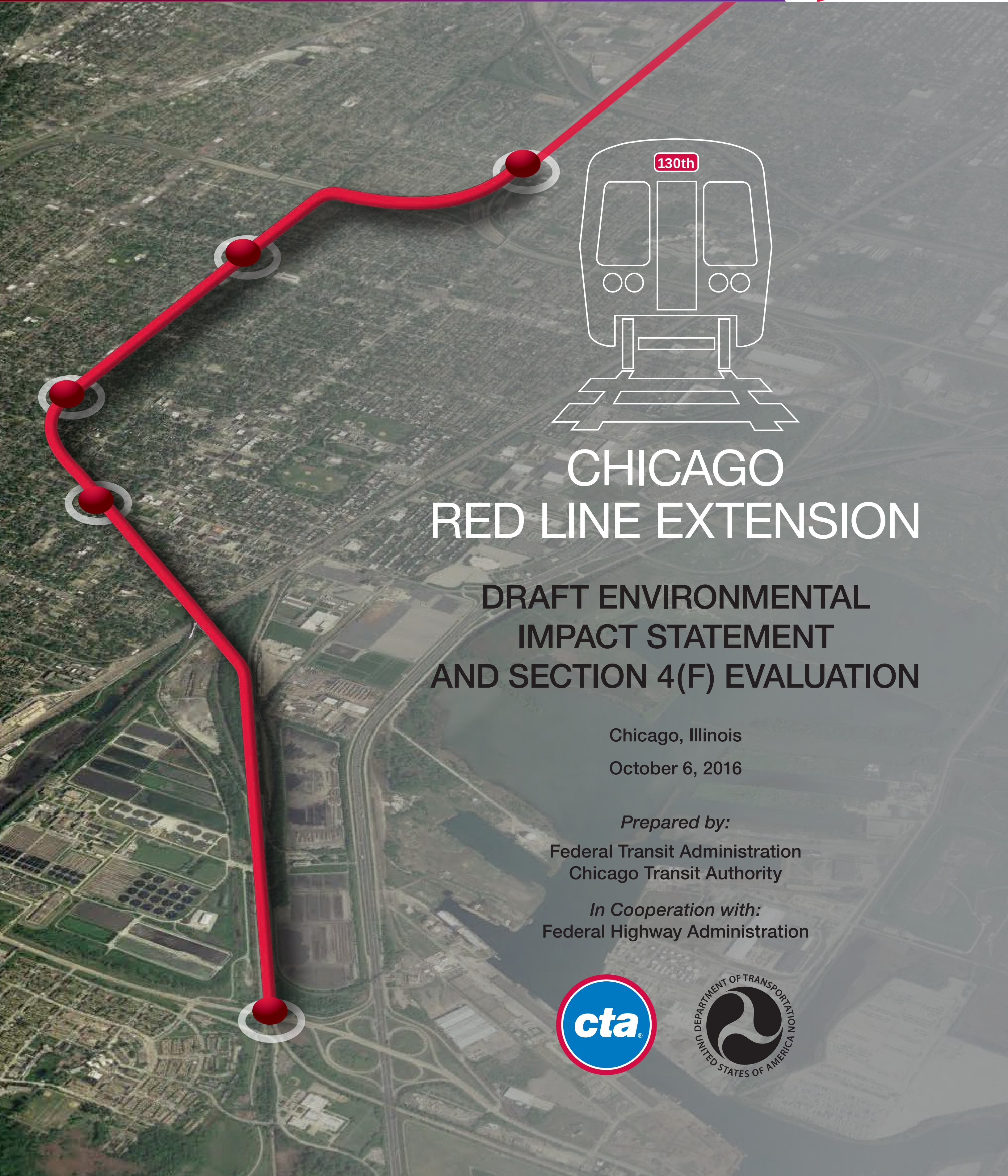
RED AHEAD

Red Line Extension



CHICAGO RED LINE EXTENSION

DRAFT ENVIRONMENTAL IMPACT STATEMENT AND SECTION 4(F) EVALUATION

Chicago, Illinois

October 6, 2016

Prepared by:
Federal Transit Administration
Chicago Transit Authority

In Cooperation with:
Federal Highway Administration

cta

DEPARTMENT OF TRANSPORTATION
UNITED STATES OF AMERICA

RED AHEAD
Moving Ahead to a Better Red

Red Line Extension

Chicago
Red Line Extension

Draft Environmental Impact Statement and Section 4(f) Evaluation

Chicago, Illinois

October 6, 2016

Prepared by:
Federal Transit Administration
Chicago Transit Authority

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Federal Highway Administration

Department of Transportation United States of America

Draft Environmental Impact Statement and Section 4(f) Evaluation

for the

Chicago Red Line Extension

Chicago, Illinois

prepared by the

U.S. Department of Transportation
Federal Transit Administration

and the

Chicago Transit Authority

In cooperation with the

Federal Highway Administration

pursuant to:

National Environmental Policy Act of 1969 (42 USC § 4332), Efficient Environmental Reviews for Project Decisionmaking (23 USC § 139), Council on Environmental Quality Regulations for Implementing the Procedures of the National Environmental Policy Act (40 CFR § 1500-1508), FHWA/FTA Environmental Impact and Related Procedures (23 CFR § 771), and
Section 4(f) requirements (49 USC § 303 and 23 USC § 138) and regulations (23 CFR § 774)

9-22-2016
Date of Approval

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9-30-16
Date of Approval

Carole Morey
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Chief Planning Officer
Chicago Transit Authority

Draft Environmental Impact Statement

Lead Agency: U.S. Department of Transportation, Federal Transit Administration

Project Sponsor: Chicago Transit Authority

Cooperating Agency: U.S. Department of Transportation, Federal Highway Administration

Title: Chicago Red Line Extension Project Draft Environmental Impact Statement

Location: Chicago, Illinois

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Abstract:

The Chicago Transit Authority (CTA), as project sponsor to the Federal Transit Administration (FTA), proposes to extend the existing Red Line heavy rail transit service 5.3 miles south from the existing 95th Street Terminal to 130th Street on Chicago's Far South Side. CTA proposes to cover a portion of the project funding by applying for federal funds administered by FTA. FTA and CTA prepared this Red Line Extension Project Environmental Impact Statement (EIS) in accordance with the National Environmental Policy Act of 1969 (NEPA) and other applicable regulations. This project is one part of CTA's Red Ahead Program, a comprehensive initiative for maintaining, modernizing, and expanding Chicago's most traveled rail line.

This Draft EIS looks at the benefits and impacts of implementing the NEPA Preferred Alternative—the Union Pacific Railroad Rail Alternative—on the physical, human, and natural environments along the corridor and near stations. This document considers two alignment (route) options for this alternative: the East Option and the West Option. This Draft EIS defines the options under consideration and evaluates the potential environmental, economic, and social impacts of the alternatives, specifically, impacts on transportation, land use and economic development, displacements and relocation of existing uses, neighborhoods and communities, visual and aesthetic conditions, noise and vibration, safety and security, historic and cultural resources, environmental justice, and other aspects of the environment. Potential mitigation measures are identified for adverse impacts resulting from operation or construction of the project. Financial implications of construction and operation of the proposed improvements are also disclosed. The information contained in this document will be used by FTA and CTA to decide whether to implement the project and to select an option for implementation.

Reviewers should provide their comments to CTA during the comment period of the Draft EIS. CTA will analyze and respond to comments and will use the information acquired in the preparation of the Final EIS. Comments on the Draft EIS should be specific and should address the adequacy of the statement and the merits of the alternatives discussed (40 Code of Federal Regulations § 1503.3).

FTA intends to issue a single document that consists of the Final EIS and Record of Decision pursuant to 23 United States Code § 139(n), unless it is determined that circumstances, such as changes to the proposed action, anticipated impacts, or other new information, preclude issuance of such a combined document.

Comments on this document must be submitted by 4:30 PM on November 30, 2016.

Send comments to the following address: Red Line Extension Project, Chicago Transit Authority, 567 W. Lake Street, 10th Floor, Chicago, IL 60661-1465; e-mail: RedExtension@transitchicago.com

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Executive Summary

The Chicago Transit Authority (CTA), as project sponsor to the Federal Transit Administration (FTA), proposes to extend the existing Red Line heavy rail transit service 5.3 miles south from the existing 95th Street Terminal to Chicago's Far South Side. This project is one part of the Red Ahead Program to extend and enhance the entire Red Line.

The National Environmental Policy Act of 1969 (NEPA) mandates the consideration of environmental impacts before approval of any federally funded project that may have significant impacts on the environment or where impacts have not yet been determined (42 United States Code [USC] § 4332). FTA and CTA prepared this Red Line Extension (RLE) Project Draft Environmental Impact Statement (EIS) in accordance with NEPA and other applicable regulations.

Red Line Extension Project

The RLE Project would extend the Red Line from the existing 95th Street Terminal to 130th Street. The proposed 5.3-mile extension would include four new stations near 103rd Street, 111th Street, Michigan Avenue, and 130th Street. Each new station would include bus and parking facilities.

The RLE Project would reduce commute times for residents, improve mobility and accessibility, and provide connection to other transportation modes. The RLE Project could also foster economic development, where new stations may serve as catalysts for neighborhood revitalization and help reverse decades of disinvestment in local business districts. The RLE Project would also provide a modern, efficient car storage yard and shop facility. Supporting information on the purpose and need for this project is provided in **Chapter 1**.

Alternatives Considered

CTA undertook an extensive Alternatives Analysis process from 2006 to 2009 that considered multiple modes and corridor options for the RLE Project. The Chicago Transit Board designated the Union Pacific Railroad (UPRR) Rail Alternative as the Locally Preferred Alternative on August 12, 2009. Based on further technical analysis and public input, CTA selected the UPRR Rail Alternative as the NEPA Preferred Alternative in August 2014. This Draft EIS looks at the environmental benefits and impacts of the No Build Alternative and the two UPRR Rail Alternative options: the East Option and the West Option. Each alternative is described below.

No Build Alternative

The No Build Alternative is defined as the existing transportation system plus any committed transportation improvements that are already in the Chicago Metropolitan Agency for Planning Fiscal Year 2014–2019 Transportation Improvement Program, including improvements to the 95th Street Terminal. No new infrastructure would be built as part of the RLE Project under the No Build Alternative.

Union Pacific Railroad Rail Alternative - Locally Preferred Alternative

The proposed UPRR Rail Alternative would extend the heavy rail Red Line from the existing 95th Street Terminal to 130th Street. The UPRR Rail Alternative alignment would run south along I-94 from the 95th Street Terminal, then curve west along the north side of I-57 (within the I-57 right-of-way) for nearly ½ mile until reaching the UPRR corridor in the vicinity of Eggleston Avenue, as shown on **Figure ES-1**. The alignment would turn south to follow the UPRR corridor. Two options are being considered for the alignment along the UPRR corridor. The CTA elevated structure would be located either east or west of the existing UPRR corridor. The alignment would follow the UPRR corridor to Prairie Avenue, where it would cross over the Canadian National/Metra Electric District (CN/ME) tracks near 119th Street. South of this point, the East and West Options would follow the same alignment southeast along the Northern Indiana Commuter Transportation District/Chicago South Shore & South Bend Railroad (NICTD/CSS & SBRR) right-of-way using a portion of the Norfolk Southern Railway and Consolidated Rail Corporation rights-of-way to the terminus (end) of the RLE at 130th Street.

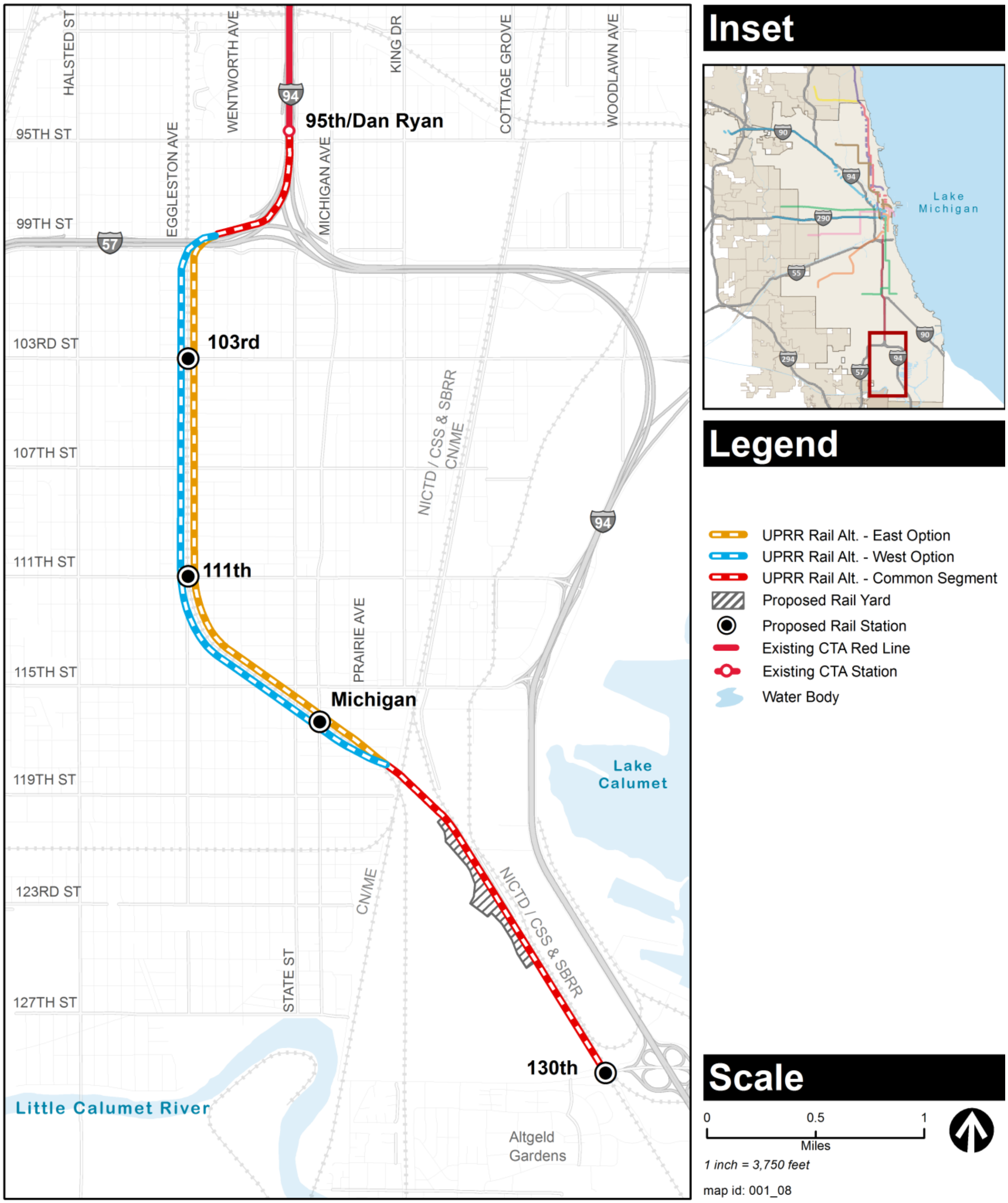
The UPRR Rail Alternative would include the following features:

- 5.3-mile heavy rail transit line extension from 95th Street Terminal to 130th Street
- Four new stations at 103rd Street, 111th Street, Michigan Avenue, and 130th Street
- New park & ride and bus facilities at each station with a total of 3,700 parking spaces along the corridor
- New yard and shop at 120th Street

As noted above, this Draft EIS studies two UPRR Rail Alternative options for the segment of the proposed alignment between I-57 and the CN/ME tracks near 119th Street:

- **East Option** - The CTA elevated structure would be placed immediately adjacent to the east side of the UPRR right-of-way.
- **West Option** - The CTA elevated structure would be placed immediately adjacent to the west side of the UPRR right-of-way.

Figure ES-1 shows the alignments for these options.


HALSTED ST
WENTWORTH AVE
KING DR
COTTAGE GROVE
WOODLAWN AVE
94
95th/Dan Ryan
95TH ST
EGGLESTON AVE
MICHIGAN AVE
99TH ST
57
103RD ST
103rd
NICTD / CSS & SBRR
CN/ME
107TH ST
94
111TH ST
111th
PRAIRIE AVE
115TH ST
Michigan
Lake Calumet
119TH ST
NICTD / CSS & SBRR
CN/ME
123RD ST
STATE ST
127TH ST
130th
Little Calumet River
Altgeld Gardens
Inset
90
94
290
55
90
294
57
94
Lake Michigan
Legend
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
UPRR Rail Alt. - Common Segment
▨ Proposed Rail Yard
● Proposed Rail Station
Existing CTA Red Line
Existing CTA Station
Water Body
Scale
0
0.5
1
Miles
1 inch = 3,750 feet
map id: 001_08

CN/ME = Canadian National/Metra Electric District, NICTD/CSS & SBRR = Northern Indiana Commuter Transportation District/Chicago South Shore & South Bend Railroad

Figure ES-1: Union Pacific Railroad Alternative Options

Environmental Benefits and Impacts

Potential environmental benefits and impacts are detailed in **Chapters 3–8** of the Draft EIS and are summarized in **Table ES-1**. The Draft EIS describes the best management practices (BMPs) and mitigation measures that would be employed to reduce impacts.

Table ES-1: Summary of Benefits and Impacts

<table>
<tr><th>No Build Alternative</th><th>Union Pacific Railroad Rail Alternative East Option</th><th>Union Pacific Railroad Rail Alternative West Option</th></tr>
<tr><td colspan="3">**Transportation** *(Chapter 3)*</td></tr>
<tr><td>No additional rapid rail transit service would be provided.

10 intersections would operate at level of service E/F in either the AM or PM peak hours or both in 2030. Traffic flow would continue to deteriorate.</td><td colspan="2">Permanent
Public Transportation
▪ CTA passengers would benefit from faster travel times by accessing rail service farther south.
▪ CTA passengers would benefit from reduced congested conditions at 95th Street Terminal with bus reroutes that would more directly connect passengers to new stations farther south.
▪ CTA passengers would benefit because of the new, direct rail service within the project area.
▪ CTA passengers would benefit from potential improved connections to regional commuter rail.
Vehicular Traffic
▪ Without mitigation, 15 intersections would operate at level of service E/F in either the AM or PM peak hours or both in 2030. Permanent impacts on vehicular traffic would not be adverse after mitigation.
Pedestrians
▪ Pedestrians would benefit from upgraded intersections immediately adjacent to stations with Americans with Disabilities Act (ADA)-accessible curb ramps and from replacement of deteriorated sidewalks.
▪ Due to the location of some park & ride facilities, passengers would need to cross an active UPRR track to reach stations, which would result in pedestrian safety impacts.
▪ Permanent impacts on pedestrians would not be adverse after mitigation.
Bicycles
▪ Bicyclists would benefit from the addition of bicycle parking at stations.
Freight Transportation
▪ No impacts
Parking Facilities
▪ No impacts. Benefits would accrue by providing additional park & ride opportunities to attract passengers to transit and potentially improve connections to regional commuter rail.
Construction
▪ Construction activities would temporarily affect the physical capacity of roadways and intersections subject to detours. For the city streets crossing the alignment, adjacent construction activities may require a lane closure. When performing work above the street (including beam placement), temporary detours will be required. Phasing the work will prevent simultaneous closure of adjacent city streets that cross the alignment. Work would be subject to Chicago Department of Transportation approval.
▪ Construction activities would require temporary lane closures on I-94 and I-57 as well as temporary shutdowns for all traffic. Temporary shutdowns of traffic (for overhead beam placement) would occur only at nighttime and during low-traffic-volume intervals and would be subject to Federal Highway Administration and Illinois Department of Transportation approval.
▪ Increased congestion due to construction may temporarily increase travel times along the I-94 and I-57 expressways.</td></tr>
</table>

No Build Alternative	Union Pacific Railroad Rail Alternative East Option	Union Pacific Railroad Rail Alternative West Option
	▪ Flagging operations and scheduled track closures would occur during construction activities near or adjacent to railroads. Scheduling would allow for continued freight and transit operations. ▪ Because of the temporary nature of construction activities, the use of construction best management practices, implementation of a traffic management plan, and implementation of the proposed mitigation measures, construction impacts from the UPRR Alternatives would not be adverse.	
Land Use and Economic Development *(Section 4.1)*		
No impacts	Permanent ▪ The park & ride facilities at the 103rd Street, 111th Street, and Michigan Avenue stations would be inconsistent with adjacent land uses and zoning designations. ▪ The substation just north of Michigan Avenue would be inconsistent with the adjacent land uses. ▪ Land use impacts would not be adverse after mitigation. ▪ The East Option could spur economic revitalization and the development of more livable, transit-supportive communities near the proposed stations. Construction ▪ Construction jobs could create short-term economic benefits. ▪ Construction could be disruptive to businesses along the alignment. Construction impacts would not be adverse after mitigation.	Permanent ▪ The elevated track structure in Fernwood Parkway would alter the open space's function as a buffer between the UPRR freight tracks and the single-family neighborhood on the west side of Eggleston Avenue. ▪ The park & ride facilities at the 103rd Street, 111th Street, and Michigan Avenue stations would be inconsistent with adjacent land uses and zoning designations. ▪ The substation just north of Michigan Avenue would be inconsistent with the adjacent land uses. ▪ Land use impacts would not be adverse after mitigation. ▪ The West Option could spur economic revitalization and the development of more livable, transit-supportive communities near the proposed stations. Construction ▪ Construction jobs could create short-term economic benefits. ▪ Construction could be disruptive to businesses along the alignment. Construction impacts would not be adverse after mitigation.
Displacements and Relocation of Existing Uses *(Section 4.2)*		
No impacts	Permanent ▪ 260 parcels (106 buildings) would be acquired for the East Option to accommodate the tracks, stations, 120th Street yard and shop, and ancillary facilities. Most of the displacements would be spread evenly along the corridor between 99th Place and the Michigan Avenue station. ▪ Permanent impacts would not be adverse after mitigation. Construction ▪ No impacts	Permanent ▪ 205 parcels (46 buildings) would be acquired for the West Option to accommodate the tracks, stations, 120th Street yard and shop, and ancillary facilities. Displacements would be spread evenly along the corridor between 103rd Street and the Michigan Avenue station. ▪ Permanent impacts would not be adverse after mitigation. Construction ▪ No impacts

No Build Alternative	Union Pacific Railroad Rail Alternative East Option	Union Pacific Railroad Rail Alternative West Option
Neighborhoods and Communities *(Section 4.3)*		
No impacts	Permanent *Community Character and Cohesion* ▪ The track structure would encroach on the edges of neighborhoods by displacing residential buildings. This impact would not be adverse after mitigation. ▪ The elevated track structure would create an adverse visual impact north of I-57 and at the intersection of 117th Street and Prairie Avenue. These impacts would remain adverse despite mitigation. ▪ The noise from CTA trains would cause adverse impacts at noise-sensitive buildings. This impact would not be adverse after mitigation.	Permanent *Community Character and Cohesion* ▪ The track structure would encroach on the edges of neighborhoods by displacing residential buildings. This impact would not be adverse after mitigation. ▪ The elevated track structure would create an adverse visual impact north of I-57 and between 99th and 103rd Streets, including 103rd Street station. This impact would remain adverse despite mitigation. ▪ The Michigan Avenue station park & ride facility would create an adverse visual impact. This impact would remain adverse despite mitigation. ▪ The noise from CTA trains would cause adverse impacts at noise-sensitive buildings. These impacts would not be adverse after mitigation.
	Mobility ▪ Passengers would benefit from improved mobility with reduced travel times.	*Mobility* ▪ Passengers would benefit from improved mobility with reduced travel times.
	Community Resources ▪ The East Option would displace the Now Faith Church of God Holiness and would cross portions of Wendell Smith Park and Block Park. These impacts would not be adverse after mitigation. ▪ Passengers would benefit from increased access to community resources in the project area.	*Community Resources* ▪ The West Option would displace the Grace Temple Church of God Established in Christ and would run through Fernwood Parkway. These impacts would not be adverse after mitigation. ▪ The elevated structure would be near Wendell Smith Park. This impact would not be adverse after mitigation. ▪ Passengers would benefit from increased access to community resources in the project area.
	Construction *Community Character and Cohesion* ▪ Construction would introduce temporary, intermittent visual, noise, and dust impacts. ▪ Construction impacts would not be adverse after mitigation.	Construction *Community Character and Cohesion* ▪ Construction would introduce temporary, intermittent visual, noise, and dust impacts. ▪ Construction impacts would not be adverse after mitigation.
	Mobility ▪ Construction would cause truck traffic to increase, and temporary street closures and detours would be needed. ▪ Access to businesses could be temporarily limited on an intermittent basis. ▪ Construction impacts would not be adverse after mitigation.	*Mobility* ▪ Construction would cause truck traffic to increase, and temporary street closures and detours would be needed. ▪ Access to businesses could be temporarily limited on an intermittent basis. ▪ Construction impacts would not be adverse after mitigation.

No Build Alternative	Union Pacific Railroad Rail Alternative East Option	Union Pacific Railroad Rail Alternative West Option
	Community Resources ▪ Construction activities would be required in Wendell Smith Park and Block Park. ▪ Access to community resources near the construction areas may be temporarily disrupted by street closures and detours. ▪ Construction impacts would not be adverse after mitigation.	*Community Resources* ▪ Construction activities would be required in Wendell Smith Park and Fernwood Parkway. ▪ Access to community resources near the construction areas may be temporarily disrupted by street closures and detours. ▪ Construction impacts would not be adverse after mitigation.
Visual and Aesthetic Conditions *(Section 4.4)*		
No impacts	Permanent ▪ The elevated track structure would create an adverse visual impact north of I-57 and at the intersection of 117th Street and Prairie Avenue. These impacts would remain adverse despite mitigation. Construction ▪ Construction would create temporary adverse impacts due to the construction work zone. ▪ Construction impacts would not be adverse after mitigation.	Permanent ▪ The elevated track structure would create an adverse visual impact north of I-57 and between 99th and 103rd Streets, including 103rd Street station. ▪ The Michigan Avenue station park & ride facility would create an adverse visual impact. ▪ Visual impacts would remain adverse despite mitigation. Construction ▪ Construction would create temporary adverse impacts due to the construction work zone. ▪ Construction impacts would not be adverse after mitigation.
Noise and Vibration *(Section 4.5)*		
No impacts	Permanent ▪ There could be moderate noise impacts on 574 noise-sensitive receivers and severe noise impacts on 83 noise-sensitive receivers before mitigation. There would be no severe or moderate impacts after mitigation. ▪ No permanent vibration impacts. Construction ▪ Construction noise levels would not exceed the FTA-recommended construction noise limits. ▪ No construction-related vibration impacts.	Permanent ▪ There could be moderate noise impacts on 738 noise-sensitive receivers and severe noise impacts on 49 noise-sensitive receivers before mitigation. There would be no severe or moderate impacts after mitigation. ▪ No permanent vibration impacts. Construction ▪ Construction noise levels would not exceed the FTA-recommended construction noise limits. ▪ No construction-related vibration impacts.
Safety and Security *(Section 4.6)*		
No impacts	Permanent ▪ A large number of pedestrians would be expected to cross the major streets without positive traffic control (marked crosswalks or signalized intersections with pedestrian countdowns), which would be an adverse impact on pedestrian safety. ▪ Permanent safety impacts would not be adverse after mitigation. ▪ There would be no permanent security impacts. Construction ▪ There would be no construction-related safety or security impacts after mitigation.	

No Build Alternative	Union Pacific Railroad Rail Alternative East Option	Union Pacific Railroad Rail Alternative West Option
Historic and Cultural Resources *(Section 4.7)*		
No effects	▪ There would be a No Adverse Effect finding on one resource - the Roseland Pumping Station.	▪ No effects on any resources
Hazardous Materials *(Section 4.8)*		
No impacts	Permanent ▪ CTA identified six High Concern sites within the permanent envelope of the East Option and six High Concern sites within the permanent envelope of the West Option. ▪ Benefits could result from the cleanup and/or removal of contaminated material during construction. ▪ Daily operations or maintenance activities that require earthmoving in contaminated areas could result in impacts from accidental spills or releases. ▪ Hazardous material spills or releases that occur along the NICTD/CSS & SBRR railroads would have the potential to migrate and affect the project area. ▪ Permanent impacts would not be adverse after BMPs and standard practices are implemented. Construction ▪ There would be the potential to encounter hazardous materials during construction. ▪ Construction-related impacts would not be adverse after BMPs and standard practices are implemented.	
Wetlands *(Section 4.9)*		
No impacts	Permanent ▪ The East and West Options could affect approximately 15.34 acres of wetlands in the vicinity of the 120th Street yard and shop and the 130th Street station. ▪ Impacts on wetlands would be mitigated through compensatory mitigation, if required. ▪ Coordination with the U.S. Army Corps of Engineers is ongoing. Construction ▪ Construction staging areas would be sited outside of wetlands as much as possible, but if there were any temporary impacts, those areas would be restored as wetlands after construction. ▪ Impacts on wetlands would be mitigated through compensatory mitigation, if required.	
Indirect and Cumulative *(Chapter 5)*		
No impacts	Indirect ▪ Implementation of the East or West Option would have the potential for redevelopment from new employment accessibility, attraction of new development near RLE stations, and overall livability improvements. Cumulative ▪ The surrounding communities would benefit from the cumulative impacts of other planned and programmed projects in the project area because they would improve access to jobs, places of interest, and residences, and would result in a reduction of air emissions.	
Resources with Limited or No Adverse Impacts *(Chapter 6)*		
The No Build Alternative and the UPRR Rail Alternative East and West Options would have limited or no impacts on the following resource areas: air quality, water quality, floodplains, vegetation and wildlife habitat, threatened and endangered species, geology and soils, and energy.		

No Build Alternative	Union Pacific Railroad Rail Alternative East Option	Union Pacific Railroad Rail Alternative West Option
Environmental Justice *(Chapter 7)*		
No impacts	▪ Permanent impacts on community character and permanent visual impacts would not be appreciably more severe or greater in magnitude than similar effects elsewhere in CTA's rail system. ▪ There would be no disproportionately high or adverse impacts on minority or low-income populations.	
Section 4(f) *(Chapter 8)*		
No impacts	▪ No adverse impacts on the attributes, features, or activities of Wendell Smith Park and Block Park would result from the East Option after the proposed mitigation; therefore, FTA has made a preliminary *de minimis* finding for both parks, subject to further public input as part of the Draft EIS.	▪ No adverse impacts on the attributes, features, or activities of Fernwood Parkway would result from the West Option after the proposed mitigation; therefore, FTA has made a preliminary *de minimis* finding for this park, subject to further public input as part of the Draft EIS.

After implementation of the BMPs and mitigation measures described in the Draft EIS, adverse impacts on community character and cohesion and on visual and aesthetic conditions would remain for both the East and West Options.

Evaluation of Alternatives

CTA used the following evaluation goals and criteria, based on the purpose and need, to compare the benefits and drawbacks of the East and West Options:

- Goal 1 - Reduce Transit Times
- Goal 2 - Increase Travel Choices
- Goal 3 - Increase Economic Competitiveness
- Goal 4 - Minimize Environmental Impacts
- Goal 5 - Provide the Best Value

Table ES-2 provides specific measures for the goals listed above, and compares the extent to which the East and West Options and the No Build Alternative would meet the goals.

Table ES-2: Comparative Evaluation of Alternatives

Criteria	No Build Alternative	Union Pacific Railroad Rail Alternative East Option	Union Pacific Railroad Rail Alternative West Option
Goal 1 - Reduce Transit Times			
Travel Times Between Stations[1,2]			
130th Street to 95th Street Terminal	28 minutes	14 minutes	14 minutes
130th Street to Jackson Station (Loop)	58 minutes	39 minutes	39 minutes
Would the proposed stations serve transit-dependent communities?	No	Yes	Yes
Would there be new direct service to Altgeld Gardens?	No	Yes	Yes
Goal 2 - Increase Travel Choices			
Would there be better access to regional employment centers and local commercial areas?	No	Yes	Yes
Would potential connections to other public transportation modes within the project area be possible?	No	Yes	Yes
Would geographic isolation be reduced?	No	Yes	Yes
How many stations would have Park & Ride Facilities?	0	4 of 4	4 of 4
Total Park & Ride Spaces	0	3,700	3,700
Goal 3 - Increase Economic Competitiveness			
Could nearby development be encouraged?	No	Yes	Yes
Goal 4 - Minimize Environmental Impacts			
Displacements and Relocations			
Properties	0	260	205
Buildings	0	106	46
Residential Buildings	0	90	26
Mixed-Use Buildings	0	1	2
Commercial and Industrial Buildings	0	13	17
Places of Worship	0	1	1
City-Owned Buildings	0	1	0
Noise Impacts After Mitigation	No change	Not adverse	Not adverse
Receivers with Moderate Impacts (before mitigation/after mitigation)	0	574/0	738/0
Receivers with Severe Impacts (before mitigation/after mitigation)	0	83/0	49/0
Park Impacts (Not Adverse After Mitigation)[3]			
Construction Phase	0 parks	2 parks	2 parks
Permanent	0 parks	2 parks	1 park
Permanent (acres)	0 acres	1.6 acres	1.9 acres
Would there be community character impacts after mitigation?	No	Yes	Yes
Would there be visual and aesthetic impacts after mitigation?	No	Yes	Yes
Goal 5 - Provide the Best Value			
Projected Ridership (per weekday)	0	42,000	42,000
Capital Costs[4]	$0	$2.26 Billion	$2.30 Billion
Annual Change in O&M Costs[5]	No Change	+$17.4 Million	+$17.4 Million

N/A = Not Applicable

[1] Source: CTA 2009

[2] Travel time between stations does not include wait time at 130th Street.

[3] Based on the Section 4(f) analysis. Findings contingent on continued coordination process.

[4] Year of expenditure dollars

[5] O&M = Operations and maintenance. Difference from No Build Alternative shown in year 2015 dollars

Public Input Requested

This Draft EIS serves as the primary document to facilitate public and agency review of the proposed project. CTA has established a 45-day comment period to take formal comments on the Draft EIS. The Draft EIS is available on the CTA website (www.transitchicago.com/RedEIS), and hard copies of the Draft EIS are available at the following locations during the public review period:

- CTA headquarters, 567 W. Lake Street, 2nd Floor, Chicago, IL 60661
- Pullman Public Library, 11001 S. Indiana Avenue, Chicago, IL 60628
- West Pullman Public Library, 830 W. 119th Street, Chicago, IL 60643
- Altgeld Public Library, 13281 S. Corliss Avenue, Chicago, IL 60827
- Woodson Regional Public Library, 9525 S. Halsted Street, Chicago, IL 60628
- Calumet Park Public Library, 1500 W. 127th Street, Calumet Park, IL 60827
- Harold Washington Library Center, 400 S. State Street, Chicago, IL 60605

A public hearing is scheduled for November 1, 2016 from 5:30 to 7:30 PM at St. John Missionary Baptist Church (211 E. 115th Street, Chicago, IL 60628) to solicit comments from the community about findings presented in the Draft EIS. The location of the public hearing is ADA-compliant and accessible by public transit. Comments received during the public hearing will be submitted to FTA and will be entered into the public record. A summary of the public hearing will be included in the Final EIS. Written comments will also be accepted at any time during the public comment period via e-mail to: RedExtension@transitchicago.com and U.S. mail to: Chicago Transit Authority, Strategic Planning, 10th Floor, Attn: Red Line Extension Project, 567 W. Lake Street, Chicago, IL 60661.

Chapter 1
Purpose and Need

The Chicago Transit Authority (CTA), as project sponsor to the Federal Transit Administration (FTA), proposes to extend the Red Line heavy rail transit (HRT) service 5.3 miles south from the existing 95th Street Terminal to Chicago's Far South Side. The Chicago Transit Board designated the Union Pacific Railroad (UPRR) Rail Alternative, discussed further in **Chapter 2**, as the Locally Preferred Alternative (LPA) on August 12, 2009. Based on further technical analysis and public input, CTA selected the UPRR Rail Alternative as the National Environmental Policy Act of 1969 (NEPA) Preferred Alternative in August 2014. CTA proposes to cover a portion of the project funding by applying for federal funds administered by FTA. The Red Line Extension (RLE) Project is included in the list of fiscally constrained projects in the Fiscal Year (FY) 2014–2019 Transportation Improvement Program (TIP) of the Chicago Metropolitan Agency for Planning (CMAP) *GO TO 2040 Comprehensive Regional Plan* (*GO TO 2040*).

NEPA mandates the consideration of environmental impacts before approval of any federally funded project that may have significant impacts on the environment or where impacts have not yet been determined. FTA and CTA prepared this RLE Project Draft Environmental Impact Statement (EIS) in accordance with NEPA and other applicable regulations, including Section 106 of the National Historic Preservation Act (NHPA), Section 4(f) of the United States Department of Transportation (USDOT) Act of 1966, joint guidance and regulations from FTA and the Federal Highway Administration (FHWA), and other agency regulations and guidelines.

When the RLE Project began in 2006 it was compliant with the federal transportation funding and authorization bill: Section 6002 Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU). In 2012 a new transportation funding and authorization bill was passed into law—the Moving Ahead for Progress in the 21st Century Act, also known as MAP-21. In December 2015, the Fixing America's Surface Transportation (FAST) Act was signed into law. The RLE Project is compliant with SAFETEA-LU, MAP-21, and the FAST Act.

This Draft EIS looks at the benefits and impacts of implementing the No Build Alternative and the NEPA Preferred Alternative—the UPRR Rail Alternative—on the physical, human, and natural environments along the corridor and near stations. This document considers two alignment (route) options within the NEPA Preferred Alternative: the East Option and the West Option. While this document refers to the "East and West Options" for brevity, only one of the two options would be selected and implemented (not both).

This chapter describes the purpose and need for transit improvements within the project area. This purpose and need was developed from the purpose and need statement presented in the RLE Alternatives Analysis (AA) document (**Appendix A**), input received from the public during the EIS scoping process (**Appendix B**), ongoing public outreach (summarized in **Chapter 10** and **Appendix C** of this Draft EIS), and the *Red Line Extension Livability Report* (by CMAP, CTA, and Developing Communities Project, Inc. [DCP]). This chapter also describes CTA's basis for advancing the RLE Project, identifies objectives that frame the development and evaluation of the alternatives, and sets the stage for NEPA analysis leading to the agency's final decision on the project. Additional background data supporting this statement of purpose and need is provided in the *Purpose and Need Report* (**Appendix D**).

1.1 Project Area Overview and Background

CTA's Red Ahead Program is a comprehensive initiative for maintaining, modernizing, and expanding Chicago's most-traveled rail line, the Red Line. As part of the program, FTA and CTA have been analyzing the proposed extension of the Red Line (see **Figure 1-1**).

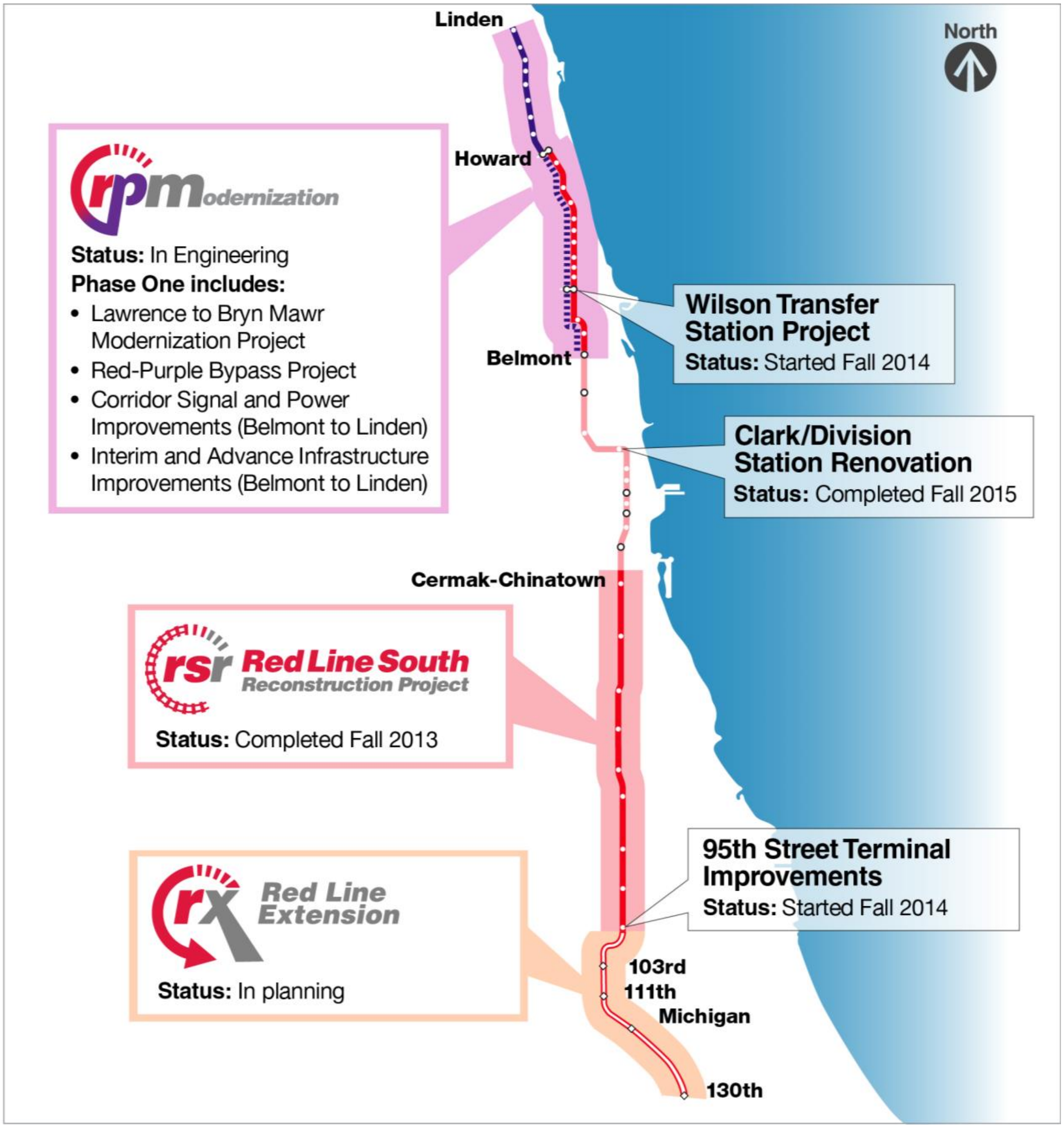

Linden
North
Howard
rpm modernization
Status: In Engineering
Phase One includes:
• Lawrence to Bryn Mawr Modernization Project
• Red-Purple Bypass Project
• Corridor Signal and Power Improvements (Belmont to Linden)
• Interim and Advance Infrastructure Improvements (Belmont to Linden)
Wilson Transfer Station Project
Status: Started Fall 2014
Belmont
Clark/Division Station Renovation
Status: Completed Fall 2015
Cermak-Chinatown
rsr Red Line South Reconstruction Project
Status: Completed Fall 2013
95th Street Terminal Improvements
Status: Started Fall 2014
rx Red Line Extension
Status: In planning
103rd
111th
Michigan
130th

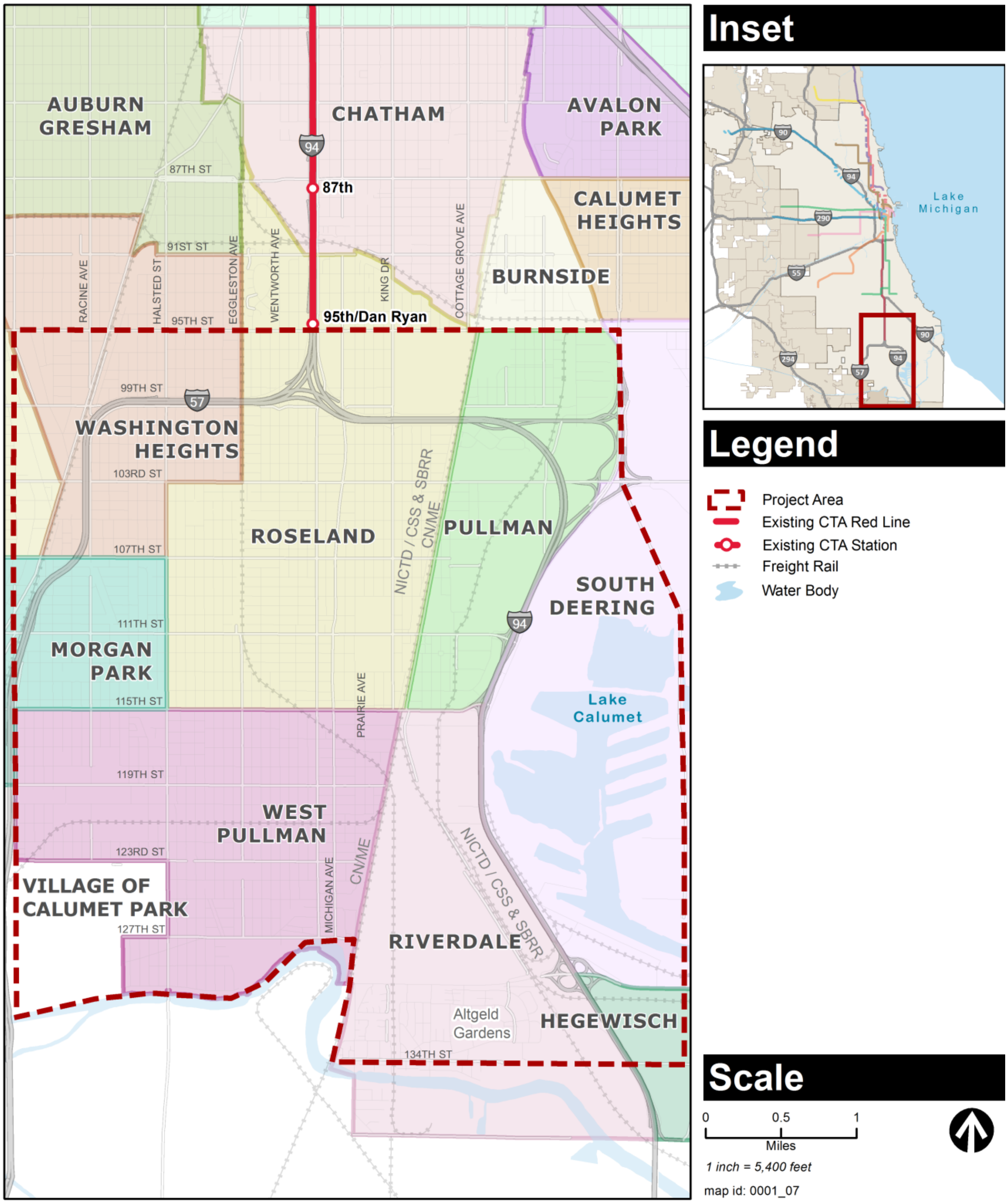
Figure 1-1: Red Ahead Program Overview

The project area for the RLE is approximately 11 miles south of the Loop (Chicago's central business district) on Chicago's Far South Side. The project area encompasses approximately 20 square miles. The boundaries of the project area are 95th Street on the north, Ashland Avenue on the west, Stony Island Avenue on the east, and the Calumet-Sag Channel/Little Calumet River and 134th Street on the south (**Figure 1-2**). The project area includes expressways, regional arterials, commuter and freight railroads, intermodal connectors, local streets, bicycle facilities, and pedestrian facilities. The expressways that pass through the project area are Interstate 94 (I-94, also known as the Dan Ryan Expressway north of 95th Street and the Bishop Ford Freeway south of 95th Street) and Interstate 57 (I-57). From the northern border of the project area, I-94 runs south to 99th Street, curves east, then curves south and runs along the west side of Lake Calumet. I-57 joins I-94 at 95th Street and runs east of the Metra Rock Island District commuter rail line to 115th Street, and then curves south along the western limit of the project area.

CTA's Red Line HRT service currently terminates at the 95th Street Terminal, in the northern portion of the project area. From there, a network of CTA and Pace Suburban Bus Service (Pace) bus routes serves the surrounding Far South Side communities. The 95th Street Terminal is among CTA's busiest stations, and many residents in the project area use bus service to transfer to the Red Line, causing lengthy travel times. The Red Line operates 24 hours per day, 7 days per week, as do some of the connecting bus routes.

Metra operates commuter rail in the project area. The commuter rail lines include the Rock Island District, Electric District mainline, and Electric District Blue Island branch. The Northern Indiana Commuter Transportation District (NICTD) operates the South Shore Line, which shares tracks with the Metra Electric District (ME) mainline north of 115th Street. These commuter rail lines offer primarily peak-hour, peak-direction service to and from downtown Chicago, with infrequent service outside of peak hours.

The overall project area has residential (primarily single-family), commercial (urban mixed-use), industrial, transportation, utility, and vacant land uses. Commercial land uses are clustered around the major thoroughfares in the area, including Michigan Avenue and Halsted Street. Vacant properties are interspersed throughout most residential and commercial blocks. The project area encompasses parts of nine community areas in the City of Chicago and the eastern section of the Village of Calumet Park (see **Figure 1-2**). Chicago community areas include Beverly, Washington Heights, Roseland, Morgan Park, Pullman, West Pullman, Riverdale, Hegewisch, and South Deering. The project area also contains several schools, universities (including Chicago State University), and the Altgeld Gardens public housing project. According to census data, project area population and employment have declined during the past decade (U.S. Census Bureau 2010); however, CMAP anticipates growth in some areas by 2030 (CMAP 2010b).


AUBURN GRESHAM
CHATHAM
AVALON PARK
CALUMET HEIGHTS
BURNSIDE
94
87th
87TH ST
91ST ST
95TH ST
95th/Dan Ryan
RACINE AVE
HALSTED ST
EGGLESTON AVE
WENTWORTH AVE
KING DR
COTTAGE GROVE AVE
99TH ST
57
WASHINGTON HEIGHTS
103RD ST
107TH ST
ROSELAND
NICTD / CSS & SBRR
CN/ME
PULLMAN
SOUTH DEERING
111TH ST
MORGAN PARK
115TH ST
PRAIRIE AVE
Lake Calumet
119TH ST
WEST PULLMAN
123RD ST
VILLAGE OF CALUMET PARK
127TH ST
MICHIGAN AVE
RIVERDALE
Altgeld Gardens
HEGEWISCH
134TH ST
Inset
Lake Michigan
90
290
55
294
Legend
Project Area
Existing CTA Red Line
Existing CTA Station
Freight Rail
Water Body
Scale
0
0.5
1
Miles
1 inch = 5,400 feet
map id: 0001_07

CN/ME = Canadian National/Metra Electric District, NICTD/CSS & SBRR = Northern Indiana Commuter Transportation District/Chicago South Shore & South Bend Railroad

Figure 1-2: Red Line Extension Project Area

1.2 Statement of Purpose and Need

This Draft EIS builds upon the RLE AA process, which took place from 2006 through 2009. The AA process included public involvement and conceptual design and analysis to identify the project's purpose and need. The purpose and need reflects the project objectives discussed with the public during the AA process, EIS scoping (including the public scoping meetings), and ongoing public involvement activities. This Draft EIS discusses the extent to which the alternatives in **Chapter 2** meet the purpose and need, which are tied to the goals discussed in **Section 9.2**.

1.2.1 Purpose

The purpose of the RLE Project is as follows:

- Reduce commute times for residents both within and south of the project area.
- Improve mobility and accessibility for transit-dependent residents in the project area.
- Improve rapid transit rail service to isolated areas and provide viable linkages between affordable housing (e.g., the Altgeld Gardens public housing project), jobs, services, and educational opportunities, thereby enhancing livability and neighborhood vitality.
- Provide an opportunity for potential connections and linkages to other public transportation modes including regional commuter rail in the project area.
- Foster economic development in the project area, where new stations may serve as catalysts for neighborhood revitalization and help reverse decades of disinvestment in local business districts.
- Provide a modern, efficient rail car storage yard and shop facility to provide storage and cost-effective preventive maintenance for rail cars associated with the RLE Project, rail cars currently stored in the existing 98th Street Yard and Shop, and rail cars supporting additional Red Line expansion of service.

1.2.2 Need

The need for the RLE Project is demonstrated by the following existing conditions:

- Transit trips to jobs are longer for Far South Side residents than they are for residents in the Chicago seven-county region[1] as a whole.
- Transit-dependent populations in the project area have limited direct access to rapid transit rail service.
- The project area is geographically isolated from major activity centers and provides residents limited viable transportation options, which limits access between affordable housing (e.g.,

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[1] The Chicago seven-county region includes the counties of Cook, DuPage, Kane, Kendall, Lake, McHenry, and Will.

the Altgeld Gardens public housing project) and employment centers outside of the project area.

- Existing transit markets are underserved and transit connectivity is challenging in the project area.
- Disinvestment and limited economic development in the project area have negatively affected Far South Side communities.
- The existing 98th Street Yard does not have capacity to store rail cars for any substantial increase in Red Line capacity accompanying future Red Line expansion.

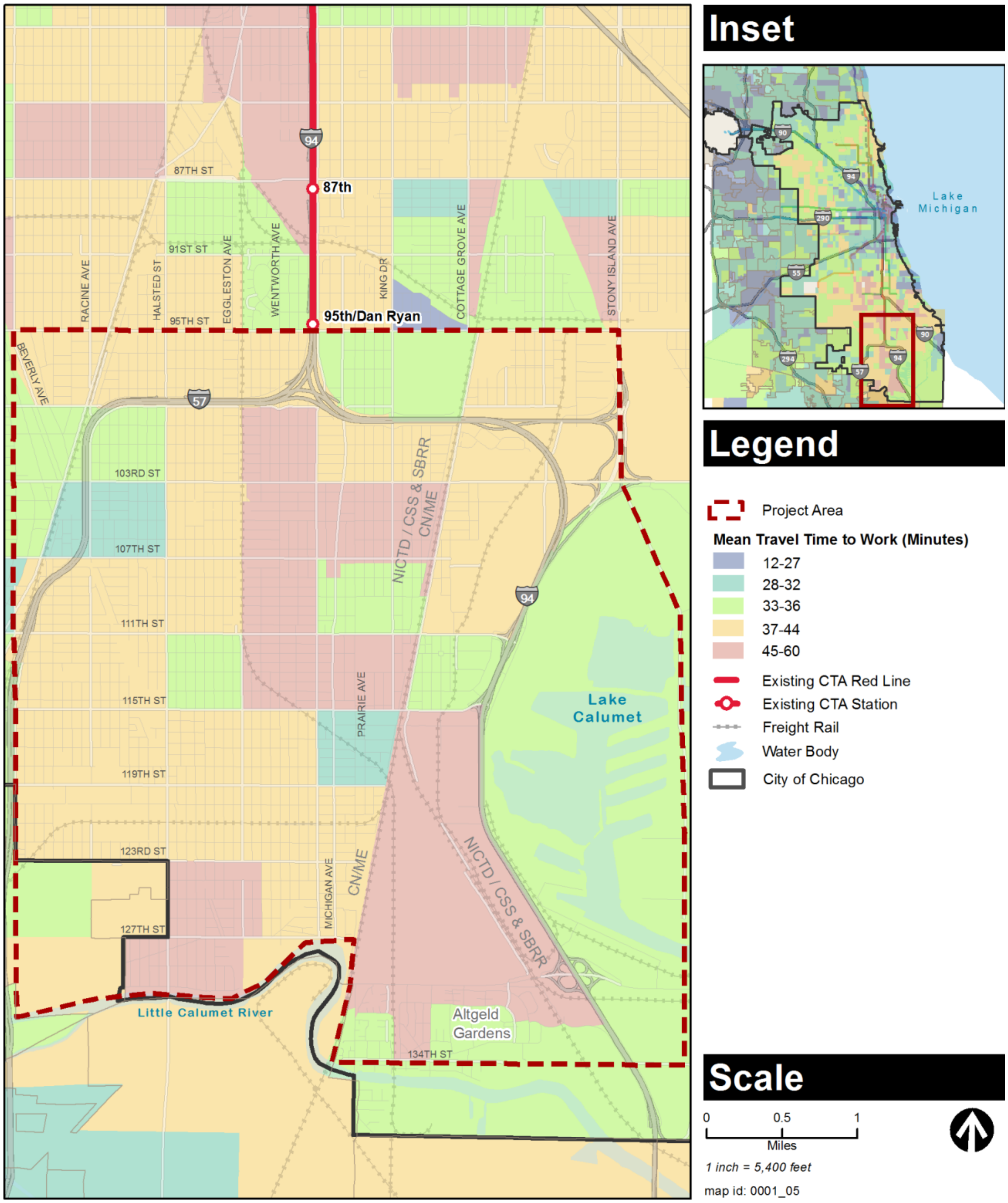
1.3 Justification of Purpose and Need

This section documents the elements of the purpose and need for the RLE Project as identified in **Section 1.2**. Supporting data is summarized in the following sections, and more detailed supporting data is available in the *Purpose and Need Report* (**Appendix D**).

1.3.1 Long Transit Trips to Job Centers for Far South Side Residents

Project area commute times are among the longest in the city, as shown in the map inset on **Figure 1-3**. **Figure 1-3** details commute times in the project area. During 2005–2010, commute times were 24 percent longer for project area residents than for other residents in the seven-county region—approximately 39 minutes one-way for project area residents, versus 32 minutes region-wide (U.S. Census Bureau 2010). Expressway and arterial traffic congestion limit the mobility of residents in the project area, including bus passengers who are frequently stuck on the same congested roadways. *GO TO 2040* states the "region's congestion levels are among the highest in the nation, and projected increases in population, jobs, and freight traffic will only add to the pressure on our infrastructure" (CMAP 2010b). Traffic congestion in the Chicago metropolitan area has steadily increased in recent decades, and project area roadways are approaching capacity limits during the morning peak period.

Public transit passengers and those who depend on public transit for meeting their travel needs are hardest affected by these long commute times. Complex transfers to reach the 95th Street Terminal make commute times greater than 2 hours one-way for some project area residents (CMAP 2012a). Project area residents accessing the 95th Street Terminal by bus and other transportation modes experience measureable delays resulting from congestion along arterial streets. The need for improved access to job centers outside of the project area is evidenced by an unemployment rate of 19 percent in the project area (U.S. Census Bureau 2013). Some neighborhoods within the project area, such as Riverdale, have unemployment rates as high as 34 percent (U.S. Census Bureau 2013). The RLE Project would reduce transit travel times to jobs from many neighborhoods in the project area, which would help facilitate job access and result in additional viable employment opportunities.


94
87th
87TH ST
91ST ST
95TH ST
95th/Dan Ryan
RACINE AVE
HALSTED ST
EGGLESTON AVE
WENTWORTH AVE
KING DR
COTTAGE GROVE AVE
STONY ISLAND AVE
BEVERLY AVE
57
103RD ST
107TH ST
111TH ST
115TH ST
119TH ST
123RD ST
127TH ST
NICTD / CSS & SBRR
CN/ME
94
PRAIRIE AVE
MICHIGAN AVE
CN/ME
NICTD / CSS & SBRR
Lake Calumet
Little Calumet River
Altgeld Gardens
134TH ST
Inset
Lake Michigan
90
94
290
55
294
57
90
94
Legend
Project Area
Mean Travel Time to Work (Minutes)
12-27
28-32
33-36
37-44
45-60
Existing CTA Red Line
Existing CTA Station
Freight Rail
Water Body
City of Chicago
Scale
0
0.5
1
Miles
1 inch = 5,400 feet
map id: 0001_05

CN/ME = Canadian National/Metra Electric District, NICTD/CSS & SBRR = Northern Indiana Commuter Transportation District/Chicago South Shore & South Bend Railroad
Source: U.S. Census Bureau 2010

Figure 1-3: Travel Time to Work

1.3.2 Transit-Dependent Populations Lack Direct Access to Rapid Transit Rail Service

A large share of the population in the project area falls within several demographic categories that typically indicate transit dependency: low-income populations, senior citizens, people who are too young to drive, people with disabilities, and people living in households without cars. For transit-dependent populations, the availability of quality transit service that connects them to job centers is particularly important. The following comparisons highlight the transit-dependent characteristics of the project area:

- The median annual household income in the project area is approximately $41,000, which is below the Chicago metropolitan area median of approximately $62,000 (U.S. Census Bureau 2010). Some community areas, such as Riverdale, have median annual household incomes as low as $11,000. The entire Chicago metropolitan area had a decline in median household income of approximately 7 percent between 2000 and 2010, but these effects have been more pronounced in the project area, which had a decline of nearly 21 percent in the same timeframe (U.S. Census Bureau 2010). Low-income households are less likely to own cars, and frequently rely on transit as their primary mode of transportation.

- Approximately 15.3 percent of project area residents are over the age of 65, compared to 10.3 percent of the Chicago metropolitan area (U.S. Census Bureau 2010). Senior citizens are more likely to be transit dependent because they may no longer be physically able to drive.

- Approximately 27 percent of the project area is under the age of 18, compared to 23 percent of the Chicago metropolitan area (U.S. Census Bureau 2010). Minors are more likely to be transit dependent because many are too young to obtain driver's licenses, or do not have the financial means to purchase a car.

- Approximately 15.4 percent of households in the project area have at least one member with a disability, compared to 11 percent region-wide (U.S. Census Bureau 2010). People with disabilities are more likely to be transit dependent if their disabilities prevent them from driving a car.

- Although the average household size in the project area (2.88 persons per household) is nearly the same as in the Chicago metropolitan area (2.84 persons), project area households have fewer vehicles on average (U.S. Census Bureau 2010). Approximately 10 percent of project area households have no vehicle available, versus 6 percent region-wide. Of the project area households that do have cars, there are generally fewer cars per person than other households in the region, causing some household members to rely on non-automobile modes of transportation.

The CTA Red Line currently serves only the northernmost portion of the project area directly. Most residents in the project area must use connecting bus service to reach the 95th Street Terminal, which results in long travel times, as described in **Section 1.3.1**. Direct access to rapid transit from a greater share of project area residences would improve job access.

1.3.3 Isolation from Major Activity Centers and Limited Viable Transportation Options

Despite the substantial amount of roadway infrastructure in the project area, expressways and arterial streets frequently become congested, thereby limiting mobility. Mobility is further inhibited by the limited options for connecting to the CTA's rail system. Although bus routes operated by CTA and Pace provide service 24 hours a day, buses in the project area are frequently delayed by congestion on arterial streets leading to the 95th Street Terminal. None of the Red Line stations along the Dan Ryan branch currently have park & ride facilities, precluding residents from accessing the stations by car unless they are dropped off. Several bus routes serve the 95th Street Terminal and Metra stations; however, the large residential tracts surrounded by local streets limit the bus network.

While the project area does have an extensive sidewalk and crosswalk system along the road network, physical divisions between communities include the ME mainline, which is on an embankment; Lake Calumet; the Little Calumet River; the UPRR right-of-way, which extends north-south from 99th Street to 119th Street; and large tracts of industrial land. These physical divisions are difficult to cross for pedestrians and bicyclists, and effectively separate the communities on either side. This geographic isolation is particularly problematic for residents of the Altgeld Gardens public housing project at the south end of the project area between 130th Street and 134th Street in the Riverdale community area. Residents in this area have limited employment opportunities and transportation choices within walking distance of their homes.

There is a high percentage of vacant homes in the project area—13 percent higher than the City of Chicago (CMAP 2012a). Several factors contribute to housing vacancy rates in a particular community. These factors include, but are not limited to, safety and security, proximity to public services, access to jobs, quality of schools, age and type of available housing units, quality of life, and the overall health of the community. In addition, there are ten affordable housing properties (with a total of almost 2,800 units) within ½ mile of the proposed alignment (National Housing Preservation Database 2015). Improved public transportation options, combined with affordable housing stock, would serve as a catalyst to bring people to the area that would not otherwise consider communities in the project area as a viable place to live. Mutual benefit for project area residents, and those seeking affordable housing, could be provided through rapid transit south of the 95th Street Terminal.

1.3.4 Underserved Transit Markets and Limited Transit Connectivity

Several groups of potential passengers ("transit markets") in the project area are underserved by the existing transit system. Transit service enhancements, including those proposed as part of the RLE Project, would improve service for these groups. The largest underserved groups are as follows:

- Project area residents who must use connecting bus routes to reach the Red Line - Most of the CTA and Pace bus routes in the project area serve the Red Line's 95th Street Terminal. As discussed above, average travel times for work trips and the number of transit-dependent residents are higher in the project area (compared to the seven-county region) due to traffic congestion and the time required to ride a bus to the 95th Terminal and transfer to the CTA

Red Line. The combination of these conditions underscores the need to improve connectivity and provide faster transit service.

- People driving to Chicago activity centers from the project area and points south - There are currently no CTA parking facilities on the Red Line Dan Ryan branch, leaving motorists coming from the project area and points south few options for parking at a Red Line station and completing their trips via transit. In addition, I-94 is congested northbound in the AM peak period and southbound in the PM peak period; during these time periods, traffic flows are more than 15 miles per hour slower than free flow speeds of 60 miles per hour (Illinois Department of Transportation [IDOT] 2015). CTA park & ride facilities near major expressways or arterial streets in the southern portions of the project area would provide new, convenient access possibilities on the Red Line. The need for park & ride facilities was confirmed based on travel demand modeling performed in 2009, as part of the RLE AA process (see **Appendix A**).

- Transit passengers traveling to other potential transit destinations - This group includes those taking reverse commute trips (residents in the central areas of the city commuting to jobs in outer communities), school trips, and trips entirely within the project area. There are several educational facilities in the project area, including Chicago State University (7,200 students), Olive-Harvey College (4,300 students), and several high schools (including Harlan, Corliss, Fenger, Julian, Brooks, and Carver High Schools) that would benefit from transit improvements in the project area.

1.3.5 Disinvestment and Limited Economic Development Have Affected Far South Side Communities

The project area has experienced ongoing disinvestment, including loss of manufacturing jobs, which has led to a decline in population, services, and job opportunities. Once-vibrant retail districts, such as Michigan Avenue and Halsted Street, now contain vacant land and storefronts. This decline is evidenced by the decrease in project area population and employment compared to the City of Chicago and the seven-county region (**Table 1-1** and **Table 1-2**).

Table 1-1: Population Decline in Red Line Extension Project Area (2000 to 2010)

Area	2000 Population	2010 Population	Change
Chicago Seven-County Region	8,146,264	8,399,893	3.0%
City of Chicago	2,895,964	2,700,741	-7.2%
Red Line Extension Project Area	147,662	128,366	-15.0%

Source: U.S. Census Bureau 2010

Table 1-2: Employment Decline in Red Line Extension Project Area (2000 to 2010)

Area	2000 Employment	2010 Employment	Change
Chicago Seven-County Area	4,083,530	4,429,414	8.5%
City of Chicago	1,358,054	1,410,294	3.8%
Red Line Extension Project Area	62,587	56,105	-11.5%

Source: U.S. Census Bureau 2010

The City of Chicago is focused on stabilizing, improving, and redeveloping communities in and around the project area. As a result, the City has designated several tax increment financing (TIF) districts, redevelopment areas, special service areas, and industrial corridors in the project area (see **Appendix D** for more information). In addition to economic revitalization initiatives, viable transportation options continue to be a key element in the success of economic development efforts and revitalization for communities within the project area. Examples of redevelopment in the project area include the Pullman District, the Method factory, and a new Walmart store (opened 2014). The Pullman District includes the Pullman factory, the Hotel Florence, and the Pullman Railroad Porters National Museum. This district was named a National Monument on February 19, 2015, making it a component of the National Park System. Building on the Pullman's community history as a manufacturing hub, Method, a manufacturer of environmentally friendly cleaning and personal care products, opened a new 150,000-square-foot factory in Pullman in April 2015, which has created approximately 100 jobs.

1.3.6 The Need for a Rail Car Storage Yard and Maintenance Facility

The existing 98th Street Yard does not have capacity to store rail cars required for any substantial increase in Red Line capacity accompanying future Red Line expansion. Two yard and shop facilities (Howard Yard at the north end of the Red Line and 98th Street Yard at the south end of the Red Line) provide storage for vehicles operating along the Red Line. Any Red Line expansion must consider the capacity of both yards. The Howard Yard and the 98th Street Yard together supply rail cars for both the northern and southern portion of the Red Line. Both yards are necessary to efficiently provide trains to meet the current and future operating plans for the entire Red Line. All northbound trains currently begin their run at 98th Street Yard, and any expansion of Red Line service would require expanded yard capacity at or near the southern end of the Red Line. The existing 98th Street Yard is landlocked between interstate ramps for I-94 and I-57. There is no room to expand the yard without major realignments of the two highways. In addition, the existing 98th Street Yard is oriented as a terminal yard for service to and north of the 95th Street Terminal. With the RLE Project expanding service to the south, use of the 98th Street Yard would lead to inefficient operations. Moving trains into and out of the existing yard, due to the orientation of the yard, would cause operational inefficiencies and potential capacity constraints to Red Line service.

1.4 Organization of the Document

This Draft EIS analyzes how well the NEPA Preferred Alternative would satisfy the purpose and need stated above. It also analyzes the potential impacts of the No Build and NEPA Preferred Alternatives. **Section 9.2** provides further analysis of the extent to which the East and West Options would satisfy the purpose and need.

NEPA documents, such as this EIS, must provide sufficient technical detail to meet a range of legal requirements and are required to be organized in a specific way, as described in 40 Code of Federal Regulations (CFR) § 1502. **Figure 1-4** provides an overview of the chapters and the major topics covered in this document.

CHAPTER 1 **Purpose and Need**	This chapter is the foundation of the document. It introduces the project, provides background information, and explains why the project is proposed and important.
CHAPTER 2 **Alternatives Considered**	This chapter reviews the planning process and alternatives considered in developing the project and describes the alternatives under further consideration in this Draft Environmental Impact Statement.
CHAPTER 3 **Transportation**	This chapter presents the potential for impacts on the transportation network. This chapter also discusses measures to avoid or minimize those impacts.
CHAPTER 4 **Environmental Impacts and Mitigation**	This chapter discusses the social, economic, and environmental resources that could be affected by the construction and operation of the project alternatives. This chapter also discusses measures to avoid or minimize those impacts.
CHAPTER 5 **Resources with Limited or No Adverse Impacts**	This chapter summarizes the resources that would have limited or no adverse impacts due to operation or construction of the project alternatives.
CHAPTER 6 **Environmental Justice**	This chapter discusses the impacts of the project alternatives on environmental justice communities in the project area.
CHAPTER 7 **Section 4(f) Evaluation**	This chapter focuses on meeting the federal requirements of Section 4(f) of the U.S. Department of Transportation Act of 1966, which protects significant historic sites, publicly owned parks, recreation areas, wildlife refuges, and waterfowl refuges that could be used by a federally funded project.
CHAPTER 8 **Evaluation of Alternatives**	This chapter presents potential capital and operations funding strategies as well as a summary evaluation of the project alternatives.
CHAPTER 9 **Public and Agency Coordination**	This chapter discusses the processes for public involvement and agency coordination and addresses public comments and suggestions.
Chapter 10 **List of Acronyms and Abbreviations**	This chapter provides definitions for the acronyms and abbreviations used within the document.
CHAPTER 11 **List of References**	This chapter provides the references used within the document.
CHAPTER 12 **List of Preparers**	This chapter lists the preparers of this document.
CHAPTER 13 **List of Recipients**	This chapter lists the agencies, local officials, and public libraries that were notified of the availability of this document.

Figure 1-4: Environmental Impact Statement Document Organization

Chapter 2
Alternatives Considered

This chapter describes the alternatives studied in this Draft EIS and discusses how they were developed. It also includes documentation of alternatives that were analyzed and subsequently eliminated from further consideration.

2.1 Alternatives Development Process

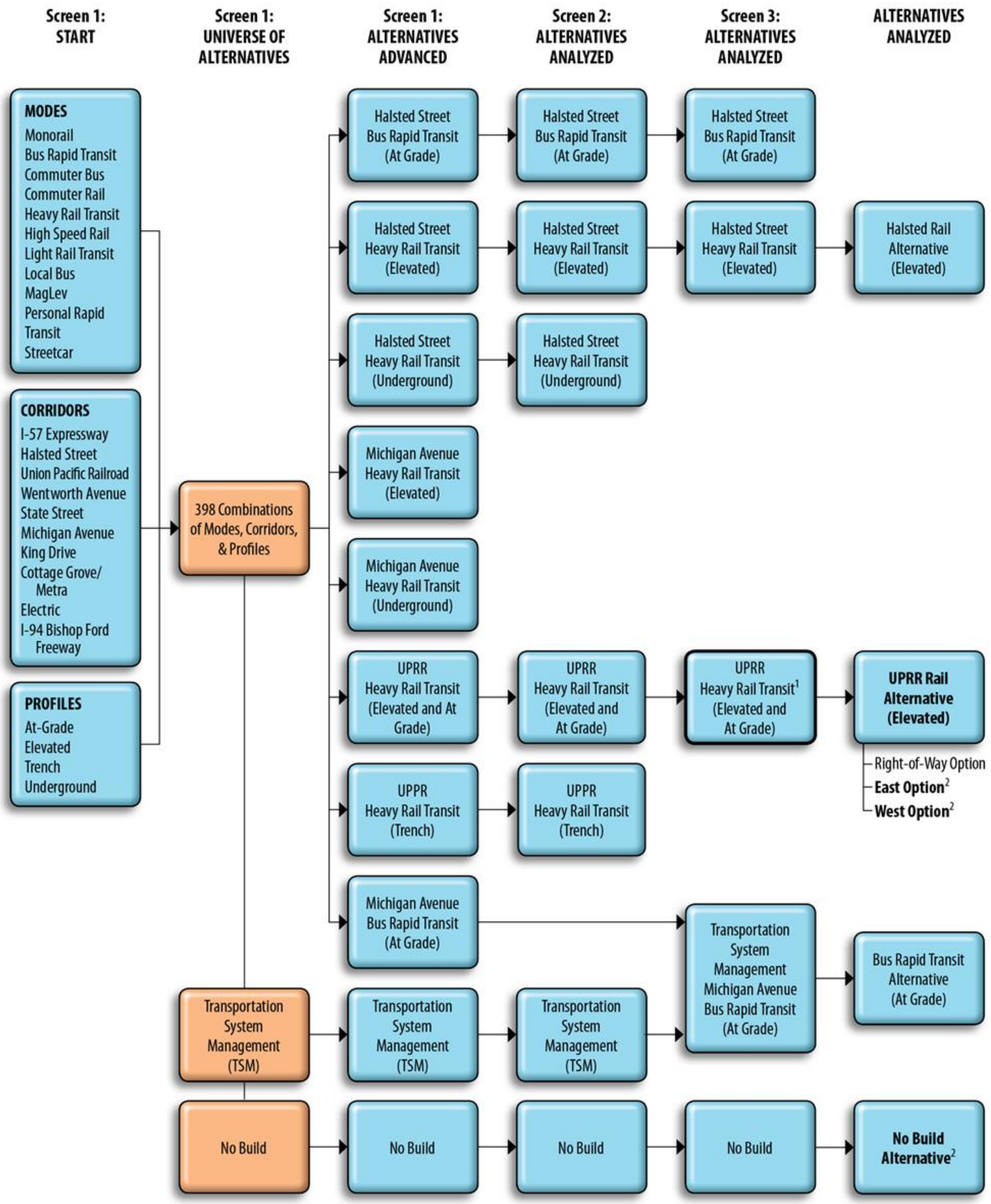
CTA began developing the alternatives studied in this Draft EIS during the AA, which took place during 2006–2009. Starting with multiple modes and corridor options, CTA developed and screened alternatives through a combination of conceptual engineering, public input (open house and stakeholder meetings), and preliminary analysis of potential impacts and costs. A three-level, detailed screening process was used to evaluate the alternatives and identify an LPA. **Appendix A** (LPA Report) provides detailed documentation of the Screen 1, Screen 2, and Screen 3 evaluations.

The Screen 1 evaluation began by identifying the universe of alternatives, which included a wide range of transit modes (such as bus, rail, or streetcar), project area corridors, and profiles (where the transit line is in relation to the ground). Combinations of 11 modes, 9 corridors, and 4 profiles were evaluated against the purpose and need. Based on this evaluation, the following alternatives were carried forward for further analysis in Screen 2: two bus rapid transit (BRT) alternatives along Halsted Street and Michigan Avenue; six HRT alternatives along Halsted Street, the UPRR, and Michigan Avenue; the No Build Alternative; and a "low cost" alternative (formerly required for FTA analyses known as the Transportation System Management [TSM] Alternative).

The alternatives carried through to the Screen 2 evaluation were more thoroughly defined to include mapping of a more defined alignment, identification of potential station locations, and preliminary service plans. Station spacing was determined by the type of alternative proposed, project area needs, and consistency with the purpose and need. The eight evaluation factors for the Screen 2 included a mix of qualitative and quantitative factors intended to further evaluate the performance of each alternative with respect to the project goals and objectives. Specific evaluation factors included physical constraints; right-of-way requirements; social and economic factors; demographics and employment; environmental factors; noise, visual, natural, and cultural resource impacts; transportation factors; and travel time, transit connectivity, and traffic.

Based on the results of the Screen 2 evaluation, a BRT alternative along Halsted Street (operating on dedicated lanes), two HRT alternatives along Halsted Street and the UPRR, the No Build Alternative, and the TSM Alternative were recommended for further evaluation in Screen 3. In addition to the alternatives carried forward from the Screen 2 evaluation and based on discussions with FTA, CTA combined the TSM Alternative with a BRT alternative (operating on existing right-of-way rather than dedicated lanes as proposed in Screen 2) along Michigan Avenue to form a single alternative (called the BRT Alternative) for evaluation in Screen 3. Because the Michigan Avenue BRT Alternative would operate in the existing right-of-way, it would require fewer property acquisitions than BRT on dedicated lanes. Screen 3 was a two-step evaluation process that included the further definition and refinement of alternatives, including conceptual design and the evaluation of these alternatives. Nine evaluation factors were used to evaluate the alternatives as part of Screen 3, including physical constraints, public support, social and economic factors, environmental factors, transportation factors, capital cost comparison, operating and maintenance cost comparison, ridership potential, and FTA's Cost Effectiveness Index. The result of the Screen 3 evaluation was a recommendation for the LPA: the UPRR Rail Alternative.

Based on the results of the AA and considerable public support for the corridor, including a 2004 referendum where 38,000 residents in the 9th and 34th Wards supported the UPRR corridor for the RLE Project, the UPRR Rail Alternative was recommended as the LPA, indicating that it is the alternative that would best meet the purpose and need of the project while addressing potential impacts and other potential constraints. The UPRR Rail Alternative would provide access to the most densely populated portions of the study area, which are primarily residential and transit supportive. The Chicago Transit Board designated the UPRR Rail Alternative as the LPA on August 12, 2009. **Figure 2-1** summarizes the AA process.


Screen 1: START
Screen 1: UNIVERSE OF ALTERNATIVES
Screen 1: ALTERNATIVES ADVANCED
Screen 2: ALTERNATIVES ANALYZED
Screen 3: ALTERNATIVES ANALYZED
ALTERNATIVES ANALYZED
MODES
Monorail
Bus Rapid Transit
Commuter Bus
Commuter Rail
Heavy Rail Transit
High Speed Rail
Light Rail Transit
Local Bus
MagLev
Personal Rapid Transit
Streetcar
CORRIDORS
I-57 Expressway
Halsted Street
Union Pacific Railroad
Wentworth Avenue
State Street
Michigan Avenue
King Drive
Cottage Grove/ Metra Electric
I-94 Bishop Ford Freeway
PROFILES
At-Grade
Elevated
Trench
Underground
398 Combinations of Modes, Corridors, & Profiles
Transportation System Management (TSM)
No Build
Halsted Street Bus Rapid Transit (At Grade)
Halsted Street Bus Rapid Transit (At Grade)
Halsted Street Bus Rapid Transit (At Grade)
Halsted Street Heavy Rail Transit (Elevated)
Halsted Street Heavy Rail Transit (Elevated)
Halsted Street Heavy Rail Transit (Elevated)
Halsted Rail Alternative (Elevated)
Halsted Street Heavy Rail Transit (Underground)
Halsted Street Heavy Rail Transit (Underground)
Michigan Avenue Heavy Rail Transit (Elevated)
Michigan Avenue Heavy Rail Transit (Underground)
UPRR Heavy Rail Transit (Elevated and At Grade)
UPRR Heavy Rail Transit (Elevated and At Grade)
UPRR Heavy Rail Transit[1] (Elevated and At Grade)
UPRR Rail Alternative (Elevated)
Right-of-Way Option
East Option[2]
West Option[2]
UPRR Heavy Rail Transit (Trench)
UPRR Heavy Rail Transit (Trench)
Michigan Avenue Bus Rapid Transit (At Grade)
Transportation System Management (TSM)
Transportation System Management (TSM)
Transportation System Management Michigan Avenue Bus Rapid Transit (At Grade)
Bus Rapid Transit Alternative (At Grade)
No Build
No Build
No Build
No Build Alternative[2]

[1] The Chicago Transit Board designated the UPRR Rail Alternative as the Locally Preferred Alternative on August 12, 2009.

[2] This Draft EIS presents impacts of the No Build Alternative and two options of the UPRR Rail Alternative: the East Option and the West Option.

EIS = Environmental Impact Statement, UPRR = Union Pacific Railroad

Figure 2-1: Alternatives Development Summary

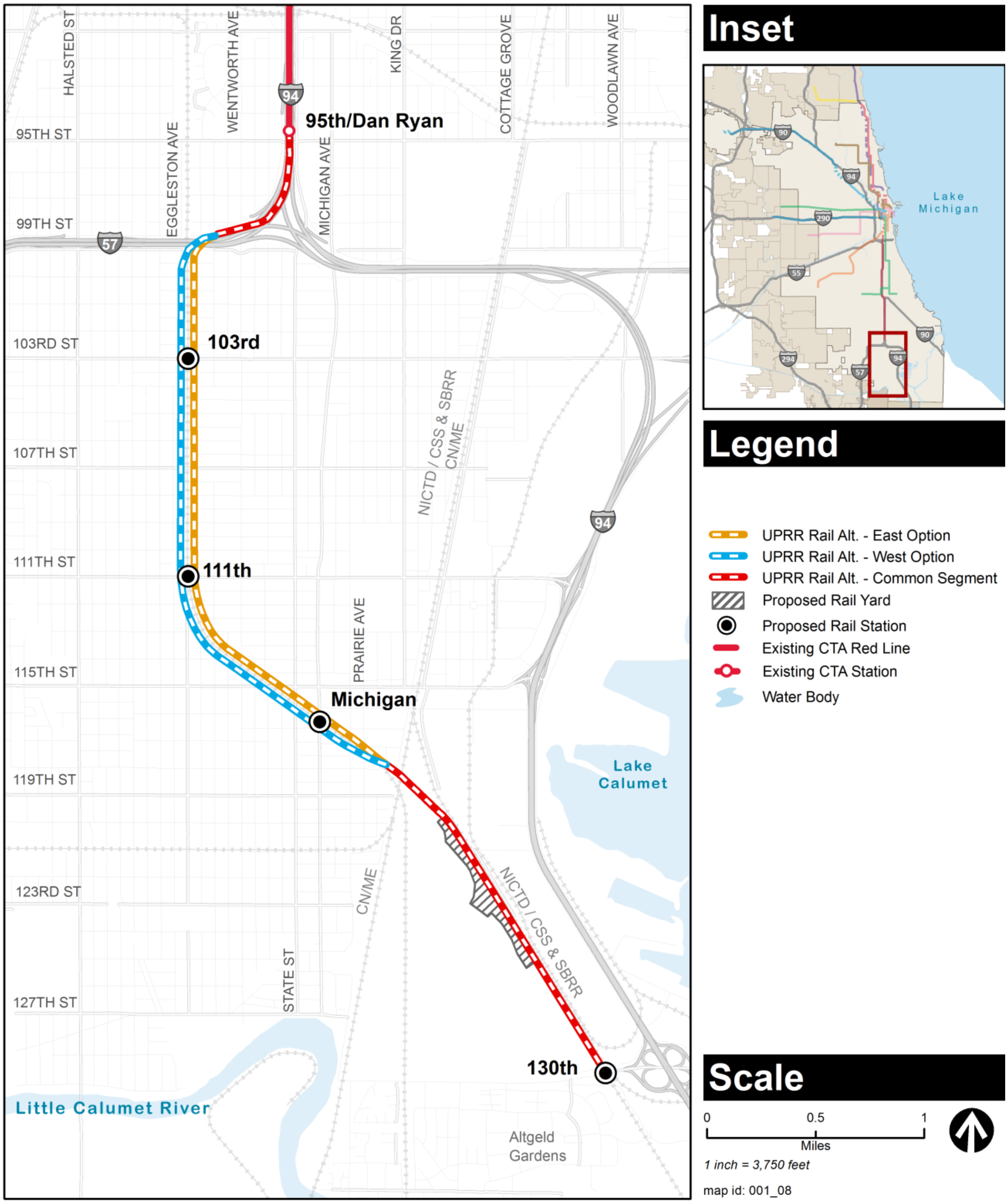
After the AA, CTA further refined the alternatives for presentation during the NEPA scoping process and study in this Draft EIS. At the conclusion of the AA process, the UPRR Rail Alternative was anticipated to be located adjacent to the east or west edge of the UPRR right-of-way. In 2012, CTA learned of a Chicago Department of Transportation (CDOT) feasibility study looking at moving UPRR freight operations out of the existing UPRR corridor before the RLE Project. By moving UPRR freight operations out of the existing UPRR corridor, CTA could use the existing UPRR right-of-way for the RLE Project. CTA evaluated this new option of the UPRR Rail Alternative, known as the Right-of-Way Option, in preparation of this Draft EIS. Subsequent coordination between local agencies and the railroads indicated that relocating UPRR freight operations from this corridor presents considerable challenges and would not be feasible.

During 2012–2014, CTA evaluated benefits and impacts of four alternatives: the No Build Alternative, the BRT Alternative (along Michigan Avenue), the UPRR Rail Alternative, and the Halsted Alternative. CTA evaluated three options for the UPRR Rail Alternative: the Right-of-Way Option, East Option, and West Option. CTA also evaluated two options for the UPRR Rail Alternative 130th Street station: a South Station Option and a West Station Option. **Appendix E**, *Description of Alternatives*, contains details about each of these four alternatives and both options for the 130th Street station. The supporting technical memoranda, included in this Draft EIS as **Appendices H–X**, include analysis of each of these alternatives and options.

In August 2014, based on the technical analysis and public input until then, CTA announced the NEPA Preferred Alternative—the UPRR Rail Alternative. Because the Right-of-Way Option is not feasible, the Draft EIS evaluates only the East and West Options for the UPRR Rail Alternative. CTA has chosen to move forward with the South Station Option at 130th Street based on technical analysis and public feedback. **Section 2.4** contains additional information about the BRT Alternative, UPRR Right-of-Way Option, UPRR West Station Option for the 130th Street station, and Halsted Alternative in the discussion of alternatives considered but not pursued.

2.2 Alternatives Evaluated in the Draft Environmental Impact Statement

This Draft EIS discusses the No Build Alternative and two options of the UPRR Rail Alternative: the East Option and the West Option. **Figure 2-2** shows the UPRR Rail Alternative alignments. For simplicity, this alternative is called the "UPRR Alternative" in the remaining sections of this document and the UPRR Rail Alternative East and West Options are referred to as the "East and West Options." **Appendix F** contains plans and profiles for the East and West Options.


HALSTED ST
WENTWORTH AVE
KING DR
COTTAGE GROVE
WOODLAWN AVE
94
95th/Dan Ryan
95TH ST
EGGLESTON AVE
MICHIGAN AVE
99TH ST
57
103RD ST
103rd
107TH ST
NICTD / CSS & SBRR
CN/ME
94
111TH ST
111th
PRAIRIE AVE
115TH ST
Michigan
119TH ST
Lake Calumet
123RD ST
CN/ME
NICTD / CSS & SBRR
STATE ST
127TH ST
130th
Little Calumet River
Altgeld Gardens
Inset
Lake Michigan
90
94
290
55
90
294
57
94
Legend
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
UPRR Rail Alt. - Common Segment
Proposed Rail Yard
Proposed Rail Station
Existing CTA Red Line
Existing CTA Station
Water Body
Scale
0
0.5
1
Miles
1 inch = 3,750 feet
map id: 001_08

CN/ME = Canadian National/Metra Electric District, NICTD/CSS & SBRR = Northern Indiana Commuter Transportation District/Chicago South Shore & South Bend Railroad

Figure 2-2: Union Pacific Railroad Alternative Options

2.2.1 No Build Alternative

The No Build Alternative is a required alternative as part of the NEPA environmental analysis and is used for comparison purposes to assess the relative benefits and impacts of implementing the UPRR Alternative.

The No Build Alternative represents future conditions if the UPRR Alternative were not implemented. The No Build Alternative includes all projects currently included in the fiscally constrained portion of the CMAP FY 2014–2019 TIP. Projects in the TIP in the project area include renovation of the 95th Street Terminal, rail line maintenance and improvements, preservation of the North Pullman historic area, road resurfacing, coordination of traffic signal timing, and construction of a new bicycle/pedestrian facility. Impacts related to the construction and operation of the 95th Street Terminal are documented in the approved *95th Street Terminal Improvement Project Environmental Assessment* (CTA 2013b). FTA issued a Finding of No Significant Impact for the 95th Street Terminal Improvement Project in April 2013 and an Amended Finding of No Significant Impact in July 2013. An Environmental Assessment Re-Evaluation performed by FTA in July 2016 confirmed that the Amended Finding of No Significant Impact dated July 2013 remains valid. No new infrastructure would be built as part of the RLE Project under the No Build Alternative.

2.2.2 Union Pacific Railroad Alternative

The UPRR Alternative would extend the heavy rail Red Line 5.3 miles from the existing 95th Street Terminal to 130th Street. As noted above, the Chicago Transit Board designated the UPRR Alternative as the LPA at its August 12, 2009 board meeting. The UPRR Alternative would reduce transit travel times from the project area to points on the Red Line north of 95th Street (from 130th Street to 95th Street) from 28 minutes to approximately 14 minutes (CTA 2009, see **Appendix D**). Two alignment options adjacent to the UPRR are considered for this alternative: the East Option and the West Option.

Alignment

The UPRR Alternative alignment would run south along I-94 from the 95th Street Terminal, then curve west along the north side of I-57 (within the I-57 right-of-way) for nearly ½ mile until reaching the UPRR corridor in the vicinity of Eggleston Avenue, as shown on **Figure 2-2**. The alignment would turn south to follow the UPRR corridor. Two options are being considered for the alignment along the UPRR corridor. The CTA elevated structure would be located either east or west of the existing UPRR corridor. The alignment would follow the UPRR corridor to Prairie Avenue, where it would cross over the Canadian National/Metra Electric District (CN/ME) tracks near 119th Street. South of this point, the East and West Options would follow the same alignment southeast along the NICTD/Chicago South Shore & South Bend Railroad (NICTD/CSS & SBRR) right-of-way using a portion of the Norfolk Southern Railway and Consolidated Rail Corporation (Conrail) right-of-way to the terminus (end) of the RLE at 130th Street.

As described, two UPRR Alternative options for the segment of the proposed alignment between I-57 and the CN/ME tracks near 119th Street are studied in this Draft EIS:

- East Option - The CTA elevated structure would be placed immediately adjacent to the east side of the UPRR right-of-way.

- West Option - The CTA elevated structure would be placed immediately adjacent to the west side of the UPRR right-of-way.

Structure and Tracks

In the UPRR Alternative, the tracks would be on a new elevated (aerial) track structure from the 95th Street Terminal through the CN/ME track crossing near 119th Street. South of this elevated crossing, the tracks would transition to an at-grade profile (they would continue at ground level).

The proposed elevated structure would be a closed-deck, steel and concrete, aerial track structure with direct-fixation track and welded rail (welded at joints). With direct-fixation track, rails are mounted to specially designed concrete blocks fixed to the concrete deck. Noise barriers (approximately 4 feet in height, measured from the top surface of the concrete deck) are proposed for portions of the structure on both sides of the track deck to reduce noise transmission at and below track level. The structure would vary in height from 14 feet 9 inches to 40 feet above existing grade, depending on required clearances above existing roadways and railroads. The two tracks would have a spacing of 13 feet (13 feet between the track centerlines). The elevated deck, on which the tracks would run, would vary in width from approximately 30 feet to approximately 52 feet at stations.

Figure 2-3 is a photo simulation of a typical proposed elevated structure above the UPRR right-of-way. The design shown is conceptual, and the actual design would vary based on further engineering and community input.

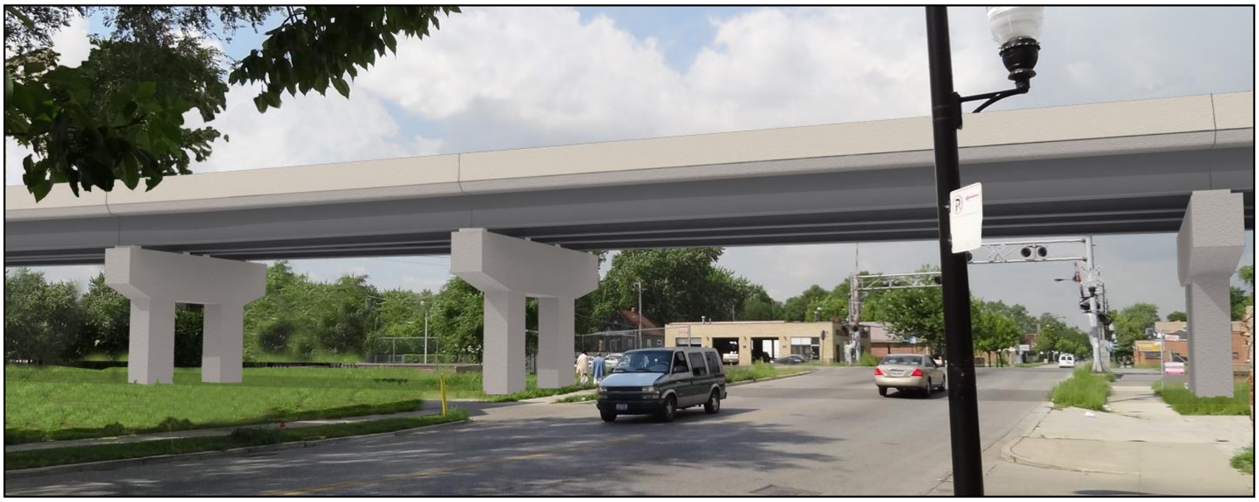


Figure 2-3: Photo Simulation of Union Pacific Railroad Alternative East Option at 111th Street Facing West - Typical Proposed Elevated Structure

Stations

As part of either the East or West Option, four new stations would be constructed at the following locations along the proposed alignment:

- 103rd Street (elevated station)
- 111th Street (elevated station)

- Michigan Avenue (elevated station)
- 130th Street (at-grade station)

At 103rd Street, 111th Street, and Michigan Avenue, East Option stations would be located east of the UPRR tracks, and West Option stations would be located west of the UPRR tracks. Each station would have a center platform, approximately 26 feet wide and 520 feet long. Platforms would accommodate ten-car trains. Each station would be Americans with Disabilities Act (ADA) accessible with elevators. Each station area would include areas for bus boarding, new crosswalks where needed to accommodate pedestrian traffic, and park & ride facilities. **Figure 2-4** is a photo simulation of a typical proposed station. The design shown is conceptual, and the actual design would vary based on further engineering and community input.

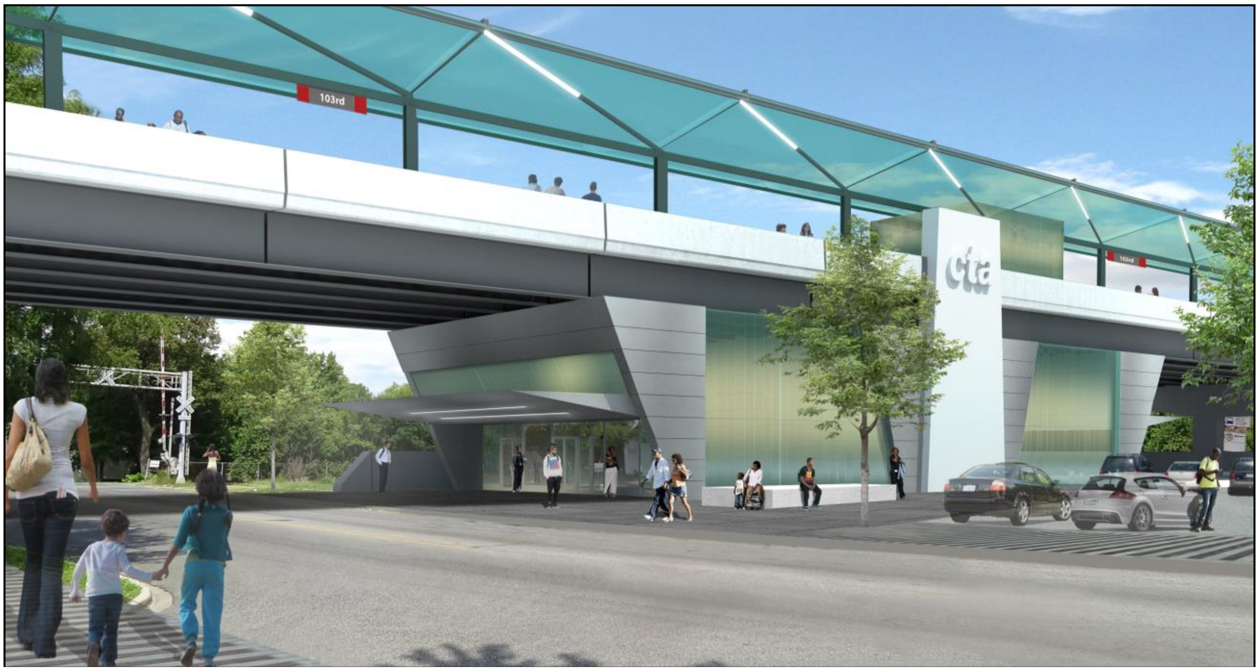


Figure 2-4: Photo Simulation of Union Pacific Railroad Alternative East Option at 103rd Street Facing Northwest - Typical Proposed Elevated Station

The 130th Street station would be located immediately west of the NICTD/CSS & SBRR right-of-way at 130th Street. Pedestrians from Altgeld Gardens would access the station from 130th Place. Pedestrians would not need to cross 130th Street to access the station because 130th Street goes over 130th Place and the railroad tracks.

Park & Ride Facilities

To accommodate passengers arriving at either the East or West Option stations by car, park & ride facilities would be constructed near each station. **Table 2-1** lists the park & ride locations, number of parking spaces at each location, and the proposed parking facilities for both the East and West Options. A total of 3,700 parking spaces would be available along the corridor. CTA estimated parking demand based on travel demand modeling performed in 2009. Bus turnarounds would be provided in the parking areas. The ground floor of the parking structure at the Michigan Avenue station would contain space for retail and community facilities.

Table 2-1: Summary of Park & Ride Facilities

Station	Number of Parking Spaces	Union Pacific Railroad Alternative East Option	Union Pacific Railroad Alternative West Option
103rd Street	200	Divided between two surface parking lots (one on the east side of the tracks and one on the west side of the tracks)	One surface parking lot
111th Street	200	Divided between two surface parking lots (one on the east side of the tracks and one on the west side of the tracks)	One surface parking lot
Michigan Avenue	1,000	Divided between a three-story parking structure and a surface parking lot (a surface parking lot on the east of the tracks and a parking structure on the west of the tracks)	Five-story parking structure
130th Street	2,300	Seven-story parking structure	

Yard and Shop

The 120th Street yard and shop, with a capacity of 340 train cars, would be sited on a combination of industrial and vacant land east of the CN/ME tracks and west of the NICTD/CSS & SBRR tracks near 120th Street and Cottage Grove Avenue. The yard would be entirely at grade. Parking spaces for CTA employees would be included at the yard. The existing 98th Street Yard and Shop at the south end of the existing Red Line would be used for other purposes, such as non-revenue equipment repairs once the 120th Street yard and shop is constructed. The yard could also function as a location where trains could be turned back from south to north for irregular or emergency service.

Substations

Substations are buildings along the alignment that house equipment to regulate the flow of electricity to the third rail, which supplies power to the trains. Substations would be placed approximately 0.8 to 1 mile apart along the alignment. Six new and upgraded substation locations are proposed: 98th Street Yard and Shop, near 101st Street, near 107th Street, near Lafayette Avenue, within the 120th Street yard and shop area, and near the 130th Street station. CTA would confirm the need and location for substations during future design phases.

Operating Plan

The UPRR Alternative would operate 24 hours a day, each day of the year. Service frequency is anticipated to be the same as with the current service (April 2016) at 95th Street—approximately 6-minute headways during morning peak hours and approximately 3-minute headways during afternoon peak hours. Headways at night (between 1 AM and 4 AM) would be approximately 13–15 minutes. Service frequency would be adjusted to accommodate demand once the RLE service has been implemented. Train frequencies would vary throughout the day (like existing Red Line service), and late night service would operate approximately every 15 minutes. Based on the estimated running time for the RLE, an additional 78 rail cars would be required as part of this project. The additional 78 rail cars would include 64 rail cars to meet the peak period schedule, plus 14 spare rail cars. Train sets would be eight cars long. Stations and track alignment would accommodate ten-car trains to maintain the option of running ten-car trains in the future. With the extension of the Red Line, some existing bus routes would be rerouted to feed into the proposed stations.

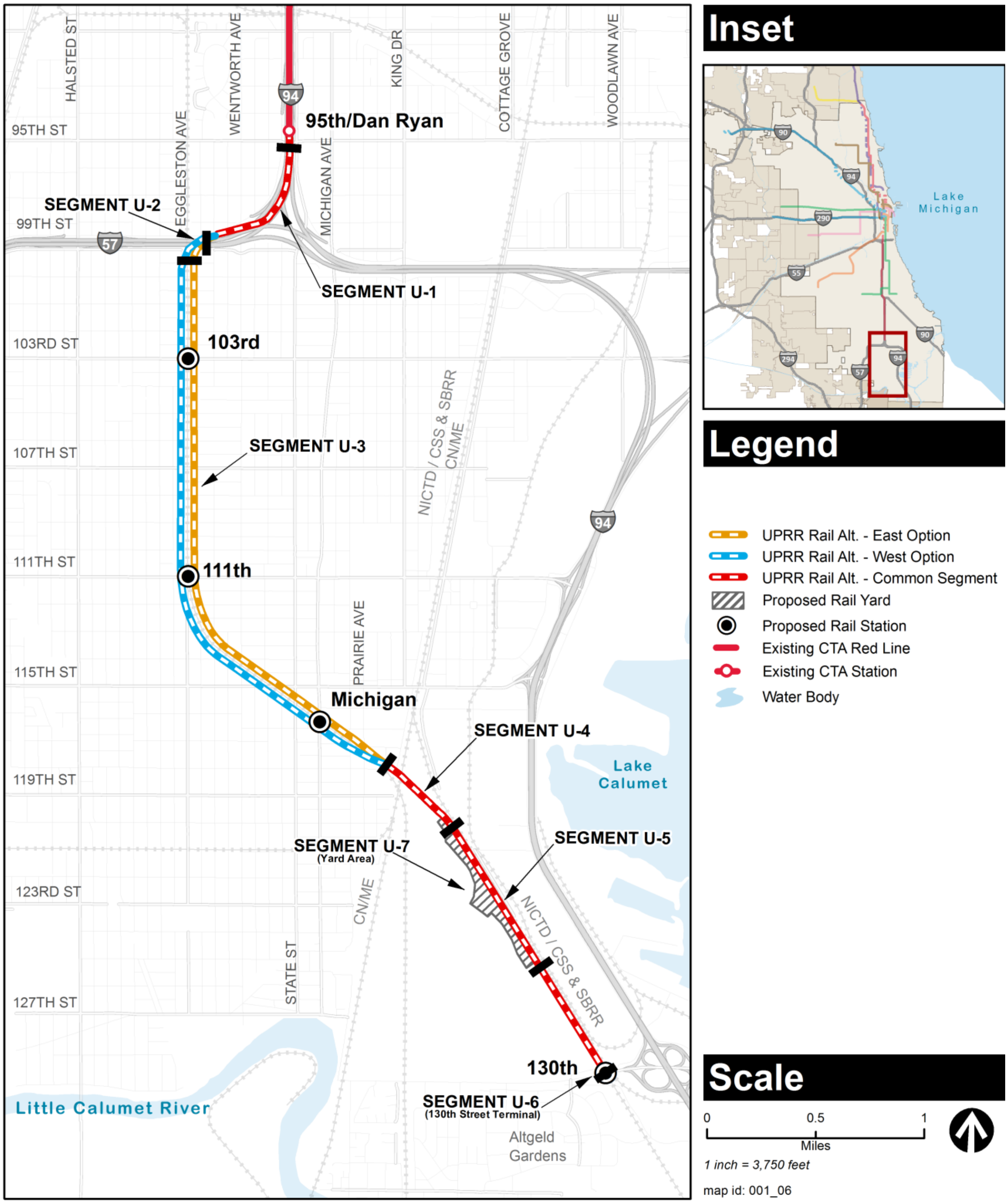
2.3 Summary of Construction Activities

This section summarizes the construction that would be needed for the UPRR Alternative. The *Description of Construction and Phasing for Build Alternatives* (**Appendix G**) provides additional details. Final engineering and pre-construction activities (see **Section 2.3.3**) would occur during 2018–2021. Heavy construction work would occur during 2022–2025, which would include 1 year of testing. The tentative opening year for the RLE is 2026. The construction timeline is dependent on federal reviews and federal, state, and local funding.

2.3.1 Construction Segments and Phasing

Construction activities would be grouped by type of work and location. Overall schedule and coordination of all construction segments would be phased and scheduled to maintain CTA operations at the 95th Street Terminal and 98th Street Yard and Shop and vehicular traffic on affected expressways and roadways.

For the purposes of describing construction activities, the RLE corridor would be divided into seven segments. **Figure 2-5** shows proposed construction segments. **Table 2-2** describes work activities for each construction segment. The construction segments and phasing plans described here are based on conceptual engineering completed to date and provide the greatest amount of flexibility for future design within a maximum envelope for evaluating environmental impacts. It is anticipated that construction of the RLE Project would be completed from north to south; however, future design phases may determine a different sequencing of construction activities.


HALSTED ST
WENTWORTH AVE
KING DR
COTTAGE GROVE
WOODLAWN AVE
95TH ST
EGGLESTON AVE
MICHIGAN AVE
94
95th/Dan Ryan
SEGMENT U-2
99TH ST
57
SEGMENT U-1
103RD ST
103rd
NICTD / CSS & SBRR
CN/ME
107TH ST
SEGMENT U-3
94
111TH ST
111th
PRAIRIE AVE
115TH ST
Michigan
SEGMENT U-4
119TH ST
Lake Calumet
SEGMENT U-7
(Yard Area)
SEGMENT U-5
123RD ST
CN/ME
NICTD / CSS & SBRR
STATE ST
127TH ST
130th
SEGMENT U-6
(130th Street Terminal)
Little Calumet River
Altgeld Gardens
Inset
Lake Michigan
90
94
290
55
90
294
57
94
Legend
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
UPRR Rail Alt. - Common Segment
Proposed Rail Yard
Proposed Rail Station
Existing CTA Red Line
Existing CTA Station
Water Body
Scale
0
0.5
1
Miles
1 inch = 3,750 feet
map id: 001_06

CN/ME = Canadian National/Metra Electric District, NICTD/CSS & SBRR = Northern Indiana Commuter Transportation District/Chicago South Shore & South Bend Railroad

Figure 2-5: Construction Segments

Table 2-2: Construction Segments and Summary of Work Activities

Segment	Location	Work Activities
U-1	From the 95th Street Terminal to the beginning of the horizontal curve at the UPRR crossing	▪ Install trackwork and signals to tie into the 95th Street Terminal. Possibly relocate trackwork between the 95th Street Terminal and the 98th Street Yard and Shop. ▪ Construct approximately 500 feet of retained fill structure south of 95th Street Terminal. ▪ Construct single-track, elevated structures over existing CTA tracks leading to the 98th Street Yard and Shop and over the existing CTA/southbound I-94 tunnel. ▪ Construct the dual-track, elevated structure through the I-94/I-57 interchange, across the westbound I-57 entrance ramp from southbound I-94, and north of the southbound I-57 lane. ▪ Upgrade the substation currently serving the 98th Street Yard and Shop.
U-2	The horizontal curve at the UPRR crossing	▪ Construct the dual-track, elevated structure spanning both lanes of I-57.
U-3	From the end of the horizontal curve at the UPRR crossing to the CN/ME track crossing near 119th Street	▪ Demolish existing buildings and structures in the proposed right-of-way where necessary. ▪ Construct the dual-track, elevated structure along the UPRR corridor. ▪ Construct stations at 103rd Street, 111th Street, and Michigan Avenue. ▪ Construct parking lots/structures and bus turnarounds at stations. ▪ Construct three substations. ▪ East Option only - Relocate the Block Park communications tower.
U-4	From the CN/ME track crossing near 119th Street to the at-grade track	▪ Demolish existing buildings and structures in the proposed right-of-way where necessary. ▪ Construct the dual-track, elevated structure along the UPRR corridor and over the CN/ME tracks near 119th Street. ▪ Construct the 120th Street yard and shop track tie-in. ▪ Construct retained embankment structure to carry the elevated structure to grade. ▪ West Option only - Construct the dual-track, elevated structure along and across the UPRR corridor and Prairie Avenue.
U-5	From the end of the aerial structure crossing the CN/ME tracks near 119th Street to the lead tracks into the 130th Street station (which would begin near the south end of the proposed yard)	▪ Construct the track roadbed. ▪ Construct the MWRD access road and bridge over the RLE tracks and the NICTD/CSS & SBRR crossing.
U-6	130th Street station (including lead tracks)	▪ Construct the track roadbed. ▪ Construct the 130th Street station. ▪ Construct the parking structure for the 130th Street station. ▪ Construct bus bays and road access for the 130th Street station. ▪ Construct the MWRD access road to 130th Street. ▪ Construct the substation.
U-7	120th Street yard and shop	▪ Construct the yard and track. ▪ Construct the shop building. ▪ Construct the access road and CTA employee parking. ▪ Construct the substation.

UPRR = Union Pacific Railroad, CTA = Chicago Transit Authority, CN/ME = Canadian National/Metra Electric District, MWRD = Metropolitan Water Reclamation District of Greater Chicago, RLE = Red Line Extension, NICTD/CSS & SBRR = Northern Indiana Commuter Transportation District/Chicago South Shore & South Bend Railroad

2.3.2 Construction Staging

Construction staging areas provide space to store equipment and materials, load trucks, and have workers perform parts of the construction process. Construction staging areas would be within the proposed right-of-way or within property acquired for stations, park & ride facilities, and the yard and shop. Nearby vacant properties and parking lots may also be used through the establishment of temporary construction easements. Staging and item assembly would be performed off-street to the fullest extent possible, to minimize traffic and community disruption. Along I-57, temporary construction easements on the expressway may be required, requiring shoulder and lane closures as well as temporary shutdown of traffic. Temporary construction easements on Metropolitan Water Reclamation District of Greater Chicago (MWRD) property near the yard and shop may be required as well.

Construction vehicles would access the staging areas on a regular basis, and would require special hauling routes and queuing locations to deliver materials and equipment, as well as remove debris. These special routes may require temporary lane closures or reconfigurations. Hauling routes would be designed to minimize impacts on noise- and dust-sensitive areas, such as residential neighborhoods, to the extent feasible. Specific design of each construction staging area would be determined during future design phases.

2.3.3 Pre-Construction Activities

Pre-construction activities would include development of construction schedules, quality plans, and procurement schedules. Utility protection and relocation information would be coordinated and verified in advance of the early construction activities. CTA and the construction contractor would initiate community notifications as early as possible to provide opportunities for community input and preparation. Demolition and building permits would be obtained during pre-construction as well. Construction mitigation measures, such as fencing, would be put in place in advance of commencing major construction activities. Materials requiring mitigation, such as asbestos, lead paint, and contaminated soil, would be identified and addressed before the start of demolition and excavation activities. The proposed UPRR alignment is in a residential area with homes, parks, schools, and businesses. Construction activities would be evaluated such that the local dynamics of the area and the needs of the property owners and businesses, as well as the end users, are incorporated into the project.

2.3.4 Traffic Rerouting

During construction, auto traffic, pedestrians, and buses may need to be rerouted around the construction sites. Rerouting of traffic is normally done by using detours and complete street closures. Street closures may include main streets, side streets, alleys, and driveways. Temporary traffic lanes and driveways would be used as needed to provide alternate access. The following activities would occur as part of traffic rerouting:

- Placement of construction signage and temporary traffic barriers
- Temporary reduction in the number of available lanes or complete street closures
- Conversion of two-way streets to one-way operation on a temporary basis

- Implementation of detours around lane and street closures
- Provision of temporary traffic lanes
- Provision of special access points for construction vehicles traveling to and from construction staging areas and the proposed rail right-of-way
- Implementation of sidewalk detours and temporary parking restrictions
- Temporary partial closure of the 95th Street Terminal and tracks leading to the 98th Street Yard and Shop, with provision of alternate bus service

Specific maintenance of traffic measures for each affected roadway and for each construction phase would be determined in a traffic management plan. The traffic management plan would be developed in the design phase of this project and would be reviewed by the agency or agencies with jurisdiction over the affected roadways.

2.3.5 Demolition

Construction of either the East or West Option would require building demolition. The demolition process would temporarily result in increased noise and debris. Work would be performed in accordance with local ordinances for construction activities. Pedestrian and vehicular traffic would not be allowed into demolition areas. The demolition process may include concrete removal, use of jackhammers, excavation, and removal of foundations. Materials requiring disposal would be stored in construction staging areas, loaded into dump trucks, and moved off-site. All materials would be handled and disposed of in a proper manner, in accordance with applicable federal, state, and local regulations.

2.3.6 Elevated Structures and Track Placement

Foundations for elevated structures and parking garages can consist of concrete and steel footings or drilled concrete shafts, depending on site conditions. A geotechnical engineer would perform exploratory borings during future design phases to determine soil type, soil capacity, and physical obstructions. The soil would be sampled to determine whether contaminants are likely to be present in the soil. All types of foundations would require excavation and removal of soil from the construction area via truck. Materials shipped off-site for disposal would be handled through approved facilities. Large cranes would be used to guide piles into position, and impact pile-driving may be needed. As described in later sections, impact pile-driving would be avoided in the vicinity of the historic Roseland Pumping Station.

After placement of foundations for the elevated structures, reinforced cast-in-place concrete piers would be constructed. The superstructure would consist of steel or concrete girders with a concrete deck to support the tracks. Along at-grade segments, tracks would be placed on ballast and ties after grading and soil preparation.

2.3.7 Earth Retention Structures

Two general categories of earth structures may be used on this project. The first is earth embankment, which consists of compacted earth with slopes on either side of the tracks. Typically, the slopes would include vegetation. Fencing for security would also be included. Earth embankments are appropriate in areas without right-of-way constraints, such as east of the CN/ME track crossing near 119th Street. The second category of earth structures is earth retained between concrete walls. These walls may use cast-in-place concrete or precast concrete panels. Retained embankments are appropriate in areas where additional right-of-way acquisition would cause additional impacts.

2.3.8 Temporary Shoring

During excavation, temporary shoring may be required to facilitate construction and protect adjacent structures. Shoring would consist of steel sheet piling driven into the ground. Temporary shoring for excavations may also include h-piles and lagging, cofferdams, and trench boxes. Temporary shoring of elevated structures may include temporary columns, footings, and shoring towers. Elevated structural work may include temporary protective barriers, fencing, barricades, and containments. The rig for the vibratory pile driver may be located within the construction staging areas, the permanent right-of-way for the project, or the street right-of-way depending on the space limitations and access points.

2.4 Alternatives Considered but not Pursued

During development of the project, CTA fully evaluated the BRT Alternative, the Right-of-Way Option for the UPRR Alternative, and the Halsted Rail Alternative (Halsted Alternative). In addition, CTA fully evaluated a West Station Option for the 130th Street station. These alternatives and the station option were analyzed as part of the technical memoranda preparation for the Draft EIS, but are not included in this Draft EIS. They were eliminated from analysis based on public input, technical constraints, potential impacts, and the extent to which they did not meet the project's purpose and need.

CTA also evaluated a variation of the UPRR Alternative where the tracks would be at grade rather than elevated, described in **Section 2.4.2**.

2.4.1 Bus Rapid Transit Alternative

CTA considered a BRT Alternative along Michigan Avenue between 95th Street Terminal and Altgeld Gardens. This limited-stop enhanced bus route along the existing #34 South Michigan Avenue bus route would have transit signal priority along Michigan Avenue. The alternative included four stops, each with park & ride facilities. Although the BRT Alternative was a lower-cost alternative than the UPRR Alternative, it was eliminated in August 2014 based on public feedback including the following concerns:

- The BRT Alternative would have minimal travel time improvements compared to the No Build Alternative (23 minutes from 130th Street to 95th Street under the BRT Alternative, compared to 28 minutes for existing conditions [CTA 2009] or 14 minutes for the UPRR Alternative over the same distance).
- Approximately 1 million riders per year were anticipated for the BRT Alternative—in comparison to 13 million riders per year anticipated for the UPRR Alternative (CTA 2009).

- The BRT buses would not have traveled on a dedicated lane along Michigan Avenue because of limited right-of-way. Although transit signal priority was planned, additional travel time savings would not have been realized without dedicated lanes for BRT buses.

2.4.2 Union Pacific Railroad Alternative

This Draft EIS summarizes the benefits and impacts of the East and West Options. In preparation of the Draft EIS, CTA fully evaluated the Right-of-Way Option and the 130th Street Station West Station Option. CTA also considered an at-grade (rather than elevated) track structure for the UPRR Alternative. Engineering memos, included with the plans and profiles in **Appendix F**, provide additional details on the at-grade evaluation of the UPRR Alternative.

Right-of-Way Option

As part of the UPRR Right-of-Way Option, the elevated CTA structure would have been placed in the UPRR right-of-way. This option was added in 2012 in response to the CDOT feasibility study looking at moving UPRR freight operations out of the existing UPRR corridor before the RLE Project. The Right-of-Way Option would only be feasible if the separate project were implemented before implementation of the RLE Project. Coordination between local agencies and the railroads indicted that relocation of UPRR freight operations from this corridor presents considerable challenges; therefore, this option is no longer feasible. Estimated travel times and ridership were the same for the Right-of-Way Option as for the East and West Options. Because the elevated CTA structure would have been placed in the UPRR right-of-way, the Right-of-Way Option would have resulted in fewer displaced properties than either the East or West Option.

130th Street Station - West Station Option

CTA initially considered two options for the 130th Street station: a South Station Option and a West Station Option. The South Station Option (described as part of the Build Alternative in **Section 2.2.2**) would be located immediately west of the NICTD/CSS & SBRR right-of-way at 130th Street. The West Station Option would be located along the north side of 130th Street at Evans Avenue. Pedestrians from Altgeld Gardens would access the West Station Option through a pedestrian crosswalk on 130th Street. A traffic signal would be required at this intersection to allow pedestrians to safely cross 130th Street.

The South Station Option is supported by the community and the Chicago Housing Authority because it would be more accessible from Altgeld Gardens. The West Station Option would incur additional costs because it would require approximately 1,100 feet of additional track due to its location, and would require intersection improvements to allow pedestrians to safely cross the street. The South Station Option would provide the best opportunity for a future connection to NICTD, improving regional rail connections and linkages to other modes of public transportation. Based on public feedback and technical analysis, CTA is considering only the South Station Option for 130th Street station.

At-Grade Track Structure

CTA considered a variation of the UPRR Alternative in which the RLE tracks would run at grade along the UPRR rail corridor (between I-57 and Prairie Avenue). In this variation, the existing east-west roadways would run either above or below the new at-grade CTA tracks and the existing at-grade UPRR tracks. Like the proposed UPRR Alternative, this variation would be elevated from the 95th Street Terminal to south of I-57, then at grade from I-57 to Prairie Avenue, elevated to cross the CN/ME tracks near 119th Street, then at grade near the proposed yard and shop and 130th Street station. CTA evaluated potential impacts and cost implications to run the east-west roadways both above (using overpasses) and below (using underpasses) the at-grade UPRR tracks and the proposed at-grade CTA tracks.

Roadway Overpasses

For an at-grade track structure, one option would be to use overpasses to carry roadways over the tracks. If roadway overpasses were used, they would need to be constructed at eight locations. More than 100 properties (primarily residential homes) would be displaced due to the overpass footprint, elimination of access to existing alleyways or driveways, and proximity of the embankment structure to the residential homes. The overpass structure and associated embankment could be as high as 30 feet, creating a substantial visual impact on the adjacent one-story residential buildings. In addition, permanent north-south residential street closures would be required where the streets would intersect with the embankment, which would disrupt neighborhood connectivity. Utilities that currently run within the street rights-of-way would have to be relocated. The potential construction cost savings between the elevated track structure and the at-grade structure would be insignificant when the cost of additional right-of-way acquisition and utility relocations is included. Roadway overpasses would also increase community impacts.

Roadway Underpasses

A second option for an at-grade track structure would be to use underpasses to carry roadways under the tracks. If underpasses were used, they would need to be constructed at eight locations. The underpass variation would have property displacements and community impacts similar to those of the roadway overpass option except a large retaining wall would be located in front of the residential homes. Because the cost of a roadway underpass structure may be as much as double the cost of an overpass structure, this variation would provide no additional cost savings over the elevated track structure alternative and would have significantly more community impacts and right-of-way costs.

Based on the property displacements and community impacts that would be created by grade-separating the roadways from the proposed CTA tracks (through either roadway overpasses or underpasses), CTA eliminated this variation from further consideration.

2.4.3 Halsted Alternative

CTA considered the Halsted Alternative, which would extend the Red Line from 95th Street Terminal along I-57, and south along Halsted Avenue to Vermont Avenue on a new elevated structure. The Halsted Alternative would run above Halsted Avenue with center piers, except at the station locations where the structures would span Halsted Avenue. The Halsted Alternative would result in travel times similar to those of the UPRR Alternative. The alternative included four stations, each with park & ride facilities. Construction costs for the Halsted Alternative were approximately 6 percent higher than for the UPRR Alternative. The Halsted Alternative was eliminated in August 2014 based on technical analysis and public feedback including the following concerns:

- The Halsted Alternative would not have the potential for a direct connection to other regional transit services[2] like the UPRR Alternative would; therefore, it would not meet the purpose and need for the project.

- The Halsted Alternative would affect four historic resources, resulting in adverse effects on historic properties, while the UPRR Alternative would not affect any historic resources.

- The proposed seven-story parking structure at Vermont Avenue would result in adverse visual impacts because of its location within a neighborhood with single-family homes.

- The Halsted Alternative would not directly serve as many affordable housing locations in the project area as the UPRR Alternative would serve, including Altgeld Gardens.

- The public expressed concern that implementation of the Halsted Alternative would be disruptive to the surrounding community and would increase shadows, crime, and noise along the Halsted Street.

- The Halsted Alternative did not receive the considerable public support before and during scoping in 2009 that the UPRR Alternative received.

2.5 Environmental Process

CTA will comply with applicable environmental regulations and will responsibly and reasonably mitigate adverse environmental impacts resulting from the RLE Project to the extent feasible in accordance with NEPA and FTA guidance. This Draft EIS identifies and analyzes worst-case scenario impacts of the East and West Options and proposes candidate mitigation measures to address the potentially adverse impacts. Throughout the Draft EIS, needs have been identified for more refined analyses such as traffic and noise, to further evaluate potential impacts. This additional analysis would be specific to the option (East or West Option) that is selected after the Draft EIS public hearing. Actual impacts may be smaller in magnitude and therefore may ultimately require less mitigation. The candidate mitigation measures will be refined as part of the Final EIS process, and a final set of commitments to mitigate adverse impacts would be included in the Final EIS and adopted by FTA upon issuance of the Record of Decision (ROD). In addition, CTA would continue to avoid and minimize environmental impacts wherever feasible.

2.5.1 Draft Environmental Impact Statement Review and Comment Period

Based on the analysis prepared to date and public comments received thus far, the NEPA Preferred Alternative is the UPRR Alternative. FTA and CTA will distribute this Draft EIS to affected federal, state, and local agencies; tribes; community groups; interested individuals; and other interested parties. The document will be made available at CTA headquarters, public libraries near the project area, and in electronic format on CTA's website (www.transitchicago.com). A formal public comment period will be initiated after release of this Draft EIS. CTA will hold a public hearing during the comment period to provide information and receive comments about this Draft EIS and the NEPA Preferred Alternative. Comments may also be submitted by mail or e-mail.

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[2] Although the Halsted Alternative alignment would intersect the ME Blue Island branch, the southern terminus of that branch is less than 3 miles from the intersection at Halsted Street and is just west of the project area. The northern terminus of the ME Blue Island branch is only two blocks from the Red Line in the Loop. Intersection with the ME Blue Island branch would not provide regional service.

2.5.2 Final Environmental Impact Statement and Record of Decision

After public review of the Draft EIS, CTA and FTA will complete any additional analyses required and prepare the Final EIS. The Final EIS will include and address all of the comments received during the Draft EIS public comment period. The Final EIS will document the results of the Draft EIS process, confirm whether the East or West Option is the selected option, and include a list of committed final mitigation measures.

In accordance with the FAST Act and 23 United States Code (USC) § 139(n), FTA intends to issue a single document that consists of the Final EIS and ROD unless it is determined that circumstances, such as changes to the proposed action, anticipated impacts, or other new information, preclude issuance of such a combined document. The ROD will include the alternatives and options that FTA considered and CTA's commitments to mitigate the adverse impacts of the RLE Project. Additionally, in accordance with 40 CFR § 1505.2(b) of NEPA, the ROD will include an identification of the environmentally preferable alternative. Finally, the ROD will include a list of mitigation commitments that must be implemented when the project is initiated. FTA's issuance of the ROD concludes the NEPA environmental process and is required for federal funding and approvals to proceed.

Chapter 3
Transportation

This chapter describes the potential benefits and adverse impacts that would result from the East and West Options on the existing transportation facilities in the project area, including public transportation, vehicular and freight traffic, bicycling, pedestrians, and parking facilities. Also described here are mitigation measures to minimize adverse impacts where feasible. The information in this chapter is based on the *Transportation Technical Memorandum* (**Appendix H**). **Table 3-1** summarizes the transportation impact findings.

In this chapter, permanent and construction-related impacts are included as part of the discussion of each resource area. The *Construction Impacts Technical Memorandum* (**Appendix I**) describes how construction activities would potentially affect transportation facilities as well as the resources described in **Chapter 4**.

Table 3-1: Transportation - Impacts Summary

Alternative	Permanent Impacts						Construction Impacts
	Public Transportation	Vehicular Traffic	Pedestrians	Bicycle Facilities	Freight Transportation	Parking	
No Build	No impacts	Adverse Impacts	No impacts	No impacts	No impacts	No impacts	No impacts
Union Pacific Railroad - East Option	Benefits	Impacts would not be adverse after mitigation	Impacts would not be adverse after mitigation	Benefits	No impacts	No impacts	No impacts
Union Pacific Railroad - West Option	Benefits	Impacts would not be adverse after mitigation	Impacts would not be adverse after mitigation	Benefits	No impacts	No impacts	No impacts

3.1 Regulatory Framework/Methods

CTA conducted the transportation analysis in compliance with current FTA guidelines, NEPA regulations, and the FAST Act. Illinois state law does not require additional analysis beyond the requirements of NEPA.

CTA studied local resources to understand the existing transportation network and other planned projects near the project corridor. These resources included *GO TO 2040*, City of Chicago transportation and community plans, and IDOT studies. *GO TO 2040* provides strategies and priorities for the future development of the regional transportation network.

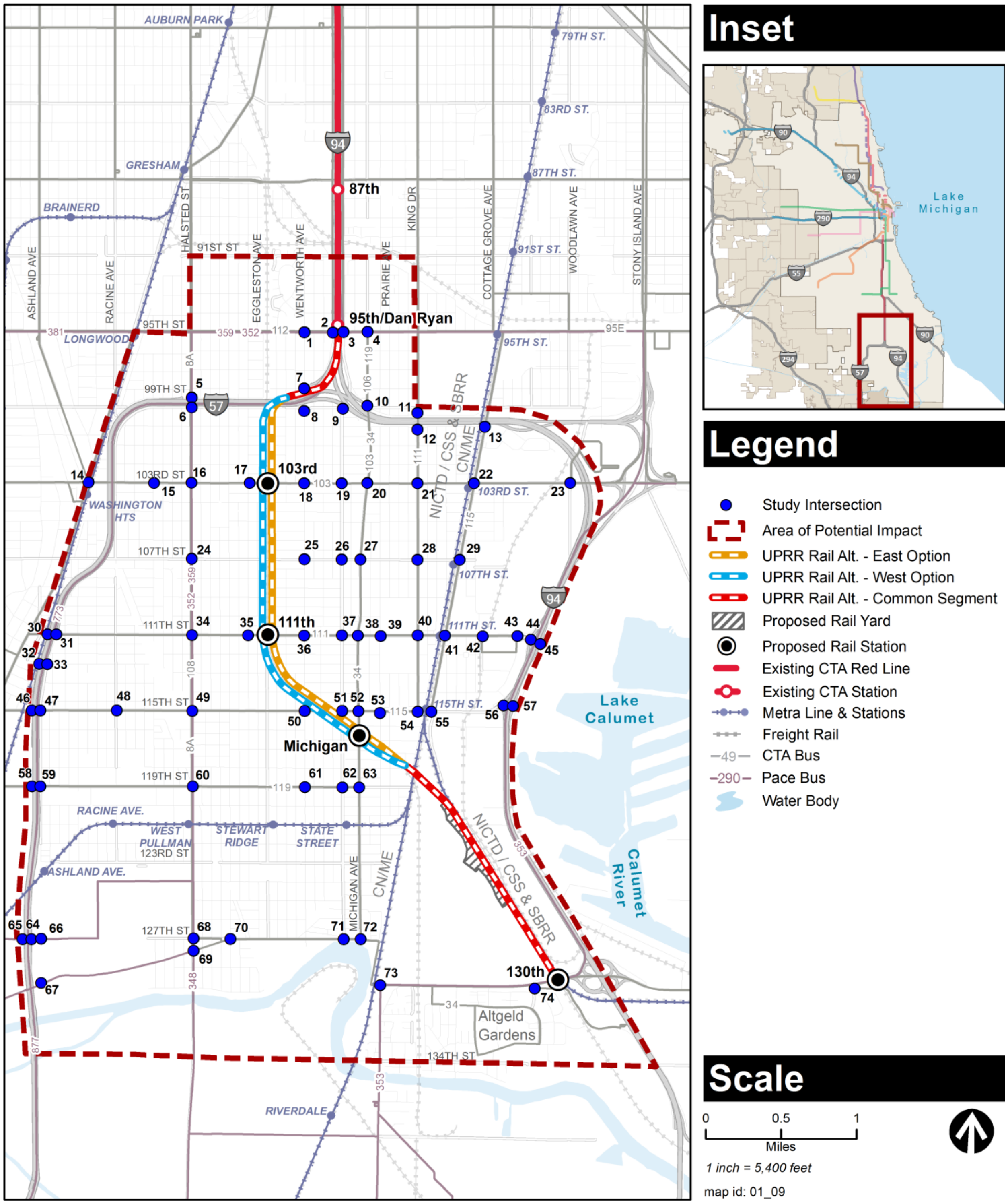
3.1.1 Public Transportation

CTA reviewed existing public transportation data (CTA, Metra, and Pace) within the project area. The analysis included a review of geographic coverage of service, travel time, frequency and hours of service, ridership, transit mode share, and train station and bus stop locations.

Benefits to public transportation would result from improvements in transit service. An adverse impact on public transportation would occur if there were negative changes associated with geographic areas of service and routing, travel time, frequency and hours of service, transit patronage and demand (including transit mode share), station access and circulation, and/or traffic around stations.

3.1.2 Vehicular Traffic

The RLE Project would include park & ride facilities that could cause vehicular traffic impacts because of additional vehicular traffic introduced near the new stations. CTA conducted a detailed vehicular traffic analysis at 74 locations within the area of potential impact (API). A total of 76 intersections were analyzed; two of the intersections are offset and were therefore analyzed as separate intersections near the same location. **Figure 3-1** shows the API and the intersections analyzed.


Inset
Lake Michigan
90
94
290
55
294
57
Legend
● Study Intersection
Area of Potential Impact
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
UPRR Rail Alt. - Common Segment
▨ Proposed Rail Yard
Proposed Rail Station
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
—49— CTA Bus
—290— Pace Bus
Water Body
Scale
0
0.5
1
Miles
1 inch = 5,400 feet
map id: 01_09
AUBURN PARK
79TH ST.
83RD ST.
87TH ST.
91ST ST.
95TH ST.
103RD ST.
107TH ST.
111TH ST.
115TH ST.
GRESHAM
BRAINERD
LONGWOOD
WASHINGTON HTS
87th
95th/Dan Ryan
103rd
111th
Michigan
130th
ASHLAND AVE
RACINE AVE
HALSTED ST
EGGLESTON AVE
WENTWORTH AVE
PRAIRIE AVE
KING DR
COTTAGE GROVE AVE
WOODLAWN AVE
STONY ISLAND AVE
MICHIGAN AVE
91ST ST
95TH ST
99TH ST
103RD ST
107TH ST
111TH ST
115TH ST
119TH ST
123RD ST
127TH ST
134TH ST
NICTD / CSS & SBRR
CN/ME
RACINE AVE.
WEST PULLMAN
STEWART RIDGE
STATE STREET
ASHLAND AVE.
RIVERDALE
Lake Calumet
Calumet River
Altgeld Gardens
94
57
381
359
352
112
119
106
34
103
111
115
108
8A
773
348
877
353
95E

Intersections #42 and #55 are offset; therefore, each leg was analyzed separately (as #42a/#42b and #55a/#55b)
CN/ME = Canadian National/Metra Electric District, NICTD/CSS & SBRR = Northern Indiana Commuter Transportation District/Chicago South Shore & South Bend Railroad

Figure 3-1: Study Intersections for Transportation Impact Analysis

To understand the existing vehicular traffic conditions within the project area and identify peak-hour turning movements, CTA compiled existing traffic count data from IDOT, CMAP, and CDOT. In addition, CTA collected new manual traffic counts at major intersections and intersections where existing data were not available. CTA compiled and reviewed the following traffic data:

- Traffic distribution and local circulation patterns
- Vehicle occupancy levels
- Road capacity levels
- Road peak-hour traffic volumes
- Intersection lane geometry and traffic signal timing plans
- Planned roadway improvements

CTA used the data to calculate existing intersection level of service (LOS) using Synchro 7.[3] The *Transportation Technical Memorandum* (**Appendix H**) includes peak-hour traffic volumes and lane geometry used for the intersection LOS analysis.

For this Draft EIS, construction of the RLE is anticipated to occur from the year 2022 through 2025. Project construction is dependent on the availability of project funding and approvals. For the traffic analysis, CTA used the project construction (opening) year of 2026 and the horizon year of 2030 to determine potential traffic impacts. The 2030 horizon year is consistent with the ridership analysis conducted for the RLE Project.

CTA used data from CMAP's 2030 Regional Travel Demand model (CMAP 2012c) to develop "no-project" intersection-level traffic projections. These "no-project" traffic projections accounted for the background growth in traffic due to additional regional and subregional land use development and population growth. CTA determined the background growth of traffic for roadway segments using the data from the regional model. Average annual traffic growth for roadway segments was 0–1.3 percent.

To simulate opening year (2026) conditions without the project, CTA interpolated background traffic growth between existing year (2012) and horizon year (2030) No Build Alternative conditions. The No Build Alternative traffic projections served as the baseline for evaluating the future "with project," (i.e., the build alternative - East or West Option). Conditions for the East and West Options included the generation of park & ride automobile trips to the proposed stations. The analysis did not include a mode shift from vehicles to transit, which is anticipated to occur when the project is built. The traffic analysis represents the "worst-case" scenario for impact analysis.

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[3] Synchro 7 is a software package used for performing intersection capacity analysis and optimizing traffic signal timing.

The build alternative-generated trips were added to the No Build Alternative traffic projections to develop the build alternative traffic volumes. The build alternative intersection LOS analyses were conducted for the study intersections. For this Draft EIS, a traffic (passenger or freight vehicle) impact would be substantial if it would result in a degradation in peak-hour LOS at any intersection within the API that leads to a change in traffic distribution and local circulation patterns, a change in vehicle occupancy levels, a change in road capacity, or a change in road traffic volumes.

The LOS for roadway intersections typically ranges from A to F (Transportation Research Board 2010). LOS is defined as follows:

- LOS A - Virtually free flow of traffic with no congestion or delay.
- LOS B - Stable traffic flow, but other vehicles in the flow are noticeable.
- LOS C - Stable flow, but this LOS marks the beginning of the range where individual vehicles become affected by interactions with other vehicles in the traffic stream.
- LOS D - High density of traffic but stable flow.
- LOS E - Operating conditions at or near capacity level. All speeds are reduced to a low but relatively uniform flow.
- LOS F - A breakdown in the operating conditions resulting in congestion and delay.

CTA coordinated with IDOT and CDOT regarding LOS thresholds, and for this analysis a change in intersection LOS from LOS A, B, C, or D under the No Build Alternative to LOS E or F under the build alternative would result in an adverse or substantially adverse impact. CTA identified mitigation measures to reduce the impacts to a more acceptable LOS for adverse impacts caused directly by project facilities, when those impacts would not be offset by the additional transportation benefits provided by the project alternative.

3.1.3 Pedestrians

To describe existing conditions for pedestrians, CTA reviewed aerial photographs, City of Chicago geographic information system and geospatial datasets, and the *Chicago Pedestrian Plan (*City of Chicago 2012b). CTA reviewed pedestrian facilities within the immediate area of the proposed station locations for ADA accessibility and conformity to transit station planning.

For this Draft EIS, a pedestrian impact would be adverse if it were to result in the disruption of an existing or planned pedestrian pathway, if it were to limit pedestrian access to proposed station entrances, or if pedestrian access to a proposed station were limited because the vicinity around the station did not have sidewalks or the sidewalks were not ADA-accessible.

3.1.4 Bicycle Facilities

To describe existing conditions for bicycle facilities, CTA reviewed IDOT's 2012 bicycle map and existing and proposed bicycle facilities for the City of Chicago based on the *Chicago Streets for Cycling Plan 2020* (City of Chicago 2012a). CTA evaluated the relationship of the existing bicycle facilities to the proposed station location and assessed whether the proposed station locations would conform to the objectives of the bicycle plans for an area within ½ mile of the stations.

For this Draft EIS, a bicycle facility impact would be adverse if it were to result in a disruption of existing or planned bicycle pathways or bicycle parking facilities.

3.1.5 Freight Transportation

This Draft EIS includes a qualitative discussion of impacts from the RLE Project on freight traffic (both rail and truck). CTA qualitatively examined the existing and projected freight traffic in the project area and determined whether the RLE Project would permanently interrupt freight movements. Through a coordination process, CTA and UPRR identified potential impacts and discussed them qualitatively.

For this Draft EIS, an impact on freight transportation would be adverse if the movement of goods and services would be disrupted or delayed.

3.1.6 Parking

To describe existing parking conditions, CTA reviewed community resources and aerial photographs and performed field observations. Using the No Build Alternative as the baseline, CTA analyzed the extent to which the East and West Options would affect on-street parking and off-street parking facilities. CTA reviewed parking capacity near the location of each proposed station and park & ride facility for potential impacts on the surrounding neighborhoods. Potential parking impacts would include changes in parking supply as a result of transit facility construction/service expansion, addition of park & ride facilities, and removal of existing parking spaces. To determine the potential for impacts and the intensity of those impacts, CTA developed guidelines based on standard industry practices.

For this Draft EIS, a parking impact would be adverse if it were to result in the following:

- Reduction in parking spaces by 10 to 50 spaces. A reduction by 50 or more parking spaces would be a substantially adverse impact.
- Reduction in accommodation for future programs requiring parking spaces, such as car sharing.
- Reduction in existing transit parking and park & ride capacity.
- Inadequate parking capacity for proposed transit service.

3.2 Existing Conditions

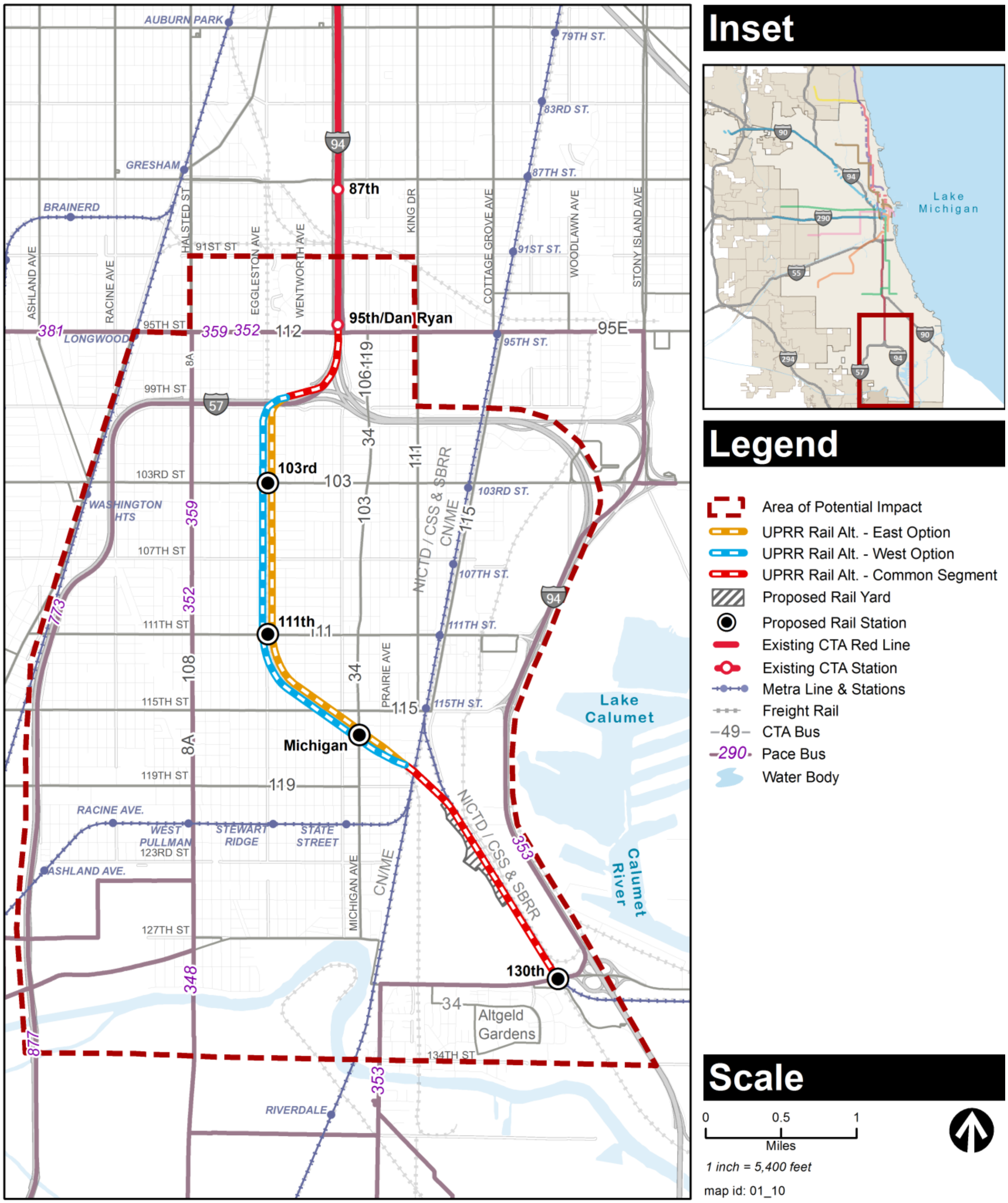
The existing transportation environment includes transit facilities for rail and bus, expressways, regional arterials (through roads), truck routes, intermodal connectors, secondary arterials, local streets, and bicycle and pedestrian facilities. Expressways in the project area include I-57 and I-94.

The 95th Street Terminal is currently the southern end of the Red Line. Many existing bus routes within the project area terminate at this location. From this station, passengers travel north on the Red Line or transfer to a different bus route. Passengers accessing the station by bus experience delays resulting from poor performance of the surrounding roadway network. The availability of alternative modes of transportation to reach the 95th Street Terminal is limited, resulting in lengthy travel times by both auto and transit to jobs north of 95th Street, including the major employment centers in downtown Chicago. According to the American Community Survey, from 2005 to 2010 the average travel time to work for residents within the project area was 39 minutes. This number is approximately 20 percent higher than the 32-minute average commute time for the seven-county region. The current transit travel time from 130th Street to the 95th Street Terminal is 28 minutes and it is 25 minutes from the 95th Street Terminal to Jackson station (CTA 2009). The limited transit services in the project area and complex transfers to reach the 95th Street Terminal make commute times to the downtown Chicago area more than an hour for some residents. Approximately 10 percent of the project area residents (as of 2010) do not own a car and depend on transit for mobility (U.S. Census Bureau 2010). One-fourth of the trips that project area residents make between their home and work are with transit (U.S. Census Bureau 2010).

Substantial expressway congestion occurs within and surrounding the project area. The expressway network was at or over capacity during the morning peak periods in 2010 and congestion is expected to worsen by 2030. Arterial street reliability is compromised by delays from at-grade freight railroad crossings, affecting travel times to the 95th Street Terminal. ME commuter trains that operate at grade and cross several arterials in the project area also cause short traffic delays.

3.2.1 Public Transportation

The existing public transportation systems in use in the project area are CTA rail service, CTA bus routes, Pace bus routes, and Metra commuter rail service. The Red Line 95th Street Terminal is the only CTA rail station within the API and is the southern end of the CTA Red Line. Greyhound and Indian Trail intercity bus service operate from the 95th Street Terminal, with fixed routes outside the project area. The 2014 average weekday rail ridership for 95th Street Terminal was approximately 11,598 passengers (CTA 2014). Rail service is provided 24 hours per day, and rail service frequency is 6 minutes during morning peak periods and 3 minutes during afternoon peak periods. CTA and Pace bus routes are on east-west and north-south thoroughfares through the project area, with 16 CTA and 6 Pace bus routes operating within the API (not including night bus routes). Of those bus routes, 18 serve the 95th Street Terminal. **Figure 3-2** shows the existing CTA and Pace bus routes as well as Metra routes and station locations. **Table 3-2** provides a summary of existing bus service in the API.


Inset
Lake Michigan
Legend
Area of Potential Impact
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
UPRR Rail Alt. - Common Segment
Proposed Rail Yard
Proposed Rail Station
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
–49– CTA Bus
–290- Pace Bus
Water Body
Scale
0
0.5
1
Miles
1 inch = 5,400 feet
map id: 01_10
AUBURN PARK
79TH ST.
83RD ST.
GRESHAM
87th
87TH ST.
BRAINERD
91ST ST
91ST ST.
95th/Dan Ryan
95TH ST
95TH ST.
95E
LONGWOOD
381
359
352
112
106-119
99TH ST
57
94
103rd
103RD ST
103RD ST.
103
34
111
115
WASHINGTON HTS
107TH ST
107TH ST.
111th
111TH ST
111TH ST.
115TH ST
115TH ST.
119TH ST
119
Michigan
RACINE AVE.
WEST PULLMAN
STEWART RIDGE
STATE STREET
123RD ST
ASHLAND AVE.
127TH ST
130th
Altgeld Gardens
134TH ST
RIVERDALE
353
348
773
877
108
8A
HALSTED ST
EGGLESTON AVE
WENTWORTH AVE
KING DR
COTTAGE GROVE AVE
WOODLAWN AVE
STONY ISLAND AVE
ASHLAND AVE
RACINE AVE
PRAIRIE AVE
MICHIGAN AVE
NICTD / CSS & SBRR
CN/ME
Lake Calumet
Calumet River

CN/ME = Canadian National/Metra Electric District, NICTD/CSS & SBRR = Northern Indiana Commuter Transportation District/Chicago South Shore & South Bend Railroad

Figure 3-2: Existing Public Transportation in the Project Area

Table 3-2: Existing Bus Service

Bus Route Number and Name	Operating Agency	2014 Average Weekday Ridership	Maximum Monthly Average Weekday Ridership (October 2014)	Serves 95th Street Terminal
#3 King Drive	CTA	19,224	20,520	No
#8A South Halsted	CTA	3,238	3,674	No
#9 Ashland	CTA	26,871	29,256	Yes
#28 Stony Island	CTA	7,208	7,742	No
#29 State	CTA	13,342	13,655	Yes
#34 South Michigan	CTA	5,150	5,793	Yes
#95E 93rd/95th	CTA	3,830	4,263	Yes
#95W West 95th	CTA	2,369	2,595	Yes
#100 Jeffery Manor Express	CTA	674	700	Yes
#103 West 103rd	CTA	2,674	3,143	Yes
#106 East 103rd	CTA	1,831	2,241	Yes
#108 Halsted/95th	CTA	1,322	1,572	Yes
#111 111th/King Drive	CTA	3,763	4,338	Yes
#112 Vincennes/111th	CTA	2,289	2,700	Yes
#115 Pullman/115th	CTA	3,990	4,600	Yes
#119 Michigan/119th	CTA	4,725	5,092	Yes
#348 Harvey - Riverdale - Blue Island	Pace	333	399	No
#352 Halsted	Pace	6,100	6,574	Yes
#353 95th - Riverdale- Homewood	Pace	1,769	2,011	Yes
#359 Robbins/South Kedzie Avenue	Pace	1,461	1,643	Yes
#381 95th Street	Pace	4,038	4,593	Yes
#395 95th/Dan Ryan CTA - UPS	Pace	530	669	Yes

Source: CTA 2014, Regional Transportation Authority Asset Management System 2014

Notes:

1. #9 Ashland serves the 95th Street Terminal only with the Night Owl Service.
2. Night service route #N5 is not included in the above table.
3. Service to the 95th Street Terminal is based on route maps current as of July 2015.

NICTD/CSS & SBRR provided limited commuter rail service to the Kensington/115th Street station until early 2012, when service was discontinued at this station. Metra commuter rail service in the API includes the ME mainline, the ME Blue Island branch, and the Metra Rock Island District mainline. There are 11 commuter rail stations within the API. **Figure 3-2** shows Metra station locations. **Table 3-3** summarizes the existing commuter rail stations and ridership within the API.

Table 3-3: Existing Commuter Rail Stations

Line/Station	2014 Daily Boardings	Parking Available	Parking Spaces Available (2012)	Parking Utilization Rate (2012)
Metra Electric District Mainline				
103rd Street (Rosemoor)	43	Yes	38	5%
107th Street	31	No	-	-
111th Street (Pullman)	19	No	-	-
Kensington/115th Street	1,081	Yes	402	90%
Metra Electric District Blue Island Branch				
State Street	54	No	-	-
Stewart Ridge	37	No	-	-
West Pullman	21	Yes	27	0%
Racine Avenue	33	Yes	29	24%
Ashland Avenue	98	Yes	90	52%
Metra Rock Island Mainline				
95th Street/Longwood	85	Yes	104	51%
103rd Street/Washington Heights	168	Yes	267	30%

Source: Regional Transportation Authority Management System 2015

3.2.2 Vehicular Traffic

The following interstate, regional, and local roadways provide east-west and north-south routes within the API:

East-West	North-South
95th Street	I-57
99th Street	Halsted Street
103rd Street	Wentworth Avenue
107th Street	State Street
111th Street	Michigan Avenue
115th Street	Indiana Avenue
119th Street	Martin Luther King Drive
127th Street	Cottage Grove Avenue
130th Street	I-94 (Dan Ryan Expressway/Bishop Ford Freeway)

Table 3-4 summarizes existing (2012) traffic conditions. Under existing conditions, most of the study intersections within the API operate at LOS D or better in both the AM and PM peak periods. Intersections operating at LOS E or F under existing conditions are highlighted in **Table 3-4**.

Table 3-4: Existing (2012) Intersection Level of Service

ID	Intersection	Control Type	AM Peak Hour LOS[1]	PM Peak Hour LOS[1]
1	95th Street and Wentworth Avenue	Signalized	B	B
2	95th Street and Lafayette Avenue	Signalized	D	D
3	95th Street and State Street	Signalized	C	C
4	95th Street and Michigan Avenue	Signalized	B	B
5	98th Place and Halsted Street	Signalized	**F**	**F**
6	99th Street and Halsted Street	Signalized	C	D
7	98th Place and Wentworth Avenue	Signalized	B	B
8	99th Street and Wentworth Avenue	Signalized	B	B
9	99th Street and State Street	Signalized	A	B
10	99th Street and Michigan Avenue	Signalized	B	B
11	99th Place and Martin Luther King Drive	Signalized	B	B
12	100th Street and Martin Luther King Drive	Signalized	B	A
13	100th Street and Cottage Grove Avenue	Unsignalized	A	B
14	103rd Street and Vincennes Avenue and Beverly Avenue	Signalized	D	**F**
15	103rd Street and Morgan Street	Signalized	B	B
16	103rd Street and Halsted Street	Signalized	**E**	D
17	103rd Street and Normal Avenue	Signalized	B	B
18	103rd Street and Wentworth Avenue	Signalized	B	B
19	103rd Street and State Street	Signalized	B	B
20	103rd Street and Michigan Avenue	Signalized	B	B
21	103rd Street and Martin Luther King Drive	Signalized	C	C
22	103rd Street and Cottage Grove Avenue	Signalized	B	B
23	103rd Street and Woodlawn Avenue	Signalized	A	A
24	107th Street and Halsted Street	Signalized	**F**	C
25	107th Street and Wentworth Avenue	Signalized	B	B
26	107th Street and State Street	Signalized	A	A
27	107th Street and Michigan Avenue	Signalized	B	B
28	107th Street and Martin Luther King Drive	Signalized	B	B
29	107th Street and Cottage Grove Avenue	Signalized	B	B
30	111th Street and Marshfield Avenue	Signalized	C	C
31	111th Street and Hamlet Avenue	Signalized	C	C
32	112th Place and Marshfield Avenue	Signalized	C	C
33	112th Place and Hamlet Avenue	Signalized	D	C
34	111th Street and Halsted Street	Signalized	C	C
35	111th Street and Normal Avenue	Signalized	A	A
36	111th Street and Wentworth Avenue	Signalized	A	A

ID	Intersection	Control Type	AM Peak Hour LOS[1]	PM Peak Hour LOS[1]
37	111th Street and State Street	Signalized	A	B
38	111th Street and Michigan Avenue	Signalized	B	B
39	111th Street and Indiana Avenue	Signalized	B	B
40	111th Street and Martin Luther King Drive	Signalized	B	A
41	111th Street and Cottage Grove Avenue	Signalized	B	C
42a[2]	111th Street and Langley Avenue	Signalized	B	C
42b[2]	111th Street and Ellis Avenue	Signalized	C	B
43	111th Street and Doty Avenue	Signalized	C	C
44	111th Street and Bishop Ford Freeway eastbound Ramps	Unsignalized	C	B
45	111th Street and Bishop Ford Freeway westbound Ramps	Unsignalized	C	B
46	115th Street and Marshfield Avenue	Signalized	B	B
47	115th Street and Ashland Avenue	Signalized	B	B
48	115th Street and Racine Avenue	Signalized	B	C
49	115th Street and Halsted Street	Signalized	C	C
50	115th Street and Wentworth Avenue	Signalized	B	B
51	115th Street and State Street	Signalized	B	B
52	115th Street and Michigan Avenue	Signalized	B	C
53	115th Street and Indiana Avenue	Signalized	B	B
54	115th Street and Martin Luther King Drive	Unsignalized	D	**F**
55a[2]	115th Street and Cottage Grove Avenue	Signalized	C	C
55b[2]	115th Street and Cottage Grove Avenue East	Signalized	D	C
56	115th Street and Bishop Ford Freeway eastbound Ramps	Unsignalized	C	B
57	115th Street and Bishop Ford Freeway westbound Ramps	Unsignalized	D	B
58	119th Street and Marshfield Avenue	Signalized	D	D
59	119th Street and Ashland Avenue	Signalized	D	**F**
60	119th Street and Halsted Street	Signalized	C	C
61	119th Street and Wentworth Avenue	Signalized	B	B
62	119th Street and State Street	Signalized	B	B
63	119th Street and Michigan Avenue	Signalized	A	A
64	127th Street and Paulina Street	Signalized	C	C
65	127th Street and Marshfield Avenue	Signalized	C	B
66	127th Street and Ashland Avenue	Signalized	C	C
67	Ashland Avenue and Vermont Avenue	Signalized	C	C
68	127th Street and Halsted Street	Signalized	C	C
69	Vermont Avenue and Halsted Street	Signalized	B	B

ID	Intersection	Control Type	AM Peak Hour LOS[1]	PM Peak Hour LOS[1]
70	127th Street and Vermont Avenue and Wallace Street	Signalized	C	D
71	127th Street and State Street	Signalized	A	B
72	127th Street and Michigan Avenue	Signalized	A	B
73	130th Street and Indiana Avenue	Signalized	B	C
74	130th Street and Ellis Avenue	Signalized	A	A

LOS = level of service

[1] Signalized intersection LOS is reported as the average for all movements. Unsignalized intersection LOS reported is the LOS of the worst movement. Intersections with LOS E and F that would be worse than the No Build conditions are shown in bold.

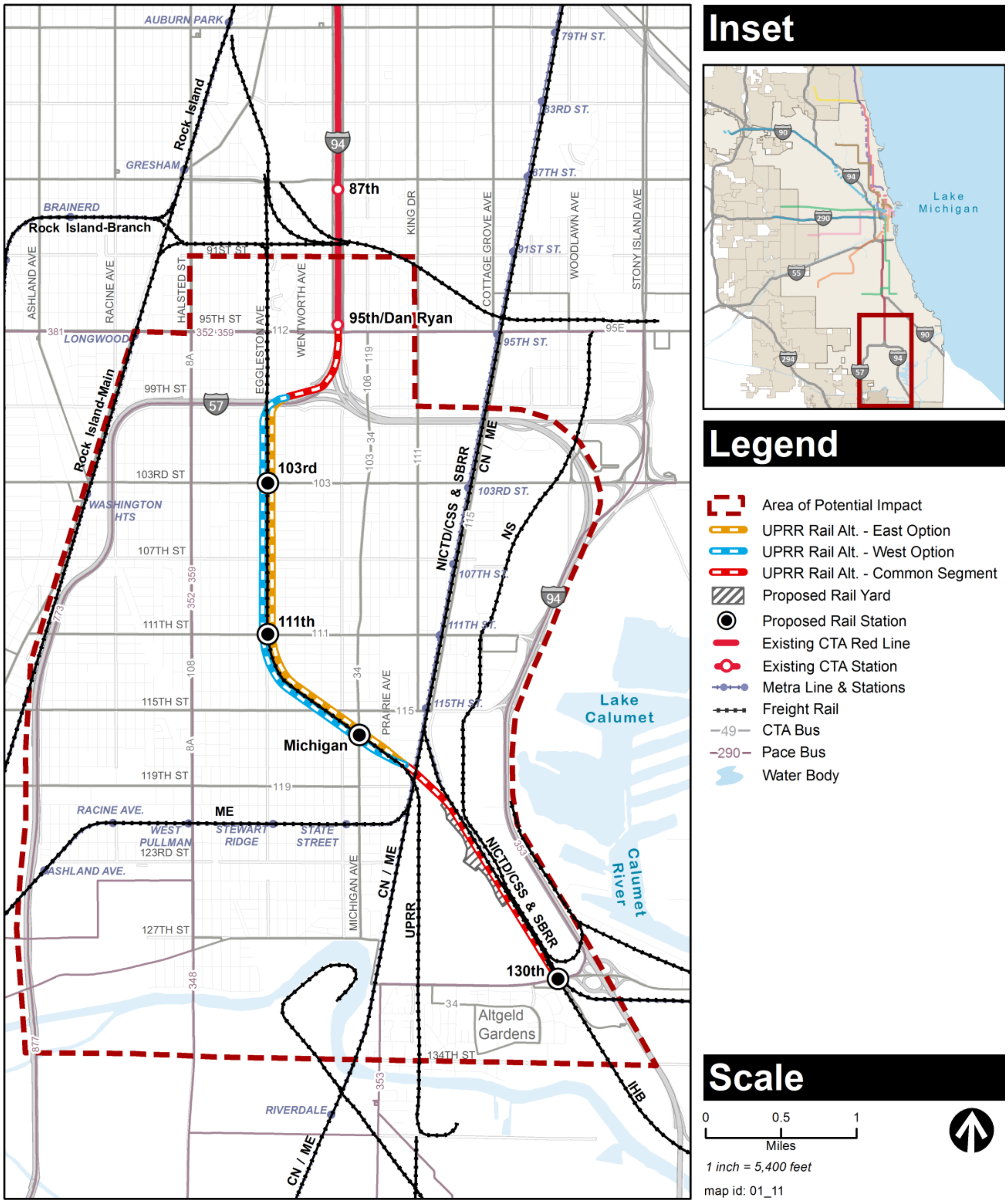
[2] Intersections #42 and #55 are offset; therefore, each leg was analyzed separately (as #42a/42b and #55a/55b).

3.2.3 Freight Transportation

Nearly 500 freight trains per day operate in the Chicago region (Chicago Metropolis 2020, 2004). In 2007, regional rail tonnage was estimated at more than 631 million tons, with about 24,000 trailers and containers and about 16,800 carload units moving into, out of, or through the region daily (CMAP 2012b). The following active freight railways operate through the API and are identified on **Figure 3-3**:

- UPRR
- CN/ME
- NICTD/CSS & SBRR
- Norfolk Southern Railway
- Indiana Harbor Belt Railroad
- Conrail

The UPRR reported 27 freight trains per day within the API. In addition, Amtrak runs two passenger trains per day on the UPRR tracks within the API. The CN/ME tracks carry both passenger and freight trains. The NICTD/CSS & SBRR tracks converge with the CN/ME tracks between 115th Street and Kensington Avenue and both carry passenger and freight trains.


Inset
Lake Michigan
Legend
Area of Potential Impact
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
UPRR Rail Alt. - Common Segment
Proposed Rail Yard
Proposed Rail Station
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
49 CTA Bus
290 Pace Bus
Water Body
Scale
0
0.5
1
Miles
1 inch = 5,400 feet
map id: 01_11
87th
95th/Dan Ryan
103rd
111th
Michigan
130th
Rock Island
Rock Island-Branch
Rock Island-Main
NICTD/CSS & SBRR
CN / ME
NS
UPRR
ME
IHB
Lake Calumet
Calumet River
Altgeld Gardens
AUBURN PARK
GRESHAM
BRAINERD
LONGWOOD
WASHINGTON HTS
RACINE AVE.
WEST PULLMAN
STEWART RIDGE
STATE STREET
ASHLAND AVE.
RIVERDALE
79TH ST.
83RD ST.
87TH ST.
91ST ST.
95TH ST.
103RD ST.
107TH ST.
111TH ST.
115TH ST.
91ST ST
95TH ST
99TH ST
103RD ST
107TH ST
111TH ST
115TH ST
119TH ST
123RD ST
127TH ST
134TH ST
ASHLAND AVE
RACINE AVE
HALSTED ST
EGGLESTON AVE
WENTWORTH AVE
KING DR
COTTAGE GROVE AVE
WOODLAWN AVE
STONY ISLAND AVE
PRAIRIE AVE
MICHIGAN AVE

ME = Metra Electric District, UPRR = Union Pacific Railroad, CN/ME = Canadian National/Metra Electric District, NICTD/CSS & SBRR = Northern Indiana Commuter Transportation District/Chicago South Shore & South Bend Railroad, NS = Norfolk Southern, IHB = Indiana Harbor Belt Railroad

Figure 3-3: Freight Railroads within the Area of Potential Impact

3.2.4 Bicycle Facilities

Chicago has over 200 miles of on-street bicycle pathways and 36 miles of trails. In addition, the city has more than 12,000 racks for bicycle parking, including racks at CTA stations (City of Chicago 2012a). The *Chicago Streets for Cycling Plan 2020* guides the development of a citywide network of innovative bicycle pathways and proposes 645 miles of on-street cycling routes. CTA identified existing bicycle facilities within ½ mile of the alternative alignments (see **Figure 3-4**). Bicycle facilities recommended in the Chicago Bike 2015 Plan (City of Chicago 2006) and pertinent recommended cycling routes from the *Chicago Streets for Cycling Plan 2020* are also shown on the figure.

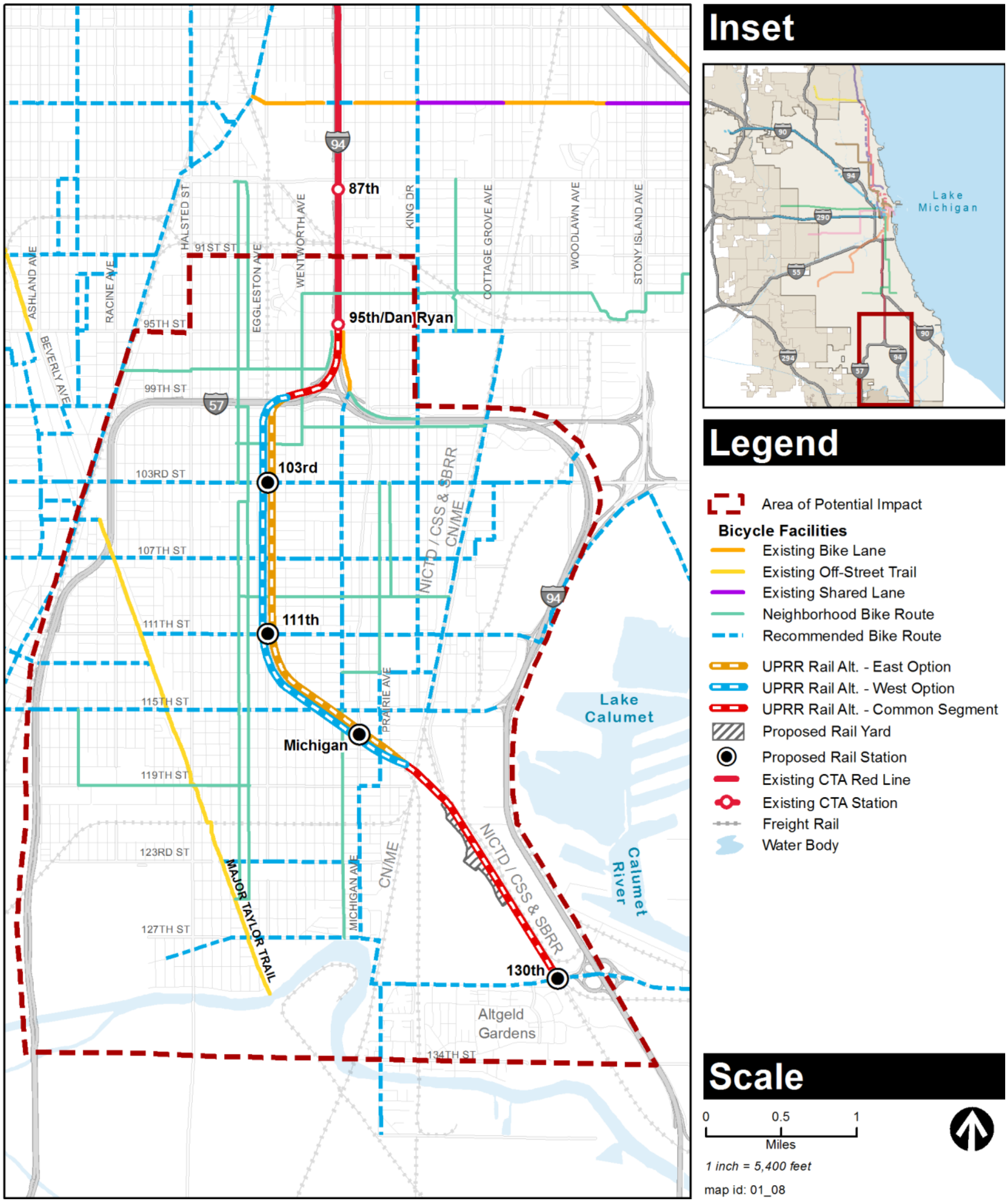
Major Taylor Trail is an off-street cycling trail that runs through the project area. There are no other marked bicycle lanes within the roadway along or crossing the alternative alignments.

3.2.5 Pedestrians

Throughout the project area, sidewalks are located on both sides of most of the arterial and collector roads. CTA qualitatively reviewed sidewalks within the API. Sidewalk width varies throughout the API. Arterial streets have a standard, 6-foot-wide sidewalk and collector streets have sidewalks that are 12 to 17 feet wide. There are no pedestrian gates along the sidewalks at the existing UPRR grade crossings within the API.

The City of Chicago is continually updating intersection curb ramps to meet current ADA guidelines and design standards. There are wheelchair accessible curb ramps at most of the intersections within the API, but most of these curb ramps are not fully compliant under current ADA standards, which require detectable warning tiles for the visually impaired.

CDOT is implementing its *Chicago Pedestrian Plan* (City of Chicago 2012b). The plan aims to increase pedestrian safety, identify and eliminate gaps and barriers in the pedestrian network, increase the amount and quality of pedestrian space, and increase the number of pedestrian trips for enjoyment, school, work, and daily errands.


Inset
Lake Michigan
90
94
290
55
294
57
Legend
Area of Potential Impact
Bicycle Facilities
Existing Bike Lane
Existing Off-Street Trail
Existing Shared Lane
Neighborhood Bike Route
Recommended Bike Route
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
UPRR Rail Alt. - Common Segment
Proposed Rail Yard
Proposed Rail Station
Existing CTA Red Line
Existing CTA Station
Freight Rail
Water Body
Scale
0
0.5
1
Miles
1 inch = 5,400 feet
map id: 01_08
87th
95th/Dan Ryan
103rd
111th
Michigan
130th
ASHLAND AVE
BEVERLY AVE
RACINE AVE
HALSTED ST
91ST ST
95TH ST
99TH ST
103RD ST
107TH ST
111TH ST
115TH ST
119TH ST
123RD ST
127TH ST
134TH ST
EGGLESTON AVE
WENTWORTH AVE
KING DR
COTTAGE GROVE AVE
WOODLAWN AVE
STONY ISLAND AVE
PRAIRIE AVE
MICHIGAN AVE
NICTD / CSS & SBRR
CN/ME
MAJOR TAYLOR TRAIL
Lake Calumet
Calumet River
Altgeld Gardens

CN/ME = Canadian National/Metra Electric District, NICTD/CSS & SBRR = Northern Indiana Commuter Transportation District/Chicago South Shore & South Bend Railroad

Figure 3-4: Existing and Recommended Bicycle Facilities within the Area of Potential Impact

3.2.6 Parking

Most of the streets in the API have on-street parking. **Table 3-5** summarizes the on-street parking along the major roadways along the alternative alignments. On-street parking is allowed (as posted) on most of the local streets not listed in this table. There is currently no park & ride facility at the existing 95th Street Terminal.

Table 3-5: Existing On-Street Parking

Street	Roadway Functional Class	On-Street Parking
95th Street	strategic regional arterial	No
99th Street	local road or street	Yes
103rd Street	minor arterial	Yes
107th Street	major collector	No
111th Street	minor arterial	Yes
115th Street	major collector	Yes
119th Street	minor arterial	Yes
127th Street	other principal arterial	No
130th Street	other principal arterial	No
Wentworth Avenue	major collector	Yes
State Street	minor arterial	Yes
Michigan Avenue	major collector	Yes
Indiana Avenue	minor arterial	No

A permit or fee is not required to park on the streets within the API. There are no existing off-street surface parking lots or garages used for public parking within the API. Many of the commercial and retail buildings within the API have parking available either through on-street parking or parking lots associated with the buildings.

3.3 Environmental Consequences

The following sections summarize the potential transportation impacts and mitigation measures of the No Build and UPRR Alternative.

3.3.1 No Build Alternative

Under the No Build Alternative, the project would not be constructed and traffic flow in the project area would continue to deteriorate. There would be a continued lack of rapid transit rail service south of 95th Street. *GO TO 2040* calls for investment in the existing transit infrastructure in the region, and the No Build Alternative would not achieve this. **Table 3-6** summarizes 2030 baseline (No Build Alternative) LOS. The intersections shown in **Table 3-6** would operate at a LOS D or worse under the No Build Alternative by 2030. There would be an adverse impact on transportation under the No Build Alternative. There would be no major construction associated with No Build Alternative; therefore, no construction-related transportation impacts would occur.

Table 3-6: No Build Alternative - Intersection Level of Service (2012 and 2030)

ID	Intersection	2012 Conditions		2030 Baseline	
		AM Peak-Hour LOS	PM Peak-Hour LOS	AM Peak-Hour LOS	PM Peak-Hour LOS
2	95th Street and Lafayette Avenue	D	D	D	D
3	95th Street and State Street	C	C	D	C
5	98th Place and Halsted Street	**F**	**F**	**F**	**F**
6	99th Street and Halsted Street	C	D	D	D
14	103rd Street and Vincennes Avenue and Beverly Avenue	D	**F**	**E**	**F**
16	103rd Street and Halsted Street	**E**	D	**F**	**E**
24	107th Street and Halsted Street	**F**	C	**F**	C
31	111th Street and Hamlet Avenue	C	C	D	D
33	112th Place and Hamlet Avenue	D	C	**E**	C
41	111th Street and Cottage Grove Avenue	B	C	C	D
44	111th Street and Bishop Ford EB Ramps	C	B	**E**	C
45	111th Street and Bishop Ford WB Ramps	C	B	**E**	B
52	115th Street and Michigan Avenue	B	C	B	D
54	115th Street and Martin Luther King Drive	D	**F**	D	**F**
55a	115th Street and Cottage Grove Avenue	C	C	D	C
55b	115th Street and Cottage Grove Avenue East	D	C	**E**	C
56	115th Street and Bishop Ford Freeway EB Ramps	C	B	D	C
57	115th Street and Bishop Ford Freeway WB Ramps	D	B	D	C
58	119th Street and Marshfield Avenue	D	D	D	D
59	119th Street and Ashland Avenue	D	**F**	D	**F**
70	127th Street and Vermont Avenue and Wallace Street	C	D	D	D

LOS = level of service, EB = eastbound, WB = westbound

3.3.2 Union Pacific Railroad Alternative - East Option

Permanent Impacts

Because the East and West Options would both run along the same corridor, the nature of transportation impacts for both options would be similar.

Public Transportation

With the extension of the Red Line, some existing bus routes would be rerouted to feed into the proposed stations (see **Appendix H** for additional details). CTA passengers would benefit from faster travel times by accessing rail service farther south. Year 2030 average weekday projected boardings with the UPRR Alternative would total approximately 42,000 passengers (CTA 2009). These estimates were developed using computerized travel forecasting models. Project boardings include the number of boardings at each new station and the number of travelers who are on board the trains on the extension as they leave the 95th Street Terminal. Implementation of the East Option would reduce congestion at 95th Street Terminal by reducing the number of bus transfers that passengers would need because they could transfer or directly board the Red Line at the proposed stations.

Public transportation would benefit from the East Option because of the new, direct rail service within the project area. The East Option would also allow for potential connections to regional commuter rail, particularly to NICTD at the 130th Street station where the NICTD tracks would be parallel to the RLE tracks. The park & ride facility at the 130th Street station may also benefit future commuter rail passengers, such as NICTD passengers, if future connections are built.

Vehicular Traffic

Traffic impacts would arise from changed travel patterns to reach the proposed stations. Traffic impacts for both the East and West Options would be similar. Both the East and West Options would operate along an existing active freight railroad corridor and impacts would occur due to the active roadway-railroad grade crossings. Additional delay analysis for vehicular traffic due to the freight railroad operations was not conducted. Depending on the option selected, a delay analysis may be warranted. The delay analysis would include the vehicular traffic generated by the park & ride facilities and would determine the additional delay that might be created at the at-grade crossings. The delay analysis would be dependent upon projected traffic growth, projected freight traffic, and location of the park & ride facilities.

Under both the East and West Options, adverse vehicular traffic impacts (2026 and 2030) would occur under 2026 and 2030 conditions at the intersections identified in **Table 3-7**. Adverse impacts would occur because these intersections would operate at a LOS worse than they would with the No Build Alternative. All increases in traffic volumes would be related to vehicle access at park & ride facilities.

Table 3-7: Union Pacific Railroad Alternative (2026 and 2030) Intersection Level of Service

ID	Intersection	Control Type	2026 Union Pacific Railroad Alternative		2030 Union Pacific Railroad Alternative	
			AM Peak Hour LOS	PM Peak Hour LOS	AM Peak Hour LOS	PM Peak Hour LOS
16	103rd Street and Halsted Street	Signalized	F	E	F	E
41	111th Street and Cottage Grove Avenue	Signalized	C	D	C	E
52	115th Street and Michigan Avenue	Signalized	F	E	F	E
54	115th Street and Martin Luther King Drive	Unsignalized	D	F	E	F
55a	115th Street and Cottage Grove Avenue	Signalized	F	F	D	F
55b	115th Street and Cottage Grove Avenue East	Signalized	E	D	F	D
59	119th Street and Ashland Avenue	Signalized	D	F	E	F
61	119th Street and Wentworth Avenue	Signalized	B	E	B	F
62	119th Street and State Street	Signalized	F	F	F	F
63	119th Street and Michigan Avenue	Signalized	E	B	E	B
68	127th Street and Halsted Street	Signalized	E	F	E	F
70	127th Street and Vermont Avenue and Wallace Street	Signalized	F	F	F	F

ID	Intersection	Control Type	2026 Union Pacific Railroad Alternative		2030 Union Pacific Railroad Alternative	
			AM Peak Hour LOS	PM Peak Hour LOS	AM Peak Hour LOS	PM Peak Hour LOS
71	127th Street and State Street	Signalized	D	**E**	**E**	**E**
73	130th Street and Indiana Avenue	Signalized	**F**	**F**	**F**	**F**
74	130th Street and Ellis Avenue	Signalized	A	D	B	**E**

UPRR = Union Pacific Railroad, LOS = level of service
Signalized intersection LOS reported as the average for all movements. Unsignalized LOS reported is the LOS of the worst movement. Intersections with LOS E and F that would be worse than the No Build conditions are shown shaded and in bold.

Mitigation - For intersections where adverse impacts are expected, CTA has identified potential mitigation measures to offset the portion of the LOS deterioration attributable to the East Option (**Table 3-8**). Mitigation measures for intersections near the affected intersection may also be necessary to provide better flow of traffic; therefore, the proposed mitigation measures include the 15 affected intersections as well as 4 adjacent or nearby intersections. If the East Option is selected, CTA will conduct additional traffic analysis to refine and optimize the mitigation measures described in **Table 3-8**.

Table 3-8: Mitigation Measures for the Union Pacific Railroad Alternative (2030) Conditions

ID	Intersection	Mitigation Measure
16	103rd Street and Halsted Street	PM: Adjust traffic signal timing and amount of time allotted to each phase of the signal to improve traffic flow.
41	111th Street and Cottage Grove Avenue	PM: Adjust amount of time allotted to each phase of the signal to improve traffic flow.
52	115th Street and Michigan Avenue	AM: Adjust amount of time allotted to each phase of the signal to improve traffic flow. PM: Adjust traffic signal timing and amount of time allotted to each phase of the signal.
54	115th Street and Martin Luther King Drive	Remove on-street parking lane for additional eastbound/westbound through lane on 115th Street.
55a	115th Street and Cottage Grove Avenue	AM/PM: Adjust traffic signal timing. Adjust amount of time allotted to each phase of the signal in the PM.
55b	115th Street and Cottage Grove Avenue East	AM/PM: Adjust traffic signal timing. Adjust amount of time allotted to each phase of the signal in the PM.
59	119th Street and Ashland Avenue	PM: Adjust amount of time allotted to each phase of the signal.
61	119th Street and Wentworth Avenue	PM: Adjust amount of time allotted to each phase of the signal.
62	119th Street and State Street	AM/PM: Adjust amount of time allotted to each phase of the signal.
63	119th Street and Michigan Avenue	AM: Adjust amount of time allotted to each phase of the signal.
64	127th Street and Paulina Street	AM/PM: Adjust traffic signal timing and amount of time allotted to each phase of the signal.
65	127th Street and Marshfield Avenue	AM/PM: Adjust traffic signal timing and amount of time allotted to each phase of the signal.
66	127th Street and Ashland Avenue	AM/PM: Adjust traffic signal timing and amount of time allotted to each phase of the signal.

ID	Intersection	Mitigation Measure
68	127th Street and Halsted Street	AM/PM: Adjust traffic signal timing and amount of time allotted to each phase of the signal.
70	127th Street and Vermont Avenue and Wallace Street	Add an additional northeast right turn lane. Change westbound through/left lane to dedicated westbound left turn lane. Restrict northeast bound-to-northbound movement. Install traffic detection to provide green signal phases in response to traffic presence and volume. Adjust traffic signal timing and amount of time allotted to each phase of the signal.
71	127th Street and State Street	AM/PM: Adjust traffic signal timing and amount of time allotted to each phase of the signal.
72	127th Street and Michigan Avenue	PM: Adjust traffic signal timing and amount of time allotted to each phase of the signal.
73	130th Street and Indiana Avenue	AM/PM: Add northbound right turn lane. Adjust traffic signal timing and amount of time allotted to each phase of the signal.
74	130th Street and Ellis Avenue	PM: Adjust amount of time allotted to each phase of the signal.

Mitigation measures proposed for Intersections #64, #65, #66, and #72 would provide for better flow of traffic to help address traffic impacts at nearby intersections.
Traffic signal timing optimization reduces travel time, reduces total system delay, and improves mobility within the urban transportation system. The need to allocate green signal time to certain legs of an intersection changes over time as traffic volumes change. Optimum allocation of the green signal time based on the volume of traffic in each direction would reduce wait times at intersections and improve traffic flow. In a system network, optimizing the system reduces total delay along a corridor.

Under mitigated East Option 2030 conditions, some intersections would operate at LOS E or F; however, these intersections would be no worse than under No Build Alternative (2030) conditions. **Table 3-9** shows the LOS after implementation of mitigation measures. Mitigated conditions would not result in additional intersections with unacceptable LOS. There would be no adverse permanent traffic impacts from the East Option.

Table 3-9: Union Pacific Railroad Alternative - Intersection Level of Service (2012 and 2030)

ID	Intersection	2012 Conditions		2030 Baseline		2030 Union Pacific Railroad Alternative Mitigated	
		AM	PM	AM	PM	AM	PM
		LOS	LOS	LOS	LOS	LOS	LOS
16	103rd Street and Halsted Street	**E**	D	**F**	**E**	**F**	C
41	111th Street and Cottage Grove Avenue	B	C	C	D	C	C
52	115th Street and Michigan Avenue	B	C	B	D	B	C
54	115th Street and Martin Luther King Drive	D	**F**	D	**F**	D	**F**
55a	115th Street and Cottage Grove Avenue	C	C	D	C	B	C
55b	115th Street and Cottage Grove Avenue East	D	C	**E**	C	C	B
59	119th Street and Ashland Avenue	D	**F**	D	**F**	D	**F**
61	119th Street and Wentworth Avenue	B	B	B	B	B	B
62	119th Street and State Street	B	B	B	B	C	B
63	119th Street and Michigan Avenue	A	A	A	A	C	B

ID	Intersection	2012 Conditions		2030 Baseline		2030 Union Pacific Railroad Alternative Mitigated	
		AM LOS	PM LOS	AM LOS	PM LOS	AM LOS	PM LOS
64	127th Street and Paulina Street	C	C	C	C	B	C
65	127th Street and Marshfield Avenue	C	B	C	C	C	C
66	127th Street and Ashland Avenue	C	C	C	C	C	C
68	127th Street and Halsted Street	C	C	C	C	C	D
70	127th Street and Vermont Avenue and Wallace Street	C	D	D	D	C	D
71	127th Street and State Street	A	B	B	B	B	C
72	127th Street and Michigan Avenue	A	B	A	B	B	C
73	130th Street and Indiana Avenue	B	C	C	C	D	D
74	130th Street and Ellis Avenue	A	A	A	A	B	B

LOS = level of service, N/A = not applicable

Pedestrians

Implementing the East Option would result in benefits for pedestrians at stations by upgrading the intersections immediately adjacent to the stations with ADA-accessible curb ramps and replacing deteriorated sidewalks. These improvements would provide access for all users and would increase pedestrian safety.

Park & ride facilities would be located to the east and west of the East Option alignment at the 103rd Street, 111th Street, and Michigan Avenue stations. Because of the location of the parking, passengers using the park & ride lots would need to cross the active UPRR tracks to reach the 103rd Street, 111th Street, and Michigan Avenue stations. The East Option would therefore result in pedestrian safety impacts. Pedestrians coming from the west would also need to cross the at-grade freight tracks.

Mitigation - If warranted by an engineering traffic study, CTA may install traffic signals to mitigate pedestrian safety impacts. To further mitigate impacts and improve pedestrian safety, CTA would consider installation of security surveillance cameras, alarm notifications (e.g., flashing blue lights), sidewalk lighting in the immediate vicinity of station entrances, pedestrian crossing treatments, such as refuge medians with appropriate signage, and police patrols. To mitigate adverse safety impacts at the roadway-railroad grade crossings, CTA would install safety cameras and would consider other options to increase safety. CTA would install fencing to deter pedestrians from crossing the freight railroad tracks in places other than the designated locations. Permanent impacts on pedestrians would not be adverse after mitigation.

Bicycles

Implementation of the East Option would be beneficial to bicyclists with the addition of bicycle parking at the proposed stations.

Freight Transportation and Parking Facilities

There would be no adverse impacts on freight transportation or parking facilities under the East Option. Sufficient parking capacity would be provided at all stations to avoid spillover parking into residential areas near the stations.

Construction Impacts

Construction associated with the East Option would temporarily affect the physical capacity of roadways and intersections subject to detours. These detours may lead to increased travel times and possible shifts in traffic volumes, increasing travel times for bus passengers, traffic, and pedestrians. Lane closures and detours would be implemented during off-peak traffic times to minimize construction impacts. CTA would phase construction to minimize impacts on passenger trains.

Construction within the I-94 and I-57 right-of-way would require temporary lane closures. CTA would sequence the structure construction to minimally affect traffic flow on either expressway. For erection of superstructures over expressway traffic lanes, temporary shutdown of all traffic would be required; per IDOT approval, traffic shutdowns would occur at times of low traffic volume. Increased traffic congestion due to construction may temporarily increase travel times along the expressways. During final design of the project and as a requirement for the project, CTA would prepare traffic management and maintenance of traffic plans that identify traffic detours and emergency access routes. CTA would coordinate traffic management with the FHWA, IDOT, Cook County Department of Transportation and Highways, and CDOT. Contractors would follow the Manual on Uniform Traffic Control Devices (MUTCD) design standards for temporary traffic control and would obtain required permits. The application of traffic management and maintenance of traffic plans as well as MUTCD design standards would minimize the temporary construction impacts. Contractors would also consider locations of schools, parks, and daycares when deciding where to route local traffic and construction equipment, and to the extent possible, route traffic away from places where children congregate.

Because UPRR freight operations would still be active in the UPRR right-of-way during construction of the East Option, CTA would need to move signal devices or install temporary signals to replace existing signals during construction of viaducts for the following at-grade crossings: 101st Street, 103rd Street, 107th Street, 109th Street, 111th Street, 115th Street, and State Street. Flagging operations and scheduled track closures would occur during construction activities near or adjacent to railroads.

Impacts Remaining After Mitigation

The East Option would result in permanent benefits to public transportation, pedestrians, and bicycles. Permanent impacts on vehicular traffic would not be adverse after mitigation. There would be no permanent impacts on freight transportation and parking facilities. Construction-related impacts would not be adverse.

3.3.3 Union Pacific Railroad Alternative - West Option

Permanent Impacts

Because the East and West Option alignments would run along the same corridor, the nature of impacts for each of the options would be similar.

Public Transportation

The West Option would have the same impacts on public transportation as the East Option. Like the East Option, the West Option would allow for potential connections to regional commuter rail, particularly to NICTD at the 130th Street station where the tracks are adjacent. The park &

ride facility at 130th Street station may also benefit future commuter rail passengers, such as NICTD passengers, if future connections are built.

Vehicular Traffic

With either the East or West Options, impacts on vehicular traffic and pedestrians would occur due to the active roadway-railroad grade crossings. If the West Option were selected, CTA would conduct additional traffic analysis to refine and optimize mitigation measures described in **Table 3-8**.

Pedestrians

Because the West Option park & ride facilities would be on the west side of the UPRR tracks, passengers using the park & ride facilities would not need to cross the active UPRR tracks to access the station, as they would for some park & ride facilities with the East Option. Some pedestrians traveling from the east would need to cross the active UPRR tracks to access the station.

Mitigation - Mitigation measures for the West Option would be same as for the East Option. Permanent impacts on pedestrians would not be adverse after mitigation.

Bicycles

Implementation of the West Option would be beneficial to bicyclists with the addition of bicycle parking at the proposed stations.

Freight Transportation and Parking Facilities

Like the East Option, the West Option would have no adverse impacts on freight transportation or parking.

Construction Impacts

Construction impacts of the West Option would be similar to those of the East Option with the exception that the West Option alignment would cross over the active UPRR tracks at two locations: Fernwood Parkway and Prairie Avenue. Construction at the crossings would be phased to minimize impacts on UPRR freight operations.

Impacts Remaining After Mitigation

The West Option would result in permanent benefits to public transportation and bicyclists. Permanent impacts on vehicular traffic and pedestrians would not be adverse after mitigation. There would be no permanent impacts on freight transportation and parking facilities. Construction-related impacts would not be adverse.

Chapter 4
Environmental Impacts and Mitigation

This chapter describes the potential benefits and adverse impacts that would result from the East and West Options along with possible mitigation measures to avoid or minimize adverse impacts where feasible. Mitigation presented in this Draft EIS consists of potential measures that are provided for public review and comment. Mitigation measures will be confirmed in the Final EIS. For each section in this chapter, a technical memorandum describes the potential environmental impacts and mitigation in more detail. The *Construction Impacts Technical Memorandum* (**Appendix I**) describes how construction activities would potentially affect many of the resources described in this chapter.

Section 4.1 Land Use and Economic Development
Section 4.2 Displacement and Relocation of Existing Uses
Section 4.3 Neighborhoods and Communities
Section 4.4 Visual and Aesthetic Conditions
Section 4.5 Noise and Vibration
Section 4.6 Safety and Security
Section 4.7 Historic and Cultural Resources
Section 4.8 Hazardous Materials
Section 4.9 Wetlands

4.1 Land Use and Economic Development

This section describes the impacts of the East and West Options on the land uses and economic development in the project area, including consistency with applicable land use plans. The information in this section is based on the *Land Use and Economic Development Technical Memorandum* (**Appendix J**). **Table 4-1** summarizes the land use and economic development impact findings.

Table 4-1: Land Use and Economic Development - Impacts Summary

Alternative	Permanent Impacts		Construction Impacts
	Land Use	Economic Development	
No Build	No impacts	No impacts	No impacts
Union Pacific Railroad - East Option	Impacts would not be adverse after mitigation	Benefits	Impacts would not be adverse after mitigation
Union Pacific Railroad - West Option	Impacts would not be adverse after mitigation	Benefits	Impacts would not be adverse after mitigation

4.1.1 Regulatory Framework/Methods

Regional and local planning bodies govern land use and zoning regulations. Within Chicago, CMAP acts as the regional planning body and defines the regional planning principles, while the City of Chicago regulates land use policies and zoning within its local jurisdictional boundaries. CTA evaluated existing land use, zoning, and relevant land use and economic development plans for parcels directly adjacent to the alignment, for the full length of the alignment, as well as those parcels within ½ mile of stations per FTA's 2004 *Guidelines and Standards for Assessing Transit-Supportive Land Use* (FTA 2004). The project could directly or indirectly affect land uses and economic development plans within ½ mile of project stations.

For this Draft EIS, a land use change may result in an adverse impact if it would be incompatible with surrounding land uses or could encourage land use and development inconsistent with local plans, goals, and objectives. An economic impact may result if one or more of the following occurs:

- Direct or indirect changes to the tax code or property taxes
- Substantial displacement of businesses (especially major employers) and individuals, defined in this analysis as those of a magnitude that would preclude relocation in the immediate area due to lack of available real estate
- Short- and/or long-term disruption of business activities
- Impacts that would influence regional construction costs

For each community area, CTA analyzed whether each option could cause adverse land use and economic impacts using the following:

- Analysis of the potential for short-term and long-term conflict with, or disruption of access to, land uses adjacent to the alternative alignments
- Identification of potential conflicts with local land use plans, policies, or regulations
- Identification of potential land use benefits of the East and West Options, such as opportunities for economic development and transit-supportive land uses

CTA analyzed whether the Build Alternative could cause land use and economic impacts. This analysis included reviewing existing land use plans and zoning maps and using field observations of the project corridor to determine consistency of the project with the goals and policies presented in the local and regional land use plans and studies of the City of Chicago and CMAP, including the following:

- CMAP - *GO TO 2040* (2010)
- City of Chicago - *Calumet Area Land Use Plan* (2002)
- City of Chicago, Chicago Park District, and Forest Preserve District of Cook County - *Cityspace: An Open Space Plan for Chicago (1998)*

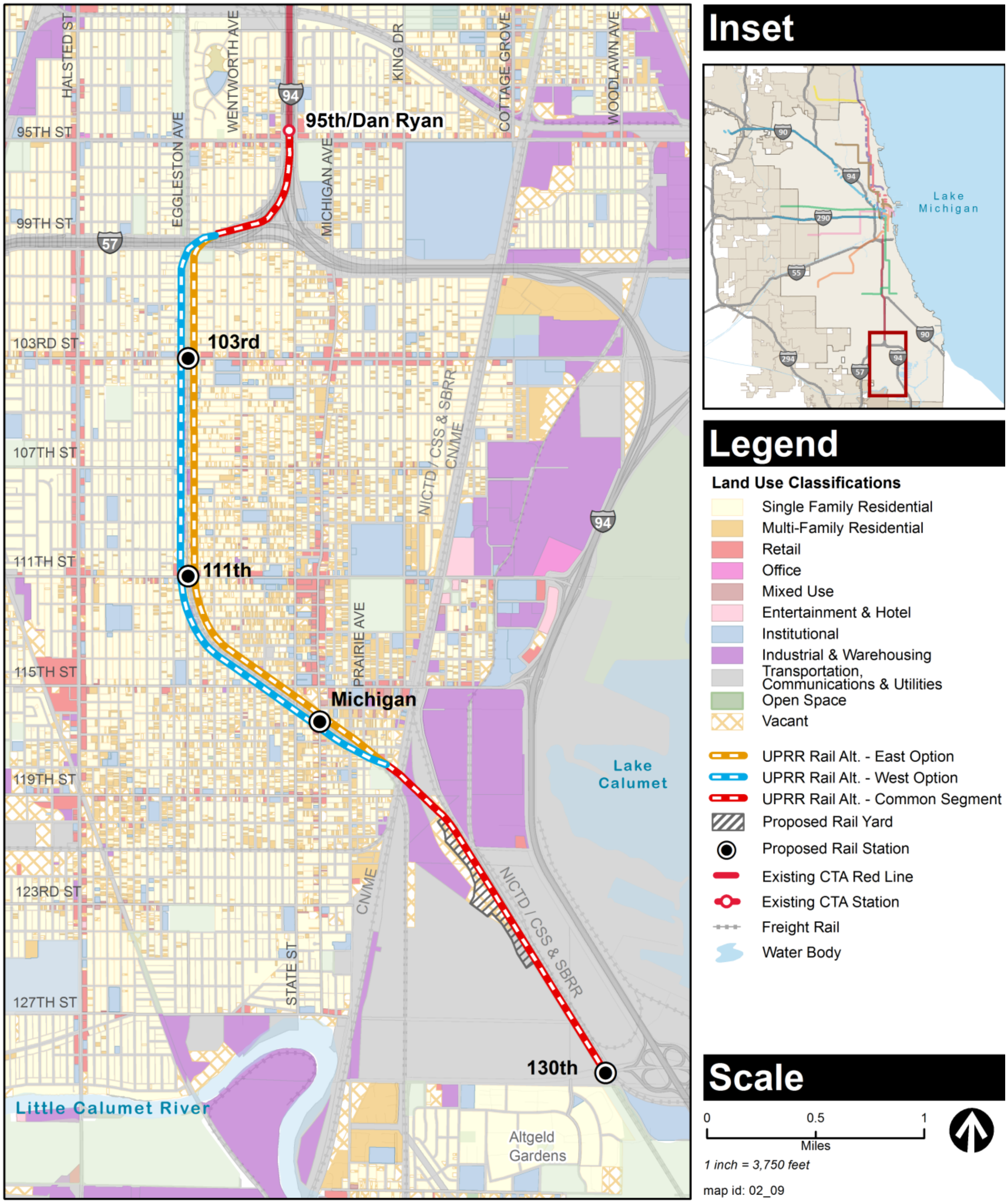
- Chicago Housing Authority - *Plan Forward: Communities That Work* (2013)
- City of Chicago - *Chicago Sustainable Industries, Phase One: A Manufacturing Work Plan for the 21st Century* (2011)
- City of Chicago and CTA - *Transit-Friendly Development Guide* (2009)
- DCP, Metropolitan Planning Council, CMAP, and Center for Neighborhood Technology - *What Will Your Station Look Like?* (2010)
- CMAP, DCP, CTA - *Improving Access, Increasing Livability: The CTA Red Line South Extension* (2012)
- Cook County - *Comprehensive Economic Development Strategy Report* (2009)
- CDOT - *130th Street Station Market/Access Study* (2010)
- University of Illinois at Chicago Voorhees Center - *Transit Equity Matters: A Regional Analysis of the Red Line and Two Other Proposed CTA Transit Line Extensions* (2009)
- University of Illinois at Chicago Voorhees Center - *The Case for Transit-Oriented Development in the Greater Roseland Area* (2005)

The applicable plans promote commercial and residential development around transit stations, as well as economic development region-wide. The plans are also compatible with the project goals of strengthening the linkages between transit and the surrounding neighborhoods. Further, the plans emphasize the integral role that transit service plays in supporting livable communities. Recommendations in the plans include improvement of pedestrian facilities, zoning for transit-oriented development around stations, including affordable housing, and engaging communities in station area planning and development. The *Land Use and Economic Development Technical Memorandum* (**Appendix J**) includes additional details about these plans.

4.1.2 Existing Conditions

The overall project area has residential (primarily single-family), commercial (urban mixed-use), industrial, transportation, utility, and vacant land uses. **Figure 4-1** depicts the overall land uses affected by the RLE Project, and **Figure 4-2** shows the existing zoning.

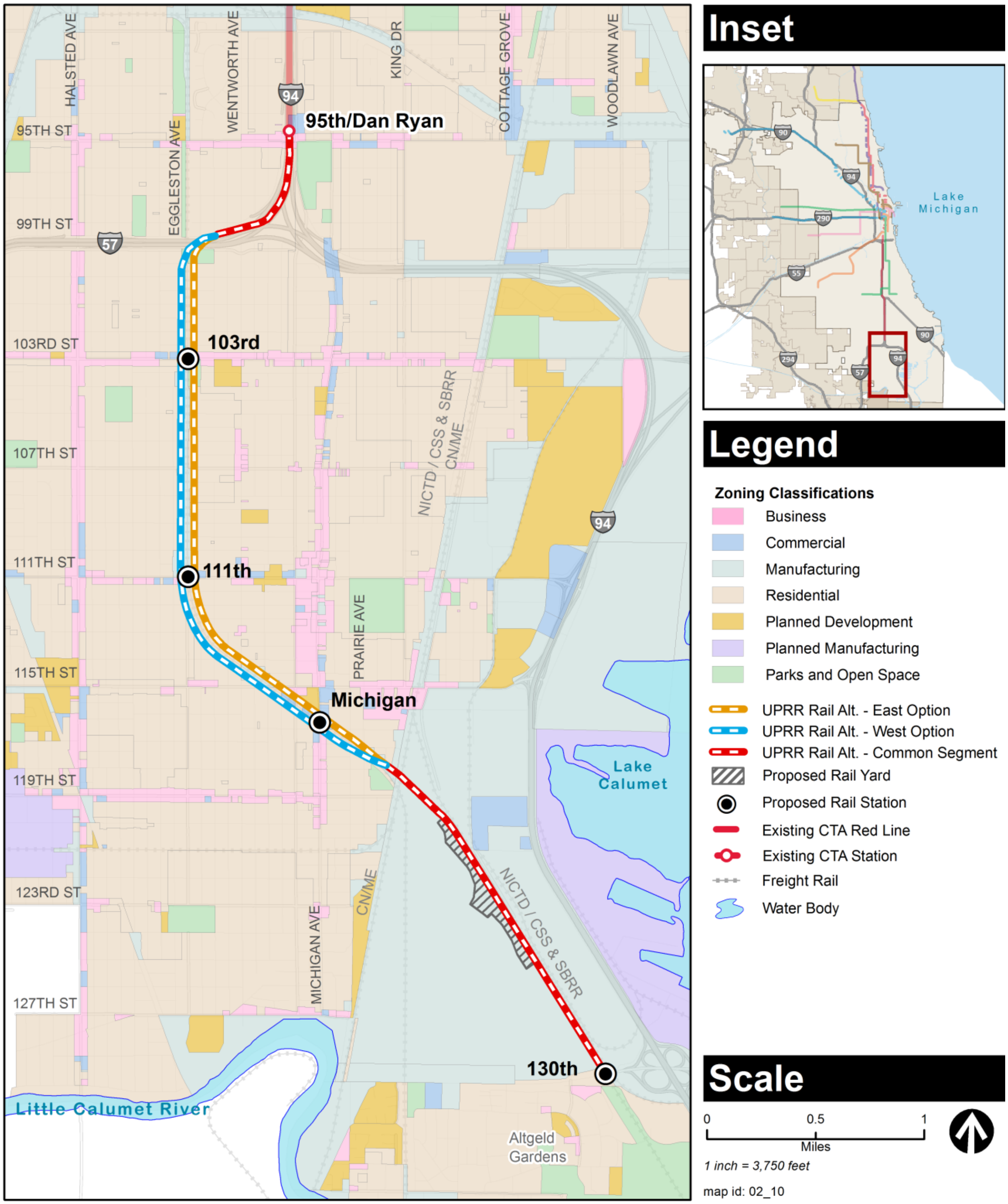
The UPRR Alternative alignment would begin within the I-57 right-of-way, north of the southbound lanes of I-57, and would follow the UPRR track southward. The surrounding land uses are primarily single-family residential properties north of I-57 and on the eastern side of the alignment, with a mix of primarily single-family residential properties and industrial properties to the west. There are typically one or two vacant properties per block in the residential areas and large vacant parcels near Michigan Avenue, some of which are slated for development. South of 119th Street, the surrounding land uses abruptly transition to industrial, railroad, and major utility sites. The Altgeld Gardens public housing project is at the southern end of the proposed alignment. **Appendix J** contains a more detailed description.


HALSTED ST
WENTWORTH AVE
KING DR
COTTAGE GROVE
WOODLAWN AVE
94
95th/Dan Ryan
95TH ST
EGGLESTON AVE
MICHIGAN AVE
99TH ST
57
103rd
103RD ST
NICTD / CSS & SBRR
CN/ME
107TH ST
94
111TH ST
111th
PRAIRIE AVE
115TH ST
Michigan
119TH ST
Lake Calumet
123RD ST
CN/ME
NICTD / CSS & SBRR
STATE ST
127TH ST
130th
Little Calumet River
Altgeld Gardens
Inset
90
94
290
55
90
294
57
94
Lake Michigan
Legend
Land Use Classifications
Single Family Residential
Multi-Family Residential
Retail
Office
Mixed Use
Entertainment & Hotel
Institutional
Industrial & Warehousing
Transportation, Communications & Utilities
Open Space
Vacant
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
UPRR Rail Alt. - Common Segment
Proposed Rail Yard
Proposed Rail Station
Existing CTA Red Line
Existing CTA Station
Freight Rail
Water Body
Scale
0
0.5
1
Miles
1 inch = 3,750 feet
map id: 02_09

CN/ME = Canadian National/Metra Electric District, NICTD/CSS & SBRR = Northern Indiana Commuter Transportation District/Chicago South Shore & South Bend Railroad

Source: CMAP 2010a

Figure 4-1: Existing Land Uses in the Project Area


HALSTED AVE
WENTWORTH AVE
KING DR
COTTAGE GROVE
WOODLAWN AVE
EGGLESTON AVE
94
95TH ST
95th/Dan Ryan
99TH ST
57
103RD ST
103rd
107TH ST
NICTD / CSS & SBRR
CN/ME
94
111TH ST
111th
PRAIRIE AVE
115TH ST
Michigan
119TH ST
Lake Calumet
123RD ST
CN/ME
NICTD / CSS & SBRR
MICHIGAN AVE
127TH ST
130th
Little Calumet River
Altgeld Gardens
Inset
Lake Michigan
90
94
290
55
90
294
57
94
Legend
Zoning Classifications
Business
Commercial
Manufacturing
Residential
Planned Development
Planned Manufacturing
Parks and Open Space
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
UPRR Rail Alt. - Common Segment
Proposed Rail Yard
Proposed Rail Station
Existing CTA Red Line
Existing CTA Station
Freight Rail
Water Body
Scale
0
0.5
1
Miles
1 inch = 3,750 feet
map id: 02_10

CN/ME = Canadian National/Metra Electric District, NICTD/CSS & SBRR = Northern Indiana Commuter Transportation District/Chicago South Shore & South Bend Railroad

Source: City of Chicago 2012c

Figure 4-2: Existing Zoning in the Project Area

4.1.3 Environmental Consequences

The following sections summarize the potential land use and economic impacts of each alternative.

4.1.3.1 No Build Alternative

Although it does not recommend specific plans for redevelopment, *GO TO 2040* identifies many potential infill areas within the project area that could be developed under the No Build Alternative. *GO TO 2040* estimates that for wards 9, 21, and 34, where the project would take place, the combined population and combined employment would increase by 14 and 39 percent, respectively, if the infill were to occur. Population and employment for the city as a whole is expected to increase by 15 and 17 percent, respectively. The No Build Alternative would be inconsistent with the goals of *GO TO 2040*, which lists the RLE Project as a fiscally constrained project. The No Build Alternative would be inconsistent with Cook County's *Comprehensive Economic Development Strategy Report,* which supports the RLE Project. The No Build Alternative would not create any new inconsistencies to land uses and economic development beyond those that already exist, and therefore would have no impact on land use or economic development.

4.1.3.2 Union Pacific Railroad Alternative - East Option

Permanent Impacts

Displacements would occur as a result of the construction of the track structure and park & ride facilities (see **Section 4.2**). The proposed Michigan Avenue station parking structure would have ground-floor retail and community facility space, which could help offset the land use and economic impacts of displacements. The following potentially adverse impacts would occur:

- The park & ride facilities at the 103rd Street, 111th Street, and Michigan Avenue stations would be inconsistent with adjacent land uses, and zoning designations do not permit large, stand-alone surface parking lots or garages.

- The substation just north of Michigan Avenue would be inconsistent with the adjacent single-family land uses.

Implementation of the East Option could spur economic revitalization and the development of more livable, transit-supportive communities near the proposed stations. More foot traffic near stations would benefit local businesses and encourage community development.

Mitigation - The following mitigation measures would offset the potentially adverse impacts:

- Land for parking facilities would be rezoned, and the facilities would include landscaping and lighting that is compatible with adjacent land uses. Garages would have architectural design and massing (setting back the upper floors away from the edge of the property to shield them from view from the street) that would reduce incompatibilities with adjacent land uses.

- Land for the substation would be rezoned, and the facility would include landscaping and architectural design and massing that would be compatible with adjacent land uses.

Construction Impacts

Construction would take up to 5 years, and would cause temporary impacts such as noise, vibration, fugitive dust, truck traffic, and roadway detours. There could be short-term economic benefits due to jobs created by construction. Construction could be disruptive to businesses along the alignment, which would be an adverse impact.

Mitigation - To minimize the adverse impact, CTA would work with the community, businesses, aldermen's offices, and the Chicago Department of Planning and Development to develop and implement a Construction Outreach and Coordination Plan. The plan would include a Business Outreach Program to assist local businesses and residents affected by construction. The plan would be tailored to business and community needs, and would include a series of initiatives to minimize construction disruption to businesses and the surrounding community. Examples of these initiatives include a community calendar to inform residents of the construction schedule and avoid affecting special events or festivals, advertising campaigns, any provisions for additional parking during construction, signage, and other economic incentives or tax relief measures for businesses adversely affected by construction.

Impacts Remaining After Mitigation

No permanent or construction-related adverse land use or economic impacts would remain after mitigation.

4.1.3.3 Union Pacific Railroad Alternative - West Option

Permanent Impacts

Like the East Option, the West Option would cause displacements as a result of construction of the track structure and park & ride facilities (see **Section 4.2**). The proposed Michigan Avenue station parking structure would have ground-floor retail and community facility space, which could help offset the land use and economic impacts of displacements. The following potentially adverse impacts would occur:

- The introduction of an elevated track structure in Fernwood Parkway would alter the open space's function as a buffer between the UPRR freight tracks and the single-family neighborhood on the west side of Eggleston Avenue.

- The park & ride facilities at the 103rd Street, 111th Street, and Michigan Avenue stations would be inconsistent with adjacent land uses, and zoning designations do not permit large, stand-alone surface parking lots or garages.

- The substation just north of Michigan Avenue would be inconsistent with the adjacent single-family land uses.

Like the East Option, the West Option could spur economic revitalization and the development of more livable, transit-supportive communities near the proposed stations. Many of the displacements related to the West Option would be industrial land uses, which could be relocated onto nearby vacant land.

Mitigation - The following mitigation measures would minimize and offset the potentially adverse impacts:

- CTA would plant additional trees on both sides of Eggleston Avenue to minimize visual impacts from the elevated track structure in Fernwood Parkway.
- Land for parking facilities would be rezoned, and the facilities would include landscaping and lighting that is compatible with adjacent land uses. Garages would have architectural design and massing that would be compatible with adjacent land uses.
- Land for the substations would be rezoned, and the facility would include landscaping and architectural design and massing that would be compatible with adjacent land uses.

Construction Impacts

Construction impacts and mitigation measures would be similar to those described for the East Option in **Section 4.1.3.2**.

Impacts Remaining After Mitigation

No permanent or construction-related adverse land use or economic impacts would remain after mitigation.

4.2 Displacements and Relocation of Existing Uses

Displacements and relocations may occur when land and/or structures are needed to accommodate construction or the permanent footprint of a project. This section describes the displacement and relocation impacts of the East and West Options. Displacements would occur if land and/or a structure were needed to accommodate construction or the permanent footprint (right-of-way) of the project. Displaced residents and businesses would be relocated in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended ("Uniform Act," 42 USC § 4601, et seq.) The *Displacements and Relocation of Existing Uses Technical Memorandum* (**Appendix K**) includes additional details. **Table 4-2** summarizes the displacements and relocation impact findings.

Table 4-2: Displacements and Relocation of Existing Uses - Impacts Summary

Alternative	Total Affected Parcels	Building Displacements	Permanent Impacts	Construction Impacts
No Build	0	0	No impacts	No impacts
Union Pacific Railroad - East Option	260	106	Impacts would not be adverse after mitigation	No impacts
Union Pacific Railroad - West Option	205	46	Impacts would not be adverse after mitigation	No impacts

4.2.1 Regulatory Framework/Methods

The Uniform Act (42 USC § 4601, et seq.) mandates that relocation services and payments be made available to eligible residents, businesses, and non-profit organizations displaced as a direct result of any project undertaken by a federal agency or with federal financial assistance. The Illinois Eminent Domain Act supports the Uniform Act and is the state regulation related to procedures for acquiring property through eminent domain, with similar provisions for reimbursements and relocation as the Uniform Act. The Metropolitan Transit Authority Act (70 Illinois Compiled Statutes [ILCS] § 3605(10)) provides CTA with the authority to use eminent domain to acquire property.

While there are no specific NEPA thresholds for assessing displacement impacts, the Uniform Act and the Uniform Real Property Acquisition Policy (42 USC § 4651, et seq.) include provisions for uniform and equitable treatment of people displaced from their homes or businesses by establishing uniform and equitable land acquisition policies to address impacts.

For this Draft EIS, displacements and relocations would cause an adverse impact if they would result in either of the following:

- Displacement of substantial numbers of existing housing units (a concentrated number of units in one neighborhood), particularly affordable housing, and/or employer units, necessitating the construction of replacement units elsewhere. This analysis uses the definition of affordable housing provided by the Illinois Housing Development Authority for the Chicago Metro area, which is based on data provided by the U.S. Department of Housing and Urban Development.

- Displacement of a substantial number of residents or employees, necessitating construction of replacement housing or employment locations elsewhere.

CTA used the following steps to determine whether each option would cause adverse displacement and relocation impacts:

- CTA prepared counts and locations of private property acquisitions and building displacements using the plan and profile drawings (**Appendix F**), CMAP and City of Chicago geographic information system parcel data, Cook County Assessor data, Google Earth, and aerial photographs. The plans and profiles are based on conceptual engineering and will be subject to revision in future engineering phases. Impacts presented in this section are based on conceptual engineering and represent maximum potential impacts for the East and West Options. Impacts will be confirmed in the Final EIS.

- CTA performed site reconnaissance of the project area and field observation of parcels and buildings to confirm the data. CTA assessed impacts of the potential acquisitions on the surrounding properties and community areas.

- CTA evaluated properties in the project area to determine whether vacancies would be sufficient to accommodate relocation of displaced residents and businesses nearby. CTA conducted qualitative field observations to determine the character of each affected community area and the ability of each to absorb temporary and permanent losses in residential and commercial units.

The following terms are used to describe displacements and relocation impacts in this section:

- Affected Parcel - A partial or a full parcel that would need to be acquired
- Building Displacement - A structure that would need to be removed (the land occupied by the structure would also be counted as an affected parcel)

Publicly owned parcels that *include a roadway* are classified as "easements" for this analysis because CTA would require a use agreement with the public entity. CTA will coordinate with FHWA, IDOT, CDOT, and Cook County regarding use of these parcels. Publicly owned parcels that *do not include a roadway* are classified as affected parcels or building displacements because CTA would need to negotiate a fee simple property transfer or other agreement with the public entity.

4.2.2 Existing Conditions

Along the UPRR Alternative alignment, the existing development pattern consists primarily of single-family residential properties north of I-57 and between 99th Street and the proposed Michigan Avenue station, with some multifamily units interspersed. Between 103rd and 111th Streets, there are several vacant and light industrial properties along the western edge of the corridor. There are also neighborhood-scale commercial retail buildings near the 103rd Street, 111th Street, and Michigan Avenue station sites. South of the proposed Michigan Avenue station location, the land uses around the alignment transition to industrial, vacant, and public utility sites. The Altgeld Gardens public housing project is at the southern end of the alignment, near 130th Street. Most of the neighborhoods along the alignment have at least a few vacant buildings and parcels per block.

CTA conducted a field verification of all potentially displaced properties on March 5, 2015 and July 7–10, 2015. CTA identified numerous houses that were boarded-up and uninhabited, primarily between 105th Street and 115th Street on the east side of the corridor and along Eggleston Avenue from 107th Street to 108th Street on the west side of the corridor.

4.2.3 Environmental Consequences

The following sections summarize the potential displacement and relocation impacts of each alternative. **Appendix K** contains a full list of displacements and detailed maps.

4.2.3.1 No Build Alternative

There would be no displacements or relocations associated with the No Build Alternative. No adverse displacement and relocation impacts would occur, and no mitigation measures would be required.

4.2.3.2 Union Pacific Railroad Alternative - East Option

Permanent Impacts

UPRR requires that, for safety reasons, the CTA tracks be located at least 50 feet from the existing freight tracks. To maintain the required 50-foot distance, the CTA right-of-way would extend into the residential neighborhoods east of the UPRR right-of-way. A total of 260 parcels and 106 buildings would be acquired for the East Option to accommodate the tracks, stations, 120th Street yard and shop, and ancillary facilities. The East Option would displace more properties and buildings than the West Option. The East Option would not displace any affordable housing units (National Housing Preservation Database 2015).

Table 4-3 summarizes the land use types for the potential property and building displacements.

Table 4-3: Union Pacific Railroad Alternative East Option Displacements

Land Use Type	Total Affected Parcels (With and Without Building Displacements)	Building Displacements[1]
Vacant	50	
Single-Family Residential	87	75
Multifamily Residential	16	15
Commercial	6	3
Mixed-Use Commercial/Residential	1	1
Institutional (Place of Worship)	1	1
Institutional (School)	2	
Industrial	17	10
Utility (MWRD)	15	
Transportation (Union Pacific Railroad)	19	
Transportation (CN/ME)	3	
Transportation (Norfolk Southern Railway)	2	
Transportation (Conrail)	3	
Transportation (NICTD/CSS & SBRR)	2	
Public (City of Chicago)	34	1
Parkland	2	
Totals	**260**	**106**

MWRD = Metropolitan Water Reclamation District of Greater Chicago, CN/ME = Canadian National/Metra Electric District, Conrail = Consolidated Rail Corporation, NICTD/CSS & SBRR = Northern Indiana Commuter Transportation District/Chicago South Shore & South Bend Railroad

[1] Building displacements are a subset of affected parcels and relate to a primary building displacement and/or an auxiliary structure (such as a garage) displacement. Building displacements are based on conceptual engineering that would be subject to revision during future design phases. Easements are not included in this table.

Figure 4-3 and **Figure 4-4** show the locations of the potential property and building displacements. **Appendix K** contains detailed information and maps of the potentially displaced properties. Displacements would occur for the following reasons:

- **99th Street to 103rd Street** - Twenty-six buildings, mostly single-family residential properties, would be removed to accommodate the right-of-way from 99th Street to 103rd Street, including the 103rd Street station and park & ride facilities.

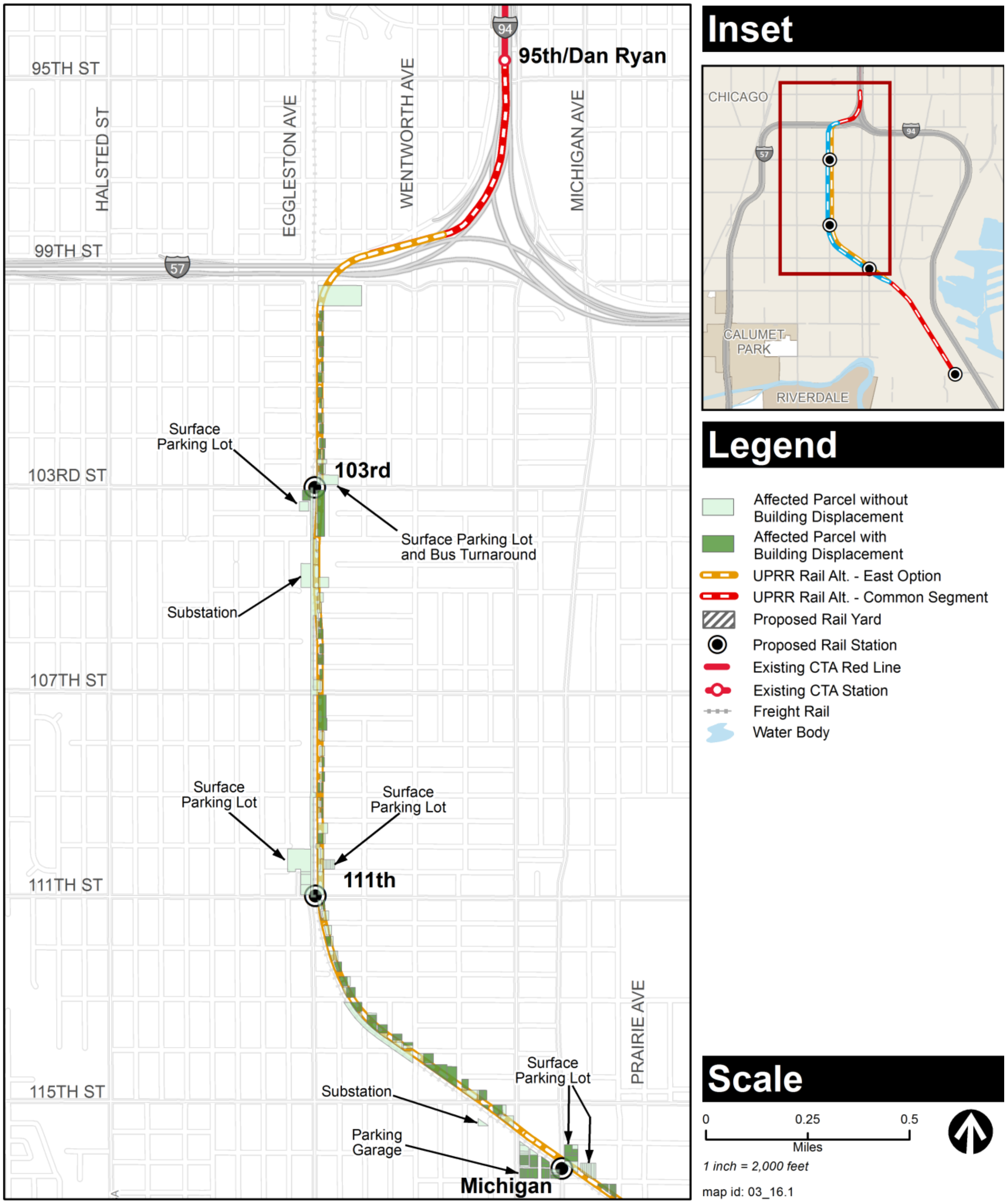
- **103rd Street to 111th Street** - Eighteen buildings, mostly single-family residential properties with some industrial properties, would be removed to accommodate the right-of-way from 103rd Street to 111th Street, including the 111th Street station, park & ride facility, and substation.

- **111th Street to 115th Street** - Twenty-eight buildings, mostly single-family residential properties, multifamily residential properties, and industrial properties, would be removed to accommodate the right-of-way from 111th Street to 115th Street. One place of worship would also be displaced.

- **115th Street to the CN/ME Tracks near 119th Street** - Thirty-three buildings would be removed to accommodate the right-of-way from 115th Street to 117th Street. Most of the displacements would result from the Michigan Avenue station park & ride facility. Displacements would consist primarily of single-family residential and multifamily residential properties as well as two industrial buildings.

- **120th Street Yard and Shop** - The 120th Street yard and shop would require removal of one industrial building.

- **Easements** - At the north end of the project area, a total of 21 easements would be required to accommodate the East Option in the I-57 right-of-way and at the crossing of I-57 where the tracks would curve south. Five easements would also be required from 115th Street to 117th Street.


95TH ST
HALSTED ST
EGGLESTON AVE
WENTWORTH AVE
MICHIGAN AVE
94
95th/Dan Ryan
99TH ST
57
Surface Parking Lot
103RD ST
103rd
Surface Parking Lot and Bus Turnaround
Substation
107TH ST
Surface Parking Lot
Surface Parking Lot
111TH ST
111th
PRAIRIE AVE
115TH ST
Substation
Surface Parking Lot
Parking Garage
Michigan
Inset
CHICAGO
57
94
CALUMET PARK
RIVERDALE
Legend
Affected Parcel without Building Displacement
Affected Parcel with Building Displacement
UPRR Rail Alt. - East Option
UPRR Rail Alt. - Common Segment
Proposed Rail Yard
Proposed Rail Station
Existing CTA Red Line
Existing CTA Station
Freight Rail
Water Body
Scale
0
0.25
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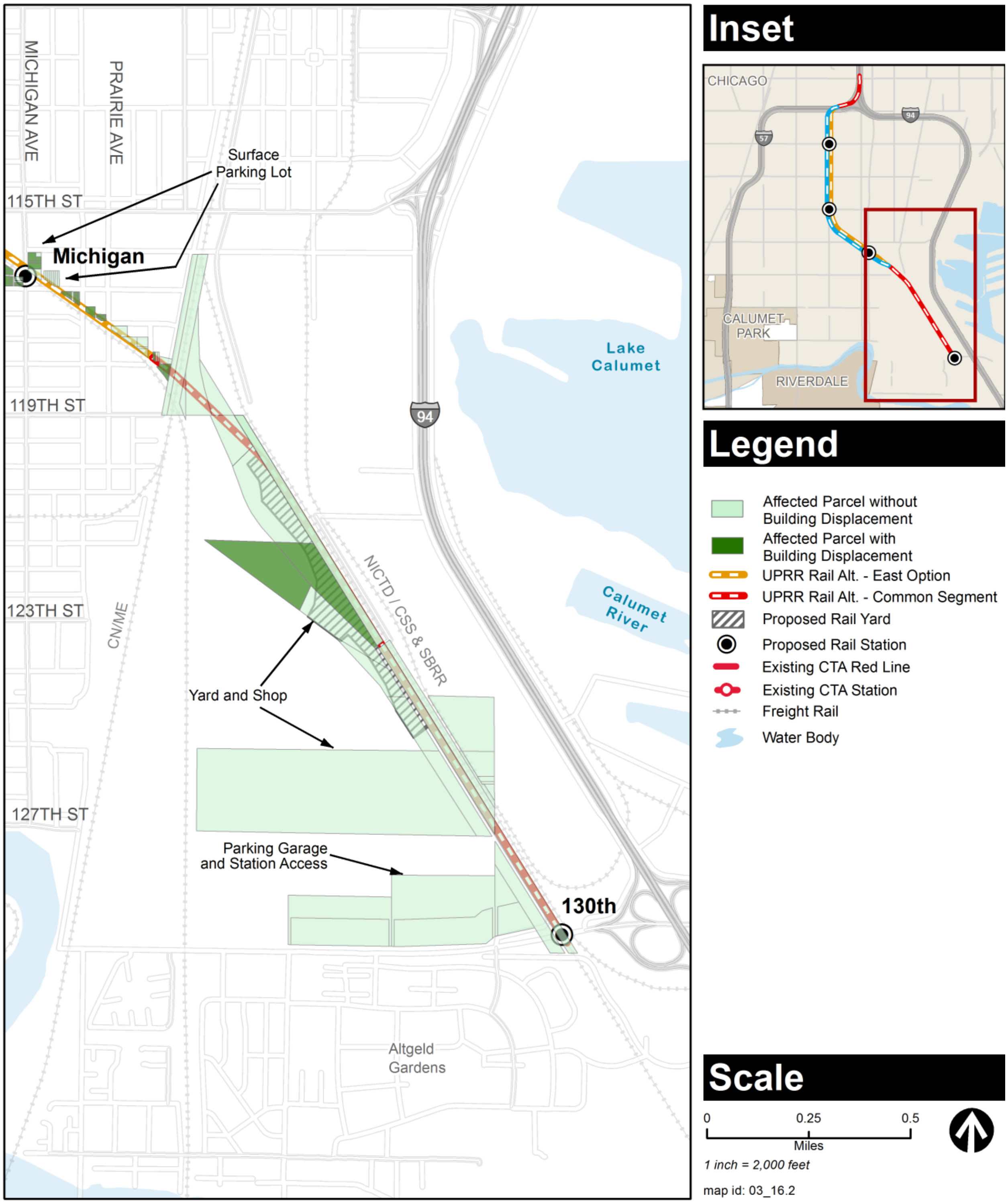
Miles
1 inch = 2,000 feet
map id: 03_16.1

Figure 4-3: Union Pacific Railroad Alternative East Option Displacements (1 of 2)


MICHIGAN AVE
PRAIRIE AVE
Surface Parking Lot
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Michigan
119TH ST
123TH ST
127TH ST
CN/ME
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Lake Calumet
Calumet River
NICTD / CSS & SBRR
Yard and Shop
Parking Garage and Station Access
130th
Altgeld Gardens
Inset
CHICAGO
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CALUMET PARK
RIVERDALE
Legend
Affected Parcel without Building Displacement
Affected Parcel with Building Displacement
UPRR Rail Alt. - East Option
UPRR Rail Alt. - Common Segment
Proposed Rail Yard
Proposed Rail Station
Existing CTA Red Line
Existing CTA Station
Freight Rail
Water Body
Scale
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Miles
1 inch = 2,000 feet
map id: 03_16.2

CN/ME = Canadian National/Metra Electric District, NICTD/CSS & SBRR = Northern Indiana Commuter Transportation District/Chicago South Shore & South Bend Railroad

Figure 4-4: Union Pacific Railroad Alternative East Option Displacements (2 of 2)

Although the East Option would displace more buildings than the West Option, most of the displacements would be spread evenly along the corridor between 99th Place and the Michigan Avenue station. On most affected blocks, one or two houses at the end of each street adjacent to the UPRR tracks would be removed. Because the displacements would be spread evenly along the corridor, most neighborhoods would not experience a substantial concentration of displacements. The only area with a high concentration of displacements would be the block bounded by the UPRR right-of-way, State Street, 116th Street, and Michigan Avenue, where the Michigan Avenue station park & ride facility would be constructed; 30 properties would be displaced on that block. Of the 260 properties that the East Option would displace, 50 parcels are vacant. In addition, 33 of the 34 parcels owned by the City of Chicago that would be affected by the East Option are vacant. The vacant properties are dispersed throughout the corridor primarily between 99th Street and Prairie Avenue.

The East Option would affect portions of Wendell Smith Park and Block Park (4.7 acres and 1.3 acres, respectively). Of the 4.7 acres of Wendell Smith Park, approximately 0.7 acre would be overlapped by the elevated structure and its associated clearances. Of the 1.3 acres of Block Park, approximately 0.9 acre of park space would be overlapped by the elevated structure and its associated clearances. Additional information about impacts on these parks is presented in **Chapter 8**. A communications tower owned by the City of Chicago is located in Block Park and would be affected by the East Option.

CTA conducted a field verification of potentially displaced properties and availability of replacement housing, commercial buildings, and vacant parcels on March 5, 2015 and July 7–10, 2015. CTA identified numerous houses that were boarded-up and uninhabited throughout the community, primarily between 105th Street and 115th Street on the east side of the corridor and along Eggleston Avenue from 107th Street south on the west side of the corridor. At the time of the field verification, three of the residential displacements identified for the East Option were boarded up, and are not likely to adversely affect a resident.

Mitigation - The availability of replacement housing, commercial buildings, and vacant parcels would likely allow relocation of displaced businesses and residents within the project area. In addition, the new multilevel parking garage at the Michigan Avenue station would have ground-floor retail and community facility space, which would help offset displacements. The new stations would improve regional accessibility and help attract new development to the area, thereby reducing the long-term impacts of displacements. With mitigation through fair compensation and relocation assistance per the Uniform Act (42 USC § 4601, et seq.), impacts would not be adverse. CTA would coordinate with the Chicago Department of Planning and Development on local economic development and community plans during future design phases. CTA has undertaken early outreach to all potentially affected property owners by contacting each owner and lessee (based on available public records). CTA's Uniform Act public outreach specialists would provide specific outreach as a one-stop resource to potentially displaced residents and/or businesses to answer questions regarding relocation rights, requirements, processes, and anticipated timelines. CTA, in coordination with the City of Chicago and the local aldermen's offices, would provide informational resources, permitting support, and points of contact for displaced business owners to find suitable sites for relocation. CTA would coordinate with the City of Chicago regarding impacts on the communications tower and potential relocation options.

Construction Impacts

Because all construction activities would occur within the street right-of-way or on land permanently acquired for the permanent right-of-way, yard and shop, and park & ride facilities, there would be no temporary construction-related displacement or relocation impacts.

Impacts Remaining After Mitigation

With mitigation through fair compensation and relocation assistance per the Uniform Act (42 USC § 4601, et seq.), impacts would not be adverse after mitigation. No temporary, construction-related adverse displacement and relocation impacts would occur under the East Option.

4.2.3.3 Union Pacific Railroad Alternative - West Option

Permanent Impacts

Like the East Option, the West Option would be subject to the UPRR requirement that the CTA elevated structure be constructed at least 50 feet from the existing freight tracks. In the West Option, however, the CTA elevated structure would run along the west side of the UPRR right-of-way, where fewer buildings are present. As a result, the West Option would result in 46 displaced buildings, compared to 106 for the East Option, and more of the displaced buildings would be industrial and commercial rather than single-family residential, due to the predominance of industrial land uses along the west side of the UPRR right-of-way. The 46 buildings that would be removed are part of the 205 parcels that would be acquired for the West Option to accommodate the tracks, stations, 120th Street yard and shop, and ancillary facilities. The West Option would not displace any affordable housing units (National Housing Preservation Database 2015). **Table 4-4** summarizes the land use types for the potential property and building displacements.

Table 4-4: Union Pacific Railroad Alternative West Option Displacements

Land Use Type	Total Affected Parcels (With and Without Building Displacements)	Building Displacements[1]
Vacant	41	
Single-Family Residential	35	22
Multifamily Residential	4	4
Commercial	13	6
Mixed-Use (Retail/Office/Residential)	2	2
Institutional (Place of Worship)	2	1
Industrial	18	11
Utility (MWRD)	15	
Transportation (Union Pacific Railroad)	36	
Transportation (CN/ME)	3	
Transportation (Norfolk Southern Railway)	2	
Transportation (Conrail)	3	
Transportation (NICTD/CSS & SBRR)	2	
Transportation (Chicago and Western Indiana Railroad)	1	
Public (City of Chicago)	24	
Parkland	4	
Totals	**205**	**46**

MWRD = Metropolitan Water Reclamation District of Greater Chicago, CN/ME = Canadian National/Metra Electric District, Conrail = Consolidated Rail Corporation, NICTD/CSS & SBRR = Northern Indiana Commuter Transportation District Chicago South Shore & South Bend Railroad

[1] Building displacements are a subset of affected parcels and relate to a primary building displacement and/or an auxiliary structure (such as a garage) displacement. Building displacements are based on conceptual engineering that would be subject to revision during future design phases. Easements are not included in this table.

Figure 4-5 and **Figure 4-6** show the locations of the potential property and building displacements. **Appendix K** contains detailed information and maps of the potentially displaced properties. Displacements would occur for the following reasons:

- **99th Street to 103rd Street** - The CTA elevated structure would be located above much of Fernwood Parkway between 99th and 103rd Streets. Park impacts are discussed further as part of the Section 4(f) analysis in **Chapter 8**. One multifamily residential property and one commercial building would be removed to accommodate the 103rd Street station.

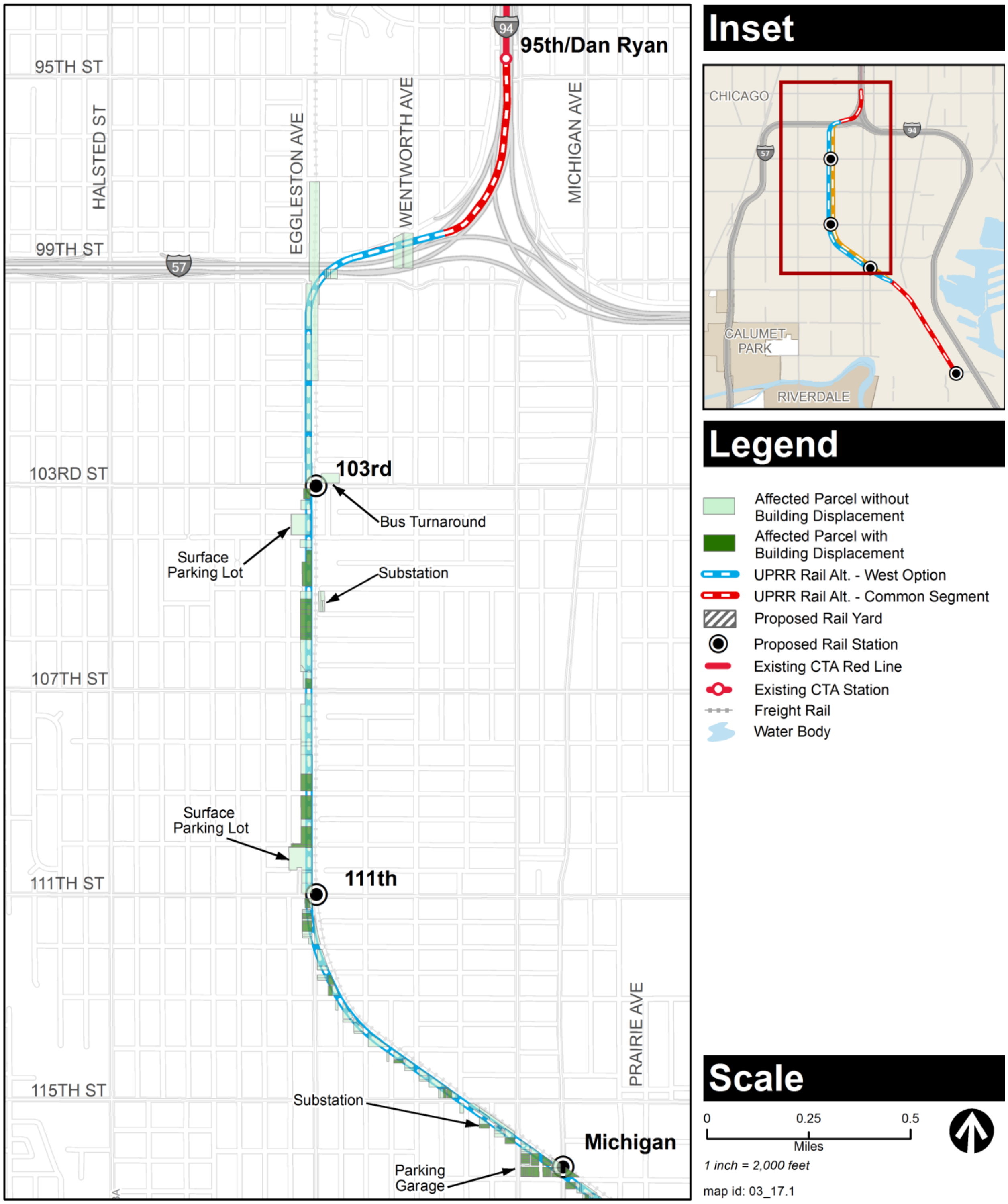
- **103rd Street to 111th Street** - Nine buildings, all industrial and commercial, would be removed to accommodate the permanent right-of-way from 103rd Street to 111th Street.

- **111th Street to 115th Street** - Eight buildings would be removed to accommodate the permanent right-of-way between 111th Street and 115th Street. Displacements would include a mix of residential, commercial, and industrial buildings.

- **115th Street to the CN/ME Tracks near 119th Street** - Twenty-six buildings would be displaced to accommodate the right-of-way from 115th Street to 117th Street. Most of the displacements would result from the Michigan Avenue station park & ride facility. Displacements would consist primarily of single-family residential and multifamily residential properties. One place of worship and one industrial building would also be displaced.

- **120th Street Yard and Shop** - The 120th Street yard and shop would require removal of one industrial building.

- **Easements** - At the north end of the project area, a total of 23 easements would be required to accommodate the West Option in the I-57 right-of-way and at the crossing of I-57 where the tracks would curve south. One easement would also be required from 115th Street to 117th Street.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UPRR Rail Alt. - Common Segment
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Proposed Rail Station
Existing CTA Red Line
Existing CTA Station
Freight Rail
Water Body
Scale
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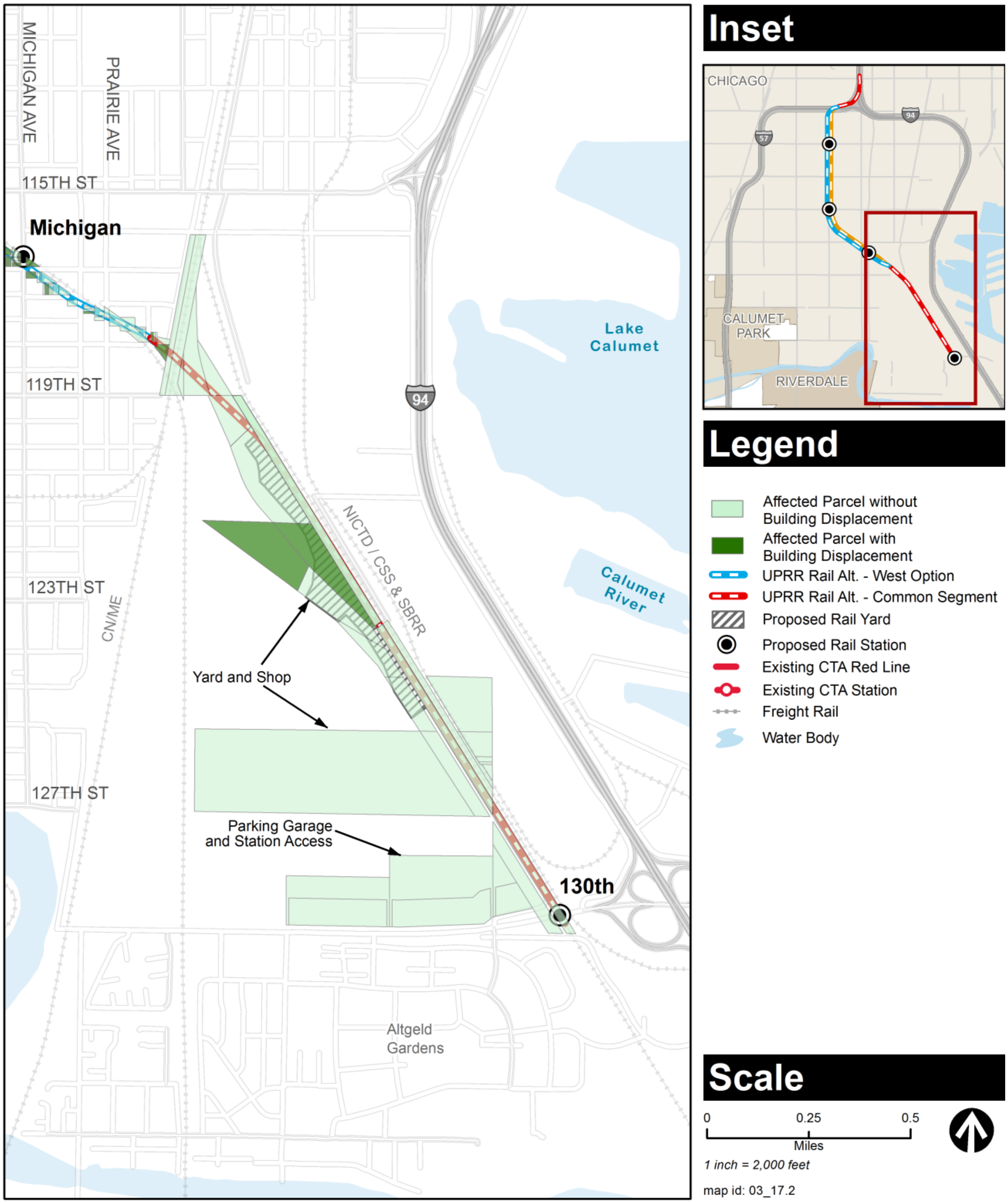
Miles
1 inch = 2,000 feet
map id: 03_17.1

Figure 4-5: Union Pacific Railroad Alternative West Option Displacements (1 of 2)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115TH ST
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94
Lake Calumet
Calumet River
Yard and Shop
Parking Garage and Station Access
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Existing CTA Station
Freight Rail
Water Body
Scale
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Miles
1 inch = 2,000 feet
map id: 03_17.2

CN/ME = Canadian National/Metra Electric District, NICTD/CSS & SBRR = Northern Indiana Commuter Transportation District/Chicago South Shore & South Bend Railroad

Figure 4-6: Union Pacific Railroad Alternative West Option Displacements (2 of 2)

Displacements would be spread evenly along the corridor between 103rd Street and the Michigan Avenue station. Many of the displacements would be industrial land uses, which could be relocated to nearby vacant parcels and buildings or within nearby industrial corridors. Most of the affected residential blocks would be between 111th Street and the Michigan Avenue station. On most of these blocks, one or two houses at the end of each street adjacent to the UPRR tracks would be removed. Because the displacements would be spread evenly along the corridor, most neighborhoods would not experience a substantial concentration of displacements. The only area with a high concentration of displacements would be the block bounded by the UPRR right-of-way, State Street, 116th Street, and Michigan Avenue, where the Michigan Avenue station park & ride facility would be constructed; 30 parcels would be displaced on this block. Of the 205 properties that the West Option would displace, 41 parcels are vacant. In addition, all 24 of the City of Chicago parcels that would be affected by the West Option are vacant. The vacant properties are dispersed throughout the corridor primarily between 99th Street and Prairie Avenue.

The West Option would affect Fernwood Parkway. Approximately 2.9 acres of Fernwood Parkway lies within the project corridor, and approximately 1.9 acres of the parkway would be overlapped by the elevated structure and its associated clearances. **Chapter 8** provides additional information about impacts on Fernwood Parkway.

CTA conducted a field verification of potentially displaced properties and availability of replacement housing, commercial buildings, and vacant parcels on March 5, 2015 and July 7–10, 2015. CTA identified numerous houses that were boarded-up and uninhabited throughout the community, the majority of which were between 105th Street and 115th Street on the east side of the corridor and along Eggleston Avenue from 107th Street south on the west side of the corridor. At the time of the field verification, one of the residential displacements identified for the West Option was boarded up, and is not likely to adversely affect a resident.

Mitigation - The availability of replacement housing, commercial buildings, and vacant parcels would likely allow relocation of displaced businesses and residents within the project area. In addition, the new multilevel parking garage at the Michigan Avenue station would have ground-floor retail and community facility space, which would help offset displacements. The new stations would improve regional accessibility and help attract new development to the area, thereby reducing the long-term impacts of displacements. With mitigation through fair compensation and relocation assistance per the Uniform Act (42 USC § 4601, et seq.), impacts would not be adverse. CTA would coordinate with the Chicago Department of Planning and Development on local economic development and community plans during future design phases. CTA would provide specific outreach as a one-stop resource to potentially displaced residents and/or businesses.

Construction Impacts

Because all construction activities would occur within the street right-of-way or on land permanently acquired for the permanent right-of-way, yard and shop, and park & ride facilities, there would be no temporary construction-related displacement or relocation impacts.

Impacts Remaining After Mitigation

With mitigation through fair compensation and relocation assistance per the Uniform Act (42 USC § 4601, et seq.), impacts would not be adverse after mitigation. No temporary, construction-related adverse displacement and relocation impacts would occur under the West Option.

4.3 Neighborhoods and Communities

This section describes the project impacts on the surrounding neighborhood and community resources. The analysis considered the surrounding community context and character, community mobility, and community facilities near the project corridor, such as schools, parks, and community centers. The *Neighborhood and Community Impacts Technical Memorandum* (**Appendix L**) and the *Parklands and Community Facilities Technical Memorandum* (**Appendix M**) contain additional details. **Table 4-5** summarizes the impact findings for community character and cohesion, mobility, and community resources.

Table 4-5: Neighborhoods and Communities - Impacts Summary

Alternative	Permanent Impacts			Construction Impacts
	Community Character and Cohesion	Mobility	Community Resources	
No Build	No impacts	No impacts	No impacts	No impacts
Union Pacific Railroad - East Option	▪ Washington Heights and Riverdale - Impacts would not be adverse after mitigation ▪ Roseland and West Pullman - Adverse impacts despite mitigation because of adverse visual impacts	Benefits	▪ Roseland - Impacts would not be adverse after mitigation ▪ Washington Heights, West Pullman, and Riverdale - Benefits	Impacts would not be adverse after mitigation
Union Pacific Railroad - West Option	▪ Riverdale - Impacts would not be adverse after mitigation ▪ Roseland, Washington Heights, and West Pullman - Adverse impacts despite mitigation because of adverse visual impacts	Benefits	▪ Roseland, Washington Heights, and Riverdale - Benefits ▪ West Pullman - Impacts would not be adverse after mitigation	Impacts would not be adverse after mitigation

4.3.1 Regulatory Framework/Methods

FHWA and IDOT both have Community Impact Assessment Manuals (FHWA 2008, IDOT 2007a), which CTA used to look at potential neighborhood and community impacts of the East and West Options. The analysis considers the following types of impacts:

- **Community Character and Cohesion** - Impacts due to commercial and residential displacements and changes in land use, visual/aesthetics, noise levels, and population/demographics. Community character is an attribute of a geographic area with identifiable characteristics that make it unique. Community cohesion is an attribute of a geographic area, where segmentation or division of the area would reduce its desirability to current and future residents. For this Draft EIS, an impact on community character and cohesion would be adverse if impacts related to displacements and changes in land use, visual/aesthetics, noise levels, and population/demographics would be adverse, as discussed throughout this chapter of the Draft EIS.

- **Mobility** - Overall community impacts of changes in transportation options, travel patterns, business activity, access to jobs, and access for emergency service providers. For this Draft EIS, an impact on mobility would be adverse if transportation options, access to jobs, and access for emergency service providers would be reduced.

- **Community Resources** - Impacts on key facilities in the project area that play an important role in shaping and defining the community, such as landmarks, parks, community centers, and other places that serve as focal points or provide community services. For this Draft EIS, an impact on community resources would be adverse if key facilities in the project area would be directly affected or access to key facilities would be reduced.

The neighborhood and community impact analysis involved creating detailed demographic and community profiles based on existing community area boundaries within ½ mile of the project alignments. CTA conducted field investigations to identify physical, social, or perceived barriers within the established community. In addition, the analysis considered other potential visual, noise, and environmental impacts that could have ripple effects on the surrounding neighborhood. Potential mitigation measures are proposed to offset identified impacts, with an emphasis on community and transit-supportive solutions to address temporary construction impacts.

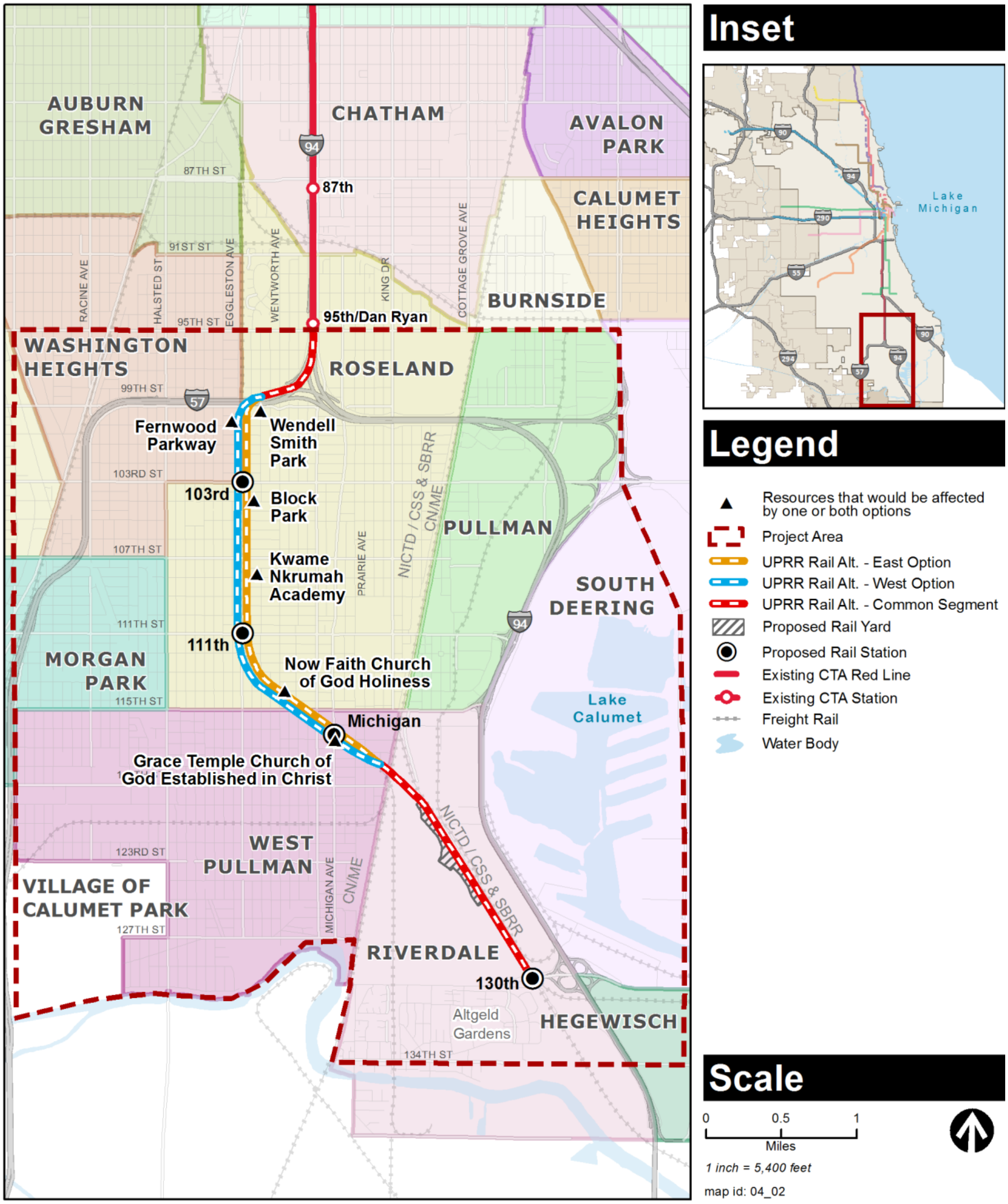
4.3.2 Existing Conditions

The affected environment for the neighborhood and community impacts analysis consists of the community areas through which the East or West Option alignment would pass. Each community area through which the East or West Option alignment would pass is described below. The *Neighborhood and Community Impacts Technical Memorandum* (**Appendix L**) contains additional information about each community area. **Figure 4-7** shows a typical street in the project area, and **Figure 4-8** shows the locations of the referenced community areas.

Figure 4-7: Photo of Residential Street near Union Pacific Railroad Corridor in Roseland

- Roseland - Consists primarily of single-family homes along one-way streets with block associations, similar to Washington Heights. Michigan Avenue serves as a major retail and commercial corridor, and several blocks also contain single-family and multifamily housing. Within Roseland, the greatest amount of retail activity occurs between 111th and 115th Streets, with the areas to the north consisting of automobile-oriented land uses.

- Washington Heights - Consists primarily of single-family homes along a grid of one-way streets with low- to medium-density commercial areas with off-street parking along major arterial streets. Blocks are well maintained, and many have community-organized block associations that provide neighborhood watch programs and other initiatives.


AUBURN GRESHAM
CHATHAM
AVALON PARK
CALUMET HEIGHTS
BURNSIDE
WASHINGTON HEIGHTS
ROSELAND
PULLMAN
SOUTH DEERING
MORGAN PARK
WEST PULLMAN
VILLAGE OF CALUMET PARK
RIVERDALE
HEGEWISCH
Lake Calumet
Altgeld Gardens
87TH ST
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134TH ST
RACINE AVE
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Fernwood Parkway
Wendell Smith Park
Block Park
Kwame Nkrumah Academy
Now Faith Church of God Holiness
Grace Temple Church of God Established in Christ
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Legend
▲ Resources that would be affected by one or both options
Project Area
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
UPRR Rail Alt. - Common Segment
▨ Proposed Rail Yard
◉ Proposed Rail Station
Existing CTA Red Line
Existing CTA Station
Freight Rail
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Miles
1 inch = 5,400 feet
map id: 04_02

CN/ME = Canadian National/Metra Electric District, NICTD/CSS & SBRR = Northern Indiana Commuter Transportation District/Chicago South Shore & South Bend Railroad

Figure 4-8: Community Areas in the Project Area and Community Resources Affected by Union Pacific Railroad Alternative East or West Options

- West Pullman - Includes portions of the Michigan Avenue commercial corridor, as well as several large industrial and utility properties. Along Michigan Avenue, many commercial buildings have residential units above. Several Spanish-speaking businesses and households are also in the area.

- Riverdale - Much of the Riverdale community area is occupied by MWRD's facility and freight railroad properties. The southern portion of Riverdale contains the Altgeld Gardens public housing project and the single-family Eden Green and Golden Gate neighborhoods. There are relatively few household-serving businesses in the area; however, Altgeld Gardens does have some of its own services, such as a school, social services, and medical facilities.

The demographic characteristics in the project area are described in detail in **Appendix L** and are summarized below (US Census Bureau 2010, 2013).

- The project area contains approximately 128,400 residents, 44,600 households, and 11,100 jobs; the numbers of all of these have been shrinking throughout recent decades. The disparity between the number of residents and jobs reflects high unemployment in the project area (19.0 percent), and a large number of residents commuting outside of the project area for work.

- Ethnicity in the project area is predominantly African American (93 percent), with the next largest percentage (4 percent) being Hispanic. All community areas in the project area have African American population percentages ranging from 83.6 percent to 97.3 percent, compared with a citywide average of 32.4 percent.

- The population is predominantly English-speaking, with some pockets of households that speak only Spanish.

- Median household income in the project area is approximately $41,000, compared to $46,900 for the City of Chicago as a whole. Some census tracks in the Riverdale community area have very low median household incomes, ranging from $2,500 to $18,000.

- Median home prices range from $75,200 in Riverdale to $113,500 in Morgan Park, which is below the City of Chicago median of $161,000.

Within ½ mile of the East and West Option alignments are 70 religious facilities, 21 public schools (including 1 charter school), 10 daycares, 7 private schools, 8 community centers, 4 healthcare centers, 2 city facilities, 2 senior centers, 1 landmark, and 1 library. In addition, the Altgeld Gardens public housing development is just southwest of the proposed 130th Street station location. The *Neighborhood and Community Impacts Technical Memorandum* (**Appendix L**) contains a full listing of the community resources, emergency services, and schools in the project area. The *Parklands and Community Facilities Technical Memorandum* (**Appendix M**) contains a full listing of the parks and other community facilities in the project area.

Wendell Smith Park is in Roseland and is approximately 4.7 acres (340 feet wide by 610 feet long). This park is an actively used facility with basketball courts, baseball fields, a play lot, recreation building, and 0.3 mile of walking trails. Regularly scheduled activities at Wendell Smith Park include basketball tournaments, baseball/softball games, and concerts. The park is also actively used by day camps and for activities organized by the Chicago Park District.

Block Park is in Roseland and is a passive green space. Harvard Avenue divides Block Park into two parcels. The east parcel is approximately 1.4 acres (130 feet wide by 460 feet long) and includes amenities such as benches, walking paths, and sidewalks. The west parcel is approximately 1.3 acres (90 feet wide by 600 feet long) and is open space with a sidewalk and no other park amenities. In addition, a communications tower and two utility structures are on the west parcel.

Fernwood Parkway is in Roseland and is a passive green space. The parkway is divided into two parcels by 101st Street. The north parcel, from 99th Street to 101st Street, is approximately 2.4 acres (78 feet wide by 1,325 feet long). The south parcel, from 101st Street to 103rd Street, is approximately 2.9 acres (78 feet wide by 1,277 feet long). Both the north and south parcels of Fernwood Parkway serve as open space and do not contain recreational facilities or amenities such as sidewalks or benches. Some trees are planted within the parkway and a chain-link fence separates the green space from the existing at-grade UPRR tracks.

4.3.3 Environmental Consequences

The following sections summarize the potential neighborhood and community impacts of each alternative.

4.3.3.1 No Build Alternative

Under the No Build Alternative the project would not be built, and there would be no changes to community character and cohesion. The No Build Alternative would lack the mobility and livability enhancements that the East and West Options would provide. It would also fail to address the community's desire for growth initiatives that could attract new economic development interests to the area. There would be no impacts on community resources. Construction would not occur under the No Build Alternative. The No Build Alternative would not have adverse community or neighborhood impacts, and no mitigation measures would be required.

4.3.3.2 Union Pacific Railroad Alternative - East Option

Permanent Impacts

Community Character and Cohesion

The East Option alignment would be within existing highway rights-of-way and adjacent to the UPRR and NICTD/CSS & SBRR freight rail corridors. The elevated structure would not substantially differ from the existing character of the freight railroad tracks, but would encroach into the residential neighborhood and would be more prominent than the freight railroad tracks due to its height. The structure would not introduce new separations between neighborhoods, because the UPRR right-of-way already has limited grade crossings and acts as a barrier for pedestrians. The East Option would require more displacements than the West Option (see **Section 4.2**), particularly in Roseland and West Pullman.

The new transit stations would become focal points for the surrounding communities, and may attract new commercial and residential activities that would result in an overall improvement in community character. The increased pedestrian activity around stations may help bridge the gap between communities currently separated by the freight tracks. The multistory park & ride facility at the Michigan Avenue station would include a ground-floor community facility and retail space, which would serve as a community enhancement.

The following permanent adverse impacts related to community character and cohesion would occur:

- Displacements and Relocation of Existing Uses
    - The placement of the track structure in Roseland would require acquisition of the two or three parcels closest to the eastern side of the UPRR right-of-way on every east-west street from 99th Place to 102nd Place and from 105th Place to Michigan Avenue. Most of these parcels contain single-family homes. Because the streets in this area, with the exception of major thoroughfares, end at the UPRR right-of-way, the displaced homes would be at the ends of blocks (adjacent to the UPRR tracks), and not in the center of the neighborhood. The CTA track structure would encroach on the edges of neighborhoods, but would leave the neighborhoods otherwise intact.
    - A total of 18 buildings would be removed to accommodate the Michigan Avenue station park & ride facility in West Pullman. Of the 18 buildings, 16 are residential, 1 is commercial, and 1 is industrial.
- Visual and Aesthetic Conditions
    - The elevated track structure would cause adverse visual impacts because of the change in the visual setting in the highway right-of-way along the north side of I-57 in Roseland, as shown in **Figure 4-14** in **Section 4.3.3.2**.
    - The track structure near the intersection of 117th Street and Prairie Avenue in West Pullman would displace two houses and extend into the neighborhood beyond the line of trees that currently shields view of the UPRR right-of-way. Four houses would face the structure, and the height would be out of scale with the existing character of the neighborhood. The structure's location above an intersection would make it impossible to minimize visual impacts from it with additional trees, as shown in **Figure 4-15** in **Section 4.4.3**.
- Noise
    - The noise from CTA trains combined with existing UPRR freight trains would cause adverse impacts at noise-sensitive buildings in Roseland, Washington Heights, and West Pullman. The UPRR train frequency is 27 trains per day and the headways (time between trains) for CTA trains would range from 3–6 minutes during peak periods to 15 minutes at night.

Mitigation - Mitigation measures to minimize adverse permanent impacts related to community character and cohesion would include the following:

- Displacements and Relocation of Existing Uses - CTA would provide compensation for displacements and relocation assistance in compliance with the Uniform Act (42 USC § 4601, et seq.), which would offset the neighborhood and community impacts of displacements because sufficient replacement housing, commercial buildings, and vacant parcels exist in the immediate area to accommodate affected residents and businesses.

- Visual and Aesthetic Conditions - Mitigation measures, as described in **Section 4.4.3**, would reduce the adverse visual impacts north of I-57 and near 117th Street and Prairie Avenue. Due to the proximity of the elevated track structure to residential areas, the impacts would remain adverse despite mitigation.

- Noise - CTA would build noise barriers approximately 4 feet in height along the sides of the track structures where needed to avoid adverse noise impacts (see **Section 4.5**).

Mobility
The East Option would substantially reduce travel times between the Washington Heights, Roseland, West Pullman, and Riverdale communities, and would enhance their connection with major employment and activity centers north of the project area. The East Option would result in substantial mobility benefits for Far South Side residents.

Community Resources
The East Option would displace the Now Faith Church of God Holiness (135 W. 114th Street), and would cross portions of Wendell Smith Park and Block Park, all in Roseland (see **Figure 4-8**).

The East Option alignment would run through the northwestern corner of the Wendell Smith Park. Of the 4.7 acres of the park, approximately 0.7 acre would be overlapped by the elevated structure and its associated clearances. The overlap area includes open space, trees, benches, and a portion of the park's walking trail. The outfield of an existing baseball field would be used. Piers would be located in the park, and the bottom of the elevated structure would be approximately 15 feet above ground level.

The East Option alignment would run through the west parcel of Block Park. Of the 1.3 acres of the west parcel of the park, approximately 0.9 acre would be overlapped by the elevated structure and its associated clearances. An auxiliary station entrance would also be located in the park, along its western edge. The affected parcel includes an isolated portion of the park's open space and a communications tower; no recreational features would be affected.

The East Option alignment would displace two parcels associated with the Kwame Nkrumah Academy at 314 W. 108th Street. The school building would not be affected, but a portion of the schoolyard would be displaced.

The new rail extension would facilitate access to community resources near the station locations, especially for transit-dependent residents, which would be beneficial overall. The RLE would provide direct transit access for residents of and visitors to Altgeld Gardens. The following permanent adverse impacts on community resources would occur:

- The elevated track structure would pass through the western portion of Wendell Smith Park in Roseland, requiring relocation of a portion of the park's walking trail.

- The elevated track structure and part of the 103rd Street station would be located in the western portion of Block Park in Roseland. The affected portion of the park contains a communications tower and no active recreational features.

- The Now Faith Church of God Holiness would be displaced.

Mitigation - Mitigation measures to minimize adverse permanent impacts on community resources would include the following:

- CTA could keep the area beneath the track structure in Wendell Smith Park and Block Park open for use, and improve park space elsewhere in the neighborhood.

- CTA would plant new trees to shield views of the structure from homes fronting Wendell Smith Park.

- In accordance with the Uniform Act (42 USC § 4601, et seq.), CTA would provide assistance for the relocation of the Now Faith Church of God Holiness to another building or parcel in the surrounding area.

Impacts on parks and proposed mitigation measures, as well as further details on coordination with the Chicago Park District to confirm park-related mitigation measures, are described in **Chapter 8** of this Draft EIS.

Construction Impacts

Community Character and Cohesion

Community disruptions would occur during construction of the East Option. Construction would be phased and would not occur at any one location for the entire construction period. Most of the construction would occur within the street right-of-way, on properties acquired as part of the permanent envelope for the project, and potentially on other nearby vacant parcels.

The following temporary construction-related adverse impacts on community character and cohesion would occur:

- Hoisting equipment might be visible above roofs, and storage of materials, equipment, and trucks would introduce temporary intermittent visual impacts.

- Temporary noise and dust impacts would occur during construction on an intermittent basis.

Mitigation - Mitigation measures to offset adverse temporary construction-related impacts on community character and cohesion would include the following:

- Construction best management practices (BMPs) would be used to limit visual, noise, and dust impacts. Examples of these BMPs include maintaining vegetation at the construction site to minimize visual impacts, limiting nighttime construction, and preparation of a Dust Control Plan to address in detail how dust would be controlled at the construction site.

- Hauling routes would be designed to minimize the number of trucks and amount of equipment passing through sensitive areas of the community, and would favor highways over local roads to the extent feasible.

- CTA would notify the community in advance of disruptive activities, such as building demolition, utility relocation, and necessary detours, and would perform work in a manner consistent with local ordinances.

- CTA would limit nighttime construction near residences to the extent practicable.

- CTA would phase construction activities to minimize impacts on CTA operations at the 95th Street Terminal and 98th Street Yard and Shop, as well as on vehicular traffic on affected expressways and roadways, minimizing disruptions to community members' day-to-day lives.

- CTA would work with the community, businesses, aldermen's offices, and the Chicago Department of Planning and Development to develop and implement a Construction Outreach and Coordination Plan, as described in **Section 4.1.3.2**.

Mobility
During construction of the UPRR Alternative, temporary closures of streets crossing the alignment might be required. Detours would be provided to maintain emergency access and access to adjacent properties, and bus service would detour around closures.

The following temporary construction-related adverse impacts on mobility would occur:

- Truck traffic would increase in the project area. Temporary street closures and detours would be needed. Lane closures, temporary parking restrictions, and temporary conversion of two-way streets to one-way streets might also be implemented.

- Access to businesses near construction sites could be temporarily limited on an intermittent basis due to construction-related detours and closures.

Mitigation - Mitigation measures to offset adverse temporary construction-related mobility impacts would include the following:

- CTA would provide adequate detours around construction sites and would minimize road and lane closures to the extent possible.

- CTA would provide a temporary advertising program to increase the visibility of adversely affected businesses during construction, for example, by providing signs that say "We Are Open" and explaining changes in access for business patrons, or by placing notifications on CTA trains and buses encouraging customers to continue to support the businesses affected by construction.

Community Resources
Construction may temporarily limit access to community resources and parks. The following adverse impacts on community resources would occur:

- Community resources adjacent to the alignment would be subject to the same impacts identified above, under "Community Character and Cohesion" and "Mobility."
- Construction activities would be required in Wendell Smith Park and Block Park in Roseland. The northwest portion of Wendell Smith Park and the west portion of Block Park would be inaccessible during construction activities.
- Access to community resources near the construction areas may be temporarily disrupted by street closures and detours.

Mitigation - Mitigation measures to offset adverse temporary construction-related impacts on community resources would include the following:

- CTA would schedule major construction activities to minimize conflicts with community events to the extent possible.
- CTA would maintain access to community resources during construction, via detours when necessary.
- CTA would coordinate with the community to avoid adverse impacts on the function of Wendell Smith Park. Nearby alternate parks, such as Robert Abbott Park and Fernwood Park, would remain available for use during construction in Wendell Smith Park.

Impacts Remaining After Mitigation

The East Option would have a permanent adverse impact on community character and cohesion that could not be mitigated, due to the visual encroachment of the elevated structure into the neighborhood north of I-57 in Roseland and at 117th Street and Prairie Avenue in West Pullman. Other permanent impacts related to neighborhoods and communities would not be adverse after implementation of mitigation measures.

Construction-related impacts on neighborhoods and communities would not be adverse after implementation of the proposed mitigation measures.

4.3.3.3 Union Pacific Railroad Alternative - West Option

Permanent Impacts

Community Character and Cohesion

Like the East Option alignment, the West Option alignment is within existing highway rights-of-way and adjacent to the UPRR and NICTD/CSS & SBRR freight rail corridors. The elevated structure would not substantially differ from the existing character of the freight railroad tracks, but would encroach into the residential neighborhood and would be more prominent than the freight railroad tracks due to its height. The structure would not introduce new separations between neighborhoods because the UPRR right-of-way already has limited grade crossings and acts as a barrier for pedestrians. The West Option would require fewer displacements than the East Option (see **Section 4.2**), particularly in Roseland and West Pullman.

The new transit stations would become focal points for the surrounding communities, and may attract new commercial and residential activities that would result in an overall improvement in community character. The increased pedestrian activity around stations may help bridge the gap between communities currently separated by the freight tracks. The multistory park & ride facility at the Michigan Avenue station would include a ground-floor community facility and retail space, which would serve as a community enhancement.

The following permanent adverse impacts related to community character and cohesion would occur:

- Displacements and Relocation of Existing Uses
  - The placement of the track structure would require acquisition of parcels along the west side of the UPRR right-of-way between 103rd Street and the Michigan Avenue station in Roseland and West Pullman. The parcels, some of which are vacant or sparsely occupied, primarily contain a mix of industrial and residential uses. Because the streets in this area, with the exception of major thoroughfares, end at the UPRR right-of-way, the displaced parcels would be at the ends of blocks (adjacent to the UPRR tracks), and not in the center of the neighborhood. The CTA track structure would encroach on the edges of neighborhoods, but would leave the neighborhoods otherwise intact.
  - A total of 17 buildings would be removed to accommodate the Michigan Avenue station park & ride facility in West Pullman. Of the 17 buildings, 16 are residential and 1 is commercial.
- Visual and Aesthetic Conditions
  - The elevated track structure would cause adverse visual impacts because of the change in the visual setting in the highway right-of-way north of I-57 in Roseland, as shown in **Figure 4-14** in **Section 4.3.3.2**.
  - Between 99th and 103rd Streets, the elevated structure would run through Fernwood Parkway in Washington Heights. The introduction of the new elevated structure and 103rd Street station would visually change the setting of the parkway and the houses facing it along the west side of Eggleston Avenue. Although the recreational impact on the parkway could be offset, the change in visual community character could not be mitigated. **Figure 4-9** shows the view along Eggleston Avenue and Fernwood Parkway facing 103rd Street, including the existing view (top) and a photo simulation of the West Option (bottom) at the same location.
  - The construction of the Michigan Avenue station park & ride facility in West Pullman would require substantial removal of buildings to accommodate the new five-story parking structure. Despite mitigation measures, there would be adverse visual impacts in this area because the scale, density, and character of the local community would be changed.

- Noise
    - The noise from CTA trains combined with existing UPRR freight trains would cause adverse impacts at noise-sensitive buildings in Roseland, Washington Heights, and West Pullman.

Mitigation - Mitigation measures to minimize adverse permanent impacts related to community character and cohesion for the West Option would be similar to those described for the East Option. Visual impacts north of I-57 in Roseland, between 99th and 103rd Street in Washington Heights, near the 103rd Street station in Roseland and Washington Heights, and near the Michigan Avenue station park & ride in West Pullman would remain adverse despite mitigation. Unlike the East Option, the West Option would have no visual impacts from the track structure near the intersection of 117th Street and Prairie Avenue in West Pullman.

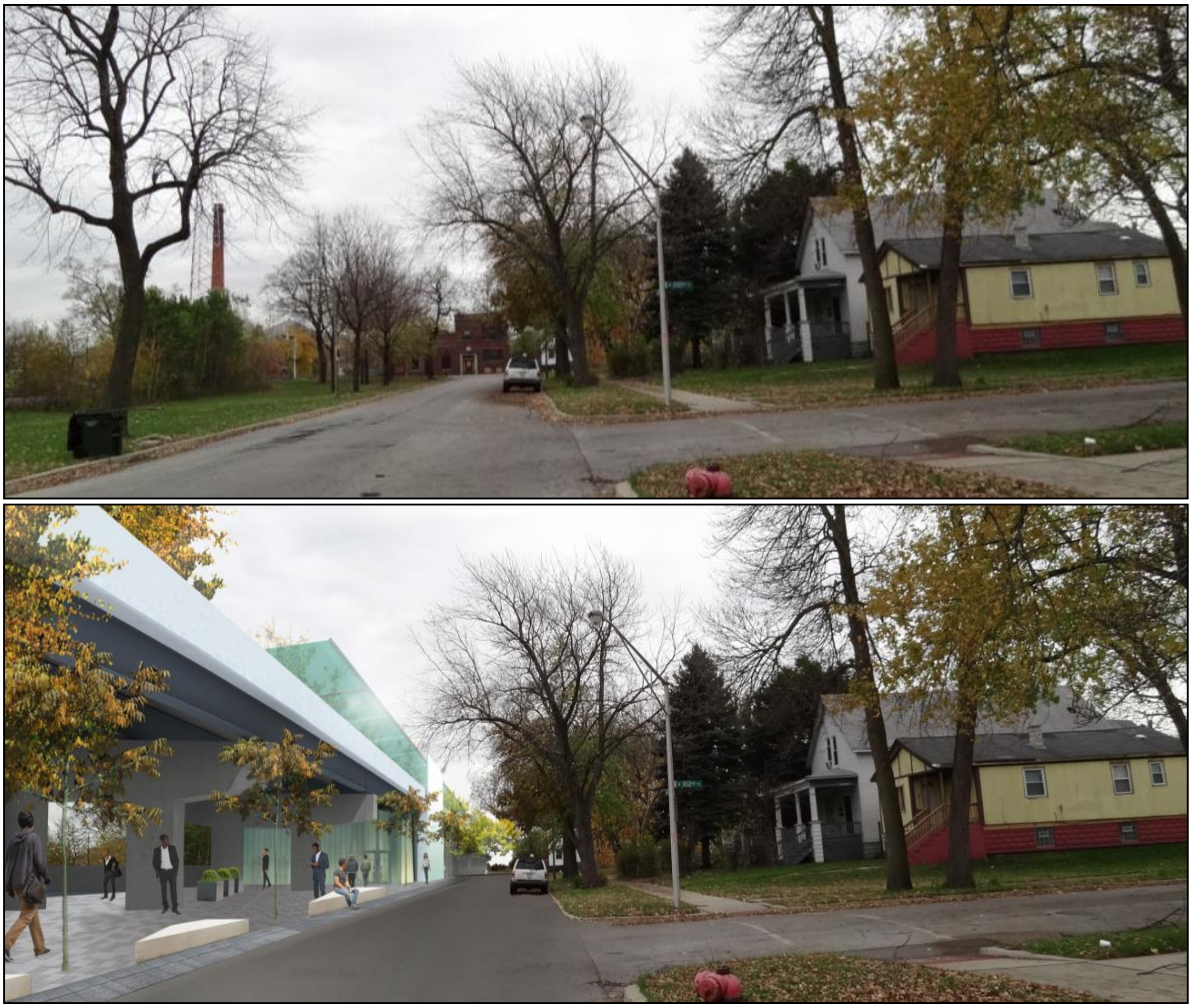


Figure 4-9: Photo of Existing Conditions and Photo Simulation of the Union Pacific Railroad Alternative West Option along Eggleston Avenue and Fernwood Parkway Facing 103rd Street

Mobility

The West Option would substantially reduce travel times between the Washington Heights, Roseland, West Pullman, and Riverdale communities, and would enhance their connection with major employment and activity centers north of the project area. The West Option would result in substantial mobility benefits for Far South Side residents.

Community Resources

The West Option would displace Fernwood Parkway in Washington Heights and the Grace Temple Church of God Established in Christ (11601 S. Michigan Avenue) in West Pullman (see **Figure 4-8**).

The West Option alignment would run through two of the four parcels that make up Fernwood Parkway; the West Option alignment would affect the parcels between 101st and 103rd Streets. Of the 5.3 acres of these two affected parcels of the parkway, approximately 1.9 acres would be overlapped by the elevated structure and its associated clearances. Much of the parkway between 101st and 103rd Streets would be permanently overlapped and shaded by the structure. Elevated track structure supports would be placed permanently in the park space.

The new rail extension would facilitate access to community resources near the station locations, especially for transit-dependent residents, which would be beneficial overall. The RLE would provide direct transit access for residents of and visitors to Altgeld Gardens.

The following permanent adverse impacts on community resources would occur:

- Near Wendell Smith Park, the elevated structure would be taller as part of the West Option than it would as part of the East Option because the CTA tracks would need to cross above the UPRR right-of-way, allowing clearance for freight trains; however, the alignment would not directly affect the park.

- Between 99th and 103rd Streets, the elevated track structure would run along Fernwood Parkway in Washington Heights. Impacts are described under the "Community Character and Cohesion" heading above.

- The Grace Temple Church of God Established in Christ would be displaced; however, as of July 2015 the building is vacant.

Mitigation - Mitigation measures to offset adverse temporary construction-related impacts on community resources would include the following:

- CTA would plant new trees to shield views of the structure from homes fronting the park.

- CTA would keep the area beneath the track structure in Fernwood Parkway open for use, and improve park space elsewhere in the neighborhood.

- In accordance with the Uniform Act (42 USC § 4601, et seq.), CTA would provide relocation assistance for the Grace Temple Church of God Established in Christ to another building or parcel in the surrounding area.

Impacts on parks and proposed mitigation measures, as well as further details on coordination with the Chicago Park District to confirm park-related mitigation measures, are described in **Chapter 8** of this Draft EIS.

Construction Impacts

The West Option would have construction impacts similar to those of the East Option, as described in **Section 4.3.3.2**, except that Block Park would not be affected under the West Option. Construction activities would be needed in Wendell Smith Park in Roseland as well as Fernwood Parkway in Washington Heights. The same mitigation measures identified for the East Option in **Section 4.3.3.2** above would apply.

Impacts Remaining After Mitigation

Despite mitigation, the West Option would have a permanent adverse impact on community character and cohesion due to the visual encroachment of the elevated structure north of I-57 in Roseland, between 99th and 103rd Streets in Washington Heights, at the 103rd Street station area in Roseland and Washington Heights, and at the Michigan Avenue station park & ride facility in West Pullman. Other permanent impacts related to neighborhoods and communities would not be adverse after implementation of mitigation measures.

Construction-related impacts on neighborhoods and communities would not be adverse after implementation of the mitigation measures.

4.4 Visual and Aesthetic Conditions

This section summarizes the existing visual and aesthetic conditions in the project area and describes the visual and aesthetic impacts of the East and West Options. See also the *Visual and Aesthetic Conditions Technical Memorandum* (**Appendix N**). **Table 4-6** summarizes the visual and aesthetic impact findings.

Table 4-6: Visual and Aesthetic Conditions - Impacts Summary

Alternative	Permanent Impacts	Construction Impacts
No Build	No impacts	No impacts
Union Pacific Railroad - East Option	Adverse impacts despite mitigation north of I-57 and at 117th Street and Prairie Avenue	No adverse impacts
Union Pacific Railroad - West Option	Adverse impacts despite mitigation north of I-57, between 99th Street and 103rd Street, near the 103rd Street station, and at the Michigan Avenue station park & ride facility	No adverse impacts

4.4.1 Regulatory Framework/Methods

CTA performed the visual and aesthetic conditions analysis to be consistent with State of Illinois Public Act 093-0545, which requires projects to take the visual context of the project area into consideration. The context includes existing and proposed land uses and zoning and the potential for degradation of the existing visual character or quality of the surrounding community areas. The analysis also considered the potential for the project to create new shade or shadow effects.

CTA considered the guidelines and ordinances that govern visual integrity and quality in the City of Chicago including the Zoning Ordinance, Land Use Ordinance, and the Landmarks Ordinance.

For this analysis, CTA assessed visual and aesthetic impacts by first analyzing existing visual resources in the project area, including any sensitive views, and assessing existing visual quality of the surrounding environment. Sensitive views were determined from research and field observations as well as public comments received as part of CTA's outreach efforts (see **Chapter 10**) CTA then considered changes to the visual environment that would result from the East and West Options. The analysis included an assessment of any changes to the viewsheds or other sensitive views that would affect the essential character or context of the visual environment and any other visual quality impacts. Where any adverse visual impacts were determined to be likely in the context of the visual environment, mitigation methods were proposed.

For this Draft EIS, an impact would be adverse if it resulted in one of the following:

- A change that is inconsistent with the community's aesthetic character
- Incompatibility of a project element with the character of the area
- Incompatibility of a project element with community aesthetic goals
- A substantial degradation of the existing visual character or quality of a site and its surroundings
- Effects on a historic site through extensive remodeling or removal of buildings or their surrounding area (discussed further in **Section 4.7**)
- Creation of new shade and shadow effects

CTA categorized visual and aesthetic changes to the environment as low, moderate, or high based on the following characteristics:

- Low visual changes generally occur when the transit facility is already part of the view and there would be minor or few changes to the transit facility that would create noticeable changes in the view. Low visual changes can be beneficial; low visual changes are not considered adverse.
- Moderate visual changes occur when the existing view would be noticeably different but not substantially different. Removal of vegetation or a single property displacement would be examples of a moderate visual change. Depending on the individual case, moderate visual changes may or may not be adverse, and may be beneficial.
- High visual changes would occur when there is a substantial change to the existing view or when visually sensitive resources would have a change in view. In some cases high visual changes may improve an area. Like other visual changes, high visual changes can be beneficial or adverse.

In addition to categorizing the visual change of a view, CTA also considered the response to a view depending on the type of viewer group that would interact with the view. A viewer group's sensitivity to a change in a view could affect the level of impact on a viewshed. Major viewer groups along the project corridor include residents, passengers, business owners, recreational groups, and visitors.

- Residents are people who are very familiar with their surroundings and interact with the visual environment on a daily basis. Residents would have high viewer sensitivity because of daily interaction with the visual environment.

- Passengers interact with the visual environment on a daily basis because they travel to and from the transit facility. Passengers have less viewer sensitivity than other viewer groups because they only pass through the visual environment and do not live in it.

- Business owners are people who are very familiar with their surroundings and have a vested interest in the visual environment. Business owners would have a higher sensitivity than other groups, such as visitors or passenger groups, based on their familiarity and vested interest in the environment.

- Recreational groups are people who may walk, run, or cycle near the transit facility. Recreational groups have different expectations of the visual environment and have a higher sensitivity to scenic views or neighborhood character than other viewer groups.

- Visitors are individuals who have limited interaction with the area and are not familiar with the visual environment. Visitors have some sensitivity to the surrounding environment.

The *Visual and Aesthetic Conditions Technical Memorandum* (**Appendix N**) includes specific information on the visual assessment process. **Section 4.7** includes a discussion of potential visual effects on historic resources.

4.4.2 Existing Conditions

The visual environment that would be affected by the RLE Project includes areas that would have a view of the new facilities and areas visible from the new facilities. The overall project area has residential (primarily single-family), commercial (urban mixed-use), industrial, transportation, utility, and vacant land uses.

The UPRR Alternative alignment would run south along I-94 from the 95th Street Terminal, then curve west along the north side of I-57. This portion of the corridor has a relatively cohesive landscape and the East and West Options would be on the same alignment in this area. **Figure 4-10** and **Figure 4-11** show the existing conditions along the highway corridors.

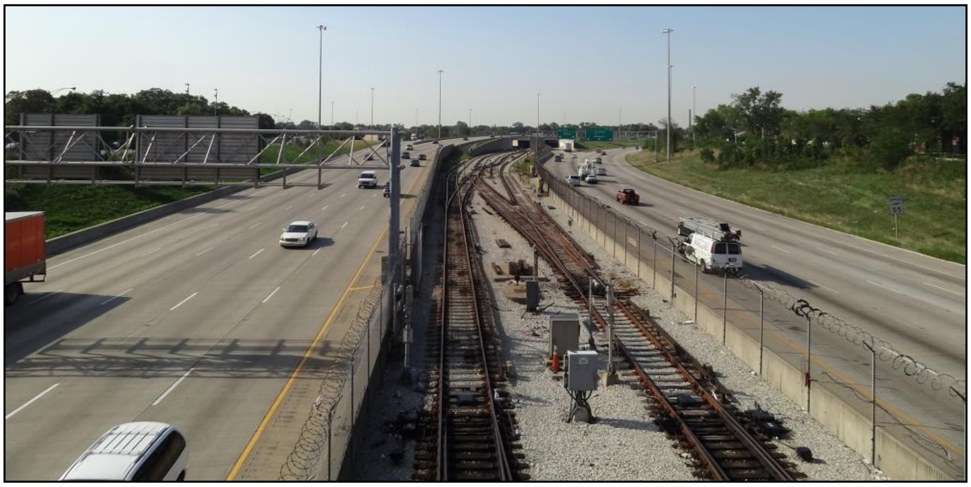


Figure 4-10: Photo Facing South from 95th Street Terminal

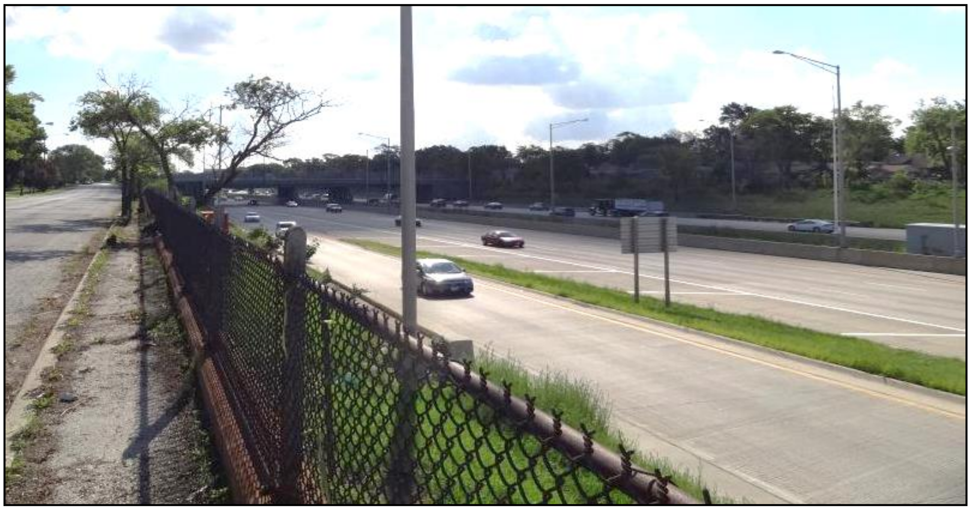


Figure 4-11: Photo Facing East, North of I-57 near 98th Street and Lowe Avenue

South of I-57, the UPRR Alternative corridor would run along an existing railroad corridor that is surrounded by a mix of residential and light commercial districts. The residential development consists of one- to two-story structures of similar style. Light commercial buildings are typically at intersections that meet the existing UPRR tracks at grade. A substantial portion of the development along the corridor is vacant and contains minimum architectural embellishments. The Roseland Pumping Station at 104th Street and Harvard Avenue is one of the few non-residential structures in the area with architectural character. South of 119th Street, the UPRR Alternative alignment would run along the MWRD property and end just north of Altgeld Gardens. Aside from the residences at Altgeld Gardens, this area has a light industrial character. The partially vacant neighborhood is relatively isolated between 130th Street, I-94, and Little Calumet River. **Figure 4-12** and **Figure 4-13** show typical conditions within the UPRR Alternative corridor.

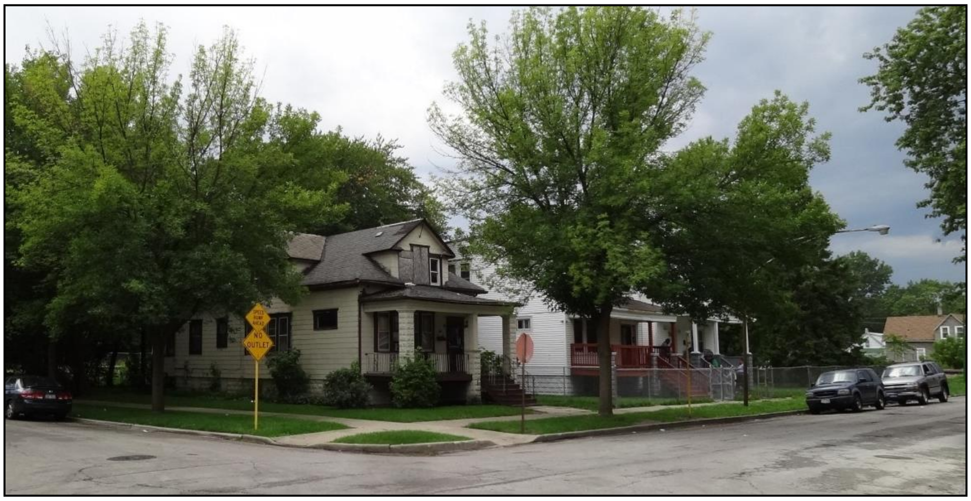


Figure 4-12: Photo Facing Southwest from 113th Street and Princeton Avenue

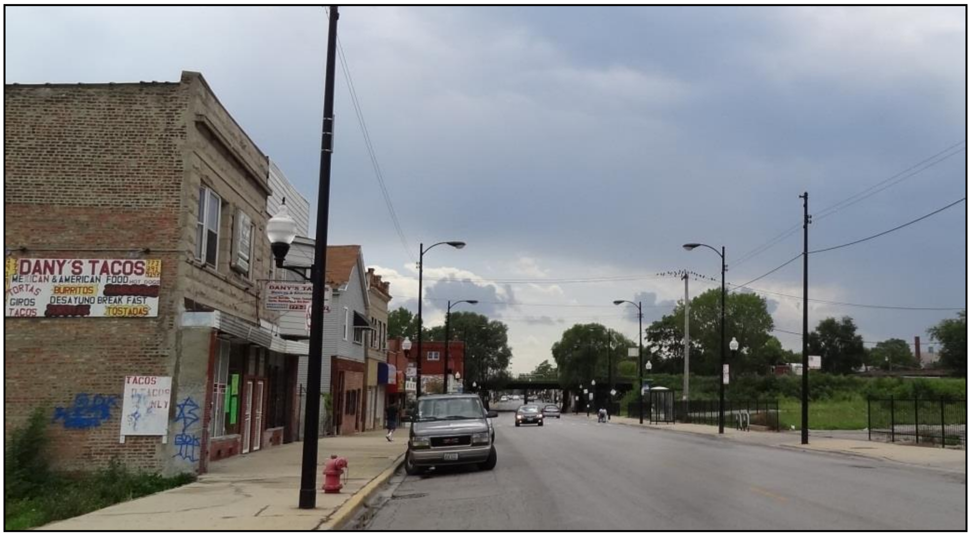


Figure 4-13: Photo Facing South along Michigan Avenue from 115th Street

4.4.3 Environmental Consequences

The following sections summarize the potential visual and aesthetic impacts of each alternative.

4.4.3.1 No Build Alternative

There would be no visual or aesthetic impacts associated with the No Build Alternative; no mitigation measures would be required.

4.4.3.2 Union Pacific Railroad Alternative - East Option

Permanent Impacts

West of Prairie Avenue, the East Option alignment would be in existing highway right-of-way and adjacent to the freight railroad right-of-way. Property acquisition would occur as part of the East Option, and would typically be concentrated near station locations.

Shadows created by the elevated structure would change throughout the day and season. The shadows would vary depending on the height, orientation, and density of surrounding structures, vegetation, and development. A substantial portion of vegetation would be removed on the east side of the project corridor, which would introduce new shadows and light patterns on developments to the east. The majority of vegetation west of the UPRR tracks would remain and would help minimize visible light and shadow effects on residences to the west. Additional lighting would be introduced to the project area, associated with park & ride facilities, stations, substations, yard and shop facilities, and trains (which include interior/safety lighting and exterior headlights). For the East Option, light and glare associated with the alignment and trains would not have an adverse impact, because the proposed features would generally be located in the existing highway corridor or near the existing UPRR corridor—areas that currently produce transportation-related light and glare.

High and adverse visual impacts would occur north of I-57 because of the change in the visual setting due to the elevated track structure in the highway right-of-way. The elevated track structure would block the horizon for the homes or pedestrians closest to 98th Place and would also create a new shadow at street level due to the movement of the sun. The elevated track structure would change the scale, density, and character of the residential neighborhood north of I-57. **Figure 4-14** shows existing conditions and a photo simulation of the track structure in the I-57 right-of-way.

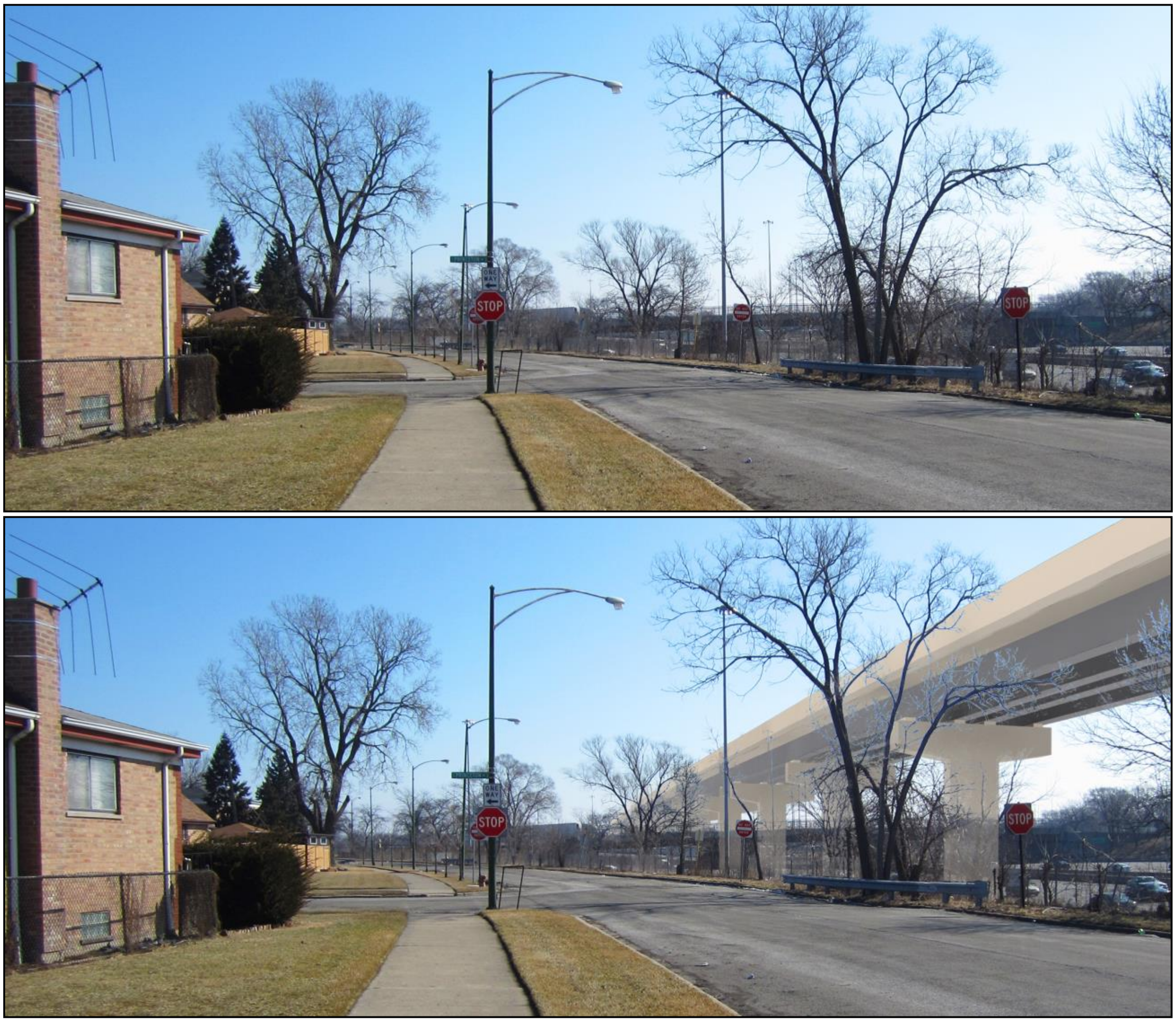


Figure 4-14: Photo of Existing Conditions and Photo Simulation of the Elevated Track Structure in the I-57 Right-of-Way, Facing East from 98th Place and Princeton Avenue

High and adverse visual impacts would occur at 117th Street and Prairie Avenue because of the elevated track structure. **Figure 4-15** shows existing conditions and a photo simulation of the East Option viaduct facing southeast from 117th Street, east of Prairie Avenue. The residential character and scale would be substantially altered by the removal of vegetation and neighborhood fabric and the addition of elevated structure east of the embankment.

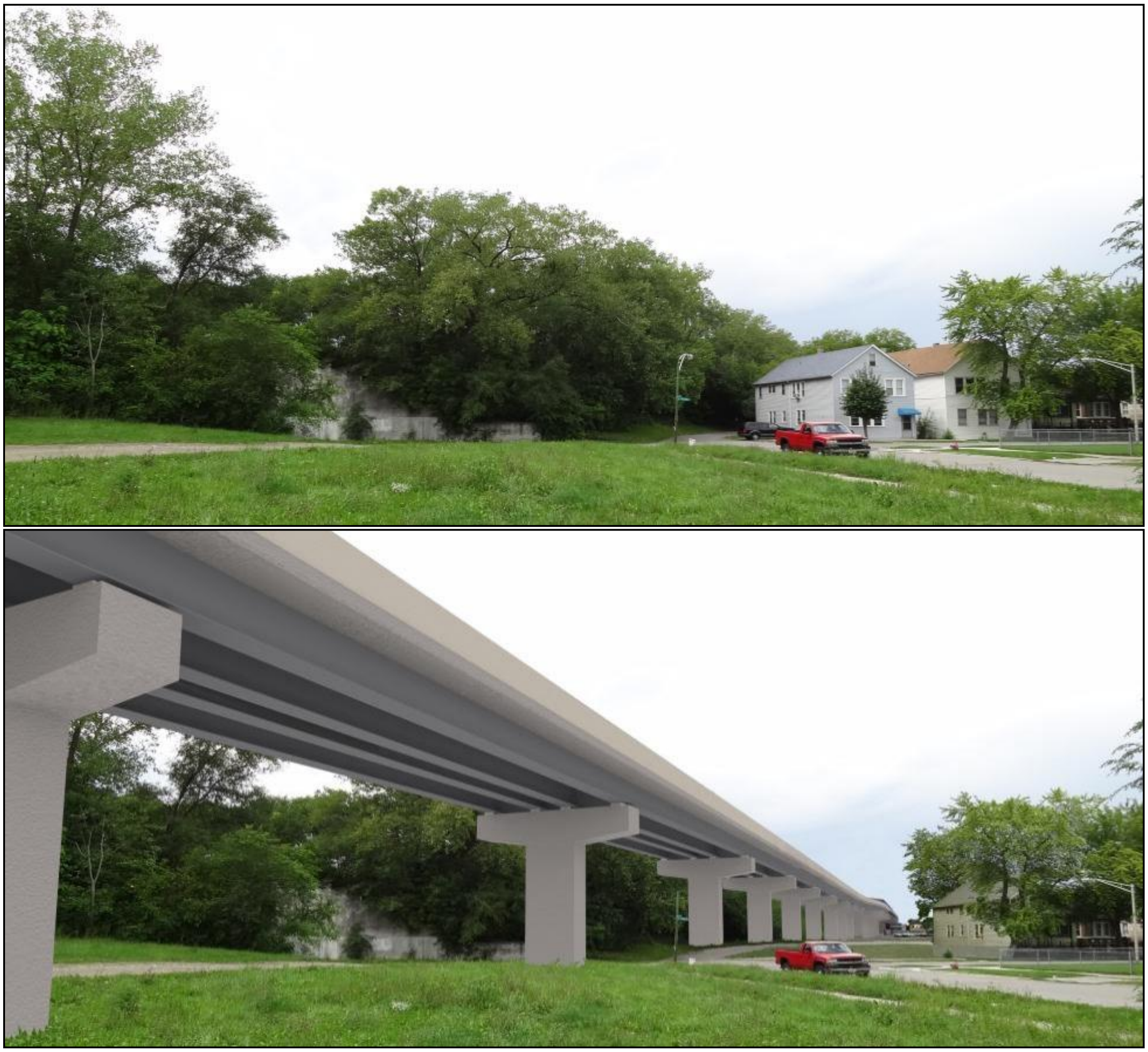


Figure 4-15: Photo of Existing Conditions and Photo Simulation of the Union Pacific Railroad Alternative East Option Viaduct Facing Southeast from 117th Street, East of Prairie Avenue

Mitigation - Mitigation measures would reduce the impacts north of I-57 and at 117th Street and Prairie Avenue, but due to the proximity of the elevated structure to residential areas, the impacts would remain high and adverse despite mitigation. Mitigation measures would include landscaping, using urban design techniques to reduce massing, and creating pedestrian-friendly surroundings. Techniques that may be used include planting larger trees near structures to break the sight lines, with smaller scale landscaping near the streets to mimic landscaping on the opposite side of the streets.

Construction

Construction-related visual impacts would be similar for both the East and West Options. The duration of construction for either option would vary from several months to a few years depending on the alignment location and which facilities are there. Construction-related visual impacts would not be adverse and would include construction fencing, demolition of existing buildings, temporary walls, temporary street closures and related signage, temporary lighting or entrances, and/or shoring of concrete structures or existing viaducts.

Mitigation - Although construction-related visual impacts related to the East Option would not be adverse, CTA would maintain as much existing vegetation as practical and minimize temporary construction impacts on neighborhoods by limiting the light trespassing from night lighting. BMPs and debris-free construction areas would mitigate temporary visual impacts from the construction sites.

Impacts Remaining After Mitigation

The East Option would have permanent high and adverse visual and aesthetic impacts north of I-57 and at 117th and Prairie Street despite implementation of mitigation measures.

4.4.3.3 Union Pacific Railroad Alternative - West Option

Permanent Impacts

General light and shadow conditions for the West Option would be similar to those discussed for the East Option. High and adverse visual impacts would occur north of I-57 because of the change in the visual setting due to the elevated track structure in the highway right-of-way. The track structure would change the scale, density, and character of the residential neighborhood north of I-57.

In addition to shadows and light patterns created by the elevated structure, the removal of vegetation along the west side of the existing railroad corridor between 99th Street and 103rd Street (along Fernwood Parkway) would alter the visual quality for developments to the west. Visual impacts between 99th Street and 103rd Street, including the 103rd Street station, would be high and adverse. Several buildings and some vegetation along the west side of the existing UPRR corridor would be removed to accommodate the new station and surface parking lot. The elevated platforms and track structure would have a high impact on the viewshed of residences adjacent to the project alignment and would create new shadows. **Figure 4-9** shows a photo simulation of the West Option along Fernwood Parkway near the 103rd Street station.

Near the Michigan Avenue station, the West Option would have high and adverse impacts similar to those of the East Option. The addition of the five-story park & ride facility and the removal of buildings and vegetation would have an adverse impact on the character and building density of the local community. **Figure 4-16** shows existing conditions and a photo simulation of how the West Option Michigan Avenue station area could look.

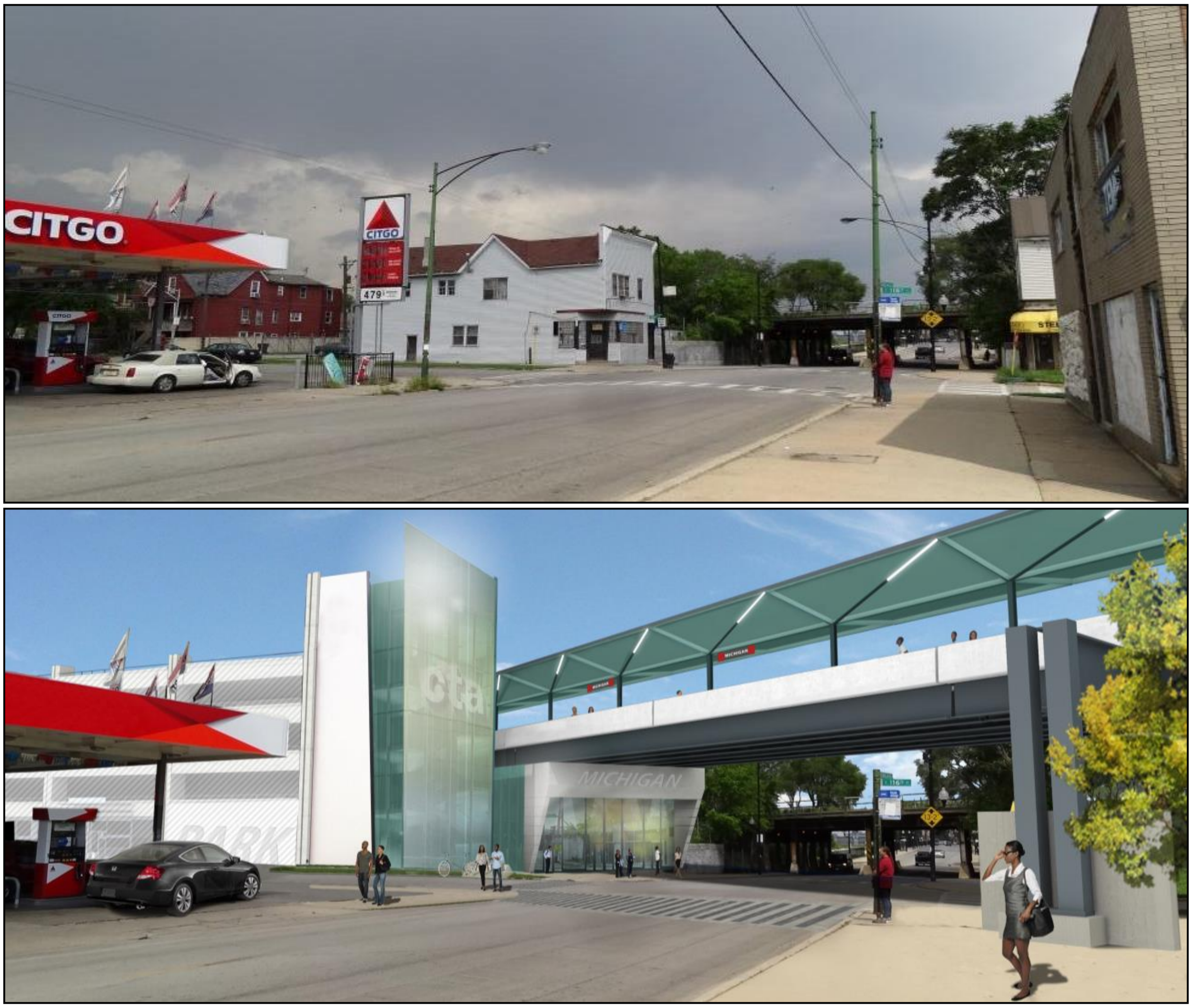


Figure 4-16: Photo of Existing Conditions and Photo Simulation of the Union Pacific Railroad Alternative West Option Michigan Avenue Station and Parking Structure Facing Northwest along Michigan Avenue

Mitigation - Mitigation measures would reduce the impacts in the area north of I-57 and from approximately 99th Street to 103rd Street, including 103rd Street station. Mitigation measures would include providing landscaping and replanting vegetation where possible. In addition, the 103rd Street station would be designed to be consistent with the character and scale of the surrounding neighborhood. Due to the scale of the elevated structure, proposed station and its proximity to adjacent residences, impacts after mitigation would remain high and adverse.

Mitigation measures would reduce the impacts near the Michigan Avenue station park & ride facility, but due to the structure's proximity to residential areas, the impacts would remain adverse despite mitigation. Mitigation measures would include landscaping, designing the park & ride facility to match the character of the surrounding neighborhood, using urban design techniques to reduce massing, and creating pedestrian-friendly surroundings. The use of larger setbacks to accommodate wider sidewalks or pedestrian areas, architectural styles, building treatments, and facades are examples of how the design of the structure would be incorporated into the neighborhood to minimize the visual impacts. Exterior lighting would be shielded and carefully placed when adjacent to sensitive areas such as residential communities.

Construction Impacts

The duration of construction and types of visual impacts for the West Option would be similar to those of the East Option. Construction-related impacts would not be adverse. The types of visual impacts and the proposed impact-minimizing mitigation measures for the West Option would be similar to those described for the East Option.

Impacts Remaining After Mitigation

The West Option would have high and adverse permanent visual and aesthetic impacts north of I-57, from 99th Street to 103rd Street, including the 103rd Street station, and near the Michigan Avenue station park & ride facility despite implementation of mitigation measures.

4.5 Noise and Vibration

This section summarizes the predicted noise and vibration impacts of the East and West Options.

Noise is "unwanted sound," generally measured in terms of loudness. The loudness, or magnitude, of noise determines its intensity and is measured in decibels (dB). The overall noise level from environmental sources is described in A-weighted decibels (dBA). The A-weighted decibel scale was developed to better approximate the sensitivity of human hearing. Because the decibel is based on a logarithmic scale, a 10-dB increase in noise level is generally perceived as a doubling of loudness, while a 3-dB increase in noise is just barely perceptible to the human ear (FHWA 2011).

Ground-borne vibration can be caused by the vibration of a transit structure, creating vibration waves that propagate through the soil and rock to the foundations of nearby buildings. The vibration of floors and walls may cause perceptible vibration, rattling of items such as windows or dishes on shelves, a rumble noise, or damage to buildings in extreme cases. Vibration is described in terms of velocity (L_v) and is measured in decibels (VdB), which is the root mean square vibration velocity relative to 1 microinch per second (FTA 2006).

The *Noise and Vibration Technical Memorandum* (**Appendix O**) contains additional information. **Table 4-7** summarizes the noise and vibration impact findings.

Table 4-7: Noise and Vibration - Impacts Summary

Alternative	Permanent Impacts		Construction Impacts	
	Noise	Vibration	Noise	Vibration
No Build	No impacts	No impacts	No impacts	No impacts
Union Pacific Railroad - East Option	574 moderate and 83 severe impacts on noise-sensitive receivers No impacts after mitigation	No impacts	No impacts	No impacts
Union Pacific Railroad - West Option	738 moderate and 49 severe impacts on noise-sensitive receivers No impacts after mitigation	No impacts	No impacts	No impacts

4.5.1 Regulatory Framework/Methods

CTA analyzed noise and vibration impacts from this project in accordance with the FTA (2006) *Transit Noise and Vibration Impact Assessment* guidance manual. The FTA guidance manual sets forth the basic concepts, methods, and procedures for evaluating the extent and severity of the noise and vibration impacts from transit projects.

The guidance manual describes three levels of analysis that may be applied depending on the complexity of the project. The first level is a screening procedure to determine whether noise-sensitive receivers would be present based on the land uses in the vicinity of the project. The outcomes of the screening procedure determine whether more detailed noise and vibration analysis is required. There are known sensitive receivers for the RLE Project, so further analysis was required. There are two levels of quantitative analysis for predicting impacts: a general assessment and a detailed analysis. The general assessment identifies and estimates the severity of noise and vibration impacts that could occur with implementation of the project. The general assessment provides information needed to differentiate between the East and West Options. The detailed analysis quantifies impacts through an in-depth analysis of a single design configuration.

CTA completed a general assessment for the UPRR corridor to provide basic information for comparing the severity of impacts from implementation of the East and West Options. The impacts disclosed in this Draft EIS are maximum, worst-case impacts. More detailed analysis in the Final EIS may identify areas where impacts may be further reduced through design.

The thresholds of significance for this project are based on FTA's operational and construction noise and vibration criteria, as described in the guidance manual. CTA conducted an assessment to identify the areas that could be subject to a moderate or severe impact along the proposed alternative alignments. This assessment established an impact contour as the basis for analysis, rather than individual analysis of each noise-sensitive receiver, because of the high density of residential areas abutting the East and West Option alignments. The impact contour defines the outer limit where a moderate or severe impact would occur based on the distance from the noise-generating source (East and West Options). CTA used the contours to estimate the potential for noise and vibration impacts along each of the option alignments.

CTA further refined the general assessment to identify individual noise-sensitive receivers within the moderate and severe impact contours. As part of a field verification of noise-sensitive receiver locations, CTA counted noise-sensitive receivers within the moderate and severe impact contours unless identified as potentially displaced properties. The identified affected noise-sensitive receivers were counted individually but were mapped as noise-sensitive receiver clusters because of the small size of the individual parcels. The clusters of receivers were determined to be similar distances from the proposed tracks and in areas where the CTA operating conditions, such as train speed, were determined to be similar.

Operational Noise

Operational noise is the noise that would occur with the ongoing operation of an implemented alternative. To determine whether the noise levels from a project might affect an area, CTA compared the existing noise levels near where the Red Line trains would run to the projected future noise levels generated by the project. FTA uses three different land use categories for identifying noise-sensitive receivers (see **Table 4-8**). FTA does not consider most commercial and industrial receivers to be sensitive to transit-related noise.

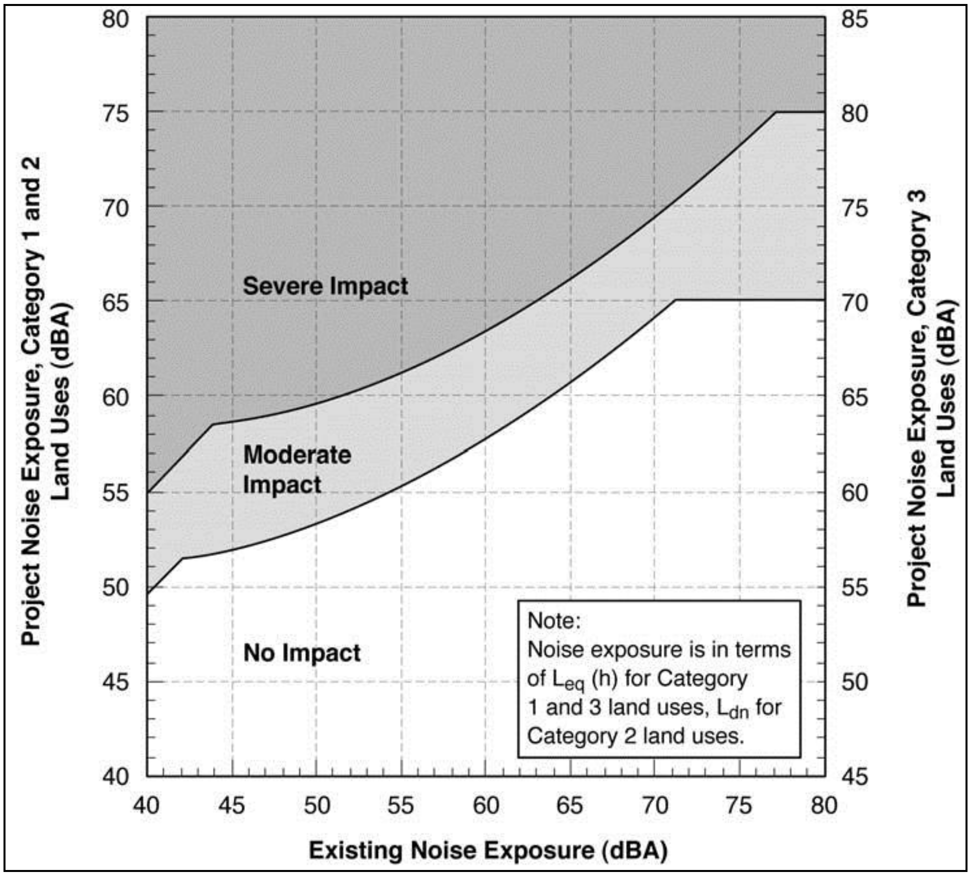
Table 4-8: FTA Land Use Categories and Noise Metrics

Land Use Category[1]	Noise Level[2]	Description
1	L_{eq}(h)	Tracts of land set aside for serenity and quiet, such as outdoor amphitheaters, concert pavilions, and historic landmarks.
2	L_{dn}	Buildings used for sleeping, including residences, hospitals, hotels, and other areas where nighttime sensitivity to noise is of utmost importance.
3	L_{eq}(h)	Institutional land uses with primarily daytime and evening uses including schools, libraries, churches, museums, cemeteries, historical sites and parks, and certain recreational facilities used for study or meditation.

FTA = Federal Transit Administration
Source: FTA 2006
[1] Land Use Categories are based on sensitivity to noise intrusions.
[2] The threshold noise limits include an hourly equivalent noise level (or L_{eq}(h)) for Category 1 and 3 noise-sensitive receivers and the day-night noise level (or L_{dn}) for Category 2 noise-sensitive receivers. The FTA noise limits, which are based on the existing background levels, are determined using empirical formulas shown graphically in **Figure 4-17**.

FTA has two categories for its noise impact criteria: moderate impact and severe impact. The moderate impact threshold defines areas where the change in noise would be noticeable but might not be sufficient to cause a strong, adverse community reaction. The severe impact threshold defines the noise limits above which a significant percentage of the population would be highly annoyed by the change in noise.

As shown in **Figure 4-17**, the FTA noise impact criteria are defined by two curves that allow increasing project noise levels as existing noise increases up to a point, beyond which an impact would be determined based on project noise alone. Category 1 noise-sensitive receivers (such as an amphitheater or historic landmark) are represented along the left axis and are described by the hourly equivalent noise level (hourly L_{eq}).[4] Category 2 noise-sensitive receivers (such as residences, hotels, and hospitals) are also represented along the left axis, but are described by the 24-hour day-night level (L_{dn}).[5] Category 3 noise-sensitive receivers (such as schools and churches) are represented along the right axis and are described by the hourly L_{eq} noise metric.



Source: FTA 2006

L_{eq}(h) = hourly equivalent noise level, L_{dn} = day-night noise level

Figure 4-17: Noise Impact Criteria for Transit Projects

Although the curves in **Figure 4-17** are defined in terms of the project noise exposure and the existing noise exposure, it is the project's increase in noise compared to existing noise levels that is the basis for the criteria. To illustrate this point, **Figure 4-18** shows the noise impact criteria for Category 1 and 2 land uses in terms of the allowable increase in the existing noise exposure. The horizontal axis is the existing noise exposure and the vertical axis is the increase in noise level due to the project. The curves in **Figure 4-18** show that the criterion for impact allows a noise exposure increase of 10 dBA if the existing noise exposure is 42 dBA or less, but only a 1-dBA increase when the existing noise level is 70 dBA. As the existing level of noise increases, the total amount that the community noise exposure is allowed to increase is reduced.

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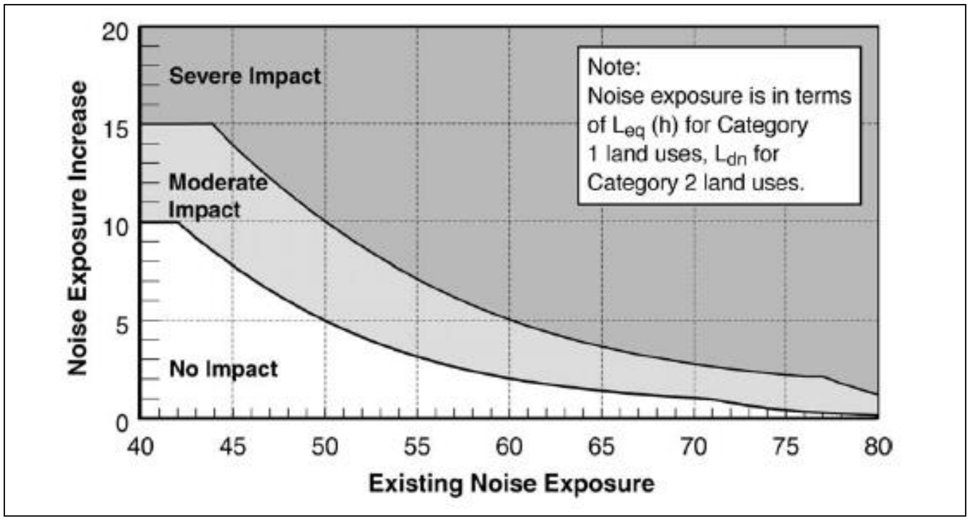
[4] L_{eq}, the hourly equivalent noise level, describes a receiver's cumulative noise exposure from all events over a 1-hour period.

[5] L_{dn}, the day-night sound level, is a measure of community noise over a 24-hour period. In the calculation of L_{dn}, noise that occurs during the nighttime hours (10:00 PM to 7:00 AM) is given a weighting that causes one train during the nighttime hours to be equivalent to 10 trains during the daytime hours.



Source: FTA 2006
L_{eq}(h) = hourly equivalent noise level, L_{dn} = day-night noise level
Figure 4-18: Allowable Increase in Noise Levels

Operational Vibration

CTA used FTA criteria to assess annoyance due to vibration and ground-borne noise from transit operations. **Table 4-9** shows the FTA vibration criteria for evaluating ground-borne vibration and noise impacts from train pass-bys at nearby vibration-sensitive receivers. These vibration criteria (expressed in VdB) are related to ground-borne vibration levels that are expected to result in human annoyance. FTA's experience with community response to ground-borne vibration indicates that when there are only a few train events per day, it would take higher vibration levels to evoke the same community response that would be expected from more frequent events. This community response to ground-borne vibration is accounted for in the FTA criteria by distinguishing between projects with frequent (more than 70 train events per day), occasional (30 to 70 train events per day), and infrequent events (fewer than 30 train events per day). The vibration levels shown in **Table 4-9** are defined in terms of human annoyance for different land use categories: high sensitivity (Category 1), residential (Category 2), and institutional (Category 3). In general, the threshold of human perceptibility of vibration is 65 VdB.

The vibration levels shown in **Table 4-9** are well below the damage criteria levels of 95 to 100 VdB. It is extremely rare for vibration from transit operations to cause any sort of building damage, even minor cosmetic damage.

Table 4-9: FTA Ground-Borne Vibration and Noise Impact Criteria for Annoyance

Land Use Category Description	Ground-Borne Vibration Levels (VdB)[1]			Ground-Borne Noise Levels (dBA)[2]		
	Frequent Events[3]	Occasional Events[4]	Infrequent Events[5]	Frequent Events[3]	Occasional Event[4]	Infrequent Event[5]
Category 1: Buildings where low vibration is essential for interior operations	65	65	65	NA[6]	NA[6]	NA[6]
Category 2: Residences and buildings where people normally sleep	72	75	80	35	38	43
Category 3: Institutional buildings with primarily daytime use	75	78	83	40	43	48

Source: FTA 2006

[1] Root mean square vibration velocity levels are reported in decibels (or VdB) referenced to 1 microinch per second.

[2] Ground-borne noise levels are reported in A-weighted decibels (dBA) referenced to 20 micropascals.

[3] "Frequent Events" is defined as more than 70 vibration events per day.

[4] "Occasional Events" is defined as between 30 and 70 vibration events per day.

[5] "Infrequent Events" is defined as less than 30 vibration events per day.

[6] NA means "not applicable." Vibration-sensitive equipment is not sensitive to ground-borne noise.

FTA = Federal Transit Administration

While vibration criteria are generally used to assess annoyance from transit sources at the exterior faces of vibration-sensitive receivers, ground-borne noise, or the rumbling sound due to vibrating room surfaces, is typically assessed indoors. In general, the relationship between vibration and ground-borne noise depends on the dominant frequency of the vibration and the acoustical absorption characteristics of the receiving room. Due to the limited data available regarding soil and ground propagation characteristics, average or typical soil conditions (hard compacted soil) were assumed everywhere along the project corridor. According to the FTA guidance, the dominant vibration frequency from train pass-bys along typical ground and soil conditions generally occurs in the 30–60 Hertz range. The ground-borne noise levels were adjusted accordingly.

Construction Noise

During the preliminary environmental permitting phase of a project, when construction details are limited, FTA suggests evaluating proposed construction scenarios against the 1-hour L_{eq} thresholds shown in **Table 4-10**. These criteria are compared to noise levels from the two loudest pieces of equipment that, under worst-case conditions, would operate continuously for 1 hour.

Table 4-10: Recommended FTA Construction Noise Limits

Land Use Category	Construction Period[2]	
	Daytime (dBA)[1]	Nighttime (dBA)[1]
Residential	90	80
Commercial	100	100
Industrial	100	100

Source: FTA 2006

[1] The Federal Transit Administration (FTA) construction noise limits are reported for the peak 1-hour period in A-weighted decibels (or dBA).

[2] Construction noise limits are established for both daytime (7 AM-10 PM) and nighttime (10 PM-7 AM) activities. The maximum noise limits represent noise levels from the two loudest pieces of equipment operating at full power over a period of 1 hour.

Construction Vibration

For evaluating potential annoyance or interference with vibration-sensitive activities due to construction vibration, CTA used the FTA criteria in **Table 4-11**. In most cases, however, the primary concern regarding construction vibration relates to potential damage to buildings. **Table 4-11** contains the FTA guidance vibration damage criteria for various structural categories of buildings. The vibration damage criteria listed for Category IV structures include historic buildings.

Table 4-11: Construction Vibration Damage Criteria

Building Category	Peak Particle Velocity (inches/second)	Approximate VdB[1]
I. Reinforced-concrete, steel or timber (no plaster)	0.5	102
II. Engineered concrete and masonry (no plaster)	0.3	98
III. Non-engineered timber and masonry buildings	0.2	94
IV. Buildings extremely susceptible to vibration damage	0.12	90

Source: FTA 2006

[1] Root mean square velocity in decibels (VdB) relative to 1 microinch/second

Construction vibration is generally assessed in cases where there is a substantial potential for impacts from construction activity. Such activities include blasting, pile-driving, demolition, and drilling or excavation near vibration-sensitive structures.

4.5.2 Existing Conditions

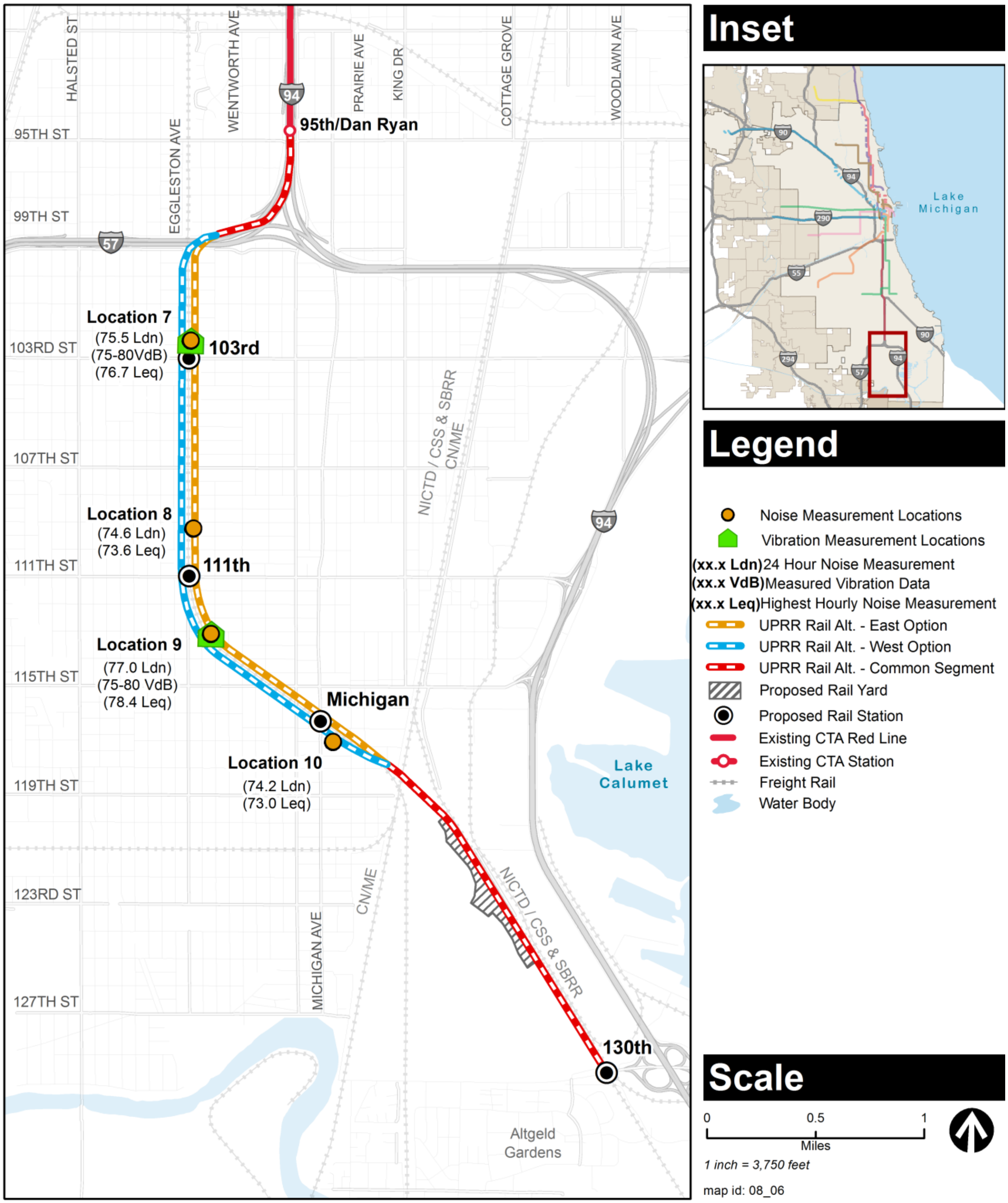
Sensitive Receivers

CTA conducted a field verification of noise-sensitive receiver locations on March 5, 2015. The land use in the vicinity of the corridor is predominantly residential (Category 2). Three parks, six schools, and four churches (Category 3) are near the corridor. During the field verification, numerous uninhabited residences were identified scattered throughout the area. Although they are not occupied and are not likely to be occupied, these properties are included in the counts of noise-sensitive receivers because they are not contiguous and are adjacent to occupied homes. The land use in the area is expected to continue to be residential, and it is possible that these properties may be resold for residential development. As such, these homes have been considered in the counts because it is anticipated that the residential land use of the area will not change. The majority of these houses were between 105th Street and 115th Street on the east side of the corridor and along Eggleston Avenue from 107th Street to 108th Street on the west side of the corridor. Although these areas would be affected and there are noise-sensitive receivers in the area, the overall impacts would likely be few because the properties are not in use. No sensitive receivers were identified south of the CN/ME corridor, which crosses the UPRR tracks near 119th Street.

Noise Measurements

CTA obtained noise measurements during October 19–26, 2012 at four representative noise-sensitive receiver locations along the UPRR Alternative alignment. The noise measurements consisted of 24-hour noise measurements at residential locations to determine the highest hourly L_{eq} and day/night average sound level (L_{dn}) occurring along the alignment. The noise measurement locations represented sensitive receivers that might be affected by noise from the project. Noise measurements along the UPRR tracks ranged from 74 to 77 dBA.

Figure 4-19 shows the measured highest L_{eq} and L_{dn} obtained at each of the four locations. The dominant noise source along the UPRR Alternative alignment is existing freight rail operation.


HALSTED ST
WENTWORTH AVE
PRAIRIE AVE
KING DR
COTTAGE GROVE
WOODLAWN AVE
EGGLESTON AVE
MICHIGAN AVE
95TH ST
99TH ST
103RD ST
107TH ST
111TH ST
115TH ST
119TH ST
123RD ST
127TH ST
94
57
95th/Dan Ryan
Location 7
(75.5 Ldn)
(75-80VdB)
(76.7 Leq)
103rd
Location 8
(74.6 Ldn)
(73.6 Leq)
111th
Location 9
(77.0 Ldn)
(75-80 VdB)
(78.4 Leq)
Michigan
Location 10
(74.2 Ldn)
(73.0 Leq)
NICTD / CSS & SBRR
CN/ME
Lake Calumet
130th
Altgeld Gardens
Inset
90
94
290
55
294
57
Lake Michigan
Legend
Noise Measurement Locations
Vibration Measurement Locations
(xx.x Ldn) 24 Hour Noise Measurement
(xx.x VdB) Measured Vibration Data
(xx.x Leq) Highest Hourly Noise Measurement
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
UPRR Rail Alt. - Common Segment
Proposed Rail Yard
Proposed Rail Station
Existing CTA Red Line
Existing CTA Station
Freight Rail
Water Body
Scale
0
0.5
1
Miles
1 inch = 3,750 feet
map id: 08_06

CN/ME = Canadian National/Metra Electric District, NICTD/CSS & SBRR = Northern Indiana Commuter Transportation District/Chicago South Shore & South Bend Railroad

Figure 4-19: Vibration and Noise Measurement Locations and Measured Noise and Vibration Data

Vibration Measurements

CTA also obtained vibration measurements at two of the noise measurement locations to determine the existing vibration levels along the UPRR Alternative alignment. The vibration measurement locations represented sensitive receivers that might be affected by vibration from the project.

Figure 4-19 shows the measured vibration level obtained at both locations. The vibration levels measured along the UPRR rail corridor were due to freight rail operations. At a distance of approximately 100 feet from the freight train pass-bys, the measured vibration levels ranged from 75 to 80 VdB.

4.5.3 Environmental Consequences

The following sections summarize the potential noise and vibration impacts projected for each alternative.

4.5.3.1 No Build Alternative

The No Build Alternative assumes no change in the existing conditions except for renovation of CTA's 95th Street Terminal (construction is expected to be completed in 2018). All impacts related to the construction and operation of the 95th Street Terminal are documented in the approved *95th Street Terminal Improvement Project Environmental Assessment* (CTA 2013). FTA issued a Finding of No Significant Impact for the 95th Street Terminal Improvement Project in April 2013, and an Amended Finding of No Significant Impact in July 2013. An Environmental Assessment Re-Evaluation performed by FTA in July 2016 confirmed that the Amended Finding of No Significant Impact dated July 2013 remains valid and that noise impacts from the 95th Street Terminal Improvement Project would not be significant. There would be no change to the existing noise and vibration levels within the project area under the No Build Alternative. As a result, the No Build Alternative would result in no impact, and would require no mitigation.

4.5.3.2 Union Pacific Railroad Alternative - East Option

The noise analysis is based on the following UPRR Alternative components as described in **Chapter 2**: a closed-deck, steel and concrete aerial track structure with welded rail. The frequency of the proposed service is anticipated to be the same as with the current Red Line service (April 2016) at 95th Street Terminal, which ranges from 3–6 minutes during peak periods to 13–15 minutes at night, with an average daytime headway of 6.1 minutes. The UPRR train frequency is 27 trains per day. Based on the proposed RLE operations and the existing noise measurements, CTA established impact contours for moderate and severe impacts based on FTA criteria. Although the noise analysis was performed based on the 2012 Red Line operations plan, average daytime headways have not changed between 2012 and April 2016 and are consistent with the daytime average headways used in the noise analysis. **Table 4-12** lists distances from the proposed alignment (distances are the same for both the East and West Options) to the moderate and severe impact contours as well as the associated noise level criterion. CTA applied the contours throughout the entire corridor. **Figure 4-20** and **Figure 4-21** show the moderate and severe noise impact contours and the clusters of affected noise-sensitive receivers associated with the East Option. The impact contours close in near the station areas because there would be less noise from the trains as they decrease speed when approaching the stations.

Table 4-12: Federal Transit Administration Moderate and Severe Impact Distances - Union Pacific Railroad Alternative (at 55 miles per hour)

Location Number	Receiver Description/ (Area of Impact)	Measured Noise Level	FTA Moderate Impact		FTA Severe Impact	
		(L_{dn}) (Highest Hour L_{eq})	Criterion	Distance	Criterion	Distance
7	Residence at 354 W. 102nd Place (I-57 to 103rd Street)	75.5 dBA 76.7 dBA	65.0 dBA	280 feet	73.6 dBA	75 feet
8	Residence at 352 W. 109th Street (103rd Street to 111th Street)	74.6 dBA 73.6 dBA	65.0 dBA	280 feet	72.9 dBA	85 feet
9	Residence at 307 W. 113th Street (111th Street to Michigan Avenue)	77.0 dBA 78.4 dBA	65.0 dBA	280 feet	74.8 dBA	65 feet
10	Residence at 11718 S. Prairie Avenue (Michigan Avenue to Metra Rail)	74.2 dBA 73.0 dBA	65.0 dBA	280 feet	72.6 dBA	90 feet

L_{dn} = day-night average sound level, L_{eq} = hourly equivalent sound level, FTA = Federal Transit Administration, dBA = A-weighted decibel

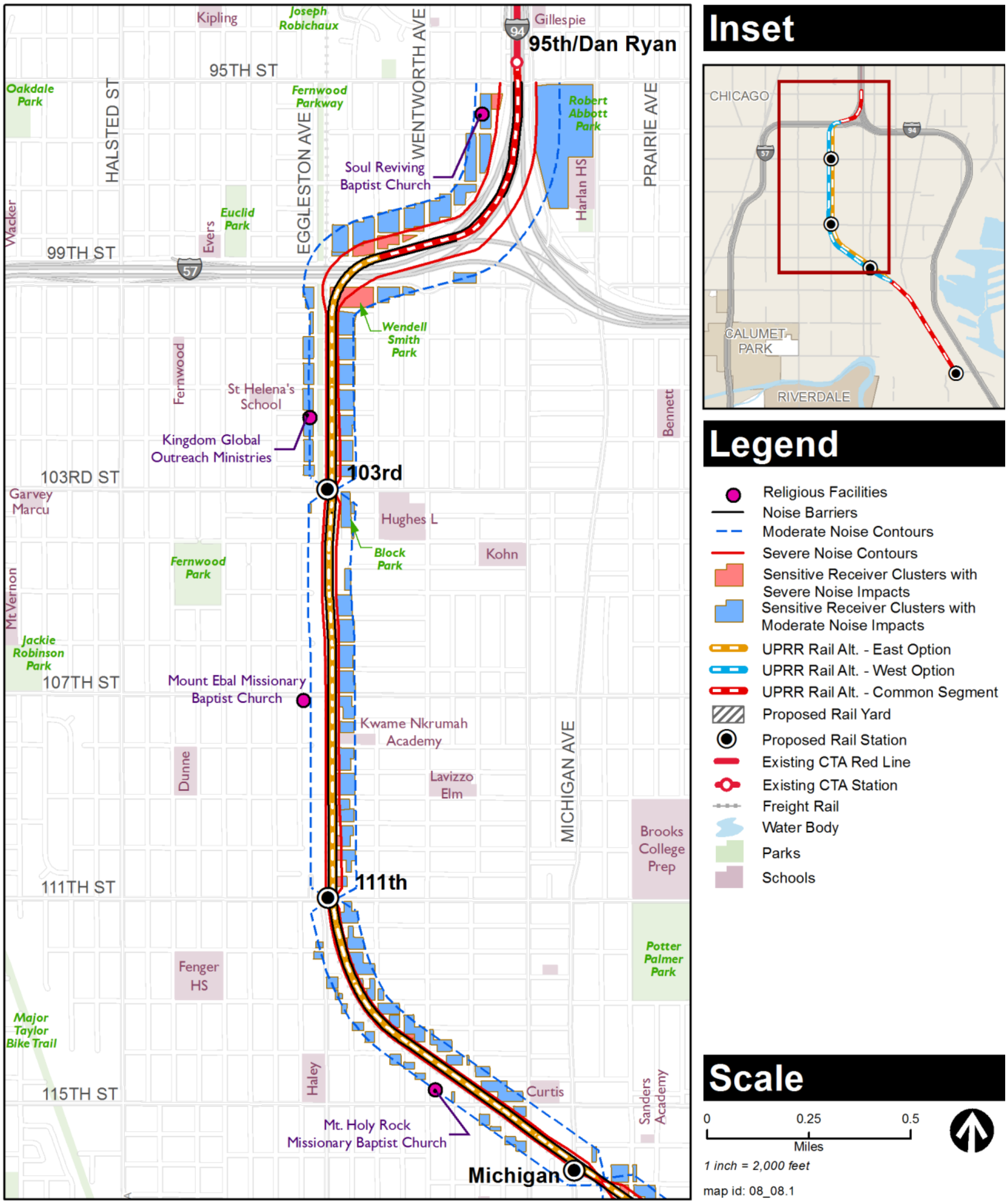
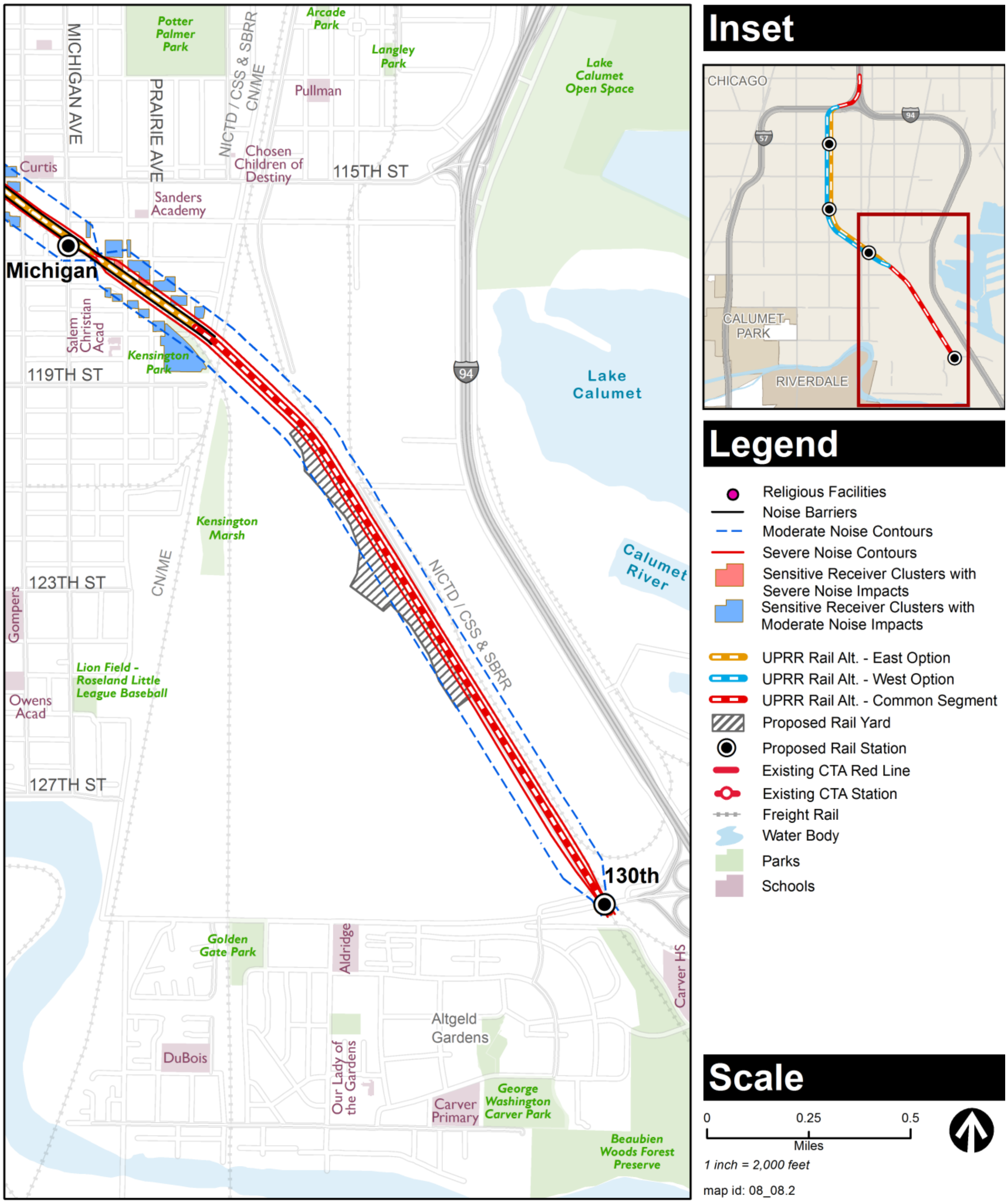

Kipling
Joseph Robichaux
WENTWORTH AVE
Gillespie
94
95th/Dan Ryan
95TH ST
Oakdale Park
HALSTED ST
Fernwood Parkway
Robert Abbott Park
PRAIRIE AVE
EGGLESTON AVE
Soul Reviving Baptist Church
Harlan HS
Wacker
Euclid Park
Evers
99TH ST
57
Wendell Smith Park
Fernwood
St Helena's School
Kingdom Global Outreach Ministries
Bennett
103RD ST
103rd
Garvey Marcu
Hughes L
Block Park
Kohn
Fernwood Park
Mt Vernon
Jackie Robinson Park
107TH ST
Mount Ebal Missionary Baptist Church
Kwame Nkrumah Academy
Lavizzo Elm
Dunne
MICHIGAN AVE
Brooks College Prep
111TH ST
111th
Fenger HS
Potter Palmer Park
Major Taylor Bike Trail
Haley
Curtis
Sanders Academy
115TH ST
Mt. Holy Rock Missionary Baptist Church
Michigan
Inset
CHICAGO
94
57
CALUMET PARK
RIVERDALE
Legend
● Religious Facilities
Noise Barriers
Moderate Noise Contours
Severe Noise Contours
🟥 Sensitive Receiver Clusters with Severe Noise Impacts
🟦 Sensitive Receiver Clusters with Moderate Noise Impacts
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
UPRR Rail Alt. - Common Segment
▨ Proposed Rail Yard
● Proposed Rail Station
Existing CTA Red Line
Existing CTA Station
Freight Rail
Water Body
Parks
Schools
Scale
0
0.25
0.5
Miles
1 inch = 2,000 feet
map id: 08_08.1

Figure 4-20: Union Pacific Railroad Alternative East Option with Moderate (in Blue) and Severe (in Red) Impact Noise Contours (1 of 2)


Potter Palmer Park
Arcade Park
Langley Park
Lake Calumet Open Space
MICHIGAN AVE
PRAIRIE AVE
NICTD / CSS & SBRR
CN/ME
Pullman
Chosen Children of Destiny
115TH ST
Curtis
Sanders Academy
Michigan
Salem Christian Acad
Kensington Park
119TH ST
94
Lake Calumet
Kensington Marsh
Calumet River
123TH ST
CN/ME
NICTD / CSS & SBRR
Gompers
Lion Field - Roseland Little League Baseball
Owens Acad
127TH ST
130th
Golden Gate Park
Aldridge
Carver HS
Altgeld Gardens
DuBois
Our Lady of the Gardens
Carver Primary
George Washington Carver Park
Beaubien Woods Forest Preserve
Inset
CHICAGO
57
94
CALUMET PARK
RIVERDALE
Legend
Religious Facilities
Noise Barriers
Moderate Noise Contours
Severe Noise Contours
Sensitive Receiver Clusters with Severe Noise Impacts
Sensitive Receiver Clusters with Moderate Noise Impacts
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
UPRR Rail Alt. - Common Segment
Proposed Rail Yard
Proposed Rail Station
Existing CTA Red Line
Existing CTA Station
Freight Rail
Water Body
Parks
Schools
Scale
0
0.25
0.5
Miles
1 inch = 2,000 feet
map id: 08_08.2

CN/ME = Canadian National/Metra Electric District, NICTD/CSS & SBRR = Northern Indiana Commuter Transportation District/Chicago South Shore & South Bend Railroad

Figure 4-21: Union Pacific Railroad Alternative East Option with Moderate (in Blue) and Severe (in Red) Impact Noise Contours (2 of 2)

Permanent Noise Impacts

Residential noise-sensitive receivers fall within the moderate and severe impact contours for the East Option. There are 574 noise-sensitive receivers within the moderate impact contour: 221 on the west side of the corridor and 353 on the east side of the corridor. A total of 83 noise-sensitive receivers lie within the severe impact contours: 25 on the west side of the corridor and 58 on the east side of the corridor. Noise-sensitive receivers identified as displacements were not counted as being affected.

Noise-sensitive receivers are present within the moderate impact contour throughout the majority of the corridor from 99th Street to the CN/ME tracks near 119th Street. On the west side of the corridor the noise-sensitive receivers within the moderate impact contour are concentrated in the area northwest of the I-57/I-94 interchange. Two churches, the Soul Reviving Baptist Church (9537 S. Perry Avenue) and Kingdom Global Outreach Ministries (10132 S. Eggleston Avenue), could be subject to a moderate impact before mitigation. The remaining noise-sensitive receivers within the moderate impact contour are sparsely located between 112th Street and Prairie Avenue.

The majority of the noise-sensitive receivers within the severe impact contour are along both sides of the corridor between 99th Street and 103rd Street, and mostly along the east side between 105th Street and 111th Street. The *Noise and Vibration Technical Memorandum* (**Appendix O**) contains detailed figures showing the noise impact contours. The project could result in a severe impact on Wendell Smith Park and a moderate impact on Block Park and Kensington Park before mitigation. A portion of Wendell Smith Park would be affected by the project and the remaining portion of the park may have a severe impact before mitigation.

The property between State Street and Michigan Avenue south of 115th Street is vacant and there are no noise-sensitive receivers in this area of the corridor. The structures south of the UPRR tracks between State Street and Michigan Avenue are identified as displacements and therefore are not counted as receptors. No impacts are anticipated in the area south of the CN/ME corridor (which runs near 119th Street), because there are no sensitive receivers there. Altgeld Gardens, which is southwest of the 130th Street station location, would not be affected because it falls outside the impact area. **Table 4-13** details the number of affected noise-sensitive receivers between station areas.

Table 4-13: Sensitive Receivers within Moderate and Severe Noise Impact Contours - Union Pacific Railroad Alternative East Option

Area of Impact	West of Track Structure	East of Track Structure	Total
95th Street to 103rd Street	167 Moderate 25 Severe	108 Moderate 22 Severe	275 Moderate 47 Severe
103rd Street to 111th Street	1 Moderate 0 Severe	107 Moderate 25 Severe	108 Moderate 25 Severe
111th Street to Michigan Avenue at 116th Street	37 Moderate 0 Severe	98 Moderate 4 Severe	135 Moderate 4 Severe
Michigan Avenue to CN/ME Tracks near 119th Street	16 Moderate 0 Severe	40 Moderate 7 Severe	56 Moderate 7 Severe
Total	**221 Moderate 25 Severe**	**353 Moderate 58 Severe**	**574 Moderate 83 Severe**

Noise-affected receivers along the project corridor would require mitigation. The project could result in a moderate noise impact on three churches, three parks, and residential areas along both sides of the rail corridor. The East Option could result in a severe noise impact on one park and small, scattered residential areas along the east side of the corridor between 101st Place and 103rd Street, between 108th Street and 111th Street, just north of 11th Street and 114th Street, and just south of 116th Street. Although the schoolyard at Kwame Nkrumah Academy is within the moderate impact contour, the school building is outside the moderate impact contour; the school building would not have severe or moderate noise impacts. No other schools are within the severe or moderate noise contours.

Mitigation - To reduce noise impacts below FTA noise impact criteria, CTA would construct a noise barrier approximately 4 feet in height (measured from the top surface of the concrete deck) to reduce noise transmission at and below the height of the tracks. The 4-foot-high noise barrier would provide a 10-dBA reduction in noise along both sides of the elevated track structure from the 95th Street Terminal to the CN/ME tracks near 119th Street. All moderate or severe noise impacts would be resolved with mitigation. No moderate or severe impacts would remain after mitigation, including at Wendell Smith Park.

Permanent Vibration Impacts

The elevated track structure with continuously welded rail would result in vibration levels that would be below the FTA impact criterion of 72 VdB at the residential noise-sensitive receivers along the project corridor. The project would therefore result in no impacts from vibration and no mitigation measures would be required.

Construction Impacts

The East Option would include the construction of an elevated track structure, stations, and parking facilities at the stations. Construction noise levels are not expected to exceed the FTA-recommended construction noise limits shown in **Table 4-10**.

The construction contractor would employ noise-reducing construction BMPs. The contractor would keep all construction equipment exhaust mufflers in a state of good repair. As part of the construction specifications, the contractor would be responsible for adhering to the noise control requirements of the project. To the maximum extent possible, vehicles not in use would not remain idling on the construction site. CTA would limit nighttime construction near residences to the extent practicable. There would be no residential noise-sensitive receivers within 150 feet of the construction activity along the I-57 right-of-way. CTA would inform community members about construction schedules, and would coordinate in advance with aldermen and local officials.

High-vibration activities during construction include demolition of buildings, construction of aerial structures, pavement breaking, and ground compaction. Vibration limits are the levels at which there is a risk for damage, not the level at which damage would occur. The impact threshold distances were calculated and it was determined from the analysis that most of the equipment can be operated without risk of damage at distances of 15 feet or greater from non-engineered timber and masonry buildings or at distances of 8 feet or greater from reinforced concrete buildings. Pile-driving would be avoided in the vicinity of the historic Roseland Pumping Station.

Impacts Remaining After Mitigation

With a 10-dBA reduction provided by an approximately 4-foot-high noise barrier, all severe and moderate noise impacts would be resolved with mitigation. Beyond the use of noise-reducing construction BMPs, construction noise mitigation measures would not be required. There would be no vibration impacts; no mitigation measures for vibration are proposed.

4.5.3.3 Union Pacific Railroad Alternative - West Option

The noise analysis is based on the following UPRR Alternative components as described in **Chapter 2**: a closed-deck, steel and concrete aerial track structure with welded rail. The moderate and severe noise impact contour distances for the West Option are the same as for the East Option (see **Table 4-12**). **Figure 4-22** and **Figure 4-23** show the moderate and severe noise impact contours and clusters of affected noise-sensitive receivers associated with the West Option. The impact contours close in as they near the station areas because there would be less train noise as the trains decrease speeds when approaching stations.

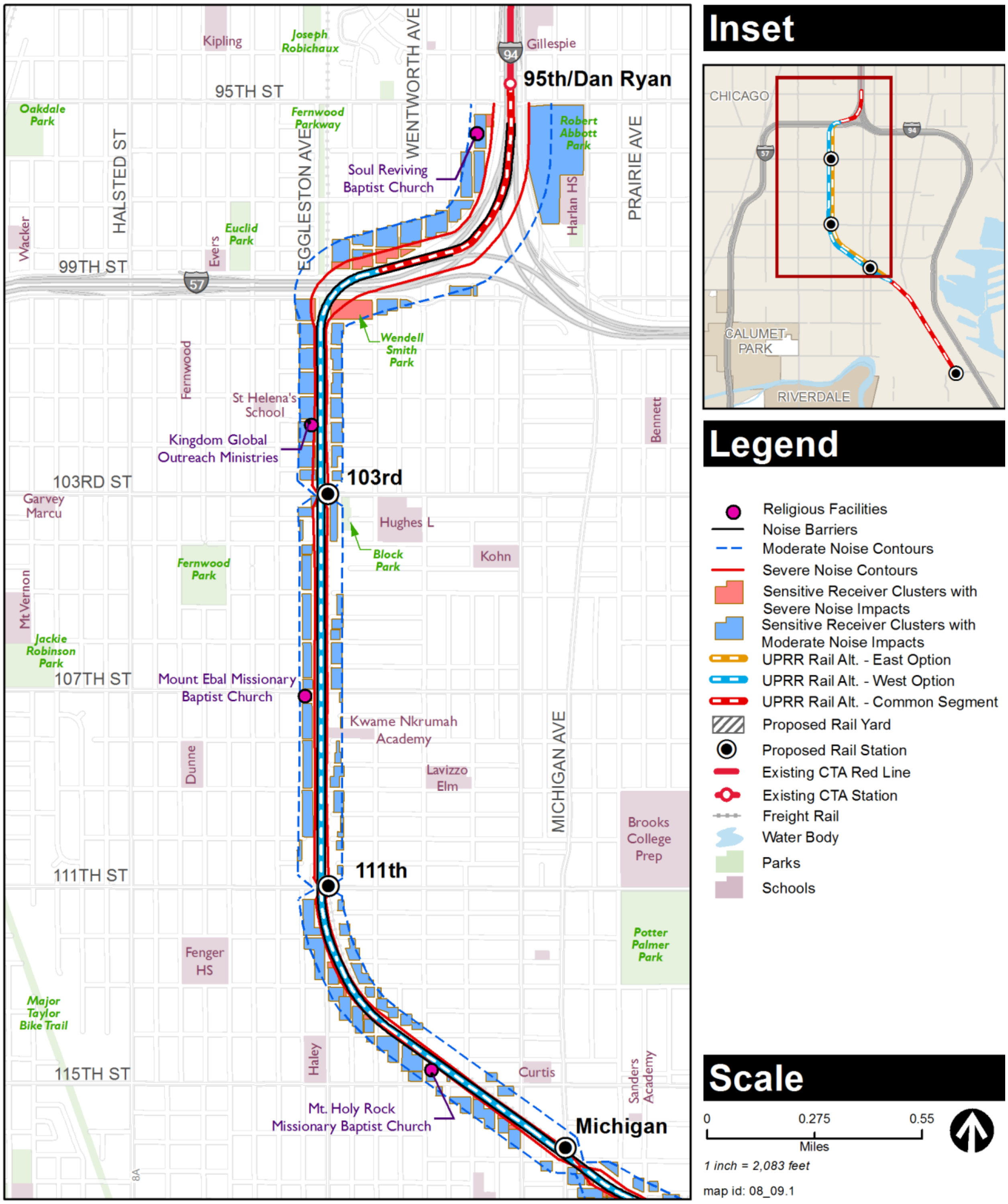
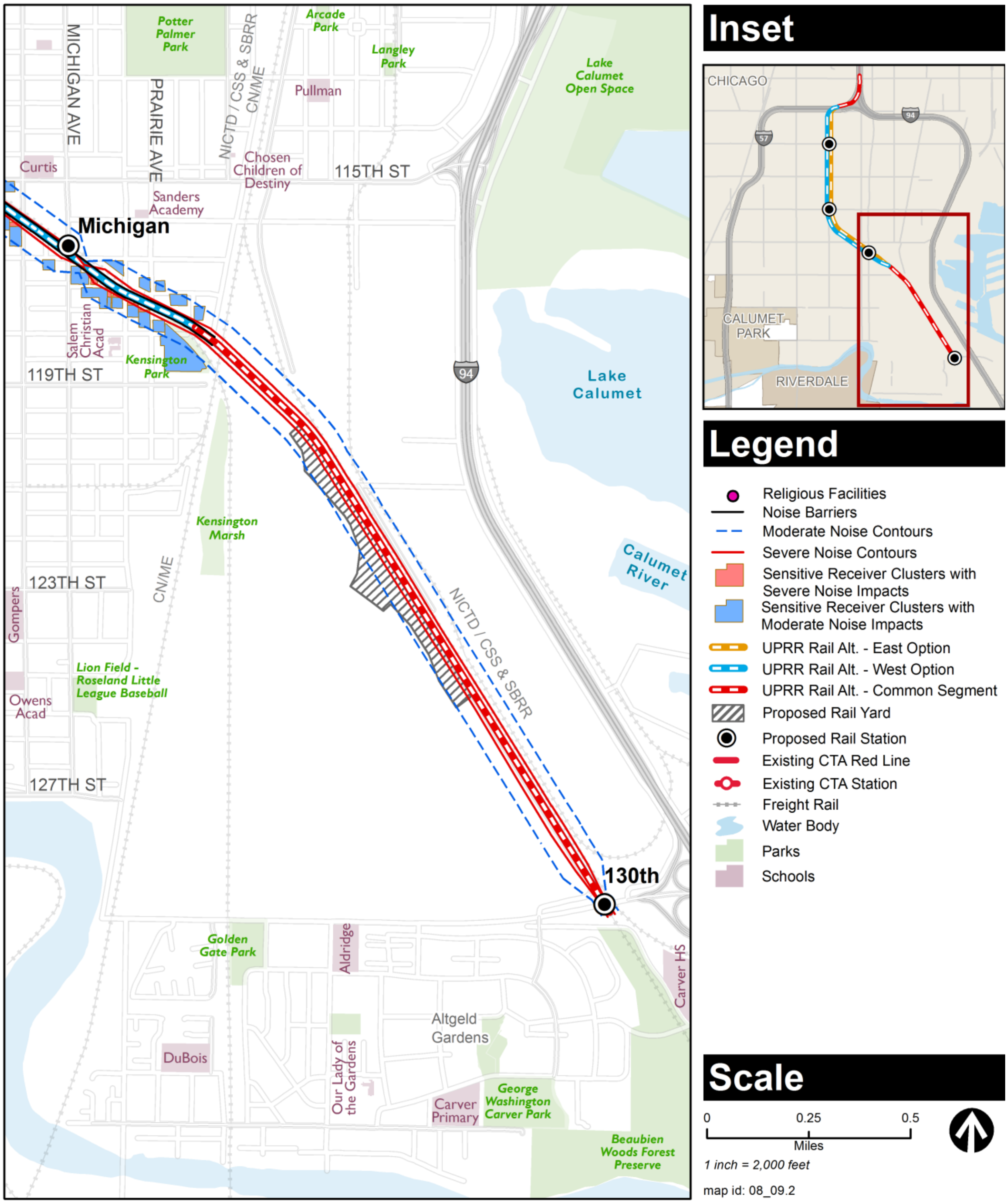

Kipling
Joseph Robichaux
Gillespie
94
95th/Dan Ryan
95TH ST
Oakdale Park
Fernwood Parkway
WENTWORTH AVE
Robert Abbott Park
HALSTED ST
EGGLESTON AVE
Soul Reviving Baptist Church
Harlan HS
PRAIRIE AVE
Euclid Park
Wacker
Evers
99TH ST
57
Wendell Smith Park
Fernwood
St Helena's School
Kingdom Global Outreach Ministries
Bennett
103RD ST
103rd
Garvey Marcu
Hughes L
Block Park
Kohn
Fernwood Park
Mt Vernon
Jackie Robinson Park
107TH ST
Mount Ebal Missionary Baptist Church
Kwame Nkrumah Academy
Lavizzo Elm
Dunne
MICHIGAN AVE
Brooks College Prep
111TH ST
111th
Potter Palmer Park
Fenger HS
Major Taylor Bike Trail
Haley
115TH ST
Curtis
Sanders Academy
Mt. Holy Rock Missionary Baptist Church
Michigan
8A
Inset
CHICAGO
94
57
CALUMET PARK
RIVERDALE
Legend
● Religious Facilities
Noise Barriers
Moderate Noise Contours
Severe Noise Contours
Sensitive Receiver Clusters with Severe Noise Impacts
Sensitive Receiver Clusters with Moderate Noise Impacts
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
UPRR Rail Alt. - Common Segment
▨ Proposed Rail Yard
Proposed Rail Station
Existing CTA Red Line
Existing CTA Station
Freight Rail
Water Body
Parks
Schools
Scale
0
0.275
0.55
Miles
1 inch = 2,083 feet
map id: 08_09.1

Figure 4-22: Union Pacific Railroad Alternative West Option with Moderate (in Blue) and Severe (in Red) Impact Noise Contours (1 of 2)


Inset
CHICAGO
57
94
CALUMET PARK
RIVERDALE
Legend
● Religious Facilities
Noise Barriers
Moderate Noise Contours
Severe Noise Contours
🟥 Sensitive Receiver Clusters with Severe Noise Impacts
🟦 Sensitive Receiver Clusters with Moderate Noise Impacts
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
UPRR Rail Alt. - Common Segment
▨ Proposed Rail Yard
Proposed Rail Station
Existing CTA Red Line
Existing CTA Station
Freight Rail
Water Body
🟩 Parks
Schools
Scale
0
0.25
0.5
Miles
1 inch = 2,000 feet
map id: 08_09.2
Potter Palmer Park
Arcade Park
Langley Park
Lake Calumet Open Space
MICHIGAN AVE
PRAIRIE AVE
NICTD / CSS & SBRR
CN/ME
Pullman
Curtis
Chosen Children of Destiny
115TH ST
Sanders Academy
Michigan
Salem Christian Acad
Kensington Park
119TH ST
94
Lake Calumet
Kensington Marsh
Calumet River
123TH ST
CN/ME
Gompers
NICTD / CSS & SBRR
Lion Field - Roseland Little League Baseball
Owens Acad
127TH ST
130th
Golden Gate Park
Aldridge
Carver HS
Altgeld Gardens
DuBois
Our Lady of the Gardens
Carver Primary
George Washington Carver Park
Beaubien Woods Forest Preserve

CN/ME = Canadian National/Metra Electric District, NICTD/CSS & SBRR = Northern Indiana Commuter Transportation District/Chicago South Shore & South Bend Railroad

Figure 4-23: Union Pacific Railroad Alternative West Option with Moderate (in Blue) and Severe (in Red) Impact Noise Contours (2 of 2)

Permanent Noise Impacts

Residential noise-sensitive receivers on the west side of the corridor would fall within the moderate and severe impact contours of this alternative. There are 738 noise-sensitive receivers within the moderate impact contour: 520 on the west side of the corridor and 218 on the east side of the corridor. A total of 48 noise-sensitive receivers lie within the severe impact contours; all are on the west side of the corridor. Receivers identified as displacements were not counted as being affected.

Impacts on noise-sensitive receivers within the moderate impact contour would occur throughout the majority of the corridor between 99th Street and the CN/ME tracks near 119th Street but with greater concentration along the west side of the corridor. There would be no noise-sensitive residential receivers within the severe impact contour on the east side of the corridor. On the west side of the corridor the noise-sensitive receivers within the severe and moderate impact contours are concentrated in the area northwest of the I-57/I-94 interchange and south of I-57 to 103rd Street. A row of noise-sensitive receivers is within the moderate impact contour between 103rd Street and 112st Street along the east side of Eggleston Avenue. Three churches could be subject to moderate impacts: the Soul Reviving Baptist Church (9837 Perry Avenue), the Kingdom Global Outreach Ministries (10132 S. Eggleston Avenue), and the Mt. Ebal Baptist Church (425 W. 107th Street). Clusters of noise-sensitive receivers fall within the moderate impact contour along both sides of the corridor between 112th Street and the CN/ME tracks near 119th Street. In addition, a few noise-sensitive receivers fall within the severe impact contour along the west side of the corridor between 112th Street and the CN/ME tracks near 119th Street.

The project could result in a severe impact on Wendell Smith Park and a moderate impact on Block Park and Kensington Park before mitigation. Because Fernwood Parkway is identified as a displacement it is not counted as being affected.

The property between State Street and Michigan Avenue south of 115th Street is vacant and there are no noise-sensitive receivers in this area along the corridor. The structures south of the UPRR tracks between State Street and Michigan Avenue are identified as displacements and therefore are not counted as receptors. No impacts are anticipated in the area south of the CN/ME corridor (which crosses the UPRR tracks near 119th Street), because there are no sensitive receivers there. Altgeld Gardens, which is southwest of the 130th Street station location, would not be affected because it falls outside the impact area. **Table 4-14** details the number of affected noise-sensitive receivers between station areas.

Table 4-14: Sensitive Receivers within Moderate and Severe Noise Impact Contours - Union Pacific Railroad Alternative West Option

Area of Impact	West of Track Structure	East of Track Structure=	Total
95th Street to 103rd Street	209 Moderate 32 Severe	81 Moderate 1 Severe	290 Moderate 33 Severe
103rd Street to 111th Street	125 Moderate 0 Severe	62 Moderate 0 Severe	187 Moderate 0 Severe
111th Street to Michigan Avenue at 116th Street	145 Moderate 9 Severe	47 Moderate 0 Severe	192 Moderate 9 Severe
Michigan Avenue to CN/ME Tracks near 119th Street	41 Moderate 7 Severe	28 Moderate 0 Severe	69 Moderate 7 Severe
Total	**520 Moderate** **48 Severe**	**218 Moderate** **1 Severe**	**738 Moderate** **49 Severe**

Noise impacts at affected receivers along the project corridor would require mitigation. The project could result in a moderate noise impact on four churches, one park, and residential areas along both sides of the rail corridor. The West Option could result in a severe noise impact on two parks and small, scattered residential areas along the west side along W. 98th Place, between 112th Place and 114th Street, between 115th Street and 116th Street, and between 117th Street and 118th Street. Although the schoolyard at Kwame Nkrumah Academy is within the moderate impact contour, the school building is outside the moderate impact contour; the school building would not have severe or moderate noise impacts. No other schools are within the severe or moderate noise contours.

Mitigation - As described for the East Option, to reduce noise levels below FTA noise impact criteria, CTA would construct a noise barrier approximately 4 feet in height to reduce noise transmission at and below track level. The 4-foot-high noise barrier would provide a 10-dBA reduction in noise along both sides of the elevated track structure from the 95th Street Terminal to the CN/ME tracks near 119th Street. All moderate or severe noise impacts would be resolved with mitigation. No moderate or severe impacts would remain after mitigation, including at Wendell Smith Park.

Permanent Vibration Impacts

The elevated track structure with continuously welded rail would result in vibration levels that would be below the FTA impact criterion of 72 VdB at the residential noise-sensitive receivers along the project corridor. The project would therefore result in no impacts from vibration and no mitigation measures would be required.

Construction Impacts

As it would be for the East Option, the West Option would include construction of an elevated track structure, stations, and parking facilities at the stations. Construction noise impacts would be the same as for the East Option. Construction noise levels are not expected to exceed the FTA-recommended construction noise limits shown in **Table 4-10**.

The construction contractor would employ noise-reducing construction BMPs as described for the East Option. As noted above for the East Option, it was determined from analysis that most of the equipment can be operated without risk of damage from vibration at distances of 15 feet or greater from non-engineered timber and masonry buildings or at distances of 8 feet or greater from reinforced concrete buildings. Pile-driving would be avoided in the vicinity of the historic Roseland Pumping Station.

Impacts Remaining After Mitigation

With a 10-dBA reduction provided by an approximately 4-foot-high noise barrier, all severe and moderate noise impacts would be resolved with mitigation. Beyond the use of noise-reducing construction BMPs, construction noise mitigation measures would not be required. There would be no vibration impacts; no mitigation measures for vibration are proposed.

4.6 Safety and Security

This section summarizes the safety and security impacts of the East and West Options. The *Safety and Security Technical Memorandum* (**Appendix P**) includes additional details.

Safety refers to freedom from harm resulting from unintentional acts or circumstances (49 CFR § 659.5). Unintentional acts or circumstances include all incidents within the CTA right-of-way (including areas along tracks, in yards, and at stations). Examples of incidents include collisions, derailments, fires, property damage, injuries, and fatalities. *Security* refers to freedom from harm resulting from intentional acts or circumstances (49 CFR § 659.5). Intentional harm includes crimes and must be reported if the intentional act meets thresholds for notification as specified in FTA's State Safety Oversight Rule (49 CFR § 674).

Table 4-15 summarizes safety and security impacts for the East and West Options.

Table 4-15: Safety and Security - Impacts Summary

Alternative	Permanent Impacts		Construction Impacts
	Safety	Security	
No Build	No impacts	No impacts	No impacts
Union Pacific Railroad - East Option	Impacts would not be adverse after mitigation	No adverse impacts	No adverse impacts
Union Pacific Railroad - West Option	Impacts would not be adverse after mitigation	No adverse impacts	No adverse impacts

4.6.1 Regulatory Framework/Methods

Federal safety and security requirements for rail systems are primarily provided in 49 CFR § 659, and through Occupational Safety and Health Administration (OSHA) standards and regulations for providing a safe and healthy workplace (namely the Occupational Safety and Health Act of 1970). Safety and security planning is included in the CTA's *System Safety Program Plan* and *Security Emergency Preparedness Plan*, both of which are required of CTA to comply with provisions under 49 CFR § 659. The CTA's *Infrastructure Design Criteria Manual* also addresses safety and security (CTA 2013b). The standards address system safety, security, fire protection, human factors, reliability, maintainability, configuration management, and quality control. Passenger safety is the highest priority in system safety objectives, along with the safety of CTA employees. Construction, installation, inspection, and testing procedures are also objectives covered by the standards.

For this Draft EIS, an adverse safety and security impact is defined as one that would cause one or more of the following:

- Creation of the potential for increased major safety or security incidents reportable to FTA
- Failure to meet the applicable design standards where such failure results in a safety or security impact
- Marked increase in safety or security risks on or off the CTA system
- Marked increase in pedestrian and/or public safety incidents in the immediate vicinity of proposed CTA stations
- Marked increase in crime incidents near proposed CTA stations
- Notable increases in calls for police service and/or emergency response time

4.6.2 Existing Conditions

The affected environment for this analysis includes areas that could be affected by impacts on the CTA system (e.g., tracks, vehicles, stations, rail yards) and impacts within ½ mile of stations. The ½-mile distance is used as an approximation of the distance most patrons will walk to a station and is therefore used when evaluating general pedestrian safety and security in the surrounding neighborhood.

Groups covered in the affected environment include transit passengers, operators, employees, contractors, and the general public. Members of these groups all come in contact with the system in some way, and could be susceptible to safety and security impacts. The main pedestrian safety risk in the project area is from motor vehicle crashes.

4.6.3 Environmental Consequences

The following sections summarize the potential safety and security impacts of each alternative.

4.6.3.1 No Build Alternative

There would be no permanent or construction-related safety and security impacts for the No Build Alternative.

4.6.3.2 Union Pacific Railroad Alternative - East Option

Permanent Impacts

The proposed stations would generate a large amount of pedestrian traffic, causing an increase in the number of pedestrians crossing streets to access the stations. At most stations, the controlled intersections (signals or all-way stops) nearest to proposed station locations are approximately one block away. It is likely that pedestrians would want to cross the streets immediately adjacent to station entrances, particularly to access the nearest available bus stops (assumed to be adjacent to stations). A large number of pedestrians would be expected to cross the major streets without positive traffic control (marked crosswalks or signalized intersections with pedestrian countdowns), which would be an adverse impact on pedestrian safety.

During the NEPA scoping process, the public expressed concern regarding the potential for increased crime surrounding proposed stations because of the higher volume of people accessing the stations. Based on data from transit stations in Chicago and across the United States, the new stations would be unlikely to have much, if any, impact on neighborhood crime (Plano 1993, Denver Regional Transportation District 2006, Liggett et al. 2003, San Diego Association of Governments 2007, Block and Davis 1996); however, research indicates that some risk would remain, particularly in low-income neighborhoods (Ihlanfeldt 2003).

Mitigation - CTA would prepare a Threat and Vulnerability Assessment, which would identify security threats in the transit system and make recommendations to reduce those threats. If warranted by an engineering traffic study, CTA may install traffic signals to mitigate pedestrian safety impacts. To further mitigate impacts and improve pedestrian safety, CTA would consider installation of security surveillance cameras, alarm notifications (e.g., flashing blue lights), sidewalk lighting in the immediate vicinity of station entrances, pedestrian crossing treatments, such as refuge medians with appropriate signage, and police patrols. To mitigate adverse safety impacts at the roadway-railroad grade crossings, CTA would install safety cameras and would consider installing additional passive or active safety devices to enhance the safety devices already in place at existing grade crossings. Additional audible warning devices or non-mountable curbs are examples of other safety measures for at-grade railroad crossings. CTA would install fencing to deter pedestrians from crossing the freight railroad tracks in places other than the designated locations. At the park & ride facilities, CTA would install surveillance cameras and controlled entry and exit access. The impacts would not be adverse after mitigation measures are implemented.

Construction Impacts

For any major capital project, CTA has a construction contract that requires the contractor to protect CTA's project site and all adjacent properties, and to take all necessary precautions for the safety of all persons on or near the project site. This requirement includes provisions to render all portions of the work secure in every respect and to decrease the possibility of, or liability for, accidents. The construction contractor would be required to have an approved Health and Safety Plan and a Safety and Security Plan in place before the start of any construction work. The Safety and Security Plan would describe protection to be provided by the contractor for its employees, CTA passengers and employees, and the general public. The project contractor would follow OSHA requirements and would comply with CTA's *Safety and Security Management Plan* (CTA 2011).

The elevated CTA rail line would be constructed adjacent to the existing, at-grade freight railroad line. Completing construction adjacent to an active freight rail line could create construction safety risks but impacts would not be adverse. The Safety and Security Plan would include the use of UPRR flaggers throughout the construction period, who would ensure that freight trains and on-track equipment pass safely through the work site without delays. The *Construction Impacts Technical Memorandum* (**Appendix I**) provides additional details regarding these potential impacts.

During the NEPA scoping process, CTA received comments regarding the ability of first responders to access construction sites and to have access through construction sites. The East Option would require lane closures on the expressways and temporary street closures during construction activities. Emergency services would have access to construction sites at all times and would access construction sites in the same way as contractors, by using various side streets and recommended detours. Emergency services wishing to cross tracks would have to use recommended detours, just as with any roadway construction project. The impacts would not be adverse.

During final design of the project and as a requirement for the project, CTA would prepare traffic management and maintenance of traffic plans that identify traffic detours and emergency access routes. CTA would coordinate traffic management with the FHWA, IDOT, Cook County Department of Transportation and Highways, the Office of Emergency Management and Communications, and CDOT. Contractors would follow the MUTCD design standards for temporary traffic control and would obtain all required local permits. Contractors would also create a public safety plan with local law enforcement officers for the construction site.

Impacts Remaining After Mitigation

Installation of new traffic signals and/or other pedestrian crossing treatments would reduce adverse impacts to a level that would be less than adverse. There would be no adverse permanent or construction-related impacts on safety and security for the East Option after mitigation measures are implemented.

4.6.3.3 Union Pacific Railroad Alternative - West Option

Permanent Impacts Remaining After Mitigation

The impacts for the West Option would be similar to those of the East Option. The park & ride facility locations would, however, differ from those of the East Option. The park & ride facilities for the West Option would be located on the same side of the railroad tracks as the proposed stations. These locations would result in fewer pedestrians crossing the railroad tracks than with the East Option. The presence of new stations adjacent to the roadway-railroad grade crossing would be an adverse impact at 103rd and 111th Streets. Like the East Option, the West Option would generate additional motor vehicle traffic and pedestrian traffic accessing the stations. The increase in traffic volume would result in increased likelihood of crashes at the roadway-railroad grade crossings. The increased likelihood of crashes would result in an adverse impact on the safety of the roadway-railroad grade crossings.

Mitigation - Mitigation measures would be same for the West Option as for the East Option. The impacts would not be adverse after mitigation measures are implemented.

Construction Impacts

The construction-related impacts would be the same for the West Option as for the East Option. As described for the East Option, the construction contractor would be required to have an approved Health and Safety Plan and a Safety and Security Plan in place before the start of any construction work.

Impacts Remaining After Mitigation

Installation of new traffic signals and/or other pedestrian crossing treatments would reduce adverse impacts to a level that would be less than adverse. There would be no adverse permanent or construction-related impacts on safety and security for the West Option after mitigation measures are implemented.

4.7 Historic and Cultural Resources

This section summarizes the draft findings under Section 106 of the National Historic Preservation Act (NHPA) and in coordination with the State Historic Preservation Office (SHPO) of the Illinois Historic Preservation Agency and consulting parties to the Section 106 process.

The structure of this section is slightly different than other sections in the Draft EIS, to fully document the process and consultation required under Section 106. In addition, the term "effects" is used in this section rather than "impacts" because of the unique requirements and terminology related to historic resources. The *Historic and Cultural Resources Technical Memorandum* (**Appendix Q**) includes additional details. **Table 4-16** summarizes the effect findings for historic and cultural resources.

Table 4-16: Historic and Cultural Resources - Effects Summary

Alternative	Effects
No Build	No effects
Union Pacific Railroad - East Option	No Adverse Effect finding for one resource
Union Pacific Railroad - West Option	No effects

4.7.1 Regulatory Framework/Methods

Cultural and historic resources are protected by various federal regulations; Section 106 of the NHPA requires federal agencies to consider effects on historic resources from their actions and to balance preservation needs with the need for the actions. As provided in 36 CFR § 800, the Section 106 process "seeks to accommodate historic preservation concerns with the needs of federal undertakings through consultation" (36 CFR § 800.1(a)). The goal of the consultation is to identify historic properties potentially affected by the undertaking, assess project effects, and seek ways to avoid, minimize, or mitigate any adverse effects on historic properties.

For the Section 106 assessment of historic and archaeological resources, FTA and CTA conducted a four-step process following requirements of 36 CFR § 800:

1. **Define the Area of Potential Effects** - FTA and CTA first determined an area of potential effects (APE) for cultural/historic resources. The APE is defined as the geographic area within which the project may cause alterations in the character or use of historic properties (36 CFR § 800.16(d)). Development of the APE involved site visits and a review of aerial photography images and conceptual engineering drawings for the alternative.

2. **Identify Historic and Archaeological Resources** - After an extensive records check, representative samples within the APE footprint were field-surveyed to identify any archaeological resources and historic resources that meet National Register of Historic Places (NRHP) criteria. Representative samples were used to determine effects on similar properties on a block-by-block basis. The properties included in the representative sample were determined using GIS databases provided by the City of Chicago, the Historic and Architectural Resources Geographic Information System, online mapping resources, SHPO records, and field visits. Additional details about the definition of the representative sample, and resources in it, are included in the *Historic and Cultural Resources Technical Memorandum* (**Appendix Q**). NRHP criteria are defined in 36 CFR § 60.4 and apply to districts, sites, buildings, structures, or objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association with one or more of the following four criteria:

   - Criterion A - Events that have made a significant contribution to the broad patterns of American history on a federal, state, and/or local level

   - Criterion B - Lives of persons significant in the history of the city, state, and/or the United States

   - Criterion C - Distinctive characteristics of a type, period, or method of construction, or the work of a master, or high artistic values, or a significant and distinguishable entity whose components may lack individual distinction

   - Criterion D - Information important in prehistory or history

   FTA and CTA identified properties listed on the NRHP, local landmarks, and Chicago Historic Resources Survey (CHRS) “Red” and “Orange”-rated[6] buildings (properties with locally designated historic importance). FTA and CTA conducted background research to assist this process, using the Historic and Architectural Resources Geographic Information System and city records, fire insurance and other historic maps, the CHRS, previous architectural studies in the area, and other relevant scholarly publications. No properties or districts currently listed on the NRHP are present in the APE.

3. **Assess Effects on Historic and Archaeological Resources** - FTA and CTA assessed effects for each evaluated resource that was listed in the NRHP or determined eligible for listing. The effects analysis referenced other technical memoranda prepared for the project (for topics such as displacements, noise, and visual impacts) and focused on how

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[6] The CHRS is an inventory of architecturally and historically significant buildings in the City of Chicago that uses a color-coded ranking system used to identify historic and architectural significance relative to age, degree of external physical integrity, and level of possible significance. The two highest color codes are "Red" and "Orange." These types of local historic resources are subject to the City of Chicago’s Demolition-Delay Ordinance. “Red” or “Orange”-rated properties were identified as possessing some architectural feature or historical association that made them potentially significant in the context of the surrounding community.

the alternative might alter the characteristics that qualify properties for inclusion in the NRHP.

4. **Resolve any Adverse Effects** - FTA and CTA will develop any necessary mitigation measures through consultation with the SHPO and other consulting parties to address adverse effect determinations.

A number of parties have a consultative role in a project considered an undertaking under Section 106. **Section 4.7.2** provides a summary of the consultation process conducted to date, as well as a list of invited and consulting parties.

4.7.2 Section 106 Consultation Process

In August 2012, FTA sent invitation letters to 11 Native American tribes to inform them of the process and request assistance in identifying areas with potential cultural and/or religious significance. Also in August 2012, CTA sent invitation letters to 19 state and local level preservation interest groups to inform them of the project and invite them to participate in the upcoming consultation process. FTA and CTA sent invitation letters to the following recipients:

Native American Tribes

- Ho-Chunk Nation
- Miami Tribe of Oklahoma
- Peoria Tribe of Indians of Oklahoma
- Sac and Fox Nation of Oklahoma
- Pokagon Band of Potawatomi Indians
- Prairie Band of the Potawatomi Nation
- Citizen Potawatomi Nation
- Forest County Potawatomi Nation
- Potawatomi Nation
- Sac and Fox Nation of Mississippi in Iowa
- Sac and Fox Nation of Missouri

State and Local Preservation Groups

- SHPO
- Advisory Council on Historic Preservation
- Illinois State Museum
- Illinois State Archaeological Survey
- City of Chicago Department of Planning and Development's Historic Preservation Division
- Preservation Chicago
- Landmarks Illinois
- Chicago Historical Society
- Ridge Historical Society
- Beverly Area Planning Association
- East Beverly Association
- Rosemoor Community Association
- Cottage Grove Cottage Grove Heights Community Coalition
- Historic Pullman Foundation
- South Suburban Genealogical and Historical Society
- Chicago Neighborhood Initiatives
- Neighborhood Housing Services of Chicago
- Mercy Housing Lakefront
- Friends of the Parks

At present, 11 groups are participating in the process. The consulting parties include the SHPO, the City of Chicago Department of Planning and Development's Historic Preservation Division, Preservation Chicago, Landmarks Illinois, the Ridge Historical Society, the Rosemoor Community Association, Friends of the Parks, Chicago Neighborhood Initiatives, Neighborhood Housing Services of Chicago, DCP, and the Chicago Park District.

On October 24, 2012, FTA and CTA held a webinar on RLE historic properties to introduce the project and initiate the consultation process. During the eligibility phase of consultation, properties and districts that were identified as eligible for listing on the NRHP were discussed. Properties over 50 years old in the APE were evaluated to determine whether they are NRHP-eligible under one of the four National Park Service Criteria for Evaluation mentioned above.

FTA and CTA provided draft materials on the identification of NRHP-eligible properties to consulting parties on January 4, 2013, in compliance with Section 106 of the NHPA. A 30-day comment period followed, with an in-person meeting on January 30, 2013 to facilitate discussion among consulting parties. The meeting was followed by an informal tour of the corridor that afternoon. As part of this phase of coordination, CTA received written comments from six consulting parties. Comments received from consulting parties in regards to eligibility focused on requesting additional surveys of resources, potential districts that should be considered recommended as eligible, reconsideration of surveyed properties and their eligibility, and the importance of looking at resources in the historical/social context.

As part of the eligibility phase, CTA surveyed 541 potentially eligible resources within the APEs for all alternatives being studied at the time (the BRT, UPRR, and Halsted Alternatives). As a result of the field investigations and comments received from consulting parties on potentially eligible resources, for the BRT, UPRR, and Halsted Alternatives, 15 total resources were identified as eligible for inclusion on the NRHP, including 13 individual buildings and 2 historic districts. Specifically for the UPRR Alternative, CTA surveyed 280 potentially eligible resources within the UPRR Alternative APE. As a result of the field investigations and comments received from consulting parties on potentially eligible resources, 7 total resources were identified for the UPRR Alternative as eligible for inclusion on the NRHP, including 6 individual buildings and 1 historic district.

FTA and CTA mailed a Draft Effects Report to consulting parties on April 18, 2014, requesting any written comments by May 23, 2014. On May 8, 2014, FTA and CTA met with consulting parties to discuss potential project effects on NRHP-eligible historic properties. CTA received written comments from four consulting parties. Comments received from consulting parties regarding assessments of effects included eligibility reconsiderations, effects reconsiderations, and requests for renderings for properties in the APE. Comments also related to effects associated with the Halsted Alternative and UPRR 130th Street West Station Option, both of which have been eliminated from further consideration (see **Section 2.4** for additional details).

From 2012–2014, CTA evaluated and took consulting party comments on four alternatives as part of the Section 106 consultation process: the No Build Alternative, the BRT Alternative (along Michigan Avenue), the UPRR Alternative, and the Halsted Alternative. CTA evaluated three options of the UPRR Alternative in the Section 106 consultation process: the Right-of-Way Option, the East Option, and the West Option. CTA also evaluated two options of the UPRR Alternative 130th Street station as part of the Section 106 consultation process: a South Station Option and a West Station Option. CTA developed separate APEs for each alternative and the Section 106 analysis and consultation was performed during 2012–2014 on all those alternatives and options.

In August 2014, based on the technical analysis and public input, CTA announced the NEPA Preferred Alternative—the UPRR Alternative. While CTA had originally considered a UPRR Right-of-Way Option, this option was subsequently removed, as it is no longer feasible. In addition, CTA is now considering only the South Station Option of the 130th Street Station. Further details on the alternatives evaluated and eliminated through the Draft EIS process are presented in **Section 2.4**. Additional conceptual engineering was conducted on the UPRR Alternative to refine the East and West Option alignments.

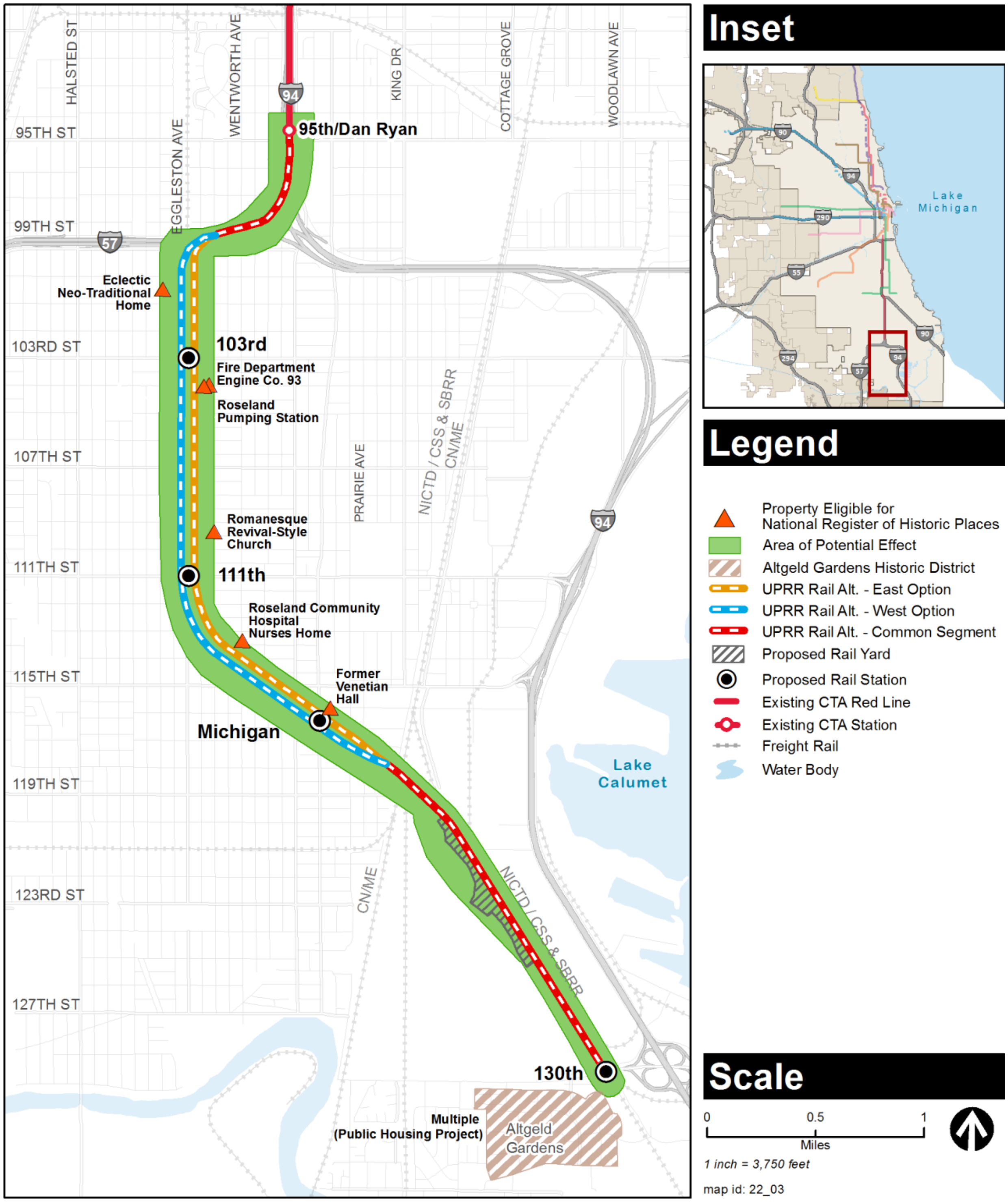
CTA provided responses to all consulting party comments received in May 2014 on November 24, 2014. Responses noted that the alternatives had been further narrowed and that the UPRR Alternative (East and West Options) were proposed to move forward as the NEPA Preferred Alternative. The consulting parties requested renderings at the Roseland Pumping Station and the 130th Street station near Altgeld Gardens. CTA has developed these renderings; they are included as **Figure 4-25** and **Figure 4-26**.

As noted above, CTA developed separate APEs for each alternative considered through the Section 106 consultation process. Based on the further narrowing of alternatives and additional conceptual engineering, FTA and CTA revised the APE accordingly as shown in **Figure 4-24**. The revised APE encompasses no new effects from the UPRR Alternative compared to what was presented during consultation. In correspondence to the SHPO dated September 21, 2016, and as described in **Section 4.7.4**, FTA described the revised project APE and made the determination that the UPRR Alternative (East and West Options) would result in no adverse effects. The September 21, 2016 correspondence to the SHPO is included in **Appendix Q**. The SHPO's concurrence with FTA's determinations is pending. Coordination with the SHPO will continue through the remainder of the project.

Appendix Q contains a full summary of the meetings, comments received, and responses to comments. The *Eligibility and Effects Summary Report* included as part of **Appendix Q** contains a concise summary of the NEPA Preferred Alternative APE as well as the eligibility and effects determinations made through the development of the project to date. In regards to the NEPA Preferred Alternative, information in the *Eligibility and Effects Summary Report* supersedes the eligibility and effects information provided in the text of the *Historic and Cultural Resources Technical Memorandum* (**Appendix Q**).

4.7.3 Existing Conditions

Figure 4-24 is a map of the revised APE and NRHP-eligible resources for the UPRR Alternative. Generally, the APE contains parcels within one block of the centerlines of the East and West Option alignments, as well as the areas immediately surrounding the park & ride and the yard and shop sites. Within the limits of the APE for the UPRR Alternative, CTA surveyed 280 individual resources. As a result of the field investigations and comments received from consulting parties on potentially eligible resources, 7 total resources were identified for the UPRR Alternative as eligible for inclusion on the NRHP, including 6 individual buildings and 1 historic district. **Table 4-17** summarizes historic resources within the APE. The *Eligibility and Effects Summary Report* (**Appendix Q**) contains a full description of the eligible resources within the APE as well as a discussion of historic and cultural resources that are locally designated.


Inset
Lake Michigan
Legend
Property Eligible for National Register of Historic Places
Area of Potential Effect
Altgeld Gardens Historic District
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
UPRR Rail Alt. - Common Segment
Proposed Rail Yard
Proposed Rail Station
Existing CTA Red Line
Existing CTA Station
Freight Rail
Water Body
Scale
0
0.5
1
Miles
1 inch = 3,750 feet
map id: 22_03
95TH ST
99TH ST
103RD ST
107TH ST
111TH ST
115TH ST
119TH ST
123RD ST
127TH ST
HALSTED ST
EGGLESTON AVE
WENTWORTH AVE
KING DR
COTTAGE GROVE
WOODLAWN AVE
PRAIRIE AVE
NICTD / CSS & SBRR
CN/ME
95th/Dan Ryan
103rd
111th
Michigan
130th
Eclectic Neo-Traditional Home
Fire Department Engine Co. 93
Roseland Pumping Station
Romanesque Revival-Style Church
Roseland Community Hospital Nurses Home
Former Venetian Hall
Multiple (Public Housing Project)
Altgeld Gardens
Lake Calumet
94
57

Source: City of Chicago Geographic Information System database, the Historic and Architectural Geographic Information System database, online mapping resources, State Historic Preservation Office records, and field visits

CN/ME = Canadian National/Metra Electric District, NICTD/CSS & SBRR = Northern Indiana Commuter Transportation District/Chicago South Shore & South Bend Railroad

Figure 4-24: NRHP-Eligible Resources in the Area of Potential Effects

Table 4-17: NRHP-Eligible Resources in the Area of Potential Effects

ID	Address	Description	NRHP Eligibility Criteria	Community Area
1	444 W. 100th Place	Eclectic Neo-Traditional Home (built 1930)	Criterion C	Washington Heights
2	324 W. 104th Street	Fire Department Engine Company 93 (built 1917)	Criterion C	Roseland
3	351 W. 104th Street	Roseland Pumping Station (built 1911)	Criterion C	Roseland
4	10920 S. Princeton Avenue	Romanesque Revival-Style Church (built 1916)	Criteria A and C	Roseland
5	11321 S. Wentworth Avenue	Roseland Community Hospital Nurses Home (built 1930s)	Criterion A	Roseland
6	133-139 E. Kensington Avenue	Former Venetian Hall (built 1925)	Criterion A	Riverdale
7	Multiple (Public Housing Project)	Altgeld Gardens Historic District (built 1945)	Criterion A	Riverdale

NRHP = National Register of Historic Places

Beyond the NRHP-eligible resources, four properties within the APE are identified as notable "Orange" in the CHRS, three of which have also been identified as NRHP-eligible:

- Fire Department Engine Company 93 at 324 W. 104th Street (NRHP-eligible, ID #3)
- Roseland Pumping Station at 351 W. 104th Street (NRHP-eligible, ID #4)
- Romanesque Revival-style church at 10920 S. Princeton Avenue (NRHP-eligible, ID #5)
- St. Salomea Church at 11800–11808 S. Indiana Avenue

These CHRS "Orange"-rated resources are protected by the City's 2003 Demolition-Delay Ordinance. As none of the CHRS "Orange"-rated resources are proposed for demolition under either the East or West Option, this ordinance is not discussed further.

Eight public parks were also surveyed for potential NRHP eligibility, but none were found to be eligible. The *Historic and Cultural Resources Technical Memorandum* (**Appendix Q**) contains additional discussion on public parks surveyed.

A records search was conducted by cultural resource specialists and no known archaeological sites exist within the APE (see also **Appendix Q**). Although the landscape through which the transit lines would pass is developed, additional archaeological sites may remain undiscovered within protected locations such as parks and gardens. Once the project design has been further refined and before the Final EIS is published, archaeological investigations will occur within areas of ground disturbance for the selected option to determine whether potential resources are present. These investigations will follow the guidelines issued by the State of Illinois.

4.7.4 Environmental Consequences

Section 106 regulations state that if there are historic properties in the APE that may be affected by a federal undertaking, the agency official will assess adverse effects, if any, in accordance with the Criteria of Adverse Effect described in 36 CFR § 800.5. As stated in the regulation, an adverse effect is found when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the NRHP in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association (36 CFR § 800.5(a)(1)). Effects can be direct, indirect, or cumulative (36 CFR § 800.5(a)(1)). The following sections summarize the potential effects on historic districts and properties that are eligible for NRHP listing. Effects are not separated into temporary construction and permanent categories because adverse effects on historic resources would be permanent regardless of whether they occur during or after construction of the project.

4.7.4.1 No Build Alternative

No adverse effects on historic and cultural resources would result from implementation of the No Build Alternative; therefore, no mitigation measures would be required.

4.7.4.2 Union Pacific Railroad Alternative - East Option

The East Option would cause displacements and visual, noise, and other environmental effects within the APE, but none of these effects would alter the characteristics that qualify any of the identified historic resources for inclusion on the NRHP. No mitigation measures would be required. Because none of the NRHP-eligible resources in the APE would be directly affected (they would not be displaced or altered), each resource was evaluated for potential visual effects from the aerial structure, stations, and parking facilities. **Table 4-18** summarizes the effects findings for each historic resource in the APE for both the East and West Options.

Table 4-18: NRHP-Eligible Resources in the Area of Potential Effects - Union Pacific Railroad Alternative East and West Options

ID	Description	Union Pacific Railroad Alternative East Option Effects Finding	Union Pacific Railroad Alternative West Option Effects Finding
1	Eclectic Neo-Traditional Home	No Historic Properties Affected	No Historic Properties Affected
2	Fire Department Engine Company 93	No Historic Properties Affected	No Historic Properties Affected
3	Roseland Pumping Station	No Adverse Effect	No Historic Properties Affected
4	Romanesque Revival-Style Church	No Historic Properties Affected	No Historic Properties Affected
5	Roseland Community Hospital Nurses Home	No Historic Properties Affected	No Historic Properties Affected
6	Former Venetian Hall	No Historic Properties Affected	No Historic Properties Affected
7	Altgeld Gardens Historic District	No Historic Properties Affected	No Historic Properties Affected

NRHP = National Register of Historic Places

Notes:

A “No Adverse Effect” determination is found when the project’s effects would not meet the criteria of adverse effect, the undertaking is modified, or conditions are imposed to avoid adverse effects, as described in **Appendix Q**.

A “No Historic Properties Affected” determination is found when the project would have no impact on a particular historic resource. This language is equivalent to the determination of “No Effect” as used in **Appendix Q**, but has been changed to be consistent with the official Section 106 determination documentation coordination with the SHPO.

Figure 4-25 is a photo simulation of the East Option track structure that would be adjacent to the Roseland Pumping Station. The track structure would be approximately 9 feet west of the Roseland Pumping Station at its nearest point. The final horizontal clearance would be determined in the design phase after property and topographic survey. The pumping station would not be displaced or directly affected by the UPRR Alternative; therefore, the East Option is anticipated to have no adverse effect. The resource was recommended eligible under Criterion C for its architecture as an excellent example of a well-preserved community pumping station designed in the Prairie Style that still functions in its original use. The building retains much of its original design, materials, and workmanship, including its projecting two-story flat-roofed entrance pavilion with geometric limestone details and coping. The proposed project would not affect these characteristics and would preserve the property’s entrance approach. The changes in setting and feeling brought on by the proposed project would not detract from the architectural aspects of the building that qualify the resource as eligible for NRHP listing. Pile-driving activities would be avoided in the vicinity of the pumping station.

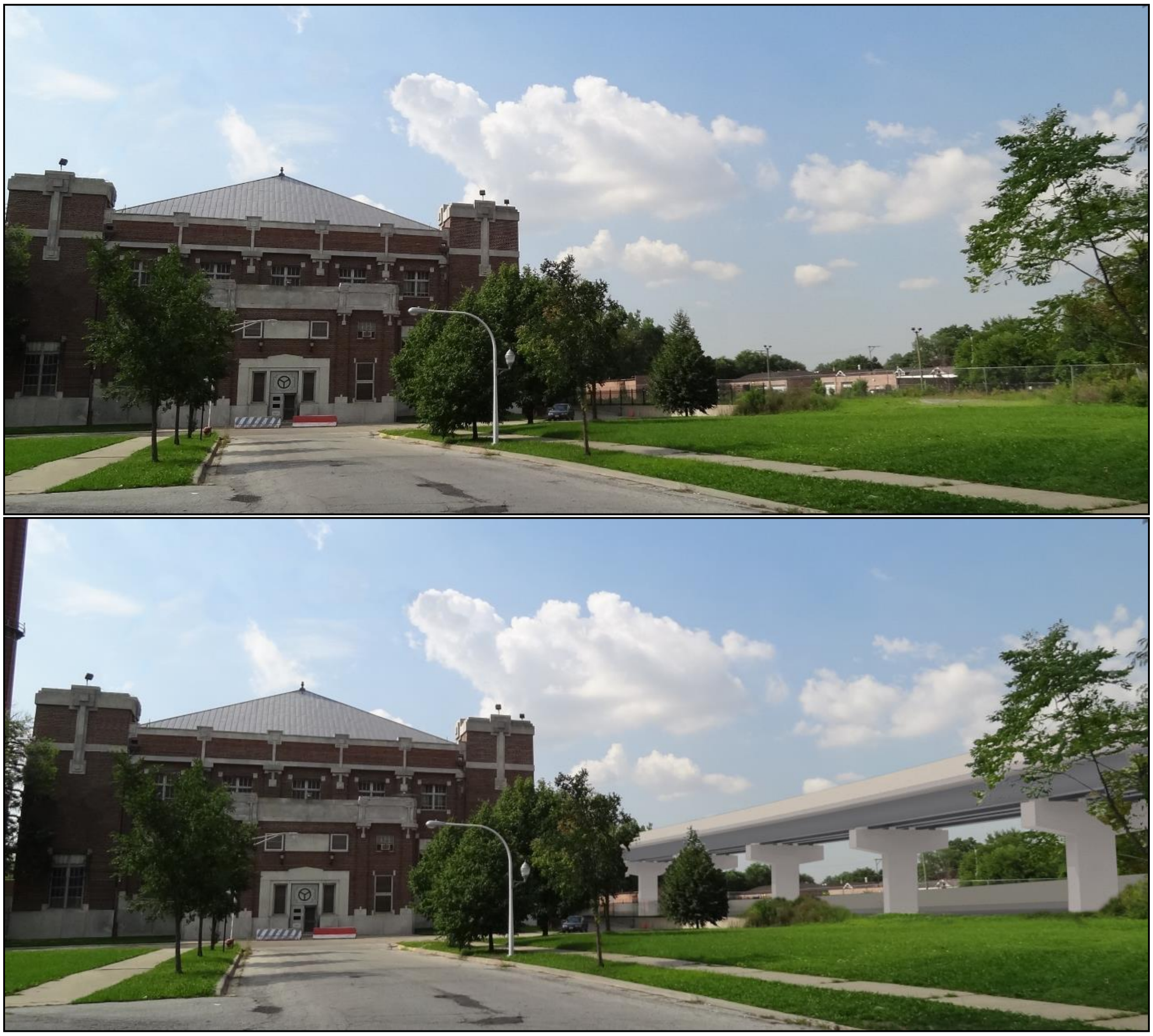


Figure 4-25: Photo of Existing Conditions and Photo Simulation of the Union Pacific Railroad Alternative East Option Elevated Track Structure adjacent to the Roseland Pumping Station, Facing South on Harvard Avenue

The 130th Street station would be approximately 800 feet from Altgeld Gardens Historic District at its closest point and the parking garage at the 130th Street station would be located at a distance away from Altgeld Gardens where the size of the structure would not create a visual impact; therefore, the 130th Street station and parking garage would not affect the Altgeld Gardens Historic District. **Figure 4-26** shows a view of the 130th Street station and parking structure from Altgeld Gardens.

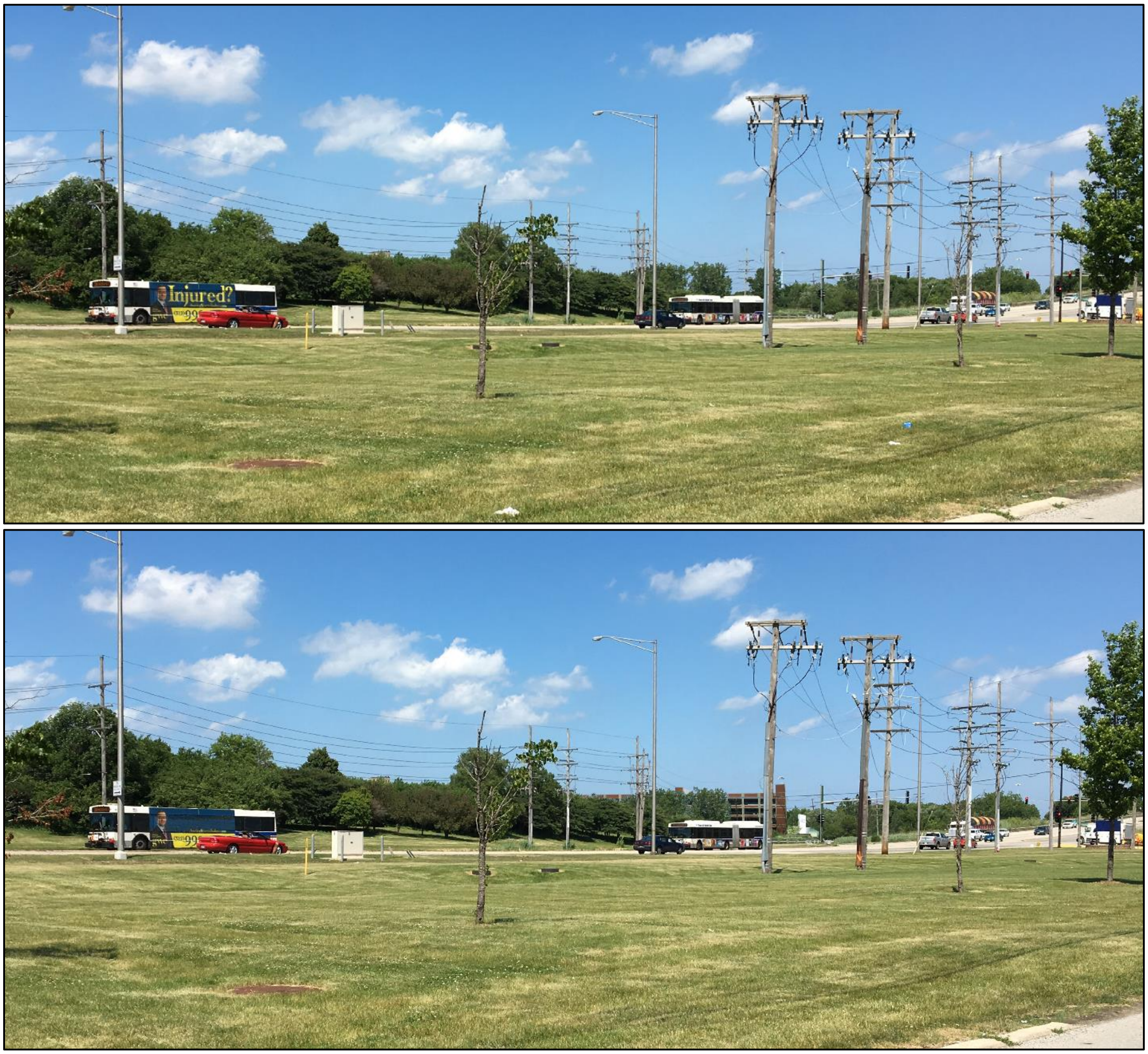


Figure 4-26: Photo of Existing Conditions and Photo Simulation of the 130th Street Station and Parking Garage, Facing Northeast on E. 130th Place

4.7.4.3 Union Pacific Railroad Alternative - West Option

Like the East Option, the West Option would cause displacements and visual, noise, and other environmental effects within the APE, but none of these effects would alter the characteristics that qualify any of the identified historic resources for inclusion on the NRHP. No mitigation measures would be required.

4.8 Hazardous Materials

This section summarizes the potential for encountering hazardous materials during operation and construction of the UPRR Alternative. Hazardous materials may include petroleum products, pesticides, organic compounds, heavy metals, asbestos-containing materials, lead-based paint, or other compounds that could harm human health or the environment (42 CFR § 9601). The nature and extent of contamination can vary widely. Early detection, evaluation, and determination of appropriate remediation of hazardous materials are essential to avoid or minimize the potential for hazardous material impacts from the project. The *Hazardous Materials Technical Memorandum* (**Appendix R**) contains additional details. **Table 4-19** summarizes the impact findings related to hazardous materials.

Table 4-19: Hazardous Materials - Impacts Summary

Alternative	Permanent Impacts	Construction Impact
No Build	No impacts	No impacts
Union Pacific Railroad - East Option	Benefits	No adverse impacts
Union Pacific Railroad - West Option	Benefits	No adverse impacts

4.8.1 Regulatory Framework/Methods

Although NEPA requires an evaluation of potential impacts related to hazardous materials, it does not define impact analysis thresholds for determining potential adverse impacts. For the purposes of this impact analysis, a hazardous material impact would be considered adverse if it would result in the following:

- Harm to human health or the environment through the routine transport, use, or disposal of hazardous materials
- Harm to human health or the environment through the accidental release of hazardous materials into the environment

Federal and state laws have been established for the protection of human health and the environment. At the federal level, the regulations include the following: the Resource Conservation and Recovery Act (RCRA) (40 CFR § 239–282); the Comprehensive Environmental Response, Compensation, and Liability Act (42 CFR § 9601); the Superfund Amendments and Reauthorization Act (42 CFR § 9601); the Clean Air Act (42 CFR § 7401); the Toxic Substances Control Act (15 USC § 2601); and the federal Occupational Safety and Health Act (29 USC § 651). At the state level, regulations and programs include the Illinois Environmental Protection Act and the Illinois Occupational Safety and Health Program, with oversight by the Office of the State Fire Marshal. Locally, the City of Chicago Police Department, City of Chicago Fire Department, and Department of Public Health regulate and oversee issues related to hazardous material.

A review of federal, state, and local regulatory databases was conducted by Environmental Data Resources, Inc. (EDR) to identify sites that currently or have historically handled, stored, transported, released, or disposed of hazardous or regulated materials, as these types of sites are potential sources of hazardous material contamination. In addition, historical Sanborn® fire insurance maps, topographic and aerial photographs, and other sources were reviewed for the analysis (EDR 2012a, Historical Information Gatherers, Inc. 2012a, 2012b, and 2012c).

Specific sites within ¼ mile of the project alignment, where hazardous materials are known or suspected to exist, were evaluated for the potential for hazardous materials to be present. Each site was assigned a level of concern based on the following criteria:

- **High Concern** - Sites with known/probable soil, groundwater, or soil gas contamination that have not been remediated, or where remediation was incomplete or undocumented. Other considerations include the type and mobility of any contamination, distance to the project, and groundwater impacts.

- **Moderate Concern** - Sites with known/potential soil, groundwater, or soil gas contamination and where remediation is in progress or was completed with restrictions in place, or contaminants do not appear to pose a concern for the project. Sites may also be considered a Moderate Concern based on the type and intensity of former land use (e.g., chemical manufacturers, machine shops, gas stations, laundromats), even though they did not otherwise have an environmental database listing.

- **Low Concern** - Sites where hazardous materials or petroleum products may have been or are stored, but where there is no known contamination associated with the property based on all available information. They may include hazardous material generator sites, sites with permitted air toxic emissions, or sites with spills or leaks that were subsequently remediated and are no longer a concern.

Polychlorinated biphenyls, lead-based paint, and asbestos-containing material are likely to occur in transformers and buildings constructed before 1978–1979. The evaluation of potential impacts associated with the other sources of hazardous materials was limited to determining whether transformers and buildings potentially constructed before 1978–1979 were present.

4.8.2 Existing Conditions

EDR conducted a search of federal, state, and local environmental regulatory databases on August 10, 2012 to identify potential sites of concern within ¼ mile of the project limits (EDR 2012b). Using the impact analysis criteria described above, CTA reviewed the sites identified by EDR and classified them as High, Moderate, or Low Concerns based on their potential to act as a source of contamination to the project. All sites not identified as High or Moderate Concern sites were classified as Low Concern sites. In addition, the list of orphan sites (sites reported as potentially being in the project area, but which could not be mapped due to inadequate or incomplete address information) was reviewed and when possible, classified. CTA used the historic research review and additional information requested from the Illinois Environmental Protection Agency (IEPA) on specific sites to determine the classification for each site.

The review identified 17 High Concern sites within ¼ mile of the East and West Option alignments (see **Table 4-20** and **Figure 4-27**). These sites have the highest potential to affect the RLE Project. The review also identified 18 Moderate Concern sites and 7 Low Concern sites near the alignment. Because it is unlikely that the Moderate and Low Concern sites would affect the RLE Project, they are not discussed here. **Appendix R** contains additional details about all identified sites.

Table 4-20: Identified High Concern Sites

EDR Site ID[1]	Map ID	EDR Database Site Name	Site Address	Approximate Separation Distance[2]	Databases[3]
8	8	Shell Oil Co.	4 E. 95th Street	250 feet (E and W)	LUST (No. 871758 Non-LUST deter.), UST (3 in use)
10	10	Abbott Park Fieldhouse	49 E. 95th Street	200 feet (E and W)	LUST (No. 932467 open; No. 932446 open), UST (removed), SPILLS[5]
51	51	Illinois Bell Telephone	413 W.105th Street	Adjacent (E); Within (W)	LUST (No. 880112 NFR), UST (3 removed)
70	70	William Ransom Transportation/ Bus Garage	352 W. 110th Street	Within (E); 110 feet (W)	LUST (No. 990399 open), UST (removed), SPILLS, RCRA-CESQG, ERNS
81	81a	Pentecostal Temple Church Of God	415 to 419 W. 111th Street	85 feet (E); 75 feet (W)	LUST (No. 912233 open; No. 913417 open), SPILLS, RCRA-SQG
103	103	Cox, Donna	2 W. 115th Street	175 feet (E); NA (W)	LUST (No. 980685 open; No. 201110008 open), UST (2 exempt), SPILLS
104	104	Triangle Transmission	35 W.115th Street	Within (E); 130 feet (W)	LUST (No. 992324 open), UST (2 exempt), SPILLS, RCRA-SQG
105	105	City of Chicago/ Abandoned Service Station	11500 S. Perry Avenue	160 feet (E); Within (W)	LUST (No. 20002342 non-LUST determination), UST (4 exempt)
122	122	Stuart Industrial Coatings, Inc.	11740 S. Front Street	Within (E and W)	LUST (No. 900054 open)
135	135	Lake Calumet Smelting	11901 S. Champlain Avenue	500 feet (E and W)	CERCLIS (referred to removal - NFRAP)
143	143	Bulkoa Inc./ Schneider Tank Lines, Clean Harbors Env. Services/ Bulkoa, Inc.	11861 S. Cottage Grove Avenue	290 feet (E and W)	LUST (No. 971905 NFR), UST (4 removed, 3 exempt), RCRA-CESQG
147	147a	Quala Services, LLC	803 E.120th Street	325 feet (E and W)	RCRA-LQG (violations), SPILLS
151, 162	151/ 162	Keywell, LLC	11900 Cottage Grove Avenue	Within (E and W)	LUST (No. 902351 NFR; No. 942202 non-LUST determination), UST (2 removed), SPILLS, RCRA-CESQG
200	200	MWRD Metropolitan Water Reclamation Di/Calumet Water Reclamation Plant	400 E.130th Street	Within (E and W)	UST (3 in use), RCRA-CESQG
Orphan[4]	O1	US Scrap	123rd Street and Cottage Grove Avenue	1,000 feet (E and W)	UST (3 in use), RCRA-CESQG

EDR Site ID[1]	Map ID	EDR Database Site Name	Site Address	Approximate Separation Distance[2]	Databases[3]
Orphan[4]	O3	Metro Sanitary District #3	125th Street and Doty Avenue	350 feet (E and W)	CERCLIS-NFRAP (archived)
Orphan[4]	O4	Penn Central Corp	810 E.124th Street	Within (E and W)	SSU (transferred to IEPA's Office of Site Evaluation)
		Lake Calumet Quad			CERCLIS-NFRAP (archived)

[1] Environmental Data Resources, Inc. (EDR) Site ID is the site ID number provided in the EDR database report included with the *Hazardous Materials Technical Memorandum*. More than one site has the same EDR Site ID; therefore, each High Concern site was given a unique “Map ID,” used in **Figure 4-27**.

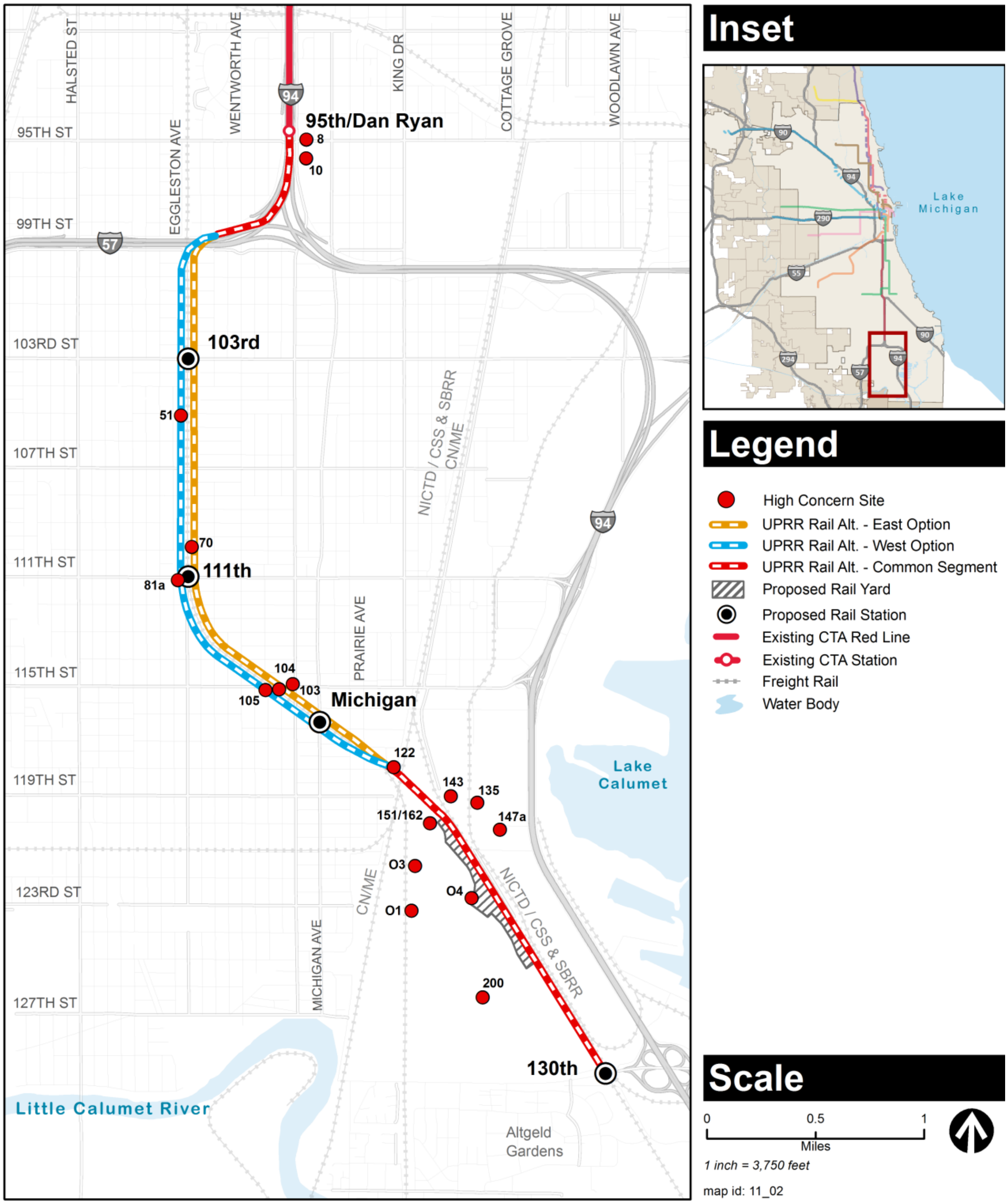
[2] Separation distance is measured from the edge of the permanent envelope for an alternative. "Within" means the site would be inside the permanent envelope. E=East Option, W=West Option, NA = High Concern classification is not applicable to that option.

[3] The databases listed are those that contributed information relevant to the site’s designation as a High Concern site. See the *Hazardous Materials Technical Memorandum* (**Appendix R** of this Draft EIS) for more information.

[4] Orphan sites are reported as potentially being in the project area but could not be mapped due to inadequate or incomplete address information.

CERCLIS = Comprehensive Environmental Response, Compensation and Liability Information System, CESQG = conditionally exempt small quantity generators, ERNS = Emergency Response Notification System, IEPA = Illinois Environmental Protection Agency, LQG = large quantity generator, LUST = leaking underground storage tank, NFR = No Further Remediation, NFRAP = No Further Remedial Action Planned, NPL = National Priority List, PRP = potentially responsible party, RCRA = Resource Conservation and Recovery Act, SPILLS = Spill Incident List, SQG = small quantity generator, SRP = Site Remediation Program, SSU = State Sites Unit, UST = underground storage tank

The majority of these sites were classified as High Concern due to both their proximity (typically inside or within 500 feet of an alternative’s permanent envelope) and being listed in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS), or being listed as RCRA Corrective Action Sites, CERCLIS-No Further Remedial Action Planned Sites (CERCLIS-NFRAP), Illinois State Sites Unit Listing (SSU) sites, and/or as open Leaking Underground Storage Tank (LUST) sites or Site Remediation Program (SRP) sites. Open LUST or SRP sites have not been issued a No Further Remediation (NFR) letter from the IEPA, which indicates that a release has been identified but remediation is likely not complete.


HALSTED ST
WENTWORTH AVE
KING DR
COTTAGE GROVE
WOODLAWN AVE
EGGLESTON AVE
95TH ST
99TH ST
103RD ST
107TH ST
111TH ST
115TH ST
119TH ST
123RD ST
127TH ST
94
57
95th/Dan Ryan
8
10
103rd
51
70
111th
81a
104
103
105
Michigan
122
143
135
151/162
147a
O3
O4
O1
200
130th
PRAIRIE AVE
MICHIGAN AVE
CN/ME
NICTD / CSS & SBRR
CN/ME
NICTD / CSS & SBRR
Lake Calumet
Little Calumet River
Altgeld Gardens
Inset
Lake Michigan
90
94
290
55
294
57
Legend
High Concern Site
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
UPRR Rail Alt. - Common Segment
Proposed Rail Yard
Proposed Rail Station
Existing CTA Red Line
Existing CTA Station
Freight Rail
Water Body
Scale
0
0.5
1
Miles
1 inch = 3,750 feet
map id: 11_02

CN/ME = Canadian National/Metra Electric District, NICTD/CSS & SBRR = Northern Indiana Commuter Transportation District/Chicago South Shore & South Bend Railroad

Figure 4-27: Identified Sites of Concern

4.8.3 Environmental Consequences

The following sections summarize the potential impacts of each alternative from hazardous materials.

4.8.3.1 No Build Alternative

No adverse construction or permanent impacts related to hazardous materials would occur as part of the No Build Alternative. Potential benefits of remediation associated with the UPRR Alternative would not occur with the No Build Alternative.

4.8.3.2 Union Pacific Railroad Alternative - East Option

Permanent Impacts

CTA identified six High Concern sites (Map IDs 70, 104, 122, 151/162, 200, and O4) within the permanent envelope of the East Option, three of which (Map IDs 151/162, 200, and O4) are within the proposed 120th Street yard and shop site. In addition, CTA identified nine High Concern sites (Map IDs 8, 10, 81a, 103, 135, 143, 147a, O1, and O3) within approximately 1,000 feet of the edge of the permanent envelope for the East Option. Although these nine High Concern sites are not within the permanent envelope, based on their designation and proximity to the permanent envelope they are identified as High Concern.

Implementation of the East or West Option would result in benefits through the cleanup and/or removal of contaminated material (soil, groundwater, and/or asbestos and lead-based paint particles) during construction. Without implementation of a project alternative, this cleanup and removal would occur either at a later date or not at all.

The project’s daily operations or maintenance activities that require earthmoving in contaminated areas would have the potential to result in permanent hazardous material impacts from accidental spills or hazardous material releases. Spills are most likely to occur during activities such as equipment and grounds maintenance. Materials typically used for these activities include fuel, oil, paints, solvents, cleaning agents, herbicides, and pesticides. Examples of maintenance that could require earthmoving include at-grade track repair, underground utility work, and foundation repairs, although these activities are not expected to occur within the first 10–20 years.

The East and West Options also have the potential for additional hazardous material impacts associated with the NICTD/CSS & SBRR. Due to the proximity of the NICTD/CSS & SBRR to the UPRR Alternative alignments, hazardous material spills or releases that occur along these railroads would have the potential to migrate and affect the UPRR Alternative project area. These materials potentially exist along the railroad currently, but the UPRR Alternative would bring transit vehicles closer to them. Spills along the NICTD/CSS & SBRR could occur from the use of chemicals for ground maintenance along the tracks. In addition, because these are freight lines, releases could occur from creosote used to preserve wood railroad ties; polynuclear aromatic compound deposition from diesel exhaust; asbestos dust from brakes; and previous releases of coal ash from engines. Freight lines might also transport hazardous material cargo, which could be released if there were a spill or accident. Releases from adjacent freight lines could affect transit passengers or operations. If adjacent freight lines have a release of hazardous materials, transit operations may need to be stopped to avoid traveling through the release area. First responders would follow the procedures and protocols for hazardous materials incidents established by the Hazardous Materials Unit of the City of Chicago Fire Department.

Impacts associated with the adjacent freight lines would be reduced by the freight lines' adherence to federal hazardous material transport regulations (49 CFR § 171–180) that among other things, specify requirements for the safe transportation of hazardous materials by rail and require rail carriers to conduct a security and safety risk analysis, to develop a security and safety risk plan that includes measures to mitigate risk to population centers, and to select the safest route.

The East Option would not have permanent adverse impacts related to hazardous materials.

Mitigation - Although there would be no permanent adverse impacts related to hazardous materials as part of the East Option, CTA would adhere to all applicable federal, state, and local regulations, as well as existing system-wide hazardous material usage, storage, and disposal plans and procedures, further minimizing the potential for hazardous material impacts.

Construction Impacts

Construction of the East or West Option would include subsurface excavation, which would result in the generation of a large quantity of soil that could contain contaminated materials requiring off-site disposal. The source of the contaminated materials could be sites identified in the database, through the historic records review, or from the presence of urban fill. Hazardous materials typically used during construction, such as paints, solvents, fuels, and hydraulic fluids, could also be released accidentally during construction. In addition, there is the potential for encountering contaminated groundwater during construction.

Construction may require the demolition of existing structures that were likely constructed before 1978–1979. These structures may contain asbestos-containing material and lead-based paint that could result in a release of asbestos fibers and lead dust during construction.

The East Option would include construction within the UPRR corridor, which is potentially already affected because of its historic long-term use as a railroad corridor. Maintenance and operation of railroad corridors typically include the use of fuel, oil, paints, herbicides, pesticides, creosote, polynuclear aromatic hydrocarbons, and coal. High and Moderate Concern sites are the greatest potential sources of hazardous material impacts. There would be adverse construction-related impacts associated with the East Option but the impacts would be mitigated by implementing the BMPs and standard practices discussed below.

Mitigation - CTA would follow federal, state, and local laws and regulations regarding hazardous materials before and during construction. The following BMPs, at a minimum, would be implemented before and during construction to avoid and minimize the potential for impacts before and during construction:

- Phase I Environmental Site Assessments (ESAs) would be conducted of any property to be purchased as part of the selected option to identify recognized environmental conditions and assess and limit environmental liability. Phase I ESAs would be completed to evaluate the presence of contamination and to develop appropriate measures to deal with hazardous materials during construction. Based on the Phase I ESA findings, a Phase II ESA (or focused site assessment) could also be required before purchasing a property.

- Focused site assessments would be required for areas where earthmoving activities would occur and on properties purchased for the project. The assessments would include characterization and evaluation of the potential for encountering hazardous materials and contaminated soils.
- Asbestos, lead-based paint, and hazardous material surveys of buildings or structures would be required before reconstruction or demolition, to identify any asbestos, lead-based paint particles, and hazardous materials, such as polychlorinated biphenyl or mercury-containing equipment. Any asbestos, lead-based paint, and hazardous materials identified would be abated and disposed of in accordance with federal, state, and local regulations. Removal, abatement, and disposal of these materials will be completed by specialists that are trained and certified to conduct such activities.

The following specific and required plans would be developed before construction to further minimize or avoid the potential for hazardous material impacts:

- A Contaminated Material Management Plan that provides the procedures for identifying, characterizing, managing, storing, and disposing of contaminated soil and groundwater encountered during construction activities would be required. The plan would comply with all applicable federal and state cleanup standards and would cover the entire project area, as it is assumed that all material has at least some level of contamination associated with it.
- Spill Control and Prevention Plans to address the use, storage, and disposal of materials such as asphalt, fuel, paint, solvents, and cleaning agents would be required. The Spill Control and Prevention Plans would provide BMPs to limit the potential for accidental releases of potentially hazardous materials.
- Construction Stormwater Pollution Control Plans, which describe methods to prevent or minimize stormwater runoff from encountering contaminated soil or other hazardous materials, would be required.
- Health and Safety Plans for construction activities would be developed by the contractors and approved by CTA before starting any work. The Health and Safety Plans would identify potential contaminants of concern, required personal protective equipment and procedures, and emergency response procedures.

Construction-related impacts would not be adverse after the implementation of the BMPs and standard practices.

Impacts Remaining After Mitigation

After these BMPs and standard practices are implemented, the East Option would not have permanent or construction-related adverse impacts due to hazardous materials. Implementation of the East Option could also result in benefits through the cleanup and/or removal of contaminated material during construction.

4.8.3.3 Union Pacific Railroad Alternative - West Option

Permanent Impacts

Permanent impacts related to the West Option would be similar to those of the East Option with the exception that the West Option would operate adjacent to and west of the UPRR freight railroad. CTA identified six High Concern sites (Map IDs 51, 105, 122, 151/162, 200, and O4) within the permanent envelope of the West Option, three of which (Map IDs 151/162, 200, and O4) are within the proposed 120th Street yard and shop site. In addition, CTA identified nine High Concern sites (Map IDs 8, 10, 81a, 103, 135, 143, 147a, O1, and O3) within approximately 1,000 feet of the edge of the permanent envelope for the West Option. Although these nine High Concern sites are not within the permanent envelope, based on their designation and proximity to the permanent envelope they are identified as High Concern.

Due to the proximity of the UPRR and NICTD/CSS & SBRR to the UPRR Alternative alignments, hazardous material spills or releases that occur along these railroads would have the potential to migrate and affect the UPRR Alternative alignment, as described above for the East Option. These materials potentially exist along the railroad currently, but the UPRR Alternative would bring transit vehicles closer to them.

There would be no permanent adverse impacts associated with the West Option related to hazardous materials.

Construction Impacts

Construction-related impacts associated with the West Option would be the same as those described for the East Option. Construction-related impacts would not be adverse after the implementation of the BMPs and standard practices.

Impacts Remaining After Mitigation

After the BMPs and standard practices discussed in **Section 4.8.3.2** are implemented, the West Option would not have permanent or construction-related adverse impacts due to hazardous materials. Implementation of the West Option could also result in benefits through the cleanup and/or removal of contaminated material during construction.

4.9 Wetlands

This section describes the impacts of the East and West Options on potential wetlands. The *Water Resources Technical Memorandum* (**Appendix S**) includes additional details, along with the wetland delineation report. **Table 4-21** summarizes the impacts on potential wetlands.

Table 4-21: Wetlands - Impacts Summary

Alternative	Permanent Impacts	Construction Impacts
No Build	No impacts	No impacts
Union Pacific Railroad - East Option	Impacts would be mitigated through compensatory mitigation, if required.	Impacts would be mitigated through compensatory mitigation, if required.
Union Pacific Railroad - West Option	Impacts would be mitigated through compensatory mitigation, if required.	Impacts would be mitigated through compensatory mitigation, if required.

4.9.1 Regulatory Framework/Methods

Executive Order 11990 directs federal agencies to minimize the destruction, loss, or degradation of wetlands. It also assures the protection, preservation, and enhancement of the nation's wetlands to the fullest extent practicable during the planning, construction, funding, and operation of transportation facilities and projects.

The Illinois Interagency Wetlands Policy Act of 1989 (the Act [20 ILCS § 830 et seq.]) is intended to ensure that there is no overall net loss of Illinois' existing wetland acres or their functional values resulting from State-supported activities. The Act charges State agencies with a further duty to "preserve, enhance, and create wetlands where necessary to increase the quality and quantity of the State's wetland resource base." The Act uses the same definition for wetlands as in the 1987 U.S. Army Corps of Engineers (USACE) *Wetland Delineation Manual* used by federal agencies in implementation of the federal Clean Water Act. All three parameters (hydric [wet] soils, hydrophytic [growing in water] vegetation, and wetland hydrology) are required for a location to be considered a wetland; however, areas that have been restored or created as the result of mitigation or planned construction projects, and that function as wetlands, are also defined as wetlands under the Act even when all three wetland parameters are not yet present.

For this Draft EIS, an impact would be adverse if it would cause the destruction, loss, or degradation of wetlands, including any net loss of their functional values; or cause any discharges of dredged or fill material into wetlands.

CTA reviewed existing data sources to evaluate potential impacts on wetlands. Wetland data was obtained from the U.S. Fish and Wildlife Service National Wetlands Inventory (NWI). The NWI data is very general and is intended to give the user reconnaissance-level information. Several areas identified by NWI as wetlands in the project area were not deemed wetlands after the field review. To help locate wetland sites that may have been missed by the NWI, CTA used the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Web Soil Survey website, where available, to locate areas of potentially hydric soils. CTA also reviewed the Illinois Ecological Compliance Assessment Tool (EcoCAT) to identify resources mapped by Illinois Department of Natural Resources (IDNR).

CTA conducted a general field reconnaissance on August 8, 2012 to identify the potential presence and condition of wetlands within the project area. This reconnaissance-level wetland assessment confirmed the presence of potential wetland areas, and the potential extent was estimated from aerial photographs.

CTA contacted USACE in October 2012 for additional information about the wetlands in the vicinity of Lake Calumet. Many areas around Lake Calumet are highly disturbed and wetland delineation is difficult. USACE acknowledged that in many areas the soils are disturbed or imported and may not exhibit typical wetland characteristics. In these situations, USACE often relies on vegetation and hydrology as wetland indicators.

CTA conducted a field reconnaissance of the entire project area and identified potential wetlands in only the areas near the 130th Street station and the 120th Street yard and shop. CTA then completed a wetland delineation of the areas identified as containing potential wetlands and applied the general procedures detailed in the 1987 USACE *Wetland Delineation Manual* and the

2010 *Regional Supplement-Midwest Region*. Data collected included information on soils, hydrology, and vegetation. Surveys were conducted in August 2015, during the growing season, and vegetative species were identified.

During the wetland delineation, these areas were inspected, and data was collected on plant species and hydrology to identify wetland boundaries. In most cases in these areas, the existing gravel and fill precluded investigation of the soil profile; therefore, wetland delineations were based primarily on the presence of wetland vegetation and hydrology. The wetland delineation identified areas that meet the USACE criteria for wetlands.

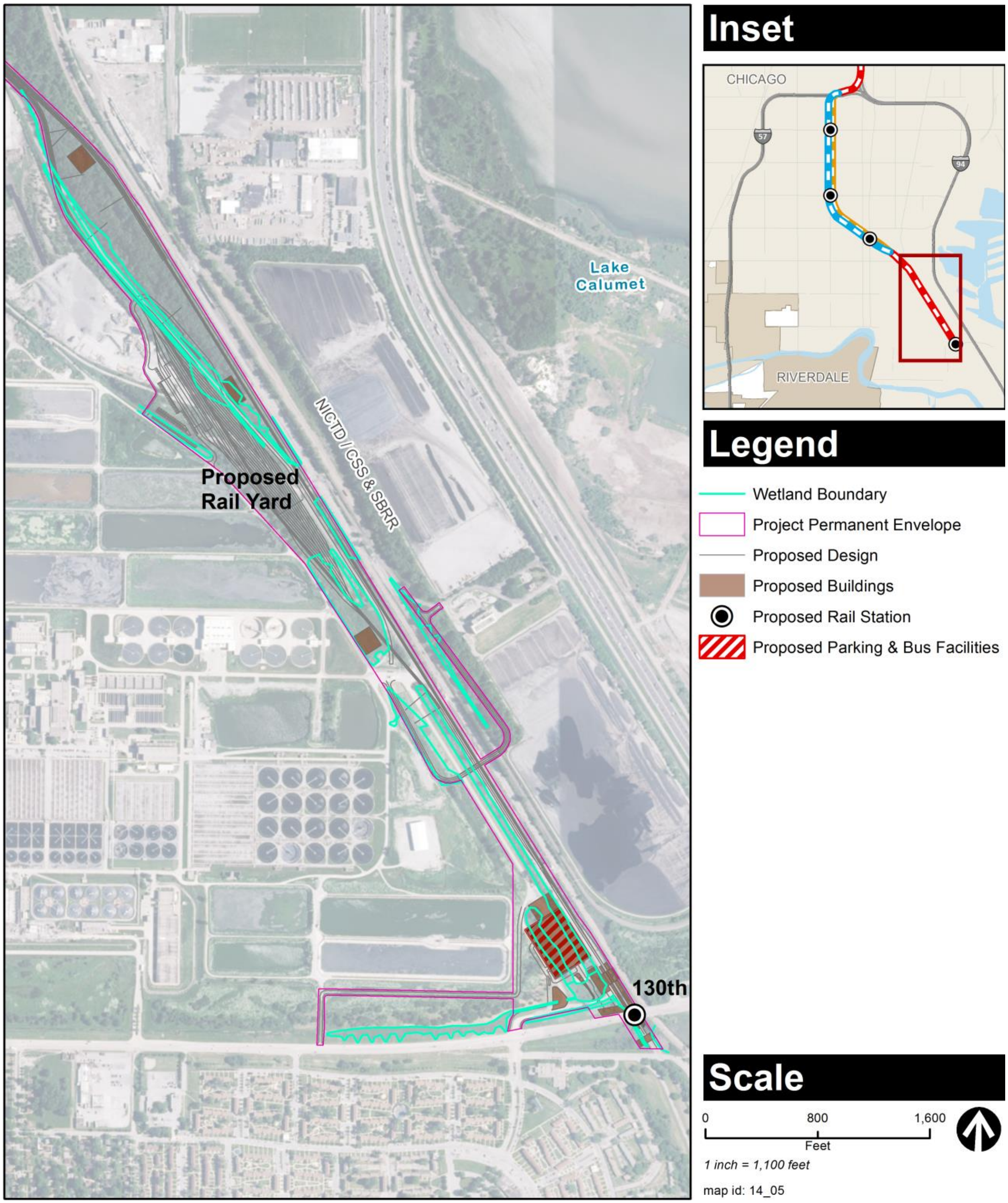
A native vegetative quality rating was calculated for each wetland using the Floristic Quality Assessment (FQA) method (Swink and Wilhelm 1994). The FQA method calculates an index of the native vegetative quality for an area with higher values assigned to areas that support a greater preponderance of native plant species. Areas that are vegetated predominantly with nonnative or invasive species get a lower FQA value even though they may still meet the definition of a wetland.

The NEPA analysis would support the permit application and review in compliance with wetlands regulations as appropriate. Wetland delineations are generally only valid for 5 years because environmental conditions may change. If more than 5 years have lapsed at the time of permit application submittal, the wetland delineation would be reconfirmed concurrent with final design. In addition, wetland regulations at the federal, state, and local levels may change and some wetlands that may be considered isolated or part of a drainage system may or may not be regulated at the time of final design. Permit requirements would include the provision of compensatory mitigation if regulated wetlands would be affected. CTA will coordinate with the local USACE district. The analysis presented here and in the *Water Resources Technical Memorandum* (**Appendix S**) identifies potential wetland impacts; actual impacts would likely be smaller because additional measures to avoid impacts would be applied in final design. Design elements such as steeper side slopes on areas that need to be filled can often be applied during final design to reduce potential wetland impacts. Because the magnitude of these reductions cannot be predicted at this stage of design, the entire wetland area within the project footprint is assumed to be potentially affected.

Compensatory mitigation is required under the 2008 Clean Water Act Section 404 Final Compensatory Mitigation Rule for wetland impacts and is intended to replace lost aquatic resource functions and area with the goal of “no net loss” of wetlands (U.S. Environmental Protection Agency [USEPA] 2008). Compensatory mitigation should take place on public or private land at or adjacent to the impact site or at another location generally within the same watershed where it is most likely to replace lost functions.

4.9.2 Existing Conditions

Based on the results of the wetland delineation, CTA identified 15 wetland areas totaling 15.34 acres of potentially affected wetlands at the site of the 130th Street station and the 120th Street yard and shop, shown in **Figure 4-28** (see also **Appendix S**, *Water Resources Technical Memorandum*, for more detailed mapping of potential wetland impacts).


Proposed Rail Yard
NICTD / CSS & SBRR
Lake Calumet
130th
Inset
CHICAGO
RIVERDALE
57
94
Legend
Wetland Boundary
Project Permanent Envelope
Proposed Design
Proposed Buildings
Proposed Rail Station
Proposed Parking & Bus Facilities
Scale
0
800
1,600
Feet
1 inch = 1,100 feet
map id: 14_05

CN/ME = Canadian National/Metra Electric District, NICTD/CSS & SBRR = Northern Indiana Commuter Transportation District/Chicago South Shore & South Bend Railroad

Figure 4-28: Wetland Delineation Map

The soils and topography near the site of the proposed 130th Street station and 120th Street yard and shop appear to be highly disturbed and likely include material imported from other locations. Railroad ties and potential slag were identified throughout the area. The compacted soils prevented the investigation of soil profiles or the identification of hydric soil characteristics; therefore, the wetland delineation was based primarily on the presence of wetland vegetation and hydrology in this disturbed area.

The area surveyed has flat topography; there were no obvious drainages and there were depressions with some standing water. The flat topography, combined with the highly compacted soils, likely holds water at the surface for the required two weeks in the spring growing season, leading to the preponderance of wetland vegetation observed. Wetland hydrology indicators observed included standing water or soil saturation in the root zone (in August 2015), sediment deposits, sparsely vegetated concave surfaces, water marks, algal mat or crust, water-stained leaves, and drainage patterns.

All wetland areas identified throughout this area are of low floristic quality and wetland function. Most of the wetlands are dominated by common reed (*Phragmities australis*), often in dense monotypic stands. There are no High Quality Aquatic Resources in the project area or mapped on adjacent properties. Fill and other manmade features define most of the wetland boundaries. On June 2, 2016, FTA and CTA requested a jurisdictional determination from USACE to determine whether the wetlands are jurisdictional under the Clean Water Act or are isolated wetlands of Cook County. Coordination with USACE is ongoing. Wetland boundaries will be reconfirmed at the time of the permit application, concurrent with final design.

4.9.3 Environmental Consequences

The following sections summarize the potential impacts of each alternative on wetlands.

4.9.3.1 No Build Alternative

There would be no permanent or construction impacts on wetlands as a result of the No Build Alternative.

4.9.3.2 Union Pacific Railroad Alternative - East Option

Permanent Impacts

The East Option could affect up to 15.34 acres of wetlands at the 120th Street yard and shop site and the 130th Street station site. The precise quantity of wetlands potentially affected would be reconfirmed based on the actual footprint to be determined in final design.

Mitigation - If there are jurisdictional wetlands and they cannot be avoided, CTA would provide compensatory mitigation. After compensatory mitigation, there would be no adverse permanent impacts on potential wetlands. The preference for compensatory mitigation would be to purchase credits from a mitigation bank or to participate in a USACE-approved in-lieu fee program. Approved mitigation banks would be reviewed at the time of final design to identify ones that include the project area in their service areas and which have available credits. If there are no suitable mitigation banks or in-lieu fee programs available, then compensatory mitigation would be provided through a mitigation project sponsored by CTA. CTA-sponsored compensatory mitigation would take place on public or private land at or near the impact site or at another location generally within the same watershed where it is most likely to replace lost functions. There are several areas associated with the Little Calumet River that appear to have been disturbed or filled by past industrial activities that could be restored as compensatory mitigation.

Impacts on wetlands would be mitigated through implementation of any of the potential compensatory mitigation measures discussed above.

Construction Impacts

Compensatory mitigation would be needed for construction-related, temporary impacts on wetlands. Construction staging areas would be sited outside of wetlands as much as possible, but if there were any temporary impacts, those areas would be restored as wetlands after construction.

Impacts Remaining After Mitigation

Impacts on wetlands would be mitigated through implementation of any of the potential compensatory mitigation measures discussed above.

4.9.3.3 Union Pacific Railroad Alternative - West Option

Permanent and construction impacts on potential wetlands, and associated mitigation, from the West Option would be the same as with the East Option because the potential wetlands would be within the common segment of the UPRR Alternatives; see the East Option **Section 4.9.3.2**.

Chapter 5
Indirect and Cumulative Impacts

While the other chapters of this Draft EIS provide analysis and findings on direct impacts of the project, NEPA also requires the consideration of the potential indirect and cumulative impacts of federally funded projects.

5.1 Regulatory Framework/Methods

Indirect impacts, also known as secondary impacts, are defined under 40 CFR § 1508.8. As defined, indirect impacts are caused by the project or plan, but are separated from direct impacts by time and/or distance (yet still in the foreseeable future). Indirect impacts include induced growth and related environmental impacts, such as changes to land use patterns, population density or growth rates, and related impacts on air quality, water and other natural systems. Cumulative impacts are defined under 40 CFR § 1508.7 as the aggregate result of the incremental direct and indirect effects of a project or plan, the effects of past and present actions, and impacts of reasonably foreseeable future actions by others on resources of concern.

CTA used the following guidance documents in determining the potential for indirect and cumulative impacts:

- *Consideration of Cumulative Impacts in EPA Review of NEPA Documents* (USEPA 1999)
- *Considering Cumulative Effects Under the National Environmental Policy Act* (Council on Environmental Quality [CEQ] 1997)
- *Guidance on the Consideration of Past Actions in Cumulative Effects Analysis* (CEQ 2005)
- *National Cooperative Highway Research Program (NCHRP) Report 466 - Desk Reference for Estimating the Indirect Effects of Proposed Transportation Projects* (Transportation Research Board 2002)

To determine the potential indirect impacts of this project, CTA followed the eight-step method described in the NCHRP Report 466. The project area boundary for the analysis was based on all proposed elements of the project, including construction limits and proposed property acquisitions. For the analysis, CTA reviewed the findings from the environmental resource analyses to properly evaluate the potential for indirect impacts on land use, transportation, and economic development plans and goals, as well as to identify notable or sensitive resources such as community facilities, historic resources, and other vulnerable or unique resources. The potential for and impacts of induced growth that could result from this project were then determined through a qualitative assessment of changes in growth and development expected as a result of the increases in transit accessibility from the project. Based on these factors, a determination was made on the potential and magnitude of impacts that could result from the project and whether those impacts would be consistent with surrounding growth, trends, and goals within the project area.

To identify the potential for cumulative impacts, CTA followed the 11-step method identified in CEQ guidance to meet best practice methods for conducting this type of analysis. Areas within ½ mile of the project corridor (consistent with other analyses conducted for this Draft EIS) were used to evaluate the potential for indirect effects. CTA reviewed applicable current and future regional and local plans.

5.2 Existing Conditions

The project area encompasses a diverse mix of land uses including residential, commercial, and light industrial as described in **Chapters 2, 3, and 4**.

Reasonably foreseeable projects include projects identified in *GO TO 2040*, the TIP, and known private development and redevelopment projects in the project area. The *Cumulative Impacts Technical Memorandum* (**Appendix T**) presents a list of projects in the project area and analyzes the potential cumulative impacts in more detail. CTA reviewed the FY 2014–2019 TIP database to determine whether any new projects would have the potential for cumulative impacts, as those projects were not included in the *Cumulative Impacts Technical Memorandum*. None of the FY 2014–2019 TIP projects would have the potential to have cumulative impacts with the RLE Project.

The specific projects discussed in this section have the potential for cumulative impacts when considered with the RLE Project. The projects that were considered were within the general RLE Project area, anticipated to be completed before the start of RLE Project construction in 2022, or that may be under construction during the RLE Project's proposed construction period of 2022–2026. Projects identified in *GO TO 2040* were also considered. The analysis was based on known projects from information available from CTA, the City of Chicago, CMAP, the Chicago Region Environmental and Transportation Efficiency Program (CREATE), IDOT, the Illinois State Toll Highway Authority, Metra, and NICTD.

Past, present, and reasonably foreseeable future actions within the project area that have the potential for benefits or impacts include the following:

- The CREATE 75th Street Corridor Improvement Project would provide improvements in the UPRR corridor. CREATE would increase freight volumes by its forecasted 2029 build year. Full implementation of CREATE would increase the number of passenger and freight trains using the UPRR tracks by 21 trains per day. CREATE projections include an increase in passenger trains from two to four trains per day by 2029 within the UPRR corridor.

- Metra's Southeast Service (SES) expansion project consists of 33.2 miles of proposed rail line from LaSalle Street station to a terminal near Balmoral Park. The rail line would run along the following four existing railroad rights-of-way: joint UPRR/CSX Transportation freight corridor from Balmoral Park to Dolton junction, UPRR from Dolton junction to Oakdale junction, Chicago Rail Link from Oakdale junction to Gresham interlocking, and Metra Rock Island District from Gresham interlocking to LaSalle Street station. Ten new stations and additional service at three existing stations (existing Rock Island District stations) are proposed. The SES would, if implemented, run along the UPRR tracks adjacent to the East or West Option alignment.

- NICTD is studying the West Lake Corridor Project, an approximately 9-mile alignment that would extend the NICTD South Shore Line from Dyer, Indiana to Hammond, Indiana. The project would connect with the existing NICTD South Shore Line and the ME Line, providing new transit service between Dyer and Millennium station in downtown Chicago. The West Lake Corridor Project alignment would run through the east side of the RLE Project area.

- The Red and Purple Modernization (RPM) Program is a series of proposed improvements to the North Red Line (from just north of Belmont station to the northern terminus of the Red Line at Howard station) and the Purple Line (from just north of Belmont station to Linden station). These improvements would increase passenger capacity and modernize transit stations, track systems, and structures along the 9.6-mile RPM corridor from just north of Belmont station to the northern terminus at Linden station, passing through the Lakeview, Uptown, Edgewater, and Rogers Park community areas of Chicago, the City of Evanston, and the Village of Wilmette.

- The Crown Commercial Real Estate & Development - Roseland Plaza redevelopment would be adjacent to the Michigan Avenue station location. The proposal includes a strip mall within a 91,000-square-foot property with 250 parking spaces. There would be 49,000 square feet of commercial space, which would include a grocery store, pharmacy, clothing store, and a bank. The City's Community Development Commission designated the developer in February 2005. The City approved the sale of its land and land write-down costs in May 2009. The developer modified its proposal and received approval of its Planned Development application from the Chicago Plan Commission in October 2011.

- The Pullman Historic District was declared a National Monument on February 19, 2015. The park is on the east side of the RLE Project area. The designation as a National Monument under the National Park Service is expected to bring economic opportunities to the surrounding communities.

5.3 Environmental Consequences

5.3.1 No Build Alternative

The No Build Alternative is defined as the existing transportation system plus any committed transportation improvements that are already in the FY 2014–2019 TIP. TIP projects consist of several road improvement projects including resurfacing and coordination of signal timing, work on Metra's ME district facilities to replace catenary lines, construction of a bicycle/pedestrian multi-use trail south of the project area, and preservation of historic facilities.

Indirect Impacts

The lack of improved transportation options and lack of new infrastructure would do little to reverse the disinvestment in the project area that has occurred over the past several decades.

Cumulative Impacts

The RPM Program, West Lake Corridor Project, and SES line are reasonably foreseeable actions that would result in beneficial air quality impacts because they would increase ridership, which would reduce trips made by vehicles. The cumulative impacts would result in a reduction of air emissions and would be beneficial. The air quality benefits of the No Build Alternative would be smaller in scale than for the East or West Option.

5.3.2 Union Pacific Railroad Alternative - East Option

Indirect Impacts

Implementation of the East Option would have the potential for indirect benefits to the project area economy. There would be potential for redevelopment from new employment accessibility, attraction of new development near RLE stations, and overall livability improvements. The private sector would likely perceive the East Option as a public-sector commitment to improve the overall project area and regain confidence in the area's economic development market. The retail and commercial space on the ground floor of the Michigan Avenue station's park & ride facility, combined with the proposed Roseland Plaza north of the station site, would help prompt greater social activity in the neighborhood and enhance the station's role as a focal point of community activity and services. The station and retail improvements may contribute to a southward expansion of the current commercial and entertainment district along Michigan Avenue between 111th and 113th Streets.

Cumulative Impacts

The CREATE 75th Street Corridor Improvement Project would provide improvements in the UPRR corridor. CREATE would increase freight volumes substantially by its forecasted 2029 build year. Because the UPRR freight traffic would remain and is projected to increase under the East Option, freight trains would have potential safety and accessibility impacts on pedestrian and vehicular traffic. The addition of more vehicular and pedestrian traffic accessing the proposed stations would increase the potential for safety and accessibility impacts near the proposed stations. Freight traffic could affect travel times for bus service to the station and could increase delays for passengers who choose to use the park & ride facilities. If the frequency of freight trains increases, the amount of time that the gates are down to accommodate the freight train movements would also increase, and vehicular traffic could be delayed while waiting for the trains to pass.

In addition to the expected increase in automobile and pedestrian traffic volumes as a result of the RLE Project when compared to the No Build Alternative, the full implementation of CREATE would increase the number of trains using the UPRR tracks from 27 to 48 per day (train volumes include both freight and passenger trains). The proposed Metra SES Project, if implemented, could also increase the number of passenger trains per day on the line beyond the existing two Amtrak trains per day. The increase in train volumes could correlate to an increase in potential crash frequency at highway-rail grade crossings. This increase in crash potential would be an adverse impact at the existing highway-rail grade crossings along the UPRR tracks at 101st Street, 103rd Street, 107th Street, 109th Street, 111th Street, Wentworth Avenue, 115th Street, and State Street. All of these crossings currently have gates on both roadway approaches and have flashing lights. Crash potential could be further mitigated by installing safety protection technologies for vehicles to prevent drivers from going around the gates. If warranted by an engineering traffic study, CTA may install traffic signals to mitigate pedestrian safety impacts. To further mitigate impacts and improve pedestrian safety, CTA would consider installation of security surveillance cameras, alarm notifications (e.g., flashing blue lights), sidewalk lighting in the immediate vicinity of station entrances, pedestrian crossing treatments, such as refuge medians with appropriate signage, and police patrols. To mitigate adverse safety impacts at the roadway-railroad grade crossings, CTA would install safety cameras and would consider installing additional passive or active safety devices to enhance the safety devices that are already in place at the existing grade crossings. Additional audible warning devices or non-mountable curbs are examples of other safety measures for at-grade railroad crossings. CTA would install fencing to deter pedestrians from crossing the freight railroad tracks in places other than the designated locations.

The West Lake Corridor Project would run through the east side of the RLE Project area and might accommodate a future connection between the NICTD South Shore Line and the Red Line near the 130th Street station. The combination of the RLE Project and the West Lake Corridor Project would provide additional transit options for people commuting to downtown Chicago.

The RPM Program, West Lake Corridor Project, and SES line are reasonably foreseeable actions that would result in beneficial air quality impacts because they would increase ridership, which would reduce trips made by automobiles. The cumulative impacts with the implementation of the East Option would result in a reduction of air emissions and would be beneficial.

The permanent cumulative impacts of these projects would be beneficial to the surrounding communities because they would improve access to jobs, places of interest, and residences. The potential for an increase in crash frequencies at the at-grade crossings would be mitigated by installing additional grade crossing protection that would prevent vehicles and pedestrians from going around the crossing gates. CTA anticipates the incremental impact from reasonably foreseeable future actions to be more efficient mobility and access to jobs, retail, and places of interest within the project corridor for Chicago residents and visitors. CTA expects that over a period of time retail establishments and places of interest would benefit from the more efficient access to their locations.

5.3.3 Union Pacific Railroad Alternative - West Option

Indirect Impacts

The indirect impacts under the West Option would be the same as those described for the East Option.

Cumulative Impacts

Cumulative impacts with the West Option would be similar to those of the East Option; however, it is anticipated that vehicular and pedestrian impacts would be fewer than with the East Option based on the locations of the park & ride facilities in relation to the proposed station areas.

Chapter 6
Resources with Limited or No Adverse Impacts

This chapter describes the environmental resource categories for which the RLE Project would have limited or no adverse impacts. Based on the nature of these resource areas, impacts would be similar for both the East and West Options and are therefore discussed together.

Section 6.1 Air Quality
Section 6.2 Water Quality
Section 6.3 Floodplains
Section 6.4 Vegetation and Wildlife Habitat
Section 6.5 Threatened and Endangered Species
Section 6.6 Geology and Soils
Section 6.7 Energy

6.1 Air Quality

Under authority of the Clean Air Act (42 USC § 7401) and its amendments, the USEPA has established National Ambient Air Quality Standards (NAAQS) for criteria pollutants to protect the public health and welfare. The IEPA maintains a statewide network of monitoring stations that continuously measure pollutant concentrations in the ambient air. These stations provide data to assess compliance with the NAAQS and the Illinois Ambient Air Quality Standards (IAAQS) and to evaluate the effectiveness of pollution control strategies. The maximum ambient concentrations for these pollutants were measured at representative monitoring stations nearest the project corridor for calendar year 2011. Except for one exceedance of the 8-hour ozone (O_3) at the Lawndale Street station, there were no exceedances in the project area of any of the NAAQS or IAAQS in 2011.

Because the RLE Project is in a "Moderate" O_3 nonattainment area, it is FTA's responsibility, as the federal funding agency, to ensure that the proposed project conforms to the Illinois State Implementation Plan. Conformity is demonstrated by showing that the proposed project is included in a conforming Regional Transportation Plan and a TIP. The RLE Project is included in a conforming Regional Transportation Plan, CMAP's *GO TO 2040*, and a corridor-wide emissions inventory analysis. It is therefore not necessary to demonstrate transportation conformity at the regional level. An air quality assessment of the localized air quality impact of the UPRR Alternative was completed because the project is adding new service that could change local vehicle miles traveled[7] (VMT) and emissions.

Because nearly all of the project-related air pollutant emissions would come from motor vehicles and because the project-related motor vehicles would move throughout the entire project area, the results of the air quality analysis apply equally to the East and West Options, as well as to the 120th Street yard and shop. That is, it makes no difference in the analysis whether the Red Line trains would be on the east side or on the west side of the UPRR right-of-way; the pollutant emissions would be the same in each case. In addition, the air pollutant emissions associated with the 120th Street yard and shop would not be substantial. The UPRR Alternative, both East and West Options, are therefore discussed together here.

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[7] Annual VMT, which is an output of CMAP's Regional Travel Demand Model (CMAP 2012c), is the total number of miles driven by all vehicles during 1 year in a defined a geographic area.

CTA trains run on electricity; therefore, they cause no direct emissions. Their electricity comes from the electric utility grid, which may include local, fossil-fueled power plants. An increase in indirect emissions due to electrical power consumption by the Red Line trains would be expected with the UPRR Alternative. The UPRR Alternative would not result in an exceedance of the carbon monoxide (CO) standards, and because its implementation would reduce VMT, it would therefore slightly improve greenhouse gas (GHG) emissions, particulate matter with an aerodynamic diameter of 2.5 micrometers and less ($PM_{2.5}$) impacts, and mobile source air toxics emissions as compared to the No Build Alternative.

CTA conducted CO dispersion modeling at three “worst-case” intersections, based on LOS and total traffic volumes in 2030 during the peak hour, as required by USEPA guidance (USEPA 1992). The maximum 1-hour and 8-hour CO concentrations were compared to the NAAQS for CO to determine impacts. Modeling determined that the UPRR Alternative alignment would not exceed the federal standards of 35 parts per million (ppm) for the 1-hour concentration or 9 ppm for the 8-hour concentration.

CTA conducted a quantitative assessment of project-related GHG benefits and/or impacts on climate change to reflect the changes in GHG emissions based on differences in VMT, travel speed, fuel consumption, and delay along the project corridor (see **Appendix U** for additional information). The quantitative assessment determined that the East and West Options would have slightly lower estimated GHG emissions as compared to the No Build Alternative.

Emissions from construction equipment would occur during site preparation activities such as grading, installing curbs, or grubbing and removal of vegetation to prepare a site for construction. Impacts during construction would be primarily associated with fugitive dust and emissions from on-road and non-road vehicles. The equipment producing these emissions could include haul trucks, concrete trucks, front-end loaders, excavators, cranes, drill rigs, compressors, flatbed trucks, and generators. Short-term exposure (i.e., 1-hour averaging period) to nitrogen dioxide (NO_2) can worsen the effect of allergens in allergic asthmatics and can contribute to atmospheric discoloration. Long-term exposure (i.e., annual averaging period) can lead to increased respiratory symptoms and medication use in asthmatics, emergency room visits for asthma in children, hospitalization for respiratory and cardiovascular disease, and premature mortality. IEPA has strict guidelines for controlling fugitive dust (by BMPs), diesel particulate emissions (by exhaust emission controls and use of low-sulfur fuels), and GHG emissions (by limiting equipment operations such as excessive idling and by using alternative fuels). In addition, the contractor would follow Chicago’s Clean Diesel Construction Ordinance, which would further reduce the potential for construction-related air quality impacts.

Construction activities can also result in traffic disruption, rerouting, and temporary shutdown of traffic. Traffic disruption, such as detours or decreased roadway capacity, can lead to increased traffic congestion, thereby increasing motor vehicle exhaust emissions on nearby roadways, and resulting in elevated localized pollutant concentrations.

Mitigation - The following mitigation measures would be implemented:

- Work would be sequenced to minimize air quality impacts on adjacent roadways and commercial and residential buildings due to traffic disruptions during construction. Alternate routes would be planned for construction-related truck traffic, creating temporary detours for regular roadways where capacities have been diminished, providing traffic control, routing trucks away from residential neighborhoods, and restricting construction activities during hours of high traffic volumes on the existing roadways. Contractors would also consider locations of schools, parks, and daycares when deciding where to route local traffic and construction equipment, and to the extent possible, route traffic away from places where children congregate.
- A Dust Control Plan would be prepared to address in detail how dust would be controlled at the construction site, the staging areas, and the access and egress routes.
- All diesel-powered equipment and vehicles would be required to be retrofitted with emissions control devices and to use ultra-low-sulfur diesel fuel (15 ppm sulfur maximum) to control diesel particulate emissions.
- Contractors would retrofit engines with an exhaust filtration device to capture diesel particulate matter before it enters the construction site.
- Contractors would position the exhaust pipe so that diesel fumes are directed away from the operator and nearby workers, reducing fume exposure for personnel.
- Contractors would use catalytic converters to reduce CO, aldehydes, and hydrocarbons in diesel fumes. These devices must be used with low-sulfur fuels.
- Contractors would use enclosed, climate-controlled cabs pressurized and equipped with high-efficiency particulate air filters to reduce the operators' exposure to diesel fumes. Pressurization ensures that air moves from inside to outside. High efficiency particulate air filters would filter incoming air.
- Contractors would regularly maintain diesel engines, which is essential to keep exhaust emissions low. Contractors would follow the manufacturer's recommended maintenance schedule and procedures.
- Contractors would reduce exposure through work practices and training, such as turning off engines when vehicles are stopped for more than a few minutes, training diesel-equipment operators to perform routine inspection, and maintaining filtration devices.
- Contractors would repower older vehicles and/or equipment with diesel- or alternative-fueled engines certified to meet newer, more stringent emissions standards. Contractors would purchase new vehicles that are equipped with the most advanced emission control systems available.
- Contractors would use electric starting aids such as block heaters with older vehicles to warm their engines to reduce diesel emissions.

- CTA would require the contractor to develop a plan (including a truck queuing plan) and schedule to allow construction trucks to enter and exit the construction sites and staging areas without excessive disruption and impacts on residences and commercial establishments.

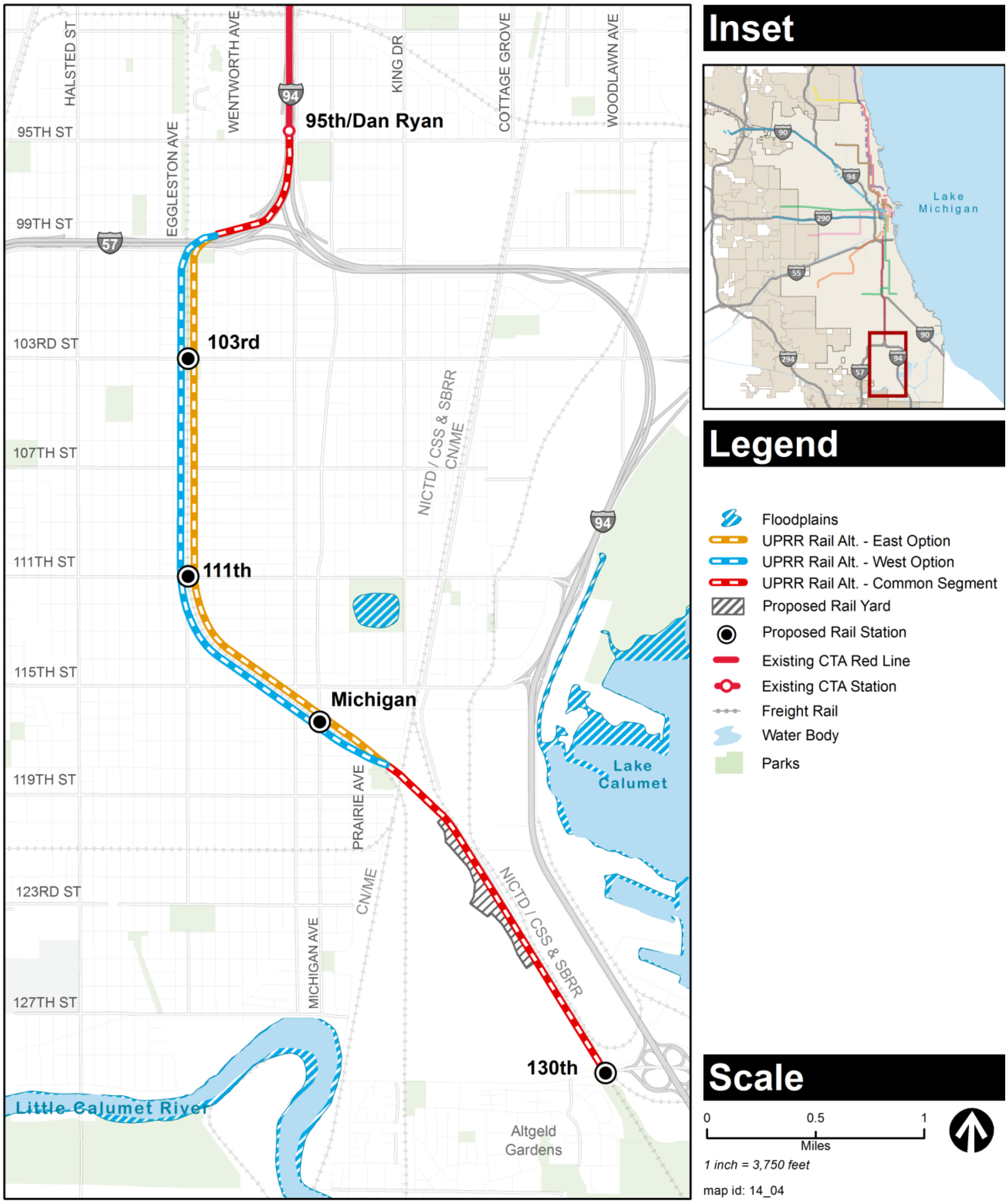
The UPRR Alternative would not have permanent adverse air quality impacts. With the use of appropriate construction-related mitigation measures as described above, no violations of the IAAQS or NAAQS would be anticipated for the UPRR Alternative. With appropriate mitigation measures in place, no adverse air quality impacts due to construction activities would be anticipated with this alternative. The *Air Quality Technical Memorandum* (**Appendix U**) contains additional details.

6.2 Water Quality

The Clean Water Act (33 USC § 1251) establishes the basic structure for regulating discharges of pollutants into waters of the United States and gives the USEPA the authority to implement pollution control programs and actions, such as setting wastewater standards for industries. Section 10 of the Rivers and Harbors Act of 1899 (33 USC § 403) prohibits the unauthorized obstruction or alteration of any navigable water of the United States. Sole source aquifers are regulated under 40 CFR § 149.

Lake Michigan is the dominant topographic feature in the region and is approximately 4.8 miles from the project area at its closest point near the UPRR Alternative alignment. Lake Calumet is in the eastern portion of the project area, and the Little Calumet River flows west along the southern boundary of the project area. The Little Calumet River is on Illinois 303(d) list (a list of waters where water quality is impaired or threatened); it is listed as impaired for mercury, polychlorinated biphenyls, aldrin, iron, dissolved oxygen, total phosphorus, and silver (IEPA 2012). IEPA has not yet developed a Total Maximum Daily Loads analysis for this segment of the Little Calumet River system. Neither the East Option nor the West Option would cross or come in contact with any local water bodies.

Lake Michigan is the drinking water source for Chicago and its suburbs. Groundwater is not a drinking water source and there are no sole source aquifers within the project area (USEPA 2012). Due to the predominance of impervious surfaces throughout the project area, minimal percolation to the underlying groundwater occurs. **Figure 6-1** shows waterbodies near the project area.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107TH ST
NICTD / CSS & SBRR
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Altgeld Gardens
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Lake Michigan
Legend
Floodplains
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
UPRR Rail Alt. - Common Segment
Proposed Rail Yard
Proposed Rail Station
Existing CTA Red Line
Existing CTA Station
Freight Rail
Water Body
Parks
Scale
0
0.5
1
Miles
1 inch = 3,750 feet
map id: 14_04

CN/ME = Canadian National/Metra Electric District, NICTD/CSS & SBRR = Northern Indiana Commuter Transportation District/Chicago South Shore & South Bend Railroad

Source: Ducks Unlimited 2012, Federal Emergency Management Agency 2008

Figure 6-1: Waterbodies and Floodplains in the Project Area

The No Build Alternative would have no adverse impacts on water resources. The East or West Option would have minimal adverse impacts on water resources. Stormwater drainage may be affected by the proposed structure; however, the alterations would not greatly affect the direction of drainage. Dewatering activities during construction could temporarily affect local groundwater levels. Contaminated groundwater encountered during construction would be disposed of properly in accordance with federal, state, and local regulation. Construction could increase erosion and sedimentation near construction areas. The use of construction BMPs would mitigate these potential impacts. The project would involve reconstruction of impervious surfaces, but would not result in a net change of impervious area, because the project area is heavily urbanized. While the potential exists for minor construction-related impacts, as described above, the East and West Options would have few or no adverse impacts on water quality; therefore, no mitigation measures would be required beyond BMPs currently followed by CTA.

The *Water Resources Technical Memorandum* (**Appendix S**) contains additional details.

6.3 Floodplains

Presidential Executive Order 11988 requires the protection of floodplains. The Executive Order directs federal agencies to avoid conducting, allowing, or supporting actions on a floodplain. The existing floodplains within the project area have been identified using the Federal Emergency Management Agency Flood Insurance Rate Maps. **Figure 6-1** shows the mapped floodplains within the project area. The UPRR Alternative would not cross a floodplain or result in any new structures or construction in a floodplain. Flooding would not affect the project. There would be no impacts on floodplains from the East or West Option.

6.4 Vegetation and Wildlife Habitat

Vegetation and wildlife habitats are regulated on the federal level by the Endangered Species Act (16 USC § 1531), Migratory Bird Treaty Act (16 USC 703–712), Fish and Wildlife Coordination Act (16 USC § 661–667e), and the Bald and Golden Eagle Protection Act (16 USC § 668–668c).

The vegetation and wildlife habitat investigation assessed existing biological resources in the project area and evaluated potential impacts on these resources. CTA reviewed the IDNR EcoCAT report to identify special-status plants and animals and Illinois Natural Areas Inventory (INAI) sites with the potential to occur in the project area (IDNR 2012). The IDNR EcoCAT database identified the Lake Calumet INAI Site near Lake Calumet east of the UPRR Alternative alignment. There are no national wildlife refuges within 0.5 mile of the East or West Option alignments (U.S. Fish and Wildlife Service 2012b).

CTA reviewed aerial photographs and identified all areas within ¼ mile of the UPRR Alternative alignment that appeared to contain approximately ½ acre or more of contiguous habitat cover. (In a heavily urbanized area, ½ acre provides a minimum amount of cover where wildlife not generally found in residential yards might be found.) During the field investigation, CTA visited and evaluated all of these areas. With the exception of the forested habitats (approximately 13 acres) in the vicinity of the 120th Street yard and shop site, it was determined that none of these areas would support wildlife communities that are substantially different from those of the surrounding residential and commercial areas.

The East and West Options have the potential to require the removal of trees. Trees occur in a narrow band immediately adjacent to the proposed track location, in the vicinity of the proposed 120th Street yard and shop, and at properties along the alignment. The narrow bands of trees along the northern portion of the alignment have a lower value to wildlife than blocks of habitat; therefore, removal of these bands of trees would have minimal impacts on wildlife. Along the southern portion of the alignment, the East and West Options have the potential to affect blocks of habitat. The East Option would affect approximately 61 acres of potential habitat and the West Option would affect approximately 67 acres of potential habitat. Tree removal in any part of the project area might affect birds protected under the Migratory Bird Treaty Act (16 USC § 703–712), and depending on what part of the project area the trees are in, tree removal might also be regulated by local ordinances. When applications for local construction permits are made it may be necessary to prepare more detailed tree inventories and update the results of this investigation because some trees may have been removed and others may have grown to a size that would be protected by local tree ordinances.

The East and West Options would have the potential to have adverse impacts on vegetation and wildlife habitat during construction due to tree removal; however, with the implementation of mitigation measures outlined below, potential impacts would not be adverse. Mitigation measures would be required for compliance with the Migratory Bird Treaty Act, for consistency with local tree protection ordinances, and to reduce potential impacts on wildlife habitat. Bird species may use trees that could be removed or disturbed during construction and could be affected. Potential mitigation measures would include the following:

- Tree removal would be timed as much as possible to occur outside the migratory bird nesting season, which occurs generally from April 1–September 15 and as early as March 1 for some species.

- If tree removal must occur during the nesting season, two biological surveys would be conducted: one 15 days before and a second 72 hours before the construction that would remove or disturb suitable nesting habitat. The surveys would be performed by a biologist with experience conducting breeding bird surveys. The biologist would prepare survey reports documenting the presence or absence of any protected bird in the habitat to be removed and any other such habitat within 300 feet of the construction work area. If a protected bird were found, surveys would be continued to locate any nests. If an active nest were located, construction within 300 feet of the nest would be postponed until the nest is vacated and juveniles have fledged and when there is no evidence of a second attempt at nesting.

- Avoidance measures would be incorporated into the design of the project during preliminary engineering where feasible; however, if construction of the project were to require removal of a protected tree, a permit would be required in accordance with applicable codes and ordinances of the City of Chicago. Tree removal permits may require replanting of protected trees within the project area or at another location to mitigate for the removal of these trees. Replanting would be done according to the ratios required by tree removal permits and in a size that is appropriate for the species and setting as determined by an arborist. In addition, planted trees would be maintained such that 90 percent are in good condition after 6 months and irrigation would be carried out until the tree is established.

The *Biological Resources Technical Memorandum* (**Appendix V**) contains additional details.

6.5 Threatened and Endangered Species

The Endangered Species Act (16 USC § 1531) and subsequent amendments provide for the conservation of threatened and endangered species and the ecosystems upon which they depend. There are 114 federal- and state-listed species that potentially occur in Cook County (U.S. Fish and Wildlife Service 2012a). CTA also reviewed the IDNR EcoCAT report for information about known occurrences of listed species within the project area. The IDNR EcoCAT database recorded occurrences of seven state-listed species within the sections that encompass the project area, including black-crowned night heron (*Nycticorax nycticorax*), Blanding's turtle (*Emydoidea blandingii*), common moorhen (*Gallinule chloropus*), little blue heron (*Egretta caerulea*), peregrine falcon (*Falco peregrinus*), yellow-crowned night heron (*Nyctanassa violacea*), and yellow-headed blackbird (*Xanthocephalus xanthocephalus*). These recorded occurrences were not within the project area, so CTA compared each species' habitat requirements to the existing habitats within the project area. CTA conducted reconnaissance-level field verification of identified habitat areas to confirm the presence or absence of threatened and endangered species and their habitats within the project area. The field investigation included parks and other public open spaces within ¼ mile of the proposed alignment, stations, and maintenance yard.

CTA identified no federal-listed species in the project area. The only state-listed species with a potential to occur in the project area is the peregrine falcon. There is no suitable habitat for species identified by the EcoCAT database in the project area except for the peregrine falcon. There are no known nesting pairs of peregrine falcons in the project area (Field Museum 2015). In addition, there is no part of the project area that would be expected to provide unique or particularly rich foraging habitat for peregrine falcons. The semi-natural habitats in the vicinity of the 120th Street yard and shop site, and large parks and open spaces might, however, be expected to provide slightly greater foraging opportunities for falcons than elsewhere in the project area.

Neither the East nor West Option would have adverse permanent or construction-related impacts on state- or federal-listed animal and plant species. No mitigation measures for listed species would be required. The *Biological Resources Technical Memorandum* (**Appendix V**) contains additional details.

6.6 Geology and Soils

CTA reviewed existing data on geology, soil, and topography to understand the general geologic setting and identify the locations of geologic hazards that could result in substantial damage to structures or infrastructure or could expose people to substantial risk of injury and to determine potential impacts of the East and West Options. CTA reviewed soil boring and water well logs, geologic maps of Cook County and of Illinois published by the Illinois State Geological Survey, U.S. Geological Survey (USGS) topographic maps, and geologic maps and reports from USDA NRCS. To identify adverse impacts, CTA also considered the project area's proximity to any identified geologic hazards and the potential severity of those hazards. The potential for impacts exists because earthwork activities (such as excavation and grading that occur during construction) can cause soil erosion, affect soil stability, and create topographic disturbances. Potential adverse impacts due to ground settlement, which can occur during both construction and operation, were also considered.

Local topography is generally flat and typically varies less than 50 feet, with a minimum elevation of 590 feet and a maximum elevation of 625 feet above sea level. Bedrock underlying the project area is present at variable depths, ranging from 50 to 100 feet below ground surface. The region has been subjected to tectonic movements; however, the local area does not show evidence of faults or substantial earthquakes (USGS 2002). The project area is underlain by urban land complexes, which are identified as soil that has been disturbed (such as fill material) (USDA NRCS 2012). CTA would perform a geotechnical investigation as part of the preliminary design of the selected option. Some aspects of preliminary plans and design may need revisions based on results of the geotechnical investigation.

Operation or construction of the East or West Option would not have adverse impacts on geologic or soil resources, because all of the features of the options would be located primarily on or within existing transportation use areas such as streets and railroad corridors. No mitigation measures would be required.

6.7 Energy

The Energy Policy Act of 2005 (Public Law 109–58) includes transportation-related provisions that reduce reliance on foreign energy sources (mainly petroleum) and increase use of recovered mineral content in federally funded projects involving procurement of cement or concrete.

CTA evaluated potential energy impacts and benefits associated with construction and operation of the RLE Project. Changes related to the project—in travel patterns and mode choice within the regional transportation network—have the potential to result in changes in net energy demand.

Analysis of long-term energy consumption changes included regional transportation-related energy consumption based on VMT and transit operations. As people choose to use improved transit instead of driving automobiles, VMT can be reduced. Transit operations use energy for vehicle propulsion and operation of stations. The baseline energy consumption was determined from the total regional VMT for the No Build Alternative in 2030, as estimated by CMAP's Regional Travel Demand Model (CMAP 2012c). The VMT was converted to British thermal units (BTU) using 3,650 BTU per vehicle mile traveled, a value derived from an estimated achieved fuel economy of 34.5 miles per gallon for cars and light trucks in 2025 from Corporate Average Fuel Economy standards (National Highway Traffic Safety Administration 2012). Either the East or West Option would result in lower regional VMT than with the No Build Alternative, and would thus result in less vehicular energy consumption than the No Build Alternative.

CTA calculated operational energy consumption based on the total additional annual rail car miles and the average kilowatt-hour per revenue car mile provided by CTA. Kilowatt-hours were then converted to BTU. Station energy was calculated based on similar CTA Red Line elevated stations in 2010.

The projected annual transportation-related energy consumption in the region for the No Build Alternative is approximately 368 trillion BTU, based on output from CMAP's Regional Travel Demand Model (CMAP 2012c). The projected regional travel demand for the East and West Options is marginally smaller than for the No Build Alternative; the East or West Option would result in 11.4 to 19.6 million fewer annual VMT than the No Build Alternative. The difference in projected energy use (regional transportation plus transit operations) between the East or West

Option and the No Build Alternative would not be greater than the margin of error for regional modeling.

The East and West Options would require energy for operations. The net difference in energy use for either option would be less than +/- 0.02 percent, which is smaller than the margin of error for regional modeling. The difference in energy use between the East and West Options and the No Build Alternative (368 trillion BTU for regional vehicular travel in 2030) would be negligible. Operation of the East and West Options would not have an impact on regional energy consumption. While the difference in energy use would be negligible, this analysis shows there would be no adverse energy impact associated with the East or West Option.

CTA evaluated construction energy consumption for the East and West Options to determine the short-term impacts of the project on regional energy use. Capital cost estimates were used to determine the construction energy consumption by applying an energy cost factor from *Energy and Transportation Systems* (California Department of Transportation 1983). Energy was expressed using BTU. Energy use includes both manufacture of components and construction to install the components. Energy would be required for construction of either the East or West Option.

Energy would be used for the production of the guideway and station components (including steel, cement, copper, and glass). Energy would also be used for the operation of construction equipment. Energy use by construction equipment would be localized and temporary. Construction energy use for the East and West Options includes construction of elevated structures and stations. The East Option would use approximately 6,130 billion BTU for construction and the West Option would use approximately 6,170 billion BTU for construction.

The one-time irreversible commitment of energy resources for construction would amount to less than 1.2 percent of the total annual energy consumption for Cook County, which is 530 trillion BTU (CNT Energy 2009). Construction of either option would not have an impact on energy consumption in the Chicago Metropolitan Area, Cook County, or the project area.

Because the RLE Project would not have an impact on regional energy consumption, no mitigation measures are proposed. The *Energy Technical Memorandum* (**Appendix W**) contains additional details.

Chapter 7
Environmental Justice

Environmental justice (EJ) is "the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies" (USEPA 2004). This chapter summarizes the EJ analysis and outreach conducted for this project. The *Environmental Justice Technical Memorandum* (**Appendix X**) provides additional details.

The project area consists entirely of minority communities, some of which are also low-income areas. All of the benefits and impacts of the project would occur within these minority and low-income populations (EJ populations). Few benefits would occur outside of the minority and low-income areas. As such, both the East and West Options would have impacts on EJ populations; however, none of the impacts would be disproportionately high and adverse. FTA and CTA have undertaken outreach and ongoing coordination with affected communities to identify EJ populations, discuss project impacts and benefits, and mitigation measures where relevant.

7.1 Regulatory Framework/Methods

Federal agencies are required to consider the potential for disproportionately high and adverse impacts on EJ populations that could result from all programs, policies, and activities (Executive Order 12898). As described in Executive Order 12898, a disproportionate impact is one that would negatively affect EJ populations to a greater extent than non-EJ populations. In accordance with FTA guidance, including the August 2012 FTA Circular 4703.1 (*Environmental Justice Policy Guidance for Federal Transit Administration Recipients*), the EJ process and analysis for the RLE Project were designed to accomplish the following:

- Avoid, minimize, or mitigate disproportionately high and adverse human health and environmental impacts, including social and economic impacts, on EJ populations.
- Ensure the full and fair participation by all potentially affected communities in the transportation decision-making process.
- Prevent the denial of, reduction in, or significant delay in the receipt of benefits by EJ populations.

CTA performed the EJ analysis in compliance with Executive Order 12898 (1994), USDOT Order 5610.2(a) (2012), and FTA Circular 4703.1 (2012). **Appendix X** contains additional details regarding federal, state, and local EJ regulations.

CTA performed the analysis of the potential for disproportionate impacts on EJ populations using the following steps:

1. Demographic Analysis and Initial Community Outreach
    - CTA used socioeconomic data from the 2010 Census and the American Community Survey to describe the population in the project area. Income, ethnicity, employment, age,

housing characteristics, disability, and English proficiency were used in conjunction with field observations and stakeholder interviews to help identify the presence of EJ populations.

- CTA collected information about elderly and disabled populations in accordance with the laws of the State of Illinois. CTA identified distinct elderly populations using a 50 percent threshold in accordance with the Illinois Environmental Justice Act. Disability statistics were compiled from 2010 Census data and American Community Survey data at the block group level to include individuals with a sensory, physical, or mental disability or other condition that limits activities of daily living. CTA then compared these statistics to citywide averages. Information on elderly and disabled populations was also overlaid onto the federally protected minority and low-income community areas to provide additional information on elderly populations and people with disabilities within the project area.

- **Section 7.2** summarizes the data analysis, and **Appendix X** contains the limited English proficiency (LEP) analysis. The project area consists of predominantly minority populations, with some concentrations of low-income groups. CTA also identified pockets of Spanish-speaking populations, indicating the need for outreach in both English and Spanish languages.

2. Environmental Analysis to Identify Adverse Impacts and Benefits

   - All of the benefits and impacts of the project would accrue to the same EJ populations. The EJ-specific environmental analysis focused on identifying all adverse impacts and mitigation measures of the East and West Options because they would both affect EJ populations.

   - Benefits that would offset the potential impacts were also identified and included in the analysis. Identification of additional mitigation measures specifically for EJ purposes would not be necessary for the RLE Project, because none of the impacts would be disproportionately high and adverse. No additional mitigation measures—beyond those identified in **Chapters 3, 4, 5, and 6** of this Draft EIS—would be needed to meet EJ requirements. **Section 7.4** presents the results of the EJ analysis.

3. Engagement with EJ Populations in the Public Outreach and Decision-Making Process

   - The stakeholder interview process and CTA's ongoing community relations efforts helped identify effective outreach methods. As described in **Chapter 10**, traditional outreach methods such as public meetings and comment periods were augmented by nontraditional outreach. Nontraditional activities included website postings, presentations to local community groups, e-mail and direct mail newsletters, and one-on-one meetings with elected officials and community group leaders. Per the LEP analysis, CTA provided Spanish translation of meeting handouts and Spanish and sign language interpreters at open house meetings. In addition, CTA maintains a project-specific e-mail address to receive comments and requests to receive updates on the project. **Section 7.3** and **Chapter 10** summarize the outreach process.

4. Incorporation of Input from EJ Populations into the NEPA Process

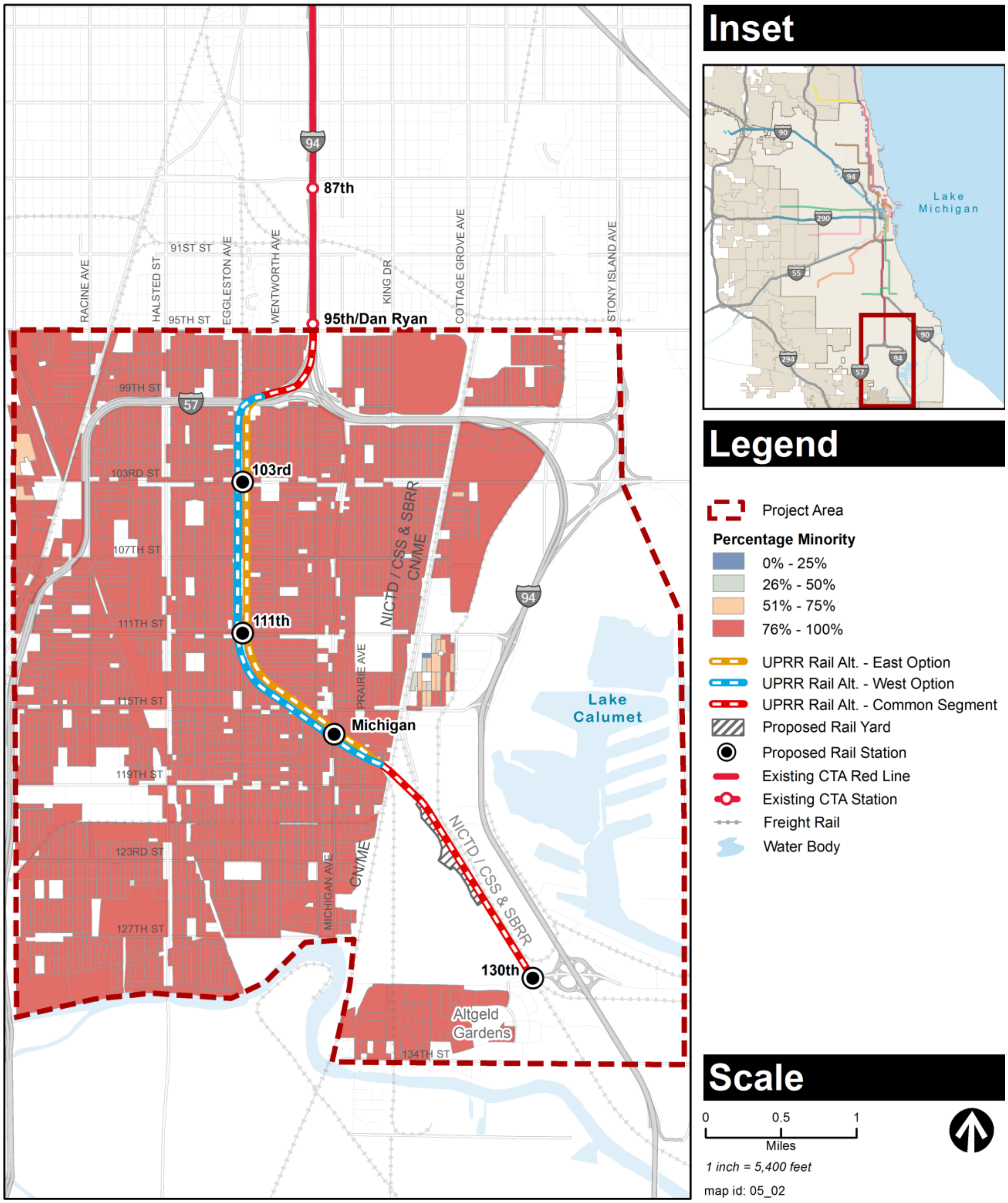
    - After the public meetings held in spring 2014, CTA decided not to pursue the Halsted Alternative in part because of public comments, including comments from EJ populations and community groups, in opposition to that alternative. In addition, the Halsted Alternative failed to fully meet the purpose and need of the project as described in **Section 2.4.3**. After the public meeting, CTA conducted additional engineering analysis to further refine the East and West Options to minimize displacements and impacts on the area parks where possible.

7.2 Existing Conditions

The project area consists entirely of predominantly minority populations (see **Figure 7-1**). Nearly all residential portions of the project area contain over 75 percent African American residents, with many areas approaching 100 percent. The project area contains a higher proportion of minority residents (97.9 percent) than the City of Chicago as a whole (68.3 percent).

The 2010 annual median household income for communities in the project area ranges from approximately $11,000 in Riverdale to $54,000 in the Village of Calumet Park. Project area median income (approximately $41,000) is lower than the City of Chicago as a whole ($46,900) and Cook County ($54,000). Within the project area, the census block groups with the lowest income are concentrated around the Riverdale community area (southeastern portion of the project area) and the Altgeld Gardens public housing project, with some pockets along Michigan Avenue in Roseland and along 119th Street in West Pullman (see **Figure 7-2**). Note: Blocks of white space represent areas with low population density such as schools and industrial areas.

The highest percentages of LEP populations occur in the West Pullman community, east of State Street between 115th and 119th Streets (see **Figure 7-3**). Other areas with LEP residents include Pullman east of the Metra Electric District Line between 111th and 119th Streets, and near Lake Calumet. According to the 2010 U.S. Census, English is the most spoken language at home in the project area, with 92.6 percent of households speaking English only. Spanish is the second most spoken language at home, with over 6 percent of households speaking Spanish. The largest Spanish-speaking populations live in the Village of Calumet Park, where 15.5 percent of households speak Spanish. Pullman and West Pullman also have large percentages of Spanish-speaking households with 10.4 percent and 6.7 percent of homes speaking Spanish, respectively. Specific census tracts in the West Pullman and South Deering community areas and the Village of Calumet Park reported that over 30 percent of households speak Spanish. The full LEP Assessment is included in **Appendix X**.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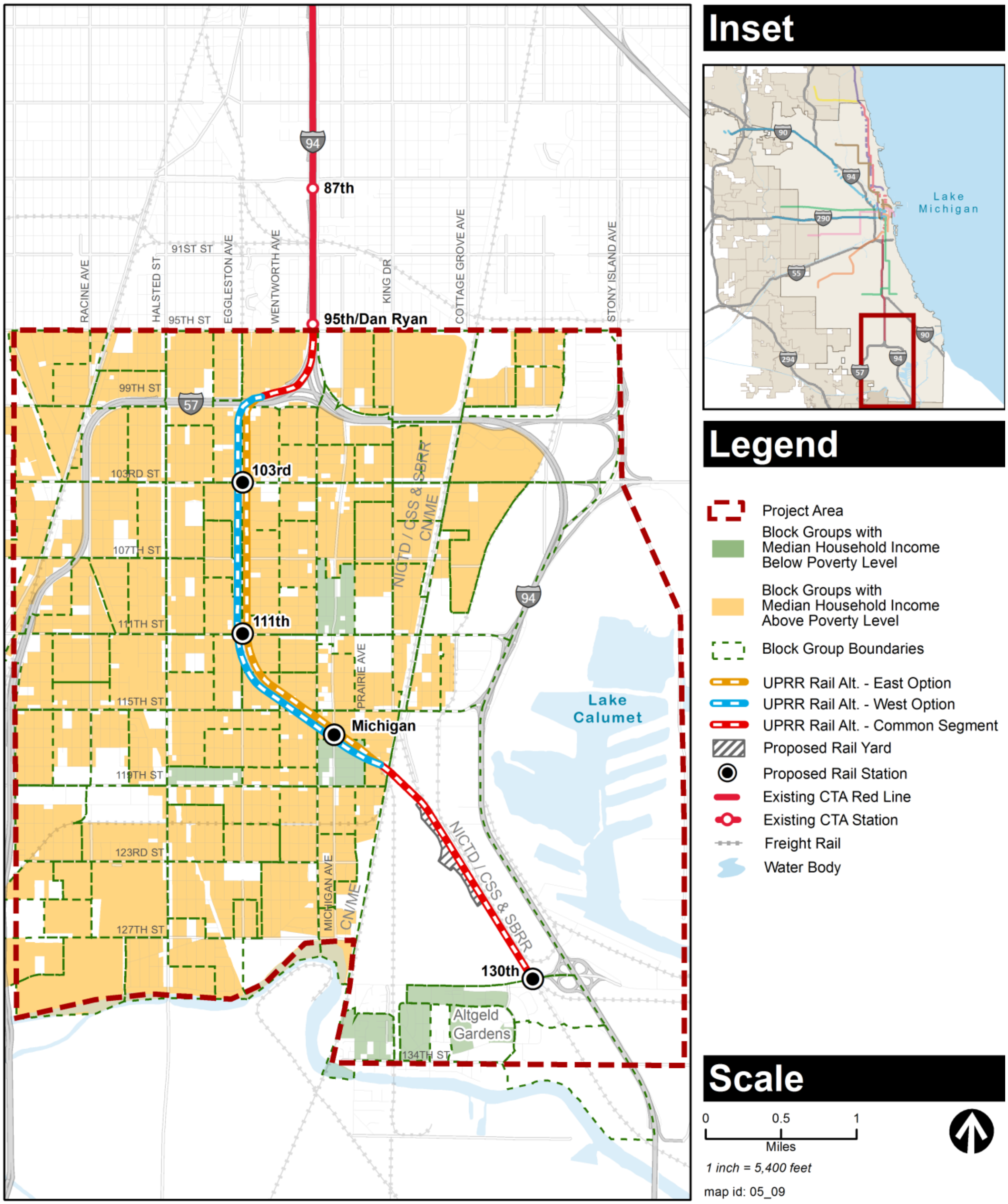
EGGLESTON AVE
WENTWORTH AVE
KING DR
COTTAGE GROVE AVE
STONY ISLAND AVE
PRAIRIE AVE
MICHIGAN AVE
NICTD / CSS & SBRR
CN/ME
Lake Calumet
Altgeld Gardens
Inset
Lake Michigan
90
94
290
55
294
57
Legend
Project Area
Percentage Minority
0% - 25%
26% - 50%
51% - 75%
76% - 100%
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
UPRR Rail Alt. - Common Segment
Proposed Rail Yard
Proposed Rail Station
Existing CTA Red Line
Existing CTA Station
Freight Rail
Water Body
Scale
0
0.5
1
Miles
1 inch = 5,400 feet
map id: 05_02

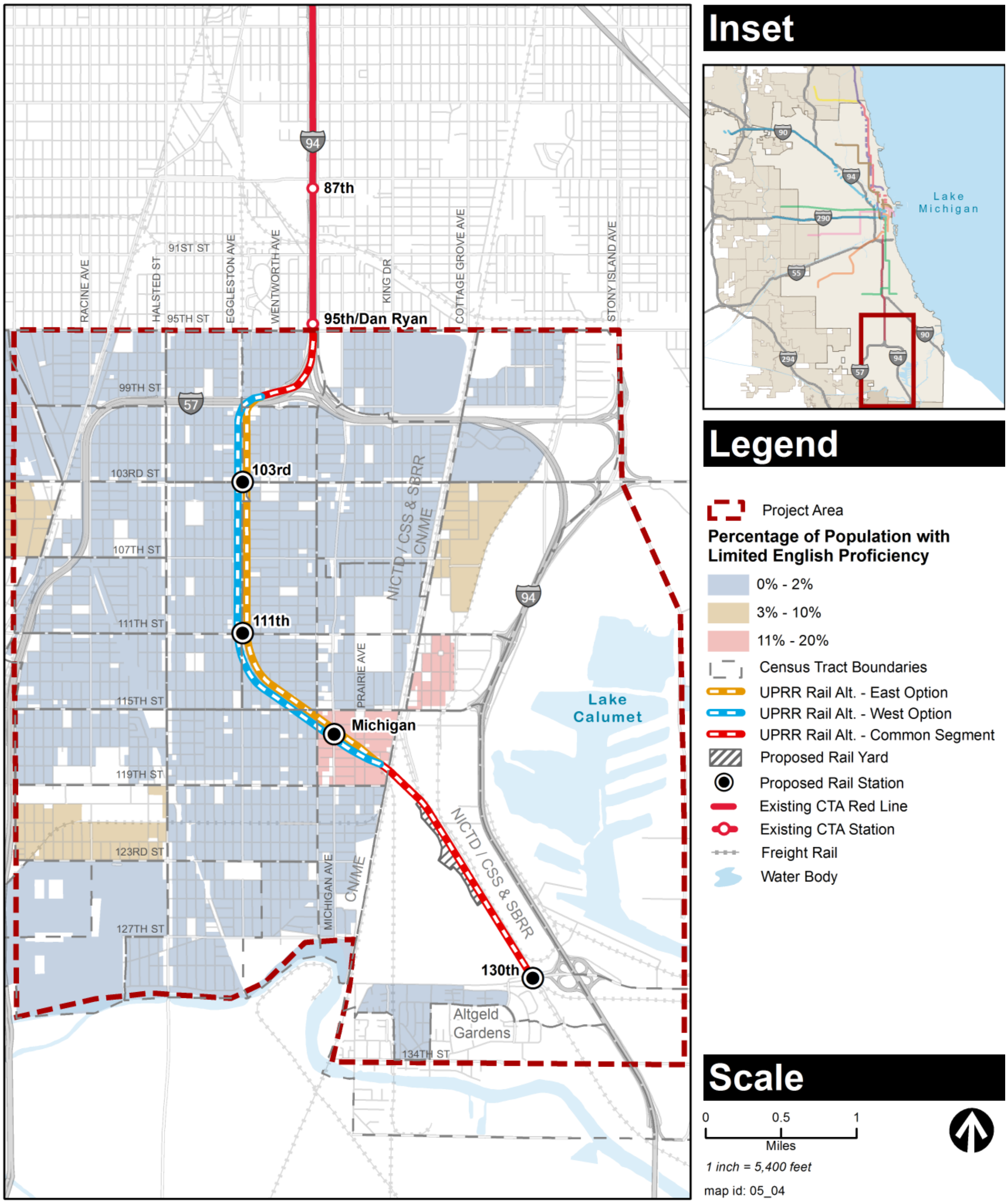
CN/ME = Canadian National/Metra Electric District, NICTD/CSS & SBRR = Northern Indiana Commuter Transportation District/Chicago South Shore & South Bend Railroad
Source: U.S. Census Bureau 2010
Note: Blocks of white space represent areas with low population density such as schools and industrial areas.

Figure 7-1: Minority Populations


Inset
Lake Michigan
90
94
290
55
294
57
Legend
Project Area
Block Groups with Median Household Income Below Poverty Level
Block Groups with Median Household Income Above Poverty Level
Block Group Boundaries
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
UPRR Rail Alt. - Common Segment
Proposed Rail Yard
Proposed Rail Station
Existing CTA Red Line
Existing CTA Station
Freight Rail
Water Body
Scale
0
0.5
1
Miles
1 inch = 5,400 feet
map id: 05_09
94
87th
91ST ST
95TH ST
RACINE AVE
HALSTED ST
EGGLESTON AVE
WENTWORTH AVE
KING DR
COTTAGE GROVE AVE
STONY ISLAND AVE
95th/Dan Ryan
99TH ST
57
103RD ST
103rd
107TH ST
NICTD / CSS & SBRR
CN/ME
94
111TH ST
111th
PRAIRIE AVE
115TH ST
Michigan
Lake Calumet
119TH ST
123RD ST
MICHIGAN AVE
CN/ME
NICTD / CSS & SBRR
127TH ST
130th
Altgeld Gardens
134TH ST

CN/ME = Canadian National/Metra Electric District, NICTD/CSS & SBRR = Northern Indiana Commuter Transportation District/Chicago South Shore & South Bend Railroad
Source: U.S. Census Bureau 2010
Note: Blocks of white space represent areas with low population density such as schools and industrial areas.

Figure 7-2: Low-Income Populations


Inset
Lake Michigan
90
94
290
55
294
57
Legend
Project Area
Percentage of Population with Limited English Proficiency
0% - 2%
3% - 10%
11% - 20%
Census Tract Boundaries
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
UPRR Rail Alt. - Common Segment
Proposed Rail Yard
Proposed Rail Station
Existing CTA Red Line
Existing CTA Station
Freight Rail
Water Body
Scale
0
0.5
1
Miles
1 inch = 5,400 feet
map id: 05_04
87th
95th/Dan Ryan
103rd
111th
Michigan
130th
91ST ST
95TH ST
99TH ST
103RD ST
107TH ST
111TH ST
115TH ST
119TH ST
123RD ST
127TH ST
134TH ST
RACINE AVE
HALSTED ST
EGGLESTON AVE
WENTWORTH AVE
KING DR
COTTAGE GROVE AVE
STONY ISLAND AVE
PRAIRIE AVE
MICHIGAN AVE
NICTD / CSS & SBRR
CN/ME
Lake Calumet
Altgeld Gardens

CN/ME = Canadian National/Metra Electric District, NICTD/CSS & SBRR = Northern Indiana Commuter Transportation District/Chicago South Shore & South Bend Railroad
Source: U.S. Census Bureau 2010
Note: Blocks of white space represent areas with low population density such as schools and industrial areas.

Figure 7-3: Percentage of Population that has Limited English Proficiency

The entire project area consists of predominantly minority populations (**Figure 7-1**), with some concentrations of low-income groups (**Figure 7-2**). For these reasons, the entire project area is considered an EJ community. The low-income area in Riverdale (the southeastern portion of the project area) has minimal population between 115th and 130th Streets; the majority of the population in this area resides south of 130th Street and is living below the poverty level.

In addition, approximately 15.3 percent of those living within the project area are elderly, which is higher than the citywide elderly proportion of 10.3 percent (U.S. Census Bureau 2010). Disabled populations within the project area constitute 15.4 percent of the project area population, higher than the 11.0 percent found at the citywide level (U.S. Census Bureau 2012). The *Environmental Justice Technical Memorandum* (**Appendix X**) provides further details about elderly and disabled populations.

7.3 Specialized Outreach

Full and fair access to meaningful involvement by EJ populations in project planning and development is an important aspect of EJ (Executive Order 12898). Using demographic data to determine the presence of EJ populations is only the first step in a robust EJ approach. Ensuring full and fair access means actively seeking the input and participation from those typically under-represented groups throughout all project stages. Residents can provide important information on community concerns, special sites, and unusual traffic, pedestrian, or employment patterns in the corridor. This information can be used in the design and evaluation of alternatives, to avoid negative impacts on valued sites, and to support the development of safe, practical, and attractive transportation options that are responsive to the concerns of EJ communities.

CTA has implemented a robust outreach program with an emphasis on meaningful exchange with EJ populations. **Chapter 10** and **Appendix C** provide additional details on public and agency coordination conducted.

Public and community meetings were conducted in compliance with NEPA guidelines and held at locations selected to reflect equitable geographic coverage and proximity to public transportation, and to minimize overlap with other meetings scheduled in the project area. The locations were within the project area, accessible by public transit, and ADA compliant. CTA performed an LEP assessment in 2009 and determined that public outreach materials should be prepared in both English and Spanish. Spanish translation of meeting handouts and Spanish and sign language interpreters were made available at every public meeting. CTA also offered to make translators for additional languages available upon request at the open house meeting.

In September 2009, two public scoping meetings provided the public with an opportunity to comment on the project purpose and need, alternatives considered, and issues and areas of concern to be considered in the Draft EIS. The meetings were publicized via direct mail and e-mail notices using the stakeholder database, postings on CTA's website, display advertisements in multilingual publications (English and Spanish), a legal notice placed in the Chicago Tribune, CTA customer alerts, flyers distributed to key locations along the project corridor, and notices posted in libraries and village halls.

CTA held an open house meeting at St. John Missionary Baptist Church on August 2, 2011 to update the community regarding the RLE Project. The meeting was publicized using the same methods as listed above. The meeting location was chosen because of its central location in the project area and proximity to public transportation, and to minimize overlap with other meetings scheduled in the project area. The location was accessible by public transit and compliant with the ADA. Spanish and sign language interpreters were available at the meeting.

In April and May 2014, CTA again reached out to the general public as well as the identified EJ population and local community groups via a public open house meeting and individual community group meetings. Within the project area, community groups who were identified and contacted as part of the EJ and community group outreach included the following:

- 34th Ward Town Hall
- Agape Community Center
- Chicago Neighborhood Initiatives
- Chicago Park District
- DCP
- Far South Side Community Development Corporation
- Friends of the Parks
- Golden Gate Homeowners Association
- Greater Roseland Chamber of Commerce
- People for Community Recovery
- Roseland Business Development Council
- Roseland Manor
- Rosemoor Community Association
- St. Anthony of Padua Parish

CTA contacted each of the groups by telephone and provided them an opportunity for a presentation on the proposed project.

At the request of interested community groups, CTA conducted meetings to share information about the project and allow community members to ask questions and voice concerns. CTA held 13 community group meetings. **Appendix C** contains meeting notes and other supporting information for the outreach efforts.

The purpose of the spring 2014 outreach was to get public feedback on the alternatives, potential impacts, and mitigation and to give the community an opportunity to ask questions about the project. In addition to the 13 community group meetings, CTA held an open house on May 13, 2014.

Input received at the open house and community meetings affected the RLE Project in several ways, the most significant of which was the elimination of the BRT and Halsted Alternatives from further consideration. The community expressed concern about the BRT Alternative's failure to meet the purpose and need.

CTA has considered the EJ communities' comments and concerns in the crafting of mitigation measures to reduce adverse impacts. These mitigation measures are described in greater detail in the environmental consequences analysis.

In addition, CTA has been mindful to promote full and fair participation from all members of the public during the decision-making process for the RLE Project. CTA's public meetings on the RLE Project are held in the evening so that the largest number of community members can attend. CTA's efforts include specialized outreach to people who, as a result of national origin, have LEP. CTA evaluated the need for additional outreach by using 2010 Census data and analyzing whether populations throughout the project corridor were linguistically isolated because of challenges with reading, writing, and/or speaking English. The largest Spanish-speaking populations live in the Village of Calumet Park, where 15.5 percent of households speak Spanish. Pullman and West Pullman also have a large percentage of Spanish-speaking households with 10.4 percent and 6.7 percent of homes speaking Spanish, respectively. Specific census tracts in the West Pullman and South Deering community areas and the Village of Calumet Park reported that over 30 percent of households speak Spanish.

Based on CTA's analysis, Spanish language interpreters were made available at all public meetings. Interpreters for other languages were also made available upon request at all public open houses, community meetings, and the public hearing for the project. Sign language interpreters were also made available at all public meetings.

7.4 Environmental Consequences

FTA Circular 4703.1 indicates that projects in areas consisting entirely of EJ populations do not necessarily eliminate the possibility of disproportionately high and adverse impact findings; however, the following characteristics are true of the project area and East and West Options:

- The entire project area is predominantly minority populations. No community in the project area contains less than 92.9 percent minority populations, and the project area as a whole contains 97.9 percent minority populations.

- All of the impacts and benefits of the East and West Options would accrue to the same minority populations.

- The purpose of this community-initiated project includes connecting disadvantaged communities to Chicago's major employment and activity centers in an effort to spur economic development and improve livability. The project would help remediate the geographic isolation and lack of employment and development opportunities that currently exist in the project area.

A multistep process was used to assess the potential for disproportionately high and adverse impacts on EJ populations as described in **Section 7.1**. Categories that had adverse impacts remaining after mitigation were analyzed further to determine whether any of those impacts would be disproportionately high or adverse. An impact would be disproportionately high or adverse if the effect (1) would be predominantly borne by an EJ population, or (2) would be suffered by the EJ population and would be appreciably more severe or greater in magnitude than the adverse effect suffered by the non-EJ population. Project benefits to EJ communities were also considered.

To provide a complete picture of how the RLE Project would affect EJ populations, this section summarizes the benefits and adverse impacts that would occur in EJ communities and the associated mitigation measures:

- **Beneficial Impacts of the Project** - To estimate the extent of the benefits derived from the East and West Options, the analysis in **Table 7-1** provides a comparison of the benefits with regard to the following criteria:
  - Reduced Transit Times
  - Increased Travel Choices
  - Increased Economic Competitiveness
  - Environmental Criteria
- **Resources with Limited or No Adverse Impacts** - The East and West Options would have limited or no adverse impacts in these environmental resource categories (**Chapter 6**). Because there would be no adverse impacts, there is no potential for disproportionately high and adverse impacts and these categories will not be carried forward for further analysis.
  - Air Quality
  - Water Quality
  - Floodplains
  - Vegetation and Wildlife Habitat
  - Threatened and Endangered Species
  - Geology and Soils
  - Energy
- **Resources with No Adverse Impacts after Mitigation** - The East and West Options would have adverse impacts that would not remain adverse after mitigation in the following categories. Because there would be no adverse impacts after mitigation, there is no potential for disproportionately high and adverse impacts and these categories will not be carried forward for further analysis. Further details about these impacts and the proposed mitigation measures are provided in **Chapter 4**.
  - Land Use and Economic Development
  - Displacement and Relocation of Existing Uses
  - Noise and Vibration
  - Safety and Security
  - Historic and Cultural Resources
  - Hazardous Materials
  - Wetlands

- **Resources with Adverse Impacts after Mitigation** - As shown in **Table 7-2**, adverse impacts would remain after mitigation for both the East and West Options in two categories. These adverse effects would not be fully addressed through mitigation measures, resulting in unavoidable adverse effects. Categories with potential adverse effects after mitigation are considered for their potential for disproportionately high and adverse effects on EJ communities. They are discussed in more detail in **Sections 7.4.2** and **7.4.3**.
    - Neighborhoods and Communities - Permanent Impacts
    - Visual and Aesthetic Conditions - Permanent Impacts

Table 7-1: Summary of Benefits

Benefits and Resource Areas	No Build Alternative	Union Pacific Railroad Alternative East Option	Union Pacific Railroad Alternative West Option
Reduced Transit Times	No	Yes	Yes
Travel Times Between Stations:[1] 130th to 95th 130th to Jackson	 28 minutes 58 minutes	 14 minutes 39 minutes	 14 minutes 39 minutes
Increased Travel Choices	No	Yes	Yes
Increased Economic Competitiveness	No	Yes	Yes
Land Use and Economic Development	No Impacts	Economic development benefits resulting from the enhanced transit service	Economic development benefits resulting from the enhanced transit service
Neighborhoods and Communities	No Impacts	Improved mobility, access to parklands and community facilities, access to jobs, possible economic development, community revitalization, new space for community facilities and retail, and direct service to Altgeld Gardens	Improved mobility, access to parklands and community facilities, access to jobs, possible economic development, community revitalization, new space for community facilities and retail, and direct service to Altgeld Gardens
Hazardous Materials	No Impacts	Cleanup and/or removal of contaminated material during construction	Cleanup and/or removal of contaminated material during construction
Transportation	No Impacts	Public transportation would benefit from expanded rail transit service and rerouted bus service within the project area. Pedestrians would benefit from upgraded intersections immediately adjacent to the stations with ADA-accessible curb ramps and replacement of deteriorated sidewalks.	Public transportation would benefit from expanded rail transit service and rerouted bus service within the project area. Pedestrians would benefit from upgraded intersections immediately adjacent to the stations with ADA-accessible curb ramps and replacement of deteriorated sidewalks.

[1] Source: CTA 2009

Table 7-2: Summary of Potential Impacts after Mitigation

Resource Area	Alternative			Analyze for Potential High and Adverse Impacts on EJ Populations
	No Build	Union Pacific Railroad - East Option[1]	Union Pacific Railroad - West Option[1]	
Transportation	--	No disproportionate adverse impacts after mitigation	No disproportionate adverse impacts after mitigation	No
Land Use and Economic Development	--	No disproportionate adverse impacts after mitigation	No disproportionate adverse impacts after mitigation	No
Displacement and Relocation of Existing Uses	--	No disproportionate adverse impacts after mitigation	No disproportionate adverse impacts after mitigation	No
Neighborhoods and Communities	--	Permanent: Adverse impact after mitigation Construction: No disproportionate adverse impacts after mitigation	Permanent: Adverse impact after mitigation Construction: No disproportionate adverse impacts after mitigation	Yes
Visual and Aesthetic Conditions	--	Permanent: Adverse impact after mitigation Construction: --	Permanent: Adverse impact after mitigation Construction: --	Yes
Noise and Vibration	--	No disproportionate adverse impacts after mitigation	No disproportionate adverse impacts after mitigation	No
Safety and Security	--	No disproportionate adverse impacts after mitigation	No disproportionate adverse impacts after mitigation	No
Historic and Cultural Resources	--	--	--	No
Hazardous Materials	--	No disproportionate adverse impacts after mitigation	No disproportionate adverse impacts after mitigation	No
Wetlands	--	No disproportionate adverse impacts after mitigation	No disproportionate adverse impacts after mitigation	No
Air Quality	--	--	--	No
Water Quality	--	--	--	No
Floodplains	--	--	--	No
Vegetation and Wildlife Habitat	--	--	--	No
Threatened and Endangered Species	--	--	--	No
Geology and Soils	--	--	--	No
Energy	--	--	--	No
Cumulative	--	--	--	No

-- = No disproportionate adverse effect before mitigation (no mitigation required).

[1] Unless noted separately, impacts are stated for both permanent and construction.

7.4.1 No Build Alternative

The No Build Alternative would not involve any new construction for the RLE Project, and would not have any adverse impacts. No mitigation measures would be required. The No Build Alternative would, however, lack the transportation benefits that the East or West Option would provide, such as reduced travel times, better access to jobs, and economic development. The No Build Alternative would also fail to address the community's desire for growth initiatives that could attract new economic development interests to the area. In addition, potential remediation benefits associated with the UPRR Alternative would not occur with the No Build Alternative.

7.4.2 Union Pacific Railroad Alternative - East Option

The UPRR Alternative East Option would involve an extension of the Red Line from its current endpoint at the 95th Street Terminal southward to 130th Street in the vicinity of Altgeld Gardens via existing highway rights-of-way and railroad corridors. The new rail service would improve commute times to jobs, provide better transit access to geographically isolated communities, and potentially spur economic development in surrounding neighborhoods. The East Option would have permanent adverse impacts on neighborhoods and communities as well as visual and aesthetic conditions. The adverse impacts would occur in the project area, which consists entirely of EJ communities.

Neighborhoods and Community Impacts

The East Option would have permanent adverse impacts on community character and cohesion that could not be mitigated due to the visual encroachment of the elevated structure into the neighborhood north of I-57 in Roseland and at 117th Street and Prairie Avenue in West Pullman. Mitigation measures for impacts on community character, including planting additional landscaping, would not be sufficient to offset this permanent impact. The East Option alignment would pass through the northwestern corner of Wendell Smith Park and the western portion of Block Park, would displace Now Faith Church of God Holiness, and would displace part of the schoolyard at Kwame Nkrumah Academy. The church could be relocated within the neighborhood. The East Option would largely leave the functional and recreational use of the parks intact and impacts would not be adverse after mitigation. See **Section 4.3** for additional details on mitigation measures for permanent neighborhood and community impacts.

By improving travel time, operation of the East Option would improve access to parklands and community facilities within walking distance (½ mile) of the station locations. The East Option would substantially reduce travel times between neighborhoods in the project area, and would enhance their connection with major job and activity centers to the north. The new transit service and the subsequent increase in pedestrian traffic could attract new businesses to the area and support the growth and enhancement of these neighborhood retail and service nodes. The parking garage at the Michigan Avenue station would provide space for retail and community facilities. The station would serve as a transit hub that brings additional passengers and visitors to the area, which could further boost economic development. The result would be an overall increase in community livability. The mobility and development impacts of the East Option would be beneficial.

Visual and Aesthetic Conditions

The elevated structure would cause adverse visual impacts north of I-57 and at 117th Street and Prairie Avenue, as discussed in **Section 4.4**. Mitigation measures would reduce the impacts at these locations, but due to the proximity of the elevated structure to residential areas, the impacts would remain adverse despite mitigation. Mitigation measures to reduce visual impacts would include landscaping, using urban design techniques to reduce massing, and creating pedestrian-friendly surroundings.

Conclusion

Considering the impacts, mitigation measures, and benefits, the East Option's permanent impact on community character and permanent visual impact would not be appreciably more severe or greater in magnitude than similar effects elsewhere in CTA's rail system. The mitigation measures proposed are similar in nature to those for other CTA projects and have been proposed by CTA, with input from local communities, consistently in EJ and non-EJ communities alike. The project offers substantial benefits that would accrue to the resident EJ populations. Although the East Option would still have adverse impacts on EJ communities, these impacts would not be disproportionately high or adverse. As such, no EJ-specific mitigation measures beyond those identified in **Chapter 4** would be required.

7.4.3 Union Pacific Railroad Alternative - West Option

Like the UPRR Alternative East Option, the West Option would involve an extension of the Red Line from its current endpoint at the 95th Street Terminal southward to 130th Street in the vicinity of Altgeld Gardens via existing highway rights-of-way and railroad corridors. The new rail service would improve commute times to jobs, provide better transit access to geographically isolated communities, and potentially spur economic development in surrounding neighborhoods. The West Option would have permanent adverse impacts on neighborhoods and communities as well as visual and aesthetic conditions. The adverse impacts would occur in the project area, which consists entirely of EJ communities.

Neighborhoods and Communities

The West Option would have permanent adverse impacts on community character and cohesion that could not be mitigated due to the visual encroachment of the elevated structure into the neighborhood north of I-57 and between 99th and 103rd Streets in Washington Heights. The 103rd Street station in Roseland and Washington Heights and the Michigan Avenue station park & ride facility in West Pullman would also cause adverse visual impacts because they would change the scale, density, and character of the local community. Mitigation measures for impacts on community character, including planting additional landscaping, would not be sufficient to offset these permanent impacts. The West Option alignment would pass through Fernwood Parkway, and would displace the Grace Temple Church of God Established in Christ. The church could be relocated within the neighborhood; however, as of July 2015 the building is vacant. CTA would keep the area beneath the track structure in Fernwood Parkway open for use, and improve park space elsewhere in the neighborhood. See **Section 4.3** for additional details on mitigation measures for permanent neighborhood and community impacts.

Other impacts, benefits, and mitigation measures would be similar to those for the East Option, as discussed above in **Section 7.4.2**.

Visual and Aesthetic Conditions

The elevated structure would cause adverse visual impacts north of I-57, between 99th Street and 103rd Street, near the 103rd Street station, and near the Michigan Avenue station park & ride facility, as discussed in **Section 4.4**. Mitigation measures to reduce visual impacts would include providing landscaping and replanting vegetation where possible, designing the station and park & ride facility to match the character of the surrounding neighborhood, using urban design techniques to reduce massing, and creating pedestrian-friendly surroundings. Exterior lighting would be shielded and carefully placed when adjacent to sensitive areas such as residential communities. The impacts would remain adverse after mitigation.

Conclusion

Considering the impacts, mitigation measures, and benefits, the West Option's permanent impact on community character and permanent visual impact would not be appreciably more severe or greater in magnitude than similar effects elsewhere in CTA's rail system. The mitigation measures proposed are similar in nature to those for other CTA projects and have been proposed by CTA consistently in EJ and non-EJ communities alike. The project offers substantial benefits that would accrue to the resident EJ populations. Although the West Option would still have adverse impacts on EJ communities, these impacts would not be disproportionately high or adverse. As such, no EJ-specific mitigation measures beyond those identified in **Chapter 4** would be required.

Chapter 8
Section 4(f) Evaluation

Section 4(f) of the USDOT Act of 1966 is a federal law that established requirements for USDOT (including FTA) consideration of publicly owned parks/recreational areas that are accessible to the general public, publicly owned wildlife/waterfowl refuges, and publicly or privately owned historic sites of federal, state, or local significance in developing transportation projects. This law, commonly known as Section 4(f), is now codified in 49 USC § 303 and 23 USC § 138, and is implemented by FTA through the regulation 23 CFR § 774. Additional guidance on the implementation of Section 4(f) may be found in FHWA's *Section 4(f) Policy Paper* (USDOT, FHWA 2012). FTA has formally adopted this guidance and this analysis was conducted consistent with this guidance.

Publically owned park or recreation land would be used as a result of the options evaluated in the Draft EIS and is further evaluated in this Section 4(f) chapter. Based on the evaluation in this Draft EIS, no historic properties would be affected or used by the project alternatives and further Section 4(f) evaluation of historic properties is not required. Historic properties are described within this chapter to provide sufficient documentation that there is no Section 4(f) use of these properties. This chapter summarizes the findings of the *Parklands and Community Facilities Technical Memorandum* (**Appendix M**), the *Historic and Cultural Resources Technical Memorandum* (**Appendix Q**), and the *Park Replacement Analysis Technical Memorandum* (**Appendix Y**).

As part of the public hearing for this Draft EIS, the public will be offered the opportunity to comment on FTA's preliminary determinations in this Section 4(f) analysis and on the mitigation measures identified, including potential replacement park options. After the public comment period is complete, FTA will make a final Section 4(f) determination based on information in this chapter, the referenced technical memoranda, further coordination with the Chicago Park District, and public comments received. FTA's Section 4(f) determination will either (1) confirm the preliminary findings within this Draft EIS for inclusion in the Final EIS and ROD for the project, or (2) require additional Section 4(f) analysis, which will be prepared as part of the Final EIS.

8.1 Project Description and Supporting Information

CTA, as project sponsor to FTA, proposes to extend the existing Red Line HRT service 5.3 miles south from the existing 95th Street Terminal to 130th Street on Chicago's Far South Side. The project area is 11 miles south of the Loop. The project would address the following needs:

- Transit trips to jobs are longer for Far South Side residents than they are for residents in the Chicago seven-county region as a whole.
- Transit-dependent populations in the project area have limited direct access to rapid transit rail service.

- The project area is geographically isolated from major activity centers and provides residents limited viable transportation options, limiting access between affordable housing (e.g., Altgeld Gardens public housing project) and employment centers outside of the project area.
- Existing transit markets are underserved and transit connectivity is challenging in the project area.
- Disinvestment and limited economic development in the project area have negatively affected Far South Side communities.
- The existing 98th Street Yard does not have capacity to store rail cars for any substantial increase in Red Line capacity accompanying future Red Line expansion.

Additional details on the purpose and need for the project are in **Chapter 1**. The Chicago Transit Board designated the UPRR Alternative, discussed further in **Chapter 2** of the Draft EIS, as the LPA on August 12, 2009.

The UPRR Alternative alignment would run south along I-94 from the 95th Street Terminal, then curve west along the north side of I-57 (within the I-57 right-of-way) for nearly ½ mile until reaching the UPRR corridor in the vicinity of Eggleston Avenue. The alignment would turn south to follow the UPRR corridor. Two UPRR Alternative options for the segment of the proposed alignment between I-57 and the CN/ME tracks near 119th Street are being analyzed:

- East Option - The CTA elevated structure would be placed immediately adjacent to the east side of the UPRR right-of-way.
- West Option - The CTA elevated structure would be placed immediately adjacent to the west side of the UPRR right-of-way.

The alignment would follow the UPRR corridor to Prairie Avenue, where it would cross over the CN/ME tracks near 119th Street. South of this point, the East and West Options would follow the same alignment southeast along the NICTD/CSS & SBRR right-of-way using a portion of the Norfolk Southern Railway and Conrail right-of-way to the terminus (end) of the RLE at 130th Street.

Chapter 2 provides further details on the AA process leading to the development and selection of the LPA and these alignment options.

8.2 Regulatory Framework

This section describes regulatory framework and requirements under Section 4(f) of the USDOT Act of 1966, as amended by 23 USC § 138 and 49 USC § 303, and its implementing regulations and guidance. It includes information on the definition of "use" under Section 4(f) (**Section 8.2.1**) and the basis of making Section 4(f) determinations (**Section 8.2.2**).

8.2.1 Section 4(f) "Use" Determinations

To determine whether Section 4(f) applies to the proposed project and as defined in 23 CFR § 774.17, the protected Section 4(f) properties must be assessed to determine whether there would be a “use” of the property as defined in the statute. Per the regulation, use of a protected Section 4(f) property occurs when any of the following conditions are met:

1. **Permanent Incorporation/Direct Use** - A permanent incorporation or direct use of a Section 4(f) property occurs when land is permanently incorporated into a transportation facility. *“Permanent incorporation”* of a Section 4(f) property would include purchasing part or all of the property for use as right-of-way or for transportation facilities, or purchasing a permanent easement for construction or operations. Even small partial acquisitions of Section 4(f) lands are considered permanent incorporation.

2. **Temporary Use** - A temporary use of a Section 4(f) property occurs when there is a short-term use of the property that is considered adverse in terms of the preservation purpose of the Section 4(f) statute. Under 23 CFR § 774.13, a temporary occupancy of a property does not constitute a “use” of a Section 4(f) property when all of the following conditions are satisfied:

    - The duration is temporary (i.e., less than the time needed for construction of the project), and there is no change in ownership of land.

    - The scope of work is minor (i.e., both the nature and magnitude of the changes to a Section 4(f) property are minimal).

    - There are no anticipated permanent adverse physical impacts, nor is there interference with the protected activities, features, or attributes of the property, on either a temporary or permanent basis.

    - The land being used is fully restored to a condition that is at least as good as that which existed before the project.

    - There is documented agreement among appropriate federal, state, and local official(s) with jurisdiction over the Section 4(f) property regarding the above conditions.

3. **Constructive Use** - A constructive use of a Section 4(f) property occurs when a transportation project would not incorporate land from the property, but the proximity of the project would result in impacts so severe that the protected activities, features, or attributes that qualify the property for protection under Section 4(f) would be substantially impaired (23 CFR § 774.15).

8.2.2 Section 4(f) Approval Options

FTA may not approve the use of a Section 4(f) property, unless it determines the following, as defined in 23 CFR § 774.17:

- There is no feasible and prudent alternative to the use of that land and the project includes all possible planning to minimize harm of using the property.

  OR

- FTA determines that Section 4(f) use of the property would have a “*de minimis*” impact.

Feasible and prudent standards for evaluating avoidance alternatives to using Section 4(f) property are defined in 23 CFR § 774.17. If it is ultimately determined no feasible and prudent avoidance alternative exists, then the alternative with the least overall harm to Section 4(f) properties must be selected. Seven factors, which are established in 23 CFR § 774.3(c)(1), are used in making a determination of the alternative with least overall harm to Section 4(f) properties.

Alternatively, the requirements of Section 4(f) are satisfied with respect to a Section 4(f) property if it is determined by FTA that a transportation project would have a "*de minimis*" impact on the Section 4(f) property.

A *de minimis* impact is defined in 23 CFR § 774.17 as follows:

- For parks, recreation areas, and wildlife/waterfowl refuges, a *de minimis* impact is one that would not adversely affect the features, attributes, or activities qualifying the property for protection under Section 4(f), and the official with jurisdiction has concurred with this determination after there has been a chance for public review and comment.

- For historic sites, a *de minimis* impact means that FTA has determined, in accordance with 36 CFR § 800, that either no historic property would be affected by the project, or the project would have "no adverse effect" on the property in question. The official with jurisdiction must be notified that FTA intends to make a *de minimis* finding based on their concurrence with the "no adverse effect" determination under 36 CFR § 800. This is usually done in the effect determination letter sent to the official with jurisdiction for their concurrence.

If an alternative is found to use Section 4(f) properties, a *de minimis* finding can be made for direct uses or temporary uses that do not adversely affect the activities, features, or attributes that make the property eligible for Section 4(f) protection. The provision allows avoidance, minimization, mitigation, and enhancement measures to be considered in making the *de minimis* determination.

Projects determined to have *de minimis* impacts on Section 4(f) properties may proceed without needing to make a determination that no feasible and prudent avoidance alternatives exist. The officials with jurisdiction must concur in writing with a *de minimis* finding. For parks, recreational areas or wildlife or waterfowl refuge properties, concurrence from the officials having jurisdiction over the properties is required. For historic sites, concurrence from the SHPO on FTA's "No Adverse Effect" determination is required.

8.3 Organization of this Chapter

The sections within this Section 4(f) chapter consider potential impacts in accordance with all applicable regulations and guidance referenced in the previous chapters, and sections are organized to follow the major analysis processes outlined in FHWA's *Section 4(f) Policy Paper*. Each section provides appropriate citations, definitions, and evaluation criteria for each of these steps.

Section 8.4 provides documentation on the identification of all properties potentially afforded protection under Section 4(f). This section includes summary information to identify potential impacts on historic properties, archaeological resources, public parks, recreational facilities, or wildlife/waterfowl refuges.

Sections 8.5 and **8.6** provide the Section 4(f) evaluations for each alignment option proposed. For each Section 4(f) property that was identified, subsections include the following:

- A full description of the Section 4(f) property, including significance for parks identified
- Assessment and determination of Section 4(f) use for that property
- All possible planning to minimize harm, including proposed mitigation measures
- Agency coordination and consultation conducted, including views of the official with jurisdiction over the Section 4(f) property
- A preliminary Section 4(f) finding for the Section 4(f) property

Section 8.7 provides next steps to confirm the preliminary Section 4(f) findings in this chapter.

8.4 Identification of Section 4(f) Properties

The identification of Section 4(f) properties and analyses of use of Section 4(f) properties is based on the findings of the historic and cultural resources analysis (**Section 4.7**, which addresses historic properties), and the neighborhood and community impacts analysis (**Section 4.3**, which addresses parks). The evaluation of properties was also informed by the 2012 *Federal Highway Administration Section 4(f) Policy Paper* issued by FHWA and formally adopted by FTA. Worst-case scenario impacts were assumed throughout the environmental analysis for full disclosure of all potential impacts and identification of potential Section 4(f) uses. Conclusions will be confirmed as part of the Final EIS based on any additional project design decisions that might be made in development of the project, such as station and structure designs beyond conceptual engineering, and after public input on the Draft EIS.

8.4.1 Historic and Archaeological Resources

CTA has been undertaking the Section 106 consultation process since August 2012, as described in **Section 4.7.2**. CTA met with consulting parties in January 2013 to discuss NRHP-eligible properties. As a result of the field investigations and comments received from consulting parties on potentially eligible resources, 15 total resources were identified as eligible for inclusion on the NRHP, including 13 individual buildings and 2 historic districts. On May 8, 2014, FTA and CTA met with consulting parties to discuss potential project effects on NRHP-eligible historic properties. A Draft Effects Report was mailed to consulting parties on April 18, 2014 and responses to comments were provided to consulting parties on November 23, 2016. As described in **Section 4.7.4**, no adverse effects on historic resources would occur because of the RLE Project (East or West Option); no mitigation measures would be required and therefore consultation with consulting parties is complete. In correspondence to the SHPO dated September 21, 2016, FTA made the determination that the UPRR Alternative (East and West Options) would result in no adverse effects. Coordination with the SHPO related to concurrence with FTA's eligibility and effects determinations is ongoing and will continue through the remainder of the project.

Appendix Q contains a full summary of the meeting, comments received, and responses to the comments for the Section 106 consultation.

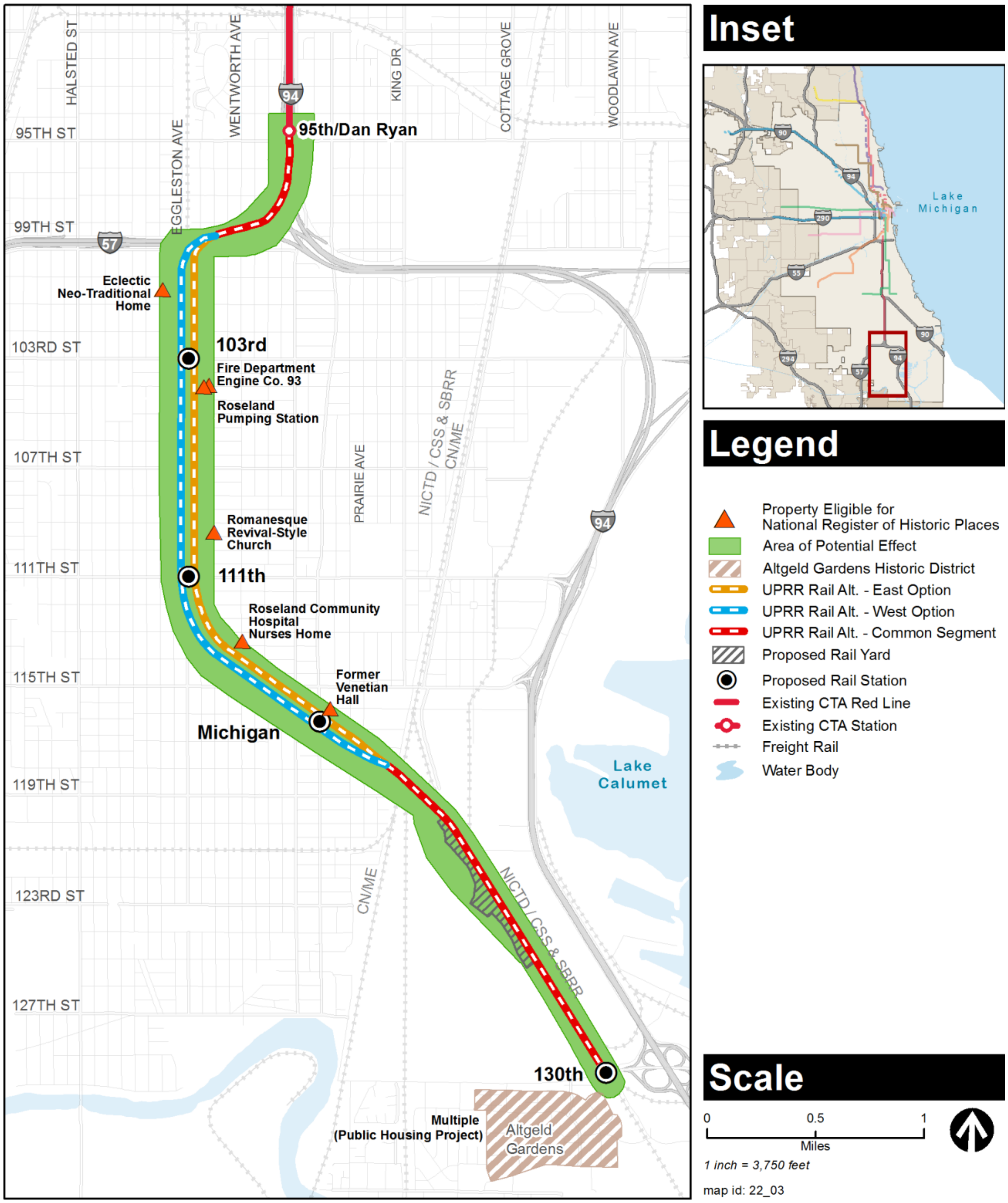
For historic properties, all properties within the APE that were found to be listed on the NRHP or eligible for listing were identified for further evaluation of potential Section 4(f) use. **Table 8-1** lists the historic properties identified within the APE and summarizes determinations of Section 4(f) use for each alignment option. **Figure 8-1** shows the locations of these historic properties.

Table 8-1: Historic Properties Evaluated for Section 4(f) Use

Address	Property Description	Community Area	Section 4(f) Use	
			Union Pacific Railroad Alternative East Option	Union Pacific Railroad Alternative West Option
444 W. 100th Place	Eclectic Neo-Traditional Home (built 1930)	Washington Heights	No Use	No Use
324 W. 104th Street	Fire Department Engine Co. 93 (built 1917)	Roseland	No Use	No Use
351 W. 104th Street	Roseland Pumping Station (built 1911)	Roseland	No Use	No Use
10920 S. Princeton Avenue	Romanesque Revival-Style Church (built 1916)	Roseland	No Use	No Use
11321 S. Wentworth Avenue	Roseland Community Hospital Nurses Home (built 1930s)	Roseland	No Use	No Use
133-139 E. Kensington Avenue	Former Venetian Hall (built 1925)	Riverdale	No Use	No Use
Multiple (Public Housing Project)	Altgeld Gardens Historic District (built 1945)	Riverdale	No Use	No Use

There would be no permanent incorporation, temporary use, or a constructive use of any of the historic properties under either option. No historic properties or land would be acquired or used for construction or permanently for either alignment option. As such, neither option would result in the use of any historic properties protected under Section 4(f).

There are no known archaeological sites within the project APE. There would be no permanent incorporation, temporary use, or constructive use of any archaeological resources under either option; therefore, neither option would result in the use of any archaeological resources protected under Section 4(f).


HALSTED ST
WENTWORTH AVE
KING DR
COTTAGE GROVE
WOODLAWN AVE
95TH ST
94
95th/Dan Ryan
EGGLESTON AVE
99TH ST
57
Eclectic Neo-Traditional Home
103RD ST
103rd
Fire Department Engine Co. 93
Roseland Pumping Station
NICTD / CSS & SBRR CN/ME
107TH ST
PRAIRIE AVE
Romanesque Revival-Style Church
94
111TH ST
111th
Roseland Community Hospital Nurses Home
115TH ST
Former Venetian Hall
Michigan
119TH ST
Lake Calumet
123RD ST
CN/ME
NICTD / CSS & SBRR
127TH ST
130th
Multiple (Public Housing Project)
Altgeld Gardens
Inset
Lake Michigan
90
94
290
55
90
294
57
94
Legend
Property Eligible for National Register of Historic Places
Area of Potential Effect
Altgeld Gardens Historic District
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
UPRR Rail Alt. - Common Segment
Proposed Rail Yard
Proposed Rail Station
Existing CTA Red Line
Existing CTA Station
Freight Rail
Water Body
Scale
0
0.5
1
Miles
1 inch = 3,750 feet
map id: 22_03

CN/ME = Canadian National/Metra Electric District, NICTD/CSS & SBRR = Northern Indiana Commuter Transportation District/Chicago South Shore & South Bend Railroad

Figure 8-1: Historic Properties in the Area of Potential Effects

8.4.2 Parks, Recreation, and Wildlife/Waterfowl Refuge Resources

No wildlife or waterfowl refuges were identified within ½ mile of the proposed alignment options. There would be no permanent incorporation, temporary use, or a constructive use of any wildlife/waterfowl resources under either option; therefore, neither option would result in the use of any wildlife/waterfowl refuges protected under Section 4(f).

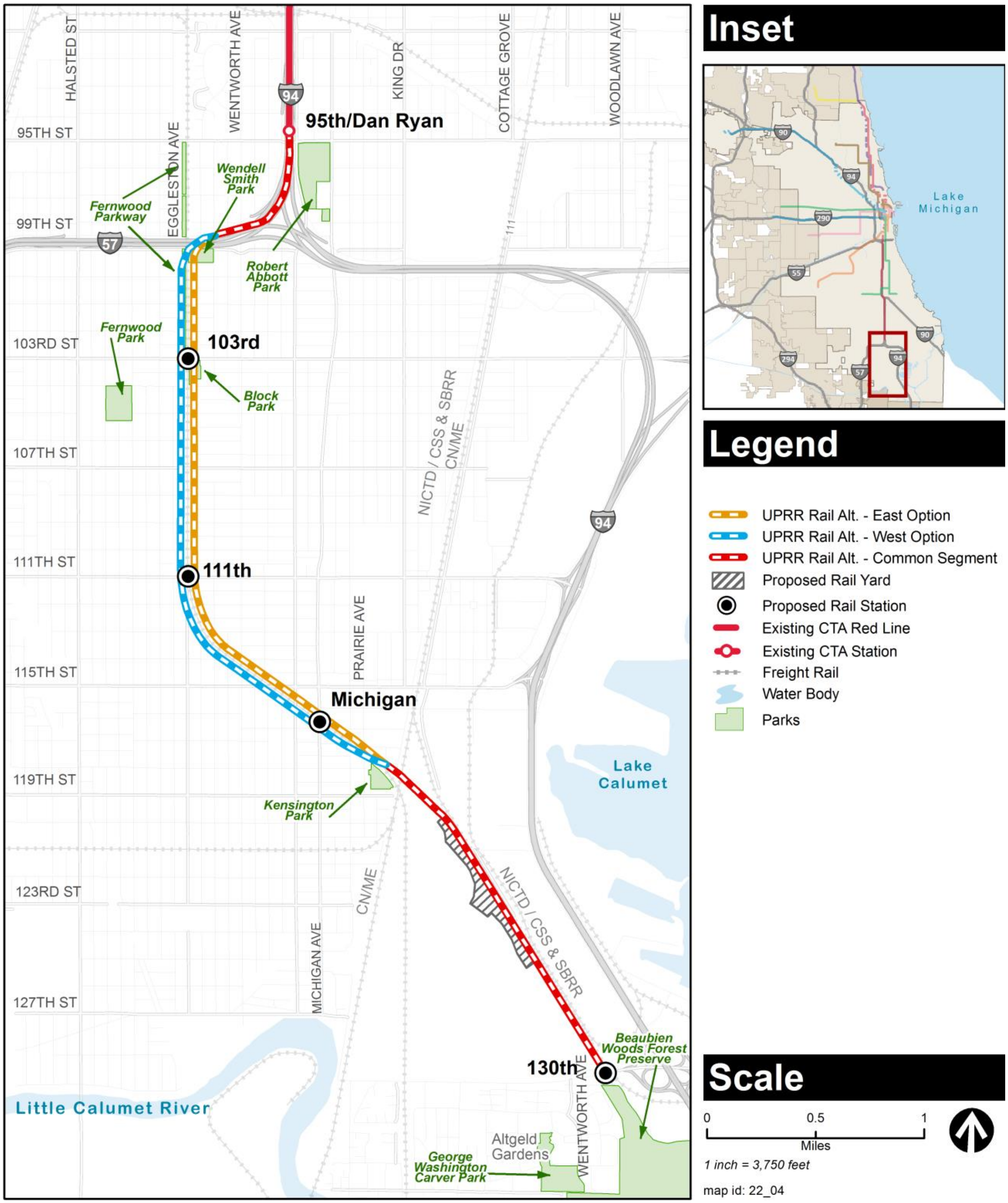
All public parks and recreational properties within 500 feet of the proposed right-of-way area and within ½ mile of the proposed station locations were analyzed for further evaluation of potential Section 4(f) use. **Table 8-2** lists the parks adjacent to the project and determinations of Section 4(f) use for each alignment option. **Figure 8-2** shows the locations of these parks.

There would be no Section 4(f) use of Robert Abbot Park, Kensington Park, Beaubien Woods Forest Preserve, or George Washington Carver Park permanently or during construction. While these parks would be exposed to increased noise during construction or operations, each of these parks is currently located near an existing highway, freight rail line, or major city streets. As such, these parks are not currently quiet, thus, quiet is not essential to their attributes, features, or activities. In addition, noise barriers would mitigate noise impacts near Robert Abbot Park and Kensington Park. Any increased noise would therefore not substantially impair the attributes, features, or activities that render the parks eligible for Section 4(f) protection. In addition, most parks in the project area would benefit from the transit extension due to improved public accessibility.

Parks subject to further evaluation under Section 4(f) include Wendell Smith Park, Fernwood Parkway, and Block Park. **Sections 8.5** and **8.6** of this chapter provide further details on the determination of Section 4(f) uses of these properties and preliminary findings.

Table 8-2: Park and Recreational Properties Evaluated for Section 4(f) Use

Park or Recreational Property Name	Address	Section 4(f) Use	
		Union Pacific Railroad Alternative East Option	Union Pacific Railroad Alternative West Option
Robert Abbott Park	49 E. 95th Street	No Use	No Use
Wendell Smith Park	9912 S. Princeton Avenue	*De minimis*	No Use
Fernwood Parkway	9501 S. Eggleston Avenue	No Use	*De minimis*
Block Park	346 W. 104th Street	*De minimis*	No Use
Kensington Park	345 E. 118th Street	No Use	No Use
Fernwood Park	10436 S. Wallace Street	No Use	No Use
Beaubien Woods Forest Preserve	1 W. Doty Avenue South	No Use	No Use
George Washington Carver Park	939 E. 132nd Street	No Use	No Use


Inset
Lake Michigan
Legend
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
UPRR Rail Alt. - Common Segment
Proposed Rail Yard
Proposed Rail Station
Existing CTA Red Line
Existing CTA Station
Freight Rail
Water Body
Parks
Scale
0
0.5
1
Miles
1 inch = 3,750 feet
map id: 22_04
HALSTED ST
WENTWORTH AVE
KING DR
COTTAGE GROVE
WOODLAWN AVE
95TH ST
99TH ST
103RD ST
107TH ST
111TH ST
115TH ST
119TH ST
123RD ST
127TH ST
EGGLESTON AVE
PRAIRIE AVE
MICHIGAN AVE
95th/Dan Ryan
103rd
111th
Michigan
130th
Fernwood Parkway
Wendell Smith Park
Robert Abbott Park
Fernwood Park
Block Park
Kensington Park
Beaubien Woods Forest Preserve
George Washington Carver Park
Altgeld Gardens
NICTD / CSS & SBRR
CN/ME
Lake Calumet
Little Calumet River
94
57
90
290
55
294

CN/ME = Canadian National/Metra Electric District, NICTD/CSS & SBRR = Northern Indiana Commuter Transportation District/Chicago South Shore & South Bend Railroad

Figure 8-2: Publicly Owned Park and Recreational Properties Adjacent to the Project

8.5 Union Pacific Railroad Alternative East Option Section 4(f) Evaluation

Two Section 4(f) park properties would be used as result of this alignment option: Wendell Smith Park and Block Park, which are evaluated below.

8.5.1 Wendell Smith Park

Description and Significance of Property

Wendell Smith Park is approximately 4.7 acres (340 feet wide by 610 feet long) and is an actively used recreational facility with basketball courts, baseball fields, a play lot, recreation building, and 0.3 mile of walking trails in Roseland. Regularly scheduled activities at Wendell Smith Park include basketball tournaments, baseball/softball games, and concerts. The park is also actively used by day camps and for activities organized by the Chicago Park District. **Figure 8-3** through **Figure 8-5** are photos and an aerial view of Wendell Smith Park.

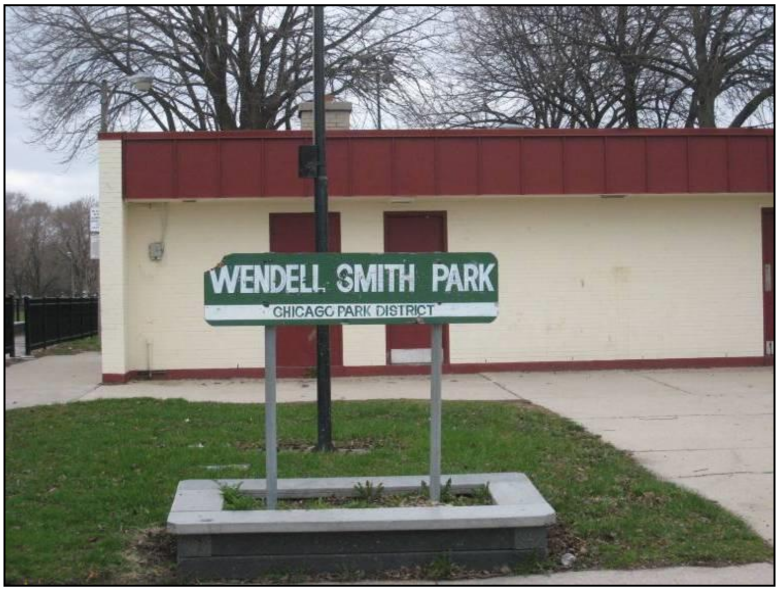


Figure 8-3: Photo of Entrance to Wendell Smith Park Facing West from Princeton Avenue

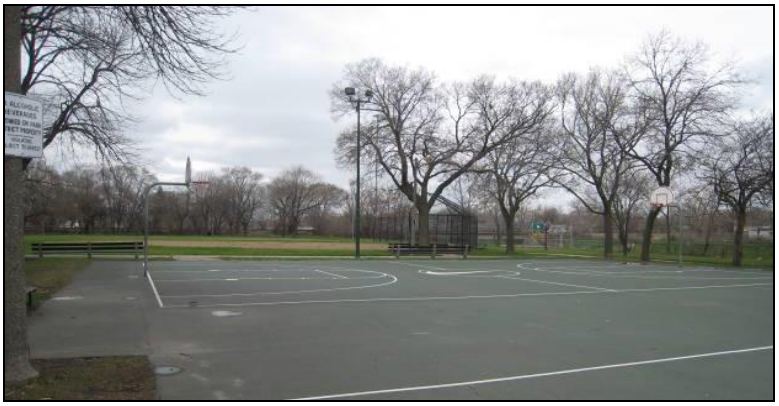
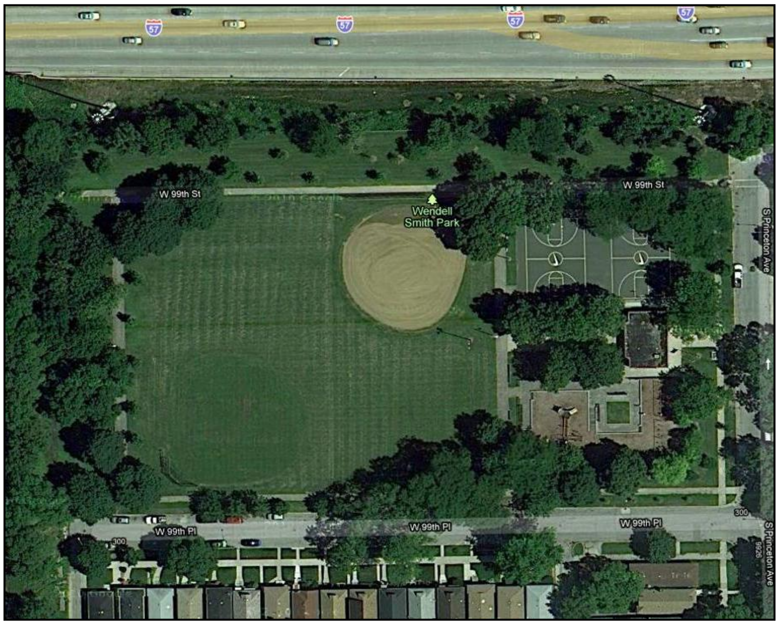


Figure 8-4: Photo of Wendell Smith Park Basketball Courts Facing West



Source: Google Maps 2011

Figure 8-5: Aerial Photograph of Wendell Smith Park

Section 4(f) Use Assessment

The East Option alignment would run through the northwestern corner of the park, as shown in **Figure 8-6**. Elevated track structure supports would be placed permanently in the park space. Of the 4.7 acres of the park, approximately 0.7 acre would be overlapped by the elevated structure and its associated clearances. Piers would be located in the park, and the bottom of the elevated structure would be approximately 15 feet above ground level.

The following attributes and features of the park are within or adjacent to the overlap area:

- **Paved Walking Path/Trees/Bench** - An existing paved walking path is maintained along the entire rectangular perimeter of the park. The westernmost north-south portion of the walking trail and a small portion of the northwestern edge of the walking path would be overlapped by the track structure. A number of small trees line the existing walking path and would be used by the overlap with tracks. In addition, there are two benches along the westernmost north-south walking path within the overlap area.

- **Baseball Field** - There are two baseball fields within Wendell Smith Park. The sand-filled baseball field on the northeast portion of the park is a junior-size baseball diamond. A small portion of the existing outfield/open space would be within the overlap area, but the overlap would not affect the ability to use the baseball field. The second baseball field is a smaller, junior-sized baseball field in the southwest corner of the park. This junior baseball field contains a backstop and bench. Due to the proposed overlap area, the bench and space behind this backstop would be used.

The overlap of the elevated track and placement of elevated track structure supports within the park would limit park use in the overlapped area. This limitation on land owned or operated by the Chicago Park District (because of the elevated structure being placed on its property) is referred to as a permanent easement. Because a permanent easement is proposed, the land within the easement would be considered a permanent incorporation (direct use) of the park facilities. The park would remain active during construction, with the exception of the overlapped portion of the park, and construction would not result in substantial changes to the park. There would be temporary and permanent uses of the protected attributes, features, and activities of the park due to the overlapped portion of the park needed for permanent right-of-way. There would be no noise impacts related to operation of the proposed project after construction of mitigation measures (noise barrier). Mitigation measures, further discussed below, would be implemented in advance of construction to the extent possible to maintain all park facilities. Remaining land used (area not used for the structure) would be restored to a condition at least as good as that which existed before the project.

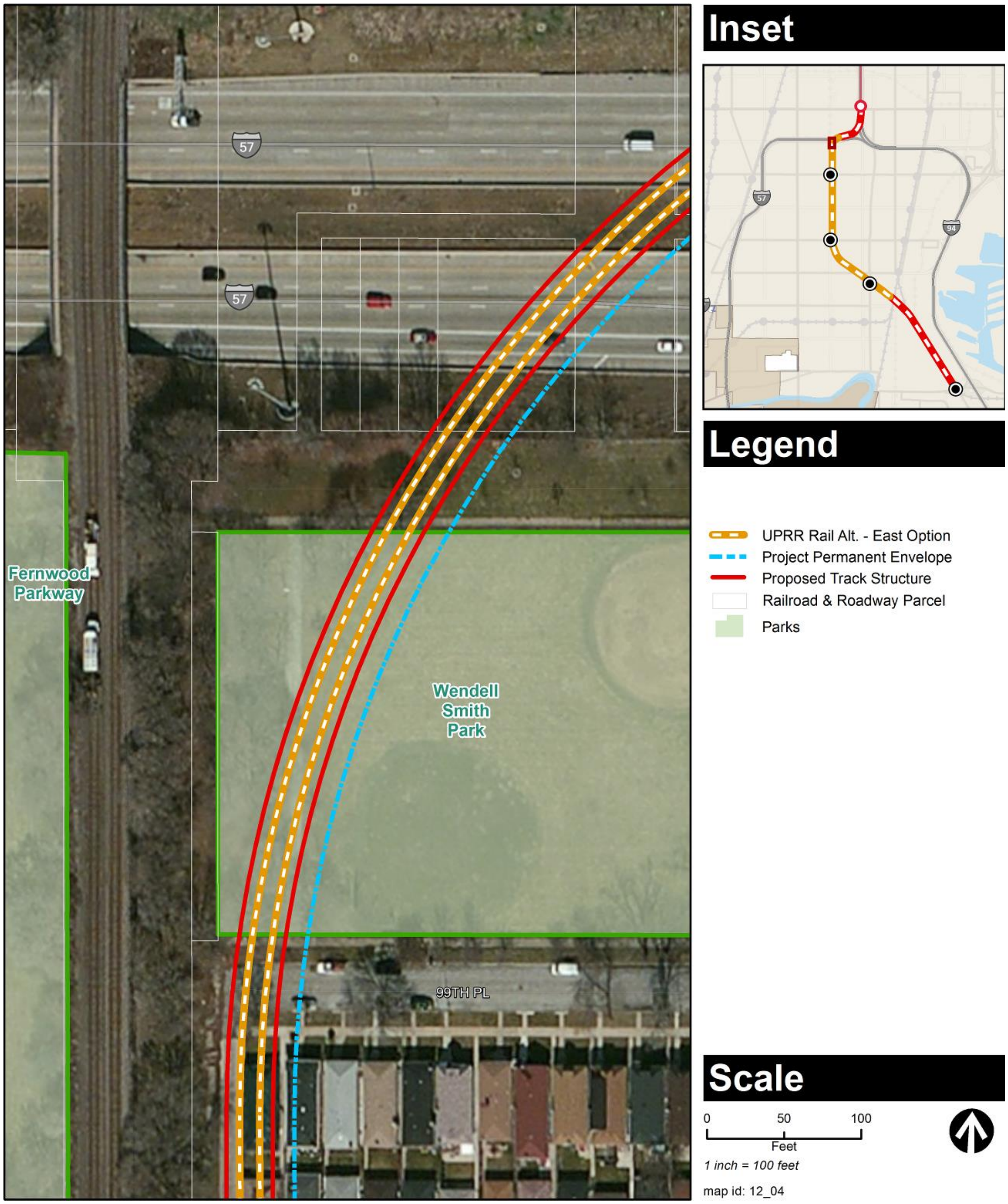

57
57
Fernwood Parkway
Wendell Smith Park
99TH PL
Inset
57
94
Legend
UPRR Rail Alt. - East Option
Project Permanent Envelope
Proposed Track Structure
Railroad & Roadway Parcel
Parks
Scale
0
50
100
Feet
1 inch = 100 feet
map id: 12_04

Figure 8-6: Impacts on Wendell Smith Park - Union Pacific Railroad Alternative East Option

All Possible Planning to Minimize Harm

Wendell Smith Park would continue to serve the surrounding community after implementation of the project. The following mitigation and enhancement measures are proposed so that there would be no adverse impacts on the features, attributes, and activities of the park as a result of the project. CTA coordinated with the Chicago Park District as part of the preparation of the Draft EIS to further develop mitigation measures and conceptual plans. **Appendix Y** provides conceptual plans for replacement of amenities within Wendell Smith Park and other replacement park options.

- Replacement of lands (acreage) used with lands of reasonably equivalent usefulness and location and of at least comparable value. The replacement land would be used to construct new park space in or near the Roseland community area to enhance parkland availability for the surrounding community. New park area created through this replacement acreage would be constructed in accordance with Chicago Park District standards and would facilitate Chicago Park District master planning goals and objectives.

- Replacement of the two smaller, junior-sized baseball fields within Wendell Smith Park to provide one larger baseball field. This mitigation measure was developed based on coordination with the Chicago Park District so that the attributes, features, and activities within the park would not be adversely affected as a result of the East Option. This measure would enhance existing baseball facilities and activities within the park. Additional outreach to the public will be conducted to share concepts and obtain public feedback.

- Relocation and replacement of the smaller, junior-sized baseball field on replacement parkland based on coordination with the Chicago Park District and outreach to the public so that the attributes, features, and activities would not be adversely affected by the use of the northwest corner of the park.

- Replacement and relocation of facilities affected by the project including sidewalks, paths, benches, trees, and other facilities within Wendell Smith Park.

- Restoration and landscaping of disturbed areas.

- Incorporation of design features where necessary to reduce or minimize impacts of use on the Section 4(f) property. Such features would be designed in a manner that would enhance the park but not adversely affect the safety of the transit facility.

Preliminary Section 4(f) Finding

Based on consideration of the proposed direct use as well as the proposed mitigation and enhancement measures, no adverse impacts on the attributes, features, or activities would result from the East Option; therefore, a *de minimis* finding is proposed for this Section 4(f) use. The Chicago Park District has concurred with this No Adverse Effect determination with the commitment of proposed mitigation measures in its letter dated August 17, 2015 (see **Appendix C**).

A public involvement process will be held in conjunction with the required NEPA public involvement process after publication of the Draft EIS for review and comment on this preliminary finding. During development of this Draft EIS, CTA and the Chicago Park District coordinated on several potential locations for new/replacement park space and replacement of amenities within Wendell Smith Park. **Appendix Y** provides conceptual plans for potential replacement parks based on this coordination. These locations and conceptual plans will be shared with the public for input as part of the Draft EIS public hearing.

FTA will consider public comment and the availability of the replacement park in determining whether the preliminary *de minimis* impact determination within this Draft EIS is appropriate. Based on FTA's finding and public input, a preferred location for replacement parkland will be identified as part of the Final EIS. The final location of the replacement park will be confirmed and secured based on ability to acquire property voluntarily, following the completion of the environmental phase of this project.

Agency Coordination and Consultation

Coordination with the agency with jurisdiction over the property, the Chicago Park District, is ongoing and will continue through development of the Final EIS. Early coordination meetings were held on April 18, 2011; July 23, 2013; May 8, 2014; and April 8, 2015 to provide Chicago Park District staff with information on the purpose and need for the project, identification and refinement of alternatives, and potential impacts on parks, and to discuss proposed mitigation measures. The Chicago Park District provided its concurrence on August 17, 2015 that after implementation of the proposed mitigation measures there would be no adverse impact on parks from either alignment option. Additional coordination meetings were held to further develop and refine proposed mitigation measures on October 8, 2015; March 10, 2016; April 6, 2016; May 18, 2016; and June 15, 2016. This coordination will continue as public input is obtained and when finalizing replacement park options and other mitigation measures in the Final EIS. The Chicago Park District has indicated that it regards this project as an opportunity to expand and enhance park activities and overall connectivity in the community once mitigation measures are in place.

8.5.2 Block Park

Description and Significance of Property

Block Park is a passive green space and is divided into two parcels by Harvard Avenue in Roseland. The east parcel is approximately 1.4 acres (130 feet wide by 460 feet long) and includes amenities such as benches, walking paths, and sidewalks. The west parcel is approximately 1.3 acres (90 feet wide by 600 feet long) and is open space with a sidewalk and no other park amenities. In addition, a communications tower and two utility structures are on the west parcel. **Figure 8-7** and **Figure 8-8** are photos of Block Park.

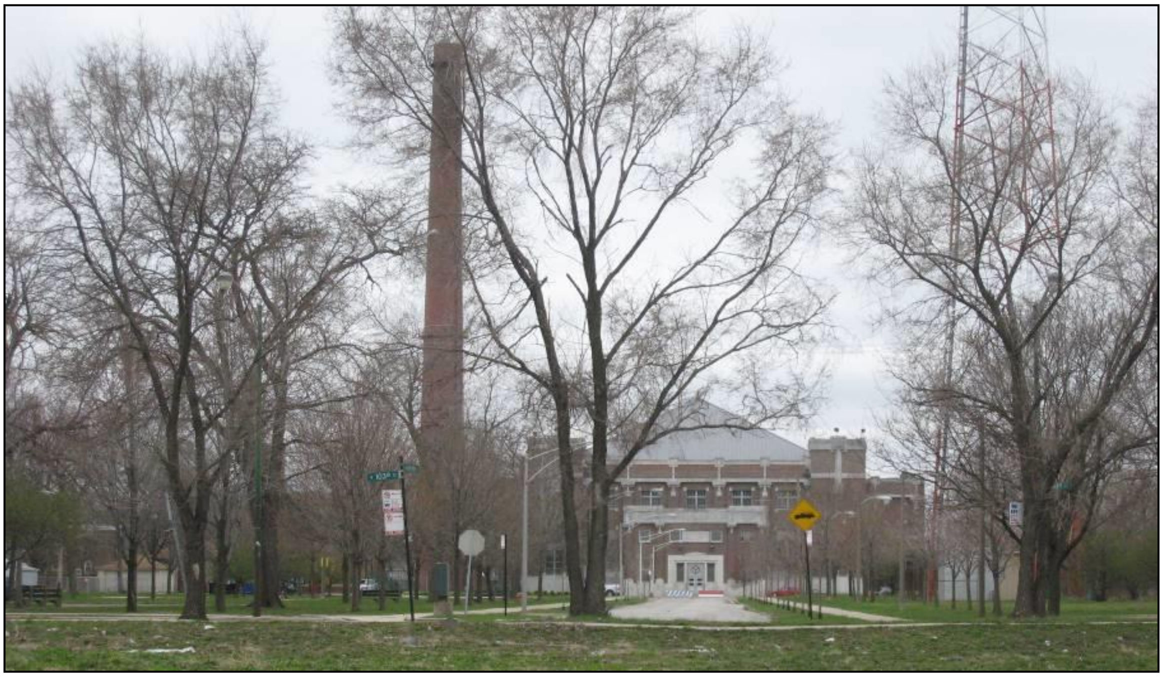


Figure 8-7: Photo of Block Park with the Roseland Pumping Station in the Background (Facing South)

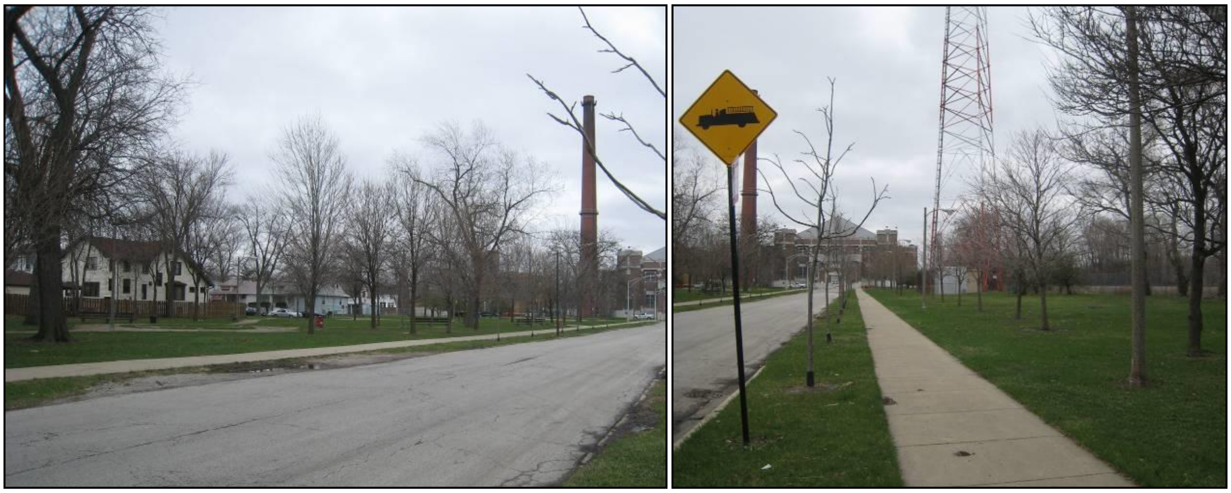


Figure 8-8: Photos of East Parcel (left) and West Parcel (right) of Block Park (Facing South)

Section 4(f) Use Assessment

The East Option alignment would run through the west parcel of Block Park, and the elevated structure and its associated clearances would overlap 0.9 acre of park space, as shown in **Figure 8-9**. Elevated track structure supports would be placed permanently in the west parcel of the park space. An auxiliary station entrance would also be located in the park, along the western edge of the existing parcel. The affected parcel includes an isolated portion of the park's open space and a communications tower, and does not currently serve a recreational use. The key recreational features of the park, walking trails and benches, are on the other side of Harvard Avenue in the east parcel of the park.

Because the alignment would run through the west parcel of Block Park, there would be a permanent incorporation (direct use) of the park facilities. Some temporary closure of the overlapped area (west parcel) would be necessary during construction and be used permanently. The east parcel of the park would remain open during construction and there would be no temporary or permanent impacts on the protected attributes, features or activities of the park. There would be no noise impacts related to operation of the proposed project after construction of mitigation measures (noise barrier). Mitigation measures, further discussed below, would be implemented in advance of construction to the extent possible. Remaining land used (area not used for the structure) would be restored to a condition at least as good as that which existed before the project.

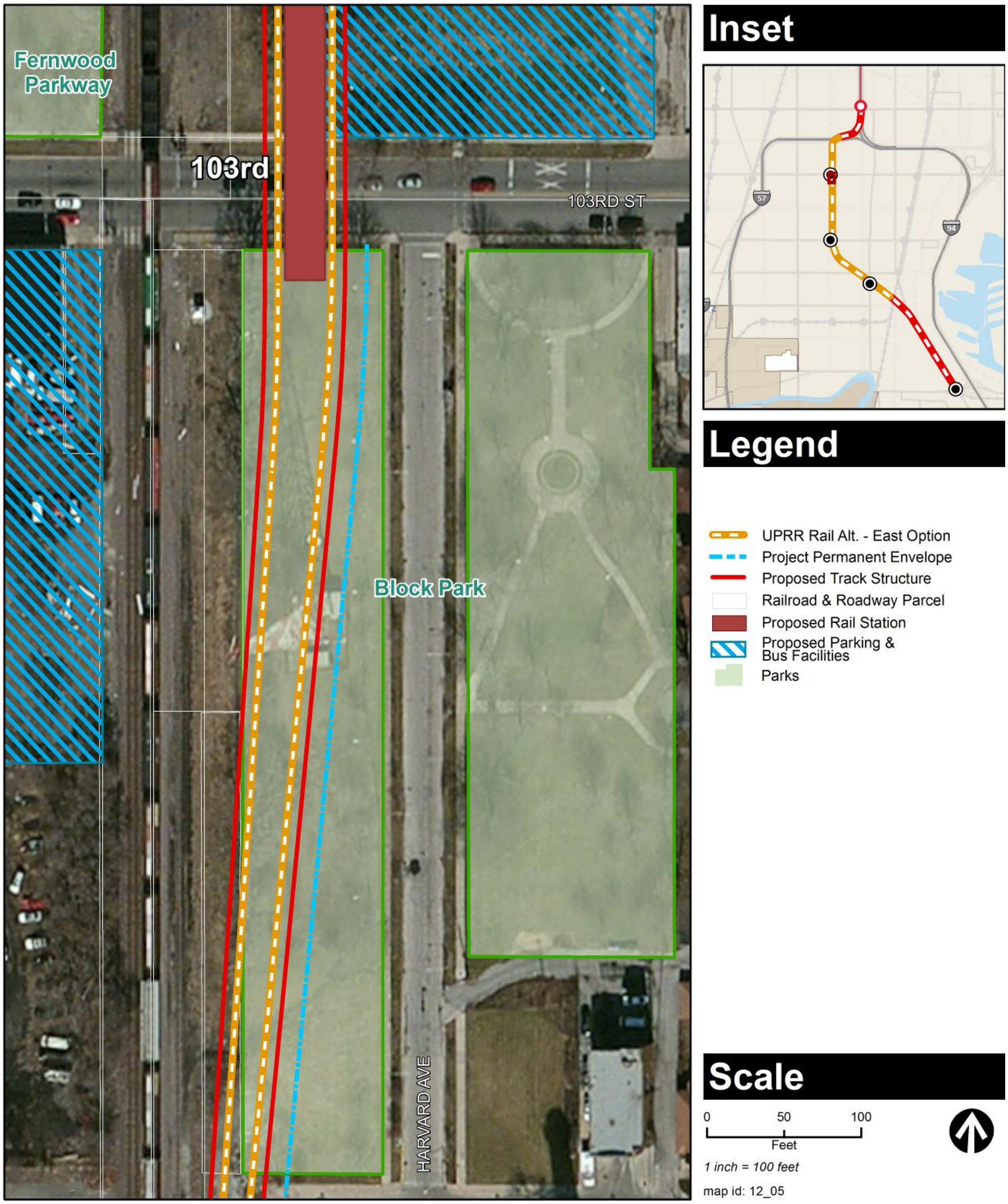

Fernwood Parkway
103rd
103RD ST
Block Park
HARVARD AVE
Inset
Legend
UPRR Rail Alt. - East Option
Project Permanent Envelope
Proposed Track Structure
Railroad & Roadway Parcel
Proposed Rail Station
Proposed Parking & Bus Facilities
Parks
Scale
0
50
100
Feet
1 inch = 100 feet
map id: 12_05

Figure 8-9: Impacts on Block Park - Union Pacific Railroad Alternative East Option

All Possible Planning to Minimize Harm

After implementation of the following proposed mitigation and enhancement measures, there would be no adverse impact on the features, attributes, and activities of the park. **Appendix Y** provides conceptual plans of Block Park and other replacement park options.

- Replacement of lands used (acreage) with lands of reasonably equivalent usefulness and location and of at least comparable value. The replacement land would be used to construct additional new park space in or near the Roseland community area to enhance parkland availability for the surrounding community. New park space created through this replacement acreage would be constructed in accordance with Chicago Park District standards and would facilitate Chicago Park District master planning goals and objectives.

- Restoration and landscaping of disturbed areas.

- Incorporation of design features where necessary to reduce or minimize impacts of use on the Section 4(f) property. Such features would be designed in a manner that would enhance the park but not adversely affect the safety of the transit facility.

While not related to the attributes, features, or activities of the park, additional mitigation measures would include coordination with the City of Chicago and the Federal Communications Commission regarding relocation of the communications tower.

Preliminary Section 4(f) Finding

Based on consideration of the proposed direct use as well as the proposed mitigation and enhancement measures, no adverse impacts on the attributes, features, or activities would result from the East Option; therefore, a *de minimis* finding is proposed for this Section 4(f) use.

The Chicago Park District has concurred with this No Adverse Effect determination with the commitment of proposed mitigation measures in its letter dated August 17, 2015 (see **Appendix C**).

A public involvement process would be held in conjunction with the required NEPA public involvement process after publication of the Draft EIS for review and comment on this preliminary finding. During development of this Draft EIS, CTA and the Chicago Park District coordinated on several potential locations for new/replacement park space. **Appendix Y** provides conceptual plans for potential replacement parks based on this coordination. These locations and conceptual plans will be shared with the public for input as part of the Draft EIS public hearing.

FTA will consider public comment and the availability of the replacement park in determining whether the preliminary *de minimis* impact determination within this Draft EIS is appropriate. Based on FTA's finding and public input, a preferred location for replacement parkland will be identified as part of the Final EIS. The final location of the replacement park will be confirmed and secured based on ability to acquire property voluntarily, following the completion of the environmental phase of this project.

Agency Coordination and Consultation

Coordination with the agency with jurisdiction over the property, the Chicago Park District, is ongoing and will continue through development of the Final EIS. Early coordination meetings were held on April 18, 2011; July 23, 2013; May 8, 2014; and April 8, 2015 to provide Chicago Park District staff with information on the purpose and need for the project, identification and refinement of alternatives, and potential impacts on parks, and to discuss proposed mitigation measures. The Chicago Park District provided its concurrence on August 17, 2015 that after implementation of the proposed mitigation measures there would be no adverse impact on parks from either alignment option. Additional coordination meetings were held to further develop and refine proposed mitigation measures on October 8, 2015; March 10, 2016; April 6, 2016; May 18, 2016; and June 15, 2016. This coordination will continue as public input is obtained and in finalizing replacement park options and other mitigation measures in the Final EIS. The Chicago Park District has indicated that it regards this project as an opportunity to expand and enhance park activities and overall connectivity in the community once mitigation measures are in place.

8.6 Union Pacific Railroad Alternative West Option Section 4(f) Evaluation

During construction of the West Option, there would be temporary and minor construction activities within Wendell Smith Park for a short duration. These temporary construction activities, further described below, would not rise to a level of Temporary Occupancy under Section 4(f) and there would be no permanent use of the park under Section 4(f).

One Section 4(f) park property would be used as result of the West Option—Fernwood Parkway, which is further evaluated in this section.

8.6.1 Wendell Smith Park

Description and Significance of Property

Section 8.5.1 provides a full description and pictures of Wendell Smith Park.

Section 4(f) Use Assessment

The West Option alignment would be located near the existing park, but would not permanently use any parkland. Due to the proximity of the West Option alignment to the park, during construction there would likely be temporary closure of a small portion of the northwest corner of the park (approximately 0.1 acre) while the tracks are constructed and piers are installed. This closure would be temporary (expected to be no more than 3 to 4 months as piers are installed).

There would be no permanent incorporation of Wendell Smith Park proposed under the West Option, because no land from this park would be used for the project. There would be a short-term closure of the northwest corner of the park (approximately 0.1 acre) during construction, but this closure would not rise to the level of temporary occupancy under 23 CFR § 774.13. The total closure time of 3 to 4 months of this small portion of the park would be substantially less than the total time needed for construction and there would be no change in ownership of the land. The work proposed would be minor, and due to the proximity of the park to the elevated track it would have minimal impact on the property during construction and no permanent physical impact on the park. The temporarily used land would be fully restored to a condition at least as good as that which existed before the project.

Public use of the park would continue throughout construction of the project, and construction would not affect the attributes, features, or activities of the park. There would be no noise impacts related to operation of the proposed project after construction of mitigation measures (noise barrier). If there were any impact on the existing walking trail during these construction activities, the affected portion of the walking trail would be temporarily relocated within the park. No impacts on existing trees are expected to occur as a result of construction activities. Should any trees need to be cut to allow for activities, the trees would be replaced. Appropriate construction BMPs would be followed to shield construction activities, allow use of the property by the general public, and minimize any safety risks.

The Chicago Park District provided its concurrence on August 17, 2015 that after implementation of the proposed mitigation measures there would be no adverse impact on any parks from either alignment option. Based on these factors and the nature of the minor construction-related work proposed, the temporary construction proposed under the West Option would not rise to the level of temporary occupancy of Wendell Smith Park and there would therefore be no use of the park under Section 4(f).

8.6.2 Fernwood Parkway

Description and Significance of Property

Fernwood Parkway is a passive green space in Washington Heights that extends from 95th Street to 103rd Street. The parkway is divided into four parcels, two of which are north of I-57 and two of which are south of I-57. The two parcels south of I-57 are separated by 101st Street. The northern parcel, from 99th Street to 101st Street, is approximately 2.4 acres (78 feet wide by 1,325 feet long). The southern parcel, from 101st Street to 103rd Street, is approximately 2.9 acres (78 feet wide by 1,277 feet long). Both the north and south parcels of Fernwood Parkway serve as open space and do not contain recreational facilities or amenities such as sidewalks or benches. Some trees are planted within the park and a chain-link fence separates the green space from the existing at-grade UPRR tracks. **Figure 8-10** and **Figure 8-11** show Fernwood Parkway facing north and south.

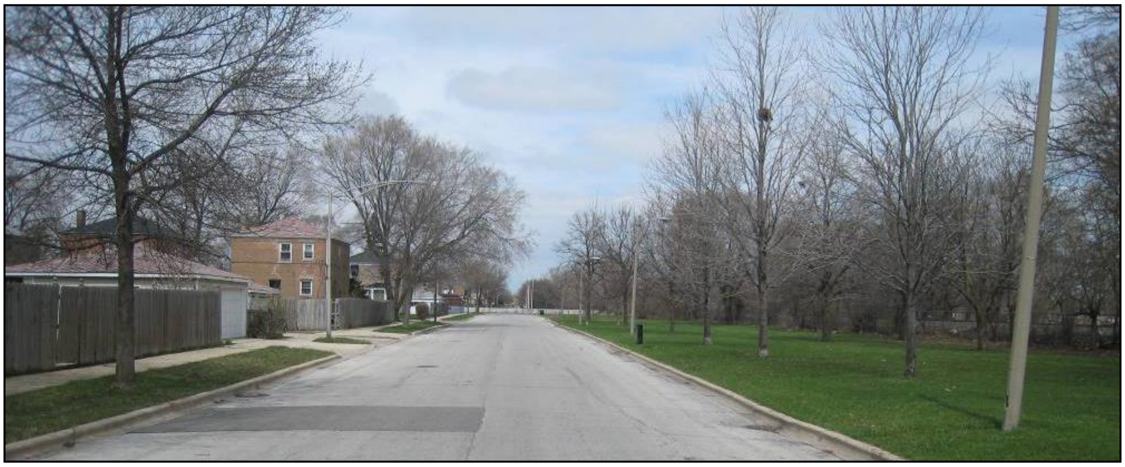


Figure 8-10: Photo of Fernwood Parkway at 100th Street and Eggleston Avenue (Facing North)

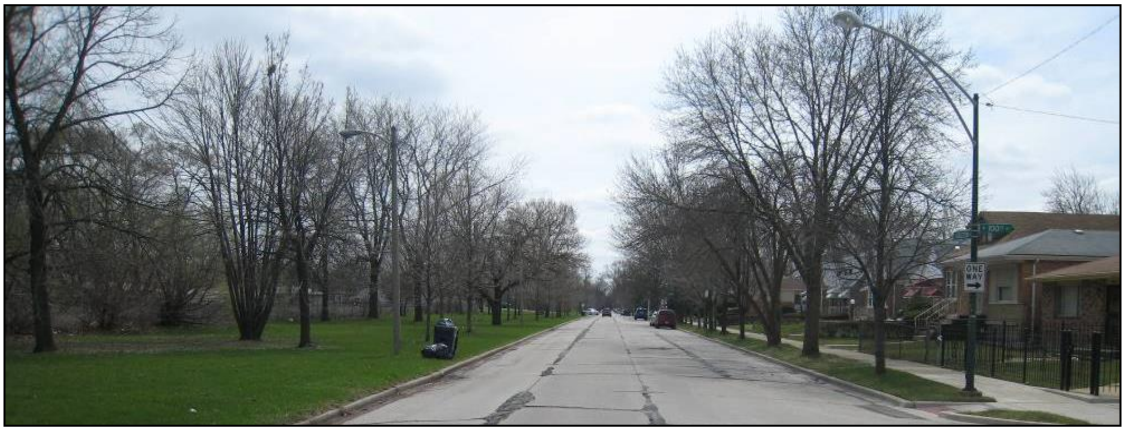


Figure 8-11: Photo of Fernwood Parkway at 100th Street and Eggleston Avenue (Facing South)

Section 4(f) Use Assessment

The West Option track structure would run through two of the four parcels that make up Fernwood Parkway between 101st and 103rd Streets. Elevated track structure supports would be placed permanently in the parkway. Approximately 1.9 acres of the parkway would be overlapped by the elevated structure and its associated clearances (see **Figure 8-12**). The parkway functions as open space, and does not contain recreational amenities.

The West Option would result in a permanent incorporation of the park space, which constitutes use under Section 4(f). Temporary closure of the overlapped section of the parkway would be necessary during construction. Elevated track structure supports would be placed permanently in the park space. There would be no noise impacts related to operation of the proposed project after construction of mitigation measures (noise barrier). Mitigation measures, further discussed below, would be implemented in advance of construction to the extent possible. Except for the piers that would be placed in the park, the land used would be restored to a condition at least as good as that which existed before the project.

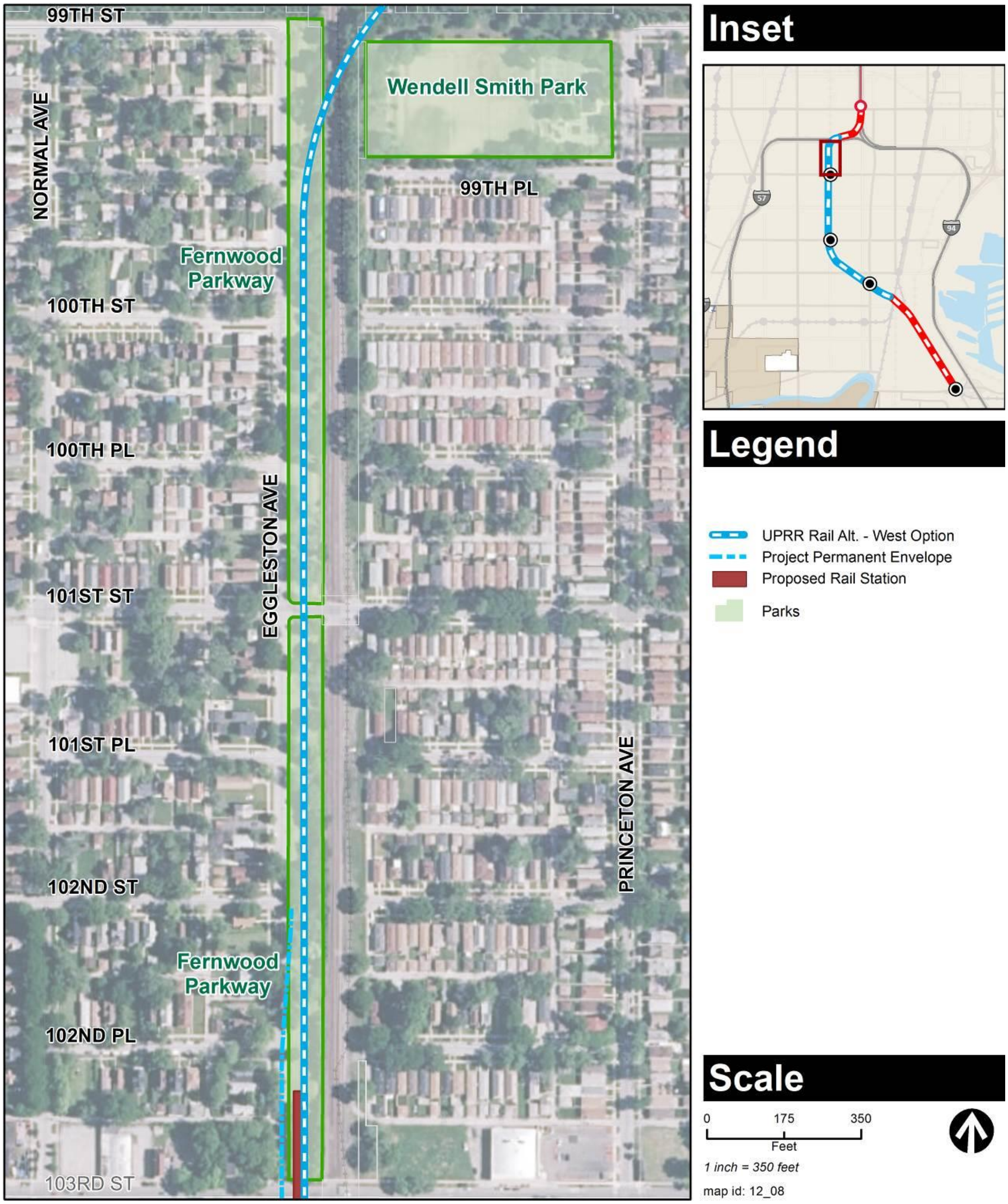

99TH ST
NORMAL AVE
Wendell Smith Park
99TH PL
Fernwood Parkway
100TH ST
100TH PL
EGGLESTON AVE
101ST ST
101ST PL
PRINCETON AVE
102ND ST
Fernwood Parkway
102ND PL
103RD ST
Inset
57
94
Legend
UPRR Rail Alt. - West Option
Project Permanent Envelope
Proposed Rail Station
Parks
Scale
0
175
350
Feet
1 inch = 350 feet
map id: 12_08

Figure 8-12: Impacts on Fernwood Parkway - Union Pacific Railroad Alternative West Option

All Possible Planning to Minimize Harm

After implementation of the following proposed mitigation and enhancement measures, there would be no adverse impact on the features, attributes, and activities of the park. **Appendix Y** provides conceptual plans of Fernwood Parkway and other replacement park options.

- Replacement of lands (acreage) used with lands of reasonably equivalent usefulness and location and of at least comparable value. The replacement land would be used to construct replacement park space in or near the Washington Heights community area to enhance parkland availability for the surrounding community. New park space created through this replacement acreage would be constructed in accordance with Chicago Park District standards and would facilitate Chicago Park District master planning goals and objectives.

- Potential installation of a new bicycle path beneath the elevated track structure, subject to use for CTA maintenance, which would enhance the existing unused green space and better connect parks and the newly proposed transit infrastructure. Additional coordination with CDOT as part of the Final EIS will finalize the feasibility of this measure.

- Restoration and landscaping of disturbed areas.

- Incorporation of design features where necessary to reduce or minimize impacts of use on the Section 4(f) property. Such features would be designed in a manner that would enhance the green space but not adversely affect the safety of the transit facility.

Preliminary Section 4(f) Finding

Based on consideration of the proposed direct use as well as the proposed mitigation and enhancement measures, no adverse impacts on the attributes, features, or activities would result from the West Option; therefore, a *de minimis* finding is proposed for this Section 4(f) use. There are no physical features requiring replacement, and replacement parkland proposed as mitigation would replace this linear open green space near existing at-grade rail with more enhanced opportunities for active recreation park space within or near the surrounding community. Additional potential for bicycle paths beneath the elevated track structure could enhance connectivity between the proposed transit facility and other nearby community facilities.

The Chicago Park District has concurred with this no adverse effect determination with the commitment of proposed mitigation measures in its letter dated August 17, 2015 (see **Appendix C**).

A public involvement process would be held in conjunction with the required NEPA public involvement process after publication of the Draft EIS for review and comment on this preliminary finding. During development of this Draft EIS, CTA and the Chicago Park District coordinated on several potential locations for new/replacement park space. **Appendix Y** provides conceptual plans for potential replacement parks based on this coordination. These locations and conceptual plans will be shared with the public for input as part of the Draft EIS public hearing.

FTA will consider public comment and the availability of the replacement park in determining whether the preliminary *de minimis* impact determination is appropriate. Based on FTA's finding and public input, a preferred location for replacement parkland will be identified as part of the

Final EIS. The final location of the replacement park will be confirmed and secured based on ability to acquire property voluntarily, following the completion of the environmental phase of this project.

Agency Coordination and Consultation

Coordination with the agency with jurisdiction over the property, the Chicago Park District, is ongoing and will continue through development of the Final EIS. Early coordination meetings were held on April 18, 2011; July 23, 2013; May 8, 2014; and April 8, 2015 to provide Chicago Park District staff with information on the purpose and need for the project, identification and refinement of alternatives, and potential impacts on parks, and to discuss proposed mitigation measures. The Chicago Park District provided its concurrence on August 17, 2015 that after implementation of the proposed mitigation measures there would be no adverse impact on parks from either alignment option. Additional coordination meetings were held to further develop and refine proposed mitigation measures on October 8, 2015; March 10, 2016; April 6, 2016; May 18, 2016; and June 15, 2016. This coordination will continue as public input is obtained and in finalizing replacement park options and other mitigation measures in the Final EIS. The Chicago Park District has indicated that it regards this project as an opportunity to expand and enhance park activities and overall connectivity in the community once mitigation measures are in place.

8.7 Next Steps

This Draft EIS provides information on preliminary findings of *de minimis impact* for the UPRR Alternative East and West Option Section 4(f) uses. These preliminary findings include all possible planning to minimize harm to the extent possible with the conceptual engineering details available to date, in accordance with 23 CFR § 774.7(e)(1).

In addition, public review and comment is required for input into these preliminary *de minimis impact* findings. During development of this Draft EIS, CTA and the Chicago Park District coordinated on several potential locations for new/replacement park space. **Appendix Y** provides conceptual plans of the affected parks and other replacement park options. These locations and conceptual plans will be shared with the public for input as part of the Draft EIS public hearing.

Based on the results from these coordination activities, in the Final EIS and ROD FTA will confirm and finalize the findings by reference to the documentation included in this Draft EIS. Concurrence from the Chicago Park District, as the agency with jurisdiction over Section 4(f) properties evaluated in this chapter, is required to confirm these preliminary findings. Correspondence from the Chicago Park District confirming FTA's determinations will be included in the Final EIS.

The Final EIS will confirm whether the East or West Option is the selected option, and a preferred replacement park site will be identified based on public input. During the Final EIS and based on public feedback on park replacement sites, CTA will conduct outreach to property owners to determine availability of land and ability to acquire replacement property. As part of the Final EIS, additional coordination with the Chicago Park District will occur as well. The Final EIS will lay out the process to be conducted between CTA and the Chicago Park District to further identify replacement park locations should any of the identified replacement park options not be available at the time of property acquisition. The final park replacement site will be acquired in coordination with the Chicago Park District after completion of the environmental phase of this project (i.e., after FTA issues a ROD for the Final EIS). Additional environmental documentation in the form of a Phase I ESA per Chicago Park District requirements for developing new parks will be conducted before construction of the replacement park. CTA will also coordinate with CDOT as part of the Final EIS regarding potential installation of a new bicycle path beneath the elevated track structure at Fernwood Parkway if the West Option is selected.

Any new or more detailed engineering information available during the preparation of the Final EIS and ROD that could raise new Section 4(f) concerns not already considered herein would be included in that final documentation. If for any reason FTA determines that additional Section 4(f) analysis is required, additional Section 4(f) analysis will be prepared as part of the Final EIS.

Chapter 9
Evaluation of Alternatives

This chapter evaluates the alternatives with two comparisons. First, this chapter reviews and compares the capital expenditures (e.g., construction costs) and operations and maintenance (O&M) costs associated with the East and West Options. The potential funding sources and financing approaches under consideration for the project area are described. Second, this chapter compares the benefits and impacts of the East and West Options.

9.1 Potential Capital and Operating Funding Strategies

The purpose of this analysis is to provide a financial comparison of the East and West Options. Capital and O&M costs included in the analysis reflect the results of planning and engineering completed to date to support the technical analyses in the Draft EIS. These costs and potential revenue sources will be refined to reflect more detailed engineering and operational planning that will be conducted as the project moves through FTA's project development process and to reflect changes in available funding sources and financing approaches.

CTA would prepare a detailed financial plan to support CTA's request for funding through the FTA Section 5309 Capital Investment Grant (CIG) Program. This future detailed financial plan will document CTA's ability to fund construction and operation of the project within FTA requirements for grants awarded under the Section 5309 CIG Program. This initial analysis completed for the Draft EIS and the more detailed future financial plan will assist FTA, CTA, cooperating and participating agencies, and the public in understanding and evaluating CTA's financial capacity to construct and operate the RLE Project and to continue to operate and maintain the existing transit system.

Costs and revenues presented in this chapter are in FY 2015 base year dollars and in year of expenditure (YOE) dollars. YOE dollars reflect the financial impact of funding that would need to be expended in the actual YOE and the relative effects of inflation on costs and revenues. Annual and compounded inflation rates and the preliminary implementation schedules are used to project base year dollars to YOE dollars. For example, in YOE dollars, $3.00 in 2015 is equivalent to $3.18 in 2017, using an annual inflation rate of 3.0 percent.

9.1.1 Capital Cost Estimates

Reflecting engineering and planning completed to support the Draft EIS, the base year capital costs are estimated to be $1,716 million (2015 dollars) for the East Option and $1,746 million (2015 dollars) for the West Option.

For the Draft EIS, the base year capital cost estimates were originally prepared in 2013 dollars and have been escalated to 2015 base year dollars using the annual and compound annual construction cost growth rates summarized in **Table 9-1**. The annual construction cost growth rates reflect the January 2013 R.S. Means Construction Cost Index Forecast for Chicago, IL that was prepared for the RLE Project.

Table 9-1: Annual Inflation Rates

Year	Annual Construction Cost Growth Rate	Compound Annual Construction Cost Growth Rate
2015	-	1.00
2016	3.65%	1.04
2017	3.66%	1.07
2018	3.58%	1.11
2019	3.50%	1.15
2020	3.43%	1.19
2021	3.36%	1.23
2022	3.30%	1.27
2023	3.25%	1.31
2024	3.19%	1.36
2025	3.14%	1.40
2026	3.08%	1.44
2027	3.04%	1.48
2028	2.99%	1.53

Source: Moody's Analytics 2013, Financial Plan for Chicago Transit Authority's Red Line Extension Project

Additionally, for the YOE analysis, CTA escalated capital costs from 2015 base year dollars using the R.S. Means Construction Cost Index combined with preliminary implementation schedules for the East and West Options as summarized in **Table 9-2**. The table summarizes the percent of construction activities expected to be completed by year (cost curve), which was used to estimate the annual capital costs for the East and West Options over the FY 2016 to FY 2028 period. As the selected option moves through FTA's project development process, this implementation schedule will be revised to reflect future federal approvals, detailed engineering, and funding availability.

Table 9-2: Preliminary Implementation Schedule Cost Curve Assumptions

Year	Union Pacific Railroad Alternative East Option	Union Pacific Railroad Alternative West Option
2016	1.2%	1.2%
2017	1.9%	1.9%
2018	1.6%	1.6%
2019	2.8%	2.8%
2020	5.4%	5.6%
2021	7.9%	8.3%
2022	17.7%	17.6%
2023	23.8%	23.7%
2024	32.4%	32.1%
2025	5.1%	5.0%
2026	0.0%	0.0%
2027	0.1%	0.1%
2028	0.1%	0.1%
Total	**100.0%**	**100.0%**

Based on the projected annual construction cost growth rates and preliminary implementation cost curve assumptions above, the total capital costs would be $2,260 million (YOE dollars) for the East Option and $2,300 million (YOE dollars) for the West Option. **Figure 9-1** summarizes the estimated annual costs for the East and West Options. As shown in the figure and reflecting the cost curve assumptions, between FY 2016 and FY 2021 costs reflect engineering, right-of-way acquisition, utility relocation, and construction staging activities. Construction and acquisition of rail cars would occur between FY 2022 and FY 2025. Start-up activities, including testing, would occur in FY 2025, and project close-out and remaining professional services activities, including FTA's Before and After Study requirements, would be completed in FY 2027–2028.

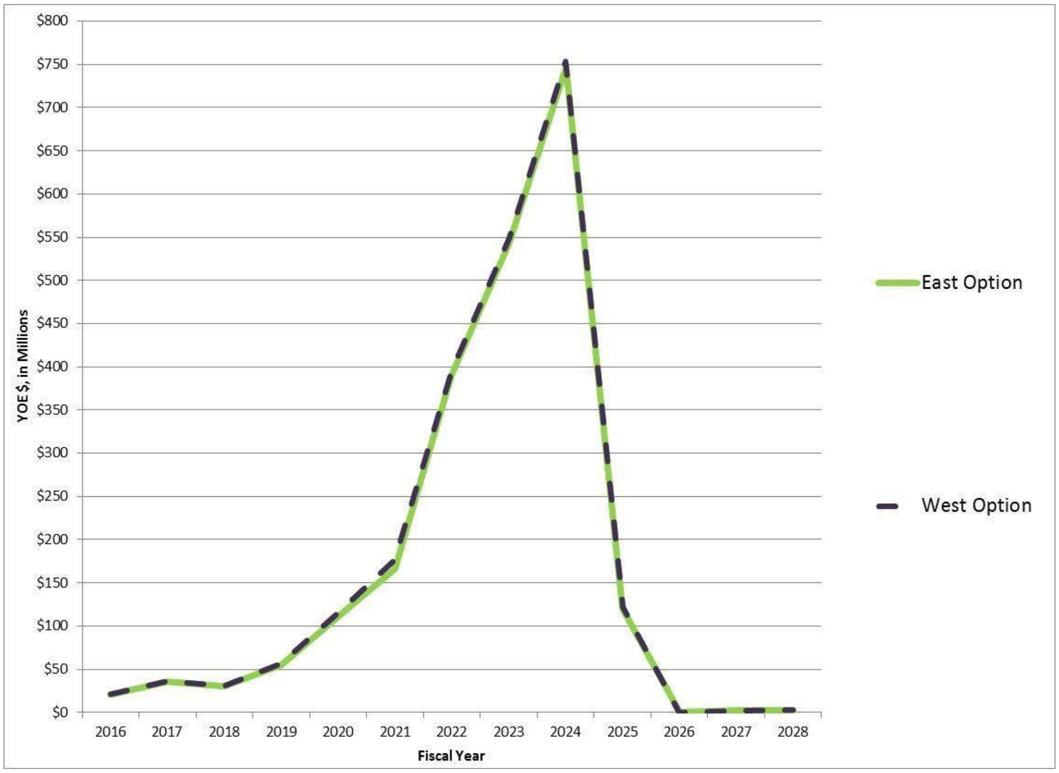


Figure 9-1: Annual Capital Cost Estimates (Year of Expenditure Dollars, in Millions)

9.1.2 Potential Capital Funding Sources and Financing Options

The potential funding sources and financing mechanisms described below reflect an initial list that could support the implementation of either the East or West Option. At this stage of project development, the funding analysis assumes a 49 percent (approximately $1,100 million YOE dollars) contribution from the FTA Section 5309 CIG Program (New Starts), and 51 percent funding from non-New Starts sources.

Potential Capital Funding Sources

Below are summary descriptions of the Section 5309 CIG Program and potential traditional and innovative approaches CTA could consider to fund the non-New Starts share of total project costs. As the selected option continues through the FTA project development process, CTA will determine the specific sources and levels of funding to cover the non-CIG Program share. This is consistent with CTA's traditional project implementation approach of working with the public and key stakeholders to determine the preferred alternative before requesting funds.

- FTA Section 5309 CIG Program (New Starts) - CTA intends to seek CIG funding from FTA for one or more of the alternatives examined in this NEPA document. The CIG Program, more commonly known as the New Starts, Small Starts, and Core Capacity Program, involves a multiyear, multistep process that project sponsors must complete before a project is eligible for funding. The steps in the process and the basic requirements of the program can be found on FTA's website at www.fta.dot.gov.

FTA must evaluate and rate proposed projects seeking funding from the CIG Program on a set of project justification and local financial commitment criteria specified in law. The criteria evaluate the merits of the project and the projects sponsor's ability to build and operate it as well as the existing transit system. FTA assigns ratings from low to high based on information that project sponsors submit on the project cost, benefits, requested amount of CIG Program funds, and overall financial plan. Projects must receive a medium or better overall rating to advance through the steps in the process and be eligible for funding from the program. As projects proceed through the steps in the process, information concerning costs, benefits, and impacts is refined and the ratings are updated to reflect new information.

As stated above, the financial analysis completed for the Draft EIS assumes CTA will pursue CIG Program funds through a New Starts Full Funding Grant Agreement of approximately 49 percent of the total project costs.

- Other Federal Funding Programs - In addition to the proposed New Starts funding, CTA could pursue the use of other federal funding programs to support implementation of the selected option. The total federal funding share for the project (New Starts plus other federal funding programs) cannot exceed 80 percent. The other federal funding programs under consideration include the FHWA programs and the USDOT Competitive Grant Program listed below.

  - FHWA Funding - Funding from these programs would be eligible to be "flexed" (transferred) to FTA to support implementation of transit capital investment projects. These funds are programmed by CMAP and would require adoption in the Long Range Transportation Plan and TIP to be used to fund a portion of the selected option's capital costs. Flexible FHWA funding sources include the following:

    - Congestion Mitigation and Air Quality Program - These funds are available for transportation projects likely to reduce congestion and to contribute to the attainment or maintenance of one or more NAAQS, with a high level of effectiveness in reducing air pollution.

    - Surface Transportation Program - This program provides funding for projects that preserve and improve the conditions and performance on any federal-aid highway, bridge and tunnel projects on any public road, pedestrian and bicycle infrastructure, and transit capital projects.

    - Transportation Alternatives Program - This competitive grant program could provide funding for non-motorized elements of the project.

  - USDOT Transportation Investment Generating Economic Recovery (TIGER) Program - The TIGER grant program was established as part of the Recovery Act in 2009 and is a competitive grant program to support implementation of "shovel ready" infrastructure projects, including highways, bridges, public transit, passenger and freight rail, port infrastructure, and intermodal facilities. Grants are made available for transportation projects of national and regional significance that contribute to the long-term economic competitiveness of the nation, improve the condition of existing transportation facilities and systems, increase energy efficiency and reduce GHG emissions, improve the safety of

U.S. transportation facilities, and/or enhance the quality of living and working environments of communities through increased transportation choices and connections.

  - Since 2009, USDOT has issued eight separate requests for TIGER applications. CTA was successful in obtaining a $20 million TIGER grant in 2012 for the 95th Street Terminal Improvements. For the RLE Project, a specific element of the overall project with independent utility (i.e., a stand-alone component of the overall project) would need to be identified to meet the TIGER grant eligibility requirements.

- State Funds - Historically the State of Illinois has provided funding assistance for CTA's major capital improvement projects. As the selected option moves through the project development process, CTA will work with State leaders to potentially include the project in future transportation funding packages. CTA could also pursue funding through the Illinois Transportation Enhancement Program (ITEP). ITEP is a competitive grant funding mechanism for Illinois transportation projects to improve pedestrian and bicycle accessibility and could potentially be used for street-level infrastructure improvements in conjunction with the RLE Project.

- Local/Private Funds - As part of the future detailed financial plan, CTA will evaluate opportunities to leverage existing and/or potential local revenue sources to fund specific project elements such as stations. This could include the use of value capture mechanisms such as special assessment districts or TIF districts. In special assessment districts, revenue is generated from a fee on properties in a specified area that is used to pay a portion of the capital improvements made within and specifically benefiting that area. In an assessment district, a connection between benefit received and cost charged is essential, in that assessments charged in these districts must be proportional to and no greater than the benefit to the assessed property. A TIF district reflects a concept where existing facilities and planned capital improvement projects would result in increased property taxes within the defined geographic area. The incremental revenue increase can then be used to support further capital investment within the district. Within the project area there are currently three TIF districts that could potentially provide funding to the project: 107th/Halsted TIF District (includes the site of the 111th Street station), Roseland/Michigan TIF District (includes the site of the Michigan Avenue station), and the Lake Calumet Industrial Corridor TIF District (includes the site of 120th Street yard and shop).

  Additionally, on June 30, 2016, the Illinois General Assembly approved a modified form of TIF to raise local revenues to fund the following four major transit improvements in Chicago and adjacent municipalities: the RLE Project, the RPM Program, Union Station improvements, and the Blue Line Modernization Project. These new districts will be called Transit Facility Improvement Areas (TFIA) and would use incremental property tax revenue to fund improvements. A TFIA as defined in the legislation is an area whose boundaries are no more than ½ mile in any direction from the location of a mass transit facility, provided that the length of any existing or proposed right-of-way included in any transit facility improvement area does not exceed 6 miles. The TIF district for a TFIA will have a 50-year life. Transit capital expenses, including costs related to the construction, reconstruction, rehabilitation, remodeling, or repair of any existing or proposed transit facility, whether publicly or privately owned or servicing debt issued for transit capital expenditures, are the only eligible expenses for revenue collected with the new TIF districts.

Traditional and Innovative Financing Approaches

Below is an overview of traditional federal and local financing mechanisms, as well as potential innovative public-private partnership financing, that could be used to accelerate implementation of the selected option. A new source(s) of funding would be required to repay these potential financing mechanisms. CTA is working with regional and state partners to evaluate a variety of potential new revenue sources and/or expansion of existing revenue sources that would support transportation improvements throughout the region. The potential sources could include new or increased levels of state, county, and local taxes, as well as potential value capture mechanisms such as assessment districts and TIFs, including the newly created TFIA districts.

- Transportation Infrastructure Finance and Innovation Act (TIFIA) Loan - TIFIA provides federal credit assistance (financing) for eligible projects of regional and national significance. TIFIA credit assistance provides improved access to capital markets, flexible repayment terms, and potentially more favorable interest rates than can be found in private capital markets for similar financing instruments. TIFIA can help advance qualified, large-scale projects that otherwise might be delayed or deferred because of size, complexity, or uncertainty over the timing of revenues. Given the flexible repayment terms and favorable interest rates, TIFIA finance has become an increasingly popular financial tool for transportation agencies. A challenge for future financing through TIFIA was the recent 70 percent reduction in annual program funding, from $1.0 billion to $287 million, with the December 2015 passage of the FAST Act. In April 2014, CTA was successful in obtaining CTA's first TIFIA Loan of $79.2 million for the 95th Street Terminal Improvement Project.

- CTA Bonds - CTA's existing debt financing is composed primarily of four different types of long term bonds: Sales and Transfer Tax Receipts Revenue Bonds, Sales Tax Receipts Revenue Bonds, Building Revenue Bonds, and Capital Grant Receipts Revenue Bonds. As the project moves forward in the project development process, CTA will determine the most appropriate bonding mechanism to provide local support for the non-federal share of funding required for the project.

- Private Financing - Private financial participation could take a number of different forms, ranging from Private Activity Bonds, (where tax-exempt interest rates are made available to private issuers), to equity participation in particular project components including transit-oriented developments, parking, or other real estate-related investments.

9.1.3 Operating Cost Estimates

CTA's O&M Cost Model was used to compare the operating costs of the East and West Options to the No Build Alternative. Based on planning completed to date, it is assumed that both options would have the same rail operating plan and associated proposed changes to existing local bus service. As a result, the comparison of operating statistics and O&M costs to the No Build is the same for the East Option and West Option.

The version of CTA's O&M Cost Model used for the Draft EIS was calibrated to the agency's FY 2012 system-wide operating budget ($1,273.7 million) and estimates costs for system-wide rail and bus costs separately. The model allows CTA staff to evaluate the financial impact of different rail and bus operating plans compared to existing service levels based on changes to the key operating statistics shown in **Table 9-3**. As shown in **Table 9-4**, the unit costs from the O&M Cost Model have been inflated to 2015 dollars based on the Chicago Area Consumer Price Index Forecast provided in the 2013 *Moody's Analytics Financial Plan for Chicago Transit Authority's Red Line Extension Project* economic analysis.

Table 9-3 compares the annual operating statistics for the East and West Options to the No Build Alternative. Compared to the No Build Alternative, the East and West Options would provide substantially higher levels of rail service (hours and miles) while streamlining existing bus service levels as new rail service replaces current bus service.

Table 9-3: Key Operating Statistics - Union Pacific Railroad Alternative East and West Options Compared to the No Build Alternative

	Difference from No Build Alternative
Rail Characteristics	
Annual Train Hours	37,227
Annual Train Car Miles	5,489,502
Peak Trains	8
Peak Train Cars	64
Stations	4
Track Miles	10.6
Existing Bus Characteristics	
Revenue Bus Miles	-276,451
Revenue Bus Hours	-3,991
Peak Buses	6

Note: Rail and bus characteristics reflect service planning assumptions developed as part of the Draft EIS. Service levels may be adjusted in the future to reflect additional planning and actual ridership demand.

Table 9-4 summarizes the estimated impact on annual O&M costs attributable to each of the variables that drive O&M costs, in total for the East and West Options and as compared to the No Build Alternative. The estimated difference in annual operating costs is $17.4 million (2015 dollars) for either the East or West Option as compared to the No Build Alternative. This difference for either of the options represents approximately 1 percent of CTA's total FY 2015 O&M budget ($1,443.7 million).

Table 9-4: Impact on Operations and Maintenance Costs for the Union Pacific Railroad Alternative East or West Option Compared to the No Build Alternative (2015 dollars, in millions)

	CTA O&M Model Unit Costs (2015$)	Difference from No Build Alternative (2015$)
Rail Variables		
Annual Train Hours	173.77	6.5
Annual Car Miles	2.03	2.6
Peak Trains	259,179.20	2.1
Peak Cars	32,216.70	2.1
Stations	647,739.00	2.6
Track Miles	259,259.05	2.7
Existing Bus Variables		
Revenue Bus Miles	3.91	(1.1)
Revenue Bus Hours	82.88	(0.3)
Peak Buses	52,564.05	0.3
Total[1]		**17.4**

O&M = Operations and Maintenance

[1] Total may not match due to rounding

Note: While the capital cost estimate includes costs associated with the construction of park & ride spaces, the O&M cost estimate does not include operating expenses for the park & ride facilities. The O&M cost estimate assumes CTA will contract with an outside company to manage and operate the park & ride facilities. This assumption is consistent with CTA's current contract with CPS Chicago Parking LLC to operate and manage existing park & ride facilities.

9.1.4 Potential Operating Revenue Sources

CTA would use the following system-generated and public funding sources to fully fund the O&M costs of the selected option as well as system-wide rail and bus operations:

- System-Generated Revenues - Fares and passes; reduced fare subsidy; advertising, charters and concessions revenues; investment income revenue; statutory required contributions from the City of Chicago and Cook County; and other revenues includes parking charges, rental revenue, third-party contractor reimbursements, and filming fees, among other income sources.

- Public Funding - The amount of public funding available for CTA operations is determined by the Regional Transportation Authority. Public funding has three sources: sales tax revenue, public transportation funds, and the real estate transfer tax. The three funding sources are authorized under Illinois statutes passed in 1983 and 2008.

9.2 Comparison of Alternatives

This section summarizes information from the other chapters of this Draft EIS and highlights important trade-offs between the East and West Options. Key points of comparison include project benefits, potential to meet purpose and need goals, environmental impacts, and costs.

9.2.1 Evaluation Goals and Criteria

CTA used the following evaluation goals and criteria to compare the benefits and drawbacks of the East and West Options. These goals reflect CTA's desire to provide enhanced transit service and promote economic development in the project area in a fiscally sound manner while minimizing adverse environmental impacts. For each goal, this evaluation applied the criteria listed below to determine the extent to which the East and West Options would meet that goal.

These goals are based on the purpose and need (**Chapter 2** of the Draft EIS), the AA process, comments received during scoping, public involvement, and the environmental analysis in **Chapters 3–7** of this Draft EIS.

Goal 1 - Reduce Transit Times

Goal 1 is evaluated based on the following criteria:

- Reduce transit times for residents, from within and south of the project area to the 95th Street Terminal and the Loop.
- Provide direct access to the CTA rail system for transit-dependent populations.
    - New stations convenient to transit-dependent communities
    - Direct service to public housing such as Altgeld Gardens

Goal 2 - Increase Travel Choices

Goal 2 is evaluated based on the following criteria:

- Provide better transit access to regional employment centers and local commercial areas.
- Allow for potential connections to other public transportation modes including regional commuter rail.
- Reduce geographic isolation of the project area and improve connections to major activity centers.
- Provide opportunities for drivers commuting on expressways to park and use transit to complete their trips.
    - Number of stations with park & ride facilities
    - Total park & ride spaces

Goal 3 - Increase Economic Competitiveness

Goal 3 is evaluated based on the following criterion:

- Foster economic development in the project area by providing stations that can encourage nearby development.

Goal 4 - Minimize Environmental Impacts

Goal 4 is evaluated based on minimizing environmental impacts:

- Displacement and Relocation Impacts

- Noise Impacts
- Park Impacts
- Community Character Impacts
- Visual and Aesthetic Impacts

Goal 5 - Provide the Best Value

Goal 5 is evaluated based on the following criteria:

- Projected ridership
- Capital costs to construct the project
- Changes in operating and maintenance costs for the system

9.2.2 Evaluation Results

Table 9-5 provides specific measurements for the goals identified in **Section 9.2.1**, and compares the extent to which the East and West Options and the No Build Alternative would meet the goals.

Table 9-5: Comparative Evaluation of Alternatives

Criteria	No Build Alternative	Union Pacific Railroad Alternative East Option	Union Pacific Railroad Alternative West Option
Goal 1 - Reduce Transit Times			
Travel Times Between Stations[1,2] 130th Street to 95th Street Terminal 130th Street to Jackson Station (Loop)	 28 minutes 58 minutes	 14 minutes 39 minutes	 14 minutes 39 minutes
Would the proposed stations serve transit-dependent communities?	No	Yes	Yes
Would there be new direct service to Altgeld Gardens?	No	Yes	Yes
Goal 2 - Increase Travel Choices			
Would there be better access to regional employment centers and local commercial areas?	No	Yes	Yes
Would potential connections to other public transportation modes within the project area be possible?	No	Yes	Yes
Would geographic isolation be reduced?	No	Yes	Yes
How many stations would have park & ride facilities?	0	4 of 4	4 of 4
Total Park & Ride Spaces	0	3,700	3,700
Goal 3 - Increase Economic Competitiveness			
Could nearby development be encouraged?	No	Yes	Yes

Criteria	No Build Alternative	Union Pacific Railroad Alternative East Option	Union Pacific Railroad Alternative West Option
Goal 4 - Minimize Environmental Impacts			
Displacements and Relocations			
Properties	0	260	205
Buildings	0	106	46
Residential Buildings	0	90	26
Mixed-Use Buildings	0	1	2
Commercial and Industrial Buildings	0	13	17
Places of Worship	0	1	1
City-Owned Buildings	0	1	0
Noise Impacts After Mitigation	No change	Not adverse	Not adverse
Receivers with Moderate Impacts (before mitigation/after mitigation)	0	574/0	738/0
Receivers with Severe Impacts (before mitigation/after mitigation)	0	83/0	49/0
Park Impacts (Not Adverse After Mitigation)[3]			
Construction Phase	0 parks	2 parks	2 parks
Permanent	0 parks	2 parks	1 park
Permanent (acres)	0 acres	1.6 acres	1.9 acres
Would there be community impacts after mitigation?	No	Yes	Yes
Would there be visual and aesthetic impacts after mitigation?	No	Yes	Yes
Goal 5 - Provide the Best Value			
Projected Ridership (per weekday)	0	42,000	42,000
Capital Costs[4]	$0	$2.26 Billion	$2.30 Billion
Annual Change in O&M Costs[5]	No Change	+$17.4 Million	+$17.4 Million

N/A = Not Applicable
[1] Source: CTA 2009
[2] Travel time between stations does not include wait time at 130th Street.
[3] Based on the Section 4(f) analysis. Findings contingent on continued coordination process.
[4] Year of expenditure dollars
[5] O&M = Operations and maintenance. Difference from No Build Alternative shown in year 2015 dollars

Based on the criteria above, both the East and West Options would meet the identified goals. The sections below provide further discussion of the evaluation.

Goal 1 - Reduce Transit Times

Under the No Build Alterative, transit times in the project area would remain the same. The East and West Options would reduce transit travel times between the project area and destinations along the existing CTA rail system. The build alternative options would extend the Red Line southward from the 95th Street Terminal, with no transfer at the 95th Street Terminal required. Both the East and West Options would include new stations in transit-dependent communities, which would provide residents with more mobility and better access to jobs and services. The 130th Street station would serve the residents of Altgeld Gardens. The East and West Options would provide enhanced mobility, particularly for project area residents who do not have access to a car, and would allow them easier access to regional employment and activity centers.

Goal 2 - Increase Travel Choices

The No Build Alternative would not provide any transit service improvements, and would therefore not increase travel choices in the project area.

The East and West Options would provide transit service to the project area and would provide better transit access to regional employment centers and local commercial areas. The East and West Options would allow for potential future connections to regional commuter rail, particularly to NICTD at the 130th Street station where the tracks are adjacent. The East and West Options would serve geographically isolated neighborhoods and improve their connections to regional job centers. With the extension of the Red Line, some existing bus routes would be rerouted to feed into the proposed stations. All stations for the East and West Options would include park & ride facilities for motorists wishing to park their cars and complete their trips using transit. These facilities would potentially attract motorists from the nearby expressways, and give project area residents and residents from the south suburbs of Chicago more options for accessing the enhanced transit service.

Goal 3 - Increase Economic Competitiveness

The new stations could serve as catalysts for development and neighborhood revitalization. The Michigan Avenue station park & ride facility would include ground-floor space for community facilities and retail, which would help offset the negative impacts of the required displacements. By providing new, high-quality transit service to communities that have experienced long-term disinvestment, the East and West Options could encourage improvement of local economic conditions for project area residents.

Goal 4 - Minimize Environmental Impacts

The No Build Alternative would not have any environmental impacts, but also would not improve transit service in the project area. It would therefore not fulfill the purpose and need of the RLE Project, and would not satisfy the criteria for the environmental goal. The East and West Options would have greater environmental impacts than the No Build Alternative, but would fulfill the purpose and need of the project. Mitigation measures to address the potentially adverse impacts are proposed in **Chapters 3–7**.

Both the East and West Options would require displacements along their proposed alignments. The East Option would require 106 building displacements, most of which would be residential. The West Option would require 46 building displacements, which would be a mix of residential, commercial, and industrial. Noise-sensitive receivers along the East and West Option alignments would have moderate and severe noise impacts before mitigation. Under the East Option, 574 noise-sensitive receivers would have moderate impacts, and 82 noise-sensitive receivers would have severe impacts. Under the West Option, 738 noise-sensitive receivers would have moderate impacts, and 48 noise-sensitive receivers would have severe impacts. Under both the East and West Options, CTA would construct a noise barrier approximately 4 feet in height along both sides of the elevated track structure from the 95th Street Terminal to the CN/ME tracks near 119th Street, to reduce noise to levels below FTA noise impact criteria. Impacts would not be adverse after mitigation.

Both the East and West Options would affect parks in the project area. The East Option would have permanent and construction impacts on Wendell Smith Park and Block Park. The East

Option would require the elevated structure to be built above the northwest corner of Wendell Smith Park and along the western parcel of Block Park. The West Option would have construction impacts on Wendell Smith Park and Fernwood Parkway and permanent impacts only on Fernwood Parkway. The West Option would require the elevated structure to be built above Fernwood Parkway between 99th and 103rd Streets. The East Option would permanently affect 1.6 acres of parkland, and the West Option would permanently affect 1.9 acres of parkland.

The placement of new elevated structures and park & ride facilities into existing communities would result in community character impacts that would remain adverse after mitigation under the East and West Options. The East Option would have adverse impacts on community character and cohesion despite mitigation because of the visual encroachment of the elevated structure into the neighborhood north of I-57 in Roseland and near 117th Street and Prairie Avenue in West Pullman. The West Option would have adverse impacts on community character and cohesion despite mitigation because of the visual encroachment of the elevated structure into the neighborhood north of I-57 in Roseland and between 99th and 103rd Street in Washington Heights, near the 103rd Street station in Washington Heights, and near the Michigan Avenue station park & ride facility in West Pullman.

Both the East and West Options would have adverse visual impacts despite mitigation. Under the East Option, the elevated track structure would create an adverse visual impact north of I-57 and at the intersection of 117th Street and Prairie Avenue. As part of the West Option, the elevated track structure would create an adverse visual impact north of I-57 and between 99th and 103rd Streets, and at the 103rd Street station.

Goal 5 - Provide the Best Value

The approximate capital costs of the East Option would be $2.22 billion in YOE dollars, and the approximate capital costs of the West Option would be $2.26 billion in YOE dollars. Projected annual O&M costs for the CTA system would increase by approximately $17.4 million for either the East or West Option. CTA developed the East and West Options to meet Goals 1–4 described above and to meet the goals in a cost-efficient manner.

Chapter 10
Public and Agency Coordination

This chapter and the *Agency Coordination and Public Involvement Appendix* (**Appendix C**) document the extensive outreach and coordination that FTA and CTA have undertaken for the RLE Project. CTA began public outreach on the project as part of the AA from 2006 to 2009. Outreach continued during the formal EIS scoping period in 2009, and has continued through the preparation of this Draft EIS starting in 2012.

10.1 Public Participation Plan

To ensure that the public was informed and had opportunities to comment at key milestones throughout the study, CTA developed a detailed Public Participation Plan (PPP) at the onset of the RLE scoping process and updated at the start of the Draft EIS phase. The PPP includes outreach goals, key issues, a detailed stakeholder database, communications protocols, public input tracking protocols, a proposed schedule for interfacing with the public, and recommendations for how meetings should be conducted at various stages of the study. The PPP also includes additional recommendations for individual stakeholder interviews or briefings, interagency coordination, and the formation of working groups. The PPP is included in **Appendix C**.

10.2 Agency Coordination

CTA has coordinated and will continue to coordinate with governmental and other agencies throughout the course of this project. Outreach efforts were conducted in compliance with NEPA and other applicable regulations, including Section 106 of the NHPA, Section 4(f) of the USDOT Act of 1966, joint guidance and regulations from FTA and FHWA, and other agency regulations and guidelines.

10.2.1 Section 106 Coordination

The effort to identify, contact, and consult with various interested groups and agencies to identify historic properties and cultural practices during the environmental planning process has been documented for the Section 106 consultation process (see also **Section 4.7**). The purpose of consultation was to identify historic resources and other concerns relating to the project's potential effects on historically important resources. FTA and CTA sought information from individuals and organizations likely to have knowledge of local potential resources. **Section 4.7** includes the list of consulting parties. Consultation meetings focusing on project introduction, eligibility review, and effects discussions were held on October 24, 2012, January 30, 2013, and May 8, 2014, as described in **Section 4.7**. **Appendix Q** contains copies of correspondence and Section 106 consultation materials. As described in **Section 4.7.4**, no adverse effects on historic resources would occur because of the RLE Project (East or West Option) and no mitigation measures would be required; therefore, consultation with consulting parties is complete. In correspondence to the SHPO dated September 21, 2016, FTA made the determination that the UPRR Alternative (East and West Options) would result in no adverse effects. Coordination with the SHPO related to concurrence with FTA's eligibility and effects determinations is ongoing and will continue through the remainder of the project.

10.2.2 Tribal Coordination

In July 2012, FTA sent invitation letters to 11 Native American tribes to inform them of the Section 106 process and request assistance in identifying areas with potential cultural and/or religious significance. Letters were sent to the following nations: the Ho-Chunk Nation, the Miami Tribe of Oklahoma, the Peoria Tribe of Indians of Oklahoma, the Sac and Fox Nation of Oklahoma, the Pokagon Band of Potawatomi Indians, the Prairie Band of the Potawatomi Nation, the Citizen Potawatomi Nation, the Forest County Potawatomi Nation, the Potawatomi Nation, the Sac and Fox Nation of Mississippi in Iowa, and the Sac and Fox Nation of Missouri. The Miami Tribe of Oklahoma, Peoria Tribe of Indians of Oklahoma, and the Forest County Potawatomi Nation responded confirming their participation in the Section 106 process; no response was received from the other tribes. Coordination with the tribes is ongoing and will continue through the remainder of the project.

10.3 Public Outreach

Community outreach for the RLE Project started with the AA, continued with NEPA scoping in 2009, and will continue through the Draft EIS and Final EIS phases of the project. CTA will continue to involve and consult with the community as the project proceeds through design. **Table 10-1** summarizes public meetings held to date.

Table 10-1: Public Meetings Held to Date

Meeting	Location	Date and Time	Number of Attendees
Alternatives Analysis Phase			
Screen 1	Chicago State University 9501 S. King Drive	April 10, 2007 6:00 to 8:00 PM	66
	Chicago Public Library - West Pullman 830 W. 119th Street	April 11, 2007 6:00 to 8:00 PM	81
Screen 2	Historic Pullman Visitor Center 11141 S. Cottage Grove Avenue	December 3, 2008 6:00 to 8:00 PM	43
	Chicago Public Library - Woodson Regional 9525 S. Halsted Street	December 4, 2008 6:00 to 8:00 PM	41
Screen 3	Olive Harvey College 10001 S. Woodlawn Avenue	June 3, 2009 6:00 to 8:00 PM	44
	Chicago Public Library - Woodson Regional 9525 S. Halsted Street	June 4, 2009 6:00 to 8:00 PM	67
Environmental Impact Statement Scoping Phase			
Scoping	Historic Pullman Visitor Center 11141 S. Cottage Grove Avenue	September 22, 2009 6:00 to 8:00 PM	87
Scoping	Chicago Public Library - Woodson Regional 9525 S. Halsted Street	September 24, 2009 6:00 to 8:00 PM	81
Draft Environmental Impact Statement Phase			
Open House	St. John Missionary Baptist Church 211 E. 115th Street	August 2, 2011 6:00 to 8:30 PM	96
Open House	Palmer Park Gymnasium 201 E. 111th Street	May 13, 2014 5:30 to 7:30 PM	212

10.3.1 Alternatives Analysis Phase

CTA conducted the RLE AA process between 2006 and summer 2009, during which time CTA regularly met with the public. Through presentations and displays, the public learned about the methods of the New Starts federal planning processes and how evaluation criteria were developed and applied to the universe of alternatives for the RLE AA. A formal question and answer process allowed the general public to make comments and ask questions on the study's findings. CTA conducted individual and group briefings for elected and public officials; community, civic, business and religious leaders; and other stakeholders, providing them the opportunity to comment and inquire about the project.

CTA held two public meetings in April 2007 to present the findings of Screen 1 of the AA study; a total of 147 people attended the meetings and 209 comments were received. Two public meetings were held in December 2008 to present the findings of Screen 2 of the AA study; a total of 84 people attended the meetings and 139 comments were received. Two public meetings were held in June 2009 to present the findings of Screen 3 of the AA study; a total of 111 people attended the meetings and 111 comments were received. The AA process concluded with the Chicago Transit Board adoption of an LPA in August 2009.

Detailed information about the public involvement that took place during the AA process is included in **Appendix A**.

10.3.2 Environmental Impact Statement Scoping Phase

The NEPA scoping process began in 2009 to inform the public about the project and gather input on the scope of the environmental studies, draft purpose and need, and alternatives to be evaluated. The *Scoping Report* (**Appendix B**) details all public and agency outreach activities associated with the NEPA scoping process. FTA published the Notice of Intent (NOI) in the Federal Register on September 9, 2009. The NOI initiated the NEPA scoping process and included notification of the dates and locations of the agency and public scoping meetings, the dates of the public comment period, and descriptions of the project purpose and need and alternatives. CTA accepted comments from the date of publication of the NOI in the Federal Register (September 9, 2009) through October 27, 2009. This schedule provided a public comment period of 57 days.

An agency scoping meeting was held on September 24, 2009 with 12 agencies and jurisdictions represented:

- Chicago Department of Community Development
- Chicago Department of Environment
- Chicago Department Streets and Sanitation
- CDOT
- Chicago Park District
- Chicago Police Department
- Detroit Department of Transportation
- Illinois Commerce Commission
- IDOT
- Illinois State Police, Chicago District
- Metra
- MWRD

CTA held two public scoping meetings to provide the public with an opportunity to comment on the project purpose and need, alternatives considered, and issues and areas of concern to be considered in the Draft EIS.

CTA publicized the meetings via direct mail and e-mail notices using the stakeholder database, postings on CTA's website, display advertisements in multilingual publications (English and Spanish), a legal notice placed in the Chicago Tribune, CTA customer alerts, postings at the 95th Street Terminal and on CTA buses and trains, flyers distributed to key locations along the project corridor, and notices posted in libraries and village halls. CTA held four meetings with elected officials from along the project corridor so they could notify their constituents.

The public scoping meetings were hosted in ADA-compliant locations in the project area, accessible by public transit. The public scoping meetings were held approximately four weeks in advance of the end of the public comment period. The scoping meetings began with a 45-minute open house format. During the open house session, project team members were present at project display boards to answer questions related to the technical aspects of the project. The open house session provided attendees with an opportunity to review the project information and clarify their understanding of the project and environmental process before the start of the presentation and subsequent comment period. After the open house period, a presentation was made to provide attendees with information regarding the purpose of scoping, the project purpose and need, project background, the recently completed AA process, and the alternatives being carried forward into the Draft EIS. After the presentation, there was a formal public comment session, which was recorded by a court reporter. Spanish translators and sign language interpreters were available during the meeting.

Agencies, community groups, members of the public, elected officials, and other interested parties submitted 352 letters, e-mails, comment cards, and verbal testimonies during the scoping comment period. The comments largely fell into three topic categories: the project purpose and need (approximately 7 comments); the alternatives to be studied in the Draft EIS, including alignment options, station location options, and potential design features (approximately 326 comments); and environmental impacts and mitigation measures (approximately 37 comments). Many comments related to several topics and may have been counted under more than one category to fully characterize the feedback for each topic.

10.3.3 Draft Environmental Impact Statement Phase

August 2011 Open House Meeting

CTA held an open house meeting on August 2, 2011 to update the community regarding the RLE Project. The meeting was held at St. John Missionary Baptist Church, 211 E. 115th Street in Chicago from 6:00 PM to 8:30 PM. A total of 96 people signed in at the open house.

CTA publicized the meeting via direct mail and e-mail notices using the stakeholder database, postings on CTA's website, display advertisements in multilingual publications (English and Spanish), CTA customer alerts, and a news release to local media outlets. CTA sent letters to participating agencies informing them of the project status and inviting them to the open house.

The open house meeting was hosted in an ADA-compliant location in the project area, accessible by public transit. An open house meeting format was used for the public meeting, during which project team members were present at project display boards to answer questions related to the technical aspects of the project. The open house provided attendees with an opportunity to review the project information and clarify their understanding of the project and environmental process. Spanish translators and sign language interpreters were available during the meeting. CTA collected written comments at the meeting and by mail, fax, and e-mail after the meeting. **Appendix C** provides additional details about the August 2011 open house.

Summer 2013 Newsletter

CTA sent a newsletter with a general project update to the approximately 3,200 addresses on the stakeholder database on August 27, 2013. **Appendix C** contains a copy of the newsletter.

Spring 2014 Outreach

CTA conducted outreach in April and May of 2014 to update the public on the status of the project; inform them of proposed alternatives, anticipated project benefits, and impacts; and gather feedback. Outreach included meetings with elected officials, interested community groups, and a public open house. The open house was held May 13, 2014 at the Palmer Park Gymnasium, 201 E. 111th Street in Chicago from 5:30 PM to 7:30 PM. The meeting was publicized using the methods described for the August 2011 open house. A total of 212 community members attended the meeting.

CTA received a total of 97 written comments from the community. Community members were asked to provide specific comments or concerns they had about alternatives, potential impacts, and mitigation measures. Overall, the community supports the RLE Project, and noted concerns related to property displacements, community and economic development, noise and vibration, safety and security, traffic, the project timeline, alternatives proposed, and alternative preferences. **Appendix C** provides additional details about the May 2014 open house.

10.4 Public Hearing and Public Comment Period

This Draft EIS serves as the primary document to facilitate review by agencies and the public of the proposed project. Comments on the Draft EIS will be accepted from October 6, 2016 to November 30, 2016. A copy of the Draft EIS is available on the CTA website (www.transitchicago.com/RedEIS), and hard copies of the Draft EIS are available at the following locations during the public review period:

- CTA headquarters, 567 W. Lake Street, 2nd Floor, Chicago, IL 60661
- Pullman Public Library, 11001 S. Indiana Avenue, Chicago, IL 60628
- West Pullman Public Library, 830 W. 119th Street, Chicago, IL 60643
- Altgeld Public Library, 13281 S. Corliss Avenue, Chicago, IL 60827
- Woodson Regional Public Library, 9525 S. Halsted Street, Chicago, IL 60628
- Calumet Park Public Library, 1500 W. 127th Street, Calumet Park, IL 60827
- Harold Washington Library Center, 400 S. State Street, Chicago, IL 60605

A public hearing is scheduled for November 1, 2016 from 5:30 to 7:30 PM at St. John Missionary Baptist Church (211 E. 115th Street, Chicago, IL 60628) to solicit comments from the community about findings presented in this Draft EIS. The public hearing was advertised through display ads in local and regional newspapers, an e-Blast, and through CTA press releases, flyers, and CTA customer alerts placed on CTA rail cars and buses within the project corridor. Additional details concerning the public hearing were also posted on CTA's website. The public hearing location is within the project area, ADA-compliant, and accessible by public transit.

Comments received during the public hearing will be reviewed by FTA and CTA, and will be entered into public record. Written comments will also be accepted at any time during the public comment period via e-mail to: RedExtension@transitchicago.com and U.S. mail to: Chicago Transit Authority, Strategic Planning, 10th Floor, Attn: Red Line Extension Project, 567 W. Lake Street, Chicago, IL 60661. A summary of the public hearing and responses to comments received will be included in the Final EIS.

10.5 Accommodations for Minority, Low-Income, and Disabled People

CTA made substantial efforts to ensure that minority, low-income, and disabled people were included in all outreach efforts. The efforts included sensitivity to multiple distribution channels and language needs, and all meetings were held in ADA-compliant facilities. CTA performed an LEP assessment in 2009, which determined that public outreach materials should be prepared in both English and Spanish. Meetings were advertised in multilingual and local publications. Spanish translators and sign language interpreters were made available at every public meeting.

In addition to direct mail and electronic notifications of meetings, CTA provided advance notice on buses and trains serving the project area to ensure that transit passengers were aware of opportunities to attend the meetings. Meeting notice materials included an offer of translation services in Spanish or other languages with advance request.

As noted, federal requirements for public participation plans include a process for seeking out and considering the needs of those traditionally underserved by existing transportation systems, such as minority and/or low-income groups. CTA actively worked with organized business and community groups in the project area and transit advocacy organizations to ensure that project information and public meetings were adequately publicized and had substantive participation by minority and low-income groups.

Chapter 11
List of Acronyms and Abbreviations

Acronym or Abbreviation	Definition
AA	Alternatives Analysis
ADA	Americans with Disabilities Act
APE	area of potential effects
API	area of potential impact
BMPs	best management practices
BRT	bus rapid transit
BTU	British thermal unit
CDOT	Chicago Department of Transportation
CEQ	Council on Environmental Quality
CERCLIS	Comprehensive Environmental Response, Compensation and Liability Information System
CERCLIS-NFRAP	Comprehensive Environmental Response, Compensation and Liability Information System - No Further Remedial Action Planned
CESQG	conditionally exempt small quantity generators
CFR	Code of Federal Regulations
CHRS	Chicago Historic Resources Survey
CIG	Capital Investment Grant
CMAP	Chicago Metropolitan Agency for Planning
CN	Canadian National
CN/ME	Canadian National/Metra Electric District
CO	carbon monoxide
Conrail	Consolidated Rail Corporation
CREATE	Chicago Region Environmental and Transportation Efficiency Program
CSS & SBRR	Chicago South Shore & South Bend Railroad
CTA	Chicago Transit Authority
dB	decibels
dBA	A-weighted decibels
DCP	Developing Communities Project, Inc.
EB	eastbound
EcoCAT	Illinois Ecological Compliance Assessment Tool
EDR	Environmental Data Resources, Inc.
EIS	Environmental Impact Statement
EJ	environmental justice
EJ populations	minority and low-income populations

Acronym or Abbreviation	Definition
ERNS	Emergency Response Notification System
ESA	Environmental Site Assessment
FAST	Fixing America's Surface Transportation Act
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
FY	fiscal year
FQA	Floristic Quality Assessment
GHG	greenhouse gas
GO TO 2040	CMAP *GO TO 2040 Comprehensive Regional Plan*
HRT	heavy rail transit
IAAQS	Illinois Ambient Air Quality Standards
IDNR	Illinois Department of Natural Resources
IDOT	Illinois Department of Transportation
IEPA	Illinois Environmental Protection Agency
IHB	Indiana Harbor Belt Railroad
ILCS	Illinois Compiled Statutes
INAI	Illinois Natural Areas Inventory
ITEP	Illinois Transportation Enhancement Program
L_{dn}	day-night average sound level
LEP	limited English proficiency
L_{eq}	equivalent continuous sound level
LOS	level of service
LPA	Locally Preferred Alternative
LUST	leaking underground storage tank
L_v	vibration velocity
LQG	large quantity generator
MAP-21	Moving Ahead for Progress in the 21st Century Act
ME	Metra Electric District
MUTCD	Manual on Uniform Traffic Control Devices
MWRD	Metropolitan Water Reclamation District of Greater Chicago
NAAQS	National Ambient Air Quality Standards
NCHRP	National Cooperative Highway Research Program
NEPA	National Environmental Policy Act of 1969
NFR	No Further Remediation
NFRAP	No Further Remedial Action Planned
NHPA	National Historic Preservation Act
NICTD	Northern Indiana Commuter Transportation District
NICTD/CSS & SBRR	Northern Indiana Commuter Transportation District/Chicago South Shore & South Bend Railroad

Acronym or Abbreviation	**Definition**
NOI	Notice of Intent
NO_2	nitrogen dioxide
NPL	National Priority List
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NWI	National Wetlands Inventory
OSHA	Occupational Safety and Health Administration
O&M	operations and maintenance
O_3	ozone
Pace	Pace Suburban Bus Service
$PM_{2.5}$	particulate matter with an aerodynamic diameter of 2.5 micrometers and less
ppm	parts per million
PPP	Public Participation Plan
PRP	potentially responsible party
RCRA	Resource Conservation and Recovery Act
RLE	Red Line Extension
ROD	Record of Decision
RPM	Red and Purple Modernization
SAFETEA-LU	Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users
SES	Southeast Service
SHPO	State Historic Preservation Office
SPILLS	Spill Incident List
SQG	small quantity generator
SRP	Site Remediation Program
SSU	Illinois State Sites Unit Listing
TFIA	Transit Facility Improvement Area
TIFIA	Transportation Infrastructure Finance and Innovation Act
TIF	tax increment financing
TIGER	Transportation Investment Generating Economic Recovery
TIP	Transportation Improvement Program
TSM	transportation system management
Uniform Act	Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970
UPRR	Union Pacific Railroad
USACE	U.S. Army Corps of Engineers
USC	United States Code
USDA	U.S. Department of Agriculture
USDOT	U.S. Department of Transportation

Acronym or Abbreviation	**Definition**
USEPA	U.S. Environmental Protection Agency
USGS	U.S. Geological Survey
UST	underground storage tank
VdB	decibels referenced to 1 microinch per second
VMT	vehicle miles traveled
WB	westbound
YOE	year of expenditure

Chapter 12
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Chapter 13
List of Preparers

Federal Transit Administration

Name	Qualifications	Primary Responsibilities
Mark Assam, AICP	Environmental Protection Specialist	FTA Review
Tony Greep	Community Planner	FTA Review

Chicago Transit Authority

Name	Qualifications	Primary Responsibilities
Carole Morey	Chief Planning Officer	CTA Review
Michael McLaughlin	Deputy Chief of Staff	CTA Review
Leah Dawson Mooney	Director of Strategic Planning and Policy	CTA Review
Sonali Tandon	Senior Project Manager	CTA Project Manager

Chicago Transit Partners

Name	Qualifications	Primary Responsibilities
John Conroyd, SE, LEED AP	Program Manager; BS Civil Engineering, MS Civil Engineering, and MBA; PE; SE; LEED AP; CMAA Certified Construction Manager; OSHA Certified; 30 years' experience	Draft EIS Review
Paul Swanson	Planning/Design Oversight Manager; BS Civil Engineering; 52 years' experience	Conceptual Engineering Review

CDM Smith

Name	Qualifications	Primary Responsibilities
Christopher Albrecht	Senior Project Manager; BS Biology, MS Environmental Biology; IL-licensed asbestos inspector/management planner; 26 years' experience	Hazardous Materials Analysis
Robert W. Ball, RPA	Cultural Resources Specialist; BS Anthropology and MHP Historic Preservation; 21 years' experience	Section 106 Coordination; Historic and Cultural Resources Analysis
Lucila DeRosier	Planner; BS Evolution and Ecology; 11 years' experience	Noise and Vibration Analysis

Name	Qualifications	Primary Responsibilities
Benjamin Harber, AIA, LEED AP BD+C	Architectural Project Manager; BS and MS Architecture; Licensed Architect; 17 years' experience	Visual and Aesthetic Conditions Analysis, prepared visualizations, station concepts, and planning
Claudia Krug Lea, PE	Water Resources Engineer; BS and MS Environmental Engineering; PE; 11 years' experience	Project Coordinator, Public Involvement, Water and Wetlands Analyses
Christopher Martel, PE, LEED AP	Vice President; BS Civil Engineering and MS Environmental Engineering; LEED AP, PE, BCEE; 21 years' experience	Hazardous Materials QA/QC
Jenifer Palmer, AICP	Planner; BA Humanities and Critical Theory, MS Public Administration; Masters Certificate in Urban and Regional Planning; AICP; 8 years' experience	Section 4(f), QA/QC
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Kate Stenberg, PhD	Senior Environmental Scientist; PhD Wildlife Science & Planning; MA Environmental Administration; BA Biology-Environmental Studies; 32 years' experience	Threatened and Endangered Species, Vegetation and Wildlife Habitat, Water Resources, Wetlands Analyses

Wight & Company

Name	Qualifications	Primary Responsibilities
Jacob Hohl, PE, LEED AP BD+C	Senior Civil Engineer, MS Civil Engineering, 7 years' experience	Conceptual Engineering
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Jacobs

Name	Qualifications	Primary Responsibilities
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Pat Smeeton	Senior Transportation Planner; BS Civil Engineering; 20 years' experience	Air Quality Analysis
Tom Underwood	Planner; BS Sociology, MS Environmental Science, MBA; 22 years' experience	Construction Impacts and Purpose and Need Analysis
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John Wirtz, PE, PTOE	Transportation Engineer/Planner; BS and MS Civil Engineering; PE, PTOE; 10 years' experience	Safety and Security Analysis, Track Right-of-Way Protection
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Name	Qualifications	Primary Responsibilities
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Name	Qualifications	Primary Responsibilities
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Name	Qualifications	Primary Responsibilities
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Surekha Lingala	Data Collection Manager; BS and MS Civil Engineering; 12 years' experience	Traffic Data Collection

HDR - Sharon Greene + Associates

Name	Qualifications	Primary Responsibilities
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Eric Rouse	Principal Consultant - Project Finance; BS Political Science and MS Community and Regional Planning; 20 years' experience	Project Funding and Finance
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Gearbox Partners

Name	Qualifications	Primary Responsibilities
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Kathy Schaeffer and Associates, Inc.

Name	Qualifications	Primary Responsibilities
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Jeffrey L. Mengler, PWS	Senior Project Scientist, Ecologist; BS and MS Biological Sciences; Professional Wetland Scientist, CWS Lake and McHenry County, QWRS Kane County; 30 years’ experience	Wetlands Delineation and Analysis
Steven J. Rauch	Environmental Services Manager; BA Environmental Studies; CWS Lake and McHenry County, QWRS Kane County; 16 years’ experience	Wetlands Delineation and Analysis

Chapter 14
List of Recipients

In order to facilitate review and comment, the following agencies, local officials, and public libraries were notified of the availability of this document. All agencies and organizations on this list will receive web links to download the Draft EIS from the CTA website.

Agencies, organizations, and libraries that received hard copies of the Draft EIS to make available to the public are identified with an asterisk (*).

Participating agencies are federal, state, or local agencies, or federally recognized Indian tribal governmental units that may have an interest in the proposed project and have accepted an invitation to be a participating agency, or in the case of a federal agency, has not declined the invitation. Participating agencies are identified in **bold** text. All federal, state, local, and regional agencies and tribes are potential participating agencies; all others on the list are not eligible to be participating agencies.

The Federal Highway Administration is a cooperating agency.

Federal Agencies

Advisory Council on Historic Preservation
Transportation Security Administration
U.S. Department of Energy
U.S. Department of the Interior, Office of Environmental Policy and Compliance*
U.S. Department of Health and Human Services
U.S. Department of Housing and Urban Development
U.S. Department of Transportation
  Federal Highway Administration
  Federal Railroad Administration
U.S. Environmental Protection Agency
U.S. Federal Emergency Management Agency
U.S. Fish and Wildlife Service

Tribes

Citizen Potawatomi Nation
Forest County Potawatomi Nation
Ho-Chunk Nation
Miami Tribe of Oklahoma
Peoria Tribe of Indians of Oklahoma
Pokagon Band of Potawatomi Indians
Potawatomi Nation-Hannahville Indian Community
Prairie Band of Potawatomi Nation

Sac and Fox Nation of Mississippi in Iowa
Sac and Fox Nation of Missouri
Sac and Fox Nation of Oklahoma

State Agencies

Illinois Commerce Commission
Illinois Department of Commerce and Economic Opportunity
Illinois Department of Employment Security
Illinois Department of Natural Resources
Illinois Department of Revenue
Illinois Department of Transportation
Illinois Environmental Protection Agency
Illinois Historic Preservation Agency
Illinois Secretary of State
Illinois State Archaeological Survey
Illinois State Museum
Illinois State Police
Illinois State Police District Chicago
Illinois Tollway
Landmarks Illinois

Local and Regional Agencies

Chicago Bureau of Convention and Tourism
Chicago Historical Society
Chicago Housing Authority
Chicago Metropolitan Agency for Planning
Chicago Park District
City of Chicago Department of Aviation
City of Chicago Department of Budget and Management
City of Chicago Department of Business Affairs and Consumer Protection
City of Chicago Department of Community Development
City of Chicago Department of Fleet and Facility Management
City of Chicago Department of Planning and Development Historic Preservation Division
City of Chicago Department of Streets and Sanitation Bureau of Street Operations
City of Chicago Department of Transportation
City of Chicago Office of the Mayor
City of Chicago Police Department
Cook County Board of Commissioners
Cook County Department of Revenue
Cook County Highway Department
Cook County Recorder of Deeds & Registrar of Titles

Cook County Sheriff's Office
Metra
Metropolitan Planning Council
Metropolitan Water Reclamation District of Greater Chicago
Pace
Preservation Chicago
Village of Calumet Park

Community Groups

Agape Community Center
Chicago Neighborhood Initiatives
Developing Communities Project, Inc.
Far South Community Development Corporation
Friends of the Parks
Golden Gate Homeowners Association
Greater Roseland Chamber of Commerce
Neighborhood Housing Services of Chicago
People for Community Recovery
Red Line Extension Coalition
Ridge Historical Society
Roseland Business Development Council
Roseland Manor
Rosemoor Community Association
St. Anthony of Padua Parish

Local Libraries

Altgeld Public Library*
Calumet Park Public Library*
Pullman Public Library*
West Pullman Public Library*
Woodson Regional Public Library*
Harold Washington Library Center*

Glossary

The following terms are used in this Draft Environmental Impact Statement.

95th Street Terminal Improvement Project - The 95th Street Terminal is currently the southern terminus (end) of CTA's Red Line. CTA is in the process of rehabilitating the current 95th Street Terminal, which dates from 1969, with an expanded modern facility. The project will bring substantial improvements to a station that serves thousands of customers each day and is a vital part of the South Side.

Aerial Track Structure - The location of a train track structure above the surface of the ground. Can be constructed of concrete and/or steel.

Affected Environment - The physical, biological, social, and economic setting potentially affected by one or more of the alternatives under consideration.

Alternative - One of a number of specific transportation improvement proposals or options.

Alternatives Analysis - Process of assessing the different transportation improvement proposals or options and documenting alternate concepts based on scenario and functional definitions.

Americans with Disabilities Act (ADA) - Federal regulation establishing legal requirements for accessibility for those with disabilities including wheelchair users.

Area of Potential Impact (API)/Area of Potential Effects (APE) - The geographic area within which the project may cause adverse or beneficial impacts or effects.

At-Grade - The location of a structure or transit guideway at the same level as the ground surface.

Block Group - A census block group is a geographical unit used by the United States Census Bureau. Census block groups fall in size between the census tract and the census block. Census blocks are the smallest geographical units for which the Census Bureau publishes sample data.

Bus Rapid Transit (BRT) - BRT is a bus service that provides faster, more efficient, and more reliable service than an ordinary bus line. Often these changes are achieved by making improvements to existing street and traffic infrastructure. High-capacity, uniquely identified buses are typically used.

Chicago Metropolitan Agency for Planning (CMAP) - The metropolitan planning organization for the Chicago region. CMAP has prepared the *GO TO 2040 Comprehensive Regional Plan*, which provides strategies for the regional transportation network.

Chicago Transit Authority (CTA) - The CTA is an independent governmental agency created by state legislation. It operates the nation's second-largest public transportation system and covers the City of Chicago and 35 surrounding suburbs. CTA is the local lead agency on the Red Line Extension Project.

Community Character - An attribute of a geographic area with identifiable characteristics that make it unique.

Community Cohesion - An attribute of a geographic area, where segmentation or division of the area would reduce its desirability to current and future residents.

Community Resources - Locations that serve as focal points or provide community services. These may include landmarks, parks, or community centers.

Construction Staging - A physical location used for the storage of construction-related equipment and materials such as vehicles and stockpiles.

Cumulative Effect - The incremental environmental impact or effect of the project when added to the impacts of other separate past, present, and reasonably foreseeable future actions.

Deck - The surface of a bridge or elevated rail track section.

> **Closed-deck structure** - Tracks that have a solid deck beneath them. Closed-deck structures allow for more effective noise barriers but require more active snow clearance and drainage maintenance.

Displacement - An impact from a project that results in homes or businesses needing to be relocated.

> **Affected Parcel** - A partial or a full parcel that would need to be acquired because of the project.
>
> **Building Displacement** - A structure that would need to be removed (the land occupied by the structure would also be counted as an affected parcel).
>
> **Easement** - Displacement of a publically owned parcel that would include a roadway. CTA would require a use agreement with the public entity.

Effect (as related to historic/cultural) - Refers to alterations in the character or use of historic properties by the alternatives. Used instead of "impacts" (referred to elsewhere in the Draft EIS) because of the unique requirements and terminology for assessing historic resource impacts.

Elevated Track Structure - The location of a structure above the surface of the ground.

Environmental Impact Statement (EIS) - An EIS is a document that evaluates the economic, social, and environmental effects of a major proposed project. The National Environmental Policy Act (NEPA) requires an EIS to be prepared when federal funds are being sought to fund all or part of a project.

Environmental Justice (EJ) - Environmental Justice is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to transportation planning and decision-making processes, per Executive Order 12898.

Federal Transit Administration (FTA) - FTA is a division of the U.S. Department of Transportation that funds transit planning and programs. FTA is the federal lead agency on the RLE Project.

Fixing America's Surface Transportation (FAST) Act - A funding and authorization bill to govern the United States federal surface transportation spending. Congress passed the FAST Act on December 3, 2015, and President Barack Obama signed it into law on December 4, 2015. The $305-billion, 5-year (FY 2016–FY 2020) provides a steady and predictable funding source over the next five years and an increase of approximately $1 billion per year to the transit program. A number of provisions are provided in the law to assist transit service providers in expediting project delivery, enhancing transit agency partnerships, and targeting investments for state of good repair and bus fleet improvements.

Greenhouse Gas (GHG) - A gas in an atmosphere that absorbs and emits radiation within the thermal infrared range. The primary greenhouse gases in the Earth's atmosphere are water vapor, carbon dioxide, methane, nitrous oxide, and ozone.

Ground-borne Vibration - A technical term used to describe mostly man-made vibrations of the ground. Examples include vibrations caused by trains, buses on rough roads, and construction activities.

Ground-borne Noise - A technical term used to describe mostly man-made noise of the ground. Examples include noise caused by trains, buses on rough roads, and construction activities. Ground-borne noise often sounds like a rumbling.

Hazardous Material - Substances that could harm human health or the environment, including petroleum products, polynuclear aromatic hydrocarbons, pesticides, organic compounds, heavy metals, asbestos-containing materials, lead-based paint, or other compounds.

Headway - The elapsed time between trains passing a fixed point in the same direction over the same track. Refers to train frequency, for example, a 15-minute headway means a train comes every 15 minutes.

Heavy Rail - A railway powered by electricity or diesel fuel with the capacity for a heavy volume of traffic (number of trains and passenger capacity). It is characterized by high speed and rapid-acceleration passenger rail cars operating singly or in multi-car trains on fixed rails, separate rights-of-way from which some other vehicular and foot traffic are excluded, sophisticated signaling, and high-platform loading.

Historic District - A group of buildings, properties, structures, or sites that have been designated either federally or by the City as historically or architecturally significant. Districts vary greatly in size: some have hundreds of structures while others have just a few.

Impact - An impact is a change in the condition or function of an environmental resource that occurs as a result of the proposed alternative. An impact can be adverse (negative) or beneficial (positive).

Adverse Impact - An adverse impact is a negative consequence of the proposed alternative (opposite of a benefit).

Construction Impact - Construction impacts are related to the construction phase of the proposed alternative.

Cumulative Impact - The environmental impact or effect of the project when added to the impacts of other separate past, present, and reasonably foreseeable future actions.

***De Minimis* Impact** - A term from Latin, meaning "about minimal things." A de minimis impact finding is defined in 23 Code of Federal Regulations § 774.17 for historic resources, parks, recreation areas, and wildlife/waterfowl refuges in determinations of use of such resources for environmental analysis.

Indirect Impact - Also known as a secondary impact, indirect impacts are those caused by the project or plan but that are separated from direct impacts by time and/or distance.

Permanent Impact - Permanent impacts are related to the operation (long-term) of the proposed alternative.

Lead Agency - The agency or agencies responsible for preparing the Environmental Impact Statement (EIS) in compliance with the National Environmental Policy Act (NEPA). FTA and CTA are the lead agencies for the RLE Project.

Level of Service (LOS) - A rating that uses a set of characteristics that indicate the quality and quantity of transportation service. Often LOS is defined by the amount of delay at a traffic signal.

Locally Preferred Alternative - The Union Pacific Railroad (UPRR) Rail Alternative was selected by the Chicago Transit Board as the LPA on August 12, 2009, indicating that it is the alternative that best meets the purpose and need of the project while addressing potential impacts and other potential constraints.

Median Household Income - Median household income is a statistical measurement of a set of household income data. The Median household income for a set of data splits the income distribution into two equal groups, half having income above that amount and half having income below that amount. Median household income is typically presented for a defined geographic area.

Mitigation - Action or measure taken to minimize, reduce, eliminate, or rectify the adverse impacts of a project, practice, action, or activity.

Mixed-use - Refers to a mixture of different types of uses in the same structure or location, for example, a building with commercial units on the ground floor and residential units above.

Mobility - The movement of people or goods, including transportation options, travel patterns, access to jobs, and access for emergency service providers.

Moving Ahead for Progress in the 21st Century Act (MAP-21) - A funding and authorization bill to govern the United States federal surface transportation spending. Congress passed MAP-21 on June 29, 2012, and President Barack Obama signed it on July 6, 2012. The $105-billion, 2-year bill did not substantially alter total funding from the previous authorization, but it did include many major reforms.

National Environmental Policy Act of 1969 (NEPA) - Requires all agencies to examine and disclose the environmental impacts of their actions, incorporate environmental information into project decisions, and use public participation in the planning and implementation of all actions.

National Historic Preservation Act of 1966 (NHPA) - Established a national framework for historic preservation, requiring the federal government to establish a national system for identifying, evaluating, protecting, and rehabilitating historic places.

National Register of Historic Places (NRHP) - The national list of districts, sites, buildings, structures, and objects significant in American history, architecture, archaeology, engineering, or culture. It is maintained by the Secretary of the Interior under authority of Section 101(2)(1)(a) of the National Historic Preservation Act, as amended.

NEPA Preferred Alternative - An alternative determined by FTA and the project sponsor (in this case, CTA) to best accomplish the purpose and need of a proposed action while fulfilling statutory requirements and responsibilities, with consideration to economic, environmental, technical, and other factors. In August 2014, based on the technical analysis and public input received, CTA announced the NEPA Preferred Alternative for the RLE Project—the UPRR Rail Alternative. The NEPA Preferred Alternative is the RLE Project alternative that is studied in the Draft EIS. CTA intends to move forward with the NEPA Preferred Alternative into the next stage of project development.

New Starts - FTA’s primary grant program for funding major transit capital investments, including rapid rail, light rail, bus rapid transit, commuter rail, and ferries.

No Build Alternative - The No Build Alternative refers to an alternative under which no action would be taken (no infrastructure would be built and no new management or operational practices would be instituted). The No Build Alternative includes all projects currently included in the fiscally constrained portion of the CMAP Fiscal Year 2010–2015 Transportation Improvement Program (TIP), including renovation of the 95th Street Terminal.

Noise Barrier - An exterior structure located next to the tracks that is designed to protect surrounding residents and community members from noise impacts related to the proposed project. Noise barriers are an effective method of mitigating roadway, railway, and industrial noise sources.

Noise-Sensitive Receiver - Noise-sensitive receivers are residences and/or other land uses that would be negatively affected by noise from the proposed project, such as tracts of land set aside for serenity and quiet, hospitals, hotels, churches, museums, parks, and cemeteries.

Nonattainment Area - Nonattainment areas are metropolitan areas that do not meet national ambient air quality standards (NAAQS), ranked by the severity of their problem as marginal, moderate, serious, severe, or extreme. In accordance with the Clean Air Act Amendments of 1990, these areas must take specific emission reduction measures.

Option - One of the several possibilities for an alternative. The UPRR Alternative has two options: the East Option and the West Option, each along the same general alignment but slightly different.

Peak/Off-Peak - Peak is the AM or PM time period when the largest volume of riders occurs. Off-Peak is the remainder of the day when travel activity is generally lower.

Photo Simulation - A computer-generated image that shows how an alternative, station, or feature could look after construction.

Platform - An area at a station used to get on or off trains.

Public Participation Plan (PPP) - A Public Participation Plan includes public outreach goals, key issues, a detailed stakeholder database, communications protocols, public input tracking protocols, a proposed schedule for interfacing with the public, and recommendations for how meetings should be conducted at various stages of the study.

Purpose and Need - Identifies the reasons a proposed project is needed and reflects the project objectives discussed with the public during the scoping process.

Railroad Ties - Rectangular supports for railroad tracks. Railroad ties are traditionally made of wood.

Record of Decision (ROD) - A document prepared by FTA that presents the basis for selecting and approving a specific transportation proposal that has been evaluated through the various environmental and engineering studies. Typically, the ROD identifies the alternative selected in the Final EIS, the alternatives considered, measures to minimize harm, monitoring or enforcement programs, and an itemized list of commitments and mitigation measures.

Red Ahead Program - A comprehensive initiative for maintaining, modernizing, and expanding Chicago's most traveled rail line. The program includes major improvement projects on the Red and Purple Lines between Linden terminal in the north and the proposed 130th Street terminal on the south. The improvement projects include the Red and Purple Modernization project, the Red Line Extension Project, and the Red Line South Reconstruction Project. In addition, the Red Ahead Program encompasses several individual projects, including the renovation of several stations along the Red Line including Wilson Station, Clark and Division Stations, and the 95th Street Terminal.

Red Line Extension (RLE) Project - The Chicago Transit Authority (CTA) is proposing to extend the Red Line from the existing 95th Street Terminal to 130th Street, subject to the availability of funding. The proposed 5.3-mile extension would include four new stations near 103rd Street, 111th Street, Michigan Avenue, and 130th Street. Each new station would include bus and parking facilities. This project is one part of the Red Ahead Program to extend and enhance the entire Red Line.

Right-of-Way - In transit usage, the corridor along a railway that is controlled by a transit or transportation agency/authority.

Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) - A funding and authorization bill that governed the United States federal surface transportation spending. It was signed into law by President George W. Bush on August 10, 2005, and expired on September 30, 2009. The Moving Ahead for Progress in the 21st Century Act (MAP-21) replaced this law on July 6, 2012.

Safety - Safety refers to freedom from harm resulting from unintentional acts or circumstances. With regard to the RLE Project, safety includes all possible incidents within the CTA right-of-way (which includes areas along tracks, in yards, and at stations). Examples include collisions, derailments, fires, property damage, injuries, and fatalities.

Scoping - An early and open process for identifying the extent, variety, and significance of issues related to a proposed action in the EIS. Scoping for RLE was held in the form of public open house meetings in the fall of 2009.

Secondary Station Entrance/Exit - An auxiliary entry/exit in addition to the primary entry and/or exit.

Section 4(f) - Section 4(f) of the Department of Transportation Act of 1966 states that no transportation project should be approved that requires the use of land from a public park, recreation area, wildlife and waterfowl refuge, or historic site unless there is no feasible or prudent alternative to the use of such land or the use of such land are found to be *de minimis*.

Section 106 - Section 106 of the National Historic Preservation Act deals with project effects on historic properties. It requires consultation with parties with expertise and interest in historic resources.

Security - Security refers to freedom from harm resulting from intentional acts or circumstances. Intentional danger includes crimes and must be reported if the intentional act meets thresholds for notification as specified in FTA's State Safety Oversight Rule.

Sensitive Receiver Cluster - A group of noise-sensitive receivers determined to be at similar distances from the proposed track locations and where the CTA operating conditions, such as train speed, would be similar.

Shoring - The process of supporting a structure in order to prevent collapse so that construction can proceed.

State Historic Preservation Officer (SHPO) - The official appointed or designated pursuant to Section 101(b)(1) of the National Historic Preservation Act to administer the State historic preservation program. The SHPO consults with state and federal agencies during the Section 106 process review. The SHPO administers the national historic preservation program at the State level, reviews National Register nominations, and maintains file data on historic properties that have been identified but not yet nominated. Agencies seek the view of the SHPO in the identification of historic properties and the assessment of the effects of a project on historic properties.

Substation - A part of an electrical generation, transmission, and distribution system. Substations transform voltage from high to low, or the reverse, or perform any of several other important functions.

Transit Infrastructure - Basic physical elements of the transit system including track, structures, signals, and power.

Transportation Improvement Program (TIP) - A document prepared by metropolitan planning organizations listing projects to be funded with Federal Highway Administration and FTA funds for the next 1- to 3-year period.

Transportation System Management - A “low cost” project alternative that was previously required for FTA analyses.

Transit-Oriented Development (TOD) - TOD is development that takes advantage of the location of the site adjacent to or near a transit station. TOD includes mixed-use developments, such as residential buildings with ground-floor retail that complement and take advantage of adjacent transit stations, activate streetscapes, enhance livability, and encourage economic development.

Travel Time - The time spent traveling from a place of origin to a place of destination.

Uniform Act - The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, mandates that relocation services and payments be made available to eligible residents, businesses, and nonprofit organizations displaced as a direct result of projects undertaken by a federal agency or with federal financial assistance.

Union Pacific Railroad (UPRR) - The UPRR owns and operates tracks and trains that run through the project corridor along Eggleston Avenue.

Viaduct - A bridge-like structure over a street that allows trains to pass over the street and vehicles to pass under the tracks.

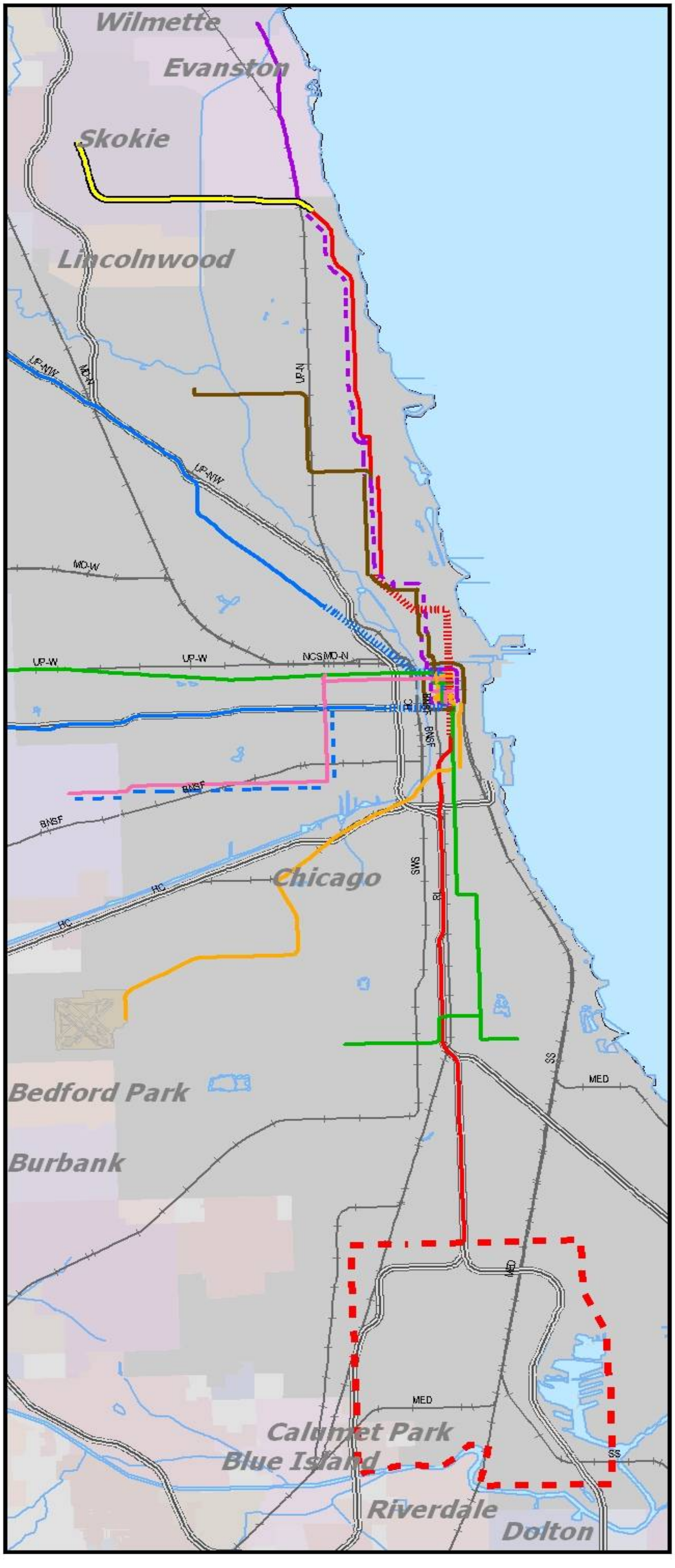
Viewshed - An area that is visible to the human eye from a fixed vantage point.

Visual Impact - A change in the appearance of a place as a result of development. Visual impacts can be positive or negative.

Wetland - Land where saturation with water is the dominant factor determining the nature of soil development and the types of plant and animal communities living in the soil and on its surface.

Yard and Shop - An area in a rail system used for maintenance, storing, or holding trains.

Appendix A
Alternatives Analysis - Locally Preferred Alternative Report


Wilmette
Evanston
Skokie
Lincolnwood
UP-NW
MD-N
UP-N
UP-NW
MD-W
UP-W
UP-W
NCS
MD-N
BNSF
BNSF
BNSF
HC
HC
Chicago
SWS
RI
SS
MED
Bedford Park
Burbank
MED
MED
Calumet Park
Blue Island
SS
Riverdale
Dolton

CTA Red Line Extension Alternatives Analysis

Locally Preferred Alternative Report

August 2009

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Acronyms Used in this Document

AA	Alternatives Analysis
ADT	Average Daily Traffic
AGT	Automated Guideway Transit
BRT	Bus Rapid Transit
CATS	Chicago Area Transportation Study
CDOT	Chicago Department of Transportation
CMAP	Chicago Metropolitan Agency for Planning
CN	Canadian National Railway
CREATE	Chicago Region Environmental and Transportation Efficiency Program
CTA	Chicago Transit Authority
dBA	Decibel Using A-Weighted Sound Level
EIS	Environmental Impact Statement
FTA	Federal Transit Administration
FY	Fiscal Year
HRT	Heavy Rail Transit
IHB	Indiana Harbor Belt Railroad
IDOT	Illinois Department of Transportation
LOS	Level of Service
LPA	Locally Preferred Alternative
LRT	Light Rail Transit
LUST	Leaking Underground Storage Tank
MED	Metra Electric District
MOE	Measures of Effectiveness
MWRDGC	Metropolitan Water Reclamation District of Greater Chicago
NEPA	National Environmental Policy Act
NICTD	Northern Indiana Commuter Transportation District
O&M	Operations and Maintenance
PE	Preliminary Engineering
PRT	Personal Rapid Transit
RA	Redevelopment Area
RTA	Regional Transportation Authority
SCC	Standard Cost Categories
TIF	Tax Increment Finance
TSM	Transportation System Management
TSP	Transit Signal Priority
UPRR	Union Pacific Railroad
V/C	Volume-to-Capacity Ratio
VdB	Vibration Decibels
VHD	Vehicle Hours of Delay
YOC	Year of Construction
YOE	Year of Expenditure

1.0 INTRODUCTION

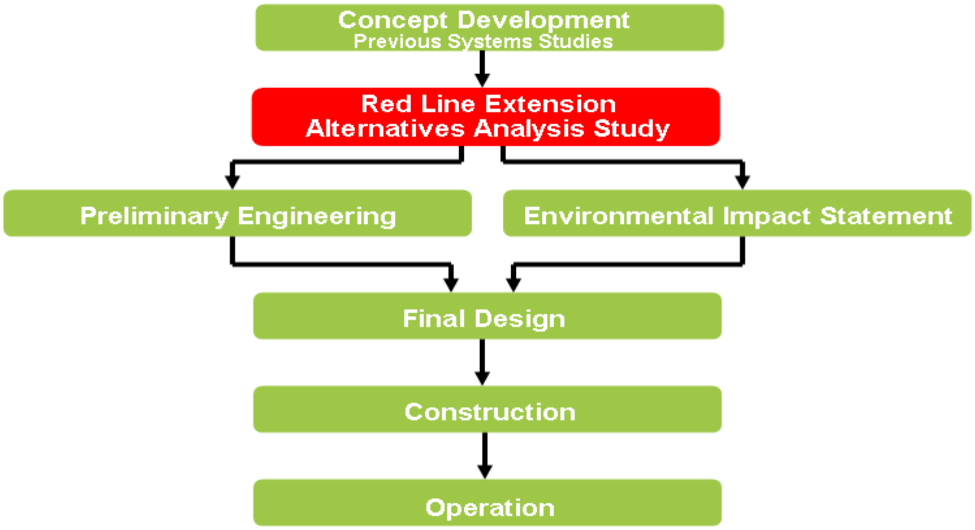
1.1 Context of the Alternatives Analysis

The Chicago Transit Authority (CTA) Red Line Dan Ryan rapid transit branch opened for service in September 1969. Proposed extensions of the CTA Red Line Dan Ryan branch to the south from its current terminus at 95th Street have been consistently included in the Chicago region's long range transportation plan developed by the Chicago Metropolitan Agency for Planning (CMAP), formerly the Chicago Area Transportation Study (CATS), since the mid-1970s.

The Chicago Department of Transportation (CDOT) also completed a draft feasibility study of transportation needs for the Far South area of the City of Chicago that concluded that despite strong transit ridership, access to CTA transit services was challenging. This draft feasibility study examined several transit corridors for their potential to improve mobility for Far South area residents and businesses. This feasibility study was also intended to lay the ground work for an Alternatives Analysis (AA) study to formally identify a Locally Preferred Alternative (LPA).

In late 2006, the CTA initiated an AA study to identify and evaluate potential major fixed guideway transit solutions in the Far South area of Chicago. This AA report documents the identification, evaluation, and selection of a LPA for the CTA, consistent with the planning and project development process defined by the Federal Transit Administration (FTA). The Alternatives Analysis is the first major step in the FTA New Starts process (shown in Figure 1.1). Transit agencies across the country seeking federal New Starts funding must follow this process. The CTA used the results of past studies as a starting point for conduct of the AA study. The AA study is completed with the selection of a LPA.

Figure 1.1: FTA's New Starts Process



The next steps in the process are Preliminary Engineering (PE) and the preparation of an Environmental Impact Statement (EIS). The CTA must apply to FTA for entry into Preliminary Engineering. If the LPA from the AA study meets the New Starts criteria thresholds established by FTA for transit projects nationally, then permission can be granted to begin PE. PE consists of more detailed design and costing of the LPA to a much higher degree of confidence. At the same time, an EIS is also prepared to evaluate all potential environmental impacts, as required by the National Environmental Policy Act (NEPA).

Final Design is the last phase of project development, and includes right-of-way acquisition, utility relocation, and the preparation of final construction plans for the LPA. Assuming all funding is in place, and the FTA issues a Full Funding Grant Agreement, construction can begin. After completion of construction and testing, the new transit service can begin operation.

Each of these steps in the New Starts process typically takes a minimum of two years although PE and preparation of an EIS can be completed concurrently. Public involvement is integral to each steps. For the AA study, CTA implemented a public involvement process that included a wide range of stakeholders from the study area, elected officials, agencies, and the general public.

1.2 Purpose of the Alternatives Analysis Report

The purpose of the Red Line Extension AA Study is to identify transit improvements that would provide improved mobility to residents and businesses located in the City of Chicago's Far South Side and surrounding suburbs. The report summarizes the results of an AA that followed FTA New Starts project development guidance. It provides information on the costs, benefits, and impacts of a wide range of alternatives that went through a three step screening process. The result of the Red Line Extension AA is a LPA that was adopted by the Chicago Transit Board.

1.3 Organization of this Report

This report is organized into eight sections. Section 2 describes the purpose and need of the project, including a description of the study area and the existing transportation system, planned growth and improvements in the study area, the need for an improved transit system. Section 3 describes the Screen 1 Evaluation of the Universe of Alternatives. Section 4 describes the Screen 2 Evaluation of the alternatives carried forward from Screen 1. Section 5 describes the Screen 3 Evaluation and the recommendation of a LPA. Section 6 describes the Locally Preferred Alternative (LPA) and how well the LPA achieved the project goals and objectives. Section 7 provides and overview of public involvement and Section 8 describes the next steps for the project.

2.0 PURPOSE AND NEED

2.1 Description of Study Area

The Chicago metropolitan region has the second largest transit system in the nation. The CTA bus and heavy rail system provides service to the City of Chicago and 40 suburbs. The CTA system served over 520 million trips in 2008. Coordination with Metra commuter rail, Pace suburban bus service, and private bus operations results in an integrated regional transit system. The region's transportation system -- both transit and highways -- support the economy of the region, provide access to jobs and other personal and business travel needs, and support development throughout the study area and region.

There are concentrations of established communities where accessibility to CTA rapid transit services is more challenging. The Far South area of Chicago is has high transit ridership, but access to the existing rapid transit network is challenging.

Pedestrian and bus congestion is a daily problem at the CTA's Red Line 95th Street station. Limited employment options in the Far South area require residents to travel long distances to the Chicago Central Area or other regional employment centers. The strong dependence on the Red Line to reach these opportunities, coupled with a constrained street network, result in many lengthy bus trips to access the 95th Street Station. According to the 2000 U.S. Census, commute times for the Far South area are longer than the region’s average commute time.

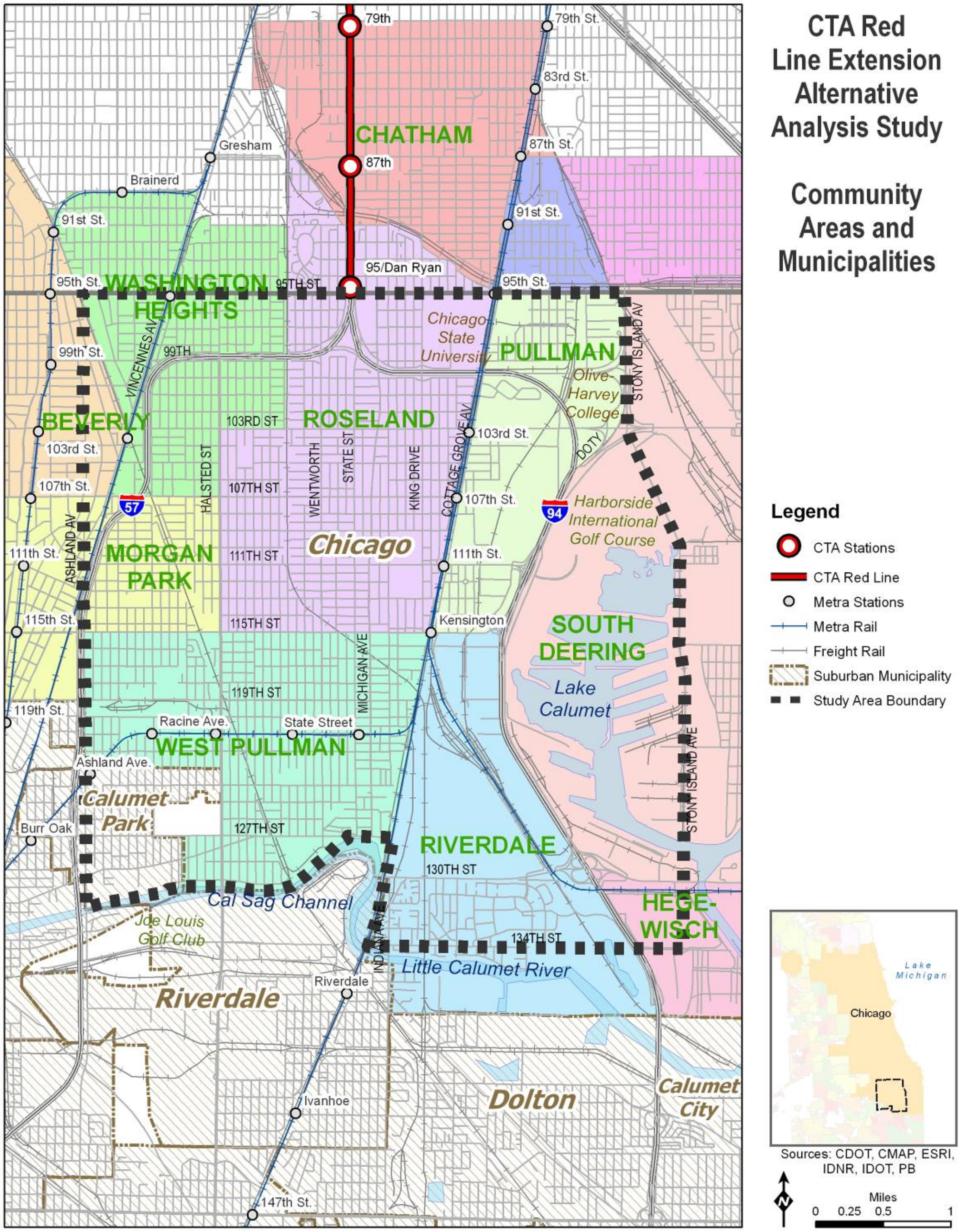
The purpose of the Red Line Extension Alternatives Analysis (AA) Study is to identify transit improvements that would provide improved mobility to residents and businesses located in the City of Chicago’s Far South Side and surrounding suburbs.

2.1.1 Study Area Boundaries

The study area (Figure 2.1) is situated 11 miles south of the Chicago Central Area (commonly referred to as the “Loop”) and encompasses approximately 20 square miles. The boundaries of the study area are 95th Street on the north, Ashland Avenue on the west, Stony Island Avenue on the east, and the Calumet-Sag Channel/Little Calumet River and 134th Street on the south. The I-57 Expressway and I-94 Bishop Ford Freeway traverse the western and eastern edges of the study area, respectively. Lake Calumet is located in the eastern portion of the study area.

The study area encompasses parts of nine community areas in the City of Chicago and the eastern section of the City of Calumet Park (area east of Ashland Avenue). Community areas include Washington Heights, Beverly, Morgan Park, Roseland, Pullman, West Pullman, South Deering, Hegewisch and Riverdale (Figure 2.1). The study area has significant residential (primarily single family), industrial (existing and vacant), transportation and commercial development. The study area boundaries are major, recognizable streets, used to clearly define where possible alternatives would be considered. However, travel patterns and analyses beyond the study area are integral components to the project study and included as necessary.

Figure 2.1: Study Area and Community Area Boundaries


CTA Red Line Extension Alternative Analysis Study
Community Areas and Municipalities
79th
79th St.
83rd St.
CHATHAM
Gresham
87th St.
87th
Brainerd
91st St.
91st St.
95/Dan Ryan
95th St.
WASHINGTON HEIGHTS
95TH ST
95th St.
Chicago State University
PULLMAN
Olive-Harvey College
STONY ISLAND AV
99th St.
99TH
VINCENNES AV
BEVERLY
103RD ST
ROSELAND
103rd St.
103rd St.
DOTY
107th St.
HALSTED ST
107TH ST
WENTWORTH
STATE ST
KING DRIVE
COTTAGE GROVE AV
107th St.
57
94
Harborside International Golf Course
111th St.
ASHLAND AV
MORGAN PARK
111TH ST
Chicago
111th St.
115th St.
115TH ST
Kensington
SOUTH DEERING
MICHIGAN AVE
Lake Calumet
119TH ST
119th St.
Racine Ave.
State Street
WEST PULLMAN
Ashland Ave.
STONY ISLAND AVE
Calumet Park
Burr Oak
127TH ST
RIVERDALE
130TH ST
Cal Sag Channel
HEGE-WISCH
Joe Louis Golf Club
INDIANA AVE
134TH ST
Little Calumet River
Riverdale
Riverdale
Dolton
Calumet City
Ivanhoe
147th St.
Legend
CTA Stations
CTA Red Line
Metra Stations
Metra Rail
Freight Rail
Suburban Municipality
Study Area Boundary
Lake Michigan
Chicago
Sources: CDOT, CMAP, ESRI, IDNR, IDOT, PB
N
Miles
0 0.25 0.5 1

2.1.2 Demographic Characteristics

The six-county northeastern Illinois region is the third most populated metropolitan region in the nation. The City of Chicago, with 2.9 million residents, is the nation's third largest municipality. In 2000, the study area had over 133,000 residents living in nearly 42,000 households. Study area population is expected to grow by 5 percent and households by 9 percent between 2000 and 2030.

Table 2.1: 2000 and 2030 Population

Area	2000 Population	2030 Population	Growth	2000 Households	2030 Households	Growth
Six-County NE Illinois Region	8,092,145	10,050,860	+24%	2,907,201	3,636,108	+25%
City of Chicago	2,897,715	3,261,464	+13%	1,062,683	1,222,082	+15%
Red Line Ext. Study Area	133,364	139,820	+5%	41,515	45,349	+9%

Source: Northeastern Illinois Planning Commission (now CMAP) 2030 Forecasts, approved 9/27/2006.

As seen in Figure 2.2, population density in the study area generally ranges from 5,000 to 20,000 persons per square mile and is consistent with the population density around the existing CTA Red Line service.

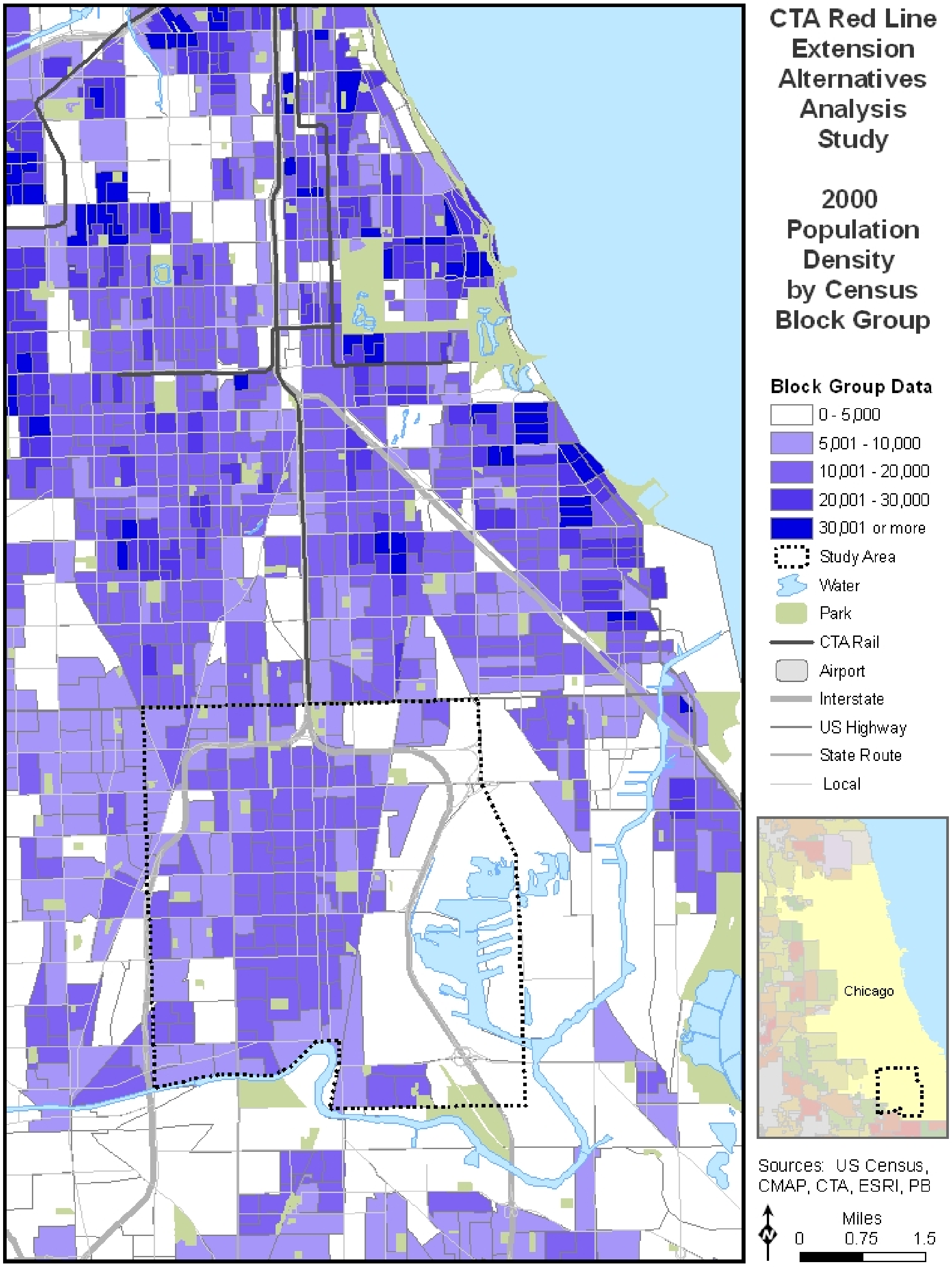
The study area population is almost entirely minority. In 2000, 93.8 percent of the study area population was African American (see Figure 2.3), 2.7 percent Hispanic, 1.9 percent Caucasian, and 1.6 percent other minorities.

A large share of the study area population is low income, as shown in Figure 2.4. In 2000, 21 percent of the population had incomes below the poverty level – double the population of low income residents in Cook County, at 11.5 percent. Just south of 130th Street and to the west of the I-94 Bishop Ford Freeway, 3,400 residents live in the Altgeld Gardens/Murray Homes public housing development.

2.1.3 Employment and Economic Development

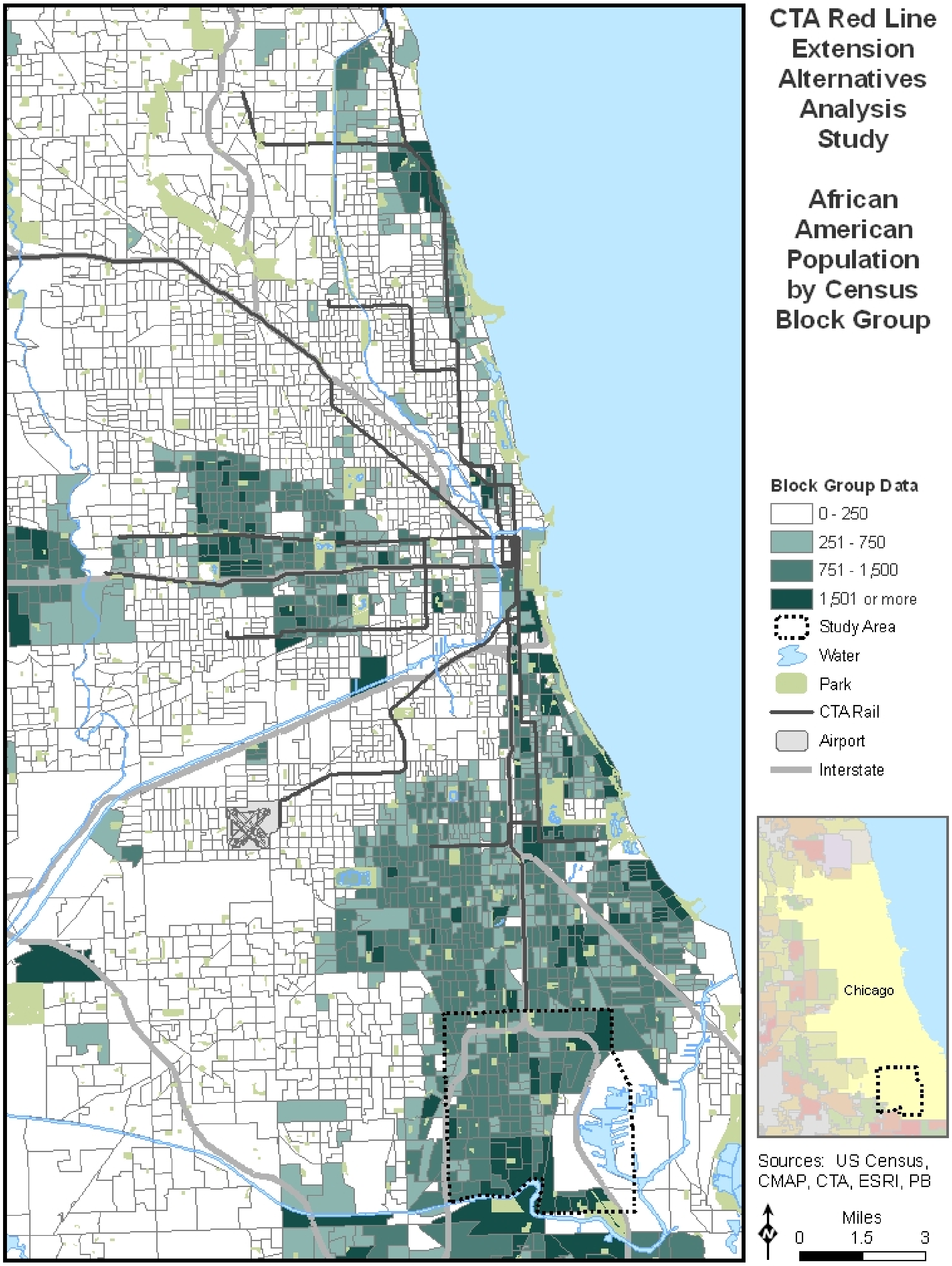
The Far South area of Chicago has seen many of its major employment centers close since the 1980s, with a loss of around 20,000 jobs. Despite these losses, the area has remained an active industrial center in the region. Since the late 1990s employment has been increasing. Several Far South area businesses have expanded, including the Ford Motor Company in South Deering, offsetting some of the job losses from previous years. As shown in Table 2.2, the 2000 employment in the Red Line Extension study area is approximately 17,000 jobs, with CMAP 2030 employment projections at 27,000 jobs (58 percent increase).

Figure 2.2: 2000 Population Density (Persons per Square Mile)


CTA Red Line Extension Alternatives Analysis Study
2000 Population Density by Census Block Group
Block Group Data
0 - 5,000
5,001 - 10,000
10,001 - 20,000
20,001 - 30,000
30,001 or more
Study Area
Water
Park
CTA Rail
Airport
Interstate
US Highway
State Route
Local
Chicago
N
Miles
0
0.75
1.5

Sources: US Census, CMAP, CTA, ESRI, PB

Figure 2.3: 2000 Study Area African American Population (Persons)


CTA Red Line Extension Alternatives Analysis Study
African American Population by Census Block Group
Block Group Data
0 - 250
251 - 750
751 - 1,500
1,501 or more
Study Area
Water
Park
CTA Rail
Airport
Interstate
Chicago
N
Miles
0
1.5
3

Sources: US Census, CMAP, CTA, ESRI, PB

Figure 2.4: 2000 Study Area Low Income Population (Persons)

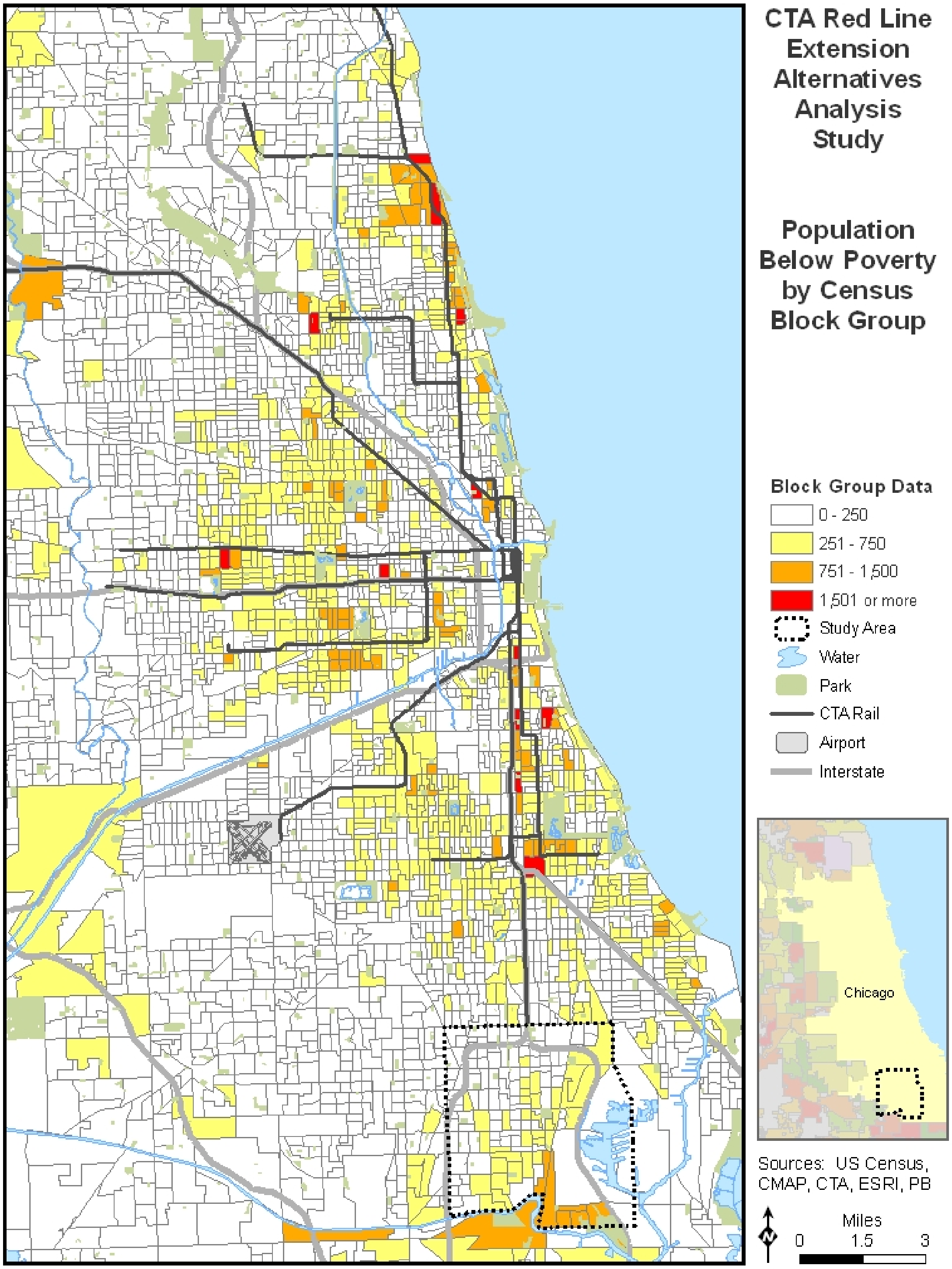

CTA Red Line Extension Alternatives Analysis Study
Population Below Poverty by Census Block Group
Block Group Data
0 - 250
251 - 750
751 - 1,500
1,501 or more
Study Area
Water
Park
CTA Rail
Airport
Interstate
Chicago
Sources: US Census, CMAP, CTA, ESRI, PB
N
Miles
0
1.5
3

Table 2.2: 2000 and 2030 Employment

Area	2000 Employment	2030 Employment	2000-2030 Change
Six-County NE Illinois Region	4,297,686	5,535,236	+29%
City of Chicago	1,499,255	1,745,101	16%
Red Line Study Area	17,290	27,108	58%

Source: Northeastern Illinois Planning Commission (now CMAP) 2030 Forecasts, approved 9/27/2006.

In 2000, the Far South study area had one job for every eight residents. This compares to one job for every two residents for the City of Chicago and the six-county northeastern Illinois region as a whole. As a result, many residents must travel to downtown Chicago or other major employment centers for work, resulting in long commutes for many Far South residents. By 2030, the jobs to population balance is expected to improve for the study area to one job for every five residents, but will still remain far below the city and regional averages.

The City of Chicago is focusing on stabilizing, improving and redeveloping communities in the Far South area. The City has designated several Tax Increment Finance (TIF) districts, Redevelopment Areas (RA), and Industrial Corridors in the study area. TIF districts direct future tax revenue increases back to the district for development assistance, infrastructure improvements, environmental remediation, building demolition, land acquisition, and employment training. RAs allow for building acquisition and demolition, assembling lots into viable parcels, and improving community facilities, infrastructure, and transportation facilities. Industrial Corridors are designated to improve opportunities for manufacturers and other industrial users. Major incentive zone areas in the study area include the 119th/Halsted RA, the Roseland/Michigan Avenue RA, the Pullman Industrial Corridor, and several smaller TIF districts.

There have been numerous market studies[1] performed in the study area to identify economic development opportunities. These studies have recommended:

- increase the supply of sites available to retain growing companies and attract new ones,
- develop large parcels to overcome perceptions of disinvestment,
- assemble large sites near intermodal facilities and market to major regional distributors,
- provide transportation support to TIF development projects,
- create proactive programs to identify and retain companies faced with expansion,
- develop comprehensive labor force development efforts,
- increase presence of commercial services franchises,
- explore potential for back-office development, and
- address unmet retail and grocery store demand.

---

[1] Chicago Industrial Market and Strategic Analysis, Strategies for Business Growth in Chicago Neighborhoods, Commercial Market Assessment Michigan Avenue Corridor in Roseland, Residential Market Analysis for the 9th Ward (Draft), Moving Chicago Far South District Analysis (Draft)

2.1.4 Land Use Characteristics

The study area's land use is diverse, as depicted in Figure 2.5. Approximately 44 percent of the study area is residential and 11 percent industrial. Retail and commercial areas are located north-south along the Halsted Street and Michigan Avenue corridors. Large tracts of vacant or underutilized industrial land remain in the eastern portion of the study area in the vicinity of Lake Calumet.

The study area is rich in educational facilities, including Chicago State University (7,200 students), Olive-Harvey College (4,300 students), and several high schools including Harlan, Corliss, Fenger, Julian, Brooks and Carver.

Other activity centers in the study area include South Michigan Avenue Shopping District, Halsted Street Commercial Corridor, Roseland Hospital (162 beds), Sherwin-Williams, Ryerson, the Illinois International Port District, and Metron Steel. The Ford Motor plant, with 2,800 employees, is located at 130th Street and Torrence Avenue, just east of the study area.

2.1.5 Travel Patterns[2]

More than 282,000 total daily trips originated or were destined to the study area in 2000. By 2030, daily trips are projected to increase by over 26 percent to over 356,000 trips.

Of the total daily study area trips in 2000, approximately 17 percent of these trips were home-based work trips. By 2030, home-based work trips increase 14 percent from 2000.

As seen in Figure 2.6, compared to other districts, the study area (District 1) exhibits a strong tie to the Chicago Central Area (District 7), and other districts accessible by CTA rapid transit, for work trips. Of the 48,000 daily work trips originated or were destined to the study area in 2000, 24.4 percent of these trips were to/from the Chicago Central Area. Other 2000 major work trip flows to/from the study area include the district surrounding the study area (District 2) at 9 percent, the south lakefront (District 16) at 9 percent, the mid-south (District 15) at 7 percent, the west side (District 14) at 6 percent, the internal study area (District 5) at 5 percent, and major employer areas such as northwest Cook County (District 8) and DuPage County (District 20) at 3.4 percent and 2.5 percent respectively.

Of the total study area daily trips in 2000, approximately 71 percent of these trips were home-based other trips. By 2030, home-based other trips increase 30 percent from 2000. Major home-based other trip flows to/from the study area in 2000 include the district surrounding the study area (District 2) at 29 percent, the internal study area (District 1) at 16 percent, the south lakefront (District 16) at 12 percent, the southwest side (District 18) at 9 percent, the mid-south (District 15) at 7 percent, Will County (District 21) at 5 percent, and the Chicago Central Area (District 7) at 4 percent.

Non-home based trips are 12 percent of total trips for the study area in 2000. By 2030, non-home based trips increase 25 percent from 2000. Of the total home-based work trips in 2000 to/from the study area, 9 percent or nearly 4,500 work trips were made by households with zero-car ownership. By 2030, the number of home-based work trips by households with zero-car ownership increases 5 percent to 4,700.

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[2] Travel data from 2000 and 2030 CTA ROY New Starts travel model runs (AECOM)

Figure 2.5: Study Area Land Use

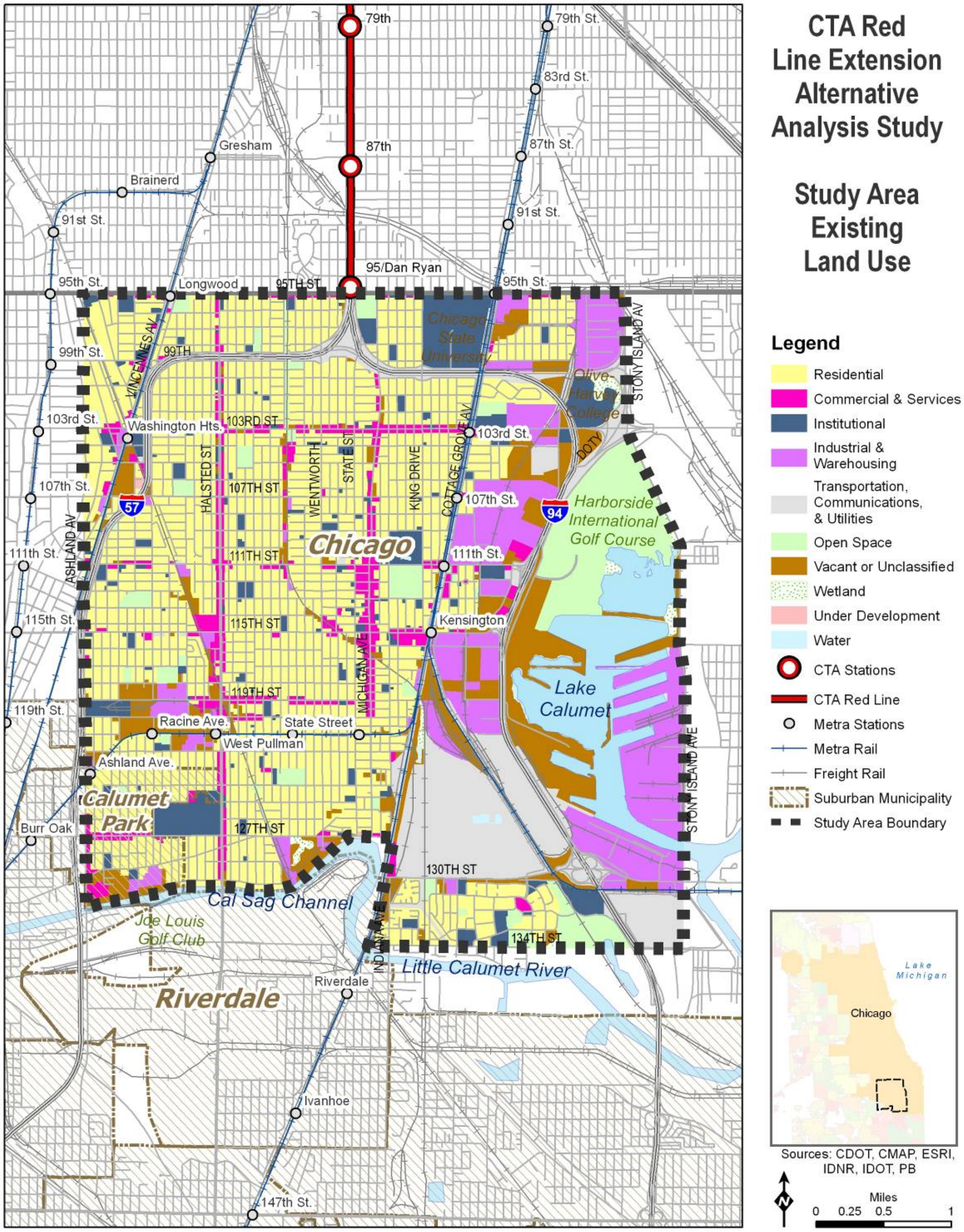
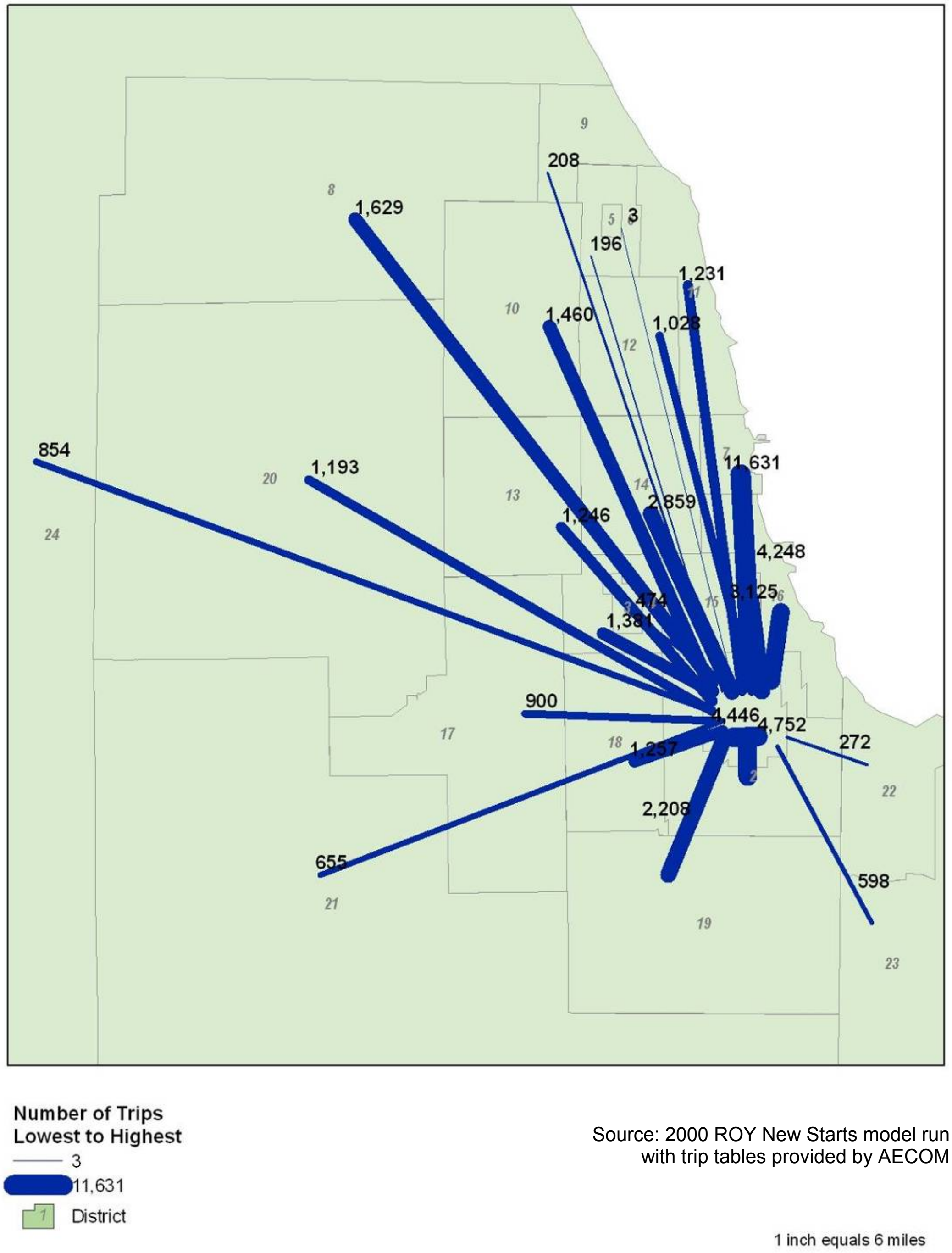

CTA Red Line Extension Alternative Analysis Study
Study Area Existing Land Use
Legend
Residential
Commercial & Services
Institutional
Industrial & Warehousing
Transportation, Communications, & Utilities
Open Space
Vacant or Unclassified
Wetland
Under Development
Water
CTA Stations
CTA Red Line
Metra Stations
Metra Rail
Freight Rail
Suburban Municipality
Study Area Boundary
79th
87th
95/Dan Ryan
79th St.
83rd St.
87th St.
91st St.
95th St.
103rd St.
107th St.
111th St.
Kensington
Gresham
Brainerd
91st St.
95th St.
Longwood
99th St.
103rd St.
Washington Hts.
107th St.
111th St.
115th St.
119th St.
Racine Ave.
West Pullman
State Street
Ashland Ave.
Burr Oak
Riverdale
Ivanhoe
147th St.
95TH ST
99TH
103RD ST
107TH ST
111TH ST
115TH ST
119TH ST
127TH ST
130TH ST
134TH ST
VINCENNES AV
ASHLAND AV
HALSTED ST
WENTWORTH
STATE ST
MICHIGAN AVE
KING DRIVE
COTTAGE GROVE AV
INDIANA AVE
DOTY
STONY ISLAND AV
STONY ISLAND AVE
57
94
Chicago
Chicago State University
Olive Harvey College
Harborside International Golf Course
Lake Calumet
Calumet Park
Cal Sag Channel
Joe Louis Golf Club
Riverdale
Little Calumet River
Lake Michigan
Chicago
Sources: CDOT, CMAP, ESRI, IDNR, IDOT, PB
N
Miles
0 0.25 0.5 1

Figure 2.6: 2000 Home-Based Work Trip Flows by District


208
9
8
1,629
5
3
196
1,231
10
1,460
1,028
12
854
20
1,193
11,631
13
14
2,859
24
1,246
4,248
3,125
474
15
1,381
900
4,446
4,752
17
18
1,257
272
22
2,208
655
598
21
19
23
Number of Trips
Lowest to Highest
3
11,631
District
1 inch equals 6 miles

Source: 2000 ROY New Starts model run
with trip tables provided by AECOM

The Far South study area had a 26 percent overall home-based work transit mode share in 2000. In particular, the study area shows very strong transit usage to the Chicago Central Area for these work trips at 57.6 percent in 2000, with the transit mode share projected to increase to 60.3 percent by 2030.

Home-based other transit mode share for the study area is 3.5 percent in 2000. Non-home based transit mode share for the study area is 3 percent in 2000.

2.2 Transportation Facilities and Services

The study area is served by roadway and transit systems, and pedestrian and bicycle facilities. Figure 2.7 depicts the roadway and rail transit systems within the study area, while Figure 2.8 provides additional details for CTA and Pace bus service within the study area.

2.2.1 Roadway System

The study area includes expressways, regional arterials, truck routes, intermodal connectors, secondary arterials and local streets. Expressways within the study area include I-57 and I-94 Dan Ryan/Bishop Ford. Average daily traffic (ADT) on I-94 Bishop Ford ranged from 129,000 west of King Drive to 156,800 north of 130th Street. The ADT on I-57 ranged from 145,900 north of 119th Street and 125,300 north of 127th Street. Leading to downtown Chicago, the I-94 Dan Ryan Expressway is one of the busiest expressways in the nation with an ADT of 300,000.[3]

Lake Calumet and the Calumet River are natural barriers resulting in no through-roads that would connect the eastern and western parts of the study area between 103rd and 130th Streets. Halsted Street is the only through north-south arterial road in the study area that crosses the Calumet-Sag Channel. ADT on Halsted Street is 26,000.

Based on CMAP 2030 traffic forecasts, projected traffic increases for Far South roads were approximately 10 percent for expressways and between 20 to 30 percent for arterials, with east-west travel demand growing slightly higher than north-south travel demand.

2.2.2 Transit System

The CTA's Red Line 95th Street terminal is at the northern boundary of the study area. Average frequency of service (headway) during the peak periods is 5 minutes, and service is provided around the clock, as seen in the Table 2.3 below. Entering weekday passengers at the 95th Street station was 14,240 in April 2008, or an estimated total of 28,500 passengers entering and exiting the station. The 95th Street station is CTA's highest entering station traffic outside of the Loop and is second overall in the system (excluding cross-platform transfers).

Table 2.3: CTA Red Line Service Summary

Service Period	Hours	Time Period	Average Frequency (minutes)	Train Length	Vehicles Required
Weekday					
Early Morning	3.0	03:00 - 06:00	13	4 or 8	
AM Peak	3.0	06:00 - 09:00	5	8	304
Base	6.0	09:00 - 15:00	7	4 or 8	184
PM Peak	3.0	15:00 - 18:00	5	8	304
Evening	4.0	18:00 - 22:00	7.5	4	
Late Evening/Owl	5.0	22:00 - 03:00	15	4 or 2	48
Weekday Total Hours	24.0				

Source: Red Line Extension Service Plan, PB and MKC Associates

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[3] ADT's from IDOT website. http://www.gettingaroundillinois.com/

Figure 2.7: Existing Transportation Facilities and Services

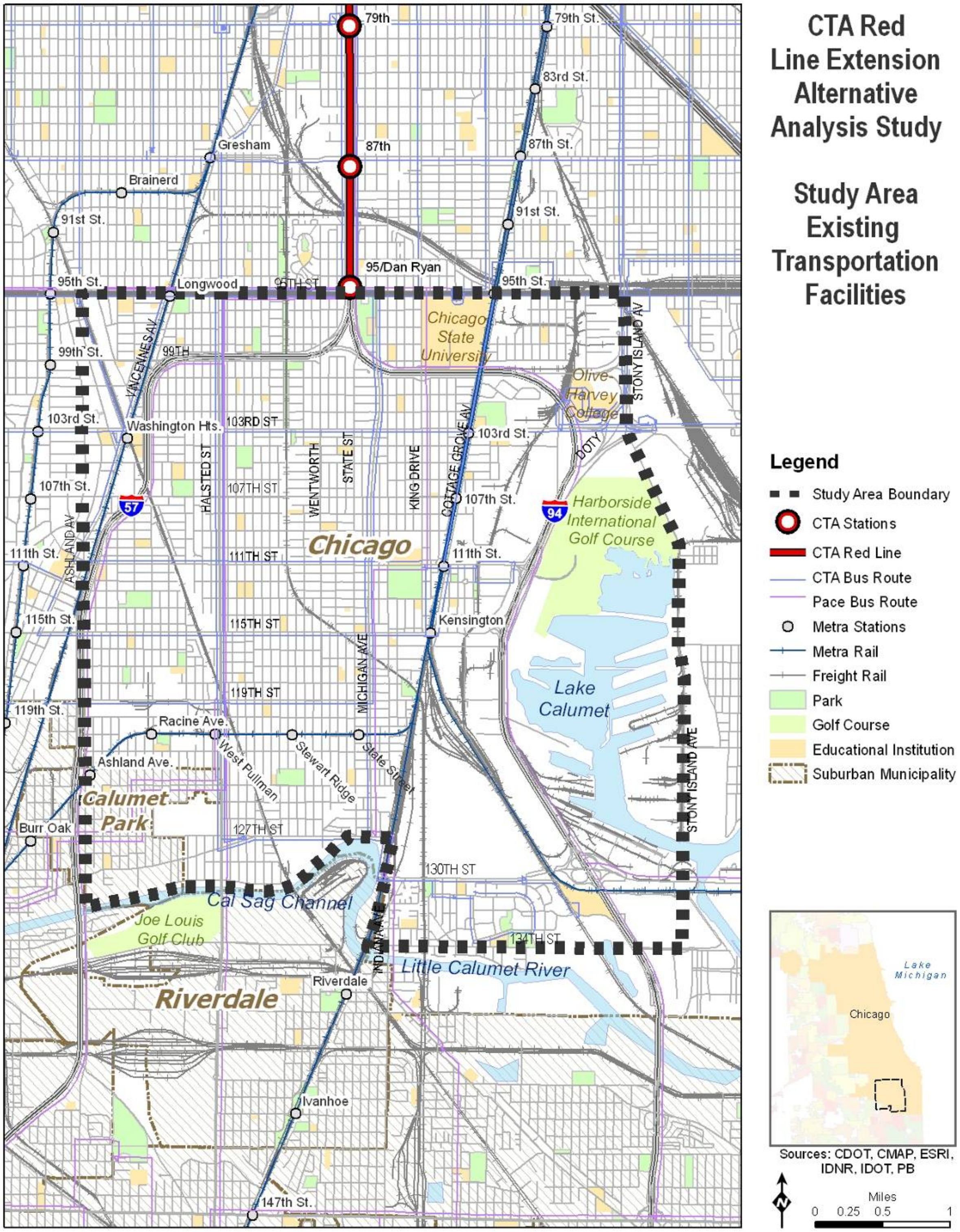
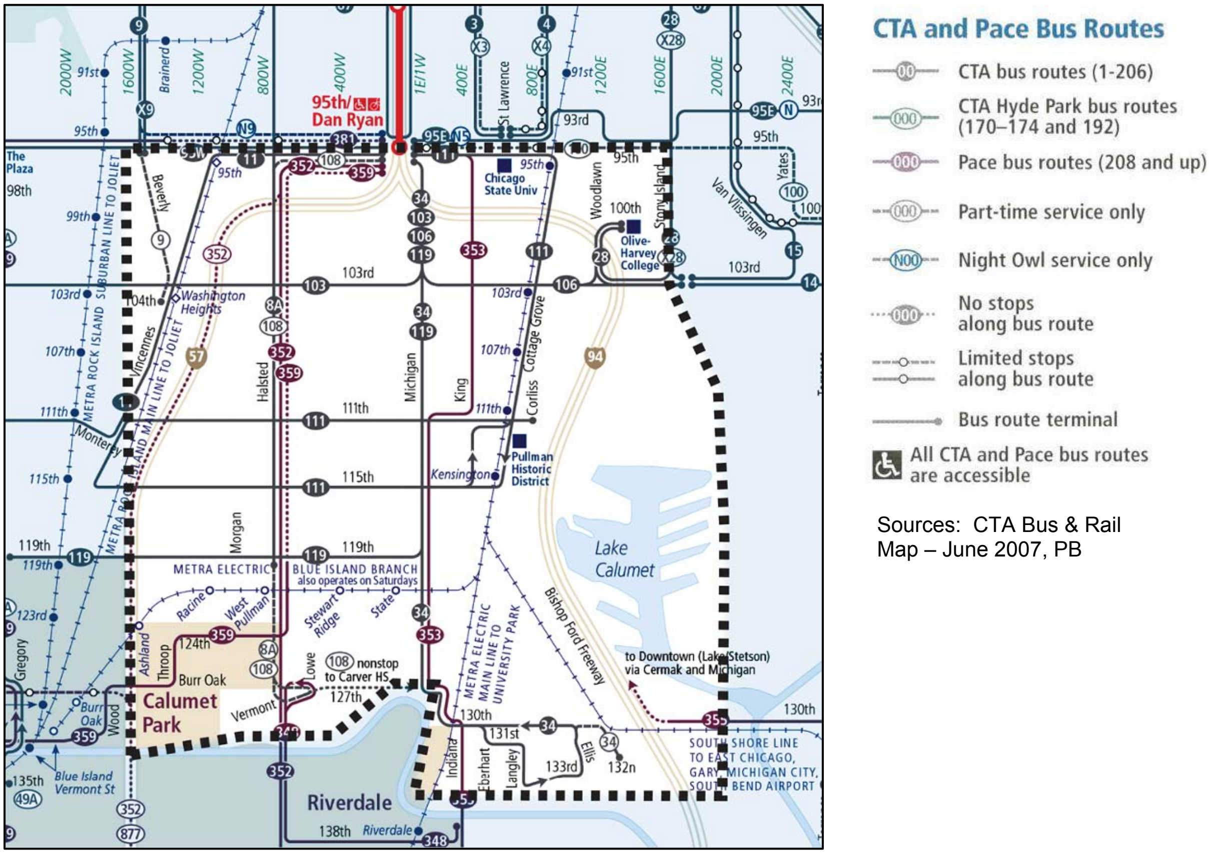

CTA Red Line Extension Alternative Analysis Study
Study Area Existing Transportation Facilities
Legend
Study Area Boundary
CTA Stations
CTA Red Line
CTA Bus Route
Pace Bus Route
Metra Stations
Metra Rail
Freight Rail
Park
Golf Course
Educational Institution
Suburban Municipality
Sources: CDOT, CMAP, ESRI, IDNR, IDOT, PB
Miles
0 0.25 0.5 1
Lake Michigan
Chicago
79th
87th
95/Dan Ryan
79th St.
83rd St.
87th St.
91st St.
95th St.
103rd St.
107th St.
111th St.
Kensington
Gresham
Brainerd
91st St.
95th St.
Longwood
99th St.
103rd St.
Washington Hts.
107th St.
111th St.
115th St.
119th St.
Racine Ave.
Ashland Ave.
Burr Oak
Riverdale
Ivanhoe
147th St.
95TH ST
99TH
103RD ST
107TH ST
111TH ST
115TH ST
119TH ST
127TH ST
130TH ST
134TH ST
VINCENNES AV
ASHLAND AV
HALSTED ST
WENTWORTH
STATE ST
KING DRIVE
COTTAGE GROVE AV
MICHIGAN AVE
INDIANA AVE
STONY ISLAND AV
STONY ISLAND AVE
DOTY
West Pullman
Stewart Ridge
State Street
57
94
Chicago
Chicago State University
Olive-Harvey College
Harborside International Golf Course
Lake Calumet
Cal Sag Channel
Little Calumet River
Joe Louis Golf Club
Calumet Park
Riverdale

Figure 2.8: Existing Transit System


CTA and Pace Bus Routes
CTA bus routes (1-206)
CTA Hyde Park bus routes (170–174 and 192)
Pace bus routes (208 and up)
Part-time service only
Night Owl service only
No stops along bus route
Limited stops along bus route
Bus route terminal
All CTA and Pace bus routes are accessible
95th/Dan Ryan
Chicago State Univ
Olive-Harvey College
Pullman Historic District
Lake Calumet
Calumet Park
Riverdale
METRA ELECTRIC
BLUE ISLAND BRANCH also operates on Saturdays
METRA ELECTRIC MAIN LINE TO UNIVERSITY PARK
METRA ROCK ISLAND SUBURBAN LINE TO JOLIET
ROCK ISLAND MAIN LINE TO JOLIET
SOUTH SHORE LINE TO EAST CHICAGO, GARY, MICHIGAN CITY, SOUTH BEND AIRPORT
Bishop Ford Freeway
to Downtown (Lake/Stetson) via Cermak and Michigan
108 nonstop to Carver HS
95th
103rd
111th
115th
119th
130th
138th
Halsted
Michigan
King
Cottage Grove
Stony Island
Vincennes
Ashland
Throop
Burr Oak
Vermont
Beverly
Blue Island Vermont St

Sources: CTA Bus & Rail Map – June 2007, PB

No CTA park-and-ride facilities are located on the Red Line Dan Ryan branch. The Red Line Dan Ryan branch and Lake Street branch of the Green Line are the only two rapid transit branches without park-and-ride facilities.

There are currently two yard and shop facilities located on the Red Line; Howard yard and shop at the north terminus of the Red Line, and 98th Street yard and shop at the south end of the line in the study area. Currently, all Red Line cars are operated and maintained from the Howard and 98th Street facilities. In addition, Yellow Line cars are stored and maintained at the Howard Yard and Shop, and the Purple Line cars are operated and maintained at yards and shops at both Linden and Howard. The 98th Street shop facility is now 40 years old, having been constructed in 1969 as part of the Dan Ryan Line construction project. The 98th Street shop is cumbersome for CTA operations due to its constrained location within an expressway median and access to the facility for materials delivery is difficult because of its grade separation from local streets. The CTA has long recognized the 98th Street shop as being an inadequate facility to support the current and future maintenance needs of the south end of the Red Line and have included the need for an expanded or new 98th Street shop in past capital programs although funding for replacement has not yet been identified.

Metra and the Northern Indiana Commuter Transportation District (NICTD) provide commuter rail service in the study area. Metra commuter rail service in the study area includes the Metra Electric District (MED), which has 10 commuter rail stations in the study area. Of the five MED mainline stations, the Kensington/115th Street station is a major transfer station and is served by 19 inbound trains between 6:00 a.m. and 9:00 a.m. on a typical weekday. The Kensington/115th Street station also has park-and-ride facilities with a capacity of 408 cars that is fully utilized. The other MED stations in the study area have much less frequent service. The other four stations (111th Street, 107th Street, 103rd Street, and 95th Street) on the MED main line are served by four or five inbound trains during the morning peak period. The five stations in the study area on the Blue Island branch of the MED (Ashland Avenue, Racine Avenue, West Pullman, Stewart Ridge, and State Street) are served by six inbound trains in the morning peak period.

The Metra-Rock Island District mainline has two stations (Longwood and Washington Heights) within the far northwestern portion of the study area. The NICTD South Shore commuter rail trains serve the study area at the Kensington/115th Street station, picking up southbound only and discharging northbound only.

The Metra commuter rail ridership in the study area is shown in Table 2.4. Of these stations, 115th Street/Kensington has the highest utilization with 1,577 average weekday boardings. Metra has previously considered the consolidation of stations north of Kensington/115th Street station.

Table 2.4: Metra Boardings by Station

Line/Station	2006 Daily Boardings
Metra Electric District - Mainline	
95Th Street	49
103rd Street/Rosemoor	70
107th Street	34
111th Street/Pullman	27
Kensington/115th Street	1,577
Metra Electric District – Blue Island Branch	
State Street	85
Stewart Ridge	61
West Pullman	24
Racine Avenue	53
Ashland Avenue	165
Metra Rock Island District - Mainline	
95th Street/Longwood	147
103rd Street/Washington Heights	219

Source: Regional Transportation Asset Management System, RTA

CTA and Pace bus services are provided on north-south and east-west thoroughfares in the study area, with 22 CTA bus routes and seven Pace bus routes operating on the edge or within the study area. Of those bus routes, 19 serve the 95th Street terminal station on the Red Line.

As seen in Table 2.5, these bus routes average 12.4 miles in length, 46 minutes in travel time, and 4,989 in daily ridership.

Table 2.5: CTA and Pace Bus Routes Serving 95th Street Station

Route Number / Route Name	Route Length (miles)	Route Travel Time	Peak Period Headway	2009 Ridership
CTA #29 / State	12.8	1:10	0:12	14,589
CTA #34 / South Michigan	5.8	0:28	0:07	6,222
CTA #95E / 93rd/95th	4.9	0:25	0:10	5,140*
CTA #95W / West 95th	3.7	0:22	0:10	5,512
CTA #100 / Jeffery Manor Express	7.1	0:32	0:16	906
CTA #103 / West 103rd	6.5	0:27	0:11	3,639
CTA #106 / East 103rd	4.3	0:19	0:09	2,101
CTA #108 / Halsted/95th	5.2	0:29	0:10	2,646
CTA #111 / Pullman/111th/115th	10.5	0:50	0:10	6,843
CTA #112 / Vincennes/111th	6.6	0:28	0:12	3,266
CTA #119 / Michigan/119th	6.3	0:31	0:07	6,222
CTA #N5 / South Shore Night Bus	12.1	0:47	N/A	5,140*
CTA #N9 / Ashland Owl	16.1	1:19	N/A	20,520**
Pace #352 / Halsted Street	17.0	1:04	0:10-0:30	5,199
Pace #353 / 95th-Riverdale-Homewood	15.0	0:55	0:15-0:30	2,433
Pace #359/ Robbins-South Kedzie	18.9	1:08	0:30	1,371
Pace #381/ 95th Street	13.0	0:52	0:15-0:30	2,629
Pace #395 / 95th Station-UPS Hodgkins	15.9	0:52	Irregular	387
Pace #1012 / 95th Evergreen Pk-Prairie Stone	54.0	1:45	N/A	28
Average	**12.4**	**0:46**	**0:13**	**4,989**

Source: Regional Transportation Asset Management System, RTA
* Ridership for CTA #95E and #N5 are reported together
** Ridership for CTA #N9 includes ridership for the #9 Ashland

The current transit fare structure for CTA is shown in Table 2.6. Pace regular bus fares are $1.75 with $0.25 transfers. The Pace/CTA 7-day pass is $28.00 and the 30-day pass is $86.00. Metra fares for MED mainline and Rock Island stations in the study area are Zone C fares, which from downtown Chicago are $3.35 (10-ride tickets are $28.50 and monthly tickets are $90.45). Fares for the MED Blue Island branch in the study area are Zone D are $3.80 (10-ride tickets are $32.30 and monthly tickets are $102.60).

Table 2.6: CTA Fare Structure

CTA Fare Types	Fare Structure (Effective 1/1/2009)
Full Fare Cash (Bus only)	$2.25
Full Fare Transit Card (TC) Bus	$2.00
Full Fare TC Rail	$2.25
Full Fare Chicago Card (CC) Bus	$2.00
Full Fare CC Rail	$2.25
TC or CC Transfer[1]	$0.25
1-Day Pass	$5.75
3-Day Pass	$14.00
7-Day Pass CTA only	$23.00
7-Day Pass CTA/Pace	$28.00
Full Fare 30-Day Pass	$86.00
Link-Up Pass	$39.00
Reduced Fare TC or CC	$0.85
Reduced Fare Cash (Bus only)	$1.00
Reduced Fare TC or CC Transfer	$0.15
Reduced Fare 30-Day Pass	$35.00

[1] Transfer fare allows two additional rides within two hours of the first boarding.

2.2.3 Intercity Bus Service

A Greyhound Bus Terminal also exists at the Red Line 95th Street Station. Intercity buses offer connecting services to much of North America. Buses arrive and depart several times per day including direct and/or connecting service nationwide and to nearby locations such as Chicago Union Station, Detroit, Minneapolis, St. Louis, St. Paul, Gary, Indianapolis, Champaign, Rockford, Bloomington, Springfield, Milwaukee, South Bend, and Benton Harbor.

2.3 Performance of the Transportation System

2.3.1 Agencies Involved in Transportation Planning

The Policy Committee of the Chicago Metropolitan Agency for Planning (CMAP) is the designated Metropolitan Planning Organization for the northeastern Illinois region. CMAP was formed in 2005 by combining the region's two previously separate transportation and land-use planning organizations – the Chicago Area Transportation Study (CATS) and the Northeastern Illinois Planning Commission (NIPC) -- into a single agency.

The Regional Transportation Authority (RTA) is a fiscal oversight agency responsible for three operating agencies or “service boards”-- CTA, Metra, and Pace. Other agencies, such as the Chicago Department of Transportation, the Illinois Department of Transportation, and the Cook County Highway Department have transportation planning responsibilities in the study area.

2.3.2 Local Transportation Goals and Objectives

The current CMAP 2030 Regional Transportation Plan, adopted in October 2008, contains three overarching goals: maintain the integrity of the existing transportation system, improve transportation system performance, and employ transportation to sustain the region’s vision and values. Relevant objectives include:

Transportation mobility and accessibility objectives

Promote transportation proposals that:

- increase access to job opportunities
- provide efficient modal alternatives for short trips
- reduce traffic congestion

Transportation system efficiency objectives

Promote transportation proposals that:

- reduce highway congestion
- increase the availability of public transit
- supports regional or local efforts to balance the location of jobs, services, and housing to reduce travel distances

Congestion management objectives

Promote transportation proposals that:

- reduce highway congestion
- improve system reliability
- increase person throughput capacity in congested corridors by increasing vehicle occupancy, providing transit options, and encouraging transit use
- increase the share of trips made by walking, bicycling, and transit
- improve coordination and connectivity between and among different modes
- support regional or local efforts to balance the location of jobs, services, and housing to reduce travel distances

Transportation and social equity objectives

Promote transportation projects that:

- provide improved transportation choices to economically disadvantaged persons
- stimulate balanced and sustainable development in communities with concentrations of disadvantaged residents
- support programs providing financial incentives to low-income persons residing in communities that provide a wider variety of transportation choices
- support links from disadvantaged communities to jobs and services

2.3.3 Roadway System Performance

Roadway system capacity deficiencies and expressway and arterial traffic congestion limit the mobility and accessibility of the residents of the study area. Traffic congestion in the metropolitan area has steadily grown over the past decades along the region’s expressways and major arterials. Chicago is ranked as second in the nation for travel time ratio (peak travel times versus free flow travel time), third for travel delay, excess fuel consumed, and congestion costs, and is ranked fourth for congestion, with 72 percent of its freeway and street lane-miles congested.[4]

The 2000 Census reported that commute times were longer for study area residents than for Chicago as a whole. In 2000, the Chicago's average commute time was 34.4 minutes, while commute times for residents on the study area averaged 41.6 minutes—21 percent higher, as shown in Figure 2.9.

Significant expressway and arterial street traffic congestion occurs throughout the study area. As seen in Figures 2.10 and 2.11, the roadway network is approaching capacity during the morning peak periods in 2000 and is expected to worsen by 2030. As seen in these figures, almost every expressway segment has a volume-capacity ratio approaching or exceeding one. Arterial street traffic shows approximately half of the street segments in the study area have volume-capacity ratios greater than one.

Arterial street reliability is further compromised by delays from at-grade freight railroad crossings in the study area. The Union Pacific Railroad (UPRR) – which operates approximately 27 trains per day through the study area – has at-grade crossings at several east-west arterials in the study area. Similarly, there are shorter delays for the Metra Electric District Blue Island Branch commuter trains that operate at-grade and cross several major arterials in the study area.

With the I-94 and I-57 expressways in the study area already congested with trips starting south of the study area already approaching or exceeding the expressway capacity. Study area generated traffic on the expressways exacerbates this situation.

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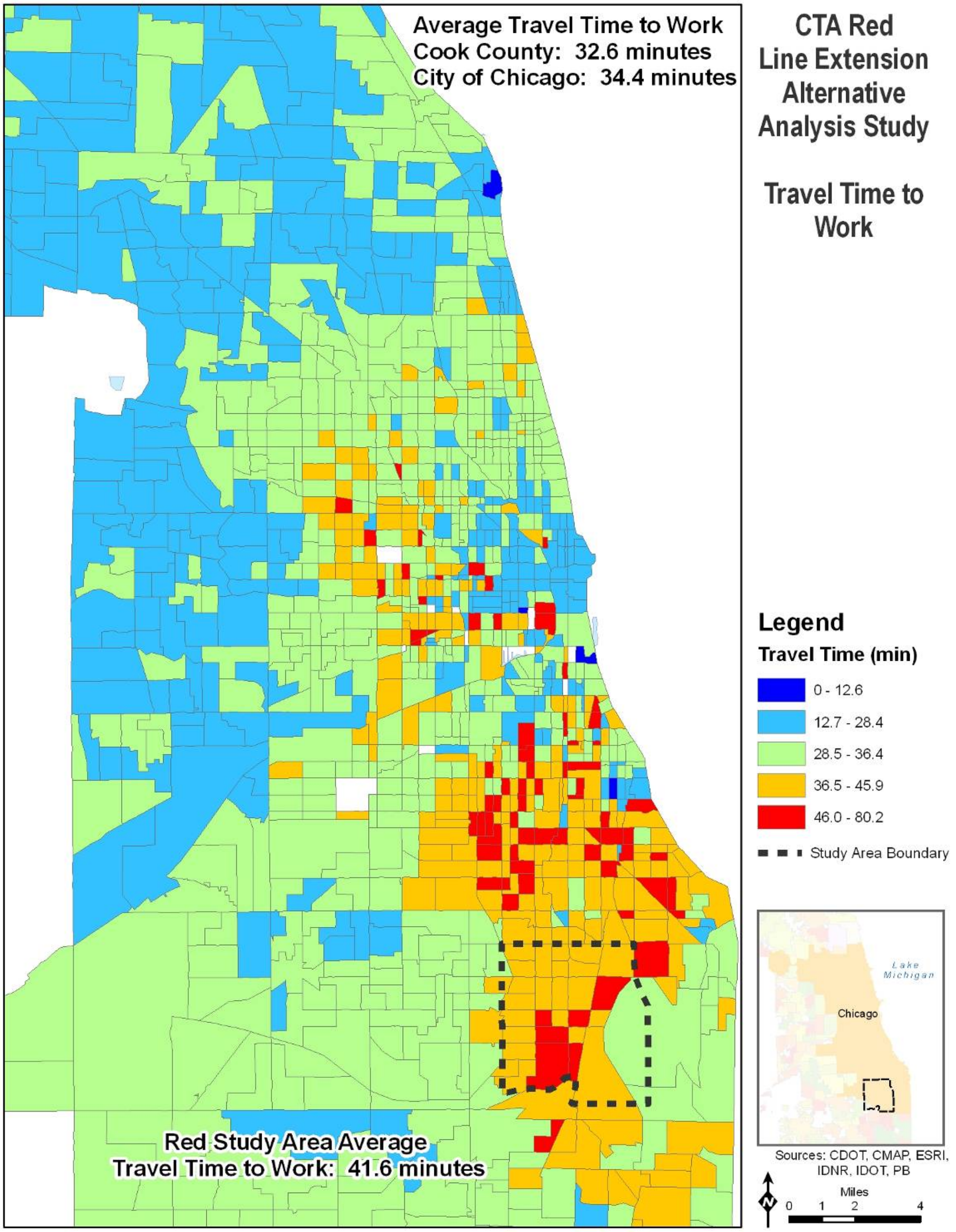
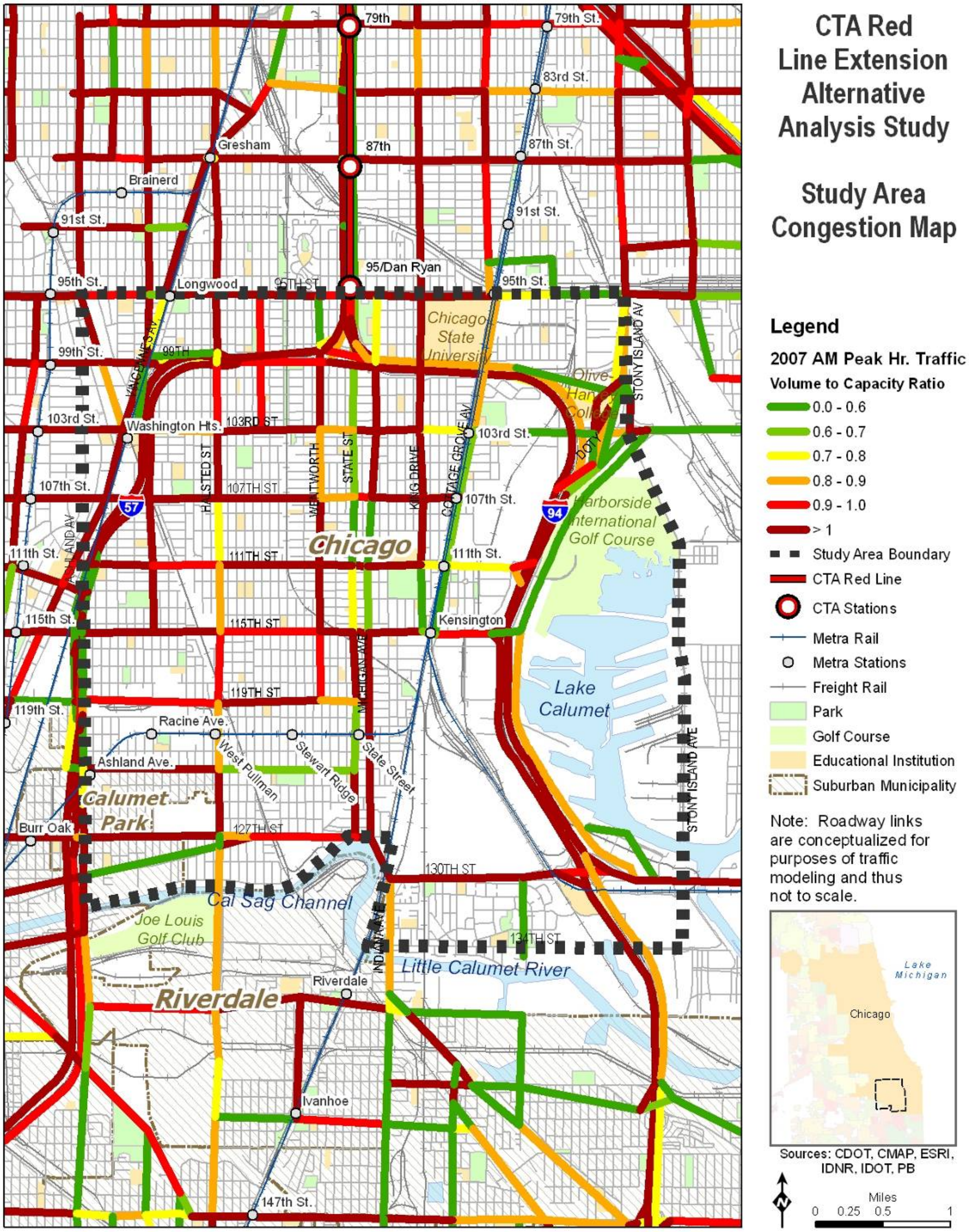
[4] Texas Transportation Institute (TTI), 2003 Urban Mobility Report.

Figure 2.9: 2000 Average Commute Times


Average Travel Time to Work
Cook County: 32.6 minutes
City of Chicago: 34.4 minutes
Red Study Area Average
Travel Time to Work: 41.6 minutes
CTA Red Line Extension Alternative Analysis Study
Travel Time to Work
Legend
Travel Time (min)
0 - 12.6
12.7 - 28.4
28.5 - 36.4
36.5 - 45.9
46.0 - 80.2
Study Area Boundary
Lake Michigan
Chicago
N
Miles
0
1
2
4

Sources: CDOT, CMAP, ESRI, IDNR, IDOT, PB

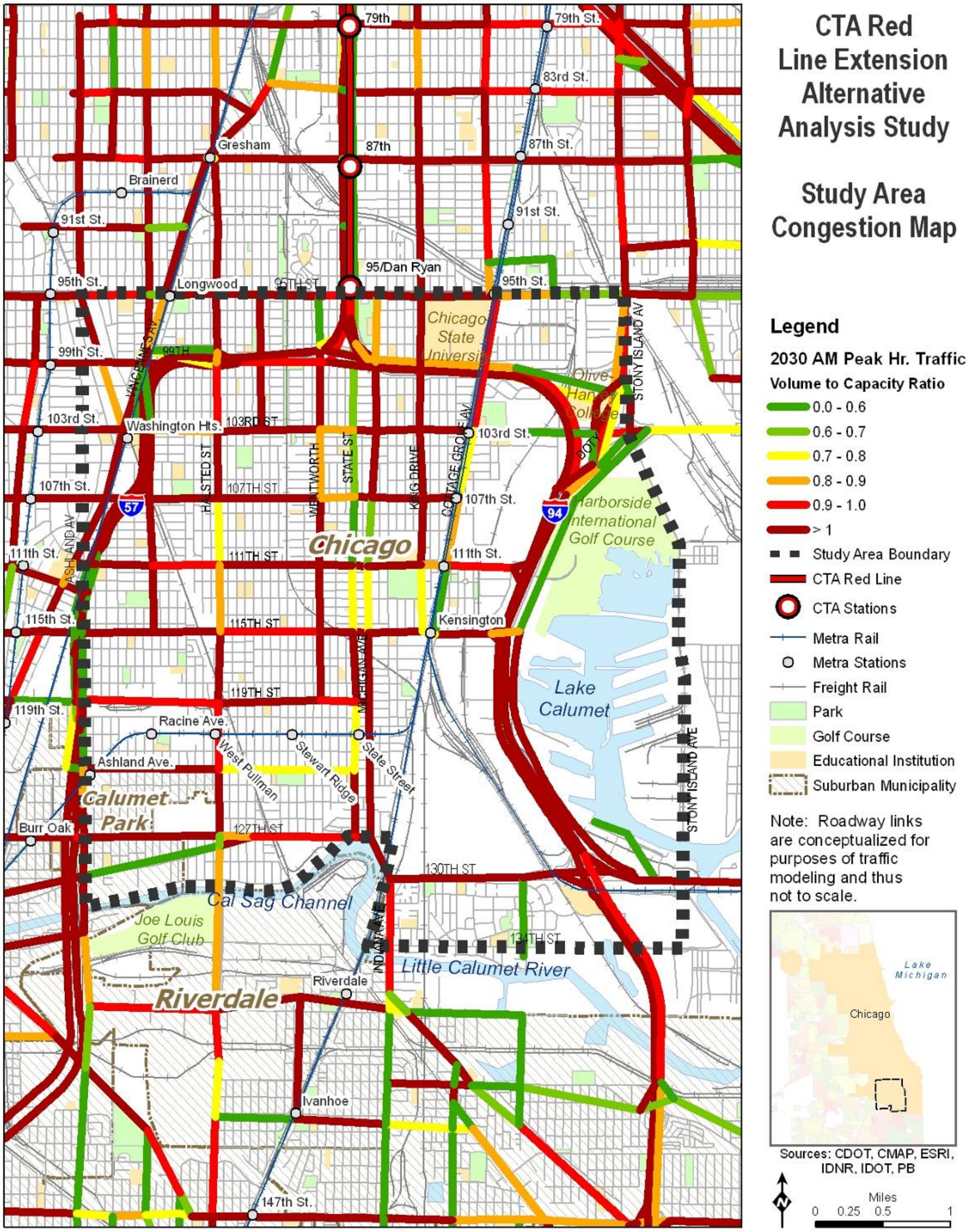
Figure 2.10: Estimated 2007 Morning Peak Hour Traffic Congestion


CTA Red Line Extension Alternative Analysis Study
Study Area Congestion Map
Legend
2007 AM Peak Hr. Traffic
Volume to Capacity Ratio
0.0 - 0.6
0.6 - 0.7
0.7 - 0.8
0.8 - 0.9
0.9 - 1.0
> 1
Study Area Boundary
CTA Red Line
CTA Stations
Metra Rail
Metra Stations
Freight Rail
Park
Golf Course
Educational Institution
Suburban Municipality
Lake Michigan
Chicago
Miles
0 0.25 0.5 1
79th
79th St.
83rd St.
87th
87th St.
Gresham
Brainerd
91st St.
95/Dan Ryan
95th St.
Longwood
95TH ST
99th St.
99TH
103rd St.
Washington Hts.
103RD ST
107th St.
107TH ST
111th St.
111TH ST
115th St.
115TH ST
Kensington
119th St.
119TH ST
Racine Ave.
Ashland Ave.
West Pullman
Stewart Ridge
State Street
Burr Oak
127TH ST
130TH ST
134TH ST
Riverdale
Ivanhoe
147th St.
Chicago State University
Olive Harvey College
Harborside International Golf Course
Lake Calumet
Cal Sag Channel
Joe Louis Golf Club
Little Calumet River
Calumet Park
Riverdale
Chicago
VINCENNES AV
ASHLAND AV
HALSTED ST
WENTWORTH
STATE ST
MICHIGAN AVE
KING DRIVE
COTTAGE GROVE AV
STONY ISLAND AV
STONY ISLAND AVE
INDIANA AVE
DOTY
57
94

Note: Roadway links are conceptualized for purposes of traffic modeling and thus not to scale.

Sources: CDOT, CMAP, ESRI, IDNR, IDOT, PB

Figure 2.11: Estimated 2030 Morning Peak Hour Traffic Congestion


CTA Red Line Extension Alternative Analysis Study
Study Area Congestion Map
Legend
2030 AM Peak Hr. Traffic
Volume to Capacity Ratio
0.0 - 0.6
0.6 - 0.7
0.7 - 0.8
0.8 - 0.9
0.9 - 1.0
> 1
Study Area Boundary
CTA Red Line
CTA Stations
Metra Rail
Metra Stations
Freight Rail
Park
Golf Course
Educational Institution
Suburban Municipality
Note: Roadway links are conceptualized for purposes of traffic modeling and thus not to scale.
Lake Michigan
Chicago
Sources: CDOT, CMAP, ESRI, IDNR, IDOT, PB
N
Miles
0 0.25 0.5 1
79th
79th St.
83rd St.
Gresham
87th
87th St.
Brainerd
91st St.
91st St.
95/Dan Ryan
95th St.
Longwood
95TH ST
95th St.
Chicago State University
Olive Harvey College
STONY ISLAND AV
99th St.
99TH
VINCENNES AV
103rd St.
Washington Hts.
103RD ST
103rd St.
HALSTED ST
WENTWORTH
STATE ST
KING DRIVE
COTTAGE GROVE AV
107th St.
107TH ST
107th St.
57
94
Harborside International Golf Course
111th St.
ASHLAND AV
111TH ST
Chicago
111th St.
115th St.
115TH ST
Kensington
MICHIGAN AVE
Lake Calumet
119TH ST
119th St.
Racine Ave.
West Pullman
Stewart Ridge
State Street
Ashland Ave.
Calumet Park
STONY ISLAND AVE
Burr Oak
127TH ST
130TH ST
Cal Sag Channel
INDIANA AVE
Joe Louis Golf Club
134TH ST
Little Calumet River
Riverdale
Riverdale
Ivanhoe
147th St.

2.3.4 Transit Performance

Red Line 95th Street Station

The 95th Street bus terminal is situated over the Dan Ryan Expressway and serves the 95th Street rail station, the southern terminus of the Red Line. The area surrounding 95th Street terminal is congested due to the high number of vehicles entering and leaving the Dan Ryan Expressway. In addition, the street network in the area is characterized by a lack of through streets over the expressway and residential streets which are not appropriate for bus traffic. Buses serving the 95th Street Station must use the terminal to change direction because the existing street network is not conducive to on-street turnaround operations.

A review of current bus schedules indicates that speeds decrease dramatically within one mile of the terminal. Speeds on select bus routes are shown in Table 2.7.

Table 2.7: Speeds for Selected Bus Routes Serving 95th Street Terminal

Bus Route	Scheduled Operating Speed	
	< 1 mile from Terminal	> 1 mile from Terminal
34	9.65	12.0
95W	8.25	11.5
95E	8.6	11.25
108	8.6	12.0
106	7.1	11.3

Source: CTA Bus Supervisor Guide Weekday, effective Dec. 28, 2009
Bus routes were selected if they had a scheduled time point approximately one mile from the terminal.

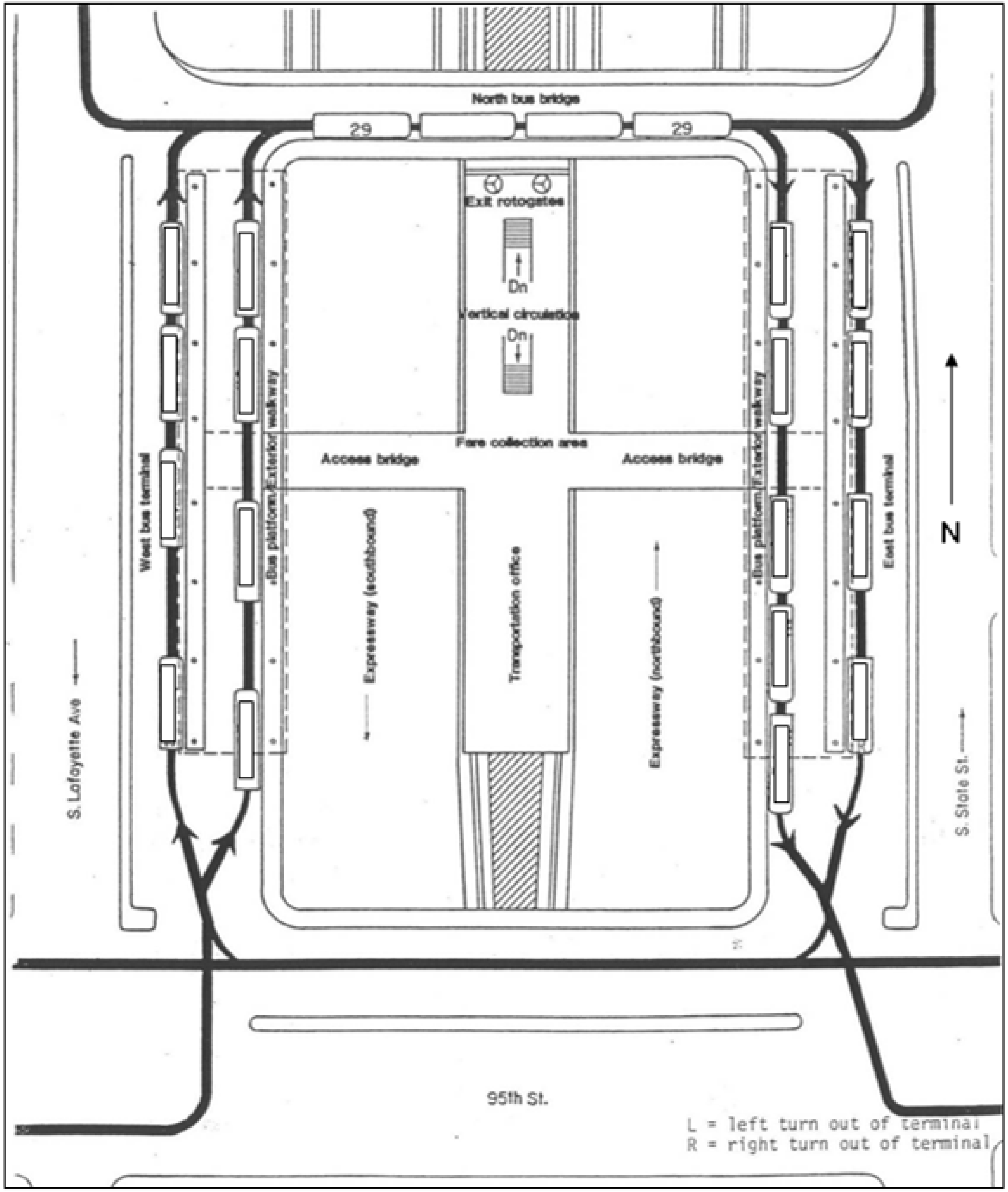
These speeds indicate that transit customers destined for 95th Street bus terminal and the Red Line experience delays on a daily basis.

The bus terminal, shown in Figure 2.12, contains nine bus islands surrounding the rail station entrance. Seven bus islands can accommodate two buses at a time, while two bus islands can accommodate three buses, for a total of 20 bus bays. Four islands are located on each side of the station (east and west) while a sidewalk located on the north side of the station functions as an additional bus island. Driveways are located off of 95th Street, Lafayette Avenue and State Street. Lafayette Avenue is one-way southbound and State Street is one-way northbound. Because Lafayetts and State Streets operate in only one direction, these driveways are of limited utility and are used exclusively by bus route 29 State Street.

All buses, except route 29, enter the terminal from 95th Street. Operations in the terminal are one-way clockwise with buses entering the west driveway in a northbound direction, circling the north side of the station and traversing the east side of the terminal southbound. Buses exit the terminal onto 95th from the east driveway. Circulation within the terminal is slow due to tight turns and the frequent presence of pedestrians in the driveways.

Normal CTA terminal operation involves the use of a passenger drop off area at a sidewalk adjacent and convenient to the station entrance. The bus then proceeds to an assigned bus bay to collect boarding customers and take scheduled recovery time. CTA cannot follow normal procedures at 95th terminal because space for a drop off area is unavailable. A drop off area is approximately the size of three to five bus bays. All available bus bays at 95th terminal are assigned to one or more bus routes.

Figure 2.12: CTA 95th Street Station Bus Terminal[5]


North bus bridge
29
29
Exit rotogates
Dn
Vertical circulation
Dn
Fare collection area
Access bridge
Access bridge
West bus terminal
Bus platform/Exterior walkway
Expressway (southbound)
Transportation office
Expressway (northbound)
Bus platform/Exterior walkway
East bus terminal
N
S. Lafayette Ave
S. State St.
95th St.
L = left turn out of terminal
R = right turn out of terminal

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[5] CTA 95th Station Expansion Study, July 1992

Bus routes assigned to bus bays in the west and north terminals drop off and pick up customers at the same location. This creates pedestrian congestion at the bus stop as disembarking passengers conflict with waiting customers on the curb. Bus routes assigned to the east terminal currently drop off passengers in the through lane in the west terminal. Dropping off passengers in the through lane of the west terminal will occasionally prevent buses from entering the terminal and cause following buses to queue along 95th Street waiting to enter the terminal.

Current operations within the bus terminal are not ideal or desirable, but are required due to the number of bus routes that must access the terminal. Nineteen CTA and Pace bus routes utilize the 95th Street terminal. Of these, two CTA routes (N5 and N9) and two Pace routes (395 and 1012) operate infrequently or during overnight hours and do not require a bus bay in peak periods. In addition to CTA and Pace, Greyhound Bus Lines occupy a bus bay in the terminal. Thus, a total of 16 bus routes require at least one bus bay during the morning peak. Eleven of the 16 bus routes require two bus bays because two buses are scheduled in the terminal at the same time. A minimum of 27 bus bays are required to accommodate current schedules. Since the 95th Street terminal contains only 20 bus bays, the terminal is operating over capacity.

In addition to the twenty-seven bays needed to accommodate current schedules, an additional five bays would be required for a drop off area at the terminal consistent with CTA standard operation elsewhere. The lack of a drop off area slows passenger boarding and alighting, creates congestion at the bus bays, and causes buses to back up onto 95th Street. Implementing a drop off area in the terminal increases the number of additional bays required to 12 (32 total bus bays).

A need exists to expand the 95th Street bus terminal in order to accommodate current schedules and comply with standard operating procedures. A terminal expansion would improve bus travel time entering the terminal, decrease transfer time within the terminal, and improve safety.

Bus Performance

Thirteen CTA and six Pace bus routes serve the 95th/Dan Ryan Red Line station. During an average weekday, approximately 6,600 riders (44 percent of all 95th/Dan Ryan boardings) transfer from CTA buses and 2,250 riders (15 percent of all 95th/Dan Ryan boardings) transfer from Pace buses at the 95th/Dan Ryan terminal (CTA transfer data for October 2006).

The performance of these bus routes is shown in Table 2.8 below.

Table 2.8: CTA and Pace Bus Routes Serving 95th Street Station Performance

Route Number / Route Name	On-Time Arrivals
CTA #29 / State	79.7%
CTA #34 / South Michigan	55.7%
CTA #95E / 93rd/95th	51.8%
CTA #95W / West 95th	72.8%
CTA #100 / Jeffery Manor Express	49.8%
CTA #103 / West 103rd	59.6%
CTA #106 / East 103rd	83.8%
CTA #108 / Halsted/95th	69.4%
CTA #111 / Pullman/111th/115th	69.9%
CTA #112 / Vincennes/111th	74.6%
CTA #119 / Michigan/119th	51.5%
CTA #N5 / South Shore Night Bus	N/A
CTA #N9 / Ashland Owl	N/A
Pace #352 / Halsted Street	N/A
Pace #353 / 95th-Riverdale-Homewood	N/A
Pace #359/ Robbins-South Kedzie	N/A
Pace #381/ 95th Street	N/A
Pace #395 / 95th Station-UPS Hodgkins	N/A
Pace #1012 / 95th Evergreen Pk-Prairie Stone	N/A
Average	**65.3%**

Source: Spring 2009 CTA Data

2.4 Specific Transportation Problems

2.4.1 Access to Jobs

The Far South Side of Chicago, including the study area, was hard hit by the decline in manufacturing that began in the 1970s and the recession of the early 1980s. Many of the major well-paying heavy industries were closed or relocated out of the area – Wisconsin Steel closed in 1980, the last Pullman railcar was produced in 1981, International Harvester and Dutch Boy

Paints left West Pullman, Republic Steel laid off 4,000 workers in 1984, and the USX South Works, which once had 20,000 workers, employed only 600 when it closed in 1993. Overall, the study area lost 38,000 jobs between 1970 and 2000.

With the loss of jobs, the study area provides only one job for every eight residents, as compared to the northeast Illinois region and City of Chicago job/population average of one job for every two residents. As a result, many residents must travel long distances to reach major employment centers, such as downtown Chicago and northwest Cook County. This results in longer commute times for study area residents. The 2000 Census indicates that commute times were 21 percent longer for study area residents than for the City of Chicago as a whole. Chicago's average commute time was 34.4 minutes, while commute times for residents on the Far South Side averaged 41.6 minutes.

Another motivating factor for the need to improve access to jobs in the study area is that one in five residents in the study area was below the poverty level in 2000. This population needs affordable transportation options to access jobs. Also, 22 percent of households in the study area in 2000 did not own a car. These residents are dependent on other means of transportation, such as transit, for job access and general mobility.

Furthermore, improved transit service will support ongoing efforts by the City of Chicago through their tax increment finance districts, redevelopment areas, and industrial corridors to spur economic development in the study area.

2.4.2 Difficult Access to the 95th Street Station

The CTA Red Line 95th Street station is located in the median of the I-94 Dan Ryan Expressway. A total of 19 CTA and Pace bus routes serve the 95th Street station. These bus routes all operate in mixed traffic with one-way route travel times averaging 46 minutes, one-way route distances averaging 12.4 miles, and ridership averaging nearly 3,600 passengers a day. This translates to an average bus speed of 9.5 miles per hour. By 2030, bus travel times are projected to increase by 20 percent.

Almost all of the bus routes operating in the study area experience their maximum load point in the vicinity of the 95th Street station. This results in greater customer boarding and alighting delays the closer the bus is to the 95th Street station.

Other major factors contributing to the longer bus route travel speeds and times to access the 95th Street station include the level of overall traffic congestion on the arterial streets in the corridors. As seen in Figures 2.10 and 2.11, existing 2000 and projected 2030 morning peak period congestion levels are very high in the study area, with approximately half of the major arterial street segments operating at volume-capacity ratios greater than one, and the other segments operating at higher volume-capacity ratios. These high volume-capacity ratios translate to poor levels of service on the roadway system, such that the ability to maneuver is severely restricted, vehicle speeds are reduced due to the higher volumes, and minor disruptions cannot be absorbed without extensive queues forming. The majority of traffic on these major arterial streets in the study area is through-traffic that begins and/or ends outside of the study area.

Other factors contributing to the difficult access to the 95th Street station include delays from at-grade freight railroad crossings in the study area. The Union Pacific Railroad (UPRR) has at-grade crossings of 95th Street, 103rd Street, 111th Street, 115th Street, 119th Street, and 130th

Street, all of which are used for CTA bus services. Currently, the UPRR has approximately 27 trains per day operating through the study area. Similarly, there are shorter delays for the Metra Electric District Blue Island Branch commuter trains that operate at-grade and cross Ashland Avenue, Halsted Street, and Michigan Avenue, which have CTA and Pace bus services. Consequently, bus operations under these conditions are very difficult and result in poor on-time performance.

Kiss-and-ride access to the 95th Street station is also difficult. There is no formal passenger drop off facility in the vicinity of the station, the station itself is congested with pedestrian and bus traffic, 95th Street is congested, and the one-way frontage road system east and west of the station is not conducive to efficient auto access to the station.

Pedestrian access to the 95th Street station is also constrained since the adjacent commercial and residential development is separated from the station by the Dan Ryan Expressway and adjacent frontage roads. Lafayette Street on the west and State Street on the east of the terminal serve as local arterials and access/egress roads for the expressway. Therefore, pedestrians required to cross these streets to access the terminal must contend with a vehicle mix traveling at varying speeds.

2.4.3 95th Street Station Bus Capacity and Delay

Nineteen CTA and Pace bus routes utilize the 95th terminal. Of these, two CTA routes and two Pace route (N5, N9, 395, 1012) operate infrequently or during overnight hours and do not require a bus bay in the morning peak period. In addition to CTA and Pace, Greyhound Bus Line occupies a bus bay in the terminal. Thus, a total of 16 bus routes require at least one bus bay during the morning peak. Based on procedures in the Transit Capacity and Quality of Service Manual, 27-32 bus bays required in the peak 15 minute time period. Since the 95th Street station bus terminal contains only 20 bus bays, the terminal is currently over capacity.

Bus circulation within the terminal is also slow due to tight turns and the frequent presence of pedestrians in the driveways. Bus routes assigned to berths in the west and north terminals drop off and pick up customers at the same location. This creates pedestrian congestion at the bus stop as disembarking passengers conflict with waiting customers on the curb. Bus routes assigned to the east terminal currently drop off passengers in the through lane in the west terminal. This occurs because passengers are not patient and will not wait until the bus reaches its assigned bus bay. Passengers are often observed pulling the emergency back door release to exit the bus as soon as it stops. Dropping off passengers in the through lane of the west terminal will occasionally prevent buses from entering the terminal and queues to form along 95th Street as buses wait to enter the terminal.

As a result of the insufficient number of bus bays, and passenger-pedestrian-bus conflicts, delays occur. Table 2.9 depicts the estimated total delay and delay per bus from 7:00 to 9:00 a.m. at the 95th Street bus terminal that can be expected based upon the number of buses accessing the bus terminal. Currently, there are 115 buses entering the 95th Street bus terminal, each with an estimated delay of 38 seconds. The cumulative bus delay is nearly one hour and 14 minutes. With growing population and employment in the study area, and slowing travel times on the bus routes, the number of buses will need to be increased. Table 2.9 shows the resulting delay at higher bus levels.

Table 2.10 provides the number of passengers boarding and alighting on CTA bus routes at the 95th Street station bus terminal between 7:00 and 9:00 a.m. Applying the 38 second delay per bus to the passenger volumes results in 34.4 hours of total passenger delay each weekday morning peak period.

Table 2.9: 95th Street Station Bus Terminal Delay (7:00-9:00 a.m.)

Number of Buses Entering the Terminal	Total Delay (hours)	Delay / Bus (minutes & seconds)
110	1:09:28	00:38
115*	**1:13:31**	**00:38**
120	1:17:41	00:39
130	1:25:36	00:40
140	1:49:01	00:47
150	2:23:41	00:57

*Current number of vehicles accessing 95th Street terminal during peak period today.

Table 2.10: Passenger Volumes at 95th Street Bus Terminal (7:00-9:00 a.m.)

Route	Direction	On	Off
CTA #29 / State	North	126	0
	South	0	116
CTA #34 / South Michigan	North	0	303
	South	199	0
CTA #95E / 93rd/95th	East	153	1
	West	0	164
CTA #95W / West 95th	East	0	133
	West	49	0
CTA #100 / Jeffery Manor Express	East	64	0
	West	0	77
CTA #103 / West 103rd	East	0	148
	West	148	0
CTA #106 / East 103rd	East	219	0
	West	5	106
CTA #108 / Halsted/95th	North	0	32
	South	117	0
CTA #111 / Pullman/111th/115th	North	0	111
	South	151	0
CTA #112 / Vincennes/111th	North	0	186
	South	140	0
CTA #119 / Michigan/119th	North	0	354
	South	155	0
Total		**1,526**	**1,732**

* Source: Fall 2008 CTA data

2.4.4 Improved Transportation Equity for All Travelers

Transportation equity is the fair distribution of transportation resources so that no group carries an unfair burden of the negative environmental, social, or economic impacts, or receives an unfair share of benefits. In 2000, 21 percent of study area population had incomes below the poverty level. The study area population is almost entirely minority, comprised of 93.8 percent

African Americans and 2.7 percent Hispanics. Many study area residents do not have access to an automobile and rely on transit for mobility.

In addition, daily parking costs in downtown Chicago are among the highest in the United States, further limiting the study area population's access to downtown. Improvements to study area transit will serve all transportation system users, including low-income and under-represented populations.

2.5 Potential Transit Markets

2.5.1 Drive-Access Transit Market

A potential transit travel market in the study area that is not currently well served is drive-access transit trips. There are no CTA park-and-ride facilities on the Red Line Dan Ryan branch. All of the other CTA rail rapid transit branches, with the exception of the Green Line Lake Street branch have park-and-ride facilities. CTA's newest rail rapid transit line, the Orange Line that opened in 1993, has park-and-ride at five of eight stations.

In particular, the Red Line 95th Street station area, located in the median of one of the busiest expressways in the country, is very congested with bus, pedestrian, and vehicular traffic, making even kiss-and-ride access to the station difficult. In 2000, less than 17.9 percent of study area home-based work transit trips were via drive access. This percentage is projected to decline slightly to 17.5 percent drive access in 2030. Opportunities exist to provide CTA park-and-ride facilities to residents of the study area and increase the drive-access transit travel market.

2.5.2 South Transit Market

Another potential transit travel market is the south Cook County area located south of the study area. The provision of CTA park-and-ride facilities located in the southern portions of the study area near major expressways or arterial streets would provide convenient drive access possibilities to the CTA Red Line that do not currently exist. CTA has successful examples attracting these trips to transit. The Blue Line has park-and-ride facilities at Rosemont and Cumberland that are conveniently located near the I-90 Kennedy Expressway. A previous survey[6] at these Blue Line park-and-ride stations found auto access from 93 suburbs and that 74 percent of all trips originated in the northwest suburbs or northwest Chicago. The Chicago Central Area was the ending location of 78 percent of all park-and-ride trips, followed by the University of Illinois at Chicago at 6 percent.

Similar conditions, such as crowded expressways and expensive parking in the Chicago Central Area, face travelers from south Cook County and beyond. In 2000, nearly 17,000 daily home base work trips between the south Cook County area (District 19 in Figure 2.6) and the Chicago Central Area were made with a transit mode share of 48 percent. Opportunities exist to provide improved access to CTA from south Cook County and beyond.

2.5.3 Other Transit Markets

Additional potential transit travel markets, although smaller, include reverse commute and school trips. With an increase of 10,000 jobs in the study area by 2030 to 27,000, there is potential for increased reverse commute travel to access these jobs. There are several educational facilities in the study area, including Chicago State University (7,200 students), Olive-Harvey College (4,300 students), and several high schools including Harlan, Corliss, Fenger, Julian, Brooks and Carver, that would benefit from transit improvements in the study area.

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[6] CTA O'Hare Park & Ride Surveys: Phase II, CTA Market Research Department, April 1994.

2.6 Project Goals and Objectives

The following proposed goals and objectives were developed based on the transportation needs described above as well as goals that are included in regional long-range transportation plans. The goals and objectives serve as the basis for evaluating the alternatives throughout the alternatives analysis. The goals and objectives are as follows:

- **Goal 1: Regional and Local Access and Mobility**

  Objectives:
  1. Increase connectivity between and within neighborhoods and activity centers.
  2. Improve access between city neighborhoods and regional centers, and between suburban communities and the greater central area.
  3. Increase regional transit competitiveness.
  4. Improve customer transfer connections among regional transit modes.

- **Goal 2: Community and Economic Development**

  Objectives:
  1. Support community development initiatives.
  2. Provide opportunity for transit-supportive development.
  3. Support efficient land use patterns.
  4. Respect community context and identity.
  5. Promote equitable distribution of project benefits and impacts.

- **Goal 3: Regional Transit System Performance**

  Objectives:
  1. Increase capacity and ridership.
  2. Enhance efficiency and cost effectiveness.
  3. Facilitate connections and linkages.
  4. Reduce transit travel times.
  5. Integrate existing transit infrastructure, where feasible.

- **Goal 4: Safety and Security**

  Objectives:
  1. Increase transportation reliability.
  2. Improve incident response capabilities.
  3. Incorporate design elements that enhance safety and security.

- **Goal 5: Environmental Quality**

  Objectives:
  1. Limit impacts.
  2. Support environmental benefits.
  3. Reduce reliance on automobile travel.

3.0 SCREEN 1 EVALUATION

The first step in the Red Line Extension Alternatives Analysis was to began with identifying the Universe of Alternatives, which is all the possible transit alternatives for the study area. The Universe of Alternatives included a wide range of transit modal technologies, study area corridors, and profiles (where the transit line is in relation to the ground).

3.1 Study Area Corridors

There were nine study area corridors identified, listed from west to east within the study area:

- I-57 Expressway
- Halsted Street
- Union Pacific Railroad
- Wentworth Avenue
- State Street
- Michigan Avenue
- King Drive
- Cottage Grove Avenue / MED CN Railway
- I-94 Bishop Ford Freeway

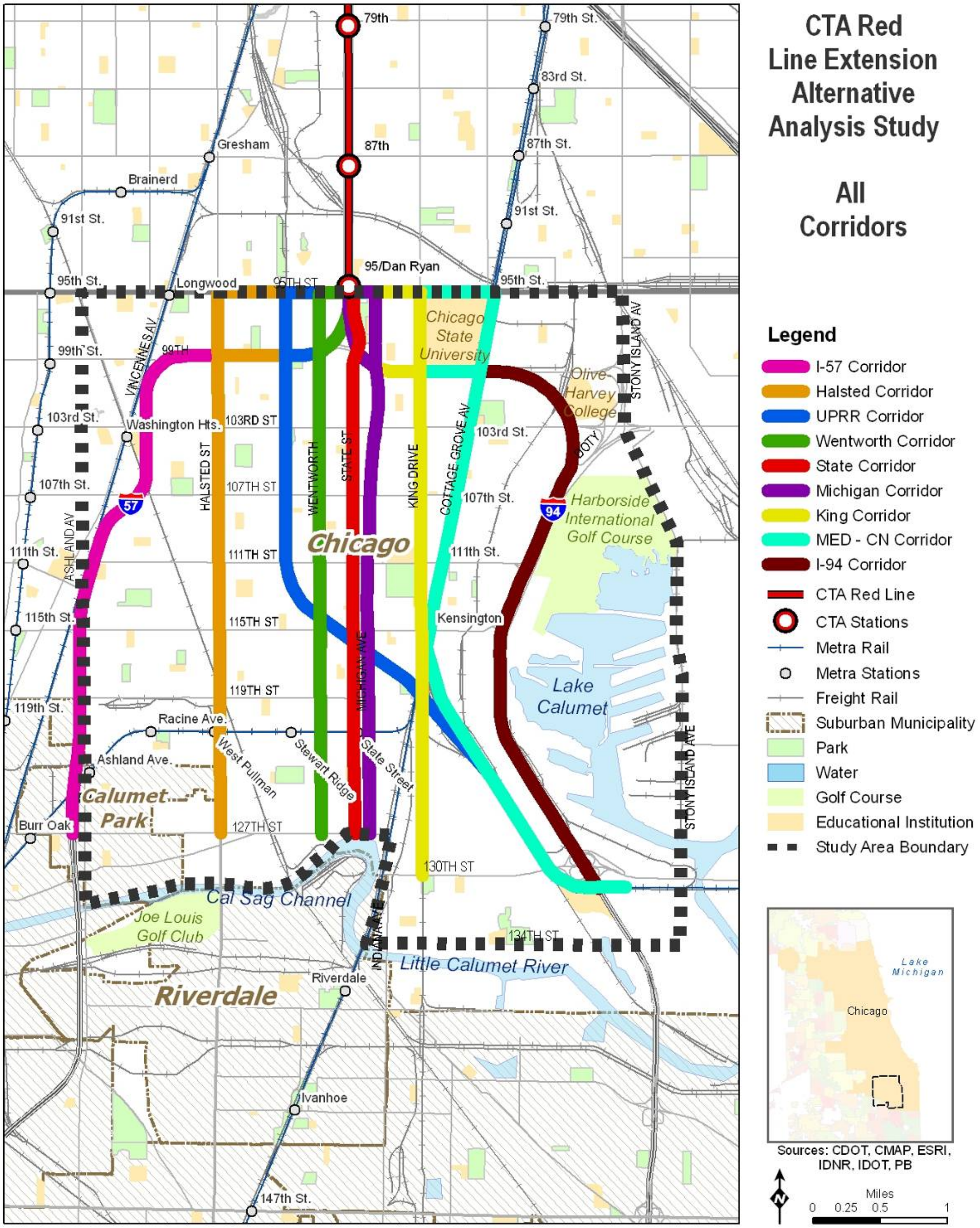
Figure 3.1 graphically depicts the nine corridors under consideration.

I-57 Expressway Corridor
The I-57 Expressway is located on the western boundary of the study area. The corridor extends west and south from I-94 and 95th Street. A complex, grade-separated junction allows traffic to interchange between I-57, I-94 Bishop Ford Freeway, and the I-94 Dan Ryan Expressway. I-57 has three lanes in each direction extending west to approximately Racine Avenue (with the highway running parallel and to the south of 98th Street) where it then turns south. By the time it crosses 127th Street (at the south end of the study area) the highway is running parallel and to the east of Paulina Street.

Major interchanges include the previously described junction with I-94, Halsted Street, 111th Street, 119th Street and 127th Street. Land use surrounding I-57 is predominantly residential from 95th Street to 112th Street (there is some industrial land to the west of the highway from 105th Street south). South of 112th Street and extending down to 119th Street, a large former industrial site is being made into a significant commercial center. Residential land use exists to the east of the highway in this section. South from 119th Street, land use to the west of the highway continues to be a mix of industrial and vacant parcels. Residential land use can be found on both sides of the highway from around 125th Street south. Commercial uses are generally located in all four quadrants of the interchanges with arterial streets.

There are also several educational and religious institutions in this corridor. Evers School is located north of I-57 on the east side of Lowe Avenue. Julian High School is to the west of the highway on the south side of 103rd Street. Morgan Park High School is located west of I-57, while Shoop Elementary School is on the east side of the highway, with both of these institutions being located north of 112th Street. The large Christ Universal Temple complex is on the east side of the highway, immediately to the south of 119th Street.

Figure 3.1: Red Line Extension AA Corridors


CTA Red Line Extension Alternative Analysis Study
All Corridors
Legend
I-57 Corridor
Halsted Corridor
UPRR Corridor
Wentworth Corridor
State Corridor
Michigan Corridor
King Corridor
MED - CN Corridor
I-94 Corridor
CTA Red Line
CTA Stations
Metra Rail
Metra Stations
Freight Rail
Suburban Municipality
Park
Water
Golf Course
Educational Institution
Study Area Boundary
Lake Michigan
Chicago
Sources: CDOT, CMAP, ESRI, IDNR, IDOT, PB
Miles
0 0.25 0.5 1
N
79th
87th
95/Dan Ryan
79th St.
83rd St.
87th St.
91st St.
95th St.
Gresham
Brainerd
91st St.
95th St.
Longwood
95TH ST
99th St.
99TH
103rd St.
Washington Hts.
103RD ST
107th St.
107TH ST
111th St.
111TH ST
115th St.
115TH ST
119TH ST
119th St.
Racine Ave.
Ashland Ave.
West Pullman
Stewart Ridge
State Street
Burr Oak
127TH ST
130TH ST
134TH ST
Calumet Park
Chicago
Chicago State University
Olive-Harvey College
103rd St.
107th St.
111th St.
Kensington
Harborside International Golf Course
Lake Calumet
Cal Sag Channel
Joe Louis Golf Club
Little Calumet River
Riverdale
Riverdale
Ivanhoe
147th St.
VINCENNES AV
ASHLAND AV
HALSTED ST
WENTWORTH
STATE ST
MICHIGAN AVE
KING DRIVE
COTTAGE GROVE AV
DOTY
STONY ISLAND AV
STONY ISLAND AVE
INDIANA AVE
57
94

Halsted Street Corridor

Halsted Street is a major north-south arterial located at 800 West. The Halsted corridor would extend west along 95th Street or I-57 from I-94 and 95th Street to Halsted Street, about one mile to the west. At Halsted, the corridor turns south and remains in the approximate right-of-way of Halsted Street to the southern edge of the study area at approximately 127th Street, at or near the borders of Chicago, Riverdale and Calumet Park.

Halsted Street varies in width, but has a nominal width of 70 feet at most locations. The cross-section generally includes two through lanes, a parking lane in each direction, and a median. An at-grade crossing with the MED Blue Island branch occurs near 121st Street.

Land use is mixed from 95th Street to approximately 98th Street and then the properties fronting on Halsted are almost entirely commercial from 98th to around 117th Street. There are also residential structures located in this section and several churches. Strip malls front on Halsted at 104th Street (east side) and near 107th Street (west side). There is a nursing center on the east side of Halsted north of 110th Street. A large indoor mall (including a grocery store) is located on the west side of Halsted, north of 115th Street. A new, smaller mall is being built to the south of 115th Street. Mixed land use (including some light industry) is located between 117th Street and 123rd Street.

Land use tends to be mixed south of 119th Street, but there are also more vacant parcels interspersed in this area. Between 127th and 129th Street, land use is commercial on both sides of Halsted. There is a residential strip running along the north side of the Calumet River, which fronts on either side of Halsted at 129th Street.

Union Pacific Railroad (UPRR) Corridor

The UPRR Corridor extends west from the intersection of I-94 and 95th Street either along 95th Street, I-57, or south west along South Lafayette Avenue to the intersection with the UPRR right-of-way at about Eggleston Avenue and 99th Street (about one mile). The corridor then follows the UPRR alignment south from 99th Street to approximately 111th Street, where the railroad alignment begins to curve to the southeast. The alignment is at-grade as far south as 115th Street (the last grade crossing is at State Street, which is crossed to the south and east of 115th Street) and then the rail alignment transitions to a grade-separated alignment. The corridor turns due south after crossing the Metra Electric mainline/Canadian National (CN) tracks (approximately 119th/ Calumet), while the corridor would continue to head southeast-ward to terminate at approximately 130th Street and Stony Island Avenue (east of the crossing of 130th and the I-94 Bishop Ford Freeway).

A number of grade crossings have been closed along the UPRR alignment. Those that remain open are: 95th, 97th, 101st, 103rd, 107th, 109th, 111th, Princeton, Wentworth, 115th, Lafayette and State Street. The UPRR right-of-way is typically on the order of 100 feet in width, and the railroad is double-track throughout the study area. The alignment is being considered for Metra’s proposed SouthEast Service.

Land uses along the UPRR are open space to the west from 95th to 103rd Street, with residential being the predominant land use to the east in this section. From 99th to 100th Street there is a dedicated park immediately east of the corridor. From 103rd to 105th Street and between 107th and 108th Street, both sides of the corridor are given over to commercial/institutional uses (a City pumping station is located on the east side of the rail line south of 104th Street, for example). Between 105th and 107th and then again from 108th to 112th Streets, commercial land use is located to the west of the UPRR, with residential being the primary use to the east.

Active industrial concerns are to the east and west of the rail line at the 107th Street crossing. Light industries surround the corridor between 111th and 115th Streets. Residential use is present on both sides of the right-of-way from 115th with, mixed land use in evidence around Michigan Avenue. From 116th Street through the end of the community (around 119th and Prairie) the primary land use is residential.

From this location, the corridor would separate from the UPRR right-of-way, continuing on a diagonal to the southeast. Land use in the area east of the UPRR is industrial in nature, along with a major Metropolitan Water Reclamation District of Greater Chicago (MWRDGC) water treatment facility. The proposed transit line would run parallel to the NICTD line to a terminal near 130th/Stony Island.

Wentworth Avenue Corridor

The Wentworth Corridor begins at 95th Street and I-94 and extends about one-quarter mile west on 95th Street to Wentworth Avenue or southwest to South Lafayette Avenue along I-57. The corridor then heads south along Wentworth Avenue (200 west) to approximately 127th Street. The width of the Wentworth Corridor is most typically around 40 feet (one through lane and one residential parking lane in each direction), though south of 121st Street (near the at-grade crossing of the Metra Electric Blue Island Branch) the street width is never more than 30 feet. Wentworth also crosses the UPRR at-grade, just south of 114th Street.

Land use along Wentworth is almost entirely residential, except where it intersects the major east-west cross-streets (103rd, etc.) where there are some commercial enterprises. The Hughes School at 104th Street to the west of Wentworth, and the Van Vlissingen School around 109th Street and east of Wentworth are near the corridor.

State Street Corridor

The State Street corridor begins at 95th Street and I-94 and extends south along State Street (0 W) to 127th Street. State Street has some variation in overall width over the section of interest, but typically has an overall width of 42 feet. This street has at-grade crossings with the UPRR (south of 115th Street) and the Metra Electric-Blue Island Branch (around 121st Street). The branch's State Street station is located to the east of State on the north side of the single-track line.

Land use along State Street is a mix of recreational and educational to the east side between 95th and 98th (the I-90/94 expressway runs along the west side of the street). South of 99th Street, land use is residential on both sides, extending down to 110th Street. At intersections with major east-west cross streets, mixed use development exists.

From 110th to 115th the uses are mixed, and as we have seen on the other north-south streets in this area, the frequency with which one encounters vacant parcels increases in this section. There are also a few vacant buildings in this area.

Curtis Elementary School fronts on the east side of State north of 115th Street. Residential and mixed-use structures are on either side of State south of 115th Street. South of UPRR grade crossing, residential land use becomes dominant, extending down to 127th Street. Gompers Elementary School is located on the northwest corner of 124th, while the Jesse Owens Community Academy is on the west side of State south of 124th Place.

Michigan Avenue Corridor

This corridor follows 95th Street east from I-94 to Michigan Avenue and then remains along

Michigan Avenue (100 East), to the south limits of the corridor at 127th Street. Michigan's overall width varies, but is nominally around 40 feet. The UPRR is on retained fill where it crosses Michigan (around 116th Street). There is an at-grade crossing with the Metra Electric - Blue Island Branch around 121st Street. This line's State Street station is located immediately west of Michigan, but there is no entrance to the station from that street.

On the portion of this corridor along 95th Street, the land use is recreational to the south and a mix of commercial and residential on the north side of the street. Land use on Michigan is residential on the east side between 95th and 99th Street, with a mix of recreational and educational purposes to the west north of 98th Street, and then residential with some mixed-use south of 98th.

South of 100th Street, the land use along Michigan is predominantly commercial on both sides of the street, with an intermixture of residential structures. A multi-story church-supported housing structure is on the west side of the street south of 102nd Street. A variety of commercial uses can be found on the four corners at 103rd Street and Michigan Avenue.

A significant senior citizen housing complex has been constructed on the northwest corner of 105th Street and Michigan Avenue, while the southeast corner of this same intersection is occupied by a town house development. Mixed use, multi-story structures can be found at several locations along Michigan Avenue from 107th south to around 121st Street, as well as the churches. In the section from 111th Street to Kensington, the uses are predominantly commercial and the structures vary between one- and two-story, though the now-closed "Gatelys" store at 112th Street is significant for having a five-story parking structure that extends down the ridge from Michigan to Pembroke Avenue (one block to the east). A new grocery store is proposed on the southwest corner of 115th and Michigan.

Residential land use becomes dominant from 120th down to almost 127th Street, where Michigan ends. There is a significant recreational field on the east side of the street between 124th Place and 125th Street.

King Drive Corridor

The King Drive corridor follows 95th Street east from I-94 to Martin Luther King Jr. Drive (400 East, or one-half mile to the east), then turns south and follows King Drive to its end on the north side of 115th Street. King Drive's width varies, but is most typically around 40 feet. The cross-section is typically one through lane and a parking lane in each direction.

Land use on 95th Street is mixed residential and commercial. On King Drive, the land use is residential to the west side between 95th and 99th, and educational / institutional to the east between these same limits. South of 100th Street and extending down to 109th, land use is primarily residential on both sides, except at major east-west cross streets (such as 103rd Street) where it is commercial. Between 109th and 113th Street, land to the west is principally educational use (St. Martin de Porres Academy and Mendel High School), while the east side of King Drive is primarily residential. A large park is located on the west side of King Drive, south of 111th Street. The land use reverts to residential on both sides down to almost 115th, where King Drive ends in a commercial area. One of the parking lots serving the Metra Electric/NICTD Kensington station is located on the east side of King Drive to the north of 115th Street.

Cottage Grove / Metra Electric Corridor

This corridor runs east from 95th Street and I-94 approximately 1.1 miles to Cottage Grove Avenue at around 800 East, and the Metra Electric District alignment, which runs parallel and to the west side of Cottage Grove. It follows this alignment on a slight southwest angle down to the end of Cottage Grove around 119th Street. From the end of Cottage Grove, the corridor continues to the southeast paralleling the NICTD right-of-way to terminate at approximately 130th Street and Stony Island Avenue, along the same alignment as proposed for the southern end of the UP Railroad Corridor.

The Metra Electric/Canadian National (CN) right of way lies to the west of Cottage Grove, while there are a variety of land uses on the east side of the street. Between 95th and 99th Place the land use is commercial/industrial. There is a small pocket of residential development south of 98th Place and then a major industrial site which extends down to I-94. South of 100th, (and extending down to 108th) this shifts to predominantly residential, with some recreational facilities mixed in. From 108th to 111th the site of the former Pullman-Standard car building plant is on the east side of Cottage Grove. The Pullman Historic District is located south of 111th Street to the east of Cottage Grove.

Immediately to the east of Cottage there are mixed commercial and residential uses, culminating in the commercial area at 115th. To the south of 115th Street, it runs on the east side of a parking lot for commuters using the Kensington Station. It also passes to the east of the interlocking tower that controls the Kensington junction between the NICTD, MED, and CN lines. As noted previously, Cottage extends down to 119th Street in the industrial area that lies to the south and east of the UPRR ROW discussed above. Within this corridor, Cottage Grove varies in width, but is most typically on the order of 48 feet wide.

Schools along this corridor include: Chicago State University on the south side of 95th Street between King Drive and the Metra Electric/CN right-of-way; Smith Elementary School and Corliss High School (both located south of 103rd Street); Poe School north of 106th Street; and, the Pullman Elementary School, located north of 115th Street.

I-94 Bishop Ford Freeway Corridor

This corridor extends east and south from the intersection of I-94 and 95th Street. A complex, grade-separated junction allows traffic to interchange between I-94 Bishop Ford Freeway, I-57 and the I-94 Dan Ryan Expressway. The I-94 Bishop Ford Freeway has three lanes in each direction extending east to approximately Stony Island Avenue. It then continues running south to the extremity of the study area at 130th Street (west of Stony Island).

Interchanges include the previously described junction with I-94 and I-57, Stony Island Avenue/103rd Street, 111th Street, 115th Street and 130th Street. The highway intersects the Metra Electric-Mainline/CN tracks at Cottage Grove Avenue and the NICTD South Shore Line crosses over the highway just south of the 130th Street interchange. An Indiana Harbor Belt (IHB) freight railroad line parallels the South Shore Line from around 119th Street to the south limits of the study area. This line is used infrequently.

Land use surrounding I-94 Bishop Ford Freeway is predominantly recreational and educational on the east side of the highway south from 95th Street, becoming residential on both sides after passing under Michigan Avenue. East of King Drive the use is institutional and educational to the north (Secretary of State's facility and Chicago State University) and then residential to the south, extending east to Cottage Grove. The use is industrial to the north on the east side of Cottage Grove, and continues to be residential to the south of the highway. As the I-94 Bishop Ford Freeway swings south to intersect 103rd Street, the use is industrial to the west and educational (Olive-Harvey College) to the east. Between 103rd and 111th Streets the use is commercial to the west and recreational to the east. From 111th south to the end of the study area the land uses are industrial on both sides of the highway.

3.1.1 Corridor Evaluation

The corridor evaluation involved the analysis of the corridor alternatives based on their performance against relevant Screen 1 evaluation criteria. These criteria represent the Screen 1 measures that apply to each corridor regardless of the modal technology and profile developed within them:

- **Land Use:** Consistency and compatibility with surrounding land uses
- **Neighborhoods and Community:** Neighborhoods and residential population served with improved transit service
- **Poverty-status and Minority Access:** Poverty-status and minority populations served
- **Transit System Usage:** Service to activity centers within the study area and the region
- **Accessibility:** Directness to the existing Red Line 95th Street terminal station and the regional system

Three corridors, Halsted, UPRR, and Michigan were recommended to be carried forward as described in Tables 3.1 and 3.2.

Table 3.1: Summary Corridor Evaluation

Criteria	I-57	Hal-sted	UPRR	Went-worth	State	Michi-gan	King Dr.	Cottage Gr./MED/CN	I-94
Land Use	+	+	+	−	−	+	−	−	+
Neighborhoods/ Community	○	+	+	+	+	+	+	○	−
Poverty Status & Minority Access	○	○	+	+	+	+	+	+	−
Transit System Usage	−	+	+	○	○	+	○	+	−
Accessibility	−	○	+	+	+	+	+	○	−
Advance For Further Screening?	No	**Yes**	**Yes**	No	No	**Yes**	No	No	No

Key: **+** Better than other alternatives; ○ Same as other alternatives; **−** Worse than other alternatives

Table 3.2: Summary Corridor Evaluation Conclusions

Corridor	Advance for Further Screening?	Comments
I-57 Expressway	No	Corridor is on the western edge of study area and evaluates worse than other alternatives for accessibility and ability to improve transit service for new and existing customers.
Halsted Street	**Yes**	Corridor is highly transit supportive and could improve transit usage and accessibility to 95th Street. Halsted is a busy and active commercial corridor with the highest existing local bus usage in the study area.
UP Railroad (UPRR)	**Yes**	Corridor evaluates better than other alternatives for land use, neighborhoods served, poverty-status/minority access, transit usage, and accessibility.
Wentworth Avenue	No	Corridor is transit supportive. However, Wentworth Avenue is a local residential street and new transit infrastructure would be highly disruptive.
State Street	No	Similar to Wentworth Avenue, State Street is a residential corridor in the study area and not suitable for high capacity transit infrastructure.
Michigan Avenue	**Yes**	Corridor is highly transit supportive and could improve transit usage and accessibility to 95th Street.
King Drive	No	Corridor currently ends at 115th Street and would require high land acquisition cost to reach 130th Street.
Cottage Grove Avenue / MED CN	No	Corridor will not improve transit service or accessibility better than other alternatives.
I-94 Bishop Ford Freeway	No	Corridor is within a freeway. Transit usage, accessibility and neighborhoods and populations served worse than other alternatives.

3.2 Transit Technologies

A wide range of modal technologies were evaluated as part of the Universe of Alternatives. Eleven transit modal technologies were evaluated. They were grouped into three groups: rail, rubber tire and other modes. Together these generally encompass the entire domain of current transit technologies. These eleven technologies are:

Rail Transit: Rail is the designation for the alternatives operating as traditional rail technologies using steel wheels on steel rail. The rail guideways can be located in dedicated rights-of-way or in some cases, they can share the street with other vehicular traffic and pedestrians. Depending on mode and function, station spacing for these systems can be as close as ¼ to ½ mile in higher populated urban areas and one to five miles in areas with a lower population density. Rail propulsion power is generally from either diesel engines on board the vehicle or from electricity delivered from a distant generating location and distributed by overhead wires or a third rail that power the vehicle's electric motors. Hybrid engines, combining diesel and electric power on board the vehicle, are emerging propulsion system technology. The various rail transit alternatives for consideration include:

- Commuter Rail
- High Speed Rail
- Heavy Rail Transit (HRT)
- Light Rail Transit (LRT)
- Streetcar

Rubber Tire Transit: Similar to the rail transit, rubber-tire alternatives can travel at higher speeds or lower speeds, operate in dedicated travelways or in mixed traffic, and can use different propulsion systems, including standard diesel, hybrid, compressed natural gas, and electric. The various alternatives for consideration are presented below.

- Commuter Bus
- Local Bus
- Bus Rapid Transit (BRT)

Other Transit: Other transit generally represents advanced technology systems recently developed that do not ride on steel or rubber wheels or have so many variations for the guideway that categorization as either a rail vehicle or a bus vehicle would be difficult. These alternatives include:

- Maglev
- Automated Guideway Transit (AGT)/Monorail
- Personal Rapid Transit (PRT)

Figure 3.2 depicts these eleven transit technologies and Table 3.3 provides a summary of the operating characteristics of the eleven transit technologies.

3.2.1 Transit Technology Evaluation

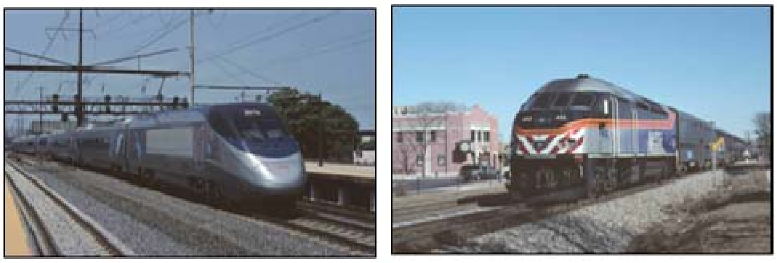
The evaluation of the transit modal technologies was based on:

- **Study Area Suitability -** The modal technology has demonstrated the capability to match basic project needs for operating speeds and station spacing.

  Measures of Effectiveness (MOE):
  - *Length of Commute:* The typical commute length of the modal technology must be consistent with study area characteristics in terms of dimensions and area.
  - *Typical Station Spacing:* The typical station spacing of a modal technology must be consistent with the purpose and need of the project.
  - *Operating Speed:* The typical modal speed is consistent with the purpose and need of the project.

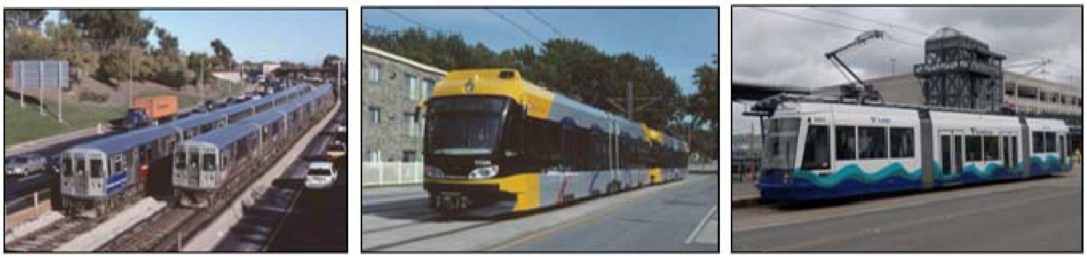
To meet the study area suitability criteria, the modal technology must have demonstrated the capability to match basic project needs such as operating speeds, station/stop spacing or length of travel.

Figure 3.2: Transit Technologies



High Speed Rail

Metra Commuter Rail



CTA Heavy Rail Transit

Minneapolis Light Rail Transit

Tacoma Streetcar

CTA Local Bus

Pace Commuter Bus

Civis Bus Rapid Transit

Shanghai MagLev

Personal Rapid Transit

Clarian Automated Guideway Transit

Table 3.3: Operating Characteristics of Technology Alternatives

	Rail Modes					Rubber Tire Modes			Other Modes		
Characteristic	**Commuter Rail**	**High Speed Rail**	**Heavy Rail Rapid Transit**	**Light Rail Transit**	**Streetcar**	**Commuter Bus**	**Local Bus**	**Bus Rapid Transit**	**Magnetic Levitation**	**Automated Guideway Transit**	**Personal Rapid Transit**
Type of Vehicle	Locomotive and train of cars; DMUs, EMUs	Locomotive and train of cars; EMUs	Trains of self-propelled cars	Self-propelled car or train of cars	Self-propelled car	Stand alone vehicle	Stand alone vehicle	Stand alone vehicle	Train of self-propelled cars	Train of self-propelled cars	Single self-propelled car
Vehicle Capacity	200-1800	500-600	800-1000	100-200	50-70	40	50-70	75-150	500-600	Varies per application	4 - 10
Propulsion	Diesel locomotives; electric motors	Usually electric motors supplied from catenary wire; also turbine powered locomotives	Electric motors supplied from 3rd rail or catenary	Electric motors supplied by overhead wire	Electric motors supplied by overhead wire	Internal combustion engine (diesel, natural gas or hybrid)	Internal combustion engine (diesel, natural gas or hybrid)	Internal combustion engine (diesel, natural gas or hybrid)	Electromagnetic coils supplied by wires in guideway	Electric motors supplied by power rail	Electric motors supplied by power rail
Service Configuration	Connecting suburbs to CBD	Intercity travel	Urban network with focus on CBD	Urban trunk line service	Line service on city streets	Express service to CBD or other major destinations	Line service on city streets	Urban trunk line service in exclusive lanes or guideway	Urban applications and intercity travel	Urban network, as well as shuttle or loop service	Point to point on demand
Travel Speed	30-50 mph	125-200 mph	25-50 mph	15-25 mph	10 mph	30-50 mph	10 mph	15-25 mph	25-250 mph	15 mph	15 mph
Station Spacing	3-7 miles	20 – 50 miles	1/4 to 2 miles	1/4 to 1 mile	2 - 4 blocks	Selected stops at each end of trip	2 - 4 blocks	1/4 to 1 mile	1 to 50 miles	Varies per application	Varies per application
In Transit Revenue Service in N. America	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No

- **System Applicability -** The technology has been established as operationally feasible. Modal technologies that have not been implemented for public use in the U.S. were not recommended for further evaluation.

  Measure of Effectiveness:
  - Proven revenue service in North America.

Using these criteria, each transit modal technology was evaluated against its suitability for the study area and its applicability in the U.S. Table 3.4 summarizes this technology evaluation and show that AGT, BRT, HRT, and LRT transit technologies are recommended to be carried forward to the next step of the evaluation.

3.3 Technology and Profile Evaluation

The transit modal technologies can operate under four possible vertical profiles:

Elevated: An elevated structure is above ground, either on an embankment or on a structure. A local example of an elevated structure is the CTA rail track that forms the Chicago Loop and supports the Orange, Green, Pink, Brown and Purple lines. Other elevated structure examples include the embankment that supports the Red and Purple line tracks between Lawrence and Howard. Given that these structures only support one modal technology, service on these lines is faster than those profiles which may result in mixed traffic operation.

At-Grade: At-grade service runs at ground level. Examples of at-grade rail service are found on the CTA's Yellow and Brown lines, and throughout Metra's service network. CTA and Pace buses use the existing road network and most are therefore at-grade. At- grade services experience conflict points with other transportation networks, potentially resulting in lower operating speeds.

Trench: A trench profile is below ground, but not covered for any distance. Examples of transportation infrastructure that is in a trench can be found on significant parts of the expressway network in Chicago. A specific example of CTA rail in a trench is approaching the Orange Line Midway Airport terminal station. Riders need to ascend to ground level to access additional transportation services. Trench services are usually faster than at-grade due to the dedicated modal technology right-of-way that reduces intersections and potential conflicts with traffic.

Underground: Examples of underground or subways include the CTA Red and Blue lines in downtown Chicago. These subways are tunnels underneath ground level that minimize impacts of the transit facility on adjacent uses, and offer faster service than profiles that cross other transportation facilities at the same level.

Table 3.4: Technology Evaluation

Technology	**Does mode meet the MOE?**				**Advance for Further Screening?**	**Comments**
	Study Area Suitability			**System Applicability**		
	Length of Commute	**Typical Station Spacing**	**Operating Speed**			
Automated Guideway Transit	●	●	●	●	**Yes**	Typical station spacing and operating speeds suitable to the study area.
Bus Rapid Transit	●	●	●	●	**Yes**	Typical station spacing, operating speeds and flexible commute lengths suitable to the study area.
Commuter Bus	x	x	●	●	No	Typically serves point-to-point suburb to city travel. Trip lengths are not consistent with the study area needs.
Commuter Rail	x	x	●	●	No	Length of commuter trip and typical station spacing of 3-7 miles is not consistent with the study area needs.
Heavy Rail Rapid Transit	●	●	●	●	**Yes**	Typical station spacing and operating speeds suitable to the study area.
High-Speed Rail	x	x	x	x	No	Typically serves intercity travel. Length of commuter trip and typical station spacing of 20 miles not consistent with the study area needs.
Light Rail Transit	●	●	●	●	**Yes**	Typical station spacing, operating speeds and flexible commute lengths suitable to the study area.
*Local Bus**	●	x	x	●	No	Typical station spacing and operating speed not consistent with the study area and purpose and need.
Maglev	x	x	x	x	No	Typical station spacing of at least 20 miles required to achieve operational speeds is inconsistent with the purpose and need of the project.
Personal Rapid Transit	●	x	●	x	No	Typical station spacing, operating speeds and flexible commute lengths suitable to the study area.
Streetcar	●	x	x	●	No	Typical station spacing and operating speed not consistent with the study area and purpose and need.

Key: ●Yes, **x** No

* Local bus service, along with the CTA Rapid Transit and Metra service is analyzed as part of the “No Build” and TSM Alternatives

3.4 Screen 1 Findings

This section identifies specific issues which led to the recommendation or elimination of each alternative in Screen 1. Tables 3.5 and 3.6 summarize this evaluation.

Halsted Street Corridor At-Grade BRT

- At-grade BRT would be both compatibly with the existing system and cost effective on the Halsted Street Corridor. The street is generally an appropriate width and can support BRT bus service. This alternative is recommended for further evaluation in Screen 2.

Halsted Street Corridor Elevated HRT

- Elevated structures on the Halsted Street Corridor, though somewhat higher in cost, are feasible for elevated HRT service. This alternative is recommended for further evaluation in Screen 2.

Halsted Street Corridor Trench HRT

- A trench alignment in the Halsted Street Corridor would interfere significantly with traffic on the road both during construction and ongoing operation as a result additional right of way that would be required. This alternative is not recommended for further evaluation.

Halsted Street Corridor Underground HRT

- This alternative scores high on nearly all measures of effectiveness in this screening. Though potentially costly, an underground HRT alternative is feasible on Halsted Street. This alternative is recommended for further for further evaluation in Screen 2.

UPRR Corridor At-Grade BRT

- The existing use of this corridor for railroad operations does not have adequate right of way for at-grade BRT lanes. This alternative is not recommended for further evaluation.

UPRR Corridor Elevated and Trench HRT

- The existing use of this corridor is for railroad operations and is feasible for elevated HRT service. This alternative is recommended to advance for further evaluation in Screen 2.

UPRR Corridor Underground HRT

- Despite scoring well on some measures of effectiveness in screen 1, underground facilities are cost prohibitive in relation to the benefits provided in this corridor. This alternative is not recommended for further evaluation.

Michigan Avenue Corridor At-Grade BRT

- At-grade BRT would be both efficient and cost effective on the Michigan Avenue Corridor. Although the street has limited right-of-way, it may support an enhanced bus service and warrants further review. This alternative is recommended for further evaluation in Screen 2.

Table 3.5: Summary of Technology and Profile Evaluation

Technology	Profile	Criteria						Advance for Further Screening
		Air Quality	System Capacity	Travel Time	Compatibility	Traffic	Project Cost	
Automated Guideway Transit	Elevated	○	○	**−**	**−**	**+**	○	No
	Trench	○	○	**−**	**−**	○	○	No
	Underground	○	○	**−**	**−**	**+**	**−**	No
Bus Rapid Transit	Elevated	○	○	○	**−**	**+**	○	No
	At-Grade	○	○	○	**+**	○	**+**	**Yes**
	Trench	○	○	○	**−**	○	○	No
	Underground	○	○	○	**−**	**+**	**−**	No
Heavy Rail Rapid Transit	Elevated	○	**+**	**+**	**+**	**+**	○	**Yes**
	Trench	○	**+**	**+**	**+**	○	○	**Yes**
	Underground	○	**+**	**+**	**+**	**+**	**−**	**Yes**
Light Rail Transit	Elevated	○	○	○	**−**	**+**	○	No
	At-Grade	○	○	○	**−**	**−**	**+**	No
	Trench	○	○	○	**−**	○	○	No
	Underground	○	○	○	**−**	**+**	**−**	No

Key: **+** Better than other alternatives; ○ Same as other alternatives; **−** Worse than other alternatives

Michigan Avenue Corridor Elevated HRT

- Elevated structures on the Michigan Avenue Corridor, though somewhat higher in cost, are feasible for elevated HRT service. This alternative is recommended for further evaluation in Screen 2.

Michigan Avenue Corridor Trench HRT

- A trench alignment in the Michigan Avenue Corridor would interfere significantly with traffic on the road both during construction and ongoing operation as a result additional right of way that would be required. This alternative is not recommended for further evaluation.

Michigan Avenue Corridor Underground HRT

- This alternative scores high on nearly all measures of effectiveness in this screening. Though very costly, this underground HRT alternative is feasible Michigan Avenue. This alternative is recommended for further evaluation in Screen 2.

Table 3.6: Summary of Screen 1 Evaluation of Alternatives

Technology	Profile	Recommended to Advance to Screen 2		
		Halsted Corridor	UP Railroad Corridor	Michigan Corridor
Bus Rapid Transit	**Elevated**	No	No	No
	At-Grade	**Yes**	No	**Yes**
	Trench	No	No	No
	Underground	No	No	No
Heavy Rail Rapid Transit	**Elevated**	**Yes**	**Yes**	**Yes**
	Trench	No	**Yes**	No
	Underground	**Yes**	No	**Yes**

Based on this evaluation, two Bus Rapid Transit (BRT) alternatives along Halsted Street and Michigan Avenue, and six Heavy Rail Transit (HRT) alternatives along Halsted Street, the Union Pacific Railroad (UPRR), and Michigan Avenue, along with the No-Build and TSM alternatives were carried forward for further analysis in Screen 2.

4.0 SCREEN 2 EVALUATION

The Screen 2 evaluation begins with the alternatives that were carried forward from the Screen 1 evaluation.

4.1 Definition of Alternatives

Step 1 Evaluation

Step 1 of the Screen 2 evaluation process consists of further defining alternatives advancing from Screen 1 beyond the initial corridor and technology descriptions to also include mapping of a more defined alignment, identification of potential station locations, and sketch service plans. This definition assists in a more complete understanding of the unique elements of each alternative. It also provides a level of information about each alternative that supports more detailed evaluation. The alternatives are summarized below.

Bus Rapid Transit (BRT) Alternatives

BRT typically operates all or a portion of its route in a dedicated right-of-way. The proposed span of service for the BRT and HRT alternatives is the same as the current Red Line service hours, which operates 24 hours every day of the year. Few bus service changes are proposed for the BRT alternative due to requirement for customers to transfer between the BRT and the Red Line at 95th Street for travel to the Central Area.

The vehicles anticipated for the BRT alternative are articulated buses that would be hybrid diesel-electric powered or use alternative fuels. These 60 foot vehicles have a capacity of up to 115 passengers. A park-and-ride facility is recommended at the terminal station.

BRT Halsted Street At-Grade Alternative

This proposed BRT would operate at-grade on exclusive right-of-way between Vermont Avenue/Halsted Street and the Red Line 95th Street terminal station. For service planning purposes, station locations include Vermont Avenue, 123rd, 119th, 115th, 111th, 107th, 103rd, and 98th Streets.

BRT Michigan Avenue At-Grade Alternative

This proposed BRT would operate at-grade on exclusive right-of-way between 127th Street and the Red Line 95th Street terminal station. The alternative is planned with eight stations and it is 4.2 miles long. For service planning purposes, station locations include 127th, 123rd, 119th, 115th, 111th, 107th, 103rd and 98th Streets.

Heavy Rail Transit (HRT) Alternatives

HRT has been defined as operating in dedicated right of way completely separated from surface traffic on an elevated structure, underground or in a trench. Power would be provided via a third rail to match the existing CTA system. Trains would operate with 4 to 8 cars and the rolling stock would be equivalent to the existing fleet.

- **Elevated** indicates that most of the proposed new infrastructure is elevated except for portions where elevated infrastructure is not practical. Elevated HRT alternatives include the Halsted Street, UPRR and Michigan Avenue Corridors.
- **Underground** indicates that, where feasible, the majority of the proposed new infrastructure is underground, except for the portions necessary to connect to existing guideway or at the terminus rail yard where underground infrastructure is not practical.

Underground HRT alternatives include the Halsted Street and Michigan Avenue Corridors.

- **Trench** indicates that most of the proposed new infrastructure is located in a trench with limited or no permanent street closures. The single Trench HRT alternative being considered is the UPRR Corridor.

HRT Halsted Street Elevated and Underground Alternatives

Heavy rail would operate as either an elevated structure or underground. The alignment would begin at Vermont Avenue/Halsted Street to the I-57 Expressway median, following the median to existing CTA track south of 95th Street. For service planning purposes, station locations are assumed at Vermont Avenue, 119th, 111th, and 103rd Streets.

HRT Union Pacific Railroad (UPRR) Elevated and Trench Alternatives

Heavy rail would operate as an elevated structure or in a trench. The alignment would follow the I-57 Expressway until the UPRR corridor. It would then turn south along the corridor to approximately 111th Street where it would turn southeast to terminate at roughly 130th Street west of the I-94 Bishop Ford Freeway. For service planning purposes, station locations include 130th, 115th, 111th, and 103rd Streets.

HRT Michigan Avenue Elevated and Underground Alternatives

Heavy rail would operate on either an elevated structure or underground. The alignment would follow the southbound I-94 Bishop Ford Expressway median and transition to either an elevated structure or underground at Michigan Avenue. It would then head south along the Michigan Avenue Corridor to approximately 127th Street. For service planning purposes, station locations include 127th, 119th, 111th, and 103rd Streets.

No-Build Alternative

The No Build Alternative is defined as no new major construction within the study area, other than existing or committed projects in the CMAP 2030 Regional Transportation Plan. Minor spot improvements, transportation management measures, and/or signal projects may be constructed under the No Build Alternative. For additional information on planned transportation improvements in the study area see Section 5.1 – Definition of Alternatives; No Build Alternative.

TSM Alternative

The TSM Alternative represents lower cost improvements to address transportation issues in the study short of constructing a new fixed guideway. Bus service changes associated with the TSM Alternative include a new limited-stop express bus route. The proposed #X34 express bus route would operate along the current #34 South Michigan route, making stops at least half mile apart at frequencies of 7.5 minutes. The X34 South Michigan Express bus route would operate between 6:00 a.m. and 8:00 p.m. on weekdays only. Rush hour frequency on routes #34 and #X34 for the TSM Alternative are proposed at 11 minutes and 7.5 minutes respectively. Results from the ridership forecast in Screen 3 may necessitate changes to the TSM routing or these proposed frequencies if estimated demand exceeds proposed capacity.

4.2 Evaluation

Step 2 Evaluation

The evaluation criteria include a robust mix of qualitative and quantitative measures, but does not include ridership forecasting or detailed cost estimating. The Step 2 evaluation factors included:

- Physical Constraints
- Right-of-Way Requirements
- Social & Economic factors
- Demographics and Employment
- Environmental Factors
- Noise, Visual, Natural and Cultural Resources
- Transportation Factors
- Travel Time, Transit Connectivity and Traffic

During Step 2, three alternatives were eliminated, and the remaining alternatives advanced to Step 3. This Step 2 evaluation is summarized in Tables 4.1 and 4.2.

Table 4.1: Recommendations of Step 2 Evaluation

Step 2 Criteria	BRT		HRT					
	Halsted Street	Michigan Avenue	Halsted Street		UPRR		Michigan Avenue	
	At-Grade	At-Grade	Elevated	Under-ground	Elevated	Trench	Elevated	Under-ground
Physical Constraints	○	−	○	○	○	○	−	−
Social / Economic	○	○	○	○	○	○	○	○
Environmental	+	○	○	○	○	○	○	−
Transportation	−	−	+	+	+	+	+	+
Advance to Step 3	**Yes**	No	**Yes**	**Yes**	**Yes**	**Yes**	No	No

Key: **+** Better than other alternatives; ○ Same as other alternatives; **−** Worse than other alternatives

Table 4.2: Summary of Screen 2 Step 2 Evaluation of Alternatives

Technology	Profile	Recommended to Advance to Screen 2 Step 2		
		Halsted Corridor	UP Railroad Corridor	Michigan Corridor
Bus Rapid Transit	**At-Grade**	**Yes**	No	No
Heavy Rail Rapid Transit	**Elevated**	**Yes**	**Yes**	No
	Trench	No	**Yes**	No
	Underground	**Yes**	No	No

Step 3 Evaluation

Step 3 is the last and most detailed evaluation within Screen 2. Remaining alternatives are evaluated using preliminary ridership projections and preliminary capital and operating cost estimates. Step 3 concludes with the recommendation to eliminate poorer performing alternatives and to advance those that are the stronger performers. Criteria used to evaluate the alternatives included:

- Capital Cost Comparison
- Operating and Maintenance (O&M) Cost Comparison
- Ridership Potential
- Cost Effectiveness

Table 4.3: Recommendations of Screen 2, Step 3 Evaluation

Project Cost and FTA Criteria	**BRT Halsted Street**	**HRT Halsted Street**		**HRT UPRR**	
	At-Grade	**Elevated**	**Under-Ground**	**Elevated**	**Trench**
Capital Cost	+	○	−	○	−
Annual Operating and maintenance Costs	○	○	○	○	○
Annual Ridership	−	+	+	+	+
Cost Effectiveness	+	○	−	○	−
Preliminary FTA Criteria Summation	+	+	−	+	−
Advance to Screen 3	**Yes**	**Yes**	No	**Yes**	No

Key: + Better than other alternatives; ○ Same as other alternatives; − Worse than other alternatives

Table 4.4: Summary of Screen 2 Step 3 Evaluation of Alternatives

Technology	**Profile**	**Recommended to Advance to Screen 3**	
		Halsted Corridor	**UP Railroad Corridor**
Bus Rapid Transit	**At-Grade**	**Yes**	Eliminated in Step 2
Heavy Rail Rapid Transit	**Elevated**	**Yes**	**Yes**
	Trench	Eliminated in Step 2	No
	Underground	No	Eliminated in Step 2

Screen 2 Alternative-Specific Issues

This section highlights the main issues that led to the recommendation and elimination of each alternative in Screen 2.

Halsted Street Corridor BRT At-grade, HRT Elevated and Underground

- The corridor is well suited for BRT at-grade and HRT elevated alternatives. Halsted Street is the largest and busiest arterial corridor in the study area with a four lane configuration and a 75’ right-of-way (ROW). These alternatives are recommended for further evaluation in Screen 3.
- The HRT Halsted Street Underground Alternative is expected to require the highest capital outlay. As result the HRT Underground Alternative was not recommended for further evaluation.

UPRR Corridor HRT Elevated and Trench

- HRT UPRR Alternative utilizes an existing freight rail right-of-way through much of the study area and is well suited for HRT Elevated alternative. The ROW width is 100 feet south of the I-57 bridge to104th Place. From there the width varies between 50 to 100 feet until 111th Street. South of 111th Street, the ROW is over 100 feet in width. The HRT UPRR Elevated Alternative is recommended for further evaluation in Screen 3.
- An open cut, or trench, profile would require placing both the UPRR and the Red Line extension within a trench. The UP line would require temporary relocation during construction. A crash wall separating the UPRR and CTA tracks may also be required if both lines were to go in a trench, which may require acquisitions in narrower segments of the ROW. This would substantially increase the construction cost compared to the elevated alternative. As result the HRT UPRR Trench Alternative was not recommended for further evaluation.

Michigan Avenue Corridor BRT At-Grade, HRT Elevated and Trench

- Michigan Avenue varies from 48 feet wide at 95th Street to 38 feet between curbs at 103rd Street. Taking 22 feet for the BRT lanes would leave 26 feet for auto lanes at 95th Street, but just 16 feet for auto lanes at 103rd Street. While it is possible to rebuild the street to increase the curb-to-curb width, this would have a negative impact on the built-up areas along Michigan Avenue. The BRT and HRT Michigan Avenue Alternatives, compared to other alternatives, would require significant right-of-way acquisitions.
- Michigan Avenue stub-ends at 127th Street within a developed residential area and there is no obvious BRT or HRT terminal location at this intersection without undertaking significant property acquisition.
- In the case of the HRT alternatives, the elevated and underground profile, while providing an alignment free from traffic interference, would be highly disruptive to the commercial and residential areas along Michigan Avenue. This would be true both during construction and subsequent operation.
- Therefore, the BRT and HRT Michigan Avenue alternatives received negative ratings in Screen 2 and were not recommended for further evaluation.

Screen 2 concluded with public involvement including meetings with elected officials and other stakeholder groups, as well as two public open houses in December 2008. As shown in Table 4.4, a BRT alternative along Halsted Street, and two HRT alternatives along Halsted Street and the UPRR, along with the No Build and the TSM alternatives were carried forward for more detailed evaluation in Screen 3.

5.0 SCREEN 3 EVALUATION

Screen 3 was comprised of a two-step evaluation process that included the further definition and refinement of alternatives and the evaluation of these alternatives. The result of the Screen 3 evaluation was a recommendation for an LPA.

5.1 Definition of Alternatives

Alternatives advancing to Screen 3 were developed and refined beyond the initial corridor and technology descriptions to include the conceptual design of the alternative, the identification of potential station locations, and preliminary service plans. This alternatives definition assists in a more complete understanding of the unique elements and requirements for each alternative. It also provides a more complete level of information about each alternative that supports increasingly detailed evaluation. The alternatives recommended from Screen 2 for further study include:

- No Build Alternative
- Transportation System Management (TSM)
- Bus Rapid Transit (BRT) via Halsted Street Corridor At-Grade
- Heavy Rail Rapid Transit (HRT) via Halsted Street Corridor Elevated
- HRT via UP Railroad (UPRR) Corridor Elevated

No Build Alternative

The No Build Alternative is defined as the existing transportation system, plus any committed transportation improvements. Committed transportation improvements include projects that are already in the Chicago Metropolitan Agency for Planning (CMAP) financially constrained Transportation Improvement Program. The Red Line Study Area has five bridge reconstructions, and several road improvements projects included in the FY 2007 – 2012 Transportation Improvement Program (TIP). These improvements are primarily on highway segments in the project study area and are not adjacent or intersecting with the proposed TSM or Fixed Guideway Alternatives.

The bridge projects include:

- Illinois 1 (Halsted Street) at the Little Calumet River, slated for completion by 2012
- I-94 (Bishop Ford Expressway) at the Stony Island ramp and at Cottage Grove Road, both scheduled for 2011
- I-57 at 103rd Street, to be completed in 2009
- I-57 at Genoa Rd, scheduled for 2011

The road projects include:

- Coordinating signal timing on Stony Island Avenue from 95th Street north, and on 95th Street from Western Avenue east to Ewing Avenue, to be completed in 2010
- Resurfacing I-94 (Bishop Ford Expressway) from ML King Drive south, scheduled for 2011
- Landscaping I-57 from I-94 south, to be done by 2012

- Landscaping and installing safety fencing and lighting along I-94 from the I-57 merge north, to be done in 2009
- Patching pavement on I-57 in various locations, with an unspecified completion date

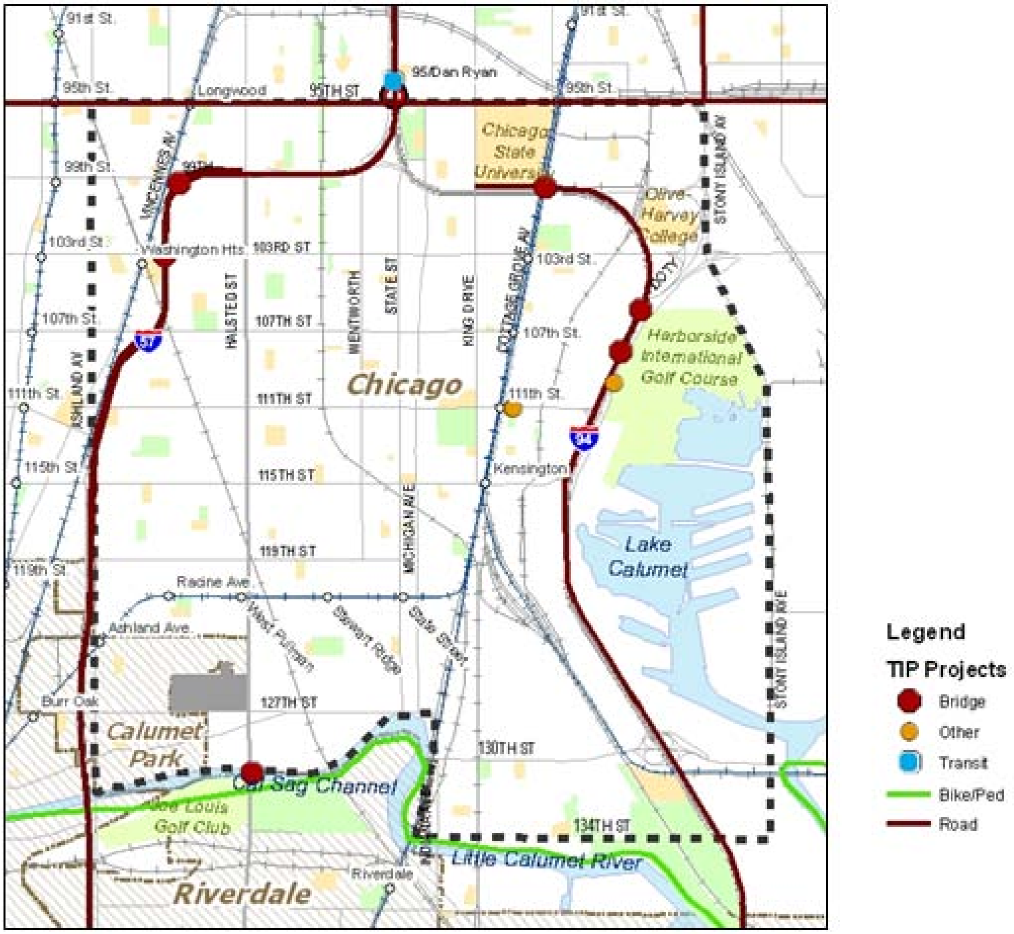
Other miscellaneous projects include a drainage project on I-94 (Bishop Ford Freeway) at 110th Street and Doty, which is scheduled for completion in 2012, and several historic preservation projects. These include the Hotel Florence at 11111 S. Forestville and the North Pullman Historic Area, both in the Pullman neighborhood of Chicago, which are scheduled to be completed in 2011.

A multi-use trail from the existing Centennial Trail in Lemont to the Burnham Greenway in Burnham, has funding identified but does not have a completion date.

Bus transit service under the No Build Alternative would be focused on the preservation of existing services and projects. No significant changes to bus service are anticipated in the project area.

All elements of the No-Build alternative are included in each of the other alternatives. The No-Build Alternative with TIP projects in the Red Line Extension Study Area is shown in Figure 5.1.

Figure 5.1: No-Build Alternative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Burr Oak
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Calumet Park
130TH ST
Cal Sag Channel
Joe Louis Golf Club
134TH ST
Little Calumet River
Riverdale
Riverdale
Legend
TIP Projects
Bridge
Other
Transit
Bike/Ped
Road

Halsted Street TSM/BRT Alternative

Based on discussions with the FTA, consolidation of the TSM and BRT Halsted Street Corridor alternatives was analyzed. The TSM and BRT alternative was initially defined to operate on a five mile alignment between the Red Line 95th Street station via Halsted Street to Vermont Avenue/127th Street.

The proposed TSM Alternative is a 5.1 mile BRT alternative that would operate between the 95th Street Station and 127th Street via Halsted Street. 95th Street is 80 feet wide with four lanes, center turn lane, landscaped median and no parking. ADT on 95th Street is 23,800. Halsted Street is the busiest north-south arterial street in the Red Line study area with nearly 37,000 vehicles ADT north of I-57 Expressway and more than 26,000 vehicles ADT to the south of the expressway. Halsted Street has a 75 foot right-of-way with four lanes, landscaped median with center turn lane, and parking.[7]

Full-scale BRT installations can provide significant travel time savings. The travel time savings for implementing BRT on the five mile route between 95th Street Station and Vermont Avenue/127th Street is 2.0 to 3.0 minutes relative to the TSM (assumes that the order of magnitude of travel time savings is between 15 and 20 percent that full-scale BRT could be expected to achieve over the TSM alternative). Given the order-of-magnitude of capital costs for implementing BRT on Halsted Street is $40 million and travel time savings are only 2.0 to 3.0 minutes over the TSM, CTA decided to merge the TSM and BRT alternatives into a single new TSM/BRT alternative. This new TSM/BRT Alternative replaced the TSM and BRT Alternatives from the Screen 2 analysis and was used for the detailed evaluation in Screen 3.

The TSM/BRT Alternative is an enhanced bus route from the existing Red Line 95th Street terminal to Vermont Avenue. It is proposed to operating in mixed-traffic along 95th Street and Halsted Street. The TSM/BRT Alternative is shown in Figure 5.2, and includes the following characteristics:

- The alternative is 5.1 miles long with four stations.
- Stations are assumed at 103rd, 111th, 119th Streets and Vermont Avenue.
- The average travel time from Vermont Avenue to 95th Street is 24.25 minutes. This includes a 2.25 minute wait time at Vermont Avenue.
- Traffic signal priority would be implemented along Halsted Street and 95th Street (similar to the previous TSM and BRT alternatives).
- Preliminary schedules indicate that four 60-foot articulated buses vehicles (including 1 spare) would be required.
- 95th Street terminal would be expanded to extend the existing bus bays along State and Lafayette Streets approximately 250-feet north to 94th Street to improve circulation and safety.
- Park and ride facilities are recommended at intermediate and terminal stations with a total capacity of 700 spaces in the year of construction.

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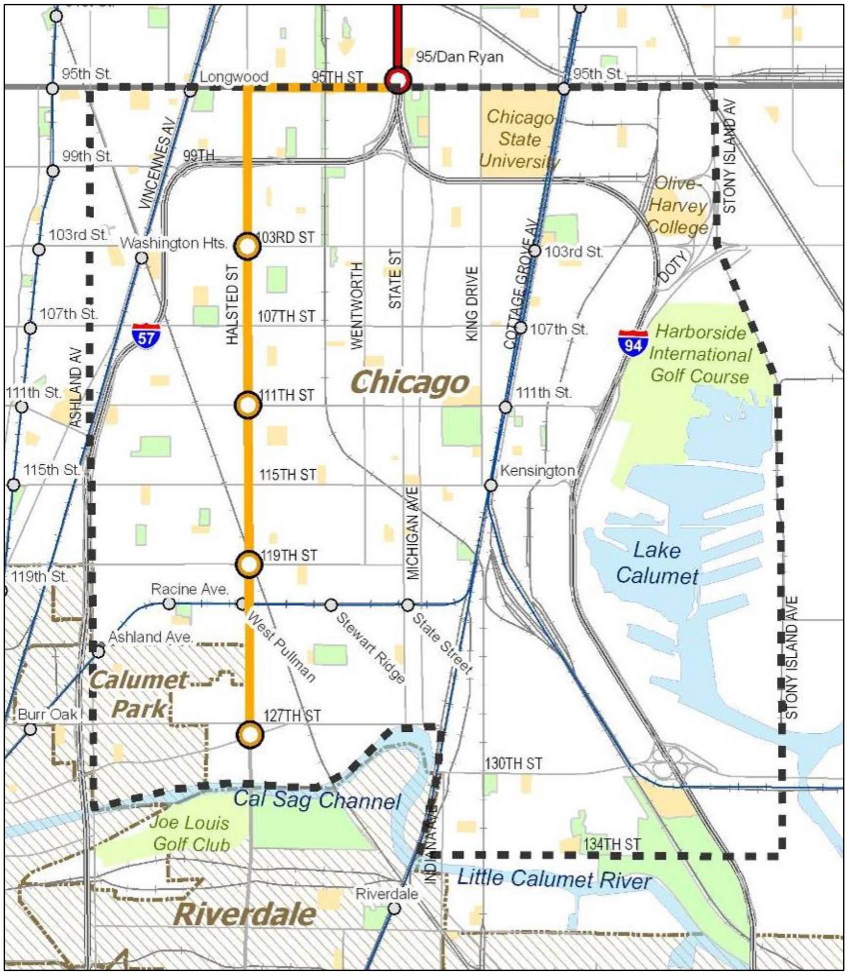
[7] ADT's from IDOT website. http://www.gettingaroundillinois.com/
Year of Count Data - 95th Street: 2007, Halsted Street: 2007.

Figure 5.2: TSM/BRT Halsted Street Alternative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West Pullman
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HRT Halsted Street Elevated Alternative

An extension of heavy rail transit would operate on an elevated structure between the existing Red Line 95th Street Terminal station and Halsted Street/Vermont Avenue. The alignment would follow the median of I-57 Expressway until Halsted Street. It would then turn south at Halsted Street and continue in median to Vermont Avenue.

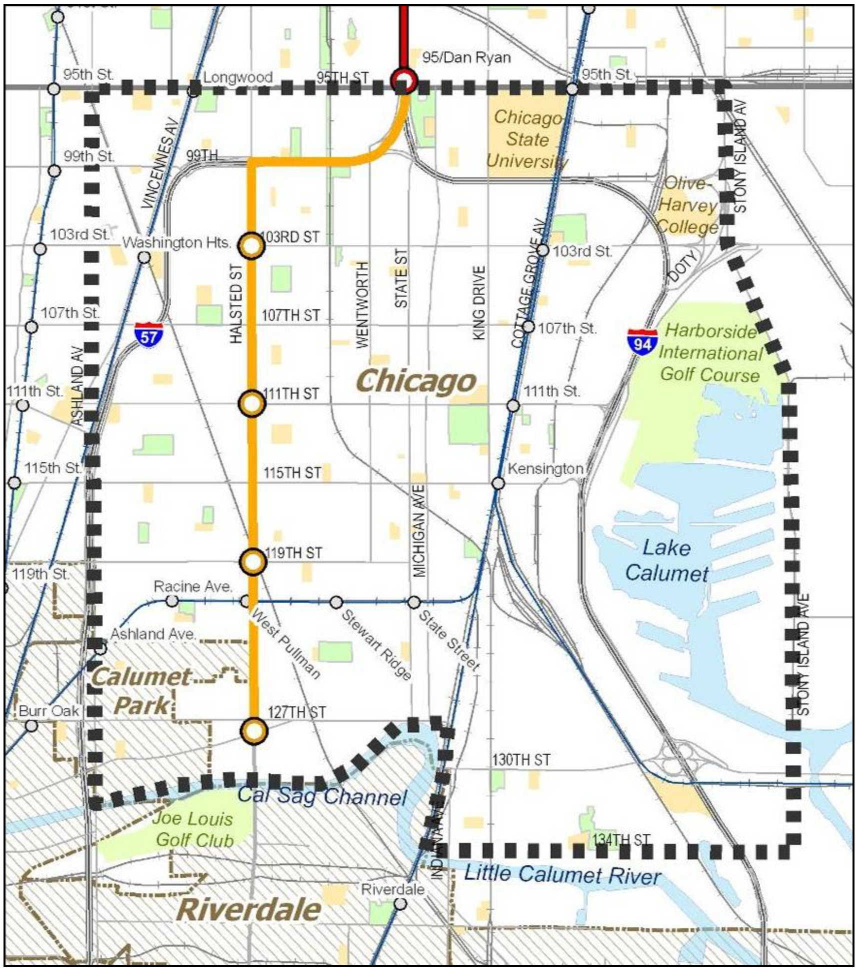
The HRT Halsted Street Alternative is shown in Figure 5.3, and includes the following characteristics:

The alignment considered for detailed evaluation is described as follows:

- The alternative is 5.0 miles long with four stations.
- Station locations are assumed at 103rd, 111th, 119th Streets and Vermont Avenue.
- The average travel time from Vermont Avenue to 95th Street is 16.25 minutes. This includes a 2.25 minute wait time at Vermont Avenue.

- Based on the estimated running time for the Halsted Street alignments, an additional 78 cars (including 14 spares) are required for the AM rush period.
- Park and ride facilities are recommended at intermediate and terminal stations with a total capacity of 1500 spaces in the year of construction.
- CTA has previously determined that the 98th Shop is in need of replacement and has made plans separate from this project to address those needs. For that reason, the replacement of 98th Shop and a new Red Line yard and shop is not considered to be part of the HRT Halsted alternative.

Figure 5.3: HRT Halsted Street Elevated Alternative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Little Calumet River
Riverdale
Riverdale

Michigan Avenue TSM/BRT Alternative

Based on discussions with FTA, the TSM/BRT Michigan Avenue alternate was introduced as a new alternative in Screen 3 for purpose of evaluation against the HRT UPRR Corridor Elevated Alternative. The proposed TSM Alternative is a 5.5 mile BRT alternative that operates between the 95th Street Station and 130th Street via East 95th Street, Michigan Avenue, East 127th Street, South Indiana Avenue and East 130th Street. 95th Street is 80 feet wide with four lanes, center turn lane, and no parking. Michigan Avenue averages 40 feet wide with two lanes and parking. 127th Street and Indiana Avenue are 40 feet wide with four lanes and no parking. 130th Street is 60 feet wide with four lanes, a center turn lane and no parking. On 95th Street, ADT is currently 23,800, ADT on Michigan Avenue between 95th Street and 127th ranges between 10,700 (at 107th Street) and 7,100 (at 127th Street), on 127th and Indiana Avenue Street 21,100, and 130th Street, ADT is 19,600. [8]

Previously in Screen 2, both HRT and BRT alternatives for the Michigan Avenue Corridor were eliminated due to physical constraints and potential displacements from the need for additional right-of-way along Michigan Avenue to accommodate the separate guideway/roadway for HRT and BRT. This TSM/BRT Michigan Avenue alternative would consist of enhanced bus service operating in existing street right-of-way. This new TSM/BRT Alternative thus introduced a separate TSM/BRT Alternative that was used for detailed evaluation in comparison to the locally preferred alternative (LPA).

The TSM/BRT Alternative would include the provisions of the No Build Alternative and add a limited-stop enhanced bus route, #X34, along the existing #34 South Michigan Avenue bus route to 130th Street and I-94 Bishop Ford Freeway. The TSM/BRT Alternative is shown in Figure 5.4, and includes the following characteristics:

- The alternative is 5.5 miles long with four stations.
- Stations are located at 103rd, 111th, 115th and 130th Streets.
- The average travel time from 130th Street to 95th Street is 25.25 minutes. This includes a 2.25 minute wait time at 130th Street.
- Preliminary schedules indicate that ten 60-foot articulated buses (including two spares) would be required.
- Traffic signal priority would be implemented along 95th Street, Michigan Avenue and 130th Street (similar to the previous TSM and BRT alternatives).
- 95th Street terminal would be expanded to extend the existing bus bays along State and Lafayette Streets approximately 250-feet north to 94th Street to improve circulation and safety.
- Park and ride facilities are recommended at intermediate and terminal stations with a total capacity of 700 spaces in the year of construction.

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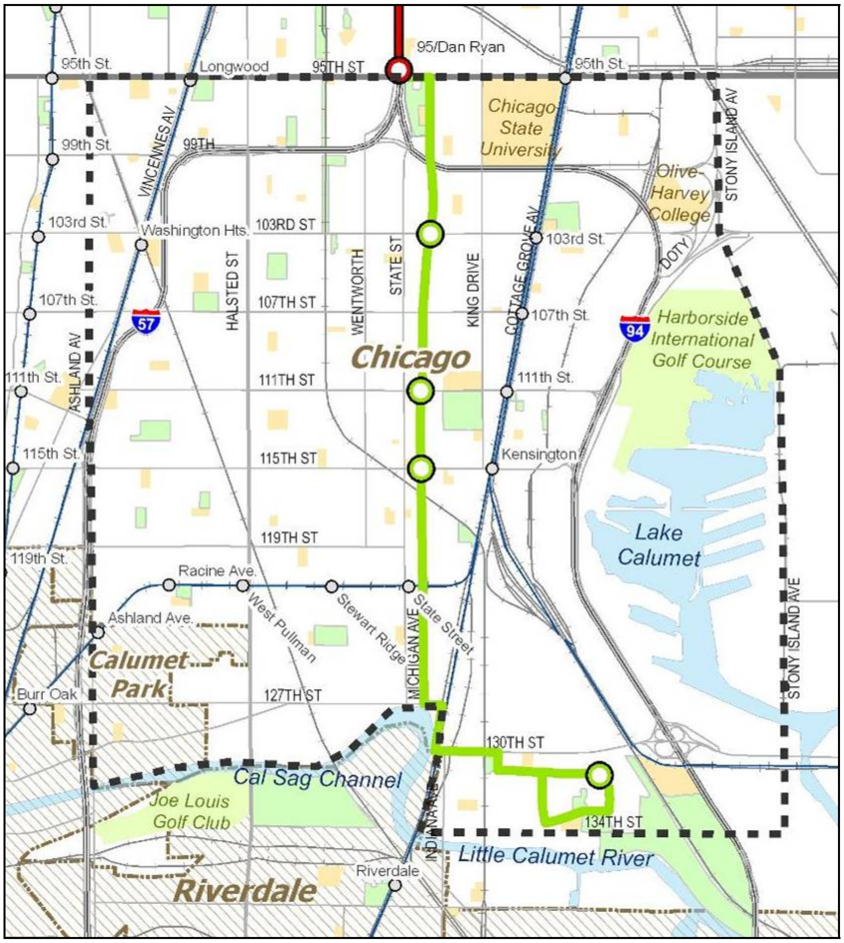
[8] ADT's from IDOT website. http://www.gettingaroundillinois.com/
Year of Count Data - 95th Street: 2007, Michigan Avenue: 2006, 127th Street: 2006, Indiana Avenue: 2006, and 130th Street is 2006.

Figure 5.4: TSM/BRT Michigan Avenue Alternative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HRT Union Pacific Railroad (UPRR) Elevated Alternative

CTA was aware of concerns about shared-use transit and freight railroad corridors as a result of shared use corridor incidents that have occurred in other parts of the country. Conceptual designs and cost estimates for that portion of the Red Line extension that would be on shared-use ROW include additional safety provisions (25 foot separation, elevated grade separation, intrusion fencing with alarms to both the CTA and UPRR control centers, as well as a crash wall between the UPRR tracks and the CTA structure) in an effort to address what was understood to be concerns as directly as possible.

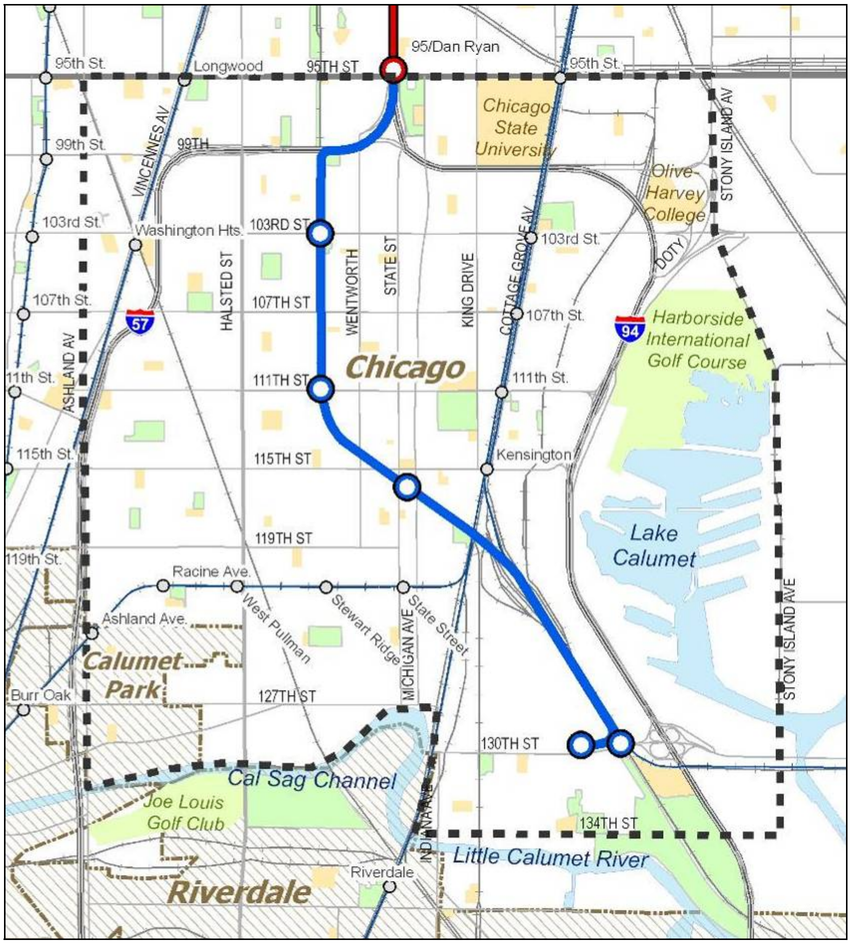
During Screen 3, a meeting was held with CTA, CDOT and UPRR representatives to discuss the potential Red Line Extension and the UPRR freight railroad shared use corridor. At this meeting, the UPRR indicated that they required a 50 foot separation distance between their tracks and a transit line. This separation distance was based on research investigations as to how best to ensure safety and protect the operations and physical plant of the UPRR. In addition, the UPRR desires to maintain its current ROW footprint in order to allow for future expansion. It would not be possible for the CTA structure to be located on the UPRR ROW and provide the required separation distance.

This led the CTA study team to examine options for locating the CTA rail line beyond the east and west limits of the UPRR ROW. As result, the HRT UPRR Alternative includes both an East and West alignment option for detailed evaluation in Screen 3.

The HRT UPRR Alternative is shown in Figure 5.5, and includes the following characteristics:

- The alternative is 5.3 to 5.6 miles long depending on terminal location and includes four stations.
- Station are located at 103rd, 111th, 115th and 130th Streets.
- The average travel time from 130th Street to 95th Street is 16.25 minutes. This includes a 2.25 minute wait time at 130th Street.
- Based on the estimated running time for the UPRR alignments, an additional 78 cars (including 14 spares) are assumed for the AM rush period.
- Park and ride facilities are recommended at intermediate and terminal stations with a total capacity of 1,500 spaces in the year of construction.

Figure 5.5: HRT UPRR Elevated Alternatives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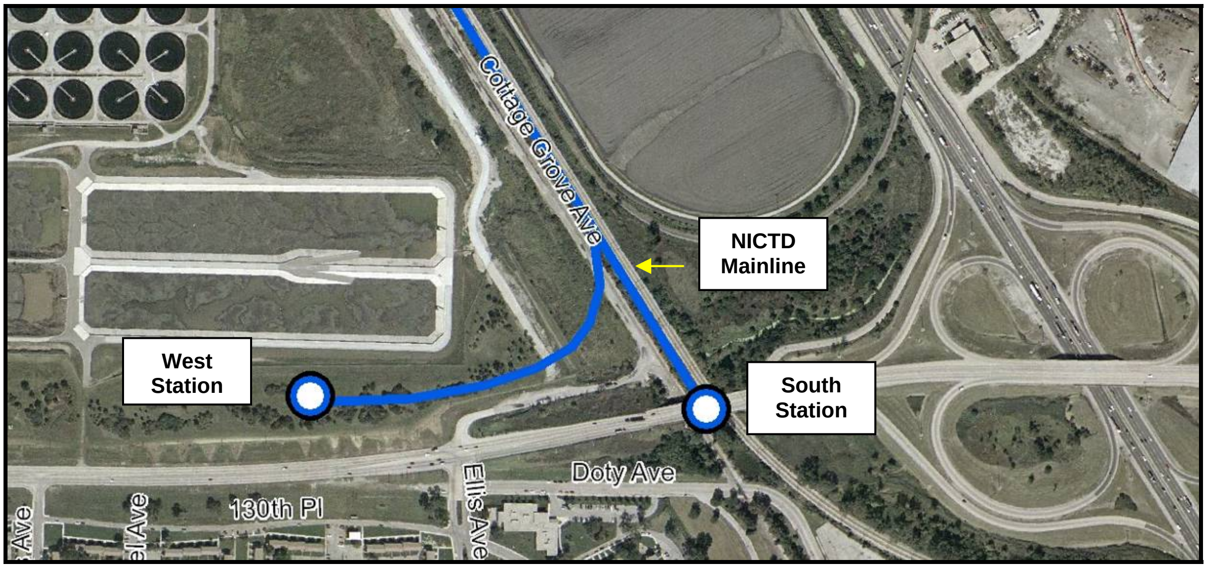
A new Red Line yard and shop facility with a 276-car capacity, would be located on a combination of industrial/vacant land to the east of the CN/MED tracks and west of the IHB and NICTD tracks at approximately 120th and Cottage Grove. The CTA has previously determined that the 98th Yard and Shop is in need of replacement and has made plans separate from this project to address those needs. For that reason, the replacement of 98th Yard and Shop and a new Red Line yard and shop is not considered to be part of the HRT UPRR alternative.

Two 130th Street terminal station locations, a south and a west option, are proposed. They are differentiated primarily in environmental factors and capital cost at this stage of the analysis. The south and west terminal station options are shown in Figure 5.6.

- *UPRR ROW to 130th- South Station Option.* The alignment terminates along the former IHB railroad right-of-way immediately north of 130th Street. The station platform would extend underneath the existing 130th Street /IHB Bridge to provide access to the Altgeld Gardens development on the south side of 130th Street. Line length is 5.3 miles long.
- *UPRR ROW to 130th- West Station Option.* For this variation, around 128th Street the double track HRT line swings off the former Michigan Central/Indiana Harbor Belt ROW to the west, running along the north side of 130th Street. The location is parallel to 130th street and provides access to the residential areas and the Altgeld Gardens development on the south side of 130th Street. Line length is 0.3 miles longer than the previous alternative, for an overall length of 5.6 miles.

Figure 5.6: HRT UPRR South and West Station Options



5.2 Screen 3 Evaluation

A summary Screen 3 evaluation matrix was developed. The evaluation factors used to assess the performance of the alternatives included:

- Physical Constraints
- Public Support
- Social/Economic Factors

- Environmental Factors
- Transportation Factors
- Capital Cost Comparison
- Operating and Maintenance (O&M) Cost Comparison
- Ridership Potential
- FTA Cost Effectiveness Index (CEI)

The Screen 3 analysis resulted in a preliminary recommendation for the HRT UPRR Alternative as the Locally Preferred Alternative, and is shown in Table 5.1.

Table 5.1: Screen 3 Evaluation Summary and LPA Recommendation

Screening Criteria	No-Build	TSM/BRT		HRT	
		Halsted	Michigan	Halsted	UPRR West and East Option
		At-Grade	At-Grade	Elevated	Elevated
Physical Constraints	NA	○	○	○	−
Public Support	NA	○	○	○	+
Social and Economic	NA	○	○	○	○
Environmental	NA	○	○	○	○
Transportation	−	−	−	+	+
Capital Cost	+	+	+	○	○
Operating Cost	+	+	+	○	○
Ridership	−	○	○	+	+
Cost Effectiveness Index	NA	−	−	○	○
Summary Rating	**0**	**+1**	**+1**	**+2**	**+2**
LPA Recommendation	No	No	No	**Yes**	**Yes***

Key: + Better than other alternatives; ○ Same as other alternatives; − Worse than other alternatives
* Subject to cost-effectiveness requirements

Specific issues that led to the recommendation or elimination of each alternative in Screen 3 are summarized below.

TSM/BRT Halsted Street and Michigan Avenue At-Grade

- Expansion of the 95th Street terminal to extend the existing bus bays along State and Lafayette Streets approximately 250-feet north to 94th Street to improve circulation and safety both TSM/BRT alternatives.

- Halsted Street can accommodate additional buses without modification to the right of way or traffic lanes.
- Michigan Avenue can accommodate additional buses without modification to the right of way or traffic lanes. However, the corridor has two vehicle lanes with parking and would require removal of parking lanes for some portions of the alignment.

Halsted Street Elevated

- Right-of-way is sufficiently wide to accommodate both construction and operation of a HRT system with the median of the roadway, though impacts to businesses and streetscape would occur along the corridor during construction and subsequent operation. The commercial character of the corridor and its location adjacent to residential neighborhoods is transit supportive.

UPRR Elevated

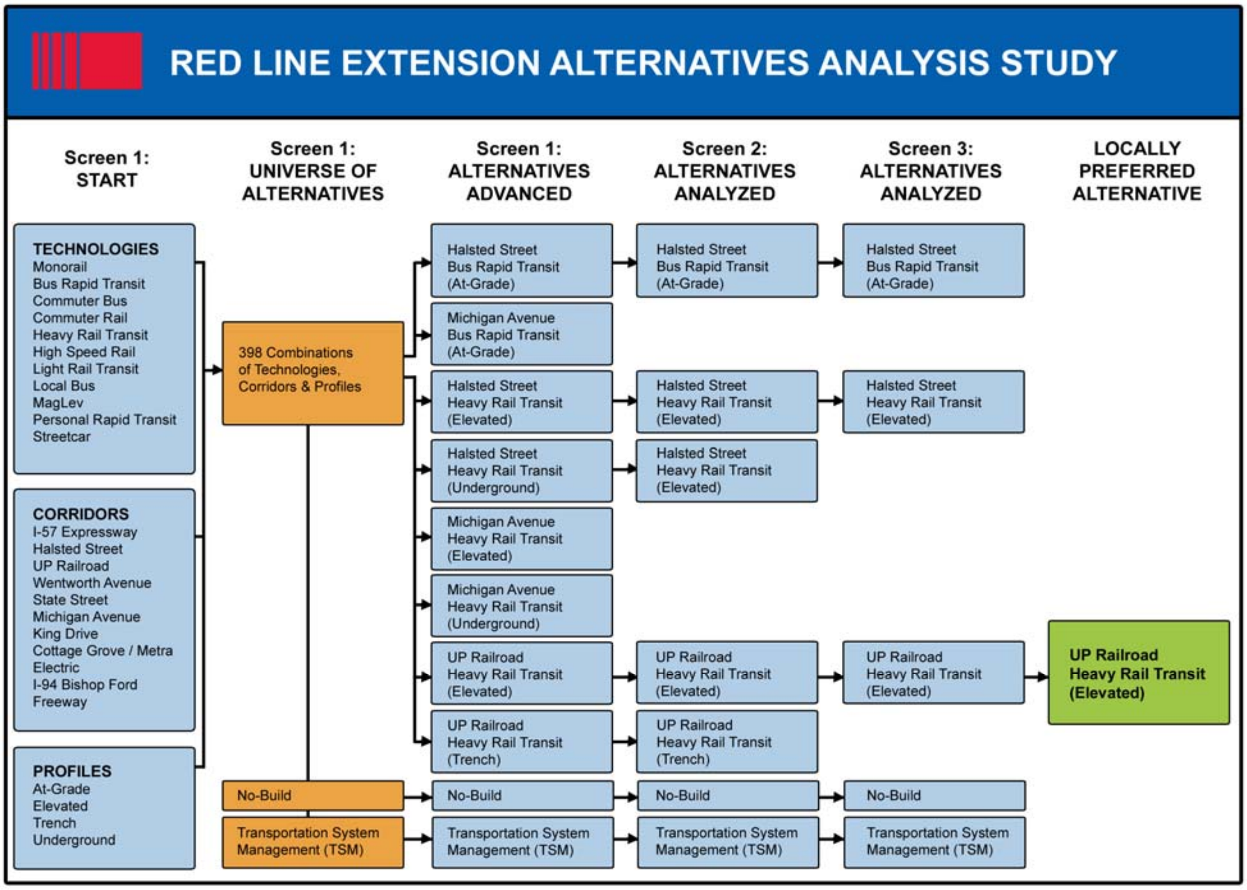
- Public support for the HRT UPRR alternative rated highly in the evaluation due the high number of public comments received for this alternative throughout Screens 1, 2 and 3. 451 public comments were received in Screens 1, 2 and 3 – 140 of those expressed a preference for a particular alternative. 85 (60.7%) of these comments were in favor of the UPRR Rail alternative and 7 (5%) were in favor of the Halsted Rail alternative. 29 (20.7%) Comments showed general support of an extension of the Red Line, and 19 (13.6%) comments specifically support extending the line to 130th Street with no particular alternative mentioned.
- In June 2009, a petition was submitted to CTA including 512 signatures supporting the CTA's locally preferred route to extend the Red Line Rail Line from the 95th Street Station to 130th Street, using the Union Pacific Rail Road (UPRR) corridor.
- In November 2004, over 38,000 residents in the 9th and 34th wards supported a public referendum for the Red Line Extension along the UPRR Corridor. A total of 38,142 'Yes' votes (93%) and 2,993 'No' votes were cast.
- The HRT UPRR alternative scores well on most criteria but scores a negative on physical constraints. Due to recent accidents, the transportation industry is adopting greater separation between freight railroad and transit operations to increase safety. Based on discussions with the UPRR, a 50-feet separation distance is desired from the UP freight railroad tracks. Extension of the Red Line immediately adjacent to west or east of the UPRR ROW will result in adjacent property acquisition.

Screen 3 concluded with public involvement including meetings with elected officials and other stakeholder groups as well as two public meetings in June 2009.

5.3 Screening Summary

Figure 5.7 presents a summary of the three screenings, beginning with the Universe of Alternatives, followed by Screens 1, 2, and 3, and the LPA recommendation for the elevated HRT adjacent to the UPRR to 130th Street.

Figure 5.7: Red Line Extension AA Screening Summary


RED LINE EXTENSION ALTERNATIVES ANALYSIS STUDY
Screen 1: START
Screen 1: UNIVERSE OF ALTERNATIVES
Screen 1: ALTERNATIVES ADVANCED
Screen 2: ALTERNATIVES ANALYZED
Screen 3: ALTERNATIVES ANALYZED
LOCALLY PREFERRED ALTERNATIVE
TECHNOLOGIES
Monorail
Bus Rapid Transit
Commuter Bus
Commuter Rail
Heavy Rail Transit
High Speed Rail
Light Rail Transit
Local Bus
MagLev
Personal Rapid Transit
Streetcar
CORRIDORS
I-57 Expressway
Halsted Street
UP Railroad
Wentworth Avenue
State Street
Michigan Avenue
King Drive
Cottage Grove / Metra Electric
I-94 Bishop Ford Freeway
PROFILES
At-Grade
Elevated
Trench
Underground
398 Combinations of Technologies, Corridors & Profiles
No-Build
Transportation System Management (TSM)
Halsted Street Bus Rapid Transit (At-Grade)
Michigan Avenue Bus Rapid Transit (At-Grade)
Halsted Street Heavy Rail Transit (Elevated)
Halsted Street Heavy Rail Transit (Underground)
Michigan Avenue Heavy Rail Transit (Elevated)
Michigan Avenue Heavy Rail Transit (Underground)
UP Railroad Heavy Rail Transit (Elevated)
UP Railroad Heavy Rail Transit (Trench)
No-Build
Transportation System Management (TSM)
Halsted Street Bus Rapid Transit (At-Grade)
Halsted Street Heavy Rail Transit (Elevated)
Halsted Street Heavy Rail Transit (Elevated)
UP Railroad Heavy Rail Transit (Elevated)
UP Railroad Heavy Rail Transit (Trench)
No-Build
Transportation System Management (TSM)
Halsted Street Bus Rapid Transit (At-Grade)
Halsted Street Heavy Rail Transit (Elevated)
UP Railroad Heavy Rail Transit (Elevated)
No-Build
Transportation System Management (TSM)
UP Railroad Heavy Rail Transit (Elevated)

6.0 LOCALLY PREFERRED ALTERNATIVE

6.1 Selection of a Locally Preferred Alternative

On August 12, 2009, the Chicago Transit Board approved an elevated HRT extension adjacent to the UPRR to 130th Street as the LPA. This recommendation was based on the technical work described in previous sections of this report, and based on public, stakeholder, and agency input. This section further describes the LPA (and No Build and TSM alternatives, which must be carried forward) and evaluates the extent to which the LPA addresses the goals and objectives for the project compared to No Build and TSM/BRT alternatives.

6.2 Description of Service Plan

Significant characteristics of the proposed service plan for each of the No Build, TSM/BRT and LPA are summarized below.

6.2.1 Alternative Descriptions

No Build Alternative

The No-Build Alternative is defined as the existing transportation system, plus any committed transportation improvements. Committed transportation improvements include projects that are already in the Chicago Metropolitan Agency for Planning (CMAP) financially constrained Transportation Improvement Program. Bus transit service under the No Build Alternative would be focused on the preservation of existing services and projects. In the 2030 design year, the transit network within the project area would largely be the same as it is now with similar service frequencies.

The No-Build Alternative also establishes the baseline for comparison of the cost-effectiveness of the TSM/BRT and HRT UPPR alternative. All elements of the No-Build alternative are included in each of the other alternatives except where an alternative replaces services or facilities inside the study area.

TSM/BRT (Michigan Avenue to 130th Street)

The TSM/BRT Alternative is a 5.5 mile BRT alternative that operates along the existing #34 South Michigan bus route from the Red Line 95th Street terminal station to 130th Street and the I-94 Bishop Ford Freeway near Altgeld Gardens. This alternative will require a net increase of eight buses plus two spares.

Three types of service modifications have been identified for the TSM/BRT Alternative to provide the best address the project Purpose and Need in Section 1 without constructing a new fixed guideway.

- The first includes frequency adjustments during peak periods to better serve anticipated demand. The TSM/BRT alternative proposes a four minute frequency between 6:00 a.m. and 8:00 p.m. on weekdays and a 12 minute frequency on the existing route 34.
- The second modification would implement BRT operational characteristics short of a dedicated lane to improve accessibility and running times. BRT characteristics include transit signal priority, improved bus shelters and park and ride facilities at the 103rd, 111th, 115th and 130th Street stations.

- The third modification would be expansion of the 95th Street terminal to extend the existing bus bays along State and Lafayette Streets approximately 250-feet north to 94th Street to improve circulation and safety.

LPA (elevated HRT adjacent to UPRR to 130th Street)

The Red Line Extension would operate on an elevated structure. The alignment would follow the I-57 Expressway until the UPRR corridor. It would then turn south along the corridor to approximately 111th Street where it would turn southeast to terminate at roughly 130th Street west of the I-94 Bishop Ford Freeway. Stations would be located at 103rd, 111th, 115th and 130th Streets. Park-and-ride facilities are assumed at each station.

The LPA is anticipated to operate train sets consisting of four or eight cars. The maximum scheduled capacity of each car is 90 passengers, which provides a maximum capacity of 360 passengers for a 4-car train, and a maximum capacity of 720 passengers for an 8-car train. The current Red Line vehicle requirements during the AM peak period is 304 cars. Based on the estimated running time for the LPA to 130th Street, an additional 78 cars will be required in the AM rush period. This estimate includes 64 cars required for the schedule, plus 14 spares.

The proposed span of service for the LPA is the same as the current Red Line, which operates 24 hours every day of the year. The LPA service frequency is expected to be the same as current service, which is approximately five minutes in the northbound direction and four minutes southbound during the AM peak period.

Table 6.1: LPA and Existing Northbound Red Line Weekday Service Characteristics

Service Period	Hours	Time Period	Average NB Frequency (minutes)	Train Length	Vehicles Required
Weekday					
Early Morning	3.0	03:00 - 06:00	13	8	
AM Peak	3.0	06:00 - 09:00	5	8	304
Base	6.0	09:00 - 15:00	7	8	184
PM Peak	3.0	15:00 - 18:00	5	8	304
Evening	4.0	18:00 - 22:00	7.5	4	
Late Evening/Owl	5.0	22:00 - 03:00	15	4	48
Weekday Total Hours	24.0				

6.2.2 Running Time

Table 6.2 shows the northbound running times for the existing Red Line and the No Build, TSM/BRT, and LPA. The existing Red Line northbound running time between the 95th Street station and the downtown Jackson Station is 25 minutes in the AM rush period.[9] To travel between 130th Street and Jackson Boulevard requires 57.0 minutes in the AM peak period for the No Build and 52.0 minutes for the TSM/BRT. The LPA is projected to have most significant time savings with a running time of 39.0 minutes from 130th to Jackson.

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[9] Source: CMAP New Starts model

Table 6.2: Estimated Northbound Running Times

Route Segment	Running Time (minutes)			
	Current Red Line	No Build	TSM/BRT	LPA
95th to Jackson	25.0			
95th to Clark/Division	32.5			
95th to Howard	61.5			
130th to 95th		28.00	23.0	14.0
130th to Jackson		57.0	52.0	39.0
130th to Clark/Division		64.5	59.5	46.5
130th to Howard		93.5	88.5	75.5

5.2.3 Proposed Bus Route Changes

The bus route changes outlined below are proposed service plans designed to speed passenger travel to downtown Chicago.

LPA Proposed Bus Service Changes

- CTA route #9 Ashland currently terminates peak period trips at 104th/Vincennes. These trips are proposed to terminate at 103rd Station on the new UPRR alignment.
- The current south terminal for CTA route #34 South Michigan is 131st/Ellis. It is proposed that route #34 continue to the new terminal at 130th/I94, operating via 130th Street, Eberhart, 131st, Langley, 133rd Place, Ellis and 130th Street.
- It is proposed that CTA routes #103 West 103rd and #106 East 103rd be combined into one route operating between a west terminal at Pulaski and an east terminal at Stony Island. This will reduce the number of bus routes terminating at 95th while still providing access to the Red Line at 103rd Station.
- To further reduce the number of bus routes terminating at 95th Station, it is recommended that CTA route #108 Halsted/95th be eliminated. The need for express bus service in this corridor is reduced with the implementation of new rail service.
- Routes #112 Vincennes/111th and #111 Pullman/111th/115th are recommended for restructuring to simplify the route paths and better serve the new alignment. Route #111 would operate on 111th between 111th/Pulaski and 111th/Corliss, serving the new 111th Station. A new route #115 would operate as a two-directional loop on 115th, Cottage Grove, 95th Street and Vincennes. Route #112 is recommended for elimination under this proposal.
- Route #119 Michigan/119th is proposed to terminate at 115th/Michigan Station.
- The south terminal of Route #348 is proposed to terminate at 130th/I94, extending the route from the current turnaround at 136th/Indiana. In addition, CTA route #30 South Chicago will terminate at the new terminal at 130th/I94, moving from its current terminal at 130th/Exchange.
- For directness, route #352 Halsted is proposed to terminate at 111th Station instead of 95th. The north terminal of route #359 Robbins/South Kedzie is proposed as 115th Station instead of 95th. Terminating route #353 south of 95th will remove bus service from King Drive between 111th Street and 95th Street. For this reason no changes are proposed for route #353.

TSM/BRT Proposed Bus Service Changes

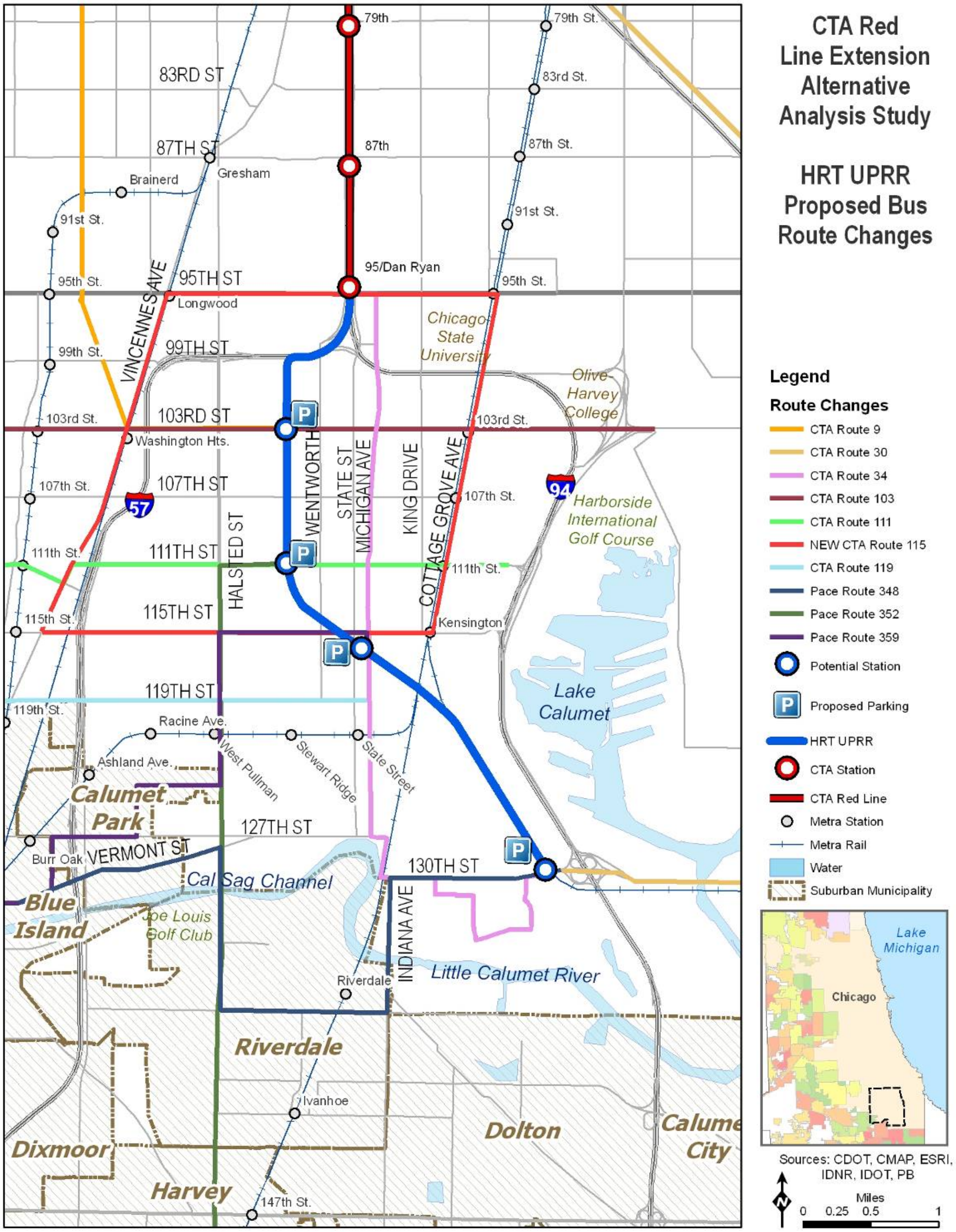
- Bus service changes associated with the TSM/BRT Alternative to 130th Street include a new enhanced bus route along Michigan Avenue. The proposed X34 enhanced bus route would operate along the current 34 South Michigan route and extend to 130th Street to serve Altgeld Gardens on a 4 minute peak headway. The headway for route 34 would be reduced to 12 minutes due to the addition of the enhanced bus X34. There are no other bus routes proposed to be changed for the TSM/BRT Alternative.

Table 6.3 lists the bus routes that currently operate within the study area. Changes to current bus operations on individual routes are proposed for each of the alternatives. The proposed bus route changes for the LPA and TSM/BRT are shown in Figures 6.1.

Table 6.3: Proposed Bus Routes Changes

Bus Route	LPA	TSM/BRT
8A	None	None
9	Terminate 104th/ Vincennes trips at 103rd	None
30	Terminate at 130th	None
34	Terminate SB at 130th	New X34
103	Combine with #106	None
106	Combine with #103	None
108	Eliminate	None
111	Serve 111th between 111th/Pulaski & 111th/Corliss.	None
115	New bi-directional loop route via 115th, Cottage Grove, 95th St & Vincennes	No new route
112	Eliminate	None
119	Terminate at 115th/Michigan	None
348	Terminate SB at 130th	None
352	Terminate at 111th	None
353	None	None
359	Terminate at 115th	None

Figure 6.1: LPA with Proposed Bus Route Changes


CTA Red Line Extension Alternative Analysis Study
HRT UPRR Proposed Bus Route Changes
Legend
Route Changes
CTA Route 9
CTA Route 30
CTA Route 34
CTA Route 103
CTA Route 111
NEW CTA Route 115
CTA Route 119
Pace Route 348
Pace Route 352
Pace Route 359
Potential Station
Proposed Parking
HRT UPRR
CTA Station
CTA Red Line
Metra Station
Metra Rail
Water
Suburban Municipality
Lake Michigan
Chicago
Sources: CDOT, CMAP, ESRI, IDNR, IDOT, PB
Miles
0 0.25 0.5 1
79th
79th St.
83RD ST
83rd St.
87TH ST
87th
87th St.
Gresham
Brainerd
91st St.
91st St.
95th St.
95TH ST
95/Dan Ryan
95th St.
Longwood
VINCENNES AVE
Chicago State University
99th St.
99TH ST
Olive-Harvey College
103rd St.
103RD ST
103rd St.
Washington Hts.
107th St.
107TH ST
57
94
107th St.
Harborside International Golf Course
111th St.
111TH ST
HALSTED ST
WENTWORTH
STATE ST
MICHIGAN AVE
KING DRIVE
COTTAGE GROVE AVE
111th St.
115th St.
115TH ST
Kensington
119TH ST
119th St.
Lake Calumet
Racine Ave.
Ashland Ave.
West Pullman
Stewart Ridge
State Street
Calumet Park
127TH ST
Burr Oak
VERMONT ST
130TH ST
Cal Sag Channel
Blue Island
Joe Louis Golf Club
INDIANA AVE
Little Calumet River
Riverdale
Riverdale
Ivanhoe
Dolton
Calumet City
Dixmoor
Harvey
147th St.

6.3 LPA Transportation Characteristics

The following transportation characteristics of the No Build, TSM/BRT and LPA are described below and include:

- Travel Time
- Access to Jobs
- Reliability and Safety
- Local Roads
- 95th Street Station Bus Capacity and Delay

6.3.1 Travel Time

Overall travel time has been calculated for the LPA, TSM/BRT, and No Build alternatives, as shown in Table 6.4. These travel time estimates include wait time, run time (in-vehicle), and walk time.

Table 6.4: Estimated Travel Times from 130th Street to Jackson Blvd.

Travel Time Elements	Time in Minutes		
	No Build	TSM/BRT	LPA
Wait time at 130th Station	3.50	2.25	2.25
Run time 130th to 95th Stations	28.00	23.00	14.00
Walk time: curb to platform	3.00	3.00	0.0
Wait time at 95th Station	2.25	2.25	0.0
Rail run time 95th to Jackson Station	25.00	25.00	25.00
Total Travel Time	61.75	55.50	41.25

As shown in Table 6.4, the travel time for the No Build Alternative is 62 minutes from 130th Street to the downtown Jackson station. This represents the existing travel time using route #34 South Michigan to 95th Street with a transfer to Red Line. Travel times for the TSM/BRT Alternative are expected to improve by five minutes or 56 minutes, but would still require a transfer to the Red Line. Overall, the LPA provides the fastest travel time at 41 minutes. Trips to Jackson would be improved by 21 and 14 minutes over the No Build and TSM/BRT, respectively.

6.3.2 Access to Jobs

The LPA would provide increased access to jobs within Chicago and 40 adjacent suburbs using the CTA transit system. Park-and-ride facilities for automobile access would be located at 103rd, 111th, 115th and 130th Streets for the TSM/BRT and LPA. The 130th Street park-and-ride facility would be near the I-94 Bishop Ford Freeway/130th Street interchange. This location is expected to draw a significant number of automobile commuters from the southern suburbs and northwest Indiana who would want to avoid congestion and travel delays further north along the Dan Ryan Expressway. Table 6.5 shows the estimated number of parking spaces for the LPA and TSM/BRT alternative for a 2015 year of construction (YOC) and 2030 forecast.

Table 6.5: Parking Spaces for 2015 and 2030

Location	TSM/BRT		LPA	
	2015	2030	2015	2030
103rd Street	100	200	200	200
111th Street	100	200	200	200
115th Street	100	1000	200	1000
130th Street	400	1400	900	2300
Total	**700**	**2800**	**1500**	**3700**

Table 6.6 shows the approximate number of transfers required for a transit trip from various origin areas in the study area to two major regional job centers: downtown Chicago and the O'Hare Airport / Rosemont area. The trips are considered during peak hour with a possible Blue Line and/or bus connection for O'Hare / Rosemont area trips. Overall, The LPA requires fewer transfers compared to No Build and TSM/BRT alternatives for these trips. Roseland Community Hospital (111th Street), Michigan commercial and retail corridor (115th Street and Michigan Avenue) and Altgeld Gardens (130th Street) would have walk to transit access to the stops/stations for the TSM/BRT and LPA. Compared to the LPA, the No Build and TSM/BRT would require a transfer from bus to rail at 95th Street to reach the Chicago Loop and additional 1-2 transfers to reach the O'Hare / Rosemont employment area.

Table 6.6: Number of Transfers between Select Origin-Destination Pairs

Number of Transfers Required	No Build	Michigan TSM/BRT	LPA HRT UPRR
Chicago Loop			
Altgeld Gardens	1	1	0
Pullman Library	1	1	1
Halsted Commercial / Retail	1	1	1
Michigan Commercial / Retail	1	1	0
Roseland Community Hospital	1	1	0
Chicago State University	1	1	1
Olive-Harvey College	1	1	1
Rosemont / O'Hare Area Employment			
Altgeld Gardens	2 - 3	2 - 3	1 - 2
Pullman Library	2 - 3	2 - 3	2 - 3
Halsted Commercial / Retail area	2 - 3	2 - 3	2 - 3
Michigan Commercial / Retail area	2 - 3	2 - 3	1 - 2
Roseland Community Hospital	2 - 3	2 - 3	1 - 2
Chicago State University	2 - 3	2 - 3	2 - 3
Olive-Harvey College	2 - 3	2 - 3	2 - 3

6.3.3 Reliability and Safety

Increased transportation reliability is evaluated by assessing impact of alternatives on operating reliability. The TSM/BRT alternative would utilize transit signal priority to improve overall travel time to 95th Street. However, the TSM/BRT alternative is expected to have a moderate operating reliability due to operation in mixed traffic along Michigan Avenue. The LPA would operate on an elevated guideway and achieve high operating reliability similar to existing Red Line service.

Table 6.7: Reliability and Safety

Criteria	No Build	TSM/BRT	LPA
Operating Reliability	N/A	Moderate	High
Potential Impact on Emergency Vehicle Incident Response Capability	N/A	Moderate/Low	Low
Enhance safety and security	N/A	Moderate	Moderate

In regards to safety, improving incident response was examined by evaluating the potential impact on emergency vehicle response capabilities. The TSM/BRT alternative could potentially have low to moderate impacts on emergency response vehicles due to signal priority conflicts which would ultimately go to emergency vehicles. TSM/BRT would operate in mixed traffic and would contribute to the normal traffic delay experienced during incident response. The LPA would be grade-separated and would not impact the ability of emergency vehicles to operate.

The LPA and TSM/BRT can incorporate design elements that enhance safety and security in preliminary engineering and final design. A wide range of safety measures will be identified, evaluated, and used in combination. These include vehicle measures (on-board closed-circuit television cameras, on-board audio and visual message communications to passengers, and emergency alarm systems), and station design (maximizing unobstructed sightlines in and surrounding stations, positioning of customer service booth for maximum presence and visibility in station, closed-circuit television cameras, public address systems, sufficient lighting, and emergency alarm systems). Traffic safety was measured using the criteria of the number potential conflict points with vehicles, pedestrians and bicycles. TSM/BRT alternative has the most number of conflict points with general traffic. Alternately, the LPA, due to the grade separation, has no conflict points with general traffic, but there are potential pedestrian conflicts with the freight railroad line for customers accessing the proposed 103rd and 111th Street stations. Mitigation measures, including pedestrian bridges, will be analyzed during Preliminary Engineering and preparation of an EIS.

6.3.4 Ridership

Ridership estimates for the year 2030 were developed using computerized travel forecasting models. The LPA exhibits strong ridership potential, while the TSM/BRT alternative is expected to only have a slight increase over the No Build alternative. By 2030, the LPA is expected to carry 13 million riders per year. For the TSM/BRT alternative, approximately one million riders are projected. Table 6.8 shows estimated weekday ridership for each station in 2030.

Table 6.8: Estimated 2030 Average Weekday Station Boardings

Station	No Build	TSM/BRT	LPA
103rd Street	N/A	500	5,100
111th Street	N/A	800	4,800
115th Street	N/A	100	6,900
130th Street	N/A	400	4,400

For consistency with other proposed rail extensions, total project ridership includes customers entering and exiting new stations as well as the volume traveling south of 95th Street Station on the extension. Year 2030 total project ridership is estimated at 42,000 per weekday or 13 million riders per year.

6.3.5 Local Roads

The impact on local roads was evaluated based on the level of traffic impediments. The LPA is proposed with full grade separation via an aerial structure and thus has a low level of potential traffic impediments. The TSM/BRT alternative operates at-grade in mixed flow traffic and has a moderate level of local roadway impacts.

The TSM/BRT Alternative would utilize traffic signal priority (TSP) at signalized intersections along 95th Street, Michigan Avenue, and 130th Street to improve running times. TSP improvements can be implemented to avoid negatively impact traffic level of service. However, the TSM/BRT alternative may require removal on street parking along Michigan Avenue in order to reduce improve level of service if warranted.

The LPA is elevated from 95th Street to the MED/CN tracks near 119th Street. The alignment then continues at -grade through an industrial area with no public through streets. Existing service drives and MWRDGC access roads would be grade separated.

The potential exists for Union Pacific freight railroad trains to affect access to the LPA at the proposed 103rd Street and 111th Street stations. At these two stations areas, the Union Pacific Railroad is at-grade, so that passing freight railroad trains would interrupt access to these Red Line Extension stations. Opportunities for pedestrian bridges will be analyzed in subsequent project steps. At the 115th Street/Michigan Avenue station, the Union Pacific Railroad is grade separated, so that access to the Red Line Extension station can be maintained by using Michigan Avenue, which passes underneath the Union Pacific Railroad.

The LPA would also require a new bus turnaround at 115th/Michigan in order to terminate CTA route #119 Michigan/119th. If an off-street turnaround is provided, it will require approximately 20,000 square feet, depending upon design.

Table 6.9: Traffic Impediments

Criteria	No Build	TSM/BRT	LPA
Potential corridor impacts	N/A	Moderate	Low
103rd, 115th and 130th Station area impacts	N/A	Low	Low-Moderate
95th Street Station area impacts	High	High	Low
Potential Displaced On-Street Parking Spaces	N/A	Moderate	Low

6.3.6 95th Street Station Bus Capacity and Delay

The LPA is expected to significantly improve bus and passenger congestion at the 95th Street station. The No Build and TSM/BRT Alternatives are expected to result in increased passenger traffic at the 95th Street station in 2030. Table 6.9 shows the current and forecasted annual ridership at the 95th Street station for the No Build, TSM/BRT and LPA. Under the No Build ridership is expected to increase by 0.4 Million in 2030.

Table 6.10: Annual 95th Street Station Ridership (in millions)

Ridership	Current Red Line (2007)	No Build (2030)	TSM/BRT (2030)	LPA (2030)
95th Street Station	9.1	9.5	9.8	4.3

Currently, nineteen CTA and Pace bus routes utilize the 95th terminal. The LPA will result in the re-routing of 11 bus routes to new Red Line Extension intermediate stations and elimination of two routes, thus relieving congestion at the 95th Street station.

The TSM/BRT alternative would include in one additional bus route and expansion of the 95th Street station bus terminal to provide additional bus bays and circulation improvements. The capital cost for this improvement is estimated at $73 M.

6.4 LPA Environmental Characteristics

The environmental characteristics of the LPA are based upon currently available information. The Environmental Impact Statement (EIS) process will be conducted for the LPA, and will assess the environmental impacts in more detail. Applicable environmental requirements and communications between the regulatory and resources agencies and the local project sponsor will be part of the EIS process.

Environmental characteristics of the No Build, TSM/BRT, and the LPA examined include:

- Social Equity / Neighborhoods
- Land Use and Development
- Displacements
- Visual and Aesthetic
- Noise and Vibration
- Air Quality

- Water and Ecosystem Resources
- Hazardous Waste Sites
- Historic, Archaeological and Cultural
- Parklands

6.4.1 Social Equity / Neighborhoods

Transit Dependent Populations

The location of transit-dependent populations is a measure of the potential for an alternative to better serve a core transit market. The following series of maps illustrates characteristics associated with transit dependent populations including: age distribution, low income households, and the number of no-vehicles households in relationship to the LPA.

Figure 6.2 illustrates the concentration of residents over the age of 65 and Figure 6.3 shows under the age of 18. The young and elderly have reduced access to personal vehicles and rely more on public transit.

Figure 6.4 shows areas where low income households are found relative to proposed station locations. Lower income households are more likely to rely on public transportation as a primary mode of transportation. See also Table 6.11.

Table 6.11: Poverty Status and Zero-Car Households within ½-Mile Station Areas

Criteria	No Build	TSM/BRT	LPA
2000 Poverty-Status Population	N/A	9,696	8,473
2000 Zero Car Households	N/A	2,991	2,336

Table 6.11 and Figure 6.5 provide data on households that report not owning a vehicle. These households are more likely to rely on public transportation as their primary mode of travel.

In general, the LPA serves the transit dependent populations in the study area, especially in the Roseland, southeast Washington Heights, and northeast West Pullman community areas and the Altgeld Gardens area.

Figure 6.2: 2000 Age Distribution Over 65

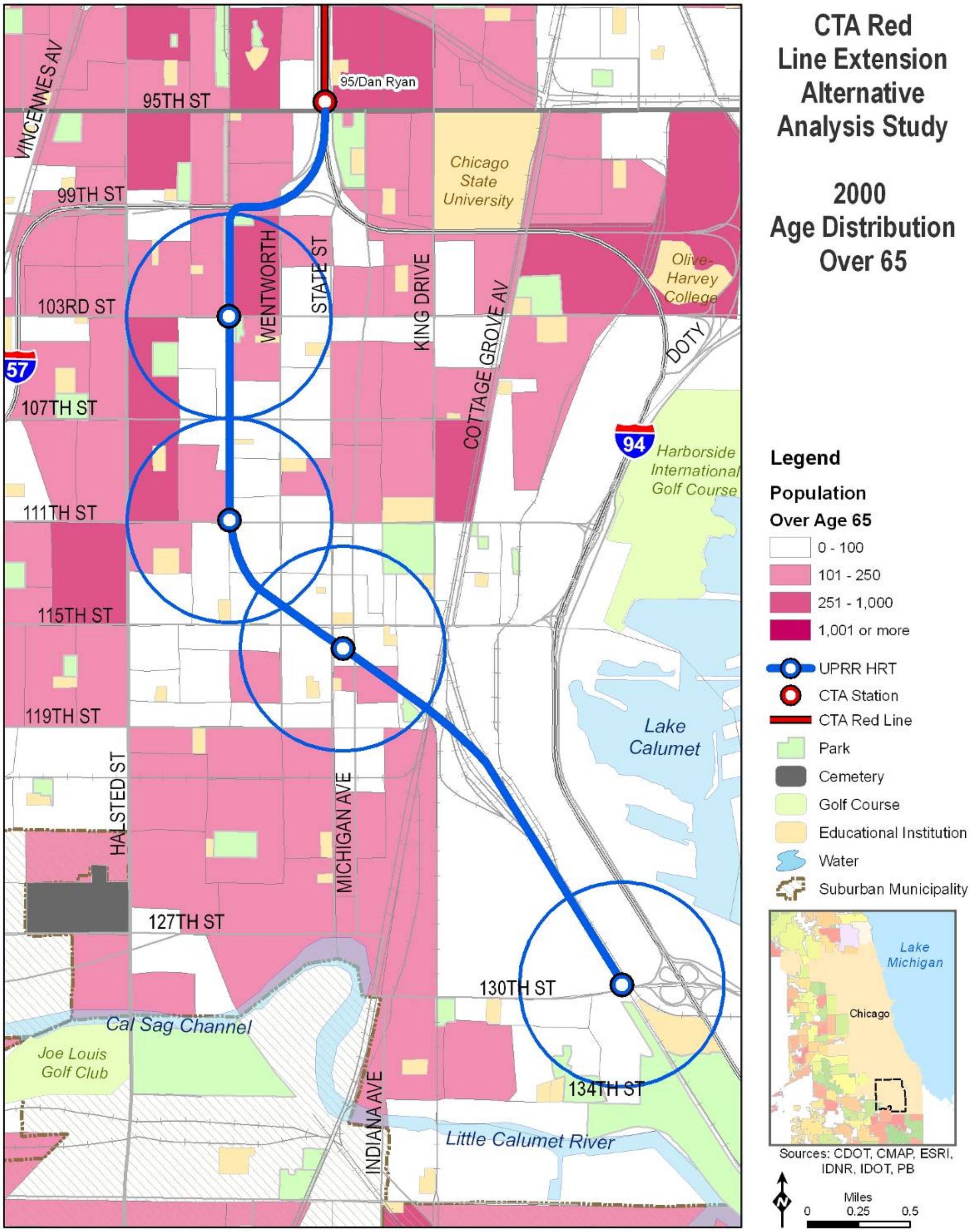

CTA Red Line Extension Alternative Analysis Study
2000 Age Distribution Over 65
Legend
Population Over Age 65
0 - 100
101 - 250
251 - 1,000
1,001 or more
UPRR HRT
CTA Station
CTA Red Line
Park
Cemetery
Golf Course
Educational Institution
Water
Suburban Municipality
Lake Michigan
Chicago
Sources: CDOT, CMAP, ESRI, IDNR, IDOT, PB
Miles
0
0.25
0.5
95/Dan Ryan
95TH ST
99TH ST
103RD ST
107TH ST
111TH ST
115TH ST
119TH ST
127TH ST
130TH ST
134TH ST
VINCENNES AV
WENTWORTH
STATE ST
KING DRIVE
COTTAGE GROVE AV
DOTY
HALSTED ST
MICHIGAN AVE
INDIANA AVE
57
94
Chicago State University
Olive-Harvey College
Harborside International Golf Course
Lake Calumet
Cal Sag Channel
Joe Louis Golf Club
Little Calumet River

Figure 6.3: 2000 Age Distribution Under 18

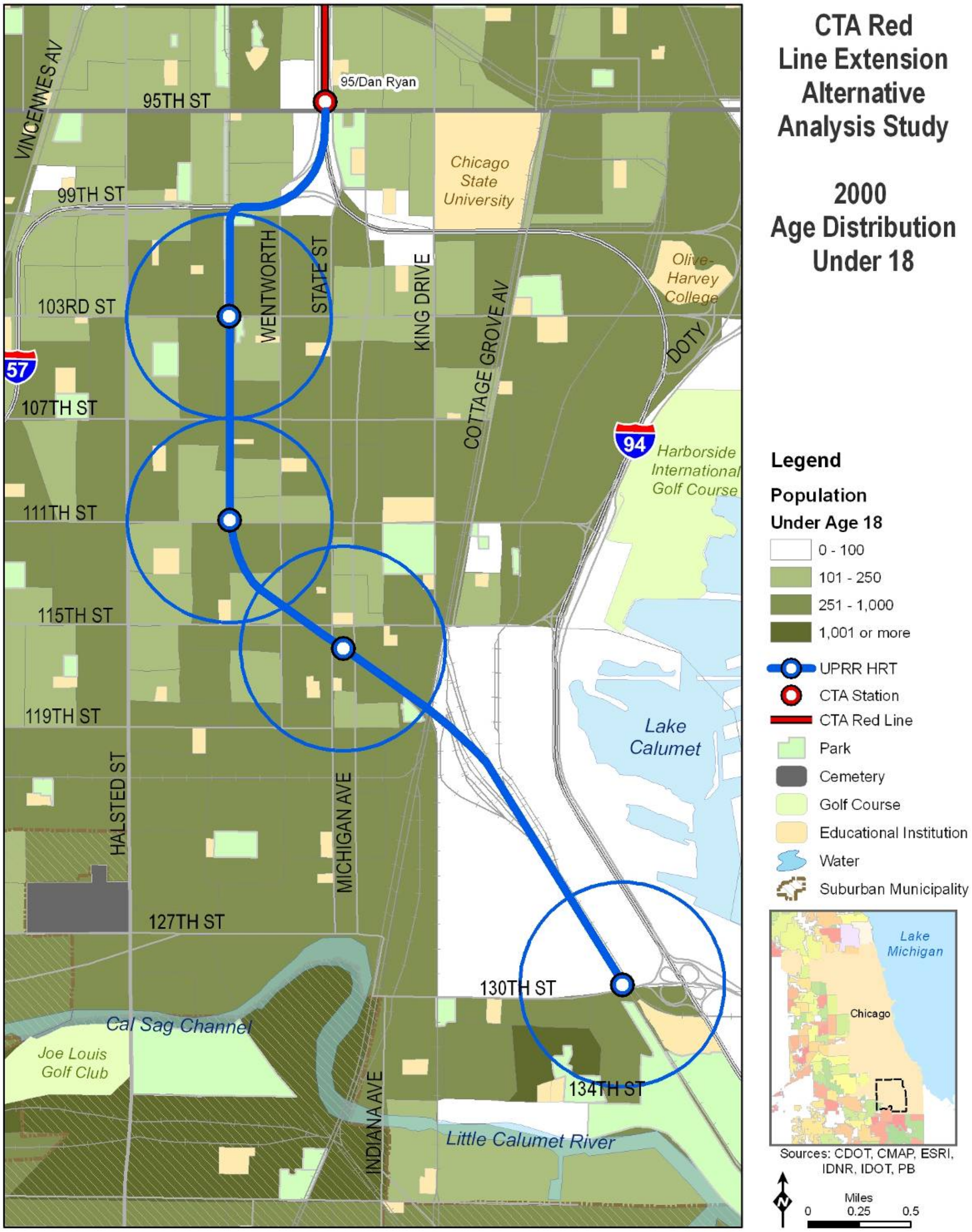

CTA Red Line Extension Alternative Analysis Study
2000 Age Distribution Under 18
95/Dan Ryan
95TH ST
VINCENNES AV
99TH ST
103RD ST
107TH ST
111TH ST
115TH ST
119TH ST
127TH ST
130TH ST
134TH ST
WENTWORTH
STATE ST
KING DRIVE
COTTAGE GROVE AV
DOTY
HALSTED ST
MICHIGAN AVE
INDIANA AVE
57
94
Chicago State University
Olive-Harvey College
Harborside International Golf Course
Lake Calumet
Cal Sag Channel
Joe Louis Golf Club
Little Calumet River
Legend
Population Under Age 18
0 - 100
101 - 250
251 - 1,000
1,001 or more
UPRR HRT
CTA Station
CTA Red Line
Park
Cemetery
Golf Course
Educational Institution
Water
Suburban Municipality
Lake Michigan
Chicago
Sources: CDOT, CMAP, ESRI, IDNR, IDOT, PB
N
Miles
0
0.25
0.5

Figure 6.4: 2000 Poverty Status

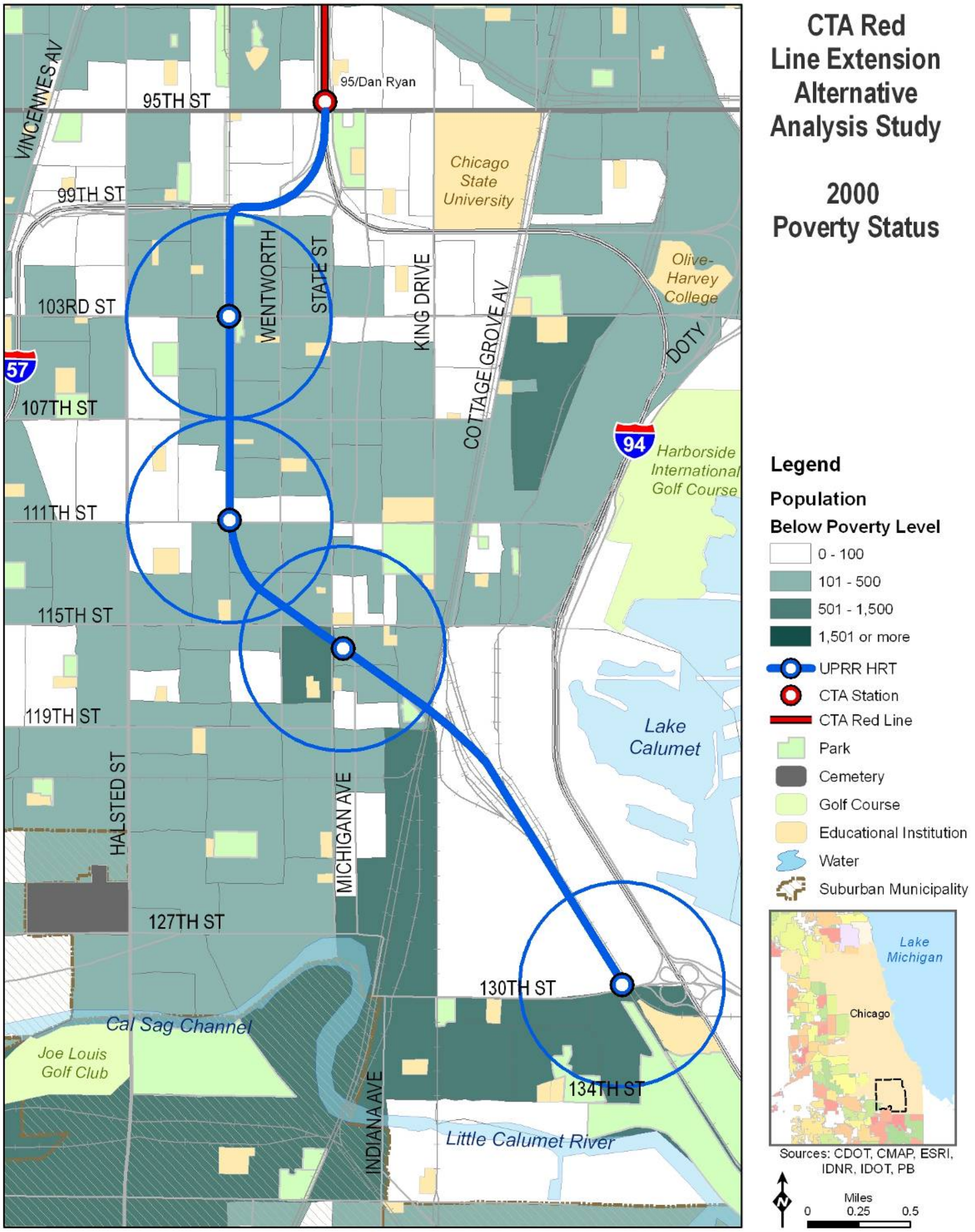
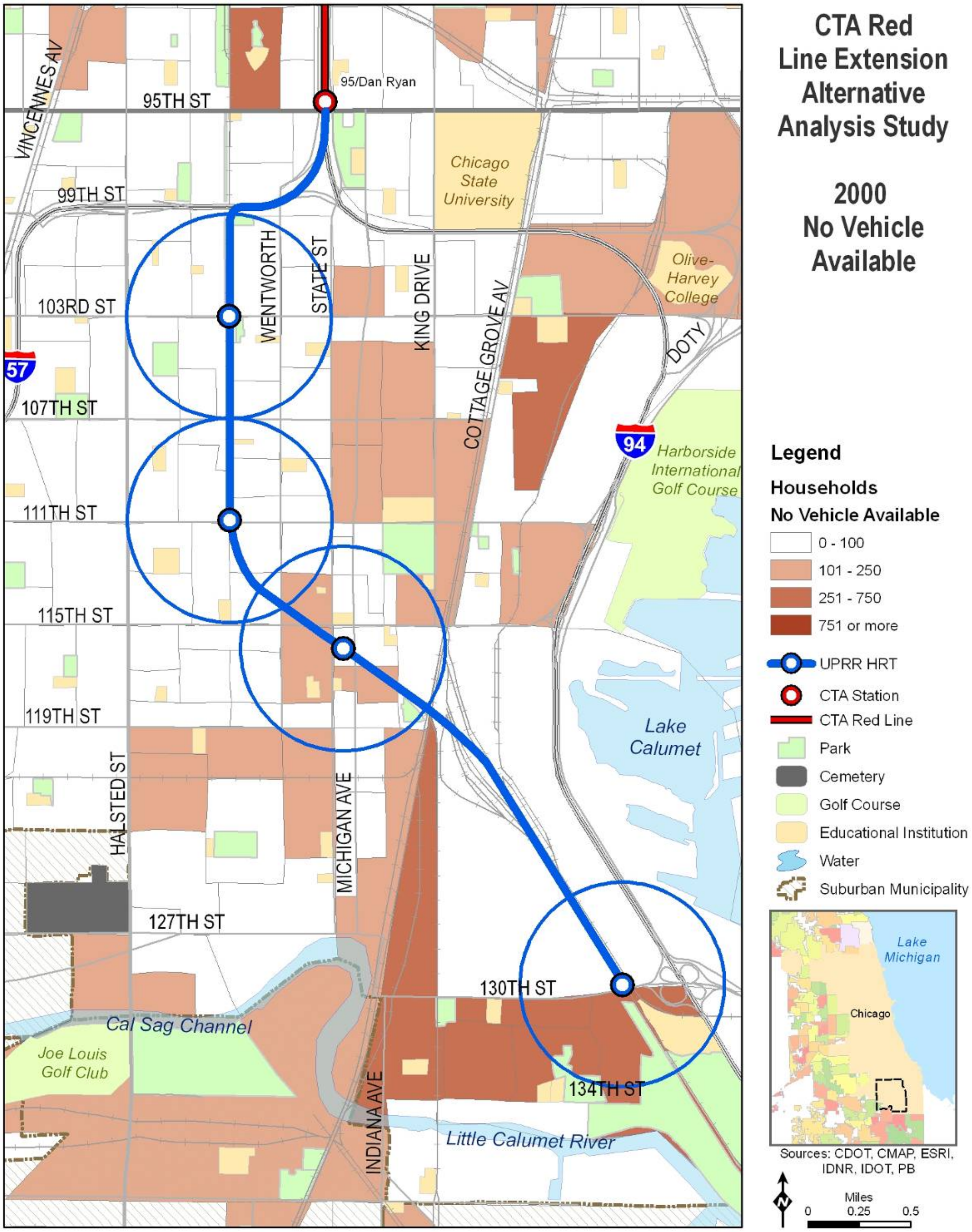

CTA Red Line Extension Alternative Analysis Study
2000 Poverty Status
Legend
Population
Below Poverty Level
0 - 100
101 - 500
501 - 1,500
1,501 or more
UPRR HRT
CTA Station
CTA Red Line
Park
Cemetery
Golf Course
Educational Institution
Water
Suburban Municipality
Lake Michigan
Chicago
Sources: CDOT, CMAP, ESRI, IDNR, IDOT, PB
Miles
0
0.25
0.5
95/Dan Ryan
95TH ST
VINCENNES AV
99TH ST
103RD ST
107TH ST
111TH ST
115TH ST
119TH ST
127TH ST
130TH ST
134TH ST
WENTWORTH
STATE ST
KING DRIVE
COTTAGE GROVE AV
DOTY
HALSTED ST
MICHIGAN AVE
INDIANA AVE
57
94
Chicago State University
Olive-Harvey College
Harborside International Golf Course
Lake Calumet
Cal Sag Channel
Joe Louis Golf Club
Little Calumet River

Figure 6.5: 2000 No Vehicle Available


CTA Red Line Extension Alternative Analysis Study
2000 No Vehicle Available
Legend
Households
No Vehicle Available
0 - 100
101 - 250
251 - 750
751 or more
UPRR HRT
CTA Station
CTA Red Line
Park
Cemetery
Golf Course
Educational Institution
Water
Suburban Municipality
95/Dan Ryan
95TH ST
99TH ST
103RD ST
107TH ST
111TH ST
115TH ST
119TH ST
127TH ST
130TH ST
134TH ST
VINCENNES AV
WENTWORTH
STATE ST
KING DRIVE
COTTAGE GROVE AV
DOTY
HALSTED ST
MICHIGAN AVE
INDIANA AVE
Chicago State University
Olive-Harvey College
Harborside International Golf Course
Lake Calumet
Cal Sag Channel
Joe Louis Golf Club
Little Calumet River
57
94
Lake Michigan
Chicago
Miles
0
0.25
0.5
N

Sources: CDOT, CMAP, ESRI, IDNR, IDOT, PB

6.4.2 Land Use and Development

The LPA is expected to have the greatest potential for future economic development. This is due to enhanced accessibility of station areas to the CTA rapid transit system compared to the No-Build and TSM alternatives. Altgeld Gardens and Murray Homes are under physical rehabilitation as part of the Chicago Housing Authority's Plan for Transformation, indicating a commitment to the residents and potential for additional economic development in the area.

Other opportunities exist at the 103rd Street station and at the 115th Street/Michigan Avenue area. The 103rd Street station area has a number of vacant and underutilized lots that can be redeveloped in response to the new station. The 115th Street / Michigan Avenue area is part of the Roseland/Michigan TIF which created a potential funding source for economic development in the area, and the City owns a number of parcels near the proposed station area that are being reviewed for potential commercial or mixed-use redevelopment.

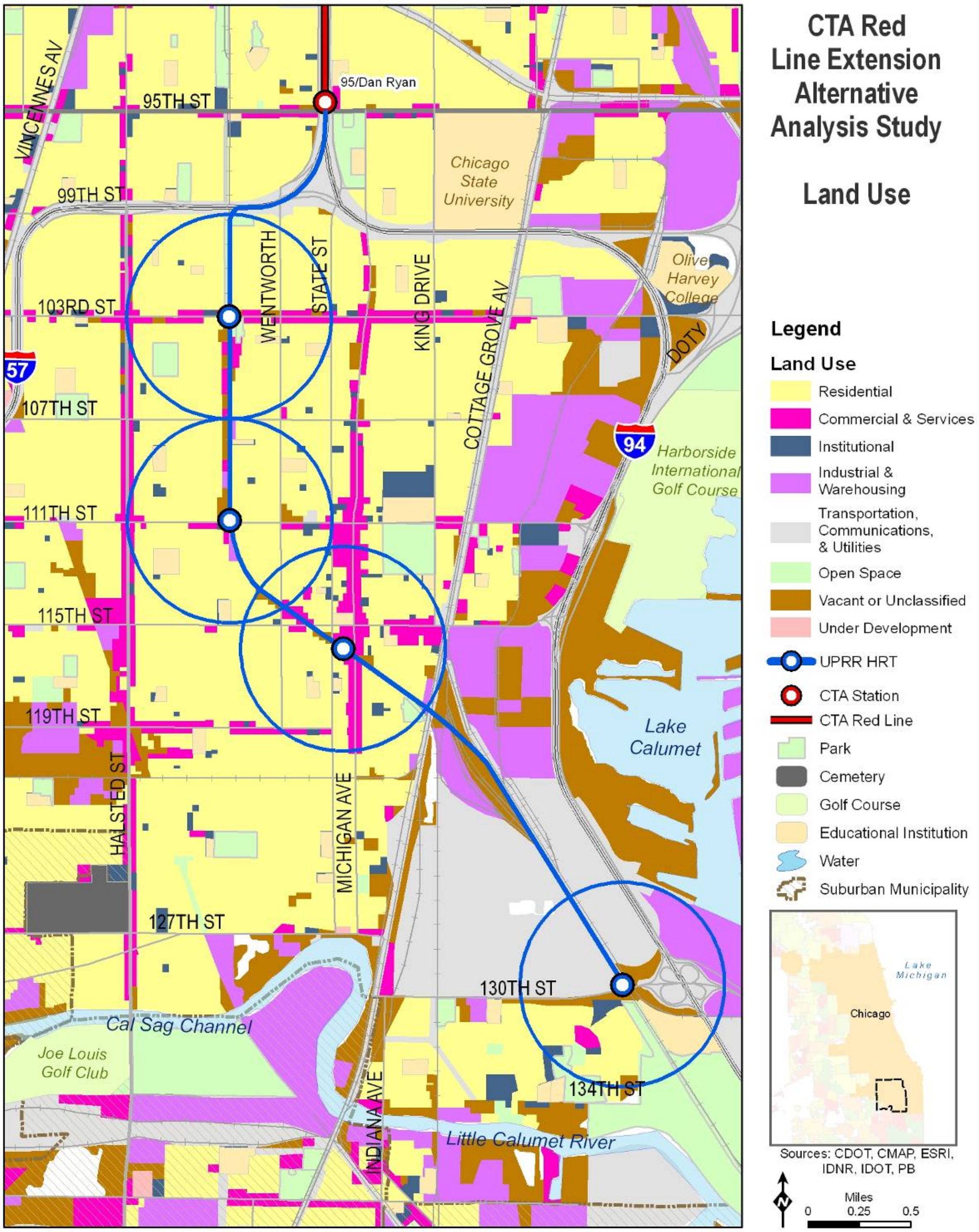
Figure 6.6 shows land use relative to the LPA and station areas within the Study Area.

Table 6.12: Land Use and Development

Criteria	No Build	TSM/BRT	LPA
Development initiatives	N/A	2	5
Long-term potential	N/A	−	+

Key: + Better than other alternatives; ○ Same as other alternatives; − Worse than other alternatives
* 0.5 mile buffer station area analysis

Figure 6.6: Land Use and Development


CTA Red Line Extension Alternative Analysis Study
Land Use
95/Dan Ryan
95TH ST
99TH ST
103RD ST
107TH ST
111TH ST
115TH ST
119TH ST
127TH ST
130TH ST
134TH ST
VINCENNES AV
WENTWORTH
STATE ST
KING DRIVE
COTTAGE GROVE AV
DOTY
MICHIGAN AVE
HALSTED ST
INDIANA AVE
57
94
Chicago State University
Olive Harvey College
Harborside International Golf Course
Lake Calumet
Cal Sag Channel
Joe Louis Golf Club
Little Calumet River
Legend
Land Use
Residential
Commercial & Services
Institutional
Industrial & Warehousing
Transportation, Communications, & Utilities
Open Space
Vacant or Unclassified
Under Development
UPRR HRT
CTA Station
CTA Red Line
Park
Cemetery
Golf Course
Educational Institution
Water
Suburban Municipality
Lake Michigan
Chicago
Sources: CDOT, CMAP, ESRI, IDNR, IDOT, PB
N
Miles
0
0.25
0.5

6.4.3 Displacements

The LPA would be located adjacent to the east or west edge of the UPRR right-of-way. The width of the UPRR right-of-way ranges from 65 to 135 feet. At this stage of the analysis both the east and west options suggest comparative level of impacts with no option having better or worse physical constraints. There are several key differences that characterize physical constraints for the east or west alignment of the LPA between I-57 and the Metra Electric District / Canadian National rail tracks.

- The East alignment may require taking a small portion of Wendell Smith Park when the alignment transitions from the I-57 expressway to the east side of the UPRR right-of-way. This would require a Section 4(f) evaluation during the Environmental Impact Statement analysis.
- A small portion of a yard belonging to the Roseland Christian School (314 West 108th Street) may be impacted by the east side alignment.
- On the east, between I-57 and 103rd Street there are five vacant and 17 residential parcels that would be impacted by the Red Line extension; from 103rd and 111th Street there are 18 vacant, nine residential and two commercial/industrial parcels that would be impacted; and between 111th Street and the Metra Electric District/Canadian National rail tracks there are 30 vacant, 39 residential and 16 commercial/industrial parcels that would be affected. A preliminary analysis shows a potential total of 138 lots which may be affected, with ten parcels owned by the Union Pacific Railroad.
- For the West option, Fernwood Parkway extends between 95th and 103rd Streets between Eggelston Avenue and the UPRR right-of-way. The west alignment option can be accommodated without displacement of residences or businesses in this segment if the alignment uses Fernwood Parkway. However, the parkway is owned by the Chicago Parks Department and is zoned as “Parks and Open Space” as of May 2009. Using this property for the HRT UPRR Elevated alternative would require a Section 4(f) evaluation as part of the Environmental Impact Statement review.
- On the west, between 103rd and 111th Street there are 15 vacant and 18 commercial/ industrial parcels that would be impacted by the Red Line extension; between 111th Street and the Metra Electric District /Canadian National rail tracks there are 28 vacant, 25 residential and 22 commercial/industrial parcels that would be impacted. A preliminary analysis shows a total of 112 impacted parcels of which 27 parcels are owned by the Union Pacific Railroad and four are Fernwood Parkway.

6.4.4 Visual and Aesthetic

The LPA is deemed to have a moderate potential visual and aesthetic impact. The LPA received this rating because of the elevated profile. This impact is somewhat mitigated by the lack of frontage along the UPRR corridor. Figure 6.7 is example rendering of the LPA elevated structure adjacent to the UPRR ROW at the proposed 103rd Street Station. The elevated structure would be constructed of concrete with side walls in order reduce visual and noise impacts of the HRT alignment. This is similar in design and construction to the existing Orange Line elevated structure southwest of Halsted Street. Figure 6.8 illustrates of profile view of the LPA elevated structure adjacent to the UPRR ROW.

Figure 6.7: Example Rendering of the LPA Elevated Structure at the Proposed 103rd Street Station

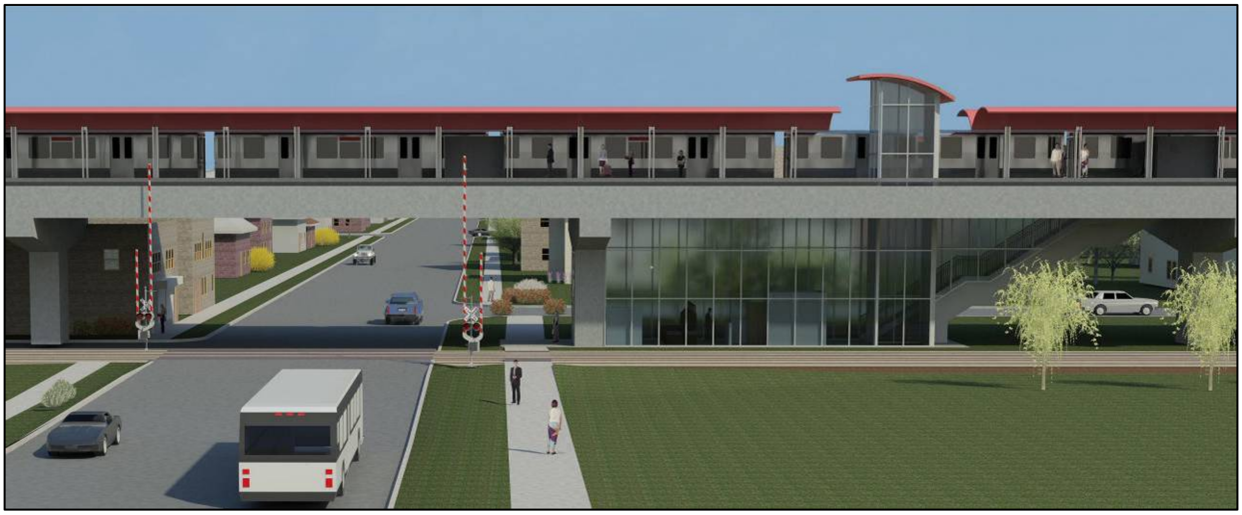
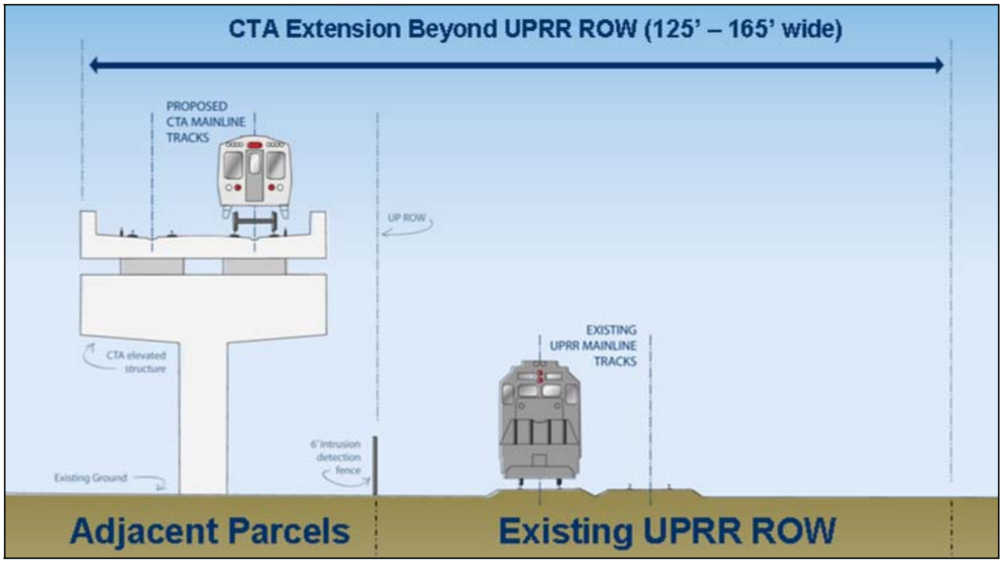


Figure 6.8: Profile of the LPA between 95th Street and 119th Street


CTA Extension Beyond UPRR ROW (125' – 165' wide)
PROPOSED CTA MAINLINE TRACKS
UP ROW
CTA elevated structure
EXISTING UPRR MAINLINE TRACKS
6' intrusion detection fence
Existing Ground
Adjacent Parcels
Existing UPRR ROW

6.4.5 Noise and Vibration

A generalized noise and vibration analysis for the TSM/BRT and LPA was performed. Implementation of the proposed TSM/BRT service may add 5 decibel on the A-weighted sound level (dBA) to the noise environment experienced by residents. There is existing vehicular traffic and bus service along the proposed corridor, although the new TSM/BRT service is estimated to increase ambient noise by 5 dBA for noise receptors.

The LPA is estimated to increase ambient noise by 8 dBA, from 65 dBA to 73 dBA, for the residences closest to the right-of-way. A city bus idling is approximately at 72 dBA. It should be noted that the existing freight rail service also results in similar noise impacts. The UPRR corridor is currently an active freight rail line, with an average of 27 trains per day. Because of the existing freight rail service in the corridor, sensitive receptors along the alignment are likely to experience a higher level of noise that residential areas without a similar transportation facility.

For the LPA, the CTA will evaluate and use a combination of noise abatement measures, as necessary. These measures could include rail vehicle measures (vehicle skirts, undercar absorption, and resilient or damped wheels), and guideway measures (sound barriers, rail lubrication on sharp curves, and ballasted track).

Vibration impacts are typically analyzed in terms of ground-borne vibration. Vibration occurs for rail transit when the train wheels rolling on the rails create vibration energy that is transmitted through the track support system into the transit structure. The amount of energy that is transmitted to the transit structure is dependent on a number of factors including the type of track support system, the vehicle suspension system, and smoothness of the wheels and rail. Screening level estimates for vibration for the LPA range from 58-62 vibration decibels (VdB). In general, 65 VdB is the approximate threshold of human perception.

For the LPA, the CTA will evaluate and use a combination of vibration abatement measures, as necessary. The type of track support system is a major determinant of ground borne vibration. The highest vibration levels are created by track that is rigidly attached to a concrete trackbed. The vibration levels are much lower when special vibration control track systems, such as ballasted mats and resilient fasteners are used.

6.4.6 Air Quality

Northeastern Illinois is classified as a moderate non-attainment area for the 8-hour ozone standard, and a non-attainment area for the annual fine particulate matter (PM2.5) standard. Air quality was assessed through the potential for micro-scale pollution.

The LPA includes heavy rail transit technology that is powered by electricity, which does not emit gases or particulate matter at the point of use. In addition, the LPA reduces the length of bus access trips, resulting in a reduction of emissions.

Buses used for the TSM/BRT service, or continued use of existing buses in the case of No-Build alternative, would have more adverse impact than the LPA, due to diesel exhaust. CTA is incorporating hybrid buses into its fleet to mitigate this impact, but the LPA would still have lower air quality impacts.

6.4.7 Water and Ecosystem Resources

The Red Line Extension study area is an urbanized area. Wetlands and critical habitat for protected species in the area were assessed for potential impacts. Waters in the area – the Cal-Sag Channel and the Little Calumet River – were not evaluated for impacts, such as non-point source pollution, and should be considered during the EIS review. Assessing potential environmental impacts to the natural environment provides information that can be used to limit or reduce the negative impacts of an alternative, if any.

During the screening analysis, the LPA was identified to have five wetlands within a 1,000 foot wide corridor around the alignment. The five wetlands are located on industrial or MWRDGC land on the southern portion of the alignment between the MED/CN tracks and 130th Street. Further review of the LPA corridor showed that most of the wetlands were on the outer edge of the corridor and would only have a slight chance of being negatively affected. The TSM/BRT was identified to have one wetland with 1,000 foot wide corridor around the alignment. The

TSM/BRT and LPA terminal station locations are situated in land areas adjacent to 130th Street that are landscaped and profiled for drainage.

Mitigation could be employed to protect or replace these wetlands. In addition, field studies during the upcoming EIS process will be completed to verify that these wetlands are still in existence and the potential impact that may occur based on the final design of the chosen alternative.

6.4.8 Hazardous Waste Sites

As part of its history, the Red Line Extension study area includes a high concentration of industrial and former industrial sites. One of the legacies of previous industrial processes is the potential for hazardous waste sites. These sites can include:

- Brownfields, which are abandoned or underutilized industrial facilities and land
- Waste handlers, which can include any facility that deals with toxic chemicals
- Superfund sites, which are deemed to be the worst brownfields, and are on a priority list for being cleaned by the U.S. Environmental Protection Agency
- Other sites, which can include active industrial sites or commercial properties, such as gas stations with leaking underground storage tanks (LUST)

Identifying these sites is important for two reasons: clean-up of a site can be costly, adding to the overall cost of an alternative, and reusing a site can have positive environmental benefits for a community.

There are 18 hazardous waste handlers and three other hazardous waste sites within 500 feet of TSM/BRT route along Michigan Avenue. However, the alternative does not require widening of Michigan Avenue, as service was anticipated to be provided in the existing street right-of-way; it is unlikely that these sites would be disturbed.

There are four hazardous waste handlers and three other hazardous waste sites within 500 feet of the LPA corridor.

6.4.9 Historic, Archaeological and Cultural

An analysis of historic, archaeological and cultural sites is important to ensure that the AA considers and respects a community's context and identity. Historic, archaeological and cultural sites within a 500 foot buffer from the centerline of each corridor were identified in Screen 2 and 3. The analysis determined that there was low potential for impacts to archeological sites with the proposed corridors. There were also no historic buildings or districts within a 500 foot buffer.

6.4.10 Parklands

There are two parklands that may be affected by the LPA. They include Fernwood Parkway, along the west side of the UPRR right-of-way and Wendall Smith Park, to the east of the UPRR right-of-way. The TSM/BRT and No-Build alternatives were determined to not have any impacts to park land.

The LPA west alignment would affect the portion of Fernwood Park that parallels the UPRR right-of-way from I-57 to 103rd Street. This linear park, about 75 to 80 feet wide and 0.5 mile long, would be impacted by the Red Line extension. Wendall Smith Park, along the east, is approximately 500 feet long and 260 to 270 feet wide. About 50 feet of the park adjacent to the

UPRR right-of-way would need to be used to accommodate the Red Line extension. Aerial photography shows trees and other vegetation in this area, separated from the other portions of the park by a sidewalk.

No natural recreational areas were found in any of the corridors during the environmental analysis.

6.4.11 Summary of Environmental Impacts

Table 6.13 below provides a summary of the potential environmental impacts for the LPA and TSM/BRT alternative. For additional detail on the preliminary environmental impacts for each alternative see the Red Line Extension Screen 3 Alternatives Evaluation Report, July 2009.

Table 6.13: Summary of Potential Environmental Impacts

Environmental Factors	TSM/BRT	LPA
Hazardous Sites: Brownfields	0	0
Hazardous Sites: Waste Handlers	18	4
Hazardous Sites: Superfund Sites	0	0
Hazardous Sites: Others	3	3
Wetlands	1	5
Historic Districts	Low	Low
Potential Micro Scale Pollution	Moderate	Low
Potential Noise Impact	+5 dBA	+8 dBA
Potential Vibration Impact	N/A	58-62 VdB
Potential Visual Impacts	Low	Moderate
Parklands Impacted	1	5
Recreation Areas Impacted	0	0
Total Parcels impacted	0	112-139
Vacant Parcels impacted	0	43-53
Critical Habitat Impacts to Protected Species	0	0
Potential for Archaeological Site Impacts within the Proposed ROW	Low	Low
Buildings Listed or Eligible for Listing in the NRHP Within 200’	0	0
Districts Listed or Eligible for Listing in the NRHP Within 200’	0	0

6.5 LPA Cost and Financial Analysis

A description of the capital and operating and maintenance cost estimates for the LPA and a preliminary financial analysis is presented in this section.

6.5.1 Capital Cost Estimates

Capital cost estimates have been developed in accordance with FTA guidelines. The guidelines call for cost estimates to be prepared and reported using the latest revision of FTA's Standard Cost Categories (SCC). In the estimates, cost components for the various alternatives are developed and summarized into the SCC. These cost categories form the basis for the format and structure that is used for the capital cost detail and summary sheets developed for this project. The FTA SCC consists of the following:

- Guideway
- Stations
- Support Facilities
- Sitework and Special Conditions
- Systems
- Right-of-Way, Land, Existing Improvements
- Vehicles
- Professional Services
- Allocated and Unallocated Contingency
- Finance Charges

Table 6.14: LPA Capital Cost ($M, 2009)

FTA Standard Cost Categories (with contingency)[10]	LPA 5.4 Miles
Guideways & Track Elements	180
Stations, Terminals, Stops	154
Yards, Shops, Administration Buildings.	-
Sitework & Special Conditions	21
Systems	128
Right-of-Way, Land Acquisition	32
Vehicles	175
Professional Services	139
Unallocated Contingency	50
Total Project Cost	**879**
Capital Cost per Route Miles	**163**

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[10] An allocated contingency allowance, in the range of 12 percent to 25 percent, is included in the FTA standard cost categories.

Design alternatives exist and are described in Section 6.2. For the capital cost estimates in this section, the UPRR East Options to 130th Street with the South Terminal Station was assumed. Major capital cost elements for the LPA include the following:

- One at-grade terminal station with island and side platforms to serve three station tracks: $25 M.
- Three elevated profile intermediate, island-platform stations: $94 M.
- Construction of parking facilities at the intermediate and terminal stations with a year of construction total of all facilities at 1,500 parking spaces (Forecast for 2030 is 3700 parking spaces): $35 M.
- Construction of an aerial guide way structure from 95th Street to 119th Street: $149 M.
- Temporary facilities and protection of active lines adjacent to construction zones (includes CTA and UPRR lines): $6.0 M.
- Land acquisition for the extension, stations and amenities, terminal facilities, on-line substations: $32.0 M.
- Construction of realigned service roads and new overpass over UPRR red line extension for the south station: $4 M.
- Purchase of 78 new rapid transit cars: $175 M.

Yard and Shop Capital Cost Estimate

Completion of a new 270-car yard and shop facility is not included in the LPA project cost estimate. The CTA has long recognized 98th Shop as being an inadequate facility to support the current and future maintenance needs of the south end of the Red Line and have included the need for an expanded or new 98th Shop in past capital needs programs. With the shop reaching 40 years in age, the shop has also met the FTA criteria for replacement. The CTA has plans to utilize existing 98th Shop for non-revenue equipment repairs once a new revenue shop is constructed. The CTA has previously determined that the 98th Shop is in need of replacement and has made plans separate from this project to address those needs. For that reason, the replacement of 98th Shop is not considered to be part of the Red Line Extension project at this stage of the analysis. More detailed analysis in latter project phases should indicate that a portion of the yard and shop cost would be applicable to the LPA. A new Red Line yard/shop facility would be located on a combination of industrial/vacant land to the east of the CN/MED tracks and west of the IHB and NICTD tracks at approximately 120th Street and Cottage Grove.

Major capital cost elements for construction of new Yard and Shop include the following:

- Construction of yard and shop: $147 M.
- Purchase of real estate: $11 M.
- Professional services for design and construction: $45 M.
- Unallocated contingency: $12 M.
- Total capital cost for a new yard and shop facility is estimated at $215 M.

Total Program Capital Cost Estimate

To prepare a preliminary financial plan for the Red Line Extension project, a total program cost was developed. The program is divided into a New Starts funded and non-New Starts funded segments. The non-New Starts funded segment consists of the yard and shop facility to be funded outside the New Starts program. The total program cost also includes estimates of inflation in construction costs and expressed in year-of-expenditure (inflated dollars). The total program cost in inflated dollars is estimated at $1.4 billion as shown in Table 6.15.

Table 6.15: Program Capital Cost Estimates ($M)

Segment	Base Year (2009) Dollars	Year-of-Expenditure (Inflated) Dollars
New Starts funded segment	$878	$1,142
Non-New Starts funded segment	$214	$287
Total	**$1,093**	**$1,430**

6.5.2 Operating and Maintenance Cost Estimates

Operating & Maintenance (O&M) costs were estimated using CTA's operating cost model, which is based on actual line item budget expenses. The cost model allocates each budget line item expense to a key service variable such as revenue hours, revenue miles, peak vehicles, route miles, etc. These variables are called "cost drivers" because the cost of service is "driven" by the magnitude of these variables. Thus, the more service hours provided or miles operated, the higher the O&M cost. Estimated annual operating cost for the LPA is $18.3 million in 2009 dollars. Table 6.16 summarizes the O&M costs for the LPA.

Table 6.16: LPA Operating and Maintenance Costs

Cost Driver	Unit Cost (2009 Dollars)	Level of Service	O&M Cost (2009 Dollars)
Rail			
Peak Trains	$131,552.79	8	$1,052,422
Peak Cars	$26,364.48	64	$1,687,327
Revenue Train Hours	$76.54	37,227	$2,849,192
Revenue Car Miles	$1.38	5,489,502	$7,570,895
Station Hours	$33.84	35,040	$1,185,819
Stations			
Elevated*	$304,556.80	4	$1,218,227
Track Miles			
Elevated	$118,840.61	10.6	$1,259,710
Substations	$62,969.30	1	$62,969
Fare Collection Equipment	$6,730.92	29	$195,197
Elevators/Escalators	$23,027.68	8	$184,221
Yard/Shop (per sq. foot)	$4.75		$0
Park & Ride (per space)	$521.46	2,800	$1,460,086
Rail Ridership	$0.05	7,708,106	$399,154
Bus			
Peak Buses	$34,587	6	$207,516
Revenue Bus Miles	$2.75	(276,451)	($759,439)
Revenue Bus Hours	$44.80	(3,991)	($178,762)
Turnarounds	$15,341	5	$76,703
Bus Stops	$14.14		$0
Bus Ridership	$0.05	(3,083,242)	($159,662)
Total O&M Cost (Base Year (2009) Dollars)			**$18,311,575**

* Station Unit Cost is an aggregated unit cost in CTA O&M cost model

6.5.3 Capital Funding Sources

CTA has identified the following preliminary capital funding sources for the LPA:

- *Federal New Starts Program (Section 5309)*: A federal match of 60 percent was assumed on the federally funded portion of the Project. Receipt of New Starts grant funds is assumed to commence in FY11 and is assumed to be subject to an annual cap of $150 million annually.
- *State Funds:* State funds are assumed to defray the remaining share of capital costs not covered by federal New Starts grants. This includes 40 percent of the cost of the federally funded portion of the project, and 100 percent of the non-federally funded portion of the project. Both portions total an estimated at $774 million. To date, however, no state funds have been identified or committed for this purpose. Therefore, there is presently a capital funding shortfall equal to the projected state funding share in the financial plan. On July 13, 2009, a $31 billion State capital bill, *Illinois Jobs Now!,* was signed into law. This bill provides $2.7 billion for the six-county northeastern Illinois region for bringing the transit system to a state of good repair. This capital bill is indicative of the State's commitment to funding public transportation investments and CTA will continue to advocate for additional funds in subsequent capital bills.

In addition, the financial plan includes federal transit formula grants that CTA is projected to receive from operating the incremental transit service associated with the project:

- Section 5309 Rail and Fixed Guideway Modernization Program, which grows as a function of fixed guideway directional route-miles and fixed guideway vehicle revenue-miles.
- Section 5307 Large Urban Cities Program, which grows as a function of demographic measures (population and population density, adjusted three years after each decennial census); level of service (vehicle revenue-miles and fixed guideway directional route-miles); and an incentive funding measure (passenger miles x passenger miles/operating cost)

These funds are applied toward future year infrastructure renewal and replacement costs associated with the LPA. These grant programs are subject to review and revision by Congress as part of surface transportation authorization legislation every six years, and could be altered in the future.

Projected future-year unit grant values are multiplied by projections of applicable transit service characteristics for the project (e.g., revenue vehicle miles, fixed guideway directional route miles, passenger miles, and operating costs). The resulting projection of incremental federal formula grants for the LPA in the design year (2030) is $6.6 million (2009 dollars).

Other federal funding program sources in the financial plan include:

- Section 9 (5307) Congestion Mitigation and Air Quality Program: Federal formula grants for transportation projects that reduce criteria air pollutants regulated from transportation-related sources in National Ambient Air Quality Standards nonattainment areas. Fixed funding of $4.0 million annually beginning in FY10, based on historic average funding levels.
- Job Access and Reverse Commute Program: A federal formula grant program to address the unique transportation challenges faced by welfare recipients and low-income persons seeking to get and keep jobs. One-time funding applied in FY09.
- Homeland Security/Department of Justice Grants: Federal formula grants for transit security improvements. Fixed funding of $6.5 million annually beginning in FY09, based on historic average funding levels.

6.5.4 O&M Funding Sources

CTA O&M funding sources include passenger revenue, public funding, system generated revenue, and additional public funding. Passenger revenue reflects the fares received from customers. Projected fare revenue for the proposed Red Line Extension LPA is a function of projected passengers and projected average fare paid per passenger. It is expected that $8.4 million (2009 dollars) in fare revenue will result in 2030 due to implementation of the Red Line Extension project.

Public funding includes sales tax and discretionary funding from the 1983 Regional Transportation Authority (RTA) Act, and new funding from the 2008 legislation.

- **Sales Tax (1983 Formula):** The RTA Sales Tax authorized in 1983 is the primary source of operating revenue for CTA. The tax is authorized by Illinois statute, imposed by the RTA in the six-county region of northeastern Illinois and collected by the State.

The sales tax is the equivalent of 1 percent on sales in Cook County and 0.25 percent on sales in the collar counties of DuPage, Kane, Lake, McHenry and Will. The 1 percent sales tax in Cook County is comprised of 1 percent on food and drugs and 0.75 percent from all other sales, with the State then providing a "replacement" amount to the RTA equivalent to 0.25 percent of all other sales. CTA receives 100 percent of the taxes collected in the City of Chicago and 30 percent of those collected in suburban Cook County, after the RTA retains its 15.0 percent share. Revenues are projected to grow beyond FY09 based on a projection of Cook County sales tax revenue developed for CTA by Moody's Economy.com.

- **Sales Tax and Public Transportation Fund (PTF):** RTA sales tax increased by the enactment of PL (P.A. 95-0708) in January 2008 equivalent to a 0.25 percent on sales in each county in the six-county region. By statute, 100 percent of the sales tax receipts and PTF funds, excluding the 25 percent PTF on Real Estate Transfer Tax (RETT) which goes to the CTA, are disbursed by formula to the Service Boards after setting aside funds for ADA paratransit service, suburban mobility, and for innovation, coordination, and enhancement (ICE). Funding for these three initiatives increase or decrease annually based on the percent change in the previous year's receipts from taxes imposed by PL (P.A. 95-0708) under Section 4.03. The RTA deposits funds each year into an ICE fund as directed by Section 4.03.3 of PL. ICE funds may be used by the RTA based on the affirmative vote of 12 RTA Directors for operating or capital grants or loans to Service Boards, transportation agencies, or units of local government that advance the goals and objectives of the RTA Strategic Plan. This funding is projected to grow on the basis of projected growth in sales and real estate transfer taxes in the six-county region.
- **RTA Discretionary:** Apportionment from RTA's 15 percent share of the sales tax (1983 Formula) and the State Public Transportation Fund (PTF) equal to 25 percent of the sales tax (1983 Formula) are the source of the RTA discretionary fund. This funding is projected to grow on the basis of projected growth in sales tax in the six-county region.
- **Real Estate Transfer Tax – RTA Formula:** As authorized by the 2008 Legislation (P.A. 95-0708), CTA receives the portion of PTF revenue earned from real estate transfer taxes. This funding is projected to grow on the basis of projected growth in Cook County real estate transfer taxes.
- **Real Estate Transfer Tax – City of Chicago:** In addition to the PTF real estate transfer tax revenue, the 2008 Legislation (P.A. 95-0708) authorized CTA to receive funds at a tax rate of 0.3 percent on real estate transfers in the City of Chicago. This funding is projected to grow on the basis of projected growth in Cook County real estate transfer taxes.

System generated revenue includes:

- **Reduced Fare Subsidy:** The reduced-fare subsidy is the State of Illinois reimbursement to CTA for discounted fares to seniors, people with disabilities and students. This revenue source is projected to grow with inflation.
- **Advertising, Charter, and Concessions:** Includes revenue from advertising, charter transit service, and concessions on CTA property. This revenue source is projected to grow with inflation.
- **Investment Income:** Interest income on CTA fund balances. Calculated annually in the financial plan on the basis projected cash balances. Applies a forecast of three-month U.S. Treasury Bills as the interest rate.

- **Statutory Required Contributions:** The Regional Transportation Authority Act requires the City of Chicago and Cook County to contribute $3.0 million and $2.0 million, respectively, towards CTA operations each year. This amount is projected to remain fixed at $5.0 million annually.
- **All Other Revenue:** Includes parking fees, sale of real estate and rentals. This revenue source is projected to grow with inflation.

6.5.5 Capital and Operating Shortfalls

Additional Revenue Sources

Additional revenue sources must be identified to address projected CTA and Red Line Extension project-specific shortfalls. A state-supplied funding source or mixture of multiple sources to address capital and operating shortfalls has not yet been identified by the State of Illinois or the RTA.

Risks and Uncertainties

As the Red Line Extension project progresses, there are several strategies that CTA could utilize to address these risks, if one or more should occur. These strategies include:

- Further staging the construction of the project;
- Controlling the growth of service;
- Raising fares at a higher annualized rate and/or more often;
- Redefining the scope of the project; and
- Introducing additional short and long term financing strategies.

Implementation

Based on the funding shortfalls identified above, CTA is developing a strategy to fund the capital and operating needs of the LPA. Overall, the strategy assumes that 60 percent of the project capital cost would be funded by FTA Section 5309 New Starts grants, with the remainder covered by state funding. CTA and the RTA are working with the Illinois Department of Transportation and relevant committees of the state legislature to identify stable and reliable sources of funding to fully fund operations and maintenance of existing services, renewal existing infrastructure, and fund the operations, maintenance, and eventual infrastructure renewal of capacity expansion projects, including the Red Line extension project.

As the Red Line Extension project progresses through the project development process, CTA will work with its funding partners to further develop and refine this funding strategy, which would ultimately form the basis of a Full Funding Grant Agreement between CTA and FTA.

6.6 LPA Achievement of Project Goals and Objectives

Five goals were identified for the Red Line Extension AA. Specific criteria and measures were developed for each goal as a means of assessing whether an alternative meets the goal. Figure 6.9 depicts how the LPA achieves these goals and objectives. These include:

Goal 1 – Regional and Local Access Mobility

The purpose of the Red Line Extension Alternatives Analysis (AA) Study is to identify transit improvements that would provide improved mobility to residents and businesses located in the City of Chicago's Far South area.

To evaluate this goal, the number of residents with access to high quality, convenient, and reliable transit service was estimated. The LPA provides access to a high number of residents. According to 2000 U.S. Census data, there are a total of 54,000 people and 19,000 households in the UPRR corridor. Nearly 59 percent (32,000) of the corridor population is within 0.25 miles of the station areas.

The Red Line Extension would provide connections with the other CTA rail rapid transit lines at transfer stations (Roosevelt, Jackson, Lake, Fullerton, and Belmont stations). The new Red Line Extension stations would include bus terminals for CTA and Pace bus transfers. The opportunity exists to construct a new transfer station to the NICTD South Shore Commuter Rail Line in the vicinity of the proposed Red Line Extension 130th Street station. This potential connection to the South Shore would depend on funding availability. The CTA will continue to coordinate with NICTD during the Red Line Extension project development. In addition, the CTA will continue to coordinate with Metra regarding their proposed South-East Service.

Goal 2 – Community and Economic Development

A major aspect of this goal is to locate transit alignments and stations in areas with existing land uses conducive to transit use or in those areas which have the greatest potential to develop transit supportive land uses.

The LPA fits well with the Purpose and Need Report for this project, providing a corridor that connects major neighborhoods and activity centers in the study area. Most of these neighborhoods have been experiencing stable growth and redevelopment in recent years. The City of Chicago Department of Community Development recently approved development plans for a new supermarket and commercial development at 115th Street and Michigan Avenue. An intermodal transit station with bus transfer and park and ride would be located adjacent to this site along the UPRR ROW at 115th Street/Michigan Avenue. The LPA also offers opportunities for development of land surrounding the terminal station at 130th Street and the enhanced potential for economic development activity in conjunction with the renewal of Altgeld Gardens. The LPA is adjacent to five TIF districts and/or enterprise zones and is consistent with local development plans.

The LPA has the highest level of past and current public support.

- In a November 2004, over 38,000 residents of the Red Line extension study area in the 9th and 34th Wards supported a public referendum for the Red Line Extension along the UPRR Corridor. A total of 38,142 'Yes' votes (93%) and 2,993 'No' votes were cast.
- 451 public comments were received in Screens 1, 2 and 3 – 140 of those expressed a preference for a particular alternative. 85 (60.7%) of these comments were in favor of the UPRR Rail alternative and 7 (5%) were in favor of the Halsted Rail alternative. 29 (20.7%) Comments showed general support of an extension of the Red Line, and 19 (13.6%) comments specifically support extending the line to 130th Street with no particular alternative mentioned.
- In June 2009, a petition was submitted to CTA including 512 signatures supporting the CTA's locally preferred route to extend the Red Line Rail Line from the 95th Street Station to 130th Street, using the Union Pacific Rail Road (UPRR) corridor.

Goal 3 – Regional Transit System Performance

This goal ensures that both the capital and operating costs of the project are commensurate with its benefits. The LPA is the most promising alternative to reduce travel times, improve trip reliability, provide sufficient transit capacity to meet 2030 transit demand, maximize potential transit ridership, and to enhance linkages within the CTA and regional transit system.

Based on the Screen 3 analysis, the LPA provides the best opportunity to meet the cost-effectiveness thresholds currently set by FTA. The CTA is seeking approval and funding for construction from the federal government through the Federal Transit Administration's New Starts grant program. In general, projects advancing into the FTA PE phase of project development must achieve a cost-effectiveness measure of below $25 in project cost per hour of travel time savings. The cost-effectiveness of the LPA is expected to be refined during the EIS and PE phase of the project development in order to meet the FTA criteria for New Starts funding.

Goal 4 – Safety and Security

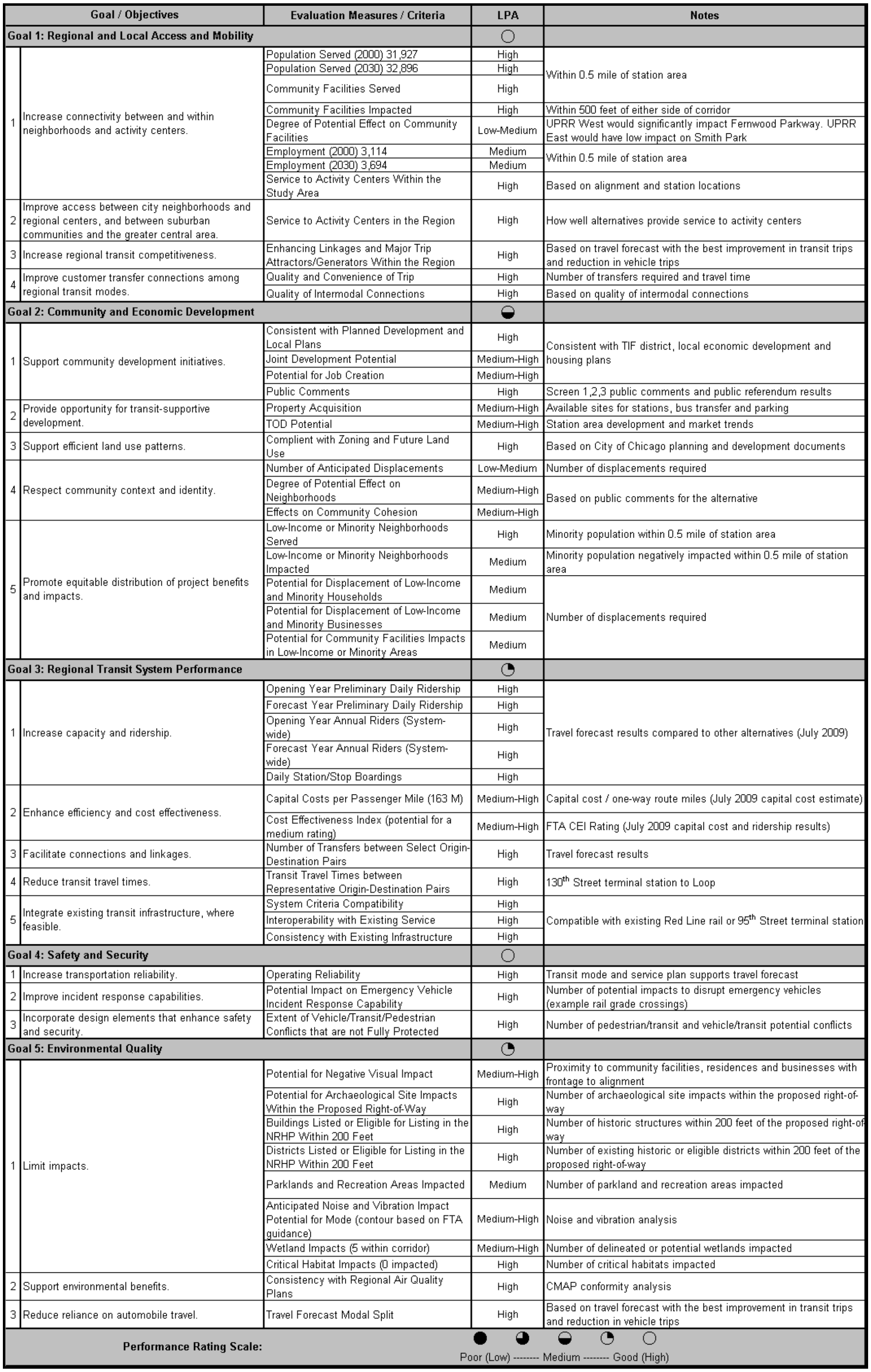
The Red Line extension would increase the safety and security by relieving congestion at the 95th Street station. Several CTA and Pace bus routes that currently serve the 95th Street station would be shortened and re-routed to terminate at 103rd, 111th, 115th and 130th Street. It is anticipated that CTA bus routes 103 – West 103rd Street, 106 – East 103rd Street, 111 – Pullman/111th/115th, 119 – Michigan/119th, and Pace bus routes 348 – Riverdale Connector, 352 – Halsted, and 359 – Robbins/S. Kedzie would be re-routed to serve Red Line Extension stations. These bus re-routings will result in the reduction of current 95th Street station bus terminal congestion, both in terms of the number of bus vehicles serving the station, a reduction in passenger-bus conflicts as passengers walk from the their bus drop-off/pick-up locations to the station house, and the total number of passengers on the station platform.

During the next steps, Preliminary Engineering and the preparation of an EIS, a wide range of safety measures will be identified, evaluated, and used in combination. They include vehicle measures (on-board closed-circuit television cameras, on-board audio and visual message communications to passengers, and emergency alarm systems), and station design (maximizing unobstructed sightlines in and surrounding stations, positioning of customer service booth for maximum presence and visibility in station, closed-circuit television cameras, public address systems, sufficient lighting, and emergency alarm systems).

Goal 5 – Environmental Quality

The fifth goal, Environmental Quality, is to develop solutions which minimize impacts to environmental resources and communities within the study area. The AA identified several potential impacts, including displacements, park lands, and noise and vibration. The next step, the preparation of an EIS will analyze these impacts, as well as the other social, economic, and environmental consequences in detail. The goal of the environmental analysis will be to avoid, minimize and mitigate potential environmental impacts. This environmental review process is required by the National Environmental Policy Act of 1969 (NEPA) and related laws.

Figure 6.9: Effectiveness of Alternatives Meeting Goals and Objectives in 2030



	Goal / Objectives	Evaluation Measures / Criteria	LPA	Notes
Goal 1: Regional and Local Access and Mobility			○	
1	Increase connectivity between and within neighborhoods and activity centers.	Population Served (2000) 31,927	High	Within 0.5 mile of station area
		Population Served (2030) 32,896	High	
		Community Facilities Served	High	
		Community Facilities Impacted	High	Within 500 feet of either side of corridor
		Degree of Potential Effect on Community Facilities	Low-Medium	UPRR West would significantly impact Fernwood Parkway. UPRR East would have low impact on Smith Park
		Employment (2000) 3,114	Medium	Within 0.5 mile of station area
		Employment (2030) 3,694	Medium	
		Service to Activity Centers Within the Study Area	High	Based on alignment and station locations
2	Improve access between city neighborhoods and regional centers, and between suburban communities and the greater central area.	Service to Activity Centers in the Region	High	How well alternatives provide service to activity centers
3	Increase regional transit competitiveness.	Enhancing Linkages and Major Trip Attractors/Generators Within the Region	High	Based on travel forecast with the best improvement in transit trips and reduction in vehicle trips
4	Improve customer transfer connections among regional transit modes.	Quality and Convenience of Trip	High	Number of transfers required and travel time
		Quality of Intermodal Connections	High	Based on quality of intermodal connections
Goal 2: Community and Economic Development			◒	
1	Support community development initiatives.	Consistent with Planned Development and Local Plans	High	Consistent with TIF district, local economic development and housing plans
		Joint Development Potential	Medium-High	
		Potential for Job Creation	Medium-High	
		Public Comments	High	Screen 1,2,3 public comments and public referendum results
2	Provide opportunity for transit-supportive development.	Property Acquisition	Medium-High	Available sites for stations, bus transfer and parking
		TOD Potential	Medium-High	Station area development and market trends
3	Support efficient land use patterns.	Complient with Zoning and Future Land Use	High	Based on City of Chicago planning and development documents
4	Respect community context and identity.	Number of Anticipated Displacements	Low-Medium	Number of displacements required
		Degree of Potential Effect on Neighborhoods	Medium-High	Based on public comments for the alternative
		Effects on Community Cohesion	Medium-High	
5	Promote equitable distribution of project benefits and impacts.	Low-Income or Minority Neighborhoods Served	High	Minority population within 0.5 mile of station area
		Low-Income or Minority Neighborhoods Impacted	Medium	Minority population negatively impacted within 0.5 mile of station area
		Potential for Displacement of Low-Income and Minority Households	Medium	Number of displacements required
		Potential for Displacement of Low-Income and Minority Businesses	Medium	
		Potential for Community Facilities Impacts in Low-Income or Minority Areas	Medium	
Goal 3: Regional Transit System Performance			◔	
1	Increase capacity and ridership.	Opening Year Preliminary Daily Ridership	High	Travel forecast results compared to other alternatives (July 2009)
		Forecast Year Preliminary Daily Ridership	High	
		Opening Year Annual Riders (System-wide)	High	
		Forecast Year Annual Riders (System-wide)	High	
		Daily Station/Stop Boardings	High	
2	Enhance efficiency and cost effectiveness.	Capital Costs per Passenger Mile (163 M)	Medium-High	Capital cost / one-way route miles (July 2009 capital cost estimate)
		Cost Effectiveness Index (potential for a medium rating)	Medium-High	FTA CEI Rating (July 2009 capital cost and ridership results)
3	Facilitate connections and linkages.	Number of Transfers between Select Origin-Destination Pairs	High	Travel forecast results
4	Reduce transit travel times.	Transit Travel Times between Representative Origin-Destination Pairs	High	130th Street terminal station to Loop
5	Integrate existing transit infrastructure, where feasible.	System Criteria Compatibility	High	Compatible with existing Red Line rail or 95th Street terminal station
		Interoperability with Existing Service	High	
		Consistency with Existing Infrastructure	High	
Goal 4: Safety and Security			○	
1	Increase transportation reliability.	Operating Reliability	High	Transit mode and service plan supports travel forecast
2	Improve incident response capabilities.	Potential Impact on Emergency Vehicle Incident Response Capability	High	Number of potential impacts to disrupt emergency vehicles (example rail grade crossings)
3	Incorporate design elements that enhance safety and security.	Extent of Vehicle/Transit/Pedestrian Conflicts that are not Fully Protected	High	Number of pedestrian/transit and vehicle/transit potential conflicts
Goal 5: Environmental Quality			◔	
1	Limit impacts.	Potential for Negative Visual Impact	Medium-High	Proximity to community facilities, residences and businesses with frontage to alignment
		Potential for Archaeological Site Impacts Within the Proposed Right-of-Way	High	Number of archaeological site impacts within the proposed right-of-way
		Buildings Listed or Eligible for Listing in the NRHP Within 200 Feet	High	Number of historic structures within 200 feet of the proposed right-of-way
		Districts Listed or Eligible for Listing in the NRHP Within 200 Feet	High	Number of existing historic or eligible districts within 200 feet of the proposed right-of-way
		Parklands and Recreation Areas Impacted	Medium	Number of parkland and recreation areas impacted
		Anticipated Noise and Vibration Impact Potential for Mode (contour based on FTA guidance)	Medium-High	Noise and vibration analysis
		Wetland Impacts (5 within corridor)	Medium-High	Number of delineated or potential wetlands impacted
		Critical Habitat Impacts (0 impacted)	High	Number of critical habitats impacted
2	Support environmental benefits.	Consistency with Regional Air Quality Plans	High	CMAP conformity analysis
3	Reduce reliance on automobile travel.	Travel Forecast Modal Split	High	Based on travel forecast with the best improvement in transit trips and reduction in vehicle trips

Performance Rating Scale: ● ◕ ◒ ◔ ○

Poor (Low) -------- Medium -------- Good (High)

7.0 PUBLIC INVOLVEMENT

7.1 Public Involvement Approach

As part of the FTA's Alternative Analysis process the CTA conducted an array of public involvement activities. In order to achieve a high level of participation, a comprehensive public involvement plan was developed and implemented.

7.1.1 Description of Outreach Program

Over the course of the AA study, a series of three public presentations were conducted within the Red Line Extension Alternatives Analysis Study area to encourage the general public's participation at key project stages. Through presentations and displays, the public learned about the methodology of the New Starts federal planning processes and how evaluation criteria were developed and applied to the universe of alternatives for the Red Line AA. A formal question and answer process allowed the general public to make comments and ask questions on the study's findings.

Individual and group briefings for elected and public officials; community, civic, business and religious leaders; and other stakeholders were conducted along the same timeline, providing them the opportunity to comment and inquire about the project.

The public had continual access to the project's public outreach presentation materials on the Red Line Extension AA Study weblink via the CTA's website (www.transitchicago.com). In addition to presentation materials, the website provides information on how to submit comments and questions to CTA via phone, email and standard mail. At the end of each public comment period, all questions and answers were posted on the project website. In addition, a database of participants in the outreach process was developed and continually updated, and CTA's community outreach database was also used. CTA's existing database includes community groups, non-profits, community development organizations, and chambers of commerce.

Throughout the public involvement process, the CTA monitored participation from the general public, elected officials, and stakeholders to gauge public interest and opinion regarding the proposed project. To identify potential modification to the public notification process, CTA analyzed the number of attendees and the geographic representation through regularly scheduled discussions with local elected officials and through monitoring attendance at the public meetings.

7.1.2 General Public

Each affected community within the study area has had different levels of interest in the project, due to many factors including intended use; direct or indirect impacts; support for or lack of support for transit improvements; and potential or perceived degree of project impact on property and/or daily routines. This acknowledgement was integral to CTA's evaluation of whether the public education and involvement process was targeted properly or if it required adjustment to better reach and inform the public.

The study area encompasses several neighborhoods: Beverly, Altgeld Gardens, Pullman, Morgan Park, Roseland, Longwood Manor, Princeton Park, Cottage Grove Heights, Burnside, and Washington Heights. Outreach was conducted to the study area as a whole and CTA was also aware of the distinct neighborhoods and was able to identify critical local issues.

Three rounds of presentations took place over the course of the study: one for each level of alternatives screening. Because of the length of the Red Line Extension's alternative corridors, each round consisted of two meetings, for a total of six public meetings. Two identical meetings per screening phase ensured adequate stakeholder and community coverage throughout the study area. Prior to each presentation, the public was informed of the meetings through advertisements in local newspapers and car cards posted on CTA buses, trains, and in stations. During the second and third phases, previous participants were also notified by letter or email. Local stakeholders and elected officials were also recruited to help conduct outreach to generate more project and public interest in attending these meetings.

The first round of meetings outlined the Purpose and Need of the Red Line Extension Alternatives Analysis Study and presented the preliminary findings from Screen 1. The second round of public meetings reviewed the findings of Screen 1, presented the preliminary findings of Screen 2, and solicited comments and questions. The third round of meetings reviewed the findings of Screen 2, presented the preliminary findings of Screen 3, announced a recommended Locally Preferred Alternative (LPA), and solicited comments and questions particularly relating to the recommended LPA.

7.1.3 Stakeholders and Local Officials

Individual and group briefings were held to allow stakeholders and elected officials to share perspectives, interests, and potential concerns, as well as to offer their recommendations for strengthening candidate alternatives or to identify additional alternatives. Following the same schedule as the general public program, three rounds of briefings are scheduled for the Red Line Extension Alternatives Analysis Study. Stakeholders and elected officials also were invited to attend the public meetings. Stakeholder and elected official categories include the following:

Civic Organizations
Civic organizations include transportation, environmental, regional-growth or business-related groups.

Activity Generators
Members of this category include retail locations, area attractions, and parks.

Religious Organizations & Neighborhood Groups
Members of this category include ministers, local chambers of commerce, block clubs, and other community groups.

Government Facilities, Infrastructure, and Institutions
This category includes schools, operational facilities, neighborhood parks, railroads, and universities.

U.S. Representatives and U.S. Senators
Individual briefings for the Congressmen and Senators and/or their staff were conducted for the initial round of briefings. They were also invited to attend all public meetings. As the screening process proceeded and the study entered the final stages, another round of briefings were held with the Congressmen and Senators to provide the opportunity for them to comment on the recommended LPA.

Aldermen
Establishing a dialogue with aldermen inside the study area was critical for the public involvement efforts. Local aldermen served as a resource to assist CTA in expanding the list of local stakeholders, engage their residents in the process, and identify local issues pertinent to

the AA process. Aldermen were briefed regularly and were invited to participate in the public meetings and local stakeholder meetings

State and County Officials
These officials were informed of the AA study's progress. They also served as another resource to CTA to identify additional stakeholders, and to inform and explain potential local issues to CTA.

Surrounding Municipalities
A portion of the Village of Calumet Park is located within the study area, and Blue Island and Riverdale border the study area. CTA contacted these three municipalities and the South Suburban Mayors & Managers Association to identify potential stakeholders and other interest groups to be included in this public involvement process. CTA also sent alerts to other surrounding municipalities to keep them informed of the process.

7.2 Implementation and Execution of Public Involvement

The CTA Red Line Extension Alternatives Analysis Study Public Involvement included various meetings held in conjunction with each alternatives screening. Each round of meetings focused on the respective Screening phase. Each of the three rounds were conducted in a similar manner to ensure consistency.

Public Meeting Locations
The first step entailed identifying appropriate locations within the study area to hold the public presentations. Locations were identified in conjunction with the Aldermen in the study area. Locations identified changed during each round of meetings to ensure thorough study area coverage:

The locations identified met the following criteria:

- Location must be available on date of presentation;
- The facility must be able to accommodate a theater-type presentation that can hold at least 100 people and the presentation boards, technical staff, and public;
- Must be ADA accessible;
- Near public transportation; and
- Free of charge.

Meeting facilities were booked for public meetings several weeks in advance of the actual meetings to enable informative and accurate public notification. All logistical arrangements were arranged and confirmed.

Elected Official Briefings
All elected officials were informed them of scheduled public meetings. Those officials interested in a scheduled meeting were:

- Briefed using a flip board presentation
- Encouraged to identify stakeholders to be contacted in their area
- Encouraged to identify potential public meeting locations

Officials were contacted for follow-up meetings to update them regarding issues to be discussed at public meetings and to provide opportunity to comment prior to the meeting.

Public Meeting Announcements

CTA used the following methods to ensure that the stakeholders and general public were aware of the meetings:

- Meeting announcements appeared in local community papers two weeks in advance of the scheduled meetings.
- Some community papers were weeklies and required meeting notices to run twice
- Stakeholders were given information regarding upcoming meetings as a supplement to these advertisements
- Meeting announcements were posted on CTA’s website
- Meeting announcement were posted at CTA stations and in CTA trains and buses via car cards
- CTA distributed and posted a press release including meeting details

Any member of the public interested in attending one or the entire series of presentations was welcome. No pre-registration was required.

7.3 Meeting Format

Each meeting included the following formats: an arcade open house, in which an area was dedicated to project maps and alternatives analysis process displays, a formal presentation including a PowerPoint presentation on Screen 1, 2, or 3 and a question and answer session.

The entire session was allotted two hours, beginning at 6:00 P.M. and ending at 8:00 P.M. This schedule allowed sufficient time to conduct the presentation, answer questions, and allow attendees to view the information on the presentation boards. The time was expanded when public involvement warranted.

Prior to each meeting, an internal client/consultant meeting and rehearsal was held to evaluate the effectiveness of the meeting and identify potential improvements for future meetings.

Arcade Open House

When attendees first arrived at the facility at 6:00 P.M., they signed in and were asked to provide contact information. They will were given a question/comment card and directed to the arcade. In the arcade, attendees had an opportunity to review project information and to familiarize themselves with the project so they can prepare questions or comments before the formal presentation and question and answer session.

The arcade was staffed by CTA and the project consultant team and included a series of poster boards (35 inches across and 47 inches tall) displaying maps, analysis results and recommendations.

Formal Presentation

The presentation consisted of a PowerPoint presentation lasting approximately 25 minutes. An interpreter for the hearing impaired and a translator for Spanish speaking individuals were available.

Question & Answer Session

At the conclusion of the presentation, the moderator explained the procedure for the question & answer session. There was a short break for participants to formulate their comments and/or questions. All questions were submitted in writing using question/comment cards provided to attendees at the sign-in table. The comment cards were collected by CTA and grouped in like categories. The moderator read the questions/comments to the audience and the presentation panel provided answers verbally.

All questions received regarding the Red Line Extension Alternatives Analysis Study were also answered in writing and posted on the CTA website.

7.4 Screen 1 Public Involvement Summary

The CTA hosted two community meetings in the study area on April 10 & 11, 2007. These meetings presented the findings of Screen1 of the AA study.

The CTA placed advertisements to inform the community of the proposed project and upcoming meetings through local community newspapers, Chicago public libraries, local universities and colleges, aldermanic offices, customer alerts on CTA buses and stations (English & Spanish) and postings at village halls adjacent to the study area. The community newspapers included The Crusader (3/31 & 4/7), The Defender (4/4 & 4/6-10), La Raza (April 8-14), The Star Newspaper/The Daily Southtown (4/5). Additionally, the Chicagoland Chamber of Commerce, Alderman Beale and the Calumet Area Industrial Council posted information on their websites. Village hall postings included Burnham, Blue Island, Calumet, Calumet Park, Dolton, Evergreen Park, and Riverdale.

Prior to the public meetings, CTA met with community leaders, chamber of commerce executive directors, and aldermen and/or their staff. Additionally, CTA staff asked these leaders to assist them by submitting names of local groups/organizations that are active in the community and would be interested in this extension study, as well as becoming proactive participants of the public involvement process of the AA study. Recommended groups were added to the community outreach database. CTA contacted by letter 34 elected officials. Sixteen meetings were held to brief interested elected officials. There were 74 stakeholders invited to participate in a briefing on the morning of April 10, 2007. This briefing was held at Carver Military Academy. Fourteen individuals attended representing 11 organizations.

The public meetings were held at Chicago State University (April 10) and Chicago Public Library –West Pullman Branch (April 11) from 6:00-8:00 P.M. Sixty-six people attended the April 10 meeting. Eighty-one people attended the April 11 meeting. The presentation and meeting materials were made available on the website on the morning after the first public meeting.

The most common comment received was in regard to preferences for the alignments (corridors) studied – 89 comments in total. There was a strong level of support voiced for the UPRR corridor (55). The next category that received a high number of comments was in regard to economic and environmental impacts. Many people were interested in the economic benefits the study area would gain, including new access to jobs or jobs created by the project itself. Another common comment was on the project timeline with people wanting the project to move forward more rapidly.

The official comment period remained open until May 11, 2007. Two hundred and nine comments or questions were collected. These were answered by CTA staff and posted to the project website. Once posted, elected officials, stakeholders and meeting participants received either an email or letter notifying them that the comments and responses were now available on-line.

7.5 Screen 2 Public Involvement Summary

The CTA hosted two community meetings in the study area on December 3 and 4, 2008. These meetings presented the findings of Screen 2 of the AA study.

The CTA placed advertisements to inform the community of the proposed project and upcoming meetings through local community newspapers, Chicago public libraries, local universities and colleges, aldermanic offices, customer alerts on CTA buses and stations (English & Spanish) and postings at village halls adjacent to the study area. The community newspapers included The Crusader (11/20), The Defender (11/12 and 11/19), La Raza (11/23), The Southtown Star (11/20). Additionally, the Chicago 6th Ward office of Alderman Beale, Chicago Metropolitan Agency for Planning, Regional Transportation Authority, and the Active Transportation Alliance, posted information on their websites. Village hall postings included Burnham, Blue Island, Calumet, Calumet Park, Dolton, Evergreen Park, and Riverdale.

Similar to Screen 1 of the project, CTA met with community leaders, and elected officials and/or their staff prior to the public meetings. CTA staff briefed these leaders on the Screen 2 findings and also asked them to identify local groups/organizations that are active in the community and would be interested in this extension study. Recommended groups were added to the community outreach database. CTA contacted by letter 34 elected officials. Eight meetings were held to brief interested elected officials. There were 79 stakeholders invited to participate in a briefing on the morning of December 3, 2008. This briefing was held at Woodson Regional Chicago Public Library. Ten individuals attended representing 9 organizations.

The public meetings were held at Historic Pullman Visitor Center (December 3, 2008) and Woodson Regional Chicago Public Library (December 4, 2008) from 6:00-8:00 P.M. Using the data base from the prior public meetings, the CTA invited participants whom attended the Screen 1 public meetings. One hundred seventy people were invited to participate by letter or email. Forty-three people attended the December 3, 2008, meeting. Forty-one people attended the December 4, 2008 meeting. The presentation and meeting materials were made available on the website on the morning after the first public meeting.

The most common comment received expressed preferences for the alignments (corridors) studied - 50 comments in total. As in Screen 1 participants expressed a strong support for the Union Pacific Railroad (UPRR) corridor (31). The next category that received a high number of comments was in regard to the public involvement process. Participants were interested in how the screening criteria applied throughout the analysis to advance the alternatives being evaluated, if individual suggestions were considered and what information was available to the public. Another common comment was on the project timeline with people inquiring how much longer the process would take and when it would be completed.

The official comment period remained open until December 18, 2008. One hundred thirty-one comments or questions were collected. These were answered by CTA staff and posted to the project website. Once posted, elected officials, stakeholders and meeting participants received either an email or letter notifying them that the comments and responses were available online.

7.6 Screen 3 Public Involvement Summary

The CTA hosted two community meetings in the study area on June 3 and 4, 2009. These meetings presented the findings of Screen 3 and the recommendation of a LPA.

The CTA placed advertisements to inform the community of the proposed project and upcoming meetings through local community newspapers, customer alerts on CTA buses and stations (English & Spanish) and postings at village halls adjacent to the study area. The community newspapers included The Crusader (May 14 & 21), The Chicago Defender (May 13 & 30), La Raza (May 17), and The Southtown Star (May 18). Additionally, the Regional Transportation Authority, the Chicago Metropolitan Agency for Planning, Progressive Railroading, the Active Transportation Alliance, Transit Future, and the Chicago Defender, posted information on their websites or in their e-newsletters. The Chicago Citizen newspaper also published an article regarding the meeting. Village hall postings included Burnham, Blue Island, Calumet, Calumet Park, Dolton, Evergreen Park, and Riverdale.

Similar to the earlier phases of the project, CTA met with community leaders and elected officials and/or their staff prior to the public meetings. CTA staff briefed these leaders on the Screen 3 findings and presented the recommended LPA. Additionally, CTA staff asked these leaders to identify local groups/organizations that are active in the community and would be interested in this extension study. Recommended groups were added to the community outreach database. CTA contacted by letter 34 elected officials. Eleven meetings were held to brief interested elected officials and/or their staff. Represented in the meetings were Aldermen from 6 Chicago wards, a Cook County Commissioner, a U.S. Congressman, 2 State Representatives, and a State Senator. There were 86 stakeholders invited to participate in a briefing on the morning of June 3, 2009. This briefing was held at Olive Harvey College. Fourteen individuals attended representing 13 organizations.

The public meetings were held at Olive Harvey College (June 3, 2009) and Woodson Regional Chicago Public Library (June 4, 2009) from 6:00-8:00 P.M. Using the data base from the prior public meetings, the CTA invited individuals who participated in the Screen 1 and 2 public meetings. Two hundred eighteen people were invited to participate by letter or email. Forty-four people attended the June 3, 2009 meeting. Sixty-seven attended the June 4, 2009 meeting. The presentation and meeting materials were made available on the website on the morning after the first public meeting.

A total of 111 comments were received at the stakeholder and public meetings, via e-mail, or U.S. Postal Service. The majority of the comments received were related to economic and environmental impacts. Some focused on the opportunity for business and job development whiles others questioned the impact on homes and property. In addition, many comments were in support or opposition to the project, and some questioned how their support would affect the outcome of the project. Lastly, a petition that included 512 signatures was submitted in support of the CTA’s recommended LPA.

The official comment period was extended to June 25, 2009. Questions and comments were responded to by CTA staff and posted to the website (transitchicago.com).

On August 12, 2009 the Chicago Transit Board met and the adopted an LPA. A letter was sent to participants, stakeholders and agency outreach inviting them to submit comments or participate in the Board action. At the meeting comments were made by stakeholders in support of the Red Line Extension. The CTA will now move to the Environmental Impact Statement step of the FTA process. There will be additional opportunities for public involvement in subsequent steps of the FTA process.

7.7 Final Reporting

Upon the completion of all the public involvement activities CTA completed Public Involvement binders for each corresponding screen. These included all related information for public meeting announcements, elected official meetings, stakeholder meetings, public meetings, public involvement, media coverage, examples of the CTA website, any follow up activity, as well as copies of all registration cards and any comment that was submitted during each screen.

8.0 NEXT STEPS

The preparation of a Draft Environmental Impact Statement (DEIS) will be the next step following the recent selection of a LPA. After completion of scoping for the EIS, the CTA will prepare an application to the Federal Transit Administration (FTA) for advancement into Preliminary Engineering phase of the New Starts process. Issues that will be addressed in these next steps include:

- Detailed alignment analysis for the LPA
- Details of intermediate and terminal station locations
- Right-of-way requirements
- Impacts identification and proposed mitigation measures
- Costs and possible phasing
- Evaluation of the cost effectiveness of project elements

There will be opportunities for public involvement in subsequent project phases.

Appendix B
Scoping Report

Red Line Extension Project
Scoping Report

Prepared for:
Chicago Transit Authority
567 West Lake Street
Chicago, IL 60661

Federal Transit Administration
200 West Adams Street
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Red Line Extension
Connecting 95th Street Station to 130th Street

cta

Prepared by:

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Section 1
Introduction

1.1 Overview

The Chicago Transit Authority (CTA) is proposing to make transportation improvements by extending the Red Line from the 95th Street station to 130th Street. CTA and the Federal Transit Administration (FTA) will be preparing an Environmental Impact Statement (EIS) that will evaluate the environmental effects of constructing and operating the proposed extension. FTA is the federal lead agency and CTA is the local lead agency.

The Red Line was put into operation in 1969. Plans to extend the Red Line to the southern city limits were made shortly thereafter but have not yet been implemented. Starting in 2002, community activists began an awareness campaign and a community petition drive which resulted in an advisory referendum being placed on the November 2004 ballot. The referendum was supported by 38,000 voters in the 9th and 34th wards. In 2006, the Chicago Transit Board initiated an Alternatives Analysis (AA) study for the proposed extension.

The study area is situated 11 miles south of the Chicago Central Area (commonly referred to as the Loop) and encompasses approximately 20 square miles. The boundaries of the study area are 95th Street on the north, Ashland Avenue on the west, Stony Island Avenue on the east, and the Calumet-Sag Channel/Little Calumet River and 134th Street on the south.
The I-57 Expressway and I-94 Bishop Ford Freeway traverse the western and eastern edges of the study area, respectively. Lake Calumet is located in the eastern portion of the study area.

The study area encompasses parts of nine community areas in the City of Chicago and the eastern section of the City of Calumet Park (area east of Ashland Avenue). Community areas include Washington Heights, Beverly, Morgan Park, Roseland, Pullman, West Pullman, South Deering, Hegewisch and Riverdale. The study area has significant residential (primarily single family) industrial (existing and vacant), transportation and commercial development. The study area boundaries are major, recognizable streets, used to clearly define where possible alternatives would be considered. However, travel patterns and analyses beyond the study area are integral components to the project study and included as necessary.

For the Red Line Extension project the CTA has completed an Alternatives Analysis (AA) and conducted early scoping on the potential range of alternatives. The results of that study may be found in the Locally Preferred Alternative Report (CTA 2009) and which is incorporated here by reference. The AA provides the reasoning for decisions regarding the identification and narrowing of the range of alternatives. The AA process identified an initial set of nine corridors and eleven transit modal technologies. The process screened these options into a set of eight conceptual alternatives that potentially met the project purpose. These alternatives were screened against criteria related to constructability, right-of-way constraints, impacts of configurations, and operational concerns. This screening step narrowed the range of alternatives to three build alternatives and a no build alternative and a transportation system management (TSM) alternative. These alternatives were screened against the goals, objectives, and evaluation criteria established for the project.

In addition, input from stakeholders, the public and agencies was solicited in the process of narrowing the range of alternatives. The AA process resulted in the identification of a locally preferred alternative (LPA) in addition to one other build alternative (the Halsted HRT Alternative), the No Build Alternative, and a TSM Alternative that will be carried forward into the DEIS. A Locally Preferred Alternative (LPA) was identified through the AA process and designated by the Chicago Transit Board in August 2009.

The EIS will evaluate the LPA along with a No Build Alternative, a Transportation System Management (TSM) Alternative, and the Halsted Alternative developed during the AA process. Subsequent to the completion of the AA process, FTA and CTA initiated the public and agency NEPA scoping to obtain input on the scope of the EIS. The Notice of Intent (NOI) identified the four alternatives carried forward from the AA for evaluation. This report summarizes the results of the NEPA scoping process.

The Draft EIS (DEIS) will build upon the AA studies and form the basis for performance of Preliminary Engineering and preparation of a subsequent Final EIS. One of the primary purposes of scoping is to identify possible environmental impacts of the project. Transit improvements in the Far South side could be financed with a mix of local, state, federal New Starts, and other federal funds. Accordingly, the project will be executed in compliance with current FTA Section 5309 New Starts guidelines, and all environmental documents will satisfy the requirements of NEPA and the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU).

1.2 Project Area

The proposed project area is located 11 miles south of the Chicago Central Area (commonly referred to as the “Loop”). The limits of the project area are from 95th Street on the north to 130th Street on the south. The Calumet-Sag Channel/Little Calumet River extends along the southern edge of the project area and Lake Calumet is located to the east. The I-57 Expressway and I-94 Bishop Ford Freeway traverse the western and eastern edges of the project area, respectively.

The project area includes parts of eight community areas in the far south side of the City of Chicago. Community areas include Washington Heights, Morgan Park, Roseland, Pullman, West Pullman, South Deering, Hegewisch, and Riverdale. The project area encompasses significant residential (primarily single family), industrial (existing and vacant), transportation, and commercial developments.

1.3 Alternatives

The Red Line Extension EIS will include an evaluation of a No Build Alternative, a Transportation System Management Alternative, the Locally Preferred Union Pacific Railroad Heavy Rail Transit (HRT) Alternative, and the Halsted Street HRT Alternative. These alternatives are briefly described below.

1.3.1 No Build Alternative

The No Build Alternative is defined as the existing transportation system, plus any committed transportation improvements. Committed transportation improvements include projects that are already in the Chicago Metropolitan Agency for Planning (CMAP) financially constrained

Transportation Improvement Program (TIP). The Red Line project area has five bridge reconstructions, and several road improvement projects included in the FY 2007 – 2012 TIP. These improvements are primarily on highway segments in the vicinity of the project area and generally do not lie adjacent to or intersect with the proposed TSM or HRT alternatives.

Bridge projects in the TIP include: Illinois 1 (Halsted Street) at the Little Calumet River; I-94 (Bishop Ford Expressway) at the Stony Island Avenue ramp and at Cottage Grove Road; I-57 at 103rd Street; and I-57 at Genoa Road. Road improvement projects include a variety of landscaping, safety fencing, and resurfacing projects, and coordination of signal timing on Stony Island Avenue from 95th Street north, and on 95th Street from Western Avenue east to Ewing Avenue. There is also a bicycle and pedestrian multi-use trail proposed to extend from the existing Centennial Trail in Lemont to the Burnham Greenway in Burnham.

Bus transit service under the No Build Alternative would be focused on the preservation of existing services and projects. No significant changes to bus service are anticipated in the project area. All elements of the No Build Alternative are included in each of the other alternatives.

Summary:

- Existing transportation system.
- Plus committed transportation improvements: bridge and road improvement projects.
- Bus transit service focused on the preservation of existing services and projects.

1.3.2 Transportation System Management (TSM) Alternative

The proposed TSM Alternative is a Bus Rapid Transit (BRT) alternative that operates between the 95th Street Station and 130th Street via East 95th Street, Michigan Avenue, East 127th Street, South Indiana Avenue, and East 130th Street. Proposed BRT service would operate in mixed traffic with traffic signal priority along 95th Street, Michigan Avenue, and 130th Street.
The TSM Alternative is 5.5 miles long and would include four intermediate stops at 103rd, 111th, 115th, and 130th Streets with park-and-ride facilities proposed at all of the new stops. The 95th Street terminal would be expanded to extend the existing bus bays along State and Lafayette Streets approximately 250-feet north to 94th Street to improve circulation and safety. The TSM alternative assumes that buses from the south would continue to serve the 95th Street Station.

Summary:

- Transportation improvements that are already in the CMAP Fiscal Year 2007-2012 TIP as described in the No Build Alternative.
- Bus Rapid Transit (BRT) that operates between the 95th Street Station and 130th Street.
- 5.5 miles long with three intermediate stops at 103rd, 111th, and 115th Streets and a new terminal station at 130th Street.
- Park-and-ride facilities proposed at all new stops.
- Operates in mixed traffic with traffic signal priority along 95th Street, Michigan Avenue, and 130th Street.
- 95th Street terminal expanded to extend the existing bus bays along State and Lafayette Streets approximately 250-feet north to 94th Street to improve circulation and safety.
- Existing buses from the south continue to serve the 95th Street station.

1.3.3 Locally Preferred Alternative (LPA): Union Pacific Railroad (UPRR) Heavy Rail Transit (HRT) Alternative

The proposed LPA would extend the heavy rail transit line from the existing Red Line 95th Street Station to 130th Street. The line would be on an elevated structure from the 95th Street as it heads south along the I-57 Expressway for nearly one-half mile until reaching the UPRR corridor in the vicinity of Eggleston Avenue. It would then turn south along the UPRR corridor to approximately 111th Street where it would turn southeast. East of South Prairie Avenue, the alignment would cross over the Canadian National/Metra tracks near 119th Street where it would transition to an at-grade profile and then continue southeast along the former Michigan Central/Indiana Harbor Belt (IHB) railroad right-of-way to terminate in the vicinity of 130th Street.

The proposed LPA is 5.3 miles long and would include three new intermediate stations at 103rd, 111th, and 115th Streets and a new terminal station at 130th Street with new park-and-ride and bus terminal facilities at each station. This alternative assumes that buses from the south would be re-routed to serve the new intermediate and terminal stations to speed passenger travel toward downtown Chicago.

The new HRT tracks would be placed immediately adjacent to the UPRR right-of-way on either the west side (West Side Option) or the east side (East Side Option). Both options would require adjacent property acquisition to accommodate the CTA right-of-way and station facilities at 103rd, 111th, and 115th Streets. The West Side Option could impact Fernwood Parkway between 99th Street and 103rd Streets which could trigger a Section 4(f) of the Department of Transportation Act evaluation in the EIS. The East Side Option could impact Wendell Smith Park adjacent to the I-57 Expressway which could also trigger a Section 4(f) evaluation in the EIS.

There are two options for the 130th Street terminal station. The Red Line extension would continue south along the IHB right-of-way to either a south or west terminal station location along the north side of 130th Street, just west of the I-94 Bishop Ford Freeway.

Summary:

- Transportation improvements that are already in the CMAP Fiscal Year 2007-2012 TIP as described in the No Build Alternative.
- Heavy rail transit line extension from 95th Street Station to 130th Street.
- 5.3 mile extension with three new intermediate stops at 103rd, 111th and 115th Streets and a new terminal station at 130th Street.
- New park-and-ride and bus terminal facilities at each station.
- Buses from the south would be rerouted to serve the new intermediate and terminal stations to speed passenger travel to downtown Chicago.
- Two alignment options will be studied in the EIS: Tracks could be placed immediately adjacent to the UPRR right of-way on either the west side (West Side Option) or the east side (East Side Option).
- Two options for the 130th Street terminal station will be studied in the EIS: The line would continue south along the IHB right-of-way to either a south or west terminal station location along the north side of 130th Street, just west of the I-94 Bishop Ford

Freeway.

1.3.4 Halsted Street Heavy Rail Transit Alternative

The proposed Halsted Street HRT Alternative would be operated on an elevated structure between the existing Red Line 95th Street Station and the Halsted Street/Vermont Avenue intersection in the vicinity of 127th Street. The alignment would follow the median of I-57 Expressway until reaching Halsted Street. It would then turn south onto Halsted Street and continue in the median to Vermont Avenue.

The proposed Halsted Street HRT Alternative is 5.0 miles long and would include three new intermediate stations at 103rd, 111th, 119th Streets and a new terminal station at Vermont Avenue with new park-and-ride and bus terminal facilities at the intermediate and terminal stations. This alternative assumes that buses from the south would be re-routed to serve the new intermediate and terminal stations to speed passenger travel to downtown Chicago.

Near the proposed station areas, there may be additional impacts to adjacent land owners if land acquisition would be required for station facilities such as bus turnarounds or parking facilities. This would be most applicable at the proposed terminal station at 127th/Vermont since several properties are located close to Halsted Street in this segment and there may be higher off-street facility needs.

Summary:

- Transportation improvements that are already in the CMAP Fiscal Year 2007-2012 TIP as described in the No Build Alternative.
- Heavy rail transit line extension from 95th Street Station to Halsted Street/Vermont Avenue intersection.
- 5.0 mile extension with three new intermediate stops at 103rd, 111th, 119th Streets and a new terminal station at Vermont Avenue.
- New park-and-ride facilities at intermediate and terminal stations.
- Buses from the south would be rerouted to serve the new intermediate and terminal stations.

1.4 Summary of Purpose and Need

The purpose of the Red Line Extension project is to reduce travel times to jobs for Far South Side and South Suburban residents and improve the performance of the existing Red Line 95th Street Station terminal. The project would also provide an opportunity to support economic development initiatives. The City of Chicago has designated several Tax Increment Finance (TIF) districts, Redevelopment Areas(RA), and Industrial Corridors in the study area. Major incentive zone areas in the study area include the 119th/Halsted RA, the Roseland/Michigan Avenue RA, the Pullman Industrial Corridor, and several smaller TIF districts.

The need for the project is based on the following considerations:

- Lack of park-and-ride and passenger drop off, and poor pedestrian facilities limit access to the existing 95th Street terminal of the Red Line.
- Customers accessing the existing terminal facility by bus experience measureable delays resulting from poor performance of surrounding arterial intersections, insufficient space

for bus loading and unloading, and insufficient space for bus layovers.

- Congested bus and passenger conditions at the existing terminal station and bus facility result in safety issues and diminish the attractiveness of transit as an alternative to other travel modes.
- Roadway performance in the study area is adversely impacted by narrow arterial streets and frequent at-grade freight rail crossings.
- Study area population is highly transit dependent, minority, and low-income. Presently, this population is underserved by rail transit compared to other areas in the region.

1.5 Project Participants

The project participants include FTA, CTA, and CTA's consultants. CTA's consultants include the CWC Transit Group and CWC's subconsultants. The Federal Highway Administration (FHWA) has been identified as a cooperating agency. Other project participants include federal, state, and local participating agencies identified in accordance with the Safe, Accountable, Flexible, Efficient Transportation Equity Act – A Legacy for Users (SAFETEA-LU) 6002. Participating agencies have been identified and are listed in Appendix C.

1.6 Purpose of Report

The following report summarizes the public participation process for, and the public comments resulting from, the Red Line Extension public scoping meetings and comment period. The process of determining the scope, focus, and content of an EIS is known as "scoping." Scoping meetings are a useful opportunity to obtain information from the public and governmental agencies. In particular, the scoping process asks agencies and interested parties to provide input on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation, and potential impacts and mitigation measures to be considered.

Section 2
Scoping Process

2.1 Early Scoping Activities

In 2006, CTA and FTA began the Alternatives Analysis (AA) process, for the proposed Red Line Extension. As part of a three step screening process, CTA held six public meetings between 2007 and 2009 in order to help define the purpose and need and identify a range of reasonable alternatives. This AA process is an early public scoping process and was conducted consistent with the Federal Transit Administration's (FTA) guidelines.

Early scoping included a series of three screening evaluations and public outreach efforts. The first step, Screen 1, included meetings with elected officials and community groups in the study area, a meeting with stakeholders, a Technical Advisory Committee (TAC) meeting, and two public meetings. The two public meetings were held on April 10 and 11, 2007. A total of 147 persons attended the two public meetings and 14 representatives of 11 community and governmental organizations attended the stakeholder session, held prior to the public meetings.

The second step, Screen 2, again included meetings with elected officials and community groups in the study area, a meeting with stakeholders, a Technical Advisory Committee (TAC) meeting, and two public meetings. The two public meetings were held on December 3 and 4, 2008. A total of 84 persons attended the two public meetings, and 10 representatives of 10 organizations attended the stakeholder session, held prior to the public meetings.

The third step of the process, Screen 3, included two public meetings held on June 3 and 4, 2009. Prior to the public meetings, CTA conducted 11 briefings of elected officials and their staff and one stakeholder meeting. Fourteen representatives of 13 organizations attended the stakeholder briefing.

Screen 1
- April 10, 2007 - public meeting
- April 11, 2007 - public meetings

Screen 2
- December 3, 2008 - public meetings
- December 4, 2008 - public meetings

Screen 3
- June 3, 2009 - public meetings
- June 4, 2009 - public meetings

During early scoping, CTA evaluated nine alternatives, and in August 2009, the Chicago Transit Board designated the Union Pacific Railroad (UPRR) Heavy Rail Transit (HRT) Alternative as the Locally Preferred Alternative (LPA) for further study in the EIS. The LPA was chosen, in part, due to agency participation and public participation through review and comments.

2.2 Draft Environmental Impact Statement (DEIS) Scoping Activities

In accordance with NEPA, CTA and FTA have initiated the environmental review process for the Red Line Extension. An EIS will be prepared to identify impacts related to project construction and operation. As part of the initial phase of the environmental process, public scoping meetings were hosted on September 22, 2009 and September 24, 2009, to receive public comments on the alternatives and issues that should be examined as part of the environmental analysis. The public meetings are also a requirement of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), which requires project proponents to provide opportunities for public participation in transportation decision-making. The process of determining the scope, focus, and content of an EIS is known as "scoping." Scoping meetings are a useful opportunity to obtain information from the public and governmental agencies. In particular, the scoping process asks agencies and interested parties to provide input on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation, and potential impacts and mitigation measures to be considered.

2.2.1 Public Participation Plan

NEPA and SAFETEA-LU require project proponents to provide opportunities for public participation in transportation decision-making. In order to meet the requirements of these two Acts, a Public Participation Plan (Appendix A) was developed to guide CTA through a comprehensive public participation process for the Red Line Extension EIS scoping phase. The plan includes public participation goals, strategies to engage the public, key audiences to be addressed and the plan for notification and outreach for the scoping phase of the project. The Public Participation Plan that is included in Appendix A was developed specifically for the scoping process and will be updated to address outreach needs for the release of the Draft Environmental Impact Statement.

2.2.2 Coordination Plan

Section 6002 of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) established an environmental review process for transit projects that has now been included in Section 139 of Title 23 of the U.S. Code. Section 139 directs agencies to prepare a plan for coordinating public and agency participation in and comments on the environmental review process for a project. The coordination plan describes how the lead agencies will provide opportunities for input from both the public and other agencies. The Coordination Plan includes the Public Participation Plan described above in Section 2.2.1.

2.3 Initiation of Scoping - Notice of Intent (NOI)

FTA published the NOI in the Federal Register on September 1, 2009. The publication of the NOI is the official federal notification of the agency's intent to prepare a DEIS. The NOI included notification of the dates and locations of the agency and public scoping meetings, the public comment period, as well as a description of the project purpose and need and alternatives. The NOI initiates the NEPA scoping process. A copy of the NOI is in Appendix B. Comments were accepted by CTA from the date of publication of the NOI in the Federal Register (September 1, 2009) through October 27, 2009. This provided a public comment period of 57 days.

2.4 Agency Scoping

2.4.1 Participating Agencies

Participating agencies can be Federal, State, tribal, regional, and local government agencies that may have an interest in the project. In accordance with SAFETEA-LU Section 6002 requirements, CTA, in coordination with the FTA, prepared and mailed participating agency invitation letters to 80 agencies with a potential interest in the project in September 2009. The identification of potential participating agencies built on the list of agencies identified through the AA process.

The responsibilities of these agencies include, but are not limited, to:

- Participating in the NEPA process starting at the earliest possible time, especially with regards to the development of the purpose and need statement, range of alternatives, methodologies, and the level of detail for the analysis of alternatives.
- Identify, as early as practicable, any issues of concern regarding potential environmental or socioeconomic impacts of the project.
- Participate in the issue resolution process, described in the Coordination Plan.
- Provide meaningful and timely input on unresolved issues.
- Participate in the scoping process.

Accepting the designation as a participating agency does not indicate project support and does not provide the agency with increased oversight or approval authority beyond its statutory limits.

Participating agencies for the project are listed in Appendix C and include federal, state and local agencies with an interest in the project because of an overlap in their area of jurisdiction or some specialized knowledge of potential project effects. Invited federal agencies automatically become a participating agency unless they decline the invitation in writing, while local and state agencies much accept the invitation. The final list of participating agencies then includes federal agencies that both accepted and did not decline as well as state and local agencies that accepted the invitations.

Agencies were given 30 days from the date of the letter to respond. Agencies may also request to be added at any time during the process. Appendix D contains two sample invitation letters; one that was sent to federal agencies and tribes and one that was sent to state, regional, and local agencies.

2.4.2 Cooperating Agencies

Cooperating agencies are, by definition in 40 CFR 1508.5, federal agencies with jurisdiction, by law or special expertise, with respect to any environmental impact involved in the proposed project. A state or local agency of similar qualifications may, by agreement with the lead agency, also become a cooperating agency. The cooperating agencies are by definition participating agencies as well, and while the roles and responsibilities of both are similar, the cooperating agencies have a slightly greater degree of authority, responsibility, and involvement in the environmental review process.

The Federal Highway Administration (FHWA) has requested to become a cooperating agency for the Red Line Extension project because of their jurisdiction over the portion of the proposed alignment that would be located in the median of Interstates 94 and 57.

2.4.3 Agency Scoping Meeting

One Agency Scoping meeting was held as follows:

Time: Thursday, September 24, 2009, 10:30 A.M.

Location: CTA Headquarters, Conference Room C
567 W. Lake Street
Chicago, IL 60661

Attendees: 19, representing the following agencies and jurisdictions (sign-in sheet included in Appendix E):

- Illinois Department of Transportation (IDOT)
- Metra
- Metropolitan Water Reclamation District
- City of Chicago, Department of Community Development
- Chicago Department of Transportation
- Pace
- City of Detroit, Department of Transportation
- Illinois Commerce Commission
- Chicago Police Department
- Illinois State Police, Chicago District
- Chicago Park District
- City of Chicago, Streets and Sanitation
- Chicago Department of Environment
- Illinois Secretary of State Office

CTA hosted and presented the meeting with FTA present to observe. The meeting included a PowerPoint presentation similar to the one shown at the public scoping meetings and described in Section 2.5.4.1 with some additional information on the AA process.

2.4.3.1 Agency Scoping Meeting Comments

The topics addressed in the question and answer session included:

- A discussion of the capital cost estimates for each alternative and proposed funding sources.
- Effects of land acquisition.
- Coordination with other service providers.
- Opportunities to connect CTA and Metra at 115th and 130th.
- Opportunities for an intermodal station at 130th.
- Effects on Pace bus routes, access, and connections.
- Need to analyze bus effects for both build alternatives.
- Effects on bike access.
- Locations of grade separations and potential effects on bus service and street access.
- Use of green technologies.
- Coordination with wastewater treatment operations.
- Design of terminal at 130th Street.
- Effects of odors from sludge processing operations at adjacent property owned by the Metropolitan Water Reclamation District of Greater Chicagoland (MWRDGC) at 130th Street station.
- Potential reconfiguration of 95th Street Station.
- Safety and Security.
- Maintenance of access to expressway on-ramp during construction.
- Need for coordination regarding ongoing patrolling of facility.
- Cost of providing security.
- Management of contaminated debris during construction.
- Effects to wetlands.
- Coordination with/potential benefits to new environmental center at 38th and Torrence.
- Discussion of potential schedule for EIS, PE, and construction, and the EIS decision process.

The agency scoping meeting minutes are included in Appendix E.

2.5 Public Scoping

Public scoping is an important element in the process of determining the focus and content of an EIS. Scoping helps to identify the range of actions, alternatives, environmental effects, and mitigation measures to be analyzed in depth, and helps eliminate from detailed study those issues that are not pertinent to the final decision on the proposed project. Scoping is an effective way to bring together and address the concerns of the public, agencies, and other interested parties.

Notification of the public scoping meetings was completed via several forms of media as described further in this section. This outreach was in addition to the official notice published in the Federal Register. Two public scoping meetings were held as described in Section 2.5.4.

2.5.1 Notification Database

CTA maintained and updated the stakeholder database developed during the AA study to track interested individuals and groups. To the extent possible, CTA includes mailing addresses as well as e-mail contact information on the database. The database includes those who participated in the early scoping AA process by attending a meeting or providing comment during the process.

In addition to those identified through the AA process, the notification database was expanded to include residents and businesses adjacent to the proposed build alternative alignments. Addresses for businesses and residences on parcels either immediately adjacent to the proposed alignment or separated from the alignment by a street, park, vacant parcel, or one residence, were also added to the notification database. Parcels on both the east and west sides of the UPRR right-of-way were included. Parcels adjacent to both sides of the Halsted Alternative alignment were also included.

At the time of the scoping meetings, 4,265 entries were listed on the Red Line Extension project database. A list of the public agency database entries is provided in Appendix F.

2.5.2 Public Notification Activities

In order to engage the public to participate in the environmental review process and attend a scoping meeting, some basic strategies were used including: 1) make it easy to participate, 2) provide easy-to-understand information that helps people provide informed scoping comments and 3) provide multiple ways to obtain information and provide comment and ensure stakeholders are aware of the planning process and are shown how public input will be used.

Invitations were mailed directly to people on the project mailing list and e-blast invitations were sent to the e-mail distribution list. Newspaper display ads were placed in a total of 9 publications, transit cards were placed on CTA vehicles and in transit stations, and flyers were placed at strategic locations in the project area. Additionally, a project web page was developed to provide all of the project information and pertinent scoping information.

Prior to developing notification materials, an evaluation was conducted of the languages spoken within census tracts within the project area with an emphasis on identifying populations with limited English proficiency. The proposed Red Line extension LPA crosses 12 census tracts. In two of those tracts the percentages of Spanish speakers who speak English “less than very well” were 15 percent and 22 percent. In the other tracts and for other languages, the percentages were all below 3 percent for people who speak English “less than very well”. Therefore, the notification and scoping materials were provided in English and Spanish for the Red Line extension project.

2.5.2.1 Direct Mail Notice

Scoping meeting invitations were mailed on September 1, 2009 to a list of 4,265 entries that included elected officials, government agencies (including local agencies not described in Agency Scoping discussion in Section 2.4), tribes, general interested persons, businesses, organizations, neighborhood associations and property owners adjacent to both sides of the proposed build alternatives routes. The notice provided information on scoping, the alternatives, how to provide a comment, and the public scoping meeting information. The mailed invitation included information in English and Spanish. (Appendix G).

2.5.2.2 Transit Cards

In order to reach a large audience of transit riders, "transit cards" or "car cards" with the public scoping meeting information were placed in various buses and stations in the project area. (Appendix G) Approximately 691 transit cards were distributed on September 4, 2009 for posting at all Red Line stations and on bus routes originating from the 103rd Street Garage.

2.5.2.3 E-mail Notification

An invitation e-mail was created that included information on the public scoping meeting and how to provide comments. The e-mail was sent to approximately 323 addresses to people who had previously demonstrated an interest in the Red Line extension on September 5, 2009. A copy of the e-mail notification is included in Appendix G.

2.5.2.4 Newspaper Advertisements

To invite the public to the scoping meeting and notify individuals about the comment period, display advertisements for the scoping meetings were placed in nine newspapers within the project area. Newspapers were selected based on their geographic focus, language needs, and audited circulation numbers. Display ads ran during the week of September 8, 2009 through the week of September 18, 2009. Ads were placed in different papers on different days of the week throughout the notification period. Ads were placed in the two papers with the largest circulation twice, running a week apart. In addition, a legal notice was placed in the Chicago Tribune on September 8, 2009. The display ads and legal notice are included in Appendix G.

Table 2-1. Newspaper Display Advertisements

Newspaper	Ad Size	Geographic Coverage	Language	First Ad Date	Second Ad Date
Chicago Sun-Times	1/4 page	Region	English	Tues, 9/08/09	Tues, 9/15/09
Hoy	1/4 page	Citywide	Spanish	Fri, 9/11/09	--
RedEye	1/4 page	Citywide	English	Wed, 9/09/09	--
La Raza	1/4 page	Citywide	Spanish	Sun, 9/13/09	--
Chicago Tribune - City and SW Zone	1/4 page	City, SW suburbs	English	Fri, 9/11/09	Fri, 9/18/09
Southtown Star	1/4 page	S. Suburbs	English	Sun, 9/13/09	--
Chicago Crusader	1/4 page	South	English	Thu, 9/17/09	--
Chicago Defender	1/4 page	South	English	Wed, 9/16/09	--
Beverly Review	1/4 page	South	English	Tue, 9/15/09	--
Legal Notice: Tribune	N/A	Region	English	Tue, 9/08/09	

Source: CWC Transit Group

2.5.2.5 Project Web Site

A project web site, www.transitchicago.com/redEIS/, was developed for the Red Line EIS. The site includes information about the project, the environmental review process, and the scoping information. The site also included information about how to submit scoping comments and who to contact for additional information. The web site prominently featured the dates and times of the public scoping meetings, as well as links to directions using public transit to access the meeting locations. Website content included the scoping booklets, presentations made at the public scoping meetings, and other information of interest to the public from the AA process. The website will continue to be updated at key milestones. Some materials posted to the website were translated into Spanish.

2.5.2.6 Additional Outreach During Public Scoping Period

In order to maximize the coverage of the outreach effort for the scoping meetings, a media release (Appendix G) was sent to local press outlets, meeting announcements were posted on local on-line community calendars, and flyers (Appendix G) were put in key locations around the area. The meeting announcement was distributed to the following village hall and library locations:

- City of Burnham
- City of Blue Island
- City of Calumet
- Village of Calumet Park
- Village of Dolton
- Village of Evergreen Park
- Village of Riverdale
- Altgeld Branch Public Library

- Blue Island Public Library
- Brainerd Branch Public Library
- Calumet City Public Library
- Hegewisch Library Branch
- James F. Vodak/East Side Branch Public Library
- Jeffrey Manor Branch Public Library
- Pullman Public Library
- Riverdale Public Library
- South Chicago Library Branch
- Tuley Park Library Branch
- Walker Branch Public Library
- West Pullman Library Branch

2.5.3 Elected Official and Stakeholder Briefings

There were four briefings with elected officials or stakeholders held on the Red Line Extension project. Generally, briefings covered a description of the project and the scoping process. The briefings included the following:

- Office of Alderwoman Austin, 34th Ward, September 15, 2009.
- Office of Alderman Beale, 9th Ward, September 14, 2009.
- Office of U.S. Representative Jesse Jackson, Jr., September 22, 2009.
- Roseland Business Development Council, October 10, 2009.

2.5.4 Public Scoping Meeting

CTA hosted two public scoping meetings to inform the public about the project and gather input on the scope of the environmental studies, draft purpose and need, and alternatives to be evaluated. Meetings were conducted in compliance with NEPA guidelines, and locations were selected to reflect equitable geographic coverage, proximity to public transportation, and to minimize overlap with other meetings scheduled in the project area. The locations were within the project area, accessible by public transit, and ADA compliant. The scoping meetings were set approximately five weeks in advance of the end of the public comment period on October 27, 2009.

For the convenience of all attendees, bus lines to and from the meeting sites were publicized on some notices and on the website. In order to provide the greatest opportunity for community participation, meetings were scheduled in the early evening on weekdays.

A total of 173 people signed in at the two meetings. There may have been a few additional attendees at each meeting who did not sign in. Approximately 35 people provided verbal and/or written comments at the meetings. An additional 309 comments were received via letters, e-mail, and mailed comment cards throughout the public scoping period.

Meeting 1:

Time:	Tuesday, September 22, 2009, 6:00 to 8:00 p.m.
Location:	Historic Pullman Visitor Center 11141 S. Cottage Grove Avenue Chicago, IL 60628
Attendees:	87 people signed in
Comments:	11 verbal, 2 written

Meeting 2:

Time:	Thursday, September 24, 2009 from 6:00 to 8:00 p.m.
Location:	Woodson Regional Chicago Public Library 9525 S. Halsted Street Chicago, IL 60628
Attendees:	81 people signed in
Comments:	17 verbal, 5 written

2.5.4.1 Public Scoping Meeting Format

The scoping meetings began with a 45-minute open house format. During the open house session, project team members were present at project display boards to answer questions related to the technical aspects of the project. The open house session provided attendees with an opportunity to review the project information and clarify their understanding of the project and environmental process prior to the start of the presentation and subsequent comment period. Spanish and sign language interpreters were made available at both meetings. Following the open house period, a PowerPoint presentation was made to provide attendees with information regarding the purpose of scoping and information on the project purpose and need, background, the recently completed AA process, and the alternatives being carried forward into the DEIS (Appendix I). Emphasis was placed on the importance of the community providing comments before the comment deadline, at the public meetings or via e-mail, fax, or postal mail.

Following the presentation, the meeting shifted into a formal public comment session, which was recorded by a court reporter. Members of the public provided verbal comments to CTA on the scope of the EIS and the project which were recorded in formal transcripts (Appendix K). Comments were also accepted by comment sheets at the meeting and by mail, fax, and e-mail after the meeting until the close of the comment period on October 27, 2009. The oral comment period was moderated, and speakers were asked to limit their comments to three minutes. Those requiring translation were provided with six minutes. After the public comment portion of the meeting, the project team was again available to answer technical questions at the informational display boards until the end of the meeting time.

Agenda:
6:00-6:45 pm Open House
6:45-6:55 pm Presentation

6:55-7:55 pm Public Comments
7:55-8:00 pm Next Steps/Adjournment

2.5.4.2 Public Meeting Materials

Each meeting attendee was offered the following materials: an EIS scoping information booklet, a comment sheet, and a speaker card (Appendix H). The scoping information booklet provided a project overview and included the following sections: purpose of the EIS and scoping, environmental issues to be considered in the EIS, project overview, project alternatives, project purpose and need, public participation, how to participate in the decision-making process, and next steps. This scoping information booklet was also available in Spanish and was posted on the project web site.

The comment sheet allowed attendees to submit written comments during or after the meeting. The comment sheet was designed as a self-mailer so that individuals could easily mail comments to CTA if they needed more time to develop them after the public scoping meeting (Appendix H). The speaker card was provided for attendees to fill out and turn in before or during the public comment session if they wanted to give verbal comments. The speaker cards were provided to the hearing facilitator and names were announced to allow people to approach the microphone to make a comment (Appendix H).

Project exhibit boards were developed and used during the public open house part of the meeting. The boards included: No-Build Alternative, the Transportation System Management Alternative, the Locally Preferred Alternative, the Halsted Street Heavy Rail Transit (HRT) Alternative, Project Purpose and Need, How to Submit Comments, How to Stay Involved, Welcome to the Meeting, Environmental Review Process, Issues Potentially Considered in the Environmental Impact Statement, Meeting Agenda, and the Project Timeline (Appendix J). Exhibit boards were also posted on the website.

2.6 Comments Received

The public scoping period was from September 1, 2009 to October 27, 2009 which was greater than the 45 calendar days required by FTA rules. People were provided opportunities to comment in writing or orally at the two public scoping meetings or they could comment in writing via e-mail, fax, or postal letter. The comment cards distributed at the public meetings were designed to facilitate return of written comments both at the public meeting and via postal mail later during the public comment period. E-mail comments could be sent to a project specific e-mail address found on the project website and included in all notice materials distributed. In total, approximately 344 comments were received by the close of the public comment period. All comments received are included in Appendices K, L, and M.

At the September 22nd public scoping meeting, 87 people signed-in, 11 people made formal public comments and 2 submitted written comments by the end of the meeting. At the September 24th public scoping meeting 81 people signed-in, 17 people made formal public comments and 5 submitted written comments by the end of the meeting. An additional 309 written comments were received on the Red Line Extension project by the close of the public comment period.

Section 3
Summary of Scoping Comments

3.1 Introduction

CTA accepted comments on the Red Line Extension project throughout the entire scoping period, from September 1, 2009 until October 27, 2009. Agencies, community groups, members of the public, elected officials, and other interested parties submitted 344 letters, e-mails, comment cards, and individuals' oral testimony during this period. The summary table (Table 3-1) provides a tally of the topics discussed in the comments.

It should be noted that the combined numbers of comments listed in the following subsections and the summary table will be greater than the total number of comment submissions because some people discussed multiple topics in their submission. Topics covered in the comments included the purpose and need, the alternatives to be analyzed in the DEIS, potential impacts and mitigation measures, and other substantive issues. This section contains a summary of comments received during the scoping period. The actual comments may be found in Appendices K, L and M.

3.2 Summary of Substantive Comments

All comments were reviewed and categorized in an electronic database. The database contains information documenting the name of the commenter, the agency or organization the commenter represented, the method by which the comment was received, the topic categories addressed in the comment. The full text of each comment is included in Appendices K, L, and M.

The comments were largely fit into three topic categories. The major categories of comments were the project purpose and need (approximately 7 comments), the alternatives to be studied in the DEIS (including alignment options, station location options, and potential design features; approximately 326 comments), and environmental impacts and mitigation measures (approximately 37 comments). The following sections contain summaries of the comments from each major category.

Table 3-1 provides a summary of the comments received during the scoping period. Transcripts of the spoken comments submitted at the public scoping meetings and full text of all written public comments are provided in Appendices K and L. Agency comments are provided in Appendix M.

Table 3-1 Comment Summary

Purpose and Need	Ease congestion in the region Improve transit access to and from Far South side Reduce congestion at 95th and Dan Ryan terminal Provide connections to transit disadvantaged communities		
Proposed Alternatives	Support No-Build (0) Support TSM (0)	LPA – UPRR HRT Alternative(318) Support (317) Do Not Support (1)	Halsted Street Alternative(3) Support (3) Do Not Support (0)
Design Comments	Stations (326) Extension should connect to Altgeld Gardens at 130th Provide bike access and parking Parking facilities should be larger Parking facilities should be smaller Parking should be at church lots Station design needs to accommodate bus access	Design Features (12) Recycling stations Use alternative energy Lighting design to reduce light pollution Natural stormwater management Native landscaping Green roofs Bike access and parking	Design Features (cont) Use permeable paving Incentives for alternate fuel vehicles Adequate bus bays for Pace, CTA, Paratransit Operator facilities Passenger information Signal priority for bus access
Other Alternatives	1. One way loop 2. Leave the UPRR right-of-way at 115th Street or Kensington Avenue, travel east to the Metra Electric line, cross over the electric line and turn south onto the IHB right-of-way	3. Use the alleys to the east of South State Street or South Michigan Avenue 4. Extend electric line routes to connect with an Indiana-Illinois border parking lot	5. Use I-94 and/or I-57 for the extension 6. Use of the Green Line from Stony Island to I-94 and South to 159th Street 7. A 9.5 mile one-way loop with seven stations
Potential Impacts	Transportation Impacts (21) Land Acquisitions, Displacement and Relocations(14) Community and Neighborhood Impacts (21) Visual and Aesthetic Impacts (6) Noise and Vibration (9)	Parklands (3) Economic and Fiscal Impacts (7) Safety and Security (8) Environmental Justice (284) Construction Impacts (8) Public Services (3)	

Note: Tallies are approximate

3.3 Comments Related to Purpose and Need

Most comments regarding the purpose and need for the project cited the benefits of the rail extension. In total, approximately 7 comments related to purpose and need were received. The general topics that these comments addressed were:

- Easing congestion in the region.

- Providing more transit options.
- Reducing bus congestion at the 95th and Dan Ryan Terminal.
- Providing connections to transit disadvantaged communities.

3.4 Comments Related to Alternatives

An approximate total of 326 comments specifically discussed the alternatives. The majority of the comments, approximately 317, supported the Locally Preferred Alternative (LPA) - Union Pacific Railroad (UPRR) Heavy Rail Transit (HRT) Alternative. Most of the comments in support of the LPA also noted that the extension should reach the Altgeld Gardens/Calumet River area at 130th Street, which is already a feature of the Locally Preferred Alternative. Many comments simply indicated a preference for the Locally Preferred Alternative without indicating the reason for their choice. One comment opposed the extension citing relocation impacts, and potential effects related to property values, traffic, and noise. A few comments mentioned other alignments. There were no comments specific to the no build or the TSM alternative. Three comments expressed support for the Halsted Street HRT Alternative as an approach that would have less impact on existing residences. However, even these comments mentioned the need for the extension to reach the Altgeld Gardens area.

3.4.1 Locally Preferred Alternative (LPA)

Approximately 317 comments were received expressing a preference for the LPA. Comments on this alternative included:

- Need for the extension to reach the Altgeld Gardens area.
- Potential to enhance neighborhoods by easing congestion and providing more transit options.
- Potential impact of land acquisitions, displacements and relocations due to the new extension and the park and ride facilities.
- Potential impacts related to construction.
- Potential noise and vibration impacts.
- Potential impacts to parking, bicycle and pedestrian circulation, bus access and routes.
- Potential to increase foot and vehicle traffic around the stations.
- Potential to increase litter and crime around the stations.
- Potential to provide options to transit disadvantaged population.
- Provides the greatest potential to mitigate traffic congestion feeding in from the south.
- Concerns about neighborhood compatibility.
- Potential impacts to parklands.
- Potential energy usage effects.
- Potential for brownfields redevelopment.

- Potential lighting and shadow effects.
- Potential for economic development.

3.4.2 Halsted Street Heavy Rail Transit (HRT) Alternative

Three comments were received supporting the Halsted Street Heavy Rail Transit (HRT) Alternative. Two of those comments included the refinement that the alternative should still reach the Altgeld Gardens area.

3.4.3 Station Locations and Connections

Approximately eight comments suggested station locations and connections that the Red Line Extension could make. The comments pertaining to station locations and connections included:

- Extension should connect to the Altgeld Gardens/Calumet River area at 130th Street.
- A station at 115th or Kensington to provide an easier connection to Metra and the South Shore.
- Concerns about providing bicycle access and parking.
- A suggestion to increase the proposed parking at the large park-and-ride facilities.
- Reduce the number of large park-and-ride stations and place more reliance on PACE bus services to get to the train.
- Use church parking lots instead of constructing new park-and-rides in the vicinity of the four station stops of the extension.

3.4.4 Other Alignments

CTA received approximately eight comments suggesting alignments for the Red Line Extension other than the LPA Alternative. These suggested alignments included:

- A one-way loop alternative.
- An alignment that leaves the UPRR right-of-way at either 115th Street or Kensington Avenue traveling east to the Metra Electric line, crossing over the electric line and turning south onto the IHB right-of-way.
- An alignment that uses the alleys to the east of South State Street or South Michigan Avenue.
- Extension of the electric line routes to connect with an Indiana-Illinois border parking lot.
- Use of I-94 and I-57 for the extension.
- Use of the Green Line from Stony Island Avenue to I-94 and South to 159th Street.
- A 9.5 mile one-way loop with seven stations.

3.4.5 Design Features

Approximately twelve comments were submitted suggesting additional design features to be taken into consideration. Suggestions regarding design features were primarily related to issues of sustainability. These features include the following:

- Recycling opportunities at stations and parking areas.
- Alternative energy options including solar, solar thermal, wind and more to provide electricity and heating/cooling.
- Solar arrays (on rooftops and large expanses) to return energy to the grid.
- Downward facing lighting to reduce light pollution.
- Bioswales and rain barrels.
- Native landscapes with little to no irrigation.
- Green roofs.
- Bicycle access and parking.
- Permeable paving for the park-and-ride areas.
- Charging stations for electric vehicles.
- Include sufficient bus bays at the stations to accommodate both Pace fixed/express routes, Regional ADA Paratransit services, and CTA bus routes.
- Include bus operator facilities and passenger information as well as bus priority access such as transit signal priority or bus-activated signals to allow buses to enter/exit the terminal with minimal congestion.

3.5 Comments Related to Potential Impacts

Approximately 37 comments received pertained to specific potential impacts of the project. Commenters discussed a wide range of potential impacts, though the majority touched upon relocations and displacements, safety, community compatibility, and transportation related issues such as traffic, parking, and bike and bus access to park and rides. The comments on each type of impact are summarized in the following subsections.

3.5.1 Transportation Impacts

Approximately 21 comments touched on potential transportation impacts including potential impacts to traffic circulation, parking, and access to park and rides by bikes, buses, and pedestrians. Comments included the following issues:

- Need for immediate relief of congestion at the 95th/Dan Ryan Terminal.
- Need for easy access for first responders such as police, fire and medical response during an emergency.
- Potential impacts related to increased foot and vehicle traffic.
- Arterial roadway access to/from the proposed station(s) served by connecting bus services need review for issues such as railroad grade crossings, street parking, and intersection improvements to accommodate bus movements.
- Suggestions for location and sizing of park and rides (both larger and smaller), and an

alternative to use church parking lots for commuter parking rather than new construction.

- Potential impacts to neighborhood parking if park and ride fills up.
- Extension will increase transit options for users.
- Need to increase bus service including night owl service.
- Reductions in travel times for bus riders.
- Use of bus services to access rail line.
- Potential effects on traffic patterns and congestion in a larger regional context.

3.5.2 Land Acquisition, Displacement, and Relocations

Fourteen comments about land acquisition, displacement, and relocations were received. The issues addressed in these comments include concern from the potential impacts to houses around the stations and extension. Comments included the following issues:

- Potential for property loss due to the construction of the stations, park and ride lots, and the extension line.
- Potential to impact homes on Eggelston Street.
- Potential to impact homes on the east side of the tracks.
- Potential to impact industry and businesses on the west side of the tracks.
- Reluctance of senior residents to relocate.

3.5.3 Community and Neighborhood Impacts

Twenty-one comments about neighborhood compatibility and potential community impacts were received. The comments focus on the potential impacts to the neighborhoods due to construction and operation of the Red Line Extension. Comments included the following issues:

- Potential to enhance neighborhoods.
- Potential for transit-oriented development.
- Issues of compatibility between commuter rail and residential neighborhoods.
- Operational impacts on residential character. Concerned that the construction and operation of the project will cause adverse impacts to the residential character of the community.
- Potential increased safety issues for residents near the extension.
- Disruption to senior citizens in the project area.
- Potential loss of residential homes.
- Potential effects of lighting around the stations and tracks.
- Potential loss of residential street parking due to transit riders parking in the

neighborhoods.

- Potential impact to residences on Eggelston Street including relocation, property values changes and increased traffic.
- Potential effects related to redevelopment of brownfield sites, such as environmental or human health risks.
- Effect of increasing transit access to transit disadvantaged communities.
- Potential to support and revitalize underserved communities.

3.5.4 Visual and Aesthetic Impacts

Six comments about visual and aesthetic impacts were received. Comments were primarily related to the potential for light impacts. One comment noted the potential for the trestle on Halsted Street to cause dark shadows and blight the area. Another comment mentioned the potential for an elevated track in back of homes to create dark areas and a visual impact.

3.5.5 Noise and Vibration

Approximately nine comments about noise and vibration were received. The issues addressed in these comments included noise and vibration from the trains moving along the tracks and potential damage to surrounding buildings due to vibration. One comment requested that the CTA do a full-scale investigation of the "best available" and "best practicable" noise mitigation technologies.

3.5.6 Parklands

Three comments about parkland and recreational facilities were received. Comments noted potential impacts to both Wendell Smith Park and Fernwood Parkway Park. In addition, one comment noted the potential opportunity to provide better access to the Ford Calumet Environmental Center.

3.5.7 Economic and Fiscal Impacts

Approximately seven comments received concerned the economic and fiscal impacts of the project. These comments included the following issues:

- Potential to increase labor productivity as a result of mitigating car congestion and reducing travel times to work for residents of the far south side of Chicago and south suburbs.
- Concerns about the project costs compared to other projects across the country.
- Potential impact to property values of the homes near the extension.
- Potential to disrupt businesses during construction.
- Potential beneficial impact of transit investment on job creation and increasing employment opportunities.
- Employment model should demonstrate benefits to working populations in project area. Concern that the project will not provide jobs to the people in project area.

- Several suggested design variations were mentioned as potentially being lower cost options.
- Opportunities for transit oriented development and/or commercial and retail services near proposed stations and park and rides.
- Concerns about funding sources and maintenance and operation costs.

3.5.8 Safety and Security

Eight comments about safety and security were received. Comments included the following issues:

- Ability of first responders to access construction areas.
- Concerns that lighting around stations and along the rail line be adequate to discourage crime. Potential for the trestle on Halsted Street to create shadows.
- Potential impact for increased crime at stations and surrounding neighborhoods.

3.5.9 Environmental Justice

Approximately 284 comments were received that focused on the benefits of the proposed project to transit disadvantaged communities (communities underserved proportionally by transit investment). One comment referred to potential air quality benefits that might accrue to the low income community at Altgeld Gardens. Several comments specifically mentioned environmental justice as a potential goal or benefit of the project. Approximately five of the comments referred to a potential for or concern about brownfields development to mitigate the effects of contamination within the project area and effects of hazardous materials on disadvantaged communities. Some specific comments included:

- EIS needs to demonstrate compliance with environmental justice principals.
- Employment model should demonstrate benefits to working populations in project area.
- Potential for environmental justice issues related to job creation and increased employment opportunities.
- Effect of increasing transit access to transit disadvantaged communities.
- Potential to support and revitalize underserved communities.
- Reluctance of senior residents to relocate.

3.5.10 Construction Impacts

Eight comments about construction effects were received. Comments included the following concerns:

- Potential for an increase in termites and rodents in neighboring homes and structures during demolition.
- First responders need access to and through construction zones.
- Potential for construction vibration to damage nearby homes.

- Potential impacts of construction noise.
- Potential disruption of neighborhood traffic patterns and parking
- Construction duration.

3.6 Comments Submitted by Federal, State, and Other Agencies

Seven agencies submitted comments during the scoping period. Most of the topics mentioned were also covered in the comments discussed in the previous sections. However, some of the agency comments presented new issues, including requests to ensure compliance with government-mandated policies and regulations, coordination among transit providers, and safety concerns. The agency comments are summarized in the following sections, and full text of the agency comments is provided in Appendix M. The concerns of all the agencies will be addressed both through the DEIS analysis and through on-going coordination with CTA.

There were no comments from federal agencies. Comment letters were received from two state agencies, one regional transit provider, and four City of Chicago agencies.

3.6.1 Comments Submitted by State Agencies

The Illinois Environmental Protection Agency did not have any objections to the proposed project and highlighted the future need to obtain construction permits for construction stormwater management and the potential need to obtain permits from the US Army Corps of Engineers if there would be any in-water work. The Illinois State Police highlighted concerns for first responders including access to construction zones and access to elevated tracks.

3.6.2 Comments Submitted by Other Agencies

The Pace suburban bus service, the City of Chicago Department of Streets and Sanitation, Chicago Department of Environment, Chicago Housing Authority, Chicago Police Bureau of Patrol, and the Metropolitan Water Reclamation District of Greater Chicago (MWRD) submitted comments covering some of the topics mentioned in previous sections, as well as:

- Evaluate opportunities for sustainability actions such as recycling stations, use of solar energy, sustainable management of stormwater, incentives for use of fuel efficient or alternative fuel vehicles, and/or reuse and recycling of construction debris.
- Consider connections to the new Ford Calumet Environmental Center.
- Consider intermodal connections and providing connections between transit systems at proposed station stops at 115th and at 130th Streets.
- Evaluate potential impacts of construction and operation on the need for services from other City departments including staffing levels and specialized rail training.
- Evaluate impacts on street lights, street lighting levels, and street trees.
- Extension to Altgeld Gardens will improve city wide accessibility for transit dependent populations.
- Ensure safety of transit users by evaluating potential security risks from less used and isolated access points to train lines.

- Arterial road access to proposed stations should be evaluated for adequate grade crossings, street parking, and intersection configurations to accommodate connecting bus movements.
- Station design should include consideration of access requirements for both Pace and CTA bus routes and Regional ADA Paratransit, operator facilities, passenger information, and bus priority access.
- Evaluation of connecting bus service to new stations should consider likely route restructuring that would occur to reduce service overlap.
- Design will need to maintain access to MWRD facilities, evaluate potential impacts to operations, and coordinate with utility locations.
- Potential use of MWRD property for proposed stations and park and ride facilities at 130th Street would require agreements with MWRD.
- Evaluate impacts to wetlands potentially located in the vicinity of the proposed 130th Street station.
- Evaluate potential effects of odors from MWRD facilities on proposed transit facilities.

Section 4
Responses to Comments

4.1 Introduction

The purpose of scoping is to provide an opportunity for agencies and the public to comment on the purpose and need, the range of alternatives proposed for analysis, and to help the project proponent identify issues that should be evaluated in the DEIS analysis. Therefore, all comments that fall within the scope of the NEPA process will be addressed in the DEIS. CTA will also continue to work closely with agencies and stakeholder groups to address issues identified through scoping.

4.2 Comments Related to Purpose and Need

There were no comments directly related to the stated purpose of the project. A number of comments did affirm many of the previously identified needs for the project. In addition, some commenters identified additional conditions or benefits that support the need for the project. The DEIS will expand and clarify the purpose and need statement in response to these comments.

4.3 Comments Related to Alternatives

Many commenters expressed a preference for the LPA because it would enhance neighborhoods, ease congestions and provide better transit options for users. Comments that included reasons for a stated preference also provide insight into potential impacts or benefits of all of the alternatives. These insights into potential impacts are helpful in guiding the impact analysis of the DEIS. Comments that provide this insight are also counted as a comment on a particular resource discipline and will be included in the analysis of potential impacts.

A few comments expressed a preference for an alternative that is not currently proposed for consideration in the DEIS. The DEIS will summarize alternatives previously considered and eliminated and the process used to do so. Alternatives that do not meet the project purpose and need will not be evaluated further.

4.4 Comments Related to Potential Impacts

Potential impacts or benefits of alternatives identified by commenters will be analyzed in the DEIS. Insights into how a particular alternative may affect traffic, neighborhoods and communities, safety, or accessibility in the project area and the region are a valuable result of the scoping process. Many comments reflected an awareness of the transit dependency of the communities in the project area and hope for potential benefits to disadvantaged populations that may result from the project. Specific comments on each potential impact will be used to guide the analysis of the alternatives.

Specific comments on potential impacts were related to traffic circulation and congestion, parking issues, property acquisitions and relocations, safety, community and neighborhood compatibility, economic development opportunities, visual and aesthetic concerns, noise and vibration, and construction activities.

Appendix A
Public Participation Plan

Chicago Transit Authority

PUBLIC PARTICIPATION PLAN

ENVIRONMENTAL IMPACT STATEMENT (EIS) PHASE 1

RED LINE EXTENSION

Submitted: July 14, 2009

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Overview

Red Line Extension

The Chicago Transit Authority (CTA) is proposing to make transportation improvements by extending the Red Line southwest from the 95th Street terminal station to 99th Street in the I-57 median, then turning south and southeast along or adjacent to the Union Pacific Railroad (UPRR) right-of-way until 120th Street, continuing southeast at-grade to 130th Street. CTA and the Federal Transit Administration (FTA) will be preparing an Environmental Impact Statement (EIS) that will evaluate the environmental impacts of constructing and operating the extension. The extension includes 5.3 new route miles of rapid transit to the existing Red Line, four additional stations – at 103rd, 111th, 115th and 130th Streets – with new park-and-ride and bus terminal facilities at each station, and 78 new railcars. CTA is investigating a shortened version of this LPA (to 115th Street) to evaluate potential improvements in cost-effectiveness.

The proposed project is intended to:

- Improve commute times for study area residents
- Improve access to the 95th Street station
- Alleviate congestion at the existing Red Line terminal station, where current use exceeds design capacity, resulting in delays, safety issues, and lack of transit attractiveness
- Reduce adverse impacts of projected growth to study area resident without transportation alternatives

Public Participation Plan

The National Environmental Policy Act (NEPA) requires evaluation of potential environmental impacts associated with federal projects and actions. For this project, the evaluation will be documented in an Environmental Impact Statement (EIS). An EIS will be prepared to identify impacts related to project construction and operation.

The EIS will cover a No Build Alternative, a Transportation Systems Management (TSM) Alternative and the Locally Preferred Alternative. The EIS will describe the alternatives, the existing environmental setting, the potential impacts from construction and operation of the alternatives and mitigation measures to reduce or eliminate potential impacts.

The Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) is an act that governs United States federal surface transportation spending and requires project proponents provide opportunities for public participation in transportation decision-making. SAFETEA-LU incorporates changes aimed at improving and streamlining the environmental process for transportation projects. It provides a framework for carrying out the existing requirements under NEPA and other laws.

The process of determining the scope, focus and content of an EIS is known as “scoping.” Scoping meetings are a useful opportunity to obtain information from the public and governmental agencies. In particular, the scoping process asks agencies and interested parties to provide input on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation, and potential impacts and mitigation measures to be considered.

Public Participation Plan for Next Phase

This Public Participation Plan covers activities and materials for the scoping phase only. An additional plan will be provided to outline public participation activities that will be done during the development and review of the Draft EIS and Final EIS.

Goals

The public participation plan is intended to guide the CTA through a comprehensive public involvement and outreach process for the Red Line Extension EIS scoping phase. The program is flexible in order to respond appropriately to public and agency issues as they arise. It is anticipated that additional information will become available that will further guide proposed activities. The dates and activities are preliminary and may change.

Two of the major goals of the NEPA environmental analysis process are to better inform governmental decisions and to enhance citizen involvement. With these goals in mind, the public participation program will:

PUBLIC PARTICIPATION GOALS
o Build on previous outreach efforts established during the Alternatives Analysis phase
o Make the complex issues associated with the proposed project and the environmental analysis understandable to stakeholders
o Ensure stakeholders are aware of the planning process and the purpose and content of the proposed project
o Provide a range of opportunities for the public and interested stakeholders to comment on the proposed project and environmental studies
o Fulfill the public participation requirements and guidelines of NEPA and the federal transportation reauthorization bill known as the Safe, Accountable, Flexible, Efficient Transportation Equity Act-A Legacy for Users (SAFETEA-LU)
o Document all public and agency input.

The public participation program provides a variety of communication channels to help the public understand the current scope of the study, including its impacts and benefits. The program will solicit input and feedback from the public as to their specific needs, issues, concerns, and recommendations. In order to engage the public to participate in the environmental review process, some basic strategies will be used in the public participation program.

STRATEGIES TO ENGAGE PUBLIC	⇨ APPROACH
o Make it easy to participate o Provide easy-to-understand information that helps people provide informed scoping comments o Provide multiple ways to obtain information and provide comment o Ensure stakeholders are aware of the planning process o Show how public input will be used	o Scoping meeting within the project area; Web access to all project information; outreach materials in English and Spanish o Straightforward Scoping Booklet, Web site, exhibit boards and handouts at meetings o Web site, mailed notice, e-blasts, community calendars, comment cards, media o Careful review and augmentation of the existing project mailing list o Stakeholder and Alderman/elected official briefings to identify issues and find additional ways to engage the local community o Document all public and agency input in the Scoping Meeting Summary Report; provide final report on Web site

Key Issues

As the study progresses, key issues will evolve and the appropriate public involvement approach to address key issues will be determined. An initial list of the key issues has been developed. The list will be amended and expanded as the study moves forward.

KEY ISSUES

General Issues/Community Concerns

- Public safety (schools, crime, crossings)
- Providing access to underserved communities (Altgeld neighborhood)
- Location/benefit of different station options
- Length of the study process
- Impact to Chicago Olympic bid
- Impact/enhancement on residential/business/school areas surrounding the project
- Effect/enhancement of quality of life
- Existing negative environmental conditions
- Noise/vibration for residents along corridor
- Potential reduction of greenhouse gasses vs. contribution to sprawl
- Accuracy of model data (ridership numbers)
- Suburban residents' image of CTA service

Economic Issues/Concerns

- Jobs/improved economy
- Project cost
- Funding
- Cost vs. benefits
- Local workforce participation
- Potential to take money away from other needed public projects
- Public transit effects on property values
- Support for local economic and land use plans and goals

Transportation Issues/Concerns

- Coordination/connectivity with other transit systems
- Project amenities for bike/pedestrian and transit users
- Impact of program on the other CTA services

Construction Issues/Concerns

- Length of construction
- Potential traffic/detours/delays
- Potential parking/relocation/displacement during construction
- Potential transit access/impacts on bus or transit stops

Key Audiences

Anyone who lives, works, plays, learns and commutes through the Red Line Extension project area, or has some involvement or oversight in how the line will operate, is an important audience member. The public participation program will create a structure for gaining an understanding of the different community interests and characteristics. The project is important to many different groups, each with specific interests in the study. The outreach team will keep these groups involved and continually informed about the process and progress of the analysis. Brief discussions of some key audiences follow.

Local Community

Reduction of impacts on residential areas and maintenance of neighborhood character are important issues for neighborhood organizations and homeowners. The public participation program will include outreach to property owners and residents around and adjacent to the extension. Some of the local communities that may be interested include the following:

- Altgeld Neighborhood
- Beverly Neighborhood
- Burnham Residents
- Chatham Avalon Park Community Council
- Chesterfield Community Council
- City of Blue Island Residents
- City of Calumet Residents
- Cottage Grove Heights Neighborhood
- Gardens Neighborhood
- Longwood Manor Neighborhood
- Morgan Park Neighborhood
- Neighbors of Fuller Park
- Princeton Park Neighborhood
- Pullman Neighborhood
- Roseland Neighborhood
- United Neighborhood Organization
- Village of Calumet Park Residents
- Village of Dolton Residents
- Village of Evergreen Park Residents
- Village of Riverdale Residents
- Washington Heights Neighborhood

Business / Business Associations / Institutions

Business interests vary along the corridor. Some business stakeholders value the extension's potential enhancement of employee and customer access to the region while others are concerned about its effects on individual business sites. This overall group includes the industries, local business leaders and chambers of commerce. The outreach will solicit ideas and concerns from the business community. Some of the local business groups that may be interested include the following:

- 87th Street Stony Island Chamber of Commerce
- 95th Street Corridor
- American Brotherhood of Contractors
- Association of Asian Construction Enterprises
- Black Contractors United (BCU)
- Blue Island Chamber of Commerce
- Bronzeville Chamber of Commerce
- Business and Economic Revitalization Association
- Calumet Area Industrial Commission
- Calumet City Chamber of Commerce
- Chatham Business Association
- Chicago Area Gay & Lesbian Chamber of Commerce
- Chicago Minority Business Development Council (CMBDC)
- Chicago Southland Chamber of Commerce
- Chicagoland Chamber of Commerce
- Cosmopolitan Chamber of Commerce
- Greater Auburn -Gresham Development
- Greater Southwest Development Corp
- East Side Chamber of Commerce
- Hegewisch Chamber of Commerce
- Hispanic American Construction Industry Association (HACIA)
- Illinois Hispanic Chamber of Commerce
- Illinois Sports Authority
- Latin American Chamber of Commerce
- National Association of Women Business Owners (NAWBO-Chicago Area Chapter)
- Predestined Incorporated
- Puerto Rican Chamber of Commerce of Illinois
- Rainbow Push Coalition, International Trade Bureau
- South Chicago Chamber of Commerce
- Southwest REACH Center
- St. Bernard's Hospital and Health Care Center
- Women's Business Development Center (WBDC)

Associations / Special Interest Groups / Schools

Sensitivity to the surrounding environment is important to developing an acceptable project. The input of various local, state, and federal agencies will be obtained throughout the environmental process. In addition, associations, special interest groups and schools will be consulted. Some of the key groups that may be interested include the following:

- Alianza Leadership Institute
- Apostolic Church of God
- Carver Military Academy
- Catholic Charities - Community Affairs and Civic Affairs
- Chicago State University, Office of Public Affairs
- Chicago Urban League
- Chicagoland Bicycle Federation
- Corliss High School
- Developing Communities Projects, Inc
- Firman Community Services
- Gwendolyn Brooks College Preparatory High School
- Harlan Community Academy High School
- Historic Pullman Foundation
- Illinois Institute of Technology
- Kennedy King College
- Metro Seniors in Action
- Morgan Park High School
- NAACP, Chicago Southside Chapter
- Northeastern University Center for Inner City Students
- Northwestern University
- Olive-Harvey College
- Percy L. Julian High School
- Pullman Civic Organization
- Pullman Historic Visitor Center
- Rainbow/Push Coalition
- Riverdale Community Resource Center
- Roseland Heights Community Association
- Roseland Heights Community Organization
- Rosemoore Community Association
- Salem Baptist Church of Chicago
- Senior Service Coalition of Southeast Chicago
- Simeon Career Academy
- South Shore Cultural Center
- Southeast Environmental Task Force
- St. Sabina Church
- Strategies for Community Economic Development & Finance
- Teamwork Englewood
- University of Chicago
- University of Illinois at Chicago -College of Urban Planning and Policy
- West Chatham Improvement Association
- YWCA

Commuters

Commuters are interested in the study as it relates to their daily commute. Key issues include traffic impacts and congestion, safety, and access. Advanced, timely information is important for this group.

Public Agencies and Local Government

Coordination and cooperation among agencies and all levels of government are an important element of this study. Some of the key agencies and local government representatives that may be interested include the following:

- Alderman, Ward 3
- Alderman, Ward 6
- Alderman, Ward 7
- Alderman, Ward 8
- Alderman, Ward 9
- Alderman, Ward 17
- Alderman, Ward 34
- Beverly Area Planning Association
- Chicago Housing Authority
- Chicago Roseland Development Corporation
- City of Blue Island
- City of Burnham
- City of Calumet
- City of Chicago Department of Community Development
- City of Chicago Department of Transportation
- Congressmen
- Cook County Commissioners
- South Suburban Mayors & Managers Association
- Southeast Chicago Development Commission
- State Representatives
- State Senators
- Village of Calumet Park
- Village of Dolton
- Village of Evergreen Park
- Village of Riverdale
- Village of Riverdale, Community Development Department

Media

Media coverage offers an efficient means of communicating with the general public. Effective coordination with local and regional media contacts will be crucial to raising public awareness and explaining the study. Supplying the media with updated, factual information increases the likelihood of balanced, informative coverage. Ethnic, multi-lingual media coverage will also be an important element of the media outreach. See Appendix C for a list of the media outlets.

Public Participation Activities

Stakeholder and Alderman/Elected Official Briefings

An initial task in the public involvement program will be to identify areas of agreement and conflict among various stakeholders. Individual meetings with key stakeholders will be informal but structured to obtain input on goals, objectives, key issues, preferred communication tools, and public policy considerations. Input obtained from the stakeholder briefings will be shared with the team and incorporated in the public participation program. The team will work with CTA to develop the list of key stakeholders that will be briefed.

Schedule:

Schedule Meetings:	End of August
Hold Stakeholders Meetings:	Between 9/9/09 and 9/29/09

Agency Scoping Meeting

An agency scoping meeting will be held to coordinate and facilitate work with the designated federal, state and local agencies. Agendas for all meetings will be prepared and discussions and agreements will be fully documented.

Location

- The meeting will be held at the CTA offices.

Schedule:

- Agency Scoping Meeting: 9/22/09

Public Scoping Meeting

The scoping meeting will first inform the public about the project process, the Locally Preferred Alternative, and the public participation plan. Then, the meeting will gather input on the scope of the environmental studies, draft purpose and need, and the alternatives to be evaluated.

Schedule:

- Public Scoping Meeting: Between9/23/09 – 10/2/09

Location

The meeting location will be within the project area and must meet FTA criteria. Locations will be identified in conjunction with the Aldermen in the project area.

The locations identified must meet the following criteria:

- The facility must have at least two large rooms – one room must be able to accommodate a theater type presentation that can hold at least 100 people and a second room must be available to comfortably accommodate the presentation boards, technical staff, and public
- Must be ADA accessible
- Near public transportation
- Free of charge

Format

The meeting will start with an open house format where members of the public and other interested parties can view exhibit boards with project information. This informal setting provides participants a chance to ask questions of project team members who understand the project objectives and alternatives.

The project team will be available to answer any questions during the open house and will encourage people to make formal comments in writing or during the comment session. A short PowerPoint presentation will follow, providing an overview of the Locally Preferred Alternative, the NEPA process, the purpose of scoping, and the potential environmental issues.

The meeting will end with a session where members of the public can provide oral comments on the scope of the EIS. Each presentation will be set up to accommodate 100 attendees. Comments may be provided at the meeting by comment cards and during the public comment session. A court reporter will take public comments and input at the meeting and document the formal comment session. In addition, material will be available with contact information for those who wish to submit written comments later during the scoping period.

Comments will not be addressed during the meeting. The purpose of the scoping meetings is to listen to people's concerns and to address them through the analysis in the EIS. CTA will not respond to comments during the open comment period. The open house portion of the meeting is intended to provide people an opportunity to ask questions and clarify their understanding of the project proposal.

Schedule:

- 6:00-6:45 pm Open House
- 6:45-7:05 pm Presentation
  - Welcome/Meeting Purpose and Format
  - Project Overview
  - Environmental Process, Scoping and Environmental Issues
- 7:05-7:55 pm Public Comments on Scope of EIS
- 7:55-8:00 pm Next Steps/Adjournment

Note: The scoping meeting will be advertised from 6:00 – 8:00 pm and the team and staff will stay until 8:00 pm, even if no members of the public are present. Also, the team and staff will not end the meeting until everyone who wishes to speak has had an opportunity to do so.

Public Participation Notification and Information Materials

Notice of Intent (NOI)

The publication of a Notice of Intent in the Federal Register is the first formal step in an EIS process. The Notice of Intent (NOI) will be sent by CTA, the lead agency, to notify agencies that it plans to prepare an Environmental Impact Statement (EIS).

Schedule:

- Publish NOI in Federal Register: 9/8/09
- Beginning of 45 day comment period: 9/9/09

Participating Agency Invitation Letters

Letters inviting agencies to be involved in the process will be prepared.

Schedule:

- Mail participating agency letters: 8/26/09

Public Scoping Invitation Notice

A one page mailer will act as an announcement for the meeting. It will include the meeting date, location and time, and will also provide basic information about the project, the environmental process, and date by which public comments must be submitted. The notice will be translated into Spanish and Polish.

Schedule:

- Mail scoping invitation notice (arrive 2 weeks in advance of meeting): 8/26/09

Other Notification (Village Hall, Libraries, Blogs, e-blasts, Transit Cards)

Notice of the scoping meetings will be posted and distributed throughout the area including at Village Halls, libraries, e-list serves and with community groups.

Schedule:

- Launch notification distribution: 8/26/09

Village Hall Announcement Posting Locations:

- City of Burnham
- City of Blue Island
- City of Calumet
- Village of Calumet Park
- Village of Dolton
- Village of Evergreen Park
- Village of Riverdale

Library Announcement Posting Locations

- Altgeld Branch Public Library
- Blue Island Public Library
- Brainerd Branch Public Library
- Calumet City Public Library

- Hegewisch Library Branch
- James F. Vodak/East Side Branch Public Library
- Jeffrey Manor Branch Public Library
- Pullman Public Library
- Riverdale Public Library
- South Chicago Library Branch
- Tuley Park Library Branch
- Walker Branch Public Library
- West Pullman Library Branch

Blogs

- Chicago Transit Board Chairman Carole Brown's "Ask Carole" blog
- Chi-Town Daily News
- CTATattler blog
- Gapers Block
- Ridge99.com
- southwestobserver.com
- thesixthward.blogspot.com

E-blasts

E-blasts will be sent to stakeholders, politicians and residents who went to the previous CTA meetings. We will obtain e-mail addresses for officials at key businesses and public buildings – such as post offices, schools, libraries, and courthouses – to make sure they receive the meeting information in a PDF format so they can print it out and post it.

Online calendars

There are many online event calendars, and most of them are run through newspapers or TV stations. Meeting notices will be sent to local chambers of commerce and to large organizations that cover a wide audience and would communicate with members in the areas served by the line, such as the Chicagoland Chamber of Commerce, Illinois Chamber of Commerce and the Association Forum of Chicagoland.

Promotion in Transit

The scoping meeting announcement will be posted at the CTA stations and in the CTA trains and buses via car cards.

Schedule:

Send scoping announcement to CTA	8/12/09
Post in vehicles	8/26/09

Social media

There are several opportunities for CTA to reach out via social media. We can post the meeting information on the CTA Facebook group page. Information can also be provided to movingbeyondcongestion.com. In addition, we can start a Facebook page for the Red Line Extension project, so that people can follow the progress of the project and offer their support. And, if CTA started Twitter accounts for the Red Line, followers could receive updates about what transpires at a public meeting, for example.

Web site

A new project site will be developed for the environmental phase. The Web site provides access to project updates, project background, project materials and documents and announcements. The scoping meeting dates will be posted in advance on the Web site.

Schedule:

- Develop Web site: June - August 09
- Launch Web site: 8/13/09
- Post Scoping Information 8/26/09

Scoping Display Advertisement/Legal Notice

A formal scoping display ad will be placed in local and regional newspapers. The ad will include information on the project, the environmental analysis, the scoping meeting agenda, the meeting information and where and when to submit comments. An e-mail and postal mail address will be provided for written comments. The team will coordinate with CTA as to the placement of ¼ page advertisements in local newspapers. The ad will also be prepared in Spanish. Below is a preliminary listing of the outlets.

Publication Placement:

- The Chicago Crusader
- Chicago Defender
- LaRaza
- Neighborhood Star
- Southtown Star
- Beverly Review
- The Villager

Schedule:

- Provide display ad text to CTA ten days prior to media publishing deadlines
- Place display ad: Two weeks in advance of meeting, 8/26/09

Media Release

Media outreach will be done to ensure that reporters are aware of the scoping meetings and have adequate background information with which to write about the environmental review process. The team will work with CTA to develop key messages and put together a press release and media advisory. See Appendix C for the media distribution list.

Schedule:

- Send media release to CTA two days in advance of media deadline for 9/16/09 publication
- Distribute media release: One week in advance of meeting, 9/16/09

Scoping Booklet

The scoping booklet will contain background information on the project and the NEPA process. The purpose of the scoping meeting also will be identified within the booklet. A map depicting the project location and a description of the project area will be included. The booklet will also include a section on how and where comments may be submitted. The scoping meeting date and location will be provided in the booklet. An electronic file (.pdf file) will also be produced for posting on the CTA website.

Schedule:
- Print scoping booklet: 8/31/09

Meeting Materials

Information boards for use during the open house part of the scoping meetings and general hand-outs will be prepared.

- **Boards:** Welcome, Project Area Map, Typical Cross Sections/Station Locations, List of Environmental Issues to be Studied, Environmental Review Process, How to Stay Involved/Submit Comments
- **Hand-outs:** Agenda, comment form, copies of the boards, scoping booklet

Schedule:
- Print/finalize Meeting Materials: 9/14/09

Frequently Asked Questions/Talking Points

A Frequently Asked Questions (FAQs) and talking points will be provided for use by CTA staff and the consultants to prepare them for the stakeholder meetings and scoping meetings.

Schedule:
- FAQ/Talking Points: 9/14/09

Project Database

A comprehensive database of all stakeholders for the Red Line Extension will be established and maintained, using CTA's existing database. The database will be updated regularly and supplemented as appropriate. The database will include elected officials, special interest group representatives, and agency staff. The mailing list will also include property owners and tenants adjacent to the centerline of the proposed project.

Schedule:
- Update Project Database: June/July 09
- Finalize for Invitation Mailing: End of July 09

Documentation

Comment Tracking/Documentation/Response Management

The scoping meetings will be fully documented for the administrative record in compliance with NEPA and SAFETEA-LU. Comments will be received by mail, e-mail, and by comment card and verbally at the scoping meetings.

Scoping Meeting Summary Report

A summary meeting report from the scoping meetings will be prepared. It will include comment cards, the court-reporter record of the scoping meeting, letters, attendance sheets, notification materials and a summary of verbal and written input, such that an evidential record of the meetings are documented. This meeting report will be incorporated into the formal scoping report.

Schedule:

- Finalize Report and Post on Web site: 10/27/09

CHICAGO TRANSIT AUTHORITY (CTA)

APPENDIX A

ENVIRONMENTAL IMPACT STATEMENT (EIS) PHASE 1

RED LINE EXTENSION

Public Participation Plan Overview Schedule 2009

Activity	June	July	August	September	October	November	December
Key Milestones/Meetings							
Project Milestones				9/8/09: Notice of Intent (NOI) in Federal Registry 9/9/09: Public Comment Period Begins (45 days)	10/27/09: Public Comment Period Ends (45 days)		
CTA Board Meetings			8/12/09: CTA Board Approval of Locally Preferred Option				
Agency Scoping Meeting				9/22/09: Agency Scoping Meeting			
Public Scoping Meeting				Between 9/23/09 – 10/2/09: Public Scoping Meetings			
Stakeholder Briefing Meetings			Finalize List & Schedule Meetings	9/9/09- 9/29/09: Stakeholder Meetings			
Communication Activities							
Public Participation Plan (PPP)	Draft	Finalize					
Mailing List/Database	Update	Finalize			Update		
Participating Agency Letters		Develop & Finalize	8/26/09: Mail Letters				
Public Scoping Invite Letter		Develop & Finalize	8/26/09: Mail Notice				
Web site	Submit Outline	Develop New Site	8/13/09: Launch New Site 8/26/09 Post Scoping Dates/Info	After Meetings: Post Presentation/Materials	Post Scoping Meeting Summary	Update	Update
Scoping Display Ad/Legal Notice		Finalize Placement Outlets & Develop Ad	8/26/09: Run display ad				
Media Outreach (releases)		Finalize Outlets	Develop Release	9/16/09: Distribute Release			
Other Notification: Libraries, Village Halls, e-blasts, blogs, community calendars, transit cards		Develop Materials	8/26/09: Distribute notification				
Scoping Info Booklet		Develop Book	8/31/09: Finalize				
Meeting Materials: BOARDS			Develop Boards	9/14/09: Finalize			
Meeting Materials: Handouts			Develop Handouts	9/14/09: Finalize			
Meeting PowerPoint Presentation			Develop Presentation	9/14/09: Finalize			
FAQ/Talking Points			Develop FAQ	9/14/09: Finalize			
Scoping Meeting Summary Report					10/27/09: Develop & Finalize		

Note: All dates are preliminary and subject to change.

APPENDIX B: Mailing/Stakeholder List

Not Public

APPENDIX C: Media Release Distribution List

Print (General)

- *Chicago Tribune*, to transportation reporters Jon Hilkevitch and Richard Wronski and calendar editors.
- *Chicago Sun-Times*, to transportation writer Mary Wisniewski (who also has a blog) and calendar editors.
- *Red Eye*, to the writers of the transit-focused Going Public column and blog.
- *Crain's Chicago Business, to reporters and its calendar section.*
- *Chicago Reader*, an alternative Chicago weekly read by many CTA riders.
- *Hoy Chicago* and *La Raza*, Spanish language newspapers.
- *Chicago Defender*, which serves the African-American community.

Print (Red Line)

- Southtown Star
- The Chicago Crusader
- Neighborhood Star
- Beverly Review
- The Villager

Television

- WBBM Channel 2 (CBS)
- WGN Channel 9 (CW)
- WMAQ Channel 5 (NBC)
- WLS Channel 7 (ABC)
- WFLD Channel 32 (FOX)
- WSNS Channel 44, Spanish
- WOCK Channel 13, Spanish
- WOCH Channel 41, Korean
- WGBO Channel 66, Spanish (Univision)
- WXFT Channel 60, Spanish (Telefutura)
- WTTW Channel 11, public television
- WYCC Channel 20, public television
- CLTV, which primarily covers suburban communities and hosts the "Commute with Kye" blog
- CANTV, Chicago public access channels

Radio

- WBBM-AM 780, Chicago's only all-news station
- WGN-AM 720, news and talk
- WLS-AM 890, talk radio
- WBEZ-FM 91.5, public radio
- WGCI-FM 107.5, urban contemporary
- WGRB-AM 1390, gospel
- WHPK-FM 88.5, community radio based at University of Chicago
- WIIT-FM 88.9, college radio from Illinois Institute of Technology
- WSBC-AM 1240, broadcasts in a variety of languages, including Spanish and Russian
- WRTO-AM 1200, Spanish – Univision Radio
- WRTE-FM 90.5, Spanish
- WKIE-FM 92.7, Spanish
- WVIX-FM 93.5, Spanish
- WVIV-FM 103.1, Spanish
- WOJO-FM 105.1, Spanish, "La Que Buena"
- WVON-AM 1690, "The Talk of Chicago"
- WRLL-AM 1450, "Radio Latino"
- WVAZ-FM 102.7, Urban Contemporary
- WNWI-AM 1080, Multiple languages
- WNUA-FM 95.5, Spanish

Wire Services

- Associated Press, for datebook
- Medill News Services

Appendix B
Notice of Intent

- Build Alternative 1; adding one general purpose lane in each direction.
- Build Alternative 2; adding two general purpose lanes in each direction.
- Build Alternative 3; adding one toll lane to the existing carpool lane in each direction that will be managed together (Federal Highway Administration tolling authority required); also adding one general purpose lane in each direction north of Euclid Street to I–605.
- Build Alternative 4; on I–405 from Euclid Street to I–605, providing additional general purpose lane at various locations and improving various interchanges.
- Transportation Systems Management (TSM)/Transportation Demand Management (TDM)/Mass Transit Alternative; making only low-cost operational improvements, rather than major capital projects, to maximize the efficiency of the present highway system and expand travelers' transportation choices.

Based on a Preliminary Environmental Analysis Report (PEAR) for the I–405 Improvement Project, it is anticipated that the project may require the following Federal permits: Section 404 Permit for filling/dredging waters of the United States and Section 401 Water Quality Certification. The environmental document will analyze factors that include, but are not limited to, the following: Aesthetics, cultural resources, biological resources, hazardous wastes and materials, public services and facilities, water quality, floodplain, noise, air quality, recreation, community impacts, and transportation/traffic. Some of these alternatives may have impacts on the above mentioned resources, as well as on water quality, cultural resources, parks/recreation facilities, and community character and cohesion; the environmental documentation process will assess for potential impacts and suggest ways to reduce or mitigate them.

This document is available at *http://www.octa.net/405improvement* and *http://www.dot.ca.gov/dist12/405/index.htm.*

Letters describing the proposed action and soliciting comments will be sent to appropriate Federal, State, Participating Agencies, various Tribal governments, and local agencies, and to private organizations and citizens who have previously expressed or are known to have interest in this proposal. The environmental review process will begin in Fall 2009. Public scoping meetings will be held in Fountain Valley, Huntington Beach, Westminster, and Rossmoor, California, on September 22, 23, 30, and October 01, respectively. In addition, a public hearing will be held. Public notice will be given of the time and place of the meeting and hearing. The draft EIS will be available for public and agency review and comment prior to the public hearing.

To ensure that the full range of issues related to this proposed action are addressed and all significant issues identified, comments, and suggestions are invited from all interested parties. Comments or questions concerning this proposed action and the EIS should be directed to Ms. Deshpande at Caltrans at the address provided above.

(Catalog of Federal Domestic Assistance Program Number 20.205, Highway Research, Planning and Construction. The regulations implementing Executive Order 12372 regarding intergovernmental consultation on Federal programs and activities apply to this program.)

Issued on: August 26, 2009.

Cindy Vigue,

Director, State Programs, Federal Highway Administration, Sacramento, California.

[FR Doc. E9–21040 Filed 8–31–09; 8:45 am]

BILLING CODE 4910–22–P

DEPARTMENT OF TRANSPORTATION

Federal Transit Administration

Intent to Prepare an Environmental Impact Statement for Proposed Transit Improvements to the Red Line, Cook County, IL

AGENCY: Federal Transit Administration (FTA), Department of Transportation.

ACTION: Notice of intent to prepare an Environmental Impact Statement.

SUMMARY: The FTA, as the lead federal agency, and the Chicago Transit Authority (CTA) intend to prepare an Environmental Impact Statement (EIS) for the Red Line Extension Project in Cook County, Illinois. CTA operates the rapid transit system in Chicago, Cook County, Illinois. The proposed project, described more completely within, would extend the Red Line, a heavy rail transit line, to connect the 95th Street Station to 130th Street. The purpose of this Notice of Intent is to alert interested parties regarding the intent to prepare the EIS, to provide information on the nature of the proposed project and possible alternatives, to invite public participation in the EIS process.

DATES: Written comments on the scope of the EIS, including the project's purpose and need, the alternatives to be considered, the impacts to be evaluated, and the methodologies to be used in the evaluations should be sent to CTA on or before October 27, 2009. See ADDRESSES below for the address to which written public comments may be sent. Two public scoping meetings to accept comments on the scope of the EIS will be held on the following dates:

- Tuesday, September 22, 2009; 6 p.m. to 8 p.m.; at the Historic Pullman Visitor Center, 11141 S. Cottage Grove Avenue, Chicago, IL 60628.
- Thursday, September 24, 2009; 6 p.m. to 8 p.m.; at the Woodson Regional Chicago Public Library, 9525 S. Halsted Street, Chicago, IL 60628.

The buildings used for the scoping meetings are accessible to persons with disabilities. Any individual who requires special assistance, such as a sign language interpreter, to participate in the scoping meeting should contact Mr. Darud Akbar, Government and Community Relations Officer, at 312–681–2708 or *dakbar@transitchicago.com,* five days prior to the meeting.

Scoping materials describing the project purpose and need and the alternatives proposed for analysis will be available at the meetings and on the CTA Web site *http://www.transitchicago.com/RedEIS.* Paper copies of the scoping materials may also be obtained from Mr. Darud Akbar, Government and Community Relations Officer, at 312–681–2708 or *dakbar@transitchicago.com.* An interagency scoping meeting will be held on Thursday, September 24 at 10:30 a.m. at CTA Headquarters, in Conference Room 2C, 567 W. Lake Street, Chicago, IL 60661. Representatives of Native American tribal governments and of all federal, state, regional and local agencies that may have an interest in any aspect of the project will be invited to be participating or cooperating agencies, as appropriate.

ADDRESSES: Comments will be accepted at the public scoping meetings or they may be sent to Mr. Jeffrey Busby, General Manager, Strategic Planning, Chicago Transit Authority, P. O. Box 7602, Chicago, IL 60680–7602, or via e-mail at *RedExtension@transitchicago.com.*

FOR FURTHER INFORMATION CONTACT: Mr. David Werner, Community Planner, Federal Transit Administration, Region V, 200 West Adams Street, Suite 320, Chicago, IL 60606, phone 312–353–3879, e-mail *david.werner@dot.gov.*

SUPPLEMENTARY INFORMATION:

Scoping

The FTA and CTA invite all interested individuals and organizations, public agencies, and Native American Tribes to comment on the scope of the EIS, including the project's purpose and need, the alternatives to be studied, the impacts to be evaluated, and the evaluation methods to be used. Comments should address (1) alternatives that may better achieve the project's need and purposes at less cost or with fewer adverse impacts, and (2) any significant environmental impacts relating to the alternatives.

National Environmental Policy Act (NEPA) ''scoping'' (40 CFR 1501.7) has specific and fairly limited objectives, one of which is to identify the significant issues associated with alternatives that will be examined in detail in the document, while simultaneously limiting consideration and development of issues that are not truly significant. It is in the NEPA scoping process that potentially significant environmental impacts—those that give rise to the need to prepare an environmental impact statement—should be identified; impacts that are deemed not to be significant need not be developed extensively in the context of the impact statement, thereby keeping the statement focused on impacts of consequence. Transit projects may also generate environmental benefits; these should be highlighted as well—the impact statement process should draw attention to positive impacts, not just negative impacts.

Once the scope of the environmental study, including significant environmental issues to be addressed, is settled, an annotated outline of the document will be prepared and shared with interested agencies and the public. The outline serves at least three worthy purposes, including (1) Documenting the results of the scoping process; (2) contributing to the transparency of the process; and (3) providing a clear roadmap for concise development of the environmental document.

Purpose and Need for the Project

The purpose of the Red Line Extension project is to reduce travel times to jobs for far South Side and South Suburban residents and improve the performance of the existing Red Line 95th Street Station terminal. The project would also provide an opportunity to support economic development initiatives.

The need for the project is based on the following considerations: lack of park-and-ride, passenger drop-off, and poor pedestrian facilities limit access to the existing 95th Street terminal of the Red Line; customers accessing the existing terminal facility by bus experience measureable delays resulting from poor performance of surrounding arterial intersections, insufficient space for bus loading and unloading, and insufficient space for bus layovers; congested bus and passenger conditions at the existing terminal station and bus facility result in safety issues and diminish the attractiveness of transit as an alternative to other travel modes; roadway performance in the project area is adversely impacted by narrow arterial streets and frequent at-grade freight rail crossings; and, the project area population is highly transit-dependent, minority and low-income.

Project Location and Environmental Setting

The proposed heavy rail transit (HRT) project area lies about 11 miles south of the Chicago Central Area (commonly referred to as the ''Loop''). The limits of the project area are from 95th Street on the north to 130th Street on the south. The Calumet-Sag Channel/Little Calumet River extends along the southern edge of the project area and Lake Calumet is located to the east.

The project area includes parts of eight community areas in the far South of the City of Chicago. Community areas include Washington Heights, Morgan Park, Roseland, Pullman, West Pullman, South Deering, Hegewisch and Riverdale. The project area encompasses significant residential (primarily single family), industrial (existing and vacant), transportation, and commercial developments.

The locally preferred alternative (LPA) for the proposed Red Line Extension project was approved by the Chicago Transit Board for further study in the EIS on August 12, 2009. The LPA would extend the heavy rail transit line from the 95th Street Station south along the I–57 Expressway to the Union Pacific Railroad (UPRR) right-of-way near Eggleston Avenue. From that point, the line extends south from I–57 along the UPRR corridor to approximately 111th Street where it turns southeast along existing railroad and industrial right-of-way to terminate in the vicinity of 130th Street. The extension would add 5.3 new route miles of rapid transit to the existing Red Line, four additional stations at approximately 103rd, 111th, 115th, and 130th Streets with new park-and-ride and bus terminal facilities at each station.

Alternatives

The Red Line Extension Final Alternatives Analysis Report (2009) prepared by CTA identified three alternatives for further consideration in the EIS. These alternatives include: A No Build Alternative, Transportation System Management (TSM) Alternative, and the UPRR HRT Alternative (the LPA). Additionally, the Halsted Street HRT Alternative from the Red Line Extension Alternatives Analysis Screen 3 Report (2009) will be considered in the EIS.

No Build Alternative: The No Build Alternative is defined as the existing transportation system, plus any committed transportation improvements. Committed transportation improvements include projects that are already in the Chicago Metropolitan Agency for Planning (CMAP) financially constrained Transportation Improvement Program (TIP). The Red Line project area has five bridge reconstructions, and several road improvement projects included in the FY 2007–2012 TIP. These improvements are primarily on highway segments in the vicinity of the project area and generally do not lie adjacent to or intersect with the proposed TSM or HRT alternatives.

Bridge projects in the TIP include: Illinois 1 (Halsted Street) at the Little Calumet River; I–94 (Bishop Ford Expressway) at the Stony Island ramp and at Cottage Grove Road; I–57 at 103rd Street; and I–57 at Genoa Road. Road improvement projects include a variety of landscaping, safety fencing, and resurfacing projects, and coordination of signal timing on Stony Island Avenue from 95th Street north, and on 95th Street from Western Avenue east to Ewing Avenue. There is also a bicycle and pedestrian multi-use trail proposed to extend from the existing Centennial Trail in Lemont to the Burnham Greenway in Burnham.

Bus transit service under the No Build Alternative would be focused on the preservation of existing services and projects. No significant changes to bus service are anticipated in the project area. All elements of the No Build Alternative are included in each of the other alternatives.

Transportation System Management (TSM) Alternative: A TSM Alternative is proposed because it is required as part of the New Starts evaluative process; in this case, it does not meet the purposes of and need for the proposed project. The TSM Alternative is Bus Rapid Transit (BRT) that would operate between the 95th Street Station and 130th Street via East 95th Street, Michigan Avenue, East 127th Street, South Indiana Avenue, and East 130th Street. Proposed BRT service would operate in mixed traffic with traffic signal priority along 95th Street, Michigan Avenue, and 130th Street.

The TSM Alternative is 5.5 miles long and would include four intermediate stops at 103rd, 111th, 115th, and 130th Streets with park-and-ride facilities proposed at all of the new stops. The 95th Street terminal would be expanded to extend the existing bus bays along State and Lafayette Streets approximately 250-feet north to 94th Street to improve circulation and safety. The TSM alternative assumes that buses from the south would continue to serve the 95th Street Station.

UPRR Heavy Rail Transit (HRT) Alternative/Locally Preferred Alternative (LPA): The proposed LPA would operate between the existing Red Line 95th Street Station and 130th Street. The line would be on an elevated structure from the 95th Street as it heads south along the I–57 Expressway for nearly one-half mile until reaching the UPRR corridor in the vicinity of Eggleston Avenue. It would then turn south along the UPRR corridor to approximately 111th Street where it would turn southeast. East of South Prairie Avenue the alignment would cross over the Canadian National/Metra tracks near 119th Street where it would transition to an at-grade profile and then continue southeast along the former Michigan Central/Indiana Harbor Belt (IHB) railroad right-of-way to terminate in the vicinity of 130th Street.

The LPA is 5.3 miles long and would include three new intermediate stations at 103rd, 111th, and 115th Streets and a new terminal station at 130th Street with new park-and-ride and bus terminal facilities at each station. This alternative assumes that buses from the south would be re-routed to serve the new intermediate and terminal stations to speed passenger travel to downtown Chicago.

The new HRT tracks would be placed immediately adjacent to the UPRR right-of-way on either the west side (West Side Option) or the east side (East Side Option). Both options would require adjacent property acquisition to accommodate the CTA right-of-way and station facilities at 103rd, 111th, and 115th Streets. Based on a preliminary analysis of the conceptual alignment plans and Cook County parcel data, the West Side Option would require up to 112 property acquisitions and/or displacements and the East Side Option would require 138. In addition, the West Side Option could impact Fernwood Parkway between 99th Street and 103rd Streets which could trigger a Section 4(f) of the Department of Transportation Act evaluation in the EIS. The East Side Option could impact Wendell Smith Park adjacent to the I–57 Expressway which could also trigger a Section 4(f) evaluation in the EIS. Kensington Playground Park near 118th Street would not be impacted by either option.

There are two options for the 130th Street terminal station. The Red Line extension would continue south along the IHB right-of-way to either a south or west terminal station location along the north side of 130th Street, just west of the I–94 Bishop Ford Freeway.

Halsted Street HRT Alternative: The proposed Halsted Street HRT Alternative would be operated on an elevated structure between the existing Red Line 95th Street Station and the Halsted Street/Vermont Avenue intersection in the vicinity of 127th Street. The alignment would follow the median of I–57 Expressway until reaching Halsted Street. It would then turn south onto Halsted Street and continue in the median to Vermont Avenue.

The Halsted Street HRT Alternative is 5.0 miles long and would include three new intermediate stations at 103rd, 111th, 119th Streets and a new terminal station at Vermont Avenue with new park-and-ride and bus terminal facilities at the intermediate and terminal stations. This alternative assumes that buses from the south would be re-routed to serve the new intermediate and terminal stations to speed passenger travel to downtown Chicago.

Near the proposed station areas, there may be additional impacts to adjacent land owners if land acquisition would be required for station facilities such as bus turnarounds or parking facilities. This would be most applicable at the proposed terminal station at 127th/Vermont since several properties are located close to Halsted Street in this segment and there may be higher off-street facility needs.

Possible Effects

The purpose of this EIS process is to study, in a public setting, the effects of the proposed project and its alternatives on the quality of the human environment. Areas of investigation for transit projects generally include, but are not limited to: Land use, development potential, land acquisition and displacements, historic resources, visual and aesthetic qualities, air quality, noise and vibration, energy use, safety and security, and ecosystems, including threatened and endangered species; investigation may reveal that the proposed project will not affect or affect substantially many of those areas. Measures to avoid, minimize, or mitigate any significant adverse impacts will be identified.

FTA Procedures

The regulations implementing NEPA, as well as provisions of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA–LU), call for public involvement in the EIS process. Section 6002 of SAFETEA–LU requires that FTA and CTA do the following: (1) Extend an invitation to other Federal and non-Federal agencies and Native American tribes that may have an interest in the proposed project to become ‘‘participating agencies;’’ (2) provide an opportunity for involvement by participating agencies and the public to help define the purpose and need for a proposed project, as well as the range of alternatives for consideration in the EIS; and (3) establish a plan for coordinating public and agency participation in, and comment on, the environmental review process. An invitation to become a participating or cooperating agency, with scoping materials appended, will be extended to other Federal and non-Federal agencies and Native American tribes that may have an interest in the proposed project. It is possible that FTA and CTA will not be able to identify all Federal and non-Federal agencies and Native American tribes that may have such an interest. Any Federal or non-Federal agency or Native American tribe interested in the proposed project that does not receive an invitation to become a participating agency should notify at the earliest opportunity the Project Manager identified above under **ADDRESSES**.

A comprehensive public involvement program and a Coordination Plan for public and interagency involvement will be developed for the project and posted on CTA's Web site *http://www.transitchicago.com/RedEIS.* The public involvement program includes a full range of activities including maintaining the project Web page on the CTA Web site and outreach to local officials, community and civic groups, and the public. Specific activities or events for involvement will be detailed in the project's public participation plan.

The Paperwork Reduction Act seeks, in part, to minimize the cost to the taxpayer of the creation, collection, maintenance, use, dissemination, and disposition of information. Consistent with this goal and with principles of economy and efficiency in government, it is FTA policy to limit insofar as possible distribution of complete printed sets of environmental documents. Accordingly, unless a specific request for a complete printed set of environmental documents is received (preferably in advance of printing), FTA and its grantees will distribute only the executive summary of the environmental document together with a Compact Disc of the complete environmental document. A complete printed set of the environmental document is available for review at the grantee's offices and elsewhere; an electronic copy of the complete environmental document is also available on the grantee's Web page.

CTA may seek New Starts funding for the proposed project under 49 United States Code 5309 and will, therefore, be subject to New Starts regulations (49 Code of Federal Regulations (CFR) Part 611). The New Starts regulations also require the submission of certain project-justification information to support a request to initiate preliminary engineering. This information is normally developed in conjunction with the NEPA process. Pertinent New Starts evaluation criteria will be included in the EIS.

The EIS will be prepared in accordance with NEPA and its implementing regulations issued by the Council on Environmental Quality (40 CFR Parts 1500–1508) and with the FTA/Federal Highway Administration regulations ''Environmental Impact and Related Procedures'' (23 CFR Part 771).

Issued on: August 24, 2009.

Marisol R. Simon,

Regional Administrator, FTA Region V.

[FR Doc. E9–20963 Filed 8–28–09; 8:45 am]

BILLING CODE 4910–57–P

DEPARTMENT OF TRANSPORTATION

Federal Motor Carrier Safety Administration

Fiscal Year 2010 Safety Grants

AGENCY: Federal Motor Carrier Safety Administration (FMCSA), DOT.

ACTION: Notice; correction.

SUMMARY: FMCSA is correcting a notice that appeared in the **Federal Register** on August 12, 2009 (74 FR 40638), which informed the public of FMCSA's Fiscal Year (FY) 2010 safety grant opportunities and FMCSA's changes to its application and award processes for grant programs.

FOR FURTHER INFORMATION CONTACT: For further information regarding this notice please contact, Ms. Theresa Rowlett at 202.366.6406. Staff may be reached at FMCSA, 1200 New Jersey Avenue, SE., Washington, DC 20590. Office hours are from 9 a.m. to 5 p.m., EST, Monday through Friday, except Federal holidays.

SUPPLEMENTARY INFORMATION: For FMCSA's FY 2010 Grants notice published on August 12, 2009 (74 FR 40638), the following corrections are made:

On page 40638, in the **FOR FURTHER INFORMATION CONTACT** section, the contact for the Commercial Vehicle Information Systems and Networks Grants (CVISN) is corrected from ''CVISN Grants—Julie Lane, *julie.lane@dot.gov,* 202–385–2391'' to ''CVISN Grants—Quon Kwon, *quon.kwan@dot.gov,* 202–385–2389''.

On page 40638, in the *FY 2010 Safety Grants Program* section, the schedule for the New Entrant Safety Audit Grants and the Motor Carrier Safety Assistance Program (MCSAP) High Priority Grants is corrected from ''New Entrant Safety Audit Grants—September 1, 2009, MCSAP High Priority Grants—October 15, 2009'' to ''New Entrant Safety Audit Grants—October 15, 2009, MCSAP High Priority Grants—September 15, 2009.''

Issued on August 24, 2009.

William A. Quade,

Associate Administrator for Enforcement and Program Delivery.

[FR Doc. E9–21019 Filed 8–31–09; 8:45 am]

BILLING CODE 4910–EX–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

4th Meeting: RTCA Special Committee 221: Aircraft Secondary Barriers and Alternative Flight Deck Security Procedures

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of RTCA Special Committee 221 meeting: Aircraft Secondary Barriers and Alternative Flight Deck Security Procedures.

SUMMARY: The FAA is issuing this notice to advise the public of a meeting of RTCA Special Committee 221: Aircraft Secondary Barriers and Alternative Flight Deck Security Procedures.

DATES: The meeting will be held September 15–16, 2009. September 15th from 12 a.m. to 5 p.m., September 16th from 9 a.m. to 5 p.m.

ADDRESSES: The meeting will be held at RTCA, Inc., MacIntosh—NBAA and Hilton—ATA Rooms, 1828 L Street, NW., Suite 805, Washington, DC 20036.

FOR FURTHER INFORMATION CONTACT: RTCA Secretariat, 1828 L Street, NW., Suite 805, Washington, DC 20036; telephone (202) 833–9339; fax (202) 833–9434; Web site *http://www.rtca.org.*

SUPPLEMENTARY INFORMATION: Pursuant to section 10(a)(2) of the Federal Advisory Committee Act (Pub. L. 92–463, 5 U.S.C., Appendix 2), notice is hereby given for a Special Committee 221: Aircraft Secondary Barriers and Alternative Flight Deck Security Procedures meeting. The agenda will include:

- Welcome/Introductions/Administrative Remarks;
- Approval of Summary of the Second Meeting held June 23–24, 2009, RTCA Paper No. 174–09/SC221–013;
- Leadership Comments;
- Review of Threat Work Group—Status Report;
- Review of Alternative Methods Work Group—Status Report;
- Review of Installed Physical Secondary Barrier (IPSB) Work Group—Status Report;
- Presentation/Discussion of SC–221 Schedule and Milestones;
- Discussion of Working Group reports: re-allocation of groups, capture learning points, discuss additional or follow-on goals;
- Approval and Tasking of Existing/Proposed Working Groups;
- Other Business—Including Proposed Agenda, Date and Place for Next Meeting.

Attendance is open to the interested public but limited to space availability. With the approval of the chairmen, members of the public may present oral statements at the meeting. Persons wishing to present statements or obtain information should contact the person listed in the **FOR FURTHER INFORMATION CONTACT** section. Members of the public may present a written statement to the committee at any time.

Issued in Washington, DC, on August 24, 2009.

Francisco Estrada C.,

RTCA Advisory Committee.

[FR Doc. E9–21063 Filed 8–31–09; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

Eightieth Meeting: RTCA Special Committee 159: Global Positioning System (GPS)

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of RTCA Special Committee 159 meeting: Global Positioning System (GPS).

SUMMARY: The FAA is issuing this notice to advise the public of a meeting of RTCA Special Committee 159: Global Positioning System (GPS).

DATES: The meeting will be held September 29–October 2, 2009, from 9

Appendix C
Participating Agencies

Organization	Salutation	First Name	Last Name	Title	Address	Apt/ Floor	City	State	Zip
Chicago Housing Authority	Ms.	Edie	Diaz		60 E. Jackson, Suite 1200		Chicago	IL	60605
Chicago Park District	Mr.	Joseph	Bornstein	Project Manager, Planning & Development	541 N. Fairbanks		Chicago	IL	60611
City of Chicago Department of Business Affairs and Consumer Protection	Ms.	Norma I.	Reyes	Commissioner	50 W. Washington St.	Room 208	Chicago	IL	60602
City of Chicago Department of Community Development	Ms.	Christine	Raguso	Acting Commissioner	121 N. LaSalle St.	Ste. 1000	Chicago	IL	60602
City of Chicago Department of Environment	Ms.	Nicole	Kamins	Program Director	30 N. LaSalle St.	Floor 25	Chicago	IL	60602
City of Chicago Department of Transportation	Mr.	Richard	Hazlett	Coordinating Planner	30 N. LaSalle Street	Suite 500	Chicago	IL	60602
City of Chicago Office of the Mayor	Mr.	Pat	Harney	Deputy Chief of Staff	121 N. LaSalle St.	Room 509	Chicago	IL	60602
City of Chicago Police Department	Mr.	Mark	Harmon	Commanding Officer, Patrol Division	3510 S. Michigan Ave.		Chicago	IL	60653
Metra Commuter Rail	Mr.	David	Kralik	Department Head, Long Range Planning	547 W. Jackson Blvd.	13th Floor	Chicago	IL	60661
Metropolitan Water Reclamation District of Greater Chicago	Mr.	Joseph	Schuessler	Principal Civil Engineer	100 East Erie Street		Chicago	IL	60611
Pace	Mr.	David	Tomzik	Manager, Long Range Planning	550 W. Algonquin Road		Arlington Heights	IL	60005
Illinois Commerce Commission	Ms.	Shauna	Kelley	Bureau of Transportation Chief	160 N. LaSalle St.	C800	Chicago	IL	60601
Illinois Department of Natural Resources	Mr.	Steve	Hamer	Office of Realty & Environmental Planning, Division of Ecosystems & Environment	One Natural Resources Way		Springfield	IL	62702
Illinois Department of Transportation	Ms.	Lil	Budzinski	Section Chief, CTA/ City of Chicago Section	100 W. Randolph	Suite 6-600	Chicago	IL	60601
Illinois Environmental Protection Agency	Ms.	DiAnne	Schuerman		Deputy Director's Office/MC#1, P.O. Box 19276		Springfield	IL	62794-9276
Illinois Historic Preservation Agency	Ms.	Anne	Hacker	Deputy State Historic Preservation Officer	#1 Old State Capitol Plaza		Springfield	IL	62701
Department of Energy	Mr.	Steven	Chu	Secretary	1000 Independence Ave. SW		Washington	DC	20585
Department of Health and Human Services	Mr.	James	Galloway	Acting Regional Director - Region 5	233 N. Michigan Ave.	Ste. 1300	Chicago	IL	60601
Department of Housing and Urban Development	Ms.	Beverly	Bishop	Deputy Regional Director	77 W. Jackson Blvd.		Chicago	IL	60604
Federal Emergency Management Agency	Ms.	Janet	Odeshoo	Deputy Regional Administrator, Region V	536 S. Clark St.	6th floor	Chicago	IL	60605
Federal Highway Administration	Mr.	Matt	Fuller	Environmental Programs Engineer	3251 Executive Park Drive		Springfield	IL	
Federal Railroad Administration	Mr.	Laurence	Hasvold	Regional Administrator	200 West Adams	Suite 310	Chicago	IL	60606
Transportation Security Administration	Ms.	Gale	Rossides	Acting Administrator	601 S. 12th St.		Arlington	VA	20598
U.S. Environmental Protection Agency	Mr.	Bharat	Mathur	Acting Regional Administrator - Region 5	77 W. Jackson Blvd.		Chicago	IL	60604
U.S. Fish and Wildlife Service	Mr.	John	Rogner	Field Supervisor - Chicago Field Office	1250 S. Grove	Ste. 103	Barrington	IL	60010
Citizen Potawatomi Nation					1601 S. Gordon Cooper Drive		Shawnee	OK	74801
Ho-Chunk Nation					5744 W. Irving Park Road		Chicago	IL	60634
Peoria Tribe	Chief	John	Froman	Chief	118 S. Eight Tribes Trail	P.O. Box 1527	Miami	OK	74355
Sac and Fox Tribe - Mississippi and Iowa	Mr.	Jonathan	Buffalo		349 Meskwaki		Tama	IA	52339
Sac and Fox Tribe - Missouri and Kansas					305 N. Main Street		Reserve	KS	66434
Sac and Fox Tribe - Oklahoma					Rt. 2 Box 246		Stroud	OK	74079

Appendix D
Participating Agency Invitation Letters

U.S. Department
of Transportation
**Federal Transit
Administration**

REGION V
Illinois, Indiana,
Michigan, Minnesota,
Ohio, Wisconsin

200 West Adams Street
Suite 320
Chicago, IL 60606-5253
312-353-2789
312-886-0351 (fax)

September 1, 2009

[Insert Agency Representative]
[Insert Agency Name]
[Insert Address]
[Insert, City, State, Zip]

Re: Invitation to Participate in Environmental Review Process for the CTA Red Line Extension

Dear *[Agency Representative]*:

The Federal Transit Administration (FTA), in cooperation with the Chicago Transit Authority (CTA), is initiating the preparation of an Environmental Impact Statement for the proposed Red Line Extension project. The proposed project would extend the Red Line, a heavy rail transit line, 5.3 miles from its existing 95th Street Station to a new terminal station at 130th Street.

The purpose of the project, as currently defined, is to reduce travel times to jobs for Far South Side and South Suburban residents and improve the performance of the existing Red Line 95th Street Station terminal. The project would also provide an opportunity to support economic development initiatives. The enclosed scoping information packet provides more details including a preliminary project schedule.

An Alternatives Analysis has been completed for this project and the final report may be found at http://www.transitchicago.com/RedEIS. Through the Alternatives Analysis process and with input from the public and agencies, the project area and the range of alternatives have been refined and a locally preferred alternative has been selected. The project area and the alternatives identified in the Alternatives Analysis will be the subjects of the Draft EIS.

Section 6002 of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users establishes an enhanced environmental review process for certain FTA projects, increasing the transparency of the process, as well as opportunities for participation. The requirements of Section 6002 apply to the project that is the subject of this letter. As part of the environmental review process for this project, the lead agencies must identify, as early as practicable, any other

Federal and non-Federal agencies that may have an interest in the project, and invite such agencies to become participating agencies in the environmental review process.[1]

Your agency has been identified preliminarily as one that may have an interest in this project, because of the surrounding land uses which include middle and low income residential neighborhoods, rail and surface transportation facilities, industrial brownfields, parks and natural areas, and the potential for impacts to the physical and human environment from construction and operation of the project; accordingly, you are being extended this invitation to become actively involved as a participating agency in the environmental review process for the project.

As a participating agency, you will be afforded the opportunity, together with the public, to be involved in defining the purpose of and need for the project, as well as in determining the range of alternatives to be considered for the project. These opportunities will build on the early participation opportunities that were provided during the Alternatives Analysis process. In addition, you will be asked to:

- Provide input on the impact assessment methodologies and level of detail in your agency's area of expertise;
- Participate in coordination meetings, conference calls, and joint field reviews, as appropriate; and
- Review and comment on sections of the pre-draft or pre-final environmental documents to communicate any concerns of your agency on the adequacy of the document, the alternatives considered, and the anticipated impacts and mitigation.

Your agency does not have to accept this invitation. If, however, you elect not to become a participating agency, you must decline this invitation in writing, indicating that your agency has no jurisdiction or authority with respect to the project, no expertise or information relevant to the project, and does not intend to submit comments on the project. The declination may be transmitted electronically to Mr. David Werner of our Region V Office at david.werner@dot.gov, please include the title of the official responding. In order to give your agency adequate opportunity to weigh the relevance of your participation in this environmental review process, written response to this invitation is not due until after the agency scoping. The interagency scoping meeting will be held on the following date and location:

- Thursday, September 24 at 10:30 a.m. at CTA Headquarters, in Conference Room 2C, 567 W. Lake Street, Chicago, IL 60661.

You or your delegate is invited to represent your agency at this meeting. Please note that building security requires meeting attendees to RSVP in advance. Your agency will be treated as participating agency unless your written response declining such designation as outlined above is transmitted to this office not later than September 30, 2009.

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[1] Designation as a "participating agency" does not imply that the participating agency supports the proposed project or has any jurisdiction over, or special expertise concerning the proposed project or its potential impacts. A "participating agency" differs from a "cooperating agency," which is defined in regulations implementing the National Environmental Policy Act as "any Federal agency other than a lead agency which has jurisdiction by law or special expertise with respect to any environmental impact involved in a proposal (or a reasonable alternative) for legislation or other major Federal action significantly affecting the quality of the human environment." 40 C.F.R. § 1508.5.

We are providing a copy of the Federal Register Notice of Intent and scoping information materials with this letter that include a description of the project area and proposed alternatives. Additional information will be forthcoming during the scoping process. If you have questions regarding this invitation or to RSVP your attendance at the interagency scoping meeting, please contact Mr. Jeffrey Busby, General Manager, Strategic Planning, Chicago Transit Authority, PO Box 7602, Chicago, IL 60680-7602, via email at RedExtension@transitchicago.com, or phone at (312) 681-4240.

Sincerely,

Marisol R. Simon
Regional Administrator

Enclosures (2):

1. Scoping Information Packet/Schedule
2. Federal Register NOI

cc: Jeffrey Busby, Chicago Transit Authority

CHICAGO TRANSIT AUTHORITY

567 West Lake Street
Chicago, Illinois 60661-1498
TEL 312 664-7200
www.transitchicago.com

September 2, 2009

[Insert Agency Representative]
[Insert Agency Name]
[Insert Address]
[Insert, City, State, Zip]

Re: Invitation to Participate in Environmental Review Process for the CTA Red Line Extension

Dear *[Agency Representative]*:

The Federal Transit Administration (FTA), in cooperation with the Chicago Transit Authority (CTA), is initiating the preparation of an Environmental Impact Statement for the proposed Red Line Extension project. The proposed project would extend the Red Line, a heavy rail transit line, 5.3 miles from its existing 95th Street Station to a new terminal station at 130th Street.

The purpose of the project, as currently defined, is to reduce travel times to jobs for Far South Side and South Suburban residents and improve the performance of the existing Red Line 95th Street Station terminal. The project would also provide an opportunity to support economic development initiatives. The enclosed scoping information packet provides more details including a preliminary project schedule.

An Alternatives Analysis has been completed for this project and the final report may be found at http://www.transitchicago.com/RedEIS. Through the Alternatives Analysis process and with input from the public and agencies, the project area and the range of alternatives have been refined and a locally preferred alternative has been selected. The project area and the alternatives identified in the Alternatives Analysis will be the subjects of the Draft EIS.

Section 6002 of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users establishes an enhanced environmental review process for certain FTA projects, increasing the transparency of the process, as well as opportunities for participation. The requirements of Section 6002 apply to the project that is the subject of this letter. As part of the environmental review process for this project, the lead agencies must identify, as early as practicable, any other Federal and non-Federal agencies that may have an interest in the project, and invite such agencies to become participating agencies in the environmental review process.[1]

Your agency has been identified preliminarily as one that may have an interest in this project, because of the surrounding land uses which include middle and low income residential neighborhoods, rail and surface transportation facilities, industrial brownfields, parks and natural areas, and the potential for impacts to the physical and human environment from construction and operation of the project; accordingly, you are being extended this invitation to become actively involved as a participating agency in the environmental review process for the project.

As a participating agency, you will be afforded the opportunity, together with the public, to be involved in defining the purpose of and need for the project, as well as in determining the range of alternatives to be considered for the project. These opportunities will build on the early participation opportunities that were provided during the Alternatives Analysis process. In addition, you will be asked to:

- Provide input on the impact assessment methodologies and level of detail in your agency's area of expertise;
- Participate in coordination meetings, conference calls, and joint field reviews, as appropriate; and
- Review and comment on sections of the pre-draft or pre-final environmental documents to communicate any concerns of your agency on the adequacy of the document, the alternatives considered, and the anticipated impacts and mitigation.

If you elect to become a participating agency, you must accept this invitation in writing. The acceptance may be transmitted electronically to Mr. Jeffrey Busby, General Manager, Strategic Planning, Chicago Transit Authority, at RedExtension@transitchicago.com; please include the title of the official responding. In order to give your agency adequate opportunity to weigh the relevance of your participation in this environmental review process, written responses to this invitation are not due until after the agency scoping meeting. The agency scoping meeting will be held on the following date and location:

- Thursday, September 24 at 10:30 a.m. at CTA Headquarters, in the Conference Room 2C, 567 W. Lake Street, Chicago, IL 60661.

You or your delegate is invited to represent your agency at this meeting. Please note that building security requires meeting attendees to RSVP in advance. Written responses accepting designation as participating agencies should be transmitted to this office not later than October 2, 2009.

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[1] Designation as a "participating agency" does not imply that the participating agency supports the proposed project or has any jurisdiction over, or special expertise concerning the proposed project or its potential impacts. A "participating agency" differs from a "cooperating agency," which is defined in regulations implementing the National Environmental Policy Act as "any Federal agency other than a lead agency which has jurisdiction by law or special expertise with respect to any environmental impact involved in a proposal (or a reasonable alternative) for legislation or other major Federal action significantly affecting the quality of the human environment." 40 C.F.R. § 1508.5.

We are providing a copy of the Federal Register Notice of Intent and scoping information materials with this letter that include a description of the project area and proposed alternatives. Additional information will be forthcoming during the scoping process. If you have questions regarding this invitation or to RSVP your attendance at the interagency scoping meeting, please contact Mr. Jeffrey Busby, General Manager, Strategic Planning, Chicago Transit Authority, PO Box 7602, Chicago, IL 60680-7602, via email at RedExtension@transitchicago.com, or phone at (312) 681-4240.

Sincerely,

John Paquet

John Paquet
Vice President
Planning and Development

Enclosures (2):

1. Scoping Information Packet/Schedule
2. Federal Register NOI

cc: Federal Transit Administration

Appendix E
Agency Scoping Meeting
(Sign-in sheet and meeting minutes)

Red Line Extension

Connecting 95th Street Station to 130th Street

cta

AGENCY SCOPING MEETING

September 24, 2009

10:30 AM – 12:30 PM

	PRINTED NAME	TITLE ORGANIZATION	ADDRESS CITY, STATE ZIP	PHONE	E-MAIL
1	Joe Schuessler	Princ. Civil Engr MWRD	111 E. Erie Chicago, IL 60611	312-751-3236	joseph.schuessler@mwrd.org
2	David Kralik	Dept. Head Long Range Planning Metra	547 W. Jackson Chicago, IL 60661	312 322 8035	dkralik@metrarr.com
3	Wendy Williams	City of Chgo Dept. of Cmty Dev.	121 N LaSalle RM 1003	312 744 4488	wendywalker@cityofchicago.org
4	STEVE HANDS	CTA	567 W. LAKE	312 681-4169	SHANDS@TRANSITCHICAGO.COM
5	RICH HAZLETT	CDOT	30 N LA SALLE	312 744-1986	
6	Tim Roseboom	DETROIT DOT STRATEGIC PLAN	1301 E WARREN DETROIT MI 48207	313-833-1196	timros@detroitmi.gov
7	MARK HARMON	CHGO POLICE	3510 S. MICHIGAN	312-745-6210	MARK.HARMON@CHICAGOPO

Red Line Extension

Connecting 95th Street Station to 130th Street

cta

AGENCY SCOPING MEETING

September 24, 2009

10:30 AM – 12:30 PM

	PRINTED NAME	TITLE ORGANIZATION	ADDRESS CITY, STATE ZIP	PHONE	E-MAIL
1	TONY LUPO	IL STATE POLICE DIST. CHGO	9511 W. HARRISON DESPLAINES IL 60016	847 294 4655	
2	Clare Pfotenhauer	IL STATE Police Dist Chgo	9511 W Harrison Des Plaines IL 60016	847 294 4522	Pfotenc@ISP.STATE.IL.US
3	David Tomzik	manager Long Range Planning Pace	550 W Algonquin Arlington Hts IL 60005	847 228 2467	david.tomzik@pacebus.com
4	Joseph Bornstein	PROJ. MGR. CHICAGO PARK DISTRICT	541 N FAIRBANKS Chicago IL 60611	312 942 4864	
5	L Kimmelman	FTA		312-353- 4060	
6	David Werner	FTA			
7	TOM RADAK	SR. PROJECT MGR PACE	550 W. Algonquin ARLINGTON HTS, ILL 60005	847-228-2478	TOM:RADAK@PACEBUS.com

Red Line Extension

Connecting 95th Street Station to 130th Street

cta

AGENCY SCOPING MEETING

September 24, 2009

10:30 AM – 12:30 PM

	PRINTED NAME	TITLE ORGANIZATION	ADDRESS CITY, STATE ZIP	PHONE	E-MAIL
1	Kim Cheever	Engineering Asst. Wight & Company	2500 N. Frontage Road Darien, IL 60561	(630) 969-7000	kcheever@wightco.com
2	Dan Powers	Senior Railroad Safety Specialist IL. Commerce Commission	527 E. Capitol Ave. Springfield, IL. 62701	(847) 516-0733	dpowers@icc.illinois.gov
3	Nicole Kamins	Program Director Chicago Dept of Environment	30 N LaSalle 25th Flr C, IL 60602	312 744 5959	nkamins@cityofchicago.org
4	JONATHAN ERNST	PROJECT COORD STR + SAN	121 N. LA SALLE, 704	312 744-8312	jernst@cityofchicago.org
5	Gene Marks	IDOT			
6	MORRISON, TERRY	ILL. STATE POLICE	9511 W HARRISON ST DES PLAINES IL. 60016	847 294-4427	MORRIST@ISP.STATE.IL.US
7	Chuck Abraham	IDOT Mgr. of Program Support	100 W. Randolph, Suite 6-600 Chgo. 60601	312.793.3510	charles.abraham@illinois.gov

Red Line Extension

Connecting 95th Street Station to 130th Street

AGENCY SCOPING MEETING

September 24, 2009

10:30 AM – 12:30 PM

	PRINTED NAME	TITLE	ADDRESS	PHONE	E-MAIL
		ORGANIZATION	CITY, STATE ZIP		
1	Jill Zwick	Sec. of State (ILLINOIS)	17 N. State St. #1200 Chicago IL. 60602	312-793-8876	jzwick@ilsos.net
2					
3					
4					
5					
6					
7					

MEETING MINUTES

RE: **Red Line Extension**
Agency Scoping Meeting

MEETING NO. & DATE: **No. 1 – September 24, 2009**

CHAIRPERSON: **Jeff Busby, CTA**

LOCATION: **CTA Offices: 567 West Lake Street**

TO: **Distribution and All Attendees**

ATTENDEES:

Names	Initials	Organization / Title
Jeffrey Busby	JB	CTA Strategic Planning
Helene Kornblatt	HK	CWC Transit Group
Kate Stenberg	KS	CWC Transit Group
Chris Martel	CM	CWC Transit Group
Bob Tessiatore	BT	CWC Transit Group
Kim Cheever	KC	CWC Transit Group
John Kulpa	JK	CWC Transit Group
Joe Clemens	JC	CWC Transit Group
Kristy Ranieri	KR	CirclePoint (CWC team member firm)
Sarah Layton-Wallace	SLW	CirclePoint (CWC team member firm)
Joe Schmessler		MWRD / Princ. Civil Engineer
David Werner		Federal Transit Administration (FTA)
David Kralik		Metra / Dept. Head Long Range Planning
Wendy Williams		City of Chicago / Dept. of Community Development
Lois Kimmelman		Federal Transit Administration (FTA)
Steve Hands		Chicago Transit Authority (CTA)
Rica Mazlett		Chicago Dept. of Transportation (CDOT)
Tom Radak		Pace / Senior Project Manager
David Tomzik		Pace / Manager Long Range Planning
Tim Roseman		Detroit DOT / Strategic Plan
Dan Powers		IL Commerce Commission / Senior RR Safety Specialist
Mark Harmon		Chicago Police
Tony Lupo		IL State Police District Chicago
Clare Pfotenhauer		IL State Police District Chicago
Joseph Bornstein		Chicago Park District / Project Manager
Jonathan Ernst		City of Chicago / Streets & Sanitation
Nicole Kamins		Chicago Dept. of Environment (CDOE)/ Program Director
Gene Marks		IL Dept. of Transportation (IDOT)
Terry Morrison		IL State Police District Chicago
Chuck Abraham		IDOT / Manager of Program Support
Jill Zwick		State of Illinois / Secretary of State

PREPARED BY: Kim Cheever

ISSUE DATE: September 30, 2009

Meeting called to order at 10:35 am CDT.

Objective: Agency Scoping

Item No.	*Item Description*	*Responsibility*	*Due Date*
1.00	**Agency Participation Request** CTA presented a project overview and requested questions/comments from agencies in attendance. CTA requested written request from agencies interested in being a participating agency by October 2, 2009. Agencies do not have to be a participating agency to be involved, but it offers them a more active role in the process. Following the presentation, the meeting was opened up to questions and comments.		
1.01	CWC: Please note that the deadline to submit comments is October 27, 2009.		
1.02	CTA: The initial project concept was to route the new line within the railroad ROW, but railroad policy requires a 50' separation from the railroad to an adjacent transit line and there isn't sufficient room to accommodate the transit line within the existing ROW. The new line will need to be adjacent to the UPRR ROW on either the east or west side.		
2.00	**Land Acquisition** CDOE: How much acquisition would be involved? *CTA: We will study that in detail as part of the EIS; however, we did a preliminary analysis in the AA. The East Option would affect mostly residential properties, while the West Option would affect mostly commercial and vacant properties.*		
2.01	FTA: Does the UPRR alternative capital costs include property acquisition? *CTA: I believe that it does and takes into account the East Option that includes mostly residential properties.*		
3.00	**System Coordination** Metra: An important consideration is that there should be a joint station for Metra and CTA, as Metra is considering expansion of service and there are opportunities to connect to CTA service at 115th and 130th Streets. Intermodal station could be located at 130th for train to Indiana.		
4.00	**Project Costs** FTA: Does matrix include ROW costs? *CTA: The ROW costs are included but do not differentiate between the west or east side alternative.*		
5.00	**Bus Routes** Pace: Will bus access be evaluated at these stations and which bus routes would be affected? *CTA: Yes, bus access and impacts will be evaluated in the EIS.*		

Item No.	***Item Description***	***Responsibility***	*Due Date*
6.00	**Funding** Dept. of Planning: What if federal funds were not available? *CTA: Capital improvements in the CTA system are dependent on federal funds.*		
6.01	Dept. of Planning: If we don't get 2016 Olympic bid, will that impact likelihood of the project? *CTA: No, these projects are warranted without the Olympics and were not included in the Olympic bid package.*		
6.02	Detroit DOT: What is the percentage of New Starts funding that you are seeking? *CTA: Project sponsors are allowed to ask for up to 80%, but in the spirit of competitiveness the FTA desires a greater local commitment.*		
6.03	FTA: Having local and state funding in place as soon as possible is of critical importance in the New Starts process. *CTA: CTA is looking to get firm commitments in the next capital bill process.*		
7.00	**Impact of Grade Crossings** Pace: Do you look at impact of grade crossings and how buses would access the terminal? *CWC: Yes. If the project causes bus activity to be different, that's where we look at impact.*		
8.00	**Wetlands** CDOE: There are a lot of wetlands nearby, but route appears to avoid them. Excited this is on the table. Great for people trying to get to jobs. Station at 130th would be beneficial. There is a new environmental center under development at 38th and Torrence. LEED certification for that center would be helped by transit improvements. The agency is hearing that people are supportive of the project.		
9.00	**Contaminated Debris** CDOE: How do you handle contaminated debris during construction? *CTA: A pre-phase 1 analysis is done as part of the EIS to determine potential remediation methods and costs.*		
10.00	**Alternatives** CDOT: At which point will you select an East or West of right of way option? And the alternate terminal locations? How is that selection a part of this process? *CWC: The draft EIS will evaluate design options with the intent to fully inform decision makers, the FTA and stakeholders of the pros and cons of each alternative and each option.*		
11.00	**Preliminary Engineering** CDOT: When will preliminary engineering start? *CTA: Not until scoping is over. Entering into preliminary engineering requires Federal approval.* *CWC: Will need to do enough engineering to know what maximum impact could be.*		

Item No.	Item Description	Responsibility	Due Date
12.00	**Street Level Separation** IDOT: Are there any street level separations? *CTA: The entire line is elevated over street crossings. After the line crosses the ICCN tracks it comes down to grade to save money, along the Chicago's water reclamation property.*		
13.00	**Bus Operations and Coordination** Pace: What level of detail will be explored for bus needs to access this alternative? *CWC: The bus analysis will be performed in the EIS. The AA cost analysis looked at Pace bus restructuring at a high level, so it would help to get Pace feedback on this analysis.* *CTA: For costing, the AA process did make assumptions about PACE restructuring, but would be helpful to have PACE review those.* Pace: Would the bus analysis be done for both Halsted and the UPRR alignments? *CWC: Yes.*		
14.00	**Green Technology** CDOE: Do park & ride facilities include green technologies? *CTA: We will look at technological options as part of the project's mitigation methods.*		
15.00	**Public Input** Chicago Park District: What are some of the common concerns noted so far? *CTA: Noise and vibration from residents, and safety and security at stations. The public along this corridor are generally accepting of potential land acquisitions.*		
16.00	**MWRD Coordination** MWRD: Interested in a conceptual plan for terminal because it ends up on our property. *CTA: Have the conceptual profile sheets for review at this meeting.*		
17.00	**95th Street Station** Pace: Since congestion at the 95th Street station will be relieved by this project, how would you re-configure this facility? *CTA: We have not considered this yet, but it could be included within the EIS study.*		
18.00	**Bike Access** CDOE: Will there be bike access? City will accommodate bike access and consider adjacent trails. *CTA: We promote bike access and accommodate bike parking beyond fare gates. Interest in doing that.*		
19.00	**MWRD Odors** MWRD: Noted concern that there is an odor from the water treatment facility at 130th street. *CTA: EIS will need to gage magnitude of issue.*		

Item No.	*Item Description*	*Responsibility*	*Due Date*
20.00	**Safety and Security** IL State Police & Chicago Police: Raised potential concerns with access to expressway on-ramp during construction; need for coordination regarding ongoing patrolling of facility; was the cost of patrolling included? *CTA: These issues would be studied in more depth in the EIS.*		

Please notify the author of the minutes of any corrections and/or clarifications within five (5) business days.

cc: Attendees

Appendix F
Agencies and Organizations Notified of Scoping

Organization	Salutation	First Name	Last Name	Title	Address	Apt/ Floor	City	State	Zip
87th Street Stony Island Chamber of Commerce	Ms.	Joyce	Ellen		8135 S. Stony Island		Chicago	IL	60617
87th Street Stony Island Chamber of Commerce	Ms.	Kimi	Ellen	President	8135 S. Stony Island		Chicago	IL	60617
95th Street Corridor	Mr.	Randy	Moore	President	349 West 93rd Street		Chicago	IL	60620
American Brotherhood of Contractors	Mr.	Danton	Fielder	President	11509 S. Elizabeth Ave.		Chicago	IL	60643
AMTRAK	Mr.	Joseph	Boarman	President	60 Massachusetts Ave.	NE	Washington	DC	20002
ATV Local 308	Mr.	Al	Martin		205 W. Wacker	Suite 700	Chicago	IL	60606
Blue Island Chamber of Commerce	Ms.	Ruth	Sheahan		2434 Vermont Street		Blue Island	IL	60406
Bridgeview Chamber of Commerce & Industry	Ms.	Roseann	Bautista	Director	7300 West 87th Street		Bridgeview	IL	60455
Bronzeville Chamber of Commerce	Mr.	Johnnie	Blair	President	4955 S. King Dr.		Chicago	IL	60615
Business and Economic Revitalization Association	Mr.	Philip	Sims		200 East 75th Street	Suite 304	Chicago	IL	60619
Business and Economic Revitalization Association	Ms.	Alicia	Spears	Director	200 East 75th Street	Suite 304	Chicago	IL	60619
Calumet Area Industrial Commission	Mr.	Ted	Stalnos	President	1000 East 111th Street	10th Floor	Chicago	IL	60628
Calumet City Chamber of Commerce	Ms.	Kay	Cooper	President	80 River Oaks Center	Arcade-6	Calumet City	IL	60409
Canadian National	Mr.	Patrick	Waldron	Public	17641 Ashland Ave		Homewood	IL	60430
Cedar Park Cemetery					12540 S. Halsted Street		Chicago	IL	60643
Centerpoint Development	Mr.	Michael	Mullen	CEO	1808 Swift Drive		Oakbrook	IL	60523
Chatam Business Association	Ms.	Melinda	Kelly	Director	8441 South Cottage Grove		Chicago	IL	60619
Chicago Roseland Development Corporation	Mr.	Willie	Lomax	Director	11015 South Michigan Avenue		Chicago	IL	60628
Chicago Southland Chamber of Commerce	Ms.	Patrice	Brooks	Executive Vi	1916 West 174th Street		East Hazel Crest	IL	60429
Chicago Transportation Coordination Office	Mr.	Dave	Grewe	Superintend	1501 S. Canal Street		Chicago	IL	60607
Chicago Transportation Coordination Office	Mr.	Phil	Oresik	Superintend	1501 S. Canal Street		Chicago	IL	60607
Chicagoland Chamber of Commerce	Mr.	Michael	Mini	Governmen	200 East Randolph Street	Suite 2200	Chicago	IL	60601
Cosmopolitan Chamber of Commerce	Ms.	Carnice	Carey	Director	203 N. Wabash Ave.	Suite 518	Chicago	IL	60601
CSX Transportation Inc.	Ms.	Ellen	Fitzsimmons	Senior Vice	500 Water Street.		Jacksonville	Florida	32202
East Side Chamber of Commerce	Ms.	Jacqueline	Herod	Director	3658 East 106th Street		Chicago	IL	60617
Greater Auburn-Gresham Development	Mr.	Carlos	Nelson	Director	1159 W. 79th Street		Chicago	IL	60620
Greater Roseland Chamber of Commerce	Ms.	Andrea	Reed	Director					
Greater Southwest Development Corp	Mr.	James	Capraro	Executive	2601 West 63rd Street		Chicago	IL	60629
Hegewisch Chamber of Commerce	Ms.	Amy	Davis		13330 South Baltimore Avenue		Chicago	IL	60633
Hegewisch Chamber of Commerce	Ms.	Bernadette	Rodriguez	Director	13330 South Baltimore Avenue		Chicago	IL	60633
Historic Pullman Foundation	Ms.	Dedee	Fabris	Staffer	614 East 113th Street		Chicago	IL	60628
Icanhelputravel.com	Ms.	Geraldine	Hill		11731 S Wallace		Chicago	IL	60628
Indiana Harbor Belt Railroad	Mr.	Dave	Nelson		2721 161st Street		Hammond	IN	46323-1099
Indiana Harbor Belt Railroad	Mr.	Jim	Roots	General Mar	2721 161st Street		Hammond	IN	46323-1099
Indiana Harbor Belt Railroad	Mr.	Phillip	Oresik		2721 161st Street		Hammond	IN	46323-1099
Inka Internet Station	Mr.	Semaj	Salinas		11320 S. Halsted St		Chicago	IL	60628
International Socialist Organization	Mr.	Nikolai	Diaz		1347 W Cullerton		Chicago	IL	60628
Laborer Local 76	Mr.	Wendell	Dixon		11612 S Austin		Chicago	IL	60643
Laborers Union Local 6	Mr.	Billy	Dorsey		11431 S Union Ave		Chicago	IL	60628
Little Company of Mary Hospital	Mr.	Dennis	Riley		2800 W. 95th St		Evergreen Park	Il	60805
Long & Associates	Dr.	John	Long		7258 S. Euclid		Chicago	IL	60649
Maple Park Home Owner	Mr.	Jacob	Harston		11519 S. Loomis		Chicago	IL	60643
Material Girlz Fabric Club - CSU	Ms.	Marian	Hayes		9501 S. King Drive		Chicago	IL	60628
McNamara Cab Co	Mr.	Frank	Lo Presti				Chicago	IL	
Midwest High-Speed Rail Assoc	Mr.	Christopher	Lacina		10211 S Prospect Ave		Chicago	IL	60643
MKC Associates	Ms.	Mary Kay	Christopher		3112 Maple		Berwyn	IL	60402

Area Chapter)	Ms.	Deborah	Chima	President	216 W. Jackson Blvd.	Suite 625	Chicago	IL	60606
P.U.S.H. / N.A.A.C.P/ AFSCME (Council 31)	Ms.	Linda	Steward		920 E. Hyde Park Blvd.		Chicago	IL	60615
Socialist Worker	Mr.	Christopher	Collins		1100 N LaSalle Blvd		Chicago	IL	60610
South Chicago Chamber of Commerce	Mr.	Neil	Bosanko	Director	2938 East 91st Street		Chicago	IL	60617
South Suburban Mayors & Managers	Mr.	Ed	Paesel	Director	1904 W. 174th Street		East Hazel Crest	IL	60429
Southeast Chicago Development Commission	Mr.	Doug	Knuth	President	9204 South Commercial Avenue		Chicago	IL	60617
St. Bernard's Hospital and Health Care Center	Mr.	Charles	Holland		326 W. 64th St.		Chicago	IL	60621
Strategies for Community Economic Development & Finance	Ms.	Heather	Parish	Consultant	Third Floor		Chicago	IL	60649
Streeterville Chamber of Commerce	Ms.	Mable	Buckner	Director	645 N. Michigan Ave. #800		Chicago	IL	60611
Streetwise	Mr.	Sean	Redmond		525 S. State Street		Chicago	IL	60605
Transit Riders Authority	Mr.	Adam	Kerman		P.O. Box 529		Chicago	IL	60690
Union Pacific Railroad	Mr.	Mike	Payette	Assistant Vi	101 North Wacker Drive, Suite 1910		Chicago	IL	60606
Union Pacific Railroad	Mr.	Joseph	Bateman, Jr.	VP Public Af	1400 Douglas St.	STOP 1560	Omaha	NE	68719
Union Pacific Railroad	Mr.	Mark	Bristol	General Dire	1400 Douglas St.	STOP 1120	Omaha	NE	68719
Women's Business Development Center (WBDC)	Ms.	Hedy	Ratner	Director	8 S. Michigan Avenue, Suite 400		Chicago	IL	60603
Altgeld Community Foundation	Ms.	Paulette	Edwards		13226 South Ellis Ave.		Chicago	IL	60827
Beverly Area Planning Association	Mr.	Matt	Walsh	Director	11107 S. Longwood Drive		Chicago	IL	60643
Beverly Area Planning Association	Ms.	Marcia	Walsh	and	11107 S. Longwood Drive		Chicago	IL	60643
Blue Island Chamber of Commerce	Mr.	Greg	Luchow	Executive D	2434 Vermont Street		Blue Island	IL	60406
Catholic Charities, Community and Civic Affairs	Mr.	John	Ryan	Director	721 North LaSalle Street		Chicago	IL	60610
Center for Neighborhood Technology	Mr.	Kyle	Smith		2150 W North Ave		Chicago	IL	60647
CFABC-Improve RDA	Mr.	Thomas	Babbington		3653 W 81st St		Chicago	IL	60652
Chatham Avalon Park Community Council	Mr.	Keith	Tate	President	8441 South Cottage Grove		Chicago	IL	60619
Chesterfield Community Council	Mr.	Nell	Howard		8737 W Wabash		Chicago	IL	60619
Chesterfield Community Council	Mr.	Lester	Smith	President	501 East 90th Place		Chicago	IL	60619
Chesterfield Community Council	Mr.	WM	Howard		8737 Wabash Ave.		Chicago	IL	60619
Chesterfield Community Council	Ms.	Cynthia	Coleman	President	501 East 90th Place		Chicago	IL	60619
Chesterfield Community Council	Ms.	Worthettia	Evans		501 East 90th Place		Chicago	IL	60619
Chesterfield Community Council	Ms.	Kristina	Patterson		501 East 90th Place		Chicago	IL	60619
Chicago South CDO	Mr.	James	Dunlap Jr.		12538 S. Halsted		Chicago	IL	60643
Chicago Urban League	Mr.	Patrick	Colbert	Relationshi	4510 South Michigan Avenue		Chicago	IL	60653
Chicago Urban League	Ms.	Cheryle	Jackson	CEO	4510 South Michigan Avenue		Chicago	IL	60653
Chicago Urban League	Ms.	Cheryl	Freeman Smith	Diversity	4510 South Michigan Avenue		Chicago	IL	60653
Chicagoland Bicycle Federation	Mr.	Keith	Holt		9 W. Hubbard	#402	Chicago	IL	60610
Citizens Taking Action	Mr.	Charley	Yale		6057 N Lincoln Ave	Apt 611	Chicago	IL	60659
Community Mental Health Council	Dr.	Lynne	Mock, Ph.D.		8704 S. Constance Ave.		Chicago	IL	60617
Community Mental Health Council	Mr.	Ade	Elegbede		8704 S. Constance		Chicago	IL	60617
Community Renewal Society-Senior Action Network	Ms.	Doris	Martin		13207 S. Rhodes Ave		Chicago	IL	60827
CTA Gray Line Project	Mr.	Mike	Payne		P.O. Box 64614		Chicago	IL	60664
Developing Communities Project	Mr.	James	Woodson		9701 S. Harvard Ave.		Chicago	IL	60628
Developing Communities Project	Mr.	Darrell	Evans		12500 S. Lowe		Chicago	IL	60628
Developing Communities Project	Mr.	John Paul	Jones	Organizer	11300 South Halsted		Chicago	IL	60626
Developing Communities Project	Mr.	Brandon	Love		11300 S Halsted		Chicago	IL	60628
Developing Communities Project	Mr.	Dennis	Lucas		11300 S Halsted		Chicago	IL	60628
Developing Communities Project	Mr.	Roderick	Montgomery		11300 South Halsted	Ste A	Chicago	IL	
Developing Communities Project	Mr.	Eugene	Rogers		10763 S. Sangamon		Chicago	IL	60643
Developing Communities Project	Mr.	Horace	Smith		10557 S King Dr		Chicago	IL	60628
Developing Communities Project	Mr.	Eugene	Taylor		586 Calhoun Ave		Calumet City	IL	60409
Developing Communities Project	Mr.	Lou	Turner		11300 S Halsted St		Chicago	IL	60628

Developing Communities Project	Mrs.	Tracie	Evans		12500 S. Lowe		Chicago	IL	60628
Developing Communities Project	Ms.	Edith	Evans		71211 S. Emerald Ave.		Chicago	IL	60628
Developing Communities Project	Ms.	Desta	Houston		212 E. 95th St.		Chicago	IL	60619
Developing Communities Project	Ms.	Sharon	Houston		12240 S. Perry		Chicago	IL	60628
Developing Communities Project	Ms.	Patricia	Peters		648 E. 101st Street		Chicago	IL	60628
Developing Communities Project	Ms.	Debra	Strickland		212 E. 95th St.		Chicago	IL	60619
Developing Communities Project	Ms.	Lisa	Dunbar		10231 S Peoria		Chicago	IL	60643
Developing Communities Project	Ms.	Michelle	Evans		12500 S. Lowe		Chicago	IL	60628
Developing Communities Project	Ms.	Patricia	Gray Smith		10557 S King Dr		Chicago	IL	60628
Developing Communities Project	Ms.	Sandra	Herrin		10956 S State		Chicago	IL	60628
Developing Communities Project	Ms.	Ernnesha	Kerr		11300 S Halsted		Chicago	IL	60628
Developing Communities Project	Ms.	Dorothy	King		1453 W. 71st Place		Chicago	IL	60636
Developing Communities Project	Ms.	Gwendolyn	Rice	Director	11300 South Halsted		Chicago	IL	60626
Developing Communities Project	Ms.	Hilda	Taylor		586 Calhoun Ave		Calumet City	IL	60409
Developing Communities Project	Pastor	Samuel	Strachan		449 W. 129th St.		Chicago	IL	60628
Developing Communities Project	Rev.	Michael	Evans		212 E. 95th St.		Chicago	IL	60619
Developing Communities Project	Rev.	Larry	Redd		11320 S Halsted		Chicago	IL	60628
Fireman Community Services	Mr.	Warner	Abrams		144 W 47th St.		Chicago	IL	60609
Gangs, Drugs, and Violence Prevention Inc.	Mr.	Jesse	Beckam Jr.		12600 S. Wallace		Chicago	IL	60628
Gangs, Drugs, and Violence Prevention Inc.	Ms.	Addie	Beckam		12600 S. Wallace		Chicago	IL	60628
Golden Gate Homeowners Association	Ms.	Mary	Jefferson		13161 S Rhodes Ave		Chicago	IL	60827
Golden Gate Homeowners Association	Ms.	Deloris	Lucas		13134 S Vernon		Chicago	IL	60827
Grand Boulevard Federation	Ms.	Andrea	Lee		4859 S. Wabash	2nd Floor	Chicago	IL	60615
Healthcare Consortium of Illinois	Ms.	Mayme	Buckley		1350 E Sibley Blvd		Dolton	IL	60419
Healthcare Consortium of Illinois	Ms.	Naomi	Coleman		1350 E Sibley Blvd		Dolton	IL	60417
Historic Pullman Foundation	Mr.	Michael	Shymanski		614 E. 113th St.		Chicago	IL	60628
Illinois Nurses Association	Ms.	Sharon	Bell		1250 W. 112th Place		Chicago	IL	60643
It Takes A Village	Ms.	Clare	Nellums		344 W. 123rd Street		Chicago	IL	60628
Justice for Children	Ms.	Debra	McLaurin	Developmer	2600 Southwest Frwy	Ste 806	Houston	TX	77098
Little Village Environmental Justice Organization	Mr.	Harry	Brooks		7818 S South Shore Drive	Apt 2A	Chicago	IL	60649
Metro Seniors in Action	Mr.	Charles	Spears		6733 S. Ridgeland Ave	Apt. 1-1y	Chicago	IL	60649
Metro Seniors in Action	Ms.	Dorothy	Sims		10834 S. Eberhart Ave.		Chicago	IL	60628
NAACP, Chicago Southside Chapter	Rev.	Phillip	O'Bannon	President	800 East 78th Street		Chicago	IL	60619
Neighbors of Fuller Park	Mr.	Kenneth	Smith		239 W. 46th St.		Chicago	IL	60609
Omnibus Society of America	Mr.	Wiliam	Reynolds		2114 W Balmoral Ave		Chicago	IL	60625
Partnership for Economic and Community Development	Mr.	Renard	Harvey		1667 W. 92nd Place		Chicago	IL	60620
Pastors United for Change	Mr.	Roosevelt	Watkins	ent	9231 S. Cottage Grove		Chicago	Il	60619
People for Community Recovery	Ms.	Cheryl	Johnson		13116 S. Ellis Ave.		Chicago	IL	60827
People for Community Recovery	Ms.	Alisha	Jacobs		755 130th Place		Chicago	IL	60827
People for Community Recovery	Ms.	Imanie	Johnson		13015 S Evans Ave		Chicago	IL	60827
People for Community Recovery	Ms.	Nekeba	Johnson		13041 S Evans Ave		Chicago	IL	60827
Predestined Incorporated	Ms.	Laticia	Strachan	hief	9322 South Emerald Avenue		Chicago	IL	60620
Pullman Civic Organization	Mr.	Drew	Sexton	President	11111 S. Forrestville Ave.		Chicago	IL	60628
Pullman Civic Organization	Mr.	Andrew	Bullen		619 E 111th St		Chicago	IL	60628
Pullman Civic Organization	Ms.	Linda	Bullen		619 E 111th St		Chicago	IL	60628
Pullman Civic Organization	Mr.	Drew	Smith		11111 S. Forrestville Ave.		Chicago	IL	60628
Pullman Historic Visitor Center	Ms.	Deedee	Frabris	Director	11141 South Cottage Grove		Chicago	IL	60628
Rainbow Push Coalition, International Trade Bureau	Ms.	Marshette	Turner	Director	930 E. 50th Street		Chicago	IL	60615
Rainbow/Push Coalition	Mr.	John	Mitchell	Staff	930 East 50th Street		Chicago	IL	60615

Riverdale Community Resource Center	Ms.	Rebecca	George	Director	13725 South Wabash		Riverdale	IL	60827
Riverdale Community Resource Center	Ms.	Myrna	Watkins	Director	13725 South Wabash		Riverdale	IL	60827
Roseland Heights Community Association	Mr.	Arthur	Jones	tive	9910 South Prairie Avenue		Chicago	IL	60628
Roseland Heights Community Association	Mr.	Michael	Porche	Director	P.O. Box 198751		Chicago	IL	60619
Roseland Heights Community Association	Mr.	Clevan	Tucker Jr		P.O. Box 198751		Chicago	IL	60619
Roseland Heights Community Association	Ms.	Louise	Hutchinson		9742 S. Forest Avenue		Chicago	IL	60628
Roseland Heights Community Association	Ms.	Anne	Wilson		9719 S. Forest Ave.		Chicago	IL	60628
Rosemoor Community Association	Ms.	Hileria	Godfrey	President	10205 S. Martin Luther King Dr.		Chicago	IL	60628
Rosemoor Community Association	Ms.	Dena	McMullan		10109 S King Drive		Chicago	IL	60628
Senior Service Coalition of Southeast Chicago	Ms.	Julia	Lopez	, S. S.	3201 East 91st Street		Chicago	IL	60617
South Shore Cultural Center	Ms.	Andrea	Adams	Director	7059 South South Shore Drive		Chicago	IL	60649
Southeast Chicago Chamber	Ms.	Joyce	Ellen	Director	8135 S. Stony Island		Chicago	IL	60617
Southeast Environmental Task Force	Ms.	Peggy	Salazar	Board of	13300 South Baltimore Avenue		Chicago	IL	60633
Southeast Environmental Task Force	Mr.	Mike	Skuja	Board of	13300 South Baltimore Avenue		Chicago	IL	60633
Southsiders Organized for Unity and Liberation (SOUL)	Mr.	Prentice	Butler		5001 S Ellis		Chicago	IL	60615
Southsiders Organized for Unity and Liberation (SOUL)	Mr.	Christian	Mitchell		5001 S Ellis		Chicago	IL	60615
Southwest REACH Center	Mr.	Piotr	Korzynski	Coordinator	6155 S. Pulaski Road	2nd Floor	Chicago	IL	60629
TCA Health Inc.	Ms.	La Donna	Brown Miller		1029 East 130th St		Chicago	IL	60628
Teamwork Englewood	Rev.	R.C.	Walker	Director	815 W. 63rd St. 2nd Floor		Chicago	IL	60621
The Community Mental Health Council	Ms.	Diana	Short		333 E 55th Place	Apt 208	Chicago	IL	60637
The Little Village Environmental Justice Organization	Mr.	Mike	Pitula		2856 S. Millard Ave.		Chicago	IL	60623
United Neighborhood Organization	Mr.	Juan	Rangel	Executive	3rd Floor		Chicago	IL	60607
Village of Riverdale, Community Development Department	Mr.	Earl	Silas, Jr	Director	157 West 144th Street		Riverdale	IL	60827
Voorhees Center	Ms.	Martha	Glas		400 S Peoria St		Chicago	IL	60607
West Chatham Advisory	Minister	Silvian	Jones	President					
West Chatham Improvement Association	Ms.	Lorri	Baldwin	Vice-	8153 S. Harvard Avenue		Chicago	IL	60620
West Chesterfield Community Council	Ms.	Gwen	Coleman		9351 S. Michigan Ave.		Chicago	IL	60619
YWCA	Ms.	Cynthia	Angline	Director	6600 S. Cottage Grove		Chicago	IL	60637
American Indian Center, Inc.	Ms.	Frances	Hagemann	Board Vice	1630 W. Wilson Ave.		Chicago	IL	60640
American Indian Center, Inc.	Ms.	Rita	Hodge	Board Secre	1630 W. Wilson Ave.		Chicago	IL	60640
American Indian Center, Inc.	Ms.	Debra	Valentino	Board Presi	1630 W. Wilson Ave.		Chicago	IL	60640
Association of Asian Construction Enterprises	Mr.	Perry	Nakachi	President	333 N. Ogden Avenue		Chicago	IL	60607
Black Contractors United (BCU)	Ms.	Florence	Cox	Director	Suite 200		Chicago	IL	60620
Chicago Area Gay & Lesbian Chamber of Commerce	Ms.	Christee	Snell	Director	1210 W. Rosedale		Chicago	IL	60660
Chicago Minority Business Development Council	Ms.	Sheila	Hill	President	1 East Wacker Drive	Suite 1200	Chicago	IL	60601
China Town Chamber of Commerce		Man-Men	Lee	Co-Executiv	2169B S. China Place		Chicago	IL	60616
China Town Chamber of Commerce		Chi Can	To	Co-Executiv	2169B S. China Place		Chicago	IL	60616
Hispanic American Construction Industry Association	Mr.	Paul	Cerpa	Director	901 W. Jackson Blvd.	Suite 205	Chicago	IL	60607
Illinois Hispanic Chamber of Commerce	Mr.	Omar	Duque	CEO	111 W. Washington	Suite 1660	Chicago	IL	60602
Latin American Chamber of Commerce	Mr.	Bennett	Santana	Chairman	3512 W. Fullerton Ave.		Chicago	IL	60647
Puerto Rican Chamber of Commerce of Illinois	Mr.	Marlo	Irizarry	Director	2622 W. Division St.		Chicago	IL	60622
2nd Congressional District	Congressm	Jesse	Jackson Jr.	Congressma	7121 S. Yates Blvd.		Chicago	IL	60649
2nd Congressional District Office	Mr.	Rick	Bryant		17926 South Halsted		Homewood	IL	60430
2nd Congressional District Office	Mr.	Ben	Lenet	District	17926 South Halsted		Homewood	IL	60430
7th Congressional District	man	Danny	Davis	an	3333 West Arthington Street	Ste. 130	Chicago	IL	60624
U.S. Senator	Senator	Roland	Burris	Senator	230 S. Dearborn	Ste. 3900	Chicago	IL	60604
U.S. Senator	Senator	Richard	Durbin	Senator	230 S. Dearborn	Ste. 3892	Chicago	IL	60604
Alderman Carrie Austin's Office	Mr.	Chester	Wilson		507 W 111th Street		Chicago	IL	60628
Alderman Howard Brookins Jr. Office	Ms.	Adrienne	Smith		9612 S Halsted		Chicago	IL	60628

Calumet City	Ms.	Michelle	Markiewicz Qualkinbush	Mayor	204 Pulaski Road		Calumet City	IL	60409
Chicago City Council 10th Ward	Ms.	Yessenia	Carreon		3522 E. 106th St.		Chicago	IL	60617
Chicago City Council 10th Ward Office	Alderman	John A.	Pope	Alderman	3552 E. 106th St.		Chicago	IL	60617
Chicago City Council 17th Ward	Alderman	Latasha	Thomas	Alderman	7811 S. Racine Avenue		Chicago	IL	60620
Chicago City Council 19th Ward	Alderman	Ginger	Rugai	Alderman	10400 South Western Avenue		Chicago	IL	60655
Chicago City Council 20th Ward	Alderman	Willie	Cochran	Alderman	6357 S. Cottage Grove		Chicago	IL	60637
Chicago City Council 21st Ward	Alderman	Howard	Brookins, Jr.	Alderman	9612 S. Halsted St		Chicago	IL	60628
Chicago City Council 34th Ward	Alderman	Carrie	Austin	Alderman	507 W. 111th St.		Chicago	IL	60628
Chicago City Council 34th Ward Office	Mr.	Lemuel	Austin		500 W. 111th St.		Chicago	IL	60628
Chicago City Council 34th Ward Office	Mr.	Alfred	Connor		1124 W. 107th Place		Chicago	IL	60643
Chicago City Council 34th Ward Office	Ms.	Leslie	Austin		507 W. 111th St.		Chicago	IL	60628
Chicago City Council 34th Ward Office	Ms.	Diane	Turner		507 W. 111th St.		Chicago	IL	60628
Chicago City Council 34th Ward Office	Ms.	Lee Angela	Lofton		12708 S. Green St.		Chicago	IL	60643
Chicago City Council 3rd Ward	Alderman	Pat	Dowell	Alderman	5046 S. State Street		Chicago	IL	60609
Chicago City Council 6th Ward	Alderman	Freddrenna	Lyle	Alderman	406 E. 75th St.		Chicago	IL	60619
Chicago City Council 6th Ward Office	Mr.	Keith	Harris		406 E 75th St		Chicago	IL	60619
Chicago City Council 7th Ward	Alderman	Sandi	Jackson	Alderman	7129 S. Yates Street		Chicago	IL	60649
Chicago City Council 8th Ward	Alderman	Michelle A.	Harris	Alderman	8539 S. Cottage Grove		Chicago	IL	60619
Chicago City Council 9th Ward	Alderman	Anthony	Beale	Alderman	34 E. 112th Place		Chicago	IL	60628
City of Blue Island	Mr.	Donald E.	Peloquin	Mayor	13051 S. Greenwood Ave.		Blue Island	IL	60406
City of Blue Island	Ms.	Mary	Poulsen	Marketing D	13051 South Greenwood Avenue		Blue Island	IL	60406
City of Calumet - Community & Economic Development	Mr.	James J.	Gigliotti	Coordinator	204 Pulaski Road		Calumet City	IL	60409
City of Chicago Office of the Mayor	Mayor	Richard	Daley	Mayor	121 N. LaSalle St.	Room 507	Chicago	IL	60602
City of Chicago Office of the Mayor	Mr.	Sean B.	Harden	Assistant to	121 N. LaSalle St.	Room 406	Chicago	IL	60602
City of Chicago Office of the Mayor	Mr.	Gene	Lee	Chief of	121 N. LaSalle St.	Room 406	Chicago	IL	60602
Village of Burnham	President	Robert	Polk	President	14450 Manistee		Burnham	IL	60633
Village of Calumet Park	Mr.	Joseph	DuPar	Mayor	12409 S. Throop St.		Calumet Park	IL	60827
Village of Calumet Park, Community Relations Commissioner	Mr.	Norm	Edwards	Director	12409 South Throop		Calumet Park	IL	60827
Village of Dolton	Mayor	Ronnie	Lewis	Mayor	14014 Park Avenue		Dolton	IL	60419
Village of Evergreen Park	Mayor	James	Sexton	Mayor	9418 S. Kedzie Ave		Evergreen Park	IL	60805
Village of Riverdale	Mr.	Deyon L.	Dean	Mayor	157 W. 144th St.		Riverdale	IL	60827
Village of Riverdale	Ms.	Deborah	Smiley	Village Clerk	157 West 144th Street		Riverdale	IL	60827
Cook County Board of Commissioners	Mr.	Todd	Stroger	President	118 N. Clark Street	Room 537	Chicago	IL	60602
Cook County Commissioner	oner	William	Beavers	ner	118 N. Clark Street		Chicago	IL	60602
Cook County Commissioner	oner	Jerry "Iceman"	Butler	ner	118 N. Clark Street		Chicago	IL	60602
Cook County Commissioner	oner	Robert	Steele	ner	118 N. Clark Street		Chicago	IL	60602
Cook County Commissioner Robert Steele's Office	Ms.	Alexis	Mims		118 N Clark St.	Room 567	Chicago	IL	60619
Cook County Recorder of Deeds & Rgistrar of Titles	Mr.	Eugene	Moore	Deeds	118 N. Clark Street	Room 120	Chicago	IL	60602
Illinois Governor	Governor	Patrick	Quinn	Governor	100 W. Randolph, 16-100		Chicago	IL	60601
Illinois House of Representative District 18	ative	Julie	Hamos	Representat	820 Davis Street	Ste. 103	Evanston	IL	60201
Illinois House of Representative District 27	ative	Monique D.	Davis	Representat	1234 West 95th Street		Chicago	IL	60643
Illinois House of Representative District 28	ative	Robert	Rita	Representat	4818 W. 137th Street		Crestwood	IL	60445
Illinois House of Representative District 29	ative	David E.	Miller	Representat	1350 East Sibley Blvd	Ste 301 A	Dolton	IL	60419
Illinois House of Representative District 30	ative	William	Davis	tive	1912 W. 174th St.		East Hazel Crest	IL	60429
Illinois House of Representative District 31	ative	Mary E.	Flowers	Representat	2525 W. 79th Street		Chicago	IL	60652
Illinois House of Representative District 32	ative	Andre M.	Thapedi	Representat	371 East 75th St		Chicago	IL	62706
Illinois House of Representative District 33	ative	Marlow H.	Colvin	Representat	8539 South Cottage Grove		Chicago	IL	60619
Illinois House of Representative District 34	ative	Constance A	Howard	Representat	8729 S. State Street		Chicago	IL	60619
Illinois House of Representative District 35	ative	Kevin	Joyce	tive	6965 W. 111th Street		Worth	IL	60482

Illinois House of Representative District 36	ative	James D.	Brosnahan	tive	5311 W. 95th St.		Oak Lawn	IL	60453
Illinois House of Representative District 5	ative	Kenneth	Dunkin	Representat	1520 N. Wells		Chicago	IL	60610
Illinois House of Representative District 6	ative	Esther	Golar	Representat	4926 South Ashland		Chicago	IL	60609
Illinois Secretary of State	Mr.	Jesse	White	of State	213 State Capitol		Springfield	IL	62756
Illinois Senator District 14	Senator	Emil	Jones III	Senator	507 West 111th Street		Chicago	IL	60628
Illinois Senator District 15	Senator	James T	Meeks	Senator	2050 E. 159th Street		Calumet City	IL	60419
Illinois Senator District 16	Senator	Jacqueline Y.	Collins	Senator	1155 West 79th Street		Chicago	IL	60620
Illinois Senator District 17	Senator	Donne E.	Trotter	Senator	8704 South Constance Avenue	Ste. 324	Chicago	IL	60617
Illinois Senator District 18	Senator	Edward D	Maloney	Senator	10400 South Western Avenue		Chicago	IL	60643
Illinois Senator District 3	Senator	Mattie	Hunter	Senator	2929 S. Wabash Avenue	Ste. 102	Chicago	IL	60616
Illinois State Police	Mr.	Jonathan	Monken	Director	801 South Seventh Street	P.O. Box 19461	Springfield	IL	62794
Illinois State Police District Chicago	Trooper	Clare	Pfotenhauer	Trooper	9511 W. Harrison St.		Des Plaines	IL	60016
Illinois State Toll Highway Authority	Mr.	John	Minolta	Chairman	2700 Ogden Ave		Downer's Grove	IL	60515
State Rep David Miller's Office	Ms.	Valerie	Davis		1350 E Sibley Blvd	Ste 301 A&B	Chicago	IL	60419
Compliance	Mr.	Michael	Chezik	Environme	200 Chestnut St.	Room 244	Philadelphia	PA	19106
Federal Highway Administration	Mr.	Norman	Stoner	Division Adm	3250 Executive Park Drive		Springfield	IL	62703
Federal Highway Administration	Mr.	Chris	DiPalma		200 West Adams, Suite 320		Chicago	IL	60606
Federal Highway Administration	Mr.	Ed	Christopher	n Planning	4749 Lincoln Mall Drive	Ste. 600	Matteson	IL	60443
Federal Highway Administration	Mr.	Michael	Rosenstiehl	ve Team	4749 Lincoln Mall Drive	Ste. 600	Matteson	IL	60443
Federal Railroad Administration	Mr.	Laurence	Hasvold	Regional Ad	200 West Adams, Suite 310		Chicago	IL	60606
Federal Railroad Administration	Mr.	Timothy	Barkley	Office of	1200 New Jersey Ave. SE		Washington	DC	20590
Federal Transit Administration	Mr.	David	Werner	Regional Ad	200 West Adams Street, Suite 320		Chicago	IL	60606
Chicago Bureau of Convention and Tourism	Mr.	Mark	Theis	Vice	2301 N. Lakeshore Drive		Chicago	IL	60616
Chicago Housing Authority	Mr.	Lewis	Jordan	CEO	60 E. Van Buren		Chicago	IL	60605
Chicago Housing Authority, Intergovernmental Affairs	Mr.	Otis	Wright	Director	60 E. Van Buren		Chicago	IL	60605
City of Chicago Department of Aviation	Mr.	Larry	Rzewski		121 N. LaSalle St.		Chicago	IL	60602
City of Chicago Department of Budget and Management	Mr.	Gene	Saffold	Financial	121 N. LaSalle St.	Room 604	Chicago	IL	60602
City of Chicago Department of Community Development	Ms.	Karen	Forte	Architect - C	121 N. LaSalle St.	Ste. 1000	Chicago	IL	60602
City of Chicago Department of Community Development	Mr.	Edward	Lewis	of	121 N. LaSalle St.	Ste. 1000	Chicago	IL	60602
Operations	Mr.	Bob	Richardson	Commissio	121 N. LaSalle St.	Room 704	Chicago	IL	60602
City of Chicago Department of Transportation, Division of Planning	Mr.	Richard	Hazlett	Coordinating	30 N. LaSalle Street	Suite 500	Chicago	IL	60602
City of Chicago Department of Transportation, Division of Planning	Ms.	Brenda	McGruder		30 N. LaSalle Street	Suite 500	Chicago	IL	60602
City of Chicago Department of Transportation, Division of Planning	Mr.	Joe	Alonzo	CREATE Ma	30 N. LaSalle Street, Suite 500		Chicago	IL	60602
Village of Riverdale	Ms.	Deborah	Smiley	Clerk	157 West 144th Street		Riverdale	IL	60827
Chicago Metropolitan Agency for Planning	Ms.	Janet	Bright	Relations	233 S. Wacker Drive	Ste. 800	Chicago	IL	60606
Chicago Metropolitan Agency for Planning	Mr.	Jose	Rodriguez	Programmin	233 S. Wacker Drive	Ste. 800	Chicago	IL	60606
Chicago Metropolitan Agency for Planning	Ms.	Claire	Bozic	Senior Analy	233 South Wacker Drive, Suite 800		Chicago	IL	60606
Cook County Department of Revenue	Mr.	Nathan	Paige	Director	118 N. Clark St.	Room 1160	Chicago	IL	60602
Cook County Highway Department	Mr.	John	Beissel		69 West Washington	Room 2300	Chicago	IL	60602
Cook County Sheriff's Office	Chief	Louis A.	Sbarboro		5600 Old Orchard Rd.		Skokie	IL	60077
Metra Commuter Rail	Ms.	Kristen	Andersen	Transportati	547 West Jackson Boulevard	13th Floor	Chicago	IL	60661
Metra Commuter Rail	Mr.	David	Kralik	Section Man	547 West Jackson Boulevard, 13th Floor		Chicago	IL	60661
Metropolitan Water Reclamation District	Mr.	Joseph	Schuessler	Principal Civ	111 East Erie		Chicago	IL	60611-3154
Metropolitan Water Reclamation District	Mr.	Nicholas	Venuso	Assistant Ch	111 East Erie		Chicago	IL	60611-3154
Metropolitan Water Reclamation District	Mr.	A.S.	Paintal	Supervising	111 East Erie		Chicago	IL	60611-3154
Northern Indiana Commuter Transportation District	Mr.	John	Parsons		33 East U.S. Highway 12		Chesterton	IN	46304
Northern Indiana Commuter Transportation District	Mr.	Bill	O'Dea		33 East U.S. Highway 12		Chesterton	IN	46304
Pace	Mr.	David	Tomzik	Manager, Lo	550 West Algonquin Road		Arlington Heights	IL	60005
Pace	Mr.	Thomas J.	Ross	Director	550 W. Algonquin Road		Arlington Heights	IL	60005

Regional Transit Authority	Ms.	Aimee	Lee	Manager, Re	175 West Jackson Boulevard, Suite 1550		Chicago	IL	60604
Regional Transit Authority	Ms.	Diane	Palmer	Director of C	175 W. Jackson Blvd.	Suite 1550	Chicago	IL	60604
Regional Transit Authority	Mr.	Sid	Weseman		175 West Jackson Boulevard, Suite 1550		Chicago	IL	60604
Illinois Commerce Commission	Mr.	Charles	Box	Chairman	527 East Capitol Avenue		Springfield	IL	62701
Illinois Department of Commerce and Economic Opportunity	Ms.	Felisha	McNeal		100 W Randolph	Ste 3-400	Chicago	IL	60601
Illinois Department of Employment Security	Ms.	Maureen T.	O'Donnell	Director	33 S. State St.		Chicago	IL	60603
Illinois Department of Revenue	Mr.	Brian	Hamer	Director	100 West Randolph Street		Chicago	IL	60601
Illinois Department of Transportation	Mr.	Stanley	Moore		300 W. Adams	2nd Floor	Chicago	IL	60606
Illinois Department of Transportation	Mr.	Chuck	Abraham	Division of P	J. R. Thomson Center, Suite 6-600		Chicago	IL	60601
Illinois Department of Transportation	Ms.	Lil	Budzinski		J. R. Thomson Center, Suite 6-600		Chicago	IL	60601
Illinois Department of Transportation, Bureau of Railroads	Mr.	Michael	Garcia	Engineerin	2300 S. Dirksen Parkway	Room 339	Springfield	IL	62764
Illinois Department of Transportation, Central Bureau of Operations	Ms.	Diane	O'Keefe	Director	201 West Center Court		Schaumburg	IL	60196
Illinois Department of Transportation, District 1 Bureau of Construction	Mr.	Bill	Frey	Chief	201 West Center Court		Schaumburg	IL	60196
Illinois Department of Transportation, Division of Traffic Safety	Mr.	Robert	Hoover	Chief	2300 S. Dirksen Parkway		Springfield	Il	62764
Illinois Department of Transportation, ITS Program Office	Mr.	Chuck	Schmitt	Chief	2300 South Dirksen Parkway		Springfield	IL	62764
Altgeld Branch Public Library	Ms.	Shante	Jackson	Director	950 East 132nd Place		Chicago	IL	60827
Blue Island Public Library	Mr.	Jim	Deiters	Director	2433 York Street		Blue Island	IL	60406
Brainerd Branch Public Library	Ms.	Mary	Jones	Director	1350 West 89th Street		Chicago	IL	60620
Calumet City Public Library	Mr.	Doug	Losey	Director	660 Manistee Avenue		Calumet City	IL	60409
Calumet City Public Library	Mr.	William	Pixley	Director	660 Manistee Avenue		Calumet City	IL	60409
Hegewisch Library Branch	Ms.	Susan	Puterko	Manager	3048 East 130th Street		Chicago	IL	60633
James F. Vodak/East Side Branch Public Library	Mr.	Richard	Mclellan	Director	3710 East 110th Street		Chicago	IL	60617
Jeffrey Manor Branch Public Library	Ms.	Claudia	Brand	Director	2401 East 100th Street		Chicago	IL	60617
Jeffrey Manor Branch Public Library	Ms.	Elizabeth	Garcia	Director	2401 East 100th Street		Chicago	IL	60617
Pullman Public Library	Mr.	Jimmy	Markcom	Director	11001 South Indiana Avenue		Chicago	IL	60628
Riverdale Public Library	Ms.	Barb	Diel	tive	208 West 144th Street		Riverdale	IL	60827
South Chicago Library Branch	Ms.	Kim	Catledge	Manager	9055 South Houston Avenue		Chicago	IL	60617
Tuley Park Library Branch	Ms.	Stella	Beck	Manager	501 East 90th Place		Chicago	IL	60619
Walker Branch Public Library	Ms.	Christina	Matera	Director	11071 South Hoyne Avenue		Chicago	IL	60643
West Pullman Library Branch	Ms.	Duwana	Dorsey	Manager	830 West 119th Street		Chicago	IL	60628
Hope Fellowship Christian Center	Ms.	Carolyn	Cox		PO Box 198567		Chicago	IL	60619
Apostolic Church of God	Rev. Dr.	Arthur M.	Brazier	Pastor	6320 South Dorchester Avenue		Chicago	IL	60637
Bethel House of Prayer	Mr.	James	McFadden		10956 S State Street		Chicago	IL	60628
Bethel House of Prayer	Ms.	Vanessa	Lewis		10956 S. State Street		Chicago	IL	60628
Bethel House of Prayer	Ms.	Bernadette	Lewis		10956 S. State Street		Chicago	IL	60628
Holy Spirit Lutheran	Mr.	Roger	Mitchell		9210 S. Phillips Avenue		Chicago	IL	60617
Joy Fellowship Baptist Church	Mr.	Albert	Reece		7715 So. Throop		Chicago	IL	60620
Joy Fellowship Baptist Church	Mrs.	Sandra	White		9131 So. Claremont Ave.		Chicago	IL	60620
Joy Fellowship Baptist Church	Ms.	Carrie	Ross		11733 S. Stewart		Chicago	IL	60628
Joy Fellowship Baptist Church	Ms.	Viola	Smith		11638 S. Parnell Avenue		Chicago	IL	60628
Joy Fellowship Baptist Church	Ms.	Ruby	Stewart Mitchell		12322 S. Yale		Chicago	IL	60628
Joy Fellowship Baptist Church	Ms.	Donna	Tyson		14427 Chicago Road	Apt. A	Dolton	IL	60419
Joy Fellowship Baptist Church	Ms.	Willa Mae	Wilson		750 W. 87th Street		Chicago	IL	60620
Joy Fellowship Baptist Church	Ms.	Rosa	Young Martin		14130 Calumet		Dolton	IL	60419
Joy Fellowship Baptist Church	Ms.	Roberta	Patterson		2025 E 175th		Lansing	IL	60438
Joy Fellowship Baptist Church	Ms.	Cecile	Shannon		11740 S Longwood Drive		Chicago	IL	60643
Kenwood United Church of Christ	Pastor	Leroy	Sanders		4600-08 S. Greenwood		Chicago	IL	60653
Lilydale 1st Baptist Church	Rev.	Alvin	Love		649 W. 113th St.		Chicago	IL	60628
Lutheran Church of the Holy Spirit	Mr.	Robert	Elliott		1335 W. 115th St.		Chicago	IL	60643

Lutheran Church of the Holy Spirit	Ms.	Carolyn	Lesmeister		12157 S. Michigan Ave.	#3	Chicago	IL	60628
Lutheran Church of the Holy Spirit	Rev.	Rayford	Grady		1335 W. 115th Street		Chicago	IL	60643
New Beginnings Ministry of Faith	Br.	William	Moore		432 154th Place		Calumet City	IL	60409
New Beginnings Ministry of Faith	Ms.	Belinda	Moore		432 154th Place		Calumet City	IL	60409
Salem Baptist Church of Chicago	Rev.	James T.	Meeks	Pastor	752 East 114th Street		Chicago	IL	60628
Sheldon Heights Church of Christ	Mr.	Lionel	Harden		10353 S. Sangamon St.		Chicago	IL	60643
Sheldon Heights Church of Christ	Mr.	CJ	Harmon		5438 S Ridgewood Ct.	#3	Chicago	IL	60615
Sheldon Heights Church of Christ	Ms.	Frances	Garrett		11325 S. Halsted		Chicago	IL	60628
Sheldon Heights Church of Christ	Ms.	Katherine	Raglin		5044 S. St. Lawrence Ave.	1st Floor	Chicago	IL	60615
Sheldon Heights Church of Christ	Ms.	Janet	Bailey		11325 S Halsted		Chicago	IL	60628
Sheldon Heights Church of Christ	Ms.	Vera	Dixon		11325 S Halsted		Chicago	IL	60628
Sheldon Heights Church of Christ	Ms.	LaJoyce	Eason		4929 S. St. Lawrence		Chicago	IL	60615
Sheldon Heights Church of Christ	Ms.	Rhonda	Garrett		11325 S. Halsted		Chicago	IL	60628
Sheldon Heights Church of Christ	Ms.	Brenda L.	Gilbert		11325-55 S Halsted St.		Chicago	IL	60628
Sheldon Heights Church of Christ	Ms.	Marie	Gilbert		209 W 109th Place		Chicago	IL	60628
Sheldon Heights Church of Christ	Ms.	Kietta	McFee		11733 S. Sangamon		Chicago	IL	60643
Sheldon Heights Church of Christ	Pastor	Leonardo	Gilbert		11355 S. Halsted		Chicago	IL	60628
Sheldon Heights Church of Christ	Pastor	Charles	Smith		11355 S. Halsted		Chicago	IL	60628
St. Sabina Church	Rev.	Dr. Michael L.	Pfleger	Pastor	1210 West 78th Place		Chicago	IL	60620
UCC Churches	Rev.	Alice	Harper-Jones		P.O. Box 208491		Chicago	IL	60620
					411 W. 111th Street		Chicago	IL	60628
115-116-117 Elizabeth St. Block Club	Ms.	Marie	Ellis-Milan		11611 S. Elizabeth Street		Chicago	IL	60643
115-116-117 Elizabeth St. Block Club	Ms.	Marie	Milan		11611 S. Elizabeth Street		Chicago	IL	60643
115-116-117 Elizabeth St. Block Club	Ms.	Claudia	Davis		11531 S. Elizabeth Street		Chicago	IL	60643
Block Club 96 Wentworth	Ms.	Sylvia	Durham		9624 S Wentworth		Chicago	IL	60628
Block Club 96 Wentworth	Ms.	Mable	Echols		9622 Wentworth Ave		Chicago	iL	60628
Alianza Leadership Insitute	Mr.	Rey	Lopez-Calderon	Director	2938 E. 91st St.	Ste. 206	Chicago	IL	60617
Carver Military Academy	Mr.	John F.	Thomas	Principal	13100 South Doty Avenue		Chicago	IL	60627
Chicago State Alumni	Ms.	Marianne	Robinson		7530 S. Vernon		Chicago	IL	60619
Chicago State University	Mr.	Mark	Sudeith		8720 S. Calument Ave.		Chicago	IL	60619
Chicago State University	Ms.	Nancy	Hall-Walker		9501 S. King Drive		Chicago	IL	60628
Chicago State University, Office of Public Affaris	Ms.	Patricia	Arnold	Director	9501 South King Drive	ADM 200	Chicago	IL	60628
Corliss High School	Dr.	Anthony	Spivey	Principal	821 East 103rd Street		Chicago	IL	60628
Gwendolyn Brooks College Preparatory High School	Dr.	Dushon A.	Brown	Principal	250 East 111th Street		Chicago	IL	60628
Harlan Community Academy High School	Mr.	Reginald	Evans	Principal	9652 S. Michigan Avenue		Chicago	IL	60628
Illinois Institute of Technology	Mr.	David	Baker	External	3300 South Federal Street	PH 223	Chicago	IL	60616
Kennedy King College	Mr.	Clyde	K. El Amin	President	6800 South Wentworth Avenue		Chicago	IL	60621
Morgan Park High School	Dr.	Beryl	Shingles	Principal	1744 West Pryor Avenue		Chicago	IL	60643
Northeastern University Center for Inner City Students	Dr.	Conrad	Worrill	Educational	700 East Oakwood Avenue		Chicago	IL	60653
Northwestern University	Mr.	Patrick	Ryan	Head	633 Clark Street		Evanston	IL	60208
Olive-Harvey College	Ms.	Stephanie	Johnson	Dean of	10001 South Woodlawn Avenue		Chicago	IL	60628
Percy L. Julian High School	Dr.	Darreyl	Young-Gibson	Principal	10330 South Elizabeth Street		Chicago	IL	60643
Roseland Christian School	Mr.	James	Van Zyl		314 W. 108th Street		Chicago	IL	60628
Simeon Career Academy	Ms.	Tamara	Sterling	Principal	8147 South Vincennes Avenue		Chicago	IL	60620
Tulane University	Mr.	Roland	Solinski		21096 N Taylor Ln		Barrington	IL	
UIC Voorhees	Ms.	Janet	Smith		412 S Peoria St		Chicago	IL	60607
UIC Voorhees Center	Ms.	Katie	Bowman		400 S Peoria	Ste 2100	Chicago	IL	60607
University of Chicago	Mr.	Brian	Shaw	Transit	5555 S. Ellis Ave.	3rd Floor	Chicago	IL	60637
University of Chicago, Community & Government Affairs	Ms.	Anne Marie	Lipinski	Engageme	5801 South Ellis Avenue		Chicago	IL	60637

University of Illinois at Chicago - College of Urban Planning and Policy	Ms.	Danielle	Inendino	Assistant,	412 S Peoria St		Chicago	IL	60607

Appendix G
Notification Materials
(Direct Mailer, Transit Card, E-mail Blast, Newspaper Ads, Legal Notice, Village and Library Flyer, Media Release)

Chicago Transit Authority
567 West Lake Street
Chicago, IL 60661

Chicago Transit Authority

Red Line Extension Project

Connecting 95th Street Station to 130th Street

**Come Participate in the
September 22 & 24, 2009
Scoping Meetings**

Customer Information: 1-888-YOUR-CTA (1-888-968-7282) • CTA TTY: 1-888-CTA-TTY1 (1-888-282-8891)
Transit Information: 836-7000 from any local area code RTA TTY: 312-836-4949

Red Line Extension

PROJECT OVERVIEW

The Chicago Transit Authority (CTA) is proposing to make transportation improvements by extending the Red Line from the 95th Street Station to the vicinity of 130th Street. The extension includes 5.3 new route miles of rapid transit from the existing Red Line, four additional stations – at approximately 103rd, 111th, 115th and 130th Streets – with new bus terminal and parking facilities at each station.

ENVIRONMENTAL PROCESS OVERVIEW

CTA and the Federal Transit Administration (FTA) have initiated the federal environmental process pursuant to the National Environmental Policy Act (NEPA) and are preparing an Environmental Impact Statement (EIS) for the project. The EIS will build upon the Alternatives Analysis (AA) process that occurred from 2006-2009 and culminated in the designation of a Locally Preferred Alternative by the Chicago Transit Board on August 12, 2009. The AA process analyzed an array of transportation alternatives and included an extensive public involvement process. The EIS will evaluate at least four alternatives: a No Build Alternative, a Transportation System Management (TSM) Alternative, the Locally Preferred Alternative that extends the Red Line to 130th Street and a rail alternative along Halsted Street. The EIS will describe the alternatives, the existing environmental setting, the potential impacts from construction and operation of each alternative and proposed mitigation measures to reduce or eliminate potential impacts.

SCOPING MEETINGS

You are invited to attend a public scoping meeting to learn more about the project and to provide feedback on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and potential effects and mitigation measures to be included in the EIS.

WHAT IS SCOPING?

The process of determining the scope, focus and content of an EIS is known as "scoping." During the scoping process residents, as well as city, county, state and federal agencies have an opportunity to provide feedback and comments. The purpose of the scoping process is to:

- Identify public and agency concerns early in the environmental process
- Define the issues and alternatives that will be examined in the EIS
- Save time in the overall process and facilitate an efficient EIS preparation process.

SCOPING MEETING DATES AND LOCATIONS

Tuesday, September 22, 2009
Historic Pullman Visitor Center
6:00 p.m. to 8:00 p.m.
11141 S. Cottage Grove Avenue
Chicago, IL 60628
This location is accessible to people with disabilities and is served by CTA bus 111, Pace bus 353 , and the Metra Electric Main Line.

Thursday, September 24, 2009
Woodson Regional Chicago Public Library
6:00 p.m. to 8:00 p.m.
9525 S. Halsted Street
Chicago, IL 60628
This location is accessible to people with disabilities and is served by CTA bus 108, 112, 8A, 95W , Pace bus 352 and the Metra Electric Rock Island Line.

MEETING AGENDA AND FORMAT

Open House: 6:00 pm – 6:45 pm
Learn about the project and talk with project staff.
Presentation and Formal Public Comment:
6:45 pm – 8:00 pm
A brief presentation will be followed by an opportunity to enter formal comments into the public record.

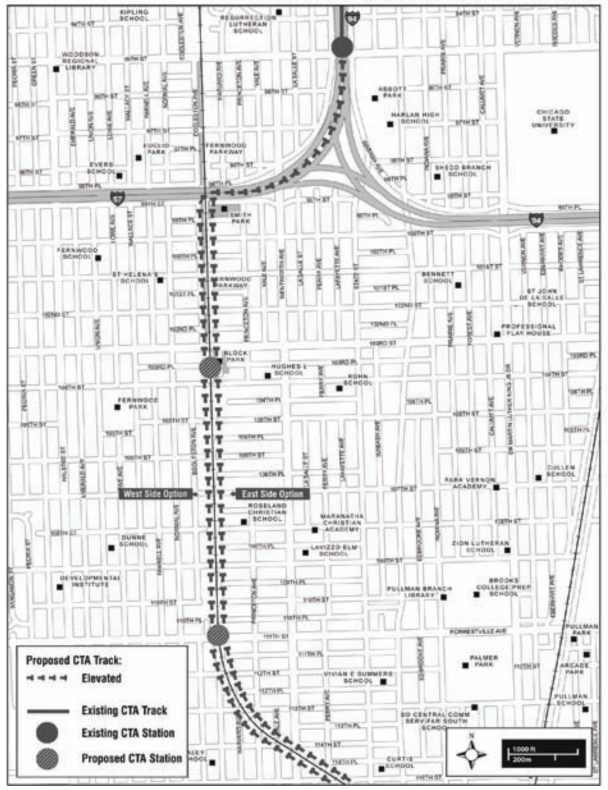
SUBMIT COMMENTS

In addition to comments on the scope of the EIS received at the meeting, written scoping comments will be accepted until October 27, 2009 and may be submitted via mail, e-mail, fax or the project website with attention to: Jeffrey Busby, General Manager, Strategic Planning, Chicago Transit Authority, P.O. Box 7602, Chicago, IL 60680-7602.
Email: RedExtension@transitchicago.com
Website: www.transitchicago.com/RedEIS
Fax: (312)-681-4297

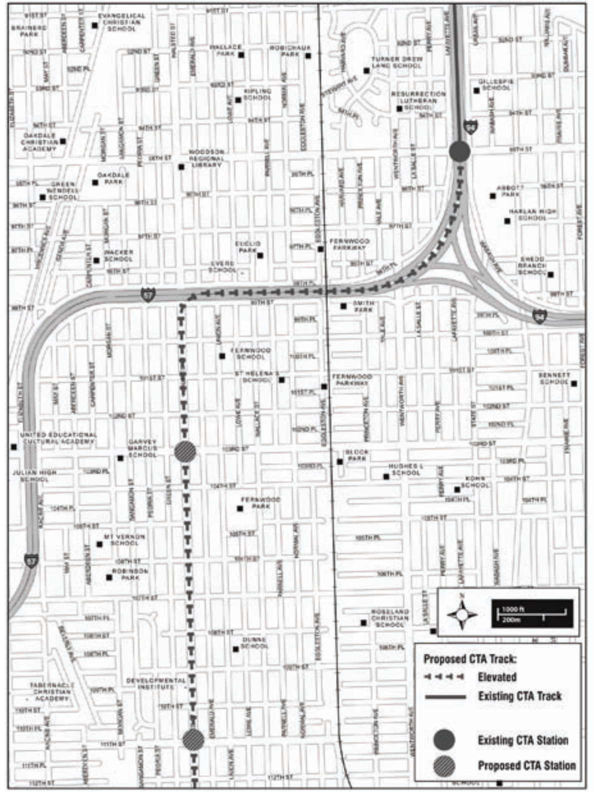
ADA AND LANGUAGE ACCOMMODATIONS

To receive an accessible format version of this notice, or if you require an interpreter, including sign language services, or other accommodations at this meeting, please contact Darud Akbar, Government & Community Relations Officer, five days prior to the meeting at (312) 681-2708 or dakbar@transitchicago.com. Information is also available at www.transitchicago.com/RedEIS

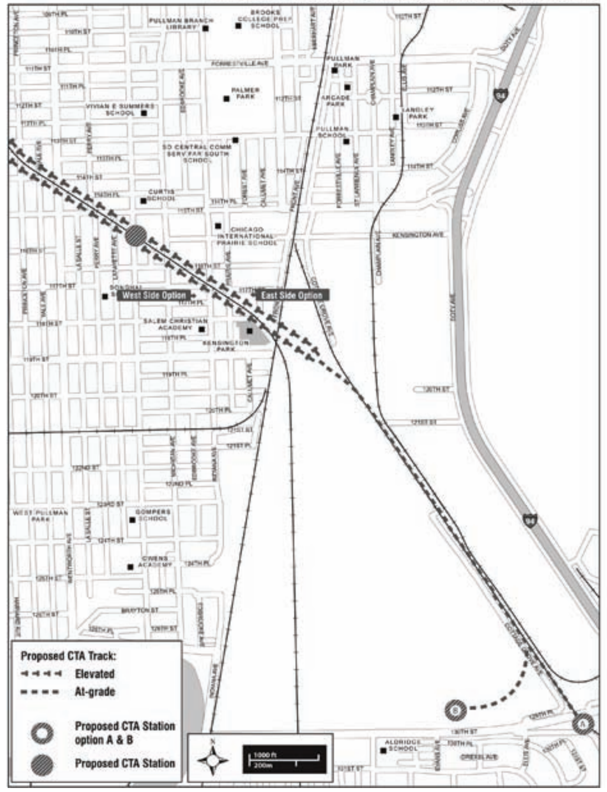
Red Line Extension | Locally Preferred Alternative



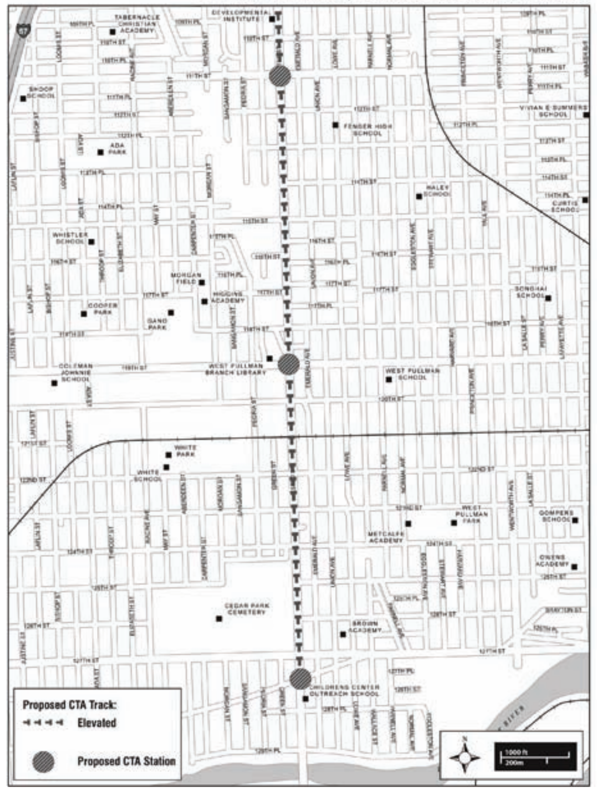
Red Line Extension | Halsted Street HRT Alternative



Red Line Extension | Locally Preferred Alternative



Red Line Extension | Halsted Street HRT Alternative



Red Line Extension cta

Proyecto de Extensión de la Línea Roja

Que conecta la Estación de la 95th Street a la 130th Street
Venga a participar en las Reuniones de Involucramiento al Público los días 22 y 24 de septiembre de 2009
Información al cliente: 1-888-YOUR-CTA (1-888-968-7282) • CTA (TTY): 1-888-CTA-TTY1 (1-888-282-8891)
Información sobre Tránsito: 836-7000 desde todo código telefónico local
RTA (TTY): 312-836-4949

Extensión de la Línea Roja

RESUMEN GENERAL DEL PROYECTO

La Chicago Transit Authority (CTA) se propone hacer mejoras de transporte al extender la Línea Roja desde la estación de la 95th Street a las inmediaciones de la 130th Street. La extensión incluye una ruta nueva de 5.3 millas de tránsito rápido de la Línea Roja ya existente, cuatro estaciones más – ubicadas aproximadamente en las 103rd, 111th, 115th, y 130th Streets – con una nueva terminal de autobuses e instalaciones de estacionamiento en cada estación.

RESUMEN GENERAL DEL PROCESO MEDIOAMBIENTAL

La CTA y la Administración Federal de Tránsito (conocida en inglés por sus siglas “FTA”) han iniciado un proceso federal medioambiental, de acuerdo a la Ley sobre la Política Nacional Medioambiental (conocida en inglés por sus siglas “NEPA”) y están en vías de elaborar una Declaración sobre el Efecto Medioambiental (conocida en inglés por sus siglas “EIS”) para el proyecto. La EIS se elaborará en base al proceso de Análisis de Alternativas (conocido en inglés por sus siglas “AA”) que tomó lugar desde 2006 a 2009 y culminó en una Alternativa de Preferencia Local que adoptó la Junta Directiva de Tránsito de Chicago el 12 de agosto de 2009. El Proceso de AA analizó una serie de alternativas de transporte e incluyó un amplio proceso de involucramiento al público. La EIS evaluará por lo menos cuatro alternativas: una Alternativa sin obras de construcción; una Alternativa de Administración del Sistema de Transporte (conocida en inglés por sus siglas “TSM”), una Alternativa de Preferencia Local que extiende la Línea Roja a la 130th Street, y una alternativa ferroviaria por la Halsted Street. La EIS detallará la alternativa, el contexto medioambiental existente, los efectos posibles de la construcción y la puesta en marcha de cada alternativa, y las medidas atenuadoras propuestas para disminuir o eliminar los efectos negativos posibles.

REUNIÓN PARA INVOLUCRAR AL PÚBLICO

Usted queda invitado a asistir una reunión para involucrar al público, con el fin de informarse en más detalle sobre el proyecto y para expresar sus opiniones sobre las alternativas propuestas, el propósito y la necesidad del proyecto, los temas propuestos de evaluación, los efectos negativos posibles, y las medidas atenuadoras que habrá que incluir en la EIS.

¿QUÉ ES EL INVOLUCRAMIENTO AL PÚBLICO?

Se conoce el proceso de determinar el alcance, el enfoque, y el contenido de una EIS como el “involucramiento al público”. Durante este proceso de involucramiento comunitario, los residentes, así como las agencias municipales, condales, estatales, y federales, tendrán la oportunidad de expresar sus opiniones y hacer comentarios. Este proceso de involucramiento se dedica a:

- Identificar las cuestiones de preocupación del público y las agencias gubernamentales por adelantado durante el proceso de evaluación medioambiental.
- Definir las cuestiones y las alternativas que serán estudiadas en la EIS.
- Ahorrar tiempo en el proceso general y agilizar la eficacia del proceso de elaborar la EIS.

INVOLUCRAMIENTO AL PÚBLICO: Fechas y Localidades

martes, 22 de septiembre de 2009
Historic Pullman Visitor Center
6:00 p.m. to 8:00 p.m.
11141 S. Cottage Grove Avenue
Chicago, IL 60628
Esta localidad tiene acceso para las personas con incapacidades, y el autobús 111 de la CTA, el autobús 353 de Pace, y la Línea Eléctrica Principal de Metra brindan servicio de transporte hasta allá.

jueves, 24 de septiembre de 2009
Woodson Regional Chicago Public Library
6:00 p.m. to 8:00 p.m.
9525 S. Halsted Street
Chicago, IL 60628
Esta localidad tiene acceso para las personas con incapacidades, y el autobús 108, 112, 8A, y 95W de la CTA, el autobús 352, de Pace, y la Línea Eléctrica de Rock Island de Metra brindan servicio de transporte hasta allá.

ORDEN DEL DÍA Y FORMATO

Presentación al público: 6:00 pm – 6:45 pm
Informarse sobre el proyecto y hablar con el personal del proyecto.
Presentación y comentarios formales del público: 6:45 pm – 8:00 pm
Después de una breve presentación, habrá una oportunidad para hacer comentarios que constarán formalmente en el acta pública.

ENTREGA DE COMENTARIOS

Además de los comentarios sobre el alcance de la EIS que se entregarán en la reunión, se aceptarán comentarios por escrito proporcionados por el público hasta el 27 de octubre de 2009, los cuales pueden entregarse por correo postal, correo electrónica, por facsímile, o al sitio de web del proyecto, a la atención de Jeffrey Busby, General Manager, Strategic Planning, Chicago Transit Authority, P.O. Box 7602, Chicago, IL 60680-7602.
Correo electrónico: RedExtension@transitchicago.com
Sitio de web: www.transitchicago.com/RedEIS
Facsímile: (312)-681-4297

ADAPTACIONES PARA LAS PERSONAS CON INCAPACIDADES Y POR MOTIVOS DE IDIOMA

Para recibir una versión de formato asequible de esta notificación, o en caso de que usted tenga necesidad de un intérprete, incluso el servicio de traducción por señas, u otras adaptaciones para poder participar en esta reunión, por favor comuníquese con Darud Akbar, Government & Community Relations Officer, con cinco días de antelación de esta reunión, al (312) 681-2708, o al dakbar@transitchicago.com. La información también está disponible en el sitio de web www.transitchicago.com/RedEIS.

Red Line Extension

Connecting 95th Street Station to 130th Street

cta

ATTEND A PUBLIC SCOPING MEETING

Tuesday, September 22, 2009
6:00 to 8:00 p.m.
Historic Pullman Visitor Center
11141 S. Cottage Grove Avenue, Chicago

Thursday, September 24, 2009
6:00 to 8:00 p.m.
Woodson Regional Chicago Public Library
9525 S. Halsted Street, Chicago

Information presented will be the same at both meetings. These facilities are accessible to persons with disabilities.

The Chicago Transit Authority (CTA) is proposing to make transportation improvements by extending the Red Line from the 95th Street Station to the vicinity of 130th Street.

We want to hear from you!

Attend one of the public scoping meetings to learn more about the project and provide feedback on the proposed alternatives, the purpose and need for the project and the environmental and community impacts to be evaluated. The input will help define the environmental studies to be considered in the Draft Environmental Impact Statement (EIS) scheduled for public review in late 2010.

Submit a Comment by October 27, 2009

In addition to comments received at the meeting, written comments will be accepted until October 27, 2009. Comments may be submitted by mail, e-mail or fax, with attention to:

Jeffrey Busby, General Manager, Strategic Planning, Chicago Transit Authority
P.O. Box 7602, Chicago, IL 60680-7602
E-mail: RedExtension@transitchicago.com
Fax: (312) 681-4297

For More Info: www.transitchicago.com/RedEIS
Customer Information: 1-888-YOUR-CTA (1-888-968-7282)

Red Line Extension

PROJECT OVERVIEW

The Chicago Transit Authority (CTA) is proposing to make transportation improvements by extending the Red Line from the 95th Street Station to the vicinity of 130th Street. The extension includes 5.3 new route miles of rapid transit from the existing Red Line, four additional stations – at approximately 103rd, 111th, 115th and 130th Streets – with new bus terminal and parking facilities at each station.

ENVIRONMENTAL PROCESS OVERVIEW

CTA and the Federal Transit Administration (FTA) have initiated the federal environmental process pursuant to the National Environmental Policy Act (NEPA) and are preparing an Environmental Impact Statement (EIS) for the project. The EIS will build upon the Alternatives Analysis (AA) process that occurred from 2006-2009 and culminated in the designation of a Locally Preferred Alternative by the Chicago Transit Board on August 12, 2009. The AA process analyzed an array of transportation alternatives and included an extensive public involvement process. The EIS will evaluate at least four alternatives: a No Build Alternative, a Transportation System Management (TSM) Alternative, the Locally Preferred Alternative that extends the Red Line to 130th Street and a rail alternative along Halsted Street. The EIS will describe the alternatives, the existing environmental setting, the potential impacts from construction and operation of each alternative and proposed mitigation measures to reduce or eliminate potential impacts.

SCOPING MEETINGS

You are invited to attend a public scoping meeting to learn more about the project and to provide feedback on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and potential effects and mitigation measures to be included in the EIS.

WHAT IS SCOPING?

The process of determining the scope, focus and content of an EIS is known as "scoping." During the scoping process residents, as well as city, county, state and federal agencies have an opportunity to provide feedback and comments. The purpose of the scoping process is to:

- Identify public and agency concerns early in the environmental process
- Define the issues and alternatives that will be examined in the EIS
- Save time in the overall process and facilitate an efficient EIS preparation process.

SCOPING MEETING DATES AND LOCATIONS

Tuesday, September 22, 2009
Historic Pullman Visitor Center
6:00 p.m. to 8:00 p.m.
11141 S. Cottage Grove Avenue
Chicago, IL 60628
This location is accessible to people with disabilities and is served by CTA bus 111, Pace bus 353 , and the Metra Electric Main Line.

Thursday, September 24, 2009
Woodson Regional Chicago Public Library
6:00 p.m. to 8:00 p.m.
9525 S. Halsted Street
Chicago, IL 60628
This location is accessible to people with disabilities and is served by CTA bus 108, 112, 8A, 9, 95W and Pace bus 352.

MEETING AGENDA AND FORMAT

Open House: 6:00 pm – 6:45 pm
Learn about the project and talk with project staff.
Presentation and Formal Public Comment:
6:45 pm – 8:00 pm
A brief presentation will be followed by an opportunity to enter formal comments into the public record.

SUBMIT COMMENTS

In addition to comments on the scope of the EIS received at the meeting, written scoping comments will be accepted until October 27, 2009 and may be submitted via mail, e-mail, fax or the project website with attention to: Jeffrey Busby, General Manager, Strategic Planning, Chicago Transit Authority, P.O. Box 7602, Chicago, IL 60680-7602.

Email: RedExtension@transitchicago.com
Website: www.transitchicago.com/RedEIS
Fax: (312)-681-4297

ADA AND LANGUAGE ACCOMMODATIONS

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Chicago Transit Authority
Orange Line Extension NEPA Scoping Meeting Notice

The Chicago Transit Authority (CTA) is proposing to make trans-
portation improvements by extending the Orange Line from Mid-
way Station at the Midway International Airport south along the
Belt Railway Company right-of-way from 59th to Marquette Road,
crossing the Belt Railway Company Clearing Yard and ending on
Cicero Avenue. The extension includes 2.3 new route miles of
rapid transit from the existing Orange Line and one additional
station at approximately 7600 S. Cicero Avenue with new bus
erminal and parking facilities.

CTA and the Federal Transit Administration (FTA) have initiated
he federal environmental process pursuant to the National En-
vironmental Policy Act (NEPA) and are preparing an Environmen-
al Impact Statement (EIS) for the project. The EIS will build
upon the Alternatives Analysis (AA) process that occurred from
2006 - 2009 and culminated in the designation of a Locally Pre-
erred Alternative by the Chicago Transit Board on August 12,
2009. The AA process analyzed an array of transportation alter-
natives and included an extensive public involvement process.
The EIS will evaluate at least three alternatives: a No Build Al-
ernative, a Transportation System Management (TSM) Alterna-
ive and the Locally Preferred Alternative that extends the Or-
ange Line to Cicero Avenue near 76th Street. The EIS will de-
scribe the alternatives, the existing environmental setting, the
potential impacts from construction and operation of each alter-
native and proposed mitigation measures to reduce or elimi-
nate potential impacts.

You are invited to attend a public scoping meeting to learn
more about the project and to provide feedback on the pro-
posed alternatives, the purpose and need for the project, the
proposed topics of evaluation and potential effects and mitiga-
ion measures to be considered in the EIS.

Monday, September 21, 2009; 6:00 p.m. to 8:00 p.m.; at the
Hancock College Preparatory High School, 4034 W. 56th Street,
Chicago, IL 60629
his location is accessible to people with disabilities and is
erved by CTA Bus Routes 53A and 55.

n addition to comments received at the meeting, written com-
ments will be accepted until October 27, 2009 and may be sub-
mitted via mail, e-mail or fax to: Jeffrey Busby, General Manag-
r, Strategic Planning, Chicago Transit Authority, P.O. Box 7602,
Chicago, IL 60680-7602. Email:
OrangeExtension@transitchicago.com
Website: www.transitchicago.com/OrangeEIS Fax: (312)-681-
297

o receive an accessible format version of this notice, or if you
require an interpreter, including sign language services, or other
ccommodations at this meeting, please contact Darud Akbar,
Government & Community Relations Officer, five days prior to
he meeting at (312) 681-2708 or dakbar@transitchicago.com.
nformation is also available at
ww.transitchicago.com/OrangeEIS.
00863619 Pub: September 8, 2009

Chicago Transit Authority
Red Line Extension NEPA Scoping Meeting Notice

The Chicago Transit Authority (CTA) is proposing to make transportation improvements by extending the Red Line from the 95th Street Station to the vicinity of 130th Street. The extension includes 5.3 new route miles of rapid transit from the existing Red Line, four additional stations - at approximately 103rd, 111th, 115th and 130th Streets - with new bus terminal and parking facilities at each station.

CTA and the Federal Transit Administration (FTA) have initiated the federal environmental process pursuant to the National Environmental Policy Act (NEPA) and are preparing an Environmental Impact Statement (EIS) for the project. The EIS will build upon the Alternatives Analysis (AA) process that occurred from 2006-2009 and culminated in the designation of a Locally Preferred Alternative by the Chicago Transit Board on August 12, 2009. The AA process analyzed an array of transportation alternatives and included an extensive public involvement process. The EIS will evaluate at least four alternatives: a No Build Alternative, a Transportation System Management (TSM) Alternative, the Locally Preferred Alternative that extends the Red Line to 130th Street, and a heavy rail alternative along Halsted Street. The EIS will describe the alternatives, the existing environmental setting, the potential impacts from construction and operation of each alternative and proposed mitigation measures to reduce or eliminate potential impacts.

You are invited to attend a public scoping meeting to learn more about the project and to provide feedback on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and potential effects and mitigation measures to be considered in the EIS.

Tuesday, September 22, 2009; 6:00 p.m. to 8:00 p.m.; at the Historic Pullman Visitor Center, 11141 S. Cottage Grove Avenue, Chicago, IL 60628
This location is accessible to people with disabilities and is served by CTA bus 111, Pace bus 353, and the Metra Electric Main Line.

Thursday, September 24, 2009; 6:00 p.m. to 8:00 p.m.; at the Woodson Regional Chicago Public Library, 9525 S. Halsted Street, Chicago, IL 60628
This location is accessible to people with disabilities and is served by CTA bus 108, 112, 8A, 9, 95W and Pace bus 352.

In addition to comments received at the meeting, written comments will be accepted until October 27, 2009 and may be submitted via mail, e-mail or fax to: Jeffrey Busby, General Manager, Strategic Planning, Chicago Transit Authority, P.O. Box 7602, Chicago, IL 60680-7602. Email:
RedExtension@transitchicago.com
Website: www.transitchicago.com/RedEIS Fax: (312)-681-4297

To receive an accessible format version of this notice, or if you require an interpreter, including sign language services, or other accommodations at this meeting, please contact Darud Akbar, Government & Community Relations Officer, five days prior to the meeting at (312) 681-2708 or dakbar@transitchicago.com. Information is also available at www.transitchicago.com/RedEIS.
600863743 Pub: September 8, 2009

Chicago Transit Authority
Yellow Line Extension NEPA Scoping Meeting Notice

The Chicago Transit Authority (CTA) is proposing to make transportation improvements by extending the Yellow Line from Dempster Station to Old Orchard Road. The Yellow Line Extension includes 1.6 new route miles of rapid transit from the existing Yellow Line, reconfiguration of the existing Dempster Station and one additional station at Old Orchard Road with new bus access and parking facilities.

CTA and the Federal Transit Administration (FTA) have initiated the federal environmental process pursuant to the National Environmental Policy Act (NEPA) and are preparing an Environmental Impact Statement (EIS) for the project. The EIS will build upon the Alternatives Analysis (AA) process that occurred from 2006-2009 and culminated in the designation of a Locally Preferred Alternative by the Chicago Transit Board on August 12, 2009. The AA process analyzed an array of transportation alternatives and included an extensive public involvement process. The EIS will evaluate at least three alternatives; a No Build Alternative, a Transportation System Management (TSM) Alternative and the Locally Preferred Alternative that extends the Yellow Line to Old Orchard Road. The EIS will describe the alternatives, the existing environmental setting, the potential impacts from construction and operation of each alternative and proposed mitigation measures to reduce or eliminate potential impacts.

You are invited to attend a public scoping meeting to learn more about the project and to provide feedback on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and potential effects and mitigation measures to be considered in the EIS.

Wednesday, September 23, 2009; 6:00 p.m. to 8:00 p.m.; at the Oakton Community Center, 4701 Oakton Street, Skokie, IL 60076
This location is accessible to people with disabilities and is served by CTA bus 97.

In addition to comments received at the meeting, written comments will be accepted until October 27, 2009 and may be submitted via mail, e-mail or fax to: Jeffrey Busby, General Manager, Strategic Planning, Chicago Transit Authority, P.O. Box 7602, Chicago, IL 60680-7602.
Email: YellowExtension@transitchicago.com
Website: www.transitchicago.com/YellowEIS Fax: (312)-681-4297

To receive an accessible format version of this notice, or if you require an interpreter, including sign language services, or other accommodations at this meeting, please contact Darud Akbar, Government & Community Relations Officer, five days prior to the meeting at (312) 681-2708 or dakbar@transitchicago.com. Information is also available at www.transitchicago.com/YellowEIS.
600864482 Pub: September 8, 2009

CTA Media Relations
312-681-3090

CTA to Host Public Meeting for Proposed Orange Line Extension

The Chicago Transit Authority is hosting a public meeting to receive input on the proposed Orange Line Extension project. Attendees will have an opportunity to provide comments on the proposed alternatives, the purpose and need for the project, the potential effects and mitigation measures to be considered in the Environmental Impact Study (EIS).

The meeting is scheduled for:

Monday, September 21
6:00 p.m. - 8:00 p.m.
Hancock College Preparatory High School*
4034 W. 56th St., Chicago, IL
(*facility is accessible to people with disabilities)

Written comments also will be accepted until October 27. Scoping comments may be submitted via mail, email or fax to the attention of:

Jeffery Busby, General Manager, Strategic Planning
Chicago Transit Authority
PO Box 7602
Chicago IL 60680-7602
OrangeExtension@transitchicago.com
Fax 312-681-4297

Attendees who require an interpreter, including sign language services, or other accommodations at the meeting should contact Darud Akbar, Government and Community Relations Officer, at 312-681-2708.

CTA and the Federal Transit Administration (FTA) have initiated the federal environmental process pursuant to the National Environmental Policy Act (NEPA) and are preparing an EIS for the project. The EIS will evaluate at least three alternatives: a No Build Alternative, a Transportation System Management (TSM) Alternative and the Locally Preferred Alternative (LPA) adopted by the Chicago Transit Board that extends the Orange Line to Cicero Avenue near 76th Street.

The EIS will build upon the Alternatives Analysis process that led to the adoption of a Locally Preferred Alternative.

The Federal Transit Administration's New Starts program requires transit project proposals to proceed through a process of planning, design and construction. The FTA process consists of five formal steps: Alternatives Analysis (AA), Environmental Impact Statement, Preliminary Engineering, Final Design and Construction.

# # #

fore Griffin passed away. "He did a great job for Samford, and all the coaches loved him. That was no surprise to me."

Griffin received one of Samford's Practice Hard Work Awards following his junior been established in Griffin's name to benefit the Marist basketball program. Donations may be sent to Coach Gene Nolan, c/o Marist High School, 4200 W. 115th St., Chicago, IL 60655.

"Marc was in the right place at the right time," said Clemens. "But that play showed that you just have to put the ball in the right spot to score."

The Caravan dominated minute left, Enrique Voltaire was unable to get control on a breakaway, and his shot missed the left post.

It didn't take long for Andrew (2-3-1) to end the game in the extra session.

Jacobs got one past talented Caravan goalie Edson Zagal, portunities in front of you and don't take advantage. The ball needs to get through 10 guys before it even gets to him."

An example of Mt. Carmel's domination of the game, the Caravan had six corner kicks to just one for Andrew and had five more shots on goal.

Red Line Extension
Connecting 95th Street Station to 130th Street
cta

ATTEND A PUBLIC SCOPING MEETING

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6:00 to 8:00 p.m.
Historic Pullman Visitor Center
11141 S. Cottage Grove Avenue, Chicago

Thursday, September 24, 2009
6:00 to 8:00 p.m.
Woodson Regional Chicago Public Library
9525 S. Halsted Street, Chicago

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Attend one of the public scoping meetings to learn more about the project and provide feedback on the proposed alternatives, the purpose and need for the project and the environmental and community impacts to be evaluated. The input will help define the environmental studies to be considered in the Draft Environmental Impact Statement (EIS) scheduled for public review in late 2010.

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For More Info: www.transitchicago.com/RedEIS
Customer Information: 1-888-YOUR-CTA (1-888-968-7282)

Softball

(Continued from page 17)

Wabash Tap, which features 10 local players among the 15-player roster, captured the title on Sept. 9.

"We have been playing together for a couple of years," said Player/Coach Matt Hilliard, a Sutherland Elementary School and St. Ignatius College Prep graduate. "It's great that a group of friends who grew up together, but now live all over the city, can still get together to play every week. We plan on continuing to dominate the Wednesday night league until we are too old and feeble to swing a bat."

Domination was the perfect word to describe the team. It went 9-0 in the regular season, scoring 108 runs and allowing just 38.

Other team members are Conor Ryan, Joe Wilson, Kerry Brackin, Liam McManus, Catherine Corr, Brendan Sheils, Bob Kriz, Pete Steadman, Kathleen Griffin, Samantha Kyme, Jen Sheridan, Colleen McNamara, Meeghan Holly and Lydia Maloney.

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as a nurse for five years at St. Francis and then MetroSouth, said she knew cuts were coming. Recently, her hours were cut to the point where she worked just three days in a two-week period. The 48-year-old Blue Island resident said she had noticed fewer patients coming to the hospital.

"You could drop a bomb in

bought MetroSouth from SSM Health Care, a St. Louis-based non-profit and one of the nation's largest Catholic-owned systems.

St. Francis had also struggled with patients unable to pay their medical bills and racked up tens of millions of dollars in losses under SSM ownership.

But MetroSouth executives have said a $30 million commitment from New York-based Falcon Investors is helping to finance new imaging equipment, an electronic medical records system and a conversion to all private rooms for patients. Kimmel said that all of those projects are still in the works.

MetroSouth has also applied for a tax break from the

formed a TIF district for th hospital, which will captur any new tax revenues fror the property and allow th hospital to use that money t reinvest in the facility. Th hospital is located at 12935 Gregory St. in the heart of th city's commercial busines district.

Mayor Donald Peloqui said he's confident in th hospital's health and sai that while the layoffs wer painful, they were needed.

"The fact that they laid o people off doesn't affect th hospital's long-term goals, Peloquin said. "It does sho the effect of the econom They are trying to stay on to of things instead of gettin into a hole that they can't ge out of."

The Watcher

By Maureen Ryan | Tribune television critic

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Chicago Tribune
IT'S A WHOLE NEW DAY

"STILL MARCHING TO THE BEAT OF MY OWN DRUM!"

At Senior Star, we have built an entire company around a simple philosophy.

We listen to our residents and respond with the programs and services that will empower them to live the lives they want to live. Our new community in Romeoville offers Memory Care today; our Independent and Assisted Living communities open this Winter.

With Senior Star's progressive, coordinated services our residents live out each day with complete confidence, knowing that if their needs should change we have the ability to care for them longer.

NOW ACCEPTING RESERVATIONS!

Senior Star
at Weber Place

Red Line Extension
Connecting 95th Street Station to 130th Street
cta

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much of the bells and whi tles we're going to put in," h said, adding that the reques for proposals will seek separate cost estimate fo each item.

Village Clerk Pat Rea sai restrooms will be part of th updated station, as will fou warming/weather shelter on the inbound platform an one shelter on the outbound

Although Biggert and Z brocki put ridership at 3,00 Metra spokesman Michae Gillis said the most recer weekday ridership count– done in fall 2006—puts th 80th Avenue Station at 2,45 passengers. That figur makes it the system's fourth busiest station, just behin third-place Lisle, whic showed 2,472 passengers.

"STILL MARCHING TO THE BEAT OF MY OWN DRUM!"

At Senior Star, we have built an entire company around a simple philosophy.

We listen to our residents and respond with the programs and services that will empower them to live the lives they want to live. Our new community in Romeoville offers Memory Care today; our Independent and Assisted Living communities open this Winter.

With Senior Star's progressive, coordinated services our residents live out each day with complete confidence, knowing that if their needs should change we have the ability to care for them longer.

NOW ACCEPTING RESERVATIONS!
Senior Star

Michael G. Shinn, CFP
YOUR MONEY Really
Matters
5806

Winning the financial game

by Michael G. Shinn

"Winning is not a sometime thing. It's an all time thing. You don't win once in a while, you don't do things right once in a while, you do them right all the time. Winning is a habit. Unfortunately, so is losing," stated

Winning financially and achieving financial goals is not a sometime thing, it's an all time thing. The seven steps to setting and achieving financial goals are not secrets. We do it all the time on our jobs, when we set sales or production goals, cost reductions or specific project achievements. The trick is to apply the same techniques to your finances, with the same rigor and personal management. It starts with a winning attitude.

Steps to setting financial goals:

Step 1- Sit down with a clean sheet of paper and brainstorm the question, "What do I really want out of life?" Write down every possible financial goal that comes to mind – a house, early retirement, debt payoff, dren's education, new car, ove vacation, etc. Dream and write all down.

Step 2- Discuss the list with family or people who are signi in your life. With their input, ex and modify the list. In working clients, I find that many times have not discussed their fan financial goals and agreed on th ority. This lack of communic about finances can lead to se family conflicts.

Step 3- Now go over your second time. This time, refine prioritize the list, adding an ele of realism to it. Write down the that are most important on a she paper called "Key Financial Go Cross off the items you really want or need. Move anything might have mixed emotions to a arate sheet called "Future Go After you have achieved som your key goals, you may wa include some items from this lis

Step 4- Expand each of you goals, estimating the cost (in to dollars) and when you will ac the goal. It is very important tha are specific in each of these area

Step 5- Separate your Key into short-term, intermediate long-term objectives. Short- goals can be achieved in less tha year and might include; estab ment of an emergency fund, year's vacation, or minor improvements. Intermediate go one to five years might include; ing off credit card debt, saving house down payment or ma major home improvements. L term goals of more than five might include; college fun retirement or a vacation home chase.

Step 6- Develop a plan for ac ing each Key Goal, breaking large goals into their main elem Using the college fund exa Research public college costs; a 529 Saving Plan account; I $328 per month using auto withdrawal from my chec account; Research investments could provide a higher return.

Step 7- Monitor your progres reviewing your financial goa least annually and revising your as necessary.

Michael G. Shinn, Registered Representative of securities and investment adv services offered through Fina Network Investment Corpora member SIPC.

Red Line Extension
Connecting 95th Street Station to 130th Street
cta

ATTEND A
PUBLIC SCOPING MEETING

Tuesday, September 22, 2009
6:00 to 8:00 p.m.
Historic Pullman Visitor Center
11141 S. Cottage Grove Avenue, Chicago
OR
Thursday, September 24, 2009
6:00 to 8:00 p.m.
Woodson Regional Chicago Public Library
9525 S. Halsted Street, Chicago

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The Chicago Transit Authority (CTA) is proposing to make transportation improvements by extending the Red Line from the 95th Street Station to the vicinity of 130th Street.

We want to hear from you!

Attend one of the public scoping meetings to learn more about the project and provide feedback on the proposed alternatives, the purpose and need for the project and the environmental and community impacts to be evaluated. The input will help define the environmental studies to be considered in the Draft Environmental Impact Statement (EIS) scheduled for public review in late 2010.

Submit a Comment by October 27, 2009

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cutting a fool when the President spoke at the joint session of Congress. It was totally disrespectful of this dunder head to heckle the President as he gave his speech. No one, especially Black U. S. legislators ever did such a thing to President George Dubya Bush, although it was pretty darn clear he did not always tell the truth and coupled with the lyingest Vice President in the world in Dick Cheney, a heckle or two would have been in order for this pair. They lied about WMD (Weapons of Mass Destruction) as the reason to invade Iraq, lied about exposing a CIA Agent to harm, you name it, yet our Congresspersons were restrained and respectful to the office of President. But just like everything else once we get to goals such as being President of the United States, the rules change. Money I hear has been pouring in to the Congressman to further his campaign by racists everywhere. And that's exactly who (racists) poured into Washington over the weekend to demonstrate and talk about the President.

HATE SIGNS REMINISCENT OF KKK

If Ima had not been told differently she would have headed for the hills last week when the hate mongers of the world spilled over into Washington, D. C. You see Ima remembers the KKK riding

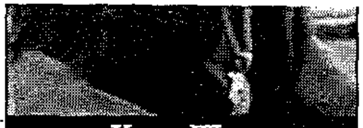
ulate where this all will end up. It's scary. But it is also clear that the racists are now synonymous with the Republican Party.

OUT OF CONTROL

If it ain't enough and the real reason Ima consulted the trusty Almanac about the moon is that one of our revered sports figures and a popular music artist started acting crazy. Ima was shocked to see Serena Williams at as she did at the U.S. Open Tennis Match. Ima has been known to know how to weave the f word into sentences at the appropriate places, was speechless when one such as Serena, who has been subjected to all kinds of challenges in fighting her way to the top, let go on a line judge at the tennis competition.

Serena Williams

Now she has apologized but it


Kanye West

that his last "buffoonery" piece pulled in $24 million dollars this past weekend for "I Can Do Bad All By Myself." So Spike, et al

now suffering from.

-Ima-

(Continued on page 17)

Red Line Extension
Connecting 95th Street Station to 130th Street
cta

ATTEND A PUBLIC SCOPING MEETING

Tuesday, September 22, 2009
6:00 to 8:00 p.m.
Historic Pullman Visitor Center
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---

ing and math. Most community colleges offer exemptions to students who score high enough on the ACT college entrance exam, or have successful college coursework in a given subject area. Others make exceptions on a case-by-case basis.

"Sometimes students just test poorly, and there's other things—grades, other pieces of information that we have on a student—that can factor into that overall decision," said Sheryl Otto, dean of student development at Harper College, where about 37 percent of new students take remedial courses.

About a third of entering freshmen are taking remedial courses this fall at College of DuPage in Glen Ellyn. Glenda Gallisath, associate

to high school seniors so any remedial work can begin in high school; to align high school, remedial and college-level standards, and to develop a system to reward community colleges for helping students progress through remedial courses and on to full-credit classes.

Illinois is pursuing several initiatives to bridge the academic gap. Last fall, educators joined the American Diploma Project, a national effort to develop a more rigorous curriculum for high school students.

"The key to trying to improve outcomes is first improving our standards," said Mary Fergus, a spokeswoman for Illinois State Board of Education. "We're really focusing on preparing students

thing they didn't know
fore, but to refresh as rapi
as I can, that informatio
said Marie Eibl, math/s
ence tutor coordinator
Harper.

Harper nursing stude
Stacey Wolf, 27, of Mun
lein, shed tears of relief wh
she passed the math exam
the last day of testing. Af
cramming all night, W
paid $50 for a two-hour p
vate tutoring session bef
taking the test, narro
avoiding a remedial algeb
course and a one-year po
ponement of nursing studi

"I didn't think I was goi
to pass it," said Wolf, w
plans to work as an eme
gency room nurse. "Tha
why I'm so emotional,
cause now I get to sta
nursing school."

Watch and Earn

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6:00 to 8:00 p.m.

Historic Pullman Visitor Center
11141 S. Cottage Grove Avenue, Chicago

OR

Thursday, September 24, 2009

6:00 to 8:00 p.m.

Woodson Regional Chicago Public Library
9525 S. Halsted Street, Chicago

Information presented will be the same at both meetings.
These facilities are accessible to persons with disabilities.

The Chicago Transit Authority (CTA) is proposing to make transportation improvements by extending the Red Line from the 95th Street Station to the vicinity of 130th Street.

We want to hear from you!

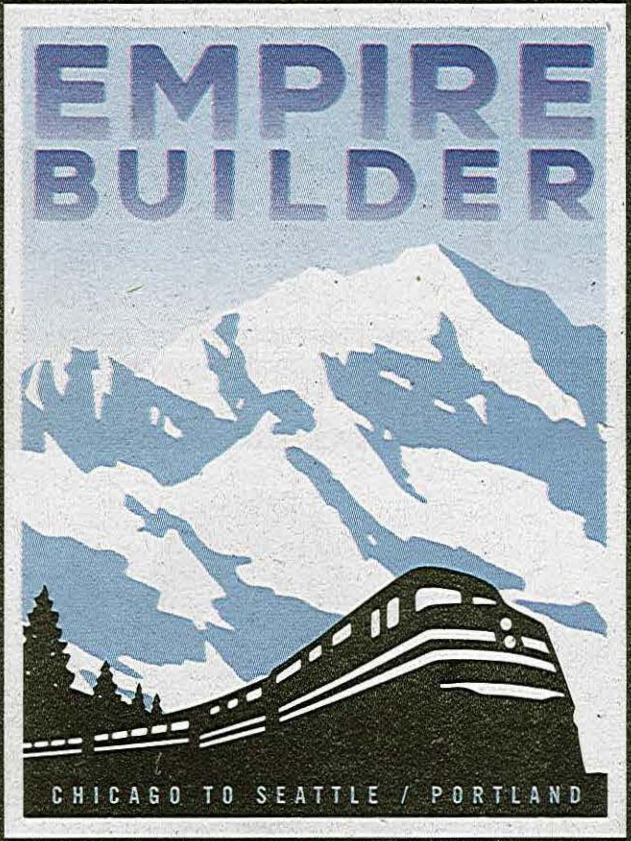
Attend one of the public scoping meetings to learn more about the project and provide feedback on the proposed alternatives, the purpose and need for the project and the environmental and community impacts to be evaluated. The input will help define the environmental studies to be considered in the Draft Environmental Impact Statement (EIS) scheduled for public review in late 2010.

Submit a Comment by October 27, 2009

In addition to comments received at the meeting, written comments will be accepted until October 27, 2009. Comments may be submitted by mail, e-mail or fax, with attention to:

Jeffrey Busby, General Manager, Strategic Planning

A JOURNEY FILLED
with high points.



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Yellow Line Extension

Connecting Dempster Station to Old Orchard Road

cta

ATTEND A PUBLIC SCOPING MEETING

Wednesday, September 23, 2009
6:00 to 8:00 p.m.
Oakton Community Center
4701 Oakton Street, Skokie
Facility accessible to persons with disabilities.

The Chicago Transit Authority (CTA) is proposing to make transportation improvements by extending the Yellow Line from Dempster Station to Old Orchard Road.

We want to hear from you!

Attend the public scoping meeting to learn more about the project and provide feedback on the proposed alternatives, the purpose and need for the project and the environmental and community impacts to be evaluated. The input will help define the environmental studies to be considered in the Draft Environmental Impact Statement (EIS) scheduled for public review in late 2010.

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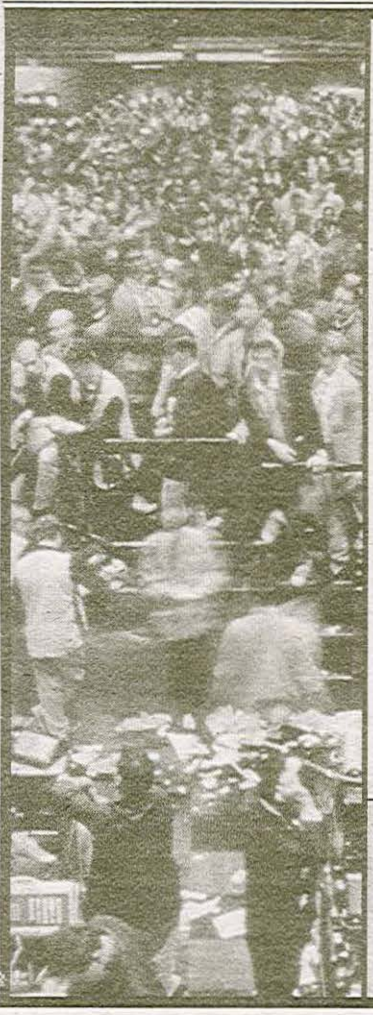
P.O. Box 7602, Chicago, IL 60680-7602
E-mail: YellowExtension@transitchicago.com • Fax: (312) 681-4297

For More Info: www.transitchicago.com/YellowEIS
Customer Information: 1-888-YOUR-CTA (1-888-968-7282)



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Red Line Extension

Connecting 95th Street Station to 130th Street

cta

ATTEND A PUBLIC SCOPING MEETING

Tuesday, September 22, 2009
6:00 to 8:00 p.m.
Historic Pullman Visitor Center
11141 S. Cottage Grove Avenue, Chicago

Thursday, September 24, 2009
6:00 to 8:00 p.m.
Woodson Regional Chicago Public Library
9525 S. Halsted Street, Chicago

Information presented will be the same at both meetings. These facilities are accessible to persons with disabilities.

The Chicago Transit Authority (CTA) is proposing to make transportation improvements by extending the Red Line from the 95th Street Station to the vicinity of 130th Street.

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P.O. Box 7602, Chicago, IL 60680-7602
E-mail: RedExtension@transitchicago.com • Fax: (312) 681-4297

For More Info: www.transitchicago.com/RedEIS
Customer Information: 1-888-YOUR-CTA (1-888-968-7282)

Orange Line Extension

Connecting Midway to Ford City

cta

ATTEND A PUBLIC SCOPING MEETING

Monday, September 21, 2009
6:00 to 8:00 p.m.
Hancock College Preparatory High School
4034 W. 56th Street, Chicago
Facility accessible to persons with disabilities.

The Chicago Transit Authority (CTA) is proposing to make transportation improvements by extending Orange Line rapid transit from Midway Station at the Midway International Airport to Cicero Avenue near 76th Street.

We want to hear from you!

Attend the public scoping meeting to learn more about the project and provide feedback on the proposed alternatives, the purpose and need for the project and the environmental and community impacts to be evaluated. The input will help define the environmental studies to be considered in the Draft Environmental Impact Statement (EIS) scheduled for public review in late 2010.

Submit a Comment by October 27, 2009

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P.O. Box 7602, Chicago, IL 60680-7602
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For More Info: www.transitchicago.com/OrangeEIS
Customer Information: 1-888-YOUR-CTA (1-888-968-7282)

Extensión de la Línea Anaranjada

Que conecta el Midway a Ford City

cta

ASISTA A UNA REUNIÓN DE INVOLUCRAMIENTO AL PÚBLICO

lunes, 21 de septiembre de 2009
6:00 to 8:00 p.m.
Hancock College Preparatory High School
4034 W. 56th Street, Chicago
Esta localidad tiene acceso para las personas con incapacidades.

La Chicago Transit Authority (CTA) se propone hacer mejoras de transporte al extender la Línea Amarilla desde la Dempster Station a la Old Orchard Road.

¡Queremos oír sus opiniones!

Asista a una reunión de involucramiento al público, para enterarse en más detalle sobre el proyecto y para expresar sus opiniones sobre las alternativas propuestas, el propósito y la necesidad del proyecto, los efectos medioambientales y comunitarios que habrá que considerarse en el borrador de la Declaración sobre el Efecto Medioambiental (conocida en inglés por sus siglas "EIS"), programada para repaso por el público a fines del 2010.

Entregue sus comentarios hasta el día 27 de octubre de 2009.

Además de los comentarios que se entregarán en la reunión, se aceptarán comentarios por escrito hasta el 27 de octubre de 2009, los cuales pueden entregarse por correo postal, correo electrónica, por facsímile, a la atención de:

Jeffrey Busby, General Manager, Strategic Planning, Chicago Transit Authority
P.O. Box 7602, Chicago, IL 60680-7602
E-mail: OrangeExtension@transitchicago.com • Fax: (312) 681-4297

Para más información: transitchicago.com/OrangeEIS
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Extensión de la Línea Amarilla

Que conecta la estación de la Dempster a la Old Orchard Road

cta

ASISTA A UNA REUNIÓN DE INVOLUCRAMIENTO AL PÚBLICO

miércoles, 23 de septiembre de 2009
6:00 to 8:00 p.m.
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4701 Oakton Street, Skokie
Esta localidad tiene acceso para las personas con incapacidades.

La Chicago Transit Authority (CTA) se propone hacer mejoras de transporte al extender la Línea Amarilla desde la Dempster Station a la Old Orchard Road.

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Para más información: transitchicago.com/YellowEIS
Información al cliente: 1-888-YOUR-CTA (1-888-968-7282)

0704-9148525

Extensión de la Línea Roja

Que conecta la Estación de la 95th Street a la 130th Street

cta

ASISTA A UNA REUNIÓN DE INVOLUCRAMIENTO AL PÚBLICO

martes, 22 de septiembre de 2009	**jueves, 24 de septiembre de 2009**
6:00 to 8:00 p.m.	**6:00 to 8:00 p.m.**
Historic Pullman Visitor Center	Woodson Regional Chicago Public Library
11141 S. Cottage Grove Avenue, Chicago	9525 S. Halsted Street, Chicago

Se presentará la misma información en ambas reuniones. Esta localidad tiene acceso para las personas con incapacidades.

La Chicago Transit Authority (CTA) se propone hacer mejoras de transporte al extender la Línea Roja desde la estación de la 95th Street a las inmediaciones de la 130th Street.

¡Queremos oír sus opiniones!

Asista a una de las reuniones de involucramiento al público, para enterarse en más detalle sobre el proyecto y para expresar sus opiniones sobre las alternativas propuestas, el propósito y la necesidad del proyecto, los efectos medioambientales y comunitarios que habrá que considerarse en el borrador de la Declaración sobre el Efecto Medioambiental (conocida en inglés por sus siglas "EIS"), programada para repaso por el público a fines del 2010.

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Información al cliente: 1-888-YOUR-CTA (1-888-968-7282)

0704-9148526

Caribe América Latina

Interceptan en alta mar a 35 indocumentados

Iban en un velero hacia Puerto Rico. Había un chino

EFE
SANTO DOMINGO

La Marina de Guerra dominicana interceptó ayer en alta mar a treinta y cinco personas, entre ellas un nacional chino, que se dirigían clandestinamente en un velero a Puerto Rico, informó la Armada local.

REPÚBLICA DOMINICANA

El grupo viajaba en el velero "Mi niña" de matrícula dominicana, que fue detenido a seis millas de Cap Cana, en la provincia La Altagracia, en el extremo oriental del país.

Los indocumentados, que se encuentran en buen estado de salud, serán traslados a la sede de la Marina de Guerra, en Santo Domingo, para ser interrogados, dijo a Efe un portavoz de la institución.

*La Marina de Guerra apresó la semana pa*sada a 18 personas, entre ellas dos menores de edad y dos ceilandeses, que intentaban viajar a Miami (EE.UU.) también en un velero.

La Procuraduría General y la Armada local anunciaron el mes pasado que coordinan acciones para perseguir a los traficantes de personas, muchas de las cuales pierden la vida cada año en las aguas del Mar Caribe en ruta hacia la vecina isla de Puerto Rico.

Los trabajos son coordinados en cumplimiento a la Ley-137-03 que sanciona en el país el delito del tráfico ilícito de inmigrantes y trata de personas, implementando así una política de combate al crimen organizado con jurisdicción en todo el país.

Cada año miles de dominicanos tratan de llegar a Puerto Rico para sortear la precaria situación económica en la que viven.

En julio pasado, entre 20 y 25 dominicanos desaparecieron en ruta a Puerto Rico tras zarpar el día 11 de la playa de Gaspar Hernández, en la provincia Espaillat, norte del país.

Extensión de la Línea Anaranjada

Que conecta el Midway a Ford City

cta

ASISTA A UNA REUNIÓN DE INVOLUCRAMIENTO AL PÚBLICO

lunes, 21 de septiembre de 2009
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¡Queremos oír sus opiniones!

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Para más información: transitchicago.com/OrangeEIS
Información al cliente: 1-888-YOUR-CTA (1-888-968-7282)

Extensión de la Línea Roja

Que conecta la Estación de la 95th Street a la 130th Street

cta

ASISTA A UNA REUNIÓN DE INVOLUCRAMIENTO AL PÚBLICO

martes, 22 de septiembre de 2009	jueves, 24 de septiembre de 2009
6:00 to 8:00 p.m.	6:00 to 8:00 p.m.
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11141 S. Cottage Grove Avenue, Chicago	9525 S. Halsted Street, Chicago

Se presentará la misma información en ambas reuniones. Esta localidad tiene acceso para las personas con incapacidades.

La Chicago Transit Authority (CTA) se propone hacer mejoras de transporte al extender la Línea Roja desde la estación de la 95th Street a las inmediaciones de la 130th Street.

¡Queremos oír sus opiniones!

Asista a una de las reuniones de involucramiento al público, para enterarse en más detalle sobre el proyecto y para expresar sus opiniones sobre las alternativas propuestas, el propósito y la necesidad del proyecto, los efectos medioambientales y comunitarios que habrá que considerarse en el borrador de la Declaración sobre el Efecto Medioambiental (conocida en inglés por sus siglas "EIS"), programada para repaso por el público a fines del 2010.

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Extensión de la Línea Amarilla

Que conecta la estación de la Dempster a la Old Orchard Road

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Información al cliente: 1-888-YOUR-CTA (1-888-968-7282)

CTA PUBLIC SCOPING MEETINGS

Red Line Extension Project – Environmental Impact Statement (EIS)

The Chicago Transit Authority (CTA) is proposing to make transportation improvements by extending the Red Line from the 95th Street Station to the vicinity of 130th Street. Attend the public scoping meetings to learn more about the project and provide feedback on the proposed alternatives, the purpose and need for the project and the environmental and community impacts to be evaluated. In addition to comments received at the meeting, written scoping comments will be accepted until October 27, 2009.

Attend Public Scoping Meetings:

Tuesday, September 22, 2009
Historic Pullman Visitor Center
6:00 to 8:00 p.m.
11141 S. Cottage Grove Avenue
Chicago, IL

Thursday, September 24, 2009
Woodson Regional Chicago Public Library
6:00 to 8:00 p.m.
9525 S. Halsted Street
Chicago, IL

For More Info: www.transitchicago.com/RedEIS

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Appendix H
Scoping Meeting Materials
(Comment Sheet, Speaker Card, Scoping Information Books)

Red Line Extension

Connecting 95th Street Station to 130th Street

The purpose of the scoping process is to identify public and agency concerns early in the environmental process, define the issues and alternatives that will be examined in the Environmental Impact Statement (EIS) and facilitate an efficient EIS preparation process. Please PRINT.

Name: ____________________

Organization: ____________________ Title: ____________________

Address: ____________________

City: ____________________ State: __________ Zip: ____________________

Phone: ____________________ E-mail: ____________________

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

Scoping comments may be submitted via mail, e-mail, fax or the project website with attention to: Jeffrey Busby, General Manager, Strategic Planning, Chicago Transit Authority, P.O. Box 7602, Chicago, IL 60680-7602. **Fax:** (312)681-4297, **Email:** RedExtension@transitchicago.com, **Website:** www.transitchicago.com/RedEIS, **Customer Information:** 1-888-YOUR-CTA (1-888-968-7282), **Hearing & Speech Impaired:** 1-888-CTA-TTY1 (1-888-282-6891), **Transit Information:** 836-7000 from any local area code **RTA TTY:** 312-836-4949

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Jeffrey Busby, General Manager
Strategic Planning
Chicago Transit Authority
P.O. Box 7602
Chicago, IL 60680-7602

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Red Line Extension

Connecting 95th Street Station to 130th Street

Deadline to submit comments:
October 27, 2009

Red Line Extension

Connecting 95th Street Station to 130th Street

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Scoping Meeting Speaker Card

Date: ☐ September 22, 2009
☐ September 24, 2009

Complete this card if you wish to speak this evening. Your input is a vital component of this phase of the project. Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Thank you for your interest in the Red Line Expansion project.

Name: ____________________

Organization: ____________________ Title: ____________________

Address: ____________________

City: ____________________ State: __________ Zip: __________

Red Line Extension
Connecting 95th Street Station to 130th Street
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Scoping Meeting Speaker Card
Date: ☐ September 22, 2009
☐ September 24, 2009
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Organization: ____________________ Title: ____________________
Address: ____________________
City: ____________________ State: __________ Zip: __________

Red Line Extension
Connecting 95th Street Station to 130th Street
cta
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Name: ____________________
Organization: ____________________ Title: ____________________
Address: ____________________
City: ____________________ State: __________ Zip: __________

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Connecting 95th Street Station to 130th Street
cta
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Name: ____________________
Organization: ____________________ Title: ____________________
Address: ____________________
City: ____________________ State: __________ Zip: __________

Red Line Extension

Connecting 95th Street Station to 130th Street

Environmental Impact Statement Scoping Information

September 2009

Department of Transportation
United States of America

cta

INTRODUCTION

The Chicago Transit Authority (CTA) is proposing to make transportation improvements by extending the Red Line from the 95th Street station to 130th Street. CTA and the Federal Transit Administration (FTA) will be preparing an Environmental Impact Statement (EIS) that will evaluate the environmental impacts of constructing and operating the extension.

PURPOSE OF THE EIS AND SCOPING PROCESSS

In accordance with the National Environmental Policy Act (NEPA), CTA and FTA have initiated the environmental review process for the Red Line Extension. An EIS will be prepared to identify impacts related to project construction and operation. As part of the initial phase of the environmental process, public scoping meetings will be hosted to receive public comments on the alternatives and issues that should be examined as part of the environmental analysis. These public meetings are also requirements of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), which requires project proponents to provide opportunities for public participation in transportation decision-making.

The process of determining the scope, focus and content of an EIS is known as "scoping." Scoping meetings are a useful opportunity to obtain information from the public and governmental agencies. In particular, the scoping process asks agencies and interested parties to provide input on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation, and potential impacts and mitigation measures to be considered.

ENVIRONMENTAL ANALYSIS

Environmental issues to be examined in the EIS include:

- Cultural resources
- Wildlife and ecosystems
- Energy use
- Land acquisition, displacements and relocations
- Land use
- Natural resources (including air quality and water resources)
- Neighborhood compatibility and environmental justice
- Parklands/ recreational facilities
- Safety and security
- Transportation
- Visual and aesthetic impacts
- Noise and vibration
- Zoning and economic development and secondary development

PROJECT OVERVIEW

In 2006, the Chicago Transit Authority (CTA) and the Federal Transit Administration (FTA) began the Alternatives Analysis process for the proposed Red Line Extension. As part of the three step screening process, CTA has held six public meetings over the past three years in order to gather input from the public regarding alternative options. CTA evaluated nine alternatives and has adopted the Union Pacific Railroad (UPRR) Heavy Rail Transit (HRT) Alternative as the Locally Preferred Alternative(LPA) for further study in the EIS. The proposed Red Line Extension will be further refined during the conceptual design phase of the project and is being carried forward for additional study in the EIS.

PROJECT ALTERNATIVES TO BE EVALUATED IN THE EIS

The EIS will include an evaluation of the following alternatives:

No Build Alternative

The No Build Alternative is defined as the existing transportation system, plus any committed transportation improvements that are already in the Chicago Metropolitan Agency for Planning (CMAP) FY 2007 – 2012 Transportation Improvement Program (TIP). TIP projects within the project area consist of five bridge reconstructions and several road improvement projects that include landscaping, fencing, resurfacing, coordination of signal timing, and a bicycle/ pedestrian multi-use trail. All elements of the No Build Alternative are included in each of the other alternatives.

Summary:

- Existing transportation system
- Plus committed transportation improvements: bridge and road improvement projects
- Bus transit service focused on the preservation of existing services and projects

Transportation System Management (TSM) Alternative

The proposed TSM Alternative is a Bus Rapid Transit (BRT) alternative that operates between the 95th Street Station and 130th Street via East 95th Street, Michigan Avenue, East 127th Street, South Indiana Avenue, and East 130th Street.

Summary:

- No Build Alternative, plus:
- Bus Rapid Transit (BRT) that operates between the 95th Street Station and 130th Street
- 5.5 miles long with four intermediate stops at 103rd, 111th, 115th and 130th Streets
- Park-and-ride facilities proposed at all new stops

- Operates in mixed traffic with traffic signal priority along 95th Street, Michigan Avenue, and 130th Street
- 95th Street terminal expanded to extend the existing bus bays along State and Lafayette Streets approximately 250-feet north to 94th Street to improve circulation and safety
- Existing buses from the south continue to serve the 95th Street station

Locally Preferred Alternative (LPA): Union Pacific Railroad (UPRR) Heavy Rail Transit (HRT) Alternative

The proposed LPA would extend the heavy rail transit line from the existing Red Line 95th Street Station to 130th Street.

Summary:

- No Build Alternative, plus:
- Heavy rail transit line extension from 95th Street Station to 130th Street
- 5.3 mile extension with three new intermediate stops at 103rd, 111th and 115th Streets and a new terminal station at 130th Street
- New park-and-ride and bus terminal facilities at each station
- Operates on an elevated structure from 95th Street as it heads south along the I-57 Expressway for nearly one-half mile until reaching the UPRR corridor in the vicinity of Eggleston Avenue. It would then turn south along the UPRR corridor to approximately 111th Street where it would turn southeast. East of South Prairie Avenue the alignment crosses over the CN/Metra tracks near 119th Street where it transitions to an at-grade profile and then continues southeast along the former Michigan Central/Indiana Harbor Belt (IHB) railroad right-of-way to terminate in the vicinity of130th Street.
- Buses from the south would be rerouted to serve the new intermediate and terminal stations to speed passenger travel to downtown Chicago
- Two alignment options will be studied in the EIS: Tracks could be placed immediately adjacent to the UPRR right-of-way on either the west side (West Side Option) or the east side (East Side Option)
- Two options for the 130th Street terminal station will be studied in the EIS: The line would continue south along the IHB right-of-way to either a south or west terminal station location along the north side of 130th Street, just west of the I-94 Bishop Ford Freeway

Halsted Street Heavy Rail Transit (HRT) Alternative

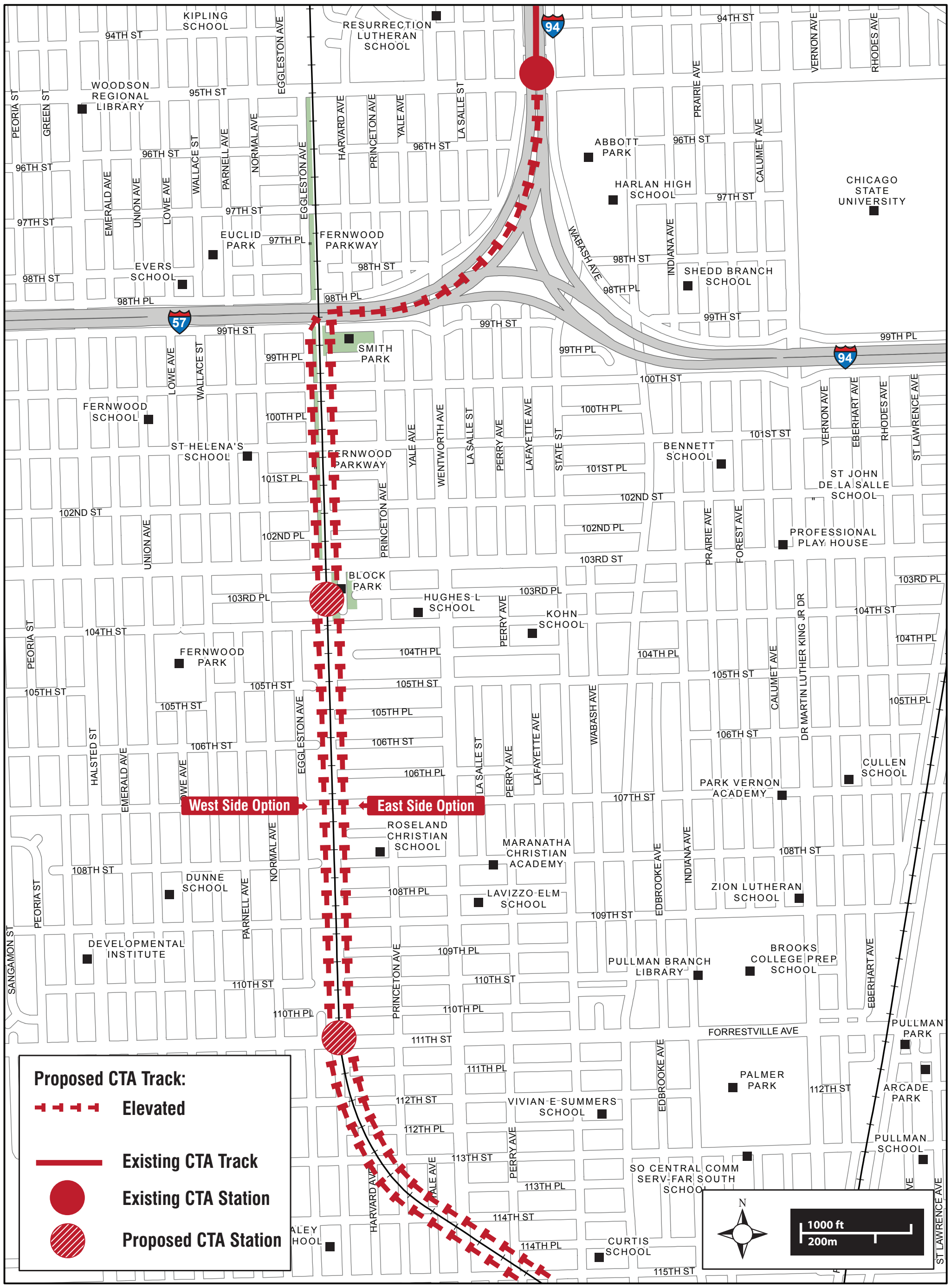
The proposed Halsted Street HRT Alternative would extend the rail transit line from the existing Red Line 95th Street Terminal station to terminate at the Halsted Street/Vermont Avenue intersection in the vicinity of 127th Street.

Summary:

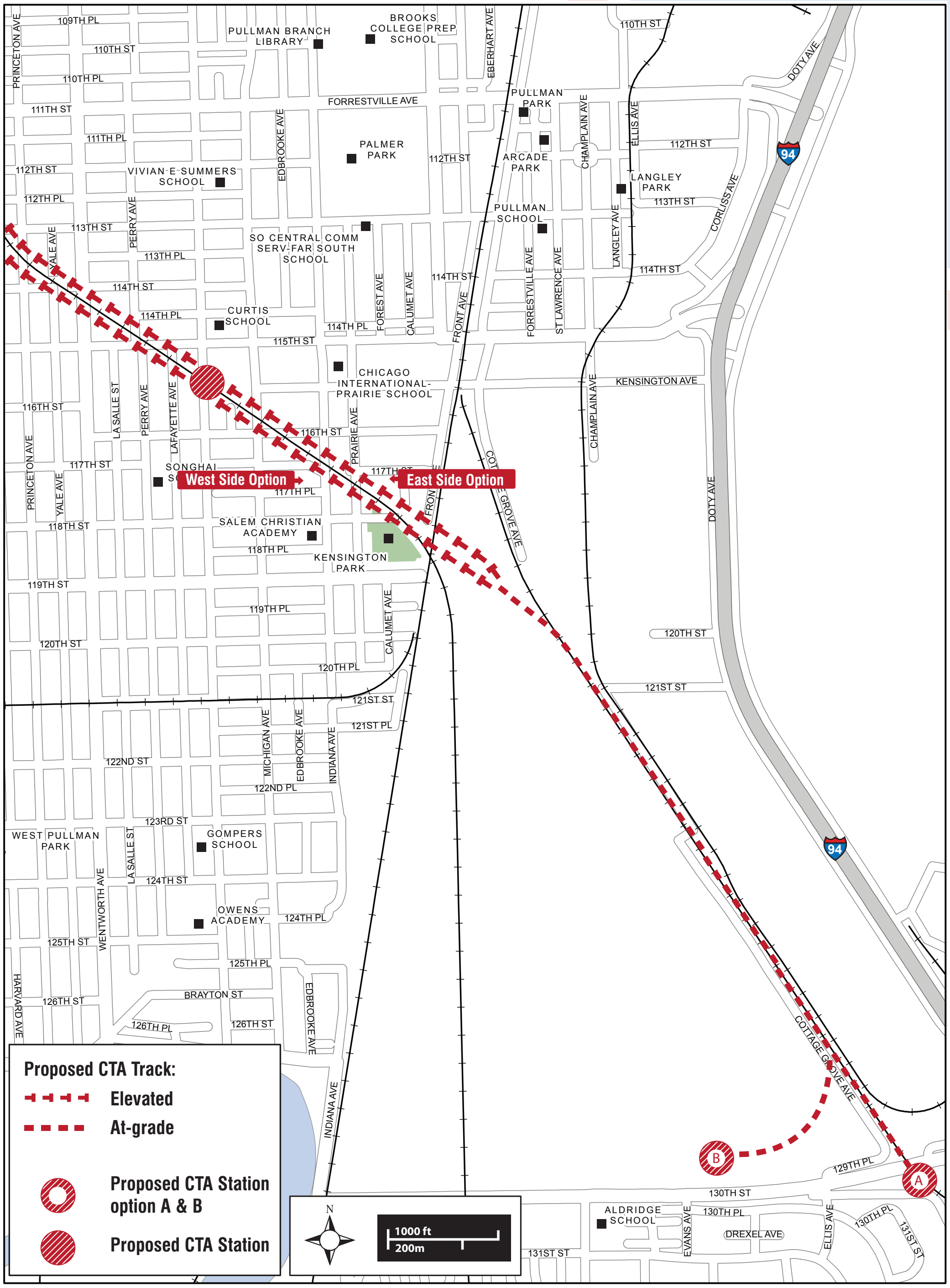
- No Build Alternative, plus:
- Heavy rail transit line extension from 95th Street Station to Halsted Street/Vermont Avenue intersection
- 5.0 mile extension with three new intermediate stops at 103rd, 111th, 119th Streets and a new terminal station at Vermont Avenue
- New park-and-ride facilities at intermediate and terminal stations
- Operates on an elevated structure between the existing Red Line 95th Street Station and the Halsted Street/Vermont Avenue intersection in the vicinity of 127th Street. The alignment would follow the median of I-57 Expressway until reaching Halsted Street. It would then turn south onto Halsted Street and continue in the median to Vermont Avenue
- Buses from the south would be rerouted to serve the new intermediate and terminal stations

Other alternatives may also be identified in the scoping process.

Red Line Extension | *Locally Preferred Alternative*

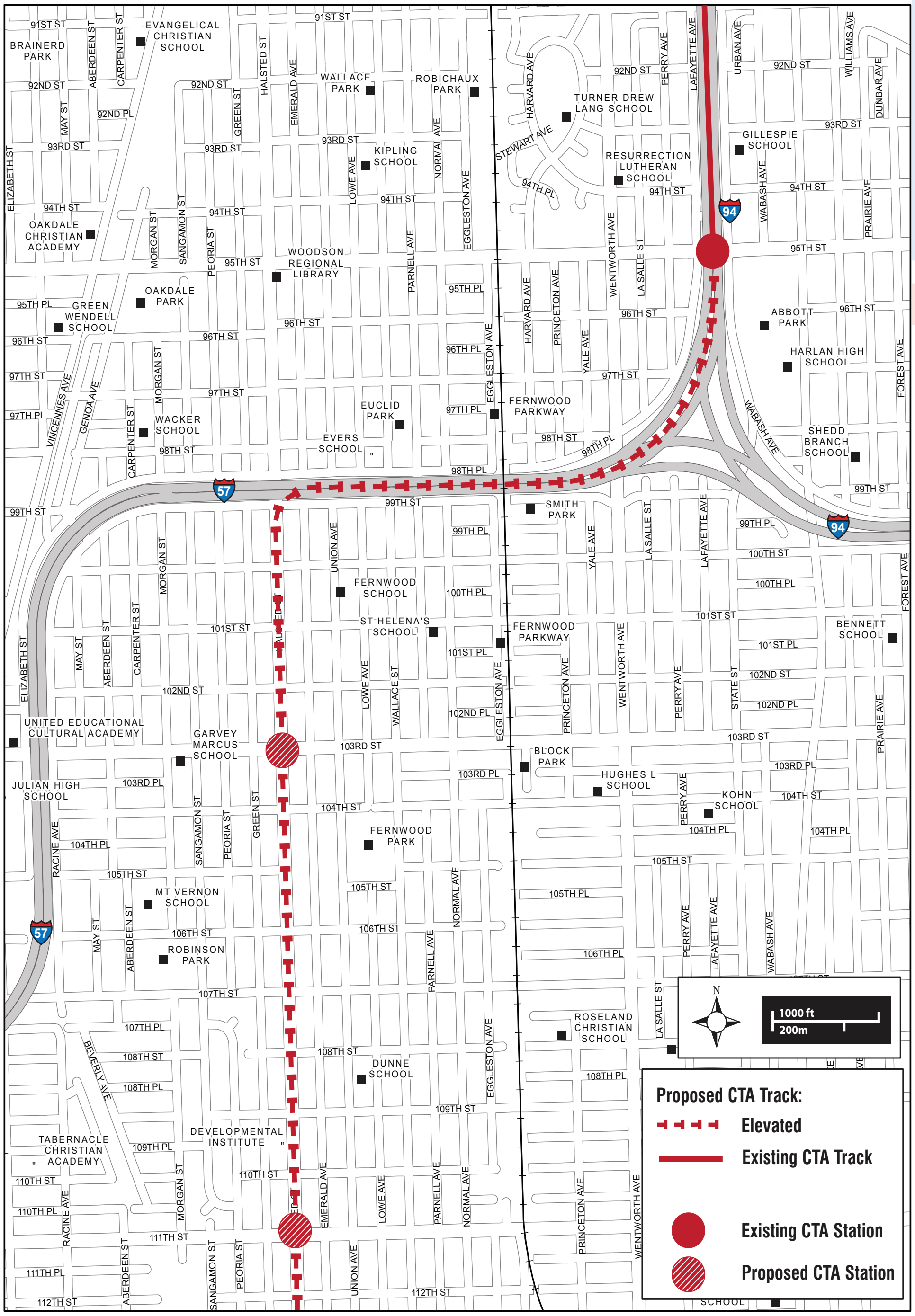

Proposed CTA Track:
Elevated
Existing CTA Track
Existing CTA Station
Proposed CTA Station
West Side Option
East Side Option
N
1000 ft
200m
94
57
KIPLING SCHOOL
RESURRECTION LUTHERAN SCHOOL
WOODSON REGIONAL LIBRARY
ABBOTT PARK
HARLAN HIGH SCHOOL
CHICAGO STATE UNIVERSITY
EUCLID PARK
FERNWOOD PARKWAY
EVERS SCHOOL
SHEDD BRANCH SCHOOL
SMITH PARK
FERNWOOD SCHOOL
ST HELENA'S SCHOOL
BENNETT SCHOOL
ST JOHN DE LA SALLE SCHOOL
PROFESSIONAL PLAY HOUSE
BLOCK PARK
HUGHES L SCHOOL
KOHN SCHOOL
FERNWOOD PARK
CULLEN SCHOOL
PARK VERNON ACADEMY
ROSELAND CHRISTIAN SCHOOL
MARANATHA CHRISTIAN ACADEMY
DUNNE SCHOOL
LAVIZZO ELM SCHOOL
ZION LUTHERAN SCHOOL
DEVELOPMENTAL INSTITUTE
PULLMAN BRANCH LIBRARY
BROOKS COLLEGE PREP SCHOOL
FORRESTVILLE AVE
PULLMAN PARK
PALMER PARK
ARCADE PARK
VIVIAN E SUMMERS SCHOOL
PULLMAN SCHOOL
SO CENTRAL COMM SERV-FAR SOUTH SCHOOL
CURTIS SCHOOL
94TH ST
95TH ST
96TH ST
97TH ST
97TH PL
98TH ST
98TH PL
99TH ST
99TH PL
100TH ST
100TH PL
101ST ST
101ST PL
102ND ST
102ND PL
103RD ST
103RD PL
104TH ST
104TH PL
105TH ST
105TH PL
106TH ST
106TH PL
107TH ST
108TH ST
108TH PL
109TH ST
109TH PL
110TH ST
110TH PL
111TH ST
111TH PL
112TH ST
112TH PL
113TH ST
113TH PL
114TH ST
114TH PL
115TH ST
PEORIA ST
GREEN ST
HALSTED ST
SANGAMON ST
EMERALD AVE
UNION AVE
LOWE AVE
WALLACE ST
PARNELL AVE
NORMAL AVE
EGGLESTON AVE
HARVARD AVE
PRINCETON AVE
YALE AVE
WENTWORTH AVE
LA SALLE ST
PERRY AVE
LAFAYETTE AVE
STATE ST
WABASH AVE
INDIANA AVE
PRAIRIE AVE
FOREST AVE
CALUMET AVE
EDBROOKE AVE
DR MARTIN LUTHER KING JR DR
VERNON AVE
EBERHART AVE
RHODES AVE
ST LAWRENCE AVE

Red Line Extension | *Locally Preferred Alternative*

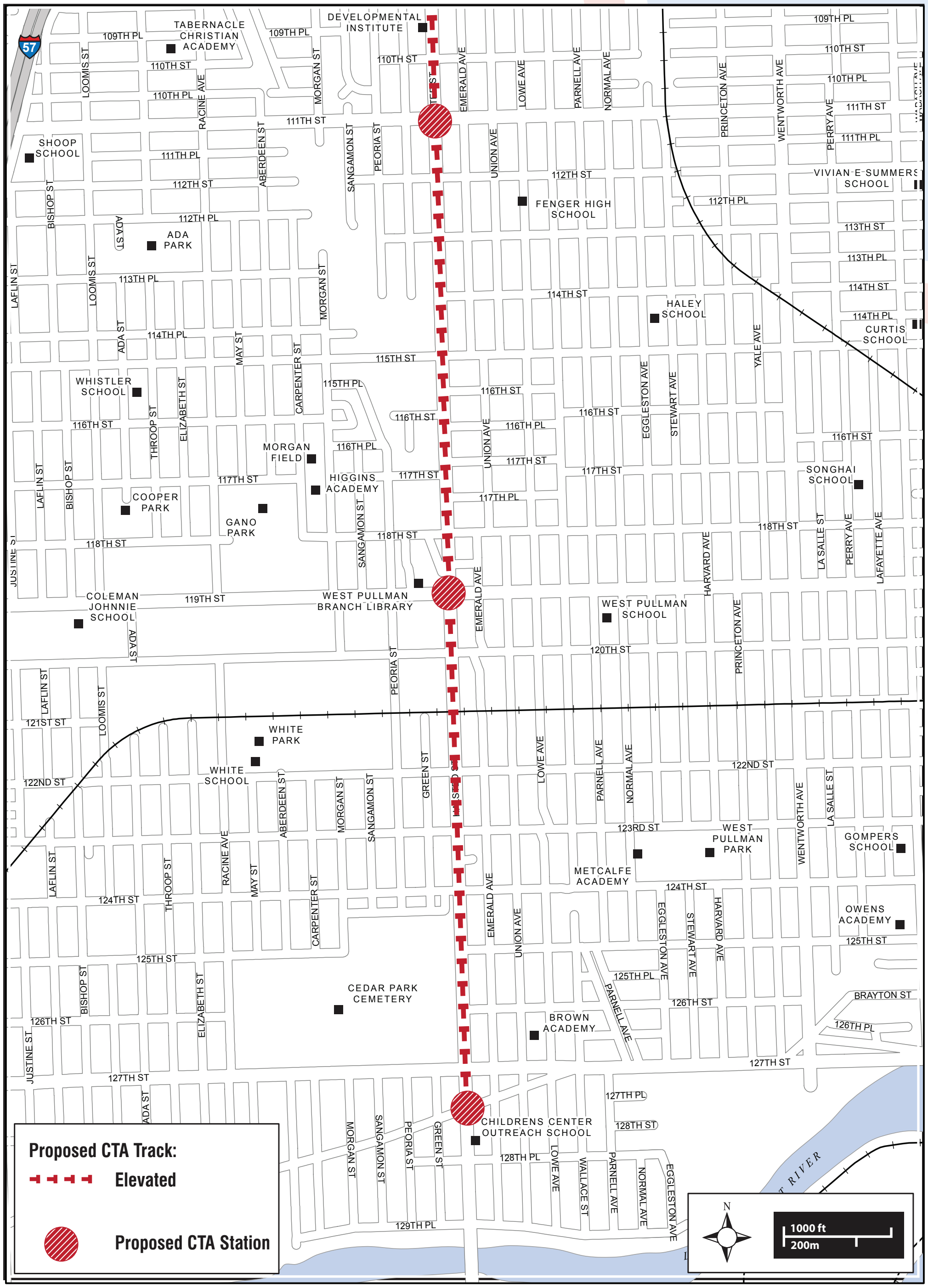


West Side Option
East Side Option
Proposed CTA Track:
Elevated
At-grade
Proposed CTA Station option A & B
Proposed CTA Station
A
B
N
1000 ft
200m
PULLMAN BRANCH LIBRARY
BROOKS COLLEGE PREP SCHOOL
PALMER PARK
VIVIAN E SUMMERS SCHOOL
SO CENTRAL COMM SERV-FAR SOUTH SCHOOL
CURTIS SCHOOL
CHICAGO INTERNATIONAL-PRAIRIE SCHOOL
SONGHAI
SALEM CHRISTIAN ACADEMY
KENSINGTON PARK
PULLMAN PARK
ARCADE PARK
PULLMAN SCHOOL
LANGLEY PARK
WEST PULLMAN PARK
GOMPERS SCHOOL
OWENS ACADEMY
ALDRIDGE SCHOOL
PRINCETON AVE
109TH PL
110TH ST
110TH PL
111TH ST
111TH PL
112TH ST
112TH PL
113TH ST
113TH PL
114TH ST
114TH PL
115TH ST
116TH ST
117TH ST
117TH PL
118TH ST
118TH PL
119TH ST
119TH PL
120TH ST
120TH PL
121ST ST
121ST PL
122ND ST
122ND PL
123RD ST
124TH ST
124TH PL
125TH ST
125TH PL
126TH ST
126TH PL
BRAYTON ST
129TH PL
130TH ST
130TH PL
131ST ST
FORRESTVILLE AVE
EDBROOKE AVE
PERRY AVE
YALE AVE
LA SALLE ST
LAFAYETTE AVE
PRAIRIE AVE
FOREST AVE
CALUMET AVE
FRONT AVE
EBERHART AVE
FORRESTVILLE AVE
ST LAWRENCE AVE
CHAMPLAIN AVE
ELLIS AVE
LANGLEY AVE
KENSINGTON AVE
COTTAGE GROVE AVE
DOTY AVE
CORLISS AVE
94
MICHIGAN AVE
INDIANA AVE
WENTWORTH AVE
HARVARD AVE
EVANS AVE
DREXEL AVE

Red Line Extension | *Halsted Street HRT Alternative*


91ST ST
BRAINERD PARK
ABERDEEN ST
CARPENTER ST
EVANGELICAL CHRISTIAN SCHOOL
HALSTED ST
EMERALD AVE
WALLACE PARK
ROBICHAUX PARK
HARVARD AVE
TURNER DREW LANG SCHOOL
92ND ST
PERRY AVE
LAFAYETTE AVE
URBAN AVE
WILLIAMS AVE
DUNBAR AVE
92ND PL
MAY ST
GREEN ST
93RD ST
KIPLING SCHOOL
NORMAL AVE
STEWART AVE
RESURRECTION LUTHERAN SCHOOL
GILLESPIE SCHOOL
ELIZABETH ST
LOWE AVE
EGGLESTON AVE
94TH PL
94TH ST
WABASH AVE
PRAIRIE AVE
OAKDALE CHRISTIAN ACADEMY
MORGAN ST
SANGAMON ST
PEORIA ST
95TH ST
WOODSON REGIONAL LIBRARY
PARNELL AVE
WENTWORTH AVE
LA SALLE ST
95TH PL
PRINCETON AVE
GREEN WENDELL SCHOOL
OAKDALE PARK
96TH ST
96TH PL
ABBOTT PARK
HARLAN HIGH SCHOOL
YALE AVE
97TH ST
VINCENNES AVE
GENOA AVE
97TH PL
WACKER SCHOOL
EUCLID PARK
FERNWOOD PARKWAY
FOREST AVE
EVERS SCHOOL
98TH ST
98TH PL
SHEDD BRANCH SCHOOL
99TH ST
57
94
SMITH PARK
99TH PL
UNION AVE
100TH ST
100TH PL
FERNWOOD SCHOOL
101ST ST
ST HELENA'S SCHOOL
101ST PL
BENNETT SCHOOL
STATE ST
102ND ST
102ND PL
WALLACE ST
UNITED EDUCATIONAL CULTURAL ACADEMY
GARVEY MARCUS SCHOOL
103RD ST
103RD PL
BLOCK PARK
HUGHES L SCHOOL
KOHN SCHOOL
JULIAN HIGH SCHOOL
104TH ST
104TH PL
RACINE AVE
FERNWOOD PARK
105TH ST
105TH PL
MT VERNON SCHOOL
106TH ST
106TH PL
ROBINSON PARK
107TH ST
107TH PL
BEVERLY AVE
ROSELAND CHRISTIAN SCHOOL
108TH ST
108TH PL
DUNNE SCHOOL
109TH ST
109TH PL
TABERNACLE CHRISTIAN ACADEMY
DEVELOPMENTAL INSTITUTE
110TH ST
110TH PL
111TH ST
111TH PL
112TH ST
SCHOOL
N
1000 ft
200m
Proposed CTA Track:
Elevated
Existing CTA Track
Existing CTA Station
Proposed CTA Station

Red Line Extension | *Halsted Street HRT Alternative*


57
109TH PL
TABERNACLE CHRISTIAN ACADEMY
109TH PL
DEVELOPMENTAL INSTITUTE
109TH PL
110TH ST
LOOMIS ST
110TH ST
110TH PL
RACINE AVE
MORGAN ST
110TH ST
HALSTED ST
EMERALD AVE
LOWE AVE
PARNELL AVE
NORMAL AVE
PRINCETON AVE
WENTWORTH AVE
110TH PL
111TH ST
PERRY AVE
111TH PL
111TH ST
SHOOP SCHOOL
111TH PL
ABERDEEN ST
SANGAMON ST
PEORIA ST
UNION AVE
112TH ST
VIVIAN E SUMMERS SCHOOL
112TH ST
BISHOP ST
FENGER HIGH SCHOOL
112TH PL
112TH PL
ADA ST
ADA PARK
113TH ST
113TH PL
LAFLIN ST
LOOMIS ST
113TH PL
MORGAN ST
114TH ST
114TH ST
HALEY SCHOOL
114TH PL
ADA ST
114TH PL
MAY ST
CARPENTER ST
YALE AVE
CURTIS SCHOOL
115TH ST
WHISTLER SCHOOL
ELIZABETH ST
115TH PL
116TH ST
EGGLESTON AVE
STEWART AVE
116TH ST
THROOP ST
116TH ST
116TH PL
116TH ST
116TH PL
MORGAN FIELD
117TH ST
117TH ST
116TH ST
LAFLIN ST
BISHOP ST
117TH ST
HIGGINS ACADEMY
117TH ST
SONGHAI SCHOOL
COOPER PARK
117TH PL
GANO PARK
118TH ST
JUSTINE ST
118TH ST
SANGAMON ST
118TH ST
LA SALLE ST
PERRY AVE
LAFAYETTE AVE
HARVARD AVE
COLEMAN JOHNNIE SCHOOL
119TH ST
WEST PULLMAN BRANCH LIBRARY
EMERALD AVE
WEST PULLMAN SCHOOL
ADA ST
120TH ST
PRINCETON AVE
PEORIA ST
LAFLIN ST
LOOMIS ST
121ST ST
WHITE PARK
122ND ST
WHITE SCHOOL
ABERDEEN ST
MORGAN ST
SANGAMON ST
GREEN ST
HALSTED ST
LOWE AVE
PARNELL AVE
NORMAL AVE
122ND ST
WENTWORTH AVE
LA SALLE ST
123RD ST
WEST PULLMAN PARK
GOMPERS SCHOOL
LAFLIN ST
RACINE AVE
MAY ST
THROOP ST
METCALFE ACADEMY
124TH ST
EMERALD AVE
124TH ST
CARPENTER ST
UNION AVE
EGGLESTON AVE
STEWART AVE
HARVARD AVE
OWENS ACADEMY
125TH ST
125TH ST
125TH PL
BISHOP ST
ELIZABETH ST
CEDAR PARK CEMETERY
126TH ST
PARNELL AVE
BRAYTON ST
126TH ST
BROWN ACADEMY
126TH PL
JUSTINE ST
127TH ST
127TH ST
ADA ST
127TH PL
CHILDRENS CENTER OUTREACH SCHOOL
128TH ST
MORGAN ST
SANGAMON ST
PEORIA ST
GREEN ST
128TH PL
LOWE AVE
WALLACE ST
PARNELL AVE
NORMAL AVE
EGGLESTON AVE
129TH PL
RIVER
N
1000 ft
200m

Proposed CTA Track:

- - - - **Elevated**

▨ **Proposed CTA Station**

PROJECT PURPOSE AND NEED

The purpose of the Red Line Extension project is to reduce travel times to jobs for Far South Side and South Suburban residents and improve the performance of the existing Red Line 95th Street Station terminal. The project would also provide an opportunity to support economic development initiatives.

The need for the project is based on the following considerations:

- Lack of park-and-ride, passenger drop off and poor pedestrian facilities limit access to the existing 95th Street terminal of the Red Line
- Customers accessing the existing terminal facility by bus experience measureable delays resulting from poor performance of surrounding arterial intersections, xinsufficient space for bus loading and unloading, and insufficient space for bus layovers
- Congested bus and passenger conditions at the existing terminal station and bus facility result in safety issues and diminish the attractiveness of transit as an alternative to other travel modes
- Roadway performance in the study area is adversely impacted by narrow arterial streets and frequent at-grade freight rail crossings
- Study area population is highly transit dependent, minority, and low-income.

PUBLIC PARTICIPATION

Throughout the EIS process, CTA will offer a number of opportunities for you to get involved in the Red Line Extension project. Whether you want to take an active role in shaping this project or just want to stay informed, CTA looks forward to your participation in the months ahead. To ensure that the issues most important to residents, public agencies, and other involved parties are addressed in this review, CTA is hosting two scoping meetings to collect public input. The input gathered from the scoping meetings will help shape the scope of the study, its design efforts and the assessment criteria used in evaluating improvement options.

Additional opportunities to participate will be provided throughout the environmental review process in order to solicit feedback regarding specific needs and concerns.

HOW TO PARTICIPATE

Attend a Meeting

Tuesday, September 22, 2009
6:00 p.m. to 8:00 p.m.
Historic Pullman Visitor Center
11141 S. Cottage Grove Ave.
Chicago, IL 60628

Thursday, September 24, 2009
6:00 p.m. to 8:00 p.m.
Woodson Regional Chicago
Public Library
9525 S. Halsted St.
Chicago, IL 60628

Oral and written comments can be made at the meeting.

Comment

Provide written comments on the proposed project alternatives and potential environmental impacts. Comments will be considered in the scoping process if received by October 27, 2009.

Mail your comments to:

Jeffrey Busby
General Manager, Strategic Planning
Chicago Transit Authority
P.O. Box 7602
Chicago, IL 60680-7602

Or e-mail:

RedExtension@transitchicago.com

Comments can be submitted by mail or e-mail.

Stay Involved

For project information, visit: www.transitchicago.com/RedEIS

If you would like to be added to the project mailing list or e-list for future updates, please send your contact information to Darud Akbar, Government & Community Relations Officer, Chicago Transit Authority, P.O. Box 7567, Chicago, IL 60680-7567, call (312) 681-2708 or e-mail dakbar@transitchicago.com.

THE DECISION MAKING PROCESS AND NEXT STEPS

After the scoping period, CTA will start preliminary engineering and prepare a Draft EIS. The public will have an opportunity to comment on the Draft EIS during a 45-day public comment period. During the review period, CTA will host public hearings to receive comments on the Draft EIS from the public and agencies. CTA will then prepare a Final EIS that includes responses to public comments.

The Federal Transit Administration (FTA) will consider the Final EIS and prepare a Record of Decision (ROD) selecting the preferred alternative. Issuance of the ROD indicates that CTA has satisfied all of the requirements of the National Environmental Policy Act (NEPA). While CTA can advance on preliminary engineering concurrently with the environmental analysis, the issuance of the ROD will allow CTA to move forward with final design and construction of the Red Line.

TARGETED PROJECT SCHEDULE

Fall 2009	2010-2011	2011-2013	2016
Public Scoping Meetings, September 22 and 24, 2009	Preliminary Engineering and Draft EIS	Final EIS, ROD, Final Design, Start of Construction	Open for Operation

Extensión de la Línea Roja

Que conecta la Estación de la 95th Street a la 130th Street

Información sobre el Involucramiento al Público en la Declaración sobre el Efecto Medioambiental

Septiembre de 2009

DEPARTMENT OF TRANSPORTATION
UNITED STATES OF AMERICA

INTRODUCCIÓN

La Chicago Transit Authority (CTA) se propone hacer mejoras de transporte al extender la Línea Roja desde la estación de la 95th Street a la 130th Street. La CTA y la Administración Federal de Tránsito (conocida en inglés por sus siglas "FTA") pasarán a preparar una Declaración sobre el Efecto Medioambiental (conocida en inglés por sus siglas "EIS"), la cual evaluará los efectos medioambientales de construcción y de funcionamiento de la extensión.

PROPÓSITO DE LA EIS Y EL PROCESO DE INVOLUCRAMIENTO AL PÚBLICO

De acuerdo con la Ley sobre la Política Nacional Medioambiental (conocida en inglés por sus siglas "NEPA"), la CTA y la FTA han iniciado un proceso de estudio medioambiental para la Extensión de la Línea Roja. Se elaborará una EIS para identificar los efectos relativos a las obras de construcción y el funcionamiento de la línea. Como parte de la etapa inicial del estudio medioambiental, se celebrará reuniones para involucrar al público con el fin de recibir comentarios por parte del público sobre las alternativas y las cuestiones que deben considerarse como parte del análisis medioambiental. Estas reuniones con el público también son un requisito de la Ley sobre la Equidad del Transporte Seguro, Confiable, Flexible y Eficiente: Un Legado para Usuarios (conocida en inglés por sus siglas "SAFETEA-LU"), la cual exige que los proponentes del proyecto ofrezcan oportunidades para que participe el público en la toma de decisiones sobre el transporte.

Se conoce el proceso de determinar el alcance, el enfoque, y el contenido de una EIS como el "involucramiento al público". Las reuniones de involucramiento constituyen una oportunidad idónea para obtener información de las entidades públicas y gubernamentales. En particular, el proceso de involucramiento pide a las entidades y a las personas interesadas que expresen sus opiniones sobre las alternativas propuestas, el propósito y la necesidad del proyecto, los temas propuestos de evaluación, los efectos negativos posibles, y las medidas atenuadoras que habrán que tener en cuenta.

ANÁLISIS MEDIOAMBIENTAL

Las cuestiones medioambientales que se estudiarán en la EIS son como siguen:

- Recursos culturales;
- Flora y fauna naturales y ecosistemas;
- Uso de energía;
- Adquisición de tierras, desplazamientos, y reubicaciones;
- Uso de tierras;
- Recursos naturales (incluso la calidad del aire y los recursos acuáticos);
- Compatibilidad de los vecindarios y la equidad medioambiental;
- Tierras de parque verde/ instalaciones recreativas
- Seguridad y protección;
- Transporte;
- Efectos visuales y estéticos;
- Ruidos y vibraciones;
- Planificación por zonas y el desarrollo económico y secundario.

REPASO DEL PROYECTO

En 2006, la Chicago Transit Authority (CTA) y la Administración Federal de Tránsito (FTA) iniciaron un proceso de análisis de alternativas para la extensión propuesta de la Línea Roja. Como parte de este proceso de revisión de tres etapas, la CTA ha celebrado seis reuniones públicas durante los últimos tres años, con el fin de recoger opiniones del público sobre las alternativas posibles. La CTA evaluó nueve alternativas y ha adoptado la Alternativa del Tránsito Ferroviario Pesado (conocida en inglés por sus siglas "HRT") de la Union Pacific Railroad (UPRR) como la Alternativa de Preferencia Local (conocida en inglés por sus siglas "LPA") para mayor estudio en la EIS. Se irá perfeccionando la Extensión de la Línea Roja propuesta durante la etapa del diseño conceptual del proyecto y se someterá a mayor estudio durante la etapa de la EIS.

ALTERNATIVAS DEL PROYECTO QUE SERÁN EVALUADAS EN LA EIS

La EIS incluirá una evaluación de las siguientes alternativas:

Alternativa sin Obras de Construcción

La Alternativa sin Obras de Construcción se define como el sistema de transporte ya existente, además de las otras mejoras de transporte para las cuales ya se ha contraído el compromiso de realizarlas y que ya quedan incluidas en el Programa de Mejoras de Transporte (conocida en inglés por sus siglas "TIP") para los ejercicios fiscales de 2007-2012 dentro de la Dirección Metropolitana de Chicago para la Planificación (conocida en inglés por sus siglas "CMAP"). Los proyectos de TIP dentro del área del proyecto consisten en la reconstrucción de cinco puentes y los proyectos de mejoras de algunos caminos, los cuales incluyen la jardinería, la colocación de cercos, obras de repavimento, la coordinación de sincronización de señales, y un sendero de multiuso para biciclistas y peatones. Todos los elementos de la Alternativa sin Obras de Construcción se incluyen en cada una de las otras alternativas.

Para resumir:

- Sistema de transporte ya existente;
- Además de las otras mejoras de transporte: proyectos de mejoras de puentes y caminos;
- Servicio de tránsito por autobús que se enfoca sobre la conservación de servicios y proyectos ya existentes.

Alternativa de Administración del Sistema de Transporte (conocida en inglés por sus siglas "TSM")

La Alternativa propuesta de TSM es una alternativa de tránsito rápido por autobuses (conocida en inglés por sus siglas "BRT"), que anda entre la Estación de la 95th Street y la 130th Street, por medio de la East 95th Street, la Michigan Avenue, al East 127th Street, la South Indiana Avenue, y la East 130th Street.

Para resumir:

- Alternativa sin Obras de Construcción, además de:
- El tránsito rápido por autobuses (BRT) que anda entre la Estación de la 95th Street y la 130th Street;

- Un recorrido de 5.5 millas con cuatro paradas intermedias en la 103rd, 111th, 115th, y 130th Streets;
- Estaciones con instalaciones de estacionamiento propuestas para todas las nuevas paradas
- Anda en el tránsito mixto con señales de preferencia por la 95th Street, la Michigan Avenue, y la 130th Street;
- La terminal de la 95th Street ampliada para extender las plataformas de entrada ya existentes para los autobuses por la State y Lafayette Streets, ubicados aproximadamente 250 pies al norte a la 94th Street, con el fin de mejorar la circulación y la seguridad;
- Los autobuses que andan del sur seguirán brindando servicio a la estación de la 95th Street.

Alternativa de Preferencia Local (LPA): Alternativa de Tránsito Ferroviario Pesado (HRT) de la Union Pacific Railroad (UPRR)

La propuesta LPA extenderá la línea de tránsito ferroviario pesado desde la Estación de la 95th Street ya existente de la Línea Roja a la 130th Street.

Para resumir:

- Alternativa sin Obas de Construcción, además de:
- Extensión de la línea de tránsito ferroviario pesado desde la Estación de la 95th Street a la 130th Street;
- Una extensión de 5.3 millas con tres nuevas paradas intermedias en la 103rd, 111th, 115th, y 130th Streets y una estación terminal nueva en la 130th Street;
- Estaciones nuevas con instalaciones de estacionamiento y terminales de autobuses en cada estación;
- Anda por encima de una estructura elevada desde la 95th Street, mientras que va hacia el sur por la I-57 Expressway por casi media milla hasta llegar al corredor de la UPRR en proximidad de la Eggleston Avenue. Luego se dirigiría al sur por el corredor de la UPRR hasta aproximadamente 111th Street, donde daría la vuelta al sudeste. Al este de la South Prairie Avenue, el alineamiento cruza sobre las vías de la CN/Metra cerca de la 119th Street, donde adoptaría una configuración de andar a nivel de calle, para seguir después hacia el sudeste por la servidumbre de paso de la antigua compañía de ferrocarril periférico de Michigan Central/Indiana Harbor (Michigan Central/Indiana Harbor Belt Railroad, o IHB por sus siglas en inglés), acabando en proximidad de la 130th Street;

- Las rutas de autobuses que venían del sur serán desviadas para brindar servicio a las nuevas estaciones intermedias y terminales, con el fin de agilizar el tránsito de viajeros al centro de Chicago;
- Se estudiarán dos alternativas de alineamiento en la EIS: Se podrá colocar vías inmediatamente adyacentes a la servidumbre de paso de la UPRR por el lado al oeste (Opción del Lado al Oeste) o por el lado al este (Opción del Lado al Este);
- Se estudiarán dos alternativas para la estación terminal de la 130th Street en la EIS: La línea seguiría hacia el sur por la servidumbre de paso de la IHB hasta una estación terminal que estaría ubicada en un sitio al sur o al oeste, por el lado al norte de la 130th Street, justamente al oeste de la I-94 Bishop Ford Freeway.

Alternativa de Tránsito Ferroviario Pesado (HRT) de la Halsted Street

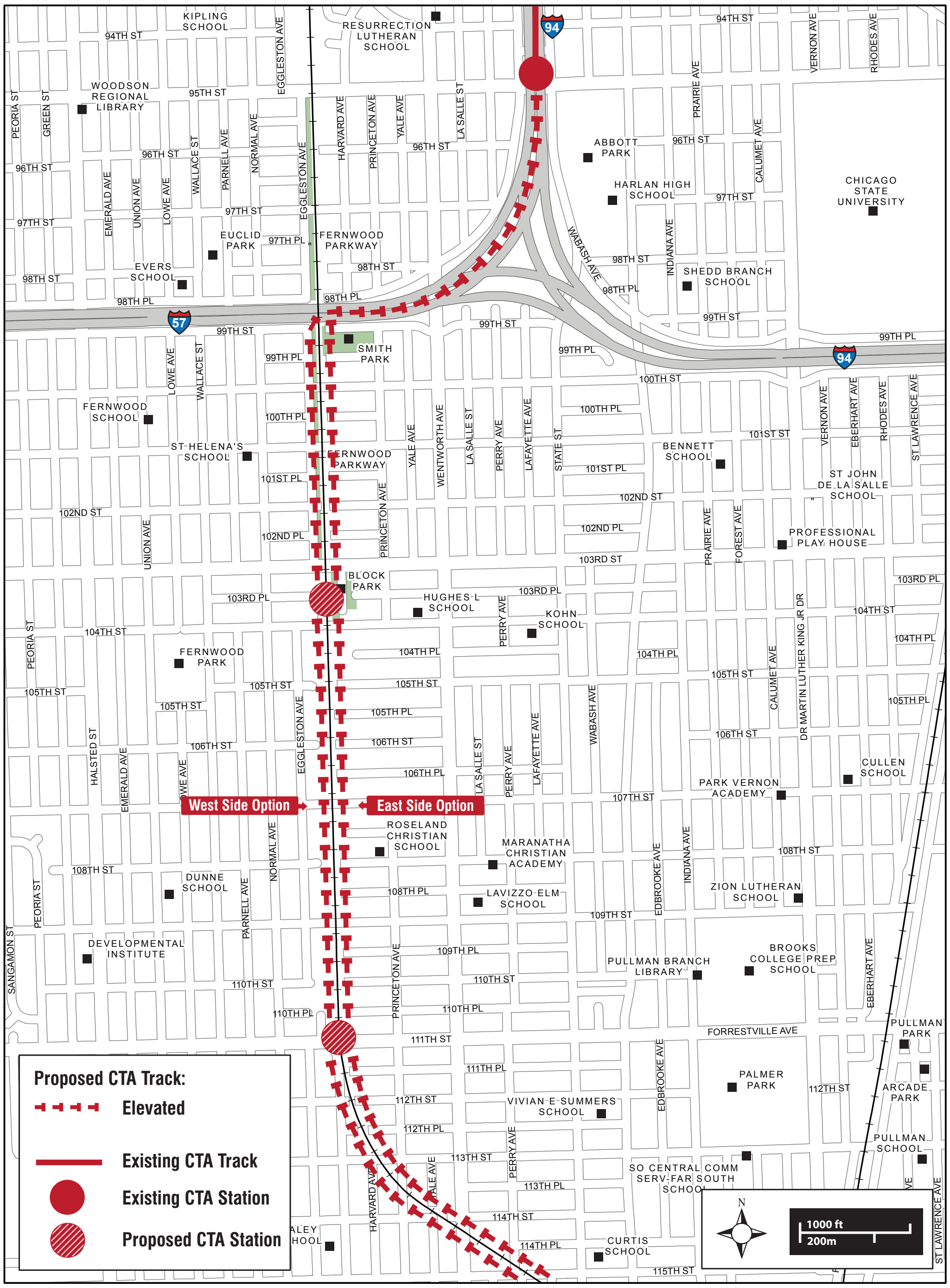
La Alternativa propuesta de HRT de la Halsted Street extendería la línea de tránsito ferroviario desde la estación terminal de la 95th Street ya existente de la Línea Roja para acabar en el cruce de caminos entre la Halsted Street/Vermont Avenue, en proximidad a la 127th Street.

Para resumir:

- Alternativa sin Obras de Construcción, además de:
- Extensión de la línea de tránsito ferroviario pesado desde la Estación de la 95th Street al cruce de caminos entre la Halsted Street/Vermont Avenue;
- Una extensión de 5.0 millas con tres nuevas paradas intermedias en la 103rd, 111th, 119th, y una estación terminal nueva en la Vermont Avenue;
- Nuevas estaciones con instalaciones de estacionamiento en las estaciones intermedias y terminales;
- Anda por encima de una estructura elevada entre la Estación de la 95th Street ya existente de la Línea Roja y el cruce de caminos entre la Halsted Street/Vermont Avenue, en proximidad de la 127th Street. El alineamiento seguirá el camellón o zona media de la I-57 Expressway hasta que llega a la Halsted Street. Luego daría una vuelta hacia el sur, entrando en la Halsted Street, para seguir después por la zona media hasta llegar a la Vermont Avenue.
- Las rutas de autobuses que venían del sur serán desviadas para brindar servicio a las nuevas estaciones intermedias y terminales

Se podrán identificar otras alternativas en el proceso de involucrar al público..

Red Line Extension | *Locally Preferred Alternative*


Proposed CTA Track:
Elevated
Existing CTA Track
Existing CTA Station
Proposed CTA Station
West Side Option
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KIPLING SCHOOL
RESURRECTION LUTHERAN SCHOOL
WOODSON REGIONAL LIBRARY
ABBOTT PARK
HARLAN HIGH SCHOOL
CHICAGO STATE UNIVERSITY
EUCLID PARK
FERNWOOD PARKWAY
EVERS SCHOOL
SHEDD BRANCH SCHOOL
SMITH PARK
FERNWOOD SCHOOL
ST HELENA'S SCHOOL
BENNETT SCHOOL
ST JOHN DE LA SALLE SCHOOL
PROFESSIONAL PLAY HOUSE
BLOCK PARK
HUGHES L SCHOOL
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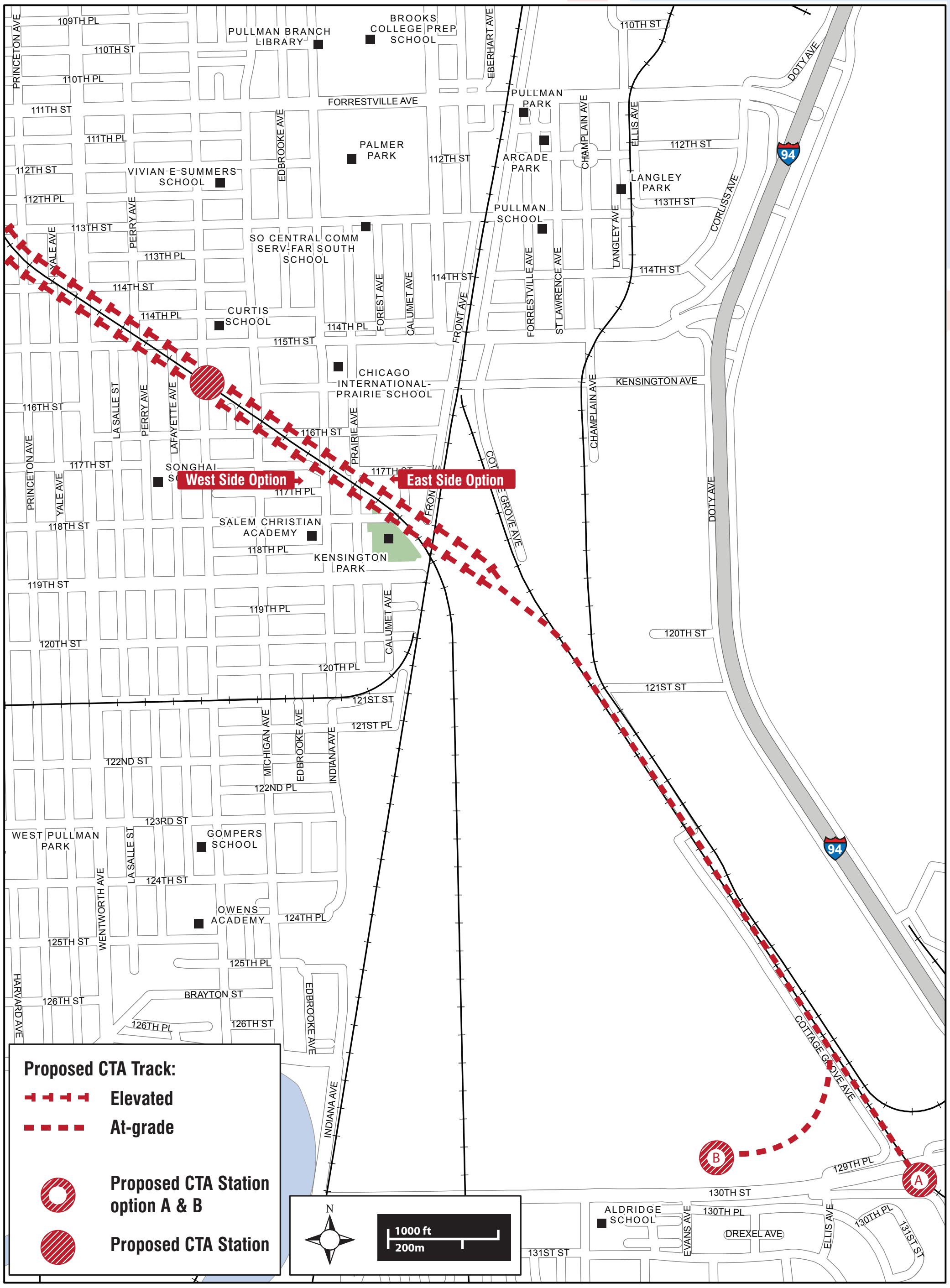
FERNWOOD PARK
CULLEN SCHOOL
PARK VERNON ACADEMY
ROSELAND CHRISTIAN SCHOOL
MARANATHA CHRISTIAN ACADEMY
DUNNE SCHOOL
LAVIZZO ELM SCHOOL
ZION LUTHERAN SCHOOL
DEVELOPMENTAL INSTITUTE
PULLMAN BRANCH LIBRARY
BROOKS COLLEGE PREP SCHOOL
PULLMAN PARK
PALMER PARK
ARCADE PARK
VIVIAN E SUMMERS SCHOOL
PULLMAN SCHOOL
SO CENTRAL COMM SERV-FAR SOUTH SCHOOL
CURTIS SCHOOL

Red Line Extension | *Locally Preferred Alternative*


West Side Option
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Proposed CTA Track:
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Proposed CTA Station option A & B
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PALMER PARK
PULLMAN PARK
ARCADE PARK
PULLMAN SCHOOL
LANGLEY PARK
VIVIAN E SUMMERS SCHOOL
SO CENTRAL COMM SERV-FAR SOUTH SCHOOL
CURTIS SCHOOL
CHICAGO INTERNATIONAL-PRAIRIE SCHOOL
SONGHAI SCHOOL
SALEM CHRISTIAN ACADEMY
KENSINGTON PARK
WEST PULLMAN PARK
GOMPERS SCHOOL
OWENS ACADEMY
ALDRIDGE SCHOOL
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KENSINGTON AVE
COTTAGE GROVE AVE
DOTY AVE
FRONT AVE
CALUMET AVE
MICHIGAN AVE
INDIANA AVE
EDBROOKE AVE
PRAIRIE AVE
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PERRY AVE
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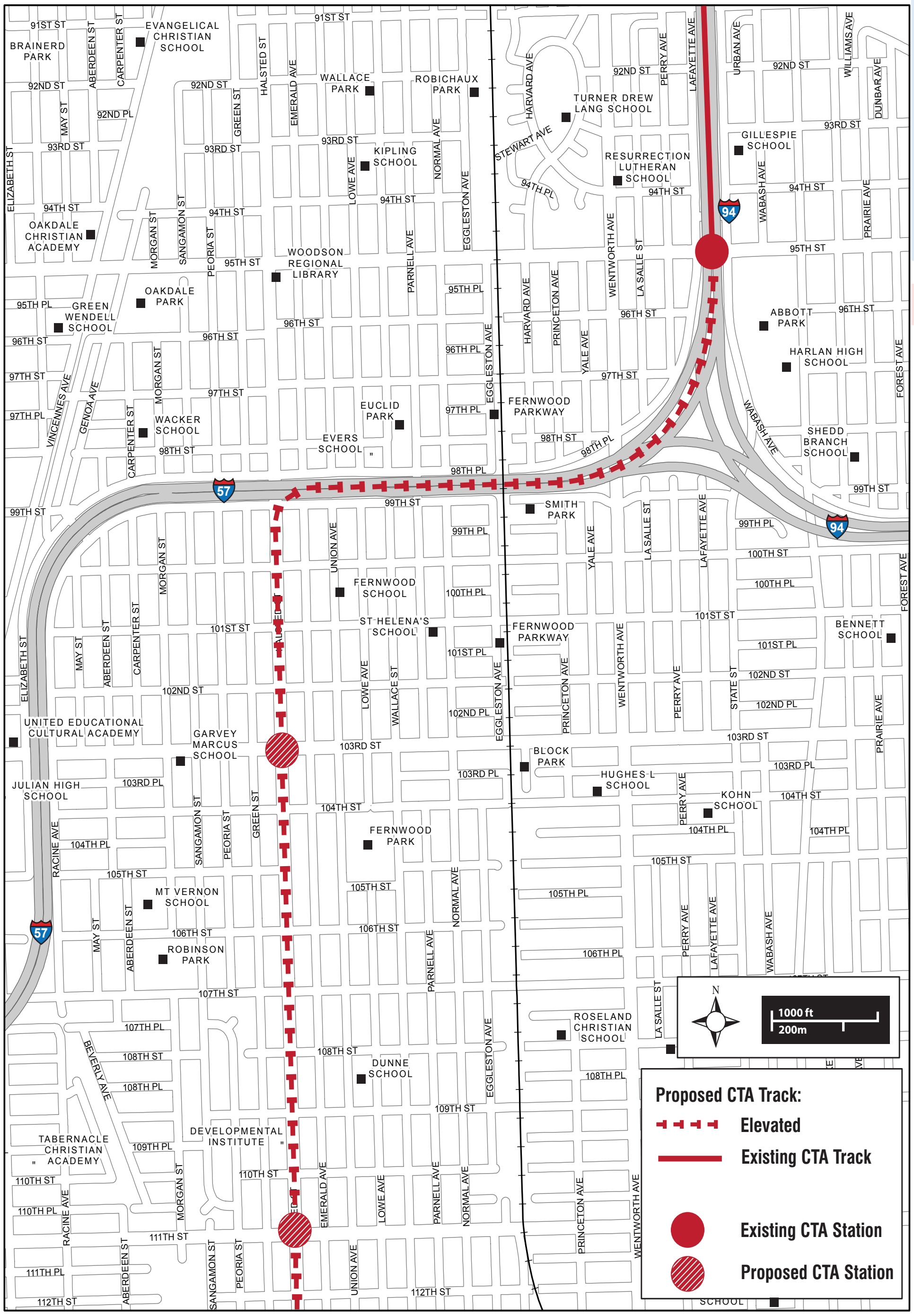
Red Line Extension | *Halsted Street HRT Alternative*



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ABERDEEN ST
CARPENTER ST
EVANGELICAL CHRISTIAN SCHOOL
HALSTED ST
EMERALD AVE
WALLACE PARK
ROBICHAUX PARK
HARVARD AVE
PERRY AVE
LAFAYETTE AVE
URBAN AVE
WILLIAMS AVE
DUNBAR AVE
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92ND PL
MAY ST
GREEN ST
TURNER DREW LANG SCHOOL
STEWART AVE
93RD ST
KIPLING SCHOOL
NORMAL AVE
LOWE AVE
EGGLESTON AVE
RESURRECTION LUTHERAN SCHOOL
GILLESPIE SCHOOL
WABASH AVE
94TH ST
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PRAIRIE AVE
ELIZABETH ST
OAKDALE CHRISTIAN ACADEMY
MORGAN ST
SANGAMON ST
PEORIA ST
WOODSON REGIONAL LIBRARY
PARNELL AVE
95TH ST
95TH PL
WENTWORTH AVE
LA SALLE ST
PRINCETON AVE
OAKDALE PARK
GREEN WENDELL SCHOOL
96TH ST
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YALE AVE
ABBOTT PARK
HARLAN HIGH SCHOOL
FOREST AVE
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GENOA AVE
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EUCLID PARK
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UNITED EDUCATIONAL CULTURAL ACADEMY
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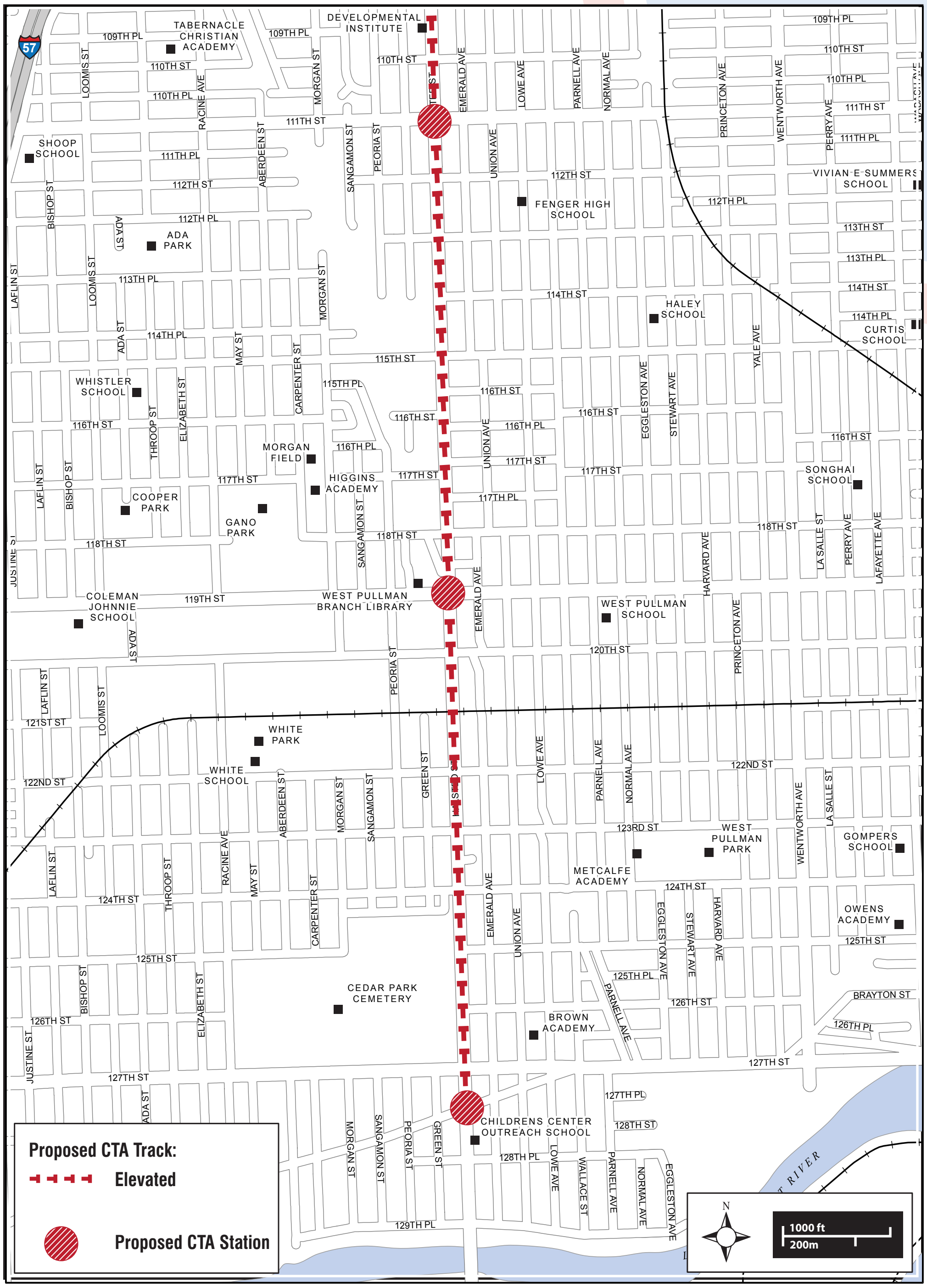
Proposed CTA Track:
Elevated
Existing CTA Track
Existing CTA Station
Proposed CTA Station

Red Line Extension | *Halsted Street HRT Alternative*



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Proposed CTA Station
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TABERNACLE CHRISTIAN ACADEMY
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ADA PARK
FENGER HIGH SCHOOL
HALEY SCHOOL
VIVIAN E SUMMERS SCHOOL
CURTIS SCHOOL
WHISTLER SCHOOL
MORGAN FIELD
HIGGINS ACADEMY
COOPER PARK
GANO PARK
SONGHAI SCHOOL
COLEMAN JOHNNIE SCHOOL
WEST PULLMAN BRANCH LIBRARY
WEST PULLMAN SCHOOL
WHITE PARK
WHITE SCHOOL
METCALFE ACADEMY
WEST PULLMAN PARK
GOMPERS SCHOOL
OWENS ACADEMY
CEDAR PARK CEMETERY
BROWN ACADEMY
CHILDRENS CENTER OUTREACH SCHOOL
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THROOP ST
ELIZABETH ST
RACINE AVE
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CARPENTER ST
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PEORIA ST
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UNION AVE
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NORMAL AVE
EGGLESTON AVE
STEWART AVE
HARVARD AVE
PRINCETON AVE
YALE AVE
WENTWORTH AVE
LA SALLE ST
PERRY AVE
LAFAYETTE AVE
WABASH AVE
RIVER

PROPÓSITO Y NECESIDAD DEL PROYECTO

El proyecto de Extensión de la Línea Roja tiene el propósito de reducir el tiempo de viaje al trabajo para los residentes ubicados en el lado del sur lejano y de los suburbios del sur y de mejorar el funcionamiento de la estación terminal de la 95th Street ya existente de la Línea Roja. El proyecto también daría la oportunidad para fomentar las iniciativas de desarrollo económico.

La necesidad del proyecto se basa en las siguientes consideraciones:

- La falta de estaciones con instalaciones de estacionamiento y de un lugar para dejar y recoger a pasajeros, y las instalaciones pobres para peatones limitan el acceso a la estación terminal ya existente de la 95th Street de la Línea Roja.
- Los viajeros que llegan a las instalaciones terminales ya existentes por autobús sufren de demoras numerosas que resultan del mal rendimiento de los cruces de caminos arteriales en los alrededores, del espacio insuficiente para la carga y la descarga de pasajeros en los autobuses, y del espacio insuficiente para las paradas intermedias (escalas) de autobuses.
- Las condiciones congestionadas para autobuses y pasajeros en las estaciones terminales ya existentes y en las instalaciones de autobuses resultan en los problemas de seguridad y disminuyen lo atractivo del tránsito como alternativa de otras modalidades de viaje.
- El rendimiento de las calzadas en este estudio queda perjudicado por las calles arteriales estrechas y cruces ferroviarios frecuentes de carga a nivel de calle.
- La población en el área del estudio consiste en grupos étnicos minoritarios, sumamente dependientes del tránsito, y de ingresos bajos.

PARTICIPACIÓN DEL PÚBLICO

A lo largo del proceso de la EIS, la CTA ofrecerá numerosas oportunidades para que usted quede involucrado en el proyecto de Extensión de la Línea Roja. Que usted participe activamente para dar forma a este proyecto o que simplemente prefiera estar al tanto de las últimas novedades, la CTA espera con placer su participación en los meses venideros. Para asegurar que se aborden las cuestiones que son más importantes a los residentes, a las entidades públicas, y a otras partes interesadas en este estudio, la CTA celebrará dos reuniones de involucramiento público para recoger las opiniones del público. Los comentarios que se recogen en las reuniones de involucramiento ayudarán a determinar el alcance del estudio, los esfuerzos por diseñarlo, y los criterios de valoración dedicados a evaluar las opciones para hacer mejoras.

Se ofrecerán más oportunidades para participar durante el proceso del estudio medioambiental, con el fin de pedir más opiniones sobre las necesidades y los temas específicos de preocupación.

CÓMO PARTICIPAR

Asistir a una reunión

martes, 22 de septiembre de 2009
6:00 p.m. - 8:00 p.m.
Historic Pullman Visitor Center
11141 S. Cottage Grove Avenue
Chicago, IL 60628

jueves, 24 de septiembre de 2009
6:00 p.m. - 8:00 p.m.
Woodson Regional Chicago Public Library
9525 S. Halsted Street
Chicago, IL 60628

Se pueden hacer comentarios orales y por escrito en las reuniones.

Hacer comentarios

Hacer comentarios por escrito sobre las alternativas propuestas del proyecto y los efectos medioambientales posibles. Se considerarán los comentarios en el proceso de involucramiento al público con tal de que se entreguen para el día 27 de octubre de 2009.

Enviar sus comentarios a:

Jeffrey Busby
General Manager, Strategic Planning
Chicago Transit Authority
P.O. Box 7602
Chicago, IL 60680-7602

O enviar por correo electrónico a:

RedExtension@transitchicago.com

Se pueden entregar comentarios por correo postal o electrónico.

Quedar involucrado

Para informarse sobre el proyecto, vaya al: www.transitchicago.com/RedEIS

Si usted desea incorporarse a nuestra lista de correo postal o electrónico del proyecto para recibir noticias en el futuro, favor de enviar sus datos de contacto a Darud Akbar, Government & Community Relations Officer, Chicago Transit Authority, P.O. Box 7567, Chicago, IL 60680-7567, llame al (312) 681-2708, o enviar una nota por correo electrónico a dakbar@transitchicago.com.

EL PROCESO DE TOMAR DECISIONES Y LOS PRÓXIMOS PASOS

Después del período de involucramiento al público, la CTA comenzará la ingeniería preliminar y elaborará un borrador de la EIS. El público tendrá una oportunidad para hacer comentarios sobre el borrador de la EIS durante un plazo de 45 días dedicado a los comentarios por el público. Durante el período de estudio, la CTA celebrará reuniones públicas para recibir comentarios sobre el borrador de la EIS del público en general y de las entidades. La CTA luego elaborará una versión definitiva de la EIS que incluirá las respuestas a los comentarios que habrán hecho el público

La Administración Federal de Tránsito (FTA) estudiará la versión definitiva de la EIS y elaborará un Acta de Decisión (conocida en inglés por sus siglas "ROD"), en la cual escogerá la alternativa preferida. El acto de emitir la ROD da a entender que la CTA ha cumplido con todos los requisitos que exige la Ley sobre la Política Nacional Medioambiental (NEPA). Aunque la CTA puede seguir adelante con la ingeniería preliminar de forma simultánea con el análisis medioambiental, el acto de emitir la ROD permitirá a la CTA proceder al diseño definitivo y emprender la construcción de la Línea Roja.

CRONOGRAMA ANTICIPADO DEL PROYECTO

Otoño del 2009	2010-2011	2011-2013	2016
Reuniones de Involucramiento al Público, 22 y 24 de septiembre de 2009	Ingeniería Preliminar y Borrador de la EIS	Versión Definitiva de la EIS, Acta de Decisión (ROD), Diseño Definitivo, y Inicio de las Obras de Construcción	Entrar en funcionamiento

Appendix I
Meeting Presentation

Red Line Extension

Environmental Impact Statement (EIS)
Public Scoping Meetings
September 22 & 24, 2009

Meeting Agenda

• 6:00 – 6:45 pm	Open House
• 6:45 – 6:55 pm	Presentation
• 6:55 – 7:55 pm	Public Comments on Scope of Environmental Impact Statement (EIS)
• 7:55 – 8:00 pm	Next Steps/Adjournment

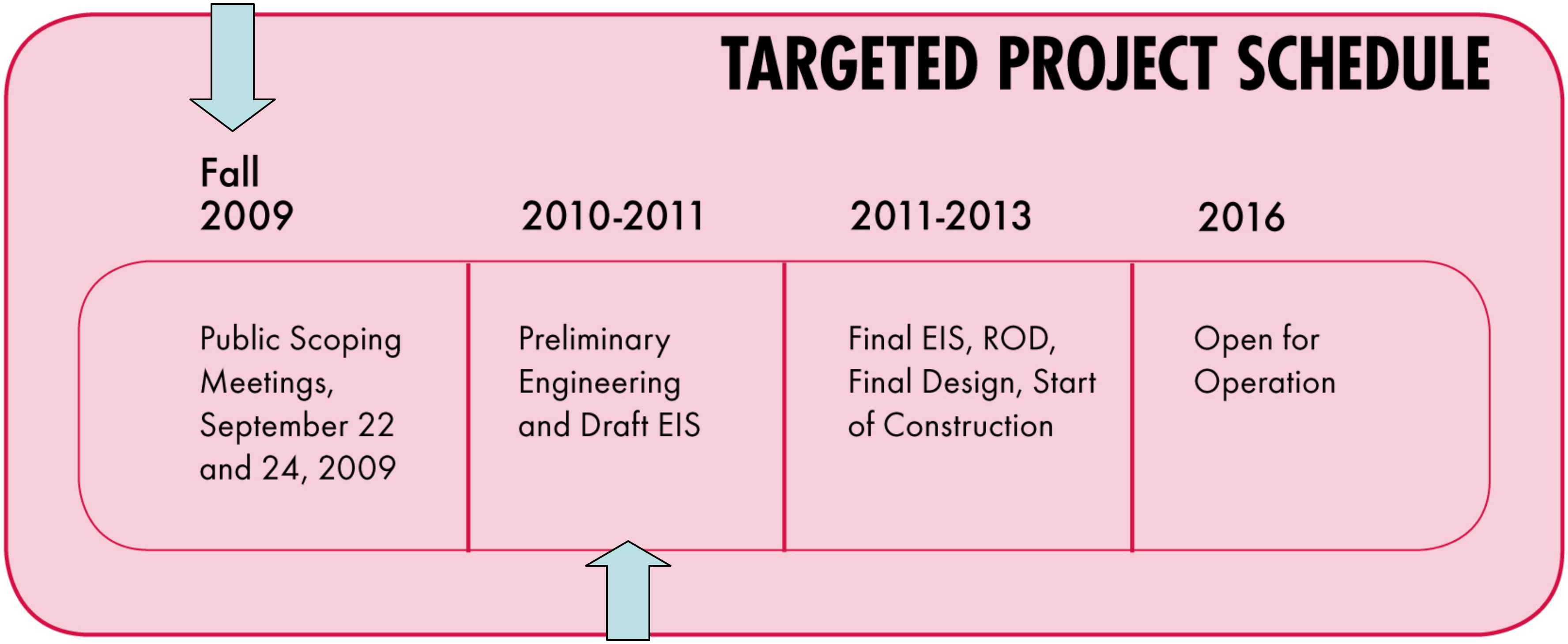
Background/History

- Alternatives Analysis process began in 2006
- Evaluated nine alternatives
- Extensive public outreach program
- Adopted Union Pacific Railroad Heavy Rail Transit Alternative as Locally Preferred Alternative (LPA)
- Environmental Impact Statement (EIS) builds on Alternatives Analysis process

Environmental Impact Statement (EIS)

- Prepared to comply with National Environmental Policy Act (NEPA)
- Identify and evaluate potential impacts related to project construction and operation
- Inform public and decision-makers of potential impacts and mitigation measures

Scoping: process of determining focus and content (scope) of EIS



TARGETED PROJECT SCHEDULE

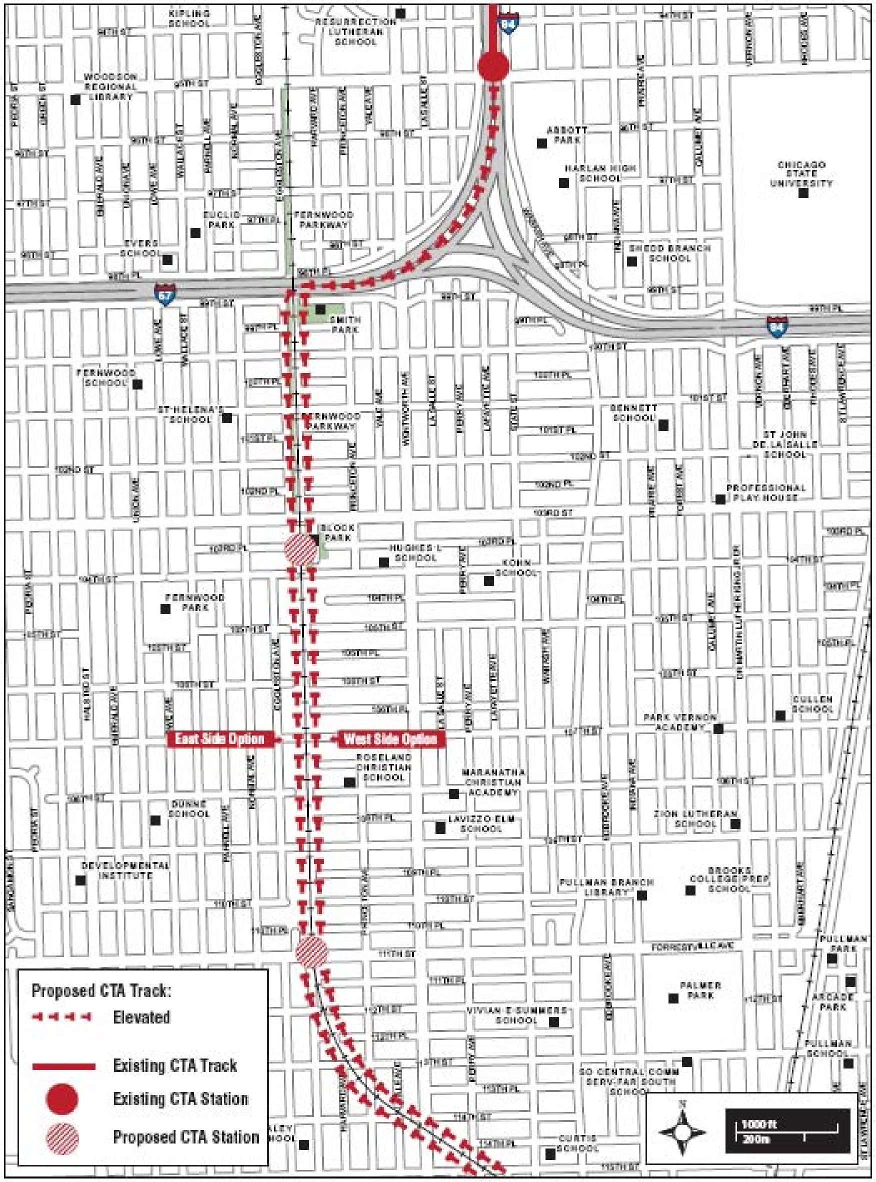
Fall 2009	2010-2011	2011-2013	2016
Public Scoping Meetings, September 22 and 24, 2009	Preliminary Engineering and Draft EIS	Final EIS, ROD, Final Design, Start of Construction	Open for Operation

Public review of Draft EIS; relevant scoping comments addressed in Draft EIS

Project Alternatives Proposed for Study in EIS

- No Build Alternative
- Transportation System Management (TSM) Alternative
- Locally Preferred Alternative (LPA): Union Pacific Railroad Heavy Rail Transit Alternative
- Halsted Street Heavy Rail Transit Alternative

Locally Preferred Alternative


East Side Option
West Side Option
Proposed CTA Track:
Elevated
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Existing CTA Station
Proposed CTA Station
1000 ft
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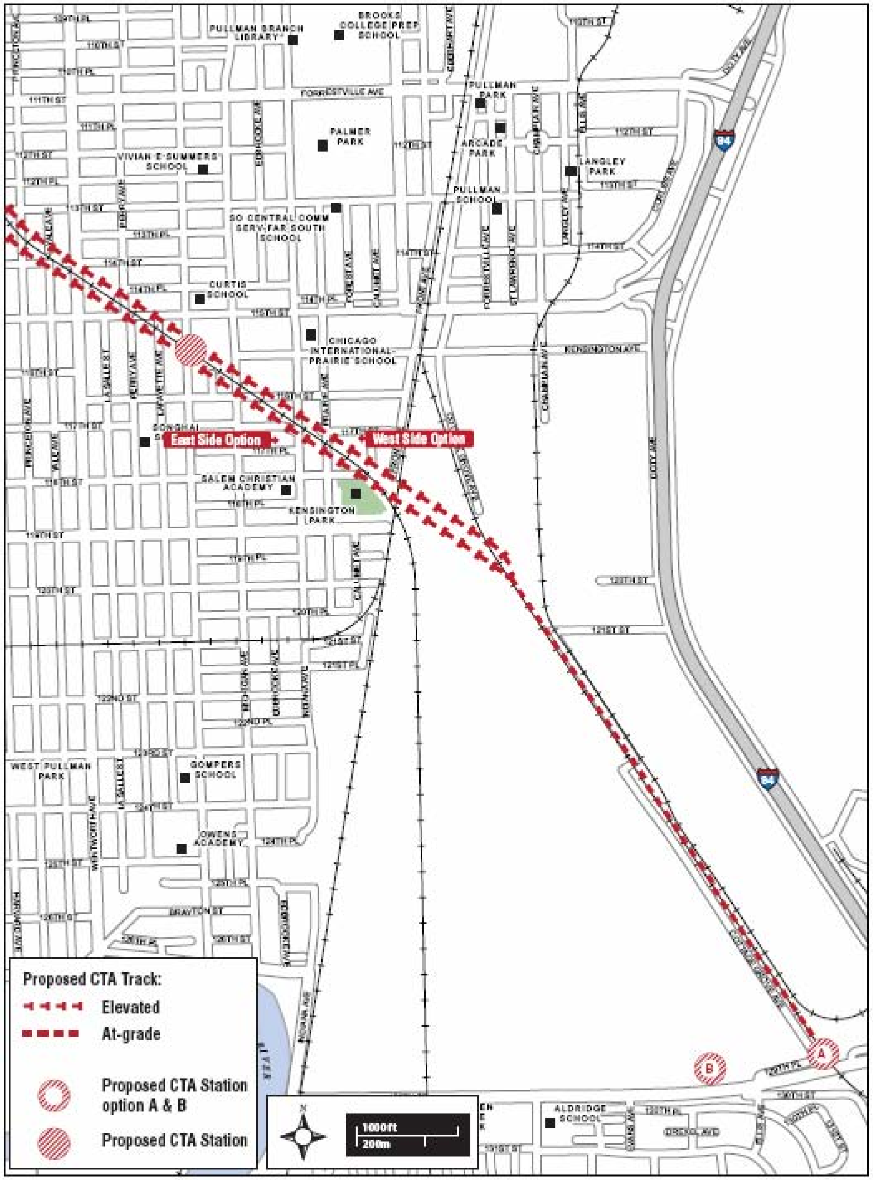
East Side Option
West Side Option
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Proposed CTA Track:
Elevated
At-grade
Proposed CTA Station option A & B
Proposed CTA Station
1000 ft
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Red Line Extension

Connecting 95th Street Station to 130th Street

Environmental Impact Statement Scoping
September 2009

Public Comments on Scope of EIS

Stay Involved

www.transitchicago.com/RedEIS

Contact:

Darud Akbar
Government & Community Relations Office
Chicago Transit Authority
P.O. Box 7567
Chicago, IL 60680-7567
(312) 681-2708
dakbar@transitchicago.com

Scoping Comments

Focus comments on:

- Purpose and Need
- Proposed Alternatives
- Proposed Environmental Issues to be Examined
- Potential Environmental Effects and Mitigation Measures to be Considered

Speaker Guidelines

- Submit a speaker card
- Moderator will call speakers by name
- Re-state your name
- Speakers have 3 minutes to comment
  - ➢Yellow Card- 30 seconds remaining
  - ➢Red Card- speaking time is over
- Tonight we will not respond to your comments
- Comments will be documented in scoping report

Scoping Comments due by October 27, 2009

- Tonight verbal comments recorded by court reporter
- Write comments and place in box provided
- Mail:

  Jeffery Busby, General Manager, Strategic Planning
  Chicago Transit Authority
  P.O. Box 7602
  Chicago, IL 60680-7602

- E-mail: RedExtension@transitchicago.com
- Fax: (312) 681-4297

Appendix J
Meeting Exhibit Boards

No Build Alternative

- Existing transportation system
- Plus committed transportation improvements in Chicago Metropolitan Agency for Planning Transportation Improvement Program including select bridge and road improvement projects
- Focus on preservation of existing bus service

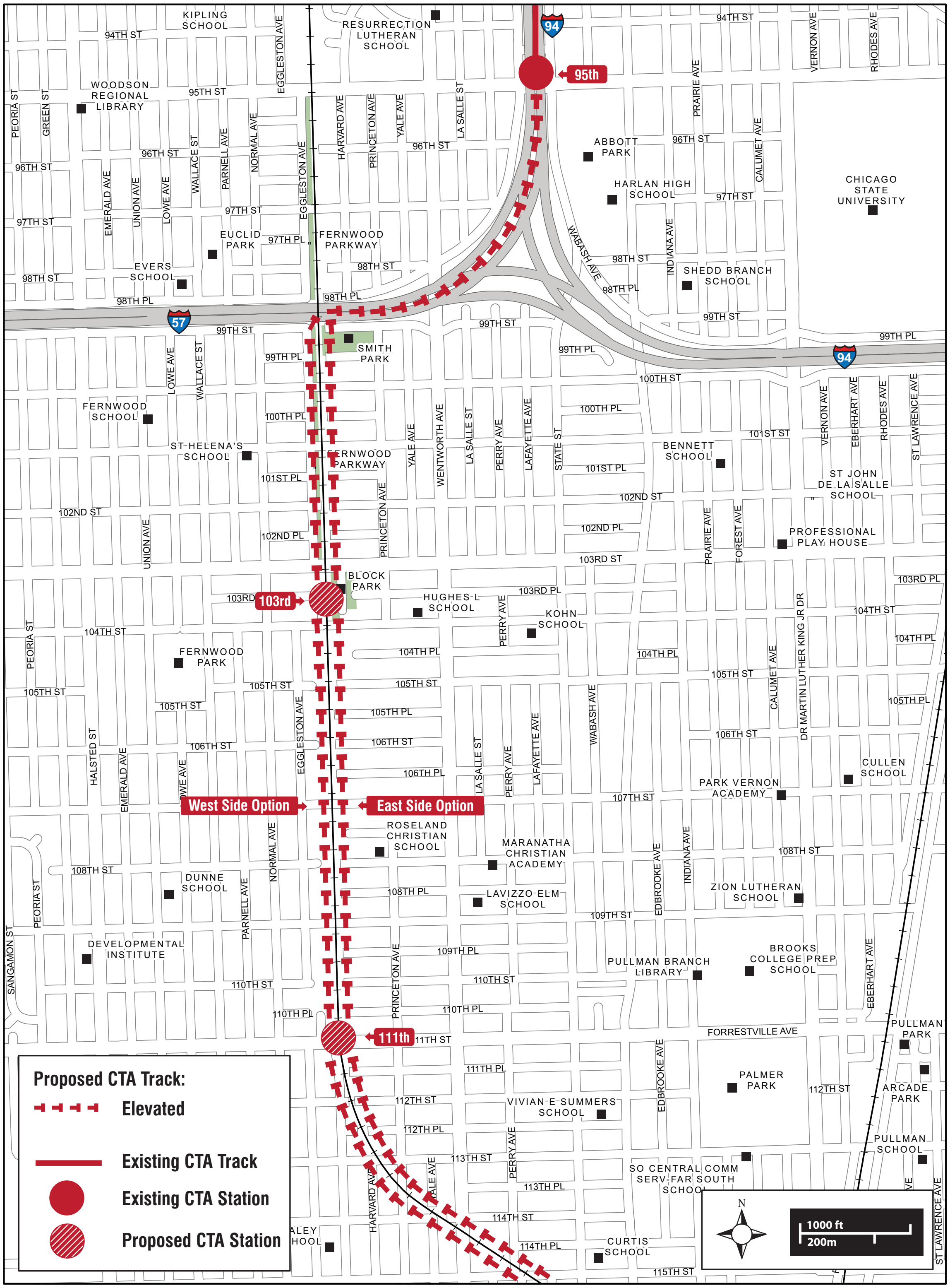
Transportation System Management (TSM) Alternative

Bus Rapid Transit (BRT) alternative that operates between the 95th Street Station and 130th Street via East 95th Street, Michigan Avenue, East 127th Street, South Indiana Avenue, and East 130th Street.

- 5.5 miles long with four intermediate stops at 103rd, 111th, 115th and 130th streets
- Park & Ride facilities proposed at all new stops
- Operates in mixed traffic with traffic signal priority along 95th Street, Michigan Avenue, and 130th Street
- 95th Street terminal expanded to extend the existing bus bays along State and Lafayette streets to 94th Street to improve circulation and safety
- Existing buses from the south would continue to serve the 95th Street Station

Locally Preferred Alternative (LPA):

Union Pacific Railroad (UPRR) Heavy Rail Transit (HRT) Alternative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EUCLID PARK
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EVERS SCHOOL
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PARK VERNON ACADEMY
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ARCADE PARK
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DR MARTIN LUTHER KING JR DR
EDBROOKE AVE
VERNON AVE
EBERHART AVE
RHODES AVE
ST LAWRENCE AVE

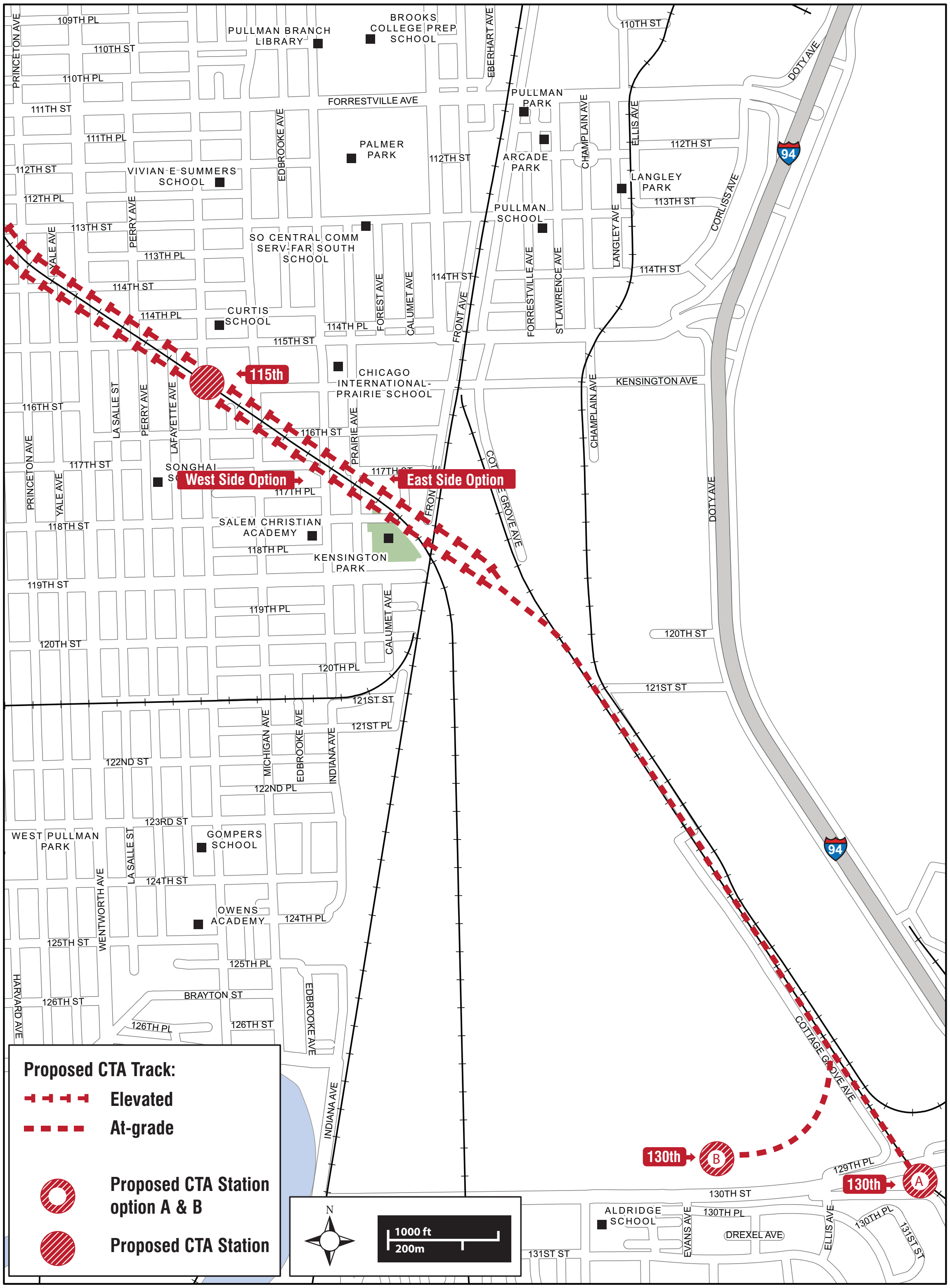
Red Line Extension

Connecting 95th Street Station to 130th Street

cta

Locally Preferred Alternative (LPA):

Union Pacific Railroad (UPRR) Heavy Rail Transit (HRT) Alternative


115th
West Side Option
East Side Option
130th
B
130th
A
94
94
PULLMAN BRANCH LIBRARY
BROOKS COLLEGE PREP SCHOOL
PALMER PARK
PULLMAN PARK
ARCADE PARK
VIVIAN E SUMMERS SCHOOL
LANGLEY PARK
PULLMAN SCHOOL
SO CENTRAL COMM SERV-FAR SOUTH SCHOOL
CURTIS SCHOOL
CHICAGO INTERNATIONAL-PRAIRIE SCHOOL
SONGHAI S
SALEM CHRISTIAN ACADEMY
KENSINGTON PARK
WEST PULLMAN PARK
GOMPERS SCHOOL
OWENS ACADEMY
ALDRIDGE SCHOOL
109TH PL
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129TH PL
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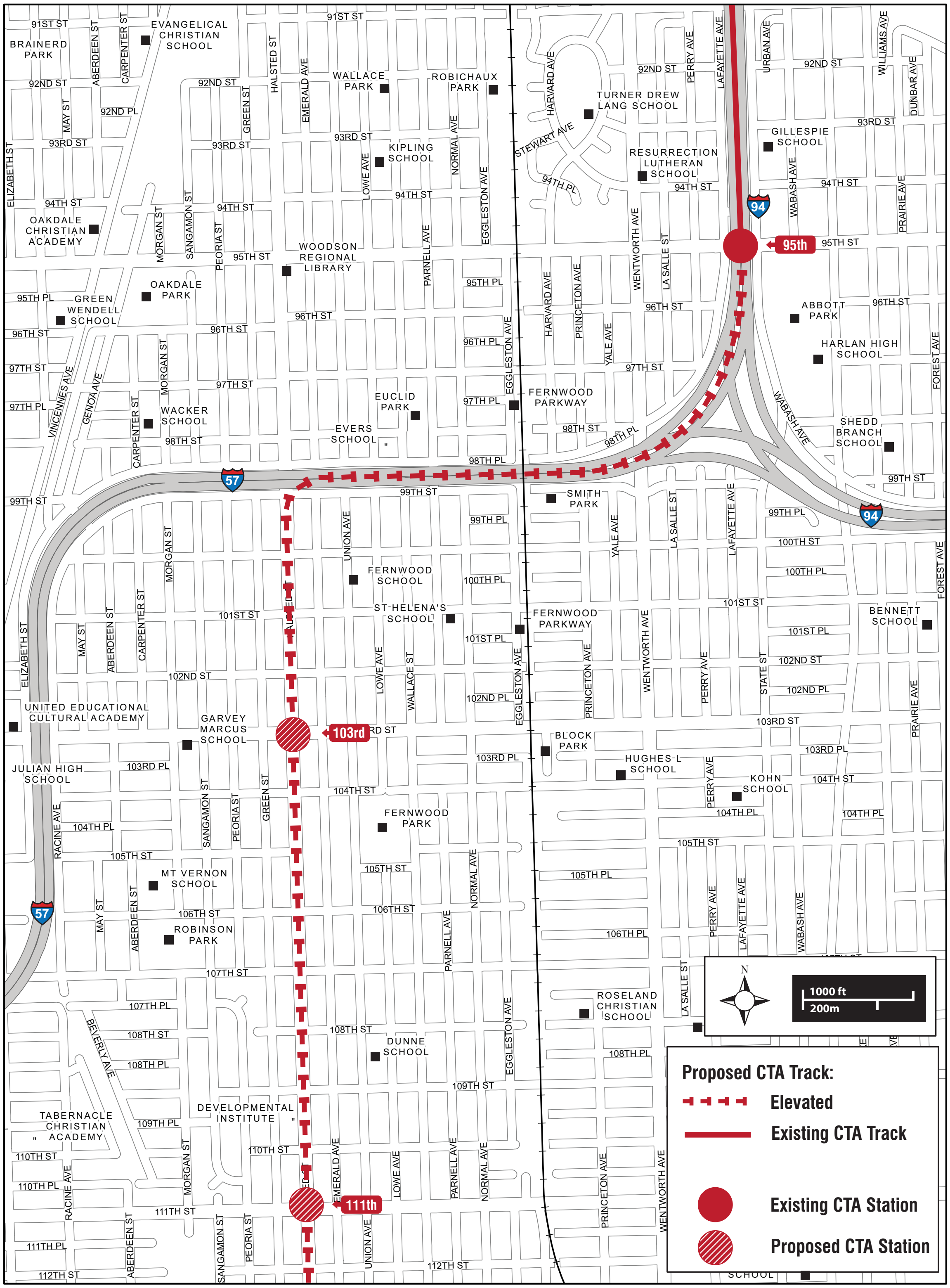
131ST ST
BRAYTON ST
FORRESTVILLE AVE
KENSINGTON AVE
DREXEL AVE
PRINCETON AVE
YALE AVE
PERRY AVE
LA SALLE ST
LAFAYETTE AVE
WENTWORTH AVE
HARVARD AVE
MICHIGAN AVE
EDBROOKE AVE
INDIANA AVE
PRAIRIE AVE
FOREST AVE
CALUMET AVE
FRONT AVE
EBERHART AVE
FORRESTVILLE AVE
ST LAWRENCE AVE
CHAMPLAIN AVE
LANGLEY AVE
ELLIS AVE
EVANS AVE
CORLISS AVE
DOTY AVE
COTTAGE GROVE AVE
131ST ST
Proposed CTA Track:
Elevated
At-grade
Proposed CTA Station option A & B
Proposed CTA Station
N
1000 ft
200m

Red Line Extension

Connecting 95th Street Station to 130th Street

Halsted Street Heavy Rail Transit (HRT) Alternative


95th
103rd
111th
57
94
Proposed CTA Track:
Elevated
Existing CTA Track
Existing CTA Station
Proposed CTA Station
N
1000 ft
200m
91ST ST
92ND ST
92ND PL
93RD ST
94TH ST
94TH PL
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96TH PL
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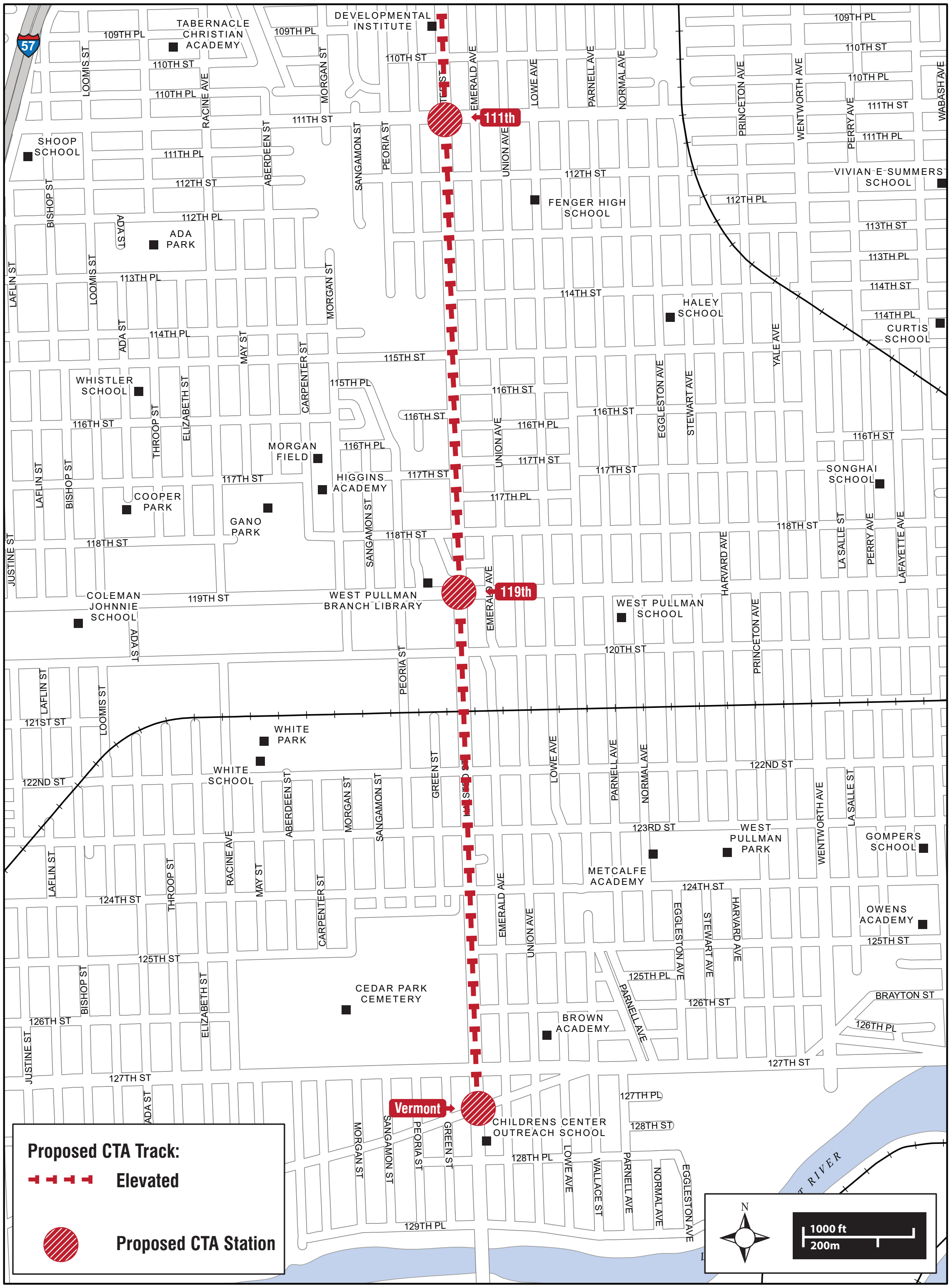
ELIZABETH ST
RACINE AVE
MAY ST
ABERDEEN ST
CARPENTER ST
MORGAN ST
SANGAMON ST
PEORIA ST
GREEN ST
HALSTED ST
EMERALD AVE
UNION AVE
LOWE AVE
WALLACE ST
PARNELL AVE
NORMAL AVE
EGGLESTON AVE
VINCENNES AVE
GENOA AVE
BEVERLY AVE
STEWART AVE
HARVARD AVE
PRINCETON AVE
YALE AVE
WENTWORTH AVE
LA SALLE ST
PERRY AVE
LAFAYETTE AVE
STATE ST
URBAN AVE
WABASH AVE
PRAIRIE AVE
FOREST AVE
WILLIAMS AVE
DUNBAR AVE
BRAINERD PARK
EVANGELICAL CHRISTIAN SCHOOL
WALLACE PARK
ROBICHAUX PARK
KIPLING SCHOOL
TURNER DREW LANG SCHOOL
RESURRECTION LUTHERAN SCHOOL
GILLESPIE SCHOOL
OAKDALE CHRISTIAN ACADEMY
WOODSON REGIONAL LIBRARY
OAKDALE PARK
GREEN WENDELL SCHOOL
ABBOTT PARK
HARLAN HIGH SCHOOL
WACKER SCHOOL
EUCLID PARK
EVERS SCHOOL
FERNWOOD PARKWAY
SHEDD BRANCH SCHOOL
SMITH PARK
FERNWOOD SCHOOL
ST HELENA'S SCHOOL
BENNETT SCHOOL
UNITED EDUCATIONAL CULTURAL ACADEMY
GARVEY MARCUS SCHOOL
BLOCK PARK
HUGHES L SCHOOL
KOHN SCHOOL
JULIAN HIGH SCHOOL
FERNWOOD PARK
MT VERNON SCHOOL
ROBINSON PARK
ROSELAND CHRISTIAN SCHOOL
DUNNE SCHOOL
TABERNACLE CHRISTIAN ACADEMY
DEVELOPMENTAL INSTITUTE
SCHOOL

Red Line Extension

Connecting 95th Street Station to 130th Street

cta

Halsted Street Heavy Rail Transit (HRT) Alternative


57
111th
119th
Vermont
Proposed CTA Track:
Elevated
Proposed CTA Station
N
1000 ft
200m
DEVELOPMENTAL INSTITUTE
TABERNACLE CHRISTIAN ACADEMY
SHOOP SCHOOL
ADA PARK
FENGER HIGH SCHOOL
HALEY SCHOOL
VIVIAN E SUMMERS SCHOOL
CURTIS SCHOOL
WHISTLER SCHOOL
MORGAN FIELD
HIGGINS ACADEMY
COOPER PARK
GANO PARK
SONGHAI SCHOOL
COLEMAN JOHNNIE SCHOOL
WEST PULLMAN BRANCH LIBRARY
WEST PULLMAN SCHOOL
WHITE PARK
WHITE SCHOOL
WEST PULLMAN PARK
METCALFE ACADEMY
GOMPERS SCHOOL
OWENS ACADEMY
CEDAR PARK CEMETERY
BROWN ACADEMY
CHILDRENS CENTER OUTREACH SCHOOL
RIVER
109TH PL
110TH ST
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PARNELL AVE
NORMAL AVE
UNION AVE
PRINCETON AVE
WENTWORTH AVE
PERRY AVE
WABASH AVE
BISHOP ST
ADA ST
LAFLIN ST
MAY ST
CARPENTER ST
THROOP ST
ELIZABETH ST
JUSTINE ST
EGGLESTON AVE
STEWART AVE
YALE AVE
HARVARD AVE
LA SALLE ST
LAFAYETTE AVE
GREEN ST
HALSTED ST
WALLACE ST

Locally Preferred Alternative (LPA): Union Pacific Railroad (UPRR) Heavy Rail Transit (HRT)

Extend Red Line rapid transit from the existing Red Line 95th Street Station to 130th Street.

- 5.3-mile extension with three new intermediate stops at 103rd, 111th and 115th Streets and a new terminal station at 130th Street
- New Park & Ride and bus terminal facilities at each station
- Buses from the south would be re-routed to serve the new intermediate and terminal stations to speed passenger travel to downtown Chicago

Halsted Street Heavy Rail Transit (HRT) Alternative

Extend Red Line rapid transit from the existing Red Line 95th Street station to Halsted Street/ Vermont Avenue intersection in the vicinity of 127th Street.

- 5-mile extension with three new intermediate stops at 103rd, 111th, 119th streets and a new terminal station at Vermont Avenue
- New Park & Ride facilities at intermediate and terminal stations
- Buses from the south would be re-routed to serve the new intermediate and terminal stations

Project Purpose

- Reduce travel times to jobs for Far South Side and South Suburban residents
- Improve performance of existing Red Line 95th Street Station terminal
- Provide an opportunity to support economic development initiatives

The need for the project is based on the following considerations:

- Lack of Park & Ride, passenger drop off and poor pedestrian facilities limit access to existing 95th Street Red Line terminal station
- Customers accessing existing terminal facility by bus experience measureable delays
- Congested bus and passenger conditions at existing terminal station and bus facility result in safety issues and diminish the attractiveness of transit as an alternative to other travel modes
- Roadway performance in study area is adversely impacted by narrow arterial streets and frequent at-grade freight rail crossings
- Study area population is highly transit dependent, minority and low-income

Submit Comments

Scoping comments due by: ***October 27, 2009.*** Comment on the proposed project alternatives and potential environmental effects. Submit to:

Jeffrey Busby

General Manager, Strategic Planning

Chicago Transit Authority

P.O. Box 7602

Chicago, IL 60680-7602

Fax: 312-681-4297

E-mail: RedExtension@transitchicago.com

Stay Involved

Visit: www.transitchicago.com/RedEIS

To join the mailing list or e-list, contact:

Darud Akbar
Government and Community Relations Officer
Chicago Transit Authority
567 W. Lake Street
Chicago, IL 60661
Fax: 312-681-2796
E-mail: RedExtension@transitchicago.com

Appendix K
Public Scoping Meeting Transcripts

CHICAGO TRANSIT AUTHORITY
PUBLIC HEARING
"RED LINE EXTENSION
CONNECTING 95TH STREET STATION TO 130TH STREET"
September 22, 2009

STENOGRAPHIC REPORT OF PROCEEDINGS

had in the above-entitled matter held at the Historic Pullman Visitor Center, 11141 South Cottage Grove Avenue, Chicago, Illinois, commencing at 6:44 o'clock p.m.

PRESENTERS:

MR. DARUD AKBAR, Government & Community Relations Officer, Chicago Transit Authority

MR. JEFFREY BUSBY, General Manager, Strategic Planning, Chicago Transit Authority

MS. SARAH LAYTON WALLACE, Moderator

Reported by: Anna M. Morales, CSR, RMR
License No.: 084-002854

(Whereupon, the following proceedings commenced at

6:44 o'clock p.m.)

MR. AKBAR: Good evening, everyone. If we could have folks begin to take their seats, we would like to go ahead and get the presentation started.

Good evening. Once again, my name is Darud Akbar. I'm the Government & Community Relations Officer with the Chicago Transit Authority. I would like to welcome everyone to the CTA's public scoping meeting for the Red Line Extension Project. Before we begin the presentation, I would like to acknowledge Lorie Lipson. She is representing Alderman Austin's office. If you could just raise your hand, Lorie. Thank you.

I'm going to turn things over to Sarah. Sarah is going to give us a talk about the meeting agenda tonight, and then we're going to go ahead and begin the presentation shortly.

MS. WALLACE: Thank you. Before we get started, I just want to check, is there anyone that will be in need of Spanish translation this

evening? We do have that service available.

Tonight, as you see our agenda, we are just completed with the open house portion of the agenda, and now we're going to move into the presentation that's going to be about a ten-minute presentation, and Jeff Busby from CTA is going to make that presentation to you, after which we'll move to our public comment period. And just before the public comment period, I'm going to go through some guidelines with you so that you have an understanding of how that process works and your time limitations and so forth that you have.

At the conclusion of the public comment period -- and I will just say that if it's not 8 o'clock yet and we've gotten all the comments initially, we are going to remain here to take public comment until 8 o'clock as we gave you notice, and then we'll just go over some next steps before we adjourn the meeting.

So with that, let's turn it over to Jeff for a presentation.

MR. BUSBY: Hi. Thanks, Sarah. Thanks all for coming out.

I'm Jeff Busby. I work in the Planning

Department at CTA. I see quite a few familiar faces from our previous work.

Just a little bit of background on the Red Line Extension Project. The idea to extend the Red Line has really been around since the 1970s; but we, at CTA, got very busy with the first and foremost stage of a federal process to begin to apply for money back in 2006 when we started an Alternatives Analysis study.

The purpose of that study was to look at a whole range of transportation options to improve the service in the study area to the far south side and the south suburbs. We looked at different transit technologies or modes, different corridors, different profiles where the transit would be in relationship to the street level.

We had three rounds of public outreach. Very strong attendance at all of those. We had some really nice media coverage.

Recently, in August, we concluded that study when the Board of the CTA adopted the Union Pacific Railroad Alternative as the Locally Preferred Alternative. That will be one of the alternatives we'll look at in the environmental

studies. I will talk a little bit about that in more detail. But this environmental study which we're starting right now really is a culmination -- it starts from the work we did in the Alternatives Analysis and advances that into significantly more detail.

Why are we doing this? Well, we would like to use federal funds, at least a portion of the federal funds, to help pay for an extension to the Red Line. To spend large amounts of federal money on really anything, you need to comply with the National Environmental Policy Act which requires that you identify potential impacts both positive and negative to the environment from the construction and operation of a rapid transit facility. So we're starting that process tonight.

The purpose of preparing this document is both to inform members of the public about the likely impacts, but to also help decision-makers who will pay for and be responsible for operating the line about the impacts and how we might mitigate those impacts that are adverse to the community.

Here's a schedule for you, just to give

you a sense of where the project is and where we would like to go. This is a target. It's not something that unfortunately I can guarantee for you. But we're going to start this evening receiving your comments on what you would like us to study in the environmental review. We're going to study that over the next year and share a draft of the Environmental Impact Study at the end of 2010 or perhaps early 2011.

At that stage, we need to ask the federal government for additional money and for permission to begin final design. That's the preparation of really the construction drawings. We hope for that period to last between 2011 and 2013. At that point, we need to have identified all the funds for the start of construction. If those funds were available and, again, if we got federal permission, we would like to start construction in 2013 to open in 2016.

I think this is a realistic schedule. It is ambitious. Certainly your support is helpful in making that realized. I mentioned that we'll be studying the Locally Preferred Alternative which came out of the Alternative Analysis Study; but

there are also three alternatives that will be studied as part of the Environmental Impact Study.

The first is a No-Build Alternative. That becomes a point of comparison, so what would be the environmental impacts of not doing anything.

The second is a Transportation System Management Alternative. It's a long word, but what it really means is a lower cost alternative to building the Red Line; and, in this case, it would be express buses and some improvements at 95th Street so that those express buses could have a place to drop people off.

The Locally Preferred Alternative, there are maps in the back and we'll be talking about that in more detail. That's an extension of the Red Line from 95th Street following the Union Pacific Railway with stations at 103rd, 111th, 115th and Michigan, and a final station at 130th. It's an elevated extension, so it's above the street level but adjacent to those Union Pacific freight tracks.

And, finally, another alternative in the

Alternatives Analysis that performed very well that we thought we would include in the environmental

study as a point of comparison was an elevated extension along Halsted Street. It would be elevated above the median of that street. Similar, four stations at 103rd, 111th, 119th, and 127th and Vermont.

This is a map of the Locally Preferred Alternative. As I mentioned, it leaves 95th Street, travels in the median of I-57, and then is an elevated line above the street level traveling next to the Union Pacific Railroad. It ends at 130th and the Bishop Ford, very close to Altgeld Gardens.

And, similarly, the Halsted alternative which leaves 95th Street, again using the median of I-57, travels south elevated above Halsted, ending at 127th.

So we're very interested in your comments tonight. Sarah is going to help us with rules on how that's all going to work and I will turn it over to her.

MS. WALLACE: Okay. Thank you very much. So it's time for the public comment process, and I want to go over some of the guidelines.

First of all, so that you know, we would like you to focus your comments on the work that we have ahead, which is the purpose and need for the project; the proposed alternatives; the proposed environmental issues to be examined; and the potential environmental effects and mitigation measures to be considered. So those should be the focus of your comments tonight.

The guidelines. If you would like to speak and if you haven't done so already, you will need to fill out one of these speaker cards. Christy will be happy to collect those and bring them to me. I will plan to call speakers up in the order that I have received them. And I will call a couple at a time so that you can go ahead and get lined up and know where you're coming.

When you come to the microphone, I'd ask you first to restate your name so we get that for the record. We have a court reporter here who's going to be documenting your comments. And we would ask you to direct your comments to CTA here at the front table.

You're going to have three minutes to comment. And the good news is you're not going to have to keep track of the three minutes. We got a

stoplight here so everyone can see that. When you begin your comments, the stoplight will be green. When you have got about 30 seconds left, the stoplight will turn yellow; and then it will begin flashing when you have 15 seconds. So you should be able to gauge your comments and know when you need to be wrapping up. Once that turns red, that means your comment time is up.

We would ask everybody to stick with that comment period. The only exception to that is anyone who needs translation, we're going to allow six minutes because of the time that it takes to go back and forth with the translator. So be aware of that.

Tonight, we're really here to hear what you have to say. This is your chance for input on the process. CTA is here to listen to you. And so they won't be responding to your comments in any way at this time, but your comments are going to be documented in a scoping report.

So that's the process. Hope that's clear to one and all, and we're ready to get started.

Okay. We have -- the first couple are Helen Rockingham, Derrick Brownlee, and Reverend

Isaac Hayes. You want to get situated at the microphone. And, Helen, please go ahead and restate your name first.

MS. ROCKINGHAM: My name is Helen Rockingham. I would like to say good afternoon to everyone. I would also like to give my appreciation to CTA -- express my appreciation to CTA for this effort.

It's been long past due, and there are a lot of residents who are going to appreciate having this kind of facility available to them.

Myself, I'm a rider on CTA's Red Line train and buses at some point in time to work everyday. And what I find at 95th Street is that the parking is nonexistent and we're always getting traffic tickets there. So these lines and the proposed parking spaces that would be available at the different terminals would be a plus for this project to us, to the community, and we appreciate that, if the project becomes finalized.

Another thing is I'm a property owner and that Pacific line comes right past my home. As a matter of fact, I'm the second house from that line, south of that line on Princeton. And the environmental impact, I know for the benefit of the

community, if we have to be relocated, that would not be an issue to some homeowners, but CTA's obligation to us, when will we find that out or if it would be found out in the 2013 year, and how would those -- how would those homeowners be contacted and at what point, would be my question.

Okay, I'm still on green. Great. Yes, it appears that the preferred route would be the Pacific line. I have been bouncing this, brainstorming with a lot of neighbors, and we see Halsted would be the least route for the advantages for the businesses and traffic going to the expressway. We just know we will see the benefits of it in our neighborhood, and that's the end of my comments. Thank you.

MS. WALLACE: Derrick Brownlee. Derrick Brownlee? Okay. Reverend Isaac Hayes.

REV. HAYES: Reverend Isaac Hayes, candidate for U.S. Congress in the Illinois 2nd Congressional District, and I just want to commend the CTA for taking this step. Certainly I know many residents and citizens on the south side have long wanted this, and people are happy they will have an easier commute to work or to school or wherever they may

go. And so I don't need the full three minutes. I just wanted to commend the CTA, and the residents on the south side are very happy for this step. Thank you.

MS. WALLACE: Robert Franklin and then Charlie Yale.

MR. FRANKLIN: All right. My name is Robbie Franklin. I would like to know if you're going to run the El starting at 99th and Eggelston, are you going to be on that platform on the tracks to the Pacific or are you going from the west side or the east side? And are you going to damage the little park that's in there between 99th and 103rd?

MS. WALLACE: Do you have other comments?

MR. FRANKLIN: No. That's it.

MS. WALLACE: Charlie Yale and then Eugene Taylor. Please restate your name.

MR. YALE: I'm Charlie Yale from Citizens Taking Action. I work with the unions and I got a high seniority.

It's a wonderful thing that CTA is doing right now with that extension. If the economy picks up and the recession gets better in the near future, where are you going to extend the Red Line?

How far out may I ask? How far out? The Red Line, how far out will it go out? How far in distance, north or south? May I ask, please?

MS. WALLACE: Right now we're in the public comment portion, so we're just listening to you, but that's the kind of discussion you can have as you are looking at the board.

MR. YALE: Fine. If this works out for the public and everybody else, it would be a wonderful thing. Let the economy pick up with the recession. Right now, it's pretty bad right now. If this could be done, it would be a wonderful, wonderful thing for everybody and everybody. I want to see what happens. Analyze this.

There's construction going on I heard. This I heard. But this could be done by everybody and be one good thing for the future. I want to see what happens.

MS. WALLACE: Eugene Taylor and Michael Bryant.

Eugene Taylor?

MR. TAYLOR: Yes.

MS. WALLACE: Please restate your name.

MR. TAYLOR: My name is Eugene Taylor, and I'm here to represent Developing Communities Project.

We are a faith-based community organizing agency that has served the Chicago community areas of Greater Roseland since 1986.

In 2003, DCP began organizing a transportation campaign advocating for the expansion of rapid transit on Chicago's far south side. DCP through its CTA Red Line Oversight Committee, or RLOC, comprised of community residents, churches, community leaders, and local grass root organizations initiated a referendum drive in 2004 that resulted in 38,000 votes supporting the extension of the CTA Red Line along the Union Pacific Railroad Corridor.

We have come to recognize the critical importance of mass transit to Chicago and its residents. From the increased exposure to air and noise pollution throughout the region to the increased travel time imposed upon both workers and students, addressing our mass transit service needs was and is paramount to our community's future and its quality of life. This community has paid a high price for this urban transit dilemma.

But today is a good day. This day is long awaited by many and fully expected by some,

expected because the public's desire for economic justice and equity in capital spending decision-making was reasonable. Yet, its anticipation for nearly 40 years has become an urban legend.

So, today, we thank the Federal Transportation Administration for requiring this public hearing, and we thank the CTA, the Chicago Transit Authority, for selecting the Union Pacific Rail route as the locally preferred route.

We here today want to register our initial public comments as part of the scoping process. On September 18th, 16 members of DCP's Red Line Oversight Committee toured the Union Pacific Railroad route to examine the physical and environmental conditions along the corridor.

MS. WALLACE: 30 seconds.

MR. TAYLOR: The RLOC participants documented parkways, homes, small businesses, and tracks and so forth.

Much like the Federal Transportation Agency, the DCP Red Line Oversight Committee will be listening to the CTA's environmental impact consultant's statement. Our committee will continue our review of the locally preferred route, the environmental and engineering requirements. We'll conduct and assemble additional public comments.

MS. WALLACE: Thank you.

MR. TAYLOR: And thank you.

MS. WALLACE: We look forward to written comments for those of you who have more than you can say during your three minutes. Michael Bryant.

MR. BRYANT: (Through an interpreter). Hi. My name is Michael Bryant, and I have been dreaming of this for like a long time. It's amazing how this idea is very similar to what I dreamed about. And, of course, I prefer the UPR route. You know, I prefer that very much because at 95th Street, there's really a lot of traffic there. Like I went there and I went to the other meeting and I tried to explain, but I just want to know what they're going to do for the future. I mean, we discussed like what the plans might be.

I think it's great if the 95th Street line could be set up, you know, on 130th Street, and if they could add that, that would be perfect. But I know the choice -- the decision hasn't been made.

It's a future decision, but I know it's going to be a speedy process -- I know it's not going to be a speedy process. And there's a lot of things that are going to have to change, but I think the environment will change rapidly with the changes that are going to be made by the CTA. Thank you.

MS. WALLACE: Okay. Ernest Williams and then Lou Turner. Ernest Williams?

MR. WILLIAMS: Coming. Good evening. My name is Ernest Williams, and I'm here on behalf of the Golden Gate Community Association.

The one question that I had was when the Orange Line was extended southwest to Midway, I'm sure that these same studies were done. I think it would be -- it would benefit us to talk to some of the leaders that helped implement that plan and live through the process to see what the line impacted and what the community concerns were at that time to give us something to compare to if you had those feasibility studies that you probably started back when that happened so that we can put it possibly together. Just a thought.

MS. WALLACE: Okay. Lou Turner and then David May. And please restate your name.

MR. TURNER: Hi. My name is Lou Turner. I'm with the Developing Communities Project. You have already heard from the president of our Red Line Oversight Committee.

I think a number of people here already know that the Developing Communities Project has been mobilizing the community and interest and opinions in the community around this project since 2003. And we put together a historic referendum in 2004 in which 39,000 voters in the 9th and the 34th Ward voted for this very project. And that's one of the things that the CTA has included as part of the reasons for their selection for the Locally Preferred Alternative.

I have a few things and I will submit it also in a written form, but in the instructions, particularly in the introduction to the folder that you have here, it says that -- the EIS scoping info says that the CTA and the FTA will be preparing the EIS. How will the FTA participate in the preparation of the EIS?

Secondly, what weight will public comment have in the decision-making process of the EIS and the preliminary engineering?

Thirdly, what governmental agencies will also participate? Because it says public comment and governmental agencies or agencies will participate in the scoping process. Will their comment and analysis be made public? If so, where? I assume the EPA and people like that. What weight will their input, that is, the governmental agencies, carry? And if there's a conflict between the input of the public agencies -- excuse me, the governmental agencies and the public comment, how will these conflicts be resolved?

You mentioned the proposal for topics of evaluation. One, it seems to me, especially for environmental impact that becomes important, is to identify brown fields along the route. I assume that there is some kind of map somewhere or there's some process at hand in terms of identifying -- 30 seconds -- identifying brown fields.

Secondly, if these brown fields are identified, I want to know what the process is for minority procurement opportunities for mitigating those brown fields.

And, lastly, what are the scoping -- what is the scoping analysis going to do in terms of

identifying transit-oriented development opportunities along the route?

MS. WALLACE: Thank you.

MR. TURNER: Thank you.

MS. WALLACE: David May and Harry Brooks.

MR. MAY: I'm David May. I'm here speaking as an individual. I think it's a very valuable project for underserved communities here on the south side, and I think these extension projects are great in terms of leveraging the existing facilities.

The cost estimates I have seen for the LPA seem very high compared to similar projects that have been built in other countries. CTA has a bad record in terms of managing large construction projects, and I recommend that you look at the Army Corps of Engineers' Early Contractor Involvement Process; P3 processes being used in Alberta and Ontario; FDoT's recent I-95 procurement; and how BART is doing the Oakland Airport Connector.

In looking at this extension, I thought the design criteria that should have been used would be to maximize the number of customers living within a half mile of a station. So you need more

stations and you need the routes running through residential neighborhoods; avoiding overlapping coverage with METRA; using existing rights-of-way; running on ground as much as possible; and serving Chicago State and Olive-Harvey.

I think a preferable way to design this thing which I think you should consider as one of your alternatives is a one-way loop, a 9 and a half mile long loop, one-way loop, instead of your 5 mile two-way design could give you seven stations, for example, at Ford and Rhodes, 103rd and Dauphin, 111th and Langley, 115th and State, 114th and Halsted, 107th and Racine, and I-57 and Halsted which would serve many more people within walking distance in your design.

It would give you 2 miles on ground in the Bishop Ford right-of-way. It would give you 2 miles on ground on the I-57 right-of-way; 1 mile on ground on the abandoned railroad right-of-way;

and 3 miles on ground in the excess railroad right-of-way, all which are great improvements compared to your mostly elevated, very expensive guideway design. Thank you.

MS. WALLACE: All right. Harry Brooks and

William James. Harry? William, you will be after.

MR. BROOKS: Good evening. One of the things that needs to be done immediately is something to relieve the bus turn-around at 95th and the Dan Ryan, because the number of buses that go in and out of there, they have outgrown that terminal.

When I was coming here this evening, I happened to get there in just one of those rare moments. I'm sure it was like a perfect storm. All the bus lines, CTA and PACE, plus a Greyhound all were in the station at the same time. And that was interesting to watch, but it caused quite a traffic jam.

So I would hope, of course, when this extension is put in that some of those lines that go up to 95th Street now would go to the new stations or that something be done somehow, even though it's kind of landlocked, to expand the terminal because you get all -- you get everybody in there at the same time and it just doesn't work.

The 111 bus that I took to get over here stops behind the Number 106 bus, for example. And the Chicago Police Department decided to park a paddy wagon next to where the Number 106 takes some

recovery time. So I wasn't late or anything, but we had to sit there until it was time for the 106 to leave, and there were a couple of other buses that were trying to get out.

Now that particular problem could be dealt with if CTA told the police that they would have to park large vehicles elsewhere. But something still needs to be done now and in the future for that 95th terminal because, as I said before, and I'm repeating, I know, if everybody is in there at the same time, it's not working. Fun to watch, but I'm sure it's not fun for the drivers.

MS. WALLACE: Okay. William James.

MR. JAMES: Okay. My name is William James. I've lived in Roseland all my life.

MS. WALLACE: Could you please speak into the microphone?

MR. JAMES: Yeah. I came here as a teenager. I'm very familiar with Roseland, all parts of it. I have lived all over the community.

I have also lived near train tracks. Where I'm at presently, I'm near that Union Pacific. My concern is noise, vibration, property damage. What happens is these trains roll past.

Right now, there's a group in our community trying to stop the whistle blowing of the train there. Okay. They're not very successful. They have been campaigning for years. It's not stopping. The train is still blowing the whistle. The noise goes on. I lived there 20 years. I'm now oblivious to it. Other people are not.

With a CTA train running down your mysteriously preferred location -- I don't know who prefers this -- I'm going to have constant noise. I'm telling you now, I don't want you. Go away. Go down Halsted.

I have another issue there. With these train tracks and these stations, I'm going to get dirt. I'm going to get crowds there that I don't want in my backyard. I live very close to 103rd. I don't want you in my backyard. I don't want you crawling through my yard going to the train station. It's an issue for me. Okay?

Another thing that disturbs me is that through these vibrations, they damage the foundations to your homes. Many people who live close to this train have cracked foundations. CTA is going to come, they're going to build their

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little train, you're going to go ahead about your business, I'm going to be stuck with damage, more home damage. Okay? I don't want it. These are just issues that concern me.

You're only going to build on one side of the track. Many people are thinking that they're going to get money through eminent domain. You're going to come in and pay them and they're going to move off happy. But there's two sides of that track. When you build that train, elevate it, it's going to be running through some of your bedrooms. That train is up over your head. Only one side is going to get paid. The other people are going to get stuck. And I think we need to keep this in mind. This is not about money. This is about where we live and about our comfort. Thank you.

MS. WALLACE: Are there other folks who would like to comment this evening? Okay. We're going to be available until 8 o'clock to take comment if additional people come in or you decide you want to comment.

For those of you who don't, let me go over a couple of things. If you want to leave, you can leave. If you want to spend some more time at the

board, you are welcome to do that.

So, again, tonight the verbal comments were reported by our court reporter. There's other ways that you can submit your comments. So you can write comments and place it in the box over here. You're welcome also to mail your comments to the contact and contact information listed here. You can e-mail or you can fax your comments.

We also encourage you to keep updated on what's going on with the project, and a couple ways to do that, one is to regularly go to the Web site that you see here on the screen or you can join the e-mail mailing list by writing to Darud.

So thank you so much for your input this evening. We appreciate it. And, again, we'll be available for comment until 8.

(Whereupon, there were no further speakers.)

(Public Hearing adjourned at 8 o'clock p.m.)

STATE OF ILLINOIS)
) SS:
COUNTY OF C O O K)

ANNA M. MORALES, being first duly sworn, On oath says that she is a court reporter doing business in the City of Chicago; and that she reported in shorthand the proceedings of said Public Hearing, and that the foregoing is a true and correct transcript of her shorthand notes so taken as aforesaid, and contains the proceedings given at said Public Hearing.

____

Certified Shorthand Reporter

CHICAGO TRANSIT AUTHORITY

PUBLIC HEARING

"RED LINE EXTENSION

CONNECTING 95TH STREET STATION TO 130TH STREET"

September 24, 2009

STENOGRAPHIC REPORT OF PROCEEDINGS had in the above-entitled matter held at the Woodson Regional Chicago Public Library, 9525 South Halsted Street, Chicago, Illinois, commencing at 6:48 o'clock p.m.

PRESENTERS:

MR. DARUD AKBAR, Government & Community Relations Officer, Chicago Transit Authority

MR. JEFFREY BUSBY, General Manager, Strategic Planning, Chicago Transit Authority

MS. SARAH LAYTON WALLACE, Moderator

Reported by: Anna M. Morales, CSR, RMR

License No.: 084-002854

(Whereupon, the following proceedings commenced at 6:48 o'clock p.m.)

MR. AKBAR: Good evening, everyone. My name is Darud Akbar. I'm with the Government & Community Relations Department at the Chicago Transit Authority. I want to welcome and thank everyone for coming to the Red Line -- this is actually our second public scoping meeting. So I want to thank you for coming out this evening.

I'm going to turn things over to Sarah. Sarah is going to talk to us about tonight's agenda, and then we're going to go into a brief presentation and come back to Sarah to explain what our rules and regulations are for this evening. So thank you once again.

MS. WALLACE: Great. Good evening. Before we get started, I want to check, is there anybody in need of Spanish translation? Okay. So we have that service if anyone is in need of that.

As you see from our agenda this evening, we've just completed the open house portion of the meeting. In just a moment, I'm going to turn it over to Jeff Busby, and Jeff is going to give a

brief presentation on the project, and then we're going to go into the formal public comment period of the meeting. And right before we do that, I will walk through some guidelines. We are going to be limiting comments to three minutes. So be thinking about that now as you are composing your thoughts, those of you that are speakers. I will go over some other things to get us on track. After the public comment period, then we'll go over some next steps and adjourn the meeting.

And I do want to note that if we conclude before 8 o'clock, you will be, you know, free to leave if you want at that time, but we are going to stay here and available for anyone who arrives and still wants to comment. So we'll remain here until 8 o'clock for sure.

So with that, Jeff will provide a presentation.

MR. BUSBY: Hi. Thanks for coming out again. I'm Jeff Busby. I work in the Planning Department at CTA.

I wanted to give you a background on where we are on the Red Line Extension. Really, the idea for bringing the Red Line further south has been

around for a very long time. In the 1960s, when they were building the freeways, they left space for a Red Line Extension; and, recently -- and this is not a new problem -- but recently the CTA has started a study called an Alternatives Analysis, and that study is intended to look at a whole range of transit options to try to improve some of the transportation problems south of 95th Street.

Many of you are aware, if you take CTA, that the 95th Street station is very crowded. There's lots of buses going there and there's lots of delays associated with getting there. So people have very long trips sometimes to get to the existing station.

So what we could accomplish with an extension of the Red Line is shorter and faster trips for people to get to CTA services as well as solving some of those congestion problems at the 95th Street station.

As I mentioned, we started this study in 2006. We looked at a whole range of options and identified a couple of options which we're going to talk about tonight which we're advancing into this next step. Part of the Alternatives Analysis

included public involvement. So we've been to Woodson Regional a couple times and actually had a series of other meetings -- three rounds of meetings with six total meetings prior to this leading up to tonight's recommendation.

The local -- I'm sorry. The Alternatives Analysis ended in August when the Chicago Transit Board adopted what's called a Locally Preferred Alternative. It's the one option that, resulting from the study, looks to be best at solving the problems we've identified, and that is an extension of the Red Line, following or running next to the Union Pacific Railroad at about 400 west. I will show you a map in a moment.

So tonight's meeting starts the

Environmental Impact Statement which very much relies on the previous work we completed in the Alternatives Analysis.

So what's an Environmental Impact Statement? The CTA is hoping to use -- to ask for federal money to pay for a portion of the extension; and any time you use federal money for a large project, you have to comply with the National Environmental Policy Act. And the National

Environmental Policy Act, or NEPA, requires that the CTA in a public setting identify and evaluate the potential impacts of both building an extension and operating an extension for the Red Line.

And the idea here is to help us make decisions about the environmental impacts and where -- and they're both positive and negative environmental impacts -- but where we identify negative environmental impacts, come up with potential ways to mitigate those, make them less adverse.

This is a schedule which gives you an idea of where we're headed. As I mentioned, we're starting the environmental process tonight with these scoping meetings. We had a meeting, very same presentation, a couple of days ago on the same subject. We're receiving input on what we should study in this environmental process.

We'll come back to you next year with the results of the environmental process in what's called a draft EIS, a draft Environmental Impact Study, and that's your opportunity to review both the impacts we've identified and what we proposed to mitigate them.

At the same time, we're going to be asking the federal government for additional funds and permission to start more detailed engineering. That's called preliminary engineering on this map. We think that process would take about two years. And so by 2013, we would need to have identified all of the money, both the federal and the nonfederal share, to fund the extension, and we would need federal permission to begin the final design.

2013 would be the year in which we would start construction. We show a three-year construction period; and the Red Line Extension opening for operation in 2016.

It's important to point out that this is our targeted schedule. It's not something we can guarantee. There's a couple of reasons for that. As I mentioned, we rely on additional funding from Washington, D.C., to continue these studies, and we also rely on permission from the Federal Transit Administration. But we think this is an achievable target and we're going to pursue it.

We're going to study alternatives, project alternatives in the Environmental Impact Study.

This is a list of them. The first alternative is a No-Build Alternative. It's really important as a point of comparison. What this alternative is is what would be the impact to the environment of not doing anything?

We're also going to study what's called a Transportation System Management Alternative. That's a very long name, but what it means is a lower cost alternative to building a rail extension. In this case, it would be an express bus service with limited stops; some technology to help speed the buses down the road through giving them priority to traffic signals; and a pretty significant expansion of the station at 95th Street to make the buses in that corridor work better as well as accommodate new buses in this alternative.

We also will be studying what's called the Locally Preferred Alternative, an extension of the Red Line following the Union Pacific rail right-of-way, an elevated extension, I should point out.

And we have identified a fourth alternative which is also an extension of the Red Line but follows Halsted Street.

Let me show you a map of the Locally Preferred Alternative. So starting with the map on the left, the Red Line would run south from 95th Street in the middle of the I-57 highway, and then it would climb up out of the highway and run elevated at about 400 West Eggelston Avenue and would travel next to the Union Pacific rail right-of-way all the way south to 130th. It would make four stops. The stops are at 103rd, 111th, 115th and Michigan, and 130th and the Bishop Ford Expressway close to Altgeld Gardens.

We're also showing two options here, the reason there's two dotted lines. We have a choice of being on the east or the west side of the freight rail tracks.

The Halsted alternative is a similar link. It runs about a half mile to the west. So, again, the train would use the median of the expressway, I-57, traveling south. When it gets to Halsted Street, it would go into the air and run down the middle of Halsted Street, above the street. It would make four stops again at 103rd, 111th, and 119th, and at Vermont which is about 127th.

This is an elevated structure. The

columns to support the elevated structure would be made of concrete most likely and be placed in the median of Halsted Street.

So those are our four alternatives. We are interested in your comments tonight. I'm going to turn things over to Sarah to give you some instructions on how we're going to receive those.

MS. WALLACE: Okay. It's time for the comment portion of our meeting; and, as promised, I want to go over a few things with you.

Because we're working on this environmental study, there are sections that we need to write and we need your input in order to do that. So we would ask you to focus your comments tonight on these areas: The purpose and need for the project; the proposed alternatives; the proposed environmental issues to be examined; and the potential environmental effects and the mitigation measures to be considered. So those are the areas we specifically need your input.

Some guidelines. If you haven't done so already, please submit a speaker card, and we can collect those and they will be brought up front. I'm going to call speakers by name. I will

probably call several at a time so that you can get lined up and prepared to speak. Here's the mic you will use, the standing mic on that side.

The first thing you will want to do is restate your name. I may not get the pronunciation right, and we want to make sure that we have that right for the record. We've got a court reporter here that is going to be documenting your comments.

You'll have three minutes to comment. The good news is you're not going to have to try to keep track of where you are in that three minutes. We have this stoplight here that is going to assist you in that process. So once you start, we'll turn that on and the green light will turn on, and that lets you know that your three minutes are starting. Once you have 30 seconds left, the light will go yellow. And once you have 15 seconds left, the light will be flashing yellow. So that kind of helps you gauge wrapping up your comment. And once it turns red, that means your comment period is up.

So we would like everyone to keep to the three minutes so that we can keep things moving and we're hearing from everyone who wants to speak tonight.

Because we're here tonight to hear from you -- that's the whole purpose of the meeting is to hear your comments -- CTA is not going to be responding to your comments tonight. We're going to be listening. We're going to be documenting and all your comments will be documented in the report.

So we would ask you to -- there are two folks from the CTA here. We would ask you to direct your comments to them, but do, again, keep an eye on the light.

So our first speakers up: Thomas Brown,

Senior, followed by Rob Kelsey, and I believe this is McClellan. So are those folks here?

Yes. And I do want to remind everybody, if you haven't done so already, turn off cell phones or pagers or at least change the setting to vibrate so that we don't cut into people's time that are speaking.

Could Thomas Brown, Senior, please approach the microphone? Go ahead.

MR. BROWN: Again, my name is Thomas Brown, Senior. I live directly in the area where the proposed train will be built and constructed. My comments center around myself as well as my

neighbors. I'm right on 325 West 99th Place, directly in front of Wendell Smith Park, and most of my neighbors are senior citizens.

So in the environmental study, I would like for you all to take into consideration the fact that a lot of the homeowners are senior citizens and the fact that we would want -- we don't want to be -- they don't want to be disrupted unduly, and just to take those factors into consideration in the environmental study, as well as Wendell Smith Park is a park that is utilized, and also to look at, in addition to what you're already studying, the noise impact and the safety impact of that park.

Another comment I would like to make is

the fact that the proposed plan going down Eggelston Avenue, it's very residential, and there's definitely some concern about having a commuter line directly through the residential corridor that's there. Those are my comments. Thank you.

MS. WALLACE: Thank you. Rob Kelsey, and then McClellan, and then Dorothy Boyd.

MR. KELSEY: Good evening, everyone. My name

is Robert Kelsey. I'm a Chicago Public School counselor. I work in the West Pullman area, Gompers Fine Arts Option School.

As a counselor, I fill out numerous applications, help students fill out applications for high school. And being an educator, I also recognize that a number of students don't get downtown unless it's a field trip a lot of times. So this new Red Line or -- I'm not sure exactly what this -- Red Line Extension will be helpful in a lot of aspects.

I heard the speaker before me. He had a lot of excellent concerns there, but I think there's also some advantages for some of our younger people. So that's my comment. Thank you.

MS. WALLACE: Okay. McClellan? Could you state your name and speak directly into the mic?

MS. McCLELLAN: Gina McClellan. I have three concerns. The lighting around the tracks that are going to be made, and I was hoping that we could be able to see some kind of visual, what this was going to look like, but for security reasons, will it become dark like the El stations down by Lake Street? That was a question.

The construction time, how long is this going to take, 2016? And then once you start, what does it do to me? Is it going to be three, four years where I'm going to be inconvenienced where I can't even get into my home since I'm right off of Halsted Street.

I'm concerned about the noise level that I will have to live with the trains going constantly. I'm concerned that the parking lot that you're going to put there, when it's filled, that I can't park on my block because I'm one block off of Halsted. So are those things being taken into consideration, too?

MS. WALLACE: Okay. Dorothy Boyd, Lou Turner, and Ben Christy.

MS. BOYD: My name is Dorothy Boyd. My concern is the families on Eggelston Street; I need to know if they're going to be relocated. We don't want to be relocated.

I want to know how the property value, how will that affect us? And I want to know about the incoming traffic that this is going to cause.

There are a lot of seniors in our area,

and we do not want to move. We already have that

train that goes down Eggelston. It keeps up a lot of noise. We need another batch of noise like we need two heads. I'm not seeing this.

MS. WALLACE: Lou Turner, Ben Christy, and John Paul Jones.

MR. TURNER: Hello. My name is Lou Turner. I'm the Public Policy Director for Developing Communities Project which is a project for the last six years.

My concern is really just singular tonight -- I spoke on Tuesday -- and that's the impact, the positive impact, the collateral benefits that this project could have for the residents in Altgeld Gardens, 130th Street, which is where the Red Line Extension would end.

Back in 2005, we did a study which showed that of all the households in this area, one out of four of these households don't have or don't own an automobile. That's the same as the 9th Ward in New Orleans; and were the same kind of catastrophe to hit, we would have the same kind of crisis of this community that we saw in New Orleans at the time of Katrina.

I think that given the history of

transportation planning, in big cities like Chicago, where very often minority communities have been more the victim than the beneficiary of transportation planning, this is an opportunity and, particularly out of Altgeld Gardens, to really provide access to one of the most isolated communities in the city. This is an opportunity to use transportation planning to provide benefit rather than victimization of a minority community.

So I would ask that the Environmental Impact Statement look at the environmental impacts that would be for the residents at Altgeld Gardens; and the fact that Altgeld Gardens is an area that has high toxicity; a lot of waste sites surround the area. It is one of the highest levels of cancers in the city amongst any group of people.

And so with the construction of this Red Line Extension, it seems to me that one of the key environmental impact factors or areas of analysis should be the impact that the construction of the Red Line Extension would have on mitigating the toxic degradation out at Altgeld Gardens and the opportunities that would provide for a very isolated community.

So, again, I urge that CTA really focus singularly on Altgeld Gardens and really push the LPA, the Locally Preferred Alternative, which is the one that would go to 130th Street. None of the impacts that are mentioned here, a number that others can think of were mentioned, would really be mitigated by the other alternatives. Only the alternatives, the LPA going down to 130th Street near Altgeld Gardens would really impact favorably these communities in these areas. Thank you.

MS. WALLACE: Ben Christy, then John Paul Jones, then Donald Miller.

MR. CHRISTY: Yes. I'm Ben Christy. I don't live in the area. Instead, I use the Red Line to get to the area. In fact, I didn't go to the other impact study because I couldn't -- you know, I'm sure there's a bus that gets by there; but 95th, 95th station, what bus to use and everything, I just didn't do it. So that's why I'm here today instead of Tuesday.

I actually do live right next to the Red Line by Berwyn. Come on by and say hi. The noise of the train, hey, it's a train. When I grew up, I lived a block away from the train. Now I

live just across the alley from a train. Yes, it's a noise. You get used to it. So don't worry too much about that.

The thing I'm worried about is the TV reception every time a train goes by. With this new better TV? No way. Anyway, that has no effect with this group.

What I see on the alternatives here is

that there are people in the Halsted area that don't want their train down Halsted; but, if I wanted to get to Halsted there, I would use the train to get to your businesses.

The plan -- the LPA, which is not the Halsted, does have the positive that it could help bring people in from out of state if we have enough parking, park-and-ride spaces. So I would expect you to decide how many park-and-rides you want and then triple it.

Other than that, we need more trains. For years, we've needed more trains. Some people will be discomforted by the building of them, but don't let that keep us from plowing ahead. They have said for years that they expected to extend this, but they haven't.

MS. WALLACE: 30 seconds.

MR. CHRISTY: So please give us -- give us our ride, extend it as much as possible. Thank you.

MS. WALLACE: John Paul Jones, and Donald Miller, and Thomas Jundanian.

MR. JONES: I'm John Paul Jones. I'm an organizer for the far south region, also a resident in the Englewood District. For 50 years, I've been involved in organizing and urban planning, and I have seen a significant value in the Union Pacific Railroad corridor. And if you look at the far south region, they have always had a challenge of public and private -- the investment. That Union Pacific corridor provides a venue where you can begin to introduce to the community, a very urban community, a whole new set of ideas and investment around transit and developing that and turn that corridor, provide venues so that the end of the station can add value to the property, at the same time, give greater access to the greater part of Chicago.

Also, from Englewood, we've always had challenges with getting transportation to jobs; and with the Union Pacific Railroad corridor, again,

you can begin to hire a lot more people, connect with the south suburban communities that are going to have job growth, much more than you get in Chicago during the economic downturn.

But, also, the environmental impact piece that we're concerned about and want to speak to tonight, that corridor, much like rail corridors throughout my community of Englewood, areas where there's always a decline of public investment and through the years you had accumulation of blight, if you look at that corridor, you look at a corridor that is over ran with many forestries now. There's open space that's been denied any real attention for many, many decades.

So it's an opportunity for you, the city and the community, to kind of think through how do we use these corridors more wisely and strategically to improve our community, encourage reinvestment, and increase the travel time for us to get to work or recreation and other venues.

So it's a real plus for the region more than a negative. I would want to encourage that more -- supporting what the person said from 95th Street corridor. Certainly, we want to be

careful and considerate of the residential impacts. We want to be very careful of the impact to the brown field districts, but also opportune as possible relative to the eroding issues. We certainly want to be helping the community anticipate and remediate any particular eroding problems that may occur in some of these wooded areas that have been neglected for 30 or 40 years.

So we want to use that opportunity to work more closely with any governmental plan to figure out ways to impact the environmental impact on the roads maybe through this reconstruction strategy. Thank you.

MS. WALLACE: Donald Miller, Thomas Jundanian, and Lori Baldwin.

MR. MILLER: Thank you. My name is Donald Miller. I heard a lot of complaints -- concerns, rather, about the environment and the noise and how the train would sound coming through the communities. But this is dealing with rail. I think we should take a model from some of the rails that run on the north side. You know, you are going to have these type of problems.

What we are trying to do is get a system

that would fit our community, that would be accessible for us to get in and out of our community efficiently and safely. And I would think the transit people should look at the highest concentration of the population, where could -- the highest volume of population and let the train be used in that corridor, in that area where the population would be affected the most.

And I think it's an excellent idea because the south side of Chicago needs a little bit more of a public system in our community, and I'm for it, and I hope that it happens very soon. Thank you.

MS. WALLACE: Thomas Jundanian, Lori Baldwin, and then Bradena Thomas.

MR. JUNDANIAN: Good evening. My name is Thomas Keith Jundanian. I'm the third generation owner/operator of an 85-year-old Roseland-based business. I'm a Roseland boy, born and raised.

I have a different perspective on this than maybe some, having grown up in this community and having our family business based here all the time, all those years. I'm not 85, but -- don't rush me.

On the heels of Donald's comments, I too kind of feel like the south side of the city has been a very neglected location in our beautiful metropolis, and it would be -- I think either one of these plans are going to be a positive thing for us. I'm not qualified to say which one is going to be better than the other.

Initially, I was surprised to find out that the LPA was the preferred alternative with more public support because it seems that it's going to disrupt some lives, some memories, some households if it occurs on the east side of the tracks. If it's on the west side of the tracks, I know from my own childhood and playing in some of those empty lots, there's more industry over there.

My business is located on Halsted Street at 116th Street. It's the K. A. Pridjian rug store, that big old rug store there on Halsted Street. So one of the concerns that I would have as a business owner having seen long construction projects mean the demise of some businesses that have been interrupted with their traffic flow.

What have previous construction projects like this and studies that have gone on indicated with those businesses? How are they impacted? I have got nothing to base this on. When this trestle goes up on Halsted Street, what is it going to look like? It's probably going to be concrete. Jack and I were talking outside. Would it be something that's attractive? Will the elevated tracks all the way down Halsted Street create a lot of dark shadows, a lot of shadowing areas where people can congregate and do things that are not in the best interest of the community? Will the trestle be placed where garbage and other debris and litter accumulate? Will it be a blight to Halsted Street?

As far as bringing people down Halsted Street, yeah, it will. The stations are going to be -- you know, 111th and 119th are a mile apart. So that's still quite a ways to try to get to one of the businesses. I was chatting with a lady who also has a building at 108th and Halsted. That kind of encapsulates some of my concerns. I think either one of these things are a positive thing for the south side, whichever is best for our city and our community. Thank you.

MS. WALLACE: Lori Baldwin, and then

Bradena Thomas, and JoAnne Guillemette.

MS. BALDWIN: I am Lori Baldwin, and I'm representing the West Chatham community and the Park Advisory Council of that area, but I'm also part of the Red Line Oversight Committee.

I would just like to interject that I'm thanking the FTA for requiring this public hearing as well as CTA for selecting the Union Pacific Railroad as the locally preferred route, particularly, because this route will give the greatest need and take care of a lot of the needs of disparity that we have had in that community for a very, very long time on the south side of Chicago, to give us more transportation options; as well as we have had the opportunity on September 18th, some of the members of DCP Red Line Oversight Committee toured the entire Union Pacific Railroad, and we examined the physical and environmental conditions and the impact along the corridor, and we found that there are documented parkways, homes, small businesses, and tracks of forestry along that route.

However, most of that route, as has been stated before, is open space, and so this would be

a great asset to the community. Also, because of the need for us to have transportation in this area, and it's been such a long, long time, this is the area that I think the city should be focusing on much more than some of the other options.

We also looked at the environmental impact, and this provided greater access to a number of residents. And also this route had less environmental impacts in terms of conditions and areas and the taking of homes.

So I, again, just want to encourage you and let you know that the community will benefit from this new development. Thank you.

MS. WALLACE: Bradena Thomas and then JoAnne Guillemette.

MS. THOMAS: My name is Bradena Thomas. I am concerned as a senior living in the area. In fact, I'm right at 97th and LaSalle which is where 94 and 57 split.

My concern is whether or not there would be an elevated track right behind me or whether it's going to be recessed?

Also I have a business, a building on Halsted at 108th. Now is this going to be an

elevated structure which would darken, you know, the area? So that is my concern for both. But I definitely wouldn't want an elevated area looking out of my backyard. That's my concern.

They do need transportation to the south because 95th is extremely congested, and I realize that; but, hopefully, I wouldn't want to have to move. Thank you.

MS. WALLACE: JoAnne Guillemette.

MS. GUILLEMETTE: Good evening. My concerns have been previously stated by several others, but to say it as succinctly as possible, my concern would be for the increased foot and vehicle traffic; the increased debris; as well as the increased crimes that would follow a structure like this.

I have lived near the Red Line and I know that it also -- because of the activity and vibration of the ground, it increases the presence of termites and other rodents. And when you're dealing with termites, you're talking about the destruction of homes; and, to prevent it, homeowners would incur tremendous expense on a yearly basis to ward off the termites. So that's

an extreme concern for me. And I would hold that for other homeowners as well.

Further, who would bear the maintenance expense of this extension? Because the homeowners nearest the tracks, are their property taxes going to increase? Is their property value going to go down? And what mechanisms are being put in place to address these issues? Because it's my feeling that you're going to go ahead with this in spite of what we say. And especially if we should be successful with our bid for the Olympics, this is going to be a major development. It's going to be pressed forward, and the residents need to know the true impact on them in terms of dollars and cents. Thank you.

MS. WALLACE: Could you please restate your name for the record?

MS. GUILLEMETTE: JoAnne Guillemette.

MS. WALLACE: Thank you. Are there any other speaker cards? Gwendolyn Rice and then Barry Finkel.

MS. RICE: My name is Gwendolyn Rice, and I work for Developing Communities Project which has been working with this issue for six years.

MS. WALLACE: Could you get little closer to the mic, please? Thank you.

MS. RICE: But I think I'm coming from a more personal point of view, because all the other issues have been talked about.

For the last I won't say how many years of my working life, I have worked in one way or another with residents of Altgeld Gardens as a counselor or as a recreation worker or just simply knowing children who live there or adults who live there. And I remember and I just -- my mind was refreshed on the way in when one of the workers outside mentioned that she had lived in Altgeld Gardens and she remembered having to take the PACE bus into Chicago and then taking a CTA bus and then finally getting to the Red Line.

But I remember also having to take kids home at night because the transportation was not available for the kids to take advantage of the amenities in Chicago. I remember many times having to do that, even in the afternoon having to do that, which I didn't mind doing because I could do it. But their parents may not have always been able to do that, provide the access.

This project is going to provide access to what is a transit disadvantaged community. We are kind of in competition with other lines throughout Chicago that are going beyond the city limits. On the south side, there's nothing that goes to the city limits. And I really say that we must take that Locally Preferred Alternative through to 130th Street. I don't think there's an alternative. That's the only option.

I don't know what else to say, but I just am passionate about the fact that you're going to Altgeld Gardens, an isolated community that is not outside of Chicago. It is in the Riverdale community area of Chicago -- not in Riverdale, Illinois -- and it's important that the CTA go at least to the city limits to serve its constituents. It will also serve people who live in the suburbs who commute to Chicago who will have a chance to park and ride and ride downtown and eliminate a lot of pollution.

Again, I just want to speak on behalf of the residents of Altgeld. I don't live there, but I have been there many times. I have worked there, and it can make a big difference in providing an opportunity for people to have access, to be able to be exposed to the larger community. As the teacher said earlier, people generally who live in transit deserts do not get out and understand what's going, and it would cut down on violence and cut down on a lot of other factors. Thank you.

MS. WALLACE: Thank you. Barry Finkel. If there is anybody else who wishes to speak, send your speaker card in.

MR. FINKEL: My name is Barry Finkel. I have been a resident of the Beverly area, 103rd and Western, since 1951, and I take the Red Line downtown at least once a week. I see at 95th Street station lots of PACE buses coming in from the south suburbs, and I think an extension of the Red Line would help in getting those buses -- to get the train and not have to come all the way to 95th Street to service those people.

We're talking here about public transportation, and I see in all the alternatives, there's talk of park-and-ride. It seems to me, and I have sort of a disagreement with some of the speakers, but it seems to me that if we have good feeder bus lines into the stations, there's no need

to have a large park-and-ride facility at each station. Maybe at the farthest station. But I don't see really a need, for example, a big park-and-ride station at 103rd and Halsted. There's no room there for a park-and-ride, and I don't see any need for it. Thank you.

MS. WALLACE: Alice Harper-Jones.

REV. HARPER-JONES: Good afternoon. I am Reverend Alice Harper Jones. I'm the Dean of Cluster 6 of Chicago Metropolitan Association of the United Church of Christ and represent about 13 churches on the south side. And I'm also a member of the Chicago State University Alumni Board, and so I'm speaking, commenting on two things.

The first one is our churches. There are people who live on the far south side who will have better access to the church, being able to get there and to get back home again, especially those who do not have cars or sometimes you wake up and the car is not working. So I think that would be positive for those people.

Also, from Chicago State University. I'm thinking in terms of our academic program that we

have there, it would be better accessible to many, many people; and those young people that we're trying to attract to the university would certainly be able to have access to and from the university. Especially if a person is working, they can come in the evening to attend the university and be able to go back home again without having to, you know, wait for buses and everything on 95th Street because Chicago State is very accessible to 95th Street right there.

My concern is that -- one of the proposals I looked at, the Halsted Street would still -- there's still a gap it seems like from Halsted Street all the way to the Altgeld Garden projects there. So in constructing, you know, that Halsted Street project -- and I'm kind of leaning toward Halsted because you're not destroying homes. But if you can, you know, think in terms of your construction of getting that closer to the people in the project, then they don't have to take a bus from Halsted to where their home is so that they would be able to have access to the university and to the churches.

Again, as I say, I prefer the Halsted one

because then we're not destroying homes. People have lived in this community -- I live in the community. I know the value of my home, and I don't believe that if you give me fair value that it will be -- you know, it would really come to where I think that my home should be priced at because of the improvements I have made.

So that should be a consideration especially when we think about seniors who have been there for years and who take pride in their home and their neighborhoods and their friends around there, that to destroy that community, you know, with the train is not a preferred option. Thank you.

MS. WALLACE: William Warren. Please restate your name.

MR. WARREN: Good evening. It's William Warren, W-a-r-r-e-n. I'm here representing the Vernon Park Community Council. I'm president of the Vernon Park Community Council. We live in the area as well. I'm also a member of the Oversight Committee who had the opportunity to do a tour of the actual site last week -- actually, this week.

And, you know, we feel that by all means that the Red Line should be extended to the south side. We're in support of it. We think it would be a positive move in every respect. A lot of comments that were made earlier in reference to the rodent issues, the way the tracks are going to look, the lighting issues, the garbage and that sort of thing, of course, we're very concerned about those issues, but we feel very in support of bringing this extension to the south side. Thank you very much.

MS. WALLACE: Are there other speakers? Okay.

Again, we're going to be here until

8 o'clock if others arrive and still want to speak. I did want to mention that scoping comments are due by October 27th. So in addition to speaking tonight, you have an opportunity to write comments and place it in the box outside. You have an opportunity to mail in comments, fax or e-mail your comments. And we'll make sure this is back up for your reference.

We also encourage you to stay involved. You can visit this Web site. You can also get on an e-mail list so that you can receive updates

through e-mail and through Darud, if you'll e-mail him.

Any other comments at this time? Have you filled out a card, sir? Right now, we're taking public comment. If you want to fill out a speaker card and come to the mic --

MR. TURNER: I did.

MS. WALLACE: Well, three minutes is the rule. Are there others that want to speak?

We'll stick around. You are welcome to spend some more time out at the boards if you like or you are welcome to head on out, but we'll be here until 8 o'clock.

(Off the record at 7:34 p.m.)

(On the record at 7:46 p.m.)

MS. WALLACE: Johnnie Burke. Please restate your name and speak directly into the mic.

MS. BURKE: Johnnie Burke, and I'm a member of the 96th and Prairie Block Club. I had two questions. One, how many residences would be disturbed with the park-and-ride construction? And also, in the entire project, how many residences would be destroyed? How many people would be removed from the community? Thank you.

(Whereupon, there were no further speakers.)

(Public Hearing adjourned at 8 o'clock p.m.)

STATE OF ILLINOIS)
) SS:
COUNTY OF C O O K)

ANNA M. MORALES, being first duly sworn, On oath says that she is a court reporter doing business in the City of Chicago; and that she reported in shorthand the proceedings of said Public Hearing, and that the foregoing is a true and correct transcript of her shorthand notes so taken as aforesaid, and contains the proceedings given at said Public Hearing.

____

Certified Shorthand Reporter

Appendix L
Public Scoping Written Comments

RS #1

From: Red Extension [redextension@transitchicago.com]
Sent: Friday, September 18, 2009 4:31 PM
To: Peters, Melissa
Cc: Kornblatt, Helene B.
Subject: FW: CTA Redline

From: Aristotle Socrates Haywood [aristotlesocrates@hotmail.com]
Sent: Wednesday, September 16, 2009 7:12 PM
To: Red Extension
Subject: CTA Redline

As a 30 year southside resident I welcome the proposed extension of the Dan Ryan branch of the Redline. The Union Pacific corridor is the best route. The extension would enhance the neighborhoods it runs through, ease traffic congestion and give better transit options to user of CTA buses, Pace, Metra, and South Shore trains.

"See the world as it really is--not as you wish it should be"

Hotmail: Free, trusted and rich email service. Get it now.

RS#2

Cheever, Kim

From:	Red Extension [redextension@transitchicago.com]
Sent:	Monday, September 28, 2009 9:41 AM
To:	Peters, Melissa
Cc:	Kornblatt, Helene B.
Subject:	FW: Red Line Extension One-Way Loop Alternate
Attachments:	Red Line Ext One Way Loop Proposal Table of Contents.doc; CTA Red Line Extension design criteria.doc; Red Line Loop Description.doc; red line loop map.JPG; CTA Red Line Extension map description.doc; red line statistics 7 stations.xls; Red Line loop Station Locations and features.doc; red line comparisons.xls; red line design criteria compare LPA and loop.xls

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From: May, David [dmay@walshgroup.com]
Sent: Sunday, September 27, 2009 7:38 PM
To: Red Extension
Subject: FW: Red Line Extension One-Way Loop Alternate

Mr. Jeffrey Busby,

Attached is the One-Way Loop alternate proposal that I recommended to the CTA at the public hearing on Tuesday night. Let me know if you have any questions.

David May

Disclaimer: I am not a professional transit system designer. I represent no organization, nor my employer. I prepared the proposal for the common good and to pursue my personal interest in the problem.

CTA RED LINE EXTENSION

south from 95th Street

One-Way Loop Alternate Proposal

David May - Sept 27, 2009

TABLE OF CONTENTS

1. Design Criteria
2. Description of Proposed One-Way Loop Alternate
3. Map of One-Way Loop and of CTA's LPA
4. Map Description
5. Statistics of One-Way Loop
6. Stations Locations and Features
7. Red Line Extension Proposals Comparison
8. Red Line Design Criteria Comparison

CTA Red Line

David May: 9-27-09

Extension South of 95th St.

DESIGN CRITERIA

1. Maximize number of stations within walking distance of customers homes to provide many one-seat trips. *Therefore*:
   a. Locate stations at ~1.0 mi on center
   b. Locate stations within or adjacent to residential neighborhoods

2. Provide convenient rail transit access to those without, by avoiding overlapping coverage with existing Metra stations. So focus the routing east of I-57, north of 119th St. and west of King Drive.

3. Minimize property acquisition costs, construction costs, grade separation structures and noise in quiet neighborhoods by maximizing the use existing vacant and excess transportation rights-of-way.

4. To control construction costs, run the line at grade (on ground) as much as possible.

5. Serve Chicago State University and Olive Harvey College.

Red Line Extension

David May 9-27-09

Proposed One-Way Loop Alternate

After considering several options, the CTA narrowed its study of Red Line Extension designs to 3 possibilities: two heavy rail and one BRT. All three were 2-way, north-south lines running south to 127th or 130th Streets. Both of the heavy rail line extensions had only 4 stations. The CTA selected the UPRR heavy rail extension alternative (designated the Locally Preferred Alternative = LPA).

I believe CTA made a mistake in considering only two-way linear extension options and in selecting the UPRR line. The study should have also considered one or more one-way loop extensions of the existing heavy rail system. A one-way loop at the end of an existing two-way mainline offers many advantages over a two-way linear extension. Compared to a two-way line of the same length with the same number of added stations, some one-way loop extension trips take longer; but others are quicker. The one-way loop requires half as much track as the same length two-way line, allows single side stations with no crossover structures, can use narrower (and, in this case, often existing) rights of way, requires narrower and less expensive elevated guideway structures, requires fewer train cars, fewer train operators and consumes less electric power.

Attached is proposal for a 10.0 mile long single track one-way loop Red Line Extension with 7 stations spaced about 1 mile apart. To better serve Washington Heights, Roseland and Pullman neighborhoods that lack rail transit service, the entire loop is located more than ½ mile north of the Metra Electric Line's 4 stations on 121st St. Compared to the CTA's preferred 4 station, two-way, 5.3 mile long extension(LPA), this proposed one-way loop extension is conveniently accessible by walking to 50% more local residents. The one-way loop extension has lower construction costs of elevated structures and bridges, more use of existing public rights-of-way, less track rail to purchase, much less expensive costs per station, and similar traction power distribution costs.

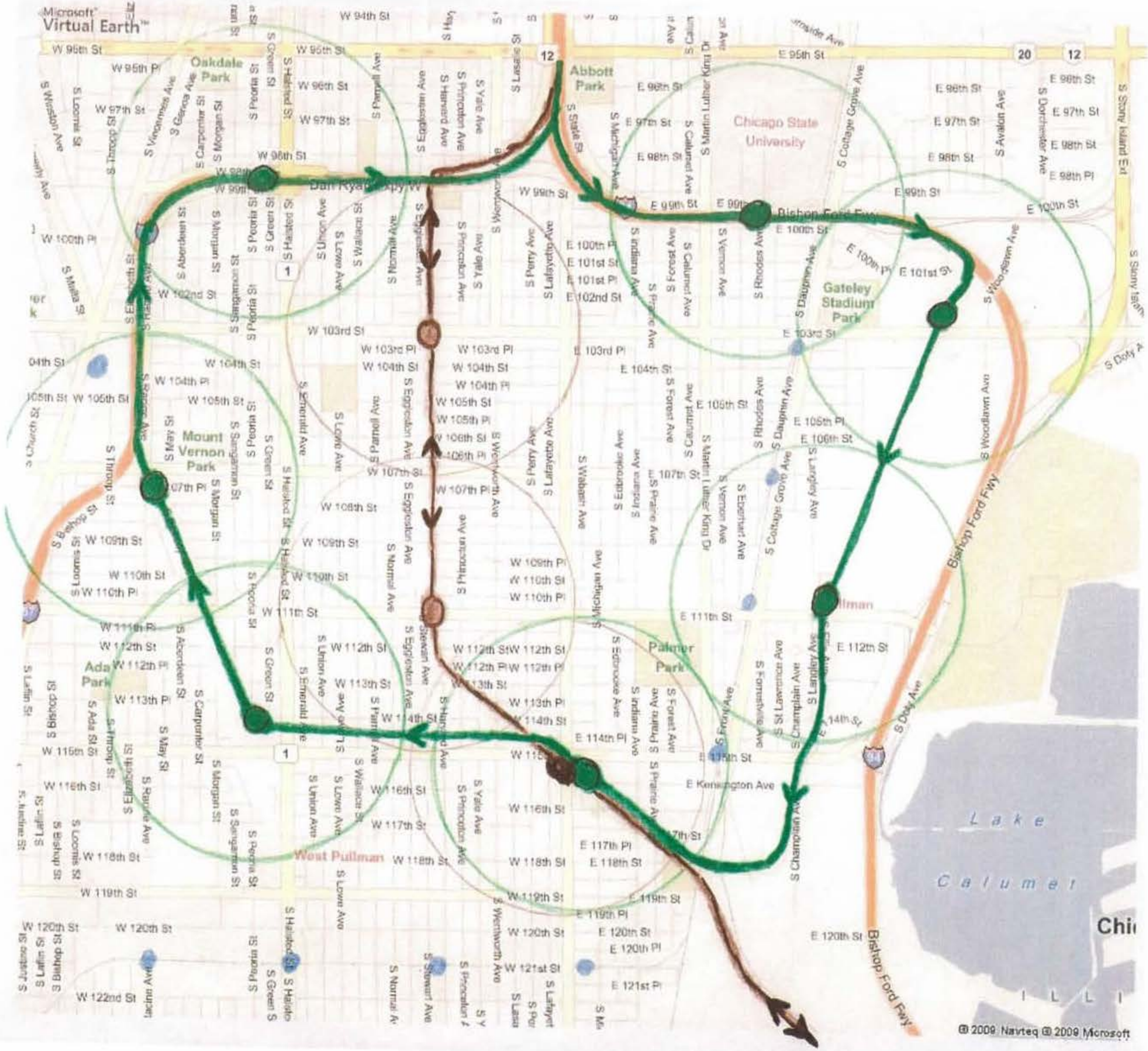
The proposed 10.0 mile one-way loop route will have low right-of-way acquisition costs because:

> 1.9 miles are located in the median of the Bishop Ford Expressway
> 2.5 miles are located in the median of I-57
> 1.1 miles are located on an abandoned railroad right-of-way
> 2.9 miles are located on unused railroad right-of-way next to existing freight train tracks.

Combined, these comprise 83% of the required rights-of-way.

Over three quarters of the proposed 10.0 mile one-way loop route is at grade to substantially reduce guideway and stations construction costs. Six of the seven stations are at grade. Only three of the seven stations require stairs and elevators. All seven stations are single side platform – reducing the area required, the cost of construction and the need for cross-over structures.

Locations of the Seven Stations
Bishop Ford Xway and Rhodes (Chicago State)
103rd and Woodlawn (Olive Harvey)
111th and Ellis
Kensington/115th and State
114th and Peoria/Halsted
107th and Racine
I-57 and Halsted


Microsoft Virtual Earth
W 95th St
E 95th St
W 94th St
Oakdale Park
Abbott Park
Chicago State University
Gateley Stadium Park
Mount Vernon Park
Ada Park
Palmer Park
West Pullman
Pullman
Dan Ryan Expy W
Bishop Ford Fwy
W 99th St
E 99th St
E 100th St
W 100th Pl
W 102nd St
W 103rd St
E 103rd St
W 104th St
W 105th St
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W 114th St
E 114th Pl
W 115th St
E 115th St
E Kensington Ave
W 116th St
W 117th St
E 117th Pl
W 118th St
E 118th St
W 119th St
E 119th St
W 120th St
E 120th St
W 121st St
E 121st Pl
W 122nd St
S Halsted St
S Michigan Ave
S State St
S Wentworth Ave
S Princeton Ave
S Eggleston Ave
S Cottage Grove Ave
S Champlain Ave
S Langley Ave
S Woodlawn Ave
S Stony Island Ave
S Doty Ave
S Martin Luther King Dr
S Vernon Ave
S Indiana Ave
S Prairie Ave
S Calumet Ave
S Throop St
S Loomis St
S Morgan St
S Peoria St
S Green St
S Union Ave
S Lowe Ave
S Wallace St
S Normal Ave
S Perry Ave
S Lafayette Ave
S Wabash Ave
S Bishop St
S Aberdeen St
S Carpenter St
S Sangamon St
S May St
S Racine Ave
S Emerald Ave
S Parnell Ave
S Stewart Ave
S Yale Ave
S Rhodes Ave
S Dauphin Ave
S Ebenhart Ave
S Forest Ave
S Edbrooke Ave
S Lawrence Ave
S St Lawrence Ave
Lake Calumet
Chi
12
20
1
57
94
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CTA Red Line David May: 9-27-09

Extension South of 95th St.

MAP DESCRIPTION

1. Proposed One-Way Loop Route is the Green line. Stations are Green ovals. Green circles are ½ mile radius from Green stations.

2. CTA UPRR Locally Preferred Alternate route is the Brown line. (South end and station at 130th Street are not shown.) Stations are Brown ovals. Brown circles are ½ mile radius from Brown stations.

3. Metra Electric line stations are Blue circles.

Red Line Extension
One-way Loop Proposal

Station	Route	Route Distance	Direct Distance	At Grade	Elevated	Elevated Structure	ROW status	ROW notes	Station Elevated?		Station components	
Existing 95th St		miles		miles	miles					stair	elevator	at grade crossing
	Bishop Ford median	1.0	0.9	1.0		NA	existing public					
1 **Bishop Ford & Rhodes**									no (below street)	yes	yes	no
(south edge Chi St. U.)												
	Bishop Ford median	0.9	0.7	0.9		NA	existing public					
	West side of Railroad	0.2	0.1	0.2		NA	existing private (RR)					
2 **103rd & Woodlawn**									no	no	no	yes
(SW edge of Olive-Harvey)												
	Next to Railroad	1.2	1.2	1.2		NA	existing private (RR)					
3 **111th & Ellis**									no	no	no	yes
	Next to Railroad 111th to 118th	1.0	1.0	1.0		NA	existing private (RR)					
	Over Metra Elec & Cottage Grove	0.5	0.5		0.5	beam & column	various public & private					
	Next to UPRR 117th to 115th	0.5	0.5		0.5	embankment	railroad, private & public					
4 **Kensington (15500) & Michigan**									yes	yes	yes	no
	Over 115th and UPRR	0.2	0.2		0.2	beam & column	railroad, private & public					
	N. of 115th Wentworth to Peoria	0.9	0.9		0.9	beam & column	public + private	maybe buy all houses adjacent ot north side of alley for new ROW.				
5 **114th & Peoria**									no	no	no	yes
	Former RR ROW (now elec & bike)	1.0	1.0	1.0		NA	open (owner?)					
6 **107th & Aberdeen**									no	no	no	yes
	to I-57 median	0.1	0.1	0.1		NA	open (owner?) & public					
	down to grade at median	0.1	0.1		0.1	beam & column	existing public	use existing abandoned rr bridge to across I-57 NB lanes to median? (need new ramp down to median level)				
	I-57 Median	1.3	1.0	1.3		NA	existing public					
7 **I-57 (9900) & Halsted**									no (below street)	yes	yes	no
	I-57 Median	0.9	0.9	0.9		NA	existing public					
	bridge expressway lanes	0.2	0.2		0.2	beam & column	existing public	need a bridge or tunnel				
Existing 95th St												
	TOTALS =>	10.0	9.3	7.6	2.4							

Red Line Extension 1-way Loop Alternate

Stations

All 7 stations have a single platform. No crossover structures.

Station Locations	Station Features
Bishop Ford Xway and Rhodes (Chicago State)	stairs & elevator (& ramp?) up to King Drive
103rd and east of Woodlawn (Olive Harvey)	at grade (no stairs, no elevators)
111th and Ellis	at grade (no stairs, no elevators)
Kensington/115th and State	elevated (stairs & elevator down to ground)
114th and Peoria/Halsted	at grade (no stairs, no elevators)
107th and Racine	at grade (no stairs, no elevators)
I-57 and Halsted	stairs & elevator (& ramp?) up to Halsted

Red Line Extension Proposals Comparison

Item	CTA Preferred ("LPA")		One-Way Loop Alt	
ROW length (miles)	5.3		10.0	
ROW area (SF)	1,259,280	if 45 ft wide	1,584,000	if 30 ft wide
Track pair length (miles)	10.6		10.0	
Elevated guideway structure (miles)	3.9		2.4	
Elevated guideway structure area (SF)	617,760	if 30 ft wide	253,440	if 20 ft wide
Stations (number)	4		7	
Elevated stations	3		1	
Stations requiring stairs and elevator	3		3	
Area within 1/2 mile of stations (sq miles)	3.1		5.5	
Institutions served	none		Chicago State Univ Olive Harvey JC	

Red Line Extension Design Criteria Comparison

LPA vs "one-way loop"

Criteria	CTA Preferred ("LPA")	One-Way Loop	which is better:
1. Maximize number of stations within walking distance of customers homes to provide many one-seat trips. Therefore:	4 Stations	7 Stations	One-Way Loop
a. Locate stations at ~1.0 mi on center	Yes: 3 of 4	Yes: 7 of 7	One-Way Loop
b. Locate stations within or adjacent to residential neighborhoods	Yes: 3.5 of 4	Yes: 6 of 7	tie
2. Provide convenient rail transit access to those without, by avoiding overlapping coverage with existing Metra stations. So focus the routing east of I-57, north of 119th St. and west of King Drive.	Yes: 3 of 4	Yes: 5 of 7	tie
3. Minimize property acquisition costs, construction costs, grade separation structures and noise in quiet neighborhoods by maximizing the use existing vacant and excess transportation rights-of-way.	Yes	Yes	tie
4. To control construction costs, run the line at grade (on ground) as much as possible.	25% at grade	76% at grade	One-Way Loop
5. Serve Chicago State University and Olive Harvey College.	No: neither	Yes: both	One-Way Loop

0.245283019

Cheever, Kim

RS#3

From: Red Extension [redextension@transitchicago.com]
Sent: Friday, September 18, 2009 4:32 PM
To: Peters, Melissa
Cc: Kornblatt, Helene B.
Subject: FW: RED LINE EXT.

From: RonnC7@aol.com [RonnC7@aol.com]
Sent: Friday, September 18, 2009 11:08 AM
To: Red Extension
Subject: RED LINE EXT.

I BELIEVE YOU SHOULD SEND THE RED LINE DOWN THE EXPRESSWAY FROM 95TH TO 130TH. YOU WILL NOT HAVE TO DISPLACE ANYONE.

Cheever, Kim

RS#4

From: Red Extension [redextension@transitchicago.com]
Sent: Friday, September 18, 2009 4:31 PM
To: Peters, Melissa
Cc: Kornblatt, Helene B.
Subject: FW: Red Line Extension Comment

From: White Oak [quercus_alba@hotmail.com]
Sent: Sunday, September 13, 2009 1:13 PM
To: Red Extension
Subject: Red Line Extension Comment

To whom it may concern:

I really like the idea of extending the Red Line South. It should greatly improve the transit options sor the far South Side. However, it seems very strange to have an alignment that crosses over the Metra Electric and South Shore lines but does not provide for convenient transfer between those lines and the Red Line.

A much better option in terms of improving overall connectivity in the transit system would be an alignment that left the UP right-of-way at either 115th St or Kensington Ave, traveling east to the Metra Electric line, crossing over the Metra Electric line and turning south onto the IHB right-of-way. A Red Line station on either Kensington or 115th could provide a relatively easy connection to Metra and the South Shore.

If such an alignment is not feasible, the CTA should work with Metra and/or the South Shore to establish a convenient transfer station somewhere for the Red Line extension.

Thank you,

Mark Ambrose

Cheever, Kim

RS #5

From: Red Extension [redextension@transitchicago.com]
Sent: Friday, September 18, 2009 4:30 PM
To: Peters, Melissa
Cc: Kornblatt, Helene B.
Subject: FW: Meeting Announcement: Red Line Extension
Follow Up Flag: Follow up
Flag Status: Completed

From: Jon Evans [jkeiit963827@sbcglobal.net]
Sent: Friday, September 04, 2009 4:44 PM
To: Red Extension
Subject: Re: Meeting Announcement: Red Line Extension

Ladies & Gentlemen:

I thought that if I could sell the idea of a Boston style High Speed Electric Trolley Bus (Articulated) running parallel to the Norfolk and Western railroad tracks that the Red Line Extension could be built and operational much faster, and at a substantially lower cost than a Conventional Fixed Rail system.

I was told that modifying Eggleston Avenue to take high speed buses would've been so cost prohibitive that it would've been better to go conventional anyway. I liked South Halsted Street better, but I've learned that it too, has been passed over.

The Green Line's Kenwood Corridor uses alleys to the east of Prairie Avenue. I was therefore wondering why alleys to the east of South State Street or South Michigan Avenue were not considered.

There has to be a cheaper, faster means of putting the Red Line Extension together and making it operational.

Jon Evans
11936 South Princeton Avenue
Chicago, Illinois 60628-6014
1-773-821-8142 Home
1-773-383-2363 Cell
jkeiit963827@sbcglobal.net
JKEIIT96@hotmail.com

--- On **Fri, 9/4/09, Red Extension** ***<redextension@transitchicago.com>*** wrote:

> From: Red Extension <redextension@transitchicago.com>
> Subject: Meeting Announcement: Red Line Extension
> To:
> Date: Friday, September 4, 2009, 4:31 PM

Cheever, Kim

RS #6

From:	Red Extension [redextension@transitchicago.com]
Sent:	Friday, September 18, 2009 4:29 PM
To:	Peters, Melissa; Kornblatt, Helene B.
Subject:	FW: Red Line Extension
Follow Up Flag:	Follow up
Flag Status:	Completed

From: Edmund Hawkins [eghawk@sbcglobal.net]
Sent: Tuesday, September 01, 2009 8:07 AM
To: Red Extension
Subject: Red Line Extension

It's about time that the CTA is finally considering seriously an extension to the Red Line from 95th St. As you know, the far south is the **only** area is the Chicagoland area that is not served by rapid transit. The South Side of town for some reason is almost always ignored when it comes to either new service or improvements to service.

This is something that has been talked about for at least the past 25-30 years and I hope that the political hoops and ladders that have to be cleared don't get in the way of making this project happen, at least I would like to see it happen in my lifetime. The problem with the rest of the Red Line is there is no parking facilities to serve riders. I have been in other cities and many of the stations have very adequate parking. I believe that it is the key to growing ridership. I have parked at quite a few of the stations on this system and I have noticed that there is parking available after the morning rush hour. When you double the price of parking from $2.00 to $4.00, this would make an impact. People are suffering enough with loss of income and rising prices. Now, it is cheaper to drive to your destinations rather than ride your system which is at best slow.

Cheever, Kim

RS#7

From: Red Extension [redextension@transitchicago.com]
Sent: Wednesday, September 30, 2009 9:13 AM
To: Peters, Melissa
Cc: Kornblatt, Helene B.
Subject: FW:

From: melissa [mellaout@yahoo.com]
Sent: Tuesday, September 29, 2009 11:28 AM
To: Red Extension
Subject:

Good Morning,

I do think that the Red Line expansion is in dire need. There are many people who travel long hours to reach the city for work, etc. I do believe the Red Line expansion along the Union Pacific to be a good route. However, with the expansion will added bus services be included? I ask due to the fact that I live far East and there is no night owl services to 130th. Please take in consideration if this does take place to include night owl services along the far East side/Hegwish area. The expansion would be a positive project for all that take public transportation on the far South side of Chicago.

Thank You,
Melissa Najera

RS #8

(THURSDAY)
SEPT. 17, 2009

DEAR MR. BUSBY,

RE: REDLINE PROPOSED EXTENSION TO 130TH STREET

I AM INTERESTED IN FURTHER INFORMATION ABOUT THE CTA RED LINE PROPOSED EXTENSION.

ANY SUCH IMPROVEMENT IS LONG OVERDUE AND SHOULD CERTAINLY MEET WITH APPROVAL FROM SOUTH SUBURBAN RESIDENTS. SOUTH EASTERN RIDERS ARE MOST IN NEED OF THIS EXTENSION.

METRA RAILROAD TRAINS MANAGERS MAY NOT LIKE THIS IDEA, BUT NOT ALL REGULAR COMUTERS PURCHASE MONTHLY PASSES.

I WELCOME A WRITTEN REPLY, AS I HAVE NO HOME COMPUTER. (BUT I WOULD LIKE TO KNOW MORE ABOUT COSTS, NEED, AND WHAT PROPOSED ALTERNATIVES ARE DECIDED UPON... SUBWAY CTA COSTS ARE A MAJOR FACTOR FOR RIDERS: MANY HAVE LIMITED INCOMES AND BUDGETS. WHILE METRA IS COMPETITION, RIDERS LIKE AS MANY CHOICES POSSIBLE. SOME SUBURBS ARE NOT WELL SERVED BY METRA LOCATIONS, SO RIDERS ARE FORCED TO THE ONLY OTHER CHOICE.)

THERE MUST BE MANY OTHER FACTORS

WHICH THE STUDY WILL UNCOVER, AND THE PUBLIC NEEDS TO KNOW THEM ALL.

P.S. WHEN A THIRD AIRPORT WAS FELT NEEDED IN THE AREA, HOWLS OF PROTEST ERUPTED. MAYOR DALEY DID "MIDNIGHT-BEHIND-THE-SCENES LAKE-FRONT-INTERFERENCE" TO BLOCK SUCH A PLAN NEAR McCORMICK PLACE. IT NEVER DID GET ANY VOTE OR EVEN GET TO CHICAGO'S CITY COUNSEL MEMBERSHIP FOR THEIR INPUT. (HOW DID THAT BENEFIT "THE CITY THAT WORKS"??) SHAME ON SUCH POLITICAL MONKEY SHINES! RIDERS INPUT SHOULD NOT BE IGNORED.

YOUR REPLY IS WELCOME!

Mr. Victor Bahr
3162 W Meadow Lane Dr Apt 1
Merrionette Park, IL 60803-5856

Red Line Extension

RS#9

Connecting 95th Street Station to 130th Street

cta

The purpose of the scoping process is to identify public and agency concerns early in the environmental process, define the issues and alternatives that will be examined in the Environmental Impact Statement (EIS) and facilitate an efficient EIS preparation process. Please PRINT.

Name: JOE W. BOATNER

Organization: SELF Title:

Address: 400 W. 99PL (CROSS STREETS 99PL + EGGLESTON

City: CHICAGO State: IL Zip: 60628

Phone: 773 233 0904 E-mail: N/A

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

THE IMPACT (REAL NOT POTENTIAL) IS THE NOISE CREATED BY THE TRAINS. MORE PRECISLE~~Y~~ (PRICISELY) IT MAY NOT BE THE NOISE OF THE CTA TRAIN BY ITSELF BUT WHEN ADDED TO THE NOISE THE UNION PACIFIC RAILROAD MAKES WITH THE "OVER USE OF THEIR HORNS" WOULD MAKE THE COMBINED NOISE TOO MUCH TO TOLERATE. I UNDERSTAND TRAINS ON TRACKS MAKES NOISE BUT THE UPRR HORNS ARE TOO MUCH

ALSO, AS SOMEONE SAID TONIGHT WHAT ABOUT TERMITES + OTHER RODENTS DISPLACED AND LOOKING FOR SOMEWHERE TO LIVE (MY HOUSE MAYBE!)

Joe W Boatner

Scoping comments may be submitted via mail, e-mail, fax or the project website with attention to: Jeffrey Busby, General Manager, Strategic Planning, Chicago Transit Authority, P.O. Box 7602, Chicago, IL 60680-7602. **Fax:** (312)681-4297, **Email:** RedExtension@transitchicago.com, **Website:** www.transitchicago.com/RedEIS, **Customer Information:** 1-888-YOUR-CTA (1-888-968-7282), **Hearing & Speech Impaired:** 1-888-CTA-TTY1 (1-888-282-6891), **Transit Information:** 836-7000 from any local area code **RTA TTY:** 312-836-4949

Red Line Extension

RS #10

Connecting 95th Street Station to 130th Street

The purpose of the scoping process is to identify public and agency concerns early in the environmental process, define the issues and alternatives that will be examined in the Environmental Impact Statement (EIS) and facilitate an efficient EIS preparation process. Please PRINT.

Name: Hapri Hill

Organization: Resident Title:

Address: 9225 S. May

City: Chicago State: IL Zip: 60620

Phone: 773 551 6103 E-mail: Hapri_hill@yahoo.com

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

I think extending the red Line woold be an excellent idea

Scoping comments may be submitted via mail, e-mail, fax or the project website with attention to: Jeffrey Busby, General Manager, Strategic Planning, Chicago Transit Authority, P.O. Box 7602, Chicago, IL 60680-7602. **Fax:** (312)681-4297, **Email:** RedExtension@transitchicago.com, **Website:** www.transitchicago.com/RedEIS, **Customer Information:** 1-888-YOUR-CTA

Red Line Extension

RS#11

Connecting 95th Street Station to 130th Street

cta

The purpose of the scoping process is to identify public and agency concerns early in the environmental process, define the issues and alternatives that will be examined in the Environmental Impact Statement (EIS) and facilitate an efficient EIS preparation process. Please PRINT.

Name: TOM McMAHON CAPTAIN - Chicago Police DEPT.

Organization: PULLMAN CIVIC ORG. Title: MEMBER

Address: 639 E. 111TH ST

City: Chicago State: ILL Zip: 60628

Phone: 264-4243 E-mail: MCMAHONE@SBCGLOBAL.NET

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

I AM IN FAVOR of the Proposal Taking the Red Line over the R/R TRACKS ON EGGLESTON OUT TO ALTGELD GARDENS. ALTGELD has had A MAJOR COSTLY RENNVATION. The PEOPLE have for years FELT LEFT OUT due TO Their LOCATION. This Would Allow High School STUDENTS ACCESS TO BETTER EDUCATION AND JOBS for Residents.

Scoping comments may be submitted via mail, e-mail, fax or the project website with attention to: Jeffrey Busby, General Manager, Strategic Planning, Chicago Transit Authority, P.O. Box 7602, Chicago, IL 60680-7602. **Fax:** (312)681-4297, **Email:** RedExtension@transitchicago.com, **Website:** www.transitchicago.com/RedEIS, **Customer Information:** 1-888-YOUR-CTA

Red Line Extension

RS#12

Connecting 95th Street Station to 130th Street

The purpose of the scoping process is to identify public and agency concerns early in the environmental process, define the issues and alternatives that will be examined in the Environmental Impact Statement (EIS) and facilitate an efficient EIS preparation process. Please PRINT.

Name: Harry Brooks

Organization: ______ Title: ______

Address: 7818 S South Shore Dr

City: Chicago State: IL Zip: 60649

Phone: 773-731-0608 E-mail: hrry_brooks@yahoo.com

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

One thing that needs to be done immediately is to relieve congestion at the 95th/Dan Ryan Terminal. The number of buses and routes that use the station have outgrown the terminal.

Scoping comments may be submitted via mail, e-mail, fax or the project website with attention to: Jeffrey Busby, General Manager, Strategic Planning, Chicago Transit Authority, P.O. Box 7602, Chicago, IL 60680-7602. **Fax:** (312)681-4297, **Email:** RedExtension@transitchicago.com, **Website:** www.transitchicago.com/RedEIS, **Customer Information:** 1-888-YOUR-CTA (1-888-968-7282), **Hearing & Speech Impaired:** 1-888-CTA-TTY1 (1-888-282-6891), **Transit Information:** 836-7000 from any

Red Line Extension

Connecting 95th Street Station to 130th Street

cta

RS#13

Date: ☐ September 22, 2009
☒ September 24, 2009

Scoping Meeting Speaker Card

Complete this card if you wish to speak this evening. Your input is a vital component of this phase of the project. Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Thank you for your interest in the Red Line Expansion project.

Name: Johnnie G Burke

Organization: 96th Perry Block Club Title: Clerk

Address: 9607 So. Perry

City: Chgo State: Il Zip: 60628

① Will construction of RS #13
Park + Ride sites
remove residents from
present locations?
② How many properties
will be disturbed in
constructing entire
phases?

Red Line Extension

Connecting 95th Street Station to 130th Street

RS#14

Date: ☐ September 22, 2009
☒ September 24, 2009

Scoping Meeting Speaker Card

Complete this card if you wish to speak this evening. Your input is a vital component of this phase of the project. Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Thank you for your interest in the Red Line Expansion project.

Name: Rev. Alice Harper-Jones

Organization: United Church of Christ Association Title: Pastor

Address: PoBX 208491

City: Chgo State: IL Zip: 60620

Why Can't Halsted plan extend To The Algal Projects

RS#14

Red Line Extension

Connecting 95th Street Station to 130th Street

RS#15

Date: ☑ September 22, 2009
☐ September 24, 2009

Scoping Meeting Speaker Card

Complete this card if you wish to speak this evening. Your input is a vital component of this phase of the project. Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Thank you for your interest in the Red Line Expansion project.

Name: MICHAEL T. BRYANT (DEAF)

Organization: ____ Title: ____

Address: 7931 S. EAST END AVE

City: CHICAGO State: ILL Zip: 60617

RS#15

1 GOAL TO PLAN DREAM

RED LINE ~~HOW~~ 130TH-HOWARD

1 VOTE (CHOOSE) UPRR & HRT

RS-16

Oct. 2, 09

Hi Jeffrey,

I see you are the travelers friend - you asked for our input.

I live in N.W. Indiana and have a difficult time getting to Chicago since the pace #355 Lansing to Chicago Loop was eliminated. From the Schererville - Munster border I ~~can~~ could safely and easily drive to Ridge and Wentworth - get on #355 and arrive at the Loop - No-longer! I don't care to take the South Shore. The station has minimum SAFE parking and I must drive through a questionable area where there are now gang shootings and a few murders. With your new schedules and extensions can this 80-year old former flapper extend her comments. Please!

1. Extend one of the electric rail routes to connect with a possible Indiana Illinois border parking lot.

2. Reinstitute # 355

But on a reduced schedule to allow working people as well as shoppers and hospital patients early in the day and return late afternoon rides on a safe and easy to get to bus.

But eliminate the costly empty mid-day routes. I had ridden near empty busses and I sympathize with your low revenue. But a good schedule could be a better source of revenue to you.

Sincerely, Lorraine Smalley
219-924-1509

Red Line Extension

Connecting 95th Street Station to 130th Street

cta

RS-17

The purpose of the scoping process is to identify public and agency concerns early in the environmental process, define the issues and alternatives that will be examined in the Environmental Impact Statement (EIS) and facilitate an efficient EIS preparation process. Please PRINT.

Name: Annette Spight
Organization: DNA Title: DNA
Address: mailing P.O 19592
City: Chicago State: Il Zip: 60619
Phone: optional E-mail: optional

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

First of all, I would like to apologize for sending this in late, but someone else attended the meeting for me, but did not tell me their was A date for submission on it. I recieved the materials late and the information. I decided to send the card in anyway and keep a copy of it. According to some of the speakers at the meeting this project has been on the table and introduced in the 1960's. Now they talked about the completion date and the enviromental survey. Impact the dates or years 2013-2016 and govermental funding and being in compliance with. I heard of some of the major and minor concerns too, Businesses, residential and non residential. As far as an environmental impact study being done this is not A new project, that has

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RS-17

No existence. This is a project that has a as you used an extension. Therefore it is already in existence. And environmental studies from the previous years should assist instead of creating new ones. Its far as the 130th stop you have already environmental issues ~~sta~~ such as waste and industrial companies in that area. Those people who had concerns about their businesses, that have financial statements prepared each year and according to the economy, if the construction is going to affect them ask to be compensated for their losses. The residents should go to their local real estate agencies to find out or to other areas to find out if their property has depreciated or appresiated. What I was looking for is some ~~tem~~ solutions that could be offered while the concerns exist. The timeframe that they are talked about is unreasonable for something that already exist. Also certain people talked about the beneficial factors and assisting young people of getting around better and for those who do not have cars. Another comment was made about the disparity in certain communities that are minorities and the way they have been overlooked. I thank you for your time and effort in reading this comment letter. Last but not least one gentlemen said he lived by the train and the noise is not so bad and it would free up the congestion at 95th Dan Ryan.

Thank You Annette Spight

Cheever, Kim

RS-18

From: Peters, Melissa [PetersMe@cdm.com]
Sent: Tuesday, October 06, 2009 8:23 AM
To: Cheever, Kim
Subject: FW: Red Line Extension 117thStreet/Michigan Ave Station

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From: Red Extension [mailto:redextension@transitchicago.com]
Sent: Monday, October 05, 2009 4:44 PM
To: Peters, Melissa
Cc: Kornblatt, Helene B.
Subject: FW: Red Line Extension 117thStreet/Michigan Ave Station

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From: Rico Thomas [ricot60409@yahoo.com]
Sent: Saturday, October 03, 2009 2:06 AM
To: Red Extension
Subject: Red Line Extension 117thStreet/Michigan Ave Station

The design of the 115th Street/ Michigan Ave Station is of special interest because it is at a location that can significantly develop. Development should not be hindered at this location by a bus turnaround. Furthermore, this may not be a good place for a park and ride either. This space should be used for commercial retail and/or a community focused service.

Red Line Extension

Connecting 95th Street Station to 130th Street

RS-19

The purpose of the scoping process is to identify public and agency concerns early in the environmental process, define the issues and alternatives that will be examined in the Environmental Impact Statement (EIS) and facilitate an efficient EIS preparation process. Please PRINT.

Name: Ronn L. Johnson

Organization: Citizen Title: —

Address: 9539 S. Dobson

City: Chicago State: IL Zip: 60628-1628

Phone: E-mail: rokk 7914 @ yahoo.com

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

USE Both I-94 and I-57 for the Red-line extension.

Or Green Line up Stoney Island to I-94 and South to 159 or more

Scoping comments may be submitted via mail, e-mail, fax or the project website with attention to: Jeffrey Busby, General Manager, Strategic Planning, Chicago Transit Authority, P.O. Box 7602, Chicago, IL 60680-7602. **Fax:** (312)681-4297, **Email:** RedExtension@transitchicago.com, **Website:** www.transitchicago.com/RedEIS, **Customer Information:** 1-888-YOUR-CTA (1-888-968-7282), **Hearing & Speech Impaired:** 1-888-CTA-TTY1 (1-888-282-6891), **Transit Information:** 836-7000 from any local area code **RTA TTY:** 312-836-4949

RS-20

Cheever, Kim

From: Red Extension [redextension@transitchicago.com]
Sent: Monday, October 12, 2009 4:35 PM
To: Peters, Melissa
Cc: Kornblatt, Helene B.
Subject: FW: Illinois State Police concerns

From: Anthony_Lupo@isp.state.il.us [Anthony_Lupo@isp.state.il.us]
Sent: Wednesday, October 07, 2009 11:14 AM
To: Red Extension; Yellow Extension; Orange Extension
Cc: mark.harmon@chicagopolice.org
Subject: Illinois State Police concerns

As we discussed in the Scoping meeting on September 23, 2009. Below is details a few concerns we had and would like them looked at during the preliminary phase:

FIRST RESPONDERS

Will the construction area be easily accessible for First Responders to respond to any type of emergency? With the tracks being elevated, will there be an easy on/off for personnel?

SECURITY

If the Contractor desires additional police officer services of Illinois State Police (ISP), District Chicago, for enforcement, traffic control, and/or security, ISP personnel will, as available, provide police services on a hireback basis. During this time, ISP officers will provide a visible State Police presence, provide general police services and take enforcement action as appropriate in and around the site of the program. We will govern all areas on the expressways or on state owned property. To secure the above, the Contractor would have to sign a binding contract detailing all the specifics with the State of Illinois.

If you should have any questions or need additional information, please do not hesitate to contact me.

Respectfully,

Lieutenant Tony Lupo
District Chicago
Administrative Command
Office 847 294 4655
Fax 847 294 4440
Cell 708 932 9347

RS-21

Cheever, Kim

From: Red Extension [redextension@transitchicago.com]
Sent: Monday, October 12, 2009 4:34 PM
To: Peters, Melissa
Cc: Kornblatt, Helene B.
Subject: FW: Additional Question about Red line extension

From: Alicia DeVoll [alicia.devoll@loop.colum.edu]
Sent: Monday, October 05, 2009 8:06 PM
To: Katelyn Thrall
Cc: Red Extension
Subject: Additional Question about Red line extension

Hello,

I attended the last community scoping meeting and i was wondering if there are any further updates with the Red line extension. Also has this extension been effected by the loss of the Olympic games?

--
Alicia DeVoll

Journalism Major
Columbia College Chicago
360-941-4759

RS-22

Cheever, Kim

From: Red Extension [redextension@transitchicago.com]
Sent: Wednesday, October 21, 2009 1:41 PM
To: Peters, Melissa
Cc: Kornblatt, Helene B.
Subject: FW: Dan Ryan Extension

From: Aristotle Haywood [fitnessphase@yahoo.com]
Sent: Monday, October 19, 2009 6:45 PM
To: Red Extension
Subject: Dan Ryan Extension

As a resident of the South Side of Chicago for over 30 years the proposed extension of the Red Line is long overdue.

It will alleviate congestion, make travel faster for bus users and give better transit alternatives to people who live on the far South Side of

Chicago and Northwest Indiana. The Union Pacific route makes the most sense.

Aristotle Haywood.

RS-23

Cheever, Kim

From: Red Extension [redextension@transitchicago.com]
Sent: Friday, September 18, 2009 4:30 PM
To: Peters, Melissa
Cc: Kornblatt, Helene B.
Subject: FW: Red line extension

From: emailafrica@yahoo.com [emailafrica@yahoo.com]
Sent: Tuesday, September 08, 2009 10:50 AM
To: Red Extension
Subject: Red line extension

The extension of the red line is a great idea and I support the effort.
Sent from my BlackBerry® wireless device from U.S. Cellular

CHICAGO TRANSIT AUTHORITY
PUBLIC HEARING
"RED LINE EXTENSION
CONNECTING 95TH STREET STATION TO 130TH STREET"
September 22, 2009

STENOGRAPHIC REPORT OF PROCEEDINGS had in the above-entitled matter held at the Historic Pullman Visitor Center, 11141 South Cottage Grove Avenue, Chicago, Illinois, commencing at 6:44 o'clock p.m.

PRESENTERS:
MR. DARUD AKBAR, Government & Community Relations Officer, Chicago Transit Authority
MR. JEFFREY BUSBY, General Manager, Strategic Planning, Chicago Transit Authority
MS. SARAH LAYTON WALLACE, Moderator

Reported by: Anna M. Morales, CSR, RMR
License No.: 084-002854

(Whereupon, the following proceedings commenced at

6:44 o'clock p.m.)

MR. AKBAR: Good evening, everyone. If we could have folks begin to take their seats, we would like to go ahead and get the presentation started.

Good evening. Once again, my name is Darud Akbar. I'm the Government & Community Relations Officer with the Chicago Transit Authority. I would like to welcome everyone to the CTA's public scoping meeting for the Red Line Extension Project. Before we begin the presentation, I would like to acknowledge Lorie Lipson. She is representing Alderman Austin's office. If you could just raise your hand, Lorie. Thank you.

I'm going to turn things over to Sarah. Sarah is going to give us a talk about the meeting agenda tonight, and then we're going to go ahead and begin the presentation shortly.

MS. WALLACE: Thank you. Before we get started, I just want to check, is there anyone that will be in need of Spanish translation this

evening? We do have that service available.

Tonight, as you see our agenda, we are just completed with the open house portion of the agenda, and now we're going to move into the presentation that's going to be about a ten-minute presentation, and Jeff Busby from CTA is going to make that presentation to you, after which we'll move to our public comment period. And just before the public comment period, I'm going to go through some guidelines with you so that you have an understanding of how that process works and your time limitations and so forth that you have.

At the conclusion of the public comment period -- and I will just say that if it's not 8 o'clock yet and we've gotten all the comments initially, we are going to remain here to take public comment until 8 o'clock as we gave you notice, and then we'll just go over some next steps before we adjourn the meeting.

So with that, let's turn it over to Jeff for a presentation.

MR. BUSBY: Hi. Thanks, Sarah. Thanks all for coming out.

I'm Jeff Busby. I work in the Planning

Department at CTA. I see quite a few familiar faces from our previous work.

Just a little bit of background on the Red Line Extension Project. The idea to extend the Red Line has really been around since the 1970s; but we, at CTA, got very busy with the first and foremost stage of a federal process to begin to apply for money back in 2006 when we started an Alternatives Analysis study.

The purpose of that study was to look at a whole range of transportation options to improve the service in the study area to the far south side and the south suburbs. We looked at different transit technologies or modes, different corridors, different profiles where the transit would be in relationship to the street level.

We had three rounds of public outreach. Very strong attendance at all of those. We had some really nice media coverage.

Recently, in August, we concluded that study when the Board of the CTA adopted the Union Pacific Railroad Alternative as the Locally Preferred Alternative. That will be one of the alternatives we'll look at in the environmental

studies. I will talk a little bit about that in more detail. But this environmental study which we're starting right now really is a culmination -- it starts from the work we did in the Alternatives Analysis and advances that into significantly more detail.

Why are we doing this? Well, we would like to use federal funds, at least a portion of the federal funds, to help pay for an extension to the Red Line. To spend large amounts of federal money on really anything, you need to comply with the National Environmental Policy Act which requires that you identify potential impacts both positive and negative to the environment from the construction and operation of a rapid transit facility. So we're starting that process tonight.

The purpose of preparing this document is both to inform members of the public about the likely impacts, but to also help decision-makers who will pay for and be responsible for operating the line about the impacts and how we might mitigate those impacts that are adverse to the community.

Here's a schedule for you, just to give

you a sense of where the project is and where we would like to go. This is a target. It's not something that unfortunately I can guarantee for you. But we're going to start this evening receiving your comments on what you would like us to study in the environmental review. We're going to study that over the next year and share a draft of the Environmental Impact Study at the end of 2010 or perhaps early 2011.

At that stage, we need to ask the federal government for additional money and for permission to begin final design. That's the preparation of really the construction drawings. We hope for that period to last between 2011 and 2013. At that point, we need to have identified all the funds for the start of construction. If those funds were available and, again, if we got federal permission, we would like to start construction in 2013 to open in 2016.

I think this is a realistic schedule. It is ambitious. Certainly your support is helpful in making that realized. I mentioned that we'll be studying the Locally Preferred Alternative which came out of the Alternative Analysis Study; but

there are also three alternatives that will be studied as part of the Environmental Impact Study.

The first is a No-Build Alternative. That becomes a point of comparison, so what would be the environmental impacts of not doing anything.

The second is a Transportation System Management Alternative. It's a long word, but what it really means is a lower cost alternative to building the Red Line; and, in this case, it would be express buses and some improvements at 95th Street so that those express buses could have a place to drop people off.

The Locally Preferred Alternative, there are maps in the back and we'll be talking about that in more detail. That's an extension of the Red Line from 95th Street following the Union Pacific Railway with stations at 103rd, 111th, 115th and Michigan, and a final station at 130th. It's an elevated extension, so it's above the street level but adjacent to those Union Pacific freight tracks.

And, finally, another alternative in the

Alternatives Analysis that performed very well that we thought we would include in the environmental

study as a point of comparison was an elevated extension along Halsted Street. It would be elevated above the median of that street. Similar, four stations at 103rd, 111th, 119th, and 127th and Vermont.

This is a map of the Locally Preferred Alternative. As I mentioned, it leaves 95th Street, travels in the median of I-57, and then is an elevated line above the street level traveling next to the Union Pacific Railroad. It ends at 130th and the Bishop Ford, very close to Altgeld Gardens.

And, similarly, the Halsted alternative which leaves 95th Street, again using the median of I-57, travels south elevated above Halsted, ending at 127th.

So we're very interested in your comments tonight. Sarah is going to help us with rules on how that's all going to work and I will turn it over to her.

MS. WALLACE: Okay. Thank you very much. So it's time for the public comment process, and I want to go over some of the guidelines.

First of all, so that you know, we would like you to focus your comments on the work that we have ahead, which is the purpose and need for the project; the proposed alternatives; the proposed environmental issues to be examined; and the potential environmental effects and mitigation measures to be considered. So those should be the focus of your comments tonight.

The guidelines. If you would like to speak and if you haven't done so already, you will need to fill out one of these speaker cards. Christy will be happy to collect those and bring them to me. I will plan to call speakers up in the order that I have received them. And I will call a couple at a time so that you can go ahead and get lined up and know where you're coming.

When you come to the microphone, I'd ask you first to restate your name so we get that for the record. We have a court reporter here who's going to be documenting your comments. And we would ask you to direct your comments to CTA here at the front table.

You're going to have three minutes to comment. And the good news is you're not going to have to keep track of the three minutes. We got a

stoplight here so everyone can see that. When you begin your comments, the stoplight will be green. When you have got about 30 seconds left, the stoplight will turn yellow; and then it will begin flashing when you have 15 seconds. So you should be able to gauge your comments and know when you need to be wrapping up. Once that turns red, that means your comment time is up.

We would ask everybody to stick with that comment period. The only exception to that is anyone who needs translation, we're going to allow six minutes because of the time that it takes to go back and forth with the translator. So be aware of that.

Tonight, we're really here to hear what you have to say. This is your chance for input on the process. CTA is here to listen to you. And so they won't be responding to your comments in any way at this time, but your comments are going to be documented in a scoping report.

So that's the process. Hope that's clear to one and all, and we're ready to get started.

Okay. We have -- the first couple are Helen Rockingham, Derrick Brownlee, and Reverend

Isaac Hayes. You want to get situated at the microphone. And, Helen, please go ahead and restate your name first.

MS. ROCKINGHAM: My name is Helen Rockingham. I would like to say good afternoon to everyone. I would also like to give my appreciation to CTA -- express my appreciation to CTA for this effort.

It's been long past due, and there are a lot of residents who are going to appreciate having this kind of facility available to them.

Myself, I'm a rider on CTA's Red Line train and buses at some point in time to work everyday. And what I find at 95th Street is that the parking is nonexistent and we're always getting traffic tickets there. So these lines and the proposed parking spaces that would be available at the different terminals would be a plus for this project to us, to the community, and we appreciate that, if the project becomes finalized.

Another thing is I'm a property owner and that Pacific line comes right past my home. As a matter of fact, I'm the second house from that line, south of that line on Princeton. And the environmental impact, I know for the benefit of the

community, if we have to be relocated, that would not be an issue to some homeowners, but CTA's obligation to us, when will we find that out or if it would be found out in the 2013 year, and how would those -- how would those homeowners be contacted and at what point, would be my question.

Okay, I'm still on green. Great. Yes, it appears that the preferred route would be the Pacific line. I have been bouncing this, brainstorming with a lot of neighbors, and we see Halsted would be the least route for the advantages for the businesses and traffic going to the expressway. We just know we will see the benefits of it in our neighborhood, and that's the end of my comments. Thank you.

MS. WALLACE: Derrick Brownlee. Derrick Brownlee? Okay. Reverend Isaac Hayes.

REV. HAYES: Reverend Isaac Hayes, candidate for U.S. Congress in the Illinois 2nd Congressional District, and I just want to commend the CTA for taking this step. Certainly I know many residents and citizens on the south side have long wanted this, and people are happy they will have an easier commute to work or to school or wherever they may

go. And so I don't need the full three minutes. I just wanted to commend the CTA, and the residents on the south side are very happy for this step. Thank you.

MS. WALLACE: Robert Franklin and then Charlie Yale.

MR. FRANKLIN: All right. My name is Robbie Franklin. I would like to know if you're going to run the El starting at 99th and Eggelston, are you going to be on that platform on the tracks to the Pacific or are you going from the west side or the east side? And are you going to damage the little park that's in there between 99th and 103rd?

MS. WALLACE: Do you have other comments?

MR. FRANKLIN: No. That's it.

MS. WALLACE: Charlie Yale and then Eugene Taylor. Please restate your name.

MR. YALE: I'm Charlie Yale from Citizens Taking Action. I work with the unions and I got a high seniority.

It's a wonderful thing that CTA is doing right now with that extension. If the economy picks up and the recession gets better in the near future, where are you going to extend the Red Line?

How far out may I ask? How far out? The Red Line, how far out will it go out? How far in distance, north or south? May I ask, please?

MS. WALLACE: Right now we're in the public comment portion, so we're just listening to you, but that's the kind of discussion you can have as you are looking at the board.

MR. YALE: Fine. If this works out for the public and everybody else, it would be a wonderful thing. Let the economy pick up with the recession. Right now, it's pretty bad right now. If this could be done, it would be a wonderful, wonderful thing for everybody and everybody. I want to see what happens. Analyze this.

There's construction going on I heard. This I heard. But this could be done by everybody and be one good thing for the future. I want to see what happens.

MS. WALLACE: Eugene Taylor and Michael Bryant.

Eugene Taylor?

MR. TAYLOR: Yes.

MS. WALLACE: Please restate your name.

MR. TAYLOR: My name is Eugene Taylor, and I'm here to represent Developing Communities Project.

We are a faith-based community organizing agency that has served the Chicago community areas of Greater Roseland since 1986.

In 2003, DCP began organizing a transportation campaign advocating for the expansion of rapid transit on Chicago's far south side. DCP through its CTA Red Line Oversight Committee, or RLOC, comprised of community residents, churches, community leaders, and local grass root organizations initiated a referendum drive in 2004 that resulted in 38,000 votes supporting the extension of the CTA Red Line along the Union Pacific Railroad Corridor.

We have come to recognize the critical importance of mass transit to Chicago and its residents. From the increased exposure to air and noise pollution throughout the region to the increased travel time imposed upon both workers and students, addressing our mass transit service needs was and is paramount to our community's future and its quality of life. This community has paid a high price for this urban transit dilemma.

But today is a good day. This day is long awaited by many and fully expected by some,

expected because the public's desire for economic justice and equity in capital spending decision-making was reasonable. Yet, its anticipation for nearly 40 years has become an urban legend.

So, today, we thank the Federal Transportation Administration for requiring this public hearing, and we thank the CTA, the Chicago Transit Authority, for selecting the Union Pacific Rail route as the locally preferred route.

We here today want to register our initial public comments as part of the scoping process. On September 18th, 16 members of DCP's Red Line Oversight Committee toured the Union Pacific Railroad route to examine the physical and environmental conditions along the corridor.

MS. WALLACE: 30 seconds.

MR. TAYLOR: The RLOC participants documented parkways, homes, small businesses, and tracks and so forth.

Much like the Federal Transportation Agency, the DCP Red Line Oversight Committee will be listening to the CTA's environmental impact consultant's statement. Our committee will continue our review of the locally preferred route, the environmental and engineering requirements. We'll conduct and assemble additional public comments.

MS. WALLACE: Thank you.

MR. TAYLOR: And thank you.

MS. WALLACE: We look forward to written comments for those of you who have more than you can say during your three minutes. Michael Bryant.

MR. BRYANT: (Through an interpreter). Hi. My name is Michael Bryant, and I have been dreaming of this for like a long time. It's amazing how this idea is very similar to what I dreamed about. And, of course, I prefer the UPR route. You know, I prefer that very much because at 95th Street, there's really a lot of traffic there. Like I went there and I went to the other meeting and I tried to explain, but I just want to know what they're going to do for the future. I mean, we discussed like what the plans might be.

I think it's great if the 95th Street line could be set up, you know, on 130th Street, and if they could add that, that would be perfect. But I know the choice -- the decision hasn't been made.

It's a future decision, but I know it's going to be a speedy process -- I know it's not going to be a speedy process. And there's a lot of things that are going to have to change, but I think the environment will change rapidly with the changes that are going to be made by the CTA. Thank you.

MS. WALLACE: Okay. Ernest Williams and then Lou Turner. Ernest Williams?

MR. WILLIAMS: Coming. Good evening. My name is Ernest Williams, and I'm here on behalf of the Golden Gate Community Association.

The one question that I had was when the Orange Line was extended southwest to Midway, I'm sure that these same studies were done. I think it would be -- it would benefit us to talk to some of the leaders that helped implement that plan and live through the process to see what the line impacted and what the community concerns were at that time to give us something to compare to if you had those feasibility studies that you probably started back when that happened so that we can put it possibly together. Just a thought.

MS. WALLACE: Okay. Lou Turner and then David May. And please restate your name.

MR. TURNER: Hi. My name is Lou Turner. I'm with the Developing Communities Project. You have already heard from the president of our Red Line Oversight Committee.

I think a number of people here already know that the Developing Communities Project has been mobilizing the community and interest and opinions in the community around this project since 2003. And we put together a historic referendum in 2004 in which 39,000 voters in the 9th and the 34th Ward voted for this very project. And that's one of the things that the CTA has included as part of the reasons for their selection for the Locally Preferred Alternative.

I have a few things and I will submit it also in a written form, but in the instructions, particularly in the introduction to the folder that you have here, it says that -- the EIS scoping info says that the CTA and the FTA will be preparing the EIS. How will the FTA participate in the preparation of the EIS?

Secondly, what weight will public comment have in the decision-making process of the EIS and the preliminary engineering?

Thirdly, what governmental agencies will also participate? Because it says public comment and governmental agencies or agencies will participate in the scoping process. Will their comment and analysis be made public? If so, where? I assume the EPA and people like that. What weight will their input, that is, the governmental agencies, carry? And if there's a conflict between the input of the public agencies -- excuse me, the governmental agencies and the public comment, how will these conflicts be resolved?

You mentioned the proposal for topics of evaluation. One, it seems to me, especially for environmental impact that becomes important, is to identify brown fields along the route. I assume that there is some kind of map somewhere or there's some process at hand in terms of identifying -- 30 seconds -- identifying brown fields.

Secondly, if these brown fields are identified, I want to know what the process is for minority procurement opportunities for mitigating those brown fields.

And, lastly, what are the scoping -- what is the scoping analysis going to do in terms of

identifying transit-oriented development opportunities along the route?

MS. WALLACE: Thank you.

MR. TURNER: Thank you.

MS. WALLACE: David May and Harry Brooks.

MR. MAY: I'm David May. I'm here speaking as an individual. I think it's a very valuable project for underserved communities here on the south side, and I think these extension projects are great in terms of leveraging the existing facilities.

The cost estimates I have seen for the LPA seem very high compared to similar projects that have been built in other countries. CTA has a bad record in terms of managing large construction projects, and I recommend that you look at the Army Corps of Engineers' Early Contractor Involvement Process; P3 processes being used in Alberta and Ontario; FDoT's recent I-95 procurement; and how BART is doing the Oakland Airport Connector.

In looking at this extension, I thought the design criteria that should have been used would be to maximize the number of customers living within a half mile of a station. So you need more

stations and you need the routes running through residential neighborhoods; avoiding overlapping coverage with METRA; using existing rights-of-way; running on ground as much as possible; and serving Chicago State and Olive-Harvey.

I think a preferable way to design this thing which I think you should consider as one of your alternatives is a one-way loop, a 9 and a half mile long loop, one-way loop, instead of your 5 mile two-way design could give you seven stations, for example, at Ford and Rhodes, 103rd and Dauphin, 111th and Langley, 115th and State, 114th and Halsted, 107th and Racine, and I-57 and Halsted which would serve many more people within walking distance in your design.

It would give you 2 miles on ground in the Bishop Ford right-of-way. It would give you 2 miles on ground on the I-57 right-of-way; 1 mile on ground on the abandoned railroad right-of-way;

and 3 miles on ground in the excess railroad right-of-way, all which are great improvements compared to your mostly elevated, very expensive guideway design. Thank you.

MS. WALLACE: All right. Harry Brooks and

William James. Harry? William, you will be after.

MR. BROOKS: Good evening. One of the things that needs to be done immediately is something to relieve the bus turn-around at 95th and the Dan Ryan, because the number of buses that go in and out of there, they have outgrown that terminal.

When I was coming here this evening, I happened to get there in just one of those rare moments. I'm sure it was like a perfect storm. All the bus lines, CTA and PACE, plus a Greyhound all were in the station at the same time. And that was interesting to watch, but it caused quite a traffic jam.

So I would hope, of course, when this extension is put in that some of those lines that go up to 95th Street now would go to the new stations or that something be done somehow, even though it's kind of landlocked, to expand the terminal because you get all -- you get everybody in there at the same time and it just doesn't work.

The 111 bus that I took to get over here stops behind the Number 106 bus, for example. And the Chicago Police Department decided to park a paddy wagon next to where the Number 106 takes some

recovery time. So I wasn't late or anything, but we had to sit there until it was time for the 106 to leave, and there were a couple of other buses that were trying to get out.

Now that particular problem could be dealt with if CTA told the police that they would have to park large vehicles elsewhere. But something still needs to be done now and in the future for that 95th terminal because, as I said before, and I'm repeating, I know, if everybody is in there at the same time, it's not working. Fun to watch, but I'm sure it's not fun for the drivers.

MS. WALLACE: Okay. William James.

MR. JAMES: Okay. My name is William James. I've lived in Roseland all my life.

MS. WALLACE: Could you please speak into the microphone?

MR. JAMES: Yeah. I came here as a teenager. I'm very familiar with Roseland, all parts of it. I have lived all over the community.

I have also lived near train tracks. Where I'm at presently, I'm near that Union Pacific. My concern is noise, vibration, property damage. What happens is these trains roll past.

Right now, there's a group in our community trying to stop the whistle blowing of the train there. Okay. They're not very successful. They have been campaigning for years. It's not stopping. The train is still blowing the whistle. The noise goes on. I lived there 20 years. I'm now oblivious to it. Other people are not.

With a CTA train running down your mysteriously preferred location -- I don't know who prefers this -- I'm going to have constant noise. I'm telling you now, I don't want you. Go away. Go down Halsted.

I have another issue there. With these train tracks and these stations, I'm going to get dirt. I'm going to get crowds there that I don't want in my backyard. I live very close to 103rd. I don't want you in my backyard. I don't want you crawling through my yard going to the train station. It's an issue for me. Okay?

Another thing that disturbs me is that through these vibrations, they damage the foundations to your homes. Many people who live close to this train have cracked foundations. CTA is going to come, they're going to build their

little train, you're going to go ahead about your business, I'm going to be stuck with damage, more home damage. Okay? I don't want it. These are just issues that concern me.

You're only going to build on one side of the track. Many people are thinking that they're going to get money through eminent domain. You're going to come in and pay them and they're going to move off happy. But there's two sides of that track. When you build that train, elevate it, it's going to be running through some of your bedrooms. That train is up over your head. Only one side is going to get paid. The other people are going to get stuck. And I think we need to keep this in mind. This is not about money. This is about where we live and about our comfort. Thank you.

MS. WALLACE: Are there other folks who would like to comment this evening? Okay. We're going to be available until 8 o'clock to take comment if additional people come in or you decide you want to comment.

For those of you who don't, let me go over a couple of things. If you want to leave, you can leave. If you want to spend some more time at the board, you are welcome to do that.

So, again, tonight the verbal comments were reported by our court reporter. There's other ways that you can submit your comments. So you can write comments and place it in the box over here. You're welcome also to mail your comments to the contact and contact information listed here. You can e-mail or you can fax your comments.

We also encourage you to keep updated on what's going on with the project, and a couple ways to do that, one is to regularly go to the Web site that you see here on the screen or you can join the e-mail mailing list by writing to Darud.

So thank you so much for your input this evening. We appreciate it. And, again, we'll be available for comment until 8.

(Whereupon, there were no further speakers.)

(Public Hearing adjourned at 8 o'clock p.m.)

STATE OF ILLINOIS)
) SS:
COUNTY OF C O O K)

ANNA M. MORALES, being first duly sworn, On oath says that she is a court reporter doing business in the City of Chicago; and that she reported in shorthand the proceedings of said Public Hearing, and that the foregoing is a true and correct transcript of her shorthand notes so taken as aforesaid, and contains the proceedings given at said Public Hearing.

____

Certified Shorthand Reporter

CHICAGO TRANSIT AUTHORITY
PUBLIC HEARING
"RED LINE EXTENSION
CONNECTING 95TH STREET STATION TO 130TH STREET"
September 24, 2009

STENOGRAPHIC REPORT OF PROCEEDINGS

had in the above-entitled matter held at the Woodson Regional Chicago Public Library, 9525 South Halsted Street, Chicago, Illinois, commencing at 6:48 o'clock p.m.

PRESENTERS:
MR. DARUD AKBAR, Government & Community Relations Officer, Chicago Transit Authority
MR. JEFFREY BUSBY, General Manager, Strategic Planning, Chicago Transit Authority
MS. SARAH LAYTON WALLACE, Moderator

Reported by: Anna M. Morales, CSR, RMR
License No.: 084-002854

(Whereupon, the following proceedings commenced at 6:48 o'clock p.m.)

MR. AKBAR: Good evening, everyone. My name is Darud Akbar. I'm with the Government & Community Relations Department at the Chicago Transit Authority. I want to welcome and thank everyone for coming to the Red Line -- this is actually our second public scoping meeting. So I want to thank you for coming out this evening.

I'm going to turn things over to Sarah. Sarah is going to talk to us about tonight's agenda, and then we're going to go into a brief presentation and come back to Sarah to explain what our rules and regulations are for this evening. So thank you once again.

MS. WALLACE: Great. Good evening. Before we get started, I want to check, is there anybody in need of Spanish translation? Okay. So we have that service if anyone is in need of that.

As you see from our agenda this evening, we've just completed the open house portion of the meeting. In just a moment, I'm going to turn it over to Jeff Busby, and Jeff is going to give a

brief presentation on the project, and then we're going to go into the formal public comment period of the meeting. And right before we do that, I will walk through some guidelines. We are going to be limiting comments to three minutes. So be thinking about that now as you are composing your thoughts, those of you that are speakers. I will go over some other things to get us on track. After the public comment period, then we'll go over some next steps and adjourn the meeting.

And I do want to note that if we conclude before 8 o'clock, you will be, you know, free to leave if you want at that time, but we are going to stay here and available for anyone who arrives and still wants to comment. So we'll remain here until 8 o'clock for sure.

So with that, Jeff will provide a presentation.

MR. BUSBY: Hi. Thanks for coming out again. I'm Jeff Busby. I work in the Planning Department at CTA.

I wanted to give you a background on where we are on the Red Line Extension. Really, the idea for bringing the Red Line further south has been

around for a very long time. In the 1960s, when they were building the freeways, they left space for a Red Line Extension; and, recently -- and this is not a new problem -- but recently the CTA has started a study called an Alternatives Analysis, and that study is intended to look at a whole range of transit options to try to improve some of the transportation problems south of 95th Street.

Many of you are aware, if you take CTA, that the 95th Street station is very crowded. There's lots of buses going there and there's lots of delays associated with getting there. So people have very long trips sometimes to get to the existing station.

So what we could accomplish with an extension of the Red Line is shorter and faster trips for people to get to CTA services as well as solving some of those congestion problems at the 95th Street station.

As I mentioned, we started this study in 2006. We looked at a whole range of options and identified a couple of options which we're going to talk about tonight which we're advancing into this next step. Part of the Alternatives Analysis

included public involvement. So we've been to Woodson Regional a couple times and actually had a series of other meetings -- three rounds of meetings with six total meetings prior to this leading up to tonight's recommendation.

The local -- I'm sorry. The Alternatives Analysis ended in August when the Chicago Transit Board adopted what's called a Locally Preferred Alternative. It's the one option that, resulting from the study, looks to be best at solving the problems we've identified, and that is an extension of the Red Line, following or running next to the Union Pacific Railroad at about 400 west. I will show you a map in a moment.

So tonight's meeting starts the

Environmental Impact Statement which very much relies on the previous work we completed in the Alternatives Analysis.

So what's an Environmental Impact Statement? The CTA is hoping to use -- to ask for federal money to pay for a portion of the extension; and any time you use federal money for a large project, you have to comply with the National Environmental Policy Act. And the National

Environmental Policy Act, or NEPA, requires that the CTA in a public setting identify and evaluate the potential impacts of both building an extension and operating an extension for the Red Line.

And the idea here is to help us make decisions about the environmental impacts and where -- and they're both positive and negative environmental impacts -- but where we identify negative environmental impacts, come up with potential ways to mitigate those, make them less adverse.

This is a schedule which gives you an idea of where we're headed. As I mentioned, we're starting the environmental process tonight with these scoping meetings. We had a meeting, very same presentation, a couple of days ago on the same subject. We're receiving input on what we should study in this environmental process.

We'll come back to you next year with the results of the environmental process in what's called a draft EIS, a draft Environmental Impact Study, and that's your opportunity to review both the impacts we've identified and what we proposed to mitigate them.

At the same time, we're going to be asking the federal government for additional funds and permission to start more detailed engineering. That's called preliminary engineering on this map. We think that process would take about two years. And so by 2013, we would need to have identified all of the money, both the federal and the nonfederal share, to fund the extension, and we would need federal permission to begin the final design.

2013 would be the year in which we would start construction. We show a three-year construction period; and the Red Line Extension opening for operation in 2016.

It's important to point out that this is our targeted schedule. It's not something we can guarantee. There's a couple of reasons for that. As I mentioned, we rely on additional funding from Washington, D.C., to continue these studies, and we also rely on permission from the Federal Transit Administration. But we think this is an achievable target and we're going to pursue it.

We're going to study alternatives, project alternatives in the Environmental Impact Study.

This is a list of them. The first alternative is a No-Build Alternative. It's really important as a point of comparison. What this alternative is is what would be the impact to the environment of not doing anything?

We're also going to study what's called a Transportation System Management Alternative. That's a very long name, but what it means is a lower cost alternative to building a rail extension. In this case, it would be an express bus service with limited stops; some technology to help speed the buses down the road through giving them priority to traffic signals; and a pretty significant expansion of the station at 95th Street to make the buses in that corridor work better as well as accommodate new buses in this alternative.

We also will be studying what's called the Locally Preferred Alternative, an extension of the Red Line following the Union Pacific rail right-of-way, an elevated extension, I should point out.

And we have identified a fourth alternative which is also an extension of the Red Line but follows Halsted Street.

Let me show you a map of the Locally Preferred Alternative. So starting with the map on the left, the Red Line would run south from 95th Street in the middle of the I-57 highway, and then it would climb up out of the highway and run elevated at about 400 West Eggelston Avenue and would travel next to the Union Pacific rail right-of-way all the way south to 130th. It would make four stops. The stops are at 103rd, 111th, 115th and Michigan, and 130th and the Bishop Ford Expressway close to Altgeld Gardens.

We're also showing two options here, the reason there's two dotted lines. We have a choice of being on the east or the west side of the freight rail tracks.

The Halsted alternative is a similar link. It runs about a half mile to the west. So, again, the train would use the median of the expressway, I-57, traveling south. When it gets to Halsted Street, it would go into the air and run down the middle of Halsted Street, above the street. It would make four stops again at 103rd, 111th, and 119th, and at Vermont which is about 127th.

This is an elevated structure. The

columns to support the elevated structure would be made of concrete most likely and be placed in the median of Halsted Street.

So those are our four alternatives. We are interested in your comments tonight. I'm going to turn things over to Sarah to give you some instructions on how we're going to receive those.

MS. WALLACE: Okay. It's time for the comment portion of our meeting; and, as promised, I want to go over a few things with you.

Because we're working on this environmental study, there are sections that we need to write and we need your input in order to do that. So we would ask you to focus your comments tonight on these areas: The purpose and need for the project; the proposed alternatives; the proposed environmental issues to be examined; and the potential environmental effects and the mitigation measures to be considered. So those are the areas we specifically need your input.

Some guidelines. If you haven't done so already, please submit a speaker card, and we can collect those and they will be brought up front. I'm going to call speakers by name. I will

probably call several at a time so that you can get lined up and prepared to speak. Here's the mic you will use, the standing mic on that side.

The first thing you will want to do is restate your name. I may not get the pronunciation right, and we want to make sure that we have that right for the record. We've got a court reporter here that is going to be documenting your comments.

You'll have three minutes to comment. The good news is you're not going to have to try to keep track of where you are in that three minutes. We have this stoplight here that is going to assist you in that process. So once you start, we'll turn that on and the green light will turn on, and that lets you know that your three minutes are starting. Once you have 30 seconds left, the light will go yellow. And once you have 15 seconds left, the light will be flashing yellow. So that kind of helps you gauge wrapping up your comment. And once it turns red, that means your comment period is up.

So we would like everyone to keep to the three minutes so that we can keep things moving and we're hearing from everyone who wants to speak tonight.

Because we're here tonight to hear from you -- that's the whole purpose of the meeting is to hear your comments -- CTA is not going to be responding to your comments tonight. We're going to be listening. We're going to be documenting and all your comments will be documented in the report.

So we would ask you to -- there are two folks from the CTA here. We would ask you to direct your comments to them, but do, again, keep an eye on the light.

So our first speakers up: Thomas Brown,

Senior, followed by Rob Kelsey, and I believe this is McClellan. So are those folks here?

Yes. And I do want to remind everybody, if you haven't done so already, turn off cell phones or pagers or at least change the setting to vibrate so that we don't cut into people's time that are speaking.

Could Thomas Brown, Senior, please approach the microphone? Go ahead.

MR. BROWN: Again, my name is Thomas Brown, Senior. I live directly in the area where the proposed train will be built and constructed. My comments center around myself as well as my

neighbors. I'm right on 325 West 99th Place, directly in front of Wendell Smith Park, and most of my neighbors are senior citizens.

So in the environmental study, I would like for you all to take into consideration the fact that a lot of the homeowners are senior citizens and the fact that we would want -- we don't want to be -- they don't want to be disrupted unduly, and just to take those factors into consideration in the environmental study, as well as Wendell Smith Park is a park that is utilized, and also to look at, in addition to what you're already studying, the noise impact and the safety impact of that park.

Another comment I would like to make is

the fact that the proposed plan going down Eggelston Avenue, it's very residential, and there's definitely some concern about having a commuter line directly through the residential corridor that's there. Those are my comments. Thank you.

MS. WALLACE: Thank you. Rob Kelsey, and then McClellan, and then Dorothy Boyd.

MR. KELSEY: Good evening, everyone. My name

is Robert Kelsey. I'm a Chicago Public School counselor. I work in the West Pullman area, Gompers Fine Arts Option School.

As a counselor, I fill out numerous applications, help students fill out applications for high school. And being an educator, I also recognize that a number of students don't get downtown unless it's a field trip a lot of times. So this new Red Line or -- I'm not sure exactly what this -- Red Line Extension will be helpful in a lot of aspects.

I heard the speaker before me. He had a lot of excellent concerns there, but I think there's also some advantages for some of our younger people. So that's my comment. Thank you.

MS. WALLACE: Okay. McClellan? Could you state your name and speak directly into the mic?

MS. McCLELLAN: Gina McClellan. I have three concerns. The lighting around the tracks that are going to be made, and I was hoping that we could be able to see some kind of visual, what this was going to look like, but for security reasons, will it become dark like the El stations down by Lake Street? That was a question.

The construction time, how long is this going to take, 2016? And then once you start, what does it do to me? Is it going to be three, four years where I'm going to be inconvenienced where I can't even get into my home since I'm right off of Halsted Street.

I'm concerned about the noise level that I will have to live with the trains going constantly. I'm concerned that the parking lot that you're going to put there, when it's filled, that I can't park on my block because I'm one block off of Halsted. So are those things being taken into consideration, too?

MS. WALLACE: Okay. Dorothy Boyd, Lou Turner, and Ben Christy.

MS. BOYD: My name is Dorothy Boyd. My concern is the families on Eggelston Street; I need to know if they're going to be relocated. We don't want to be relocated.

I want to know how the property value, how will that affect us? And I want to know about the incoming traffic that this is going to cause.

There are a lot of seniors in our area,

and we do not want to move. We already have that

train that goes down Eggelston. It keeps up a lot of noise. We need another batch of noise like we need two heads. I'm not seeing this.

MS. WALLACE: Lou Turner, Ben Christy, and John Paul Jones.

MR. TURNER: Hello. My name is Lou Turner. I'm the Public Policy Director for Developing Communities Project which is a project for the last six years.

My concern is really just singular tonight -- I spoke on Tuesday -- and that's the impact, the positive impact, the collateral benefits that this project could have for the residents in Altgeld Gardens, 130th Street, which is where the Red Line Extension would end.

Back in 2005, we did a study which showed that of all the households in this area, one out of four of these households don't have or don't own an automobile. That's the same as the 9th Ward in New Orleans; and were the same kind of catastrophe to hit, we would have the same kind of crisis of this community that we saw in New Orleans at the time of Katrina.

I think that given the history of

transportation planning, in big cities like Chicago, where very often minority communities have been more the victim than the beneficiary of transportation planning, this is an opportunity and, particularly out of Altgeld Gardens, to really provide access to one of the most isolated communities in the city. This is an opportunity to use transportation planning to provide benefit rather than victimization of a minority community.

So I would ask that the Environmental Impact Statement look at the environmental impacts that would be for the residents at Altgeld Gardens; and the fact that Altgeld Gardens is an area that has high toxicity; a lot of waste sites surround the area. It is one of the highest levels of cancers in the city amongst any group of people.

And so with the construction of this Red Line Extension, it seems to me that one of the key environmental impact factors or areas of analysis should be the impact that the construction of the Red Line Extension would have on mitigating the toxic degradation out at Altgeld Gardens and the opportunities that would provide for a very isolated community.

So, again, I urge that CTA really focus singularly on Altgeld Gardens and really push the LPA, the Locally Preferred Alternative, which is the one that would go to 130th Street. None of the impacts that are mentioned here, a number that others can think of were mentioned, would really be mitigated by the other alternatives. Only the alternatives, the LPA going down to 130th Street near Altgeld Gardens would really impact favorably these communities in these areas. Thank you.

MS. WALLACE: Ben Christy, then John Paul Jones, then Donald Miller.

MR. CHRISTY: Yes. I'm Ben Christy. I don't live in the area. Instead, I use the Red Line to get to the area. In fact, I didn't go to the other impact study because I couldn't -- you know, I'm sure there's a bus that gets by there; but 95th, 95th station, what bus to use and everything, I just didn't do it. So that's why I'm here today instead of Tuesday.

I actually do live right next to the Red Line by Berwyn. Come on by and say hi. The noise of the train, hey, it's a train. When I grew up, I lived a block away from the train. Now I

live just across the alley from a train. Yes, it's a noise. You get used to it. So don't worry too much about that.

The thing I'm worried about is the TV reception every time a train goes by. With this new better TV? No way. Anyway, that has no effect with this group.

What I see on the alternatives here is

that there are people in the Halsted area that don't want their train down Halsted; but, if I wanted to get to Halsted there, I would use the train to get to your businesses.

The plan -- the LPA, which is not the Halsted, does have the positive that it could help bring people in from out of state if we have enough parking, park-and-ride spaces. So I would expect you to decide how many park-and-rides you want and then triple it.

Other than that, we need more trains. For years, we've needed more trains. Some people will be discomforted by the building of them, but don't let that keep us from plowing ahead. They have said for years that they expected to extend this, but they haven't.

MS. WALLACE: 30 seconds.

MR. CHRISTY: So please give us -- give us our ride, extend it as much as possible. Thank you.

MS. WALLACE: John Paul Jones, and Donald Miller, and Thomas Jundanian.

MR. JONES: I'm John Paul Jones. I'm an organizer for the far south region, also a resident in the Englewood District. For 50 years, I've been involved in organizing and urban planning, and I have seen a significant value in the Union Pacific Railroad corridor. And if you look at the far south region, they have always had a challenge of public and private -- the investment. That Union Pacific corridor provides a venue where you can begin to introduce to the community, a very urban community, a whole new set of ideas and investment around transit and developing that and turn that corridor, provide venues so that the end of the station can add value to the property, at the same time, give greater access to the greater part of Chicago.

Also, from Englewood, we've always had challenges with getting transportation to jobs; and with the Union Pacific Railroad corridor, again,

you can begin to hire a lot more people, connect with the south suburban communities that are going to have job growth, much more than you get in Chicago during the economic downturn.

But, also, the environmental impact piece that we're concerned about and want to speak to tonight, that corridor, much like rail corridors throughout my community of Englewood, areas where there's always a decline of public investment and through the years you had accumulation of blight, if you look at that corridor, you look at a corridor that is over ran with many forestries now. There's open space that's been denied any real attention for many, many decades.

So it's an opportunity for you, the city and the community, to kind of think through how do we use these corridors more wisely and strategically to improve our community, encourage reinvestment, and increase the travel time for us to get to work or recreation and other venues.

So it's a real plus for the region more than a negative. I would want to encourage that more -- supporting what the person said from 95th Street corridor. Certainly, we want to be

careful and considerate of the residential impacts. We want to be very careful of the impact to the brown field districts, but also opportune as possible relative to the eroding issues. We certainly want to be helping the community anticipate and remediate any particular eroding problems that may occur in some of these wooded areas that have been neglected for 30 or 40 years.

So we want to use that opportunity to work more closely with any governmental plan to figure out ways to impact the environmental impact on the roads maybe through this reconstruction strategy. Thank you.

MS. WALLACE: Donald Miller, Thomas Jundanian, and Lori Baldwin.

MR. MILLER: Thank you. My name is Donald Miller. I heard a lot of complaints -- concerns, rather, about the environment and the noise and how the train would sound coming through the communities. But this is dealing with rail. I think we should take a model from some of the rails that run on the north side. You know, you are going to have these type of problems.

What we are trying to do is get a system

that would fit our community, that would be accessible for us to get in and out of our community efficiently and safely. And I would think the transit people should look at the highest concentration of the population, where could -- the highest volume of population and let the train be used in that corridor, in that area where the population would be affected the most.

And I think it's an excellent idea because the south side of Chicago needs a little bit more of a public system in our community, and I'm for it, and I hope that it happens very soon. Thank you.

MS. WALLACE: Thomas Jundanian, Lori Baldwin, and then Bradena Thomas.

MR. JUNDANIAN: Good evening. My name is Thomas Keith Jundanian. I'm the third generation owner/operator of an 85-year-old Roseland-based business. I'm a Roseland boy, born and raised.

I have a different perspective on this than maybe some, having grown up in this community and having our family business based here all the time, all those years. I'm not 85, but -- don't rush me.

On the heels of Donald's comments, I too kind of feel like the south side of the city has been a very neglected location in our beautiful metropolis, and it would be -- I think either one of these plans are going to be a positive thing for us. I'm not qualified to say which one is going to be better than the other.

Initially, I was surprised to find out that the LPA was the preferred alternative with more public support because it seems that it's going to disrupt some lives, some memories, some households if it occurs on the east side of the tracks. If it's on the west side of the tracks, I know from my own childhood and playing in some of those empty lots, there's more industry over there.

My business is located on Halsted Street at 116th Street. It's the K. A. Pridjian rug store, that big old rug store there on Halsted Street. So one of the concerns that I would have as a business owner having seen long construction projects mean the demise of some businesses that have been interrupted with their traffic flow.

What have previous construction projects like this and studies that have gone on indicated with those businesses? How are they impacted? I have got nothing to base this on. When this trestle goes up on Halsted Street, what is it going to look like? It's probably going to be concrete. Jack and I were talking outside. Would it be something that's attractive? Will the elevated tracks all the way down Halsted Street create a lot of dark shadows, a lot of shadowing areas where people can congregate and do things that are not in the best interest of the community? Will the trestle be placed where garbage and other debris and litter accumulate? Will it be a blight to Halsted Street?

As far as bringing people down Halsted Street, yeah, it will. The stations are going to be -- you know, 111th and 119th are a mile apart. So that's still quite a ways to try to get to one of the businesses. I was chatting with a lady who also has a building at 108th and Halsted. That kind of encapsulates some of my concerns. I think either one of these things are a positive thing for the south side, whichever is best for our city and our community. Thank you.

MS. WALLACE: Lori Baldwin, and then

Bradena Thomas, and JoAnne Guillemette.

MS. BALDWIN: I am Lori Baldwin, and I'm representing the West Chatham community and the Park Advisory Council of that area, but I'm also part of the Red Line Oversight Committee.

I would just like to interject that I'm thanking the FTA for requiring this public hearing as well as CTA for selecting the Union Pacific Railroad as the locally preferred route, particularly, because this route will give the greatest need and take care of a lot of the needs of disparity that we have had in that community for a very, very long time on the south side of Chicago, to give us more transportation options; as well as we have had the opportunity on September 18th, some of the members of DCP Red Line Oversight Committee toured the entire Union Pacific Railroad, and we examined the physical and environmental conditions and the impact along the corridor, and we found that there are documented parkways, homes, small businesses, and tracks of forestry along that route.

However, most of that route, as has been stated before, is open space, and so this would be

a great asset to the community. Also, because of the need for us to have transportation in this area, and it's been such a long, long time, this is the area that I think the city should be focusing on much more than some of the other options.

We also looked at the environmental impact, and this provided greater access to a number of residents. And also this route had less environmental impacts in terms of conditions and areas and the taking of homes.

So I, again, just want to encourage you and let you know that the community will benefit from this new development. Thank you.

MS. WALLACE: Bradena Thomas and then JoAnne Guillemette.

MS. THOMAS: My name is Bradena Thomas. I am concerned as a senior living in the area. In fact, I'm right at 97th and LaSalle which is where 94 and 57 split.

My concern is whether or not there would be an elevated track right behind me or whether it's going to be recessed?

Also I have a business, a building on Halsted at 108th. Now is this going to be an

elevated structure which would darken, you know, the area? So that is my concern for both. But I definitely wouldn't want an elevated area looking out of my backyard. That's my concern.

They do need transportation to the south because 95th is extremely congested, and I realize that; but, hopefully, I wouldn't want to have to move. Thank you.

MS. WALLACE: JoAnne Guillemette.

MS. GUILLEMETTE: Good evening. My concerns have been previously stated by several others, but to say it as succinctly as possible, my concern would be for the increased foot and vehicle traffic; the increased debris; as well as the increased crimes that would follow a structure like this.

I have lived near the Red Line and I know that it also -- because of the activity and vibration of the ground, it increases the presence of termites and other rodents. And when you're dealing with termites, you're talking about the destruction of homes; and, to prevent it, homeowners would incur tremendous expense on a yearly basis to ward off the termites. So that's

an extreme concern for me. And I would hold that for other homeowners as well.

Further, who would bear the maintenance expense of this extension? Because the homeowners nearest the tracks, are their property taxes going to increase? Is their property value going to go down? And what mechanisms are being put in place to address these issues? Because it's my feeling that you're going to go ahead with this in spite of what we say. And especially if we should be successful with our bid for the Olympics, this is going to be a major development. It's going to be pressed forward, and the residents need to know the true impact on them in terms of dollars and cents. Thank you.

MS. WALLACE: Could you please restate your name for the record?

MS. GUILLEMETTE: JoAnne Guillemette.

MS. WALLACE: Thank you. Are there any other speaker cards? Gwendolyn Rice and then Barry Finkel.

MS. RICE: My name is Gwendolyn Rice, and I work for Developing Communities Project which has been working with this issue for six years.

MS. WALLACE: Could you get little closer to the mic, please? Thank you.

MS. RICE: But I think I'm coming from a more personal point of view, because all the other issues have been talked about.

For the last I won't say how many years of my working life, I have worked in one way or another with residents of Altgeld Gardens as a counselor or as a recreation worker or just simply knowing children who live there or adults who live there. And I remember and I just -- my mind was refreshed on the way in when one of the workers outside mentioned that she had lived in Altgeld Gardens and she remembered having to take the PACE bus into Chicago and then taking a CTA bus and then finally getting to the Red Line.

But I remember also having to take kids home at night because the transportation was not available for the kids to take advantage of the amenities in Chicago. I remember many times having to do that, even in the afternoon having to do that, which I didn't mind doing because I could do it. But their parents may not have always been able to do that, provide the access.

This project is going to provide access to what is a transit disadvantaged community. We are kind of in competition with other lines throughout Chicago that are going beyond the city limits. On the south side, there's nothing that goes to the city limits. And I really say that we must take that Locally Preferred Alternative through to 130th Street. I don't think there's an alternative. That's the only option.

I don't know what else to say, but I just am passionate about the fact that you're going to Altgeld Gardens, an isolated community that is not outside of Chicago. It is in the Riverdale community area of Chicago -- not in Riverdale, Illinois -- and it's important that the CTA go at least to the city limits to serve its constituents. It will also serve people who live in the suburbs who commute to Chicago who will have a chance to park and ride and ride downtown and eliminate a lot of pollution.

Again, I just want to speak on behalf of the residents of Altgeld. I don't live there, but I have been there many times. I have worked there, and it can make a big difference in providing an opportunity for people to have access, to be able to be exposed to the larger community. As the teacher said earlier, people generally who live in transit deserts do not get out and understand what's going, and it would cut down on violence and cut down on a lot of other factors. Thank you.

MS. WALLACE: Thank you. Barry Finkel. If there is anybody else who wishes to speak, send your speaker card in.

MR. FINKEL: My name is Barry Finkel. I have been a resident of the Beverly area, 103rd and Western, since 1951, and I take the Red Line downtown at least once a week. I see at 95th Street station lots of PACE buses coming in from the south suburbs, and I think an extension of the Red Line would help in getting those buses -- to get the train and not have to come all the way to 95th Street to service those people.

We're talking here about public transportation, and I see in all the alternatives, there's talk of park-and-ride. It seems to me, and I have sort of a disagreement with some of the speakers, but it seems to me that if we have good feeder bus lines into the stations, there's no need

to have a large park-and-ride facility at each station. Maybe at the farthest station. But I don't see really a need, for example, a big park-and-ride station at 103rd and Halsted. There's no room there for a park-and-ride, and I don't see any need for it. Thank you.

MS. WALLACE: Alice Harper-Jones.

REV. HARPER-JONES: Good afternoon. I am Reverend Alice Harper Jones. I'm the Dean of Cluster 6 of Chicago Metropolitan Association of the United Church of Christ and represent about 13 churches on the south side. And I'm also a member of the Chicago State University Alumni Board, and so I'm speaking, commenting on two things.

The first one is our churches. There are people who live on the far south side who will have better access to the church, being able to get there and to get back home again, especially those who do not have cars or sometimes you wake up and the car is not working. So I think that would be positive for those people.

Also, from Chicago State University. I'm thinking in terms of our academic program that we

have there, it would be better accessible to many, many people; and those young people that we're trying to attract to the university would certainly be able to have access to and from the university. Especially if a person is working, they can come in the evening to attend the university and be able to go back home again without having to, you know, wait for buses and everything on 95th Street because Chicago State is very accessible to 95th Street right there.

My concern is that -- one of the proposals I looked at, the Halsted Street would still -- there's still a gap it seems like from Halsted Street all the way to the Altgeld Garden projects there. So in constructing, you know, that Halsted Street project -- and I'm kind of leaning toward Halsted because you're not destroying homes. But if you can, you know, think in terms of your construction of getting that closer to the people in the project, then they don't have to take a bus from Halsted to where their home is so that they would be able to have access to the university and to the churches.

Again, as I say, I prefer the Halsted one

because then we're not destroying homes. People have lived in this community -- I live in the community. I know the value of my home, and I don't believe that if you give me fair value that it will be -- you know, it would really come to where I think that my home should be priced at because of the improvements I have made.

So that should be a consideration especially when we think about seniors who have been there for years and who take pride in their home and their neighborhoods and their friends around there, that to destroy that community, you know, with the train is not a preferred option. Thank you.

MS. WALLACE: William Warren. Please restate your name.

MR. WARREN: Good evening. It's William Warren, W-a-r-r-e-n. I'm here representing the Vernon Park Community Council. I'm president of the Vernon Park Community Council. We live in the area as well. I'm also a member of the Oversight Committee who had the opportunity to do a tour of the actual site last week -- actually, this week.

And, you know, we feel that by all means that the Red Line should be extended to the south side. We're in support of it. We think it would be a positive move in every respect. A lot of comments that were made earlier in reference to the rodent issues, the way the tracks are going to look, the lighting issues, the garbage and that sort of thing, of course, we're very concerned about those issues, but we feel very in support of bringing this extension to the south side. Thank you very much.

MS. WALLACE: Are there other speakers? Okay.

Again, we're going to be here until

8 o'clock if others arrive and still want to speak. I did want to mention that scoping comments are due by October 27th. So in addition to speaking tonight, you have an opportunity to write comments and place it in the box outside. You have an opportunity to mail in comments, fax or e-mail your comments. And we'll make sure this is back up for your reference.

We also encourage you to stay involved. You can visit this Web site. You can also get on an e-mail list so that you can receive updates

through e-mail and through Darud, if you'll e-mail him.

Any other comments at this time? Have you filled out a card, sir? Right now, we're taking public comment. If you want to fill out a speaker card and come to the mic --

MR. TURNER: I did.

MS. WALLACE: Well, three minutes is the rule. Are there others that want to speak?

We'll stick around. You are welcome to spend some more time out at the boards if you like or you are welcome to head on out, but we'll be here until 8 o'clock.

(Off the record at 7:34 p.m.)

(On the record at 7:46 p.m.)

MS. WALLACE: Johnnie Burke. Please restate your name and speak directly into the mic.

MS. BURKE: Johnnie Burke, and I'm a member of the 96th and Prairie Block Club. I had two questions. One, how many residences would be disturbed with the park-and-ride construction? And also, in the entire project, how many residences would be destroyed? How many people would be removed from the community? Thank you.

(Whereupon, there were no
further speakers.)
(Public Hearing adjourned at
8 o'clock p.m.)

STATE OF ILLINOIS)
) SS:
COUNTY OF C O O K)

ANNA M. MORALES, being first duly sworn, On oath says that she is a court reporter doing business in the City of Chicago; and that she reported in shorthand the proceedings of said Public Hearing, and that the foregoing is a true and correct transcript of her shorthand notes so taken as aforesaid, and contains the proceedings given at said Public Hearing.

____
Certified Shorthand Reporter

RS-52

Cheever, Kim

From: Red Extension [redextension@transitchicago.com]
Sent: Wednesday, November 04, 2009 4:47 PM
To: Peters, Melissa
Cc: Kornblatt, Helene B.
Subject: FW: Request for Comments -- Department of Streets and Sanitation - Proposed Red Line Expansion

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From: StreetsAndSan [streetsandsan@cityofchicago.org]
Sent: Monday, November 02, 2009 2:39 PM
To: Red Extension
Cc: Ernst, Jonathan
Subject: Request for Comments -- Department of Streets and Sanitation - Proposed Red Line Expansion

Mr. Jeffrey Busby
General Manager, Strategic Planning
Chicago Transit Authority
RedExtension@transitchicago.com
OrangeExtension@transitchicago.com

Dear Mr. Busby:

I am writing in response to your request for comments regarding the environmental reviews that will take place pertinent to the potential expansions of the Red and Orange Lines of the Chicago Transit Authority.

For both projects, the City of Chicago's Department of Streets and Sanitation (DSS) would like the review committee to consider the following comments and concerns regarding the expansions during the environmental review process:

1. The location of any street lights that will need to be removed or relocated as a result of the new lines;
2. An analysis of the affect these elevated concrete supports will have on street level lighting and any steps that will be taken to supplement street lighting in these areas, i.e. CTA-provided lighting on the underside of the elevated line;
3. The location of any public way trees that will need to be removed as a result of the new lines or the construction activity and a replacement strategy for those lost trees;
4. The level of assistance the CTA expects to request from DSS for services such as street "No Parking" postings and the towing of illegally parked vehicles during the construction phase of these projects;
5. The creation of a rodent abatement plan for the affected land which includes required sign-offs by the DSS's Bureau of Rodent Control prior to construction;
6. A plan for the proper storage, removal and recycling of all construction and demolition debris in accordance with all City of Chicago ordinances; and
7. A commitment to having platform level recycling containers and space at street level for the storage of recyclables prior to being separately collected from the garbage.

Thank you for your consideration of these issues

Sincerely,
(SIGNED)
Thomas G. Byrne

Commissioner
Department of Streets and Sanitation
TGB:je:lps

EMAIL/Busby.CTA.email.environmental review

cc: Jonathan Ernst

RS-53

City of Chicago
Richard M. Daley, Mayor

Department of Environment

Suzanne Malec-McKenna
Commissioner

Twenty-fifth Floor
30 North LaSalle Street
Chicago, Illinois 60602-2575
(312) 744-7606 (Voice)
(312) 744-6451 (FAX)
(312) 744-3586 (TTY)
http://www.cityofchicago.org

October 30, 2009

Mr. Richard L. Rodriguez, President
Mr. Jeffrey Busby, General Manager, Strategic Planning
Chicago Transit Authority
P.O. Box 7602
Chicago, IL 60680-7602

Dear Messrs. Rodriguez and Busby:

The Department of Environment (DOE) appreciates the opportunity to comment on the proposed extension of the Chicago Transit Authority (CTA) Red and Orange Lines. We are supportive of both projects and the increased service to currently under-supported communities.

Three sections follow; the first is a list that applies to both projects, the second focuses on the Red Line, and the third on the Orange Line.

BOTH PROJECTS
Please evaluate:

- Recycling opportunities at stations and parking areas
- Alternative energy options including solar, solar thermal, wind and more to provide electricity and heating / cooling where needed
- Opportunities to install solar arrays (on rooftops, large expanses, etc.) to return energy to the grid
- Reduction of light pollution through the use of downward-facing lighting
- Compliance with the city's stormwater ordinance, including using bioswales, rain barrels and other methods to reduce the first flush of water into the sewer system
- Native landscapes requiring little to no irrigation
- Green roofs on any facilities
- Bicycle access and parking
- Permeable paving for the Park-N-Ride areas
- Preferred parking for fuel-efficient vehicles
- Charging stations for electric vehicles
- The City's new Soil and Rubble Reuse Intergovernmental Agreement applicability – extensive reuse of materials during demolition and construction could be possible
- Impacts to wildlife or other important natural resources

RED LINE

DOE will be constructing the Ford Calumet Environmental Center, a 38,000 square foot environmental education facility near 130th and Torrence in Chicago. We are supportive of a joint Metra / CTA station at 115th Street and are very interested in the possibility of an intermodal connection between NicTD/South Shore Line and CTA at 130th Street. These joint stations would allow residents from Indiana and the suburbs to easily gain access to our Center. We would also invite discussion around a bus turnaround at the Center for the 130th and Torrence buses or other buses with similar routes.

ORANGE LINE

Of particular concern to DOE are issues relating to neighborhood compatibility and environmental justice, primarily in relation to historical and/or privately owned parcels that may need to be acquired for the project. DOE would also be interested in a detailed evaluation of noise and vibration, including additive effects associated with Midway airport operations, to determine how such issues will affect neighboring properties.

We offer our support and assistance with any of our comments as appropriate. Thank you for the opportunity to comment on these important projects.

Sincerely,

Suzanne Malec-McKenna
Commissioner

cc: Nicole Kamins
Kevin Laberge

SMM/NRWQ/nlk

KS-54

Red Line Extension

Connecting 95th Street Station to 130th Street

cta

The purpose of the scoping process is to identify public and agency concerns early in the environmental process, define the issues and alternatives that will be examined in the Environmental Impact Statement (EIS) and facilitate an efficient EIS preparation process. Please PRINT.

Name: Helen Rockingham
Organization: Home Owner Title:
Address: 11340 S. Princeton Ave.
City: Chicago, State: Il Zip: 60628
Phone: 773-821-0208 E-mail: helen_rockingham@att.net

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

Even though there was one other option presented at the Sept. 22nd, Scoping Mee
- cant see the purpose being fulfilled using it or the HRT Alternative route. Your goals as
stated on page 11 appears to be more efficiently implimented by the Locally Preferred Alt
West and South side of the exsisting track. That being said, What is the distance fro
the track of property in need of occupancy removal? Where on the time-line would
those individuals be contacted? How would these persons be contacted? Who (what
division of Management) will be responsible for those notifications? Will the Engineers
be aware + take under consideration the ability or inability of homes that structually could
not withstand Ⓐ the building/Construction affects (the shifting of landscape (Consequently home structures
Ⓑ upon opening the rail-traffic.
I think the age of the structures must be taken into consideration not only
distance.
I commend you on your objectives - knowing how very much this new system
is needed and I hope an open and fair Communication Line will Continue throughout the Project at

Scoping comments may be submitted via mail, e-mail, fax or the project website with attention to: Jeffrey Busby, General Manager, Strategic Planning, Chicago Transit Authority, P.O. Box 7602, Chicago, IL 60680-7602. Fax: (312)681-4297, Email: RedExtension@transitchicago.com, Website: www.transitchicago.com/RedEIS, Customer Information: 1-888-YOUR-CTA (1-888-968-7282), Hearing & Speech Impaired: 1-888-CTA-TTY1 (1-888-282-6891), Transit Information: 836-7000 from any local area code RTA TTY: 312-836-4949

RS-55

From: Red Extension [redextension@transitchicago.com]
Sent: Thursday, October 29, 2009 8:35 AM
To: Peters, Melissa
Cc: Kornblatt, Helene B.
Subject: FW:

From: Schneider, Alexandra [ASCHNE11@depaul.edu]
Sent: Wednesday, October 28, 2009 3:49 PM
To: Red Extension
Subject:

I support the Red Line Extension but No to the circle line!

RS-56

Little Village Environmental Justice Organization
La Organización de Justicia Ambiental de la Villita

October 27, 2009

Jeffrey Busby
General Manager, Strategic Planning
Chicago Transit Authority
P.O. Box 7602
Chicago, Illinois 60680-7602

Cc: Richard L. Rodriguez, CTA President; Terry Peterson, CTA Board Chairman; Stephen Schlickman, RTA Executive Director; Peter M. Rogoff, FTA Administrator; John Paul Jones, Developing Communities Project.

RE: CTA Alternatives Analysis Projects: Red Line Extension, Orange Line Extension, Yellow Line Extension.

Dear Mr. Busby:

This letter is regarding CTA's Alternatives Analysis Projects: Red Line Extension, Orange Line Extension, and Yellow Line Extension.

Red Line Extension
The Little Village Environmental Justice Organization (LVEJO) supports the CTA's Red Line Extension to 130th Street along the UPRR route. We support the efforts of the Developing Communities Project (DCP) to extend rapid transit to underserved areas in the African-American communities of the South Side. Once the CTA demonstrates sufficient progress toward bringing the existing rail and bus system into a State of Good Repair (SGR) and sufficient progress on maintaining, enhancing, and expanding the bus system, this project needs to moved forward with the utmost urgency. Originally proposed for completion in 1970, we believe that the Red Line Extension to 130th Street should be CTA's first capital expansion priority for the El. It must take priority over the CTA Circle Line and the Metra Star Line in order to remedy the systemic and institutional racial discrimination created by unequal access to rapid transit on Chicago's South Side and South Suburbs. This project would greatly reduce the travel times of transit riders traveling between Chicago's far South Side and Downtown Chicago, providing significant economic benefits to riders and the regional economy.

Orange Line Extension
LVEJO supports the CTA's Orange Line Extension Project. CTA should build the Orange Line Extension as part of the Mid-City Transitway (Cicero Beltway Railroad). Additionally, CTA should evaluate a potential station at 72nd and Cicero to provide access to Walmart and other work/shopping destinations.

Yellow Line Extension
LVEJO believes that the Yellow Line Extension should be given lower priority, under the Red and Orange Line Extension. CTA should study how this project could be integrated into the Mid-City Transitway as per previous studies commissioned by the Chicago Department of Transportation (CDOT). Given the large number of complaints from local residents, CTA needs

to modify the Locally Preferred Alternative (LPA) to accommodate the needs of those raising objections to the project. If the LPA cannot be modified to satisfy these objections, then the project should be cancelled.

Additionally, all new CTA capital construction projects should meet or exceed federal Title VI Disadvantaged Business Enterprise (DBE) requirements. They should also work to provide jobs to low income community members from the surrounding area.

Sincerely,

Michael Pitula
Community Organizer – Public Transit

LVEJO

2856 S. Millard Avenue Chicago, IL 60623-4550
Tele: (773) 762-6991 Fax: (773) 762-6993
Email: publictransit@lvejo.org – Web: www.lvejo.org

RS-57

Cheever, Kim

From: Red Extension [redextension@transitchicago.com]
Sent: Thursday, October 29, 2009 8:35 AM
To: Peters, Melissa
Cc: Kornblatt, Helene B.
Subject: FW: Red line EIS scoping comments

From: David Tomzik [David.Tomzik@Pacebus.com]
Sent: Tuesday, October 27, 2009 9:12 AM
To: Red Extension
Subject: Red line EIS scoping comments

Pace scoping comments regarding CTA Red Line Extension Environmental Impact Statement

Thank you for the opportunity to review and comment on the scoping of the Environmental Impact Statement for the Red Line extension. Below are comments regarding the proposed project alternatives and potential environmental impacts relating to the proposed extension between 95th Street Station and 130th Street.

- Pace supports the rail extension of the Red Line from the current terminus at 95th Street Station to 130th Street
- In compliance with the Illinois Auditor General's recommendation to reduce CTA & Pace overlapping service and provide greater suburban market coverage area, Pace intends to restructure various south suburban routes operating on Halsted and King Drive which now serve the Red Line 95th Street Station. Additional planning development and review would be required to determine the most optimal station(s) to serve on either alignment.
- Arterial roadway access to/from the proposed station(s) served by connecting bus services will require further review including issues such as railroad grade crossings, street parking, and intersection improvements to accommodate bus movements.
- Pace requests participation in the planning development and design of the proposed station facilities served by both fixed route and Regional ADA Paratransit services. Design should include sufficient bays to accommodate Pace and CTA bus routes, Regional ADA Paratransit, operator facilities, passenger information as well as bus priority access such as Transit Signal Priority or bus activated signals to allow buses to enter/exit the terminal with minimal congestion.

We look forward to participating in this regional planning process.

David Tomzik
Manager, Long Range Planning
Pace Suburban Bus Service
550 W. Algonquin Road
Arlington Heights, IL 60005
847 228-2463
fax 847 228-2330

david.tomzik@pacebus.com

RS-58

CHRIST ORGANIZING IN THE MIDST OF COMMUNITY
DCP
DEVELOPING
COMMUNITIES
PROJECT INC.

11300 South Halsted Street – Suite A
Chicago, IL 60628-4757
Phone: (773) 928-2500
Fax: (773) 928-2513
E-mail:
dev_comm_project@ameritech.net
www.dcpincorp.org

Member Churches
Bethel House of Prayer UHCA
Bethel Tabernacle UHCA
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Joy Fellowship Baptist Church
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Gwendolyn Mackel Rice

Keeping Greater Roseland Alive!

To: **Jeffrey Busby, General Manager, Strategic Planning**
Chicago Transit Authority

Email: RedExtension@transitchicago.com

From: **The Red line Oversight Committee (ROC) of Developing Communities Project**

Subject: **Red Line Extension EIS Scoping Comments**

Date: **Oct. 27, 2009**

The environmental analysis for the Locally Preferred Alternative (LPA) recommended by the CTA and approved by the Chicago Transit Board represents a significant milestone in the five-year organizing and advocacy effort to make the Red Line Extension a reality. The 13 scoping issues listed in the CTA Red Line Extension "Environmental Impact Statement Scoping Information" brochure (Sept. 2009) are issues and areas of concern for the far south side Greater Roseland community.

Developing Communities Project (DCP) is proud to have spear-headed community efforts to bring this important project to the attention of public officials and regional planners. DCP sees its role and function in the current phase of planning and evaluation for the Environmental Impact Statement (EIS) and Preliminary Engineering (PE) as one of highlighting critical issues that planners and decision-makers need to seriously consider in evaluating the cost-effectiveness and equity consideration for pursuing the LPA. This is especially important in view of the fact that the CTA Red Line Extension LPA has been demonstrated by DCP to be the route, from 95th Street to 130th Street, that is overwhelmingly favored by the Greater Roseland community.

For that reason, DCP and its Red line Oversight Committee (ROC) are submitting the following EIS Scoping Comments:

1) A major concern that we have is with the environmental foot print that the proposed creation of park-and-rides at each of the four station stops will have. The RTA has reservations about making more park-and-rides for automobile traffic. There is also the issue of over-capacity in residential areas. Since there exists legislation that allows church parking lots in the vicinity of train stops to offer their facilities as park-and-rides, and Metra has been doing this for some time, CTA should consider scoping the impact of church parking lots instead of the construction of new park-and-rides in the vicinity of the four station stops of the Extension. This would have the added bonus of reducing the line item in the project budget for park-and-rides and make the Extension more cost-effective.

1) Because the environmental analysis for rail lines looks at the impact on traffic patterns and congestion years into the future, DCP believes that the LPA that extends to 130th Street has the greatest impact on mitigating traffic congestion feeding in from the south suburban and collar counties. The other alternatives to the LPA, still under consideration, do not meet this criterion in any significant way.

2) DCP would urge the CTA to evaluate and forecast the impact of the LPA on air quality levels in comparison to the other alternatives.

3) DCP urges the CTA environmental analysis to measure and forecast the LPA's impact on increasing labor productivity as a result of mitigating car congestion and reducing travel times to work for residents of the far south side of Chicago and south suburbs and collar counties.

4) According to the CTA, in its press release, "CTA Celebrates Earth Week," a fully loaded 8-car train eliminates 1,000 cars from our highways, thus mitigating congestion, reducing travel times to work, and improving air quality. How will the CTA operationalize this metric in assessing the impact of the Red Line Extension?

5) DCP urges the CTA to calculate the wait-times of riders at the proposed station stops of the Extension against the wait-times of passengers for the other alternatives under consideration, including the status quo and the "no build" option. This is important because the longer riders wait past 15 minutes the more turned off to public transportation they become. On the positive side, the calculation or forecast of wait-times can provide an estimation of potential riders who would take advantage of public transportation.

6) According to the RTA's Campaign for Better Transit, "Basic Facts about Public Transportation in the Chicago Metropolitan Area," 77% of residents with cars decide to use pubic transit. DCP urges the CTA, in its environmental analysis, to estimate the impact of the Red Line Extension on this metric for the far south side, south suburbs and collar counties.

7) Can the estimated reduction in air pollution due the impact of the Red Line Extension be made a collateral cost-effective benefit given the poor air quality on the far south side and south suburbs due to the area, especially around Altgeld Gardens, being the site of the City's toxic waste disposal site? In other words, what are the ramifications of the Red Line Extension's reduction of automobile congestion and exhausts in an area that is already identified as having the poorest air quality in the metropolitan area? [NB: This is a "superfund" type of issue that raises the question of transit impacts on major polluters in the area, i.e., what are the trade-offs presented by a major transportation project for a mixed residential and industrial landscape?]

8) DCP urges the CTA to investigate the impact on the construction of the Red Line Extension LPA on brown fields abatement, especially around the 130th Street station at Altgeld Gardens, and the proposed new train yard.

9) DCP urges the CTA to investigate thoroughly both the noise impact of the LPA and the "best available" technologies needed to significantly mitigate the possible noise problems associated with the Red Line Extension.

10) Noise is the greatest environmental disturbance caused by public transit. However, in the case of the Red Line Extension LPA, the project right-away along the UPRR is already the cause of significant noise disturbance. In support of local homeowners and their concerns about additional noise pollution, DCP urges the CTA to do a scoping analysis of the current noise levels caused by the UPRR.

11) DCP also urges the CTA to make, as part of its scoping analysis of potential noise disturbance caused by the Extension, a full-scale investigation of the "best available" and "best practicable" noise mitigation technologies for the Extension.

12) The role transportation can play in revitalizing and supporting underserved communities is recognized by the U.S. Department of Transportation (DOT) and the Federal Transit Administration (FTA) in their efforts to include environmental justice language in program and funding priorities. In addition to safety and mobility being the U.S. Department of Transportation's two top priorities, DOT describes 3 fundamental environmental justice principles to be relevant for transportation planning and to the mission of the agency. Environmental Justice Principles for transportation programs include: 1) To avoid, minimize, or mitigate disproportionately high and adverse human health and environmental effects, including social and economic effects, on minority and low-income populations. 2) To prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority and low-income populations. 3) Ensure full participation by all potentially affected communities. How does the CTA intend to insure that these principles are adhered to? How does the CTA intend to make the prevention of denial of, reduction in and delay in "receipt of benefits by minority and low-income populations," e.g., Altgeld Gardens, a priority criterion for the EIS of the Red Line Extension.

13) Livability Principles for transportation, housing and environmental programs include: 1) Provide more transportation choices, 2) Promote equitable affordable housing, 3) Enhance economic competitiveness, 4) Support existing communities, 5) Coordinate policies and leverage investment, 6) Value communities and neighborhoods. How does the CTA plan to make these environmental goals operational in the environmental analysis of the Red Line Extension?

14) What is the CTA's employment model for measuring the potential benefits to working populations on the far south side, south suburbs and collar counties afforded by the Red Line Extension?

15) Does the CTA intend to prioritize the impact of transit investment on job creation and increasing employment opportunities, in accordance with the environmental justice criterion of preventing the denial of, reduction in and delay in "receipt of benefits by minority and low-income populations," in its environmental impact analysis?

In conclusion, Developing Communities Project and its Red line Oversight Committee would like to express its appreciation to the Chicago Transit Authority for its serious consideration of the issues that we have brought to your attention. We look forward to your response as the process of drafting the Environmental Impact Statement for the Red Line Extension proceeds.

With sincerest regards,

Gwendolyn M. Rice
Executive Director, DCP

Elder Eugene Taylor

Elder Eugene Taylor
Chairman, ROC

Cc: Governor Pat Quinn
Congressman Jesse Jackson, Jr.
Congressman Bobby Rush
Senator James T. Meeks
State Senator Emil Jones, III
State Senator Donne Trotter

Red Line Extension

Connecting 95th Street Station to 130th Street

RS-59

The purpose of the scoping process is to identify public and agency concerns early in the environmental process, define the issues and alternatives that will be examined in the Environmental Impact Statement (EIS) and facilitate an efficient EIS preparation process. Please PRINT.

Name: Shirley Hill
Organization: Rosemoor Community Assoc. Title: membership Chairperson
Address: 10220 S. Rhodes Ave.
City: Chicago State: Il. Zip: 60628
Phone: E-mail: ShirleyHill807@hotmail.com

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

I support the extension of the CTA Red Line using the Union Pacific Rail Road (UPRR) route. I support the position that the Red Line extension must reach the Altgeld Gardens/ Calumet River area at 130th Street and that every possible engineering design concept must be examined to ensure the full extension of the Red Line from 95th Street to 130th Street. This will insure mass transit access to a transit dependent population, south suburban communities and nearby industries.

I think citizens near Altgeld Gardens and 130th st. Should have access to CTA red line. It will speed up their travels. They will have access to the down-town area without going thru transferring to buses and walking.

Shirley Hill

Scoping comments may be submitted via mail, e-mail, fax or the project website with attention to: Jeffrey Busby, General Manager, Strategic Planning, Chicago Transit Authority, P.O. Box 7602, Chicago, IL 60680-7602. **Fax:** (312)681-4297, **Email:** RedExtension@transitchicago.com, **Website:** www.transitchicago.com/RedEIS, **Customer Information:** 1-888-YOUR-CTA (1-888-968-7282), **Hearing & Speech Impaired:** 1-888-CTA-TTY1 (1-888-282-6891), **Transit Information:** 836-7000 from any local area code **RTA TTY:** 312-836-4949

Red Line Extension

Connecting 95th Street Station to 130th Street

RS-60

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Name: Cosette D. Thomas

Organization: Roseland Christian Reformed Church Title: Member

Address: 305 W. 124th st

City: Chg State: IL Zip: 60628

Phone: 773-568-4387 E-mail: Cosieco@prodigy.net

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

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Red Line Extension

Connecting 95th Street Station to 130th Street

RS-61

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Name: SabrinA Beecham
Organization: Roseland Chr Reform Ch. Title:
Address: 232 W 110 St
City: Chgo State: IL Zip: 60628
Phone: 773 995-8223 E-mail: None

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

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Red Line Extension

Connecting 95th Street Station to 130th Street

RS-62

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Name: Rev. Anthony Van Zanten
Organization: Roseland Christian Reformed Church Title: Member
Address: 9803 S. Prospect Ave
City: Chicago State: IL Zip: 60643
Phone: 773-881-3937 E-mail:

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

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Red Line Extension

Connecting 95th Street Station to 130th Street

cta

RS-63

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Name: DuWitt Orlawndo Casey Jr

Organization: Roseland Christian Reform Church Title: Member

Address: 10859 South State Street 1st Floor

City: Chicago State: IL. Zip: 60628

Phone: 773 606-3785 E-mail: docmeanJr @ Yahoo . com

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

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Red Line Extension

Connecting 95th Street Station to 130th Street

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RS-64

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Name: Mamie J Thomas

Organization: Roseland Christia Ministr Title: Member

Address: 10858 S. Michigan Ave

City: Chicago State: IL Zip: 60628

Phone: 773-264-5665 E-mail:

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Red Line Extension

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RS-65

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Name: Ann R. Howard

Organization: UIC Title: Patient Services Special

Address: 840 So. Wood Street

City: Chicago State: IL Zip: 60629

Phone: 773-778-0250 E-mail: arhoward@uic.edu

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

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Red Line Extension

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RS-66

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Name: Henry L Rice
Organization: Roseland christian ministries Title: member
Address: 10914 S State
City: Chicago State: Ill Zip: 60628
Phone: 773-821-0482 E-mail:

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

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RS-67

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Name: Tonya Braggs

Organization: HRDI Title: Member

Address: 12141 S. Indiana

City: Chicago State: Il Zip: 60643

Phone: 928-0338 E-mail:

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

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Red Line Extension

Connecting 95th Street Station to 130th Street

RS-68

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Name: LARRIS FOX
Organization: HRDI Title: Member
Address: 13034 S. Wood
City: Blue Island State: ILL Zip: 60406
Phone: 708-385-4671 E-mail:

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

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Red Line Extension

Connecting 95th Street Station to 130th Street

cta

RS-69

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Name: Kevin Zeigler

Organization: Roseland Christian Ministries Title: Staff

Address: 5439 S. Greenwood

City: Chicago State: IL. Zip: 60615

Phone: 773-573-9032 E-mail: KZeiglerc100@Hotmail.com

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

I support the extension of the CTA Red Line using the Union Pacific Rail Road (UPRR) route. I support the position that the Red Line extension must reach the Altgeld Gardens/ Calumet River area at 130th Street and that every possible engineering design concept must be examined to ensure the full extension of the Red Line from 95th Street to 130th Street. This will insure mass transit access to a transit dependent population, south suburban communities and nearby industries.

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Red Line Extension

Connecting 95th Street Station to 130th Street

RS-70

The purpose of the scoping process is to identify public and agency concerns early in the environmental process, define the issues and alternatives that will be examined in the Environmental Impact Statement (EIS) and facilitate an efficient EIS preparation process. Please PRINT.

Name: Bernie Powell

Organization: R.C.M. Title: Staff aid

Address: 10858 S Michigan

City: Chicago State: Ill Zip: 60628

Phone: 773 - 746-0671 E-mail:

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Red Line Extension

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RS-71

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Name: Wesley Perry

Organization: INNer Voice Title: Job Developer

Address: 1639 W. WalNUT ST.

City: Chicago State: IL Zip: 60612

Phone: 312 226-2730 X17 E-mail: Wperry@innervoicechicago.org

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Red Line Extension

Connecting 95th Street Station to 130th Street

RS-72

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Name: ERIC MYERS
Organization: IDES Title: Employment Rep.
Address: 4931 W DIVERSEY
City: CHICAGO State: IL Zip: 60639
Phone: 773-889-6820 E-mail: ERIC.MYERS@Illinois.GOV

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Red Line Extension

Connecting 95th Street Station to 130th Street

RS-73

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Name: Julia Parham

Organization: Roseland CCC Title: MEMBER

Address: 313 E. 137th

City: Chicago State: Il Zip: 60628

Phone: (773) 562-3751 E-mail: parhamjulia18@yahoo.com

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Red Line Extension

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RS-74

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Name: CURTIS FLOWERS

Organization: ROSELAND C.C.C. Title: MEMBER

Address: 10858 S. MICHIGAN

City: CHICAGO State: IL Zip: 60628

Phone: E-mail: N/A

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Red Line Extension

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RS-75

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Name: Cordero McNeal

Organization: ROSELAND CCC Title: MEMBER

Address: 313 E 137th

City: Chicago State: Il Zip: 60628

Phone: (773) 562-6933 E-mail: Corderomcnealdol39@yahoo.com

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Red Line Extension

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RS-76

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Name: DEBORAH RANDALL

Organization: INNER VOICE Title: SENIOR CASE MANAGER

Address: 1639 W. WALNUT

City: Chicago State: IL Zip: 60612

Phone: (312) 226-2730 E-mail:

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Red Line Extension

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RS-77

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Name: Jill Spooner

Organization: InnerVoice Title: Director of Targeted Outreach

Address: 1639 W Walnut

City: Chicago State: IL Zip: 60612

Phone: 312-226-2730 E-mail: jspooner@innervoice chicago.org

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RS-78

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Name: HAROLd C ColemAN

Organization: Roseland CCC Title: MEMBER

Address: 1621 W WAlnut

City: ChICAGO State: IL Zip: 60612

Phone: E-mail:

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RS-79

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Name: Bobby M. Roberson Sr.

Organization: THE INNER VOICE INC. Title: CASEMANAGER

Address: 1639 W. WALNUT ST.

City: CHICAGO State: IL. Zip: 60652

Phone: 1-312-226-2730x25 E-mail: broberson@innervoice.org

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Red Line Extension

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RS-80

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Name: Patricia A. Washington

Organization: Rosaland Cristain Min Title: member

Address: 10858 Michigain

City: Chicago State: Il Zip: 60628

Phone: 773-264-5865 E-mail:

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RS-81

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Name: EDDiE Floyd
Organization: ROSelAND Christian Title: CARPteR
Address: 10858 So michgaN
City: Chicago State: Illinois Zip: 60628
Phone: 773-221-8673 E-mail:

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RS-82

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Name: William D. Gordon II

Organization: Roseland christian ministries Title: Member

Address: 131 e 103RD PL

City: Chicago State: IL Zip: 60628

Phone: 773-264-5665 E-mail:

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Red Line Extension

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cta

RS-83

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Name: Edward McGill
Organization: Roseland Christian Ministries Title:
Address: 10858 S. Michgan
City: Chicago State: IL Zip: 60628
Phone: E-mail:

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Red Line Extension

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cta

RS-84

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Name: DeEldridge L. Covington
Organization: Roseland Christian Ministri Title: Member
Address: 10858 S. Michigan
City: Chicago State: IL Zip: 60628
Phone: 773-264-5665 E-mail:

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RS-85

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Name: JIMMIE RELFORD

Organization: ROSELAND CHRISTOMA Title: MEMBER

Address: 130 E 132 ST

City: CHICAGO State: ILL Zip: 60628

Phone: E-mail:

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RS-86

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Name: Evelyn Fletcher
Organization: Rosland Chrisfain Title: Member
Address: 6511 S. Eberhart
City: Chicago State: Il Zip: 60637
Phone: 1-773-301-4926 E-mail: Oneal.Evelyn Yahoo.com

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Red Line Extension

Connecting 95th Street Station to 130th Street

RS-87

The purpose of the scoping process is to identify public and agency concerns early in the environmental process, define the issues and alternatives that will be examined in the Environmental Impact Statement (EIS) and facilitate an efficient EIS preparation process. Please PRINT.

Name: AARON Gill
Organization: Roseland Christian Ministry Title:
Address: 10858 S Michigan
City: Chi. State: IL. Zip: 60625
Phone: E-mail:

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

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Red Line Extension

Connecting 95th Street Station to 130th Street

RS-88

The purpose of the scoping process is to identify public and agency concerns early in the environmental process, define the issues and alternatives that will be examined in the Environmental Impact Statement (EIS) and facilitate an efficient EIS preparation process. Please PRINT.

Name: Carlton Youngblood

Organization: Title:

Address: 345 W. 110 St

City: Chicago State: IL Zip: 60628

Phone: 773 568 7710 E-mail:

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

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Red Line Extension

Connecting 95th Street Station to 130th Street

cta

RS-89

The purpose of the scoping process is to identify public and agency concerns early in the environmental process, define the issues and alternatives that will be examined in the Environmental Impact Statement (EIS) and facilitate an efficient EIS preparation process. Please PRINT.

Name: ANNETTE LOVE

Organization: _____ Title: _____

Address: 10521 S. PERRY

City: Chicago State: Ill. Zip: 60628

Phone: (773) 821-1190 E-mail: _____

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

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Red Line Extension

Connecting 95th Street Station to 130th Street

RS-90

The purpose of the scoping process is to identify public and agency concerns early in the environmental process, define the issues and alternatives that will be examined in the Environmental Impact Statement (EIS) and facilitate an efficient EIS preparation process. Please PRINT.

10-22-09

Name: Merv Bills

Organization: Rosland Christan Title: member

Address: 10743 S Forest

City: Chicago State: Ill Zip: 60628

Phone: E-mail:

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

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Red Line Extension

Connecting 95th Street Station to 130th Street

RS-91

The purpose of the scoping process is to identify public and agency concerns early in the environmental process, define the issues and alternatives that will be examined in the Environmental Impact Statement (EIS) and facilitate an efficient EIS preparation process. Please PRINT.

Name: Mr. Clifford [illegible]

Organization: ____ Title: ____

Address: 10906 S. INDIANA

City: CHICAGO State: ILL Zip: 60628

Phone: 253-2855 E-mail: ____

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

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Red Line Extension

Connecting 95th Street Station to 130th Street

cta

RS-92

The purpose of the scoping process is to identify public and agency concerns early in the environmental process, define the issues and alternatives that will be examined in the Environmental Impact Statement (EIS) and facilitate an efficient EIS preparation process. Please PRINT.

Name: DURANE L. BELL

Organization: Roseland Christian Minitry Title: Saleman

Address: 10851 So. Wabash Ave

City: Chicago Il State: ILL Zip: 60628

Phone: (773)660-0593 E-mail: NONE

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

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Durane Bell

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Red Line Extension

Connecting 95th Street Station to 130th Street

RS-93

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Name: Jonathan Tate

Organization: Reliable steel Die Maker Title: Die Maker

Address: 10535 S. Michigan Ave

City: Chicago State: Il. Zip: 60622

Phone: 773.762.1471 E-mail:

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

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Red Line Extension

Connecting 95th Street Station to 130th Street

cta

RS-94

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Name: Bruce O'neal

Organization: Christan Minerstqs Title:

Address: 6511 S. Eberhart

City: Chicago State: I Zip: 60631

Phone: 1-773-263-5337 E-mail:

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

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Red Line Extension

Connecting 95th Street Station to 130th Street

RS-95

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Name: Robyn Washington
Organization: Rosland Chirstain Minersty Title:
Address: 6511 S. Eberhart
City: Chicago State: Il Zip: 60637
Phone: E-mail:

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

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Red Line Extension

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RS-96

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Name: DENNIS RUDOLPH
Organization: ROSLAND CHIRITEN Title: member
Address: 455 W 116 ST
City: CHICAGO State: Ill Zip: 60628
Phone: 773 821-1521 E-mail:

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

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Red Line Extension

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RS-97

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Name: Welton Anderson
Organization: Roseland Christian Ministries Title:
Address: 10858 S. Michigan
City: Chicago, State: IL. Zip: 60628
Phone: 773- 264-6556 E-mail:

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Red Line Extension

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RS-98

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Name: Gray don artis
Organization: Roseland Christian Title:
Address: 10858 S. Mich
City: Chgo State: Il Zip: 60628
Phone: 264-5665 E-mail:

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Red Line Extension

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RS-99

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Name: Neal Blaney

Organization: Roseland Christian Ministries Title: RCM

Address: 12407 S Princeton St

City: Chicago State: ILL Zip: 60628

Phone: 773-264-5665 E-mail:

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Red Line Extension

Connecting 95th Street Station to 130th Street

cta

RS-100

The purpose of the scoping process is to identify public and agency concerns early in the environmental process, define the issues and alternatives that will be examined in the Environmental Impact Statement (EIS) and facilitate an efficient EIS preparation process. Please PRINT.

Name: RaChelle Brown

Organization: Roseland Christian Title: Shelter

Address: 10858 So. Michigan Ave

City: Chgo State: Ill Zip: 60628

Phone: 773/264-5665 E-mail:

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

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Red Line Extension

Connecting 95th Street Station to 130th Street

cta

RS-101

The purpose of the scoping process is to identify public and agency concerns early in the environmental process, define the issues and alternatives that will be examined in the Environmental Impact Statement (EIS) and facilitate an efficient EIS preparation process. Please PRINT.

Name: RUTH BERNARD

Organization:

Title:

Address: 1013 E MAY ST

City: HAMMOND State: IN Zip: 46320

Phone: 219-554-5402 E-mail:

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

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Red Line Extension

Connecting 95th Street Station to 130th Street

RS-102

The purpose of the scoping process is to identify public and agency concerns early in the environmental process, define the issues and alternatives that will be examined in the Environmental Impact Statement (EIS) and facilitate an efficient EIS preparation process. Please PRINT.

Name: Carol Moss

Organization: Title:

Address: 7936 Justine

City: Chgo. State: IL Zip: 60620

Phone: 630 667 6420 E-mail:

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

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Red Line Extension

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RS-103

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Name: Katrina Martin

Organization: RCM Title: member

Address: 338 W. 116th Street

City: chgo State: IL Zip: 60628

Phone: 773-821-4539 E-mail: KMartinReed@yahoo.com

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

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Red Line Extension

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cta

RS-104

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Name: Pearlie Davis

Organization: Roseland Christian Ministries Title: Member

Address: 941-W-108th

City: Chicgo State: ill Zip: 60628

Phone: 773-5930206 E-mail:

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

I support the extension of the CTA Red Line using the Union Pacific Rail Road (UPRR) route. I support the position that the Red Line extension must reach the Altgeld Gardens/ Calumet River area at 130th Street and that every possible engineering design concept must be examined to ensure the full extension of the Red Line from 95th Street to 130th Street. This will insure mass transit access to a transit dependent population, south suburban communities and nearby industries.

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Red Line Extension

Connecting 95th Street Station to 130th Street

RS-105

The purpose of the scoping process is to identify public and agency concerns early in the environmental process, define the issues and alternatives that will be examined in the Environmental Impact Statement (EIS) and facilitate an efficient EIS preparation process. Please PRINT.

Name: Earnest Lee Treadwell

Organization: onMeer B Chich Title: Memder

Address: 10809 S. Priaire

City: Chicago State: Il Zip: 60628

Phone: 773-678-5607 E-mail:

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

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Connecting 95th Street Station to 130th Street

RS-106

The purpose of the scoping process is to identify public and agency concerns early in the environmental process, define the issues and alternatives that will be examined in the Environmental Impact Statement (EIS) and facilitate an efficient EIS preparation process. Please PRINT.

Name: Marion Lee

Organization: RoseLand Christian Min- Title: member

Address: 11020 S Indiana

City: Chicago State: ILL Zip: 60628

Phone: None E-mail:

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

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Red Line Extension

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RS-107

The purpose of the scoping process is to identify public and agency concerns early in the environmental process, define the issues and alternatives that will be examined in the Environmental Impact Statement (EIS) and facilitate an efficient EIS preparation process. Please PRINT.

Name: Nicole Mitchell

Organization: Association for the Advancement of Creative Musicians Title: Chairperson

Address: 10841 S Forest Ave

City: Chicago State: IL Zip: 60628

Phone: 773-821-7131 E-mail: blackearthmusic@gmail.com

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

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Nicole Mitchell

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Red Line Extension

Connecting 95th Street Station to 130th Street

RS-108

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Name: MASSONBURG, REGINALD

Organization: MECNANIC Title: SHOP - FORSMAN

Address: 11324 SOUTH WENTWORTH ST

City: CHICAGO State: IL. Zip: 60628

Phone: (773) 301-2999 E-mail: rmassonburg.yAhoo.com

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

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Red Line Extension

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RS-109

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Name: Elena martin
Organization: Roseland Christian Ministries Title: Member
Address: 341 W, 108 PL.
City: Chicago 911, State: 911 Zip: 60628
Phone: 773-3830206 E-mail:

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

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Red Line Extension

Connecting 95th Street Station to 130th Street

cta

RS-110

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Name: Jordan Connell

Organization: Roseland Christian Ministries Title: Member

Address: 49 E 102nd Place (Front)

City: Chicago State: IL Zip: 60628

Phone: 636 584-9016 E-mail: connellj@william.jewell.edu

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

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Red Line Extension

Connecting 95th Street Station to 130th Street

cta

RS-111

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Name: Shaun Lawler

Organization: Roseland Christian Ministries Title: Member

Address: 49 E. 102nd Pl (Front)

City: Chicago State: IL Zip: 60628

Phone: 1-256-996-7215 E-mail: slawler427@yahoo.com

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

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Red Line Extension

Connecting 95th Street Station to 130th Street

RS-112

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Name: Sara Shackelford

Organization: Roseland Christian Ministries Title: Member

Address: 49 E. 102nd Pl (Front)

City: Chicago State: IL Zip: 60628

Phone: (901) 489-8054 E-mail: sarashackelford1@gmail.com

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Red Line Extension

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RS-113

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Name: ALVIS DEAN JACKSON

Organization: RoseLAND ChrisTian Min Title: Member

Address: 10449 S WABASH

City: ChicaGo State: IL Zip: 60628

Phone: 1-773-264-5665 E-mail: NA

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

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Red Line Extension

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cta

RS-114

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Name: JoHnnie Jones

Organization: RoseLand cHRisTian minisTRies Title: member

Address: 1085. MicHigan

City: CHicago State: Ill. Zip: 60628

Phone: 773 876-4695 E-mail:

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cta

RS-115

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Name: JeNKins, Debbie
Organization: Roseland Christian (Church) Title: Member
Address: 13129 So. St. LAWrENCE
City: ChiCAGO State: ILL Zip: 60827
Phone: 773-765-8997 E-mail: N/A

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

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Red Line Extension

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RS-116

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Name: Horace L. Smith
Organization:
Title:
Address: 10557 So King Dr
City: Chicago State: IL Zip: 60628
Phone: (773) 568-9408 E-mail: SmithHPKTgroup@AmeriTech.ne

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Red Line Extension

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RS-117

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Name: Areanda Robinson

Organization: Developing Communities Project Title: Intern

Address: 11300 South Halsted Street

City: Chicago State: IL Zip: 60628

Phone: (773) 928-2500 E-mail: AW [redacted] N/A

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Red Line Extension

Connecting 95th Street Station to 130th Street

cta

RS-118

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Name: Patricia Gray Smith
Organization: Developing Communities Project Title: Prevention Specialist
Address: 11300 S. Halsted
City: Chicago State: IL Zip: 60628
Phone: (773)928-2500 E-mail:

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Red Line Extension

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cta

RS-119

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Name: Martrese Gray
Organization: — Title: —
Address: 5750 Lafayette
City: Chicago State: IL Zip: 60628
Phone: — E-mail: —

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Red Line Extension

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cta

RS-120

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Name: Glenn L. [illegible]
Organization: Roseland Christian Reformed Chur Title: Memba
Address: 723 S. Wood
City: Chgo State: Il Zip: 60620
Phone: 728-283-7614 E-mail:

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

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RS-121

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Name: Roderick Janes

Organization: RCRC Title: Musician

Address: 5 E 102 PL

City: Chgo State: ILL Zip: 60620

Phone: 773 4838632 E-mail:

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Red Line Extension

Connecting 95th Street Station to 130th Street

RS-122

The purpose of the scoping process is to identify public and agency concerns early in the environmental process, define the issues and alternatives that will be examined in the Environmental Impact Statement (EIS) and facilitate an efficient EIS preparation process. Please PRINT.

Name: Jocelyn Walker

Organization: Roseland CRC Title: Member

Address: 9856 S. Colfax

City: Chgo State: Ill Zip: 60649

Phone: 221 9592 E-mail:

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

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Red Line Extension

Connecting 95th Street Station to 130th Street

cta

RS-123

The purpose of the scoping process is to identify public and agency concerns early in the environmental process, define the issues and alternatives that will be examined in the Environmental Impact Statement (EIS) and facilitate an efficient EIS preparation process. Please PRINT.

Name: Harold Boyd

Organization: RCRC Title:

Address: 2018 W 53rd place

City: Chicago State: IL Zip: 60609

Phone: 773-318-8148 E-mail:

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

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Red Line Extension

Connecting 95th Street Station to 130th Street

RS-124

The purpose of the scoping process is to identify public and agency concerns early in the environmental process, define the issues and alternatives that will be examined in the Environmental Impact Statement (EIS) and facilitate an efficient EIS preparation process. Please PRINT.

Name: Tynisha A Jackson

Organization: Roseland Christian Reformed Church Title: Member

Address: 120 E. 103rd Place

City: Chicago State: IL Zip: 60628

Phone: (773) 264-5665 E-mail: iceprincess714@hotmail.com
(773) 569-9911 (cell)

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

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Red Line Extension

Connecting 95th Street Station to 130th Street

cta

RS-125

The purpose of the scoping process is to identify public and agency concerns early in the environmental process, define the issues and alternatives that will be examined in the Environmental Impact Statement (EIS) and facilitate an efficient EIS preparation process. Please PRINT.

Name: Karran Smith
Organization: RCMC Title: Member
Address: 4807S Prairie
City: Chicago State: IL Zip: 60615
Phone: 773 727-9491 E-mail: Karranmarie@ Hotmail

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

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Red Line Extension

Connecting 95th Street Station to 130th Street

RS-126

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Name: Jeri Smith
Organization: Rosland Christian Reformed Church Title: Member
Address: 4807 S. Prairie AVE
City: Chicago State: IL Zip: 60615
Phone: (773) 510-6416 E-mail: jeriSmith@tomail.com

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

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Red Line Extension

Connecting 95th Street Station to 130th Street

RS-127

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Name: Kerry Wilkerson

Organization: Roseland Christian Ministries Title: Member

Address: 49 E. 102nd Place (Front)

City: Chicago State: IL Zip: 60628

Phone: (404)805-5803 E-mail: Kwilkerson810@yahoo.com

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Red Line Extension

Connecting 95th Street Station to 130th Street

cta

RS-128

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Name: CArol Cooley WatKins

Organization: RCRC Title: member

Address: 31 W. 108 Place

City: Chgo State: I- Zip: 60628

Phone: 773-341-4113 E-mail: CArolfrances51@Yahoo.Com

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

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Red Line Extension

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cta

RS-129

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Name: Pamela Fluellen

Organization: Victory Temple C.O.G.I.C. Title: member

Address: 10209 S. St Lawrence

City: Chgo State: Il Zip: 60628

Phone: (773)661-8762 E-mail: p_fluellen@yahoo.com

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Red Line Extension

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cta

RS-130

The purpose of the scoping process is to identify public and agency concerns early in the environmental process, define the issues and alternatives that will be examined in the Environmental Impact Statement (EIS) and facilitate an efficient EIS preparation process. Please PRINT.

Name: Teresa Williams
Organization: Salem Baptise Title: Member
Address: 12129 S Parnell
City: Chicago State: IL Zip: 60628
Phone: 773-571-4487 E-mail: heyladyt@yahoo.com

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Red Line Extension

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RS-131

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Name: SHERRIE T. HAYES

Organization: Christ The ANSWER COGIC Title: Member

Address: 12129 So PARNELL

City: ChiCAGO State: IL Zip: 60628

Phone: 773-386-8483 E-mail: sherrihayes50@yahoo.com

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Sherrie Hayes

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Red Line Extension

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RS-132

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Name: Andrew Bates

Organization: Pioneer Baptist Church Title: Parishioner

Address: 12104 Wallace

City: Chicago State: IL. Zip: 60628

Phone: (773) 660-0368 E-mail: batesandrew09@yahoo.com

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RS-133

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Name: Brenda Johnson Fisher

Organization: 10 503 Salem B.C Church Title: Member

Address: 10503 S. Corliss Ave

City: Cicago ILL State: Zip: 60628

Phone: 1773 291-9026 E-mail:

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Red Line Extension

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RS-134

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Name: KIMBERLY RENEE JACKSON

Organization: NEW LIFE ~~[illegible]~~ Title: MEMBER

Address: 7255 S. PHILLIPS

City: Chicago State: IL Zip: 60649

Phone: (773)430-4130 E-mail: Kim_rjackson1@yahoo.com

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Red Line Extension

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RS-135

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Name: Viesha Long
Organization: New life Title: Manager
Address: 7003 S Chicago
City: Chicag State: IL Zip: 60649
Phone: 773-406-7332 E-mail: neshalong@yahoo.com

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Red Line Extension

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RS-136

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Name: WILLIAM GILL
Organization: HOUSE OF HOPE 801 E. 115TH ST Title: CHRISTIAN
Address: 10559 S. STATE ST.
City: CHICAGO State: IL Zip: 60628
Phone: 773-821-95219 E-mail: WilliamGill50593@Yahoo.com

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RS-137

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Name: CAlvin Cotton

Organization: Roslang Chisten Minteree Title:

Address: 10529 S. Perry

City: Chicago State: IL Zip: 60628

Phone: 773-468-0518 E-mail:

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RS-138

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Name: CARLTON-LEWIS

Organization: Janitor Title: LEROY CLEANING SERVICE

Address: 11037 S. EDBROOK

City: Chicago State: ILL Zip: 60628

Phone: 773-703-7379 E-mail:

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Scoping comments may be submitted via mail, e-mail, fax or the project website with attention to: Jeffrey Busby, General Manager, Strategic Planning, Chicago Transit Authority, P.O. Box 7602, Chicago, IL 60680-7602. **Fax:** (312)681-4297, **Email:** RedExtension@transitchicago.com, **Website:** www.transitchicago.com/RedEIS, **Customer Information:** 1-888-YOUR-CTA (1-888-968-7282), **Hearing & Speech Impaired:** 1-888-CTA-TTY1 (1-888-282-6891), **Transit Information:** 836-7000 from any local area code **RTA TTY:** 312-836-4949

Connecting 95th Street Station to 130th Street

RS-139

The purpose of the scoping process is to identify public and agency concerns early in the environmental process, define the issues and alternatives that will be examined in the Environmental Impact Statement (EIS) and facilitate an efficient EIS preparation process. Please PRINT.

Name: JAMES FulFurd

Organization: CHurch of God Title: Member

Address: 12528 EdBrooke

City: Chicagu State: Il. Zip: 60623

Phone: 773-641-1804 E-mail:

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

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Connecting 95th Street Station to 130th Street

RS-140

The purpose of the scoping process is to identify public and agency concerns early in the environmental process, define the issues and alternatives that will be examined in the Environmental Impact Statement (EIS) and facilitate an efficient EIS preparation process. Please PRINT.

Name: Gregory Jefferson

Organization: Rosebud Chrisianty Title:

Address: 128 W 109th PL

City: Chicago State: Illinois Zip: 60628

Phone: 773-568-4650 E-mail:

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

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Connecting 95th Street Station to 130th Street

RS-141

The purpose of the scoping process is to identify public and agency concerns early in the environmental process, define the issues and alternatives that will be examined in the Environmental Impact Statement (EIS) and facilitate an efficient EIS preparation process. Please PRINT.

Name: Jason Clayton

Organization: cuffes catering Title: Cook, cashier

Address: 10826. S Wabash

City: Chicago State: IL Zip: 60628

Phone: 773 494-2228 E-mail: Jasfobison@Yahoo.co

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

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Red Line Extension

Connecting 95th Street Station to 130th Street

RS-142

The purpose of the scoping process is to identify public and agency concerns early in the environmental process, define the issues and alternatives that will be examined in the Environmental Impact Statement (EIS) and facilitate an efficient EIS preparation process. Please PRINT.

Name: Saleena Claybourne

Organization: Roseland Christen Min. Title:

Address: 819 E. 102 St.

City: Chicago State: IL Zip: 60628

Phone: E-mail:

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

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Red Line Extension

Connecting 95th Street Station to 130th Street

RS-143

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Name: Linda Thompson
Organization: Title:
Address: 5603 W. Iowa
City: Chicago State: Il Zip: 60651
Phone: 773-430-8025 E-mail: linda4thompson@yahoo.com

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

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Red Line Extension

Connecting 95th Street Station to 130th Street

RS-144

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Name: Guy Pollion

Organization: ______ Title: ______

Address: 5245 S. Indiana

City: Chicago State: ILL Zip: 60615

Phone: (773) 924-2034 E-mail: ______

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

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Red Line Extension

Connecting 95th Street Station to 130th Street

RS-145

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Name: Laura Ten Clay
Organization: Roseland Christian Ministries Title: Volunteer Coordinator
Address: 21 E 102nd Pl
City: Chicago State: IL Zip: 60628
Phone: 773-264-5665 E-mail: zlholmke@tiu.edu

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

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Red Line Extension

Connecting 95th Street Station to 130th Street

RS-146

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Name: David Ten Clay

Organization: Roseland Christian Comm. Homes Corp Title: Housing Director

Address: 21 E 102nd PL

City: Chicago State: IL Zip: 60628

Phone: 773-264-5665 E-mail: dtenclay32@hotmail.com

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Red Line Extension

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RS-147

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Name: SANDRA PEARSON

Organization: True light Baptist Churc Title: member

Address: 239 E 108 st 1st flR

City: Chicago State: Ill Zip: 60628

Phone: 773-766-0431 E-mail:

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Red Line Extension

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RS-148

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Name: Mia Montegmery
Organization: Roseland Christan Min. Title:
Address: 19 E 102 Pl
City: Chicago State: Il Zip: 60028
Phone: E-mail:

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Red Line Extension

Connecting 95th Street Station to 130th Street

cta

RS-149

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Name: ANgelA Rodgers

Organization: Title: BArber Stylist

Address: 901 E. 104th

City: Chgo State: Il Zip: 60628

Phone: 773) 724-7601 E-mail: angelarodgers44@yahoo.com

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Red Line Extension

Connecting 95th Street Station to 130th Street

cta

RS-150

The purpose of the scoping process is to identify public and agency concerns early in the environmental process, define the issues and alternatives that will be examined in the Environmental Impact Statement (EIS) and facilitate an efficient EIS preparation process. Please PRINT.

Name: VINCENT Griffin
Organization: N/A Title: N/A
Address: 715 E. 50th PL # Apt. 3A
City: Chicago State: IL Zip: 60615
Phone: (773) 676-0310 E-mail: N/A

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

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Red Line Extension

Connecting 95th Street Station to 130th Street

RS-151

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Name: HYLAND GILDER BARRY

Organization: ROSELAND CHRISTIAN MINISTRY Title:

Address: ~~108~~ 33-E-111th PL

City: CHICAGO State: Zip: 60628

Phone: 1-773-263-0160 E-mail: NONE

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

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Red Line Extension

Connecting 95th Street Station to 130th Street

cta

RS-152

The purpose of the scoping process is to identify public and agency concerns early in the environmental process, define the issues and alternatives that will be examined in the Environmental Impact Statement (EIS) and facilitate an efficient EIS preparation process. Please PRINT.

Name: Steven D. Benson
Organization: — Title: —
Address: 248 W 112 PL
City: Chicago State: IL. Zip: 60628
Phone: 773-568-9548 E-mail:

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

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Red Line Extension

Connecting 95th Street Station to 130th Street

RS-153

The purpose of the scoping process is to identify public and agency concerns early in the environmental process, define the issues and alternatives that will be examined in the Environmental Impact Statement (EIS) and facilitate an efficient EIS preparation process. Please PRINT.

Name: Ronnie Adams
Organization: Roseland THRIFT Title: LABORER
Address: 33 E. 111 PL.
City: Chgo State: IL Zip: 60628
Phone: 468-5686 E-mail:

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

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Red Line Extension

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RS-154

The purpose of the scoping process is to identify public and agency concerns early in the environmental process, define the issues and alternatives that will be examined in the Environmental Impact Statement (EIS) and facilitate an efficient EIS preparation process. Please PRINT.

Name: Betty Cheeks

Organization: Roseland Christian Ministry Title:

Address: 12420 S

City: Chgo. State: Ill. Zip: 60628

Phone: 773-928-3884 E-mail:

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

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Red Line Extension

Connecting 95th Street Station to 130th Street

cta

RS-155

The purpose of the scoping process is to identify public and agency concerns early in the environmental process, define the issues and alternatives that will be examined in the Environmental Impact Statement (EIS) and facilitate an efficient EIS preparation process. Please PRINT.

Name: Anthony E. Whitehead Jr.

Organization: Roseland Cristain ministry Title: guess / vistor

Address: my now knaon address is 16349 S Windchester

City: Marksam State: IL Zip: 60626

Phone: (708) 339-8740 E-mail: anthony e whitehead jr.

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

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This will only assist school kid and also after work tax payer with CTA continuesous transit assistance !!!

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Connecting 95th Street Station to 130th Street

RS-156

The purpose of the scoping process is to identify public and agency concerns early in the environmental process, define the issues and alternatives that will be examined in the Environmental Impact Statement (EIS) and facilitate an efficient EIS preparation process. Please PRINT.

Name: Steven Turner

Organization: Roseland Christian Ministry Title:

Address: 10858 SO Michigan

City: Chicago State: Ill Zip: 60628

Phone: (773) 414-1753 E-mail:

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

I support the extension of the CTA Red Line using the Union Pacific Rail Road (UPRR) route. I support the position that the Red Line extension must reach the Altgeld Gardens/ Calumet River area at 130th Street and that every possible engineering design concept must be examined to ensure the full extension of the Red Line from 95th Street to 130th Street. This will insure mass transit access to a transit dependent population, south suburban communities and nearby industries.

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Red Line Extension

Connecting 95th Street Station to 130th Street

RS-157

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Name: CHARLES BAISTEN

Organization: ROSELAND - CHRISTIAN - THRIFT STORE Title: TRUCK - DRIVER

Address: 33-E-111-TH PL

City: CHICAGO State: ILL Zip: 60628

Phone: 468-0262 E-mail:

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

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Red Line Extension

Connecting 95th Street Station to 130th Street

cta

RS-158

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Name: Tatiana J. Turner
Organization: Roseland Christian Reformed Title: Member
Address: 5. E. 102nd Place (Church) 322 E. 107th Street (Home)
City: Chicago State: IL Zip: 60628
Phone: 7739958223 E-mail: tatianaturner1@yahoo.com

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

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Red Line Extension

Connecting 95th Street Station to 130th Street

RS-159

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Name: DORNZELLO BEECHAM

Organization: ROSLAND CHRISTIAN CHURCH Title: MEMBER

Address: 9230 SO LOWE AVE

City: Chicago State: ILL Zip: 60620

Phone: (773) 994 6523 E-mail: DORNZELLOBEECHAM@Gmail.com

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

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Red Line Extension

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RS-160

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Name: Leonard Clark
Organization: R. C. M. C. Title: Member
Address: 10903 So. State
City: Chicago State: Ill Zip: 60628
Phone: 928-1323 E-mail:

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

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Leonard Clark

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Red Line Extension

Connecting 95th Street Station to 130th Street

RS-161

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Name: Sylvester BROWN
Organization: A GAte CALL BeautiFul Title: member
Address: 335 W 107 PL
City: CHiCAgo State: IL Zip: 60628
Phone: (773) 468-7529 E-mail:

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

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Red Line Extension

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RS-162

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Name: James E Green
Organization: Roseland Christian Title: merber
Address: 11210 S Normal
City: Chicago State: Il Zip: 60648
Phone: 773 660-1344 E-mail: N/A

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

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Red Line Extension

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RS-163

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Name: Mary Barnett

Organization: RCRC Title:

Address: 5439 Greenwood Ave 1fl

City: Chgo State: Ill Zip: 60615

Phone: 7736672668 E-mail:

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

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Red Line Extension

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RS-164

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Name: Dashan Hudson

Organization: Roseland Chr. Ref. Church Title: Deacon

Address: 15 E. 102nd St.

City: Chgo State: IL Zip: 60628

Phone: E-mail:

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Red Line Extension

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cta

RS-165

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Name: Juan C Diaz
Organization: R.C.RC. Title: MEmber
Address: 27 W. 114th Place
City: CHicago State: Ill Zip: 60628
Phone: (773) 563-3883 E-mail: NONE

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

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RS-166

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Name: Lynn Wilson

Organization: Church - RCRC Title: Member

Address: 7318 Southworth Circle

City: Plainfield State: IL Zip: 60586

Phone: (815)577-9937 E-mail: wilson_lynn@yahoo.com

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

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Red Line Extension

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RS-167

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Name: Jei Wilson
Organization: Church - RCRC Title: Member
Address: 7318 Southworth Circle
City: Plainfield State: IL Zip: 60586
Phone: (815)577-9937 E-mail: wilson_jei@yahoo.com

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RS-168

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Name: Robert J. Barnett
Organization: Roseland CKC Title: E/DEL
Address: 10831 S INDIANA
City: Chicago State: IL Zip: 60628
Phone: 7732647307 E-mail:

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RS-169

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Name: Irene M. Hilson
Organization: Rslnd. CRC Title: Deacon
Address: 5 E. 102nd Pl.
City: Chgo. Ill. State: Ill. Zip: 60626
Phone: 1-708-333-2797 E-mail: none

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

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Red Line Extension

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RS-170

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Name: JAMES SALLEY
Organization: ROSELAND I RCRC Title: MEMBER
Address: 12 E 102 PLACE
City: CHICAGO State: ILL Zip: 60628
Phone: 253-7519 E-mail: JSSmoth919@yAhoo.com

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

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RS-171

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Name: Rev Conrad Dalley

Organization: Church Title:

Address: 27 West 114th Place

City: Chicago State: Ill Zip: 60628

Phone: 1-773-941 4362 E-mail:

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Red Line Extension

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RS-260

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Name: Kamilah Abdur-Rahman

Organization: HCI Title: Consumer Advocate

Address: 10524 S. Vernon Ave.

City: Chicago State: Il. Zip: 60028

Phone: 773-305-7154 E-mail: Karrahman@hotmail.com

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RS-261

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Name: Mayme Buckley
Organization: Healthcare Consortium of Illinois Title: Director External Affairs
Address: 1350 E Sibley Blvd
City: Dalton State: Il Zip: 60419
Phone: (708)841-9515 E-mail: MBuckley@HCIOnline.org

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M Buckley

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Red Line Extension

Connecting 95th Street Station to 130th Street

RS-262

The purpose of the scoping process is to identify public and agency concerns early in the environmental process, define the issues and alternatives that will be examined in the Environmental Impact Statement (EIS) and facilitate an efficient EIS preparation process. Please PRINT.

Name: Pamela Glenn

Organization: Title:

Address: 53 E 100th St

City: Chgo State: IL Zip: 60628

Phone: 773/941-4507 E-mail: paglenn1001@yahoo.com

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

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Pamela Gl

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Red Line Extension

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cta

RS-263

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Name: Juan Talbert

Organization: J and J Consultants, Inc. Title: Public Relation Specialist

Address: 4724 S. Drexel Blvd. Apt 2

City: Chicago State: IL Zip: 60615

Phone: 708-574-4308 E-mail: juan_talbert@yahoo.com

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10/26/09

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Red Line Extension

Connecting 95th Street Station to 130th Street

RS-264

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Name: Phillip Cusic
Organization: New Life Title: Pastor
Address: 8201 S. Jeffery
City: Chicago State: IL Zip: 60628
Phone: 773 995-5315 E-mail: cusic@att.net

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

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Phillip Cusic

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Red Line Extension

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RS-265

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Name: Ulondia Johnson

Organization: Golden Gates Day Care Title: Teacher

Address: 13027 S. Drexel ave

City: Chicago State: Il Zip: 60827

Phone: 773 269-0991 E-mail:

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

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RS-266

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Name: Yahya A. Karim
Organization: Roseland Comm Dev. Cop. Title: Executive Director
Address: 11409 S. Michigan
City: Chicago State: IL. Zip: 60628
Phone: 773-821-5349 E-mail: roselandcdc@yahoo

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RS-267

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Name: Silas Woods Jr.
Organization: AREA Neighborhood Block Clubs Title: Exec Direct
Address: 9437 S. Hamilton
City: Chgo State: IL Zip: 60643
Phone: 773-550-6772 E-mail: W9219Woody@Aol.com

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Red Line Extension

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cta

RS-268

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Name: Karlisa Rodgers

Organization:

Title:

Address: 13027 S DRexel

City: Riverdale State: IL Zip: 60827

Phone: (773)853-8902 E-mail:

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RS-269

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Name: Clotiel Cameron
Organization: TeachThemHow Title: E Director
Address: 10501S. Parnell
City: Chgo State: Il. Zip: 60628
Phone: 773552-8497 E-mail: TeachThemHow@aol.com

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RS-270

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Name: Addie Allen

Organization: Healthcare CONSORTIUM of IL Title: CAO

Address: 1350 E Sibley BlvD

City: DolToN State: IL Zip: 60419

Phone: 708 841-9515 E-mail: acallen@hcionline.org

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cta

RS-271

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Name: Derek Covington
Organization: Roseland Community Collaborative, NFP Title: President
Address: 258 E. 115th St.
City: Chicago State: IL Zip: 60628
Phone: 312/381-9054 E-mail: mrcovington1994@yahoo.com

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RS-272

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Name: GREGORY C. WILLIAMS

Organization: ST JOHN M.B.C Title: DEACON

Address: 211 E 115TH ST

City: CHICAGO State: IL Zip: 60619

Phone: 312-320-2760 E-mail: REDMAN97@HOTMAIL.COM

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C. Will

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RS-273

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Name: ×DONNA L ROACH

Organization: Roos moor Association Title: Member

Address: 259 E. 107th Street

City: Chgo State: IL Zip: 60628

Phone: 568-895 E-mail: jmwilliamsj1@yahoo.com

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RS-274

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Name: EUNICE WILLIAMS

Organization: ROSEMOOR ASSOCIATION Title:

Address: 611 E. 103 Rd PL

City: ChicAgo State: Il Zip: 60628

Phone: E-mail:

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RS-275

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Name: Jeanette M. Williams
Organization: Roosemore Association Title: Member
Address: 259 E. 107th Street
City: Chgo State: Il Zip: 60628
Phone: 773/568-8951 E-mail: jmwilliamsj1@yahoo.com

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RS-276

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Name: Marsha Eaglin

Organization: IMPACT Family Center Title: CEO

Address: 10835 S. Hermosa / 10956 S. State St.

City: Chicago State: IL Zip: 60643 /28

Phone: 773 329 5086 E-mail: mseaglin34@gmail

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RS-277

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Name: Cynthia Flowers

Organization: BLACK STAR Community PTA Title: PRESIDENT

Address: 3509 S King Drive

City: Chgo State: IL Zip: 60616

Phone: (773) 285-9600 E-mail: Cynthia.NHHFOUNDATION@yahoo.com

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cta

RS-278

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Name: SHEILAH ROBINSON
Organization: Calumet Area Industrial Title: Project Manager
Address: 1000 E 111TH STREET
City: CHICAGO State: IL Zip: 60628
Phone: (773) 928-6000 E-mail: srobinson@calumetareaindustrial.com

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Red Line Extension

Connecting 95th Street Station to 130th Street

cta

RS-279

The purpose of the scoping process is to identify public and agency concerns early in the environmental process, define the issues and alternatives that will be examined in the Environmental Impact Statement (EIS) and facilitate an efficient EIS preparation process. Please PRINT.

Name: LaDonna Brown-Miller

Organization: ____________ Title: ____________

Address: 1029 E 130th Street

City: Chgo State: IL Zip: 60628

Phone: 773-995-6300 E-mail: lbrownmiller@tcahealth.org

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Red Line Extension

Connecting 95th Street Station to 130th Street

cta

RS-280

The purpose of the scoping process is to identify public and agency concerns early in the environmental process, define the issues and alternatives that will be examined in the Environmental Impact Statement (EIS) and facilitate an efficient EIS preparation process. Please PRINT.

Name: Jarvis Price

Organization: ____ Title: ____

Address: 418 Illinois St.

City: Park Forest State: IL Zip: 60466

Phone: 708-898-2809 E-mail: jarjay4@aol.com

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

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Red Line Extension

Connecting 95th Street Station to 130th Street

cta

RS-281

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Name: Jeanine M. Price

Organization: ________ Title: ________

Address: 418 Illinois St.

City: Park Forest State: IL Zip: 60466

Phone: 708-898-2809 E-mail: jarjay4@aol.com

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Red Line Extension

Connecting 95th Street Station to 130th Street

RS-282

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Name: Percy Nesbary

Organization: ____ Title: ____

Address: 10621 S. State St

City: Chgo. State: IL Zip: 60628

Phone: 773.428.1979 E-mail: ____

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Red Line Extension

Connecting 95th Street Station to 130th Street

RS-283

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Name: Keenya Brown

Organization: ______ Title: ______

Address: 8411 S. Ingleside, #3, Chicago, IL

City: Chicago State: IL Zip: 60619

Phone: (773) 636-2252 E-mail: Keenya_brown@yahoo.com

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Red Line Extension

Connecting 95th Street Station to 130th Street

RS-284

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Name: LISA DUNBAR

Organization: L.A.T.S.O. Title: President

Address: 10231 S. PEORIA

City: Chgo State: IL Zip: 60643

Phone: 773 445 1081 E-mail: latso312@yahoo.com

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Red Line Extension

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RS-285

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Name: Rosa Young

Organization: ______ Title: ______

Address: 17658 Bernadine

City: Lansing State: IL Zip: 60438

Phone: 708-648-0114 E-mail: ______

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Red Line Extension

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RS-286

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Name: Debra Martin

Organization: Title:

Address: 24625 Mulberry LN

City: Crete State: IL Zip: 60417

Phone: 708-704-6657 E-mail: itsdmartin@yahoo.com

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Red Line Extension

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RS-287

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Name: Charlotte Evans
Organization: Title:
Address: 4827 S. Kimbark
City: Chicago State: IL Zip: 60619
Phone: 773-551-2224 E-mail:

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cta

RS-288

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Name: Ella Grays
Organization: Healthcare Consortium of IL Title: Chief Program Officer
Address: 1350 E. Sibley Blvd
City: Dolton, I State: IL Zip: 60419
Phone: 708 841 7515 E-mail: egrays@hcconline.org

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Ella

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RS-289

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Name: Janet Wright

Organization: Title:

Address: 11919 S. Indiana

City: Chgo State: Il Zip: 60628

Phone: 708-261-2953 E-mail: David grant 24@ Yahoo.com

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RS-290

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Name: Teresa L. Moore

Organization: Star Project Title: Parent/Civil rights

Address: 538 W. 62ND St 2f

City: Chicago State: Ill Zip: 60621

Phone: 773.673.8132 E-mail:

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RS-291

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Name: ERIC Campbell

Organization: Title:

Address: P.O. BOX 81144

City: Chicago State: IL Zip: 60681

Phone: 312-953-1693 E-mail: bourgeoise@comcast.net

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Red Line Extension

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RS-292

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Name: Beverly Stewart

Organization: ______ Title: ______

Address: 6022 S. Indiana #201

City: Chicago Ill State: ______ Zip: ______

Phone: 773 32406 70 E-mail: ______

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Red Line Extension

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RS-293

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Name: Samina BROWN
Organization: Title:
Address: 4734 S. INdiana AVE
City: Chicago State: IL Zip: 60615
Phone: 773)268-0015 E-mail:

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RS-294

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Name: GWENDOLYN WoullARd

Organization: Title:

Address: 6733 So. Ridgeland Ave

City: Chgo State: Ill Zip: 60649

Phone: E-mail: ggwoullard@COMCAST.NET

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

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RS-295

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Name: JoANN Burl

Organization: JeanettesJoy Comm Service Title: Founder/CEO

Address: 10639 S. Champlain Ave

City: Chgo State: IL Zip: 60628

Phone: 773.2537631 E-mail: jeanettsjoy@yahoo.com

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Connecting 95th Street Station to 130th Street

RS-296

The purpose of the scoping process is to identify public and agency concerns early in the environmental process, define the issues and alternatives that will be examined in the Environmental Impact Statement (EIS) and facilitate an efficient EIS preparation process. Please PRINT.

Name: Diane Latiker
Organization: Kids Off The Block Title: Founder/President
Address: 11621 S. Michigan
City: Chicago State: IL Zip: 60628
Phone: 773-995-9099 E-mail: diane.latiker@sbcglobal.net

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

I support the extension of the CTA Red Line using the Union Pacific Rail Road (UPRR) route. I support the position that the Red Line extension must reach the Altgeld Gardens/ Calumet River area at 130th Street and that every possible engineering design concept must be examined to ensure the full extension of the Red Line from 95th Street to 130th Street. This will insure mass transit access to a transit dependent population, south suburban communities and nearby industries.

Scoping comments may be submitted via mail, e-mail, fax or the project website with attention to: Jeffrey Busby, General Manager, Strategic Planning, Chicago Transit Authority, P.O. Box 7602, Chicago, IL 60680-7602. **Fax:** (312)681-4297, **Email:** RedExtension@transitchicago.com, **Website:** www.transitchicago.com/RedEIS, **Customer Information:** 1-888-YOUR-CTA (1-888-968-7282), **Hearing & Speech Impaired:** 1-888-CTA-TTY1 (1-888-282-6891), **Transit Information:** 836-7000 from any local area code **RTA TTY:** 312-836-4949

Red Line Extension

Connecting 95th Street Station to 130th Street

cta

RS-297

The purpose of the scoping process is to identify public and agency concerns early in the environmental process, define the issues and alternatives that will be examined in the Environmental Impact Statement (EIS) and facilitate an efficient EIS preparation process. Please PRINT.

Name: DARRYL Gibson
Organization: 111th EmeRAld Title:
Address: 11142 S. EmeRAld
City: ChicAgo State: IL. Zip: 60628
Phone: 773 443-6925 E-mail: DARRYLGibson25@yAhoo.com

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

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Red Line Extension

Connecting 95th Street Station to 130th Street

cta

RS-298

The purpose of the scoping process is to identify public and agency concerns early in the environmental process, define the issues and alternatives that will be examined in the Environmental Impact Statement (EIS) and facilitate an efficient EIS preparation process. Please PRINT.

Name: Angela Woods

Organization: Title:

Address: 1458 Broadway Street

City: Blue Island State: IL Zip: 60406

Phone: 312-518-1638 E-mail: angee314@yahoo.com

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

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Red Line Extension

Connecting 95th Street Station to 130th Street

RS-299

The purpose of the scoping process is to identify public and agency concerns early in the environmental process, define the issues and alternatives that will be examined in the Environmental Impact Statement (EIS) and facilitate an efficient EIS preparation process. Please PRINT.

Name: Cecile Shannon

Organization: Joy Fellowship Bapt. Ch. Title: Church worker

Address: 2025 E. 175th

City: Lansing State: IL Zip: 60438

Phone: 708-418-8920 E-mail: joyfellowship@yahoo.com

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

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Red Line Extension

Connecting 95th Street Station to 130th Street

RS-300

The purpose of the scoping process is to identify public and agency concerns early in the environmental process, define the issues and alternatives that will be examined in the Environmental Impact Statement (EIS) and facilitate an efficient EIS preparation process. Please PRINT.

Name: PATRICIA NESBARY

Organization: Title:

Address: 6316 ALLEMONG DRIVE

City: MATTESON State: Il Zip: 60443

Phone: 708-720-5834 E-mail:

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

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Red Line Extension

Connecting 95th Street Station to 130th Street

cta

RS-301

The purpose of the scoping process is to identify public and agency concerns early in the environmental process, define the issues and alternatives that will be examined in the Environmental Impact Statement (EIS) and facilitate an efficient EIS preparation process. Please PRINT.

Name: Demetrius Houston

Organization: Title:

Address: 12240 South Perry

City: Chicago State: IL Zip: 60628

Phone: 773-226-4139 E-mail: demetrius_houston@yahoo.com

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

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Red Line Extension

Connecting 95th Street Station to 130th Street

RS-302

The purpose of the scoping process is to identify public and agency concerns early in the environmental process, define the issues and alternatives that will be examined in the Environmental Impact Statement (EIS) and facilitate an efficient EIS preparation process. Please PRINT.

Name: Desta Houston

Organization: Developing Communities Proj Title: Adm. Assistant

Address: 11310 South Halsted Street - Suite A

City: Chicago State: IL Zip: 60628-4757

Phone: 773-928-2500 E-mail: desta_houston@yahoo.com

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

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Red Line Extension

Connecting 95th Street Station to 130th Street

RS-303

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Name: Darsharlette Barron

Organization: Title:

Address: 11519 Villa Ct Apt. # 1D

City: Alsip State: IL Zip: 60803

Phone: 708-926-9831 E-mail: dbarronsales@hotmail.com

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

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Red Line Extension

Connecting 95th Street Station to 130th Street

RS-304

The purpose of the scoping process is to identify public and agency concerns early in the environmental process, define the issues and alternatives that will be examined in the Environmental Impact Statement (EIS) and facilitate an efficient EIS preparation process. Please PRINT.

Name: DR ISAAC L. FLOYD

Organization: Joy Fellowship Baptist Church Title: PASTOR

Address: 2025 E 175th

City: Lansing State: IL Zip: 60438

Phone: 708 4188920 E-mail: DRILFLOYD@ yahoo.com

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

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Red Line Extension

Connecting 95th Street Station to 130th Street

cta

RS-305

The purpose of the scoping process is to identify public and agency concerns early in the environmental process, define the issues and alternatives that will be examined in the Environmental Impact Statement (EIS) and facilitate an efficient EIS preparation process. Please PRINT.

Name: Sharon Houston

Organization: D Title:

Address: 12240 South Perry Avenue

City: Chicago State: Il. Zip: 60628

Phone: (773) 550-2084 E-mail: houstonsharon@sbcglobal.net

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

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Red Line Extension

Connecting 95th Street Station to 130th Street

cta

RS-306

The purpose of the scoping process is to identify public and agency concerns early in the environmental process, define the issues and alternatives that will be examined in the Environmental Impact Statement (EIS) and facilitate an efficient EIS preparation process. Please PRINT.

Name: Janice Richardson

Organization: Title:

Address: 12955 S. May Street

City: Calumet Park State: IL Zip: 60827

Phone: 708-209-7276 E-mail: jambennett13@yahoo.com

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

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Red Line Extension

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cta

RS-307

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Name: R. C. Houston
Organization: ______ Title: ______
Address: 12240 South Perry Avenue
City: Chicago State: IL Zip: 60628-6327
Phone: (312) - 0078 E-mail: RCHouston2@yahoo.com

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

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Red Line Extension

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RS-308

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Name: Verdia L. Jones

Organization: Joy Fellowship Title:

Address: 8623 So. Elizabeth St.

City: Chicago State: IL Zip: 60620

Phone: (773) 994-6742 E-mail:

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

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Red Line Extension

Connecting 95th Street Station to 130th Street

cta

RS-309

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Name: Pamela Wimberly
Organization: Title:
Address: 61 West 125 Street
City: Chicago State: ILL Zip: 60628
Phone: 773 264-7022 E-mail: Wimberly1234@yahoo.com

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Red Line Extension

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RS-310

The purpose of the scoping process is to identify public and agency concerns early in the environmental process, define the issues and alternatives that will be examined in the Environmental Impact Statement (EIS) and facilitate an efficient EIS preparation process. Please PRINT.

Name: Christopher Bates

Organization: Title:

Address: 2145 E 175th St.

City: Lansing State: Il Zip: 60438

Phone: ~~(?)~~ 773-469-4681 E-mail: Chris.Bates

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Red Line Extension

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cta

RS-311

The purpose of the scoping process is to identify public and agency concerns early in the environmental process, define the issues and alternatives that will be examined in the Environmental Impact Statement (EIS) and facilitate an efficient EIS preparation process. Please PRINT.

Name: Patricia Clark

Organization: ______ Title: ______

Address: 3623 188th Pl

City: Lansing State: Il. Zip: 60438

Phone: (708) 895-5639 E-mail: ______

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

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Red Line Extension

Connecting 95th Street Station to 130th Street

RS-312

The purpose of the scoping process is to identify public and agency concerns early in the environmental process, define the issues and alternatives that will be examined in the Environmental Impact Statement (EIS) and facilitate an efficient EIS preparation process. Please PRINT.

Name: Michael Richardson
Organization: Title:
Address: 12955 South May
City: Chicago, Calumet Park State: Ill Zip: 60827
Phone: 312-420-0258 E-mail:

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Red Line Extension

Connecting 95th Street Station to 130th Street

cta

RS-313

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Name: Clinton HAll

Organization: R.C.A. Title: BOARD member

Address: 10536 So Rhodes

City: ChicAgo State: IL. Zip: 60628

Phone: 773-928-1604 E-mail: HAllcb@hotmAil.Com

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Red Line Extension

Connecting 95th Street Station to 130th Street

RS-314

The purpose of the scoping process is to identify public and agency concerns early in the environmental process, define the issues and alternatives that will be examined in the Environmental Impact Statement (EIS) and facilitate an efficient EIS preparation process. Please PRINT.

Name: Lois E. Williams

Organization: ______ Title: ______

Address: 200 E. 115 th Street

City: Chicago State: IL Zip: 60628

Phone: 312-747-9500 E-mail: Williams-Lois@CDPH.org

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Red Line Extension

Connecting 95th Street Station to 130th Street

RS-315

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Name: KNESHA ROSE
Organization: HEALTHCARE CONSORTIUM. Title: Assistant Director
Address: 1350 E SIBLEY BLD. SUITE #303
City: Dolton State: IL Zip: ~~[illegible]~~ 60419
Phone: 708-841-9515 E-mail: krose@hcionline.org.

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

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Red Line Extension

Connecting 95th Street Station to 130th Street

cta

RS-316

The purpose of the scoping process is to identify public and agency concerns early in the environmental process, define the issues and alternatives that will be examined in the Environmental Impact Statement (EIS) and facilitate an efficient EIS preparation process. Please PRINT.

Name: Naomi Coleman

Organization: HCI Title:

Address: 1350 E Sibley

City: Dolton State: IL Zip: 60419

Phone: 708 841-9515 E-mail: ncoleman@hcionline.org

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Naomi Coleman

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Red Line Extension

Connecting 95th Street Station to 130th Street

RS-317

The purpose of the scoping process is to identify public and agency concerns early in the environmental process, define the issues and alternatives that will be examined in the Environmental Impact Statement (EIS) and facilitate an efficient EIS preparation process. Please PRINT.

Name: Ashley Phillips

Organization: Healthcare Consortium of Il Title:

Address: 1350 E. Sibley Blvd

City: Dolton State: Il Zip: 60419

Phone: 708~~3~~201 5405 E-mail: aphillips@hcionline.org

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

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Ashley Phillips

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Red Line Extension

Connecting 95th Street Station to 130th Street

RS-318

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Name: BARBARA HEARON

Organization: STRIVING FOR JUSTICE MIN Title: EXEC DIR.

Address: 258 E 115th

City: CHGO State: IL Zip: 60620

Phone: 773 852-0071 E-mail: hearonb@yahoo.com

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Red Line Extension

Connecting 95th Street Station to 130th Street

cta

RS-319

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Name: Robert Douglas
Organization: S.D.N Foundation Title: Founder
Address: 10812 S. Forest
City: Chicago State: IL. Zip: 60628
Phone: 773-653-7527 E-mail: sonfourlife@yahoo.com

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Red Line Extension

Connecting 95th Street Station to 130th Street

RS-320

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Name: Yolanda Luvert

Organization: ______ Title: ______

Address: 700 W. 117th St

City: CHGO State: Il Zip: 60628

Phone: 773-882-0029 E-mail: Yolanda Luvert (a) sbc global.net

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Red Line Extension

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RS-321

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Name: MARK HARRELL

Organization: 111th ST. Block CLUB Title: PRESIDENT

Address: 11121 S. Emerald

City: Chgo State: IL Zip: 60628

Phone: 708-439-2661 E-mail: mark-harrell@us.aflac.com

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RS-322

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Name: Suwanda O. Atwater

Organization: ______ Title: ______

Address: 19 W. 112th Street

City: Chicago State: IL Zip: 60628

Phone: (708) 359-1582 E-mail: South20@Comcast.com

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RS-323

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Name: Patricia Taylor

Organization: ____________ Title: ____________

Address: 4947 S. Coles

City: Chicago State: IL Zip: 60617

Phone: 773-719-3216 E-mail: ____________

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RS-324

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Name: Charise R. Bennett

Organization: ____________________ Title: ____________________

Address: 12955 S. May

City: Calumet Park State: IL Zip: 60827

Phone: 708-743-8811 E-mail: Chairis@hotmail.com

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RS-325

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Name: LAVERNE L. SIMS

Organization: Title:

Address: 337 Oglesby

City: Calumet City State: IL Zip: 60409

Phone: 708 717-0162 E-mail: LAVSIMS@yahoo.com

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Red Line Extension

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RS-326

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Name: Bobbie Lloyd

Organization: Title:

Address: 12357 S. Perry

City: Chicago State: Il. Zip: 60628

Phone: 773 995 1632 E-mail:

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Red Line Extension

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RS-327

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Name: Ashley Davis

Organization: Title:

Address: 7940 S. Wood

City: Chicago State: IL Zip: 60620

Phone: 773-544-4156 E-mail: adavis2593@yahoo.com

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Red Line Extension

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RS-328

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Name: Edmond Lumpkin

Organization: Title:

Address: 7940 S. Woodst Apt 7

City: Chicagu State: IL Zip: 60620

Phone: 773 494 8866 E-mail: edlumpkin@yahoo.com

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RS-329

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Name: DANIEL Mays

Organization: Title:

Address: 9800 South

City: Chicago State: IL Zip: 60628

Phone: (773) 320-0521 E-mail: Carpenterdan.@Yahoo.COM

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Red Line Extension

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RS-330

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Name: CassanDRA Allen Courtney

Organization: Title:

Address: 20630 CRAWFORD

City: Matteson State: IL Zip: 60443

Phone: 708-679 9596 E-mail: CassanDRA Courtney@yahoo.com

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Red Line Extension

Connecting 95th Street Station to 130th Street

RS-331

The purpose of the scoping process is to identify public and agency concerns early in the environmental process, define the issues and alternatives that will be examined in the Environmental Impact Statement (EIS) and facilitate an efficient EIS preparation process. Please PRINT.

Name: Malvoris Rodgers

Organization: ______ Title: ______

Address: 7901 S. Paxton

City: Chicago State: IL Zip: 60617

Phone: 312.560.1375 E-mail: ______

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

I support the extension of the CTA Red Line using the Union Pacific Rail Road (UPRR) route. I support the position that the Red Line extension must reach the Altgeld Gardens/ Calumet River area at 130th Street and that every possible engineering design concept must be examined to ensure the full extension of the Red Line from 95th Street to 130th Street. This will insure mass transit access to a transit dependent population, south suburban communities and nearby industries.

Scoping comments may be submitted via mail, e-mail, fax or the project website with attention to: Jeffrey Busby, General Manager, Strategic Planning, Chicago Transit Authority, P.O. Box 7602, Chicago, IL 60680-7602. **Fax:** (312)681-4297, **Email:** RedExtension@transitchicago.com, **Website:** www.transitchicago.com/RedEIS, **Customer Information:** 1-888-YOUR-CTA (1-888-968-7282), **Hearing & Speech Impaired:** 1-888-CTA-TTY1 (1-888-282-6891), **Transit Information:** 836-7000 from any local area code **RTA TTY:** 312-836-4949

Red Line Extension

Connecting 95th Street Station to 130th Street

cta

RS-332

The purpose of the scoping process is to identify public and agency concerns early in the environmental process, define the issues and alternatives that will be examined in the Environmental Impact Statement (EIS) and facilitate an efficient EIS preparation process. Please PRINT.

Name: Cheryl Haynes

Organization: Title:

Address: 3515 W. 85th PL

City: Chicago State: IL Zip: 60652

Phone: 773-471-9405 E-mail: Lady 930 @ Prodigy.net

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

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Red Line Extension

Connecting 95th Street Station to 130th Street

cta

RS-333

The purpose of the scoping process is to identify public and agency concerns early in the environmental process, define the issues and alternatives that will be examined in the Environmental Impact Statement (EIS) and facilitate an efficient EIS preparation process. Please PRINT.

Name: JOHN PAUL JONES
Organization: Sustainable Englewood Project Title: President
Address: 2113 W. 71st Street
City: Chicago State: IL Zip: 606
Phone: (773) 928-2500 E-mail: jpjones.dcp@gmail.com

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

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John Paul Jones

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Red Line Extension

Connecting 95th Street Station to 130th Street

RS-334

The purpose of the scoping process is to identify public and agency concerns early in the environmental process, define the issues and alternatives that will be examined in the Environmental Impact Statement (EIS) and facilitate an efficient EIS preparation process. Please PRINT.

Name: Brandon Lore

Organization: DEVELOPING COMMUNITIES PROJECT Title: PREVENTION SPECIALIST

Address: 11300 S. HALSTED, SUITE A

City: CHICAGO State: IL Zip: 60628

Phone: (773) 928-2500 E-mail: branpelle@aol.com

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

I support the extension of the CTA Red Line using the Union Pacific Rail Road (UPRR) route. I support the position that the Red Line extension must reach the Altgeld Gardens/ Calumet River area at 130th Street and that every possible engineering design concept must be examined to ensure the full extension of the Red Line from 95th Street to 130th Street. This will insure mass transit access to a transit dependent population, south suburban communities and nearby industries.

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Red Line Extension

Connecting 95th Street Station to 130th Street

RS-335

The purpose of the scoping process is to identify public and agency concerns early in the environmental process, define the issues and alternatives that will be examined in the Environmental Impact Statement (EIS) and facilitate an efficient EIS preparation process. Please PRINT.

Name: GWENDOLYN M. RICE

Organization: Developing Communities Project Title: Executive Director

Address: 11300 S. HALSTED ST - Suite A

City: CHICAGO State: IL Zip: 60628

Phone: 773-928-2500 E-mail: GWENRICE.DCP@AMERITECH.NET

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27. 2009.

The Key MEASURE FOR consideration in This MATTER is the TRANSIT RIDERS: how the CTA CAN BE MORE USER FRIENDLY & helpful to those persons who ARE TRANSIT disadvantaged.

Clearly, the Red Line must be extended & AVAILABLE to those with low incomes, without cars OR without employment because they ARE TRANSIT disadvantaged.

It is CRITICAL FOR The CTA Line to extend to 130th St to insure that young & old have access to Chicago's amenities - the HAROLD WASHINGTON LIBRARY, the Millenium Park, The Cultural Center - that ARE SO TOTALLY accessible to walking and high wealth communities.

It is important for transit to be equitable. This line will help (not completely solve) to mitigate against The glaring transit inequities on Chicago's FAR South side.

Scoping comments may be submitted via mail, e-mail, fax or the project website with attention to: Jeffrey Busby, General Manager, Strategic Planning, Chicago Transit Authority, P.O. Box 7602, Chicago, IL 60680-7602. **Fax:** (312)681-4297, **Email:** RedExtension@transitchicago.com, **Website:** www.transitchicago.com/RedEIS, **Customer Information:** 1-888-YOUR-CTA (1-888-968-7282), **Hearing & Speech Impaired:** 1-888-CTA-TTY1 (1-888-282-6891), **Transit Information:** 836-7000 from any local area code **RTA TTY:** 312-836-4949

Red Line Extension

Connecting 95th Street Station to 130th Street

RS-336

The purpose of the scoping process is to identify public and agency concerns early in the environmental process, define the issues and alternatives that will be examined in the Environmental Impact Statement (EIS) and facilitate an efficient EIS preparation process. Please PRINT.

Name: Tony Adams , Anhonyjohnson

Organization: sara Lee bakins Title: I work brsad

Address: 3351 W 21th St

City: Chicaso State: Ciul Zip: 60623

Phone: 1-773-522-5286 E-mail: 3351 W 21th St

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

cultural resources
Wildife and ecosytems
Enersy use
Land acquisition displacement and relocation
Land use relocations
Natural resources includins air quality
and water resources
Neihsnorhood compatiblity and environmsetal
Justice
Parklands/ recreational facilities
safety and security secondary development
transportation. Noiseand vibration
visual and aesthetic impacts
zon and economic development and

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RS-337

CHANGE.
CHICAGO HOUSING AUTHORITY

Martin Nesbitt
Chairperson

Board of Commissioners
Hallie Amey
Deverra Beverly
Dr. Mildred Harris
Michael Ivers
Myra King
Carlos Ponce
M. Bridget Reidy
Sandra Young

Lewis A. Jordan
Chief Executive Officer

Scott W. Ammarell
General Counsel

November 2, 2009

Jeffrey Busby
General Manager, Strategic Planning
Chicago Transit Authority
P.O. Box 7602
Chicago, IL 60680-7602

Dear Mr. Busby:

In response to the *Environmental Impact Statement Scoping Information* regarding *Connecting 95th Street Station to 130th Street,* The Chicago Housing Authority (CHA) would like to express strong support for the Red Line Extension Locally Preferred Alternative.

This alternative extension would improve public transportation and citywide accessibility for residents and workers of the South Side. Particularly, this extension would allow greater public transportation and a Red Line stop near the Altgeld Gardens residential development which is located on the far South Side near the Riverdale community. The 190-acre Altgeld Gardens is comprised of 17 blocks of 225 two-story row houses with 1,953 family units and its full rehabilitation is scheduled to be completed in 2014. The CHA would like to add that the Red Line Extension Locally Preferred Alternative would have a tremendous positive impact for the families living at Altgeld Gardens who would certainly benefit from utilizing this proposed extension.

The CHA looks forward to this Chicago Transit Authority targeted project and hopes that we can be of support throughout the process of the Red Line Extension.

Sincerely,

Lewis A. Jordan
Chief Executive Officer

Red Line Extension

Connecting 95th Street Station to 130th Street

RS-338

The purpose of the scoping process is to identify public and agency concerns early in the environmental process, define the issues and alternatives that will be examined in the Environmental Impact Statement (EIS) and facilitate an efficient EIS preparation process. Please PRINT.

Name: THE REV. DR. JOSEPH M. BOCKO

Organization: REFORMATION LUTHERAN Title: SENIOR PASTOR

Address: 11310 S. FOREST AVE.

City: CHICAGO State: IL Zip: 60628

Phone: 773-785-4570 E-mail: reforchicago@yahoo.com

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

I support the extension of the CTA Red Line using the Union Pacific Rail Road (UPRR) route. I support the position that the Red Line extension must reach the Altgeld Gardens/ Calumet River area at 130th Street and that every possible engineering design concept must be examined to ensure the full extension of the Red Line from 95th Street to 130th Street. This will insure mass transit access to a transit dependent population, south suburban communities and nearby industries.

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Red Line Extension

Connecting 95th Street Station to 130th Street

RS-339

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Name: Helen Rockingham
Organization: Home Owner Title:
Address: 11340 S. Princeton Ave.
City: Chicago, State: Il Zip: 60628
Phone: 773-821-0208 E-mail: helen.rockingham@att.net

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

Even though there was one other option presented at the Sept. 22nd, Scoping Mee
-cant see the purpose being fulfilled using it or the HRT Alternativeroute. Your goals as
stated on page 11 appears to be more efficiently implimented by the Locally Preferred Alt
West and South side of the exsisting track. That being said, What is the distance fro
the track of property in need of occupancy removal? Where on the time-line would
hose individuals be contacted? How would these persons be contacted? Who (what
division of Management) will be responsible for those notifications? Will the Engineers now
be aware + take under consideration the ability or inability of homes that structurally coul
not withstand ⓐ the building/construction affects (the shifting of landscape (consequently home structures
ⓑ upon opening the rail-traffic.
I think the age of the structures must be taken into consideration not only
distance.
I commend you on your objectives - knowing how very much this new system effe
s needed and I hope an open and fair Communication Line will Continue throughout the Project at

Scoping comments may be submitted via mail, e-mail, fax or the project website with attention to: Jeffrey Busby, General Manager, Strategic Planning, Chicago Transit Authority, P.O. Box 7602, Chicago, IL 60680-7602. **Fax:** (312)681-4297, **Email:** RedExtension@transitchicago.com, **Website:** www.transitchicago.com/RedEIS, **Customer Information:** 1-888-YOUR-CTA (1-888-968-7282), **Hearing & Speech Impaired:** 1-888-CTA-TTY1 (1-888-282-6891), **Transit Information:** 836-7000 from any local area code **RTA TTY:** 312-836-4949

Red Line Extension

Connecting 95th Street Station to 130th Street

RS-340

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Name: REATHER STOCKSTELL

Organization: SALEM BAPTIST CHURCH OF CHGO Title: MEMBER ID: 10974

Address: 753 EAST 79th STREET, 4A

City: CHICAGO State: IL Zip: 60619-3133

Phone: (773) 398-4408 E-mail: rstockstell@yahoo.com

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

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Red Line Extension

Connecting 95th Street Station to 130th Street

RS-341

The purpose of the scoping process is to identify public and agency concerns early in the environmental process, define the issues and alternatives that will be examined in the Environmental Impact Statement (EIS) and facilitate an efficient EIS preparation process. Please PRINT.

Name: Rita Maryland

Organization: Title:

Address: 9230 S. Bennett Ave

City: Chicago State: Il Zip: 60617

Phone: 773-978-5625 E-mail:

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

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Red Line Extension

Connecting 95th Street Station to 130th Street

RS-342

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Name: Brian Maryland

Organization: Title:

Address: 8751 S. Euclid

City: Chicago State: Il Zip: 60617

Phone: E-mail:

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Line Extension

Connecting 95th Street Station to 1 0th Street

RS-343

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Name: DOLORES M. CHESTNUT
Organization: ROSEMOOR COMMUNITY ASSOC Title: MEMBER
Address: 10522 So. VERNON AV.
City: CHICAGO State: IL Zip 60628
Phone: (773)928-09[illegible]1 E-mail:

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

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Line Extension

Connecting 95th Street Station to 1 0th Street

RS-344

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Name: MONICA N. CHESTNUT
Organization: ROSEMOOR COMMUNITY ASSOC Title: MEmber
Address: 10522 S. VERNON
City: Chicago State: IL Zip: 60628
Phone: (773) 928-0971 E-mail:

Please comment on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation and the potential impacts and mitigation measures to be considered. Comments must be submitted by the close of business on October 27, 2009.

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Appendix M
Agency Scoping Comments

RS-53

City of Chicago
Richard M. Daley, Mayor

Department of Environment

Suzanne Malec-McKenna
Commissioner

Twenty-fifth Floor
30 North LaSalle Street
Chicago, Illinois 60602-2575
(312) 744-7606 (Voice)
(312) 744-6451 (FAX)
(312) 744-3586 (TTY)
http://www.cityofchicago.org

NEIGHBORHOODS Alive!
BUILDING CHICAGO TOGETHER

October 30, 2009

Mr. Richard L. Rodriguez, President
Mr. Jeffrey Busby, General Manager, Strategic Planning
Chicago Transit Authority
P.O. Box 7602
Chicago, IL 60680-7602

Dear Messrs. Rodriguez and Busby:

The Department of Environment (DOE) appreciates the opportunity to comment on the proposed extension of the Chicago Transit Authority (CTA) Red and Orange Lines. We are supportive of both projects and the increased service to currently under-supported communities.

Three sections follow; the first is a list that applies to both projects, the second focuses on the Red Line, and the third on the Orange Line.

BOTH PROJECTS
Please evaluate:

- Recycling opportunities at stations and parking areas
- Alternative energy options including solar, solar thermal, wind and more to provide electricity and heating / cooling where needed
- Opportunities to install solar arrays (on rooftops, large expanses, etc.) to return energy to the grid
- Reduction of light pollution through the use of downward-facing lighting
- Compliance with the city's stormwater ordinance, including using bioswales, rain barrels and other methods to reduce the first flush of water into the sewer system
- Native landscapes requiring little to no irrigation
- Green roofs on any facilities
- Bicycle access and parking
- Permeable paving for the Park-N-Ride areas
- Preferred parking for fuel-efficient vehicles
- Charging stations for electric vehicles
- The City's new Soil and Rubble Reuse Intergovernmental Agreement applicability – extensive reuse of materials during demolition and construction could be possible
- Impacts to wildlife or other important natural resources

CHICAGO WORKS TOGETHER

RED LINE
DOE will be constructing the Ford Calumet Environmental Center, a 38,000 square foot environmental education facility near 130th and Torrence in Chicago. We are supportive of a joint Metra / CTA station at 115th Street and are very interested in the possibility of an intermodal connection between NicTD/South Shore Line and CTA at 130th Street. These joint stations would allow residents from Indiana and the suburbs to easily gain access to our Center. We would also invite discussion around a bus turnaround at the Center for the 130th and Torrence buses or other buses with similar routes.

ORANGE LINE
Of particular concern to DOE are issues relating to neighborhood compatibility and environmental justice, primarily in relation to historical and/or privately owned parcels that may need to be acquired for the project. DOE would also be interested in a detailed evaluation of noise and vibration, including additive effects associated with Midway airport operations, to determine how such issues will affect neighboring properties.

We offer our support and assistance with any of our comments as appropriate. Thank you for the opportunity to comment on these important projects.

Sincerely,

Suzanne Malec-McKenna
Commissioner

cc: Nicole Kamins
Kevin Laberge

SMM/NRWQ/nlk

RS-52

Cheever, Kim

From: Red Extension [redextension@transitchicago.com]
Sent: Wednesday, November 04, 2009 4:47 PM
To: Peters, Melissa
Cc: Kornblatt, Helene B.
Subject: FW: Request for Comments -- Department of Streets and Sanitation - Proposed Red Line Expansion

---

From: StreetsAndSan [streetsandsan@cityofchicago.org]
Sent: Monday, November 02, 2009 2:39 PM
To: Red Extension
Cc: Ernst, Jonathan
Subject: Request for Comments -- Department of Streets and Sanitation - Proposed Red Line Expansion

Mr. Jeffrey Busby
General Manager, Strategic Planning
Chicago Transit Authority
RedExtension@transitchicago.com
OrangeExtension@transitchicago.com

Dear Mr. Busby:

I am writing in response to your request for comments regarding the environmental reviews that will take place pertinent to the potential expansions of the Red and Orange Lines of the Chicago Transit Authority.

For both projects, the City of Chicago's Department of Streets and Sanitation (DSS) would like the review committee to consider the following comments and concerns regarding the expansions during the environmental review process:

1. The location of any street lights that will need to be removed or relocated as a result of the new lines;
2. An analysis of the affect these elevated concrete supports will have on street level lighting and any steps that will be taken to supplement street lighting in these areas, i.e. CTA-provided lighting on the underside of the elevated line;
3. The location of any public way trees that will need to be removed as a result of the new lines or the construction activity and a replacement strategy for those lost trees;
4. The level of assistance the CTA expects to request from DSS for services such as street "No Parking" postings and the towing of illegally parked vehicles during the construction phase of these projects;
5. The creation of a rodent abatement plan for the affected land which includes required sign-offs by the DSS's Bureau of Rodent Control prior to construction;
6. A plan for the proper storage, removal and recycling of all construction and demolition debris in accordance with all City of Chicago ordinances; and
7. A commitment to having platform level recycling containers and space at street level for the storage of recyclables prior to being separately collected from the garbage.

Thank you for your consideration of these issues

Sincerely,
(SIGNED)
Thomas G. Byrne

Commissioner
Department of Streets and Sanitation
TGB:je:lps

EMAIL/Busby.CTA.email.environmental review

cc: Jonathan Ernst

RS-337

CHANGE.
CHICAGO HOUSING AUTHORITY

Martin Nesbitt
Chairperson

Board of Commissioners
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Carlos Ponce
M. Bridget Reidy
Sandra Young

Lewis A. Jordan
Chief Executive Officer

Scott W. Ammarell
General Counsel

November 2, 2009

Jeffrey Busby
General Manager, Strategic Planning
Chicago Transit Authority
P.O. Box 7602
Chicago, IL 60680-7602

Dear Mr. Busby:

In response to the *Environmental Impact Statement Scoping Information* regarding *Connecting 95th Street Station to 130th Street,* The Chicago Housing Authority (CHA) would like to express strong support for the Red Line Extension Locally Preferred Alternative.

This alternative extension would improve public transportation and citywide accessibility for residents and workers of the South Side. Particularly, this extension would allow greater public transportation and a Red Line stop near the Altgeld Gardens residential development which is located on the far South Side near the Riverdale community. The 190-acre Altgeld Gardens is comprised of 17 blocks of 225 two-story row houses with 1,953 family units and its full rehabilitation is scheduled to be completed in 2014. The CHA would like to add that the Red Line Extension Locally Preferred Alternative would have a tremendous positive impact for the families living at Altgeld Gardens who would certainly benefit from utilizing this proposed extension.

The CHA looks forward to this Chicago Transit Authority targeted project and hopes that we can be of support throughout the process of the Red Line Extension.

Sincerely,

Lewis A. Jordan
Chief Executive Officer

60 E. Van Buren Street · Chicago, Illinois 60605-1207 · (312) 742-8500 · www.thecha.org

Cheever, Kim

From: Peters, Melissa [PetersMe@cdm.com]
Sent: Tuesday, October 06, 2009 8:21 AM
To: Cheever, Kim
Subject: FW: Attn ; Jeff Busby
Attachments: cta expansion.doc

Note that this is an agency comment.

From: Orange Extension [mailto:OrangeExtension@transitchicago.com]
Sent: Monday, October 05, 2009 4:45 PM
To: Peters, Melissa
Cc: Kornblatt, Helene B.
Subject: FW: Attn ; Jeff Busby

From: Harmon, Mark A. [Mark.Harmon@chicagopolice.org]
Sent: Monday, October 05, 2009 9:18 AM
To: 'redextension@transitchicago.om'
Cc: Orange Extension
Subject: Attn ; Jeff Busby

Sorry for the delay

Lt Mark Harmon

BUREAU OF PATROL **1 October 2009**

TO: Jeffrey Busby
General Manager
Strategic Planning
Chicago Transit Authority

FROM: Mark Harmon
Commanding Officer
Bureau of Patrol Administration

SUBJECT: CTA Extension Projects

Bureau of Patrol is listing the following concerns/issues to be addressed in regards to the Red and Orange line extension projects:

- Federal funding for an overtime initiative similar to the Dan Ryan extension project. Overall security for the project will over burden regular patrol duties. Site and personnel security should be covered separately from day to day operations.

- Remote and somewhat concealed access points and locations pose security issues.

- Additional traffic issues need to be addressed with proposed right of way going to CTA. There will also be additional vehicles being utilized to begin the shuttle service to proposed new destinations.

- More Chicago Police Department members will need to be rail certified with the proximity of the rail system to the designated patrol areas.

- Proposed expansion of the 95th St terminal poses many traffic and security issues. Currently the terminal is one of the busiest rail locations for police service. This would be greatly affected by reduced parking and increased foot and vehicular traffic.

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 North Grand Avenue East, P.O. Box 19276, Springfield, Illinois 62794-9276 • (217) 782-2829
James R. Thompson Center, 100 West Randolph, Suite 11-300, Chicago, IL 60601 • (312) 814-6026

PAT QUINN, GOVERNOR **DOUGLAS P. SCOTT**, DIRECTOR

217-782-0547

September 28, 2009

Mr. John Paquet
Vice President
Planning and Development
Chicago Transit Authority
567 West Lake Street
Chicago, IL 60661-1498

Dear Mr. Paquet:

We have reviewed the information concerning an Environmental Impact Statement project for the proposed Red Line Extension to serve the South Suburban residents. This project also includes improvements to the 95th Street Station terminal.

The Agency has no objections to the project; however a construction site activity stormwater NPDES permit will be required from the Division of Water Pollution Control. Also, please contact The U. S. Army Corps of Engineers for any permit requirements if there are any stream crossings that require dredge and fill activities in the waterway.

If you have need for an Environmental Review in the future, please submit your information to:
Illinois Environmental Protection Agency, Deputy Director's Office/MC #1,
PO Box 19276, Springfield, Illinois 62794-9276, **ATTN: DiAnne Schuerman**

Sincerely,

Lisa Bonnett

Lisa Bonnett
Acting Deputy Director

RS-20

Cheever, Kim

From: Red Extension [redextension@transitchicago.com]
Sent: Monday, October 12, 2009 4:35 PM
To: Peters, Melissa
Cc: Kornblatt, Helene B.
Subject: FW: Illinois State Police concerns

From: Anthony_Lupo@isp.state.il.us [Anthony_Lupo@isp.state.il.us]
Sent: Wednesday, October 07, 2009 11:14 AM
To: Red Extension; Yellow Extension; Orange Extension
Cc: mark.harmon@chicagopolice.org
Subject: Illinois State Police concerns

As we discussed in the Scoping meeting on September 23, 2009. Below is details a few concerns we had and would like them looked at during the preliminary phase:

FIRST RESPONDERS

Will the construction area be easily accessible for First Responders to respond to any type of emergency? With the tracks being elevated, will there be an easy on/off for personnel?

SECURITY

If the Contractor desires additional police officer services of Illinois State Police (ISP), District Chicago, for enforcement, traffic control, and/or security, ISP personnel will, as available, provide police services on a hireback basis. During this time, ISP officers will provide a visible State Police presence, provide general police services and take enforcement action as appropriate in and around the site of the program. We will govern all areas on the expressways or on state owned property. To secure the above, the Contractor would have to sign a binding contract detailing all the specifics with the State of Illinois.

If you should have any questions or need additional information, please do not hesitate to contact me.

Respectfully,

Lieutenant Tony Lupo
District Chicago
Administrative Command
Office 847 294 4655
Fax 847 294 4440
Cell 708 932 9347

RS-57

Cheever, Kim

From: Red Extension [redextension@transitchicago.com]
Sent: Thursday, October 29, 2009 8:35 AM
To: Peters, Melissa
Cc: Kornblatt, Helene B.
Subject: FW: Red line EIS scoping comments

From: David Tomzik [David.Tomzik@Pacebus.com]
Sent: Tuesday, October 27, 2009 9:12 AM
To: Red Extension
Subject: Red line EIS scoping comments

Pace scoping comments regarding CTA Red Line Extension Environmental Impact Statement

Thank you for the opportunity to review and comment on the scoping of the Environmental Impact Statement for the Red Line extension. Below are comments regarding the proposed project alternatives and potential environmental impacts relating to the proposed extension between 95th Street Station and 130th Street.

- Pace supports the rail extension of the Red Line from the current terminus at 95th Street Station to 130th Street
- In compliance with the Illinois Auditor General's recommendation to reduce CTA & Pace overlapping service and provide greater suburban market coverage area, Pace intends to restructure various south suburban routes operating on Halsted and King Drive which now serve the Red Line 95th Street Station. Additional planning development and review would be required to determine the most optimal station(s) to serve on either alignment.
- Arterial roadway access to/from the proposed station(s) served by connecting bus services will require further review including issues such as railroad grade crossings, street parking, and intersection improvements to accommodate bus movements.
- Pace requests participation in the planning development and design of the proposed station facilities served by both fixed route and Regional ADA Paratransit services. Design should include sufficient bays to accommodate Pace and CTA bus routes, Regional ADA Paratransit, operator facilities, passenger information as well as bus priority access such as Transit Signal Priority or bus activated signals to allow buses to enter/exit the terminal with minimal congestion.

We look forward to participating in this regional planning process.

David Tomzik
Manager, Long Range Planning
Pace Suburban Bus Service
550 W. Algonquin Road
Arlington Heights, IL 60005
847 228-2463
fax 847 228-2330

david.tomzik@pacebus.com

RS-53

City of Chicago
Richard M. Daley, Mayor

Department of Environment

Suzanne Malec-McKenna
Commissioner

Twenty-fifth Floor
30 North LaSalle Street
Chicago, Illinois 60602-2575
(312) 744-7606 (Voice)
(312) 744-6451 (FAX)
(312) 744-3586 (TTY)
http://www.cityofchicago.org

October 30, 2009

Mr. Richard L. Rodriguez, President
Mr. Jeffrey Busby, General Manager, Strategic Planning
Chicago Transit Authority
P.O. Box 7602
Chicago, IL 60680-7602

Dear Messrs. Rodriguez and Busby:

The Department of Environment (DOE) appreciates the opportunity to comment on the proposed extension of the Chicago Transit Authority (CTA) Red and Orange Lines. We are supportive of both projects and the increased service to currently under-supported communities.

Three sections follow; the first is a list that applies to both projects, the second focuses on the Red Line, and the third on the Orange Line.

BOTH PROJECTS
Please evaluate:

- Recycling opportunities at stations and parking areas
- Alternative energy options including solar, solar thermal, wind and more to provide electricity and heating / cooling where needed
- Opportunities to install solar arrays (on rooftops, large expanses, etc.) to return energy to the grid
- Reduction of light pollution through the use of downward-facing lighting
- Compliance with the city's stormwater ordinance, including using bioswales, rain barrels and other methods to reduce the first flush of water into the sewer system
- Native landscapes requiring little to no irrigation
- Green roofs on any facilities
- Bicycle access and parking
- Permeable paving for the Park-N-Ride areas
- Preferred parking for fuel-efficient vehicles
- Charging stations for electric vehicles
- The City's new Soil and Rubble Reuse Intergovernmental Agreement applicability – extensive reuse of materials during demolition and construction could be possible
- Impacts to wildlife or other important natural resources

NEIGHBORHOODS Alive!
BUILDING CHICAGO TOGETHER

CHICAGO WORKS TOGETHER

RED LINE

DOE will be constructing the Ford Calumet Environmental Center, a 38,000 square foot environmental education facility near 130th and Torrence in Chicago. We are supportive of a joint Metra / CTA station at 115th Street and are very interested in the possibility of an intermodal connection between NicTD/South Shore Line and CTA at 130th Street. These joint stations would allow residents from Indiana and the suburbs to easily gain access to our Center. We would also invite discussion around a bus turnaround at the Center for the 130th and Torrence buses or other buses with similar routes.

ORANGE LINE

Of particular concern to DOE are issues relating to neighborhood compatibility and environmental justice, primarily in relation to historical and/or privately owned parcels that may need to be acquired for the project. DOE would also be interested in a detailed evaluation of noise and vibration, including additive effects associated with Midway airport operations, to determine how such issues will affect neighboring properties.

We offer our support and assistance with any of our comments as appropriate. Thank you for the opportunity to comment on these important projects.

Sincerely,

Suzanne Malec-McKenna
Commissioner

cc: Nicole Kamins
Kevin Laberge

SMM/NRWQ/nlk

RS-52

Cheever, Kim

From: Red Extension [redextension@transitchicago.com]
Sent: Wednesday, November 04, 2009 4:47 PM
To: Peters, Melissa
Cc: Kornblatt, Helene B.
Subject: FW: Request for Comments -- Department of Streets and Sanitation - Proposed Red Line Expansion

---

From: StreetsAndSan [streetsandsan@cityofchicago.org]
Sent: Monday, November 02, 2009 2:39 PM
To: Red Extension
Cc: Ernst, Jonathan
Subject: Request for Comments -- Department of Streets and Sanitation - Proposed Red Line Expansion

Mr. Jeffrey Busby
General Manager, Strategic Planning
Chicago Transit Authority
RedExtension@transitchicago.com
OrangeExtension@transitchicago.com

Dear Mr. Busby:

I am writing in response to your request for comments regarding the environmental reviews that will take place pertinent to the potential expansions of the Red and Orange Lines of the Chicago Transit Authority.

For both projects, the City of Chicago's Department of Streets and Sanitation (DSS) would like the review committee to consider the following comments and concerns regarding the expansions during the environmental review process:

1. The location of any street lights that will need to be removed or relocated as a result of the new lines;
2. An analysis of the affect these elevated concrete supports will have on street level lighting and any steps that will be taken to supplement street lighting in these areas, i.e. CTA-provided lighting on the underside of the elevated line;
3. The location of any public way trees that will need to be removed as a result of the new lines or the construction activity and a replacement strategy for those lost trees;
4. The level of assistance the CTA expects to request from DSS for services such as street "No Parking" postings and the towing of illegally parked vehicles during the construction phase of these projects;
5. The creation of a rodent abatement plan for the affected land which includes required sign-offs by the DSS's Bureau of Rodent Control prior to construction;
6. A plan for the proper storage, removal and recycling of all construction and demolition debris in accordance with all City of Chicago ordinances; and
7. A commitment to having platform level recycling containers and space at street level for the storage of recyclables prior to being separately collected from the garbage.

Thank you for your consideration of these issues

Sincerely,
(SIGNED)
Thomas G. Byrne

Commissioner
Department of Streets and Sanitation
TGB:je:lps

EMAIL/Busby.CTA.email.environmental review

cc: Jonathan Ernst

RS-337

CHANGE.
CHICAGO HOUSING AUTHORITY

Martin Nesbitt
Chairperson

Board of Commissioners
Hallie Amey
Deverra Beverly
Dr. Mildred Harris
Michael Ivers
Myra King
Carlos Ponce
M. Bridget Reidy
Sandra Young

Lewis A. Jordan
Chief Executive Officer

Scott W. Ammarell
General Counsel

November 2, 2009

Jeffrey Busby
General Manager, Strategic Planning
Chicago Transit Authority
P.O. Box 7602
Chicago, IL 60680-7602

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This alternative extension would improve public transportation and citywide accessibility for residents and workers of the South Side. Particularly, this extension would allow greater public transportation and a Red Line stop near the Altgeld Gardens residential development which is located on the far South Side near the Riverdale community. The 190-acre Altgeld Gardens is comprised of 17 blocks of 225 two-story row houses with 1,953 family units and its full rehabilitation is scheduled to be completed in 2014. The CHA would like to add that the Red Line Extension Locally Preferred Alternative would have a tremendous positive impact for the families living at Altgeld Gardens who would certainly benefit from utilizing this proposed extension.

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Sincerely,

Lewis A. Jordan
Chief Executive Officer

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To: Cheever, Kim
Subject: FW: Attn ; Jeff Busby
Attachments: cta expansion.doc

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Cc: Orange Extension
Subject: Attn ; Jeff Busby

Sorry for the delay

Lt Mark Harmon

BUREAU OF PATROL **1 October 2009**

TO:
Jeffrey Busby
General Manager
Strategic Planning
Chicago Transit Authority

FROM:
Mark Harmon
Commanding Officer
Bureau of Patrol Administration

SUBJECT: **CTA Extension Projects**

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ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

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James R. Thompson Center, 100 West Randolph, Suite 11-300, Chicago, IL 60601 • (312) 814-6026

PAT QUINN, GOVERNOR **DOUGLAS P. SCOTT**, DIRECTOR

217-782-0547

September 28, 2009

Mr. John Paquet
Vice President
Planning and Development
Chicago Transit Authority
567 West Lake Street
Chicago, IL 60661-1498

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Sincerely,

Lisa Bonnett

Lisa Bonnett
Acting Deputy Director

RS-20

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Cc: Kornblatt, Helene B.

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If you should have any questions or need additional information, please do not hesitate to contact me.

Respectfully,

Lieutenant Tony Lupo
District Chicago
Administrative Command
Office 847 294 4655
Fax 847 294 4440
Cell 708 932 9347

RS-57

Cheever, Kim

From: Red Extension [redextension@transitchicago.com]
Sent: Thursday, October 29, 2009 8:35 AM
To: Peters, Melissa
Cc: Kornblatt, Helene B.
Subject: FW: Red line EIS scoping comments

From: David Tomzik [David.Tomzik@Pacebus.com]
Sent: Tuesday, October 27, 2009 9:12 AM
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We look forward to participating in this regional planning process.

David Tomzik
Manager, Long Range Planning
Pace Suburban Bus Service
550 W. Algonquin Road
Arlington Heights, IL 60005
847 228-2463
fax 847 228-2330

david.tomzik@pacebus.com

Protecting Our Water Environment

Metropolitan Water Reclamation District of Greater Chicago
100 EAST ERIE STREET CHICAGO, ILLINOIS 60611-3154 312·751·5600

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Joseph P. Sobanski, P.E.
Director of Engineering

312·751·7905 FAX 312·751·5681

October 14, 2009

Mr. Jeffrey Busby
General Manager, Strategic Planning
Chicago Transit Authority
P.O. Box 7602
Chicago, IL 60680-7602

Dear Mr. Busby:

Subject: Environmental Impact Statement Scoping for the CTA Red Line Extension

Reference is made to your interagency scoping meeting on September 24, 2009, concerning the subject matter. The Metropolitan Water Reclamation District of Greater Chicago (District) has the following comments for the scoping process:

- Aerial photos of the Locally Preferred Alternative shown at the meeting indicate the proposed alignment running along the Union Pacific Railroad (UPRR) at grade adjacent to District property. The District requires access between the Calumet Water Reclamation Plant to the west of Cottage Grove Avenue and its facilities to the east of Cottage Grove Avenue. District access between the two facilities will have to be modified or reconstructed as part of the project.

- The proposed alternative for the station at the end of the line south of 130th Street is adjacent to District property between 130th Street and 130th Avenue and west of the station. Depending on the location of parking, etc., a request to lease or acquire District property may be required.

- The location for the proposed CTA station north of 130th Street is entirely on District property, some of which may be considered wetland. Also, it appears that the rerouted Cottage Grove Avenue utilizes the District road within the plant boundaries. The District understands that the draft plans are preliminary, but we will have to do a complete evaluation as plans are further developed to determine potential impact on the District.

- We recommend an odor study be conducted early in the environmental review process for impacts on the proposed CTA facilities. The area of greatest concern is the final CTA station along 130th Street, which is directly adjacent to the Calumet Water Reclamation Plant.

- The proposed alignment crosses the District's 17'6"x14'0" Calumet Intercepting Sewer 6 just east of Indiana Avenue. Attached are Sheets 1 and 5 of this contract. This intercepting sewer should be placed on all future Red Line Extension plans.

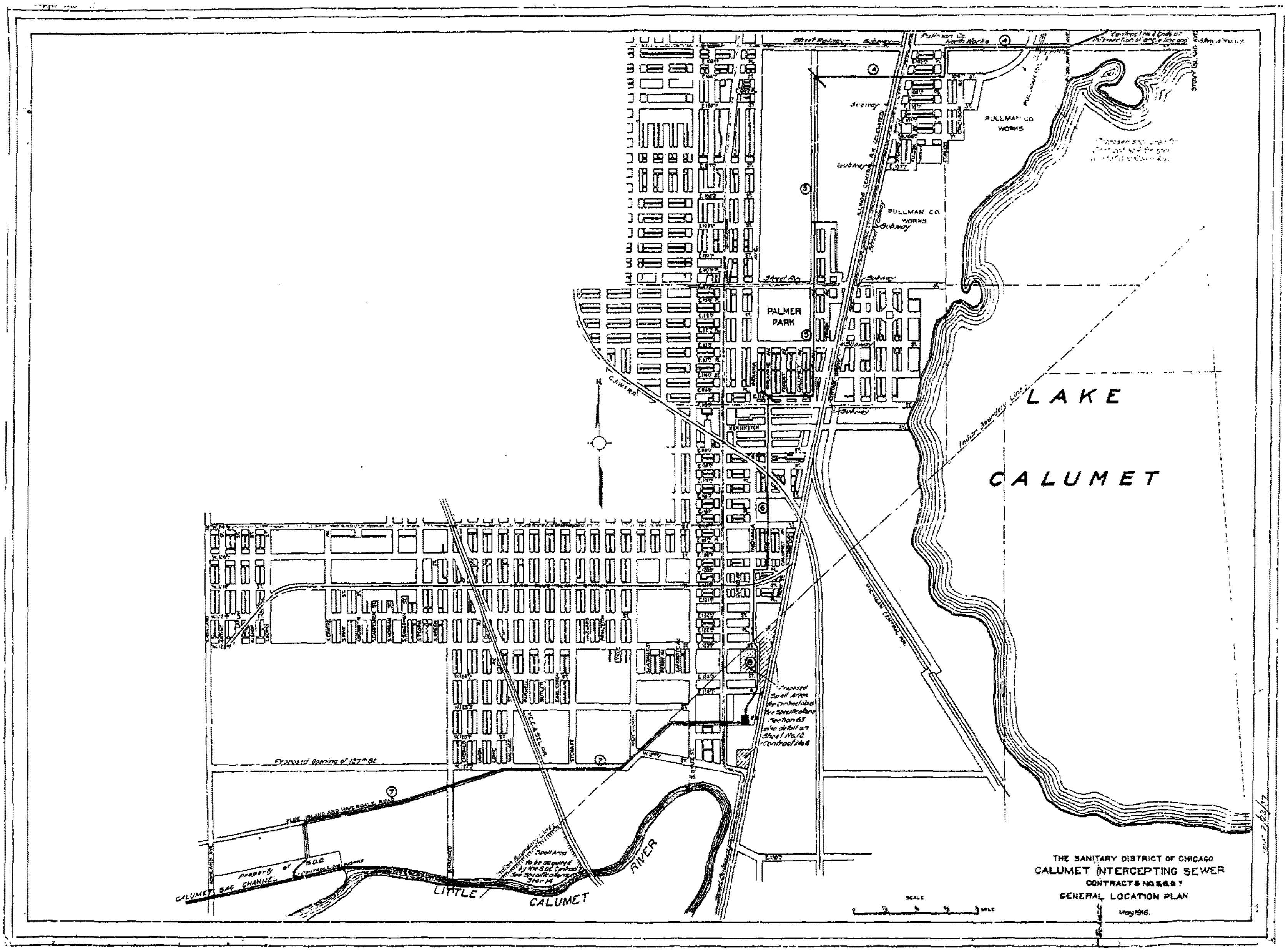
Questions may be referred to Joe Schuessler, 312-751-3236.

Very truly yours,

Joseph Sobanski

Joseph P. Sobanski
Director of Engineering

WSS:AP:JMS
Attachment


LAKE CALUMET
LITTLE CALUMET RIVER
CALUMET SAG CHANNEL
Property of S.D.C.
PALMER PARK
PULLMAN CO WORKS
PULLMAN CO WORKS
Pullman Co. North Works
Street Railway — Subway
Subway
Street Ry.
Subway
Subway
ILLINOIS CENTRAL R.R. (ELEVATED)
MICHIGAN CENTRAL RR.
P.C.C.& ST.L. RR.
BLUE ISLAND AND RIVERDALE ROAD
Proposed Opening of 127th St.
Indian Boundary Line
KENSINGTON
STONY ISLAND AVE
S. STATE ST.
Contract No 4 Ends at intersection of angle line and Stony Island Ave
Proposed Spoil Areas for Contract No. 6 See Specifications Section 63 also detail on Sheet No. 12 Contract No. 6
Indian Boundary Line
Spoil Area to be acquired by the S.D.C. Contract See Specifications Sec. 14
N
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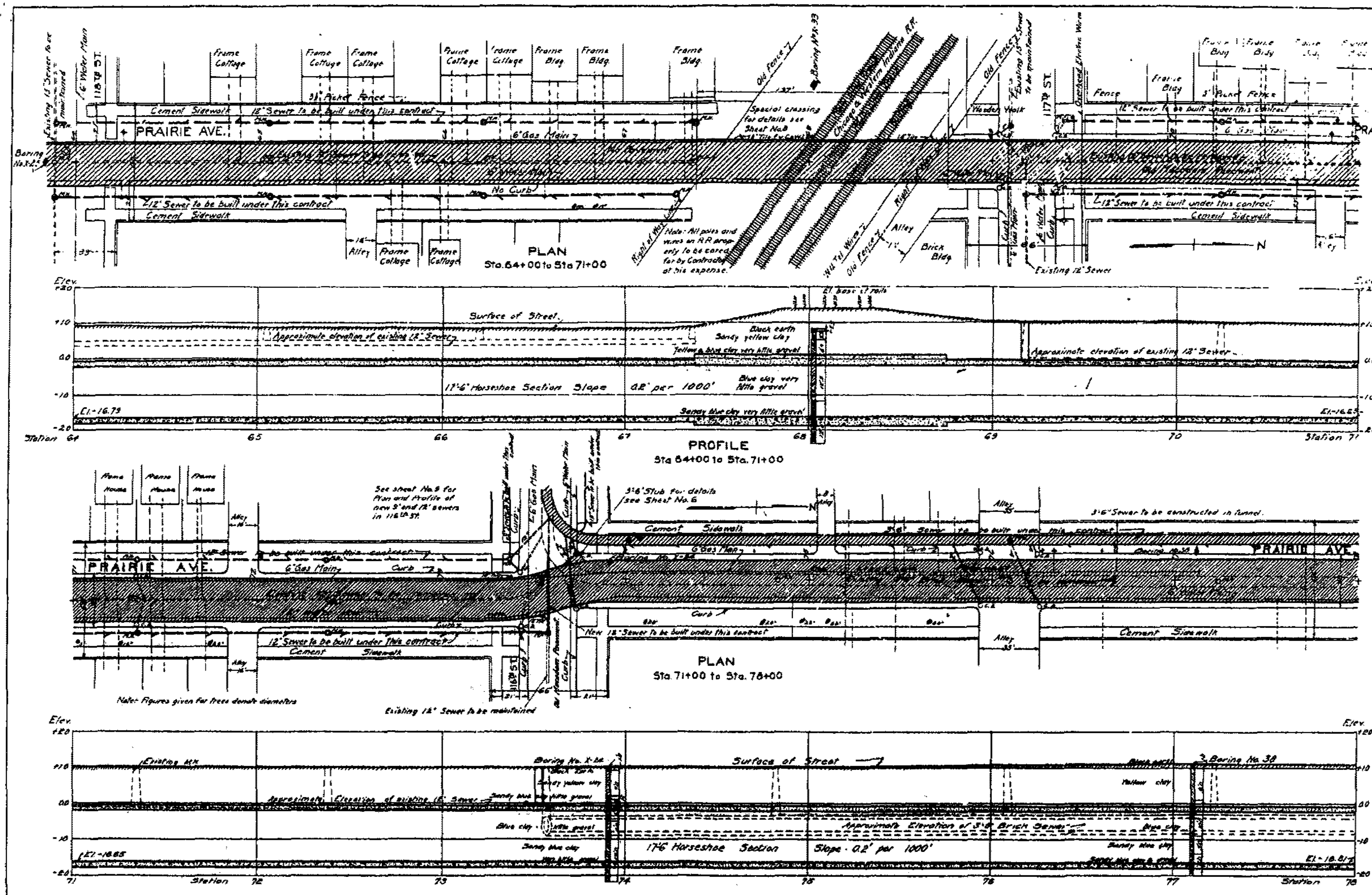
SCALE
0 ¼ ½ ¾ 1 MILE

THE SANITARY DISTRICT OF CHICAGO
CALUMET INTERCEPTING SEWER
CONTRACTS NO. 5, 6 & 7
GENERAL LOCATION PLAN
May 1916.


PLAN
Sta. 64+00 to Sta. 71+00
PRAIRIE AVE.
118TH ST.
117TH ST.
Cement Sidewalk
12" Sewer to be built under this contract
6" Gas Main
Frame Cottage
Frame Bldg.
Special crossing for details see Sheet No. 8
Note: All poles and wires on R.R. property to be cared for by Contractor at his expense.
Boring No. 33
Existing 12" Sewer
N
PROFILE
Sta. 64+00 to Sta. 71+00
Surface of Street
Approximate elevation of existing 12" Sewer
17'-6" Horseshoe Section Slope 0.2' per 1000'
El. -16.79
El. -16.65
Elev.
+20
+10
0.0
-10
-20
Station 64
65
66
67
68
69
70
Station 71
PLAN
Sta. 71+00 to Sta. 78+00
See sheet No. 6 for Plan and Profile of new 5' and 12' sewers in 116th St.
3'-6" Stub for details see Sheet No. 6
3'-6" Sewer to be constructed in tunnel.
New 18" Sewer to be built under this contract
Note: Figures given for trees denote diameters
Existing 12" Sewer to be maintained
Frame House
Alley
PROFILE
Sta. 71+00 to Sta. 78+00.
Existing MH
Boring No. X-34
Boring No. 38
Approximate Elevation of existing 12" Sewer
Approximate Elevation of 3'-6" Brick Sewer
17'6" Horseshoe Section Slope - 0.2' per 1000'
El. -16.65
El. -16.81
71
Station 72
73
74
75
76
77
Station 78

Note:-

The character of soil shown by borings made at the points indicated on the plans is supposed to be approximately correct, but the excavation may reveal different soil conditions along the site of the work. Such differences in soil conditions shall not constitute a claim for damages on the part of the Contractor for extra work on account of increased cost of excavation.

The attention of the Contractor is called to section 6 of the Specifications with reference to the location of all underground structures.

All elevations are referred to Chicago City Datum.

Legend

- ● Electric Light, Telegraph, Telephone, and Street Railway Poles
- ✦ Gas Lamp
- ● Mail Box, Fire Alarm, and Police Call
- ✧ Hydrant
- ○ Existing sewer manhole or circular Cover
- ▭ Existing manhole on Telephone, Telegraph, or Electric Conduit or Water Valve Manhole
- ● Manhole to be built
- ● Tree

THE SANITARY DISTRICT OF CHICAGO
CALUMET INTERCEPTING SEWER
CONTRACT NO. 6
PLAN AND PROFILE
PRAIRIE AVE. FROM STA. 64+00 TO STA. 78+00
Hor. Scale 1"=20'
Vert. Scale 1"=10'

Correct. Langdon Pearse
Division Engineer

Approved.
Chief Engineer

Feb. 1916 10 Sheets Sheet No. 5

Appendix C
Agency Coordination and Public Involvement

Contents:

Limited English Proficiency Analysis (July 2009)
Public Participation Plan (August 2012)
Coordination Plan (August 2012)
Coordination with Chicago Park District
Website (May 2015)
Alternatives Analysis (2006-2009)
Outreach to Community Groups (2012)
August 2011 Open House Meeting Summary
August 2013 Newsletter
Spring 2014 Outreach Summary

Appendix C
Agency Coordination and Public Involvement

Limited English Proficiency Analysis (July 2009)

CWC Transit Group

Memorandum

To: CTA

From: CWC Transit Group

Date: July 13, 2009

Subject: Red Line Extension Limited English Proficiency Assessment

Upon further analysis of the Limited English Proficiency (LEP) needs of the CTA Red Line Extension Project Area, we have determined that public outreach materials should be prepared in both English and Spanish.

Looking at census data within each tract adjacent to the Locally Preferred Alternative (LPA) we see that there are several tracts where over 35% of the citizens speak Spanish/Spanish Creole. Construction of the Red Line Extension Project can have large impacts on the community, even more so on the properties adjacent to the LPA. The CTA needs to ensure that every citizen potentially affected by this project is made aware of possible impacts on their neighborhood.

Analysis was conducted at the tract level by specifically selecting those tracts adjacent to the LPA Right of Way (ROW). Refer to the attached LEP Baseline Report (Enclosure 1) and the corresponding Census Tract map (Enclosure 2) for detailed data on the specific tracts and languages used within each.

Enclosures:

1. ***LEP Baseline Report***
2. ***Map of Census Tracts along LPA ROW***

cc: ***Melissa Peters***

Limited English Proficiency (LEP) Baseline Report

CTA Red Line

Executive Order 13166 "Improving Access to Services for Persons with Limited English Proficiency" requires all recipients of federal funds to provide meaningful access to persons who are limited in their English proficiency (LEP). The United States (U.S.) Department of Justice defines LEP individuals as those "who do not speak English as their primary language and who have a limited ability to read, write, speak, or understand English" (67 FR 41459). Data about LEP populations was gathered in the U.S. Census 2000. For data analysis purposes, the Census divides the states of the United States into counties and divides counties into tracts.

Within area tracts, Census data record the presence of persons who describe their ability to speak English as less than "Very Well." The table below shows the percentages of adults who speak English less than "Very Well" by language category. Additionally, 175 households or 1.0% of households within area tracts reported to the Census that their household was linguistically isolated, meaning that all household members over the age of fourteen had at least some difficulty with English. Thus, Census data indicate the presence of LEP populations.

Table. Census Data: Percent of Adult Speakers Who Speak English Less than Very Well*

Census Geographies	Total Adult Population	Percent of Adult Speakers Who Speak English Less than Very Well			
		Spanish Language Speakers	Other Indo European Language Speakers	Asian and Pacific Island Language Speakers	Other Language Speakers
Tracts					
Tract 4906.00 Cook County	1,331	0.6%	0.0%	0.5%	0.0%
Tract 4907.00 Cook County	2,709	0.6%	0.3%	0.0%	0.2%
Tract 4910.00 Cook County	4,356	0.7%	0.4%	0.4%	0.0%
Tract 4911.00 Cook County	3,986	0.7%	0.0%	0.0%	0.0%
Tract 4912.00 Cook County	1,949	0.3%	0.3%	0.0%	0.0%
Tract 4913.00 Cook County	2,470	1.5%	0.3%	0.0%	0.0%
Tract 5104.00 Cook County	33	15.2%	0.0%	0.0%	0.0%
Tract 5301.00 Cook County	1,993	21.9%	0.0%	0.0%	0.0%
Tract 5302.00 Cook County	4,577	1.0%	0.0%	0.7%	0.0%

Tract 5305.00 Cook County	10,336	0.6%	0.7%	0.0%	0.3%
Tract 5306.00 Cook County	2,699	0.7%	1.2%	0.0%	0.0%
Tract 5401.00 Cook County	5,305	2.8%	0.0%	0.0%	0.0%

Data Source: United States Census 2000 (Table P19) as of February 9, 2008 for persons age 18 and older.

* The data on ability to speak English represent the Census respondent's own perception about his ability to speak English (United States Census 2000 Metadata).

Since LEP is partially defined as a limited ability to read and write English, literacy data were also consulted. Indirect literacy estimates for adults were calculated by the National Center for Education Statistics based on 2003 survey data for states and counties. None of the geographies in study area meet the requirements to be included in the National Institute for Literacy study; thus, literacy data is not available. In conclusion, the data indicate the likelihood of LEP populations in the area.

To determine the languages of the LEP populations, Census data were consulted for project area tracts. The table below details the top five languages spoken by the total adult population (LEP and non-LEP) for each tract.

Table. Census Data: Top Five Languages Spoken by the Adult Population

Census Geographies	**Language 1**	**Language 2**	**Language 3**	**Language 4**	**Language 5**
Tracts					
Tract 4906.00 Cook County	English 93.2%	Spanish/Spanish Creole 2.3%	Tagalog 2.3%	French (Patois, Cajun) 1.8%	Korean 0.4%
Tract 4907.00 Cook County	English 96.4%	Spanish/Spanish Creole 2.1%	German 0.6%	Hebrew 0.5%	Korean 0.4%
Tract 4910.00 Cook County	English 96.9%	Spanish/Spanish Creole 2.2%	Tagalog 0.4%	French (Patois, Cajun) 0.4%	Korean 0.2%
Tract 4911.00 Cook County	English 97.7%	Spanish/Spanish Creole 1.3%	Japanese 0.4%	German 0.3%	Italian 0.2%
Tract 4912.00 Cook County	English 96.8%	French (Patois, Cajun) 1.0%	Spanish/Spanish Creole 0.9%	Tagalog 0.8%	German 0.3%
Tract 4913.00 Cook County	English 96.8%	Spanish/Spanish Creole 2.1%	French Creole 0.9%	French (Patois, Cajun) 0.3%	-
Tract 5104.00 Cook County	English 60.6%	Spanish/Spanish Creole 39.4%	-	-	-
Tract 5301.00 Cook County	English 59.5%	Spanish/Spanish Creole	Other Slavic languages	German 0.6%	Italian 0.4%

		38.9%	0.7%		
Tract 5302.00 Cook County	English 96.2%	Spanish/Spanish Creole 2.6%	Tagalog 0.7%	German 0.2%	Other Pacific Island languages 0.2%
Tract 5305.00 Cook County	English 94.3%	Spanish/Spanish Creole 2.1%	French (Patois, Cajun) 1.1%	Arabic 0.8%	German 0.6%
Tract 5306.00 Cook County	English 96.6%	Spanish/Spanish Creole 1.7%	Polish 1.0%	Russian 0.3%	French (Patois, Cajun) 0.3%
Tract 5401.00 Cook County	English 95.1%	Spanish/Spanish Creole 4.8%	Italian 0.1%	-	-
Data Source: United States Census 2000 (Table PCT10) as of February 9, 2008.					

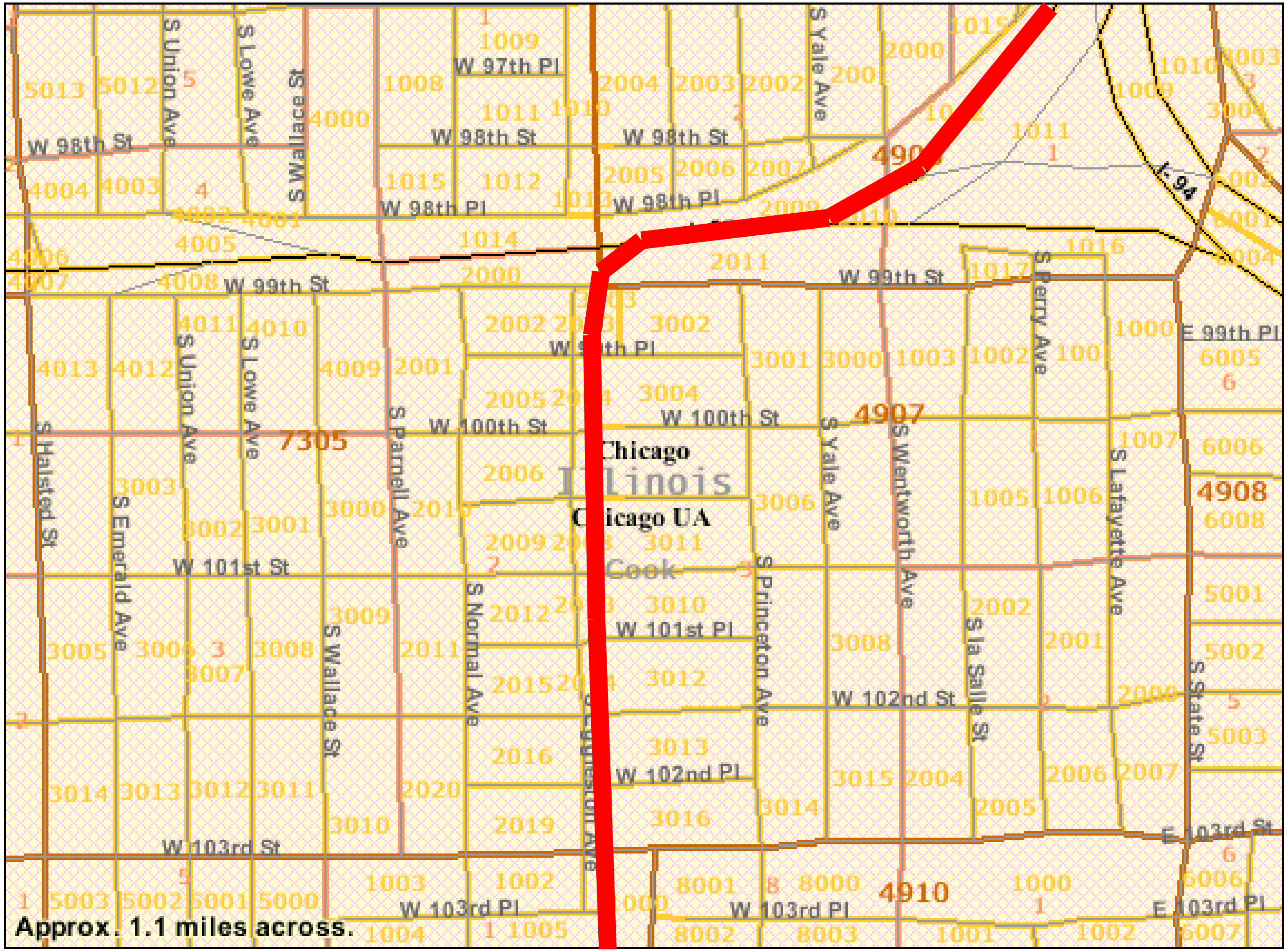
Therefore, the tracts data does not indicate the presence of LEP language groups that exceed the Department of Justice's Safe Harbor threshold of 5% or 1,000 persons. [However, the following measures will be taken to ensure LEP persons meaningful access: enter any measures to be taken to ensure meaningful access if applicable]. Thus, the requirements of Executive Order 13166 appear to be satisfied.

Citations

- "Improving Access to Services for Persons with Limited English Proficiency," 3 Code of Federal Regulations 13166. 2001 ed.
- "Guidance to Federal Financial Assistance Recipients Regarding Title VI Prohibition Against National Origin Discrimination Affecting Limited English Proficient Persons," 67 Federal Register 117 (18 June 2002), pp. 41459.
- U.S. Bureau of the Census. Census 2000: Summary File 3. Washington: The Bureau, 2008.
- National Center for Education Statistics. "State & County Estimates of Low Literacy." National Assessment of Adult Literacy. 2009. http://nces.ed.gov/naal/estimates/Index.aspx.
- National Center for Education Statistics. Common Core of Data. Washington: NCES.

Legend

- ▬ Census Tract Boundary
- ▬ Block Group Boundary
- ▬ Block Boundary
- ▬ Major Road
- ▬ Street
- ▬ Stream/Waterbody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S Wallace St
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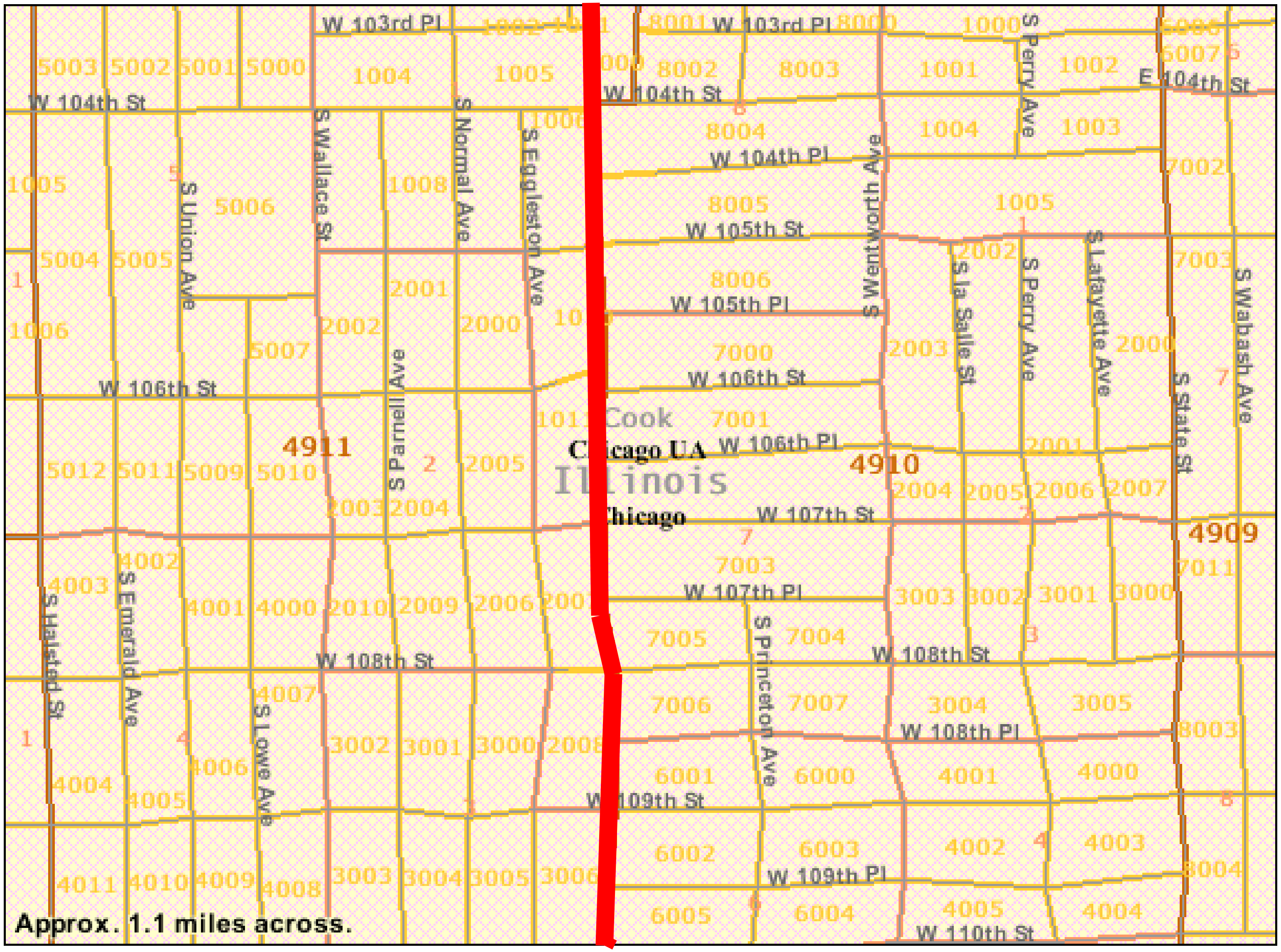
S Emerald Ave
S Parnell Ave
S Normal Ave
S Princeton Ave
S Yale Ave
S Wentworth Ave
S la Salle St
S Perry Ave
S Lafayette Ave
S State St
I- 94
7305
4907
4908
4910
490
Chicago
Illinois
Chicago UA
Cook
Approx. 1.1 miles across.

Census Tract, Block Group, and Block Location Map

Legend

▬	Census Tract Boundary
▬	Block Group Boundary
▬	Block Boundary
▬	Major Road
▬	Street
▬	Stream/Waterbody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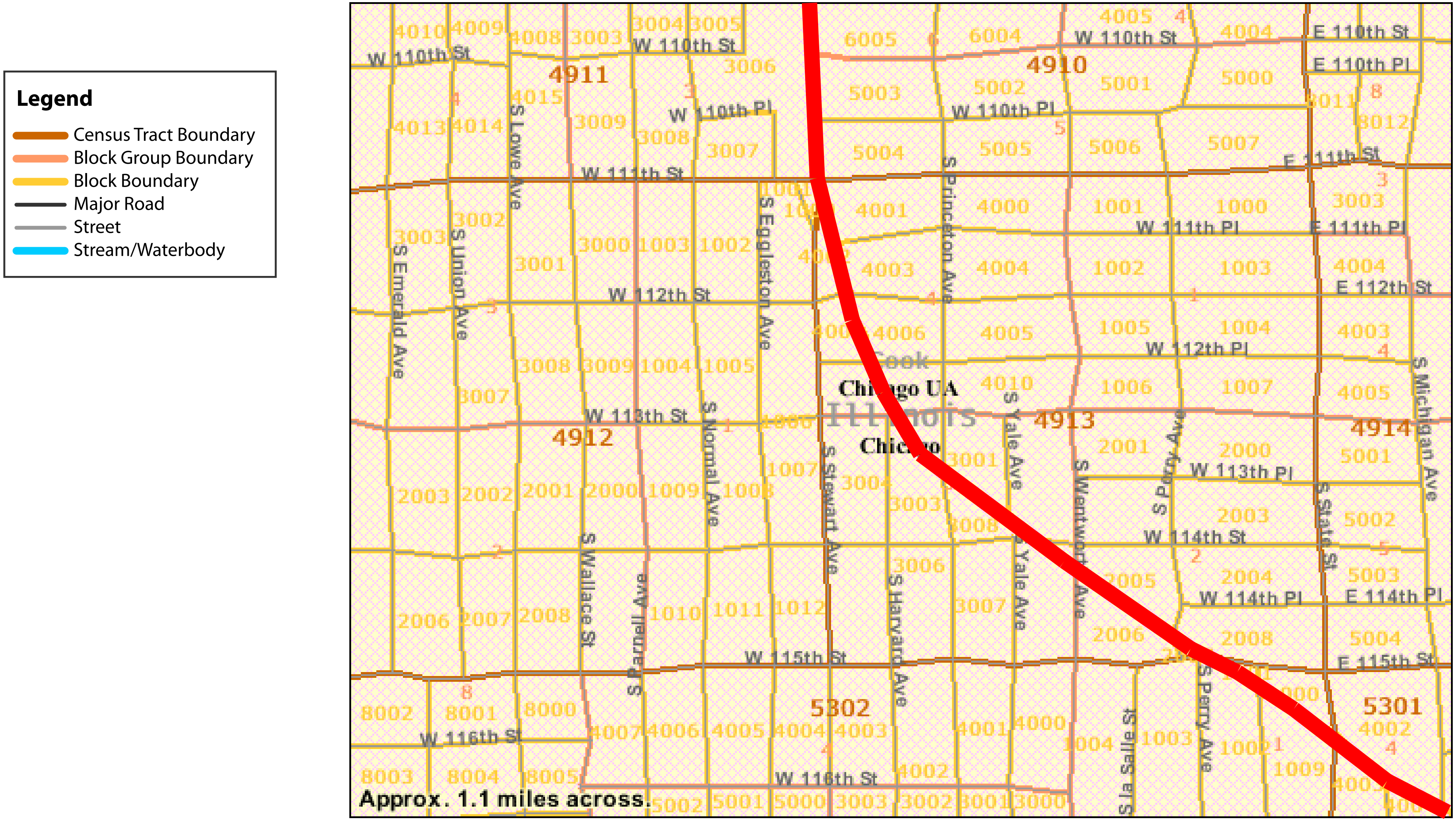
S Union Ave
S Lowe Ave
S Wallace St
S Parnell Ave
S Normal Ave
S Eggleston Ave
S Princeton Ave
S Wentworth Ave
S la Salle St
S Perry Ave
S Lafayette Ave
S State St
S Wabash Ave
4911
4910
4909
Cook
Chicago UA
Illinois
Chicago
Approx. 1.1 miles across.

Census Tract, Block Group, and Block Location Map


Legend
Census Tract Boundary
Block Group Boundary
Block Boundary
Major Road
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Stream/Waterbody
4910
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5302
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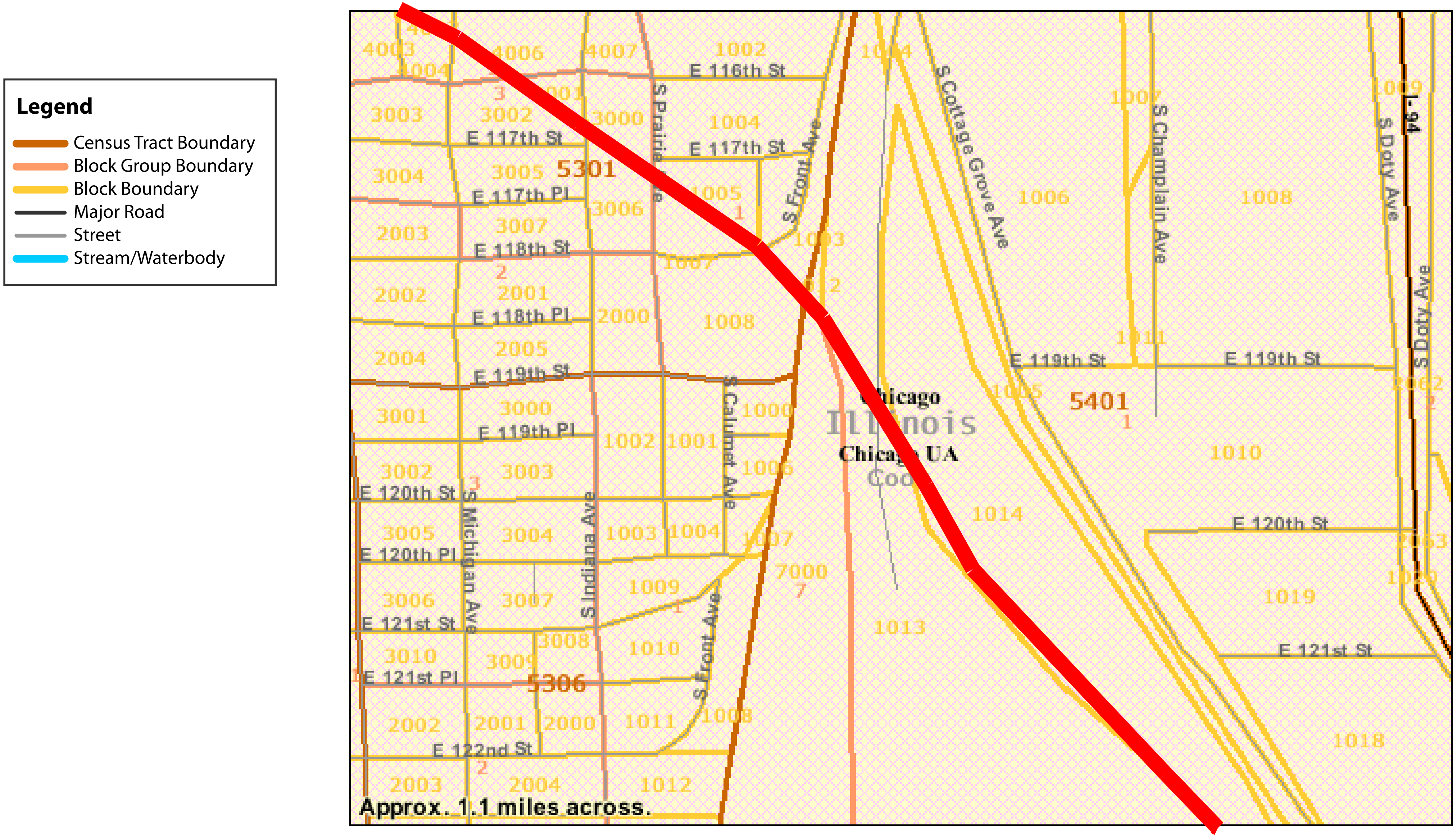
S Eggleston Ave
S Stewart Ave
S Harvard Ave
S Princeton Ave
S Yale Ave
S Wentworth Ave
S Perry Ave
S la Salle St
S State St
S Michigan Ave
Cook
Chicago UA
Illinois
Chicago
Approx. 1.1 miles across.

Census Tract, Block Group, and Block Location Map


Legend
Census Tract Boundary
Block Group Boundary
Block Boundary
Major Road
Street
Stream/Waterbody
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5306
5401
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E 118th St
E 118th Pl
E 119th St
E 119th Pl
E 120th St
E 120th Pl
E 121st St
E 121st Pl
E 122nd St
S Prairie Ave
S Front Ave
S Cottage Grove Ave
S Champlain Ave
S Doty Ave
I-94
S Calumet Ave
S Michigan Ave
S Indiana Ave
Chicago
Illinois
Chicago UA
Cook
1002
1004
1005
1006
1007
1008
1009
1010
1011
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1014
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1019
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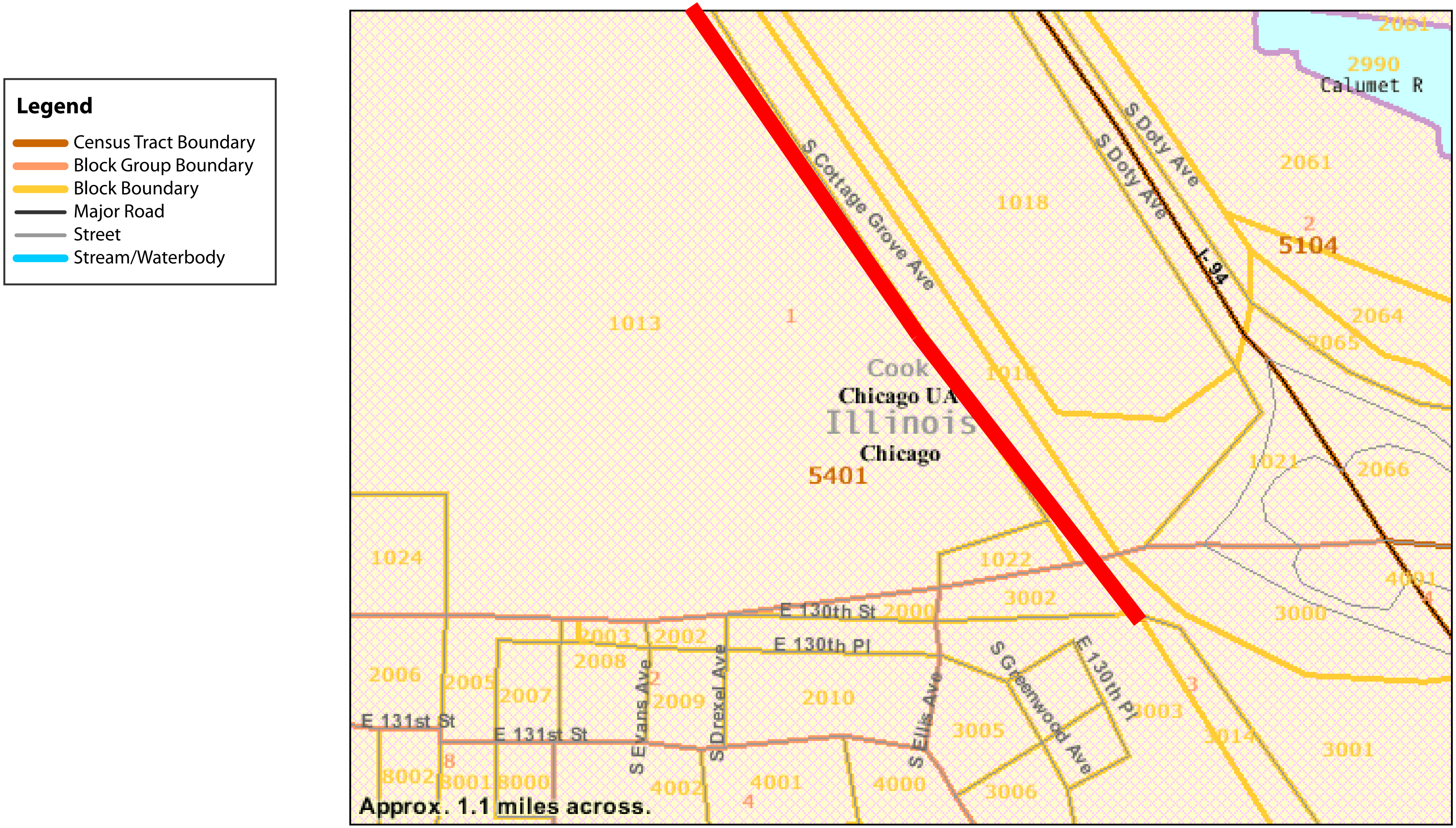
2002
2003
2004
2005
3000
3001
3002
3003
3004
3005
3006
3007
3008
3009
3010
4003
4004
4006
4007
7000
Approx. 1.1 miles across.

Census Tract, Block Group, and Block Location Map


Legend
Census Tract Boundary
Block Group Boundary
Block Boundary
Major Road
Street
Stream/Waterbody
S Cottage Grove Ave
S Doty Ave
S Doty Ave
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Calumet R
2990
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1021
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Illinois
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E 130th Pl
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4001
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2008
2006
2005
2007
2
2009
2010
S Evans Ave
S Drexel Ave
S Ellis Ave
S Greenwood Ave
E 130th Pl
3003
3
3005
3014
3001
3006
E 131st St
E 131st St
8
8002
8001
8000
4002
4001
4
4000
Approx. 1.1 miles across.

Census Tract, Block Group, and Block Location Map

Appendix C
Agency Coordination and Public Involvement

Public Participation Plan (August 2012)

RED AHEAD

Moving Ahead to a Better Red

Red Line Extension

Red Line Extension Project

Public Participation Plan

August 23, 2012

Prepared for:
Chicago Transit Authority
567 West Lake Street
Chicago, IL 60661

Prepared by:
CWC Transit Group
125 South Wacker Drive
Suite 600
Chicago, IL 60606

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Appendices

Appendix A	Overview Schedule
Appendix B	Stakeholder Interview Summary

Abbreviations

AA - Alternatives Analysis
CTA - Chicago Transit Authority
EIS - Environmental Impact Statement
FTA - Federal Transit Administration
HRT - Heavy Rail Transit
LEP - Limited English Proficiency
LPA - Locally Preferred Alternative
NEPA - National Environmental Policy Act
RLE - Red Line Extension
TSM - Transportation Systems Management
UPRR - Union Pacific Railroad

SECTION 1
OVERVIEW

Red Line Extension Project

The Chicago Transit Authority (CTA) is proposing to make transportation improvements by extending the Red Line from the 95th Street terminal station to 130th Street, the Red Line Extension (RLE) Project. CTA and the Federal Transit Administration (FTA) are preparing a Draft Environmental Impact Statement (EIS) that will evaluate the environmental impacts of constructing and operating the extension.

Public Participation Plan

The National Environmental Policy Act (NEPA) requires evaluation of potential environmental impacts associated with federal projects and actions. For this project, the evaluation will be documented in an EIS.

The EIS will focus on the alternatives that emerged from the Alternatives Analysis (AA) and the NEPA scoping process including: a No Action Alternative, a Transportation Systems Management (TSM) Alternative, a Locally Preferred Alternative (LPA): Union Pacific Railroad (UPRR) Heavy Rail Transit (HRT) including a Right-of-Way Option, an East Option, and a West Option, and a Halsted Street HRT Alternative. The EIS will describe the alternatives, the existing environmental setting, the potential impacts from construction and operation of the alternatives, and mitigation measures to reduce or eliminate potential impacts.

The public participation will build on the public and agency input received in the AA, as well as the input received during scoping. The AA process started in 2006 and was completed in 2009 with a recommendation of a range of alternatives to be studied in the EIS. As part of the three-step screening process, CTA hosted six public meetings over three years in order to gather input from the public regarding alternative options.

SECTION 2
GOALS

The public participation plan will guide CTA through a focused public involvement and outreach process for the RLE Draft EIS. The plan is flexible in order to respond appropriately to public and agency issues as they arise. It is anticipated that additional information will become available that will further guide proposed activities. The dates and activities are preliminary and may change. See Appendix A for a preliminary overview of the public participation schedule.

PUBLIC PARTICIPATION GOALS

- Build on previous outreach efforts of the Alternatives Analysis process and scoping
- Make the complex issues associated with the RLE Project and the environmental study process understandable to customers and those using other modes of transportation
- Ensure stakeholders are aware of the planning process and the purpose and content of the proposed project
- Ensure that the project is clearly defined to the public within the umbrella of CTA's other planning projects
- Identify any needs, issues, or concerns of stakeholders
- Provide a range of opportunities for the public and interested stakeholders to comment on the proposed project
- Ensure that the area's diverse population, including tracts adjacent to the project alignment where more than 15% of the population has limited English proficiency as well as Environmental Justice populations (minorities and low income), are included in the process
- Ensure the public understands the project timeline and the financial and right-of-way constraints
- Fulfill the public participation requirements of FTA's New Starts Criteria
- Document all public and agency input
- Provide context for why other projects are currently underway such as Loop Track Renewal, and the Red Line Dan Ryan Track Renewal project

The public participation program provides a variety of communication channels to help the public understand the RLE Project, including its potential negative and beneficial impacts. The program will solicit input and feedback from the public as to their specific needs, issues, concerns, and recommendations.

In order to engage the public to participate in the study process, some basic strategies will include:

STRATEGIES TO ENGAGE THE PUBLIC	APPROACH
■ Make it easy to participate ■ Provide opportunities for constructive dialogue and communication	■ Community meetings within the project area; web access to final project documents; meetings in locations accessible by public transportation and accessible to people with disabilities; outreach materials in English and Spanish and accessible to people with visual impairments
■ Provide timely, easy-to-understand information that helps people provide informed comments	■ Straightforward Citizens Guide to the Environmental Document, newsletters, website, exhibit boards and handouts at meetings
■ Leverage communications resources	■ Work with organizations that have established audiences and channels of communication to more widely disseminate project information
■ Provide multiple ways to obtain information and provide comments	■ Website, mailed notice, e-blasts, community calendars, comment cards, Facebook, Twitter, media, flyers in libraries, CTA System
■ Ensure stakeholders are aware of the planning process	■ Careful review and augmentation of the existing project contact list ■ Stakeholder and Alderman/elected official briefings to identify issues and find additional ways to engage the local community ■ Outreach to community-based organizations representing environmental justice communities
■ Show how public input will be used	■ Document all public and agency input in the Meeting Summaries

SECTION 3
KEY ISSUES

There are four primary issues that have been identified as likely issues of public and stakeholder concern to be explored and discussed during this phase: alignment options, station location options, the benefits of the proposed project to transit disadvantaged communities (communities underserved proportionally by transit investment) and the impacts of construction. A host of other issues also were identified through public input during the Alternative Analysis and EIS scoping phases as listed below. As the study progresses, new key issues may develop, some existing issues will be refined and the appropriate public involvement approach to address key issues will be determined. The list will be amended as the study moves forward.

General Issues/Community Concerns/Opportunities

- Access/benefits for disadvantaged and underserved communities (Altgeld Gardens neighborhood)
- Alignment options and station/stop locations
- Support for the LPA – UPRR HRT Alternative
- Public safety at stations/stops and surrounding communities
- Community compatibility
- Relocation and displacement impacts/enhancement on residential/business/school areas surrounding the project corridor
- Passenger access to local businesses, community, and cultural amenities (improved mobility, neighborhood revitalization)
- Effect/enhancement of quality of life
- Noise and vibration impacts along corridor
- Proximity to Wendell Smith Park and Fernwood Parkway Park

Economic Issues/Concerns/Opportunities

- Jobs/improved economy
- Funding
- Project cost
- Local workforce participation
- Property value impact
- Support for local economic and land use plans and goals

- Transit fare changes

Transportation Issues/Concerns/Opportunities

- Easing congestion in the region
- Coordination/connectivity with other transit systems and modes (Metra, buses, bicycle/pedestrian access, I-Go and Zip Cars)
- Traffic and parking
- Bike and bus access to park and rides
- Improve transit access to and from Far South side
- Reduce congestion at 95th and Dan Ryan terminal

Construction Issues/Concerns/Opportunities

- Length of construction
- Potential traffic/detours/delays
- Potential customer reduction to businesses along corridor during construction
- Potential parking/relocation/displacement during construction
- Noise, impacts to buildings

SECTION 4
KEY AUDIENCES

Anyone who lives, works, plays, learns, and commutes through the RLE project area, or has some involvement or oversight in how the line will operate, is an important audience member. The public participation program creates a structure for learning about the different community interests and characteristics. The project is important to many different groups, each with specific interests in the study. The outreach team will keep these groups involved and continually informed about the process and progress of the analysis. Brief discussions of key audiences follow.

Project Area Residents and Neighborhood Associations

Important issues for neighborhood associations and project area residents include: corridor impacts/enhancements such as neighborhood compatibility, economic development, station locations, and the reduction of impacts on residential areas. The public participation program includes outreach to property owners and residents in the project area. These groups will receive project information through a combination of channels including newspaper display ads, invitation postcards, email notices, transit alert cards, community hall and library flyers, and CTA's Facebook, Twitter, and website. Some of the local communities that may be interested include the following:

- Chatham Avalon Park Community Council
- Chesterfield Community Council
- Residents of Altgeld Neighborhood
- Residents of Beverly Neighborhood
- Residents of Burnham Neighborhood
- Residents of City of Blue Island
- Residents of Cottage Grove Heights Neighborhood
- Residents of Dolton Neighborhood
- Residents of Evergreen Park Neighborhood
- Residents of Fuller Park Neighborhood
- Residents of Gardens Neighborhood
- Residents of Longwood Manor Neighborhood
- Residents of Morgan Park Neighborhood
- Residents of Princeton Park Neighborhood
- Residents of Pullman Neighborhood
- Residents of Riverdale Neighborhood
- Residents of Roseland Neighborhood
- Residents of the City of Calumet
- Residents of Village of Calumet Park
- Residents of Washington Heights Neighborhood
- United Neighborhood Organization

Business/Business Associations/Institutions

Some business stakeholders value the extension's potential to increase customers to local businesses and improve business districts around the corridor line, as well as employees and customers having greater access to the area. This overall category includes the industries, individual businesses, local business leaders, and chambers of commerce. The public involvement effort will solicit ideas and concerns from the business community. These stakeholders will receive invitations to community update meetings and the public hearings and updates on the project as it progresses. A stakeholder briefing may be scheduled to get input. Some of the local business groups that may be interested include the following:

- 87th Street Stony Island Chamber of Commerce
- American Brotherhood of Contractors
- Association of Asian Construction Enterprises
- Black Contractors United (BCU)
- Blue Island Chamber of Commerce
- Bronzeville Chamber of Commerce
- Business and Economic Revitalization Association
- Calumet Area Industrial Commission
- Calumet City Chamber of Commerce
- Canadian National Railway Company
- Chatham Business Association
- Chicago Area Gay & Lesbian Chamber of Commerce
- Chicago Minority Supplier Development Council (CMSDC)
- Chicago Southland Chamber of Commerce
- Chicago Women in the Trades (CWIT)
- Chicagoland Chamber of Commerce
- Cosmopolitan Chamber of Commerce
- Federation of Women Contractors (FWC)
- Greater Auburn -Gresham Development Corporation
- Greater Southwest Development Corporation
- East Side Chamber of Commerce
- Friends of the Parks
- Hegewisch Chamber of Commerce

- Hispanic American Construction Industry Association (HACIA)
- Illinois Hispanic Chamber of Commerce
- Latin American Chamber of Commerce
- Metropolitan Family Services
- Midwest High Speed Rail Association
- National Association of Women Business Owners (NAWBO-Chicago Area Chapter)
- Predestined Incorporated
- Puerto Rican Chamber of Commerce of Illinois
- International Trade Bureau
- Roseland Business Development Council
- Roseland Community Hospital
- South Chicago Chamber of Commerce
- Southeast Chicago Development Corporation
- Southwest REACH Center
- Total Resource Community Development Center
- Union Pacific Railroad
- Women's Business Development Center (WBDC)
- St. Bernard's Hospital and Health Care Center

Associations/Special Interest Groups/Schools

Sensitivity to the surrounding environment is important to the project. The input of various local, state, and federal agencies will be obtained throughout the EIS process. In addition, associations, special interest groups, and schools will be consulted. The director or leader of these groups will be notified of the community update meetings and the public hearings and updated as the project progresses. Some of the key groups that may be interested include the following:

- ACCESS Living
- Alianza Leadership Institute
- Apostolic Church of God
- Carver Military Academy
- Catholic Charities of the Archdiocese of Chicago - Community Affairs & Civic Affairs
- Center for Neighborhood Technology
- Charles H. Wacker Elementary School

- Chicago International Charter School - Prairie
- Chicago State University, Office of Public Affairs
- The Chicago Urban League
- Childrens Center Outreach
- Children’s Developmental Institute
- Christian Fenger Academy High School
- Corliss High School
- Developing Communities Project, Inc.
- Dunne Technology Academy
- Equip for Equality
- Firman Community Services
- Gompers Fine Arts Option School
- Gwendolyn Brooks College Preparatory Academy
- Harlan Community Academy High School
- Historic Pullman Foundation & Historic Pullman Visitor Center
- Higgins Community Academy
- House of Hope
- Illinois Institute of Technology
- John G. Shedd Public School
- Johnnie Coleman Academy
- Kennedy-King College
- Marantha Christian Academy
- Marcus Garvey Math & Science School
- Medgar Evers Fine & Performing Arts School
- Metro Seniors in Action
- Morgan Park High School
- National Association for the Advancement of Colored People (NAACP), Chicago Southside Branch
- Northeastern Illinois University – Jacob H. Carruthers Center for Inner City Studies
- Northwestern University

- Olive-Harvey College
- Park Vernon Learning Academy
- Percy L. Julian High School
- Prayer & Faith Outreach Ministries
- The Pullman Civic Organization
- The Pullman State Historic Site
- Rainbow PUSH Coalition
- Riders for Better Transit (Active Transportation Alliance)
- Riverdale Community Resource Center
- Ronald H. Brown Community Academy
- Roseland Christian School
- Roseland Heights Community Association
- Rosemoor Community Association, Inc.
- Saint Anthony of Padua Parish
- Salem Baptist Church of Chicago
- The Salvation Army
- Senior Service Coalition of Southeast Chicago
- Simeon Career Academy
- Southsiders Organized for Unity and Liberation (SOUL)
- South Central Community Service - Far South
- South Shore Cultural Center
- Southeast Environmental Task Force
- Saint Helena of the Cross School
- The Faith Community of St. Sabina
- Strategies for Community Economic Development & Finance
- Tabernacle Christian Academy
- Teamwork Englewood
- Transportation Equity Network
- United Educational Cultural Academy
- The University of Chicago

- University of Illinois at Chicago - Department of Urban Planning and Policy
- Vivian E. Summers Preparatory School
- West Chesterfield Community Association
- West Chatham Improvement Association
- YWCA Metropolitan Chicago

Commuters

Key issues for commuters include access, passenger capacity and comfort, travel times, station/stop locations, and condition of the facilities. Advanced, timely information is important for this group. Commuters will be notified in the same way that the general public is, through newspaper ads, media stories and social media. In addition, meeting announcements for the public hearings and community update meetings will be posted at the CTA stations and in the CTA trains and buses via car alert cards.

Public Agencies and Local Government

Coordination and cooperation among agencies and all levels of government is an important element of this project. The following key agencies and local government representatives will be notified about the project:

- Chicago Housing Authority
- Chicago Park District
- Chicago Roseland Development Corporation
- Chicago Metropolitan Agency for Planning
- City of Blue Island
- City of Burnham
- City of Calumet
- City of Chicago, Alderman (Ward 9) Anthony Beale
- City of Chicago, Alderman (Ward 10) John Pope
- City of Chicago, Alderman (Ward 21) Howard Brookins Jr.
- City of Chicago, Alderman (Ward 34) Carrie Austin
- City of Chicago, Mayor Rahm Emanuel
- City of Chicago Department of Housing and Economic Development
- City of Chicago Department of Business Affairs and Consumer Protection
- City of Chicago Department of Community Development

- City of Chicago Department of Environment
- City of Chicago Department of Transportation
- City of Chicago Community Development Commission
- City of Chicago Police Department
- Metra Commuter Rail
- Metropolitan Water Reclamation District of Greater Chicago
- Pace
- Cook County Board of Commissioners, Board President Toni Preckwinkle
- Cook County Board of Commissioners, Commissioner (District 4) William M. Beavers
- Cook County Board of Commissioners, Commissioner (District 5) Deborah Sims
- Illinois Commerce Commission
- Illinois Department of Transportation
- Illinois Department of Natural Resources
- Illinois Environmental Protection Agency
- Illinois Historic Preservation Agency
- Illinois General Assembly, State Representative (House-27) Monique Davis
- Illinois General Assembly, State Representative (House-28) Robert Rita
- Illinois General Assembly, State Representative (House-29) David Miller
- Illinois General Assembly, State Representative (House-34) Constance Howard
- Illinois State Senate, Senator (Senate-14) Emil Jones Jr.
- Illinois State Senate, Senator (Senate-15) James Meeks
- Illinois State Senate, Senator (Senate-17) Donne Trotter
- State of Illinois, Governor Pat Quinn
- Mayor’s Office for People with Disabilities
- South Suburban Mayors and Managers Association
- Southeast Chicago Development Commission
- U.S. Department of Energy
- U.S. Department of Health and Human Services
- U.S. Department of Housing and Urban Development
- U.S. Transportation Security Administration

- U.S. Fish and Wildlife Service
- U.S. Environmental Protection Agency
- Federal Emergency Management Agency
- Federal Highway Administration
- Federal Railroad Administration
- U.S. House of Representatives, Congressman (District 1) Bobby Rush
- U.S. House of Representatives, Congressman (District 2) Jesse Jackson
- U.S. Senate, Senator Dick Durbin
- U.S. Senate, Senator Mark Kirk
- Ho-Chunk Nation
- Miami Tribe of Oklahoma
- Peoria Tribe of Indians of Oklahoma
- Sac and Fox Nation of Oklahoma
- Pokagon Band of Potawatomi Indians
- Prairie Band of Potawatomi Nation
- Citizen Potawatomi Nation
- Forest County Potawatomi
- Potawatomi Nation – Hannahville Indian Community
- Sac and Fox Nation of Mississippi in Iowa
- Sac and Fox Nation of Missouri
- Village of Calumet Park
- Village of Dolton
- Village of Evergreen Park
- Village of Riverdale

Media

Media coverage offers an efficient means of communicating with the general public. Effective coordination with local and regional media contacts will be crucial to raising public awareness and explaining the RLE Project. Supplying the media with updated, factual information increases the likelihood of balanced, informative coverage. Ethnic, multi-lingual media coverage will also be an important element of the media outreach.

SECTION 5
LIMITED ENGLISH PROFICIENCY ANALYSIS

A fundamental requirement of the NEPA is communication with local citizens who could be affected by a project. This means that informational materials should effectively communicate with everyone in a project area. The project area has historically supported a very diverse population. It was important at the start of this project, prior to developing notification materials, to determine whether there was a significant population with limited English proficiency within the project area.

During the scoping process, an analysis of languages spoken and English proficiency within the study area was conducted based on data collected from the U.S. Census. The RLE project area crosses 12 census tracts. While the majority of the population in those tracts speaks English, there are several tracts adjacent to the LPA where more than 35% of the citizens speak Spanish/Spanish Creole. Furthermore, some of these tracts have linguistically isolated populations where more than 15% speak Spanish, but speak English less than “Very Well.”

The RLE project can have large impacts on the community, even more so on the properties adjacent to the LPA. Therefore outreach should be conducted to raise awareness of possible impacts among those potentially affected by this project as well as Environmental Justice populations (minorities and low income).

Based on this analysis, outreach materials will be provided in Spanish and a Spanish translator will be available at the public hearings. A meeting may be conducted in Spanish and outreach will be done through other Spanish-speaking outlets.

SECTION 6
ENVIRONMENTAL JUSTICE ANALYSIS

The Draft EIS will assess environmental justice (EJ) issues related to the proposed project alternatives. The EJ analysis will comply with the Federal Executive Order 12898 to address disproportionately high and adverse human health or environmental effects on minority and low-income populations resulting from federal programs, policies and activities. The social groups specifically benefitted or harmed by the proposed action will be identified. Effects of the alternatives upon the elderly, handicapped, non-drivers, transit-dependent, low income, minorities, and Limited English Proficiency (LEP) populations will be described.

The evaluation of minority and LEP impacts will include analysis of census data for the general project area regarding race, color, national origin and ability to speak English well. Census data analysis will be supplemented and verified through field reconnaissance. Potential displacement of residences, businesses and employees will also be considered when evaluating the potential for disproportionate adverse impacts in EJ communities. Changes in minority employment opportunities, the effect of the proposed action on EJ populations and proposed mitigation measures to reduce or avoid disproportionate impacts upon EJ populations will be discussed in the draft EIS.

Large construction projects often disproportionately impact EJ communities because of a lack of opportunity for these communities to become engaged in the planning and environmental process and voice their issues and concerns. *See section 7 for information on how we intend to address this.*

SECTION 7
PUBLIC PARTICIPATION ACTIVITIES

Resolution of Community Concerns

To fully engage EJ communities and try to identify and resolve potential concerns, a series of stakeholder interviews will be conducted with representatives of the various EJ populations. The interviews will be focused on identifying any concerns of EJ communities along the corridor regarding the RLE Project and its associated impacts, as well as the best ways of discussing those concerns with the community and CTA. In addition, the interviews will help further identify specific groups or associations to engage, existing communication vehicles to leverage and best practices to engage specific communities.

Based on the insight gathered through the stakeholder interviews, a series of up to eight focused grassroots meetings will be conducted to work through EJ community concerns and to identify appropriate project modifications and mitigation measures to address concerns. These meetings may be conducted at a neighborhood level, with an existing organization or with a congregation that is potentially impacted by the project.

Depending on the distribution of LEP populations, some of the community meetings may be conducted and facilitated in Spanish. Sign language interpreters and interpreters for other languages will be provided as needed.

Project materials will be prepared in appropriate languages and cultural contexts. If needed to more effectively engage LEP populations, materials specifically tailored to these groups may be developed.

Community Update Meetings

Community update meetings will be held to keep the general community informed about project progress. These meetings will typically be an open house format and may include information on environmental analyses, results of community surveys, changes in project alternatives, identification of potential funding sources, or resolution of neighborhood issues. These meetings will provide opportunities for the public to provide ongoing input that will help CTA with finalizing options for the LPA. The open house format will be confirmed after discussions with CTA and FTA.

Community Update Schedule

Community Update Meetings: Spring 2013

Location: The meeting locations will be within the project area and must meet FTA criteria such as being ADA accessible and near to transit.

Notification materials will include: Newspaper display ads, invitation postcard, email notice, transit alert cards, community hall and library flyers, and CTA's Facebook, Twitter and website.

Stakeholder and Alderman/Elected Official Briefings

Project briefings will provide existing and potential stakeholders an overview of the public participation program and the project. Approximately fifteen stakeholders will be briefed three times at key milestones in the project. Multiple stakeholders may be briefed at a single meeting.

The team will work with CTA and specifically the CTA Government and Community Relations staff to develop the list of key stakeholders that will be briefed. The list might include elected officials, mayors, aldermen, the Mayor's Office for People with Disabilities, city administrative staff, community leaders and neighborhood groups. CTA will identify appropriate milestones to brief stakeholders.

Stakeholder Briefing Schedule

Meetings in Winter/early Spring 2013 to brief stakeholders before the community update meetings scheduled for Spring 2013.

Meetings in early Fall 2013 to brief stakeholders before the public hearings in late Fall 2013.

Public Hearings on the Draft EIS

Two public hearings on the Draft EIS will be held in the same week to inform the public about the project, the contents of the Draft EIS, and to receive comments on the Draft EIS. The same information will be presented at the two public hearings, but the meeting locations will be different. The hearing format will be confirmed after discussions with CTA and FTA.

Public Hearing Schedule

Two Public Hearings: Fall 2013

Location: The hearing location will be within the project area and must meet FTA criteria such as being ADA accessible and near to transit. Locations selected will be distributed throughout the project area to provide full geographic coverage.

Notification materials will include: Legal notice, newspaper display ads, postcard invitation notice, email notice, media release, transit alert cards, community hall and library flyers, and CTA's website.

Media Relations

Regular monitoring of various media coverage and discussions on the project will be conducted. These media may include print media, on-line blogs, and other social media conversations about the project. This information will inform the development of the project.

SECTION 8
PUBLIC PARTICIPATION NOTIFICATION AND INFORMATION MATERIALS

Project Newsletters

Two project newsletters will be developed to deliver the project messages in a clear and concise manner and to provide information and other data about the project. The newsletters will provide an overview of the EIS process and the opportunities for public input. Graphics and maps will be incorporated in the newsletters in order to make the content easy to read and understand. The newsletters will be mailed to all of the people on the project mailing list.

Website

The existing project website will be updated for this phase of the project. The website provides access to project updates, project background, project materials, and documents and announcements. The community update meetings and public hearing meeting dates will be posted in advance on the website. Information on the website will be in a readable format for people with vision impairments.

Citizens Guide to the Draft EIS

The Citizens Guide to the Draft EIS will be prepared to provide an overview of the Draft EIS with pictures from the study area, maps of the alternatives, colorful bold headings, and succinct descriptions of the impacts and proposed mitigation measures for each resource area. The text will explain the process for public review and will get to the heart of technical issues in an easily understood manner. In order to more fully engage the community, artist's renderings or other visual simulations will be used to help residents understand potential effects of what the proposed extension will look like.

Public Notices

Various formats will be used to invite the public to attend one of the public participation meetings. Below is a chart that shows the type of invitation and outreach that will be conducted for each type of meeting. A more detailed description of the notification materials is provided below.

Outreach	Mailed Postcard Invite	Email or Phone Call	Display Ads	Media Release	Other Notification (flyers, e-blast, blogs, transit alert cards, tweets, Facebook posts)
Community Update Meetings	X		X	X	X
Public Hearings	X		X	X	X
Neighborhood Meetings		X			
Stakeholder Briefings		X			

Other Notification (Village Hall, Libraries, Blogs, e-blasts, Transit Alert Cards)

Notifications for the community update meetings and public hearings will be posted and distributed throughout the area including at Village Halls, libraries, e-list serves, and with community groups.

City Hall, Village Hall, or Community Center Announcement Posting Locations

- City of Burnham
- City of Blue Island
- Calumet City
- Village of Calumet Park
- Village of Dolton
- Village of Evergreen Park
- Village of Riverdale

Library Announcement Posting Locations

- Calumet City Public Library
- Chicago Public Library –Altgeld Branch
- Chicago Public Library –Brainerd Branch
- Chicago Public Library –Hegewisch Branch
- Chicago Public Library –Vodak/East Side Branch
- Chicago Public Library –Jeffrey Manor Branch
- Chicago Public Library –Pullman Branch
- Chicago Public Library –South Chicago Branch
- Chicago Public Library -Walker Branch
- Chicago Public Library -West Pullman Branch

- Riverdale Public Library

Blogs/Websites/List servs

- Riders for Better Transit (Active Transportation Alliance) website and blog
- Aldermen list servs and websites
- Car Free Chicago (blog)
- Chi-Town Daily News
- Chicago“L”.org (website)
- CMAP Updates (blogs)
- CTA Twitter
- CTA Facebook
- CTA Tattler (blog)
- Gapers Block (general interest site)
- GridChicago.com (website)
- Movingbeyondcongestion.com (website)
- Metropolitan Planning Council (MPC) (publications: Blog, newsletter, website)
- Ridge99.com
- southwestobserver.com
- Streetsblog (blogs)
- thesixthward.blogspot.com
- Transitchicago.com (website)
- The Urbanophile (an urban affairs blog that covers transportation and economic development)
- Write of Way blog by the Active Transportation Alliance

E-mail Notice

An e-mail notice will be sent to stakeholders, elected officials, and residents who attended previous CTA meetings on this project and provided an email contact, or those who contacted the CTA via email to submit a public comment or request to be added to the email list.

Online Calendars

Information will be sent to online event calendars, most of which are run through newspapers and TV stations. In addition, meeting notices will be sent to local chambers of commerce and to large organizations that cover a wide audience and would communicate with members in the areas served by the lines, such as the Chicagoland Chamber of Commerce, Illinois Chamber of Commerce, and the Association Forum of Chicagoland.

Promotion in Transit: Transit Alert Cards

Meeting announcements for the public hearings and community update meetings will be posted at the CTA stations and in the CTA trains and buses via car alert cards.

Social Media

There are many opportunities for CTA to reach out and to listen via social media. Information will be posted on the CTA Facebook group page and Twitter sites. CTA also will monitor the ongoing social media dialogue about CTA and the project in order to identify concerns, answer questions, respond to ideas, and correct any misunderstandings or misinformation. CTA also will tap social media sites of partner organizations to provide information and hear feedback.

Display Advertisement for Community Update Meetings and Public Hearings

Display advertisements in local and regional newspapers will be used to publicize the community update meetings and the public hearings. The community update meeting display ads will provide the time, date and location of the update meetings. A more formal public hearing display ad will be placed that includes information on the project, the alternatives analysis, the meeting information, and where and when to submit comments. An email and postal mail address will be provided for written comments. The newspapers in which display ads may be placed include the following:

Publication Placement

- Beverly Review
- Chicago Crusader
- Chicago Defender
- Chicago Sun-Times
- Chicago Tribune
- Hoy
- LaRaza
- Red Eye
- Southtown Star

Media Release

Media releases will be issued to ensure that media outlets are aware of the public meetings and have adequate background information with which to write about the EIS process.

Meeting Materials

Information boards will be developed for the public hearings and the community update meetings and general hand-outs will be prepared.

Project Database

A comprehensive database of approximately 5,000 stakeholders for the RLE Project has been established and maintained. The database includes elected officials, special interest group representatives, agency staff persons who attended the scoping meetings, and persons who requested to be on the mailing list. The mailing list includes property owners and tenants adjacent to the centerline of the proposed project.

SECTION 9
DOCUMENTATION

Comment Tracking/Documentation/Response Management

The public meetings will be fully documented for the administrative record. Comments will be received by mail, email, and by comment card at the public hearings and community update meetings. A summary of all public meetings will be included in the Draft EIS. The summary will include comment cards, letters, attendance sheets, notification materials, and a summary of verbal and written input, such that an evidential record of the meetings is documented.

CHICAGO TRANSIT AUTHORITY (CTA)

APPENDIX A

DRAFT ENVIRONMENTAL IMPACT STATEMENT

Public Participation Plan Overview Schedule 2012/2013

Activity	2012: Summer	2012: Fall	2013: Winter	2013: Spring	2013: Summer	2013: Fall/Winter
Project Milestones						Fall: Publish Draft EIS and Notice of Availability (NOA) in Federal Register Fall-Winter: Public Comment Period (30 days)
Public Participation Activities						
CTA Board Meetings	Brief CTA Board		Brief CTA Board			Brief CTA Board
Public Meetings (neighborhood, community update, and public hearings)		As needed: Neighborhood Meetings to Resolve Concerns	As needed: Neighborhood Meetings to Resolve Concerns	Spring: Update Meetings		Fall: Public Hearings (2) on Draft EIS
Stakeholder and Alderman /Elected Official Briefings			Winter: Stakeholder Briefing Meetings	Early Spring: Stakeholder Briefing Meetings		Fall: Stakeholder Briefing Meetings
Public Participation Notification and Information Materials						
Mailing List/Database	Update	Update	Update	Update	Update	Update
Public Notices				Spring: Postcard Notice for Update Meetings		Fall: Public Hearing Notice
Website	Update	Update	Update	Update	Update	Update
Display Ad/Legal Notice			Display Ads for Update Meetings			Fall: Public Hearings Display Ad/Legal Notice
Media Outreach (Releases distributed by CTA)			Winter: Update Meeting Advisory Release			Fall: Public Hearing Advisory Release & Post Meeting Release
Other Notification: Libraries, Village Halls, e-blasts, blogs, community calendars, transit alert cards			Notification Package for Update Meetings			Notification Package for Public Hearings
Citizens Guide to the Draft EIS					Develop Guide	Print & Distribute Guide
Meeting Materials (boards, handouts, sign-in, etc.)			Meeting Materials for Update Meetings			Meeting Materials for Public Hearings
Project Newsletters		Develop/Distribute Newsletter			Develop/Distribute Newsletter	
Meeting Summary Reports				Update Meeting and Neighborhood Meeting Summaries		Public Hearing Report

Note: All dates are preliminary and subject to change.

APPENDIX B: Stakeholder Interview Summary

Development of the public participation plan was informed by interviews with representatives of community members to identify the most effective outreach and engagement strategies, activities, languages, and channels. Interviews were conducted in April 2012.

Categories of stakeholder perspectives included:

Elected Officials/Aldermen

Community Organizations

Older Adults and People with Disabilities

Businesses

Non-Profits (including places of worship) Serving Environmental Justice Populations

Input Influenced the Public Participation Plan

There is a high level of interest in the Red Line Extension (RLE) Project among the categories of stakeholders listed above. As a result of the process to identify stakeholders to interview, the list of stakeholder organizations in the plan was expanded.

Using a variety of both online and offline communication channels and tools, CTA is most likely to reach the greatest number of interested members of the community. Tapping established communication channels which come from trusted sources means CTA is more likely to be heard. Many of the interviewees offered up specific communications channels which may be used directly or through the stakeholders. These communication channels, such as listservs, websites, and publications, have been added to the plan. Visuals were highlighted as being an essential part of the project information produced and shared.

Communicating with and through places of worship is critically important in the communities along this project corridor.

Stakeholders suggested that the community preferred a more interactive meeting format than CTA has conducted in the past. Using a combination of small community resolution meetings, larger public open house meetings, and targeted meetings with community groups, outreach resources will be leveraged so that more of the community is reached by their trusted sources of information. Working with such groups to gather input from the community also will enhance effectiveness in working with Environmental Justice communities.

Availability of Spanish-language materials and Spanish speakers at meetings will be critical to engaging the isolated Spanish-speaking, limited English proficiency populations along the corridor.

Stakeholders advised that at future meetings CTA have new information to share and be at a point in the process where public input could influence decisions to be made in the near term. This information influences the plans for preparing for the public meetings.

Appendix C
Agency Coordination and Public Involvement

Coordination Plan (August 2012)

RED AHEAD
Moving Ahead to a Better Red

Red Line Extension

Chicago Red Line Extension Project

SAFETEA-LU
Coordination Plan

August 2012

Prepared for:
Chicago Transit Authority
567 West Lake Street
Chicago, IL 60661

Prepared by:
CWC Transit Group
125 South Wacker Drive
Suite 600
Chicago, IL 60606

DEPARTMENT OF TRANSPORTATION
UNITED STATES OF AMERICA

cta

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Abbreviations

AA - Alternatives Analysis
CTA - Chicago Transit Authority
EIS - Environmental Impact Statement
FHWA - Federal Highway Administration
FTA - Federal Transit Administration
NEPA - National Environmental Policy Act
NOI - Notice of Intent
PPP - Public Participation Plan
RLE - Red Line Extension
ROD - Record of Decision
SAFETEA-LU - Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users

Section 1
Purpose of This Coordination Plan

The Federal Transit Administration (FTA) and the Chicago Transit Authority (CTA) have initiated preparation of a Draft Environmental Impact Statement (EIS) for the Chicago Red Line Extension (RLE) Project. FTA is serving as the lead agency for purposes of National Environmental Policy Act (NEPA) environmental review. The project participants for this Coordination Plan consist of FTA, CTA, and federal, state, and local participating agencies pursuant to the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) of 2005, Section 6002.

This Coordination Plan provides a structure for coordinating public and agency participation and comments on the Draft EIS. The plan is intended to guide the CTA and the public through the process. More specifically, the plan outlines the public and agency activities that will take place. The environmental planning and review process for the RLE project began with an Alternatives Analysis (AA) process and will conclude with a NEPA determination and Record of Decision (ROD) from the FTA. Following the issuance of the ROD, the permitting process will begin. CTA will follow this Coordination Plan to solicit public and agency input on the project and to ensure that the received input is considered in the decision-making process. Both agency coordination and the Public Participation Plan (PPP) are addressed below.

The Coordination Plan is considered a "living document" and is designed to provide flexibility, as needed, to address changes in the project and therefore may be adjusted from time to time in response to the evolving communication needs of the project.

This plan complies with SAFETEA-LU, Section 6002, and serves as a plan for coordination (Section 139(g)(1)).

Section 2
Project Summary

The CTA is proposing to extend the Red Line from the 95th Street station to the vicinity of 130th Street, subject to the availability of funding. The proposed extension would include four new stations. Each new station would include bus and parking facilities. This project is one part of the Red Ahead Program to extend and enhance the entire Red Line.

The project area is 11 miles south of the "Loop," Chicago's central business district and encompasses approximately 20 square miles. Figure 2-1 shows the project area.

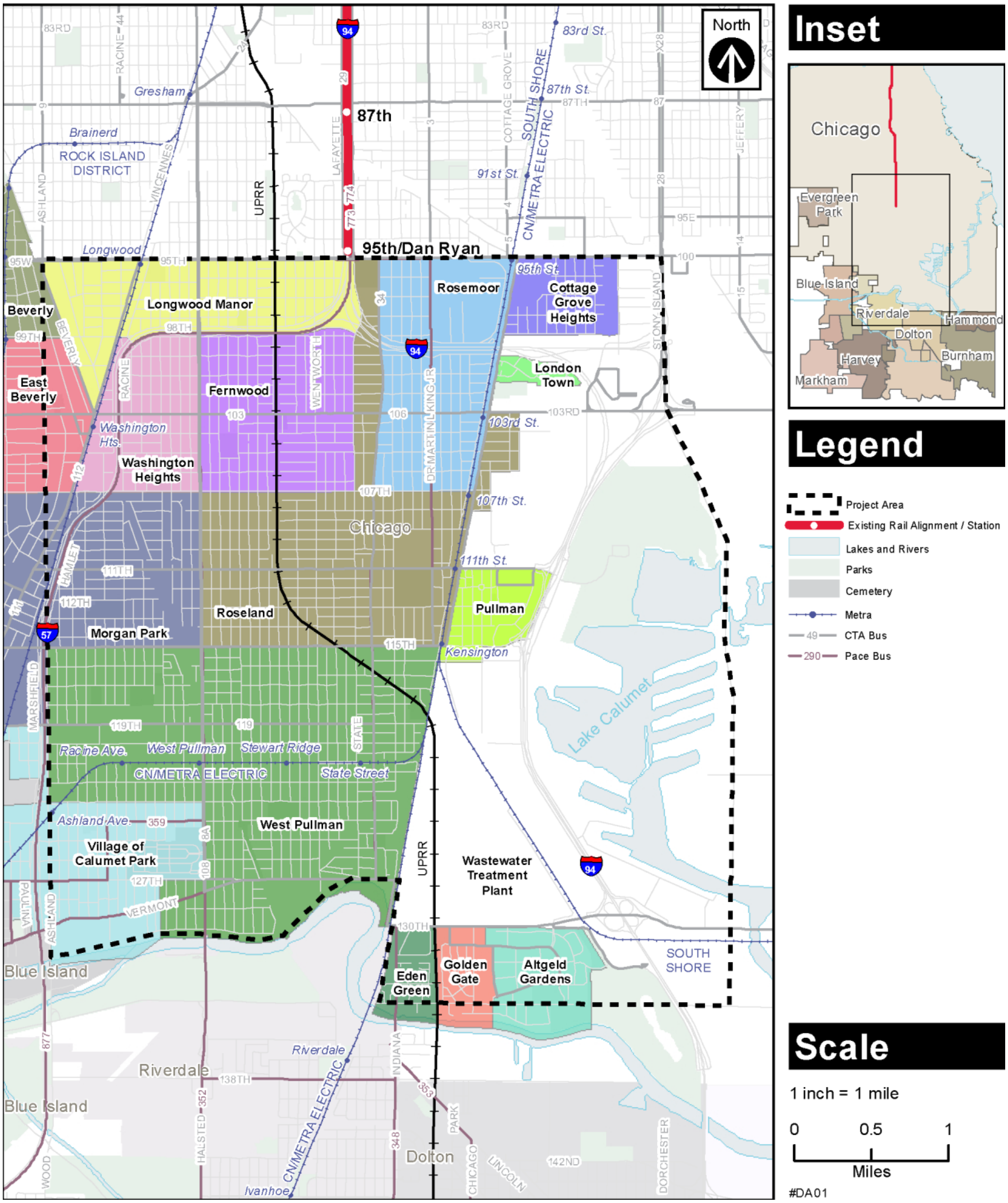

North
Inset
Chicago
Evergreen Park
Blue Island
Riverdale
Dolton
Hammond
Harvey
Burnham
Markham
Legend
Project Area
Existing Rail Alignment / Station
Lakes and Rivers
Parks
Cemetery
Metra
49 CTA Bus
290 Pace Bus
Scale
1 inch = 1 mile
0
0.5
1
Miles
#DA01
87th
95th/Dan Ryan
Gresham
Brainerd
ROCK ISLAND DISTRICT
Longwood
83rd St.
87th St.
91st St.
95th St.
103rd St.
107th St.
111th St.
Kensington
SOUTH SHORE
CN/METRA ELECTRIC
UPRR
Beverly
Longwood Manor
Rosemoor
Cottage Grove Heights
East Beverly
Fernwood
London Town
Washington Hts.
Washington Heights
Chicago
Roseland
Pullman
Morgan Park
Racine Ave.
West Pullman
Stewart Ridge
State Street
Ashland Ave
Village of Calumet Park
West Pullman
Wastewater Treatment Plant
Lake Calumet
Eden Green
Golden Gate
Altgeld Gardens
Blue Island
Riverdale
Riverdale
Dolton
Ivanhoe
Blue Island

Figure 2-1: Project Area

Section 3
Project Process

In accordance with federal regulations, CTA, in coordination with FTA, will complete the following steps to complete the NEPA environmental document for the project:

- Publish the Notice of Intent (NOI) in the Federal Register
- Complete project scoping to ascertain the scope of the Draft EIS, project purpose and need, and range of alternatives considered, and identify potential impacts and potential mitigation measures to be addressed in the environmental document
- Prepare a Draft EIS
- Complete a public review and comment period for the Draft EIS
- Obtain approval from FTA to enter into Preliminary Engineering
- Prepare a Final EIS
- Obtain Chicago Transit Board certification of the Final EIS and approval of the project
- Obtain a ROD from FTA

The NOI was published in the Federal Register on September 1, 2009. One agency scoping meeting was held on September 24, 2009 and two public scoping meetings were held on September 22, 2009 and September 24, 2009. A public open house was held on August 2, 2011. The Draft EIS analysis will be conducted in 2012 and 2013. The schedule for the remaining steps is dependent on identification of funding.

Agency and public coordination will proceed on an as-needed basis until the release of the Draft EIS. Upon the release of the Draft EIS a public and agency comment period will begin.

Section 4
Agency Participation

As the project lead agencies, FTA and CTA are responsible for preparing the EIS. In accordance with SAFETEA-LU, Section 6002, CTA is required to identify and involve federal, state, regional, and local agencies in the development of the project. Agency coordination will occur on an on-going basis throughout the project development process, with opportunities for public and agency participation occurring at several different stages of the EIS process, including the following major coordination points:

- Developing the scope of the Draft EIS, including issues to be addressed, methodologies to be used to evaluate potential effects, and the significance criteria
- Reviewing and commenting on the Draft EIS throughout the public review period, which includes public meetings that will be held to receive comments
- Commenting on the alternatives including input received at the agency scoping meeting on September 24, 2009
- Notification of the completion of the Final EIS
- Completion of permits, licenses, and approvals following the ROD

4.1 Identification of Cooperating and Participating Agencies

4.1.1 Cooperating Agencies

Cooperating agencies are, by definition in 40 CFR 1508.5, federal agencies with jurisdiction, by law or special expertise, with respect to any environmental impact involved in the proposed project. A state or local agency of similar qualifications may, by agreement with the lead agencies, also become a cooperating agency. The cooperating agencies are by definition participating agencies as well, and while the roles and responsibilities of both are similar, the cooperating agencies have a slightly greater degree of authority, responsibility, and involvement in the environmental review process.

The Federal Highway Administration (FHWA) has requested to be a cooperating agency in the RLE project because a portion of the proposed route extends along I-94 and I-57 and would cross over I-57 as it turns south along either the Union Pacific Railroad right-of-way or Halsted Street. FTA and CTA will consider additional cooperating agencies if approached per 40 CFR 1501.6.

4.1.2 Participating Agencies

Participating agencies can be federal, state, tribal, regional, and local government agencies that may have an interest in the project. The responsibilities of these agencies are defined in SAFETEA-LU, Section 6002, and include but are not limited to:

- Participating in the FTA process starting at the earliest possible time, especially with regards to the development of the purpose and need statement, range of alternatives, methodologies, and the level of detail for the analysis of alternatives
- Identifying, as early as practicable, any issues of concern regarding potential environmental or socioeconomic impacts of the project
- Participating in the issue resolution process, described in Section 4.4
- Providing meaningful and timely input on unresolved issues
- Participating in the scoping process

Accepting the designation as a participating agency does not indicate project support and does not provide the agency with increased oversight or approval authority beyond its statutory limits, if applicable.

Participating agencies for the project are listed in Appendix A. They include federal agencies that did not affirmatively decline the invitation to become a participating agency and regional, state, and local agencies that affirmatively accepted the invitation to become a participating agency.

In accordance with SAFETEA-LU Section 6002 requirements, FTA, in coordination with the CTA, prepared and mailed participating agency invitation letters to 80 agencies with a potential interest in the project on September 1, 2009.

Letters were sent to update participating agencies in June 2011 on the project progress and invite them to the public open house meeting held on August 2, 2011.

4.2 Agency Coordination Objectives

The primary objectives of the CTA, related to the involvement of these and other agencies throughout the project development process, are to:

- Ensure the open and timely exchange of information, ideas, and concerns between the participating agencies, FTA, and CTA throughout the project development process
- Ensure the appropriate integration of the project into the communities through which it operates
- Avoid substantial design changes during the future permitting process by identifying and addressing the permitting requirements of individual agencies during conceptual and preliminary engineering, as practicable

4.3 Agency Coordination Structure

4.3.1 Early Coordination

Agency participation and coordination began in 2006 during the first phase of the project, the AA phase. Agency participation and coordination for the EIS began with the issuance of the NOI in September 2009 and the start of scoping activities. Early coordination creates an opportunity for participating agencies to provide input and guidance on the scope of the environmental document, methods used in the environmental analysis, purpose and need, and the alternatives to be analyzed in the Draft EIS.

EIS coordination was initiated as part of the scoping process by publishing the NOI in the Federal Register on September 1, 2009. In addition, CTA mailed the NOI and scoping information to 28 local, 15 regional, 19 state, and 12 federal agencies, and six Native American tribes, to ensure the awareness of the project and invite scoping comments.

An agency scoping meeting was held on September 24, 2009 to provide additional opportunities for agencies to identify their interest in coordination and provide input on the purpose and need, range of alternatives, proposed schedule, potential areas of impact, and the methodologies to be used to evaluate effects.

After considering input received during the scoping process, the lead agencies will further articulate the project's purpose and need. In accordance with existing guidance, issued by Congress in its conference report on SAFETEA-LU, other federal agencies should afford substantial deference to the FTA's articulation of the purpose and need for a transportation action.

4.3.2 Coordination during Project Development

Ongoing and active coordination will be undertaken with all agencies identified during the AA and scoping processes as having jurisdiction over the right-of-way of the proposed project or an interest or expertise in a specific environmental resource, including cooperating and participating agencies. This coordination process will consist of meetings with individual agencies and appropriate CTA and consultant staff, to discuss the specific concerns and suggestions. Subsequent meetings with agencies will be scheduled as needed to ensure that the appropriate level of coordination and communication is attained, especially as the project progresses. The purpose of these meetings will be to identify and resolve substantive issues, as early as practicable, in the design and environmental review process; finalize the methods that will be used in the environmental analysis; and collect data related to the project. In addition, this direct coordination process will support the documentation of official communications and any agreements between CTA and these agencies.

An effort will be also made to hold meetings with other agencies that may indicate specific issues of concern as the project progresses, and CTA will coordinate with all agencies to ensure that issues are addressed early in the process.

4.3.3 Coordination of Review and Comment on the Draft EIS

As a cooperating agency, FHWA will review administrative drafts of the Draft EIS along with FTA and CTA. Participating agencies will receive a Notice of Availability of the Draft EIS. They will be invited to attend the public hearings on the Draft EIS and to review and comment on the Draft EIS during the public comment period.

4.3.4 Coordination Subsequent to Draft EIS and Prior to the Record of Decision

Coordination of the Final EIS and ROD will be similar to coordination of review and comment on the Draft EIS. The participating agencies will receive a Notice of Availability of the Final EIS and project approval actions. All participating agencies will receive notification of the issuance of the ROD.

4.3.5 Coordination Subsequent to the Record of Decision

After approval of the ROD, the CTA will consult with the FTA prior to requesting any major approvals or grants to establish whether or not the approved EIS remains valid. These consultations will be documented as needed. Per 23 CFR 771.129, an EIS may become invalid if the NEPA process does not proceed as described below:

- A written evaluation of the Draft EIS must be prepared if an acceptable Final EIS is not submitted within three years from the date that the Draft EIS is circulated. The purpose of this evaluation is to determine if a supplement to the Draft EIS or a new Draft EIS is needed.

- A written evaluation of the Final EIS must be prepared before further approvals may be granted if major steps to advance the action have not occurred within three years after the approval of the Final EIS. Major steps to advance the action may include undertaking final design, acquiring significant portions or right-of-way and/or approving plans.

Agencies with permitting authority will continue to be consulted throughout the re-evaluation process as needed and the permit application development process. Permit applications will be submitted and data developed to support needs identified by the permitting agencies.

4.4 Issue Resolution Process

The lead agencies, cooperating agencies, and participating agencies will work cooperatively to identify and resolve issues that could substantially delay completion of the environmental review, and issues of concern that could substantially delay or prevent issuance of permits or approvals needed for the project.

The following issue resolution process will be followed:

- Every attempt will be made to resolve issues of concern between the lead agencies and participating agencies as they arise through direct agency meetings. These meetings will be held as needed during the NEPA process to discuss and resolve the issues of concern. The meetings will be specific to the issue and agency involved. Therefore, as appropriate, the meetings could range from a single meeting involving technical staff of the agency and CTA to a series of meetings involving incrementally higher executive-level participation from the participating agency and CTA. An effort will be made to hold up to three such meetings within a reasonably available time period consistent with the project process and schedule, to resolve an issue of concern in a timely manner before proceeding to the next step of the process, described below.

- If direct meetings between the agencies are not sufficient to resolve an issue of concern in a timely manner:
  - An official issue resolution meeting will be scheduled.
  - If resolution cannot be reached within 30 days following such a meeting, and a determination has been made by FTA that all information necessary to resolve the issue has been obtained, then:
  - FTA will notify the heads of all participating agencies, CTA, the Committee on Environment and Public Works of the Senate, the Committee on Transportation and Infrastructure of the House of Representatives, and the Council of Environmental Quality of the FTA determination
  - FTA will publish such notice in the Federal Register

Section 5
Summary of Public Participation Plan

The Draft EIS phase of the RLE project will involve an extensive and inclusive community outreach process that builds upon and enhances the public engagement efforts developed during the AA phase; the RLE PPP is included as Appendix B. RLE public involvement includes outreach not only to neighborhood stakeholders, but also to current and potential CTA riders, and the wider population of transit users in Cook County. This effort will also re-engage targeted stakeholders identified during the AA while identifying and involving potentially new stakeholders who may now, more than before, have a special interest in this project. The PPP builds upon CTA's experience with the AA, including lessons learned and identification of potential opportunity areas as well as CTA's best practices in public outreach.

5.1 Compliance with Federal Requirements

SAFETEA-LU has a strong federal emphasis on public participation, requiring that the PPPs of CTA's planning processes "be developed in consultation with all interested parties and … provide that all interested parties have reasonable opportunities to comment on the contents of the transportation plan." SAFETEA-LU's broad definition of participation by "interested parties" includes as its partners, groups, and individuals who are affected by or involved with transportation in the area surrounding the project's service area. Examples stated include citizens, affected public agencies, representatives of public transportation employees, private providers of transportation, representatives of users of public transportation, representatives of users of pedestrian walkways and bicycle transportation facilities, representatives of the disabled, and other interested parties. These interested parties are to be provided with a reasonable opportunity to comment on the transportation plan.

As outlined in the Act, methods to accommodate these goals to the maximum extent possible include:

- Holding any public meetings at convenient and accessible locations and times
- Employing visualization techniques to describe plans
- Making public information available in hard copy and electronically accessible formats and means, such as the internet, as appropriate, to afford reasonable opportunity for consideration of public information
- Coordinating local public participation/involvement processes with statewide public involvement processes wherever possible to enhance public consideration of the issues, plans, and programs, and reduce redundancies and costs

SAFETEA-LU also requires that public meetings be held at convenient and accessible times and locations, that all plans be available by website, and documents be written in easy, understandable language utilizing visual components.

This PPP was developed to be compliant with SAFETEA-LU, the public participation requirements of NEPA, and the FTA New Starts program.

5.2 Goals and Objectives of the Public Participation Process

The PPP for the RLE project provides an efficient, proactive, and comprehensive guide to community outreach efforts throughout each phase of this project. This plan builds on the foundation of the public engagement effort developed during the AA. The public involvement and consensus-building effort for this project has several goals and objectives, including:

- Utilize an inclusive outreach strategy that maximizes input from a broad range of project stakeholders
- Provide forums for residents, businesses, and community leaders to participate in the planning
- Create multiple opportunities for the generation of ideas, comments, and possible mitigation measures
- Establish a forum for educating stakeholders on a regular basis as the project evolves

The intent of the public involvement process is to work cooperatively with the community toward the development of a preferred alternative that meets the purpose and need of the project. Issues to be addressed during the Draft EIS outreach process for the RLE might include further development and refinement of the alternatives, locations of stations, bus/rail interface and other transit issues, urban design, land use, neighborhood and community impacts, environmental impacts, and potential mitigation measures.

5.3 Description of Public Participation/Involvement Activities

5.3.1 Schedule Overview

The schedule for the public participation process is summarized in Table 5-1. The proposed schedule for preparation of the Draft EIS will be shared with the public and participating agencies. A series of community update meetings and formal public hearings will be held at key milestones including the dissemination of the Draft EIS. In addition, CTA will continue to meet with individual stakeholder groups. The public engagement effort will continue as the NEPA process progresses.

Table 5-1: Public Participation Process Schedule

Schedule	Activity
August 12, 2009	Chicago Transit Board Meeting
September 1, 2009	Publish NOI in Federal Register Public Comment Period Begins
September 1, 2009	Mail Participating Agency Letters
September 2009	Distribute Media Outreach Releases
September - October 2009	Stakeholder Briefing Meetings
September 24, 2009	Agency Scoping Meeting
September 22 and 24, 2009	Public Scoping Meetings
October 27, 2009	Public Comment Period Ends
August 2, 2011	Public Open House Meeting
Spring 2013	Stakeholder Briefings
Spring 2013	Community Open House Meeting
Fall 2013	Stakeholder Briefings
Fall 2013	Public Hearings
Fall 2013	Public Comment Period

5.3.2 Stakeholder Identification and Community Profile

CTA will maintain and update the stakeholder database developed during the AA and scoping phases to track interested individuals and groups, areas of interest, communication, and other pertinent information for the duration of the project. Building on the database developed during the AA phase, CTA will continue to provide ongoing maintenance and updates to keep the database current.

The Draft EIS phase will include extended outreach beyond the project area, including all jurisdictions that could potentially benefit or be adversely affected by the RLE project. New project stakeholders may be identified as the project progresses in addition to those identified during the AA and scoping phases of the project. All stakeholders will be engaged throughout the NEPA process. Stakeholders for the RLE project include, but are not limited to:

- Local, county, federal, and state elected officials
- Neighborhood councils, associations, and community councils
- Business and labor associations
- Retail and entertainment center destinations
- Education, cultural, religious, and health care institutions along the proposed alignments

- Transit advocacy and environmental groups
- Public agencies/officials

Communication with individuals and organizations beyond the physical project area will be a priority during this phase.

Further, building on information gathered during the AA phase, CTA has developed a stakeholder outreach strategy that includes an identification of:

- Key communities and constituencies in the project area
- Key communities and constituencies outside the project area, likely to benefit from the project
- Issues of special interest to communities and constituencies
- Strategies and actions to address these communities, constituencies, and issues

In this way CTA will be able to monitor the issues and priorities of the distinct communities within and of relevance to the project in and beyond the project area.

5.3.3 Public and Agency Scoping Meetings and Elected Official Briefings

CTA conducted two public scoping meetings, one agency scoping meeting, and briefed three elected officials and one community business association within the scoping period of the project to solicit comment and input for the Draft EIS prior to the Oct 27, 2009, deadline for public scoping comments.

5.3.3.1 Public Scoping Meetings

Two public scoping meetings were held in the project area on September 22 and 24, 2009.

Scoping meetings are a useful opportunity to obtain information from the public and governmental agencies. In particular, the scoping process asks agencies and interested parties to provide input on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation, and potential impacts and mitigation measures to be considered. These meetings were documented in a Scoping Report.

5.3.3.2 Agency Scoping Meetings

An agency scoping meeting was held at CTA's offices on September 24, 2009. This meeting was held to coordinate and facilitate work with the designated federal, state, and local agencies. Agendas and sign in sheets for all meetings were prepared and discussions and agreements were fully documented. A detailed summary of comments and meeting notes were prepared afterwards.

5.3.3.3 Stakeholder and Alderman/Elected Official Briefings

An initial task in the public involvement program was to identify areas of agreement and conflict among various stakeholders. Individual meetings with key stakeholders were informal but structured to obtain input on goals, objectives, key issues, preferred communication tools, and public policy considerations. Input obtained from the stakeholder briefings was incorporated in the public participation program. Three elected officials and one stakeholder with interest in the project area were identified and briefed..

5.3.4 Events

To reach out to those not active in civic issues or who do not typically attend community meetings, CTA will explore the feasibility and effectiveness of other non-traditional outreach opportunities including participation in local events, festivals, fairs, and other grassroots outreach opportunities such as farmers markets, mall or shopping center booths, and other more community-focused events. This outreach technique was not employed during the AA or scoping, but remains a potential tool for use during the preparation of the Draft EIS.

Upcoming events including public open house meetings, public hearings, and stakeholder outreach, are summarized in Table 5-1

5.3.4.1 Summer 2011 Public Open House Meeting

A public open house meeting was held on August 2, 2011 to update residents and participating agencies about the project progress. This update summarized the results of the NEPA scoping process that concluded in October 2009. The open house was an opportunity for community members to ask questions about the range of actions, alternatives, environmental effects, and mitigation measures to be analyzed in the Draft EIS. A detailed summary of the meeting with documentation on comment received was prepared.

5.3.4.2 Stakeholder and Alderman/Elected Official Briefings

CTA representatives conducted 12 briefings with elected officials and stakeholders about the project in July and August 2011. Briefings generally covered a description of the project and the scoping process. Meeting notes were prepared.

5.3.5 Public Notice and Review

Public notices for scoping meetings included:

- NOI
- Participating agency invitation letters
- Public scoping invitation notices which were mailed out two weeks prior to the scoping meeting and were translated into Spanish
- Meeting notices were posted at local village halls and libraries

- Email notifications were sent to all in the project database

5.3.6 Written Materials

CTA will develop text and visuals for collateral materials, specifically newsletters, meeting materials, frequently asked questions, technical handouts on specific topics, and other materials as needed throughout the project. Materials for the RLE project will be translated into Spanish and will be available in other languages, including Braille, upon request. See Appendix B - Public Participation Plan.

5.3.7 Website

A project website was developed for the environmental phase. The website provides access to project updates, project background, project materials, documents, and announcements. Public meeting dates were posted in advance on the website. In addition to serving as a source for public information, the website will also serve as a way to gather information. The website includes a clickable link to the project email address that allows people to reach CTA project managers with their comments. The webpage will facilitate ongoing database additions and provide a means for the community to provide input, ask questions, receive responses, and distribute project materials. The website will be updated as the project progresses.

5.3.8 Media

CTA takes a proactive role working with the mainstream media to publicize all community meetings and to raise awareness of RLE project. This includes the development of press releases, complemented by outreach to grassroots, ethnic and niche print, broadcast and public access (radio and television), and new media, as applicable. See Appendix B – Public Participation Plan for details.

5.3.9 Accommodations

All public meetings will be scheduled at locations accessible by transit users and wheelchair accessible. Information regarding bicycle lockers/storage can also be researched upon request. Interpreters (language and hearing) or other auxiliary aids will be arranged if requested at least five days prior to a meeting.

5.4 Outreach to Traditionally Underserved Groups

Federal requirements for PPPs include a process for seeking out and considering the needs of those traditionally underserved by existing transportation systems, such as low income and/or minority groups. CTA has actively worked with organized business and community groups in the project area and will continue outreach efforts to transit users and traditionally underserved groups. In addition, materials will be translated into Spanish. See Appendix B – Public Participation Plan for details.

5.5 Public Participation Measures of Effectiveness

On a periodic basis, the public participation process will be reviewed to determine if modification of any particular strategy is necessary or if additional strategies need to be incorporated into the PPP to reach desired demographic groups.

In addition, the PPP will be revised as needed throughout the NEPA process to ensure that the outreach and involvement efforts are appropriate for the project area and that issues continue to be identified and addressed.

Appendix A
Participating Agencies

Eighty local, regional, state, federal, and tribal agencies were invited to be participating agencies (listed in Table A-1). Of those, 17 agencies affirmatively accepted the invitation and an additional 14 federal and tribal agencies did not decline. Federal and tribal agencies that do not decline the invitation are added to the list of participating agencies. In addition, the FHWA requested to become a cooperating agency. Participating agencies are listed in Table A-2.

Table A-1: Agencies Invited to Become Participating Agencies

Agency Type	Organization
Local	Calumet City - Community & Economic Development
Local	Chicago Bureau of Convention and Tourism
Local	Chicago Housing Authority
Local	Chicago Park District
Local	Chicago Port Authority
Local	Chicago Public Schools, External Resources
Local	Chicago State University, Office of Public Affairs
Local	City of Blue Island
Local	City of Chicago Department of Aviation
Local	City of Chicago Department of Business Affairs and Consumer Protection
Local	City of Chicago Department of Community Development
Local	City of Chicago Department of Cultural Affairs, Office of Tourism
Local	City of Chicago Department of Environment
Local	City of Chicago Department of Fire
Local	City of Chicago Department of Public Health
Local	City of Chicago Department of Streets and Sanitation
Local	City of Chicago Department of Transportation
Local	City of Chicago Department of Water Management
Local	City of Chicago Department of Zoning and Land Use Planning
Local	City of Chicago Office of Emergency Management and Communications
Local	City of Chicago Office of the Mayor
Local	City of Chicago Police Department
Local	Olive-Harvey College
Local	Village of Burnham
Local	Village of Calumet Park, Community Relations Commissioner
Local	Village of Dolton

Agency Type	Organization
Local	Village of Evergreen Park
Local	Village of Riverdale, Community Development Department
Regional	Chicago Metropolitan Agency for Planning
Regional	Circuit Court of Cook County - Fifth Municipal District
Regional	Cook County Building and Zoning
Regional	Cook County Emergency Management Agency
Regional	Cook County Environmental Control Department
Regional	Cook County Forest Preserve District
Regional	Cook County Health & Hospital Systems
Regional	Cook County Highway Department
Regional	Cook County Sheriff's Office
Regional	Cook County Zoning Board of Appeals
Regional	Metra Commuter Rail
Regional	Metropolitan Water Reclamation District of Greater Chicago
Regional	Northern Indiana Commuter Transportation District
Regional	Pace
Regional	Regional Transit Authority
State	Illinois Commerce Commission
State	Illinois Department of Central Management
State	Illinois Department of Commerce and Economic Opportunity
State	Illinois Department of Human Services
State	Illinois Department of Natural Resources
State	Illinois Department of Public Health
State	Illinois Department of Transportation
State	Illinois Emergency Management Agency
State	Illinois Environmental Protection Agency
State	Illinois Historic Preservation Agency
State	Illinois Housing Development Authority
State	Illinois Pollution Control Board
State	Illinois Secretary of State
State	Illinois Sports Facilities Authority
State	Illinois State Board of Education
State	Illinois State Police
State	Illinois State Toll Highway Authority
State	Illinois WorkNet
State	Office of the State Fire Marshal
Federal	Department of Energy

Agency Type	Organization
Federal	Department of Health and Human Services
Federal	Department of Housing and Urban Development
Federal	Department of the Interior, Office of Environmental Policy and Compliance
Federal	Federal Aviation Administration
Federal	Federal Emergency Management Agency
Federal	Federal Highway Administration
Federal	Federal Railroad Administration
Federal	Transportation Security Administration
Federal	U.S. Army Corps of Engineers
Federal	U.S. Environmental Protection Agency
Federal	U.S. Fish and Wildlife Service
Tribal	Citizen Potawatomi Nation
Tribal	Ho-Chunk Nation
Tribal	Peoria Tribe
Tribal	Sac and Fox Tribe - Mississippi and Iowa
Tribal	Sac and Fox Tribe - Missouri and Kansas
Tribal	Sac and Fox Tribe - Oklahoma

Table A-2: RLE Participating Agencies

Organization	Salutation	First Name	Last Name	Title	Address	Apt/ Floor	City	State	Zip
Department of Energy	Mr.	Steven	Chu	Secretary	1000 Independence Ave. SW		Washington	DC	20585
Department of Health and Human Services	Mr.	James	Galloway	Acting Regional Director - Region 5	233 N. Michigan Ave.	Ste. 1300	Chicago	IL	60601
Department of Housing and Urban Development	Ms.	Beverly	Bishop	Deputy Regional Director	77 W. Jackson Blvd.		Chicago	IL	60604
Federal Emergency Management Agency	Ms.	Janet	Odeshoo	Deputy Regional Administrator, Region V	536 S. Clark St.	6th floor	Chicago	IL	60605
Federal Highway Administration	Mr.	Norman	Stoner	Division Administrator, Illinois Division Office	3250 Executive Park Drive		Springfield	IL	62703
Federal Highway Administration	Mr.	Matt	Fuller	Environmental Programs Engineer	3251 Executive Park Drive		Springfield	IL	62703
Federal Railroad Administration	Mr.	Laurence	Hasvold	Regional Administrator	200 West Adams	Suite 310	Chicago	IL	60606
Transportation Security Administration	Ms.	Gale	Rossides	Acting Administrator	601 S. 12th St.		Arlington	VA	20598
U.S. Environmental Protection Agency	Mr.	Bharat	Mathur	Acting Regional Administrator - Region 5	77 W. Jackson Blvd.		Chicago	IL	60604
U.S. Fish and Wildlife Service	Mr.	John	Rogner	Field Supervisor - Chicago Field Office	1250 S. Grove	Ste. 103	Barrington	IL	60010
Citizen Potawatomi Nation	Mr.	John	Barrett	Chairperson	1601 S. Gordon Cooper Drive		Shawnee	OK	74801
Forest County Potawatomi	Mr.	Phillip	Shopodock	Chairperson	PO Box 340		Crandon	WI	54520
Ho-Chunk Nation	Mr.	Bill	Quackenbush	Tribal Historic Preservation Officer	P.O. Box 667		Black River Falls	WI	54815
Miami Tribe of Oklahoma	Mr.	George	Strack	Tribal Historic Preservation Officer	202 S. Eight Tribes Trail		Miami	OK	74354
Peoria Tribe of Indians of Oklahoma	Mr.	John	Froman	Chief	118 S. Eight Tribes Trail		Miami	OK	74354
Pokagon Band of Potawatomi Indians	Mr.	Michael	Zimmerman	Tribal Historic Preservation Officer	58620 Sink Road		Dowagiac	MI	49047
Potawatomi Nation-Hannahville Indian Community	Mr.	Earl	Meshigaud		N14911 Hannahville Blvd.		Wilson	MI	49896
Prairie Band of Potawatomi Nation	Mr.	Steve	Ortiz	Chief	16281 Q Road		Mayetta	KS	66509
Sac and Fox Nation of Mississippi in Iowa	Mr.	Homer	Bear, Jr.	Chairman	349 Meskwaki Road		Tama	IA	52339
Sac and Fox Nation of Missouri	Ms.	Twen	Barton	Chairperson	305 N. Main Street		Reserve	KS	66434
Sac and Fox Nation of Oklahoma	Ms.	Sandra	Massey	Tribal Historic Preservation Officer	Rt. 2 Box 246		Stroud	OK	74079
Chicago Housing Authority	Mr.	Lewis	Jordan	CEO	60 E. Van Buren		Chicago	IL	60605
Chicago Housing Authority	Ms.	Edie	Diaz		60 E. Jackson, Suite 1200		Chicago	IL	60605
Chicago Housing Authority, Intergovernmental Affairs	Mr.	Otis	Wright	Director	60 E. Van Buren		Chicago	IL	60605
Chicago Park District	Mr.	Mike	Kelly	CEO	541 N. Fairbanks		Chicago	IL	60611

Organization	Salutation	First Name	Last Name	Title	Address	Apt/ Floor	City	State	Zip
Chicago Park District	Mr.	Joseph	Bornstein	Project Manager, Planning & Development	541 N. Fairbanks		Chicago	IL	60611
City of Chicago Department of Business Affairs and Consumer Protection	Ms.	Rosemary	Krimbel	Commissioner	121 N. LaSalle St.	Room 805	Chicago	IL	60602
City of Chicago Department of Community Development	Ms.	Christine	Raguso	Acting Commissioner	121 N. LaSalle St.	Ste. 1000	Chicago	IL	60602
City of Chicago Department of Environment	Ms.	Suzanne	Malec-McKenna	Commissioner	30 N. LaSalle St.	Floor 25	Chicago	IL	60602
City of Chicago Department of Environment	Ms.	Nicole	Kamins	Program Director	30 N. LaSalle St.	Floor 25	Chicago	IL	60602
City of Chicago Department of Transportation	Ms.	Luann	Hamilton	Director, Transportation Planning	30 N. LaSalle St.	Suite 500	Chicago	IL	60602
City of Chicago Department of Transportation	Mr.	Joe	Alonzo	CREATE Manager	30 N. LaSalle Street	Suite 500	Chicago	IL	60602
City of Chicago Department of Transportation	Mr.	Richard	Hazlett	Coordinating Planner	30 N. LaSalle Street	Suite 500	Chicago	IL	60602
City of Chicago Office of the Mayor	Mr.	Pat	Harney	Deputy Chief of Staff	121 N. LaSalle St.	Room 509	Chicago	IL	60602
City of Chicago Police Department	Mr.	Jody	Weis	Superintendent	3510 S. Michigan Ave.		Chicago	IL	60653
City of Chicago Police Department	Mr.	Mark	Harmon	Commanding Officer, Patrol Division	3510 S. Michigan Ave.		Chicago	IL	60653
Metra Commuter Rail	Ms.	Lynette	Ciavarella	Director, Planning and Analysis	547 W. Jackson Blvd.	13th Floor	Chicago	IL	60661
Metra Commuter Rail	Mr.	David	Kralik	Department Head, Long Range Planning	547 W. Jackson Blvd.	13th Floor	Chicago	IL	60661
Metropolitan Water Reclamation District of Greater Chicago	Mr.	Terrence J.	O'Brien	President, Board of Commissioners	100 E. Erie St.		Chicago	IL	60611
Metropolitan Water Reclamation District of Greater Chicago	Mr.	Joseph	Schuessler	Principal Civil Engineer	100 East Erie Street		Chicago	IL	60611
Regional Transportation Authority	Ms.	Leanne	Redden	Senior Deputy, Executive Director of Planning	175 W. Jackson Blvd.	Suite 1550	Chicago	IL	60604
Regional Transportation Authority	Ms.	Aimee	Lee	Manager, Regional Planning	175 W. Jackson Blvd.	Suite 1550	Chicago	IL	60604
Regional Transportation Authority	Mr.	Peter	Fahrenwald		175 W. Jackson Blvd.	Suite 1550	Chicago	IL	60604
Pace	Mr.	David	Tomzik	Manager, Long Range Planning	550 W. Algonquin Road		Arlington Heights	IL	60005
Pace	Ms.	Lorraine	Snorden	Manager, Department of Planning Services	550 W. Algonquin Road		Arlington Heights	IL	60005
Illinois Commerce Commission	Mr.	Steve	Matrisch	Acting Transportation Bureau Chief	527 E. Capitol Ave		Springfield	IL	62701
Illinois Commerce Commission	Mr.	Michael E.	Stead	Rail Safety Program Administrator	527 E. Capitol Ave		Springfield	IL	62701
Illinois Department of Natural Resources	Mr.	Marc	Miller	Director	One Natural Resources Way		Springfield	IL	62702

Organization	Salutation	First Name	Last Name	Title	Address	Apt/ Floor	City	State	Zip
Illinois Department of Natural Resources	Mr.	Steve	Hamer	Office of Realty & Environmental Planning, Division of Ecosystems & Environment	One Natural Resources Way		Springfield	IL	62702
Illinois Department of Transportation	Mr.	Chuck	Abraham	Division of Public and Intermodal Transportation	100 W. Randolph	Suite 6-600	Chicago	IL	60601
Illinois Department of Transportation	Mr.	Joseph	Shacter	Director, Division of Public and Intermodal Transportation	100 W. Randolph	Suite 6-600	Chicago	IL	60601
Illinois Department of Transportation	Ms.	Lil	Budzinski	Section Chief, CTA/ City of Chicago Section	100 W. Randolph	Suite 6-600	Chicago	IL	60601
Illinois Environmental Protection Agency	Ms.	Lisa	Bonnett	Interim Director	1021 North Grand Avenue East	PO Box 19276	Springfield	IL	62794-9276
Illinois Environmental Protection Agency	Ms.	Dianne	Schuerman		1021 North Grand Avenue East	PO Box 19276	Springfield	IL	62794-9276
Illinois Historic Preservation Agency	Mr.	William	Wheeler	State Historic Preservation Officer	#1 Old State Capitol Plaza		Springfield	IL	62701
Illinois Historic Preservation Agency	Ms.	Anne	Haacker	Deputy State Historic Preservation Officer	#1 Old State Capitol Plaza		Springfield	IL	62701

Appendix B
Public Participation Plan

Please see Public Participation Plan provided earlier in Appendix C of the Draft EIS.

Appendix C
Agency Coordination and Public Involvement

Coordination with Chicago Park District

MEETING NOTES

RE: **CTA-CWC-Chicago Park District Meeting**
Red Line South Extension Project

MEETING DATE: **April 18, 2011**

CHAIRPERSON: **Sonali Tandon, CTA**

LOCATION: **at CTA and via Conference Call**

TO: **Distribution and All Attendees**

ATTENDEES:

Name	*Initials*	*Organization / Title*
Sonali Tandon	ST	CTA
Steve Hands	SH	CTA
Joe Iacobucci	JI	CTA
Helene Kornblatt	HK	CWC Transit Group
Claudia Lea	CL	CWC Transit Group
Joseph Bornstein	JB	Chicago Park District

PREPARED BY: Claudia Lea

ISSUE DATE: April 19, 2011

Meeting called to order at 1:30 pm

Project Background

Sonali Tandon discussed the project background, including the Alternatives Analysis process, the determination of a Locally Preferred Alternative (Union Pacific Railroad Heavy Rail Transit Alternative – UPRR HRT Alternative), the scoping process, as well as an overview of the EIS process.

Helene Kornblatt provided background regarding the 4(f) process: Section 4(f) of the Department of Transportation Act of 1966 prohibits the Federal Transit Administration (FTA) from approving a project or program that uses land from a significant public park, recreation area, wildlife or waterfowl refuge, or historic site except if the Administration determines that the other alternatives are not feasible. All parkland that is used for a transit project needs to be compensated. A 4(f) report will need to be completed as part of the EIS.

West Option

The UPRR HRT West Option would intersect Fernwood Park, located along the proposed alignment between 99th Street and 103rd Street. Fernwood Park is a linear park which runs between the UPRR tracks and Eggleston Avenue. There are limited improvements to the park (no sidewalks), and it is not programmed much as a park. Abandoned houses and vacant lots are located along the park.

Joseph Bornstein indicated that CPD would be amenable to talking about this park. JB stated that if any of the park is used for the Red Line Extension, the remainder of the park will be unusable, and CTA will be responsible for a one-to-one acreage trade for the entire park area between 99th and 103rd Street. JB indicated that there would likely be land available to create new parks given the vacant land in the near vicinity of the park, but CTA will need to see what the community would like. CPD has no current plans for improvements to Fernwood Park. CTA will recommend several sites in the vicinity of Fernwood Park that would replace the entire Fernwood Park area (4.5 acres), and will begin by reviewing City of Chicago owned property.

East Option

The UPRR HRT East Option would intersect Wendell Smith Park, located on South Princeton Avenue between 99th Street and 99th Place. Wendell Smith Park is 4 acres in size and has basketball courts, baseball fields, a play lot, a recreation building, and 0.33 miles of walking trails. There are regularly-scheduled basketball, baseball, and softball games, concerts, and day camps that take place at the park. The UPRR HRT East Option would run through the northwest corner of the park. Impacts to the park would involve the loss of trees in the unused and unkempt northwest corner of the park, a total of 0.66 acres of impacted area.

The East Option would also run through the eastern parcel of Block Park. Block Park is located on two parcels, to the east and west of South Harvard Avenue, and runs along the eastern boundary of the UPRR. A natatorium was located on this property until 1998. A radio tower is located on the property at this time. Approximately 0.69 acres of the park would be impacted by the UPRR HRT East Option; the total parcel area is 1.26 acres. Following the meeting, JB provided information that the potentially impacted parcel is leased property from the Water Department. He indicated that the lease on the property is most likely expired, and CTA may need to work with the Water Department regarding the future of their parcels.

Process

- CTA will need to get feedback from the community regarding their wants and needs
- CPD does one-for-one land swaps
- CPD requires a two-acre minimum for new parks. CPD would prefer new parks to be greater than two acres, if possible.
- Land actions need to go though the CPD Board, which is a relatively quick process.
- CTA will need to discuss findings with FTA prior to proceeding.
- Funding for the park development will need to be discussed with FTA.
- CPD estimates that it costs ~$1 million per acre for development of property into usable park land, which includes lighting, improvements, etc.

Next Steps

As CTA begins to draft the EIS, they will get back in touch with CPD regarding potential sites and compensation, based on FTA's feedback. At this time, the EIS is not funded. CPD has no plans for further park development in the vicinity of the LPA.

Please notify the author of the minutes of any corrections and/or clarifications within five (5) business days.

cc: Attendees

MEETING NOTES

RE: **Chicago Park District Meeting**
Red Line Extension Draft EIS

MEETING DATE: **Wednesday, July 24, 2013 1:00PM**

LOCATION: **Chicago Park District Offices**

ATTENDEES:

Name	***Initials***	***Organization***
Sonali Tandon	ST	CTA
Rob Rejman	RR	Chicago Park District
Doreen O'Donnell	DO	Chicago Park District
Helene Kornblatt	HK	CWC Transit Group
Kansai Uchida	KU	CWC Transit Group

PREPARED BY: Kansai Uchida

ISSUE DATE: Thursday, July 25, 2013

- CTA is currently preparing the Draft Environmental Impact Statement for the Red Line Extension project. The ultimate funding sources and schedule for project implementation are still being determined.
- CPD's policy regarding other agencies' use of their property is replacement (whether the property is active or not). Replacement does not need to be in the same location.
- CTA, CPD, and CWC reviewed draft conceptual plan and profile drawings for the UPRR Rail Alternative options at Wendell Smith Park, Fernwood Parkway, and Block Park.
- CPD recently renewed its lease on Block Park for 25 years.
- CPD recognized that a Fernwood Parkway alignment might mean fewer residential displacements. If CPD received equal acreage nearby, they would have the opportunity to provide a better park for the neighborhood than the existing Fernwood Parkway.
- CWC described the potential Section 4(f) findings:
    - Use of Wendell Smith Park under all of the UPRR Rail Alternative Options
    - Use of Fernwood Parkway under the UPRR Rail Alternative West Option
    - De minimis impact on Block Park under the UPRR Rail Alternative East Option
- CPD understands the accessibility benefits that the extension would provide to the community. CPD sees this as an opportunity to improve existing parks or create a new park in alternate locations that would better serve the neighborhood.
- CPD will conduct an internal analysis of the needs of the community, and potential parks for improvement or new park lands to compensate for parks that may be affected by RLE project alternatives.

- CPD would like to have a representative attend a future meeting that CTA may have with Friends of the Parks.
- ST provided a copy of map showing Red Line Extension alternatives.

Please notify the author of the minutes of any corrections and/or clarifications within five (5) business days.

cc: Attendees

Meeting Notes

Date: Thursday, May 8, 2014

Meeting: CTA with Chicago Park District and Friends of the Parks

Meeting Purpose: CTA to share RLE Project updates and Parks Impacts

Present:
Erika Sellke, Chicago Park District
Cassandra Francis, Friends of the Parks
Sylvia Jones, Friends of the Parks
Sonali Tandon, Chicago Transit Authority
Virginia Jackson, CWC Transit Group
Jenifer Palmer, CWC Transit Group

Time: 1:00 pm to 2:00 pm

Location: CTA Headquarters, 567 West Lake Street, 10th Floor, Chicago, IL

Presentation Highlights

CTA staff delivered a presentation about the proposed Red Line Extension (RLE) Project that would extend the Red Line from the existing 95th Street Terminal to the vicinity of 130th Street. Representatives from the CTA discussed:

- **Project Overview and Benefits**
  The RLE Project would mean a better served Far South Side, by providing direct CTA rail service and reducing commute times from the project area. The project would include four new stations, a new rail yard, and bus and parking facilities at all stations. The project would encourage economic development and benefit the community by bringing construction jobs to the area and increasing access to jobs outside of the project area.

- **RLE Project Alternatives and Potential Impacts**
  CTA is evaluating three options for the Locally Preferred Alternative along the Union Pacific Railroad (UPRR) tracks including an option within the existing freight right-of-way (ROW Option), an East Option, and a West Option. CTA is also evaluating a rail alternative along Halsted Street, a Bus Rapid Transit (BRT) Alternative along Michigan Avenue, and the No Build Alternative.

- **CTA is preparing an Environmental Impact Statement (EIS)**
  CTA has been evaluating the project alternatives and has begun to prepare a Draft EIS which will analyze the potential positive and negative environmental impacts of construction and operation of each alternative and will propose mitigation measures to reduce or eliminated potential negative impacts. Once the CTA completes the Draft EIS, a public hearing will be held to share the findings of the Draft EIS.

- **Parks Impacts**
  CTA has been analyzing the potential impacts of the project from a number of different perspectives, including potential for displacements, noise and vibration, impacts to historic properties and others and understands this meeting is mainly to discuss findings with respect to parks. Based on the analysis, the No-Build, BRT and Halsted Rail Alternative have no associated potential park impacts. All UPRR Alternatives have an impact to Wendell Smith Park due to the overlap with the park and elevated structure/vertical clearances. There would be temporary occupancy of a small portion of the park during construction, but the area underneath the elevated structure would remain open after construction. Depending upon the UPRR alternative selected, the acreage impacted varies.

  In addition to potential temporary impacts to Wendell Smith Park from all UPRR Alternatives, the UPRR East Alternative has potential impact to Block Park. The affected area includes an isolated portion of the park's open space and a communications tower and is in an area of the park that does not currently serve a recreational use. The key recreational features of the park, walking trails and benches, are on the other side of Harvard Avenue in the eastern half of the park. While there would be some temporary construction impacts, no permanent incorporation is needed as the area underneath the elevated track structure would remain open after construction.

  In addition to potential temporary impacts to Wendell Smith Park from all UPRR Alternatives, the UPRR West Alternative has potential permanent impact to Fernwood Parkway. The West Option alignment would run through two of the four parcels that make up Fernwood Parkway between 101st and 103rd Streets and would affect about 1.9 acres of the park. Temporary closure of the section of the park overlapped by the elevated structure would be necessary during construction. Public use of the park could resume after construction, as long as the area underneath the elevated structure is reopened. However, much of the park between 101st and 103rd Streets would be permanently overlapped and shaded by the structure. Concrete aerial supports would be placed permanently in the park space. The West Option would result in a permanent incorporation of the park space and if this option is selected, CTA would work with the Chicago Parks District on appropriate mitigation. Some options have already been discussed with the City, including creating replacement park space nearby and/or adding enhanced recreational features to improve Fernwood Parkway's functionality as a park. The end result would potentially be a net benefit for park users.

Questions and Comments from Meeting Participants

- Discussion ensued about appropriated funds for project development and Sylvia Jones noted that it was her understanding that $1.5 Billion was to be appropriated in 2009 for the Red Line Extension. CTA stated that funding for the EIS planning study had been received and was used to fund this portion of the project. Once the Final EIS is submitted and a Record of Decision is determined by the Federal Transit Administration (FTA), the project would become eligible under the federally competitive New Starts grant funding. Additional local and state funding sources would be needed at that time for further project development.
- Sylvia Jones asked about the future parking fee for the proposed park and ride facility. This has not yet been determined by CTA and would be dependent upon the alternative selected to move forward. As the project develops further, CTA will evaluate the size and scale needed for the park and ride facilities.
- CTA asked about any areas of community concern with regard to the potential for park impacts of proposed alternatives. Discussion ensued about specific parks in the surrounding community. Sylvia Jones asked about impacts to Princeton Park and Trinity Church. Based on review of study area mapping, these facilities are located near 95th Street, east of Eggleston. CTA noted that these areas are outside of the proposed alternatives' alignments and study area. Similarly, CTA was asked whether the study reviewed potential impacts to Kensington Park. CTA noted that this had been reviewed but was outside of the area of potential effect.
- Sylvia Jones noted that Carver Park in Altgeld Gardens is a good example park in the area.
- Cassandra Francis asked that Major Taylor Bike Trail be added to the park impacts mapping, as appropriate. Major Taylor Bike Trail is not impacted by the project, but should be shown for reference purposes.
- Discussion ensued about potential impacts from all UPRR alternatives on Wendell Smith Park. It is understood that this is not a permanent incorporation and that only a small portion of parkland is affected. However, Ms. Francis noted that leaving the area of overlap between the park and elevated structure afterwards does change the nature of the park use.
- Cassandra Francis had concerns about impacts to parks from the UP Rail alternatives and noted that replacement of parks should be considered as part of the mitigation efforts for Block Park as well as Fernwood Parkway. CTA explained that the portion of Block Park that would be impacted is not used for recreational activity currently and does not contain any amenities. If the UPRR West Option is selected, and Fernwood Parkway is impacted, CTA would work with the Chicago Parks Department on appropriate mitigation, including creating replacement park area nearby and other amenities.
- Ms. Francis noted that she would like to work with Erika Sellke at the Chicago Parks Department to conduct a field visit of the potentially impacted parks and determine ways to enhance compact, integrated park areas within the project study area.

Follow Up

CTA Government and Community Relations staff will provide Ms. Jones with a copy of the Section 106 (Historic) Effects Report.

Friends of the Parks and Chicago Parks Department staff will further coordinate a field visit to discuss the potential impacts on parks and appropriate mitigation. CTA offered to coordinate and be part of these field visits if desired.

Friends of the Parks will look for other properties in the area that could be used for parkland mitigation.

MEETING NOTES

RE: **Chicago Park District Coordination Meeting**
Chicago Transit Authority Red Line Extension Project

DATE: **April 8, 2015, 9:00 a.m.**

LOCATION: **Chicago Park District, 541 N. Fairbanks Court, Chicago, IL**

ATTENDEES:

Name	***Initials***	***Organization***
Sonali Tandon	ST	CTA
Jenifer Palmer	JP	CWC Transit Group
Michael Lange	MH	CPD
Doreen O'Donnell	DO	CPD
Rob Rejman	RR	CPD

PREPARED BY: **Jenifer Palmer**

ISSUE DATE: **April 15, 2015**

MEETING NOTES:

- Sonali Tandon (CTA) provided an update on the status of the Red Line Extension Project. Since CTA last met with the Chicago Park District (CPD), there have been some new developments. CTA is preparing a Draft Environmental Impact Statement (EIS) and has narrowed the number of alternatives under consideration to two options of the Union Pacific Railroad Rail Alternative—the East Option and the West Option.

- After the Draft EIS phase, only one option will move forward for further study in the Final EIS. This is a community-driven project and public feedback on the environmental impacts of each option will help in refining the alignment and in selection of a single preferred option.

- There are a number of environmental resource areas studied in the Draft EIS in addition to parks, such as property displacements and noise and vibration, which could have an effect on community decision-making. CTA's goal, therefore, is to work with CPD on further detailing appropriate mitigation measures for each of these options that will result in a no adverse effect to parks following implementation of measures and which allows the public an opportunity to review the park impacts of the two options after mitigation.

- CPD stated that they would provide further information on appropriate mitigation measures for each option that are responsive to community needs and would allow the public to weigh in on the park impacts and mitigation measures in line with other considerations on a preferred option.

- CTA shared maps and information on impacts for each option. The alignment has been refined to reduce park impacts and CTA is continuing to coordinate with Illinois Department of Transportation to seek concurrence on refinements in the I-57 segment. For the East Option, park impacts include a portion of Wendell Smith Park and a portion of Block Park. The West Option would impact Fernwood Parkway – a fewer number of parks but greater acreage affected. CPD noted that mitigation measures should note acre-for-acre replacement in either option.

- CTA shared potential mitigation measures for CPD comment, including replacement park provisions, maintaining park area beneath the structure, restoration/landscaping of any disturbed areas, and incorporating design features into the final transportation infrastructure to enhance parks while maintaining safety of the transit facility. For the West Option, there would also be a potential for creating a bike path beneath the elevated structure. CTA would still need to use the area for maintenance purposes.

- CPD noted that when clipping portions of a park, maintaining the park underneath is not as desirable a mitigation measure from a CPD perspective as replacement. The bike path concept is a very desirable one, especially if it could be a connector to other bike park plans that CPD has (i.e., Calumet). There may also be some interesting opportunities/ideas with regard to both options and providing replacement park space near stations. While a park next to the new station might be a non-continuous park, it would have the potential to enhance the surrounding area and provide better park access and connectivity. When parks are incorporated near transit, they are known to attract greater transit-oriented development.

- CTA shared some additional information on requirements under the National Environmental Policy Act and Section 4(f) as it relates to park impacts. Findings related to Section 4(f) will consider not only the impacts to parks, but the significance of parks and the mitigation measures proposed for the determination of a no adverse effect finding on each option after implementation of mitigation measures.

- Obtaining consensus from CPD, as the official with jurisdiction over findings of the impacts and mitigation measures proposed for each option, will allow the continued community-driven process for selection of a preferred option. A public meeting and comment period on findings of all environmental impacts and mitigation measures proposed is expected to occur in spring 2016.

- As a next step, CTA will send CPD a letter (and the materials reviewed during the meeting) that will outline the major items where CTA would like feedback from CPD.

- CTA shared with CPD next steps in the coordination process. These steps will help formalize mitigation measures and impact findings for both options, which can then be shared with the public for further input and feedback on a preferred option.

CHICAGO TRANSIT AUTHORITY

567 West Lake Street
Chicago, Illinois 60661-1498
TEL 312 664-7200
www.transitchicago.com

June 8, 2015

Mr. Rob Rejman
Director of Planning and Construction
Chicago Park District
541 N. Fairbanks Court
Chicago, IL 60611

Re: CTA Red Line Extension (RLE) Project

Dear Mr. Rejman:

The Chicago Transit Authority (CTA) and Federal Transit Administration (FTA) are continuing efforts to prepare an Environmental Impact Statement (EIS) for the proposed Red Line Extension (RLE) Project in accordance with the National Environmental Policy Act (NEPA).The proposed project would extend the Red Line from the existing 95th Street Terminal to 130th Street, subject to the availability of funding.

CTA recently met with your agency on April 8, 2015 and presented information about the East and West options of the Union Pacific Railroad alignment, potential park impacts, and preliminary mitigation measures for each of the alignment options. In follow up to that meeting, this letter provides additional supporting information on the project, park impacts, and preliminary mitigation measures for further input from your agency. As the official with jurisdiction over these properties, CTA would like additional input from your agency on the following:

1. Confirmation on the attached documentation regarding primary activities and functions that take place at each of the three park properties that would be affected by the options under consideration, including which of these activities and functions constitute the primary purpose of these parks.

2. The views of your agency on the significance of each of these parks in terms of their existing availability and function in meeting the objectives of the Chicago Park District and the surrounding community as well as the impacts and/or benefits of the proposed project with mitigation measures implemented as proposed.

3. Comments and recommendations from your agency on the proposed mitigation measures for impacts and use of each park, including identification of any appropriate replacement park locations for the proposed project mitigation measures.

4. The views of your agency on whether, after implementation of these mitigation measures, the impacts presented would be adverse to the activities, features, or attributes of each park.

We also welcome any other feedback from your agency that would be useful in understanding the views, goals, and objectives of the Chicago Park District in relationship to the proposed RLE Project. Your input will be used and reflected in the Draft EIS and Section 4(f) Evaluation that is being prepared. Section 4(f) of the USDOT Act of 1966 protects significant historic resources as well as publicly owned recreation areas, parks, and wildlife refuges. Once your views on these matters are appropriately incorporated into the document, CTA and FTA will be providing documentation to your agency on the environmental impacts and Section 4(f) findings and will seek concurrence from the Chicago Park District on the determination made. Additional coordination meetings will be scheduled with your agency, as needed, to ensure proper coordination.

At this time, CTA expects to release the Draft EIS and Section 4(f) Evaluation for public review and comment in spring 2016. A public hearing will be scheduled at that time to take public comments on the environmental findings in the Draft EIS and Section 4(f) Evaluation. Based on the technical analysis conducted and public input received, a Final EIS/Record of Decision will be prepared. The Final EIS/Record of Decision will document the results of the Draft EIS process, confirm whether the East or West Option will be constructed, and include a list of committed final mitigation measures for the option chosen. CTA and FTA will continue to work with your agency through this process to keep you informed on the status of this project and to conduct follow up coordination activities, as needed. Additional information about the project is available at: transitchicago.com/RedEIS.

If you have any questions, please do not hesitate to contact me. Thank you for your participation on this project.

Sincerely,

Sonali

Sonali Tandon
Senior Project Manager, Planning
Chicago Transit Authority
312.681.4246
standon@transitchicago.com

cc:
Michael Lange, Chicago Park District
Doreen O'Donnell, Chicago Park District
Reginald Arkell, Federal Transit Administration
Mark Assam, Federal Transit Administration

Project Overview and Description

The Chicago Transit Authority (CTA), as project sponsor to the Federal Transit Administration (FTA), proposes to construct the Red Line Extension (RLE) Project to extend the existing Red Line heavy rail transit service approximately 5 miles south from the existing 95th Street Terminal to 130th Street on Chicago's Far South Side. The project area for the RLE is approximately 11 miles south of the Loop (Chicago's central business district).

The National Environmental Policy Act of 1969 (NEPA) mandates the consideration of environmental impacts before approval of any federally funded project that may have significant impacts on the environment or where impacts have not yet been determined. FTA and CTA are currently preparing a Draft Environmental Impact Statement (EIS) for this project in accordance with NEPA and other applicable regulations, including Section 106 of the National Historic Preservation Act (NHPA), Section 4(f) of the United States Department of Transportation (USDOT) Act of 1966, joint guidance and regulations from FTA and the Federal Highway Administration (FHWA), and other agency regulations and guidelines.

After extensive planning and study, the Chicago Transit Board designated the Union Pacific Railroad (UPRR) Rail Alternative as the Locally Preferred Alternative (LPA) for this project on August 12, 2009. The UPRR Alternative route would run south along I-94 from the 95th Street Terminal, then curve west along the north side of I-57 (within the I-57 right-of-way) for nearly ½ mile until reaching the UPRR corridor in the vicinity of Eggleston Avenue. The alignment would turn south to follow the UPRR corridor.

Two options are being considered for the alignment along the UPRR corridor. The CTA elevated structure would be located either east or west of the existing UPRR corridor. The alignment would follow the UPRR corridor to Prairie Avenue, where it would cross over the Canadian National/Metra Electric District (CN/ME) tracks near 119th Street. South of this point, the East and West Options would follow the same alignment southeast along the NICTD/Chicago South Shore & South Bend Railroad (CSS & SBRR) right-of-way using a portion of the Indiana Harbor Belt Railroad (IHB) right-of-way to the terminus (end) of the RLE at 130th Street.

As described, two UPRR Alternative options for the segment of the proposed route between I-57 and the CN/ME tracks near 119th Street are under further evaluation:

- East Option - The CTA elevated structure would be placed immediately adjacent to the east side of the UPRR right-of-way.

- West Option - The CTA elevated structure would be placed immediately adjacent to the west side of the UPRR right-of-way.

An overview map of the project and alignment options is provided in **Figure 1**.

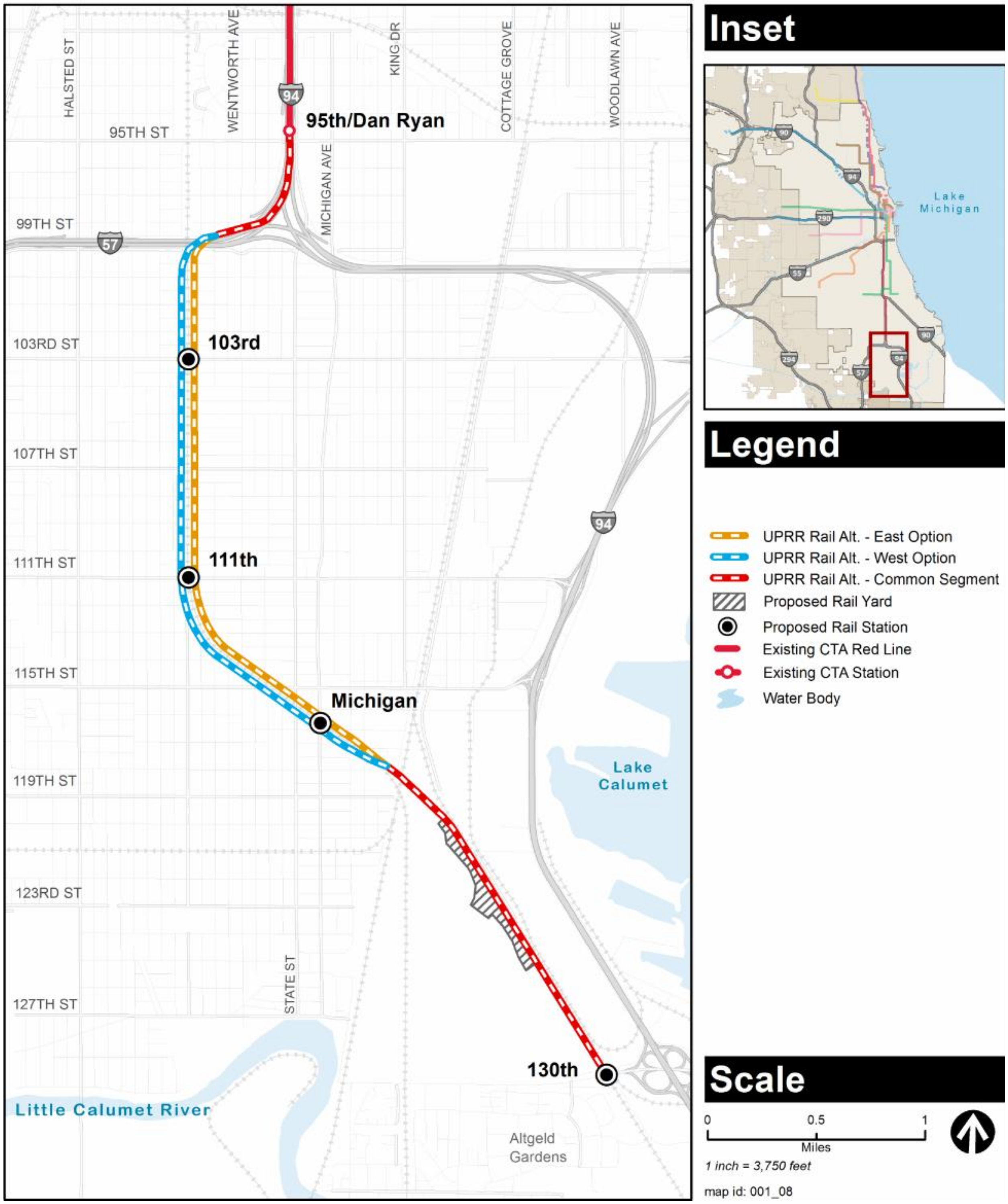

HALSTED ST
WENTWORTH AVE
KING DR
COTTAGE GROVE
WOODLAWN AVE
95TH ST
94
95th/Dan Ryan
MICHIGAN AVE
99TH ST
57
103RD ST
103rd
107TH ST
94
111TH ST
111th
115TH ST
Michigan
119TH ST
Lake Calumet
123RD ST
STATE ST
127TH ST
130th
Little Calumet River
Altgeld Gardens
Inset
90
94
290
55
294
57
90
94
Lake Michigan
Legend
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
UPRR Rail Alt. - Common Segment
Proposed Rail Yard
Proposed Rail Station
Existing CTA Red Line
Existing CTA Station
Water Body
Scale
0
0.5
1
Miles
1 inch = 3,750 feet
map id: 001_08

Figure 1: Union Pacific Railroad Alternative Options

Park Impact Overview

All public parks within 500 feet of the proposed right-of-way and within ½ mile around the locations of proposed stations were analyzed for potential impacts as a result of implementing the project. **Table 1** summarizes park impacts as a result of each UPRR alignment option. **Figure 2** shows the locations of all parks in the vicinity of the project. The following section provides further details on the park or parks impacted by each alignment option.

Table 1: Park and Recreational Resources Impacts Overview

Park or Recreational Resource Name	Address	Impact Findings	
		East Option	West Option
Wendell Smith Park	9912 S. Princeton Avenue	0.7 acres	-
Fernwood Parkway	9501 S. Eggleston Avenue	-	1.9 acres
Block Park	346 W. 104th Street	0.9 acres	-
Total		*1.6 acres*	*1.9 acres*

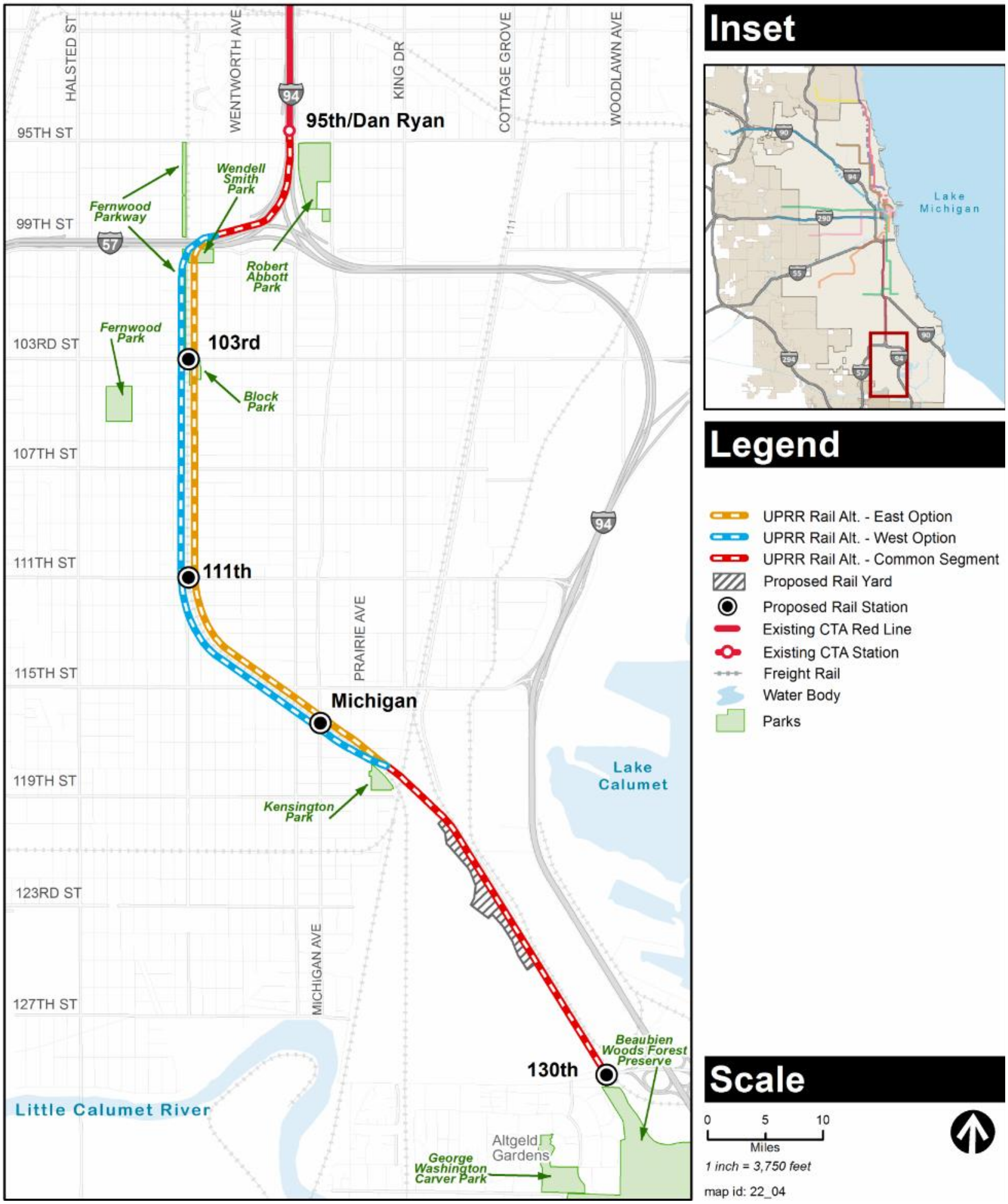

HALSTED ST
WENTWORTH AVE
KING DR
COTTAGE GROVE
WOODLAWN AVE
95TH ST
99TH ST
103RD ST
107TH ST
111TH ST
115TH ST
119TH ST
123RD ST
127TH ST
MICHIGAN AVE
PRAIRIE AVE
94
57
95th/Dan Ryan
Wendell Smith Park
Fernwood Parkway
Robert Abbott Park
Fernwood Park
103rd
Block Park
111th
Michigan
Kensington Park
Lake Calumet
130th
Beaubien Woods Forest Preserve
Little Calumet River
Altgeld Gardens
George Washington Carver Park
Inset
Lake Michigan
90
290
55
294
Legend
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
UPRR Rail Alt. - Common Segment
Proposed Rail Yard
Proposed Rail Station
Existing CTA Red Line
Existing CTA Station
Freight Rail
Water Body
Parks
Scale
0
5
10
Miles
1 inch = 3,750 feet
map id: 22_04

Figure 2: Publicly Owned Park and Recreational Properties Adjacent to the Project

UPRR Alternative East Option - Park Impacts

Two park resources would be used as result of the East Option: Wendell Smith Park and Block Park, which are further described below.

Wendell Smith Park

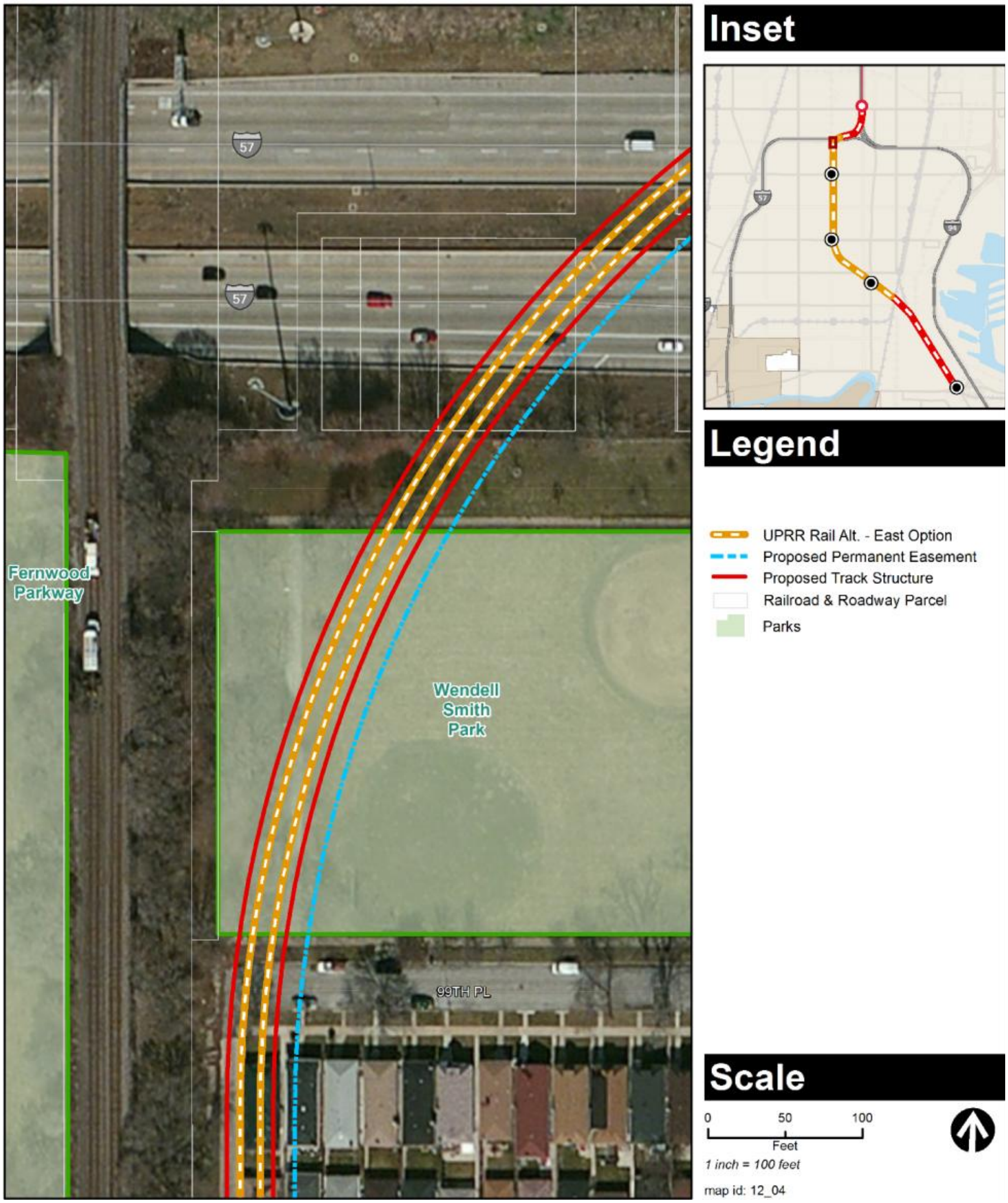
Wendell Smith Park is approximately 4.7 acres (340 feet wide by 610 feet long) and is an actively used facility with basketball courts, baseball fields, a play lot, recreation building, and 0.3 mile of walking trails. Regularly scheduled activities at Wendell Smith Park include basketball tournaments, baseball/softball games, and concerts. The park is also actively used by day camps and for activities organized by the Chicago Park District.

The East Option alignment would run through the northwestern corner of the park, as shown in Error! Reference source not found.. Of the 4.7 acres of the park, approximately 0.7 acre would be overlapped by the elevated structure and its associated clearances. The overlap area includes open space, trees, benches, and a portion of the park's walking trail. The outfield of an existing baseball field would be used. Piers would be located in the park, and the bottom of the elevated structure would be approximately 15 feet above ground level. Because a permanent easement is proposed, the land within the easement would be considered a permanent incorporation (direct use) of the park facilities. Temporary closure of the overlapped portion of Wendell Smith Park would be necessary during construction.

Preliminary Mitigation Measures

Mitigation and enhancement measures are proposed that would result in no adverse effect to the features, attributes, and activities of the park after implementation, as follows:

- Replacement of impacted park space. Payment would be the fair market value of the land and improvements taken or improvements to the remaining site equal to the fair market value of the land and improvements taken. Location of replacement property would be further defined in coordination with the Chicago Park District.
- Relocation or replacement of the baseball field based on further coordination with the Chicago Park District and outreach to the public so that the attributes, features, and activities are not adversely affected by the use of the northwest corner of the park.
- Replacement of facilities affected by the project including sidewalks, paths, benches, lights, trees, and other facilities within the park.
- Restoration and landscaping of disturbed areas.
- Incorporation of design features where necessary to reduce or minimize impacts of use on the Section 4(f) property. Such features would be designed in a manner that would enhance the park but not adversely affect the safety of the transit facility.



57
57
Fernwood Parkway
Wendell Smith Park
99TH PL
Inset
57
94
Legend
UPRR Rail Alt. - East Option
Proposed Permanent Easement
Proposed Track Structure
Railroad & Roadway Parcel
Parks
Scale
0
50
100
Feet
1 inch = 100 feet
map id: 12_04

Figure 3: Impacts on Wendell Smith Park – -Union Pacific Railroad Alternative East Option

Block Park

Block Park is a passive green space and is divided into two parcels by Harvard Avenue. The east parcel is approximately 1.4 acres (130 feet wide by 460 feet long) and includes amenities such as benches, walking paths, and sidewalks. The west parcel is approximately 1.3 acres (90 feet wide by 600 feet long) and is open space with a sidewalk and no other park amenities. In addition, a radio tower and two utility structures are on the west parcel. Photos of Block Park are shown in **Figures 4** and **5**.

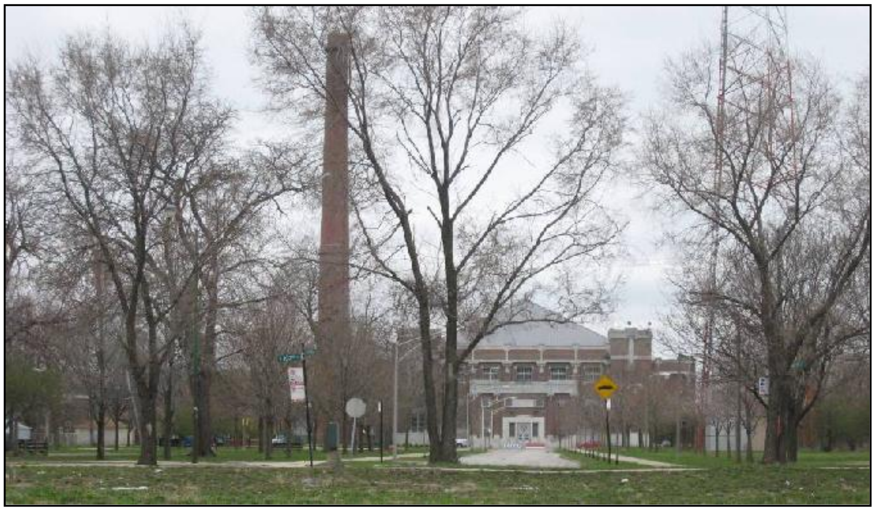


Figure 4: Block Park with the Roseland Pumping Station in the Background (facing south)

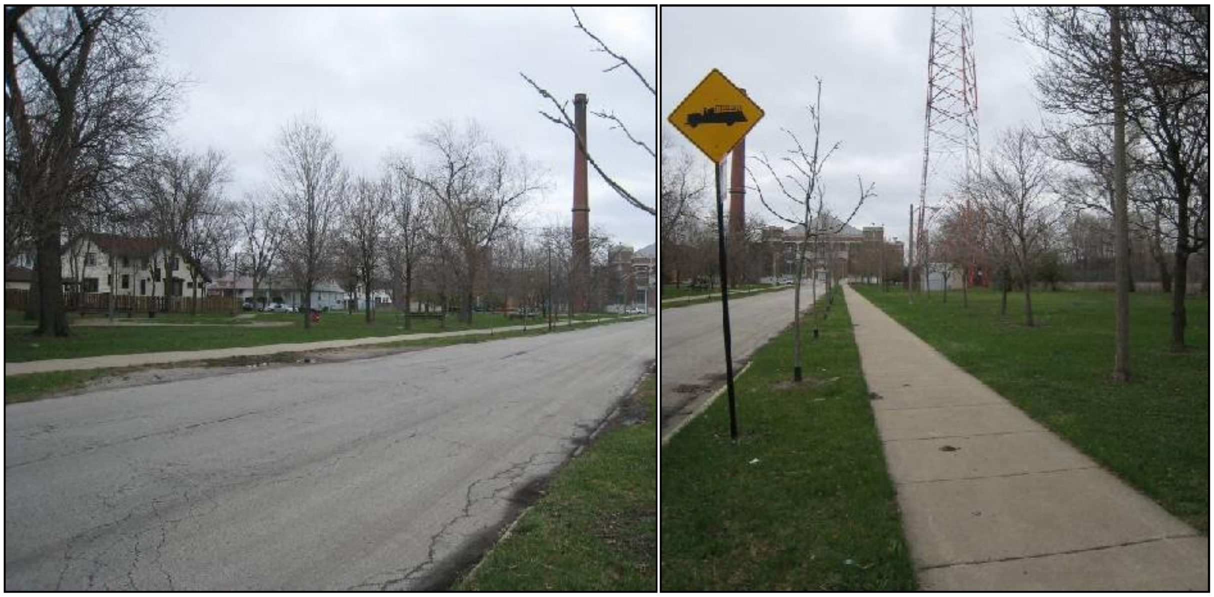


Figure 5: East Parcel (left) and West Parcel (right) of Block Park

The East Option alignment would run through the west parcel of Block Park, and would overlap 0.9 acre of park space with the elevated structure and its associated clearances, as shown in Error! Reference source not found.. A secondary station entrance would also be located in the park, along its western edge. The affected parcel includes an isolated portion of the park's open space and a communications tower, and does not currently serve a recreational use. The key recreational features of the park, walking trails and benches, are on the other side of Harvard Avenue in the east parcel of the park. Because the East Option alignment elevated structure would overlap a portion of this park, there would be a permanent incorporation (direct use) of this passive greenspace. Some temporary closure of the overlapped area would be necessary during construction.

Preliminary Mitigation Measures

Mitigation and enhancement measures are proposed that would result in no adverse effect to the features, attributes, and activities of the park after implementation. CTA and the Chicago Park District are currently coordinating to define any additional or alternative mitigation measures that may be necessary:

- Replacement of impacted park space. Payment would be the fair market value of the land and improvements taken or improvements to the remaining site equal to the fair market value of the land and improvements taken. Location of replacement property would be further defined in coordination with the Chicago Park District. Providing enhanced park connectivity to the proposed station area at 103rd Street and other CPD park projects in the nearby area could be considered to enhance the attributes, features and activities of this existing passive green space.

- Restoration and landscaping of disturbed areas.

- Incorporation of design features where necessary to reduce or minimize impacts of use on the Section 4(f) property. Such features would be designed in a manner that would enhance the park but not adversely affect the safety of the transit facility.

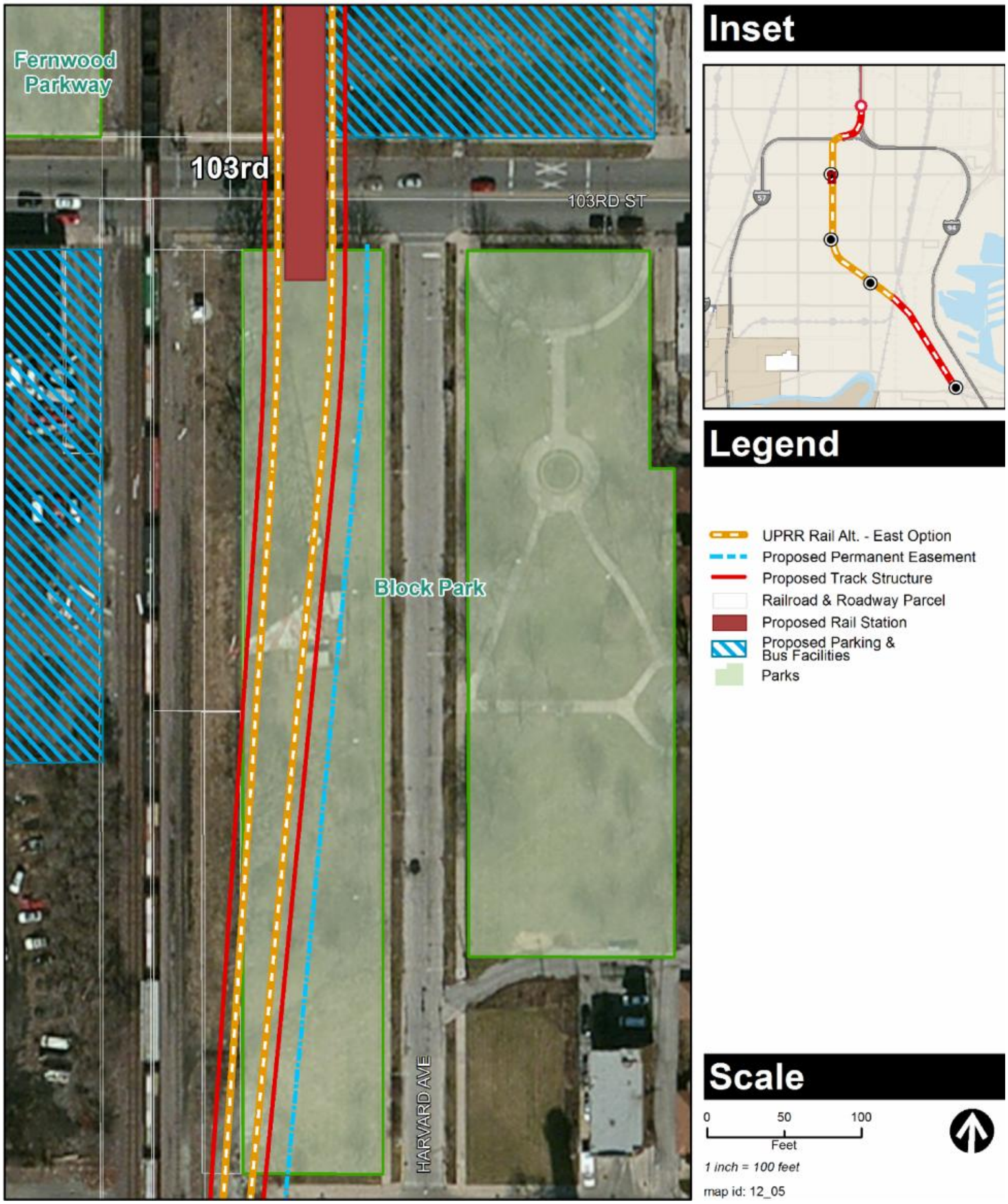

Fernwood Parkway
103rd
103RD ST
Block Park
HARVARD AVE
Inset
Legend
UPRR Rail Alt. - East Option
Proposed Permanent Easement
Proposed Track Structure
Railroad & Roadway Parcel
Proposed Rail Station
Proposed Parking & Bus Facilities
Parks
Scale
0
50
100
Feet
1 inch = 100 feet
map id: 12_05

Figure 6: Impacts on Block Park - East Option

UPRR Alternative West Option - Park Impacts

One park resource would be used as result of the West Option—Fernwood Parkway—which is further described below.

Fernwood Parkway

Fernwood Parkway is a passive green space, and is divided into two parcels separated by 101st Street. The northern parcel, from 99th Street to 101st Street, is approximately 2.4 acres (78 feet wide by 1,325 feet long). The southern parcel, from 101st Street to 103rd Street, is approximately 2.9 acres (78 feet wide by 1,277 feet long). Both the north and south parcels of Fernwood Parkway serve as open space and do not contain recreational facilities or amenities such as sidewalks or benches. Some trees are planted within the park and a chain-link fence separates the green space from the existing at-grade UPRR tracks. **Figures 7 and 8** shows Fernwood Parkway facing north and south.

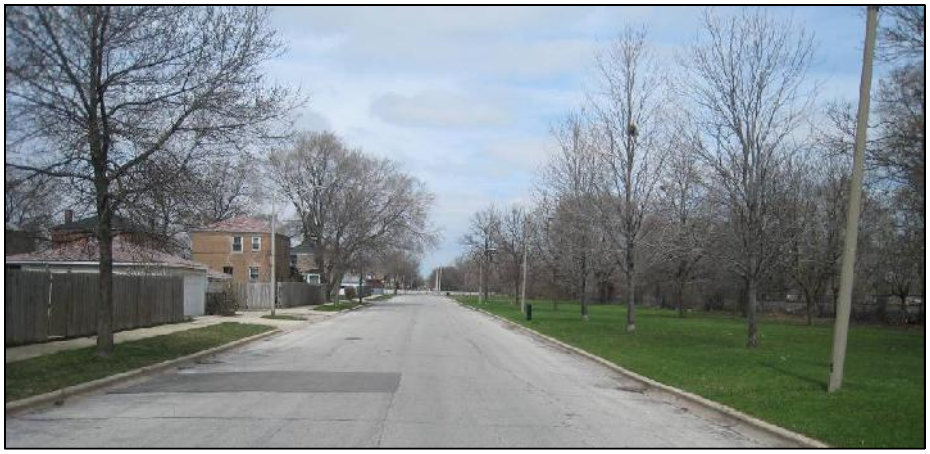


Figure 7: Fernwood Parkway at 100th Street and Eggleston Avenue (facing north)

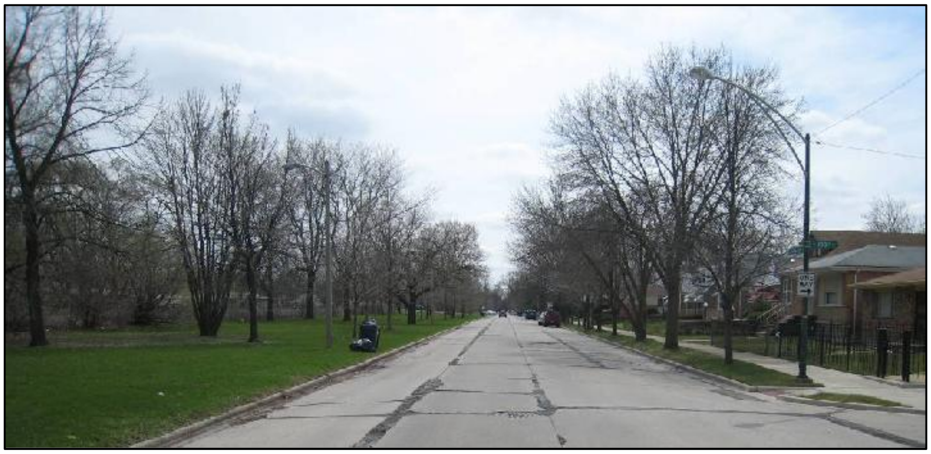


Figure 8: Fernwood Parkway at 100th Street and Eggleston Avenue (facing south)

The West Option track structure would run through two of the four parcels that make up Fernwood Parkway between 101st and 103rd Streets. Approximately 1.9 acres of the parkway would be overlapped by the elevated structure and its associated clearances (see Error! Reference source not found.). The parkway functions as open space, and does not contain recreational amenities. Temporary closure of the section of the overlapped section of the parkway would be necessary during construction. Public use of the parkway could resume after construction, as long as the area beneath the elevated track structure is reopened, but much of the parkway between 101st and 103rd Streets would be permanently overlapped and shaded by the structure. Elevated track structure supports would be placed permanently in the park space. Because the West Option alignment elevated structure would overlap a portion of this park, there would be a permanent incorporation (direct use) of this passive green space.

Preliminary Mitigation Measures

Mitigation and enhancement measures are proposed that would result in no adverse effect to the features, attributes, and activities of the park after implementation, as follows:

- Replacement of impacted park space. Payment would be the fair market value of the land and improvements taken or improvements to the remaining site equal to the fair market value of the land and improvements taken. Location of replacement property would be further defined in coordination with the Chicago Park District.
- Potential installation of a new bicycle path beneath the elevated track structure, subject to use for CTA maintenance, which would enhance the existing unused green space and better connect parks and the newly proposed transit infrastructure.
- Restoration and landscaping of disturbed areas.
- Incorporation of design features where necessary to reduce or minimize impacts of use on the Section 4(f) property. Such features would be designed in a manner that would enhance the green space but not adversely affect the safety of the transit facility.

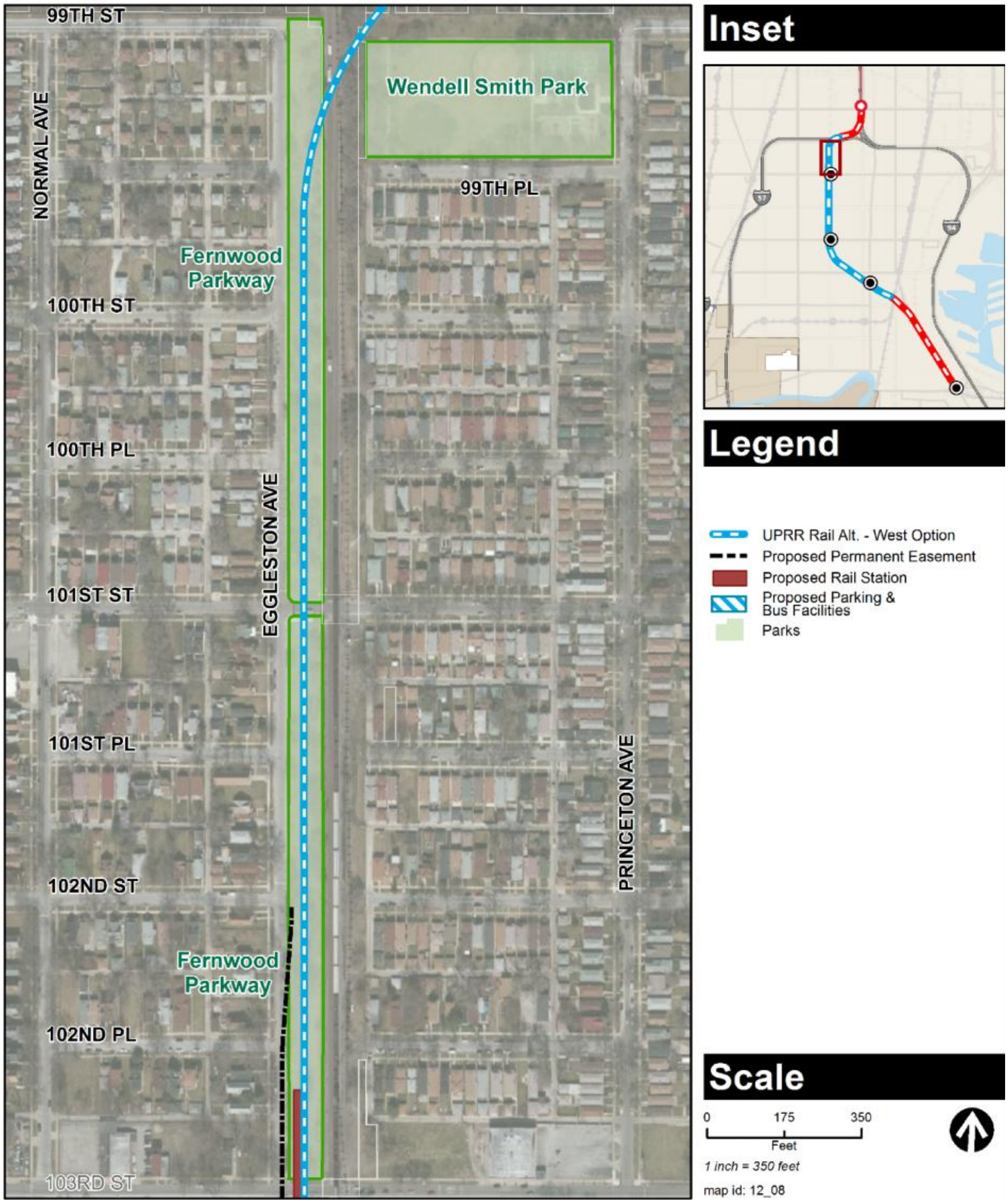

99TH ST
Wendell Smith Park
NORMAL AVE
99TH PL
Fernwood Parkway
100TH ST
100TH PL
EGGLESTON AVE
101ST ST
101ST PL
PRINCETON AVE
102ND ST
Fernwood Parkway
102ND PL
103RD ST
Inset
Legend
UPRR Rail Alt. - West Option
Proposed Permanent Easement
Proposed Rail Station
Proposed Parking & Bus Facilities
Parks
Scale
0
175
350
Feet
1 inch = 350 feet
map id: 12_08

Figure 9: Impacts on Fernwood Parkway - Union Pacific Railroad Alternative West Option

chicago park district

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(312) 747-2001 TTY
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August 17, 2015

Sonali Tandon
Chicago Transit Authority
567 West Lake Street
Chicago, IL 60661

Re: CTA Red Line Extension (RLE) Project

Dear Ms. Tandon:

The Chicago Park District (CPD) appreciates the opportunity to review the draft of the proposed park impacts for the CTA Red Line Extension (RLE) Project dated June 8, 2015. Any proposed mitigation measures should include fully developed replacement property with the appropriate replacement improvements in the community area. The CPD's priorities for replacement park sites is to expand existing parks.

CPD's neighborhood parks range in size from 2-5 acres in size. These are parks that contain indoor and/or outdoor recreation facilities and typically include a playground and/or other sport fields. The standard for new parks is a minimum of two (2) acres in size. If Recognized Environmental Conditions are identified in the Phase 1 Environmental Site Assessment (ESA) then a Phase 2 ESA is required. If there are exceedances of the Illinois Environmental Protection Agency's (IEPA) TACO Tier 1 Residential Standards, then the property is required to receive a Comprehensive No Further Remediation (NFR) Letter from the IEPA's Site Remediation Program.

The documentation regarding primary activities and functions that occur in each of the three parks is accurate. CPD concurs conceptually with the proposed mitigation measures as outlined in the coordination package.

Wendell Smith (#272) Park is a 4.7-acre neighborhood park that primary serves the population within a ½ mile. Improvements include two basketball courts, two baseball fields, a playground, recreation building and .3 miles of walking trails. In addition to the areas described in the letter, the overlap area includes space behind the existing baseball backstop. Preliminary mitigation measures should include replacement property located in the Roseland Community area constructed in accordance with Chicago Park District standards.

Block (#1005) Park is a 2.95-acre passive park that provides informal active recreational uses or other accessory uses. The east option alignment affects the entire function of the 1.3 acre west parcel, including the accessory communication tower space. Preliminary mitigation measures should include replacement property located in the Roseland Community area constructed in accordance with Chicago Park District standards. Additionally, mitigation and replacement of the communications and utility structures is required.

Fernwood (#1215) Parkway is an 8.63-acre linear passive park that provides informal active recreational uses or other accessory uses. The parkway functions as open space and provides a quiet natural setting for park users. The Chicago Park District would not program or maintain areas beneath the elevated track structures. Preliminary mitigation measures should include replacement property located in the Washington Heights Community area constructed in accordance with Chicago Park District standards.

The suggested mitigations strategies coupled with the above comments should address all the adverse impacts on the Parks. We look forward to a successful collaboration.

Sincerely,

Rob Rejman
Director of Planning and Construction

RR/ml

cc: Doreen O'Donnell, Research and Planning Manger
Michael Lange, Senior Project Manager

Appendix C
Agency Coordination and Public Involvement

Website (May 2015)

@ the CTA Newsletter
Charter a Train
Developer Center
Going Green
Open Data
Performance
Planning & Expansion
  Alternatives Analysis Studies (and archives)
  Ashland Bus Rapid Transit (BRT)
  Blue Line Forest Pk. Br. Feas./Vision Study
  Circle Line Alternatives Analysis
  Jeffery Jump
  Orange Line Extension
  Red Ahead
  Red & Purple Modernization Project
  Red Line Extension
  Yellow Line Extension
Press Releases
Public Art
Reports & Notices
System Improvement Projects
Ventra
Videos
Winter Preparedness

RED AHEAD Red Line Extension

Red Line Extension

Connecting 95th Street Terminal to 130th Street

The Chicago Transit Authority (CTA) is proposing to extend the Red Line from the existing 95th Street Terminal to 130th Street, subject to the availability of funding. The proposed 5.3-mile extension would include four new stations near 103rd Street, 111th Street, Michigan Avenue, and 130th Street. Each new station would include bus and parking facilities. This project is one part of the Red Ahead Program to extend and enhance the entire Red Line.

Learn more about this project.

What's New?

In August 2014, we announced that list of extension alternatives have been narrowed to one "preferred alternative" with two variations:

- **Union Pacific Railroad Rail (UPRR) Alternative, East Option**
  Under this option, the CTA elevated structure would be placed immediately east of the Union Pacific Railroad right-of-way from 99th Street to 118th Street.
- **Union Pacific Railroad Rail (UPRR) Alternative, West Option**
  Under this option, CTA elevated structure would be placed immediately west of Union Pacific Railroad right-of-way from 99th Street to north of 118th Street.

The proposed alignment of the rapid transit line would be the same for the two East and West options from 95th Street to 99th Street and from 118th Street to 130th Street.

The CTA arrived at these options based on environmental analysis and comments received at the public open house meeting in May 2014 as well as additional public comments submitted in summer 2014.

In addition to the selection of the "preferred alternative", the CTA has also announced $5 million of bond funds to move forward on the required federal planning process for the rail line extension.

Red Line Extension

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Google Maps RTA Trip Planner

About trip planners (and more options)..

System Status

Trains:

Red Line	Normal Service
Blue Line	Normal Service
Brown Line	Minor Delays
Green Line	Normal Service
Orange Line	Normal Service
Purple Line	Minor Delays
Pink Line	Normal Service
Yellow Line	Normal Service

Buses:

Routes with Current Alerts (View All):

1 4 N5 7 12 J14
15 18 19 20 22 28
29 30 37 47 52 52A
53 55 55A 56 59 60
63 66 71 75 78 95E
120 121 124 126 132 136
143 146 147 151 156 157
172 192

More:

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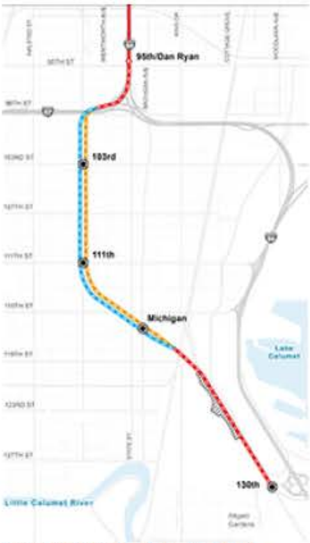

See maps and learn more...

Press Releases

Mayor Emanuel, CTA Announce Next Steps in Modernizing the Red Line, CTA's busiest rail line (4/17/2014)
CTA Provides Update on Proposed Red Line Extension from 95th to 130th Street (8/11/2014)

Project Status

In accordance with the National Environmental Policy Act (NEPA), the CTA and the Federal Transit Administration (FTA) are preparing a Draft Environmental Impact Statement (EIS). An EIS compares the positive and negative environmental impacts of the various project alternatives. Additional public meetings will be held in 2016.

Get Involved and Stay Informed

Public and agency input is important. This website will keep you informed about the proposed project, the planning process, and opportunities for public input and participation.

If you have any questions related to the Chicago Transit Authority's proposed Red Line Extension, or would like to be added to the project mailing list for future updates, please contact us at:

RedExtension@transitchicago.com

Chicago Transit Authority
Strategic Planning & Policy, 10th Floor
Attn: Red Line Extension
567 W. Lake Street
Chicago, IL 60661-1465

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RED AHEAD Red Line Extension

About the Red Line Extension

Connecting 95th Street Station to 130th Street

Overview

The Chicago Transit Authority (CTA) is proposing to make transportation improvements by extending the Red Line from the 95th Street Terminal to the vicinity of 130th Street. This project is one part of the Red Ahead Program to extend and enhance the entire Red Line.

Purpose & Need

The purpose of the Red Line Extension is to:

- Reduce commute times for residents both within and south of the project area.
- Improve mobility and accessibility for transit-dependent residents in the project area.
- Improve rapid transit rail service to isolated areas and provide viable linkages between affordable housing (e.g., Altgeld Gardens public housing project), jobs, services, and educational opportunities, thereby enhancing livability and neighborhood vitality.
- Provide an opportunity for potential connections and linkages to other public transportation modes including regional commuter rail in the project area.
- Foster economic development in the project area, where new stations may serve as catalysts for neighborhood revitalization and help reverse decades of disinvestment in local business districts.

The RLE Project is needed to respond to the following problems:

- Transit trips to jobs are longer for Far South Side residents than they are for passengers in the Chicago seven-county region as a whole.
- Transit-dependent populations in the project area have limited direct access to rapid transit rail service.
- The project area is geographically isolated from major activity centers and provides residents limited viable transportation options, which limit access between affordable housing and employment centers outside of the project area.
- Existing transit markets are underserved and transit connectivity is challenging in the project area.

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29 30 37 47 52 52A
53 55 55A 56 59 60
63 66 71 75 78 95E
120 121 124 126 132 136
143 146 147 151 156 157
172 192

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- Disinvestment and limited economic development in the project area have negatively impacted Far South Side communities.

Project Alternatives

CTA began developing the alternatives that are being studied in Draft EIS during the Alternatives Analysis (AA) which took place from 2006 to 2009. Starting with multiple modes and corridor options, CTA developed and screened alternatives through a combination of conceptual engineering, public input (open houses and stakeholder meetings), and preliminary analysis of potential impacts and costs.
In preparation for the Draft Environmental Impact Statement (EIS), CTA evaluated the following alternatives and options:

- No Build Alternative
- Bus Rapid Transit Alternative
- Union Pacific Railroad Rail (UPRR) Alternative
  - Right-of-Way Option
  - East Option
  - West Option
- Halsted Rail Alternative

In August 2014, based on the technical analysis and public input CTA announced narrowing down the number of alternatives to a single Preferred Alternative with two options—the UPRR Rail Alternative. The Draft EIS will summarize the environmental benefits and impacts of the No Build Alternative and two UPRR Rail Alternative options: the East Option and the West Option.

No Build Alternative

The No Build Alternative is defined as the existing transportation system plus any committed transportation improvements that are already in the Chicago Metropolitan Agency for Planning (CMAP) Fiscal Year 2010-2015 Transportation Improvement Program (TIP). All elements of the No Build Alternative are included in each of the other alternatives.

The No Build Alternative would include the following:

- Existing transportation system
- Committed transportation improvements including bridge reconstructions, 95th Street Terminal Improvement Project, several road improvement projects including resurfacing and coordination of signal timing, work on Metra's facilities, construction of a bicycle/pedestrian multi-use trail, and preservation of historic facilities
- Bus transit service focused on the preservation of existing services and projects

Union Pacific Railroad (UPRR) Rail Alternative – Locally Preferred Alternative ✓

The proposed UPRR Rail Alternative would extend the heavy rail transit line from the existing Red Line 95th Street Terminal to 130th Street. The UPRR Rail Alternative would operate on an elevated structure heading south from 95th Street along the I-57 Expressway for nearly one-half mile until reaching the UPRR corridor in the vicinity of Eggleston Avenue. The alignment would then turn south along the UPRR corridor to approximately 111th Street where it would turn southeast. East of South Prairie Avenue, the alignment would cross over the Canadian National/Metra Electric tracks near 119th Street, where it would transition to an at-grade profile and then continue southeast along the Northern Indiana Commuter Transportation District Chicago South Shore & South Ben Railroad (NICTD/CSS & SBRR) right-of-way using a portion of the Indiana Harbor Belt (IHB) alignment to terminate at 130th Street. The Chicago Transit Board selected the UPRR Alternative as the Locally Preferred Alternative on August 12, 2009.

The Locally Preferred Alternative would include the following features:

- Transportation improvements that are already in the Chicago

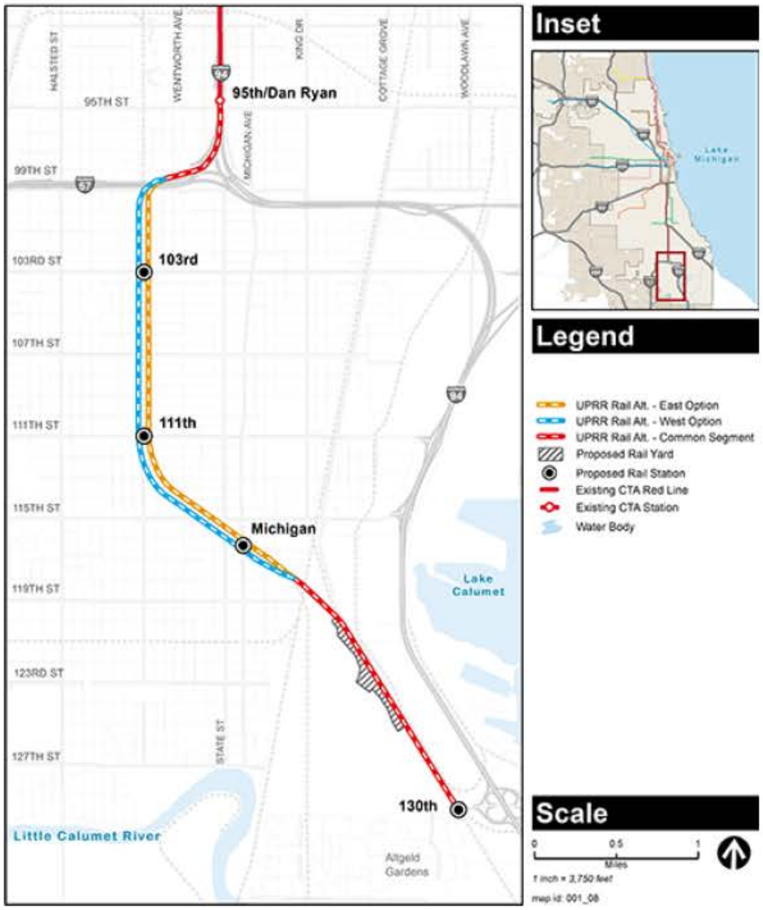
Metropolitan Agency for Planning Fiscal Year 2010-2015 Transportation Improvement Program as described in the No Build Alternative

- 5.3-mile heavy rail transit line extension from 95th Street Terminal to 130th Street
- Four new stations at 103rd Street, 111th Street, Michigan Avenue, and 130th Street
- New park & ride and bus terminal facilities at each station
- Bus transit service from the south to the new stations for faster travel to downtown Chicago
- New yard and shop at 120th Street

Two alignment options are being studied in the Draft EIS:

- **East Option**
  Under this option, the CTA elevated structure would be placed immediately east of the Union Pacific Railroad right-of-way from 99th Street to 118th Street.
- **West Option**
  Under this option, CTA elevated structure would be placed immediately west of Union Pacific Railroad right-of-way from 99th Street to north of 118th Street.

The proposed alignment of the rapid transit line would be the same for the two East and West options from 95th Street to 99th Street and from 118th Street to 130th Street.


HALSTED ST
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WOODLAWN AVE
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99TH ST
MICHIGAN AVE
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111TH ST
111th
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123RD ST
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Legend
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UPRR Rail Alt. - Common Segment
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  Circle Line Alternatives Analysis
  Jeffery Jump
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RED AHEAD Red Line Extension

Environmental Review

Overview

The National Environmental Policy Act (NEPA) requires evaluation of potential environmental impacts associated with federal projects and actions. In accordance with the NEPA, the Chicago Transit Authority (CTA) and the Federal Transit Administration (FTA) are preparing an Environmental Impact Statement (EIS) that will evaluate the environmental effects of constructing and operating the proposed extension.

Environmental Impact Statement

The CTA is currently in the process of preparing a Draft EIS. The Draft EIS will include an evaluation of the No Build Alternative, the BRT Alternative, the UPRR Rail Alternative, and the Halsted Rail Alternative. The Draft EIS will describe the alternatives, the existing environmental setting, the potential impacts from construction and operation of the alternatives, and proposed mitigation measures to reduce or eliminate potential impacts.

The purpose of the EIS is to study, in a public setting, the effects of the proposed project and its alternatives on the quality of the physical, human and natural environment. Areas to be evaluated for potential impacts from construction and operation of the proposed project include, but are not limited to:

- Transportation
- Land use and economic development
- Displacement and relocation of existing uses
- Neighborhoods and communities
- Visual and aesthetic
- Noise and vibration
- Safety and security
- Historic and cultural resources
- Hazardous materials
- Air quality
- Wetlands
- Water quality
- Floodplains
- Vegetation and wildlife habitat
- Threatened and endangered species
- Geology and soils
- Energy
- Environmental Justice

The evaluation will reveal the extent to which the proposed project will or will not affect these areas. Measures to avoid, minimize, and mitigate potential adverse impacts will also be identified and evaluated.

CTA began public outreach on the project as part of the Alternatives Analysis from 2006 to 2009. Outreach continued during the formal Environmental Impact Statement (EIS) scoping period in 2009, and has continued through the preparation of Draft EIS starting in 2012. CTA will continue to involve and consult with the community as the project proceeds through the environmental process.

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15	18	19	20	22	28
29	30	37	47	52	52A
53	55	55A	56	59	60
63	66	71	75	79	95E
120	121	124	128	132	136
143	146	147	151	156	157
172	192				

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Open House - 2014

CTA conducted outreach in April and May of 2014 to update the public on the status of the project; inform them of proposed alternatives, anticipated project benefits, and impacts; and gather feedback. Outreach included meetings with elected officials, interested community groups, and a public open house. The open house was held May 13, 2014 at the Palmer Park Gymnasium, 201 E. 111th Street in Chicago from 5:30 PM to 7:30 PM.

May 2014 Open House Exhibit Boards
May 2014 Project Summary

Newsletter - 2013

CTA sent a newsletter with a general project update to the approximately 3,200 addresses on the stakeholder database on August 27, 2013.

August 2013 Newsletter

Open House - 2011

CTA held an open house meeting on August 2, 2011 to update the community regarding the RLE Project. The meeting was held at St. John Missionary Baptist Church, 211 E. 115th Street in Chicago from 6:00 PM to 8:30 PM.

August 2011 Open House Exhibit Boards

Scoping and Scoping Meetings - 2009

The process of determining the scope, focus, and content of an EIS is known as "scoping." Scoping meetings are an opportunity to obtain information from the public and governmental agencies. The scoping process asks agencies and interested parties to provide input on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation, and potential effects and mitigation measures to be considered.

The official public comment period for scoping concluded on October 27, 2009. The comments received are summarized in the Scoping Report. Input received during scoping is used to refine the project purpose and need and alternatives, and to direct the analysis of environmental impacts. Public input is also used to help planners avoid potential impacts, and to identify potential mitigation measures.

Red Line Extension Scoping Report (.pdf)
Scoping report - revised June, 2010. Appendices are available as separate files.

Red Line Extension Scoping Report Appendices A-G (.pdf)
Public Participation Plan, Notice of Intent, Participating Agencies, Participating Agency Invitation Letters, Agency Scoping Meeting, Agencies and Organizations Notified of Scoping, Notification Materials

Red Line Extension Scoping Report Appendices H-K (.pdf)
Scoping Meeting Materials, Meeting Presentation, Meeting Exhibit Boards, Public Scoping Meeting Transcripts

Red Line Extension Scoping Report Plain Text Supplement for Appendices H-J (.txt)
This text-only supplement describes Scoping Meeting Materials, Meeting Presentation, Meeting Exhibit Boards

Red Line Extension Scoping Report Appendix L Public Comments 1-95 (.pdf)

Red Line Extension Scoping Report Appendix L Public Comments 96-171 (.pdf)

Red Line Extension Scoping Report Appendix L Public Comments 172-259 (.pdf)

Red Line Extension Scoping Report Appendix L Public Comments 260-344 (.pdf)

Red Line Extension Scoping Report Appendix M (.pdf)
Agency Comments - revised June, 2010

Alternatives Analysis - 2006–2009

The purpose of the Alternatives Analysis (AA) Study, which ended in August 2009, was to examine a wide range of potential transportation options. In the AA process, the project's purpose and need were identified, alternatives that meet the purpose and need were developed and evaluated, and comprehensive and ongoing public involvement was initiated. Many different transportation alternatives were identified in the AA process. Based on public comment and an evaluation of those options against criteria that included cost, environmental factors, and feasibility considerations, the number of options was narrowed. There were three screening stages and the results of each screening stage were presented at public meetings. At each stage, there was an opportunity for the public to review and comment on the results. The end result of the AA process was the selection of a Locally Preferred Alternative by the Chicago Transit Board on August 12, 2009.

Screen 1 Analysis

The CTA held public open houses to receive input on preliminary findings from Screen 1 of the Alternatives Analysis Study for the proposed Red Line Extension.

Tuesday, April 10, 2007, 6-8 p.m.
Chicago State University, New Academic Library, 4th Floor Auditorium
9501 S. King Drive, Chicago, IL 60628

Wednesday, April 11, 2007, 6-8 p.m.
West Pullman Branch, Chicago Public Library
830 W. 119th St., Chicago, IL 60628

Presentations delivered at the Screen 1 meetings are available at the links below:

Public Meeting Presentation Part 1 - April 2007 (3 MB PDF)
Public Meeting Presentation Part 2 - April 2007 (2 MB PDF)
Public Meeting Presentation - April 2007 (Text version)

Public Meeting Display Boards - April 2007 (3 MB PDF)
Public Meeting Display Boards - April 2007 (Text version)

Public Meeting Comment Card - April 2007 (0.4 MB PDF)

The official public comment period for the study's Screen 1 preliminary findings meeting concluded on May 11, 2007. Full documentation of all comments and questions as well as complete responses are provided in the following files:

Screen 1 Public Comment Database (0.1 MB PDF)
Screen 1 Responses to Public Comments (0.1 MB PDF)

Screen 2 Analysis

The CTA held public open houses to present possible transit technologies and alignments in a study area bordered by 95th Street on the north, Ashland Avenue on the west, Stony Island Avenue on the east, and the Cal-Sag Channel/Little Calumet River and 134th Street on the south.

Wednesday, December 3, 2008, 6-8 p.m.
Historic Pullman Visitor Center
11141 South Cottage Grove, Chicago, IL 60628

Thursday, December 4, 2008, 6-8 p.m.
Woodson Regional Chicago Public Library
9525 South Halsted Street, Chicago, IL 60628

Presentations delivered at the Screen 2 meetings are available at the links below:

Public Meeting Presentation Part 1 – December 2008 (2.8 MB PDF)
Public Meeting Presentation Part 2 - December 2008 (3.8 MB PDF)
Public Meeting Presentation - December 2008 (Text version)

Public Meeting Display Boards Part 1 - December 2008 (2 MB PDF)
Public Meeting Display Boards Part 2 - December 2008 (2.4 MB PDF)

Public Meeting Display Boards - December 2008 (Text version)

Public Meeting Comment Card - December 2008 (0.4 MB PDF)

The official public comment period for the study's Screen 2 preliminary findings meeting concluded on December 18, 2008. Full documentation of all comments and questions as well as complete responses are provided in the following files:

Screen 2 Public Comment Database (0.1 MB PDF)
Screen 2 Responses to Public Comments (0.1 MB PDF)

Screen 3 Analysis

The CTA invited the public to open houses to present preliminary Screen 3 findings and a recommendation of a locally preferred alternative, which concluded the Alternatives Analysis study for the Red Line Extension.

Wednesday, June 3, 2009, 6-8 p.m.
Olive-Harvey College, Cafeteria
10001 South Woodlawn Avenue, Chicago, IL 60628

Thursday, June 4, 2009, 6-8 p.m.
Woodson Regional Chicago Public Library
9525 South Halsted Street, Chicago, IL 60628

Presentations delivered at the Screen 3 meetings are available at the following links:

Public Meeting Presentation Part 1 – June 2009 (1.4 MB PDF)
Public Meeting Presentation Part 2 – June 2009 (2.9 MB PDF)
Public Meeting Presentation - June 2009 (Text version)

Display Boards Part 1 - June 2009 (2.4 MB PDF)
Display Boards Part 2 - June 2009 (3.4 MB PDF)
Display Boards - June 2009 (Text version)

Display Maps – HRT UPRR Alternative (1.2 MB PDF)
Display Maps – HRT Halsted Alternative (0.9 MB PDF)
Public Meeting Comment Card (0.4 MB PDF)

The official public comment period for the study's Screen 3 findings and preliminary recommendation for a locally preferred alternative concluded on June 25, 2009. Full documentation of all comments and questions as well as complete responses are provided in the following files:

Screen 3 Public Comment Database (0.1 MB PDF)
Screen 3 Responses to Public Comments (0.1 MB PDF)

Locally Preferred Alternative Report

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RED AHEAD

Red Line Extension

Red Line Extension Project: FAQ

The Chicago Transit Authority (CTA) knows residents and potential Red Line riders have questions about this proposed extension.

Q: How would CTA fund this proposed project?
A: Two types of funding are needed for the proposed extension – capital and operating. Capital funding (construction funding) for the proposed extension is provided partially by the Federal Transit Administration (FTA), through its "New Starts" grant program. This program provides funding for major public transit infrastructure projects throughout the United States through a highly competitive process. CTA is currently in the environmental review phase of that process that will allow the agency to apply for funding. Upon successfully advancing through the FTA's process, a project would be qualified to receive a Full Funding Grant Agreement (FFGA) from the Federal Transit Administration. The FFGA typically covers about half of a project's capital cost. Other non-federal funds will comprise the remainder of capital funding. Once the proposed extension is built and operational, CTA's operating budget would support day-to-day service.

Q: When would the extended Red Line be open for use?
A: No timeline has yet been established. Project schedule is dependent on federal reviews and approvals and funding availability.

Q: When would construction begin on the proposed Red Line Extension?
A: No timeline has yet been established. Project schedule is dependent on federal reviews and approvals and funding availability.

Q: What will be the operating hours for the proposed extension?
A: In the current project planning phase, the operating hours for the proposed extension are assumed to be the same as for the current Red Line, which operates 24 hours every day of the year.

Q: Would CTA need to buy private property because of the location of the proposed extension?
A: Yes, CTA would need to buy private property for the selected option. The number of properties affected varies; between approximately 215 and 279 properties could be affected. Final property acquisition requirements would be confirmed as project engineering proceeds. Property owners will be paid not less than fair market value for their land and buildings, and may be eligible for compensation equal to the original purchase price of the property. They will also be assisted in relocating their businesses or dwellings, per the Federal Uniform Act on relocation assistance and property acquisition. When

- @ the CTA Newsletter
- Charter a Train
- Developer Center
- Going Green
- Open Data
- Performance
- Planning & Expansion
  - Alternatives Analysis Studies (and archives)
  - Ashland Bus Rapid Transit (BRT)
  - Blue Line Forest Pk. Br. Feas./Vision Study
  - Circle Line Alternatives Analysis
  - Jeffery Jump
  - Orange Line Extension
  - Red Ahead
  - Red & Purple Modernization Project
  - Red Line Extension
  - Yellow Line Extension
- Press Releases
- Public Art
- Reports & Notices
- System Improvement Projects
- Ventra
- Videos
- Winter Preparedness

Red Line Extension

Quick Links

- Home
- About / Alternatives
- Environmental Review
- FAQ

Quick Links

Schedules Maps Alerts
Transit Trackers Ventra Fare Info

Plan a trip

Start (e.g. O'Hare Airport)

End (e.g. 1 N State St, Chicago, IL)

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Get directions with:
Google Maps RTA Trip Planner

About trip planners (and more options)...

System Status

Trains:

Red Line	Normal Service
Blue Line	Normal Service
Brown Line	Minor Delays
Green Line	Normal Service
Orange Line	Normal Service
Purple Line	Minor Delays
Pink Line	Normal Service
Yellow Line	Normal Service

Buses:

Routes with Current Alerts (View All):

1 4 N5 7 12 J14
15 18 19 20 22 28
29 30 37 47 52 52A
53 55 55A 56 59 60
63 66 71 75 78 95E
120 121 124 128 132 136
143 146 147 151 156 157
172 192

More:

See all Alerts Accessibility

a single option is chosen, CTA will work with the community and property owners (including the UPRR) to minimize property impacts.

Q: Will there be places to park near the new stations?
A: New park & ride lots are proposed at each new station.

Q: How would this proposed extension impact the natural environment and the community?
A: Potential impacts to the environment are being studied in the Draft Environmental Impact Statement (EIS). The Draft EIS will:
• Identify and evaluate measures to avoid, minimize and mitigate adverse impacts.
• Describe the potential environmental effects of the proposed Red Line Extension improvements and the steps that will be taken to alleviate them.
Typically, environmental reviews for proposed transit projects address:

- Transportation
- Land use and economic development
- Displacement and relocation of existing uses
- Neighborhoods and communities
- Visual and aesthetic
- Noise and vibration
- Safety and security
- Historic and cultural resources
- Hazardous materials
- Air quality
- Wetlands
- Water quality
- Floodplains
- Vegetation and wildlife habitat
- Threatened and endangered species
- Geology and soils
- Energy
- Environmental Justice

Q: How would this proposed extension impact noise in the community?
A: The Draft Environmental Impact Statement (EIS) will evaluate the potential for noise impacts to the surrounding community. If it is determined that there could be noise impacts, then mitigation measures to reduce those impacts would be proposed in the Draft EIS such as welded rail, closed deck structures, and noise barriers. During the public review of the Draft EIS, you will have an opportunity to review and comment on the analysis and the proposed mitigation measures.

Q: What is the economic impact of this proposed extension?
A: The Draft Environmental Impact Statement (EIS) will evaluate the fiscal and economic benefits and potential impacts of the proposed extension. During the public review of the Draft EIS, you will have an opportunity to review and comment on the economic analysis. Numerous transit studies suggest that transit investments result in economic development. CTA estimates between 2,600 and 4,100 jobs would be created during Red Line Extension construction. In addition, new stations may serve as catalysts for neighborhood revitalization and help reverse decades of disinvestment in local business districts.

Q: How would the proposed Red Line Extension affect current CTA services, both during construction of the new service and during operation of the new service?
A: The specifics of construction for the proposed Red Line Extension have not been established yet. CTA's general guidelines minimize the effects of construction on existing transit services. However, bus reroutes are possible. Once the proposed extension is complete, existing bus routes may be changed to complement the new high-capacity transit service. Depending on the specific route of the service, the number of routes feeding into the 95th Street Terminal may be reduced, which would also reduce congestion in and

around this facility.

Q: Is it possible that at some point this proposed Red Line Extension could go even farther to the Gary Airport and South Bend, Indiana?
A: At this point CTA's proposal for the Red Line Extension is limited to the project's defined study area, which is bounded by the Little Calumet River and 134th Street on the South. Any initiative to further expand service to the Gary Airport and South Bend, Indiana, would merit further investigation and its own planning study.

Q: For the Locally Preferred Alternative near the Union Pacific Railroad (UPRR) tracks, has CTA talked with Union Pacific representatives?
A: CTA has had preliminary conversations with UPRR and will continue to coordinate with the railroad as plans proceed. The UPRR requires that the CTA tracks be located at least 50 feet from the existing freight tracks due to safety considerations.

Q: Can engineering design be done at the same time as the Environmental Impact Statement is being drafted?
A: As part of the new Moving Ahead for Progress in the 21st Century Act (MAP-21) policy, environmental review is completed during the Project Development Phase. The Engineering Phase is the next step, during which engineering and design is completed. The timing for the Engineering Phase is subject to funding availability and federal approvals. Currently, CTA has not secured approval and funding for the Engineering Phase.

Q: How does work on the other Red Ahead projects affect progress on the Red Line Extension?
A: Red Line Extension project is one part of the Red Ahead Program to extend and enhance the entire Red Line. The Red Ahead program consists of separate projects with their own separate sources of potential funding and timelines. These projects are mutually beneficial and are combined into the Red Ahead program to ensure that they are coordinated efficiently.

Q: What portion of the extension would be elevated?
A: The UPRR Rail Alternative would operate on an elevated structure from approximately 95th Street to 118th Street, where it would transition to an at-grade profile and then continue at grade before terminating near 130th Street. The terminal station would be at-grade, whereas other stations would be elevated.

Q: Would this extension connect to existing Metra Electric or South Shore services?
A: There is potential for connection of the proposed Red Line Extension to the Northern Indiana Commuter Transportation District (NICTD) South Shore Commuter Rail Line in the vicinity of 130th Street, where the two lines would be adjacent to each other. This potential connection will be explored in further detail during the engineering phase. A connection between the Red Line Extension and Metra Electric District at Kensington/115th Street station is not possible, as the proposed Red Line Extension routing crosses the Metra Electric District Line approximately one-half mile to the south of the Kensington/115th Street station.

Q: Is CTA coordinating with Metra on the Red Line Extension?
A: CTA is coordinating with Metra on our progress with the Red Line Extension project. Metra is a participating agency in the environmental review process for the Red Line Extension.

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Appendix C
Agency Coordination and Public Involvement

Alternatives Analysis (2006-2009)

Screen 1

Screen 2

Screen 3

Appendix C
Agency Coordination and Public Involvement

Alternatives Analysis (2006-2009)

Screen 1

- Presentation
- Exhibit Boards
- Comment Card
- Comment Database
- Comment Responses

Federal Transit Administration’s
New Starts Process

Red Line Extension Alternatives Analysis Study

4-5-2007

Schedule for Tonight’s Meeting

- **Structure of the Meeting**
- **Questions and Answers Process**
  - Submit your comments in writing on comment cards
  - Comments and questions will be grouped and answered by topic
  - All comments and questions will be addressed on CTA’s website **-** www.transitchicago.com
  - An interpreter for the hearing impaired and a translator for the Spanish speaking community are available this evening

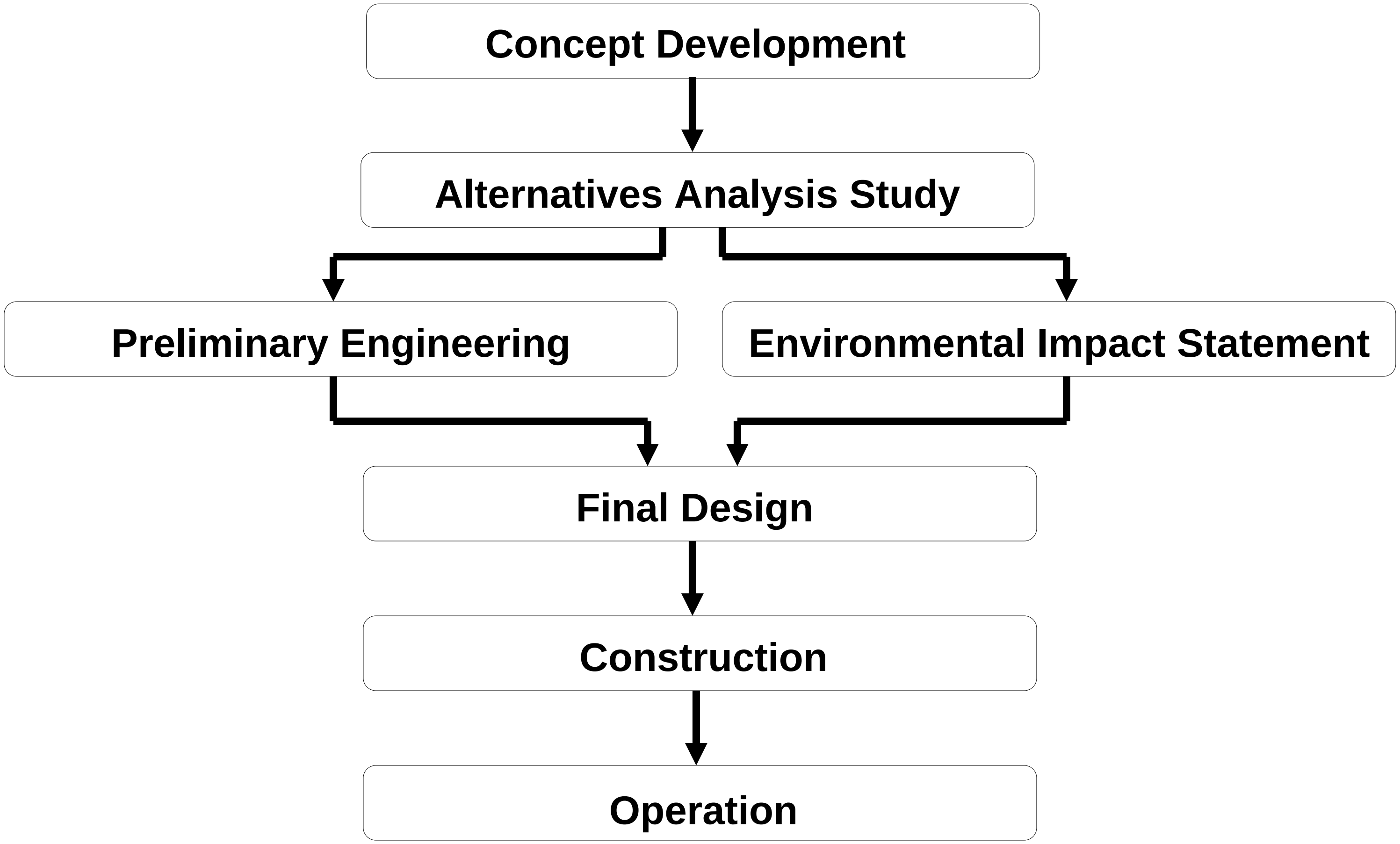
Tonight's Speakers

- **Darud Akbar – Moderator**
  - Chicago Transit Authority
- **Jeffrey Sriver – Project Manager**
  - Chicago Transit Authority
- **Ronald Shimizu – Red Line Study Area Manager**
  - PB Americas, Inc.

Outline of the Presentation

- Describe Federal Transit Administration's (FTA) Required "New Starts" Process
- Define Alternatives Analysis Study Steps
- Emphasize Importance of Public Involvement Process
- Discuss Status of Red Line Extension Alternatives Analysis Study

FTA’s Required New Starts Process



Concept Development

Alternatives Analysis Study

Preliminary Engineering

Environmental Impact Statement

Final Design

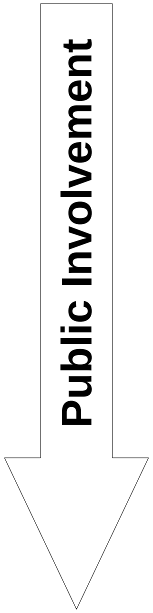
Construction

Operation

Alternatives Analysis (AA) Studies

- FTA Requirement for Federal Funding for Transit Expansion (New Starts)
- Identifies Transit Opportunities and Ensures All Practical Solutions are Considered
- Ensures Planning is Consistent Among All New Starts Projects Throughout the Country
- Provides Opportunity to Gather Information and Receive Public Input
- Identifies Locally Preferred Alternative

Alternatives Analysis Process – Key Steps


Public Involvement

- Define Purpose and Need
- Identify all Possible Transportation Alternatives called the “Universe of Alternatives”
- Evaluate Viability of Possible Alternatives through a Screening Procedure
- Identify Locally Preferred Alternative

Public Involvement Process

- **Key Component of the Alternatives Analysis Study**
- **Opportunity to Provide Information and Receive Public Input**
  - Your comments are needed to complete this screening process
- **Community Outreach:**
  - General public, elected officials, community and civic organizations, faith-based organizations, city and state agencies
- **Ongoing Public Involvement/Input**
  - Meetings announced through public notices and advertisements
  - Project updates on the CTA web site - www.transitchicago.com, accessible at local public libraries

Status of Study

Screen 1

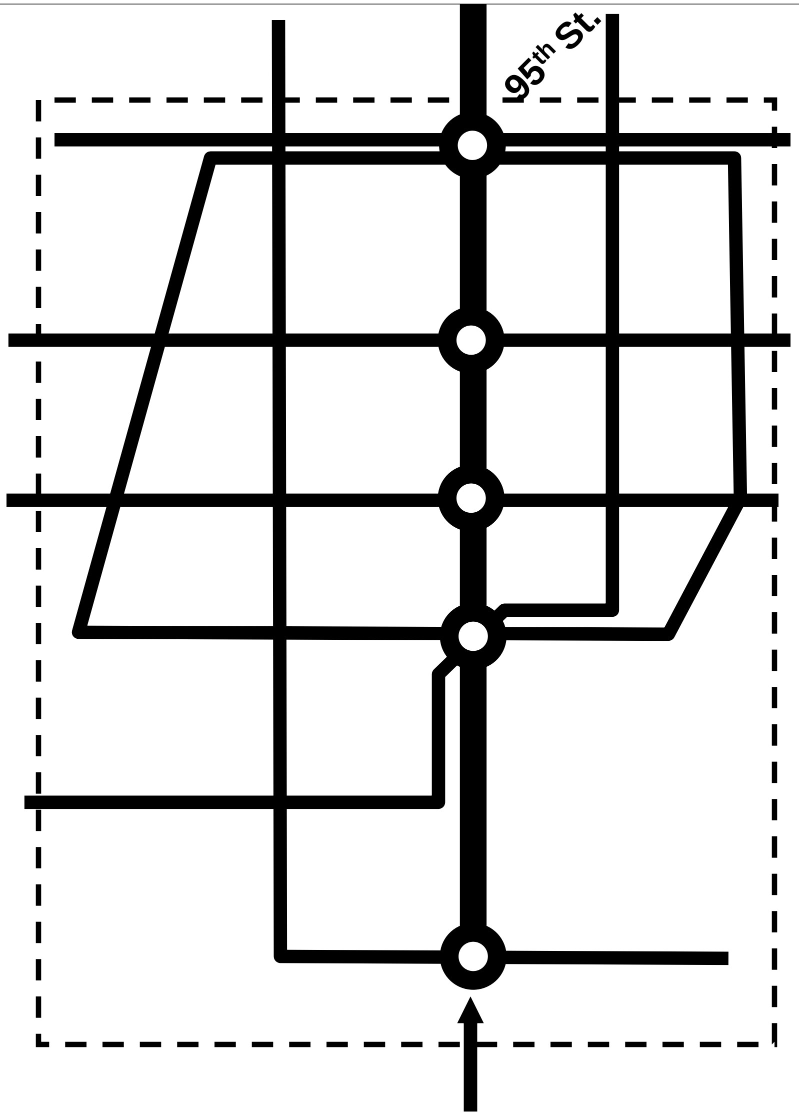
Purpose and Need

- Significant Bus and Passenger Congestion at 95th Street Red Line Station
- Lengthy Bus Trips to Access 95th Street Red Line Station
- Far South Area Residents Experience 20% Longer Commute Times than Rest of City
- Traffic Congestion is Expected to Grow along with Study Area Population and Employment

Screen 1

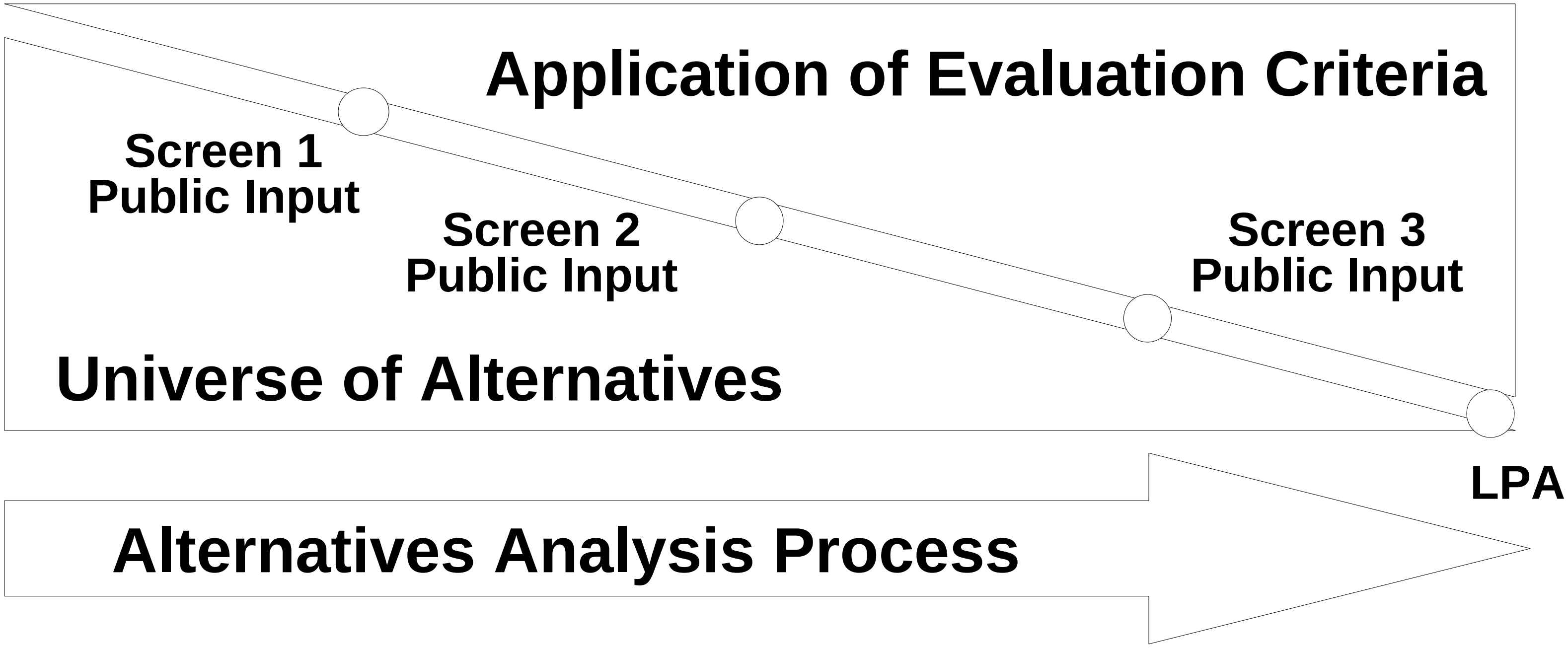
Opportunity for Improvement

- **Extend Rapid Transit Service South From 95th Street Red Line Terminal:**
  - **Improve access to, within, and beyond study area**
  - **Shorten transit travel times through faster and more direct routings**
  - **Stimulate economic development and job opportunities**



FTA Evaluation Process

As the AA study progresses and the evaluation criteria are applied, options within the Universe of Alternatives are eliminated until, at the end of the process, there is a Locally Preferred Alternative (LPA).



Application of Evaluation Criteria

Screen 1
Public Input

Screen 2
Public Input

Screen 3
Public Input

Universe of Alternatives

LPA

Alternatives Analysis Process

Evaluation Process – Screening Detail

- **Screen 1 – Review Universe of Alternatives**
  - Eliminate alternatives based on technology, corridor and profile
  - Advance strongest alternatives to Screen 2
- **Screen 2 – More Detailed Definition and Evaluation**
  - Define alignments, forecast transit ridership, calculate capital costs, identify neighborhood resources along the alignment
  - Evaluate and reduce number of remaining alternatives
- **Screen 3 – Final Definition**
  - Refine remaining alternatives
  - Identify Locally Preferred Alternative

Screen 1 Process

1. Define the Universe of Alternatives
2. Evaluate all Potential Technologies
3. Evaluate all Potential Alignments (Corridors and Profiles)
4. Evaluate all Potential Combinations of Technological and Alignment Alternatives
5. Advance Strongest Combinations

Technologies Evaluated

Universe of Alternatives Considered

TECHNOLOGIES
Automated Guideway/Monorail
Bus Rapid Transit
Commuter Bus
Commuter Rail
Heavy Rail Transit
High Speed Rail
Light Rail Transit
Local Bus
MagLev
Personal Rapid Transit
Streetcar

Technologies Reviewed

Automated Guideway/Monorail

Screen 1

Technologies Reviewed

LAS VEGAS 06

Bus Rapid Transit

Technologies Reviewed

VIA GRAND RD
pace
2398
SUPERFAST REFUNDS.
BRICKYARD
MALL

Commuter Bus

Screen 1

Technologies Reviewed

Metra
Metra

Commuter Rail

Screen 1

Technologies Reviewed

Heavy Rail Transit

Screen 1

Technologies Reviewed

High Speed Rail

Screen 1

Technologies Reviewed

Link
1001
SOUND TRANSIT

Light Rail Transit

Screen 1

Technologies Reviewed

cta
6400
cta

Local Bus

Technologies Reviewed

MagLev

Screen 1

Technologies Reviewed

Personal Rapid Transit

Screen 1

Technologies Reviewed

109 PORT MELB

Streetcar

Screen 1

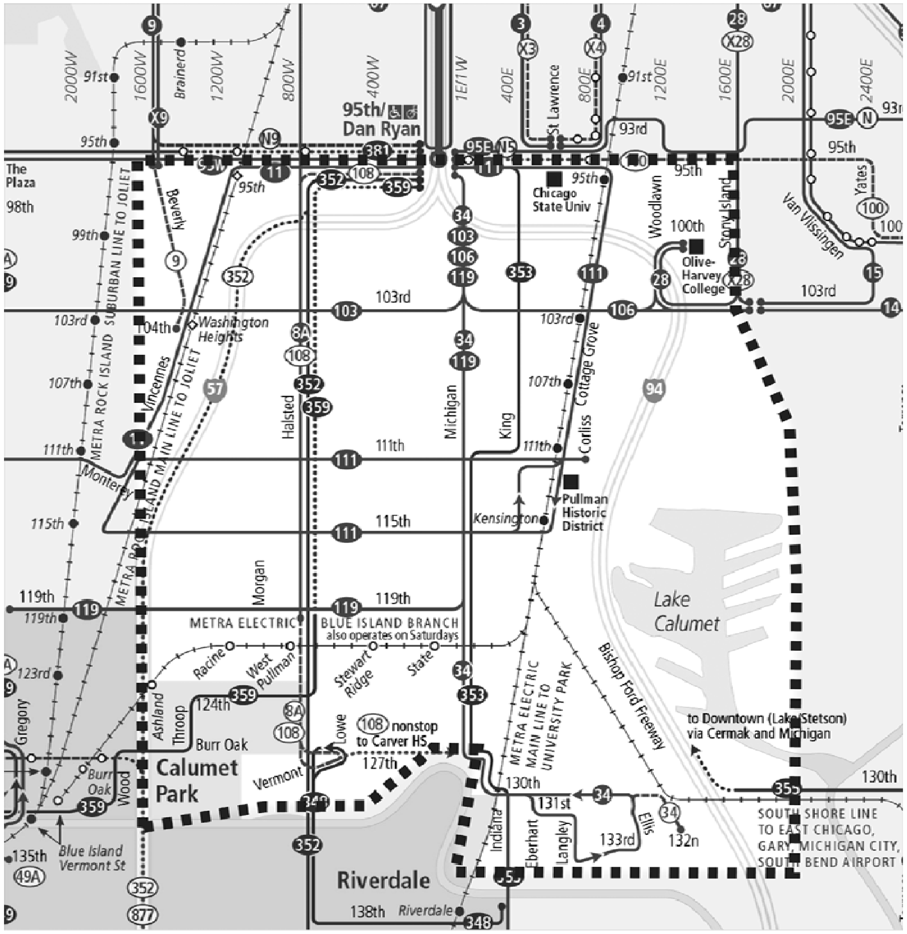
Corridors and Profiles Evaluated

Screen 1

Universe of Corridors and Profiles Considered

CORRIDORS	PROFILES
I-57 Expressway **Halsted Street** **UP Railroad** **Wentworth Avenue** **State Street** **Michigan Avenue** **King Drive** **Cottage Grove Avenue / Metra Electric** **I-94 Bishop Ford Freeway**	**At-Grade** **Elevated** **Trench** **Underground**

Study Area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Throop
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Vermont
Indiana
Eberhart
Langley
Ellis
St Lawrence
Washington Heights
The Plaza
Chicago State Univ
Olive-Harvey College
Pullman Historic District
Kensington
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Calumet Park
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Riverdale
Blue Island Vermont St
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METRA ROCK ISLAND MAIN LINE TO JOLIET
METRA ELECTRIC BLUE ISLAND BRANCH also operates on Saturdays
METRA ELECTRIC MAIN LINE TO UNIVERSITY PARK
Racine
West Pullman
Stewart Ridge
State
Bishop Ford Freeway
108 nonstop to Carver HS
to Downtown (Lake/Stetson) via Cermak and Michigan
SOUTH SHORE LINE TO EAST CHICAGO, GARY, MICHIGAN CITY, SOUTH BEND AIRPORT
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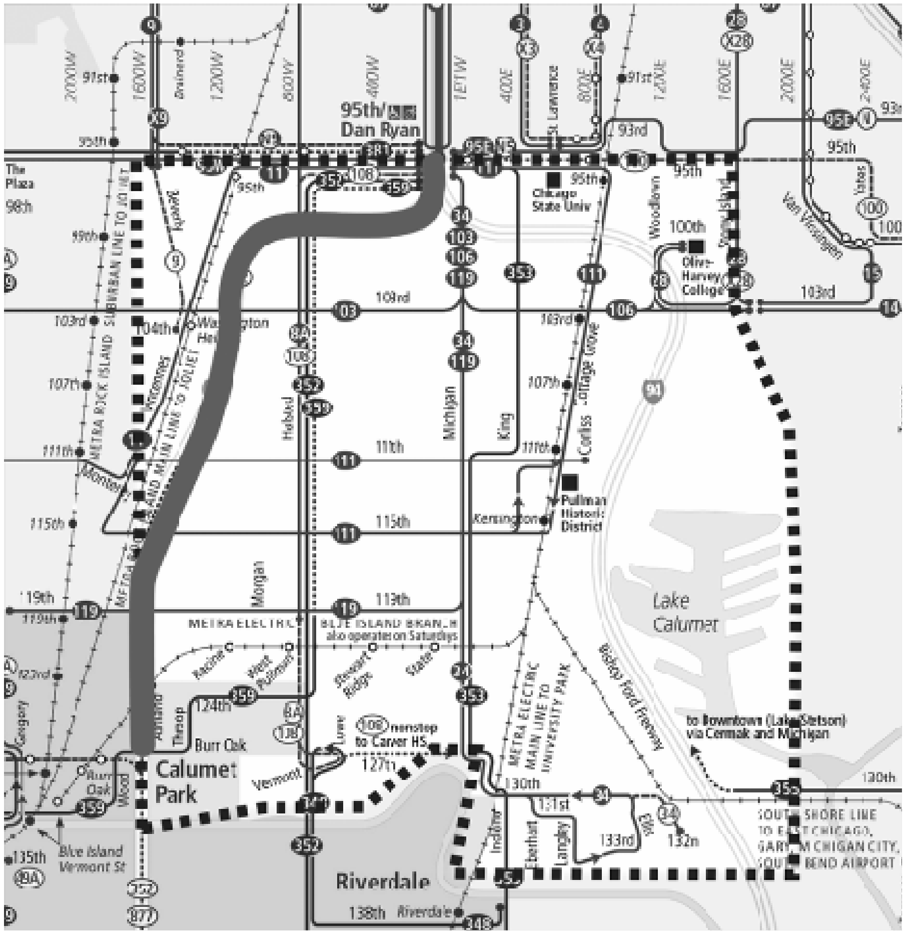
Screen 1

I-57 Expressway Corridor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Cottage Grove
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Woodlawn
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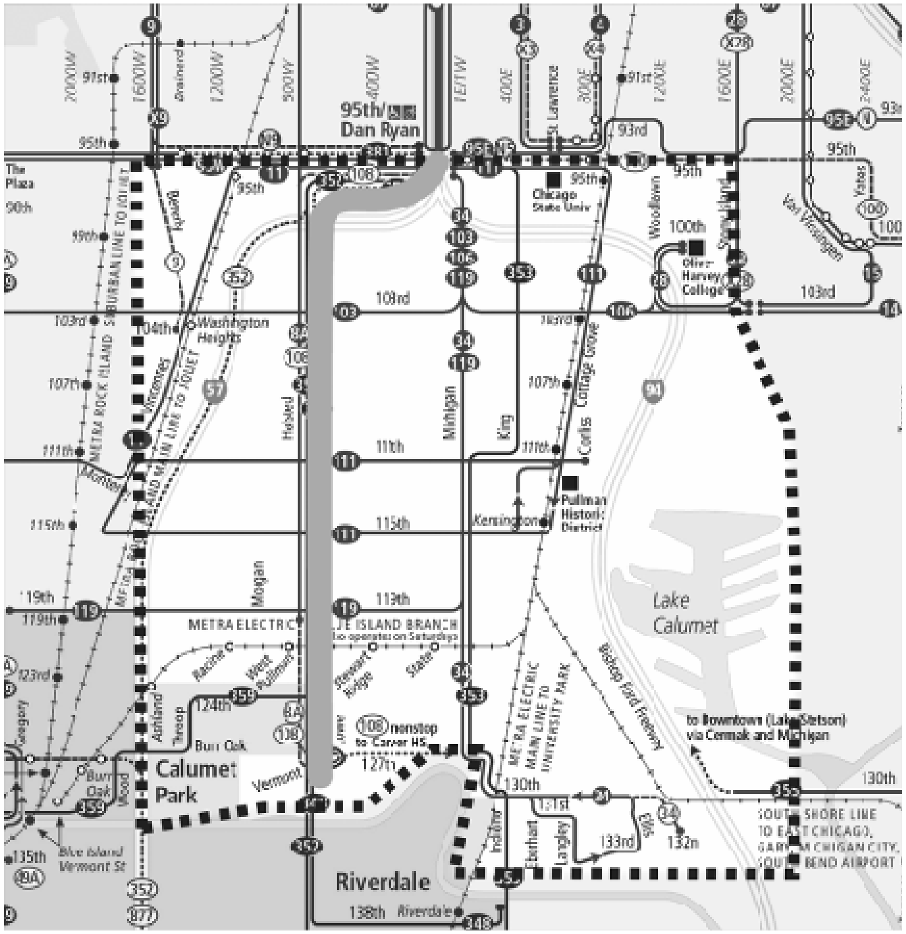
Screen 1

Halsted Street Corridor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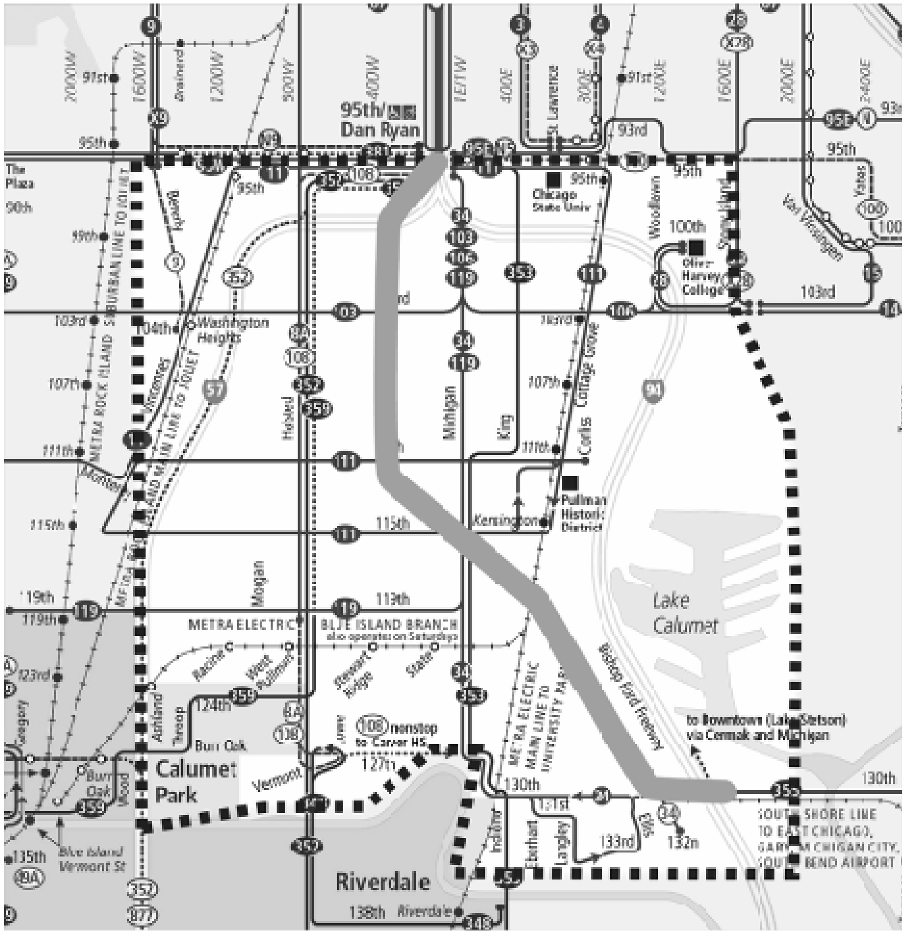
Screen 1

UP Railroad Corridor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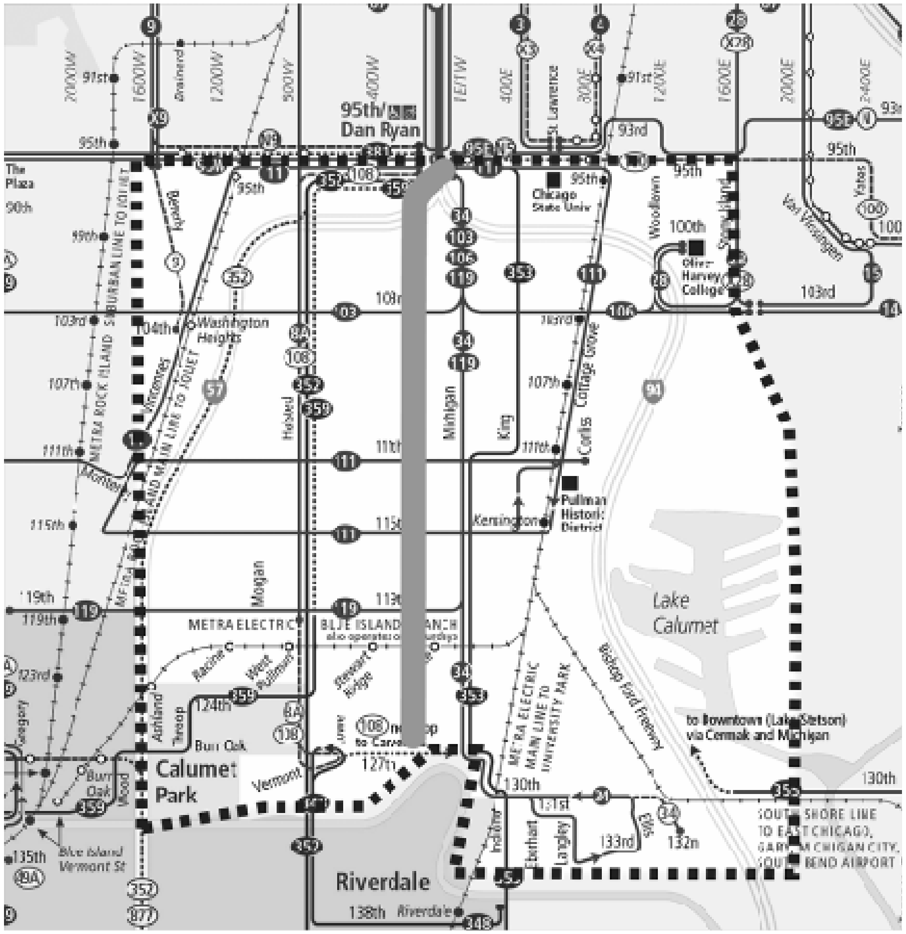
Wentworth Avenue Corridor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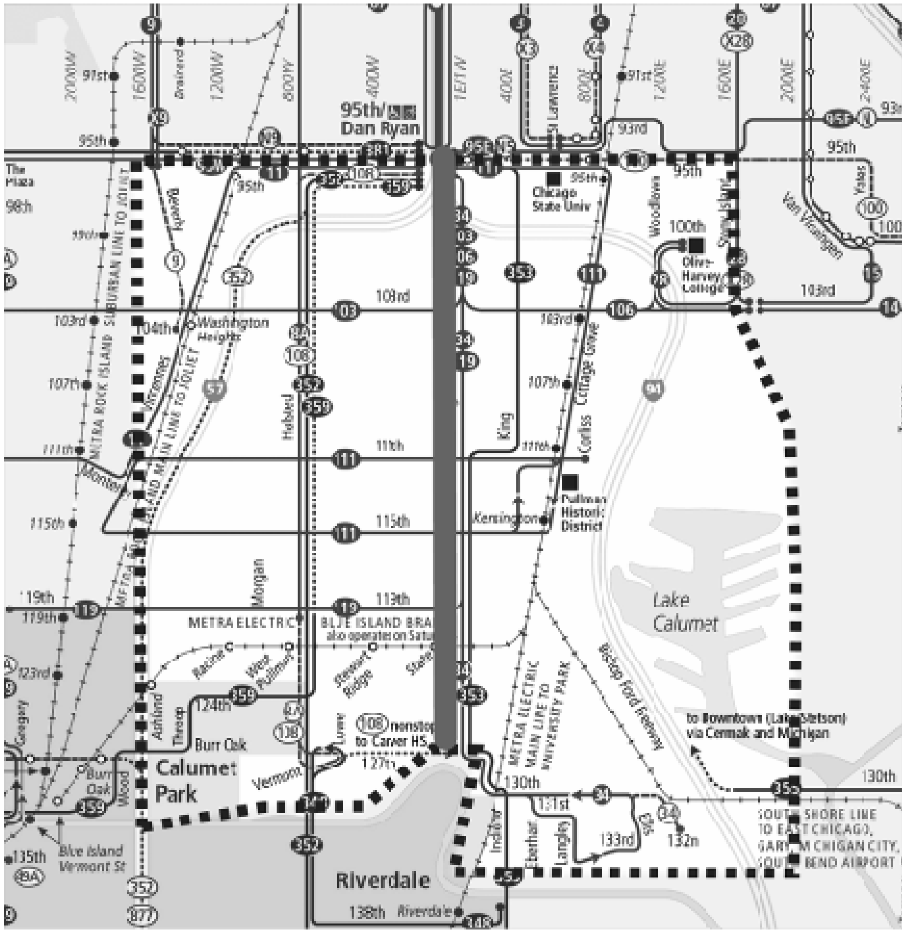
Screen 1

State Street Corridor


95th/Dan Ryan
Chicago State Univ
Olive-Harvey College
Washington Heights
Pullman Historic District
Kensington
Lake Calumet
Calumet Park
Riverdale
Burr Oak
Blue Island Vermont St
METRA ROCK ISLAND SUBURBAN LINE TO JOLIET
METRA ELECTRIC BLUE ISLAND BRANCH also operates on Saturdays
METRA ELECTRIC MAIN LINE TO UNIVERSITY PARK
SOUTH SHORE LINE TO EAST CHICAGO, GARY, MICHIGAN CITY, SOUTH BEND AIRPORT
to Downtown (Lake/Wabash) via Cermak and Michigan
108 nonstop to Carver HS
Bishop Ford Freeway
Cottage Grove
Stony Island
Halsted
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Ashland
King
Corliss
Woodlawn
Van Vlissingen
Yates
Indiana
Eberhart
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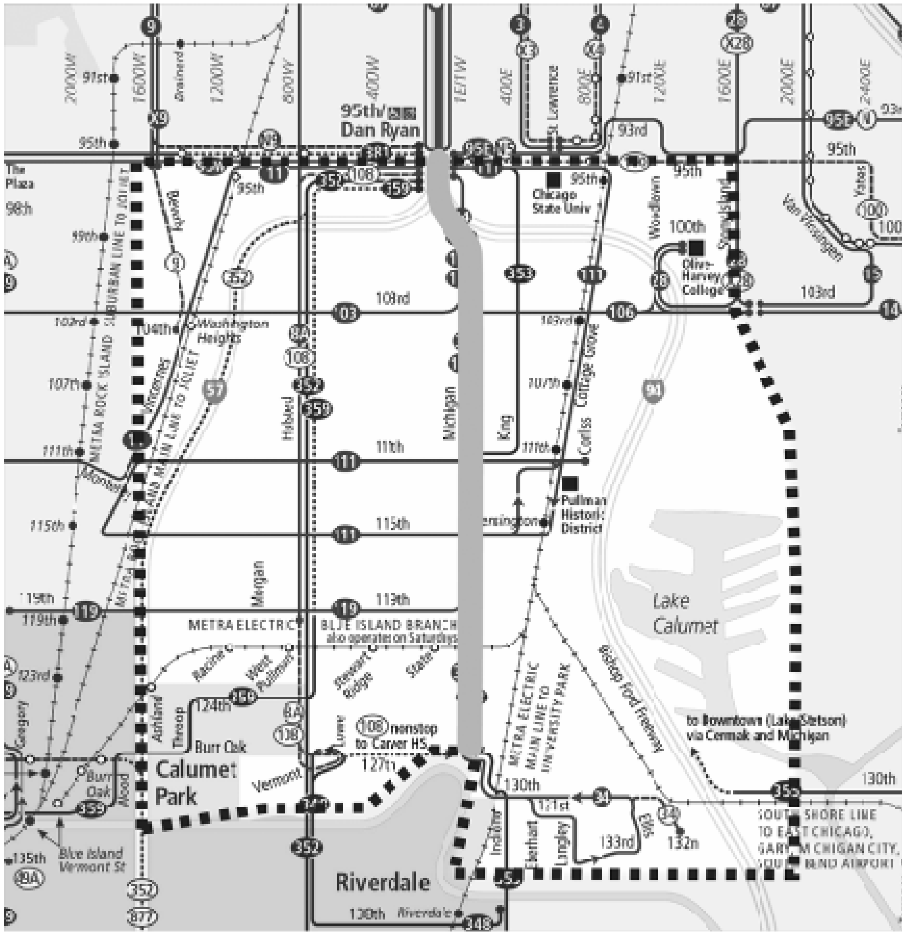
Screen 1

Michigan Avenue Corridor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Yates
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Racine
West Pullman
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METRA ROCK ISLAND SUBURBAN LINE TO JOLIET
ROCK ISLAND MAIN LINE TO JOLIET
METRA ELECTRIC BLUE ISLAND BRANCH also operates on Saturdays
METRA ELECTRIC MAIN LINE TO UNIVERSITY PARK
Bishop Ford Freeway
108 nonstop to Carver HS
to Downtown (Lake/Wetson) via Cermak and Michigan
SOUTH SHORE LINE TO EAST CHICAGO, GARY, MICHIGAN CITY, SOUTH BEND AIRPORT
Blue Island Vermont St
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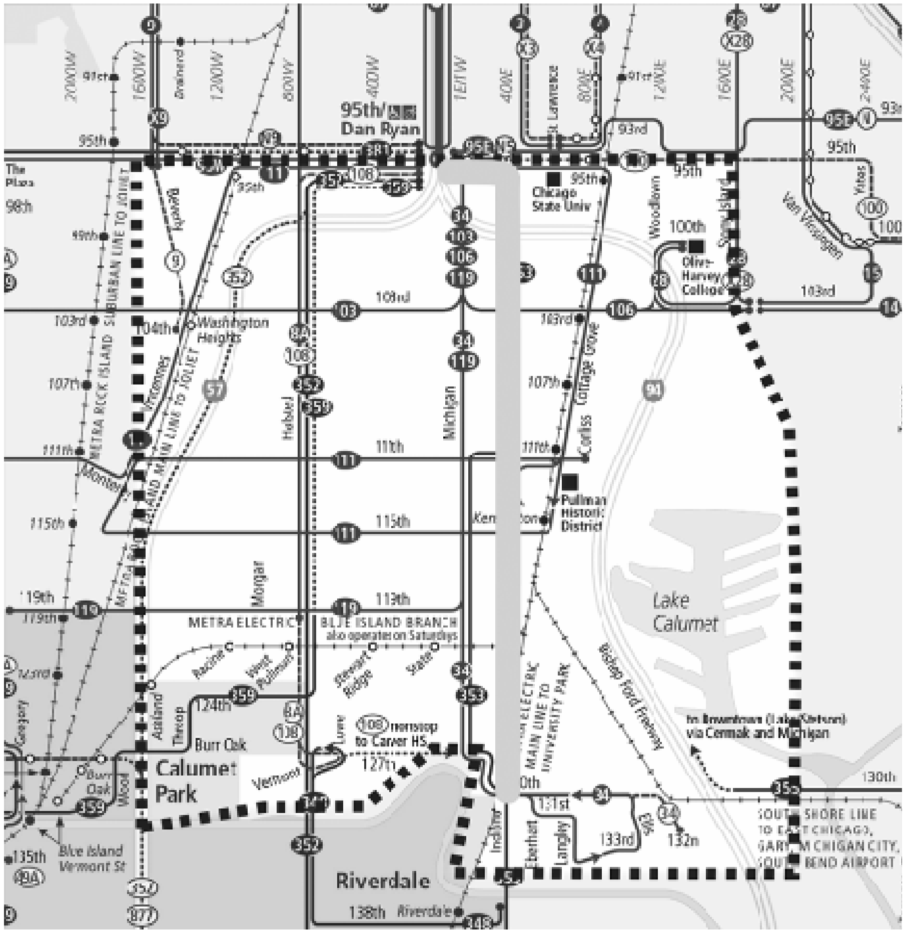
Screen 1

King Drive Corridor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Olive-Harvey College
Washington Heights
Pullman Historic District
Lake Calumet
Calumet Park
Riverdale
Burr Oak
Michigan
Cottage Grove
Halsted
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Stony Island
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Racine
State
Vermont
The Plaza
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METRA ELECTRIC BLUE ISLAND BRANCH also operates on Saturdays
METRA ELECTRIC MAIN LINE TO UNIVERSITY PARK
SOUTH SHORE LINE TO EAST CHICAGO, GARY, MICHIGAN CITY, SOUTH BEND AIRPORT
Bishop Ford Freeway
108 nonstop to Carver HS
to Downtown (Lake/Clinton) via Cermak and Michigan
Blue Island Vermont St
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1E/1W
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1600E
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95E
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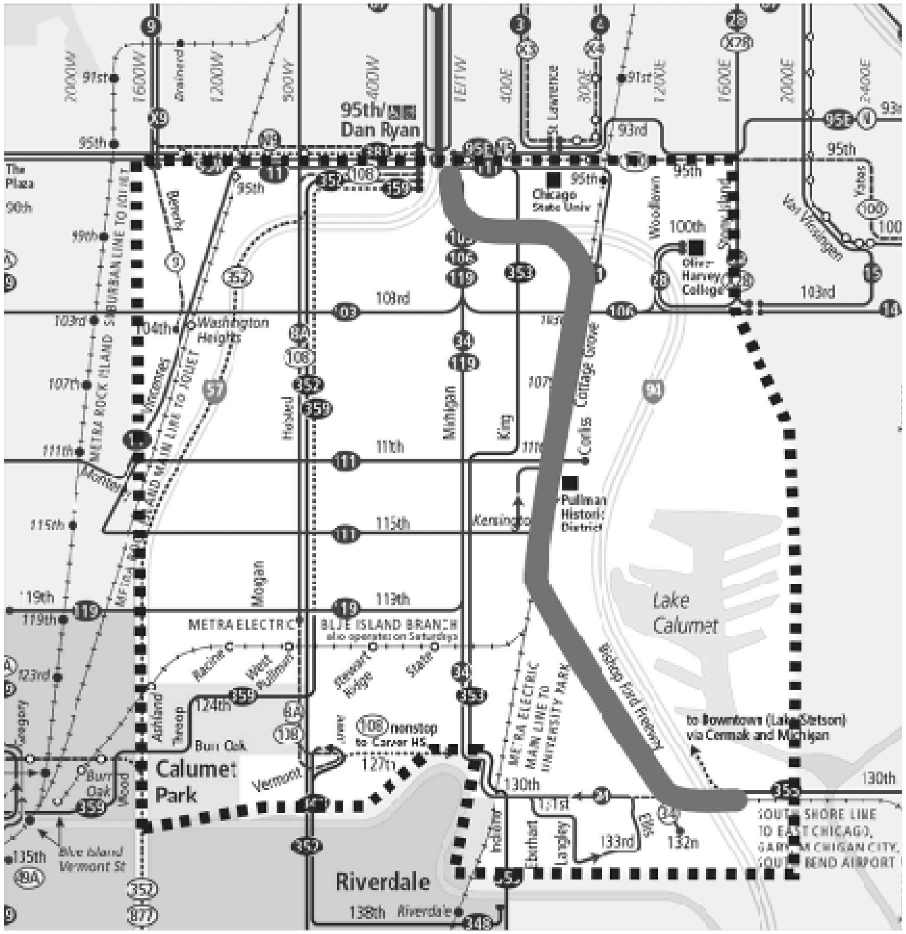
Cottage Grove Avenue / Metra Electric Corridor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Olive-Harvey College
Pullman Historic District
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Calumet Park
Riverdale
Washington Heights
Cottage Grove
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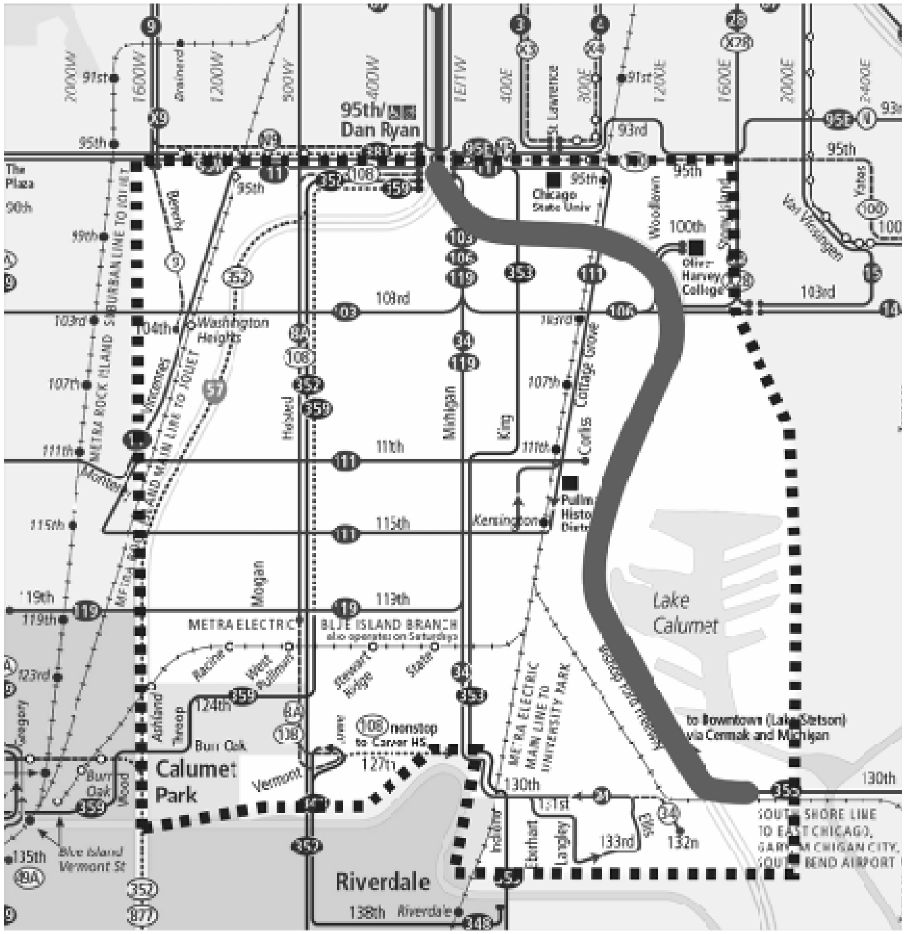
Halsted
Morgan
Corliss
Kensington
Bishop Ford Freeway
Stony Island
Woodlawn
METRA ELECTRIC BLUE ISLAND BRANCH
METRA ELECTRIC MAIN LINE TO UNIVERSITY PARK
METRA ROCK ISLAND SUBURBAN LINE TO JOLIET
SOUTH SHORE LINE TO EAST CHICAGO, GARY, MICHIGAN CITY, SOUTH BEND AIRPORT
to Downtown (Lake/Stetson) via Cermak and Michigan
108 nonstop to Carver HS
Vermont
Burr Oak
Ashland
138th
Riverdale
133rd
132nd
Ellis
Langley
Eberhart
Indiana
State
127th
124th

Screen 1

I-94 Bishop Ford Freeway Corridor



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133rd
138th
Chicago State Univ
Olive-Harvey College
Washington Heights
Kensington
Pullman Historic District
Lake Calumet
Calumet Park
Riverdale
Halsted
Michigan
King
Cottage Grove
Corliss
Woodlawn
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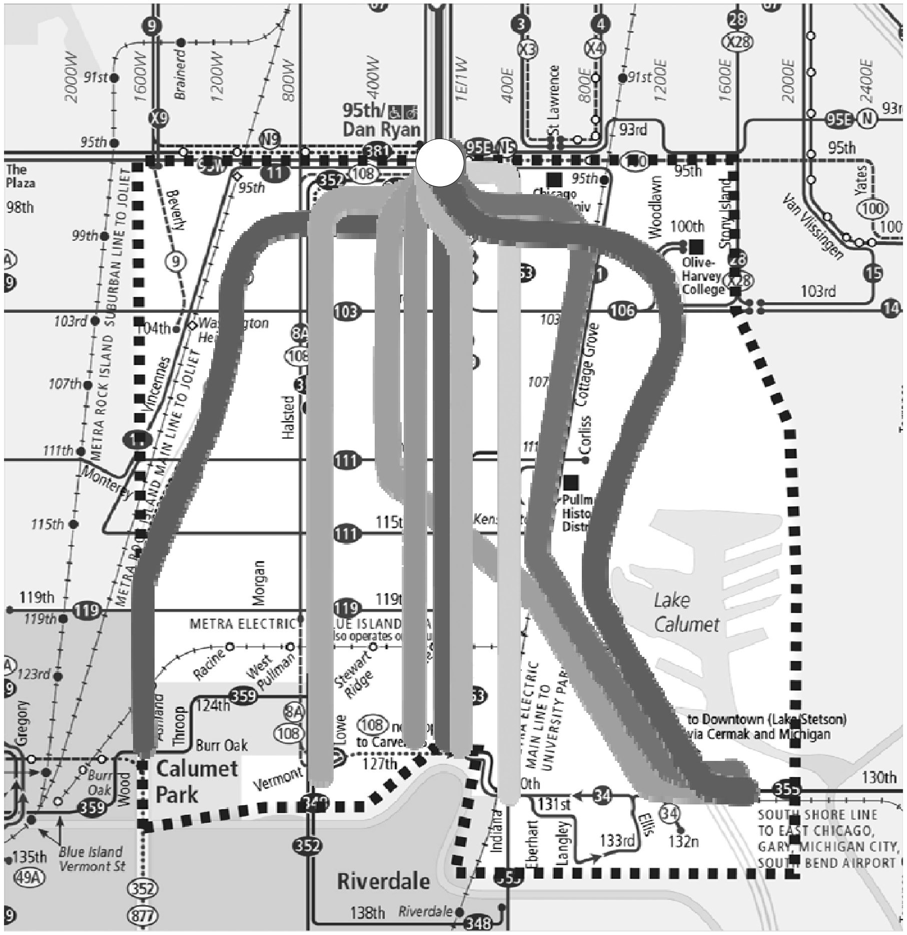
Yates
Morgan
Ashland
Vermont
Indiana
Langley
Ellis
METRA ROCK ISLAND SUBURBAN LINE TO JOLIET
METRA ELECTRIC BLUE ISLAND BRANCH
METRA ELECTRIC MAIN LINE TO UNIVERSITY PARK
108 nonstop to Carver HS
to Downtown (Lake/Stetson) via Cermak and Michigan
SOUTH SHORE LINE TO EAST CHICAGO, GARY, MICHIGAN CITY, SOUTH BEND AIRPORT
Blue Island Vermont St
Bishop Ford Freeway

Screen 1

Corridors Considered in the AA Study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Olive-Harvey College
Pullman Historic District
Chicago State Univ
Burr Oak
Blue Island Vermont St
METRA ELECTRIC
METRA ROCK ISLAND SUBURBAN LINE TO JOLIET
METRA ELECTRIC MAIN LINE TO UNIVERSITY PARK
to Downtown (Lake/Stetson) via Cermak and Michigan
SOUTH SHORE LINE TO EAST CHICAGO, GARY, MICHIGAN CITY, SOUTH BEND AIRPORT

- I-57 Expressway
- Halsted Street
- UP Railroad
- Wentworth Avenue
- State Street
- Michigan Avenue
- King Drive
- Cottage Grove Avenue / Metra Electric
- I-94 Bishop Ford Freeway

Screen 1

Universe of Alternatives in the AA Study

Technologies*

&

Corridors

I-57

Halsted

UP RR

Wentworth

State

Michigan

King

Cottage Grove / Metra Electric

I-94

&

Profiles

At-Grade

Elevated

Trench

Underground

=

Universe

398

Combinations

Including

No-Build

and

Baseline

* Not all Technologies Can be Applied to Each Alignment

Screen 1 Evaluation

Screen 1 Evaluation Criteria

Technologies	Corridors	Technologies, Corridors and Profiles
Speed Station Spacing Customer Capacity Proven Reliability	Social Factors Transportation Factors	Effects on Neighborhoods Physical and Operational Factors Opportunities to Access Other Transit Services

Screen 1 Evaluation Process Preliminary Findings

- **Technologies that Meet the Criteria of the Screen 1 Evaluation Process**
  - **Bus Rapid Transit (BRT)**
  - **Heavy Rail Transit (HRT)**
- **Technologies that Do Not Meet the Criteria of the Screen 1 Evaluation Process**
  - **Light Rail Transit (LRT)**
  - **High Speed Rail**
  - **Commuter Rail**
  - **Commuter Bus**
  - **Magnetic Levitation Trains**
  - **AGT / Monorail**
  - **Personal Rapid Transit**
  - **Streetcar**
  - **Local Bus**

Screen 1 Evaluation Process Preliminary Findings

- **Corridors that Meet the Criteria of the Screen 1 Evaluation Process**
  - Halsted Street
  - UP Railroad (UPRR)
  - Michigan Avenue
- **Corridors that Do Not Meet the Criteria of the Screen 1 Evaluation Process**
  - I-57 Expressway
  - Wentworth Avenue
  - King Drive
  - State Street
  - Cottage Grove / Metra Electric
  - I-94 Bishop Ford Freeway

Screen 1 Evaluation Process Preliminary Findings

Bus Rapid Transit

- At-Grade

Heavy Rail Transit

- Elevated
- Underground
- Trench

Screen 1 Evaluation Process Preliminary Findings

Technologies*

Bus Rapid Transit

Heavy Rail Rapid Transit

&

Corridors

Halsted

UPRR

Michigan

&

Profiles

At-Grade

Elevated

Trench

Underground

=

Universe

10

Combinations

Including

No-Build

and

Baseline

* Not all Technologies Can be Applied to Each Alignment

Next Steps

Next Steps

- **Incorporate Public Comments**
- **Confirm “Screen 1” Preliminary Findings**
- **Refine the Alternatives**
- **Continue Public Involvement**
  - Sign-in cards will be used to create a contact list to send notices and updates
  - Meetings announced through car cards, customer alerts, local media and contact list
  - Project updates on CTA web site - www.transitchicago.com

Screen 1 Meeting Schedule

Tuesday April 10, 2007
6:00 p.m. – 8:00 p.m.
Chicago State University
New Academic Library
4th Floor Auditorium
9501 South King Drive
Chicago, Illinois

Wednesday April 11, 2007
6:00 p.m. – 8:00 p.m.
West Pullman Branch
Chicago Public Library
Community Room
830 West 119th Street
Chicago, Illinois

Questions and Comments

- **CTA representatives are available to answer additional questions**
- **Written comments and questions accepted through May 11, 2007:**

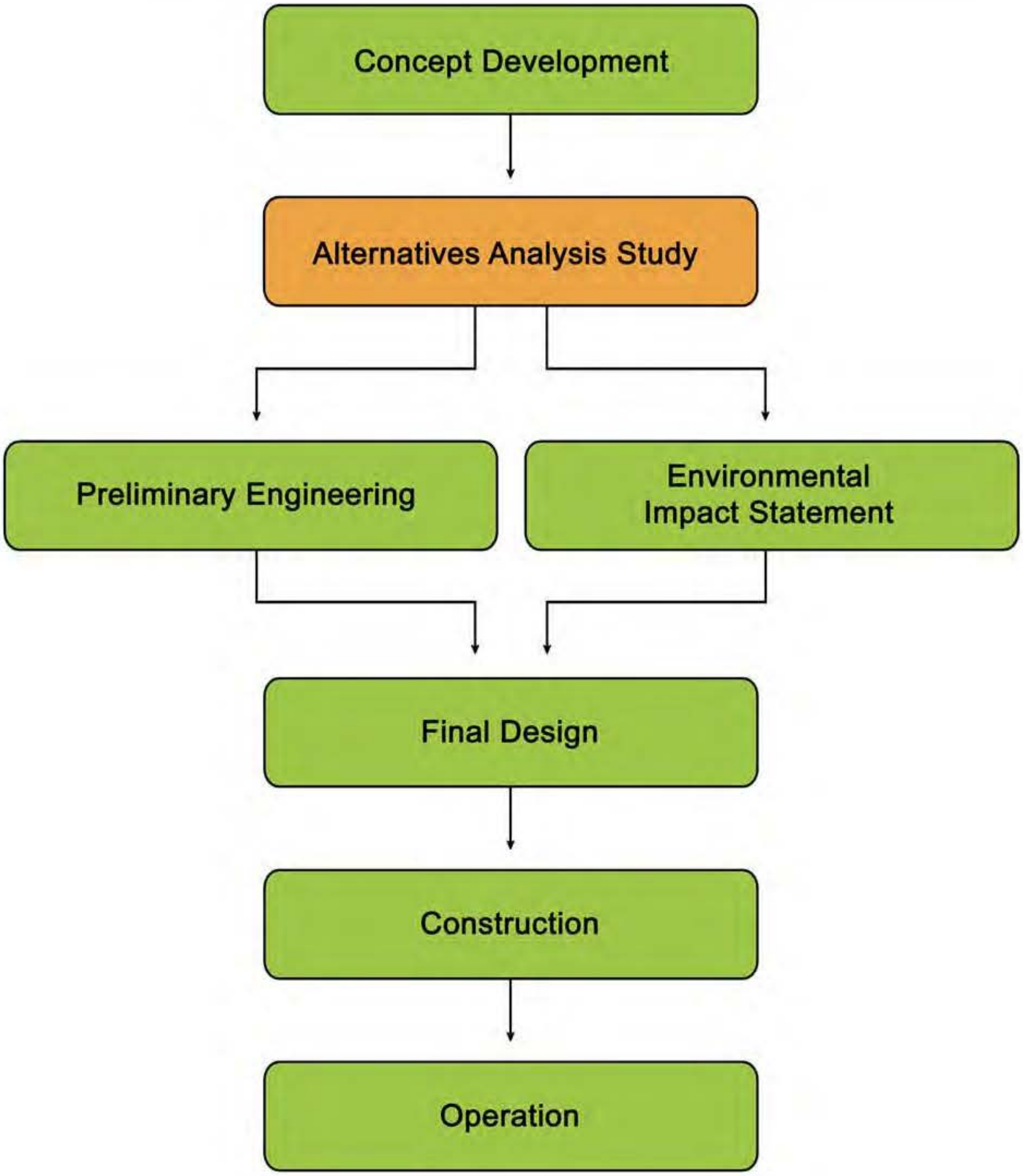
Mr. Darud Akbar
Chicago Transit Authority
Government and Community Relations
P.O. Box 7567
Chicago, IL 60680-7567
dakbar@transitchicago.com
312-681-2708

Federal Transit Administration’s
New Starts Process

Red Line Extension Alternatives Analysis Study

4-5-2007

FTA's New Starts Process



Concept Development

Alternatives Analysis Study

Preliminary Engineering

Environmental Impact Statement

Final Design

Construction

Operation

Red Line Extension
Alternative Analysis Study

Purpose and Need

Transportation Needs

- Significant bus and passenger congestion at 95th Street Red Line Station
- Lengthy bus trips to access 95th Street Red Line Station
- Far South Area residents experience 20% longer commute than rest of City
- Traffic congestion is expected to grow along with study area population and employment

Opportunity for Improvement

- Extend rapid transit service south from 95th Street Red Line Station
- Improve access to, within, and beyond study area
- Stimulate economic development and job opportunities
- Shorten transit travel times through faster and more direct routings

Community Participation

Community participation is one of the key components of the alternatives analysis.

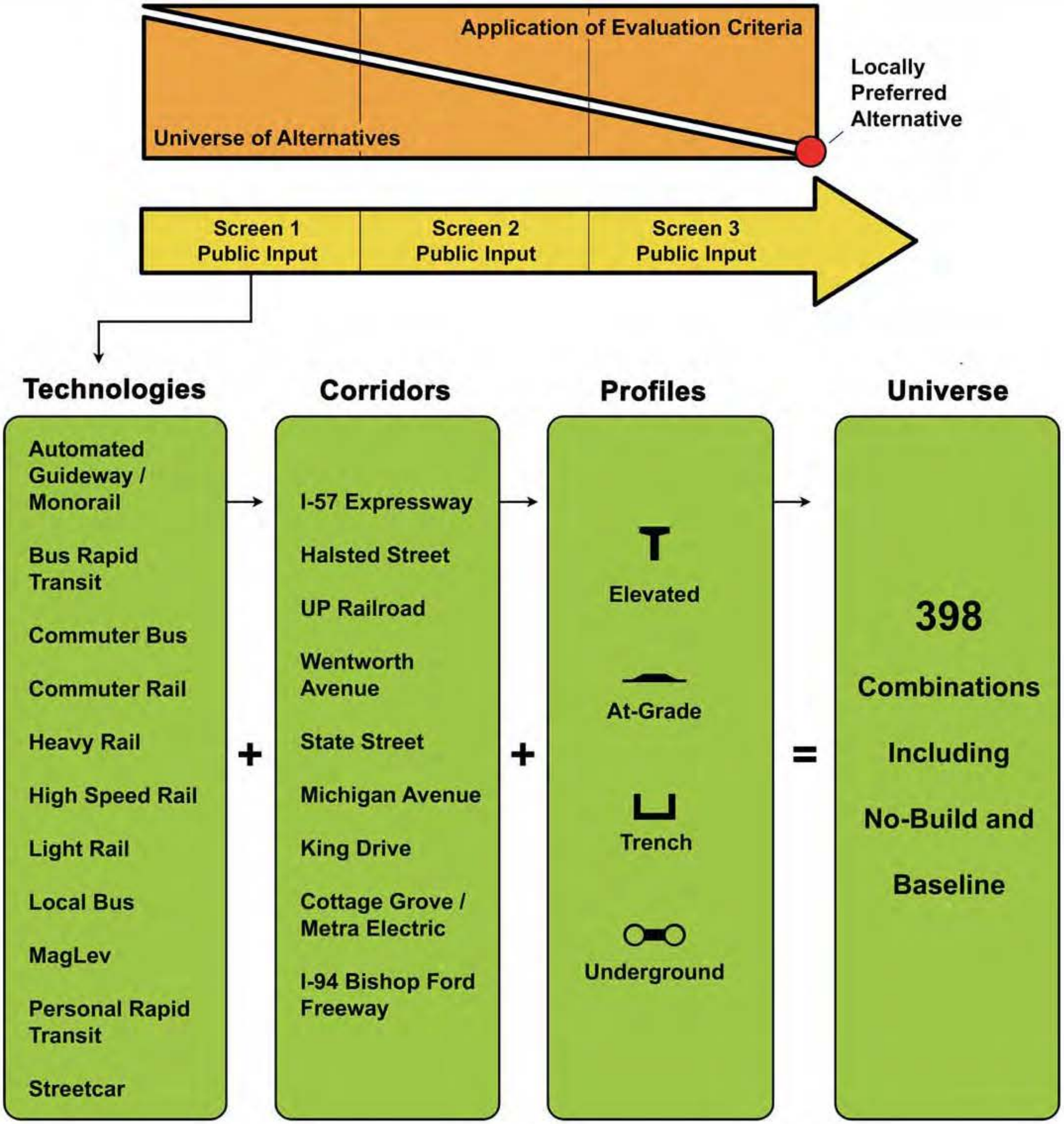
Community Outreach

- General Public
- Elected and Appointed Officials
- Community and Civic Organizations
- Faith-Based Organizations
- City and State Agencies

Ongoing Public Involvement/Input

- Meetings announced through public notices and advertisements
- Project updates on the CTA web site : www.transitchicago.com, accessible at local public libraries

Alternatives Analysis Process



Application of Evaluation Criteria

Universe of Alternatives

Locally Preferred Alternative

Screen 1 Public Input

Screen 2 Public Input

Screen 3 Public Input

Technologies

- Automated Guideway / Monorail
- Bus Rapid Transit
- Commuter Bus
- Commuter Rail
- Heavy Rail
- High Speed Rail
- Light Rail
- Local Bus
- MagLev
- Personal Rapid Transit
- Streetcar

+

Corridors

- I-57 Expressway
- Halsted Street
- UP Railroad
- Wentworth Avenue
- State Street
- Michigan Avenue
- King Drive
- Cottage Grove / Metra Electric
- I-94 Bishop Ford Freeway

+

Profiles

- Elevated
- At-Grade
- Trench
- Underground

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Universe

398

Combinations Including No-Build and Baseline

Technologies Evaluated

Automated Guideway/Monorail

- Service Area: Airports, theme parks, circulators, ½ to 5 miles
- Typical Speeds: 15 to 30 mph
- Station Spacing: ½ to 2 miles

Bus Rapid Transit

- Service Area: Urban and suburban uses, 1 to 10 miles or more
- Typical Speeds: 15 to 25 mph
- Station Spacing: ¼ to 1 mile

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pace
SUPERFAST REFUNDS
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Commuter Bus

- Service Area: Suburbs to city, 15 to 100 miles
- Typical Speeds: 30 to 50 mph
- Station Spacing: 3 to 7 miles, or at end points

Commuter Rail

- Service Area: Suburbs to city, 15 to 100 miles
- Typical Speeds: 30 to 50 mph
- Station Spacing: 3 to 7 miles

Technologies Evaluated

Heavy Rail

- Service Area: Urban uses and loadings, 1 to 10 miles or more
- Typical Speeds: 25 to 40 mph
- Station Spacing: ¼ mile downtown, up to 2 miles in neighborhoods

High Speed Rail

- Service Area: Intercity, 150 to 300 miles
- Typical Speeds: 110 to 186 mph
- Station Spacing: 20 to 50 miles

Light Rail

- Service Area: Urban or suburban uses, 1 to 10 miles or more
- Typical Speeds: 15 to 25 mph
- Station Spacing: ¼ to 1 mile

Local Bus

- Service Area: Urban and suburban uses, ½ to 5 miles
- Typical Speeds: 10 mph
- Station Spacing: 2 to 4 blocks

Technologies Evaluated

MagLev

- Service Area: Intercity, 100 to 300 miles
- Typical speeds: 250 to 340 mph
- Station Spacing: 20 to 50 miles

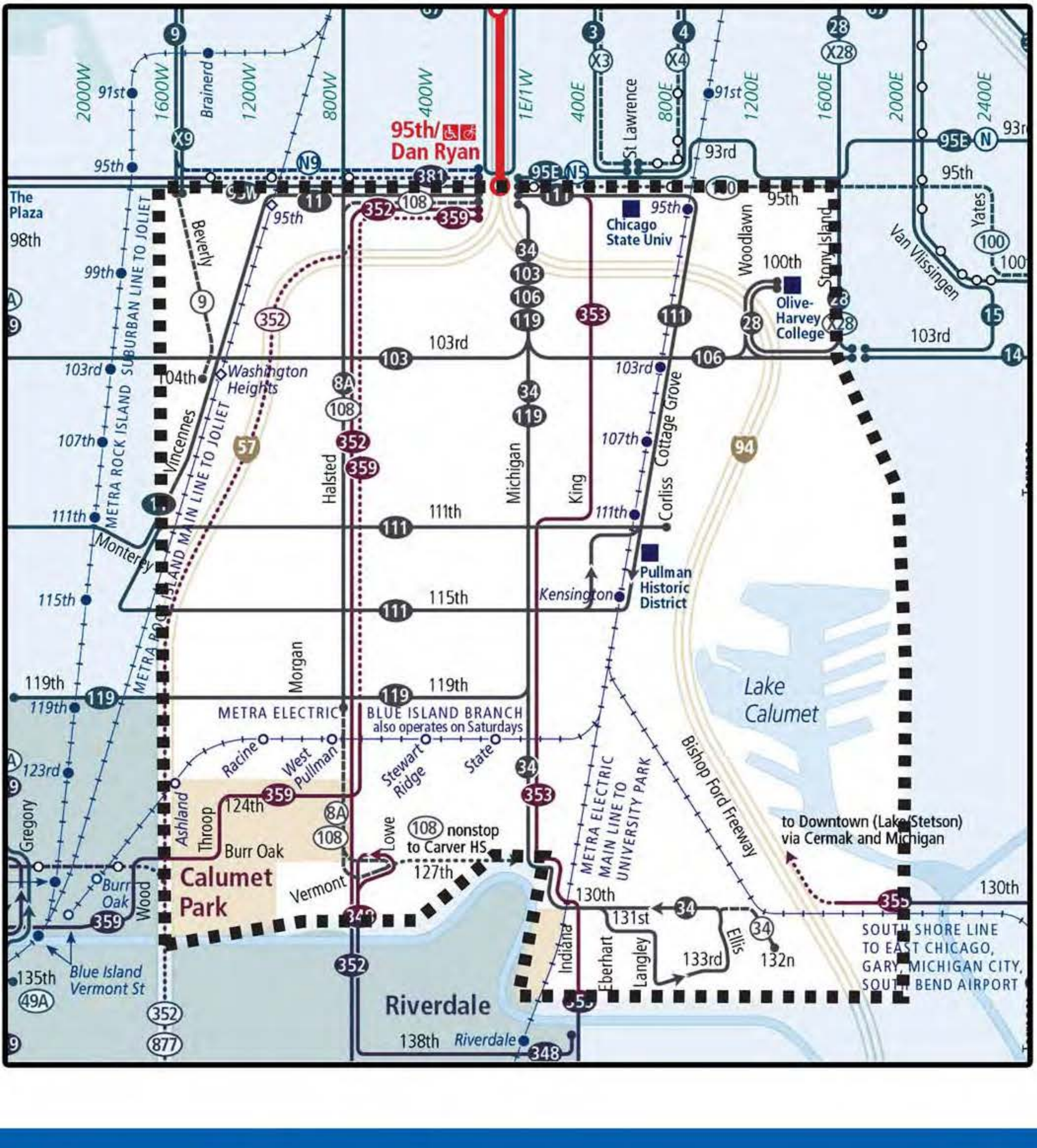
Personal Rapid Transit

- Service Area: Small area networks or campuses, 1 to 5 miles
- Typical Speeds: 15 mph
- Station Spacing: ¼ to 1 mile

Streetcar

- Service Area: Urban and suburban streets, ½ to 6 miles
- Typical Speeds: 10 mph
- Station Spacing: 2 to 4 blocks

Study Area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Chicago State Univ
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Van Vlissingen
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State
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Ashland
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Langley
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Wood
Burr Oak
Blue Island Vermont St
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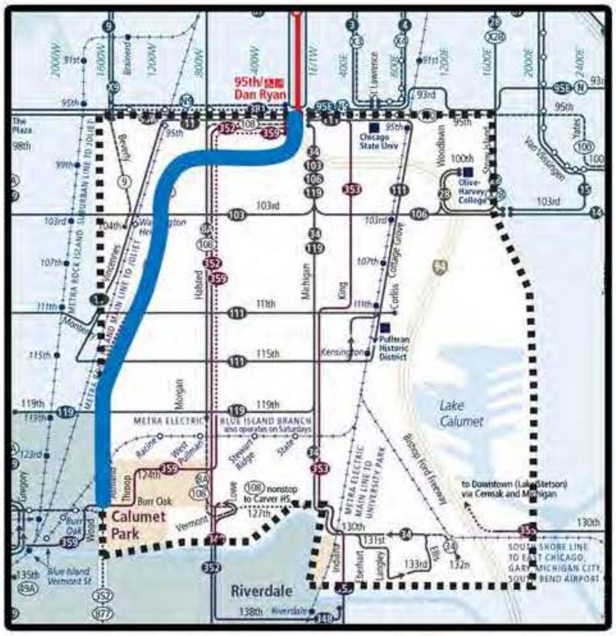
Red Line Extension
Alternative Analysis Study

Corridors Evaluated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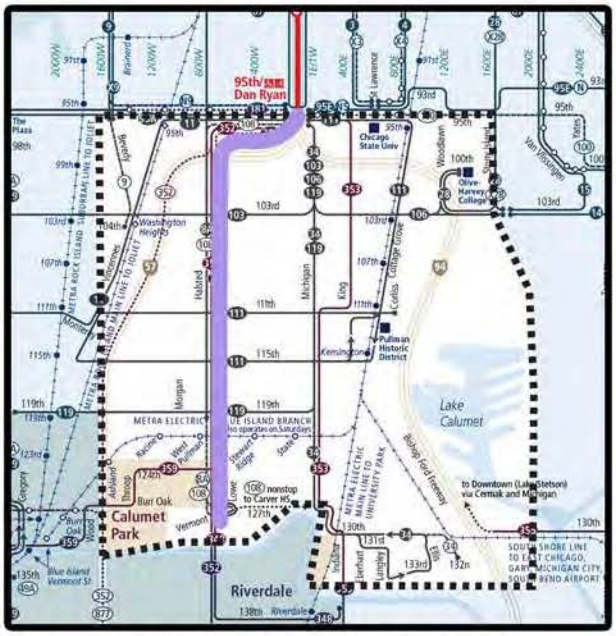
I-57 Expressway Corridor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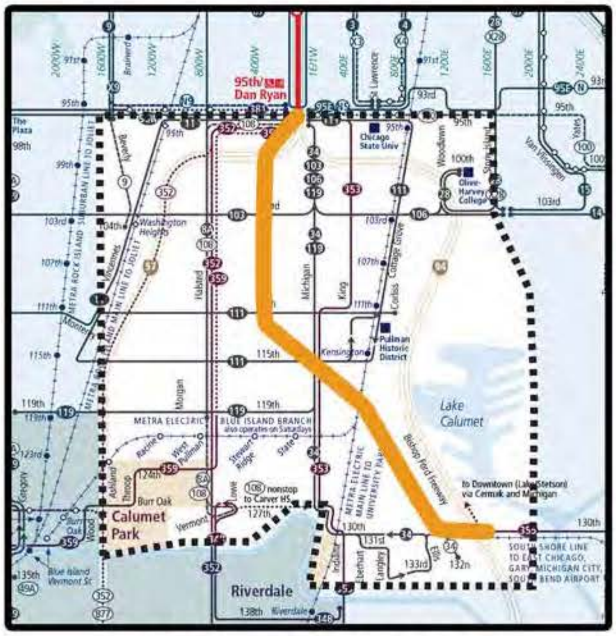
SOUTH SHORE LINE TO EAST CHICAGO, GARY, MICHIGAN CITY, SOUTH BEND AIRPORT

Halsted Street Corridor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Pullman Historic District
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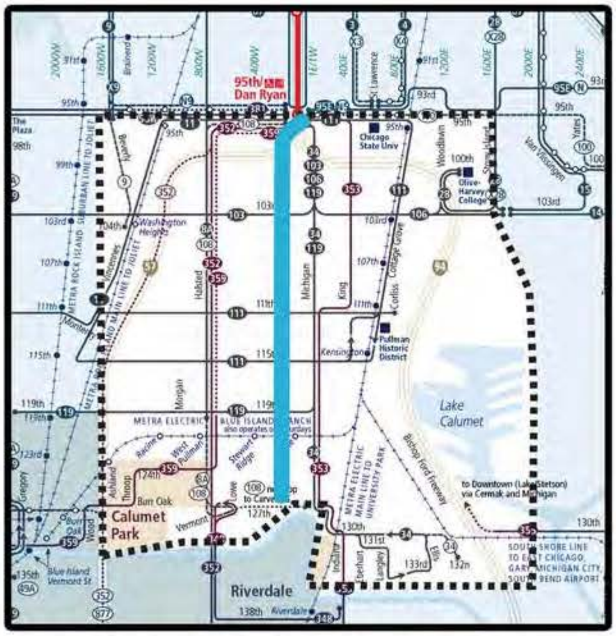
SOUTH SHORE LINE TO EAST CHICAGO, GARY, MICHIGAN CITY, SOUTH BEND AIRPORT

UP Railroad Corridor

Red Line Extension
Alternative Analysis Study

Corridors Evaluated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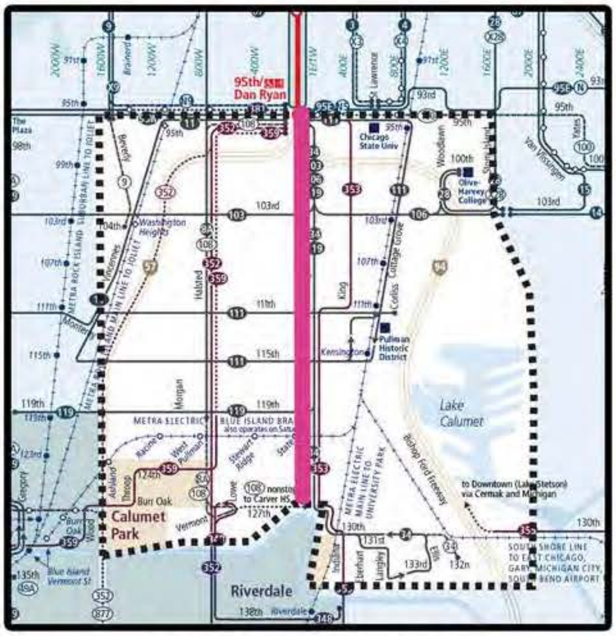
METRA ELECTRIC BLUE ISLAND BRANCH
to Downtown (Lake/Stetson) via Cermak and Michigan
SOUTH SHORE LINE TO EAST CHICAGO, GARY, MICHIGAN CITY, SOUTH BEND AIRPORT

Wentworth Avenue Corridor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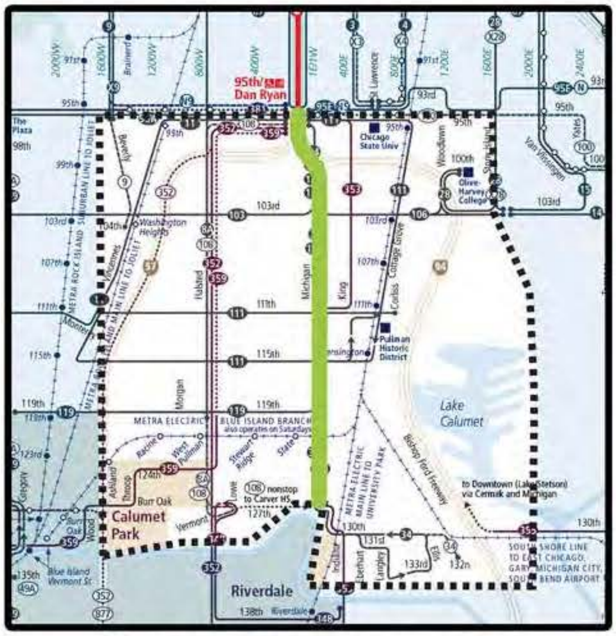
Calumet Park
Riverdale

State Street Corridor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Riverdale

Michigan Avenue Corridor

Red Line Extension
Alternative Analysis Study

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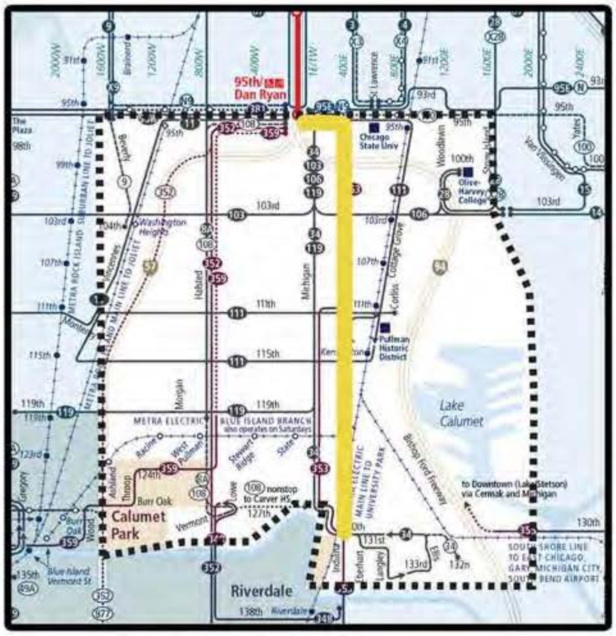
Corridors Evaluated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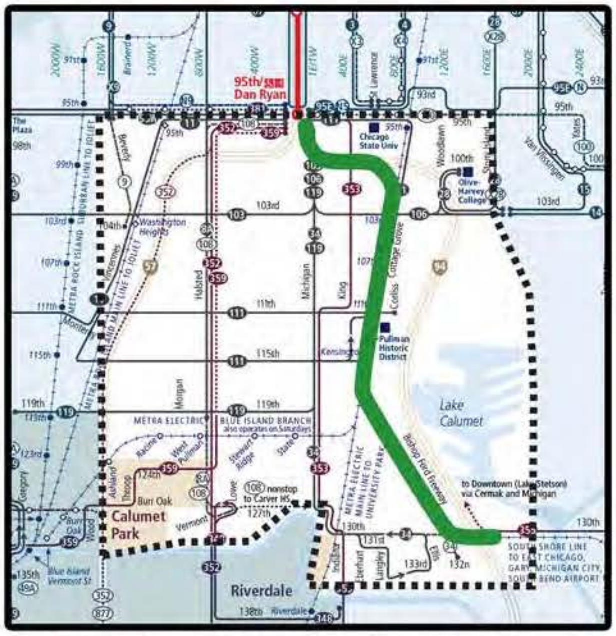
Halsted
Michigan
Cottage Grove
Woodlawn
The Plaza

King Drive Corridor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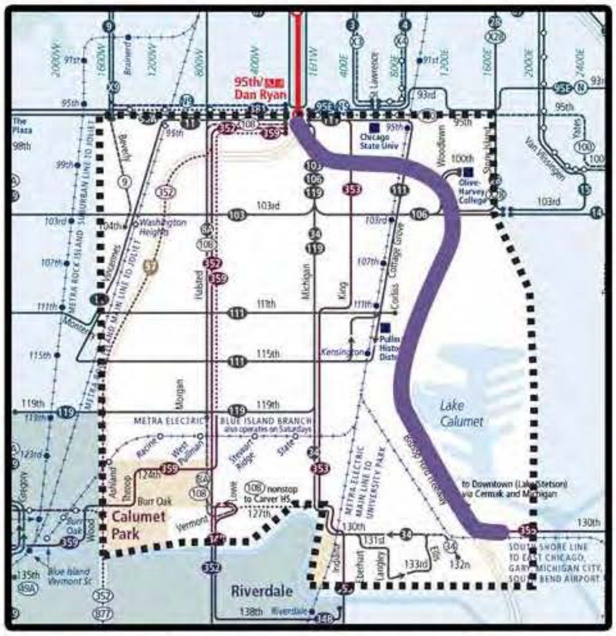
Olive-Harvey College
Pullman Historic District
Lake Calumet
Bishop Ford Freeway
Calumet Park
Riverdale

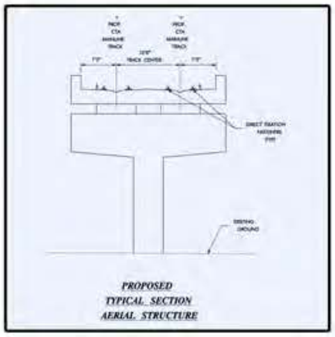
Cottage Grove / Metra Electric Corridor


95th/Dan Ryan
Chicago State Univ
Olive-Harvey College
Lake Calumet
Bishop Ford Freeway
Calumet Park
Riverdale

I-94 Bishop Ford Freeway Corridor

Red Line Extension
Alternative Analysis Study

Profiles Evaluated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PROP. CTA MAINLINE TRACK
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DIRECT FIXATION FASTENERS (TYP)
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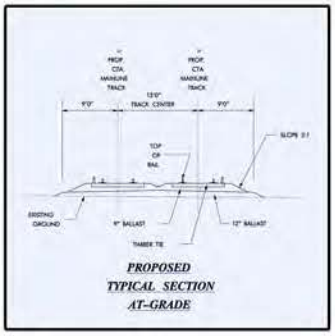
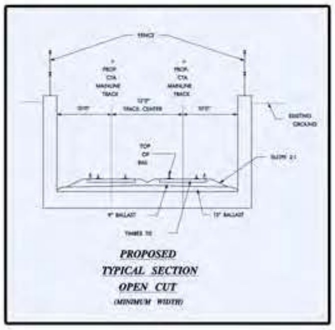
PROPOSED
TYPICAL SECTION
AERIAL STRUCTURE

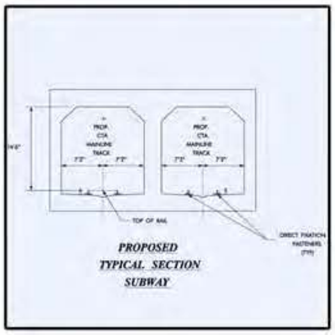
Elevated


PROP. CTA MAINLINE TRACK
PROP. CTA MAINLINE TRACK
9'0"
13'0" TRACK CENTER
9'0"
SLOPE 2:1
TOP OF RAIL
EXISTING GROUND
9" BALLAST
12" BALLAST
TIMBER TIE
PROPOSED
TYPICAL SECTION
AT-GRADE

At Grade


FENCE
PROP. CTA MAINLINE TRACK
PROP. CTA MAINLINE TRACK
10'0"
12'0" TRACK CENTER
10'0"
EXISTING GROUND
TOP OF RAIL
SLOPE 2:1
9" BALLAST
12" BALLAST
TIMBER TIE
PROPOSED
TYPICAL SECTION
OPEN CUT
(MINIMUM WIDTH)

Trench


PROP. CTA MAINLINE TRACK
PROP. CTA MAINLINE TRACK
14'6"
7'2"
7'2"
7'2"
7'2"
TOP OF RAIL
DIRECT FIXATION FASTENERS (TYP)
PROPOSED
TYPICAL SECTION
SUBWAY

Underground

Step 1:

Technology Evaluation

Technology	Does Mode Meet the Measure of Effectiveness?				Advance for Further Screening?
	Length of Commute	Typical Station Spacing	Operating Speed	System Applicability	
Automated Guideway	●	●	●	●	YES
Bus Rapid Transit	●	●	●	●	YES
Commuter Bus	X	X	●	●	NO
Commuter Rail	X	X	●	●	NO
Heavy Rail Rapid Transit	●	●	●	●	YES
High Speed Rail	X	X	X	X	NO
Light Rail Transit	●	●	●	●	YES
Local Bus	●	X	X	●	NO
MagLev	X	X	X	X	NO
Personal Rapid Transit	●	X	●	X	NO
Streetcar	●	X	X	●	NO

● **Yes** X **No**

Red Line Extension
Alternative Analysis Study

cta

Step 2:

Technology & Profile Evaluation

Technology	Profile	Air Quality	System Capacity	Travel Time	Compatibility	Traffic	Project Cost	Advance for Further Screening?
Automated Guideway Transit 	Elevated	○	○	-	-	+	○	NO
	Trench	○	○	-	-	○	○	NO
	Underground	○	○	-	-	+	-	NO
Bus Rapid Transit 	Elevated	○	○	○	-	+	○	NO
	At-Grade	○	○	○	+	○	+	YES
	Trench	○	○	○	-	○	○	NO
	Underground	○	○	○	-	+	-	NO
Heavy Rail Transit 	Elevated	○	+	+	+	+	○	YES
	Trench	○	+	+	+	○	○	YES
	Underground	○	+	+	+	+	-	YES
Light Rail Transit 	Elevated	○	○	○	-	+	○	NO
	At-Grade	○	○	○	-	-	+	NO
	Trench	○	○	○	-	○	○	NO
	Underground	○	○	○	-	+	-	NO

+ Better than other alternatives **○** Comparable to other alternatives **-** Worse than other alternatives

Red Line Extension
Alternative Analysis Study

Step 3:

Corridor Evaluation

Criteria Corridor	Land Use	Neighborhood	Underserved	Transit Usage	Accessibility	Advance for Further Screening?
I-57 Expressway	+	○	○	-	-	NO
Halsted Street	+	+	+	+	○	YES
UP Railroad	+	+	+	+	+	YES
Wentworth Street	-	+	+	○	+	NO
State Street	-	+	+	○	+	NO
Michigan Avenue	+	+	+	+	+	YES
King Drive	-	+	○	○	+	NO
Cottage Grove / Metra Electric	-	○	○	+	○	NO
I-94 Bishop Ford Freeway	+	-	-	-	-	NO

+ Better than other alternatives ○ Comparable to other alternatives **-** Worse than other alternatives

Red Line Extension
Alternative Analysis Study

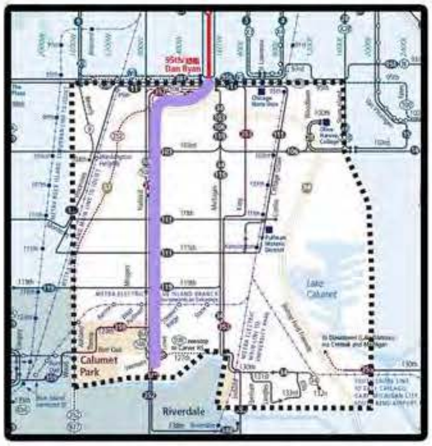
Step 4:

Combined Evaluation

Technology	Profile	Recommended to Advance for Detailed Evaluation		
		Halsted Corridor	UPRR Corridor	Michigan Corridor
Bus Rapid Transit	Elevated	NO	NO	NO
	At-Grade	YES	NO	YES
	Trench	NO	NO	NO
	Underground	NO	NO	NO
Heavy Rail Transit	Elevated	YES	YES	YES
	Trench	NO	YES	NO
	Underground	YES	NO	YES

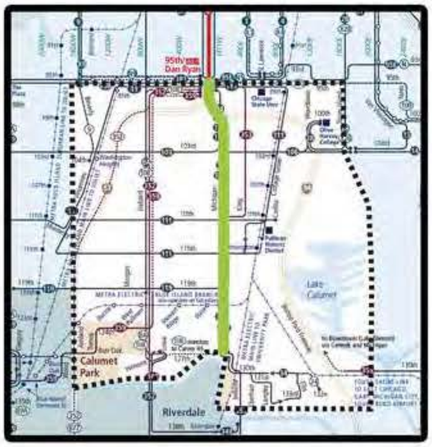
Preliminary Findings

Bus Rapid Transit


95th/Dan Ryan
Lake Calumet
Calumet Park
Riverdale

Halsted Street Corridor

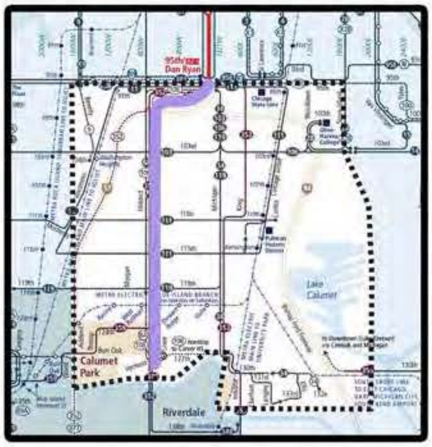
⌒ At Grade


95th/Dan Ryan
Lake Calumet
Calumet Park
Riverdale

Michigan Avenue Corridor

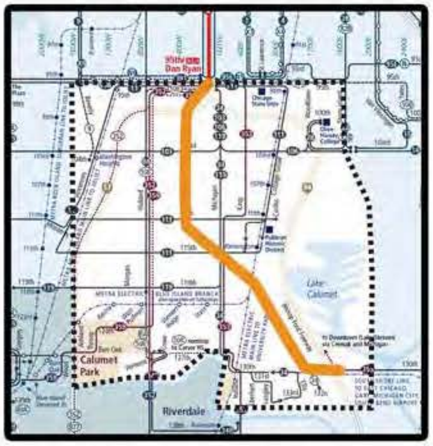
⌒ At Grade

Heavy Rail Transit


95th/Dan Ryan
Lake Calumet
Calumet Park
Riverdale

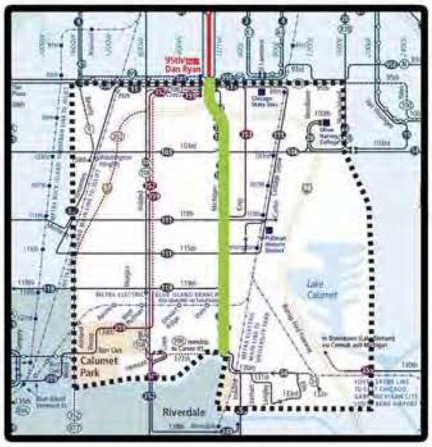
Halsted Street Corridor

T Elevated
○■○ Underground


95th/Dan Ryan
Lake Calumet
Calumet Park
Riverdale

UP Railroad Corridor

T Elevated
⊔ Trench


95th/Dan Ryan
Lake Calumet
Calumet Park
Riverdale

Michigan Avenue Corridor

T Elevated
○■○ Underground

Red Line Extension
Alternative Analysis Study

Red Line Extension

Alternatives Analysis Study
Comment Card

Please print your contact information if you would like to receive a response to the questions and comments.

Name ____________________

Organization ____________________

Address (Street, City, Zip)

____

____

____

Phone ____________________

E-Mail ____________________

☐ Would you like to be added to the Red Line Extension Project mailing list? Check box if yes.

Please write your question or comment in the area below (please print). When you have completed the form, please give to one of the CTA representatives.

____

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Please send comments and questions to Mr. Darud Akbar, Chicago Transit Authority, Government and Community Relations, P.O. Box 7567, Chicago, IL 60680-7567. Or dakbar@transitchicago.com

Customer Information: 1-888-YOUR-CTA (1-888-968-7282)
Hearing & Speech Impaired: 1-888-CTA-TTY1 (1-888-282-8891)
Transit Information: 836-7000 from any local area code • www.transitchicago.com

CHICAGO TRANSIT AUTHORITY

Red Line Extension Alternatives Analysis Study

Screen One Public Involvement * Public Comments and Questions

November 21, 2007

No.	Comment/Question	Received Via*	Topic Area(s)
1	Heavy Rail using UP Corridor makes the most sense. Seamless ride using existing Red Line and ROW already exists.	STK	7,9
2	Will parking be available at proposed stations and at 95th Street (similar to parking at Green Line)?	STK	17
3	Would like more information on no-build and baseline and proposed station locations.	STK	6,10
4	The Community Route is the best route because it better meets the needs of the main riders - 9th Ward, 34th Ward residents. Very little home displacement while addressing 28 to 30% new ridership. (UP Rail)	STK	7,12
5	The decision to select the three corridors stated in your presentation, was there any community representation at your CTA meetings to inform the community as you prioritize your three selection of corridors?	STK	13
6	What plans are there to provide off-street parking along the Red Line? Specifically at 95th and 55th Street? Also, does the extension provide off street parking at the terminal?	STK	17
7	If extended again, will this line serve the Gary Airport and extend on to South Bend, Indiana?	STK	5
8	Is it possible to get a list of the ten alternatives? If so, please send that out.	STK	7
9	What statistics/demographics can you provide for the study area?	STK	1,5
10	After April 11 public meeting, will representatives come out to groups to provide a presentation?	STK	13
11	If non-federal funds were used, would this project move faster?	STK	14
12	Could the state/city/county do more to help fund this?	STK	14
13	What is the local match needed?	STK	14
14	I think 39,000 voters voted for the route they favor.	CSU	7
15	Extend along the Union Pacific, CSX railroad from 99th Street to 130th & Stony Island, just west of the Ford assembly plant. Also bring back "A" and "B" skip stops.	CSU	7,11,19
16	UP corridor route alternative seems best option (alternative) - heavy rail grade level or trench.	CSU	7,9
17	I believe that the "UP Corridor" route is the best alternative because it provides the best transportation alternative for the greatest number of patrons without the need to transfer at 95th . While the development of communities is not a primary concern for the CTA, the UP Corridor also provides the greatest impetus for community development.	CSU	7
18	Some of the alternative routes pictured (State St., Wentworth, Michigan) would displace existing houses and businesses, are those serious proposals?	CSU	6,12
19	Considering the UP proposal: Where would stations be located?	CSU	10
20	Considering the UP proposal: would it connect with Metra Electric?	CSU	16
21	Considering the UP proposal: would there be parking facilities at each station?	CSU	17
22	Eight final proposals were mentioned - can you please enumerate them again?	CSU	7
23	The UP option looks good. Would the CTA build an elevated line beside the tracks, as they did with the Orange Line, or is the UP line abandoned and they could simply build on the embankment?	CSU	8
24	I believe that the UP route and the heavy rail technology makes the best sense and provides for transit oriented development along with substantial ridership, with fewest displacement.	CSU	7,9,12
25	I think the UP Corridor route would be the best because it would be of greater services to the needs of the residents.	CSU	7,18
26	My community would be interested in the UP rail line. Would that line terminate in Riverdale? Or at 130th Street at the Bishop Ford expressway entrance?	CSU	7,10
27	Suggestion - If the rail is elevated with ground bus service to rail - it's the least disruptive to community and environmental.	CSU	8,9,18
28	DCP supports the UPRR Corridor because the route would benefit the far south side community, creating transit oriented development. It would also allow residents at the 130th Street stop means of getting into the City for work.	CSU	7
29	The UP Corridor is the preferred route of 39,000 residents of 2 Wards from the study area.	CSU	7

No.	Comment/Question	Received Via*	Topic Area(s)
30	UP Rail Line - our choice.	CSU	7
31	The (UP Rail) "The Community Route" is the best route because: It’s close to my home, ridership will increase and I can get to and from work faster.	CSU	7
32	The Community Route (UP Rail) is by far the best route because: I have lived and work in this area for over 40 years. Now I need and many others work in my age group (60s and 70s) need what should have happened 30 plus years ago. Just do it. I don't have long to use it for work.	CSU	7
33	The Community Route is the best route because: When I get off work, the bus that I ride home - 108 Halsted - has stopped running. I have to ride the closest bus to my house or just walk. The Red Line would run all night. I don't mind the short walk home - and there are plenty of folks like me that come home late from work.	CSU	7,19
34	We need the Community Route because: It would help me get to work and school without having to take so many buses and trains.	CSU	7
35	The Community Route is the best route because: It is the right thing to do. Don't waste time and money trying a lot of options. Most of people riding the Red Line live along the Community Route (UP Rail). I believe that means CTA will have more riders and make more money - enough said.	CSU	7
36	The Community Route is the best route for the Red Line Extension because: my community (Altgeld) will not be isolated to cut off times with transportation and easier to get to jobs, schools or wherever we need to go outside of the community.	CSU	7,18
37	To me the best way to go is where the most people are. The Community Route - UP Rail Corridor - makes the most sense. I know it would help me a great deal.	CSU	7
38	After all the studies are done, the best way to build will be the Community Route. I know it and the CTA knows it. Build the rails close to the most users, simple.	CSU	1,6,7
39	We need the Community Route because it is difficult for the elderly to get on so many buses.	CSU	7
40	The Community Route is the best route because many people will have better access to get out of the community and get better jobs.	CSU	7
41	Heavy Rail trench Michigan Street would probably serve the community best.	CSU	7,8,9
42	Why don't you reconsider taking the Red Line down the Bishop Ford Expressway and reroute buses into station? This would cause less construction hassle.	CSU	7
43	UP Corridor precludes Metra Southeast. There probably needs to be spacing at 18'6" on either side of columns. Columns may be five feet thick. 42' uses up entire so - remaining empty r-o-w Metra need two additional tracks.	CSU	7
44	I like the Cottage/Metra Electric as well as the UP Railroad to try to prevent damage to communities. Bus rapid would also work on longer routes.	CSU	7,9
45	Cottage Grove corridor further east to Olive Harvey. UP Rail corridor to Altgeld Gardens - stops west of Bishop Ford for residents encouraged.	CSU	7
46	Michigan Avenue Corridor - extend hours past school hours.	CSU	7,11
47	If the goal is to improve transit, why not increase frequency of Metra services on both sides of corridor and restructure east-west bus service connections without major capital project?	CSU	16
48	The UP Corridor is not appropriate for dense "transit-oriented" development on account of hazardous materials.	CSU	6,7,18
49	Why was commuter rail rejected? Commuter rail could have closely spread stations as Metra BNSF, UP North, and Rock Island have today. Commuter Rail doesn't require incompatible infrastructure.	CSU	9
50	Why was a viable commuter rail alternative rejected?	CSU	9
51	Can you explain the intermodal modes at 130th and UPRR?	CSU	16
52	Is intermodal transfer being evaluated at 130th and the Metra Electric Line on the Michigan Avenue alternative?	CSU	16

No.	Comment/Question	Received Via*	Topic Area(s)
53	What corridor would be the least expensive?	CSU	6,7,14
54	Will the community be able to vote on the corridor they prefer?	CSU	1,6,13
55	Use CTA Gray Line as complement to Red Line Extension.	CSU	5
56	Please contact CMAP for CTA Gray Line project ranking and information.	CSU	5
57	Utilize the Metra Electric as a CTA "L" route as proposed in the Gray Line project: www.Grayline.20M.com as included in the CMAP 2030 RTP in addition to the Red Line Extension.	CSU	5
58	Where and how will the Red Line Extension connect with the South Shore Line to Indiana?	CSU	5,16
59	Are you considering elevated trains for the Halsted and Michigan models?	CSU	8
60	What are connecting streets for the Halsted model? 95th?	CSU	7
61	When you said extending the Red Line, in my mind I am thinking the train will stop at 103rd, 111th, 119th and so on. Why can it not be extended this way?	CSU	6,9,10
62	Howard (A) east 130th Street (I-94) and Howard (B) west 127th (I-57)	CSU	7
63	I -94 alignment east side or west side of expressway?	CSU	7
64	I am a former resident of Altgeld Garden. In over 30 years Altgeld has waited to see the CTA railway realized through to the south side city limits. I support the Community Route for the Red Line because it will remove the isolation that continues to suppress opportunities for economic growth. It will also address the inequity and discrimination that has been prolonged for too long.	CSU	7,18
65	With gas prices escalating it would be feasible to use the heavy rail transit, not buses.	CSU	9
66	Since there is overcrowding already of cars on the streets use the overhead rail for the heavy rail transit.	CSU	8,9
67	At the moment, I like the State Street line which would simply be an extension of the present line. Whichever corridor is used will/should draw more commuters.	CSU	7
68	Heavy rail - Michigan, in my opinion would best serve the need of the community.	CSU	7,9
69	The corridors ending/terminating last at 130th is needed urgently. The Halsted and other corridors currently have bus access on the west and several bus routes in the center of the proposed geographic areas. In the Altgeld area there is not easy access to rail lines, southwest bus routes only the #34 services the area with limited transfer points.	CSU	7
70	The Dan Ryan (Red Line) should have been built all the way to Altgeld Gardens as originally intended. Buses constantly get jammed in 95th terminal.	CSU	4,5,19
71	The Midway (Orange Line) trains should already be going to Ford City. This was originally intended. In fact, trains have Ford City destination signs on them.	CSU	19
72	Why was the extension held from being constructed in the past?	CSU	1
73	I want to see the PRT line because it would be more accessible to and from the community. This line will also provide more jobs for the people in the surrounding community.	CSU	9
74	Please consider future multi-use trail connections - please look at Chicago Trails Plan.	CSU	16,18
75	Please be concerned about possible future gentrified communities when this extension is built.	CSU	18
76	Please be concerned about connections.	CSU	16
77	The Red Line Extension is more than 30 years coming. It should be looked at before younger projects. More ridership will come from the Red Line Extension. Over crowding at 95th Street will be taken care of, and the community will have easy access. The UP Rail Road or the Community Route is the best route to take.	CSU	1,4,7,18
78	I'd rather prefer having the Red Line use the Bishop Ford where it was proposed before. This would be closer to be at the CTA 103rd garage.	CSU	7
79	What are chances that the CTA sub-regional study will supersede the Red Line Extension project?	CSU	3
80	What is the relationship of the CTA sub-regional study to the New Starts Baseline Alternative?	CSU	3

CHICAGO TRANSIT AUTHORITY
Red Line Extension Alternatives Analysis Study
Screen One Public Involvement * Public Comments and Questions
November 21, 2007

No.	Comment/Question	Received Via*	Topic Area(s)
81	Given that PB did a feasibility study for CDOT that came to most of the conclusions we've heard tonight, what is new in this AA?	CSU	1
82	Why isn't the actual analysis with measures, methodologies, criteria being made available to the public?	CSU	13
83	Metra Line at 95th - will it connect to Red Line? And years from now after 130th, will it go further?	CSU	5,16
84	When will PB/CTA consider noise abatement technologies as a significant need for the Red Line Extension going through residential areas?	CSU	18
85	What is the relationship of Parsons-Brinckerhoff (PB) to CTA? How committed is PB to the CTA's strategic plan?	CSU	1
86	Who will get to bid on these contracts for CTA transportation jobs? Will ALL contract bids be done through City Council or Mayor Daley?	CSU	18
87	Does CTA have any idea right now how much this will be costing the residents of Chicago and the suburbs? Will you print it on the website?	CSU	13,14
88	How will you make continued connections from transit to bus?	CSU	15
89	What are the environmental justice impacts in the AA and why weren't they made public?	CSU	18
90	How does residential displacement factor in decisions to analyze various alternatives?	CSU	6,12
91	Do you foresee any displacement of homes in any of these plans?	CSU	12
92	If the UP Railroad alternative is used, will it run 24 hours and will the price be closer to that of Metra system cost?	CSU	11
93	Buses get hours cut. Don't use bus services when heavy rail is the answer.	CSU	9,19
94	Regardless of the corridor adopted, additional trains would need to be run. This could potential increase congestion within the downtown area and north to the Belmont switch. How do you plan on combating against this plausible congestion problem? Perhaps making the new south extension as a separate line much like Skokie Swift.	CSU	2,15
95	I live in Roseland, the buses are always crowded. Sometimes they are so crowded they pass my stop. I often have to walk to a more populated stop so the buss won't pass me by. The best route for the Red Line to take is the UP Rail Route or the Community Route.	CSU	7,19
96	How committed is the CTA to public involvement? Would CTA support the participation of community stakeholders on the Project Management Team, especially on the "Overall New Starts Criteria" team?	CSU	13
97	How can Chicago South assist in the process? We are a long existing community development organization on the Southside! 1968	CSU	13
98	If the alternatives analysis (AA) screenings are completed by early 2008, will CTA continue immediately to PE instead of waiting until December 2008 according to the CTA's original timeline?	CSU	1,4
99	Is it possible to get email copy of presentation?	CSU	13
100	In order to save money, can the rapid bus transit be made possible for the corridors listed instead of the rail?	CSU	9
101	What impact would hybrid busing bring to the community? Cost?	CSU	9
102	What is the priority among the New Starts projects? Because the Red Line serves low-to-moderate income communities - should that not place high priority on the project? Residents have fewer options, ratio of people to cars is also lower.	CSU	2,18
103	Have you considered splitting the Red Line at the end or midway in the study area like the Green Line?	CSU	7,11
104	How about advertising these public meetings at local stores?	CSU	13
105	Salem Baptist - have you talked to the reps about this project?	CSU	13
106	I am willing to volunteer to do outreach.	CSU	13
107	UP Railroad Corridor best one - could be elevated or below grade. 115th/Michigan location some Pace routes/CTAcould end at 115th/Kensington/Metra/South Shore. Parking is great.	WPL	7,16,17
108	Will parking be near the stations? 103rd -111th -115th/Michigan- maybe a Metra transfer near 119th street - 130th/Bishop Ford	WPL	10,16,17

No.	Comment/Question	Received Via*	Topic Area(s)
109	Michigan corridor is ok but could be costly - will it change the area around Roseland/West Pullman to something vibrant and bring business near area?	WPL	7,18
110	UPRR corridor - trench	WPL	7,8
111	I support the UP line in the community because this will benefit the Roseland area more efficiently.	WPL	7
112	The Red Line Community Route (UP railroad) is the best route because it will increase ridership, promote economic development, be easier to access, and best reflects the community needs and desires.	WPL	7,18
113	For this community the Red Line Extension is an issue that this will do what ever is necessary to support this project. I support the Community (UP) corridor at grade trench as a route to extend the Red Line.	WPL	7,8
114	The UP Railroad corridor is the route supported by over 39,000 citizens from 2 wards in the study area, and the only one which brings rapid transit service to the south city limits and to underserved patrons and workers in the area. It is the best and preferred route.	WPL	7,18
115	The UP Corridor route would be the best route for the community because it would alleviate congestion and allow Altgeld residents the ability to acquire jobs further north of the City.	WPL	7,18
116	The UP Corridor is the best route for the community!	WPL	7
117	Customer service on the buses overall is not good!	WPL	19
118	Too many unsavory characters, especially at 95th.	WPL	19
119	UP Corridor Route.	WPL	7
120	If you use Bus Rapid Transit or Heavy Rail, what people capacity and scheduled hours of operation are you proposing? Also, how often would they run? The current "EL" operates 24 hours, would this new transit route do the same?	WPL	9,11
121	Red Line Extension is long overdue. I would like to see project kept realistic with a corridor that will make it feasible. I am a little upset to not see a little about on I-57 due to the fact it could be built at-grade with lower cost. The line needs to be rail to stay fluid with system. I believe many people would use line especially I-57 users if adequate parking was to be and anchoring the south end. The population declines as you go east of Halsted and would be betting on an area renewing itself. I believe that would be a gamble. I believe a line would be most feasible terminating near 130th and Halsted.	WPL	4,7
122	Yes, it should be placed near the expressway.	WPL	7
123	I believe the Halsted Route would be more beneficial to the community while stopping some of the local bus services.	WPL	7,15
124	How would you combine the current rail with which ever rail you choose (heavy rail/bus rail)? Or will the whole thing change or just the extension?	WPL	15,16
125	When will construction start?	WPL	4
126	In order to massively increase regional transit ridership and comply with federal ADA, civil rights, and environmental justice statutes, RTA and CTA expansion should prioritize the Red Line Community Route and the MidCity Transitway (MCT) and eliminate Block 37, airport express, Circle Line and Pink Line projects.	WPL	2,4,18
127	There is a cemetery on Halsted from 124th to 127th, how will that work out?	WPL	7,12,18
128	130th is being rehabbed at the Altgeld Garden homes, wouldn't it be more feasible?	WPL	7
129	I am in favor of the Halsted or Michigan corridor being the choice for the Red Line expansion.	WPL	7
130	Will community residents be considered for employment opportunities with this project?	WPL	18
131	Has a "displacement percentage" of residents been evaluated or achieved?	WPL	12
132	Several years ago the 108 Halsted was cut in service. After 9 pm we only have Pace. Has there been any thought to reinstate the route for people who need transportation late night? My son is being picked up at 95th at 4 am because no bus will bring him home until later, or he leaves before the last 108 stop.	WPL	19

No.	Comment/Question	Received Via*	Topic Area(s)
133	I think you should use the I-94 Route/Metra Route but people can use the Metra unless they go all the way north to Howard on Red Line. Or use UPRR route on grade. L.V. CPS I could not find any info on website.	WPL	5,7
134	Halsted is better because there are more businesses.	WPL	7,18
135	The rail service should go on the Halsted Corridor. It doesn't make sense to have a rail service that goes along near the south rail system. They already have rail service. Halsted needs something.	WPL	7
136	Buses - Halsted Street/ rail - Michigan	WPL	7,9
137	Everything sounds really good; I especially like the fact that you will try to connect the Metra with the CTA lines. But I was wondering, during the whole construction process, will transportation be affected drastically?	WPL	15
138	How do you get a bus route's hours extended? The 111/115 should be 24 hours/7 days or 24 hours/5 days or some other combination. It needs to run longer than until midnight. Many of its riders work second shift jobs!!	WPL	19
139	At 130th at Ellis, it takes less than 5 minutes by car, 20 - 40 minutes by walking and biking but by public transportation it takes 3 buses and about a six block walk to reach where the proposed new transit is going to be built. How is CTA going to address this need for the residents of the Riverdale Community Area (54) to have bus transportation at 130tth Street.	WPL	4,19
140	What are the environmental impact study stated in regards to the selected technologies?	WPL	18
141	What source of fuel will be used to power the selected technology?	WPL	9
142	What are economic opportunities for communities of low-income that are near this development?	WPL	18
143	Why are public comments or questions from the floor not allowed, since this is a public, mandated meeting?	WPL	13
144	Has the CTA requested the City and/or State to provide the matching funds for the Red Line Extension project?	WPL	14
145	When the final alternative has been narrowed down, who gets to be involved in indicating which is the preferred route? Will the people in the community have a voice?	WPL	6,13
146	The CTA's lack of a true public comment process which allows participants to speak is fundamentally patronizing, classist, racist, and undemocratic. You must allow people to speak.	WPL	13
147	What consideration has been given to having a community person on your project management team for the Red Line Extension? Developing Communities Project (DCP) has been promoting this project a long time and has information that could prove quite valuable/could provide valuable input.	WPL	13
148	No specific questions tonight, but I represent 10 churches on the south side and they need to be aware of what's going on.	WPL	13
149	I live between three of your corridors evaluated. Will this effect my home? If yes, please explain. (Wentworth/State Street/Michigan Street)	WPL	7,12
150	A major concern is the amount of displacement of people, homes, etc. Which takes the least amount of displacement?	WPL	12
151	I am all for extending the Red Line, but how will affect homeowners who would be in the path of the final decision?	WPL	12
152	Will more minority businesses have an opportunity to build and flourish along the expected corridor?	WPL	18
153	Which of the proposed routes will require displacement? If so, how many residents, homes, businesses?	WPL	12
154	How many jobs for the community?	WPL	18
155	When will construction start? And when will jobs be available?	WPL	4,18
156	Is there a maximum amount the FTA will approve for each project?	WPL	14
157	Approximately how long after approval will the project take for completion?	WPL	4
158	Can all four projects be approved in this round and if so how will CTA prioritize the approved projects?	WPL	1,2
159	The Red Line needs to be extended and done in such a way that allows for maximum benefit of the community in terms of easy accessibility and potential for economic development. Why is it taking so long (and has it taken so long) for this to be done?	WPL	1,4,18
160	Will this thing ever be done? If so, when?	WPL	4
161	How much will this project cost?	WPL	14

No.	Comment/Question	Received Via*	Topic Area(s)
162	This meeting has been very informative; particularly in the areas of the diversity of transportation systems. Question: The research overwhelmingly indicates that it is feasible to extend the Red Line. Why is the process so long in implementing the extension of the Red Line? Our communities are fitting weary and impatient!	WPL	1,4
163	Like many other people, I would really like to know why this project is taking so long? (Around 40 years) We were told that the monies were available.	WPL	1,4,14
164	Will you have a place in your plan for the displaced persons?	WPL	12
165	What safety precautions will be in place for underground?	WPL	8,11
166	Where will the Red Line stations be along the proposed routes?	WPL	10
167	Who determines the route the Red Line Extension will take?	WPL	1,6
168	Can I get mailings of all your evaluations?	WPL	13
169	If heavy rail is used, what would be done for security purposes? I'm concerned about the overcast and concealing this creates of business and people under this elevated area, eg: 63rd Street.	WPL	8,18
170	With CTA proposing cuts what will be the hours of operation for the new transit line?	WPL	11
171	Will a percentage of the new jobs created with CTA be left open for some of the people in the community where the new line will venture?	WPL	18
172	Presidential Order 12898 detailed environmental justice principles, will CTA include this Order while making decisions about this development?	WPL	18
173	How is environmental justice issues being applied to this development of transportation?	WPL	18
174	Pastor Leroy Sanders - not present tonight, but he should be informed about the progress of this project.	WPL	13
175	What route will the train take?	USPS	7
176	How long will it take for a final decision to be made for construction to start?	USPS	4
177	God's Blessings on this project.	USPS	19
178	Why do south side commuters have to wait two to three times longer than north side commuters to receive basic service that pails in comparison. The red line extension is long overdue and must be constructed before any talk of a Skokie extension. Its not fair the south siders had to wait an additional 10 years for expressway reconstruction when the Kennedy has far less traffic. Now we are repeating this prejudice again to south side commuters of the cta.	EMAIL	1,2,18
179	I'm writing because I'm excited about the CTA finally taking the steps it needs to bring the Dan Ryan line extension to fruition and would like to be added to the Red Line Extension Project mailing list.	EMAIL	13
180	Why do south side commuters have to continually wait for transit improvements? The basic commuter services of the CTA buses and rail lines already pails in comparison from the north side to the south side . The red line extension is long overdue and must be constructed before any talk of a Skokie extension or any other north side improvements. Is not the brown and pink line renovations enough. The tearing down of the 63rd & Stony Island station was insulting, and resulted in longer commutes for anyone living east and south. It is not fair for the south side commuters to continually receive less service, the worst buses and never receive our fair share of transit improvements. When will the prejudice to south side commuters stop!!!	EMAIL	1,2,18,19
181	The South Side has become more populated than when this line was originally designed. An extension would make more passengers further south have an easier commute.	USPS	18
182	CTA needs to create a better time schedule for when a particular bus or train will arrive.	USPS	19
183	I think this addition will be a great opportunity for our community that will bring good paying jobs for the people which will improve the living conditions of our communities. I will support the expansion project by any way I can. UP Route.	HND	7
184	This extension will greatly benefit the entire city of Chicago. I rode the red line with my granddaughter from 87th to Grand to go to Navy Pier 2 days ago. It was a great ride.	HND	7

CHICAGO TRANSIT AUTHORITY
Red Line Extension Alternatives Analysis Study
Screen One Public Involvement * Public Comments and Questions
November 21, 2007

No.	Comment/Question	Received Via*	Topic Area(s)
185	I support the UP route.	HND	7
186	I want the UP Route extended to 130th St.	HND	7
187	I would like to see the UP Route extended.	HND	7
188	I want the UP route extended to 130th St.	HND	7
189	I would like to see the UP Route extended.	HND	7
190	Much need. UP Route.	HND	7
191	The UP Route.	HND	7
192	The UP Route.	HND	7
193	Please extend the Red line to 130rd. It is very much needed for transportation purpses. The UP route	HND	7
194	No questions right now. Except I want the UP Route.	HND	7
195	The UP Route.	HND	7
196	UP Route.	HND	7
197	We would love to let you know we need the UP Route	HND	7
198	I think it would be a good idea to extend the Red Line with stops on Michigan Ave. and King Drive. Also a stop if possible on State Street South.	HND	7
199	I think we should have the UP line so that the traffic on the Bishop Ford will be lessend and the people in that community will have better access to jobs.	HND	7,18
200	It would be nice to see the red line extended to 130th Street.	HND	7
201	I grew up in the Greater Roseland community. I support the UP route.	HND	7
202	Extension of the Red Line should be given highest priority for economic, financial and personal gain to the community. This has been needed for a long time. By the grace of God it shall be done.	HND	18
203	I think that it is a great idea to bring the red line to 130th street. People can get on the bus at 95th Dan Ryan and ride all the way to 130th rather than getting on several trains and buses. Ths is more convienent for individuals and families. There wil also be more jobs available.	HND	7,18
204	I think it would be a good idea for the red line to extend further south.	HND	7
205	I would like to see the red line extended out this way for the convienence of the people who live out this way. Also: this will hopefully create a few more jobs for people.	HND	7,18
206	I would like to see the Red Line Extension added to 130th St.	HND	7
207	I' asking for the Red Line to Create Job for the community	HND	18
208	This extension would be a great opportunity for our community where as it will provide the community with better transportation and provide more job opportunity. I support the UP Route.	HND	7,18
209	You act as though the considerable Metra infrastructure in this area does not exist. Within your Study Area there already exist 10 stations served by the Metra Electric Line, as well as another 2 served by the Metra Rock Island Line. Your "alternatives analysis" overlooks the obvious - and very inexpensive - remedy for the transit needs of this area, which is to turn the in-city portions of the Metra Electric line into a CTA operation. The right-of-way, tracks, and stations exist. This proposal has been nicknamed the "Grey Line".	EMAIL	5

No.	Comment/Question	Received Via*	Topic Area(s)
	One major reason for having the CTA operate the Blue Island, Kensington, and South Chicago branches of the Metra Electric as an "L" would be the ability to transfer to other routes to complete a trip. Currently, this requires paying two separate fares using incompatible fare systems. Having the CTA operate the Metra Electric city sections would resolve these issues, and also free up a large number of the CTA buses currently allocated for express bus service along the south lakefront. I think you need to seriously explain why this cheap, easy proposal cannot work, before asking the taxpayers to fund expensive and essentially duplicate facilities. There are already 12 rapid transit stations built, paid for, and in operation within the Study Area. We don't need any more - we just need to make better use of what we already have. It is incumbent on you to include this alternative in your formal Alternatives Analysis, otherwise you will have failed to consider all reasonable alternatives for meeting the very real transit needs of your Study Area. For more information, refer to the Chicago Area Transportation Study "Shared Path 2030" Regional Transportation Plan at http://www.sp2030.com/proposals/index.htm This proposal earned one of the strongest ratings of all those in Shared Path 2030, due to its combination of maximum benefit and minimum cost.		

*** Key to source of comments:**

CSU	Comment received at Public Meeting held at Chicago State University
EMAIL	Comment sent to CTA by email
HND	Comment hand delivered to CTA
STK	Comment received at Stakeholder Meeting
USPS	Comment sent to CTA by postal mail
WPL	Comment received at public Meeting held at West Pullman Library

Chicago Transit Authority
Red Line Extension Alternatives Analysis Study

Screen 1 Public Involvement
Responses to Public Comments and Questions

15 July 2008

Written questions and comments regarding the Red Line Extension Alternatives Analysis Study were submitted by a variety of individuals and groups from throughout the Chicago region at the study's Screen 1 Public Meetings held on April 10 and 11, 2007. In addition, public comments and questions on Screen 1 were submitted directly to the Chicago Transit Authority (CTA) via e-mail and postal mail through May 11, 2007.

All of the questions and comments have been collected and compiled to provide a comprehensive review of the issues raised along with CTA's responses. Every question, comment, and suggestion, submitted during the public comment period has been compiled in the "Outreach Comment Database" (see separate document). Each question has been recorded verbatim and assigned a number that corresponds with the answers provided in this document, ensuring every question or comment submitted has been reviewed and answered or acknowledged. Collectively, the public comments and preferences will be considered in the evaluation of alternatives and concepts introduced through the public involvement process and may be evaluated and/or reflected in advancing alternatives as appropriate.

Many of the comments received were very similar in nature. As a result, similar comments and their responses have been grouped by topic and "General Comment" heading below to avoid duplicative responses. Questions or comments requiring individual or specific responses are also included below along with unique responses. In order to understand some terms used in the Comments and Responses, it may be necessary to review the original Screen 1 presentation materials which are posted on CTA's Web site www.transitchicago.com.

The list below shows the index of topics covered in the report, along with the number of comments received for each. Because comments often refer to more than one topic, the numbers associated with each do not equal the total number of comments received.

Index of Topics

1. FTA's Alternatives Analysis Process (15)
2. Relationship of Red Line Extension to Other Proposed Transit Projects (6)
3. Relationship of Red Line Extension Project to Far South Sub-Regional Study (2)
4. Overall Red Line Extension Project Timeline, Purpose, and Need (14)
5. Red Line Extension Study Area (10)
6. Evaluation Criteria Used in the Alternatives Analysis Study (10)
7. Alignments (Corridors) Analyzed (89)
8. Vertical Profiles Analyzed (9)
9. Transit Vehicle Technologies (Modes) Analyzed (19)
10. Proposed Red Line Extension Stations (6)
11. Proposed Red Line Extension Operations (7)
12. Potential Property Acquisition & Impacts (12)
13. Alternatives Analysis Public Involvement Process and Format (19)
14. Funding for Red Line Extension Construction and Operations (9)
15. Potential Red Line Extension Impacts on Existing CTA Services (5)
16. Potential Red Line Extension Connections with Existing Regional Transit Services (11)
17. Potential Red Line Extension Parking Facilities (5)
18. Potential Red Line Extension Economic and Environmental Impacts (39)
19. General Customer Service Questions/Compliments/Complaints (14)

1.

FTA's Alternatives Analysis Process

General Comment:

Please Describe the Federal Transit Administration's (FTA) Alternatives Analysis process and its components.

Pertains to specific comments:

9, 38, 54, 72, 77, 98, 158, 159, 162, 163, 167, 178, 180

Response to Overall Category Comment:

Alternatives Analysis has for over 25 years been a key part of FTA's decision-making process for awarding grant funding to support fixed guideway transit projects. Federal law requires that projects seeking grant funding from FTA's New Starts program be based upon the results of an alternatives analysis study and subsequent preliminary engineering. Alternatives analysis has also been a part of established transportation planning practice in the United States for several decades. At its core, alternatives analysis is about supporting local decision-making. An effective alternatives analysis answers the questions: What are the transportation problems in a corridor? What are their underlying causes? What are viable options for addressing these problems? What are their costs? What are their benefits?[1]

The Red Line Extension project is currently conducting its Alternatives Analysis study. The Red Line Extension Alternatives Analysis study will have three steps or "screens." Screen 1, which has just been completed and presented to the public, has issued preliminary findings regarding corridors, alignments, and vehicle technologies that should be advanced to Screen 2 for further analysis. These findings have determined 3 vehicle technologies, 3 potential corridors and 3 alignments that should be studied further. Screens 2 and 3 will further refine these corridors, technologies and alignments. In each successive screen, the potential locations, vehicles and alignments will be discussed in more detail, costs and ridership will be projected and operational questions considered. Ultimately, this process will result in the selection of a Locally Preferred Alternative (LPA) which, with FTA approval, will subsequently undergo environmental analysis and preliminary engineering.

A detailed description of the formal FTA Alternatives Analysis process is available at the Federal Transit Administration's web site: http://www.fta.dot.gov/16363_ENG_HTML.htm .

Other Specific Comments Noted on this Topic:

Comment:

81: Given that PB did a feasibility study for CDOT that came to most of the conclusions we've heard tonight, what is new in this AA?

Response:

The feasibility study that was conducted for CDOT served as a starting point to build the "Universe of Alternatives" for the Red Line Extension's Alternatives Analysis. The results presented in Screen 1 represent a shortlist of alternatives that merit further consideration in the alternatives analysis study. In subsequent screens, increasingly rigorous evaluation criteria will be applied to the remaining alternatives with the objective of identifying a Locally Preferred Alternative. Unlike a feasibility study, a formal alternatives analysis (AA) must follow guidelines as prescribed by the Federal Transit Administration. The AA considers additional transit alternatives not considered during the feasibility study introduces public involvement in the planning process and represents the first formal step in the application for New Starts funding.

Comment:

85: What is the relationship of Parsons-Brinkerhoff (PB) to CTA? How committed is PB to the CTA's strategic plan?

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[1] "Additional Guidance on Local Initiation of Alternatives Analysis Planning Studies." Federal Transit Authority Web site.

Response:

PB is a paid consultant to the CTA, performing the technical services for the Red Line Extension Alternatives Analysis. CTA relies on transportation consultants like PB to assist in the completion of project analysis and deliverables for special projects for which it is more cost effective to contract for the necessary expertise for limited time rather than adding to CTA planning staff. PB is a widely recognized consulting firm that participated in a competitive bidding process against other consulting companies to assist the CTA with the completion of the Red Line Extension Alternatives Analysis. The CTA awarded the contract to PB due to their technical skills and extensive experience performing similar work. The project team assisting with the Red Line Extension is local to Chicago and familiar with the city, the study area and its related transportation needs. CTA has oversight on all work completed by PB and the CTA and PB are partners in the Red Line Extension Alternatives Analysis; both parties are committed to the goals and success of the project.

2. Relationship of Red Line Extension to Other Proposed Transit Projects

General Comment:

Are other transit projects being considered by CTA, and if so, what is the relationship between the Red Line Extension and these other projects?

Pertains to specific comments:

94, 102, 126, 158, 178, 180

Response:

Every five to six years, the United States Congress enacts legislation that authorizes federal funding for highway, transit, motor carrier, safety, and research programs across the country. This federal support represents the primary source of capital funding for CTA and other transit agencies throughout the U.S. The current legislation, known as SAFETEA-LU (Safe, Accountable, Flexible, Efficient Transportation Equity Act - A Legacy for Users), authorizes the federal transit and highway programs through 2009. President Bush signed the act into law on August 10, 2005.

The SAFETEA-LU legislation authorized CTA to seek federal New Starts grant support for five new rail lines or line extensions including: the Red Line Extension to 130th Street; the Orange Line Extension to Ford City; the Yellow Line Extension to Old Orchard; the Circle Line; and the Ogden-Carroll-Navy Pier Transitway. In order to qualify for New Starts funding, CTA is required to perform comprehensive Alternatives Analysis studies for each. Alternatives Analysis studies for all five projects are currently underway following the same federally mandated process as the Red Line Extension study, but addressing the unique transportation needs of their respective study areas.

A key objective of the Federal Transit Administration's Alternatives Analysis process is to measure all transit projects from across the nation by the same set of standards. This process ranks projects based on this measurement and not on where they are located. In this way, the benefits and costs of a project can be objectively measured in comparison to all others. Acknowledging that each project has a unique Purpose and Need, the process allows multiple projects from the same region to be rated highly. It is not unusual for a large region such as Chicago to seek approval for several major transit initiatives at the same time. In the late 1990s, CTA won New Starts funding approval for both the Cermak (Douglas) Branch reconstruction and the Brown Line capacity expansion project at the same time. Metra has also received New Starts funding for multiple projects at the same time. New York City in 2005 had two multi-billion dollar transit projects approved for New Starts funding.

In order to qualify for federal funding, regional transportation projects must also be included in an official Regional Transportation Plan. Chicago's Regional Transportation Plan is prepared by the Chicago Metropolitan Agency for Planning[2] (CMAP) with input from local and state government agencies

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[2] CMAP was created in 2006 by the merger of the Chicago Area Transportation Study (CATS) and the Northeastern Illinois Planning Commission (NIPC).

(including CTA), community organizations, and the general public. The plan is updated regularly and the Red Line Extension project is included in the plan. The most recent comprehensive update of the 2030 Regional Transportation Plan (RTP) was prepared in 2006 and involved extensive public outreach meetings throughout the region in May and June of 2006. A technical update of the 2030 RTP was also completed earlier this year. Additional information on this plan can be found on CMAP's "Shared Path 2030" Web site www.sp2030.com.

3. Relationship between Far South Sub-Regional Study and Red Line Extension Project

General Comment:

We have questions relating to the Far South Sub-Regional Study and its impact to the Red Line Extension Project.

Pertains to specific comments:

79, 80

Response to Overall Category Comment:

CTA's Far South Sub-regional Study seeks to better meet transportation needs in a relatively short timeframe (approximately one to two years) through potential restructuring of existing bus routes and/or creation of new bus services. Guided by comments voiced by the local communities, the objective of the sub-regional study is to implement solutions that can address transit needs in a shorter time frame. The Red Line Extension project not only examines existing conditions, but it also accounts for what is anticipated to be problems over a longer planning horizon, out to year 2030. As a result, the scope of the Red Line Extension project is focused on a more permanent long-term solution that can not only solve the study area's current day problems, but can mitigate growing transportation problems projected for future years.

4. Overall Red Line Extension Project Schedule and Timeline, Purpose and Need

General Comment:

What is the timeline of the project? How long will it take from design until operation?

Pertains to specific comments:

70, 77, 98, 121, 125, 126, 139, 155, 157, 159, 160, 162, 163, 176

Response to Overall Category Comment:

The FTA New Start grant program requires conceptual transit project proposals to proceed through a formal process of planning, design, and construction. Upon completion of this process, the project is ready for operation. The process involves five formal steps: Alternatives Analysis (AA); Environmental Impact Statement (EIS); Preliminary Engineering (PE); Final Design (FD); and Construction. Each of these steps typically takes 2-3 years to complete. Initiation of each step is also contingent upon continued availability of federal and local funding, the timing of which will also affect the overall project schedule. For highly complex projects the Final Design and Construction steps take longer, particularly if construction is implemented in sequential phases rather than all at once.

In the Alternatives Analysis step, the project's purpose and need is identified, alternatives to address the purpose and need are developed and evaluated, comprehensive and on-going public involvement is initiated, and a Locally Preferred Alternative (LPA) is determined. The Red Line Extension project's "purpose and need" is to improve transportation access and enhance opportunity for economic development within the study area. In particular, transportation improvements are needed to reduce the significant bus and passenger congestion at CTA's existing 95th Street Red Line station; reduce lengthy bus trip times to access the 95th Street Red Line station from neighborhoods south of 95th Street; reduce the lengthy transit commute times experienced by many residents of the study area; and more effectively manage future traffic growth in the study area. Extending Red Line transit service south of 95th Street is intended to stimulate economic development and enhance job opportunities by improving access to, within, and beyond the study area and shortening transit travel times through faster and more direct transit service.

The Red Line Extension project is currently in the Alternatives Analysis phase. The next step is preparation of an Environmental Impact Statement (EIS). In this step, potential environmental, financial and economic impacts of each alternative are identified, potential environmental impacts of the LPA are analyzed; environmental mitigation strategies are developed, public hearings are conducted to receive input, and a formal Record of Decision is received from the FTA upon successful completion. The Preliminary Engineering step involves engineering effort to support the EIS (30% design level), development of project phasing and construction staging, and feasibility review of mitigation approaches for construction or operational impacts. In the Final Design step the engineering design started in PE is completed, capital and operating cost estimates are updated and construction drawings are prepared, and a Full Funding Grant Agreement is obtained from the FTA upon successful completion. The Construction step commences when federal and local matching funds are secured.

The current Red Line Extension Alternatives Analysis study is expected to conduct public involvement meetings for Screens 2 and 3 in 2008. Identification of an LPA and completion of the study is anticipated in 2008.

5. Red Line Extension Study Area

General Comments:

How large is the project study area? How were the boundaries of the study area determined?

Pertains to specific comments:

9, 58, 70, 83, 133

Response to Overall Category Comment:

A key component of the Alternatives Analysis process is specifying a study area of a definite size for the project. The goal is to establish a specific area and to define the transit challenges and opportunities within this particular space, so that potential solutions can be measured against these defined challenges. Keeping the study area focused also helps to avoid confusion between multiple unique transit project proposals within the same city or region. Too large a study area can make it too difficult to determine accurately whether the potential solutions effectively address the identified transportation needs.

The Red Line Extension study area is bounded by the current terminus of the existing CTA Red Line at 95th Street (9500S) on the north, the Little Calumet River (approximately 13000S) on the south, Ashland Avenue (1600W) on the west, and Stony Island Avenue (1600E) on the east. The study area is four (4) miles east-to-west and approximately five (5) miles north-to-south. These boundaries define an area with numerous opportunities for improving transit connections and growing transit market share. A key goal of the Red Line Extension is to improve transportation access and enhance opportunities for economic development. In particular, transportation improvements are needed to reduce the significant bus and passenger congestion at CTA's existing 95th Street Red Line station; reduce lengthy bus trip times to access the 95th Street Red Line station from neighborhoods south of 95th Street; reduce the lengthy transit commute times experienced by many residents of the study area; and more effectively manage future traffic growth in the study area. Extending Red Line transit service south of 95th Street is intended to stimulate economic development and enhance job opportunities by improving access and shortening transit travel times through faster and more direct transit service. The study area boundaries encompass the areas that would benefit most directly from such transit service improvements.

For more information on the details of the study area population, please see the Screen 1 report document, which is available for download at the CTA's website www.chicagotransit.com as noted in the introduction to this document.

Other Specific Comments Noted on this Topic:

Comment:

We have questions relating to the "Gray Line" proposal and its consideration in this Alternatives Analysis.

Pertains to specific comments:

55, 56, 57, 209

Response:

The "Gray Line" proposal calls for operational changes to increase service frequency on the Metra Electric District Line and improve CTA connections to this facility as well as fare integration between regional transit services.

Opportunities for changes or improvements to the existing Metra commuter rail service and CTA bus services within the corridor will be evaluated in detail during both the Screen 2 and 3 processes. These types of "lower capital cost investment" opportunities will be considered within the no-build and TSM alternatives described in Topic 6, as well as in conjunction and coordination with other more capital intensive options. Additionally, CTA is focusing attention on identifying possibilities to enhance intermodal interchange on the various alignments. See Topic 16 for additional information about connections with existing regional transit services.

A proposed "Gray Line" meets some of the needs of the study area, such as reducing the lengthy transit commute times experienced by many residents of the study area. However, it will not be included as a build alternative in the current Alternatives Analysis because it does not comprehensively address all of the needs of the project, including alleviating the bus and passenger congestion at 95th Street Red Line station, reducing travel times of passengers that transfer from bus to CTA rail to best access their destination, or stimulating economic development in the region. Additionally, as noted in Topic 9, commuter rail has several characteristics that are less favorable for the study area than other modes analyzed (such as bus and heavy rail).

Comment:

7: If extended again, will this line serve the Gary Airport and extend onto South Bend, Indiana?

Response:

The scope of this Alternatives Analysis study is strictly tied to the project's purpose and need (see Topic Area 4) and the project's defined study area (above). While consideration can be made to preserve other future opportunities for expansion, any initiative to further expand service to Gary Airport and South Bend, Indiana would merit further investigation and its own planning study.

6. Evaluation Criteria Used in the Alternatives Analysis Study

General Comment:

How are screening criteria applied throughout the analysis to advance the alternatives being evaluated?

Pertains to specific comments:

18, 38, 48, 53, 54, 61, 90, 145, 167

Response to Overall Category Comment:

A three phase evaluation methodology is being used for the Red Line Extension Alternatives Analysis. With each screen increasingly detailed and comprehensive evaluation criteria are applied to a decreasing number of alignment alternatives that have been identified as the best potential transportation investments. Each step in the evaluation process is thus designed to increase the level of detailed planning and engineering analysis on progressively fewer alternatives.

In Screen 1, the Alternatives Analysis began with identifying a "universe" of alternatives—all of the conceivable transit service improvements that may address the purpose and need for the project within the study area. These alternatives included a wide array of transit vehicle technologies, six potential corridors through the study area, and three possibilities for vertical profiles (above ground, below ground, and at ground level). This universe of alternatives was evaluated in Screen 1 to identify a shortlist of specific technologies, corridors, and profiles that may best satisfy the project's goals and objectives.

In Screen 1, the transit vehicle technologies were evaluated for study area suitability according to the length of commute, typical station spacing, operating speed and system applicability. Simultaneously, the corridors through the study area were evaluated according to social factors (land use, neighborhoods and communities, and population access) and transportation factors (system usage and accessibility). Next, in combination with possible vertical profiles (subway, trench, at-grade, or elevated), the corridors and technologies that were found to be suitable to the study area were then evaluated according to general environmental, transportation, and economic parameters. These general evaluation criteria were used to eliminate alternatives that were not capable of meeting the project's goals.

For more information on the Screen 1 evaluation criteria or evaluation results of each alternative, please see the detailed summaries available for review on the Screen 1 presentation boards, which are available for download at the CTA's website www.chicagotransit.com as noted in the introduction to this document.

Other Specific Comments Noted on this Topic:

Comment:

3: Would like more information on no-build and baseline?

Response:

The No-Build Alternative incorporates only those transportation improvements that are included in the 2030 Regional Transportation Plan for which need, commitment, financing, and public and political support are identified and are reasonably expected to be implemented. The second alternative that is developed for consideration is called the Transportation System Management (TSM) Alternative and is defined as the best that can be done for improving mobility without constructing a new transit guideway. The TSM Alternative can include applicable transportation system upgrades such as intersection improvements, bus route restructuring, shortened bus headways, express and limited-stop service, signalization improvements, and timed-transfer operations.

The Federal Transit Administration must approve the definition of the No-Build and TSM Alternatives; however, only one of these alternatives advances as the Baseline Alternative. Because the Baseline Alternative should represents the best that can be done to improve transit service in the study area without major capital investment in new infrastructure, it is often the TSM Alternative that is used as the Baseline Alternative. The Baseline Alternative should be designed to address identified transportation needs in the Red Line Extension study area and demonstrate the extent to which these problems can be solved without a proposed major capital investment.

The definitions and selection of the No-Build and TSM Alternatives – and the alternative chosen as the Baseline Alternative – occur in the next stage of the project, Screen 2. At that time, definition of the specifics of these alternatives will be presented to the public in one of the future project public forums. Additionally, measured benefits from the alignment, mode and vertical profile alternatives (or build alternatives) that have advanced to Screen 2 will be compared with the FTA-required Baseline Alternative. This comparative analysis is a key activity that the FTA uses in their annual rating of New Starts transit projects.

7. Alignments (Corridors) Analyzed

General Comment for UPRR Corridor:

There is a strong level of support within the community for extending CTA Red Line service along the Union Pacific Railway corridor.

Pertains to specific comments:

1, 4, 15, 16, 17, 24, 25, 26, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 44, 45, 64, 69, 77, 95, 107, 110, 111, 112, 113, 114, 115, 116, 119, 183, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 200, 201, 203, 206, 208

General Comment for Michigan Avenue / Halsted Street Corridors:

There is support within the community for extending CTA Red Line service along the Michigan Avenue and/or Halsted Street corridors.

Pertains to specific comments:

41, 46, 68, 109, 123, 129, 134, 135, 136, 198

General Comment for Various Corridors Analyzed:

There is support for other corridors and/or please provide clarification on the various corridors considered.

Pertains to specific comments:

8, 14, 22, 43, 48, 53, 60, 62, 63, 67, 78, 103, 121, 122, 127, 128, 133, 149, 175, 184, 199, 204, 205

Response to Overall Category Comment:

Several recommendations and preferences for potential alignment extensions were provided on the question/comment cards submitted by the public. Many are derivations of the alternatives already defined. Others significantly differ from the alternatives proposed by the CTA. Staff will review all suggestions and incorporate in the analysis those that offer merit for further consideration. Suggested alignments that are predominantly or entirely outside the defined study area will not be considered.

Regarding the defined alternatives, nine (9) different north/south corridors were defined and reviewed as part of the universe of alternatives. Collectively, these alternatives encompass the entire study area. From west-to-east across the study area alternatives include: 1) I-57 Expressway Corridor that, similar to the existing Red Line would be an extension of the rapid transit service in the median of the expressway. 2) The next corridor is Halsted, one of the major north/south arterial streets in the study area. Halsted is a wide street with four lanes of traffic, parking and a median. The corridor attracts a large amount of activity and includes a concentration of retail stores. Several local bus routes currently use Halsted. 3) The Union Pacific (UP) Railroad corridor is the freight railroad corridor and then continues south-east parallel to the Bishop-Ford/130th Street area. This alternative would serve the center of the study area and then shift to the southeast. 4)Wentworth is predominantly a residential street, that narrows significantly towards the south. 5) The State Street alternative is also a narrow street that is mostly residential. The latter two alternatives are not currently served by bus service.

Continuing to the east is: 6) Michigan Avenue, which is a major commercial corridor through the heart of the study area with several local bus services operating on it; towards the south end (south of 120th) the land use becomes residential. 7) King Drive is the next corridor to the east. King Drive has bus service over a portion of it, and much of the surrounding land use is residential; the street ends at 115th Street. 8) Cottage Grove/Metra Electric alternative would extend east along 95th Street and then generally operate parallel to the Metra Electric service (along Cottage Grove) and then head to the southeast, adjacent to the South Shore Line, ending in the vicinity of the Bishop Ford and 130th Street. The ninth (9) and last corridor is the I-94 - Bishop Ford alternative. This corridor has been studied previously and would use the expressway median from 95th Street and continue down I-94. This is a low density non-residential corridor over the majority of its length.

Other Specific Comments on this Topic:

Comment:

42. Why don't you reconsider taking the Red Line Extension down the Bishop Ford Expressway and reroute buses into station?

Response:

The ninth alternative considered does propose use of the Bishop Ford expressway median from 95th street to 130th Street. Optimizing existing, and potentially expanding, transit service, including feeder bus and suburban bus services, are important considerations in developing this and other alternatives being studied. One concern with this alternative is that it is somewhat removed from the population centers in the study area. While it is true that feeder buses could link the population centers to the new stations, travel time reductions from reduced transfer activity is a key purpose of this extension. All of these factors will be considered in greater detail as the Alternatives Analysis advances.

8. Vertical Profiles Analyzed

General Comment:

Please provide additional information on the issues involved with elevated, at-grade, trench and underground alignments.

Pertains to specific comments:

27, 41, 66, 110, 113, 165, 169

Response to Overall Category Comment:

Four alignments (or profiles) are possible for any transit service: below ground (subway), open cut (trench), above ground (elevated), or at-grade (street level). The current CTA system features trains that operate on each of the four alignments at various points within the rail system. Following modern transit industry practice, CTA-compatible heavy rail will only be considered in elevated, trench, or below ground alignments in the Red Line Extension analysis (not at street level).[3] Bus rapid transit will only be considered on street level, because the benefits of lower construction costs could not be realized if it used an elevated structure or subway alignment like heavy rail.

In Screen 1, vertical profiles for corridors and transit technologies (rail, bus, etc.) were evaluated according to general environmental, transportation, and economic parameters. These general evaluation criteria were used to eliminate alternatives that were not capable of meeting the project's goals. See Topic Area 6 for more information. Preferences for potential vertical profiles that were provided on the question/comment cards submitted by the public will be reviewed by staff and profiles that offer merit will be incorporated into the analysis for further consideration.

Other Specific Comments on this Topic:

Comment:

23. The UP option looks good. Would the CTA build an elevated line beside the tracks, as they did with the Orange Line, or is the UP line abandoned and they could simply build on the embankment?

Response:

For the Red Line Extension Alternative Analysis, elevated and trench rail profiles are being considered for the UP corridor alternative.

The UP Line is an active rail line and is an important corridor linking Chicago and the south. This freight line is at-grade from the north end of the study area to State Street (south of 115th) and then elevated through the center of Roseland. It returns to an at-grade alignment after crossing over the Metra Electric/Canadian National rail lines around 119th Street. The UP Line is also being evaluated by Metra as a possible commuter rail route for the South-East Service, which is in its own Alternatives Analysis planning process. CTA will coordinate with both Metra and UP to accommodate the existing freight line and any potential transit improvements.

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[3] Although there are section of CTA's Brown, Pink, and Purple heavy rail transit lines that currently operate at-grade, this characteristic is due to the design standards that were in place at the time these lines were built nearly 100 years ago. Modern design practice for newly-built heavy rail transit lines calls for complete grade separation to promote faster, safer, and more reliable service for transit customers.

Comment:

59. Are you considering elevated trains for the Halsted and Michigan models?

Response:

In the case of the Halsted and Michigan alignments, both subway and elevated rail profiles continue to be analyzed.

9. Transit Vehicle Technologies (Modes) Analyzed

General Comment for Heavy Rail Rapid Transit:

There is support within the community for Heavy Rail Rapid Transit.

Pertains to Specific Comments:

1, 16, 24, 27, 41, 61, 65, 66, 68, 93

General Comment for Various Transit Vehicle Technologies Analyzed:

There is support for other vehicle technologies and/or please provide clarification on the various modes considered.

Pertains to specific comments:

44, 73, 120, 136

Response to Overall Category Comment:

Several recommendations and preferences for modes were provided on the question/comment cards submitted by the public. Staff will review all suggestions and incorporate in the analysis those that offer merit for further consideration.

During Phase 1, eleven (11) transit technologies were evaluated applying a series of screening factors including vehicle operating speed, station spacing requirements, capacity, reliability, and daily use in revenue transit operations. Preliminary findings for Screen 1 identified two technologies to advance to more detailed evaluation -- Bus Rapid Transit, or BRT, and Heavy Rail Transit, or HRT -- the existing type of Red Line technology -- to be carried forward. The other nine technologies were deemed not as well suited to this study area due to factors like the operating speed and other compatibility issues. Bus Rapid Transit will be considered only as an at-grade application or in-street operation. For Heavy Rail Transit, three different options in terms of profile will be considered including; elevated, in-trench and underground (or subway). HRT and BRT technologies will now be evaluated within the operating context of the alternatives being carried forward.

Other Specific Comments on this Topic:

Comments:

49. Why was commuter rail rejected?
50. Why was a viable commuter rail alternative rejected?

Response:

In Screen 1, the transit vehicle technologies were evaluated for study area suitability according to the length of commute, typical station spacing, operating speed and system applicability. Commuter rail has several characteristics that are less favorable for the study area than other modes analyzed (such as bus and heavy rail). Commuter rail is typically used for longer distance trips, such as from the suburbs to the central city, and station spacing is usually three to seven miles apart. Meanwhile, the study area for the Red Line Extension is four (4) miles east-to-west and approximately five (5) miles north-to-south. Preferred modes in the study area would need to have closely spaced stations to facilitate trip making both within and beyond the study area. Additionally, the frequency of service required to effectively serve short distance trips anticipated in this study area is not conducive to commuter rail. Commuter rail service tends to be oriented toward peak period travel; in contrast, the technology selected to serve the study area demand would be intended for operation seven days per week and up to 24-hours per day.

Comment:

100. In order to save money, can the rapid bus transit be made possible for the corridors listed instead of rail?

Response:

Bus Rapid Transit (BRT) along with Heavy Rail Transit (HRT) are the two technologies that based upon the analysis will be brought forward into the next planning and evaluation phase. While BRT can utilize separate lanes, station construction, special signalization, and other infrastructure, BRT within this study will be confined to at-grade (or in-street) operations. This reduces the infrastructure requirements -- and costs -- often associated with BRT as confirmed by several of the BRT services in operation throughout the U.S. The planning process is not yet in an advanced stage that would support any statement regarding capital or operating costs.

Screen 1 findings recommend BRT alternatives to operate on Halsted and Michigan at-grade. Heavy rail is recommended to be carried forward to further evaluate its operation along the Halsted and Michigan Avenue corridors in either subway or elevated. For the UP Railroad, operating along an elevated right-of-way or in trench will be considered. Many factors in addition to cost will be evaluated in the consideration and eventual selection of the mode best suited for the projected level of ridership, including the appropriateness for the corridor, environmental compatibility, traffic impacts, safety, and visual impacts. Positive impacts will be identified as well, such as the anticipated positive impacts on community and commercial development and expanded employment opportunity.

Comments:

101. What impact would hybrid busing bring to the community? Cost?
141. What source of fuel will be used to power the selected technology?

Response:

The planning process has not yet advanced to a stage that would support any statement regarding the impacts of various propulsion system alternatives.

10. Proposed Red Line Extension Stations

General Comment:

Where would stations on the proposed Red Line Extension be located?

Pertains to Specific Comments:

3, 19, 26, 61, 108, 166

Response to Overall Category Comment:

Prospective station locations for advancing BRT and HRT alternatives will be reviewed as part of Screen 2.

Physical constraints, the ability to transfer between lines, cost, property acquisition and other critical station design issues will all be addressed in the preparation of the federally required Environmental Impact Statement (EIS). The EIS process is a requirement for federal funding and mandates that any negative environmental impacts—including impacts upon the built environment—must be mitigated in order to receive federal approval. The EIS process begins after the Alternatives Analysis process ends and an LPA is determined.

11. Proposed Red Line Extension Operations

General Comment:

How will the service operate? Will the trains run 24 hours and what will be the fare?

Pertains to Specific Comments:

15, 46, 92, 103, 120, 165, 170

Response to Overall Category Comment:

At this time, specific operating hours, fares, and other operational issues of the Red Line Extension have not been determined. As a part of Screen 3, FTA guidance requires CTA to conduct additional analysis of ridership, travel times, and cost-effectiveness ratings (cost per travel time savings) on the proposed routes and transit technologies. Until these additional reviews have been made, operating recommendations will not be developed. It is expected, however, that any new CTA service will be generally consistent with current CTA operating practices and seek to provide customers with safe, frequent and reliable travel options. Any new CTA service and associated facilities recommended by this study would be consistent with the Americans with Disabilities Act (ADA) requirements.

12. Potential Property Acquisition and Impacts

General Comment:

Alternatives with less residential displacement are preferred. How will you handle displaced residents due to property acquisition?

Pertains to Specific Comments:

4, 18, 24, 90, 91, 127, 131, 149, 150, 151, 153, 164

Response to Overall Category Comment:

At this early stage in the Alternatives Analysis study CTA cannot determine how much private property, if any, would need to be acquired in order to construct and operate the selected alternative. A final determination on the vehicle technology, alignment and vertical profile will need to be established before potential property impacts can be assessed. Potential property impacts are determined in detail as a part of the Preliminary Engineering (PE) phase of project development, which proceeds concurrently with the preparation of the Environmental Impact Statement (EIS). The EIS process is a requirement for federal funding and mandates that any negative environmental impacts—including impacts upon private property—must be mitigated in order to receive federal approval. The EIS and PE processes both begin after the Alternatives Analysis process ends and an LPA is determined. Public acquisition of private property is governed by federal and local laws. In accordance with these laws, affected property owners would be compensated for their properties based on fair market values and can be provided relocation costs. See Topic 18 for additional details about potential economic and environmental impacts of the Red Line Extension project.

13. Alternatives Analysis Public Involvement Process and Format

General Comment:

Does the public involvement process for the Red Line Extension Alternatives Analysis study allow individuals to have a voice in the decision in the corridor selection? Is all the information (evaluation criteria, etc.) available to the public?

Pertains to Specific Comments:

5, 54, 82, 87, 96, 97, 99, 104, 105, 106, 143, 145, 146, 147, 148, 168, 174, 179

Response to Overall Category Comment:

Public involvement is a key component of this process. The outreach has already begun including a community stakeholders meeting with representatives and leaders of various community groups throughout the study area. We also have met with all the elected officials and reached out to all the aldermen representing the Red Line Extension study area and adjacent areas. Many of the state representatives and senators from the area have been given a briefing on this presentation. Meetings also included faith- based organizations, other community organizations, and city and state agencies such as the Chicago Department of Transportation, Illinois Department of Transportation, Regional Transportation Authority, Metra, and Pace. If your organization would like to be included in the stakeholder's meetings please contact Darud Akbar, CTA Government and Community Relations at dakbar@transitchicago.com.

The public involvement process for the Red Line Extension Alternatives Analysis study also includes a total of six public involvement meetings, two each at the conclusion of the Screen 1, Screen 2, and Screen 3/LPA analyses. The Screen 1 meetings were held at Chicago State University and West Pullman Public Library. Meeting locations for Screen 2 and Screen 3 have not yet been determined nor have the dates. The meeting locations must be close to public transit and accessible to people with disabilities. Suggestions for meeting locations may be sent to Darud Akbar, CTA Government and Community Relations at dakbar@transitchicago.com.

Meetings are announced through ads in neighborhood newspapers and publications as well as public alerts on CTA trains and buses, at rail stations, on the CTA Web site, and distributed to print and broadcast media via news releases.

The format of the meetings included groups of presentation boards containing detailed information on each area of analysis in the study, where individual conversations between the public and project staff knowledgeable about that area of analysis could take place. The public meetings also included a community presentation that provided information in a slideshow format led by the study's project managers (available at www.transitchicago.com). Meeting attendees were requested to submit questions and comments in a written format. CTA's goal in emphasizing written questions and comments has been to ensure everyone's thoughts are collected and reviewed, rather than only those individuals who might choose to speak publicly at a meeting or monopolize available time thus precluding others from voicing their questions and comments. The intent has been for everyone to have an equal opportunity to participate in the process. In addition, by reviewing and responding to similarly worded questions, the presenters efficiently addressed multiple individuals at once and avoided repetition during the public meetings. CTA and the consultant team staff have also been available to answer any individual questions on a one-on-one basis following the general question and answer period at each meeting.

The written comments received at the public meetings and other detailed comments submitted subsequently are being answered individually for the record in the format of this document, which will be made available publicly on the CTA Web site, by email to public meeting participants, and in hard copy by written request. All of the comment cards and other written communications (primarily emails) will collectively become part of the evaluation process and will be submitted to the Federal Transit Administration as a part of the official documentation for the Alternatives Analysis study.

Other Specific Comments on this Topic:

Comment:

10. Will representatives come out to groups to provide a presentation?

Response:

Presentations can be scheduled by contacting Darud Akbar, CTA Government and Community Relations at dakbar@transitchicago.com.

14. Funding of Red Line Extension Construction and Operations

General Comment:

How will the construction and operation of the Red Line Extension be funded? How much funding for this project has already been received by CTA? How much with the project cost?

Pertains to Specific Comments:

12, 13, 53, 87, 144, 156, 161, 163

Response:

The Red Line Extension will seek approval and funding for construction from the federal government through the Federal Transit Administration's "New Starts" grant program. This program provides funding for major public transit infrastructure projects throughout the U.S. For projects that ultimately receive a "Full Funding Grant Agreement," the federal government typically provides 50% or more of the project's capital costs. State and local funds comprise the remainder. Other sources may also be used to provide funding for the project, but the federal New Starts grant program is the program most capable of supporting transit projects of this nature. Securing a New Starts grant requires the project to be evaluated as part of a nationally competitive process.

To secure the federal New Starts funding, matching funds of at least 20% are required from non-federal (i.e., state and local) sources. From 2000 through 2004, the Chicago region's matching funds came from the State of Illinois through the Illinois FIRST legislation. The Illinois FIRST legislation expired on June 30, 2004. Since that time, CTA has been working with the Illinois Legislature to enact a replacement to Illinois FIRST and ensure that all future federal transit funds available to the Chicago region can be utilized.

Estimates of the Red Line Extension capital costs will depend on route and alignment and will be prepared during the second and third analysis phases, or Screens. Once the line is built and operational, the funds to operate the system will come from fare revenue as well as local and state funding sources, consistent with the funding mechanisms that support CTA's current bus and rail transit services.

At the present time, CTA only has sufficient funding to initiate this Alternatives Analysis study; it has received no federal funding for completing the remaining steps involved in planning, designing, and constructing the Red Line Extension project. Although the project was listed as "eligible" to receive federal funding in the SAFETEA-LU legislation of 2005 (see Topic 4), no funding for environmental analysis, preliminary engineering, final design, or construction of this project has been appropriated by the U.S. Congress (nor the Illinois State Legislature) at this time.

Other Specific Comments on this Topic:

Comment:

11. If non-federal funds were used, would this project move faster?

Response:

It is possible to build a major transit improvement such as the Red Line Extension without using any federal funding. Due to the high cost of this type of project and the limited availability of non-federal (i.e., state and local) funds seeking federal support is desirable. If sufficient state and local funds were identified so that no federal funding would be needed, there may be some time savings from avoiding federal requirements. This time savings may be limited – the project development process would still include similar steps. The Alternatives Analysis step remains a prudent planning process to ensure that the proposed public investment is best suited to addressing the identified purpose and need. Environmental studies will still be required per state and local laws, and the duration of design and construction steps would not change significantly due to a change in funding sources.

15. Potential Red Line Extension Impacts on Existing CTA Services

General Comment:

How would the Red Line Extension impact current CTA services, both during construction of the new service and ultimately during operation of the new service?

Pertains to specific comments:

88, 94, 123, 124, 137

Response to Overall Category Comment:

While the specifics of construction staging and the exact route of the Red Line Extension have not yet been established, a general guideline is that impacts to existing transit services must be minimized during construction. Bus reroutes are possible on paralleling streets through much of the study area.

The structure of existing bus routes in the study area may be changed to complement new high-capacity transit service. Depending on the specific route of the high-capacity service, the number of routes feeding into the 95th Street Red Line station may be reduced, which would reduce congestion in and around this facility.

16. Potential Red Line Extension Connections with Existing Regional Transit Services

General Comment:

Will the Red Line Extension connect with existing CTA and Metra lines? Will I be able to transfer from one service to another?

Pertains to specific comments:

20, 58, 74, 76, 83, 107, 108, 124

Response to Overall Category Comment:

A key goal of the Red Line Extension is to utilize and integrate existing regional transit infrastructure to the greatest extent possible. CTA's bus and rail lines, Metra's commuter rail lines, and Pace's suburban bus services are interrelated. The Red Line Extension will be designed to establish and maintain convenient connections between transit services it intersects. In the Alternatives Analysis study, suggested connection points between the Red Line Extension, CTA bus and rail lines, and Metra commuter rail lines will be identified. In particular, opportunities may exist to develop new connections between the proposed CTA Red Line Extension and the Metra Rock Island District, Metra Electric District and/or the NICTD South Shore Line commuter rail systems, possibly at either existing Metra stations or at new station locations. Similarly, opportunities for connections between the CTA Red Line Extension and Pace bus services will also be explored. These connection possibilities will be further described and analyzed in Screen 2 and 3.

While transit integration is a key goal of the project, regional transportation integration of multiple modes is also a priority. As a part of the Alternatives Analysis process, CTA meets regularly with its counterparts at Metra, Pace, RTA, the Chicago Department of Transportation, the Illinois Department of

Transportation, and the Chicago Metropolitan Agency for Planning to promote coordination within all components of the region's transportation network. The Red Line Extension's Purpose and Need includes effectively managing future traffic growth in the study area. The CTA seeks opportunities to connect with other transportation elements as opportunities permit.

Other Specific Comments on this Topic:

Comment:

47. If the goal is to improve transit, why not increase frequency of Metra services on both sides of corridor and restructure east-west bus service connections without major capital projects?

Response:

Opportunities for changes or improvements to the existing Metra commuter rail service and CTA bus services within the corridor will be evaluated in detail during both the Screen 2 and 3 processes. These types of "lower capital cost investment" opportunities will be considered within the no-build and TSM alternatives described in Topic 6, as well as in conjunction and coordination with other more capital intensive options.

Comments:

51. Can you explain the intermodal modes at 130th and UPRR?
52. Is Intermodal transfer being evaluated at 130th and the Metra Electric Line on the Michigan Avenue Alternative?

Response:

The study area and alignments under consideration have locations where significant intermodal interchange facilities could be built. For example, at Michigan/Kensington a number of local bus routes could interchange with high-capacity transit service (regardless of the technology selected). As noted in a previous response, it is also possible that Metra's Southeast Service might operate over the UP alignment, and so also serve this intermodal facility. At 130th/Bishop Ford, a similar bus interchange is possible, which could also include a South Shore Line interchange station. For various corridor alternatives, an intermodal facility is also possible at 130th and the Metra Electric District (MED) Line, although a new 130th Street MED passenger station would need to be constructed.

17. Potential Red Line Extension Parking Facilities

General Comment:

Will parking facilities be proposed and where will they be located?

Pertains to specific comments:

2, 6, 21, 107, 108

Response to Overall Category Comment:

Parking facilities associated with the proposed transit improvements in the study area are considered along with station locations. The amount of parking to be constructed is determined by forecast station usage. Proposed station locations will be addressed in the Screen 2 process. At that time, the location of each station, the area served, and proximity to major arterials and/or highways will determine whether parking is recommended at each station. If parking is determined to be advantageous at a proposed station, patronage forecast for those stations will determine the number of parking spaces and the type of parking facility required (e.g. parking lot, parking garage).

18. Potential Red Line Extension Economic and Environmental Impacts

General Comment:

What will be the economic and environmental impact of the Red Line Extension? What will be the community and economic benefits of the Red Line Extension?

Pertains to specific comments:

25, 27, 36, 48, 64, 74, 75, 77, 84, 102, 109, 112, 114, 115, 126, 127, 130, 134, 140, 142, 152, 154, 155, 159, 169, 171, 178, 180, 181, 199, 202, 203, 205, 207, 208

Response to Overall Category Comment:

An Environmental Impact Statement (EIS) will analyze in detail the social, economic, and environmental consequences and benefits of the proposed Red Line Extension. The environmental review process required by the *National Environmental Policy Act* of 1969 (NEPA) and related laws includes environmental impact analyses and the preparation of documentation for public review. Per FTA guidance, the environmental evaluation begins upon completion of the Alternatives Analysis study, and it will result in a detailed written statement on the anticipated environmental impacts of the Red Line Extension and the steps that will be taken to reduce any negative impacts to the community and the natural environment.

Typically, environmental reviews for proposed transit projects address the potential impact areas of air and water quality, noise and vibration, historic and cultural properties, parklands, contaminated lands, displacement of residences and businesses, and community preservation. During the federal environmental review process, the CTA will work concurrently with state and other local agencies to also comply with state and local environmental laws. See Topic 12 for additional information about potential property acquisition and impacts.

Regarding the economic impact of the Red Line Extension, FTA guidance requires an economic analysis of the Red Line Extension to be conducted as a part of Screen 3 of the Alternatives Analysis. In general terms, it may be noted that numerous transit studies suggest that transit investments result in economic development. A recently conducted study by the U.S. Department of Transportation, found that for every $1 billion invested in transit projects, 47,500 jobs are created or sustained. Specific projections for the Red Line Extension may be developed in later studies.

Other Specific Comments on this Topic:

89. What are the environmental justice impacts in the AA and why weren't they made public?
172. Presidential Order 12898 detailed environmental justice principles, will CTA include this Order while making decisions about this development?
173. How is environmental justice issues being applied to this development of transportation?

Response:

Environmental justice will be considered throughout the subsequent levels of screening. During these periods the evaluation will identify potential environmental justice situations. These will be noted and alignment and station alternatives will be modified accordingly. Environmental justice is a specific focus in the preparation of the federal environmental impact statements which will begin after the selection of the Locally Preferred Alternative.

Comment:

86. Who will get to bid on these contracts for transportation jobs?

Response:

All contract procurement will follow CTA's competitive bidding requirements open to all qualified firms. More information about CTA's competitive bidding requirements is available on the CTA web site at www.transitchicago.com.

19. General Customer Service Questions/Compliments/Complaints

General Comment:

We have some general comments related to CTA and/or CTA service.

Pertains to specific comments:

15, 33, 70, 71, 93, 95, 117, 118, 132, 138, 139, 177, 180, 182

Response to Overall Category Comment:

CTA Customer Service representatives were also in attendance at the public meetings for the Red Line Extension and were available to answer specific questions on existing CTA services and to take suggestions for improvements to those services. Many questions submitted to the Red Line Extension study team also covered these topics, which are outside the purview of the study itself. The study team notes these questions and comments for the record and has referred them to the CTA Customer Service Department for an independent response and filing through CTA’s established Customer Service procedures.

Appendix C
Agency Coordination and Public Involvement

Alternatives Analysis (2006-2009)

Screen 2

- Presentation
- Exhibit Boards
- Comment Card
- Comment Database
- Comment Responses

Federal Transit Administration’s
New Starts Process

Red Line Extension
Alternatives Analysis Study

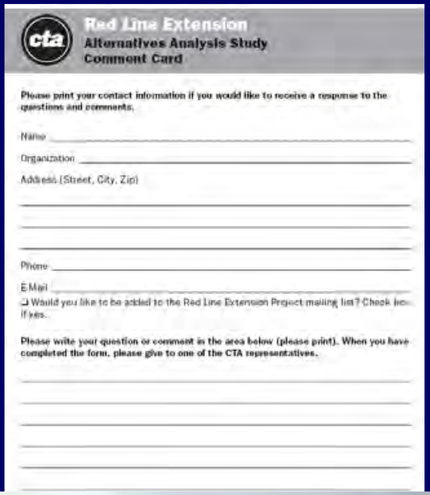
Schedule for Tonight’s Meeting

- **Structure of the meeting**
- **Questions and answers process**
  - Submit your comments in writing on comment cards
  - Comments and questions will be grouped and answered by topic
  - All comments and questions will be addressed on CTA’s website - www.transitchicago.com
  - An interpreter for the hearing impaired and a translator for the Spanish speaking community are available this evening

Screen 2 Public Involvement Process

- **Open Houses are scheduled as follows:**
  - Wednesday, December 3, 2008
    6 - 8 p.m. (presentation begins at 6:15 p.m.)
    Historic Pullman Visitor Center
    11141 South Cottage Grove
    Chicago, IL
  - Thursday, December 4, 2008
    6 – 8 p.m. (presentation begins at 6:15 p.m.)
    Woodson Regional Chicago Public Library
    9525 South Halsted Street
    Chicago, IL

Facilities are accessible to people with disabilities



Red Line Extension
Alternatives Analysis Study
Comment Card

Please print your contact information if you would like to receive a response to the questions and comments.

Name ____________________

Organization ____________________

Address (Street, City, Zip)

____

____

____

Phone ____________________

E-Mail ____________________

☐ Would you like to be added to the Red Line Extension Project mailing list? Check bo if yes.

Please write your question or comment in the area below (please print). When you have completed the form, please give to one of the CTA representatives.

Tonight's Speakers

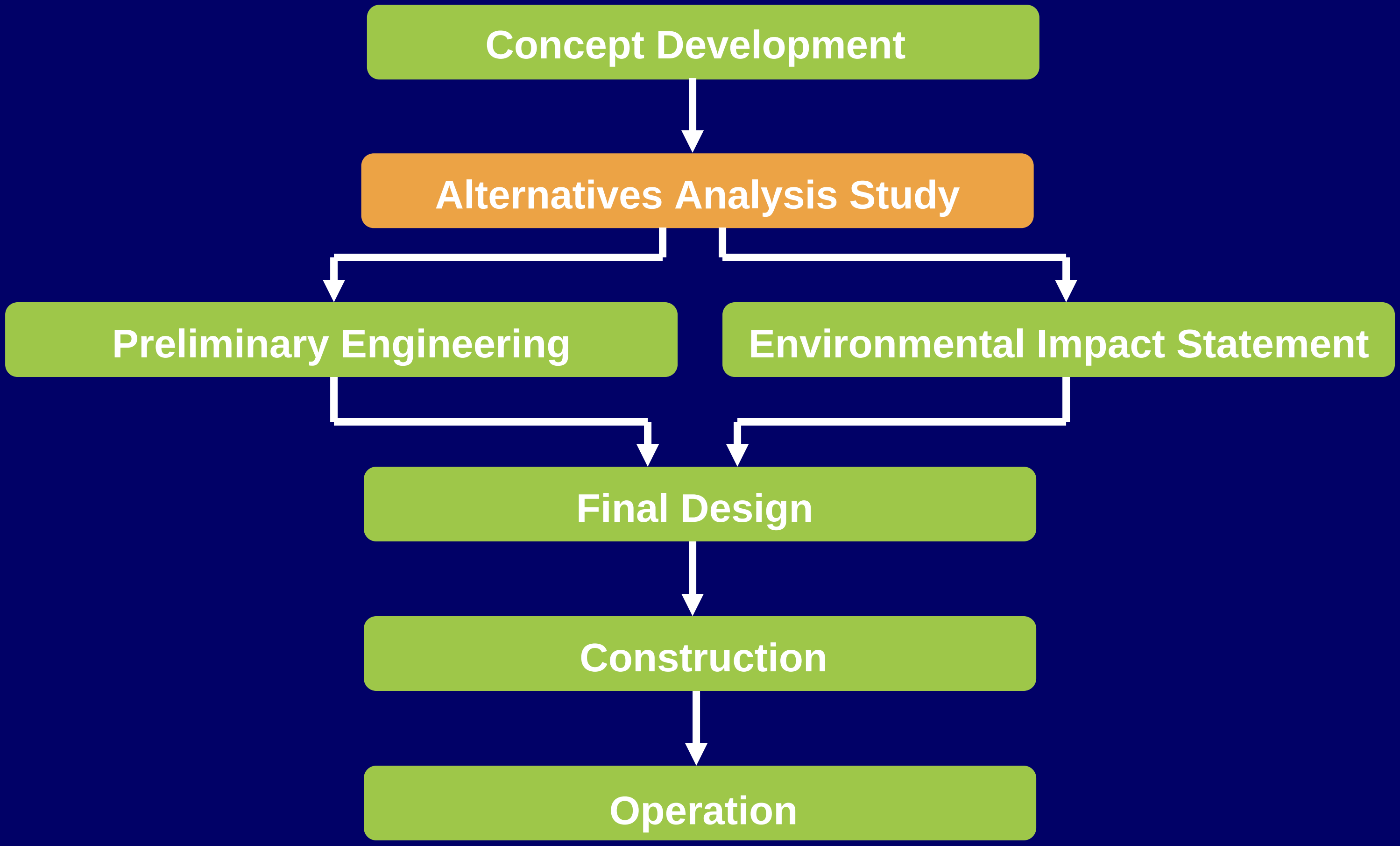
- Darud Akbar – Moderator
  - Chicago Transit Authority
- Jeffrey Busby – Strategic Planning Manager
  - Chicago Transit Authority
- Ronald Shimizu – Red Line Study Area Manager
  - Parsons Brinckerhoff

Outline of the Presentation

- Discuss Status of Red Line Extension Alternatives Analysis Study
  - New Starts Overview
  - Screen 1 Findings
- Screen 2 Preliminary Findings
- Public Involvement Process

Status of Study

FTA's Required New Starts Process



Concept Development

Alternatives Analysis Study

Preliminary Engineering

Environmental Impact Statement

Final Design

Construction

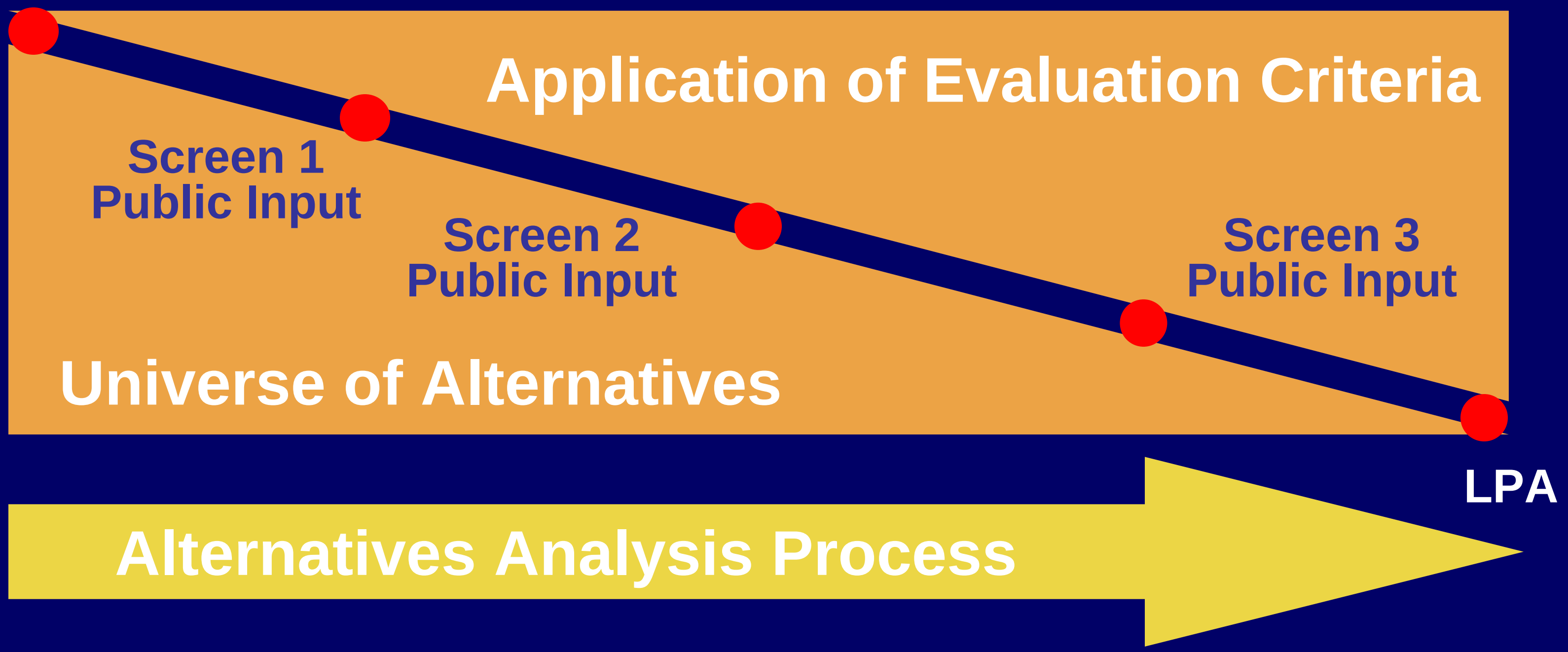
Operation

Alternatives Analysis (AA) Studies

- FTA Requirement for federal funding for transit expansion (New Starts)
- Identifies transit opportunities and ensures all practical solutions are considered
- Ensures planning is consistent among all New Starts projects throughout the country
- Provides opportunity to gather information and receive public input
- Identifies Locally Preferred Alternative

FTA Evaluation Process

The Purpose and Need is first defined, the evaluation criteria are applied, and options within the Universe of Alternatives are eliminated until, at the end of the process, there is a Locally Preferred Alternative (LPA).



Application of Evaluation Criteria

Screen 1
Public Input

Screen 2
Public Input

Screen 3
Public Input

Universe of Alternatives

LPA

Alternatives Analysis Process

Purpose and Need

- Significant Bus and Passenger Congestion at 95th Street Red Line Station
- Lengthy Bus Trips to Access 95th Street Red Line Station
- Far South Area Residents Experience 20% Longer Commute Times than Rest of City
- Traffic Congestion is Expected to Grow along with Study Area Population and Employment

Screen 1 Process

1. Define the Universe of Alternatives
2. Evaluate all Potential Technologies
3. Evaluate all Potential Alignments (Corridors and Profiles)
4. Evaluate all Potential Combinations of Technological and Alignment Alternatives
5. Advance Strongest Combinations to Screen 2

Screen 1

Universe of Alternatives - Technologies

TECHNOLOGIES

Automated Guideway/Monorail

Bus Rapid Transit

Commuter Bus

Commuter Rail

Heavy Rail Transit

High Speed Rail

Light Rail Transit

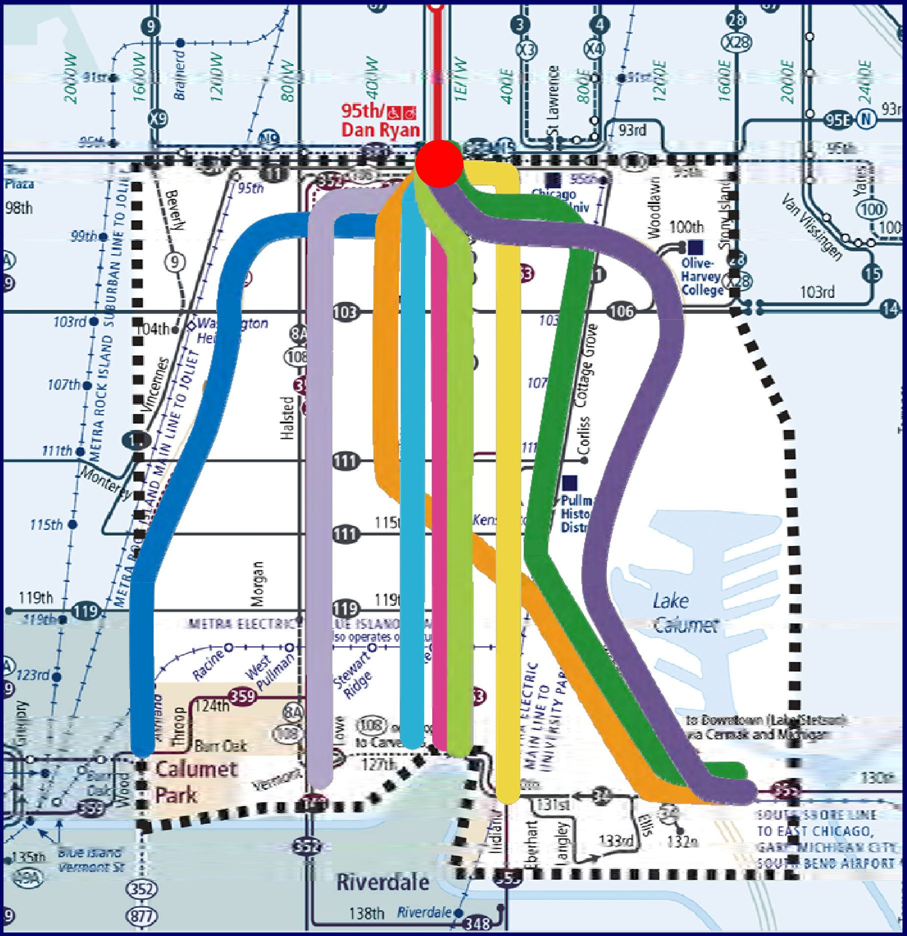
Local Bus

MagLev

Personal Rapid Transit

Streetcar

Universe of Alternatives - Corridors


95th/Dan Ryan
91st
95th
The Plaza
98th
99th
103rd
107th
111th
115th
119th
123rd
135th
138th
Beverly
Vincennes
Monterey
Halsted
Morgan
Racine
West Pullman
Stewart Ridge
Halsted
Cottage Grove
Corliss
Woodlawn
Stony Island
Van Vlissingen
Yates
Chicago State Univ
Olive-Harvey College
Pullman Historic District
Kensington
METRA ROCK ISLAND SUBURBAN LINE TO JOLIET
METRA ROCK ISLAND MAIN LINE TO JOLIET
METRA ELECTRIC
BLUE ISLAND
METRA ELECTRIC MAIN LINE TO UNIVERSITY PARK
Lake Calumet
Calumet Park
Riverdale
Burr Oak
Vermont
Ashland
Throop
Wood
Indiana
Eberhart
Langley
Ellis
124th
127th
130th
131st
132nd
133rd
to Downtown (Lake/State) via Cermak and Michigan
SOUTH SHORE LINE TO EAST CHICAGO, GARY, MICHIGAN CITY, SOUTH BEND AIRPORT
Blue Island Vermont St
2000W
1600W
1200W
800W
400W
1E/1W
400E
800E
1200E
1600E
2000E
2400E
St Lawrence
Brainerd
Riverdale

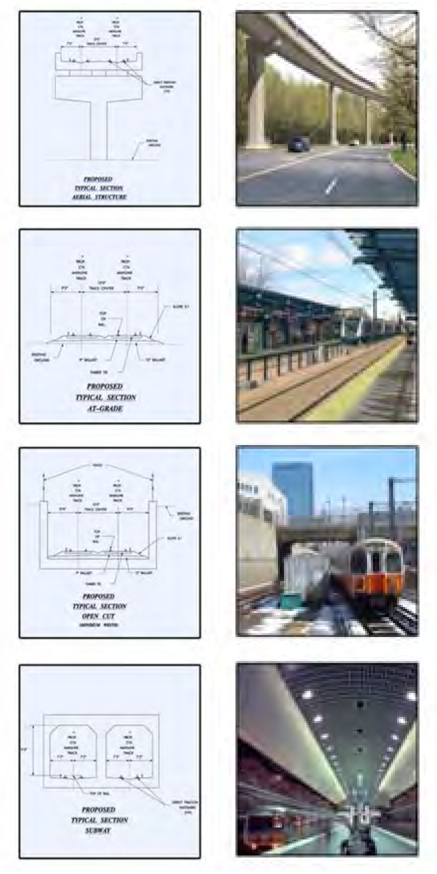
- 🟦 I-57 Expressway
- 🟪 Halsted Street
- 🟧 UP Railroad
- 🟦 Wentworth Avenue
- 🟥 State Street
- 🟩 Michigan Avenue
- 🟨 King Drive
- 🟩 Cottage Grove Avenue / Metra Electric
- 🟪 I-94 Bishop Ford Freeway

Screen 1

Universe of Alternatives - Profiles

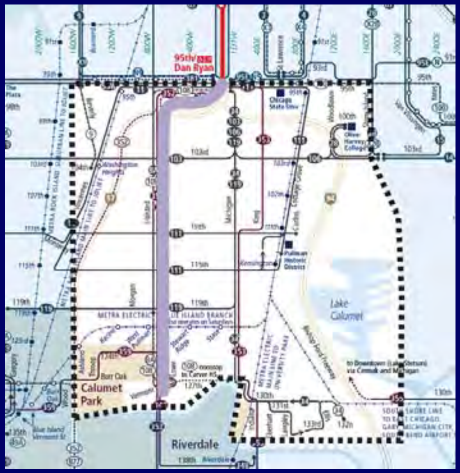
PROFILES

- Elevated
- At-Grade
- Trench
- Underground

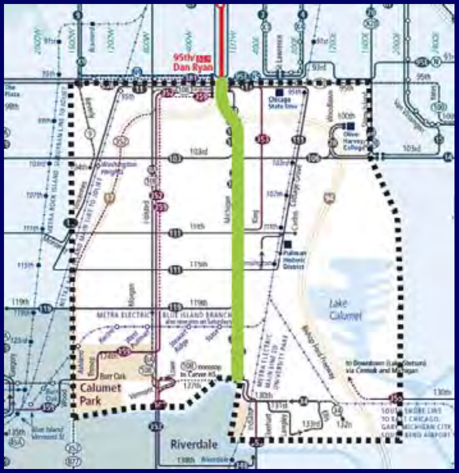

PROPOSED TYPICAL SECTION AERIAL STRUCTURE
PROPOSED TYPICAL SECTION AT-GRADE
PROPOSED TYPICAL SECTION OPEN CUT
PROPOSED TYPICAL SECTION SUBWAY

Screen 1 Evaluation - Findings

Bus Rapid Transit


95th/Dan Ryan
Calumet Park
Riverdale
Lake Calumet

Halsted Street

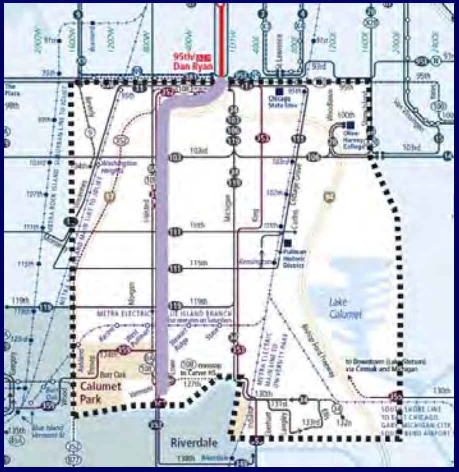

95th/Dan Ryan
Calumet Park
Riverdale
Lake Calumet

Michigan Avenue

At Grade

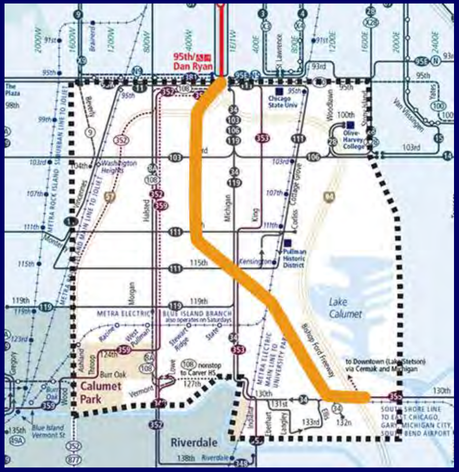
Screen 1 Evaluation - Findings

Heavy Rail Transit


95th/Dan Ryan
Lake Calumet
Calumet Park
Riverdale

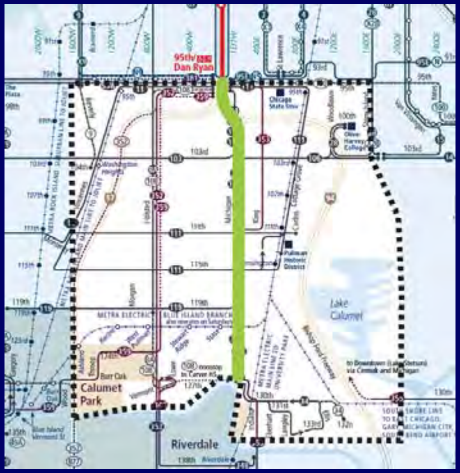
Halsted Street

Elevated / Underground


95th/Dan Ryan
Lake Calumet
Calumet Park
Riverdale

UP Railroad

Elevated / Trench


95th/Dan Ryan
Lake Calumet
Calumet Park
Riverdale

Michigan Avenue

Elevated / Underground

Screen 1 Public Involvement Process

- Two Public Meetings
  - April 10, 2007 at Chicago State University
  - April 11, 2007 at West Pullman Branch Chicago Public Library
- More than 140 people attended public meetings
- Met with stakeholders and elected officials
- Over 200 comments submitted and answered
- Significant media coverage

Screen 2

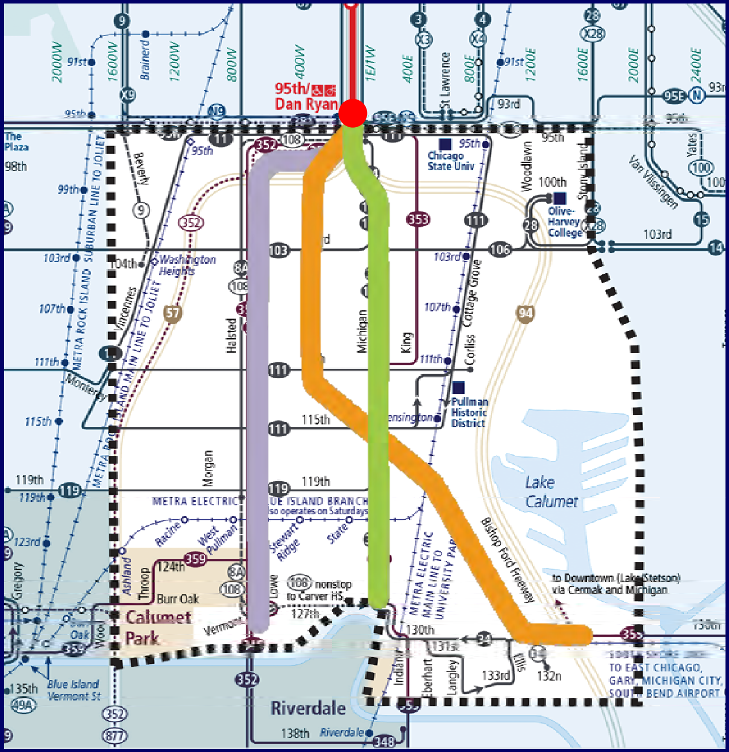
Screen 2
Analysis

Screen 2 Process

- **Step 1 – Alternatives Definition**
- **Step 2 – Preliminary Evaluation**
  - Physical Constraints (Right-of-Way Requirements)
  - Social & Economic Factors (Demographics and Employment)
  - Environmental Factors (Noise, Visual, Natural and Cultural Resources)
  - Transportation Factors (Travel Time, Transit Connectivity and Traffic)
- **Step 3 – Detailed Evaluation**
  - Capital Cost Comparison
  - Operating and Maintenance (O&M) Cost Comparison
  - Ridership Potential
  - Cost Effectiveness

Step 1 - Alternatives Definition

- Integrated the most suitable technologies, alignments and potential station locations


95th/Dan Ryan
95th
Chicago State Univ
100th
Olive-Harvey College
103rd
107th
111th
115th
119th
Halsted
Michigan
King
Cottage Grove
Morgan
Pullman Historic District
Lake Calumet
Bishop Ford Freeway
Calumet Park
Riverdale
130th
METRA ELECTRIC
METRA ROCK ISLAND
Washington Heights
Beverly
to Downtown (Lake/Stetson) via Cermak and Michigan
TO EAST CHICAGO, GARY, MICHIGAN CITY, SOUTH BEND AIRPORT

🟪 **Halsted Street**

🟧 **UP Railroad**

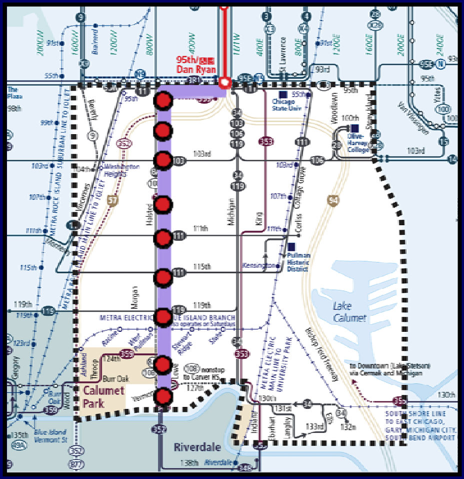
🟩 **Michigan Avenue**

Bus Rapid Transit

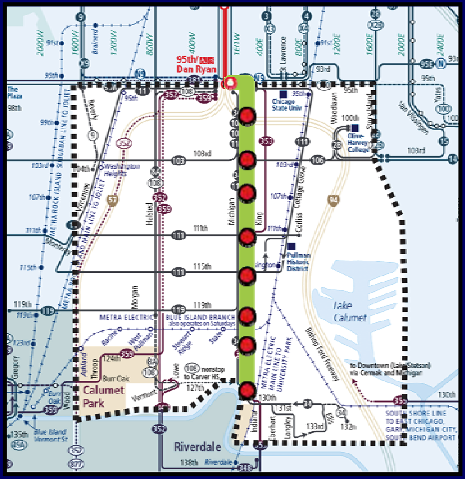
Heavy Rail Transit

Step 1 - Alternatives Definition

Bus Rapid Transit


95th/Dan Ryan
Lake Calumet
Calumet Park
Riverdale

Halsted Street

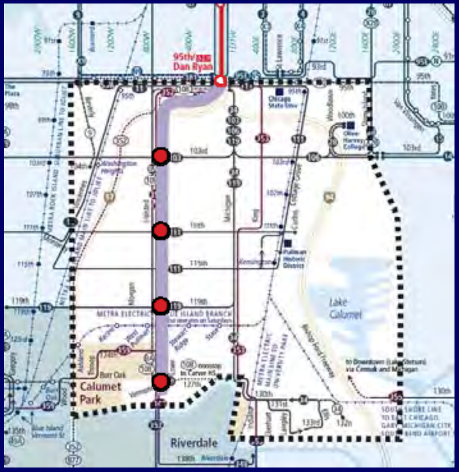

95th/Dan Ryan
Lake Calumet
Calumet Park
Riverdale

Michigan Avenue

At Grade

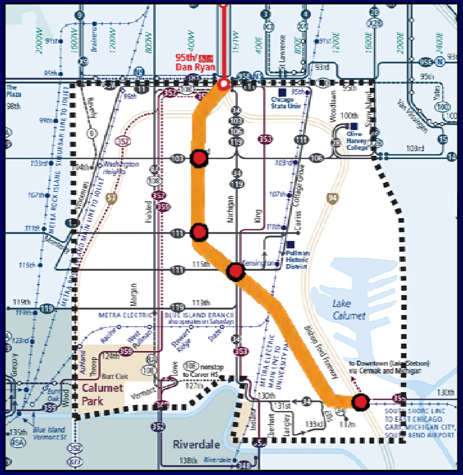
Step 1 - Alternatives Definition

Heavy Rail Transit


95th/Dan Ryan
Lake Calumet
Calumet Park
Riverdale

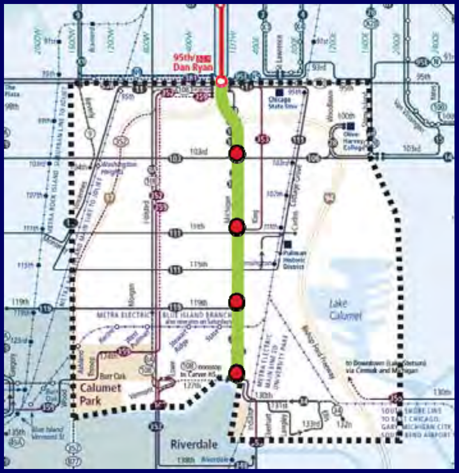
Halsted Street

Elevated / Underground


95th/Dan Ryan
Lake Calumet
Calumet Park
Riverdale

UP Railroad

Elevated / Trench


95th/Dan Ryan
Lake Calumet
Calumet Park
Riverdale

Michigan Avenue

Elevated / Underground

Step 2 - Preliminary Evaluation

Evaluation Factors

- Physical Constraints
  - Right-of-Way Requirements
- Social & Economic factors
  - Demographics and Employment
- Environmental Factors
  - Noise, Visual, Natural and Cultural Resources
- Transportation Factors
  - Travel Time, Transit Connectivity and Traffic

Step 2 - Preliminary Evaluation
Preliminary Findings

- **Corridors that Meet the Criteria of the Step 2 Evaluation Process**
  - Halsted Street BRT At-grade
  - Halsted Street HRT Elevated and Underground
  - UP Railroad (UPRR) HRT Elevated and Trench
- **Corridors that Do Not Meet the Criteria of the Step 2 Evaluation Process**
  - Michigan Avenue BRT At-grade
  - Michigan Avenue HRT Underground
  - Michigan Avenue HRT Elevated

Step 3 - Detailed Evaluation

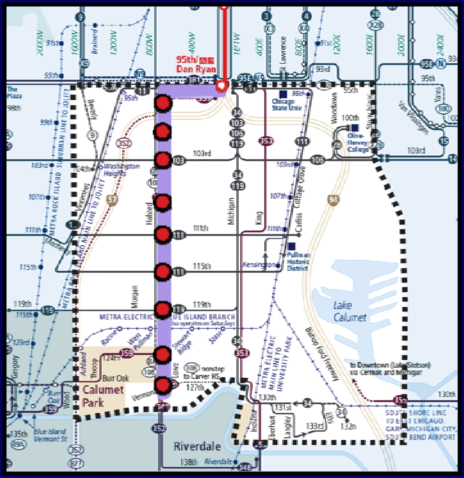
- **Projects Costs and FTA Criteria**
  - Capital Cost Comparison
  - Operating and Maintenance (O&M) Cost Comparison
  - Ridership Potential
  - Cost Effectiveness

Step 3 - Detailed Evaluation Preliminary Findings

- **Corridors that Meet the Criteria of the Step 3 Evaluation Process**
  - Halsted Street BRT At-grade
  - Halsted Street HRT Elevated
  - UP Railroad (UPRR) HRT Elevated
- **Corridors that Do Not Meet the Criteria of the Step 3 Evaluation Process**
  - Halsted Street HRT Underground
  - UP Railroad (UPRR) HRT Trench

Screen 2 Evaluation - Preliminary Findings

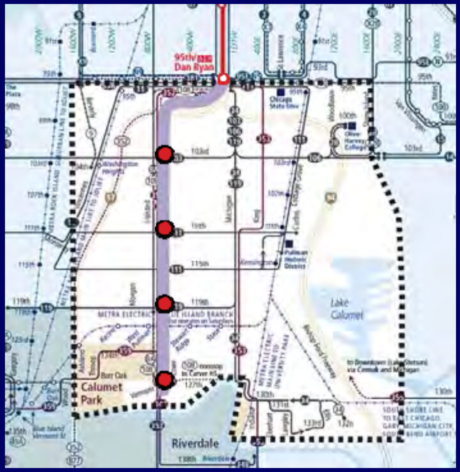
Bus Rapid Transit


95th/Dan Ryan
Lake Calumet
Calumet Park
Riverdale

Halsted Street

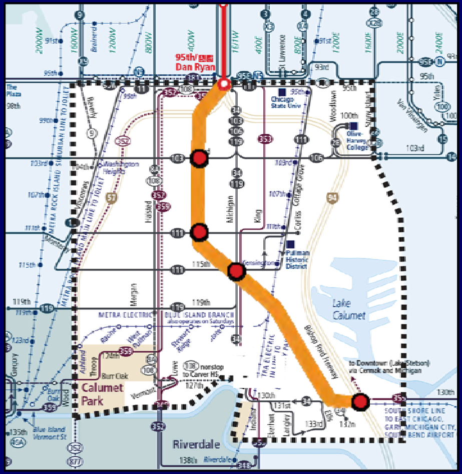
At Grade

Heavy Rail Transit


95th/Dan Ryan
Lake Calumet
Calumet Park
Riverdale

Halsted Street

Elevated


95th/Dan Ryan
Lake Calumet
Calumet Park
Riverdale

UP Railroad

Elevated

Next Steps

- **Screen 2**
  - Confirm Corridor Findings
    - Incorporate comments from public meetings
  - Confirm No Build and Transportation System Management (TSM) Alternatives
- **Screen 3**
  - Detailed Baseline Alternative
  - Detailed Refinement of Alternatives
  - Identify Locally Preferred Alternative (LPA)
  - Continued Public Involvement

Public Involvement

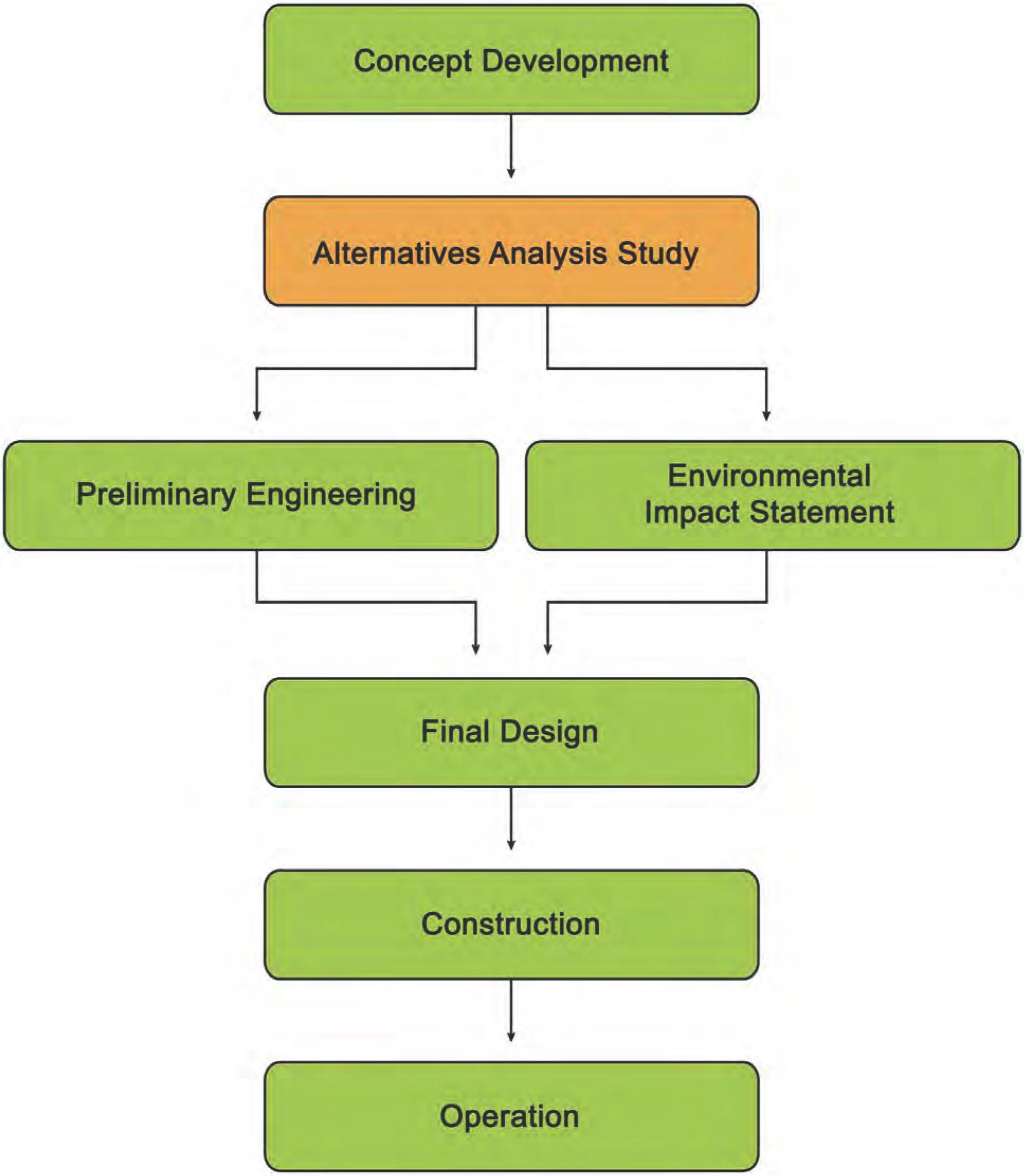
- Sign-in cards will be used to create a contact list to send notices and updates
- Meetings announced through car cards, customer alerts, local media and contact list
- Project updates on CTA web site - www.transitchicago.com

Questions and Comments

- **CTA representatives are available to answer additional questions**
- **Written comments and questions accepted through December 18, 2008:**

Mr. Darud Akbar
Chicago Transit Authority
Government and Community Relations
P.O. Box 7567
Chicago, IL 60680-7567
dakbar@transitchicago.com
CTA Customer Service: 1-888-YOUR-CTA
TTY: 1-888-CTA-TTY1

FTA’s New Starts Process



Concept Development

Alternatives Analysis Study

Preliminary Engineering

Environmental Impact Statement

Final Design

Construction

Operation

Red Line Extension
Alternative Analysis Study

Purpose and Need

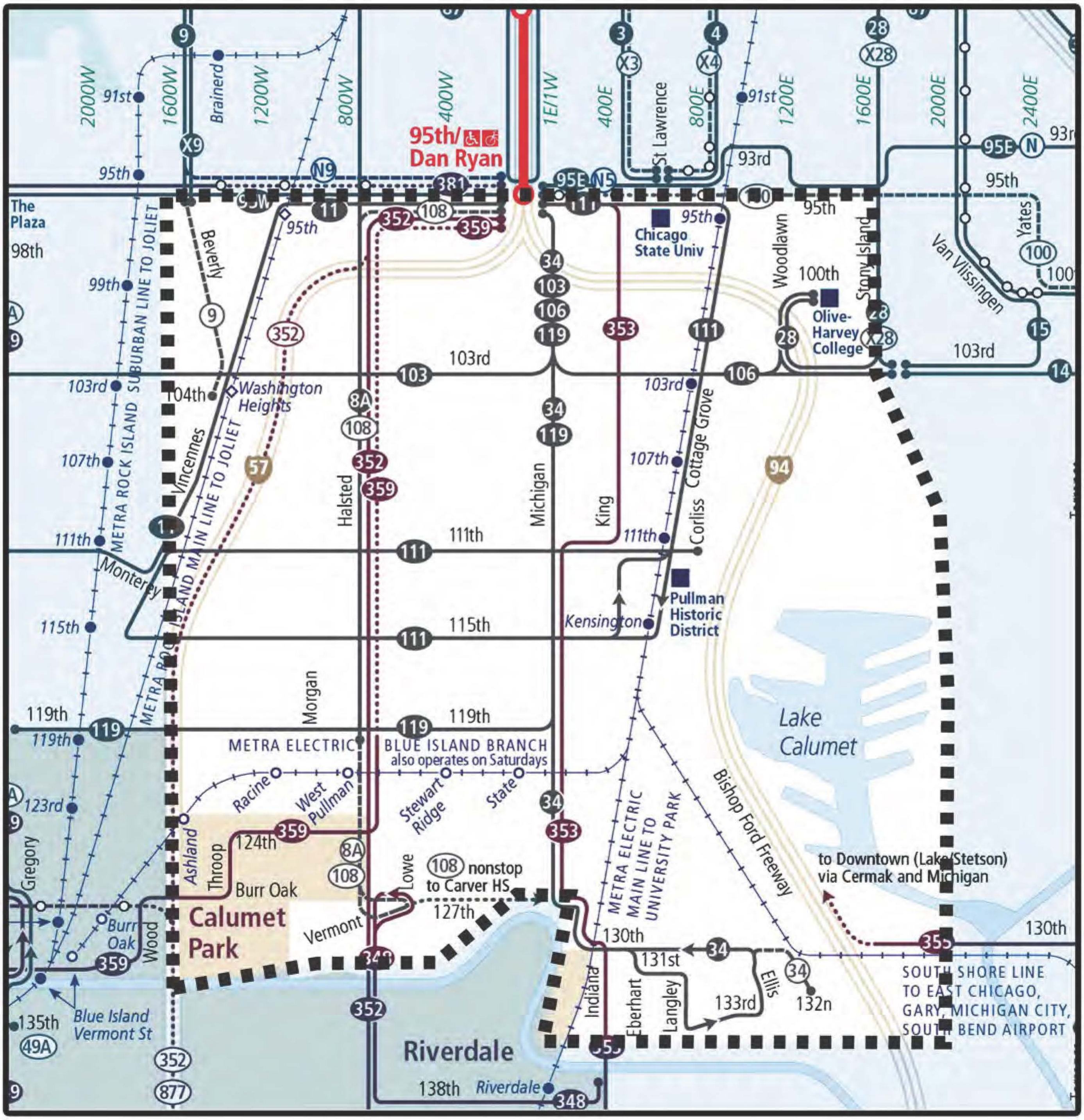
Transportation Needs

- Significant bus and passenger congestion at 95th Street Red Line Station
- Lengthy bus trips to access 95th Street Red Line Station
- Far South Area residents experience 20% longer commute than rest of City
- Traffic congestion is expected to grow along with study area population and employment

Opportunity for Improvement

- Extend rapid transit service south from 95th Street Red Line Station
- Improve access to, within, and beyond study area
- Stimulate economic development and job opportunities
- Shorten transit travel times through faster and more direct routings

Study Area


95th/
Dan Ryan
2000W
1600W
1200W
800W
400W
1E/1W
400E
800E
1200E
1600E
2000E
2400E
91st
Brainerd
St Lawrence
93rd
95th
The Plaza
98th
99th
Beverly
95th
Chicago State Univ
Woodlawn
100th
Stony Island
Olive-Harvey College
Van Vlissingen
Yates
103rd
104th
Washington Heights
107th
Vincennes
Halsted
Michigan
King
Cottage Grove
Corliss
111th
Monterey
115th
Kensington
Pullman Historic District
Morgan
119th
METRA ROCK ISLAND SUBURBAN LINE TO JOLIET
METRA ROCK ISLAND MAIN LINE TO JOLIET
METRA ELECTRIC BLUE ISLAND BRANCH also operates on Saturdays
Racine
West Pullman
Stewart Ridge
State
METRA ELECTRIC MAIN LINE TO UNIVERSITY PARK
Bishop Ford Freeway
Lake Calumet
123rd
Ashland
Throop
124th
Burr Oak
Calumet Park
Gregory
Wood
Burr Oak
Vermont
Lowe
108 nonstop to Carver HS
127th
130th
131st
133rd
132n
Indiana
Eberhart
Langley
Ellis
to Downtown (Lake/Stetson) via Cermak and Michigan
SOUTH SHORE LINE TO EAST CHICAGO, GARY, MICHIGAN CITY, SOUTH BEND AIRPORT
135th
Blue Island Vermont St
Riverdale
138th
Riverdale
9
X9
N9
95W
381
11
352
108
359
95E
N5
111
100
3
X3
4
X4
28
X28
95E
N
15
14
34
103
106
119
353
8A
57
94
1
348
355
49A
877

Red Line Extension
Alternative Analysis Study

Community Participation

Community participation is one of the key components of the alternatives analysis.

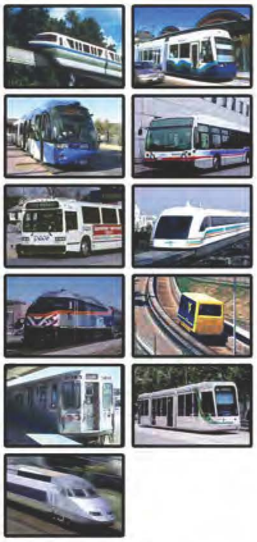
Community Outreach

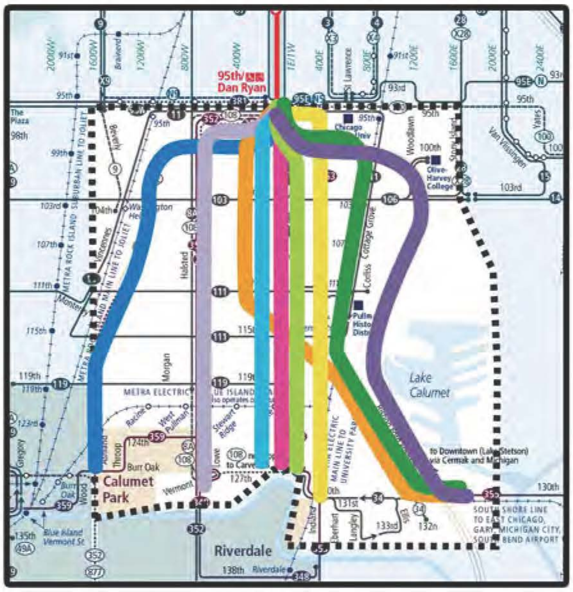
- General Public
- Elected and Appointed Officials
- Community and Civic Organizations
- Faith-Based Organizations
- City and State Agencies

Ongoing Public Involvement/Input

- Meetings announced through public notices and advertisements
- Project updates on the CTA web site: www.transitchicago.com, accessible at local public libraries

Universe of Alternatives




95th/Dan Ryan
Calumet Park
Riverdale
Lake Calumet
Metra Electric
Metra Rock Island Suburban Line to Joliet
Metra Rock Island Main Line to Joliet
Metra Electric Main Line to University Park
to Downtown (Lake Stetson) via Cermak and Michigan
South Shore Line to East Chicago, Gary, Michigan City, South Bend Airport
Chicago State Univ
Olive-Harvey College
Pullman Historic District
95th
103rd
111th
115th
119th
127th
130th
138th

Technologies

- Automated Guideway / Monorail
- Bus Rapid Transit
- Commuter Bus
- Commuter Rail
- Heavy Rail
- High Speed Rail
- Light Rail
- Local Bus
- MagLev
- Personal Rapid Transit
- Streetcar

Corridors

- 🟦 I-57 Expressway
- 🟪 Halsted Street
- 🟧 UP Railroad
- 🟦 Wentworth Avenue
- 🟥 State Street
- 🟩 Michigan Avenue
- 🟨 King Drive
- 🟩 Cottage Grove / Metra Electric
- 🟪 I-94 Bishop Ford Freeway

Profiles

T
Elevated

⌓
At-Grade

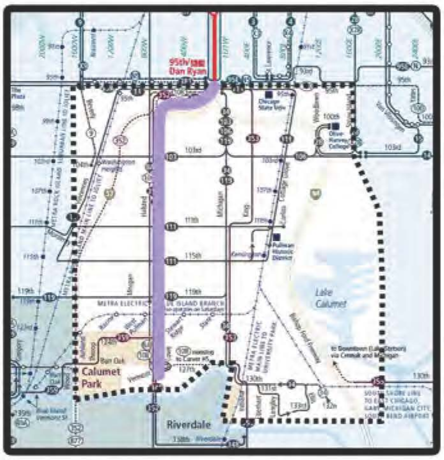
⊔
Trench

○━○
Underground

Red Line Extension
Alternative Analysis Study

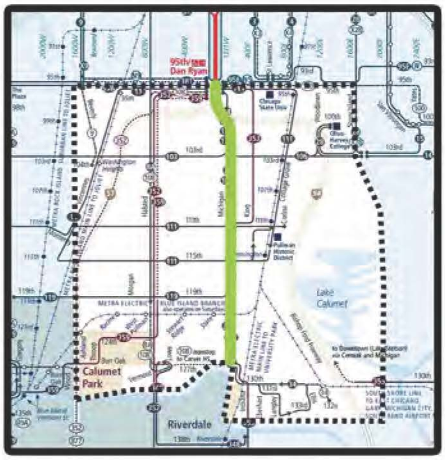
Screen 1 Findings

Bus Rapid Transit


95th/Dan Ryan
Calumet Park
Lake Calumet
Riverdale

Halsted Street Corridor

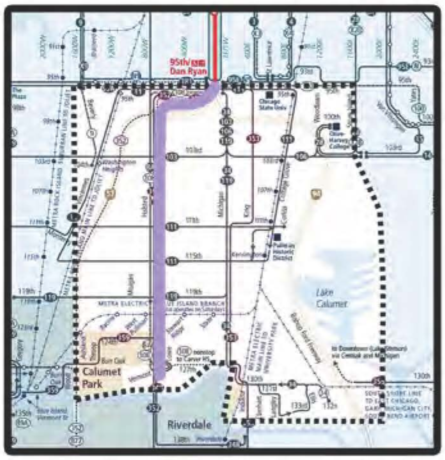
At Grade


95th/Dan Ryan
Calumet Park
Lake Calumet
Riverdale

Michigan Avenue Corridor

At Grade

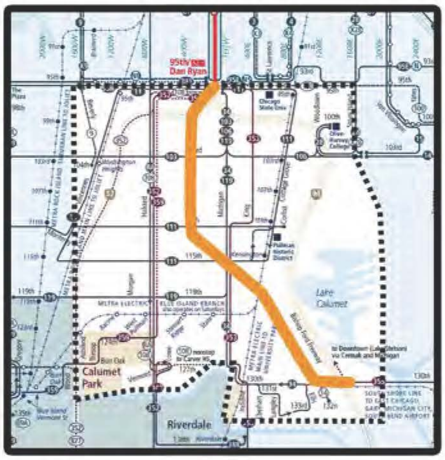
Heavy Rail Transit


95th/Dan Ryan
Calumet Park
Lake Calumet
Riverdale

Halsted Street Corridor

T Elevated

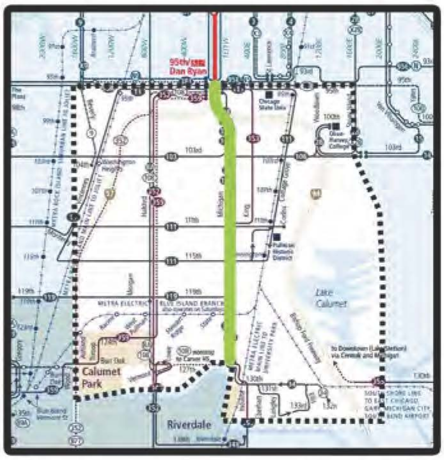
○━○ Underground


95th/Dan Ryan
Calumet Park
Lake Calumet
Riverdale

UP Railroad Corridor

T Elevated

⊔ Trench


95th/Dan Ryan
Calumet Park
Lake Calumet
Riverdale

Michigan Avenue Corridor

T Elevated

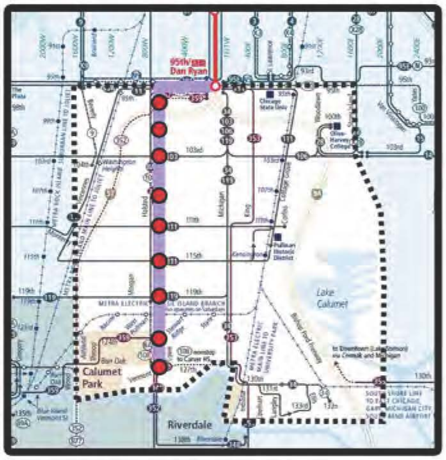
○━○ Underground

Red Line Extension
Alternative Analysis Study

SCREEN 2 - Step 1:

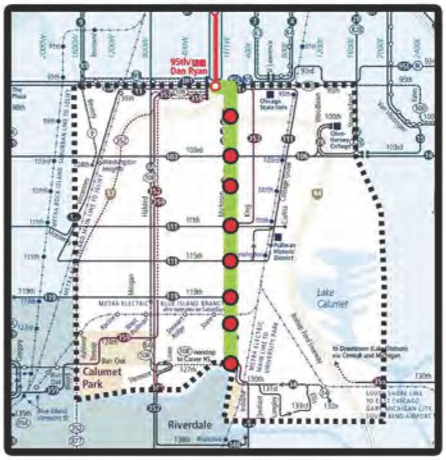
Alternatives Definition

Bus Rapid Transit


95th/Dan Ryan
Calumet Park
Lake Calumet
Riverdale

Halsted Street Corridor

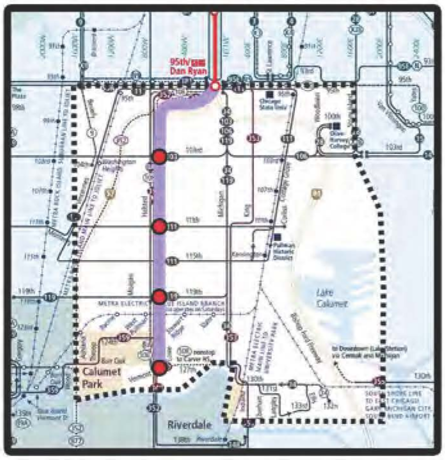
At Grade
9 Stations / 5.1 Route Miles


95th/Dan Ryan
Calumet Park
Lake Calumet
Riverdale

Michigan Avenue Corridor

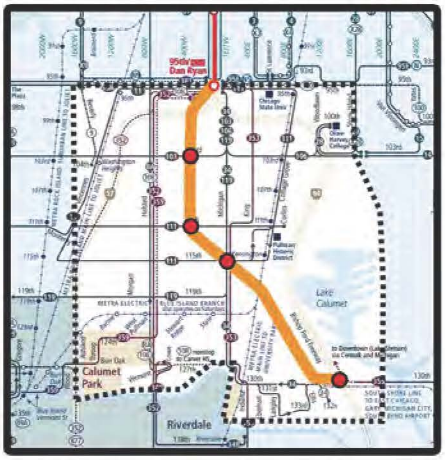
At Grade
8 Stations / 4.2 Route Miles

Heavy Rail Transit


95th/Dan Ryan
Calumet Park
Lake Calumet
Riverdale

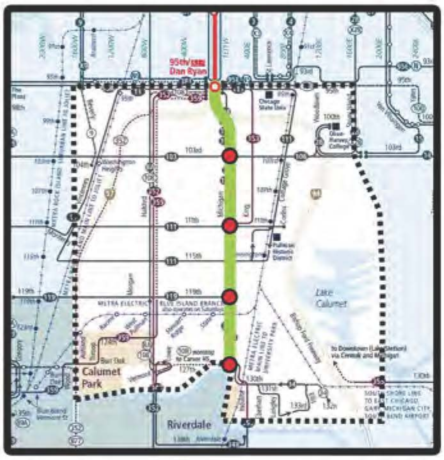
Halsted Street Corridor

T Elevated / ○▬○ Underground
4 Stations / 4.9 Route Miles


95th/Dan Ryan
Calumet Park
Lake Calumet
Riverdale

UP Railroad Corridor

T Elevated / ⊔ Trench
4 Stations / 6.0 Route Miles


95th/Dan Ryan
Calumet Park
Lake Calumet
Riverdale

Michigan Avenue Corridor

T Elevated / ○▬○ Underground
4 Stations / 4.1 Route Miles

Corridors and stations are shown in generalized locations only.

SCREEN 2 - Step 2:

Evaluation Findings

Technology	Corridor	Profile	Physical Constraints	Social / Economic	Environ-mental	Transpor-tation	Advance for Further Screening?
Bus Rapid Transit 	**Halsted Street**	At-Grade	○	○	+	-	YES
	Michigan Avenue	At-Grade	-	○	○	-	NO
Heavy Rail Transit 	**Halsted Street**	Elevated	○	○	○	+	YES
		Underground	○	○	○	+	YES
	UP Railroad	Elevated	○	○	○	+	YES
		Trench	○	○	○	+	YES
	Michigan Avenue	Underground	-	○	○	+	NO
		Elevated	-	○	-	+	NO

+ Better than other alternatives   ○ Comparable to other alternatives   **-** Worse than other alternatives

Red Line Extension
Alternative Analysis Study

cta

SCREEN 2 - Step 3:

Evaluation Findings

Technology	Corridor	Profile	Capital Cost	Operating Cost	Ridership	Cost Effectiveness	Advance for Further Screening?
Bus Rapid Transit	**Halsted Street**	At-Grade	+	+	-	+	YES
Heavy Rail Transit	**Halsted Street**	Elevated	O	O	+	O	YES
		Underground	-	O	+	-	NO
	UP Railroad	Elevated	O	O	+	O	YES
		Trench	-	O	+	-	NO

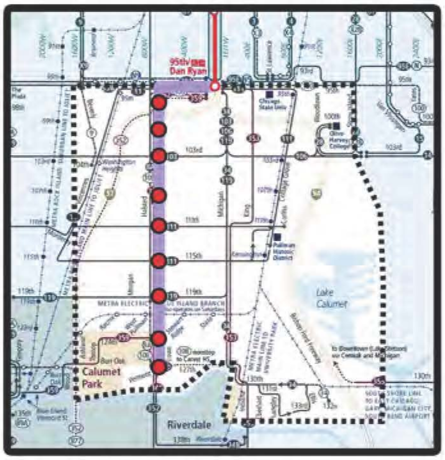
+ Better than other alternatives **O Comparable to other alternatives** **- Worse than other alternatives**

Red Line Extension
Alternative Analysis Study

cta

Preliminary Screen 2 Findings

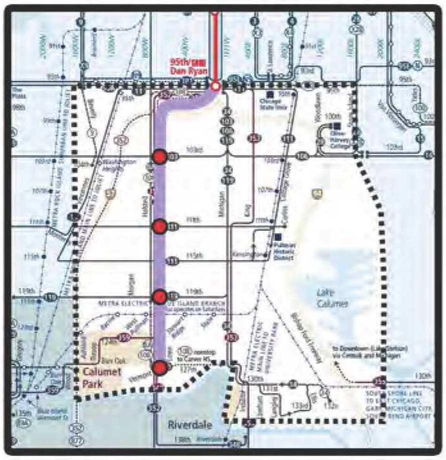
Bus Rapid Transit


95th/Dan Ryan
Chicago State Univ.
Olive-Harvey College
Washington Heights
Pullman Historic District
Lake Calumet
Calumet Park
Riverdale
METRA ELECTRIC
Halsted
Michigan
103rd
111th
115th
119th
127th
130th

Halsted Street Corridor

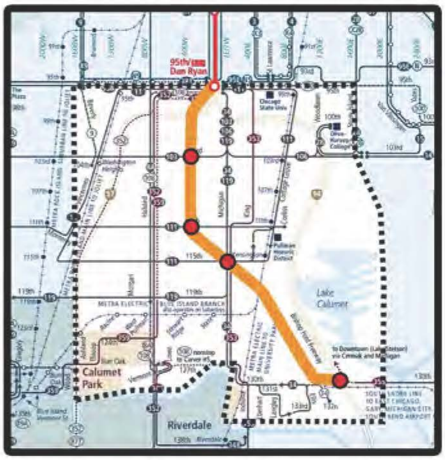
At Grade

Heavy Rail Transit


95th/Dan Ryan
Chicago State Univ.
Lake Calumet
Calumet Park
Riverdale

Halsted Street Corridor

T Elevated


95th/Dan Ryan
Chicago State Univ.
Lake Calumet
Calumet Park
Riverdale

UP Railroad Corridor

T Elevated

Corridors and stations are shown in generalized locations only.

Red Line Extension

Alternatives Analysis Study
Comment Card

Please print your contact information if you would like to receive a response to the questions and comments.

Name ____________________

Organization ____________________

Address (Street, City, Zip)

____

____

____

Phone ____________________

E-Mail ____________________

☐ Would you like to be added to the Red Line Extension Project mailing list? Check box if yes.

Please write your question or comment in the area below (please print). When you have completed the form, please give to one of the CTA representatives.

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Please send comments and questions to Mr. Darud Akbar, Chicago Transit Authority, Government and Community Relations, P.O. Box 7567, Chicago, IL 60680-7567. Or dakbar@transitchicago.com

Customer Information: 1-888-YOUR-CTA (1-888-968-7282)
Hearing & Speech Impaired: 1-888-CTA-TTY1 (1-888-282-8891)
Transit Information: 836-7000 from any local area code • www.transitchicago.com

Chicago Transit Authority

Red Line Extension Alternative Analysis Study

Screen 2 Public Involvement - Public Comments and Questions

February 2008

No.	Comment/Question	Received Via*	Topic Area(s)
1	What will this extension do to CTA fares? Stay the same or increase?	STK	6
2	DCP (Developing Communities Project) has been advocating for the Red Line extension for 5 years and their work has, we believe, has helped to advance & promote construction of the Red Line Extension. Community impact and input is essential.	STK	15
3	Where does Red Line Extension fall in priority for Rapid Transit capital projects in Chicago?	STK	2
4	When identifying park and ride alternatives priority to look at vacant and available land/properties. Also, the impact of the surrounding community to newly created routes should be addressed via public hearings at that stage. Opportunity for neighborhood/community consensus. Widen your reach to advertising about this project to radar newspapers and public hearings. Job creation opportunities should be promoted and give transfer periods for this project.	STK	7, 12, 13
5	Again as discussed at the meeting a job creation plan for community and minority contractors is crucial. It is imperative that communities with CTA BBE/Mowp etc begin to prepare (certify, educate community on how to enter apprentice ship positions etc) begin. It may appear to plan to be prepared for construction opportunities five to ten years out is futile, but it is not. Please use our organization to set up training sites etc.	STK	13
6	How can the alternative analysis preferred alternatives be arrived at ahead of the environmental impact analysis when one of the routes- the UP Railroad- has significant environmental issues, effecting isolated communities like Altgeld Corridor?	HPC	1, 8
7	I think that the UP Rail Extension is the best alternative.	HPC	5
8* (8-9)	Subways are cost prohibitive? Why? Are the cost constraints the CTA's or the Fed governments?	HPC	8, 10
9	Bus pollution of BRT, how will it be mitigated?	HPC	13
10	What are the transit oriented development values associated with the 3 alternatives?	HPC	8
11	What is the process by which public involvement impacts the evaluation process if arriving at the locally preferred alternatives?	HPC	12
12	Best Alternative in my view: "Union Pacific/Heavy Rail" This would provide service to S Michigan, and Altgeld, and Hegewisch- Also, potential connections to 1. Metra Electric Rail 2. South Shore Electric Rail.	HPC	5
13	I am a longtime rider of this line when it was first open I ride from 95th State Street to Davis Street in Skokie, Illinois Daily and weekends. Sunday from 95th State Street to Dividend once at 6am to 4:30. I would like to know will the extension with go out I-94 to 130th Street or I-57 to 127th Street?	HPC	5
14	Would the amount of revenue generated by the local stops on the Red Line on the South side be a faster in determining the priority of the Red Line Extension via other New Starts Projects?	HPC	2
15	Will the Red Line Extension mean significant redesign of the 95th Street stop.	HPC	14
16	When will the CTA schedule the 3rd screening?	HPC	12
17* (17-18)	When will the final choice of the route be made, and who makes it?	HPC	1, 3
18	When the federal funds become available, how long will it take to get the matching funds? Is there an expectation of getting the matching funds?	HPC	11
19* (19-20)	When will you have the final choice between the different alternatives?	HPC	1, 3
20	When will the next analysis phase meetings take place?	HPC	12
21* (21-23)	When does the CTA anticipate a third and final alternative analysis meeting?	HPC	12
22	When will you make your final choice on the alternatives?	HPC	1, 3
23	What are the CTA's plans for searching matching funding?	HPC	11
24*(24-25)	When will the Red Line extension be a reality?	HPC	3
25	Once the choice is made on the route and the funds are available, how long will it take to complete the work?	HPC	1, 3
26	When does the CTA estimate construction will begin on the Red Line Extension?	HPC	3
27	When will you make the final choice on the alternatives?	HPC	1, 3
28*(28-29)	What are the cost estimates?	HPC	10
29	Where would the yard be located?	HPC	6
30	Will the rail options include park and ride?	HPC	5, 7

31	What are the dollar amounts for the 3 alternatives?	HPC	10
32	What are CTA plans for securing matching funding?	HPC	11
33	What does the CTA believe will be the cost estimate for the 3 final alternatives?	HPC	10
34* (34-38)	What is the impact of the proposed route on economic development?	HPC	8, 13
35	Which projects are being driven by the 2016 Olympics?	HPC	15
36	When will the people have an opportunity to let you know their favored route?	HPC	12
37	What are the CTA's plans for securing matching funds?	HPC	11
38	The UP elevated alternative sounds best.	HPC	5
39	Is the Red Line- rather the advancement of the project being driven by 2016 Olympics?	HPC	15
40* (40-41)	Has CTA proposed or surveyed the communities to obtain an estimate of ridership or preferences for rapid bus or rail?	HPC	1, 9, 12
41	Has rapid bus in other areas addressed the need for rail service?	HPC	5
42	It was stated that south area passengers experience a 20% longer commute currently. With each possibility (HB, HR, UPR) what would the impact be on decreasing the commute time?	HPC	3, 8
43	I am in favor of UP Route. I think that although Halsted is wide enough, any transit additional would make traffic worst.	HPC	5
44	Will the CTA, the RTA and IDOT present the Red Line Extension as a priority project as a public works project to the new Obama Administration?	HPC	2
45	I recommend the UP route for the service it will extend to the underserved area of the far southeast side of Chicago.	HPC	5
46	We need a route that would not make it necessary to transfer at 95th but extend the Red Line to city limits.	HPC	5
47	The Halsted End of the Line will not be as to limiting morning suburban traffic/ commuters to city. End of the line using UP track would be more am to parking and limiting traffic congestion on expressway- and promote access south to shore riders. The UP line offers more options for riders and does not congest community.	HPC	5
48	good meeting	HPC	15
49	The Red Line is the most used line in the city. It would be a great help to those living far south. Many who do not drive together to work, would be a help to them. Thank you.	HPC	15
50	Comment: UP Rail- Best Solution, Halsted Rail- 2nd Best, Halsted Bus- 3rd. UP Rail - Land necessary, impact on environment, etc. This is the top alternative in my opinion.	HPC	5
51	Not exactly a comment, but so far, I wish that the proposed routing of the UP Railroad goes through.	HPC	5
52	For the Heavy Rail/UPRR option, you could end at the 130th on the west side of the Bishop Ford Fwy, thereby preserving the ability to extend further south in the future, while also fitting in a station with walking access to Carver HS & Altgeld Gardens and a transfer station to the South Shore trains. Please see the sketch I sent to CTA a few months ago.	HPC	4, 5
53	This is a little specific but: would the 111/115 Pullman Route return to a "shuttle like" route whenever an alternative is chosen? As I understand, it did not travel to 95th and if so could it be extended to a 24 hour time?	HPC	14
54	Will the fare hikes have any bearing on the completion of the x-tension and is there an anticipated start date to begin construction?	HPC	3, 6, 11
55	What are ridership estimates for the UP Railroad and Halsted route? If ridership estimates have not been done, when will the estimates be done? When will ridership estimates be made public?	HPC	9
56	What are the socioeconomic factors taken into consider for environmental impact analysis?	HPC	8, 13
57	What percentage does socioeconomic impact carry in evaluating routes?	HPC	8, 13
58	What weight does access of isolated communities, like Altgeld Corridor have in evaluating alternatives?	HPC	8, 13
59*(59-61)	Of all projects considered, where does the red line prioritize? 1st, 2nd, 3rd, or 4th? What are the parameters that determine priority?	HPC	2
60	More buses will not help because decrease in funds will decrease bus service.	HPC	5
61	What are the costs of the three proposals?	HPC	10
62	Concept Development Alternative Analysis Study Preliminary Engineering Environmental Construction	WCPL	15
63	Send a copy of presentation and boards.	WCPL	12

64* (64-67)	When will there be a third and final Alternative Analysis meeting?	WCPL	12
65	When will the final choice be made?	WCPL	1, 3
66	Are there any ridership projections for the suggested alternative routes?	WCPL	9
67	How is funding for capital projects obtained?	WCPL	11
68	Are 4 stations along the Red Line Extension Heavy Rail alternative really enough stations to alleviate congestion and promote increase usage of the Red Line? Would it really help the South Side Communities?	WCPL	5
69	Sounds good, where will you get the money?	WCPL	11
70	Why not extend the red line further south to 130th St on Halsted?	WCPL	5
71	Is the land at 127th Street for a new longer train yard?	WCPL	6
72* (72-74)	The UP certainly seems most feasible. It is the most cost effective since the tracks are already there?	WCPL	8
73	How does the Red Line extension compare with other extensions in the city, i.e. circle, orange, etc. Is the Red Line #1? If not why not?	WCPL	2
74	Halsted BRT and UP HRT should both be utilized.	WCPL	5
75	What effect does the Canadian National's RR purchase of the EJ&E RR and subsequent rerouting of freight trains in suburban & city areas have in the final consideration?	WCPL	15
76	The Red line extension is a great idea but will the extension increase the cost for the rider in the city?	WCPL	11
77	Any Bus alternative will add to the congestion would be heavy rail (UP) tracks either elevated, or trench (ideally subway).	WCPL	5
78* (78-79)	I believe that the UP route for the red line extension is the best one.	WCPL	5
79	Is it true that the greatest financial benefit to the CTA would be through the selection of the UP route even though the initial cost might be more?	WCPL	10
80	I choose one of the red line extension is UP Railroad corridor because it connects with bus routes and other train stations. Please try to make the red line extension easy for the people and run on time.	WCPL	5
81	A Referendum was voted on in 2004 by @ 38,000 residents impacted by the Red Line Extension. The locally preferred alternative/the UP line is by far the best, most expedient, most beneficial to the most people, including seniors, and the disabled.	WCPL	5
82	What is the reasoning behind imposing an additional bus line on an existing bus line?	WCPL	5
83	The UP route provides transportation in the area where there is no existing public transportation, this being more accessible to more underserved people.	WCPL	5
84	I was in Boston in the fall of 2007 and rode their Green Line. It was an Articulated Hybrid Bus with the only difference being a Power Pole attached. It opened on an Express Busway. It took me from Boston Logan - Boston Amtrak in 15 minutes. I see an Electrified High Speed Bus way as a LOW COST Alternative Red Line Extension. Agree or Disagree	WCPL	5, 10
85	The city has spent money beautifying Halsted St. The elevated tracks would make the street darker and make it more unsafe looking and who would go underground in Roseland? There are churches in the area & schools what about noise especially on Sundays and street crossings?	WCPL	5, 13
86	Would like to get a hard copy of the power points presentation from both tonight and April of 2007 sent to me or made available for pick up at CTA Headquarters Lake Jefferson.	WCPL	12
87	I'm totally against the red line coming down Halsted.	WCPL	5
88	What exactly would the TSM be for the Red Line Study?	WCPL	8
89	What is the Baseline Alternative, and does not the BRT come closest to the Baseline alternative?	WCPL	8
90	What are the developments of the 3 final alternatives?	WCPL	5
91	How much displacement of residential housing and businesses do each of the options call for?	WCPL	13
92	Why exactly was the trench option for the UPRR HRT not recommended? Would the UPRR tracks really need to be in the trench as well?	WCPL	5, 10
93	Why was underground Heavy Rail for the UP route shot down?	WCPL	5, 10
94	UP Line? Can this line (track) be elevated? Along with existing track?	WCPL	5

95	Have there been examples of elevated rail over existing rail right-of-ways like to UP Railroad? The elevated would be constructed over the freight and Metra rail line.	WCPL	5
96* (96-99)	Since the Federal Government and the CTA are aware of the economic and social benefits that accrue around transportation projects, how will those issues be measured in deciding on the locally preferred route?	WCPL	8
97	Why has it taken decades to get this far with the red line extension, while other lines got completed in relatively short periods of time?	WCPL	3
98	Why has service to suburbs (north and west) received greater attention than service south of 95th?	WCPL	2
99	I highly recommend the UPRR route for the benefits to community.	WCPL	5
100	How important is resolving the train yard congestion at 98th as a factor in choosing the LPA?	WCPL	3, 6
101	How much does existing congestion on Halsted factor into evaluating the BRT option for Halsted?	WCPL	8
102	Comment: Just wondering what interface would be created between bus and rail at 95th, since this intersection is already heavily congested. Would Bus Rapid Transit keep the same schedule as the Red line? 24 hour service? What intervals or headway would BRT have? Same as Red Line? Would bus lines be rerouted as a result of implementing BRT. BRT & Heavy Rail- Median of Halsted? How to keep pedestrians & transit patrons safe? Similar to Day Ryan.	WCPL	6, 13, 14
103	Will the Extension of the Red Line cut the time of getting to your destination on time because the commit time is disgusting.	WCPL	8
104	What are the TOD values of the 3 alternatives?	WCPL	8, 13
105	What kind of support facilities are planned/proposed for New Stations? Will any of the Stations have "park and ride" facility? How many? Will passenger facilities (stations) have stores or stands? Is there any proposed construction for area adjacent to stations? Will only currently owned property be used? (for expansions)	WCPL	5, 7
106	Are the plans/proposals available to the public via CTA website?	WCPL	12
107	Where are your handouts?	WCPL	12
108	What is the CTA doing to obtain funding for its capital projects?	WCPL	11
109	The UP route seems to be the best route for the Extension.	WCPL	5
110* (110-112)	I'm addressing this letter to you about transportation expansion in the city of Chicago. My first issue I would like to talk about is the extension of the CTA Red Line. I think this service improvement is completely necessary, but I think it should be implemented in another form. Instead, I think service levels on the Metra Electric line should be increased to levels comparable with the proposed extension. When the name Metra is mentioned many people think of diesel locomotive pulling a string of cars behind it. However, this is not the case on the Metra Electric line as the name implies. With the electric power comes greatly increased acceleration power and lower operating costs due to not having to pay for diesel fuel. Electrical power is also quieter and pollution free compared to diesel locomotives. These are common characteristics that are shared with CTA trains and even though they are incompatible electrical systems, electrical power is necessary for increased service levels. This brings me to another point- no new cars would be necessary for the increased service levels because Metra has a large stockpile of cars that are used for the extremely frequent rush hour services. These	EMAIL	4
111	Also, the Metra line largely parallels the proposed route of the CTA extension. What would happen as a result is that these two lines would be competing for passengers which is not desirable in any business environment. Metra Electric ridership will decline because in 1969 when the CTA Dan-Ryan line was built ridership between 75th and 111th street stations declined 75%.[1] In addition, Metra Electric stations are far closer together than the CTA Red Line. This may be a little inefficient, but it is a convenience for riders and is a lot better than putting two lines right next to each other like the CTA is proposing to do. To resolve the issue of bus congestion at the CTA 95th station is very easy. If half of the buses were rerouted to nearby Metra stations (which many are closer to the bus routes) the issue would be solved. In addition, the plan of increasing trains on the Metra Electric could be implemented almost immediately compared to the years it will take to build the Red Line extension. Furthermore, the Red Line extension will be extremely cost prohibitive due to the soaring materials costs, acquisition of cars, and operating expenses. If you supported the implementation of the Met	EMAIL	4

112	I also wanted to give you an example of where a similar plan is being put into action. The location is London, and they are creating the Over ground Network. Most people would agree that London is light years ahead of the U.S. when it comes to public transportation, and the planners in London came to a startling conclusion. They realized that it was extremely expensive to build new subway lines, so they took commuter train lines, increased their frequency, and rebranded them into the Over ground network. This is essentially the same thing I'm proposing for the Metra Electric line without the rebranding. So basically, if train frequencies are increased on the Metra Electric and the CTA Red Line extension is not built, it will provide the same service to the taxpayers' of Chicago immediately with much less of their money being spent. I hope you take my suggestions into consideration.	EMAIL	4
113	Can "A" & "B" stops come back to the red line. Along Halsted St. or Michigan Ave, will the elevated be over the street like Lake St. or an adjacent alley?	USPS	5, 6
114	I believe you are making a mistake by considering only linear two-way travel extension options. A one-way loop extension at the end of an existing two-way mainline offers many advantages over a two-way linear extension. Attached is a proposal for a 10 mile long single track loop Red Line south extension. This extension would cost about the same as a two-way 5 mile long extension. But it's ten stations would make the Red Line accessible by walking to twice as many residents of the area as any of the nine two-way alternatives in your study. Note that: For a one-way loop extension compared to a two-way line with the same number of added stations: some trips take longer; but others are quicker. (see attached hypothetical example) One-way loop allows: Single side stations: no crossover structures, Use of narrower existing ROWs, Fewer cars ands operators and power consumption Let me know if you have any questions. Thanks you for your consideration. Sorry I am making my suggestion so late in your process. *Two documents attached	EMAIL	5
115* (115-116)	I can bloody well understand why Michigan Avenue was quashed south of 95th Street. In fact, I was wondering how trolleys plied Michigan Avenue in the olden days, in the first place! But just as most of the Green Line runs along alleys west of Calumet Avenue, and/or east of Prairie Avenue, couldn't a viable Red Line Extension use alleys west of Michigan Avenue, or is the environmental impact (noise) too great to make that an option this time around? Incidentally, I thought I could submit an idea to use Eggleston Avenue for a High Speed Electric Bus way-complete with overhead wires from 95th Street south to 127th and Indiana. But there were misgivings about doing that versus extending the rail portion.	EMAIL	5
116	Also: Has anyone thought about expanding the 95th Street Terminal for auto parking and bus marshalling using the air rights over the Dan Ryan Expressway?	EMAIL	5, 14
117	Thank you for the opportunity to voice my support for the Red Line extension to 130th/Altgeld. I have been attending meetings concerning this for at least 2 years. I continue to support the progress that has been made and I support the UNION PACIFIC ROUTE. This project would provide jobs, new business and a new mode of transportation for many residents. This extension is really needed. I am a regular rider on the Red Line and I would love to be able to have the additional stops. Thanks and keep me on your list for information regarding further developments.	EMAIL	5
118	I'm writing to inform you of the importance of the CTA Red Line. If extended to Altgeld Gardens it would help low-income families as well as our high school students who work. Please consider others when making your decision.	EMAIL	5
119	Please add me to your mailing list for the Greater Roseland Red Line Extension Project. Thank you.	EMAIL	12
120	This email is to indicate my families support of the Red Line extension and the support for the Union Pacific Route be used for the CTA Red Line Extension. The extension of the Red Line is long over due. The Roseland, Morgan Park, Altgeld neighbors were told this extension would happen when I was in grammar school I am now over 20 years in the working world and the extension is still talk. The extension of the Red Line is needed currently it takes two buses and over an hour just to get the 95th Street to board the Red Line.	EMAIL	5

121	I have been riding the Red Line from 95th Street to 4700 North for over 1 year now and I live near 115th and Halsted. The Red Line extension would benefit me and so many other CTA Red Line Riders. We could save time and money if the Red Line is extended to 130th Street. Please move on the Red Line riders behalf and get the extension plan moving a little faster. We have been meeting for over 3 years about this extension and what ever the riders and supporters of the Red Line extension need to do we will do.	EMAIL	3
122	I am writing to encourage you and others to extend the CTA Red Line from 95 Street to 130/Altgeld Gardens. Having lived in the south suburbs for almost 20 years, I know the frustration of not being near a CTA line and the extra time it takes to get to and from work. With over 40,000 people catching the El at 95th Street, I understand it has become the most profitable terminal for CTA. However, not so beneficial for a considerable number of those individuals who make up the 40,000 because they must first drive a long distances (from Altgeld, Riverdale, Dolton, South Holland, Calumet City) to take advantage of this mode of transportation. Extending the Red line could alleviate some of the burden of trying to find parking around 95 Street and then trying to get to work on time. An extension of the line could also help to increase employment opportunities for those in areas beyond 95 and increase CTA ridership. I enthusiastically support extending the Red line to 130/Altgeld and hope you and others will move to do so quickly.	EMAIL	5
123	I am in support of the 95th Street Red Line extension because and the Union Pacific Route: The 95th Street Red Line terminal is the most profitable terminal of all CTA Rails. Over 40,000 people use the 95th Street Rail each day. Most riders have to catch buses or taxis to get to and from the 95th street stop. Altgeld Gardens is the most isolated community in Chicago. Extending the Red Line would increase employment, as businesses develop around station stops. The proposed extension would run along the Union Pacific tracks, and would include stops at 103rd Street, 111th Street, 115th Street/Michigan, and 130th/Altgeld.	EMAIL	5
124	I support the Union Pacific Route to Altgeld. I take the el train everyday and have to catch a bus from the 95th Street line. This is an important part of transportation because our area is very isolated and in the evening, very dangerous.	EMAIL	5
125	Please accept this email as support in favor of extending the Red Line from 95th street to 130th/Altgeld via the union Pacific.	EMAIL	5
126	Please accept my support for the extension of the CTA Red Line from 95th Street to 130th/Altgeld using the Union Pacific Route.	EMAIL	5
127	I am very interested in the Red Line extension. My choice is the Union Pacific line. It is often very inconvenient for me to travel to 95th Street to get to the Loop. If the Red Line is extended to 130th and Stony Island it would make it so much easier for me to get around. I would love to park and ride.	EMAIL	5, 7
128	I wanted to make sure I sent you an email to express my great support of the Red Line Union Pacific extension. I live in the Washington Heights area and think that extending the red line is a fantastic idea. I work downtown and have to drive in order to make it into work at an appropriate time. However, having the redline closer to my home would allow me to substantially decrease my car usage and provide a better commute for me everyday. There is a substantial need to have increase transportation on the south side outskirts of Chicago. The citizens in this neighborhood deserve the services just as does the rest of the city. Here are some of other great reasons that this project should proceed: The 95th Street Red Line terminal is the most profitable terminal of all CTA Rails. Over 40,000 people use the 95th Street Rail each day. Most riders have to catch buses or taxis to get to and from the 95th street stop. Altgeld Gardens is the most isolated community in Chicago. Extending the Red Line would increase employment, as businesses develop around station stops. The proposed extension would run along the Union Pacific tracks, and would include stops at 103rd Street, 111th Street, 115th Street/Michigan, and 130 Please move forward with the expansion project as this will be a positive move for both the CTA and the city of Chicago!	EMAIL	5

129	I am sending this email because I believe that it is a excellent idea to extend the Red Line to 130th. Everyone I know that rides the Red Line everyday has to catch a bus or call a cab or a family member. I'm sure that the money that is spent expanding the Red Line will be reimbursed ten-fold when the project is complete!	EMAIL	15
130	I support the extension of the Union Pacific Route which will commute people to and from 130th/Altgeld Gardens.	EMAIL	5
131	Please accept my support for the extension of the CTA Red Line from 95th Street to 130th/Altgeld using the Union Pacific Route.	EMAIL	5
* Comments were received on the same comment card			
Key to source of comments:			
HPC Comment received at Public Meeting held at Historic Pullman Center			
WCPL Comment received at Public Meeting held at Woodson Regional Chicago Public Library			
EMAIL Comment sent to CTA by email			
STK Comment received at Stakeholder Meeting			
USPS Comment sent to CTA by postal mail			

Chicago Transit Authority
Red Line Extension Alternatives Analysis Study

Screen 2 Public Involvement
Responses to Public Comments and Questions

17 February 2009

Written questions and comments regarding the Red Line Extension Alternatives Analysis Study were submitted by a variety of individuals and groups from throughout the Chicago region at the study's Screen 2 Public Meetings held on December 3 and 4, 2008. In addition, public comments and questions on Screen 2 were submitted directly to the Chicago Transit Authority (CTA) via e-mail and postal mail through December 18, 2008.

All of the questions and comments have been collected and compiled to provide a comprehensive review of the issues raised along with CTA's responses. Every question, comment, and suggestion submitted during the public comment period has been compiled in the ―Outreach Comment Database" (see separate document). Each question has been recorded verbatim and assigned a number that corresponds with the answers provided in this document, ensuring every question or comment submitted has been reviewed and answered or acknowledged. Collectively, the public comments and preferences will be considered in the evaluation of alternatives and concepts introduced through the public involvement process and may be evaluated and/or reflected in advancing alternatives as appropriate.

Many of the comments received were very similar in nature. As a result, similar comments and their responses have been grouped by topic and ―General Comment" heading below to avoid duplicative responses. Questions or comments requiring individual or specific responses are also included below along with unique responses. In order to understand some terms used in the Comments and Responses, it may be necessary to review the original Screen 2 presentation materials which are posted on CTA's Web site www.transitchicago.com (click on News and Initiatives, then Alternatives Analysis Studies).

The list below shows the index of topics covered in the report, along with the number of comments received for each. Because comments often refer to more than one topic, the numbers associated with each do not equal the total number of comments received.

Index of Topics

1. FTA's Alternatives Analysis Process (8)
2. Relationship of Red Line Extension to Other Proposed Transit Projects (6)
3. Overall Red Line Extension Project Timeline, Purpose and Need (12)
4. Red Line Extension Study Area (4)
5. Alternatives Analyzed (50)
6. Proposed Red Line Extension Operations (7)
7. Potential Red Line Extension Parking Facilities (4)
8. Evaluation Criteria Used in the Alternatives Analysis Study (15)
9. Ridership Estimates and Related Issues (3)
10. Project Cost Estimation (9)
11. Funding of Red Line Extension Construction and Operations (9)
12. Alternatives Analysis Public Involvement Process and Format (13)
13. Potential Red Line Extension Economic and Environmental Impacts (11)
14. Potential Red Line Extension Impacts on Existing CTA Services (4)
15. Other (8)

1. FTA’s Alternatives Analysis Process

General Comment:

Please describe the Federal Transit Administration’s (FTA) Alternatives Analysis process and its components.

Pertains to Specific Comments:

17, 19, 22, 25, 27, 40, 65

Response to Overall Category Comment:

Alternatives Analysis has for over 25 years been a key part of FTA’s decision-making process for awarding grant funding to support fixed guideway transit projects. Federal law requires that projects seeking grant funding from FTA’s New Starts program be based upon the results of an alternatives analysis study and subsequent preliminary engineering. Alternatives analysis has also been a part of established transportation planning practice in the United States for several decades. At its core, alternatives analysis is about supporting local decision-making. An effective alternatives analysis answers the questions: What are the transportation problems in a corridor? What are their underlying causes? What are viable options for addressing these problems? What are their costs? What are their benefits?[1]

The Red Line Extension project is currently conducting its Alternatives Analysis study. The Red Line Extension Alternatives Analysis study will have three steps or “screens.” Screen 1, completed in April 2007, issued preliminary findings regarding corridors, alignments, and vehicle technologies that should be advanced to Screen 2 for further analysis. Screen 2, just completed in December 2008, further refined the alternatives from Screen 1. These findings have determined three alternatives that should be studied further. Screen 3 will be a quantitative screening process; costs and ridership will be projected and operational questions considered. Screen 3 will result in the recommendation of a Locally Preferred Alternative (LPA) which, with FTA approval, will subsequently undergo environmental analysis and preliminary engineering.

A detailed description of the formal FTA Alternatives Analysis process is available at the Federal Transit Administration’s web site: http://www.fta.dot.gov/planning/planning_environment_5221.html .

Other Specific Comments Noted on this Topic:

Comment:

6: How can the alternative analysis preferred alternatives be arrived at ahead of the environmental impact analysis when one of the routes- the UP Railroad- has significant environmental issues, effecting isolated communities, like the Altgeld Corridor?

Response:

While the formal federally mandated Environmental Impact Statement (EIS) is not completed until after the selection of a Locally Preferred Alternative, environmental issues and community impacts are considered for each corridor and technology studied in the Alternatives Analysis. The subsequent EIS phase is used to quantify both positive and negative environmental impacts in detail and develop mitigation measures where necessary. See Topic 8 for more information about evaluation criteria used in the screening process.

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[1] “Additional Guidance on Local Initiation of Alternatives Analysis Planning Studies.” Federal Transit Authority web site.

2. Relationship of Red Line Extension to Other Proposed Transit Projects

General Comment:

What is the relationship between the Red Line Extension and other projects being considered by CTA? Is the Red Line Extension the highest priority?

Pertains to Specific Comments:

3, 14, 59, 73, 98

Response to Overall Comment Category:

Every five to six years, the United States Congress enacts legislation that authorizes federal funding for highway, transit, motor carrier, safety, and research programs across the country. This federal support represents the primary source of capital funding for CTA and other transit agencies throughout the U.S. The current legislation, known as SAFETEA-LU (Safe, Accountable, Flexible, Efficient Transportation Equity Act - A Legacy for Users), authorizes the federal transit and highway programs through 2009. President Bush signed the act into law on August 10, 2005.

The SAFETEA-LU legislation authorized CTA to seek federal New Starts grant support for four new rail lines or line extensions including: the Red Line Extension to 130th Street; the Orange Line Extension to Ford City; the Yellow Line Extension to Old Orchard; and the Circle Line. In order to qualify for New Starts funding, CTA is required to perform comprehensive Alternatives Analysis studies for each. Alternatives Analysis studies for all four projects are currently underway following the same federally mandated process as the Red Line Extension study, but addressing the unique transportation needs of their respective study areas.

A key objective of the Federal Transit Administration's Alternatives Analysis process is to measure all transit projects from across the nation by the same set of standards. This process ranks projects based on this measurement and not on where they are located. In this way, the benefits and costs of a project can be objectively measured in comparison to all others. Acknowledging that each project has a unique Purpose and Need, the process allows multiple projects from the same region to be rated highly. It is not unusual for a large region such as Chicago to seek approval for several major transit initiatives at the same time. In the late 1990s, CTA won New Starts funding approval for both the Cermak (Douglas) Branch reconstruction and the Brown Line capacity expansion project at the same time. Metra has also received New Starts funding for multiple projects at the same time. New York City in 2005 had two multi-billion dollar transit projects approved for New Starts funding.

CTA is preparing all of the New Starts projects to be advanced simultaneously from Alternatives Analysis with the selection of Locally Preferred Alternatives in each study area by fall 2009.

In order to qualify for federal funding, regional transportation projects must also be included in an official Regional Transportation Plan. Chicago's Regional Transportation Plan is prepared by the Chicago Metropolitan Agency for Planning[2] (CMAP) with input from local and state government agencies (including CTA), community organizations, and the general public. The plan is updated regularly and the Red Line Extension project is included in the plan. The most recent comprehensive update of the 2030 Regional Transportation Plan (RTP) was prepared in 2006 and involved extensive public outreach meetings throughout the region in May and June of 2006. A technical update of the 2030 RTP was also completed in 2008. Additional information on this plan can be found on CMAP's ―Shared Path 2030" web site http://www.cmap.illinois.gov/sp2030/sp2030main.aspx?terms=2030.

Other Specific Comments Noted on this Topic:

Comment:

44: Will the CTA, the RTA and IDOT present the Red Line Extension as a priority project as a public works project to the new Obama Administration?

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[2] CMAP was created in 2006 by the merger of the Chicago Area Transportation Study (CATS) and the Northeastern Illinois Planning Commission (NIPC).

Response:

CTA can only speculate that the President's support for transit will be beneficial to transit and transportation systems in our nation. However, CTA is subject to the federal New Starts process that both guides prudent planning activities and determines the evaluation steps required for additional funding.

Current details of a federal stimulus plan that may include additional funding for urban transit systems suggest that funding would need to be spent in a short time frame to have the desired stimulus and jobs creation. This type of funding, as currently specified, would not be available to New Starts projects; however, CTA is reviewing details of the stimulus package and its likely impacts on the CTA. If New Starts funding were increased through stimulus measures, CTA would propose to advance progress on all of its New Starts projects into subsequent Preliminary Engineering and Environmental Impact Statement project phases.

3. Overall Red Line Extension Project Timeline, Purpose and Need

General Comment:

What is the timeline of the project and when will the Locally Preferred Alternative be selected? How long will it take from design until operation?

Pertains to Specific Comments:

17, 19, 22, 24, 25, 26, 27, 42, 54, 65, 97, 100, 121

Response to Overall Category Comment:

Fixed guideway projects are resource intensive and are rarely funded through local funding sources alone. In order to obtain federal funding for fixed guideway projects such as an extension of a rail line, the FTA developed a funding application process called the New Starts process. The FTA New Start grant program requires conceptual transit project proposals to proceed through a formal process of planning, design, and construction. Upon completion of this process, the project is ready for operation. The process involves five formal steps: Alternatives Analysis (AA); Environmental Impact Statement (EIS); Preliminary Engineering (PE); Final Design (FD); and Construction. Each of these steps typically takes 2-3 years to complete. Initiation of each step is also contingent upon continued availability of federal and local funding, the timing of which will also affect the overall project schedule. For highly complex projects the Final Design and Construction steps take longer, particularly if construction is implemented in sequential phases rather than all at once.

In the Alternatives Analysis step, the project's purpose and need is identified, alternatives to address the purpose and need are developed and evaluated, comprehensive and on-going public involvement is initiated, and a Locally Preferred Alternative (LPA) is determined. The Red Line Extension project's "purpose and need" is to improve transportation access and enhance opportunity for economic development within the study area. In particular, transportation improvements are needed to reduce the significant bus and passenger congestion at CTA's existing 95th Street Red Line station; reduce lengthy bus trip times to access the 95th Street Red Line station from neighborhoods south of 95th Street; reduce the lengthy transit commute times experienced by many residents of the study area; and more effectively manage future traffic growth in the study area. Extending Red Line transit service south of 95th Street is intended to stimulate economic development and enhance job opportunities by improving access to, within, and beyond the study area and shortening transit travel times through faster and more direct transit service.

The Red Line Extension project is currently in the Alternatives Analysis phase. The next step is preparation of an Environmental Impact Statement (EIS). In this step, potential environmental, financial and economic impacts of each alternative are identified, potential environmental impacts of the LPA are analyzed; environmental mitigation strategies are developed, public hearings are conducted to receive input, and a formal Record of Decision is received from the FTA upon successful completion. The Preliminary Engineering step involves engineering effort to support the EIS (30% design level), development of project phasing and construction staging, and feasibility review of mitigation approaches for construction or operational impacts. In the Final Design step the engineering design started in PE is completed, capital and operating cost estimates are updated and construction drawings are prepared, and a Full Funding Grant Agreement is obtained from the FTA upon successful completion. The Construction step commences when federal and local matching funds are secured.

The current Red Line Extension Alternatives Analysis study is expected to conduct the final, Screen 3, public involvement meetings in summer 2009. Prior to these meetings, CTA will complete the quantitative analysis that will help to identify an LPA in the study area. This LPA will be presented at the Screen 3 public outreach meetings and public comments will be reviewed before CTA makes its selection final in late summer 2009. CTA anticipates completing technical work to support an LPA recommendation and submission to the FTA for project advancement in fall 2009.

Specific Comments Noted on this Topic:

Comment:

100: How important is resolving the train yard congestion at 98th as a factor in choosing the LPA?

Response:

A Locally Preferred Alternative cannot advance if it has technical or operational shortcomings without proposed solutions. However, several alternatives exist for resolving congestion at the 98th Street yard.

4. Red Line Extension Study Area

General Comments:

What are the boundaries of the project study area? How were those boundaries determined?

Pertains to Specific Comments:

52, 110, 111, 112

Response to Overall Category Comment:

A key component of the Alternatives Analysis process is specifying a study area of a definite size for the project. The goal is to establish a specific area and to define the transit challenges and opportunities within this particular space, so that potential solutions can be measured against these defined challenges. Keeping the study area focused also helps to avoid confusion between multiple unique transit project proposals within the same city or region. Too large a study area can make it too difficult to determine accurately whether the potential solutions effectively address the identified transportation needs.

The Red Line Extension study area is bounded by the current terminus of the existing CTA Red Line at 95th Street (9500S) on the north, the Little Calumet River (approximately 13400S) on the south, Ashland Avenue (1600W) on the west, and Stony Island Avenue (1600E) on the east. The study area is four miles east-to-west and approximately five miles north-to-south. These boundaries define an area with numerous opportunities for improving transit connections and growing transit market share. A key goal of the Red Line Extension is to improve transportation access and enhance opportunities for economic development. In particular, transportation improvements are needed to reduce the significant bus and passenger congestion at CTA's existing 95th Street Red Line station; reduce lengthy bus trip times to access the 95th Street Red Line station from neighborhoods south of 95th Street; reduce the lengthy transit commute times experienced by many residents of the study area; and more effectively manage future traffic growth in the study area. Extending Red Line transit service south of 95th Street is intended to stimulate economic development and enhance job opportunities by improving access and shortening transit travel times through faster and more direct transit service. The study area boundaries encompass the areas that would benefit most directly from such transit service improvements.

For more information on the details of the study area, please see the Screen 1 presentation materials available for download at the CTA's website www.chicagotransit.com as noted in the introduction to this document.

Other Specific Comments Noted on this Topic:

Comment:

We have questions relating to the ―Gray Line” proposal and its consideration in this Alternatives Analysis.

Pertains to Specific Comments:

110, 111, 112

Response:

The ―Gray Line” proposal calls for operational changes to increase service frequency on the Metra Electric District Line and improve CTA connections to this facility as well as fare integration between regional transit services.

Opportunities for changes or improvements to the existing Metra commuter rail service and CTA bus services within the corridor will continue to be evaluated in detail during Screen 3. These types of ―lower capital cost investment” opportunities will be considered within the no-build and TSM alternatives (described in Topic 8), in conjunction with other more capital intensive options. Additionally, CTA is focusing attention on identifying possibilities to enhance intermodal interchange on the various alignments.

A proposed ―Gray Line” meets some of the needs of the study area, such as reducing the lengthy transit commute times experienced by many residents of the study area. However, it will not be included as a build alternative in the current Alternatives Analysis because it does not comprehensively address all of the needs of the project, including alleviating the bus and passenger congestion at 95th Street Red Line station or reducing travel times of passengers that transfer from bus to CTA rail to access their destination. Additionally, as noted in the Screen 1 analysis (available at www.transitchicago.com – click on News and Initiatives, then Alternatives Analysis Studies) commuter rail has several characteristics that are less favorable for the study area than other modes analyzed (such as bus and heavy rail).

5. Alternatives Analyzed

General Comment in Support of UPRR Alternatives:

Many comments received support extending CTA Red Line service along the Union Pacific Railroad corridor. Additionally, some comments expressed opposition to advancing the Halsted Street Corridor or Bus Rapid Transit alternatives.

Pertains to Specific Comments:

7, 12, 38, 43, 45, 46, 47, 50, 51, 60, 74, 77, 78, 80, 81, 83, 85, 87, 99, 109, 117, 120, 122, 123, 124, 125, 126, 127, 128, 130, 131

General Comment for Various Alternatives Analyzed:

Please provide more information about the combined corridor-technology-vertical profile alternatives analyzed in Screen 2.

Pertains to specific comments:

13, 30, 52, 72, 74, 90, 94, 116

Response to Overall Category Comment:

In Screen 1, CTA evaluated potential transit corridors, vehicle technologies, and vertical profiles to determine which would be appropriate to meet the needs of the proposed Red Line Extension. From this analysis, three transit corridors (Halsted Street, Union Pacific Railroad (UPRR) right-of-way, Michigan Avenue) and two vehicle technologies (Bus Rapid Transit (BRT), Heavy Rail Transit (HRT)) were advanced. Additionally, for rail alternatives, three vertical profiles (elevated, subway, trench) were advanced and for bus alternatives, one vertical profile (at-grade) was advanced. These components were combined to create specific alternatives and in total, eight alternatives were advanced to Screen 2.

(For more information about all of the alternatives evaluated in Screen 1, see Screen 1 presentation, technical boards and public comments and responses posted on the CTA website www.transitchicago.com – click on News and Initiatives, then Alternatives Analysis Studies).

In Screen 2, two bus alternatives were evaluated, as follows: 1) Halsted Street BRT at-grade, which is proposed to travel via an exclusive travel lane right-of-way from Vermont Avenue/Halsted Street to the Red Line 95th Street terminal station; and 2) Michigan Avenue BRT at-grade, which is proposed to travel via an exclusive travel lane from 127th Street/Michigan Avenue to the Red Line 95th Street terminal station. Both of these alternatives were defined with BRT station stops proposed every half mile on their respective north-south arteries, consistent with BRT stop spacing, and no stops proposed on 95th Street. The vehicles anticipated for the BRT alternatives would be articulated buses that would be hybrid diesel-electric powered or use alternative fuels.

In addition to the two bus alternatives, six rail alternatives were evaluated, as follows: 1 & 2) Halsted Street HRT elevated and underground alternatives. Both of these alternatives would depart the current CTA 95th Street terminal station and follow the I-57 Expressway median, transitioning to either an elevated or underground structure at Halsted Avenue, where these alternatives would travel south on Halsted Street to Vermont Avenue. These proposed alternatives are both 4.9 miles long and have four station stops – at Vermont Avenue, 119th Street, 111th Street, and 103rd Street – consistent with modern rapid transit station spacing. 3 & 4) UPRR HRT elevated and trench alternatives. Both of these alternatives would follow the I-57 Expressway as it traveled south from the 95th Street terminal station until the UPRR corridor, where it would turn south to follow the corridor. The UPRR corridor travels south to approximately 111th Street, and then travels southeast until the proposed terminal location at 130th Street near the I-94 Bishop Ford Freeway. These alternatives are 6.0 miles long and have four proposed stations – at 130th Street, 115th Street, 111th Street, and 103rd Street. 5 & 6) Michigan Avenue HRT elevated and underground alternatives. Both of these alternatives would follow the I-94 Bishop Ford Expressway median and transition to either an elevated or underground structure at Michigan Avenue, where these alternatives would travel south on Michigan Avenue to 127th Street. These proposed alternatives are both 4.1 miles long and have four station stops – at 127th Street, 119th Street, 111th Street, and 103rd Street.

All rail transit alternatives would be powered via an electric third rail, consistent with the existing CTA system and rail cars would be equivalent to those used by the existing fleet. Note that with regard to the UPRR Corridor, CTA and UPRR operate services with incompatible train cars and power systems; therefore, in the proposed UPRR Corridor, CTA will have its own dedicated tracks. The elevated alternative would operate above the existing UPRR freight right-of-way (currently at-grade); whereas the trench alternative would be in a cut below the surface, with the UPRR freight right-of-way relocated in the trench as well, adjacent to the CTA right-of-way.

All alternatives currently have Park and Ride lots proposed in proximity to their terminal stations; for more information about parking facilities, see Topic 7.

Several recommendations and preferences for potential alternative and terminal configurations were provided on the question/comment cards submitted by the public. Many are derivations of the alternatives already defined. Others significantly differ from the alternatives proposed by the CTA. Staff will review all suggestions and incorporate in the analysis those that merit further consideration.

Other Specific Comments on this Topic:

Comment:

41: Has rapid bus in other areas addressed the need for rail service?
82: What is the reasoning behind imposing an additional bus line on an existing bus line?

Response:

Bus Rapid Transit (BRT) is an option for introducing certain features of rail service (for example, dedicated right-of-way and multi-door boarding) at a lower capital cost and on a more accelerated timeline than building new rail lines. Several cities in North America have successfully adopted BRT services, including New York, Los Angeles, Cleveland, Kansas City, Toronto, and Mexico City.

Introducing BRT in a local bus corridor can increase travel options for customers with different needs. For example, BRT routes may be ideal for those who are willing to walk further to a stop in exchange for a faster more predictable trip, while local routes may be a preferred option for those with limited mobility or those making short trips. Providing both services in one corridor ensures that diverse travel needs are met.

Comment:

68: Are 4 stations along the Red Line Extension Heavy Rail alternative really enough stations to alleviate congestion and promote increase[d] usage of the Red Line? Would it really help the South Side Communities?

Response:

Proposed station locations on each of the rail alternatives are consistent with modern rapid transit station spacing – about one-mile between station stops. In some cases, such as on the UPRR corridor, larger gaps exist between station locations due to the lack of development between proposed stops. Additionally, buses on east-west arterials will be able to service the rapid transit station in closest proximity to that bus line, allowing the proposed Red Line Extension to divert many bus trips currently traveling on north-south arterials in the study area to the 95th Street terminal station. Proposed Park and Ride facilities will provide more convenient auto access and promote transit use in the study area.

Comment:

70: Why not extend the red line further south to 130th St on Halsted?

Response:

The Halsted Street BRT and HRT alternatives were designed to capture the majority of potential transit riders in the Halsted Street corridor, without crossing the Calumet Sag / Little Calumet River located at Halsted Street just south of 129th Street where development density drops significantly. The proposed terminal location of the Halsted Street BRT and HRT alternatives is located at Vermont Street, just two blocks north and within walking distance of the southernmost intersection with Halsted Street in the City of Chicago.

Comment:

84: I see an Electrified High Speed Bus way as a LOW COST Alternative Red Line Extension. Agree or Disagree?
115: Incidentally, I thought I could submit an idea to use Eggleston Avenue for a High Speed Electric Bus way-complete with overhead wires from 95th Street south to 127th and Indiana.

Response:

Bus Rapid Transit (BRT) is an option for introducing certain features of rail service (for example, dedicated right-of-way and multi-door boarding) at a lower capital cost (and on a more accelerated timeline) than building new rail lines.

Eggleston Avenue has a similar width as Michigan Avenue, which is too narrow to support a dedicated BRT corridor.

Propulsion technology for the BRT alternatives has not yet been finalized; however, vehicles are anticipated to be articulated buses that would be hybrid diesel-electric powered or use alternative fuels.

Comment:

92. Why exactly was the trench option for the UPRR HRT not recommended? Would the UPRR tracks really need to be in the trench as well?
93. Why was underground Heavy Rail for the UP route shot down?

Response:

Due to the limited right-of-way available for rail infrastructure in the UPRR corridor, if the CTA Red Line Extension were to be placed in a trench, as considered in one alternative in Screen 2, then the UPRR right-of-way would also need to be placed in a trench. The configuration of rail lines require minimum distances on either sides of the rail tracks and a trench alignment increases these requirements. Without placing the UPRR rail line in a trench as well, the available right-of-way would not be sufficient for both services to operate. While there are some additional environmental impacts from placing the UPRR rail line in a trench, such as transferring higher elevation diesel emissions to ground-level, the primary reason that this corridor was not advanced was due to the increased cost. Additional costs to put the freight line in a trench will not accrue additional benefits to transit users, making this alternative less cost-effective than the elevated UPRR alternative.

Comment:

95: Have there been examples of elevated rail over existing rail right-of-ways like to UP Railroad?

Response:

Portions of the CTA Orange Line are elevated over a freight railroad right-of-way.

Comment:

105: What kind of support facilities are planned/proposed for New Stations? Will any of the Stations have "park and ride" facility? How many? Will passenger facilities (stations) have stores or stands? Is there any proposed construction for area adjacent to stations? Will only currently owned property be used? (for expansions)?

Response:

Park and Ride facilities are planned in all proposed Red Line Extension alternatives. Size, configuration and specific locations will be determined in Screen 3. Additionally, Park and Ride facilities at intermediate stations as well as station details included in the station area plans will also be developed in Screen 3.

Comment:

113: Along Halsted St. or Michigan Ave, will the elevated be over the street like Lake St. or an adjacent alley?

Response:

In Screen 2, the Halsted Street and Michigan Avenue Corridors both included elevated rail alternatives that would travel over the existing street (not in an adjacent alley). However, the engineering design of these elevated structures has not yet been defined. As suggested, an elevated rail line may have a box-shaped support such as on Lake Street. An alternate elevated structure design on the CTA system exists on the Orange Line, which uses hammerhead columns – a center support that opens for the elevated track structure. Modern engineering variations will be considered for elevated structures advancing to Screen 3.

Comment:

114. I believe you are making a mistake by considering only linear two-way travel extension options.

A one-way loop extension at the end of an existing two-way mainline offers many advantages over a two-way linear extension.

Attached is a proposal for a 10 mile long single track loop Red Line south extension. This extension would cost about the same as a two-way 5 mile long extension. But its ten stations would make the Red Line accessible by walking to twice as many residents of the area as any of the nine two-way alternatives in your study.

Response:

A loop alternative would enhance coverage of the study area but would result in longer travel times on the guideway. Many potential customers in the study area are geographically dispersed and are anticipated to access the rail line by bus or auto beyond the immediate station area as they do today and therefore need faster travel times on the guideway such that transit remains competitive with other modes.

6. Proposed Red Line Extension Operations

General Comment:

How will the service operate? Will the trains run 24 hours and what will be the fare?

Pertains to Specific Comments:

1, 54, 102, 113

Response to Overall Category Comment:

CTA assumes that any new CTA service will be generally consistent with current CTA operating practices and seek to provide customers with safe, frequent and reliable travel options. CTA assumes that the proposed Red Line Extension will operate the same hours as existing Red Line service and that the fare would be consistent with existing fares at the time of implementation. Any new CTA service and associated facilities recommended by this study would be consistent with the Americans with Disabilities Act (ADA) requirements.

Other Specific Comments on this Topic:

Comments:

29: Where would the yard be located?
71: Is the land at 127th Street for a new longer train yard?
100: How important is resolving the train yard congestion at 98th as a factor in choosing the LPA?

Response:

CTA has explored some preliminary yard location sites for each of the proposed rail alternatives. For the Halsted Street HRT elevated alternative, a preliminary yard location has been identified on the west side of Halsted Street near industrial areas in the middle of the corridor. For the UPRR HRT elevated alternative, possible yard sites could be accommodated along the southern leg of the proposed alignment in adjacent industrial areas.

Identifying yard space in coordination with the proposed alternatives is one way to accommodate additional trains required to serve a rail line extension; however, other operational improvements can achieve similar goals. The feasibility of accommodating additional trains at alternate yard locations in the CTA system will also be considered as part of this study.

7. Potential Red Line Extension Parking Facilities

General Comment:

Where will parking facilities be located? Will you look at vacant and available land/properties?

Pertains to Specific Comments:

4, 30, 105, 127

Response to Overall Category Comment:

The CTA is considering Park and Ride facilities for each of the bus and rail alternatives included in Screen 2. For each corridor, Park and Ride facilities are being considered at the terminal locations of the proposed Red Line Extension alternatives. Additionally, in Screen 3, further analysis on adjacent land use and parking needs at interim station locations will also be considered. The amount of parking proposed is determined by forecast station usage. The location of each station, the area served, and proximity to major arterials and/or highways will determine whether parking is recommended at each station. If parking is determined to be advantageous at a proposed station, the ridership forecast for that station will determine the number of parking spaces and the type of parking facility required (e.g. a lot or a garage).

8. Evaluation Criteria Used in the Alternatives Analysis Study

General Comment:

How are screening criteria applied throughout the analysis to advance the alternatives being evaluated?

Pertains to Specific Comments:

6, 8, 57, 58, 72, 96

Response to Overall Category Comment:

A three phase evaluation methodology is being used for the Red Line Extension Alternatives Analysis. With each screen, increasingly detailed and comprehensive evaluation criteria are applied to a decreasing number of alignment alternatives that have been identified as the best potential transportation investments. Each step in the evaluation process is thus designed to increase the level of detailed planning and engineering analysis on progressively fewer alternatives.

In Screen 1, the Alternatives Analysis began with identifying a ‑universe” of alternatives—all of the conceivable transit service improvements that may address the purpose and need for the project within the study area. This universe of alternatives was qualitatively evaluated in Screen 1 using social, environmental, transportation, and economic parameters to identify a shortlist of specific technologies, corridors, and profiles that may best satisfy the project's goals and objectives.

In Screen 2, after identifying the alternatives in more detail, two additional steps of evaluation were performed. In the first step, four factors were used to evaluate each alternative's performance, as follows: physical constraints, such as right-of-way requirements; social and economic factors, using demographics and employment data; environmental factors, including impacts from each alternative on noise, visual, natural and cultural resources; and transportation factors, such as travel time, transit connectivity, and traffic impacts. At the start of Screen 2, eight distinct build alternatives (not including the No-Build and TSM alternatives, which are discussed in more detail below) were considered. Only five of these alternatives advanced after the application of the four evaluative factors used in this first evaluation step.

Next, a more detailed evaluation of the five remaining build alternatives was performed. In this step, preliminary estimates of capital costs, operating costs and projected ridership were used to compare the alternatives. This evaluation was performed with order-of-magnitude estimates to determine which alternatives were most likely to perform well under FTA's cost-effectiveness evaluation criteria. After this evaluation step, three build alternatives remained, as follows: 1) Halsted BRT at-grade, 2) Halsted HRT elevated, 3) UPRR HRT elevated, plus the No-Build and TSM alternatives.

In Screen 3, these advancing alternatives will be evaluated using detailed and quantitative analysis to identify and recommend an alternative to continue as the Locally Preferred Alternative in the study area. In addition to the quantitative cost, ridership, and cost-effectiveness evaluation performed in Screen 3, evaluation of other FTA criteria, such as analyses of transit-supportive land use and local financial commitment are also prepared.

For more information on the evaluation criteria or evaluation results of each alternative, please see the detailed summaries available for review on the Screen 1 and Screen 2 presentation boards, which are available for download at the CTA's website www.chicagotransit.com as noted in the introduction to this document.

Other Specific Comments on Socioeconomic Criteria:

What are the socio-economic factors considered in the Screen 2 analyses and how are they weighted?

Pertains to Specific Comments:

10, 34, 56, 57, 58, 104

Response:

In Screen 2, after identifying the alternatives in more detail, two additional steps of evaluation were performed. In the first step, social and economic factors were considered, among others. Social factors were evaluated by station area: for BRT this included the area within ¼-mile radius of proposed station stops and for HRT, the area within ½-mile radius of proposed station stops. CTA evaluated factors including total population, population density, employment, employment density, number of households, total zero-car households, zero-car household percentage, total minority population, minority population percentage, total poverty-status households, poverty-status household percentage, number of hospitals, and number of schools and colleges. All of these factors were evaluated based on year 2000 data and, where available, forecasts for year 2030. CTA compared BRT alternatives and HRT alternatives separately, due to the differing station radii used for collecting and analyzing data.

For the eight alternatives evaluated, the data did not significantly differentiate one alternative from any other. For example, the analysis reveals there are no significant differences in the current percent of minority populations among the three alternatives. The minority population for all of the corridors considered is approximately 99 percent, which is significantly higher than the minority population in Cook County at 44 percent. Additionally, all corridors include a proportion of households without cars (ranging from 15-25 percent) similar to Cook County at 17 percent. And all corridors have a higher percentage of poverty-status households (17-24 percent) than Cook County as a whole (at 12 percent).

A comparison of the potential impact on hospitals and schools did not reveal significant differences either. One hospital is located within quarter of a mile of the Michigan Avenue Alternatives and each alternative has three to five schools within a quarter mile of station areas. Since all schools were along the neighboring streets rather than on the main routes, with the exception of Harlan High School on the west side of South Michigan Avenue at West 97th Street, they did not weigh heavily on the overall social rating.

All economic factors were evaluated within a ¼-mile radius of both BRT and HRT proposed station stops. Factors included the number of Tax Increment Financing (TIF) Districts, Enterprise Zones and Industrial Corridors as well as an evaluation of retail locations and transit-supportive land use potential and impacts to the revenue of adjacent businesses during construction.

For the eight alternatives evaluated, all of the alternatives were equivalent in the evaluation of economic factors. All of the corridors have adjacent areas belonging to (TIF) Districts, Enterprise Zones and Industrial Corridors. The Halsted Street and UPRR Corridors have five and six noted areas, respectively. The Michigan Avenue Corridor has only two of these areas; however, the Michigan Ave TIF district encompasses nearly the entire corridor.

In the evaluation of average retail locations and transit supportive land uses, note that the corridors that perform best (the Halsted and Michigan Avenue Corridors) are also the corridors most affected during construction – as noted in the subsequent economic factor –Impacts to revenue of adjacent businesses during construction.” All of the corridors have the potential for enhanced economic development in conjunction with the respective alternative.

Transit-oriented development (TOD) is also an important evaluation factor considered by the Federal Transit Administration (FTA). The FTA evaluation of TOD includes existing land use, transit supportive plans and policies, performance and impacts of these policies, and other land use considerations. As all corridors have the potential for enhanced economic development, there are TOD opportunities for all three alternatives. These opportunities will be further defined and documented during the upcoming station area planning work that CTA will perform to support Screen 3.

Other Specific Comments Noted on this Topic:

Comment:

42: …With each possibility (HB, HR, UPR) what would the impact be on decreasing the commute time?
103: Will the extension of the Red Line cut the time of getting to your destination…?

Response:

Reducing travel times is one of the key elements in the stated Purpose and Need of the Red Line Extension Alternatives Analysis study (see Topic 4 for more information about the project Purpose and Need). All of the proposed build alternatives advancing to Screen 3 (Halsted at-grade Bus Rapid Transit, Halsted elevated Heavy Rail Transit, and UPRR elevated Heavy Rail Transit) include improvements to reduce travel times in the Red Line Extension Alternatives Analysis study area.

The Heavy Rail Transit alternatives on Halsted and the UPRR both result in travel time reductions on the bus trips currently used to access the Red Line. Local bus trips would serve the proposed extension station nearest the east-west bus lines, reducing the total number of buses serving the current Red Line

95th Street terminal station. Estimated travel time by rail from 130th Street to 95th Street by rail is approximately 12 minutes compared to 25 minutes or more today.

For the Bus Rapid Transit alternatives, travel times on Halsted, the corridor with the majority of bus trips in the Red Line Extension Alternatives Analysis study area would improve due to roadway improvements such as dedicated travel lines and traffic signal priority. Additionally, this alternative includes reconfiguring the current bus terminal at the Red Line 95th Street terminal station, alleviating some of the congestion approaching and accessing the terminal, although still requiring a transfer for trips beyond 95th Street.

Comment:

88: What exactly would the TSM be for the Red Line Study?
89: What is the Baseline Alternative, and does not BRT come closest to the Baseline Alternative?

Response:

The No-Build Alternative incorporates only those transportation improvements that are included in the 2030 Regional Transportation Plan for which need, commitment, financing, and public and political support are identified and are reasonably expected to be implemented. The second alternative that is developed for consideration is called the Transportation System Management (TSM) Alternative and is defined as the best that can be done for improving mobility without constructing a new transit guideway. The TSM Alternative can include applicable transportation system upgrades such as intersection improvements, bus route restructuring, shortened bus headways, express and limited-stop service, signalization improvements, and timed-transfer operations.

The Federal Transit Administration must approve the definition of the No-Build and TSM Alternatives; however, only one of these alternatives advances as the Baseline Alternative. Because the Baseline Alternative should represents the best that can be done to improve transit service in the study area without major capital investment in new infrastructure, it is often the TSM Alternative that is used as the Baseline Alternative. The Baseline Alternative should be designed to address identified transportation needs in the Red Line Extension study area and demonstrate the extent to which these problems can be solved without a proposed major capital investment.

The definitions and selection of the No-Build and TSM Alternatives – and the alternative chosen as the Baseline Alternative – is the subject of interaction between FTA and CTA Alternatives Analysis study staff and that process is currently underway. When the final alternatives are selected, definition of the specifics of these alternatives will be presented to the public in the next round of outreach, Screen 3. Additionally, measured benefits from the alignment, mode and vertical profile alternatives (or build alternatives) that have advanced from Screen 2 to Screen 3 will be compared with the FTA-required Baseline Alternative. This comparative analysis is a key activity that the FTA uses in their annual rating of New Starts transit projects.

Comment:

101: How much does existing congestion on Halsted factor into evaluating the BRT option for Halsted?

Response:

In Screen 2, after identifying the alternatives in more detail, two additional steps of evaluation were performed. In the first step, transportation factors were considered, among others. Transportation factors were evaluated along the corridor length of each proposed alternative. CTA evaluated factors such as the anticipated travel speed of each alternative, new traffic impediments introduced by the alternative, and potentially displaced parking spaces.

Since the Halsted Street BRT at-grade alternative assumes that a dedicated lane exists for the BRT vehicles, average travel speed was derived from known travel speeds in other BRT corridors operating in similar conditions – and was not negatively impacted by existing congestion on Halsted Street. The Halsted Street impacts to traffic in general purpose lanes and parking displacement will be assessed in more detail in Screen 3.

9. Ridership Estimates and Related Issues

General Comment:

How were ridership numbers generated? What is the projected ridership on each corridor?

Pertains to Specific Comments:

40, 55, 66

Response to Overall Category Comment:

As required by FTA guidance, CTA is working in cooperation with other regional transportation agencies and the Chicago Metropolitan Agency for Planning (CMAP) to develop a regional travel forecasting computer model that can be used to predict ridership for the various alternatives being studied using information on projected population, employment, congestion, and other factors. This computer model is based on other models already used by CMAP for other regional transportation planning purposes.

In Screen 2, after identifying each alternative in more detail, two steps of evaluation were performed. In the first step, four factors were used to evaluate each alternative's performance including physical constraints, social and economic factors, environmental factors, and transportation factors. (More detail on the evaluation process is provided in Topic 8.) At the start of Screen 2, eight distinct build alternatives, plus the No-Build and TSM alternatives (also discussed in more detail in Topic 8) were considered. Only five of these build alternatives advanced after the application of the four evaluative factors used in this first evaluation step.

Next, in addition to other evaluation criteria, preliminary ridership estimates were developed for each alternative that advanced to the step 2 evaluation of Screen 2. The ridership model requires calibration with current day transit volumes in order to validate the forecasting outputs. This calibration had not yet been completed in detail at the completion of Screen 2; therefore, the ridership volumes produced by the model are only conceptual estimates and can only be referenced for order-of-magnitude comparisons. However, these estimates suggest that the rail alternatives on the Halsted Street and UPRR Corridors are similar in scale. Additionally, the estimates suggest that the rail alternatives have a ridership volume that is about three times higher than BRT ridership estimates. Specific ridership estimates from the calibrated model will be produced for the Screen 3 and will support the recommendation of a Locally Preferred Alternative.

10. Project Cost Estimation

General Comment:

Please describe the project cost estimating process and how these estimates are used to make decisions regarding alternatives advanced in the study. What are the current estimates for each alternative?

Pertains to Specific Comments:

8, 28, 31, 33, 61, 84, 92, 93

Response to Overall Category Comment:

Constructing transportation facilities, purchasing transit vehicles, providing new transit services, and maintaining existing services require a significant financial commitment. Transit capital investments can last several generations and can require continuing public financial support for maintenance and operations. FTA guidelines require that all of these factors must be considered when evaluating the feasibility of an alternative and in determining which alternatives advance for more detailed analysis.

In Screen 2, the costs used in the analysis were preliminary and conceptual in many cases, based on general knowledge of the costs associated with each alternative being evaluated. For example, in the comparison of the underground versus elevated HRT alternatives on Halsted Street, experience from projects in other U.S. cities indicates that underground HRT in this context would cost two to three times as much as elevated HRT, but would yield comparable benefits—such as capacity and travel times. As a result, although highly detailed and precise economic costs regarding the expenses to create an underground or elevated HRT alternative were not determined (and are not appropriate at this stage), underground HRT was not advanced to Screen 3 because the identified economic factors strongly indicated that there would be higher costs for the underground HRT system with little or no advantage over an elevated HRT system.

This order-of-magnitude analysis was performed on all alternatives advancing into the second evaluation phase of Screen 2 (see Topic 8 for more information about evaluation criteria). Alternatives were compared with each other to determine which would advance into the more detailed capital costing performed in Screen 3. CTA analysis determined that the Halsted Street BRT at-grade alternative rated favorably compared with others under consideration and will be advanced to Screen 3. As mentioned, the Halsted Street HRT underground alternative and the UPRR HRT trench alternative performed poorly compared with other alternatives, as their costs are expected to be much higher than other HRT alternatives. Finally, while these order-of-magnitude estimates suggest that the UPRR HRT elevated alternative would be more expensive than the Halsted Street HRT elevated alternative due to over a mile more in infrastructure costs, both of these alternatives rated favorably compared with different vertical profiles on the same corridors (the trench and underground alternatives, respectively) and will be advanced to Screen 3.

The upcoming Screen 3 analysis will examine capital and operating costs in more detail as well as how the various cost factors apply to the alternatives being considered. In Screen 3, the reduced number of alternatives creates a manageable set of alternatives to be examined in detail. In accordance with FTA guidance, the analysis in Screen 3 will include a capital cost comparison, an operating and maintenance cost comparison, as well as a comparison of the estimated annualized cost per boarding.

Other Specific Comments on this Topic:

Comment:

8: Subways are cost prohibitive? Why? Are the cost constraints the CTA's or the Federal governments?

Response:

There are no local or federal constraints on the project cost. However, since the Red Line Extension and other projects in Chicago are competing with other cities across the country for a limited amount of federal funding to advance into Preliminary Engineering and Environmental Impact Statement project phases, CTA works to keep all of its projects competitive. The current FTA measure of competitiveness is the project cost-effectiveness rating, which compares project cost with estimated user benefits. The project must provide high benefits (measured in terms of new riders and travel time savings) for the people using the facility for the least amount of cost to remain competitive against projects in other cities.

Screen 2 analyses estimated that the cost of building a subway on the Halsted Street corridor in the Red Line Extension Alternatives Analysis study area would be two to three times the cost of an elevated structure in the same corridor. However, while the cost of a subway line is much higher than an elevated structure, the level of service and travel time savings provided by both are identical. Additionally, since the evaluation analyses to advance alternatives are comparative, the subway alternative did not perform as well as the elevated alternative on the Halsted Street corridor.

Comment:

79: Is it true that the greatest financial benefit to the CTA would be through the selection of the UP route even though the initial cost might be more?

Response:

It is too early to tell which alternative will have the greatest financial or ridership benefits. The Screen 3 evaluation process will develop ridership forecasts based on computerized travel models, and more detailed estimates of capital and operating costs associated with the remaining alternatives. Therefore, at the end of Screen 3, the CTA will be able to address this question. It is important to note that all proposed alternatives are expected to require public financial support for construction, operation, and maintenance.

11. Funding of Red Line Extension Construction and Operations

General Comment:

How will the construction and operation of the Red Line Extension be funded? How are matching funds secured? How is the Red Line Extension funding related to transit fares?

Pertains to Specific Comments:

18, 23, 32, 37, 54, 67, 69, 76, 108

Response to Overall Comment Category:

CTA's operating budget supports day-to-day operations and helps determine the service frequency and hours CTA can offer on its bus and rail system. Half of CTA’s operating budget comes from customer fares and revenue generated from sources such as advertising and concessions. The other half of the operating budget comes from regional sales taxes and matching funds from the State of Illinois. No federal funds are available specifically to cover operating expenses. Once the Red Line Extension is built and operational, the funds to operate the system will come from fare revenue as well as local and state funding sources, consistent with the funding mechanisms that support CTA’s other bus and rail transit services.

Meanwhile, CTA’s capital funding is provided both by the federal government and State of Illinois and is granted specifically for improvement projects such as rail station renovations, track and structure rehabilitation, bus and rail car purchases, and rail extensions. It is federal capital funding that is being sought for the Red Line Extension and other New Starts projects. Capital funds help the CTA maintain and improve its service, but federal rules prevent its use for day-to-day operations expenses.

CTA has initiated this Alternatives Analysis study for the Red Line Extension as a first step towards obtaining capital funding for the project through the Federal Transit Administration’s ―New Starts” grant program.[3] This program provides funding for major public transit infrastructure projects throughout the U.S. through a highly competitive process. Upon successfully advancing through the four phases of project implementation (Alternatives Analysis, Environmental Impact Statement, Preliminary Engineering, and Final Design) a project will be qualified to receive a ―Full Funding Grant Agreement” (FFGA) from the U.S. Government. The amount of funding in the FFGA covers up to 80 percent of the project’s capital costs. Other federal, state and local funds comprise the remainder of capital funding. It is possible to seek alternative sources of federal and non-federal funding for the project, but the federal New Starts grant program is specifically intended to support transit projects of this nature and is the public funding mechanism generally most capable of doing so.

As indicated above, to ultimately secure federal New Starts grant funding, matching funds for at least 20 percent of the project’s capital costs are required from sources other than the New Starts grant program mainly from non-federal (i.e., state and local) sources. From 2000 through 2004, the Chicago region’s matching funds came from the State of Illinois through the Illinois FIRST legislation. The Illinois FIRST legislation expired on June 30, 2004. Since that time, CTA has been working with the Illinois Legislature to enact a replacement to Illinois FIRST and ensure that all future federal transit funds available to the Chicago region can be fully utilized.

CTA is simultaneously pursuing solutions to its overall operating and capital funding challenges while also positioning itself (through Alternatives Analysis studies such as this one) to secure capital funding to meet the region’s future transit infrastructure needs. While it is necessary and critical for CTA to obtain the capital and operating resources it needs to maintain its system in a state of good repair on an ongoing basis, it is equally important to plan for the future; there is little value in maintaining an existing system if it will not adequately address future travel needs. CTA’s overall Capital Improvement Program not only identifies funding needs to maintain the existing system in a state of good repair, but it also identifies and addresses future needs to serve growing regional transit travel demands. With a growing population and shifting travel patterns and travel needs, it is important to anticipate CTA customers’ future needs and plan accordingly. For example, many of today’s key transit links—including the Blue Line to O'Hare and the Orange Line to Midway—were made possible by past generations who understood the need to invest in transit's future even as they addressed significant day-to-day financial pressures.

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[3] CTA is also conducting concurrent Alternatives Analysis studies for other candidate New Starts expansion projects that have been authorized by the U.S. Congress—including extending the Yellow Line to Old Orchard, extending the Orange Line to Ford City Mall, and the constructing the Circle Line.

It is also important to recognize that federal capital funding for transit system expansion projects comes largely from the New Starts grant program funds that are allocated separately from federal formula funds dedicated to ongoing "state of good repair" capital improvements. While federal formula funds may be used for infrastructure renewal projects, New Starts funds are discretionary funds that can only be used for system expansions. Given that CTA has demonstrated need for both formula and New Starts funding, it is prudent that CTA take all necessary steps to obtain funding from both sources and not focus on just one while passing up the other. CTA does not propose diverting its federal formula funds to support system extensions and expansions.

See Topic 10 for more information about Red Line Extension project costs.

12. Alternatives Analysis Public Involvement Process and Format

General Comment:

Does the public involvement process for the Red Line Extension Alternatives Analysis study allow individuals to have a voice in the decision in the corridor selection? Is all the information (evaluation criteria, etc.) available to the public? When will the next round of meetings be held?

Pertains to Specific Comments:

2, 4, 11, 16, 20, 21, 36, 40, 63, 64, 86, 106,107,119

Response to Overall Category Comment:

Public involvement is a key component of this process. The outreach has already begun including a community stakeholders meeting with representatives and leaders of various community groups throughout the study area. We also have offered to meet with all elected officials representing the Red Line Extension study area and adjacent areas. Meetings also included faith-based organizations, other community organizations, and city and state agencies such as the Chicago Department of Transportation, Illinois Department of Transportation, Regional Transportation Authority, Metra, and Pace. If your organization would like to be included in the stakeholder's meetings please contact Darud Akbar, CTA Government and Community Relations at dakbar@transitchicago.com.

The public involvement process for the Red Line Extension Alternatives Analysis study also includes a total of six public involvement meetings, two each at the conclusion of the Screen 1, Screen 2, and Screen 3/LPA analyses. The Screen 1 meetings were held at Chicago State University and West Pullman Public Library. The Screen 2 meetings were held at the West Pullman Historic Visitors Center and the Woodson Regional Public Library. Meeting locations for Screen 3 have not yet been determined nor have the dates; however, CTA anticipates that meetings will be held in summer 2009. The meeting locations must be close to public transit and accessible to people with disabilities. Suggestions for meeting locations may be sent to Darud Akbar, CTA Government and Community Relations at dakbar@transitchicago.com.

Meetings are announced through ads in neighborhood newspapers and publications as well as public alerts on CTA trains and buses, at rail stations, on the CTA Web site, and distributed to print and broadcast media via news releases. The Screen 2 outreach meeting information was posted in The Chicago Defender (Nov. 12 & 19), The Crusader (Nov. 13), La Raza (Nov. 23rd), and the Daily Southtown (Nov. 20th). In addition to the CTA website, information was posted on at the websites for the Regional Transportation Authority and the Chicago Metropolitan Agency for Planning. Notices were distributed to elected officials and surrounding suburb's village halls for distribution and posting.

The format of the meetings included groups of presentation boards containing detailed information on each area of analysis in the study, where individual conversations between the public and project staff knowledgeable about that area of analysis could take place. The public meetings also included a community presentation that provided information in a slideshow format led by the study's project managers (available at www.transitchicago.com). Meeting attendees were requested to submit questions and comments in a written format. CTA's goal in emphasizing written questions and comments has been to ensure everyone's thoughts are collected and reviewed, rather than only those individuals who might choose to speak publicly at a meeting. The intent has been for everyone to have an equal opportunity to participate in the process. In addition, by reviewing and responding to similarly worded questions, the presenters efficiently addressed multiple individuals at once and avoided repetition during the public meetings. CTA and the consultant team staff have also been available to answer any individual questions on a one-on-one basis following the general question and answer period at each meeting. All of the meeting materials are available at the CTA's web site (www.transitchicago.com).

The written comments received at the public meetings and other detailed comments submitted subsequently are being answered individually for the record in the format of this document, which will be made available publicly on the CTA web site, by email to public meeting participants, and in hard copy by written request. All of the comment cards and other written communications (primarily emails) will collectively become part of the evaluation process and will be submitted to the Federal Transit Administration as a part of the official documentation for the Alternatives Analysis study.

13. Potential Red Line Extension Economic and Environmental Impacts

General Comment:

What will be the economic and environmental impacts of the Red Line Extension? What will be the community and economic benefits of the Red Line Extension? How are specific impacts and benefits measured and valued?

Pertains to Specific Comments:

4, 5, 34, 56, 57, 58, 85, 91, 102, 104, 105

Response to Overall Category Comment:

An Environmental Impact Statement (EIS) will analyze in detail the social, economic, and environmental consequences and benefits of the proposed Red Line Extension. The environmental review process required by the *National Environmental Policy Act* of 1969 (NEPA) and related laws includes environmental impact analyses and the preparation of documentation for public review. Per FTA guidance, the environmental evaluation begins upon completion of the Alternatives Analysis study, and it will result in a detailed written statement on the anticipated environmental impacts of the Red Line Extension and the steps that will be taken to mitigate any negative impacts to the community and the natural environment.

Typically, environmental reviews for proposed transit projects address the potential impact areas of air and water quality, noise and vibration, historic and cultural properties, parklands, contaminated lands, displacement of residences and businesses, and community preservation. During the federal environmental review process, the CTA will work concurrently with state and other local agencies to also comply with state and local environmental laws.

As part of the preparation of an Environmental Impact Statement, the traffic and parking impacts of the proposed transit improvements – at key intersections, at proposed terminal locations, and throughout the study area – will also be evaluated in more detail. Depending on the Locally Preferred Alternative (LPA), local bus routes may be reduced or reconfigured. Where necessary, CTA coordinates with the Illinois Department of Transportation and local municipalities when evaluating traffic issues. Maintaining traffic flow and related efficiencies is a major consideration in CTA's planning of this extension.

Prior to initial engineering work which outlines specific infrastructure needs in coordination with available right-of-way and current land uses, CTA cannot determine how much private property, if any, would need to be acquired in order to construct and operate the selected alternative. A final determination on the vehicle technology, alignment and vertical profile will need to be established before potential property impacts can be assessed. Potential property impacts are determined in detail as a part of the Preliminary Engineering (PE) phase of project development, which proceeds concurrently with the preparation of the EIS. Public acquisition of private property is governed by federal and local laws. In accordance with these laws, affected property owners would be compensated for their properties based on fair market values and can be provided relocation costs.

Regarding the economic impact of the Red Line Extension, FTA guidance requires an economic analysis of the Red Line Extension to be conducted as a part of Screen 3 of the Alternatives Analysis. In general terms, it may be noted that numerous studies suggest that transit investments result in economic development. A recently conducted study by the U.S. Department of Transportation, found that for every $1 billion invested in transit projects, 47,500 jobs are created or sustained. Specific projections for the Red Line Extension may be developed in later studies. Currently, CTA is working with the Mayor's Office of Workforce Development to ensure that training and jobs access will be available to support the construction of the proposed Red Line Extension.

Other Specific Comments on this Topic:

Comment:

9: Bus pollution of BRT, how will it be mitigated?

Response:

CTA anticipates that any BRT alternatives would use hybrid diesel-electric powered or use alternative fuels-based vehicles. Alternatives fuels could include compressed natural gas, clean diesel technology engines, and/or low sulfur fuel. New technologies, such as fuel cell powered buses are also being developed. All of these options have lower pollution than regular diesel fuel vehicles; however, the potential pollution impacts of any vehicle decision will be further evaluated during the subsequent Environmental Impact Statement project phase. Mitigation strategies, if necessary, would be developed at that time.

14. Potential Red Line Extension Impacts on Existing CTA Services

General Comment:

How would the Red Line Extension impact current CTA services? Will there be redesign or expansion to the existing 95th Street terminal station?

Pertains to Specific Comments:

15, 102, 116

Response to Overall Category Comment:

It is anticipated that the structure of existing bus routes in the study area will be changed to complement new high-capacity transit service. Depending on the specific alternative advanced as the Locally Preferred Alternative, the number of bus routes feeding into the 95th Street Red Line station may change. Changes to bus services will be subject to public input and will be implemented after construction.

The use of the air rights over the Dan Ryan Expressway has been considered for expanding the 95th Street Red Line station facility. This type of expansion is very costly and must be weighed against the needs and benefits of expanding the station facility. The Red Line Extension HRT alternatives – including the Halsted Street HRT elevated and the UPRR HRT elevated alternatives – would reduce the number of buses feeding the 95th Street station, while the Halsted Street BRT at-grade and Transportation System Management (TSM) alternatives (more information about these alternatives is available in Topic 8) would result in an increase in the number of buses serving the 95th Street station. During Screen 3, the potential for expanding the 95th Street station facility will be examined as part of the Halsted Street BRT and TSM alternatives. The Screen 3 evaluation and subsequent engineering design phases will determine the necessity for any significant redesign of the 95th Street station based on proposed bus routing changes that affect the terminal.

Other Specific Comments on this Topic:

Comment:

53: Would the 111/115 Pullman Route return to a "shuttle like" route whenever an alternative is chosen?

Response:

Route 111 Pullman/111th Street/ 115th Street bus may be restructured if it results in a simplified route paths and better service to the proposed alternative. The Screen 3 evaluation will include the development of preliminary service plans for the alternatives that would identify any anticipated changes to the bus route.

15. Other

General Comment:

This section includes general comments and viewpoints that can be characterized as public input into the study process.

Pertains to Specific Comments:

2, 48, 49, 62, 129

Response to Overall Category Comment:

These comments do not ask a question or refer to a specific issue, but rather point out general views on the subject, which have been noted. Thank you for your feedback.

Other Specific Comments on this Topic:

Comment:

35: Which projects are being driven by the 2016 Olympics?
39: Is the Red Line- rather the advancement of the project being driven by 2016 Olympics?

Response:

CTA is working closely with the 2016 bid team and believes that the present transit system can handle transit needs for the 2016 Olympics. The Red Line Extension project is not linked with Chicago's bid for the 2016 Olympics. However, any improvements made to the current system could only benefit the City's Olympic candidacy.

Comment:

75: What effect does the Canadian National's RR purchase of the EJ&E RR and subsequent rerouting of freight trains in suburban & city areas have in the final consideration?

Response:

This purchase does not affect any of the alternatives under consideration in the Red Line Extension Alternatives Analysis study.

Appendix C
Agency Coordination and Public Involvement

Alternatives Analysis (2006-2009)

Screen 3

- Presentation
- Exhibit Boards
- Comment Card
- Comment Database
- Comment Responses

Federal Transit Administration’s
New Starts Process

Red Line Extension Alternatives Analysis Study

June 2009

Schedule for Tonight’s Meeting

- **Structure of the meeting**
- **Questions and answers process**
  - Submit your comments in writing on comment cards
  - Comments and questions will be grouped and answered by topic
  - All comments and questions will be addressed on CTA’s website - www.transitchicago.com
  - An interpreter for the hearing impaired and a translator for the Spanish speaking community are available this evening

Screen 3 Public Meetings

Wednesday, June 3, 2009	Thursday, June 4, 2009
6:00 pm - 8:00 pm (Presentation begins at 6:15 pm) Olive-Harvey College Cafeteria 10001 S. Woodlawn Ave. Chicago, IL	6:00 pm - 8:00 pm (Presentation begins at 6:15 pm) Woodson Regional Chicago Public Library 9525 S. Halsted St. Chicago, IL

Tonight's Speakers

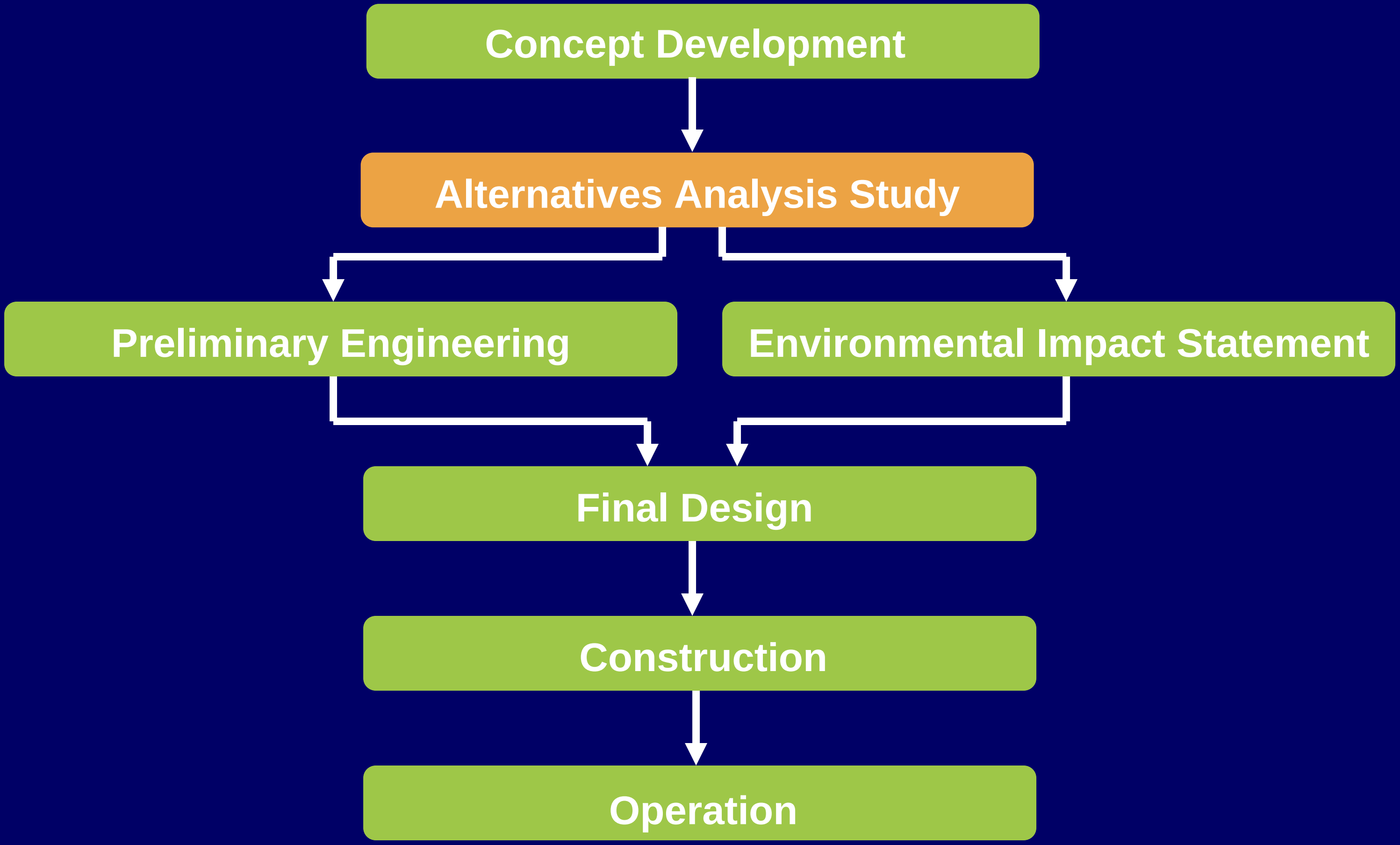
- **Darud Akbar – Moderator**
  - Chicago Transit Authority
- **Jeffrey Busby – Strategic Planning Manager**
  - Chicago Transit Authority
- **Ronald Shimizu – Red Line Study Area Manager**
  - Parsons Brinckerhoff

Outline of the Presentation

- Discuss Status of Red Line Extension Alternatives Analysis Study
  - New Starts Overview
  - Prior Findings
- Screen 3 Preliminary Findings
- Public Involvement Process

Status of Study

FTA’s Required New Starts Process



Concept Development

Alternatives Analysis Study

Preliminary Engineering

Environmental Impact Statement

Final Design

Construction

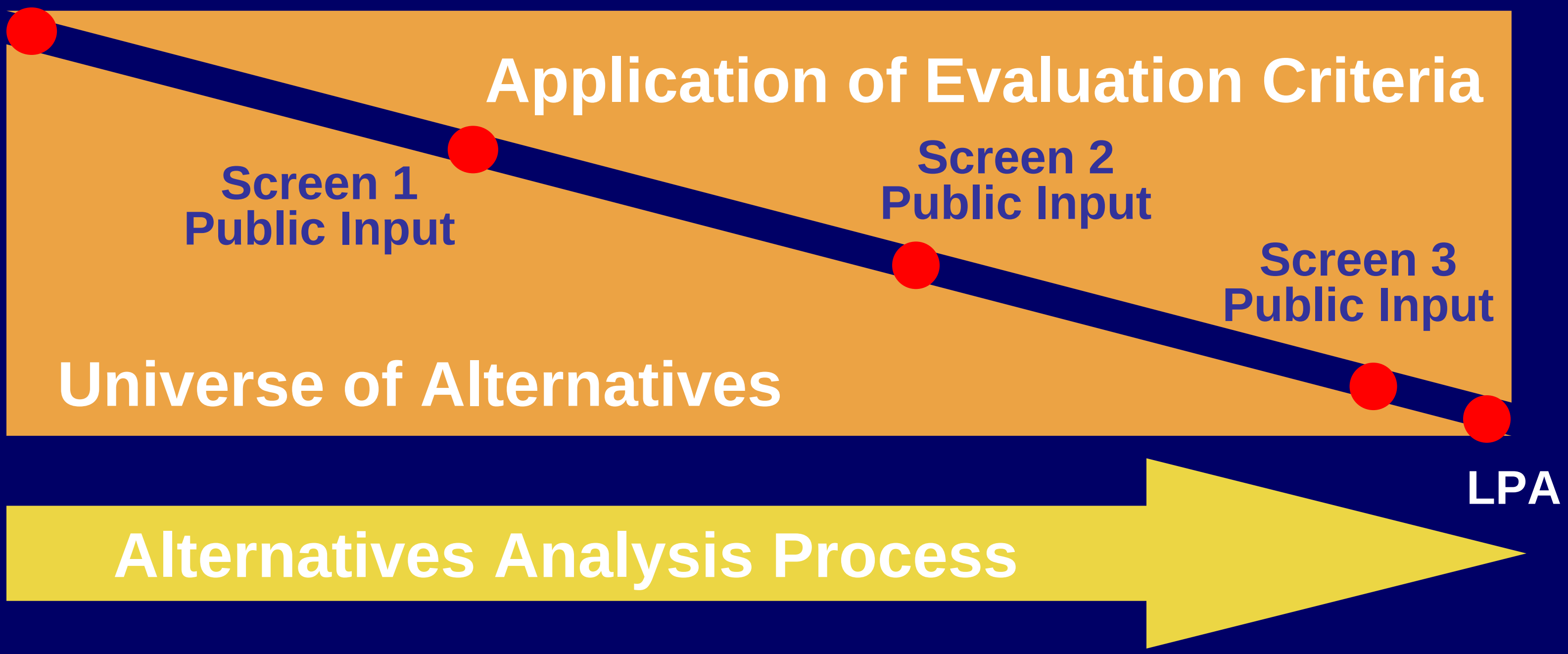
Operation

Alternatives Analysis (AA) Studies

- FTA Requirement for federal funding for transit expansion (New Starts)
- Identifies transit opportunities and ensures all practical solutions are considered
- Ensures planning is consistent among all New Starts projects throughout the country
- Provides opportunity to gather information and receive public input
- Identifies Locally Preferred Alternative

FTA Evaluation Process

The Purpose and Need is first defined, the evaluation criteria are applied, and options within the Universe of Alternatives are eliminated until at the end of the process, there is a Locally Preferred Alternative (LPA).



Application of Evaluation Criteria

Screen 1
Public Input

Screen 2
Public Input

Screen 3
Public Input

Universe of Alternatives

LPA

Alternatives Analysis Process

Purpose and Need

- Significant Bus and Passenger Congestion at 95th Street Red Line Station
- Lengthy Bus Trips to Access 95th Street Red Line Station
- Far South Area Residents Experience 20% Longer Commute Times than Rest of City
- Traffic Congestion is Expected to Grow along with Study Area Population and Employment

Screen 1 & 2
Summary

Screen 1

Universe of Alternatives - Technologies

TECHNOLOGIES

Automated Guideway/Monorail

Bus Rapid Transit

Commuter Bus

Commuter Rail

Heavy Rail Transit

High Speed Rail

Light Rail Transit

Local Bus

MagLev

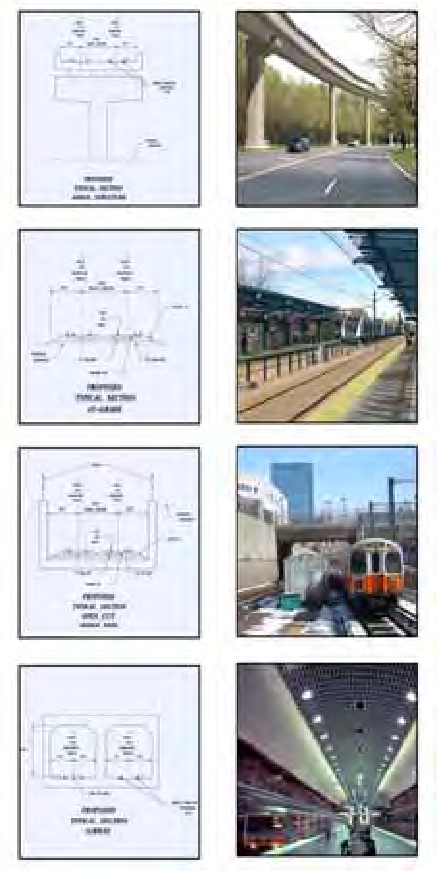
Personal Rapid Transit

Streetcar

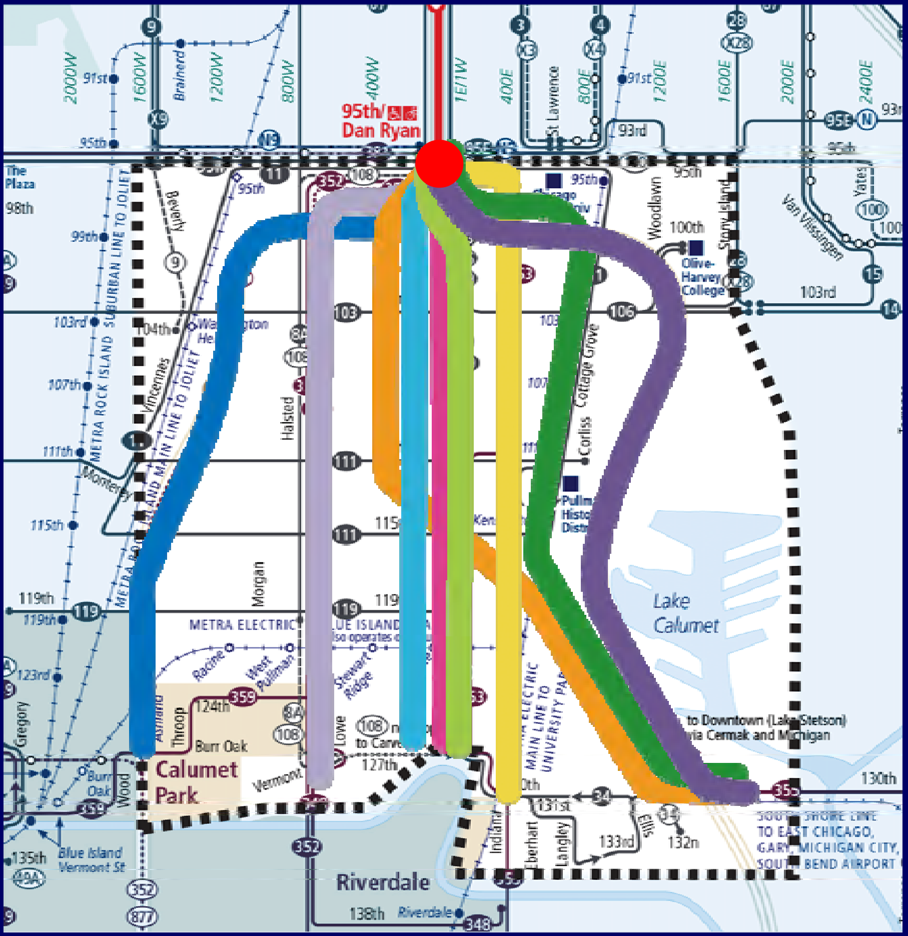
Universe of Alternatives - Profiles

PROFILES

- Elevated
- At-Grade
- Trench
- Underground



Universe of Alternatives - Corridors


95th/
Dan Ryan
91st
95th
98th
99th
103rd
104th
107th
111th
115th
119th
123rd
124th
127th
130th
131st
133rd
135th
138th
The Plaza
Beverly
Halsted
Morgan
Lowe
Vincennes
Woodlawn
Stony Island
Cottage Grove
Corliss
Ellis
Langley
Eberhart
Indiana
Van Vlissingen
Yates
Ashland
Throop
Wood
Gregory
Racine
West Pullman
Stewart Ridge
Vermont
Burr Oak
Olive-Harvey College
2000W
1600W
1200W
800W
400W
1E/1W
400E
800E
1200E
1600E
2000E
2400E
METRA ROCK ISLAND SUBURBAN LINE TO JOLIET
ROCK ISLAND MAIN LINE TO JOLIET
METRA ELECTRIC
METRA ELECTRIC MAIN LINE TO UNIVERSITY PARK
Lake Calumet
Calumet Park
Riverdale
Blue Island Vermont St
to Downtown (Lake Stetson) via Cermak and Michigan
SOUTH SHORE LINE TO EAST CHICAGO, GARY, MICHIGAN CITY, SOUTH BEND AIRPORT

- I-57 Expressway
- Halsted Street
- UP Railroad
- Wentworth Avenue
- State Street
- Michigan Avenue
- King Drive
- Cottage Grove Avenue / Metra Electric
- I-94 Bishop Ford Freeway

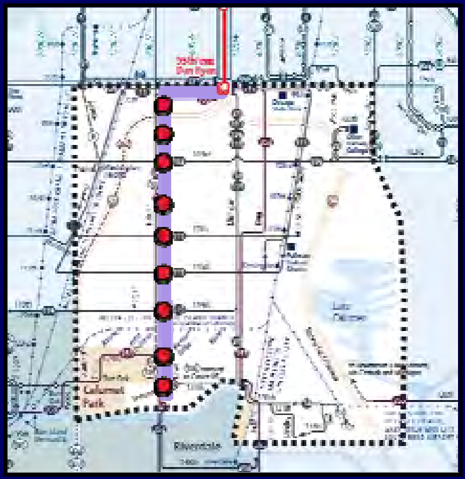
Screen 1 Public Involvement Process

- **Two public meetings**
  - April 10, 2007 at Chicago State University
  - April 11, 2007 at West Pullman Branch Chicago Public Library
- **More than 140 people attended public meetings**
- **Met with stakeholders and elected officials**
- **Over 200 comments submitted and answered**
- **Significant media coverage**

Screen 2 Evaluation - Findings

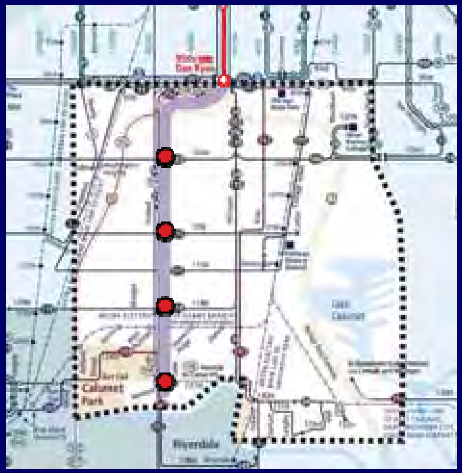
Bus Rapid Transit

Heavy Rail Transit



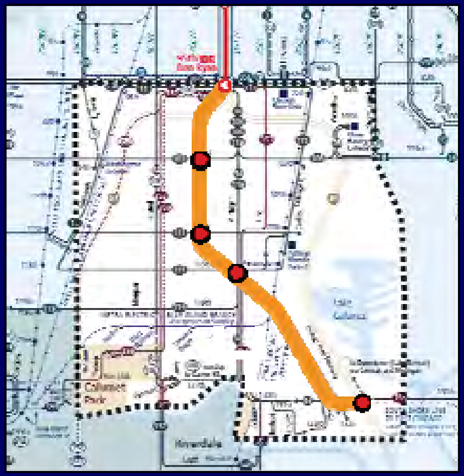
Halsted Street

At Grade



Halsted Street

Elevated



UP Railroad

Elevated

Screen 2 Public Involvement Process

- Two public meetings
  - December 3, 2008 at Historic Pullman Visitor Center
  - December 4, 2008 at Woodson Regional Chicago Public Library
- More than 80 people attended public meetings
- Met with stakeholders and elected officials
- Over 130 comments submitted and answered
- Significant media coverage

Red Line Extension
Alternatives Analysis Study
Comment Card

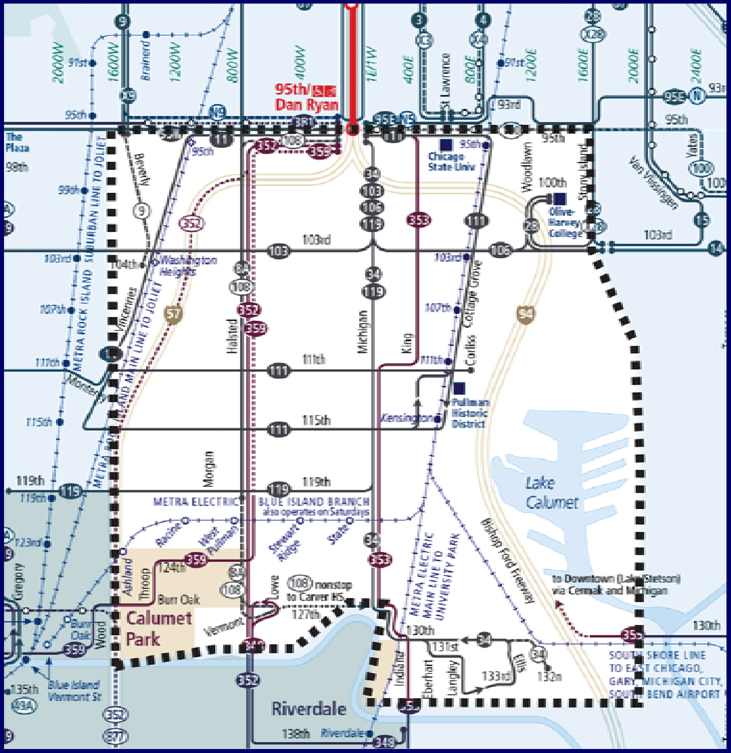
Screen 3
Analysis

Screen 3 Process

- **Step 1 – Alternatives Definition**
  - Conceptual Alignment Refinement
  - Operating Plans
- **Step 2 – Preliminary Evaluation**
  - Physical Constraints
  - Public Support
  - Social/Economic Factors
  - Environmental Factors
  - Transportation Factors
  - Capital Cost Comparison
  - Operating and Maintenance (O&M) Cost Comparison
  - Ridership Potential
  - Cost Effectiveness Index

Screen 3

No Build Alternative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Washington Heights
Vincennes
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Michigan
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Carlisle
Cottage Grove
Woodlawn
Stony Island
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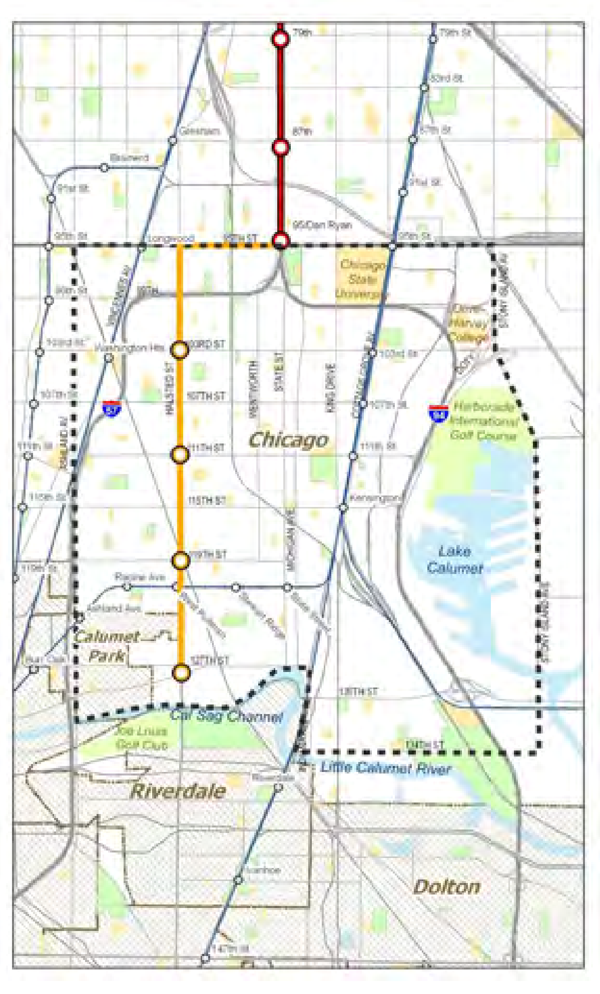
Van Vlissingen
Chicago State Univ
Olive-Harvey College
Pullman Historic District
Kensington
Lake Calumet
Calumet Park
Riverdale
Burr Oak
Blue Island Vermont St
Ashland
Throop
Morgan
Racine
West Pullman
Stewart Ridge
State
Lowe
Vermont
Wood
Gregory
Indiana
Eberhart
Langley
Ellis
METRA ROCK ISLAND SUBURBAN LINE TO JOLIET
ROCK ISLAND MAIN LINE TO JOLIET
METRA ELECTRIC BLUE ISLAND BRANCH also operates on Saturdays
METRA ELECTRIC MAIN LINE TO UNIVERSITY PARK
Bishop Ford Freeway
to Downtown (Lake Stetson) via Cermak and Michigan
108 nonstop to Carver HS
SOUTH SHORE LINE TO EAST CHICAGO, GARY, MICHIGAN CITY, SOUTH BEND AIRPORT

- Existing CTA heavy rail transit service terminating at the 95th Street station
- Existing CTA and Pace bus service

Screen 3

TSM (Bus) Alternative – Halsted Street

- **BRT redefined to be part of TSM Alternative**
- **Express bus between CTA 95th Street station and Halsted/127th Street**
  - 95th Street station expansion
  - No separated exclusive lanes
  - Transit signal priority
  - Intermediate stations at 103rd, 111th and 119th
  - Terminal station at 127th
  - Park-and-ride at stations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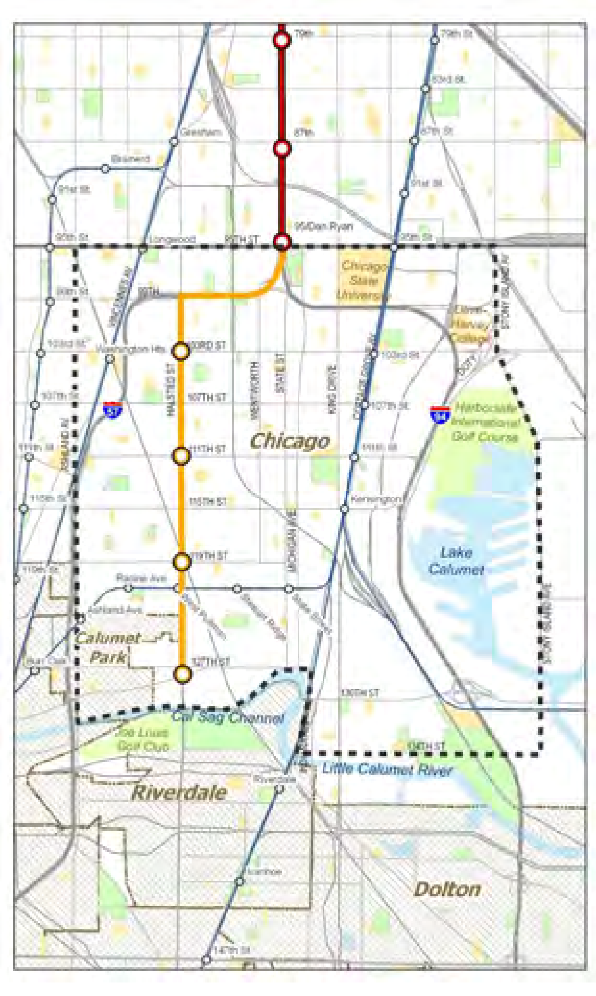
Kensington
Chicago State University
Olive-Harvey College
Harborside International Golf Course
Lake Calumet
57
94
Racine Ave
Ashland Ave
Calumet Park
130TH ST
134TH ST
Cal Sag Channel
Joe Louis Golf Club
Little Calumet River
Riverdale
Ivanhoe
147th St
Dolton

Screen 3

HRT (Rail) Alternative – Halsted Street

- **95th Street to I-57 & Halsted Street**
  - Median of I-57 Expressway
- **Halsted from I-57 to 127th Street**
  - Elevated above Halsted
  - Intermediate stations at 103rd, 111th and 119th
  - Terminal station at 127th
  - Park-and-ride at stations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Ashland Ave
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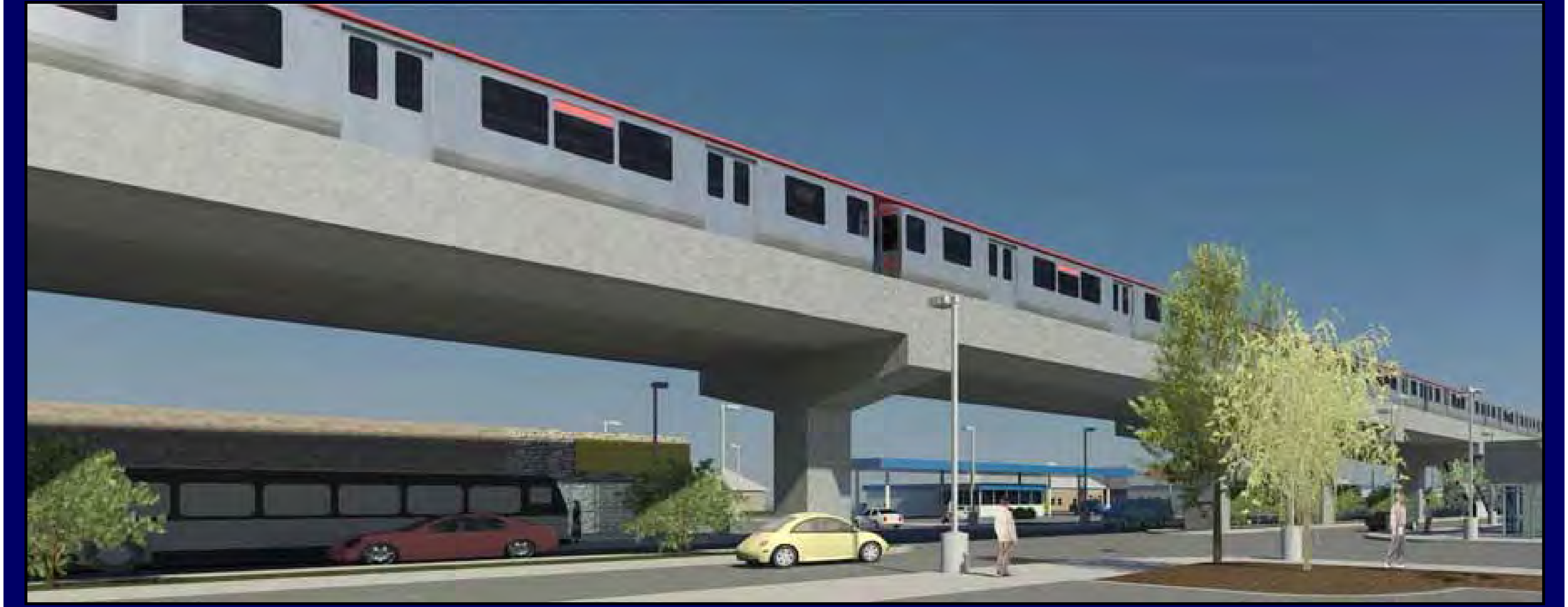
Riverdale
Ivanhoe
147th St
Dolton

Screen 3

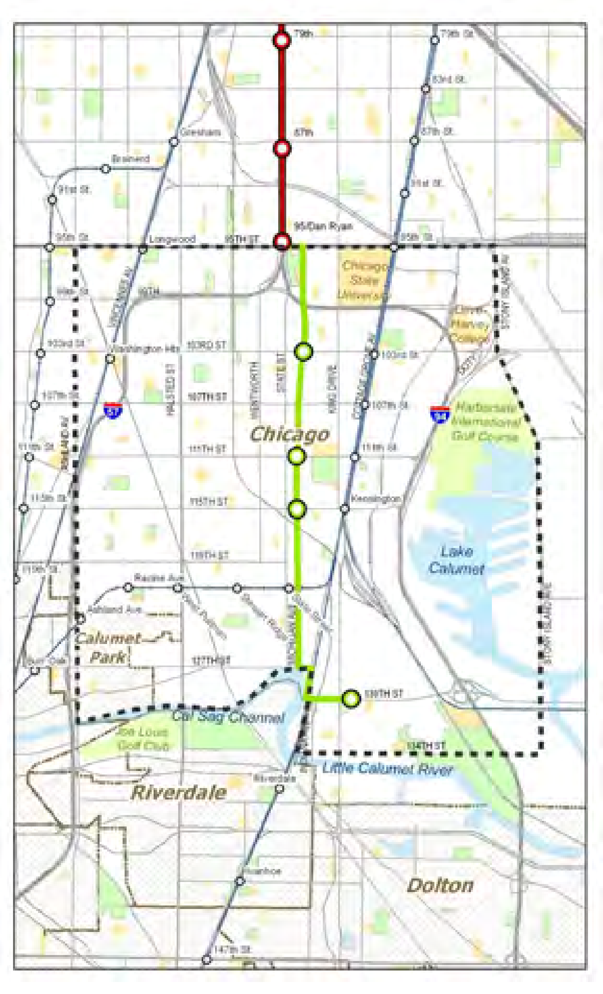
Rail Alternative – Halsted Elevated



NB Halsted Street / 103rd Street

TSM (Bus) Alternative - Michigan Avenue

- Express bus between CTA 95th Street station and 130th Street
  - 95th Street station expansion
  - No exclusive lanes
  - Transit signal priority
  - Intermediate stations at 103rd, 111th and 115th
  - Terminal station at 130th
  - Park-and-ride at stations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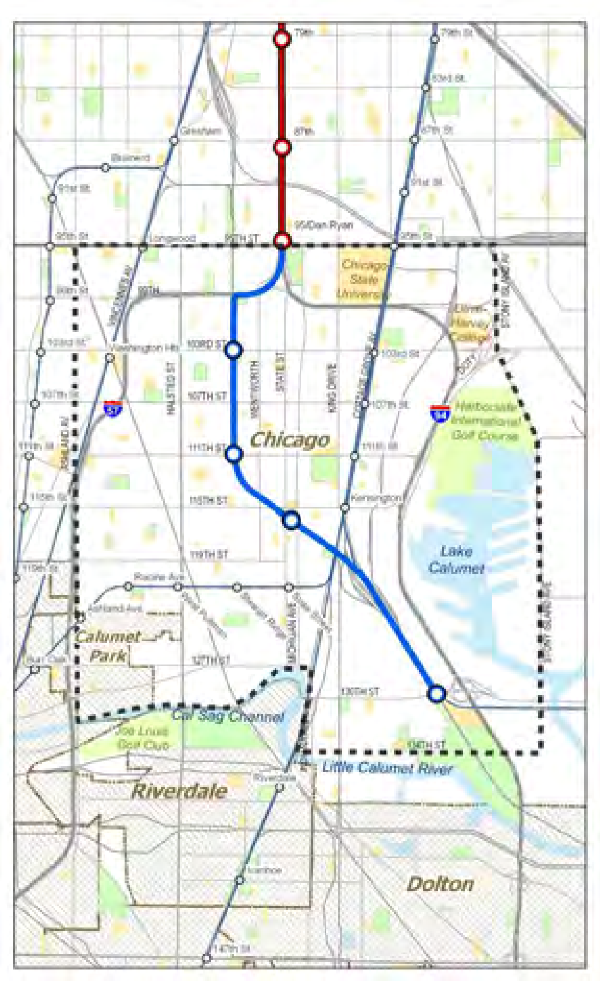
Ashland Ave
Calumet Park
127TH ST
130TH ST
Cal Sag Channel
Joe Louis Golf Club
134TH ST
Little Calumet River
Riverdale
Riverdale
Ivanhoe
Dolton
147th St.
STONY ISLAND AVE

Screen 3

HRT (Rail) Alternative – UPRR

- **95th Street to I-57 & UPRR**
  - Median of I-57
- **Railroad Section**
  - Elevated adjacent to the UPRR right-of-way
  - At-grade south of 119th to 130th Streets
  - Intermediate stations at 103rd, 111th and 115th
  - Terminal station at 130th
  - Park-and-ride at stations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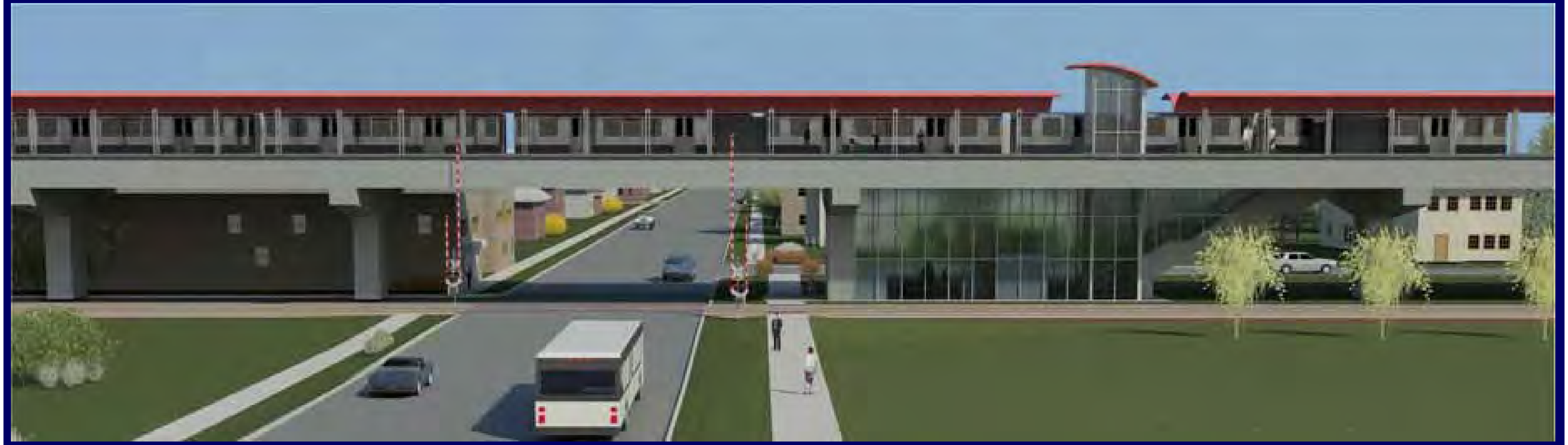
Screen 3

Rail Alternative – UPRR Elevated



103rd Street Station

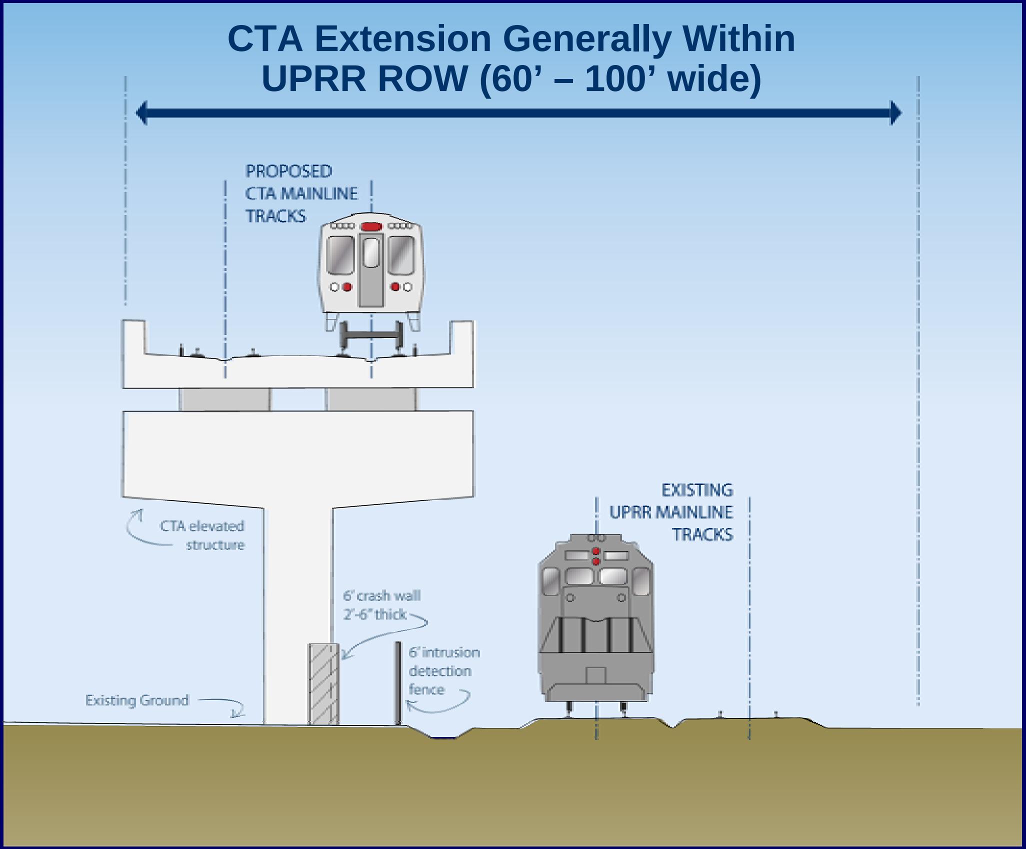
Step 2 – Detailed Evaluation

- **Evaluation Factors**
  - Physical Constraints
    - Right-of-Way Requirements
  - Public Support
    - Public Meeting Comments
    - Referendum
  - Social/Economic Factors
    - Demographics
    - Employment
  - Environmental Factors
    - Noise, Visual, Natural and Cultural Resources
  - Transportation Factors
    - Travel Time, Transit Connectivity and Traffic
  - Capital Cost
  - Operating & Maintenance Cost
  - Ridership Potential
  - Cost Effectiveness

Physical Constraints

- **Freight Railroad & Transit Shared-Use Corridor**
  - Due to recent accidents, the transportation industry is adopting greater separation between freight railroad and transit operations for safety reasons
  - For the UPRR Rail Alternative, 50-feet separation distance is desired from freight railroad tracks
- **Right-of-Way Constraints**
  - UPRR needs most of their right-of-way for operational purposes
  - With additional separation distance, CTA extension will be immediately adjacent (east or west) of the UPRR right-of-way and will require adjacent property acquisition

UPRR Rail Alternative – Within UPRR ROW

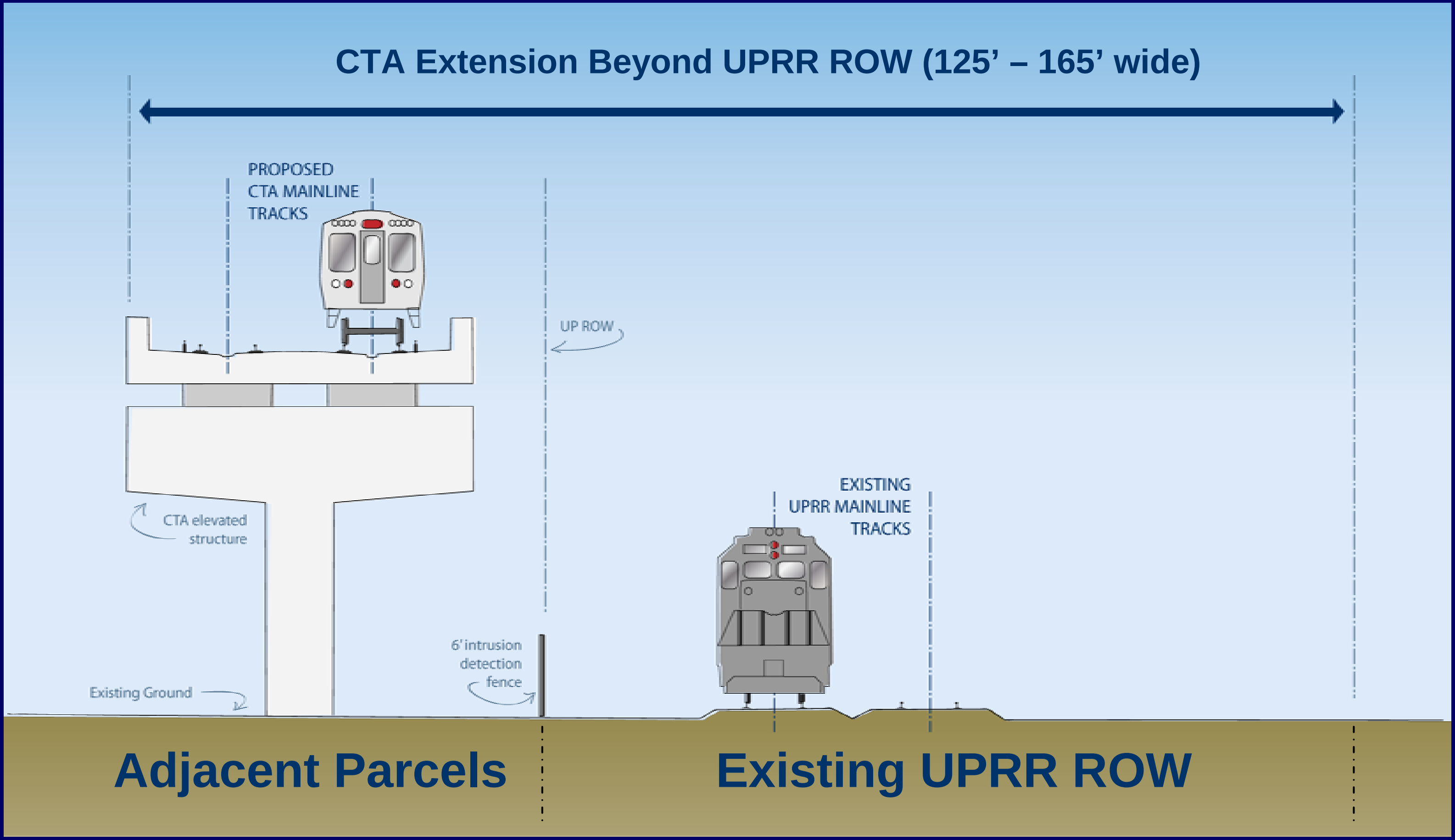


CTA Extension Generally Within UPRR ROW (60' – 100' wide)

PROPOSED
CTA MAINLINE
TRACKS
CTA elevated structure
6' crash wall
2'-6" thick
6' intrusion detection fence
Existing Ground
EXISTING
UPRR MAINLINE
TRACKS

Screen 3

UPRR Rail Alternative – Beyond UPRR ROW


CTA Extension Beyond UPRR ROW (125’ – 165’ wide)
PROPOSED CTA MAINLINE TRACKS
UP ROW
CTA elevated structure
EXISTING UPRR MAINLINE TRACKS
6’ intrusion detection fence
Existing Ground
Adjacent Parcels
Existing UPRR ROW

Public Support

- 340 comments were received in Screens 1 & 2 -- 99 of those expressed a preference for a particular alternative
- 87% of these comments were in favor of the UPRR Rail alternative and 7% were in favor of the Halsted Rail alternative
- In a November 2004, 38,000 residents in the 9th and 34th wards supported a public referendum for the Red Line Extension along the UPRR Corridor

Screen 3

Factor	Bus Halsted	Bus Michigan	Rail Halsted	Rail UPRR
Physical	O	O	O	-
Public Support	O	O	O	+
Social/Economic	O	O	O	O
Environmental	O	O	O	O
Transportation	-	-	+	+
Capital Costs	+	+	O	O
O&M Costs	+	+	O	O
Ridership	O	O	+	+
Summary	+1	+1	+2	+2
LPA Recommend	NO	NO	YES	YES*

* Subject to cost-effectiveness requirements

Screen 3

Factor	Bus Halsted	Bus Michigan	Rail Halsted	Rail UPRR
Physical	O	O	O	-
Public Support	O	O	O	+
Social/Economic	O	O	O	O
Environmental	O	O	O	O
Travel Time From 130th or Vermont Streets to Jackson & State (min.)	47	52	39	39
Capital Costs (YOE)	$230 M	$210 M	$1,100 M	$1,100 M
O&M Costs (annual)	$1.2 M	$3.1 M	$20.5 M	$24.1 M
Ridership (annual)	2.5 M	0.9 M	11.6 M	12.7 M
Summary	+1	+1	+2	+2
LPA Recommend	NO	NO	YES	YES*

* Subject to cost-effectiveness requirements

Screen 3

Cost-Effectiveness Evaluation

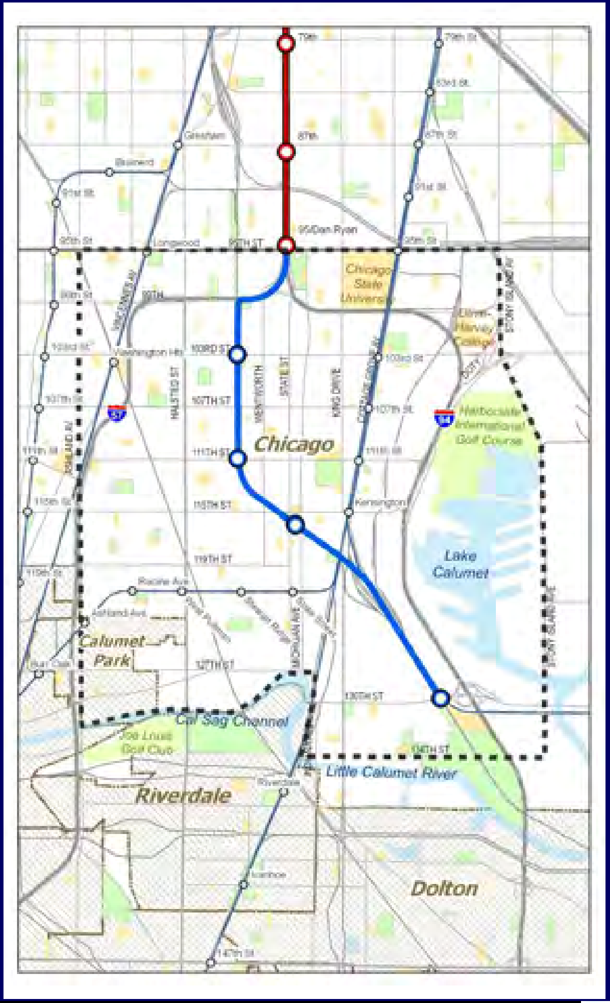
- **FTA has cost-effectiveness thresholds**
  - Cost per hour of projected user benefits as measured by travel time savings
- **Shorter versions were investigated to see if the cost-effectiveness improved**
  - Halsted Rail to 119th St.
  - UPRR Rail to 115th St.
- **Initial results indicate up to 23% improvement in cost-effectiveness due to greater proportion of capital and O&M cost savings versus ridership reductions**

Screen 3 Evaluation – Preliminary Findings

- **Locally Preferred Alternative Preliminary Recommendation**

Rail Extension via UPRR*

* **Subject to cost-effectiveness requirements**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Brainerd
Longwood
Washington Hts
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Racine Ave
Ashland Ave
Blue Island
57
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Screen 3

Next Steps

Next Steps

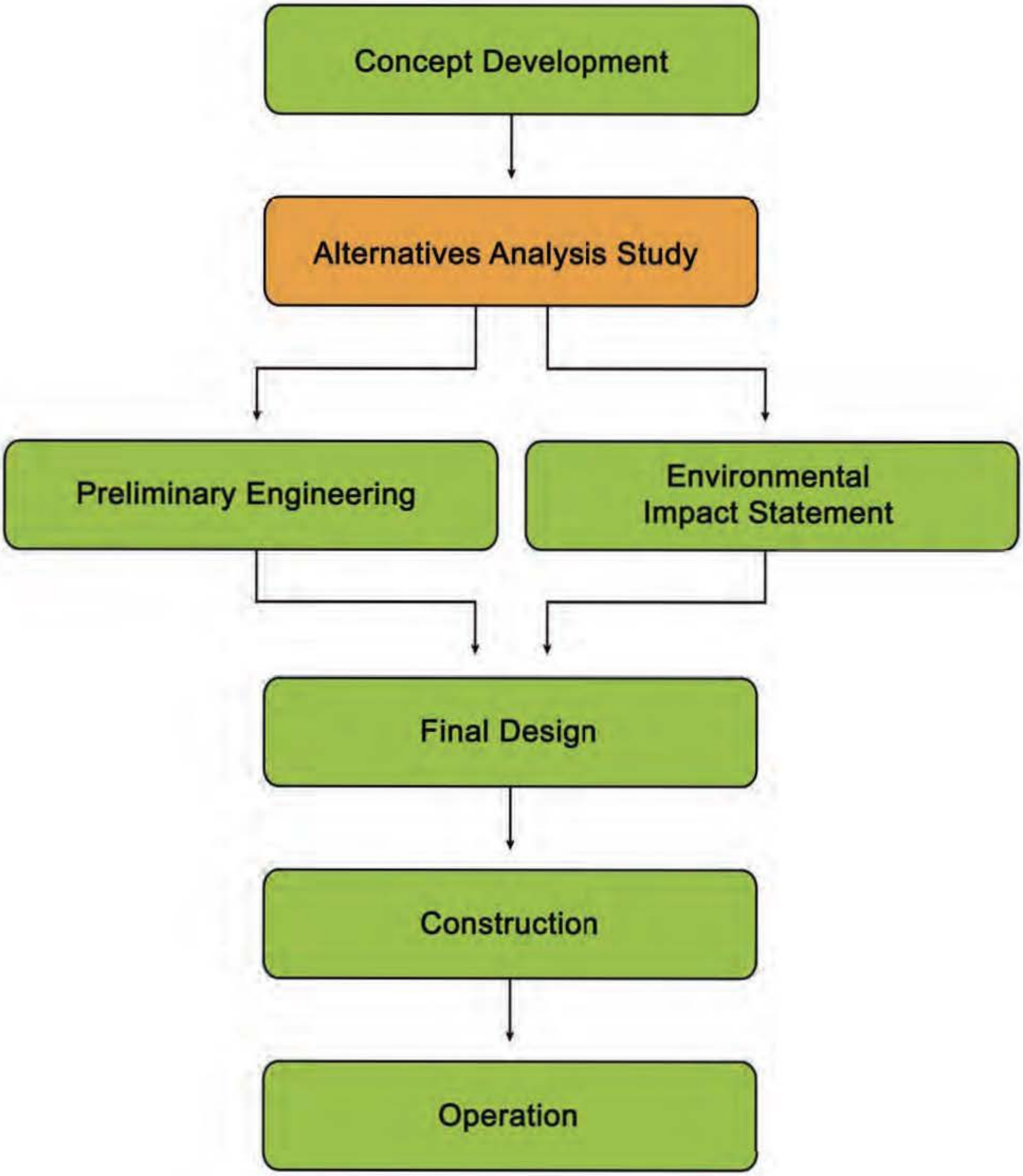
- Incorporate public comments
- Continue railroad discussions and cost-effectiveness evaluation
- Review findings with FTA
- Final recommendation on LPA
- CTA Board to approve LPA
- Ongoing public involvement
  - Sign-in cards will be used to create a contact list to send notices and updates
  - Project updates on CTA web site - www.transitchicago.com

Questions and Comments

- CTA representatives are available to answer additional questions
- Written comments and questions accepted through June 18, 2009

Mr. Darud Akbar
Chicago Transit Authority
Government and Community Relations
P.O. Box 7567
Chicago, IL 60680-7567
dakbar@transitchicago.com
CTA Customer Service: 1-888-YOUR-CTA
TTY: 1-888-CTA-TTY1

FTA's New Starts Process


Concept Development

Alternatives Analysis Study

Preliminary Engineering

Environmental
Impact Statement

Final Design

Construction

Operation

Purpose and Need

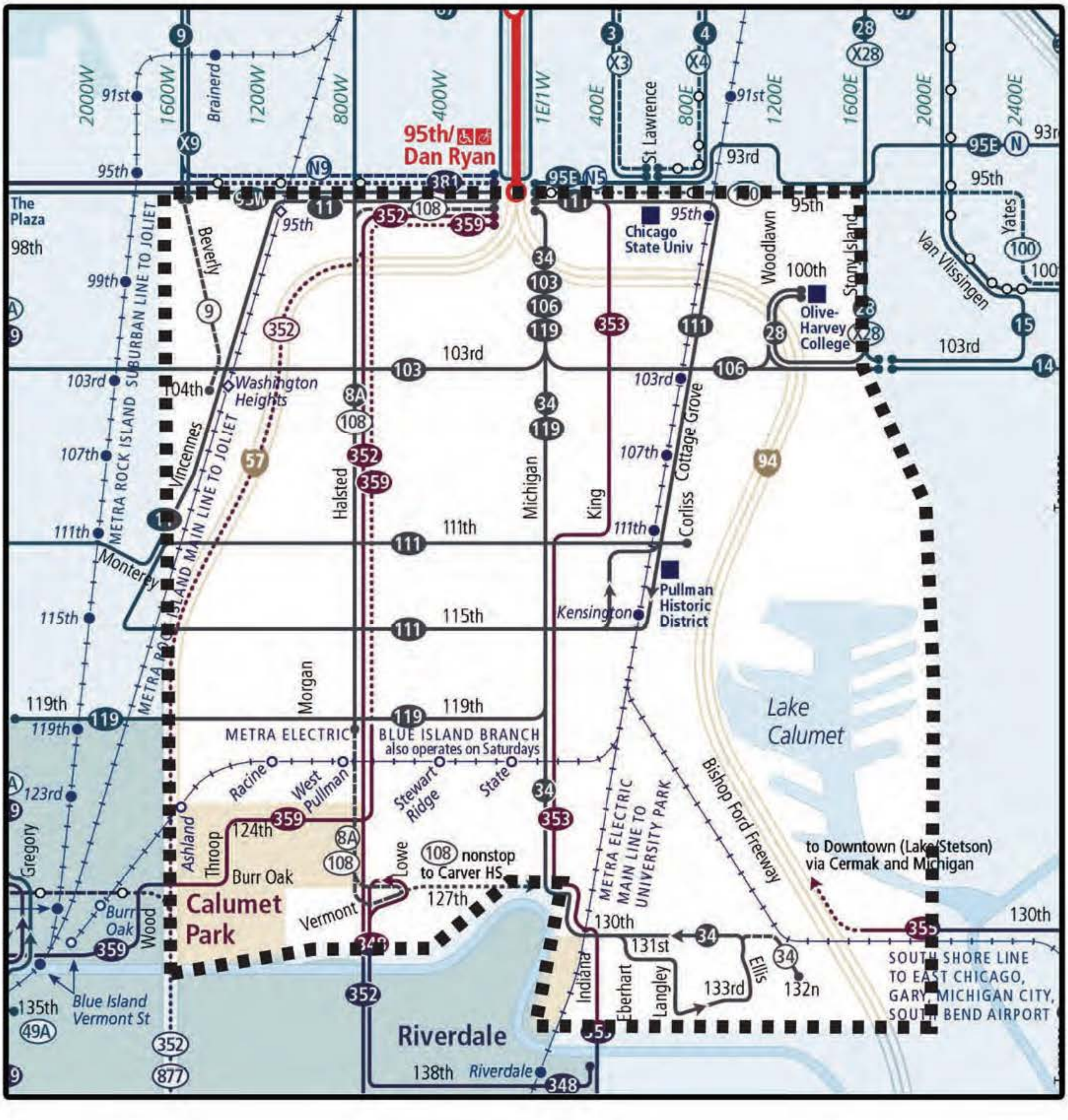
Transportation Needs

- Significant bus and passenger congestion at 95th Street Red Line Station
- Lengthy bus trips to access 95th Street Red Line Station
- Far South Area residents experience 20% longer commute than rest of City
- Traffic congestion is expected to grow along with study area population and employment

Opportunity for Improvement

- Extend rapid transit service south from 95th Street Red Line Station
- Improve access to, within, and beyond study area
- Stimulate economic development and job opportunities
- Shorten transit travel times through faster and more direct routings

Study Area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Riverdale
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49A
877

Red Line Extension
Alternative Analysis Study

Community Participation

Community participation is one of the key components of the alternatives analysis.

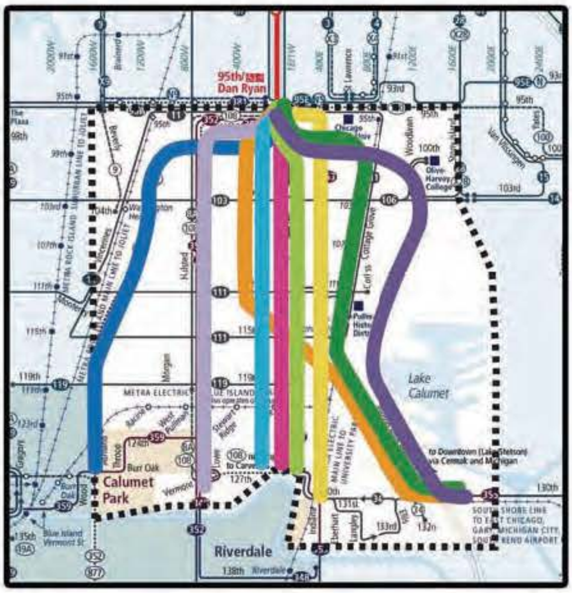
Community Outreach

- General Public
- Elected and Appointed Officials
- Community and Civic Organizations
- Faith-Based Organizations
- City and State Agencies

Ongoing Public Involvement/Input

- Meetings announced through public notices and advertisements
- Project updates on the CTA web site: www.transitchicago.com, accessible at local public libraries

Universe of Alternatives


95th/Dan Ryan
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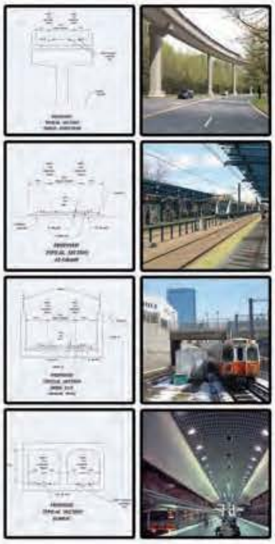
to Downtown (Lake/Stetson) via Cermak and Michigan
South Shore Line to East Chicago, Gary, Michigan City, South Bend Airport



Technologies

- Automated Guideway / Monorail
- Bus Rapid Transit
- Commuter Bus
- Commuter Rail
- Heavy Rail
- High Speed Rail
- Light Rail
- Local Bus
- MagLev
- Personal Rapid Transit
- Streetcar

Corridors

- ● I-57 Expressway
- ● Halsted Street
- ● UP Railroad
- ● Wentworth Avenue
- ● State Street
- ● Michigan Avenue
- ● King Drive
- ● Cottage Grove / Metra Electric
- ● I-94 Bishop Ford Freeway

Profiles

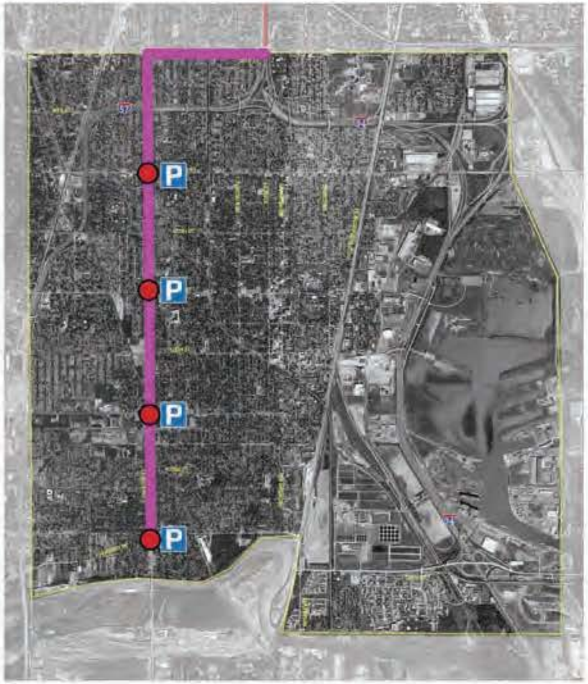
- Elevated
- At-Grade
- Trench
- Underground

Red Line Extension
Alternative Analysis Study

SCREEN 3 - Step 1:

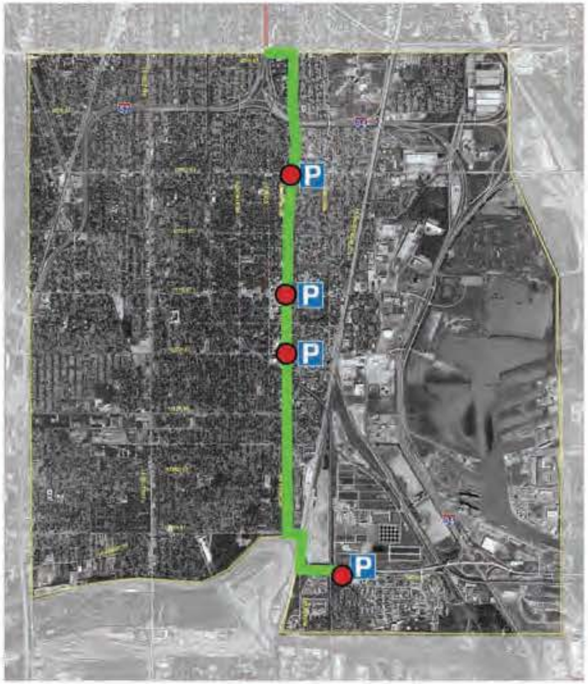
Alternatives Definition

Transportation System Management (Incorporates BRT)



Halsted Street to Vermont Avenue

At-Grade
No Exclusive Lanes
4 Stations / 5.1 Route Miles



Michigan Avenue to 130th Street

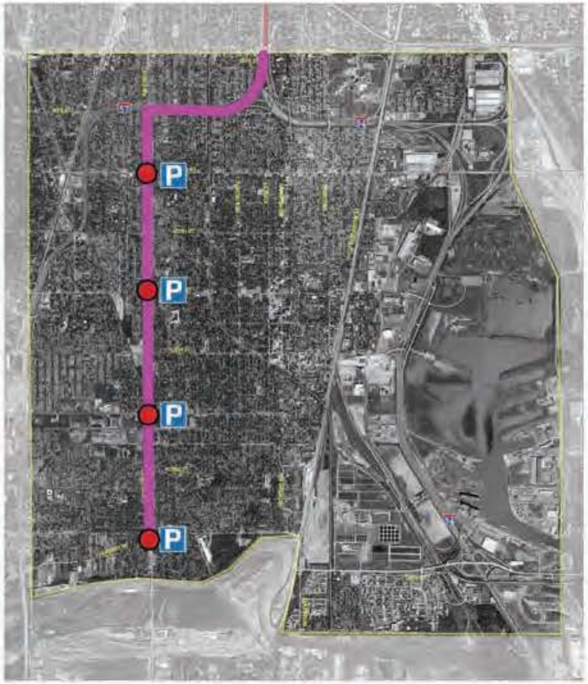
At-Grade
No Exclusive Lanes
4 Stations / 8.0 Route Miles

Corridors and stations and parking P are shown in generalized locations only.

SCREEN 3 - Step 1:

Alternatives Definition

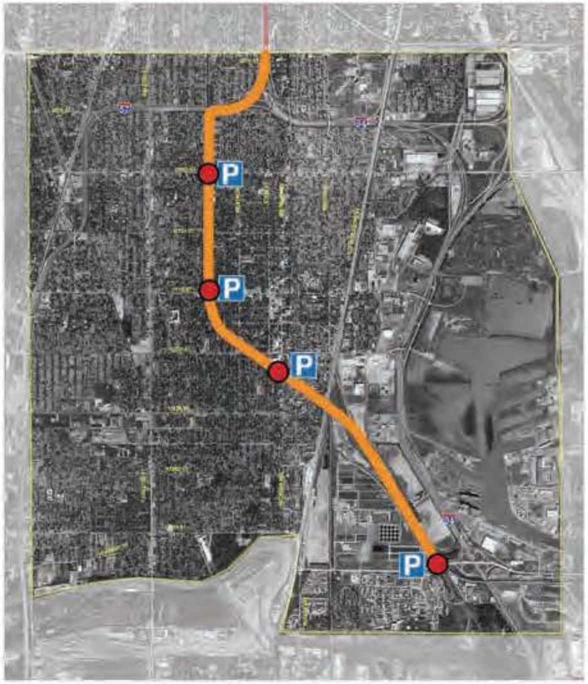
Heavy Rail Transit



Halsted Street to Vermont Avenue

T Elevated

4 Stations / 5.0 Route Miles



UP Railroad to 130th Street

T Elevated

4 Stations / 5.3 Route Miles

Corridors and stations and parking P are shown in generalized locations only.

Red Line Extension
Alternative Analysis Study

SCREEN 3 - Step 2

Evaluation Findings

Factor	**Transportation System Management (Incorporates BRT)**		**Heavy Rail Transit** 	
Corridor	**Halsted Street to Vermont Avenue**	**Michigan Avenue to 130th Street**	**Halsted Street to Vermont Avenue**	**UP Railroad to 130th Street**
Profile	At-Grade No exclusive lanes	At-Grade No exclusive lanes	Elevated	Elevated
Physical Constraints	○	○	○	-
Public Support	○	○	○	+
Social / Economic	○	○	○	○
Environmental	○	○	○	○
Transportation	-	-	+	+
Capital Cost	+	+	○	○
Operating Cost	+	+	○	○
Ridership	○	○	+	+
Summary Rating	**+1**	**+1**	**+2**	**+2**
LPA Recommendation	NO	NO	YES	YES*

+ Better than other alternatives **○ Comparable to other alternatives** **- Worse than other alternatives**

*** Subject to separation distance/ROW availability and cost-effectiveness requirements**

Red Line Extension
Alternative Analysis Study

Preliminary Cost-Effectiveness Evaluation

FTA has cost-effectiveness thresholds

- Cost per hour of projected user benefits as measured by travel time savings.

Shorter versions of the HRT alternatives were investigated to see if the cost-effectiveness improved:

- HRT Halsted to 119th Street
- HRT UPRR to 115th Street

Initial results indicate up to 23% improvement in cost-effectiveness due to greater proportion of capital and O&M cost savings versus ridership reductions.

Factor *	HRT Halsted		HRT UPRR	
	Vermont Avenue	119th Street	130th Street	115th Street
Capital Costs (YOE)	$1,100M	$900M	$1,100M	$800M
O&M Costs (Annual)	$21M	$17M	$24M	$17M
Ridership (Annual)	11.6M	10.9M	12.7M	10.6M
YARD and Shop Costs (YOE)	$200M	$200M	$200M	$300M

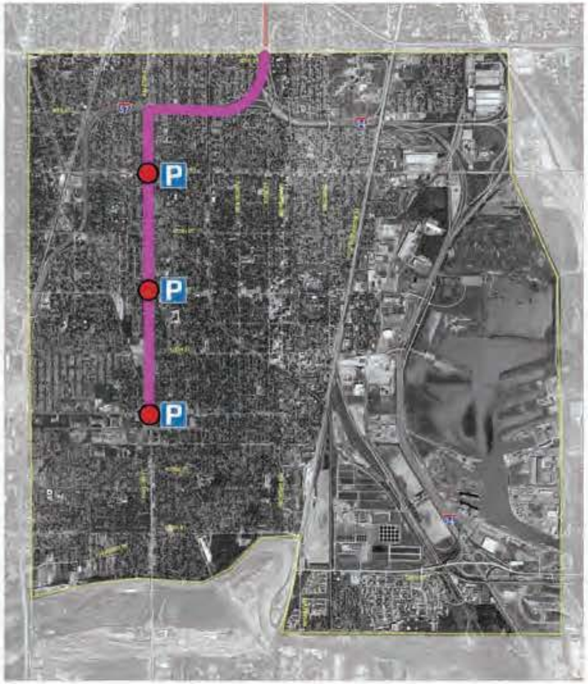
The Halsted 119th Street alternative improves cost-effectiveness by 23%

The UPRR 115th Street alternative improves cost-effectiveness by 22%

* Costs and ridership figures as of June 2009

Preliminary Cost-Effectiveness Evaluation Shortened Alignments

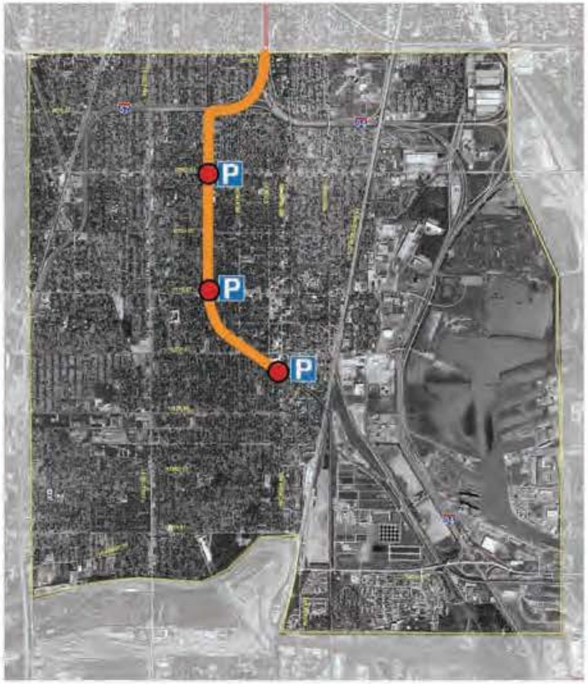
Heavy Rail Transit



Halsted Street to 119th Street

T Elevated

4 Stations / 3.8 Route Miles



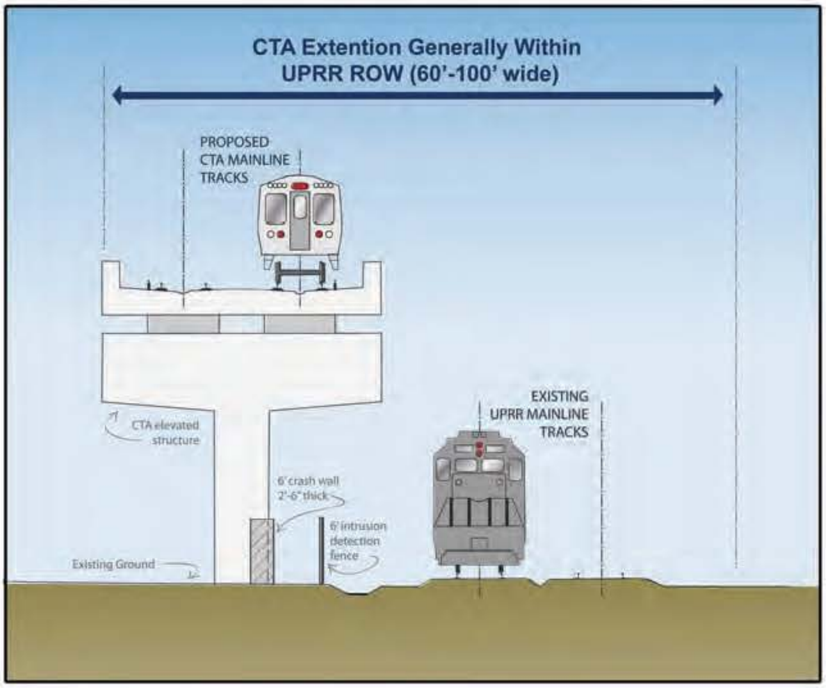
UP Railroad to 115th Street

T Elevated

4 Stations / 3.3 Route Miles

Corridors and stations and parking P are shown in generalized locations only.

Freight Railroad & Transit Shared Use Corridor


CTA Extention Generally Within UPRR ROW (60'-100' wide)
PROPOSED CTA MAINLINE TRACKS
CTA elevated structure
6' crash wall 2'-6" thick
6' intrusion detection fence
Existing Ground
EXISTING UPRR MAINLINE TRACKS

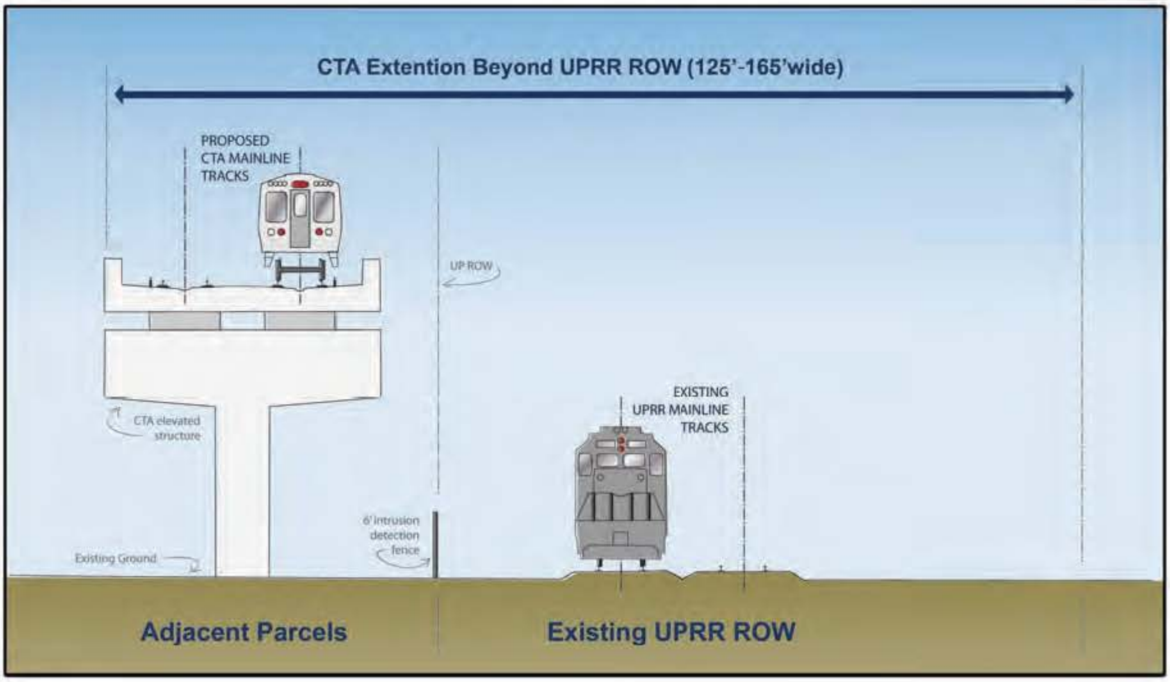
Physical Constraints

Freight Railroad & Transit Shared-Use Corridor

- **Due to recent accidents, the transportation industry is adopting greater separation between freight railroad and transit operations for safety reasons**
- **For the HRT UPRR Elevated Alternative, 50-feet separation distance is desired**

Right-of-Way Constraints

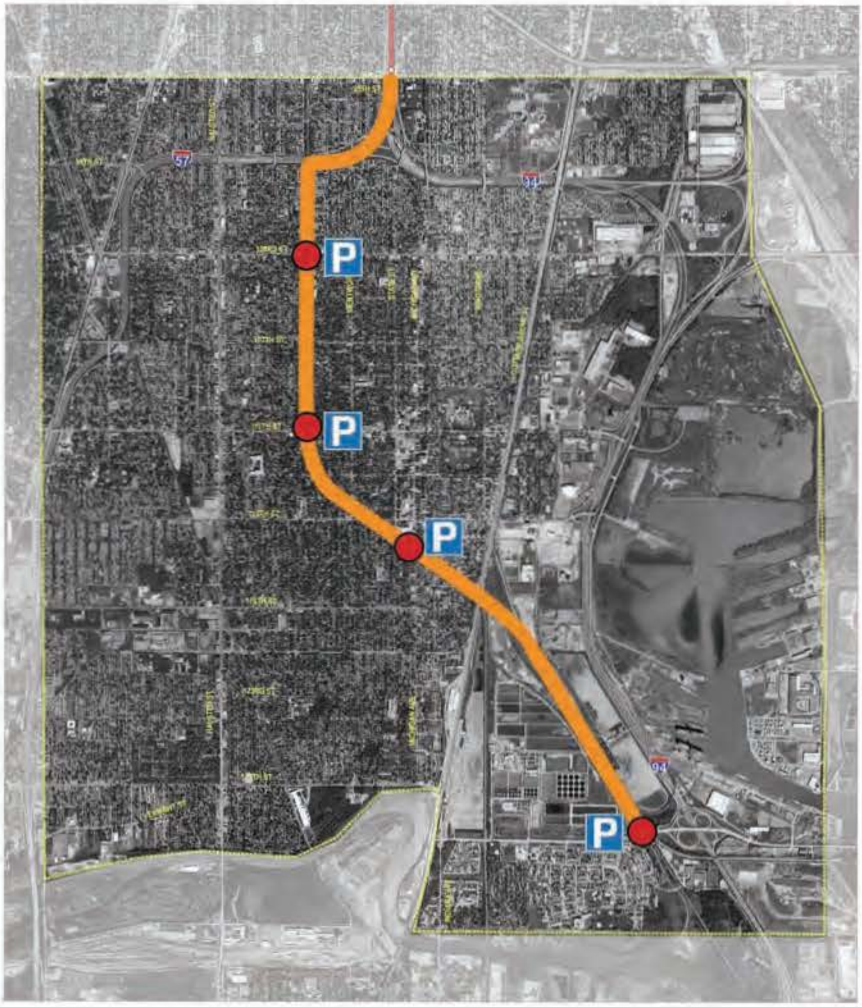
- **UPRR needs entire right-of-way for operational purposes**
- **With additional separation distance, CTA extension will require adjacent property acquisition**
- **East and west alignments immediately adjacent to the UPRR right-of-way are being investigated**


CTA Extention Beyond UPRR ROW (125'-165'wide)
PROPOSED CTA MAINLINE TRACKS
UP ROW
CTA elevated structure
Existing Ground
6' intrusion detection fence
EXISTING UPRR MAINLINE TRACKS
Adjacent Parcels
Existing UPRR ROW

SCREEN 3 - Recomendation:

Locally Preferred Alternative

Heavy Rail Transit



UP Railroad to 130th Street

T Elevated

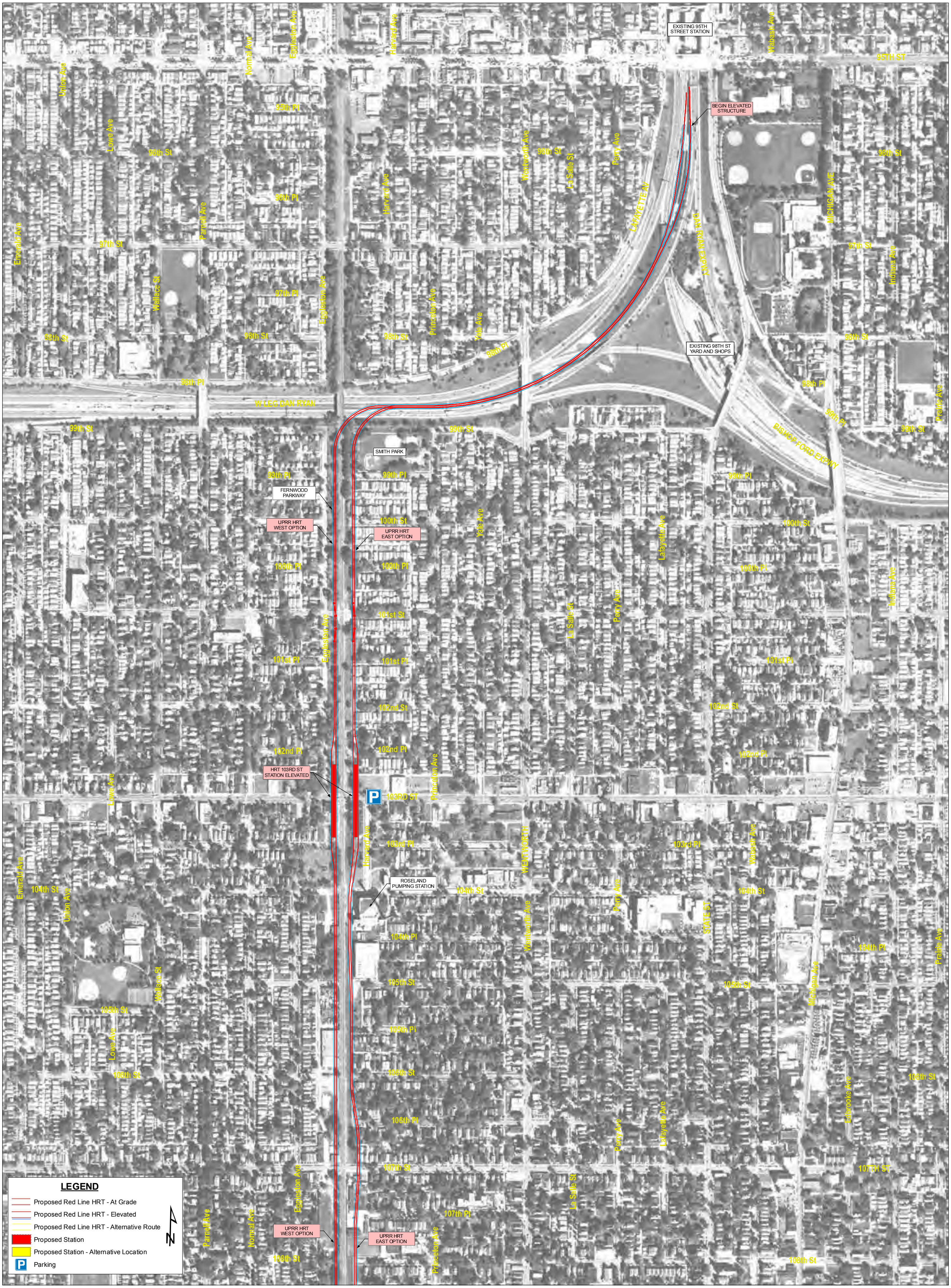
4 Stations / 5.3 Route Miles

Corridors and stations and parking P are shown in generalized locations only.

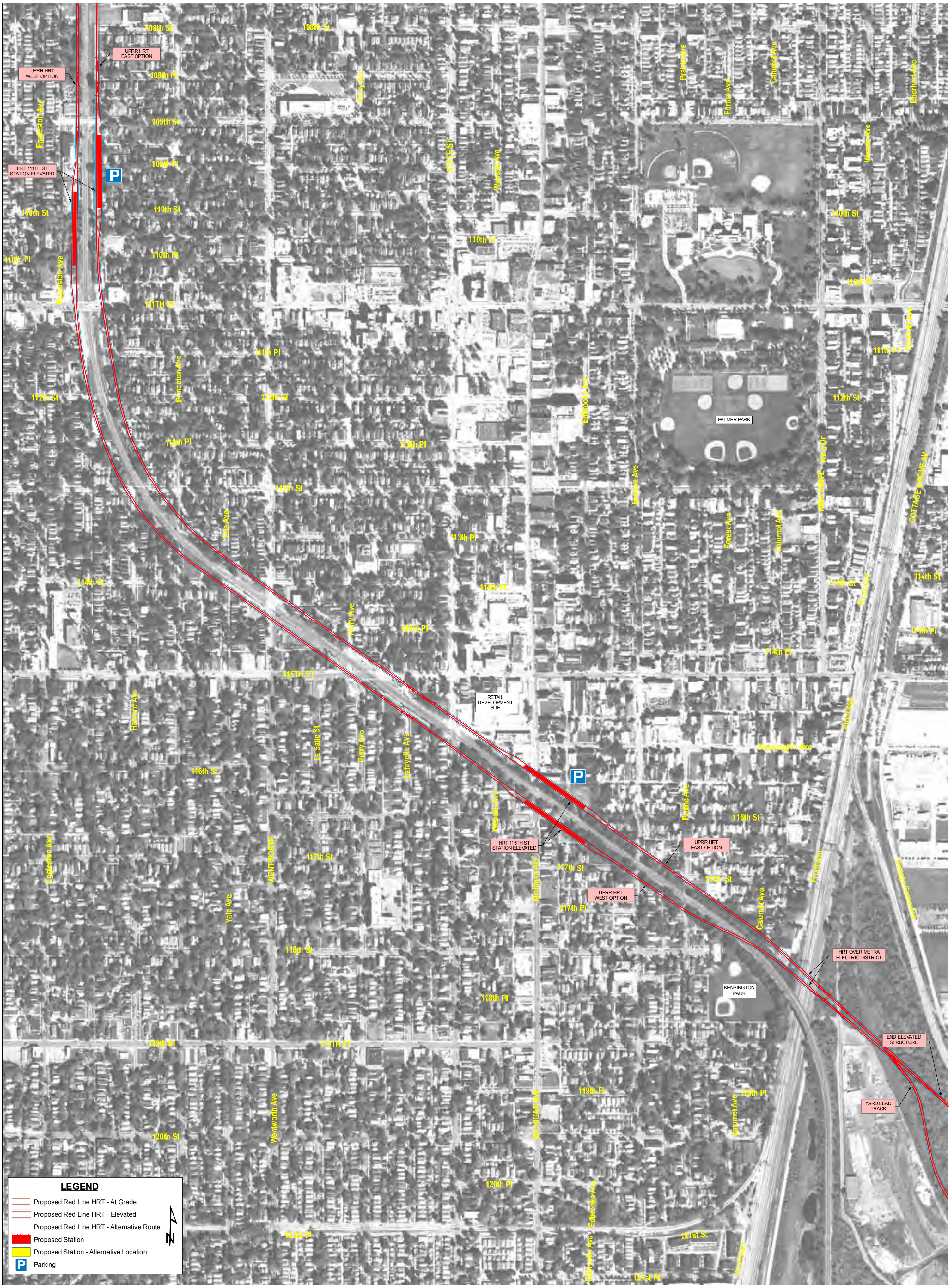
Red Line Extension
Alternative Analysis Study

cta

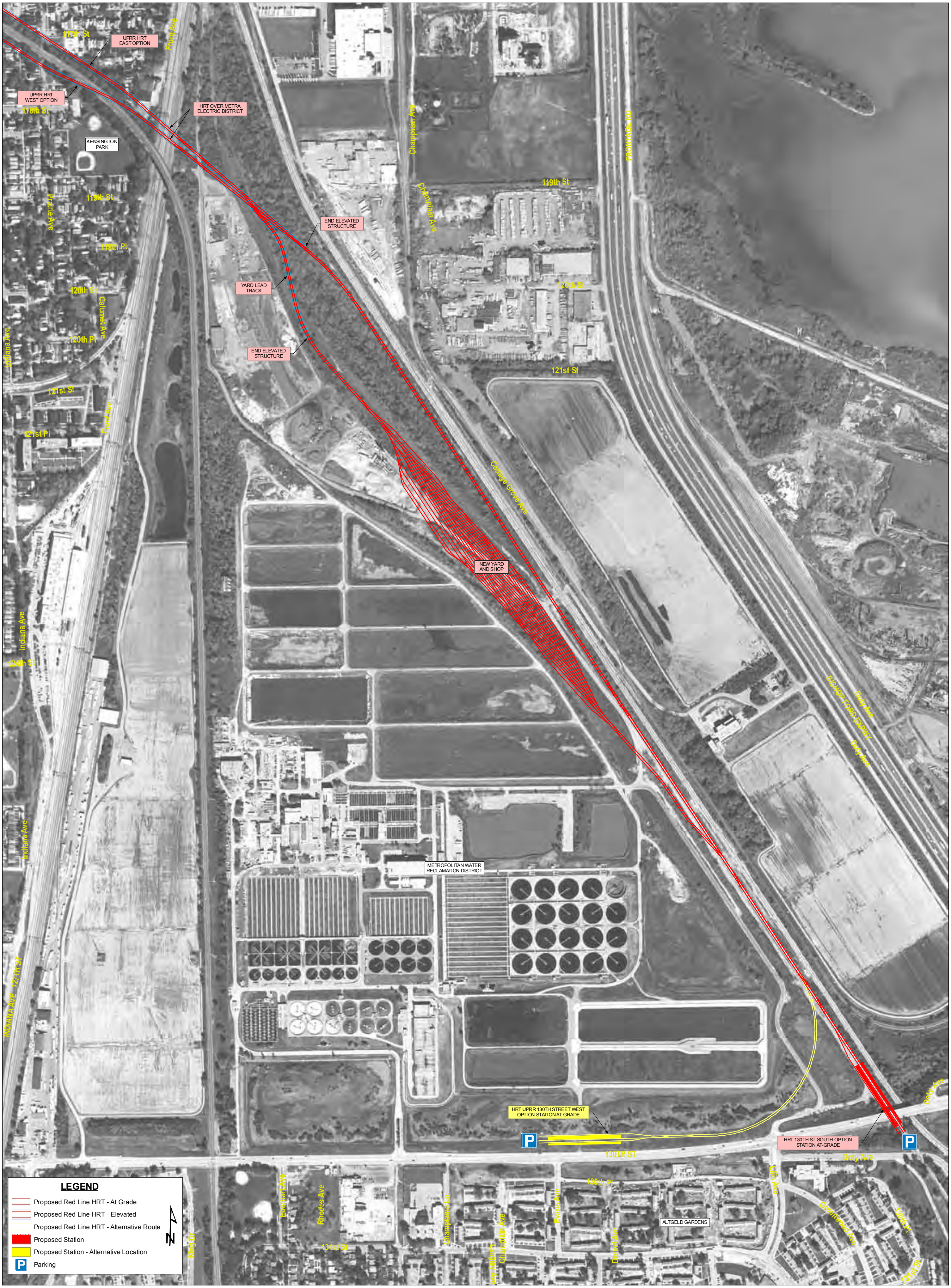
HRT UPRR Elevated


EXISTING 95TH STREET STATION
BEGIN ELEVATED STRUCTURE
EXISTING 98TH ST YARD AND SHOPS
SMITH PARK
FERNWOOD PARKWAY
UPRR HRT WEST OPTION
UPRR HRT EAST OPTION
HRT 103RD ST STATION ELEVATED
ROSELAND PUMPING STATION
UPRR HRT WEST OPTION
UPRR HRT EAST OPTION
95th St
95th Pl
96th St
96th Pl
97th St
97th Pl
98th St
98th Pl
99th St
99th Pl
100th St
100th Pl
101st St
101st Pl
102nd St
102nd Pl
103RD St
103rd Pl
104th St
104th Pl
105th St
105th Pl
106th St
106th Pl
107th St
107th Pl
108th St
W LEO DAN RYAN
BISHOP FORD EXPWY
Emerald Ave
Union Ave
Lowe Ave
Wallace St
Parnell Ave
Normal Ave
Eggleston Ave
Harvard Ave
Princeton Ave
Yale Ave
Wentworth Ave
La Salle St
Perry Ave
Lafayette Ave
STATE ST
Wabash Ave
MICHIGAN AVE
Indiana Ave
Prairie Ave
Edbrooke Ave
LEGEND
Proposed Red Line HRT - At Grade
Proposed Red Line HRT - Elevated
Proposed Red Line HRT - Alternative Route
🟥 Proposed Station
🟨 Proposed Station - Alternative Location
P Parking
N

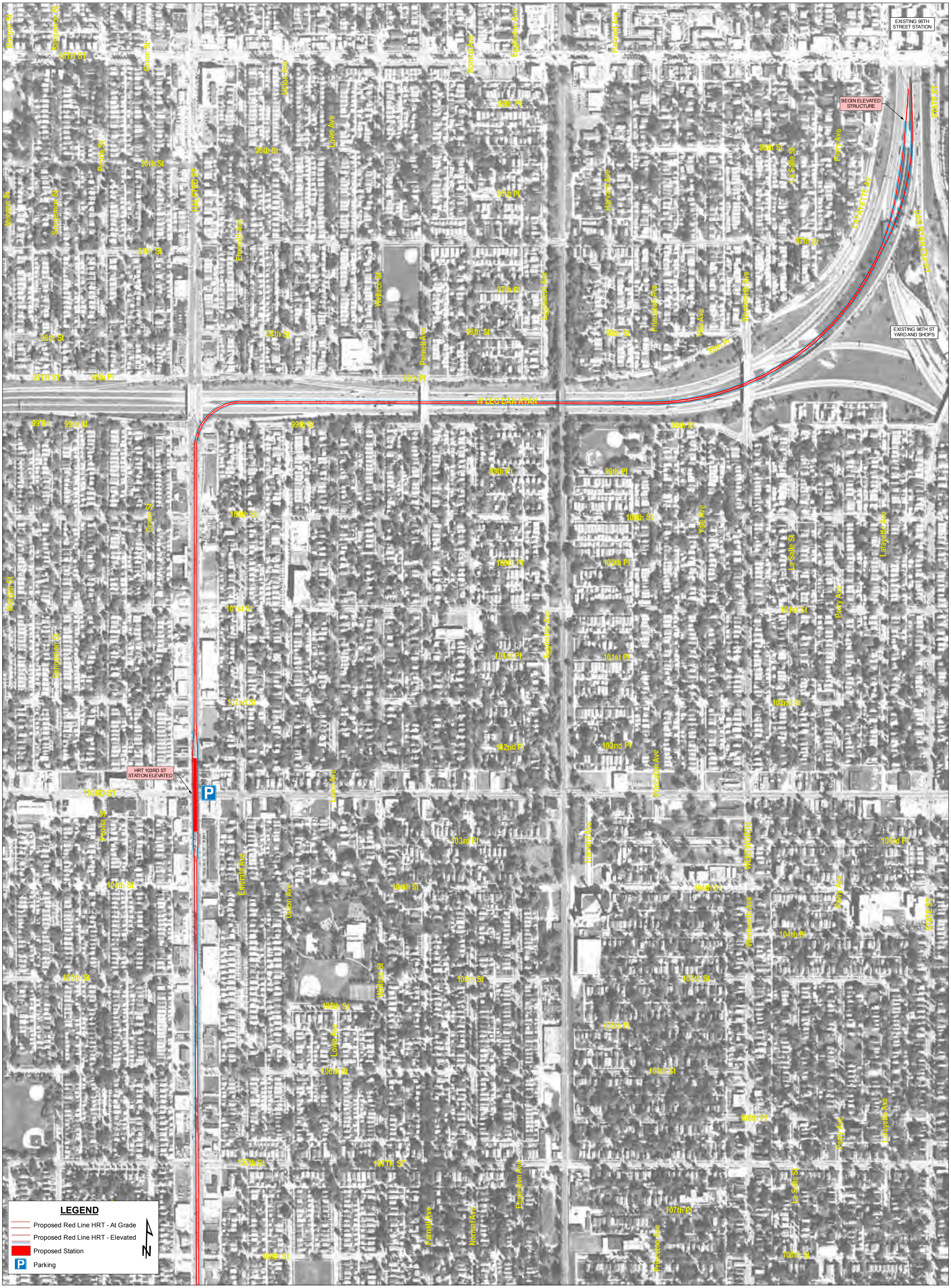
HRT UPRR Elevated


UPRR HRT EAST OPTION
UPRR HRT WEST OPTION
HRT 111TH ST STATION ELEVATED
P
PALMER PARK
RETAIL DEVELOPMENT SITE
HRT 115TH ST STATION ELEVATED
UPRR HRT EAST OPTION
UPRR HRT WEST OPTION
HRT OVER METRA ELECTRIC DISTRICT
KENSINGTON PARK
END ELEVATED STRUCTURE
YARD LEAD TRACK
108th St
108th Pl
109th St
109th Pl
110th St
110th Pl
111TH ST
111th Pl
112th St
112th Pl
113th St
113th Pl
114th St
114th Pl
115TH ST
116th St
117th St
117th Pl
118th St
118th Pl
119th St
119TH ST
119th Pl
120th St
120th Pl
121st St
121st Pl
Eggleston Ave
Princeton Ave
Yale Ave
Perry Ave
Harvard Ave
La Salle St
Lafayette Ave
WENTWORTH
Wentworth Ave
STATE ST
Wabash Ave
Michigan Ave
MICHIGAN AVE
Edbrooke Ave
Indiana Ave
Prairie Ave
Forest Ave
Calumet Ave
King Dr
Vernon Ave
Eberhart Ave
Kensington Ave
Front Ave
COTTAGE GROVE AV
Cottage Grove Ave
LEGEND
Proposed Red Line HRT - At Grade
Proposed Red Line HRT - Elevated
Proposed Red Line HRT - Alternative Route
Proposed Station
Proposed Station - Alternative Location
Parking
N

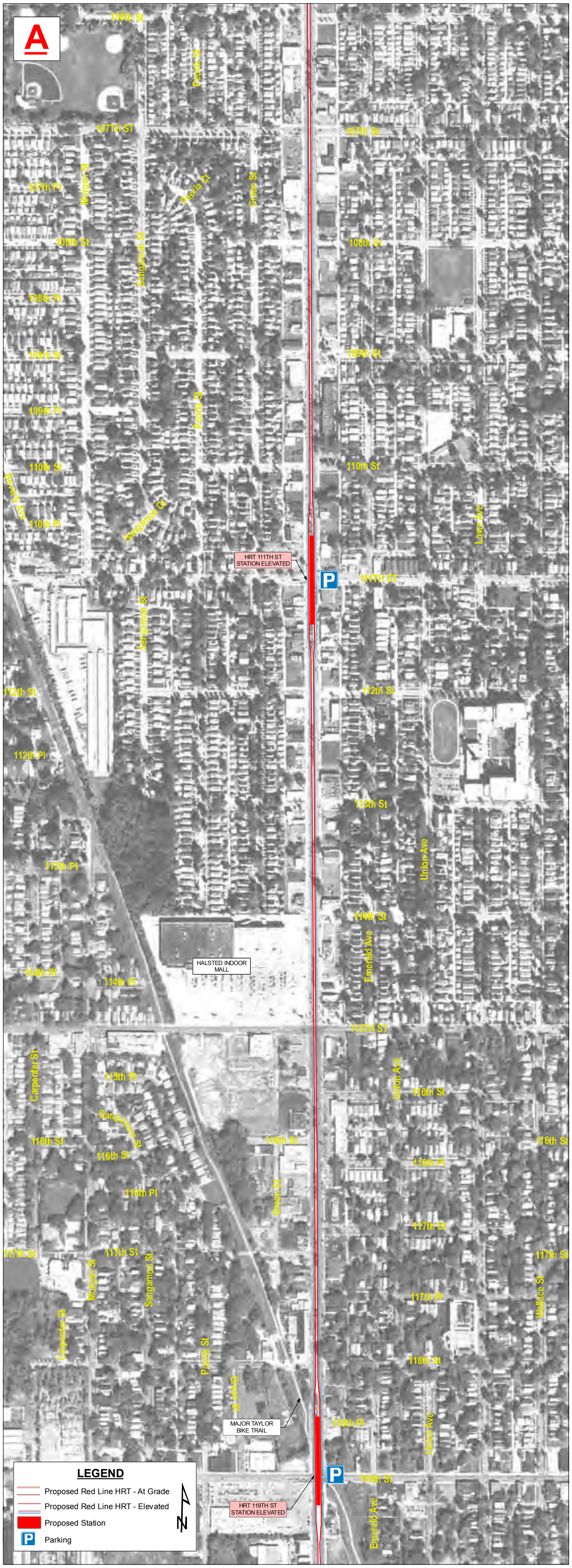
HRT UPRR Elevated

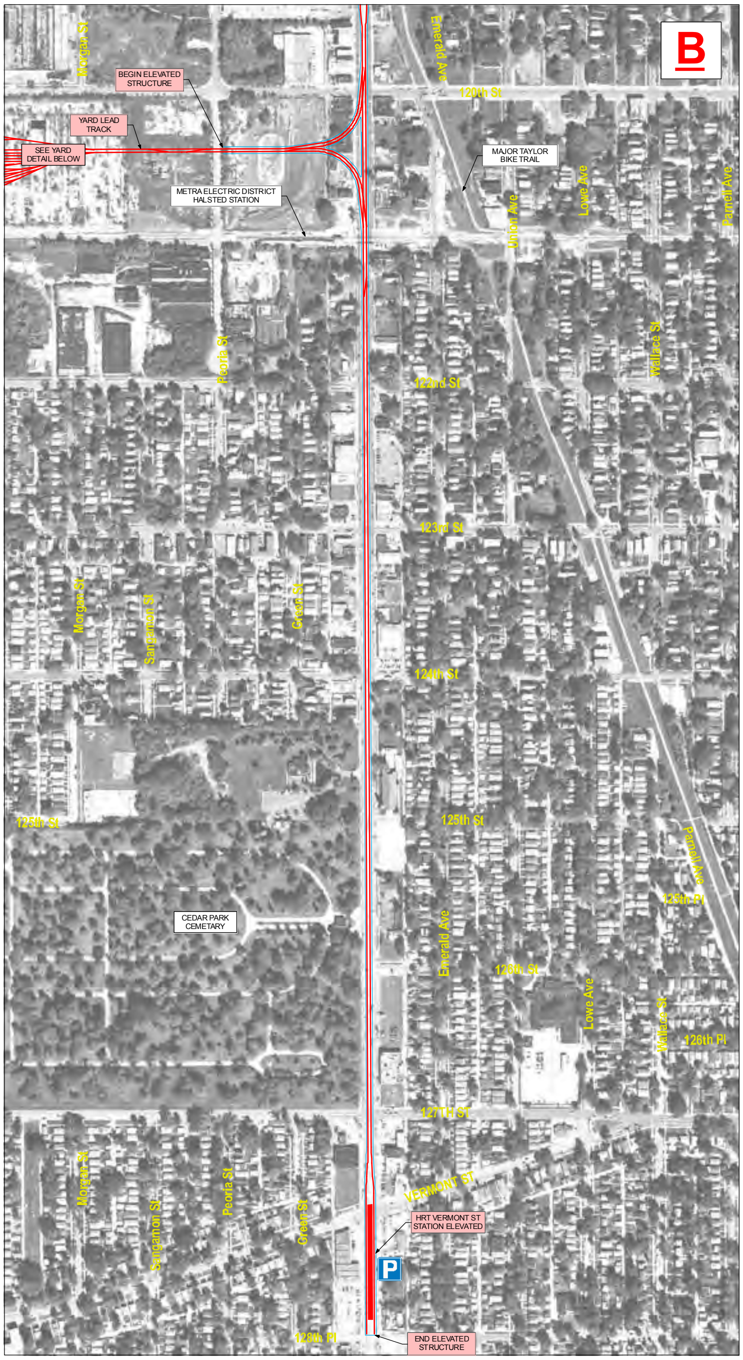

117th St
UPRR HRT EAST OPTION
Front Ave
UPRR HRT WEST OPTION
118th St
HRT OVER METRA ELECTRIC DISTRICT
KENSINGTON PARK
Champlain Ave
FRONTAGE RD
119th St
Prairie Ave
119th St
END ELEVATED STRUCTURE
119th Pl
YARD LEAD TRACK
120th St
Calumet Ave
120th Pl
Indiana Ave
END ELEVATED STRUCTURE
121st St
121st St
Front Ave
121st Pl
Cottage Grove Ave
NEW YARD AND SHOP
Indiana Ave
124th St
Bishop Ford Expwy
Doty Ave
Indiana Ave
METROPOLITAN WATER RECLAMATION DISTRICT
127TH ST
INDIANA AVE
Doty Ave
HRT UPRR 130TH STREET WEST OPTION STATION AT GRADE
P
130TH ST
HRT 130TH ST SOUTH OPTION STATION AT-GRADE
P
Doty Ave
130th Pl
Ellis Ave
Eberhart Ave
Rhodes Ave
Champlain Ave
Langley Ave
Evans Ave
Drexel Ave
ALTGELD GARDENS
Greenwood Ave
130th Pl
131st St
131st St
King Dr
LEGEND
Proposed Red Line HRT - At Grade
Proposed Red Line HRT - Elevated
Proposed Red Line HRT - Alternative Route
Proposed Station
Proposed Station - Alternative Location
Parking
N

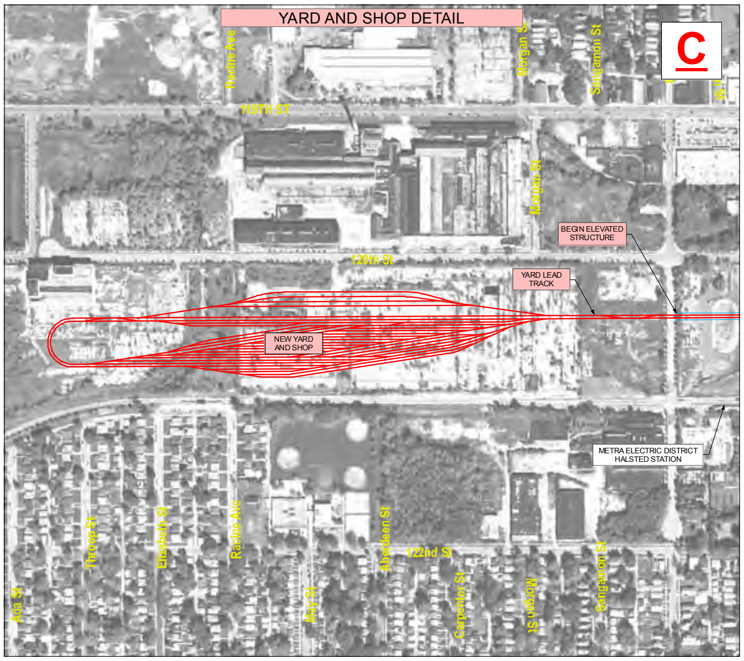
HRT Halsted Street Elevated


EXISTING 95TH STREET STATION
BEGIN ELEVATED STRUCTURE
EXISTING 98TH ST YARD AND SHOPS
HRT 103RD ST STATION ELEVATED
P
W LEG DAN RYAN
HALSTED ST
LAFAYETTE AV
STATE ST
95TH ST
95th Pl
96th St
96th Pl
97th St
97th Pl
98th St
98th Pl
99th St
99th Pl
100th St
100th Pl
101st St
101st Pl
102nd St
102nd Pl
103RD ST
103rd Pl
104th St
104th Pl
105th St
105th Pl
106th St
106th Pl
107th St
107th Pl
108th St
Morgan St
Sangamon St
Green St
Peoria St
Emerald Ave
Union Ave
Lowe Ave
Wallace St
Normal Ave
Parnell Ave
Eggleston Ave
Harvard Ave
Princeton Ave
Yale Ave
WENTWORTH AVE
La Salle St
Perry Ave
Lafayette Ave
LEGEND
Proposed Red Line HRT - At Grade
Proposed Red Line HRT - Elevated
Proposed Station
Parking
N

HRT Halsted Street Elevated


A
106th St
107th St
107th Pl
108th St
108th Pl
109th St
109th Pl
110th St
110th Pl
111TH ST
112th St
112th Pl
113th St
113th Pl
114th St
114th Pl
115TH ST
115th Pl
116th St
116th Pl
117th St
117th Pl
118th St
119th Pl
119th St
Morgan St
Peoria St
Green St
Sangamon St
Sangamon Ct
Racine Ave
Carpenter St
Union Ave
Lowe Ave
Emerald Ave
Wallace St
HRT 111TH ST STATION ELEVATED
HALSTED INDOOR MALL
MAJOR TAYLOR BIKE TRAIL
HRT 119TH ST STATION ELEVATED
P
LEGEND
Proposed Red Line HRT - At Grade
Proposed Red Line HRT - Elevated
Proposed Station
Parking
N


B
120th St
122nd St
123rd St
124th St
125th St
125th Pl
126th St
126th Pl
127TH ST
VERMONT ST
128th Pl
Morgan St
Peoria St
Sangamon St
Green St
Emerald Ave
Union Ave
Lowe Ave
Wallace St
Parnell Ave
BEGIN ELEVATED STRUCTURE
YARD LEAD TRACK
SEE YARD DETAIL BELOW
METRA ELECTRIC DISTRICT HALSTED STATION
MAJOR TAYLOR BIKE TRAIL
CEDAR PARK CEMETARY
HRT VERMONT ST STATION ELEVATED
P
END ELEVATED STRUCTURE


YARD AND SHOP DETAIL
C
119TH ST
120th St
122nd St
Racine Ave
Morgan St
Sangamon St
Throop St
Elizabeth St
Aberdeen St
Carpenter St
Ada St
Ann St
BEGIN ELEVATED STRUCTURE
YARD LEAD TRACK
NEW YARD AND SHOP
METRA ELECTRIC DISTRICT HALSTED STATION

Red Line Extension
Alternatives Analysis Study
Comment Card

Please print your contact information if you would like to receive a response to the questions and comments.

Name ______________________________

Organization ______________________________

Address (Street, City, Zip)

____

____

____

Phone ______________________________

E-Mail ______________________________

☐ Would you like to be added to the Red Line Extension Project mailing list? Check box if yes.

Please write your question or comment in the area below (please print). When you have completed the form, please give to one of the CTA representatives.

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Please send comments and questions to Mr. Darud Akbar, Chicago Transit Authority, Government and Community Relations, P.O. Box 7567, Chicago, IL 60680-7567. Or dakbar@transitchicago.com

Customer Information: 1-888-YOUR-CTA (1-888-968-7282)
Hearing & Speech Impaired: 1-888-CTA-TTY1 (1-888-282-8891)
Transit Information: 836-7000 from any local area code • www.transitchicago.com

Chicago Transit Authority

Red Line Extension Alternative Analysis Study

Screen 3 Public Involvement-Public Comments and Questions

August 2009

No.	Comment/Question	Received Via*	Topic Area(s)
1	Planning Committee with CTA/City of Chicago Community leaders to develop & implement economic development impact.	STK	10
2	Planning Committee with CTA/City of Chicago Community leaders to develop & implement economic development impact.	STK	10
3	Will there be any plans to ensure that while the new business are welcomed what mechanisms will be in place to ensure existing businesses are not displaced; homeowners are not negatively impacted via noise abatement and a sharp rise in real estate taxes.	STK	10
*4 (4-6)	How much parking space will be provided at stations?	STK	6
5	Sense of insecurity is a BIG issue on Red Line. How will this be addressed on trains/stations and in new designs?	STK	10
6	How will presence of UP trains at grade affect travel time for passengers accessing Red Line stations?	STK	4
7	What type of security will you provide for passage. At ground level, have pedestrian bridge.	STK	10
8	If the terminal station that would extend to 130th Street is not selected, what alternatives will be available for the potential patrons who live beyond 103rd and 127th for the other alternative stations or plans?	STK	3, 11
9	Development of 130th would bring new "economic development" to a region of the city. This would greatly improve the overall economic structure of the area.	STK	10
10	What considerations have been given to the development of jobs once he construction starts?	STK	10
*11(11-12	Has the improvement if the 95th Street station include going south on 95th Street and extend over the rail right-of-way on the southside of the street? Also, has it been considered to look at the separation of the bus terminal from the ridership to move the bus stations to the south? Can a pedestrian bridge be added? (across 95th St)	STK	3
12	Consider pedestrian bridges for the access of UR rail & rapid transit for passengers/riders. Are there schematics of this?	STK	4
13	Inter-governmental and inter-agency coordination should now be put into action. A project this large and comprehensive needs the cooperation and input from many levels/layers of government, and city agencies- Planning, environmental, transportation, and economic development with CTA. This has been and can be done and certainly should be done.	STK	9
14	How long would it take for the increased ridership on the Red Line Extension to pay for the cost of the extension-if ever.	OLIVE	8
*15(15-17)	I agree with the recommendation to extend the Red Line using the UPRR to 130th St plan.	OLIVE	13
16	How will CTA acquire the match required by the federal government?	OLIVE	8
17	What type of green technologies are being considered for construction of the Red Line?	OLIVE	12
18	If service was increased on the Metra Electric line, in the grey line proposal, why couldn't business be diverted from 95th Street to closer Metra Electric stations.	OLIVE	2
19	In the 1960's when the Dan Ryan line was built ridership went down 75% on parallel Metra Electric stations. If the same is to happen here wouldn't the goals of better transit access be best accomplished by increasing frequency on the Metra Electric.	OLIVE	2
*20(20-21)	Since the money for this project will be included in the general transportation project, what priority will the Red Line extension be given? Is it mainly a matter of getting on the books while other projects are completed?	OLIVE	2, 8
21	Will tomorrow's meeting have the same info as this one?	OLIVE	9
22	Does funding from federal sources, e.g., Omnibus Budget earmarks, have to have state & local matches?	OLIVE	8
23	I understand that the CTA as an organization does not consider any of the proposed rail projects. If limited funds are available, what factors will influence where the funds are directed?	OLIVE	2

No.	Comment/Question	Received Via*	Topic Area(s)
24	How often does UPRR run through the Red Lines extension corridor?	OLIVE	4
25	Can the land east of the UP south of 119th be used to shorten the line & bring it to grade sooner?	OLIVE	3
*26(26-28)	Why not use MWRDGC vacant land @ 130th for park & ride?	OLIVE	3, 6
27	Can an intermodal at both station be added to the south east metra line (proposed)? And reestablish the Wildwood Station on Metra Electric at 130th?	OLIVE	2
28	What is the travel time 130th to Madison?	OLIVE	5
29	Would like you to send me a print copy of your power point presentation. Print copies (reduced) of display cards.	OLIVE	9
30	Will there be public involvement in the Environmental Impact Study? If so, how will that public involvement be conducted?	OLIVE	1, 10
31	Does the public get to comment on the cost-effectiveness option to only built the Red Line Extension to 115th St.?	OLIVE	9
32	Will there be a bidding process for the Preliminary Engineering? If so, when will that process begin?	OLIVE	1
33	Who will compose the Project Management team during the Preliminary Engineering phase? Is there a place for community on the project management team?	OLIVE	1
34	The grade crossing next to stations seem like a danger for car/pedestrian alike. Why not build at-grade and use the savings to build underpasses of both CTA and UPRR?	OLIVE	3, 4, 12
35	How will the Halsted Street bus or train benefit the passengers who don't live west? Yes its beneficial to hose who live south, but not as accessible to those who live south east. (no buses that go that way).	OLIVE	11
36	How will bus services be distributed among the new train station?	OLIVE	11
37	Why is all the trains & buses centered around Halsted?	OLIVE	3
38	Well done, CTA. Continue to work to finalize the approval. In the long run the 130th St stop will be the most cost effective, the most equitable solution, the highest federal priority in the low income communities will have access & more parity.	OLIVE	13
39	One of the concerns CTA expressed previously was the capacity of the existing rail yard at 95th. If the proposed UP route would be shortened, how would the existing rail yard be improved?	OLIVE	5
40	Similar to your presentation on the Heavy Rail findings, improvement to the 95th St station need to considered to your findings for the UP Route and its needs to address overuse at the 95th St station.	OLIVE	3, 11
41	The social and economic benefit factor for the UP Route should be higher, against your heavy rail measurement. Can a review of factors be re-examined prior to June 18th?	OLIVE	7
42	I feel this is a great idea for 130th. And it will contribute to transit riders in the south. And project TSM seems the best of all!	OLIVE	13
43	Originally the Red Line was supposed to continue to Altegeld Gardens. That is what it should do.	OLIVE	13
44	I truly support the far southside Red Line Extension project	OLIVE	13
45	Who was funded this transportation surveys and how much did they cost.	OLIVE	1, 8
46	We are pleased that you have come to the conclusion to recommend the Union Pacific Rail alternatives. This area is the most needed in my opinion and other of my associations. We appreciate your dedication to the project and your hard work.	OLIVE	13
*47(47-49)	What would the station at 130th St (UPRR) be connected to? (Bus-Access to suburbs BRT?	OLIVE	11
48	Would acquiring space for trains cause a delay in final decision?	OLIVE	1,10

Chicago Transit Authority

Red Line Extension Alternative Analysis Study

Screen 3 Public Involvement-Public Comments and Questions

August 2009

No.	Comment/Question	Received Via*	Topic Area(s)
49	Would CTA extend it existing bus service to accommodate the rider-ship w/o passing thru Altegeld Gardens?	OLIVE	11
*(50-52)50	Does this extension depend on the stimulus money from the state to complete?	OLIVE	8
51	How much input or cost would be dependent on acquiring the land adjacent to UPRR lines, are they in favor?	OLIVE	10
52	Proposed date for completion of the screening process and final decision to proceed?	OLIVE	1
53	Recently attended a Chicago Plan Commission Mtg and heard presented the possibility of station being attached to a new shopping center at 115th Michigan your pictures place the station about 2 blocks away . Wondering which way your going in this case.	OLIVE	10
54	I support the far southside Red Line Extension Project to 130th Street. With the extension to 130th St. Are there any plans of the communities east of 130th Street? How does our plan stand in relation to the other extensions?	OLIVE	11,13
55	HRT Ext via UPRR to 130th. Have you considered extension to South Shore Station in Hegewisch. You would have transit interface between "L", South Shore, CTA bus, and PACE bus routes. There is Park & Ride already there.	OLIVE	2, 3
*56 (56-59)	What would the parking lost be-Affordable?	OLIVE	6
57	how many homes will be affected by rail line on Union Pacific Rail Route?	OLIVE	10
58	I don’t like the short version of Build Extended Version.	OLIVE	13
59	What connective service will be provided for residents south of 103rd -east of Ford Freeway.	OLIVE	11
*60 (60-61)	Once you reach the environmental impact statement would it be exclusive of environmental justice principles?	OLIVE	10
61	What skills set would be required in eh construction of proposed site for employment purposes? Would area's residents have preference to job opportunities?	OLIVE	10

Red Line Extension Alternative Analysis Study

Screen 3 Public Involvement-Public Comments and Questions

August 2009

No.	Comment/Question	Received Via*	Topic Area(s)
62	While I support the initiative the CTA is taking by trying to improve transit in this area. I believe it should be done in different way. Instead of building a new heavy rail to brt extension. I believe the CTA should implement something similar to the grey line proposal. First of all, I think service levels on the Metra Electric line should be increased to near CTA levels. Unknown to many people, train frequencies on the Metra line used to be every 10 minutes until they were cut back in the 1960's. The benefit of this plan is that increasing trains on the Metra Electric could be implemented almost immediately compared tot he years it will take to build the Red Line Extension. Also, the Metra Electric line is not the typical commuter rail described in your alternatives study. In your study you stated that station spacing is typically 3 to 7 miles apart. However, this is far from the true in the study area where Metra Electric stations are as close as 4 blocks. This station spacing is closer than your proposal for heavy rail. This provides a convenience to riders that would not be attainable with the proposed CTA extension. The other thing about the Metra line is that it is totally electrified. With electric power comes greatly increased acceleration power and lower operating costs due to not having to pay for diesel fuel. To address the bus congestion use at the 95th Street is very easy in my proposal. If half of the buses were rerouted to nearby Metra stations (which many are closer tot he bus routes) the issue would be solved. The reason this was not done before was because service frequencies on Metra Electric were traditionally low and would make trips to time consuming while waiting for a train to come. Furthermore, the Red Line extension will be extremely cost prohibitive and it would be cheaper to implement the grey line plan because all of the infrastructure is already in place. This extra money could then be used to rebuild badly aged Metra Stations which then will attract new riders and economic development. Another important factor is that the Metra Electric line largely parallels the proposed route of the CTA extension. Therefore, ridership will decline because in 1969 when the CTA Dan-Ryan line was built, ridership between 75th and 111th Street Metra stations declined 75%. So what essentially is going to happen is that riders will be siphoned off the Metra line to the new CTA line because service frequencies will be higher. In my opinion this is a big waste of taxpayer money when the CTA is having a hard enough time maintaining what they currently have due to a lack of money.	OLIVE	2
63	What park-and-ride plans are there for the UPR alternative at 130th?	WCPL	6
64	Will environmental engineering be used in PE?	WCPL	1, 12
65	How does the new train yard for the UPRR route factor into cost-effectiveness	WCPL	5
66	The reconstruction in the area of people homes want plan do you have to relocate and have you talked to them, and the feed back.	WCPL	10
67	Job training for the people to work on the new line! Starting wages.	WCPL	10
68	Would homes be uprooted in order to extend the Red Line to 130th?	WCPL	10
69	Approximately how many homes will be removed to make way for the rail proposals?	WCPL	10
70	Is there consideration for transfer stop at 115th/Kensington Metra Line? And/or with transfer stop to 130th and South Shore Line?	WCPL	2
71	Please consider establishing connection points between Metra and Kensington/115th or at points along the proposed SE corridor.	WCPL	2
72	With this project and the "New Starts" funding process is there a chance for a Public/Private funding option, which may bring the project to completion sooner.	WCPL	8
73	Why haven't you considered building the rail line on the I-57 expressway?	WCPL	3
74	Why not use Medium of I-57 it would be less destruction to surrounding neighborhoods.	WCPL	3

Red Line Extension Alternative Analysis Study

Screen 3 Public Involvement-Public Comments and Questions

August 2009

No.	Comment/Question	Received Via*	Topic Area(s)
75	Will the Red Line Extension project get any money from the American Recovery and Reinvestment Act? If so how will that stimulus money effect phases and time-line for project?	WCPL	8
76	We do hope that we will move forward with this project. The extension of the Red Line to the far southside is desperately needed. I do hope that construction will be done exponentially.	WCPL	13
77	If CTA acknowledges that 95th/Dan Ryan (Red Line) as it is unsafe why did the Brown Line project and Blue Line projects start first? Is there a plan for survey the community on what they want because80 percent meeting are not representative of what we want.	WCPL	2,9
78	The alternatives to the red line extension seems to cut thru some communities and homes. If this is the case what will happen to the homes and residents between 103rd and 117th? Will these residents be compensated? If so, through what method?	WCPL	10
79	If funding is not available for the red line extension, what alternative plan is in place to relieve congestion at the 95th Street station?	WCPL	3, 8
80	95 W has passed by the time get we get out of work on 95th & Halsted.	WCPL	14
81	I'm in support of the Red Line Extension for future.	WCPL	13
82	Support Red Line train.	WCPL	13
83	The safety of CTA & UPRR passenger was great and all people do not have cars so alternative transportation is great for Chicago and CTA it will work.	WCPL	13
84	We are in favor of the Union Pacific Red Line Extension ending at 130th St.	WCPL	13
*85 (85-86)	How long will it take to complete the Red Line extension project. Also when will it begin?	WCPL	1
86	When will the bus alternative on Halsted Street start?	WCPL	1
87	Do you have a starting date for this project 2009-2010?	WCPL	1
88	How long will it take for construction to start? Will all the stations have park N ride? Where will the Red Line leave it current route to get on the UPRR alignment?	WCPL	1, 3, 6
89	Will the proposed rail extension begin at the 95th street terminal or will it be connected by shuttle bus to the 95th street terminal?	WCPL	3
90	Would the extension eliminate the "back up" that generally occurs from 69th to 87th St. from time-to-time especially during the rush hours? Is this caused by limited space in train yard?	WCPL	11
91	Have equity issues been considered as the plans have evolved such as: greater access for low-income communities, no park 'n' rides on the southside from Chinatown south, limited to no accessibility at stops south of 22nd St., and no extensions to city limits for southside residents.	WCPL	10
92	If the rail ended as 115th St wouldn’t the likelihood of completing the line be having to go back to this long term drawing board? Another 30 years? Wont this shortchange the prospects for future ridership.	WCPL	3
93	What noise abatements have been considered?	WCPL	10
94	Is it possible to shift the proposed alternative from east to west on the UP to circumvent or limit displacement.	WCPL	10, 12

No.	Comment/Question	Received Via*	Topic Area(s)
95	Based on my review of your current plans, I have decided to support the idea of having a station just north of 130th street. This alternative reduces the potential of at-grade traffic conflicts on 130th street. It also allows for a more seamless access to park and ride lots along with the bus turnaround. I would also like to see a kiss and ride facility along with a small bike and ride lot and car share zip car at the station/ I am also in support of adding a bus turnaround at 103rd Street and 111th Street to accommodate route changes for CTA route 100, 103, Potentially route 14, Potentially route 15, potentially route 28, and potentially a Hammond Transit Route at 103rd. A turnaround at 111th Street could accommodate route 352, 359, and a streetside 111. These stations should also have Coffee shops, bike and ride facilities, and heated bus waiting areas	EMAIL	6, 12, 13
96	Concerning the Red Line extension from 95th to 130th Streets. The route selection paralleling the Burlington Northern Railroad's tracks seems to be the best of the alternatives explored. However, there is a safety issue for CTA riders using the station facilities that are location where the CTA's elevated tracks run parallel with the BN's Tracks. The problem is that large volumes of riders will have to routinely cross the BN's tracks when proceeding to and from the stations. With increased train traffic and longer trains, I think it is reasonable to expect that there will be numerous occasions when pedestrian access over the BN's crossing will be blocked for short periods of time. This may happen because of the length of a train, or because of some sort of operational delay. When this happens, even with grade crossing protection in place, some riders, left with no other options, are going to try and beat approaching trains, or climber through or even under standing trains. I suppose the railroad's right-of-way could be fenced off at the stations, but the streets would still be open and the opportunity for pedestrians to exercise the kind of bad judgments described above would still be available. While it would seem improbable that people would be in such a hurry that they would make such dangerous choices, it has happened before, sometimes with disastrous results. With that having been said, it is my opinion that a pedestrian overpass for CTA riders should be constructed as part of each CTA Station located where the CTA's tracks parallel the BN's tracks.	EMAIL	4, 12
97	The 107 Throop area would be a great second stop on the extension line. Buses could feed into the terminal from Vincennes and Halsted and there is a curved street that could be used for bus turn around this stop would also service two High Schools. The 111th - 115th street buses could pull in the Pullman, Roseland travelers. Riders 119th and beyond would use the end of the line 130th ST terminal. If the 107th terminal is built large enough and High speed tracks are installed there would be little need for costly multiple terminals and stops between 95th and 130th.	EMAIL	3
98	Inka Internet Station at 11320 South Halsted in Chicago, supports the Red Line extension project from 95 th Street to 130th street.	EMAIL	13
99	I'm writing to let you know that I support the extension of the CTA Redline from 95th - 134th St. It is vital that the state and CTA start to recognize the importance of the residents who live beyond 95th & state. It is necessary that Red Line be extended to service these residents, which I might state is long overdue! Governor Quinn, please include the CTA Red Line Extension project in the 2009-2010 Illinois State Budget and request full funding now. "I support the extension of the CTA Redline from 95th - 134th St"	EMAIL	13
100	Please extend the Red Line train to 130th Street	EMAIL	13
*101(101-105)	I do not support the Red Line Extension Plan as designated (the UPRR and Halsted Elevated Proposals). I am in support of effective transportation for the south side of Chicago which is beneficial to the surrounding community. I think that the Red Line Extension proposals will be too destructive to the neighborhood.	EMAIL	13

No.	Comment/Question	Received Via*	Topic Area(s)
102	Please address the following questions: What will happen to the structure of the neighborhood with the removal of the homes and businesses along the proposed UPRR/Halsted route? The neighborhood is primarily single home structures. Have studies of other cities' transit transportation and their impact been considered? Thank you for your consideration.	EMAIL	10
103	What is the plan for the 95th street Station? How will the structure be modified to improve its function? How will the station be more accessible to disabled and or elderly riders? Will the footprint of the station increase? Is a parking lot part of the plans for the 95th Street Red Line Station? Where is the proposed site of this lot? Will the homes west and east of the station be raised? Will the public park land be taken?	EMAIL	3, 10
104	Can additional meetings be scheduled to explain the proposals? In talking to people, most were unaware of the four highlighted proposals in the June 4th meeting. People again and again asked if the extension was going to run down i-57. Although the meetings in June were effective in introducing the analysis, many residents in the effective communities are not informed of the proposals.	EMAIL	1,9
105	Why doesn't the expansion branch off to the east (in the middle of the Bishop Ford Expressway) where it would serve the surrounding neighborhoods? Why isn't the proposal heading east in the middle of the Bishop Ford Expressway where it would serve Chicago State University, Olive-Harvey College, and Corlis High School? Please explain in greater detail the use of land that will be needed to develop an elevated train after 95th Street Station? I am concerned that possible expansion (as presented on June 4, 2009) will destroy the homes of hard working people who have mainstay of the neighborhoods. I am concerned that the cement structures as depicted in the presentation will be a physical separation in the flow of the neighborhoods. How will this be addressed?	EMAIL	3, 10, 13
106	I have been a citizen of Chicago, ILLINOIS my entire life. I want Governor Quinn to support and fund the expansion of the CTA train to 134th Street. This community is under serviced when it come to transportation. This expansion proposal has been defeated several times, I believe now is the time for approval when many cannot afford the expense of an automobile. The CTA is our only viable way to safely commute to jobs in this city. Our fellow northern citizen do not have this problem with transportation because the CTA has been expanded thru and outside the city to O'Hare Airport and beyond. The southern based taxpayer are funding transportation to the north, and west sides. We know some monies should be allocated and spent for our general good. So please add the expansion in the budget while there is funding available. I want our Governor to support this expansion and see that it is done to benefit his citizens regards of their location in our great state.	EMAIL	13
107	I support the CTA's Red Line Extension Project (95th to 130th). This service is needed for the Far South Region communities.	EMAIL	13
108	I would like to support Developing Communities Project's call for a red line extension. This effort has been discussed far too long, and it's time to put the funding into the State's 2009-2010 budget for the Red Line Extension Project. It is necessary to think about Chicagoans south of 9th street, not to mention helping the students who attend Gwendolyn Brooks College Prep.	EMAIL	13
109	Please extend the Red Line south beyond 95th Street. As someone who has lived in Chicago, Skokie, Detroit, and St. Louis, I've seen the huge difference that rail transit (or the lack thereof) can make in a neighborhood. Roseland, Pullman, and the other communities south of 95th would benefit greatly from rail service, from the everyday lives of individual people on up to the streetscapes themselves.	USPS	13

No.	Comment/Question	Received Via*	Topic Area(s)
110	I strongly agree with the choice of the UP alignment, but I am troubled by the inclusion of park and ride at all of the stations. If this line is intended to revitalize the areas around the stations at 103rd, 111th, and 115th, parking lots will work against that. Plus- why would we want to increase car traffic around these neighborhood-oriented stations? Better would be to concentrate parking at 130th/Bishop Ford Espy where there would be easy onto access. If access from I-57 is desired, perhaps, a parking deck could be built over the expressway just south of 95th St, with dedicated lanes to/from I-57 and a direct pedestrian connection to the 95th Street Red Line Station.	USPS	6, 10, 13
111-Petition	We the public, supports the CTA's locally preferred route to Extend the Red Line Rail Line from the 95th Street Station to 130th Street, using the Union Pacific Rail Road (UPRR) corridor. In addition, we support the call for a reduction in air pollution, reduced travel time, and increased access to employment and education opportunities in the Far South Region of Cook County, and the State of Illinois, through the construction of the Red Line Extension Project. [Note: 512 signatures included on petition.]	USPS	10, 13
Key to source of comments:			
OLIVE	**Comment received at Public Meeting held at Olive Harvey College**		
WCPL	**Comment received at Public Meeting held at Woodson Regional Chicago Public Library**		
EMAIL	**Comment sent to CTA by email**		
STK	**Comment received at Stakeholder Meeting**		
USPS	**Comment sent to CTA by postal mail**		
*** Denotes comments listed on the same comment card and/or email**			

Chicago Transit Authority
Red Line Extension Alternatives Analysis Study

Screen 3 Public Involvement
Responses to Public Comments and Questions

31 August 2009

Written questions and comments regarding the Red Line Extension Alternatives Analysis Study were submitted by a variety of individuals and groups from throughout the Chicago region at the study's Screen 3 Public Meetings held on June 3 and 4, 2009. In addition, public comments and questions on Screen 3 were submitted directly to the Chicago Transit Authority (CTA) via e-mail and postal mail through June 25, 2009.

All of the questions and comments have been collected and compiled to provide a comprehensive review of the issues raised along with CTA's responses. Every question, comment, and suggestion submitted during the public comment period has been compiled in the "Outreach Comment Database" (see separate document). Each question has been recorded verbatim and assigned a number that corresponds with the answers provided in this document, ensuring every question or comment submitted has been reviewed and answered or acknowledged. Collectively, the public comments and preferences will be considered in the evaluation of alternatives and concepts introduced through the public involvement process may be evaluated and/or reflected in subsequent project phases as appropriate.

Many of the comments received were very similar in nature. As a result, similar comments and their responses have been grouped by topic and "General Comment" heading below to avoid duplicative responses. Questions or comments requiring individual or specific responses are also included below along with unique responses. In order to understand some terms used in the Comments and Responses, it may be necessary to review the original Screen 3 presentation materials which are posted on CTA's Web site www.transitchicago.com (News and Initiatives, Alternatives Analysis Studies).

The list below shows the index of topics covered in the report, along with the number of comments received for each. Because comments often refer to more than one topic, the numbers associated with each do not equal the total number of comments received.

Index of Topics

1. FTA's Alternatives Analysis Process and Timeline (12)
2. Relationship of Red Line Extension to Other Proposed Transit Projects (10)
3. Alternatives Analyzed (17)
4. Access to Proposed Red Line Extension Stations (4)
5. Proposed Red Line Extension Operations and Yard (3)
6. Proposed Red Line Extension Parking Facilities (7)
7. Evaluation Criteria Used in the Alternatives Analysis Study (1)
8. Funding for Red Line Extension Construction and Operations (9)
9. Alternatives Analysis Public Involvement Process and Format (6)
10. Potential Red Line Extension Economic and Environmental Impacts (27)
11. Potential Red Line Extension Impacts on Existing CTA and Pace Services (9)
12. Issues to Be Addressed in Preliminary Engineering (6)
13. Statements of Support or Opposition of the Extension (25)
14. Other (1)

1. FTA's Alternatives Analysis Process and Timeline

General Comment:

What is the timing of the Environmental Impact Study, Preliminary Engineering, Final Design, Construction and Operation of the Red Line Extension?

Pertains to Specific Comments:

45, 52, 64, 85, 86, 87, 88

Response to Overall Comment Category:

The FTA New Start grant program requires conceptual transit project proposals to proceed through a formal process of planning, design, and construction. Upon completion of this process, the project is ready for operation. The process involves five formal steps: Alternatives Analysis (AA); Environmental Impact Statement (EIS); Preliminary Engineering (PE); Final Design (FD); and Construction. Each of these steps typically takes 2-3 years to complete although the EIS and PE can be done concurrently. Initiation of each step is also contingent upon federal approval and continued availability of federal and local funding, the timing of which will also affect the overall project schedule. For highly complex projects the Final Design and Construction steps take longer, particularly if construction is implemented in sequential phases rather than all at once.

The current Red Line Extension Alternatives Analysis study is being completed in summer 2009, with the adoption of a locally preferred alternative by the Chicago Transit Board. The subsequent project phase, Environmental Impact Study, is projected to begin in fall 2009. A specific completion year depends on factors outside CTA's control, but is expected no earlier than 2016.

Other Specific Comments Noted on this Topic:

Comments:

30. Will there be public involvement in the Environmental Impact Study? If so, how will that public involvement be conducted?
104. Can additional meetings be scheduled to explain the proposals? In talking to people, most were unaware of the four highlighted proposals in the June 4th meeting. People again and again asked if the extension was going to run down i-57. Although the meetings in June were effective in introducing the analysis, many residents in the effective communities are not informed of the proposals.

Response:

Yes, the Environmental Impact Statement (EIS) will have several opportunities for public involvement.

The purpose of the EIS is to provide full and open evaluation of environmental issues and alternatives, and to inform decision-makers and the public of reasonable alternatives that could avoid or minimize adverse impacts and enhance the quality of the environment.

The EIS process begins with Federal Transit Administration's (FTA) publication of a *Notice of Intent* to prepare an EIS in the *Federal Register* along with similar CTA announcements in local newspapers and other media. At this time, a tentative list of alternatives and impacts is established and presented to the public and interested government agencies for comment. This notification is part of *scoping* - the process of affording an early opportunity for the public and agencies to identify potential issues to be addressed in the EIS. Scoping includes the provision of materials describing the project, alternatives, impacts, and any other relevant information known about the proposed undertaking. These materials are distributed to invite early comments, which will be accepted at scoping meetings – anticipated to be held in fall 2009 – and through written comments.

Following scoping, the EIS is prepared in two stages – draft and final. The Draft Environmental Impact Statement (DEIS) provides an opportunity for government agencies and the public to review a proposed project and alternatives. The principle components of a DEIS include discussion of the following 1) the purpose of and need for action; 2) alternatives, including the proposed action; 3) the affected environment; and 4) environmental consequences. A DEIS must be signed by the FTA Regional Administrator and the authorized official of the local lead or cooperating transit agency. The approved DEIS is then concurrently filed by FTA with the US Environmental Protection Agency (US EPA) and distributed by the local lead agency.

After completion of the circulation period, all substantive written comments and the public hearing testimony are addressed and the preparation of a Final Environmental Impact Statement (FEIS) begins. The principle components of the FEIS include: 1) identification of a preferred alternative; 2) responses to comments made during the circulation period; 3) commitments to mitigate adverse impacts of the project; 4) evidence of compliance with related environmental statutes, Executive Orders and regulations; and 5) a description of changes that have been made to the project since the DEIS was published. Once the appropriate FTA official has approved the FEIS, it is concurrently filed by FTA with the US Environmental Protection Agency (US EPA) for publication of a notification of availability for a 30-day circulation period in the Federal Register and it is distributed and advertised through local media by the local lead agency.

Comments:

32. Will there be a bidding process for the Preliminary Engineering? If so, when will that process begin?
33. Who will compose the Project Management team during the Preliminary Engineering phase? Is there a place for community on the project management team?

Response:

CTA anticipates that the Preliminary Engineering (PE) team will be chosen in 2010. There are two steps that must be completed before the PE team will be selected and PE initiated. After the completion of the Alternatives Analysis study, CTA will submit an Application to Enter Preliminary Engineering to the Federal Transit Administration (FTA) to receive a project rating. First, CTA must receive a favorable rating by FTA to advance to PE. Second, CTA must obtain funding to begin PE. Typically, funding for New Starts projects is obtained at the federal level – more information about funding is provided in Topic Category 8. After these two steps are completed, CTA will procure a consulting team to perform PE services for the Red Line Extension project.

The procurement process will follow standard CTA procurement guidelines, as outlined on the CTA website www.transitchicago.com (click on Doing Business, then Procurement Information). Since PE comprises the technical work to develop and design the engineering specifications for the project, this work is not typically scoped to include community participation. However, this work is often performed in conjunction with the Environmental Impact Statement (EIS), which allows for extensive community participation to understand potential project impacts and evaluate mitigation strategies. Mitigation strategies developed and approved in the EIS phase are incorporated into PE project designs.

Comment:

48. Would acquiring space for trains cause a delay in final decision?

Response:

At this early stage in the process, it is difficult to predict delays associated with land acquisition. Specific issues such as required land acquisition will be studied in the next steps, Preliminary Engineering and the preparation of an Environmental Impact Statement. Required land acquisition typically begins after completion of the Environmental Impact Statement and the issuance of a Record of Decision.

2. Relationship of Red Line Extension to Other Proposed Transit Projects

General Comment:

Wouldn’t this area be better served by the Metra Electric Gray Line service? Can this extension connect to existing Metra Electric or South Shore services?

Pertains to Specific Comments:

18, 19, 27, 55, 62, 70, 71

Response to Overall Comment Category:

Various proposals – the Gray Line or the Gold Line -- call for operational changes to increase service frequency on the Metra Electric District Line and improve CTA connections to this facility as well as fare integration between regional transit services. This would terminate at a station in downtown Chicago. It would not have the same connectivity to the CTA rail rapid transit system that provides accessibility to the entire Chicago area that an extension of the CTA Red Line would provide.

Improved Metra Electric Service meets some of the needs of the study area, such as reducing the lengthy transit commute times experienced by many residents of the study area. However, it will not be included as a build alternative in the current Alternatives Analysis because it does not comprehensively address all of the needs of the project, including alleviating the bus and passenger congestion at 95th Street Red Line station or reducing travel times of passengers that transfer from bus to CTA rail to access their destination. Additionally, as noted in the Screen 1 analysis (available at www.transitchicago.com – click on News and Initiatives, then Alternatives Analysis Studies) commuter rail has several characteristics that are less favorable for the study area than other modes analyzed (such as bus and heavy rail).

There is potential for connection of the proposed Red Line extension to the Northern Indiana Commuter Transportation District (NICTD) South Shore Commuter Rail Line in the vicinity of 130th Street, where the two lines would be adjacent to each other. This potential connection will be explored in further detail during Preliminary Engineering. A connection between the Red Line Extension and Metra Electric District at Kensington/115th Street station is not possible, as the proposed Red Line Extension routing crosses the Metra Electric District Line approximately one-half mile to the south of the Kensington/ 115th Street station.

Other Specific Comments on this Topic:

Comments:

20. Since the money for this project will be included in the general transportation project, what priority will the Red Line extension be given? Is it mainly a matter of getting on the books while other projects are completed?
23. I understand that the CTA as an organization does not consider any of the proposed rail projects. If limited funds are available, what factors will influence where the funds are directed?

Response:

Every five to six years, the United States Congress enacts legislation that authorizes federal funding for highway, transit, motor carrier, safety, and research programs across the country. This federal support represents the primary source of capital funding for CTA and other transit agencies throughout the U.S. The current legislation, known as SAFETEA-LU (Safe, Accountable, Flexible, Efficient Transportation Equity Act - A Legacy for Users), authorizes the federal transit and highway programs through 2009. President Bush signed the act into law on August 10, 2005.

The SAFETEA-LU legislation authorized CTA to seek federal New Starts grant support for four new rail lines or line extensions including: the Red Line Extension to 130th Street; the Orange Line Extension to Ford City; the Yellow Line Extension to Old Orchard; and the Circle Line. In order to qualify for New Starts funding, CTA is required to perform comprehensive Alternatives Analysis studies for each. Alternatives Analysis studies for all four projects are currently underway following the same federally mandated process as the Red Line Extension study, but addressing the unique transportation needs of their respective study areas.

A key objective of the Federal Transit Administration's Alternatives Analysis process is to measure all transit projects from across the nation by the same set of standards. This process ranks projects based on this measurement and not on where they are located. In this way, the benefits and costs of a project can be objectively measured in comparison to all others. Acknowledging that each project has a unique Purpose and Need, the process allows multiple projects from the same region to be rated highly. It is not unusual for a large region such as Chicago to seek approval for several major transit initiatives at the same time. In the late 1990s, CTA won New Starts funding approval for both the Cermak (Douglas)

Branch reconstruction and the Brown Line capacity expansion project at the same time. Metra has also received New Starts funding for multiple projects at the same time. New York City in 2005 had two multi-billion dollar transit projects approved for New Starts funding.

CTA is preparing all of the New Starts projects to be advanced simultaneously from Alternatives Analysis with the selection of Locally Preferred Alternatives in each study area by fall 2009 and has not expressed a priority for any project as they are all intended to address important transportation objectives in their respective study areas.

Comment:

77. If CTA acknowledges that 95th/Dan Ryan (Red Line) as it is unsafe why did the Brown Line project and Blue Line projects start first?

Response:

CTA uses a variety of factors to prioritize among many worthy projects for which there are limited resources. The Red Line Alternatives Analysis Study has identified deficiencies at the 95th Street bus terminal including narrow sidewalks connecting to surrounding neighborhoods, inadequate space within the terminal for passenger circulation and bus maneuvering and frequent presence of pedestrians in the bus drive lanes. These conditions are not desirable because they make transit less attractive and make the terminal less safe. The proposed LPA is intended to address this bus and passenger congestion (among other goals) and prevent conditions from deteriorating in the future.

The Cermak (Douglas) Blue Line Branch reconstruction project, which is now served by Pink Line trains, was prioritized for reconstruction because of the substantially deteriorated condition of track, structure and station facilities that had reached the end of their useful life. Prior to reconstruction, trains speeds were slowed to no more than 15 miles per hour over most of the branch to minimize the risk of further damage to the structure or derailment significantly lengthening commute times and depressing ridership. Conditions were so deteriorated CTA considered suspending service, but funds were secured through the New Starts program for reconstruction.

The Brown Line Capacity Expansion project was motivated by the significant ridership growth on the Brown Line over the last decade. In response to increasing rush hour crowding, train frequencies were increased to the maximum possible. As ridership continued to grow, crowding on rush hour trains exceeded CTA loading standards and the capacity expansion project was planned to lengthen platforms to accommodate 8-car trains (from 6 cars). The $530 million project, now nearing completion, also modernized stations and made them accessible for people with disabilities.

3. Alternatives Analyzed

General Comment:

Explain the alternatives that were analyzed.

Pertains to Specific Comments:

8, 11, 26, 34, 40, 55, 79, 88, 89, 103, 105

Response to Overall Comment Category:

CTA evaluated five alternatives in the Red Line Extension Alternatives Analysis Screen 3, including the No-Build Alternative, two Transportation System Management (TSM) / Bus Rapid Transit (BRT) Alternatives on Halsted Street and Michigan Avenue, respectively, and two heavy rail (HRT) alternatives terminating on Halsted Street and adjacent to the Union Pacific Railroad (UPRR) right-of-way, respectively.

The No-Build Alternative considers the system if no changes are made to transit services in the study area between today and the forecasted year of evaluation, 2030. Existing transit service in the study area includes 22 CTA bus routes and seven Pace bus routes operating on the edge or within the study area, offering extensive north-south and east-west travel options throughout the study area, and primarily terminating at the 95th Street station. The 95th Street station includes a bus terminal facility with 20 bus bays.

Next, CTA evaluated two bus alternatives from Screen 2, combining a TSM – a low-cost option – and BRT for evaluation in Screen 3. The first TSM/BRT Alternative is an enhanced bus route from the 95th Street station to Halsted Street and 127th Street/Vermont Avenue, operating in mixed-traffic on Halsted Street. Bus stop locations are proposed at 103rd Street, 111th Street, 119th Street and 127th Street/Vermont Avenue, with park-and-ride facilities at each stop. The second TSM/BRT Alternative is an enhanced bus route from the 95th Street station to 130th Street via East 95th Street, Michigan Avenue, East 127th Street, South Indiana Avenue and East 130th Street. Bus stop locations are proposed at 103rd Street, 111th Street, 115th Street and 130th Street, with park-and-ride facilities at each stop. These alternatives do not propose to use exclusive lanes; however, implementation of transit signal priority at signalized intersections – to increase bus speeds by extending the green light cycle at traffic signals when needed – is proposed along the Halsted Street and Michigan Avenue portions of the respective routes. A fleet of enhanced 60-foot hybrid articulated buses are proposed. Finally, with each of the bus alternatives, expansion of the 95th Street terminal – extending the existing bus bays along State and Lafayette Streets approximately 250-feet north to 94th Street – to improve circulation and safety is also included.

In addition to the two bus alternatives, two rail alternatives were also evaluated in Screen 3. The first alternative is the Halsted Street HRT elevated alternative. This alternative would depart the current CTA 95th Street terminal station and follow the I-57 Expressway median, transitioning to an elevated structure at Halsted Avenue and traveling south on Halsted Street to 127th Street/Vermont Avenue. This alternative is 5.0 miles long and has four proposed stations– at 103rd Street, 111th Street, 119th Street, and 127th Street/Vermont Avenue – consistent with modern rapid transit station spacing. The second HRT alternative is the UPRR HRT elevated alternative. This alternative would follow the I-57 Expressway as it traveled south from the 95th Street terminal station until the UPRR corridor (adjacent to Eggleston Avenue), where it would turn south to follow the corridor to approximately 111th Street, and then southeast until it crosses over the Metra Electric District tracks at about 119th Street; here, the corridor deviates from the UPRR corridor, continuing southeast at-grade adjacent to the Northern Indiana Commuter Transportation District (NICTD) South Shore tracks to the proposed terminal location at 130th Street near the I-94 Bishop Ford Freeway. This alternative is 5.3 miles long and has four proposed stations – at 103rd Street, 111th Street, 115th Street, and 130th Street.

For each of the proposed rail extension alternatives, an intermediate alternative was also evaluated. The intermediate alternative for the Halsted Street HRT elevated alternative would terminate at the proposed 119th Street station – for a total distance of 3.8 miles and three new stations. The intermediate alternative for the UPRR HRT elevated alternative would terminate at the proposed 115th Street Station – for a total distance of 3.3 miles and three new stations.

All rail transit alternatives would be powered via an electric third rail, consistent with the existing CTA system and rail cars would be equivalent to those used by the existing fleet. Note that with regard to the UPRR Corridor, CTA and UPRR operate services with incompatible train cars and power systems; therefore, in the proposed UPRR Corridor, CTA would have its own dedicated tracks. The elevated alternative would operate adjacent to existing UPRR freight right-of-way (currently at-grade). All alternatives currently have bus terminal facilities and Park and Ride lots proposed in proximity to each station.

Other recommendations and preferences for potential alternatives, alternative design elements, and alternatives extending beyond the study area were provided on the question/comments cards submitted by the public. Staff will review all suggestions and incorporate in the analysis those that merit further consideration.

Other Specific Comments on this Topic:

Comment:

25. Can the land east of the UP south of 119th be used to shorten the line & bring it to grade sooner?

Response:

Yes, concept plans for the Red Line Extension show that traveling southbound after crossing over the Metra Electric District tracks, the Red Line Extension would be at-grade (street level) adjacent to the NICTD South Shore tracks.

Comment:

37. Why are all the trains & buses centered around Halsted?

Response:

Within the study area, the majority of north-south existing bus service is located on Halsted Street and Michigan Avenue. These streets have multiple CTA and Pace bus routes operating on them. During Screen 3 of the Alternatives Analysis study, the two Red Line rail extension alternatives that were studied included Halsted Street and the Union Pacific Railroad corridor, which is located to the east of Halsted Street.

Comments:

73: Why haven't you considered building the rail line on the I-57 expressway?
74: Why not use Medium of I-57 it would be less destruction to surrounding neighborhoods.
97: The 107 Throop area would be a great second stop on the extension line…

Response:

During Screen 1, the I-57 Expressway corridor was analyzed. The I-57 Expressway was one of nine corridors that were examined as part of the Universe of Alternatives. The I-57 Expressway corridor was not recommended for further study in Screen 1 because it was located at the far western edge of the study area and did not address all of the needs of the project, including directly serving population and employment in the study area. Additionally, transit access is more difficult to this corridor due to its location in the median of the expressway. For more information about Screen 1, see the project website at www.transitchicago.com.

Comment:

92. If the rail ended as 115th St wouldn't the likelihood of completing the line be having to go back to this long term drawing board? Another 30 years? Won't this shortchange the prospects for future ridership.

Response:

CTA examined the possibility of ending the Red Line Extension at 115th Street to see if it would better position the project to compete for Federal Transit Administration New Starts funding by improving its cost-effectiveness and also lowering the overall cost of the project. The Red Line Extension is unlikely to be built without the federal New Starts funding. CTA will continue its discussions with the Federal Transit Administration as it continues through the New Starts process (Environmental Impact Statement, Preliminary Engineering, and Final Design) to determine the terminal location of the Red Line Extension. In addition, the current federal surface transportation bill expires this fall, and the re-authorization has the potential to contain revisions to the New Starts process, including changes as to how projects are rated and funding commitments to the program. These potential changes could impact decisions as to whether to terminate the Red Line at 115th Street or 130th Street.

If the Red Line Extension were to terminate at 115th Street, it is unknown as to when the line could be extended to 130th Street. Funding availability will likely be a key factor in the timing. It is anticipated that opening and operating a Red Line Extension to 115th Street will result in increased ridership in the corridor, thus strengthening an already strong travel market.

4. Access to Proposed Red Line Extension Stations

General Comment:

How will Union Pacific trains affect access to the red line station? Have you considered pedestrian bridges?

Pertains to Specific Comments:

6, 24, 34, 96

Response to Overall Comment Category:

For the Union Pacific Railroad heavy rail transit elevated alternative, Union Pacific freight railroad trains may affect access to the Red Line Extension at the proposed 103rd Street and 111th Street stations. At these two stations areas, the Union Pacific Railroad right-of-way has approximately 25-30 trains per day using the at-grade corridor, interrupting street traffic and access to potential Red Line Extension stations. Station design options that facilitate or improve access, such as the inclusion of pedestrian bridges at these proposed station locations, will be analyzed in the subsequent Preliminary Engineering project phase (see Topic Category 12 for more information).

At the proposed Red Line Extension 115th Street/Michigan Avenue station, the Union Pacific Railroad is grade separated, so that access to the Red Line Extension station can be maintained by using Michigan Avenue, which passes underneath the Union Pacific Railroad.

5. Proposed Red Line Extension Operations and Yard

General Comment:

Is a rail yard included in the alternatives, even the shortened alternatives? How does a new yard site factor into the evaluation of alternatives, including cost-effectiveness?

Pertains to Specific Comments:

39, 65

Response to Overall Comment Category:

Yard capacity is an important concern when planning for rail line expansion and additional vehicle requirements. Analysis suggests that current CTA yard capacity is sufficient for CTA needs, including additional cars that would be added with the proposed Red Line Extension.

Three rail yards are accessible from the Red Line and considered in a yard capacity analysis. Howard Yard (at the north end of the current Red Line) has a practical operational capacity of 254 cars, while 98th Street Yard (at the south end of the current Red Line) has a capacity of 234 cars and Linden Yard (at the north end of the Purple Line) has a capacity of 76 cars, for a combined total of 564 cars. The current Rail Car Assignment (as of Spring 2009) provides for 356 cars to be assigned to the Red Line, 88 cars assigned to the Purple Line and 6 cars assigned to Yellow Line service. The total car assignment for the three lines is 450 cars. Because the Red Line operates 24 hour service, 48 Red Line “road cars” will be in service at all times, resulting in a normal maximum total of 402 cars that might be stored in the three yards at any given time. This would indicate that the existing total yard capacity of 564 cars is sufficient to cover the current maximum storage requirement.

Several other factors are also considered when evaluating total yard capacity. Cars may not be evenly distributed between yards, based on the cars that must be available from each yard to meet the daily service requirements or peak period requirements for each line, plus car requirements for maintenance and spares. For the yards/shops to function effectively, the yards should not be filled to capacity. For this study, it is assumed that for efficient operation, yards should not exceed more than 90 percent of their maximum capacity. These factors, combined with the assumption of an additional 78 cars for the Red Line Extension (and additional two cars for the Yellow Line Extension), indicates that the combined Red, Yellow, and Purple Line yard capacity must be at least 482 cars, which is still less than the current maximum combined 564 car capacity of the Howard, 95th and Linden Yards.

Since yard capacity is not a constraining factor for advancing the Red Line Extension, a new yard is not included in the project plans or cost assumptions for the Red Line Extension. Therefore, additional yard costs do not weigh into cost-effectiveness analyses. However, a potential yard site has been identified and may be pursued using non New Starts funding.

One additional factor to consider when evaluating yard capacity is associated maintenance shop capacity and condition. The 98th Street Shop facility is currently 40 years old and at the end of its useful life. CTA has identified replacement of this facility as a state-of-good repair need. While the existing shop can be replaced at its current site, one of the advantages of extending the rail line is that it does allow CTA to consider other sites, which may have additional benefits, for a replacement location. Options to shorten the proposed heavy rail alternatives limit available options for a new yard site; however, if shortened options are considered and alternate shop and yard sites are pursued, non-revenue track (at a cost of up to about $100 million) could be added to the shop replacement cost to extend the line to proposed maintenance locations.

Other Specific Comments Noted on this Topic:

Comment:

28. What is the travel time 130th to Madison?

Response:

Travel time on the proposed Union Pacific Railroad heavy rail transit elevated alternative from the 130th Street station to the Monroe Street station is estimated to be 40 minutes.

6. Proposed Red Line Extension Parking Facilities

General Comment:

Describe the park and ride facilities including locations, fees, and number of parking spaces proposed.

Pertains to Specific Comments:

4, 56, 63, 88, 95

Response to Overall Comment Category:

At this stage in the Red Line Extension project development, general assumptions about park-and-ride facilities were made so that estimate costs for these facilities could be included in total capital and operating cost estimates. However, details for proposed park-and-ride facilities have not yet been finalized. The subsequent project phases, Preliminary Engineering and Environmental Impact Statement, will evaluate land availability and impacts of proposed station locations and adjacent facilities and will provide design requirements for park-and-ride at each station. For the Screen 3 analysis, 1500 total park-and-ride spaces were assumed to be distributed among each of the four stations (or three stations for the shortened alternatives) for each heavy rail transit alternative. The greatest park-and-ride demand (and availability) is assumed at the proposed terminal station for each alternative.

The Chicago Transit Board is responsible for setting the parking rates. Current parking rates for CTA park-and-ride facilities are between $4 and $5 (except for longer-term parking at Rosemont and Cumberland).

Other Specific Comments Noted on this Topic:

Comment:

26. Why not use MWRDGC vacant land at 130th for park & ride?

Response:

Subject to ongoing discussions with the Metropolitan Water Reclamation District of Greater Chicago (MWRDGC), CTA is considering property in the vicinity of 130th Street for a station and park-and-ride facilities. The potential use of this land will be evaluated in the next steps, Preliminary Engineering and the preparation of an Environmental Impact Statement.

Comment:

110. I strongly agree with the choice of the UP alignment, but I am troubled by the inclusion of park and ride at all of the stations. If this line is intended to revitalize the areas around the stations at 103rd, 111th, and 115th, parking lots will work against that. Plus- why would we want to increase car traffic around these neighborhood-oriented stations? Better would be to concentrate parking at 130th/Bishop Ford Espy where there would be easy onto access. If access from I-57 is desired, perhaps, a parking deck could be

built over the expressway just south of 95th St, with dedicated lanes to/from I-57 and a direct pedestrian connection to the 95th Street Red Line Station.

Response:

There are no existing CTA park-and-ride facilities on the Dan Ryan branch of the Red Line. The Red Line Extension provides an opportunity to serve auto access to the Red Line. Although the Red Line Extension park-and-ride facilities have not been sized yet, it is anticipated that the majority of the parking will be provided at the 130th Street terminal station. In the subsequent project phases, the preparation of an Environmental Impact Statement and Preliminary Engineering, the Red Line Extension station park-and-ride facilities will be located and sized, and traffic impacts of these park-and-ride facilities will be evaluated. The construction of a park-and-ride facility over the Dan Ryan Expressway on the south side of 95th Street was not considered for the Red Line Extension project due to high capital costs and community concerns.

7. Evaluation Criteria Used in the Alternatives Analysis Study

General Comment:

41. The social and economic benefit factor for the UP Route should be higher, against your heavy rail measurement. Can a review of factors be re-examined prior to June 18th?

Response:

The Screen 3 analysis of social factors reveals some differentiation between the Halsted and UPRR alternatives. The UPRR alternative is higher than the Halsted alternative in percentage of population under 18, poverty-status and zero-car households. Beyond these factors, all the alternatives are similar as previously analyzed in Screen 2, with approximately the same total population and employment (both now and in 2030), and approximately the same percentages of minority population (all being much higher than Cook County as a whole), population age 64 and over, and population with a mental, physical, or sensory disability. No alternative significantly stands out to be better or worse than any other alternative with regards to social factors, and each adequately serves poverty, minority, youth, senior, and disabled populations as well as zero-car households and poverty-status populations (as designated by the 2000 US Census). Because of this lack of differentiation, all alternatives receive a neutral comparative social factor rating.

8. Funding of Red Line Extension Construction and Operations

General Comment:

How will the construction and operation of the Red Line Extension be funded? Is CTA seeking matching funds?

Pertains to Specific Comments:

14, 16, 20, 22, 72

Response to Overall Comment Category:

Two types of funding are needed for the extension – operating funds and capital funds.

CTA's operating budget supports day-to-day service delivery on its bus and rail system and determines the frequency and hours of service offered. Approximately half of CTA's operating budget comes from customer fares and revenue generated from advertising, concessions and other sources. The other half comes from regional sales taxes, real estate transfer taxes, and matching funds from the State of Illinois. Once the Red Line Extension is built and operational, funds to operate the system are anticipated to be consistent with funding mechanisms that support CTA's other bus and rail transit services.

Meanwhile, CTA has initiated this Alternatives Analysis study for the Red Line Extension as a first step towards obtaining capital funding for the project through the Federal Transit Administration's "New Starts" grant program.[1] This program provides funding for major public transit infrastructure projects throughout the U.S. through a highly competitive process. These are discretionary funds that are only available for system expansions and do not compete with federal funds that CTA receives for capital maintenance (or state of good repair) needs.

Upon successfully advancing through Alternatives Analysis, Environmental Impact Statement, and Preliminary Engineering, a project may receive a Full Funding Grant Agreement (FFGA) from the federal goverment. The FFGA can provide federal funds for up to 80 percent of a project's capital cost including Final Design, although typically project sponsors request 50 percent or less to increase the competitiveness of their projects. Other non-federal funds (in Illinois, these have traditionally been state funds) will comprise the remainder of capital funding. It is possible to seek alternative sources of federal and non-federal funding for the project – such as private sector funding, where available through partnerships or other agreements – but the federal New Starts grant program is specifically intended to support transit projects of this nature and is the public funding mechanism generally most capable of doing so.

CTA is simultaneously pursuing solutions to its overall operating and capital funding challenges while also positioning itself through Alternatives Analysis studies such as this one to secure capital funding to meet the region's future transit infrastructure needs. Many of today's key transit links—including the Blue Line to O'Hare and the Orange Line to Midway—were made possible by past generations who understood the need to invest in transit's future even as they addressed significant day-to-day financial pressures.

At the present time, CTA has limited funding to begin the subsequent Environmental Impact Statement project phase; however, no funding has been identified for completion of the New Starts process.

Other Specific Comments on this Topic:

Comment:

45. Who was funded this transportation surveys and how much did they cost?

Response:

The Red Line Extension Alternatives Analysis Study cost $1.8 million; funding was appropriated for the study by the U.S. Congress through the Federal Transit Administration's 5339 Alternatives Analysis grant program.

Comments:

50: Does this extension depend on the stimulus money from the state to complete?
75: Will the Red Line Extension project get any money from the American Recovery and Reinvestment Act? If so how will that stimulus money effect phases and time-line for project?

Response:

CTA did receive funding from the American Recovery and Reinvestment Act (ARRA); however that funding had very strict requirements. The objective of this funding was to get people working right away, and was only applicable to projects that were "shovel-ready," or had completed final design and were ready for construction. As discussed in Topic Category 1, there are five formal project phases for the Red Line Extension project, including Alternatives Analysis, Environmental Impact Statement, Preliminary Engineering, Final Design, and Construction. Unfortunately, this project still has several planning and design steps before construction, so stimulus funding from the ARRA was not applicable to the Red Line Extension project.

CTA used available ARRA funding to purchase new buses, allowing CTA to replace older buses that are more than 12 years old, which is the life expectancy of a bus. Additionally, CTA was able to put people to work right away replacing ties in the rail system and making other facility improvements. So while the ARRA funding was put to good use, it was not available for this project because it had to be spent in such a short time frame.

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[1] CTA is also conducting concurrent Alternatives Analysis studies for other candidate New Starts expansion projects that have been authorized by the U.S. Congress—including extending the Orange Line to Ford City, extending the Yellow Line to Old Orchard Road, and constructing the Circle Line.

Comment:

79. If funding is not available for the red line extension, what alternative plan is in place to relieve congestion at the 95th Street station?

Response:

CTA is an aging transit system and has a large state of good repair funding need, including replacement of buses and railcars, system improvements to electric, signal and communication systems, track structure and facility repairs, and other miscellaneous needs. State of good repair needs are traditionally funded through federal formula and state funding sources designated for capital improvements and investments. CTA's state of good repair needs are currently estimated at nearly $7 billion.

If funding is not available for the Red Line Extension, capital improvements at the 95th Street Station would need to be prioritized against other systemwide state of good repair needs and funded through the federal formula and state funding sources designated for this type of investment. As described in the TSM alternative, expansion of the bus facility at 95th Street to accommodate existing demand would cost approximately $72 million.

9. Alternatives Analysis Public Involvement Process and Format

General Comment:

What is the public involvement process? Does the public involvement process for the Red Line Extension Alternatives Analysis study allow individuals to comment on the options?

Pertains to Specific Comments:

13, 21, 29, 31, 77, 104

Response to Overall Category Comment:

Public comments are collected through CTA public outreach for each screen of the Alternatives Analysis Study. CTA participates in individual stakeholder meetings as necessary to discuss options and listen to individual stakeholder concerns. Additionally, CTA hosts community stakeholder meetings with representatives of various community groups throughout the study area. We also have met or offered to meet with city, county, state and federal elected officials in the study area and surrounding communities. Meetings also included faith-based organizations, other community and commerce organizations, and city and state agencies such as the Illinois Department of Transportation, Regional Transportation Authority, Metra, and Pace. If your organization would like to be included in the stakeholder's meetings for future project phases, please contact Darud Akbar, CTA Government and Community Relations at dakbar@transitchicago.com.

Public comments are also solicited at the public involvement meetings. The public involvement process for the Red Line Extension Alternatives Analysis study included two public involvement meetings at the conclusion of Screen 1, Screen 2 and Screen 3/LPA analyses. Note that for each set of Screening meetings, material presented was identical. The Screen 1 meetings were held at Chicago State University and West Pullman Public Library. The Screen 2 meetings were held at the West Pullman Historic Visitors Center and the Woodson Regional Public Library. The Screen 3 meetings were held at Olive-Harvey College and the Woodson Regional Public Library. CTA's goal in emphasizing written questions and comments has been to ensure everyone's thoughts are collected and reviewed. During the outreach meeting, some of these comments are addressed; however, public comments were accepted for three weeks after the outreach meetings. Written comments received at the public meetings and other subsequently submitted comments are being answered individually for the record in this document, which will be made available publicly on the CTA web site, by email to public meeting participants, and in hard copy by written request. All of the comment cards and other written communications (primarily emails and letters from elected officials) will collectively become part of the evaluation process and will be submitted to the Federal Transit Administration as a part of the official documentation for the Alternatives Analysis study.

The comments received during the public outreach process can and do shape the development of project alternatives. For example, CTA considered the strong preference of public comments in favor of the Union Pacific Railroad heavy rail transit alternative as one criteria in the evaluation and recommendation of a Locally Preferred Alternative in the Screen 3 evaluation process. Additionally, as noted in Topic Category 10, there will be additional opportunities for public involvement in subsequent project phases, including the subsequent Environmental Impact Statement phase.

After the first public meeting for each of the three Screening phases, the presentation, technical boards and maps discussing the screening analysis – including the screening process, evaluation criteria, and analysis results and recommendations – were posted on the CTA website at www.transitchicago.com (News and Intiatives, Alternatives Analysis Studies, Red Line Extension). As noted above, responses to each written comment collected during the outreach process are addressed in this document, which is also available publicly on the CTA website, by email or in hard copy.

10. Potential Red Line Extension Economic and Environmental Impacts

General Comment:

What will be the economic and environmental impact of the Red Line Extension? How and when will the analysis be conducted? Does it evaluate equity issues or include an environmental justice analysis?

Pertains to Specific Comments:

1, 2, 3, 5, 7, 9, 10, 30, 48, 51, 53, 57, 60, 61, 66, 67, 68, 69, 78, 91, 93, 94, 102, 103, 105, 110, 111

Response to Overall Category Comment:

An Environmental Impact Statement (EIS) will analyze in detail the social, economic, and environmental consequences and benefits of the proposed Red Line Extension. The environmental review process required by the *National Environmental Policy Act* of 1969 (NEPA) and related laws include environmental impact analyses and the preparation of documentation for public review. Per Federal Transit Administration (FTA) guidance, the environmental evaluation begins upon completion of the Alternatives Analysis study, and it will result in a detailed written statement on the anticipated environmental impacts of the Red Line Extension improvements and the steps that will be taken to address impacts to the community and the natural environment.

Typically, environmental reviews for proposed transit projects address the potential impact areas of air and water quality, noise and vibration, historic and cultural properties, parklands, contaminated lands, displacement of residences and businesses, and community preservation – including environmental justice. During the federal environmental review process, the CTA will work concurrently with state and other local agencies to also comply with state and local environmental laws. The environmental review process includes opportunities for public review and comment.

See specific comment sections below for more details on particular impacts.

Other Specific Comments regarding Noise and Vibration Impacts:

Comments:

3, 93

Response:

Noise and vibration impacts will be measured according to FTA guidance described in the document "Transit Noise and Vibration Impact Assessment" (FTA-VA-90-1003-06). This assessment includes monitoring existing noise levels along the corridor and using computer models to predict the change in noise levels associated with the extension for residents and other sensitive noise receptors along the corridor. Where noise impacts are predicted to exceed certain thresholds, mitigation strategies will be developed. Mitigation strategies could include rail vehicle measures (vehicle skirts, undercar absorption, and resilient or damped wheels), and guideway measures (sound barriers, rail lubrication on sharp curves, and ballasted track).

Other Specific Comments regarding Property Acquisition:

Comments:

3, 48, 51, 57, 66, 68, 69, 78, 94, 102, 103, 105

Response:

The recommended locally preferred alternative, the Union Pacific Railroad (UPRR) alignment would be located adjacent to the east or west edge of the UPRR right-of-way (ROW). The width of the UPRR ROW ranges from 65 to 135 feet; however, a 50-foot separation distance between the Red Line Extension and the UPRR tracks for safety purposes would require property acquisition from a combination of public, residential, commercial, and Union Pacific properties. Preliminary analysis in Screen 3 determined that both the east and west alignment options for this alternative (discussed in more detail in Topic Category 12) would include between 100-140 property acquisitions or displacements, which will be studied in much greater detail in the subsequent project phase. The Environmental Impact Statement phase will study potential impacts, including community preservation, to both determine the alignment option that minimizes impacts and propose mitigation measures.

Public acquisition of private property is governed by federal and local laws, including the Uniform Relocation Assistance and Real Property Acquisition Policies Act. In accordance with these laws, affected property owners would be compensated for their properties based on fair market values and can be provided relocation costs. Many highway and transit projects require relocations. For example, the CTA's recent Brown Line Expansion Project required some relocations. Furthermore, if relocations or other environmental impacts are found to be too objectionable for alignments adjacent to the Union Pacific Railroad right-of-way, then the Halsted Street alternative for the Red Line Extension could also be examined.

Other Specific Comments regarding Business Impacts and Economic Development:

Comments:

1, 2, 3, 9, 53, 110, 111

Response:

The Red Line Extension is anticipated to support economic development in the study area, especially in the vicinity of the four new stations. The extension will improve access to these areas, including job access for workers and result in greater foot traffic for retail development.

For example, CTA has been coordinating with the City of Chicago Department of Community Development to secure an easement for a potential station at the site of a proposed grocery store and other shopping development near 115th Street and South Michigan Avenue. The recommended locally preferred alternative would provide access to the proposed development and underscores the types of benefits that can be achieved from coordinated transit and city planning. These types of economic development benefits will be further evaluated in the subsequent Environmental Impact Statement project phase.

For business relocation impacts, see comments regarding Property Acquisition (also in Topic Category 10).

Other Specific Comments regarding Jobs:

Comment:

10, 61, 67

Response:

CTA will continue to work with all stakeholder groups to provide information and opportunities for all qualified applicants. All contract procurement will follow CTA's competitive bidding requirements open to all qualified firms. CTA has an established procurement process that works with disadvantaged business enterprises under the Illinois Unified Certification Program. This project will follow the same procurement process as other CTA projects. More information about CTA's competitive bidding requirements is available on the CTA web site at www.transitchicago.com. In addition, CTA is working with the Mayor's

Office of Workforce Development to ensure that training and jobs access will be available to support the construction of the proposed Red Line Extension.

Other Specific Comments regarding Safety and Security:

Comment:

5, 7

Response:

Safety and security are a top priority at the CTA. The CTA works with the City of Chicago and other municipalities served by the CTA to provide plain-clothed and uniformed patrols of system property, in addition to hired private security guards at stations and onboard transit vehicles.

During subsequent detailed design phases, particular attention will be devoted to physical security measures than can be incorporated into the design including CCTV monitoring, lighting, vandal-resistant materials, and clear sightlines.

11. Potential Red Line Extension Impacts on Existing CTA and Pace Services

General Comment:

How will communities beyond the potential extension (south, east or west) be served, depending on which alternative is selected?

Pertains to Specific Comments:

8, 35, 49, 54, 59

Response to Overall Comment Category:

The Red Line Extension heavy rail alternatives will result in shortened feeder bus rides, including to residents in the south and southeastern portion of the study area. East-west feeder buses in the study area and beyond via 103rd, 111th, 115th, 119th, and 127th/130th would provide access to a Red Line Extension heavy rail alternative. In addition, the proposed stations on either Red Line Extension heavy rail alternative would have park-and-ride facilities, which are not available on the existing Red Line Dan Ryan branch.

If the Red Line Extension extends to 115th Street, instead of 130th Street, bus service would be provided from the southern portion of the study area, including Altgeld Gardens, to the new Red Line Extension 115th/Michigan station. These feeder bus trips to the 115th/Michigan station would be over two and one-half miles shorter than going to the 95th Street station.

Specific Comments on this Topic:

Comments:

36. How will bus services be distributed among the new train station?
47. What would the station at 130th St (UPRR) be connected to? (Bus-Access to suburbs BRT?

Response:

Routes that currently go east-west along 103rd, 111th ,115th or 119th Streets would be reconfigured to serve new proposed rail station locations on those streets, instead of traveling north to 95th Street Station. Also buses coming from the south, including Pace buses from the south suburbs, would also connect at intermediate stations instead of traveling to 95th Street Station before connecting with the Red Line. The goal of service reconfigurations to bus routes would be to improve travel times by reducing time spent on buses and at the 95th Street bus terminal and facilitate a faster transfer to rail. In summary, bus routes considered for reconfiguration include CTA Routes 9, 30, 34, 103, 106, 108, 112, and 119, and Pace Routes 352 and 359.

The Red Line Extension 130th Street station would include park-and-ride facilities for automobile access. It is anticipated that CTA bus Routes 30 South Chicago and 34 South Michigan, and Pace bus route 348 Riverdale Connector will serve a proposed Red Line Extension 130th Street station.

In addition, CTA and Pace regularly review existing bus service for improvements and will continue to do so while the Red Line Extension project progresses through the federal New Starts grant process, which includes several phases (see Topic Category 1 for more information about the New Starts process). Opportunities to make changes to bus service between now and the completion of the Red Line Extension will include public input before any changes are implemented permanently.

Comment:

40. Similar to your presentation on the Heavy Rail findings, improvement to the 95th St station need to considered to your findings for the UP Route and its needs to address overuse at the 95th St station.

Response:

The Red Line Extension will relieve congestion at the 95th Street Station by shortening and re-routing several CTA and Pace bus routes that currently serve the 95th Street Station to serve the proposed Red Line Extension intermediate and new terminal stations. Buses that currently serve the 95th Street Station that are proposed to be shortened to terminals at new Red Line Extension stations include CTA Routes 103 – West 103rd Street, 106 – East 103rd Street, 111 – Pullman/111th/115th, 119 – Michigan/119th, and Pace bus routes 348 – Riverdale Connector, 352 – Halsted, and 359 – Robbins/S. Kedzie. These bus re-routings will result in the reduction of current 95th Street station bus terminal congestion, both in terms of the number of bus vehicles serving the station, a reduction in passenger-bus conflicts as passengers walk from the their bus drop-off/pick-up locations to the station house, and the total number of passengers on the station platform.

Comment:

90. Would the extension eliminate the "back up" that generally occurs from 69th to 87th St. from time-to-time especially during the rush hours? Is this caused by limited space in train yard?

Response:

Today, Red Line trains approaching 95th Street station are often delayed outside the station because trains are occupying both terminal tracks. This delay is not a result of insufficient capacity in the rail yard, but is an indication of a rail terminal station that has reached or is exceeding capacity. CTA seeks to manage these delays by minimizing the time trains spend laying over at the 95th Street platform and returning to service. Ideally, the 95th Street terminal station would be configured to have three tracks with two island platforms similar to terminals at the Orange Line or O'Hare Blue Line, which offers an additional track to store trains and prepare trains for a return trip. With the expressway on either side of the tracks, limited right-of-way width does not allow for this design. The extension will allow for a modern station configuration to be constructed, which should minimize or eliminate delays approaching the new terminal station.

12. Issues to be Addressed in Preliminary Engineering

General Comment:

Will green technologies or environmental engineering be used? Will pedestrian access to stations adjacent to the UPRR be provided? Will the UPRR extension be on the east or west side of the UPRR right-of-way? What station amenities may be included in station design?

Pertains to Specific Comments:

17, 34, 64, 94, 95, 96

Response to Overall Comment Category:

A number of comments received include suggestions for detailed project design elements. These comments are noted and will be evaluated during Preliminary Engineering.

13. Statements of Support or Opposition of the Extension

General Comment:

Statements of support or opposition to the extension and the locally preferred alternative presented were provided on the question/comment cards submitted by the public. CTA staff will review statements of support or opposition to the extension; other suggestions will be considered for incorporation into the analysis as appropriate.

In Support:

15, 38, 42, 43, 44, 46, 54, 58, 76, 81, 82, 83, 84, 95, 98, 99, 100, 106, 107, 108, 109, 110, 111 (includes 512-signature petition in support of recommended locally preferred alternative)

In Opposition:

101

Support for Other Alternatives:

105

14. Other

General Comment:

This section includes general comments and viewpoints that can be characterized as public input into the study process.

Pertains to Specific Comment:

80

Response to Overall Comment Category:

These comments do not ask a question or refer to a specific issue, but rather point out general views on the subject, which have been noted. Thank you for your feedback.

CTA Customer Service representatives were in attendance at the public meetings for the Red Line Extension and were available to answer specific questions on existing CTA services and to take suggestions for improvements to those services. Any questions submitted to the Red Line Extension study team that covered customer service topics were outside the purview of this study itself. The study team notes these questions and comments for the record and refers them to the CTA Customer Service Department for an independent response and filing through CTA's established Customer Service procedures.

Appendix C
Agency Coordination and Public Involvement

Outreach to Community Groups (2012)

Red Line Extension Project Update

Monday, March 12th 2012

- **Draft Environmental Impact Statement (DEIS)**
    - Continued Federal Transit Administration coordination and approvals during DEIS

    - DEIS Activities and Schedule
        - Conceptual Engineering   Spring 2012 – Summer 2012
            - Conduct field surveys
            - Develop station concepts
            - Finalize drawings for all the alternatives

        - Public Participation Plan   Spring 2012
            - Interviews with DCP and other community members

        - Public Meeting   Fall 2012
            - Update to community on project progress and get feedback. This meeting may include information on environmental analyses, results of any interim community outreach, changes in project alternatives, identification of potential funding sources, or resolution of neighborhood issues

        - Environmental Analysis   Fall 2012 - Winter 2012-2013
            1. Transportation
            2. Land Use and Economic Development
            3. Displacements and Relocation of Existing Uses
            4. Neighborhoods and Community Impacts
            5. Environmental Justice
            6. Historic and Cultural Resources
            7. Visual and Aesthetic Conditions
            8. Noise and Vibration
            9. Safety and Security
            10. Construction Impacts

        11. Hazardous Materials
        12. Parklands and Community Facilities
        13. Air Quality and Climate Change
        14. Water Quality
        15. Wetlands
        16. Floodplains
        17. Vegetation and Wildlife Habitat
        18. Threatened and Endangered Species
        19. Geology and Soils
        20. Energy
        21. Indirect and Cumulative Impacts
        22. Section 4(f)

    - ▪ Public Meeting Spring 2013
        - Update to community on project progress, present environmental analysis, and get feedback. This meeting may include information on environmental analyses, results of any interim community outreach, changes in project alternatives, identification of potential funding sources, or resolution of neighborhood issues.

    - ▪ Draft EIS to FTA Summer 2013
        - FTA reviews Draft EIS and provides comments

    - ▪ Public Hearings Winter 2013-2014
        - Present Draft EIS to the community and get comments

- **Preliminary Engineering and Final EIS**
    - o Subject to FTA approvals and funding availability

DCP
DEVELOPING
COMMUNITIES
PROJECT, INC.

MEMORANDUM

Date: November 15, 2012

To: George Coleman, Government Affairs & Community Relations Officer
Chicago Transit Authority

From: Gwendolyn M. Rice, Executive Director
Developing Communities Project

RE: **November 30, 2012 Meeting with CTA Chairman Peterson and CTA President Claypool**

Thank you for arranging for us to meet with Chairman Peterson and President Claypool on

November 30, 2012
10:30 a.m.
Developing Communities Project
212 E. 95th Street
Chicago, Illinois

Below are the items as requested:

I. Proposed Agenda

- Developing Communities Project's (DCP) Community Advocacy Role
- DCP's partnership with the CTA
- DCP's partnership with other planning groups
- Financing the Red Line Extension
- Workforce Development
- Transit-Oriented Development
- Project Management Team
- Environmental Impact Statement
- 95th Street Station Improvement

II. Invited (to be invited) Attendees

Representatives from the Red Line Oversight Committee (ROC) of DCP:

- Gwendolyn M. Rice, DCP Executive Director, 773-928-2500

- Eugene Rogers, Chairman, DCP Workforce Sub-Committee, 773-568-8324
- Lou Turner, DCP Public Policy Consultant, 217-972-2447
- Rev. Mitchell L. Johnson, JD, DCP Consultant, 708-418-5033

Should you have further questions or need additional information, please let me know. I can be reached at 773-928-2500 or gmrice@dcpchicago.org.

Appendix C
Agency Coordination and Public Involvement

August 2011 Open House Meeting Summary

Red Line Extension Project
August 2, 2011 OPEN HOUSE SUMMARY

October 2011

Prepared for:
Chicago Transit Authority
567 West Lake Street
Chicago, IL 60661

Prepared by:

CWC Transit Group

Red Line Extension
Connecting 95th Street Station to 130th Street

Prepared by:

CDM
125 South Wacker Drive
Suite 600
Chicago, IL 60606

Kathy Schaeffer and Associates, Inc.
17 N. State St.
Ste. 1690
Chicago, IL 60602

Wight & Company
2500 North Frontage Road
Darien, IL 60561

Jacobs
2705 Bee Cave Road, Suite 300
Austin, TX 78746

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Appendix L	Exhibit Boards

1.0 Overview

CTA conducted an open house to update residents about the Red Line Extension project. This update included summarizing the results of the NEPA scoping process that concluded October 27, 2009. The open house also was an opportunity for community members to ask questions about the range of actions, alternatives, environmental effects, and mitigation measures to be analyzed in the Environmental Impact Statement (EIS).

2.0 Open House Database

The notification database, which was developed for the September 2009 scoping meetings, was maintained and updated for this open house. To the extent possible, the database included both mailing addresses and e-mail addresses.

The notification database developed for scoping includes residents and businesses adjacent to the proposed build alternative alignments. Addresses for businesses and residences on parcels either immediately adjacent to the proposed alignment or separated from the alignment by a street, park, vacant parcel, or one residence, were included in the notification database. Parcels on both the east and west sides of the UPRR Alternative and parcels adjacent to both sides of the Halsted Alternative were included. The database also included those who attended meetings or provided comments in the Alternatives Analysis (AA) phase and/or during the September 2009 scoping process.

In addition to those identified during the AA process and September 2009 scoping meetings, the database was expanded to include residents who had requested to receive updates about Your Red projects during the January 2011 scoping meetings for the Red & Purple Modernization project. At the time of the open house, a total of 3,868 parties were listed on the Red Line Extension project database including 3,708 mailing addresses and 751 e-mail addresses.

3.0 Public Notification Activities

Postcard invitations were mailed directly to people in the project database and e-blast messages were sent to individuals on the e-mail distribution list. CTA also posted "transit cards" on CTA vehicles and in transit stations, and placed newspaper display ads in three publications. Additionally, the Red Line Extension project website was updated with information about the open house.

3.1 Postcard

Postcards were mailed on July 15, 2011 to a list of 3,868 entries that included elected officials, government agencies, residents, businesses, community organizations, neighborhood associations, and property owners adjacent to both sides of the proposed build alternative alignments. The postcard provided details about the open house including the closest transit access. The mailing list is included in Appendix A and the postcard is in Appendix B.

3.2 Transit Cards

In order to reach a large audience of transit riders, CTA placed "transit cards" or "car cards" with the open house information in various buses and stations in the project area. CTA distributed approximately 860 transit cards on July 11, 2011 for posting at all Red Line stations, on Red Line rail cars and on bus routes originating from the 103rd Street Garage. A copy of the transit card is in Appendix C.

3.3 E-blast

On July 18, 2011, an invitation e-mail that included information about the open house was sent to 751 e-mail addresses of people who had previously demonstrated an interest in the Red Line Extension project. A copy of the e-blast is in Appendix D.

3.4 Newspaper Display Advertisements

To invite the public to the open house, display advertisements were placed in three newspapers within the project area. Newspapers were selected based on their geographic focus, language needs and audited circulation numbers. Display ads ran during the weeks of July 17 and July 24, 2011. Ads were placed in different papers on different days of the week. The tear sheets of each newspaper ad are in Appendix E.

Newspaper	Ad Size	Geographic Coverage	Language	First Ad Date	Second Ad Date
Chicago Sun-Times	1/4 page	Region	English	Sun, 7/17/11	Mon, 7/25/11
Hoy	1/2 page	Citywide	Spanish	Mon, 7/18/11	Tues, 7/26/11
Chicago Defender	1/4 page	South	English	Wed, 7/20/11	--
Chicago Defender	1/2 page	South	English	Wed, 7/27/11	--

3.5 Project Website

The Red Line Extension project website, www.transitchicago.com/redEIS/, was updated in July 2011 to include details about the open house. The website was originally developed in fall 2009 for the project and contains information about the project alternatives, the National Environmental Policy Act (NEPA) process and the scoping report.

3.6 Additional Outreach for Open House

In order to maximize the coverage of the outreach effort for the open house, CTA sent a news release to local media outlets.

4.0 Elected Official and Stakeholder Briefings

CTA representatives conducted 12 briefings with elected officials or stakeholders about the Red Line Extension project. Most of the briefings were conducted prior to the open house to allow elected officials an opportunity to reach out to their constituents prior to the open house. Generally, briefings covered a description of the project and the scoping process. CTA officials met with:

- Office of Illinois Representative Monique Davis, 27th District, July 20, 2011
- Office of Illinois Senator Emil Jones III, 14th District, July 20, 2011

- Office of Chicago Alderwoman Carrie Austin, 34th Ward, July 21, 2011
- Office of Chicago Alderman Anthony Beale, 9th Ward, July 21, 2011
- Developing Communities Project, July 21, 2011
- Office of Chicago Alderman Roderick Sawyer, 6th Ward, July 25, 2011
- Roseland Business Development Council, July 26, 2011
- Office of Chicago Alderman Howard Brookins, Jr., 21st Ward, July 27, 2011
- Office of Cook County Commissioner Joan Patricia Murphy, 6th District, July 27, 2011
- Office of U.S. Representative Jesse Jackson, Jr., 2nd District, July 28, 2011
- Office of Illinois Senator Martin Sandoval, 12th District, July 29, 2011
- Office of Illinois Representative Cynthia Soto, 4th District, August 8, 2011
- Illinois Representative William Davis, 30th District, August 1st, 2011

Summaries of each elected official briefing are in Appendix F except for the meeting on August 1st at which no notes were kept. However, the content of that briefing was similar to the other briefings.

5.0 Participating Agency Update Letters

CTA provided an update on the project to the participating agencies to inform them of the project status and invite them to the Open House. Participating agencies are federal, state, and local agencies with an interest in the project because of an overlap in their area of jurisdiction or some specialized knowledge of potential project effects. The list of participating agencies is in Appendix G. Appendix H contains sample update letters for both federal and state or local participating agencies.

6.0 Open House

CTA conducted an open house to update the public about the project and the results of the NEPA scoping process and to provide people with an opportunity to ask questions about the project in an informal setting. The location was near the center of the project area and was accessible by public transportation. The location was American Disabilities Act (ADA) compliant.

For the convenience of all attendees, bus routes to and from the open house location were publicized on the postcard, the e-blast, and on the website. In order to provide the greatest opportunity for community participation, the open house was scheduled in the early evening on a weekday.

A total of 96 people signed in at the open house. There were a few additional attendees who did not want to sign in. Copies of the sign in sheets are in Appendix I.

Time: 6 to 8:30 p.m.
Date: Tuesday, August 2, 2011

Location: St. John Missionary Baptist Church
211 E. 115th St.
Chicago, IL 60628

During the open house, project team members and CTA representatives were present at project display boards to answer questions related to the technical aspects of the project. The open house session provided attendees with an opportunity to review the project information, clarify their understanding of the project and environmental process, and give feedback about the alternatives. Spanish and sign language interpreters were made available during the open house.

6.1 Materials

Each open house attendee was offered a comment card and a fact sheet on issues that will be analyzed in the Draft EIS. The comment card allowed attendees to submit written comments during or after the open house. The comment card was designed as a self-mailer so that individuals could easily mail comments to CTA if they needed more time to develop them after the open house. The issues fact sheet outlined the concerns community members expressed during the scoping meetings in 2009 and provided a preliminary summary of how the proposed Red Line Extension might affect environmental elements such as traffic, noise, and aesthetics. A second fact sheet on the real estate acquisition process was available to those with specific questions on that topic. Copies of all of the comment cards returned as of the date of this summary are included in Appendix J and a copy of each fact sheet is in Appendix K.

Project exhibit boards were developed and used during the open house. The boards included:

- Welcome to the Red Line Extension Open House
- Red Line Extension – What's New?
- Project Purpose
- Why Extend the Red Line?
- Project Development Process
- Planning for the Red Line Extension
- Environmental Review Process
- Issues Potentially Evaluated in Environmental Impact Statement
- EIS Scoping Comments Received
- Locally Preferred Alternative Union Pacific Railroad (UPRR) Alternative
- Locally Preferred Alternative Union Pacific Railroad (UPRR) Alternative West and East Side Options
- Other Alternatives to be Evaluated in Draft EIS
- Stay Involved
- This is Your Red

Copies of the exhibit boards are in Appendix L.

6.2 Comments Received

Although this open house was not a formal comment period under the NEPA process, people were provided opportunities to comment in writing during the open house or they could submit their comments after the open house via e-mail, fax, or postal letter. Comment cards distributed at the open house were designed to facilitate return of written comments both at the open house and via postal mail later. E-mail comments could be sent to a project specific e-mail address found on the project website. Approximately 13 people provided written comments at the open house and seven people provided comments via email. Comment cards received as of the date of this open house summary are included in Appendix J.

CTA and CWC Transit Group representatives received a variety of oral and written comments from participants during the open house. Overall there was no major opposition to the Red Line Extension. Several residents were eager to learn when the extension will become a reality. Here is an overview of comment themes:

- Inter-governmental planning – Residents want this project to remain a top priority and want to see more inter-governmental coordination.
- Real estate acquisitions – There was recognition that the project may affect residential parcels. Residents were interested in receiving information about the potential schedule for such acquisitions.
- Park impacts – Residents wanted to know if other parks will be added to the community if parks near the extension would be affected.
- Timeline – Community members wanted to know when construction would start so that they can be prepared for disruptions. They expressed concern that the longer the project takes to come to fruition, the less involved the community will be in providing feedback.
- Halsted Alternative – Members of Developing Communities Project wanted to know why the CTA was still considering this alternative. Other community members wanted to know why the CTA didn't choose the Halsted Alternative as the LPA.
- Hours of operation – Several attendees were concerned that the extended Red Line might not be available for 2nd and 3rd shift workers, and that the hours would not align with the schedules for connecting buses.
- CTA bus reroutes – Several attendees wanted to know where the affected buses would terminate once the Red Line is extended.
- Park & Ride lots – Residents would like to see more parking along the Red Line Extension.
- 130th street terminal – Participants mentioned that people travel beyond 130th Street, and expressed interest in extending the Red Line further south.
- Minority contractors – Residents wanted to make sure that local minority contractors would be considered once construction begins.
- Funding – Community members wanted to know how the CTA will fund the extension and if fares will be raised.
- Duplication of services – Some community members mentioned that Metra, Northern Indiana Commuter Transportation District, and PACE provide adequate service to the area.
- Gray Line – A suggestion was made to use Metra tracks and Highliner trains during non-rush hour periods and offer CTA-style "L" service; the Gray Line

proposal was mentioned as an option because population along the Red Line Extension is low.

- High-speed electric trolley bus – Some participants suggested a high-speed electric trolley bus down Eggleston Avenue.
- Noise and vibration – Many residents were concerned about extra noise and vibration.
- Summer temperatures – Some participants said it was too hot for senior citizens to be out at an open house (temperatures on the day of the open house were in the upper 90s).

Appendix A
Postcard Mailing List
Dated July 14, 2011

Open House Notice Mailing List
Red Line Extension

Organization	Salutation	First Name	Last Name	Title	Address	Apt/ Floor	City	State	Zip
Union Pacific Railroad	Mr.	Joseph	Bateman, Jr.	VP Public Affairs - Northern Region	1400 Douglas St.	STOP 1560	Omaha	NE	68719
Bridgeview Chamber of Commerce & Industry	Ms.	Roseann	Bautista	Executive Director	7300 West 87th Street		Bridgeview	IL	60455
Bronzeville Chamber of Commerce	Mr.	Johnnie	Blair	President	4955 S. King Dr.		Chicago	IL	60615
AMTRAK	Mr.	Joseph	Boarman	President	60 Massachusetts Ave.	NE	Washington	DC	20002
Transform Architecture		James	Boley	Owner	5248 N. Winthrop Ave., 3N		Chicago	IL	60640
South Chicago Chamber of Commerce	Mr.	Neil	Bosanko	Executive Director	2938 East 91st Street		Chicago	IL	60617
Union Pacific Railroad	Mr.	Mark	Bristol	General Director, Network & Bus. Devel.	1400 Douglas St.	STOP 1120	Omaha	NE	68719
Chicago Southland Chamber of Commerce	Ms.	Patrice	Brooks	Executive Vice President	1916 West 174th Street		East Hazel Crest	IL	60429
Streeterville Chamber of Commerce	Ms.	Mable	Buckner	Executive Director	645 N. Michigan Ave. #800		Chicago	IL	60611
			Business Owner		112 W. 115th Street		Chicago	IL	60628
			Business Owner		11426 S. Perry Avenue		Chicago	IL	60628
			Business Owner		135 W. 114th Street		Chicago	IL	60628
			Business Owner		316 W. 103rd Street		Chicago	IL	60628
			Business Owner		327 W. 103rd Street		Chicago	IL	60628
			Business Owner		330 W. 111th Street		Chicago	IL	60628
			Business Owner		340 W. 111th Street		Chicago	IL	60628
			Business Owner		401 W. 111th Street		Chicago	IL	60628
			Business Owner		409 W. 109th Street		Chicago	IL	60628
			Business Owner		415 W. 107th Street		Chicago	IL	60628
			Business Owner		420 W. 111th Street		Chicago	IL	60628
			Business Owner		421 W. 107th Street		Chicago	IL	60628
Cedar Park Cemetery			Business Owner		12540 S. Halsted Street		Chicago	IL	60643
Greater Southwest Development Corp	Mr.	James	Capraro	Chief Executive Officer	2601 West 63rd Street		Chicago	IL	60629
Cosmopolitan Chamber of Commerce	Ms.	Carnice	Carey	Executive Director	203 N. Wabash Ave.	Suite 518	Chicago	IL	60601
National Association of Women Business Owners (NAWBO-Chicago Area Chapter)	Ms.	Deborah	Chima	President	216 W. Jackson Blvd.	Suite 625	Chicago	IL	60606
MKC Associates	Ms.	Mary Kay	Christopher		3112 Maple		Berwyn	IL	60402
Calumet City Chamber of Commerce	Ms.	Kay	Cooper	President	80 River Oaks Center	Arcade-6	Calumet City	IL	60409
Hegewisch Chamber of Commerce	Ms.	Amy	Davis		13330 South Baltimore Avenue		Chicago	IL	60633
International Socialist Organization	Mr.	Nikolai	Diaz		1347 W Cullerton		Chicago	IL	60628
Gruppo di Amici		Phaedra	Divres	Owner	1508 W. Jarvis		Chicago	IL	60626
Laborers Union Local 6	Mr.	Billy	Dorsey		11431 S Union Ave		Chicago	IL	60628
87th Street Stony Island Chamber of Commerce	Ms.	Kimi	Ellen	President	8135 S. Stony Island		Chicago	IL	60617
Historic Pullman Foundation	Ms.	Deedee	Fabris	Staffer	614 East 113th Street		Chicago	IL	60628
American Brotherhood of Contractors	Mr.	Danton	Fielder	President	11509 S. Elizabeth Ave.		Chicago	IL	60643
CSX Transportation Inc.	Ms.	Ellen	Fitzsimmons	Senior Vice President-Law and Public Affairs	500 Water Street.		Jacksonville	Florida	32202
Chicago Transportation Coordination Office	Mr.	Dave	Grewe	Superintendent	1501 S. Canal Street		Chicago	IL	60607
Maple Park Home Owner	Mr.	Jacob	Harston		11519 S. Loomis		Chicago	IL	60643
Material Girlz Fabric Club - CSU	Ms.	Marian	Hayes		9501 S. King Drive		Chicago	IL	60628
East Side Chamber of Commerce	Ms.	Jacqueline	Herod	Execuitve Director	3658 East 106th Street		Chicago	IL	60617
Icanhelputravel.com	Ms.	Geraldine	Hill		11731 S Wallace		Chicago	IL	60628
St. Bernard's Hospital and Health Care Center	Mr.	Charles	Holland		326 W. 64th St.		Chicago	IL	60621
Inclusion Solutions		Patrick	Hughes	President	2000 Greenley		Evanston	IL	60202
Edgewater Development Corporation		Trinette	Johnson	Executive Director	6044 N Broadway		Chicago	IL	60660
Chatam Business Association	Ms.	Melinda	Kelly	Executive Director	8441 South Cottage Grove		Chicago	IL	60619
Transit Riders Authority	Mr.	Adam	Kerman		P.O. Box 529		Chicago	IL	60690
Southeast Chicago Development Commission	Mr.	Doug	Knuth	President	9204 South Commercial Avenue		Chicago	IL	60617
Midwest High-Speed Rail Assoc	Mr.	Christopher	Lacina		10211 S Prospect Ave		Chicago	IL	60643
Chicago Roseland Development Corporation	Mr.	Willie	Lomax	Executive Director	11015 South Michigan Avenue		Chicago	IL	60628
Lumbar Lounge		Janna	Lombardo	Massage Therapist	1445 W. Jarvis		Chicago	IL	60626
Long & Associates	Dr.	John	Long		7258 S. Euclid		Chicago	IL	60649

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Red Line Extension

Organization	Salutation	First Name	Last Name	Title	Address	Apt/ Floor	City	State	Zip
ATV Local 308	Mr.	Al	Martin		205 W. Wacker	Suite 700	Chicago	IL	60606
Chicagoland Chamber of Commerce	Mr.	Michael	Mini	Director, Government Affairs	200 East Randolph Street	Suite 2200	Chicago	IL	60601
95th Street Corridor	Mr.	Randy	Moore	President	349 West 93rd Street		Chicago	IL	60620
Centerpoint Development	Mr.	Michael	Mullen	CEO	1808 Swift Drive		Oakbrook	IL	60523
Indiana Harbor Belt Railroad	Mr.	Dave	Nelson		2721 161st Street		Hammond	IN	46323-1099
Greater Auburn-Gresham Development	Mr.	Carlos	Nelson	Executive Director	1159 W. 79th Street		Chicago	IL	60620
C&E Railroad Consultants		Peter	Nicholson		1500 Oak Avenue, Suite 3B		Evanston	IL	60201
Kaufman O'Neil Architects		Tim	O'Neil	Partner	1540 W. Glen Lake Ave		Chicago	IL	60660
Chicago Transportation Coordination Office	Mr.	Phil	Oresik	Superintendent	1501 S. Canal Street		Chicago	IL	60607
Indiana Harbor Belt Railroad	Mr.	Phillip	Oresik		2721 161st Street		Hammond	IN	46323-1099
South Suburban Mayors & Managers	Mr.	Ed	Paesel	Executive Director	1904 W. 174th Street		East Hazel Crest	IL	60429
Strategies for Community Economic Development & Finance	Ms.	Heather	Parish	Consultant	6756 South Oglesby Avenue Third Floor		Chicago	IL	60649
Women's Business Development Center (WBDC)	Ms.	Hedy	Ratner	Executive Director	8 S. Michigan Avenue, Suite 400		Chicago	IL	60603
Little Company of Mary Hospital	Mr.	Dennis	Riley		2800 W. 95th St		Evergreen Park	Il	60805
Hegewisch Chamber of Commerce	Ms.	Bernadette	Rodriguez	Executive Director	13330 South Baltimore Avenue		Chicago	IL	60633
Indiana Harbor Belt Railroad	Mr.	Jim	Roots	General Manager	2721 161st Street		Hammond	IN	46323-1099
Jarvis Greenview		Mohammed	Sabir Junagadhwaln	Owner	7358 N. Greenview		Chicago	IL	60626
Inka Internet Station	Mr.	Semaj	Salinas		11320 S. Halsted St		Chicago	IL	60628
Blue Island Chamber of Commerce	Ms.	Ruth	Sheahan		2434 Vermont Street		Blue Island	IL	60406
Business and Economic Revitalization Association	Mr.	Philip	Sims		200 East 75th Street	Suite 304	Chicago	IL	60619
Sodexo		Rick	Siwecki	Human Resources Mgr.	2245 Sheridan Rd.		Evanston	IL	60208
Business and Economic Revitalization Association	Ms.	Alicia	Spears	Executive Director	200 East 75th Street	Suite 304	Chicago	IL	60619
Calumet Area Industrial Commission	Mr.	Ted	Stalnos	President	1000 East 111th Street	10th Floor	Chicago	IL	60628
P.U.S.H. / N.A.A.C.P/ AFSCME (Council 31)	Ms.	Linda	Steward		920 E. Hyde Park Blvd.		Chicago	IL	60615
Canadian National	Mr.	Patrick	Waldron	Manager, Public Affairs	17641 Ashland Ave		Homewood	IL	60430
The Side Project		Adam	Webster		1439 W. Jarvis		Chicago	IL	60626
Rogers Bark Pet Salon		Marie	Winkeler	Owner	1447 W. Jarvis Ave.		Chicago	IL	60626
Fireman Community Services	Mr.	Warner	Abrams		144 W 47th St.		Chicago	IL	60609
South Shore Cultural Center	Ms.	Andrea	Adams	Center Director	7059 South South Shore Drive		Chicago	IL	60649
YWCA	Ms.	Cynthia	Angline	Director	6600 S. Cottage Grove		Chicago	IL	60637
CFABC-Improve RDA	Mr.	Thomas	Babbington		3653 W 81st St		Chicago	IL	60652
West Chatham Improvement Association	Ms.	Lori	Baldwin	Second Vice-President	8153 S. Harvard Avenue		Chicago	IL	60620
Rogers Park Business Alliance		Katrina	Balog	Project Manager	1448 W. Morse Ave		Chicago	IL	60626
Gangs, Drugs, and Violence Prevention Inc.	Ms.	Addie	Beckam		12600 S. Wallace		Chicago	IL	60628
Gangs, Drugs, and Violence Prevention Inc.	Mr.	Jesse	Beckam Jr.		12600 S. Wallace		Chicago	IL	60628
Illinois Nurses Association	Ms.	Sharon	Bell		1250 W. 112th Place		Chicago	IL	60643
Uptown Neighborhood Council		Katharine	Boyda		4432 N. Clifton		Chicago	IL	60640
Little Village Environmental Justice Organization	Mr.	Harry	Brooks		7818 S South Shore Drive	Apt 2A	Chicago	IL	60649
TCA Health Inc.	Ms.	La Donna	Brown Miller		1029 East 130th St		Chicago	IL	60628
Healthcare Consortium of Illinois	Ms.	Mayme	Buckley	Director External Affairs	1350 E. Sibley Blvd.		Dolton	IL	60419
Pullman Civic Organization	Mr.	Andrew	Bullen		619 E 111th St		Chicago	IL	60628
Pullman Civic Organization	Ms.	Linda	Bullen		619 E 111th St		Chicago	IL	60628
Southsiders Organized for Unity and Liberation (SOUL)	Mr.	Prentice	Butler		5001 S Ellis		Chicago	IL	60615
Chicago Urban League	Mr.	Patrick	Colbert	Client Relationship Mgr	4510 South Michigan Avenue		Chicago	IL	60653
Chesterfield Community Council	Ms.	Cynthia	Coleman	Acting President	501 East 90th Place		Chicago	IL	60619
Healthcare Consortium of Illinois	Ms.	Naomi	Coleman		1350 E Sibley Blvd		Dolton	IL	60419
Edgewater Chamber of Commerce		Jay	Delaney	President & CEO	1210 W Rosedale Ave		Chicago	IL	60660-3436
EV Mark/ Downtown Evanston	Ms.	Carolyn	Dellutri	Executive Director	820 Davis St.	Suite 151	Evanston	IL	60201
Developing Communities Project & L.A.T.S.O.	Ms.	Lisa	Dunbar	President	10231 S. Peoria		Chicago	IL	60643
Community Mental Health Council	Mr.	Ade	Elegbede		8704 S. Constance		Chicago	IL	60617

Open House Notice Mailing List
Red Line Extension

Organization	Salutation	First Name	Last Name	Title	Address	Apt/ Floor	City	State	Zip
Southeast Chicago Chamber	Ms.	Joyce	Ellen	Director	8135 S. Stony Island		Chicago	IL	60617
Developing Communities Project	Ms.	Michelle	Evans		12500 S. Lowe		Chicago	IL	60628
Developing Communities Project	Rev.	Michael	Evans		212 E. 95th St.		Chicago	IL	60619
Developing Communities Project	Mr.	Darrell	Evans		12500 S. Lowe		Chicago	IL	60628
Developing Communities Project	Mrs.	Tracie	Evans		12500 S. Lowe		Chicago	IL	60628
Chesterfield Community Council	Ms.	Worthettia	Evans		501 East 90th Place		Chicago	IL	60619
Many People's Church		Rita	Feikema		1323 W. Touhy	1N	Chicago	IL	60626
Pullman Historic Visitor Center	Ms.	Deedee	Frabris	Director	11141 South Cottage Grove		Chicago	IL	60628
Chicago Urban League	Ms.	Cheryl	Freeman Smith	Director, Diversity	4510 South Michigan Avenue		Chicago	IL	60653
Riverdale Community Resource Center	Ms.	Rebecca	George	Director	13725 South Wabash		Riverdale	IL	60827
Voorhees Center	Ms.	Martha	Glas		400 S Peoria St		Chicago	IL	60607
Rosemoor Community Association	Ms.	Hileria	Godfrey	Vice-President	10205 S. Martin Luther King Dr.		Chicago	IL	60628
Partnership for Economic and Community Development	Mr.	Renard	Harvey		1667 W. 92nd Place		Chicago	IL	60620
Developing Communities Project	Ms.	Sandra	Herrin		10956 S State		Chicago	IL	60628
Sherwin Condos		Jennifer	Hitchcock		1546 W. Sherwin Ave.		Chicago	IL	60626
Chicagoland Bicycle Federation	Mr.	Keith	Holt		9 W. Hubbard	#402	Chicago	IL	60610
Developing Communities Project	Ms.	Desta	Houston		212 E. 95th St.		Chicago	IL	60619
Developing Communities Project	Ms.	Sharon	Houston		12240 South Perry		Chicago	IL	60628
Chesterfield Community Council	Mr.	Nell	Howard		8737 W Wabash		Chicago	IL	60619
Chesterfield Community Council	Mr.	WM	Howard		8737 Wabash Ave.		Chicago	IL	60619
Roseland Heights Community Association	Ms.	Louise	Hutchinson		9742 S. Forest Avenue		Chicago	IL	60628
Metro Chicago Synod - ELCA		Rev. William E.	Hutchison	Reverend	1805 Washington St.		Evanston	IL	60202
Chicago Urban League	Ms.	Cheryle	Jackson	CEO	4510 South Michigan Avenue		Chicago	IL	60653
People for Community Recovery	Ms.	Alisha	Jacobs		755 130th Place		Chicago	IL	60827
Golden Gate Homeowners Association	Ms.	Mary	Jefferson		13161 S Rhodes Ave		Chicago	IL	60827
People for Community Recovery	Ms.	Cheryl	Johnson		13116 S. Ellis Ave.		Riverdale	IL	60827
People for Community Recovery	Ms.	Nekeba	Johnson		13041 S Evans Ave		Chicago	IL	60827
People for Community Recovery	Ms.	Imanie	Johnson		13015 S Evans Ave		Chicago	IL	60827
Developing Communities Project	Mr.	John Paul	Jones	Community Organizer	11300 South Halsted		Chicago	IL	60626
Roseland Heights Community Association	Mr.	Arthur	Jones	Representative	9910 South Prairie Avenue		Chicago	IL	60628
Developing Communities Project	Ms.	Ernnesha	Kerr		11300 S Halsted		Chicago	IL	60628
Developing Communities Project	Ms.	Dorothy	King		1453 W. 71st Place		Chicago	IL	60636
Southwest REACH Center	Mr.	Piotr	Korzynski	Industrial Coordinator	6155 S. Pulaski Road	2nd Floor	Chicago	IL	60629
Grand Boulevard Federation	Ms.	Andrea	Lee		4859 S. Wabash	2nd Floor	Chicago	IL	60615
Senior Service Coalition of Southeast Chicago	Ms.	Julia	Lopez	Coordinator, S. S.	3201 East 91st Street		Chicago	IL	60617
Developing Communities Project	Mr.	Dennis	Lucas		11300 S Halsted		Chicago	IL	60628
Blue Island Chamber of Commerce	Mr.	Greg	Luchow	Executive Director	2434 Vermont Street		Blue Island	IL	60406
Community Renewal Society-Senior Action Network	Ms.	Doris	Martin	Member	13207 S. Rhodes Ave		Riverdale	IL	60827
Northgate Pier Condo		Joe	Maschek	Board Member	7641 N. Eastlake Terrace 2A		Chicago	IL	60626
Justice for Children	Ms.	Debra	McLaurin	Development Director	2600 Southwest Frwy	Ste 806	Houston	TX	77098
Rainbow/Push Coalition	Mr.	John	Mitchell	Chief of Staff	930 East 50th Street		Chicago	IL	60615
Southsiders Organized for Unity and Liberation (SOUL)	Mr.	Christian	Mitchell		5001 S Ellis		Chicago	IL	60615
Community Mental Health Council	Dr.	Lynne	Mock, Ph.D.		8704 S. Constance Ave.		Chicago	IL	60617
Rogers Park Vintage Mgmt		Greg	Nielson		1443 W. Jarvis		Chicago	Il	60626
NAACP, Chicago Southside Chapter	Rev.	Phillip	O'Bannon	President	800 East 78th Street		Chicago	IL	60619
Chesterfield Community Council	Ms.	Kristina	Patterson		501 East 90th Place		Chicago	IL	60619
CTA Gray Line Project	Mr.	Mike	Payne		P.O. Box 64614		Chicago	IL	60664
Developing Communities Project	Ms.	Patricia	Peters		648 E. 101st Street		Chicago	IL	60628
The Little Village Environmental Justice Organization	Mr.	Mike	Pitula		2856 S. Millard Ave.		Chicago	IL	60623
Roseland Heights Community Association	Mr.	Michael	Porche	Executive Director	P.O. Box 198751		Chicago	IL	60619
United Neighborhood Organization	Mr.	Juan	Rangel	Chief Executive Officer	954 W. Washington Blvd. 3rd Floor		Chicago	IL	60607
Developing Communities Project	Rev.	Larry	Redd		11320 S Halsted		Chicago	IL	60628
Omnibus Society of America	Mr.	Wiliam	Reynolds		2114 W Balmoral Ave		Chicago	IL	60625
Developing Communities Project	Ms.	Gwendolyn	Rice	Executive Director	11300 South Halsted		Chicago	IL	60626
Developing Communities Project	Mr.	Eugene	Rogers		10763 S. Sangamon		Chicago	IL	60643

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Organization	Salutation	First Name	Last Name	Title	Address	Apt/ Floor	City	State	Zip
Catholic Charities, Community and Civic Affairs	Mr.	John	Ryan	Executive Director	721 North LaSalle Street		Chicago	IL	60610
Southeast Environmental Task Force	Ms.	Peggy	Salazar	President, Board of Directors	13300 South Baltimore Avenue		Chicago	IL	60633
Pullman Civic Organization	Mr.	Drew	Sexton	President	11111 S. Forrestville Ave.		Chicago	IL	60628
The Community Mental Health Council	Ms.	Diana	Short		333 E 55th Place	Apt 208	Chicago	IL	60637
Historic Pullman Foundation	Mr.	Michael	Shymanski		614 E. 113th St.		Chicago	IL	60628
Village of Riverdale, Community Development Department	Mr.	Earl	Silas, Jr	Director	157 West 144th Street		Riverdale	IL	60827
Metro Seniors in Action	Ms.	Dorothy	Sims		10834 S. Eberhart Ave.		Chicago	IL	60628
Southeast Environmental Task Force	Mr.	Mike	Skuja	President, Board of Directors	13300 South Baltimore Avenue		Chicago	IL	60633
Chesterfield Community Council	Mr.	Lester	Smith	President	501 East 90th Place		Chicago	IL	60619
Developing Communities Project	Mr.	Horace	Smith		10557 S King Drive		Chicago	IL	60628
Neighbors of Fuller Park	Mr.	Kenneth	Smith		239 W. 46th St.		Chicago	IL	60609
Developing Communities Project	Ms.	Patricia	Smith		10557 S King Drive		Chicago	IL	60628
Pullman Civic Organization	Mr.	Drew	Smith		11111 S. Forrestville Ave.		Chicago	IL	60628
Metro Seniors in Action	Mr.	Charles	Spears		6733 S. Ridgeland Ave	Apt. 1-1y	Chicago	IL	60649
Saint Francis Hospital		Nancy	Stermer	Community Outreach	355 Ridge		Evanston	IL	60202
Predestined Incorporated	Ms.	Laticia	Strachan	President/Chief Executive Director	9322 South Emerald Avenue		Chicago	IL	60620
Developing Communities Project	Pastor	Samuel	Strachan		449 W. 129th St.		Chicago	IL	60628
Developing Communities Project	Ms.	Debra	Strickland		212 E. 95th St.		Chicago	IL	60619
Chatham Avalon Park Community Council	Mr.	Keith	Tate	President	8441 South Cottage Grove		Chicago	IL	60619
Developing Communities Project	Mr.	Eugene	Taylor		586 Calhoun Ave		Calumet City	IL	60409
Developing Communities Project	Ms.	Hilda	Taylor		586 Calhoun Ave		Calumet City	IL	60409
Roseland Heights Community Association	Mr.	Clevan	Tucker Jr		P.O. Box 198751		Chicago	IL	60619
Rainbow Push Coalition, International Trade Bureau	Ms.	Marshette	Turner	Executive Director	930 E. 50th Street		Chicago	IL	60615
Beverly Area Planning Association	Mr.	Matt	Walsh	Executive Director	11107 S. Longwood Drive		Chicago	IL	60643
Beverly Area Planning Association	Ms.	Marcia	Walsh	Housing and Economic Development	11107 S. Longwood Drive		Chicago	IL	60643
Riverdale Community Resource Center	Ms.	Myrna	Watkins	Director	13725 South Wabash		Riverdale	IL	60827
Pastors United for Change	Mr.	Roosevelt	Watkins	CEO/President	9231 S. Cottage Grove		Chicago	Il	60619
Roseland Heights Community Association	Ms.	Anne	Wilson		9719 S. Forest Ave.		Chicago	IL	60628
Developing Communities Project	Mr.	James	Woodson		9701 S. Harvard Ave.		Chicago	IL	60628
Citizens Taking Action	Mr.	Charley	Yale		6057 N Lincoln Ave	Apt 611	Chicago	IL	60659
Hispanic American Construction Industry Association	Mr.	Paul	Cerpa	Executive Director	901 W. Jackson Blvd.	Suite 205	Chicago	IL	60607
Black Contractors United (BCU)	Ms.	Florence	Cox	Executive Director	400 West 76th St. Suite 200		Chicago	IL	60620
Illinois Hispanic Chamber of Commerce	Mr.	Omar	Duque	President & CEO	111 W. Washington	Suite 1660	Chicago	IL	60602
American Indian Center, Inc.	Ms.	Frances	Hagemann	Board Vice President	1630 W. Wilson Ave.		Chicago	IL	60640
Chicago Minority Business Development Council	Ms.	Sheila	Hill	President	1 East Wacker Drive	Suite 1200	Chicago	IL	60601
American Indian Center, Inc.	Ms.	Rita	Hodge	Board Secretary	1630 W. Wilson Ave.		Chicago	IL	60640
Puerto Rican Chamber of Commerce of Illinois	Mr.	Marlo	Irizarry	Executive Director	2622 W. Division St.		Chicago	IL	60622
China Town Chamber of Commerce		Man-Men	Lee	Co-Executive Director	2169B S. China Place		Chicago	IL	60616
Lifeline Theatre		Dorothy	Milne	Artistic Director	6912 N. Glenwood Ave.		Chicago	IL	60626
Association of Asian Construction Enterprises	Mr.	Perry	Nakachi	President	333 N. Ogden Avenue		Chicago	IL	60607
Latin American Chamber of Commerce	Mr.	Bennett	Santana	Chairman	3512 W. Fullerton Ave.		Chicago	IL	60647
Chicago Area Gay & Lesbian Chamber of Commerce	Ms.	Christee	Snell	Executive Director	1210 W. Rosedale		Chicago	IL	60660
China Town Chamber of Commerce		Chi Can	To	Co-Executive Director	2169B S. China Place		Chicago	IL	60616
American Indian Center, Inc.	Ms.	Debra	Valentino	Board President	1630 W. Wilson Ave.		Chicago	IL	60640
Chicago City Council 34th Ward Office	Mr.	Lemuel	Austin		500 W. 111th St.		Chicago	IL	60628
Chicago City Council 34th Ward Office	Ms.	Leslie	Austin		507 W. 111th St.		Chicago	IL	60628
Chicago City Council 9th Ward	Alderman	Anthony	Beale	Alderman	34 E. 112th Place		Chicago	IL	60628
Cook County Commissioner	Commissioner	William	Beavers	Commissioner	118 N. Clark Street		Chicago	IL	60602
Chicago City Council 21st Ward	Alderman	Howard	Brookins, Jr.	Alderman	9612 S. Halsted St		Chicago	IL	60628
Illinois House of Representative District 36	Representative	James D.	Brosnahan	Representative	5311 W. 95th St.		Oak Lawn	IL	60453
2nd Congressional District Office	Mr.	Rick	Bryant		17926 South Halsted		Homewood	IL	60430

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Organization	Salutation	First Name	Last Name	Title	Address	Apt/ Floor	City	State	Zip
U.S. Senator	Senator	Roland	Burris	Senator	230 S. Dearborn	Ste. 3900	Chicago	IL	60604
Cook County Commissioner	Commissioner	Jerry "Iceman"	Butler	Commissioner	118 N. Clark Street		Chicago	IL	60602
Chicago City Council 10th Ward	Ms.	Yessenia	Carreon		3522 E. 106th St.		Chicago	IL	60617
Chicago City Council 20th Ward	Alderman	Willie	Cochran	Alderman	6357 S. Cottage Grove		Chicago	IL	60637
Illinois Senator District 16	Senator	Jacqueline Y.	Collins	Senator	1155 West 79th Street		Chicago	IL	60620
Illinois House of Representative District 33	Representative	Marlow H.	Colvin	Representative	8539 South Cottage Grove		Chicago	IL	60619
Chicago City Council 34th Ward Office	Mr.	Alfred	Connor		1124 W. 107th Place		Chicago	IL	60643
City of Chicago Office of the Mayor	Mayor	Richard	Daley	Mayor	121 N. LaSalle St.	Room 507	Chicago	IL	60602
Illinois House of Representative District 30	Representative	William	Davis	Representative	1912 W. 174th St.		East Hazel Crest	IL	60429
State Rep David Miller's Office	Ms.	Valerie	Davis		1350 E Sibley Blvd	Ste 301 A&B	Chicago	IL	60419
7th Congressional District	Congressman	Danny	Davis	Congressman	3333 West Arthington Street	Ste. 130	Chicago	IL	60624
Illinois House of Representative District 27	Representative	Monique D.	Davis	Representative	1234 West 95th Street		Chicago	IL	60643
Village of Riverdale	Mr.	Deyon L.	Dean	Mayor	157 W. 144th St.		Riverdale	IL	60827
Chicago City Council 3rd Ward	Alderman	Pat	Dowell	Alderman	5046 S. State Street		Chicago	IL	60609
Illinois House of Representative District 5	Representative	Kenneth	Dunkin	Representative	1520 N. Wells		Chicago	IL	60610
Village of Calumet Park	Mr.	Joseph	DuPar	Mayor	12409 S. Throop St.		Calumet Park	IL	60827
U.S. Senator	Senator	Richard	Durbin	Senator	230 S. Dearborn	Ste. 3892	Chicago	IL	60604
Village of Calumet Park, Community Relations Commissioner	Mr.	Norm	Edwards	Director	12409 South Throop		Calumet Park	IL	60827
Democratic Party of the 49th Wd.		David	Fagus	Democratic Committeeman	1340 W. Morse #503		Chicago	IL	60626
Illinois House of Representative District 31	Representative	Mary E.	Flowers	Representative	2525 W. 79th Street		Chicago	IL	60652
City of Calumet - Community & Economic Development	Mr.	James J.	Gigliotti	Coordinator	204 Pulaski Road		Calumet City	IL	60409
Illinois House of Representative District 6	Representative	Esther	Golar	Representative	4926 South Ashland		Chicago	IL	60609
City of Evanston - Community Development Department, Planning Division	Ms.	Susan	Guderley	Community Developmen	2100 Ridge Avenue		Evanston	IL	60201
Illinois House of Representative District 18	Representative	Julie	Hamos	Representative	820 Davis Street	Ste. 103	Evanston	IL	60201
City of Chicago Office of the Mayor	Mr.	Sean B.	Harden	Executive Assistant to the Mayor	121 N. LaSalle St.	Room 406	Chicago	IL	60602
Chicago City Council 6th Ward Office	Mr.	Keith	Harris		406 E 75th St		Chicago	IL	60619
Chicago City Council 8th Ward	Alderman	Michelle A.	Harris	Alderman	8539 S. Cottage Grove		Chicago	IL	60619
City of Evanston - Ward 5	Ald.	Delores	Holmes	Alderman	2100 Ridge Ave.		Evanston	IL	60201
Illinois House of Representative District 34	Representative	Constance A	Howard	Representative	8729 S. State Street		Chicago	IL	60619
Illinois Senator District 3	Senator	Mattie	Hunter	Senator	2929 S. Wabash Avenue	Ste. 102	Chicago	IL	60616
Chicago City Council 7th Ward	Alderman	Sandi	Jackson	Alderman	7129 S. Yates Street		Chicago	IL	60649
2nd Congressional District	Congressman	Jesse	Jackson Jr.	Congressman	7121 S. Yates Blvd.		Chicago	IL	60649
Illinois Senator District 14	Senator	Emil	Jones III	Senator	507 West 111th Street		Chicago	IL	60628
Illinois House of Representative District 35	Representative	Kevin	Joyce	Representative	6965 W. 111th Street		Worth	IL	60482
49th Ward		Michael	Land		7356 N. Greenview		Chicago	IL	60626
City of Chicago Office of the Mayor	Mr.	Gene	Lee	Deputy Chief of Staff	121 N. LaSalle St.	Room 406	Chicago	IL	60602
2nd Congressional District Office	Mr.	Ben	Lenet	Deputy District Admin	17926 South Halsted		Homewood	IL	60430
Village of Dolton	Mayor	Ronnie	Lewis	Mayor	14014 Park Avenue		Dolton	IL	60419
Chicago City Council 34th Ward Office	Ms.	Lee Angela	Lofton		12708 S. Green St.		Chicago	IL	60643
Chicago City Council 6th Ward	Alderman	Freddrenna	Lyle	Alderman	406 E. 75th St.		Chicago	IL	60619
Illinois Senator District 18	Senator	Edward D	Maloney	Senator	10400 South Western Avenue		Chicago	IL	60643
Calumet City	Ms.	Michelle	Markiewicz Qualkinbush	Mayor	204 Pulaski Road		Calumet City	IL	60409
Illinois Senator District 15	Senator	James T	Meeks	Senator	2050 E. 159th Street		Calumet City	IL	60419
Illinois House of Representative District 29	Representative	David E.	Miller	Representative	1350 East Sibley Blvd	Ste 301 A	Dolton	IL	60419
Cook County Commissioner Robert Steele's Office	Ms.	Alexis	Mims		118 N Clark St.	Room 567	Chicago	IL	60619
Illinois State Toll Highway Authority	Mr.	John	Minolta	Chairman	2700 Ogden Ave		Downers Grove	IL	60515
Illinois State Police	Mr.	Jonathan	Monken	Director	801 South Seventh Street	P.O. Box 19461	Springfield	IL	62794
Chicago Alderman - Ward 49	Ald.	Joe	Moore	Alderman	121 N. LaSalle St.	Room 300	Chicago	IL	60202
Cook County Recorder of Deeds & Rgistrar of Titles	Mr.	Eugene	Moore	Recorder of Deeds	118 N. Clark Street	Room 120	Chicago	IL	60602
City of Blue Island	Mr.	Donald E.	Peloquin	Mayor	13051 S. Greenwood Ave.		Blue Island	IL	60406
Illinois State Police District Chicago	Trooper	Clare	Pfotenhauer	Trooper	9511 W. Harrison St.		Des Plaines	IL	60016
Village of Burnham	President	Robert	Polk	President	14450 Manistee		Burnham	IL	60633
Chicago City Council 10th Ward Office	Alderman	John A.	Pope	Alderman	3552 E. 106th St.		Chicago	IL	60617
City of Blue Island	Ms.	Mary	Poulsen	Marketing Director	13051 South Greenwood Avenue		Blue Island	IL	60406

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Organization	Salutation	First Name	Last Name	Title	Address	Apt/ Floor	City	State	Zip
Illinois Governor	Governor	Patrick	Quinn	Governor	100 W. Randolph, 16-100		Chicago	IL	60601
City of Evanston - Ward 8	Ald.	Ann	Rainey	Alderman	2100 Ridge Ave.	Room 2500	Evanston	IL	60201
Illinois House of Representative District 28	Representative	Robert	Rita	Representative	4818 W. 137th Street		Crestwood	IL	60445
Chicago City Council 19th Ward	Alderman	Ginger	Rugai	Alderman	10400 South Western Avenue		Chicago	IL	60655
Village of Evergreen Park	Mayor	James	Sexton	Mayor	9418 S. Kedzie Ave		Evergreen Park	IL	60805
Village of Riverdale	Ms.	Deborah	Smiley	Village Clerk	157 West 144th Street		Riverdale	IL	60827
Alderman Howard Brookins Jr. Office	Ms.	Adrienne	Smith		9612 S Halsted		Chicago	IL	60628
Cook County Commissioner	Commissioner	Robert	Steele	Commissioner	118 N. Clark Street		Chicago	IL	60602
Cook County Board of Commissioners	Mr.	Todd	Stroger	President	118 N. Clark Street	Room 537	Chicago	IL	60602
Illinois House of Representative District 32	Representative	Andre M.	Thapedi	Representative	371 East 75th St		Chicago	IL	62706
Chicago City Council 17th Ward	Alderman	Latasha	Thomas	Alderman	7811 S. Racine Avenue		Chicago	IL	60620
Illinois Senator District 17	Senator	Donne E.	Trotter	Senator	8704 South Constance Avenue	Ste. 324	Chicago	IL	60617
Chicago City Council 34th Ward Office	Ms.	Diane	Turner		507 W. 111th St.		Chicago	IL	60628
Illinois Secretary of State	Mr.	Jesse	White	Secretary of State	213 State Capitol		Springfield	IL	62756
Alderman Carrie Austin's Office	Mr.	Chester	Wilson		507 W 111th Street		Chicago	IL	60628
Illinois Department of Transportation	Mr.	Chuck	Abraham	Division of Public and Intermodal Transportation	J. R. Thomson Center, Suite 6-600		Chicago	IL	60601
City of Chicago Department of Transportation, Division of Planning	Mr.	Joe	Alonzo	CREATE Manager	30 N. LaSalle Street, Suite 500		Chicago	IL	60602
Metra Commuter Rail	Ms.	Kristen	Andersen	Transportation Planning Analyst	547 West Jackson Boulevard	13th Floor	Chicago	IL	60661
Federal Railroad Administration	Mr.	Timothy	Barkley	Director, Office of Policy & Communication	1200 New Jersey Ave. SE		Washington	DC	20590
Cook County Highway Department	Mr.	John	Beissel		69 West Washington	Room 2300	Chicago	IL	60602
Illinois Commerce Commission	Mr.	Charles	Box	Chairman	527 East Capitol Avenue		Springfield	IL	62701
Chicago Metropolitan Agency for Planning	Ms.	Claire	Bozic	Senior Analyst	233 South Wacker Drive, Suite 800		Chicago	IL	60606
Chicago Metropolitan Agency for Planning	Ms.	Janet	Bright	External Relations	233 S. Wacker Drive	Ste. 800	Chicago	IL	60606
Illinois Department of Transportation	Ms.	Lil	Budzinski		J. R. Thomson Center, Suite 6-600		Chicago	IL	60601
Illinois Department of Transportation	Ms.	Lil	Budzinski		100 West Randolph	J. R. Thomson Cent	Chicago	Illinois	60601
Department of the Interior, Office of Environmental Policy and Compliance	Mr.	Michael	Chezik	Regional Environmental Officer	200 Chestnut St.	Room 244	Philadelphia	PA	19106
Federal Highway Administration	Mr.	Ed	Christopher	Metropolitan Planning Specialist	4749 Lincoln Mall Drive	Ste. 600	Matteson	IL	60443
Federal Highway Administration	Mr.	Chris	DiPalma		200 West Adams, Suite 320		Chicago	IL	60606
City of Chicago Department of Community Development	Ms.	Karen	Forte	Architect - City Planner	121 N. LaSalle St.	Ste. 1000	Chicago	IL	60602
Illinois Department of Transportation, District 1 Bureau of Construction	Mr.	Bill	Frey	Bureau Chief	201 West Center Court		Schaumburg	IL	60196
Illinois Department of Transportation, Bureau of Railroads	Mr.	Michael	Garcia	Chief, Rail Engineering	2300 S. Dirksen Parkway	Room 339	Springfield	IL	62764
Illinois Department of Revenue	Mr.	Brian	Hamer	Director	100 West Randolph Street		Chicago	IL	60601
Federal Railroad Administration	Mr.	Laurence	Hasvold	Regional Administrator	200 West Adams, Suite 310		Chicago	IL	60606
City of Chicago Department of Transportation, Division of Planning	Mr.	Richard	Hazlett	Coordinating Planner	30 N. LaSalle Street	Suite 500	Chicago	IL	60602
Illinois Department of Transportation, Division of Traffic Safety	Mr.	Robert	Hoover	Bureau Chief	2300 S. Dirksen Parkway		Springfield	Il	62764
Chicago Housing Authority	Mr.	Lewis	Jordan	CEO	60 E. Van Buren Street		Chicago	IL	60605
Metra Commuter Rail	Mr.	David	Kralik	Section Manager, New Starts and Corridor Planning	547 West Jackson Boulevard, 13th Floor		Chicago	IL	60661
Regional Transit Authority	Ms.	Aimee	Lee	Manager, Regional Planning	175 West Jackson Boulevard, Suite 1550		Chicago	IL	60604

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Organization	Salutation	First Name	Last Name	Title	Address	Apt/ Floor	City	State	Zip
City of Chicago Department of Community Development	Mr.	Edward	Lewis	Coordinator of Economic Development	121 N. LaSalle St.	Ste. 1000	Chicago	IL	60602
City of Chicago Department of Transportation, Division of Planning	Ms.	Brenda	McGruder		30 N. LaSalle Street	Suite 500	Chicago	IL	60602
Illinois Department of Commerce and Economic Opportunity	Ms.	Felisha	McNeal		100 W Randolph	Ste 3-400	Chicago	IL	60601
Illinois Department of Transportation	Mr.	Stanley	Moore		300 W. Adams	2nd Floor	Chicago	IL	60606
Metropolitan Planning Council		Marisa	Novara	Associate	140 S. Dearborn, Suite 1400		Chicago	IL	60603
Northern Indiana Commuter Transportation District	Mr.	Bill	O'Dea		33 East U.S. Highway 12		Chesterton	IN	46304
Illinois Department of Employment Security	Ms.	Maureen T.	O'Donnell	Director	33 S. State St.		Chicago	IL	60603
Illinois Department of Transportation, Central Bureau of Operations	Ms.	Diane	O'Keefe	Deputy Director	201 West Center Court		Schaumburg	IL	60196
Cook County Department of Revenue	Mr.	Nathan	Paige	Director	118 N. Clark St.	Room 1160	Chicago	IL	60602
Metropolitan Water Reclamation District	Mr.	A.S.	Paintal	Supervising Civil Engineer	111 East Erie		Chicago	IL	60611-3154
Regional Transit Authority	Ms.	Diane	Palmer	Director of Communications	175 W. Jackson Blvd.	Suite 1550	Chicago	IL	60604
Northern Indiana Commuter Transportation District	Mr.	John	Parsons		33 East U.S. Highway 12		Chesterton	IN	46304
City of Chicago Department of Streets and Sanitation Bureau of Street Operations	Mr.	Bob	Richardson	Deputy Commissioner	121 N. LaSalle St.	Room 704	Chicago	IL	60602
Chicago Metropolitan Agency for Planning	Mr.	Jose	Rodriguez	Programming & Operations	233 S. Wacker Drive	Ste. 800	Chicago	IL	60606
Federal Highway Administration	Mr.	Michael	Rosenstiehl	Administrative Team Leader	4749 Lincoln Mall Drive	Ste. 600	Matteson	IL	60443
Pace	Mr.	Thomas J.	Ross	Executive Director	550 W. Algonquin Road		Arlington Heights	IL	60005
City of Chicago Department of Aviation	Mr.	Larry	Rzewski		121 N. LaSalle St.		Chicago	IL	60602
City of Chicago Department of Budget and Management	Mr.	Gene	Saffold	Chief Financial Officer	121 N. LaSalle St.	Room 604	Chicago	IL	60602
Cook County Sheriff's Office	Chief	Louis A.	Sbarboro		5600 Old Orchard Rd.		Skokie	IL	60077
Illinois Department of Transportation, ITS Program Office	Mr.	Chuck	Schmitt	Bureau Chief	2300 South Dirksen Parkway		Springfield	IL	62764
Metropolitan Water Reclamation District	Mr.	Joseph	Schuessler	Principal Civil Engineer	111 East Erie		Chicago	IL	60611-3154
Federal Highway Administration	Mr.	Norman	Stoner	Division Administrator, Illinois Division Office	3250 Executive Park Drive		Springfield	IL	62703
Chicago Bureau of Convention and Tourism	Mr.	Mark	Theis	Executive Vice President	2301 N. Lakeshore Drive		Chicago	IL	60616
Pace Suburban Bus Service	Mr.	David	Tomzik	Manager, Long Range Planning	550 West Algonquin Road		Arlington Heights	IL	60005
Metropolitan Water Reclamation District	Mr.	Nicholas	Venuso	Assistant Chief Engineer	111 East Erie		Chicago	IL	60611-3154
Federal Transit Administration	Mr.	David	Werner	Regional Administrator	200 West Adams Street, Suite 320		Chicago	IL	60606
Regional Transit Authority	Mr.	Sid	Weseman		175 West Jackson Boulevard, Suite 1550		Chicago	IL	60604
CPS		Lorraine	Wille	Teacher	1501 W. Chase Ave.		Chicago	IL	60626
Chicago Housing Authority, Intergovernmental Affairs	Mr.	Otis	Wright	Director	60 E. Van Buren		Chicago	IL	60605
Tuley Park Library Branch	Ms.	Stella	Beck	Branch Manager	501 East 90th Place		Chicago	IL	60619
South Chicago Library Branch	Ms.	Kim	Catledge	Branch Manager	9055 South Houston Avenue		Chicago	IL	60617
Blue Island Public Library	Mr.	Jim	Deiters	Director	2433 York Street		Blue Island	IL	60406
Riverdale Public Library	Ms.	Barb	Diel	Representative	208 West 144th Street		Riverdale	IL	60827
West Pullman Library Branch	Ms.	Duwana	Dorsey	Branch Manager	830 West 119th Street		Chicago	IL	60628
Jeffrey Manor Branch Public Library	Ms.	Elizabeth	Garcia	Director	2401 East 100th Street		Chicago	IL	60617
Brainerd Branch Public Library	Ms.	Mary	Jones	Director	1350 West 89th Street		Chicago	IL	60620
Calumet City Public Library	Mr.	Doug	Losey	Director	660 Manistee Avenue		Calumet City	IL	60409
Pullman Public Library	Mr.	Jimmy	Markcom	Director	11001 South Indiana Avenue		Chicago	IL	60628
Walker Branch Public Library	Ms.	Christina	Matera	Director	11071 South Hoyne Avenue		Chicago	IL	60643
Calumet City Public Library	Mr.	William	Pixley	Director	660 Manistee Avenue		Calumet City	IL	60409

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Organization	Salutation	First Name	Last Name	Title	Address	Apt/ Floor	City	State	Zip
Hegewisch Library Branch	Ms.	Susan	Puterko	Branch Manager	3048 East 130th Street		Chicago	IL	60633
Hope Fellowship Christian Center	Ms.	Carolyn	Cox		PO Box 198567		Chicago	IL	60619
Sheldon Heights Church of Christ	Ms.	Janet	Bailey		11325 S Halsted		Chicago	IL	60628
Apostolic Church of God	Rev. Dr.	Arthur M.	Brazier	Pastor	6320 South Dorchester Avenue		Chicago	IL	60637
Sheldon Heights Church of Christ	Ms.	Vera	Dixon		11325 S Halsted		Chicago	IL	60628
Sheldon Heights Church of Christ	Ms.	LaJoyce	Eason		4929 S. St. Lawrence		Chicago	IL	60615
Lutheran Church of the Holy Spirit	Mr.	Robert	Elliott		1335 W. 115th St.		Chicago	IL	60643
Sheldon Heights Church of Christ	Ms.	Frances	Garrett		11325 S. Halsted		Chicago	IL	60628
Sheldon Heights Church of Christ	Ms.	Rhonda	Garrett		11325 S. Halsted		Chicago	IL	60628
Sheldon Heights Church of Christ	Ms.	Marie	Gilbert		209 W 109th Place		Chicago	IL	60628
Sheldon Heights Church of Christ	Pastor	Leonardo	Gilbert		11355 S. Halsted		Chicago	IL	60628
Sheldon Heights Church of Christ	Ms.	Brenda L.	Gilbert		11325-55 S Halsted St.		Chicago	IL	60628
Lutheran Church of the Holy Spirit	Rev.	Rayford	Grady		1335 W. 115th Street		Chicago	IL	60643
Sheldon Heights Church of Christ	Mr.	Lionel	Harden		10353 S. Sangamon St.		Chicago	IL	60643
Sheldon Heights Church of Christ	Mr.	CJ	Harmon		5438 S Ridgewood Ct.	#3	Chicago	IL	60615
Lutheran Church of the Holy Spirit	Ms.	Carolyn	Lesmeister		12157 S. Michigan Ave.	#3	Chicago	IL	60628
Bethel House of Prayer	Ms.	Bernadette	Lewis		10956 S. State Street		Chicago	IL	60628
Bethel House of Prayer	Ms.	Vanessa	Lewis		10956 S. State Street		Chicago	IL	60628
Lilydale 1st Baptist Church	Rev.	Alvin	Love		649 W. 113th St.		Chicago	IL	60628
Bethel House of Prayer	Mr.	James	McFadden		10956 S State Street		Chicago	IL	60628
Sheldon Heights Church of Christ	Ms.	Kietta	McFee		11733 S. Sangamon		Chicago	IL	60643
Salem Baptist Church of Chicago	Rev.	James T.	Meeks	Pastor	752 East 114th Street		Chicago	IL	60628
Holy Spirit Lutheran	Mr.	Roger	Mitchell		9210 S. Phillips Avenue		Chicago	IL	60617
New Beginnings Ministry of Faith	Ms.	Belinda	Moore		432 154th Place		Calumet City	IL	60409
New Beginnings Ministry of Faith	Br.	William	Moore		432 154th Place		Calumet City	IL	60409
Joy Fellowship Baptist Church	Ms.	Roberta	Patterson		2025 E 175th		Lansing	IL	60438
St. Sabina Church	Rev.	Dr. Michael L.	Pfleger	Pastor	1210 West 78th Place		Chicago	IL	60620
Sheldon Heights Church of Christ	Ms.	Katherine	Raglin		5044 S. St. Lawrence Ave.	1st Floor	Chicago	IL	60615
Joy Fellowship Baptist Church	Mr.	Albert	Reece		7715 So. Throop		Chicago	IL	60620
Joy Fellowship Baptist Church	Ms.	Carrie	Ross		11733 S. Stewart		Chicago	IL	60628
Kenwood United Church of Christ	Pastor	Leroy	Sanders		4600-08 S. Greenwood		Chicago	IL	60653
Joy Fellowship Baptist Church	Ms.	Cecile	Shannon		11740 S Longwood Drive		Chicago	IL	60643
Joy Fellowship Baptist Church	Ms.	Viola	Smith		11638 S. Parnell Avenue		Chicago	IL	60628
Sheldon Heights Church of Christ	Pastor	Charles	Smith		11355 S. Halsted		Chicago	IL	60628
Joy Fellowship Baptist Church	Ms.	Ruby	Stewart Mitchell		12322 S. Yale		Chicago	IL	60628
Joy Fellowship Baptist Church	Ms.	Donna	Tyson		14427 Chicago Road	Apt. A	Dolton	IL	60419
Joy Fellowship Baptist Church	Mrs.	Sandra	White		9131 So. Claremont Ave.		Chicago	IL	60620
Joy Fellowship Baptist Church	Ms.	Willa Mae	Wilson		750 W. 87th Street		Chicago	IL	60620
Joy Fellowship Baptist Church	Ms.	Rosa	Young Martin		14130 Calumet		Dolton	IL	60419
Trinal, Inc	Ms.	Tammi	Davis		329 W 18th St	Ste 401	Chicago	IL	60616
Trinal, Inc	Ms	Alicia	Garcia-Abner		329 W. 18tth St	Ste 401	Chicago	IL	60616
CirclePoint	Ms.	Shay	Humphrey	Project Associate	455 Capitol Mall	Suite 802	Sacramento	CA	95814
CDM	Mr.	Mike	Izzo		125 S Wacker Drive	Ste 600	Chicago	IL	60606
Trinal, Inc	Ms.	Maye	Kelsey		329 W 18th St	Ste 401	Chicago	IL	60616
CDM	Ms.	Helene	Kornblatt		523 W. Sixth Street	Suite 400	Los Angeles	CA	90014
CirclePoint	Ms.	Sarah	Layton Wallace	Principal	555 12st Street	Suite 290	Oakland	CA	94607
CDM	Mr.	Chris	Martel		125 S Wacker Drive	Ste 600	Chicago	IL	60606
Kathy Schaeffer and Associates, Inc.	Mr.	Bob	Musinski	Account Supervisor	17 North State Street	Suite 1690	Chicago	IL	60602
CDM	Ms.	Melissa	Peters		125 S. Wacker Drive	Suite 600	Chicago	IL	60606
CirclePoint	Ms.	Kristy	Ranieri	Senior Project Manager	182 Oakland Road	Suite 100	Maplewood	NJ	07040
Chicago Transit Authority	Mr.	Richard	Rodriguez	President	567 West Lake Street		Chicago	IL	60661
Kathy Schaeffer and Associates, Inc.	Ms.	Kathy	Schaeffer	Principal	17 North State Street	Suite 1690	Chicago	IL	60602
Kathy Schaeffer and Associates, Inc.	Ms.	Lisa	Soard	Senior Account Executive	17 North State Street	Suite 1690	Chicago	IL	60602
CDM	Ms.	Kate	Stenberg	Senior Environmental Planner	11811 NE 1st	Suite 201	Bellevue	WA	98005

Open House Notice Mailing List
Red Line Extension

Organization	Salutation	First Name	Last Name	Title	Address	Apt/ Floor	City	State	Zip
Wight & Co	Mr.	Bob	Tessiatore		1200 N Frontage Dr		Darien	IL	60561
115-116-117 Elizabeth St. Block Club	Ms.	Claudia	Davis		11531 S. Elizabeth Street		Chicago	IL	60643
Block Club 96 Wentworth	Ms.	Sylvia	Durham		9624 S Wentworth		Chicago	IL	60628
Block Club 96 Wentworth	Ms.	Mable	Echols		9622 Wentworth Ave		Chicago	iL	60628
115-116-117 Elizabeth St. Block Club	Ms.	Marie	Ellis-Milan		11611 S. Elizabeth Street		Chicago	IL	60643
115-116-117 Elizabeth St. Block Club	Ms.	Marie	Milan		11611 S. Elizabeth Street		Chicago	IL	60643
		Dawn	Adams		1608 W. Sherman #314		Chicago	IL	60626
		Jean-Paul	Addie		1625 W. Lunt		Chicago	IL	60626
		Duke	Alden		5430 N. Sheridan Road	408	Chicago	IL	60640
		Antoine	Alexander		1749 W. Jarvis Avenue		Chicago	IL	60626
		Jacob	Aronov		1423 W. Sherwin	1	Chicago	IL	60626
		M	Badanes		6737 N. Greenview		Chicago	IL	60626
		Raymond	Bailey		1335 W. Fargo	3W	Chicago	IL	60626
	Ms.	Andrea	Baker		1567 Ridge Ave		Evanston	IL	60201
		Patrick	Barry		6743 N. Nowgard		Chicago	IL	60626
		Brianna	Bedard		6907 N. Bosworth Ave.		Chicago	IL	60626
		William	Benjamin		623 Linden		Wilmette	IL	60091
		Leroy	Blommaert		5333 N Winthrop		Chicago	IL	60640
		Gemariah	Borough		1936 Central		Evanston	IL	60201
		Donald	Bosan-Bruno		2225 Madison Pl		Evanston	IL	60202
		Carl	Bova		1322 Rosalie St		Evanston	IL	60201
		Sarah	Bracken		4647 N. Magnolia Street, Apt 1 N		Chicago	IL	60640
		Terry	Brennan		7506 N. Rogers		Chicago	IL	60626
		Aaron	Brown		1809 S. Carpenter		Chicago	IL	60608
		Norbert	Budde		1108 South Blvd.		Evanston	IL	60202
		Pat	Burke		2116 W. Lunt Ave.		Chicago	IL	60645
		Brittany	Burran-Stanley		314 1/2 S. Blvd.		Evanston	IL	60202
		Joy	Campbell		1216 W. Jarvis Ave. 15		Chicago	IL	60626
		Helen	Carlock		7729 N. Ashland		Chicago	IL	60626
		Mark	Cartwright		2919 N. Troy St.		Chicago	IL	60618
		Jennifer	Clark		6439 N. Sheridan		Chicago	IL	60626
		Jason	Cocking		1513 W. Chase Ave.	1A	Chicago	IL	60626
		Lynne	Collins		11253-57 S. Champlain		Chicago	IL	60628
		Hector	Colon		6656 N. Glenwood		Chicago	IL	60626
Owner/Renter		Lillie	Council		1415 Lunt, Unit 508		Chicago	IL	60626
		Paul	Damian		1349 W. Thorndale		Chicago	IL	60660
		Jon	Davis		2009 W. Chase Ave. #2		Chicago	IL	60645
		Mark	Dawson		2425 W. Coland		Chicago	IL	60625
		Kenneth	DeMuth		640 N. Lasalle, Suite 400		Chicago	IL	60610
		Brian	DeSantis		6709 N. Lakewood Ave.		Chicago	IL	60626
		Jeff	DeVries		1222 Elmdale	3E	Chicago	IL	60660
		James	Donat		6807 N. Ashland	1	Chicago	IL	60626
		Amy	Dykema		312 South Blvd.		Evanston	IL	60202
		Ingrid	Eckersberg		1501 Walnut		Wilmette	IL	60091
		Paul	Estrich		1461 W. Fargo		Chicago	IL	60626
		Georgia	Evans		2743 W. Pratt		Chicago	IL	60645
		Jane	Evans		813 Gaffield PL		Evanston	IL	60201
		Aaron	Feinstein		5940 N. Lakewood		Chicago	IL	60660
		Kelly	Flyte		5958 N. Kenmore Ave.	503	Chicago	IL	60660
		Daryl & Leslie	Frank		7626 N. Greenview		Chicago	IL	60626
Resident		Elizabeth	Freeman		1501 W. Chase Ave., #1		Chicago	IL	60626
		Lisa	Frohmann		1435 W. Chase		Chicago	IL	60626
Resident		Joselito V.	Gatdula		1455 W. Fargo Ave #1		Chicago	IL	60626
		Eric	Gegner		7409 N. Claremont Ave.		Chicago	IL	60645
		Matt	Gibbs		5052 N. Marine Dr.	D8	Chicago	IL	60640
		Ruben	Gil		6431 N. Hoyne		Chicago	IL	60645
		Eric	Glastein		7012 N. Greenview Ave.		Chicago	IL	60626

Organization	Salutation	First Name	Last Name	Title	Address	Apt/ Floor	City	State	Zip
		David	Gloss		N. Broadway St, Apt 506		Chicago	IL	60660
		Aaron	Glynn		808 Clark St.	2B	Evanston	IL	60201
		Thomas	Gonzales		1608 Ridge Avenue		Evanston	IL	60201
		Donald	Gordon		1228 W. Lunt		Chicago	IL	60626
		Chris	Gray		1257 W. Lunt	416	Chicago	IL	60626
		Donna	Green		8445 S. Rhodes		Chicago	IL	60619
		Earle	Grosvenor		7401 N. Albany Ave.		Chicago	IL	60645-1101
		Tim	Gustafson		5630 N Sheridan Rd #904		Chicago	IL	60660
		Manfred & Jennifer	Haja		1316 W. Fargo	201	Chicago	IL	60626
		Harold	Hansen		7414 N. Sheridan Road		Chicago	IL	60626
		Theo	Harduvel		1436 W. Fargo		Chicago	IL	60626
		Jason	Hartline		453 W Fullerton		Chicago	IL	60614
		Chris	Hein		5100 N. Marine Dr., #16H		Chicago	IL	60640
		Gisele	Hennings		7305 N. Greenview		Chicago	IL	60626
		Judy	Hoffman		1436 W. Fargo		Chicago	IL	60626
Resident		Erick	Howenstine	Dr/Prof	1426 W. Estes		Chicago	IL	60626
		Arefin	Huq		5525 N. Winthrop Ave.	512	Chicago	IL	60640
		Hiromi	Ishikawa		1331 W. Chase	2A	Chicago	IL	60626
		Archie	Jackson		7648 N. Paulina		Chicago	IL	60626
		Brian	Jakosz		1628 W. Greenleaf Ave., #35		Chicago	IL	60626
		Eileen	Jasper		1505 W. Sherwin Ave.		Chicago	IL	60626
		CJ	Jelinek		1542 W. Sherwin	2	Chicago	IL	60626
		Nyisha Mari	Johnson	Student Columbia	1627 W. Touhy Ave.		Chicago	IL	60626
		Shawn	Jones		1114 Monroe		Evanston	IL	60202
		Harvey	Kahler		2041 W. Birchwood	2	Chicago	IL	60645
		Bryan	Kibbe		6610 N. Newgard Ave.		Chicago	IL	60626
		Jackie	Kinnaman		1507 W. Chase Ave.		Chicago	IL	60645
		Diane F.	Korling		1914 Orrington Avenue		Evanston	IL	60201-2910
		Amanda	Kraus		1440 W. Sherwin	302	Chicago	IL	60626
		Daniel	Kraus		1440 W. Sherwin Avenue		Chicago	IL	60676
		Clarence	Krusinski		1526 W Sherwin Ave		Chicago	IL	60626
		Josette	Krusinski		1526 W Sherwin Ave		Chicago	IL	60626
		Bob	LeBailly		2424 Eastwood Ave.		Evanston	IL	60201
		AJ	Lebeda		1915 Maple Ave. #517		Evanston	Il	60201
		Leigh Ann	Leenauskas		7429 N. Greenview Ave.	3	Chicago	IL	60626
		Margene	Lehman		215 Golf Terrace		Wilmette	IL	60091
		Barbara	Leonard		1055 W. 104th St.		Chicago	IL	60643
		Claude D.	Lewis Jr.		11255 S. Loomis		Chicago	IL	60643
Resident		Jeanne	Lindwall		625 Library Place		Evanston	IL	60201
		Carl	Lingenfelter		1900 W. Lunt Ave.		Chicago	IL	60626
		Lilangel	Logan		5934 N. Winthrop		Chicago	IL	60660
		Cecile	Margulies		4430 N Clifton		Chicago	IL	60640
		Alfie	Martin		633 N. Avers Avenue	#2	Chicago	IL	60624
		Julia	McAvoy		2013 W. Greenleaf Avenue		Chicago	IL	60645
Resident		William	McCauslin		1455 W. Fargo Ave #1		Chicago	IL	60626
		Andrew	McGonigle		2526 Princeton Ave.		Evanston	IL	60201
		Norma	McLennon		2041 W Birchwood Ave #2		Chicago	IL	60645
		Lori	Mooney		1039 W. North Shore		Chicago	IL	60626
		Mattie	Moore		1626 W. Sherwin		Chicago	IL	60626
		R	Morris		6901 N. Ashland		Chicago	IL	60626
		Norma	Moruzzi		814 W. Lakeside Place	110	Chicago	IL	60640
		Susan	Mudd		6707 N. Newgard Ave		Chicago	IL	60626
		Tudo	Nguyen		1542 W. Sherwin Ave.	3S	Chicago	IL	60626
		Ernie	Norrman		7450 N. Rogers Ave.	1013	Chicago	IL	60626
		Lynn	Otte		1631 Ashland		Evanston	IL	60202
		Susan S.	Pastin		1340 W. Touhy Ave., #405		Chicago	IL	60626
		Virginia	Paton		2230 Dodge		Evanston	IL	60201

Organization	Salutation	First Name	Last Name	Title	Address	Apt/ Floor	City	State	Zip
		Stella	Patterson		2842 W. Summerdale Ave. #2E		Chicago	IL	60625
		Bobbie	Patzold		1143 W. Pratt	1W	Chicago	IL	60626
		M C	Peceny		1332 W. Birchwood		Chicago	IL	60626
		Stephanie	Pedretti		1355 W. Greenleaf Ave.	1-J	Chicago	IL	60626
		Jacob	Peklo		806 Hinman	303	Evanston	IL	60202
		Mark	Perelman		543 Florence		Evanston	IL	60201
		Brian	Peters		1801 Maple Ave.	2300	Evanston	IL	60201
		Jacob	Peters		2894 W. Leland Avenue		Chicago	IL	60625
		Ellen	Pinkham		1725 W. Jarvis Ave.		Chicago	IL	60626
		Ursula	Pokorska		1609 W. Estes		Chicago	IL	60626
		Anthony	Portnay		1222 Chicago Ave.	302	Evanston	IL	60202
		JoAnn	Preston		4123 N. Keating		Skokie	IL	60076
		John	Prucha		1205 Mulford St.		Evanston	IL	60202
Concerned Citizen		Robert	Puckett		1205 Mulford St.		Evanston	IL	60202
		William	Reynolds		2114 W. Winnemac Avenue		Chicago	IL	60640
		Summer	Roberle		1032 W. Sheridan		Chicago	IL	60642
		Bob	Roberts		180 N. Stetson	1100	Chicago	IL	60611
		Roland	Rodgers		1412 W. Chase Ave., #106		Chicago	IL	60626
Skokie Commission on Family Services		Julie	Roth		9244 Gross Pt. Rd. #409		Skokie	IL	60077
		Julia	Ruemmele		1434 W. Carmen		Chicago	IL	60642
		Bob	Rugh		1235 W. Jarvis #2		Chicago	IL	60626
		Jonathan	Samuel		5112 W. Fulton Street		Chicago	IL	60644
		Kristi	Sanford		1423 W. Greenleaf	2S	Chicago	IL	60626
		Sherri	Schmidt		1422 W. Touhy		Chicago	IL	60626
		John	Selep		3628 N Wilton Ave		Chicago	IL	60613
		Wayne	Seltzer		5858 N. Broadway	505	Chicago	IL	60660
		Timothy	Sheehan		1440 W. Jarvis	3A	Chicago	IL	60626
		Sean	Sheridan		1261 W. Argyle Street		Chicago	IL	60640
		Paul	Shumard		1804 W. Farwell		Chicago	IL	60626
		Brooke	Smart		214 South Blvd. Unit C		Evanston	IL	60202
		Lyle	Smart		214 South Blvd.		Evanston	IL	60202
		Jean	Smiling Coyote		1823 W. Granville Ave., Apt. 1B		Chicago	IL	60660-1060
		Jeff	Smith		2724 Harrison		Evanston	IL	60201
		Bill	Smith		1726 Wesley Ave		Evanston	IL	60201
		Nancy	Solomon		1527 W. Chase	1D	Chicago	IL	60626
		Joseph	Stafford		5958 N. Kenmore Ave.	503	Chicago	IL	60660
		Michael	Stanley		314 1/2 S. Blvd.		Evanston	IL	60202
		Mike	Stone		6240 N. Lakewood Avenue		Chicago	IL	60640
		Igor	Studenkov		5560 W. Northwest Hwy		Palatine	IL	60067
		Mary Anne	Sullivan		110 N. Clifton #7		Park Ridge	IL	60068
		William	Swain		7616 N. Eastlake Ter.		Chicago	IL	60626
		Geoff	Swindells		2254 Sherman	3	Evanston	IL	60201
		Shahab	Tabatabainejad		1205 W. Farwell Ave.		Chicago	IL	60626
		Jennifer	Tani		1542 W. Sherwin Ave.		Chicago	IL	60626
		George	Tibbits		1629 W. Sherwin Ave.	305	Chicago	IL	60626-1933
		Aimee	Tierney		1210 Mulford St.		Evanston	IL	60202
		Patrick	Tierney		1210 Mulford		Evanston	IL	60202
		Robert	Troy		1424 W. Howard St.		Chicago	IL	60607
		Eleanor	Troy		1424 W. Howard St		Chicago	IL	60626
Citizen		Anna	Upson		519 Chicago Ave.		Evanston	IL	60202
		Denzel	Vaden		9225 S. May		Chicago	IL	60620
		Bryan	Vuong		5823 N. Paulina		Chicago	IL	60660
		Horst	Wagener		5648 N. Hermitage		Chicago	IL	60660
		Mike	Wagner		415 South Blvd.		Evanston	IL	60202
		Jaime	Wagner		415 South Blvd.		Evanston	IL	60202
Resident		Maria	Wagner		1513 W. Fargo #2N		Chicago	IL	60626
		Steve	Wall		1832 W. Greenleaf		Chicago	IL	60626

Open House Notice Mailing List
Red Line Extension

Organization	Salutation	First Name	Last Name	Title	Address	Apt/ Floor	City	State	Zip
		Jennifer	Walling		1430 Thorndale		Chicago	IL	60660
		Elfriede	Wedam		1517 W. Fargo Ave.		Chicago	IL	60626
		Dale	Wheeler		1408 W. Jarvis		Chicago	IL	60626
		Brian	White		1844 N. Greenleaf		Chicago	IL	60626
Resident/Home Owner		Chad	Willetts	Musician/Composer	1642 W. Touhy		Chicago	IL	60626
		Hugh	Williams		6416 N. Lakewood Avenue		Chicago	IL	60626
		Tom	Wood		5062 N. Winthrop		Chicago	IL	60640
		John	Zbesko		1120 Noyes		Evanston	IL	60201
		Kim	Zesiger		7731 N. Eastlake Ter		Chicago	IL	60626
		Jeff	Zoline		207 Skokie Boulevard		Wilmette	IL	60091
		Eric Geguer			7409 N. Claremont Ave.		Chicago	IL	60645
		Resident			1415 W Lunt Ave	501	Chicago	IL	60626
Chicago State University, Office of Public Affaris	Ms.	Patricia	Arnold	Director	9501 South King Drive	ADM 200	Chicago	IL	60628
Illinois Institute of Technology	Mr.	David	Baker	VP of External Affairs	3300 South Federal Street	PH 223	Chicago	IL	60616
UIC Voorhees Center	Ms.	Katie	Bowman		400 S Peoria	Ste 2100	Chicago	IL	60607
Gwendolyn Brooks College Preparatory High School	Dr.	Dushon A.	Brown	Principal	250 East 111th Street		Chicago	IL	60628
Harlan Community Academy High School	Mr.	Reginald	Evans	Principal	9652 S. Michigan Avenue		Chicago	IL	60628
Loyola University		Sangita	Gosalia		6439 N Sheridan		Chicago	IL	60626
Chicago State University	Ms.	Nancy	Hall-Walker		9501 S. King Drive		Chicago	IL	60628
University of Illinois at Chicago College of Urban Planning and Policy	Ms.	Danielle	Inendino	Research Assistant, Urban Transportation Center	412 S Peoria St		Chicago	IL	60607
Olive-Harvey College	Ms.	Stephanie	Johnson	Assistant Dean of Special Events & Planning	10001 South Woodlawn Avenue		Chicago	IL	60628
Kennedy King College	Mr.	Clyde	K. El Amin	President	6800 South Wentworth Avenue		Chicago	IL	60621
Northwestern University		Philip	Keeve	Student	726 University Place		Evanston	IL	60201
University of Chicago, Community & Government Affairs	Ms.	Anne Marie	Lipinski	VP, Civic Engagement	5801 South Ellis Avenue		Chicago	IL	60637
Alianza Leadership Insitute	Mr.	Rey	Lopez-Calderon	Executive Director	2938 E. 91st St.	Ste. 206	Chicago	IL	60617
Chicago State Alumni	Ms.	Marianne	Robinson		7530 S. Vernon		Chicago	IL	60619
Northwestern University	Mr.	Patrick	Ryan	Department Head	633 Clark Street		Evanston	IL	60208
University of Chicago	Mr.	Brian	Shaw	Director of Transit Planning	5555 S. Ellis Ave.	3rd Floor	Chicago	IL	60637
Morgan Park High School	Dr.	Beryl	Shingles	Principal	1744 West Pryor Avenue		Chicago	IL	60643
UIC Voorhees	Ms.	Janet	Smith		412 S Peoria St		Chicago	IL	60607
Corliss High School	Dr.	Anthony	Spivey	Principal	821 East 103rd Street		Chicago	IL	60628
Simeon Career Academy	Ms.	Tamara	Sterling	Principal	8147 South Vincennes Avenue		Chicago	IL	60620
Chicago State University	Mr.	Mark	Sudeith		8720 S. Calument Ave.		Chicago	IL	60619
Carver Military Academy	Mr.	John F.	Thomas	Principal	13100 South Doty Avenue		Chicago	IL	60627
Roseland Christian School	Mr.	James	Van Zyl		314 W. 108th Street		Chicago	IL	60628
Northeastern University Center for Inner City Students	Dr.	Conrad	Worrill	Director Educational Leadership & Development	700 East Oakwood Avenue		Chicago	IL	60653
Percy L. Julian High School	Dr.	Darreyl	Young-Gibson	Principal	10330 South Elizabeth Street		Chicago	IL	60643
	Mr.	Jeremiah	Abdullah		13076 S Drexel		Riverdale	IL	60827
HCI		Kamilah	Abdur-Rahman	Consumer Advocate	10524 S. Vernon Ave.		Chicago	IL	60028
	Ms.	Loyce	Acres		14121 Calumet		Dolton	IL	60419
	Ms.	Denne	Adams		9255 S State		Chicago	IL	60619
	Ms.	Edith	Adams		13079 S Evans		Chicago	IL	60827
Roseland Christian Thrift Store		Ronnie	Adams	Laborer	33 E. 111th Pl.		Chicago	IL	60628
	Ms	Shirley	Adams		1500 Lincoln Ave		Calumet City	IL	60409
Sara Lee Baking		Tony	Adams		3351 W. 21st St.		Chicago	IL	60623
	Ms.	Phenice	Adams-Whiting		1618 E 84th St		Chicago	IL	60617
	Ms.	Khalimah	Al-Farugi		1350 E Sibley Blvd		Dolton	IL	60419
	Ms.	Susan	Allan		11360 S Forest		Chicago	IL	60628
Healthcare Consortium of IL		Addie	Allen	CAO	1350 E. Sibley Blvd.		Dolton	IL	60419
	Ms.	Rosemary	Allen		10153 S Rhodes		Chicago	IL	60628

Organization	Salutation	First Name	Last Name	Title	Address	Apt/ Floor	City	State	Zip
	Ms	Debbie	Allen		7636 S Jeffrey		Chicago	IL	60649
	Ms	Gertrude	Allen		8137 S Perry		Chicago	IL	60620
	Ms.	Grace	Allen		11512 S Eggleston		Chicago	IL	60628
		Cassandra	Allen Courtney		20630 Crawford		Matteson	IL	60443
	Mr.	Caleb	Anderson		12217 S Carpenter		Chicago	IL	60643
Roseland Christian Ministries		Welton	Anderson		10858 S. Michigan Ave.		Chicago	IL	60628
	Ms.	Edith	Anderson		954 E 131st		Riverdale	IL	60827
	Mr.	Charles	Anderson Sr		954 E 131st		Riverdale	IL	60827
		Johnson	Antony		3351 W. 21st St.		Chicago	IL	60623
	Ms.	Michelle	Appling		112 E 89th Pl		Chicago	IL	60619
	Ms	Menisha	Archie		10818 S Eggleston Ave		Chicago	IL	60628
Trinity Christian College		Elizabeth	Arquilla		6601 W. College Dr.		Palos Heights	IL	60463
Trinity Christian College		Elizabeth	Arquilla		8019 Binford Dr.		Orland Park	IL	60462
		Clifford	Arthur		10906 S. Indiana		Chicago	IL	60628
Roseland Christian Ministries		Graydon	Artis		10858 S. Michigan Ave.		Chicago	IL	60628
	Ms.	Deretra B.	Askew		9738 S LaSalle		Chicago	IL	60628
		Suwanda	Atwates		19 W. 112th Street		Chicago	IL	60628
	Ms.	Geraldine	Austin		764 E 131st St		Riverdale	IL	60827
	Ms.	LaTonya	Aytela		10049 S Perry		Chicago	IL	60628
	Ms.	Elizabeth	B		7831 S Shore Dr		Chicago	IL	60628
		Victor	Bahr		3162 W. Meadow Lane, Apt. 1		Merrionette Park	IL	60803-5856
Developing Communities Project		Harry	Bailey		527 156th Pl.		Calumet City	IL	60409
	Ms.	Cares	Bailey		2616 E 74th St		Chicago	IL	60649
	Mr.	James	Bailey		2616 E 74th St		Chicago	IL	60649
	Ms.	Kimberly	Baker		4532 S Indiana	Unit 2N	Chicago	IL	60653
	Ms	Bettye	Baker Houston		10122 S Prairie		Chicago	IL	60628
		Lori	Baldwin		8217 S. Perry Ave.		Chicago	IL	60643
	Ms.	Victoria	Ballard		9522 S Sangamon		Chicago	IL	60643
	Mr.	Roger	Ballock		9347 S University		Chicago	IL	60619
Roseland Christian Thrift Store		Charles	Balsten	Truck Driver	33 E. 111th Pl.		Chicago	IL	60628
	Ms.	Chaneka	Banks		1035 E 132nd St		Chicago	IL	60827
Roseland Christian Reformed Church		Mary	Barnett	Member	5439 Greenwood Ave.		Chicago	IL	60615
	Mr.	Fred	Barney		2780 E State Street		Burnham	IL	60633
		Darsharlette	Barron		11519 Villa Court, Apt #1D		Alsip	IL	60803
		Darsharlette	Barron		6727 S. Peoria, Apt. #2		Chicago	IL	60621
		Patricia	Barton		10545 S. Prospect Ave.		Chicago	IL	60643
	Ms.	Paula	Basta		1930 W. Estes	Apt. 403	Chicago	IL	60628
Pioneer Baptist Church		Andrew	Bates	Parishioner	12104 Wallace		Chicago	IL	60628
		Christopher	Bates		2145 E. 175th St.		Lansing	IL	60438
	Mr.	Eddie	Bauer		10804 S Hoyne		Chicago	IL	60643
	Mr.	Nathan	Bedell		13088 S Evans		Riverdale	IL	60827
		Ora	Beece		7715 S. Throop		Chicago	IL	60620
		Albert	Beece III		7715 S. Throop		Chicago	IL	60620
Roseland Christian Reformed Church		Angela	Beecham	Member	232 W. 110th St.		Chicago	IL	60628
Roseland Christian Reformed Church		Dornzello	Beecham	Member	9230 S. Lowe Ave.		Chicago	IL	60620
Roseland Christian Reformed Church		Raphael	Beecham	Member	9230 S. Lowe Ave.		Chicago	IL	60620
Roseland Christian Reformed Church		Jessica	Beecham	Member	232 W. 110th St.		Chicago	IL	60628
Roseland Christian Reformed Church		Sabrina	Beecham	Member	232 W. 110th St.		Chicago	IL	60628
Roseland Christian Reformed Church		Raphael	Beecham Jr.	Member	232 W. 110th St.		Chicago	IL	60628
		Janet	Bell		21221 Georgetown Rd.		Frankfort	IL	60423
	Mr.	Cedric	Bell		1250 W. 112th Place		Chicago	IL	60643
Roseland Christian Ministries		Durane	Bell	Salesman	10851 S. Wabash Ave.		Chicago	IL	60628
	Ms.	Markiesha	Bell		636 E 133rd St		Riverdale	IL	60827
	Mr.	Michael	Belton		10944 S Morgan		Chicago	IL	60643
	Ms.	Morteen	Benham-Miller		10222 S Rhodes		Chicago	IL	60628
Metro Strategies Inc.		Kristen	Bennett		226 N. West Ave., Ste. 201		Elmhurst	IL	60126
Roseland Christian Reformed Church		Robert	Bennett	Member	10831 S. Indiana		Chicago	IL	60628

Open House Notice Mailing List
Red Line Extension

Organization	Salutation	First Name	Last Name	Title	Address	Apt/ Floor	City	State	Zip
	Ms.	Sheree	Bennett		7641 S Bennett Ave		Chicago	IL	60649
	Ms.	Chiiata	Benson		13072 S Ellis		Riverdale	IL	60827
		Steven	Benson		248 W. 112th Pl.		Chicago	IL	60628
		Ruth	Bernard		1013 E. May St.		Hammond	IN	46320
Roseland Christian Ministries		Merv	Bills	Member	10743 S. Forest		Chicago	IL	60628
	Mr.	Larry	Bishop		629 E 88th Pl		Chicago	IL	60619
Roseland Christian Ministries		Neal	Blaney	Member	12407 S. Princton St.		Chicago	IL	60628
SELL		Joe	Boatner		400 W. 99th Place		Chicago	IL	60628
Reformation Lutheran	Rev. Dr.	Joseph	Bocks	Senior Pastor	11310 S. Forest Ave.		Chicago	IL	60628
		Mary Ann	Booker		13290 S. Vernon Ave.		Chicago	IL	60827
	Mr.	P	Boozer		10348 S Indiana		Chicago	IL	60628
Cotter Consulting, Inc.	Ms.	Pamela	Bordner-Riney	Vice President - Business Dev.	100 South Wacker Drive	Suite 920	Chicago	IL	60606
	Mr.	L	Boughton		916 N Ridgeland		Oak Park	IL	60302
		CJ	Bowers		2316 W. 80th Pl.		Chicago	IL	60620
		Marvin & Dorothy	Boyd		415 W. 102nd St.		Chicago	IL	60628
Angeliz Organicas Learning Center		Martha	Boyd	Program Director	6400 S. Kimbark Ave.		Chicago	IL	60637
Roseland Christian Reformed Church		Harold	Boyd	Member	2018 W. 53rd Place		Chicago	IL	60609
	Mr.	Jimmy	Bradford		9552 S Green St		Chicago	IL	60628
	Ms.	Lillian	Braggs		9635 S Yale Ave		Chicago	IL	60628
	Mr.	Mose	Braggs		9635 S Yale Ave		Chicago	IL	60628
HRDI		Tonya	Braggs	Member	12141 S. Indiana		Chicago	IL	60643
	Mr.	Donald	Branch		11607 S Peoria St		Chicago	IL	60643
	Ms.	Barbara	Branden Lawrence		717 E 130th Pl		Riverdale	IL	60827
	Ms.	Eboney	Brinson		254 W 118th St		Chicago	IL	60628
	Ms.	Sharon	Brooks		9230 S Avalon		Chicago	IL	60619
	Mr.	Dusty	Brooks		434 W 127th St		Chicago	IL	60628
	Ms.	Anntionetta	Browder		616 E 133rd St		Chicago	IL	60827
		Keenya	Brown		8411 S. Ingleside, #3		Chicago	IL	60619
		Senart	Brown		1751 W. Albion		Chicago	IL	60628
	Ms.	Marilyn	Brown		11959 S. LaSalle St.		Chicago	IL	60628
Roseland Christian Ministries		Rochelle	Brown		10858 S. Michigan Ave.		Chicago	IL	60628
		Samina	Brown		4734 S. Indiana Ave.		Chicago	IL	60615
A Gate Call Beautiful		Sylvester	Brown	Member	335 W. 107th Pl.		Chicago	IL	60628
		Lizzie	Brown		11517 S Church St		Chicago	IL	60643
	Ms.	Alicia	Brown		7811 Winchester		Chicago	IL	60620
	Ms.	Antionne	Brown		970 E 133 St		Riverdale	IL	60827
	Mr.	Derrick	Brown		1139 E 131st		Riverdale	IL	60827
	Mr.	Eddie	Brown		445 E Ohio Street, Apt 1807		Chicago	IL	60611
	Ms.	Izora	Brown		10408 S Green		Chicago	IL	60643
	Ms.	Mae	Brown		7637 S Ada St		Chicago	IL	60620
	Ms.	Mary	Brown		10819 S Wabash		Chicago	IL	60628
	Ms.	Monica	Brown		1751 W Steuben Ave		Chicago	IL	60643
		Thomas H.	Brown Sr.		325 W. 99th PL.		Chicago	IL	60628
		Derrick	Brownlee		14416 Sanderson Ave.		Dolton	IL	60419
	Ms.	Leslie	Bruce		636 E 133rd St		Riverdale	IL	60827
	Mr.	Solomon	Brumbolt		13210 S St. Lawrence		Chicago	IL	60819
	Mr.	Charles	Bruster		9604 S Peoria		Chicago	IL	60643
(Deaf)	Mr.	Michael	Bryant		7931 S. East End Ave.		Chicago	IL	60617
TCA Halth Inc.		Nordecai	Buckley		1029 E. 130th St.		Chicago	IL	60640
96th Perry Block Club		Johnnie	Burke		9607 S. Perry Ave.		Chicago	IL	60628
Jeanette's Joy Comm. Service		JoAnn	Burl	Founder/CEO	10639 S. Champlain Ave.		Chicago	IL	60628
	Ms.	Tomika	Burnett		909 W 77th Street		Chicago	IL	60620
	Mr.	Glenn	Burton		10017 S LaSalle		Chicago	IL	60628
	Mr.	M	Burton		10949 S Wabash		Chicago	IL	60628
			Business Owner		10001 S. Halsted Street		Chicago	IL	60628
			Business Owner		10015 S. Halsted Street		Chicago	IL	60628

Open House Notice Mailing List
Red Line Extension

Organization	Salutation	First Name	Last Name	Title	Address	Apt/ Floor	City	State	Zip
			Business Owner		10116 S. Halsted Street		Chicago	IL	60628
			Business Owner		10140 S. Halsted Street		Chicago	IL	60628
			Business Owner		10222 S. Halsted Street		Chicago	IL	60628
			Business Owner		10230 S. Halsted Street		Chicago	IL	60628
			Business Owner		10232 S. Halsted Street		Chicago	IL	60628
			Business Owner		10238 S. Halsted Street		Chicago	IL	60628
			Business Owner		10321 S. Halsted Street		Chicago	IL	60628
			Business Owner		10400 S. Halsted Street		Chicago	IL	60628
			Business Owner		10420 S. Halsted Street		Chicago	IL	60628
			Business Owner		10500 S. Halsted Street		Chicago	IL	60628
			Business Owner		10504 S. Halsted Street		Chicago	IL	60628
			Business Owner		10600 S. Halsted Street		Chicago	IL	60628
			Business Owner		10613 S. Halsted Street		Chicago	IL	60628
			Business Owner		10621 S. Halsted Street		Chicago	IL	60628
			Business Owner		10623 S. Halsted Street		Chicago	IL	60628
			Business Owner		10626 S. Halsted Street		Chicago	IL	60628
			Business Owner		10627 S. Halsted Street		Chicago	IL	60628
			Business Owner		10628 S. Halsted Street		Chicago	IL	60628
			Business Owner		10630 S. Halsted Street		Chicago	IL	60628
			Business Owner		10637 S. Halsted Street		Chicago	IL	60628
			Business Owner		10640 S. Halsted Street		Chicago	IL	60628
			Business Owner		10655 S. Halsted Street		Chicago	IL	60628
			Business Owner		10701 S. Halsted Street		Chicago	IL	60628
			Business Owner		10713 S. Halsted Street		Chicago	IL	60628
			Business Owner		10722 S. Halsted Street		Chicago	IL	60628
			Business Owner		10727 S. Halsted Street		Chicago	IL	60628
			Business Owner		10745 S. Halsted Street		Chicago	IL	60628
			Business Owner		10748 S. Halsted Street		Chicago	IL	60628
			Business Owner		10753 S. Halsted Street		Chicago	IL	60628
			Business Owner		10810 S. Halsted Street		Chicago	IL	60628
			Business Owner		10812 S. Halsted Street		Chicago	IL	60628
			Business Owner		10814 S. Halsted Street		Chicago	IL	60628
			Business Owner		10830 S. Halsted Street		Chicago	IL	60628
			Business Owner		10846 S. Halsted Street		Chicago	IL	60628
			Business Owner		10857 S. Halsted Street		Chicago	IL	60628
			Business Owner		10900 S. Halsted Street		Chicago	IL	60628
			Business Owner		10906 S. Halsted Street		Chicago	IL	60628
			Business Owner		10910 S. Halsted Street		Chicago	IL	60628
			Business Owner		10936 S. Halsted Street		Chicago	IL	60628
			Business Owner		10942 S. Halsted Street		Chicago	IL	60628
			Business Owner		10946 S. Halsted Street		Chicago	IL	60628
			Business Owner		10958 S. Halsted Street		Chicago	IL	60628
			Business Owner		11013 S. Halsted Street		Chicago	IL	60628
			Business Owner		11019 S. Halsted Street		Chicago	IL	60628
			Business Owner		11023 S. Halsted Street		Chicago	IL	60628
			Business Owner		11025 S. Halsted Street		Chicago	IL	60628
			Business Owner		11026 S. Halsted Street		Chicago	IL	60628
			Business Owner		11038 S. Halsted Street		Chicago	IL	60628
			Business Owner		11043 S. Halsted Street		Chicago	IL	60628
			Business Owner		11045 S. Halsted Street		Chicago	IL	60628
			Business Owner		11057 S. Halsted Street		Chicago	IL	60628
			Business Owner		11117 S. Halsted Street		Chicago	IL	60628
			Business Owner		11119 S. Halsted Street		Chicago	IL	60628
			Business Owner		11123 S. Halsted Street		Chicago	IL	60628
			Business Owner		11125 S. Halsted Street		Chicago	IL	60628
			Business Owner		11126 S. Halsted Street		Chicago	IL	60628
			Business Owner		11127 S. Halsted Street		Chicago	IL	60628

Organization	Salutation	First Name	Last Name	Title	Address	Apt/ Floor	City	State	Zip
			Business Owner		11128 S. Halsted Street		Chicago	IL	60628
			Business Owner		11134 S. Halsted Street		Chicago	IL	60628
			Business Owner		11135 S. Halsted Street		Chicago	IL	60628
			Business Owner		11139 S. Halsted Street		Chicago	IL	60628
			Business Owner		11142 S. Halsted Street		Chicago	IL	60628
			Business Owner		11200 S. Halsted Street		Chicago	IL	60628
			Business Owner		11201 S. Halsted Street		Chicago	IL	60628
			Business Owner		11223 S. Halsted Street		Chicago	IL	60628
			Business Owner		11226 S. Halsted Street		Chicago	IL	60628
			Business Owner		11254 S. Halsted Street		Chicago	IL	60628
			Business Owner		11301 S. Halsted Street		Chicago	IL	60628
			Business Owner		11302 S. Halsted Street		Chicago	IL	60628
			Business Owner		11306 S. Halsted Street		Chicago	IL	60628
			Business Owner		11322 S. Halsted Street		Chicago	IL	60628
			Business Owner		11325 S. Halsted Street		Chicago	IL	60628
			Business Owner		11328 S. Halsted Street		Chicago	IL	60628
			Business Owner		11357 S. Halsted Street		Chicago	IL	60628
			Business Owner		11435 S. Halsted Street		Chicago	IL	60628
			Business Owner		11443 S. Halsted Street		Chicago	IL	60628
			Business Owner		11500 S. Halsted Street		Chicago	IL	60628
			Business Owner		11509 S. Halsted Street		Chicago	IL	60628
			Business Owner		11526 S. Halsted Street		Chicago	IL	60628
			Business Owner		11550 S. Halsted Street		Chicago	IL	60628
			Business Owner		11600 S. Halsted Street		Chicago	IL	60628
			Business Owner		11601 S. Halsted Street		Chicago	IL	60628
			Business Owner		11643 S. Halsted Street		Chicago	IL	60628
			Business Owner		11656 S. Halsted Street		Chicago	IL	60628
			Business Owner		11717 S. Halsted Street		Chicago	IL	60628
			Business Owner		11720 S. Halsted Street		Chicago	IL	60628
			Business Owner		11724 S. Halsted Street		Chicago	IL	60628
			Business Owner		11815 S. Halsted Street		Chicago	IL	60628
			Business Owner		11932 S. Halsted Street		Chicago	IL	60628
			Business Owner		11944 S. Halsted Street		Chicago	IL	60628
			Business Owner		11948 S. Halsted Street		Chicago	IL	60628
			Business Owner		11957 S. Halsted Street		Chicago	IL	60628
			Business Owner		11958 S. Halsted Street		Chicago	IL	60628
			Business Owner		711 W. 120th Street		Chicago	IL	60628
			Business Owner		719 W. 119th Street		Chicago	IL	60628
			Business Owner		723 W. 119th Street		Chicago	IL	60628
			Business Owner		725 W. 119th Street		Chicago	IL	60628
			Business Owner		741 W. 115th Street		Chicago	IL	60628
			Business Owner		9900 S. Halsted Street		Chicago	IL	60628
			Business Owner		9911 S. Halsted Street		Chicago	IL	60628
			Business Owner		9934 S. Halsted Street		Chicago	IL	60628
Roseland Christian Ministries		Terry	Butler	Member	10517 S. Indiana		Chicago	IL	60628
	Mr.	Norman	Cage		10238 S Torrence		Chicago	IL	60617
	Ms.	Cozine	Calhoun		10217 S Eberhart		Chicago	IL	60628
	Ms.	Julia	Calvin		720 W 76th		Chicago	IL	60620
Teach Them How		Clotiel	Cameron	Executive Director	10501 S. Parnell		Chicago	IL	60628
		Eric	Campbell		P.O. Box 81144		Chicago	IL	60681
		Melvin	Campbell		11411 S. Emerald		Chicago	IL	60628
		Debra	Campbell		10842 S. Eberhart		Chicago	IL	60628
	Mr.	Emil	Campbell		9601 S Vanderpoel		Chicago	IL	60643
	Ms	Erica	Campbell		5041 S Princeton		Chicago	IL	60609
	Ms.	Elisabeth	Caron		1462 W. Argyle	Apt. #2-S	Chicago	IL	60640
Michael Carroll for 46th Ward Alderman	Mr.	Mark	Carroll		4760 N. Sheridan		Chicago	IL	60646

Organization	Salutation	First Name	Last Name	Title	Address	Apt/ Floor	City	State	Zip
	Ms	Mary	Carter		101069 S King		Chicago	IL	60628
	Ms.	Tatianna	Carter		13175 S Eberhardt		Chicago	IL	60827
	Ms	Julia	Cartwright		10221 S Eberhart		Chicago	IL	60628
	Ms.	Beverly	Catherine		9345 S Greenwood Ave		Chicago	IL	60619
	Ms.	Loina	Cesse		3530 W 83rd St		Chicago	IL	60652
	Ms.	Carolyn	Chatman		801 E 87th		Chicago	IL	60619
Roseland Christian Ministries		Betty	Cheeks		12420 S. ??		Chicago	IL	60628
Rosemoor Community Assoc.	Ms.	Dolores	Chestnut	Member	10522 S. Vernon Ave.		Chicago	IL	60628
Rosemoor Community Assoc.		Monica	Chestnut	Member	10522 S. Vernon Ave.		Chicago	IL	60628
	Mr.	Robert	Chi		1776 W. Winnemac	Apt. 302	Chicago	IL	60640
	Mr.	Robert	Christopher		12408 S Normal		Chicago	IL	60628
Roseland Christian Reformed Church		Leonard	Clark	Member	10903 S. State St.		Chicago	IL	60628
		Patricia	Clark		3623 188th Pl.		Lansing	IL	60438
CAPS		Vivian	Clark		13230 S. Vernon Ave.		Chicago	IL	60827
Roseland Christian Ministries		Saleena	Claybourne	Member	19 E. 102nd Street		Chicago	IL	60628
Cuffes Catering		Jason	Clayton	Cook, Cashier	10826 S. Wabash		Chicago	IL	60628
	Ms.	Shelytia	Cocroft		1900 W VanBuren		Chicago	IL	60614
	Mr.	Darian	Coffey		1157 E 101st St		Chicago	IL	60628
Roseland Christian Reformed Church		Harold	Coleman	Member	1621 W. Walnut St.		Chicago	IL	60612
	Ms.	Shany	Coleman		5219 W Madison		Chicago	IL	60644
	Mr.	Darius	Coleman		10543 S King Drive		Chicago	IL	60628
	Ms.	Kelly	Collier		815 E 130th		Riverdale	IL	60827
	Ms.	Stacy	Combs		1552 W 122nd St		Chicago	IL	60643
	Ms.	Mary	Commons		2032 E 79th		Chicago	IL	60649
	Ms	Pamela	Conley		11351 S Loomis		Chicago	IL	60643
Roseland Christian Ministries		Jordan	Connell	Member	49 E. 102nd Place		Chicago	IL	60628
		Angela	Conner		10018 S. Eberhart		Chicago	IL	60628
	Ms.	Amailia	Conway		13254 S Ellis		Riverdale	IL	60627
	Mr.	James	Conway		1131 E 131 St		Riverdale	IL	60827
	Mr.	Gramer	Cook		5925 S Bishop St		Chicago	IL	60636
	Ms.	Shekema	Cook		257 W 107th Pl		Chicago	IL	60628
Roseland Christian Reformed Church		Hilda	Cooks	Member	10740 S. State St.		Chicago	IL	60628
Roseland Christian Reformed Church		Carol	Cooley Watkins	Member	31 W. 108th Place		Chicago	IL	60628
	Ms.	Gloria	Cosey		10133 Rhodes		Chicago	IL	60628
	Mr.	Stephen	Costello		1723 E 71st Street		Chicago	IL	60649
Roslang Christen Ministries		Calvin	Cotton	Member	10529 S. Perry		Chicago	IL	60628
Roseland Comm. Collaborative NFP		Derek	Covington	President	258 E. 115th St.		Chicago	IL	60628
Roseland Christian Ministries		DeEldridge	Covington	Member	10858 Michigan Ave.		Chicago	IL	60628
	Ms.	Carolyn	Cox		10124 S Rhodes		Chicago	IL	60628
	Ms.	Tearra	Cox		12846 S Wallace		Chicago	IL	60628
	Ms	Kim	Craig		18550 Torrence Ave		Chicago	IL	60438
	Ms.	Kory	Crain		10057 S Prairie		Chicago	IL	60628
	Ms.	Altee	Crocker		9300 S Rhodes Ave		Chicago	IL	60619
	Ms.	Brittany	Crockrom		14729 Lincoln		Chicago	IL	60419
	Mr.	Eugene	Crowley		55 W. Chestnut	Apt 2304	Chicago	IL	60610
	Mr.	Jacob	Cummings		13113 S St. Lawrence		Chicago	IL	60827
	Ms.	Jasmine	Cummings		13113 S St. Lawrence		Chicago	IL	60827
	Mr.	Mike	Cummings		13113 S St. Lawrence		Chicago	IL	60827
	Ms.	Tamieka	Cummings		13113 S St. Lawrence		Chicago	IL	60827
	Ms.	Tanisha	Cummings		13113 S St. Lawrence		Chicago	IL	60827
New Life		Phillip	Cusic	Pastor	8201 S. Jeffery		Chicago	IL	60628
	Mr.	Reginald	Daniel		6631 S Champlain		Chicago	IL	60637
	Mr	Darryl	Daniels		9625 S Yale Ave		Chicago	IL	60628
	Mr.	Edmund Dewayne	Daniels		8822 South Dante Ave		Chicago	IL	60619
	Mr.	Robert	Daniels		5480 South Cornell Ave		Chicago	IL	60615

Organization	Salutation	First Name	Last Name	Title	Address	Apt/ Floor	City	State	Zip
	Mr.	Caesar	Davidson		7732 S Honore		Chicago	IL	60620
	Ms.	Karlise	Davidson		7732 S Honore		Chicago	IL	60620
	Ms.	Peggy	Davidson		7732 S Honore		Chicago	IL	60620
	Ms.	Tiffany	Davidson		7732 S Honore		Chicago	IL	60620
		Ashley	Davis		7940 S. Wood St.		Chicago	IL	60620
Blacks in Green		Naomi	Davis	President	6839 S. Ridgeland		Chicago	IL	60649
	Mr.	Kenneth	Davis		11557 S Yale		Chicago	IL	60628
Roseland Christian Ministries		Pearle	Davis	Member	341 W. 108th Place		Chicago	IL	60628
	Ms.	Talisha	Davis		4709 176th St		Country Club Hills	IL	60478
	Mr.	James	Dawson		7102 S Luella		Chicago	IL	60649
		Juanita	Dean		315 W. 99th Place		Chicago	IL	60628
	Ms.	Alicia	DeBarry		426 E 48th Pl	#1W	Chicago	IL	60615
Trinity Christian College		Michelle	DeHaan		6601 W. College Dr.		Palos Heights	IL	60463
	Mr.	D	Delaney		13057 S Champlain		Chicago	IL	60628
	Ms.	Moesha	Delaney		13057 S Champlain		Chicago	IL	60628
	Mr.	Solomon	Densby		2534 W 68th St		Chicago	IL	60629
	Mr.	Michael	Denton Jr.		10931 S Vernon Ave	#1E	Chicago	IL	60628
Roseland Christian Reformed Church		Juan	Diaz	Member	27 W. 114th Place		Chicago	IL	60628
CAP Meeting		Evelyn	Dickerson	Member	13278 S. Riverdale		Chicago	IL	60827
	Ms.	Fannie	Dickett		9924 S Lafayette		Chicago	IL	60628
		Ann	Dillemuth		4841 N. Ashland #1F		Chicago	IL	60640
		Alzonia	Dixon		11426 Egglesten		Chicago	IL	60678
	Ms.	Cheryl	Dixon		634 C E 133rd St		Riverdale	IL	60827
	Ms.	Jessie	Dixon		535 E 102nd St		Chicago	IL	60628
	Ms.	Sharon	Dixon		13118 S Ellis		Chicago	IL	60633
Roseland Christian Reformed Church		Alma	Donald	Member	7623 S. Wood		Chicago	IL	60620
	Mr.	William	Dortch		970 E 133 St		Riverdale	IL	60827
S.O.N. Foundation		Robert	Douglas	Founder	10812 S. Forest		Chicago	IL	60628
	Mr.	Alex	duBuclet		4936 S Ellis		Chicago	IL	60615
	Ms.	Marilyn	Duffis		13044 S Drexel		Riverdale	IL	60827
	Mr.	Antonio	Dukes		9925 S Beverly		Chicago	IL	60643
Roseland Christian Reformed Church		Bobbie	Dunbar	Member	31 W. 108th Place		Chicago	IL	60628
	Ms.	Joyce	Dunmore		10321 S Calumet		Chicago	IL	60628
	Ms.	Beth	Dybala		4170 N. Marine	13K	Chicago	IL	60613
	Mr.	George	E		11306 S Church St		Chicago	IL	60643
Impact Family Center		Marsha	Eaglin	CEO	10835 S. Hermosa		Chicago	IL	60643
	Ms.	Diana	Echiles		13093 S Drexel		Riverdale	IL	60827
		Arlene	Echols		11329 St. Lawrence		Chicago	IL	60628
	Ms.	Everlian	Eckols		10822 S Wabash		Chicago	IL	60628
	Ms.	Izola	Elliot		12559 S Lowe		Chicago	IL	60628
	Ms.	Marie	Elliot		10944 S Parnell		Chicago	IL	60628
		Melanie	Ellis		8653 S. Tripp		Chicago	IL	60652
	Mrs.	Dora	Engram		12230 S Perry Ave		Chicago	IL	60628
	Ms.	Lavell	Enis		13020 S Drexel		Riverdale	IL	60827
	Mr.	Stewart	Evans		5948 S Rockwell		Chicago	IL	60620
	Ms.	Alisha	Evans		12500 S. Lowe		Chicago	IL	60628
		Charlotte	Evans		4827 S. Kimbark		Chicago	IL	60619
	Mr.	Jon	Evans		119036 S Princeton Ave		Chicago	IL	60628
	Mr.	S	Evans		801 E 193rd		Chicago	IL	60425
	Ms.	Paulette	Ewing		38 W 109th Pl		Chicago	IL	60628
	Mr	Tony	Fields		830 W 119th		Chicago	IL	60643
		Barry	Finkel		10314 S. Oakley		Chicago	IL	60643
	Mr.	Michael	Flemming		10239 S LaSalle		Chicago	IL	60628
	Ms.	Tracy	Flemming		1717 Ashland		Chicago	IL	60620
Roseland Christian Ministries		Evelyn	Fletcher	Member	6511 S. Eberthard		Chicago	IL	60637
99th & 100th Green St. Block Club		Deborah	Fletcher		9929 S. Green St.		Chicago	IL	60643
Black Star Community PTA		Cynthia	Flowers	President	3509 S. King Drive		Chicago	IL	60616

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Organization	Salutation	First Name	Last Name	Title	Address	Apt/ Floor	City	State	Zip
Roseland Christian Reformed Church		Curtis	Flowers	Member	10858 S. Michigan Ave.		Chicago	IL	60628
Joy Fellowship Baptist Church		Dr. Isaac	Floyd	Pastor	2025 E. 175th		Lansing	IL	60438
Roseland Christian Ministries		Eddie	Floyd	Carpenter	10858 Michigan Ave.		Chicago	IL	60628
Victory Temple COFIC		Pamela	Fluellen	Member	10209 S. St. Lawrence		Chicago	IL	60628
	Ms.	Shirley	Forte		453 E 107th St		Chicago	IL	60628
Honor Roll AU Stars		Moe	Fourte	Executive Director	3473 S. King Dr., #462		Chicago	IL	60616
		Maria	Fowler		10210 Eggleston		Chicago	IL	60628
HRDI		Larris	Fox	Member	13034 S. Wood		Blue Island	IL	60406
		Robert	Franklin		10152 S. Eggleston		Chicago	IL	60628
	Ms.	Doretha	Franklin		13042 S Ellis		Riverdale	IL	60827
	Mr.	Leron	Frencha		6717 S. Evans Ave.		Chicago	IL	60637
		Bill	Fried		4543 N. Hamilton Ave.		Chicago	IL	60625-1643
Church of God		James	Fulford	Member	12528 Edbrook		Chicago	IL	60623
	Mr.	Keith	Gaitor		10645 S Green St		Chicago	IL	60643
	Mr.	Graham	Garfield		901 W Gordan Ter	#1	Chicago	IL	60613
	Mr	TS	Gary		1181 S Lyman Ave		Oak Park	IL	60304
	Ms.	Ellen	Garza		11338 S. St. Lawrence		Chicago	IL	60628
		Sandra	Gaskin		701 E. 105th Street		Chicago	IL	60628
	Mr.	Donald	Gater		9404 S Vernon		Chicago	IL	60619
	Ms.	Nobie	Gatson		14343 Hoxie		Chicago	IL	60633
	Ms.	Jamian	Gaydon		7659 S Damen		Chicago	IL	60620
	Ms.	Patty	Gaydon		7659 S Damen		Chicago	IL	60620
	Mr.	Lesszes	George		7125 S Eggleston		Chicago	IL	60621
		Darryl	Gibson		11142 S. Emerald		Chicago	IL	60628
Roseland Christian Ministries		Hyland	Gilder Barry		33 E. 111th Pl.		Chicago	IL	60628
House of Hope		William	Gill	Member	10559 S. State St.		Chicago	IL	60628
Roseland Christian Ministries		Aaron	Gill		10858 Michigan Ave.		Chicago	IL	60628
	Mr.	Larry	Gill		6926 S Racine		Chicago	IL	60621
	Ms.	Dida	Gillard		13105 s St Lawrence		Chicago	IL	60827
	Mr.	Aaron	Glasper		10817 S Forest		Chicago	IL	60628
		Pamela	Glenn		53 E. 100th St.		Chicago	IL	60628
Trinity Christian College		Kayla	Godinez		6601 W. College Dr.		Palos Heights	IL	60463
	Mr.	Charles	Goodrum		7317 S. Prairie		Chicago	IL	60619
	Mr.	Stephan	Gordan		13098 S Ellis		Chicago	IL	60827
Roseland Christian Ministries		William	Gordon II	Member	131 E. 103rd Place		Chicago	IL	60628
	Mr.	Don	Grabowski		30 W LaSalle	Ste 3220	Chicago	IL	60602
De Stefano Partners	Ms.	Mary Jo	Graf	Director of Marketing and Public Relations	330 North Wabash Avenue	Suite 3200	Chicago	IL	60611
	Ms.	Karen	Graham		9354 S Parnell		Chicago	IL	60620
	Ms.	April	Gray		13048 S Deluxe		Riverdale	IL	60827
	Ms.	Carmelita	Gray		5750 S Lafayette		Chicago	IL	60621
		Martese	Gray		5750 Lafayette		Chicago	IL	60628
Developing Communities Project		Patricia	Gray Smith	Prevention Specialist	11300 South Halsted St.		Chicago	IL	60628
Healthcare Consortium of IL		Ella	Grays	Chief Program Officer	1350 E. Sibley Blvd.		Dolton	IL	60419
		Robert	Graziano		1530 N. Dearborn		Chicago	IL	60610
	Ms.	Gloria	Green		10143 S Calumet		Chicago	IL	60628
	Ms	Deloris	Green		9335 S Parnell		Chicago	IL	60620
Roseland Christian Reformed Church		James	Green	Member	11210 S. Normal		Chicago	IL	60642
	Ms	Kenisha	Greene		20030 Monterey Av		Lynwood	IL	60411
	Ms	Miedred	Greenlaw		251 W 79th St		Chicago	IL	60620
	Mr.	Alvin	Greenup Jr.		12118 S. Parnell Ave.		Chicago	IL	60628
Precision Management		Donna	Greenwood	President	8445 S. Rhodes		Chicago	IL	60619
	Ms.	Rachel	Gregersen		11239 S Forrestville		Chicago	IL	60628
	Ms.	Odella	Grey		11138 S Vernon		Chicago	IL	60628
		Vincent	Griffin		715 E. 56th Pl., #3A		Chicago	IL	60615
		Jen	Groen		1258 W. Winona St.		Chicago	IL	60628

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Organization	Salutation	First Name	Last Name	Title	Address	Apt/ Floor	City	State	Zip
	Ms.	Barbara	Gross		10720 S Yates		Chicago	IL	60617
	Mr.	Ross	Guthrie		5217 N. Clark		Chicago	IL	60640
		Abraham	Gutierrez	Special Education Classroom Asst.	6024 S. Fairfield Ave.		Chicago	IL	60629
R.C.A.	Mr.	Clinton	Hall	Board Member	10536 S. Rhodes		Chicago	IL	60628
	Mr.		Hall		557 W. 125th St.		Chicago	IL	60628
		Edward	Hamb		7903 S. Rhodes, #211		Chicago	IL	60611
	Mr.	Renardo	Hamilton		4340 S. Drexel Blvd.	7D	Chicago	IL	60653
	Mr.	Horace	Hamilton		2032 E 79th		Chicago	IL	60649
	Mr.	Mitchell	Hampton		13067 S Champlain		Chicago	IL	60628
Roseland Christian Ministries		Charisse	Hancox	Member	10517 S. Indiana		Chicago	IL	60628
		Denise	Handy		11408 S. Prairie Ave.		Chicago	IL	60628
Kenjiva Energy		Mark	Handy	Principal	519 E. Hyde Park		Chicago	IL	60615
	Mr.	Michael	Hargis		10724 S Sangamon		Chicago	IL	60643
United Church of Christ Association	Rev.	Rev. Alice	Harper Jones	Pastor	P.O. Box 208491		Chicago	IL	60620
111th Street Block Club		Mark	Harrell		11121 S. Emerald		Chicago	IL	60628
		Dolphin	Harris		7438 S. Eberhart		Chicago	IL	60619
	Ms.	Joanna	Harris		922 E 155th St		Chicago	IL	60426
	Ms.	Latrice	Harris		40 W 113th Pl		Chicago	IL	60628
Roseland Christian Reformed Church		Gregory & Kay	Hart	Member	15122 Walgreen Dr.		South Holland	IL	60473
Roseland Christian Ministries		Ethel	Harts	Member	10858 S. Michigan Ave.		Chicago	IL	60628
Roseland Christian Ministries		Tony	Harts	Member	9331 S. Saginaw		Chicago	IL	60617
	Mr.	Sherman	Hatley		10945 S Vernon		Chicago	IL	60628
	Ms.	Nadine	Hawley		9631 S Green St		Chicago	IL	60643
Candidate for U.S. Congress, IL 2nd Congressional District	Rev.	Isaac	Hayes		P.O. Box 996		Richton Park	IL	60471
Christ the Answer COGIC		Sherrie	Hayes	Member	12129 S. Parnell		Chicago	IL	60628
	Mr.	Byron	Hayes		7609 S Emerald		Chicago	IL	60620
		Cheryl	Haynel		3515 W. 85th Pl.		Chicago	IL	60652
	Mr.	J	Haynes		10335 S Vernon		Chicago	IL	60628
	Mr.	Ronald	Haynes		10335 S Vernon		Chicago	IL	60628
Striving for Justice Min.		Barbara	Hearon	Executive Director	258 E. 115th St.		Chicago	IL	60620
	Ms.	Nancy	Henderson		10543 King Drive		Chicago	IL	60628
	Mr.	Gregory	Hendricks		9355 S Michigan		Chicago	IL	60619
		Jeremy	Henley		10012 S. Calumet Ave.		Chicago	IL	60628
	Ms.	Bridget	Henry		9337 S Marquette Ave		Chicago	IL	60617
	Ms.	Cierra	Herdon		10216 S Princeton		Chicago	IL	60628
	Mr.	Dion	Hibbler		13043 S Evans		Riverdale	IL	60827
	Ms.	Evelyn J.	Hicks		11342 S. Lowe		Chicago	IL	60628
	Ms.	Angelies	Hightower		10217 S St Lawrence		Chicago	IL	60628
		Hapri	Hill		9225 S. May		Chicago	IL	60620
Rosemoor Community Assoc.		Shirley	Hill	Membership Chairperson	10220 S. Rhodes Ave.		Chicago	IL	60628
	Ms.	Stephanie	Hill		36 W 113th		Chicago	IL	60628
	Ms.	Julia	Hines		501 E 107th St		Chicago	IL	60628
	Mr.	John	Holden		4729 N. Dover St.		Chicago	IL	60640
	Ms.	Mattie	Holden		13113 S St. Lawrence		Chicago	IL	60827
	Ms.	Kyra	Hollingsworld		13217 S Rhodes		Riverdale	IL	60827
Trinity Christian College		Leah	Hollingsworth		6601 W. College Dr.		Palos Heights	IL	60463
	Ms	Luvenia	Holman		8453 S Paulina		Chicago	IL	60620
	Mr.	Donald	Hood		9837 S Ingleside		Chicago	IL	60628
	Ms.	Blanche	Hoplans		11426 S Wallace		Chicago	IL	60628
	Mr.	Melvin	Hopson		1515 S Prairie		Chicago	IL	60605
	Ms.	Christina	Horde		1520 W. 99th St.		Chicago	IL	60643
	Ms.	Cecilia	Horde		1514 W. 99th		Chicago	IL	60643
	Mrs.	Jerre	Horde		9628 S Perry Ave		Chicago	IL	60628
95-97 Perry Ave. Block Club	Mr.	John	Horde		9628 S. Perry Ave.		Chicago	IL	60628

Organization	Salutation	First Name	Last Name	Title	Address	Apt/ Floor	City	State	Zip
		Mary J.	Horde		9228 S. Perry		Chicago	IL	60628-1344
		Beesie	Hoskins		1641 Harbor Ave.		Calumet City	IL	60409
	Mr.	Kirk	Hoskins		319 E 130th St		Chicago	IL	60827
		Demetrius	Houston		12240 South Perry		Chicago	IL	60628
		Desta	Houston		11300 S. Halsted, Suite A		Chicago	IL	60628
		R.C.	Houston		12240 South Perry		Chicago	IL	60628
Roseland Christian Reformed Church		Annette	Howard	Member	840 S. Wood Street		Chicago	IL	60629
	Mr.	Joe	Howard		15531 Cottage Grove		Chicago	IL	60419
	Ms.	Lucille	Howye		1358 S Throop		Chicago	IL	60608
Roseland Christian Reformed Church		Dashan	Hudson	Deacon	5 E. 102nd Place		Chicago	IL	60628
	Mr.	Jerry	Hudson		9696 S Indiana		Chicago	IL	60628
Roseland Christian Ministries		Evelyn	Hughes	Member	10858 S. Michigan Ave.		Chicago	IL	60628
DCP		Amy	Hughs		10949 S. Ridgeway		Chicago	IL	60655
		G	Hunter		501 E. 105th St.		Chicago	IL	60628
	Mr.	Michael	Hunter Jr.		13254 S Ellis		Chicago	IL	60628
		Mackenzi	Huyser		5346 S. Drexel Ave.		Chicago	IL	60615
	Mr.	JR	Hyde		9543 S Union Ave		Chicago	IL	60628
	Mr.	Yul	Ivy		1000 E 130th Street		Chicago	IL	60628
Roseland Christian Reformed Church		Tynisha	Jackson	Member	120 E. 103rd Place		Chicago	IL	60620
New Life		Kimberly Renee	Jackson	Member	7255 S. Philips		Chicago	IL	60649
Roseland Christian Ministries		Alvis Dean	Jackson	Member	10449 S. Wabash		Chicago	IL	60628
Developing Communities Project		Emanual	Jackson		8101 S. Maryland		Chicago	IL	60619
	Mr.	Edward	Jackson		10540 S Vernon		Chicago	IL	60628
	Mr.	Emmanuel	Jackson		8101 S Maryland		Chicago	IL	60619
	Ms.	Jackie	Jackson		9921 S Normal		Chicago	IL	60628
	Ms.	Kay	Jackson		9372 Vanderpoel Ave		Chicago	IL	60643
	Mr.	Marcus	Jackson		6404 S Troy		Chicago	IL	60629
	Mr.	Hoy	Jackson III		11347 S Green		Chicago	IL	60643
Healthcare Consortium of IL		Jessica	Jagielnik		2329 W. Walton St.		Chicago	IL	60622
	Mr.	Deon	James		13169 S Corliss		Chicago	IL	60827
	Mr.	Derrick	James		1743 E 83rd Pl		Chicago	IL	60617
	Ms.	Elaine	Jefferson		705 West 107th St.		Chicago	IL	60628
Roseband Christianity		Gregory	Jefferson	Member	128 W. 109th Place		Chicago	IL	60628
	Mr.	Michael	Jefferson		13075 S Evans		Riverdale	IL	60827
	Ms.	Jacqueline	Jefferson		247 E 132nd		Riverdale	IL	60827
Roseland Christian Ministries		Debbie	Jenkins	Member	13129 S. St. Lawrence		Chicago	IL	60827
	Ms.	Jocelynn	Jenkins		6342 S Kenwood		Chicago	IL	60637
Aldridge PTA		Maxine	Jennings	President	13100 S. St. Lawrence		Chicago	IL	60827
		Ronn	Johnson		9539 S. Dobson		Chicago	IL	60628
	Ms.	Dee'Annah	Johnson		8201 S State St		Chicago	IL	60619
	Mr.	Eric	Johnson		338 E. 99th St.		Chicago	IL	60628
		Horatio	Johnson		13027 S. Drexel		Chicago	IL	60827
	Mr.	James	Johnson		11118 S Homewood		Chicago	IL	60643
		Jerry	Johnson		11329 S. Indiana Ave.		Chicago	IL	60628
		Joyce	Johnson		368 E. 134th		Chicago	IL	60827
Roseland Christian Ministries		Shuna	Johnson	Member	10858 S. Michigan Ave.		Chicago	IL	60628
Golden Gate Community Association		Ulondia	Johnson	Teacher	13027 S. Drexel Ave.		Chicago	IL	60827
		Ursula	Johnson		13027 S. Drexel		Chicago	IL	60827
CAP Meeting		Walter	Johnson		368 E. 134th		Chicago	IL	60827
	Mr.	Anthony	Johnson		1929 S Homan Ave		Chicago	IL	60623
	Mr.	Anthony	Johnson		3351 W 21st St		Chicago	IL	60623
	Ms.	Carolyn	Johnson		13130 S Corliss		Riverdale	IL	60827
	Ms.	Cheryl	Johnson		13116 S. Ellis Ave.		Riverdale	IL	60827
	Ms.	Mamie	Johnson		10041 S State		Chicago	IL	60628
	Ms.	Mikeisha	Johnson		12025 S Wentworth		Chicago	IL	60628
	Ms.	Reba	Johnson		13262 S Ellis		Riverdale	IL	60827

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Organization	Salutation	First Name	Last Name	Title	Address	Apt/ Floor	City	State	Zip
	Ms.	Shatrice	Johnson		304 E 132nd St		Riverdale	IL	60827
	Ms.	Valerie	Johnson		923 E 130th Place		Riverdale	IL	60827
	Mr.		Johnson		13041 S Evans		Riverdale	IL	60827
Salem B. Church		Brenda	Johnson Fisher	Member	10503 S. Corliss Ave.		Chicago	IL	60628
	Ms.	Sonja	Johnson Hall		12700 S Sangamon		Chicago	IL	60643
	Mr.	Lanita	Jones		10531 S. Eberhart		Chicago	IL	60628
		Joanne	Jones		145 W. 125th St.		Chicago	IL	60628
Sustainable Englewood Project		John Paul	Jones	President	2113 W. 71st St.		Chicago	IL	60636
	Mr.	Alexander	Jones		9537 S Racine		Chicago	IL	60643
	Ms.	Chane	Jones		830 W 50th Pl		Chicago	IL	60609
	Mr.	Christopher	Jones		10331 S Eberhart		Chicago	IL	60628
Golden Gate Community Association		Claudia	Jones		13273 S. Eberhart		Chicago	IL	60827
	Ms.	Erica	Jones		713 E 131st		Riverdale	IL	60827
Roseland Christian Ministries		Fred	Jones	Member	11218 S. Zangley		Chicago	IL	60628
	Mr.	James	Jones		917 E 130th		Chicago	IL	60827
Roseland Christian Ministries		Johnnie	Jones	Member	108 S. Michigan Ave.		Chicago	IL	60628
	Mr.	Jordhan	Jones		600 E 88th Street		Chicago	IL	60619
	Ms	Karen	Jones		10314 S Vernon		Chicago	IL	60628
	Mr.	Levi	Jones		10537 S King Drive		Chicago	IL	60628
	Ms.	Regina	Jones		10531 S. Eberhart		Chicago	IL	60628
Roseland Christian Reformed Church		Roderick	Jones	Musician	5 E. 102nd Place		Chicago	IL	60620
Joy Fellowship Baptist Church		Verdia	Jones		8623 S. Elizabeth St.		Chicago	IL	60620
	Mr.	Javon	Jordan		9900 S Peoria		Chicago	IL	60643
	Mr.	Bruce	Jordan		8105 S Peoria		Chicago	IL	60628
	Mr.	Larry	Jordan		857 w 107th		Chicago	IL	60643
	Ms.	Brandy	Julien		10957 S Green		Chicago	IL	60643
K.A. Pridjian Rug Store		Thomas	Jundanian	Owner	11600 S. Halsted St.		Chicago	IL	60628
	Mr.	Lowell	Junior		14032 Marquette Ave		Chicago	IL	60633
	Mr.	Harvey	Kahler		2041 W. Birchwood		Chicago	IL	60645
Roseland CDC		Yahya	Karim	Ex. Director	11409 S. Michigan		Chicago	IL	60628
Domenech Hicks & Krockmalnic Architects	Mr.	George	Katsoufis	Associate	54 Canal Street	Suite 200	Boston	MA	02114
	Mr.	Ryan	Kaufmann		8552 Village Qtr.	#6	Dundee	IL	60118
Roseland Comm. Dev. Corp.		Yahya	Kavim	Executive Director	11409 S. Michigan		Chicago	IL	60628
		J	Keane		936 W. Sunnyside Ave.	Apt. 303	Chicago	IL	60640
Wefarm America		Seneca	Kein		4121 S. Drexel Blvd.		Chicago	IL	60653
Gompers Fine Arts		Robert	Kelsey		12302 S. State		Chicago	IL	60628
	Mr.	Dwayne	Kennedy		10538 S Corliss		Chicago	IL	60628
	Ms.	Renee	Kennedy		950 E 86th		Chicago	IL	60619
		Richard	Kennedy		10538 S. Corliss		Chicago	IL	60628-3059
	Ms.	Reaeh	King		12409 S Yale		Chicago	IL	60628
	Mr.	Randy	King		11014 S. Lowe		Chicago	IL	60628
Roseland Christian Ministries		Rachel	Kirkpatrick	Member	49 E. 102nd Place		Chicago	IL	60628
	Mr.	James	Kline		12817 S Union		Chicago	IL	60628
		Jane	Klunk		3857 W. 111th St.		Chicago	IL	60655
	Mr.	Tyrone	Kyles		5525 W Congress Pkwy		Chicago	IL	60644
		Craig	Laramore		10225 S. Green St.		Chicago	IL	60643-2341
Kids Off the Block		Diane	Latiker	Founder/President	11621 S. Michigan		Chicago	IL	60628
Roseland Christian Ministries		Shaun	Lawler	Member	49 E. 102nd Place		Chicago	IL	60628
	Mr.	Carl	Laws		408 W Marquette		Chicago	IL	60621
	Mr.	Katherine	Leatherwood		1366 S Eberhart		Chicago	IL	60628
	Mr.	Michael	Leatherwood		10207 Eberhart		Chicago	IL	60628
Golden Gate Community Association		Angaleak	Lee	Secretary	13256 S. Vernon Ave.		Riverdale	IL	60827
	Mr.	Allen	Lee		10554 S Eberhart		Chicago	IL	60628
	Mr.	Julius	Lee		1044 E 132nd St		Chicago	IL	60827
Roseland Christian Ministries		Marion	Lee	Member	11020 S. Indiana		Chicago	IL	60628

Organization	Salutation	First Name	Last Name	Title	Address	Apt/ Floor	City	State	Zip
	Ms.	Cadisha	Lemon		13113 S St. Lawrence		Chicago	IL	60827
	Ms.	Camaya	Lemon		13113 S St. Lawrence		Chicago	IL	60827
	Ms.	Danasha	Lemon		13113 S St. Lawrence		Chicago	IL	60827
	Ms.	Toni	Lemon		13113 S St. Lawrence		Chicago	IL	60827
		Monique	Lenvir		11544 S. Perry		Chicago	IL	60628
Leroy Cleaning Service		Carlton	Lewis	Janitor	11037 S. Edbrook		Chicago	IL	60628
	Mr.	Donald	Lewis		739 E 131st		Chicago	IL	60827
		Arzetta	Libbett		P.O. Box 288776		Chicago	IL	60628
	Ms.	Essence	Lindsey		2100 W Washington		Chicago	IL	60612
	Ms.	Patricia	Litefoot		10224 S Walden Parkway	#B1	Chicago	IL	60643
	Mr.	Jeffrey	Littleton		4727 N. Malden St.		Chicago	IL	60640
		Bobbie	Lloyd		12357 S. Perry		Chicago	IL	60628
	Ms.	Gladis	Lloyd Vinson		10011 S Prairie Ave		Chicago	IL	60628
	Mr.	Brandon	Lockett		10436 S Eberhart		Chicago	IL	60628
Golden Gate Community Association		Lamont	Lofton	Treasurer	13164 S. Vernon Ave.		Riverdale	IL	60827
New Life		Niesha	Long	Member	7003 S. Chicago		Chicago	IL	60640
		David	Lopez		11344 S. Forestville		Chicago	IL	60628
		Frank A.	LoPresti		6252 S. Central	Apt.# 35	Chicago	IL	60638
		Chequita	Loston		12837 S. Parnell Ave.		Chicago	IL	60628
Developing Communities Project	Mr.	Brandon	Love	Prevention Specialist	11300 S. Halsted Street	Suite A	Chicago	IL	60628
		Annette	Love		10521 S. Peary		Chicago	IL	60628
Golden Gate Community Association		Deloris	Lucas	President	13134 S. Vernon Ave.		Riverdale	IL	60827
		Edmond	Lumpkin		7940 S. Wood St., Apt. 1		Chicago	IL	60620
		Yolanda	Luvert		700 W. 111th St.		Chicago	IL	60628
		Lori	Lypson		10748 S. Parnell		Chicago	IL	60628
	Ms	Christina	Macias		3044 E 87th		Chicago	IL	60617
Golden Gate Community Association		Leola	Macklin		13236 S. Vernon Ave.		Chicago	IL	60827
		Freda	Madison		9907 S. Parnell Ave.		Chicago	IL	60628
	Ms.	Mary	Magee		917 E 130th		Chicago	IL	60827
City of Chicago, Dept. of Environment		Suzanne	Malec-McKenna	Commissioner	30 N. LaSalle Street, 25 Floor		Chicago	IL	60602
	Ms.	Mercedes	Mallette		1380 Ring Rd		Calumet City	IL	60409
		Jamonica	Marion		11543 S. Campbell Ave.		Chicago	IL	60655
		Debra	Martin		24625 Mulberry Lane		Crete	IL	60417
Roseland Christian Ministries		Katrina	Martin	Member	338 W. 116th Street		Chicago	IL	60628
Roseland Christian Ministries		Elena	Martin	Member	341 W. 108th Place		Chicago	IL	60628
	Ms.	Joann	Martin		10351 S Forest		Chicago	IL	60628
	Ms.	Beverly	Martin		742 East 69th		Chicago	IL	60637
	Ms.	Melayna	Martin		9859 S Muskegon		Chicago	IL	60617
	Mr.	P	Martin		9347 S Phillips		Chicago	IL	60617
		Brian	Maryland		8751 S. Euclid		Chicago	IL	60617
		Rita	Maryland		9230 S. Bennett Ave.		Chicago	IL	60617
Mechanic Shop		Reginald	Massonburg	Shop Foreman	11324 S. Wentworth St.		Chicago	IL	60628
	Ms.	Vivian	Mathis		10534 S Rhodes		Chicago	IL	60628
	Mr.	David	Matthews		1953 Grove St.		Blue Island	IL	60457
	Ms.	Sabrina	Matthews		9343 Ridgeland		Chicago	IL	60617
	Mr.	Walter	Matthews		8905 S Eggleston		Chicago	IL	60628
		David	May		400 S. 8th Ave.		LaGrange	IL	60525
		Daniel	Mays		9800 South		Chicago	IL	60628
Maple Park UMC		Antoinette	McAllister		11705 S. Elizabeth		Chicago	IL	60643
		Jean	McBride		10524 S. Corliss Ave.		Chicago	IL	60628
	Ms.	Risa	McCall		13057 S Drexel Ave		Riverdale	IL	60827
	Ms.	Chiaudriana	McClatchey		112 W 110th Pl		Chicago	IL	60628
	Ms.	Precious	McCoy		13100 Doty		Chicago	IL	60628
	Mr.	Muhammad	McCrax		10441 S Prairie		Chicago	IL	60628
	Ms.	Omega	McDaniels		1131 E 131 St		Riverdale	IL	60827
	Ms.	Venita	McDonald		2813 W 85th Pl		Chicago	IL	60652
	Ms.	Frances	McFee		11733 S. Sangamon		Chicago	IL	60643

Open House Notice Mailing List
Red Line Extension

Organization	Salutation	First Name	Last Name	Title	Address	Apt/ Floor	City	State	Zip
		John	McGarry		10615 Princess Ave.		Chicago Ridge	IL	60415
		Patrice	McGee		9433 S. Indiana Ave.		Chicago	IL	60619
	Mr.	James	McGinnis		10850 Wentworth		Chicago	IL	60628
Roseland Christian Ministries		Edward	McGut		10858 Michigan Ave.		Chicago	IL	60628
Pullman Civic Org.		Tom	McMahon		639 E. 111th Street		Chicago	IL	60628
Rosemoor Com. Assoc.		Deena	McMillan		10109 S. King Dr.		Chicago	IL	60628
	Ms	Haroldeena	McMillian		10109 S King Drive		Chicago	IL	60628
Walsh Construction		Chris	McNally	Project Engineer	929 W. Adams St.		Chicago	IL	60607
Roseland Christian Reformed Church		Corclero	McNeal	Member	313 E. 137th		Chicago	IL	60628
	Ms.	Qiana	Mcose		9924 S Hoxie		Chicago	IL	60617
	Ms.	Sahauanna	Measman		6442 S Maplewood		Chicago	IL	60229
	Mr.	Jack	Meeks		446 E 103rd St		Chicago	IL	60628
	Ms.	Valerie	Meeks		9551 S Princeton		Chicago	IL	60628
	Mr.	Trinadad	Mendez		11332 S Forrestville Ave		Chicago	IL	60628
Assoc. for the Advocant of Creative Musicians		Nicole	Michell	Chairperson	10841 S. Forest Ave.		Chicago	IL	60628
	Ms.	Brandy	Miles		14620 S Union		Chicago	IL	60426
	Mr.	Ashleigh	Miller		4532 s King Drive		Chicago	IL	60653
	Mr.	Ray	Miller		10041 S LaSalle		Chicago	IL	60628
	Mr.	Ronnel	Milton		10555 S Eggleston		Chicago	IL	60629
		L	Minter		P.O. Box 368443		Chicago	IL	60628
	Ms.	Cheryl	Mister Thompson		8007 S Washtenaw		Chicago	IL	60652
	Mr.	R.C.	Mitchell		1335 W. 115th Street		Chicago	IL	60643
	Mr.	Deril	Mitchell		6311 N Kedzie		Chicago	IL	60649
	Ms.	Latasha	Monden		13066 E Ellis		Riverdale	IL	60827
Roseland Christian Ministries		Mia	Montgomery		19 E. 102nd Place		Chicago	IL	60628
	Mr.	Lawrence	Moore		P.O. Box 87288		Chicago	IL	60680
	Ms.	Tina	Moore		11629 S Eggleston Ave		Chicago	IL	60628
	Ms.	Deneta	Moore		10215 S Rhodes		Chicago	IL	60628
Star Project		Teresa	Moore		538 W. 62nd St.		Chicago	IL	60621
	Ms.	Venus	Mordis		14800 Minerva		Dolton	IL	60419
LAC		Miranda	Morgan	Block Rep.	13072 S. Drexel Ave.		Chicago	IL	60827
	Ms.	Katrin	Morgan		12018 S Wentworth		Chicago	IL	60628
	Mr.	Rufus	Morris		12351 S Union		Chicago	IL	60628
	Ms.	Lisa	Mosley		10319 S Calumet		Chicago	IL	60628
		Carol	Moss		7936 Justine		Chicago	IL	60620
Edgewater Community Council	Mr.	Tom	Murphy		1314 Glenlake		Chicago	IL	60660
ICES		Eric	Myers	Employment Rep.	4931 W. Diversey		Chicago	IL	60639
	Mr.	Christian	Nalar		512 E 115th St		Chicago	IL	60628
		Carlos	Nelson		1640-C W. 103rd St.		Chicago	IL	60643
Roseland Christian Ministries		Toni	Nelson	Member	10808 S. State		Chicago	IL	60628
	Ms.	Maxine	Nelson		7944 S Francisco		Chicago	IL	60652
		Patricia	Nesbary		6316 Allemong Drive		Matteson	IL	60443
		Percy	Nesbary		10621 S. State St.		Chicago	IL	60628
	Mr.	Alonzo	Nevils		7039 Justine		Chicago	IL	60636
	Ms.	Tahisa	Newson		16470 S Paulina		Chicago	IL	60428
	Mr.	David	Niemeier		P.O. Box 60621		Chicago	IL	60660
	Mr	Cedric	Nixon		10620 S Lowe		Chicago	IL	60628
	Ms.	Claire	Nowak-Boyd		3204 N 19th		St. Louis	MO	63107
	Mr.	Albert	Odits		9231 S Forest Ave		Chicago	IL	60619
	Ms.	Anita	Officer		9773 S Prospect Ave		Chicago	IL	60620
	Ms.	Dorothy	Olivier		PO Box 09374		Chicago	IL	60609
	Mr.	Olumide	Olupitan		9226 S Parnell		Chicago	IL	60620
Roseland Christian Ministries		Bruce	O'Neal		6511 S. Eberhart		Chicago	IL	60637
Roseland Christian Reformed Church		DiWitt	Orlawndo Casey Jr.	Member	10859 S. State Street, 1st Fl.		Chicago	IL	60628
	Mr.	Joseph	Orr		11423 S Calumet		Chicago	IL	60628
	Mr.	J.J.	Ostarello		11326 S. Forrestville Ave.		Chicago	IL	60628

Organization	Salutation	First Name	Last Name	Title	Address	Apt/ Floor	City	State	Zip
	Ms.	Jaime	Pacheco		7120 S Spaulding		Chicago	IL	60629
Golden Gate Community Association		Phyllis	Palmer	Assoc. Business Manager	13107 S. Eberhart		Chicago	IL	60827
Roseland Christian Reformed Church		Julia	Parham	Member	313 E. 137th		Chicago	IL	60628
	Ms.	Monisha	Parker		5818 S Wolcott		Chicago	IL	60636
	Mr.	Joe	Parks		13113 S St. Lawrence		Chicago	IL	60827
		Lena	Patton		13138 S. Vernon Ave.		Riverdale	IL	60827
		Robert	Patton		13138 S. Vernon Ave.		Riverdale	IL	60827
Chicago Hopes		Ashley	Payton	Tutor/Mentor	14214 University		Dolton	IL	60419
	Mr.	Jerome	Payton		810 E 131st		Chicago	IL	60827
	Ms.	Lacy Dell	Payton		13044 S Ellis		Riverdale	IL	60827
The Uptown Exchange	Ms.	Sharon	Pearson	Staff Reporter	3033 W. Lexington St.	3rd Floor	Chicago	Il	60612
	Ms.	Arletta	Pearson		633 E 131st		Chicago	IL	60827
True Light Baptist Church		Saudra	Pearson	Member	239 E. 108th St., 1st Floor		Chicago	IL	60628
	Ms.	Calandra	Pennington		750 E 132nd		Riverdale	IL	60827
	Ms	Dorothy	Peoples		19517 Oakwood		Chicago	IL	60411
	Ms	Josephine	Peoples		321 W 100 St		Chicago	IL	60628
Trinity Christian College		Melissa	Perkins		Box 788, 6601 W. College Dr.		Palos Heights	IL	60463
Inner Voice		Wesley	Perry	Job Developer	1639 W. Walnut St.		Chicago	IL	60612
Healthcare Consortium of IL		Ashley	Phillips		1350 E. Sibley Blvd.		Dolton	IL	60419
	Mr.	A	Phillips		917 E 78th	303E	Chicago	IL	60619
	Ms.	Precious	Pickens		626 A E 133rd		Riverdale	IL	60827
	Ms.	Dolores	Pillow		2352 E 96th St		Chicago	IL	60617
		Mae	Piszczor		5716 W. 111th St.		Oak Lawn	IL	60453
Little Village Environmental Justice Organization		Richard	Pitula	Community Organizer - Public Transit	2856 S. Millard Avenue		Chicago	IL	60623
	Mr.	Booker	Plume		10552 S Vernon		Chicago	IL	60628
	Mr.	Brian	Poe		10952 S Emerald		Chicago	IL	60628
	Mr.	Charles	Poindexter		7201 S Sawyer		Chicago	IL	60629
		Guy	Pollion		5245 S. Indiana		Chicago	IL	60615
Trinity Christian College		Shawna	Poppert		6601 W. College Dr.		Palos Heights	IL	60463
Roseland Christian Ministries		Bernie	Powell	Staff aid	10758 S. Michigan		Chicago	IL	60628
	Mr.	Demetrius	Preston		1011 King		Chicago	IL	60628
		Jarvis	Price		418 Illinois St.		Park Forest	IL	60466
		Jeanine	Price		418 Illinois St.		Park Forest	IL	60466
	Mr.	Anthony	Price		10520 S Wabash		Chicago	IL	60628
Roseland Christian Reformed Church		Shelby	Price	Member	27 W. 114th Place		Chicago	IL	60628
	Ms.	Shirley	Pryor		651 E 130th Pl		Riverdale	IL	60827
		Shyaam	Ramkumar		5 N. Wabash, #1205		Chicago	IL	60602
Inner Voice		Deborah	Randall	Senior Case Manager	1639 W. Walnut St.		Chicago	IL	60612
	Ms.	Allie	Rea Jackson		12539 S. Emerald		Chicago	IL	60628
	Mr.	Eddie	Reed		10324 S Prarie		Chicago	IL	60628
Altgeld - Local Advisory Council		Gayle	Reed	Block Rep.	976 E. 133rd St.		Chicago	IL	60827
	Ms.	Tanya	Reid		13213 S Ellis		Riverdale	IL	60827
Roseland Christian Ministries		Jimmie	Reliford	Member	131 E. 132nd St.		Chicago	IL	60628
			Resident		10000 S Eggleston Ave		Chicago	IL	60628
			Resident		10000 S Green St		Chicago	IL	60643
			Resident		10001 S Emerald Ave		Chicago	IL	60628
			Resident		10001 S Green St		Chicago	IL	60643
			Resident		10004 S Emerald Ave		Chicago	IL	60628
			Resident		10005 S Green St		Chicago	IL	60643
			Resident		10006 S Eggleston Ave		Chicago	IL	60628
			Resident		10007 S Emerald Ave		Chicago	IL	60628
			Resident		10008 S Green St		Chicago	IL	60643
			Resident		10009 S Emerald Ave		Chicago	IL	60628

Open House Notice Mailing List
Red Line Extension

Organization	Salutation	First Name	Last Name	Title	Address	Apt/ Floor	City	State	Zip
			Resident		10009 S Green St		Chicago	IL	60643
			Resident		10010 S Eggleston Ave		Chicago	IL	60628
			Resident		10010 S Emerald Ave		Chicago	IL	60628
			Resident		10010 S Green St		Chicago	IL	60643
			Resident		10011 S Green St		Chicago	IL	60643
			Resident		10014 S Eggleston Ave		Chicago	IL	60628
			Resident		10014 S Green St		Chicago	IL	60643
			Resident		10015 S Emerald Ave		Chicago	IL	60628
			Resident		10015 S Green St		Chicago	IL	60643
			Resident		10016 S Green St		Chicago	IL	60643
			Resident		10018 S Eggleston Ave		Chicago	IL	60628
			Resident		10018 S Emerald Ave		Chicago	IL	60628
			Resident		10019 S Emerald Ave		Chicago	IL	60628
			Resident		10019 S Green St		Chicago	IL	60643
			Resident		10020 S Eggleston Ave		Chicago	IL	60628
			Resident		10020 S Emerald Ave		Chicago	IL	60628
			Resident		10020 S Green St		Chicago	IL	60643
			Resident		10022 S Emerald Ave		Chicago	IL	60628
			Resident		10023 S Emerald Ave		Chicago	IL	60628
			Resident		10023 S Green St		Chicago	IL	60643
			Resident		10024 S Eggleston Ave		Chicago	IL	60628
			Resident		10024 S Emerald Ave		Chicago	IL	60628
			Resident		10024 S Green St		Chicago	IL	60643
			Resident		10025 S Green St		Chicago	IL	60643
			Resident		10026 S Emerald Ave		Chicago	IL	60628
			Resident		10026 S Green St		Chicago	IL	60643
			Resident		10027 S Emerald Ave		Chicago	IL	60628
			Resident		10029 S Green St		Chicago	IL	60643
			Resident		10030 S Emerald Ave		Chicago	IL	60628
			Resident		10030 S Green St		Chicago	IL	60643
			Resident		10031 S Emerald Ave		Chicago	IL	60628
			Resident		10032 S Eggleston Ave		Chicago	IL	60628
			Resident		10033 S Green St		Chicago	IL	60643
			Resident		10034 S Emerald Ave		Chicago	IL	60628
			Resident		10034 S Green St		Chicago	IL	60643
			Resident		10035 S Emerald Ave		Chicago	IL	60628
			Resident		10036 S Eggleston Ave		Chicago	IL	60628
			Resident		10036 S Green St		Chicago	IL	60643
			Resident		10037 S Green St		Chicago	IL	60643
			Resident		10038 S Emerald Ave		Chicago	IL	60628
			Resident		10039 S Emerald Ave		Chicago	IL	60628
			Resident		10039 S Green St		Chicago	IL	60643
			Resident		10040 S Eggleston Ave		Chicago	IL	60628
			Resident		10040 S Green St		Chicago	IL	60643
			Resident		10041 S Emerald Ave		Chicago	IL	60628
			Resident		10042 S Eggleston Ave		Chicago	IL	60628
			Resident		10042 S Emerald Ave		Chicago	IL	60628
			Resident		10042 S Green St		Chicago	IL	60643
			Resident		10043 S Green St		Chicago	IL	60643
			Resident		10044 S Emerald Ave		Chicago	IL	60628
			Resident		10045 S Emerald Ave		Chicago	IL	60628
			Resident		10046 S Emerald Ave		Chicago	IL	60628
			Resident		10046 S Green St		Chicago	IL	60643
			Resident		10047 S Emerald Ave		Chicago	IL	60628

Open House Notice Mailing List
Red Line Extension

Organization	Salutation	First Name	Last Name	Title	Address	Apt/ Floor	City	State	Zip
			Resident		10047 S Green St		Chicago	IL	60643
			Resident		10050 S Emerald Ave		Chicago	IL	60628
			Resident		10050 S Green St		Chicago	IL	60643
			Resident		10051 S Emerald Ave		Chicago	IL	60628
			Resident		10051 S Green St		Chicago	IL	60643
			Resident		10052 S Eggleston Ave		Chicago	IL	60628
			Resident		10052 S Emerald Ave		Chicago	IL	60628
			Resident		10052 S Green St		Chicago	IL	60643
			Resident		10054 S Eggleston Ave		Chicago	IL	60628
			Resident		10055 S Emerald Ave		Chicago	IL	60628
			Resident		10056 S Emerald Ave		Chicago	IL	60628
			Resident		10056 S Green St		Chicago	IL	60643
			Resident		10058 S Eggleston Ave		Chicago	IL	60628
			Resident		10059 S Emerald Ave		Chicago	IL	60628
			Resident		101 W. 114th Street		Chicago	IL	60628
			Resident		10100 S Eggleston Ave		Chicago	IL	60628
			Resident		10100 S Emerald Ave		Chicago	IL	60628
			Resident		10100 S Green St		Chicago	IL	60643
			Resident		10101 S Emerald Ave		Chicago	IL	60628
			Resident		10101 S Green St		Chicago	IL	60643
			Resident		10102 S Green St		Chicago	IL	60643
			Resident		10104 S Eggleston Ave		Chicago	IL	60628
			Resident		10104 S Emerald Ave		Chicago	IL	60628
			Resident		10105 S Emerald Ave		Chicago	IL	60628
			Resident		10105 S Green St		Chicago	IL	60643
			Resident		10106 S Emerald Ave		Chicago	IL	60628
			Resident		10106 S Green St		Chicago	IL	60643
			Resident		10107 S Emerald Ave		Chicago	IL	60628
			Resident		10109 S Green St		Chicago	IL	60643
			Resident		1011 S King Drive		Chicago	IL	60628
			Resident		10110 S Eggleston Ave		Chicago	IL	60628
			Resident		10110 S Emerald Ave		Chicago	IL	60628
			Resident		10110 S Green St		Chicago	IL	60643
			Resident		10111 S Emerald Ave		Chicago	IL	60628
			Resident		10112 S Emerald Ave		Chicago	IL	60628
			Resident		10113 S Green St		Chicago	IL	60643
			Resident		10114 S Eggleston Ave		Chicago	IL	60628
			Resident		10114 S Emerald Ave		Chicago	IL	60628
			Resident		10114 S. Halsted Street		Chicago	IL	60628
			Resident		10115 S Emerald Ave		Chicago	IL	60628
			Resident		10115 S Green St		Chicago	IL	60643
			Resident		10116 S Green St		Chicago	IL	60643
			Resident		10118 S Emerald Ave		Chicago	IL	60628
			Resident		10118 S Green St		Chicago	IL	60643
			Resident		10119 S Emerald Ave		Chicago	IL	60628
			Resident		10119 S Green St		Chicago	IL	60643
			Resident		10120 S Eggleston Ave		Chicago	IL	60628
			Resident		10120 S Emerald Ave		Chicago	IL	60628
			Resident		10121 S Green St		Chicago	IL	60643
			Resident		10122 S Green St		Chicago	IL	60643
			Resident		10124 S Emerald Ave		Chicago	IL	60628
			Resident		10125 S Emerald Ave		Chicago	IL	60628
			Resident		10125 S Green St		Chicago	IL	60643
			Resident		10126 S Emerald Ave		Chicago	IL	60628
			Resident		10126 S Green St		Chicago	IL	60643
			Resident		10128 S Green St		Chicago	IL	60643

Open House Notice Mailing List
Red Line Extension

Organization	Salutation	First Name	Last Name	Title	Address	Apt/ Floor	City	State	Zip
			Resident		10129 S Emerald Ave		Chicago	IL	60628
			Resident		10129 S Green St		Chicago	IL	60643
			Resident		10130 S Emerald Ave		Chicago	IL	60628
			Resident		10131 S Emerald Ave		Chicago	IL	60628
			Resident		10132 S Green St		Chicago	IL	60643
			Resident		10133 S Green St		Chicago	IL	60643
			Resident		10134 S Emerald Ave		Chicago	IL	60628
			Resident		10135 S Emerald Ave		Chicago	IL	60628
			Resident		10136 S Emerald Ave		Chicago	IL	60628
			Resident		10136 S Green St		Chicago	IL	60643
			Resident		10137 S Emerald Ave		Chicago	IL	60628
			Resident		10139 S Green St		Chicago	IL	60643
			Resident		10140 S Emerald Ave		Chicago	IL	60628
			Resident		10140 S Green St		Chicago	IL	60643
			Resident		10141 S Emerald Ave		Chicago	IL	60628
			Resident		10142 S Eggleston Ave		Chicago	IL	60628
			Resident		10142 S Emerald Ave		Chicago	IL	60628
			Resident		10144 S Green St		Chicago	IL	60643
			Resident		10145 S Emerald Ave		Chicago	IL	60628
			Resident		10145 S Green St		Chicago	IL	60643
			Resident		10146 S Emerald Ave		Chicago	IL	60628
			Resident		10148 S Eggleston Ave		Chicago	IL	60628
			Resident		10151 S Emerald Ave		Chicago	IL	60628
			Resident		10152 S Eggleston Ave		Chicago	IL	60628
			Resident		10152 S Emerald Ave		Chicago	IL	60628
			Resident		10152 S Green St		Chicago	IL	60643
			Resident		10153 S Green St		Chicago	IL	60643
			Resident		10154 S Eggleston Ave		Chicago	IL	60628
			Resident		10154 S Emerald Ave		Chicago	IL	60628
			Resident		10155 S Emerald Ave		Chicago	IL	60628
			Resident		10156 S Green St		Chicago	IL	60643
			Resident		10157 S Green St		Chicago	IL	60643
			Resident		10158 S Emerald Ave		Chicago	IL	60628
			Resident		10158 S Green St		Chicago	IL	60643
			Resident		10159 S Emerald Ave		Chicago	IL	60628
			Resident		10200 S Eggleston Ave		Chicago	IL	60628
			Resident		10200 S Emerald Ave		Chicago	IL	60628
			Resident		10200 S Green St		Chicago	IL	60643
			Resident		10201 S Emerald Ave		Chicago	IL	60628
			Resident		10201 S Green St		Chicago	IL	60643
			Resident		10202 S Emerald Ave		Chicago	IL	60628
			Resident		10202 S Green St		Chicago	IL	60643
			Resident		10204 S Emerald Ave		Chicago	IL	60628
			Resident		10205 S Emerald Ave		Chicago	IL	60628
			Resident		10206 S Emerald Ave		Chicago	IL	60628
			Resident		10206 S Green St		Chicago	IL	60643
			Resident		10208 S Green St		Chicago	IL	60643
			Resident		10209 S Emerald Ave		Chicago	IL	60628
			Resident		10209 S Green St		Chicago	IL	60643
			Resident		10210 S Eggleston Ave		Chicago	IL	60628
			Resident		10210 S Emerald Ave		Chicago	IL	60628
			Resident		10211 S Emerald Ave		Chicago	IL	60628
			Resident		10211 S Green St		Chicago	IL	60643
			Resident		10212 S Green St		Chicago	IL	60643

Organization	Salutation	First Name	Last Name	Title	Address	Apt/ Floor	City	State	Zip
			Resident		10213 S Green St		Chicago	IL	60643
			Resident		10214 S Eggleston Ave		Chicago	IL	60628
			Resident		10214 S Green St		Chicago	IL	60643
			Resident		10215 S Emerald Ave		Chicago	IL	60628
			Resident		10215 S Green St		Chicago	IL	60643
			Resident		10216 S Emerald Ave		Chicago	IL	60628
			Resident		10218 S Eggleston Ave		Chicago	IL	60628
			Resident		10218 S Green St		Chicago	IL	60643
			Resident		10219 S Emerald Ave		Chicago	IL	60628
			Resident		10219 S Green St		Chicago	IL	60643
			Resident		10220 S Emerald Ave		Chicago	IL	60628
			Resident		10221 S Emerald Ave		Chicago	IL	60628
			Resident		10222 S Emerald Ave		Chicago	IL	60628
			Resident		10223 S Green St		Chicago	IL	60643
			Resident		10224 S Eggleston Ave		Chicago	IL	60628
			Resident		10224 S Green St		Chicago	IL	60643
			Resident		10225 S Green St		Chicago	IL	60643
			Resident		10226 S Emerald Ave		Chicago	IL	60628
			Resident		10229 S Green St		Chicago	IL	60643
			Resident		10230 S Green St		Chicago	IL	60643
			Resident		10231 S Emerald Ave		Chicago	IL	60628
			Resident		10231 S Green St		Chicago	IL	60643
			Resident		10232 S Emerald Ave		Chicago	IL	60628
			Resident		10233 S Green St		Chicago	IL	60643
			Resident		10236 S Green St		Chicago	IL	60643
			Resident		10237 S Green St		Chicago	IL	60643
			Resident		10238 S Emerald Ave		Chicago	IL	60628
			Resident		10238 S Green St		Chicago	IL	60643
			Resident		10239 S Emerald Ave		Chicago	IL	60628
			Resident		10240 S Eggleston Ave		Chicago	IL	60628
			Resident		10241 S Green St		Chicago	IL	60643
			Resident		10241 S. Halsted Street		Chicago	IL	60628
			Resident		10242 S Emerald Ave		Chicago	IL	60628
			Resident		10242 S Green St		Chicago	IL	60643
			Resident		10243 S Green St		Chicago	IL	60643
			Resident		10248 S Eggleston Ave		Chicago	IL	60628
			Resident		10314 S Green St		Chicago	IL	60643
			Resident		10315 S Emerald Ave		Chicago	IL	60628
			Resident		10318 S Green St		Chicago	IL	60643
			Resident		10319 S Emerald Ave		Chicago	IL	60628
			Resident		10320 S Emerald Ave		Chicago	IL	60628
			Resident		10321 S Green St		Chicago	IL	60643
			Resident		10323 S Emerald Ave		Chicago	IL	60628
			Resident		10324 S Green St		Chicago	IL	60643
			Resident		10325 S Emerald Ave		Chicago	IL	60628
			Resident		10325 S Green St		Chicago	IL	60643
			Resident		10326 S Emerald Ave		Chicago	IL	60628
			Resident		10327 S Green St		Chicago	IL	60643
			Resident		10329 S Emerald Ave		Chicago	IL	60628
			Resident		10330 S Green St		Chicago	IL	60643
			Resident		10331 S Green St		Chicago	IL	60643
			Resident		10332 S Emerald Ave		Chicago	IL	60628
			Resident		10333 S Emerald Ave		Chicago	IL	60628
			Resident		10333 S Green St		Chicago	IL	60643

Open House Notice Mailing List
Red Line Extension

Organization	Salutation	First Name	Last Name	Title	Address	Apt/ Floor	City	State	Zip
			Resident		10334 S Emerald Ave		Chicago	IL	60628
			Resident		10334 S Green St		Chicago	IL	60643
			Resident		10335 S Emerald Ave		Chicago	IL	60628
			Resident		10335 S Green St		Chicago	IL	60643
			Resident		10336 S Green St		Chicago	IL	60643
			Resident		10338 S Emerald Ave		Chicago	IL	60628
			Resident		10338 S Green St		Chicago	IL	60643
			Resident		10340 S Green St		Chicago	IL	60643
			Resident		10342 S Emerald Ave		Chicago	IL	60628
			Resident		10343 S Emerald Ave		Chicago	IL	60628
			Resident		10344 S Emerald Ave		Chicago	IL	60628
			Resident		10344 S Green St		Chicago	IL	60643
			Resident		10345 S Emerald Ave		Chicago	IL	60628
			Resident		10346 S Emerald Ave		Chicago	IL	60628
			Resident		10349 S Green St		Chicago	IL	60643
			Resident		10350 S Green St		Chicago	IL	60643
			Resident		10351 S Emerald Ave		Chicago	IL	60628
			Resident		10351 S Green St		Chicago	IL	60643
			Resident		10352 S Emerald Ave		Chicago	IL	60628
			Resident		10354 S Green St		Chicago	IL	60643
			Resident		10356 S Green St		Chicago	IL	60643
			Resident		10357 S Emerald Ave		Chicago	IL	60628
			Resident		10357 S Green St		Chicago	IL	60643
			Resident		10358 S Emerald Ave		Chicago	IL	60628
			Resident		10400 S Emerald Ave		Chicago	IL	60628
			Resident		10400 S Green St		Chicago	IL	60643
			Resident		10401 S Emerald Ave		Chicago	IL	60628
			Resident		10401 S Green St		Chicago	IL	60643
			Resident		10404 S Emerald Ave		Chicago	IL	60628
			Resident		10404 S Green St		Chicago	IL	60643
			Resident		10405 S Emerald Ave		Chicago	IL	60628
			Resident		10405 S Green St		Chicago	IL	60643
			Resident		10408 S Emerald Ave		Chicago	IL	60628
			Resident		10408 S Green St		Chicago	IL	60643
			Resident		10409 S Emerald Ave		Chicago	IL	60628
			Resident		10409 S Green St		Chicago	IL	60643
			Resident		10410 S Green St		Chicago	IL	60643
			Resident		10411 S Green St		Chicago	IL	60643
			Resident		10412 S Emerald Ave		Chicago	IL	60628
			Resident		10413 S Emerald Ave		Chicago	IL	60628
			Resident		10414 S Eggleston Ave		Chicago	IL	60628
			Resident		10414 S Green St		Chicago	IL	60643
			Resident		10415 S Eggleston Ave		Chicago	IL	60628
			Resident		10415 S Green St		Chicago	IL	60643
			Resident		10416 S Emerald Ave		Chicago	IL	60628
			Resident		10417 S Emerald Ave		Chicago	IL	60628
			Resident		10417 S Green St		Chicago	IL	60643
			Resident		10418 S Eggleston Ave		Chicago	IL	60628
			Resident		10418 S Green St		Chicago	IL	60643
			Resident		10419 S Eggleston Ave		Chicago	IL	60628
			Resident		10420 S Eggleston Ave		Chicago	IL	60628
			Resident		10420 S Emerald Ave		Chicago	IL	60628
			Resident		10420 S Green St		Chicago	IL	60643
			Resident		10421 S Eggleston Ave		Chicago	IL	60628

Organization	Salutation	First Name	Last Name	Title	Address	Apt/ Floor	City	State	Zip
			Resident		10421 S Emerald Ave		Chicago	IL	60628
			Resident		10421 S Green St		Chicago	IL	60643
			Resident		10422 S Eggleston Ave		Chicago	IL	60628
			Resident		10422 S Emerald Ave		Chicago	IL	60628
			Resident		10423 S Green St		Chicago	IL	60643
			Resident		10424 S Green St		Chicago	IL	60643
			Resident		10425 S Eggleston Ave		Chicago	IL	60628
			Resident		10425 S Emerald Ave		Chicago	IL	60628
			Resident		10426 S Eggleston Ave		Chicago	IL	60628
			Resident		10427 S Eggleston Ave		Chicago	IL	60628
			Resident		10427 S Emerald Ave		Chicago	IL	60628
			Resident		10427 S Green St		Chicago	IL	60643
			Resident		10428 S Emerald Ave		Chicago	IL	60628
			Resident		10428 S Green St		Chicago	IL	60643
			Resident		10430 S Eggleston Ave		Chicago	IL	60628
			Resident		10430 S Emerald Ave		Chicago	IL	60628
			Resident		10430 S Green St		Chicago	IL	60643
			Resident		10431 S Eggleston Ave		Chicago	IL	60628
			Resident		10431 S Emerald Ave		Chicago	IL	60628
			Resident		10431 S Green St		Chicago	IL	60643
			Resident		10432 S Eggleston Ave		Chicago	IL	60628
			Resident		10433 S Eggleston Ave		Chicago	IL	60628
			Resident		10433 S Green St		Chicago	IL	60643
			Resident		10434 S Eggleston Ave		Chicago	IL	60628
			Resident		10434 S Green St		Chicago	IL	60643
			Resident		10436 S Emerald Ave		Chicago	IL	60628
			Resident		10436 S Green St		Chicago	IL	60643
			Resident		10437 S Emerald Ave		Chicago	IL	60628
			Resident		10437 S Green St		Chicago	IL	60643
			Resident		10439 S Eggleston Ave		Chicago	IL	60628
			Resident		10440 S Eggleston Ave		Chicago	IL	60628
			Resident		10440 S Emerald Ave		Chicago	IL	60628
			Resident		10440 S Green St		Chicago	IL	60643
			Resident		10441 S Emerald Ave		Chicago	IL	60628
			Resident		10441 S Green St		Chicago	IL	60643
			Resident		10442 S Eggleston Ave		Chicago	IL	60628
			Resident		10443 S Eggleston Ave		Chicago	IL	60628
			Resident		10444 S Eggleston Ave		Chicago	IL	60628
			Resident		10444 S Emerald Ave		Chicago	IL	60628
			Resident		10444 S Green St		Chicago	IL	60643
			Resident		10445 S Emerald Ave		Chicago	IL	60628
			Resident		10446 S Eggleston Ave		Chicago	IL	60628
			Resident		10446 S Green St		Chicago	IL	60643
			Resident		10447 S Eggleston Ave		Chicago	IL	60628
			Resident		10447 S Green St		Chicago	IL	60643
			Resident		10448 S Eggleston Ave		Chicago	IL	60628
			Resident		10448 S Emerald Ave		Chicago	IL	60628
			Resident		10449 S Emerald Ave		Chicago	IL	60628
			Resident		10450 S Green St		Chicago	IL	60643
			Resident		10451 S Eggleston Ave		Chicago	IL	60628
			Resident		10451 S Green St		Chicago	IL	60643
			Resident		10452 S Eggleston Ave		Chicago	IL	60628

Open House Notice Mailing List
Red Line Extension

Organization	Salutation	First Name	Last Name	Title	Address	Apt/ Floor	City	State	Zip
			Resident		10452 S Emerald Ave		Chicago	IL	60628
			Resident		10453 S Eggleston Ave		Chicago	IL	60628
			Resident		10453 S Emerald Ave		Chicago	IL	60628
			Resident		10453 S Green St		Chicago	IL	60643
			Resident		10454 S Green St		Chicago	IL	60643
			Resident		10456 S Emerald Ave		Chicago	IL	60628
			Resident		10456 S Green St		Chicago	IL	60643
			Resident		10457 S Emerald Ave		Chicago	IL	60628
			Resident		10457 S Green St		Chicago	IL	60643
			Resident		10459 S Eggleston Ave		Chicago	IL	60628
			Resident		10460 S Emerald Ave		Chicago	IL	60628
			Resident		10461 S Emerald Ave		Chicago	IL	60628
			Resident		10500 S Eggleston Ave		Chicago	IL	60628
			Resident		10500 S Emerald Ave		Chicago	IL	60628
			Resident		10500 S Green St		Chicago	IL	60643
			Resident		10501 S Eggleston Ave		Chicago	IL	60628
			Resident		10501 S Emerald Ave		Chicago	IL	60628
			Resident		10501 S Green St		Chicago	IL	60643
			Resident		10502 S Emerald Ave		Chicago	IL	60628
			Resident		10502 S Green St		Chicago	IL	60643
			Resident		10503 S Emerald Ave		Chicago	IL	60628
			Resident		10504 S Eggleston Ave		Chicago	IL	60628
			Resident		10505 S Eggleston Ave		Chicago	IL	60628
			Resident		10505 S Green St		Chicago	IL	60643
			Resident		10506 S Eggleston Ave		Chicago	IL	60628
			Resident		10506 S Emerald Ave		Chicago	IL	60628
			Resident		10506 S Green St		Chicago	IL	60643
			Resident		10507 S Eggleston Ave		Chicago	IL	60628
			Resident		10507 S Emerald Ave		Chicago	IL	60628
			Resident		10509 S Green St		Chicago	IL	60643
			Resident		10510 S Eggleston Ave		Chicago	IL	60628
			Resident		10510 S Emerald Ave		Chicago	IL	60628
			Resident		10510 S Green St		Chicago	IL	60643
			Resident		10511 S Eggleston Ave		Chicago	IL	60628
			Resident		10511 S Emerald Ave		Chicago	IL	60628
			Resident		10512 S Eggleston Ave		Chicago	IL	60628
			Resident		10512 S Green St		Chicago	IL	60643
			Resident		10513 S Green St		Chicago	IL	60643
			Resident		10514 S Emerald Ave		Chicago	IL	60628
			Resident		10515 S Eggleston Ave		Chicago	IL	60628
			Resident		10515 S Emerald Ave		Chicago	IL	60628
			Resident		10515 S Green St		Chicago	IL	60643
			Resident		10516 S Green St		Chicago	IL	60643
			Resident		10517 S Eggleston Ave		Chicago	IL	60628
			Resident		10518 S Eggleston Ave		Chicago	IL	60628
			Resident		10518 S Emerald Ave		Chicago	IL	60628
			Resident		10519 S Eggleston Ave		Chicago	IL	60628
			Resident		10519 S Emerald Ave		Chicago	IL	60628
			Resident		10519 S Green St		Chicago	IL	60643
			Resident		10520 S Green St		Chicago	IL	60643
			Resident		10521 S Green St		Chicago	IL	60643
			Resident		10522 S Eggleston Ave		Chicago	IL	60628
			Resident		10522 S Emerald Ave		Chicago	IL	60628

Open House Notice Mailing List
Red Line Extension

Organization	Salutation	First Name	Last Name	Title	Address	Apt/ Floor	City	State	Zip
			Resident		10522 S Green St		Chicago	IL	60643
			Resident		10523 S Eggleston Ave		Chicago	IL	60628
			Resident		10523 S Emerald Ave		Chicago	IL	60628
			Resident		10524 S Eggleston Ave		Chicago	IL	60628
			Resident		10525 S Eggleston Ave		Chicago	IL	60628
			Resident		10525 S Green St		Chicago	IL	60643
			Resident		10526 S Emerald Ave		Chicago	IL	60628
			Resident		10526 S Green St		Chicago	IL	60643
			Resident		10527 S Emerald Ave		Chicago	IL	60628
			Resident		10527 S Green St		Chicago	IL	60643
			Resident		10528 S Eggleston Ave		Chicago	IL	60628
			Resident		10529 S Eggleston Ave		Chicago	IL	60628
			Resident		10529 S Green St		Chicago	IL	60643
			Resident		10530 S Eggleston Ave		Chicago	IL	60628
			Resident		10530 S Emerald Ave		Chicago	IL	60628
			Resident		10531 S Eggleston Ave		Chicago	IL	60628
			Resident		10531 S Emerald Ave		Chicago	IL	60628
			Resident		10531 S Green St		Chicago	IL	60643
			Resident		10532 S Eggleston Ave		Chicago	IL	60628
			Resident		10532 S Green St		Chicago	IL	60643
			Resident		10534 S Emerald Ave		Chicago	IL	60628
			Resident		10535 S Eggleston Ave		Chicago	IL	60628
			Resident		10535 S Green St		Chicago	IL	60643
			Resident		10536 S Eggleston Ave		Chicago	IL	60628
			Resident		10536 S Green St		Chicago	IL	60643
			Resident		10537 S Eggleston Ave		Chicago	IL	60628
			Resident		10537 S Green St		Chicago	IL	60643
			Resident		10538 S Emerald Ave		Chicago	IL	60628
			Resident		10539 S Eggleston Ave		Chicago	IL	60628
			Resident		10539 S Green St		Chicago	IL	60643
			Resident		10540 S Eggleston Ave		Chicago	IL	60628
			Resident		10542 S Emerald Ave		Chicago	IL	60628
			Resident		10543 S Eggleston Ave		Chicago	IL	60628
			Resident		10544 S Eggleston Ave		Chicago	IL	60628
			Resident		10544 S Green St		Chicago	IL	60643
			Resident		10545 S Eggleston Ave		Chicago	IL	60628
			Resident		10545 S Green St		Chicago	IL	60643
			Resident		10546 S Emerald Ave		Chicago	IL	60628
			Resident		10546 S Green St		Chicago	IL	60643
			Resident		10547 S Green St		Chicago	IL	60643
			Resident		10548 S Eggleston Ave		Chicago	IL	60628
			Resident		10549 S Eggleston Ave		Chicago	IL	60628
			Resident		10549 S Emerald Ave		Chicago	IL	60628
			Resident		10549 S Green St		Chicago	IL	60643
			Resident		10550 S Eggleston Ave		Chicago	IL	60628
			Resident		10550 S Emerald Ave		Chicago	IL	60628
			Resident		10550 S Green St		Chicago	IL	60643
			Resident		10551 S Eggleston Ave		Chicago	IL	60628
			Resident		10551 S Green St		Chicago	IL	60643
			Resident		10552 S Green St		Chicago	IL	60643
			Resident		10554 S Eggleston Ave		Chicago	IL	60628
			Resident		10554 S Emerald Ave		Chicago	IL	60628

Organization	Salutation	First Name	Last Name	Title	Address	Apt/ Floor	City	State	Zip
			Resident		10555 S Green St		Chicago	IL	60643
			Resident		10556 S Emerald Ave		Chicago	IL	60628
			Resident		10556 S Green St		Chicago	IL	60643
			Resident		10557 S Eggleston Ave		Chicago	IL	60628
			Resident		10557 S Green St		Chicago	IL	60643
			Resident		10600 S Eggleston Ave		Chicago	IL	60628
			Resident		10600 S Emerald Ave		Chicago	IL	60628
			Resident		10600 S Green St		Chicago	IL	60643
			Resident		10601 S Eggleston Ave		Chicago	IL	60628
			Resident		10601 S Emerald Ave		Chicago	IL	60628
			Resident		10601 S Green St		Chicago	IL	60643
			Resident		10604 S Eggleston Ave		Chicago	IL	60628
			Resident		10604 S Emerald Ave		Chicago	IL	60628
			Resident		10604 S Green St		Chicago	IL	60643
			Resident		10605 S Eggleston Ave		Chicago	IL	60628
			Resident		10605 S Emerald Ave		Chicago	IL	60628
			Resident		10605 S Green St		Chicago	IL	60643
			Resident		10608 S Eggleston Ave		Chicago	IL	60628
			Resident		10608 S Emerald Ave		Chicago	IL	60628
			Resident		10608 S Green St		Chicago	IL	60643
			Resident		10609 S Eggleston Ave		Chicago	IL	60628
			Resident		10609 S Green St		Chicago	IL	60643
			Resident		10610 Perry		Chicago	IL	60628
			Resident		10610 S Emerald Ave		Chicago	IL	60628
			Resident		10611 S Eggleston Ave		Chicago	IL	60628
			Resident		10612 S Eggleston Ave		Chicago	IL	60628
			Resident		10612 S Green St		Chicago	IL	60643
			Resident		10613 S Green St		Chicago	IL	60643
			Resident		10614 S Emerald Ave		Chicago	IL	60628
			Resident		10615 S Emerald Ave		Chicago	IL	60628
			Resident		10616 S Eggleston Ave		Chicago	IL	60628
			Resident		10616 S Emerald Ave		Chicago	IL	60628
			Resident		10616 S Green St		Chicago	IL	60643
			Resident		10617 S Emerald Ave		Chicago	IL	60628
			Resident		10617 S Green St		Chicago	IL	60643
			Resident		10619 S Eggleston Ave		Chicago	IL	60628
			Resident		10620 S Eggleston Ave		Chicago	IL	60628
			Resident		10620 S Emerald Ave		Chicago	IL	60628
			Resident		10620 S Green St		Chicago	IL	60643
			Resident		10621 S Eggleston Ave		Chicago	IL	60628
			Resident		10621 S Emerald Ave		Chicago	IL	60628
			Resident		10621 S Green St		Chicago	IL	60643
			Resident		10622 S Eggleston Ave		Chicago	IL	60628
			Resident		10622 S Emerald Ave		Chicago	IL	60628
			Resident		10623 S Eggleston Ave		Chicago	IL	60628
			Resident		10623 S Emerald Ave		Chicago	IL	60628
			Resident		10624 S Green St		Chicago	IL	60643
			Resident		10625 S Green St		Chicago	IL	60643
			Resident		10626 S Eggleston Ave		Chicago	IL	60628
			Resident		10626 S Emerald Ave		Chicago	IL	60628
			Resident		10627 S Eggleston Ave		Chicago	IL	60628

Open House Notice Mailing List
Red Line Extension

Organization	Salutation	First Name	Last Name	Title	Address	Apt/ Floor	City	State	Zip
			Resident		10627 S Emerald Ave		Chicago	IL	60628
			Resident		10628 S Eggleston Ave		Chicago	IL	60628
			Resident		10628 S Emerald Ave		Chicago	IL	60628
			Resident		10629 S Eggleston Ave		Chicago	IL	60628
			Resident		10629 S Emerald Ave		Chicago	IL	60628
			Resident		10629 S Green St		Chicago	IL	60643
			Resident		10632 S Emerald Ave		Chicago	IL	60628
			Resident		10633 S Eggleston Ave		Chicago	IL	60628
			Resident		10633 S Emerald Ave		Chicago	IL	60628
			Resident		10633 S Green St		Chicago	IL	60643
			Resident		10634 S Emerald Ave		Chicago	IL	60628
			Resident		10635 S Eggleston Ave		Chicago	IL	60628
			Resident		10635 S Emerald Ave		Chicago	IL	60628
			Resident		10636 S Green St		Chicago	IL	60643
			Resident		10637 S Green St		Chicago	IL	60643
			Resident		10638 S Eggleston Ave		Chicago	IL	60628
			Resident		10638 S Emerald Ave		Chicago	IL	60628
			Resident		10639 S Eggleston Ave		Chicago	IL	60628
			Resident		10639 S Emerald Ave		Chicago	IL	60628
			Resident		10640 S Eggleston Ave		Chicago	IL	60628
			Resident		10640 S Emerald Ave		Chicago	IL	60628
			Resident		10640 S Green St		Chicago	IL	60643
			Resident		10641 S Eggleston Ave		Chicago	IL	60628
			Resident		10641 S Green St		Chicago	IL	60643
			Resident		10643 S Emerald Ave		Chicago	IL	60628
			Resident		10644 S Eggleston Ave		Chicago	IL	60628
			Resident		10644 S Emerald Ave		Chicago	IL	60628
			Resident		10644 S Green St		Chicago	IL	60643
			Resident		10645 S Emerald Ave		Chicago	IL	60628
			Resident		10648 S Green St		Chicago	IL	60643
			Resident		10649 S Green St		Chicago	IL	60643
			Resident		10652 S Green St		Chicago	IL	60643
			Resident		10653 S Green St		Chicago	IL	60643
			Resident		10655 S Emerald Ave		Chicago	IL	60628
			Resident		10656 S Green St		Chicago	IL	60643
			Resident		10657 S Green St		Chicago	IL	60643
			Resident		10701 S Green St		Chicago	IL	60643
			Resident		10705 S Green St		Chicago	IL	60643
			Resident		10709 S Green St		Chicago	IL	60643
			Resident		10714 S Eggleston Ave		Chicago	IL	60628
			Resident		10714 S Green St		Chicago	IL	60643
			Resident		10715 S Emerald Ave		Chicago	IL	60628
			Resident		10715 S Green St		Chicago	IL	60643
			Resident		10718 S Eggleston Ave		Chicago	IL	60628
			Resident		10718 S Green St		Chicago	IL	60643
			Resident		10719 S Eggleston Ave		Chicago	IL	60628
			Resident		10719 S Green St		Chicago	IL	60643
			Resident		10721 S Emerald Ave		Chicago	IL	60628
			Resident		10722 S Green St		Chicago	IL	60643
			Resident		10723 S Green St		Chicago	IL	60643
			Resident		10725 S Emerald Ave		Chicago	IL	60628
			Resident		10726 S Green St		Chicago	IL	60643

Open House Notice Mailing List
Red Line Extension

Organization	Salutation	First Name	Last Name	Title	Address	Apt/ Floor	City	State	Zip
			Resident		10727 S Eggleston Ave		Chicago	IL	60628
			Resident		10727 S Green St		Chicago	IL	60643
			Resident		10728 S Eggleston Ave		Chicago	IL	60628
			Resident		10729 S Emerald Ave		Chicago	IL	60628
			Resident		10730 S Emerald Ave		Chicago	IL	60628
			Resident		10730 S Green St		Chicago	IL	60643
			Resident		10731 S Eggleston Ave		Chicago	IL	60628
			Resident		10731 S Green St		Chicago	IL	60643
			Resident		10732 S Eggleston Ave		Chicago	IL	60628
			Resident		10732 S Emerald Ave		Chicago	IL	60628
			Resident		10733 S Eggleston Ave		Chicago	IL	60628
			Resident		10733 S Emerald Ave		Chicago	IL	60628
			Resident		10734 S Green St		Chicago	IL	60643
			Resident		10735 S Green St		Chicago	IL	60643
			Resident		10736 S Eggleston Ave		Chicago	IL	60628
			Resident		10736 S Emerald Ave		Chicago	IL	60628
			Resident		10737 S Eggleston Ave		Chicago	IL	60628
			Resident		10737 S Emerald Ave		Chicago	IL	60628
			Resident		10738 S Eggleston Ave		Chicago	IL	60628
			Resident		10738 S Green St		Chicago	IL	60643
			Resident		10739 S Green St		Chicago	IL	60643
			Resident		10740 S Emerald Ave		Chicago	IL	60628
			Resident		10741 S Eggleston Ave		Chicago	IL	60628
			Resident		10741 S Eggleston Ave		Chicago	IL	60628
			Resident		10741 S Emerald Ave		Chicago	IL	60628
			Resident		10742 S Emerald Ave		Chicago	IL	60628
			Resident		10742 S Green St		Chicago	IL	60643
			Resident		10743 S Emerald Ave		Chicago	IL	60628
			Resident		10743 S Green St		Chicago	IL	60643
			Resident		10745 S Eggleston Ave		Chicago	IL	60628
			Resident		10746 S Emerald Ave		Chicago	IL	60628
			Resident		10746 S Green St		Chicago	IL	60643
			Resident		10747 S Emerald Ave		Chicago	IL	60628
			Resident		10747 S Green St		Chicago	IL	60643
			Resident		10749 S Eggleston Ave		Chicago	IL	60628
			Resident		10750 S Emerald Ave		Chicago	IL	60628
			Resident		10750 S Green St		Chicago	IL	60643
			Resident		10751 S Eggleston Ave		Chicago	IL	60628
			Resident		10751 S Emerald Ave		Chicago	IL	60628
			Resident		10751 S Green St		Chicago	IL	60643
			Resident		10754 S Eggleston Ave		Chicago	IL	60628
			Resident		10754 S Emerald Ave		Chicago	IL	60628
			Resident		10755 S Emerald Ave		Chicago	IL	60628
			Resident		10756 S Eggleston Ave		Chicago	IL	60628
			Resident		10756 S Emerald Ave		Chicago	IL	60628
			Resident		10756 S Green St		Chicago	IL	60643
			Resident		10757 S Green St		Chicago	IL	60643
			Resident		10759 S Emerald Ave		Chicago	IL	60628
			Resident		10800 S Eggleston Ave		Chicago	IL	60628
			Resident		10800 S Emerald Ave		Chicago	IL	60628
			Resident		10800 S Green St		Chicago	IL	60643

Organization	Salutation	First Name	Last Name	Title	Address	Apt/ Floor	City	State	Zip
			Resident		10801 S Eggleston Ave		Chicago	IL	60628
			Resident		10801 S Emerald Ave		Chicago	IL	60628
			Resident		10801 S Green St		Chicago	IL	60643
			Resident		10804 S Green St		Chicago	IL	60643
			Resident		10805 S Eggleston Ave		Chicago	IL	60628
			Resident		10805 S Green St		Chicago	IL	60643
			Resident		10806 S Eggleston Ave		Chicago	IL	60628
			Resident		10806 S Emerald Ave		Chicago	IL	60628
			Resident		10807 S Eggleston Ave		Chicago	IL	60628
			Resident		10807 S Emerald Ave		Chicago	IL	60628
			Resident		10808 S Green St		Chicago	IL	60643
			Resident		10809 S Green St		Chicago	IL	60643
			Resident		10810 S Eggleston Ave		Chicago	IL	60628
			Resident		10810 S Emerald Ave		Chicago	IL	60628
			Resident		10811 S Eggleston Ave		Chicago	IL	60628
			Resident		10811 S Emerald Ave		Chicago	IL	60628
			Resident		10812 S Green St		Chicago	IL	60643
			Resident		10813 S Eggleston Ave		Chicago	IL	60628
			Resident		10813 S Green St		Chicago	IL	60643
			Resident		10815 S Emerald Ave		Chicago	IL	60628
			Resident		10816 S Eggleston Ave		Chicago	IL	60628
			Resident		10816 S Green St		Chicago	IL	60643
			Resident		10818 S Eggleston Ave		Chicago	IL	60628
			Resident		10818 S Emerald Ave		Chicago	IL	60628
			Resident		10819 S Emerald Ave		Chicago	IL	60628
			Resident		10820 S Eggleston Ave		Chicago	IL	60628
			Resident		10820 S Green St		Chicago	IL	60643
			Resident		10821 S Green St		Chicago	IL	60643
			Resident		10823 S Eggleston Ave		Chicago	IL	60628
			Resident		10823 S Emerald Ave		Chicago	IL	60628
			Resident		10824 S Eggleston Ave		Chicago	IL	60628
			Resident		10824 S Emerald Ave		Chicago	IL	60628
			Resident		10824 S Green St		Chicago	IL	60643
			Resident		10825 S Eggleston Ave		Chicago	IL	60628
			Resident		10825 S Green St		Chicago	IL	60643
			Resident		10828 S Eggleston Ave		Chicago	IL	60628
			Resident		10828 S Emerald Ave		Chicago	IL	60628
			Resident		10828 S Green St		Chicago	IL	60643
			Resident		10829 S Emerald Ave		Chicago	IL	60628
			Resident		10829 S Green St		Chicago	IL	60643
			Resident		10831 S Emerald Ave		Chicago	IL	60628
			Resident		10832 S Emerald Ave		Chicago	IL	60628
			Resident		10832 S Green St		Chicago	IL	60643
			Resident		10833 S Green St		Chicago	IL	60643
			Resident		10834 S Eggleston Ave		Chicago	IL	60628
			Resident		10835 S Eggleston Ave		Chicago	IL	60628
			Resident		10835 S Emerald Ave		Chicago	IL	60628
			Resident		10836 S Eggleston Ave		Chicago	IL	60628
			Resident		10836 S Emerald Ave		Chicago	IL	60628
			Resident		10836 S Green St		Chicago	IL	60643
			Resident		10837 S Eggleston Ave		Chicago	IL	60628

Open House Notice Mailing List
Red Line Extension

Organization	Salutation	First Name	Last Name	Title	Address	Apt/ Floor	City	State	Zip
			Resident		10837 S Green St		Chicago	IL	60643
			Resident		10839 S Emerald Ave		Chicago	IL	60628
			Resident		10840 S Eggleston Ave		Chicago	IL	60628
			Resident		10840 S Emerald Ave		Chicago	IL	60628
			Resident		10840 S Green St		Chicago	IL	60643
			Resident		10841 S Eggleston Ave		Chicago	IL	60628
			Resident		10841 S Emerald Ave		Chicago	IL	60628
			Resident		10841 S Green St		Chicago	IL	60643
			Resident		10843 S Eggleston Ave		Chicago	IL	60628
			Resident		10844 S Emerald Ave		Chicago	IL	60628
			Resident		10844 S Green St		Chicago	IL	60643
			Resident		10845 S Green St		Chicago	IL	60643
			Resident		10846 S Eggleston Ave		Chicago	IL	60628
			Resident		10846 S Emerald Ave		Chicago	IL	60628
			Resident		10847 S Eggleston Ave		Chicago	IL	60628
			Resident		10848 S Green St		Chicago	IL	60643
			Resident		10849 S Eggleston Ave		Chicago	IL	60628
			Resident		10849 S Emerald Ave		Chicago	IL	60628
			Resident		10849 S Green St		Chicago	IL	60643
			Resident		10850 S Eggleston Ave		Chicago	IL	60628
			Resident		10850 S Emerald Ave		Chicago	IL	60628
			Resident		10851 S Eggleston Ave		Chicago	IL	60628
			Resident		10852 S Green St		Chicago	IL	60643
			Resident		10853 S Emerald Ave		Chicago	IL	60628
			Resident		10853 S Green St		Chicago	IL	60643
			Resident		10854 S Eggleston Ave		Chicago	IL	60628
			Resident		10855 S Eggleston Ave		Chicago	IL	60628
			Resident		10857 S Emerald Ave		Chicago	IL	60628
			Resident		10857 S Green St		Chicago	IL	60643
			Resident		10858 S Eggleston Ave		Chicago	IL	60628
			Resident		10858 S Emerald Ave		Chicago	IL	60628
			Resident		10858 S Michigan		Chicago	IL	60620
			Resident		10858 S Michigan		Chicago	IL	60620
			Resident		10859 S Eggleston Ave		Chicago	IL	60628
			Resident		10900 S Eggleston Ave		Chicago	IL	60628
			Resident		10900 S Green St		Chicago	IL	60643
			Resident		10901 S Eggleston Ave		Chicago	IL	60628
			Resident		10901 S Green St		Chicago	IL	60643
			Resident		10904 S Eggleston Ave		Chicago	IL	60628
			Resident		10904 S Emerald Ave		Chicago	IL	60628
			Resident		10904 S Green St		Chicago	IL	60643
			Resident		10905 S Eggleston Ave		Chicago	IL	60628
			Resident		10905 S Emerald Ave		Chicago	IL	60628
			Resident		10905 S Green St		Chicago	IL	60643
			Resident		10906 S Eggleston Ave		Chicago	IL	60628
			Resident		10907 S Eggleston Ave		Chicago	IL	60628
			Resident		10908 S Green St		Chicago	IL	60643
			Resident		10909 S Green St		Chicago	IL	60643
			Resident		10910 S Eggleston Ave		Chicago	IL	60628
			Resident		10911 S Eggleston Ave		Chicago	IL	60628
			Resident		10912 S Eggleston Ave		Chicago	IL	60628

Organization	Salutation	First Name	Last Name	Title	Address	Apt/ Floor	City	State	Zip
			Resident		10912 S Green St		Chicago	IL	60643
			Resident		10913 S Eggleston Ave		Chicago	IL	60628
			Resident		10913 S Green St		Chicago	IL	60643
			Resident		10916 S Eggleston Ave		Chicago	IL	60628
			Resident		10916 S Emerald Ave		Chicago	IL	60628
			Resident		10916 S Green St		Chicago	IL	60643
			Resident		10917 S Eggleston Ave		Chicago	IL	60628
			Resident		10917 S Emerald Ave		Chicago	IL	60628
			Resident		10917 S Green St		Chicago	IL	60643
			Resident		10918 S Eggleston Ave		Chicago	IL	60628
			Resident		10919 S Eggleston Ave		Chicago	IL	60628
			Resident		10920 S Emerald Ave		Chicago	IL	60628
			Resident		10920 S Green St		Chicago	IL	60643
			Resident		10921 S Emerald Ave		Chicago	IL	60628
			Resident		10921 S Green St		Chicago	IL	60643
			Resident		10922 S Eggleston Ave		Chicago	IL	60628
			Resident		10923 S Eggleston Ave		Chicago	IL	60628
			Resident		10924 S Eggleston Ave		Chicago	IL	60628
			Resident		10924 S Emerald Ave		Chicago	IL	60628
			Resident		10924 S Green St		Chicago	IL	60643
			Resident		10925 S Eggleston Ave		Chicago	IL	60628
			Resident		10925 S Emerald Ave		Chicago	IL	60628
			Resident		10925 S Green St		Chicago	IL	60643
			Resident		10928 S Eggleston Ave		Chicago	IL	60628
			Resident		10928 S Emerald Ave		Chicago	IL	60628
			Resident		10928 S Green St		Chicago	IL	60643
			Resident		10929 S Eggleston Ave		Chicago	IL	60628
			Resident		10929 S Emerald Ave		Chicago	IL	60628
			Resident		10929 S Green St		Chicago	IL	60643
			Resident		10930 S Eggleston Ave		Chicago	IL	60628
			Resident		10931 S Eggleston Ave		Chicago	IL	60628
			Resident		10932 S Emerald Ave		Chicago	IL	60628
			Resident		10932 S Green St		Chicago	IL	60643
			Resident		10933 S Eggleston Ave		Chicago	IL	60628
			Resident		10933 S Emerald Ave		Chicago	IL	60628
			Resident		10933 S Green St		Chicago	IL	60643
			Resident		10934 S Eggleston Ave		Chicago	IL	60628
			Resident		10936 S Emerald Ave		Chicago	IL	60628
			Resident		10936 S Green St		Chicago	IL	60643
			Resident		10937 S Eggleston Ave		Chicago	IL	60628
			Resident		10937 S Emerald Ave		Chicago	IL	60628
			Resident		10937 S Green St		Chicago	IL	60643
			Resident		10939 S Eggleston Ave		Chicago	IL	60628
			Resident		10940 S Eggleston Ave		Chicago	IL	60628
			Resident		10940 S Emerald Ave		Chicago	IL	60628
			Resident		10940 S Green St		Chicago	IL	60643
			Resident		10941 S Emerald Ave		Chicago	IL	60628
			Resident		10941 S Green St		Chicago	IL	60643
			Resident		10942 S Eggleston Ave		Chicago	IL	60628
			Resident		10943 S Eggleston Ave		Chicago	IL	60628
			Resident		10944 S Emerald Ave		Chicago	IL	60628

Organization	Salutation	First Name	Last Name	Title	Address	Apt/ Floor	City	State	Zip
			Resident		10944 S Green St		Chicago	IL	60643
			Resident		10945 S Emerald Ave		Chicago	IL	60628
			Resident		10945 S Green St		Chicago	IL	60643
			Resident		10946 S Eggleston Ave		Chicago	IL	60628
			Resident		10947 S Eggleston Ave		Chicago	IL	60628
			Resident		10948 S Eggleston Ave		Chicago	IL	60628
			Resident		10948 S Emerald Ave		Chicago	IL	60628
			Resident		10948 S Green St		Chicago	IL	60643
			Resident		10949 S Eggleston Ave		Chicago	IL	60628
			Resident		10949 S Emerald Ave		Chicago	IL	60628
			Resident		10949 S Green St		Chicago	IL	60643
			Resident		10952 S Emerald Ave		Chicago	IL	60628
			Resident		10952 S Green St		Chicago	IL	60643
			Resident		10953 S Eggleston Ave		Chicago	IL	60628
			Resident		10953 S Emerald Ave		Chicago	IL	60628
			Resident		10953 S Green St		Chicago	IL	60643
			Resident		10954 S Eggleston Ave		Chicago	IL	60628
			Resident		10956 S Emerald Ave		Chicago	IL	60628
			Resident		10956 S Green St		Chicago	IL	60643
			Resident		10957 S Emerald Ave		Chicago	IL	60628
			Resident		10957 S Green St		Chicago	IL	60643
			Resident		10958 S Eggleston Ave		Chicago	IL	60628
			Resident		11000 S Green St		Chicago	IL	60643
			Resident		11000 S Green St		Chicago	IL	60643
			Resident		11001 S Emerald Ave		Chicago	IL	60628
			Resident		11001 S Green St		Chicago	IL	60643
			Resident		11006 S Emerald Ave		Chicago	IL	60628
			Resident		11007 S Emerald Ave		Chicago	IL	60628
			Resident		11007 S Green St		Chicago	IL	60643
			Resident		11008 S Green St		Chicago	IL	60643
			Resident		11010 S Emerald Ave		Chicago	IL	60628
			Resident		11011 S Emerald Ave		Chicago	IL	60628
			Resident		11011 S Green St		Chicago	IL	60643
			Resident		11012 S Emerald Ave		Chicago	IL	60628
			Resident		11012 S Green St		Chicago	IL	60643
			Resident		11013 S. Halsted Street		Chicago	IL	60628
			Resident		11015 S Emerald Ave		Chicago	IL	60628
			Resident		11016 S Emerald Ave		Chicago	IL	60628
			Resident		11016 S Green St		Chicago	IL	60643
			Resident		11017 S Emerald Ave		Chicago	IL	60628
			Resident		11018 S Green St		Chicago	IL	60643
			Resident		11019 S Green St		Chicago	IL	60643
			Resident		11020 S Emerald Ave		Chicago	IL	60628
			Resident		11021 S Green St		Chicago	IL	60643
			Resident		11022 S Green St		Chicago	IL	60643
			Resident		11023 S Emerald Ave		Chicago	IL	60628
			Resident		11024 S Emerald Ave		Chicago	IL	60628
			Resident		11025 S Emerald Ave		Chicago	IL	60628
			Resident		11025 S Green St		Chicago	IL	60643
			Resident		11026 S Emerald Ave		Chicago	IL	60628
			Resident		11026 S Green St		Chicago	IL	60643

Organization	Salutation	First Name	Last Name	Title	Address	Apt/ Floor	City	State	Zip
			Resident		11027 S Emerald Ave		Chicago	IL	60628
			Resident		11027 S Green St		Chicago	IL	60643
			Resident		11028 S Green St		Chicago	IL	60643
			Resident		11031 S Emerald Ave		Chicago	IL	60628
			Resident		11031 S Green St		Chicago	IL	60643
			Resident		11032 S Emerald Ave		Chicago	IL	60628
			Resident		11032 S Green St		Chicago	IL	60643
			Resident		11034 S Emerald Ave		Chicago	IL	60628
			Resident		11035 S Emerald Ave		Chicago	IL	60628
			Resident		11035 S Green St		Chicago	IL	60643
			Resident		11036 S Green St		Chicago	IL	60643
			Resident		11036 S. Green Street		Chicago	IL	60628
			Resident		11038 S Emerald Ave		Chicago	IL	60628
			Resident		11038 S. Green Street		Chicago	IL	60628
			Resident		11039 S Emerald Ave		Chicago	IL	60628
			Resident		11039 S Green St		Chicago	IL	60643
			Resident		11041 S Emerald Ave		Chicago	IL	60628
			Resident		11042 S Emerald Ave		Chicago	IL	60628
			Resident		11042 S. Green Street		Chicago	IL	60628
			Resident		111 W. 114th Street		Chicago	IL	60628
			Resident		11100 S Emerald Ave		Chicago	IL	60628
			Resident		11101 S Green St		Chicago	IL	60643
			Resident		11101 S Green St		Chicago	IL	60643
			Resident		11103 S Green St		Chicago	IL	60643
			Resident		11103 S Green St		Chicago	IL	60643
			Resident		11104 S Emerald Ave		Chicago	IL	60628
			Resident		11105 S Green St		Chicago	IL	60643
			Resident		11105 S Green St		Chicago	IL	60643
			Resident		11107 S Green St		Chicago	IL	60643
			Resident		11107 S Green St		Chicago	IL	60643
			Resident		11108 S Emerald Ave		Chicago	IL	60628
			Resident		11109 S Green St		Chicago	IL	60643
			Resident		11109 S Green St		Chicago	IL	60643
			Resident		11111 S Green St		Chicago	IL	60643
			Resident		11111 S Green St		Chicago	IL	60643
			Resident		11114 S Eggleston Ave		Chicago	IL	60628
			Resident		11114 S Emerald Ave		Chicago	IL	60628
			Resident		11116 S Green St		Chicago	IL	60643
			Resident		11118 S Eggleston Ave		Chicago	IL	60628
			Resident		11118 S Emerald Ave		Chicago	IL	60628
			Resident		11118 S Green St		Chicago	IL	60643
			Resident		11119 S Eggleston Ave		Chicago	IL	60628
			Resident		11119 S Emerald Ave		Chicago	IL	60628
			Resident		11120 S Eggleston Ave		Chicago	IL	60628
			Resident		11121 S Emerald Ave		Chicago	IL	60628
			Resident		11122 S Emerald Ave		Chicago	IL	60628
			Resident		11122 S Green St		Chicago	IL	60643
			Resident		11124 S Emerald Ave		Chicago	IL	60628
			Resident		11124 S Stewart Ave		Chicago	IL	60628
			Resident		11126 S Green St		Chicago	IL	60643
			Resident		11128 S Emerald Ave		Chicago	IL	60628

Open House Notice Mailing List
Red Line Extension

Organization	Salutation	First Name	Last Name	Title	Address	Apt/ Floor	City	State	Zip
			Resident		11128 S Green St		Chicago	IL	60643
			Resident		11129 S Eggleston Ave		Chicago	IL	60628
			Resident		11129 S Green St		Chicago	IL	60643
			Resident		11130 S Eggleston Ave		Chicago	IL	60628
			Resident		11130 S Stewart Ave		Chicago	IL	60628
			Resident		11131 S Eggleston Ave		Chicago	IL	60628
			Resident		11131 S Emerald Ave		Chicago	IL	60628
			Resident		11132 S Emerald Ave		Chicago	IL	60628
			Resident		11132 S Green St		Chicago	IL	60643
			Resident		11133 S Eggleston Ave		Chicago	IL	60628
			Resident		11133 S Emerald Ave		Chicago	IL	60628
			Resident		11133 S Green St		Chicago	IL	60643
			Resident		11136 S Eggleston Ave		Chicago	IL	60628
			Resident		11136 S Emerald Ave		Chicago	IL	60628
			Resident		11136 S Green St		Chicago	IL	60643
			Resident		11137 S Emerald Ave		Chicago	IL	60628
			Resident		11137 S Green St		Chicago	IL	60643
			Resident		11138 S Emerald Ave		Chicago	IL	60628
			Resident		11139 S Eggleston Ave		Chicago	IL	60628
			Resident		11139 S Green St		Chicago	IL	60643
			Resident		11140 S Green St		Chicago	IL	60643
			Resident		11141 S Emerald Ave		Chicago	IL	60628
			Resident		11142 S Eggleston Ave		Chicago	IL	60628
			Resident		11142 S Emerald Ave		Chicago	IL	60628
			Resident		11143 S Emerald Ave		Chicago	IL	60628
			Resident		11143 S Green St		Chicago	IL	60643
			Resident		11144 S Eggleston Ave		Chicago	IL	60628
			Resident		11144 S Green St		Chicago	IL	60643
			Resident		11145 S Eggleston Ave		Chicago	IL	60628
			Resident		11146 S Emerald Ave		Chicago	IL	60628
			Resident		11147 S Emerald Ave		Chicago	IL	60628
			Resident		11147 S Green St		Chicago	IL	60643
			Resident		11148 S Eggleston Ave		Chicago	IL	60628
			Resident		11149 S Eggleston Ave		Chicago	IL	60628
			Resident		11149 S Green St		Chicago	IL	60643
			Resident		11150 S Eggleston Ave		Chicago	IL	60628
			Resident		11150 S Emerald Ave		Chicago	IL	60628
			Resident		11150 S Green St		Chicago	IL	60643
			Resident		11150 S Stewart Ave		Chicago	IL	60628
			Resident		11151 S Emerald Ave		Chicago	IL	60628
			Resident		11152 S Emerald Ave		Chicago	IL	60628
			Resident		11153 S Eggleston Ave		Chicago	IL	60628
			Resident		11153 S Green St		Chicago	IL	60643
			Resident		11154 S Green St		Chicago	IL	60643
			Resident		11155 S Eggleston Ave		Chicago	IL	60628
			Resident		11156 S Emerald Ave		Chicago	IL	60628
			Resident		11157 S Eggleston Ave		Chicago	IL	60628
			Resident		11158 S Green St		Chicago	IL	60643
			Resident		11159 S Green St		Chicago	IL	60643
			Resident		11200 S Emerald Ave		Chicago	IL	60628
			Resident		11200 S Green St		Chicago	IL	60643

Open House Notice Mailing List
Red Line Extension

Organization	Salutation	First Name	Last Name	Title	Address	Apt/ Floor	City	State	Zip
			Resident		11200 S Stewart Ave		Chicago	IL	60628
			Resident		11201 S Emerald Ave		Chicago	IL	60628
			Resident		11201 S Green St		Chicago	IL	60643
			Resident		11204 S Emerald Ave		Chicago	IL	60628
			Resident		11204 S Green St		Chicago	IL	60643
			Resident		11204 S Stewart Ave		Chicago	IL	60628
			Resident		11205 S Green St		Chicago	IL	60643
			Resident		11207 S Emerald Ave		Chicago	IL	60628
			Resident		11208 S Emerald Ave		Chicago	IL	60628
			Resident		11208 S Green St		Chicago	IL	60643
			Resident		11209 S Emerald Ave		Chicago	IL	60628
			Resident		11209 S Green St		Chicago	IL	60643
			Resident		11210 S Green St		Chicago	IL	60643
			Resident		11210 S Stewart Ave		Chicago	IL	60628
			Resident		11211 S Emerald Ave		Chicago	IL	60628
			Resident		11212 S Emerald Ave		Chicago	IL	60628
			Resident		11212 S Stewart Ave		Chicago	IL	60628
			Resident		11213 S Green St		Chicago	IL	60643
			Resident		11215 S Emerald Ave		Chicago	IL	60628
			Resident		11215 S Green St		Chicago	IL	60643
			Resident		11216 S Emerald Ave		Chicago	IL	60628
			Resident		11216 S Stewart Ave		Chicago	IL	60628
			Resident		11219 S Green St		Chicago	IL	60643
			Resident		11220 S Emerald Ave		Chicago	IL	60628
			Resident		11221 S Emerald Ave		Chicago	IL	60628
			Resident		11222 S Green St		Chicago	IL	60643
			Resident		11223 S Green St		Chicago	IL	60643
			Resident		11224 S Emerald Ave		Chicago	IL	60628
			Resident		11224 S Stewart Ave		Chicago	IL	60628
			Resident		11225 S Emerald Ave		Chicago	IL	60628
			Resident		11225 S Emerald Ave		Chicago	IL	60628
			Resident		11226 S Green St		Chicago	IL	60643
			Resident		11227 S Green St		Chicago	IL	60643
			Resident		11229 S Emerald Ave		Chicago	IL	60628
			Resident		11229 S Stewart Ave		Chicago	IL	60628
			Resident		11230 S Green St		Chicago	IL	60643
			Resident		11230 S Stewart Ave		Chicago	IL	60628
			Resident		11231 S Green St		Chicago	IL	60643
			Resident		11232 S Emerald Ave		Chicago	IL	60628
			Resident		11232 S Green St		Chicago	IL	60643
			Resident		11233 S Emerald Ave		Chicago	IL	60628
			Resident		11233 S Green St		Chicago	IL	60643
			Resident		11234 S Stewart Ave		Chicago	IL	60628
			Resident		11236 S Emerald Ave		Chicago	IL	60628
			Resident		11236 S Green St		Chicago	IL	60643
			Resident		11236 S Stewart Ave		Chicago	IL	60628
			Resident		11237 S Emerald Ave		Chicago	IL	60628
			Resident		11237 S Green St		Chicago	IL	60643
			Resident		11240 S Emerald Ave		Chicago	IL	60628
			Resident		11240 S Stewart Ave		Chicago	IL	60628
			Resident		11241 S Emerald Ave		Chicago	IL	60628

Open House Notice Mailing List
Red Line Extension

Organization	Salutation	First Name	Last Name	Title	Address	Apt/ Floor	City	State	Zip
			Resident		11241 S Green St		Chicago	IL	60643
			Resident		11241 S Stewart Ave		Chicago	IL	60628
			Resident		11241 S Stewart Ave		Chicago	IL	60628
			Resident		11243 S Green St		Chicago	IL	60643
			Resident		11244 S Emerald Ave		Chicago	IL	60628
			Resident		11244 S Green St		Chicago	IL	60643
			Resident		11244 S Stewart Ave		Chicago	IL	60628
			Resident		11245 S Emerald Ave		Chicago	IL	60628
			Resident		11246 S Green St		Chicago	IL	60643
			Resident		11246 S Stewart Ave		Chicago	IL	60628
			Resident		11247 S Green St		Chicago	IL	60643
			Resident		11248 S Emerald Ave		Chicago	IL	60628
			Resident		11249 S Emerald Ave		Chicago	IL	60628
			Resident		11250 S Green St		Chicago	IL	60643
			Resident		11251 S Green St		Chicago	IL	60643
			Resident		11252 S Emerald Ave		Chicago	IL	60628
			Resident		11252 S Stewart Ave		Chicago	IL	60628
			Resident		11254 S Stewart Ave		Chicago	IL	60628
			Resident		11255 S Green St		Chicago	IL	60643
			Resident		11256 S Emerald Ave		Chicago	IL	60628
			Resident		11258 S Green St		Chicago	IL	60643
			Resident		11259 S Green St		Chicago	IL	60643
			Resident		11300 S Green St		Chicago	IL	60643
			Resident		11300 S Stewart Ave		Chicago	IL	60628
			Resident		11300 S Wentworth Ave		Chicago	IL	60628
			Resident		11301 S Emerald Ave		Chicago	IL	60628
			Resident		11301 S Green St		Chicago	IL	60643
			Resident		11301 S Stewart Ave		Chicago	IL	60628
			Resident		11303 S Stewart Ave		Chicago	IL	60628
			Resident		11304 S Green St		Chicago	IL	60643
			Resident		11304 S Stewart Ave		Chicago	IL	60628
			Resident		11305 S Green St		Chicago	IL	60643
			Resident		11305 S Stewart Ave		Chicago	IL	60628
			Resident		11306 S Church St		Chicago	IL	60643
			Resident		11307 S Emerald Ave		Chicago	IL	60628
			Resident		11308 S Stewart Ave		Chicago	IL	60628
			Resident		11308 S Wentworth Ave		Chicago	IL	60628
			Resident		11309 S Stewart Ave		Chicago	IL	60628
			Resident		11310 S Green St		Chicago	IL	60643
			Resident		11310 S Stewart Ave		Chicago	IL	60628
			Resident		11311 S Emerald Ave		Chicago	IL	60628
			Resident		11311 S Green St		Chicago	IL	60643
			Resident		11311 S Stewart Ave		Chicago	IL	60628
			Resident		11312 S Wentworth Ave		Chicago	IL	60628
			Resident		11314 S Green St		Chicago	IL	60643
			Resident		11314 S Wentworth Ave		Chicago	IL	60628
			Resident		11314 S Yale Ave		Chicago	IL	60628
			Resident		11315 S Emerald Ave		Chicago	IL	60628
			Resident		11315 S Green St		Chicago	IL	60643
			Resident		11315 S Stewart Ave		Chicago	IL	60628
			Resident		11315 S Yale Ave		Chicago	IL	60628

Open House Notice Mailing List
Red Line Extension

Organization	Salutation	First Name	Last Name	Title	Address	Apt/ Floor	City	State	Zip
			Resident		11316 S Harvard Ave		Chicago	IL	60628
			Resident		11318 S Green St		Chicago	IL	60643
			Resident		11319 S Green St		Chicago	IL	60643
			Resident		11319 S Princeton Ave		Chicago	IL	60628
			Resident		11320 S Emerald Ave		Chicago	IL	60628
			Resident		11320 S Harvard Ave		Chicago	IL	60628
			Resident		11320 S Stewart Ave		Chicago	IL	60628
			Resident		11320 S Wentworth Ave		Chicago	IL	60628
			Resident		11321 S Princeton Ave		Chicago	IL	60628
			Resident		11321 S Stewart Ave		Chicago	IL	60628
			Resident		11321 S Yale Ave		Chicago	IL	60628
			Resident		11322 S Green St		Chicago	IL	60643
			Resident		11322 S Yale Ave		Chicago	IL	60628
			Resident		11323 S Green St		Chicago	IL	60643
			Resident		11324 S Stewart Ave		Chicago	IL	60628
			Resident		11324 S Wentworth Ave		Chicago	IL	60628
			Resident		11325 S Emerald Ave		Chicago	IL	60628
			Resident		11325 S Stewart Ave		Chicago	IL	60628
			Resident		11326 S Emerald Ave		Chicago	IL	60628
			Resident		11326 S Green St		Chicago	IL	60643
			Resident		11326 S Harvard Ave		Chicago	IL	60628
			Resident		11326 S Yale Ave		Chicago	IL	60628
			Resident		11327 S Green St		Chicago	IL	60643
			Resident		11327 S Harvard Ave		Chicago	IL	60628
			Resident		11327 S Princeton Ave		Chicago	IL	60628
			Resident		11328 S Stewart Ave		Chicago	IL	60628
			Resident		11329 S Emerald Ave		Chicago	IL	60628
			Resident		11329 S Harvard Ave		Chicago	IL	60628
			Resident		11329 S Stewart Ave		Chicago	IL	60628
			Resident		11330 S Emerald Ave		Chicago	IL	60628
			Resident		11330 S Green St		Chicago	IL	60643
			Resident		11330 S Harvard Ave		Chicago	IL	60628
			Resident		11330 S Stewart Ave		Chicago	IL	60628
			Resident		11330 S Wentworth Ave		Chicago	IL	60628
			Resident		11330 S Yale Ave		Chicago	IL	60628
			Resident		11331 S Green St		Chicago	IL	60643
			Resident		11331 S Harvard Ave		Chicago	IL	60628
			Resident		11331 S Yale Ave		Chicago	IL	60628
			Resident		11333 S Emerald Ave		Chicago	IL	60628
			Resident		11333 S Stewart Ave		Chicago	IL	60628
			Resident		11334 S Emerald Ave		Chicago	IL	60628
			Resident		11334 S Green St		Chicago	IL	60643
			Resident		11334 S Harvard Ave		Chicago	IL	60628
			Resident		11334 S Wentworth Ave		Chicago	IL	60628
			Resident		11334 S Yale Ave		Chicago	IL	60628
			Resident		11335 S Green St		Chicago	IL	60643
			Resident		11336 S Harvard Ave		Chicago	IL	60628
			Resident		11336 S Yale Ave		Chicago	IL	60628
			Resident		11338 S Emerald Ave		Chicago	IL	60628
			Resident		11338 S Green St		Chicago	IL	60643
			Resident		11338 S Wentworth Ave		Chicago	IL	60628

Open House Notice Mailing List
Red Line Extension

Organization	Salutation	First Name	Last Name	Title	Address	Apt/ Floor	City	State	Zip
			Resident		11339 S Emerald Ave		Chicago	IL	60628
			Resident		11339 S Green St		Chicago	IL	60643
			Resident		11339 S Harvard Ave		Chicago	IL	60628
			Resident		11339 S Harvard Ave		Chicago	IL	60628
			Resident		11339 S Stewart Ave		Chicago	IL	60628
			Resident		11339 S Yale Ave		Chicago	IL	60628
			Resident		11340 S Emerald Ave		Chicago	IL	60628
			Resident		11340 S Harvard Ave		Chicago	IL	60628
			Resident		11340 S Princeton Ave		Chicago	IL	60628
			Resident		11342 S Green St		Chicago	IL	60643
			Resident		11342 S Princeton Ave		Chicago	IL	60628
			Resident		11343 S Emerald Ave		Chicago	IL	60628
			Resident		11343 S Green St		Chicago	IL	60643
			Resident		11343 S Stewart Ave		Chicago	IL	60628
			Resident		11344 S Emerald Ave		Chicago	IL	60628
			Resident		11344 S Harvard Ave		Chicago	IL	60628
			Resident		11344 S Stewart Ave		Chicago	IL	60628
			Resident		11344 S Wentworth Ave		Chicago	IL	60628
			Resident		11345 S Harvard Ave		Chicago	IL	60628
			Resident		11346 S Green St		Chicago	IL	60643
			Resident		11346 S Harvard Ave		Chicago	IL	60628
			Resident		11347 S Green St		Chicago	IL	60643
			Resident		11347 S Stewart Ave		Chicago	IL	60628
			Resident		11348 S Emerald Ave		Chicago	IL	60628
			Resident		11348 S Stewart Ave		Chicago	IL	60628
			Resident		11349 S Emerald Ave		Chicago	IL	60628
			Resident		11349 S Wentworth Ave		Chicago	IL	60628
			Resident		11350 S Green St		Chicago	IL	60643
			Resident		11350 S Stewart Ave		Chicago	IL	60628
			Resident		11350 S Wentworth Ave		Chicago	IL	60628
			Resident		11351 S Green St		Chicago	IL	60643
			Resident		11351 S Stewart Ave		Chicago	IL	60628
			Resident		11352 S Emerald Ave		Chicago	IL	60628
			Resident		11353 S Emerald Ave		Chicago	IL	60628
			Resident		11354 S Green St		Chicago	IL	60643
			Resident		11355 S Green St		Chicago	IL	60643
			Resident		11356 S Emerald Ave		Chicago	IL	60628
			Resident		11356 S Stewart Ave		Chicago	IL	60628
			Resident		11357 S Emerald Ave		Chicago	IL	60628
			Resident		11358 S Green St		Chicago	IL	60643
			Resident		11359 S Green St		Chicago	IL	60643
			Resident		11400 S Emerald Ave		Chicago	IL	60628
			Resident		11401 S Emerald Ave		Chicago	IL	60628
			Resident		11404 S Emerald Ave		Chicago	IL	60628
			Resident		11407 S Emerald Ave		Chicago	IL	60628
			Resident		11408 S Emerald Ave		Chicago	IL	60628
			Resident		11410 S Emerald Ave		Chicago	IL	60628
			Resident		11411 S Emerald Ave		Chicago	IL	60628
			Resident		11412 S Harvard Ave		Chicago	IL	60628
			Resident		11412 S Harvard Ave		Chicago	IL	60628
			Resident		11412 S Princeton Ave		Chicago	IL	60628

Open House Notice Mailing List
Red Line Extension

Organization	Salutation	First Name	Last Name	Title	Address	Apt/ Floor	City	State	Zip
			Resident		11412 S Yale Ave		Chicago	IL	60628
			Resident		11413 S Princeton Ave		Chicago	IL	60628
			Resident		11413 S Yale Ave		Chicago	IL	60628
			Resident		11414 S Emerald Ave		Chicago	IL	60628
			Resident		11415 S Emerald Ave		Chicago	IL	60628
			Resident		11415 S Harvard Ave		Chicago	IL	60628
			Resident		11416 S Yale Ave		Chicago	IL	60628
			Resident		11417 S Princeton Ave		Chicago	IL	60628
			Resident		11418 S Emerald Ave		Chicago	IL	60628
			Resident		11418 S Harvard Ave		Chicago	IL	60628
			Resident		11418 S Princeton Ave		Chicago	IL	60628
			Resident		11419 S Emerald Ave		Chicago	IL	60628
			Resident		11419 S Harvard Ave		Chicago	IL	60628
			Resident		11420 S Princeton Ave		Chicago	IL	60628
			Resident		11420 S Yale Ave		Chicago	IL	60628
			Resident		11421 S Yale Ave		Chicago	IL	60628
			Resident		11422 S Emerald Ave		Chicago	IL	60628
			Resident		11422 S Harvard Ave		Chicago	IL	60628
			Resident		11422 S Princeton Ave		Chicago	IL	60628
			Resident		11422 S Yale Ave		Chicago	IL	60628
			Resident		11423 S Emerald Ave		Chicago	IL	60628
			Resident		11423 S Harvard Ave		Chicago	IL	60628
			Resident		11423 S Princeton Ave		Chicago	IL	60628
			Resident		11423 S Wentworth Ave		Chicago	IL	60628
			Resident		11423 S Yale Ave		Chicago	IL	60628
			Resident		11426 S Emerald Ave		Chicago	IL	60628
			Resident		11426 S Princeton Ave		Chicago	IL	60628
			Resident		11426 S Yale Ave		Chicago	IL	60628
			Resident		11427 S Emerald Ave		Chicago	IL	60628
			Resident		11427 S Harvard Ave		Chicago	IL	60628
			Resident		11427 S Yale Ave		Chicago	IL	60628
			Resident		11428 S Emerald Ave		Chicago	IL	60628
			Resident		11428 S Harvard Ave		Chicago	IL	60628
			Resident		11428 S Princeton Ave		Chicago	IL	60628
			Resident		11429 S Emerald Ave		Chicago	IL	60628
			Resident		11429 S Harvard Ave		Chicago	IL	60628
			Resident		11431 S Harvard Ave		Chicago	IL	60628
			Resident		11431 S Yale Ave		Chicago	IL	60628
			Resident		11432 S Emerald Ave		Chicago	IL	60628
			Resident		11432 S Wentworth Ave		Chicago	IL	60628
			Resident		11433 S Emerald Ave		Chicago	IL	60628
			Resident		11433 S Harvard Ave		Chicago	IL	60628
			Resident		11433 S Princeton Ave		Chicago	IL	60628
			Resident		11434 S Harvard Ave		Chicago	IL	60628
			Resident		11434 S Princeton Ave		Chicago	IL	60628
			Resident		11435 S Yale Ave		Chicago	IL	60628
			Resident		11436 S Emerald Ave		Chicago	IL	60628
			Resident		11436 S Harvard Ave		Chicago	IL	60628
			Resident		11436 S Wentworth Ave		Chicago	IL	60628
			Resident		11436 S Yale Ave		Chicago	IL	60628
			Resident		11437 S Emerald Ave		Chicago	IL	60628

Organization	Salutation	First Name	Last Name	Title	Address	Apt/ Floor	City	State	Zip
			Resident		11437 S Princeton Ave		Chicago	IL	60628
			Resident		11438 S Harvard Ave		Chicago	IL	60628
			Resident		11438 S Princeton Ave		Chicago	IL	60628
			Resident		11438 S Wentworth Ave		Chicago	IL	60628
			Resident		11439 S Harvard Ave		Chicago	IL	60628
			Resident		11439 S Princeton Ave		Chicago	IL	60628
			Resident		11440 S Emerald Ave		Chicago	IL	60628
			Resident		11441 S Emerald Ave		Chicago	IL	60628
			Resident		11441 S Princeton Ave		Chicago	IL	60628
			Resident		11441 S Wentworth Ave		Chicago	IL	60628
			Resident		11441 S Yale Ave		Chicago	IL	60628
			Resident		11442 S Emerald Ave		Chicago	IL	60628
			Resident		11442 S Harvard Ave		Chicago	IL	60628
			Resident		11442 S Princeton Ave		Chicago	IL	60628
			Resident		11442 S Wentworth Ave		Chicago	IL	60628
			Resident		11442 S Yale Ave		Chicago	IL	60628
			Resident		11443 S Emerald Ave		Chicago	IL	60628
			Resident		11443 S Yale Ave		Chicago	IL	60628
			Resident		11446 S Emerald Ave		Chicago	IL	60628
			Resident		11446 S Wentworth Ave		Chicago	IL	60628
			Resident		11449 S Emerald Ave		Chicago	IL	60628
			Resident		11450 S Emerald Ave		Chicago	IL	60628
			Resident		11455 S Emerald Ave		Chicago	IL	60628
			Resident		11456 S Emerald Ave		Chicago	IL	60628
			Resident		11514 S Yale Ave		Chicago	IL	60628
			Resident		11515 S Perry Ave		Chicago	IL	60628
			Resident		11516 S Yale Ave		Chicago	IL	60628
			Resident		11517 S Church St		Chicago	IL	60643
			Resident		11517 S Perry Ave		Chicago	IL	60628
			Resident		11517 S Wentworth Ave		Chicago	IL	60628
			Resident		11518 S Perry Ave		Chicago	IL	60628
			Resident		11518 S Wentworth Ave		Chicago	IL	60628
			Resident		11520 S Wentworth Ave		Chicago	IL	60628
			Resident		11521 S Perry Ave		Chicago	IL	60628
			Resident		11521 S Perry Ave		Chicago	IL	60628
			Resident		11522 S Yale Ave		Chicago	IL	60628
			Resident		11523 S Yale Ave		Chicago	IL	60628
			Resident		11524 S Perry Ave		Chicago	IL	60628
			Resident		11526 S Wentworth Ave		Chicago	IL	60628
			Resident		11527 S Yale Ave		Chicago	IL	60628
			Resident		11528 S Perry Ave		Chicago	IL	60628
			Resident		11528 S Yale Ave		Chicago	IL	60628
			Resident		11530 S Wentworth Ave		Chicago	IL	60628
			Resident		11530 S Yale Ave		Chicago	IL	60628
			Resident		11532 S Lafayette Ave		Chicago	IL	60628
			Resident		11532 S Yale Ave		Chicago	IL	60628
			Resident		11534 S Lafayette Ave		Chicago	IL	60628
			Resident		11536 S Wentworth Ave		Chicago	IL	60628
			Resident		11537 S Perry Ave		Chicago	IL	60628
			Resident		11538 S Lafayette Ave		Chicago	IL	60628
			Resident		11538 S Wentworth Ave		Chicago	IL	60628

Organization	Salutation	First Name	Last Name	Title	Address	Apt/ Floor	City	State	Zip
			Resident		11538 S Yale Ave		Chicago	IL	60628
			Resident		11539 S Wentworth Ave		Chicago	IL	60628
			Resident		11539 S Wentworth Ave		Chicago	IL	60628
			Resident		11540 S Lafayette Ave		Chicago	IL	60628
			Resident		11541 S Lafayette Ave		Chicago	IL	60628
			Resident		11541 S Michigan Ave		Chicago	IL	60628
			Resident		11542 S Michigan Ave		Chicago	IL	60628
			Resident		11542 S Wentworth Ave		Chicago	IL	60628
			Resident		11543 S Michigan Ave		Chicago	IL	60628
			Resident		11543 S Wentworth Ave		Chicago	IL	60628
			Resident		11544 S Perry Ave		Chicago	IL	60628
			Resident		11545 S Perry Ave		Chicago	IL	60628
			Resident		11546 S State St		Chicago	IL	60628
			Resident		11546 S Wentworth Ave		Chicago	IL	60628
			Resident		11547 S Wentworth Ave		Chicago	IL	60628
			Resident		11547 S Yale Ave		Chicago	IL	60628
			Resident		11548 S Lafayette Ave		Chicago	IL	60628
			Resident		11548 S Perry Ave		Chicago	IL	60628
			Resident		11548 S State St		Chicago	IL	60628
			Resident		11548 S Yale Ave		Chicago	IL	60628
			Resident		11549 S Lafayette Ave		Chicago	IL	60628
			Resident		11549 S Perry Ave		Chicago	IL	60628
			Resident		11549 S Perry Ave		Chicago	IL	60628
			Resident		11549 S Yale Ave		Chicago	IL	60628
			Resident		11550 S Lafayette Ave		Chicago	IL	60628
			Resident		11550 S Perry Ave		Chicago	IL	60628
			Resident		11551 S Yale Ave		Chicago	IL	60628
			Resident		11555 S Yale Ave		Chicago	IL	60628
			Resident		11556 S State St		Chicago	IL	60628
			Resident		11559 S Wentworth Ave		Chicago	IL	60628
			Resident		11560 S State St		Chicago	IL	60628
			Resident		11564 S State St		Chicago	IL	60628
			Resident		11568 S State St		Chicago	IL	60628
			Resident		11569 S State St		Chicago	IL	60628
			Resident		11571 S Wentworth Ave		Chicago	IL	60628
			Resident		11572 S State St		Chicago	IL	60628
			Resident		11572 S Wabash Ave		Chicago	IL	60628
			Resident		11573 S State St		Chicago	IL	60628
			Resident		11574 S Wabash Ave		Chicago	IL	60628
			Resident		11576 S State St		Chicago	IL	60628
			Resident		11576 S State St		Chicago	IL	60628
			Resident		11579 S Wentworth Ave		Chicago	IL	60628
			Resident		11583 S State St		Chicago	IL	60628
			Resident		11586 S State St		Chicago	IL	60628
			Resident		11586 S State St		Chicago	IL	60628
			Resident		11592 S Michigan Ave		Chicago	IL	60628
			Resident		116 E. 117th Street		Chicago	IL	60628
			Resident		116 W. 115th Street	#1	Chicago	IL	60628
			Resident		116 W. 115th Street	#2	Chicago	IL	60628
			Resident		11600 S Michigan Ave		Chicago	IL	60628
			Resident		11601 S State St		Chicago	IL	60628

Open House Notice Mailing List
Red Line Extension

Organization	Salutation	First Name	Last Name	Title	Address	Apt/ Floor	City	State	Zip
			Resident		11605 S State St		Chicago	IL	60628
			Resident		11608 S Michigan Ave		Chicago	IL	60628
			Resident		11610 S Michigan Ave		Chicago	IL	60628
			Resident		11610 S State St		Chicago	IL	60628
			Resident		11611 S Michigan Ave		Chicago	IL	60628
			Resident		11611 S State St		Chicago	IL	60628
			Resident		11614 S Prairie Ave		Chicago	IL	60628
			Resident		11614 S State St		Chicago	IL	60628
			Resident		11615 S Prairie Ave		Chicago	IL	60628
			Resident		11618 S Prairie Ave		Chicago	IL	60628
			Resident		11618 S State St		Chicago	IL	60628
			Resident		11619 S Prairie Ave		Chicago	IL	60628
			Resident		11620 S Prairie Ave		Chicago	IL	60628
			Resident		11620 S State St		Chicago	IL	60628
			Resident		11622 S Prairie Ave		Chicago	IL	60628
			Resident		11623 S Prairie Ave		Chicago	IL	60628
			Resident		11624 S Prairie Ave		Chicago	IL	60628
			Resident		11626 S Michigan Ave		Chicago	IL	60628
			Resident		11626 S Prairie Ave		Chicago	IL	60628
			Resident		11628 S State St		Chicago	IL	60628
			Resident		11630 S Prairie Ave		Chicago	IL	60628
			Resident		11634 S Prairie Ave		Chicago	IL	60628
			Resident		11642 S. Halsted Street		Chicago	IL	60628
			Resident		11644 S. Halsted Street		Chicago	IL	60628
			Resident		117 W. 114th Street		Chicago	IL	60628
			Resident		11700 S Michigan Ave		Chicago	IL	60628
			Resident		11700 S Peoria St		Chicago	IL	60643
			Resident		11701 S Peoria St		Chicago	IL	60643
			Resident		11704 S Peoria St		Chicago	IL	60643
			Resident		11706 S Peoria St		Chicago	IL	60643
			Resident		11708 S Indiana Ave		Chicago	IL	60628
			Resident		11709 S Indiana Ave		Chicago	IL	60628
			Resident		11709 S Peoria St		Chicago	IL	60643
			Resident		11709 S Peoria St		Chicago	IL	60643
			Resident		11710 S Peoria St		Chicago	IL	60643
			Resident		11710 S. Halsted Street		Chicago	IL	60628
			Resident		11711 S Indiana Ave		Chicago	IL	60628
			Resident		11712 S Peoria St		Chicago	IL	60643
			Resident		11714 S Indiana Ave		Chicago	IL	60628
			Resident		11715 S Indiana Ave		Chicago	IL	60628
			Resident		11715 S. Calumet	#1	Chicago	IL	60628
			Resident		11715 S. Calumet	#2	Chicago	IL	60628
			Resident		11716 S Peoria St		Chicago	IL	60643
			Resident		11717 S Peoria St		Chicago	IL	60643
			Resident		11718 S Indiana Ave		Chicago	IL	60628
			Resident		11718 S Peoria St		Chicago	IL	60643
			Resident		11718 S Prairie Ave		Chicago	IL	60628
			Resident		11719 S Peoria St		Chicago	IL	60643
			Resident		11719 S. Calumet		Chicago	IL	60628
			Resident		11720 S Peoria St		Chicago	IL	60643
			Resident		11720 S. Halsted Street		Chicago	IL	60628

Open House Notice Mailing List
Red Line Extension

Organization	Salutation	First Name	Last Name	Title	Address	Apt/ Floor	City	State	Zip
			Resident		11721 S Indiana Ave		Chicago	IL	60628
			Resident		11721 S Peoria St		Chicago	IL	60643
			Resident		11721 S. Calumet	#1	Chicago	IL	60628
			Resident		11721 S. Calumet	#2	Chicago	IL	60628
			Resident		11722 S Peoria St		Chicago	IL	60643
			Resident		11722 S Prairie Ave		Chicago	IL	60628
			Resident		11723 S. Calumet		Chicago	IL	60628
			Resident		11724 S Peoria St		Chicago	IL	60643
			Resident		11724 S Prairie Ave		Chicago	IL	60628
			Resident		11724 S. Halsted Street		Chicago	IL	60628
			Resident		11726 S Peoria St		Chicago	IL	60643
			Resident		11726 S Prairie Ave		Chicago	IL	60628
			Resident		11727 S Peoria St		Chicago	IL	60643
			Resident		11727 S. Calumet		Chicago	IL	60628
			Resident		11731 S. Calumet	#1	Chicago	IL	60628
			Resident		11731 S. Calumet	#2	Chicago	IL	60628
			Resident		11733 S Peoria St		Chicago	IL	60643
			Resident		11734 S Prairie Ave		Chicago	IL	60628
			Resident		11735 S Indiana Ave		Chicago	IL	60628
			Resident		11735 S Peoria St		Chicago	IL	60643
			Resident		11736 S Peoria St		Chicago	IL	60643
			Resident		11737 S Peoria St		Chicago	IL	60643
			Resident		11738 S Prairie Ave		Chicago	IL	60628
			Resident		11739 S Peoria St		Chicago	IL	60643
			Resident		11740 S Peoria St		Chicago	IL	60643
			Resident		11744 S Peoria St		Chicago	IL	60643
			Resident		11745 S Indiana Ave		Chicago	IL	60628
			Resident		11745 S Indiana Ave		Chicago	IL	60628
			Resident		11745 S Peoria St		Chicago	IL	60643
			Resident		11745 S. Halsted Street		Chicago	IL	60628
			Resident		11748 S Indiana Ave		Chicago	IL	60628
			Resident		11749 S Peoria St		Chicago	IL	60643
			Resident		11752 S Indiana Ave		Chicago	IL	60628
			Resident		11753 S Peoria St		Chicago	IL	60643
			Resident		11753 S. Halsted Street		Chicago	IL	60628
			Resident		11755 S Peoria St		Chicago	IL	60643
			Resident		11756 S Peoria St		Chicago	IL	60643
			Resident		11759 S. Halsted Street		Chicago	IL	60628
			Resident		11763 S. Halsted Street		Chicago	IL	60628
			Resident		118 E. 117th Street		Chicago	IL	60628
			Resident		11800 S Peoria St		Chicago	IL	60643
			Resident		11800 S Peoria St		Chicago	IL	60643
			Resident		11801 S Prairie Ave		Chicago	IL	60628
			Resident		11801 S. Prairie		Chicago	IL	60628
			Resident		11805 S Peoria St		Chicago	IL	60643
			Resident		11805 S Peoria St		Chicago	IL	60643
			Resident		11806 S Peoria St		Chicago	IL	60643
			Resident		11806 S Peoria St		Chicago	IL	60643
			Resident		11807 S Indiana Ave		Chicago	IL	60628
			Resident		11807 S Peoria St		Chicago	IL	60643
			Resident		11807 S Peoria St		Chicago	IL	60643

Organization	Salutation	First Name	Last Name	Title	Address	Apt/ Floor	City	State	Zip
			Resident		11808 S Peoria St		Chicago	IL	60643
			Resident		11808 S Peoria St		Chicago	IL	60643
			Resident		11809 S Indiana Ave		Chicago	IL	60628
			Resident		11811 S Peoria St		Chicago	IL	60643
			Resident		11811 S Peoria St		Chicago	IL	60643
			Resident		11812 S Peoria St		Chicago	IL	60643
			Resident		11812 S Peoria St		Chicago	IL	60643
			Resident		11814 S Prairie Ave		Chicago	IL	60628
			Resident		11815 S Peoria St		Chicago	IL	60643
			Resident		11815 S Peoria St		Chicago	IL	60643
			Resident		11817 S Prairie Ave		Chicago	IL	60628
			Resident		11818 S Peoria St		Chicago	IL	60643
			Resident		11819 S Peoria St		Chicago	IL	60643
			Resident		11819 S Peoria St		Chicago	IL	60643
			Resident		11820 S Prairie Ave		Chicago	IL	60628
			Resident		11821 S Indiana Ave		Chicago	IL	60628
			Resident		11821 S Peoria St		Chicago	IL	60643
			Resident		11821 S Peoria St		Chicago	IL	60643
			Resident		11821 S Prairie Ave		Chicago	IL	60628
			Resident		11822 S Prairie Ave		Chicago	IL	60628
			Resident		11823 S Peoria St		Chicago	IL	60643
			Resident		11823 S Peoria St		Chicago	IL	60643
			Resident		11824 S Peoria St		Chicago	IL	60643
			Resident		11824 S Peoria St		Chicago	IL	60643
			Resident		11825 S Prairie Ave		Chicago	IL	60628
			Resident		11826 S Prairie Ave		Chicago	IL	60628
			Resident		11828 S Peoria St		Chicago	IL	60643
			Resident		11828 S Peoria St		Chicago	IL	60643
			Resident		11828 S Prairie Ave		Chicago	IL	60628
			Resident		11829 S Prairie Ave		Chicago	IL	60628
			Resident		11831 S Indiana Ave		Chicago	IL	60628
			Resident		11831 S Indiana Ave		Chicago	IL	60628
			Resident		11831 S Prairie Ave		Chicago	IL	60628
			Resident		11832 S Prairie Ave		Chicago	IL	60628
			Resident		11833 S Indiana Ave		Chicago	IL	60628
			Resident		11833 S Prairie Ave		Chicago	IL	60628
			Resident		11834 S Indiana Ave		Chicago	IL	60628
			Resident		11834 S Peoria St		Chicago	IL	60643
			Resident		11834 S Peoria St		Chicago	IL	60643
			Resident		11834 S Prairie Ave		Chicago	IL	60628
			Resident		11835 S Peoria St		Chicago	IL	60643
			Resident		11835 S Peoria St		Chicago	IL	60643
			Resident		11836 S Indiana Ave		Chicago	IL	60628
			Resident		11836 S Peoria St		Chicago	IL	60643
			Resident		11836 S Peoria St		Chicago	IL	60643
			Resident		11837 S Indiana Ave		Chicago	IL	60628
			Resident		11837 S Prairie Ave		Chicago	IL	60628
			Resident		11838 S Indiana Ave		Chicago	IL	60628
			Resident		11838 S Peoria St		Chicago	IL	60643
			Resident		11838 S Peoria St		Chicago	IL	60643
			Resident		11838 S Prairie Ave		Chicago	IL	60628

Open House Notice Mailing List
Red Line Extension

Organization	Salutation	First Name	Last Name	Title	Address	Apt/ Floor	City	State	Zip
			Resident		11839 S Indiana Ave		Chicago	IL	60628
			Resident		11841 S Indiana Ave		Chicago	IL	60628
			Resident		11841 S Prairie Ave		Chicago	IL	60628
			Resident		11845 S Indiana Ave		Chicago	IL	60628
			Resident		11845 S Prairie Ave		Chicago	IL	60628
			Resident		11848 S Indiana Ave		Chicago	IL	60628
			Resident		11853 S Indiana Ave		Chicago	IL	60628
			Resident		11915 S Emerald Ave		Chicago	IL	60628
			Resident		11925 S Emerald Ave		Chicago	IL	60628
			Resident		11927 S Prairie Ave		Chicago	IL	60628
			Resident		11931 S Prairie Ave		Chicago	IL	60628
			Resident		11935 S Emerald Ave		Chicago	IL	60628
			Resident		11936 S Prairie Ave		Chicago	IL	60628
			Resident		11952 S Prairie Ave		Chicago	IL	60628
			Resident		11953 S Prairie Ave		Chicago	IL	60628
			Resident		11959 S Prairie Ave		Chicago	IL	60628
			Resident		12000 S Halsted St		Chicago	IL	60628
			Resident		12001 S Halsted St		Chicago	IL	60628
			Resident		12003 S Halsted St		Chicago	IL	60628
			Resident		12004 S Emerald Ave		Chicago	IL	60628
			Resident		12011 S Union Ave		Chicago	IL	60628
			Resident		12012 S Emerald Ave		Chicago	IL	60628
			Resident		12014 S Union Ave		Chicago	IL	60628
			Resident		12015 S Union Ave		Chicago	IL	60628
			Resident		12018 S Union Ave		Chicago	IL	60628
			Resident		12022 S Halsted St		Chicago	IL	60628
			Resident		12023 S Union Ave		Chicago	IL	60628
			Resident		12024 S Union Ave		Chicago	IL	60628
			Resident		12029 S Union Ave		Chicago	IL	60628
			Resident		12032 S Union Ave		Chicago	IL	60628
			Resident		12033 S Halsted St		Chicago	IL	60628
			Resident		12034 S Union Ave		Chicago	IL	60628
			Resident		12039 S Union Ave		Chicago	IL	60628
			Resident		12043 S Union Ave		Chicago	IL	60628
			Resident		12045 S Union Ave		Chicago	IL	60628
			Resident		12046 S Union Ave		Chicago	IL	60628
			Resident		12047 S Union Ave		Chicago	IL	60628
			Resident		12049 S Union Ave		Chicago	IL	60628
			Resident		12050 S Emerald Ave		Chicago	IL	60628
			Resident		12051 S Union Ave		Chicago	IL	60628
			Resident		12054 S Union Ave		Chicago	IL	60628
			Resident		12102 S Emerald Ave		Chicago	IL	60628
			Resident		12103 S Emerald Ave		Chicago	IL	60628
			Resident		12105 S Halsted St		Chicago	IL	60628
			Resident		12106 S Emerald Ave		Chicago	IL	60628
			Resident		12107 S Emerald Ave		Chicago	IL	60628
			Resident		12107 S Halsted St		Chicago	IL	60628
			Resident		12110 S Halsted St		Chicago	IL	60628
			Resident		12111 S Emerald Ave		Chicago	IL	60628
			Resident		12114 S Emerald Ave		Chicago	IL	60628
			Resident		12114 S Emerald Ave		Chicago	IL	60628

Open House Notice Mailing List
Red Line Extension

Organization	Salutation	First Name	Last Name	Title	Address	Apt/ Floor	City	State	Zip
			Resident		12115 S Emerald Ave		Chicago	IL	60628
			Resident		12117 S Emerald Ave		Chicago	IL	60628
			Resident		12118 S Emerald Ave		Chicago	IL	60628
			Resident		12119 S Emerald Ave		Chicago	IL	60628
			Resident		12120 S Halsted St		Chicago	IL	60628
			Resident		12123 S Emerald Ave		Chicago	IL	60628
			Resident		12124 S Emerald Ave		Chicago	IL	60628
			Resident		12125 S Emerald Ave		Chicago	IL	60628
			Resident		12125 S Halsted St		Chicago	IL	60628
			Resident		12126 S Halsted St		Chicago	IL	60628
			Resident		12128 S Emerald Ave		Chicago	IL	60628
			Resident		12128 S Halsted St		Chicago	IL	60628
			Resident		12128 S Halsted St		Chicago	IL	60628
			Resident		12129 S Emerald Ave		Chicago	IL	60628
			Resident		12131 S Emerald Ave		Chicago	IL	60628
			Resident		12131 S Green St		Chicago	IL	60643
			Resident		12132 S Emerald Ave		Chicago	IL	60628
			Resident		12136 S Emerald Ave		Chicago	IL	60628
			Resident		12137 S Emerald Ave		Chicago	IL	60628
			Resident		12137 S Green St		Chicago	IL	60643
			Resident		12138 S Emerald Ave		Chicago	IL	60628
			Resident		12141 S Emerald Ave		Chicago	IL	60628
			Resident		12141 S Green St		Chicago	IL	60643
			Resident		12142 S Emerald Ave		Chicago	IL	60628
			Resident		12142 S Halsted St		Chicago	IL	60628
			Resident		12143 S Emerald Ave		Chicago	IL	60628
			Resident		12143 S Green St		Chicago	IL	60643
			Resident		12143 S Halsted St		Chicago	IL	60628
			Resident		12147 S Emerald Ave		Chicago	IL	60628
			Resident		12148 S Emerald Ave		Chicago	IL	60628
			Resident		12151 S Emerald Ave		Chicago	IL	60628
			Resident		12154 S Emerald Ave		Chicago	IL	60628
			Resident		12155 S Emerald Ave		Chicago	IL	60628
			Resident		12155 S Halsted St		Chicago	IL	60628
			Resident		12156 S Emerald Ave		Chicago	IL	60628
			Resident		12200 S Emerald Ave		Chicago	IL	60628
			Resident		12205 S Emerald Ave		Chicago	IL	60628
			Resident		12208 S Emerald Ave		Chicago	IL	60628
			Resident		12210 S Green St		Chicago	IL	60643
			Resident		12211 S Green St		Chicago	IL	60643
			Resident		12214 S Emerald Ave		Chicago	IL	60628
			Resident		12214 S Green St		Chicago	IL	60643
			Resident		12215 S Green St		Chicago	IL	60643
			Resident		12216 S Emerald Ave		Chicago	IL	60628
			Resident		12216 S Green St		Chicago	IL	60643
			Resident		12217 S Halsted St		Chicago	IL	60628
			Resident		12219 S Green St		Chicago	IL	60643
			Resident		12220 S Emerald Ave		Chicago	IL	60628
			Resident		12220 S Green St		Chicago	IL	60643
			Resident		12222 S Green St		Chicago	IL	60643
			Resident		12223 S Green St		Chicago	IL	60643

Open House Notice Mailing List
Red Line Extension

Organization	Salutation	First Name	Last Name	Title	Address	Apt/ Floor	City	State	Zip
			Resident		12225 S Emerald Ave		Chicago	IL	60628
			Resident		12225 S Emerald Ave		Chicago	IL	60628
			Resident		12226 S Emerald Ave		Chicago	IL	60628
			Resident		12226 S Green St		Chicago	IL	60643
			Resident		12227 S Green St		Chicago	IL	60643
			Resident		12228 S Emerald Ave		Chicago	IL	60628
			Resident		12230 S Emerald Ave		Chicago	IL	60628
			Resident		12230 S Green St		Chicago	IL	60643
			Resident		12231 S Emerald Ave		Chicago	IL	60628
			Resident		12231 S Green St		Chicago	IL	60643
			Resident		12234 S Green St		Chicago	IL	60643
			Resident		12235 S Green St		Chicago	IL	60643
			Resident		12236 S Green St		Chicago	IL	60643
			Resident		12238 S Emerald Ave		Chicago	IL	60628
			Resident		12239 S Green St		Chicago	IL	60643
			Resident		12240 S Green St		Chicago	IL	60643
			Resident		12241 S Emerald Ave		Chicago	IL	60628
			Resident		12241 S Green St		Chicago	IL	60643
			Resident		12242 S Emerald Ave		Chicago	IL	60628
			Resident		12242 S Green St		Chicago	IL	60643
			Resident		12242 S Green St		Chicago	IL	60643
			Resident		12244 S Emerald Ave		Chicago	IL	60628
			Resident		12245 S Emerald Ave		Chicago	IL	60628
			Resident		12245 S Green St		Chicago	IL	60643
			Resident		12246 S Halsted St		Chicago	IL	60628
			Resident		12247 S Green St		Chicago	IL	60643
			Resident		12250 S Green St		Chicago	IL	60643
			Resident		12251 S Green St		Chicago	IL	60643
			Resident		12251 S Halsted St		Chicago	IL	60628
			Resident		12252 S Green St		Chicago	IL	60643
			Resident		12254 S Emerald Ave		Chicago	IL	60628
			Resident		12255 S Halsted St		Chicago	IL	60628
			Resident		12257 S Green St		Chicago	IL	60643
			Resident		12258 S Green St		Chicago	IL	60643
			Resident		12259 S Halsted St		Chicago	IL	60628
			Resident		123 W. 114th Street		Chicago	IL	60628
			Resident		12300 S Emerald Ave		Chicago	IL	60628
			Resident		12301 S Halsted St		Chicago	IL	60628
			Resident		12303 S Halsted St		Chicago	IL	60628
			Resident		12305 S Halsted St		Chicago	IL	60628
			Resident		12308 S Emerald Ave		Chicago	IL	60628
			Resident		12310 S Emerald Ave		Chicago	IL	60628
			Resident		12311 S Emerald Ave		Chicago	IL	60628
			Resident		12312 S Emerald Ave		Chicago	IL	60628
			Resident		12315 S Emerald Ave		Chicago	IL	60628
			Resident		12316 S Emerald Ave		Chicago	IL	60628
			Resident		12319 S Emerald Ave		Chicago	IL	60628
			Resident		12320 S Emerald Ave		Chicago	IL	60628
			Resident		12324 S Emerald Ave		Chicago	IL	60628
			Resident		12325 S Emerald Ave		Chicago	IL	60628
			Resident		12328 S Emerald Ave		Chicago	IL	60628

Open House Notice Mailing List
Red Line Extension

Organization	Salutation	First Name	Last Name	Title	Address	Apt/ Floor	City	State	Zip
			Resident		12334 S Emerald Ave		Chicago	IL	60628
			Resident		12335 S Emerald Ave		Chicago	IL	60628
			Resident		12335 S Halsted St		Chicago	IL	60628
			Resident		12336 S Emerald Ave		Chicago	IL	60628
			Resident		12338 S Emerald Ave		Chicago	IL	60628
			Resident		12341 S Emerald Ave		Chicago	IL	60628
			Resident		12341 S Halsted St		Chicago	IL	60628
			Resident		12342 S Emerald Ave		Chicago	IL	60628
			Resident		12345 S Emerald Ave		Chicago	IL	60628
			Resident		12349 S Emerald Ave		Chicago	IL	60628
			Resident		12350 S Emerald Ave		Chicago	IL	60628
			Resident		12352 S Emerald Ave		Chicago	IL	60628
			Resident		12354 S Emerald Ave		Chicago	IL	60628
			Resident		124 W. 115th Street		Chicago	IL	60628
			Resident		124 W. 115th Street	#1	Chicago	IL	60628
			Resident		124 W. 115th Street	#2	Chicago	IL	60628
			Resident		12400 S Emerald Ave		Chicago	IL	60628
			Resident		12400 S Emerald Ave		Chicago	IL	60628
			Resident		12401 S Emerald Ave		Chicago	IL	60628
			Resident		12401 S Halsted St		Chicago	IL	60628
			Resident		12405 S Emerald Ave		Chicago	IL	60628
			Resident		12406 S Emerald Ave		Chicago	IL	60628
			Resident		12409 S Emerald Ave		Chicago	IL	60628
			Resident		12409 S Emerald Ave		Chicago	IL	60628
			Resident		12410 S Emerald Ave		Chicago	IL	60628
			Resident		12413 S Emerald Ave		Chicago	IL	60628
			Resident		12414 S Emerald Ave		Chicago	IL	60628
			Resident		12415 S Emerald Ave		Chicago	IL	60628
			Resident		12416 S Emerald Ave		Chicago	IL	60628
			Resident		12421 S Emerald Ave		Chicago	IL	60628
			Resident		12424 S Emerald Ave		Chicago	IL	60628
			Resident		12425 S Emerald Ave		Chicago	IL	60628
			Resident		12429 S Emerald Ave		Chicago	IL	60628
			Resident		12432 S Emerald Ave		Chicago	IL	60628
			Resident		12433 S Emerald Ave		Chicago	IL	60628
			Resident		12433 S Halsted St		Chicago	IL	60628
			Resident		12435 S Emerald Ave		Chicago	IL	60628
			Resident		12436 S Emerald Ave		Chicago	IL	60628
			Resident		12439 S Emerald Ave		Chicago	IL	60628
			Resident		12442 S Emerald Ave		Chicago	IL	60628
			Resident		12445 S Emerald Ave		Chicago	IL	60628
			Resident		12446 S Emerald Ave		Chicago	IL	60628
			Resident		12448 S Emerald Ave		Chicago	IL	60628
			Resident		12449 S Emerald Ave		Chicago	IL	60628
			Resident		12450 S Emerald Ave		Chicago	IL	60628
			Resident		12453 S Emerald Ave		Chicago	IL	60628
			Resident		12454 S Emerald Ave		Chicago	IL	60628
			Resident		12456 S Emerald Ave		Chicago	IL	60628
			Resident		12457 S Emerald Ave		Chicago	IL	60628
			Resident		125 W. 114th Street		Chicago	IL	60628
			Resident		12500 S Emerald Ave		Chicago	IL	60628

Open House Notice Mailing List
Red Line Extension

Organization	Salutation	First Name	Last Name	Title	Address	Apt/ Floor	City	State	Zip
			Resident		12501 S Emerald Ave		Chicago	IL	60628
			Resident		12501 S Halsted St		Chicago	IL	60628
			Resident		12507 S Emerald Ave		Chicago	IL	60628
			Resident		12508 S Emerald Ave		Chicago	IL	60628
			Resident		12509 S Emerald Ave		Chicago	IL	60628
			Resident		12512 S Emerald Ave		Chicago	IL	60628
			Resident		12512 S Halsted St		Chicago	IL	60628
			Resident		12513 S Emerald Ave		Chicago	IL	60628
			Resident		12515 S Emerald Ave		Chicago	IL	60628
			Resident		12516 S Emerald Ave		Chicago	IL	60628
			Resident		12516 S Emerald Ave		Chicago	IL	60628
			Resident		12519 S Emerald Ave		Chicago	IL	60628
			Resident		12525 S Emerald Ave		Chicago	IL	60628
			Resident		12526 S Emerald Ave		Chicago	IL	60628
			Resident		12527 S Emerald Ave		Chicago	IL	60628
			Resident		12529 S Emerald Ave		Chicago	IL	60628
			Resident		12533 S Emerald Ave		Chicago	IL	60628
			Resident		12534 S Emerald Ave		Chicago	IL	60628
			Resident		12535 S Emerald Ave		Chicago	IL	60628
			Resident		12538 S Emerald Ave		Chicago	IL	60628
			Resident		12539 S Emerald Ave		Chicago	IL	60628
			Resident		12542 S Emerald Ave		Chicago	IL	60628
			Resident		12543 S Emerald Ave		Chicago	IL	60628
			Resident		12546 S Emerald Ave		Chicago	IL	60628
			Resident		12547 S Emerald Ave		Chicago	IL	60628
			Resident		12550 S Emerald Ave		Chicago	IL	60628
			Resident		12551 S Emerald Ave		Chicago	IL	60628
			Resident		12552 S Emerald Ave		Chicago	IL	60628
			Resident		12555 S Emerald Ave		Chicago	IL	60628
			Resident		12558 S Emerald Ave		Chicago	IL	60628
			Resident		12559 S Emerald Ave		Chicago	IL	60628
			Resident		126 E. 117th Street		Chicago	IL	60628
			Resident		12600 S Emerald Ave		Chicago	IL	60628
			Resident		12601 S Emerald Ave		Chicago	IL	60628
			Resident		12605 S Emerald Ave		Chicago	IL	60628
			Resident		12608 S Emerald Ave		Chicago	IL	60628
			Resident		12609 S Emerald Ave		Chicago	IL	60628
			Resident		12610 S Emerald Ave		Chicago	IL	60628
			Resident		12612 S Emerald Ave		Chicago	IL	60628
			Resident		12613 S Emerald Ave		Chicago	IL	60628
			Resident		12616 S Emerald Ave		Chicago	IL	60628
			Resident		12617 S Emerald Ave		Chicago	IL	60628
			Resident		12621 S Emerald Ave		Chicago	IL	60628
			Resident		12622 S Emerald Ave		Chicago	IL	60628
			Resident		12625 S Emerald Ave		Chicago	IL	60628
			Resident		12627 S Emerald Ave		Chicago	IL	60628
			Resident		12628 S Emerald Ave		Chicago	IL	60628
			Resident		12631 S Emerald Ave		Chicago	IL	60628
			Resident		12632 S Emerald Ave		Chicago	IL	60628
			Resident		12635 S Emerald Ave		Chicago	IL	60628
			Resident		12636 S Emerald Ave		Chicago	IL	60628

Open House Notice Mailing List
Red Line Extension

Organization	Salutation	First Name	Last Name	Title	Address	Apt/ Floor	City	State	Zip
			Resident		12638 S Emerald Ave		Chicago	IL	60628
			Resident		12639 S Emerald Ave		Chicago	IL	60628
			Resident		12640 S Emerald Ave		Chicago	IL	60628
			Resident		12643 S Emerald Ave		Chicago	IL	60628
			Resident		12645 S Emerald Ave		Chicago	IL	60628
			Resident		12648 S Emerald Ave		Chicago	IL	60628
			Resident		12650 S Emerald Ave		Chicago	IL	60628
			Resident		12651 S Emerald Ave		Chicago	IL	60628
			Resident		12654 S Emerald Ave		Chicago	IL	60628
			Resident		12655 S Emerald Ave		Chicago	IL	60628
			Resident		12658 S Emerald Ave		Chicago	IL	60628
			Resident		12659 S Emerald Ave		Chicago	IL	60628
			Resident		127 E 68th St		Chicago	IL	60637
			Resident		12700 S Emerald Ave		Chicago	IL	60628
			Resident		12700 S Green St		Chicago	IL	60643
			Resident		12700 S Halsted St		Chicago	IL	60628
			Resident		12701 S Emerald Ave		Chicago	IL	60628
			Resident		12701 S Green St		Chicago	IL	60643
			Resident		12701 S Halsted St		Chicago	IL	60628
			Resident		12704 S Emerald Ave		Chicago	IL	60628
			Resident		12704 S Green St		Chicago	IL	60643
			Resident		12705 S Emerald Ave		Chicago	IL	60628
			Resident		12705 S Green St		Chicago	IL	60643
			Resident		12706 S Emerald Ave		Chicago	IL	60628
			Resident		12707 S Emerald Ave		Chicago	IL	60628
			Resident		12708 S Green St		Chicago	IL	60643
			Resident		12709 S Green St		Chicago	IL	60643
			Resident		12711 S Emerald Ave		Chicago	IL	60628
			Resident		12712 S Green St		Chicago	IL	60643
			Resident		12713 S Emerald Ave		Chicago	IL	60628
			Resident		12713 S Green St		Chicago	IL	60643
			Resident		12716 S Green St		Chicago	IL	60643
			Resident		12717 S Emerald Ave		Chicago	IL	60628
			Resident		12717 S Green St		Chicago	IL	60643
			Resident		12717 S Halsted St		Chicago	IL	60628
			Resident		12718 S Emerald Ave		Chicago	IL	60628
			Resident		12719 S Emerald Ave		Chicago	IL	60628
			Resident		12719 S Green St		Chicago	IL	60643
			Resident		12720 S Green St		Chicago	IL	60643
			Resident		12722 S Emerald Ave		Chicago	IL	60628
			Resident		12722 S Green St		Chicago	IL	60643
			Resident		12723 S Emerald Ave		Chicago	IL	60628
			Resident		12723 S Green St		Chicago	IL	60643
			Resident		12726 S Emerald Ave		Chicago	IL	60628
			Resident		12726 S Emerald Ave		Chicago	IL	60628
			Resident		12726 S Green St		Chicago	IL	60643
			Resident		12727 S Green St		Chicago	IL	60643
			Resident		12730 S Green St		Chicago	IL	60643
			Resident		12730 S Halsted St		Chicago	IL	60628
			Resident		12747 S Halsted St		Chicago	IL	60628
			Resident		12751 S Emerald Ave		Chicago	IL	60628
			Resident		12752 S Emerald Ave		Chicago	IL	60628

Open House Notice Mailing List
Red Line Extension

Organization	Salutation	First Name	Last Name	Title	Address	Apt/ Floor	City	State	Zip
			Resident		12755 S Emerald Ave		Chicago	IL	60628
			Resident		12756 S Emerald Ave		Chicago	IL	60628
			Resident		12757 S Emerald Ave		Chicago	IL	60628
			Resident		12758 S Halsted St		Chicago	IL	60628
			Resident		12760 S Emerald Ave		Chicago	IL	60628
			Resident		12761 S Emerald Ave		Chicago	IL	60628
			Resident		12762 S Emerald Ave		Chicago	IL	60628
			Resident		12765 S Emerald Ave		Chicago	IL	60628
			Resident		12765 S Emerald Ave		Chicago	IL	60628
			Resident		128 E. 117th Street		Chicago	IL	60628
			Resident		12800 S Emerald Ave		Chicago	IL	60628
			Resident		12801 S Emerald Ave		Chicago	IL	60628
			Resident		12801 S Halsted St		Chicago	IL	60628
			Resident		12803 S Halsted St		Chicago	IL	60628
			Resident		12804 S Emerald Ave		Chicago	IL	60628
			Resident		12805 S Emerald Ave		Chicago	IL	60628
			Resident		12805 S Halsted St		Chicago	IL	60628
			Resident		12806 S Emerald Ave		Chicago	IL	60628
			Resident		12807 S Emerald Ave		Chicago	IL	60628
			Resident		12810 S Emerald Ave		Chicago	IL	60628
			Resident		12814 S Emerald Ave		Chicago	IL	60628
			Resident		12815 S Emerald Ave		Chicago	IL	60628
			Resident		12816 S Emerald Ave		Chicago	IL	60628
			Resident		12816 S Green St		Chicago	IL	60643
			Resident		12817 S Emerald Ave		Chicago	IL	60628
			Resident		12819 S Green St		Chicago	IL	60643
			Resident		12821 S Emerald Ave		Chicago	IL	60628
			Resident		12822 S Emerald Ave		Chicago	IL	60628
			Resident		12822 S Green St		Chicago	IL	60643
			Resident		12823 S Green St		Chicago	IL	60643
			Resident		12824 S Emerald Ave		Chicago	IL	60628
			Resident		12824 S Green St		Chicago	IL	60643
			Resident		12825 S Emerald Ave		Chicago	IL	60628
			Resident		12825 S Green St		Chicago	IL	60643
			Resident		12828 S Green St		Chicago	IL	60643
			Resident		12829 S Green St		Chicago	IL	60643
			Resident		12830 S Green St		Chicago	IL	60643
			Resident		12831 S Green St		Chicago	IL	60643
			Resident		12834 S Emerald Ave		Chicago	IL	60628
			Resident		12835 S Emerald Ave		Chicago	IL	60628
			Resident		12835 S Green St		Chicago	IL	60643
			Resident		12836 S Emerald Ave		Chicago	IL	60628
			Resident		12837 S Green St		Chicago	IL	60643
			Resident		12838 S Green St		Chicago	IL	60643
			Resident		12839 S Emerald Ave		Chicago	IL	60628
			Resident		12840 S Emerald Ave		Chicago	IL	60628
			Resident		12842 S Emerald Ave		Chicago	IL	60628
			Resident		12846 S Emerald Ave		Chicago	IL	60628
			Resident		12847 S Emerald Ave		Chicago	IL	60628
			Resident		12847 S Halsted St		Chicago	IL	60628
			Resident		12848 S Emerald Ave		Chicago	IL	60628
			Resident		12849 S Emerald Ave		Chicago	IL	60628

Organization	Salutation	First Name	Last Name	Title	Address	Apt/ Floor	City	State	Zip
			Resident		12850 S Green St		Chicago	IL	60643
			Resident		12850 S Green St		Chicago	IL	60643
			Resident		12851 S Green St		Chicago	IL	60643
			Resident		12852 S Emerald Ave		Chicago	IL	60628
			Resident		12852 S Green St		Chicago	IL	60643
			Resident		12853 S Emerald Ave		Chicago	IL	60628
			Resident		12853 S Green St		Chicago	IL	60643
			Resident		12853 S Halsted St		Chicago	IL	60628
			Resident		12854 S Emerald Ave		Chicago	IL	60628
			Resident		12856 S Green St		Chicago	IL	60643
			Resident		12857 S Green St		Chicago	IL	60643
			Resident		12857 S Halsted St		Chicago	IL	60628
			Resident		12858 S Emerald Ave		Chicago	IL	60628
			Resident		12858 S Green St		Chicago	IL	60643
			Resident		12861 S Emerald Ave		Chicago	IL	60628
			Resident		12861 S Green St		Chicago	IL	60643
			Resident		12862 S Emerald Ave		Chicago	IL	60628
			Resident		12862 S Green St		Chicago	IL	60643
			Resident		12863 S Green St		Chicago	IL	60643
			Resident		12864 S Green St		Chicago	IL	60643
			Resident		12865 S Emerald Ave		Chicago	IL	60628
			Resident		12865 S Green St		Chicago	IL	60643
			Resident		12868 S Green St		Chicago	IL	60643
			Resident		12869 S Green St		Chicago	IL	60643
			Resident		12870 S Green St		Chicago	IL	60643
			Resident		12871 S Green St		Chicago	IL	60643
			Resident		12875 S Green St		Chicago	IL	60643
			Resident		12876 S Green St		Chicago	IL	60643
			Resident		12877 S Green St		Chicago	IL	60643
			Resident		12900 S Emerald Ave		Chicago	IL	60628
			Resident		12900 S Green St		Chicago	IL	60643
			Resident		12900 S Halsted St		Chicago	IL	60628
			Resident		12900 S Halsted St		Chicago	IL	60628
			Resident		12901 S Emerald Ave		Chicago	IL	60628
			Resident		12904 S Emerald Ave		Chicago	IL	60628
			Resident		12904 S Green St		Chicago	IL	60643
			Resident		12905 S Green St		Chicago	IL	60643
			Resident		12907 S Emerald Ave		Chicago	IL	60628
			Resident		12908 S Emerald Ave		Chicago	IL	60628
			Resident		12909 S Green St		Chicago	IL	60643
			Resident		12910 S Green St		Chicago	IL	60643
			Resident		12911 S Green St		Chicago	IL	60643
			Resident		12911 S Halsted St		Chicago	IL	60628
			Resident		12912 S Emerald Ave		Chicago	IL	60628
			Resident		12913 S Emerald Ave		Chicago	IL	60628
			Resident		12914 S Emerald Ave		Chicago	IL	60628
			Resident		12914 S Green St		Chicago	IL	60643
			Resident		12915 S Green St		Chicago	IL	60643
			Resident		12916 S Green St		Chicago	IL	60643
			Resident		12917 S Green St		Chicago	IL	60643
			Resident		130 W. 114th Street		Chicago	IL	60628

Appendix B
Postcard

YOUR RED

Red Line Extension

cta

You’re Invited to Join the Chicago Transit Authority (CTA) at an Open House on the Red Line Extension

Connecting 95th Street Station to 130th Street

CTA is proposing to extend the Red Line 5.3 miles from the 95th Street Station to the vicinity of 130th Street, subject to the availability of funding. This project is one part of the ***Your Red*** Program to extend and enhance the entire Red Line.

Learn about the Red Line Extension

This open house will continue to keep you informed about the proposed Red Line Extension project.

If you require an interpreter, including sign language services, or other accommodations at this open house, contact Deborah Lopez, Senior Government Relations Officer, at least five days prior to the open house at (312) 681-2709 or dlopez@transitchicago.com.

Tuesday, August 2, 2011
6:00 to 8:30 p.m.

St. John Missionary Baptist Church
211 E. 115th St.
Chicago, IL 60628

This location is accessible to people with disabilities and is served by:
CTA Bus #111, #34, and #119 and
Metra Kensington Station

For more information, visit http://www.transitchicago.com/redeis/

Para informacion en Español, llame al 312-681-2709 • Customer Information: 888-YOUR-CTA (888-968-7282)

YOUR RED
Red Line Extension
cta

Chicago Transit Authority
567 West Lake Street
Chicago, IL 60661

OPEN HOUSE

Tuesday, August 2, 2011

6:00 to 8:30 p.m.

St. John Missionary Baptist Church
211 E. 115th St.
Chicago, IL 60628

This location is accessible to people with disabilities and is served by:
CTA Bus #111, #34, and #119 and
Metra Kensington Station

Appendix C
Transit Card

CTA OPEN HOUSE

Red Line Extension – Progress Update

This meeting will serve to update the public on the status of CTA's Red Line Extension project, which proposes to extend the rail line from 95th Street to 130th Street. Current developments and next steps for the project will be discussed.

Tuesday, August 2, 2011
6pm to 8:30pm
St. John Missionary Baptist Church*
211 E. 115 Street, Chicago

*Facility accessible to people with disabilities.

transitchicago.com

Customer Information: 1-888-YOUR-CTA (1-888-968-7282); CTA TTY: 1-888-CTA-TTY1 (1-888-282-8891)
Transit Information: 312-836-7000; RTA TTY: 312-836-4949

Remove August 3, 2011 SPP/070511
11JD01_1h #40

Appendix D
E-Blast

You're Invited to Join Chicago Transit Authority (CTA) at an Open House on the Red Line Extension

Connecting 95th Street Station to 130th Street

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6:00 to 8:30 p.m.

St. John Missionary Baptist Church
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Chicago, IL 60628

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Para informacion en Español, llame al 312-681-2709 - Customer Information: 888-YOUR-CTA (888-968-7282)

Appendix E
Newspaper Advertisements

Ad Number: CST3618898
Insertion Number:
Size: 5.056 X 5.
Color Type: B&W
Client Name:
Advertiser: C T A
Section/Page/Zone: MAIN/018/
Description: C T A

CHICAGO SUN-TIMES
Publication Date: 07/17/2011
This E-Sheet(r) is provided as conclusive evidence that the ad appeared in the Chicago Sun-Times on the date & page indicated. You may not create derivative works, or in any way exploit or repurpose any content.

Ghost bikes haunt city sidewalks

Critic says memorials set up for dead cyclists become eyesores over time

BY KARA SPAK

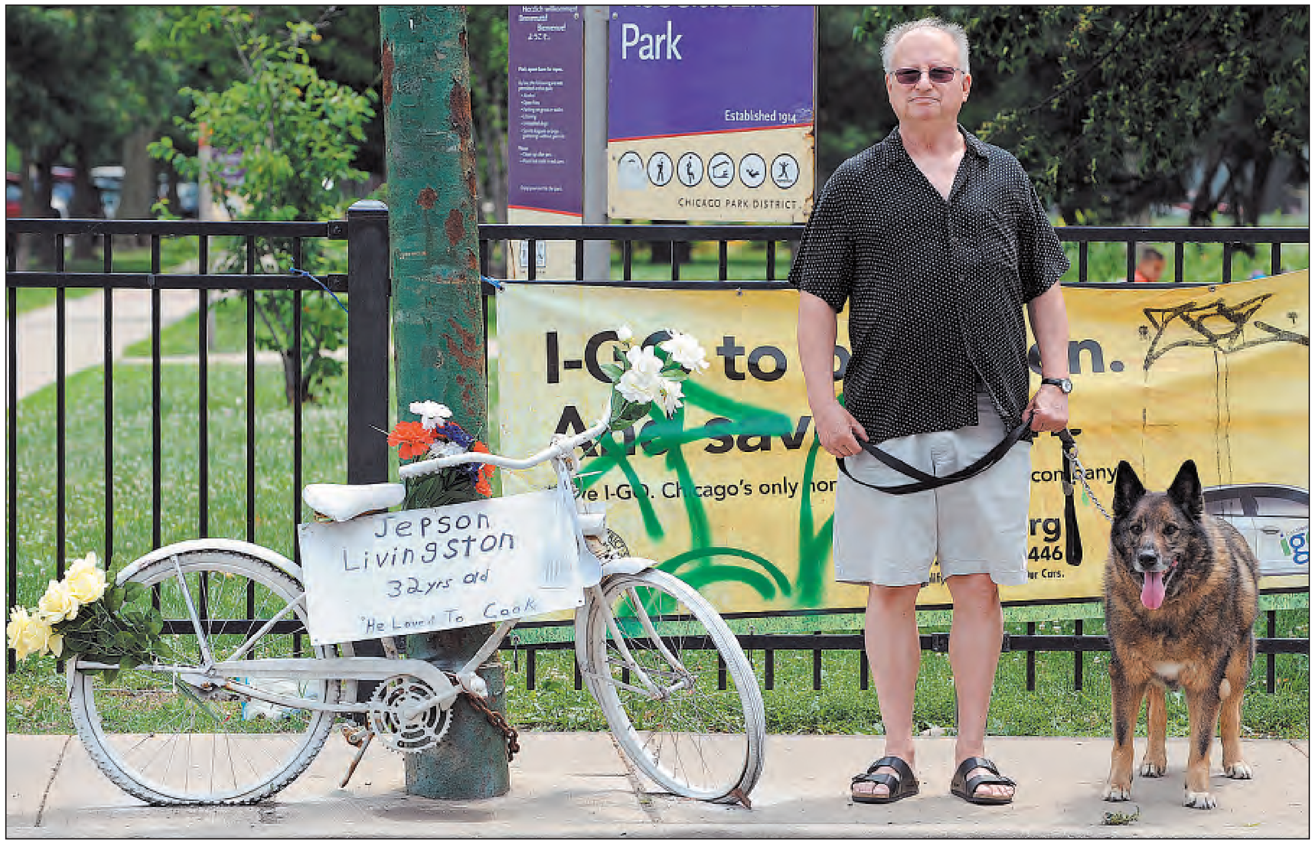
Staff Reporter/kspak@suntimes.com

Almost every day for the last 16 months, Ed Hooks has walked his dog Nugget past a painted white bike at the entrance to the North Side's Kosciuszko Park.

It's a memorial for Jepson Livingston, a 32-year-old man who died in 2009. Livingston was riding his bike on Diversey when he was struck by a van involved in a high-speed chase. The driver was arrested and charged with murder.

Hooks feels for Livingston's family — he also lost a child too young. But he also believes there should be a time limit for memorials on public property, like the so-called "ghost bikes," which he considers an unnecessary eyesore after spending countless months or even years in Chicago weather.

"I grieve for them," he said of Livingston's family. "I grieve with them. That has nothing to do with whether or not a painted white bicycle should be chained to a light post forever in my neighborhood. At a certain point, the family needs to go to the cemetery."



Ed Hooks poses next to the bicycle memorial for a victim of a hit and run crash in 2009. | JOHN J. KIM~SUN-TIMES

But for Livingston's family, the bike remains a source of comfort.

"When I go by the bike, I feel more at peace compared to the cemetery," said Henrietta Livingston, Jepson Livingston's mother.

The urban equivalent of flower-strewn crosses along rural highways, there are about a dozen ghost bikes on sidewalks around Chicago. Painted white and bearing a sign with the name of the dead cyclist, the bikes are meant to serve as a memorial and a warning for drivers and cyclists.

Ghost bikes meet the criteria of Chicago's code for abandoned bikes. Purposefully stripped of parts, they cannot be ridden. They have not been moved in seven days — one ghost bike has been on Western since 2006. City code says abandoned bikes can be ticketed and then disposed of.

But Brian Steele, spokesman for Chicago's Department of Transportation, said the city doesn't move ghost bikes because officials don't consider them abandoned but "important memorials."

"If they do not infringe on the public way, or take up space that would be used by bicycles or pedestrians, [they] can be an important reminder of the impact on loved ones and our society when the rules are not followed by all modes, including the cyclists," Steele said in an e-mail.

For Hooks, a gentle-speaking 65-year-old teacher, author and former actor, the bikes are a legitimate memorial, just like those that appear outside fatal crime scenes featuring candles and stuffed animals. The difference is that the crime memorials are short-lived, he said.

"I would not object to these ghost bikes being there," he said. "I just think they should have an expiration date."

His request for an honest neighborhood discussion about the issue at the website Everyblock led to anonymous cyclists calling him everything from insensitive to a bigot. He said he isn't either, and has learned the hard way what the death of a child is like. His daughter Dagny was 21 when she accidentally overdosed on drugs in 2005 in Lake View.

"There is no closure for the death of a child," he said. "It's a crime against nature. Yet what's the lesson from my daughter's death — don't mess around with drugs. It didn't occur to me to go over [to Lake View] and put a sign up with her pictures and cover it with drug stuff and expect it to be there forever."

Ghost bikes started in 2002 in St. Louis by a bike shop worker. Since then, the bikes have appeared in 22 countries and, in America, 37 states.

In Chicago, the bikes are put up and maintained by concerned cyclists. Some ghost bikes are maintained more carefully than others.

In Boston, the bikes are typically taken down within days by the city, said James McBride of MassBikes, a Boston-based bicycle advocacy organization.

"Some of the shorter-term ghost bikes that stay up, I know people get upset they got moved quickly," he said.

Not all of the Chicago bikes are permanent. One placed near a West Side church was removed by church officials, said Howard Kaplan, who has helped install many ghost bikes. Another near a Walgreen's on the North Side also didn't stay up long, and a ghost bike at the Lincoln, Damen and Irving Park intersection has come and gone several times.

"When I work with the family [of the dead cyclist] to get one put up I tell them there's no guarantee for how long it's going to stay," he said. "If it's up for a year it's a good run."

Kaplan agrees with Hooks that there is no clear way to quantify how effective ghost bikes are as safety warnings. That doesn't mean that they are not valuable, he said.

"I think it's outrageous that you can't ride a bike around the city without risking your life," he said. "I think when a bicyclists is killed it should be noticed."

YOUR RED
Red Line Extension
cta

You're Invited to Join the Chicago Transit Authority (CTA)
at an Open House on the Red Line Extension
Connecting 95th Street Station to 130th Street

Tuesday, August 2, 2011
6:00 to 8:30 p.m.

St. John Missionary Baptist Church
211 E. 115th St.
Chicago, IL 60628
This location is accessible to people with disabilities and is served by:
CTA Bus #111, #34, and #119 and Metra Kensington Station

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YOUR RED
Red Line Extension
cta

SU LÍNEA ROJA
Extensión de la Línea Roja

Usted queda invitado para acompañar a la
Chicago Transit Authority (CTA)
a una Recepción Pública para la Extensión de la Línea Roja

Para conectar la Estación de la 95th Street a la 130th Street

martes, 2 de agosto de 2011
Desde las 6:00 a las 8:30 p.m.

St. John Missionary Baptist Church
211 E. 115th St.
Chicago, IL 60628

Las personas con incapacidades pueden tener acceso a este lugar, al cual brindan servicio los Autobuses de la CTA #111, #34, y #119 y la Estación Kensington de la Metra.

La Chicago Transit Authority (CTA) se propone extender la Línea Roja desde la Estación de la 95th Street al vecindario de la 130th Street, sujeto a la disponibilidad de financiación. Esta extensión propuesta de 5.3 millas abarcará tres nuevas paradas intermedias cerca de las 103rd, 111th, y 115th Streets, así como una nueva estación terminal en las inmediaciones de la 130th Street. Cada nueva parada incluirá las instalaciones para autobuses y el estacionamiento de vehículos. Este proyecto forma parte del Programa de Su Línea Roja para extender y reformar la Línea Roja por completo.

Infórmese sobre la Extensión de la Línea Roja
Esta recepción pública se dedica a darle noticias actualizadas sobre el proyecto propuesto de Extensión de la Línea Roja.

Si usted necesita intérprete, incluso los servicios de interpretación en el idioma de señas, u otras adaptaciones para esta recepción pública, por favor comuníquese con Deborah López, Oficial Superior de Relaciones Gubernamentales por lo menos cinco días antes de la fecha de la recepción pública al (312) 681-2709 o dlopez@transitchicago.com.

Para informarse en más detalle, vaya a visitar al http://www.transitchicago.com/redeis/
Para información en español, llame al 312-681-2709
Información para Clientes: 888-YOUR-CTA (888-968-7282)

Soldados canadienses se preparan para partir de la base militar de Kandahar. La OTAN empezó a transferir la seguridad del país a las autoridades locales. GETTY

La seguridad cambia de manos

Afganistán empieza a asumir el control del país

Por Fawad Peikar
EFE/KABUL

La misión de la OTAN en Afganistán empezó ayer oficialmente en la provincia central de Bamiyán la transferencia de competencias de seguridad a las autoridades locales, proceso que continuará en cinco zonas más del país durante la próxima semana.

La ceremonia formal de traspaso, celebrada este mediodía, contó con la presencia del máximo responsable de la misión de la OTAN en Afganistán, el general David Petraeus, y de los titulares afganos de Interior, Bismilá Mohamadi, y de Defensa, Abdul Rahim Wardak.

"Las fuerzas de seguridad afganas homenajearon a los militares del contingente internacional por su servicio de los últimos diez años al pueblo de Afganistán y a este país asolado por la guerra", explicó a EFE el portavoz afgano de Interior, Sediq Sediqi.

El acto tuvo lugar en el cuartel de la Policía afgana en la capital de una provincia relativamente libre de actividad insurgente pero que, paradójicamente, es uno de los símbolos del régimen talibán por la voladura de sus famosos Budas gigantes en 2001.

Los cerca de 200 militares de Nueva Zelanda -país representado en la ceremonia por su embajador- y la veintena de soldados de Singapur desplegados en Bamiyán serán los primeros miembros del contingente internacional en cambiar sus funciones.

"Los soldados extranjeros harán a partir de ahora trabajos de entrenamiento militar y de rehabilitación en la zona", dijo el portavoz provincial, Abdul Rahman Ahmadi.

El traspaso de hoy responde al compromiso anunciado el pasado marzo por el presidente afgano, Hamid Karzai, de que las fuerzas afganas asumirían el control de siete áreas durante el mes de julio, en paralelo al inicio de la retirada de tropas de EEUU.

Durante la próxima semana se irán transfiriendo las competencias de otras cinco zonas: la provincia de Panjshir (este) y las ciudades de Mihtarlam (este), Lashkar Gah (sur), Herat (oeste) y Mazar-i Sharif (norte).

Sólo queda por determinar cuándo se hará el traspaso sobre la séptima de esas zonas, la estratégica provincia de Kabul.

"Seguramente se hará al final de esta primera fase de cesión de competencias, pero el Gobierno aún no ha tomado una decisión definitiva sobre la provincia de la capital", dijo el portavoz del Ministerio de Interior.

El inicio de la transferencia en materia de seguridad llega apenas días después de que, el pasado miércoles, empezaran a salir del país los primeros 650 soldados estadounidenses, pertenecientes a dos regimientos estacionados hasta ahora cerca de Kabul.

EEUU prevé retirar este año 10 mil efectivos y 23 mil más hasta de septiembre de 2012, mientras que sus cerca de 70.000 soldados restantes abandonarán Afganistán entre 2013 y 2014.

staurants will make kids menus healthier

Grill, Chevys, Chili's, Corner Bakery Cafe, Cracker Barrel, Denny's, El Pollo Loco, Friendly's, IHOP, Joe's Crab Shack, Outback Steakhouse, Silver Diner, Sizzler, T-Bones Great American Eatery and zpizza.

Joe Taylor of Chilis said the company has responded to consumer demands for healthier foods. While diners looking for a healthier meal used to have to ask for substitutions, they now have more options.

"We've seen our guests customize their meals to a greater degree when they are looking to hold the mayo or add the broccoli," Taylor said.

Patrick Lenow of IHOP said the restaurant will add two new children's menu items because of the effort, including pancakes with fruit and scrambled eggs with fruit. The company had already limited everything on their children's menu to fewer than 600 calories and made fruit a default side, instead of fries -

See KIDS MENUS, page 14

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cta

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Bachmann, Pawlenty ramp up war of words

Michele Bachmann

Tim Pawlenty

WASHINGTON — The campaigns of Republican presidential hopefuls Michele Bachmann and Tim Pawlenty resumed their war of words Sunday, arguing via press release over which candidate has the stronger conservative credentials.

Minnesota Rep. Bachmann accused Pawlenty of supporting policies that are anathema to her Tea Party supporters, such as the mandate to buy health insurance and a "cap-and-trade" agreement to reduce greenhouse gases. And she slammed the former Minnesota governor for praising the federal government's 2008 bailouts.

"I have fought against irresponsible spending while Governor Pawlenty was leaving a multi-billion-dollar budget mess in Minnesota," Bachmann added.

Pawlenty's campaign swiftly rejected Bachmann's claims, saying there is "very little difference" between the two candidates' positions.

However, Pawlenty spokesman Alex Conant said, "The difference is that when Governor Pawlenty was scoring conservative victories . . . Congresswoman Bachmann was giving speeches and offering failed amendments, all while struggling mightily to hold onto the most Republican house seat in the state."

Pawlenty in July raised Bachmann's ire when he called her record of accomplishment in Congress "nonexistent."

Bachmann argued again Sunday against that assessment, saying, "I have demonstrated leadership and the courage of my convictions to change Washington, stop wasteful spending, lower taxes, put Americans back to work and turn our economy around."

AP

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cta

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Connecting 95th Street Station to 130th Street

Tuesday, August 2, 2011
6:00 to 8:30 p.m.

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The Chicago Transit Authority (CTA) is proposing to extend the Red Line from the 95th Street Station to the vicinity of 130th Street, subject to the availability of funding. The proposed 5.3-mile extension would include three new intermediate stops near 103rd, 111th, and 115th streets, as well as a new terminal station in the vicinity of 130th Street. Each new stop would include bus and parking facilities. This project is one part of the Your Red Program to extend and enhance the entire Red Line.

Learn about the Red Line Extension
This open house will continue to keep you informed about the proposed Red Line Extension project.

If you require an interpreter, including sign language services, or other accommodations at this open house, contact Deborah Lopez, Senior Government Relations Officer, at least five days prior to the open house at (312) 681-2709 or dlopez@transitchicago.com.

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YOUR RED

Red Line Extension

cta

SU LÍNEA ROJA
Extensión de la Línea Roja

**Usted queda invitado para acompañar a la
Chicago Transit Authority (CTA)
a una Recepción Pública para la Extensión de la Línea Roja**

Para conectar la Estación de la 95th Street a la 130th Street

**martes, 2 de agosto de 2011
Desde las 6:00 a las 8:30 p.m.**

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211 E. 115th St.
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La Chicago Transit Authority (CTA) se propone extender la Línea Roja desde la Estación de la 95th Street al vecindario de la 130th Street, sujeto a la disponibilidad de financiación. Esta extensión propuesta de 5.3 millas abarcará tres nuevas paradas intermedias cerca de las 103rd, 111th, y 115th Streets, así como una nueva estación terminal en las inmediaciones de la 130th Street. Cada nueva parada incluirá las instalaciones para autobuses y el estacionamiento de vehículos. Este proyecto forma parte del Programa de Su Línea Roja para extender y reformar la Línea Roja por completo.

Infórmese sobre la Extensión de la Línea Roja
Esta recepción pública se dedica a darle noticias actualizadas sobre el proyecto propuesto de Extensión de la Línea Roja.

Si usted necesita intérprete, incluso los servicios de interpretación en el idioma de señas, u otras adaptaciones para esta recepción pública, por favor comuníquese con Deborah López, Oficial Superior de Relaciones Gubernamentales por lo menos cinco días antes de la fecha de la recepción pública al (312) 681-2709 o dlopez@transitchicago.com.

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an pleads ss burning

admitted that he and the others schemed Aug. 28 to burn a cross in a Black person's yard. Officials say Tony Branscum built a wooden cross and the men covered it in gasoline-soaked clothing.

Prosecutors say that after they drove to the victim's residence, Coffee propped up the cross on a satellite dish and ignited it.

His attorney, Misty Borkowski, declined to comment Monday night. *AP*

ntenced for ack churches

The 46-year-old Smith had previously pleaded guilty to 11 counts of mailing letters threatening to burn down seven predominantly Black churches and four NAACP offices in Cambridge, Roxbury and Medford in Massachusetts; Providence, R.I.; and Charlotte, N.C.

The letters allegedly said the author didn't like African Americans or minorities as his office supervisors "nor I like them as President of the United States." *AP*

n gap widens , minorities

ment accounts or other stock holdings.

"What's pushing the wealth of whites is the rebound in the stock market and corporate savings, while younger Hispanics and African Americans who bought homes in the last decade - because that was the American dream - are seeing big declines," said Timothy Smeeding, a University of Wisconsin-Madison professor who specializes in income inequality.

The median wealth of white U.S. households in 2009 was $113,149, compared with $6,325 for Hispanics and $5,677 for blacks, according to the analysis released Tuesday by the Pew Research Center. Those ratios, roughly 20 to 1 for Blacks and 18 to 1 for –

See *WEALTH GAP*, page 21

RED **Red Line Extension** **cta**

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Appendix F
Elected Official Briefing Summaries

YOUR RED | Red Line Extension

Meeting Notes

Date: July 21, 2011

Present: Alderman Anthony A. Beale, 9th Ward
George Coleman, CTA
Sonali Tandon, CTA
Jeffrey Sriver, Chicago Department of Transportation
Lisa Soard (note taker), CWC Transit Group

Time: 12:30 p.m.

Highlights:

CTA staff presented and left a seven-page packet of Red Line Extension materials. The materials and CTA representatives stressed that:

- Since the 95th Street Station is a highly used terminal and the area south of the Red Line has a need for more transit options, CTA is pursuing this extension.

- Better transit will spur economic revitalization along the current Red Line and the extension.

- Between 2006 and 2009, planners worked with the community to examine several options for placement of the extension. Based on those discussions and studies, the Union Pacific Railroad alternative was chosen as the Locally Preferred Alternative.

- The CTA is in the Environmental Impact Study (EIS) phase of the project as it collects information about how plans would affect the local community and the environment. The August 2nd Open House is part of the EIS phase.

The Chicago Department of Transportation representative added that CDOT would study if there is another way for Union Pacific trains to take a different route to the city, which would free the Union Pacific Railroad right-of-way for the Locally Preferred Alternative.

Overall Alderman Beale was supportive of the plans, and was hopeful that the money can be secured to build the extension.

He had questions and suggestions abut the Red Line Extension.

- **Affect on Parks and Housing**
  Alderman Beale asked if only parks would be reduced or if residential property also would be impacted.
    - CTA responded that they didn't know what would truly be affected as far as housing, but that would be studied in the next part of the EIS.

- **Environmental Impact Statement and Funding**
  He asked when the EIS would be completed and whether CTA had the funding it needed.
    - CTA representatives said to move forward in the process they need to identify state, local and federal funds. They also mentioned that the August 2nd Open House would let the community know that CTA is still focused on the Red Line Extension project and that it is moving forward.

- **Legislative Champions**
  Alderman Beale asked who was spearheading the efforts to obtain funding for the Red Line Extension in Washington D.C. He specifically asked if it was Representative Jesse L. Jackson, Jr. He stated that in his opinion funding for the project was a federal issue and that the project needed a Congressional champion.

YOUR RED Red Line Extension

Meeting Notes

Date: July 21, 2011

Present: Alderman Carrie M. Austin, 34th Ward
George Coleman, CTA
Sonali Tandon, CTA
Jeffrey Sriver, Chicago Department of Transportation
Lisa Soard (note taker), CWC Transit Group

Time: 1:05 p.m.

Highlights:

CTA staff presented and left a seven-page packet of Red Line Extension materials. The materials and CTA representatives stressed that:

- The August 2nd Open House will update the community about where CTA is in the process on the Red Line Extension project.

- The CTA completed the Alternatives Analysis phase and chose the Union Pacific Railroad alternative as its Locally Preferred Alternative based on community input. Scoping meetings were hosted in September 2009 to initiate the Environmental Impact Study (EIS) phase.

- The project is in the EIS phase. In this phase, the effect of plans on the local community and the environment would be studied. However in order to continue, CTA needs funding for the Draft EIS and for construction and operation.

The Chicago Department of Transportation representative added that the Union Pacific Railroad is requesting a 50-foot separation between the tracks. He said that CDOT would study if there is another way for Union Pacific trains to take a different route to the city, which would free the Union Pacific Railroad right-of-way for the Locally Preferred Alternative.

Overall Alderman Austin is supportive of the plans and is thinking about the long term and wants to leave a legacy for the residents of her ward. She also said that she knows her State Representative and Senator support the project.

Alderman Austin had questions and suggestions abut the Red Line Extension.

- **Elected Officials**
  Alderman Austin asked if the CTA had reached out to U.S. Representative Bobby Lee Rush. She also suggested that the CTA contact Andrew J. Mooney, Commissioner of the City of Chicago Department of Housing and Economic Development.
    - CTA responded by saying they would consider reaching out to Representative Rush and Commissioner Mooney.

- **Effect on Parks**
  While looking at the map of the LPA, Alderman Austin asked if any park land would be taken with the extension.
    - CTA representatives said that the purpose of the EIS is to research how parks would be affected and that several parks could be impacted.

- **Metra Modernization**
  Alderman Austin also asked if Metra had any plans to modernize its Kensington Station. She said she was only asking for fresh paint, better lighting, and new signage. Austin wants to make sure that Metra stations are consistent with the potential new Red Line Extension stations.
    - The Chicago Department of Transportation representative answered this question by saying that an elevator was installed at the Kensington Metra station more than 10 years ago and he would convey Austin's request to Metra.

YOUR RED
Red Line Extension

Meeting Notes

Date: July 27, 2011

Present: Alderman Howard B. Brookins, Jr., 21st Ward
Curtis V. Thompson, Jr., chief of staff, Alderman Brookins, Jr.
Sonali Tandon, CTA
George Coleman, CTA
Lisa Soard (note taker), CWC Transit Group

Time: 12:12 p.m.

Highlights:

CTA staff presented and left a seven-page packet about the proposed Red Line Extension (RLE). The materials and CTA representatives stressed that:

- This extension is part of “Your Red,” which also includes Dan Ryan Track Renewal and the North Red and Purple Modernization projects.

- CTA is partnering with the Federal Transit Administration on the extension.

- The extension will help South Side residents save 20 minutes on their commute from 130th Street to downtown and reduce the need for transfers.

- All four proposed stations would have park and ride facilities. The extension would be elevated from 99th Street to 119th Street and after that it would be at-grade.

- Between 2006 and 2009, planners worked with the community to examine several options for alignment of the extension. Based on those discussions and studies, the Union Pacific Railroad (UPRR) alternative was chosen as the Locally Preferred Alternative (LPA).

- The CTA is in the Environmental Impact Study (EIS) phase of the project which will examine at least four alternatives and collect information about how plans would affect local community members and the environment. The August 2nd Open House is part of the EIS phase.

- Funding for the EIS was announced Monday by Senator Richard Durbin. CTA still needs funding for construction and operation of the extension.

Overall Alderman Brookins and his chief of staff, Mr. Thompson, were supportive of the plans and felt that it would have minimal impact on the 21st Ward. Alderman Brookins mentioned that he would have preferred the Halsted alternative and appreciates that it is still being considered during the EIS.

Alderman Brookins and Mr. Thompson had questions and suggestions about the Red Line Extension.

- **Safety**
  Mr. Thompson asked how far the students from Carver Military Academy would have to walk to the proposed 130th Street Station. He said a lot can happen between the school and the station.
    - CTA responded that the distance would likely be ½ mile to one mile from the proposed station to Carver Military Academy.
- **Quiet Zones**
  Mr. Thompson mentioned to CTA that the 21st Ward was pursuing to be a quiet zone and asked whether a CTA train would be quieter than or as noisy as a Union Pacific train.
    - CTA replied that the City of Chicago Department of Transportation (CDOT) is initiating a quiet zone study in the area, and that CDOT also is working with Union Pacific to study if Union Pacific trains could be rerouted.
- **Timeline**
  Alderman Brookins asked when they could expect the RLE to be complete and operating.
    - CTA mentioned that it typically takes two to three years to finish the EIS, and if everything is in place (funding and federal approval) it could be seven to eight years from now, at the earliest, that the RLE could begin operating.
- **Effect on Housing**
  Alderman Brookins wanted to know whether homes would be demolished when the extension becomes a reality.
    - CTA said that some homes might be affected and explained that whether houses will be affected or not depends on conversations with Union Pacific. CTA also stated that it will work with Union Pacific to discuss issues, such as the Union Pacific's need to have 50 feet of clearance between its track and the CTA track.
- **Economic Development**
  Alderman Brookins asked whether there would be an opportunity for businesses to locate near the station.
    - CTA responded that it would consider retail space, but that it was too early in the process to say anything specific.

YOUR RED

Red Line Extension

Meeting Notes

Date: July 25, 2011

Present: Alderman Roderick Sawyer, 6th Ward
George Coleman, CTA
Sonali Tandon, CTA
Lisa Soard (note taker), CWC Transit Group

Time: 1:57 p.m.

Highlights:

CTA staff presented and left a seven-page packet of Red Line Extension materials. The materials and CTA representatives stressed that:

- This extension is part of “Your Red,” which also includes Dan Ryan Track Renewal and the North Red and Purple Modernization projects.

- The extension will begin at the 95th Street Station and either terminate just north of 130th Street or east of Altgeld Gardens. It also will help South Side residents save 20 minutes on their commute from 130th Street to downtown and reduce the need for transfers.

- All four proposed stations would have park and ride facilities. No park and ride lot would be added to the 95th Street Station. The extension would be elevated from 99th Street to 119th Street and after that it would be at-grade.

- Between 2006 and 2009, planners worked with the community to examine several options for alignment of the extension. Based on those discussions and studies, the Union Pacific Railroad alternative was chosen as the Locally Preferred Alternative (LPA).

- The CTA is in the Environmental Impact Study (EIS) phase of the project as it collects information about how plans would affect local community members and the environment. The August 2nd Open House is part of the EIS phase and will allow community members to have informal discussions with CTA representatives about the proposed extension.

- Funding for the EIS was announced this morning by Senator Richard Durbin. CTA still needs funding for construction and operation of the extension.

Overall Alderman Sawyer is supportive of the plans. He said that the South Side is long overdue for better access to public transportation and he is happy to see that plans are moving forward. Alderman Sawyer is most interested in what is happening at the 95th Street Station and the Dan Ryan Track Renewal project because they are in his ward.

Alderman Sawyer had questions and suggestions about the Red Line Extension.

- **Train Stations**
  He mentioned that the 95th Street Station is a huge hub that needs improvements. He also said that there is a desire in the community to see the Red Line stops in his ward modernized. He asked about whether CTA was considering making improvements to the stops in his ward (69th, 79th, 87th, and 95th streets).
  - CTA responded that one of the alternatives was expanding the 95th Street Station and improving bus service. CTA said that it would like to walk through the four stations with him to hear about what he and the community would like improved. CTA also would like to talk with him about the new adopt-a-station program.

- **Next Steps**
  He wanted to know when the EIS would be complete and what funding CTA had or needs to move forward with the extension.
  - CTA replied that in order to construct and operate the RLE it needs to have funding in place and would need federal approvals. CTA also mentioned that it would take two to three years to finish the EIS, and if everything is in place it could be seven to eight years from now, at the earliest, that the RLE could be operating.

- **Economic Development**
  He asked if there would be opportunities for local contractors to get involved with the construction of the RLE. He also wants to make sure that retailers can locate near the stations. He explained that he couldn’t even buy a newspaper by the 69th Street Station.
  - CTA representatives said that local contractors would be considered during the construction phase and that it would consider retail possibilities.

YOUR RED

Red Line Extension

Meeting Notes

Date: July 27, 2011

Present: Cook County Commissioner Joan Patricia Murphy, 6th District
Sonali Tandon, CTA
Maria-Teresa Roman, CTA
Lisa Soard (note taker), CWC Transit Group

Time: 3:10 p.m.

Highlights:

CTA staff presented and left a seven-page packet about the proposed Red Line Extension (RLE). The materials and CTA representatives stressed that:

- This extension is part of “Your Red,” which also includes Dan Ryan Track Renewal and the North Red and Purple Modernization projects.

- CTA is partnering with the Federal Transit Administration on the extension.

- The extension will begin at the 95th Street Station and either terminate just north of 130th Street or east of Altgeld Gardens. It also will help South Side residents save 20 minutes on their commute from 130th Street to downtown and reduce the need for transfers.

- All four proposed stations would have park and ride facilities. The extension would be elevated from 99th Street to 119th Street and after that it would be at-grade.

- Between 2006 and 2009, planners worked with the community to examine several options for alignment of the extension. Based on those discussions and studies, the Union Pacific Railroad (UPRR) alternative was chosen as the Locally Preferred Alternative (LPA).

- The CTA is in the Environmental Impact Study (EIS) phase of the project and it will examine at least four alternatives and collect information about how plans would affect local community members and the environment. The August 2nd Open House is part of the EIS phase.

- Funding for the EIS was announced Monday by Senator Richard Durbin. CTA still needs funding for construction and operation of the extension.

Commissioner Murphy is in favor of the extension and mentioned she is happy to help however she can at the county level. Murphy knows a lot about transportation and supports high-speed rail to and from Chicago. Murphy had questions and suggestions about the Red Line Extension.

- **Union Pacific Railroad**
  Commissioner Murphy asked how CTA is working with Union Pacific because she knew of a high-speed rail plan that also relied on using the Union Pacific Railroad right-of-way. She suggested that perhaps the high-speed rail could be above ground and the RLE could be below ground. She also said that she thought Union Pacific had 600 feet of right-of-way, which led her to inquire about how much space CTA needs for its track and platforms.
  - CTA said that it prefers the UPRR alternative, and is working with Union Pacific to discuss issues, such as the Union Pacific's need to have 50 feet of clearance between its track and the CTA track. The CTA representative told Murphy she would have to get back to Murphy about how much space CTA would need for its track and platforms.

- **Safety**
  Commissioner Murphy voiced her concern about keeping people and property safe if the RLE ends near Altgeld Gardens. She asked if the terminal station could be moved further east or west. She also suggested a paid monthly pass to park in a fenced, secure lot near the terminal.
  - CTA responded that safety is a top priority and that part of the EIS would review safety.

- **130th Street Terminal**
  Commissioner Murphy questioned why CTA was stopping the RLE at 130th and why CTA wouldn't take the extension further south.
  - CTA said that the extension stops at the city's southern border, which is 130th Street. The CTA staff also explained that south of 130th is a forest preserve. In order to justify extending the line south of 130th, CTA would have to go all the way to 159th Street where there is more population density.

Meeting Notes

Date: July 21, 2011

Present: John Paul Jones, Developing Communities Project (DCP)
Phyllis Palmer, DCP
Eugene X*, DCP
Elder X*, DCP
Lou Turner, DCP
Reagan Robinson, student leader from DCP
Kevin Austria, student leader from DCP
Lee Melis, student leader from DCP
Andre X*, student leader from DCP
Centrall X*, student leader from DCP
Shonay Jackson, student leader from DCP
Naomi Mitch, student leader from DCP
Tiara X*, student leader from DCP
Diane Williams, Parent Leadership in Action Network (PLAN)
Christina Willis, PLAN
Chelsea Smith, PLAN
George Coleman, CTA
Sonali Tandon, CTA
Jeffrey Sriver, Chicago Department of Transportation
Lisa Soard (note taker), CWC Transit Group

Time: 11:00 a.m.

The Red Line Extension (RLE) meeting was preceded by a discussion about general environmental issues that included a mention of the RLE. More focused discussions on RLE followed as described below.

Highlights:

CTA staff showed a seven-slide PowerPoint presentation and a map of the proposed RLE. The presentation and CTA representatives stressed that:

- This extension is part of the “Your Red” Program, which also includes Dan Ryan Track Renewal and the North Red and Purple Modernization projects.

- Since the 95th Street Station is a highly used terminal and the area south of the Red Line has a need for more transit options, CTA is pursuing this extension.

* The “X” means we were unable to obtain the last name of the participant.

- Better transit would spur economic revitalization along the current Red Line and the extension.

- The extension will begin at the 95th Street Station and either terminate just north of 130th Street or east of Altgeld Gardens. It also will help South Side residents save 20 minutes on their commute from 130th Street to downtown and reduce the need for transfers.

- Between 2006 and 2009, CTA worked with the community to examine several options for placement of the extension. Based on those discussions and studies, the Union Pacific Railroad alternative was chosen as the Locally Preferred Alternative (LPA).

- The CTA is in the Environmental Impact Study (EIS) phase of the project as it collects information about how plans would affect local community and the environment. The August 2nd Open House is part of the EIS phase.

Overall DCP is supportive of the plans. The organization reminded CTA that it has been working on this extension for about 20 years. They see that the CTA's transportation projects are being compared to other projects in major U.S. cities, and they want to make sure CTA stays on schedule and doesn't fall behind other cities. They also want to know what they can do to help CTA move the Red Line Extension forward and want to keep the community motivated to help this process.

DCP had questions and suggestions abut the Red Line Extension.

- **Elevation**
  DCP asked if the whole extension will be elevated.
  - CTA responded that only part of it would be elevated up to 119th Street, after which it will become at-grade. CTA clarified that three of the four proposed new stations would be elevated and the terminal station at 130th would be at-grade.

- **Affect on Parks and Housing**
  DCP expressed concern about park land being taken for the extension and explained that the portions that would be impacted are used by families for picnics. DCP would like to work with CTA and the community to see where new green space could be found.
  - CTA representatives said that ideally CTA would like to operate in the existing railroad right-of-way, and will work with the railroad to minimize impacts to parks and homes.

- **Union Pacific Railroad**
  A DCP representative wanted to know if CTA was talking to the Union Pacific about the UPRR alternative.
  - CTA said that it has had some conversations with Union Pacific and that those conversations are ongoing.

- **Alternatives**
  In addition to asking for a reminder about the different alternatives to consider during the EIS, DCP also asked why other alternatives were still being considered when the CTA and the community had already chosen the UPRR as the LPA. DCP also reminded the CTA that noise is a concern and that they particularly supported the UPRR alternative because the noise wouldn't be as bad in its opinion.
    - CTA described each of the three other alternatives: No Build, Transportation System Management, and Halsted Street. CTA representatives also reminded DCP that each of the proposed new stations would include park and ride lots and bus transfer facilities. To answer the question about why other alternatives are still being considered, CTA said that it is required by the Federal Transit Administration (FTA).

- **Funding for EIS**
  DCP wanted to know when the EIS would be complete and what funding CTA had to move forward with the extension. They also asked how much money would be needed to complete the EIS.
    - CTA responded that in order to go any further they needed funds to prepare the Draft EIS and identify funds for construction and operation. CTA said it would continue to work with FTA and elected officials to identify funds. The August 2nd Open House is planned so that residents can see the results from the first scoping meeting and see that CTA is moving forward. CTA said that they would need \$3 million to \$5 million to complete the EIS and approximately \$30 million to finish preliminary engineering. CTA also mentioned that it would take two to three years to finish the EIS.

- **Livable Communities Grant**
  DCP asked whether the CTA was working with CMAP to pass a city ordinance that would give CTA \$1 million of a \$4.25 million grant from CMAP to study the Red Line Extension. DCP seemed confident that this ordinance would move forward and said they testified at the July 15th CTA Board meeting about the ordinance.
    - CTA representatives said they were unfamiliar with the ordinance, but they would look into it and continue to work with other partners for funding.

- **Your Red**
  There was a concern among DCP representatives that several projects were getting piled into one program – "Your Red" – and that may slow down the Red Line Extension.
    - CTA responded that there are three separate projects and that the Red Line Extension is following the New Starts process.

- **Open House**
  DCP asked if there was anything they could do during the Open House to help move the process forward.
    - CTA said that the comments received from the community during the Open House will be considered when drafting the EIS.

YOUR RED

Red Line Extension

Meeting Notes

Date: July 26, 2011

Present: Ledall Edwards, Executive Director, Roseland Business Development Council
George Coleman, CTA
Sonali Tandon, CTA
Lisa Soard (note taker), CWC Transit Group

Time: 10:20 a.m.

Highlights:

CTA staff presented a seven-page packet about the proposed Red Line Extension. The materials and CTA representatives stressed that:

- This extension is part of "Your Red," which also includes the Dan Ryan Track Renewal and the North Red and Purple Modernization projects. In addition, any improvements made to one part of the Red Line help the entire line.

- The extension will begin at the 95th Street Station and terminate either just north of 130th Street or east of Altgeld Gardens. It also will help South Side residents save 20 minutes on their commute from 130th Street to downtown and reduce the need for transfers.

- All four proposed stations would have park and ride facilities. The extension would be elevated from 99th Street to 119th Street and after that it would be at-grade.

- Between 2006 and 2009, planners worked with the community to examine several options for alignment of the extension. Based on those discussions and studies, the Union Pacific Railroad (UPRR) alternative was chosen as the Locally Preferred Alternative (LPA).

- The CTA is in the Environmental Impact Study (EIS) phase of the project as it examines four alternatives and collects information about how plans would affect local community members and the environment. The August 2nd Open House is part of the EIS phase.

- Funding for the EIS was announced yesterday by Senator Richard Durbin. CTA still needs funding for construction and operation of the extension.

Overall Mr. Edwards and the Roseland Business Development Council (RDBC) are supportive of the plans. He suggested that CTA come back during RBDC's next quarterly meeting to give all members an update. Edwards had questions and suggestions about the Red Line Extension.

- **Community Support**
  Mr. Edwards asked if the CTA had community support for this extension. He also mentioned that he has been hearing some concerns about noise from the community.
    - CTA affirmed that the community supports this extension, particularly the UPRR alternative because it goes to Altgeld Gardens. CTA said that it is working with UPRR to discuss issues, such as the UPRR's need to have 50 feet of clearance between its track and the CTA track. CTA responded to the noise concern by reminding Mr. Edwards that it will be looking at noise impacts during the EIS.

- **Funding**
  He asked if CTA anticipated having problems getting the funding needed to make this extension a reality.
    - CTA said that identifying funding will be a challenge. CTA also explained that in order to construct and operate the RLE, the CTA will need to have funding in place first, and then the project would need federal approval.

- **Economic Development**
  Mr. Edwards asked about the look of the 115th Street Station, since that would be closest to his business. He asked if it would mirror the 95th Street Station. He wanted to make sure there would be an opportunity for businesses to locate near the station so that passengers might go even further to the retail strip and his business on South Michigan Avenue.
    - CTA responded that it would consider retail space, but that it was too early in the process to say anything specific. CTA also said that all new stations would have park and ride lots.

- **Timeline**
  He also asked about when to expect the RLE to be up and operating.
    - CTA mentioned that it could take two to three years to finish the EIS, and if everything is in place (funding and federal approval) it could be seven to eight years from now, at the earliest, that the RLE could be operating.

- **Effect on Environment and Housing**
  Mr. Edwards wanted to know how the RLE would impact the environment, and if any homes would be demolished.
    - CTA said that some parks might be affected, as well as homes. CTA explained that whether houses will be affected depends on conversations with UPRR. And, CTA officials reminded Mr. Edwards effects to historical properties will be analyzed during the EIS.

Meeting Notes

Date: August 8, 2011

Present: Representative Cynthia Soto, 4th District
Joe Iacobucci, CTA
Sonali Tandon, CTA
Deborah Lopez, CTA
Lisa Soard (note taker), CWC Transit Group

Time: 8:53 a.m.

Highlights:
CTA staff presented information about the Red Line Extension (RLE) and left a seven-page packet for Representative Soto to reference, as needed. CTA representatives emphasized that:

- This extension is part of "Your Red," which also includes Dan Ryan Track Renewal and the North Red and Purple Modernization (RPM) projects.

- The extension will begin at the 95th Street Station and terminate either just north of 130th Street or east of Altgeld Gardens. It will help South Side residents save about 20 minutes on their commute from 130th Street to downtown and reduce the need for transfers.

- All four proposed stations would have park and ride facilities. The extension would be elevated from 99th Street to 119th Street and after that it would be at-grade.

- Between 2006 and 2009, planners worked through the Alternatives Analysis process. Based on discussions with the community and studies, the Union Pacific Railroad alternative was chosen as the Locally Preferred Alternative (LPA).

- Although Senator Durbin recently announced federal money to complete the EIS for the RLE and RPM projects, CTA would still need federal, state, and local funds for design and construction of the RLE.

- The CTA is in the Environmental Impact Study (EIS) phase of the project as it collects information about how plans would affect residents and the environment. CTA conducted an Open House on August 2nd to allow community members to ask CTA representatives about the proposed extension.

Representative Soto said CTA is doing good things and that she likes this project. She appreciated that CTA came out to brief her, but mentioned that she felt CTA should be doing more advertising and community events to raise awareness about this project. She also said she hoped that minority participation in construction would be high.

Representative Soto had questions and suggestions about the Red Line Extension.

- **130th Street Terminal**
  Representative Soto asked if CTA had future plans to extend the Red Line beyond 130th Street.
  - CTA said that it would need to go through another EIS process before it considered extending beyond 130th Street, and that it had to get the RLE approved and built first.

- **Timing and Funding**
  Representative Soto wanted to know how long the CTA had been working on the RLE. She also asked about whether any of the federal money for high speed rail could be used for the RLE, whether CTA got any capital dollars, and how much CTA would need to complete the RLE. She emphasized that she would be meeting with Transportation Secretary Ray LaHood soon, which could help inform where funding should be directed.
  - CTA replied that it had been working on the RLE since 2006. CTA stated that no federal money for high speed rail could be used on this project, but that the RLE was going through the “New Starts” funding process for new rail projects. CTA answered that it had received some capital funds, but those were to keep the existing system in a state of good repair, and would not address the RLE. CTA also said that its original 2009 estimate to complete the RLE was $1.1 billion, but that will likely rise with inflation.

- **Feasibility**
  Representative Soto asked if CTA had completed a feasibility study for the RLE.
  - CTA explained that a preliminary feasibility study was completed as part of the Alternatives Analysis phase, and that a more comprehensive feasibility study would be part of the next steps in the preliminary engineering phase.

YOUR RED | Red Line Extension

Meeting Notes

Date: July 28, 2011

Present: Rick Bryant, Chief of Staff, Representative Jesse Jackson, Jr., 2nd District
Joe Iacobucci, CTA
Michael McLaughlin, CTA
Deborah Lopez, CTA
Lisa Soard (note taker), CWC Transit Group

Time: 10:40 a.m.

Highlights:
CTA staff presented and left a seven-page packet of Red Line Extension (RLE) materials. The materials and CTA representatives stressed that:

- This extension is part of "Your Red," which also includes Dan Ryan Track Renewal and the North Red and Purple Modernization (RPM) projects.

- The CTA is taking a balanced approach to the Red Line; roughly half the money announced by Sen. Durbin recently will go to the EIS for the RLE and half to RPM.

- The CTA is partnering with the Federal Transit Administration (FTA) on the RLE.

- The extension will begin at the 95th Street Station and terminate either just north of 130th Street or east of Altgeld Gardens. It also will help South Side residents save 20 minutes on their commute from 130th Street to downtown and reduce the need for transfers.

- All four proposed stations would have park and ride facilities. The extension would be elevated from 99th Street to 119th Street and after that it would be at-grade.

- Between 2006 and 2009, planners worked through the Alternatives Analysis process. Based on discussions with the community and studies, the Union Pacific Railroad alternative was chosen as the Locally Preferred Alternative (LPA).

- The CTA is in the Environmental Impact Study (EIS) phase of the project which will collect information about how plans would affect local community members and the environment. The August 2nd Open House is part of the EIS phase and will allow community members to ask CTA representatives about the proposed extension.

Mr. Bryant said CTA is doing good work and that he has been impressed with the CTA's commitment to this project. Mr. Bryant also said he and Representative Jackson, Jr., will support the community's decision for the LPA. Mr. Bryant had questions and suggestions about the Red Line Extension.

- **Union Pacific**
  Mr. Bryant asked if CTA and the Chicago Department of Transportation were able to work with the UP to vacate its track or move to the Canadian National line, would the CTA use the UP's track?
    - CTA said that it would still build an elevated track. CTA also said that it would continue to work with the UP because the UP has several concerns. For example, the UP may consider adding a third track, and the UP wants to make sure that it doesn't lose income because this line is its main line to Texas.

- **Timing and Funding**
  He wanted to know when the EIS would be complete and what funding CTA had or needs to move forward with the extension.
    - CTA replied that in order to construct and operate the RLE it needed to have full funding in place and would need federal approval. CTA representatives said that they were looking at a state match and an operating subsidy. CTA also mentioned that it could take two to three years to finish the EIS, and if everything is in place it could be seven to eight years from now, at the earliest, that the RLE could be operating.

- **Halsted Alternative**
  Mr. Bryant asked about the Halsted Alternative and whether it would be elevated.
    - CTA explained that it would be elevated and that it scored just as well as the Union Pacific Railroad right-of-way. CTA is keeping the Halsted Alternative in the EIS for comparison purposes and to meet FTA requirements.

Meeting Notes

Date: July 20, 2011

Present: Representative Monique Davis, 27th District
Deborah Lopez, CTA
Sonali Tandon, CTA
One local resident
Karen Huelsman (note taker), CWC Transit Group

Time: Noon

Highlights:

CTA staff presented and left a seven-page packet of Red Line Extension materials. The materials and CTA representatives stressed that:

- Since the 95th Street Station is a highly used terminal and the area south of the Red Line has a need for more transit options, CTA is pursuing this extension.

- Better transit will spur economic revitalization along the current Red Line and the extension.

- Between 2006 and 2009, planners worked with the community to examine several options for placement of the extension. Based on those discussions and studies, the Union Pacific Railroad alternative, was chosen as the Locally Preferred Alternative.

- The CTA is in the Environmental Impact Study (EIS) phase of the project as it collects information about how plans would affect the local community and the environment. The August 2nd Open House is part of the EIS phase.

Overall Representative Davis was supportive of the plans, and was hopeful that the money can be secured to build the extension. Since the state government will have to contribute a portion of the funding, she noted that there is a lot of work ahead.

Representative Davis had questions and suggestions abut the Red Line Extension.

- **Safety**
  She said one of her biggest concerns is that people feel safe riding the train. She suggested looking at what other cities do to address these concerns.
    - CTA answered that security personnel and cameras could address safety concerns.

- **Community Involvement**
  She said many in her district feel forgotten when it comes to transit. She also stressed the need for keeping the community informed through every step.
    - CTA representatives said this extension is in direct response to the need for more transit options south of 95th Street. If the extension is built, it would eliminate the need for time-consuming transfers. Transit riders traveling from the proposed 130th Street terminal to the Loop would save about 20 minutes.

- **Affect on Housing**
  She was optimistic that the community would support the plan as long as the disruption to housing was minimal and that elevated tracks would not be placed over existing homes in the area. In addition, she was concerned about toxic train emissions too close to housing. A resident also was concerned if the extension would serve residents of Altgeld Gardens. The resident also asked where tracks would be placed in relation to existing structures.
    - CTA representatives responded that the extension would serve Altgeld Gardens and that ideally CTA would like to operate in the existing railroad right-of-way, and will work with the railroad to minimize effects on residents.

Meeting Notes

Date: July 29, 2011

Present: Senator Martin A. Sandoval, 12th District
Sean J. Murray, chief of staff, Senator Sandoval
Sonali Tandon, CTA
Joe Iacobucci, CTA
Deborah Lopez, CTA
Joan Coogan, CTA
Lisa Soard (note taker), CWC Transit Group

Time: 1:05 p.m.

Highlights:
CTA staff presented and left a seven-page packet of Red Line Extension (RLE) materials. The materials and CTA representatives stressed that:

- This extension is part of "Your Red," which also includes Dan Ryan Track Renewal and the North Red and Purple Modernization (RPM) projects; and that when improvements are made to one part of the line it helps the whole line.

- The CTA is partnering with the Federal Transit Administration (FTA) on the RLE.

- The extension will begin at the 95th Street Station and terminate either just north of 130th Street or east of Altgeld Gardens. It also will help South Side residents save 20 minutes from 130th Street on their commute to downtown and reduce the need for transfers.

- All four proposed stations would have park and ride facilities. The extension would be elevated from 99th Street to 119th Street and after that it would be at-grade.

- Between 2006 and 2009, planners worked through the Alternatives Analysis process. Based on discussions with the community and studies, the Union Pacific Railroad (UPRR) alternative was chosen as the Locally Preferred Alternative (LPA).

- The CTA is in the Environmental Impact Study (EIS) phase of the project which will collect information about how plans would affect local community members and the environment. The August 2nd Open House is part of the EIS phase and will allow community members to ask CTA representatives about the proposed extension.

Senator Sandoval was pleased to see progress on the RLE. He said people are really getting excited about this extension and that CTA and its supporters need to get the federal government to help move this forward. He also mentioned that he would try to get to the open house and asked to keep getting briefings as this process moves forward.

- **130th Street Terminal**
  Senator Sandoval mentioned that the unions have asked him if the CTA is considering extending the Red Line beyond 130th Street. The unions seem to think there is a greater ridership at 159th Street.
  - CTA representatives explained that the "New Starts" process, which is the process the CTA is going through for the RLE, is very competitive and that the projects considered need to be cost effective. The CTA staff also said that south of 130th is a forest preserve, which is low density for ridership. In order to justify extending the line south of 130th, CTA would have to go to where there is more population density.

- **Timing and Funding**
  He wanted to know when the EIS would be complete and what funding CTA had or needs to move forward with the extension. Senator Sandoval also asked how much the CTA got from the federal government, which Senator Durbin announced recently.
  - CTA replied that in order to construct and operate the RLE it needed to have full funding in place first and then it would need federal approval. CTA representatives said that they were looking at a 50/50 federal-local match, which could be a combination of city and state funding.

    CTA also mentioned that it could take two to three years to finish the EIS. After the EIS, CTA would focus on engineering and design, and if everything (including funding) is in place it could be seven to eight years from now, at the earliest, that the RLE could be operating.

    Additionally, CTA explained that roughly half the money announced by Senator Durbin recently will go to the EIS for the RLE (approximately $3 million) and half to RPM. CTA added that it would cost about $1.4 billion to construct RLE.

- **City Elected Official Support**
  Senator Sandoval asked who the transportation chair was at the city level and whether that person had hearings on the RLE. He also asked about the wards that the RLE would go through and whether the aldermen supported it. In addition, he asked if the CTA chairman and president, and Chicago's new mayor were aggressively seeking funding. He followed that up by asking if the mayor had transportation in his transition report.
  - CTA said that the transportation chair was Alderman Anthony Beale and that he hadn't hosted hearings yet. CTA also said that they had briefed all of the aldermen who would have the RLE in their wards and that all have voiced support. CTA affirmed that the CTA chairman and president, and Mayor Emanuel were aggressively seeking funding for the RLE, and that transportation was in the transition report.

- **Effect on Property and Environment**
  Sandoval asked about the impact on the environment and whether any housing would be affected.
    - CTA replied that the UPRR alternative could have minimal impacts on property and some impact on parks; the impacts would be evaluated in EIS. CTA also said that it is working with the Union Pacific because the UP has requested a 50-foot buffer between its tracks and the extension.

YOUR RED

Red Line Extension

Meeting Notes

Date: July 20, 2011

Present: Senator Emil Jones III, 14th District
Deborah Lopez, CTA
Sonali Tandon, CTA
Karen Huelsman (note taker), CWC Transit Group

Time: 1:40 p.m.

Highlights:

CTA staff presented and left a seven-page packet of Red Line Extension materials. The materials and CTA representatives stressed that:

- Since the 95th Street Station is a highly used terminal and the area south of the Red Line has a need for more transit options, CTA is pursuing this extension.
- Better transit will spur economic revitalization along the current Red Line and the extension.
- Four new transit stations with parking facilities are planned for the extension.
- Between 2006 and 2009, planners worked with the community to examine several options for placement of the extension. Based on those discussions and studies, the Union Pacific Railroad alternative was chosen as the Locally Preferred Alternative.
- The CTA is in the Environmental Impact Study (EIS) phase of the project as it collects information about how plans would affect the local community and the environment. The Aug. 2 Open House is part of the EIS phase.

Senator Jones was very supportive of the proposal, saying, “We want to get this done.” He said that he was planning to attend the Open House on Aug. 2.

He had questions and suggestions abut the Red Line Extension.

- **Park Land and Homes that Would be Affected**
  He expressed concern that the community would be reluctant to give up any park space for more transit tracks. He also mentioned that if housing would need to be razed then that could be a challenge to the community.
  - Within the locally preferred option, the CTA pointed out that different parks would be affected depending on whether the CTA tracks were built East or West of the Union Pacific Railroad's existing tracks. Likewise, different housing units could be affected. Ideally CTA would like to operate in the existing railroad right-of-way, and will work with the railroad to minimize land acquisition.

- **Length of Time for Completion and Costs**
  Senator Jones said that he and his community have been waiting a long time for more transit, and that he was unaware completion could be eight years away. His biggest funding concern, upon hearing the project could cost $1.1 billion, was coming up with the state's portion of the funding. But he was optimistic about the CTA being able to secure the funding and that he had already talked with Gov. Quinn about supporting the project.
  - CTA explained that the proposed extension would require federal, state and local funding.

- **How This Would Help Commuters**
  Senator Jones was pleased that transit riders would not have to make any transfers to travel from 130th Street to the Loop, and that the extension would reduce about 20 minutes off that trip.
  - CTA staff pointed out that reduced commuting time would make travel more convenient for those who have jobs or are looking for jobs downtown. Coupled with the park and ride facilities, the project would be an economic booster for local businesses along the line as well.

Appendix G
Participating Agency List
Dated June 21, 2011

Participating Agencies
Red Line Extension

Category	Sub-Category	Organization	Salutation	First Name	Last Name	Title	Address	Apt/ Floor	City	State	Zip
Government Agency	Federal	Department of Energy	Mr.	Steven	Chu	Secretary	1000 Independence Ave. SW		Washington	DC	20585
Government Agency	Federal	Department of Health and Human Services	Mr.	James	Galloway	Acting Regional Director - Region 5	233 N. Michigan Ave.	Ste. 1300	Chicago	IL	60601
Government Agency	Federal	Department of Housing and Urban Development	Ms.	Beverly	Bishop	Deputy Regional Director	77 W. Jackson Blvd.		Chicago	IL	60604
Government Agency	Federal	Federal Emergency Management Agency	Ms.	Janet	Odeshoo	Deputy Regional Administrator, Region V	536 S. Clark St.	6th floor	Chicago	IL	60605
Government Agency	Federal	Federal Highway Administration	Mr.	Norman	Stoner	Division Administrator, Illinois Division Office	3250 Executive Park Drive		Springfield	IL	62703
Government Agency	Federal	Federal Highway Administration	Mr.	Matt	Fuller	Environmental Programs Engineer	3251 Executive Park Drive		Springfield	IL	62703
Government Agency	Federal	Federal Railroad Administration	Mr.	Laurence	Hasvold	Regional Administrator	200 West Adams	Suite 310	Chicago	IL	60606
Government Agency	Federal	Transportation Security Administration	Ms.	Gale	Rossides	Acting Administrator	601 S. 12th St.		Arlington	VA	20598
Government Agency	Federal	U.S. Environmental Protection Agency	Mr.	Bharat	Mathur	Acting Regional Administrator - Region 5	77 W. Jackson Blvd.		Chicago	IL	60604
Government Agency	Federal	U.S. Fish and Wildlife Service	Mr.	John	Rogner	Field Supervisor - Chicago Field Office	1250 S. Grove	Ste. 103	Barrington	IL	60010
Tribes		Citizen Potawatomi Nation					1601 S. Gordon Cooper Drive		Shawnee	OK	74801
Tribes		Ho-Chunk Nation					5744 W. Irving Park Road		Chicago	IL	60634
Tribes		Peoria Tribe	Chief	John	Froman	Chief	118 S. Eight Tribes Trail	P.O. Box 1527	Miami	OK	74355
Tribes		Sac and Fox Tribe - Mississippi and Iowa	Mr.	Jonathan	Buffalo		349 Meskwaki		Tama	IA	52339
Tribes		Sac and Fox Tribe - Missouri and Kansas					305 N. Main Street		Reserve	KS	66434
Tribes		Sac and Fox Tribe - Oklahoma					Rt. 2 Box 246		Stroud	OK	74079
Government Agency	Local	Chicago Housing Authority	Mr.	Lewis	Jordan	CEO	60 E. Van Buren		Chicago	IL	60605
Government Agency	Local	Chicago Housing Authority	Ms.	Edie	Diaz		60 E. Jackson, Suite 1200		Chicago	IL	60605
Government Agency	Local	Chicago Housing Authority, Intergovernmental Affairs	Mr.	Otis	Wright	Director	60 E. Van Buren		Chicago	IL	60605
Government Agency	Local	Chicago Park District	Mr.	Mike	Kelly	CEO	541 N. Fairbanks		Chicago	IL	60611
Government Agency	Local	Chicago Park District	Mr.	Joseph	Bornstein	Project Manager, Planning & Development	541 N. Fairbanks		Chicago	IL	60611
Government Agency	Local	City of Chicago Department of Business Affairs and Consumer Protection	Ms.	Norma I.	Reyes	Commissioner	50 W. Washington St.	Room 208	Chicago	IL	60602
Government Agency	Local	City of Chicago Department of Community Development	Ms.	Christine	Raguso	Acting Commissioner	121 N. LaSalle St.	Ste. 1000	Chicago	IL	60602
Government Agency	Local	City of Chicago Department of Environment	Ms.	Suzanne	Malec-McKenna	Commissioner	30 N. LaSalle St.	Floor 25	Chicago	IL	60602
Government Agency	Local	City of Chicago Department of Environment	Ms.	Nicole	Kamins	Program Director	30 N. LaSalle St.	Floor 25	Chicago	IL	60602
Government Agency	Local	City of Chicago Department of Transportation	Ms.	Luann	Hamilton	Director, Transportation Planning	30 N. LaSalle St.	Suite 500	Chicago	IL	60602
Government Agency	Local	City of Chicago Department of Transportation	Mr.	Joe	Alonzo	CREATE Manager	30 N. LaSalle Street	Suite 500	Chicago	IL	60602
Government Agency	Local	City of Chicago Department of Transportation	Mr.	Richard	Hazlett	Coordinating Planner	30 N. LaSalle Street	Suite 500	Chicago	IL	60602
Government Agency	Local	City of Chicago Office of the Mayor	Mr.	Pat	Harney	Deputy Chief of Staff	121 N. LaSalle St.	Room 509	Chicago	IL	60602
Government Agency	Local	City of Chicago Police Department	Mr.	Jody	Weis	Superintendent	3510 S. Michigan Ave.		Chicago	IL	60653
Government Agency	Local	City of Chicago Police Department	Mr.	Mark	Harmon	Commanding Officer, Patrol Division	3510 S. Michigan Ave.		Chicago	IL	60653
Government Agency	Regional	Metra Commuter Rail	Ms.	Lynette	Ciavarella	Director, Planning and Analysis	547 W. Jackson Blvd.	13th Floor	Chicago	IL	60661
Government Agency	Regional	Metra Commuter Rail	Mr.	David	Kralik	Department Head, Long Range Planning	547 W. Jackson Blvd.	13th Floor	Chicago	IL	60661
Government Agency	Regional	Metropolitan Water Reclamation District of Greater Chicago	Mr.	Terrence J.	O'Brien	President, Board of Commissioners	100 E. Erie St.		Chicago	IL	60611
Government Agency	Regional	Metropolitan Water Reclamation District of Greater Chicago	Mr.	Joseph	Schuessler	Principal Civil Engineer	100 East Erie Street		Chicago	IL	60611
Government Agency	Regional	Regional Transportation Authority	Ms.	Leanne	Redden	Senior Deputy, Executive Director of Planning	175 W. Jackson Blvd.	Suite 1550	Chicago	IL	60604
Government Agency	Regional	Regional Transportation Authority	Ms.	Aimee	Lee	Manager, Regional Planning	175 W. Jackson Blvd.	Suite 1550	Chicago	IL	60604
Government Agency	Regional	Regional Transportation Authority	Mr.	Peter	Fahrenwald		175 W. Jackson Blvd.	Suite 1550	Chicago	IL	60604
Government Agency	Regional	Pace	Mr.	David	Tomzik	Manager, Long Range Planning	550 W. Algonquin Road		Arlington Heights	IL	60005
Government Agency	Regional	Pace	Ms.	Lorraine	Snorden	Manager, Department of Planning Services	550 W. Algonquin Road		Arlington Heights	IL	60005
Government Agency	State	Illinois Commerce Commission	Ms.	Shauna	Kelley	Bureau of Transportation Chief	160 N. LaSalle St.	C800	Chicago	IL	60601
Government Agency	State	Illinois Department of Natural Resources	Mr.	Marc	Miller	Director	One Natural Resources Way		Springfield	IL	62702
Government Agency	State	Illinois Department of Natural Resources	Mr.	Steve	Hamer	Office of Realty & Environmental Planning, Division of Ecosystems & Environment	One Natural Resources Way		Springfield	IL	62702
Government Agency	State	Illinois Department of Transportation	Mr.	Chuck	Abraham	Division of Public and Intermodal Transportation	100 W. Randolph	Suite 6-600	Chicago	IL	60601
Government Agency	State	Illinois Department of Transportation	Mr.	Joseph	Clary	Director, Division of Public and Intermodal Transportation	100 W. Randolph	Suite 6-600	Chicago	IL	60601
Government Agency	State	Illinois Department of Transportation	Ms.	Lil	Budzinski	Section Chief, CTA/ City of Chicago Section	100 W. Randolph	Suite 6-600	Chicago	IL	60601
Government Agency	State	Illinois Environmental Protection Agency	Mr.	Douglas	Scott	Director	500 Stratton Office Building		Springfield	IL	62076
Government Agency	State	Illinois Environmental Protection Agency	Ms.	DiAnne	Schuerman		Deputy Director's Office/MC#1, P.O. Box 19276		Springfield	IL	62794-9276
Government Agency	State	Illinois Historic Preservation Agency	Mr.	William	Wheeler	State Historic Preservation Officer	#1 Old State Capitol Plaza		Springfield	IL	62701
Government Agency	State	Illinois Historic Preservation Agency	Ms.	Anne	Hacker	Deputy State Historic Preservation Officer	#1 Old State Capitol Plaza		Springfield	IL	62701

Appendix H
Participating Agency Update Letter

U.S. Department
of Transportation
**Federal Transit
Administration**

REGION V
Illinois, Indiana,
Michigan, Minnesota,
Ohio, Wisconsin

200 West Adams Street
Suite 320
Chicago, IL 60606-5253
312-353-2789
312-886-0351 (fax)

June 15, 2011

[Insert Agency Representative]
[Insert Agency Name]
[Insert Address]
[Insert, City, State, Zip]

Re: CTA Red Line Extension Environmental Review Process Update

Dear *[Agency Representative]*:

The Federal Transit Administration (FTA), in cooperation with the Chicago Transit Authority (CTA), has completed scoping in preparation for the development of an Environmental Impact Statement (EIS) for the proposed Red Line Extension project. This project would extend the Red Line, a rail transit line, 5.3 miles from its existing 95th Street Station to a new terminal station at 130th Street. Future project development is subject to available funding.

CTA will be hosting an open house on August 2, 2011 from 6:00 p.m.to 8:30 p.m. at St. John Missionary Baptist Church, 211 E. 115th Street, Chicago, IL to update the community on the results of the scoping process and on project progress. Your agency is cordially invited to attend this update meeting. CTA continues to receive feedback on the project and potential effects which will be addressed in the Draft EIS. The meeting format will be an open exchange of information between the attendees and CTA staff. There will be no formal presentation or testimony.

The EIS scoping process included an agency scoping meeting on September 24, 2009 and two public scoping meetings on September 22, 2009, and September 24, 2009. The scoping comment period ran from September 1 to October 27, 2009. Input received on the project from both agencies and the public is summarized in the scoping report dated June 2010. Agencies, community groups, members of the public, elected officials, and other interested parties submitted 316 letters, e-mails, and comment cards, and 28 individuals provided oral testimony during this period. The scoping report can be accessed at http://www.transitchicago.com/Redeis/documents.aspx.

The comments that were received will be used to guide the analysis in the Draft EIS. Preliminary evaluations have also identified potential issues that will likely require coordination and further study regarding parks, utilities, I-94 and I-57, and acquisitions.

As the project moves forward and the Draft EIS is developed, as a participating agency, you may be asked to:

- Provide input on the impact assessment methodologies and level of detail in your agency's area of expertise;
- Participate in coordination meetings, conference calls, and joint field reviews, as appropriate; and
- Review and comment on sections of the pre-draft or pre-final environmental documents to communicate any concerns of your agency on the adequacy of the document, the alternatives considered, and the anticipated impacts and mitigation.

If you have questions regarding this process, please contact either:

Ms. Sonali Tandon, Project Manager
Strategic Planning and Policy
Chicago Transit Authority
PO Box 7602
Chicago, IL 60680-7602
Phone: (312) 681-4246
Email: RedExtension@transitchicago.com

Mr. Reginald Arkell, Community Planner
Federal Transit Administration Region V
200 W. Adams, Suite 320
Chicago, IL 60606
Phone: (312) 886-3704
Email: Reginald.Arkell@dot.gov

Sincerely,

Marisol R. Simon
Regional Administrator

cc: Sonali Tandon, Chicago Transit Authority

CHICAGO TRANSIT AUTHORITY

567 West Lake Street
Chicago, Illinois 60661-1498
TEL 312 664-7200
www.transitchicago.com

June 15, 2011

[Insert Agency Representative]
[Insert Agency Name]
[Insert Address]
[Insert, City, State, Zip]

Re: CTA Red Line Extension Environmental Review Process Update

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Strategic Planning and Policy
Chicago Transit Authority
PO Box 7602
Chicago, IL 60680-7602
Phone: (312) 681-4246
Email: RedExtension@transitchicago.com

Mr. Reginald Arkell, Community Planner
Federal Transit Administration Region V
200 W. Adams, Suite 320
Chicago, IL 60606
Phone: (312) 886-3704
Email: Reginald.Arkell@dot.gov

Sincerely,

Michael McLaughlin

Michael McLaughlin
Vice President
Strategic Planning and Policy

cc: Reginald Arkell, Federal Transit Administration

Appendix I
Sign In Sheets

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YOUR RED

Red Line Extension

cta

OPEN HOUSE

August 2, 2011

St. John Missionary Baptist Church

PLEASE SIGN IN FOR THE RED LINE EXTENSION PROJECT

	PRINTED NAME	TITLE ORGANIZATION	ADDRESS CITY, STATE ZIP	PHONE	E-MAIL	Check to receive updates on Your Red
1	FRANCINE DAVIS	RESIDENT	CHICAGO, IL 60628	773-934-4929	FDAVIS114@YAHOO.COM	✓
2	Mike Payne	CTA Grey Line Project	4609 Yender Ave Lisle, IL 60532	(773) 787-8078	grayline15@Yahoo.com	✓
3	DAVID HARRISON	Resident	8404 S Bennett Chicago IL 60617	773 221 0120	msibnsf@sbcglobal.net	✓
4	Deena McMullan	Rosemoor Community Association	10109 S. King Dr. 60628	—	—	✓
5	Debra Strickland	Developing Comm. Project	~~3d~~ 11300 S Halsted Cgo Ill. 60628	773-928- 2500	d.strickland@ dcpchicago.org	✓
6	Mamie Thomas	Developing Comm Project	11300 S. Halsted Chicago Il 60628	773-928- 2500	womanofgodmit @att.net	✓
7	AREFIN ~~[illegible]~~HUQ	-	5525 N Winthrop #512 Chicago IL 60640	773-682-0664	fig@arefin.net	
8	P E Palmer	DCP	13107 S. Eberhart Chicago Il 60827	773 264-0213	palmerphyllis13@yahoo.com	✓
9	Cebell Huey		352 W. 101st Street	773 568-0531		
10	MARIA FOWLER		10210 S. Egglestion	773-779-5397	MFOWLER128@YAHOO	✓

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	PRINTED NAME	TITLE ORGANIZATION	ADDRESS CITY, STATE ZIP	PHONE	E-MAIL	Check to receive updates on Your Red
1	R McClellan	99/100 BlK Club	Chgo, Il. 9941 So Green			
2	Billy Dorsey		11431 So. Union	773-264-5260	NONE	✓
3	Michael D. Denton		10931 S. Vernon			
4	David Kralik	Metra	547 W. Jackson Chicago, IL 60661			
5	Willie & Lula Spruill	Block	20 W. 115th Street	773-909-5011		
6	Josephine (Josie) Smith	PLAN 99th Yale Block Club	9921 S. Yale	773-468-4019	JosieSmith79@yahoo.com	✓
7	Cheryl Johnson	People for Comm Re covery	13116 So. Ellis Chgo 60827	773.840.4618	hazelmJohnson@aol.com	
8	David Patten	SGA Youth & family Services (Roseland)		7		
9	L. MINTER	V.O.T.E		(773) 886 5745	brokeparty@gmle.com	
10	Tony Anthony Johnson	CTA Metra	3351 W 21th St	1-773-542-0588		

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	PRINTED NAME	TITLE ORGANIZATION	ADDRESS CITY, STATE ZIP	PHONE	E-MAIL	Check to receive updates on Your Red
1	[illegible] Wilson	Alderman Carrie Austin	Chgo Ill 60605	773 928-6961	cwilson@cityofchicago.org	
2	Macy Johnson	Smith Park	346 W. 101st Street	773-264-5984		
3	Deborah Fletcher	99th & 100th Green St. Block Club -	9929 So. Green St. - Chgo. 60643			✓
4	Taylor Lang	reporter In these times	525 S. State St. Chicago 60605	724.456.2378	tslang91@gmail.com	✓
5	Rita Maryland		9230 S. Bennett	773-978-5626		✓
6	Shaunte Burton	New Commandment Church Mother	Chicago, IL. 60636 120 W. 115th St. 1742 W. 63rd st Chgo ~~60636~~	773.747.8517	sis.burton@yahoo.com	✓
7	Dorian A. Johnson	Far South CDC SSA # 45	9923 S. Halsted Ste D Chgo. IL. 60628	773 800 5510	Dorian@FarSouthcdc.org	✓
8	Lou Turner	DCP	Chicago IL	217/972-2447	loturner@illinois.edu	✓
9	Dewana Dorsey	West Pullman Library	830 W. 119th St 60643	3127471425	DDORSEY@CHIPUBLIB.ORG	✓
10	Harold Aaron	A&H Mech.	1215 E. 79th St	773-933-2400	haaron@a-hmechanical.com	

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August 2, 2011

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	PRINTED NAME	TITLE ORGANIZATION	ADDRESS CITY, STATE ZIP	PHONE	E-MAIL	Check to receive updates on Your Red
1	Jon K. Evans		11936 S. Princeton Ave Chicago Il 60628-6014	773-821-8142	jkeiit963827@sbcglobal.net JKEII796@hotmail.com	X
2	TiNA MOORE	RiDER	11629 S. EgglesTON 60628	(773) 660 1612	TinAMOORE859 @ hotmail	
3	Harvey Kahler		2041 W Birchwood Chicago 60645		harvey.kahler@att.net	✓
4	Tracy Swartz	RedEye		(312) 259-4232	tswartz@tribune.com	X
5	Dolores Ruiz	resident	11623 So. Prairie Chicago 60628	773) 719-3182	dvillalvaz@aol.com	X
6	Renee Kuruc	FTA	200 W. Adams Ste 320 Chgo IL 60606	312-353 1646	renee.kuruc@ dot.gov	✓
7	J. OSTARELLO		11326 S. FORRESTVILLE CHGO 60628		PULLMAN785@ YAHOO. COM	✓
8	Samuel Strachan	DCP	113th Halsted	(773) 928-2500	ssstrachan449@sbcglobal .net	✓
9	Phil Sung	DCP		(650 810 1103	psung26@gmail.com	✓
10	Jennifer O'Neill	reporter FM 101.1 News	Merchandise Mart	630. 336.9981	ojenn13@hotmail.com	

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August 2, 2011

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	PRINTED NAME	TITLE ORGANIZATION	ADDRESS CITY, STATE ZIP	PHONE	E-MAIL	Check to receive updates on Your Red
1	Mary Polk		9731 Prairie			
2	E. Lewis	City of Chicago HED	121 N. LaSalle #1000	312-744 4401	—	—
3	S. Al Nurridin	RCH HCI	139 E. 115th St	708-841-9875	—	—
4	Peter Fahrenwald	RTA	175 W. Jackson Chicago			
5	Jeffrey Sriver	CDOT	30 N. LaSalle St ~~7920 S Wabash Av~~	312 744 7080		
6	Doris H. White		7920 S. Wabash Chicago IL 60619	312 972 9652		
7	Janice Allen		22 W 115 Street Chicago Il 60628	773- 818-4970		
8	Robert Douglas	S.O.N Foundation	10812 S. Forest Chicago, IL. 60628	773-653- 7527	Sonstourlife@yahoo.co	
9	John Paul Jones	Community Organizer D.C.P.	11300 S Halsted Chgo Il. 60628			
10	Leon Walker	DLS Realty	1050 E 95th Street	773-648-2793	LWalker@DLSrealty.com	

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	PRINTED NAME	TITLE ORGANIZATION	ADDRESS CITY, STATE ZIP	PHONE	E-MAIL	Check to receive updates on Your Red
1	Jon Samuel		5112 W. Fulton St. Chicago, IL 60644	(773) 544-8424	jonsamuel32@yahoocom	✓
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	PRINTED NAME	TITLE ORGANIZATION	ADDRESS CITY, STATE ZIP	PHONE	E-MAIL	Check to receive updates on Your Red
1	REGGIE ARKELL	COMM. PLANNER FTA	200 W. ADAMS ST. CHICAGO, IL 60606	312-886-0704	REGINALD.ARKELL @DOT.GOV	✓
2	Ryan Hicks	Transportation Systems Planner NIRPC	6100 Southport Road Portage, IN	219-763-6060	Rhicks@nirpc.org	✓
3	Chris Gray	freelance journalist	1257 W. Lunt Chicago 60626	414-434-3526	topher.gray@ gmail.com	✓
4	Roberta ParKman	Resident	346 W. 100th Place Chgo. 60628	773-264-7842	—0—	✓
5	Donald Miller	R—	733 E 84	773 886 2811		
6	Madie L. Burton	Resident	120 W 115th St. Church Chgo, IL 60628	773 368 8436	all lower case Pastor.Madie@gmail.com	✓
7	RYAN RICHTER	METRA	547 W. Jackson Blvd Chicago, IL 60661	312-322-8036	rrichter@metrarr.com	✓
8	DON RASHID	ALLPOINTS SECURITY + DETECTIVE, INC	2112 EAST 71ST ST CHGO. IL 60649	773.955.6700	drashid@allpointssecurityinc.com	
9	Xavier Tidwell	Inspiration Cafe	6957 W. Sheridan	708 235 0021	Tidwellx@yahoo.com	
10	Minister Sylvia Y. Jones	PCP Sec. ROC	8419 S Emerald e 60620	773-368-0991	elohiminc@SBC Global.Net	✓

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	PRINTED NAME	TITLE ORGANIZATION	ADDRESS CITY, STATE ZIP	PHONE	E-MAIL	Check to receive updates on Your Red
1	LaDwain Shaw		Chicago IL 60827	773-419-1746		✓
2	RENNie M. GRACE		CHicago IL, 60614	773-723-7294		✓
3	John Long		Chicago, IL.	773.450.7617	jow107@aol.com	✓
4	Naomi Tate	SEIU	Chgo Ill	773.603.6956		
5	Donna & Tony Van Zanten		Chic. Ill	773-881-3937		✓
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	PRINTED NAME	TITLE ORGANIZATION	ADDRESS CITY, STATE ZIP	PHONE	E-MAIL	Check to receive updates on Your Red
1	Tom Coleman	PB	230 W. Monroe Suite 900	312-351-4302	colemant@pbworld.com	✓
2	EUGENE ROGERS	D-C-P	10763 S. SANGAMON	773-568-8324		
3	Diane Williams	Public	9900 S. Yale	773 568-7551	dylynnx@yahoo.	
4	Mary Darke	Public	9050 S Dauphin	773 706-4421		
5	HENRY TAYLOR	MEDIA ACTIONS NETWORK/[illegible]	1525 E 84TH ST CHGO ILLINOIS	773-221-2512	HTaylor@HenryTaylor AND CO.COM	
6	Patricia Young		11582 S Prairie	773-815-1597		
7	Jasmine Young		11582 S. prairie	773-815-1597		
8	William Glover	CFABC	PO Box 1273	708-781-5233		
9	Monique Lenoir		11544 S. Perry Ave Chicago IL 60628	773-447-2198	mlenoir22@yahoo.com	✓
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	PRINTED NAME	TITLE ORGANIZATION	ADDRESS CITY, STATE ZIP	PHONE	E-MAIL	Check to receive updates on Your Red
1	Roland Solinski		5531 N. Sheridan Chicago IL	224-305-8008	rsolinsk@voa.com	X
2	DOLORES CHESTNUT	ROSEMOOR COMMUNITY ASSC	10522 SO. VERNON CHG 60628	773 928-0971		X
3	Dolores Thibodeaux	Allpoints Security	2112 E. 71st ST 60649	773-955-6700	mail@allpoints securityinc.com	X
4	LILLIAN BRAGGS		9635 S. YALE AVE 60628	773-821-1095		X
5	Chisphar young					
6	Roger Mitchee		9210 S. Phillips	(773)768-8825		X
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	PRINTED NAME	TITLE ORGANIZATION	ADDRESS CITY, STATE ZIP	PHONE	E-MAIL	Check to receive updates on Your Red
1	Ella McGEE		1025 W. 102nd St CHGO, IL 60643	7734451779		
2	Lizzie BROWN		11517 So. CHURCH St.	773-239-6005		
3	DONNell Williams	Nehemiah Restoration Coal.	211 E. 115th	773-451-9329	donjehavon@ hotmail.com	✓
4	EDMUND HAWKINS		1515 GRANT ST. DOLTON, IL 60419		EGHAWK@SBCGLOBAL.NET	
5	Dexter Muhammad		12137 S. Wallace Chicago 60628		coachdexter@ live.com	
6	Ron Shimizu	Parsons Brinckerhoff	230 W. Monroe, Suite 900 Chicago, IL 60606	312-803-6638	shimizur@pbworld.com	✓
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1	Dorothy Anderson		10121 S. Green	773-779-8606	msda.25@yahoo.com	
2	Gwendolyn M. Rice	Developing Communities Project (DCP)	11300 S. Halsted	773.928-2500	gmrice@dcpchicago.org	
3	SCOTT ENTERPRISE Edmund Scott	PRESIDENT Roseland Bus. DEV. C.	11513 S. MICHIGAN CHICAGO, IL 60628	773 568 8181 773 928 6100	ScottENT11513@AOL	✓
4	Kenneth Jenkins	 Roseland Bus Dev	10822 S. Normal	773 2556931		
5	Mose Bragg		9635 So YALE Chicago Ill 6065[illegible]			
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YOUR RED

Red Line Extension

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August 2, 2011

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1	Lorri Baldwin	Red-Line Oversight Com.	8217 S. Perry Ave Chgo, IL. 60620	773-873-3698	lebaldwin@sbcglobal.net	Yes
2	Lonnetta Jones	FCP	Chgo Ill 60620	773-928-2508		
3	Rev. Rayford Grady	DCP	Chgo IL-60643	773.5044527	mrrg2@msn.com	YES
4	Robert Young		11582 S Prairie	773-1597		
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Appendix J
Comment Cards

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YOUR RED

Red Line Extension

cta

We are always interested in receiving your comments on the proposed Red Line Extension Project. This project is one part of the Your Red Program to extend and enhance the entire Red Line. Please PRINT.

Name: Lori Baldwin

Organization: Red-Line Oversight Committee Title: Red-Line 95th Street Station Adopt-A-Station Committee

Address: 8217 S. Perry Avenue

City: Chicago State: IL. Zip: 60620

Phone: 773-873-3698 Email: lebaldwin@sbcglobal.net

Please provide your comments about the proposed alternatives to extend the Red Line south to the vicinity of 130th Street.

My most concern is that as we moved through this planning and EIS phases - I would like to see more inter-governmental planning coordinated. Also, that the density and activity (busiest station in the system) 95th Street Red-Line station be identified as a transportation HUB. As part of the Red-Line Oversight Committee, I truly hope that city government continues to make this project a priority Equity in transportation development projects and community needs (does really matter). Referenced the the Voorhees (UIC) + DCP report. We want to be sure this opportunity does not get lost in politics. We have to move forward and the commitments that our politicians have made - including the Mayor - This project must remain a priority and on the front-lines.

Comments may be submitted via **mail**: Sonali Tandon, Strategic Planning & Policy, Chicago Transit Authority, P.O. Box 7602, Chicago, IL 60680-7602, **fax**: 312-681-4297, or **e-mail**: RedExtension@transitchicago.com.

For more information about the Red Line Extension Project visit: www.transitchicago.com/redeis. For **Hearing & Speech Impaired**: 1-888-CTA-TTY1 (1-888-282-6891). For information on other transit matters: **Customer Information:** 1-888-YOUR-CTA (1-888-968-7282), and **Transit Information:** 312-836-7000, or **RTA TTY:** 312-836-4949.

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YOUR RED

Red Line Extension

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We are always interested in receiving your comments on the proposed Red Line Extension Project. This project is one part of the Your Red Program to extend and enhance the entire Red Line. Please PRINT.

Name: Madie L. Burton

Organization: ______ Title: ______

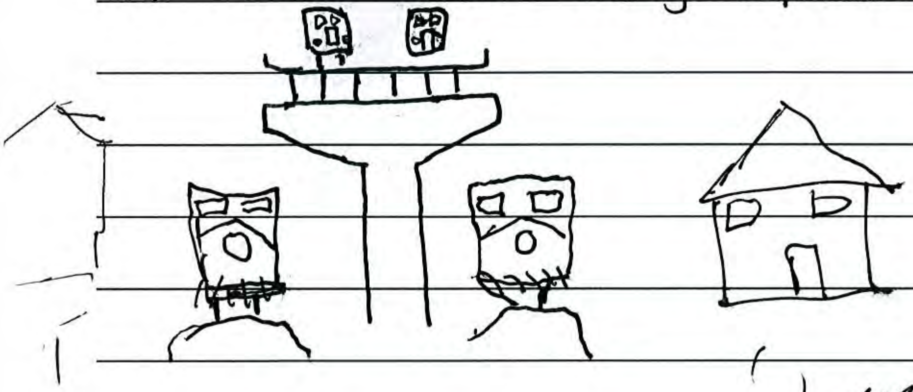
Address: 120 W 115th st.

City: Chicago State: IL Zip: 60628

Phone: ______ Email: pastor.madie@gmail.com

Please provide your comments about the proposed alternatives to extend the Red Line south to the vicinity of 130th Street.

The proposed route adjacent to UP RR seems like a good route. Will it be east or west of the UP RR tracks. IF it ran above the UPRR or on existing tracks I think that will save a lot of homes from being razed



HRT (Rail) Alternative is definitly a NoNo. please do not take the sun from us along Halsted St

Madie L. Burton

Comments may be submitted via **mail**: Sonali Tandon, Strategic Planning & Policy, Chicago Transit Authority, P.O. Box 7602, Chicago, IL 60680-7602, **fax**: 312-681-4297, or **e-mail**: RedExtension@transitchicago.com.

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We are always interested in receiving your comments on the proposed Red Line Extension Project. This project is one part of the Your Red Program to extend and enhance the entire Red Line. Please PRINT.

Name: Jon Keith Evans

Organization: 11936 South Princeton Avenue Title:

Address: 11936 South Princeton Avenue

City: Chicago State: Illinois Zip: 60628-6014

Phone: 773-821-8142 Email: jkeiit963827@sbcglobal.net JKEIIT96@hotmail.com

1 Please provide your comments about the proposed alternatives to extend the Red Line south to the vicinity of 130th Street. I firmly believe that a high speed electric trolley bus similar to Boston Massachusetts Green Line (down a modified Eggleston Avenue in Chicago) could've been less expensive to build and quicker to implement. It, as I envisioned it, also would've run parallel to UPRR

2 I DO NOT BLAME THE CTA FOR FOOTDRAGGING on constructing the Red Line Extension. From a business standpoint it would be foolhardy to invest in an area where graffiti and vandalism is common, assaults on women and girls could easily occur at the construction sites, and finally - CTA riders FLOUT advisories against eating, littering, radio playing and smoking on vehicles

Comments may be submitted via **mail**: Sonali Tandon, Strategic Planning & Policy, Chicago Transit Authority, P.O. Box 7602, Chicago, IL 60680-7602, **fax**: 312-681-4297, or **e-mail**: RedExtension@transitchicago.com.

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We are always interested in receiving your comments on the proposed Red Line Extension Project. This project is one part of the Your Red Program to extend and enhance the entire Red Line. Please PRINT.

Name: EDMUND HAWKINS

Organization: Title:

Address: 15015 GRANT ST.

City: DOLTON State: IL Zip: 60419

Phone: Email: EGHAWK@SBCGLOBAL.NET

Please provide your comments about the proposed alternatives to extend the Red Line south to the vicinity of 130th Street.

I AM IN AGREEMENT THAT AN EXTENSION TO THE RED LINE TO 130TH ST. IS MUCH NEEDED. FROM WHAT I AM HEARING, IT DOESN'T HAVE A CHANCE ON BECOMING A REALITY FOR THE NEXT 10 TO 20 YRS. I AM CONCERNED THAT WITH WHAT YOU CURRENTLY HAVE, TRAVEL ON THE RED LINE FROM 95TH ST. TO DOWNTOWN HAS BECOME PAINFULLY SLOW DUE TO LACK OF MAINTENANCE TO THE TRACKS. ANOTHER CONCERN OF MINE IS THAT WHEN I VISITED OTHER CITIES WITH RAPIT TRANSIT OR LIGHT RAIL SYSTEMS, PARKING IS AMPLE. ON THE RED LINE, THE ONLY PARKING FACILITY IS HOWARD ST. UNTIL OR IF EVER THIS EXTENSION HAPPENS, I ~~[illegible]~~ WOULD LIKE TO SEE THE TRACKS IN A STATE OF GOOD REPAIR SO THE TRAVEL TIME WOULD BE REDUCED TO NO MORE THAN 25 MINUTES FROM 95TH TO THE LOOP. WITH THE TRAVEL TIME BEING SO SLOW, I HAVE EITHER DRIVEN TO THE LOOP OR HAVE OPTED TO RIDE METRA OR THE SOUTH SHORE LINE SINCE IT GETS YOU FROM THE FAR SOUTH SIDE TO DOWNTOWN IN APPROXIMATELY 30-35 MINUTES

Comments may be submitted via **mail**: Sonali Tandon, Strategic Planning & Policy, Chicago Transit Authority, P.O. Box 7602, Chicago, IL 60680-7602, **fax**: 312-681-4297, or **e-mail**: RedExtension@transitchicago.com.

For more information about the Red Line Extension Project visit: www.transitchicago.com/redeis. For **Hearing & Speech Impaired**: 1-888-CTA-TTY1 (1-888-282-6891). For information on other transit matters: **Customer Information:** 1-888-YOUR-CTA (1-888-968-7282), and **Transit Information:** 312-836-7000, or **RTA TTY:** 312-836-4949.

⑤

YOUR RED

Red Line Extension

cta

We are always interested in receiving your comments on the proposed Red Line Extension Project. This project is one part of the Your Red Program to extend and enhance the entire Red Line. Please PRINT.

Name: tony Anhony Johnson

Organization: Sara Lee baking group Title: ||

Address: 3351 W71 thtnst

City: Chicago State: Ilunois Zip: 60623

Phone: 1-773-542-0588 Email: 3351 W71thst

Please provide your comments about the proposed alternatives to extend the Red Line south to the vicinity of 130th Street.

the federal transit Administration and
cta have initated
the feberal Environmental review
process and are prebarins
the eis will describe
Alternative
No action.
transportation system manasement
bus rapid transit
halsted street
union pacific railroad - the locally preferred

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Name: Tony Annony Adams Johnson

Organization: Saralee bakins Title: //

Address: 3351 W21 thst

City: Chicaso State: ill Zip: 60623

Phone: 1-773-592-0588 Email: 3351 W21 th$t

Please provide your comments about the proposed alternatives to extend the Red Line south to the vicinity of 130th Street.

the braft Environmantal impact statement
EIS will analyze potential impacts to
environmental social and
benefilial such as increased trasit access
reduced travel time and reliability or
reduced consestion on area
streets while only very preliminary evaluations
of the project area have been conducted to date
it is likely that
there would not be substantial impacts to
natural resarces such as wildlife wetlands

Comments may be submitted via **mail**: Sonali Tandon, Strategic Planning & Policy, Chicago Transit Authority, P.O. Box 7602, Chicago, IL 60680-7602, **fax**: 312-681-4297, or **e-mail**: RedExtension@transitchicago.com.

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YOUR RED

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Name: tony Adams

Organization: Sara Lee bakinsgroup Title: /

Address: 3351 W21th St

City: Chicaso State: Illinois Zip: 60623

Phone: 1-773-542-0588 Email: 3351 W21th St

Please provide your comments about the proposed alternatives to extend the Red Line south to the vicinity of 130th Street.

traffic · the proposed line would be elevated and
not have at Grade · crossings that could increase
traffic
consestion all alternatives would include
net park and ride facilities at each station
and there could be trafilic
preferred Alternative - union pacific · Railroad ·
UPRR Alternative

Comments may be submitted via **mail**: Sonali Tandon, Strategic Planning & Policy, Chicago Transit Authority, P.O. Box 7602, Chicago, IL 60680-7602, **fax**: 312-681-4297, or **e-mail**: RedExtension@transitchicago.com.

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(8)

Proposed Red Line Extension to 130th Street

The Red Line Extension to 130th & Bishop Ford/I-94 is a wholly unnecessary and wasteful expenditure.

- The hundred million dollars for the Red Line extension represents a costly duplication of existing and nearby Metra and Northern Indiana Commuter Transportation District services to the South Suburbs.
- Suburban buses could be routed just as easily and more efficiently to existing suburban stations at 115th/Kensington, Riverdale, or Hegewisch or to a new station on the NICTD South Shore Line at 130th & Bishop Ford.
- The extension and station at 130th bypassing Roseland would be relevant to very few City residents that couldn't use existing Metra, NICTD and Pace services.
- Existing Pace services to 95th do not extend much beyond Harvey or into Indiana and do not afford the reach into distant suburbs provided by Metra and NICTD.
- Metra Electric offers nearly as many connections to east-west CTA buses across the South Side as the Red Line and Green Line combined, and to CTA trains downtown.
- If Metra Electric frequency is a community issue, add trains.
- If Metra Electric fares are an issue, incorporate Metra South Chicago and Blue Island and NICTD South Shore lines in the City into the CTA system as the Gray Line.
- The 2-person Metra crew represents a savings over the CTA 1-person crew and manned stations.
- The CTA extension would attract few if any new transit users without park-n-ride in addition to a bus transfer terminal. Parking facilities and a station could be built just as easily on the South Shore without a CTA rail extension.
- The CTA extension seeks to divert existing transit users from other services with lower fares that willfully increase its operating deficit. The premise seems to be that increasing the deficit raises the amount of State funding that can be brought into the City. There is complete disregard for regional fiscal responsibility and accessibility need priorities for transit.
- The only value in constructing the extension is in the State and Federal dollars brought into the City; and that competes with needs, some desperate, elsewhere.
- In a related matter, extending Metra/Gray Line local service to Hegewisch would open capacity for NICTD South Shore service growth to Northwest Indiana while facilitating expanded bus-rail transfers. Tracks used by the South Shore from the State Line are owned by Metra.

Harvey I Kahler 8/2/2011

⑨

From: Harvey Kahler (harvey.kahler@att.net)
To: CHICAGOTRANSIT@yahoogroups.com;
Date: Tue, July 12, 2011 12:02:57 PM
Cc:
Subject: Re: [CHICAGOTRANSIT] Re: Red Line 130th extension

In the first place, you totally ignore existing transit infrastructure in the area that could be exploited more fully for less money.
The bus volume into 95th is more artificial and competitive than economic. While the service in Chicago is understandable, the number of Pace routes incurs significant additional mileage to feed the CTA than the nearest suburban Metra station whose service would be faster. These extra miles are not free of expense, consuming resources and limiting the ability to expand into unserved areas.
As I see it, a CTA extension to 130th would shorten the Pace feeder routes and avoid expressway congestion approaching 95th to be more compete on fare and travel time to poach Metra riders at a cost of a $-billion. I suspect that the cost for the length of trip for such service is above the system average and represents a subsidy equal to or greater than that for Metra.
The CTA Red Line Extension intermediate station volumes projected to be quite low, comparable to those proposed to be closed in a Red Line reconstruction between Clark Jct & Howard. Even so, the volumes probably include a fair number of Metra customers diverted from the nearby Electric and Rock Island stations (didn't get a feel for those numbers from the study).
Yes, a transfer is required to continue north; but is the cost of a parallel line worth the new or diverted Metra riders attracted to the Red Line bound for north of the Loop?
Yes, in principal the Red Line should extend from the northern to the southern corporate limits; but given the existence of other alternatives, is this a responsible use of capital resources?
Finally, the proposed CTA extension would not tie in with Metra to reach suburban destinations, obliging parallel competing Pace-CTA services with a limited pot of dollars for operations.

--- On **Tue, 7/12/11, PJ** ***<choochoopw@yahoo.com>*** wrote:

> From: PJ <choochoopw@yahoo.com>
> Subject: Re: [CHICAGOTRANSIT] Re: Red Line 130th extension
> To: "CHICAGOTRANSIT@yahoogroups.com" <CHICAGOTRANSIT@yahoogroups.com>
> Date: Tuesday, July 12, 2011, 8:36 AM
>
> I've been sitting back trying to understand why so many are against the red line being extended. Isn't 95th like the 2nd busiest station in the entire system? Doesn't that warrant an extension since so many buses feed into that terminal? None of the buses with the exception of the 29 cross another CTA rail line so people that take the bus out there don't have another option to get downtown and points beyond other than the red line. I used to have to take that long ride from the suburbs by the 352 or 353 daily and running the red line further south would eliminate a good portion of my commute. If I still lived out there I probably wouldn't take the 352 considering I don't see how that bus would end up anywhere but at 95th but the 353 was always my preferred bus and it would make sense for me to take that. While I can see the fight for the gray line, I think it is somewhat limited for what the red line extension is trying to do. If my final destination was downtown, then yes that would work but if I was

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trying to go elsewhere, Lakeview or points north or west, that creates an unnecessary transfer with a walk from Millennium Station to Wabash or State to the appropriate train. And before anyone jumps up and chews my head off, I'm just searching for clarification not a debate.

From: Dennis McClendon <dennismcclendon@gmail.com>
To: CHICAGOTRANSIT@yahoogroups.com
Sent: Monday, July 11, 2011 10:47 PM
Subject: Re: [CHICAGOTRANSIT] Re: Red Line 130th extension

David Harrison wrote:

> The Red line extension is needed to solve the congestion at the
> most crowded outlying station in the city.

Congestion of vehicles or people? Wouldn't it be a lot cheaper to build a big parking garage at 95th with a huge bus terminal on the ground floor?

> The extension is needed to provide service to the most isolated
> area in the city.

Isolated? It's squeezed in between two Metra lines with stations every half mile. Do you think folks in Scottsdale, Sauganash, Montclare, Mount Greenwood, or Garfield Ridge would agree that Roseland is "the most isolated area in the city?"

The bigger problem is that the Red Line extension area is low density. Roseland, West Pullman, and Pullman are all under 11,000 persons per square mile. For comparison, South Shore is 21,000, Lake View is 30,000.

Check it out: http://i55.tinypic.com/2jbnrq0.jpg

::::::::::::::::::::::::::::::::::::::
Dennis McClendon
dennismcclendon@gmail.com

__._,_.___
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Messages in this topic **(91)**

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⑪

From: Harvey Kahler (harvey.kahler@att.net)
To: CHICAGOTRANSIT@yahoogroups.com;
Date: Tue, July 12, 2011 12:15:37 AM
Cc:
Subject: Re: [CHICAGOTRANSIT] Re: Red Line 130th extension

Just how would FRA regs be any different with the Gray line since Metra would continue to operate its trains on its plant for a CTA service? Or continue to operate as Metra with an integrated RTA fare system?
The other advantage of the Gray Line is that Metra is not eligible (directly) for revenue from the dedicated RTA sales tax generated in the City. CTA could use this to purchase service from Metra, thereby making Metra whole. The suburban-generated tax revenue could be shifted to CTA mitigated by the purchase of service, offsetting the added expense of the Gray Line to the CTA.
Further Pace and CTA operating savings may be achieved by orienting buses to feed the Gray Line and Metra Electric rather than going much farther either to Downtown or 95th.

--- On **Mon, 7/11/11, Albert *<buslist@yahoo.com>*** wrote:

> From: Albert <buslist@yahoo.com>
> Subject: [CHICAGOTRANSIT] Re: Red Line 130th extension
> To: CHICAGOTRANSIT@yahoogroups.com
> Date: Monday, July 11, 2011, 9:43 PM
>
> And how does that purchase of survice align with the higher cost per passenger mile due to FRA regs and requirements? These folks deserve a higher subsidy? And don't think FRA will go away as PATH will tell you all about (far less a FRA railroad than the Gray Line would be)
>
> --- In CHICAGOTRANSIT@yahoogroups.com, "Adam H. Kerman" <ahk@...> wrote:
> \>
> \> At 3:24pm -0000, 07/10/11, chicagopcc <msibnsf@...> wrote:
> \>
> \> >More "costly" as in rider has to pay twice. The entire sentence was
> \> >written in a present tense.....or past perfect....it's too damn hot to
> \> >argue rhetoric. There was nothing in the entire passage relating to your
> \> >Gray Line proposal.
> \>
> \> Aargh.
> \>
> \> That is not Mike's position. Mike is in favor of fare integration. He
> \> envisions Gray Line as city/CTA purchase of service from Metra, so if the
> \> city funded it, why would you believe it would be done without fare
> \> integration?
> \>
> \> Mike is in favor of stations staffed with CTA customer assistants as if
> \> they were rapid transit stations, so obviously he's in favor of fare
> \> integration. I don't agree with his premature assumptions on fare
> \> collection.
> \>
>
> Reply to **sender** | Reply to **group** | **Reply via web post** | **Start a New Topic**
> Messages in this topic **(80)**

From: Harvey Kahler (harvey.kahler@att.net)
To: CHICAGOTRANSIT@yahoogroups.com;
Date: Sat, July 9, 2011 1:37:35 PM
Cc:
Subject: Re: [CHICAGOTRANSIT] Re: Red Line 130th extension

With the Gray Line proposal, #95W-#95E and #103-#106 could be combined and returned to through routes across the South Side and connect with suburban rail services to Joliet, University Park, and Indiana as well as feeding the Gray Line to Downtown.
Have I mentioned before that 130th & Bishop Ford is at the South Shore that could be transformed to a Gray Line branch from Hegewisch?

--- On **Sat, 7/9/11, chicagopcc *<msibnsf@sbcglobal.net>*** wrote:

> From: chicagopcc <msibnsf@sbcglobal.net>
> Subject: [CHICAGOTRANSIT] Re: Red Line 130th extension
> To: CHICAGOTRANSIT@yahoogroups.com
> Date: Saturday, July 9, 2011, 11:17 AM
>
> The most important fact is that the present 95th Street terminal of the Red line is the most congested in the city and the only way to relieve this is to extend the Red line into those territories feeding 95th. Decades ago planners thought the extension would be both east and west and left space in the two expressway medians. We now know that neither median is the best routing and the concept of the UP ROW or south Halsted competed and the UP won out as the best of both worlds, and undoubtedly the cheaper. The UP does bend east and touches the commercial strip. After crossing the Metra/CN its a surface operation to 130th.
>
> Is 130th a great place for a terminal. It is a good place for parking. Desolate locations can still be secured and there is plenty of potential traffic on the Freeway. Those who want the express to downtown already have Hegwisch and Harvey. 130th can hold a super rail yard. The other "L" lines certainly don't boast packed trains at their end points, so why shpould the Red line be any different.
>
> In short, the extension relieves 95th Street and that can only be done extending the "L". It cannot be done with a "pie in the sky" new Metra service. Of course, we could get Six Flags to develop a winter ski park on that mountain of landfill....that would be in the old tradition of interurban lines that went to a park at the end of the line.
>
> David Harrison
>
> David Harrison
>
> --- In CHICAGOTRANSIT@yahoogroups.com, Eric Pancer <epancer@...> wrote:
> \>
> \> On Sat, Jul 9, 2011 at 10:28, chicagopcc <msibnsf@...> wrote:
> \> > It's not Chicago's fault that the city is not perfectly geometric. Â But to keep from having the two rail services cloud their spheres of influence...."city of" equals CTA "L"..."suburbs and beyond" equals Metra.
> \>
> \> You're putting a lot of effort in to making something asymmetrical, symmentrical
> \>
> \> [..]
> \> > Hey on the other sides the CTA has parking for the incoming commuters from the burbs....Rosemont, Forest Park, Wilmette, Skokie. Â Whats with this constant looking for reasons to

(13)

deny the south side the "L." Â Yes, I'm defensive.
>
> There's actually business in those locations. There is NOTHING at
> 130th Street (other than a handful of residents). Are you proposing
> that there be development there? If you want to run an to 115th and
> truncate it back, make your argument. No one will park-n-ride at 130th
> street. Why? It's a desolate location, you're at least an hour from
> the Loop, and it's easier just to drive to Harvey or Riverdale and
> save time by taking MED.
>
> - Eric
>

__._,_.___

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__,_._,___

From: Harvey Kahler (harvey.kahler@att.net)
To: CHICAGOTRANSIT@yahoogroups.com;
Date: Sat, July 9, 2011 1:22:08 PM
Cc:
Subject: Re: [CHICAGOTRANSIT] Re: Red Line 130th extension

Trains are trains and railways are railways; that's why some metropolitan systems like BART, Metro, and others act as regional services in outlying areas, and why Metra (electric and diesel) could serve as metropolitan lines in Chicago. There may be service characteristics that distinguish equipment needs; but these often are in conflict and less than ideal for different market segments. The CTA-Metra distinction is functionally artificial and political.
The provision for seating on rapid transit was made early on. Later, center doors and bowling alley seating were added for the relatively short runs, high loads, and constrained capacity of the Loop. Quarter-point doors improved access within the cars; and the State and Dearborn subways relieved the limited capacity of the Loop and the need to pack as many passengers as possible on the trains. Basically, I'm opposed to building a costly parallel rapid transit line to serve much the same area as an existing and underutilized rail line that could be exploited for much less money.

--- On **Sat, 7/9/11, chicagopcc** ***<msibnsf@sbcglobal.net>*** wrote:

> From: chicagopcc <msibnsf@sbcglobal.net>
> Subject: [CHICAGOTRANSIT] Re: Red Line 130th extension
> To: CHICAGOTRANSIT@yahoogroups.com
> Date: Saturday, July 9, 2011, 10:28 AM
>
> It's not Chicago's fault that the city is not perfectly geometric. But to keep from having the two rail services cloud their spheres of influence...."city of" equals CTA "L"..."suburbs and beyond" equals Metra.
>
> 130th ST maybe was picked out of a hat. It puts Altgeld Gardens within walking distance...good for demographics. I have a friend who says the Tribune did a story and 130th ST was given because there was plenty of space for a "super rail yard."
>
> Personally, I am leaning back towards bending the line east to 115th ST and the Ford Freeway. Takes a while to get used to that name "freeway." If the tracks come back along the Metra/CN a connecting station could go in at Kensington, then the "L" goes east to 115th and Ford. You've got the second largest assembly hall and the new WalMart led retail going in there at 115th. There should be plenty of space for the parking facility. You're now a shorter one and a half mile from the college at 103rd and Altgeld is still within reach. Or if needed the line can turn south and go alongside the Freeway and still go to 130th ST.
>
> Hey on the other sides the CTA has parking for the incoming commuters from the burbs....Rosemont, Forest Park, Wilmette, Skokie. Whats with this constant looking for reasons to deny the south side the "L." Yes, I'm defensive.
>
> David Harrison
>
> --- In CHICAGOTRANSIT@yahoogroups.com, Dennis McClendon <dennismcclendon@...> wrote:
> \>
> \> David Harrison wrote:
> \>
> \> > The extension to 130th ST falls within the CTA "L"'s sphere.

>
> I can't agree. 130th St. is the same distance from State & Madison
> as Evanston Davis Street, Skokie-Dempster, or Melrose Park. More
> importantly, it's not an urban neighborhood with any possibility of
> walk-in traffic. The fact that it's just barely within Chicago city
> limits should be irrelevant. It's park-n-ride territory, and
> deserves the fast service provided by regional rail. From CTA's
> point of view, it makes no sense to run mostly empty Red Line trains
> all the way out there and back. From the patron's point of view, it
> makes no sense to stop every mile on the way downtown.
>
> :::::::::::::::::::::::::::::::::::
> Dennis McClendon
> dennismcclendon@...
>

__._,_.___

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__,_._,___

- It's obvious that without a stronger, coordinating, hand for RTA, self-serving expansion proposals like the CTA Red Line extension will abound.
- Metra services are categorized *by CTA* as serving longer trips to downtown. As a generalization there some truth to it; but it totally misrepresents the capacity and history for providing the frequent urban service expected in the City.
    - Metra Electric trains and infrastructure have the characteristics of heavy rail transit with multi-stream floor-level boarding and electric traction.
    - The Rock Island Blue Island and Electric South Chicago branches still schedule some rush-hour trains as little as ten and fifteen minutes apart respectively.
    - CTA fares are lower than Metra's and provided little reduction for transfers other than the monthly Link-up pass.
    - The alternative to increase the frequency and reduce the intervals between Metra trains, particularly on the Electric to 115th and Blue Island, is not even considered as it should if RTA were the lead agency.
    - The South Side Elevated Railway Company and Illinois Central Railroad both provided frequent urban rail transit services with similar steam locomotives and coaches. Both electrified and the IC eventually bought larger cars. Both continued to compete with the separate streetcar and bus companies.
    - It wasn't until 1946 when the CTA took over L-subway and surface operations that reduced fare transfers were instituted between the L-subway and surface lines. This drew City riders away from the IC or CRI&P and started the declines in riders and service.
- Much of the reduced Metra (xIC and xCRI&P) service stems from diversion to the CTA owing in part to bus service changes and the Dan Ryan Line construction.
    - The more Metra service was cut back to reflect lower demand, still more riders switched to the CTA.
    - Ridership declines were exacerbated by the deterioration of South Side neighborhoods and declining population that seems to be on the rebound.
    - Buses on 95th and 103rd do not continue across the corridor to facilitate use for passengers that might want to use Metra.Few 1/2-mile east-west CTA routes are available to feed existing Metra stations.
    - CTA bus routes in the study corridor are typically 1-mile apart.
- The report in the Tribune on Wednesday, April 11, 2007 regarding crowding and lack of capacity on the Metra Electric and NICTD South Shore is a shallow, biased, and unfair representation to justify the CTA initiative.
    - Sufficient capacity is available on tracks 2 & 3 for expanded, frequent urban service more extensive than proposed for the Gray Line with South Chicago, Blue Island, and Hegewisch branches.
    - Service to Hegewisch would relieve demand and crowding on the South Shore trains.
    - The Randolph Street terminal can be modified easily enough for the Gray Line and handle demands for frequent service.

  - Alternative reduced 15-minute skip-stop service to Blue Island and Hegewisch would allow reverse-peak Metra and South Shore trains to share tracks 2 & 3 and greatly expand suburban peak capacity for tracks 1 & 4.

-

- Urban Service (Gray Line)

	Headway	Run Time	Cycle Time	Trains	Cars
	Min.	Min.	Min.		
93rd/So. Chicago-ED	6	40	84	14	48
	7.5	40	90	12	24
115th/Kensington-ED	6	40	*	*	*
	7.5	40	*	*	*
Blue Island-ED	12	57	120	10	30
	15	57	120	8	16
Hegewisch-SS	12	50	108	9	28
	15	50	105	7	14
111th/Morgan Pk-RID	15	35	#	#	#
Blue Island-RID	15	45	105	7	40

(18)

Date: Wed, 3 Oct 2007 18:55:43 -0700 (PDT)
From: "Harvey Kahler" <harvey.kahler@att.net> View Contact Details Add Mobile Alert
Subject:Re: Gray Line Randolph St operation
To: "Adam H. Kerman" <ahk@chinet.com>

A representative evening cycle begins at :00 at the top and proceeds at :02 min intervals. The Gray Line service consists of alternating South Chicago and Blue Island/Hegewisch trains on either a 4-train, 16-minute, or 3-train, 12-minute cycle. Given the additional capacity on the Metra side, continued Metra Blue Island Expresses every 16 minutes and alternating South Chicago and Mainline-Hegewisch trains on respective 8-minute headways for the Gray Line are another option.

Inbound reverse-commute trains would be augmented by equipment pulling out from the 12th St Yard on Track 2 to make up outbound trains. Gray Line would run left-hand on Tracks 2 & 3 in PM, Metra left-hand on Track 1 in AM.

This plan takes advantage of the yard lead between local tracks and the platform between tracks 4 & 5 at Randolph Street that can be isolated for fare control. Reverse running solves the terminal problem that would be more difficult and expensive to rectify; but it poses other issues down the line such as bi-directional signaling, crossovers, and boarding platform for direction of travel.

"Adam H. Kerman" <ahk@chinet.com> wrote:
At 1:48pm -0700, 10/03/07, Harvey Kahler wrote:

>Sorry, I couldn't post the Randolph St schematic, so I'm sending this the
>hard way as an attachment.

Harvey, will you explain the schematic?

19

YOUR RED

Red Line Extension

cta

We are always interested in receiving your comments on the proposed Red Line Extension Project. This project is one part of the Your Red Program to extend and enhance the entire Red Line. Please PRINT.

Name: Dr. John Long, Ed.D.

Organization: Lilydale First Baptist Title:

Address: P.O. Box 490564

City: Chgo State: IL Zip: 60649

Phone: 773.450-7617 Email: jowlo7@aol.com

Please provide your comments about the proposed alternatives to extend the Red Line south to the vicinity of 130th Street.

I agree with the proposed Red Line Route.
My hope is that the EIS is expedited so that
some real planning ~~can be~~ in finalizing the ready-shovel
plan is completed ~~work~~. No more stalling. Thank you for informing
us on your project

Comments may be submitted via **mail**: Sonali Tandon, Strategic Planning & Policy, Chicago Transit Authority, P.O. Box 7602, Chicago, IL 60680-7602, **fax**: 312-681-4297, or **e-mail**: RedExtension@transitchicago.com.

For more information about the Red Line Extension Project visit: www.transitchicago.com/redeis. For **Hearing & Speech Impaired**: 1-888-CTA-TTY1 (1-888-282-6891). For information on other transit matters: **Customer Information:** 1-888-YOUR-CTA (1-888-968-7282), and **Transit Information:** 312-836-7000, or **RTA TTY:** 312-836-4949.

(20)

YOUR RED

Red Line Extension

cta

We are always interested in receiving your comments on the proposed Red Line Extension Project. This project is one part of the Your Red Program to extend and enhance the entire Red Line. Please PRINT.

Name: Phyllis E Palmer

Organization: Golden Gate Title: Business Mgr

Address: 13107 S. Eberhart

City: Chicago State: Il Zip: 60827

Phone: (773) 264-0313 Email:

Please provide your comments about the proposed alternatives to extend the Red Line south to the vicinity of 130th Street.

Very bad plan. It's to hot to have people out standing!

Comments may be submitted via **mail**: Sonali Tandon, Strategic Planning & Policy, Chicago Transit Authority, P.O. Box 7602, Chicago, IL 60680-7602, **fax**: 312-681-4297, or **e-mail**: RedExtension@transitchicago.com.

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YOUR RED

Red Line Extension

cta

We are always interested in receiving your comments on the proposed Red Line Extension Project. This project is one part of the Your Red Program to extend and enhance the entire Red Line. Please PRINT.

Name: Debra A. Strickland

Organization: Developing Communities Project Title: Parent Leadership in Action Admin. Coordinator

Address: 11300 S. Halsted

City: Chgo State: IL. Zip: 60628

Phone: 773-928-2500 Email: d.strickland@dcpchicago.org

Please provide your comments about the proposed alternatives to extend the Red Line south to the vicinity of 130th Street.

Developing Communities Project should be given recognition were recognition is due for Advocating for the CTA Red Line Extension Project. However, CTA is during a good job.

Comments may be submitted via **mail**: Sonali Tandon, Strategic Planning & Policy, Chicago Transit Authority, P.O. Box 7602, Chicago, IL 60680-7602, **fax**: 312-681-4297, or **e-mail**: RedExtension@transitchicago.com.

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22

YOUR RED

Red Line Extension

cta

We are always interested in receiving your comments on the proposed Red Line Extension Project. This project is one part of the Your Red Program to extend and enhance the entire Red Line. Please PRINT.

Name: Naomi Tate

Organization: Title:

Address: 357 E. 71 st

City: Chgo State: Ill Zip: 60619

Phone: 773. 603. 6956 Email:

Please provide your comments about the proposed alternatives to extend the Red Line south to the vicinity of 130th Street.

Extending the Redline is a step in the right direction. Ten-Twenty years ago it would have been an excellent idea! People live and travel well past 130th and much further east and west.

I hope a significant number of minority contractors will ~~not~~ be on board. Jobs provided for local people in the area and how many home-owners will be effected by the extension.

Comments may be submitted via **mail**: Sonali Tandon, Strategic Planning & Policy, Chicago Transit Authority, P.O. Box 7602, Chicago, IL 60680-7602, **fax**: 312-681-4297, or **e-mail**: RedExtension@transitchicago.com.

For more information about the Red Line Extension Project visit: www.transitchicago.com/redeis. For **Hearing & Speech Impaired**: 1-888-CTA-TTY1 (1-888-282-6891). For information on other transit matters: **Customer Information:** 1-888-YOUR-CTA (1-888-968-7282), and **Transit Information:** 312-836-7000, or **RTA TTY:** 312-836-4949.

23

YOUR RED

Red Line Extension

cta

We are always interested in receiving your comments on the proposed Red Line Extension Project. This project is one part of the Your Red Program to extend and enhance the entire Red Line. Please PRINT.

Name: Naomi Tate

Organization: Title:

Address: 357 E. 71 st.

City: Chgo State: Zip:

Phone: 773.603.6956 Email:

Please provide your comments about the proposed alternatives to extend the Red Line south to the vicinity of 130th Street.

This meeting was a waste of time!
NO. presentation.
NO. question and answer session
This did not serve the community adequately!

Comments may be submitted via **mail**: Sonali Tandon, Strategic Planning & Policy, Chicago Transit Authority, P.O. Box 7602, Chicago, IL 60680-7602, **fax**: 312-681-4297, or **e-mail**: RedExtension@transitchicago.com.

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YOUR RED

Red Line Extension

cta

We are always interested in receiving your comments on the proposed Red Line Extension Project. This project is one part of the Your Red Program to extend and enhance the entire Red Line. Please PRINT.

Name: DORIS H. White

Organization: Title:

Address: 7920 S. Wabash Avenue Apt 3B

City: Chicago State: IL Zip: 60619

Phone: 312 972 9652 847 294 2146 Email: DORIS_WHITE@USC. SALVATION ARMY.ORG

Please provide your comments about the proposed alternatives to extend the Red Line south to the vicinity of 130th Street.

① When will this happen?

② My Church is at 115 street Closer to the Bishop Ford Expressway, so will it be that close to the expressway?

③ Will there be buses at these Stops?

④ When these new stops are built and the trains coming Northbound for downtown, will there be no seats and riders would have to stand.

⑤ Will there be an fare increase?

⑥ Where is the money coming from to extend the redline?

Comments may be submitted via **mail**: Sonali Tandon, Strategic Planning & Policy, Chicago Transit Authority, P.O. Box 7602, Chicago, IL 60680-7602, **fax**: 312-681-4297, or **e-mail**: RedExtension@transitchicago.com.

For more information about the Red Line Extension Project visit: www.transitchicago.com/redeis. For **Hearing & Speech Impaired**: 1-888-CTA-TTY1 (1-888-282-6891). For information on other transit matters: **Customer Information:** 1-888-YOUR-CTA (1-888-968-7282), and **Transit Information:** 312-836-7000, or **RTA TTY:** 312-836-4949.

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YOUR RED

Red Line Extension

cta

We are always interested in receiving your comments on the proposed Red Line Extension Project. This project is one part of the Your Red Program to extend and enhance the entire Red Line. Please PRINT.

Name: Donnell Williams

Organization: Nehemiah Restoration Coalition Title: Community Organizer

Address: 9356 S. Lowe

City: Chicago State: IL Zip: 60620

Phone: 773- Email: donjehavon@hotmail.com

Please provide your comments about the proposed alternatives to extend the Red Line south to the vicinity of 130th Street.

To be honest the major things I am concerned about is have community benefit agreement. I want to make sure the community has a voice And that minority businesses are going get their fair share. The physical proposals I have read the reports to make an accurate assessment. From the presentation I don't get a clear Idea what going on. all I get is they are working on the process & they will keep us informed I would like to see a specific person who is in charge of community and a community organization in an advisory capacity.

Comments may be submitted via **mail**: Sonali Tandon, Strategic Planning & Policy, Chicago Transit Authority, P.O. Box 7602, Chicago, IL 60680-7602, **fax**: 312-681-4297, or **e-mail**: RedExtension@transitchicago.com.

For more information about the Red Line Extension Project visit: www.transitchicago.com/redeis. For **Hearing & Speech Impaired**: 1-888-CTA-TTY1 (1-888-282-6891). For information on other transit matters: **Customer Information:** 1-888-YOUR-CTA (1-888-968-7282), and **Transit Information:** 312-836-7000, or **RTA TTY:** 312-836-4949.

26

YOUR RED

Red Line Extension

cta

We are always interested in receiving your comments on the proposed Red Line Extension Project. This project is one part of the Your Red Program to extend and enhance the entire Red Line. Please PRINT.

Name: JasmINE young

Organization: None Title: Constmer

Address: 11500 .S. prairie

City: Chacago State: IL Zip: 60628

Phone: 1773-815-1592 Email: dont have one

Please provide your comments about the proposed alternatives to extend the Red Line south to the vicinity of 130th Street.

I think they should run a train from 130th street to 95th street be cuse people could travel farther the the use to and the could get to where they need to be

Comments may be submitted via **mail**: Sonali Tandon, Strategic Planning & Policy, Chicago Transit Authority, P.O. Box 7602, Chicago, IL 60680-7602, **fax**: 312-681-4297, or **e-mail**: RedExtension@transitchicago.com.

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From: Red Extension [redextension@transitchicago.com]
Sent: Wednesday, August 10, 2011 7:59 AM
To: Lea, Claudia
Cc: Stenberg, Kate
Subject: FW: Public Input

RedExtension@transitchicago.com

CTA Strategic Planning Department
Chicago Transit Authority
P.O. Box 7602
Chicago, IL 60680-7602
Fax: (312) 681-4297

From: T R [madsaavy@yahoo.com]
Sent: Tuesday, August 09, 2011 12:04 PM
To: Red Extension
Subject: Public Input

I would like to be kept informed on the progress of this project as it will have huge impact on my neighbors, as well as, our group. We weren't informed about any opportunity to have input in the past, despite your notices. I find it curious there weren't any postings at Wendell Smith Park, being as everyone around here would/will be impacted by this project if your "Locally" Preferred Alternative continues as suggested. I would like to be put on a mailing list that would provide information, schedules, and opportunities for public input. I have questions to pose when you at the stage where you will provide answers!

R. Ross
madsaavy@yahoo.com

From: Red Extension [redextension@transitchicago.com]
Sent: Wednesday, August 17, 2011 9:26 AM
To: Lea, Claudia
Cc: Stenberg, Kate
Subject: FW: Notification

RedExtension@transitchicago.com

CTA Strategic Planning Department
Chicago Transit Authority
P.O. Box 7602
Chicago, IL 60680-7602
Fax: (312) 681-4297

From: Chris Rowe [chrisrowe85@gmail.com]
Sent: Saturday, August 13, 2011 11:04 AM
To: Red Extension
Subject: Notification

Hi there, I would like to receive notification about any activity related to the extension of the red line. Thanks.

From: Red Extension [redextension@transitchicago.com]
Sent: Friday, September 09, 2011 8:21 AM
To: Lea, Claudia
Cc: Stenberg, Kate
Subject: FW: 115th and State

RedExtension@transitchicago.com

CTA Strategic Planning Department
Chicago Transit Authority
P.O. Box 7602
Chicago, IL 60680-7602
Fax: (312) 681-4297

From: Stella Brown [creolestubbie@yahoo.com]
Sent: Thursday, August 25, 2011 7:05 PM
To: Red Extension
Subject: 115th and State

We were not informed of the August 2, 2011 meeting held for this proposal. We have lived at 12 West 115th Street for the last 35 years we would like to know if the expansion does in fact effect our property. We also would like to be informed of any further meetings that are held to discuss the project. If it is indeed possible, we would like to know what was mentioned at the afore mentioned meeting.

Sincerely,
Charles and Stella Brown
12 West 115th Street
Chicago Il 60628-5512
773 928-6950

Lea, Claudia

From: Red Extension [redextension@transitchicago.com]
Sent: Wednesday, September 14, 2011 1:12 PM
To: Lea, Claudia
Cc: Stenberg, Kate
Subject: FW: location of the elevated tracks

RedExtension@transitchicago.com

CTA Strategic Planning Department
Chicago Transit Authority
P.O. Box 7602
Chicago, IL 60680-7602
Fax: (312) 681-4297

From: Stella Brown [creolestubbie@yahoo.com]
Sent: Friday, September 09, 2011 5:37 PM
To: Red Extension
Subject: location of the elevated tracks

Thank you for including me in this breifing. I would like to be informed of where and when the next community input meeting will be held. There are a lot of questions, I have concerned the true location of the elevated tracks, since I live at 115th and State! There is already a train track at the end of the block that has caused structural damage to our home. The addtion of more trains plus the vibrations, noise and traffic that will accompany it are beyond any reasonable plan. Please be more specific in your replies, not just the already available information on the www.

Sincerely,
Stella Brown
12 West 115th Street
Chicago Il 60628-5512
773 928-6950

From:	Red Extension [redextension@transitchicago.com]
Sent:	Wednesday, September 14, 2011 1:13 PM
To:	Lea, Claudia
Cc:	Stenberg, Kate
Subject:	FW: Reline Extension

RedExtension@transitchicago.com

CTA Strategic Planning Department
Chicago Transit Authority
P.O. Box 7602
Chicago, IL 60680-7602
Fax: (312) 681-4297

From: Daniel Pate [danpate42@yahoo.com]
Sent: Sunday, September 11, 2011 6:23 PM
To: Red Extension
Cc: juliet72@comcast.net
Subject: Reline Extension

To whom it may concern can you please keep me informed and let me know when your next redline exention meetings

Lea, Claudia

From: Red Extension [redextension@transitchicago.com]
Sent: Wednesday, September 14, 2011 1:16 PM
To: Lea, Claudia
Cc: Stenberg, Kate
Subject: FW: Connecting with Northwest Indiana Transit

RedExtension@transitchicago.com

CTA Strategic Planning Department
Chicago Transit Authority
P.O. Box 7602
Chicago, IL 60680-7602
Fax: (312) 681-4297

From: Chris Retson [chris@retson.net]
Sent: Monday, August 15, 2011 1:12 PM
To: Red Extension
Subject: Connecting with Northwest Indiana Transit

I encourage you to consider issues with coordination with Region (Northwest Indiana) mass-transit systems and highways. Coordinating to connect with region bus authority buses and building sufficient, safe parking at the 130th St terminal will encourage commuters and tourists to use the CTA rather than congesting the expressways and downtown streets by driving to work and entertainment venues. The Red Line serves Soldier Field, Wrigley, and US Cellular Field – if people on the south side and northwest Indiana could safely and conveniently park their car where space is abundant and ride in, it would improve the downtown experience for residents and tourists alike.

Thank You for your consideration,
Chris Retson
chris@retson.net

Lea, Claudia

From: Red Extension [redextension@transitchicago.com]
Sent: Wednesday, September 14, 2011 1:19 PM
To: Lea, Claudia
Cc: Stenberg, Kate
Subject: FW: Redline Extension

RedExtension@transitchicago.com

CTA Strategic Planning Department
Chicago Transit Authority
P.O. Box 7602
Chicago, IL 60680-7602
Fax: (312) 681-4297

From: WILLIAM GLOVER [w_glover@msn.com]
Sent: Wednesday, August 03, 2011 8:29 PM
To: Red Extension
Subject: Redline Extension

8/03/2011

I'm having some serious problems with this Redline Extension, this project has been in the works for 20+ years and I know that most of the community that the new station will go through are a ruff area. Does it really take that long? Does that area not have any TIF funds available? When the community cried out about closing the Greenline "Homan" stop you all took it away anyway. The community in and around the new Morgan St. station said that they wanted a station built because their is no bus service or rail stations in that area, or you have to walk blocks to get to where you want to go in that area. The Blacks have been asking for this extension for years. Now you need another 2 years to do another survey. Their was never any public hearings on the Morgan St. station or if it was it was so little known about it. You all had pretty signs the other night, but what was it all for? You had CDOT money for that project, but no money for the extension project, I'm just not getting it. The you all are buying camera's to put in every station, but the thugs have taken over 95th, 87th, 79th, 69th, and 63rd street stations. Police @ 95th spend most of their days in that corner office or talking to CTA employee's. Do I feel safe at any of these station, "No I don't". Why do Police officer come to the customer service desk, ask the clerk to sign a form and then leave? What are you paying these guys to do? you seem to have money to buy all of this equipment but no one is manning them. how is it that people can come and shit on the platform piss on the platform and never and do mean never get caught, that's crazy. the police never ride past the 35th Sox stop going South. you all need to monitor your employee's more. whatever happen to the secret travel program, after you all got a ton of how your employee's really work the program kind of disappeared. I ride CTA because I like how I can get from one part of the city to another with less hassle, but I never ever speak or ask a CTA employee anything because they are so rude to a person just asking for directions. When it comes time for you all to ask Springfield for money, I sit at my desk at work and call and tell them to not give you all a dime, the employee's are just to rude. The bus driver's are again about to start letting the school kids get on the bus without using that have fare card...it happens every year. you need a system that monitor's your employee's. The supervisor's are to buddie, buddie with their co-workers do that system is really broke. come stand at 95th with me and I can spot all the problem and just show them to you

Appendix K
Fact Sheets

YOUR RED

Red Line Extension

Draft Environmental Impact Statement Issues

The Draft Environmental Impact Statement (EIS) will analyze potential impacts to environmental, social, and economic resources of the area surrounding each Red Line Extension alternative. Some of the effects would be beneficial such as increased transit access, reduced travel time, and reliability or reduced congestion on area streets. While only very preliminary evaluations of the project area have been conducted to-date, it is likely that there would not be substantial impacts to natural resources such as wildlife, wetlands, air quality, or water quality. The resources in the project area that could experience impacts will be identified in the Draft EIS along with potential mitigation measures.

During scoping in 2009, the community expressed concerns about potential impacts related to traffic, property acquisitions, community and neighborhood compatibility, visual and aesthetic effects, and noise and vibration. This handout provides a preliminary summary of some of these potential effects, focusing mainly on the Locally Preferred Alternative – Union Pacific Railroad (UPPRR) Alternative.

Traffic – The proposed line would be elevated and would not have at-grade crossings that could increase traffic congestion. All alternatives would include new park and ride facilities at each station and there could be traffic effects in the vicinity of the stations that would be evaluated in the Draft EIS. Mitigation measures would be developed to help offset potential impacts. Overall, the effect of the extension would be expected to be beneficial as more people would be able to access transit and reduce the number of cars on the roads.

Community and Neighborhood Compatibility – None of the alternatives would divide neighborhoods with new transit structures, but the project could change the character of some blocks. Through community involvement and context sensitive design, mitigation measures would be developed to address this potential impact in a way that would be acceptable to the community.

Visual/Aesthetics – All of the build alternatives envision an elevated line that would be constructed adjacent to freight lines, businesses, and residences. Some neighborhoods are oriented so that the new transit line would face the fronts of homes while in other neighborhoods the new tracks would face the sides or backs of homes. How this orientation affects the visual conditions of each neighborhood will be studied in the Draft EIS.

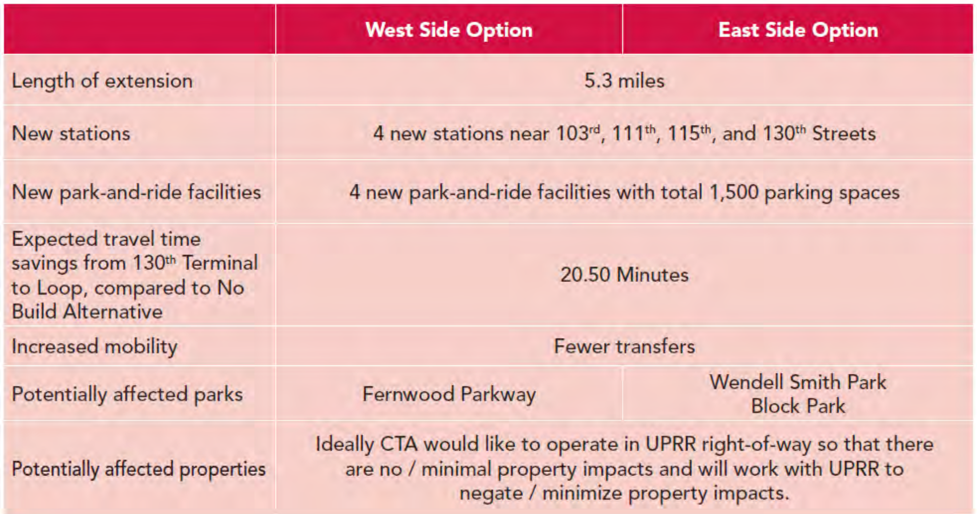
Property Acquisition – Ideally CTA would like to operate in UPRR right-of-way so that there are no / minimal property impacts and will work with UPRR to negate / minimize property impacts. CTA is also evaluating two options for the Union Pacific Railroad (UPRR) Heavy Rail Transit Alternative - the East Side Option and the West Side Option, if UPRR right-of-way is not available. The amount of acquisition will depend on UPRR expansion plans and clearance requirements. If acquisition is required, the effects could range from a narrow easement along the edge of a property to a full acquisition and property owners would be compensated in compliance with federal laws.

Historic Resources – Several structures within the project area are older than 50 years and could potentially be considered historic. The Draft EIS will conduct a survey of such structures and determine the eligibility of each for listing on the National Register of Historic Places.

Noise and Vibration - Construction involves the use of heavy equipment which can create noise, work zones that can have visual impacts, traffic detours, and activities that generate dust which can all affect neighboring properties. Operation of a rail transit system can generate noise and vibration. Mitigation measures would be developed to reduce these potential impacts.

Parks – The East Side Option of the UPPR alternative could directly affect portions of Wendell Smith and Block Parks, while the West Side Option could affect portions of the Fernwood Parkway. If these impacts were allowed, mitigation would be required.

UPRR Alignment Options Comparison



	West Side Option	East Side Option
Length of extension	5.3 miles	
New stations	4 new stations near 103rd, 111th, 115th, and 130th Streets	
New park-and-ride facilities	4 new park-and-ride facilities with total 1,500 parking spaces	
Expected travel time savings from 130th Terminal to Loop, compared to No Build Alternative	20.50 Minutes	
Increased mobility	Fewer transfers	
Potentially affected parks	Fernwood Parkway	Wendell Smith Park Block Park
Potentially affected properties	Ideally CTA would like to operate in UPRR right-of-way so that there are no / minimal property impacts and will work with UPRR to negate / minimize property impacts.	

YOUR RED

Red Line Extension

Transit Projects and Your Property

Ideally CTA would like to operate the Red Line Extension in Union Pacific Rail Road (UPRR) right-of-way so that there are no / minimal property impacts and will work with UPRR to negate / minimize property impacts. As part of the federal environmental review process, CTA has to evaluate different alternatives for potential impacts and mitigation measures.

How does CTA acquire private property for a project?

Government programs designed to benefit the public as a whole can result in acquisition of private property and, sometimes, in the displacement of people from their residences or businesses. State and federal constitutions recognize the need for public agencies to purchase private property for public use. Congress passed the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (The Uniform Act), and amended it in 1987. The Uniform Act, along with state and federal constitutions, authorize this purchase and assure full protection of the rights of each property owner. As a public agency, CTA can purchase private property for public use, such as for a transit project.

How is property appraised and acquired?

CTA must appraise and purchase properties needed for a transit project in accordance with federal rules. If CTA is interested in acquiring your property, or a portion of it for a transit project, you, the property owner, will be notified as soon as possible. Shortly thereafter, an independent appraiser will contact you to make an appointment to inspect your property. The appraiser is responsible for determining the initial fair market value of the property. You, or a representative that you designate, will be invited to accompany the appraiser when the appraiser inspects your property. You or your representative may provide information about improvements to the property and any special features that may affect the value of the property to CTA's appraiser to ensure that these facts are considered in the appraisal. After the appraisal and a review appraisal is completed (and approval of CTA's funding agencies is obtained, if required), CTA will present a written offer for the property based upon the appraised value of the property. CTA is legally required to offer to purchase your property for an amount that is not less than the appraised value of the property.

Does CTA assist with relocation for those displaced by the property acquisition?

CTA will provide financial assistance and relocation services, as required by federal rules, for property owners and for commercial and residential occupants who must move because of a transit project. Both owners and occupants are contacted promptly by CTA and/or its relocation consultant after CTA has presented an offer to the property owner to acquire the property. The relocation procedure as well as eligibility for relocation payments and advisory services to be provided by CTA and/or its relocation consultant is explained.

Will the Red Line Extension project require any residential or business relocation?

The land acquisition, displacements, and relocations sections of the Environmental Impact Statement (EIS) will present a summary of the potential impacts related to residential and non-residential relocations. The Draft EIS, when complete will be available for public review.

For More Information

For additional information, please contact Deborah Lopez, Senior Government Relations Officer, at (312) 681-2709 or dlopez@transitchicago.com.

Appendix L
Exhibit Boards

Welcome to Red Line Extension Open House!

95th
834
2941

This open house is to keep you informed about the proposed Red Line Extension.

Tonight we have an interactive open house format in lieu of a formal presentation.

If you have questions, feel free to ask the representatives stationed around the boards.

CTA continues to make progress on the proposed Red Line Extension project.

Red Line Extension

cta

Red Line Extension — What's New

- Red Line Extension is now part of the ***YOUR RED*** Program to extend and enhance the entire Red Line
- CTA pursued and received $8.4 Million in federal funding for preparing Environmental Impact Statements (EIS) for ***YOUR RED*** projects
- Red Line Extension is identified as a Priority Project in the Chicago Metropolitan Agency for Planning's GO TO 2040 Regional Transportation Plan
- EIS Scoping completed
- Next Step – Prepare Draft EIS

Red Line Extension

Project Purpose

- Enhance economic competitiveness and neighborhood livability through access and mobility improvements
- Reduce travel times to jobs and community destinations for Far South Side and South Suburban residents
- Increase transportation choices
- Improve transit performance
- Support community revitalization initiatives

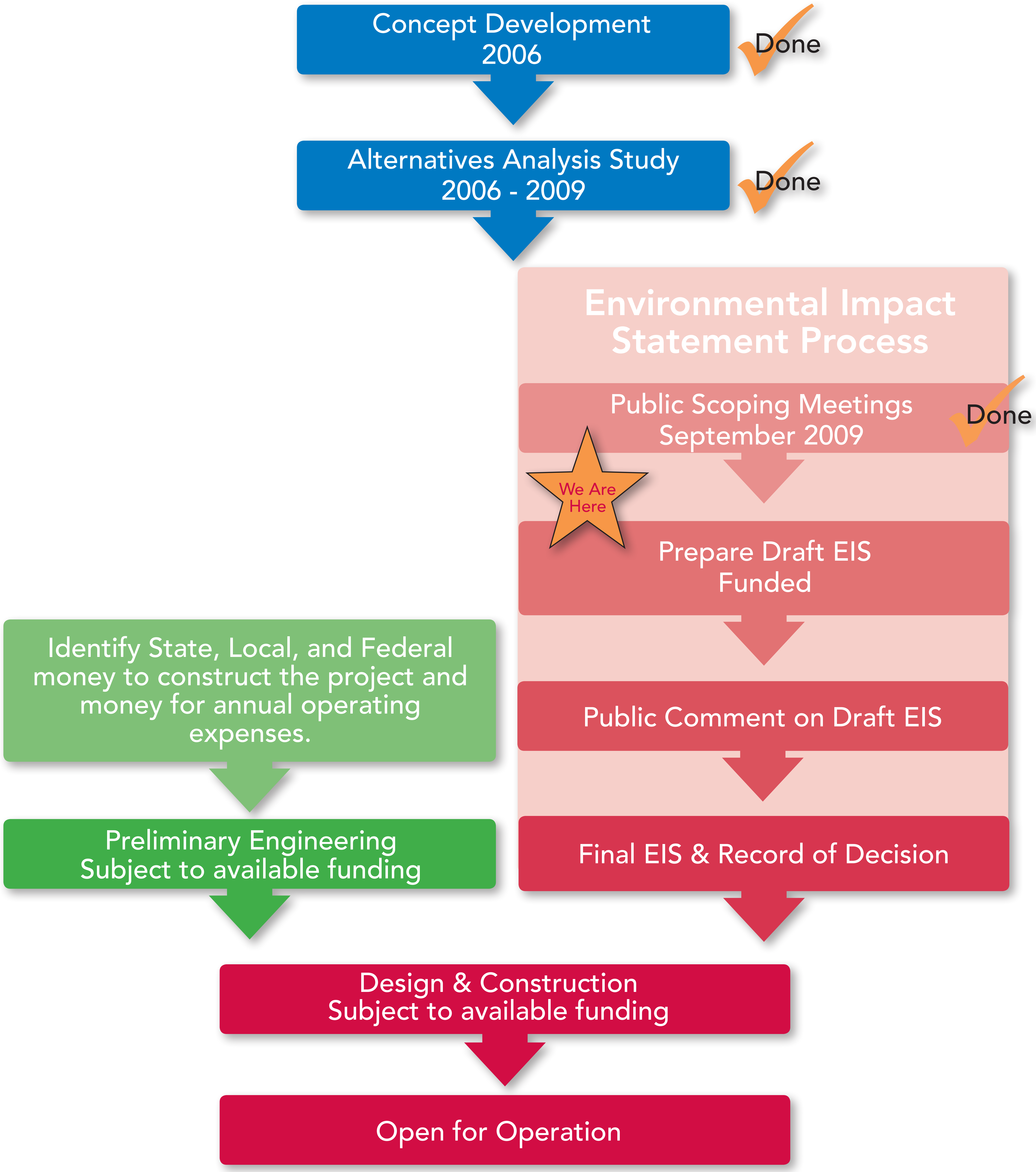
Why Extend the Red Line?

- Reliable and timely access to employment centers and community destinations is not readily available on the Far South Side
- 95th Street Terminal has poor passenger access with no Park & Ride
- Riders experience delays at the 95th Street Terminal due to crowded nearby intersections and insufficient space for bus transfers
- Crowded conditions at 95th Street Terminal for buses and riders may result in safety issues
- Road congestion in the Far South Side limits mobility
- Area population is highly transit-dependent

119 TO WESTERN
95W 95/RED LINE

Red Line Extension

Project Development Process



Concept Development
2006

✓ Done

Alternatives Analysis Study
2006 - 2009

✓ Done

Environmental Impact Statement Process

Public Scoping Meetings
September 2009

✓ Done

We Are Here

Prepare Draft EIS
Funded

Public Comment on Draft EIS

Final EIS & Record of Decision

Identify State, Local, and Federal money to construct the project and money for annual operating expenses.

Preliminary Engineering
Subject to available funding

Design & Construction
Subject to available funding

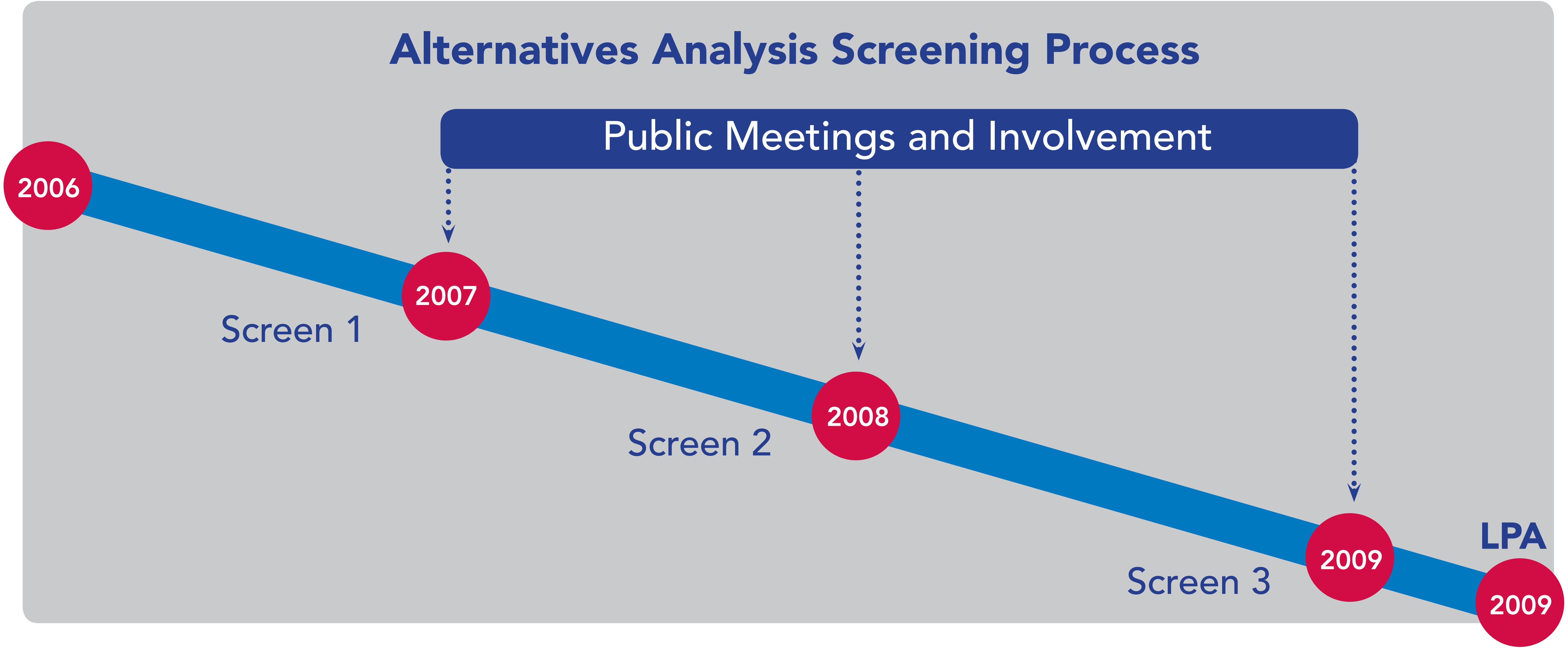
Open for Operation

Red Line Extension

cta

Planning for the Red Line Extension

Alternatives Analysis 2006 - 2009



Alternatives Analysis Screening Process

Public Meetings and Involvement

2006

Screen 1

2007

Screen 2

2008

Screen 3

2009

LPA

2009

- CTA adopted the Union Pacific Railroad Heavy Rail Transit Alternative as the Locally Preferred Alternative (LPA).

Environmental Impact Statement Scoping meetings, September 2009

- More than 340 comments were received and we heard from you that this is an important project with significant benefits.
- Comments received during scoping will be addressed in the Draft EIS. The Scoping Report summarizing your input can be found at www.transitchicago.com/redeis or by calling Customer Service at 888-YOUR-CTA.

Red Line Extension

cta

Environmental Review Process

The Federal Transit Administration and CTA have initiated the federal environmental review process and are preparing an Environmental Impact Statement (EIS).

The EIS will describe:

- Alternatives
  - No Action
  - Transportation System Management (Bus Rapid Transit)
  - Halsted Street
  - Union Pacific Railroad - the Locally Preferred Alternative
- Existing environmental setting
- Potential impacts from construction and operation of each alternative
- Proposed mitigation measures to minimize potential impacts

This process will help refine the locally preferred alternative.

Issues Potentially Evaluated in Environmental Impact Statement (EIS)

- Historical and Cultural Resources
- Natural Resources such as Air Quality, Water Quality, Wildlife, Wetlands, and Endangered Species
- Land Use including Neighborhood Compatibility, Land Acquisition, Displacement, and Relocation
- Parklands and Recreational Facilities
- Safety and Security
- Transportation including Traffic, Parking, and Transit Access
- Visual and Aesthetic Impacts
- Noise and Vibration
- Energy Use
- Zoning and Economic Development
- Cumulative Impacts such as from Secondary Development
- Construction Impacts

Other issues may be added for evaluation as needed.

EIS Scoping Comments Received

Scoping comments will be addressed in the Draft EIS.

	Number of comments received		
Purpose and Need	7	Ease congestion in the region Improve transit access to and from Far South side Reduce congestion at 95th and Dan Ryan terminal Provide connections to transit disadvantaged communities	
Proposed Alternatives	326	Locally Preferred Alternative – UPRR HRT Alternative *317 comments supported the alternative; 1 comment opposed the alternative* Halsted Street Alternative *3 comments supported the alternative* Other Alternatives *8 comments*	
Station Locations and Connections	338	Connectivity to Altgeld Gardens at 130th Street Bike access and parking facilities Parking facilities – size and location Bus Transfer Facilities	
Design Features	12	Operator facilities Passenger information Green roofs Signal priority for bus access	Recycling Alternative energy Natural storm water management Native landscaping
Potential Impacts	384	Transportation Impacts Land Acquisitions, Displacement and Relocations Community and Neighborhood Impacts Visual and Aesthetic Impacts Noise and Vibration	Parklands Economic and Fiscal Impacts Safety and Security Environmental Justice Construction Impacts Public Services

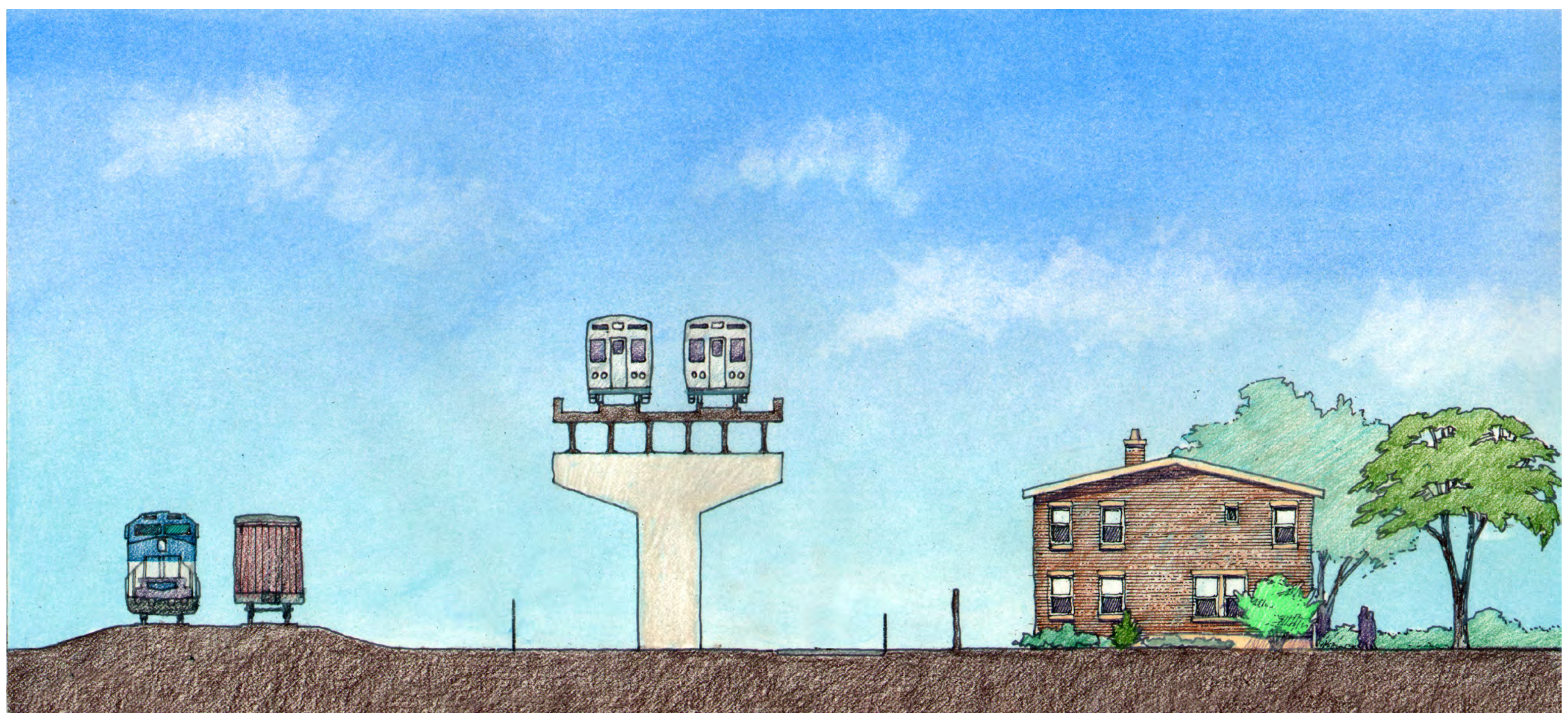
Note: *Tallies are approximate. Combined numbers of comments listed in the subsections will be greater than the total number of comment submissions because some people discussed multiple topics in their submission.*

Red Line Extension

cta

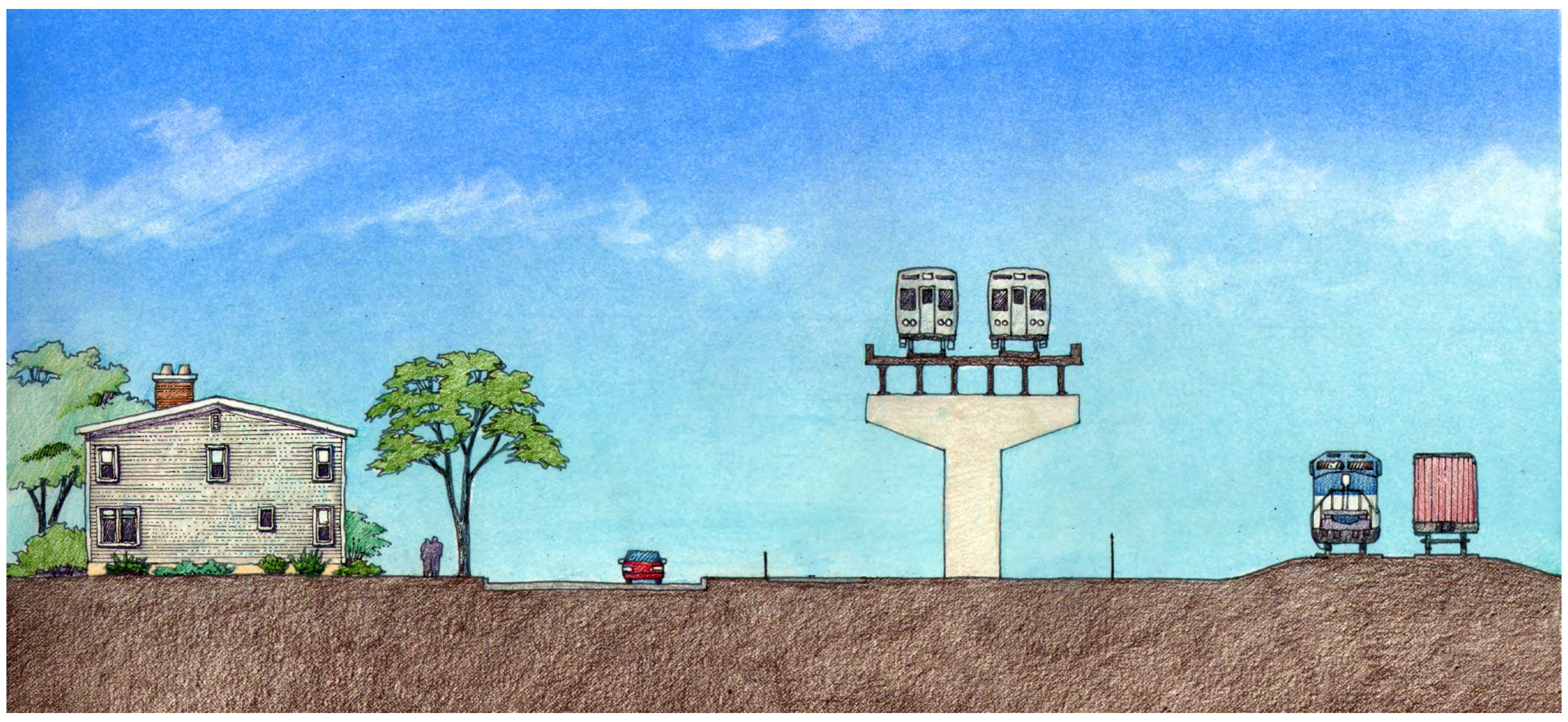
Locally Preferred Alternative
Union Pacific Railroad (UPRR) Alternative

	West Side Option	East Side Option
Length of extension	5.3 miles	
New stations	4 new stations near 103rd, 111th, 115th, and 130th Streets	
New park-and-ride facilities	4 new park-and-ride facilities with total 1,500 parking spaces	
Expected travel time savings from 130th Terminal to Loop, compared to No Build Alternative	20.50 Minutes	
Increased mobility	Fewer transfers	
Potentially affected parks	Fernwood Parkway	Wendell Smith Park Block Park
Potentially affected properties	Ideally CTA would like to operate in UPRR right-of-way so that there are no / minimal property impacts and will work with UPRR to negate / minimize property impacts.	



East Side Option typical cross section (looking north)

West Side Option typical cross section (looking north)

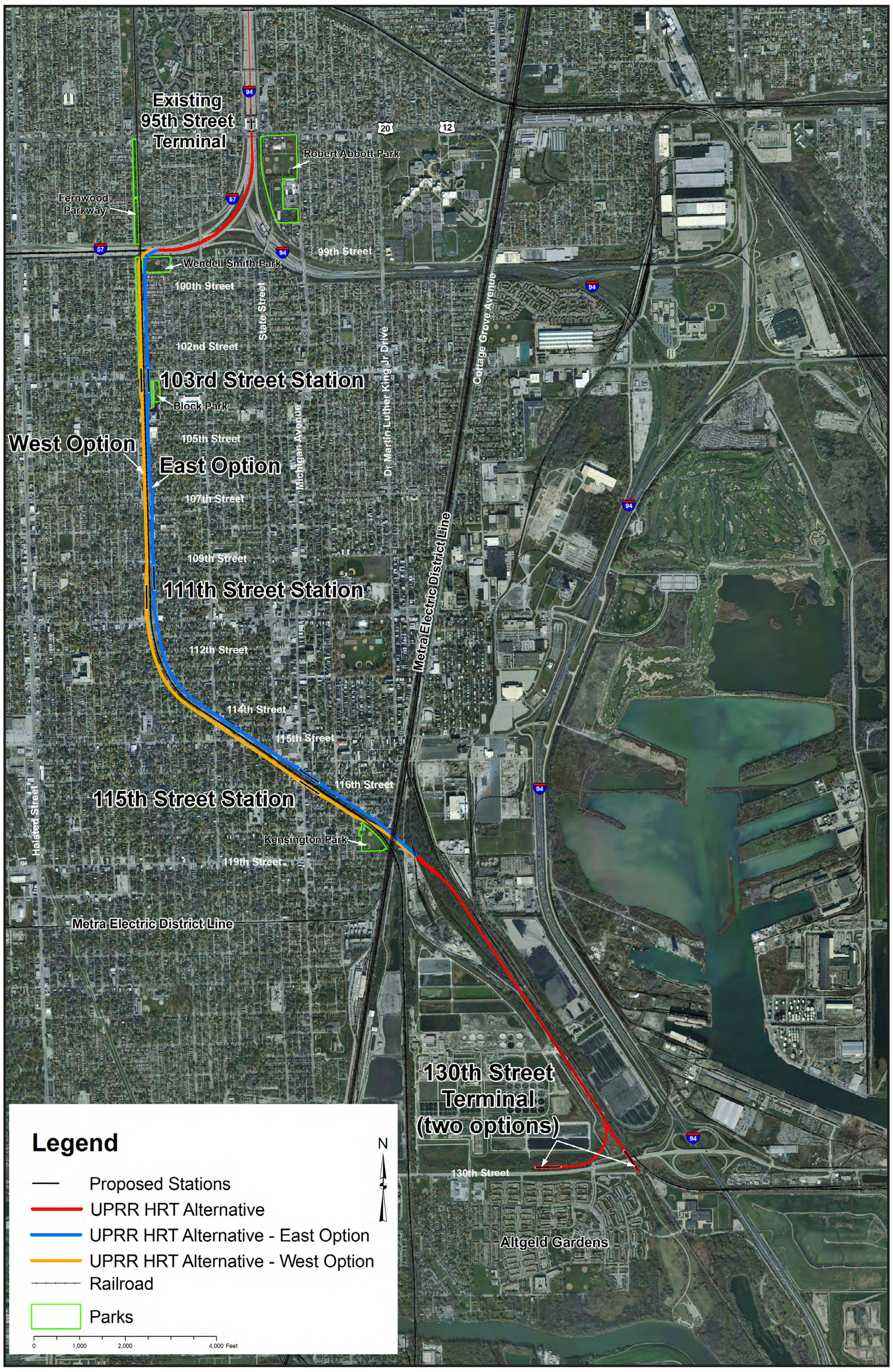


Red Line Extension

cta

Locally Preferred Alternative

Union Pacific Railroad (UPRR) Alternative


Existing 95th Street Terminal
Robert Abbott Park
Fernwood Parkway
99th Street
Wendell Smith Park
100th Street
State Street
102nd Street
103rd Street Station
Block Park
105th Street
West Option
East Option
Michigan Avenue
Dr Martin Luther King Jr Drive
Cottage Grove Avenue
107th Street
Metra Electric District Line
109th Street
111th Street Station
112th Street
114th Street
115th Street
116th Street
115th Street Station
Kensington Park
119th Street
Halsted Street
Metra Electric District Line
130th Street Terminal (two options)
130th Street
Altgeld Gardens
94
57
20
12
Legend
Proposed Stations
UPRR HRT Alternative
UPRR HRT Alternative - East Option
UPRR HRT Alternative - West Option
Railroad
Parks
0
1,000
2,000
4,000 Feet
N

- Based on public support, the UPRR Alternative was adopted by the Chicago Transit Board as the Locally Preferred Alternative in August 2009.

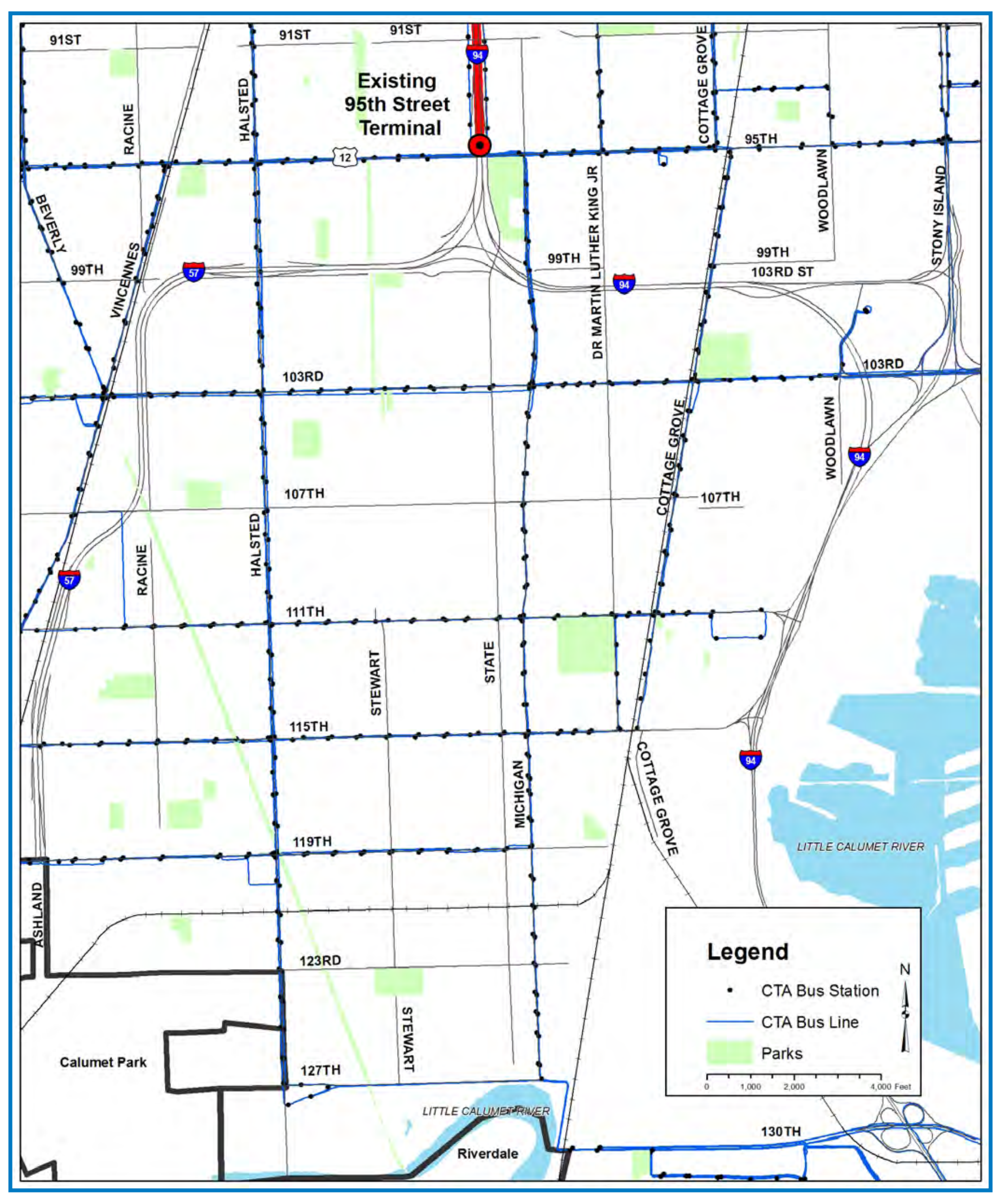
Red Line Extension

cta

Other Alternatives to be Evaluated in the Draft EIS

No Build Alternative

- Existing CTA heavy rail transit service terminating at the 95th Street station
- Existing CTA and Pace bus service


91ST
91ST
91ST
Existing 95th Street Terminal
RACINE
HALSTED
COTTAGE GROVE
95TH
WOODLAWN
STONY ISLAND
BEVERLY
VINCENNES
99TH
99TH
99TH
103RD ST
DR MARTIN LUTHER KING JR
103RD
103RD
107TH
107TH
111TH
STEWART
STATE
115TH
MICHIGAN
119TH
LITTLE CALUMET RIVER
ASHLAND
123RD
127TH
Calumet Park
Riverdale
130TH
Legend
CTA Bus Station
CTA Bus Line
Parks
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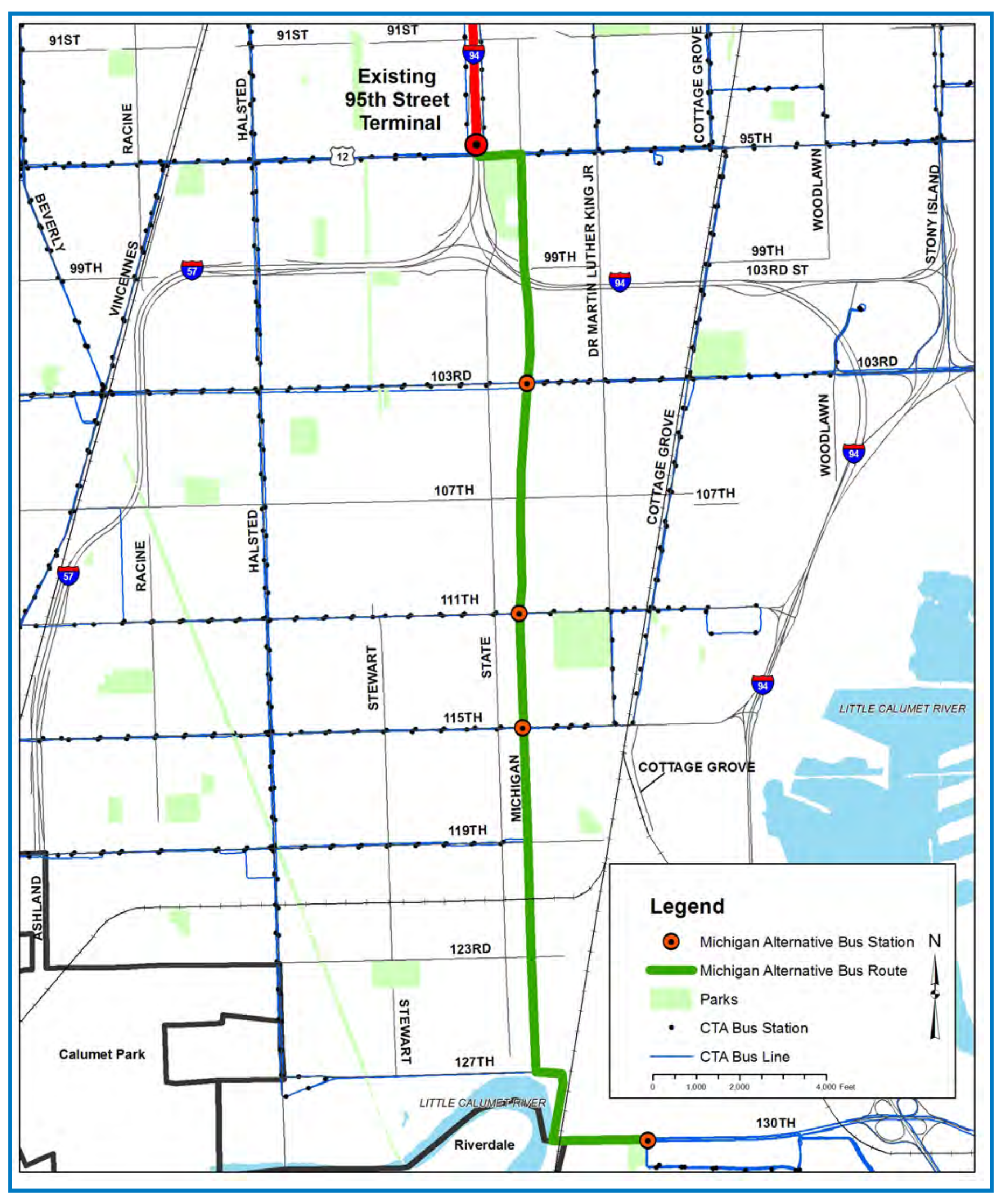
0 1,000 2,000 4,000 Feet

Transportation System Management (Bus) Alternative — Michigan Avenue

- Expansion of 95th Street Terminal
- Express bus along Michigan Avenue with transit signal priority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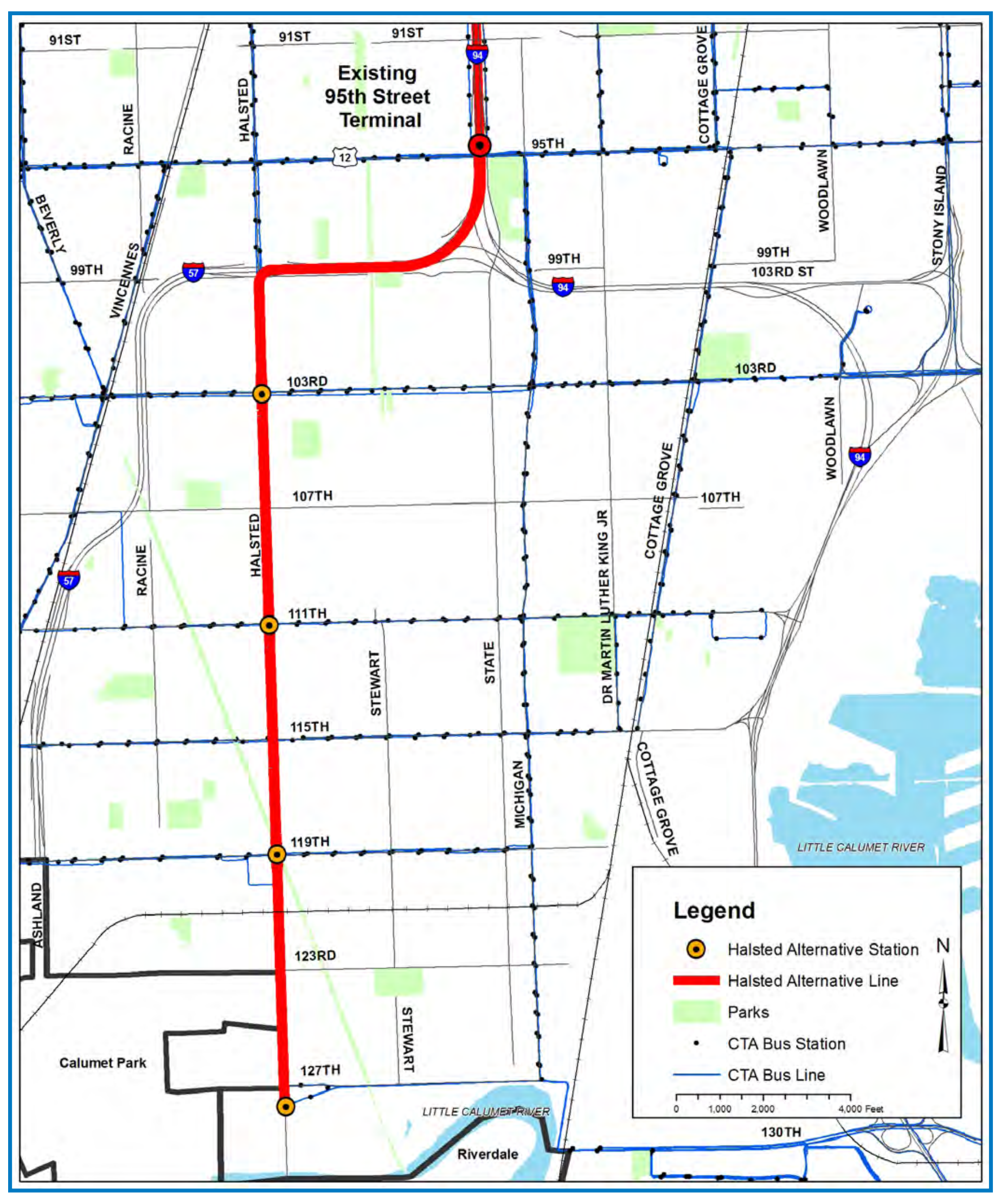
Existing 95th Street Terminal
RACINE
HALSTED
COTTAGE GROVE
95TH
WOODLAWN
STONY ISLAND
BEVERLY
VINCENNES
99TH
99TH
99TH
103RD ST
DR MARTIN LUTHER KING JR
103RD
103RD
107TH
107TH
111TH
STEWART
STATE
115TH
MICHIGAN
119TH
COTTAGE GROVE
LITTLE CALUMET RIVER
ASHLAND
123RD
127TH
Calumet Park
Riverdale
130TH
Legend
Michigan Alternative Bus Station
Michigan Alternative Bus Route
Parks
CTA Bus Station
CTA Bus Line
N
0 1,000 2,000 4,000 Feet

HRT (Rail) Alternative — Halsted Street

- 95th Street to I-57 & Halsted Street
- Halsted from I-57 to 127th Street
- Elevated above Halsted Street


91ST
91ST
91ST
Existing 95th Street Terminal
RACINE
HALSTED
COTTAGE GROVE
95TH
WOODLAWN
STONY ISLAND
BEVERLY
VINCENNES
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99TH
103RD ST
103RD
103RD
107TH
107TH
111TH
STEWART
STATE
DR MARTIN LUTHER KING JR
115TH
MICHIGAN
119TH
COTTAGE GROVE
LITTLE CALUMET RIVER
ASHLAND
123RD
127TH
Calumet Park
Riverdale
130TH
Legend
Halsted Alternative Station
Halsted Alternative Line
Parks
CTA Bus Station
CTA Bus Line
N
0 1,000 2,000 4,000 Feet

Stay Involved

To submit comments tonight, fill out a comment card and place it in the box provided.

There are six ways to stay involved:

Visit: http://www.transitchicago.com/redeis

Join the Mailing/E-list: At the sign-in desk

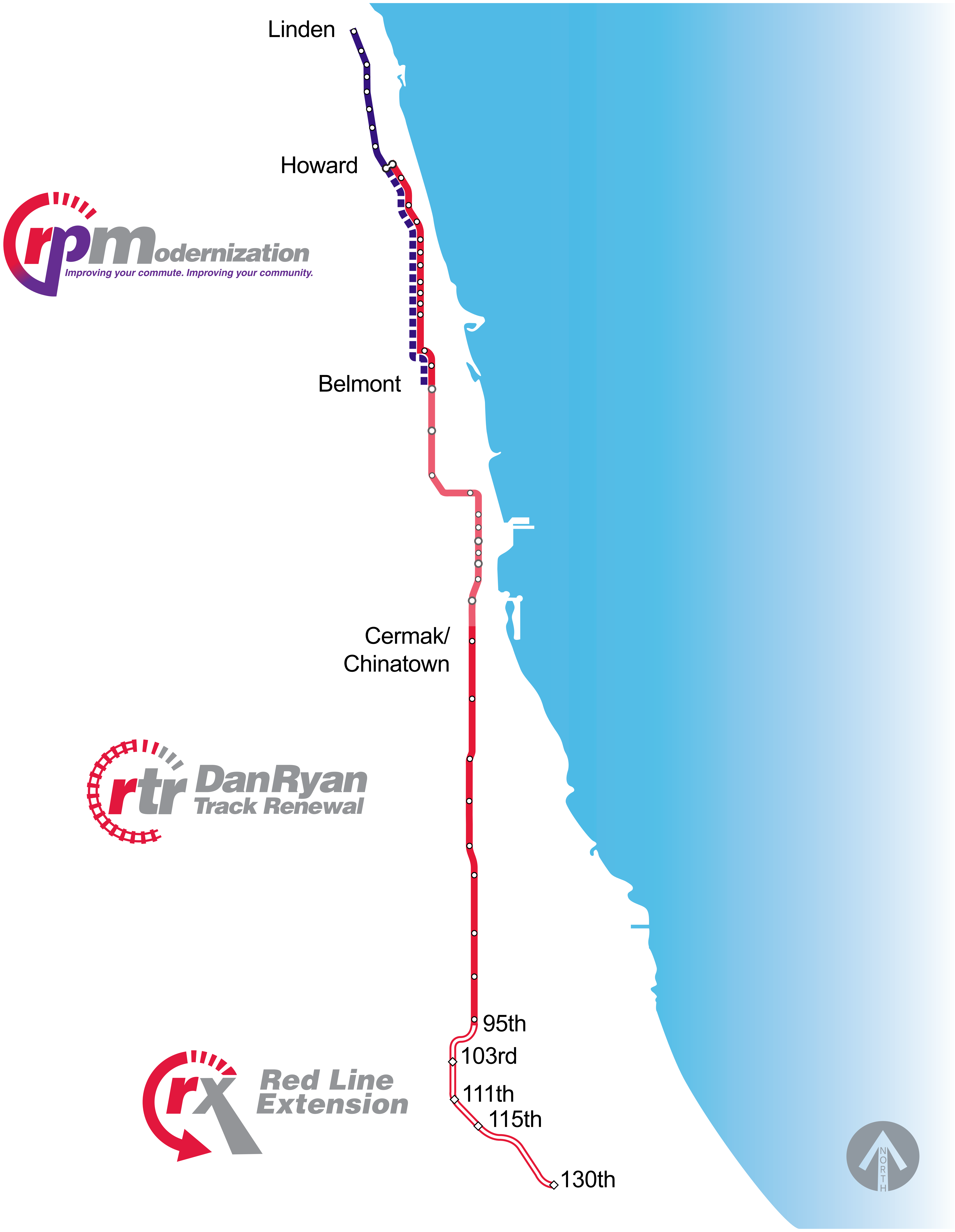
Mail:
Sonali Tandon
Strategic Planning & Policy
Chicago Transit Authority
P.O. Box 7602
Chicago, IL 60608-7602

Phone: 888-YOUR-CTA (888-968-7282)

Fax: 312-681-4297

E-mail: RedExtension@transitchicago.com

YOUR RED


Linden
Howard
Belmont
Cermak/
Chinatown
95th
103rd
111th
115th
130th
NORTH

rpm Modernization
Improving your commute. Improving your community.

rtr DanRyan Track Renewal

rx Red Line Extension

cta

Appendix C
Agency Coordination and Public Involvement

August 2013 Newsletter

RED AHEAD

Red Line Extension

CTA wants to keep you informed about our proposed Red Line Extension (RLE) Project, part of the Red Ahead Program, a comprehensive initiative for maintaining, modernizing, and expanding Chicago's most-traveled rail line.

Summer 2013 Newsletter

RLE Project:

The CTA is proposing to make transportation improvements by extending the Red Line from the 95th Street Terminal to the vicinity of 130th Street. The proposed 5.3-mile extension would include four new stations near 103rd, 111th, Michigan, and 130th Streets.

RLE Project Status:

Since the RLE Project open house meeting during the summer of 2011, we have started the technical analysis of the project and are preparing a Draft Environment Impact Statement (EIS) on behalf of Federal Transit Administration (FTA), which is the federal lead agency for the project.

What is an Environmental Impact Statement?

RLE Project will require significant federal funding for construction. To acquire federal funding, an EIS is required by the National Environmental Policy Act (NEPA). An EIS includes a description and comparison of each of the studied alternatives, explanation of the existing environmental setting and community context, and analysis of potential positive and negative effects of construction and operation of each alternative.

What's Next for RLE?

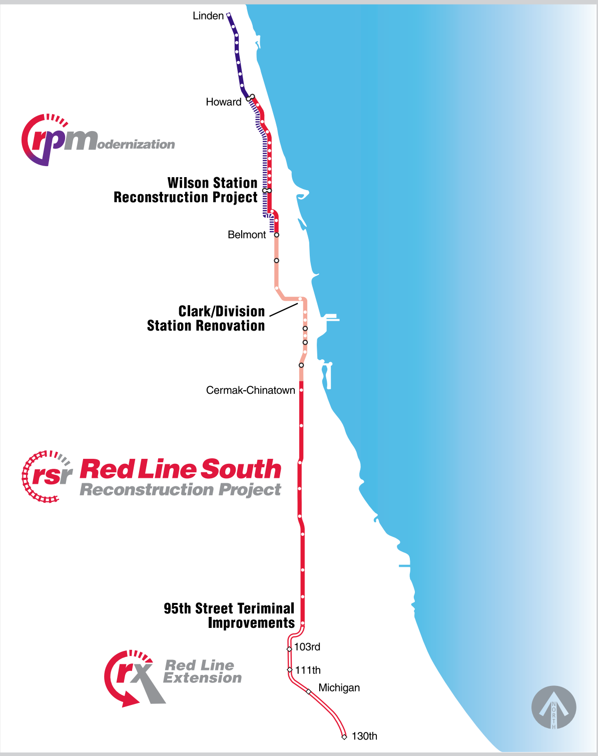
The CTA is continuing to coordinate with communities and will be hosting an open house and attending community group meetings throughout the winter to share preliminary findings of the environmental studies and learn about the communities' desires and concerns. After that outreach, we will make sure the proposed project responds to community concerns, and then issue the Draft EIS in conjunction with the FTA. A public hearing will be held on the Draft EIS in 2014.

Red Line South Reconstruction Project:

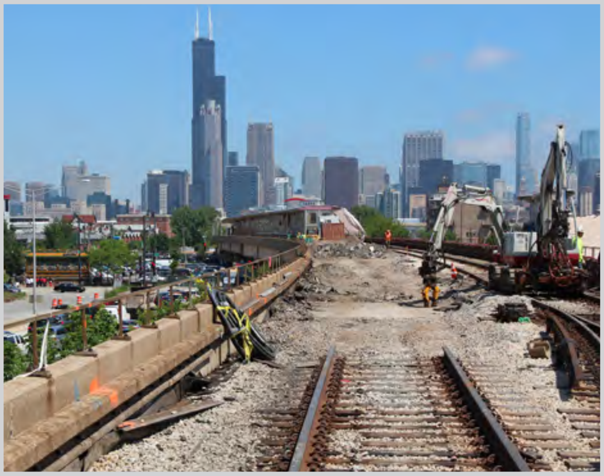
The CTA is rebuilding the tracks along the Red Line's Dan Ryan Branch from Cermak-Chinatown to 95th/Dan Ryan—a project that will provide faster, smoother and more reliable service for Red Line South riders. Crews are replacing everything in the track bed, including ties, rail, third rail, ballast and drainage systems. Red Line South stations are receiving improvements ranging from new canopies, paint, and lighting upgrades to new benches and bike racks, plus accessibility upgrades (including new elevators) that will make the entire 10.2-mile route fully accessible. The project is on time and the Red Line South is expected to reopen in October.

The work is part of Mayor Rahm Emanuel's Building a New Chicago program, updating infrastructure critical to the city. Funding for the work is part of more than $1 billion in federal, state and local funding announced in late 2011 by Governor Pat Quinn and Mayor Emanuel for the Red and Purple lines. For more information, visit **redlinesouth.com**.

RED AHEAD PROGRAM


Linden
Howard
rpm Modernization
Wilson Station Reconstruction Project
Belmont
Clark/Division Station Renovation
Cermak-Chinatown
rsr Red Line South Reconstruction Project
95th Street Teriminal Improvements
103rd
rx Red Line Extension
111th
Michigan
130th

Learn more about the Red Ahead program by visiting our website: **transitchicago.com/redahead**



BUILDING A NEW CHICAGO

transitchicago.com/RedEIS

RED AHEAD

Red Line Extension

Get Involved and Stay Informed:

We appreciate your feedback and encourage you to stay involved in the Red Line Extension (RLE) Project.

By providing us your email address, we can keep you up-to-date on information about the next meetings and project progress.

If you would like to be added to the project mailing list or e-list for future updates or have any questions about the RLE project, please contact:

Chicago Transit Authority
Strategic Planning & Policy, 10th Floor
Attn: Red Line Extension
567 W. Lake Street
Chicago, IL 60661-1465
Email: **RedExtension@transitchicago.com**

For more information about RLE and project updates,
visit: **www.transitchicago.com/RedEIS**

BUILDING A NEW CHICAGO

transitchicago.com/RedEIS

cta

From: Red Extension <redextension@transitchicago.com>
Sent: Tuesday, September 03, 2013 8:09 AM
To: Lea, Claudia; Bojan, Sharon
Subject: FW: Future updates

-----Original Message-----
From: Cedric Bell [mailto:ceds1972@gmail.com]
Sent: Wednesday, August 28, 2013 7:11 PM
To: Red Extension
Subject: Future updates

I would like to be added to the project mailing list: Cedric bell, 1250 w. 112th place, Chicago, il. 60643

Sent from my iPhone

Lea, Claudia

From: Kenae Martin <kenaeinthemixcom@yahoo.com>
Sent: Tuesday, August 27, 2013 9:11 AM
To: Red Extension

this is redicioulus that train should have been extened years ago 95th to 130th iz all bought race if it was whites in the area train would have been expaned like northside improvements..cta when r u gonna wake up those old habits got to change this iz new chicago act like it....u got the money

From: Dora Engram <d.engram@sbcglobal.net>
Sent: Tuesday, August 27, 2013 10:36 PM
To: Red Extension
Subject: Re: CTA Red Line Extension News

Thank you for this information. Please keep me on your email distribution list for all RLE Updates.

Dora Engram
d.engram@sbcglobal.net

From: CTA RLE Project <RedExtension@transitchicago.com>
To: d.engram@sbcglobal.net
Sent: Tuesday, August 27, 2013 8:45 AM
Subject: CTA Red Line Extension News

View this email in your browser

The summer newsletter for the Chicago Transit Authority's Red Line Extension Project is available to view or download. Click here.

CTA wants to keep you informed about our proposed Red Line Extension Project (RLE), a part of the Red Ahead Program, a comprehensive initiative for maintaining, modernizing and expanding Chicago's most traveled rail line. Thank you for your continued interest.

RLE Project Team
Chicago Transit Authority
RedExtension@transitchicago.com

Copyright © 2013 Chicago Transit Authority, All rights reserved.
You are receiving this e-mail because you signed up to receive updates on the RLE Project as they are available.

Our mailing address is:
Chicago Transit Authority

567 West Lake Street
10th Floor
Chicago, IL 60661
Add us to your address book

unsubscribe from this list   update subscription preferences

From: currentz09@gmail.com
Sent: Tuesday, August 27, 2013 11:12 PM
To: Red Extension
Subject: Newsletter Request

I am inquiring in requesting 10 copies of the Red Line Extension Newsletter & a copy of the most recent edition of Up to speed

Corey Ellison
3518 N. 60th st
Milwaukee, WI 53216

From: Red Extension <redextension@transitchicago.com>
Sent: Wednesday, September 11, 2013 8:19 AM
To: Lea, Claudia; Bojan, Sharon
Subject: FW: mailing list

-----Original Message-----
From: Pavel Arzate [mailto:skyscraperfan@gmail.com]
Sent: Tuesday, September 10, 2013 9:13 PM
To: Red Extension
Subject: mailing list

Hi, I would like to be added to the mailing list for the Red Line Extension. Thank you.

Mrs. Dolphin Pierce
10929 S Emerald Ave.
Chicago, IL 60628

03 SEP 2013 PM 5 L

Chgo. Transit Authority
Strategic Planning & Policy - 10th Fl.
Attn: Red Line Extension
567 W. Lake St.
Chgo., Il. 60661-1465

A note from...

Dolphin Pierce 08-31-13
10929 S. Emerald
Chgo., Il. 60628

Re: RLE Project

Please keep me informed about meetings and progress of the RLE. Unfortunately, I have no Email address.

Sincerely —
D. H. Pierce

Sonali —
can you add this nice lady
to your snail mail contacts for RLE?

MC

9/3/13

Habitat for Humanity

To: CTA

Please keep me updated on Red Line Extension meetings and *projected progress.

Thank you!

J Burke

Johnnie G. Burke
9607 S. Perry Ave.
Chicago, IL 60628-1343

* US mail only!

Appendix C
Agency Coordination and Public Involvement

Spring 2014 Outreach Summary

RED AHEAD
Moving Ahead to a Better Red

Red Line Extension

Chicago Red Line Extension Project

Spring 2014
Outreach Summary

Final

October 9, 2014

Prepared for:
Chicago Transit Authority
567 West Lake Street
Chicago, IL 60661

Prepared by:
CWC Transit Group
125 South Wacker Drive
Suite 600
Chicago, IL 60606

cta

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Inviting the Public 1
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Appendix B – April 17, 2014 Aldermanic Briefing Notes
Appendix C – Participating Agency List, Update Letters, and Responses
Appendix D – Community Group Meeting Materials and Meeting Notes
Appendix E – Open House Sign-in Sheets
Appendix F – Open House Meeting Photos
Appendix G – Open House Meeting Materials
Appendix H – Open House Exhibit Boards
Appendix I – Comments Received

Executive Summary

Connecting 95th Street Terminal to 130th Street

The Chicago Transit Authority (CTA) is proposing to extend the Red Line from the existing 95th Street Terminal to the vicinity of 130th Street, subject to the availability of funding. The proposed 5.3-mile extension would include four new stations near 103rd Street, 111th Street, Michigan Avenue, and 130th Street. Each new station would include bus and parking facilities. This project is one part of the Red Ahead Program to extend and enhance the entire Red Line.

Open House Meeting

CTA conducted an open house meeting on May 13, 2014 to update the public on the status of the Red Line Extension Project; inform them of proposed alternatives, anticipated project benefits and impacts; and gather feedback from the residents of the Far South Side of Chicago. The meeting was designed to give the public a chance to share their concerns about the project with CTA representatives, as well as learn about the preliminary impact analysis of alternatives and the ongoing Draft Environmental Impact Statement process.

The open house meeting was held in the project area at a location that was accessible by public transportation and ADA compliant. In order to provide the greatest opportunity for community participation, the public meetings were scheduled in the early evening on a weekday. Spanish and sign language interpreters were available during the open house meeting. Outreach was conducted in both English and Spanish languages, as recommended in the limited English proficiency analysis performed during scoping in 2009.

During the meeting, residents had the opportunity to review boards displaying information about the proposed alternatives, talk with CTA representatives about the project, and provide comments.

Inviting the Public

In order to hear from as many members of the community as possible at the public meeting, CTA:

- Sent invitation emails to 670 residents who had previously demonstrated an interest in Red Line projects.
- Updated the Red Line Extension Project webpage, www.transitchicago.com/redeis, with information about the meeting.
- Contacted aldermen and local libraries and provided them with flyers about the open house meeting to distribute to community members.

- Posted alert cards providing information about the open house meeting at the 95th Street Terminal, on Red Line trains, and in buses operating out of the 103rd Street bus garage.

What We Heard

Attendees had the opportunity to comment in writing during the open house meeting. They also could submit their comments after the open house meeting via email or mail. A total of 212 community members attended the meeting. A total of 97 written comments were received from community members as of the date of this outreach summary.

Community members were asked what specific comments or concerns they had about Red Line Extension alternatives, potential impacts, and mitigation measures. Overall, the community supports the RLE Project and noted concerns related to the following topics:

- Property Displacements
- Community and Economic Development
- Noise and Vibration
- Timeline
- Safety and Security
- Traffic
- Alternatives Analysis
- Alternative Preference

As part of the comment card, residents also were asked about their use of Wendell Smith Park, Fernwood Parkway, and Block Park. Of the 81 completed comment cards, 63 filled out the section on the use of local parks. Most commenters responded that they did not use any of the parks. Of the comments received, Wendell Smith Park is the most-used park, primarily for walking, jogging, and community events.

Section 1
Project Background

The Chicago Transit Authority (CTA) conducted an open house meeting on May 13, 2014 to inform the public about the preliminary environmental impact analysis of the alternatives and options being studied for the Red Line Extension (RLE) Project. CTA is proposing to add major new transit service on Chicago's South Side by extending its busiest rail line, the Red Line, south from the 95th Street Terminal to the vicinity of 130th Street. The proposed 5.5-mile extension would include four new stations near 103rd Street, 111th Street, Michigan Avenue, and 130th Street as well as bus and parking facilities. The public outreach conducted in April and May 2014, along with the open house meeting, provided an opportunity for community members to learn more about the project, give their input about which alternative and option would best meet their transit needs, and the environmental impacts of each of the alternatives and options.

Section 2
Public Notification Activities

2.1 Press Release

The Mayor's Press Office and CTA Media Relations issued a press release announcing open house meetings for both the RLE and Red and Purple Modernization projects. The press release was posted to CTA's website on April 17, 2014 and is included in Appendix A.

2.2 Elected Officials and Stakeholders

CTA contacted elected officials and stakeholders starting April 10, 2014 to brief them on the project and provide information about the open house meeting. CTA representatives met with elected officials as summarized in Table 1.

Table 1: Elected Officials Briefed

Name	Representing	Briefing Date
Alderman Carrie Austin	34th Ward	April 10, 2014
Alderman Anthony Beale	9th Ward	April 15, 2014
Alderman Roderick Sawyer's Office Alderwoman Michelle Harris's Office Alderman Anthony Beale's Office Alderman Howard Brookins	6th Ward 8th Ward 9th Ward 21st Ward	April 17, 2014
State Representative Al Riley's office	38th District	April 17, 2014
Alderman Carrie Austin's Town Hall Meeting	34th Ward	June 19, 2014

Meeting notes from the April 17th Aldermanic Briefing are included in Appendix B.

CTA provided flyers with information about the open house meeting to elected officials and other stakeholders to distribute to community members. The flyer, available in both English and Spanish, is included in Appendix A. The flyers were also emailed to libraries surrounding the project area to be distributed to patrons. A list of libraries receiving notices is included in Table 2.

Table 2: Libraries Receiving Flyers

Library	Address	City, State Zip
Blue Island Public Library	2433 York Street	Blue Island, IL 60406
Brainerd Branch Public Library	1350 West 89th Street	Chicago, IL 60620
Calumet City Public Library	660 Manistee Avenue	Calumet City, IL 60409
Calumet City Public Library	660 Manistee Avenue	Calumet City, IL 60409
Hegewisch Library Branch	3048 East 130th Street	Chicago, IL 60633
Jeffrey Manor Branch Public Library	2401 East 100th Street	Chicago, IL 60617
Pullman Public Library	11001 South Indiana Avenue	Chicago, IL 60628
Riverdale Public Library	208 West 144th Street	Riverdale, IL 60827
South Chicago Library Branch	9055 South Houston Avenue	Chicago, IL 60617
Walker Branch Public Library	11071 South Hoyne Avenue	Chicago, IL 60643
West Pullman Library Branch	830 West 119th Street	Chicago, IL 60628

2.3 Project Website

CTA updated the project website for the Red Line Extension Project, www.transitchicago.com/redeis, on April 17, 2014 with up-to-date project information. The webpage provided general information about the project and alternatives, details about the open house meeting, information about project funding and timeline, and frequently asked questions. A printout of the project webpage is included in Appendix A.

2.4 Social Media Updates

CTA shared three Twitter tweets and three Facebook posts regarding the project on April 17 and 18, 2014. Copies of these social media updates are included in Appendix A.

2.5 Postcards

CTA mailed postcards inviting community members to the public open house on April, 17, 2014, to a list of 3,456 addresses that included public agencies, business groups, churches, schools, and community/neighborhood groups/associations within or near the project area, as well as attendees of previous RLE Project open house meetings and/or those that requested information about future Red Line projects. The postcard provided details about the open house meeting, including the closest transit access, and contact information to request assistance at the meeting. The postcard is included in Appendix A.

2.6 E-blasts

CTA sent an invitation email (e-Blast) with information about the open house meeting and links to the project website on April 17, 2014. A second email reminding recipients of the open house meeting was sent on May 12, 2014. The e-Blasts were sent to 666 and 670, respectively, email addresses of residents who had previously demonstrated an interest in the RLE Project and/or requested information about future Red Line projects. The two e-Blasts are included in Appendix A.

2.7 Transit Alert Cards

A transit alert card providing information about the open house meeting was printed on April 30, 2014 and provided to the following locations:

- 20 alerts were produced for posting at the Red Line 95th Street Terminal station
- 370 alerts were produced for posting on all Red Line rail cars
- 350 alerts were produced for posting on all buses operating out of the 103rd Street bus garage

In total, 740 open house alerts were produced and distributed. The transit alert card is included in Appendix A.

2.8 Media

In response to the CTA announcement, a number of news articles about the RLE Project appeared in local media. Table 3 summarizes the articles that appeared in April and May 2014. The full articles are included in Appendix A.

Table 3: Published Media Articles April and May 2014

Date	Media Outlet	Article Title
4/14/2014	Chicago Sun-Times	CTA weighs two options for Red Line extension route
4/15/2014	Chicago Sun-Times	CTA narrows possible routes for proposed Red Line expansion
4/16/2014	Chicago Tribune	Red Line to Get North Side Overhaul, While South Siders Decry Wait
4/17/2014	Chicago Sun-Times	CTA Plans Red Line Improvements on North, South Sides
4/17/2014	Chicagoist	CTA Officially Announces Red Line South Extension, Red/Purple Line Renovation
4/17/2014	NBC 5 Chicago	CTA Announces Plans For Red Line Extension and Rehab
4/18/2014	CBS 2 Chicago	Far South Side Residents Endorse Red Line Extension
4/20/2014	The Times of Northwest Indiana	Southeast Chicago residents awaiting proposed Red Line extension to 130th Street
4/21/2014	The Chicago Maroon	Multi-billion Boost to Red Line
4/22/2014	Progressive Railroading	CTA Unveils First Phase of Modernization Project, Red Line Extension Environmental Steps
4/23/2014	Bid Ocean	CTA Announces Next Steps in Modernizing the Red Line
5/14/2014	ABC 7 Chicago	Red Line Extension Project Moving Forward
5/14/2014	CTA Tattler	Nearly 100 buildings would be razed to build preferred Red Line south extension
5/14/2014	Curbed Chicago	CTA Could Consume 259 Properties For Red Line Extension
5/14/2014	Chicago Sun-Times	Whistleblower off-base on CTA budget, Claypool says
5/13/2014	Chicago Sun-Times	CTA: Hundreds of parcels might be needed for Red Line expansion
5/18/2014	RedEye	Construction Ahead

Section 3
Participating Agencies

CTA provided an update on the project to the RLE Project participating agencies to inform them of the project status and invite them to the Open House. Participating agencies are federal, state, and local agencies with an interest in the project because of an overlap in their area of jurisdiction or some specialized knowledge of potential project effects. The list of participating agencies and copies of the letters sent to both federal and state, regional, or local participating agencies is included in Appendix C. Responses were received from the Regional Transportation Authority, Chicago Park District, Illinois Department of Transportation, Transportation Security Administration, and Illinois Environmental Protection Agency. Responses are also included in Appendix C.

Section 4
Community Group Meetings

CTA met with local community groups to share information about the project and allow community members to ask questions. Appendix D contains the meeting presentation (the same presentation was given at each meeting), sign-in sheets, and meeting summaries. The meetings are summarized in Table 4.

Table 4: Community Group Meetings

Group Name	Meeting Date
Developing Communities Project (Leadership)	April 16, 2014
Chicago Neighborhood Initiatives Greater Roseland Chamber of Commerce	April 29, 2014
Developing Communities Project (Membership)	April 30, 2014
People for Community Recovery Golden Gate Homeowners Association	May 6, 2014
Rosemoor Community Association	May 7, 2014
Friends of the Parks Chicago Park District	May 8, 2014
Roseland Manor	May 13, 2014
Far South Side Community Development Corporation	May 14, 2014
Agape Community Center	May 15, 2014
34th Ward Town Hall	June 19, 2014

In addition to the groups with which CTA met, CTA also reached out to St. Anthony of Padua Parish and the Roseland Business Development Council in April 2014, but did not meet with either organization.

Section 5
Open House Meeting

CTA conducted an open house meeting to inform the public about the project and to provide people with an opportunity to ask questions about the RLE Project in an informal setting.

Time:	5:30 to 7:30 p.m.
Date:	Tuesday, May 13, 2014
Location:	Palmer Park Gymnasium 201 E. 111th Street Chicago, IL 60628

The meeting was held in a community center familiar to area residents, accessible by public transportation, and was ADA compliant. For the convenience of all attendees, bus lines to and from the meeting site were publicized on the flyer, notice, e-Blast, and on the website. In order to provide the greatest opportunity for community participation, the open house was scheduled in the early evening on a weekday. Spanish translation and a sign language interpreter were made available during the open house meeting.

A total of 212 people signed in at the May 13, 2014 open house. Although everyone was encouraged to sign in, there were a few additional attendees who declined to sign in. Copies of the sign in sheets are included as Appendix E.

During the open house meeting, project team members explained information presented on exhibit boards and answered project-related questions. Attendees also had the opportunity to view a video prepared by the Chicago Metropolitan Agency for Planning (CMAP) about the RLE Project. The video was played continuously during the open house, and is available online at: cmap.illinois.gov/mobility/transit/red-line. The open house provided attendees an opportunity to review the project information and give feedback about which project alternative would best meet their transit needs and the potential environmental impacts.

Photos from the meeting are included in Appendix F.

5.1 Meeting Materials

Meeting attendees were offered comment cards, a project factsheet with information on the project (available in both English and Spanish), and a glossary of terms to be consulted as they visited the project exhibit boards. The comment card allowed attendees to submit written comments during or after the open house meeting. Two specific questions were posed on the comment card:

- What specific comments or concerns do you have about the Red Line Extension alternatives, potential impacts, and mitigation measures?

- How do you use the following parks? (Accompanied by a table listing Wendell Smith Park, Fernwood Park, and Block Park and activities options such as “Playground,” “Community Events,” and “Other.”)

The comment card, English and Spanish project factsheet, and glossary are included in Appendix G.

CTA developed exhibit boards about the project, which were used during the open house meetings. The boards included:

- Welcome
- Red Ahead Program
- What is the RLE Project?
- Why are we preparing an Environmental Impact Statement (EIS)?
- Project Alternatives: UPRR Rail Alternative
- Project Alternatives: Halsted Rail Alternative
- Project Alternatives: BRT Alternative
- Potential Impacts to Parks
- Potential Property Displacements
- Potential Noise Impacts
- Potential Visual and Community Impacts
- Potential Effects to Historic Properties
- Impacts to Wetlands
- Temporary Construction Impacts
- RLE Project Benefits
- Project Development Process
- Stay Involved

The exhibit boards illustrated the RLE Project alternatives, potential impacts, and potential mitigation measures. Project team members provided meeting attendees with specific information related to these topics and answered questions at each exhibit board. At the "Potential Property Displacements" exhibit board, TA real estate acquisition brochures were available for distribution. Copies of the exhibit boards are in Appendix H.

5.2 Comments Received

Attendees could comment in writing during the open house or submit their comments after the open house via email or mail. Email comments could be sent to a project specific email address (RedExtension@transitchicago.com) found on the comment cards, project website, and on all notification materials. At the May 13, 2014 open house meeting, 76 people filled out and submitted comment cards. In addition, one letter, six comment cards, and fourteen emails were received following the May 13 open house meeting. All comment cards and emailed comments received as of the date of this meeting summary are included in Appendix I.

Community members were asked what specific comments or concerns they had about Red Line Extension alternatives, potential impacts, and mitigation measures. Overall, the community supports the RLE Project. They noted the following concerns and comments:

- Property Displacements: Commenters wanted to know how many properties would be purchased, what properties would be purchased, how owners would be compensated, and how the RLE Project would impact property values. Commenters also expressed concern regarding the potential emotional impacts of property acquisitions on long-time area residents, particularly senior citizens.

- Community and Economic Development: Commenters stated that communities in the project area are underserved by public transit and have been waiting for this project. Commenters would like to see the RLE project create jobs for area residents and increase economic development. Some commenters expressed concern that the RLE Project would disrupt the residential communities along the project alternative alignments.

- Noise and Vibration: Commenters requested additional information regarding train noise and if its vibration would affect home foundations.

- Timeline: Commenters requested additional information regarding the project timeline and length of construction.

- Safety and Security: Commenters suggested that the elevated trains could make the street darker, possibly increase crime, and decrease safety. Commenters also suggested that pedestrian safety be evaluated at stations along the UPRR tracks as well as the 130th Street Station.

- Traffic: Commenters expressed concern about traffic impacts related to the project. One commenter also suggested that the project would reduce congestion on I-94.

- Alternatives Analysis: Several commenters provided suggestions for alternate routes, modes, parking, and/or the RLE terminal station.

- Alternative Preference: Commenters provided preferences for both the UPRR Rail Alternative and Halsted Rail Alternative. The majority of comments that expressed a preference related to the alternatives were in support of the UPRR Rail Alternative although some commenters were in opposition to the UPRR Alternative because of property displacements. Multiple commenters opposed the Halsted Rail Alternative because of visual, noise, historic resources, and safety impacts, and because it wouldn't provide transit access to underserved communities.

The comment cards also asked how attendees use project area parks; attendees could mark multiple activities and multiple parks. Of the 82 completed comment cards, 67 filled out the section on the use of local parks. A summary of responses to the second question is shown in Table 5.

Table 5: Use of Project Area Parks

Park	Baseball / Softball / Basketball	Play ground	Walking / Jogging	Community Events	Other	I do not use this park	No Response
Wendell Smith Park	8	5	14	13	5	47	18
Fernwood Parkway	3	5	7	7	7	40	27
Block Park	1	1	7	3	3	47	26

Appendix A
Meeting Notifications

Press Release

Flyers

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Postcard

E-blast

Transit Alert Card

Media Articles

Chicago Transit Authority

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Going Green
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Performance
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Public Art
Reports & Notices
System Improvement Projects
Ventra
Videos
Winter Preparedness

Mayor Emanuel, CTA Announce Next Steps in Modernizing the Red Line, CTA’s busiest rail line

4/17/2014

CTA Unveils First Phase of its Red and Purple Modernization Program That Will Ultimately Rebuild the Northern Section of the Red Line and the Parallel Purple Line

Red Line Extension Plan to Extend the Red Line South of 95th Street to 130th Street Moves Forward with its Environmental Process

Mayor Rahm Emanuel and CTA President Forrest Claypool today announced the first phase of its Red and Purple Modernization (RPM) program, which will completely rebuild the northern section of the Red Line and the parallel Purple Line, and beginning of the next step in a federal process to secure funding for the Red Line Extension plan, which would extend the Red Line south from 95th Street to 130th Street.

These are the latest steps in the ongoing modernization of the CTA under Mayor Emanuel.

“As a world-class city, Chicago has a world-class transit service to connect residents to jobs, education, culture and above all opportunity,” said Mayor Emanuel. “CTA is investing in modernizing the Red Line as part of our strategy to create a seamless, safe, and reliable transportation system for every neighborhood.”

The CTA’s Red Line, which runs 24/7 along 23 miles of tracks, is Chicago’s busiest rail line with about 75 million annual rides.

The Red and Purple Modernization program and the Red Line Extension project are the latest in a series of Red Line projects to modernize and extend the backbone of the CTA’s rail system that have been undertaken since 2011.

With a significant portion of the Red Line built more than a century ago, the improvements would address the current need to expand capacity by building new infrastructure to accommodate growing ridership. Additional Red Line modernization projects under Mayor Emanuel include:

- Successful $425 million replacement of the Red Line South railroad in 2013, as well as station rehabilitations.

- $86 million renewal and rehabilitation of seven far north side stations in 2012.
- $240 million new 95th Street Terminal, work beginning in late summer.
- $203 million Wilson station reconstruction and track and signal replacement, major construction to begin this fall.

“These projects are the next steps in our overall vision to rebuild, modernize and expand the entire Red Line,” said P President Claypool. “We’re already kicking off Red and Purple Modernization by beginning reconstruction of the Wilson station this fall and continuing progress on the South Side by starting the new 95th Street Terminal this summer, following the successful completion of the Red Line South reconstruction last year. With both the Red and Purple Modernization and Red Line Extension projects, we’ll replace outdated infrastructure with a modern, efficient rail, and build more than five miles of new track. Together these improvements will offer CTA customers faster, more reliable service, and increasing access to quality rail transportation for thousands of future riders.”

The CTA is also moving forward with its proposed Red Line Extension plan by beginning the second step of its environmental process to ultimately finish the Environmental Impact Study, which is required to begin engineering on the plan to extend the Red Line south of 95th Street to 130th Street. Both projects will include a broad community outreach process that will begin next month to solicit community feedback on both projects and provide updates on the funding process for each project.

About Red and Purple Modernization

The RPM program will proceed in phases to fully replace old, deteriorating infrastructure and stations along the entire north branch of the Red Line and the parallel Purple Line, and will pave the way for CTA to significantly increase train capacity for the next 80 years.

This section of the Red and Purple lines carries one out of every five CTA rail rides and serves customers in some of the densest, most diverse neighborhoods in Chicago. Rush-hour ridership has jumped 40 percent in the last five years alone.

Most tracks and bridges along the Red and Purple lines are nearly 100 years old. Despite rising demand, the CTA is unable to increase capacity because of the current infrastructure’s age and structural limitations. Continuing to operate a busy rail line on this outdated infrastructure results in high maintenance costs, the need for frequent repairs that disrupt service and slow travel, as well as outdated stations that can’t accommodate elevators or other necessary and modern amenities.

RPM will create a completely rebuilt rail line, resulting in faster, smoother rides, modern, fully ADA accessible stations along the entire corridor and more frequent train service to alleviate overcrowding.

The first phase of the RPM improvements will include two main components:

- **Station and track modernization, Wilson to Bryn Mawr:** Completely rebuilding the Wilson, Lawrence, Argyle, Berwyn, and Bryn Mawr stations and rebuilding all tracks, support structures, bridges and viaducts for the Red and Purple lines between Lawrence and Bryn Mawr. Replacement of the Wilson station and surrounding infrastructure begins this fall. These

Systemwide:

New Schedules in Effect (All Tra
Routes)

Trains:

Red Line	Normal Service
Blue Line	Normal Service
Brown Line	Normal Service
Green Line	Normal Service
Orange Line	Normal Service
Purple Line	Normal Service
Pink Line	Normal Service
Yellow Line	Normal Service

Buses:

Routes with Current Alerts (View A

1 2 3 4 7
15 20 24 29 36
39 44 49 56 59
62 63W 65 66 70
120 121 124 132 156
171 172 192

More:

See all Alerts Acc

Plan a trip

Start (e.g. O'Hare Airport)

End (e.g. 1 N State St, Chicago, I

● **Leave Now**

Get directions with:

Google Maps ➔ RTA Trip Plan

About trip planners (and more opti

stations were built originally between 1908 and 1923 and the elevated support structures date back to the 1920s. The Bryn Mawr station was last updated 40 years ago, in 1974; the remaining three stations received interim station renewal work in 2012. Reconstruction of these stations will include adding elevators at each to make them accessible to customers with disabilities. The project also includes rebuilding the tracks, signals and support structures, which will significantly improve train speeds and service reliability on the slow zone-plagued stretch. (The Wilson station project is already funded from state, federal and local sources, and is currently proceeding through a separate Environmental Assessment process.)

- **Construction of a Red-Purple bypass.** Construction of a bypass north of the Belmont station to eliminate delays and speed up train service where the Red, Purple and Brown lines currently all intersect. The current configuration requires trains on three of four tracks to stop and wait for Brown Line trains to cross, which results in more than 40 percent of weekday trains being delayed by as much as three minutes. About 150,000 rides travel through this intersection each weekday, all of which are slowed down because trains must stop and wait for signal clearance. The structure’s original 1907 design makes it difficult, under present day and service demands, to provide reliable service and makes adding service extremely challenging.

“Modernizing Red Line rail service and stations strengthens our neighborhoods by making transit more reliable and ultimately generating new economic development near revitalized stations,” said Ald. Harry Osterman. “We’re pleased that Mayor Emanuel and the CTA recognize the importance of safe, reliable transit in neighborhoods near the Red Line, including Andersonville, Edgewater and Uptown, and look forward to working closely with the CTA on this exciting program.”

Future phases of RPM will bring the same level of infrastructure and station improvements to the remaining sections of the Red and Purple lines, from north of Belmont station to Linden station in Wilmette.

Estimated cost for the first phase of RPM is $1.7 billion.

In November 2013, the CTA became the first transit system accepted into the Federal Transit Administration’s (FTA) new Core Capacity Program that provides funding to transit systems to add capacity on existing infrastructure for future ridership growth. The RPM project is eligible for 2014 Core Capacity federal funding approved by Congress earlier this year.

About RLE

The 5.3-mile Red Line Extension project will extend south from the 95th Street Terminal through the greater Roseland community. Plans include construction of four new stations near 103rd Street, 111th Street, Michigan Avenue/116th Street and 130th Street, all with bus and parking facilities.

The RLE project will provide rapid transit rail access to a low income, transit-dependent Far South Side area that does not have direct CTA rail service. An extended Red Line will provide up to a 20-minute time savings to downtown by providing one-seat service, as opposed to the current bus-rail trip from 130th Street. It will also improve access to jobs and education, and foster economic development.

In 2011, the CTA received funding from the FTA to conduct the Environmental Impact Statement (EIS) for the RLE project—a major, important step in the multi-step federal process to secure approval and funding of the $2.3 billion dollar project.

Public Input and Next Steps

The CTA will meet with community groups and host public open houses to share details and seek input on the proposed RPM and RLE projects. Members of the public can submit formal comments directly to the CTA or at public open houses where CTA and representatives will provide additional information on RPM and RLE project plans. For each project, CTA is seeking community input on the location, design, and social, economic, and environmental effects of the proposed improvements.

The **Lawrence to Bryn Mawr Modernization Open House** will be held Wednesday, May 21, at Truman Community College, 1145 W. Wilson Ave. from 5:30 p.m. to 7:30 p.m.

The **Red-Purple Bypass Open House** will be held Thursday, May 22, at the 19th District Police Station, 850 W. Addison St., from 5:30 p.m. to 7:30 p.m.

The **RLE Open House** will be held Tuesday, May 13, at Palmer Park Gymnasium, 201 E. 111th St., between 5:30 p.m. and 7:30 p.m.

Comments for either project can also be submitted by email or postal mail to:

RPM@transitchicago.com

RedExtension@transitchicago.com

Chicago Transit Authority
Strategic Planning, 10th floor
Attn: RPM Project or RLE Project
567 W. Lake Street
Chicago, IL. 60661-1465

Following public input, the CTA will deliver draft environmental studies for both RPM Phase One and RLE to the FTA as part of the process to request federal funding. Timing for construction starts on each project is dependent upon the receipt of funding for each project. By the beginning of May, the CTA will release a request for Letters of Interest and Qualifications (LIQ) for Preliminary Engineering (PE) services for Phase One of RPM.

For more information about the Red Purple Modernization and Red Line Extension projects, visit transitchicago.com.

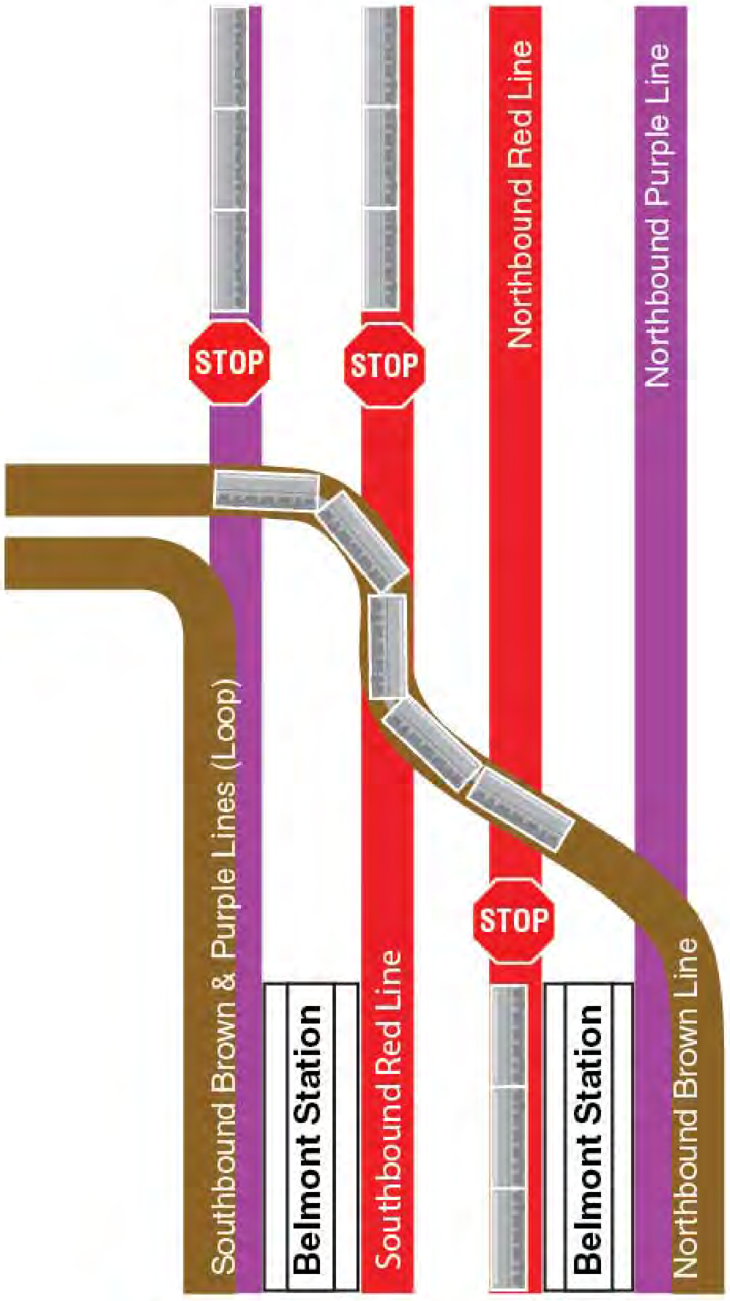
###

More Information

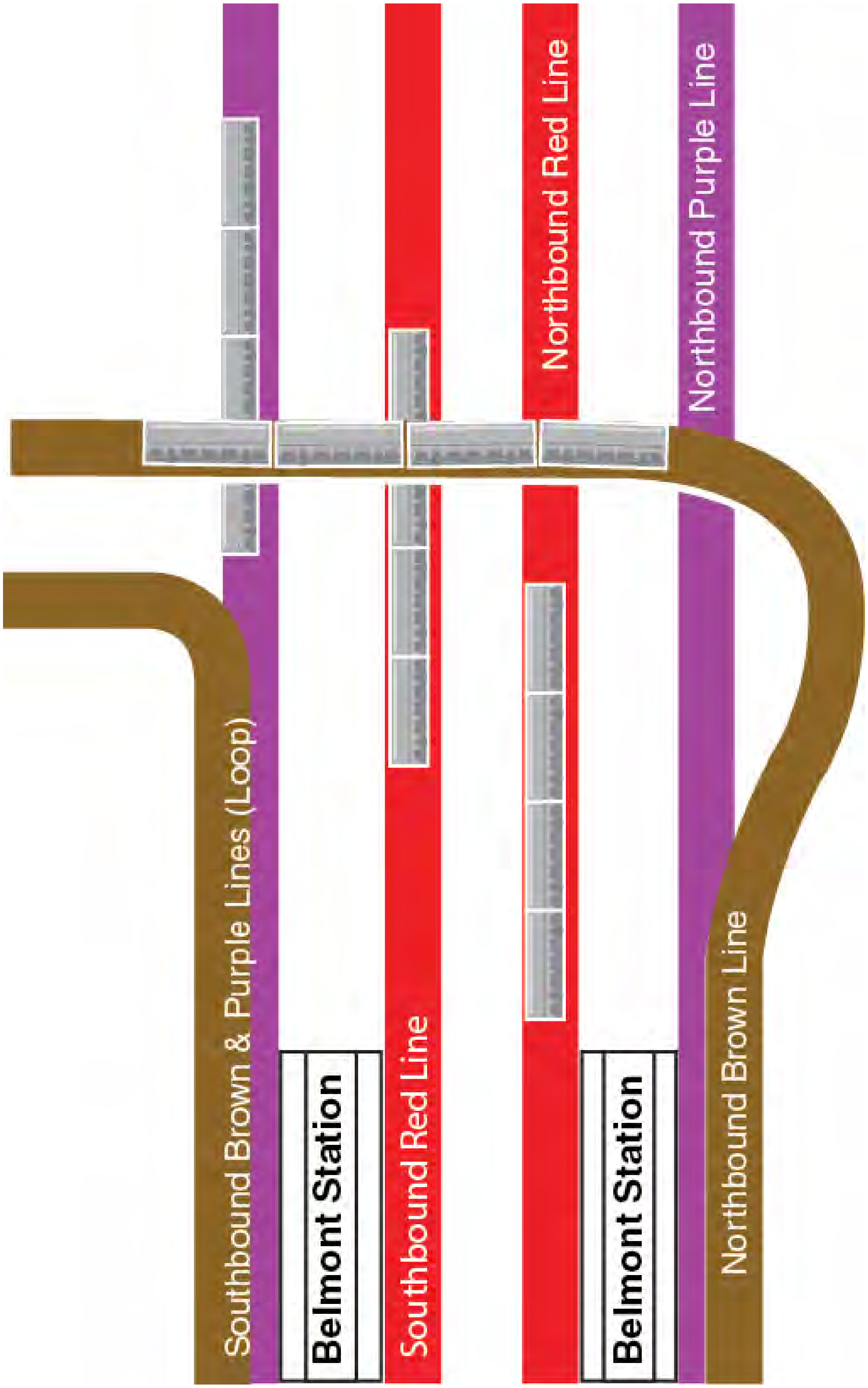
Red Line Extension Project: http://www.transitchicago.com/redeis/

Red and Purple Modernization Project: http://www.transitchicago.com/rpmproject/

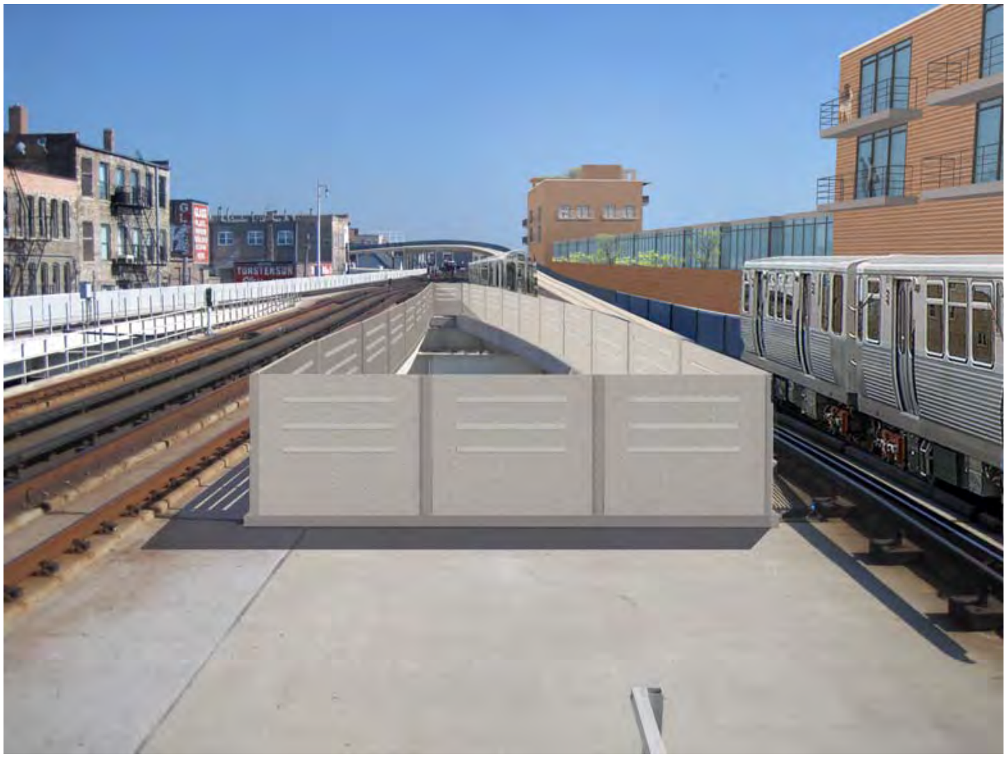
Current Red-Purple and Brown Track Intersection Configuration


STOP
STOP
Northbound Red Line
Northbound Purple Line
STOP
Southbound Brown & Purple Lines (Loop)
Belmont Station
Southbound Red Line
Belmont Station
Northbound Brown Line

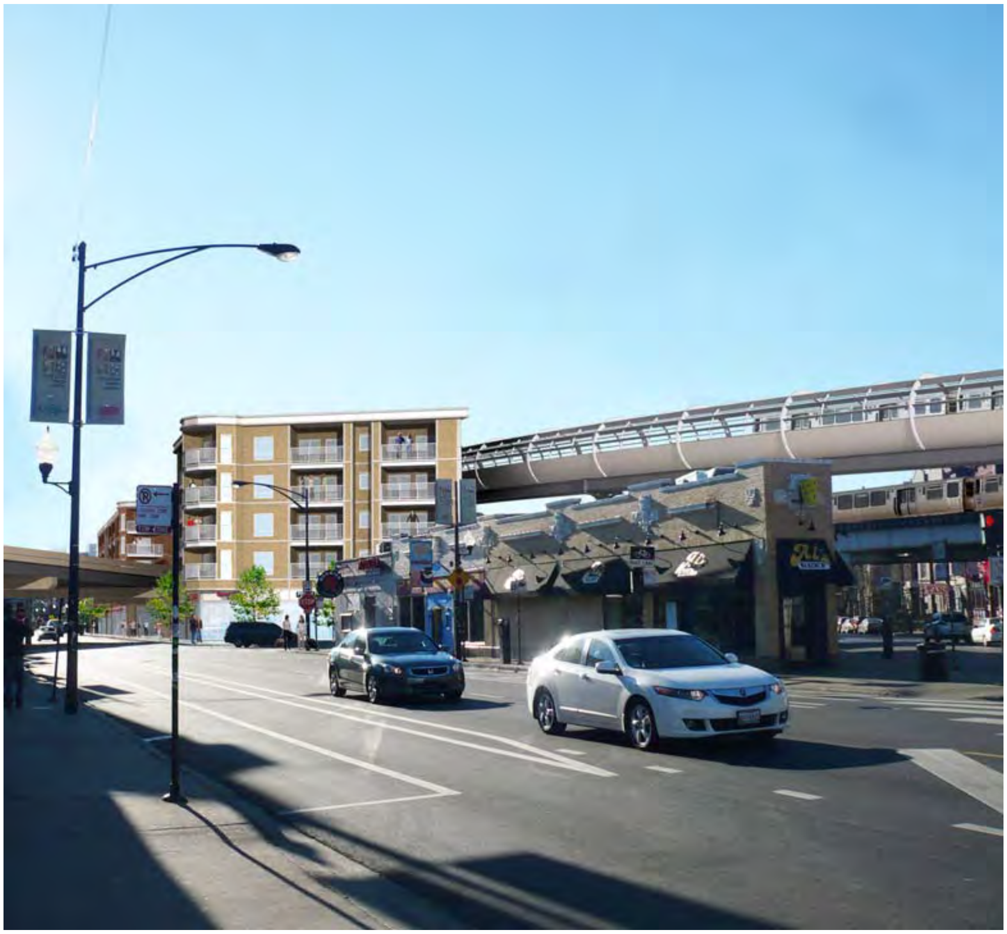
RPM Bypass Track Configuration


Northbound Red Line
Northbound Purple Line
Southbound Brown & Purple Lines (Loop)
Belmont Station
Southbound Red Line
Belmont Station
Northbound Brown Line

RPM Bypass Track-Level View Concept



RPM Bypass Street-Level View Concept



Bryn Mawr Station Interior Concept

Bryn Mawr Platform Concept

Bryn Mawr Station Entry (Street View) Concept

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TTY: 1-888-CTA-TTY1

@ E-mail: feedback@transitchicago.com

RED AHEAD
Moving Ahead to a Better Red

Red Line Extension

You're invited to attend a CTA open house on the

Red Line Extension Project

When and Where?

Tuesday, May 13, 2014
5:30 to 7:30 p.m.

Palmer Park Gymnasium
201 E. 111th Street
Chicago, IL 60628

This location is served by:
CTA Bus #34, #111, #119; Pace Bus #353;
and Metra Electric 111th Street (Pullman).

This facility is accessible to people with disabilities.

At the open house, you will learn more about the proposed alternatives, hear about anticipated project benefits and impacts, and have the opportunity to provide feedback.

What's New with the Red Line Extension Project?

Since the RLE Project open house meeting during the summer of 2011, we have been preparing a Draft Environmental Impact Statement (EIS) based on the technical analysis of impacts of the alternatives. Findings from this preliminary impact analysis of the alternatives will be discussed at the Open House. CTA welcomes your comments and feedback about the RLE Project alternatives and potential impacts, which will be incorporated into the Draft EIS.

This project is one part of CTA's Red Ahead Program, a comprehensive initiative for maintaining, modernizing, and expanding Chicago's most-traveled rail line.

Do you require assistance?

If you require an interpreter, including sign language services, or other accommodations at this meeting, contact Gerald Nichols, CTA Government and Community Relations, at least five days prior to the meeting at 312-681-2807 or GNichols@transitchicago.com.

Para informacion en Español, llame al 312-681-2807

Customer Information: 1-888-YOUR-CTA (1-888-968-7282)

RedExtension@transitchicago.com

transitchicago.com/redeis **/thecta** **@cta**

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rx **Red Line Extension**

Usted está invitado a una reunión abierta al público sobre el proyecto

Extensión de la Línea Roja

¿Cuándo y Dónde?

Martes, 13 de Mayo del 2014
5:30 p.m. a 7:30 p.m.

Gimnasio de Palmer Park
201 E. 111th Street
Chicago, IL 60628

Este lugar es accesible por: Las rutas de autobus #34, #111, #119; Autobús Pace #353; y Metra Electric 111th Street (Pullman).

Las instalaciones son accesibles para las personas con discapacidad.

Durante la reunión, usted se informará acerca de las alternativas propuestas y los beneficios e impactos anticipados. También tendrá la oportunidad de compartir sus preferencias y sugerencias.

¿Qué hay de nuevo con la Extensión de la Línea Roja?

Desde la última reunión de la Extensión de la Línea Roja en el verano del 2011, CTA ha estado preparando el borrador de la Declaración de Impacto Ambiental, basada en el análisis técnico de los impactos de las alternativas. Las conclusiones de este análisis preliminar de las alternativas será discutido en la reunión. CTA con gusto acepta sus comentarios y sugerencias acerca de las alternativas y los impactos del proyecto de Extensión de la Línea Roja, los cuales serán incorporados en el borrador de la Declaración de Impacto Ambiental.

Este proyecto es una parte del programa *Red Ahead Program* de la CTA, una iniciativa comprensiva para mantener, modernizar y extender la línea de tren más usada en Chicago.

¿Requiere Asistencia?

Si usted necesita un intérprete, incluyendo servicios de lenguaje de señas, u otros servicios especiales durante la reunión, comuníquese con Gerald Nichols, oficial de relaciones gubernamentales y comunitarias para la CTA, al (312) 681-2807 o GNichols@transitchicago.com por lo menos cinco días antes de la reunión.

Llame al 312-681-2807 para información en español

Información a los clientes: 1-888-968-7282

RedExtension@transitchicago.com

transitchicago.com/redeis **/thecta** **@cta**

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Appendix A
Meeting Notifications

Press Release

Flyers

Website

Social Media Updates

Postcard

E-blast

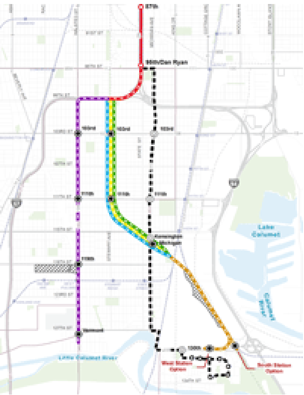
Transit Alert Card

Media Articles

Line, CTA’s busiest rail line (4/17/2014)

Project Status

In accordance with the National Environmental Policy Act (NEPA), the CTA and the Federal Transit Administration (FTA) have initiated the environmental review process for this project and are preparing an Environmental Impact Statement (EIS). An EIS compares the positive and negative environmental impacts of the various project alternatives.


87th
95th/Dan Ryan
103rd
103rd
103rd
111th
111th
111th
Kensington
Vermont
Lake Calumet
Calumet River
Little Calumet River
130th
West Station Option
South Station Option

See alternatives under consideration and learn more about the project, here.

Get Involved and Stay Informed

Public and agency input is important. This website will keep you informed about the proposed project, the planning process, and opportunities for public input and participation.

If you have any questions related to the Chicago Transit Authority’s proposed Red Line Extension, or would like to be added to the project mailing list for future updates, please contact us at:

RedExtension@transitchicago.com

Chicago Transit Authority
Strategic Planning & Policy, 10th Floor
Attn: Red Line Extension
567 W. Lake Street
Chicago, IL 60661-1465

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Languages [En] [Pl] [Zh] [Es]

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- Going Green
- Open Data
- Performance
- Planning & Expansion
  - Red Ahead
  - Red & Purple Modernization Project
  - Red Line Extension
  - Yellow Line Extension
  - Orange Line Extension
  - Alternatives Analysis Studies (and archives)
  - Circle Line Alternatives Analysis
  - Jeffery Jump
  - Ashland Bus Rapid Transit (BRT)
  - Blue Line Forest Pk. Br. Feas./Vision Study
- Press Releases
- Public Art
- Reports & Notices
- System Improvement Projects
- Ventra
- Videos
- Winter Preparedness

Red Line Extension

Quick Links

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- Environmental Review
- FAQ

RED AHEAD
rx Red Line Extension
95th

About the Red Line Extension

Connecting 95th Street Station to 130th Street

Overview

The Chicago Transit Authority (CTA) is proposing to make transportation improvements by extending the Red Line from the 95th Street Terminal to the vicinity of 130th Street. This project is one part of the Red Ahead Program to extend and enhance the entire Red Line.

See a PDF summary of the project

Purpose & Need

The purpose of the Red Line Extension is to:

- Reduce commute times for residents both within and south of the project area.
- Improve mobility and accessibility for low-income and transit-dependent residents in the project area.
- Improve rapid transit rail service to isolated areas and provide viable linkages to affordable housing, jobs, services, and educational opportunities, thereby enhancing livability and neighborhood vitality.
- Improve connections and linkages of public transportation modes in the project area.
- Foster economic development in the project area, where new stations/stops may serve as catalysts for neighborhood revitalization and help reverse decades of disinvestment in local business districts.

The RLE Project is needed to respond to the following problems:

- Transit trips to jobs are longer for Far South Side residents compared to the Chicago region as a whole.
- Transit-dependent populations lack direct access to rapid transit rail service.
- The project area is geographically isolated from major activity centers and lacks viable transportation options, which limits access to affordable housing and supporting infrastructure.
- Existing transit markets are underserved and transit connectivity is challenging in the project area.
- Disinvestment and limited economic development in the project area have

Quick Links

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Transit Trackers Ventra Fare Info

Plan a trip

Start (e.g. O'Hare Airport)

End (e.g. 1 N State St, Chicago, IL)

● Leave Now More

Get directions with:

Google Maps RTA Trip Planner

About trip planners (and more options)..

System Status

Systemwide:

New Schedules in Effect (All Train Routes)

Trains:

Red Line	Significant Delays
Blue Line	Normal Service
Brown Line	Normal Service
Green Line	Planned Work w/Station(s) Bypassed
Orange Line	Normal Service
Purple Line	Normal Service
Pink Line	Normal Service
Yellow Line	Normal Service

Buses:

Routes with Current Alerts (View All):

1 2 3 4 7 8
11 15 20 24 29 36
37 39 44 49 49B 56
59 60 62 63W 65 66
70 72 120 121 124 132
156 170 171 172 192

More:

See all Alerts Accessibility

negatively impacted Far South Side communities.

Project Alternatives

Several alternatives, which included different routes and technologies, were considered during the Alternatives Analysis process. The alternatives were then narrowed down through public and agency feedback to the four alternatives described here. These alternatives are being analyzed in the Draft Environmental Impact Statement.

No Build Alternative

The No Build Alternative is defined as the existing transportation system plus any committed transportation improvements that are already in the Chicago Metropolitan Agency for Planning (CMAP) Fiscal Year 2010-2015 Transportation Improvement Program (TIP). All elements of the No Build Alternative are included in each of the other alternatives.

The No Build Alternative would include the following:

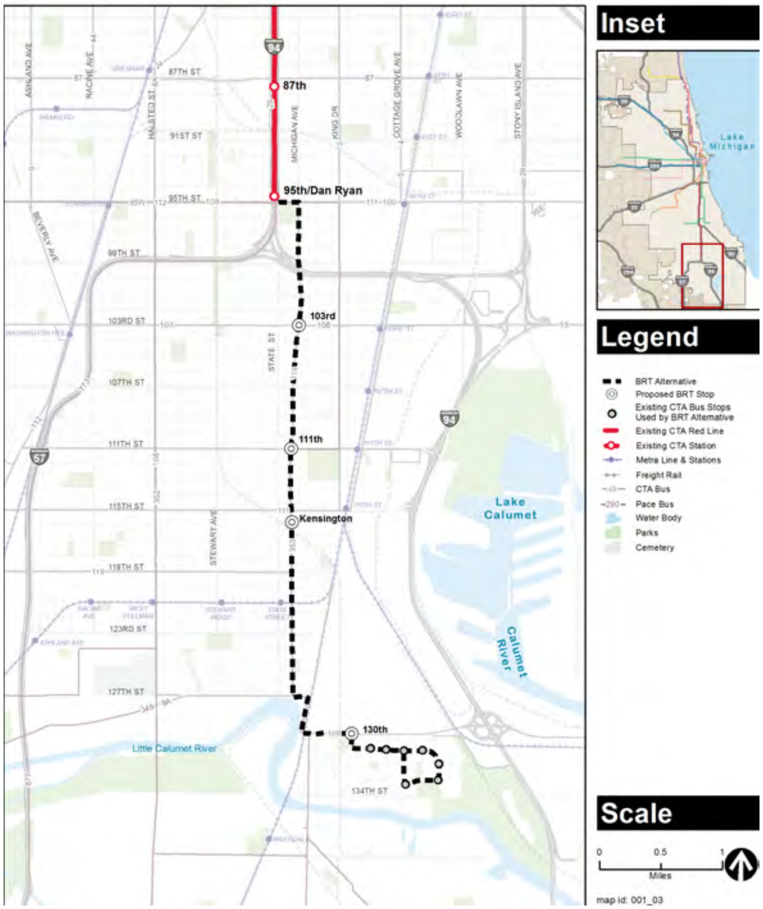
- Existing transportation system
- Committed transportation improvements including bridge reconstructions, 95th Street Terminal Improvement Project, several road improvement projects including resurfacing and coordination of signal timing, work on Metra’s facilities, construction of a bicycle/pedestrian multi-use trail, and preservation of historic facilities
- Bus transit service focused on the preservation of existing services and projects

Bus Rapid Transit (BRT) Alternative

The proposed Bus Rapid Transit (BRT) Alternative (formerly referred to as the transportation system management alternative) would operate between the existing 95th Street Terminal and the intersection of 130th Street and Eberhart Avenue via East 95th Street, Michigan Avenue, East 127th Street, South Indiana Avenue, and East 130th Street. The BRT would operate in mixed traffic and would not include new dedicated bus lanes.

The BRT Alternative would include the following features:

- Transportation improvements that are already in the Chicago Metropolitan Agency for Planning Fiscal Year 2010-2015 Transportation Improvement Program as described in the No Build Alternative
- 5.5 mile BRT service from 95th Street Terminal with four stops at 103rd Street, 111th Street, Kensington Avenue, and 130th Street
- New park & ride facilities at all stops
- Traffic signal priority at signalized intersections along 95th Street, Michigan Avenue, and 130th Street


87th
95th/Dan Ryan
103rd
111th
Kensington
130th
ASHLAND AVE
RACINE AVE
HALSTED ST
MICHIGAN AVE
KING DR
COTTAGE GROVE AVE
WOODLAWN AVE
STONY ISLAND AVE
STATE ST
STEWART AVE
BEVERLY AVE
87TH ST
91ST ST
95TH ST
99TH ST
103RD ST
107TH ST
111TH ST
115TH ST
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123RD ST
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134TH ST
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Calumet River
Little Calumet River
Inset
Lake Michigan
Legend
BRT Alternative
Proposed BRT Stop
Existing CTA Bus Stops Used by BRT Alternative
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
CTA Bus
Pace Bus
Water Body
Parks
Cemetery
Scale
0
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Miles
map id: 001_03

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Union Pacific Railroad (UPRR) Rail Alternative – Locally Preferred Alternative

The proposed UPRR Rail Alternative would extend the heavy rail transit line from the existing Red Line 95th Street Terminal to 130th Street. The UPRR Rail Alternative would operate on an elevated structure heading south from 95th Street along the I-57 Expressway for nearly one-half mile until reaching the UPRR corridor in the vicinity of Eggleston Avenue. The alignment would then turn south along the UPRR corridor to approximately 111th Street where it would turn southeast. East of South Prairie Avenue, the alignment would cross over the Canadian National/Metra Electric tracks near 119th Street, where it would transition to an at-grade profile and then continue southeast along the Northern Indiana Commuter Transportation District Chicago South Shore & South Ben Railroad (NICTD/CSS & SBRR) right-of-way using a portion of the Indiana Harbor Belt (IHB) alignment to terminate at 130th Street. The UPRR Alternative was selected by the Chicago Transit Board as the Locally Preferred Alternative on August 12, 2009.

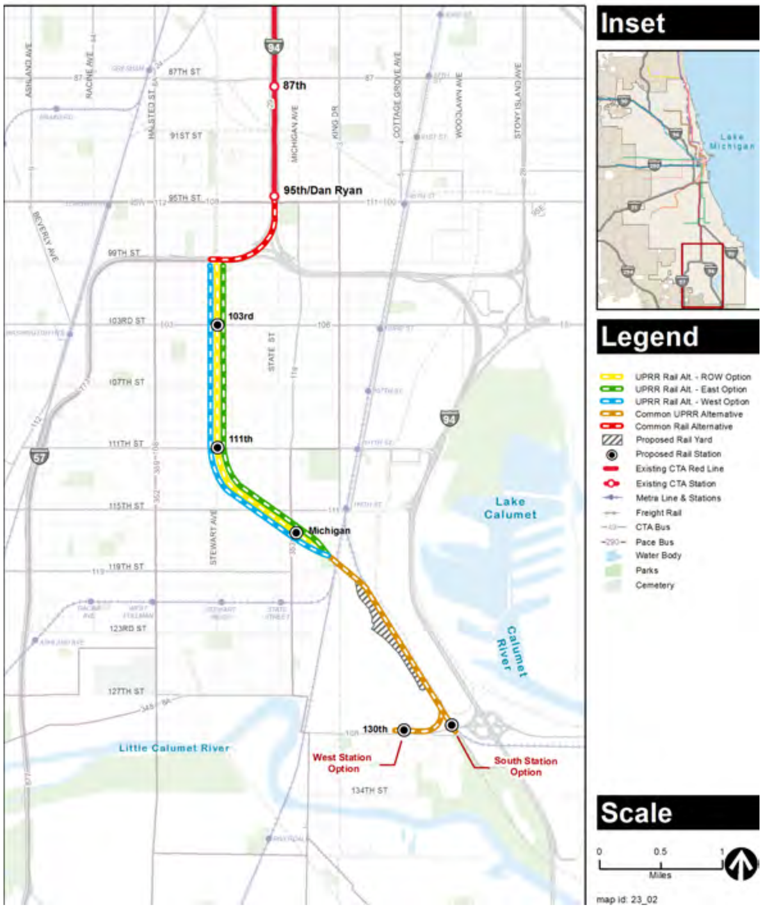
The Locally Preferred Alternative would include the following features:

- Transportation improvements that are already in the Chicago Metropolitan Agency for Planning Fiscal Year 2010-2015 Transportation Improvement Program as described in the No Build Alternative
- 5.3-mile heavy rail transit line extension from 95th Street Terminal to 130th Street
- Four new stations at 103rd Street, 111th Street, Michigan Avenue, and 130th Street
- New park & ride and bus terminal facilities at each station
- Bus transit service from the south to the new stations for faster travel to downtown Chicago
- New yard and shop at 120th Street

Three alignment options are being studied in the Draft EIS:

- Right-of-Way (ROW) Option
  The ROW Option was identified during the environmental analysis. As part of this option, the UPRR freight trains would relocate to another area (as part of a separate project), and new elevated CTA Red Line tracks would be built in the space where the Union Pacific freight rail tracks are now. This option would be contingent upon the UPRR relocating. The Chicago Department of Transportation (CDOT) has been working with the affected railroads to assess the technical and operational feasibility of such relocation. The results of CDOT's analysis will help to inform the feasibility of this new option.
- East Option
  As part of the East Option, CTA tracks would be placed immediately adjacent to the UPRR right-of-way to the east.
- West Option
  As part of the West Option, CTA tracks would be placed immediately adjacent to the UPRR right-of-way to the west.

Two options for the 130th Street terminal station are being studied in the Draft EIS. The South Station Option would be located to the west of the NICTD/CSS & SBRR right-of-way at 130th Street. The West Station Option would be located along the north side of 130th Street to the west of the NICTD/CSS & SBRR route.


Inset
Lake Michigan
Legend
UPRR Rail Alt. - ROW Option
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
Common UPRR Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
CTA Bus
Pace Bus
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87th
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103rd
111th
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130th
West Station Option
South Station Option
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Calumet River
Little Calumet River
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RACINE AVE
HALSTED ST
MICHIGAN AVE
KING DR
COTTAGE GROVE AVE
WOODLAWN AVE
STONY ISLAND AVE
BEVERLY AVE
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127TH ST
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57

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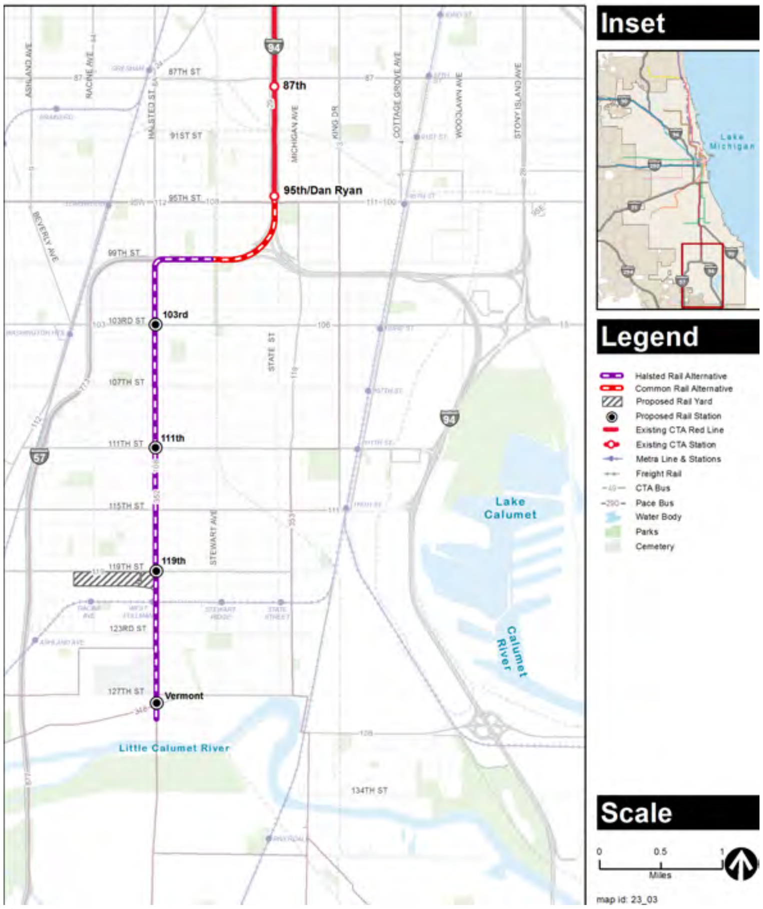
Halsted Rail Alternative

The proposed Halsted Rail Alternative would extend the rail line from the existing 95th Street Terminal to the intersection of Halsted Street and Vermont Avenue near 127th Street.

The Halsted Alternative would operate on an elevated structure between the existing 95th Street Terminal and the intersection of Halsted Street and Vermont Avenue near 127th Street. The alignment would follow the median of the I-57 Expressway until reaching Halsted Street. It would then turn south onto Halsted Street and continue to Vermont Avenue.

The Halsted Alternative would include the following features:

- Transportation improvements that are already in the Chicago Metropolitan Agency for Planning Fiscal Year 2010-2015 Transportation Improvement Program as described in the No Build Alternative
- 5-mile heavy rail transit line extension from 95th Street Terminal to the intersection of Halsted Street and Vermont Avenue
- Four new stations at 103rd Street, 111th Street, 119th Street, and Vermont Avenue
- New park & ride facilities at each station
- Bus transit service from the south to the new stations for faster travel to downtown Chicago
- New yard and shop at 119th Street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Halsted Rail Alternative
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Proposed Rail Yard
Proposed Rail Station
Existing CTA Red Line
Existing CTA Station
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RED AHEAD Red Line Extension

Environmental Review

Overview

The National Environmental Policy Act (NEPA) requires evaluation of potential environmental impacts associated with federal projects and actions. In accordance with the NEPA, the Chicago Transit Authority (CTA) and the Federal Transit Administration (FTA) are preparing an Environmental Impact Statement (EIS) that will evaluate the environmental effects of constructing and operating the proposed extension.

Environmental Impact Statement

The CTA is currently in the process of preparing a Draft EIS. The Draft EIS will include an evaluation of the No Build Alternative, the BRT Alternative, the UPRR Rail Alternative, and the Halsted Rail Alternative. The Draft EIS will describe the alternatives, the existing environmental setting, the potential impacts from construction and operation of the alternatives, and proposed mitigation measures to reduce or eliminate potential impacts.

The purpose of the EIS is to study, in a public setting, the effects of the proposed project and its alternatives on the quality of the physical, human and natural environment. Areas to be evaluated for potential impacts from construction and operation of the proposed project include, but are not limited to:

- Transportation
- Land use and economic development
- Displacement and relocation of existing uses
- Neighborhood and community
- Visual and aesthetic
- Noise and vibration
- Safety and security
- Historic and cultural resources
- Hazardous materials
- Air quality
- Wetlands
- Water quality
- Floodplains
- Vegetation and wildlife habitat
- Threatened and endangered species
- Geology and soils
- Energy
- Environmental Justice

The evaluation will reveal the extent to which the proposed project will or will not affect these areas. Measures to avoid, minimize, and mitigate potential adverse impacts will also be identified and evaluated.

To keep you informed about the proposed Red Line Extension Project, a newsletter was sent out in Summer 2013 and is available here.

Schedule

The CTA expects to publish the Draft EIS in early 2015 for public review. The public will have an opportunity to comment on the published Draft EIS during

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Brown Line	Normal Service
Green Line	Planned Work w/Station(s) Bypassed
Orange Line	Normal Service
Purple Line	Normal Service
Pink Line	Normal Service
Yellow Line	Normal Service

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11	15	20	24	29	36
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70	72	120	121	124	132
156	170	171	172	192	

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a 45-day public comment period. During the review period, CTA will host public hearings to receive comments on the Draft EIS from the public and agencies. The CTA will then prepare a Final EIS that will include responses to public comments received in Draft EIS, the environmental analysis of the single NEPA Preferred Alternative, and a list of committed final mitigation measures.

The FTA will consider the Final EIS and prepare a Record of Decision (ROD) selecting the preferred alternative including mitigations for adverse impacts. Issuance of the ROD indicates that CTA has satisfied all of the requirements of the NEPA. The issuance of the ROD will allow CTA to move forward with engineering and construction of the project.

The project schedule is dependent on federal reviews and approvals and funding availability.

August 2011 Open House

The CTA hosted an Open House in August 2011 to keep the public informed about the proposed Red Line Extension.

Tuesday, August 2, 2011, 6:00 p.m. to 8:30 p.m.
St. John Missionary Baptist Church
211 E. 115th Street, Chicago, IL 60628

Open House Exhibit Boards – August 2011

Scoping and Scoping Meetings

The process of determining the scope, focus, and content of an EIS is known as “scoping.” Scoping meetings are an opportunity to obtain information from the public and governmental agencies. The scoping process asks agencies and interested parties to provide input on the proposed alternatives, the purpose and need for the project, the proposed topics of evaluation, and potential effects and mitigation measures to be considered.

The official public comment period for scoping concluded on October 27, 2009. The comments received are summarized in the Scoping Report. Input received during scoping is used to refine the project purpose and need and alternatives, and to direct the analysis of environmental impacts. Public input is also used to help planners avoid potential impacts, and to identify potential mitigation measures.

Red Line Extension Scoping Report (.pdf)
Scoping report - revised June, 2010. Appendices are available as separate files.

Red Line Extension Scoping Report Appendices A-G (.pdf)
Public Participation Plan, Notice of Intent, Participating Agencies, Participating Agency Invitation Letters, Agency Scoping Meeting, Agencies and Organizations Notified of Scoping, Notification Materials

Red Line Extension Scoping Report Appendices H-K (.pdf)
Scoping Meeting Materials, Meeting Presentation, Meeting Exhibit Boards, Public Scoping Meeting Transcripts

Red Line Extension Scoping Report Plain Text Supplement for Appendices H-J (.txt)
This text-only supplement describes Scoping Meeting Materials, Meeting Presentation, Meeting Exhibit Boards

Red Line Extension Scoping Report Appendix L Public Comments 1-95 (.pdf)

Red Line Extension Scoping Report Appendix L Public Comments 96-171 (.pdf)

Red Line Extension Scoping Report Appendix L Public Comments 172-259 (.pdf)

Red Line Extension Scoping Report Appendix L Public Comments 260-344 (.pdf)

Red Line Extension Scoping Report Appendix M (.pdf)
Agency Comments - revised June, 2010

Alternatives Analysis

The purpose of the Alternatives Analysis (AA) Study, which ended in August 2009, was to examine a wide range of potential transportation options. In the AA process, the project's purpose and need were identified, alternatives that meet the purpose and need were developed and evaluated, and comprehensive and ongoing public involvement was initiated. Many different transportation alternatives were identified in the AA process. Based on public comment and an evaluation of those options against criteria that included cost, environmental factors, and feasibility considerations, the number of options was narrowed. There were three screening stages and the results of each screening stage were presented at public meetings. At each stage, there was an opportunity for the public to review and comment on the results. The end result of the AA process was the selection of a Locally Preferred Alternative by the Chicago Transit Board on August 12, 2009.

Screen 1 Analysis

The CTA held public open houses to receive input on preliminary findings from Screen 1 of the Alternatives Analysis Study for the proposed Red Line Extension.

Tuesday, April 10, 2007, 6-8 p.m.
Chicago State University, New Academic Library, 4th Floor Auditorium
9501 S. King Drive, Chicago, IL 60628

Wednesday, April 11, 2007, 6-8 p.m.
West Pullman Branch, Chicago Public Library
830 W. 119th St., Chicago, IL 60628

Presentations delivered at the Screen 1 meetings are available at the links below:

Public Meeting Presentation Part 1 - April 2007 (3 MB PDF)
Public Meeting Presentation Part 2 - April 2007 (2 MB PDF)
Public Meeting Presentation - April 2007 (Text version)

Public Meeting Display Boards - April 2007 (3 MB PDF)
Public Meeting Display Boards - April 2007 (Text version)

Public Meeting Comment Card - April 2007 (0.4 MB PDF)

The official public comment period for the study's Screen 1 preliminary findings meeting concluded on May 11, 2007. Full documentation of all comments and questions as well as complete responses are provided in the following files:

Screen 1 Public Comment Database (0.1 MB PDF)
Screen 1 Responses to Public Comments (0.1 MB PDF)

Screen 2 Analysis

The CTA held public open houses to present possible transit technologies and alignments in a study area bordered by 95th Street on the north, Ashland Avenue on the west, Stony Island Avenue on the east, and the Cal-Sag Channel/Little Calumet River and 134th Street on the south.

Wednesday, December 3, 2008, 6-8 p.m.
Historic Pullman Visitor Center
11141 South Cottage Grove, Chicago, IL 60628

Thursday, December 4, 2008, 6-8 p.m.
Woodson Regional Chicago Public Library
9525 South Halsted Street, Chicago, IL 60628

Presentations delivered at the Screen 2 meetings are available at the links below:

Public Meeting Presentation Part 1 – December 2008 (2.8 MB PDF)
Public Meeting Presentation Part 2 - December 2008 (3.8 MB PDF)
Public Meeting Presentation - December 2008 (Text version)

Public Meeting Display Boards Part 1 - December 2008 (2 MB PDF)
Public Meeting Display Boards Part 2 - December 2008 (2.4 MB PDF)
Public Meeting Display Boards - December 2008 (Text version)

Public Meeting Comment Card - December 2008 (0.4 MB PDF)

The official public comment period for the study's Screen 2 preliminary findings meeting concluded on December 18, 2008. Full documentation of all comments and questions as well as complete responses are provided in the following files:

Screen 2 Public Comment Database (0.1 MB PDF)
Screen 2 Responses to Public Comments (0.1 MB PDF)

Screen 3 Analysis

The CTA invited the public to open houses to present preliminary Screen 3 findings and a recommendation of a locally preferred alternative, which concluded the Alternatives Analysis study for the Red Line Extension.

Wednesday, June 3, 2009, 6-8 p.m.
Olive-Harvey College, Cafeteria
10001 South Woodlawn Avenue, Chicago, IL 60628

Thursday, June 4, 2009, 6-8 p.m.
Woodson Regional Chicago Public Library
9525 South Halsted Street, Chicago, IL 60628

Presentations delivered at the Screen 3 meetings are available at the following links:

Public Meeting Presentation Part 1 – June 2009 (1.4 MB PDF)
Public Meeting Presentation Part 2 – June 2009 (2.9 MB PDF)
Public Meeting Presentation - June 2009 (Text version)

Display Boards Part 1 - June 2009 (2.4 MB PDF)
Display Boards Part 2 - June 2009 (3.4 MB PDF)
Display Boards - June 2009 (Text version)

Display Maps – HRT UPRR Alternative (1.2 MB PDF)
Display Maps – HRT Halsted Alternative (0.9 MB PDF)
Public Meeting Comment Card (0.4 MB PDF)

The official public comment period for the study's Screen 3 findings and preliminary recommendation for a locally preferred alternative concluded on June 25, 2009. Full documentation of all comments and questions as well as complete responses are provided in the following files:

Screen 3 Public Comment Database (0.1 MB PDF)
Screen 3 Responses to Public Comments (0.1 MB PDF)

Locally Preferred Alternative Report

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  - Blue Line Forest Pk. Br. Feas./Vision Study
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RED AHEAD Red Line Extension

Red Line Extension Project: FAQ

The Chicago Transit Authority (CTA) knows residents and potential Red Line riders have questions about this proposed extension.

Q: How would CTA fund this proposed project?
A: Two types of funding are needed for the proposed extension – capital and operating. Capital funding (construction funding) for the proposed extension is provided partially by the Federal Transit Administration (FTA), through its "New Starts" grant program. This program provides funding for major public transit infrastructure projects throughout the United States through a highly competitive process. CTA is currently in the environmental review phase of that process that will allow the agency to apply for funding. Upon successfully advancing through the FTA's process, a project would be qualified to receive a Full Funding Grant Agreement (FFGA) from the Federal Transit Administration. The FFGA typically covers about half of a project's capital cost. Other non-federal funds will comprise the remainder of capital funding. Once the proposed extension is built and operational, CTA's operating budget would support day-to-day service.

Q: When would the extended Red Line be open for use?
A: No timeline has yet been established. Project schedule is dependent on federal reviews and approvals and funding availability.

Q: When would construction begin on the proposed Red Line Extension?
A: No timeline has yet been established. Project schedule is dependent on federal reviews and approvals and funding availability.

Q: What will be the operating hours for the proposed extension?
A: In the current project planning phase, the operating hours for the proposed extension are assumed to be the same as for the current Red Line, which operates 24 hours every day of the year.

Q: Would CTA need to buy private property because of the location of the proposed extension?
A: Yes, CTA would need to buy private property for each of the build alternatives. The number of properties impacted varies by alternative; between approximately 52 and 259 properties could be impacted. Final property acquisition requirements would be confirmed as project engineering proceeds. Property owners will be paid not less than fair market value for their land and buildings, and may be eligible for compensation equal to the original purchase price of the property. They would also be assisted in relocating their businesses or dwellings, per the Federal Uniform Act on

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Purple Line	Normal Service
Pink Line	Normal Service
Yellow Line	Normal Service

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59 60 62 63W 65 66
70 72 120 121 124 132
156 170 171 172 192

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relocation assistance and property acquisition. When a single alternative or option is chose, CTA will work with the community and property owners (including the UPRR) to minimize property impacts.

Q: Will there be places to park near the new stations?
A: New park & ride lots are proposed at each new station.

Q: How would this proposed extension impact the natural environment and the community?
A: Potential impacts to the environment are being studied in the Draft Environmental Impact Statement (EIS). The Draft EIS will:
• Identify and evaluate measures to avoid, minimize and mitigate adverse impacts.
• Describe the potential environmental effects of the proposed Red Line Extension improvements and the steps that will be taken to alleviate them.
Typically, environmental reviews for proposed transit projects address:

- Transportation
- Land use and economic development
- Displacement and relocation of existing uses
- Neighborhood and community
- Visual and aesthetic
- Noise and vibration
- Safety and security
- Historic and cultural resources
- Hazardous materials
- Air quality
- Wetlands
- Water quality
- Floodplains
- Vegetation and wildlife habitat
- Threatened and endangered species
- Geology and soils
- Energy
- Environmental Justice

Q: How would this proposed extension impact noise in the community?
A: The Draft Environmental Impact Statement (EIS) will evaluate the potential for noise impacts to the surrounding community. If it is determined that there could be noise impacts, then mitigation measures to reduce those impacts would be proposed in the Draft EIS such as welded rail, closed deck structures, and noise barriers. During the public review of the Draft EIS, you will have an opportunity to review and comment on the analysis and the proposed mitigation measures.

Q: What is the economic impact of this proposed extension?
A: The Draft Environmental Impact Statement (EIS) will evaluate the fiscal and economic benefits and potential impacts of the proposed extension. During the public review of the Draft EIS, you will have an opportunity to review and comment on the economic analysis. Numerous transit studies suggest that transit investments result in economic development. CTA estimates between 2,600 and 4,100 jobs would be created during Red Line Extension construction. In addition, new stations may serve as catalysts for neighborhood revitalization and help reverse decades of disinvestment in local business districts.

Q: How would the proposed Red Line Extension affect current CTA services, both during construction of the new service and during operation of the new service?
A: The specifics of construction for the proposed Red Line Extension have not been established yet. CTA’s general guidelines minimize the effects of construction on existing transit services. However, bus reroutes are possible. Once the proposed extension is complete, existing bus routes may be changed to complement the new high-capacity transit service. Depending on the specific route of the service, the number of routes feeding into the 95th

Street Terminal may be reduced, which would also reduce congestion in and around this facility.

Q: Is it possible that at some point this proposed Red Line Extension could go even farther to the Gary Airport and South Bend, Indiana?
A: At this point CTA's proposal for the Red Line Extension is limited to the project's defined study area, which is bounded by the Little Calumet River and 134th Street on the South. Any initiative to further expand service to the Gary Airport and South Bend, Indiana, would merit further investigation and its own planning study.

Q: If the CTA already has a Locally Preferred Alternative, why is the Draft Environmental Impact Statement (EIS) still studying two other build alternatives?
A: The federal National Environmental Policy Act (NEPA) process requires that we evaluate a range of alternatives in the EIS along with the Locally Preferred Alternative and a No Build Alternative (which looks at the existing transportation system, plus any committed transportation improvements that already are in the Chicago Metropolitan Agency for Planning Fiscal Year 2010 to 2015 Transportation Improvement Program). Other alternatives to be evaluated in the Draft EIS would include a Bus Rapid Transit Alternative and an elevated transit line along Halsted Street (which would not impact any parkland but could have other impacts). Federal law protects parklands from use by transportation projects unless there are no feasible or prudent alternatives that avoid the use of parklands. Project planning must include all possible planning to minimize harm to parklands and therefore, the Halsted Alternative will be evaluated in further detail in the Draft EIS. Based on the environmental analysis and public feedback received in the Draft EIS, a single NEPA preferred alternative will be selected and proposed in the Final EIS.

Q: For the Locally Preferred Alternative near the Union Pacific Railroad (UPRR) tracks, has CTA talked with Union Pacific representatives?
A: CTA has had preliminary conversations with UPRR and will continue to coordinate with the railroad as plans proceed. The UPRR requires that the CTA tracks be located at least 50 feet from the existing freight tracks due to safety considerations.

Q: Can engineering design be done at the same time as the Environmental Impact Statement is being drafted?
A: As part of the new Moving Ahead for Progress in the 21st Century Act (MAP-21) policy, environmental review is completed during the Project Development Phase. The Engineering Phase is the next step, during which engineering and design is completed. The timing for the Engineering Phase is subject to funding availability and federal approvals. Currently, CTA has not secured approval and funding for the Engineering Phase.

Q: How does work on the other Red Ahead projects affect progress on the Red Line Extension?
A: Red Line Extension project is one part of the Red Ahead Program to extend and enhance the entire Red Line. The Red Ahead program consists of separate projects with their own separate sources of potential funding and timelines. These projects are mutually beneficial and are combined into the Red Ahead program to ensure that they are coordinated efficiently.

Q: What portion of the extension would be elevated?
A: The UPRR Rail Alternative would operate on an elevated structure from approximately 95th Street up to 119th Street, where it would transition to an at-grade profile and then continue at grade before terminating in the vicinity of 130th Street. The terminal station would be at-grade, whereas other stations would be elevated. The Halsted Rail Alternative would operate on an elevated structure from 95th Street to the intersection of Halsted Avenue and Vermont Avenue and all stations on this alternative would be elevated.

Q: Would this extension connect to existing Metra Electric or South Shore services?
A: There is potential for connection of the proposed Red Line Extension to the Northern Indiana Commuter Transportation District (NICTD) South Shore Commuter Rail Line in the vicinity of 130th Street, where the two lines would

be adjacent to each other. This potential connection will be explored in further detail during the engineering phase. A connection between the Red Line Extension and Metra Electric District at Kensington/115th Street station is not possible, as the proposed Red Line Extension routing crosses the Metra Electric District Line approximately one-half mile to the south of the Kensington/115th Street station.

Q: Is CTA coordinating with Metra on the Red Line Extension?
A: CTA is coordinating with Metra on our progress with the Red Line Extension project. Metra is a participating agency in the environmental review process for the Red Line Extension.

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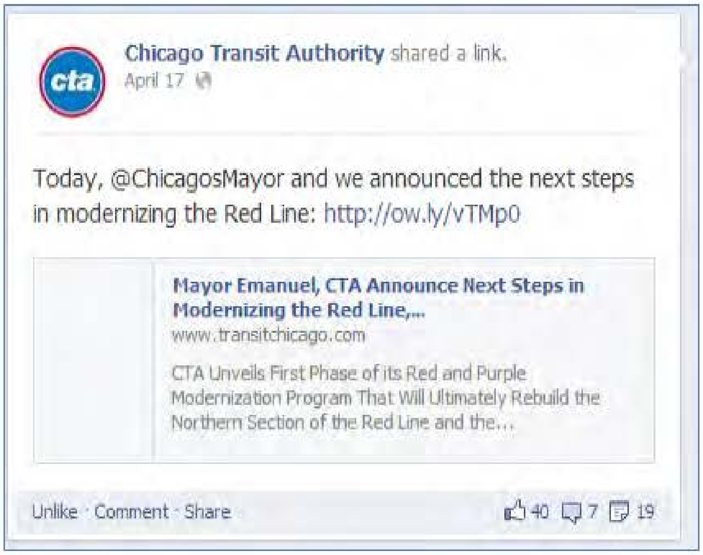
Chicago Transit Authority shared a link.
April 17

Today, @ChicagosMayor and we announced the next steps in modernizing the Red Line: http://ow.ly/vTMp0

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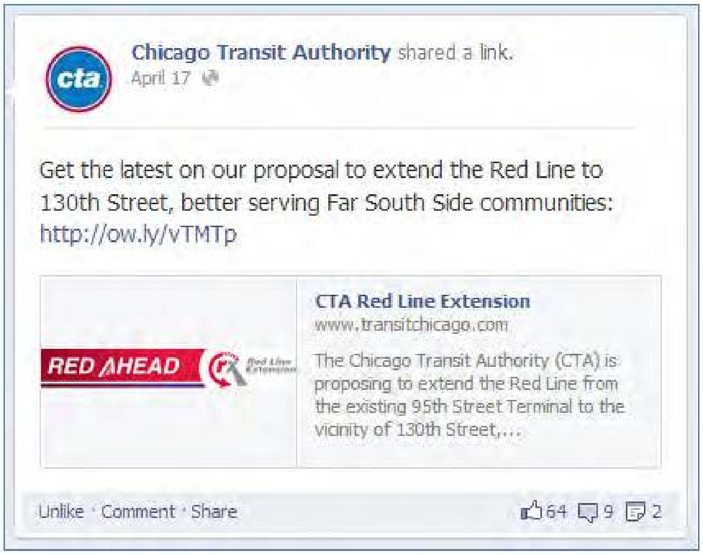
CTA Unveils First Phase of its Red and Purple Modernization Program That Will Ultimately Rebuild the Northern Section of the Red Line and the...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Get the latest on our proposal to extend the Red Line to 130th Street, better serving Far South Side communities: http://ow.ly/vTMTp

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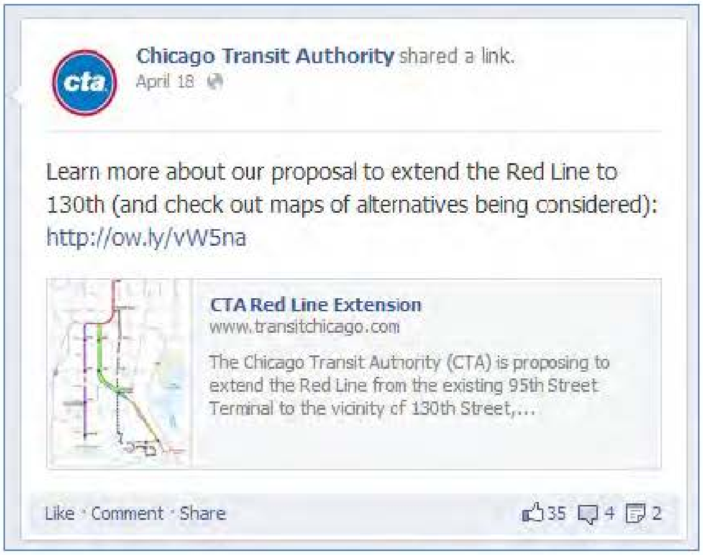
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Learn more about our proposal to extend the Red Line to 130th (and check out maps of alternatives being considered): http://ow.ly/vW5na

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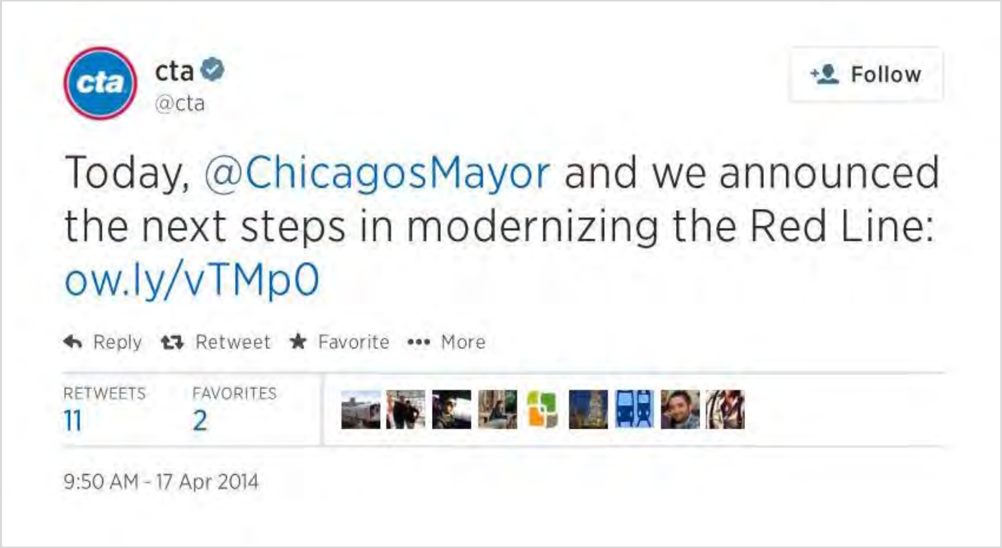
The Chicago Transit Authority (CTA) is proposing to extend the Red Line from the existing 95th Street Terminal to the vicinity of 130th Street,...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Today, @ChicagosMayor and we announced the next steps in modernizing the Red Line: ow.ly/vTMp0

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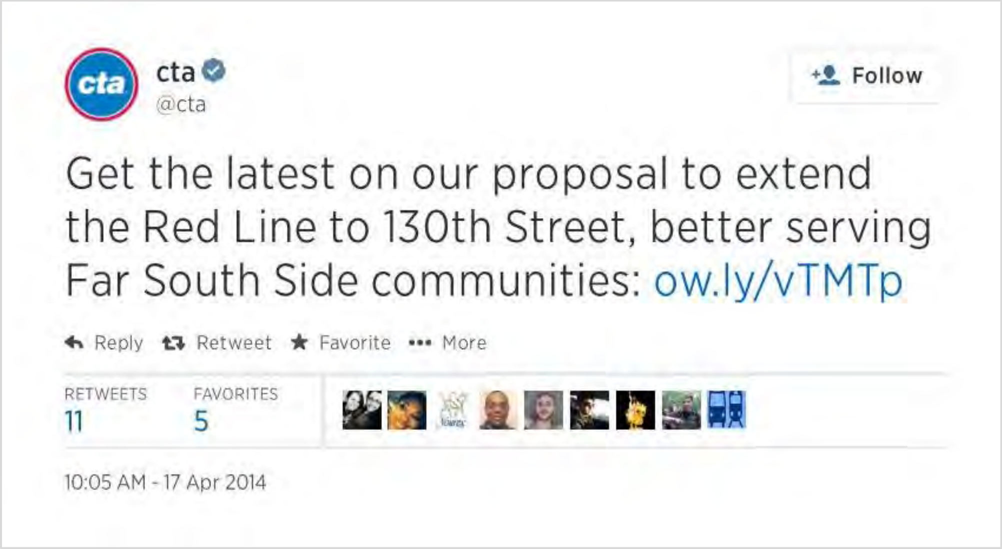
FAVORITES 2

9:50 AM - 17 Apr 2014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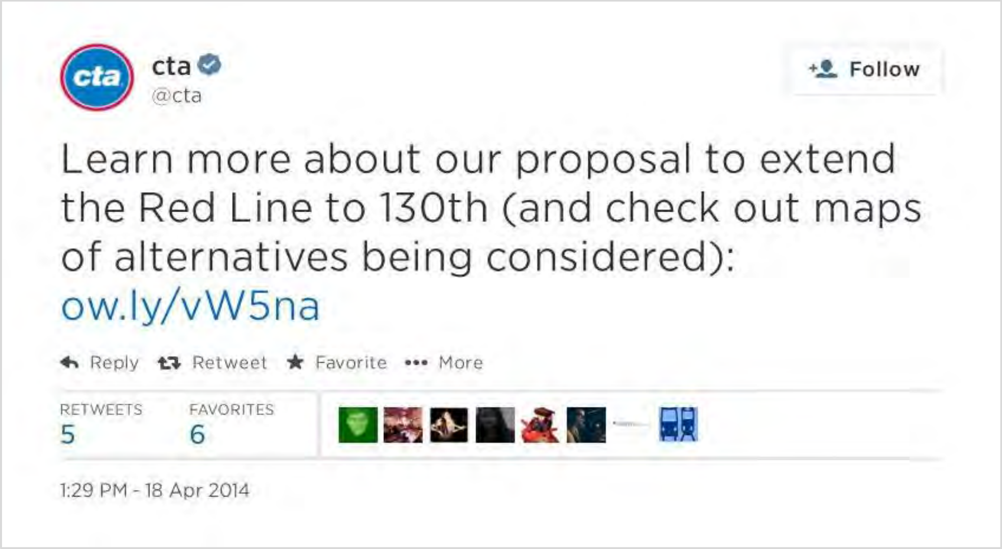
10:05 AM - 17 Apr 2014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Learn more about our proposal to extend the Red Line to 130th (and check out maps of alternatives being considered): ow.ly/vW5na

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FAVORITES 6

1:29 PM - 18 Apr 2014

Red Line Extension

cta

You're invited to attend a CTA open house on the

Red Line Extension Project

Since the RLE Project open house meeting during the summer of 2011, we have been preparing a Draft Environmental Impact Statement (EIS) based on the technical analysis of impacts of the alternatives. Findings from this preliminary impact analysis of the alternatives will be discussed at the Open House. CTA welcomes your comments and feedback about the RLE Project alternatives and potential impacts, which will be incorporated into the Draft EIS.

This project is one part of CTA's Red Ahead Program, a comprehensive initiative for maintaining, modernizing, and expanding Chicago's most-traveled rail line.

When and where?

Tuesday, May 13, 2014
5:30 to 7:30 p.m.

Palmer Park Gymnasium
201 E. 111th Street
Chicago, IL 60628

This location is served by: CTA Bus #34, #111, #119; Pace Bus #353; and Metra Electric 111th Street (Pullman).

This facility is accessible to people with disabilities.

www.transitchicago.com/redeis • RedExtension@transitchicago.com

Para informacion en Español, llame al 312-681-2807

Customer Information: 1-888-YOUR-CTA (1-888-968-7282)

Red Line Extension

cta

Chicago Transit Authority
Strategic Planning, 10th Floor
567 West Lake Street
Chicago, IL 60661-1465

Do you require assistance?

If you require an interpreter, including sign language services, or other accommodations at this meeting, contact Gerald Nichols, CTA Government and Community Relations, at least five days prior to the meeting at 312-681-2807 or GNichols@transitchicago.com.

You're invited to attend a CTA

OPEN HOUSE

on Red Line Extension (RLE) Project

Since the last RLE Project open house meeting during the summer of 2011, CTA has been preparing a Draft Environmental Impact Statement (EIS) to evaluate the impacts of three potential build alternatives for the project. At the open house, you will learn more about the proposed alternatives, hear about anticipated project benefits and impacts of the alternatives under consideration, and have the opportunity to provide feedback. CTA welcomes your comments about the RLE Project alternatives and potential impacts, which will be incorporated into the Draft EIS.

Learn More About the Project!

CTA encourages you to visit the RLE webpage to get more information about the project. The RLE Project is one part of the Red Ahead Program, a comprehensive initiative for maintaining, modernizing and expanding Chicago's most traveled rail line. Thank you for your continued interest.

RLE Project Team
Chicago Transit Authority

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Red Line Extension

You're invited to attend a CTA

OPEN HOUSE

on Red Line Extension (RLE) Project

At the open house, you will learn more about the three potential build alternatives for the project, hear about anticipated project benefits and impacts of the alternatives under consideration, and have the opportunity to provide feedback. CTA welcomes your comments about the RLE Project alternatives and potential impacts, which will be incorporated into the Draft Environmental Impact Statement.

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CTA Open House

Red Line Extension Project – Progress Update

At the Red Line Extension (RLE) Project open house, you will learn more about the proposed alternatives, hear about anticipated project benefits and impact , and have the opportunity to provide feedback.

What's New with the Red Line Extension Project?
Since the RLE Project open house meeting during the summer of 2011, CTA has been preparing a Draft Environmental Impact Statement (EIS) based on the technical analysis of impacts of the alternatives. Findings from this preliminary impact analysis of the alternatives will be discussed at the open house.

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*Facility accessible to people with disabilities

transitchicago.com
Customer Information: 1-888-YOUR-CTA (1-888-968-7282); CTA TTY: 1-888-CTA-TTY1 (1-888-282-8891)
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Appendix A
Meeting Notifications

Press Release

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Media Articles

http://politics.suntimes.com/article/chicago/cta-announces-final-two-options-red-line-extension-route/tue-04152014-613pm

The 95th Street station is now the end of the Red Line. That station is due for a major renovation, and the CTA is looking at routes to extend the Red Line to 130th Street. | Sun-Times File Photo

CTA weighs two options for Red Line extension route

TUE, 04/15/2014 - 6:13PM

FRAN SPIELMAN AND ROSALIND ROSSI
@FSPIELMAN | EMAIL

The CTA has narrowed to two the routes for a long-awaited Red Line extension from 95th to 130th Street — one down the middle of busy Halsted Street, the other mostly running along existing freight tracks.

Ald. Anthony Beale (9th), whose South Side ward would be most heavily affected by the extension, was briefed on the options Tuesday. The chairman of the City Council’s Transportation Committee emerged with a ringing endorsement of the alternative that steers clear of Halsted.

That option for the $2 billion, 5-mile-plus extension generally follows freight tracks operated by the Union Pacific Railroad. A large portion of the tracks run along Eggleston — four blocks west of the existing 95th Street station — and curve eastward as they move farther and farther south.

The CTA’s plan calls for four new stations: at 103rd, 111th, 115th and 130th, with a combined total of up to 2,000 “Park & Ride” spaces, the alderman said.

In addition, construction of a new, $240 million station at the end of the current Red Line, at 95th Street, is due to begin this year and follows massive improvements to Red Line track from Cermak to 95th, completed last October.

“Halsted Street is wide open. Putting elevated tracks down the middle of the street would disrupt the integrity and cosmetics of Halsted. It would hurt existing businesses. I don’t think anybody wants that,” Beale said.

CTA President Forrest Claypool could not be reached for comment on Tuesday’s briefing.

Union Pacific spokesman Mark Davis said Tuesday that the CTA approached the railroad about the possibility of extending the Red Line about a year ago and “we haven’t heard anything back since.’’

However, Davis said, “If they want to approach us again, I’m sure our team would be happy to talk with them.’’

Davis noted that CTA trains, which are powered by an electrified third rail, cannot travel on the same tracks as diesel freight trains.

That means the option Beale favors would require the CTA to build its own tracks, either alongside the UP track or above them. Elevating the tracks could present its own set of problems, considering the hazardous materials freight trains sometimes carry. Davis did not immediately know whether any hazardous materials are transported on the portion of UP track in question.

Either way, the CTA would be required to obtain right-of-way from the railroad, Davis said. Another question is whether UP owns a wide enough right-of-way to allow another set of tracks to be built.

“From a safety standpoint, putting a commuter train next to freight lines — you need wider areas. It’s a complex negotiation to make that happen,” Davis said.

Mayor Rahm Emanuel campaigned on a promise to rebuild the 95th Street station and extend the Red Line South to 130th Street.

The mayor also sold aldermen on his risky, $425 million plan to close the Red Line for five months with the argument that the line needed to be rebuilt before it could be extended.

Now that the possible routes for an extension have been narrowed from five to two, the next step is an exhaustive set of community hearings to decide which option South Side residents favor and how much parking they want at each station.

Beale called it “phase four” of seven or eight hurdles that must be cleared before construction can begin — in three or four years, at the earliest.

The biggest question is whether the CTA can persuade the federal government to bankroll the $2 billion project.

Beale believes the chances are good and not just because of the clout Emanuel carries as a former North Side congressman who served as White House chief-of-staff under President Barack Obama.

“That’s a huge ask from the federal government. But, we’ve been talking about the Red Line extension since I was a kid. Since I’ve been chairman, I’ve made this a priority. So has the mayor. I have all the confidence in the world it’s going to happen,” Beale said.

“95th Street is not the end of the city. What about people who need access to jobs downtown and deserve the right get there in a timely manner? Now that we’ve completed the Red Line upgrade and the [$240 million] 95th Street Station reconstruction is about to start, we can walk right into the extension that will finally complete the Red Line from one end of the city to the other.”

If federal funding falls short, Beale said the Red Line extension could be a candidate for Emanuel’s much-ballyhooed Infrastructure Trust to persuade private investors to bankroll projects Chicago can’t afford to build on its own.

That option would likely require CTA riders to pay higher fees to guarantee private investors an attractive return on their money.

“If we have to, we can look at it, but only if it’s the only way,” Beale said.

“We don’t want to put an extra fee on top [of CTA fares]. If we can get the money from the federal government, we can keep the fees down. We’re gonna lean on the federal government for funding first. My emphasis is on the federal government — not the trust."

The extension of the Red Line is part of the CTA's "Red Ahead" project to extend and enhance the CTA's most-traveled rail line. The project includes improvements on the Red Line as well as upgrades to the line it connects into at its north end — the Purple Line — all the way to the last stop, at Linden in Wilmette.

Chicago Sun-Times

http://www.suntimes.com/news/metro/26869554-418/cta-narrows-possible-routes-for-proposed-red-line-expansion.html#.U1rcFVVdV8F

CTA narrows possible routes for proposed Red Line expansion

BY FRAN SPIELMAN AND ROSALIND ROSSI Staff Reporters April 15, 2014 10:04PM

The 95th Street station is now the end of the Red Line. That station is due for a major renovation, and the CTA is looking at routes to extend the Red Line to 130th Street. | Sun-Times File Photo

The CTA has narrowed to two the routes for a long-awaited Red Line extension from 95th to 130th Street — one down the middle of busy Halsted Street, the other mostly running along existing freight tracks.

Ald. Anthony Beale (9th), whose South Side ward would be most heavily affected by the extension, was briefed on the options Tuesday. The chairman of the City Council's Transportation Committee emerged with a ringing endorsement of the alternative that steers clear of Halsted.

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Elevated tracks "would disrupt the integrity and cosmetics of Halsted. It would hurt existing businesses. I don't think anybody wants that," Beale said.

CTA President Forrest Claypool could not be reached for comment on Tuesday's briefing.

Union Pacific “would be happy to talk” with the CTA about extending the Red Line, spokesman Mark Davis said Tuesday, but he noted CTA trains, powered by an electrified third rail, can’t use the same tracks as diesel freight trains.

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Either way, the CTA would be required to obtain right-of-way from the railroad, Davis said. Another question is whether UP owns a wide enough right-of-way to allow another set of tracks to be built.

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Chicago Tribune

http://www.chicagotribune.com/news/local/breaking/chi-cta-to-redo-4-north-side-red-line-stations-20140416,0,6118418.story?page=2&r=1662C3061245J7V

Red Line to get North Side overhaul, while South Siders decry wait

Residents react to the news that 16 buildings could be razed to make way for an expansion for the Brown, Purple, and Red line trains at Belmont.

Belmont
Belmont - cta Red, Purple, Brown Lines

Residents react to the news that 16 buildings could be razed to make way for an expansion for the Brown, Purple, and Red line trains at Belmont.

By Jon HilkevitchTribune reporter

8:32 p.m. CDT, April 16, 2014

The CTA said Wednesday it is moving forward with a multibillion-dollar overhaul of the Red Line's aging north branch tracks and stations, just hours after South Siders aired complaints to the agency's board that Mayor Rahm Emanuel's promised southern extension of the same rail line was moving too slowly.

CTA officials later said they also were planning a "major announcement" for Thursday about the 5 1/2-mile extension, envisioned to run from the current 95th Street terminal to about 130th Street and feature four new stops.

Despite the strong billing, however, Thursday's disclosure will focus primarily on that project moving deeper into an ongoing environmental impact study, officials said.

It's an incremental step in a long process. Ultimately, the planned rail service enhancement would provide vital transportation links to downtown and other areas of the city from some of the poorest and transit-underserved communities in the U.S., officials have said.

That's in contrast to Wednesday's more definitive announcement that four north-branch stations — Lawrence, Argyle, Berwyn and Bryn Mawr — will be replaced and that track in that area will be upgraded to allow faster trains, starting no sooner than in 2017. That work comes with a commitment of some amount of federal money and would be the first phase of a $4 billion-plus rehab project along the Purple and northern Red lines.

And for Emanuel, getting closer to breaking ground on the extension would likely help to shore up support among African-American voters, which Tribune polling shows has fallen since his election.

But transit officials have not even hinted when construction might begin. That's because the Red Line south extension project, estimated to cost $2.3 billion, has no funding for construction currently.

The 59,000 residents of the Greater Roseland area are "growing impatient" with elected officials about the slow pace of progress on the extension, the Rev. Paul Brown, representing the Zion Temple Missionary Baptist Church and the Developing Communities Project, testified before the CTA board Wednesday. He said "a sense of urgency" is needed.

"I simply do not understand why the communities that seem to have your attention have succeeded while we are clearly failing," Brown said.

The CTA last year spent $425 million to rebuild the tracks on the Red Line south branch from Cermak-Chinatown to 95th Street, cutting up to 10 minutes each way between 95th Street and downtown. A $240 million expansion and overhaul of the crowded 95th Street terminal begins this year. But the Red Line south extension hasn't taken off, despite pledges from a handful of past CTA presidents dating to the mid-1990s.

Current CTA president Forrest Claypool said Wednesday that he cannot speak about earlier decisions.

"Mayor Emanuel has been here less than three years and in that three years I think this has been on a very fast trajectory," Claypool said. "The federal government makes it a very extensive process … where you are basically starting from scratch as a new start. It is very onerous and time-consuming, but we are moving that as fast as possible."

The CTA is counting on federal funding to finance the bulk of the extension work, but current federal transportation spending legislation expires at the end of September and many experts consider it a long shot that a new spending plan will be approved soon.

There is, however, the commitment to some as-yet-unknown level of federal funding for the CTA's modernization of the Red Line north branch and the Purple Line. The multi-year project will involve replacing stations, deteriorated tracks and outdated signals as well as rebuild structure on a 9.6-mile stretch from north of the Belmont station through Evanston to the Linden station in Wilmette.

The overall goals are to increase capacity on the Red and Purple lines by 20 to 50 percent, reduce travel times, alleviate overcrowded station platforms and provide access for transit riders with disabilities, officials said.

The Federal Transit Administration, which allocates money for large-scale transit projects across the nation, recently listed the CTA's Red-Purple Modernization project as the first project in the U.S. eligible for a new pot of money under a so-called "core capacity" program, which is aimed at helping cities renew heavily used transit lines. No specific dollar pledge has been made yet. The U.S. Department of Transportation has recommended spending a total of $275 million in fiscal 2015 on all eligible core capacity projects in the U.S.

The CTA said in documents released in March that it expects to seek $1.5 billion from the FTA to begin the Purple Line and Red Line north branch work. More funding could be sought later from different pots of federal money, officials said.

The CTA said Wednesday that it will start the ball rolling by rebuilding the four contiguous stations that date to the early 1900s, as well as conduct track and structure work on the Red Line north branch, at an estimated cost of $1.13 billion.

"Some of this infrastructure has stood since the last time the Chicago Cubs won the World Series (in 1908)," Steele said.

The Argyle and Bryn Mawr stations were built in 1908, according to the CTA. Berwyn was built in 1916 and Lawrence in 1923. The complete redo will include the installation of elevators to make the stations accessible to disabled riders.

Officials said it is too early to know how the work will affect service.

The North Side project's total cost is $4.7 billion, according to the FTA.

In addition to the four stations, the nearby Wilson station will also be rebuilt as part of a previously announced and already funded $203 million project that is set to begin this fall.

Meanwhile, an extension of the Red Line south branch has been sought for decades by South Siders, and at different points in time labeled as a high priority by mayors and CTA presidents. In August 2009, the CTA board made it official by voting to extend the line.

The preferred route that the CTA identified in 2009 would operate on an elevated structure that heads south from 95th Street along the median of I-57 for nearly one-half mile until reaching a corridor owned by the Union Pacific Railroad, in the vicinity of Eggleston Avenue.

It would then turn south along the UP corridor to approximately 111th Street, where it would turn southeast. East of South Prairie Avenue, the alignment crosses over the Canadian National/Metra tracks near 119th Street, where it transitions to ground level and then continues southeast along the former Michigan Central/Indiana Harbor Belt railroad right-of-way to terminate in the vicinity of 130th Street.

The extension would include four stations near 103rd, 111th, 115th and 130th streets. Each new station would include park-and-ride lots and bus terminals to serve connecting riders, officials said.

Emanuel said the Red Line extension was his No. 1 transportation priority when he was campaigning for mayor, and CTA officials say the extension remains a top priority.

But riders like lifelong Chicago resident Phyllis Johnson, who spoke at a CTA board meeting Wednesday before the agency released information on either Red Line project, question whether it’s the case.

“What can we do to get this ball rolling to resolve this problem?” said Johnson, a resident of the Roseland community. “Wouldn’t you agree with me that it is way beyond time to extend the CTA Red Line?”

That skepticism is common on the South Side, said Ald. Howard Brookins, 21st, when reached by the Tribune on Wednesday.

“I think a lot people think that it’s so far off that it won’t occur for another 20 years,” he said.

He said South Siders tend to feel shortchanged with it comes to public transportation, because other areas of the city have multiple CTA and Metra lines.

Tribune reporter Hal Dardick contributed.

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Chicago Sun-Times

http://www.suntimes.com/26889866-761/cta-plans-red-line-improvements-on-north-south-sides.html#.U1VzoVVdV8F

CTA plans Red Line improvements on North, South sides

By ROSALIND ROSSI Transportation Reporter April 17, 2014 1:10AM

North and South Side riders of the CTA's busiest rail line — the Red Line — should see improvements under plans outlined Wednesday.

For North Siders, the CTA could begin work as early as 2017 on a $1.13 billion plan to upgrade track and rehab four stations, from Lawrence to Bryn Mawr.

The stations are among the oldest in the system, officials said. Bryn Mawr was built in 1908, when the Cubs last won the World Series.

The project is contingent on funding, but the CTA hopes to bankroll it with new federal "core capacity" money that can be tapped by older transit lines.

For South Siders, President Forrest Claypool insisted Wednesday that the CTA is "putting the pedal to the metal" on a long-awaited plan to extend the south end of the Red Line from 95th Street to 130th.

One CTA user, Phyllis Johnson, told CTA board members Wednesday that the extension once promised by former Mayor Richard J. Daley after the Red Line opened in 1969 is "becoming the dream deferred.'' Other lines have been extended or created while the Roseland community, which would be affected by an extension, has sat by with no transit developments, Johnson said.

The layers of requirements needed to win federal money for the $2 billion project are "onerous," Claypool said, but Mayor Rahm Emanuel is "putting this on a faster trajectory than previous administrations.''

Emanuel campaigned on extending the Red Line and has emphasized the project since his election, Claypool said.

“Mayor Emanuel’s mandate to us is to modernize the Red Line, from top to bottom, from north to south, and that’s what we’re doing,’’ Claypool said.

The CTA’s “preferred” extension method would be to run an elevated track from the 95th Street station, along Interstate 57 to 98th Street, where the elevated tracks would run parallel with some Union Pacific freight tracks to 130th Street, Claypool said. The tracks could run to the east of UP’s right of way or to the west, CTA officials said. The CTA also had considered building inside the UP’s right of way, but UP has ruled that out, a UP spokesman said.

Although the UP route is the top option, the CTA must give federal authorities at least two more, Claypool said. They include running the rail extension down Halsted Street — something local Ald. Anthony Beale (9th) opposes — or doing a less expensive bus-rapid transit route to 130th.

Beale said Tuesday he was briefed on only two plans — the UP route and the Halsted route, leading him to believe the CTA had only two options under active consideration.

“I can see how he might have perceived it that way because that’s where the focus of the conversation was,’’ Claypool said. “But there’s always been a federally required third alternative, which is the BRT.’’

Claypool conceded that land will have to be acquired as part of the extension project, although it’s too early to say where or how many parcels.

The next step involves publication of the final environmental impact study in 2015, Claypool said.

On the North Side, the planned improvements are part of a larger project to rejuvenate the Red Line and Purple lines, from the Belmont station to the Linden Station in Wilmette. Project estimates have ranged from $2 billion to $4 billion.

Email rrossi@suntimes.com

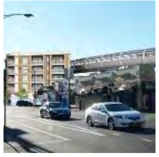
Twitter @rosalindrossi

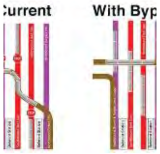
Chicagoist

http://chicagoist.com/2014/04/17/cta_officially_announces_red_line_s.php#photo-1

CTA Officially Announces Red Line South Extension, Red/Purple Line Renovation

A rendering of the proposed Belmont Overpass.(*Chicago Transit Authority*)





Chicago Transit Authority formally released details of its planned renovations of the Purple Line and Red Line north branch and the long planned extension of the Red Line's south branch Thursday and let's just say we're cautiously optimistic that maybe CTA has done some solid planning.

We already know the first phase of the project, set to begin in 2017, will involve rehabbing the Lawrence, Argyle, Berwyn and Bryn Mawr Red Line stations and replacing tracks for the Red and Purple Lines at those stations to reduce slow zones. CTA has started the process of securing federal funding to extend the Red Line from its current southern endpoint at 95th Street to 130th Street, using existing freight rail tracks. That project would cost $2.3 billion.

The aspect of the Red/Purple Line rehab we're most impressed by is a "Belmont bypass" allowing the Brown Line to continue along its route by riding above the existing Red and Purple Line rails. Currently the Brown Line has to negotiate its route by crossing those rails, resulting in 40 percent of weekday trains being delayed by up to three minutes.

In order for the bypass to be built CTA will have to buy 16 buildings between Belmont Avenue and Addison Street in order to make room for the project. The total cost of the Belmont bypass is included in the $1.7 billion cost the first phase of Red and Purple Line rehab is expected to cost.

CTA has been busy with infrastructure improvements lately. They rebuilt the Red Line's south branch last year at a cost of $425 million, spent $86 million renovating and rehabbing seven stations on the Red Line north branch two years ago, and work will begin later this year on extensive renovations to the 95th Street and Wilson Red Line stations. "With both the Red and Purple Modernization and Red Line Extension projects, we'll replace outdated infrastructure with a modern, efficient rail, and build more than five miles of new track," CTA President Forrest Claypool said. "Together these improvements will offer CTA customers faster, more reliable service, and increasing access to quality rail transportation for thousands of future riders."

NBC 5 Chicago

http://www.nbcchicago.com/traffic/transit/CTA-Announces-Plans-For-Red-Line-Extension-and-Rehab-255653171.html

CTA Announces Plans For Red Line Extension and Rehab

Plans to extend the Red Line past 95th Street, rebuild oldest North Side stations

By **Colleen Connolly**

Thursday, Apr 17, 2014 | Updated 5:04 PM CDT

The CTA is planning to overhaul tracks on the North Side's Red, Brown and Purple lines, and expand Red Line service on the far South Side. Charlie Wojciechowski has details.

Red Line riders have something to look forward to in the coming years.

Chicago Transit Authority officials announced Thursday plans for rehabbing five North Side stations and building a long-awaited South Side extension. The projects are part of the first phase of the city's Red and Purple Modernization program.

The stations at Wilson, Lawrence, Argyle, Berwyn and Bryn Mawr were specified for the rehabilitation, which could begin as early as 2017. The five stations are among the oldest, having been built between 1908 and 1923.

The CTA also announced plans to build a Red-Purple Line bypass north of Belmont to eliminate delays and speed up train service where the Red, Purple and Brown Lines intersect.

On the South Side, the CTA plans to extend tracks for 5.3 miles and add four new Red Line stations south of 95th Street. Stops would be located at 103rd, 111th, 115th and 130th Streets, and up to 2,000 “Park and Ride” spaces would be added.

No date has been set to begin the construction of the new stations, but plans for the route have been narrowed down to three options. The first option is to build tracks parallel to the Union Pacific freight tracks from 98th Street to 130th Street. The second option is to build elevated tracks above Halsted Street. The final option is to build a bus-rapid transit route to 130th Street.

Last year, the CTA closed nine Red Line stops south of Roosevelt Road as part of the Red Line South Track Renewal Project. The $425 construction project repaired the crumbling tracks and reduced commute times.

CBS 2 Chicago

http://chicago.cbslocal.com/2014/04/18/far-south-side-residents-endorse-red-line-extension/

Far South Side Residents Endorse Red Line Extension

April 18, 2014 6:11 PM

Dorothy Tucker

(CBS) – The CTA has an ambitious proposal in the works: extending the Red Line from 95th Street south to 130th, with four new stops along the way.

CBS 2's Dorothy Tucker has reaction from CTA riders.

Timothy Thomas rises every morning at 5 to catch the Pace bus near 130th.

"It's not always accurate," he says of the schedule.

But the bus is the only way to connect to the CTA train on 95th, which gets him to his job downtown. "So, if the Red Line were extended it would be great," Thomas says.

One hundred and thirtieth would be the new last stop on the Red Line extension. New, too, would be stops at 115th, 111th and 103rd. That's where Kelia Louis now catches the bus.

"That would be very convenient," Louis says.

The extension would shave 10 to 15 minutes off Louis' commute from Chicago's South Side, and even more for suburban commuters.

The Times of Northwest Indiana

http://www.nwitimes.com/news/local/illinois/chicago/southeast-chicago-residents-awaiting-proposed-red-line-extension-to-th/article_b5c42660-b95d-5eff-8b39-fd190ef09e0a.html

Southeast Chicago residents awaiting proposed Red Line extension to 130th Street

April 20, 2014 1:00 am • Gregory Tejeda Times Correspondent

CHICAGO | When Peggy Salazar, of the Slag Valley neighborhood, needs to travel to downtown, her commute is longer than that of many suburban residents who live farther away.

Her community has only one Chicago Transit Authority route that leads downtown. It's a No. 30 South Chicago bus route that works its way from the Hegewisch station on the South Shore line at Brandon and Brainard avenues north to the Red Line train line at 69th Street.

"It's a long, slow kind of route," she said of the commute that can take 1 1/2 hours to complete.

Salazar and others at Chicago's southern end were interested in the news the CTA is looking at improvements on the Red Line trains.

For now, the focus is on building a bypass meant to ease congestion on CTA train lines that service North Side neighborhoods. CTA officials said they're also submitting applications to federal agencies for more funding for an expansion of the Red Line trains south to 130th Street.

CTA President Forrest Claypool said money is to complete environmental impact studies that began in 2011 and are required before engineering studies on the extension proposal can begin.

Officials said they will begin a community outreach program this spring meant to get local views on the project, while also allowing the CTA to disseminate information to the public about when the long-desired extension would begin. An open house already is scheduled for May 13 at Palmer Park gym, 201 E. 111th St.

What they're going to find is that some people already are working to prepare area businesses and residents for the day when a CTA train route extends nearly to Chicago's far southern border at 138th Street.

Michael LaFargue, president of the West Chesterfield Community Association, said his group and several other far South Side community organizations meet regularly to discuss the extension, which they say will revitalize businesses in their area by making it easier for people to travel so far south in Chicago.

“We want any businesses located near the train stations on the extension to be ready when it takes place,” LaFargue said, adding it also would allow people to work jobs outside their home neighborhoods.

“It will provide motivation for many unemployed people to go out and get a job if we make it easier for them to get to work,” he said.

LaFargue said he and other activists will be watching closely as CTA and City Hall officials act on the project.

“We’re hoping this doesn’t get bogged down by politics, because this is a very important project,” he said.

Currently, the Red Line goes south down the middle of the Dan Ryan Expressway as far as 95th Street. In 2009, the CTA’s governing board approved the concept of an extension to add stations in the Roseland neighborhood at 103rd Street, 111th Street, 116th Street and Michigan Avenue, and a final station at 130th Street near the Bishop Ford Freeway in between the Hegewisch neighborhood and the Altgeld Gardens public housing complex.

CTA officials do have an alternate route in mind that would go south along Interstate 57, then become an elevated train on Halsted Street ultimately winding up at 127th Street in Blue Island, if negotiations with the Union Pacific Railroad are unsuccessful in getting access needed to make the 130th Street extension.

But CTA officials say the route to 130th Street is the “locally preferred” route that community officials have expressed support for.

Cheryl Johnson, an Altgeld Gardens resident and head of the People for Community Recovery group, said she and her neighbors are “confident” the day will come when the extension will be built.

“Chicago is a big city that stretches so far south,” Johnson said. “It isn’t right that such a large part of it doesn’t have train access.”

She also said that with plans to build extensive parking lots around a 130th Street station to accommodate commuters, it might be possible for people from nearby suburbs such as Calumet City and Dolton to also begin using CTA trains on a regular basis.

“This would help revitalize the entire area,” Johnson said. Agreeing was Peggy Salazar, executive director of the Hegewisch-based Southeast Environmental Task Force, who said people from other parts of Chicago often have trouble getting to the 10th Ward.

“When we try to bring in interns, it is hard for them to get here if they don’t happen to drive,” she said. “If they extend the trains and put in a 130th Street bus, it would really help improve the connection between Hegewisch and the rest of Chicago.”

The Chicago Maroon

http://chicagomaroon.com/2014/04/21/north-side-to-see-red-line-upgrade/

Multi-billion boost to Red Line

CTA PLANS TO EXPAND RED LINE TO 130TH STREET.

Posted Apr 21, 2014 by Felicia Woron

Chicago Mayor Rahm Emanuel and the Chicago Transit Authority (CTA) recently announced plans to begin renovations of the Red and Purple Lines in 2017. The CTA hopes to begin an extension of the Red Line further south after these renovations are completed.

The agency plans to replace parts of tracks on the Red and Purple Lines as well as build at least five miles of new track as an extension of the Red Line. The Red Line currently runs from 95th Street to the Uptown neighborhood, remaining parallel for much of its length to the Purple Line, which runs from the Loop to Wilmette, a suburb north of Evanston.

In a $1.7 billion project, what CTA President Forrest Claypool described in a CTA press release as “outdated infrastructure” will be replaced with “modern, efficient rail.” Most Red and Purple Line tracks are nearly 100 years old, and a significant amount of time and money is currently spent on repairs, hindering service greatly, according to the press release. These tracks will be replaced and five stations originally built between 1908 and 1923—Wilson, Lawrence, Argyle, Berwyn, and Bryn Mawr—will be completely rebuilt, with new elevators to improve accessibility.

According to the press release, in a spot north of the Belmont station in the Lakeview neighborhood where the Red, Purple, and Brown Lines all intersect, delays of up to three minutes often occur because trains on the Red and Purple Lines must wait for Brown Line trains to cross. In order to remedy this, a bypass will be built, allowing the Brown Line to cross over the Red and Purple Lines. According to an article in*Chicagoist*, the CTA will have to buy 16 buildings between Belmont Avenue and Addison Street in order for this bypass to be built, which is included in the $1.7 billion cost of the first phase of the project.

The second phase is a $2.3 billion endeavor in which the Red Line will be extended from 95th Street through the Roseland community south to 130th Street, a low-income area that largely depends on public transit but lacks the infrastructure that is available in other areas. The project is expected to shorten the commute from 130th Street to downtown by 20 minutes, allowing better access to education and jobs downtown, according to the CTA press release.

Progressive Railroading

http://www.progressiverailroading.com/passenger_rail/news/CTA-unveils-first-phase-of-modernization-project-Red-Line-extension-environmental-steps--40170

Rail News: Passenger Rail

CTA unveils first phase of modernization project, Red Line extension environmental steps

Chicago Transit Authority (CTA) officials late last week announced the first phase of the Red and Purple modernization program to rebuild the northern section of the Red Line and the parallel Purple Line.

They also announced the beginning of the next step in a federal process to secure funding for the Red Line extension project, which would extend the Red Line south from 95th Street to 130th Street, according to a CTA press release.

The CTA's Red Line, which runs 24/7 along 23 miles of tracks, is Chicago's busiest rail line with about 75 million annual rides.

The first phase of the Red and Purple modernization improvements will include two main components: station and track modernization from Wilson to Bryn Mawr, which entails rebuilding the Wilson, Lawrence, Argyle, Berwyn and Bryn Mawr stations and rebuilding all track, support structures, bridges and viaducts for the Red and Purple lines between Lawrence and Bryn Mawr; and construction of a Red-Purple bypass north of the Belmont Station.
The first phase of the Red and Purple modernization is estimated to cost $1.7 billion.

The 5.3-mile Red Line extension project will extend south from the 95th Street Terminal through the greater Roseland community. Plans include construction of four new stations near 103rd Street, 111th Street, Michigan Avenue/116th Street and 130th Street, all with bus and parking facilities.

In 2011, the CTA received funding from the Federal Transit Authority to conduct the Environmental Impact Statement for the Red Line project — a major step in the multi-step federal process to secure approval and funding of the $2.3 billion dollar project, authority officials said.

The CTA will host the following open houses to solicit public comments on the projects: May 13 for the Red Line project; May 21 for the Lawrence-to-Bryn Mawr modernization; and May 22 for the Red-Purple bypass.

Bid Ocean

http://www.bidocean.com/business-news/108966-IL--CTA-Announces-Next-Steps-in-Modernizing-the-Red-Line.html

Illinois Construction and Business News

IL - CTA Announces Next Steps in Modernizing the Red Line

April 23, 2014

CTA President Forrest Claypool recently announced the first phase of its Red and Purple Modernization (RPM) program.

Mayor Rahm Emanuel and CTA President Forrest Claypool recently announced the first phase of its Red and Purple Modernization (RPM) program, which will completely rebuild the northern section of the Red Line and the parallel Purple Line, and beginning of the next step in a federal process to secure funding for the Red Line Extension plan, which would extend the Red Line south from 95th Street to 130th Street.

These are the latest steps in the ongoing modernization of the CTA under Mayor Emanuel.

“As a world-class city, Chicago has a world-class transit service to connect residents to jobs, education, culture and above all opportunity,” said Mayor Emanuel. “CTA is investing in modernizing the Red Line as part of our strategy to create a seamless, safe, and reliable transportation system for every neighborhood.”

The CTA’s Red Line, which runs 24/7 along 23 miles of tracks, is Chicago’s busiest rail line with about 75 million annual rides.

The Red and Purple Modernization program and the Red Line Extension project are the latest in a series of Red Line projects to modernize and extend the backbone of the CTA’s rail system that have been undertaken since 2011.

With a significant portion of the Red Line built more than a century ago, the improvements would address the current need to expand capacity by building new infrastructure to accommodate growing ridership. Additional Red Line modernization projects under Mayor Emanuel include:

- Successful $425 million replacement of the Red Line South railroad in 2013, as well as station rehabilitations.
- $86 million renewal and rehabilitation of seven far north side stations in 2012.

- $240 million new 95th Street Terminal, work beginning in late summer.
- $203 million Wilson station reconstruction and track and signal replacement, major construction to begin this fall.

“These projects are the next steps in our overall vision to rebuild, modernize and expand the entire Red Line,” said P President Claypool. “We’re already kicking off Red and Purple Modernization by beginning reconstruction of the Wilson station this fall and continuing progress on the South Side by starting the new 95th Street Terminal this summer, following the successful completion of the Red Line South reconstruction last year. With both the Red and Purple Modernization and Red Line Extension projects, we’ll replace outdated infrastructure with a modern, efficient rail, and build more than five miles of new track. Together these improvements will offer CTA customers faster, more reliable service, and increasing access to quality rail transportation for thousands of future riders.”

The CTA is also moving forward with its proposed Red Line Extension plan by beginning the second step of its environmental process to ultimately finish the Environmental Impact Study, which is required to begin engineering on the plan to extend the Red Line south of 95th Street to 130th Street. Both projects will include a broad community outreach process that will begin next month to solicit community feedback on both projects and provide updates on the funding process for each project.

About Red and Purple Modernization

The RPM program will proceed in phases to fully replace old, deteriorating infrastructure and stations along the entire north branch of the Red Line and the parallel Purple Line, and will pave the way for CTA to significantly increase train capacity for the next 80 years.

This section of the Red and Purple lines carries one out of every five CTA rail rides and serves customers in some of the densest, most diverse neighborhoods in Chicago. Rush-hour ridership has jumped 40 percent in the last five years alone.

Most tracks and bridges along the Red and Purple lines are nearly 100 years old. Despite rising demand, the CTA is unable to increase capacity because of the current infrastructure’s age and structural limitations. Continuing to operate a busy rail line on this outdated infrastructure results in high maintenance costs, the need for frequent repairs that disrupt service and slow travel, as well as outdated stations that can’t accommodate elevators or other necessary and modern amenities.

RPM will create a completely rebuilt rail line, resulting in faster, smoother rides, modern, fully ADA accessible stations along the entire corridor and more frequent train service to alleviate overcrowding.

The first phase of the RPM improvements will include two main components:

- **Station and track modernization, Wilson to Bryn Mawr:** Completely rebuilding the Wilson, Lawrence, Argyle, Berwyn, and Bryn Mawr stations and rebuilding all tracks, support structures, bridges and viaducts for the Red and Purple lines between Lawrence and Bryn Mawr. Replacement of the Wilson station and surrounding infrastructure begins this fall. These stations were built originally between 1908 and 1923 and the elevated support structures date back to the 1920s. The Bryn Mawr station was last updated 40 years ago, in 1974; the remaining three stations received interim station renewal work in 2012. Reconstruction of these stations will include adding elevators at each to make them accessible to customers with disabilities. The project also includes rebuilding the tracks, signals and support structures, which will significantly improve train speeds and service reliability on the slow zone-plagued stretch. (The Wilson station project is already funded from state, federal and local sources, and is currently proceeding through a separate Environmental Assessment process.)
- **Construction of a Red-Purple bypass.** Construction of a bypass north of the Belmont station to eliminate delays and speed up train service where the Red, Purple and Brown lines currently all intersect. The current configuration requires trains on three of four tracks to stop and wait for Brown Line trains to cross, which results in more than 40 percent of weekday trains being delayed by as much as three minutes. About 150,000 rides travel through this intersection each weekday, all of which are slowed down because trains must stop and wait for signal clearance. The structure's original 1907 design makes it difficult, under present day and service demands, to provide reliable service and makes adding service extremely challenging.

"Modernizing Red Line rail service and stations strengthens our neighborhoods by making transit more reliable and ultimately generating new economic development near revitalized stations," said Ald. Harry Osterman. "We're pleased that Mayor Emanuel and the CTA recognize the importance of safe, reliable transit in neighborhoods near the Red Line, including Andersonville, Edgewater and Uptown, and look forward to working closely with the CTA on this exciting program."

Future phases of RPM will bring the same level of infrastructure and station improvements to the remaining sections of the Red and Purple lines, from north of Belmont station to Linden station in Wilmette.

Estimated cost for the first phase of RPM is $1.7 billion.

In November 2013, the CTA became the first transit system accepted into the Federal Transit Administration's (FTA) new Core Capacity Program that provides funding to transit systems to add capacity on existing infrastructure for future ridership growth. The RPM project is eligible for 2014 Core Capacity federal funding approved by Congress earlier this year.

About RLE

The 5.3-mile Red Line Extension project will extend south from the 95th Street Terminal through the greater Roseland community. Plans include construction of four new stations near 103rd Street, 111th Street, Michigan Avenue/116th Street and 130th Street, all with bus and parking facilities.

The RLE project will provide rapid transit rail access to a low income, transit-dependent Far South Side area that does not have direct CTA rail service. An extended Red Line will provide up to a 20-minute time savings to downtown by providing one-seat service, as opposed to the current bus-rail trip from 130th Street. It will also improve access to jobs and education, and foster economic development.

In 2011, the CTA received funding from the FTA to conduct the Environmental Impact Statement (EIS) for the RLE project—a major, important step in the multi-step federal process to secure approval and funding of the $2.3 billion dollar project.

Public Input and Next Steps

The CTA will meet with community groups and host public open houses to share details and seek input on the proposed RPM and RLE projects. Members of the public can submit formal comments directly to the CTA or at public open houses where CTA and representatives will provide additional information on RPM and RLE project plans. For each project, CTA is seeking community input on the location, design, and social, economic, and environmental effects of the proposed improvements.

The Lawrence to Bryn Mawr Modernization Open House will be held Wednesday, May 21, at Truman Community College, 1145 W. Wilson Ave. from 5:30 p.m. to 7:30 p.m.

The Red-Purple Bypass Open House will be held Thursday, May 22, at the 19th District Police Station, 850 W. Addison St., from 5:30 p.m. to 7:30 p.m.

The RLE Open House will be held Tuesday, May 13, at Palmer Park Gymnasium, 201 E. 111th St., between 5:30 p.m. and 7:30 p.m.

Comments for either project can also be submitted by email or postal mail to:

RPM@transitchicago.com

RedExtension@transitchicago.com

Chicago Transit Authority Strategic Planning, 10th floor Attn: RPM Project or RLE Project 567 W.
Lake Street Chicago, IL. 60661-1465

Following public input, the CTA will deliver draft environmental studies for both RPM Phase One and RLE to the FTA as part of the process to request federal funding. Timing for construction starts on each project is dependent upon the receipt of funding for each project. By the beginning of May, the CTA will release a request for Letters of Interest and Qualifications (LIQ) for Preliminary Engineering (PE) services for Phase One of RPM.

For more information about the Red Purple Modernization and Red Line Extension projects, visit transitchicago.com.

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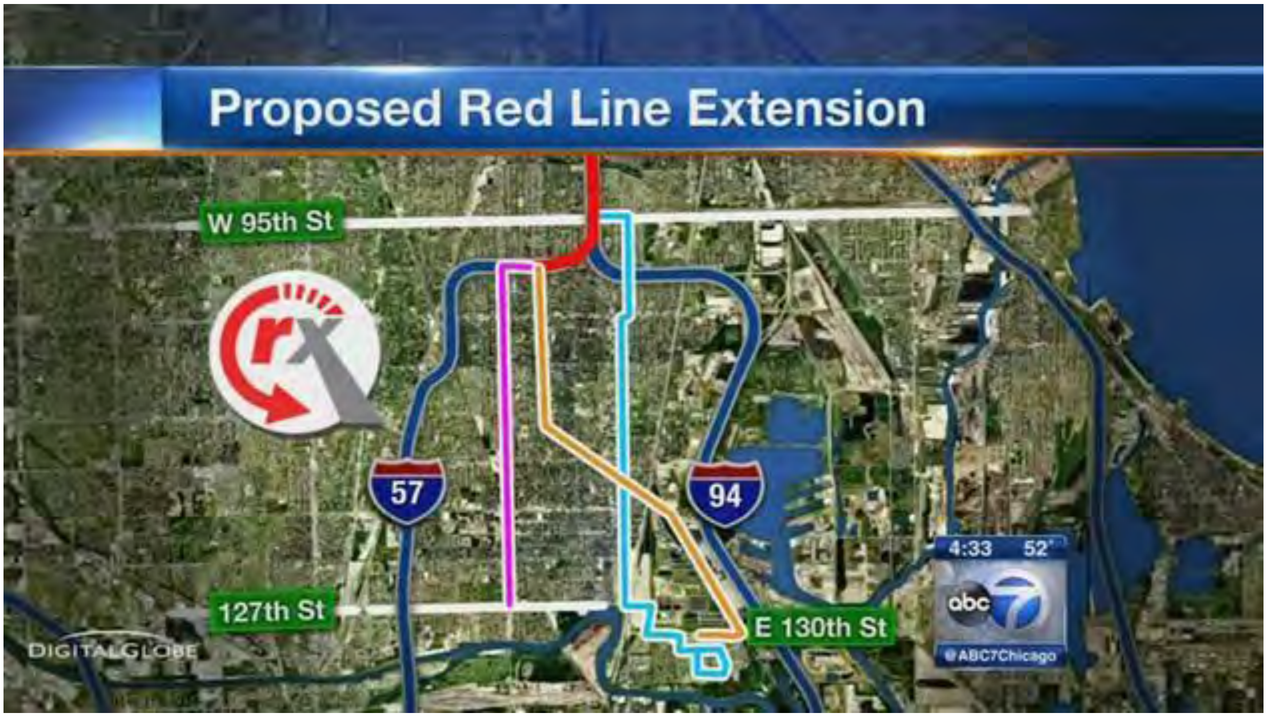
ABC 7 Chicago

http://abc7chicago.com/news/red-line-extension-project-moving-forward/59881/

RED LINE EXTENSION PROJECT MOVING FORWARD


Proposed Red Line Extension
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@ABC7Chicago

The CTA is moving forward with its plan to build a $2.3 billion extension to the south end of the Red Line.

By Leah Hope

Wednesday, May 14, 2014

CHICAGO (WLS) --
The Chicago Transit Authority is moving forward with its largest expansion project in decades. The CTA is planning a $2.3 billion extension to the south end of the Red Line.

Currently, 95th Street is the end of the line. CTA Red Line riders that go farther south rely on buses.

"It's a two and half trip for me, two buses and one 'L' train, each way from the doctor probably four or five times a month," said John Schellenbach, CTA rider.

A five-mile Red Line extension would be welcomed news to riders Eyewitness News spoke with on Wednesday.

"Out that way it's kinda hard catching the buses, you know, sometimes they're late. And just for the Red Line to go further, I think that would lessen traffic conditions also," said Sandra Cotton, CTA rider.

On Tuesday night, CTA held an open house to offer more information and get feedback. The agency is just starting the process to make the extension a reality. There are five possibilities currently, from adding new rail lines to a bus rapid transit line extended south to 130th Street.

"Our impact on natural habitats, historic properties, neighborhoods, up and down the list of concerns when you talk about churches, schools, homes," said Steve Mayberry, CTA spokesman.

A local community organization advocates for the extension to help residents in the area and the city as a whole.

"This has been something the community has desperately needed. Transit brings about business, better job opportunities, economic development," said Tiffany Hightower, Developing Communities Project.

While many support the idea of extending the Red Line, the project is still a few years out. The CTA plans to submit an environmental impact statement next year on one of those possibilities.

CTA Tattler - Chicago Now

http://www.chicagonow.com/cta-tattler/2014/05/nearly-100-buildings-would-be-razed-to-build-preferred-red-line-south-extension/

Nearly 100 buildings would be razed to build preferred Red Line south extension

By **Kevin O'Neil***, Wednesday at 6:58 pm*

Almost 100 residential buildings could be torn down if the "locally preferred alternative" for the the Red Line south extension were to be built. That's what the CTA revealed at a community meeting Tuesday night.

More than 250 total land parcels would have to be acquired for the "preferred" extension alternative. From the CTA website:

> The proposed UPRR Rail Alternative would extend the heavy rail transit line from the existing Red Line 95th Street Terminal to 130th Street. The UPRR Rail Alternative would operate on an elevated structure heading south from 95th Street along the I-57 Expressway for nearly one-half mile until reaching the UPRR corridor in the vicinity of Eggleston Avenue. The alignment would then turn south along the UPRR corridor to approximately 111th Street where it would turn southeast. East of South Prairie Avenue, the alignment would cross over the Canadian National/Metra Electric tracks near 119th Street, where it would transition to an at-grade profile and then continue southeast along the Northern Indiana Commuter Transportation District Chicago South Shore & South Ben Railroad (NICTD/CSS & SBRR) right-of-way using a portion of the Indiana Harbor Belt (IHB) alignment to terminate at 130th Street.
>
> **The Locally Preferred Alternative would include the following features:**
>
> - Transportation improvements that are already in the Chicago Metropolitan Agency for Planning Fiscal Year 2010-2015 Transportation Improvement Program as described in the No Build Alternative
> - 5.3-mile heavy rail transit line extension from 95th Street Terminal to 130th Street
> - Four new stations at 103rd Street, 111th Street, Michigan Avenue, and 130th Street

- New park & ride and bus terminal facilities at each station
- Bus transit service from the south to the new stations for faster travel to downtown Chicago
- New yard and shop at 120th Street

The Sun-Times reported on the impact of other alternatives:

> If an elevated were built west of the UP tracks, up to 195 parcels would need to be purchased, 30 of them residential.
>
> Another alternative, which would run the extension down the center of Halsted Street, would require seizing 110 parcels, including 17 residential ones.
>
> A final option, involving a bus “rapid transit” system with dedicated bus lanes, would require seizing only 52 parcels, including one residential one.
>
> In comparison, the CTA seized 40 parcels before a project to expand capacity on the Brown Line, completed in 2009.
>
> No estimate of the maximum number of people displaced by each alternative was available.

There were lots of North Siders unhappy about just 16 buildings that would have to be razed if the Belmont Flyover is built. And yet I haven't heard the same cries on the Far South Side about the nearly 100 buildings with targets on their roofs. Maybe word hasn't gotten out yet.

Curbed Chicago

http://chicago.curbed.com/archives/2014/05/14/cta-could-consume-259-properties-for-red-line-extension.php

CTA Could Consume 259 Properties For Red Line Extension

Wednesday, May 14, 2014, by AJ LaTrace

[photo by Flickr user vxla]

Last night at an open house, the CTA laid out its complete **$2.3 billion** plan to extend the Red Line south to 130th Street, and revealed that in order for the ambitious expansion to happen, the transit agency would need to acquire **259 properties** along the path. The Red Line currently ends at 95th Street, and the extension would add **5.3 miles** of new track to the busy transit line. In addition to shortening commute times for South Side residents going to the Loop, the city believes that the extension would connect the neighborhoods to much needed jobs, green space, educational institutions and medical facilities. Of the 259 properties needed to complete the project, 95 contain residential buildings. The city has been ambitious with transit updates and expansions lately, however, the Red Line extension would be the CTA's biggest since the Blue Line was extended to O'Hare in the early 80s.

Chicago Sun-Times

http://www.suntimes.com/27443532-418/whistleblower-off-base-on-cta-budget-transit-agency-president-says.html#.U3pFhtJdV8E

Whistleblower off-base on CTA budget, Claypool says

BY ROSALIND ROSSI AND FRAN SPIELMAN Staff Reporters May 14, 2014 6:04PM

Updated: May 15, 2014 2:21AM

A former CTA employee who says he was axed for blowing the whistle on what he called unrealistic budget projections “has no clue what he’s talking about,’’ CTA President Forrest Claypool said Wednesday.

And the fact that, through March, the CTA’s 2013 budget is coming in at $3.8 million less than projected is no big deal, Claypool told reporters after the CTA’s monthly meeting.

“We have another eight, nine months to deal with a two-tenths-of-one-percent variance, which is a rounding error in a budget of this size,’’ Claypool said.

The CTA will adjust expenses throughout the year to make sure the agency ends the year in balance, Claypool said. Some of the variance was blamed on a brutally cold and snowy January and February that left first quarter fare revenues $3 million under projections.

Claypool’s comments came about a week after former CTA employee Casey Loop filed a whistleblower lawsuit against the transit agency, charging he was told he was being laid off less than three months after he tipped off the RTA that the CTA’s 2013 budget had been packed with what he considered unrealistic and even “astonishing” projections.

They included a $56 million labor “credit” based on an assumption that 347 vacancies would remain vacant for an entire year, Loop said. Normally, budgets assume vacancies will not be filled for about three months, allowing for a 25 percent savings, said Loop.

However, Claypool said Wednesday the 2013 budget assumed a “reasonable” percent of the agency’s 11,000 total positions would be vacant during the year.

“Every public budget has a reasonable allowance to reflect the fact that there are savings and salvage from the fact that all those positions aren’t filled throughout the year,’’ Claypool said. “The CTA is no different than the city of Chicago, Cook County, the Park District.’’

Claypool said Loop “just didn’t understand” and “has no clue what he’s talking about.”

Loop’s suit states he was hired in February 2012 as a CTA budget project consultant; given a raise in July 2012; promoted in June 2013 to manager of performance analysis and then told in September 2013 that he was being laid off. However, Claypool insisted Loop did not get the June promotion.

“He was not promoted,’’ Claypool said. “He volunteered to do some budget work, so that’s not a promotion.”

Loop’s attorney, Betty Tsamis, said Wednesday that Loop “came forward in good faith because he believes in open and transparent government.” She added: “We stand behind our pleadings.’’

Claypool also told reporters the possibility that the CTA would have to acquire 259 parcels of land, including 95 residential buildings, to extend the Red Line from 95th to 130th Street was “a normal occurrence for any major extension.’’ Such purchases are not unusual when a transit agency must create a “brand new railroad” in an urban area, Claypool said.

Up to 259 parcels would need to be seized under one of several alternatives being considered. That particular option would place an elevated track mostly east of existing Union Pacific tracks.

Far South Side Ald. Anthony Beale (9th), chairman of the City Council’s Transportation Committee, said Wednesday he’s concerned about the number of residential and business parcels that must be seized to make way for the Red Line extension.

But the alderman said he doesn’t “want to alarm anyone” until the CTA makes a final decision on the precise route.

“At that point, we’ll make sure people are well-compensated, well-protected and not taken advantage of,” Beale said.

As for whether it’s worth displacing hundreds to improve transportation for tens of thousands, Beale said: “We have to do what’s in the best interest of the community.

That is, making sure this 40-year-old promise is kept to run the Red Line to the end of the city. If that means displacement, we can get over that hurdle.”

In other business, Claypool revealed that CTA bus drivers were expected to receive a bulletin Wednesday, reminding them to announce priority seating rules if a disabled rider is unable to find a seat. Priority seating is reserved first for the disabled, then seniors, then riders with strollers.

His comments came after Ray Yung, a disabled rider with crutches, complained that female riders with strollers have refused to give up their priority seats to him.

CTA officials also revealed that the No. 10 bus to the Museum of Science and Industry could be cancelled if its ridership does not increase. The CTA agreed Wednesday to increase the museum’s contribution for that service from $39.28 an hour to as high as $47 an hour over the next two years. However, the bus averages 30 riders an hour; the system average is 50 riders an hour. It needs 106 riders an hour to break even, CTA Chief Planning Officer Carole Morey said.

Museum officials said they are investing $75,000 this year on an aggressive marketing campaign to try to boost ridership.

Chicago Sun-Times

http://www.suntimes.com/27429137-761/cta-hundreds-of-parcels-might-be-needed-for-red-line-expansion.html#.U3pFVdJdV8E

CTA: Hundreds of parcels might be needed for Red Line expansion

BY ROSALIND ROSSI Transportation Reporter May 13, 2014 9:58PM

Updated: May 14, 2014 2:18AM

As many as 259 parcels of land — including 95 with residential buildings — could be seized as part of a Chicago Transit Authority plan to extend the Red Line to 130th Street, officials revealed Tuesday.

The $2.3 billion, 5.3-mile project would be the biggest CTA extension in 30-some years — since the Blue Line was extended to O'Hare, CTA officials said.

About 200 Chicagoans showed up Tuesday night at the Palmer Park Gym, 201 E. 111th St., to view and discuss about two dozen posterboards outlining the project.

"There was a high level of interest,'' said CTA spokesman Steve Mayberry. "Folks wanted as much information as they could get.''

One board in particular outlined what may be the most controversial numbers associated with the project — how many parcels would have to be seized to extend the Red Line to 130th Street from its current endpoint at 95th Street.

The CTA in 2009 selected a "preferred" route down the middle of I-57 to 98th St., and then alongside existing Union Pacific tracks to 130th.

Under that "preferred" route, if an elevated were built east of the UP tracks, a maximum of 259 parcels would need to be purchased, 95 of them residential, the posterboard indicated.

If an elevated were built west of the UP tracks, up to 195 parcels would need to be purchased, 30 of them residential.

Another alternative, which would run the extension down the center of Halsted Street, would require seizing 110 parcels, including 17 residential ones.

A final option, involving a bus “rapid transit” system with dedicated bus lanes, would require seizing only 52 parcels, including one residential one.

In comparison, the CTA seized 40 parcels before a project to expand capacity on the Brown Line, completed in 2009.

No estimate of the maximum number of people displaced by each alternative was available.

CTA Red Line project manager Carole Morey said all alternatives are “on equal footing” and further engineering analysis could reduce some displacements. The community will be asked for input at public hearings after an environmental assessment of each option is completed in 2015, she said.

At that time, Morey said, some citizens may want to endorse alternatives that displace fewer people.

“I think it’s too early to reach any conclusions,’’ Morey said. “We really need to hear from the community and hear their concerns.’’

The extension would run through such impoverished neighborhoods as Roseland and Englewood, and, it is hoped, give businesses there a boost, Mayberry said. It also would trim 20 minutes from the commute of residents near 130th, who would need only to hop a Red line train to get downtown instead of riding a bus to 95th Street and boarding the Red Line there, Mayberry said.

Email: rrossi@suntimes.com

Twitter: @rosalindrossi

RedEye

http://www.redeyechicago.com/news/redeye-cta-construction-ahead-20140518,0,993517.htmlpage

By Tracy Swartz | REDEYE

You thought winter was a long season? CTA construction season can seem to last forever.

The agency is midway through projects to improve parts of the Blue and Orange line tracks, which means shuttle buses replace train service in those areas on some weekends. Meanwhile, the CTA is overhauling the Harrison Red Line stop in Printers Row, affecting Red Line service and access to that stop since last month.

The Clark/Division stop in Old Town has been undergoing a monthslong renovation that will include a new mezzazine this year. Also, a new Green Line stop at Cermak Road is underway.

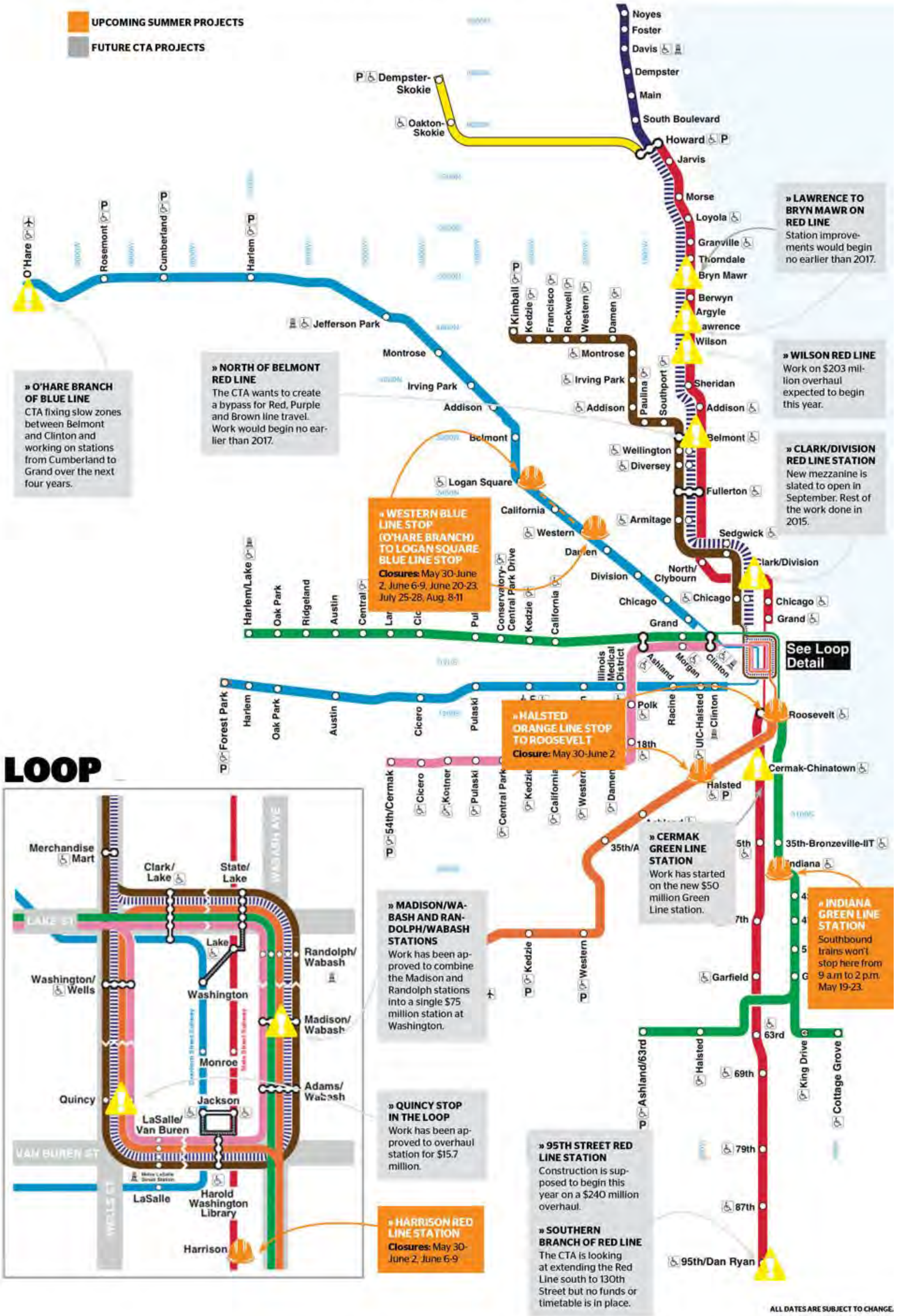
And let's not forget about the projects on the horizon—the agency is scheduled to begin turning the Wilson Red Line station into a transfer point for the Purple Line Express. Additionaly, there are plans to overhaul the Quincy Loop station and the 95th Street Red Line stop and combine the Madison/Wabash and Randolph/Wabash stations into a superstation in the Loop.

Future projects that don't have timetables include overhauling Red Line stations from Lawrence to Bryn Mawr on the North Side and creating a bypass north of the Belmont stop in Lakeview to ease Red, Brown and Purple line train traffic there.

The CTA is holding a hearing about the Lawrence to Bryn Mawr modernization project 5:30-7:30 p.m. Wednesday at Truman College, 1145 W. Wilson Ave. A meeting about the Red-Purple Bypass project will be held 5:30 to 7:30 p.m. Thursday at the 19th District Police Department, 850 W. Addison St.

RedEye mapped all current and future rail construction projects below.

TSWARTZ@TRIBUNE.COM | @TRACYSWARTZ



UPCOMING SUMMER PROJECTS
FUTURE CTA PROJECTS
Noyes
Foster
Davis
Dempster
Main
South Boulevard
Howard
Jarvis
Dempster-Skokie
Oakton-Skokie
Morse
Loyola
Granville
Thorndale
Bryn Mawr
Berwyn
Argyle
Lawrence
Wilson
Sheridan
Addison
Belmont
Fullerton
Sedgwick
Clark/Division
Chicago
Grand
O'Hare
Rosemont
Cumberland
Harlem
Jefferson Park
Montrose
Irving Park
Addison
Belmont
Logan Square
California
Western
Damen
Division
Chicago
Grand
Kimball
Kedzie
Francisco
Rockwell
Western
Damen
Montrose
Irving Park
Addison
Paulina
Southport
Wellington
Diversey
Armitage
North/Clybourn
Chicago
Harlem/Lake
Oak Park
Ridgeland
Austin
Central
Conservatory-Central Park Drive
Kedzie
California
Ashland
Morgan
Clinton
Illinois Medical District
See Loop Detail
Forest Park
Harlem
Oak Park
Austin
Cicero
Pulaski
Polk
18th
Racine
UIC-Halsted
Clinton
Roosevelt
Cermak-Chinatown
Halsted
54th/Cermak
Cicero
Kostner
Pulaski
Central Park
Kedzie
California
Western
Damen
35th/Archer
Kedzie
Western
35th-Bronzeville-IIT
Indiana
Garfield
63rd
69th
79th
87th
95th/Dan Ryan
Ashland/63rd
Halsted
King Drive
Cottage Grove
LOOP
Merchandise Mart
Clark/Lake
State/Lake
Lake
Randolph/Wabash
Washington/Wells
Washington
Madison/Wabash
Monroe
Adams/Wabash
Quincy
Jackson
LaSalle/Van Buren
LaSalle
Harold Washington Library
Harrison
LAKE ST
WABASH AVE
VAN BUREN ST
WELLS ST

» O'HARE BRANCH OF BLUE LINE
CTA fixing slow zones between Belmont and Clinton and working on stations from Cumberland to Grand over the next four years.

» NORTH OF BELMONT RED LINE
The CTA wants to create a bypass for Red, Purple and Brown line travel. Work would begin no earlier than 2017.

» LAWRENCE TO BRYN MAWR ON RED LINE
Station improvements would begin no earlier than 2017.

» WILSON RED LINE
Work on $203 million overhaul expected to begin this year.

» CLARK/DIVISION RED LINE STATION
New mezzanine is slated to open in September. Rest of the work done in 2015.

» WESTERN BLUE LINE STOP (O'HARE BRANCH) TO LOGAN SQUARE BLUE LINE STOP
Closures: May 30-June 2, June 6-9, June 20-23, July 25-28, Aug. 8-11

» HALSTED ORANGE LINE STOP TO ROOSEVELT
Closure: May 30-June 2

» CERMAK GREEN LINE STATION
Work has started on the new $50 million Green Line station.

» INDIANA GREEN LINE STATION
Southbound trains won't stop here from 9 a.m to 2 p.m. May 19-23.

» MADISON/WABASH AND RANDOLPH/WABASH STATIONS
Work has been approved to combine the Madison and Randolph stations into a single $75 million station at Washington.

» QUINCY STOP IN THE LOOP
Work has been approved to overhaul station for $15.7 million.

» HARRISON RED LINE STATION
Closures: May 30-June 2, June 6-9

» 95TH STREET RED LINE STATION
Construction is supposed to begin this year on a $240 million overhaul.

» SOUTHERN BRANCH OF RED LINE
The CTA is looking at extending the Red Line south to 130th Street but no funds or timetable is in place.

ALL DATES ARE SUBJECT TO CHANGE.

Appendix B
April 17th, 2014 Aldermanic Briefing Meeting Notes

MEETING NOTES

RE: **Aldermanic Briefing – Red Line Extension Draft EIS**

MEETING DATE: **Thursday, April 17, 2014 - 10:00 AM**

LOCATION: **City Hall (406A)**

ATTENDEES:

Name	*Initials*	*Organization*
April Branch	AB	Alderman Beale's Office
Brian Sleet	BS	Alderman Sawyer's Office
Carole Morey	CM	CTA
Eva-Dina Delgado	ED	CTA
Gerald Nichols	GN	CTA
Ald. Howard Brookins	HB	21st Ward Alderman
Jeff Wilson	JW	CTA
Lamar Brown	LB	Alderwoman Harris' Office
Loren Harris	LH	Alderwoman Harris' Office
Sonali Tandon	ST	CTA

PREPARED BY: Sonali Tandon

ISSUE DATE:

- ED kicked off the meeting and thanked everyone for attending.
- CM gave a presentation about CTA's Red Line Extension (RLE) project and discussed:
    - the Red Ahead program and different projects that are part of it. She mentioned recent CTA board action on the 95th Street Terminal Project.
    - that CTA is pursuing New Starts federal funds for RLE and the project will have to compete with other New Starts projects in the country. Red and Purple Modernization Project, which is also part of the Read Ahead Program is pursuing Core Capacity federal funds.
    - RLE project history, previous public involvement, and project benefits
    - the Environmental Impact Statement (EIS) process and different project alternatives for RLE
        - HB commented that although Union Pacific Railroad (UPRR) Alternative was the Locally Preferred (LPA) Alternative, it doesn't seem that is where people are and the Halsted Alternative would capture more of Chicago. He also mentioned that attendees that supported the UPRR alternative in previous RLE meetings were from Roseland. He asked if CTA had analyzed population density along different alternatives.
    - potential project impacts and mitigations including park impacts and potential displacements for each alternative

        - BS asked if CTA would provide grants to residents for new windows, if there are noise impacts. CM mentioned that as part of the EIS, CTA is doing detailed noise modeling to identify impacts. Mitigation measures would accordingly be identified.
    - topic areas where minimal impacts are likely to occur
    - project funding and project development process
- BS asked about Park & Ride at 95th Street Terminal. He also requested a map of proposed RLE stops in relation to Metra stops. He also mentioned that Metra stops were not in good condition and difficult locations.
- ED mentioned that CTA will be conducting small community meetings and an Open House meeting.
- RLE collaterals and flyers in English and Spanish were handed out to the attendees and the meeting was adjourned.

Appendix C
Participating Agency List, Update Letters, and Responses

Red Line Extension Project
List of Cooperating and Participating Agencies

RLE Project Involvement	Category	Sub-Category	Organization	Salutation	First Name	Last Name	Title	Address 1	Address 2	City	State	Zip
Cooperating Agency	Government Agency	Federal	Federal Highway Administration	Mr.	Norman	Stoner	Division Administrator, Illinois Division Office	3250 Executive Park Drive		Springfield	IL	62703
Cooperating Agency	Government Agency	Federal	Federal Highway Administration	Mr.	Matt	Fuller	Environmental Programs Engineer	3250 Executive Park Drive		Springfield	IL	62703
Cooperating Agency	Government Agency	Federal	Federal Highway Administration	Mr.	Mike	Hine	Engineering Team Leader	3250 Executive Park Drive		Springfield	IL	62703
Cooperating Agency	Government Agency	Federal	Federal Highway Administration		Chris	Byars	Metropolitan Transportation Engineer	200 West Adams	Suite 330	Chicago	IL	60606
Participating Agency	Government Agency	Federal	Department of Energy	Dr.	Ernest	Moniz	Secretary	1000 Independence Ave. SW		Washington	DC	20585
Participating Agency	Government Agency	Federal	Department of Health and Human Services	Mr.	James	Galloway	Acting Regional Director - Region 5	233 N. Michigan Ave.	Suite 1300	Chicago	IL	60601
Participating Agency	Government Agency	Federal	Department of Housing and Urban Development	Ms.	Beverly	Bishop	Deputy Regional Director	77 W. Jackson Blvd.		Chicago	IL	60604
Participating Agency	Government Agency	Federal	Department of Housing and Urban Development	Ms.	Melanie	Haywood	Field Environmental Officer	77 W. Jackson Blvd.	Room 2420	Chicago	IL	60604
Participating Agency	Government Agency	Federal	Department of Housing and Urban Development	Mr.	Steve	Vahl	Region 5 Environmental Officer	77 W. Jackson Blvd.	Room 2420	Chicago	IL	60604
Participating Agency	Government Agency	Federal	Federal Emergency Management Agency	Ms.	Janet	Odeshoo	Deputy Regional Administrator, Region V	536 S. Clark St.	6th Floor	Chicago	IL	60605
Participating Agency	Government Agency	Federal	Federal Emergency Management Agency	Mr.	Nicholas	Mueller	Regional Environmental Officer	536 S. Clark St.	6th Floor	Chicago	IL	60605
Participating Agency	Government Agency	Federal	Federal Railroad Administration	Mr.	Laurence	Hasvold	Regional Administrator	200 West Adams	Suite 310	Chicago	IL	60606
Participating Agency	Government Agency	Federal	Transportation Security Administration	Mr.	John	Pistole	Administrator	601 S. 12th St.		Arlington	VA	20598
Participating Agency	Government Agency	Federal	Transportation Security Administration	Mr.	Fred	Goodine	Section Chief, Risk Reduction, Mass Transit and Passenger Rail Branch	601 S. 12th St.		Arlington	VA	20598
Participating Agency	Government Agency	Federal	U.S. Environmental Protection Agency	Ms.	Susan	Hedman	Regional Administrator - Region 5	77 W. Jackson Blvd.		Chicago	IL	60604
Participating Agency	Government Agency	Federal	U.S. Environmental Protection Agency	Mr.	Norm	West	NEPA Review	77 W. Jackson Blvd.		Chicago	IL	60604
Participating Agency	Government Agency	Federal	U.S. Fish and Wildlife Service	Mr.	John	Rogner	Field Supervisor - Chicago Field Office	1250 S. Grove	Suite 103	Barrington	IL	60010
Participating Agency	Tribe	Tribe	Peoria Tribe of Indians of Oklahoma	Mr.	John F.	Froman	Chief	118 S. Eight Tribes Trail		Miami	OK	74354
Participating Agency	Tribe	Tribe	Prairie Band of Potawatomi Nation	Mr.	Steve	Ortiz	Chief	16281 Q Road		Mayetta	KS	66509
Participating Agency	Tribe	Tribe	Miami Tribe of Oklahoma	Mr.	George	Strack	Tribal Historic Preservation Officer	202 S. Eight Tribes Trail		Miami	OK	74354
Participating Agency	Tribe	Tribe	Sac and Fox Nation of Missouri	Ms.	Twen	Barton	Chairperson	305 N. Main Street		Reserve	KS	66434
Participating Agency	Tribe	Tribe	Sac and Fox Nation of Mississippi in Iowa	Mr.	Homer	Bear, Jr.	Chairman	394 Meskwaki Road		Tama	IA	52339
Participating Agency	Tribe	Tribe	Pokagon Band of Potawatomi Indians		Michael	Zimmerman	Tribal Historic Preservation Officer	58620 Sink Road		Dowagiac	MI	49047
Participating Agency	Tribe	Tribe	Potawatomi Nation-Hannahville Indian Community	Mr.	Earl	Meshiguad		N14911 Hannahville Blvd.		Wilson	MI	49896
Participating Agency	Tribe	Tribe	Forest Country Potawatomi	Mr.	Phillip	Shopodock	Chariperson	P.O. Box 340		Crandon	WI	54520
Participating Agency	Tribe	Tribe	Ho-Chunk Nation	Mr.	Bill	Quackenbush	Tribal Historic Preservation Officer	P.O. Box 667P		Black River	WI	54815
Participating Agency	Tribe	Tribe	Sac and Fox Nation of Oklahoma	Ms.	Sandra	Massey	Tribal Historic Preservation Officer	Rt. 2 Box 246		Stroud	OK	74079
Participating Agency	Tribe	Tribe	Citizen Potawatomi Nation	Mr.	John	Barrett	Chairperson	1601 S. Gordon Cooper		Shawnee	OK	74801
Participating Agency	Government Agency	Local	Chicago Housing Authority	Mr.	John	Gerut	Senior Vice President	60 E. Van Buren		Chicago	IL	60605
Participating Agency	Government Agency	Local	Chicago Housing Authority	Mr.	Jose Anthony	Alvarez	Development Manager, Office of Development Management	60 E. Van Buren		Chicago	IL	60605

Red Line Extension Project
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Participating Agency	Government Agency	Local	Chicago Park District	Mr.	Rob	Rejman		541 N. Fairbanks		Chicago	IL	60611
Participating Agency	Government Agency	Local	Chicago Park District	Ms.	Doreen	O'Donnell	Research and Planning Manager	541 N. Fairbanks		Chicago	IL	60611
Participating Agency	Government Agency	Local	Chicago Park District	Ms.	Gia	Biagi		541 N. Fairbanks		Chicago	IL	60611
Participating Agency	Government Agency	Local	City of Chicago Department of Business Affairs and Consumer Protection	Ms.	Norma I.	Reyes	Commissioner	50 W. Washington St.	Room 208	Chicago	IL	60602
Participating Agency	Government Agency	Local	City of Chicago Department of Housing and Economic Development	Mr.	Benet	Haller		121 N. LaSalle St	10th Floor	Chicago	IL	60602
Participating Agency	Government Agency	Local	City of Chicago Department of Fleet and Facility Management	Mr.	Kevin	Laberge	Bureau of Environmental, Health & Safety Management	30 N. LaSalle St.	Suite 300	Chicago	IL	60602
Participating Agency	Government Agency	Local	City of Chicago Department of Transportation	Ms.	Luann	Hamilton	Director, Transportation Planning	30 N. LaSalle St.	Suite 500	Chicago	IL	60602
Participating Agency	Government Agency	Local	City of Chicago Department of Transportation	Mr.	Jeffrey	Sriver	Projects Administrator	30 N. LaSalle Street	Suite 500	Chicago	IL	60602
Participating Agency	Government Agency	Local	City of Chicago Office of the Mayor	Mr.	Joe	Deal	Director of Regional Programs	121 N. LaSalle St.	Room 509	Chicago	IL	60602
Participating Agency	Government Agency	Local	City of Chicago Police Department	Mr.	Garry	McCarthy	Superintendent	3510 S. Michigan Ave.		Chicago	IL	60653
Participating Agency	Government Agency	Local	City of Chicago Police Department	Deputy Chief	Steve	Georgas	Bureau of Patrol; Special Functions	3510 S. Michigan Ave.		Chicago	IL	60653
Participating Agency	Government Agency	Local	City of Chicago Police Department	Commander	Nancy	Lipman	Public Transportation Section	1718 S. State St.	Annex Building	Chicago	IL	60616
Participating Agency	Government Agency	Regional	Metra Commuter Rail	Ms.	Lynette	Ciavarella	Director, Planning and Analysis	547 W. Jackson Blvd.	13th Floor	Chicago	IL	60661
Participating Agency	Government Agency	Regional	Metra Commuter Rail	Mr.	David	Kralik	Department Head, Long Range Planning	547 W. Jackson Blvd.	13th Floor	Chicago	IL	60661
Participating Agency	Government Agency	Regional	Metropolitan Water Reclamation District of Greater Chicago	Ms.	Kathleen	Meany	President, Board of Commissioners	100 E. Erie St.		Chicago	IL	60611
Participating Agency	Government Agency	Regional	Metropolitan Water Reclamation District of Greater Chicago	Mr.	Joseph	Schuessler	Principal Civil Engineer	100 E. Erie St.		Chicago	IL	60611
Participating Agency	Government Agency	Regional	Regional Transportation Authority	Ms.	Leanne	Redden	Senior Deputy, Executive Director of Planning	175 W. Jackson Blvd.	Suite 1550	Chicago	IL	60604
Participating Agency	Government Agency	Regional	Regional Transportation Authority	Mr.	Peter	Fahrenwald	Manager, Regional and Corridor Planning	175 W. Jackson Blvd.	Suite 1550	Chicago	IL	60604
Participating Agency	Government Agency	Regional	Pace	Mr.	David	Tomzik	Manager, Long Range Planning	550 W. Algonquin Road		Arlington Heights	IL	60005
Participating Agency	Government Agency	Regional	Pace	Ms.	Lorraine	Snorden	Manager, Department of Planning Services	550 W. Algonquin Road		Arlington Heights	IL	60005
Participating Agency	Government Agency	State	Illinois Commerce Commission	Ms.	Shauna	Kelley	Bureau of Transportation Chief	160 N. LaSalle St.	C800	Chicago	IL	60601
Participating Agency	Government Agency	State	Illinois Commerce Commission	Mr.	Dan	Powers	Senior Rail Safety Specialist	527 East Capitol Avenue		Springfield	IL	62701
Participating Agency	Government Agency	State	Illinois Department of Natural Resources	Mr.	Marc	Miller	Director	One Natural Resources Way		Springfield	IL	62702
Participating Agency	Government Agency	State	Illinois Department of Natural Resources	Mr.	Steve	Hamer	Office of Realty & Environmental Planning, Division of Ecosystems & Environment	One Natural Resources Way		Springfield	IL	62702
Participating Agency	Government Agency	State	Illinois Department of Transportation	Mr.	John	Fortman	Deputy Director, Region 1 Engineer	201 W. Center Court		Schaumburg	IL	60196
Participating Agency	Government Agency	State	Illinois Department of Transportation	Mr.	Charles	Abraham	Division of Public and Intermodal Transportation	100 W. Randolph	Suite 6-600	Chicago	IL	60601
Participating Agency	Government Agency	State	Illinois Department of Transportation	Mr.	Joe	Shacter	Director, Department of Public and Intermodal Transportation	100 W. Randolph	Suite 6-600	Chicago	IL	60601
Participating Agency	Government Agency	State	Illinois Department of Transportation	Ms.	John	Baczek	Environmental Studies Section Chief	201 W. Center Court		Schaumburg	IL	60196
Participating Agency	Government Agency	State	Illinois Environmental Protection Agency	Ms.	Lisa	Bonnett	Director	500 Stratton Office Building		Springfield	IL	62076
Participating Agency	Government Agency	State	Illinois Environmental Protection Agency	Ms.	DiAnne	Schuerman		Deputy Director's Office/MC#1 P.O. Box 19276		Springfield	IL	62794-9276

Red Line Extension Project
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Participating Agency	Government Agency	State	Illinois Historic Preservation Agency	Mr.	David	Halpin	Cultural Resources Manager	#1 Old State Capitol Plaza		Springfield	IL	62701
Participating Agency	Government Agency	State	Illinois Historic Preservation Agency	Ms.	Anne	Haacker	Deputy State Historic Preservation Officer	#1 Old State Capitol Plaza		Springfield	IL	62701

April 17, 2014

Mr. Matt Fuller
Environmental Programs Engineer
3250 Executive Park Drive
Springfield, IL 62703

Re: CTA Red Line Extension (RLE) Project Environmental Review Process Update

Dear Mr. Fuller*:*

The Federal Transit Administration (FTA) as lead agency, in cooperation with the Chicago Transit Authority (CTA) as a joint lead agency, has been working to prepare an Environmental Impact Statement (EIS) for the proposed Red Line Extension (RLE) project. The proposed project would extend the Red Line from the existing 95th Street Terminal to the vicinity of 130th Street, subject to the availability of funding.

CTA will be hosting an open house on May 13, 2014 from 5:30 p.m. to 7:30 p.m. at Palmer Park, 201 E. 111th Street, Chicago, IL 60628 to update the community on results of the environmental analysis to date and project progress. Your agency is cordially invited to attend this open house meeting. CTA continues to receive feedback on the project and potential impacts, which will be addressed in the Draft EIS. The meeting format will be an open exchange of information between the attendees and the CTA staff. There will be no formal presentation or testimony.

CTA previously held agency and public scoping meetings in September 2009, and hosted a public open house in August 2011. Since this time, CTA has been preparing the Draft EIS based on analysis of the impacts identified for each of the project alternatives. The Draft EIS is expected to be published for public review in spring 2015. The Draft EIS will document potential benefits and impacts of the Locally Preferred Alternative. This first alternative includes three possibilities: an option running along the existing freight rail tracks of the Union Pacific Railroad (UPRR) right-of-way (ROW Option), in addition to an East Option and a West Option adjacent to the UPRR tracks. The Draft EIS will also describe other build alternatives that are under consideration, including a rail alternative along Halsted Street, and a bus rapid transit (BRT) alternative along Michigan Avenue, in addition to the No Build Alternative.

In developing the Draft EIS over the last year, CTA has reached out to a number of agencies, including FHWA, regarding input on the impact assessment methodologies and the draft technical analyses in each agency’s area of expertise. As the project moves forward and the Draft

EIS is further developed CTA will continue to coordinate with you on the project developments and submit a pre-draft and pre-final environmental document for your review.

Your agency has previously agreed to be a cooperating agency for this project. At this time, we would like to reconfirm your involvement as a cooperating agency and your contact information. Please respond to confirm the single point-of-contact within your organization for future coordination efforts by emailing Sonali Tandon, CTA Project Manager, at STandon@transitchicago.com with the contact's name, title, and email address. FTA and CTA will use this contact information to provide future updates about the project.

Additional information about the project is available at: transitchicago.com/RedEIS.

If you have questions regarding this process, please contact either:

Sonali Tandon, Project Manager
Strategic Planning and Policy
Chicago Transit Authority
567 West Lake Street
Chicago, IL 60661-1465
Phone: (312) 681-4246
Email: standon@transitchicago.com

Reginald Arkell, Community Planner
U.S. DOT
Federal Transit Administration, Region V
200 West Adams Street, Suite 320
Chicago, IL 60606
Phone: (312) 886-3704
Email: reginald.arkell@dot.gov

Thank you for your participation on this project.

Sincerely,

Marisol R. Simón
Regional Administrator

Cc: Mike Hine, Federal Highway Administration

April 17, 2014

Dr. Ernest Moniz
Secretary
Department of Energy
1000 Independence Ave. SW
Washington, DC 20585

Re: CTA Red Line Extension (RLE) Project Environmental Review Process Update

Dear Dr. Ernest Moniz:

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Strategic Planning and Policy
Chicago Transit Authority
567 West Lake Street
Chicago, IL 60661-1465
Phone: (312) 681-4246
Email: standon@transitchicago.com

Reginald Arkell, Community Planner
U.S. DOT
Federal Transit Administration, Region V
200 West Adams Street, Suite 320
Chicago, IL 60606
Phone: (312) 886-3704
Email: reginald.arkell@dot.gov

Thank you for your participation on this project.

Sincerely,

Marisol R. Simón
Regional Administrator

April 17, 2014

Mr. James Galloway
Acting Regional Director - Region 5
Department of Health and Human Services
233 N. Michigan Ave. Ste. 1300
Chicago, IL 60601

Re: CTA Red Line Extension (RLE) Project Environmental Review Process Update

Dear Mr. James Galloway:

The Federal Transit Administration (FTA) as lead agency, in cooperation with the Chicago Transit Authority (CTA) as a joint lead agency, has been working to prepare an Environmental Impact Statement (EIS) for the proposed Red Line Extension (RLE) project. The proposed project would extend the Red Line from the existing 95th Street Terminal to the vicinity of 130th Street, subject to the availability of funding.

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Thank you for your participation on this project.

Sincerely,

Marisol R. Simón
Regional Administrator

April 17, 2014

Ms. Beverly Bishop
Deputy Regional Director
Department of Housing and Urban Development
77 W. Jackson Blvd.
Chicago, IL 60604

Re: CTA Red Line Extension (RLE) Project Environmental Review Process Update

Dear Ms. Beverly Bishop:

The Federal Transit Administration (FTA) as lead agency, in cooperation with the Chicago Transit Authority (CTA) as a joint lead agency, has been working to prepare an Environmental Impact Statement (EIS) for the proposed Red Line Extension (RLE) project. The proposed project would extend the Red Line from the existing 95th Street Terminal to the vicinity of 130th Street, subject to the availability of funding.

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Thank you for your participation on this project.

Sincerely,

Marisol R. Simón
Regional Administrator

April 17, 2014

Ms. Melanie Haywood
Field Environmental Officer
Department of Housing and Urban Development
77 W. Jackson Blvd. Rm 2420
Chicago, IL 60604

Re: CTA Red Line Extension (RLE) Project Environmental Review Process Update

Dear Ms. Melanie Haywood:

The Federal Transit Administration (FTA) as lead agency, in cooperation with the Chicago Transit Authority (CTA) as a joint lead agency, has been working to prepare an Environmental Impact Statement (EIS) for the proposed Red Line Extension (RLE) project. The proposed project would extend the Red Line from the existing 95th Street Terminal to the vicinity of 130th Street, subject to the availability of funding.

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Marisol R. Simón
Regional Administrator

April 17, 2014

Mr. Steve Vahl
Region 5 Environmental Officer
Department of Housing and Urban Development
77 W. Jackson Blvd. Rm 2420
Chicago, IL 60604

Re: CTA Red Line Extension (RLE) Project Environmental Review Process Update

Dear Mr. Steve Vahl:

The Federal Transit Administration (FTA) as lead agency, in cooperation with the Chicago Transit Authority (CTA) as a joint lead agency, has been working to prepare an Environmental Impact Statement (EIS) for the proposed Red Line Extension (RLE) project. The proposed project would extend the Red Line from the existing 95th Street Terminal to the vicinity of 130th Street, subject to the availability of funding.

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April 17, 2014

Ms. Janet Odeshoo
Deputy Regional Administrator, Region V
Federal Emergency Management Agency
536 S. Clark St. 6th floor
Chicago, IL 60605

Re: CTA Red Line Extension (RLE) Project Environmental Review Process Update

Dear Ms. Janet Odeshoo:

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Sincerely,

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Regional Administrator

April 17, 2014

Mr. Nicholas Mueller
Regional Environmental Officer
Federal Emergency Management Agency
536 S. Clark St. 6th floor
Chicago, IL 60605

Re: CTA Red Line Extension (RLE) Project Environmental Review Process Update

Dear Mr. Nicholas Mueller:

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Thank you for your participation on this project.

Sincerely,

Marisol R. Simón
Regional Administrator

April 17, 2014

Mr. Laurence Hasvold
Regional Administrator
Federal Railroad Administration
200 West Adams Suite 310
Chicago, IL 60606

Re: CTA Red Line Extension (RLE) Project Environmental Review Process Update

Dear Mr. Laurence Hasvold:

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Thank you for your participation on this project.

Sincerely,

Marisol R. Simón
Regional Administrator

April 17, 2014

Mr. John Pistole
Administrator
Transportation Security Administration
601 S. 12th St.
Arlington, VA 20598

Re: CTA Red Line Extension (RLE) Project Environmental Review Process Update

Dear Mr. John Pistole:

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Thank you for your participation on this project.

Sincerely,

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April 17, 2014

Mr. Fred Goodine
Section Chief, Risk Reduction, Mass Transit and Passenger Rail Branch
Transportation Security Administration
601 S. 12th St.
Arlington, VA 20598

Re: CTA Red Line Extension (RLE) Project Environmental Review Process Update

Dear Mr. Fred Goodine:

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Sonali Tandon, Project Manager
Strategic Planning and Policy
Chicago Transit Authority
567 West Lake Street
Chicago, IL 60661-1465
Phone: (312) 681-4246
Email: standon@transitchicago.com

Reginald Arkell, Community Planner
U.S. DOT
Federal Transit Administration, Region V
200 West Adams Street, Suite 320
Chicago, IL 60606
Phone: (312) 886-3704
Email: reginald.arkell@dot.gov

Thank you for your participation on this project.

Sincerely,

Marisol R. Simón
Regional Administrator

April 17, 2014

Ms. Susan Hedman
Regional Administrator - Region 5
U.S. Environmental Protection Agency
77 W. Jackson Blvd.
Chicago, IL 60604

Re: CTA Red Line Extension (RLE) Project Environmental Review Process Update

Dear Ms. Susan Hedman:

The Federal Transit Administration (FTA) as lead agency, in cooperation with the Chicago Transit Authority (CTA) as a joint lead agency, has been working to prepare an Environmental Impact Statement (EIS) for the proposed Red Line Extension (RLE) project. The proposed project would extend the Red Line from the existing 95th Street Terminal to the vicinity of 130th Street, subject to the availability of funding.

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Thank you for your participation on this project.

Sincerely,

Marisol R. Simón
Regional Administrator

April 17, 2014

Mr. Norm West
NEPA Review
U.S. Environmental Protection Agency
77 W Jackson Blvd.
Chicago, IL 60604

Re: CTA Red Line Extension (RLE) Project Environmental Review Process Update

Dear Mr. Norm West:

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Sincerely,

Marisol R. Simón
Regional Administrator

April 17, 2014

Mr. John Rogner
Field Supervisor - Chicago Field Office
U.S. Fish and Wildlife Service
1250 S. Grove Ste. 103
Barrington, IL 60010

Re: CTA Red Line Extension (RLE) Project Environmental Review Process Update

Dear Mr. John Rogner:

The Federal Transit Administration (FTA) as lead agency, in cooperation with the Chicago Transit Authority (CTA) as a joint lead agency, has been working to prepare an Environmental Impact Statement (EIS) for the proposed Red Line Extension (RLE) project. The proposed project would extend the Red Line from the existing 95th Street Terminal to the vicinity of 130th Street, subject to the availability of funding.

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Thank you for your participation on this project.

Sincerely,

Marisol R. Simón
Regional Administrator

April 17, 2014

Mr. John F. Froman
Chief
Peoria Tribe of Indians of Oklahoma
118 S. Eight Tribes Trail
Miami, OK 74354

Re: CTA Red Line Extension (RLE) Project Environmental Review Process Update

Dear Mr. John F. Froman:

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Thank you for your participation on this project.

Sincerely,

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Regional Administrator

April 17, 2014

Mr. Steve Ortiz
Chief
Prairie Band of Potawatomi Nation
16281 Q Road
Mayetta, KS 66509

Re: CTA Red Line Extension (RLE) Project Environmental Review Process Update

Dear Mr. Steve Ortiz:

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Sincerely,

Marisol R. Simón
Regional Administrator

April 17, 2014

Mr. George Strack
Tribal Historic Preservation Officer
Miami Tribe of Oklahoma
202 S. Eight Tribes Trail
Miami, OK 74354

Re: CTA Red Line Extension (RLE) Project Environmental Review Process Update

Dear Mr. George Strack:

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Thank you for your participation on this project.

Sincerely,

Marisol R. Simón
Regional Administrator

April 17, 2014

Ms. Twen Barton
Chairperson
Sac and Fox Nation of Missouri
305 N. Main Street
Reserve, KS 66434

Re: CTA Red Line Extension (RLE) Project Environmental Review Process Update

Dear Ms. Twen Barton:

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Sincerely,

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Regional Administrator

April 17, 2014

Mr. Homer Bear, Jr.
Chairman
Sac and Fox Nation of Mississippi in Iowa
394 Meskwaki Road
Tama, IA 52339

Re: CTA Red Line Extension (RLE) Project Environmental Review Process Update

Dear Mr. Homer Bear, Jr.:

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Thank you for your participation on this project.

Sincerely,

Marisol R. Simón
Regional Administrator

April 17, 2014

Michael Zimmerman
Tribal Historic Preservation Officer
Pokagon Band of Potawatomi Indians
58620 Sink Road
Dowagiac, MI 49047

Re: CTA Red Line Extension (RLE) Project Environmental Review Process Update

Dear Michael Zimmerman:

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If you have questions regarding this process, please contact either:

Sonali Tandon, Project Manager
Strategic Planning and Policy
Chicago Transit Authority
567 West Lake Street
Chicago, IL 60661-1465
Phone: (312) 681-4246
Email: standon@transitchicago.com

Reginald Arkell, Community Planner
U.S. DOT
Federal Transit Administration, Region V
200 West Adams Street, Suite 320
Chicago, IL 60606
Phone: (312) 886-3704
Email: reginald.arkell@dot.gov

Thank you for your participation on this project.

Sincerely,

Marisol R. Simón
Regional Administrator

April 17, 2014

Mr. Earl Meshiguad
Potawatomi Nation-Hannahville Indian Community
N14911 Hannahville Blvd.
Wilson, MI 49896

Re: CTA Red Line Extension (RLE) Project Environmental Review Process Update

Dear Mr. Earl Meshiguad:

The Federal Transit Administration (FTA) as lead agency, in cooperation with the Chicago Transit Authority (CTA) as a joint lead agency, has been working to prepare an Environmental Impact Statement (EIS) for the proposed Red Line Extension (RLE) project. The proposed project would extend the Red Line from the existing 95th Street Terminal to the vicinity of 130th Street, subject to the availability of funding.

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Thank you for your participation on this project.

Sincerely,

Marisol R. Simón
Regional Administrator

April 17, 2014

Mr. Phillip Shopodock
Chariperson
Forest Country Potawatomi
P.O. Box 340
Crandon, WI 54520

Re: CTA Red Line Extension (RLE) Project Environmental Review Process Update

Dear Mr. Phillip Shopodock:

The Federal Transit Administration (FTA) as lead agency, in cooperation with the Chicago Transit Authority (CTA) as a joint lead agency, has been working to prepare an Environmental Impact Statement (EIS) for the proposed Red Line Extension (RLE) project. The proposed project would extend the Red Line from the existing 95th Street Terminal to the vicinity of 130th Street, subject to the availability of funding.

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Phone: (312) 886-3704
Email: reginald.arkell@dot.gov

Thank you for your participation on this project.

Sincerely,

Marisol R. Simón
Regional Administrator

April 17, 2014

Mr. Bill Quackenbush
Tribal Historic Preservation Officer
Ho-Chunk Nation
P.O. Box 667P
Black River, WI 54815

Re: CTA Red Line Extension (RLE) Project Environmental Review Process Update

Dear Mr. Bill Quackenbush:

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Thank you for your participation on this project.

Sincerely,

Marisol R. Simón
Regional Administrator

April 17, 2014

Ms. Sandra Massey
Tribal Historic Preservation Officer
Sac and Fox Nation of Oklahoma
Rt. 2 Box 246
Stroud, OK 74079

Re: CTA Red Line Extension (RLE) Project Environmental Review Process Update

Dear Ms. Sandra Massey:

The Federal Transit Administration (FTA) as lead agency, in cooperation with the Chicago Transit Authority (CTA) as a joint lead agency, has been working to prepare an Environmental Impact Statement (EIS) for the proposed Red Line Extension (RLE) project. The proposed project would extend the Red Line from the existing 95th Street Terminal to the vicinity of 130th Street, subject to the availability of funding.

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Thank you for your participation on this project.

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Regional Administrator

April 17, 2014

Mr. John Barrett
Chairperson
Citizen Potawatomi Nation
1601 S. Gordon Cooper
Shawnee, OK 74801

Re: CTA Red Line Extension (RLE) Project Environmental Review Process Update

Dear Mr. John Barrett:

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Sincerely,

Marisol R. Simón
Regional Administrator

CHICAGO TRANSIT AUTHORITY

567 West Lake Street
Chicago, Illinois 60661-1498
TEL 312 664-7200
www.transitchicago.com

April 17, 2014

Mr. John Gerut
Senior Vice President
Chicago Housing Authority
60 E. Van Buren
Chicago, IL 60605

Re: CTA Red Line Extension (RLE) Project Environmental Review Process Update

Dear Mr. Gerut:

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Sonali

Sonali Tandon
Project Manager
Strategic Planning and Policy
312.681.4246
standon@transitchicago.com

cc: Reginald Arkell, Federal Transit Administration

CHICAGO TRANSIT AUTHORITY

567 West Lake Street
Chicago, Illinois 60661-1498
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April 17, 2014

Mr. Jose Anthony Alvarez
Development Manager, Office of Development Management
Chicago Housing Authority
60 E. Van Buren
Chicago, IL 60605

Re: CTA Red Line Extension (RLE) Project Environmental Review Process Update

Dear Mr. Alvarez:

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cc: Reginald Arkell, Federal Transit Administration

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April 17, 2014

Mr. Rob Rejman
Chicago Park District
541 N. Fairbanks
Chicago, IL 60611

Re: CTA Red Line Extension (RLE) Project Environmental Review Process Update

Dear Mr. Rejman:

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Project Manager
Strategic Planning and Policy
312.681.4246
standon@transitchicago.com

cc: Reginald Arkell, Federal Transit Administration

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April 17, 2014

Ms. Doreen O'Donnell
Research and Planning Manager
Chicago Park District
541 N. Fairbanks
Chicago, IL 60611

Re: CTA Red Line Extension (RLE) Project Environmental Review Process Update

Dear Ms. O'Donnell:

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If you have any questions, please do not hesitate to contact me. Thank you for your participation on this project.

Sincerely,

Sonali

Sonali Tandon
Project Manager
Strategic Planning and Policy
312.681.4246
standon@transitchicago.com

cc: Reginald Arkell, Federal Transit Administration

CHICAGO TRANSIT AUTHORITY

567 West Lake Street
Chicago, Illinois 60661-1498
TEL 312 664-7200
www.transitchicago.com

April 17, 2014

Ms. Gia Biagi
Chicago Park District
541 N. Fairbanks
Chicago, IL 60611

Re: CTA Red Line Extension (RLE) Project Environmental Review Process Update

Dear Ms. Biagi:

The Federal Transit Administration (FTA) as lead agency, in cooperation with the Chicago Transit Authority (CTA) as a joint lead agency, has been working to prepare an Environmental Impact Statement (EIS) for the proposed Red Line Extension (RLE) project. The proposed project would extend the Red Line from the existing 95th Street Terminal to the vicinity of 130th Street, subject to the availability of funding.

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April 17, 2014

Ms. Norma I. Reyes
Commissioner
City of Chicago Department of Business Affairs and Consumer Protection
50 W. Washington St.
Room 208
Chicago, IL 60602

Re: CTA Red Line Extension (RLE) Project Environmental Review Process Update

Dear Ms. Reyes:

The Federal Transit Administration (FTA) as lead agency, in cooperation with the Chicago Transit Authority (CTA) as a joint lead agency, has been working to prepare an Environmental Impact Statement (EIS) for the proposed Red Line Extension (RLE) project. The proposed project would extend the Red Line from the existing 95th Street Terminal to the vicinity of 130th Street, subject to the availability of funding.

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312.681.4246
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cc: Reginald Arkell, Federal Transit Administration

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April 17, 2014

Mr. Benet Haller
City of Chicago Department of Housing and Economic Development
121 N. LaSalle St.
10th Floor
Chicago, IL 60602

Re: CTA Red Line Extension (RLE) Project Environmental Review Process Update

Dear Mr. Haller:

The Federal Transit Administration (FTA) as lead agency, in cooperation with the Chicago Transit Authority (CTA) as a joint lead agency, has been working to prepare an Environmental Impact Statement (EIS) for the proposed Red Line Extension (RLE) project. The proposed project would extend the Red Line from the existing 95th Street Terminal to the vicinity of 130th Street, subject to the availability of funding.

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CHICAGO TRANSIT AUTHORITY

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April 17, 2014

Mr. Kevin Laberge
Bureau of Environmental, Health & Safety Management
City of Chicago Department of Fleet and Facility Management
30 N. LaSalle St.
Suite 300
Chicago, IL 60602

Re: CTA Red Line Extension (RLE) Project Environmental Review Process Update

Dear Mr. Laberge:

The Federal Transit Administration (FTA) as lead agency, in cooperation with the Chicago Transit Authority (CTA) as a joint lead agency, has been working to prepare an Environmental Impact Statement (EIS) for the proposed Red Line Extension (RLE) project. The proposed project would extend the Red Line from the existing 95th Street Terminal to the vicinity of 130th Street, subject to the availability of funding.

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April 17, 2014

Ms. Luann Hamilton
Director, Transportation Planning
City of Chicago Department of Transportation
30 N. LaSalle St.
Suite 500
Chicago, IL 60602

Re: CTA Red Line Extension (RLE) Project Environmental Review Process Update

Dear Ms. Hamilton:

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312.681.4246
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cc: Reginald Arkell, Federal Transit Administration

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567 West Lake Street
Chicago, Illinois 60661-1498
TEL 312 664-7200
www.transitchicago.com

April 17, 2014

Mr. Jeffrey Sriver
Projects Administrator
City of Chicago Department of Transportation
30 N. LaSalle Street
Suite 500
Chicago, IL 60602

Re: CTA Red Line Extension (RLE) Project Environmental Review Process Update

Dear Mr. Sriver:

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April 17, 2014

Mr. Joe Deal
Director of Regional Programs
City of Chicago Office of the Mayor
121 N. LaSalle St.
Room 509
Chicago, IL 60602

Re: CTA Red Line Extension (RLE) Project Environmental Review Process Update

Dear Mr. Deal:

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Chicago, Illinois 60661-1498
TEL 312 664-7200
www.transitchicago.com

April 17, 2014

Mr. Garry McCarthy
Superintendent
City of Chicago Police Department
3510 S. Michigan Ave.
Chicago, IL 60653

Re: CTA Red Line Extension (RLE) Project Environmental Review Process Update

Dear Mr. McCarthy:

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567 West Lake Street
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April 17, 2014

Deputy Chief Steve Georgas
Bureau of Patrol; Special Functions
City of Chicago Police Department
3510 S. Michigan Ave.
Chicago, IL 60653

Re: CTA Red Line Extension (RLE) Project Environmental Review Process Update

Dear Deputy Chief Georgas:

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312.681.4246
standon@transitchicago.com

cc: Reginald Arkell, Federal Transit Administration

CHICAGO TRANSIT AUTHORITY

567 West Lake Street
Chicago, Illinois 60661-1498
TEL 312 664-7200
www.transitchicago.com

April 17, 2014

Commander Nancy Lipman
Public Transportation Section
City of Chicago Police Department
1718 S. State St.
Annex Building
Chicago, IL 60616

Re: CTA Red Line Extension (RLE) Project Environmental Review Process Update

Dear Commander Lipman:

The Federal Transit Administration (FTA) as lead agency, in cooperation with the Chicago Transit Authority (CTA) as a joint lead agency, has been working to prepare an Environmental Impact Statement (EIS) for the proposed Red Line Extension (RLE) project. The proposed project would extend the Red Line from the existing 95th Street Terminal to the vicinity of 130th Street, subject to the availability of funding.

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If you have any questions, please do not hesitate to contact me. Thank you for your participation on this project.

Sincerely,

Sonali

Sonali Tandon
Project Manager
Strategic Planning and Policy
312.681.4246
standon@transitchicago.com

cc: Reginald Arkell, Federal Transit Administration

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April 17, 2014

Ms. Lynette Ciavarella
Director, Planning and Analysis
Metra Commuter Rail
547 W. Jackson Blvd.
13th Floor
Chicago, IL 60661

Re: CTA Red Line Extension (RLE) Project Environmental Review Process Update

Dear Ms. Ciavarella:

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April 17, 2014

Mr. David Kralik
Department Head, Long Range Planning
Metra Commuter Rail
547 W. Jackson Blvd.
13th Floor
Chicago, IL 60661

Re: CTA Red Line Extension (RLE) Project Environmental Review Process Update

Dear Mr. Kralik:

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April 17, 2014

Ms. Kathleen Meany
President, Board of Commissioners
Metropolitan Water Reclamation District of Greater Chicago
100 E. Erie St.
Chicago, IL 60611

Re: CTA Red Line Extension (RLE) Project Environmental Review Process Update

Dear Ms. Meany:

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cc: Reginald Arkell, Federal Transit Administration

CHICAGO TRANSIT AUTHORITY

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April 17, 2014

Mr. Joseph Schuessler
Principal Civil Engineer
Metropolitan Water Reclamation District of Greater Chicago
100 East Erie Street
Chicago, IL 60611

Re: CTA Red Line Extension (RLE) Project Environmental Review Process Update

Dear Mr. Schuessler:

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April 17, 2014

Ms. Leanne Redden
Senior Deputy, Executive Director of Planning
Regional Transportation Authority
175 W. Jackson Blvd.
Suite 1550
Chicago, IL 60604

Re: CTA Red Line Extension (RLE) Project Environmental Review Process Update

Dear Ms. Redden:

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April 17, 2014

Mr. Peter Fahrenwald
Manager, Regional and Corridor Planning
Regional Transportation Authority
175 W. Jackson Blvd.
Suite 1550
Chicago, IL 60604

Re: CTA Red Line Extension (RLE) Project Environmental Review Process Update

Dear Mr. Fahrenwald:

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April 17, 2014

Mr. David Tomzik
Manager, Long Range Planning
Pace
550 W. Algonquin Road
Arlington Heights, IL 60005

Re: CTA Red Line Extension (RLE) Project Environmental Review Process Update

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April 17, 2014

Ms. Lorraine Snorden
Manager, Department of Planning Services
Pace
550 W. Algonquin Road
Arlington Heights, IL 60005

Re: CTA Red Line Extension (RLE) Project Environmental Review Process Update

Dear Ms. Snorden:

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April 17, 2014

Ms. Shauna Kelley
Bureau of Transportation Chief
Illinois Commerce Commission
160 N. LaSalle St.
C800
Chicago, IL 60601

Re: CTA Red Line Extension (RLE) Project Environmental Review Process Update

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Sincerely,

Sonali

Sonali Tandon
Project Manager
Strategic Planning and Policy
312.681.4246
standon@transitchicago.com

cc: Reginald Arkell, Federal Transit Administration

CHICAGO TRANSIT AUTHORITY

567 West Lake Street
Chicago, Illinois 60661-1498
TEL 312 664-7200
www.transitchicago.com

April 17, 2014

Mr. Dan Powers
Senior Rail Safety Specialist
Illinois Commerce Commission
527 East Capitol Avenue
Springfield, IL 62701

Re: CTA Red Line Extension (RLE) Project Environmental Review Process Update

Dear Mr. Powers:

The Federal Transit Administration (FTA) as lead agency, in cooperation with the Chicago Transit Authority (CTA) as a joint lead agency, has been working to prepare an Environmental Impact Statement (EIS) for the proposed Red Line Extension (RLE) project. The proposed project would extend the Red Line from the existing 95th Street Terminal to the vicinity of 130th Street, subject to the availability of funding.

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April 17, 2014

Mr. Marc Miller
Director
Illinois Department of Natural Resources
One Natural Resources Way
Springfield, IL 62702

Re: CTA Red Line Extension (RLE) Project Environmental Review Process Update

Dear Mr. Miller:

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April 17, 2014

Mr. Steve Hamer
Office of Realty & Environmental Planning, Division of Ecosystems & Environment
Illinois Department of Natural Resources
One Natural Resources Way
Springfield, IL 62702

Re: CTA Red Line Extension (RLE) Project Environmental Review Process Update

Dear Mr. Hamer:

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April 17, 2014

Mr. John Fortman
Deputy Director, Region 1 Engineer
Illinois Department of Transportation
201 W. Center Court
Schaumburg, IL 60196

Re: CTA Red Line Extension (RLE) Project Environmental Review Process Update

Dear Mr. Fortman:

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April 17, 2014

Mr. Charles Abraham
Division of Public and Intermodal Transportation
Illinois Department of Transportation
100 W. Randolph
Suite 6-600
Chicago, IL 60601

Re: CTA Red Line Extension (RLE) Project Environmental Review Process Update

Dear Mr. Abraham:

The Federal Transit Administration (FTA) as lead agency, in cooperation with the Chicago Transit Authority (CTA) as a joint lead agency, has been working to prepare an Environmental Impact Statement (EIS) for the proposed Red Line Extension (RLE) project. The proposed project would extend the Red Line from the existing 95th Street Terminal to the vicinity of 130th Street, subject to the availability of funding.

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April 17, 2014

Mr. Joe Shacter
Director, Department of Public and Intermodal Transportation
Illinois Department of Transportation
100 W. Randolph
Suite 6-600
Chicago, IL 60601

Re: CTA Red Line Extension (RLE) Project Environmental Review Process Update

Dear Mr. Shacter:

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Chicago, Illinois 60661-1498
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April 17, 2014

Ms. John Baczek
Environmental Studies Section Chief
Illinois Department of Transportation
201 W. Center Court
Schaumburg, IL 60196

Re: CTA Red Line Extension (RLE) Project Environmental Review Process Update

Dear Ms. Baczek:

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April 17, 2014

Ms. Lisa Bonnett
Director
Illinois Environmental Protection Agency
500 Stratton Office Building
Springfield, IL 62076

Re: CTA Red Line Extension (RLE) Project Environmental Review Process Update

Dear Ms. Bonnett:

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April 17, 2014

Ms. DiAnne Schuerman
Illinois Environmental Protection Agency
Deputy Director's Office/MC#1, P.O. Box 19276
Springfield, IL 0

Re: CTA Red Line Extension (RLE) Project Environmental Review Process Update

Dear Ms. Schuerman:

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April 17, 2014

Mr. David Halpin
Cultural Resources Manager
Illinois Historic Preservation Agency
#1 Old State Capitol Plaza
Springfield, IL 62701

Re: CTA Red Line Extension (RLE) Project Environmental Review Process Update

Dear Mr. Halpin:

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CTA previously held agency and public scoping meetings in September 2009, and hosted a public open house in August 2011. Since this time, CTA has been preparing the Draft EIS based on analysis of the impacts identified for each of the project alternatives. The Draft EIS is expected to be published for public review in spring 2015. The Draft EIS will document potential benefits and impacts of the Locally Preferred Alternative. This first alternative includes three possibilities: an option running along the existing freight rail tracks of the Union Pacific Railroad (UPRR) right-of-way (ROW Option), in addition to an East Option and a West Option adjacent to the UPRR tracks. The Draft EIS will also describe other build alternatives that are under consideration, including a rail alternative along Halsted Street, and a bus rapid transit (BRT) alternative along Michigan Avenue, in addition to the No Build Alternative.

In developing the Draft EIS over the last year, CTA has reached out to a number of participating agencies regarding input on the impact assessment methodologies and the draft technical analyses in each agency's area of expertise. As the project moves forward and the Draft EIS is further developed, as a participating agency, you may be asked to review and comment on

sections of the document. This will be your opportunity to communicate any concerns of your agency on the adequacy of the document, the alternatives considered, the anticipated impacts and proposed mitigation.

Your agency has previously agreed to be a participating agency for this project. At this time, we would like to reconfirm your involvement as a participating agency and your contact information. If you are not the right contact within your organization or would like to designate another person for future coordination efforts, please email me at standon@transitchicago.com with the contact's name, title, and email address. FTA and CTA will use this contact information to provide future updates about the project.

Additional information about the project is available at: transitchicago.com/RedEIS.

If you have any questions, please do not hesitate to contact me. Thank you for your participation on this project.

Sincerely,

Sonali

Sonali Tandon
Project Manager
Strategic Planning and Policy
312.681.4246
standon@transitchicago.com

cc: Reginald Arkell, Federal Transit Administration

CHICAGO TRANSIT AUTHORITY

567 West Lake Street
Chicago, Illinois 60661-1498
TEL 312 664-7200
www.transitchicago.com

April 17, 2014

Ms. Anne Haacker
Deputy State Historic Preservation Officer
Illinois Historic Preservation Agency
#1 Old State Capitol Plaza
Springfield, IL 62701

Re: CTA Red Line Extension (RLE) Project Environmental Review Process Update

Dear Ms. Haacker:

The Federal Transit Administration (FTA) as lead agency, in cooperation with the Chicago Transit Authority (CTA) as a joint lead agency, has been working to prepare an Environmental Impact Statement (EIS) for the proposed Red Line Extension (RLE) project. The proposed project would extend the Red Line from the existing 95th Street Terminal to the vicinity of 130th Street, subject to the availability of funding.

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If you have any questions, please do not hesitate to contact me. Thank you for your participation on this project.

Sincerely,

Sonali

Sonali Tandon
Project Manager
Strategic Planning and Policy
312.681.4246
standon@transitchicago.com

cc: Reginald Arkell, Federal Transit Administration

From: Fahrenwald, Peter [mailto:FahrenwaldP@RTACHICAGO.ORG]
Sent: Wednesday, April 23, 2014 11:06 AM
To: Tandon, Sonali
Subject: Red Line Extension Project Environmental Review Process

Sonali – thanks for your letter of April 17, 2014. Yes, RTA would like to continue to be a participating agency, and we appreciate the opportunity.

Regards,
Peter

Peter Fahrenwald
Manager, Regional and Corridor Planning
Regional Transportation Authority • 175 W. Jackson Blvd • Suite 1650 • Chicago, IL 60604-2705
312-913-3247 • fahrenwaldp@rtachicago.org
Securely send me files

From: Hernandez, Nancy [mailto:nancy.hernandez@chicagoparkdistrict.com]
Sent: Monday, April 21, 2014 12:51 PM
To: Tandon, Sonali
Subject: Revised Contact Information

Hi there,

The new contacts for the Chicago Park District are:

Rob Rejman
Director of Capital, Planning and Facilities

Doreen O'Donnell
Research and Planning Manager
Department of Planning and Development

Nancy J. Hernandez
Staff Assistant to:
Gia Biagi, Chief of Staff
Steve Lux, Chief Financial Officer
Chicago Park District Commissioners

CHICAGO PARK DISTRICT
541 N. Fairbanks Ct. | Chicago, IL 60611
(312) 742-4743 | fax (312) 742-6098
Nancy.hernandez@chicagoparkdistrict.com

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Illinois Department of Transportation
Division of Highways / Region 1 / District 1
201 West Center Court / Schaumburg, Illinois 60196-1096

May 21, 2014

Ms. Sonali Tandon
Project Manager
Strategic Planning and Policy
Chicago Transit Authority
567 W. Lake Street
Chicago, IL 60661

Dear Ms. Tandon:

Thank you for your letter to the Illinois Department of Transportation (Department) regarding the Chicago Transit Authority's (CTA's) Red Line Extension.

The Department would like to confirm our involvement as a participating agency in this project. We look forward to working with the CTA in the development of this project and we ask that any reports or other documents that require Department review be sent to our Bureau of Programming with an attention to John Baczek, Project and Environmental Studies Section Chief.

If you have any questions or need additional information, please contact me or John Baczek, Project and Environmental Studies Section Chief, at (847) 705-4104.

Very truly yours,

John Fortmann, P.E.
Deputy Director of Highways
Region One Engineer

cc: Reginald Arkell – Federal Transit Authority

From: McKay, Christopher [mailto:Christopher.McKay@tsa.dhs.gov]
Sent: Thursday, May 01, 2014 1:57 PM
To: reginald.arkell@dot.gov
Cc: Tandon, Sonali; Mitchell, Cindy; 'Chris McKay' (christopher.mckay@dhs.gov)
Subject: Red Line Extension Project

Dear Mr. Arkell,

On April 17, 2014, we received a letter from the Regional Administrator, Federal Transit Administration, inviting the Transportation Security Administration (TSA) to attend an open house on May 13, 2014 to receive an update on results of the environmental analysis to date and progress in regards to the red line extension project.

TSA will not be able to participate in this open house, however, we do maintain a compelling interest in all areas related to security and security related risk reduction activities in the design, development, construction and eventual operation of the project. I will serve as your point-of-contact and appreciate the opportunity to partner with you going forward.

Sincerely yours,
Chris

Christopher T. McKay
Industry Engagement Manager
Mass Transit and Passenger Rail
Transportation Security Administration
Office: 571-227-2160
Cell: 202-253-5029

From: McQuillen, Deirdre [mailto:Deirdre.McQuillen@Illinois.gov]
Sent: Wednesday, April 23, 2014 9:41 AM
To: Tandon, Sonali
Subject: Illinois EPA contact

DiAnne Schuerman is no longer with the Agency. I now coordinate the review and Agency's response to these requests, if you could please update your files.

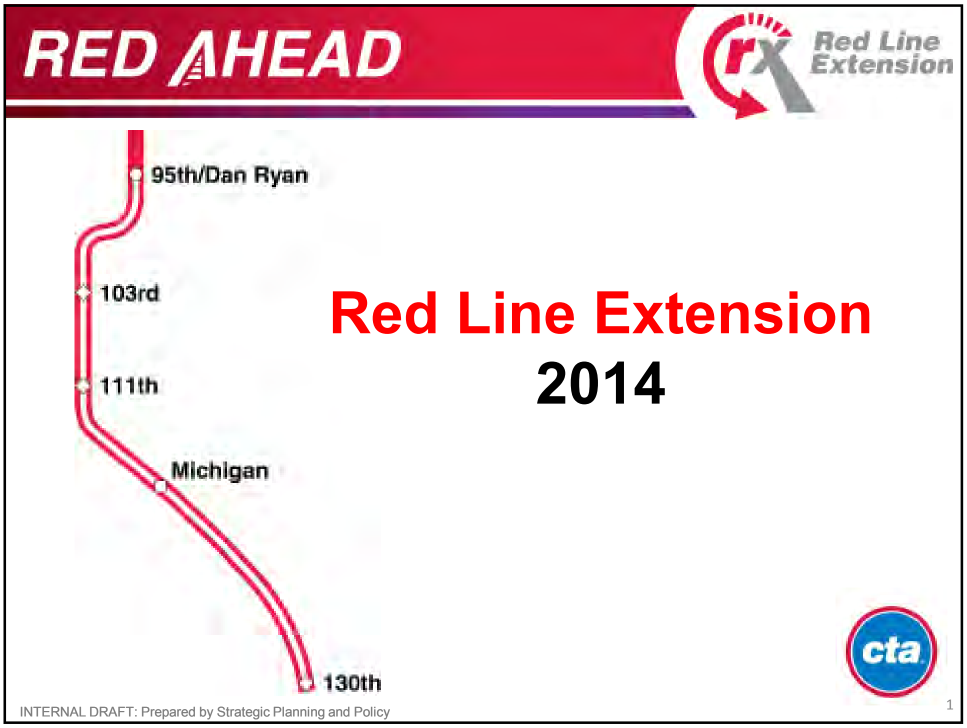
If you need anything else please let me know.

Thank you.

Deirdre McQuillen
Illinois EPA/Illinois Partners for Clean Air
Outreach/Sponsorship Coordinator
phone: 217-558-0073
fax: 217-785-8346

PARTNERS
FOR CLEAN AIR
ILLINOIS

Appendix D
Community Group Meeting Materials and Meeting Notes



RED AHEAD

Red Line Extension

95th/Dan Ryan
103rd
111th
Michigan
130th
cta

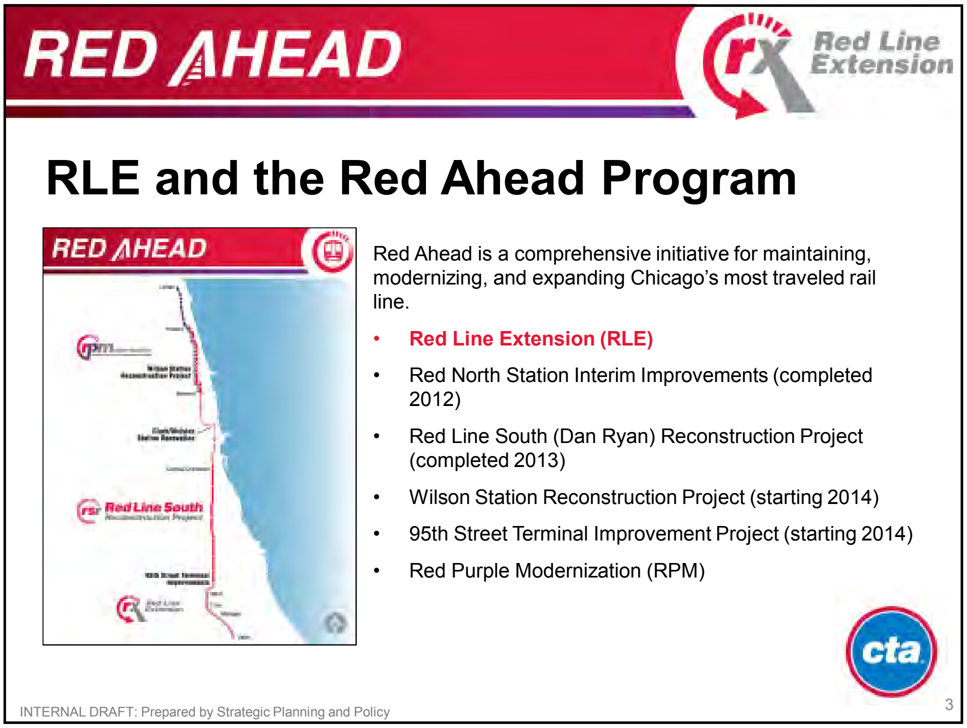
Red Line Extension
2014

INTERNAL DRAFT: Prepared by Strategic Planning and Policy

RED AHEAD

Red Line Extension

- CTA plans to extend the Red Line 5.3 miles south from 95th Street to 130th Street
- CTA needs public input to move forward on the environmental analysis



RED AHEAD

Red Line Extension

RLE and the Red Ahead Program

Red Ahead is a comprehensive initiative for maintaining, modernizing, and expanding Chicago's most traveled rail line.

- **Red Line Extension (RLE)**
- Red North Station Interim Improvements (completed 2012)
- Red Line South (Dan Ryan) Reconstruction Project (completed 2013)
- Wilson Station Reconstruction Project (starting 2014)
- 95th Street Terminal Improvement Project (starting 2014)
- Red Purple Modernization (RPM)

RED AHEAD

Red Line Extension

CTA is continuing the public processes on two critical components of the Red Ahead Program in 2014

Red Line Extension (RLE)

- Pursuing New Starts federal funds
- New Starts projects expand rail service into an area that is not within the current transit footprint, therefore entail a relatively longer environmental and planning process
- CTA must compete with other New Starts projects from across the country that are already in line for funding
- Multiple alternatives and their impacts are being evaluated

Red and Purple Modernization (RPM)

- Pursuing Core Capacity federal funds
- Core Capacity projects are intended to increase capacity of existing rail lines within the current transit footprint, therefore entail a relatively shorter environmental and planning process
- RPM is the first and only Core Capacity project in the FTA's Project Development phase and is recommended for funding in the proposed FY2015 federal budget
- Phase One includes two main projects and a single alternative is proposed for each of these projects

Project Overview

- The end of the line for the CTA's Red Line South is currently the 95th/Dan Ryan Terminal.
- Later this year construction will begin on the 95th Street Terminal Improvement Project, which will expand and greatly improve the 95th/Dan Ryan Terminal.
- With the estimated $2.3B Red Line Extension (RLE) Project, CTA is proposing to extend service from south of 95th/Dan Ryan Terminal to the vicinity of 130th Street.

Project History and Public Involvement

Alternatives Analysis (2006-2009)

- Project alternatives were presented at six public meetings
- Locally Preferred Alternative adopted by the CTA Board in 2009

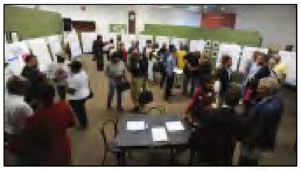
Environmental Scoping (2009)

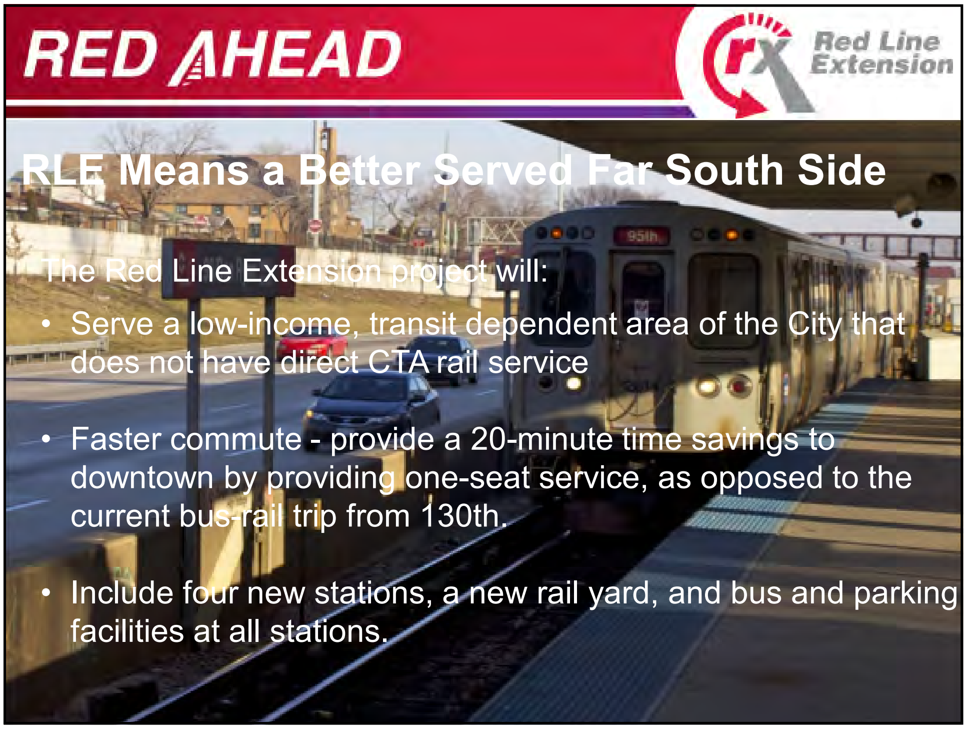
- Community members and public agencies assessed the range of project actions, alternatives and potential environmental impacts

Early Technical Work & Open House (2011)

Draft Environmental Impact Statement (2012 – present)

- Under preparation by CTA and the Federal Transit Administration (FTA)
- Public feedback on the preliminary impact of the alternatives is necessary to complete the Draft EIS





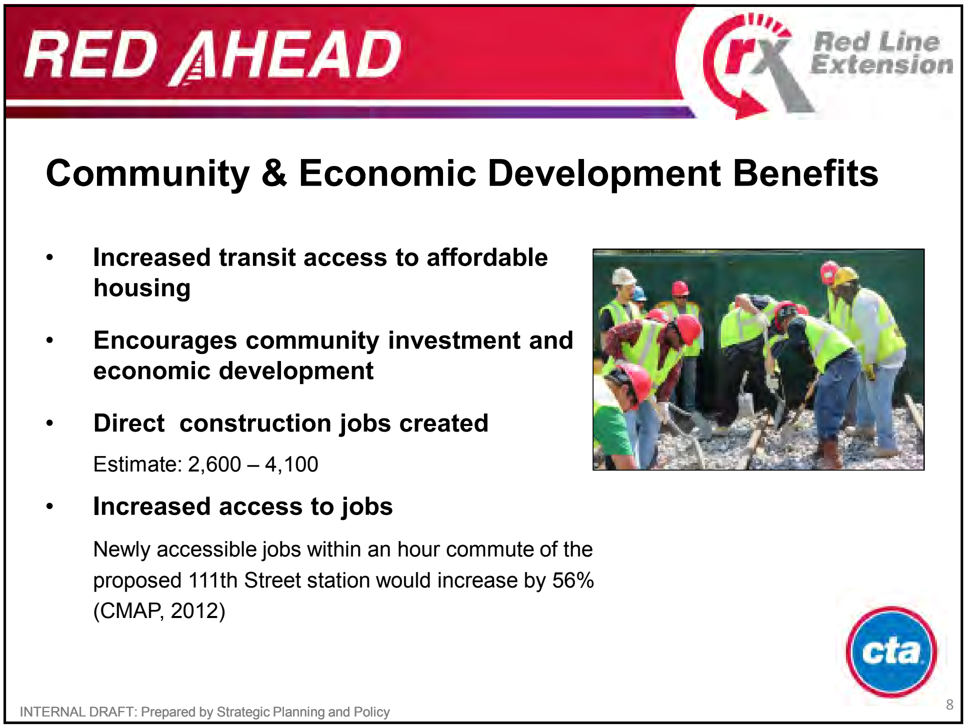
RED AHEAD

Red Line Extension

RLE Means a Better Served Far South Side

The Red Line Extension project will:

- Serve a low-income, transit dependent area of the City that does not have direct CTA rail service
- Faster commute - provide a 20-minute time savings to downtown by providing one-seat service, as opposed to the current bus-rail trip from 130th.
- Include four new stations, a new rail yard, and bus and parking facilities at all stations.



RED AHEAD

Red Line Extension

Community & Economic Development Benefits

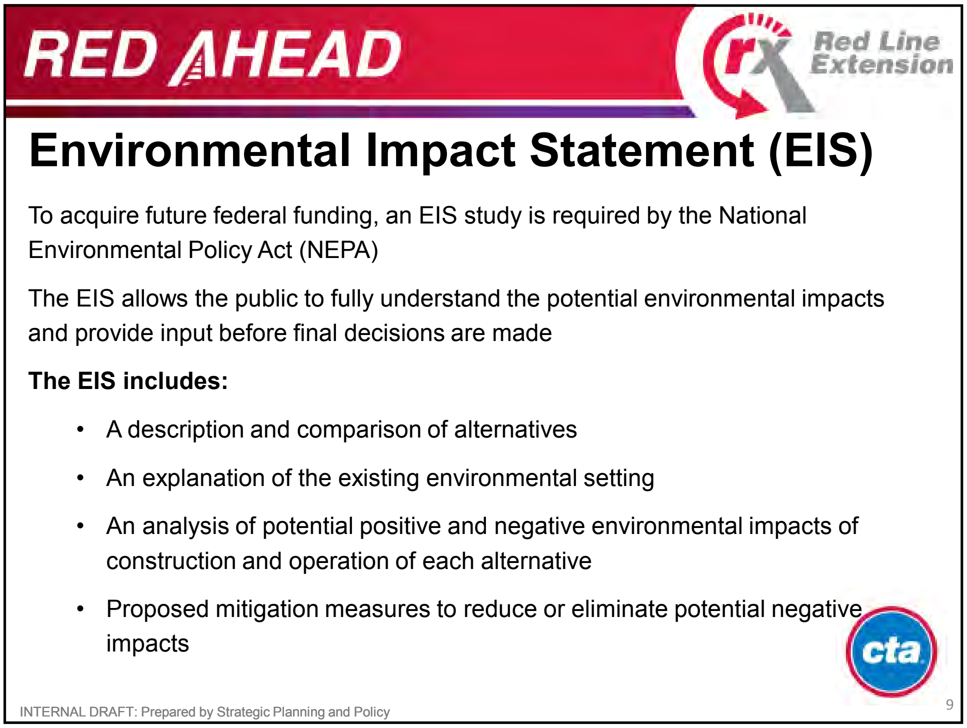
- **Increased transit access to affordable housing**
- **Encourages community investment and economic development**
- **Direct construction jobs created**

  Estimate: 2,600 – 4,100
- **Increased access to jobs**

  Newly accessible jobs within an hour commute of the proposed 111th Street station would increase by 56% (CMAP, 2012)

cta

INTERNAL DRAFT: Prepared by Strategic Planning and Policy



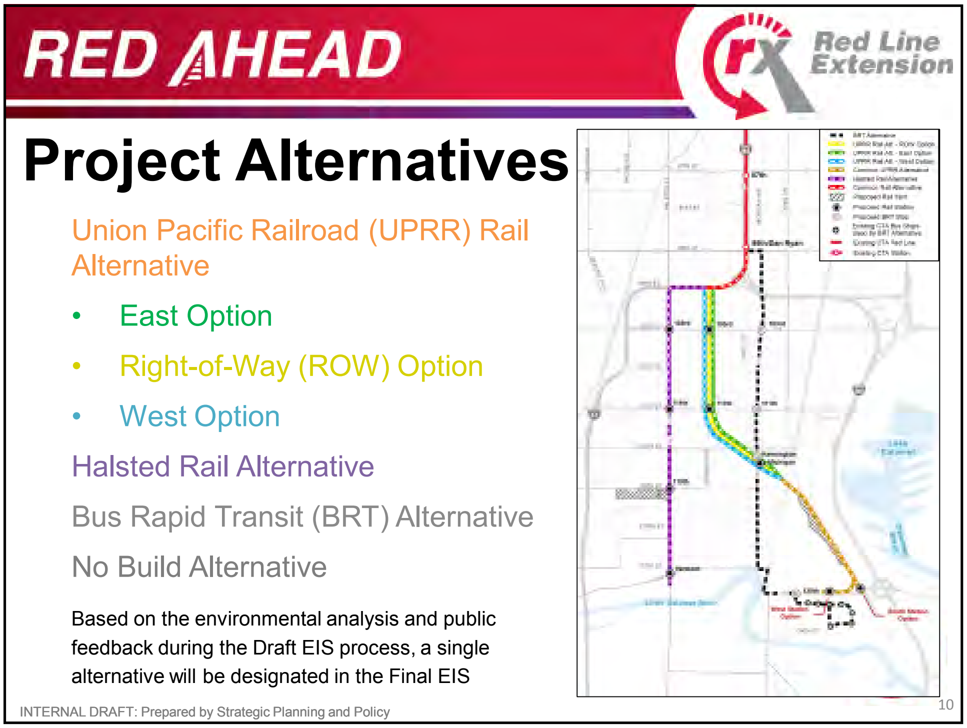
Environmental Impact Statement (EIS)

To acquire future federal funding, an EIS study is required by the National Environmental Policy Act (NEPA)

The EIS allows the public to fully understand the potential environmental impacts and provide input before final decisions are made

The EIS includes:

- A description and comparison of alternatives
- An explanation of the existing environmental setting
- An analysis of potential positive and negative environmental impacts of construction and operation of each alternative
- Proposed mitigation measures to reduce or eliminate potential negative impacts



Project Alternatives

Union Pacific Railroad (UPRR) Rail Alternative

- East Option
- Right-of-Way (ROW) Option
- West Option

Halsted Rail Alternative

Bus Rapid Transit (BRT) Alternative

No Build Alternative

Based on the environmental analysis and public feedback during the Draft EIS process, a single alternative will be designated in the Final EIS

BRT Alternative
UPRR Rail Alt. - ROW Option
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
Common UPRR Alternative
Halsted Rail Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Proposed BRT Stop
Existing CTA Bus Stops Used By BRT Alternative
Existing CTA Red Line
Existing CTA Station
87th
95th/Dan Ryan
Lake Calumet
West Station Option
South Station Option

UPRR Rail Alternative

Chicago Transit Board Adopted Alternative

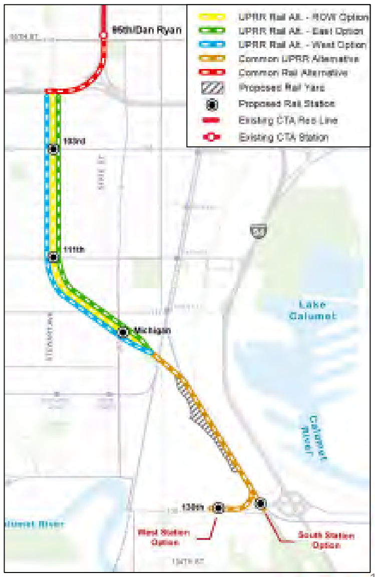
5.3-mile extension along the UPRR tracks

Three options
- East Option
- ROW Option (contingent upon the relocation of UPRR, significant cost and delay TBD)
- West Option

Four stations (103rd, 111th, Michigan, 130th)
- Park & ride facilities (up to 3,700 total parking spaces)
- Bus facilities

Elevated structure from 95th Street Terminal to 119th Street, then at-grade (ground level) tracks from 119th Street to 130th Street

120th Street Yard and Shop


95th/Dan Ryan
103rd
111th
Michigan
130th
West Station Option
South Station Option
Lake Calumet
Calumet River
94
UPRR Rail Alt. - ROW Option
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
Common UPRR Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Existing CTA Red Line
Existing CTA Station

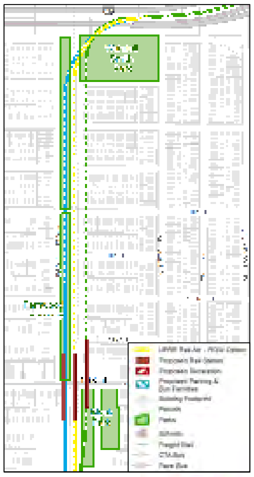
Anticipated Project Impacts

Feedback required from the public on:

- Parks
- Property displacements
- Visual
- Noise
- Community character
- Wetlands
- Historic properties

Parks

Parklands Affected by UPRR Rail Alternative Options			
Parkland	East Option	ROW Option	West Option
Wendell Smith Park	0.4 acres	0.2 acres	0.2 acres
Fernwood Parkway	-	-	1.9 acres
Block Park	0.8 acres	-	-
Total	*1.2 acres*	*0.2 acres*	*2.1 acres*



Mitigation Strategies

Coordination with Chicago Park District is ongoing to identify mitigation including improvements to other parklands or replacement nearby if there are any displacements

Property Displacements

Construction of the project would require the acquisition of private property

Potential Permanent Displacements by Alternative	UPRR			Halsted	BRT
	East Option	ROW Option	West Option		
Affected Parcels without Building Displacements	149	112	144	72	49
Affected Parcels with Building Displacements	110	22	51	38	3
(Residential Building Displacements)	*(95)*	*(17)*	*(30)*	*(17)*	*(1)*
Total Affected Parcels	259	134	195	110	52

Impacts presented are
- based on Conceptual Engineering and represent maximum impacts on all alternatives
- for the purposes of comparing alternatives and will be confirmed in the Final EIS following more detailed conceptual design of the single NEPA preferred alternative

Property Displacements

All major transit construction projects have impacts:

- The Brown Line Expansion had 40 building displacements
- The RPM project (Phase 1) may displace 19 buildings

Mitigation Strategies

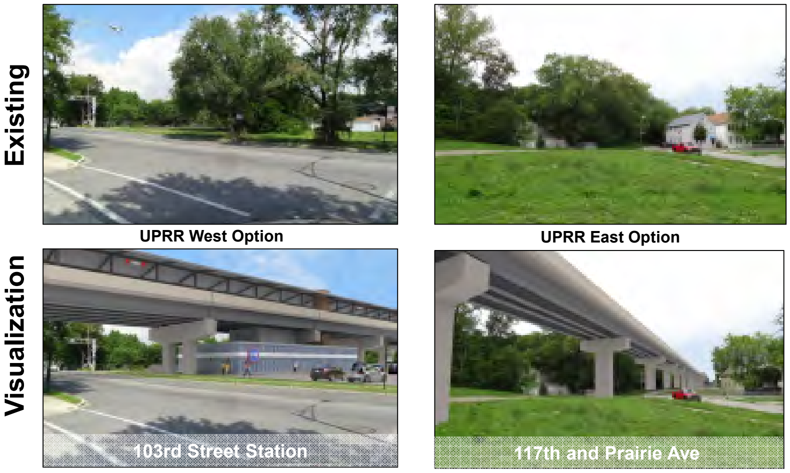
Property owners would be paid not less than fair market value for their land and buildings and may be eligible for compensation equal to the original purchase price of the property. They would also be assisted in relocating their businesses or dwellings, per the Federal Uniform Act on relocation assistance and property acquisition.

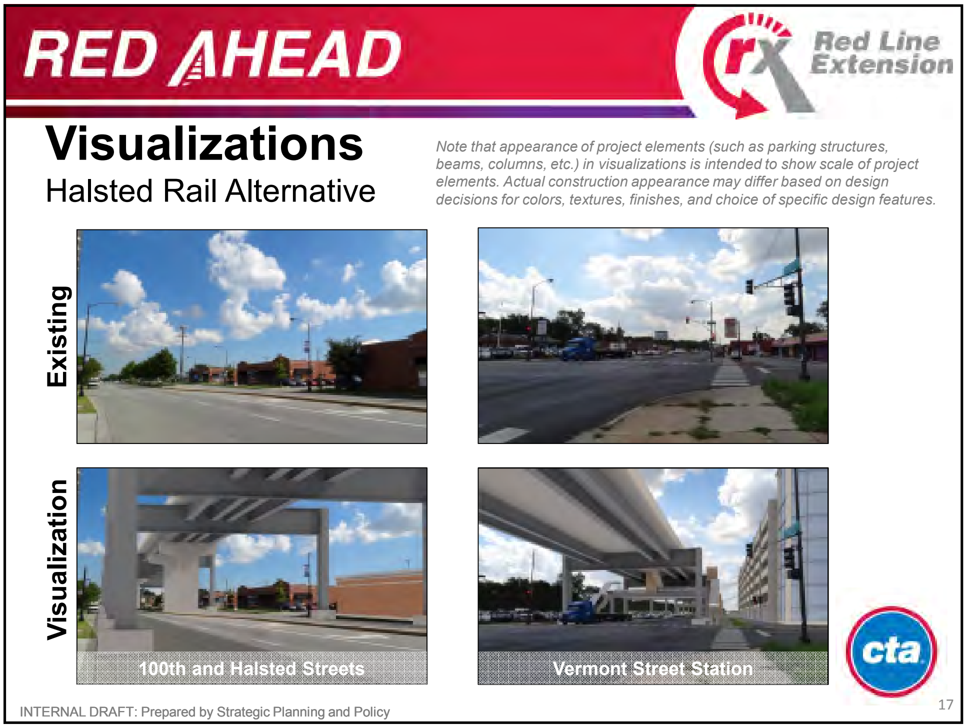
When a single option is chosen, CTA will work with the community and property owners (including the UPRR) to minimize property impacts.

Visualizations

UPRR Rail Alternative

Note that appearance of project elements (such as parking structures, beams, columns, etc.) in visualizations is intended to show scale of project elements. Actual construction appearance may differ based on design decisions for colors, textures, finishes, and choice of specific design features.





RED AHEAD

Red Line Extension

Visualizations

Halsted Rail Alternative

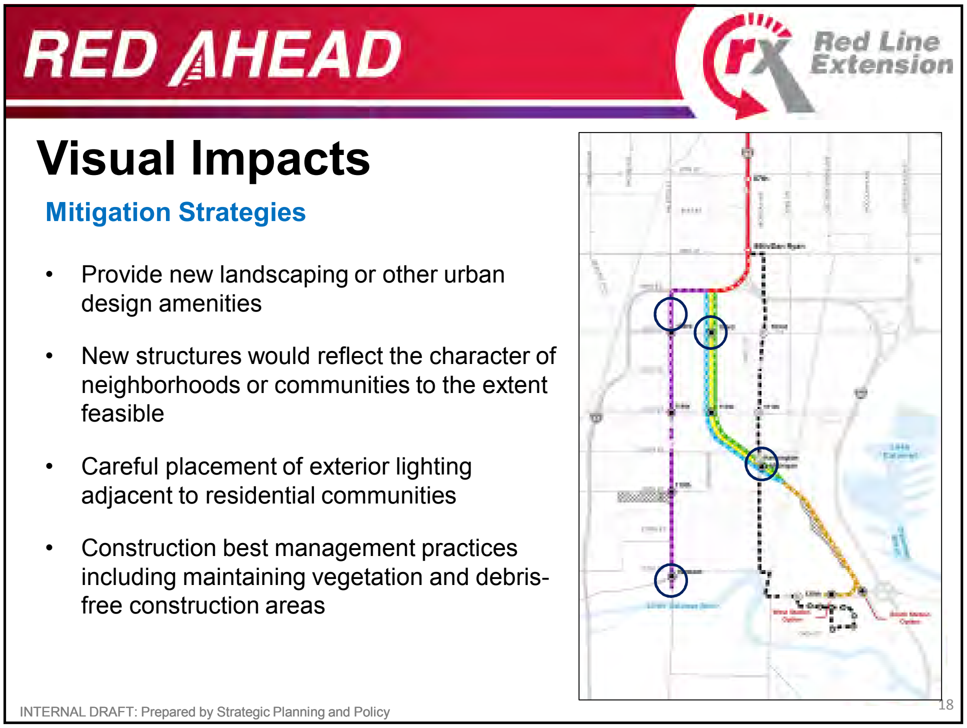
Note that appearance of project elements (such as parking structures, beams, columns, etc.) in visualizations is intended to show scale of project elements. Actual construction appearance may differ based on design decisions for colors, textures, finishes, and choice of specific design features.

Existing

Visualization

100th and Halsted Streets

Vermont Street Station



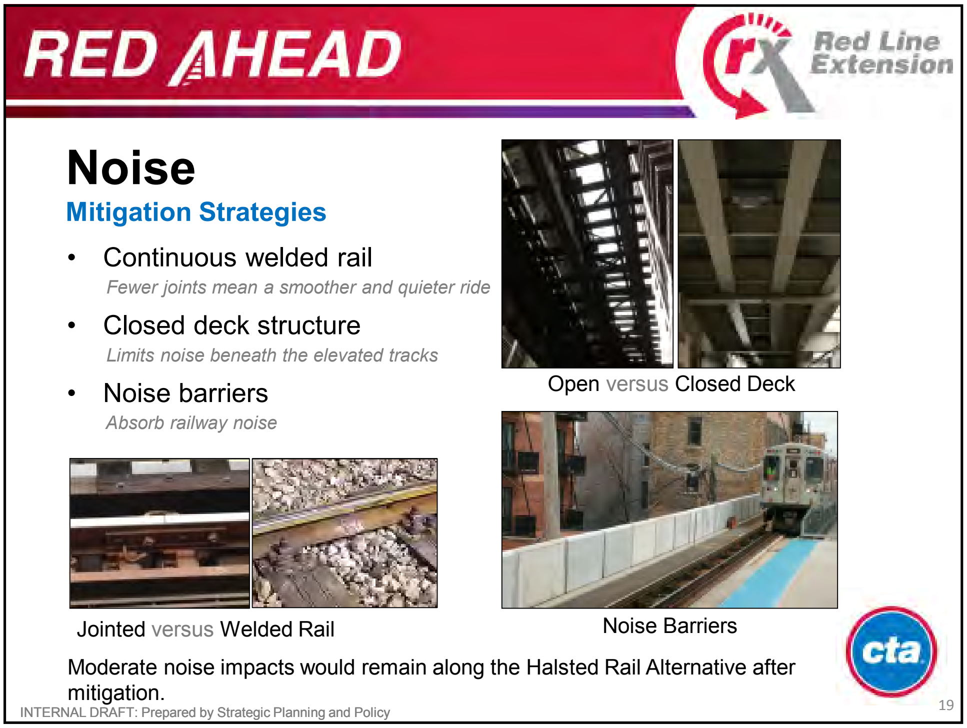
RED AHEAD

Red Line Extension

Visual Impacts

Mitigation Strategies

- Provide new landscaping or other urban design amenities
- New structures would reflect the character of neighborhoods or communities to the extent feasible
- Careful placement of exterior lighting adjacent to residential communities
- Construction best management practices including maintaining vegetation and debris-free construction areas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Noise

Mitigation Strategies

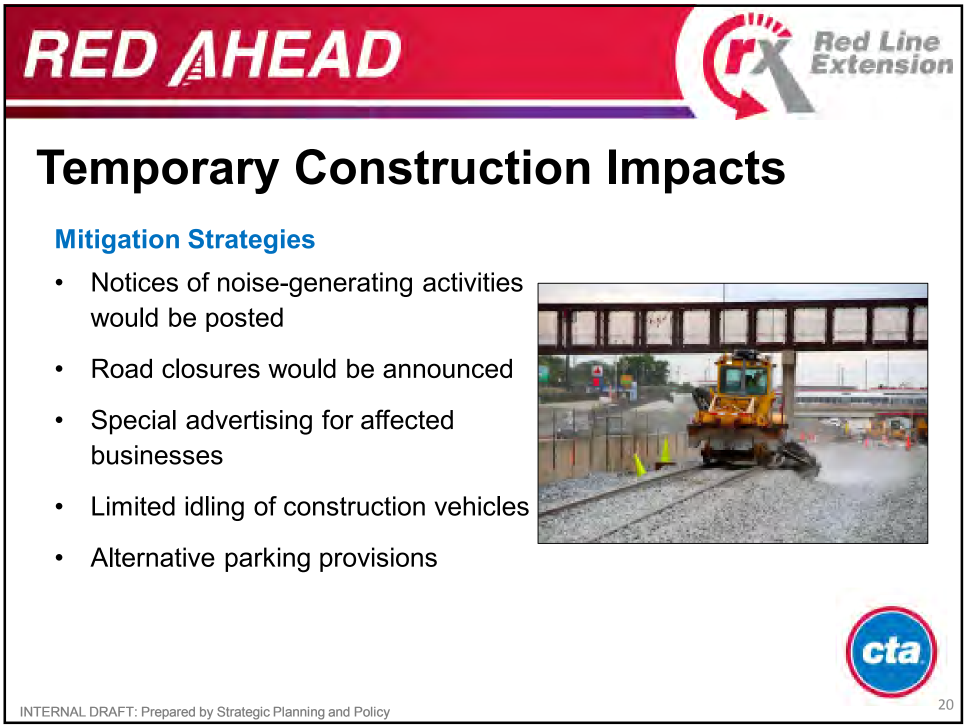
- Continuous welded rail
  Fewer joints mean a smoother and quieter ride
- Closed deck structure
  Limits noise beneath the elevated tracks
- Noise barriers
  Absorb railway noise

Open versus Closed Deck

Jointed versus Welded Rail

Noise Barriers

Moderate noise impacts would remain along the Halsted Rail Alternative after mitigation.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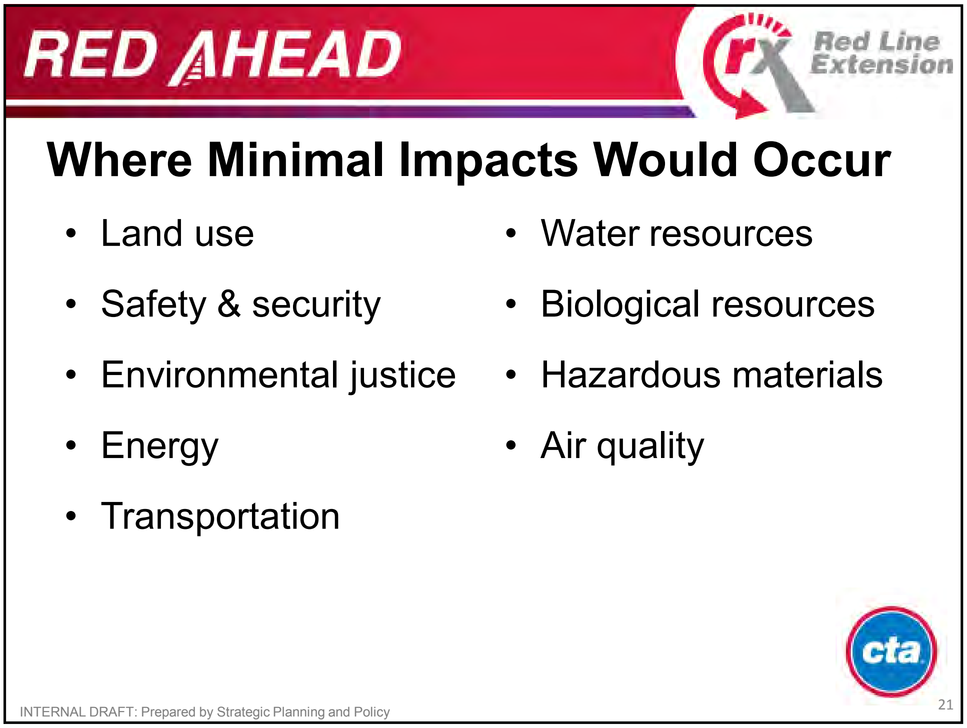
Temporary Construction Impacts

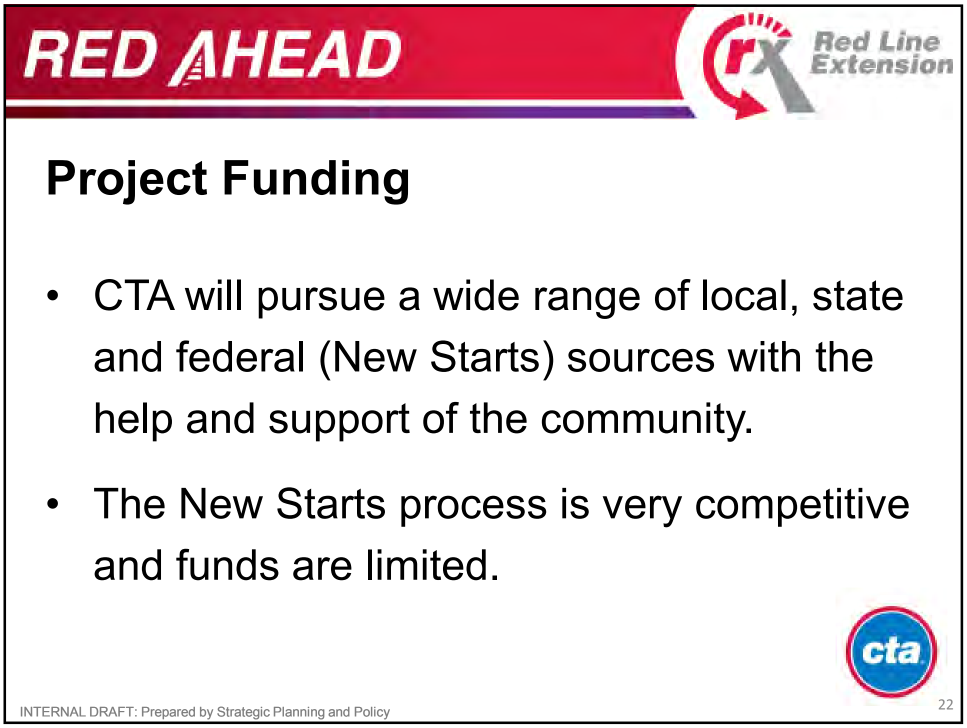
Mitigation Strategies

- Notices of noise-generating activities would be posted
- Road closures would be announced
- Special advertising for affected businesses
- Limited idling of construction vehicles
- Alternative parking provisions



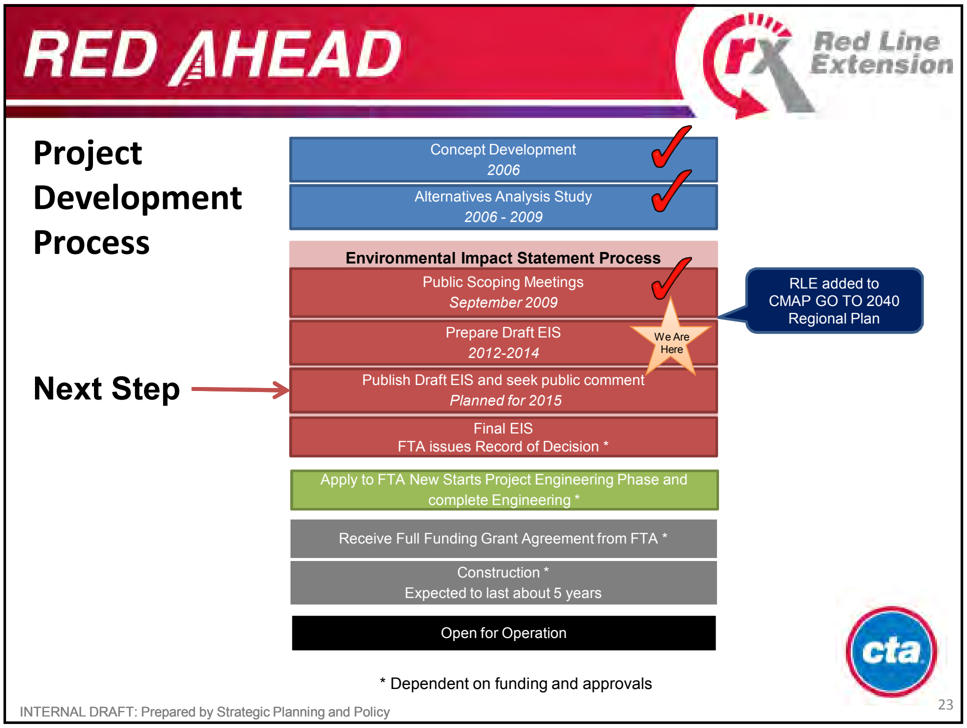
Where Minimal Impacts Would Occur

- Land use
- Safety & security
- Environmental justice
- Energy
- Transportation
- Water resources
- Biological resources
- Hazardous materials
- Air quality



Project Funding

- CTA will pursue a wide range of local, state and federal (New Starts) sources with the help and support of the community.
- The New Starts process is very competitive and funds are limited.



RED AHEAD

Red Line Extension

Project Development Process

Concept Development ✓
2006

Alternatives Analysis Study ✓
2006 - 2009

Environmental Impact Statement Process

Public Scoping Meetings ✓
September 2009

Prepare Draft EIS
2012-2014

We Are Here

RLE added to CMAP GO TO 2040 Regional Plan

Next Step →

Publish Draft EIS and seek public comment
Planned for 2015

Final EIS
FTA issues Record of Decision *

Apply to FTA New Starts Project Engineering Phase and complete Engineering *

Receive Full Funding Grant Agreement from FTA *

Construction *
Expected to last about 5 years

Open for Operation

* Dependent on funding and approvals

Meeting Notes

Date: Tuesday, April 29, 2014

Meeting: CTA with Chicago Neighborhood Initiatives and Greater Roseland Chamber of Commerce

Meeting Purpose: CTA to share RLE Project updates

Present:
Andrea D. Reed, Greater Roseland Chamber of Commerce
Anthony Beckham, Office of Congresswoman Robin Kelly
Jason Swan, Chicago Neighborhood Initiatives
David Doig, Chicago Neighborhood Initiatives
Carole Morey, Chicago Transit Authority
Gerald Nichols, Chicago Transit Authority
Sonali Tandon, Chicago Transit Authority
Melissa Williams (note taker), CWC Transit Group

Time: 10:03 am to 10:52 am

Location: Chicago Neighborhood Initiatives, 1000 E. 111th St., Chicago, IL

Presentation Highlights

CTA staff delivered a presentation about the proposed Red Line Extension (RLE) Project that would extend the Red Line from the existing 95th Street Terminal to the vicinity of 130th Street. Representatives from the CTA discussed:

- **Project Overview and Benefits**
  The RLE Project would mean a better served far south side, by providing direct CTA rail service and reducing commute times from the project area. The project would include four new stations, a new rail yard, and bus and parking facilities at all stations. The project would encourage economic development and benefit the community by adding construction jobs and increasing access to jobs.

- **CTA is preparing an Environmental Impact Statement (EIS)**
  CTA has been evaluating the project alternatives and is preparing a Draft EIS, which will analyze the potential positive and negative environmental impacts of construction and operation of each alternative and will propose mitigation measures to minimize potential negative impacts.

- **RLE Project Alternatives and Potential Impacts**
  CTA is evaluating three options for the Locally Preferred Alternative along the Union Pacific Railroad (UPRR) tracks including an option within the existing freight right-of-way (ROW Option), an East Option, and a West Option. CTA is also evaluating a rail alternative along Halsted Street, a bus rapid transit (BRT) alternative along Michigan Avenue, and the No Build Alternative. Potential project impacts include impacts to parks, property displacements, visual impacts, noise impacts, community character, wetlands, and historic properties.

- **Funding and Next Steps**
  The CTA will pursue a wide range of local, state and federal (New Starts) sources with the help and support of the community. Once the CTA completes the Draft EIS, a public hearing will be held to share the findings of the Draft EIS.

Questions and Comments from Meeting Participants

- **Anthony Beckham: An article in the Chicago Sun-Times stated that CTA will receive $2B in funding for this project. How accurate is that statement?**
  Carole Morey: The cost of the project has been estimated at approximately $2.3B. The cost depends on the actual route that will be selected. That estimate is based on the Locally Preferred Alternative which is the UPRR Rail Alternative.

- **Anthony Beckham: Will CTA seek funds from the TIGER grant?**
  Carole Morey: In order for CTA to become eligible for a full funding grant agreement from Federal Transit Administration (FTA), the NEPA process and preliminary engineering have to be completed and local funding has to be committed.

- **Jason Swan: Regarding the UPRR Alternative, it appears that the only viable route is the West Option? Is it possible to acquire part of a particular alternative?**
  Carole Morey: No, a specific option will have to be selected.

- **David Doig: What are the alternative options?**
  Carole Morey: The four alternatives are UPRR Rail Alternative, Halsted Rail Alternative, BRT Alternative, and No Build Alternative.

- **David Doig: What main streets are near the East Option?**
  Sonali Tandon: The East Option is between Wentworth and the Union Pacific railroad.

- **Anthony Beckham: With the line coming from the 130th Street area, has there been any communication with the Altgeld Gardens community?**
  Gerald Nichols: Yes, a meeting was held with the community group. Another meeting is scheduled for the near future.

- **Jason Swan: Will there be employment opportunities for the community during construction phase? One issue that will be posed is that most of the jobs are union. The people from the area are not part of the union.**
  Gerald Nichols: Yes. CTA will make sure that jobs are available to those in the community as it did for the Red Line South project. It is important for the community to be involved with the process because these concerns can be expressed to the unions.

- **Anthony Beckham: What other community groups have been engaged in this process?**
  Gerald Nichols: Developing Communities Project has been involved. CTA will be meeting with the group tomorrow.

- **Jason Swan: What church organizations if any have been engaged in this process?**
  Gerald Nichols: CTA is working on engaging the various community churches. It is CTA's understanding that Developing Communities Project has over 130 churches within its organization.

- **Jason Swan: What is the project construction process? Will the City be the general contractor and have subcontractors bidding on the various scopes?**
  Gerald Nichols: No. There will be a bidding process to select the general contractor. The project bidding process will be similar to that of the Red Line South project.

- **Anthony Beckham: What is the target date for construction?**
  Carole Morey: It is a challenge to put a date in place because there are other items that have to be completed before securing a funding grant agreement from FTA.

  > Jason Swan and Anthony Beckham: CTA should have renderings for all alternative routes displaying before and after visuals. The drawings should also show bus routes and current and potential businesses.
  >
  > Jason Swan: CNI is available to help galvanize community support. It has extensive involvement with the community in building of the local Walmart in the Pullman community.

Follow Up

CTA will keep communication lines open and consider issues discussed during this meeting in the upcoming Draft EIS.

CTA RED LINE EXTENSION
04.29.2014
1000 E 111th Street, CHICAGO

NAME	ORGANIZATION	SIGN
Sonali Tandon	CTA	Sonali
Andrea D. Reed (773) 785-4000	Greater Roseland Chamber of Commerce greccworkingQ1@yahoo.com	Andrea D. Reed
Melissa Williams	CDM/Trinal	Melissa Williams
Anthony Beckham	Cong. Kelly Office	
JASON SWAN	CHICAGO NEIGHBORHOOD INITIATIVES	
David Doig	CNI	

Meeting Notes

Date: Wednesday, April 30, 2014

Meeting: CTA with Developing Communities Projects (DCP)

Meeting Purpose: CTA to share RLE Project updates

Present:
Renett Arrington, I Have A Voice
Phyllis Johnson, 95th St. POD
Godfrey Lawson, Roseland Chamber of Commerce
Lillie Muhammad, Medical POD
Fred Jackson, 130th POD
Rev. Paul Brown, 103rd POD
Rev. J. Leon Thorn, 95th St. POD
Michael LaFargue, West Chesterfield Community Association (WCCA)
Mariann McGill, TCA Health Inc.
Cherneecia Muhammad, 95th St. POD
Tiffany D. Hightower, DCP
Katherine Thornton, DCP
Deborah L. Truss, DCP
Rev. Rayford Grady, DCP
Michael McLaughlin, Chicago Transit Authority
Gerald Nichols, Chicago Transit Authority
Sonali Tandon, Chicago Transit Authority
Melissa Williams (note taker), CWC Transit Group

Time: 11:23 am to 1:32 pm

Location: Developing Communities Project, 212 E. 95th Street, Chicago, IL

Presentation Highlights

CTA staff delivered a presentation about the proposed Red Line Extension (RLE) Project that would extend the Red Line from the existing 95th Street Terminal to the vicinity of 130th Street. Representatives from the CTA discussed:

- **Project Overview and Benefits**
  The RLE Project would mean a better served far south side, by providing direct CTA rail service and reducing commute times from the project area. The project would include four new stations, a new rail yard, and bus and parking facilities at

all stations. The project would encourage economic development and benefit the community by adding construction jobs and increasing access to jobs.

- **CTA is preparing an Environmental Impact Statement (EIS)**
  CTA has been evaluating the project alternatives and is preparing a Draft EIS, which will analyze the potential positive and negative environmental impacts of construction and operation of each alternative and will propose mitigation measures to minimize potential negative impacts.

- **RLE Project Alternatives and Potential Impacts**
  CTA is evaluating three options for the Locally Preferred Alternative along the Union Pacific Railroad (UPRR) tracks including an option within the existing freight right-of-way (ROW Option), an East Option, and a West Option. CTA is also evaluating a rail alternative along Halsted Street, a bus rapid transit (BRT) alternative along Michigan Avenue, and the No Build Alternative. Potential project impacts include impacts to parks, property displacements, visual impacts, noise impacts, community character, wetlands, and historic properties.

- **Funding and Next Steps**
  The CTA will pursue a wide range of local, state and federal (New Starts) sources with the help and support of the community. Once the CTA completes the EIS, a public hearing will be held to share the findings of the EIS.

Questions and Comments from Developing Communities Project (DCP)

- **Rev. J. Leon Thorn: Where will the proposed rail yard will be located?**
  Michael McLaughlin: The yard and maintenance facility will be located at the south end around 120th Street to 127th Street. It is not a residential area and currently has industrial, railroad, and MWRD properties.

- **Phyllis Johnson: What is CMAP? What is the website address?**
  Michael McLaughlin: CMAP is the acronym for the Chicago Metropolitan Agency for Planning (CMAP). In short, the agency integrates planning and land use for the seven counties. The website is www.cmap.illinois.gov
  Sonali Tandon: RLE is the only fiscally constrained extension project in the CMAP 2040 regional plan.

- **Rev. Paul Brown: Is there a time limit on the completion and submission of the EIS? What is CTA's estimated timeframe?**
  Michael McLaughlin: Once CTA enters into the Project Development stage by submitting a letter to FTA, it has two years to complete the EIS. As of now, there is no time limit because the letter has not been submitted to FTA; the Draft EIS has to be completed first. The estimated timeframe is about 3 years to complete the Draft and Final EIS.
  Sonali Tandon: CTA plans to publish the Draft EIS next year. It typically takes 2 years to complete the final EIS with preliminary engineering.

- **Rev. Paul Brown: This project can not move forward until 3 to 5 years from now because the EIS has to be completed?**
  Michael McLaughlin: CTA is working to complete the Draft EIS and has biweekly coordination calls with Federal Transit Administration (FTA) on the project. EIS is FTA's document and requires coordinating with them. Once the environmental work and preliminary engineering (which involves 30% design) is finished, the Final EIS can be completed.

- **Phyllis Johnson: Why does 30% of design have to be completed in order to create the document?**
  Michael McLaughlin: You need to complete about 30% design to complete the Final EIS as some of the information is needed for the Final EIS.

- **Lillie Muhammad: Please clarify the purpose of this meeting.**
  Michael McLaughlin: The purpose of this meeting is two-fold. First, CTA wants to inform the group of items that will be discussed at the public meeting. Secondly, information and feedback from these types of meetings help inform the EIS. CTA has met and will meet with other groups to get feedback.

- **Michael LaFargue: Is money available and budgeted for costs related to the 30% design phase and the creation of the EIS?**
  Deborah L. Truss: Is this cost separate from the estimated project cost of $2.3B?
  Michael McLaughlin: The $2.3B is inclusive of soft costs that include engineering and consultant costs. A budget is being put in place for the extensive cost relative to the preliminary engineering. CTA will seek funding for this process.
  Sonali Tandon: There is prior funding available that will be used for costs associated with drafting the EIS which is planned to be published next year.

- **Deborah L. Truss: Is this project shown on CTA's budget?**
  Michael McLaughlin: DCP has raised this concern previously. The budget writers are taking it into consideration. As of today, the budget does not show projects that are in the planning process. That does not mean that the budget structure cannot be changed.

  > Rev. Paul Brown: Please understand our concern. If these items are not shown, there is a great possibility that this project will be lost over the time period it will take to complete the EIS. The community feels that this project has been set aside while other projects in other communities are constantly being reported on in the newspapers as being completed. If this project is shown as a line item in the budget, it will not get lost. The community does not want to wait another 50 years before this project is done.
  > Deborah L. Truss: CTA will display good faith if the project is shown as a line item even if the amount is $0.
  > Fred Jackson: The project is not as transparent as it should be. The project should be shown as a line item in the budget.

- **Deborah L. Truss: Will the Metra – South Shore or Metra Electric tracks be used for the extension?**
  Michael McLaughlin: The Metra tracks will not be used but will be near the RLE tracks. CTA trains are different from those of Metra.

- **Lillie Muhammad: What parks would be affected? With the replacement of parks, has there been consideration as to where they will be relocated?**
  Michael McLaughlin: Wendell Smith Park, Fernwood Parkway, and Block Park would be affected depending on the alternative and option selected. Parks could be replaced if there are vacant parcels. The West Option will affect Fernwood Parkway and the East Option would impact Wendell Smith Park and Block Park.
  Sonali Tandon: A park would be replaced only if the entire park is affected. If only a small portion would be affected, other mitigation methods will be considered.

- **Rev. Paul Brown: Residents are concerned about displacements and how displacements would affect them as property owners, residents, and those who are leasing. Is there a process in place that assesses fair value and assist them with moving to an area that is conducive to their living?**
  Michael McLaughlin: When the NEPA preferred alternative route has been chosen and the affected parcels have been identified, property owners, renters, and business owners will be assisted in relocating. The Federal Uniform Relocation Act will be followed. If the property value has decreased, the fair value or purchase price could be granted.

- **Godfrey Lawson: Will future potential property value such as the Obama Library or the Chicago port system in the Altgeld Gardens area be factored into assessing property values relative to eminent domain?**
  Rev. Paul Brown: Will the mitigation strategies, relocation process, and means of assessing fair value be itemized in the Draft EIS?
  Michael McLaughlin: The Federal Uniform Relocation Act has to be followed for assessing fair value. This information is not included in the Draft EIS. Pamphlets will be made available at the public meeting regarding the Federal Uniform Relocation Act.

  > Mike Lafarge: Land development and business development coordinators should look into the Uniform Act and do research because there is such a concern for those who are upside down with their mortgage. Also, a challenge has been posed to home owners who have paid their house off 10 to 20 year ago and now would have to relocate to something comparable.

- **Deborah L. Truss: Are there drawings available that show the proposed alternative routes with enough detail to display elevations and properties that would be affected?**
  Michael McLaughlin: Additional information, maps and visuals will be displayed during the public meeting

- **Rev. Paul Brown: How will the public meeting be set up? Will information be gathered through a survey where tabulations can be made? Will there be mailings?**
  Sonali Tandon: There will be no mailings. Information similar to what is being presented today but with more detail will be available at the public meeting. CTA staff will be available to answer specific questions and talk one-on-one. Additional maps and visuals will be available.

  > Deborah L Truss: The PODS which are part of DCP should be the focus group for this project. The group should review the maps prior to being made available to the public. The PODS/DCP can help better prepare CTA for a town hall forum.

- **Lillie Muhammad: Has a strategy been put into place as to how the public will be addressed? Especially those who are affected by this transformation.**
  Michael McLaughlin: Feedback is welcome as the strategy is being formulated. Once the NEPA preferred alternative route is chosen, the affected parcels will be identified. Notification will then be released to affected persons. Relocation options and rights will be explained.

- **Rev. Paul Brown: Will the community have input in choosing the alternative route? What method has been put in place to evaluate the community's opinions?**
  Sonali Tandon: There will be comment cards at the open houses on which community can provide their feedback on alternatives. Results are documented and will be included in the EIS. Once the Draft EIS is published, there will be a formal hearing. A court reporter will be present at that hearing to record public comments. The route will be chosen based on public feedback and technical environmental analysis.

  > Michael LaFargue: A real survey is a cost but can be beneficial. A questionnaire type of survey that can be documented needs to be done and analyzed by a real statistician.

- **Rev. J. Leon Thorn: Has the Halsted Street Route been eliminated?**
  Michael McLaughlin: The statement was misconstrued. The Halsted route has not been eliminated. The board chose the UPRR Rail Alternative as a Locally Preferred Alternative based on public opinion from 2006.

- **Rev. J. Leon Thorn: What is the durability of the system? The community does not want a system that has to be replaced every 20 years.**
  Michael McLaughlin: There are maintenance measures that are put into place so that the structure would not have to be replaced in a short period of time.

- **Deborah L Truss: Is there a benchmark system similar to Chicago's that is used to determine the longevity of this type of structure?**
  Michael McLaughlin: Philadelphia, Boston, and New York are similar in the category of wear and tear in usage.

- **Tiffany D. Hightower: Is there a budget for maintenance and upgrades?**
  Michael McLaughlin: FTA requires a budget for projected maintenance and upgrades in the financial analysis. FTA must be confident in CTA maintaining the structure. FTA considers this type of project as an investment and do not want to waste federal dollars.

- **Rev. J. Leon Thorn: What is the estimated number of people that will be serviced?**
  Michael McLaughlin: That information is being gathered and will be provided at the public meeting.

- **Deborah L Truss: Will the Project Development Process and Next Steps slides be placed on CTA's website?**
  Sonali Tandon: This information will be placed on the website after the public meeting.

- **Fred Jackson: When will the plan be put in place?**
  Michael McLaughlin: It all depends on the local funding. This group's assistance is needed in securing the local match. Once funding is in place, the sooner the project will begin.

- **Rev. Paul Brown: The local PODS are being tapped into by the county commissioner, aldermen, congressmen, and state senators regarding local community projects. The more CTA communicates with these groups, the more information can be relayed to officials.**
  Michael McLaughlin: On April 17th, public officials were briefed about the project. There are more meetings scheduled in the future. CTA will continue communication regarding the project and its efforts.

- **Phyllis Johnson: What is the process in determining historic properties and community characteristics?**
  Michael McLaughlin: Properties that are eligible to be listed on the National Register of Historic Places are deemed historic properties. Community characteristics are addressed by the composition of homes and businesses in the area.

- **Phyllis Johnson: What consideration is taken from the Department of Planning regarding building and developing areas around the alternate routes?**
  Michael McLaughlin: It is a challenge considering options for building and developing areas when the NEPA preferred alternative route has not been chosen.

- **Rev. J. Leon Thorn: Have Park and Ride facilities been addressed?**
  Michael McLaughlin: All four proposed stations will have park and ride facilities with up to 3,700 total parking spaces. The public will decide if they want them.

- **Rev. Paul Brown: The community feels as if there is no sense of urgency with the RLE but other lines are coming up in other communities.**
  Michael McLaughlin: Previous projects that have been completed did not require an EIS.
  Sonali Tandon: This is the first EIS that CTA is preparing.

- **Deborah L Truss: Has FTA given CTA a timeline to finish the EIS? How will businesses be assessed through eminent domain? Especially, strip malls.**
  Michael McLaughlin: CTA will work with the businesses in helping them find a suitable relocation. CTA will also work with the City of Chicago Planning Department for relocation of any strip malls.

- **Tiffany D. Hightower: DCP will support CTA in its efforts if it provides clarity, transparency, and integrity throughout the process. DCP is requesting:**
  1. **Hardcopy of the report that has all of the public comments**
  2. **FAQ from CTA regarding this project**
  3. **Updated timeline which may include "contingent upon funding"**
  4. **A comparison document of completed projects in Chicago which lists things that are needed to get the project completed**
  5. **A comparison of other mega projects in the USA noting timelines and requirements**

  Deborah L Truss: CTA should use the HUD HOME Investment Partnerships Program FAQ as a guideline for creating its own FAQ.
  Michael McLaughlin: DCP should submit a listing of all of its meetings to CTA.

Follow Up

CTA will keep communication lines open and consider issues discussed during this meeting in the upcoming Draft EIS.

Red Line Extension Draft EIS
CTA – DCP Meeting
DCP headquarters - 212 E 95th St.
April 30, 2014 at 10AM

Sign-In Sheet

Name	Organization	Signature
SONALI TANDON	CTA	Sonali
Renett Arrington	I HAVE A VOICE, NFP	
Phyllis Johnson	95TH St POD	
GODFREY L. HUDSON	ROSEWOOD R.C.	
Melissa Williams	TDM / Trinal	Melissa Williams
Lillie Muhammad	Medical POD	Lillie Muhammad
Fred JACKSON	130th POD	Fred Jackson
REV PAUL BROWN	103RD ST POD	Paul Brown
Rev. J. Leon Thorn	St. James 95th st Pod	Jimmy Leon Thorn
[illegible]	WCCA	
Mariann McGill	TCA Health	MMcgill@tcahealth.org
Cherneecia Muhammad	95th st. POD	
Tiffany D. Hightower	DCP, Inc.	
Katherine Thornton	DCP	Kathie
DEBORAH L. TRUSS	DCP/CTA RLEP BUS. DEVELOPMENT PROJECT MGR	D L Truss
Rev. Rayfor J Grad	DCP - Pres.	
Gerald Nichols	CTA	
Michael Mclaughlin	CTA	

Meeting Notes

Date: Tuesday, May 6, 2014

Meeting: CTA with Golden Gate Homeowners Association, People for Community Recovery, and Altgeld Local Advisory Council

Meeting Purpose: CTA to share RLE Project updates

Present:
Gwenda Hoskins, People for Community Recovery
Georgia Curtis, People for Community Recovery
Marguerite Jacobs, People for Community Recovery
Naomi Allen, Altgeld Local Advisory Council
Sharon Davis, Altgeld Local Advisory Council
Doris Martin, Golden Gate Homeowners Association
Cheryl Johnson, People for Community Recovery
Deloris Lucas, Golden Gate Homeowners Association
Regina Scott
Christian Strachan, People for Community Recovery
Kevin O'Malley, Chicago Transit Authority
Gerald Nichols, Chicago Transit Authority
Sonali Tandon, Chicago Transit Authority
Melissa Williams (note taker), CWC Transit Group

Time: 12:41 pm to 1:50 pm

Location: Chicago Youth Center, 951 East 132nd Place, Chicago, IL

Presentation Highlights

CTA staff delivered a presentation about the proposed Red Line Extension (RLE) Project that would extend the Red Line from the existing 95th Street Terminal to the vicinity of 130th Street. Representatives from the CTA discussed:

- **Project Overview and Benefits**
  The RLE Project would mean a better served far south side, by providing direct CTA rail service and reducing commute times from the project area. The project would include four new stations, a new rail yard, and bus and parking facilities at all stations. The project would encourage economic development and benefit the community by adding construction jobs and increasing access to jobs.

- **CTA is preparing an Environmental Impact Statement (EIS)**
  CTA has been evaluating the project alternatives and is preparing a Draft EIS, which will analyze the potential positive and negative environmental impacts of construction and operation of each alternative and will propose mitigation measures to minimize potential negative impacts.

- **RLE Project Alternatives and Potential Impacts**
  CTA is evaluating three options for the Locally Preferred Alternative along the Union Pacific Railroad (UPRR) tracks including an option within the existing freight right-of-way (ROW Option), an East Option, and a West Option. CTA is also evaluating a rail alternative along Halsted Street, a Bus Rapid Transit (BRT) Alternative along Michigan Avenue, and the No Build Alternative. Potential project impacts include impacts to parks, property displacements, visual impacts, noise impacts, community character, wetlands, and historic properties.

- **Funding and Next Steps**
  The CTA will pursue a wide range of local, state and federal (New Starts) sources with the help and support of the community. Once the CTA completes the Draft EIS, a public hearing will be held to share the findings of the Draft EIS.

Questions and Comments from Meeting Participants

- **Deloris Lucas: What are the names of the streets associated with the 130th Street Station options?**
  Sonali Tandon: South Station Option – Ellis Avenue; West Station Option – MWRD property.
  Doris Martin: It would be best if the station could be placed in a location where bus routes wouldn't be disturbed, preferably on the side of Altgeld Gardens.

- **Marguerite Jacobs: Have any of the alternatives changed since previous discussions?**
  Sonali Tandon: No, the alternative routes are the same.

- **Marguerite Jacobs: What is the low cost alternative?**
  Sonali Tandon: The Bus Rapid Transit Alternative is the low cost alternative.

- **Georgia Curtis: What parks would be affected if the West Option is selected?**
  Sonali Tandon: Fernwood Parkway and Wendell Smith Park would be affected. Only the jogging area of Wendell Smith Park would be affected.

- **Deloris Curtis: Where are the affected parks located?**
  Sonali Tandon: Block Park is located near the Roseland pumping station; Fernwood Parkway is located between 103rd and 99th Street, next to Eggleston Avenue; Wendell Smith Park is located just south of I-57.

- **Marguerite Jacobs: Will parking be available?**
  Sonali Tandon: Yes, parking would be available at the four designated stations.

- **Gwenda Hoskins: How many homes will be affected along the East Option? A visual should be provided.**
  Sonali Tandon: Approximately 95 residential buildings would be displaced by the East Option.

- **Marguerite Jacobs: Are the homes that will be affected vacant? Will newly built structures be affected? Will CTA pay homeowners for their property?**
  Sonali Tandon: Approximately 95 residential buildings would be displaced by the East Options, which includes vacant homes. The number of vacant homes is not available. CTA is required to follow the Federal Relocation Act - homeowners will be compensated for their property.
  Doris Martin: Most of the buildings along this route are abandoned. There do not appear to be any newly built structures along this path.

- **Cheryl Johnson: Will the project be completed before 2016?**
  Sonali Tandon: The Final EIS and Preliminary Engineering have to be completed and funding has to be secured in order for construction to begin.

- **Cheryl Johnson: Could this project have both public and private funding?**
  Sonali Tandon: That is an option at this time.

- **Christian Strachan: How many people would ride between 130th and 95th Street?**
  Sonali Tandon: There will be approximately 13 million rides annually, both ways, on the new segment.

- **Marguerite Jacobs: Will bus and train fares increase?**
  Gerald Nichols: CTA does not use fares to fund capital projects; this is a capital project.

- **Christian Strachan: How is CTA coordinating with bus routes to avoid long waiting periods?**
  Kevin O'Malley: Logistics will be planned once the route is selected. CTA is too early in the process to work out those details.

- **Cheryl Johnson: What is CTA's preferred route?**
  Sonali Tandon: Based on the community feedback, the CTA Board adopted the UPRR Alternative as the Locally Preferred Alternative.

- **Cheryl Johnson: What can constituents do to voice their opinions? With which political officials have CTA spoken?**
  Gerald Nichols: CTA has briefed Aldermen from the 6th, 8th, 9th, 21st and 34th wards. CTA has also spoken to congressmen. We need the people to come to the public meeting to express their concerns. Comment cards will be available.

Follow Up

CTA will keep communication lines open and consider issues discussed during this meeting in the upcoming Draft EIS.

Red Line Extension
Meeting

Sign-in Sheet. 05.06.14
951 East 132 Place, CYC

Name	Organization	Signature
Gwenda Hoskins	P.C.R.	Gwenda Hoskin
Georgia Curtis	PCR	Georgia
Marguerite Jacobs		Marguerite Jacobs
Naomi Allen		Naomi Allen
Sharon Davis		Sharon Davis
Doris Martin	GGHOA	Doris Martin
Melissa Williams	TRinal	Melissa Williams
Cheryl Johnson	PCR	
Deloris Lucas	GGHA	Deloris Lucas
Kevin O'Malley	CTA	Kev O'Mall
Regina Scott		Regina Scott
Christian Strachan	PCR	
Sonali Tandon	CTA	Sonali..
Gerald Nichols	CTA	

Meeting Notes

Date: Wednesday, May 7, 2014

Meeting: CTA with Rosemoor Community Association (RCA)

Meeting Purpose: CTA to share RLE Project updates

Present:
Nancy Wimberly, Concerned Community Defenders
Eleanor Banks, RCA
Joyce A. Dunmore, RCA
Godfrey Lawson, RCA
Arnold Pugh, RCA
Lola Davis, RCA
Vernetta Rucker, RCA
Angela Ware, RCA
Gloria Cosey, RCA
Janet Poole, RCA
Pat Hight, RCA
Gerald Nichols, Chicago Transit Authority
Sonali Tandon, Chicago Transit Authority
Melissa Williams (note taker), CWC Transit Group

Time: 10:04 am to 11:14 am

Location: St. John De La Salle, 10205 S. King Drive, Chicago, IL

Presentation Highlights

CTA staff delivered a presentation about the proposed Red Line Extension (RLE) Project that would extend the Red Line from the existing 95th Street Terminal to the vicinity of 130th Street. Representatives from the CTA discussed:

- **Project Overview and Benefits**
  The RLE Project would mean a better served far south side, by providing direct CTA rail service and reducing commute times from the project area. The project would include four new stations, a new rail yard, and bus and parking facilities at all stations. The project would encourage economic development and benefit the community by adding construction jobs and increasing access to jobs.

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  CTA is evaluating three options for the Locally Preferred Alternative along the Union Pacific Railroad (UPRR) tracks including an option within the existing freight right-of-way (ROW Option), an East Option, and a West Option. CTA is also evaluating a rail alternative along Halsted Street, a bus rapid transit (BRT) alternative along Michigan Avenue, and the No Build Alternative. Potential project impacts include impacts to parks, property displacements, visual impacts, noise impacts, community character, wetlands, and historic properties.

- **Funding and Next Steps**
  The CTA will pursue a wide range of local, state and federal (New Starts) sources with the help and support of the community. Once the CTA completes the Draft EIS, a public hearing will be held to share the findings of the Draft EIS.

Questions and Comments from Meeting Participants

- **Arnold Pugh: Would the structure along Halsted Street be elevated?**
  Sonali Tandon: Yes. The tracks would be positioned on elevated structures. Columns would be placed to avoid interfering with traffic lanes.

- **Godfrey Lawson: What types of businesses are located near the proposed Halsted Street structure that would be affected?**
  Arnold Pugh: This route is a positive for business because they would have exposure to more visitors.

- **Vernetta Rucker: Where would parking be located for the surrounding businesses?**
  Sonali Tandon: Street parking would remain available between the columns.

- **Arnold Pugh: Moving forward it would be beneficial to have the addresses of the affected parks.**
  Sonali Tandon: Yes, that will be included in the Draft EIS.

- **Godfrey Lawson: There are plans for economic development on the south side of Chicago. Relative to eminent domain, would future value be considered when acquiring property to build the RLE?**
  Sonali Tandon: CTA is required to follow the Federal Relocation Act when compensating property owners.
  Janet Poole: Property owners might not be at an advantage with fair market value. Owners might be able to yield more from selling the property on their own.

Arnold Pugh: Property owners are concerned that they would not receive the same value in property and community once they have been relocated.

- **Nancy Wimberly: Does the CTA have a list of all addresses of homes and businesses that would be affected? Regarding CTA's Relocation Consultant, Melody Carvajal: What is her job description? What is her salary? What are her credentials? Why isn't her voicemail box set-up?**
  Sonali Tandon: The CTA does not have a relocation consultant for this project because it is still early in the process.
  Nancy Wimberly: CTA should engage someone now to help the community with relocating. Owners need to prepare themselves for losing their homes.
  Sonali Tandon: There are four alternatives that have been presented and one must be selected. Once the preferred alternative has been selected, CTA would contact the property owners to discuss next steps. CTA is trying to be judicious in its communication with the community.

- **Gloria Cosey: When would the route be selected?**
  Sonali Tandon: The Draft EIS is expected to be published in 2015. CTA will then prepare the Final EIS on a single route. The Final EIS is expected to take two years from start to completion.
  Nancy Wimberly: CTA should engage someone now to help the community with relocating. Owners need to prepare themselves for losing their homes.

- **Nancy Wimberly: CTA should release names of all contractors with contract amounts and the demographics of the workforce.**
  Gerald Nichols: This information isn't available for the RLE because construction has not started.
  Godfrey Lawson: This organization will be contacting the black contractors now so that they can be in alignment when the time comes.

- **Janet Poole: Will contractors that have only held $500,000 contracts be afforded opportunities to bid on a $1M+ contract?**
  Gerald Nichols: Yes, CTA engages small contractors in working on its projects.

- **Angela Ware: How far in advance will the RFP be released?**
  Gerald Nichols: Contractors will have ample amount of time to bid. Contractors can go online now and see a listing of all jobs that are available now. It is called JOC.

Follow Up

CTA will keep communication lines open and consider issues discussed during this meeting in the upcoming Draft EIS.

W

Red Line Extension Project
Community Group Meeting – Rosemoor Community Association
DATE: 05/07/2014
LOCATION: 10205 S. King Drive

Name	Organization	Email Address
Melissa Williams	CDm/ Trinal	mwilliams@trinalinc.com
Sonali Tandon	CTA	
Nancy Wimberly	Concerned Community Defenders	9137psnw@sbcglobal.net
ElEANOR BANKS,	10505 S.Cal	773-785-2704
JoycE A.DUNMORE	10321 SO.CALUMET AVE	Jdunmore@wowway.com
GODFREY LAWSON	10019 EBERHART	lawsong411.aol
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LoLa Davis	10137 S. Eberhart	davis_lola@sbcglobal.NET
VeRNetta RucKER	10228 S. Calumet	
ANGELA WARE	ROSEMOOR CA	rosemoorchicago@yahoo.com
Gloria Casey	RCA	" "
Janet Poole	RCA	none
Pat Hight	RCA	pathight@yahoo.com

Meeting Notes

Date: Thursday, May 8, 2014

Meeting: CTA with Chicago Park District and Friends of the Parks

Meeting Purpose: CTA to share RLE Project Updates and Parks Impacts

Present:
Erika Sellke, Chicago Park District
Cassandra Francis, Friends of the Parks
Sylvia Jones, Friends of the Parks
Sonali Tandon, Chicago Transit Authority
Virginia Jackson, CWC Transit Group
Jenifer Palmer, CWC Transit Group

Time: 1:00 pm to 2:00 pm

Location: CTA Headquarters, 567 West Lake Street, 10th Floor, Chicago, IL

Presentation Highlights
CTA staff delivered a presentation about the proposed Red Line Extension (RLE) Project that would extend the Red Line from the existing 95th Street Terminal to the vicinity of 130th Street. Representatives from the CTA discussed:

- **Project Overview and Benefits**
  The RLE Project would mean a better served far south side, by providing direct CTA rail service and reducing commute times from the project area. The project would include four new stations, a new rail yard, and bus and parking facilities at all stations. The project would encourage economic development and benefit the community by adding construction jobs and increasing access to jobs.

- **CTA is preparing an Environmental Impact Statement (EIS)**
  CTA has been evaluating the project alternatives and is preparing a Draft EIS, which will analyze the potential positive and negative environmental impacts of construction and operation of each alternative and will propose mitigation measures to minimize potential negative impacts.

- **CTA is preparing an Environmental Impact Statement (EIS)**
  CTA has been evaluating the project alternatives and has begun to prepare a Draft EIS which will analyze the potential positive and negative environmental

impacts of construction and operation of each alternative and will propose mitigation measures to reduce or eliminated potential negative impacts. Once the CTA completes the Draft EIS, a public hearing will be held to share the findings of the Draft EIS.

- **Parks Impacts**
  CTA has been analyzing the potential impacts of the project from a number of different perspectives, including potential for displacements, noise and vibration, effects on historic properties and others, and will mainly discuss findings with respect to parks in the meeting. Based on the analysis, the No Build, BRT, and Halsted Rail Alternative have no associated potential park impacts. All UPRR Rail Alternative options would impact Wendell Smith Park due to the overlap with the park and elevated structure/vertical clearances. There would be temporary occupancy of a small portion of the park during construction, but the area underneath the elevated structure would remain open after construction. Depending upon the UPRR Alternative option selected, the acreage impacted varies.

  In addition to potential temporary impacts to Wendell Smith Park from all UPRR Alternative options, the UPRR Alternative East Option would impact Block Park. The affected area includes an isolated portion of the park's open space and a communications tower, which is in an area of the park that does not currently serve a recreational use. The key recreational features of the park, walking trails and benches, are on the other side of Harvard Avenue in the eastern half of the park. While there would be some temporary construction impacts, no permanent incorporation is needed as the area underneath the elevated track structure would remain open after construction.

  In addition to potential temporary impacts to Wendell Smith Park from all UPRR Alternative options, the UPRR Alternative West Option would impact Fernwood Parkway. The West Option alignment would run through two of the four parcels that make up Fernwood Parkway between 101st and 103rd Streets and would affect about 1.9 acres of the park. Temporary closure of the section of the park overlapped by the elevated structure would be necessary during construction. Public use of the park could resume after construction, as long as the area underneath the elevated structure is reopened. However, much of the park between 101st and 103rd Streets would be permanently overlapped and shaded by the structure. Concrete aerial supports would be placed permanently in the park space. The West Option would result in a permanent incorporation of the park space and if this option is selected, CTA would work with the Chicago Park District on appropriate mitigation. Some options have already been discussed with the City, including creating replacement park space nearby and/or adding enhanced recreational features to improve Fernwood Parkway's functionality as a park. The end result would potentially be a net benefit for park users.

Questions and Comments from Meeting Participants

- Discussion followed regarding appropriated funds for project development and Sylvia Jones noted that it was her understanding that $1.5 Billion was to be appropriated in 2009 for the Red Line Extension. CTA stated that funding for the EIS planning study had been received and was used to fund this portion of the project. Once the Final EIS is submitted and a Record of Decision is determined by the Federal Transit Administration (FTA), the project would become eligible under the federally competitive New Starts grant funding. Local and state funding would be needed to secure federal funding.

- Sylvia Jones asked about the future parking fee for the proposed park and ride facility. This has not yet been determined by CTA and would be dependent upon the alternative and option selected to move forward. As the project advances, CTA will further evaluate the size and scale needed for the park and ride facilities.

- CTA asked about any areas of community concern with regard to the potential for park impacts of proposed alternatives. Discussion followed regarding specific parks in the surrounding community. Sylvia Jones asked about impacts to Princeton Park and Trinity Church. Based on review of study area mapping, these facilities are located near 95th Street, east of Eggleston. CTA noted that these areas are outside of the proposed alternatives alignments and study area. Similarly, CTA was asked whether the study reviewed potential impacts to Kensington Park. CTA noted that this had been reviewed but was outside of the area of potential effect.

- Sylvia Jones noted that Carver Park in Altgeld Gardens is a good example park in the area.

- Cassandra Francis asked that Major Taylor Bike Trail be added to the park impacts mapping, as appropriate. Major Taylor Bike Trail is not impacted by the project, but should be shown for reference purposes.

- Discussion followed regarding potential impacts from all UPRR Alternative options on Wendell Smith Park. It is understood that this is not a permanent incorporation and that only a small portion of parkland is affected. However, Ms. Francis noted that leaving the area of overlap between the park and elevated structure afterwards does change the nature of the park use.

- Cassandra Francis had concerns about impacts to parks from the UPRR Alternative options and noted that replacement of parks should be considered as part of the mitigation efforts for Block Park as well as Fernwood Parkway. CTA explained that the portion of Block Park that would be impacted is not used for recreational activity currently and does not contain any amenities. If the UPRR West Option is selected and Fernwood Parkway is impacted, CTA would work with the Chicago Park Department on appropriate mitigation, including creating replacement park area nearby and other amenities.

- Ms. Francis noted that she would like to work with Erika Sellke at the Chicago Park Department to conduct a field visit of the potentially impacted parks and determine ways to enhance compact, integrated park areas within the project study area.

Follow Up

CTA Government and Community Relations staff will provide Ms. Jones with a copy of the Section 106 (Historic) Effects Report.

Friends of the Parks and Chicago Park Department staff will further coordinate a field visit to discuss the potential impacts on parks and appropriate mitigation. CTA offered to coordinate and be part of these field visits if desired.

Friends of the Parks will look for other properties in the area that could be used for parkland mitigation.

Red Line Extension Project
Community Group Meeting
DATE: 05/08/2014
LOCATION: CTA HQ - 567 W Lake Street

Name	**Organization**	**Email Address**
Sonali Tandon	CTA	standon@transitchicago.cor
Sylvia Y. Jones	Friends of the Parks	elohimINC@SBCGlobal.Net .
ERIKA SELLKE	Chicago Park District	erika.sellke@chicagoparkdistrict.com
CASSANDRA FRANCIS	FRIENDS OF THE PARKS	FRANCISC@FOTP.ORG.
JENIFER PALMER	CWC	palmerjs@cdmsmith.com
Virginia Jackson	CWC	

Meeting Notes

Date: Tuesday, May 13, 2014

Meeting: CTA with Roseland Manor

Meeting Purpose: CTA to share RLE Project updates

Present:
Idamae McKinney, Roseland Manor
Blythe Wood
Frank Thomas, Roseland Manor
Diane Elem
Roberta Walker
Paula Evans, Roseland Manor, All Saints
Frankie A. Parker
Dorothy White
L. Williams
Roberta Harmon
Gerald Nichols, Chicago Transit Authority
Sonali Tandon, Chicago Transit Authority
Tammi Davis (note taker), CWC Transit Group

Time: 10:35 am to 11:15 am

Location: Roseland Manor, 11717 S. State Street, Chicago

Presentation Highlights
CTA staff delivered a presentation about the proposed Red Line Extension (RLE) Project that would extend the Red Line from the existing 95th Street Terminal to the vicinity of 130th Street. Representatives from the CTA discussed:

- **Project Overview and Benefits**
  The RLE Project would mean a better served far south side, by providing direct CTA rail service and reducing commute times from the project area. The project would include four new stations, a new rail yard, and bus and parking facilities at all stations. The project would encourage economic development and benefit the community by adding construction jobs and increasing access to jobs.

- **CTA is preparing an Environmental Impact Statement (EIS)**
  CTA has been evaluating the project alternatives and is preparing a Draft EIS, which will analyze the potential positive and negative environmental

impacts of construction and operation of each alternative and will propose mitigation measures to minimize potential negative impacts.

- **RLE Project Alternatives and Potential Impacts**
  CTA is evaluating three options for the Locally Preferred Alternative along the Union Pacific Railroad (UPRR) tracks including an option within the existing freight right-of-way (ROW Option), an East Option, and a West Option. CTA is also evaluating a rail alternative along Halsted Street, a bus rapid transit (BRT) alternative along Michigan Avenue, and the No Build Alternative. Potential project impacts include impacts to parks, property displacements, visual impacts, noise impacts, community character, wetlands, and historic properties.

- **Funding and Next Steps**
  The CTA will pursue a wide range of local, state and federal (New Starts) sources with the help and support of the community. Once the CTA completes the Draft EIS, a public hearing will be held to share the findings of the Draft EIS.

Questions and Comments from Meeting Participants

- **How will the best option be determined?**
  Sonali Tandon: CTA is hosting a public Open House in Pullman Park tonight. Based upon the Environmental Analysis and public feedback, CTA will be designating a single alternative in the next step. Your feedback is very important at this point.

- **Are all the alternative options possible at this point?**
  Sonali Tandon: Yes. They are all possible alternatives. The community has shown preference for the option along the Union Pacific Railroad tracks in the past. We are studying all of them currently.

- **Are they going to take a poll? How are they going to determine which option is best?**
  Sonali Tandon: We are doing outreach and getting comments from the public. We'll review those comments from the public. We'll also look at the environmental analysis and impacts of the project. Then, we'll decide on the best alternative based on our analysis and the feedback that we get during this outreach.

- **What is the first stop after 95th Street?**
  Sonali Tandon: 103rd Street is the first stop after 95th Street.

- **There are high schools and houses that have been here for 50 years. What's going to happen?**
  Sonali Tandon: The Union Pacific Railroad tracks are there. We are looking at several options where we can either go to the east or west of the

Union Pacific tracks. We are required to be 50 feet away from the UP tracks for safety considerations which would require some displacements.

- **Mr. Williams: You have been doing this for five years. People are saying that the government does not have the money. How is the community going to get this focused?**
  Sonali Tandon: CTA is currently in the planning phase. We will be pursuing federal and local money for this project. This is a huge project. We estimate the cost to be $2.3 billion. A project of this scale requires intensive planning and time.

- **Mr. Williams: For the money that was just spent on the Red Line, was that used for rehabilitation?**
  Sonali Tandon: That was a very crucial project for CTA because we needed to fix what we already had first before extending. If we build an extension but don't fix the really slow Red Line, then the extension won't work that well.

- **Mr. Williams: How will you get the funding?**
  Sonali Tandon: CTA will be working with the New Starts Program of the federal government that funds such projects. It is very competitive. Different projects from the nation apply for the funding. CTA will be submitting its application for that funding. It only funds up to 50 percent of the project costs. The rest has to come from local and state sources. We will be working with local aldermen and state officials to acquire that funding so that we can apply for federal funding to get the rest of the match.

- **Why won't they extend the line? It would create more jobs.**
  Sonali Tandon: We need to acquire the right-of-way which is why we have all these impacts. We are required to do this study and to identify those impacts. Projects of this scale take time. I understand your concern that it's been on the table for a while.

- **Ms. Harmon: What about the historical value and background of the buildings?**
  Sonali Tandon: As part of the environmental document, we are required to look at historic buildings and if there are any effects on the historic buildings. We are working with the Federal Transit Authority, State Historic Preservation Officer, and local community organizations that specifically work on historic buildings to identify the risk effects. We look at the proposed alignment to see if there are any historic buildings that have already been identified or if there are buildings that could be historic. There is specific guidance on that from the federal government on what could be historic. We then look at the projects effects on those resources. There will be more information at tonight's Open House on historic buildings specifically and historians will be there if you have additional questions.

- **Where is tonight's meeting?**
  Sonali Tandon: The meeting is at Pullman Park. Most of the information provided will be similar to what we presented today. There will be some additional information given and an opportunity to talk one-on-one with CTA staff. If you have more specific questions, we'll have comment cards there for you to provide your feedback.

- **Mr. Thomas: Do you have the land already checked out that you are trying to use?**
  No, we don't have the land currently because we can't go on the railroad right-of-way. We need to acquire properties for the right-of-way.

- **Mr. Thomas: You need permission to do it, right?**
  Sonali Tandon: We need to complete this environmental document first. Then we'll have permission to acquire that land. South of 119th street, there are some old railroad tracks that we may be able to use.

- **Mr. Thomas: You can tie into those railroad tracks?**
  Sonali Tandon: Exactly.

Follow Up

CTA will keep communication lines open and consider issues discussed during this meeting in the upcoming Draft EIS.

Red Line Extension Project
Community Group Meeting
DATE: 05.13.14
LOCATION: ROSELAND MANOR

Name	Organization	~~Signature~~ EMAIL.
SONALI TANDON	CTA	. standon@transitchicago.co
TAMMI DAVIS	CWC ~~CDM/TRINAL~~	tdavis@TRINALINC.COM
Idamae McGinney	Roseland Manor	
Blythe [illegible]		
Frank Thomas	ROSELAND MANOR	
Diane Elem	11722 So. State	
Roberta Walker	11701 S. State	robertawalker2@yahoo.com
PAULA EVANS	Roseland Manor/ALL SAINTS	Paula Evans - SERVICE Coord.
FRANKIE A. PARKER	11717 S. STATE ST APT 509	FAP1816@GMAIL.COM
Dorothy White	11717 S. State Apt 111	
Delores Harris	11701 S. State 401	

Meeting Notes

Date: Wednesday, May 14, 2014

Meeting: CTA with Far South Community Development Corp.

Meeting Purpose: CTA to share RLE Project updates

Present:
Abraham Lacy, Far South Community Development Corp.
Leroy Chalmers, Far South Community Development Corp.
Eric Thompson, Pullman Bank & Trust
Tina Sanders, Phalanx Family Services
Nikiesha Emery, Far South Community Development Corp.
Gerald Nichols, Chicago Transit Authority
Sonali Tandon, Chicago Transit Authority
Tammi Davis (note taker), CWC Transit Group

Time: 10:08 am to 11:00 am

Location: Kroc Center, 1250 West 119th Street, Chicago

Presentation Highlights
CTA staff delivered a presentation about the proposed Red Line Extension (RLE) Project that would extend the Red Line from the existing 95th Street Terminal to the vicinity of 130th Street. Representatives from the CTA discussed:

- **Project Overview and Benefits**
  The RLE Project would mean a better served far south side, by providing direct CTA rail service and reducing commute times from the project area. The project would include four new stations, a new rail yard, and bus and parking facilities at all stations. The project would encourage economic development and benefit the community by adding construction jobs and increasing access to jobs.

- **CTA is preparing an Environmental Impact Statement (EIS)**
  CTA has been evaluating the project alternatives and is preparing a Draft EIS, which will analyze the potential positive and negative environmental impacts of construction and operation of each alternative and will propose mitigation measures to minimize potential negative impacts.

- **RLE Project Alternatives and Potential Impacts**
  CTA is evaluating three options for the Locally Preferred Alternative along the Union Pacific Railroad (UPRR) tracks including an option within the existing freight right-of-way (ROW Option), an East Option, and a West Option. CTA is also evaluating a rail alternative along Halsted Street, a bus rapid transit (BRT) alternative along Michigan Avenue, and the No Build Alternative. Potential project impacts include impacts to parks, property displacements, visual impacts, noise impacts, community character, wetlands, and historic properties.

- **Funding and Next Steps**
  The CTA will pursue a wide range of local, state and federal (New Starts) sources with the help and support of the community. Once the CTA completes the EIS, a public hearing will be held to share the findings of the EIS.

Questions and Comments from Meeting Participants

- **Leroy Jones: How lengthy is the environmental process?**
  Sonali Tandon: We started the environmental analysis in 2012 and are preparing a Draft EIS. We hope to publish it next year. After the Draft EIS is published, we'll have a public hearing to get public feedback and comments. We currently have several alternatives that we are analyzing in the Draft EIS. The Final EIS will present a single alternative with additional engineering, which could take two years for a project of this scale.

- **Abraham Lacy: Relative to the Union Pacific Railroad Alternatives, are all of these alternatives going to be elevated? What conversations have happened relative to proximity to freight trains?**
  Sonali Tandon: The elevated structure, rather than at-grade, is proposed in the median of Halsted Street due to safety implications. For the Union Pacific Railroad, we are looking at an elevated structure from 99th to 119th Street. It would be at-grade (ground) level after that. There are also existing unused tracks that we can potentially use. We have had conversations with UPRR. They would like a 50-foot separation from the tracks because of safety reasons.

- **Abraham Lacy: Would you have to build a new track?**
  Sonali Tandon: We would have to acquire right-of-way and would not be able to use the existing UPRR right-of-way. Acquiring right-of-way means taking some property either east or west of the UPRR tracks. The yellow line shown on the presentation is based on the CDOT study that looked at moving UPRR out of this corridor into a separate area. The ROW Option does not look very feasible at this point because of the significant costs and time delays.

- **Abraham Lacy: Regarding Halsted, you mentioned that it wouldn't be at grade level because of safety concerns.**
  Sonali Tandon: Yes, because of the third (electrified) rail being at street level.

- **Abraham Lacy: I've seen it by the Orange Line, on the other side like on the West side, where you have it at grade level, which is a different type of safety precaution.**
  Sonali Tandon: We always get community concerns on the Yellow Line as there is a safety hazard there. We are not looking at building at grade even though it would be cheaper. There are other technologies like light rail. But the concern with that is that if you have a different type of service then it would not be connected to the Red Line. So people would still need to transfer, which defeats the purpose of the project.

- **Leroy Jones: Where is the proposed yard?**
  Sonali Tandon: With the UPRR Alternative, the yard would be north of 130th Street at the MWRD property. With the Halsted Alternative, we are proposing for the yard to be just south of 119th Street. There is a shopping mall there that would be impacted.

- **Abraham Lacy: At 119th Street, you have intermodal opportunities because it connects to the Metra. It's close to shopping and is a busy corridor.**
  Sonali Tandon: We are here to get your feedback and comments. Most of the comments we've gotten are for the UPRR. There has not been a strong preference from the community for Halsted.

- **Leroy Jones: Most people think that the option is going to be elevated on Halsted. I think that that's what turned a lot of people off because they don't want any type of structure in their neighborhood. I think that if something was presented at grade level to them, then they may say "ok." It might even attract businesses to the area.**
  Sonali Tandon: This would be a modern structure. We have some visuals but they are not the final designs. They are just there to help us see what it could look like.

- **Leroy Jones: What were some of the things that people brought up as to why they preferred the UPRR Alternative as opposed to Halsted?**
  Sonali Tandon: Some people felt that it would be more connected to the community and could connect to Altgeld Gardens, which is the public housing development in that area.

- **Abraham Lacy: Are the impacts only for the Union Pacific Railroad Alternative?**
  Sonali Tandon: No, there are impacts for all alternatives. We are coordinating with the State Historic Preservation Officer and community organizations that concentrate on historic buildings. There are historic

properties along Halsted that would be impacted and historic buildings along UPRR that might be impacted. That has been a big concern that has come out of this EIS process. Currently, we have identified four historic properties which would be impacted but they would not be displaced. I encourage you to go to our website for more information.

- **Abraham Lacy: During conversations with the community, what were some of the comments regarding noise, especially around 103rd Street?**
  Sonali Tandon: That could definitely be a concern and was brought up at the Open House yesterday. We haven't analyzed those comments yet. We have heard concerns about the noise in the past. With the mitigation strategies, our analysis shows that there would not be noise impacts along the UPRR Alternative because of the existing train line. Someone from Green Street did express a concern about the noise at the Open House. Green Street has been identified as a Historic District.

- **Leroy Jones: I understand that there was a recommendation for the CTA and the RTA to coordinate their efforts. Is that something that you're looking at or is the CTA going after the funds by themselves?**
  Sonali Tandon: We are coordinated at every level with RTA. For this project, we will apply for federal funds. To apply for federal funds, we will be in a very good position if are able to identify local funds. The federal government will not even look at our application if we do not have a local funds match. That local match will essentially come from state resources.

- **Leroy Jones: Are bonds being considered for the additional funding?**
  Sonali Tandon: CTA and RTA already have bonds to meet state of good repair needs. We'll be looking at all potential sources. The cost is $2.3 billion and we need at least half of that. One additional point, we have done ridership analysis and modeling for this. The modeling shows that it will be mostly existing bus riders that will benefit from and use the new rail line.

- **Abraham Lacy: What will be the outreach regarding construction jobs for local contractors participating in this project? And is there a certain type of certification that they are supposed to have?**
  Gerald Nichols: We'll do the same thing that we did on the Red Line Reconstruction project. The Chicago Urban League was the filtering house for getting young folks in that neighborhood employed on that project. We'll try to filter all of the young folks or individuals from the community to actually work on the project. We'll provide training beforehand as well. A lot of that is going on at the Urban League right now.

- **Abraham Lacy: Are some of the dollars earmarked to go to business in the community and not some large construction firm in the suburbs?**
  Gerald Nichols: Whoever the contractor is, we'll work with the community to ensure that. We set up meet and greets for local businesses with either the prime or subcontractors.

- **Abraham Lacy: But is there a percentage that will be set aside for construction**
  Gerald Nichols: Yes, we don't call it a set aside but we do have goals just like on Red Line South. Like on the station work, the contractor said he would bid 40%. On the track work, it was 28%. They exceeded that number.

- **Abraham Lacy: Was that a local contractor?**
  Gerald Nichols: That was with DBEs. Yes.

- **Abraham Lacy: Were the DBEs from local communities or statewide?**
  Gerald Nichols: That was with African-American firms.

- **Abraham Lacy: Not just African-American firms but this impacts the East Side as well. Just want to make sure that minority interests are involved.**
  Gerald Nichols: Yes.

- **Abraham Lacy: Are you coordinating your efforts with other prospective projects as well? For instance, a developer is trying to open a store at 115th and Michigan. Are you coordinating with developers in that area?**
  Sonali Tandon: We are working with the City. You mentioned 115th & Michigan; an Aldi's was trying to come there.

- **Abraham Lacy: Yes. Aldi's is there. They moved across the street. So another developer is trying to put a store there.**
  Sonali Tandon: We coordinate with the City of Chicago and whatever plans they have will be shared with us for that project.

- **Abraham Lacy: You work with DCP right? UIC?**
  Gerald Nichols: Yes. They had a separate project with UIC years back. They did something with the Chicago Metropolitan Agency for Planning. Last year, CMAP prepared this video which we showed in our open house yesterday. They are one of the many community organizations with whom we work.

- **Abraham Lacy: I think that 111th and 103rd are going to be heavily impacted. I think the DCP is counting on those stations being at 111th and 103rd. What did the coordination look like on your end as far as keeping up to date with them?**
  Gerald Nichols: We're at the table. They consider themselves a partner with us.

- **Abraham Lacy: I read the article that Ald. Beale put out about Halsted that was in the Sun-Times where it said that it was not going to happen having an elevated track on Halsted, which is understandable. I think it would obscure the business corridor. But I think that if there was a visual showing more of a grade level to show people the potential impact, and then it**

would help financially and with attracting new business to the corridor. I think that should be shown as an alternative as opposed to it just being an elevated track in the middle of a community.

- **Leroy Jones: Why would we not consider light rail assuming that at some point the CTA will eventually have to move to light rail?**
  Sonali Tandon: Light rail is not compatible with the rail system that we have now.

- **Abraham Lacy: What impact will there be on the Metra stations?**
  Sonali Tandon: Metra is a participating agency on this project, which means that we coordinate with them in every step of the process. Metra's market is a different market. People who take CTA are still taking the bus to the CTA and not taking Metra from existing different Metra stations. They want frequent service and access to CTA. It's a different market that Metra is trying to serve than what CTA serves. There is a lot of coordination with Metra and Pace. We had Metra and Pace representatives at our meeting yesterday.

- **Abraham Lacy: Regarding the safety aspect and security, we noticed that at a couple of CTA and Metra stations that they are poorly lit. Has it been discussed as to the level of security and coordination with local police departments to enforce a safer environment, especially with people getting off late from work?**
  Sonali Tandon: In this planning process, we look at safety and security and how that can be improved. It will be a section in the Draft EIS, which will be published next year, as well as in the Final EIS. When we get to the Final EIS, we'll solidify the mitigations, which include additional lighting and cameras. Those are the kind of elements that we are analyzing and proposing for the project in this planning phase. As it moves along to the engineering and future phases, those recommendations will get solidified. So, again, all the feedback that we get from the community is very helpful and insightful because the more you speak, the more it will count.

- **Abraham Lacy: When it comes to the nearby stops, there are abandoned buildings near the right-of-way. The last thing residents want to see coming off a stop is an abandoned house. Are you looking at the surrounding radius? What does that radius look like?**
  Sonali Tandon: We anticipate with the urban design and landscaping features that it will be an attractive stop. It will encourage more community activity and more interest for people to move in rather than move out. We have seen increased development and growth along the Brown Line.

- **Abraham Lacy: How many permanent jobs would be created?**
  Sonali Tandon: We haven't looked at the operations jobs, but there will be some once the project is complete.
  Gerald Nichols: On the Dan Ryan/Red Line, about 775 CTA jobs were created. That doesn't include the construction jobs.

- **Leroy Jones: How long will the actual construction project take?**
  Sonali Tandon: We are planning to publish the draft document in 2015. The final document can take up to two years after that. Everything is dependent upon federal funding and approval. If everything goes great, it may take about five years to build it. Before that, we will have the engineering phase, acquiring the right-of-way, which will take about two to three years prior to the five years.

- **Leroy Jones: So, we're looking at about eight years?**
  Sonali Tandon: Yes.
  Gerald Nichols: That's about average for a brand new railroad being built whether the project is here, Baltimore, or New York. That's about average.

- **Eric Thompson: Does CTA have some type of barometer on how the state feels about the project?**
  Gerald Nichols: The state funded the entire Red Line South Project. The entire $425 million was State money.

- **Eric Thompson: How long did it take to get the money from the state?**
  Gerald Nichols: I don't know.

- **Tina Sanders: What percentage is the state bringing to the table for this project?**
  Sonali Tandon: The maximum that that federal government would provide is 50%, but typically they provide 30%. The other 70% – 50% would be needed from local resources.

- **Eric Thompson: Has there been any indication as to what the state or the city is willing to give as far as financial commitments?**
  Gerald Nichols: This project has to be done, so we'll find the money. It's the only line that doesn't extend to the city limits.

- **Abraham Lacy: Is this coordinated with Olive Harvey and the Mayor's Transportation & Logistics Center, which is opening in the fall of this year?**
  Sonali Tandon: We were not aware of it. Do you have any contact information on it?

- **Leroy Jones: I have it.**
- **Abraham Lacy: The Mayor is definitely pushing that.**
  Sonali Tandon: Ok. Thanks.

Follow Up

CTA will keep communication lines open and consider issues discussed during this meeting in the upcoming Draft EIS.

Red Line Extension Project
Community Group Meeting
DATE: 05/14/2014
LOCATION: Kroc Center, 1250 West 119th Street, 10:00am

Name	Organization	Email Address
LEROY CHALMERS	FAR SOUTH CDC	LCHALMERS@GRWPFOODNETWORK.ORG
Abraham Lacy	Far South CDC	lacy@farsouthcdc.org
Nimesha Emery	far south cdc	Nimesha@farsouthcdc.org
ERIC THompson	PULLMAN BANK	ETHOMPSON@BANKPULLMAN.com
TAMMI DAVIS	CWC	tdavis@trinalinc.com
Tina Sanders	Phalanx Family Servi	TSANDERS@PHALANXGRPSERVICES.org
Sonali Tandon	CTA	standon@transitchicago.com
Gerald Nichols	CTA	

Meeting Notes

Date: Thursday, May 15, 2014

Meeting: CTA with Agape Community Center

Meeting Purpose: CTA to share RLE Project updates

Present:
Benjamin Sutton, Resident
Brad Harry, Agape Community Center
Tonya Easter, Agape Community Center
Marc Henkel, Agape Community Center
Linda Cotton, Agape Community Center
Laverne Horne, BNCO & Roseland Neighborhood Community Organization
Marcus Kellum, Resident
Gerald Nichols, Chicago Transit Authority
Sonali Tandon, Chicago Transit Authority
Tammi Davis (note taker), CWC Transit Group

Time: 10:45 am to 11:37 am

Location: Agape Community Center, 342 West 111th Street, Chicago

Presentation Highlights

CTA staff delivered a presentation about the proposed Red Line Extension (RLE) Project that would extend the Red Line from the existing 95th Street Terminal to the vicinity of 130th Street. Representatives from the CTA discussed:

- **Project Overview and Benefits**
  The RLE Project would mean a better served far south side, by providing direct CTA rail service and reducing commute times from the project area. The project would include four new stations, a new rail yard, and bus and parking facilities at all stations. The project would encourage economic development and benefit the community by adding construction jobs and increasing access to jobs.

- **CTA is preparing an Environmental Impact Statement (EIS)**
  CTA has been evaluating the project alternatives and is preparing a Draft EIS, which will analyze the potential positive and negative environmental impacts of construction and operation of each alternative and will propose mitigation measures to minimize potential negative impacts.

- **RLE Project Alternatives and Potential Impacts**
  CTA is evaluating three options for the Locally Preferred Alternative along the Union Pacific Railroad (UPRR) tracks including an option within the existing freight right-of-way (ROW Option), an East Option, and a West Option. CTA is also evaluating a rail alternative along Halsted Street, a bus rapid transit (BRT) alternative along Michigan Avenue, and the No Build Alternative. Potential project impacts include impacts to parks, property displacements, visual impacts, noise impacts, community character, wetlands, and historic properties.

- **Funding and Next Steps**
  The CTA will pursue a wide range of local, state and federal (New Starts) sources with the help and support of the community. Once the CTA completes the Draft EIS, a public hearing will be held to share the findings of the Draft EIS.

Questions and Comments from Meeting Participants

- **Marc Henkel: There was an open house meeting on Tuesday. Is this similar to that meeting or is this completely different? How does this compare to the Tuesday meeting?**
  Sonali Tandon: This is a preview of what we presented at that meeting. We don’t have all the boards that we shared at the meeting; all the boards are available online. Today we’ll provide the big picture of what was shared. We asked people in the community to provide feedback. Today, we are also here to get your feedback. You can also provide your feedback later by mail or email.

- **Linda Cotton: Why wouldn’t CTA use the UPRR tracks?**
  Sonali Tandon: The CTA doesn’t have right-of-way for those tracks. Those tracks are Union Pacific Railroad tracks. It’s their right-of-way. They want us to be 50 feet away from their tracks.

- **Marc Henkel: Is there a projected end date?**
  Sonali Tandon: We have almost completed the analysis internally. We are here to present our findings. After this, we will be coordinating with the Federal Transit Administration because this is their project and document. We will publish the Draft EIS sometime next year.

- **Laverne Horne: And that allows you to pursue funding?**
  Sonali Tandon: Yes. This whole EIS process allows us to pursue funding. But that will be just a Draft EIS. The Final EIS will be prepared on one single alternative. In this Draft EIS, we are evaluating three different alternatives. In the Final EIS there will be just one alternative. Then, we’ll do additional engineering to ensure that whatever impacts we are presenting are accurate. We will also have more negotiations on mitigations with different partners.

- **Laverne Horne: Regarding access to affordable housing, how will the housing be affected?**
  Sonali Tandon: This project will provide increased transit access to affordable housing and general housing stock. By bringing transit to the area, people will be able to utilize transit more.

- **Marc Henkel: Will the RLE be elevated? From where to where?**
  Sonali Tandon: Yes, it will be elevated from 99th Street to 119th Street.

- **Marc Henkel: Do you mean overhead?**
  Sonali Tandon: Yes, overhead. The structure will be like what's on the Orange Line. Some of our structures downtown are older, like 100 years old; this will be a more modern structure.

- **Marc Henkel: Do any of these options include a subway underground?**
  Sonali Tandon: No, subway is very expensive. One example is the 2nd Avenue Subway in New York. CTA is not looking at subway options.

- **Marc Henkel: I see the end of the orange line on the slide. Is the orange one of the alternatives?**
  Sonali Tandon: All of these options will continue on the same segment. It differs just where we are relative to the Union Pacific Railroad.

- **Brad Harry: You say it's elevated, but it's not necessarily elevated over the existing railroad track?**
  Sonali Tandon: No, it won't be elevated over the existing railroad track. It can't be for safety reasons. We have to be 50 feet away from the existing UPRR tracks.

- **Marc Henkel: Are you going to zoom in on these three options?**
  Sonali Tandon: Yes. I have another slide about the UPRR Alternative. The Halsted Alternative would be elevated and in the median of Halsted Street. We have a few visuals here and more are on our website.

- **Marc Henkel: Will this extension only have four stations?**
  Sonali Tandon: Right.

- **Marc Henkel: Will all the Bus Rapid Transit stops be along Michigan Avenue?**
  Sonali Tandon: Yes. Then, the BRT route will run along Michigan Avenue and then it will continue into Altgeld Gardens just like our #34 Bus Route but with BRT elements in it.

- **Marc Henkel: Will there be any traffic impacts? If there's a stop at 111th Street, will traffic be stopped every time?**
  Sonali Tandon: The tracks will be elevated so traffic will not be stopped. People will be trying to access the CTA and also crossing the railroad with

freight trains passing. There could be safety concerns; to mitigate the safety concerns we could put quad-gates, which are basically two gates on each side, and a pedestrian gate to discourage crossing.

- **Brad Harry: Not Fernwood Park but Fernwood Parkway? I don't know where that is.**
  Sonali Tandon: Fernwood Park is separate. There is just green land with some trees at Fernwood Parkway. It's just next to the UPRR right-of-way.

- **Brad Harry: On this slide, you're showing the East Option, Right-of-Way Option, and West Option. But, the ROW Option is not really an option because of the safety concerns. So it's going to be either East or West?**
  Sonali Tandon: The ROW Option assumes that Union Pacific would no longer be in their current right-of-way and that they would move somewhere else. There was a study conducted that looked at moving them.

- **Brad Harry: They said no?**
  Sonali Tandon: It would have unlimited delays and cost implications.

- **Marc Henkel: Have you thought about putting something above them?**
  Sonali Tandon: No, because we would still need to be 50 feet away.

- **Linda Cotton: Would this building be a displacement?**
  Sonali Tandon: What we are evaluating at this stage are not defined engineering plans; we are looking at what could be impacted. As the process proceeds, displacements will be minimized.

- **Linda Cotton: But you have identified 110 properties that could be displaced.**
  Sonali Tandon: Yes.

- **Brad Harry: Trains blow horns because there aren't quad gates that come down. Ald.Carrie Austin says that we can't get money for quad gates because it's a federal thing. But we could have quad gates with this option?**
  Sonali Tandon: Yes. That is one of the mitigation measures that we are looking at because we don't want people crossing freight to get to a CTA train. It would be a safety concern.

- **Brad Harry: Some of these impacts are negative and some are positive?**
  Sonali Tandon: Yes. But the negatives are not adverse. There will be some impact but not to the level that it would be a concern to the community.

- **Laverne Horne: What's the difference between the type of noise that the Metra train that runs through Beverly makes and the type of noise that this track will make?**
  Sonali Tandon: Our findings show that moderate impact will be defined as something people will be concerned about. Our analysis did show that the impacts would be moderate along the Union Pacific after we adopt all those mitigation measures. But in terms of the decibel noise of the Metra trains versus the decibel noise of the CTA trains, I will have to get back to you.

- **Marc Henkel: It seems to me that the CTA has less noise than the Union Pacific but more noise than the Metra. When you're on the North side or downtown and hear the "L", you can definitely know it's there.**
  Sonali Tandon: These structures would be new structures and quieter than some of the structures downtown. As the trains come to the station, the speed really reduces, so there won't be much noise from the trains but will be from the station itself such as, "doors closing" type of announcements. We also have noise maps on the exhibit boards online that designate moderate and severe noise levels. They show at what distance the noise will be moderate and at what distance it will be severe.

- **Marc Henkel: Have you done anything with the safety and security?**
  Sonali Tandon: We are looking at additional lighting and cameras around the stations. That has come up as a concern, so obviously it will be a part of the mitigation. We will work with the City of Chicago and the OEMC to identify who will be maintaining and monitoring those cameras as well as their exact distance. Is that a concern that you have for the station here?

- **Marc Henkel: I don't take the Red Line often. Sometimes when I go by the 95th Street Station, I see additional police officers and there are occasional incidences there. I was wondering if that's going to increase incidences here or at the other stops.**
  Sonali Tandon: Our analysis didn't show that bringing the stations would increase crime, but it is definitely a concern from the community. We will be addressing it in the project design so that the design is more open and includes more lighting and cameras.

- **Marc Henkel: Will there be additional security at the different stations?**
  Sonali Tandon: It is too early to say. We are still in the planning phase. As some of the things get decided and built, we'll see how the community reacts. There will obviously be security.

- **Brad Harry: You need local funding first before you get federal funding?**
  Sonali Tandon: Yes. It is a very competitive process. Different states have different projects that they are funding. The federal government would want to know what local match we have. But there are other criteria including the ridership, cost of the project, how many transit-dependent

people will use it, etc. There are several different criteria that the federal government reviews, but local funding is one of the major items.

- **Brad Harry: Let's say it takes five or ten years to get the funding. How long do you have to wait before you have to do another EIS?**
  Sonali Tandon: An EIS has a short shelf life. We would have to look at the EIS again. At some point, if the wait gets really long, then we'd have to redo the whole EIS. But if it's not that long, then we'd just have to redo some of the work but not all of it.

- **Marc Henkel: What's the soonest that everything will fall into place and things will start getting built – estimated?**
  Sonali Tandon: It all depends on funding and approvals. We currently have funding to finish the Draft EIS. We also need funding to do the Final EIS and the engineering. If we had all the funding and approvals, then the Final EIS could take two to three years. The engineering step could take another two to three years. Then construction would take about five years. So, to clarify, the ten years that I mentioned earlier was when the construction would start and not when it would end.

- **Marc Henkel: So it could take six years before you get funding to start construction?**
  Sonali Tandon: Right, to start construction.

- **Brad Harry: Construction is expected to last about five years?**
  Sonali Tandon: Yes.

- **Brad Harry: Our initial concern is if you choose that East Option, our business would be one of the businesses that would be displaced. To my knowledge, we have not been contacted by CTA. I spoke with residents on the west side of the tracks that stated that they had been contacted by CTA about exploring whether or not they would be willing to sell their property.**
  Sonali Tandon: We have not contacted anyone regarding that. So if someone had been contacted, then that's not from CTA. We just sent postcards to inform people about this meeting. We have not contacted anyone. We have these alternatives. We have not finalized on any of them and have not identified specific properties. The numbers that I have presented are just based on the maximum envelope.

- **Brad Harry: So even after the Final EIS, there's no guarantee that you'll get funding in time to go forward with this.**
  Sonali Tandon: Acquisition will not start until we have the funding and approval from FTA. The EIS gives us approval to start that acquisition, but it doesn't mean that we will start. We'll only start when we have the funding.

- **Brad Harry: Acquisition happens when you receive full funding?**
  Sonali Tandon: Yes.

- **Marc Henkel: Who's the person or entity that will determine which alternatives will be chosen?**
  Sonali Tandon: It would be CTA and FTA, based on the comments we have been getting through the public comment process, and based on our analysis. There are park impacts, historic property impacts, displacements on east versus west, and also further discussions with FTA.

- **Marc Henkel: Would aldermen be involved?**
  Sonali Tandon: We have been briefing aldermen and getting their feedback as well.

- **Brad Harry: We know that CTA has the Alderman's voice in their ear.**
  Gerald Nichols: Some years ago, we came out this way to discuss the West Option. We've spoken with Ald. Carrie Austin. She wants to go back out to the community to see if they still want that option.

- **Marc Henkel: So with the Halsted Alternative available, they still chose the West Option?**
  Gerald Nichols: Yes. We're still going to discuss all of the options to see if their minds have changed. They might want the Halsted Alternative.

- **Marc Henkel: Was there a 25 feet restriction then or was the 50 feet restriction presented at that time?**
  Sonali Tandon: Previously when we presented, it was not at this level of detail. It was a single Union Pacific Railroad option. We didn't discuss East Option versus West Option. This time around, we are discussing it in greater detail with displacements and impacts.

- **Marc Henkel: You mentioned your website a couple of times. What is the exact website where we can access this?**
  Sonali Tandon: transitchicago.com/redeis

- **Linda Cotton: You talked about the West Option. But even then, it sounds like if there is going to be a parking area, that it could be on the east side and that's the whole issue/area surrounding safety. So, could that be an impact and would it be an impact no matter what?**
  Sonali Tandon: It could be. But we are trying to identify vacant parcels for parking locations because it's more flexible. Second, we are also looking at if it's on that side and the parking is also on that side, then people would not have to cross as much. But some people who live on the East side will have to cross if they parked there. There will be more in-depth studies on the traffic movement. We've already coordinated with CDOT, IDOT, and Cook County on the traffic studies and impacts. There will be more studies conducted.

- **Brad Harry: If the East Option is chosen and this building is demolished for the project or if the West Option is chosen and this building is demolished for the project, it would be a great loss to this neighborhood. We've been here 35 years servicing the neighborhood and the city. I think the neighborhood would feel the loss of the Agape Community Center.**

- **Marc Henkel: Could there be something in the plan where the building can be relocated?**
  Sonali Tandon: In the EIS, we are also looking at community facilities that could be impacted. We would look at the potential locations for them to be relocated. We would be paying the owners the fair market value and help with relocation and costs of relocation. There are a lot of vacant parcels within the community so it should be possible to relocate them within the community.

- **Brad Harry: Great.**
  Sonali Tandon: Any other comments or questions?
  Gerald Nichols: You can also go online and put comments in there. We'll still take them.

- **Marc Henkel: Is that last slide on the website?**
  Sonali Tandon: We have this on the website.

- **Marc Henkel: Is the whole slideshow on the website?**
  Sonali Tandon: It's not exactly this slideshow. This slide is on the website. But it has additional information than what was presented today. It's called Boards. So look for Boards from the open house.

Follow Up

CTA will keep communication lines open and consider issues discussed during this meeting in the upcoming Draft EIS.

Red Line Extension Project
Community Group Meeting
DATE: 05/15/2014
LOCATION: Agape Community Center, 342 WEST 111TH STREET, 11:00am

Name	Organization	Email Address
Laverne Horne	RNCO-Barbara Horn Pres. Roseland Neighborhood Community Org -	laverne.1110@sbcglobal.net
Linda Cotton	Agape Center	linda.cotton@cru.org
Marc Henkel	Agape Center	marc.henkel@cru.org
Brad Harry	Agape Center	brad.harry@cru.org
Benjamin Sutton	Agape Center	bensuttan73@yahoo.com
Sonya [illegible]	Agape Center	tdeLovesjesus@yahoo.com
[illegible]	Agape Center	edwardsmarco@yahoo

Meeting Notes

Date: Thursday, June 19, 2014

Meeting: CTA with Alderman Carrie M. Austin and 34th Ward Residents

Meeting Purpose: CTA to share RLE Project updates

Present:
Alderman Carrie M. Austin
Reverend Leonardo Gilbert
34th Ward Residents
Gerald Nichols, Chicago Transit Authority
Carole Morey, Chicago Transit Authority
Melissa Williams (note taker), CWC Transit Group

Time: 6:07 pm to 7:13 pm

Location: Sheldon Heights Church of Christ, 11325 S. Halsted Street, Chicago

Presentation Highlights

CTA staff delivered a presentation about the proposed Red Line Extension (RLE) Project that would extend the Red Line from the existing 95th Street Terminal to the vicinity of 130th Street. Representatives from the CTA discussed:

- **Project Overview and Benefits**
  The RLE Project would mean a better served far south side, by providing direct CTA rail service and reducing commute times from the project area. The project would include four new stations, a new rail yard, and bus and parking facilities at all stations. The project would encourage economic development and benefit the community by adding construction jobs and increasing access to jobs.

- **CTA is preparing an Environmental Impact Statement (EIS)**
  CTA has been evaluating the project alternatives and is preparing a Draft EIS, which will analyze the potential positive and negative environmental impacts of construction and operation of each alternative and will propose mitigation measures to minimize potential negative impacts.

- **RLE Project Alternatives and Potential Impacts**
  CTA is evaluating three options for the Locally Preferred Alternative along the Union Pacific Railroad (UPRR) tracks including an option within the existing freight right-of-way (ROW Option), an East Option, and a West

Option. CTA is also evaluating a rail alternative along Halsted Street, a bus rapid transit (BRT) alternative along Michigan Avenue, and the No Build Alternative. Potential project impacts include impacts to parks, property displacements, visual impacts, noise impacts, community character, wetlands, and historic properties.

- **Funding and Next Steps**
  The CTA will pursue a wide range of local, state and federal (New Starts) sources with the help and support of the community. Once the CTA completes the Draft EIS, a public hearing will be held to share the findings of the Draft EIS.

Questions and Comments from Meeting Participants

- **34th Ward Resident: What part of Halsted Street would be affected?**
  Carole Morey: Halsted Street would be impacted from the I-57 alignment around 99th Street on Halsted Street down to Vermont Avenue.

- **34th Ward Resident: How many parcels would be affected along Halsted Street?**
  Carole Morey: The Halsted Alternative would impact 38 total parcels. A total of 17 are homes and the remaining 21 would be commercial and industrial properties.

- **34th Ward Resident: How many streets with homes from east and west of Halsted Street would be affected?**
  Carole Morey: The structure would be elevated; therefore only parcels that are along Halsted Street would be affected. This land would be used for parking.

- **34th Ward Resident: Would the remaining properties on Halsted Street be facing the train tracks as they do along Lake Street?**
  Carole Morey: Yes.

- **34th Ward Resident: Can a portion of the Union Pacific Right-of-Way be taken?**
  Carole Morey: The Union Pacific Railroad evaluated potentially relocating but based on a study they will not be relocating. Therefore, we were left with the East and West Options.

- **34th Ward Resident: Does the Union Pacific Railroad Alternative require taking more homes?**
  Carole Morey: Yes, this alternative has the most displaced homes.

- **34th Ward Resident: What about the Michigan Avenue Bus Rapid Transit Alternative? Would you have to widen Michigan Avenue and take more properties?**
  Carole Morey: No we would not need to widen Michigan Avenue.

- **34th Ward Resident: Is the number of affected parcels based on occupied or vacant properties?**
  Carole Morey: The count includes both occupied and vacant properties. When we go back out to survey the land we would determine how many people would be displaced since that is important.

- **34th Ward Resident: Regarding noise mitigation, would considerations be taken similar to O'Hare?**
  Carol Morey: CTA is required to meet FTA's minimal noise level. CTA would try to minimize noise by using a specific type of structure. If that does not meet the requirement, then CTA may assist residents with getting the proper home insulation.

- **34th Ward Resident: Can the community impose a quiet zone; would CTA assist the community in getting it?**
  Carol Morey: I don't know the answer to that question.

- **34th Ward Resident: Would structure be at street level? Would traffic be affected?**
  Carol Morey: The structure would be elevated. Traffic would not be affected because the train would run above the street.

- **34th Ward Resident: Would there be parking available at the stations?**
  Carole Morey: Yes there would be park and rides available at the stations totaling around 3,100 parking spot.

- **34th Ward Resident: How many homes would be affected along 111th Street because of the park and ride? The main concern is safety. There could be an increase in break-ins.**
  Carole Morey: Please place all your concerns on the comment cards. We will take it into consideration.

- **34th Ward Resident: To avoid homes and businesses being affected, why the train can't go down I-57?**
  Carole Morey: The route has to go through the community in order to have a positive economic impact.

- **34th Ward Resident: Look at how long the train has been going through Englewood with no economic impacts.**
  Carole Morey: We are noting the concern.

- **34th Ward Resident: What types of business would come into the area because of the RLE Project?**
  Alderman Austin: Small businesses are encouraged to come to the area. I would rather see a multitude of smaller businesses rather than a big box business. This would be great for us to create business.

- **34th Ward Resident: Would the Halsted Alternative and the East/West Options be the only options?**
  Carole Morey: So far they are our primary options. If you feel like there is an alternative we are not considering, I encourage you to fill out a comment card.

- **34th Ward Resident: Has CTA considered placing the line down the Bishop Ford?**
  Carole Morey: In order to have an economic impact, it has to be brought through the community.

- **34th Ward Resident: Time Frame – When would an alternative be chosen?**
  Carole Morey: Hopefully in 2015. Further engineering would have to take place.

- **34th Ward Resident: How would the alternative be chosen?**
  Carole Morey: After the FTA approves the document to be published, CTA has 30 days in which people can comment through a public hearing.

- **34th Ward Resident: Would there be permanent jobs with CTA? How many jobs overall?**
  Carole Morey: There would be 2,600 to 4,600 construction jobs and there would be permanent jobs with CTA.
  Gerald Nichols: CTA is currently hiring. Please visit www.transitchicago.com

- **34th Ward Resident: Would federal and private funding be able to cover the project?**
  Carole Morey: Federal and private funding won't cover the entire cost of the project. State funding is also needed.

- **34th Ward Resident: How would the private consumers be affected? Would bus fares increase?**
  Carole Morey: CTA does not use fares to fund capital projects; this is a capital project.

Follow Up

CTA will keep communication lines open and consider issues discussed during this meeting in the upcoming Draft EIS.

Town Hall Meeting Sign -In -Sheet June 19, 2014

Name/ Tittle	Home / Business Address	PHONE	E-Mail
1. Mary Alma	11558 So Morgan	773 468-0667	
2. Roosevelt + Cynthia Green	10505 S. Green St.	773 429 0471	bxerswife@sbcglobal.net
3. Mordecai Funches, Jr	11321 So. Stewart Ave	773.468.5466	-
4. Gary Miner	10857 S. Normal	773-744-4561	GMiner571@yahoo.com
5. Wendy Scott	12035 S. Justine	773 909 8641	savanahwm@yahoo
6. Willie Carter	10355 S. Halsted	708-312-7037	
7. Ellen Dotson	11201 S Peoria	773-568-2340	
8. Martha Burchett	11442 S. Emerald Ave	773-9950726	
9. Daisy Reese	11427 S. Emerald Ave	773 9280380	
10. Rose Shafter	11346 Peoria St	773-568-9747	
11. Lena Lee	12837 S. Peoria	773-995-5021	lenallee@att.net
12. Leslie Harris	2456 W. Marquette Rd	773-558 6578	LHarris1074@gmail.com
13. Connie Tinner		773-468-7476	
14. Tanya Hicks	10119 S. Green	773-771-343	
15. William Jones	10783 S. Peoria	773 675-0707	willyr483@yahoo.com
16. Anthony W. Williams	1027 W. 108 Pl	773-957-8238	

Town Hall Meeting Sign -In -Sheet June 19, 2014

Name/ Tittle	Home / Business Address	PHONE	E-Mail
1. Steve Loveless	10501 S Normal		
2. MURIEL STANSBERRY	10846 S. UNION	773 785 4572	
3. Shelby HAMILTON	11355 S. RACINE	773-468-1613	
4. DAWN D. COLAR	10641 S. RACINE AVE	773 416-5397	
5. WILLIE HATCHETT	11330 So GREEN ST	773 460·8915	
6. LAURA WILLIAMS	956 W. 115TH ST.	773-821-8404	
7. BJ-Gunn	10818 S. Normal	773·568-8986	
8. Doris McKinney	11313 So PEORIA	773-568-0828	
9. Dominique Davis	15859 LeClaire Ave Apt C211	(773) 732-0105	
10. REGINALD JACKSON-RAWC	10159 S. Halsted St.	(773)239-3032	
11. PO.			
12. Carolyn Shelby	10040 S. Eberhart	773 556-5636	
13. Julie Fair	10816 S. Parnell	77-264-8394	
14. Ramona James	10736 S. Normal	773.616.9338	
15. Rev. Gwendolyn Payton	The Christian Service MBC 914 W. 119th St. Chgo. 60643	773-568-5532	Mattisonivory1@hotmail.com
16. Kenya Cason	10952 S. EMERALD 60628	773-552-5819	mrscason0303@sbcglobal.net

Town Hall Meeting Sign -In -Sheet June 19, 2014

Name/ Tittle	Home / Business Address	PHONE	E-Mail
1. Celester Burton	10500 S. Normal Ave		
2. BEVERLY MARTIN	10605 S. PEORIA	(773)881-3120	
3. Emma Dixson Brow	10824 S Halsted	773 9284318	edHsonley2@sbcglobal.net
4. Melissa Williams	Trinal, Inc 329 W 18th St Chicago, IL 60616	312-738-0500	mwilliams@trinalinc.com
5. Brenda morgan	10635 So. Racine	773-575-1139	
6. LARRY ANDERSON	11026 S EMERAld		
7. Jim Murrell	12231 So. Normal	773-785-7334	
8. BRENDA PRICE	12107 S Eggleston	773-468-5667	
9. Sgt. Alvin JONES	727 E. 111th Area South	773-507-3711	
10. Andrew Ander	11439 So. May	773-991-0522	
11. Kevin McDonald	10901 S. NORMAL	773-308-1869	
12. Joann Curtis	12230 S. CARPENTER	773 573-4489	
13. JohNSON	149 WEST 115th St	773)785-6007	
14. Evelyn Woodard	946 W 115th St	773-928-7145	
15. Marie Grehart	209 W 109 Pl	773-785-7546	
16. Vanessa Griffin	12005 S. Stewart	773-676-6235	nessag27@yahoo.com

Town Hall Meeting Sign -In -Sheet June 19, 2014

Name/ Tittle	Home / Business Address	PHONE	E-Mail
1. Tony & Virginia Harvey	9814 S. Green St	773-445-4481	djr12@att.net
2. Daisy King	512 W. 115 St	773-995-5061	
3. Jessie Peterson	516 W. 115th St	773-785-9860	
4. Alfredo Peacock	10431 So Parnell	773-233-9387	
5. Joyce Kelley	10708 S. Sangamon	773-995-03[illegible]	
6. Alfred BROADWAY	11031 S MORGAN	773/821-5369	
7. Ms. Marie Jeffries	11629 S. Harvard	773-732-5941	
8. ARTHOR MITCHAM	10947 S. NORMAL	773-468-4903	
9. V Matthews	112th Emerald	773 6609337	
10. PATRICIA McCAIN	11806 So. LASALLE	77	
11. Rita Horne	521 W. 111th St.	7734688776	
12. Elmer Horne	" "	" "	
13. Claudie Stewart	11412 Morgan	773-785-2828	
14. Ricco Coleman	11819 S. NORMAL	773 995-8650	
15. EARMON DAVIS	11610 So. Ada St	773-677-1519	
16. NEAL COLEMAN	1238 W. 102ND Pl	773-445-0978	

Town Hall Meeting Sign -In -Sheet June 19, 2014

Name/ Tittle	Home / Business Address	PHONE	E-Mail
1. Rosie Henderson	12225 Carpenter St	7082283483	
2. Brandon Moore	4225 W. 177th	773-732-8982	
3. ANTOINETTE MCALISTER	11705 SO. ELIZABETH	(773) 928-5226	
4. Lavert & Viola Shaw	10640 S Eggleston	773-785-5747	
5. Robert B. Moore	11649 So. PEORIA	773-416-8487	
6. Edward Tarver	350 W. 109th St	773-264-5096	
7. PERRY JONES	10615 SO HALSTED	773294-5856	
8. Eunice WALKER	11701 S. Justine	708 227-7095	
9. Annette Cain	727 W. Vermont	773-370-1116	
10. Geraldine Davis	143 W. 104th St	7739285239	
11. Dr Angela Scott	137 W 104 St	773 919-5727	
12. Lynetta Jones	10456 S. Normal	773-505-0571	
13. Constance Coleman Robertson	11406 S. Parnell Ave	773 995 5143	
14. Terence W. Johnson	337 W. 113th St.	312-678-9107	
15.			
16.			

Town Hall Meeting Sign -In -Sheet June 19, 2014

Name/ Tittle	Home / Business Address	PHONE	E-Mail
1. Clifton Holliday	11036 S. Parnell	773 764 3517	
2. V. Washington	10820 S. Parnell	773-785-2087	
3. C Cavanesse	11157 S Peoria	708-846-3188	cupcake153@sbcglobal.net
4. Regina Kent	11437 S. Emerald	773-660-8571	RPK1948@wowway
5. [illegible]	341 West 116th Street	773 386-1556	
6. Lynette M Roberts	11441 So May	(773)468-2889	lynette-frank@sbcglobal.net
7. Alton Logan	12016 [illegible] ST	773-629-2294	alton.logan@gmail.com
8. Jessie McGee VP	825 E 99th St	773-447-0313	lindaconstruction@SBCGlobal.net
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			

Appendix E
Open House Sign-in Sheets

RED AHEAD
Moving Ahead to a Better Red

Red Line Extension

Palmer Park Gymnasium
Tuesday, May 13, 2014

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PLEASE SIGN IN FOR THE RED LINE EXTENSION PROJECT OPEN HOUSE (PLEASE PRINT)

	NAME	ORGANIZATION	ADDRESS CITY, STATE ZIP	PHONE	E-MAIL	CHECK HERE TO ALSO RECEIVE UPDATES ABOUT OTHER RED LINE PROJECTS
1	STEVEN BARRETT	BLACK CONSTRUCTION ALLIANCE	340 NASSAU ST. PARK FOREST IL 60466	815-596-0900	STEVEBARRETT.CEO@gmail.com	✓
2	JACOB E. PETERS		2722 W. BELDEN AVE #1F CHICAGO, IL 60647	773 870-1987	jacob.e.peters@gmail.com	✓
3	ANTOINE THIGPEN		143-151 E. 112th Street	(773) 620-0585	TONE17A@YAHOO.COM	✓
4	Lillie Muhammad	111th-113th Vernon Ave Block Club	11220 S. Vernon 60628	773 821-8412	lilliemuhammad	✓
5	JoAnn Walker	100 place	348 W. 100th Pl 60628	773)928-320		✓
6	C LEWIS	/	10659 S. Normal Ave			
7	Mike Moore	clark Construction			mike.moore@ clarkchicago.com	
8	LATONYA MICKENS		11311 S Eggleston	773-971-7296	lmickens8135@yahoo.com	✓
9	Sharon Pincham	West Chesterfield Comm Org	9313 S Wabash	773-264-9801	sharonpincham@gmail.COM	✓
10	HERMAN ROSS		11119 S. VERNON			
11	Alonzo Anderson	West Chesterfield Comm. Org.	9336 So. Michigan Av 60619	(773) 995-9686	alonzoma7@yahoo.com	✓
12	Eugene Rogers		10763 So. SANGAMON	773-581-8324		

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	NAME	ORGANIZATION	ADDRESS CITY, STATE ZIP	PHONE	E-MAIL	CHECK HERE TO ALSO RECEIVE UPDATES ABOUT OTHER RED LINE PROJECTS
1	Jashe Hardy		10214 S. Eggleston	7732383462		
2	RENNEL BLACK SR		2306 ORCHARD	708-388-4723		
3	B. Wheeler		136 W 110th St	773-434-9453		
4	Paula Pearson	TYLIN	200 S. WACKER	3127772868		
5	DANDREW	TYLI	200 S. Wacker	3127772356		
6	Cheryl Johnson	P.C.R.	13330 S. Corliss Chgo IL 60827	773 846 4618		
7	Anand Patel	IDOT		847-705-4677	anand.patel@illinois.gov	
8	Shirley M. Evans	Resident	9242 S. Wabash	773 568-1326	shirleyevans@sbcglobal.net	
9	ANTOINETTE MCALLISTER	SEEDS CENTER	11705 So. ELIZABETH	(773) 928-5220	[illegible]@gmail.com	
10	T Colbert		11515 Racine			
11	Samantha Donald		251 W. 106th St Chicago IL 60628	773-864 0563	Sampetties@gmail.com	✓
12	HENRY TAYLOR	MEDIA ONE CHICAGO CITIZEN NEWS	~~HEAT~~ CHGO 1525 E 84TH ST IL	773-221 2512	HTAYLOR @ HATAYLORANDCO,COM HATAYLORANDCO,COM	✓

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	NAME	ORGANIZATION	ADDRESS CITY, STATE ZIP	PHONE	E-MAIL	CHECK HERE TO ALSO RECEIVE UPDATES ABOUT OTHER RED LINE PROJECTS
1	Clarine Eggleston	Resident	735 W. 115th St IL 60628			✓
2	David Kralik	Metra	547 W. Jackson Blvd 60661		dkralik@metrarr.com	
3	George Krupa	Parsons	10 South Riverside 60606		george.krupa@parsons.com	✓
4	Kendra Smith	CMAP	233 S Wacker Dr. #800 60606		ksmith@cmapillinois.gov	✓
5	Carolyn Drummond	Resident	9412 S Perry			
6	SHAWN GOWDER		7533 S WINCHESTER	773 757-9799		
7	Deecta Wilmington	Resident 34 ward	11543 S. Throop		dwilmington@sbcglobal	✓
8	Beth Eckerty	Resident	13208 S. Exchange		betheckerty@hotmail	✓
9	Renata Gilbert-Kyles	WCCA / 95th PWO	9230 So. Indiana		MSNADA@COMCAST NET	✓
10	ELGIN TOWNSEND	RESIDENT	113 W 110th St.		SONNY3012@YAHOO.COM	✓
11	CHEENA CREDIT	RESIDENT	1022 W 108th St		Cheenacc@aol.com	✓
12	Delos [illegible]	RESIDENT	11737 S YALE		Delores.DH@gmail	

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	NAME	ORGANIZATION	ADDRESS CITY, STATE ZIP	PHONE	E-MAIL	CHECK HERE TO ALSO RECEIVE UPDATES ABOUT OTHER RED LINE PROJECTS
1	GERALD DOLES	WESTBROOK CAPITAL.	P.O. BOX 654 LAGRANGE, IL 60525	708 579-9696	G DOLES @ WESTBROOK CAPITAL.com	
2	JOHNNY CAVERS		10837 S NORMAL CHICAGO Il 60628			
3	Alesia Hushaw/Anna Williams		349 W. 99th Place Chicago, Il 60628	773-568 2087	ash2@sbcglobal.net	
4	Roy Harty Jr	USOC	4455 S. King Dr.	773.285.4205	Airabova1015@yahoo.com	
5	Vanessa Adams	FTA	200 W. Adams St	312 886 0309		
6	MARGUERITE JACOBS	PCR/Altgeld LAC/FARMER MARKET	755 E 130 PLACE	708510 8677	MARGUERITE1955 @yahoo.com	YES
7	Wayland Johnson Jr.	9th Ward Republican Committeeman	11340 S. Prairie Av. 2ND Fl	773 416 1503	waylandj20sbcglobal.net	✓
8	B. EARL AGNEW		10505 S Calumet	777-785-2719	BARNEYEARL939.Asal[illegible]	✓
9	Robyn Grange	Office of Cong. Bobby Rush	700 E. 79th St. Chicago 60619	773-224-6500	robyn.wheelergrange @mail.house.gov	
10	Clarence D. Williams		34 W. 115 ST. Chicago Il 60628	773-621-1350	Clarence66@ wowway.com	✓
11	MICHAEL LA FARGUE	WEST CHESTERFIELD COMMUNITY ASSOC	9327 S. MICHIGAN AVE CHICAGO, IL 60619	773-251-0760	MLAFARGUE1@ GMAIL.COM	✓
12	L W INFIELD		3412 ELLIS	(773)374-2665		

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	NAME	ORGANIZATION	ADDRESS CITY, STATE ZIP	PHONE	E-MAIL	CHECK HERE TO ALSO RECEIVE UPDATES ABOUT OTHER RED LINE PROJECTS
1	Donell Randle		10812 S. State St Chicago IL 60628	928 2149	don.roe44@gmail.com	
2	Edward TARVER		350 W. 109th ST. CHICAGO Il. 60628	773-413-3273	edTARVER@HOTMAIL.com	✓
3	Cedric Bell		1250 W. 112th PLACE, chgo. Il. 60643	773-239-2331	Ceds1972@Gmail.com	✓
4	Sharon Bell		〃	〃	sharonbell125@comcast.net	✓
5	PATRICK MCGEE		9433 S. INDIANA AVE., CHI., IL. 60619	773 264-1176	–	✓
6	Donald Miller		733 E 84 PL	773 4546958	Lee	✓
7	Samuel Strachan	DCP	212 E. 95st. Chi.	773 928-7026	sstrachan449@sbcglobal.net	✓
8	Cristal Simmons		10857 S. Green Chgo IL 60643	773 568-4608	Cristal.Simmons@cityofchicago.org	
9	Mark Assam	FTA			mark.assam@dot.gov	
10	MICHAEL SHERLEY		3247 W 99TH PL CHGO IL 60628	(773) 418 2545	MIKE-SHERLEY@SBCGLOBAL.NET	
11	BRENDA TAYLOR		12229 S. Lafayette Ave 60628			✓
12	Robert E. Wordlaw	Chgo Jobs Council	29 E. Madison Street	312 252-0460 ext 330	bob@cjc.net	✓

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	NAME	ORGANIZATION	ADDRESS CITY, STATE ZIP	PHONE	E-MAIL	CHECK HERE TO ALSO RECEIVE UPDATES ABOUT OTHER RED LINE PROJECTS
1	J T THOMAS		10220 S. MICH	773 616-5560	JTTHOMAS1585 @ YAHOO.com	
2	M. Elem					
3	Jerome Fleming		122 E 104th pl	773 6338132		
4	James Northern	150	117 Pheasant rd	312 343-0923		
5	Kelly Simmons		11362 S. Bishop	—	Kell.801@yahoo.com	
6	Erika Sellke	Chicago Park District	451 N. Fairbanks Ct	312 742 5389	erika.sellke@chicagoparkdistrict.com	
7	Greg Osborne		1846 W. Superior		gosborne@epsteinglobal.com	
8	Lou Turner	UIUC	1201 W. Nevada Champn 61801	217/972-2447	loturner@illinois.edu	✓
9	Cornelius Bailey		1110 S Indina			
10	Carlos Estes	Prologue	134 TH Vernon	312-804-3751	carlosestes@gmail.com	
11	GWEN McCURDY		10338 S. PRAIRIE	773-203-5522	GYM1211@ATT.NET	✓
12	Aaron Washington	Citizen	109TH + Lowe		aaronwashington@gmail	✓

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	NAME	ORGANIZATION	ADDRESS CITY, STATE ZIP	PHONE	E-MAIL	CHECK HERE TO ALSO RECEIVE UPDATES ABOUT OTHER RED LINE PROJECTS
1	Igor Studenker		6165 N. Winthrop Ave #21 Chicago IL		igorst3@hotmail.com	✓
2	Jackie McDonald		9906 S State Street Chicago, IL 60628		Mack27_2000@yahoo.com	✓
3	Miranda Morgan	L.A.C	13072 S. Drexel Ave Chg IL. 60827	708-201 7959	whitEmmorgan53@gmail.com	✓
4	Carlos Nelson	Greater Auburn-Gresham Development Corp.	7901 So. Racine Chgo IL 60620	773 4833696	cnelson@gagdc.org	✓
5	CHRISTINE DUNBEY		9758 So. EGGleston	773- 239-5283		✓
6	T Johnson		149 WEST 115th ST		TAMJohnsonAko@gmail.com	✓
7	Chester Wilson Jr	Alderman Austin	501 West 114th St	773 928 6961	CWILSON@CityofChicago	✓
8	MARIA FOWLER		10210 S. Eggleston	773- 707-1131	MFowler128@yahoo.com	✓
9	Michael Scott		18 E. 91st Street	773 9485545	MichaelMichael7500@gmail.com	✓
10	Brenadan Hope		7339 S. Chappel Ave	(708) 710-4997	BLHope7339@G-mail.com	
11	Rev Alice Harper-Jones	Block Club	PO Box 208491	773 568-0195	alicehj19@gmail.com	✓
12	TOMMIE MEDIOUS		11834 S. PRAIRIE AVE	773 821-8537		

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	NAME	ORGANIZATION	ADDRESS CITY, STATE ZIP	PHONE	E-MAIL	CHECK HERE TO ALSO RECEIVE UPDATES ABOUT OTHER RED LINE PROJECTS
1	ELi Washington	Chesterfield Community Council	501 E 90 Pl. 19	773-651-3958	chesterfield@ameritech.net	✓
2	Lois Lance		10513 S. Calumet			
3	Nancy LYLES		10501 S VERNON	—	—	—
4	Roberta Walker	Citizen	11701 S. State #209 Chicago IL 60628-5501	847-800-4523		
5	Deborah Bates	citizen	9750 S. Eggleston			
6	Zach Goldhammer	South Side Weekly	1210 Hyde Park BlVD.	617-460-1765	Zgoldhammer@uchicago.edu	✓
7	Rachel Schastok	South Side Weekly			rschastok@uchicago.edu	
8	Pamela M Burden		132 E 117th Place	773 750-5694	nursepb149@yahoo.com	✓
9	Patricia Smith	DCP	212 E 95th St	773 928 2500	pgsmith@dcpchicago.org	✓
10	GENA SMITH	—	312 E. 111TH ST	—	—	—
11	Edith Showers	—	11033 S. Parnell	773 264-4301	E_showers@att.net	✓
12	ROBERT BARCLAY	WEST CHESTERFIELD	9193 S. BURNSIDE Av	774 568-3921		

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	NAME	ORGANIZATION	ADDRESS CITY, STATE ZIP	PHONE	E-MAIL	CHECK HERE TO ALSO RECEIVE UPDATES ABOUT OTHER RED LINE PROJECTS
1	Rosemary Wyche	Concerned Citizen	322 W 101 St 40628			
2	Leslie Bruce	Resident TCA	1029 E. 130th	995-6300		
3	James Washington	Ressdent	9936 Yale	568.6188		
4	LILLIAN BRAGGS	Citizen	9635 S. YALE	773 821-1095		
5	JOHN KENT	J.R.KENT CONSTRUCTI	8025 S LAFLIN	773-994-8994	JOHNKENT1028@AOL.COM	✓
6	Matthew Walker	Citizen	11167 S Vernon	(312) 731-0273	MATWALKER8@aol.com	✓
7	Annette Cain	United Neighbor	727 W. Vermont	773-370 1116	annettecain@gmail.com	✓
8	Geraldine Baldwin	concerned citizen	11118 So Peoria	(773) 928.2211	N/A	✓
9	WILLIAM COOK	C&C CONST. Co.	429 E. 91st PLACE	773-339- 1001	WILLIAMCOOK5234@ SBCGLOBAL.NET	✓
10	Willie McKenzie	citizen	10608 s. wabash	773-928-0972	wllrdmcknz@yahoo	✓
11	Melvin Thompson	The Endeleo Institute	1947 W. 95th street	312-545-6765	mrthompson@trinitychicago.org	✓
12	LEON JACKSON		10540 S. LASALLE	773-928-1120		

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1	MARtin Wilford	CSS	10825 S. PARNELL	928-5377		✓
2	DOLORES CHESTNUT	9th Ward Greater Roseland (RCA) Block Club Coalition	10522 S. VERNON AV	773 928-0971		✓
3	Margaret McDONALD	WCC	9405 S. CALUMET AVE	773-468-3523		
4	Arlene Echols		11329 S. St. LAWRENCE	773-821-1637	AEchols1979@gmail.com	✓
5	Mose Braggs		9635 S YALE AVE	773-82-1095		
6	Sylvia Y Jones	Friends Of the Parks/DCP		773-368-0991		
7	KEVIN IRVINE	CTA BOARD	3113 W. LAWRENCE AVE, #B402 CHIC. 60625	773-368-7313	KIRVINE@TRANSITCHICAGO.COM	✓
8	ROSEMARY DEAN	TCA Health	11139 S King Dr	773510-2565		
9	Amelia Taylor		341 W 99th Place Chicago, ILL 60628	773-408-5960	amelia.taylor415@yahoo.com	
10	MACY JOHNSON		346 W. 101st Street 60628	773-264-5984		✓
11	Joseph Johnson		346 W. 101st Street 60628	773-264-5984		✓
12	Delois Coleman		138 E. 117 PL 60628	773-464-6055	✓	✓

2419 Rayburn Building
Washington, DC 20515
(202) 225-0773

Dante Sawyer
istrict Representative & Chicago Office Manager
Congresswoman Robin L. Kelly, IL02

way Plaza Drive
ite 505
on, IL 60443
679-0078

1000 E. 111th Street
11th Floor
Chicago, IL 60628
(773) 568-2623

Dante.Sawyer@mail.house.gov

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1	CARL JOSSELL		10744 WALLACE CHICAGO 60628	773 7855784	CARL JOSSELL AT YAHOO.COM	✓
2	Lisa Granados	WGBO TV.	541 N. Fairbanks	312- 4946483	lgranados@univision.net	
3	CYNTHIA ANDERSON	West Chesterfield Community	9336 S. Michigan	773 995-9686	celaine108@aol.com	✓
4	GWENDOLYN RICE		8600 S. PRAIRIE AVE	733 488-0590	gmrch-@AOL.com	✓
5	Peter Taylor	Friend of the Major Taylor Trail RCHA	9600 S. Prairie Ave		pbtaylor27@comcast.net	
6	MIKE OVITZ	Friends of Mike Ovitz	62 E. 91st Street	312-880-7570	Info@MikeOvitz.org	
7	EVERETT RICE		212 E. 109th	773928-0324	E109PR@AOL.COM	
8	Jonathan Samuel		7245 S. Phillips #3W	(773)538-7560	jonsamuel32@yahoo.com	✓
9	Alva Earsery		11021 VERNON 3			
10	Christina Horde		1520 W. 99th st		cmhorde@aol.com	
11	CECILIA HORDE				DESTA205R@AOL.COM	
12	Jenny LaFargue	WestChesterfield Comm Asso	9327 S. Michigan	773-255 9164	jlafargue81@gmail.com	

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1	Lettye W. Campbell	WCCA	9428 S. Michigan Ave	773/264-0126	—	
2	Willie Carter	CARTERS EXC	235E 157 ST HAVEY LL	7735191181		
3	Tommie Lindsey JR		56 west 99th St. Chgo IL 60628			
4	Nancy Wimberly	NAACP PUSH	10531 S. Calumet Ave.	(773)568-7900	concernedcommunitydefenders@gmail.com	
5	Georgia Bonner	104th & Green St	10423 S. Green St			
6	Eleanor Banks	10505 S. Calumet		773 785 2706		
7	Lee E. Floyd	355W 99th PL.	~~355W~~ 99th PL.	773 468-2932		
8	James L. Floyd	355 W99th PL	~~355 W~~ 99th PL.	773 468-2932		
9	Willie & Arleen McGee		10424 S. FOREST 60628	773 785-6893		
10	Quanchaize Edwards	9th Ward Alderman	34 E 112th Pl	(773) 785-1100	quanchaize.edwards@cityofchicago.org	
11	Phyllis Johnson	WCCA	9400 S CALUMET	773-610-2056	PJ9400@GMAIL.CO	
12	J. Ostarello					

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1	TERESA BARbost	Alderman John Pope	3522 E 106th St	773/721-1999	Barbost4@[illegible]	✓
2	JONATHAN SUMMONS		10731 S. Eggleston	773(615-4940)	Jonathan.Summers1959@yahoo	
3	Hulda Swan		310 East 107 St	773)568-5595		
4	Toni Stith	None	1829 S. Bishop	773/940 6888		
5	Anita Bridge	community resident	10418 S. Eggleston	773)580-1121	abridge1121@gmail.com	
6	DORA Engram	Lilydale First B Church	12230 S. PERRY Ave	773-928-1823	d.engrame Sbcglobal.net	
7	DAWN HALEY	VILLAGE OF RIVERDALE	157 W. 144th	(708) 841-2200	dhaley@villageofriverdale.net	
8	LOURDES SOLORZANO	HACIA	8236 HIGHGATE COURT ORLAND PARK IL 60462	(773)447-5559	Cadillacti@gmail.COM ~~Cadillac Transportation~~	
9	Ora Floyd		9746 S EgglestonAVE Chicago, IL	773-881-4181	Orafloyd@AMERITECH.NET	
10	ANGELA CONNER		10018 S. EBERHART CHICAGO, IL 60628	(773)568-8218	AYCONNER@SBCGLOBAL.NET	
11	Dr. Carmen Palmer	9th Ward Greater Roseland Community Coalition	10552 S. Vernon Chgo, Il. 60628	773-785-8532		
12	C. HUNT		9947 So WENTWORTH	773-468-5114		

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1	Bettie Lewis		9252 S Eggleston Chicago, Il. 60628	773-238-5051		
2	Troy D. Lewis Jr		1328 W-109st Chgo Il	773 240-0971		
3	Adam Eichenberger	Pace	550 W. Algonquin Rd Arlington Hts	847-228-2471 ~~[illegible]~~	Adam.eichenberger@PaceBus.com	✓
4	Zetta A. White	WCCA West Chesterfield	Chicago, IL. 60619 9440 S. Michigan Ave	773-264-8250		
5	Alexander Wikstrom		5122 S. University Ave Chicago, IL 60615	(417) 664-6724	awikstrom@uchicago.edu	✓
6	Deborah Pierce	CTA	11 East 103rd Pl. Chgo IL 60628	773-4684771		
7	BEtty JONES	99ST Block Club.	9921 S. Yale	773-468-4019		
8	Charlean Preston	~~1201 So. Sang~~amon	1201 So. Sangamon	773-291-0931	raspberrywater647@yahoo.com	
9	Alzonia EStes	10437 So. Green				✓
10	Siller Coleman	433 W 110th ST →	~~#3~~ 60628	773-568-7710		
11	WilliAM BAXTER	250 W 106th ST	60628	773.564-2009		
12	Rev. Alvin Love	Lilydale First Baptist	649 W. 113th Cgo, IL 60628	773-785-8623	Revluv@MSN	

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1	SAM FORD		11518 So. LASALLE		Sammiezz@yaHoo.com	
2	Jeanette Slone	None			jslone6@sbcglobal.net	✓
3	Jon Evans	Rank & File Member Amalgamated Transportation Alliance	11936 South Princeton Avenue Chicago, Il 60628-6014	773-821-8142 773-844-0568	Jkeiit963827@sbcglobal.net jkeneworleanssyo91@ogr.net JKEIII96@hotmail.com	
4	Charles & Stella BROWN	Resident	12 WEST 115th ST	773 928-6950 773 213-6185	creolestubbie@yahoo.com	✓
5	VICTOR JACKSON	RESIDENT	9912 So. YALE AVE	773 5681763	VicJac2001@GMAIL.com	
6	Elmer Swan	" "	310 E 107th St	7735685575		
7	Jackie Jones	Jackie's CDE Service	3070 E 79th ST	773 612 4341	Jackie Jones 30703070 @gmail	✓
8	Mildred A. Murry	Resident	12426 S. La Salle	773-821-8056		
9	Marlene Harper	Resident	441 w. 110th St	773-264-1690		
10	PEARLIE SPELLS	RESIDENT	10527 S. KING Dr	773-660-1999		
11	Rosie BAXTER	ResiDENT	250 w. 106th ST	773-568-2009	RB76184@gmail.com	—
12	Taylee Harris	Resident	10919 S. Eberhart St 60628	773-995-9951	tayleez@hotmail.com	✓

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Red Line Extension

Palmer Park Gymnasium
Tuesday, May 13, 2014

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PLEASE SIGN IN FOR THE RED LINE EXTENSION PROJECT OPEN HOUSE (PLEASE PRINT)

	NAME	ORGANIZATION	ADDRESS CITY, STATE ZIP	PHONE	E-MAIL	CHECK HERE TO ALSO RECEIVE UPDATES ABOUT OTHER RED LINE PROJECTS
1	ERMA Williams		318 W. 117Th Street Chgo Il. 60628	773. 264.7860	egw @att.net	✓
2	MARY MOTT		11837 S INDIANA			
3	HANIF SHAKIR	118th St Indiana Block CLUB	11837 S Indiana	773- 821-4243	hshakir45@att.net	✓
4	DORIS MARTIN	GoldenGATE HomeOwner Assc.	13207 S. RHODES	(773) 821- 6874		
5	Ernestine Alexander	108th Parnell Block Club	10845 So. Parnell Av	773945 5771		
6	BEVERLY MARTIN		10605 S. PEORIA ST	773 881-3120		
7	Rhychell Barnes	Progress Center for independent Living	7521 Madison St Forest Park, IL 60130	708-689-1381	RBarnes@ProgressCil.org	✓
8	Julie A. Pate	~~[illegible]~~	345 W 99Pl	7735683760	ladyjulieann1@yahoo.com	✓
9	Daniel E Pate	RETIRE CTA	345 S. W. 99Pl.	773-5683760		
10	Donald M. Branch		11607 S. Peoria St. Chicago, IL 60643	773-568-1984		
11	Rosa Pledger		12443 S. Perry Ave Chgo, IL 60628	773-568-7301		
12	BARBARA LEE	99th St. Block Club	40 West 99th St Chgo 60628	773.468.8241		✓

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	NAME	ORGANIZATION	ADDRESS CITY, STATE ZIP	PHONE	E-MAIL	CHECK HERE TO ALSO RECEIVE UPDATES ABOUT OTHER RED LINE PROJECTS
1	R.E.C. Ricardo Julian	R.E.C	15 E 112th PL	708-862-3689	RicoJ3144806@gmail.com	
2	KAREN W JONES		10314 S. VERNON	773 454-1984	KJONES7208@gmail.com	
3	Carolyn L. Beasley		11315 So. Green St.	708-259-2738	cljackson1122@hotmail.com ~~clbeasle~~	
4	Janice Foney		9430 S. Calumet	773-264-7085		
5	Nicholas Foney		"	"		
6	K. Rossi	Sun-Times		3123212553	krossi@suntimes	
7	Sharon Cook	—	79 E 89th ST, Chgo, IL 60619	773-846-8451		
8						
9						
10						
11						
12						

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	NAME	ORGANIZATION	ADDRESS CITY, STATE ZIP	PHONE	E-MAIL	CHECK HERE TO ALSO RECEIVE UPDATES ABOUT OTHER RED LINE PROJECTS
1	Julius McKinne	R E C	CHICAGO 10826 S. EDBROOKE 60628	773 440 9912	JULIUS4SERVICE9@YAHOO	
2	Velvetta Young	DCP	400 E. 111th St. 60628	708 612-5417	y7vel@aol.com	
3	KENT MERRITT		8153 So. RHODES 60619		Kmerritt29@YAHOO.COM	
4	Rogers Jones / Weekly Guest	Youth Peace Center	420 W. 111th Street		Rwcomm111@gmail.com ypc420@gmail.com	
5	Deanna Burrell	WVON	1000 E. 87th St	773 336.3427	deanna@wvon.com	✓
6						
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	NAME	ORGANIZATION	ADDRESS CITY, STATE ZIP	PHONE	E-MAIL	CHECK HERE TO ALSO RECEIVE UPDATES ABOUT OTHER RED LINE PROJECTS
1	Michael Scott		18 E. 91st Street	773 949 5545	MichaelMichael950@gmail.com	
2	Vincent Holt		122-E-109-PL			
3	Bryan Lynch		734 N. Wells St.; 60654	312.573.2727	bpl@blynchlaw com	✓
4	Lawrence Moore		P.O. Box 87288, Chgo. IL. 60680	—	lawrencemoore2@yahoo.com	✓
5	David E Ransburg		9228 S May	773-457 7664		
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	NAME	ORGANIZATION	ADDRESS CITY, STATE ZIP	PHONE	E-MAIL	CHECK HERE TO ALSO RECEIVE UPDATES ABOUT OTHER RED LINE PROJECTS
1	Debra Murphy		Chicago IL 60628	312 402 1584	bongold@yahoo.com	
2	DARRYL Gibson	South-side Education Economic Development Systems (Seeds)	11142 S Emerald Chicago IL. 60628	773 443-6925	darrylgibson25@yahoo.com	
3						
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Appendix F
Open House Meeting Photos

Red Line Extension (RLE) Project Open House Photos

Tuesday, May 13, 2014; 5:30 to 7:30 p.m.
Palmer Park Gymnasium
201 E. 111th Street, Chicago, IL 60628

RED AHEAD
Project Alternative:
Halsted Rail Alternative

RED AHEAD
Project Development Process
RED A
RLE Proj

RED AHEAD
Potential Noise Impacts

RED AHEAD
Project Alternatives
BRT Alternative

RED AHEAD
Project Development Process

RED AHEAD

RED AHEAD
Project Alternatives:
UPRR Rail Alternative
RED AHEAD
UPRR Rail Alternative

Appendix G
Open House Meeting Materials

Comment Card

Project Factsheet

Glossary

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Red Line Extension

WE WANT YOUR INPUT

on the Red Line Extension Project

This project is one part of the Red Ahead Program, CTA's comprehensive initiative for maintaining, modernizing, and expanding Chicago's most-traveled rail line. CTA is interested in hearing your thoughts on the project. Please PRINT.

Name ____________________

Address ____________________

City ____________________ State __________ Zip __________

Email Address ____________________

☐ *Check here to also receive updates about other projects along the Red Line.*

What specific comments or concerns do you have about the Red Line Extension alternatives, potential impacts, and mitigation measures?

____

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How do you use the following parks? (Check all that apply)

	Baseball / Softball / Basketball	Playground	Walking / Jogging	Community Events	Other	I do not use this park
Wendell Smith Park *(99th Street / Princeton Avenue)*	☐	☐	☐	☐	☐	☐
Fernwood Parkway *(Eggleston Avenue between 99th and 103rd Street)*	☐	☐	☐	☐	☐	☐
Block Park *(103rd Street / Harvard Avenue)*	☐	☐	☐	☐	☐	☐

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Additional Comments:

Thank you for attending this CTA Red Line Extension Project open house.

Comments may also be submitted via mail or e-mail to:
Chicago Transit Authority, Strategic Planning, 10th Floor, 567 W. Lake Street, Chicago, IL 60661-1465

RedExtension@transitchicago.com
transitchicago.com/redeis
facebook.com/thecta
@cta

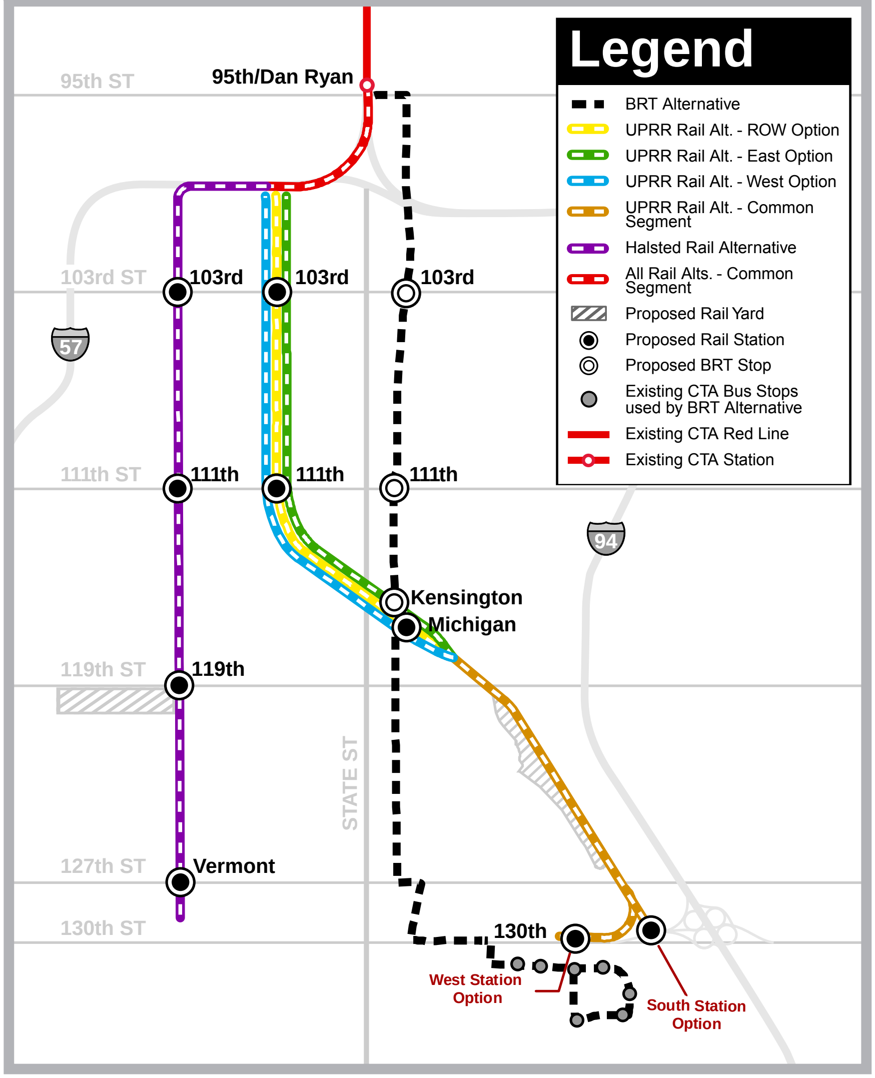
Para informacion en Espanol, llame al (312) 681-2807
Customer Information: (888) YOUR-CTA (888 968-7282)

RED AHEAD

Red Line Extension:
Expanding Transit Access on Chicago's Far South Side

The Chicago Transit Authority (CTA) is proposing to add major new transit service on Chicago's South Side by extending its busiest rail line, the Red Line, south from the 95th Street Terminal to the vicinity of 130th Street. The proposed 5.3-mile extension would include four new stations near 103rd Street, 111th Street, Michigan Avenue/116th Street, and 130th Street – each new station would include bus and parking facilities. CTA is evaluating the environmental impacts of three options for the Locally Preferred Alternative along the Union Pacific Railroad (UPRR) tracks including an option within the existing freight right-of-way (ROW Option), an East Option, and a West Option. A rail alternative along Halsted Street and a bus rapid transit (BRT) alternative along Michigan Avenue are also under evaluation.

Red Line Extension Alternatives


95th ST
95th/Dan Ryan
103rd ST
103rd
103rd
103rd
57
111th ST
111th
111th
111th
94
Kensington
Michigan
119th ST
119th
STATE ST
127th ST
Vermont
130th ST
130th
West Station Option
South Station Option
Legend
BRT Alternative
UPRR Rail Alt. - ROW Option
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
UPRR Rail Alt. - Common Segment
Halsted Rail Alternative
All Rail Alts. - Common Segment
Proposed Rail Yard
Proposed Rail Station
Proposed BRT Stop
Existing CTA Bus Stops used by BRT Alternative
Existing CTA Red Line
Existing CTA Station

Why is the Red Line Extension Project important?

- ***Expanded access and service improvements*** – The Red Line Extension would improve service and transit accessibility for Far South Side neighborhoods where transit-dependent residents currently lack direct access to rail service.
- ***Reduced commute times*** – Between 2005 and 2010, commute times were, on average, 20 percent longer for those that currently live in the area that would be served by the Red Line Extension, than for other commuters in the Chicago region. The Red Line Extension would save the average commuter in the communities affected by this project 87 hours per year.
- ***Catalyst for economic growth*** – CTA estimates between 2,600 and 4,100 jobs would be created during Red Line Extension construction. In addition, new stations may serve as catalysts for neighborhood revitalization and help reverse decades of disinvestment in local business districts.
- ***Enhanced livability*** – The improvements would also provide linkages to affordable housing, jobs, services, and educational opportunities – enhancing livability and neighborhood vitality.

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Red Line Extension

Red Line Extension: Project Update

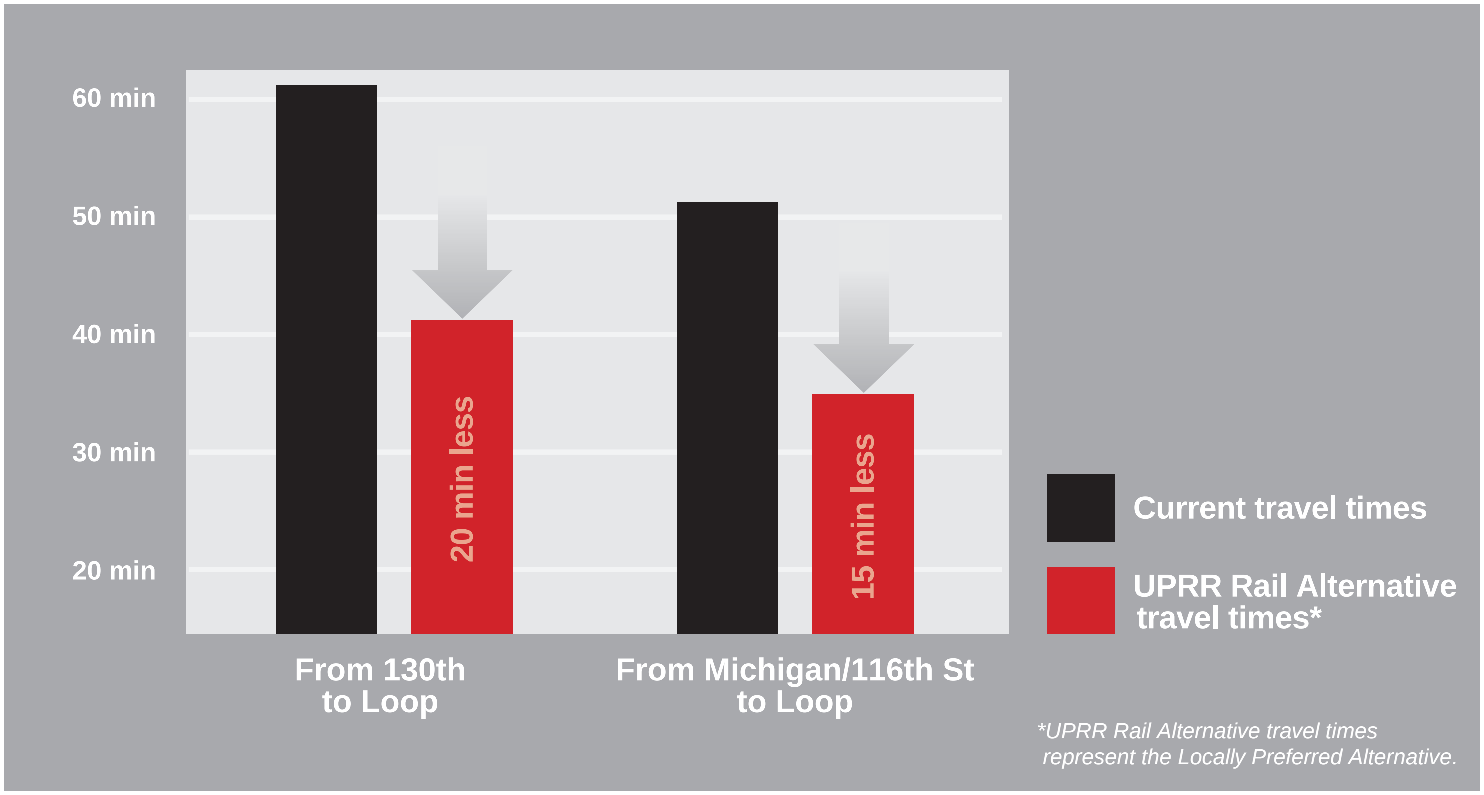
CTA is progressing on what is a multi-step federal process to secure project approval and funding. CTA has been conducting the technical environmental analysis of the project alternatives, and is preparing a Draft Environmental Impact Statement (EIS), expected to be published in early 2015. The Draft EIS will describe each alternative, explain the existing environmental setting and community context for the proposed route, and review potential positive/negative effects of construction and operation.

Following approval of the EIS, CTA can apply to the Federal Transit Administration (FTA) for entry into the Engineering Phase of this project and pursue federal funding under the competitive federal "New Starts" program. There will be future opportunities for public input as this process progresses.

Red Ahead

The Red Line Extension is part of the CTA's Red Ahead program, a comprehensive initiative for maintaining, modernizing, and expanding Chicago's most-traveled rail line. The Red Ahead program also includes the Red Line South Reconstruction Project (completed 2013), the 95th Street Terminal Project (beginning in summer 2014), the Wilson Station Reconstruction Project (beginning in fall 2014), and the Red and Purple Modernization program (currently in planning).

Estimated Travel Time Savings



**UPRR Rail Alternative travel times represent the Locally Preferred Alternative.*

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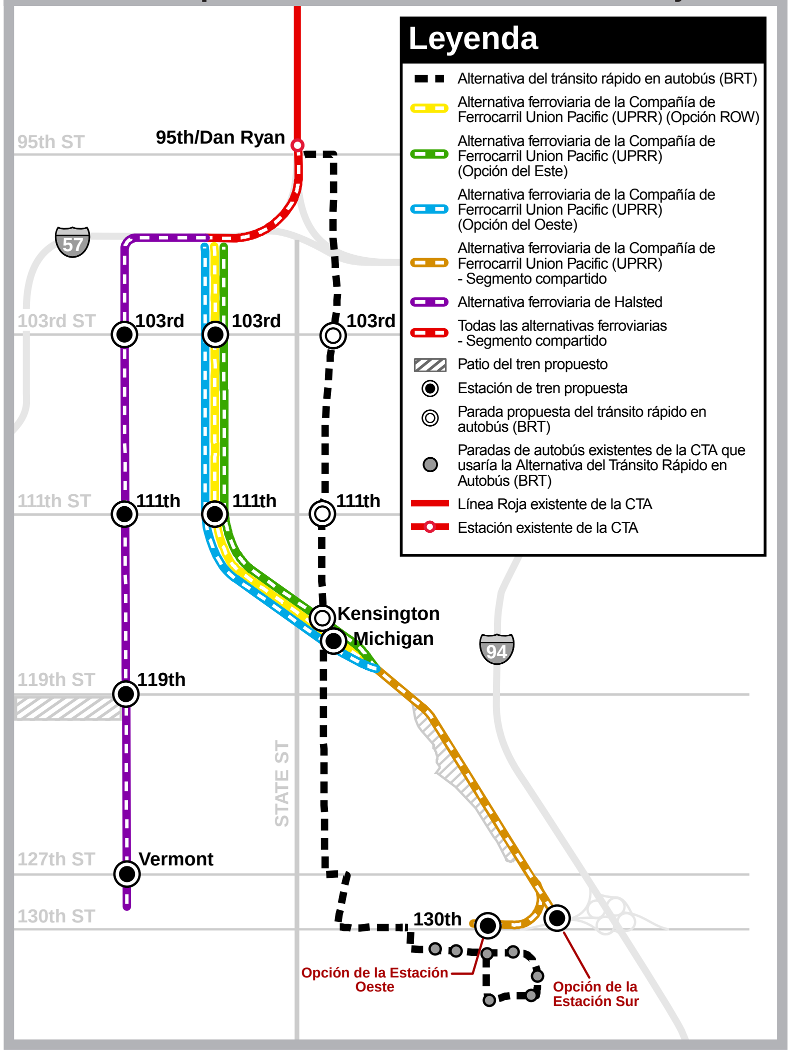
Red Line Extension

Extensión de la Línea Roja: Extender el acceso al tránsito hasta el lado del sur lejano de Chicago

La Chicago Transit Authority (CTA) se propone agregar nuevo servicio mayor de tránsito al lado del sur de Chicago al extender la línea ferroviaria más transitada, la Línea Roja, hasta el sur desde la Terminal de la calle 95 Street hasta las proximidades de la calle 130. La extensión propuesta de 5.3 millas incluiría cuatro nuevas estaciones cerca de las calles 103, y 111, la avenida Michigan/calle 116, y la calle 130 – cada nueva estación incluiría instalaciones para autobuses y estacionamiento. La CTA está en vías de evaluar los efectos ambientales de tres opciones para la Alternativa Localmente Preferida a lo largo de la red ferroviaria de la Compañía de Ferrocarril Union Pacific ("UPRR", por sus siglas en inglés), lo cual incluiría una opción dentro de la servidumbre de cargo existente ("Opción ROW", por sus siglas en inglés), una Opción del Este, y una Opción del Oeste. Está considerándose también una alternativa ferroviaria por Halsted Street y una alternativa de tránsito rápido en autobús ("BRT", por sus siglas en inglés) a lo largo de la avenida Michigan.

Alternativas para la extensión de la Línea Roja


Leyenda
Alternativa del tránsito rápido en autobús (BRT)
Alternativa ferroviaria de la Compañía de Ferrocarril Union Pacific (UPRR) (Opción ROW)
Alternativa ferroviaria de la Compañía de Ferrocarril Union Pacific (UPRR) (Opción del Este)
Alternativa ferroviaria de la Compañía de Ferrocarril Union Pacific (UPRR) (Opción del Oeste)
Alternativa ferroviaria de la Compañía de Ferrocarril Union Pacific (UPRR) - Segmento compartido
Alternativa ferroviaria de Halsted
Todas las alternativas ferroviarias - Segmento compartido
Patio del tren propuesto
Estación de tren propuesta
Parada propuesta del tránsito rápido en autobús (BRT)
Paradas de autobús existentes de la CTA que usaría la Alternativa del Tránsito Rápido en Autobús (BRT)
Línea Roja existente de la CTA
Estación existente de la CTA
95th ST
95th/Dan Ryan
57
103rd ST
103rd
103rd
103rd
111th ST
111th
111th
111th
Kensington
Michigan
94
119th ST
119th
STATE ST
127th ST
Vermont
130th ST
130th
Opción de la Estación Oeste
Opción de la Estación Sur

¿Por qué es el Proyecto de Extensión de la Línea Roja importante?

- ***Acceso ampliado y mejoras en el servicio*** – La Extensión de la Línea Roja mejoraría el servicio y la accesibilidad al tránsito para los vecindarios del lado del sur lejano donde los residentes que dependen del tránsito actualmente carecen de acceso directo al servicio ferroviario.
- ***Tiempos reducidos del desplazamiento al trabajo*** – Entre 2005 y 2010, el tiempo del desplazamiento al trabajo eran, en promedio, 20 por ciento más largo para las personas que actualmente viven en el área a que brindaría servicio la Extensión de la Línea Roja que para los otros viajeros en la región de Chicago. La Extensión de la Línea Roja ahorraría al viajero pro medio en las comunidades a quienes beneficiaría este proyecto 87 horas por año.
- ***Catalizador para el crecimiento económico*** – La CTA calcula que se crearían entre 2,600 y 4,100 trabajos durante la construcción de la Extensión de la Línea Roja. Además, las nuevas estaciones pueden servir de catalizador para la revitalización de vecindarios y ayudaría a revertir décadas de desinversión en los distritos comerciales locales.
- ***Habitabilidad aumentada*** – Las mejoras también brindarán enlaces a la viviend asequible, trabajos, servicios, y oportunidades educativas – con el fin de potenciar la habitabilidad y la vitalidad de los vecindarios.

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Extensión de la Línea Roja: Últimas noticias sobre el Proyecto

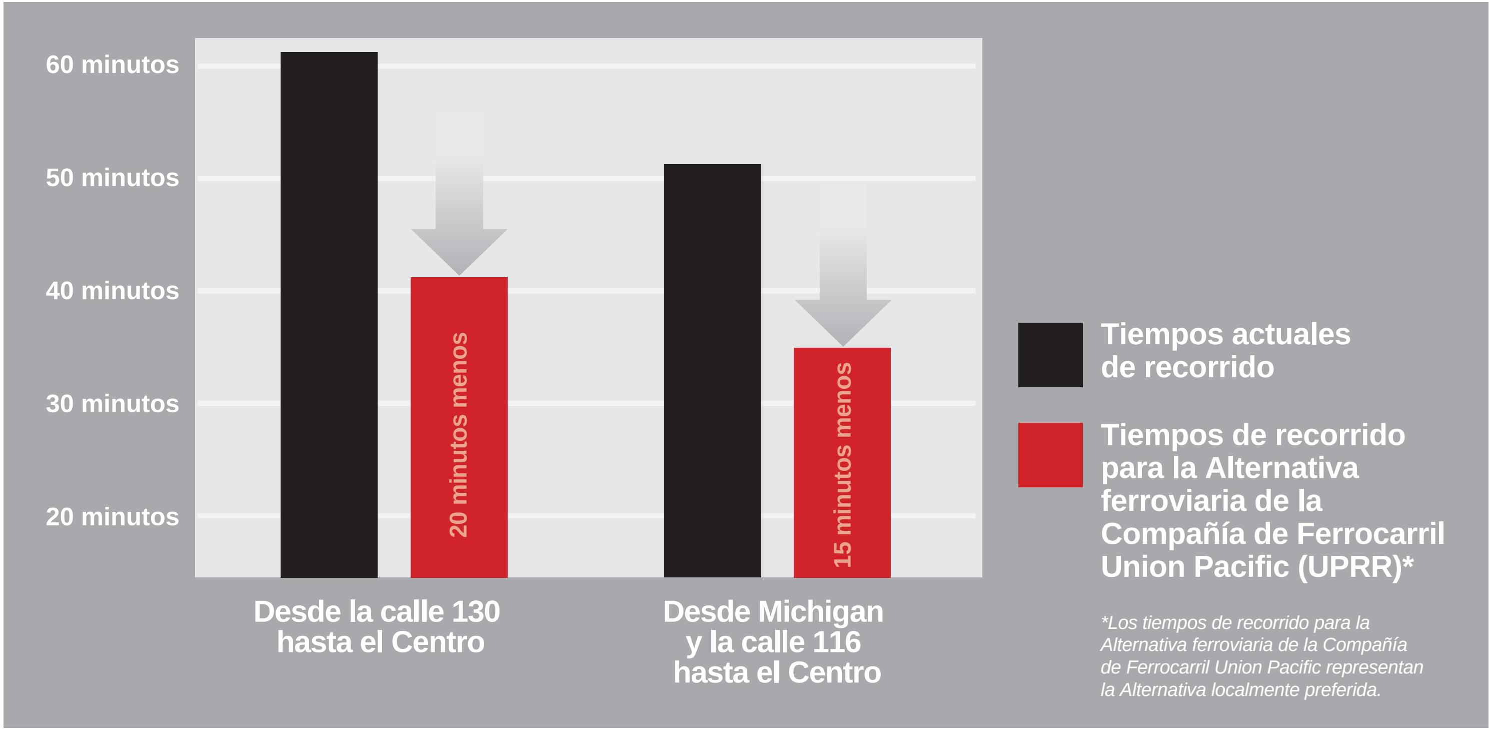
La CTA está progresando en lo que es un proceso federal de múltiples etapas para conseguir la aprobación y el financiamiento para el proyecto. La CTA está en vías de llevar un análisis ambiental técnico de las alternativas del proyecto y está elaborando una Declaración de los Efectos Ambientales en borrador ("EIS", por sus siglas en inglés), la cual se espera que sea publicada a principios del 2015. La Declaración de Efectos Ambientales (EIS) en borrador describiría cada alternativa, explicaría el marco ambiental existente y el contexto comunitario para la ruta propuesta, y repasaría los efectos positivos/negativos potenciales de las obras y las operaciones.

A partir de la aprobación de la Declaración de Efectos Ambientales (EIS), la CTA puede solicitar a la Federal Transit Administration ("FTA", por sus siglas en inglés) permiso para entrar en la Fase de Ingeniería de este proyecto y perseguiría el financiamiento federal bajo un programa federal competitivo llamado "Nuevos Comienzos". Habrá oportunidades futuras para las aportaciones por parte del público a medida que va progresando este proceso.

El Programa Red Ahead

La Extensión de la Línea Roja forma parte del Programa de Red Ahead de la CTA, una iniciativa global para el mantenimiento, la modernización y la extensión de la línea ferroviaria más transitada de Chicago. El programa de Red Ahead también incluye el Proyecto de Reconstrucción de la Línea Roja al Sur (terminado en 2013), el Proyecto de la Terminal de 95th Street (de próximo inicio en el verano de 2014), el Proyecto de Reconstrucción de la Estación de Wilson (de próximo inicio en el otoño de 2014), y el Programa de Modernización de las Líneas Roja y Púrpura (actualmente en etapa de planificación)

Ahorro aproximado de los tiempos de recorrido



**Los tiempos de recorrido para la Alternativa ferroviaria de la Compañía de Ferrocarril Union Pacific representan la Alternativa localmente preferida.*

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Glossary of Terms

The following are definitions of terms used as part of the Environmental Impact Statement process.

Affected Environment: The physical, biological, social, and economic setting potentially affected by one or more of the alternatives under consideration.

Alternative: One of a number of specific transportation improvement proposals or options.

Bus Rapid Transit (BRT): BRT is a bus service which provides faster, more efficient, and more reliable service than an ordinary bus line. Often this is achieved by making improvements to existing street and traffic infrastructure. Typically high-capacity, uniquely-identified buses are used.

Chicago Department of Transportation (CDOT): CDOT is the City of Chicago agency responsible for transportation.

Chicago Metropolitan Agency for Planning (CMAP): The planning organization for the Chicago region. CMAP has prepared the GO TO 2040 comprehensive regional plan that provides strategies for the regional transportation network.

Chicago Transit Authority (CTA): The CTA is an independent governmental agency created by state legislation. It operates the nation's second largest public transportation system and covers the City of Chicago and 35 surrounding suburbs. CTA is the local lead agency on the RLE Project.

Core Capacity: A new federal program to fund substantial improvements to existing transit lines that are currently (or expected to be in the next five years) at or over capacity. This means that trains and/or stations are overcrowded and additional service cannot be added without the proposed improvements. To be eligible, these projects must increase passenger carrying capacity by at least 10 percent.

Cumulative Impact: The incremental environmental impact or effect of the project when added to the impacts of other separate past, present, and reasonably foreseeable future actions.

Environmental Impact Statement (EIS): An EIS is a document that evaluates the economic, social, and environmental effects of a major proposed project. The National Environmental Policy Act (NEPA) requires an EIS to be prepared when federal funds are being sought to fund all or part of a project.

Environmental Justice: Environmental Justice is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to transportation planning and decision-making processes, per Executive Order 12898.

Federal Transit Administration (FTA): The FTA is a division of the U.S. Department of Transportation that funds transit planning and programs. FTA is the federal lead agency on the RLE Project.

Impact: An impact is a change in the condition or function of an environmental resource that occurs as a result of the proposed alternative. An impact can be adverse (negative) or beneficial (positive), permanent or temporary.

Lead Agency: The agency or agencies responsible for preparing the EIS in compliance with the NEPA. The FTA and CTA are the lead agencies for the RLE Project.

Locally Preferred Alternative (LPA): The Union Pacific Railroad (UPRR) Rail Alternative was selected by the Chicago Transit Board as the LPA in August 2009, indicating that it is the alternative that best meets the purpose and need of the project while addressing potential impacts and other potential constraints

Mitigation: Action or measure taken to minimize, reduce, eliminate, or rectify the adverse impacts of a project, practice, action, or activity.

National Environmental Policy Act (NEPA): Requires all agencies to examine and disclose the environmental impacts of their actions, incorporate environmental information into project decisions, and use public participation in the planning and implementation of all actions.

National Register of Historic Places (NRHP): The national list of districts, sites, buildings, structures, and objects significant in American history, architecture, archaeology, engineering, or culture. It is maintained by the Secretary of the Interior under authority of Section 101(2)(1)(A) of the National Historic Preservation Act, as amended.

NEPA Preferred Alternative: The NEPA Preferred Alternative will be designated following circulation of the Draft EIS and consideration of all comments received in accordance with NEPA.

New Starts: FTA's primary grand program for funding major transit capital investments, including rapid rail, light rail, bus rapid transit, commuter rail, and ferries.

No Build Alternative: The No Build Alternative refers to an alternative under which no action would be taken (no infrastructure would be built and no new management or operational practices would be instituted).

Option: One of the several possibilities for an alternative. The UPRR Rail Alternative has three options: ROW Option, East Option, and West Option, each along the same general alignment but slightly different.

Right-of-Way (ROW): In transit usage, the corridor along a railway that is controlled by a transit or transportation agency/authority.

Scoping: An early and open process for identifying the extent, variety, and significance of issues related to a proposed action in the EIS. Scoping for RLE was held in the form of public open house meetings in 2009 and the scoping report is available on CTA's website.

Section 4(f): Section 4(f) of the Department of Transportation Act of 1966 states that no transportation project should be approved which requires the use of land from a public park, recreation area, wildlife and waterfowl refuge, or historic site unless there is no feasible or prudent alternative to the use of such land.

Section 106: Section 106 of the National Historic Preservation Act deals with project effects on historic properties. It requires consultation with parties with expertise and interest in historic resources.

State Historic Preservation Office (SHPO): The official appointed or designated, pursuant to Section 101(b)(1) of the National Historic Preservation Act, to administer the State historic preservation program. The SHPO consults with state and federal agencies during the Section 106 process review. The SHPO administers the national historic preservation program at the State level, reviews National Register nominations, and maintains file data on historic properties that have been identified but not yet nominated. Agencies seek the view of the SHPO in the identification of historic properties and the assessment of the effects of a project on historic properties.

Travel Time: The time spent traveling from a place of origin to a place of destination.

Union Pacific Railroad (UPRR): The UPRR owns and operates tracks and trains that run through the project corridor along Eggleston Avenue.

More Relocation Information

Business

A business that is relocated as a result of the project may be entitled to benefits such as:

1. *Moving and Related Costs*
2. *Reestablishment Costs*
3. *Fixed Payment*

Statements applicable to all categories and benefits listed

Please keep in mind that there are specific benefit requirements that must be met to receive any of the funds mentioned above. Your assigned relocation agent will assist you to fully understand the payments and requirements.

No one may be displaced until adequate housing has been made available to them.

All persons required to move personal property, their home, or business must be given at least 90 days to vacate.

Your Local Transit Agency will establish an appeal process should you be aggrieved by a denial of benefits or if you feel the benefits are inadequate.

A message from the FTA and your local transit agency

It is sometimes necessary to acquire private property and displace persons and businesses in order to build a transit facility that will benefit the entire community. However, we will work with you to minimize the inevitable disruption that this causes. Please feel free to contact the agency and person listed below should you have any further questions.

Revised rules for the Uniform Act were published in the Federal Register on January 4, 2005. The rules are reprinted each year in the Code of Federal Regulations, Title 49, Part 24. All Federal, State and local government agencies, as well as others receiving Federal financial assistance for public programs and projects, that require the acquisition of real property, must comply with the policies and provisions set forth in the Uniform Act and the regulation.

For further information, please contact:

FEDERAL TRANSIT
ADMINISTRATION

GENERAL ACQUISITION & RELOCATION INFORMATION

FTA | U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL TRANSIT ADMINISTRATION

SEE THE BACK PANEL OF THIS BROCHURE FOR INFORMATION ON CONTACTING YOUR LOCAL AGENCY.

GENERAL INFORMATION

Your local transit agency may need to purchase property from you with funding from the Federal Transit Administration (FTA) in order to benefit the general public. To assure fair and consistent treatment of all persons, the FTA will require your local transit agency to follow the Uniform Relocation Assistance and Real Property Policies Act of 1970, as amended. The Uniform Act is a law passed by Congress to promote uniformity and fairness when a local transit agency must acquire property or displace persons. There are two main parts of this process:

1. *Acquisition, which is the purchase of your real estate.*
2. *Relocation which offers additional benefits should you or your business be displaced.*

Acquisition of Real Property

The purchase of real estate by a transit agency begins with the appraisal of your property. An appraiser will inspect your property to determine the value. The property owner should accompany the appraiser while making this inspection. A second appraiser will then review and approve the work of the first appraiser and will recommend a value to the local transit agency.

You should then receive a written offer to purchase your property. You will have sufficient time to consider the offer or make any counter offers that you believe is fair.

If you elect to sell your property to the local transit agency, you will be paid the full amount less any encumbrances (mortgage, lien, etc.) owed on that property. Possession of vacant property may be taken the day of closing by the local transit agency; possession of occupied property will be at an agreed future date.

Relocation

Advisory Assistance will be offered to every displaced person. A Relocation Agent will visit you to explain all of the benefits and services that you may be eligible to receive.

Below is a very brief outline of the various types of financial benefits available if you or your business are required to move.

Residential Homeowner Occupants, are those that have owned and occupied their home for at least 180 days. Typical benefits include:

1. *Moving Costs*
2. *Price Differential Payment*
3. *Increased Mortgage Interest*
4. *Incidental Closing Costs*

90 day Occupant or Tenant, is either a tenant or a homeowner that has occupied their home for less than 180 days but at least 90 days. Relocation benefits include:

1. *Moving Costs*
2. *Rental Assistance Payment/Down Payment*

Appendix H
Open House Exhibit Boards

RED AHEAD
Moving Ahead to a Better Red

Red Line Extension

Welcome to the Red Line Extension (RLE) Open House

The purpose of this meeting is to:

- Provide information on the RLE Project
- Share findings regarding anticipated project benefits and impacts
- Hear and gather your feedback and suggestions
- Discuss next steps and additional opportunities to be involved

If you have questions, feel free to ask the representatives stationed around the boards.

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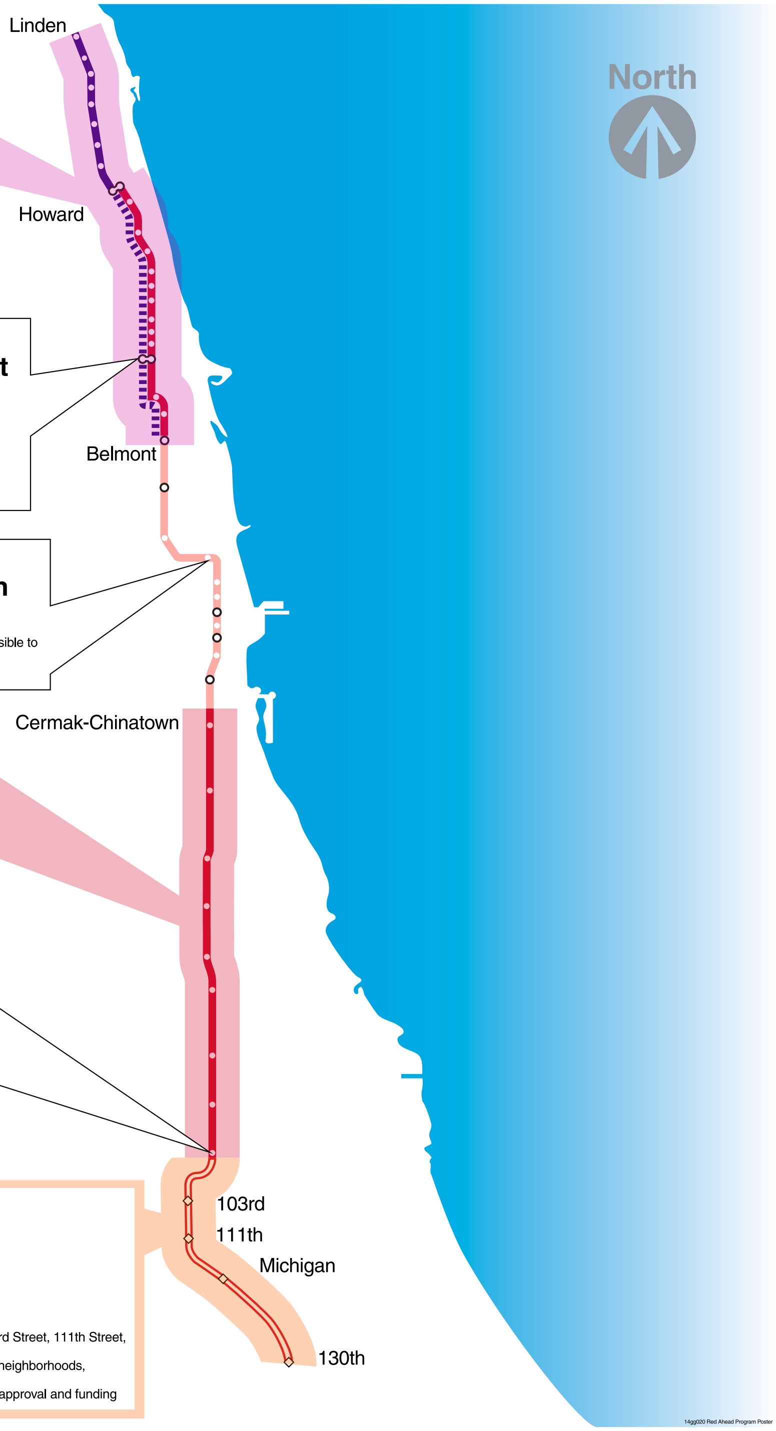
RED AHEAD

Moving Ahead to a Better Red

Red Line Extension

The Red Ahead Program

Improving the Red Line from End to End



rpModernization

Improving your commute. Improving your community.

Status: In planning
Scope:
- Multi-stage project to be completed in phases
- Rebuilding all stations, track, support structures north of Belmont
- Will result in faster rides, increased capacity, less crowding and more frequent service
- **Phase 1:**
  - – New Lawrence, Argyle, Berwyn, Bryn Mawr stations; new track and support structures along 1.3 miles
  - – New Red-Purple Bypass north of Belmont where Red, Purple and Brown lines intersect

Wilson Station Reconstruction Project

Status: Starting Fall 2014
Scope:
- Modernize station and make it accessible to customers with disabilities
- Creates new transfer point between the Red and Purple lines
- New security measures including brighter lighting and 100 security cameras

Clark/Division Station Renovation

Status: Starting Fall 2014
Scope:
- Modernize station and make it accessible to customers with disabilities
- State-of-the-art security equipment

rsr Red Line South Reconstruction Project

Status: Completed Fall 2013
Scope:
- Rebuilt tracks along 10.2 miles, from Cermak-Chinatown to 95th/Dan Ryan
- Rehabbed eight stations, all with elevators, making entire Red Line South accessible to customers with disabilities
- Shortened round-trip commutes between 95th/Dan Ryan and downtown up to 20 minutes

95th Street Terminal Improvements

Status: Starting Summer 2014
Scope:
- Redesigned and expanded terminal will increase space for busses and improve access for pedestrians
- New layout will reduce delays and congestion, and improve passenger safety
- Modern, mostly glass station and public art will improve comfort and overall transit experience

Red Line Extension

Status: In planning
Scope:
- Proposed 5.3-mile extension, including four new stations near 103rd Street, 111th Street, Michigan Avenue/116th Street and 130th Street
- Would improve service and transit accessibility for Far South Side neighborhoods, reduce commute times
- CTA progressing on a multi-step federal process to secure project approval and funding

14gg020 Red Ahead Program Poster

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RED AHEAD
Moving Ahead to a Better Red

Red Line Extension

What is the RLE Project?

The end of the line for the CTA's Red Line South is currently the 95th/Dan Ryan Terminal.

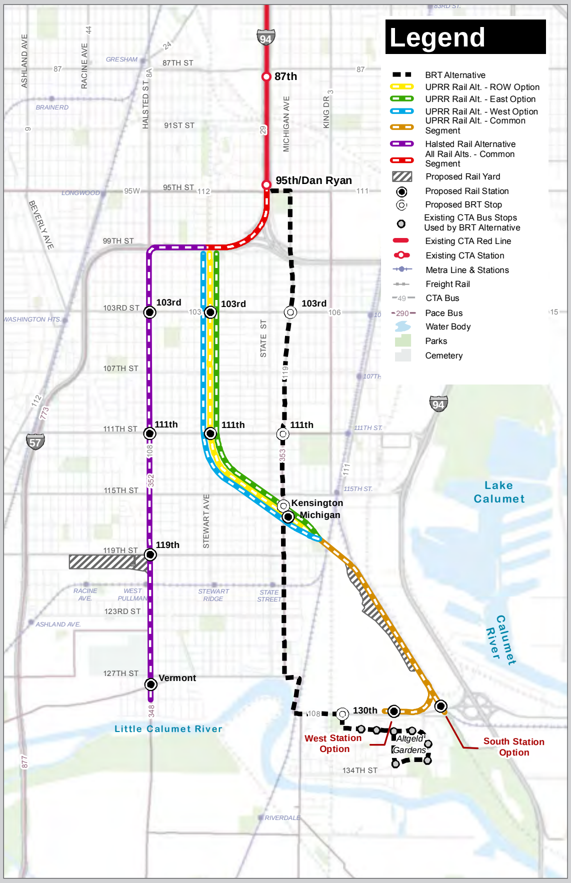
This year, construction will begin on the 95th Street Terminal Improvement Project, which will expand and greatly improve the 95th/Dan Ryan Terminal.

With the estimated $2.3B Red Line Extension (RLE) Project, CTA is proposing to extend service from south of 95th/Dan Ryan Terminal to the vicinity of 130th Street.

RLE Means a Better Served Far South Side

The Red Line Extension Project would:

- Serve a transit dependent area of the City that does not have direct CTA rail service.
- Provide a faster commute. The RLE would offer a 20-minute time savings by providing one-seat service, as opposed to the current bus-rail trip from 130th Street to downtown.
- Include four new stations, a new rail yard, plus bus and parking facilities at all stations.


Legend
BRT Alternative
UPRR Rail Alt. - ROW Option
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
UPRR Rail Alt. - Common Segment
Halsted Rail Alternative
All Rail Alts. - Common Segment
Proposed Rail Yard
Proposed Rail Station
Proposed BRT Stop
Existing CTA Bus Stops Used by BRT Alternative
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
CTA Bus
Pace Bus
Water Body
Parks
Cemetery
87th
95th/Dan Ryan
103rd
103rd
103rd
111th
111th
111th
Kensington
Michigan
119th
Vermont
130th
West Station Option
South Station Option
Altgeld Gardens
Lake Calumet
Calumet River
Little Calumet River
ASHLAND AVE
RACINE AVE
HALSTED ST
MICHIGAN AVE
KING DR
STATE ST
STEWART AVE
BEVERLY AVE
87TH ST
91ST ST
95TH ST
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127TH ST
134TH ST
GRESHAM
BRAINERD
LONGWOOD
WASHINGTON HTS.
RACINE AVE.
WEST PULLMAN
STEWART RIDGE
STATE STREET
ASHLAND AVE.
RIVERDALE
94
57

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Why are we preparing an Environmental Impact Statement (EIS)?

An EIS allows the public to fully understand the potential environmental impacts and provide input before final decisions are made.

Transportation projects seeking Federal funding are required to conduct environmental analysis. An EIS is being prepared for the RLE Project by CTA and Federal Transit Administration (FTA).

Public feedback on the preliminary impacts of the alternatives is necessary to complete the Draft EIS.

The EIS includes:

- A description and comparison of alternatives
- An explanation of the existing environmental setting
- An analysis of potential positive and negative environmental impacts of construction and operation of each alternative
- Proposed mitigation measures to reduce or eliminate potential negative impacts

RED AHEAD
Moving Ahead to a Better Red

Red Line Extension

Project Alternatives:
UPRR Rail Alternative

Chicago Transit Board Adopted Alternative

5.3-mile extension along the UPRR tracks

Three options:

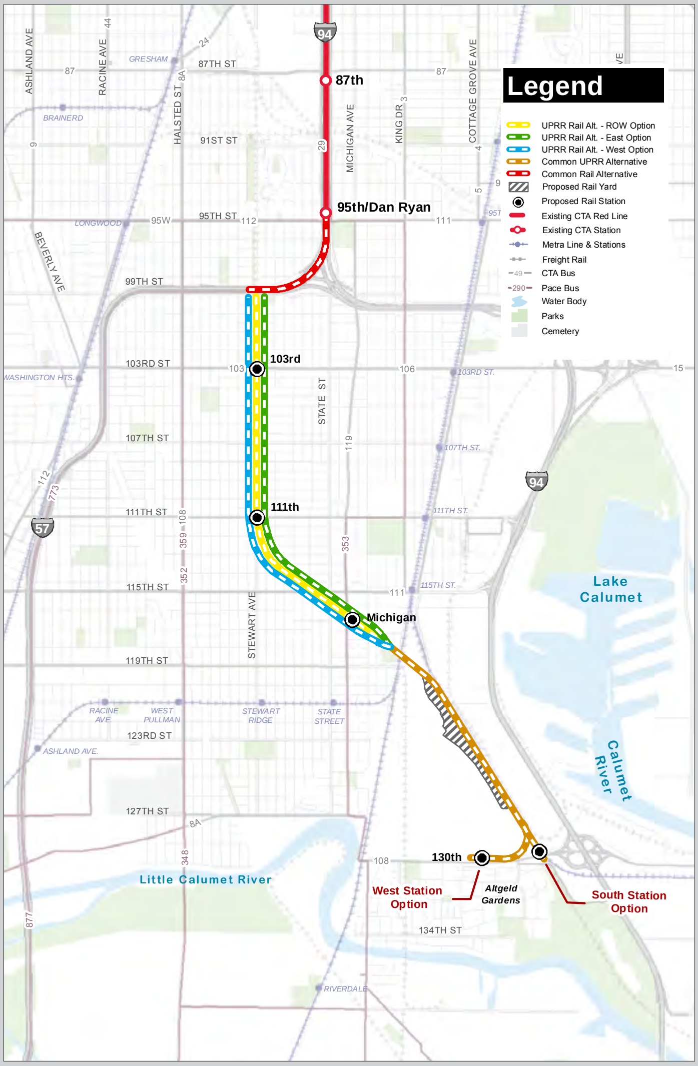
- East Option
- Right-of-Way (ROW) Option (contingent upon the relocation of UPRR, significant cost and delay TBD)
- West Option

Four stations (103rd, 111th, Michigan, 130th)

- Park & ride facilities (up to 3,700 total parking spaces)
- Bus facilities

Elevated structure from 95th Street Terminal to 119th Street, then at-grade (ground level) tracks from 119th Street to 130th Street

120th Street Yard and Shop


Legend
UPRR Rail Alt. - ROW Option
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
Common UPRR Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
49 CTA Bus
290 Pace Bus
Water Body
Parks
Cemetery
87th
95th/Dan Ryan
103rd
111th
Michigan
130th
West Station Option
South Station Option
Altgeld Gardens
Lake Calumet
Calumet River
Little Calumet River
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ASHLAND AVE
RACINE AVE
HALSTED ST
MICHIGAN AVE
KING DR
COTTAGE GROVE AVE
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STEWART AVE
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127TH ST
134TH ST
GRESHAM
BRAINERD
LONGWOOD
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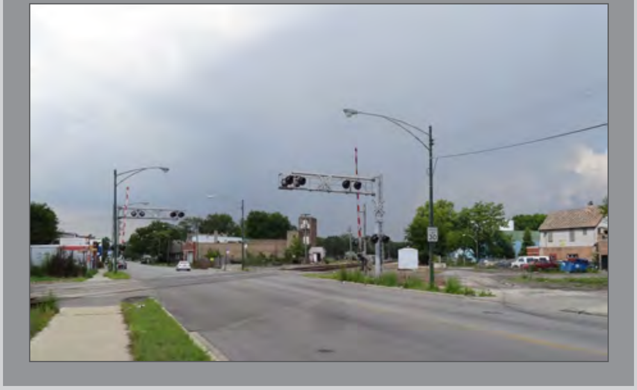
WASHINGTON HTS.
103RD ST.
107TH ST.
111TH ST.
115TH ST.
RACINE AVE.
WEST PULLMAN
STEWART RIDGE
STATE STREET
ASHLAND AVE.
RIVERDALE

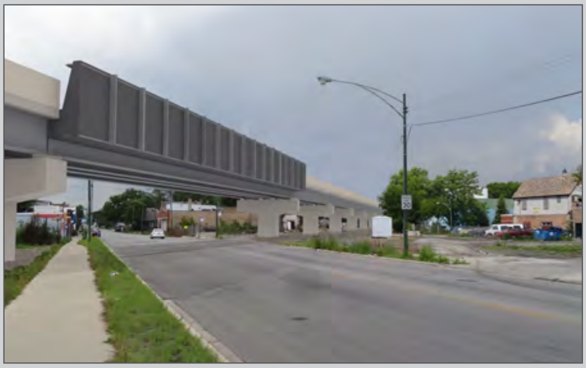
Project Alternatives:
UPRR Rail Alternative

Visualizations

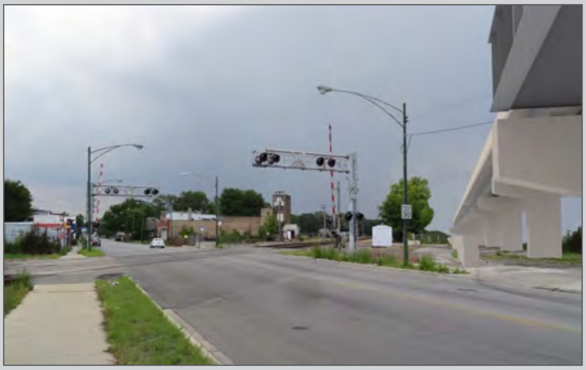
Existing - 115th Street and UPRR Tracks



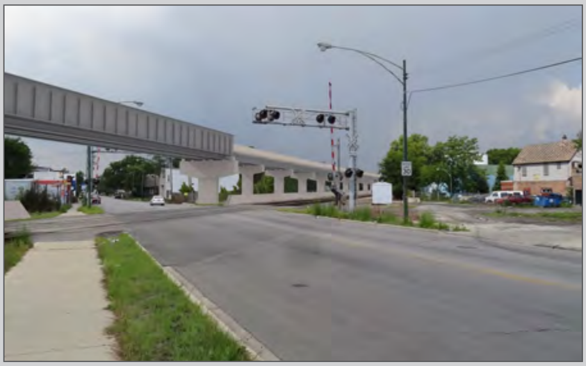
ROW Option



East Option



West Option

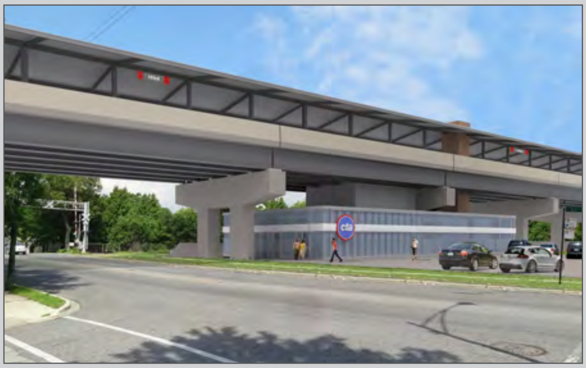


Note that appearance of project elements (such as parking structures, beams, columns, etc.) in visualizations is intended to show scale of project elements. Actual construction appearance may differ based on design decisions for colors, textures, finishes, and choice of specific design features.

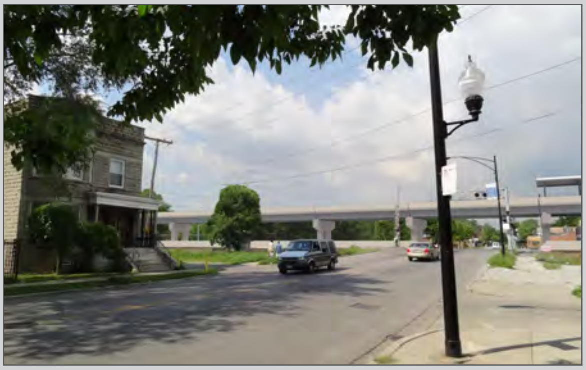
Project Alternatives:
UPRR Rail Alternative

Visualizations

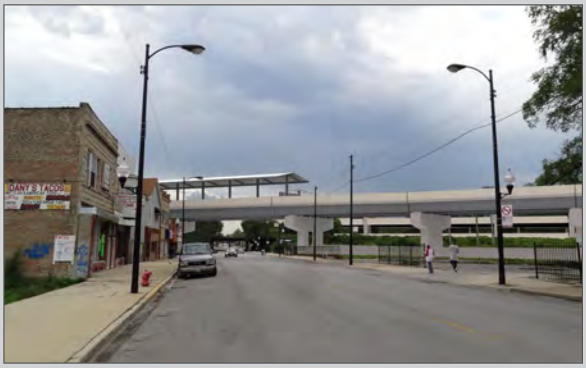
East Option - 103rd Street Station
103rd Street and Harvard Avenue



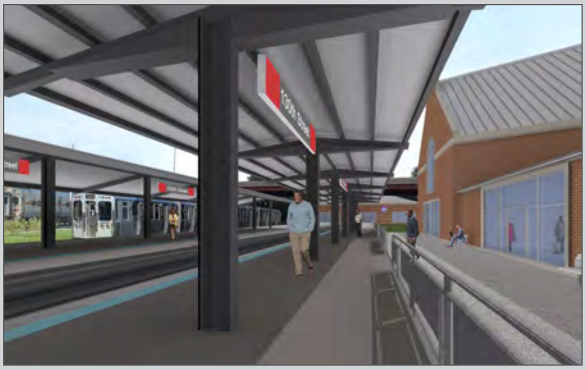
East Option - 111th Street Station
111th Street and UPRR Tracks



East Option - Michigan Avenue Station
115th Street and Michigan Avenue



130th Street Station - South Station Option



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RED AHEAD
Moving Ahead to a Better Red

Red Line Extension

Project Alternatives:
Halsted Rail Alternative

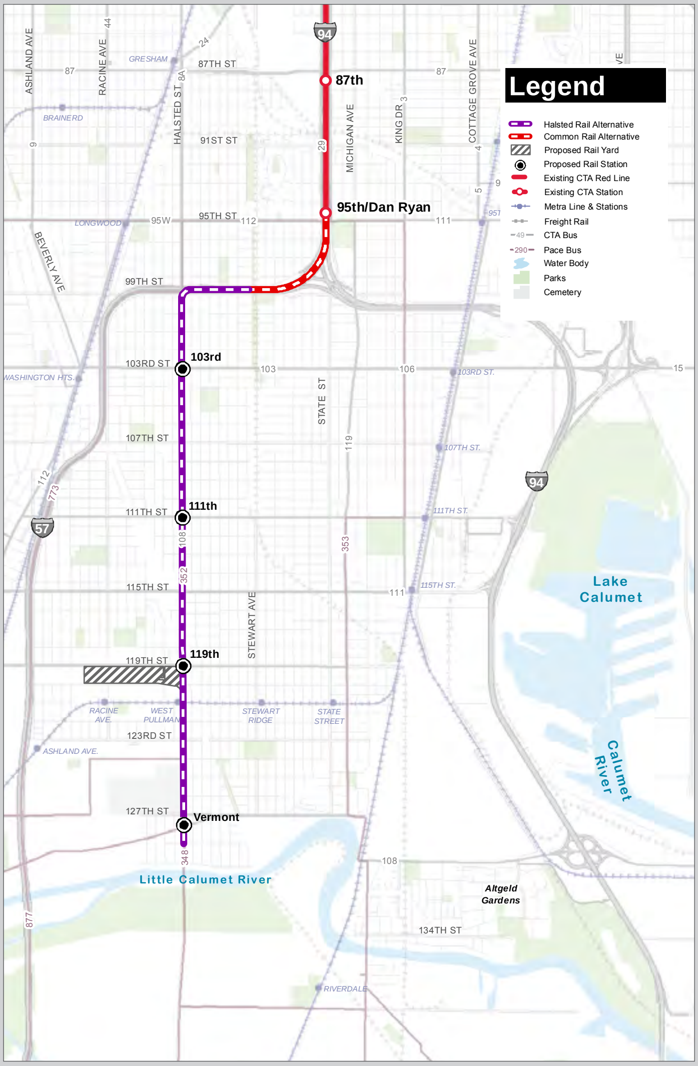
5-mile extension above Halsted Street

Four stations (103rd, 111th, 119th, Vermont)

- Park & ride facilities (up to 3,700 total parking spaces)
- Bus facilities

Elevated structure

119th Street Yard and Shop


Legend
Halsted Rail Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
49 CTA Bus
290 Pace Bus
Water Body
Parks
Cemetery
87th
95th/Dan Ryan
103rd
111th
119th
Vermont
ASHLAND AVE
RACINE AVE
HALSTED ST
MICHIGAN AVE
KING DR
COTTAGE GROVE AVE
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RACINE AVE.
WEST PULLMAN
STEWART RIDGE
STATE STREET
ASHLAND AVE.
RIVERDALE
94
57
Lake Calumet
Calumet River
Little Calumet River
Altgeld Gardens

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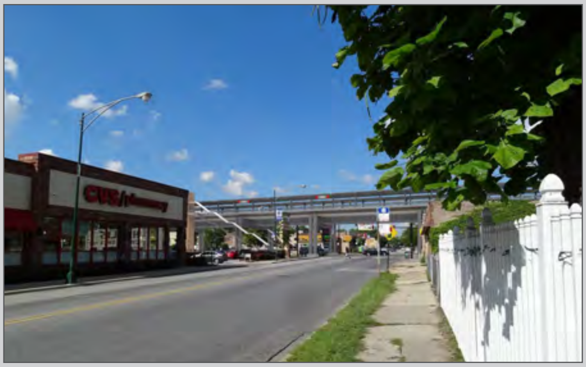
RED AHEAD
Moving Ahead to a Better Red

Red Line Extension

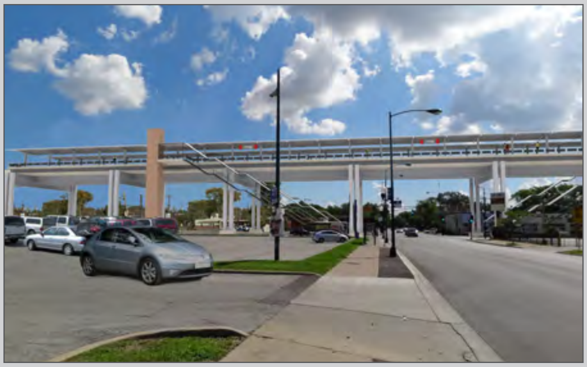
Project Alternatives:
Halsted Rail Alternative

Visualizations

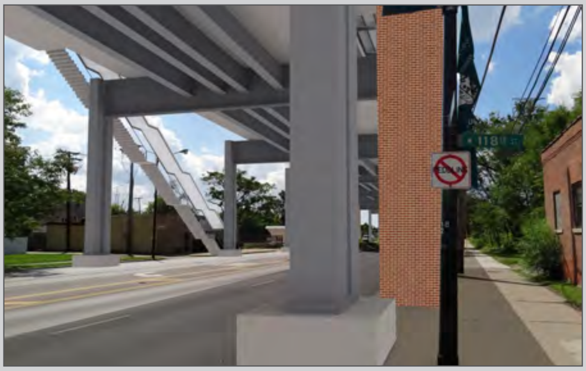
103rd Street Station
103rd Street and Emerald Avenue



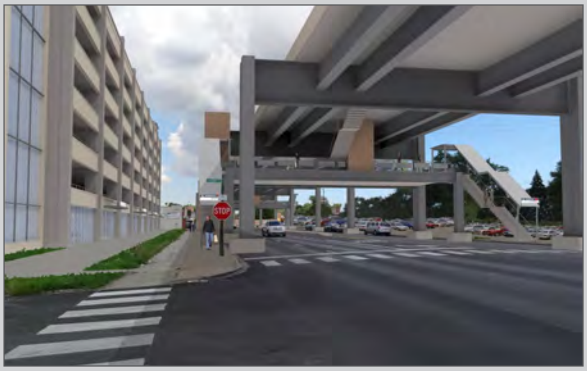
111th Street Station
111th Street and Halsted Street



119th Street Station
118th Street and Halsted Street



Vermont Avenue Station
128th Street and Halsted Street



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RED AHEAD

Moving Ahead to a Better Red

Red Line Extension

Project Alternatives:
BRT Alternative

5.5-mile long Bus Rapid Transit (BRT) Route along Michigan Avenue

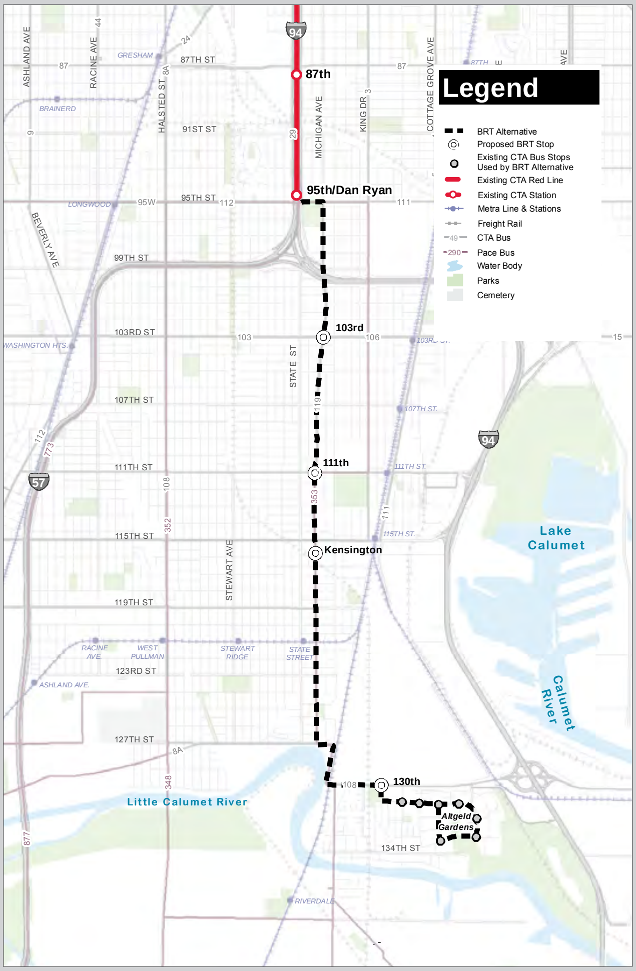
The BRT Alternative is a “low cost” alternative. It would run along Michigan Avenue, which has one of the CTA’s busiest bus routes.

Four BRT stops

- Improved bus shelters (103rd, 111th, Kensington, and 130th)
- Park & ride facilities (up to 2,800 total parking spaces)

Bus route would continue through Altgeld Gardens making existing stops

No dedicated bus lanes; parking lanes would be removed in some locations


Legend
BRT Alternative
Proposed BRT Stop
Existing CTA Bus Stops Used by BRT Alternative
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
CTA Bus
Pace Bus
Water Body
Parks
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WASHINGTON HTS.
RACINE AVE.
WEST PULLMAN
STEWART RIDGE
STATE STREET
ASHLAND AVE.
RIVERDALE

No Build Alternative

The No Build Alternative is used to compare the other alternatives to the current state and existing service. No new infrastructure would be built.

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RED AHEAD
Moving Ahead to a Better Red

Red Line Extension

Potential Impacts to Parks

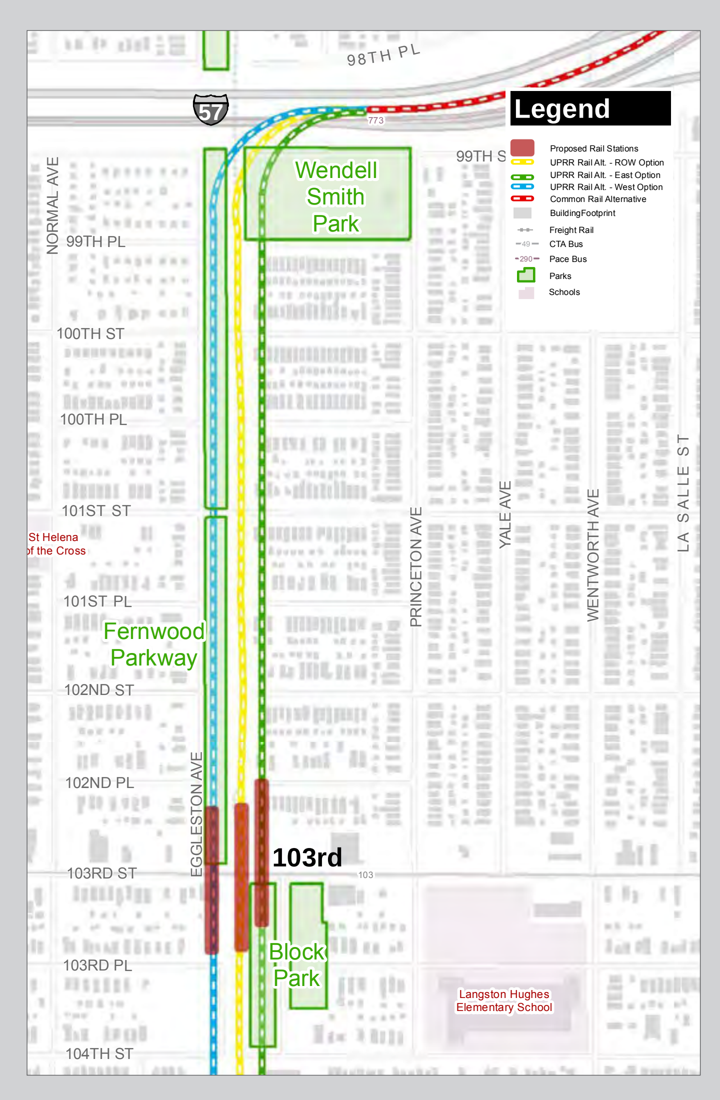
Only the UPRR Rail Alternative would impact parks.

Parklands Affected by UPRR Rail Alternative Options

Parkland	East Option	ROW Option	West Option
Wendell Smith Park	0.4 acres	0.2 acres	0.2 acres
Fernwood Parkway	-	-	1.9 acres
Block Park	0.8 acres	-	-
Total	*1.2 acres*	*0.2 acres*	*2.1 acres*

Preliminary Mitigation Strategies

Coordination with Chicago Park District is ongoing to identify mitigation including improvements to other parklands or replacement parklands nearby.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Legend
🟥 Proposed Rail Stations
UPRR Rail Alt. - ROW Option
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
Common Rail Alternative
BuildingFootprint
Freight Rail
49 CTA Bus
290 Pace Bus
Parks
Schools
99TH S
NORMAL AVE
99TH PL
Wendell Smith Park
100TH ST
100TH PL
101ST ST
St Helena of the Cross
101ST PL
Fernwood Parkway
102ND ST
102ND PL
EGGLESTON AVE
103rd
103RD ST
103
Block Park
103RD PL
104TH ST
PRINCETON AVE
YALE AVE
WENTWORTH AVE
LA SALLE ST
Langston Hughes Elementary School

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Potential Property Displacements

Construction of the project would require the acquisition of property.

Permanent Displacements by Alternative

	UPRR East Option	UPRR ROW Option	UPRR West Option	Halsted	BRT
Affected Parcels without Building Displacements	149	112	144	72	49
Affected Parcels with Building Displacements	110	22	51	38	3
(Residential Building Displacements)	(95)	(17)	(30)	(17)	(1)
Total Affected Parcels	*259*	*134*	*195*	*110*	*52*

Impacts presented are:

- Based on Conceptual Engineering and represent maximum impacts on all alternatives
- For the purposes of comparing alternatives and will be confirmed in the Final EIS following more detailed conceptual design of the single NEPA preferred alternative

All major transit construction projects have impacts:

- The Brown Line Expansion had 40 building displacements
- The RPM Program (Phase One) may displace 19 buildings

Preliminary Mitigation Strategies

Property owners would be paid not less than fair market value for their land and buildings, and may be eligible for compensation equal to the original purchase price of the property. They would also be assisted in relocating their businesses or dwellings, per the Federal Uniform Act on relocation assistance and property acquisition.

When a single alternative or option is chosen, CTA will work with the community and property owners to minimize property impacts.

RED AHEAD

Moving Ahead to a Better Red

Red Line Extension

Potential Noise Impacts

Noise Impacts by Alternative

	UPRR East Option	UPRR ROW Option	UPRR West Option	Halsted	BRT
Moderate and Severe Noise Impacts	None	None	None	Moderate impacts would remain after mitigation	Moderate impacts south of 120th Street
Vibration Impacts	None	None	None	None	None

Moderate Noise Impacts: The change in noise would be noticeable but might not be sufficient to cause a strong, adverse community reaction
Severe Noise Impacts: A significant percentage of the population would be highly annoyed by the change in noise

Preliminary Mitigation Strategies

Continuous welded rail

- Fewer joints mean a smoother and quieter ride

Jointed Rail versus Welded Rail

Closed deck structure

- Limits noise beneath the elevated tracks

Open Deck versus Closed Deck

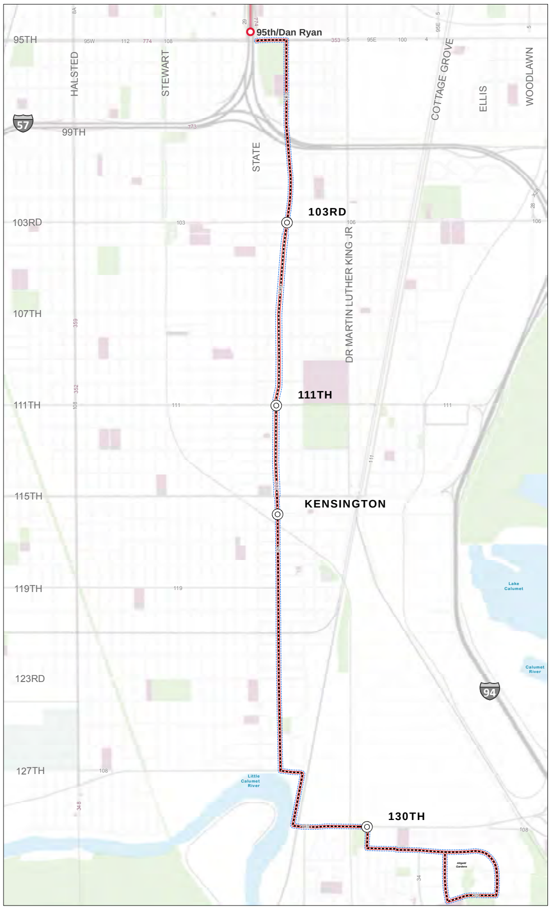
Noise barriers

- Absorb railway noise

Noise Barriers

Potential Noise Impacts and Mitigations

BRT Alternative


95TH
95th/Dan Ryan
HALSTED
STEWART
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COTTAGE GROVE
ELLIS
WOODLAWN
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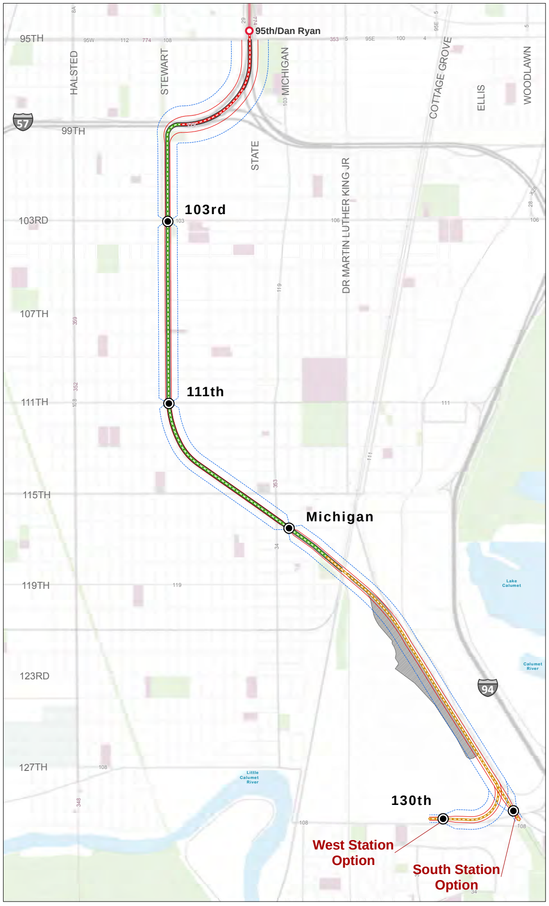
103RD
103RD
107TH
DR MARTIN LUTHER KING JR
111TH
111TH
115TH
KENSINGTON
119TH
Lake Calumet
Calumet River
123RD
94
127TH
Little Calumet River
130TH

UPRR Rail Alternative East Option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95th/Dan Ryan
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STEWART
MICHIGAN
STATE
COTTAGE GROVE
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107TH
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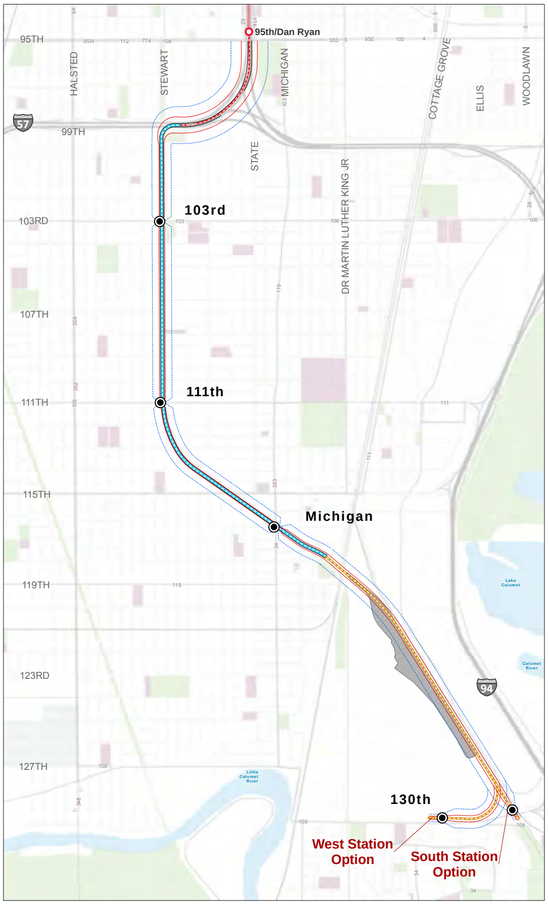
111th
115TH
Michigan
119TH
Lake Calumet
Calumet River
123RD
94
127TH
Little Calumet River
130th
West Station Option
South Station Option

Legend

▬	Mitigation - Noise Barriers
Noise Contours	
- - -	Moderate Impact
▬	Severe Impact
▭	Common Rail Alternative
▭	Common UPRR Alternative
▭	UPRR Rail Alt. - ROW
▭	UPRR Rail Alt. - West Option
▭	UPRR Rail Alt. - East Option
▭	Halsted Rail Alternative
▪▪▪▪▪	BRT Alternative
◎	Proposed BRT Stop
—	Existing CTA Red Line
⊙	Existing CTA Station
-----	Metra Line & Stations
-----	Freight Rail
—49—	CTA Bus
—290—	Pace Bus
■	Water Body
■	Parks
■	Cemetery
■	Schools

Impacts presented are based on Conceptual Engineering and represent maximum impacts. Impacts and mitigations will be confirmed in the Final EIS following more detailed design of the NEPA preferred alternative.

UPRR Rail Alternative West Option


95TH
95th/Dan Ryan
HALSTED
STEWART
MICHIGAN
STATE
COTTAGE GROVE
ELLIS
WOODLAWN
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103rd
103RD
DR MARTIN LUTHER KING JR
107TH
111th
111TH
115TH
Michigan
119TH
Lake Calumet
Calumet River
123RD
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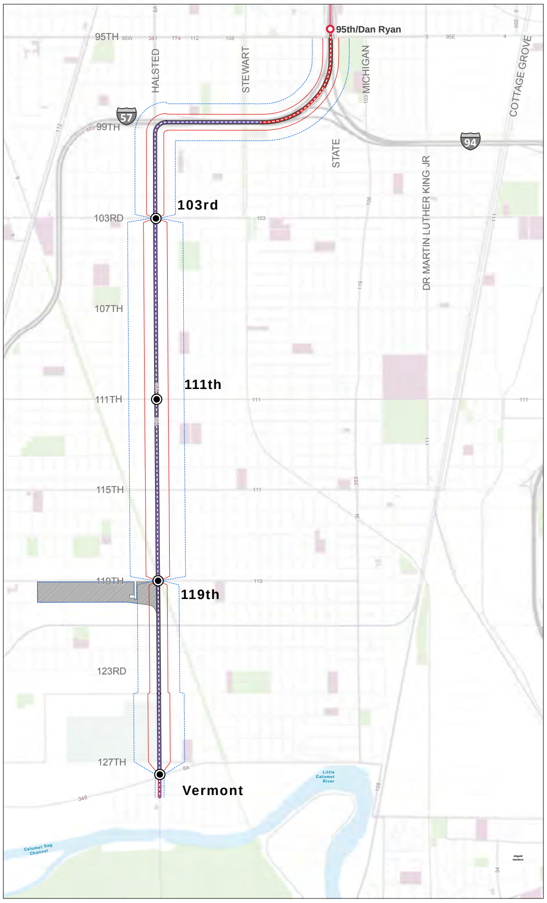
127TH
Little Calumet River
130th
West Station Option
South Station Option

Halsted Rail Alternative


95TH
95th/Dan Ryan
HALSTED
STEWART
MICHIGAN
STATE
COTTAGE GROVE
57
99TH
94
103RD
103rd
DR MARTIN LUTHER KING JR
107TH
111TH
111th
115TH
119TH
119th
123RD
127TH
Vermont
Little Calumet River
Calumet Sag Channel

RED AHEAD
Moving Ahead to a Better Red

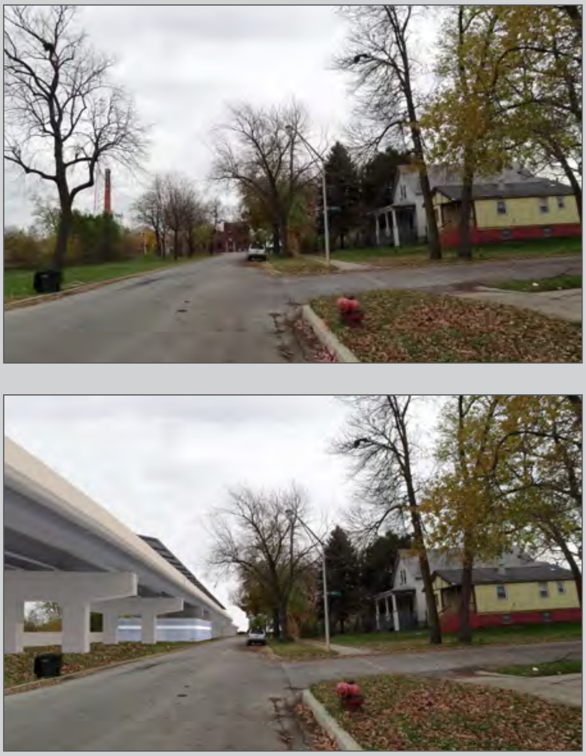
Red Line Extension

Potential Visual and Community Impacts

Visualizations

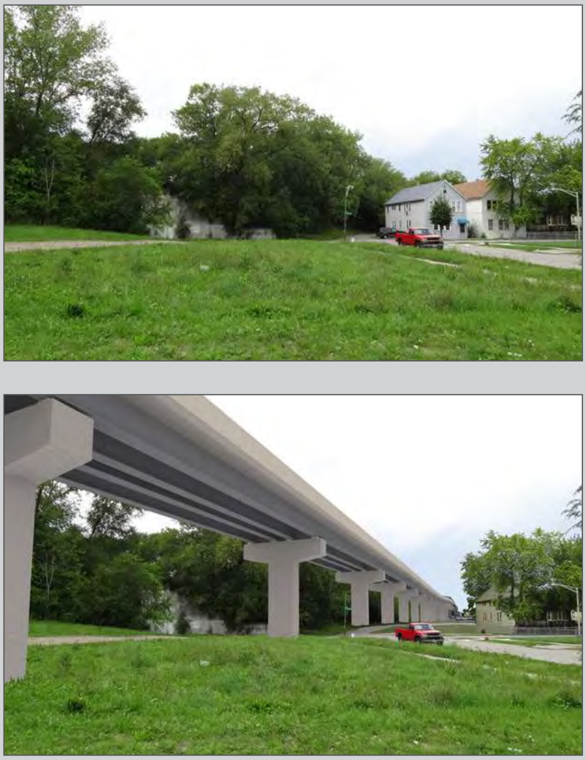
UPRR Rail Alternative

West Option



102nd Place and Eggleston Avenue

East Option



117th Street and Prairie Avenue

Note that appearance of project elements (such as parking structures, beamvs, columns, etc.) in visualizations is intended to show scale of project elements. Actual construction appearance may differ based on design decisions for colors, textures, finishes, and choice of specific design features.

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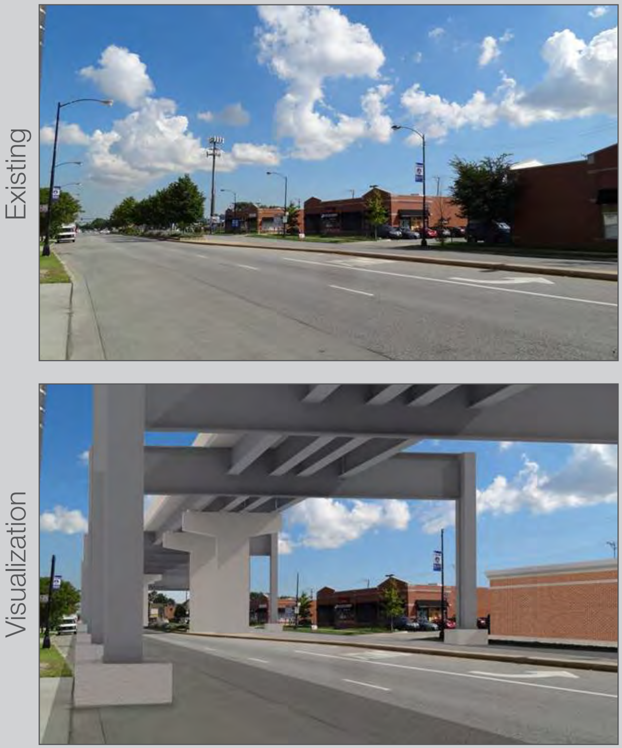
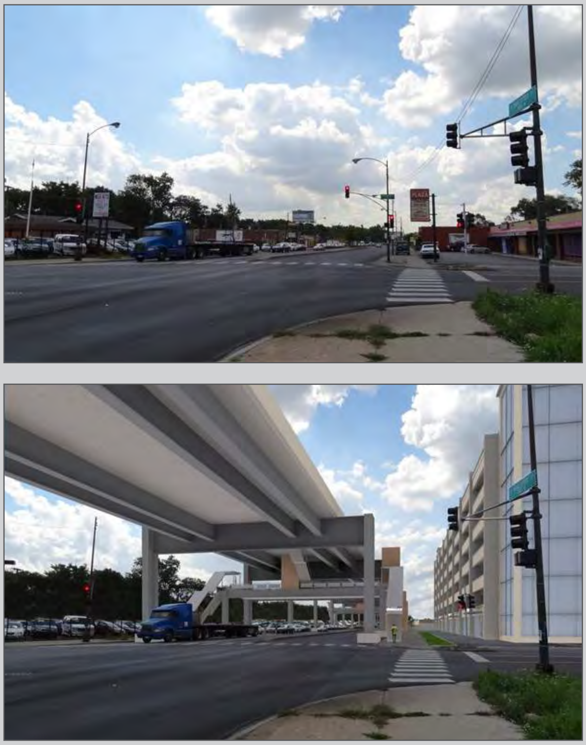
Potential Visual and Community Impacts

Visualizations

Halsted Rail Alternative



100th and Halsted Streets



Vermont Avenue and Halsted Street

Note that appearance of project elements (such as parking structures, beams, columns, etc.) in visualizations is intended to show scale of project elements. Actual construction appearance may differ based on design decisions for colors, textures, finishes, and choice of specific design features.

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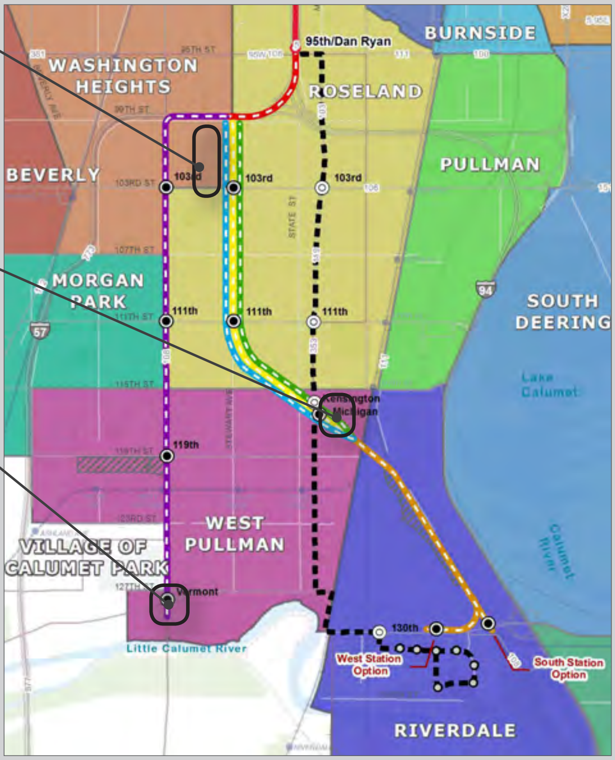
Potential Visual and Community Impacts

UPRR West Option
Roseland and Washington Heights communities

UPRR East Option
West Pullman community

Halsted Rail Alternative
West Pullman community



95th/Dan Ryan
BURNSIDE
WASHINGTON HEIGHTS
ROSELAND
BEVERLY
103rd
103rd
103rd
PULLMAN
MORGAN PARK
111th
111th
111th
SOUTH DEERING
Lake Calumet
Kensington Michigan
119th
WEST PULLMAN
VILLAGE OF CALUMET PARK
Vermont
Little Calumet River
Calumet River
130th
West Station Option
South Station Option
RIVERDALE

Preliminary Mitigation Strategies

- Provide new landscaping or other urban design amenities
- New structures would reflect the character of neighborhoods or communities to the extent feasible
- Careful placement of exterior lighting adjacent to residential communities
- Construction best management practices including maintaining vegetation and debris-free construction areas

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Potential Effects to Historic Properties

- Historic experts evaluated a sample of 541 properties near the project alternatives
- CTA/FTA invited interested parties to help evaluate potential historic resources
- CTA/FTA identified two historic districts and 13 properties that have been recommended for inclusion on the National Register of Historic Places

Adverse Effects by Alternative

	UPRR East Option	UPRR ROW Option	UPRR West Option	Halsted	BRT
Effected Properties	0	0	0	4 adversely effected after mitigation *but not demolished*	0

Preliminary Mitigation Strategies

Consultation with the State Historic Preservation Office and other interested parties is ongoing to confirm effects and identify mitigation strategies.

An adverse effect occurs when a project alters (directly or indirectly) any of the characteristics of a historic property that qualify it for the National Register, diminishing the integrity of its location, design, setting, materials, workmanship, feeling, or association.

931 W. 120th Street (Fire Department Engine House)

12433 S. Halsted Street (S.S. Peter and Paul Church)

12540 S. Halsted Street (Cedar Park Cemetery)

10227 S. Halsted Street (Former Classic Revival Substation)

These properties will not be demolished but would have potential adverse effects due to potential visual, noise, or construction impacts.

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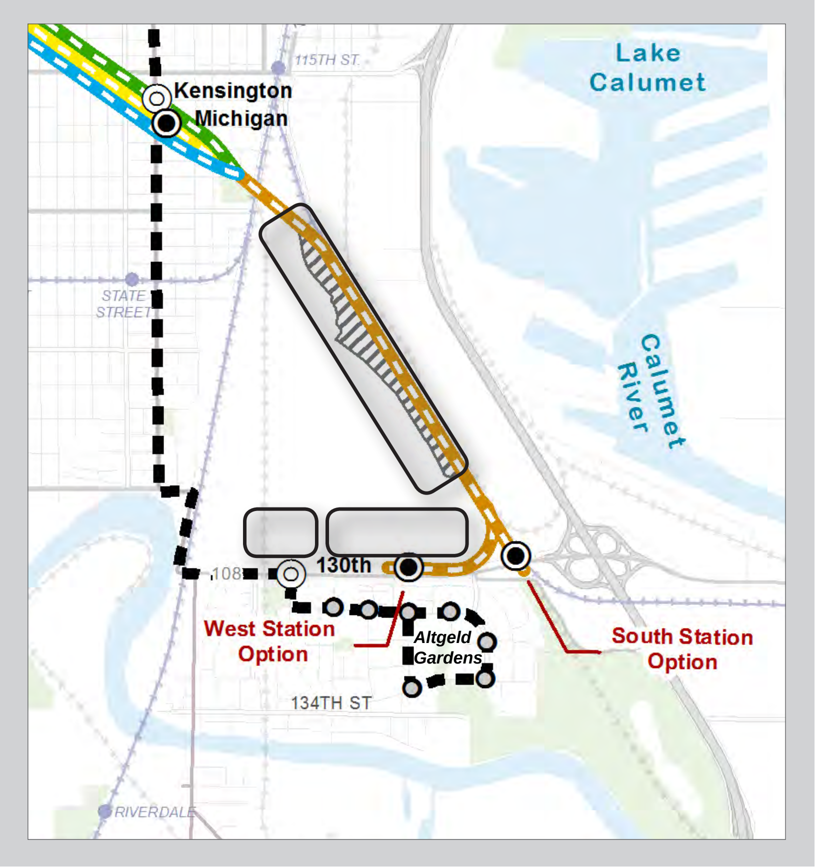
Impacts to Wetlands

Impacts to potential wetlands could occur at the UPRR 120th Street yard and shop, the West Station Option, the South Station Option, and/or the BRT 130th Street park & ride. Impacts to wetlands have not yet been confirmed.

Preliminary Mitigation Strategies

- Replace, restore, enhance, or preserve wetlands


115TH ST
Kensington
Michigan
Lake Calumet
STATE STREET
Calumet River
108
130th
West Station Option
Altgeld Gardens
South Station Option
134TH ST
RIVERDALE

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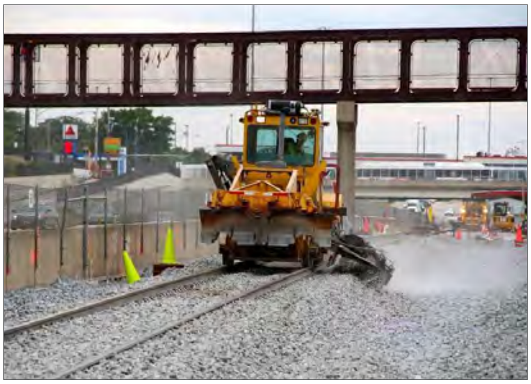
Temporary Construction Impacts



Preliminary Mitigation Strategies

- Notices of noise-generating activities would be posted
- Road closures would be announced
- Special advertising for affected businesses
- Limited idling of construction vehicles
- Alternative parking provisions

Minimal Impact Areas

- Land Use
- Safety & Security
- Environmental Justice
- Energy
- Transportation
- Water Resources
- Biological Resources
- Hazardous Materials
- Air Quality

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RLE Project Benefits

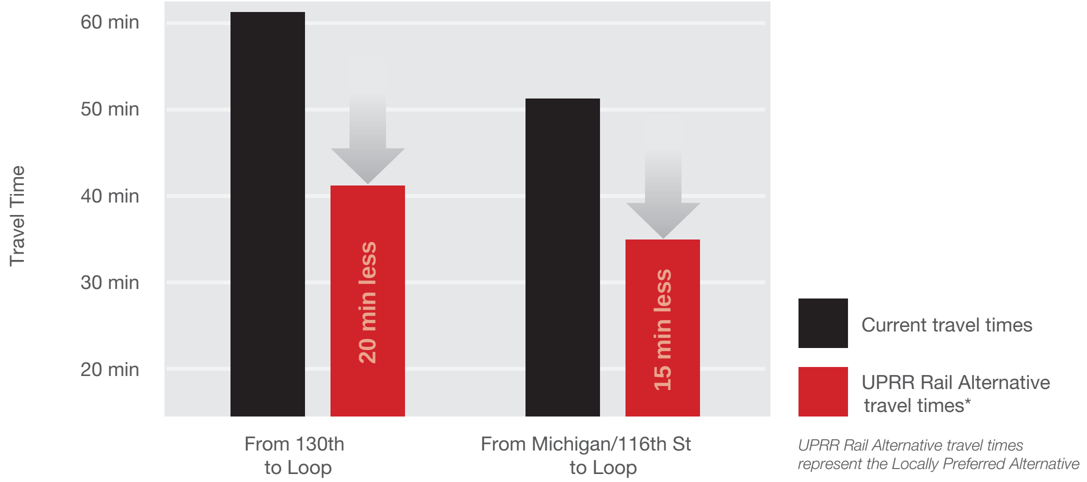
- Increase access to affordable housing, hospitals, schools, and other community facilities
- Encourage community investment and economic development
- Create direct construction jobs
  - Rail alternative estimated to create 2,600 to 4,100 jobs
- Increase access to jobs
  - Newly accessible jobs within an hour commute of the proposed 111th Street station would increase by 56% (CMAP 2012)

Ridership Benefits

	UPRR (All Options)	Halsted	BRT	No Build
Estimated Annual Trips*	13,000,000	12,000,000	1,000,000	0

**Rides taken on the RLE (95th Street to 130th Street)*

Travel Time Savings



UPRR Rail Alternative travel times represent the Locally Preferred Alternative

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Project Development Process

Conceptual Development ✓
2006

Alternatives Analysis Study ✓
2006 - 2009

Environmental Impact Statement Process

Public Scoping Meetings ✓
September 2009

RLE added to CMAP *GO TO 2040* Regional Plan

Prepare Draft EIS
2012-2014

We Are Here

Publish Draft EIS and Seek Public Comment
Planned for 2015

Next step

Final EIS
FTA issues Record of Decision*

Apply to FTA New Starts Project Engineering Phase and Complete Engineering*

Receive Full Funding Grant Agreement from FTA*

Construction*

Open for Operation

**Dependent on funding and approvals*

Continuing dialogue with the public

- Incorporate public feedback into Draft EIS
- Complete and publish Draft EIS
- Hold public hearing
- Incorporate comments into Final EIS
- Complete and publish Final EIS
- Record of Decision by FTA

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Stay Involved

To provide your input, fill out a questionnaire and place it in the box provided.

Join Contact List: At the sign-in desk

@ RedExtension@transitchicago.com
transitchicago.com/redeis
facebook.com/thecta
@cta

Mail:
Chicago Transit Authority
Strategic Planning, 10th Floor
567 W. Lake Street
Chicago, IL 60661-1465

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Appendix I
Comments Received

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WE WANT YOUR INPUT
on the Red Line Extension Project

This project is one part of the Red Ahead Program, CTA's comprehensive initiative for maintaining, modernizing, and expanding Chicago's most-traveled rail line. CTA is interested in hearing your thoughts on the project. Please PRINT.

Name Jon K. Evans
Address 11936 South Princeton Avenue
City Chicago State IL Zip 60628-6014
Email Address jkeiit963827@sbcglobal.net jkeneworleansgp91@att.net
JKEIIT96@hotmail.com
☒ Check here to also receive updates about other projects along the Red Line.

What specific comments or concerns do you have about the Red Line Extension alternatives, potential impacts, and mitigation measures?

I have resigned myself to the fact that the Red Line Extension is years away from completion. In the INTERIM, I propose a TEMPORARY RED LINE EXTENSION via one of the following routes
A State; 103rd Wentworth, 119th, Michigan 127th, Indiana & 130th between 95th Street and FOMOCO
B State, 127th Indiana, 130th,
BOTH: Stops would be limited to 103rd, 107th, 111th, 115th, 119th 127th; METRO WATER, and FOMOCO

OVER →

How do you use the following parks? (Check all that apply)

	Baseball / Softball / Basketball	Playground	Walking / Jogging	Community Events	Other	I do not use this park
Wendell Smith Park (99th Street / Princeton Avenue)	☐	☐	☐	☐	☐	☐
Fernwood Parkway (Eggleston Avenue between 99th and 103rd Street)	☐	☐	☐	☐	☐	☐
Block Park (103rd Street / Harvard Avenue)	☐	☐	☐	☐	☐	☐

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Additional Comments:

1 Michigan Avenue is WAY TOO Narrow for a BRT of any kind

2 Halsted Street is MUCH BETTER SUITED for a BRT, a Subway, or an overhead system, A Light Rail should be avoided Remember the 1950 Streetcar Crash @ 63d & State

3 My proposed Halsted Street BRT should run from the GRESHAM Metra (Rock Island) Station @ 86th Vincennes and Halsted to FOMOCO via Vermont, 127th Indiana and 130th Streets, with stops @ 95th 99th 103rd 107th 111th, 115th, 119th, 123rd 127th Vermont Halsted Bus Terminal State/Michigan, Metro Water Reclamation and FOMOCO

SUMMARY & SYNOPSIS

The area between 79th Street to the Southern City Corporate Limits and between Ashland and the State Line IS A TRANSIT DESERT SOME FORM OF INTERIM RAPID TRANSIT IS NECESSARY That interim system should be implemented most quickly at the lowest possible cost. It should also be a 24/7/365-6 alternative

Thank you for attending this CTA Red Line Extension Project open house.

Comments may also be submitted via mail or e-mail to:
Chicago Transit Authority, Strategic Planning, 10th Floor, 567 W. Lake Street, Chicago, IL 60661-1465

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transitchicago.com/redeis
facebook.com/thecta
@cta

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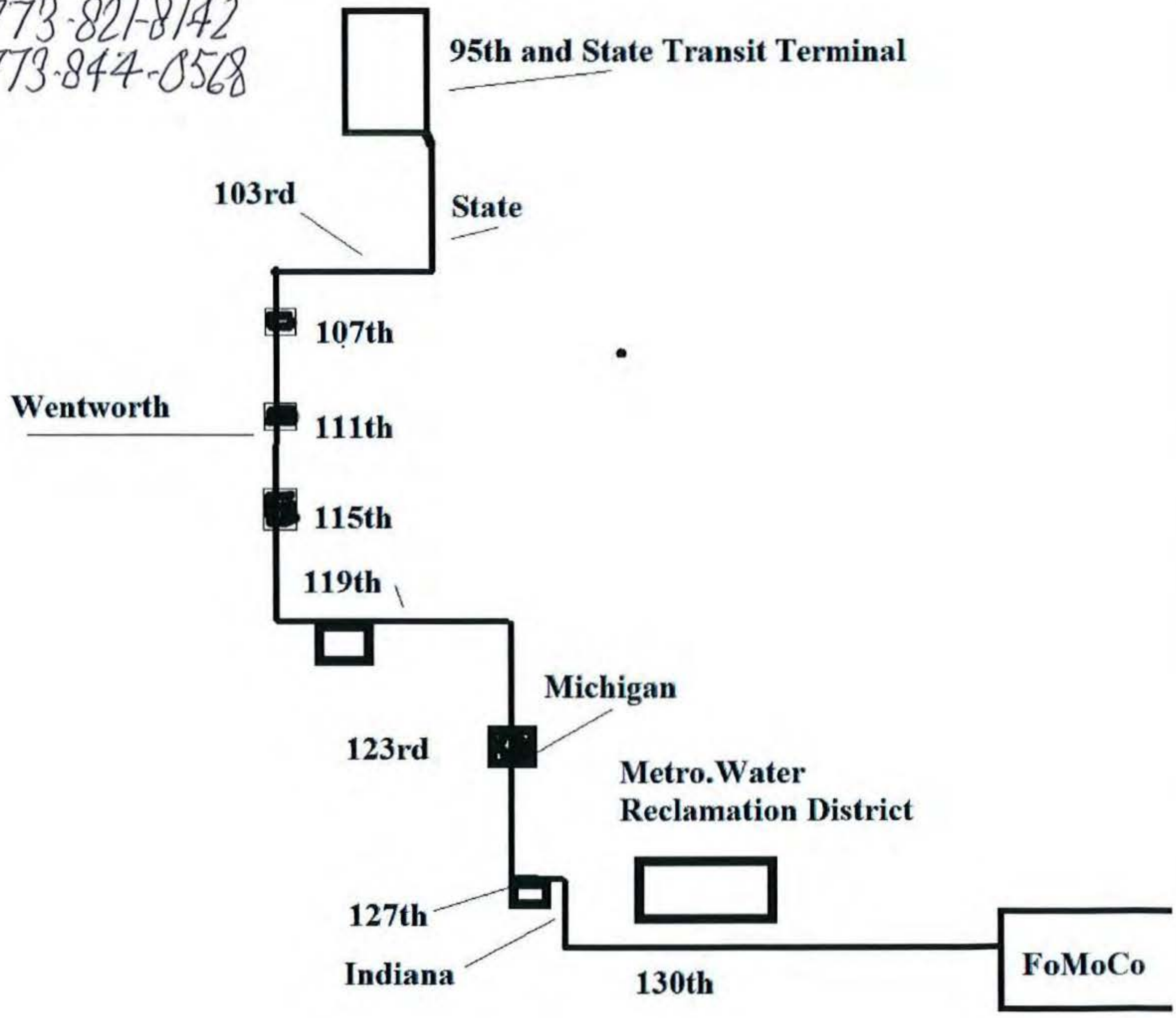
Customer Information: (888) YOUR-CTA (888 968-7282)

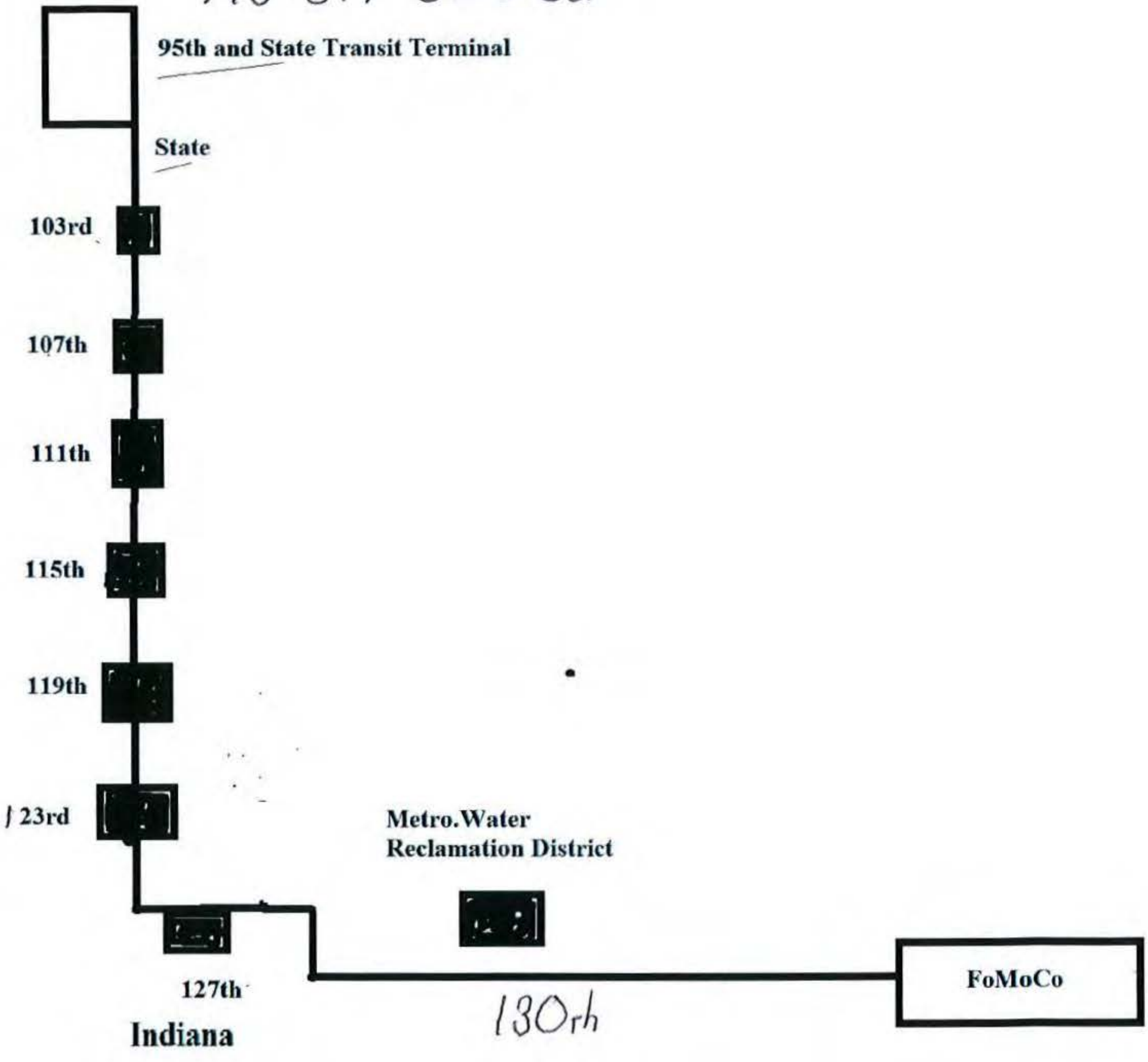
Jon Evans,
11936 South Princeton Avenue
Chicago Illinois 60628-6014
773-821-8142
773-844-0568


95th and State Transit Terminal
103rd
State
107th
Wentworth
111th
115th
119th
Michigan
123rd
Metro.Water
Reclamation District
127th
Indiana
130th
FoMoCo

Temporary Bus Rapid Transit Red Line Extension

Jon Evans
11936 South Princeton Avenue
Chicago Illinois 60628-6014
773-821-8142
773-844-0568 Cell

OR


95th and State Transit Terminal
State
103rd
107th
111th
115th
119th
123rd
Metro.Water
Reclamation District
127th
Indiana
130th
FoMoCo

Temporary Bus Rapid Transit Red Line Extension

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Name Alexander Wikstrom
Address 5122 S. University Ave.
City Chicago State IL Zip 60615
Email Address awikstrom@uchicago.edu

☑ *Check here to also receive updates about other projects along the Red Line.*

What specific comments or concerns do you have about the Red Line Extension alternatives, potential impacts, and mitigation measures?

- The rail alternatives must be pursued. The "BRT" Line may not have a dedicated lane which means it would get stuck in traffic.
- If the UPRR Alternative is pursued, pedestrian access must be addressed for 130th street. It's not pedestrian friendly at the moment.
- Parking should be minimal at best. Creating large parking lots adjacent to the sidewalk is poor planning because it is not pedestrian friendly. Areas around stations should have (cont.)

How do you use the following parks? (Check all that apply)

	Baseball / Softball / Basketball	Playground	Walking / Jogging	Community Events	Other	I do not use this park
Wendell Smith Park *(99th Street / Princeton Avenue)*	☐	☐	☐	☐	☐	☒
Fernwood Parkway *(Eggleston Avenue between 99th and 103rd Street)*	☐	☐	☐	☐	☐	☒
Block Park *(103rd Street / Harvard Avenue)*	☐	☐	☐	☐	☐	☒

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Additional Comments:

(cont. from last page) street-level, pedestrian-oriented retail or be mixed with housing. Parking lots would exclude the possibility for Transit Oriented Development on either rail alternative if they are large and sidewalk adjacent.

- I have seen extremely long trains on the UPRR passing through. Could pedestrian underpasses or bridges be constructed? They are long trains that block the intersections, making it impossible to pass.

Thank you for attending this CTA Red Line Extension Project open house.

Comments may also be submitted via mail or e-mail to:
Chicago Transit Authority, Strategic Planning, 10th Floor, 567 W. Lake Street, Chicago, IL 60661-1465

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transitchicago.com/redeis
facebook.com/thecta
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Name Mrs. Dora Engram
Address 12230 S. Perry Ave
City Chicago, State IL Zip 60628-6827
Email Address d.engram@sbcglobal.net

☑ Check here to also receive updates about other projects along the Red Line.

What specific comments or concerns do you have about the Red Line Extension alternatives, potential impacts, and mitigation measures?

I want to see the Red Line Extension happen. It will help residents get downtown faster and handicapped people can travel easier without having to use the para transit system, This will also improve the economy in the Greater Roseland/West Pull man area, We need jobs

How do you use the following parks? (Check all that apply)

	Baseball / Softball / Basketball	Playground	Walking / Jogging	Community Events	Other	I do not use this park
Wendell Smith Park (99th Street / Princeton Avenue)	☐	☐	☐	☐	☐	☒
Fernwood Parkway (Eggleston Avenue between 99th and 103rd Street)	☐	☐	☐	☐	☐	☑
Block Park (103rd Street / Harvard Avenue)	☐	☐	☐	☐	☐	☒

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Additional Comments:

and revitalization like communities
on the north side.

What is the target date for
this project?

Please let me know when the
next meeting will be held

Please hire the residents in our
neighborhood to complete this work.

Lastly, I would like to see the Red Line
Run along the ~~existing~~ existing tracks.

Thank you for attending this CTA Red Line Extension Project open house.

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Name Anna Williams
Address 3149 W. 99th Place
City Chicago State Il Zip 60628
Email Address ash2@sbcglobal.net

☐ *Check here to also receive updates about other projects along the Red Line.*

What specific comments or concerns do you have about the Red Line Extension alternatives, potential impacts, and mitigation measures?

I want to Know about the impact on my house, if there is an additional train that goes by every 10 min 24/7. My house already shakes from the freight train, I do not want additional vibration to distribute my house any more. How many homes will have to be remove if the train goes along side UPRR? There need to be several different meeting before the project is in final preparation.

How do you use the following parks? (Check all that apply)

	Baseball / Softball / Basketball	Playground	Walking / Jogging	Community Events	Other	I do not use this park
Wendell Smith Park *(99th Street / Princeton Avenue)*	☒	☒	☒	☒	☒	☐
Fernwood Parkway *(Eggleston Avenue between 99th and 103rd Street)*	☐	☐	☐	☐	☐	☐
Block Park *(103rd Street / Harvard Avenue)*	☐	☐	☐	☐	☐	☐

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Additional Comments:

Please take into consideration that most people who live around this new Red Line Extension are older & retired, and on a fix income. Asking these people to move, you should take into consideration the market value, offering them relocation cost and so portion of the closing cost. Do not be insensitive to the fact that these people lived here most all their life, and to up root them will affect them emotional. Do not make these decision based on profit but also people life. I would think going down Halsted would be a better decision, this way people won't have to move.

Thank you for attending this CTA Red Line Extension Project open house.

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Name Rosa PLedger
Address 12443 S. Perry Ave
City Chicago State IL Zip 60627
Email Address redple@comcast.net

☑ *Check here to also receive updates about other projects along the Red Line.*

What specific comments or concerns do you have about the Red Line Extension alternatives, potential impacts, and mitigation measures?

The BRT alternative is my preference as it adds to the existing service, Without knowing if there would be bus lines to support access to the proposed rail lines it is not possible for me to see how the rail lines would improve the current situation. I am saying this based on the premise that either the Halsted or Michigan ave bus service

How do you use the following parks? (Check all that apply)

	Baseball / Softball / Basketball	Playground	Walking / Jogging	Community Events	Other	I do not use this park
Wendell Smith Park (99th Street / Princeton Avenue)	☐	☐	☐	☐	☐	☑
Fernwood Parkway (Eggleston Avenue between 99th and 103rd Street)	☐	☐	☐	☐	☐	☑
Block Park (103rd Street / Harvard Avenue)	☐	☐	☐	☐	☐	☑

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Additional Comments:

would be discontinued based on whether the UPRR
rail or Halsted rail is built. While all of the plans
would reduce traveling times, they also reduce
access to the service, as the stops would be
severely reduced. Perhaps in the future you
can lett the public know what supportive
bus service, if any, would be available.

Thank you for attending this CTA Red Line Extension Project open house.

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Name Williams, Erma
Address 318 W. 112th STREET
City ChiCAGO State Il Zip 60628
Email Address egw@att.net

☒ *Check here to also receive updates about other projects along the Red Line.*

What specific comments or concerns do you have about the Red Line Extension alternatives, potential impacts, and mitigation measures?

My Comment and Request is to CONSTRUCT the Red Line down the East Side of the UPRR past 112th Street. When This Project is completed the people will have better and more means to travel! The Halsted plan should be Cancelled. I'm Ready to sell my home and move on to better living. If anyone is

How do you use the following parks? (Check all that apply)

	Baseball / Softball / Basketball	Playground	Walking / Jogging	Community Events	Other	I do not use this park
Wendell Smith Park (99th Street / Princeton Avenue)	☐	☐	☐	☐	☐	☒
Fernwood Parkway (Eggleston Avenue between 99th and 103rd Street)	☐	☐	☐	☐	☐	☒
Block Park (103rd Street / Harvard Avenue)	☐	☐	☐	☐	☐	☒

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Additional Comments:

interested in purchasing for the future plans
Be my guest.

Thank you.

Thank you for attending this CTA Red Line Extension Project open house.

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Chicago Transit Authority, Strategic Planning, 10th Floor, 567 W. Lake Street, Chicago, IL 60661-1465

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Name Mary White

Address

City State Zip

Email Address

☐ *Check here to also receive updates about other projects along the Red Line.*

What specific comments or concerns do you have about the Red Line Extension alternatives, potential impacts, and mitigation measures?

How do you use the following parks? (Check all that apply)

	Baseball / Softball / Basketball	Playground	Walking / Jogging	Community Events	Other	I do not use this park
Wendell Smith Park *(99th Street / Princeton Avenue)*	☐	☐	☐	☐	☐	☐
Fernwood Parkway *(Eggleston Avenue between 99th and 103rd Street)*	☐	☐	☐	☐	☐	☐
Block Park *(103rd Street / Harvard Avenue)*	☐	☐	☐	☐	☐	☐

Additional Comments:

My main concerns are you had your house built and now paid for and now your home is going to be taken away and you wont get enough money to pay in full for a home at todays prices. We don't want to sell our property a very low price and dont even come up or left with anything extra.

Be fair to all.
God Bless you

Thank you for attending this CTA Red Line Extension Project open house.

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Name PHYLLIS A JOHNSON
Address 9400 S. CALUMET
City CHICAGO State IL Zip 60619
Email Address PJ9400 @ GMAIL.COM

☒ *Check here to also receive updates about other projects along the Red Line.*

What specific comments or concerns do you have about the Red Line Extension alternatives, potential impacts, and mitigation measures?

- BRT IS UNACCEPTABLE
- I AM CONCERNED THAT CTA OR THEIR MGRS. of existing PARK + Rides (ARCHER ORANGE / Logan Sq - BLUE)
- I AM CONCERNED THAT CTA WILL NOT TAKE THE COMMUNITIES NEEDS INTO ACCOUNT AFTER THE DRAFT EIS IS COMPLETED.
- I AM CONCERNED ABOUT MITIGATING AIR POLLUTION DURING CONSTRUCTION + OPERATION

(OVER)

How do you use the following parks? (Check all that apply)

	Baseball / Softball / Basketball	Playground	Walking / Jogging	Community Events	Other	I do not use this park
Wendell Smith Park *(99th Street / Princeton Avenue)*	☐	☐	☐	☐	☐	☐
Fernwood Parkway *(Eggleston Avenue between 99th and 103rd Street)*	☐	☐	☐	☐	☒ SWIMMING POOL	☐
Block Park *(103rd Street / Harvard Avenue)*	☐	☐	☐	☐	☐	☐

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Additional Comments:

- I BELIEVE THE WEST STATION OPTION WILL PROVIDE CTA SERVICE TO AN EMBARASSINGLY UNDERSERVED (BY CTA) COMMUNITY.

- I BELIEVE THE GREATER ECONOMIC OPPORTUNITY FOR THE CTA, THE CITY + THE COMMUNITY IS THE CURRENT PERFERRED OPTION

Thank you for attending this CTA Red Line Extension Project open house.

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transitchicago.com/redeis
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Name Beth Eckerty
Address 13208 S. Exchange Ave
City Chicago State IL Zip 60633
Email Address betheckerty@hotmail.com

☐ *Check here to also receive updates about other projects along the Red Line.*

What specific comments or concerns do you have about the Red Line Extension alternatives, potential impacts, and mitigation measures?

- Except for the service to Altgeld, bus rapid transit does not provide much over the existing alternatives - especially without designated lanes.

- Halsted rail alternative doesn't serve underserved communities to the east (and impacts historic properties)

How do you use the following parks? (Check all that apply)

	Baseball / Softball / Basketball	Playground	Walking / Jogging	Community Events	Other	I do not use this park
Wendell Smith Park *(99th Street / Princeton Avenue)*	☐	☐	☐	☐	☐	☒
Fernwood Parkway *(Eggleston Avenue between 99th and 103rd Street)*	☐	☐	☐	☐	☐	☒
Block Park *(103rd Street / Harvard Avenue)*	☐	☐	☐	☐	☐	☒

cta

Additional Comments:

* My primary concern is service to the communities East of State - Altgeld and Hegewisch. #30 needs to connect with a South or west station alternative - there are just as many people living E of Stoney Island as there are in Altgeld to the west.

Overall the UPRR alternative ~~or~~ seems to provide the fastest service to the largest # of people.
I think environmental concerns could be mitigated with careful planning - there is a large amount of vacant industrial space to utilize.

Thank you for attending this CTA Red Line Extension Project open house.

Comments may also be submitted via mail or e-mail to:
Chicago Transit Authority, Strategic Planning, 10th Floor, 567 W. Lake Street, Chicago, IL 60661-1465

@ RedExtension@transitchicago.com
transitchicago.com/redeis
facebook.com/thecta
@cta

Para informacion en Espanol, llame al (312) 681-2807
Customer Information: (888) YOUR-CTA (888 968-7282)

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Name David Ransburg
Address 9228 S May
City Chicago State IL Zip 60620
Email Address ransburgdavid@sbcglobal.net

☐ *Check here to also receive updates about other projects along the Red Line.*

What specific comments or concerns do you have about the Red Line Extension alternatives, potential impacts, and mitigation measures?

I do not like/agree with either Station location at 130th. The two locations are very poorly planned interms of serving the community. For better benifit to the system/community, have the CTA Station at 130th to terminate at the Ford motor plant and the surrounding industrial park. A better location would be the establishment of a major transfer point on

How do you use the following parks? (Check all that apply)

	Baseball / Softball / Basketball	Playground	Walking / Jogging	Community Events	Other	I do not use this park
Wendell Smith Park *(99th Street / Princeton Avenue)*	☐	☐	☐	☐	☐	☒
Fernwood Parkway *(Eggleston Avenue between 99th and 103rd Street)*	☐	☐	☐	☐	☐	☒
Block Park *(103rd Street / Harvard Avenue)*	☐	☐	☐	☐	☐	☒

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Additional Comments:

130th with Metra electric. Now CTA has access to more riders and riders can have access to points as far as South Bend, Ind (Nortre Dame Univ)

Thank you for attending this CTA Red Line Extension Project open house.

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facebook.com/thecta
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Name CHEENA CREDIT
Address 1022 W 108th st
City CHICAGO State IL Zip 60643
Email Address Cheenagc@aol.com

☐ *Check here to also receive updates about other projects along the Red Line.*

What specific comments or concerns do you have about the Red Line Extension alternatives, potential impacts, and mitigation measures?

FIRST, LET ME START BY STATING I FEEL LIKE I ~~B~~ WAS INVITED TO THE Party AFTER ITS STARTED.
① PROPERTY Values! CONCERNED w/ HOW THIS will EFFECT THE RE SALE Value.
② SENIOR RESIDENCE! THE PROPOSED ELEVATED RAIL LINE ALONG Eggleston HAS THE potential TO Displace SENIOR RESIDENCE. NOT ONLY THAT but you would be CHANGING THE ENVIRONMENT, INCREASING CAR AND PEDESTRIAN TRAFFIC.

How do you use the following parks? (Check all that apply)

	Baseball / Softball / Basketball	Playground	Walking / Jogging	Community Events	Other	I do not use this park
Wendell Smith Park (99th Street / Princeton Avenue)	☐	☐	☐	☐	☐	☒
Fernwood Parkway (Eggleston Avenue between 99th and 103rd Street)	☐	☒	☐	☐	☐	☐
Block Park (103rd Street / Harvard Avenue)	☐	☐	☒	☐	☐	☐

cta

Additional Comments:

2 CONT.; IF FORCED TO Sale will I get compensated.
AND FAIR MARKET Value, WHO DeterMINES THAT.
Is THAT BASED ON TODAYS COST.
③ ENVIRONMENT
④ INCREASED CRIME?

Thank you for attending this CTA Red Line Extension Project open house.

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Name CLARINE Eggleston
Address 735 W 115th St.
City Chicago, IL State IL Zip 60628
Email Address

☑ *Check here to also receive updates about other projects along the Red Line.*

What specific comments or concerns do you have about the Red Line Extension alternatives, potential impacts, and mitigation measures?

It appears to me that your concern is not for the residents. Your primary focus seems to be what can bring the most money for those who will invest in this project. I find that government has little or no concern for the people, even though they say they do. I will be praying that God will do what is best for the population at large and that greed will not dictate your decision.

How do you use the following parks? (Check all that apply)

	Baseball / Softball / Basketball	Playground	Walking / Jogging	Community Events	Other	I do not use this park
Wendell Smith Park (99th Street / Princeton Avenue)	☐	☐	☐	☐	☐	☑
Fernwood Parkway (Eggleston Avenue between 99th and 103rd Street)	☐	☐	☐	☐	☐	☑
Block Park (103rd Street / Harvard Avenue)	☐	☐	☐	☐	☐	☑

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Additional Comments:

I have lived at my current resident 1971. I cannot imagine day in and day out listening to a train as it constantly goes by.

I would hate to see an over head train one-half block from my house.

This is a residential area and it would be inappropriate to alter my community to that degree.

If you wanted to buy my property, I would not object, but I definitely would not want to live there if these changes occurred.

Thank you for attending this CTA Red Line Extension Project open house.

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Name Robert E. Wordlaw

Address 29 E. Madison Street

City Chicago State IL Zip 60602

Email Address bdb@cjc.net

☒ *Check here to also receive updates about other projects along the Red Line.*

What specific comments or concerns do you have about the Red Line Extension alternatives, potential impacts, and mitigation measures?

To ensure that local residents have equal access to some of the projected 2,000 plus construction jobs, the CTA needs to enter into a Community Benefit Agreement with the Developing Community Project. A draft of such an agreement with the assistance of a pro bono law firm is currently being drafted.

(Continues on the back)

How do you use the following parks? (Check all that apply)

	Baseball / Softball / Basketball	Playground	Walking / Jogging	Community Events	Other	I do not use this park
Wendell Smith Park (99th Street / Princeton Avenue)	☐	☐	☐	☐	☐	☐
Fernwood Parkway (Eggleston Avenue between 99th and 103rd Street)	☐	☐	☐	☐	☐	☐
Block Park (103rd Street / Harvard Avenue)	☐	☐	☐	☐	☐	☐

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Additional Comments:

Entering into a CBA with a local recognized community group could become ~~how~~ of a model / for local residents can successfully obtain training and jobs on other public works projects. Being discussions and negotiations with DCP early would be a way defusing the tension surely to arise regarding employment opportunities for local residents. DCP's Workforce Collaborative is willing and able to discuss this matter in more detail whenever the CTA calls.

Thank you for attending this CTA Red Line Extension Project open house.

Comments may also be submitted via mail or e-mail to:
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Name Jeanette Slone
Address 10553 S. Lafayette
City Chicago State Ill Zip 66628
Email Address jslone6@sbcglobal.net

☑ *Check here to also receive updates about other projects along the Red Line.*

What specific comments or concerns do you have about the Red Line Extension alternatives, potential impacts, and mitigation measures?

I'm excited to see the red line extended to 130th Street. Please don't pick the Bus Route. I know it is cheaper and less impact on community but it won't improve commute. The Halsted/Rail Alternative will make too much of an impact in regard of properties.

How do you use the following parks? (Check all that apply)

	Baseball / Softball / Basketball	Playground	Walking / Jogging	Community Events	Other	I do not use this park
Wendell Smith Park *(99th Street / Princeton Avenue)*	☐	☐	☐	☐	☐	☑
Fernwood Parkway *(Eggleston Avenue between 99th and 103rd Street)*	☐	☐	☐	☐	☐	☑
Block Park *(103rd Street / Harvard Avenue)*	☐	☐	☐	☐	☐	☑

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Additional Comments:

My first time coming to this type of meeting. I learned a lot. I Hope to come to the next one when make final decesion.
Thanks for hiring sign language interpreter,

Thank you for attending this CTA Red Line Extension Project open house.

Comments may also be submitted via mail or e-mail to:
Chicago Transit Authority, Strategic Planning, 10th Floor, 567 W. Lake Street, Chicago, IL 60661-1465

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Name Charles BrowN
Address 12 WesT 115th STreet
City Chicago State ILL Zip 60628
Email Address Jhuh1951@yahoo.Com

☑ *Check here to also receive updates about other projects along the Red Line.*

What specific comments or concerns do you have about the Red Line Extension alternatives, potential impacts, and mitigation measures?

Only concerN is iF My home will be ACquired AND iF NoT how A CTA STop would AFFecT the property left behind

How do you use the following parks? (Check all that apply)

	Baseball / Softball / Basketball	Playground	Walking / Jogging	Community Events	Other	I do not use this park
Wendell Smith Park *(99th Street / Princeton Avenue)*	☐	☐	☐	☐	☐	☑
Fernwood Parkway *(Eggleston Avenue between 99th and 103rd Street)*	☐	☐	☐	☐	☐	☑
Block Park *(103rd Street / Harvard Avenue)*	☐	☐	☐	☐	☐	☑

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Additional Comments:

My wife and I have been attending these meetings
for a couple of years and we still don't know
the route or the date the construction will start
we would appreciate getting those concrete details

Thank you for attending this CTA Red Line Extension Project open house.

Comments may also be submitted via mail or e-mail to:
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@ RedExtension@transitchicago.com
transitchicago.com/redeis
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Name STELLA BROWN

Address 12 WEST 115th STREET

City Chicago State IL Zip 60628

Email Address Creolestubbie @ yahoo.com

☑ Check here to also receive updates about other projects along the Red Line.

What specific comments or concerns do you have about the Red Line Extension alternatives, potential impacts, and mitigation measures?

① My biggest concern the whether or not my property will be impacted by the traffic, noise, pollution + the vibrations of the TRAIN.

② Where will the station, parking + tracks be placed?

(Please See Attachment)

How do you use the following parks? (Check all that apply)

	Baseball / Softball / Basketball	Playground	Walking / Jogging	Community Events	Other	I do not use this park
Wendell Smith Park (99th Street / Princeton Avenue)	☐	☐	☐	☐	☐	☑
Fernwood Parkway (Eggleston Avenue between 99th and 103rd Street)	☐	☐	☐	☑	☑	☐
Block Park (103rd Street / Harvard Avenue)	☐	☐	☐	☐	☐	☑

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May 13, 2014

Red Line Extension Project

To whom it may Concern:

We as residents of 115th and State Street would like to know exactly where the purposed station, the tracks and the parking are going to be at the Michigan Avenue (115th Street Station). In the past we were told various things, such as an Aldi's was to be built at 115th and State. Then all of a sudden the sign disappeared and there is only vacant land from Michigan to State.

Since an environmental survey was done, what are the results for the area where are homes are located? How far east or west, north or south did the survey go? The majority of our homes were built in the late 1800's, hence the name West Pullman, so how will the noise and the vibrations affect the foundation of our home.

Sincerely,

Charles and Stella Brown

12 West 115th Street

Chicago IL 60628

773 928 6950

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Name Sammie FORD

Address 11518 So. LASalle st

City Chicago State IL Zip 60628

Email Address SAmmie FORD22@yAHooo.COM.

☒ Check here to also receive updates about other projects along the Red Line.

What specific comments or concerns do you have about the Red Line Extension alternatives, potential impacts, and mitigation measures?

How do you use the following parks? (Check all that apply)

	Baseball / Softball / Basketball	Playground	Walking / Jogging	Community Events	Other	I do not use this park
Wendell Smith Park (99th Street / Princeton Avenue)	☒	☐	☒	☒	☐	☐
Fernwood Parkway (Eggleston Avenue between 99th and 103rd Street)	☐	☐	☐	☐	☐	☐
Block Park (103rd Street / Harvard Avenue)	☐	☐	☐	☐	☐	☐

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Name Donald M. Branch
Address 11607 S. Peoria St.
City Chicago State IL Zip 60643
Email Address

☒ *Check here to also receive updates about other projects along the Red Line.*

What specific comments or concerns do you have about the Red Line Extension alternatives, potential impacts, and mitigation measures?

Please, do not have it circle around Altgale Gardens Housing Project. We already see enough of their vandalizm and food trash at 95th Street and on the No. 34 South Michigan Bus. I would like to see the 130th Street station on the north side of 130th Street.

How do you use the following parks? (Check all that apply)

	Baseball / Softball / Basketball	Playground	Walking / Jogging	Community Events	Other	I do not use this park
Wendell Smith Park *(99th Street / Princeton Avenue)*	☐	☐	☐	☐	☐	☒
Fernwood Parkway *(Eggleston Avenue between 99th and 103rd Street)*	☐	☐	☐	☐	☐	☒
Block Park *(103rd Street / Harvard Avenue)*	☐	☐	☐	☐	☐	☒

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Name BETTY JONES
Address 9921 S. YALE
City Chgo State Ill Zip 60628
Email Address

☑ Check here to also receive updates about other projects along the Red Line.

What specific comments or concerns do you have about the Red Line Extension alternatives, potential impacts, and mitigation measures?

I will welcome the extension of the Red line in the Wendell Smith Park area.

How do you use the following parks? (Check all that apply)

	Baseball / Softball / Basketball	Playground	Walking / Jogging	Community Events	Other	I do not use this park
Wendell Smith Park *(99th Street / Princeton Avenue)*	☐	☐	☐	☑	☐	☐
Fernwood Parkway *(Eggleston Avenue between 99th and 103rd Street)*	☐	☐	☐	☐	☐	☐
Block Park *(103rd Street / Harvard Avenue)*	☐	☐	☐	☐	☐	☐

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Name DANIEL E PATE
Address 345 W. 99PL.
City CHICAGO State ILL, Zip 60628
Email Address

☐ *Check here to also receive updates about other projects along the Red Line.*

What specific comments or concerns do you have about the Red Line Extension alternatives, potential impacts, and mitigation measures?

CONCERN ABOUT MY HOUSE BEING TORN DOWN.
345 W. 99PL.

How do you use the following parks? (Check all that apply)

	Baseball / Softball / Basketball	Playground	Walking / Jogging	Community Events	Other	I do not use this park
Wendell Smith Park *(99th Street / Princeton Avenue)*	☐	☐	☑	☐	☐	☐
Fernwood Parkway *(Eggleston Avenue between 99th and 103rd Street)*	☐	☐	☐	☐	☐	☐
Block Park *(103rd Street / Harvard Avenue)*	☐	☐	☐	☐	☐	☐

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Name JuLie A PAte

Address 345 W 99PL.

City Chicago State IL Zip 60628

Email Address LadyJULIEANN1@yAhoo.Com

☐ *Check here to also receive updates about other projects along the Red Line.*

What specific comments or concerns do you have about the Red Line Extension alternatives, potential impacts, and mitigation measures?

I Live At 345 West 99tH Place
will my house be in the ~~Past~~ PAtH of the Red
Line.

How do you use the following parks? (Check all that apply)

	Baseball / Softball / Basketball	Playground	Walking / Jogging	Community Events	Other	I do not use this park
Wendell Smith Park *(99th Street / Princeton Avenue)*	☑	☑	☑	☑	☐	☐
Fernwood Parkway *(Eggleston Avenue between 99th and 103rd Street)*	☐	☐	☐	☐	☐	☐
Block Park *(103rd Street / Harvard Avenue)*	☐	☐	☐	☐	☐	☐

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Name ELi WasHINgToN

Address 501 E 90 Place

City CHgo State IL Zip 19

Email Address ChesterField@ameRITech.NET

☒ *Check here to also receive updates about other projects along the Red Line.*

What specific comments or concerns do you have about the Red Line Extension alternatives, potential impacts, and mitigation measures?

INSURING minority Business participation oN this project.

How do you use the following parks? (Check all that apply)

	Baseball / Softball / Basketball	Playground	Walking / Jogging	Community Events	Other	I do not use this park
Wendell Smith Park *(99th Street / Princeton Avenue)*	☐	☐	☐	☐	☐	☐
Fernwood Parkway *(Eggleston Avenue between 99th and 103rd Street)*	☐	☐	☐	☐	☐	☐
Block Park *(103rd Street / Harvard Avenue)*	☐	☐	☐	☐	☐	☐

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Name Deborah Pierce

Address 11 EAST 103rd Pl

City Chgo State IL Zip 60628

Email Address PDPierce 8888 @ Sbc Global. net

☑ *Check here to also receive updates about other projects along the Red Line.*

What specific comments or concerns do you have about the Red Line Extension alternatives, potential impacts, and mitigation measures?

I am concern about the traffic in the area, and my Home. and also bus Service.

How do you use the following parks? (Check all that apply)

	Baseball / Softball / Basketball	Playground	Walking / Jogging	Community Events	Other	I do not use this park
Wendell Smith Park *(99th Street / Princeton Avenue)*	☐	☐	☑	☑	☐	☐
Fernwood Parkway *(Eggleston Avenue between 99th and 103rd Street)*	☐	☐	☑	☑	☐	☐
Block Park *(103rd Street / Harvard Avenue)*	☐	☐	☑	☑	☐	☐

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Name Nancy Wimberly

Address (See attached letter.).

City State Zip

Email Address 9137psnw@sbcglobal.net

☐ *Check here to also receive updates about other projects along the Red Line.*

What specific comments or concerns do you have about the Red Line Extension alternatives, potential impacts, and mitigation measures?

Please see attachment letter.
Why this meeting today? A focus group is needed before plans are made.
This meeting is probably just a "formality" to say "We asked you for your input."
CTA officials have already decided what will be done. This "Open House" is an insult to the average man's intelligence.

How do you use the following parks? (Check all that apply)

	Baseball / Softball / Basketball	Playground	Walking / Jogging	Community Events	Other	I do not use this park
Wendell Smith Park *(99th Street / Princeton Avenue)*	☐	☐	☐	☐	☐	☐
Fernwood Parkway *(Eggleston Avenue between 99th and 103rd Street)*	☐	☐	☐	☐	☐	☐
Block Park *(103rd Street / Harvard Avenue)*	☐	☐	☐	☐	☐	☐

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Wimberly and Associates
10531 South Calumet Avenue
Chicago, Illinois 60628
(773) 568-0949

Mr. Gerald Nichols
Representative - CTA
CTA Government and Community Relations
Chicago, Illinois

May 7, 2014

Subject: **95th Street Red Line Extension Project**

Issues: *Accountability, Transparency, Economic Benefits (if any) for 9th Ward Residents

Dear Mr. Nichols:

This is a letter requesting specific, **written answers** to important questions regarding the Proposed 95th Street CTA Red Line Extension.

Please provide the complete list of addresses of homes and businesses slated for demolition in the 9th ward for the 95th Street Red Line Extension Project along both proposed routes.

Where is the complete budget?

According to The Sun-Times:

Construction of a new station at the end of the Current Red Line	$240 million
Five mile plus extension of the Red Line from 95th to 130th Street	$ 2 billion

Furthermore, sources indicate that there is an additional $425 million plan to close the Red Line for 5 months with the argument that the closure Is needed because the current 95th Street Station has to be rebuilt (even) before it can be extended. Whose fault is that? What have the Aldermen done to take care of their communities on the South Side?

This awful, decrepit condition of the 95th Street Station is the result of years of neglect on the upkeep and safety of the 95th Street Station. Currently, the station is filthy. The concrete block with railings on the east side of the bus terminal is broken in spots, the rails are rusted. There is no evidence that the station has been painted or power washed in years.

Please list the complete, itemized budget for all persons receiving payment. Please list the business names, owners and addresses of all persons receiving compensation. **Who's really making the money on this project?**

Companies	Contracts Amounts
Electrical contractors	$__________
Mechanical engineers	$__________
Architectural firms	$__________
Wrecking companies	$__________
Painters	$__________
Trash removal/ disposal companies	$__________
HVAC companies and specialists	$__________
Security systems installers	$__________
Construction companies	$-__________
Portable toilet(s) companies	$__________
Project consultants	$ __________
Specialized Equipment	$__________
Lawyers, legal fees, etc.	$__________
Any and all other persons receiving compensation	

85% of jobs must reflect the racial diversity of the community in which the construction project(s) will take place (9th Ward). Who's responsible for making this happen for our community?

Who is Melody Carvajal? Who is Melody McKissack?

CTA's Relocation Consultant is Melody Carvajal. What is her job description? What is her **annual salary?** Who appointed her to this position? Is she a licensed real estate broker? Is she an urban planner? What are her educational and financial credentials? What are her previous achievements as a relocation consultant? Why isn't her voice mail box not yet even set up?

We are requesting a complete list of addresses of all homes and businesses in the 9th ward that will be destroyed.

The people who bought homes in Roseland in the 70's and 80's were young parents buying their first home. And guess what? When the color changes, the service changes. Today, these young parents are now senior citizens on fixed incomes who raised their children, put them through college, took care of elderly parents and paid property taxes all these years. They have roots here. They have neighbors who look out for them in extreme heat and inclement weather. Their homes are part of their legacies that can be passed on to their children. Their fixed incomes and property taxes pay salaries for corrupt politicians at City Hall.

However, sources indicate that Rahm Emanuel only wants to give homeowners what they originally paid for their homes. Please explain how this scheme benefits families whose homes are demolished and taken away from them.

For the record, any and all homeowners who lose their homes must be compensated according to replacement cost value (as determined in their homeowner's **insurance policies)** – not historical evaluation. Homeowners should be compensated for moving expenses and/or relocation costs, home inspections and closing costs on their new home. Displaced homeowners have the right to make a lateral move with no increase in property taxes, homeowners insurance and/or water bills. We need a written, detailed explanation and specific information on how these families will be compensated for their homes being destroyed.

What are the hourly parking fees (rates) for the 4 new stations' parking facilities?

If the purpose of a focus group is to gather data and input, why is this Focus Group being held after all the plans and budgets have been made? How many 9th Ward residents were involved in the initial stages of planning? Is this meeting just a "formality" to say, "Yes. We included you."

This is only Part I of a series of unanswered questions about the Red Line Project. Please send a written response within the next 3 business days. Thank you.

Respectfully,

Nancy Wimberly

cc: Rosemoor Community Association
    Concerned Community Defenders

RED AHEAD
Moving Ahead to a Better Red

Red Line Extension

WE WANT YOUR INPUT

on the Red Line Extension Project

This project is one part of the Red Ahead Program, CTA's comprehensive initiative for maintaining, modernizing, and expanding Chicago's most-traveled rail line. CTA is interested in hearing your thoughts on the project. Please PRINT.

Name JONATHAN SUMMERS

Address 10731 S. Eggleston

City Chicago State IL Zip 60628

Email Address Jonathan. Summers 1959@Yahoo .Com

☑ Check here to also receive updates about other projects along the Red Line.

What specific comments or concerns do you have about the Red Line Extension alternatives, potential impacts, and mitigation measures?

WHAT is the potential Impact to my Residence?
NOISE, possible displacement? property Acquisition?

How do you use the following parks? (Check all that apply)

	Baseball / Softball / Basketball	Playground	Walking / Jogging	Community Events	Other	I do not use this park
Wendell Smith Park (99th Street / Princeton Avenue)	☐	☐	☐	☐	☐	☐
Fernwood Parkway (Eggleston Avenue between 99th and 103rd Street)	☐	☒	☒	☒	☐	☐
Block Park (103rd Street / Harvard Avenue)	☐	☐	☐	☐	☐	☐

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Name Roberta Walker

Address 11701 S. State #209

City Chicago State IL Zip 60628-5808

Email Address robertawalker2@yahoo.com

☒ Check here to also receive updates about other projects along the Red Line.

What specific comments or concerns do you have about the Red Line Extension alternatives, potential impacts, and mitigation measures?

With regard the certain Historic sites / dwellings this extension should bring an awareness the Pullman Roseland area.
It should also finally bring an end to the transporation desert that has separated this portion of the city from the rest of Chicago.
Bravo !!

How do you use the following parks? (Check all that apply)

	Baseball / Softball / Basketball	Playground	Walking / Jogging	Community Events	Other	I do not use this park
Wendell Smith Park (99th Street / Princeton Avenue)	☐	☐	☒	☐	☐	☐
Fernwood Parkway (Eggleston Avenue between 99th and 103rd Street)	☐	☐	☐	☐	☒	☐
Block Park (103rd Street / Harvard Avenue)	☐	☐	☐	☐	☐	☒

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RED AHEAD *Moving Ahead to a Better Red* **Red Line Extension**

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Name BARBARA LEE

Address 40 West 99th Street

City Chgo State IL. Zip 60628-1360

Email Address

☑ *Check here to also receive updates about other projects along the Red Line.*

What specific comments or concerns do you have about the Red Line Extension alternatives, potential impacts, and mitigation measures?

My chief concern is the probable loss thru sale of my home.

How will this project be different from the Englewood plan which resulted in the sale of many homes many years ago and the land remains vacant?

How do you use the following parks? (Check all that apply)

	Baseball / Softball / Basketball	Playground	Walking / Jogging	Community Events	Other	I do not use this park
Wendell Smith Park (99th Street / Princeton Avenue)	☐	☐	☐	☐	☐	☑
Fernwood Parkway (Eggleston Avenue between 99th and 103rd Street)	☐	☐	☐	☐	☐	☑
Block Park (103rd Street / Harvard Avenue)	☐	☐	☐	☐	☐	☑

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5/13/14

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Name Deanna Burrell

Address 1000 E. 87th St

City Chgo State IL Zip 60619

Email Address deanna @ WVON.com

☒ *Check here to also receive updates about other projects along the Red Line.*

What specific comments or concerns do you have about the Red Line Extension alternatives, potential impacts, and mitigation measures?

I agree with the extension.
I prefer the upper rail options.
This forum was very informative.
Good luck.

How do you use the following parks? (Check all that apply)

	Baseball / Softball / Basketball	Playground	Walking / Jogging	Community Events	Other	I do not use this park
Wendell Smith Park *(99th Street / Princeton Avenue)*	☐	☐	☐	☐	☐	☑
Fernwood Parkway *(Eggleston Avenue between 99th and 103rd Street)*	☐	☐	☐	☐	☐	☒
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Name Alvin Love
Address 11311 S. Union
City Chicago State IL Zip 60628
Email Address RevLuv@MSN.COM

☑ *Check here to also receive updates about other projects along the Red Line.*

What specific comments or concerns do you have about the Red Line Extension alternatives, potential impacts, and mitigation measures?

In a 2009 referendum, the Community voted to recommend the "Community Route", which follows the Union Pacific rail lines. There were 43,000 people who voted, making it the largest referendum in Chicago history. It is my hope that the Choice of the Community will be honored!

How do you use the following parks? (Check all that apply)

	Baseball / Softball / Basketball	Playground	Walking / Jogging	Community Events	Other	I do not use this park
Wendell Smith Park *(99th Street / Princeton Avenue)*	☐	☐	☐	☐	☐	☑
Fernwood Parkway *(Eggleston Avenue between 99th and 103rd Street)*	☐	☐	☐	☐	☐	☐
Block Park *(103rd Street / Harvard Avenue)*	☐	☐	☐	☐	☐	☑

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Name Georgia Bonner

Address 10423 S. Green St

City Chicago State Il Zip 60643

Email Address

☐ *Check here to also receive updates about other projects along the Red Line.*

What specific comments or concerns do you have about the Red Line Extension alternatives, potential impacts, and mitigation measures?

Should Not be Constructed on or Near Halsted Street
Displacement of homes and Historical buildings is not an option
I recommend faster, more efficient buses for comute

How do you use the following parks? (Check all that apply)

	Baseball / Softball / Basketball	Playground	Walking / Jogging	Community Events	Other	I do not use this park
Wendell Smith Park *(99th Street / Princeton Avenue)*	☐	☐	☐	☐	☐	☐
Fernwood Parkway *(Eggleston Avenue between 99th and 103rd Street)*	☑	☑	☑	☐	☐	☐
Block Park *(103rd Street / Harvard Avenue)*	☐	☐	☐	☐	☐	☐

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Name Lee E FLOYd

Address 355 W. 99th Pl.

City ChiCAGO State ILL Zip 60628

Email Address

☑ *Check here to also receive updates about other projects along the Red Line.*

What specific comments or concerns do you have about the Red Line Extension alternatives, potential impacts, and mitigation measures?

How do you use the following parks? (Check all that apply)

	Baseball / Softball / Basketball	Playground	Walking / Jogging	Community Events	Other	I do not use this park
Wendell Smith Park *(99th Street / Princeton Avenue)*	☐	☐	☑	☑	☑	☐
Fernwood Parkway *(Eggleston Avenue between 99th and 103rd Street)*	☐	☐	☐	☐	☐	☐
Block Park *(103rd Street / Harvard Avenue)*	☐	☐	☑	☑	☑	☐

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Name JAMes T. FLOYd
Address 355 W. 99th PL.
City ChicAGO State ILL Zip 60628
Email Address

☑ Check here to also receive updates about other projects along the Red Line.

What specific comments or concerns do you have about the Red Line Extension alternatives, potential impacts, and mitigation measures?

WiLL We be ReLocAted & moving Expensives

How do you use the following parks? (Check all that apply)

	Baseball / Softball / Basketball	Playground	Walking / Jogging	Community Events	Other	I do not use this park
Wendell Smith Park *(99th Street / Princeton Avenue)*	☐	☐	☑	☑	☑	☐
Fernwood Parkway *(Eggleston Avenue between 99th and 103rd Street)*	☐	☐	☐	☐	☐	☐
Block Park *(103rd Street / Harvard Avenue)*	☐	☐	☑	☑	☑	☐

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Name Kevin Taylor
Address 341 W. 99th pl
City Chicago I. State IL Zip 60628
Email Address KevinTaylor255@Gmail.com

☐ *Check here to also receive updates about other projects along the Red Line.*

What specific comments or concerns do you have about the Red Line Extension alternatives, potential impacts, and mitigation measures?

The Rail or Tracks should go Down, Halsted, The present Rail tracks are already doing a lot of Damage to our Homes foundation. and also our property Value Will Drastically Decrease if you allow a Train to Run ~~aton~~ every 10 min.

How do you use the following parks? (Check all that apply)

	Baseball / Softball / Basketball	Playground	Walking / Jogging	Community Events	Other	I do not use this park
Wendell Smith Park *(99th Street / Princeton Avenue)*	☒	☒	☒	☒	☒	☐
Fernwood Parkway *(Eggleston Avenue between 99th and 103rd Street)*	☐	☐	☐	☐	☐	☐
Block Park *(103rd Street / Harvard Avenue)*	☐	☐	☐	☐	☐	☐

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Name Rev. Alice Harper-Jones
Address PO Box 208491
City Chicago State Il Zip 60620
Email Address alicehj19@gmail.com

☐ *Check here to also receive updates about other projects along the Red Line.*

What specific comments or concerns do you have about the Red Line Extension alternatives, potential impacts, and mitigation measures?

How much gwine will The community Contractors to be involved in The Construction process?

How do you use the following parks? (Check all that apply)

	Baseball / Softball / Basketball	Playground	Walking / Jogging	Community Events	Other	I do not use this park
Wendell Smith Park *(99th Street / Princeton Avenue)*	☐	☐	☐	☐	☐	☐
Fernwood Parkway *(Eggleston Avenue between 99th and 103rd Street)*	☐	☐	☐	☐	☐	☐
Block Park *(103rd Street / Harvard Avenue)*	☐	☐	☐	☐	☐	☐

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Name SHARON Bell

Address 1250 W. 112th Pl.

City Chgo State Il Zip 60643

Email Address sharonbell1250@comcast.net

☑ *Check here to also receive updates about other projects along the Red Line.*

What specific comments or concerns do you have about the Red Line Extension alternatives, potential impacts, and mitigation measures?

148

1) Concerned with safety of elevated tracks and potential crimes change in element ie: 63rd street.

2) What about elderly that are on fixed incomes have paid their mortgage and now with relocation they maybe faced with a mortgage.

How do you use the following parks? (Check all that apply)

	Baseball / Softball / Basketball	Playground	Walking / Jogging	Community Events	Other	I do not use this park
Wendell Smith Park *(99th Street / Princeton Avenue)*	☐	☐	☐	☐	☐	☒
Fernwood Parkway *(Eggleston Avenue between 99th and 103rd Street)*	☐	☐	☐	☐	☐	☒
Block Park *(103rd Street / Harvard Avenue)*	☐	☐	☐	☐	☐	☒

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Name ROSie lee BAXTER
Address 250 W. 106th
City ChiCAGO State Ill Zip 60628
Email Address RB76814@gmAil.COM

☑ *Check here to also receive updates about other projects along the Red Line.*

What specific comments or concerns do you have about the Red Line Extension alternatives, potential impacts, and mitigation measures?

How do you use the following parks? (Check all that apply)

	Baseball / Softball / Basketball	Playground	Walking / Jogging	Community Events	Other	I do not use this park
Wendell Smith Park *(99th Street / Princeton Avenue)*	☐	☐	☐	☐	☐	☑
Fernwood Parkway *(Eggleston Avenue between 90th and 103rd Street)*	☐	☐	☐	☐	☐	☑
Block Park *(103rd Street / Harvard Avenue)*	☐	☐	☐	☐	☐	☑

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Name WilliAM BAXTER

Address 250 W 106th ST

City ChicAgo State IL Zip 60628

Email Address BaXTeR PLACe @ AMERITeCh-NeT

☑ *Check here to also receive updates about other projects along the Red Line.*

What specific comments or concerns do you have about the Red Line Extension alternatives, potential impacts, and mitigation measures?

How do you use the following parks? (Check all that apply)

	Baseball / Softball / Basketball	Playground	Walking / Jogging	Community Events	Other	I do not use this park
Wendell Smith Park *(99th Street / Princeton Avenue)*	☐	☐	☐	☐	☐	☑
Fernwood Parkway *(Eggleston Avenue between 99th and 103rd Street)*	☐	☐	☐	☐	☐	☑
Block Park *(103rd Street / Harvard Avenue)*	☐	☐	☐	☐	☐	☑

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Name George Krupa
Address 10 South Riverside, Suite 400
City Chicago State IL Zip 60606
Email Address george.krupa@parsons.com

☒ *Check here to also receive updates about other projects along the Red Line.*

What specific comments or concerns do you have about the Red Line Extension alternatives, potential impacts, and mitigation measures?

What is the timeline for implementing this project

How do you use the following parks? (Check all that apply)

	Baseball / Softball / Basketball	Playground	Walking / Jogging	Community Events	Other	I do not use this park
Wendell Smith Park *(99th Street / Princeton Avenue)*	☐	☐	☐	☐	☐	☒
Fernwood Parkway *(Eggleston Avenue between 99th and 103rd Street)*	☐	☐	☐	☐	☐	☒
Block Park *(103rd Street / Harvard Avenue)*	☐	☐	☐	☐	☐	☒

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Name Annette Cain

Address 727 W. Vermont

City Chicago State IL Zip 60628

Email Address annettecain@ymail.com

☐ *Check here to also receive updates about other projects along the Red Line.*

What specific comments or concerns do you have about the Red Line Extension alternatives, potential impacts, and mitigation measures?

Our community organization do not want the Red line to come down Halsted. It will make it Dark, increase crime, and make a quiet community noisy

How do you use the following parks? (Check all that apply)

	Baseball / Softball / Basketball	Playground	Walking / Jogging	Community Events	Other	I do not use this park
Wendell Smith Park *(99th Street / Princeton Avenue)*	☐	☐	☐	☐	☐	☐
Fernwood Parkway *(Eggleston Avenue between 99th and 103rd Street)*	☐	☐	☐	☐	☐	☐
Block Park *(103rd Street / Harvard Avenue)*	☐	☐	☐	☐	☐	☐

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Name

Address

City State Zip

Email Address

☐ *Check here to also receive updates about other projects along the Red Line.*

What specific comments or concerns do you have about the Red Line Extension alternatives, potential impacts, and mitigation measures?

I ~~FEEL NOT~~ HAVE A BAD FEELING ABOUT THE ELEVATED OPTIONS

How do you use the following parks? (Check all that apply)

	Baseball / Softball / Basketball	Playground	Walking / Jogging	Community Events	Other	I do not use this park
Wendell Smith Park *(99th Street / Princeton Avenue)*	☐	☐	☐	☐	☐	☐
Fernwood Parkway *(Eggleston Avenue between 99th and 103rd Street)*	☐	☐	☐	☐	☐	☐
Block Park *(103rd Street / Harvard Avenue)*	☐	☐	☐	☐	☐	☐

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Name Anita Bridge
Address 10418 S. Eggleston
City Chicago State Il Zip 60628
Email Address abridge1121@gmail.com

☑ *Check here to also receive updates about other projects along the Red Line.*

What specific comments or concerns do you have about the Red Line Extension alternatives, potential impacts, and mitigation measures?

- Concern: If displaced will compensation pay off existing mortgage and assist with relocation (down payment)
- When will decision be made on the existing options.
- How soon will community be notified of existing option? (final decision) If relocation is needed - will efforts be made to keep homeowners "above water"?

How do you use the following parks? (Check all that apply)

	Baseball / Softball / Basketball	Playground	Walking / Jogging	Community Events	Other	I do not use this park
Wendell Smith Park *(99th Street / Princeton Avenue)*	☐	☐	☐	☐	☐	☑
Fernwood Parkway *(Eggleston Avenue between 99th and 103rd Street)*	☐	☐	☐	☑	☑	☐
Block Park *(103rd Street / Harvard Avenue)*	☐	☐	☐	☐	☐	☑

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Name JOHNIE R. MEDIOUS

Address 11834 S. PRAIRIE AVE.

City CHGO. State IL. Zip 60628

Email Address MEDIOUS@COMCAST.NET

☑ Check here to also receive updates about other projects along the Red Line.

What specific comments or concerns do you have about the Red Line Extension alternatives, potential impacts, and mitigation measures? WE ARE WAITING FOR IT TO START RUNNING.

How do you use the following parks? (Check all that apply)

	Baseball / Softball / Basketball	Playground	Walking / Jogging	Community Events	Other	I do not use this park
Wendell Smith Park *(99th Street / Princeton Avenue)*	☐	☐	☐	☐	☐	☒
Fernwood Parkway *(Eggleston Avenue between 99th and 103rd Street)*	☐	☐	☐	☐	☐	☒
Block Park *(103rd Street / Harvard Avenue)*	☐	☐	☐	☐	☐	☒

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Name Shirley M. Evans

Address 9242 S. Wabash Ave.

City Chicago State IL Zip 60619

Email Address shirleyevans@sbcglobal.net

☑ Check here to also receive updates about other projects along the Red Line.

What specific comments or concerns do you have about the Red Line Extension alternatives, potential impacts, and mitigation measures?

- ADDRESS Potential crime
- AREA should be kept clean
- well lite
- ADDRESS Potential loitering that might occur.

How do you use the following parks? (Check all that apply)

	Baseball / Softball / Basketball	Playground	Walking / Jogging	Community Events	Other	I do not use this park
Wendell Smith Park (99th Street / Princeton Avenue)	☐	☐	☐	☐	☐	☒
Fernwood Parkway (Eggleston Avenue between 99th and 103rd Street)	☐	☐	☐	☐	☐	☐
Block Park (103rd Street / Harvard Avenue)	☐	☐	☐	☐	☐	☒

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Name Charlean Preston
Address 10415 So. Eggleston
City Chicago State Il Zip 60628
Email Address raspberrywater647@yahoo.com

☒ Check here to also receive updates about other projects along the Red Line.

What specific comments or concerns do you have about the Red Line Extension alternatives, potential impacts, and mitigation measures?

If we have to relocate, just be fair.

How do you use the following parks? (Check all that apply)

	Baseball / Softball / Basketball	Playground	Walking / Jogging	Community Events	Other	I do not use this park
Wendell Smith Park *(99th Street / Princeton Avenue)*	☐	☐	☐	☐	☐	☒
Fernwood Parkway *(Eggleston Avenue between 99th and 103rd Street)*	☐	☐	☐	☐	☐	☒
Block Park *(103rd Street / Harvard Avenue)*	☐	☐	☐	☐	☐	☒

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Name Delois Coleman

Address 138 E 117th Place

City Chgo State IL Zip 60628

Email Address N/A

☒ *Check here to also receive updates about other projects along the Red Line.*

What specific comments or concerns do you have about the Red Line Extension alternatives, potential impacts, and mitigation measures?

Will it affect my home?

When will it start?

How long will this project take?

How do you use the following parks? (Check all that apply)

	Baseball / Softball / Basketball	Playground	Walking / Jogging	Community Events	Other	I do not use this park
Wendell Smith Park *(99th Street / Princeton Avenue)*	☐	☐	☐	☐	☐	☒
Fernwood Parkway *(Eggleston Avenue between 99th and 103rd Street)*	☐	☐	☐	☐	☐	☒
Block Park *(103rd Street / Harvard Avenue)*	☐	☐	☐	☐	☐	☒

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Name Pamela M Burden

Address 132 East 117th Place

City Chgo State IL Zip 60628

Email Address nursepb69@yahoo.com

☑ *Check here to also receive updates about other projects along the Red Line.*

What specific comments or concerns do you have about the Red Line Extension alternatives, potential impacts, and mitigation measures?

Will the Project directly affect my home?
When is either project projected to start?
How much notification will we be given?

How do you use the following parks? (Check all that apply)

	Baseball / Softball / Basketball	Playground	Walking / Jogging	Community Events	Other	I do not use this park
Wendell Smith Park *(99th Street / Princeton Avenue)*	☐	☐	☐	☐	☐	☑
Fernwood Parkway *(Eggleston Avenue between 99th and 103rd Street)*	☐	☐	☐	☐	☐	☑
Block Park *(103rd Street / Harvard Avenue)*	☐	☐	☐	☐	☐	☑

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Red Line Extension

WE WANT YOUR INPUT

on the Red Line Extension Project

This project is one part of the Red Ahead Program, CTA's comprehensive initiative for maintaining, modernizing, and expanding Chicago's most-traveled rail line. CTA is interested in hearing your thoughts on the project. Please PRINT.

Name Toni Stith

Address 1829 S. Bishop

City Chicago State IL. Zip 60643

Email Address

☐ *Check here to also receive updates about other projects along the Red Line.*

What specific comments or concerns do you have about the Red Line Extension alternatives, potential impacts, and mitigation measures?

What Percentage of Jobs will go to the Community.
Going Down Halsted is a bad option
I recommend travel Down Fraight Train Tracks will be the cheaper option

A train down state or michigan

How do you use the following parks? (Check all that apply)

	Baseball / Softball / Basketball	Playground	Walking / Jogging	Community Events	Other	I do not use this park
Wendell Smith Park *(99th Street / Princeton Avenue)*	☐	☐	☑	☐	☐	☐
Fernwood Parkway *(Eggleston Avenue between 99th and 103rd Street)*	☐	☐	☑	☐	☐	☐
Block Park *(103rd Street / Harvard Avenue)*	☐	☐	☑	☐	☐	☐

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Name LOURDES SOLORZANO (CADILLAC TRANSPORTATION INC DBE CERTIFY)

Address 8236 HIGHGATE COURT

City ORLAND PARK State IL Zip 60462

Email Address Cadillacti@gmail.COM

☐ *Check here to also receive updates about other projects along the Red Line.*

What specific comments or concerns do you have about the Red Line Extension alternatives, potential impacts, and mitigation measures?

TRUCKING - HAULING
(773) 447-5559

How do you use the following parks? (Check all that apply)

	Baseball / Softball / Basketball	Playground	Walking / Jogging	Community Events	Other	I do not use this park
Wendell Smith Park *(99th Street / Princeton Avenue)*	☐	☐	☐	☐	☐	☐
Fernwood Parkway *(Eggleston Avenue between 99th and 103rd Street)*	☐	☐	☐	☐	☐	☐
Block Park *(103rd Street / Harvard Avenue)*	☐	☐	☐	☐	☐	☐

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Name Geraldine Baldwin
Address 11118 So. Peoria St.
City Chgo. State IL. Zip 60643
Email Address N/A

☑ Check here to also receive updates about other projects along the Red Line.

What specific comments or concerns do you have about the Red Line Extension alternatives, potential impacts, and mitigation measures?

(1) How many homes will have to be displaced
near 111th & Peoria Chgo?
(2) are they going to demolish Cedar PARK Cemetary
on 127th & Halstead?
(3) Run the Red line project Near the Freight Trains,
(4) Do you have PlAns to prevent damage to
buildings/foundations?

How do you use the following parks? (Check all that apply)

	Baseball / Softball / Basketball	Playground	Walking / Jogging	Community Events	Other	I do not use this park
Wendell Smith Park (99th Street / Princeton Avenue)	☐	☐	☐	☐	☐	☐
Fernwood Parkway (Eggleston Avenue between 99th and 103rd Street)	☐	☐	☐	☐	☐	☐
Block Park (103rd Street / Harvard Avenue)	☐	☐	☐	☐	☐	☐

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Name Tony Lawson

Address

City Chicago State Ill Zip 60628

Email Address

☐ *Check here to also receive updates about other projects along the Red Line.*

What specific comments or concerns do you have about the Red Line Extension alternatives, potential impacts, and mitigation measures?

I had my house built, its paid for, I dont want to move or have the extra negative element near my home

How do you use the following parks? (Check all that apply)

	Baseball / Softball / Basketball	Playground	Walking / Jogging	Community Events	Other	I do not use this park
Wendell Smith Park *(99th Street / Princeton Avenue)*	☑	☑	☑	☑	☐	☐
Fernwood Parkway *(Eggleston Avenue between 99th and 103rd Street)*	☐	☑	☑	☐	☐	☐
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Name Igor Studenkov
Address 6165 N Winthrop Ave #214
City Chicago State IL Zip 60660
Email Address igorst3@hotmail.com

☐ *Check here to also receive updates about other projects along the Red Line.*

What specific comments or concerns do you have about the Red Line Extension alternatives, potential impacts, and mitigation measures?

I support the UPRR alternative - whether directly on the ROW or west/east of it. (though east seems to be the less disruptive of the two, so I guess I'd prefer that). I would ask CTA to consider potential transfer opportunities between Metra and CTA, especially near Kensington station

How do you use the following parks? (Check all that apply)

	Baseball / Softball / Basketball	Playground	Walking / Jogging	Community Events	Other	I do not use this park
Wendell Smith Park *(99th Street / Princeton Avenue)*	☐	☐	☐	☐	☐	☐
Fernwood Parkway *(Eggleston Avenue between 99th and 103rd Street)*	☐	☐	☐	☐	☐	☐
Block Park *(103rd Street / Harvard Avenue)*	☐	☐	☐	☐	☐	☐

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Name DeCota Wilmington
Address 11543 S. Throop
City Chicago State IL Zip 60643
Email Address dwilmington@sbcglobal.net

☒ *Check here to also receive updates about other projects along the Red Line.*

What specific comments or concerns do you have about the Red Line Extension alternatives, potential impacts, and mitigation measures?

State or Michigan to Altgeral Garden

How do you use the following parks? (Check all that apply)

	Baseball / Softball / Basketball	Playground	Walking / Jogging	Community Events	Other	I do not use this park
Wendell Smith Park *(99th Street / Princeton Avenue)*	☐	☐	☐	☐	☐	☒
Fernwood Parkway *(Eggleston Avenue between 99th and 103rd Street)*	☐	☐	☐	☐	☐	☒
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Name Carlos Nelson

Address 7901 So. Racine

City Chicago State IL Zip 60620

Email Address cnelson@gzgdc.org

☑ *Check here to also receive updates about other projects along the Red Line.*

What specific comments or concerns do you have about the Red Line Extension alternatives, potential impacts, and mitigation measures?

This project was designed 50 years ago so it is long overdue. The I-57 median was designed to accomodate a rapid transit line! Consider it and its impact!

How do you use the following parks? (Check all that apply)

	Baseball / Softball / Basketball	Playground	Walking / Jogging	Community Events	Other	I do not use this park
Wendell Smith Park *(99th Street / Princeton Avenue)*	☐	☐	☐	☐	☐	☑
Fernwood Parkway *(Eggleston Avenue between 99th and 103rd Street)*	☐	☐	☐	☐	☐	☑
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Name Christine Dungey

Address 9750 S. Eggleston

City Chicago State IL Zip 60628

Email Address

☐ *Check here to also receive updates about other projects along the Red Line.*

What specific comments or concerns do you have about the Red Line Extension alternatives, potential impacts, and mitigation measures?

When my polling place was changed to St thaddeus Church from Euclid Park(I voted there since 1967) that put me into another ward, precinct putting my house value to a lower value. Very frankly I feel as if I have been bamboozled! with your fair market pricing.

How do you use the following parks? (Check all that apply)

	Baseball / Softball / Basketball	Playground	Walking / Jogging	Community Events	Other	I do not use this park
Wendell Smith Park *(99th Street / Princeton Avenue)*	☐	☐	☐	☐	☐	☒
Fernwood Parkway *(Eggleston Avenue between 99th and 103rd Street)*	☐	☐	☐	☐	☐	☒
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Name CARlos NELSON

Address 9517 So. Bell

City ChicAGO State IL Zip 60643

Email Address cNElsoN@gagdc.org

☑ *Check here to also receive updates about other projects along the Red Line.*

What specific comments or concerns do you have about the Red Line Extension alternatives, potential impacts, and mitigation measures?

What ARE the population density Numbers within A ½ mile OR 1 mile RADIUS of each station on All Routes?

The UP option SEEMS to terminate in AN extremely low dense AREA! The HAlsted option would not only reach A larger population foot to toe but would Also have A bigger economic development impact Along the Halsted CORRidor AND the east west CORRidors

How do you use the following parks? (Check all that apply)

	Baseball / Softball / Basketball	Playground	Walking / Jogging	Community Events	Other	I do not use this park
Wendell Smith Park (99th Street / Princeton Avenue)	☐	☐	☐	☐	☐	☑
Fernwood Parkway (Eggleston Avenue between 99th and 103rd Street)	☐	☐	☐	☐	☐	☑
Block Park (103rd Street / Harvard Avenue)	☐	☐	☐	☐	☐	☑

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Name Melvin Thompson, Executive Director, The Endeleo Institute
Address 1947 W. 95th Street
City Chicago State IL Zip 60643
Email Address mrthompson@trinitychicago.org

☑ *Check here to also receive updates about other projects along the Red Line.*

What specific comments or concerns do you have about the Red Line Extension alternatives, potential impacts, and mitigation measures?

The salient impact of both the Red Line Extension and renovation of the 95th street station will be profound in terms of the economic significance along the 1/2 mile West Corridor at 95th street. Please ensure that attention is paid to this four-block area, west of the renovated station so the desired walkable community indeed comes to fruition.

How do you use the following parks? (Check all that apply)

	Baseball / Softball / Basketball	Playground	Walking / Jogging	Community Events	Other	I do not use this park
Wendell Smith Park *(99th Street / Princeton Avenue)*	☐	☐	☐	☐	☐	☐
Fernwood Parkway *(Eggleston Avenue between 99th and 103rd Street)*	☐	☐	☐	☐	☐	☐
Block Park *(103rd Street / Harvard Avenue)*	☐	☐	☐	☐	☐	☐

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Name ANGELA CONNER

Address 10018 S. EBERHART

City CHICAGO State IL Zip 60628

Email Address AYCONNER@SBCGLOBAL.NET

☒ *Check here to also receive updates about other projects along the Red Line.*

What specific comments or concerns do you have about the Red Line Extension alternatives, potential impacts, and mitigation measures?

IF THE EAST OPTION IS SELECTED I'M CONCERNED ABOUT THE NOISE.
ALSO I DON'T UNDERSTAND WHY THERE IS NO OPTION FOR THE RED LINE EXTENSION BEYOND 95TH DAN RYAN ON AROUND TO THE BISHOP FORD TO 130TH.
WHATEVER RAIL OPTION IS DECIDED THE BRT ALTERNATIVE SHOULD GO ALONG WITH IT. THE BUS SERVICE IN THAT AREA IS UNDER SERVICED NOW.

How do you use the following parks? (Check all that apply)

	Baseball / Softball / Basketball	Playground	Walking / Jogging	Community Events	Other	I do not use this park
Wendell Smith Park *(99th Street / Princeton Avenue)*	☐	☐	☐	☐	☐	☒
Fernwood Parkway *(Eggleston Avenue between 99th and 103rd Street)*	☐	☐	☐	☐	☐	☒
Block Park *(103rd Street / Harvard Avenue)*	☐	☐	☐	☐	☐	☒

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Name

Address

City State Zip

Email Address

☐ *Check here to also receive updates about other projects along the Red Line.*

What specific comments or concerns do you have about the Red Line Extension alternatives, potential impacts, and mitigation measures?

VERY DISAPPOINTED ABOUT THIS PRESENTATION, I'VE ATTENDED BEFORE AND IT DOESN'T LOOK AS THOUGH MUCH TECHNICAL PROGRESS HAS BEEN MADE; THIS SHOULD NOT BE A DECISION BASED ON PRETTY PICTURES; NEED MORE FINANCIAL & TRANSIT RELATED INFO. WHY TO ALTGELD GARDENS? WITH SO MANY VACANT LOTS, IT IS SHORT SIGHTED TO FOCUS ON THAT AREA SO FAR REMOVED FROM CITY CENTER. THANKS FOR YOUR CONSIDERATON.

How do you use the following parks? (Check all that apply)

	Baseball / Softball / Basketball	Playground	Walking / Jogging	Community Events	Other	I do not use this park
Wendell Smith Park *(99th Street / Princeton Avenue)*	☐	☐	☐	☐	☐	☐
Fernwood Parkway *(Eggleston Avenue between 99th and 103rd Street)*	☐	☐	☐	☐	☐	☐
Block Park *(103rd Street / Harvard Avenue)*	☐	☐	☐	☐	☐	☐

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Name Hulda Swan
Address 310 East 107 St.
City Chicago State Il. Zip 60628
Email Address

☒ *Check here to also receive updates about other projects along the Red Line.*

What specific comments or concerns do you have about the Red Line Extension alternatives, potential impacts, and mitigation measures?

My Concern is about the neighbor hood being Overwhelm with parking for bus and train.

How do you use the following parks? (Check all that apply)

	Baseball / Softball / Basketball	Playground	Walking / Jogging	Community Events	Other	I do not use this park
Wendell Smith Park *(99th Street / Princeton Avenue)*	☐	☐	☐	☐	☐	☒
Fernwood Parkway *(Eggleston Avenue between 99th and 103rd Street)*	☐	☐	☐	☐	☐	☒
Block Park *(103rd Street / Harvard Avenue)*	☐	☐	☐	☐	☐	☒

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Name JULIUS McKINNES (REC)
Address 10826 S. EDBROOKE
City CHICAGO IL State IL. Zip 60628
Email Address JULIUS4SERVICE@YAHOO.COM

☐ *Check here to also receive updates about other projects along the Red Line.*

What specific comments or concerns do you have about the Red Line Extension alternatives, potential impacts, and mitigation measures?

I LIKE THE RAIL IDEA BEST. THE HALSTED NOT NEAR TO A EXPRESSWAY.

How do you use the following parks? (Check all that apply)

	Baseball / Softball / Basketball	Playground	Walking / Jogging	Community Events	Other	I do not use this park
Wendell Smith Park *(99th Street / Princeton Avenue)*	☐	☐	☐	☐	☐	☒
Fernwood Parkway *(Eggleston Avenue between 99th and 103rd Street)*	☐	☐	☐	☐	☐	☒
Block Park *(103rd Street / Harvard Avenue)*	☐	☐	☐	☐	☐	☒

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Name Cynthia Anderson
Address 9336 S. Michigan Ave
City Chicago State IL Zip 60619
Email Address celaine108@aol.com

☑ *Check here to also receive updates about other projects along the Red Line.*

What specific comments or concerns do you have about the Red Line Extension alternatives, potential impacts, and mitigation measures?

Investigate the use and cost of using the Shaker Hts, OH rapid transit system for use along the proposed expansions,

What would be the impact on property values for existing neighborhoods surrounding the Red Line Extension Alternatives

How do you use the following parks? (Check all that apply)

	Baseball / Softball / Basketball	Playground	Walking / Jogging	Community Events	Other	I do not use this park
Wendell Smith Park *(99th Street / Princeton Avenue)*	☐	☐	☐	☐	☐	☑
Fernwood Parkway *(Eggleston Avenue between 99th and 103rd Street)*	☐	☐	☐	☐	☐	☑
Block Park *(103rd Street / Harvard Avenue)*	☐	☐	☐	☐	☐	☑

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Name Alonzo Anderson
Address 9336 So. Michigan Avenue
City Chicago State IL Zip 60619
Email Address alonzoma7@yahoo.com

☑ *Check here to also receive updates about other projects along the Red Line.*

What specific comments or concerns do you have about the Red Line Extension alternatives, potential impacts, and mitigation measures?

Have CTA considered using Rapid Transit Cars/Buses ~~[illegible]~~ on the new Halsted Rail Alternative Line? Since Halsted Street is two lanes running both North & South with a divider, it offers more space than Michigan Avenue for such a purpose. I have to believe that it will be more cost-effective than operating the existing red-line trains/cars on the Halsted Rail Alternative proposal?

How do you use the following parks? (Check all that apply)

	Baseball / Softball / Basketball	Playground	Walking / Jogging	Community Events	Other	I do not use this park
Wendell Smith Park (99th Street / Princeton Avenue)	☐	☐	☐	☐	☐	☒
Fernwood Parkway (Eggleston Avenue between 99th and 103rd Street)	☐	☐	☐	☐	☐	☒
Block Park (103rd Street / Harvard Avenue)	☐	☐	☐	☐	☐	☒

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Name Lawrence Moore
Address P.O. Box 87288
City Chicago State IL. Zip 60680
Email Address lawrencemoore2@yahoo.com

☑ *Check here to also receive updates about other projects along the Red Line.*

What specific comments or concerns do you have about the Red Line Extension alternatives, potential impacts, and mitigation measures?

As that I have been following the project since 2006, I think that the UPPR Alternative East Option would be the best selection because it would eliminate alot of the existing congestion at the 95th terminal, and it would give riders better options and access that would be coming from the South East Suburbs + Northwest Indiana. It would also allow for less congestion on the Bishop Ford Expressway, and allow for more jobs to open up in this corridor

How do you use the following parks? (Check all that apply)

	Baseball / Softball / Basketball	Playground	Walking / Jogging	Community Events	Other	I do not use this park
Wendell Smith Park (99th Street / Princeton Avenue)	☐	☐	☐	☐	☐	☑
Fernwood Parkway (Eggleston Avenue between 99th and 103rd Street)	☐	☐	☐	☐	☐	☑
Block Park (103rd Street / Harvard Avenue)	☐	☐	☐	☐	☐	☑

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Name OLIVER W SWAN
Address 310 E. 107Th
City CHICAGO State ILL Zip 60628
Email Address

☒ *Check here to also receive updates about other projects along the Red Line.*

What specific comments or concerns do you have about the Red Line Extension alternatives, potential impacts, and mitigation measures?

I HAVE NO CONCERNS, IT IS A GOOD THING TO HAVE A BETTER WAY TO TRAVER.
I LIVE 310 E 107 St FOR 45 YRS, SO IT TIME FOR US TO GET SOME EMPROMENT

How do you use the following parks? (Check all that apply)

	Baseball / Softball / Basketball	Playground	Walking / Jogging	Community Events	Other	I do not use this park
Wendell Smith Park *(99th Street / Princeton Avenue)*	☒	☐	☒	☒	☐	☐
Fernwood Parkway *(Eggleston Avenue between 99th and 103rd Street)*	☐	☐	☐	☐	☐	☐
Block Park *(103rd Street / Harvard Avenue)*	☐	☐	☐	☐	☐	☐

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Name Rhychell Barnes

Address

City State Zip

Email Address Rhychell_Barnes@att.net

☑ *Check here to also receive updates about other projects along the Red Line.*

What specific comments or concerns do you have about the Red Line Extension alternatives, potential impacts, and mitigation measures?

Your ideas, designed and staffs are really helpful and understand the visual public trasportation. I think Halstad Rail. May bring community to find more jobs. I hope people will try to give up some property. Please save and help them. People will feel upset. Also more Bus availalty in the Area.

How do you use the following parks? (Check all that apply)

	Baseball / Softball / Basketball	Playground	Walking / Jogging	Community Events	Other	I do not use this park
Wendell Smith Park *(99th Street / Princeton Avenue)*	☐	☐	☐	☐	☐	☑
Fernwood Parkway *(Eggleston Avenue between 99th and 103rd Street)*	☐	☐	☐	☐	☐	☑
Block Park *(103rd Street / Harvard Avenue)*	☐	☐	☐	☐	☐	☑

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Name Velvetta Young

Address 400 E. 111th St

City Chicago State IL Zip 60628

Email Address yvel@aol.com

☑ *Check here to also receive updates about other projects along the Red Line.*

What specific comments or concerns do you have about the Red Line Extension alternatives, potential impacts, and mitigation measures?

Please provide a though cleaning of the current 95th Street station. The steps are filthy and the escalator was broke

How do you use the following parks? (Check all that apply)

	Baseball / Softball / Basketball	Playground	Walking / Jogging	Community Events	Other	I do not use this park
Wendell Smith Park *(99th Street / Princeton Avenue)*	☐	☐	☐	☐	☐	☑
Fernwood Parkway *(Eggleston Avenue between 99th and 103rd Street)*	☐	☐	☐	☐	☐	☑
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Name Velvetta Young
Address 400 E. 111th Street
City Chicago State IL Zip 60628
Email Address y7vel@aol.com

☑ *Check here to also receive updates about other projects along the Red Line.*

What specific comments or concerns do you have about the Red Line Extension alternatives, potential impacts, and mitigation measures?

In future outreach opportunities consider sending information to the grammer and high schools to distribute, send notices, texts and emails to churches and non-profits in the community (food pantries). Send information where community can get it, most of us don't have home computers

How do you use the following parks? (Check all that apply)

	Baseball / Softball / Basketball	Playground	Walking / Jogging	Community Events	Other	I do not use this park
Wendell Smith Park *(99th Street / Princeton Avenue)*	☐	☐	☐	☐	☐	☒
Fernwood Parkway *(Eggleston Avenue between 99th and 103rd Street)*	☐	☐	☐	☐	☐	☒
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Name CARL P JOSSEll SR

Address 10744 SOUTH WAllACE

City cHicAgo State ILL Zip 60628-

Email Address CARL JOSSEll AT

☐ *Check here to also receive updates about other projects along the Red Line.*

What specific comments or concerns do you have about the Red Line Extension alternatives, potential impacts, and mitigation measures?

Will CONTRACTOR BE FAIR IN HIRING + TRAINING.

How do you use the following parks? (Check all that apply)

	Baseball / Softball / Basketball	Playground	Walking / Jogging	Community Events	Other	I do not use this park
Wendell Smith Park *(99th Street / Princeton Avenue)*	☐	☐	☐	☐	☐	☒
Fernwood Parkway *(Eggleston Avenue between 99th and 103rd Street)*	☐	☒	☐	☒	☒	☐
Block Park *(103rd Street / Harvard Avenue)*	☐	☐	☐	☐	☐	☒

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RED AHEAD
Moving Ahead to a Better Red

Red Line Extension

WE WANT YOUR INPUT

on the Red Line Extension Project

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Name Rosemary Wyche
Address 322 W 101 Street
City Chgo State IL Zip 60628
Email Address RWYCHE@ameritech.net

☐ *Check here to also receive updates about other projects along the Red Line.*

What specific comments or concerns do you have about the Red Line Extension alternatives, potential impacts, and mitigation measures?

— I just put raised beds in my back yard — so, I don't want an elevated train blocking the sun.

How do you use the following parks? (Check all that apply)

	Baseball / Softball / Basketball	Playground	Walking / Jogging	Community Events	Other	I do not use this park
Wendell Smith Park *(99th Street / Princeton Avenue)*	☐	☐	☐	☒	☒	☐
Fernwood Parkway *(Eggleston Avenue between 99th and 103rd Street)*	☐	☐	☐	☐	☐	☐
Block Park *(103rd Street / Harvard Avenue)*	☐	☐	☐	☐	☐	☐

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Name Peter Taylor
Address 9600 S. Prairie Ave
City Chicago State IL Zip 60628
Email Address pbtaylor27@comcast.net

☑ *Check here to also receive updates about other projects along the Red Line.*

What specific comments or concerns do you have about the Red Line Extension alternatives, potential impacts, and mitigation measures?

CMAP identified the 'Grey Line' project in 2010 utilizing excess capacity on the Metra Electric to provide CTA access & connectivity to Roseland, West Pullman, Pullman & Hedwisch The Grey Line could be brought online much more quickly than the Red Line and would complement service for the Red Line. Rapid Transit could be provided for these residents 5 years earlier.

How do you use the following parks? (Check all that apply)

	Baseball / Softball / Basketball	Playground	Walking / Jogging	Community Events	Other	I do not use this park
Wendell Smith Park *(99th Street / Princeton Avenue)*	☐	☐	☐	☐	☐	☒
Fernwood Parkway *(Eggleston Avenue between 99th and 103rd Street)*	☐	☐	☐	☐	☐	☒
Block Park *(103rd Street / Harvard Avenue)*	☐	☐	☐	☐	☐	☒

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Name Willard Mckenzie
Address 10608 S. Wabash
City Chicago State IL Zip 60628
Email Address wllrdmcknz@yahoo.com

☑ *Check here to also receive updates about other projects along the Red Line.*

What specific comments or concerns do you have about the Red Line Extension alternatives, potential impacts, and mitigation measures?

I have no concerns other than potential problems with (imminent domain abuses) I want this project to be completed as it is long overdue no buses should be used for this project otherwise I personally would consider it a complete and utter failure.

How do you use the following parks? (Check all that apply)

	Baseball / Softball / Basketball	Playground	Walking / Jogging	Community Events	Other	I do not use this park
Wendell Smith Park *(99th Street / Princeton Avenue)*	☐	☐	☐	☐	☐	☑
Fernwood Parkway *(Eggleston Avenue between 99th and 103rd Street)*	☑	☐	☑	☑	☐	☐
Block Park *(103rd Street / Harvard Avenue)*	☐	☐	☐	☐	☑	☐

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Name MARGUERITE JACOBS
Address 755 E 130 PLACE
City Chicago State IL Zip 60827
Email Address MARGUERITE1955@yahoo.com

☒ *Check here to also receive updates about other projects along the Red Line.*

What specific comments or concerns do you have about the Red Line Extension alternatives, potential impacts, and mitigation measures?

It would Be great if the PACE BUS is included. THE DIAGRAMS WAS A GREAT IDEA. Good VISION. NOW IN the MAil would help the ONES THAT IS NONE BELIEVERS.
130th –
* Not Down Halsted
PACific (YES)

How do you use the following parks? (Check all that apply)

	Baseball / Softball / Basketball	Playground	Walking / Jogging	Community Events	Other	I do not use this park
Wendell Smith Park (99th Street / Princeton Avenue)	☒	☐	☐	☐	☐	☐
Fernwood Parkway (Eggleston Avenue between 99th and 103rd Street)	☒	☐	☐	☐	☐	☐
Block Park (103rd Street / Harvard Avenue)	☒	☐	☐	☐	☐	☐

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Name

Address

City State Zip

Email Address CNElSON@gAgdc.ORg

☐ *Check here to also receive updates about other projects along the Red Line.*

What specific comments or concerns do you have about the Red Line Extension alternatives, potential impacts, and mitigation measures?

The FAR south side AN south suburbs ARE some of the most economically disadvantaged AREAS IN the entire Region with little to No Access to jobs. All other AREAS of the city has rapid transit to beyond the city limits! Halsted option would be the closest to Accomplishing this!

How do you use the following parks? (Check all that apply)

	Baseball / Softball / Basketball	Playground	Walking / Jogging	Community Events	Other	I do not use this park
Wendell Smith Park *(99th Street / Princeton Avenue)*	☐	☐	☐	☐	☐	☑
Fernwood Parkway *(Eggleston Avenue between 99th and 103rd Street)*	☐	☐	☐	☐	☐	☑
Block Park *(103rd Street / Harvard Avenue)*	☐	☐	☐	☐	☐	☑

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Name Nancy Wimberly

Address

City State Zip

Email Address

☐ *Check here to also receive updates about other projects along the Red Line.*

What specific comments or concerns do you have about the Red Line Extension alternatives, potential impacts, and mitigation measures?

How many black contractors and businessmen will work on this 2 billion dollarproject? 95% of the business should be minority contractors

How do you use the following parks? (Check all that apply)

	Baseball / Softball / Basketball	Playground	Walking / Jogging	Community Events	Other	I do not use this park
Wendell Smith Park *(99th Street / Princeton Avenue)*	☐	☐	☐	☐	☐	☐
Fernwood Parkway *(Eggleston Avenue between 99th and 103rd Street)*	☐	☐	☐	☐	☐	☐
Block Park *(103rd Street / Harvard Avenue)*	☐	☐	☐	☐	☐	☐

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Name

Address

City State Zip

Email Address

☐ *Check here to also receive updates about other projects along the Red Line.*

What specific comments or concerns do you have about the Red Line Extension alternatives, potential impacts, and mitigation measures?

This whole "so called" set-up is a disgrace to the black community. Where are the flyers for the meeting at St. James Church?

How do you use the following parks? (Check all that apply)

	Baseball / Softball / Basketball	Playground	Walking / Jogging	Community Events	Other	I do not use this park
Wendell Smith Park *(99th Street / Princeton Avenue)*	☐	☐	☐	☐	☐	☐
Fernwood Parkway *(Eggleston Avenue between 90th and 103rd Street)*	☐	☐	☐	☐	☐	☐
Block Park *(103rd Street / Harvard Avenue)*	☐	☐	☐	☐	☐	☐

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Name Matthew Walker
Address 11163 S Vernon Apt 3
City Chicago State IL Zip 60628
Email Address MATWALKER8@aol.com

☐ *Check here to also receive updates about other projects along the Red Line.*

What specific comments or concerns do you have about the Red Line Extension alternatives, potential impacts, and mitigation measures?

I am Concerned that demolition will begin but no extension will take place in the foreseeable future.

How do you use the following parks? (Check all that apply)

	Baseball / Softball / Basketball	Playground	Walking / Jogging	Community Events	Other	I do not use this park
Wendell Smith Park *(99th Street / Princeton Avenue)*	☐	☐	☒	☒	☐	☐
Fernwood Parkway *(Eggleston Avenue between 99th and 103rd Street)*	☐	☐	☒	☐	☒	☐
Block Park *(103rd Street / Harvard Avenue)*	☐	☐	☒	☐	☐	☐

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Name ROBERT C. BARCLAY (WEST CHESTERFIELD COMMUNITY ASSOC.)

Address 9191 S. BURNSIDE AVE. CHICAGO,

City CHICAGO State IL Zip 60619

Email Address

☐ *Check here to also receive updates about other projects along the Red Line.*

What specific comments or concerns do you have about the Red Line Extension alternatives, potential impacts, and mitigation measures?

WHERE I LIVE, I AM CERERN ABOUT THE 95th ST STATION, WHICH SHOULD HAVE MUILT-LEVEL PARKING FOR AUTOS. A SAFE CLEAN PARKING LOTS FOR AUTOS & BIKES AT 95th STREET STATION.

How do you use the following parks? (Check all that apply)

	Baseball / Softball / Basketball	Playground	Walking / Jogging	Community Events	Other	I do not use this park
Wendell Smith Park *(99th Street / Princeton Avenue)*	☐	☐	☐	☐	☐	☑
Fernwood Parkway *(Eggleston Avenue between 99th and 103rd Street)*	☐	☐	☐	☐	☐	☑
Block Park *(103rd Street / Harvard Avenue)*	☐	☐	☐	☐	☐	☑

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Name Cynthia & Roosevelt Green
Address 10505 S. Green Street
City Chicago State IL Zip 60643
Email Address bxerswife@sbcglobal.net

☒ *Check here to also receive updates about other projects along the Red Line.*

What specific comments or concerns do you have about the Red Line Extension alternatives, potential impacts, and mitigation measures?

the Halsted Rail alternative should not be an option. Halsted is a main Street out south. Halsted is busy with rush hour traffic in the a.m. and p.m. the noise of the rail line Would be awful, the traffic from the train stops would be awful as well as the look of the overhead tracks. I live one Street West of Halsted and Would definatly not Want the extension to run down Halsted, Economic development is always good for a Community, but how do we know the extension down Halsted will REALLY Improve our Community?

How do you use the following parks? (Check all that apply)

	Baseball / Softball / Basketball	Playground	Walking / Jogging	Community Events	Other	I do not use this park
Wendell Smith Park *(99th Street / Princeton Avenue)*	☐	☐	☐	☐	☐	☒
Fernwood Parkway *(Eggleston Avenue between 99th and 103rd Street)*	☐	☐	☐	☒	☒	☐
Block Park *(103rd Street / Harvard Avenue)*	☐	☐	☐	☐	☐	☒

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Name

Address

City State Zip

Email Address Mattioonivory1@hotmail.com

☑ *Check here to also receive updates about other projects along the Red Line.*

What specific comments or concerns do you have about the Red Line Extension alternatives, potential impacts, and mitigation measures?

- FTA requires a match for funds. 1. Does CTA have a plan to secure the additional funds? 2. Will the additional money needed be paid by the consumers? 3. What is the budget for this project? 4. Why is CTA asking for approval from the public without a clear financial plan to present to the public?

How do you use the following parks? (Check all that apply)

	Baseball / Softball / Basketball	Playground	Walking / Jogging	Community Events	Other	I do not use this park
Wendell Smith Park *(99th Street / Princeton Avenue)*	☑	☑	☑	☑	☐	☐
Fernwood Parkway *(Eggleston Avenue between 99th and 103rd Street)*	☐	☐	☐	☐	☐	☑
Block Park *(103rd Street / Harvard Avenue)*	☐	☐	☐	☐	☐	☑

Additional Comments:

The entire plan should be submitted before approval is obtained. The plan should have the construction lay-out & financial budget as well.

Thank you for attending this CTA Red Line Extension Project open house.

Comments may also be submitted via mail or e-mail to:
Chicago Transit Authority, Strategic Planning, 10th Floor, 567 W. Lake Street, Chicago, IL 60661-1465

@ RedExtension@transitchicago.com
transitchicago.com/redeis
facebook.com/thecta
@cta

Para informacion en Espanol, llame al (312) 681-2807
Customer Information: (888) YOUR-CTA (888 968-7282)

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Name Annette Cain United Neighbor

Address 727 W. Vermont

City Chicago State IL Zip 60628

Email Address annettecain@ymail.com

☐ *Check here to also receive updates about other projects along the Red Line.*

What specific comments or concerns do you have about the Red Line Extension alternatives, potential impacts, and mitigation measures?

No Red line DOWN Halsted. Our Community will be dark, noisy,

How do you use the following parks? (Check all that apply)

	Baseball / Softball / Basketball	Playground	Walking / Jogging	Community Events	Other	I do not use this park
Wendell Smith Park *(99th Street / Princeton Avenue)*	☐	☐	☐	☐	☐	☒
Fernwood Parkway *(Eggleston Avenue between 99th and 103rd Street)*	☐	☐	☐	☐	☐	☑
Block Park *(103rd Street / Harvard Avenue)*	☐	☐	☐	☐	☐	☑

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Name Leonardo Gilbert

Address 11200 Peoria

City CHGO State Il Zip 60643

Email Address leodeegilbert@aol.com

☒ *Check here to also receive updates about other projects along the Red Line.*

What specific comments or concerns do you have about the Red Line Extension alternatives, potential impacts, and mitigation measures?

- NOT DOWN Halsted option
- Please investigate any other UP options

How do you use the following parks? (Check all that apply)

	Baseball / Softball / Basketball	Playground	Walking / Jogging	Community Events	Other	I do not use this park
Wendell Smith Park *(99th Street / Princeton Avenue)*	☐	☐	☐	☐	☐	☑
Fernwood Parkway *(Eggleston Avenue between 99th and 103rd Street)*	☐	☐	☐	☐	☐	☑
Block Park *(103rd Street / Harvard Avenue)*	☐	☐	☐	☐	☐	☑

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Name GWENDOLYN GREEN
Address 10136 South MAY STREET
City Chicago State IL Zip 60643
Email Address

☑ *Check here to also receive updates about other projects along the Red Line.*

What specific comments or concerns do you have about the Red Line Extension alternatives, potential impacts, and mitigation measures?

Impacts: How many families will be displaced by the extension? Will this project infuse an ~~economic~~ revenue stream into those communities impacted? How will this opened impact race ridership? What is the volume of riders expected to utilize the extension? Increased traffic introduces increased risks. What are the safety/security concerns tied to this project and how will they be mitigated? What %age of the jobs created from this initiative (short and long term as well as permanent, will be recruited for out of the communities that will be impacted?)

How do you use the following parks? (Check all that apply)

	Baseball / Softball / Basketball	Playground	Walking / Jogging	Community Events	Other	I do not use this park
Wendell Smith Park *(99th Street / Princeton Avenue)*	☐	☐	☐	☐	☐	☑
Fernwood Parkway *(Eggleston Avenue between 99th and 103rd Street)*	☐	☐	☐	☐	☐	☑
Block Park *(103rd Street / Harvard Avenue)*	☐	☐	☐	☐	☐	☑

cta

MAY 12, 2014
(MONDAY)

ENTLEMEN:

1.) PLEASE KEEP MY NAME ON YOUR AILING LIST FOR PROGRESS AND UPDATES ON HE 2014 RED LINE EXTENSION.

2.) I AM A REGULAR RIDER ON THIS BRANCH ND HAVE FOLLOWED THE CITY'S PROGRESS FOR NO YEARS. THE EXTENSION IS A LONG-NEEDED, UCH OVERDUE CONVENIENCE FOR ALL RIDERS.

3.) ANY FURTHER MAILINGS, PLEASE INFORM E THROUGH REGULAR UNITED STATES POSTAL ELIVERY SERVICE. I AM A RETIRED U.S. ITIZEN AND CONCERNED ABOUT IMPROVED RANSPORTATION SERVICE IN THE CITY AND SUBURBS.

Mr. Victor Baker

From: Carolyn Dellutri [mailto:cdellutri@downtownevanston.org]
Sent: Monday, May 12, 2014 8:45 AM
To: Red Extension
Subject: Happy New Year

Thank you for your e-mail. I no longer work for Downtown Evanston.
Please contact Matt DiNello at 847-866-6319 (mdinello@downtownevanston.org) Carolyn Dellutri

From: Red Extension <redextension@transitchicago.com>
Sent: Tuesday, May 13, 2014 1:07 PM
To: WheelerGrange, Robyn
Subject: RE: Please add me to the project mailing list. Thank you.

Thank you for your interest in the Red Line Extension Project. We will add you to our contact list and make sure you receive all future communications.

RedExtension@transitchicago.com
Strategic Planning & Policy
Chicago Transit Authority
567 W. Lake Street
Chicago, IL 60661-1465

From: WheelerGrange, Robyn [mailto:Robyn.WheelerGrange@mail.house.gov]
Sent: Tuesday, May 13, 2014 3:01 PM
To: Red Extension
Subject: Please add me to the project mailing list. Thank you.

robyn.wheelergrange@mail.house.gov

From: Red Extension <redextension@transitchicago.com>
Sent: Wednesday, May 14, 2014 12:17 PM
To: ifiworld2 .
Subject: RE: CTA Red Line Extension Open House

Martin,

Thank you for your interest in the Red Line Extension Project.

We appreciate your input and thank you for taking the time to provide comments. We will take your comments into consideration as we develop the Draft Environmental Impact Statement. Please visit our webpage at www.transitchicago.com/Redeis to learn more about the project and to follow the progress of the Draft Environmental Impact Statement.

RedExtension@transitchicago.com

Strategic Planning & Policy
Chicago Transit Authority
567 W. Lake Street
Chicago, IL 60680-1465
Fax: (312) 681-4297

From: ifiworld2 . [mailto:ifiworld@gmail.com]
Sent: Tuesday, May 13, 2014 4:17 PM
To: Red Extension
Subject: CTA Red Line Extension Open House

Sirs:

Although I will not be able to attend the public hearing, I suggest the CTA expand its plan for the Red Line Extension to include the line to extend to just north of I-80 in Lansing with a terminus, triple-decker garage parking area (Kiss n' Ride) with bicycle racks, and rail yard there for all south suburban rides to get to the Loop, with a stop at 159th Street near the River Oaks Mall in Calumet City and one stop at Sibley Boulevard.

Sincerely,

Martin Edward Lewis
ifiworld@gmail.com

From: Red Extension <redextension@transitchicago.com>
Sent: Wednesday, May 14, 2014 12:16 PM
To: Jon Samuel
Subject: RE: Red Line Extension

Jon,

Thank you for your interest in the Red Line Extension Project.

We appreciate your input and thank you for taking the time to provide comments. We will take your comments into consideration as we develop the Draft Environmental Impact Statement. Please visit our webpage at www.transitchicago.com/Redeis to learn more about the project and to follow the progress of the Draft Environmental Impact Statement.

RedExtension@transitchicago.com

Strategic Planning & Policy
Chicago Transit Authority
567 W. Lake Street
Chicago, IL 60680-1465
Fax: (312) 681-4297

From: Jon Samuel [mailto:jonsamuel32@yahoo.com]
Sent: Tuesday, May 13, 2014 9:47 PM
To: Red Extension
Subject: Red Line Extension

I'm open to just about every option except for the Halsted option because that will go to Halsted & 127th, but it won't serve Altgeld Gardens, as residents there feel isolated from the rest of Chicago. I think that the existing #34 South Michigan should be served with articulated buses. I'd go with you purchasing whole new articulated buses or purchasing and refurbishing articulated buses previously used by another transit agency (as well as if your final decision is to implement the BRT route).

From: Red Extension <redextension@transitchicago.com>
Sent: Wednesday, May 14, 2014 12:15 PM
To: Judy Hartmann
Subject: RE: red line expansion

Judy,

Thank you for your interest in the Red Line Extension Project. We will add you to our contact list and make sure you receive all future communications.

RedExtension@transitchicago.com
Strategic Planning & Policy
Chicago Transit Authority
567 W. Lake Street
Chicago, IL 60661-1465

From: Judy Hartmann [mailto:judy@integritywallpanel.com]
Sent: Wednesday, May 14, 2014 12:37 AM
To: Red Extension
Subject: red line expansion

Please put me on the list my factory is to he west of the tracks on 109th street. I have a facility of 10,000 feet where we fabricate panels for high rise construction

Judy Hartmann
judy@integritywallpanel.com

From: Red Extension <redextension@transitchicago.com>
Sent: Wednesday, May 14, 2014 12:14 PM
To: NANCY WIMBERLY
Subject: RE: Request for Newsletters

Nancy,

Thank you for your interest in the Red Line Extension Project. We will add you to our contact list and make sure you receive all future communications.

RedExtension@transitchicago.com
Strategic Planning & Policy
Chicago Transit Authority
567 W. Lake Street
Chicago, IL 60661-1465

From: NANCY WIMBERLY [mailto:9137psnw@sbcglobal.net]
Sent: Wednesday, May 14, 2014 2:07 PM
To: Red Extension
Cc: NANCY WIMBERLY
Subject: Request for Newsletters

5/14/14

To Whom It May Concern:

Please put me on the list to receive Newsletters and other bulletins and information from CTA.
My E-mail is 9137psnw@sbcglobal.net

Thanks.

Nancy Wimberly

From: Red Extension <redextension@transitchicago.com>
Sent: Monday, May 19, 2014 6:25 AM
To: Claire Williams
Subject: RE: add me to email list

Thank you for your interest in the Red Line Extension Project. We will add you to our contact list and make sure you receive all future communications.

RedExtension@transitchicago.com
Strategic Planning & Policy
Chicago Transit Authority
567 W. Lake Street
Chicago, IL 60661-1465

From: Claire Williams [mailto:sag19@sbcglobal.net]
Sent: Wednesday, May 14, 2014 4:40 PM
To: Red Extension
Subject: add me to email list

please add me to the emailing list for the CTA red line extension.

From: Red Extension <redextension@transitchicago.com>
Sent: Monday, May 19, 2014 6:25 AM
To: Tondelya
Subject: RE: Informed

Tonya,

Thank you for your interest in the Red Line Extension Project. We will add you to our contact list and make sure you receive all future communications.

RedExtension@transitchicago.com
Strategic Planning & Policy
Chicago Transit Authority
567 W. Lake Street
Chicago, IL 60661-1465

-----Original Message-----
From: Tondelya [mailto:tondelya@aol.com]
Sent: Wednesday, May 14, 2014 10:18 PM
To: Red Extension
Subject: Informed

Please keep me informed with the red extension process due to the fact I might get affected my this change.

Tonya McDonald
99th and Yale Ave

Sent from my iPad

From: Red Extension
Sent: Monday, May 19, 2014 10:09 AM
To: 'Kara Mitchell'
Subject: RE: Red Line

Thank you for your interest in the Red Line Extension Project.

We appreciate your input and thank you for taking the time to provide comments. Please visit our webpage at www.transitchicago.com/Redeis to learn more about the project and to follow the progress of the Draft Environmental Impact Statement.

RedExtension@transitchicago.com

Strategic Planning & Policy
Chicago Transit Authority
567 W. Lake Street
Chicago, IL 60680-1465
Fax: (312) 681-4297

From: Kara Mitchell [mailto:Kara.Mitchell@EEOC.GOV]
Sent: Thursday, May 15, 2014 11:48 AM
To: Red Extension
Subject: Red Line

I hope the extension is better constructed than the 87th street station which has dripping overhead now it is both the north and side steps) and puddles of water coming in from the coves (north and side).

-----Original Message-----
From: North Red & Purple Modernization
Sent: Tuesday, May 20, 2014 1:26 PM
To: Red Extension; Feedback
Subject: FW: Contact List For Meetings

Sending this to you for other transit projects.

Best,
Steve

-----Original Message-----
From: Dominic Morris [mailto:tnnfpen1@icloud.com]
Sent: Tuesday, May 20, 2014 12:31 PM
To: North Red & Purple Modernization
Subject: Contact List For Meetings

Please add me to the list for future public meetings relating to all transit projects.

Regards,

Dominic Morris
dominicmorris2013@gmail.com

From: Red Extension [mailto:redextension@transitchicago.com]
Sent: Wednesday, May 21, 2014 7:09 AM
To: Jennifer Cobb
Subject: RE: Mailing List

Jennifer,

Thank you for your interest in the Red Line Extension Project. We will add you to our contact list and make sure you receive all future communications.

RedExtension@transitchicago.com
Strategic Planning & Policy
Chicago Transit Authority
567 W. Lake Street
Chicago, IL 60661-1465

From: Jennifer Cobb [mailto:randomuser1105@gmail.com]
Sent: Tuesday, May 20, 2014 10:08 PM
To: Red Extension
Subject: Mailing List

Hello, I would like to be added to the mailing list. Thank you.

-Jennifer Cobb

-----Original Message-----
From: Red Extension [mailto:redextension@transitchicago.com]
Sent: Wednesday, May 21, 2014 7:20 AM
To: Arlene Echols
Subject: RE: Comments on the Red Line Extension

Arlene,

Thank you for your interest in the Red Line Extension Project.

We appreciate your input and thank you for taking the time to provide comments. We will take your comments into consideration as we develop the Draft Environmental Impact Statement. Please visit our webpage at www.transitchicago.com/Redeis to learn more about the project and to follow the progress of the Draft Environmental Impact Statement.

RedExtension@transitchicago.com

Strategic Planning & Policy
Chicago Transit Authority
567 W. Lake Street
Chicago, IL 60661-1465
Fax: (312) 681-4297

-----Original Message-----
From: Arlene Echols [mailto:aechols1979@gmail.com]
Sent: Tuesday, May 20, 2014 11:08 PM
To: Red Extension
Cc: ctc-tribletter@tribune.com
Subject: Comments on the Red Line Extension

Chicago Transit Authority, Strategic Planning
567 W Lake St, 10th Fl
Chicago, IL 60661-1465

May 20, 2014

Dear Madam or Sir,
I attended the Open House for the Red Line extension on May 13, and I have several concerns about the project. The overriding issue is that inadequate funds are being committed to such a major project, and because of the inadequacy of the funding, the options for and the scope of the extension are severely limited to the point that the finished product will be a solution that disrupts many, and adequately serves the transportation needs of few.

A subway is needed. Any train that travels above ground will cast a pall on any throughway that it is over or near. The support posts and the overhead structure will be intrusive to the street scape, and the clamor of the train and the announcements from the train will be a permanent noise nuisance to people blocks away.

The Halsted overhead alternative is not likely to appeal to anyone with property along the route. What business would welcome an overhead transit structure in front of it? What household would want the noise of an above ground train anywhere within hearing? What pedestrian would choose to walk along a street covered by a set of train tracks? An above Halsted train will take a throughway that needs to be lifted up, and turn it into a street that upstanding members of the community try to avoid. Not so for the less upstanding members. The structure and support posts will provide many opportunities for graffiti and for thieves and lawbreakers to hide behind to the detriment of any pedestrians unwise enough to walk down the street.

The Michigan Avenue Bus Rapid Transit is rapid in name only. While the route would serve many, the bus will not be rapid, and will do little more than give true BRT a bad name. I learned at the open house that the BRT will be only 5 minutes faster than the present #34 Michigan. This, as you well know, is nothing like Bus Rapid Transit.

The locally preferred alternative is preferable only because it is the least disruptive to businesses and homes along and near Halsted. The train stations do not seem to serve areas populated by any significant population, and the while the end of the line is nicely located to serve Indianans and suburbanites who want to park and ride, the main purpose of the line should be to serve south siders whose rapid transit needs have been long ignored.

The scope and permanency of any rapid transit project is great enough that accommodation for the future success of the neighborhood should be taken into account before abandoning an option because it's too expensive. If the project cannot be done right, then increased and timely bus service should be added to the affected streets, and the funds should be banked until such time as a commitment to adequate funding can be made. Please do not impose this permanent, noisy, unsightly, and potential crime haven on a thoroughfare that needs a subway.

Sincerely,
Arlene Echols
11329 St Lawrence
Chicago, IL 60628
AEchols1979@gmail.com
773-821-1637

From: Red Extension [mailto:redextension@transitchicago.com]
Sent: Wednesday, June 18, 2014 1:42 PM
To: 고두종
Subject: RE: inquiries for project schedule and condition of eligibility

Thank you for your interest in the Red Line Extension Project.

CTA is currently preparing the Draft Environmental Impact Statement. Future phases of the project, which include the Final Environmental Impact Statement, Engineering, and Construction are currently not funded and project schedule is dependent on federal reviews and approvals and funding availability.

Please visit our webpage at www.transitchicago.com/Redeis to learn more about the project and to follow the progress of the Draft Environmental Impact Statement. We will continue to update the webpage with new information as it becomes available.

RedExtension@transitchicago.com

Strategic Planning & Policy
Chicago Transit Authority
567 W. Lake Street
Chicago, IL 60680-1465
Fax: (312) 681-4297

From: 고두종 [mailto:doojong@hyundai-rotem.co.kr]
Sent: Tuesday, June 17, 2014 5:13 AM
To: Red Extension
Subject: inquiries for project schedule and condition of eligibility

Dear Sir/Madam;

This is Doojong KOH, working for Hyundai-Rotem Company (train and railway system provider) and got informed this project today.

I will be appreciated if you inform its project schedule and qualifications for joining this bidding.

Best regards,

Doojong KOH

GQR- 2015 Global Quality Rotem

고두종 Koh Doojong
철도시스템영업팀 | 과장 | PMP
Railway System Sales & Marketing Team | Manager | PMP

Hyundai Rotem Company
T 02 3464 7237 M 016 265 4546
doojong@hyundai-rotem.co.kr

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귀하가 지정된 수신인이 아닌 경우 회신메일로 발신자에게 연락하여 주시고, 원본 및 사본과 첨부 문서를 모두 삭제하여 주시기 바랍니다.
협조하여 주셔서 감사합니다.

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From: Red Extension
Sent: Wednesday, June 18, 2014 3:43 PM
To: 'Rod Muir'
Subject: RE: Opening Year of the Red Line extension

Rod,

Thank you for your interest in the Red Line Extension Project.

CTA is currently preparing the Draft Environmental Impact Statement. Future phases of the project, which include the Final Environmental Impact Statement, Engineering, and Construction are currently not funded and project schedule is dependent on federal reviews and approvals and funding availability.

Please visit our webpage at www.transitchicago.com/Redeis to learn more about the project and to follow the progress of the Draft Environmental Impact Statement. We will continue to update the webpage with new information as it becomes available.

RedExtension@transitchicago.com

Strategic Planning & Policy
Chicago Transit Authority
567 W. Lake Street
Chicago, IL 60680-1465
Fax: (312) 681-4297

From: Rod Muir [mailto:rodmuir@sympatico.ca]
Sent: Wednesday, June 18, 2014 9:08 AM
To: Red Extension
Subject: Opening Year of the Red Line extension

Dear Madam or Sir;
Can you tell me plse the
current anticipated opening Year of operation
of the Red Line extension all the way down to 130st
I expect it's 2020 or beyond?
Thanks
Rod Muir

Appendix D
Purpose and Need Report

RED AHEAD
Moving Ahead to a Better Red

Red Line Extension

Chicago Red Line Extension Project

Purpose and Need
Report

May 25, 2016

Prepared for:
Chicago Transit Authority
567 W. Lake Street
Chicago, IL 60661

Prepared by:
CWC Transit Group
125 S. Wacker Drive
Suite 600
Chicago, IL 60606

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Abbreviations and Acronyms

CHA	Chicago Housing Authority
CMAP	Chicago Metropolitan Agency for Planning
CTA	Chicago Transit Authority
EIS	Environmental Impact Statement
FTA	Federal Transit Administration
MAP-21	Moving Ahead for Progress in the 21st Century Act
NICTD	Northern Indiana Commuter Transportation District
RA	redevelopment areas
RLE	Red Line Extension
TIF	tax increment financing

Section 1
Introduction

The Federal Transit Administration (FTA), as lead federal agency, and the Chicago Transit Authority (CTA), as the project sponsor, have jointly prepared a Draft Environmental Impact Statement (EIS) to evaluate potential impacts on the human and natural environment that may result from the construction and operation of Red Line Extension (RLE) alternatives including the Locally Preferred Alternative. As part of the Red Ahead Program, the CTA proposes to extend the existing Red Line 5.3 miles south from the existing 95th Street Terminal. CTA proposes to cover a portion of the project funding by applying for federal funds administered by the FTA.

This report identifies the purpose and need for transportation improvements within the project area. Developed from the Purpose and Need statement presented in the RLE Alternatives Analysis document, as well as from input received from the public during the EIS public scoping process, this report describes CTA's basis for advancing the proposed action, identifies objectives that frame the development and evaluation of the alternatives, and sets the stage for subsequent National Environmental Policy Act analysis leading to the final agency decision on the proposed action.

Section 2
The Purpose of the Red Line Extension Project

The purpose of the RLE Project is as follows:

- Reduce commute times for residents both within and south of the project area.
- Improve mobility and accessibility for transit-dependent residents in the project area.
- Improve rapid transit rail service to isolated areas and provide viable linkages between affordable housing (e.g., Altgeld Gardens Housing Complex),[1] jobs, services, and educational opportunities, thereby enhancing livability and neighborhood vitality.
- Provide an opportunity for potential connections and linkages to other public transportation modes including regional commuter rail in the project area.
- Foster economic development in the project area, where new stations may serve as catalysts for neighborhood revitalization and help reverse decades of disinvestment in local business districts.
- Provide a modern, efficient rail car storage yard and shop facility to provide storage and cost-effective preventive maintenance for rail cars associated with the RLE Project, rail cars currently stored in the existing 98th Street Yard and Shop, and rail cars supporting additional Red Line expansion of service.

---

[1] The Altgeld Gardens Housing Complex meets the FTA's definition of *legally binding affordability restricted housing*. This definition includes, but is not limited to, state or federal-supported public housing and housing owned by organizations dedicated to providing affordable housing. The Altgeld Gardens Housing Complex is owned and operated by the City of Chicago Housing Authority.

Section 3
The Need for the Red Line Extension Project

The need for the RLE Project is demonstrated by the following existing conditions:

- Transit trips to jobs are longer for Far South Side residents than they are for commuters in the Chicago region as a whole.
- Transit-dependent populations in the project area have limited direct access to rapid transit rail service.
- The project area is geographically isolated from major activity centers and provides residents limited viable transportation options, which limit access between affordable housing (e.g., Altgeld Gardens Housing Complex), and employment centers outside of the project area.
- Existing transit markets are underserved and transit connectivity is challenging in the project area.
- Disinvestment and limited economic development in the project area have negatively affected Far South Side communities.
- The existing 98th Street Yard does not have capacity to store rail cars for any substantial increase in Red Line capacity accompanying future Red Line expansion.

Section 4
The Red Line Extension Project Area

The project area is 11 miles south of the Chicago central business district (commonly referred to as the Loop) and encompasses approximately 20 square miles. The boundaries extend from 95th Street on the north, Ashland Avenue on the west, Stony Island Avenue on the east, and the Calumet-Sag Channel/Little Calumet River and 134th Street on the south (see **Figure 4-1**).

The project area includes expressways, regional arterials (through roads), commuter and freight railroads, intermodal connectors, local streets, and pedestrian facilities. The expressways that pass through the project area are Interstate 94 (I-94, also known as the Dan Ryan Expressway north of 95th Street and the Bishop Ford Freeway south of 95th Street) and Interstate 57 (I-57). I-94 runs north-south from 95th Street to 99th Street, curves east, then curves south and extends along the west side of Lake Calumet. I-57 splits from I-94 at 95th Street, runs south, on an alignment east of the Metra Rock Island District commuter rail line to 115th Street, then curves south along the western limit of the project area. Halsted Street and Ashland Avenue are the only north-south arterial streets that extend well beyond the northern and southern project limits.

Commuter rail in the project area is operated by Metra and includes the Rock Island District, Electric District Mainline, and Electric District Blue Island Branch. The Northern Indiana Commuter Transportation District operates the South Shore Line, which shares tracks with the Metra Electric District Mainline north of 115th Street. Freight trains in the project area use tracks owned by the Union Pacific Railroad, Canadian National Railroad, Chicago South Shore & South Bend Railroad, Norfolk Southern Railroad, and Indiana Harbor Belt Railroad.

The project area comprises residential (primarily single-family), industrial (both existing and vacant), and commercial development. It encompasses parts of nine community areas in the City of Chicago and the eastern section of the Village of Calumet Park. Chicago community areas include Beverly, Washington Heights, Roseland, Morgan Park, Pullman, South Deering, West Pullman, Riverdale, and Hegewisch.

The ethnicity of the population in the project area is predominantly Black or African American, ranging from 89 percent in the Village of Calumet Park to 97 percent in Roseland and Washington Heights. A majority of the project area population is low income.

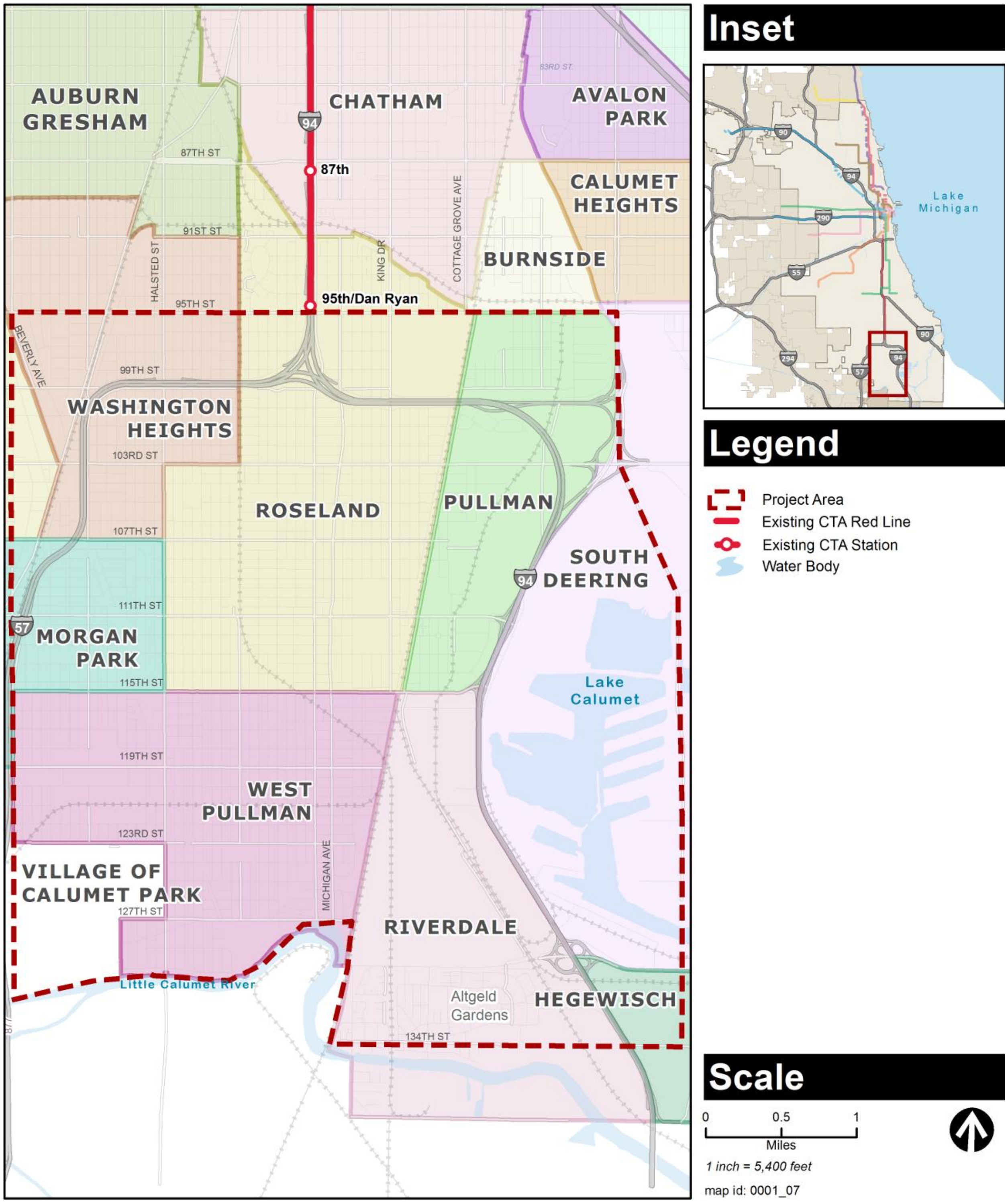

AUBURN GRESHAM
CHATHAM
AVALON PARK
CALUMET HEIGHTS
BURNSIDE
83RD ST
87TH ST
91ST ST
95TH ST
87th
95th/Dan Ryan
HALSTED ST
KING DR
COTTAGE GROVE AVE
BEVERLY AVE
99TH ST
WASHINGTON HEIGHTS
103RD ST
ROSELAND
PULLMAN
107TH ST
SOUTH DEERING
111TH ST
MORGAN PARK
115TH ST
Lake Calumet
119TH ST
WEST PULLMAN
123RD ST
VILLAGE OF CALUMET PARK
127TH ST
MICHIGAN AVE
RIVERDALE
Little Calumet River
Altgeld Gardens
HEGEWISCH
134TH ST
94
57
Inset
Lake Michigan
90
94
290
55
294
57
Legend
Project Area
Existing CTA Red Line
Existing CTA Station
Water Body
Scale
0
0.5
1
Miles
1 inch = 5,400 feet
map id: 0001_07

Figure 4-1: Red Line Extension Project Area

Section 5
Justification of the Purpose and Need

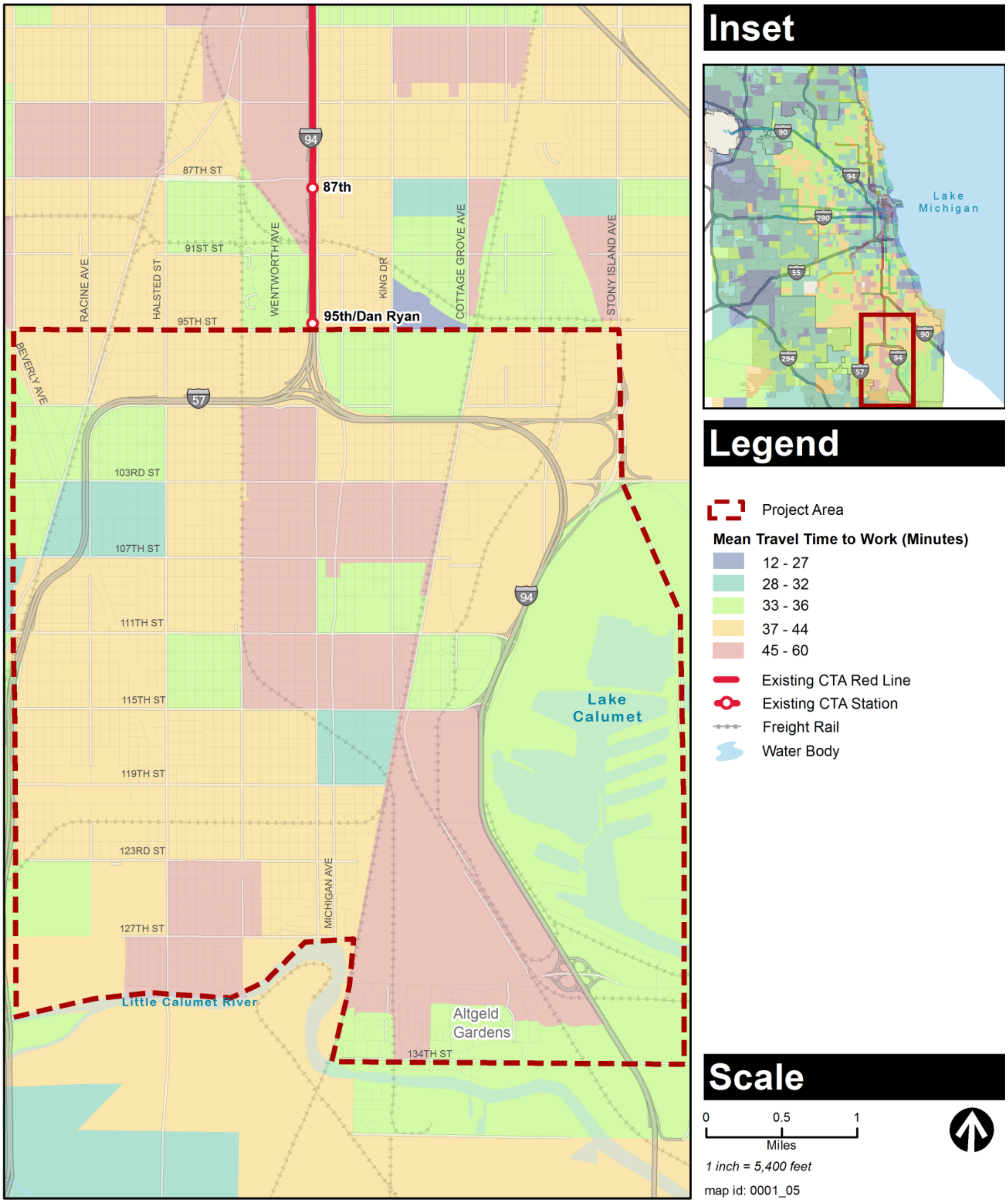
5.1 Long Transit Trips to Job Centers for Far South Side Residents

Lengthy travel times affect low-income, minority, and transit-dependent populations in the project area. During 2005–2010, commute times were 24 percent longer for project area residents than for other commuters in the Chicago region (see **Table 5-1**). The Chicago region is a seven-county area including the counties of Cook, DuPage, Kane, Kendall, Lake, McHenry, and Will. The average commute time in the Chicago region was 31.6 minutes one-way, while commute times for residents in the project area averaged 39.3 minutes. **Figure 5-1** details commute times in the project area.

Table 5-1: Mean Travel Time to Work (2005-2010)

Area	Mean Travel Time to Work (Minutes)
Chicago Region (Seven-County Area)	31.7
City of Chicago	33.6
Red Line Extension Project Area	39.3

Source: U.S. Census Bureau 2010

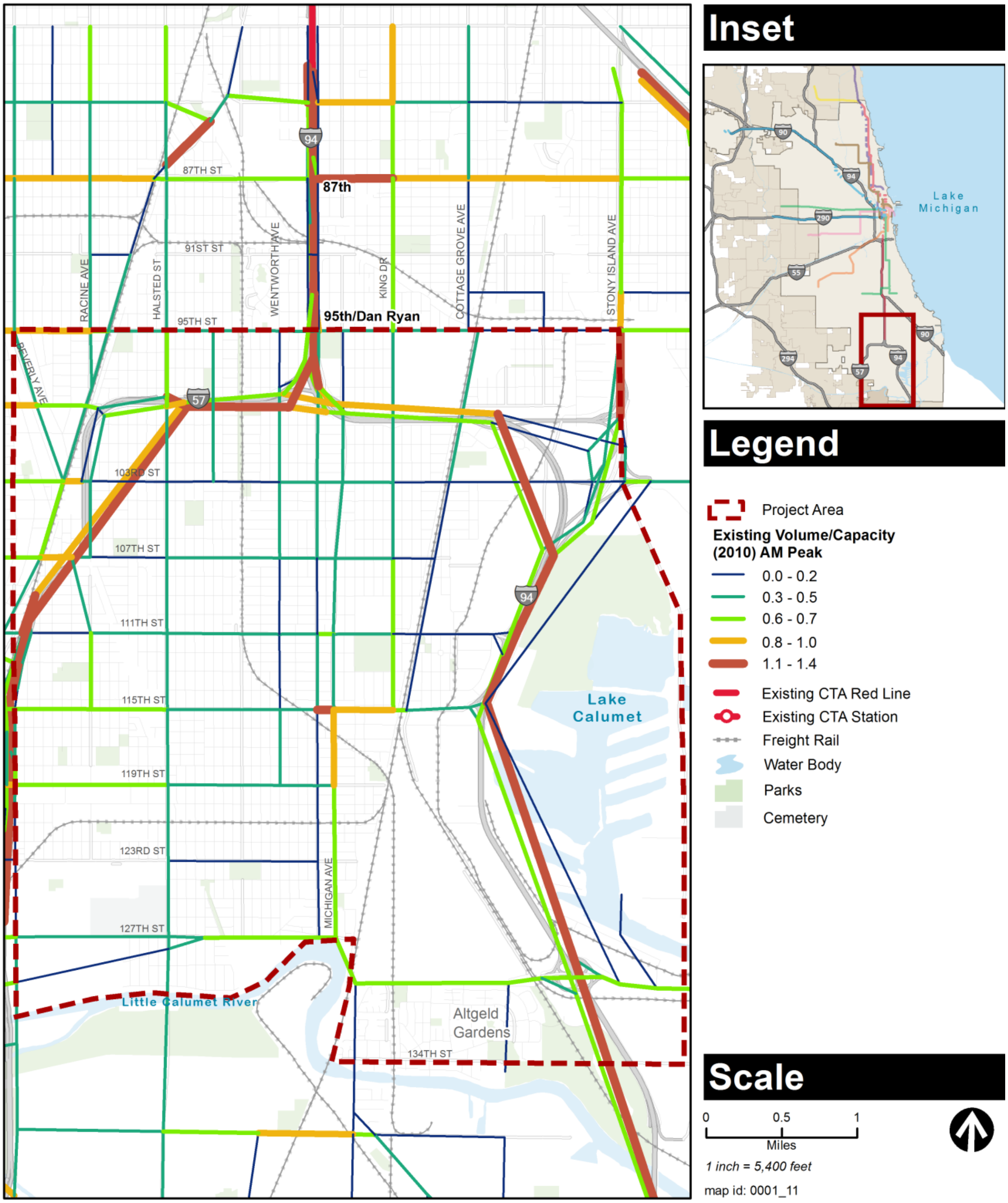

94
87th
87TH ST
91ST ST
RACINE AVE
HALSTED ST
WENTWORTH AVE
KING DR
COTTAGE GROVE AVE
STONY ISLAND AVE
95th/Dan Ryan
95TH ST
BEVERLY AVE
57
103RD ST
107TH ST
94
111TH ST
115TH ST
Lake Calumet
119TH ST
123RD ST
MICHIGAN AVE
127TH ST
Little Calumet River
Altgeld Gardens
134TH ST
Inset
Lake Michigan
90
94
290
55
294
57
90
94
Legend
Project Area
Mean Travel Time to Work (Minutes)
12 - 27
28 - 32
33 - 36
37 - 44
45 - 60
Existing CTA Red Line
Existing CTA Station
Freight Rail
Water Body
Scale
0
0.5
1
Miles
1 inch = 5,400 feet
map id: 0001_05

Source: U.S. Census Bureau 2010

Figure 5-1: Mean Travel Time to Work (Minutes)

On the region's expressways and major arterials, traffic congestion has steadily increased over the past decades. In the project area, roadway capacity constraints and expressway and arterial traffic congestion limit the mobility of residents. **Figure 5-2** shows existing traffic volume per roadway capacity (AM peak period, 2010) on project area roadways based on 2010 data. The 2010 traffic data is based on actual traffic counts provided by the Chicago Department of Transportation and Illinois Department of Transportation. Chicago is ranked seventh in the nation for travel time ratio (peak travel times versus free flow travel time), and third for travel delay, excess fuel consumed, and total congestion costs (Texas Transportation Institute 2011).

Substantial traffic congestion occurs on expressways and arterial streets throughout the project area. Traffic on the roadway network is approaching capacity during the morning peak period and congestion is expected to worsen by 2030 (see **Figure 5-3**). At-grade freight railroad crossings cause further delays on arterial streets, affecting travel times to the CTA 95th Street Terminal. The Union Pacific Railroad operates approximately 27 trains per day through the project area and has at-grade crossings at several east-west arterials. Similarly, delays occur due to the Metra Electric District Blue Island Branch commuter trains, which have at-grade crossings at several major arterials. The *Transportation Technical Memorandum* contains additional information about existing traffic conditions and CMAP traffic projections.


Inset
Lake Michigan
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55
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57
Legend
Project Area
Existing Volume/Capacity (2010) AM Peak
0.0 - 0.2
0.3 - 0.5
0.6 - 0.7
0.8 - 1.0
1.1 - 1.4
Existing CTA Red Line
Existing CTA Station
Freight Rail
Water Body
Parks
Cemetery
Scale
0
0.5
1
Miles
1 inch = 5,400 feet
map id: 0001_11
87TH ST
87th
91ST ST
95TH ST
95th/Dan Ryan
RACINE AVE
HALSTED ST
WENTWORTH AVE
KING DR
COTTAGE GROVE AVE
STONY ISLAND AVE
BEVERLY AVE
103RD ST
107TH ST
111TH ST
115TH ST
119TH ST
123RD ST
127TH ST
MICHIGAN AVE
Lake Calumet
Little Calumet River
Altgeld Gardens
134TH ST

Figure 5-2: Existing Traffic Volume/Capacity (2010, AM Peak Period)

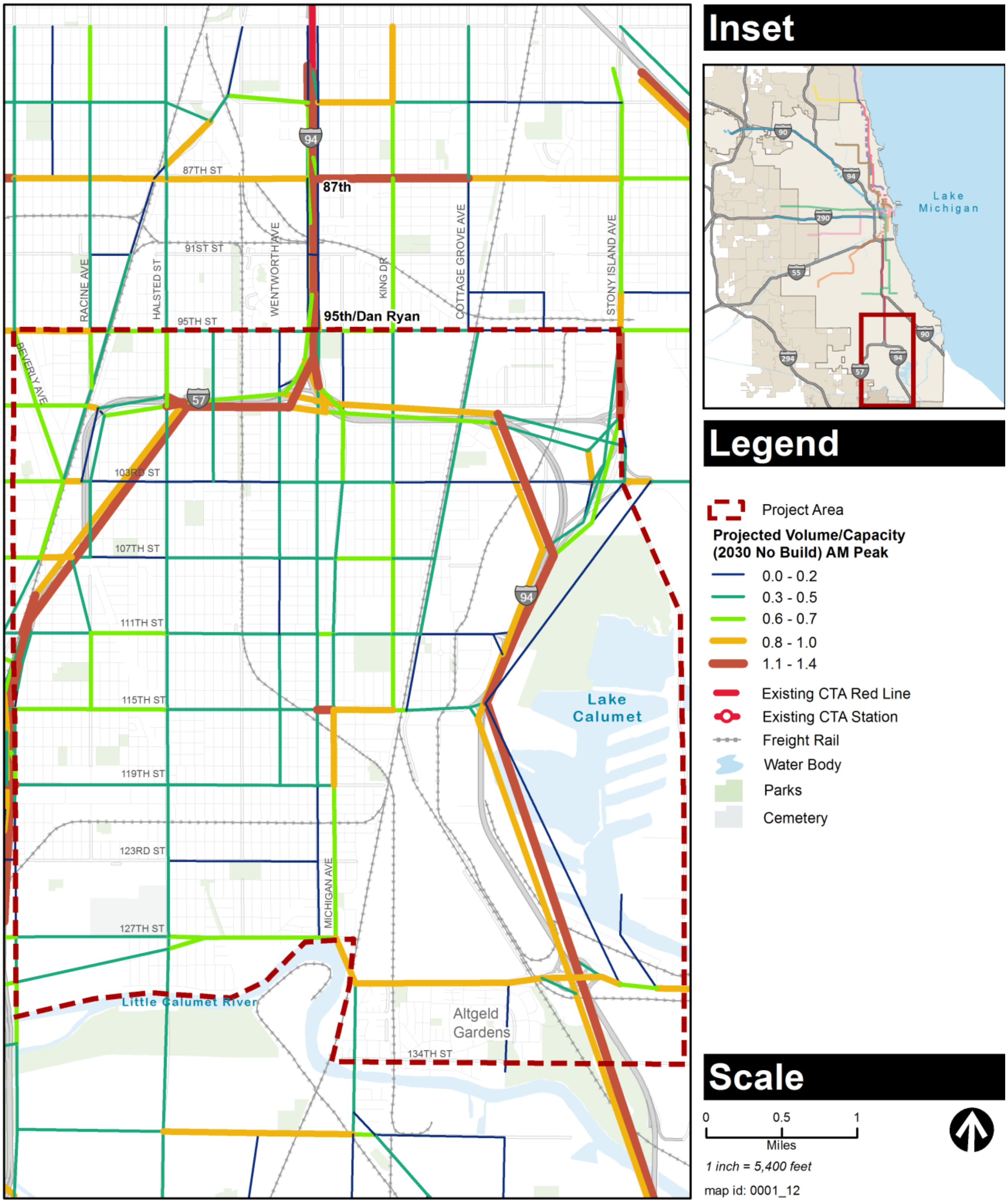
Inset
Lake Michigan
90
94
290
55
294
57
Legend
Project Area
Projected Volume/Capacity (2030 No Build) AM Peak
0.0 - 0.2
0.3 - 0.5
0.6 - 0.7
0.8 - 1.0
1.1 - 1.4
Existing CTA Red Line
Existing CTA Station
Freight Rail
Water Body
Parks
Cemetery
Scale
0
0.5
1
Miles
1 inch = 5,400 feet
map id: 0001_12
87TH ST
87th
91ST ST
95TH ST
95th/Dan Ryan
RACINE AVE
HALSTED ST
WENTWORTH AVE
KING DR
COTTAGE GROVE AVE
STONY ISLAND AVE
BEVERLY AVE
103RD ST
107TH ST
111TH ST
115TH ST
119TH ST
123RD ST
127TH ST
MICHIGAN AVE
134TH ST
Lake Calumet
Little Calumet River
Altgeld Gardens

Figure 5-3: Projected Traffic Volume/Capacity (2030, AM Peak Period, No Build Alternative Conditions)

Complex transfers to reach the 95th Street Terminal make commute times greater than two hours one-way for some project area residents (Chicago Metropolitan Agency for Planning [CMAP] 2012). Project area residents accessing the station by bus and other modes of transportation experience measureable delays and difficult transfers resulting from congestion at arterial street intersections. Travel times to jobs north of 95th Street, including the major employment centers in downtown Chicago, are long for both auto and transit commuters.

High unemployment rates in the area indicate the need for improved access to jobs, as shown in Table 5-2. By 2030, the jobs-to-population balance is expected to improve for the project area from one job for every seven adult residents in 2010 to one job for every five adult residents. This ratio would represent improved access to jobs in the project area; however, at that ratio, the area would remain far below the existing and forecasted city and regional averages of one job for every two adult residents in years 2010 and 2030, respectively (CMAP 2012, 2013).

Table 5-2: Unemployment Rates in Affected Communities

Area	Unemployment Rate
Seven-County Area	19.9%
City of Chicago	12.0%
Red Line Extension Project Area	19.0%
Community Areas within the Project Area	
Washington Heights	18.8%
Roseland	21.2%
Morgan Park	17.0%
West Pullman	18.5%
Pullman	21.4%
Riverdale	34.8%
Village of Calumet Park	17.4%

Source: ACS 2009-2013 5-Year Estimates

5.2 Transit-Dependent Populations Lack Direct Access to Rapid Transit Rail Service

The majority of the project area population is low income. According to the 2010 U.S. Census, the median household income in the project area is $41,014, which is less than the median household income for the City of Chicago ($46,877), and also less than the median household income for the seven-county area ($61,863) (U.S. Census Bureau 2010). The community with the lowest median household income in the project area is Riverdale ($11,181), which is substantially lower than the rest of the project area and the City of Chicago. The community with the highest median household income in the project area is the Village of Calumet Park ($53,785). While the seven-county region, the City of Chicago, and the project area all experienced a decline in median household incomes between 2000 and 2010, the project area has experienced a far greater decline (see **Table 5-3**).

Table 5-3: Household Income Declines in Red Line Extension Project Area (2000 to 2010, 2010 Dollars)

Area	2000 Median Household Income	2010 Median Household Income	Percent Change
Seven-County Area	$ 66,064	$ 61,863	-6.8%
City of Chicago	$ 48,911	$ 46,877	-4.3%
RLE Project Area	$ 49,548	$ 41,014	-20.8%

Source: U.S. Census Bureau 2010

Lengthy travel times to jobs are a particular problem for transit-dependent populations in the project area. Based on the number of vehicles available per household, transit-dependency is higher in the project area than in the seven-county region (see **Table 5-4** and **Table 5-5**). As **Table 5-5** shows, the project area has higher percentages of elderly and disabled populations than the seven-county region and the City of Chicago, along with lower household income levels.

Table 5-4: Vehicle Ownership - Indicator of Transit Dependency

Area	Average Household Size	Total Households	No Vehicle Available	1 Vehicle Available	2 Vehicles Available	3 or More Vehicles Available
Seven-County Area	2.84	3,824,379	229,889 (6%)	963,008 (25%)	1,576,468 (41%)	1,055,014 (28%)
City of Chicago	2.52	1,161,573	177,352 (15%)	470,228 (40%)	353,218 (30%)	160,775 (14%)
RLE Project Area	2.88	44,610	4,446 (10%)	16,263 (36%)	14,857 (33%)	9,044 (20%)
Altgeld Gardens	3.06	1,374	457 (33%)	618 (45%)	185 (13%)	114 (8%)
Southwest Roseland (Tract 4910)	3.39	1,116	249 (22%)	325 (29%)	428 (38%)	114 (10%)

Source: U.S. Census Bureau 2010

Table 5-5: Socioeconomic Indicators Correlated to Transit Dependence

Characteristic	Seven-County Area		City of Chicago		RLE Project Area	
	Total	Percent	Total	Percent	Total	Percent
Total Population	8,431,386	100.0%	2,695,598	100.0%	128,366	100.0%
Persons Age 65+	*952,026*	*11.3%*	*277,932*	*10.3%*	*16,733*	*15.3%*
Persons Age 17 and Younger	*2,118,767*	*25.1%*	*621,630*	*23.1%*	*29,584*	*27.0%*
Total Population (Ages 5+)	7,450,445	100.0%	2,651,049	100.0%	126,657	100.0%
Disabled People (Ages 5+)	*765,147*	*10.3%*	*290,748*	*11%*	*19,562*	*15.4%*
Total Households	3,824,379	100.0%	1,161,573	100.0%	44,610	100.0%
Households with income <$40,000	*988,729*	*25.9%*	*452,957*	*39%*	*20,710*	*46.4%*

Source: U.S. Census Bureau 2010; U.S. Census Bureau 2012 (data for disabled people only)

Average household size is greater in the project area than in the seven-county region and the City of Chicago, increasing the demand for multiple vehicles. In particular, residents in locations such as the Altgeld Gardens Housing complex and southwest Roseland have a much greater dependency on transit, with higher household size and lower number of vehicles available per household. Based on vehicle ownership, the City of Chicago shows a slightly higher transit-dependent population than the project area; however, it may be attributed to lifestyle choice versus automobile affordability in addition to greater access to public transportation.

Compared to the seven-county region and the City of Chicago, the project area has a greater concentration of elderly and disabled populations. More information on sensitive populations is available in the *Environmental Justice Technical Memorandum*.

Based on the socioeconomic indicators presented in this section, the RLE project area generally has higher transit dependency than the overall Chicago region. The closest rapid transit rail station is at the northern edge of the project area (CTA's 95th Street Terminal) requiring long trips to access the rapid transit rail system. As further discussed in **Sections 5.1 and 5.3**, average travel time for work trips are higher in the project area than in the seven-county region due to traffic congestion and the time required to ride a bus to the 95th Street Terminal and transfer to the Red Line. The combination of these conditions underscores the need for improved connectivity and access to more efficient modes of travel.

5.3 Isolation from Major Activity Centers and Limited Viable Transportation Options

5.3.1 Existing Transportation Options

Despite the substantial amount of roadway infrastructure in the project area, expressways and arterial streets frequently become congested, limiting mobility. Mobility is further inhibited by the limited options for connecting to the CTA's rail system. Although bus routes operated by CTA and Pace provide service 24 hours a day, buses in the project area are frequently delayed by congestion on arterial streets leading to the 95th Street Terminal. None of the Red Line stations along the Dan Ryan branch currently have park & ride facilities, precluding residents from accessing the stations by car unless they are dropped off. Several bus routes serve the 95th Street Terminal and Metra stations; however, the large residential tracts surrounded by local streets limit the bus network. **Figure 5-5** shows the existing bus routes and rail lines in the project area.

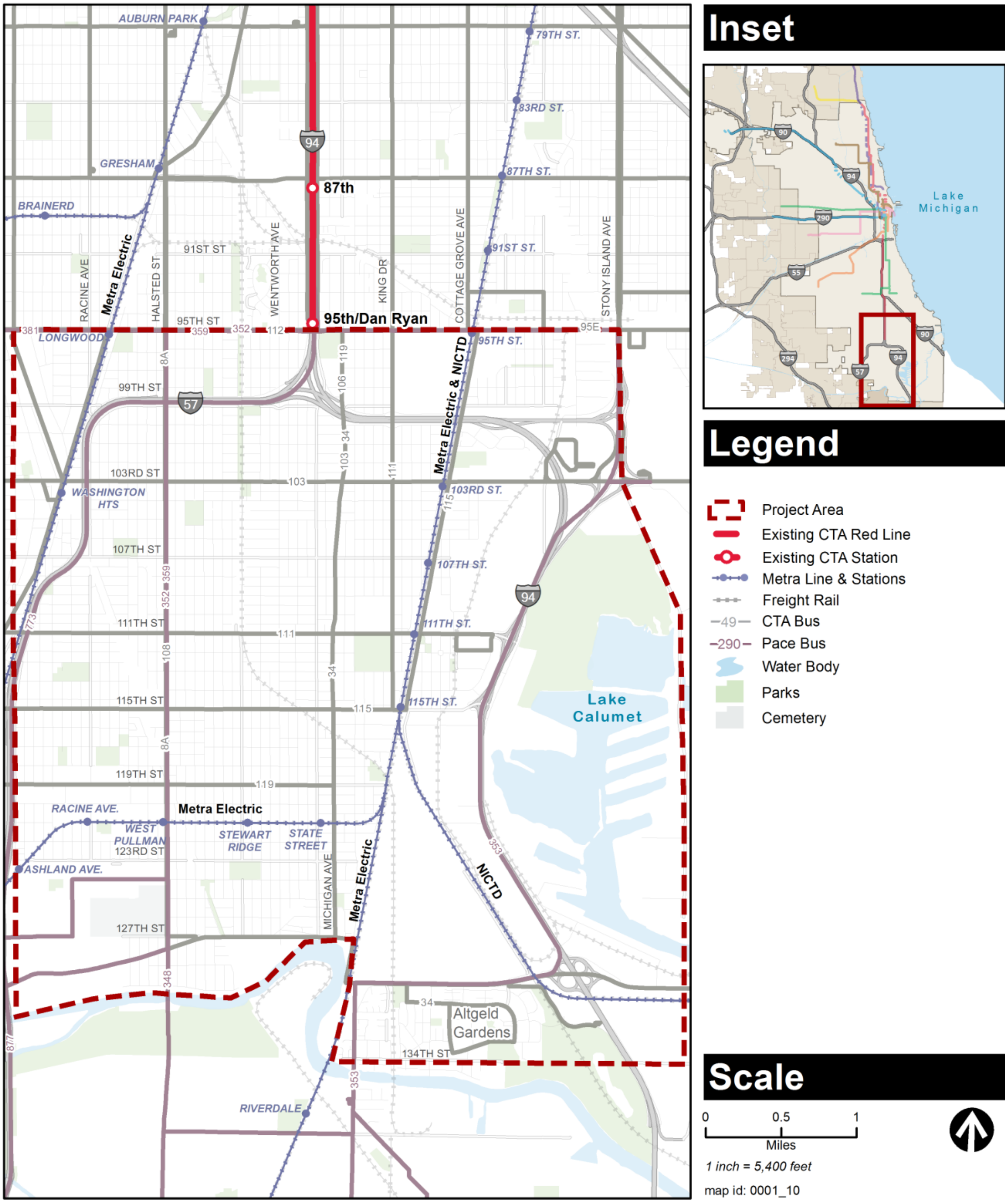
Inset
Lake Michigan
Legend
Project Area
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
CTA Bus
Pace Bus
Water Body
Parks
Cemetery
Scale
0
0.5
1
Miles
1 inch = 5,400 feet
map id: 0001_10
87th
95th/Dan Ryan
Metra Electric
Metra Electric & NICTD
NICTD
Lake Calumet
Altgeld Gardens
AUBURN PARK
GRESHAM
BRAINERD
LONGWOOD
WASHINGTON HTS
79TH ST.
83RD ST.
87TH ST.
91ST ST.
95TH ST.
103RD ST.
107TH ST.
111TH ST.
115TH ST.
RACINE AVE.
WEST PULLMAN
STEWART RIDGE
STATE STREET
ASHLAND AVE.
RIVERDALE
91ST ST
95TH ST
99TH ST
103RD ST
107TH ST
111TH ST
115TH ST
119TH ST
123RD ST
127TH ST
134TH ST
RACINE AVE
HALSTED ST
WENTWORTH AVE
KING DR
COTTAGE GROVE AVE
STONY ISLAND AVE
MICHIGAN AVE

Figure 5-5: Existing Public Transportation in the Red Line Extension Project Area

The Metra Rock Island District commuter rail line has two stations at the west end of the project area at 95th Street and 103rd Street. The Metra Electric District Mainline has four stations from 103rd Street to 115th Street and the Metra Electric Blue Island Branch has five stations from Ashland Avenue to State Street. Although it is unaffected by automobile congestion, Metra service is infrequent, and some stations, including both of the Rock Island District stations, have no mid-day or weekend service. Metra service is useful for peak-hour commuters traveling to and from downtown Chicago, but less convenient for off-peak travel or for non-downtown commutes that may require transferring to the CTA network. The Northern Indiana Commuter Transportation District does not have a station in the project area.

While the project area does have an extensive sidewalk and crosswalk system along the road network, physical divisions between communities include the ME mainline, which is on an embankment; Lake Calumet; the Little Calumet River; and the UPRR right-of-way, which extends north-south from 99th Street to 119th Street; and large tracts of industrial land. These physical divisions are difficult to cross for pedestrians and bicyclists, and effectively separate the communities on either side. This geographic isolation is particularly problematic for residents of the Altgeld Gardens public housing project at the south end of the project area between 130th Street and 134th Street in the Riverdale community area. Residents in this area have limited employment opportunities and transportation choices within walking distance of their homes. The project area currently has limited bicycle infrastructure although improvements are planned. The off-street bicycle trail, the Major Taylor Trail, extends southeast from 105th Street and Throop Street to the Whistler Woods Forest Preserve, south of the Little Calumet River in Riverdale. Bicycle lanes in the project area include the following:

- 103rd Street – From Michigan Avenue to Cottage Grove Avenue - Standard Bicycle Lanes
- State Street - From 95th Street to 99th Street - Standard Bicycle Lanes
- State Street - From 99th Street to 103rd Street - Marked-Shared Bicycle Lanes
- Vincennes Avenue - From 89th Street to 103rd Street - Barrier-Protected Bicycle Lanes
- Woodlawn Avenue - From 103rd Street to 111th Street - Standard Bicycle Lanes
- Vincennes Avenue - From 103rd Street to 105th Street “Future 2015” Buffer - Protected Bicycle Lanes
- 105th Street - From Vincennes Avenue to Major Taylor Trail - “Future 2015” Marked Shared Lanes
- Cottage Grove Avenue - From 93rd Street to 115th Street - “Future 2015” Buffer-Protected Bicycle Lanes

There is a need for additional transportation options to address the shortcomings in roadway, transit, pedestrian, and bicycle infrastructure in the project area. More information on existing travel patterns in the project area is available in the *Transportation Technical Memorandum*.

5.3.2 Affordable Housing Options

Residential houses in the project area had an estimated median value of $95,000 compared to $161,000 for the City of Chicago (2013 dollars). The median monthly rental price (for 2012) in the project area is estimated at $1,237 compared to $1,501 for the City of Chicago (Zillow 2012a, 2012b).

An example of vacant affordable housing in the project area is Altgeld Gardens, one of the country's first public housing complexes, where approximately 3,500 residents currently reside in 1,500 housing units (Altgeld Gardens, 2013). Given the age of the complex, several of the vacant units require rehabilitation before they can be inhabited. As a result, the Chicago Housing Authority (CHA), supported by a $265 capital improvement program, will rehabilitate 218 units in fiscal year 2015 (CHA 2014). As with other affordable housing opportunities in the project area, residents at Altgeld Gardens are challenged by the affordable housing/transit availability mismatch, in that housing in the project area is affordable but the commute time and effort required to reach viable employment areas are high. Given CHA's investment at Altgeld Gardens, the proposed project has the opportunity to result in a mutual benefit by leveraging the rehabilitation of the housing units and providing a viable transportation option thereby further off-setting the housing/transit availability mismatch.

There is a high percentage of vacant homes in the project area—13 percent higher than the City of Chicago (CMAP 2012). Several factors contribute to housing vacancy rates in a particular community. These factors include, but are not limited to, safety and security, proximity to public services, access to jobs, quality of schools, age and type of available housing units, quality of life, and the overall health of the community. Improved public transportation options, combined with affordable housing stock, would serve as a catalyst to bring people to the area that would not otherwise consider communities in the project area as a viable place to live. The mutual benefit for project area residents, and those seeking affordable housing, could be met through rapid transit south of the 95th Street Terminal. See **Figure 5-6** for affordable housing locations in the project area.

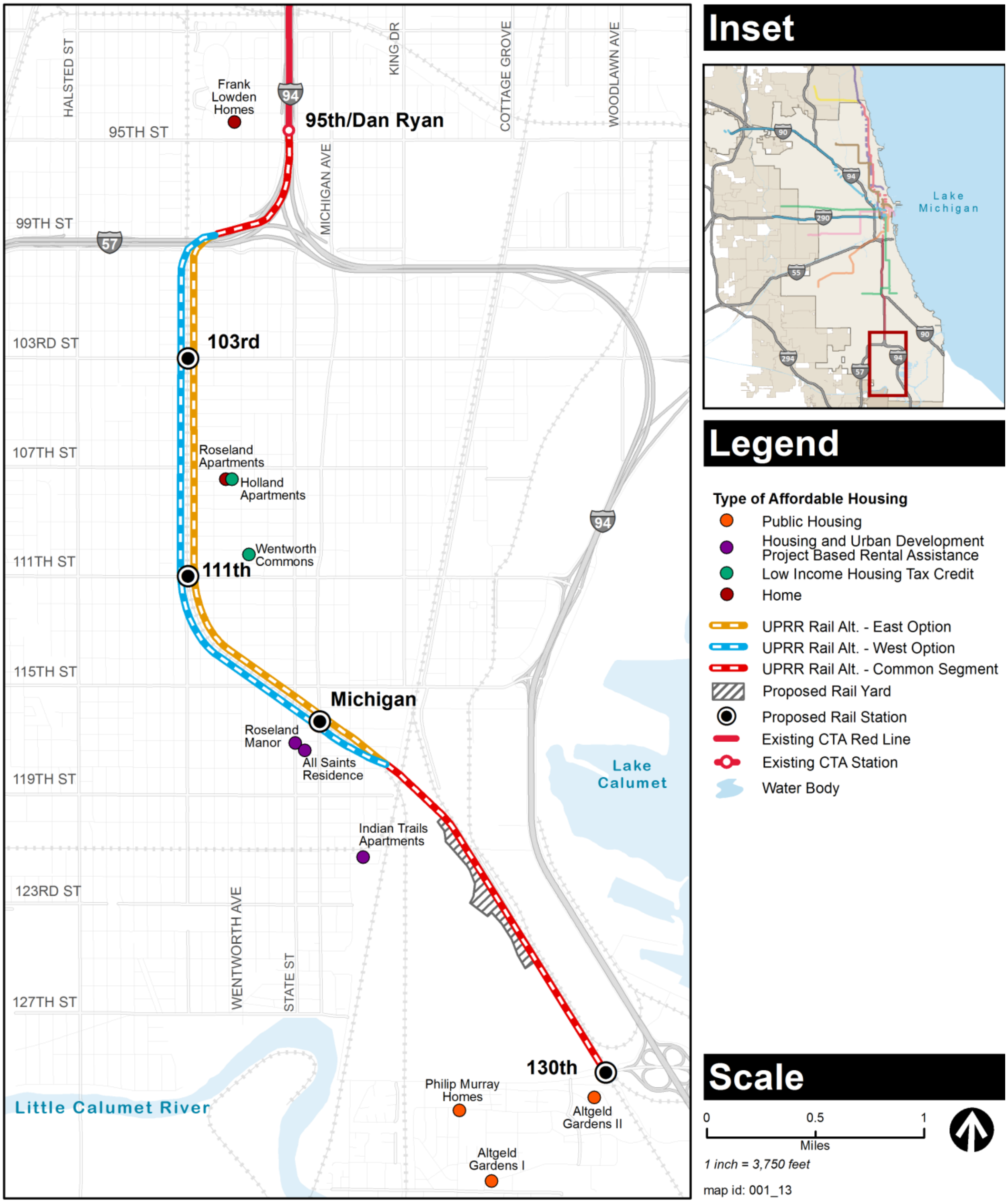
HALSTED ST
KING DR
COTTAGE GROVE
WOODLAWN AVE
Frank Lowden Homes
94
95TH ST
95th/Dan Ryan
MICHIGAN AVE
99TH ST
57
103RD ST
103rd
107TH ST
Roseland Apartments
Holland Apartments
94
Wentworth Commons
111TH ST
111th
115TH ST
Michigan
Roseland Manor
All Saints Residence
119TH ST
Lake Calumet
Indian Trails Apartments
123RD ST
WENTWORTH AVE
STATE ST
127TH ST
130th
Philip Murray Homes
Altgeld Gardens II
Little Calumet River
Altgeld Gardens I
Inset
Lake Michigan
90
94
290
55
90
294
57
94
Legend
Type of Affordable Housing
Public Housing
Housing and Urban Development Project Based Rental Assistance
Low Income Housing Tax Credit
Home
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
UPRR Rail Alt. - Common Segment
Proposed Rail Yard
Proposed Rail Station
Existing CTA Red Line
Existing CTA Station
Water Body
Scale
0
0.5
1
Miles
1 inch = 3,750 feet
map id: 001_13

Figure 5-6: Affordable Housing Locations in the Red Line Extension Project Area

5.3.3 FTA Regulatory Framework

In August, 2013, FTA published the final rule implementing changes to the New Starts/Small Starts program. This rule is known as the *Moving Ahead for Progress in the 21st Century Act* (known as "MAP-21"). The program is focused on measuring a wider set of project benefits and streamlining the project evaluation process. Under Map-21, "land use" is a quantitative evaluation of several measures, including the share of legally binding affordable housing in the corridor.

In addition to the Map-21 evaluation of affordable housing, the U.S. Department of Housing and Urban Development, the U.S. Department of Transportation, and the U.S. Environmental Protection Agency joined together to form the Partnership for Sustainable Communities. This interagency partnership helps communities nationwide to improve access to affordable housing, increase transportation options, and lower transportation costs while protecting the environment.

The partnership agencies incorporated six principles of livability into federal funding programs, policies, and future legislative proposals:

- Provide more transportation choice.
- Promote equitable, affordable housing.
- Enhance economic competitiveness.
- Support existing communities.
- Coordinate and leverage federal policies and investment.
- Value communities and neighborhoods.

Each of the livability principles identified above are key elements of this project area. More transportation options and improved access to affordable housing would enhance livability in the project area.

5.4 Underserved Transit Markets and Limited Transit Connectivity

CTA and Pace bus services are provided on the east-west and north-south thoroughfares with 16 CTA and 6 Pace routes operating in the project area (not including night bus routes). Of those 22 total bus routes, 18 serve the 95th Street Terminal on the Red Line. **Table 5-6** summarizes existing bus routes, average bus ridership, and routes that serve the 95th Street Terminal. Currently the 95th Street Terminal serves as the only point of connection between CTA and Pace buses.

Metra service in the project area includes the Rock Island District, Electric District Mainline, and Electric District Blue Island Branch. The Northern Indiana Commuter Transportation District (NICTD) operates the South Shore Line, which shares tracks with the Metra Electric District Mainline north of 115th Street. Neither Metra nor NICTD connect to the 95th Street Terminal.

Table 5-6 demonstrates the demand for access to the 95th Street Terminal and the Red Line.

Table 5-6: Chicago Transit Authority Ridership Summary

Route Number and Name	2014 Average Weekday Ridership	Maximum Monthly Average Weekday Ridership (May 2012 to April 2013)[3]	Serves 95th Street Terminal[5]
#3 King Drive	19,224	21,125	No
#8A South Halsted	3,238	3,784	No
#9 Ashland[1]	26,871	29,066	Yes
#28 Stony Island	7,208	8,014	No
#29 State	13,342	14,012	Yes
#34 South Michigan	5,150	5,690	Yes
#95E 93rd/95th	3,830	4,307	Yes
#95W West 95th	2,369	2,605	Yes
#100 Jeffery Manor Express	674	733	Yes
#103 West 103rd	2,674	3,101	Yes
#106 East 103rd	1,831	2,309	Yes
#108 Halsted/95th	1,322	1,553	Yes
#111 111th/King Drive[2]	3,763	4,366	Yes
#112 Vincennes/111th[2]	2,289	2,740	Yes
#115 Pullman/115th[2]	3,990	4,594	Yes
#119 Michigan/119th	4,725	5,068	Yes
#348 Harvey - Riverdale - Blue Island	332	399	No
#352 Halsted	6,099	6,574	Yes
#353 95th - Riverdale- Homewood	1,769	2,011	Yes
#359 Robbins/South Kedzie Avenue	1,460	1,643	Yes
#381 95th Street	4,038	4,593	Yes
#395 CTA 95th - UPS	529	669	Yes

Source: CTA 2014

Notes:

1. #9 Ashland serves the 95th Street Terminal only with the Night Owl Service.
2. Only January through April 2013 is shown for bus routes #111 and #115 due to a route change in December 2012.
3. Maximum monthly average weekday ridership is based on the 12-month period from May 2012 through April 2013. In May 2013, Red Line (Dan Ryan) reconstruction changed ridership patterns during construction.
4. Night service route #N5 is not included in this table.
5. Service to the 95th Street Terminal is based on route maps current as of July 31, 2013.

A potential transit travel market that is not currently well served is drive-access transit trips from within and south of the project area. There are no CTA park & ride facilities on the existing Red Line Dan Ryan branch. All of the other CTA rail rapid transit branches, with the exception of the Green Line Lake Street branch, have park & ride facilities. CTA's newest rail rapid transit line, the Orange Line (opened in 1993), has park & ride facilities at five of eight stations. The Blue Line has park & ride facilities at Rosemont and Cumberland stations, conveniently located near the I-90 Kennedy Expressway. A previous survey at these Blue Line park & ride stations found that passenger access CTA rail by car from 93 suburbs; 74 percent of all trips originated in the northwest suburbs or northwest Chicago (CTA 1994). Similar conditions, such as crowded expressways and expensive parking in the Loop, face travelers from southern Cook County and beyond. CTA park & ride facilities near major expressways or arterial streets in the southern portions of the project area, would provide new, convenient drive access possibilities on the Red Line.

Other potential transit travel markets include reverse commute trips, school trips, and home-based other trips within southern communities. Several educational facilities are in the project area, including Chicago State University (7,200 students), Olive-Harvey College (4,300 students), and several high schools (including Harlan, Corliss, Fenger, Julian, Brooks, and Carver High Schools) that would benefit from transit improvements in the project area.

Transportation equity is the fair distribution of transportation resources so that no group carries an unfair burden of the negative environmental, social, or economic impacts, or receives an unfair share of benefits. The project area population is almost entirely minority. Many residents do not have access to an automobile and rely on transit for mobility. In addition, daily parking costs in downtown Chicago are among the highest in the United States, further limiting the project area population's access to downtown. Transit improvements in the project area would serve all transportation system users, including low-income and underrepresented populations, and would provide better access to affordable housing in the project area.

5.5 Disinvestment and Limited Economic Development Have Affected Far South Side Communities

The project area has had ongoing disinvestment, including loss of manufacturing jobs, which has led to a decline in population, services, and job opportunities. Once-vibrant retail districts, such as Michigan Avenue and Halsted Street, now contain vacant land and storefronts. This decline may be seen in decreases in project area population and employment compared to the City of Chicago and the seven-county region (see **Table 5-7** and **Table 5-8**).

Table 5-7: Population Decline in Red Line Extension Project Area (2000 to 2010)

Area	2000 Population	2010 Population	Percent Change
Seven-County Area	8,146,264	8,399,893	3.02%
City of Chicago	2,895,964	2,700,741	-7.23%
RLE Project Area	147,662	128,366	-15.03%

Source: U.S. Census Bureau 2010

Table 5-8: Employment Decline in Red Line Extension Project Area (2000 to 2010)

Area	2000 Employment[1]	2010 Employment[1]	Percent Change
Seven-County Area	4,083,530	4,429,414	8.49%
City of Chicago	1,358,054	1,410,294	3.84%
RLE Project Area	62,587	56,105	-11.50%

Source: U.S. Census Bureau 2010

The City of Chicago is focusing on stabilizing, improving, and redeveloping communities in and adjacent to the project area. As a result, the City has designated several tax increment financing (TIF) districts, Redevelopment Areas (RA), Special Service Areas (SSAs), and Industrial Corridors in the project area. Major incentive zone areas in the project area include the following:

- 119th/Halsted Mixed-Use Area
- Roseland/Michigan Avenue Mixed-Use Area
- West Pullman Industrial Park Mixed Use Area
- North Pullman Mixed-Use Area
- 105th/Vincennes Mixed-Use Area
- 87th/Cottage Mixed-Use Area
- 119th & I-57 Redevelopment Area
- 107th/Halsted Mixed-Use Area
- Calumet Commercial Area
- Lake Calumet Indiana Industrial Corridor
- Stoney Island/Burnside Industrial Area
- SSA#40 Michigan Avenue/Roseland
- SSA #41 103rd Street/Roseland
- SSA $45 103rd Street/Halsted

In addition to economic revitalization initiatives, viable transportation options continue to be a key element in the success of economic development efforts and revitalization for communities within the project area. Examples of redevelopment in the project area include the Pullman District, the Method factory, and Walmart opening a store in 2014.

Located in the project area and referred to as the Pullman community area of Chicago, the Pullman District includes the Pullman factory, the Hotel Florence, and the Pullman Railroad Porters National Museum. This district was named a National Monument on February 19, 2015, making it a component of the National Park System. (Ward 9 Website 2015)

Building on the Pullman's community history as a manufacturing hub, Method, a manufacturer of environmentally-friendly cleaning and personal care products, has announced the opened a new 150,000 square foot factory in Pullman in April 2015. The Community Development Commission approved $8.1 million in tax increment financing for infrastructure improvements in Pullman Park in support of the Method plant construction. The plant has created approximately 100 jobs with good salaries, giving employees the opportunity to buy a home, raise a family, and build a financially secure future (Method 2015).

Bringing rail transit to an area that has not experienced recent growth may not only directly improve mobility for community residents, but it may also promote business and real estate investment confidence through the permanency of the improvement. The realization by investors that the rail infrastructure is a permanent enhancement in the area, and would provide better regional connectivity, may promote redevelopment and economic stabilization in the area. A local example is CTA's Brown Line Capacity Expansion Project where median home values near the Brown Line grew more than 40 percent between the years 2000 and 2011; the same time transit improvements where implemented in the corridor. Moreover, a Chicago-based economic development research organization determined that for every dollar spent on transit operating and capital expenses, the Chicago area will realize a return on investment of at least $1.21 and as much as $1.64. (Chicago Metropolis 2020 2007)

5.6 The Need for a Rail Car Storage Yard and Maintenance Facility

The existing 98th Street Yard does not have capacity to store rail cars required for any substantial increase in Red Line capacity accompanying future Red Line expansion. Two yard and shop facilities, Howard Yard at the north end of the Red Line and 98th Street Yard at the south end of the Red Line, provide storage for vehicles operating along the Red Line. Any Red Line expansion must consider the capacity of both yards. (The Howard Yard and the 98th Street Yard together supply rail cars for both the northern and southern portion of the Red Line.) All northbound trains currently begin their run at 98th Street Yard, and any expansion of Red Line service would require expanded yard capacity at or near the southern end of the Red Line. The existing 98th Street Yard in landlocked between interstate ramps for I-94 and I-57. There is no room to expand the yard without major realignments for the two highways. In addition, the existing 98th Street Yard is oriented as a terminal yard for service to and north of the 95th Street station. With the RLE Project expanding service to the south, use of the 98th Street Yard would lead to inefficient operations. Moving trains into and out of the existing yard, due to the orientation of the yard, would cause operational inefficiencies and potential capacity constraints to Red Line service.

Section 6
Project Goals

The goals for the RLE Project were developed, reviewed, and defined during CTA's RLE Alternatives Analysis. The goals, which helped define the evaluation criteria used in screening potential alternatives, are included in **Table 6-1**.

Table 6-1: Goals of the Red Line Extension Project Area

Goal	Objectives	Description
Goal 1	Reduce Travel Times	Reduce travel times for residents from within and south of the project area to the 95th Street Terminal and the Loop. Provide direct access to the CTA rail system for transit-dependent populations. Provide new stations convenient to transit-dependent communities. Provide direct service to public housing such as Altgeld Gardens.
Goal 2	Increase Travel Choices	Provide better transit access to regional employment centers and local commercial areas. Allow for potential connections to other public transportation modes including regional commuter rail. Reduce geographic isolation of the project area and improve connections to major activity centers. Provide opportunities for drivers commuting on expressways to park and use transit to complete their trips.
Goal 3	Increase Economic Competitiveness	Foster economic development in the project area by providing stations that can encourage nearby development.
Goal 4	Environmental Criteria	▪ Displacement and relocation impacts ▪ Noise Impacts ▪ Park Impacts ▪ Community Character Impacts ▪ Visual and Aesthetic Impacts
Goal 5	Provide the Best Value	▪ Projected ridership ▪ Capital costs to construct the project ▪ Changes in operating and maintenance costs for the system

Section 7
Conclusions

To meet the project needs identified in CTA's RLE Alternatives Analysis document and in response to the stated project goals above, the RLE Project is being proposed to reduce commute times, improve transit service, increase transportation choices, and promote economic development. The project is needed to respond to the limited transit choices, limited employment options, the need for connectivity to affordable housing, and the need to reverse disinvestment for communities on the Far South Side of Chicago. The purpose and need describes CTA's basis for advancing the proposed project and identifies objectives that frame the development and evaluation of the alternatives in the Draft EIS.

Section 8
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Appendix E
Description of Alternatives

RED AHEAD
Moving Ahead to a Better Red

Red Line Extension

Chicago Red Line Extension Project

Description of Alternatives

October 31, 2012
Updated July 29, 2015

Prepared for:
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Prepared by:
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Appendix A - 2014-2015 Red Line Extension Project Update

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Abbreviations

AREMA	American Railway Engineering and Maintenance-of-Way Association
BRT	Bus Rapid Transit
CDOT	Chicago Department of Transportation
CMAP	Chicago Metropolitan Agency for Planning
CN	Canadian National
CTA	Chicago Transit Authority
EIS	Environmental Impact Statement
IDOT	Illinois Department of Transportation
MWRD	Metropolitan Water Reclamation District of Greater Chicago
NEPA	National Environmental Policy Act
NICTD/CSS & SBRR	Northern Indiana Commuter Transportation District Chicago South Shore & South Bend Railroad
RLE	Red Line Extension
ROW	Right-of-Way
TIP	Transportation Improvement Program
UPRR	Union Pacific Railroad

Section 1
Background Information

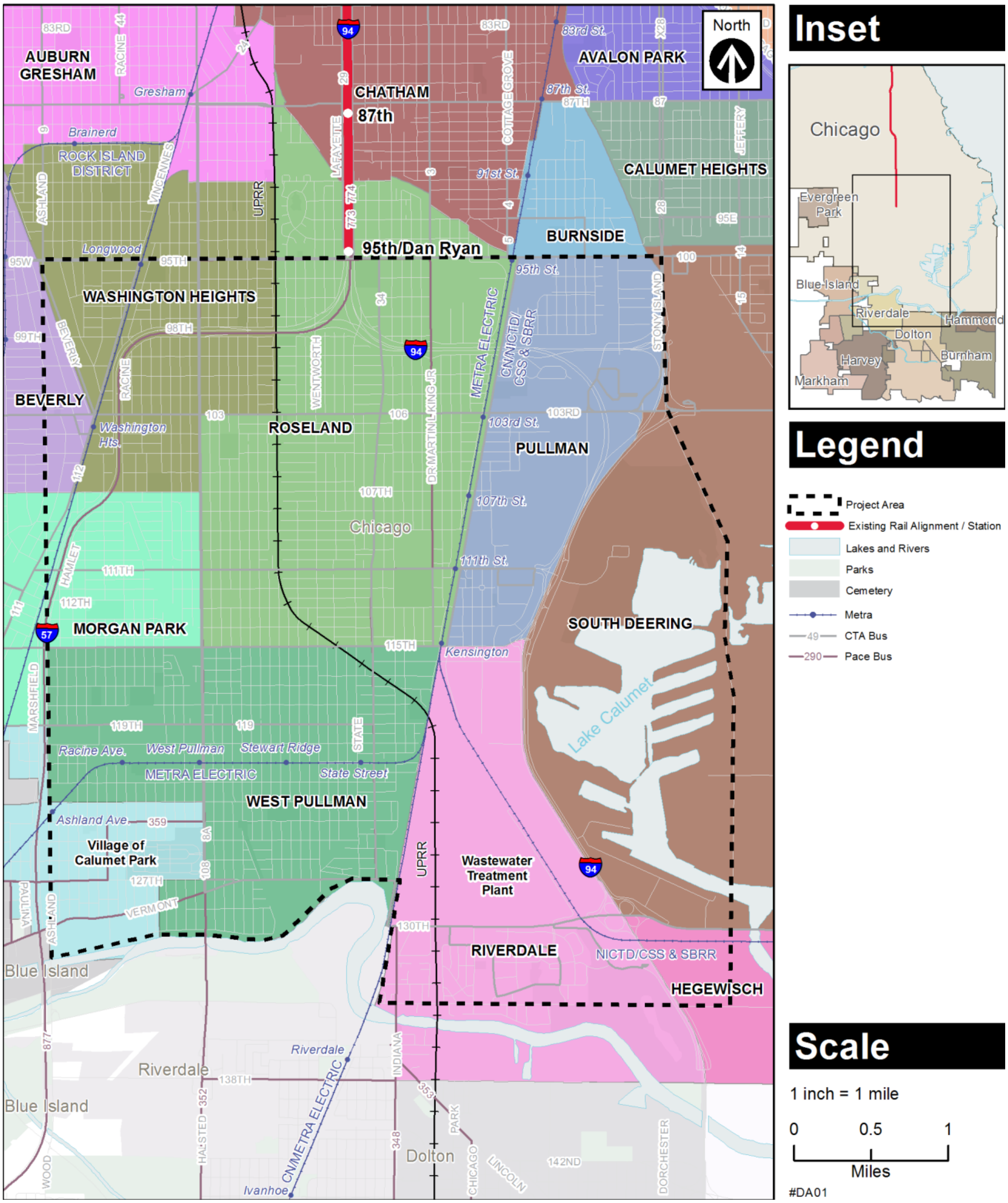
The Chicago Transit Authority (CTA) is proposing to extend the Red Line from the 95th Street station to the vicinity of 130th Street, subject to the availability of funding. The proposed Red Line Extension (RLE) would include four stops. Each stop would include bus transfer and parking facilities. This project is one part of the Red Ahead Program to extend and enhance the entire Red Line.

The project area is 11 miles south of the Chicago central business district (commonly referred to as the Loop) and encompasses approximately 20 square miles. The boundaries of the project area are 95th Street on the north, Ashland Avenue on the west, Stony Island Avenue on the east, and the Calumet-Sag Channel/Little Calumet River and 134th Street on the south. The I-57 Expressway and I-94 Bishop Ford Freeway cross the western and eastern edges of the project area, respectively. Lake Calumet is in the eastern portion of the project area. Figure 1-1 shows the project area.

The project area encompasses parts of nine community areas in the City of Chicago and the eastern section of the Village of Calumet Park. Chicago community areas include Beverly, Washington Heights, Roseland, Morgan Park, Pullman, West Pullman, Riverdale, and South Deering. The project area comprises residential (primarily single family), industrial (both existing and vacant), transportation (including freight), and commercial development.

The Draft Environmental Impact Statement (EIS) will focus on the following alternatives that emerged from the Alternatives Analysis and National Environmental Policy Act (NEPA) scoping process, which are shown in Figure 1-2:

- No Build Alternative
- Bus Rapid Transit (BRT) Alternative
- Union Pacific Railroad (UPRR) Rail Alternative
    - Right-of-Way (ROW) Option
    - East Option
    - West Option
- Halsted Rail Alternative


North
AUBURN GRESHAM
CHATHAM
87th
AVALON PARK
CALUMET HEIGHTS
BURNSIDE
95th/Dan Ryan
ROCK ISLAND DISTRICT
WASHINGTON HEIGHTS
BEVERLY
ROSELAND
PULLMAN
Chicago
MORGAN PARK
SOUTH DEERING
WEST PULLMAN
Village of Calumet Park
Wastewater Treatment Plant
RIVERDALE
HEGEWISCH
Lake Calumet
Blue Island
Riverdale
Dolton
Gresham
Brainerd
Longwood
Washington Hts.
83rd St.
87th St.
91st St.
95th St.
103rd St.
107th St.
111th St.
Kensington
Racine Ave.
West Pullman
Stewart Ridge
State Street
METRA ELECTRIC
Ashland Ave.
Ivanhoe
CN/METRA ELECTRIC
CN/NICTD/ CSS & SBRR
NICTD/CSS & SBRR
UPRR
Inset
Chicago
Evergreen Park
Blue Island
Riverdale
Dolton
Hammond
Harvey
Burnham
Markham
Legend
Project Area
Existing Rail Alignment / Station
Lakes and Rivers
Parks
Cemetery
Metra
49 CTA Bus
290 Pace Bus
Scale
1 inch = 1 mile
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1
Miles
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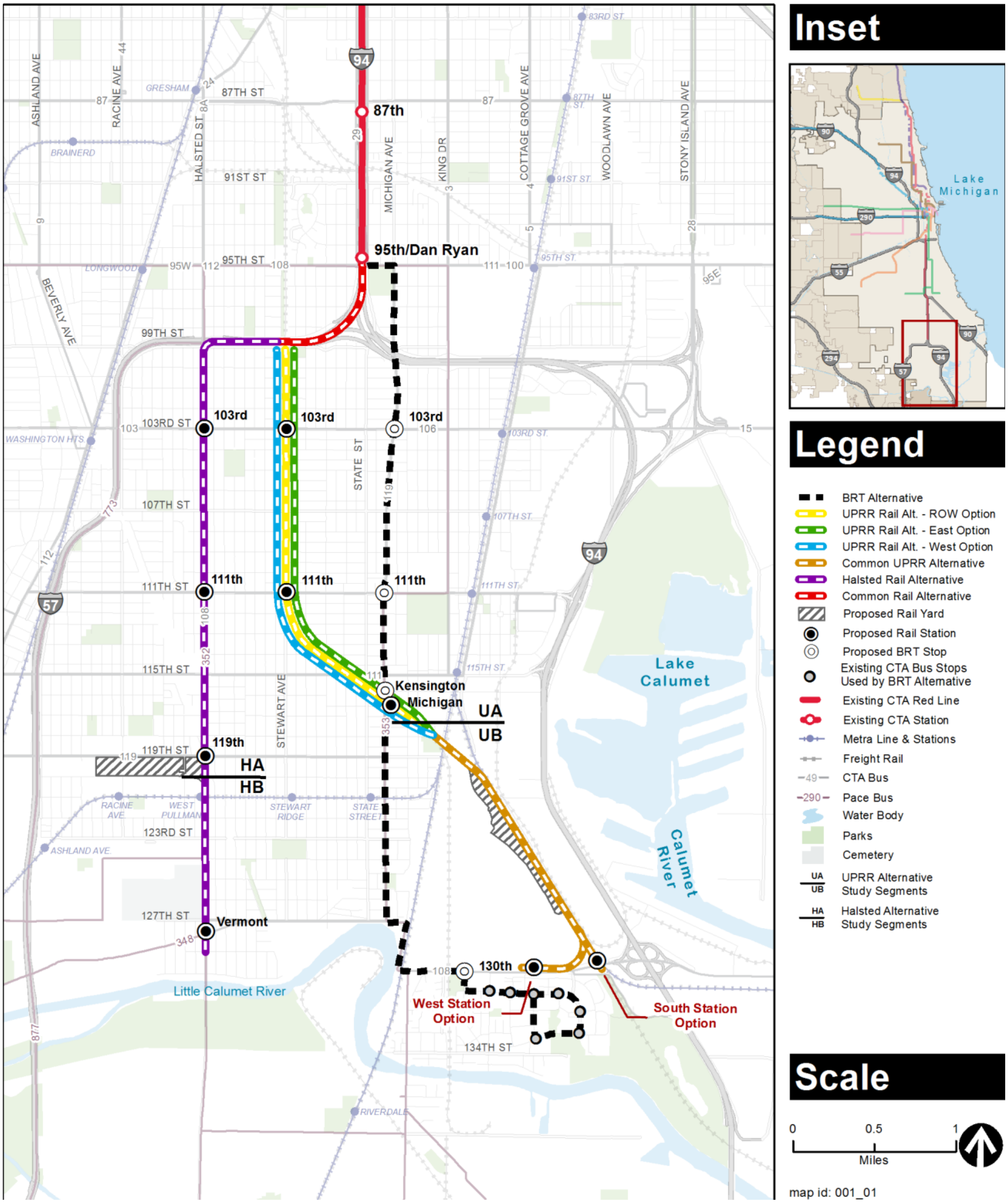
Figure 1-1: RLE Project Area


Inset
Lake Michigan
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Legend
BRT Alternative
UPRR Rail Alt. - ROW Option
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
Common UPRR Alternative
Halsted Rail Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Proposed BRT Stop
Existing CTA Bus Stops Used by BRT Alternative
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
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49 CTA Bus
290 Pace Bus
Water Body
Parks
Cemetery
UA UB UPRR Alternative Study Segments
HA HB Halsted Alternative Study Segments
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103rd
103rd
103rd
111th
111th
111th
119th
Kensington
Michigan
UA
UB
HA
HB
Vermont
130th
West Station Option
South Station Option
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95TH ST
99TH ST
103RD ST
107TH ST
111TH ST
115TH ST
119TH ST
123RD ST
127TH ST
134TH ST
ASHLAND AVE
RACINE AVE
HALSTED ST
BEVERLY AVE
MICHIGAN AVE
KING DR
COTTAGE GROVE AVE
WOODLAWN AVE
STONY ISLAND AVE
STATE ST
STEWART AVE
GRESHAM
BRAINERD
LONGWOOD
WASHINGTON HTS.
83RD ST
87TH ST
91ST ST
95TH ST
103RD ST
107TH ST
111TH ST
115TH ST
RACINE AVE
WEST PULLMAN
STEWART RIDGE
STATE STREET
ASHLAND AVE
RIVERDALE
Lake Calumet
Calumet River
Little Calumet River
94
57

Figure 1-2: RLE Project Alternatives

This technical memorandum defines the four different alternatives (note: one alternative has three options) to be evaluated in the Draft EIS for potential environmental, economic, and social impacts. Each alternative will be described based on infrastructure improvements, stations, and operating plans.

Additional Information about the RLE Project

- The Dan Ryan branch of the Red Line (Cermak-Chinatown station to 95th Street station) opened for service in September 1969.
- In late 2006, CTA initiated an Alternatives Analysis study to identify and evaluate potential major fixed guideway transit solutions in the project area.
    - Community meetings to share the results of the Screen 1 process were held on April 10 and 11, 2007.
    - Community meetings to share the results of the Screen 2 process were held on December 3 and 4, 2008.
    - Community meetings to share the results of the Screen 3 process were held on June 3 and 4, 2009.
- On August 12, 2009, the UPRR Rail Alternative was designated by the Chicago Transit Board as the Locally Preferred Alternative.
- The NEPA scoping process occurred in 2009 with an agency scoping meeting held on September 24, 2009. Public scoping meetings were held on September 22 and 24, 2009. A Notice of Intent was published in the Federal Register on September 1, 2009.
- An Open House meeting to inform the public of progress on the RLE Project was held on August 2, 2011.

Updated July 29, 2015

In August 2014, based on the technical analysis and public input until then, CTA announced the NEPA Preferred Alternative—the UPRR Rail Alternative. CTA is considering two alignment (route) options of this alternative: the East Option and the West Option. At this time, CTA is also considering only the South Station Option of the 130th Street Station. In late 2014 and early 2015, CTA conducted additional engineering on the East and West Options to refine the East and West Option alignments. Appendix A of this technical memorandum summarizes the refined alignments and any additional or different impacts that would result. The information in Appendix A supersedes information presented in other chapters of this technical memorandum.

Section 2
No Build Alternative

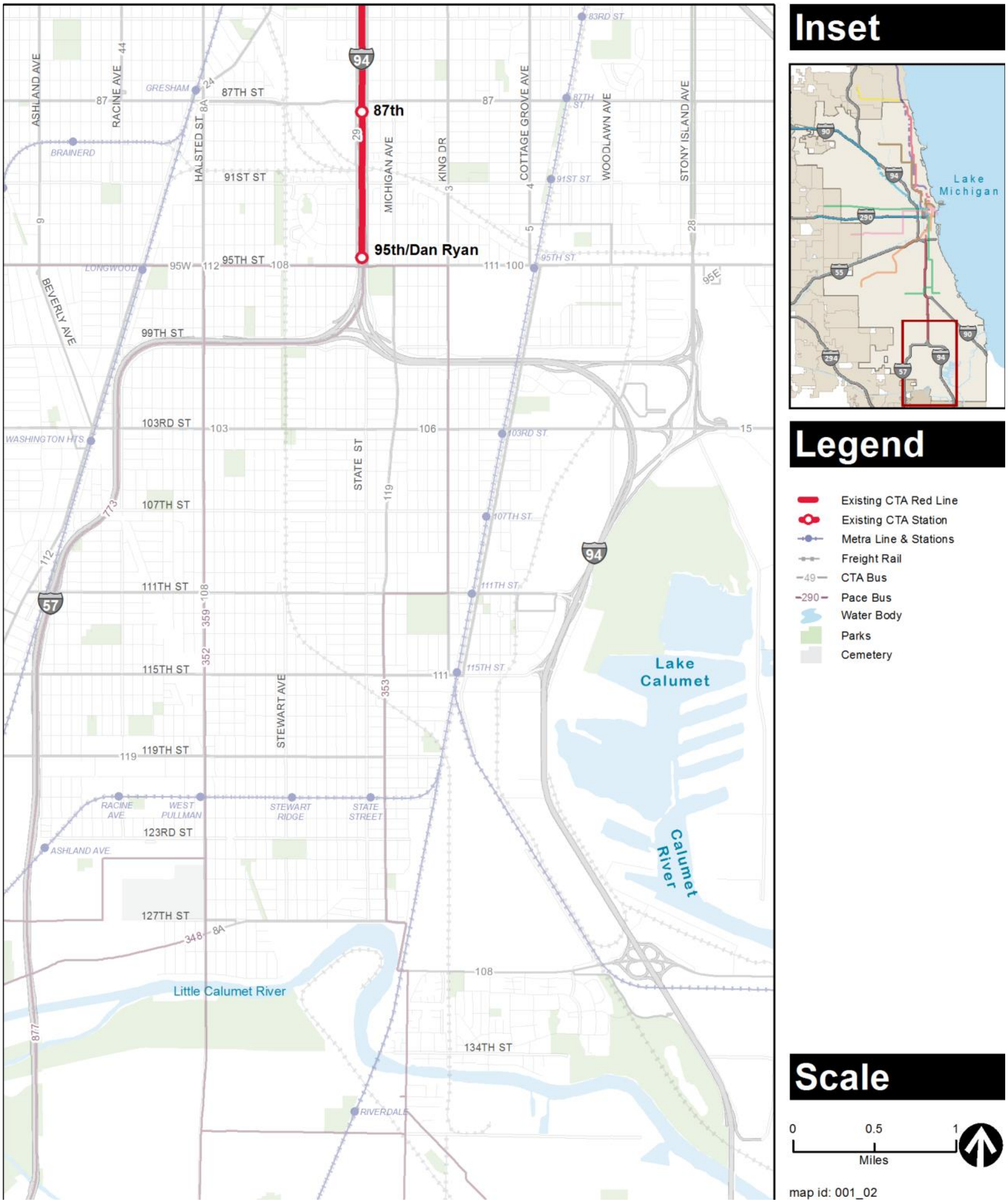
NEPA requires analysis of the No Build Alternative. Comparison with the build alternatives helps to assess the relative benefits and impacts of the other alternatives being evaluated. The No Build Alternative is carried into the Draft EIS phase of the project development regardless of its performance versus the build alternatives under consideration. No new infrastructure would be constructed as part of the No Build Alternative. The bus routes assumed to be part of the No Build Alternative are illustrated in Figure 2-1.

The No Build Alternative is defined as the existing transportation system plus any committed transportation improvements that are already in the Chicago Metropolitan Agency for Planning (CMAP) Fiscal Year 2010–2015 Transportation Improvement Program (TIP). Table 2-1 lists the TIP projects within the project area, which consist of four bridge reconstructions, several road improvement projects including resurfacing and coordination of signal timing, work on Metra's facilities, construction of a bicycle/pedestrian multi-use trail, and preservation of historic facilities.

Improvements to the 95th Street Terminal are anticipated to be completed prior to construction of the RLE. While specific details on the improvements are not yet available, major renovations and expansions to the station house are aimed at providing more space and improving the walking flow of passengers, with new or expanded bus terminal facilities—as well as Red Line platform improvements. Included in the upgrades are the following:

- New station building with bright, airy spaces and clear sightlines
- Expanded platforms to provide more room and easier flow of passengers
- Station will be largely enclosed in glass for maximum light and protection from the elements
- Wider bus lanes and increased spacing between bus bays to reduce congestion
- Wider sidewalks and waiting areas in bus terminal for increased passenger comfort and safety
- Sound panels at platform level to provide a more comfortable, less noisy space
- Additional escalators and elevators
- Additional space in front of ticket vending machines and fare gates

All elements of the No Build Alternative are included in each of the other alternatives.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STEWART AVE
BEVERLY AVE
GRESHAM
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WASHINGTON HTS
RACINE AVE
WEST PULLMAN
STEWART RIDGE
STATE STREET
ASHLAND AVE
RIVERDALE
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103RD ST
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111TH ST
115TH ST
Lake Calumet
Calumet River
Little Calumet River
94
57
Inset
Lake Michigan
Legend
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
49 CTA Bus
290 Pace Bus
Water Body
Parks
Cemetery
Scale
0
0.5
1
Miles
map id: 001_02

Figure 2-1: No Build Alternative

Table 2-1: Northbound Travel Times for No Build Alternative

Route Segment	Travel Time (minutes)
130th to 95th Street Station	28.0
130th to Jackson Station	57.0
130th to Clark/Division Station	64.5
130th to Howard Station	93.5

2.1 Infrastructure

No new infrastructure would be constructed as part of the No Build Alternative other than projects already committed through the CMAP TIP and regular maintenance of existing track and structures.

2.2 Stations

No stations would be constructed as part of the No Build Alternative.

2.3 Yard

The 98th Street yard and shop at the south end of the existing Red Line would continue to be used for Red Line trains. The 98th Street yard and shop would need to be replaced as it is past its useful life.

2.4 Operating Plan

As part of the No Build Alternative, bus transit service would be focused on the preservation of existing services and projects. Bus routes in the project area are not expected to change as part of the No Build Alternative. The following bus routes (shown in Figure 2-1) run in the project area: #8A, #9, #30, #34, #103, #106, #108, #111, #112, #115, #119, #348, #352, #353, and #359.

Red Line travel times during the morning peak period for the No Build Alternative are presented in Table 2-2.

Table 2-2: 2010-2015 CMAP TIP Projects in the Project Area; Projects Assumed in No Build Alternative

Agency	Location	Project	Expected Completion Date
Illinois Department of Transportation (IDOT)	I-94 Bishop Ford Expressway from Stony Island feeder includes Blue Island	Repair/replace two bridges	2016
IDOT	Bridge over I-94 Bishop Ford Expressway at 111th Street	Repair bridge	2013
IDOT	I-57 from US 30 (Lincoln Highway) to I-94 (Dan Ryan Expressway /Mainline)	Repair bridge	2013
Chicago Department of Transportation (CDOT)	95th Street from Western Avenue to Ewing Avenue	Coordination of traffic signal timing	2016
IDOT	Vermont Street from Western Avenue to 127th Street	Resurface road	2013
IDOT	IL 1 (Halsted Street) from 127th Street to 152nd Street	Resurface road	2013
Metra	Regionwide	Acquire shop facility and/or equipment; work on rail tower or yard; work on vehicle maintenance facility	2016
IDOT	Bike Facility: Palos Heights-Cal Sag Multi-Use Greenway from Centennial Trail to Burnham Greenway	Build bicycle and pedestrian facility	2014
IDOT	Hotel Florence from 11111 South Forestville Pullman Historic District	Preserve historic facility	2012
IDOT	North Pullman Historic District Area	Conduct landscaping, preserve historic facility	2013

Section 3
BRT Alternative

The proposed transportation system management alternative is a 5.5-mile long Bus Rapid Transit (BRT) route, which would operate between the existing 95th Street station and the intersection of 130th Street and Eberhart Avenue via 95th Street, Michigan Avenue, 127th Street, Indiana Avenue, and 130th Street. Four stops with improved bus shelters would be created at 103rd Street and Michigan Avenue, 111th Street and Michigan Avenue, Kensington Avenue and Michigan Avenue, and 130th Street and Eberhart Avenue. Although BRT service elements will not continue south of the 130th Street stop, the bus route will continue through Altgeld Gardens with stops at 131st Street and Langley Avenue, 131st Street and Corliss Avenue, 131st Street and Ingleside Avenue, 132nd Street and Ellis Avenue, 133rd Street and Ellis Avenue, and 133rd Place and Corliss Avenue. Figure 3-1 shows the BRT Alternative. Table 3-1 summarizes the streets on which the BRT Alternative would operate.

Table 3-1: BRT Alternative Street Summary

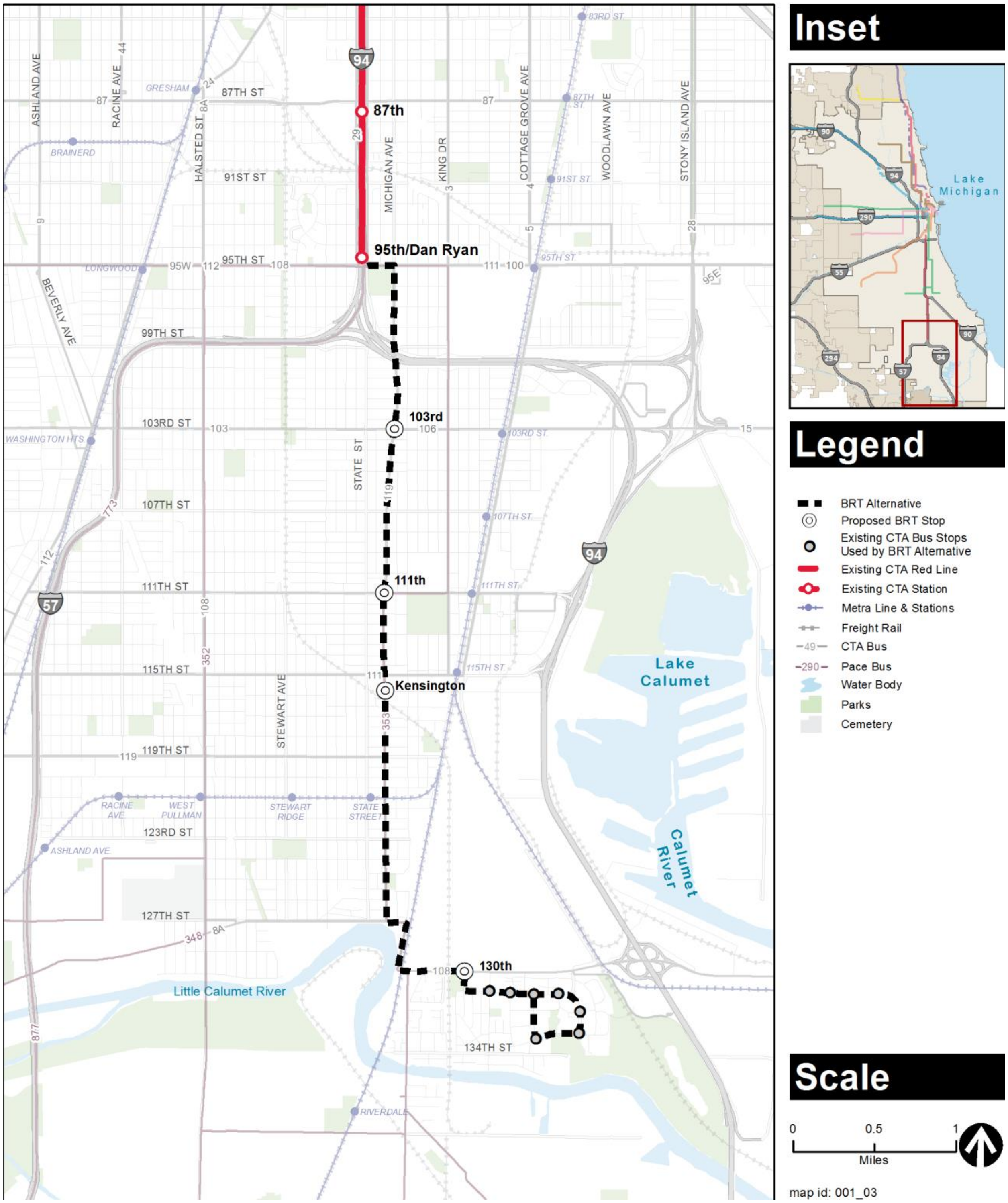
Street	Street Width (feet)	Number of Lanes	Center Turn Lane	Parking
95th Street	80	4	Yes	No
Michigan Avenue	40	2	No	Yes
127th Street	40	4	No	No
Indiana Avenue	40	4	No	No
130th Street	60	4	Yes	No

The BRT Alternative would incorporate bus routing changes that may occur as part of improvements to the 95th Street Terminal. The routing shown on the BRT Plans and Profiles reflects the existing station design. Routing will be adjusted when terminal is renovated.

3.1 Infrastructure

Projects already committed through the CMAP TIP would be constructed as described for the No Build Alternative. Regular maintenance of existing track and structures would continue.

No dedicated bus lanes would be provided for the BRT Alternative. Parking lanes would be removed for some portions of the alignment.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95th/Dan Ryan
103rd
111th
Kensington
130th
87TH ST
91ST ST
95TH ST
99TH ST
103RD ST
107TH ST
111TH ST
115TH ST
119TH ST
123RD ST
127TH ST
134TH ST
ASHLAND AVE
RACINE AVE
HALSTED ST
BEVERLY AVE
STEWART AVE
STATE ST
MICHIGAN AVE
KING DR
COTTAGE GROVE AVE
WOODLAWN AVE
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Little Calumet River
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Legend
BRT Alternative
Proposed BRT Stop
Existing CTA Bus Stops Used by BRT Alternative
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
49 CTA Bus
290 Pace Bus
Water Body
Parks
Cemetery
Scale
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Miles
map id: 001_03

Figure 3-1: BRT Alternative

3.2 Stops and Parking

Improved bus shelters would be provided at the 103rd Street, 111th Place, Kensington Avenue, and 130th Street stops. Park & ride facilities with a total capacity of 700 parking spaces in the year of construction and up to 2,800 parking spaces in a later year (2030) would be constructed at the stop locations, as shown in Table 3-2.

Table 3-2: BRT Alternative Park & Ride Facility Parking Spaces

Location	Construction Year	Horizon Year (2030)
103rd Street	100	200
111th Street	100	200
Kensington Avenue	100	1,000
130th Street	400	1,400
Total	700	2,800

3.2.1 103rd Street Stop

Improved bus shelters for the 103rd Street stop would be on the northwest corner (nearside) of the 103rd Street and Michigan Avenue intersection for the southbound bus and at the northeast corner (farside) of the 103rd Street and Michigan Avenue intersection for the northbound bus. There are existing bus stops at these locations for CTA routes #34 and #119.

A surface parking lot with capacity for 200 spaces would be located on the southeast quadrant of the 102nd Street and Michigan Avenue intersection. The driveway for the parking lot would be on the west side of the lot, directly across from 102nd Place, onto Michigan Avenue.

3.2.2 111th Street Stop

Improved bus shelters for the 111th Street stop would be on the southwest corner (farside) of the 111th Street and Michigan Avenue intersection for the southbound bus and either the northeast or southeast corner (nearside or farside, respectively) of the 111th Street and Michigan Avenue intersection for the northbound bus. There are existing bus stops at these locations for CTA routes #34 and #119.

A surface parking lot with capacity for 200 spaces would be located on the southeast quadrant of the 111th Place and State Street intersection. Driveways for the parking lot would be on the north side of the parking lot, midway between State Street and Michigan Avenue, onto 111th Place, and on the south side of the parking lot, midway between State Street and Michigan Avenue, only 112th Street.

3.2.3 Kensington Avenue Stop

Improved bus shelters for the Kensington Avenue stop would be on the northwest corner (nearside) of the Kensington Avenue and Michigan Avenue intersection for the southbound bus and at the southeast corner (nearside) of the Kensington Avenue and Michigan Avenue intersection for the northbound bus. There are existing bus stops at these locations for CTA routes #34 and #119.

A three-story parking garage with capacity for 1,000 spaces would be located on the southeast quadrant of the Kensington Avenue and Michigan Avenue intersection; the ground level of the parking garage would be available for retail and/or community facilities. Driveways for the parking garage would be on the west side of the parking structure, midway between Kensington Avenue and the railroad crossing, onto Michigan Avenue, and on the south side of the parking structure, midway between Indiana Avenue and the railroad crossing, onto 116th Street.

3.2.4 130th Street Stop

Improved bus shelters for the 130th Street stop would be on the southwest corner (nearside) of the 130th Street and Eberhart Avenue intersection for the southbound bus and at the northwest corner (farside) of the 130th Street and Eberhart Avenue intersection for the northbound bus. A signalized intersection with crosswalk is proposed at the 130th Street and Eberhart Avenue intersection.

A three-story parking garage with capacity for 1,400 spaces would be located on the northwest quadrant of the 130th Street and Water Treatment Plan Access Road intersection. Driveways for the parking garage would be on the south side of the parking lot, adjacent from Eberhart Avenue, onto 130th Street, and on the east side of the parking lot, onto the Water Treatment Plant Access Road.

3.2.5 Additional Stops

Although BRT service elements will not continue south of the 130th Street stop, the bus route will continue through Altgeld Gardens along the existing #34 route with stops at 131st Street and Langley Avenue, 131st Street and Corliss Avenue, 131st Street and Ingleside Avenue, 132nd Street and Ellis Avenue, 133rd Street and Ellis Avenue, and 133rd Place and Corliss Avenue. Existing bus shelters will remain unchanged.

3.3 Yard

The existing 103rd Street Garage at 1702 103rd Street would be used to store BRT Alternative buses.

3.4 Operating Plan

The BRT Alternative would add a limited-stop enhanced bus route, #X34, along the existing #34 South Michigan Avenue bus route to 130th Street. The BRT Alternative would utilize traffic signal priority at signalized intersections along 95th Street, Michigan Avenue, and 130th Street.

The BRT Alternative would require a net increase of 12, 60-foot articulated buses plus two spares.

The BRT Alternative bus would run 24 hours per day. Bus frequencies would be adjusted during peak periods to a four-minute frequency between 6 AM and 8 PM on weekdays and a 12-minute frequency on the existing route #34 to better serve anticipated demand.

Table 3-3 presents the proposed travel times during the morning peak period for the BRT Alternative via route #X34 and the Red Line.

Table 3-3: Northbound Travel Times for BRT Alternative

Route Segment	Travel Time (minutes)
130th Street to 95th Street Station	23.0
130th Street to Jackson Station	52.0
130th Street to Clark/Division Station	59.5
130th Street to Howard Station	88.5

Section 4
UPRR Rail Alternative

The proposed UPRR Rail Alternative would extend the heavy rail transit Red Line from the existing 95th Street Station to 130th Street, just west of I-94. The Chicago Transit Board designated the UPRR Rail Alternative as the Locally Preferred Alternative at its August 12, 2009 board meeting.

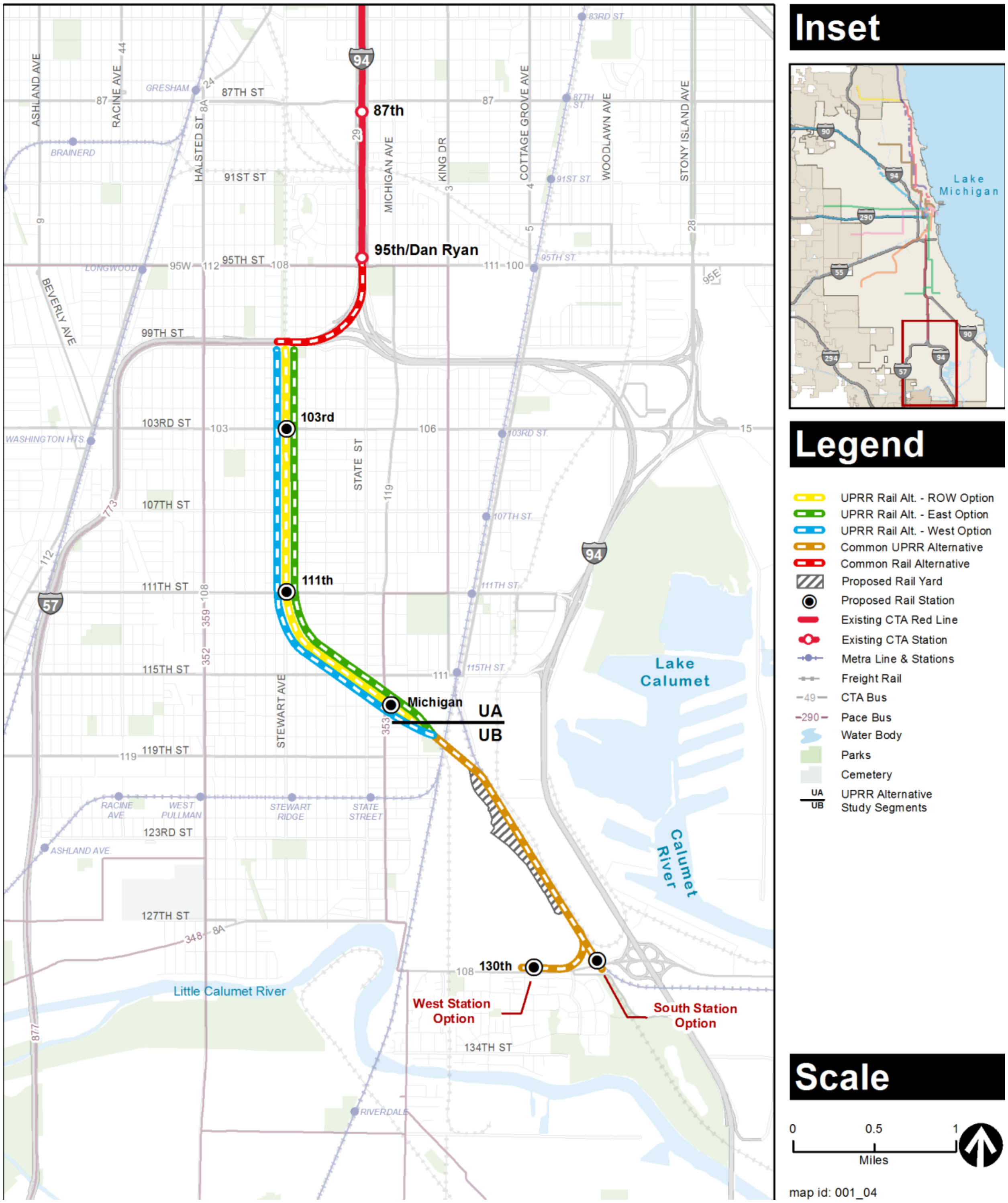
The UPRR Rail Alternative is a 5.3-mile extension of the existing Red Line. The trains would operate on an elevated structure heading south from 95th Street along I-57 for nearly ½ mile until reaching the UPRR corridor in the vicinity of Eggleston Avenue. The alignment would then turn south along the UPRR corridor to approximately 111th Street where it would turn southeast. East of Prairie Avenue, the alignment would cross over the Canadian National (CN)/Metra Electric tracks near 119th Street, where it would transition to an at-grade profile and then continue southeast along the Northern Indiana Commuter Transportation District Chicago South Shore & South Bend Railroad (NICTD/CSS & SBRR) ROW using a portion of the Norfolk Southern Railway and Consolidated Rail Corporation ROW to terminate at 130th Street. Four stations would be included at 103rd Street, 111th Street, Michigan Avenue, and 130th Street. Figure 4-1 shows the UPRR Rail Alternative.

Three UPRR Rail Alternative options for the segment between I-57 and the CN/Metra Electric tracks are studied in the EIS:

- ROW Option: CTA tracks placed in the UPRR ROW; UPRR trains would relocate to another corridor as part of a separate, earlier project that may occur regardless of RLE implementation. The City of Chicago is performing this separate, independent study to evaluate relocating the UPRR trains to another corridor.
- East Option: CTA tracks placed immediately adjacent to and east of the UPRR ROW.
- West Option: CTA tracks placed immediately adjacent to and west of the UPRR ROW.

Two options for the 130th Street terminal station are studied in the EIS:

- South Station Option: located to the west of the NICTD/CSS & SBRR ROW at 130th Street.
- West Station Option: located along the north side of 130th Street to the west of the NICTD/CSS & SBRR route.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111TH ST
115TH ST

Figure 4-1: UPRR Rail Alternative Options

4.1 Infrastructure

Projects already committed through the CMAP TIP would be constructed as described for the No Build Alternative. Regular maintenance of existing track and structures would continue.

All three UPRR Rail Alternative options would include operation on elevated structure from 95th Street to the CN/Metra Electric tracks near 119th Street. The alignment would then continue at grade through an industrial area with no public through streets. Existing service driveways and Metropolitan Water Reclamation District of Greater Chicago (MWRD) access roads would be grade separated as indicated on the plans and profiles.

The elevated substructure would consist of reinforced cast-in-place concrete hammerhead piers on drilled shafts or steel piles. The superstructure would consist of steel girders with a concrete closed deck supporting direct fixation track with welded rail.

Minimum vertical clearances would be 14 feet 9 inches. At locations where the RLE alignment would cross UPRR tracks, the minimum vertical clearance would be 23 feet 4 inches.

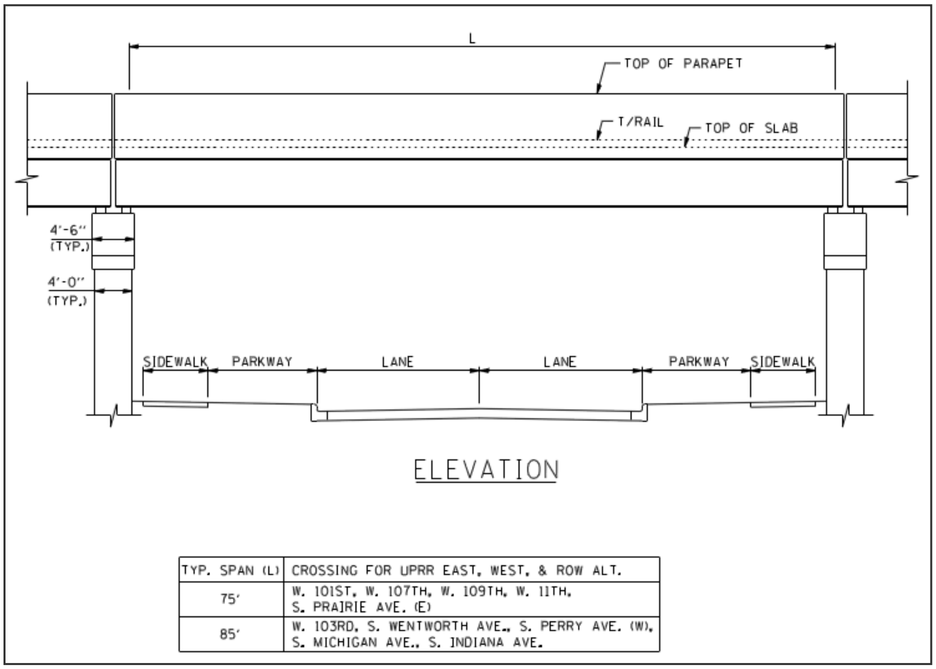
Spans between piers are expected to typically be 60 to 100 feet, and as long as 140 feet. Span length is based on site conditions, geometrics, and clearance requirements. Table 4-1 lists the clearances between piers at viaducts and Figure 4-2 shows a typical span.

Table 4-1: UPRR Rail Alternative Span Widths at Viaducts

Street Crossing	ROW Option (feet)	East Option (feet)	West Option (feet)	Notes
I-57 ramp	105	105	105	Straddle Bent
Wentworth Avenue	85	85	85	
Northbound I-57*	100/100	100/100	100/100	Straddle Bent
UPRR*	-	-	100/100	
101st Street	75	75	75	
103rd Street	85	85	85	
107th Street	75	75	75	
109th Street	75	75	75	
111th Street	75	75	75	
Wentworth Avenue	85	85	85	
115th Street	120	120	120	Through Plate Girder
Perry Avenue	-	-	85	
State Avenue	85	85	85	
Michigan Avenue	85	85	85	

Street Crossing	ROW Option (feet)	East Option (feet)	West Option (feet)	Notes
116th Street	120	120	120	Through Plate Girder
Indiana Avenue	85	85	85	
UPRR*	-	-	85/100/10/100/100	Straddle Bent
Prairie Avenue	-	75	-	
CN/Metra Electric	100/70	115/70	110/70	Through Plate Girder

*Crossings may have multiple spans due to skewed alignment and the use of bent structure

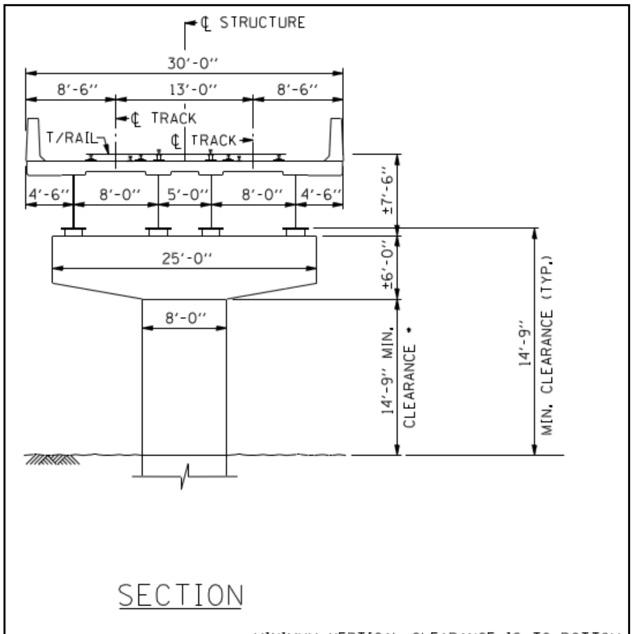


TYP. SPAN (L)	CROSSING FOR UPRR EAST, WEST, & ROW ALT.
75'	W. 101ST, W. 107TH, W. 109TH, W. 11TH, S. PRAIRIE AVE. (E)
85'	W. 103RD, S. WENTWORTH AVE., S. PERRY AVE. (W), S. MICHIGAN AVE., S. INDIANA AVE.

Figure 4-2: UPRR Rail Alternative typical span cross section

4.1.1 ROW Option

The UPRR Rail Alternative ROW Option would place the CTA tracks in the UPRR ROW between I-57 and the CN/Metra Electric tracks. UPRR trains along this alternative may relocate to another corridor as part of a separate, earlier project that would occur regardless of RLE implementation. Figure 4-3 shows a typical ROW Option cross section.



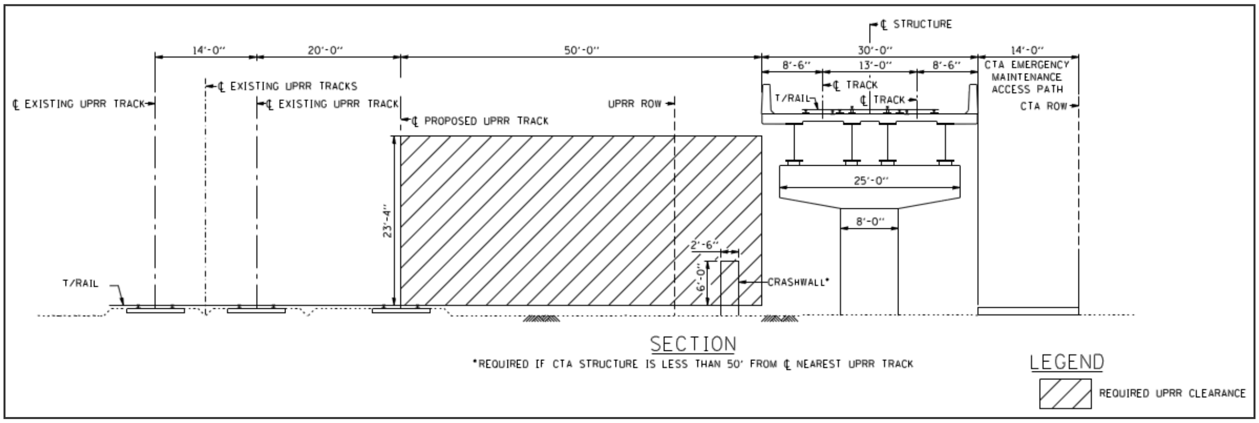
* MINIMUM VERTICAL CLEARANCE IS TO BOTTOM OF PIER CAP WHERE PIER CAP OVERHANGS TRAVELD ROADWAY.

Figure 4-3: UPRR Rail Alternative ROW Option Typical Cross Section

Substations are tentatively proposed at the following locations: to the west of the CTA tracks between 104th and 105th Street, to the west of the CTA tracks between Perry Avenue and Lafayette Avenue, and to the west of the CTA tracks north of the proposed parking structure for the South Station Option or along the curve of the CTA tracks near 130th Street for the West Station Option. An additional substation is proposed within the 120th Street yard and shop facility.

4.1.2 East Option

In the UPRR Rail Alternative East Option, CTA tracks would be placed immediately adjacent to and east of the UPRR ROW between I-57 and the CN/Metra Electric tracks. The UPRR is evaluating adding a third track to the east of their two existing tracks. The distance between the centerline of the proposed easternmost UPRR third track and the CTA structure would be 50 feet except for the following locations: 103rd Street station (approximate stationing 154+00 to 181+00 and between State Street and Michigan Avenue (approximate stationing 255+00 to 270+00). Pier protection crash walls per American Railway Engineering and Maintenance-of-Way Association (AREMA) would be installed in areas where the CTA tracks are less than 50 feet from the UPRR tracks. Figure 4-4 shows a typical East Side Option cross section.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20'-0"
50'-0"
30'-0"
14'-0"
8'-6"
13'-0"
8'-6"
CTA EMERGENCY MAINTENANCE ACCESS PATH
℄ EXISTING UPRR TRACKS
℄ EXISTING UPRR TRACK
℄ EXISTING UPRR TRACK
℄ PROPOSED UPRR TRACK
UPRR ROW
T/RAIL
℄ TRACK
℄ TRACK
CTA ROW
23'-4"
25'-0"
8'-0"
2'-6"
6'-0"
CRASHWALL*
T/RAIL
SECTION
*REQUIRED IF CTA STRUCTURE IS LESS THAN 50' FROM ℄ NEAREST UPRR TRACK
LEGEND
▨ REQUIRED UPRR CLEARANCE

Figure 4-4: UPRR Rail Alternative East Option Typical Cross Section

The UPRR Rail Alternative East Option would include substations at the following locations: west of the UPRR tracks between 104th and 105th Streets, west of the UPRR tracks between Perry Avenue and Lafayette Avenue, and west of the CTA tracks south of the proposed yard location near 130th Street station. An additional substation is proposed within the 120th Street yard and shop facility.

4.1.3 West Option

In the UPRR Rail Alternative West Option, CTA tracks would be placed immediately adjacent to and west of the UPRR ROW between I-57 on the north end and the UPRR tracks near Kensington Park on the south end. The distance between the UPRR centerline of existing west track and the proposed CTA structure centerline of track would be 50 feet except for the following locations: 99th Street (approximate stationing 138+00 to 142+00) and at the Prairie Avenue/UPRR crossing (approximate stationing 275+00 to 285+00).

The UPRR Rail Alternative West Option would include substations at the following locations: east of the UPRR tracks between 105th Street and 105th Place, west of the UPRR tracks between Perry Avenue and Lafayette Avenue, and east of the CTA tracks south of the proposed yard location near 130th Street station. An additional substation is proposed within the 120th Street yard and shop facility.

4.2 Stations and Parking

Four stations would be included in the UPRR Rail Alternative options: 103rd Street, 111th Street, Michigan Avenue, and 130th Street. One terminal station with two options is under evaluation for the 130th Street station: the South Station Option and the West Station Option.

All stations would be island platforms, 26 feet wide and 520 feet long. Platforms would be built to accommodate ten-car trains. All stations would be ADA accessible with elevators. Station footprints are depicted on the Plans and Profiles.

Bus and park & ride facilities would be placed at all stations, with capacities of 1,500 parking spaces in the year of construction and up to 3,700 parking spaces in a later year (2030), as shown in Table 4-2.

Table 4-2: UPRR Rail Alternative Park & Ride Faciliy Parking Spaces

Location	Construction Year	Horizon Year (2030)
103rd Street	200	200
111th Street	200	200
Michigan Avenue	200	1,000
130th Street	900	2,300
Total	**1,500**	**3,700**

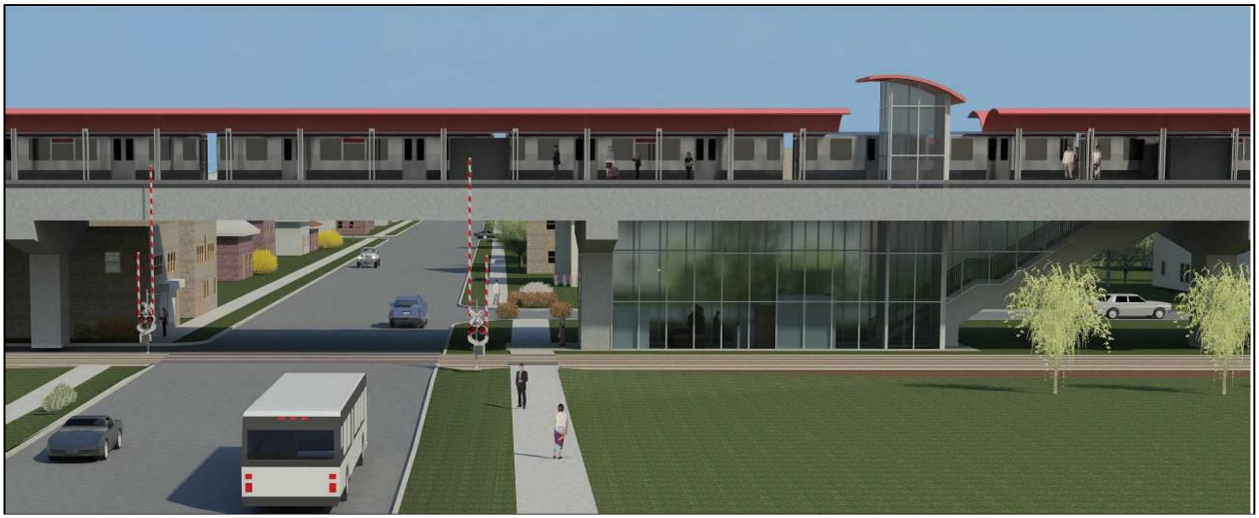
4.2.1 103rd Street Station

The primary entrance to the 103rd Street station would be on the north side of 103rd Street, and an auxiliary entrance would be on the north side of 103rd Place. Figure 4-5 shows an example rendering of the UPRR Rail Alternative elevated structure at the 103rd Street station.

As part of the ROW Option, two surface parking lots, each with capacity for 100 vehicles, would be located to the northeast and southwest of the intersection of 103rd Street with the UPRR tracks. A bus turnaround for CTA bus route #9 would be included at the northeast parking lot.

As part of the East Option, a surface parking lot with capacity for 75 vehicles would be located to the east of the tracks north of 103rd Street as well as a second surface parking lot with capacity for 125 vehicles located to the west of the tracks between 103rd Street and 103rd Place. A bus turnaround for CTA bus route #9 would be included at the northeast parking lot.

As part of the West Option, a surface parking lot with capacity for 200 vehicles would be located to the west of the tracks between 103rd Place and 104th Street. A bus turnaround for CTA bus route #9 would be included at the northeast corner of the 103rd Street and UPRR tracks intersection.



Source: *Locally Preferred Alternative Report, August 2009*

Figure 4-5: Example Rendering of the UPRR Rail Alternative Elevated Structure at the Proposed 103rd Street Station

4.2.2 111th Street Station

As part of the ROW and West Options, the primary entrance to the 111th Street station would be just north of 111th Street. An auxiliary entrance would be south of 110th Street.

As part of the East Option, the primary entrance to the 111th Street station would be just north of 111th Street. An auxiliary entrance would be at 110th Street.

As part of the ROW Option, two surface parking lots, each with capacity for 100 vehicles, would be located to the northeast and northwest of the intersection of 111th Street with the UPRR tracks. A bus turnaround for Pace bus route #352 would be included at the northwestern parking lot.

As part of the East Option, a surface parking lot with capacity for 55 vehicles would be located to the east of the tracks north of 110th Place, and a second surface parking lot with capacity for 145 vehicles located to the west of the tracks between 111th Street and 110th Street. A bus turnaround for Pace bus route #352 would be included at the northwestern parking lot.

As part of the West Option, a surface parking lot with capacity for 200 vehicles would be located to the west of the tracks between 110th Place and 110th Street. A bus turnaround for Pace bus route #352 would be included at the parking lot.

4.2.3 Michigan Avenue Station

As part of the ROW and West Options, the primary entrance to the Michigan Avenue station would be on the west side of Michigan Avenue, and an auxiliary entrance would be located on the south side of 116th Street.

As part of the East Option, a primary entrance to the Michigan Avenue station would be on the east side of Michigan Avenue. An auxiliary entrance would be on the north side of 116th Street.

As part of the ROW Option, a three-story parking garage with capacity for 750 vehicles would be located to the west of the tracks, northeast of the State Avenue and 116th Street intersection; the ground level of the parking garage would be available for retail and/or community facilities and would include a bus turnaround facility for CTA route #119 and Pace route #359. A second surface lot with capacity for 250 vehicles would be located to the east of the tracks, between 116th Street and Kensington Avenue.

As part of the East Option, a three-story parking garage with capacity for 825 vehicles would be located to the west of the tracks, northeast of the State Avenue and 116th Street intersection; the ground level of the parking garage would be available for retail and/or community facilities, and would include a bus turnaround facility for CTA route #119 and Pace route #359. A second surface lot with capacity for 175 vehicles would be located to the east of the tracks, between 116th Street and Kensington Avenue.

As part of the West Option, a five-story parking garage with capacity for 1,000 vehicles would be located to the west of the tracks, northeast of the State Avenue and 116th Street intersection; the ground level of the parking garage would be available for retail and/or community facilities, and would include a bus turnaround facility for CTA route #119 and Pace route #359.

4.2.4 130th Street Station

Two options for the 130th Street station will be studied in the EIS:

- South Station Option: along the NICTD/CSS & SBRR ROW at 130th Street
- West Station Option: along the north side of 130th Street to the west of the NICTD/CSS & SBRR route

The 130th Street station area is shown in Figure 4-6.

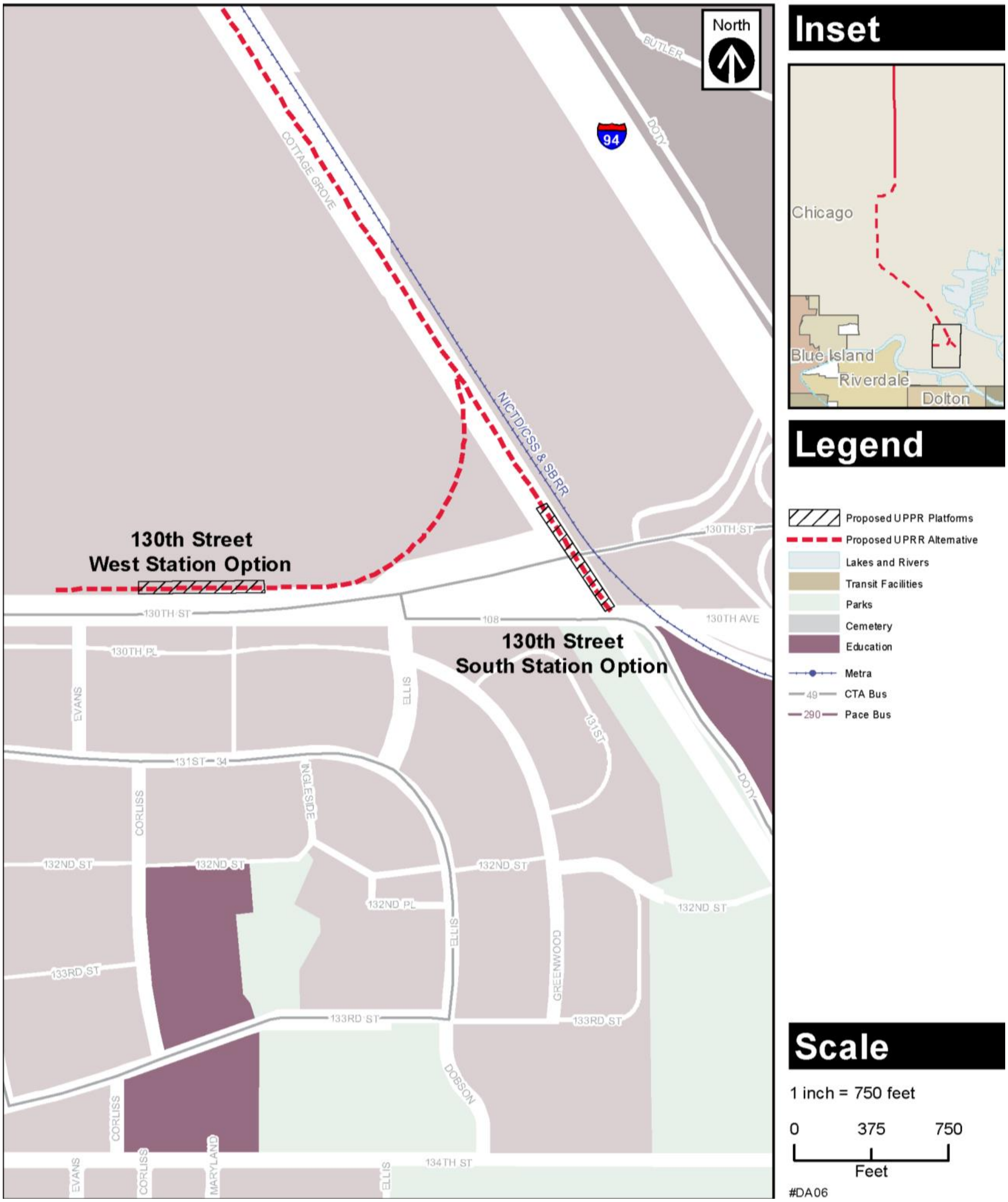

North
94
BUTLER
DOTY
COTTAGE GROVE
NICTD/CSS & SBRR
130th Street
West Station Option
130th Street
South Station Option
130TH ST
130TH AVE
108
130TH PL
EVANS
ELLIS
131ST
34
CORLISS
INGLESIDE
132ND ST
132ND PL
133RD ST
GREENWOOD
DOBSON
134TH ST
MARYLAND
Inset
Chicago
Blue Island
Riverdale
Dolton
Legend
Proposed UPPR Platforms
Proposed UPRR Alternative
Lakes and Rivers
Transit Facilities
Parks
Cemetery
Education
Metra
49 CTA Bus
290 Pace Bus
Scale
1 inch = 750 feet
0
375
750
Feet
#DA06

Figure 4-6: Station Area Showing South and West Station Options

The conceptual design for the station, based on Chicago Department of Transportation's December 2010 *130th Street Station Market/Access Study*, meets the needs for transit use, economic development, and connectivity to the proposed future pedestrian and bicycle trail network. The conceptual plans show a building approximately 15,000 square feet (200 feet by 75 feet), which would follow CTA's typical design standards for terminal stations. The station house would provide sufficient space for CTA customer operations, maintenance, mechanical rooms, staff offices, and areas for small retail stores. The retail area would primarily serve commuters and local residents.

Both the South and West Station Options would be configured with three tracks, creating a 600-foot long side and center platform arrangement. The boarding platform would be designed to allow for ten-car trains. The primary entrance to the station house would be handicap accessible.

Each station option would include a bus terminal with four bus bays and an overhead canopy. Buses would queue directly outside the primary entrance of the station to provide the closest possible connection between the rail line and bus routes. An auto drop-off area would be sited near the station house. Secure, weather-protected bicycle parking would be provided at the station. A park & ride facility with 2,300 parking spaces would be constructed by 2030 for the South Station Option, and a park & ride facility with 1,950 parking spaces plus a surface lot with 350 parking spaces would be constructed by 2030 for the West Station Option.

4.2.4.1 South Station Option

The South Station Option would be located between the MWRD facility (on the west) and the NICTD/CSS & SBRR rail tracks (on the east), using a portion of the Norfolk Southern Railway and Consolidated Rail Corporation right-of-ways. The concept plan shows a primary station entrance north of 130th Street at 130th Place, and an auxiliary entrance south of 130th Street between 130th Street and Doty Avenue; the tracks and platforms would extend beneath 130th Street. The handicapped-accessible auxiliary entrance on Doty Avenue would provide more convenient and direct access to Altgeld Gardens and Carver Military Academy.

The South Station Option site is constrained due to its tight location between the MWRD drying ponds and the train tracks. The parking area would be to the east of the existing MWRD fence. The parking area would be approximately 2.8 acres. In the construction year, a parking garage would be built with capacity for 900 vehicles. The parking garage would be developed into a seven-story parking garage with capacity for 2,300 vehicles by 2030.

The station area is significantly lower in elevation than 130th Street, which rises to cross the NICTD/CSS & SBRR tracks before crossing I-94. As a result, the station building would not be highly visible from the freeway or from cars travelling east towards the station entrance on Cottage Grove Avenue. The sloped areas adjacent to 130th Street limit the ability to place the South Option station house closer to the street.

Bus and vehicle traffic would enter and leave the station area from the current intersection of 130th Street and Cottage Grove Avenue. Cottage Grove Avenue, which primarily provides access to the MWRD drying ponds and truck traffic, would be relocated to circulate around the station. Ideally, transferring customers would not have to cross a general traffic lane to access bus transfer bays. Further refinement of this concept would likely eliminate general traffic from entering the parking lot near the station house. Currently, Cottage Grove Avenue intersects 130th Street at the same location as the proposed entrance to the South Option station. Cottage Grove Avenue would be relocated west of the station entrance. This would eliminate potential traffic conflicts between trucks servicing the MWRD facility and commuters entering the station. The new street alignment could also serve future commercial development along 130th Street.

4.2.4.2 West Station Option

The West Station Option would be located on the north side of 130th Street across from Evans Avenue, nearly ¼ mile west of the South Station Option location. The station would be west of Evans Avenue (on the south side of 130th Street) across from Altgeld Gardens. The West Station Option site is nearly twice the size of the South Station Option site, primarily due to available open land along the north side of 130th Street south of the MWRD facility. However, the dimensions of the station, bus terminal, and surface parking areas would be similar in total area as the South Station Option. The station area would be outside the existing MWRD fence. In the construction year, a surface lot would be constructed with capacity for 350 vehicles, and a parking garage would be built with capacity for 550 vehicles. The parking garage would be developed into a four-story parking garage with capacity for 1,950 vehicles by 2030.

There would be no intersections or crosswalks on 130th Street between Indiana Avenue and Cottage Grove Avenue. As a result, a signal and pedestrian crosswalk is proposed at the intersection of 130th Street and Evans Avenue to accommodate pedestrians from the south side of 130th Street. The proposed pedestrian crossing and signalized intersection would be located south of the primary station entrance.

4.3 120th Street Yard and Shop

A 270-car yard and shop facility would be sited on a combination of industrial/vacant land to the east of the CN/Metra Electric tracks and west of the NICTD/CSS & SBRR tracks at approximately 120th Street and Cottage Grove Avenue. The yard would be entirely at grade. A nominal amount of parking for employees would be included at the yard. A substation is tentatively proposed within the 120th Street yard on the west of the existing railroad tracks and to the east of the proposed shop facility. Figure 4-1 shows the proposed yard and shop location.

The 98th Street yard and shop at the south end of the existing Red Line could continue to be used for Red Line trains. The CTA would utilize the existing 98th Street shop for non-revenue equipment repairs once a new revenue shop is constructed.

4.4 Operating Plan

The UPRR Rail Alternative is anticipated to operate train sets consisting of eight cars. Although the design is for ten-car trains, the service plan is for eight-car trains as in operation today. The maximum scheduled capacity of each car is 90 passengers, which would provide a maximum capacity of 360 passengers for a four-car train, a maximum capacity of 720 passengers for an eight-car train, and a maximum capacity of 900 passengers for a ten-car train. The current Red Line vehicle requirement during the morning peak period is 304 cars. Based on the estimated travel time for the UPRR Rail Alternative, an additional 78 cars would be required in the morning rush period. This estimate includes 64 cars required for the schedule plus 14 spares.

CTA 2600-series rail cars are currently in use on the Red Line. As new CTA 5000-series rail cars replace older cars in the system, the cars currently operating on the Red Line could be replaced with CTA 5000-series or CTA 3200-series cars.

The hours of operation for the UPRR Rail Alternative would be the same as for the current Red Line, which operates 24 hours every day of the year. The UPRR Rail Alternative service frequency is expected to be the same as current service, which is approximately five minutes in the northbound direction and four minutes southbound during the morning peak period. Weekday service characteristics for the existing northbound Red Line and proposed UPRR Rail Alternative are presented in Table 4-3.

Table 4-3: UPRR Rail Alternative and Existing Northbound Red Line Weekday Service Characteristics

Service Period	Hours	Time Period	Average Northbound Frequency (minutes)	Train Length	Cars Required
Early Morning	3	3 AM-6 AM	13	8	
AM Peak	3	6 AM-9 AM	5	8	304
Base	6	9 AM-3 PM	7	8	184
PM Peak	3	3 PM-6 PM	5	8	304
Evening	4	6 PM-10 PM	7.5	4	
Late Evening/Owl	5	10 PM-3 AM	15	4	48

Proposed travel times during the morning peak period for the UPRR Rail Alternative are presented in Table 4-4.

Table 4-4: Northbound Red Line Travel Times for UPRR Rail Alternative

Route Segment	Travel Time (minutes)
130th to 95th Street Station	14.0
130th to Jackson Station	39.0
130th to Clark/Division Station	46.5
130th to Howard Station	75.5

Bus transit service from the south would serve the new stations. The UPRR Rail Alternative would result in the rerouting of 11 bus routes to new Red Line stations and elimination of two routes. Table 4-5 summarizes the proposed bus route changes to existing CTA bus routes that currently operate within the study area.

Table 4-5: Proposed Bus Route Changes for UPRR Rail Alternative

Bus Route	Proposed Change
#8A	None
#9	Terminate at 103rd Street station rather than 104th Street /Vincennes Avenue
#30	Terminate at 130th Street station rather than 130th Street /Exchange Avenue
#34	Terminate southbound at 130th Street station rather than 131st Street/Ellis Avenue
#103	Combine with #106; west terminal at Pulaski Avenue and east terminal at Stony Island Avenue
#106	Combine with #103; west terminal at Pulaski Avenue and east terminal at Stony Island Avenue
#108	Eliminate
#111	Serve 111th Street between 111th Street /Pulaski Avenue and 111th Street /Corliss Avenue
#112	Eliminate
#115	New bi-directional loop route via 115th Street, Cottage Grove Avenue, 95th Street, and Vincennes Avenue
#119	Terminate at 115th Street / Michigan Avenue
#348	Terminate southbound at 130th Street station rather than 136th Street /Indiana Avenue
#352	Terminate at 111th Street station rather than 95th Street station
#353	None
#359	Terminate at 115th Street station rather than 95th Street station

UPRR operates approximately 27 at-grade trains per day through this corridor. The potential exists for UPRR freight trains to affect access to the facilities in the UPRR Rail Alterative at the proposed 103rd Street and 111th Street stations. At these two stations areas, the UPRR is at-grade, so that passing freight railroad trains would interrupt access to the proposed Red Line stations. At the Michigan Avenue station, the UPRR is grade separated, so that access to the Red Line station could be maintained using Michigan Avenue, which passes underneath the UPRR.

Section 5
Halsted Rail Alternative

The proposed Halsted Rail Alternative is a five-mile extension of the existing Red Line. It would operate on an elevated structure running south from 95th Street along I-57 until Halsted Street. It would then turn south and continue along Halsted Street to the intersection of Halsted Street and Vermont Avenue near 127th Street. Four stations would be at 103rd Street, 111th Street, 119th Street, and Vermont Avenue. Figure 5-1 shows the Halsted Rail Alternative.

5.1 Infrastructure

Projects already committed through the CMAP TIP would be constructed as described for the No Build Alternative. Regular maintenance of existing track and structures would continue.

The proposed corridor would be elevated and would be required to span over I-94 and I-57, UPRR and Metra Electric, local roads, and pedestrian facilities. See Figures 5-2 and 5-3 for typical cross sections of the Halsted Rail Alternative.

The proposed typical structure required for the elevated section is anticipated to be similar to sections on the CTA's elevated Orange Line. Spans between piers would typically be 60 to 100 feet, and as long as 140 feet. Span length would be based on site conditions, geometrics, and clearance requirements. At specific locations, steel cross girder bents would be used. Lengths would be based on geometrics, horizontal clearances, and the use of pier protection crash walls per AREMA. Table 5-1 shows the horizontal clearances between piers at viaducts.

The substructure would be reinforced cast-in-place concrete hammerhead piers on drilled shafts or steel piles. The superstructure would consist of steel girders with a concrete closed deck supporting direct fixation track with welded rail. At the I-57 crossing at Halsted Street the profile height would be approximately 22 feet over the Halsted Street pavement, and approximately 34 feet over the expressway.

Minimum vertical clearances would be 14 feet 9 inches above local roads and 16 feet 6 inches above urban expressways. At locations where the proposed CTA structure would cross the UPRR, the minimum vertical clearance would be 23 feet 4 inches, per the UPRR standards. The minimum vertical clearance for the Metra Electric tracks would be 23 feet zero inches per AREMA standards.

Substations are proposed at the following locations: the northeast corner at the intersection of Halsted Street and 101st Street, the southeast corner at the intersection of Halsted Street and 110th Street, along Halsted Street between 120th Street and Metra Electric tracks, the southeast corner at the intersection of Halsted Street and 126th Street, and at the entrance to the yard along Peoria Street.

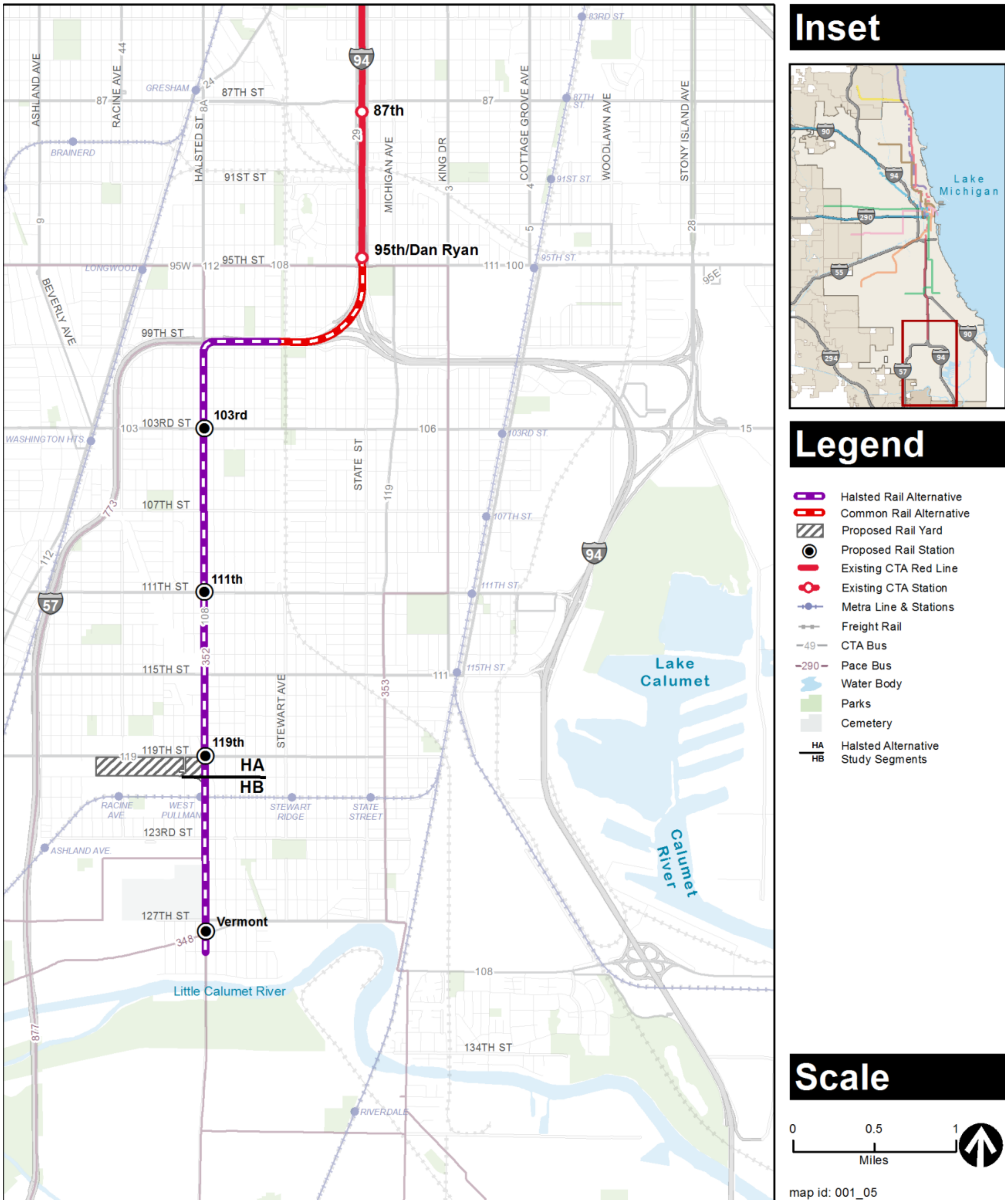
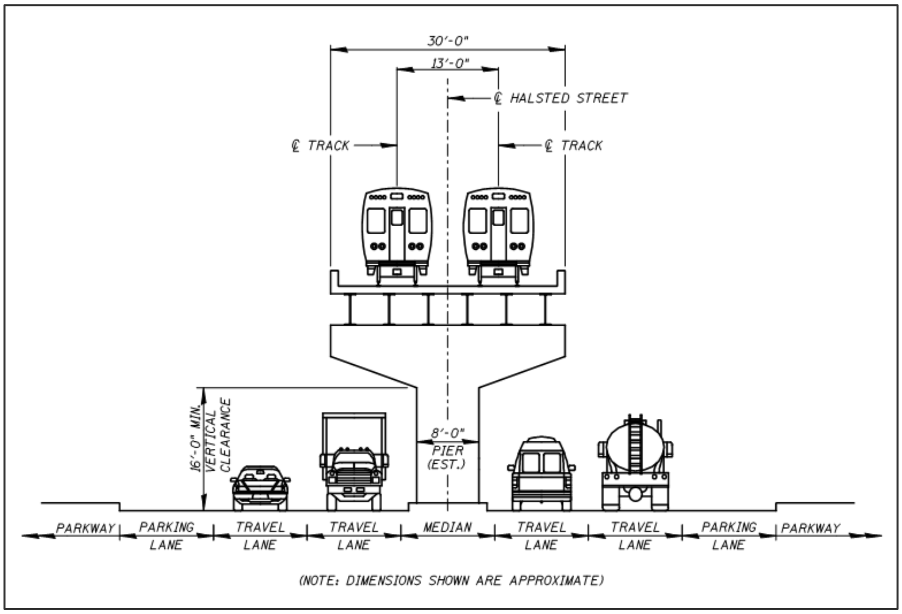
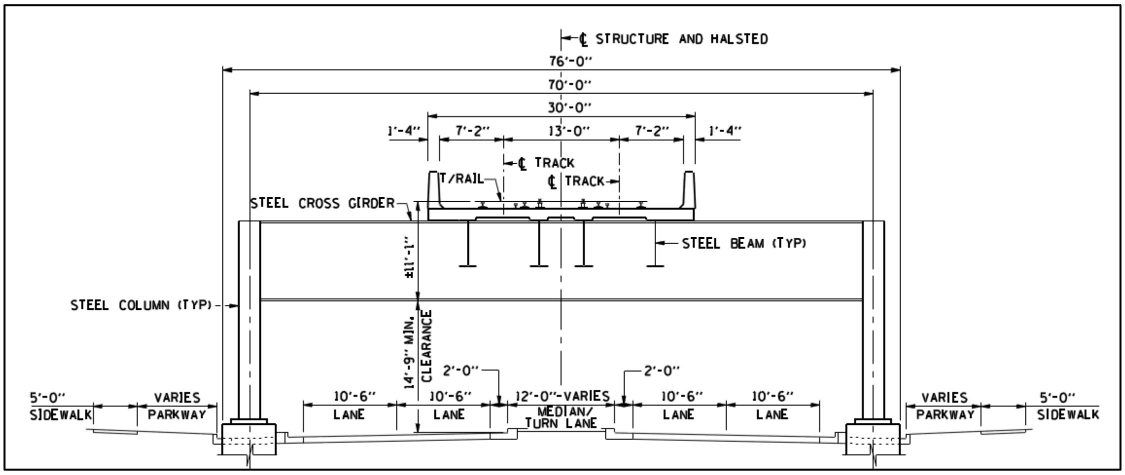

Inset
Lake Michigan
Legend
Halsted Rail Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
49 CTA Bus
290 Pace Bus
Water Body
Parks
Cemetery
HA HB Halsted Alternative Study Segments
Scale
0
0.5
1
Miles
map id: 001_05
87th
95th/Dan Ryan
103rd
111th
119th
Vermont
HA
HB
87TH ST
91ST ST
95TH ST
99TH ST
103RD ST
107TH ST
111TH ST
115TH ST
119TH ST
123RD ST
127TH ST
134TH ST
ASHLAND AVE
RACINE AVE
HALSTED ST
MICHIGAN AVE
KING DR
COTTAGE GROVE AVE
WOODLAWN AVE
STONY ISLAND AVE
STATE ST
STEWART AVE
BEVERLY AVE
GRESHAM
BRAINERD
LONGWOOD
WASHINGTON HTS.
RACINE AVE
WEST PULLMAN
STEWART RIDGE
STATE STREET
ASHLAND AVE.
RIVERDALE
83RD ST
87TH ST.
91ST ST
95TH ST
103RD ST.
107TH ST
111TH ST
115TH ST
Lake Calumet
Calumet River
Little Calumet River
94
57

Figure 5-1: Halsted Rail Alternative


30'-0"
13'-0"
℄ HALSTED STREET
℄ TRACK
℄ TRACK
16'-0" MIN. VERTICAL CLEARANCE
8'-0" PIER (EST.)
PARKWAY
PARKING LANE
TRAVEL LANE
TRAVEL LANE
MEDIAN
TRAVEL LANE
TRAVEL LANE
PARKING LANE
PARKWAY
(NOTE: DIMENSIONS SHOWN ARE APPROXIMATE)

Source: *Red Line Extension Early Engineering Review Memo*

Figure 5-2: Halsted Rail Alternative Typical Hammerhead Cross Section


℄ STRUCTURE AND HALSTED
76'-0"
70'-0"
30'-0"
1'-4"
7'-2"
13'-0"
7'-2"
1'-4"
℄ TRACK
T/RAIL
℄ TRACK
STEEL CROSS GIRDER
STEEL BEAM (TYP)
±11'-1"
STEEL COLUMN (TYP)
14'-9" MIN. CLEARANCE
2'-0"
2'-0"
5'-0" SIDEWALK
VARIES PARKWAY
10'-6" LANE
10'-6" LANE
12'-0"-VARIES MEDIAN/ TURN LANE
10'-6" LANE
10'-6" LANE
VARIES PARKWAY
5'-0" SIDEWALK

Source: *Red Line Extension Plans and Profiles*

Figure 5-3: Halsted Rail Alternative Typical Straddle Bent Cross Section

Table 5-1: Halsted Rail Span Widths at Viaducts

Street Crossing	Track Span Widths (feet)	Notes
I-57 Ramp	105	Straddle Bent
Wentworth Avenue	85	
UPRR	65	
Parnell Avenue	65	
Northbound I-57*	100/100	Straddle Bent

Street Crossing	Track Span Widths (feet)	Notes
Halsted Street*	100/100	Straddle Bent
100th Street	85	Straddle Bent
101st Street	85	Straddle Bent
102nd Street	75	Straddle Bent
103rd Street	75	Straddle Bent
104th Street	75	Straddle Bent
105th Street	85	Straddle Bent
106th Street	85	Straddle Bent
107th Street	85	Straddle Bent
108th Street	75	Straddle Bent
109th Street	70	Straddle Bent
110th Street	75	Straddle Bent
111th Street	80	Straddle Bent
112th Street	75	Straddle Bent
113th Street	75	Straddle Bent
114th Street	80	Straddle Bent
115th Street	85	Straddle Bent
116th Street	85	Straddle Bent
117th Street	85	Straddle Bent
118th Street	80	Straddle Bent
119th Street	85	Straddle Bent
120th Street	85	Straddle Bent
Metra Electric District – Blue Island Branch	80	Straddle Bent
122nd Street	70	Straddle Bent
123rd Street	75	Straddle Bent
124th Street	70	Straddle Bent
125th Street	70	Straddle Bent
126th Street	75	Straddle Bent
127th Street	85	Straddle Bent
Vermont Avenue	120	Straddle Bent
128th Street	75	Straddle Bent
129th Street	70	Straddle Bent

* Crossings may have multiple spans due to skewed alignment and the use of bent structure

5.2 Stations and Parking

This alternative would include four stations at 103rd Street, 111th Street, 119th Street, and Vermont Avenue. The 103rd, 111th, and 119th Street stations would be side platforms, with a minimum of 14 feet wide and 520 feet long with shelters. The Vermont Avenue station would be an island platform 26 feet wide and 520 feet long. Bus and park & ride facilities would be sited at all stations as shown in Table 5-2. All stations would be ADA accessible with elevators and stairs. Station footprints are depicted on the Plans and Profiles.

Table 5-2: Halsted Rail Alternative Park & Ride Facility Parking Spaces

Location	Construction Year	Horizon Year (2030)
103rd Street	200	200
111th Street	200	200
119th Street	200	1,000
Vermont Avenue	900	2,300
Total	1,500	3,700

5.2.1 103rd Street Station

Station entrances would be located on the east and west sidewalks of Halsted Street at the intersection with 103rd Street. The primary station entrance would be north of the intersection and the auxiliary entrance would be south of the intersection. Each entrance area would be on street level and contain an elevator and stairs.

The 103rd Street station would have a surface park & ride lot on the northwest parcel adjacent to the station at the intersection of 103rd Street and Halsted Street. This lot would provide approximately 200 parking spaces. A bus turnaround for CTA bus route #9 would be included at the northeast parking lot.

5.2.2 111th Street Station

Station entrances would be located on the east and west sidewalks of Halsted Street at the intersection with 111th Street. The primary station entrance would be north of the intersection and the auxiliary entrance would be south of the intersection. Each entrance area would be on street level and contain an elevator and stairs.

The 111th Street station would have a park & ride lot on the northwest parcel adjacent to the station at the intersection of 111th Street and Halsted Street. This lot would provide approximately 200 parking spaces.

5.2.3 119th Street Station

Station entrances would be located on the east and west sidewalks of Halsted Street at the intersection with 119th Street. The primary station entrance would be north of the intersection with 119th Street and the auxiliary entrance would be south of the intersection with 118th Street. Each entrance area would be on street level and contain an elevator and stairs.

The 119th Street station would have a surface park & ride facility that would hold approximately 1,000 parking spaces. The lot would be on the southwest parcel at the intersection of 119th Street and Halsted Street. A bus turnaround for Pace bus route #359 would be included at the parking lot.

5.2.4 Vermont Street Station

Station entrances would be located on the east and west sidewalks of Halsted Street between the 128th Street and Vermont Avenue. The primary station entrance would be south of Vermont Avenue and the auxiliary entrance would be north of 128th Street. Each entrance area would be on street level and contain an elevator and stairs.

The Vermont Street station would have a surface park & ride lot with approximately 300 parking spaces located to the east of Halsted Street between Vermont Avenue and 128th Street. A seven-story park & ride facility with capacity for an addition 2,000 vehicles would be located to the west of Halsted Street between Vermont Avenue and 128th Street; the ground level of the parking garage would be available for CTA office space as well as retail and/or community facilities. Bus bays for CTA bus route #8A and Pace routes #348 and #352 would be included at the station.

5.3 119th Street Yard and Shop

The 119th Street yard and shop would be located south of the 119th Street station and north of Vermont Avenue station to the west of Halsted Street. The parcel on which the yard and shop would be constructed sits west of the proposed park & ride facility at the 119th Street station. Track height would transition from elevated at station height to at-grade between Halsted Street and Morgan Street, through the proposed park & ride facility. The yard would be entirely at grade. A nominal amount of parking for employees would be included at the yard. Figure 5-1 shows the location of the proposed yard and shop.

The 98th Street yard and shop at the south end of the existing Red Line could continue to be used for Red Line trains. The CTA would utilize the existing 98th Street shop for non-revenue equipment repairs once a new revenue equipment shop is constructed at 119th Street.

5.4 Operating Plan

The Halsted Rail Alternative is anticipated to operate train sets consisting of eight cars. Although the design is for ten-car trains, the service plan is for eight-car trains as in operation today. The maximum scheduled capacity of each car is 90 passengers, which would provide a maximum capacity of 360 passengers for a four-car train, a maximum capacity of 720 passengers for an eight-car train, and a maximum capacity of 900 passengers for a ten-car train. The current Red Line vehicle requirement during the morning peak period is 304 cars. Based on the estimated travel time for the Halsted Rail Alternative, an additional 78 cars would be required in the morning rush period. This estimate includes 64 cars required for the schedule plus 14 spares.

CTA 2600-series rail cars are currently in use on the Red Line. As new CTA 5000-series rail cars replace older cars in the system, the cars currently operating on the Red Line could be replaced with CTA 5000-series or CTA 3200-series cars.

The hours of operation for the Halsted Rail Alternative would be the same as for the current Red Line, which operates 24 hours every day of the year. The Halsted Rail Alternative service frequency is expected to be the same as current service, which is approximately five minutes in the northbound direction and four minutes southbound during the morning peak period.

Bus transit service from the south would serve the new stations. The bus routes in the vicinity of the Halsted Rail Alternative would be modified to enhance connectivity between the Red Line and the existing bus network. Table 5-3 summarizes the proposed bus route changes to existing CTA bus routes that currently operate within the study area.

Table 5-3: Proposed Bus Route Changes for Halsted Rail Alternative

Bus Route	Proposed Change
#8A	None
#9	Terminate at 103rd Street station rather than 104th Street/Vincennes Avenue
#30	None
#34	None
#103	Combine with #106
#106	Combine with #103
#108	Eliminate
#111	Serve 111th Street between 111th Street/Pulaski Avenue and 111th Street/Corliss Avenue
#112	Eliminate
#115	New bi-directional loop route via 115th Street, Cottage Grove Avenue, 95th Street, and Vincennes Avenue
#119	Terminate at 115th Street/Michigan Avenue
#348	None
#352	Terminate at Vermont Avenue
#353	None
#359	Terminate at 119th Street

Section 6
Additional Resources

The following resources were used in preparing this technical memorandum.

Alternatives Analysis (https://team.cdm.com/eRoom/il/CTA_RedLineExtension_DEIS/0_1045d)

- Screen 1 Report (December 2008)
- Screen 2 Report (March 2009)
- Screen 3 Report (November 2009)
- Definition of Alternatives Summary - Draft (July 2009)
- RLE Locally Preferred Alternative Report (August 2009)

CDOT 130th Street Terminal Report (December 2010)
(https://team.cdm.com/eRoom/il/CTA_RedLineExtension_DEIS/0_f737)

CWC Early Draft EIS Work
(https://team.cdm.com/eRoom/il/CTA_RedLineExtension_DEIS/0_10004)

- Early Engineering Review (May 2011)
- Parkland Impacts Evaluation (May 2011)
- UPRR Alignment Options Impacts (June 2011)

CMAP Transportation Improvement Program (TIP) (http://www.cmap.illinois.gov/tip)

RLE EIS Plans and Profiles
(https://team.cdm.com/eRoom/il/CTA_RedLineExtension_DEIS/0_f4d6)

Appendix A
2014-2015 Red Line Extension Project Update

2014–2015 Red Line Extension Project Update

From 2012-2014, CTA evaluated benefits and impacts of four alternatives: the No Build Alternative, the Bus Rapid Transit Alternative (along Michigan Avenue), the Union Pacific Railroad (UPRR) Rail Alternative, and the Halsted Alternative. CTA evaluated three options of the UPRR Rail Alternative: Right-of-Way Option, East Option, and West Option. CTA also evaluated two options of the UPRR Rail Alternative 130th Street station: a South Station Option and a West Station Option. Based on the project description provided in Section 2 of this technical memorandum, CTA analyzed the impacts of these alternatives and station options. The benefits and impacts are included in the technical memoranda prepared in 2012-2014.

In August 2014, based on the technical analysis and public input, CTA announced the NEPA Preferred Alternative—the UPRR Rail Alternative. Additional conceptual engineering was conducted on the UPRR Rail Alternative to refine the East and West Option alignments. In addition, CTA is considering only the South Station Option of the 130th Street Station.

In late 2014 and early 2015, CTA conducted additional engineering and revised assumptions on the East and West Options to refine the alignments. The refinement of the East and West Options consisted of the following items:

- For the segment of the alignment along I-57, CTA shifted the proposed alignment from the median of I-57 to the north side of I-57 within the existing expressway right-of-way. The construction would be less complex, safer for construction workers, and have a shorter duration. The shift would also allow for fewer impacts to Wendell Smith Park for the East Option, and would allow for no permanent impacts to Wendell Smith Park for the West Option.

- CTA modified the curve speeds as the alignment heads south from I-57 along the UPRR tracks. The curve speed for both the East and West Options would be 35 mph.

- CTA shifted the East Option alignment near 103rd Street station to minimize impacts to Block Park and the Roseland Pumping Station.

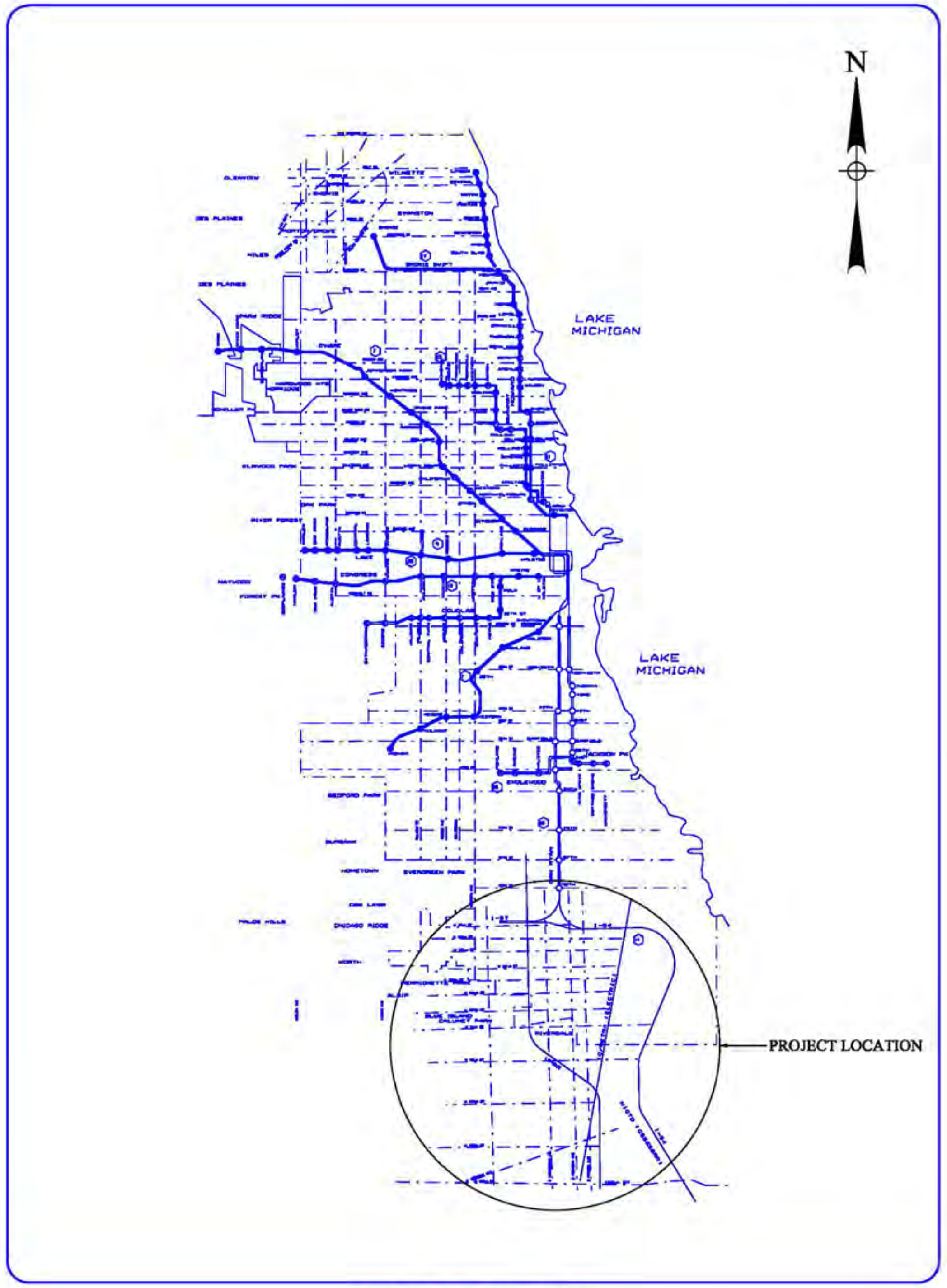
- CTA modified the curves south of 103rd Street for both the East and West Options to 55 mph to maximize the train speed.

- CTA refined the layout of the 120th Street yard and shop to optimize yard operations. The refined layout of the yard would accommodate 340 train cars.

The refinement of the East and West Option alignments minimizes potential impacts to parks while providing flexibility for future design phases. The Draft Environmental Impact Statement contains the benefits and impacts of the refined East and West Option alignments and supersedes information presented in other chapters of this technical memorandum

Appendix F
Plans and Profiles

DRAFT ENVIRONMENTAL IMPACT STATEMENT
CTA RED LINE EXTENSION
ALL ALTERNATIVES



ORIENTATION MAP

INDEX

COVER SHEET 1

UNION PACIFIC RAILROAD ALTERNATIVE

EAST OPTION 2 - 18
WEST OPTION 19 - 34

ALL ALTERNATIVES

PIER LOCATIONS 35 - 43
SECTIONS 44 - 51

MAY 1, 2015

PRELIMINARY DRAFT

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CHICAGO TRANSIT AUTHORITY

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ALL ALTERNATIVES

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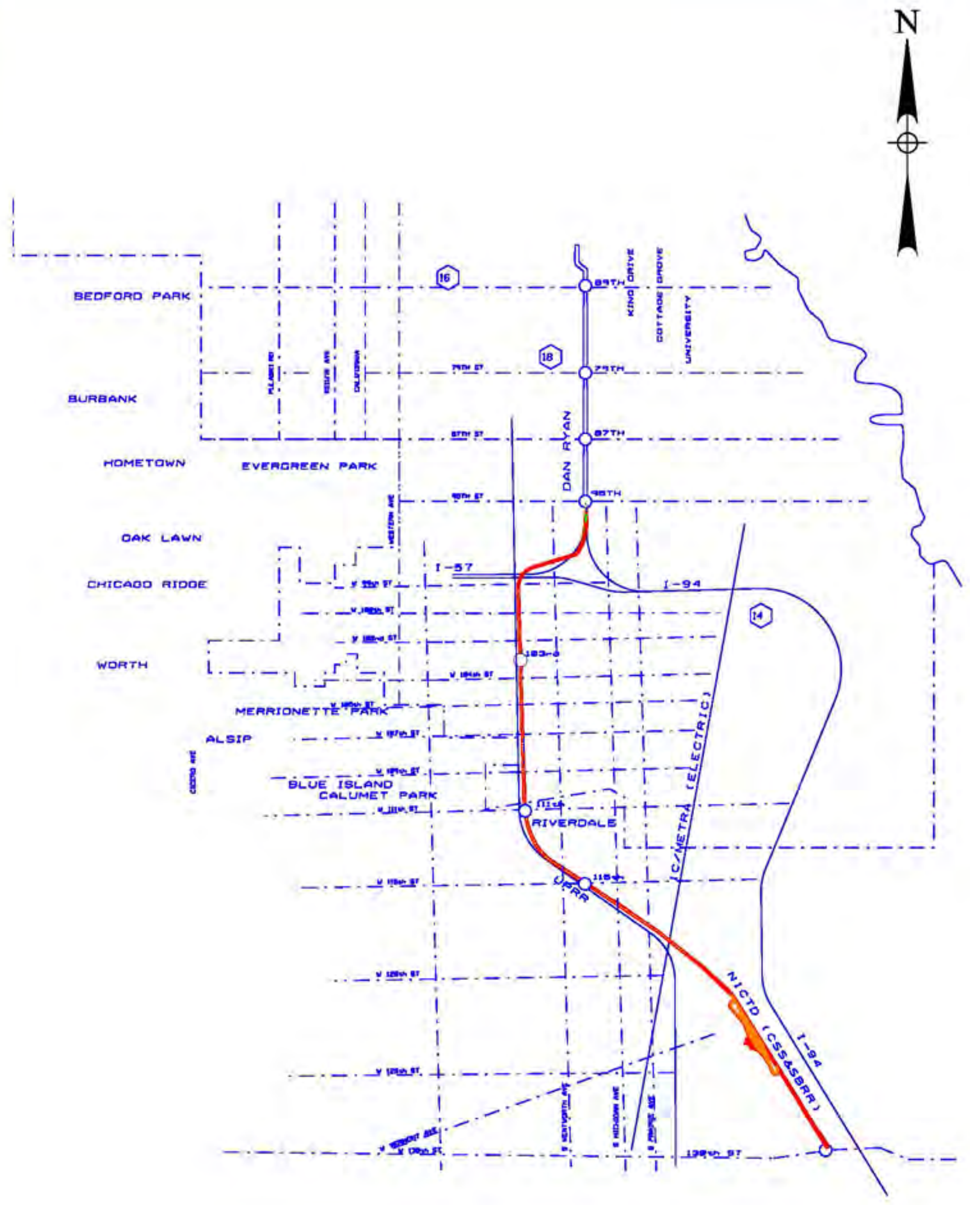
CTA RED LINE EXTENSION
UNION PACIFIC RAILROAD
EAST OPTION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BEDFORD PARK
BURBANK
HOMETOWN
EVERGREEN PARK
OAK LAWN
CHICAGO RIDGE
WORTH
MERRIONETTE PARK
ALSIP
BLUE ISLAND
CALUMET PARK
RIVERDALE
16
18
14
69TH
79TH
87TH
95TH
103rd
111th
115th
130th ST
KING DRIVE
COTTAGE GROVE
UNIVERSITY
DAN RYAN
I-57
I-94
UPRR
IC/METRA (ELECTRIC)
NICTD (CSS&SBRR)
I-94

ORIENTATION MAP

INDEX

UNION PACIFIC RAILROAD ALTERNATIVE

EAST OPTION 2 - 18

MAY 1, 2015

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RED LINE EXTENSION
ENVIRONMENTAL IMPACT STUDY
UNION PACIFIC RAILROAD
ALTERNATIVE
EAST OPTION

2 OF 51

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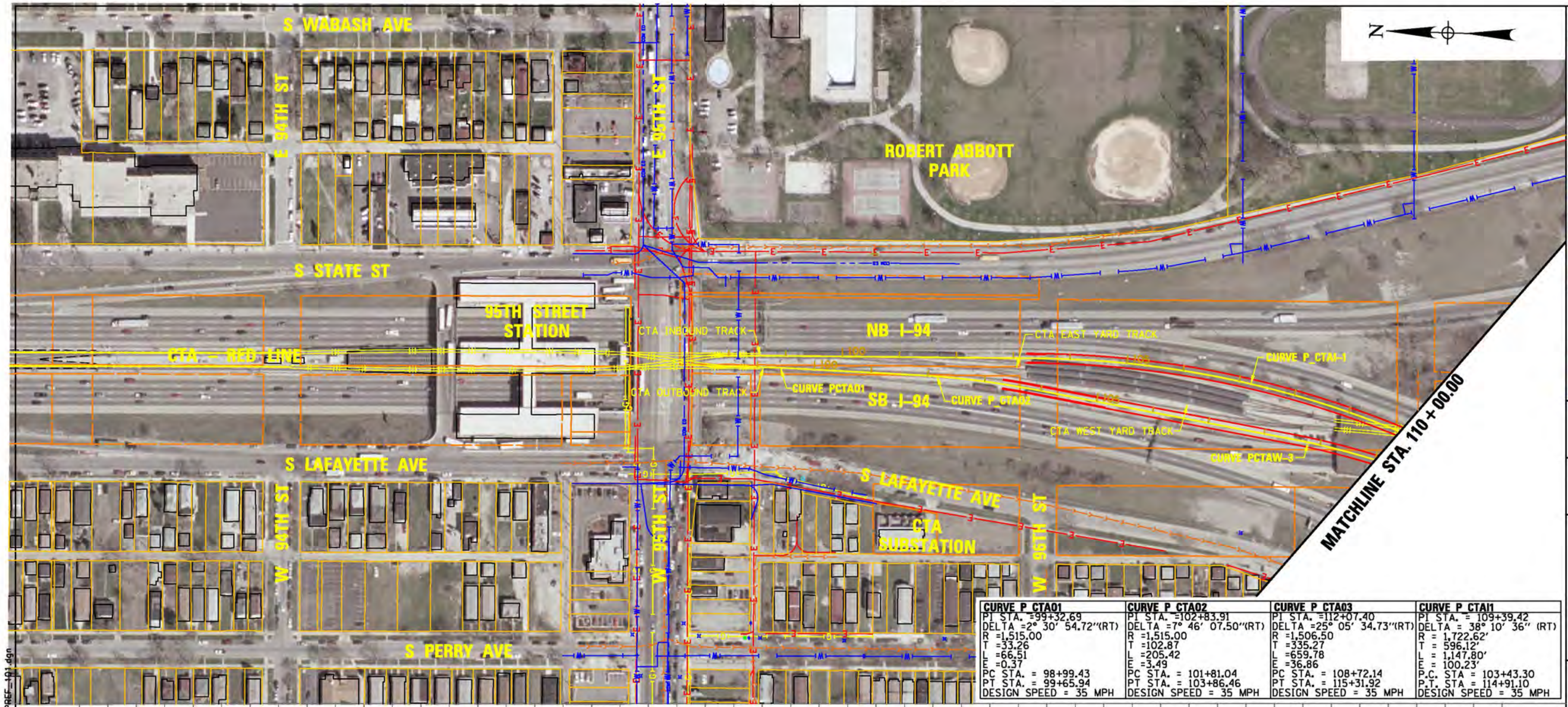
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E 95TH ST
ROBERT ABBOTT PARK
S STATE ST
95TH STREET STATION
CTA - RED LINE
CTA INBOUND TRACK
CTA OUTBOUND TRACK
NB I-94
SB I-94
CTA EAST YARD TRACK
CTA WEST YARD TRACK
CURVE PCTA01
CURVE P CTA02
CURVE P_CTAI-1
CURVE PCTAW-3
S LAFAYETTE AVE
W 94TH ST
W 95TH ST
W 96TH ST
CTA SUBSTATION
S PERRY AVE
N
MATCHLINE STA. 110 + 00.00

CURVE P CTA01	CURVE P CTA02	CURVE P CTA03	CURVE P CTAI1
PI STA. =99+32.69	PI STA. =102+83.91	PI STA. =112+07.40	PI STA. = 109+39.42
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L =66.51	L =205.42	L =659.78	L = 1,147.80'
E =0.37	E =3.49	E =36.86	E = 100.23'
PC STA. = 98+99.43	PC STA. = 101+81.04	PC STA. = 108+72.14	P.C. STA = 103+43.30
PT STA. = 99+65.94	PT STA. = 103+86.46	PT STA. = 115+31.92	P.T. STA = 114+91.10
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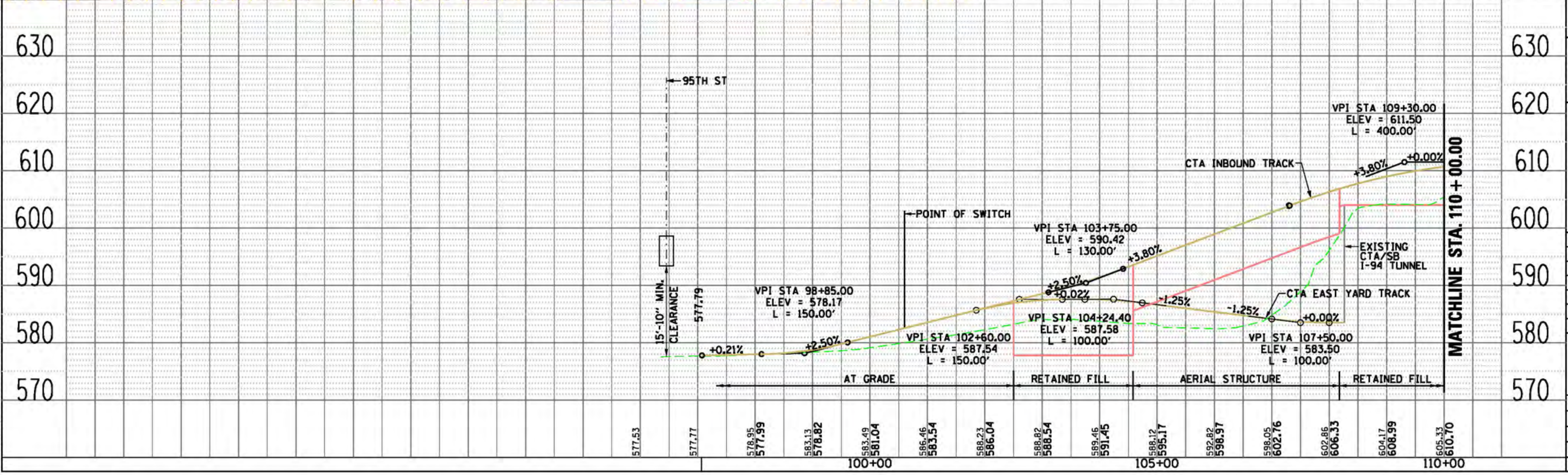
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95TH ST
15'-10" MIN. CLEARANCE
577.79
+0.21%
+2.50%
VPI STA 98+85.00
ELEV = 578.17
L = 150.00'
POINT OF SWITCH
VPI STA 102+60.00
ELEV = 587.54
L = 150.00'
VPI STA 103+75.00
ELEV = 590.42
L = 130.00'
+2.50%
+0.02%
+3.80%
VPI STA 104+24.40
ELEV = 587.58
L = 100.00'
-1.25%
-1.25%
+0.00%
CTA EAST YARD TRACK
VPI STA 107+50.00
ELEV = 583.50
L = 100.00'
EXISTING CTA/SB I-94 TUNNEL
CTA INBOUND TRACK
+3.80%
+0.00%
VPI STA 109+30.00
ELEV = 611.50
L = 400.00'
MATCHLINE STA. 110 + 00.00
AT GRADE
RETAINED FILL
AERIAL STRUCTURE
RETAINED FILL
577.53
577.77
578.95
577.99
583.13
578.82
583.49
581.04
586.46
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586.04
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———	PR TRACK CENTERLINE
———	PR TRACK STRUCTURE
———	EX ROADWAY RIGHT-OF-WAY
———	EX RAILROAD RIGHT-OF-WAY
—·—·—	PR PERMANENT ENVELOPE
———	PR ROADWAY/HARDSCAPE
🟥	PR STATION PLATFORM
▭	EX BUILDING OUTLINE
▭	PR BUILDING OUTLINE
▨	PR PARKING
▨	PR CTA SUBSTATION
———	PR UPRR TRACK CENTERLINE

UTILITIES

—W—	EXISTING WATER LINES
—→—	EXISTING SEWER LINE
———	EXISTING GAS LINE
—E—	EXISTING ELECTRIC LINE
—T—	EXISTING TELEPHONE LINE

ENTRANCES

▲	PRIMARY ENTRANCE
△	SECONDARY ENTRANCE
△	EXIT ONLY
→	PROPOSED PARKING ENTRANCE

PROFILE

— — —	EX GROUND
———	PR TOP OF RAIL
———	PR ELEVATED STRUCTURE DEPTH
▨	PLATFORM LOCATION

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RED LINE EXTENSION
ENVIRONMENTAL IMPACT STUDY
UNION PACIFIC RAILROAD
ALTERNATIVE
EAST OPTION

3 OF 51

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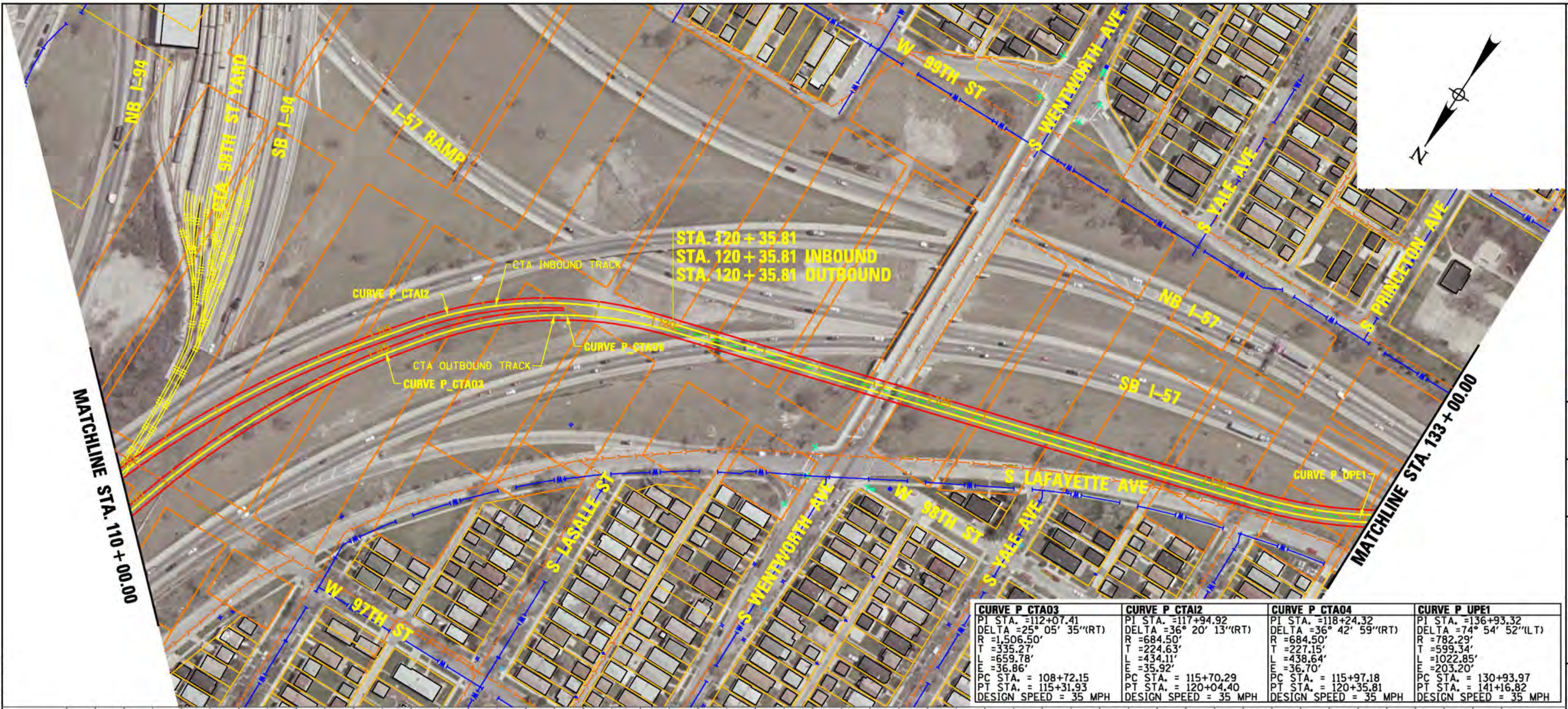
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CTA 98TH ST YARD
SB I-94
I-57 RAMP
W 99TH ST
S WENTWORTH AVE
S YALE AVE
S PRINCETON AVE
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STA. 120+35.81 INBOUND
STA. 120+35.81 OUTBOUND
CTA INBOUND TRACK
CURVE P_CTAI2
CURVE P_CTA04
CTA OUTBOUND TRACK
CURVE P_CTA03
NB I-57
SB I-57
S LAFAYETTE AVE
CURVE P_UPE1
MATCHLINE STA. 133+00.00
MATCHLINE STA. 110+00.00
S LASALLE ST
S WENTWORTH AVE
W 98TH ST
S YALE AVE
W 97TH ST
N

CURVE P_CTA03	CURVE P_CTAI2	CURVE P_CTA04	CURVE P_UPE1
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L =659.78′	L =434.11′	L =438.64′	L =1022.85′
E =36.86′	E =35.92′	E =36.70′	E =203.20′
PC STA. = 108+72.15	PC STA. = 115+70.29	PC STA. = 115+97.18	PC STA. = 130+93.97
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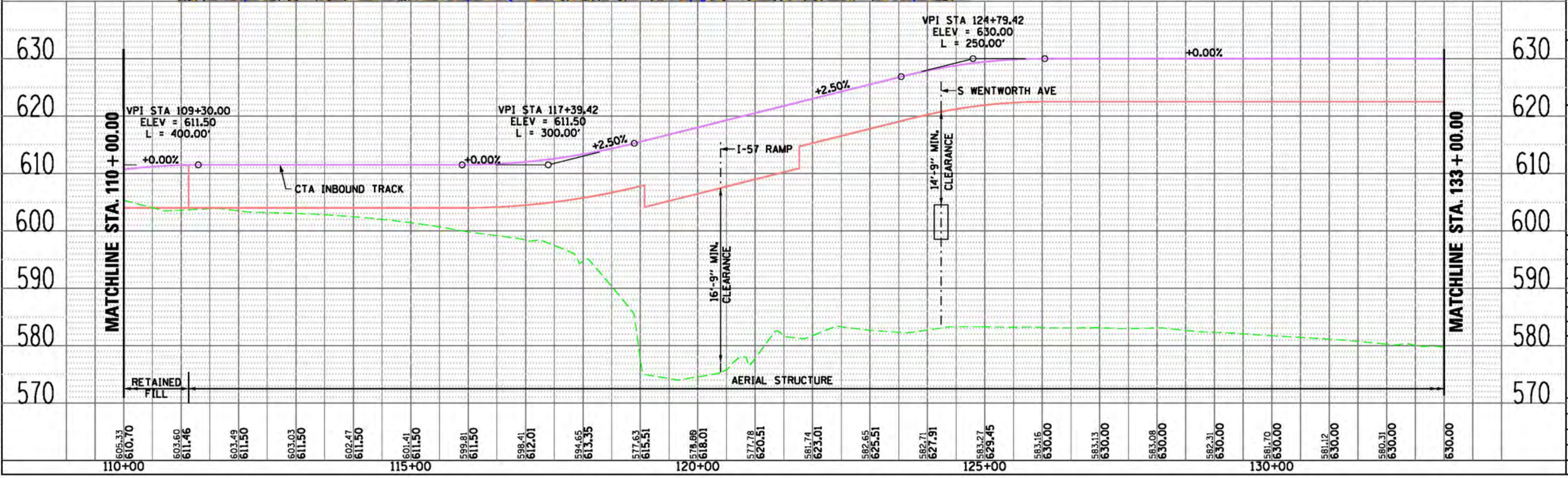

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- PR PERMANENT ENVELOPE
- PR ROADWAY/HARDSCAPE
- PR STATION PLATFORM
- EX BUILDING OUTLINE
- PR BUILDING OUTLINE
- PR PARKING
- PR CTA SUBSTATION
- PR UPRR TRACK CENTERLINE

UTILITIES
- EXISTING WATER LINES
- EXISTING SEWER LINE
- EXISTING GAS LINE
- EXISTING ELECTRIC LINE
- EXISTING TELEPHONE LINE

ENTRANCES
- ▲ PRIMARY ENTRANCE
- △ SECONDARY ENTRANCE
- EXIT ONLY
- PROPOSED PARKING ENTRANCE

PROFILE
- EX GROUND
- PR TOP OF RAIL
- PR ELEVATED STRUCTURE DEPTH
- PLATFORM LOCATION

PRELIMINARY DRAFT

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RED LINE EXTENSION
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UNION PACIFIC RAILROAD
ALTERNATIVE
EAST OPTION

4 OF 51

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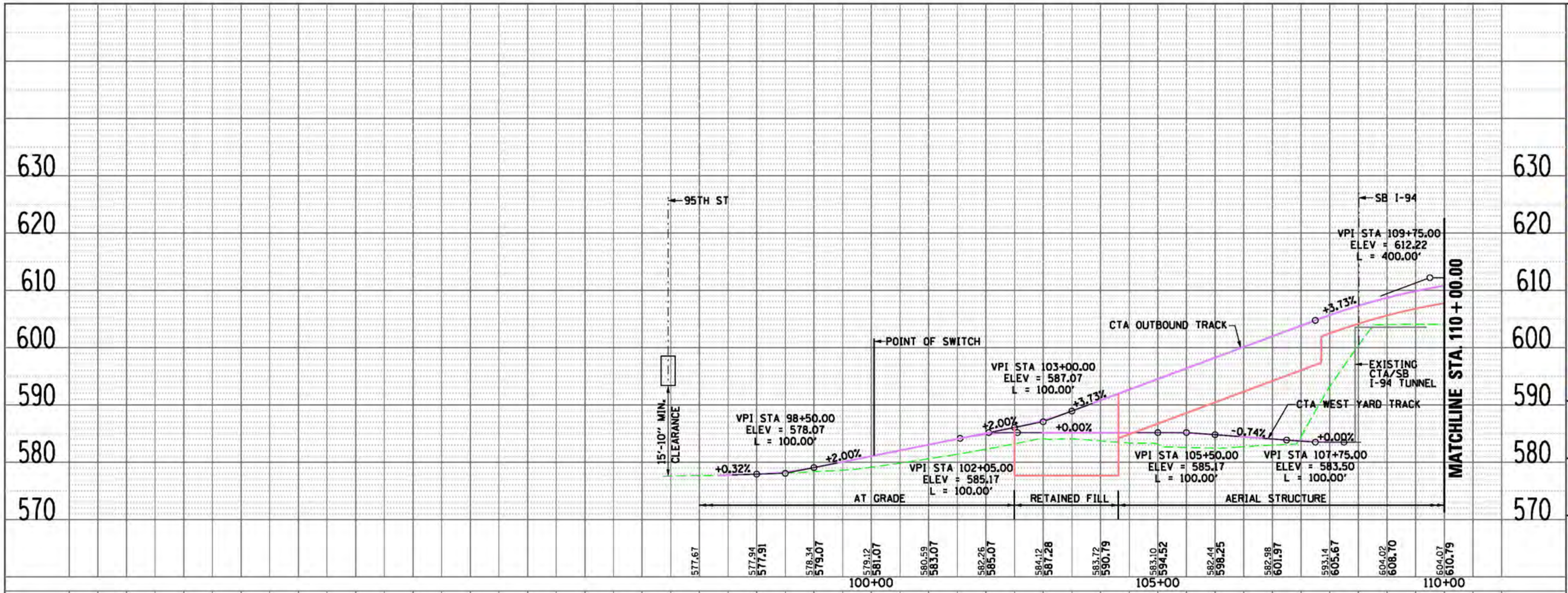
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570
95TH ST
15'-10" MIN. CLEARANCE
POINT OF SWITCH
VPI STA 98+50.00
ELEV = 578.07
L = 100.00'
+0.32%
+2.00%
VPI STA 102+05.00
ELEV = 585.17
L = 100.00'
VPI STA 103+00.00
ELEV = 587.07
L = 100.00'
+2.00%
+3.73%
+0.00%
CTA OUTBOUND TRACK
+3.73%
SB I-94
VPI STA 109+75.00
ELEV = 612.22
L = 400.00'
EXISTING CTA/SB I-94 TUNNEL
CTA WEST YARD TRACK
-0.74%
+0.00%
VPI STA 105+50.00
ELEV = 585.17
L = 100.00'
VPI STA 107+75.00
ELEV = 583.50
L = 100.00'
AT GRADE
RETAINED FILL
AERIAL STRUCTURE
MATCHLINE STA. 110+00.00
577.67
577.94 577.91
578.34 579.07
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580.59 583.07
582.26 585.07
584.12 587.28
583.72 590.79
583.10 594.52
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604.07 610.79
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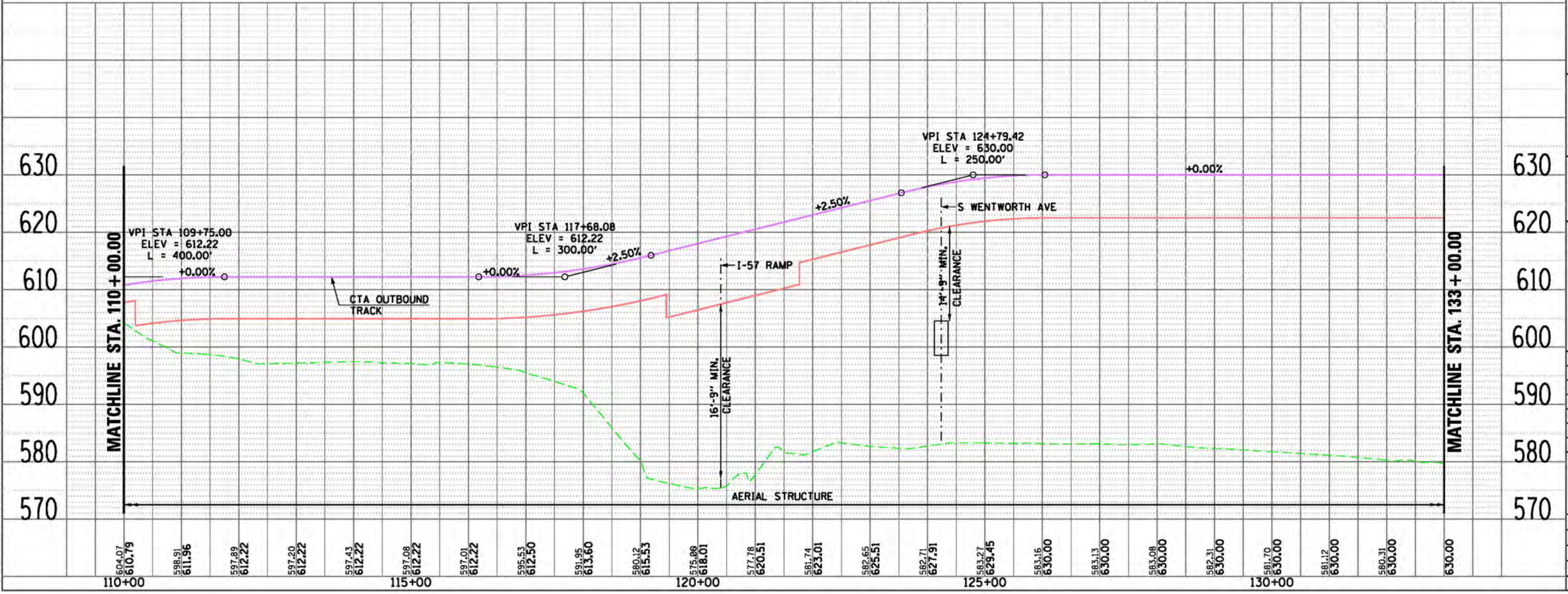
105+00
110+00


630
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590
580
570
MATCHLINE STA. 110+00.00
VPI STA 109+75.00
ELEV = 612.22
L = 400.00'
+0.00%
CTA OUTBOUND TRACK
VPI STA 117+68.08
ELEV = 612.22
L = 300.00'
+0.00%
+2.50%
I-57 RAMP
16'-9" MIN. CLEARANCE
+2.50%
VPI STA 124+79.42
ELEV = 630.00
L = 250.00'
S WENTWORTH AVE
14'-9" MIN. CLEARANCE
+0.00%
AERIAL STRUCTURE
MATCHLINE STA. 133+00.00
604.07 610.79
598.91 611.96
597.89 612.22
597.20 612.22
597.43 612.22
597.08 612.22
597.01 612.22
595.53 612.50
591.95 613.60
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120+00
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PR TRACK CENTERLINE
PR TRACK STRUCTURE
EX ROADWAY RIGHT-OF-WAY
EX RAILROAD RIGHT-OF-WAY
PR PERMANENT ENVELOPE
PR ROADWAY/HARDSCAPE
PR STATION PLATFORM
EX BUILDING OUTLINE
PR BUILDING OUTLINE
PR PARKING
PR CTA SUBSTATION
PR UPRR TRACK CENTERLINE

UTILITIES
EXISTING WATER LINES
EXISTING SEWER LINE
EXISTING GAS LINE
EXISTING ELECTRIC LINE
EXISTING TELEPHONE LINE

ENTRANCES
PRIMARY ENTRANCE
SECONDARY ENTRANCE
EXIT ONLY
PROPOSED PARKING ENTRANCE

PROFILE
EX GROUND
PR TOP OF RAIL
PR ELEVATED STRUCTURE DEPTH
PLATFORM LOCATION

PRELIMINARY DRAFT

CWE Transit Group

cta

CHICAGO TRANSIT AUTHORITY

SENSITIVE SECURITY INFORMATION

WARNING: THIS RECORD CONTAINS SENSITIVE SECURITY INFORMATION THAT IS CONTROLLED UNDER 49 CFR PARTS 15 AND 1520. NO PART OF THIS RECORD MAY BE DISCLOSED TO PERSONS WITHOUT A "NEED TO KNOW" AS DEFINED IN CFR PARTS 15 AND 1520, EXCEPT WITH THE WRITTEN PERMISSION OF THE ADMINISTRATOR OF THE TRANSPORTATION SECURITY ADMINISTRATION OR THE SECRETARY OF TRANSPORTATION. UNAUTHORIZED RELEASE MAY RESULT IN CIVIL PENALTY OR OTHER ACTION. FOR U.S. GOVERNMENT AGENCIES, PUBLIC DISCLOSURE IS GOVERNED BY 5 U.S.C. 552 AND 49 CFR PARTS 15 AND 1520.

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RED LINE EXTENSION
ENVIRONMENTAL IMPACT STUDY
UNION PACIFIC RAILROAD
ALTERNATIVE
EAST OPTION

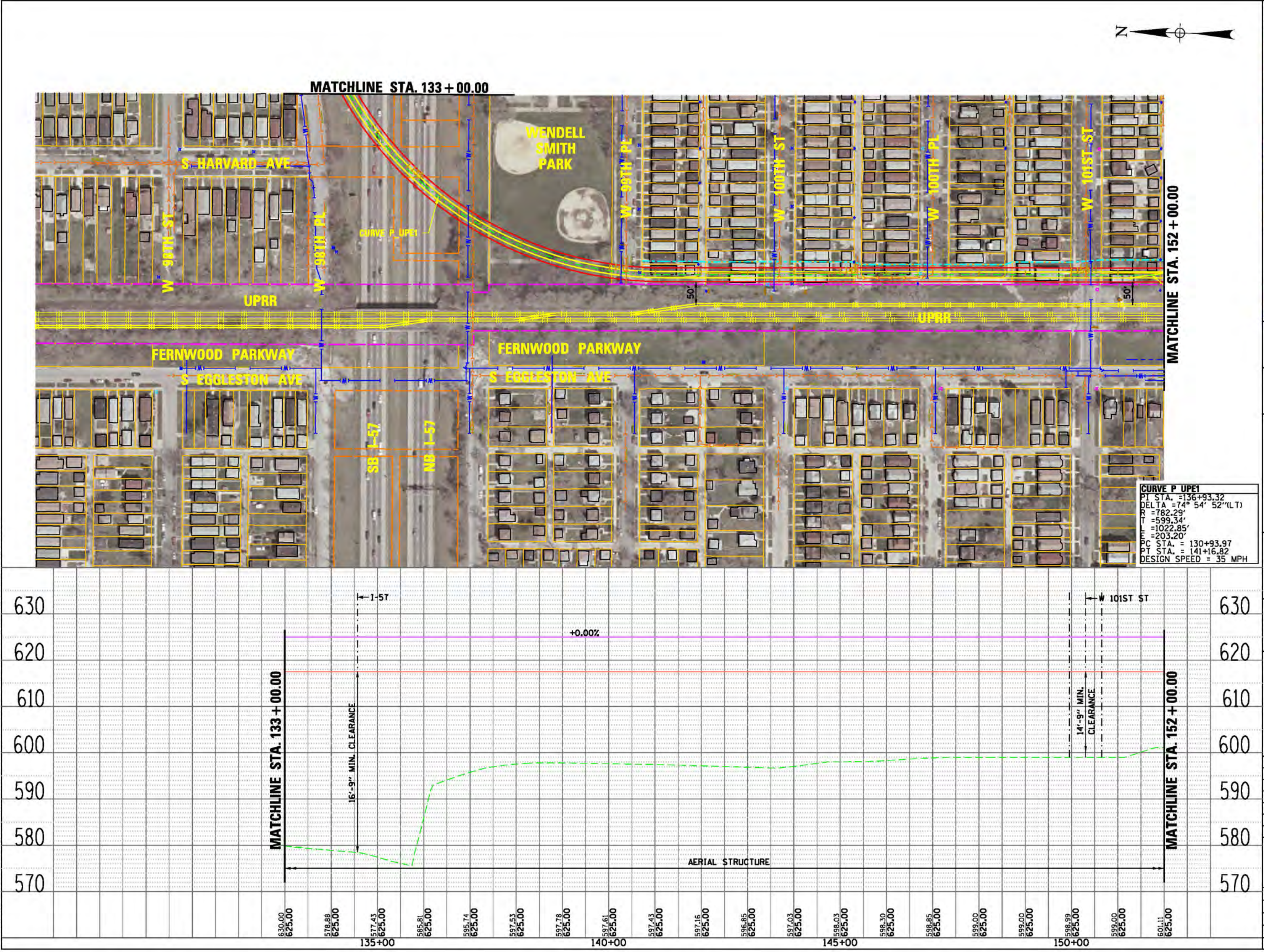
5 OF 51

IN CHARGE
APPROVED BY
CHECKED BY
DESIGNED BY
DRAWN BY
PROJECT NO CTA-RLE
FILE NAME CTARLE_CT_PP_UPRRE_PREF_102A.dgn

100 0 100 200
SCALE H 1" = 100'-0"
V 1" = 10'-0"

MARK	DATE	DESCRIPTION

SHEET TITLE


N
MATCHLINE STA. 133+00.00
WENDELL SMITH PARK
S. HARVARD AVE
W 98TH ST
W 98TH PL
W 99TH PL
W 100TH ST
W 100TH PL
W 101ST ST
CURVE P_UPE1
UPRR
UPRR
50'
50'
FERNWOOD PARKWAY
FERNWOOD PARKWAY
S EGGLESTON AVE
S EGGLESTON AVE
SB I-57
NB I-57
MATCHLINE STA. 152+00.00
630
620
610
600
590
580
570
I-57
W 101ST ST
+0.00%
16'-9" MIN. CLEARANCE
14'-9" MIN. CLEARANCE
AERIAL STRUCTURE
MATCHLINE STA. 133+00.00
MATCHLINE STA. 152+00.00
630.00 625.00
578.88 625.00
577.43 625.00
585.81 625.00
595.74 625.00
597.53 625.00
597.78 625.00
597.61 625.00
597.43 625.00
597.16 625.00
596.85 625.00
597.03 625.00
598.03 625.00
598.30 625.00
598.85 625.00
599.00 625.00
599.00 625.00
598.99 625.00
599.00 625.00
601.11 625.00
135+00
140+00
145+00
150+00

CURVE P UPE1
PI STA. =136+93.32
DELTA =74° 54′ 52″(LT)
R =782.29′
T =599.34′
L =1022.85′
E =203.20′
PC STA. = 130+93.97
PT STA. = 141+16.82
DESIGN SPEED = 35 MPH

7/24/2015 8:25:05 AM
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LEGEND

PLAN
EX CENTERLINE
PR CENTERLINE
EX TRACK CENTERLINE
PR TRACK CENTERLINE
PR TRACK STRUCTURE
EX ROADWAY RIGHT-OF-WAY
EX RAILROAD RIGHT-OF-WAY
PR PERMANENT ENVELOPE
PR ROADWAY/HARDSCAPE
PR STATION PLATFORM
EX BUILDING OUTLINE
PR BUILDING OUTLINE
PR PARKING
PR CTA SUBSTATION

UTILITIES
EXISTING WATER LINES
EXISTING SEWER LINE
EXISTING GAS LINE
EXISTING ELECTRIC LINE
EXISTING TELEPHONE LINE

ENTRANCES
PRIMARY ENTRANCE
SECONDARY ENTRANCE
EXIT ONLY
PROPOSED PARKING ENTRANCE

PROFILE
EX GROUND
PR TOP OF RAIL
PR ELEVATED STRUCTURE DEPTH
PLATFORM LOCATION

PRELIMINARY DRAFT

CWE Transit Group

cta

CHICAGO TRANSIT AUTHORITY

SENSITIVE SECURITY INFORMATION

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RED LINE EXTENSION
ENVIRONMENTAL IMPACT STUDY
UNION PACIFIC RAILROAD
ALTERNATIVE
EAST OPTION

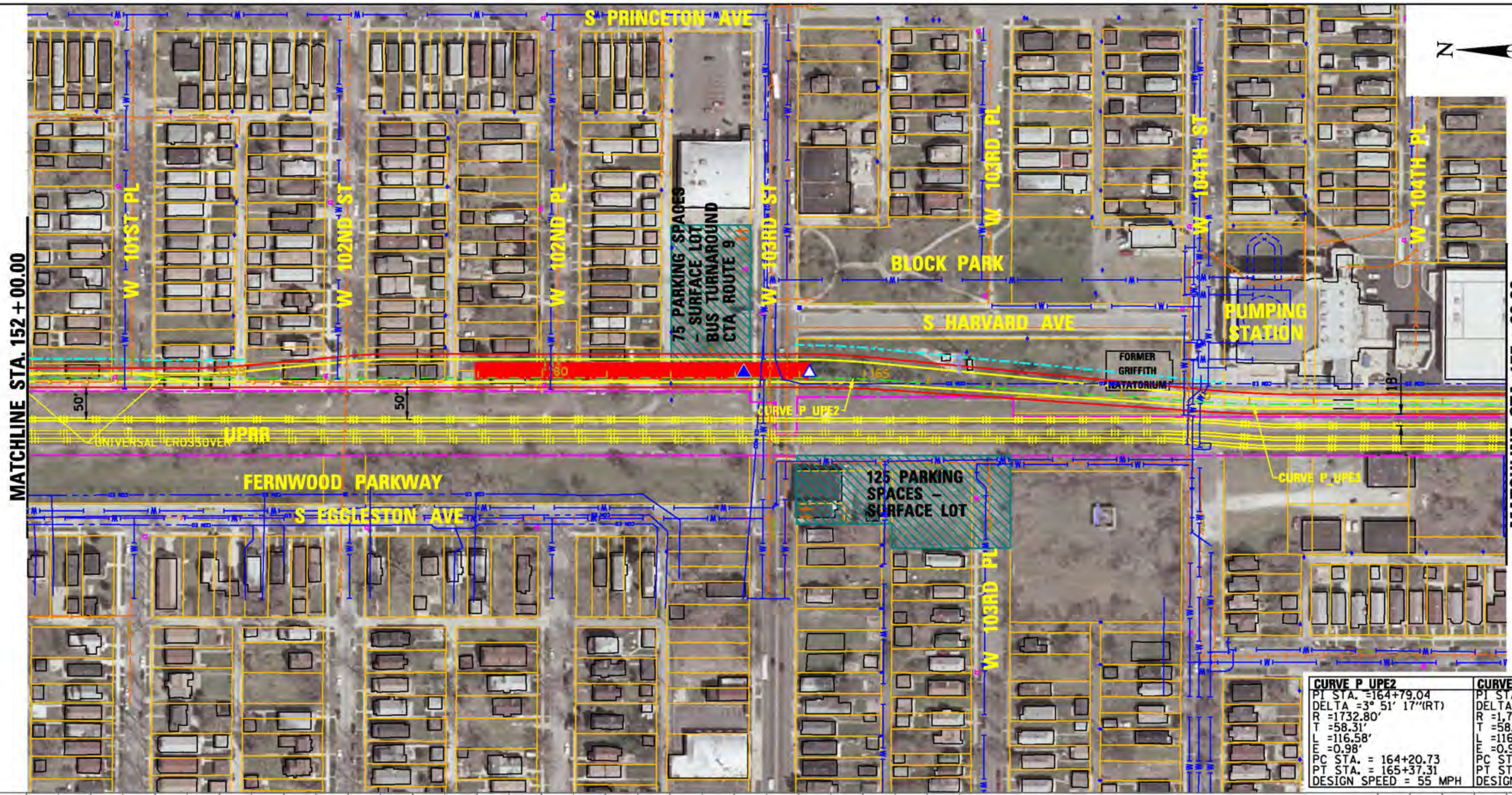
6 OF 51

IN CHARGE
APPROVED BY
CHECKED BY
DESIGNED BY
DRAWN BY
PROJECT NO CTA-RLE
FILE NAME CTARLE_CT_PP_UPRRE_PREF_103.dgn

100 0 100 200
SCALE H 1" = 100'-0"
V 1" = 10'-0"

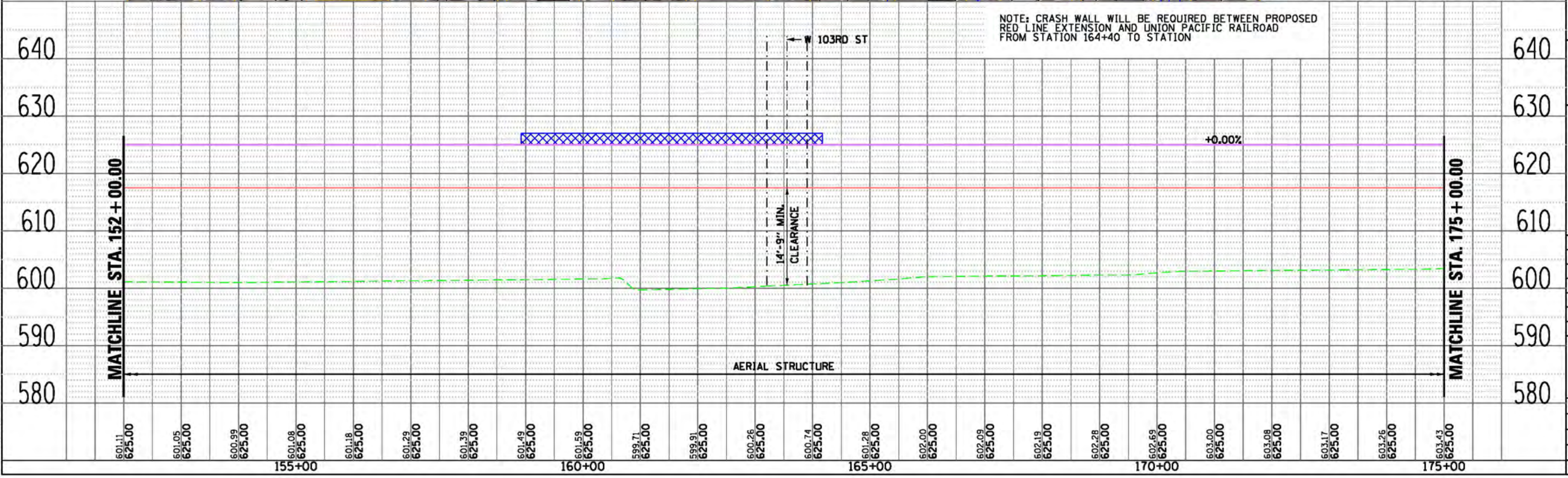
MARK	DATE	DESCRIPTION

SHEET TITLE


S PRINCETON AVE
W 101ST PL
W 102ND ST
W 102ND PL
75 PARKING SPACES - SURFACE LOT
BUS TURNAROUND CTA ROUTE 9
W 103RD ST
W 103RD PL
BLOCK PARK
W 104TH ST
W 104TH PL
S HARVARD AVE
PUMPING STATION
FORMER GRIFFITH NATATORIUM
MATCHLINE STA. 152+00.00
MATCHLINE STA. 175+00.00
UNIVERSAL CROSSOVER
UPRR
CURVE P_UPE2
CURVE P_UPE3
FERNWOOD PARKWAY
S EGGLESTON AVE
125 PARKING SPACES - SURFACE LOT
50'
50'
18'
+80
+165
N

CURVE P_UPE2	CURVE P_UPE3
PI STA. =164+79.04	PI STA. =170+87.96
DELTA =3° 51′ 17″(RT)	DELTA =3° 51′ 35″(LT)
R =1732.80′	R =1,732.80′
T =58.31′	T =58.39′
L =116.58′	L =116.73′
E =0.98′	E =0.98′
PC STA. = 164+20.73	PC STA. = 170+29.57
PT STA. = 165+37.31	PT STA. = 171+46.30
DESIGN SPEED = 55 MPH	DESIGN SPEED = 55 MPH

NOTE: CRASH WALL WILL BE REQUIRED BETWEEN PROPOSED RED LINE EXTENSION AND UNION PACIFIC RAILROAD FROM STATION 164+40 TO STATION


640
630
620
610
600
590
580
W 103RD ST
+0.00%
14'-9" MIN. CLEARANCE
MATCHLINE STA. 152+00.00
MATCHLINE STA. 175+00.00
AERIAL STRUCTURE
601.11 625.00
601.05 625.00
600.99 625.00
601.08 625.00
601.18 625.00
601.29 625.00
601.39 625.00
601.49 625.00
601.59 625.00
599.71 625.00
599.91 625.00
600.26 625.00
600.74 625.00
601.28 625.00
602.00 625.00
602.09 625.00
602.19 625.00
602.28 625.00
602.69 625.00
603.00 625.00
603.08 625.00
603.17 625.00
603.26 625.00
603.43 625.00
155+00
160+00
165+00
170+00
175+00

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LEGEND

PLAN
- EX CENTERLINE
- PR CENTERLINE
- EX TRACK CENTERLINE
- PR TRACK CENTERLINE
- PR TRACK STRUCTURE
- EX ROADWAY RIGHT-OF-WAY
- EX RAILROAD RIGHT-OF-WAY
- PR PERMANENT ENVELOPE
- PR ROADWAY/HARDSCAPE
- 🟥 PR STATION PLATFORM
- EX BUILDING OUTLINE
- PR BUILDING OUTLINE
- ▨ PR PARKING
- ▨ PR CTA SUBSTATION
- PR UPRR TRACK CENTERLINE

UTILITIES
- EXISTING WATER LINES
- EXISTING SEWER LINE
- EXISTING GAS LINE
- EXISTING ELECTRIC LINE
- EXISTING TELEPHONE LINE

ENTRANCES
- ▲ PRIMARY ENTRANCE
- △ SECONDARY ENTRANCE
- EXIT ONLY
- ⇄ PROPOSED PARKING ENTRANCE

PROFILE
- EX GROUND
- PR TOP OF RAIL
- PR ELEVATED STRUCTURE DEPTH
- ▩ PLATFORM LOCATION

PRELIMINARY DRAFT

CWE Transit Group

CHICAGO TRANSIT AUTHORITY

SENSITIVE SECURITY INFORMATION

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RED LINE EXTENSION
ENVIRONMENTAL IMPACT STUDY
UNION PACIFIC RAILROAD
ALTERNATIVE
EAST OPTION

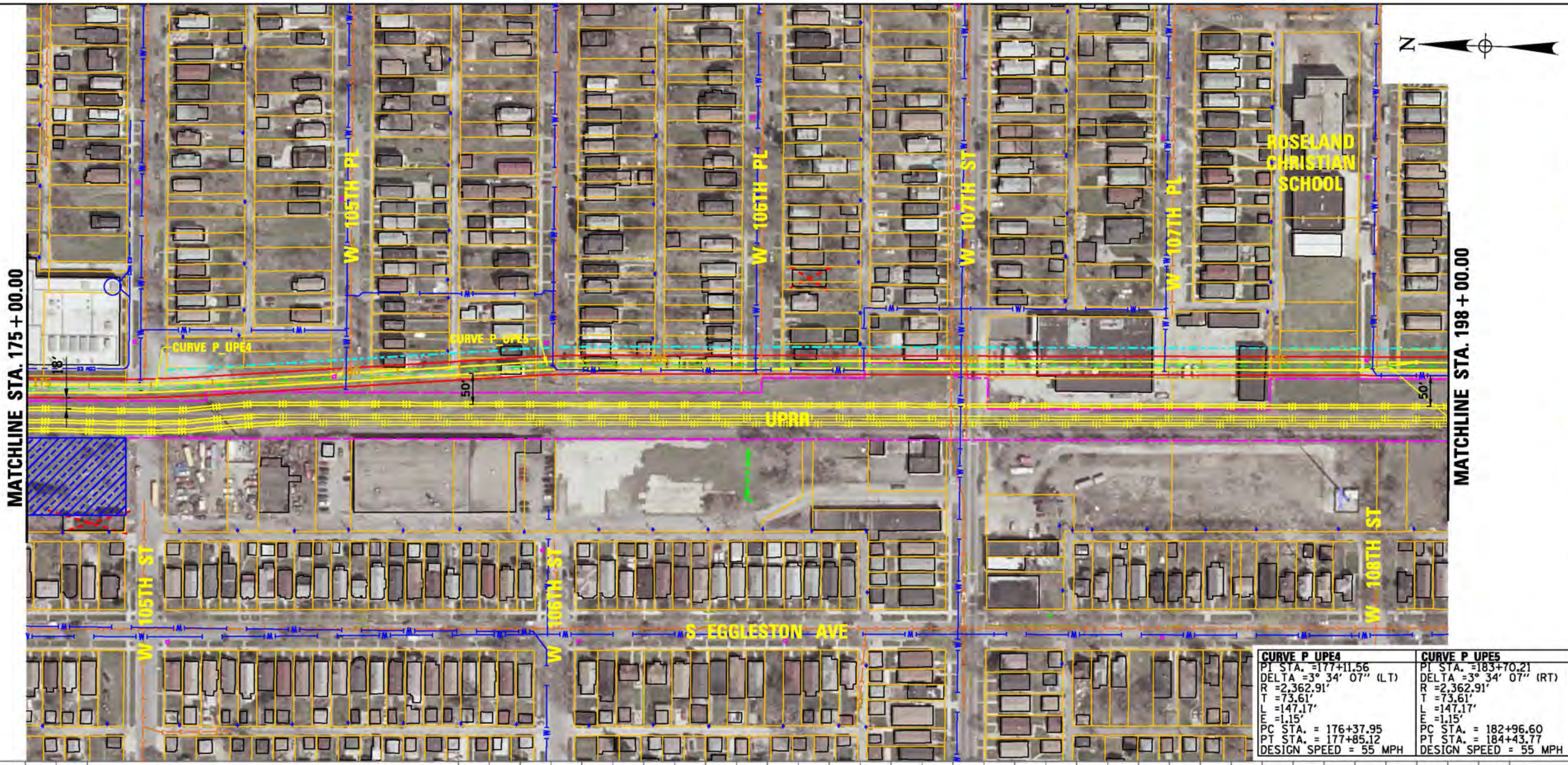
7 OF 51

IN CHARGE
APPROVED BY
CHECKED BY
DESIGNED BY
DRAWN BY
PROJECT NO CTA-RLE
FILE NAME CTARLE_CT_PP_UPRRE_PREF_104.dgn

100 0 100 200
SCALE H 1" = 100'-0"
V 1" = 10'-0"

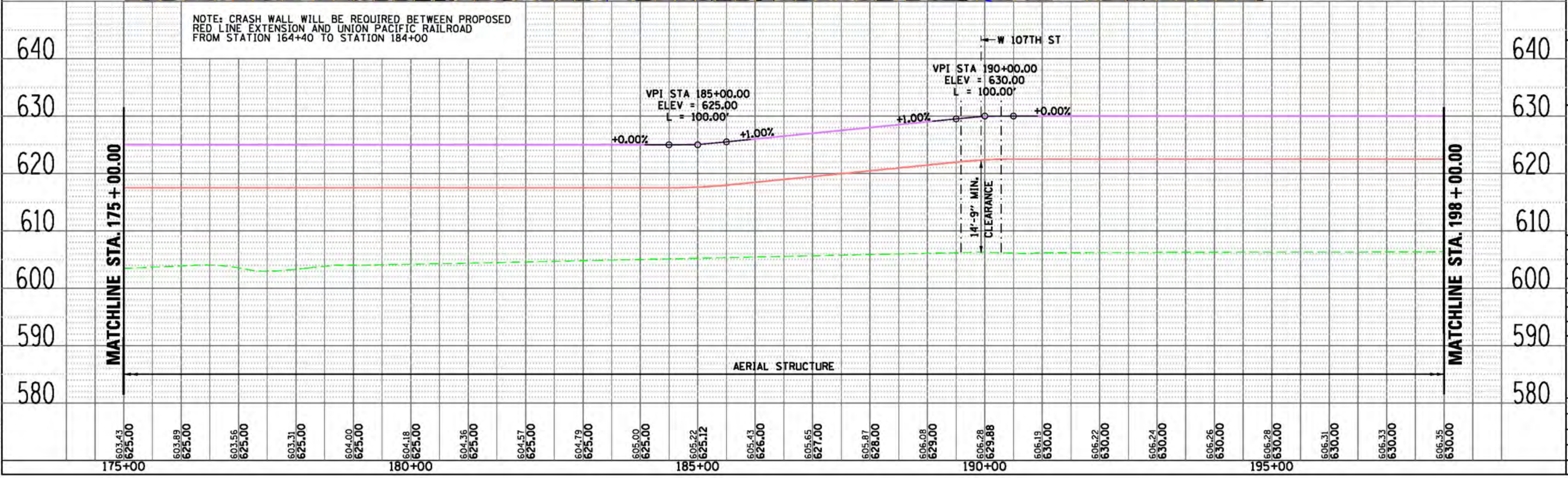
MARK	DATE	DESCRIPTION

SHEET TITLE



CURVE P_UPE4	**CURVE P_UPE5**
PI STA. =177+11.56	PI STA. =183+70.21
DELTA =3° 34' 07" (LT)	DELTA =3° 34' 07" (RT)
R =2,362.91'	R =2,362.91'
T =73.61'	T =73.61'
L =147.17'	L =147.17'
E =1.15'	E =1.15'
PC STA. = 176+37.95	PC STA. = 182+96.60
PT STA. = 177+85.12	PT STA. = 184+43.77
DESIGN SPEED = 55 MPH	DESIGN SPEED = 55 MPH

NOTE: CRASH WALL WILL BE REQUIRED BETWEEN PROPOSED RED LINE EXTENSION AND UNION PACIFIC RAILROAD FROM STATION 164+40 TO STATION 184+00



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LEGEND

PLAN
- EX CENTERLINE
- PR CENTERLINE
- EX TRACK CENTERLINE
- PR TRACK CENTERLINE
- PR TRACK STRUCTURE
- EX ROADWAY RIGHT-OF-WAY
- EX RAILROAD RIGHT-OF-WAY
- PR PERMANENT ENVELOPE
- PR ROADWAY/HARDSCAPE
- PR STATION PLATFORM
- EX BUILDING OUTLINE
- PR BUILDING OUTLINE
- PR PARKING
- PR CTA SUBSTATION
- PR UPRR TRACK CENTERLINE

UTILITIES
- EXISTING WATER LINES
- EXISTING SEWER LINE
- EXISTING GAS LINE
- EXISTING ELECTRIC LINE
- EXISTING TELEPHONE LINE

ENTRANCES
- PRIMARY ENTRANCE
- SECONDARY ENTRANCE
- EXIT ONLY
- PROPOSED PARKING ENTRANCE

PROFILE
- EX GROUND
- PR TOP OF RAIL
- PR ELEVATED STRUCTURE DEPTH
- PLATFORM LOCATION

PRELIMINARY DRAFT

CWE Transit Group

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CHICAGO TRANSIT AUTHORITY

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RED LINE EXTENSION
ENVIRONMENTAL IMPACT STUDY
UNION PACIFIC RAILROAD
ALTERNATIVE
EAST OPTION

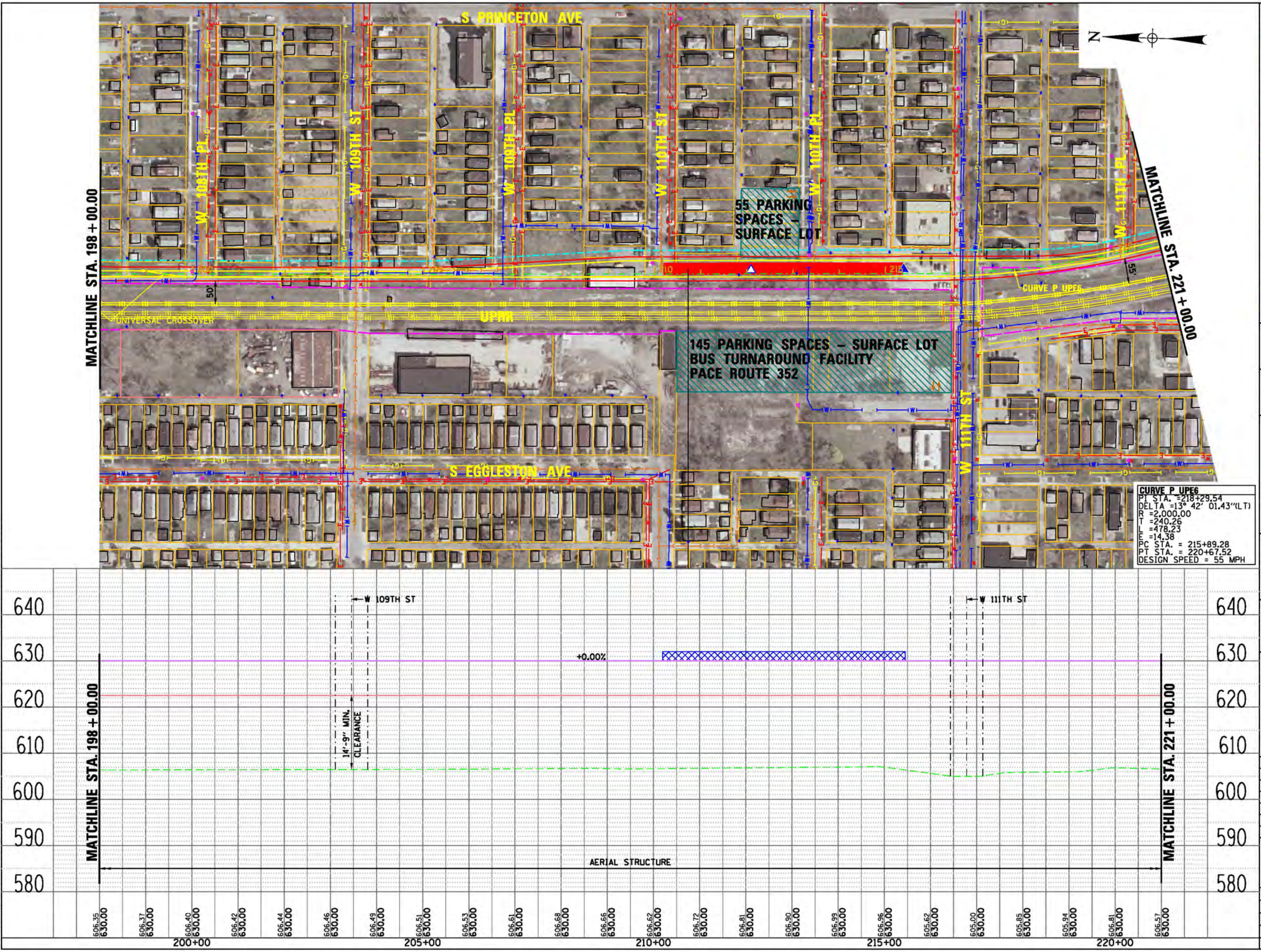
8 OF 51

IN CHARGE
APPROVED BY
CHECKED BY
DESIGNED BY
DRAWN BY
PROJECT NO CTA-RLE
FILE NAME CTARLE_CT_PP_UPRRE_PREF_105.dgn

100 0 100 200
SCALE H 1" = 100'-0"
V 1" = 10'-0"

MARK	DATE	DESCRIPTION

SHEET TITLE


S PRINCETON AVE
W 108TH PL
W 109TH ST
W 109TH PL
W 110TH ST
W 110TH PL
W 111TH ST
W 111TH PL
S EGGLESTON AVE
UPRR
UNIVERSAL CROSSOVER
CURVE P UPE6
50'
55'
55 PARKING SPACES - SURFACE LOT
145 PARKING SPACES - SURFACE LOT
BUS TURNAROUND FACILITY
PACE ROUTE 352
MATCHLINE STA. 198 + 00.00
MATCHLINE STA. 221 + 00.00
N
W 109TH ST
W 111TH ST
+0.00%
14'-9" MIN. CLEARANCE
AERIAL STRUCTURE
640
630
620
610
600
590
580
606.35 630.00
606.37 630.00
606.40 630.00
606.42 630.00
606.44 630.00
606.46 630.00
606.49 630.00
606.51 630.00
606.53 630.00
606.61 630.00
606.68 630.00
606.66 630.00
606.62 630.00
606.72 630.00
606.81 630.00
606.90 630.00
606.99 630.00
606.96 630.00
605.62 630.00
605.00 630.00
605.85 630.00
605.94 630.00
606.81 630.00
606.57 630.00
200+00
205+00
210+00
215+00
220+00

CURVE P UPE6
PI STA. =218+29.54
DELTA =13° 42′ 01.43″(LT)
R =2,000.00
T =240.26
L =478.23
E =14.38
PC STA. = 215+89.28
PT STA. = 220+67.52
DESIGN SPEED = 55 MPH

LEGEND

PLAN

— · —	EX CENTERLINE
— · —	PR CENTERLINE
═╫═	EX TRACK CENTERLINE
───	PR TRACK CENTERLINE
───	PR TRACK STRUCTURE
— —	EX ROADWAY RIGHT-OF-WAY
— —	EX RAILROAD RIGHT-OF-WAY
— · —	PR PERMANENT ENVELOPE
───	PR ROADWAY/HARDSCAPE
🟥	PR STATION PLATFORM
▭	EX BUILDING OUTLINE
▭	PR BUILDING OUTLINE
▨	PR PARKING
▨	PR CTA SUBSTATION
═╫═	PR UPRR TRACK CENTERLINE

UTILITIES

—W—	EXISTING WATER LINES
—›—›—	EXISTING SEWER LINE
—G—	EXISTING GAS LINE
—E—	EXISTING ELECTRIC LINE
—T—	EXISTING TELEPHONE LINE

ENTRANCES

▲	PRIMARY ENTRANCE
△	SECONDARY ENTRANCE
‹ ›	EXIT ONLY
⇄	PROPOSED PARKING ENTRANCE

PROFILE

— —	EX GROUND
───	PR TOP OF RAIL
───	PR ELEVATED STRUCTURE DEPTH
▩	PLATFORM LOCATION

PRELIMINARY DRAFT

CWE Transit Group

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CHICAGO TRANSIT AUTHORITY

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RED LINE EXTENSION
ENVIRONMENTAL IMPACT STUDY
UNION PACIFIC RAILROAD
ALTERNATIVE
EAST OPTION

9 OF 51

IN CHARGE
APPROVED BY
CHECKED BY
DESIGNED BY
DRAWN BY
PROJECT NO CTA-RLE
FILE NAME CTARLE_CT_PP_UPRRE_PREF_106.dgn

100 0 100 200
SCALE H 1" = 100'-0"
V 1" = 10'-0"

MARK	DATE	DESCRIPTION

SHEET TITLE

7/24/2015 8:25:24 AM
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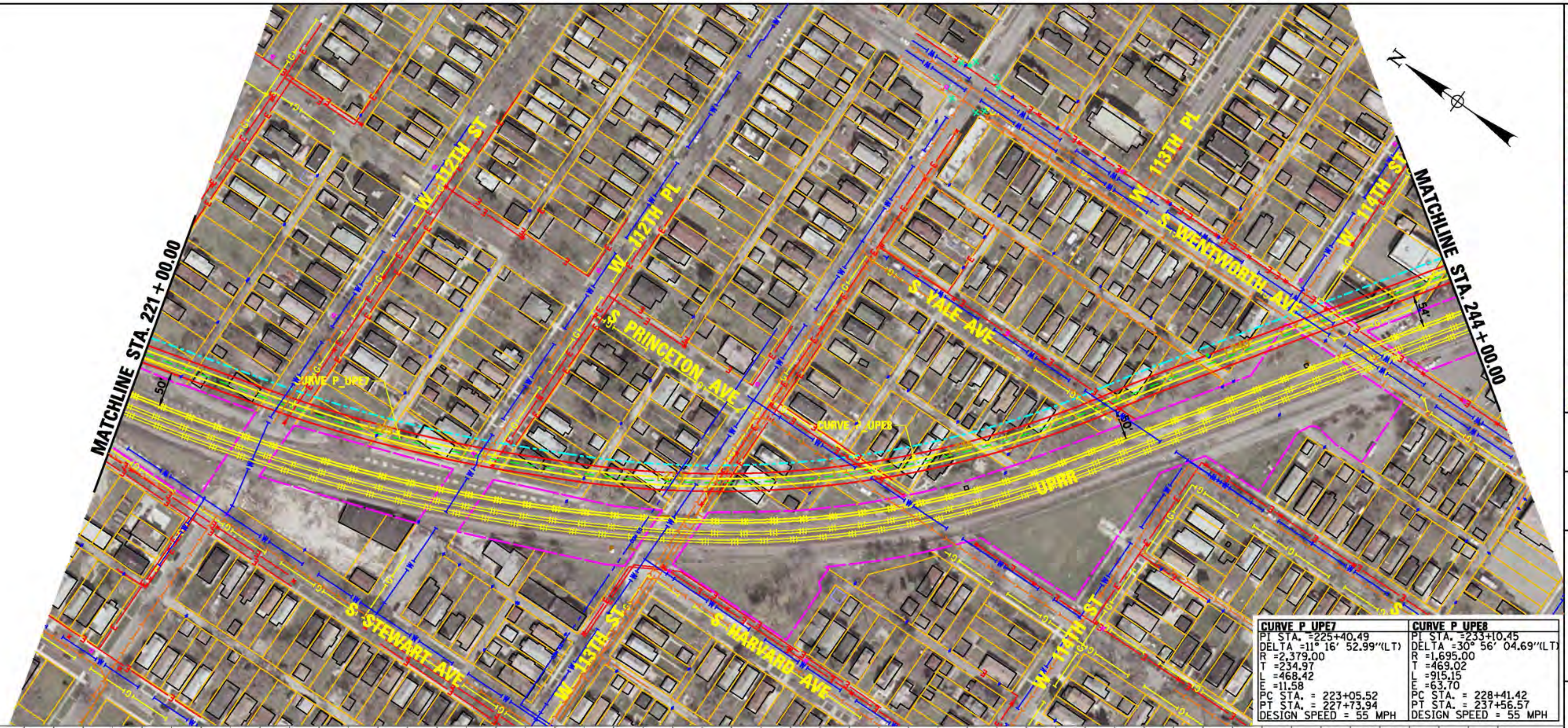
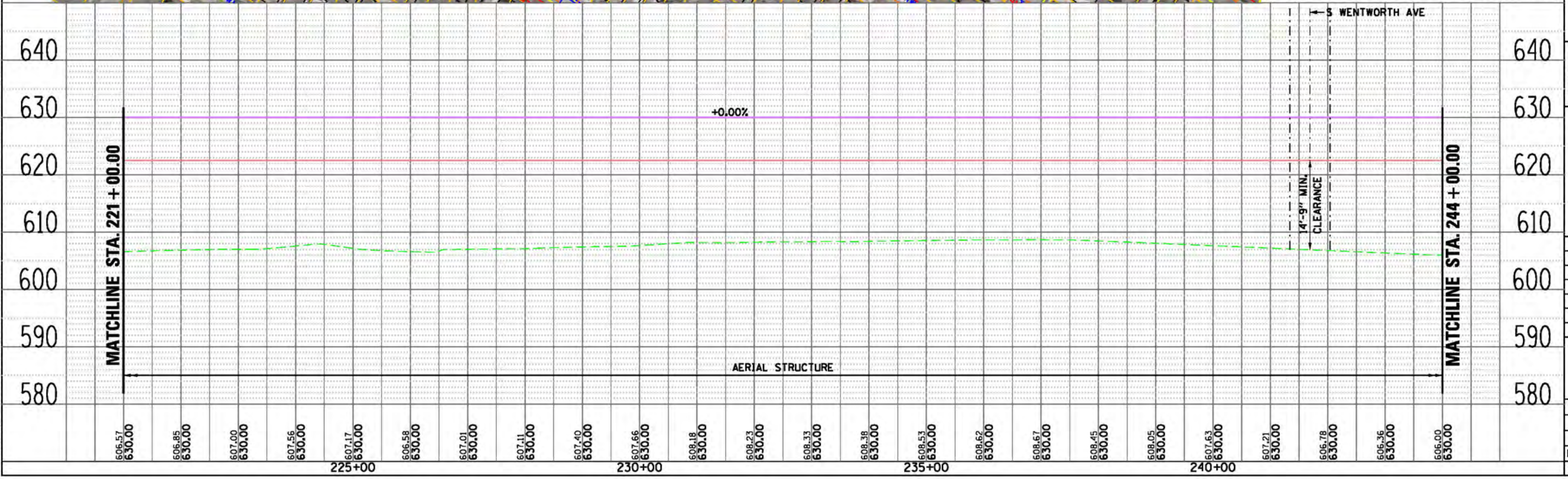


CURVE P_UPE7	CURVE P_UPE8
PI STA. =225+40.49	PI STA. =233+10.45
DELTA =11° 16′ 52.99″(LT)	DELTA =30° 56′ 04.69″(LT)
R =2,379.00	R =1,695.00
T =234.97	T =469.02
L =468.42	L =915.15
E =11.58	E =63.70
PC STA. = 223+05.52	PC STA. = 228+41.42
PT STA. = 227+73.94	PT STA. = 237+56.57
DESIGN SPEED = 55 MPH	DESIGN SPEED = 55 MPH



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LEGEND

PLAN
- EX CENTERLINE
- PR CENTERLINE
- EX TRACK CENTERLINE
- PR TRACK CENTERLINE
- PR TRACK STRUCTURE
- EX ROADWAY RIGHT-OF-WAY
- EX RAILROAD RIGHT-OF-WAY
- PR PERMANENT ENVELOPE
- PR ROADWAY/HARDSCAPE
- PR STATION PLATFORM
- EX BUILDING OUTLINE
- PR BUILDING OUTLINE
- PR PARKING
- PR CTA SUBSTATION

UTILITIES
- EXISTING WATER LINES
- EXISTING SEWER LINE
- EXISTING GAS LINE
- EXISTING ELECTRIC LINE
- EXISTING TELEPHONE LINE

ENTRANCES
- ▲ PRIMARY ENTRANCE
- △ SECONDARY ENTRANCE
- EXIT ONLY
- PROPOSED PARKING ENTRANCE

PROFILE
- EX GROUND
- PR TOP OF RAIL
- PR ELEVATED STRUCTURE DEPTH
- PLATFORM LOCATION

PRELIMINARY DRAFT

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RED LINE EXTENSION
ENVIRONMENTAL IMPACT STUDY
UNION PACIFIC RAILROAD ALTERNATIVE
EAST OPTION

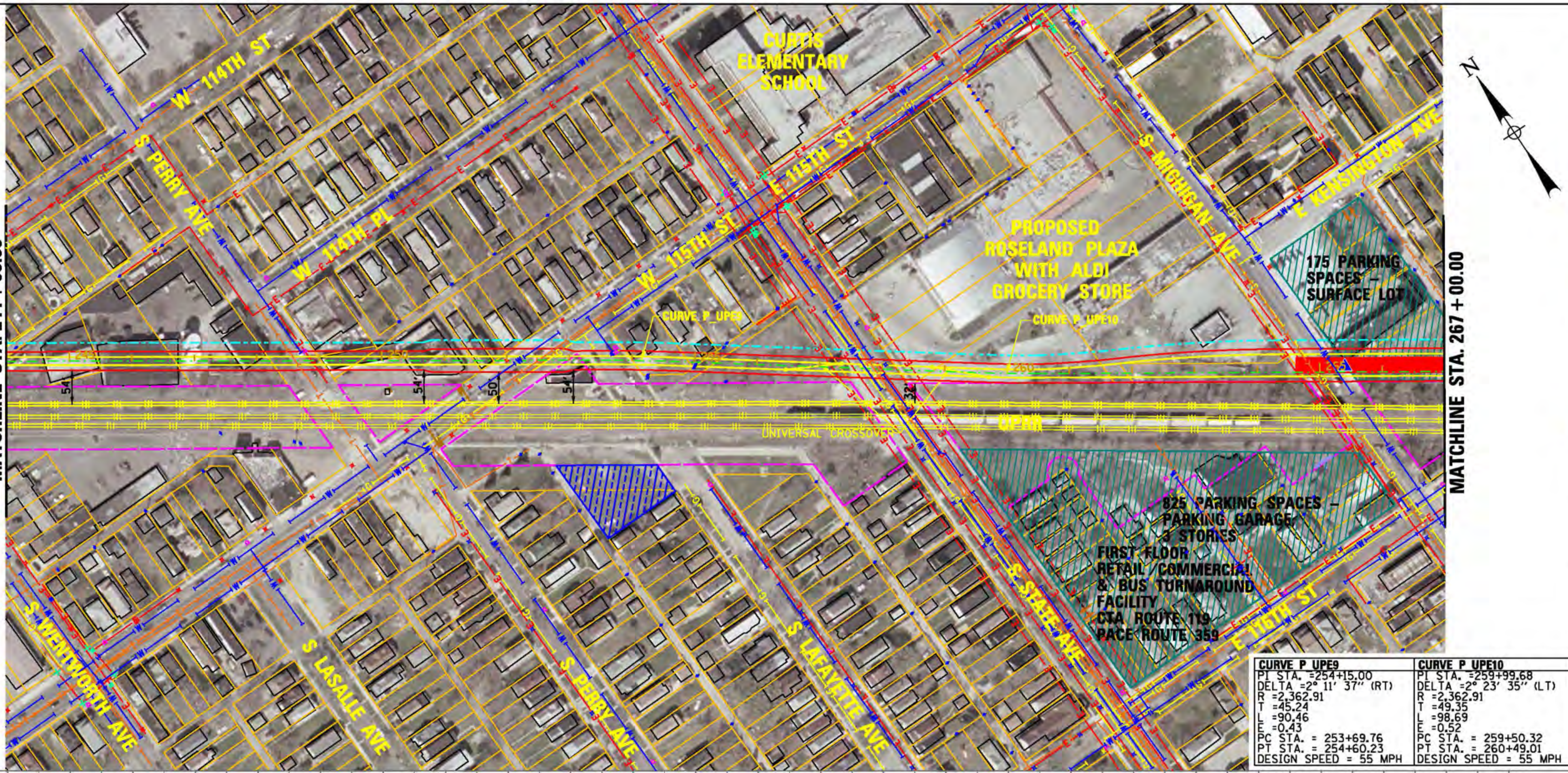
10 OF 51

IN CHARGE	
APPROVED BY	
CHECKED BY	
DESIGNED BY	
DRAWN BY	
PROJECT NO	CTA-RLE
FILE NAME	CTARLE_CT_PP_UPRRE_PREF_107.dgn

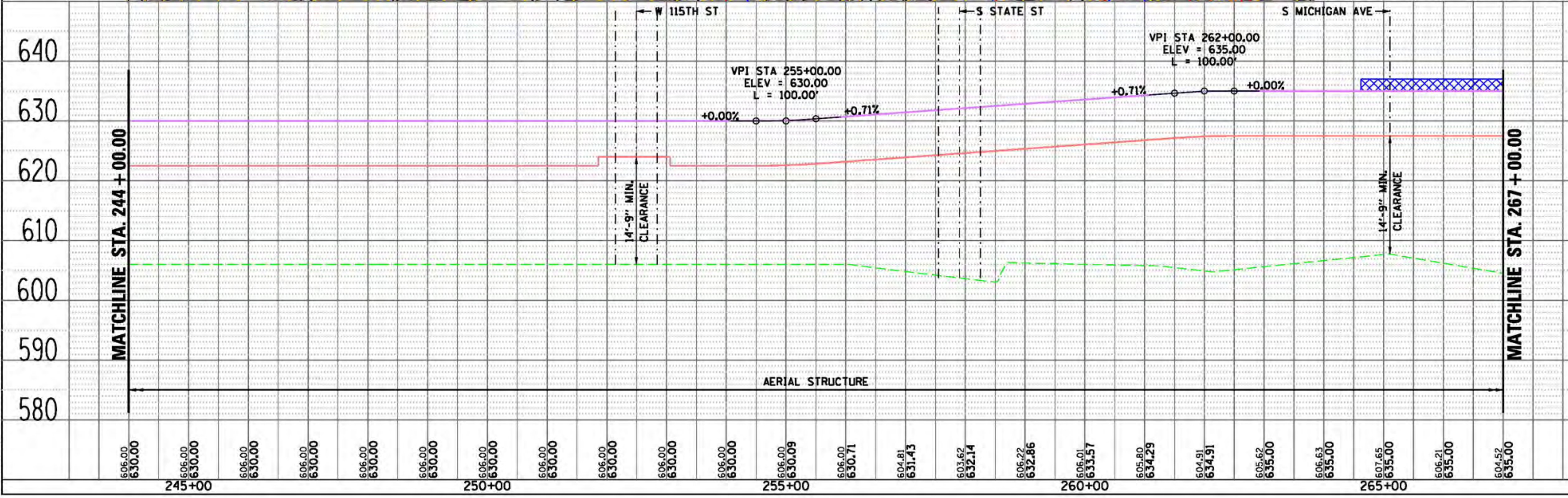
100 0 100 200
SCALE H 1" = 100'-0"
V 1" = 10'-0"

MARK	DATE	DESCRIPTION

SHEET TITLE


MATCHLINE STA. 244+00.00
MATCHLINE STA. 267+00.00
N
W 114TH ST
W 114TH PL
W 115TH ST
E 115TH ST
S PERRY AVE
CURTIS ELEMENTARY SCHOOL
PROPOSED ROSELAND PLAZA WITH ALDI GROCERY STORE
S MICHIGAN AVE
E KENSINGTON AVE
175 PARKING SPACES – SURFACE LOT
CURVE P_UPE9
CURVE P_UPE10
UNIVERSAL CROSSOVER
UPRR
54'
54'
50'
54'
32'
825 PARKING SPACES – PARKING GARAGE 3 STORIES
FIRST FLOOR RETAIL/COMMERCIAL & BUS TURNAROUND FACILITY
CTA ROUTE 119
PACE ROUTE 359
E 116TH ST
S STATE AVE
S LAFAYETTE AVE
S PERRY AVE
S LASALLE AVE
S WENTWORTH AVE

CURVE P_UPE9	CURVE P_UPE10
PI STA. =254+15.00	PI STA. =259+99.68
DELTA =2° 11′ 37″ (RT)	DELTA =2° 23′ 35″ (LT)
R =2,362.91	R =2,362.91
T =45.24	T =49.35
L =90.46	L =98.69
E =0.43	E =0.52
PC STA. = 253+69.76	PC STA. = 259+50.32
PT STA. = 254+60.23	PT STA. = 260+49.01
DESIGN SPEED = 55 MPH	DESIGN SPEED = 55 MPH



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LEGEND

PLAN
- EX CENTERLINE
- PR CENTERLINE
- EX TRACK CENTERLINE
- PR TRACK CENTERLINE
- PR TRACK STRUCTURE
- EX ROADWAY RIGHT-OF-WAY
- EX RAILROAD RIGHT-OF-WAY
- PR PERMANENT ENVELOPE
- PR ROADWAY/HARDSCAPE
- PR STATION PLATFORM
- EX BUILDING OUTLINE
- PR BUILDING OUTLINE
- PR PARKING
- PR CTA SUBSTATION
- PR UPRR TRACK CENTERLINE

UTILITIES
- EXISTING WATER LINES
- EXISTING SEWER LINE
- EXISTING GAS LINE
- EXISTING ELECTRIC LINE
- EXISTING TELEPHONE LINE

ENTRANCES
- ▲ PRIMARY ENTRANCE
- △ SECONDARY ENTRANCE
- EXIT ONLY
- PROPOSED PARKING ENTRANCE

PROFILE
- EX GROUND
- PR TOP OF RAIL
- PR ELEVATED STRUCTURE DEPTH
- PLATFORM LOCATION

PRELIMINARY DRAFT

CWC Transit Group

cta

CHICAGO TRANSIT AUTHORITY

SENSITIVE SECURITY INFORMATION

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RED LINE EXTENSION
ENVIRONMENTAL IMPACT STUDY
UNION PACIFIC RAILROAD
ALTERNATIVE
EAST OPTION

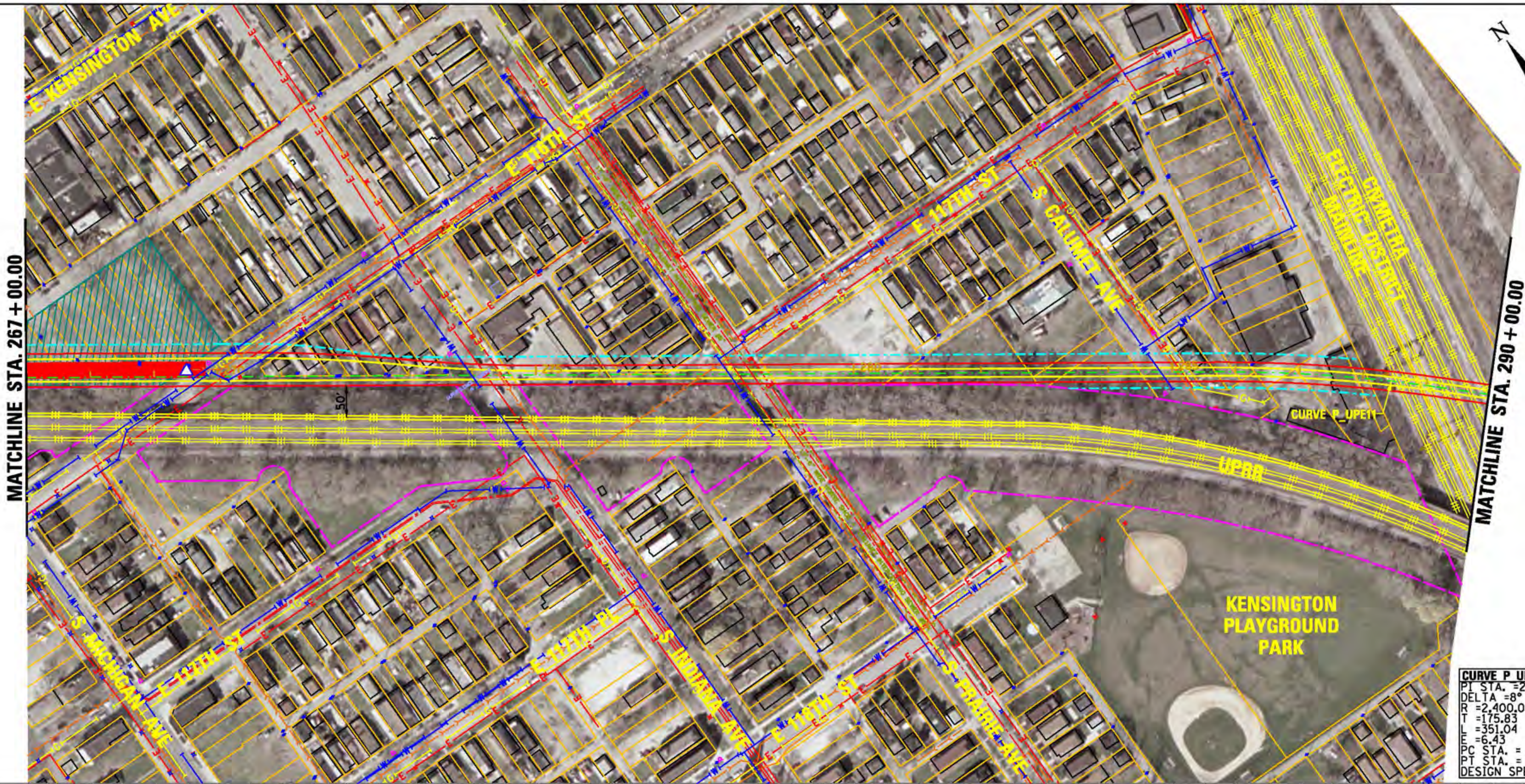
11 OF 51

IN CHARGE
APPROVED BY
CHECKED BY
DESIGNED BY
DRAWN BY
PROJECT NO CTA-RLE
FILE NAME CTARLE_CT_PP_UPRRE_PREF_108.dgn

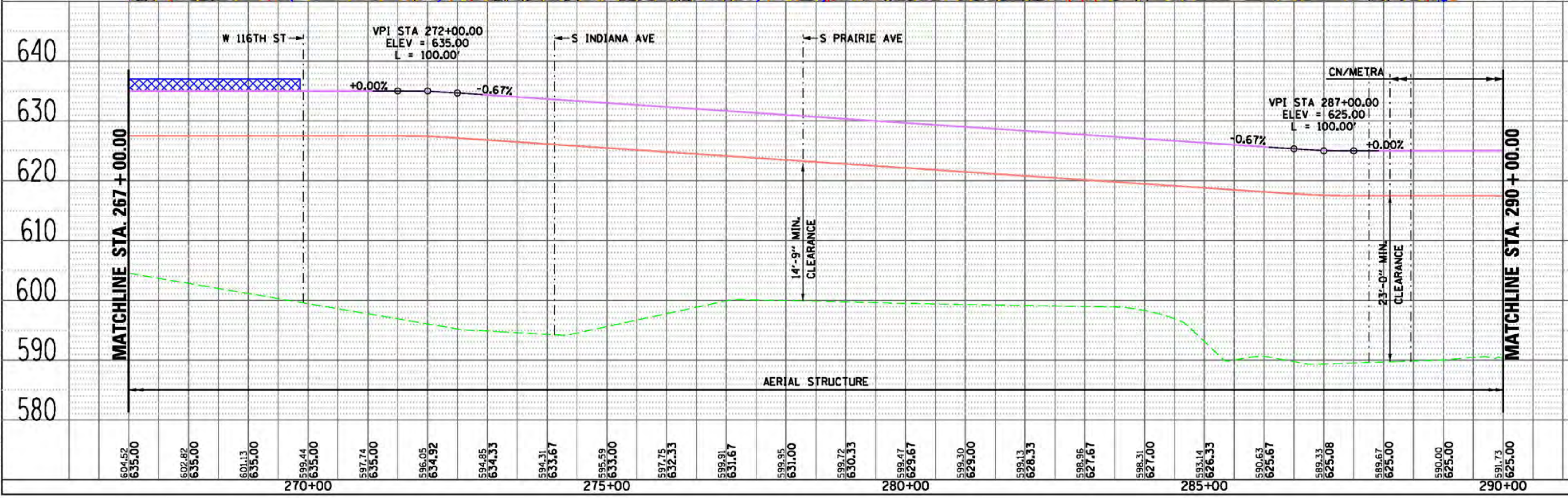
100 0 100 200
SCALE H 1" = 100'-0"
V 1" = 10'-0"

MARK	DATE	DESCRIPTION

SHEET TITLE


MATCHLINE STA. 267+00.00
MATCHLINE STA. 290+00.00
N
E KENSINGTON AVE
E 116TH ST
E 117TH ST
S CALUMET AVE
CN/METRA ELECTRIC DISTRICT MAINLINE
50'
CURVE P_UPE11
UPRR
KENSINGTON PLAYGROUND PARK
S MICHIGAN AVE
E 116TH ST
E 117TH PL
S INDIANA AVE
E 118TH ST
S PRAIRIE AVE

CURVE P_UPE11
PI STA. =287+41.84
DELTA =8° 22′ 49.78″ (RT)
R =2,400.00
T =175.83
L =351.04
E =6.43
PC STA. = 285+66.01
PT STA. = 289+17.05
DESIGN SPEED = 55 MPH



LEGEND

PLAN
- EX CENTERLINE
- PR CENTERLINE
- EX TRACK CENTERLINE
- PR TRACK CENTERLINE
- PR TRACK STRUCTURE
- EX ROADWAY RIGHT-OF-WAY
- EX RAILROAD RIGHT-OF-WAY
- PR PERMANENT ENVELOPE
- PR ROADWAY/HARDSCAPE
- PR STATION PLATFORM
- EX BUILDING OUTLINE
- PR BUILDING OUTLINE
- PR PARKING
- PR CTA SUBSTATION
- PR UPRR TRACK CENTERLINE

UTILITIES
- EXISTING WATER LINES
- EXISTING SEWER LINE
- EXISTING GAS LINE
- EXISTING ELECTRIC LINE
- EXISTING TELEPHONE LINE

ENTRANCES
- ▲ PRIMARY ENTRANCE
- △ SECONDARY ENTRANCE
- EXIT ONLY
- PROPOSED PARKING ENTRANCE

PROFILE
- EX GROUND
- PR TOP OF RAIL
- PR ELEVATED STRUCTURE DEPTH
- ▨ PLATFORM LOCATION

PRELIMINARY DRAFT

CWE Transit Group

cta

CHICAGO TRANSIT AUTHORITY

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RED LINE EXTENSION
ENVIRONMENTAL IMPACT STUDY
UNION PACIFIC RAILROAD
ALTERNATIVE
EAST OPTION

12 OF 51

IN CHARGE	
APPROVED BY	
CHECKED BY	
DESIGNED BY	
DRAWN BY	
PROJECT NO	CTA-RLE
FILE NAME	CTARLE_CT_PP_UPRRE_PREF_109.dgn

100 0 100 200
SCALE H 1" = 100'-0"
V 1" = 10'-0"

MARK	DATE	DESCRIPTION

SHEET TITLE

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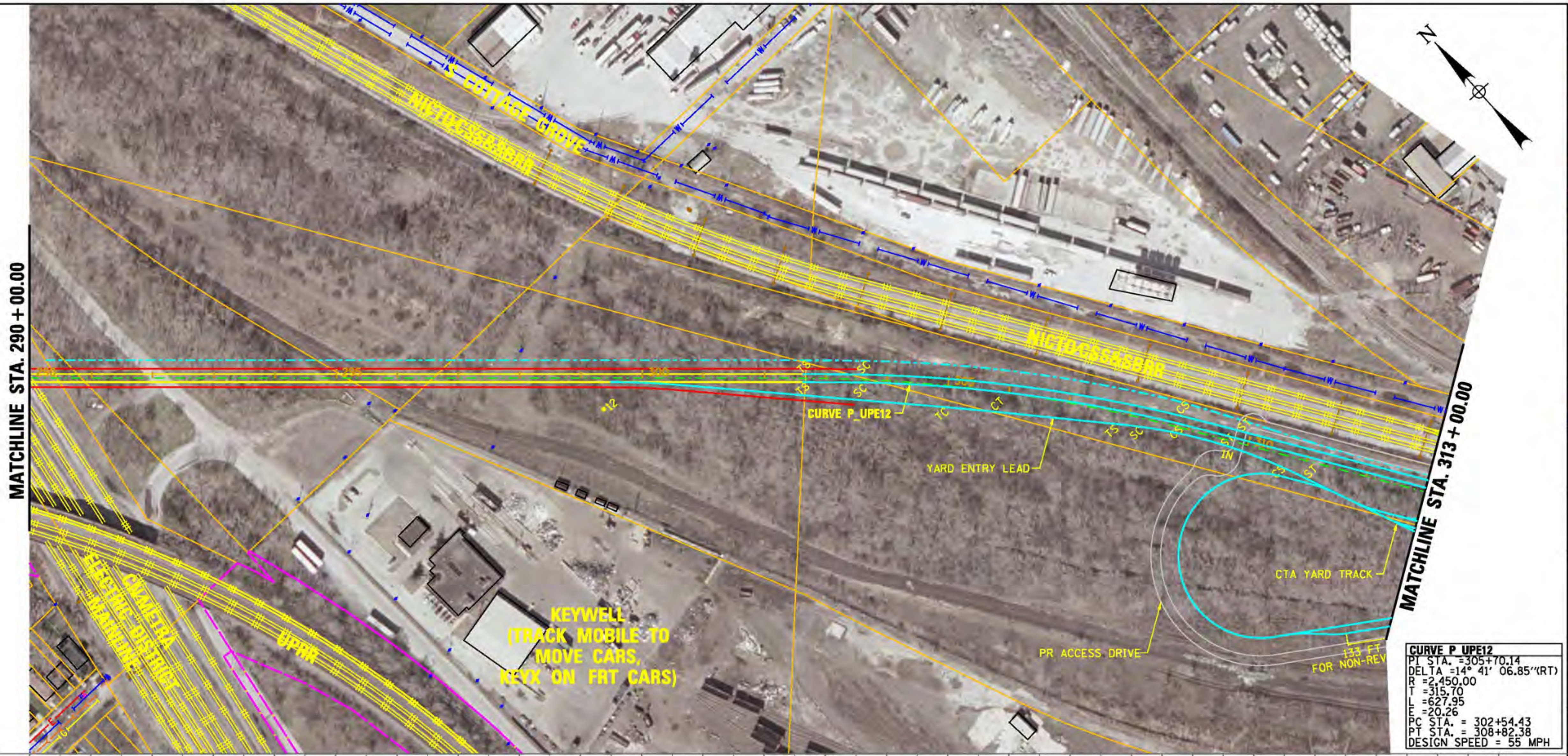
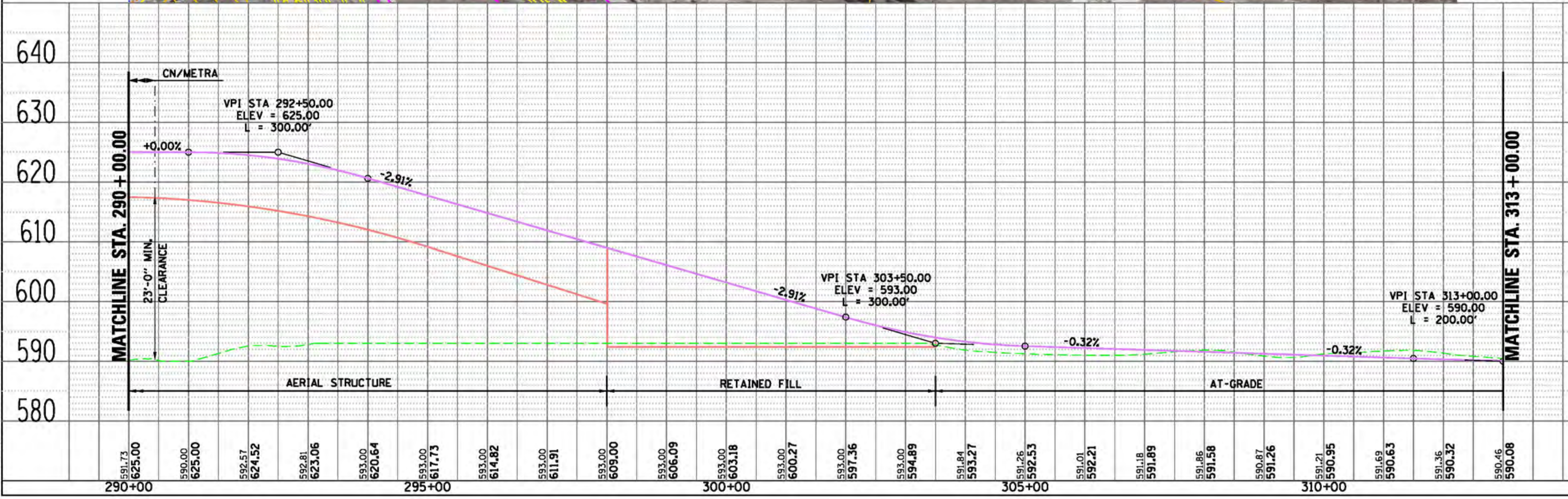

MATCHLINE STA. 290+00.00
MATCHLINE STA. 313+00.00
N
S. COTTAGE GROVE
NICTD/CSS&SBRR
NICTD/CSS&SBRR
CURVE P_UPE12
YARD ENTRY LEAD
CTA YARD TRACK
PR ACCESS DRIVE
133 FT FOR NON-REV
TS
SC
CS
ST
TC
CT
IN
CN/METRA ELECTRIC DISTRICT MAINLINE
UPRR
KEYWELL (TRACK MOBILE TO MOVE CARS, KEYX ON FRT CARS)

CURVE P_UPE12
PI STA. =305+70.14
DELTA =14° 41′ 06.85″(RT)
R =2,450.00
T =315.70
L =627.95
E =20.26
PC STA. = 302+54.43
PT STA. = 308+82.38
DESIGN SPEED = 55 MPH



LEGEND

PLAN

	EX CENTERLINE
	PR CENTERLINE
	EX TRACK CENTERLINE
	PR TRACK CENTERLINE
	PR TRACK STRUCTURE
	EX ROADWAY RIGHT-OF-WAY
	EX RAILROAD RIGHT-OF-WAY
	PR PERMANENT ENVELOPE
	PR ROADWAY/HARDSCAPE
🟥	PR STATION PLATFORM
	EX BUILDING OUTLINE
	PR BUILDING OUTLINE
▨	PR PARKING
▨	PR CTA SUBSTATION
	PR UPRR TRACK CENTERLINE

UTILITIES

W	EXISTING WATER LINES
	EXISTING SEWER LINE
	EXISTING GAS LINE
E	EXISTING ELECTRIC LINE
T	EXISTING TELEPHONE LINE

ENTRANCES

▲	PRIMARY ENTRANCE
△	SECONDARY ENTRANCE
	EXIT ONLY
	PROPOSED PARKING ENTRANCE

PROFILE

	EX GROUND
	PR TOP OF RAIL
	PR ELEVATED STRUCTURE DEPTH
▨	PLATFORM LOCATION

PRELIMINARY DRAFT

CWE Transit Group

cta

CHICAGO TRANSIT AUTHORITY

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RED LINE EXTENSION
ENVIRONMENTAL IMPACT STUDY
UNION PACIFIC RAILROAD
ALTERNATIVE
EAST OPTION

13 OF 51

IN CHARGE
APPROVED BY
CHECKED BY
DESIGNED BY
DRAWN BY
PROJECT NO CTA-RLE
FILE NAME CTARLE_CT_PP_UPRRE_PREF_110.dgn

100 0 100 200
SCALE H 1" = 100'-0"
V 1" = 10'-0"

MARK	DATE	DESCRIPTION

SHEET TITLE

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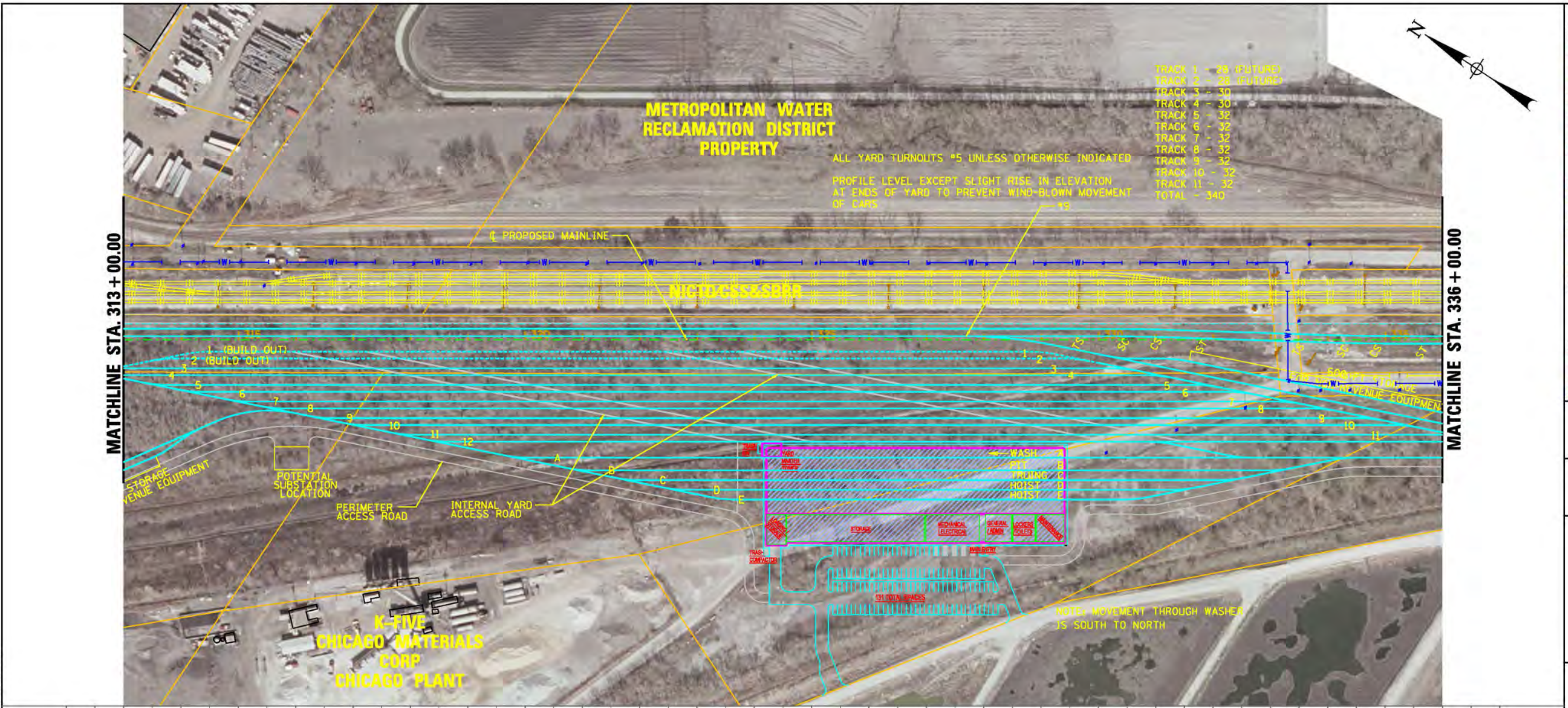
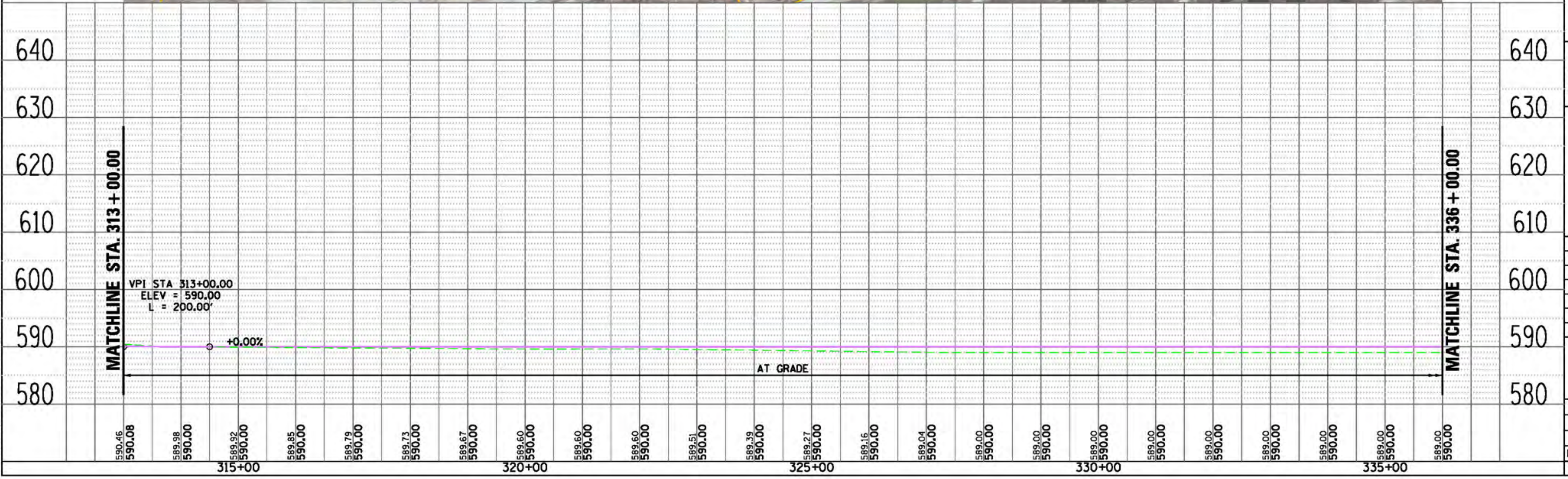

MATCHLINE STA. 313+00.00
MATCHLINE STA. 336+00.00
N
METROPOLITAN WATER RECLAMATION DISTRICT PROPERTY
℄ PROPOSED MAINLINE
NICTD CSS&SBRR
1 (BUILD OUT)
2 (BUILD OUT)
1
2
3
4
5
6
7
8
9
10
11
12
A
B
C
D
E
#9
TS
SC
CS
ST
STORAGE VENUE EQUIPMENT
POTENTIAL SUBSTATION LOCATION
PERIMETER ACCESS ROAD
INTERNAL YARD ACCESS ROAD
WASH A
PIT B
TRUING C
HOIST D
HOIST E
TRASH BIN
YARD MASTER TOWER
LOADING/ STORAGE
STORAGE
MECHANICAL /ELECTRICAL
GENERAL /ADMIN
LOCKERS /TOILETS
MAINTENANCE
TRASH COMPACTOR
MAIN ENTRY
131 TOTAL SPACES
K-FIVE CHICAGO MATERIALS CORP CHICAGO PLANT

ALL YARD TURNOUTS #5 UNLESS OTHERWISE INDICATED

PROFILE LEVEL EXCEPT SLIGHT RISE IN ELEVATION AT ENDS OF YARD TO PREVENT WIND-BLOWN MOVEMENT OF CARS

TRACK 1 - 28 (FUTURE)
TRACK 2 - 28 (FUTURE)
TRACK 3 - 30
TRACK 4 - 30
TRACK 5 - 32
TRACK 6 - 32
TRACK 7 - 32
TRACK 8 - 32
TRACK 9 - 32
TRACK 10 - 32
TRACK 11 - 32
TOTAL - 340

NOTE: MOVEMENT THROUGH WASHER IS SOUTH TO NORTH


640
630
620
610
600
590
580
MATCHLINE STA. 313+00.00
MATCHLINE STA. 336+00.00
VPI STA 313+00.00
ELEV = 590.00
L = 200.00'
+0.00%
AT GRADE
590.46 590.08
589.98 590.00
589.92 590.00
589.85 590.00
589.79 590.00
589.73 590.00
589.67 590.00
589.60 590.00
589.60 590.00
589.60 590.00
589.51 590.00
589.39 590.00
589.27 590.00
589.16 590.00
589.04 590.00
589.00 590.00
589.00 590.00
589.00 590.00
589.00 590.00
589.00 590.00
589.00 590.00
589.00 590.00
589.00 590.00
315+00
320+00
325+00
330+00
335+00

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LEGEND

PLAN
EX CENTERLINE
PR CENTERLINE
EX TRACK CENTERLINE
PR TRACK CENTERLINE
PR TRACK STRUCTURE
EX ROADWAY RIGHT-OF-WAY
EX RAILROAD RIGHT-OF-WAY
PR PERMANENT ENVELOPE
PR ROADWAY/HARDSCAPE
PR STATION PLATFORM
EX BUILDING OUTLINE
PR BUILDING OUTLINE
PR PARKING
PR CTA SUBSTATION

UTILITIES
EXISTING WATER LINES
EXISTING SEWER LINE
EXISTING GAS LINE
EXISTING ELECTRIC LINE
EXISTING TELEPHONE LINE
ENTRANCES
▲ PRIMARY ENTRANCE
△ SECONDARY ENTRANCE
EXIT ONLY
PROPOSED PARKING ENTRANCE
PROFILE
EX GROUND
PR TOP OF RAIL
PR ELEVATED STRUCTURE DEPTH
PLATFORM LOCATION

PRELIMINARY DRAFT

CWE Transit Group

CHICAGO TRANSIT AUTHORITY

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RED LINE EXTENSION
ENVIRONMENTAL IMPACT STUDY
UNION PACIFIC RAILROAD
ALTERNATIVE
EAST OPTION

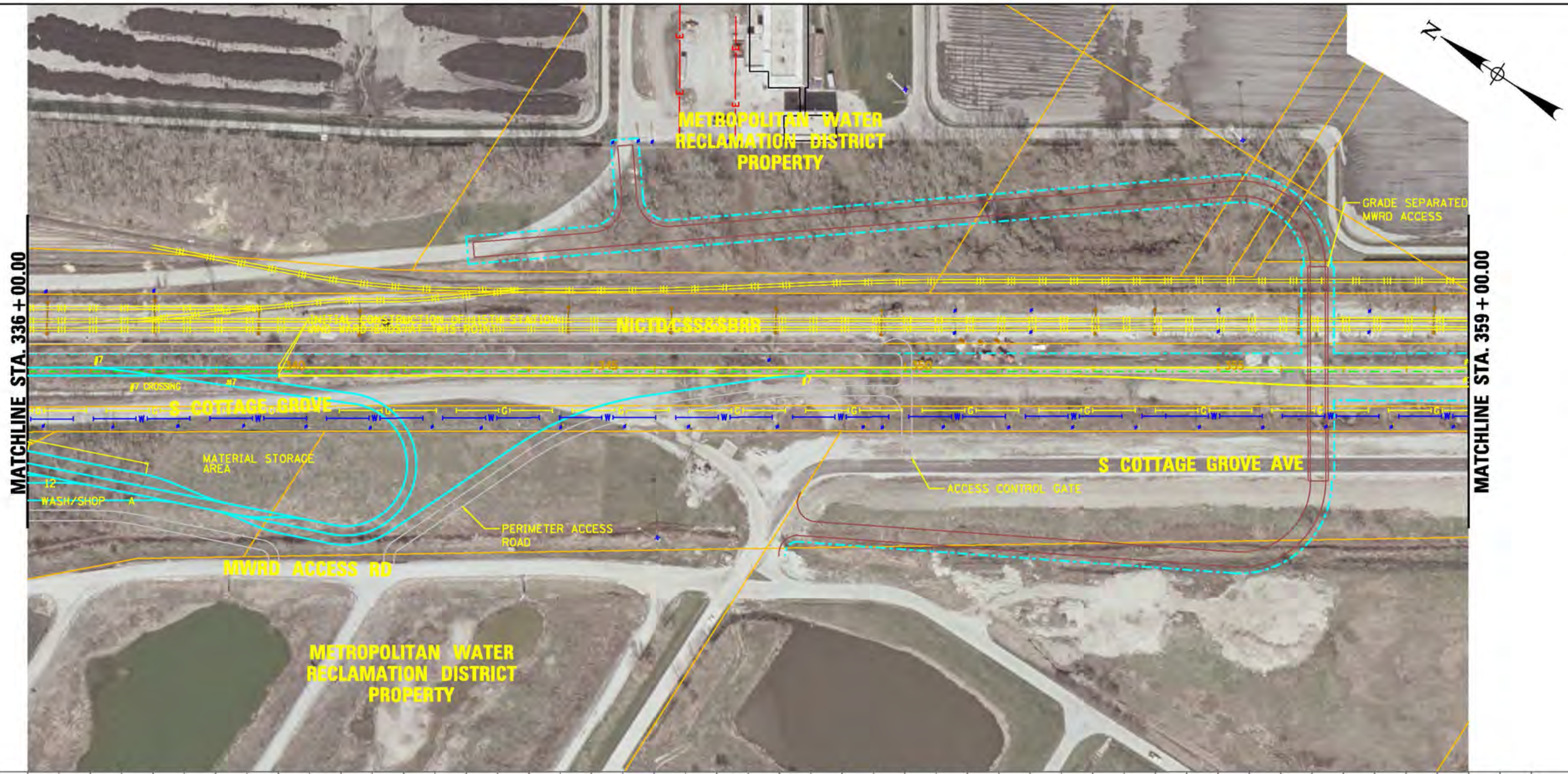
14 OF 51

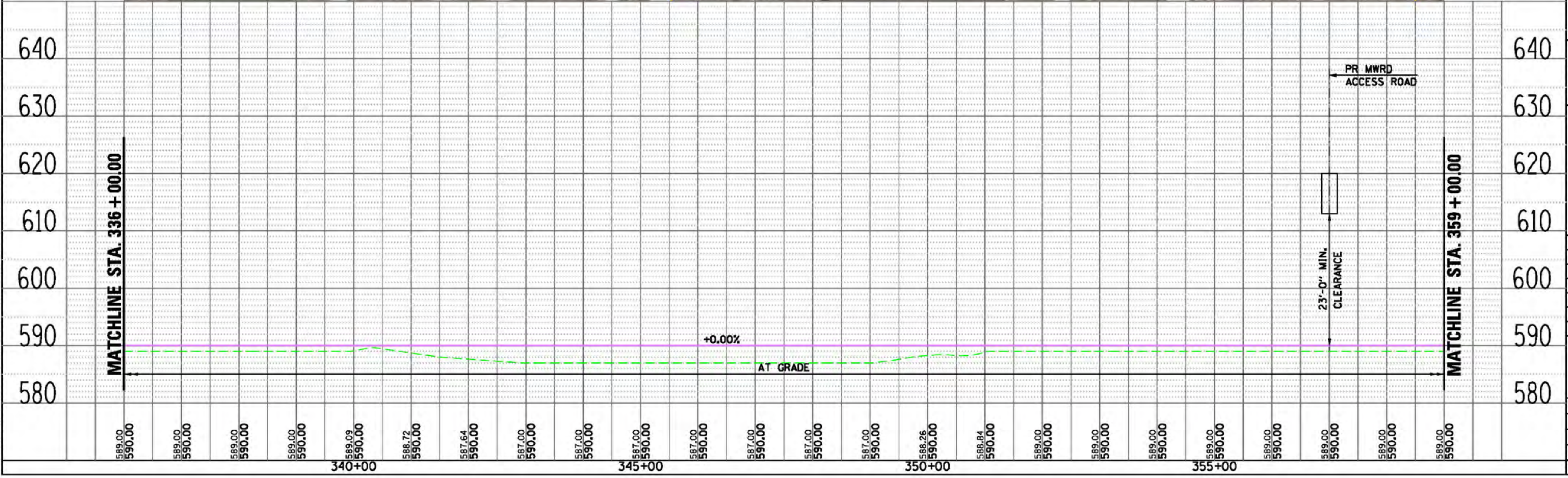
IN CHARGE
APPROVED BY
CHECKED BY
DESIGNED BY
DRAWN BY
PROJECT NO CTA-RLE
FILE NAME CTARLE_CT_PP_UPRRE_PREF_111.dgn

100 0 100 200
SCALE H 1" = 100'-0"
V 1" = 10'-0"

MARK	DATE	DESCRIPTION

SHEET TITLE


METROPOLITAN WATER RECLAMATION DISTRICT PROPERTY
GRADE SEPARATED MWRD ACCESS
MATCHLINE STA. 336+00.00
MATCHLINE STA. 359+00.00
INITIAL CONSTRUCTION OF 115TH STATION AND YARD ENDS AT THIS POINT
NICTD/CSS&SBRR
340
345
350
355
#7
#7 CROSSING
S COTTAGE GROVE
MATERIAL STORAGE AREA
12
WASH/SHOP A
PERIMETER ACCESS ROAD
MWRD ACCESS RD
ACCESS CONTROL GATE
S COTTAGE GROVE AVE
METROPOLITAN WATER RECLAMATION DISTRICT PROPERTY
N



LEGEND

PLAN
EX CENTERLINE
PR CENTERLINE
EX TRACK CENTERLINE
PR TRACK CENTERLINE
PR TRACK STRUCTURE
EX ROADWAY RIGHT-OF-WAY
EX RAILROAD RIGHT-OF-WAY
PR PERMANENT ENVELOPE
PR ROADWAY/HARDSCAPE
PR STATION PLATFORM
EX BUILDING OUTLINE
PR BUILDING OUTLINE
PR PARKING
PR CTA SUBSTATION

UTILITIES
EXISTING WATER LINES
EXISTING SEWER LINE
EXISTING GAS LINE
EXISTING ELECTRIC LINE
EXISTING TELEPHONE LINE

ENTRANCES
▲ PRIMARY ENTRANCE
△ SECONDARY ENTRANCE
EXIT ONLY
PROPOSED PARKING ENTRANCE

PROFILE
EX GROUND
PR TOP OF RAIL
PR ELEVATED STRUCTURE DEPTH
PLATFORM LOCATION

PRELIMINARY DRAFT

CWE Transit Group

cta

CHICAGO TRANSIT
AUTHORITY

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RED LINE EXTENSION
ENVIRONMENTAL IMPACT STUDY
UNION PACIFIC RAILROAD
ALTERNATIVE
EAST OPTION

15 OF 51

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CHECKED BY
DESIGNED BY
DRAWN BY
PROJECT NO CTA-RLE
FILE NAME CTARLE_CT_PP_UPRRE_PREF_112.dgn

100 0 100 200
SCALE H 1" = 100'-0"
V 1" = 10'-0"

MARK	DATE	DESCRIPTION

SHEET TITLE

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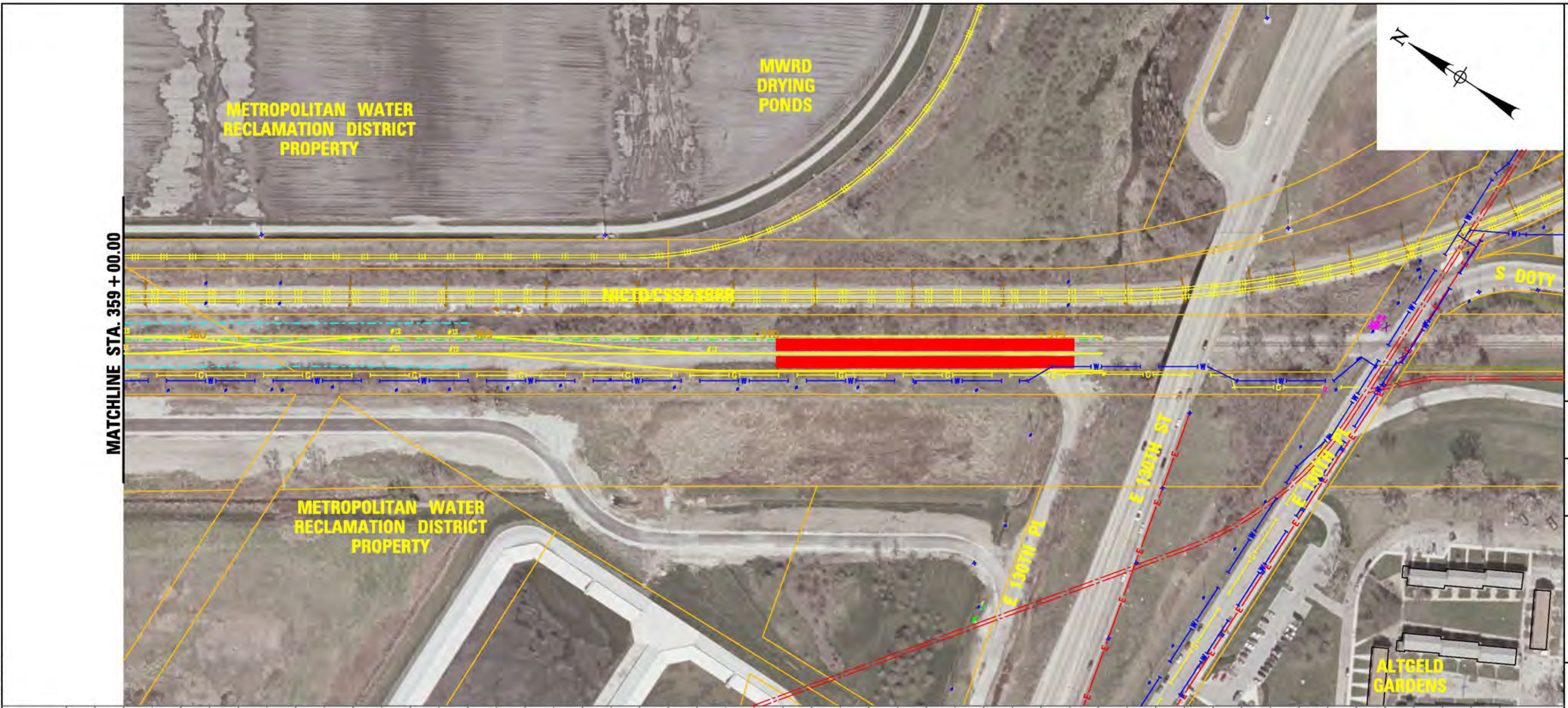
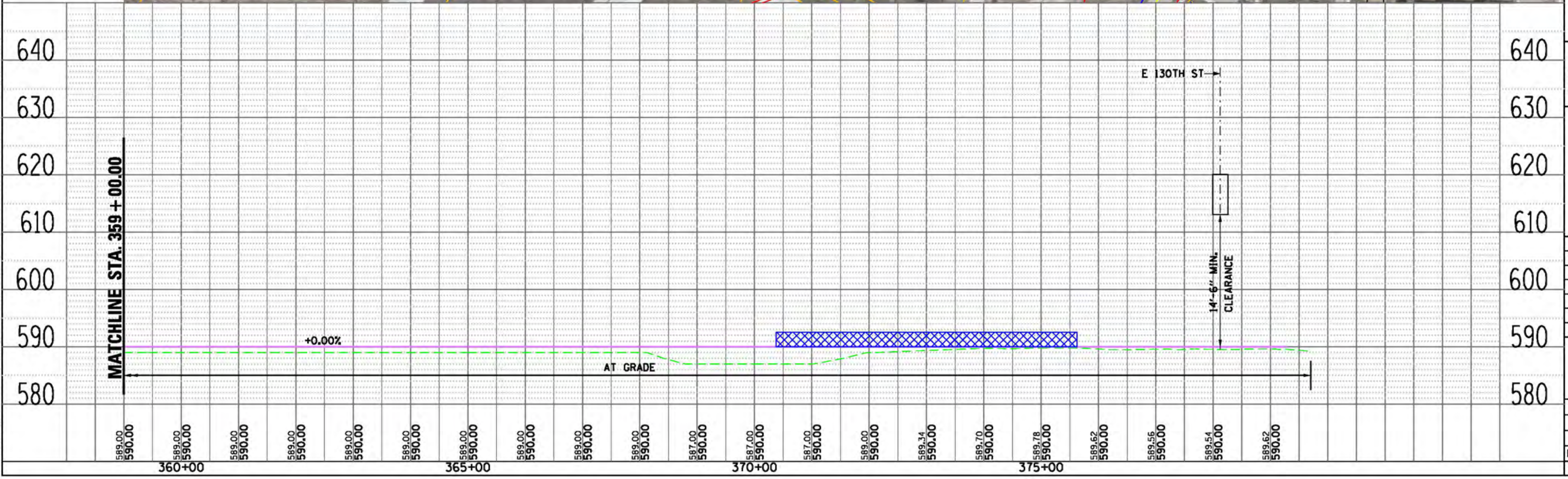

MATCHLINE STA. 359+00.00
METROPOLITAN WATER RECLAMATION DISTRICT PROPERTY
MWRD DRYING PONDS
NICTD/CSS&SSRR
S DOTY
E 130TH ST
E 130TH PL
METROPOLITAN WATER RECLAMATION DISTRICT PROPERTY
ALTGELD GARDENS
N


640
630
620
610
600
590
580
MATCHLINE STA. 359+00.00
E 130TH ST
14'-6" MIN. CLEARANCE
+0.00%
AT GRADE
589.00 590.00
589.00 590.00
589.00 590.00
589.00 590.00
589.00 590.00
589.00 590.00
589.00 590.00
589.00 590.00
589.00 590.00
589.00 590.00
587.00 590.00
587.00 590.00
587.00 590.00
589.00 590.00
589.34 590.00
589.70 590.00
589.78 590.00
589.62 590.00
589.56 590.00
589.54 590.00
589.62 590.00
360+00
365+00
370+00
375+00

LEGEND

PLAN

	EX CENTERLINE
	PR CENTERLINE
	EX TRACK CENTERLINE
	PR TRACK CENTERLINE
	PR TRACK STRUCTURE
	EX ROADWAY RIGHT-OF-WAY
	EX RAILROAD RIGHT-OF-WAY
	PR PERMANENT ENVELOPE
	PR ROADWAY/HARDSCAPE
🟥	PR STATION PLATFORM
	EX BUILDING OUTLINE
	PR BUILDING OUTLINE
▨	PR PARKING
▨	PR CTA SUBSTATION
	PR UPRR TRACK CENTERLINE

UTILITIES

W	EXISTING WATER LINES
	EXISTING SEWER LINE
	EXISTING GAS LINE
E	EXISTING ELECTRIC LINE
T	EXISTING TELEPHONE LINE

ENTRANCES

▲	PRIMARY ENTRANCE
△	SECONDARY ENTRANCE
	EXIT ONLY
	PROPOSED PARKING ENTRANCE

PROFILE

	EX GROUND
	PR TOP OF RAIL
	PR ELEVATED STRUCTURE DEPTH
▨	PLATFORM LOCATION

PRELIMINARY DRAFT

CWC Transit Group

CHICAGO TRANSIT AUTHORITY

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RED LINE EXTENSION
ENVIRONMENTAL IMPACT STUDY
UNION PACIFIC RAILROAD
ALTERNATIVE
EAST OPTION

16 OF 51

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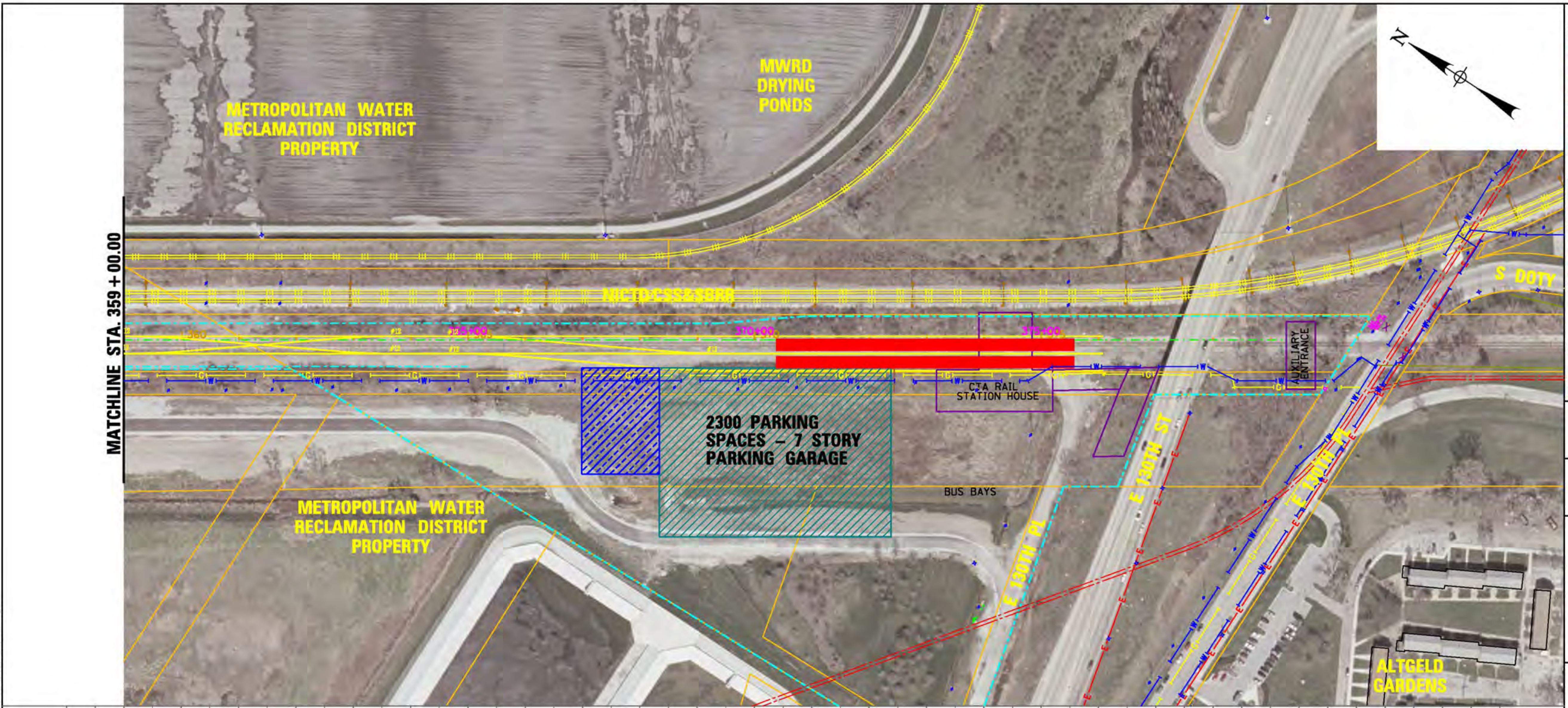
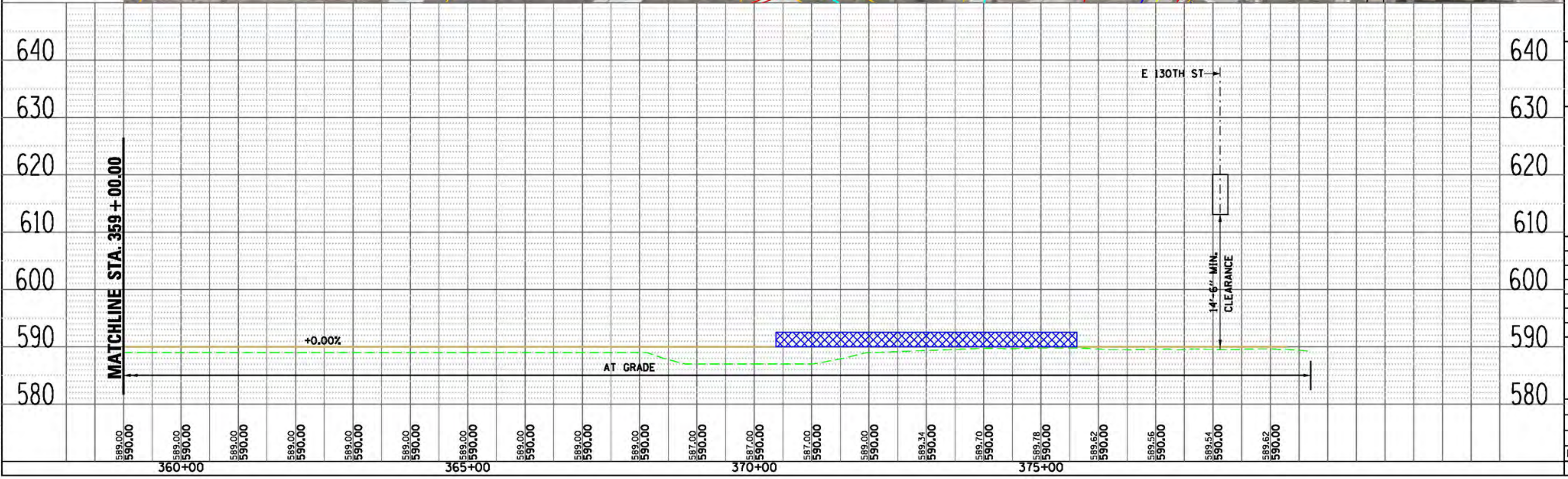
DESIGNED BY
DRAWN BY
PROJECT NO CTA-RLE
FILE NAME CTARLE_CT_PP_UPRRE_PREF_113.dgn

100 0 100 200
SCALE H 1" = 100'-0"
V 1" = 10'-0"

MARK	DATE	DESCRIPTION

SHEET TITLE


N
METROPOLITAN WATER RECLAMATION DISTRICT PROPERTY
MWRD DRYING PONDS
MATCHLINE STA. 359 + 00.00
NICTD/CSS&SBRR
S DOTY
360
365+00
370+00
375+00
AUXILIARY ENTRANCE
CTA RAIL STATION HOUSE
2300 PARKING SPACES - 7 STORY PARKING GARAGE
BUS BAYS
METROPOLITAN WATER RECLAMATION DISTRICT PROPERTY
E 130TH ST
E 130TH PL
E 130TH PL
ALTGELD GARDENS


640
630
620
610
600
590
580
MATCHLINE STA. 359 + 00.00
E 130TH ST
14'-6" MIN. CLEARANCE
+0.00%
AT GRADE
589.00 590.00
589.00 590.00
589.00 590.00
589.00 590.00
589.00 590.00
589.00 590.00
589.00 590.00
589.00 590.00
589.00 590.00
589.00 590.00
587.00 590.00
587.00 590.00
587.00 590.00
589.00 590.00
589.34 590.00
589.70 590.00
589.78 590.00
589.62 590.00
589.56 590.00
589.54 590.00
589.62 590.00
360+00
365+00
370+00
375+00

LEGEND

PLAN

— · — · —	EX CENTERLINE
— · — · —	PR CENTERLINE
═╫═	EX TRACK CENTERLINE
——	PR TRACK CENTERLINE
——	PR TRACK STRUCTURE
— — —	EX ROADWAY RIGHT-OF-WAY
— — —	EX RAILROAD RIGHT-OF-WAY
- · - · -	PR PERMANENT ENVELOPE
——	PR ROADWAY/HARDSCAPE
🟥	PR STATION PLATFORM
▭	EX BUILDING OUTLINE
▭	PR BUILDING OUTLINE
▨	PR PARKING
▨	PR CTA SUBSTATION
═╫═	PR UPRR TRACK CENTERLINE

UTILITIES

—W—	EXISTING WATER LINES
›—›—›	EXISTING SEWER LINE
—G—	EXISTING GAS LINE
—E—	EXISTING ELECTRIC LINE
—T—	EXISTING TELEPHONE LINE

ENTRANCES

▲	PRIMARY ENTRANCE
△	SECONDARY ENTRANCE
⛛	EXIT ONLY
⇄	PROPOSED PARKING ENTRANCE

PROFILE

— — —	EX GROUND
——	PR TOP OF RAIL
——	PR ELEVATED STRUCTURE DEPTH
▩	PLATFORM LOCATION

PRELIMINARY DRAFT

CWC Transit Group

cta

CHICAGO TRANSIT AUTHORITY

SENSITIVE SECURITY INFORMATION

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RED LINE EXTENSION
ENVIRONMENTAL IMPACT STUDY
UNION PACIFIC RAILROAD
ALTERNATIVE
EAST OPTION

17 OF 51

IN CHARGE
APPROVED BY
CHECKED BY
DESIGNED BY
DRAWN BY
PROJECT NO CTA-RLE
FILE NAME CTARLE_CT_PP_UPRRE_PREF_113_StationAlt.dg

100 0 100 200
SCALE H 1" = 100'-0"
V 1" = 10'-0"

MARK	DATE	DESCRIPTION

SHEET TITLE

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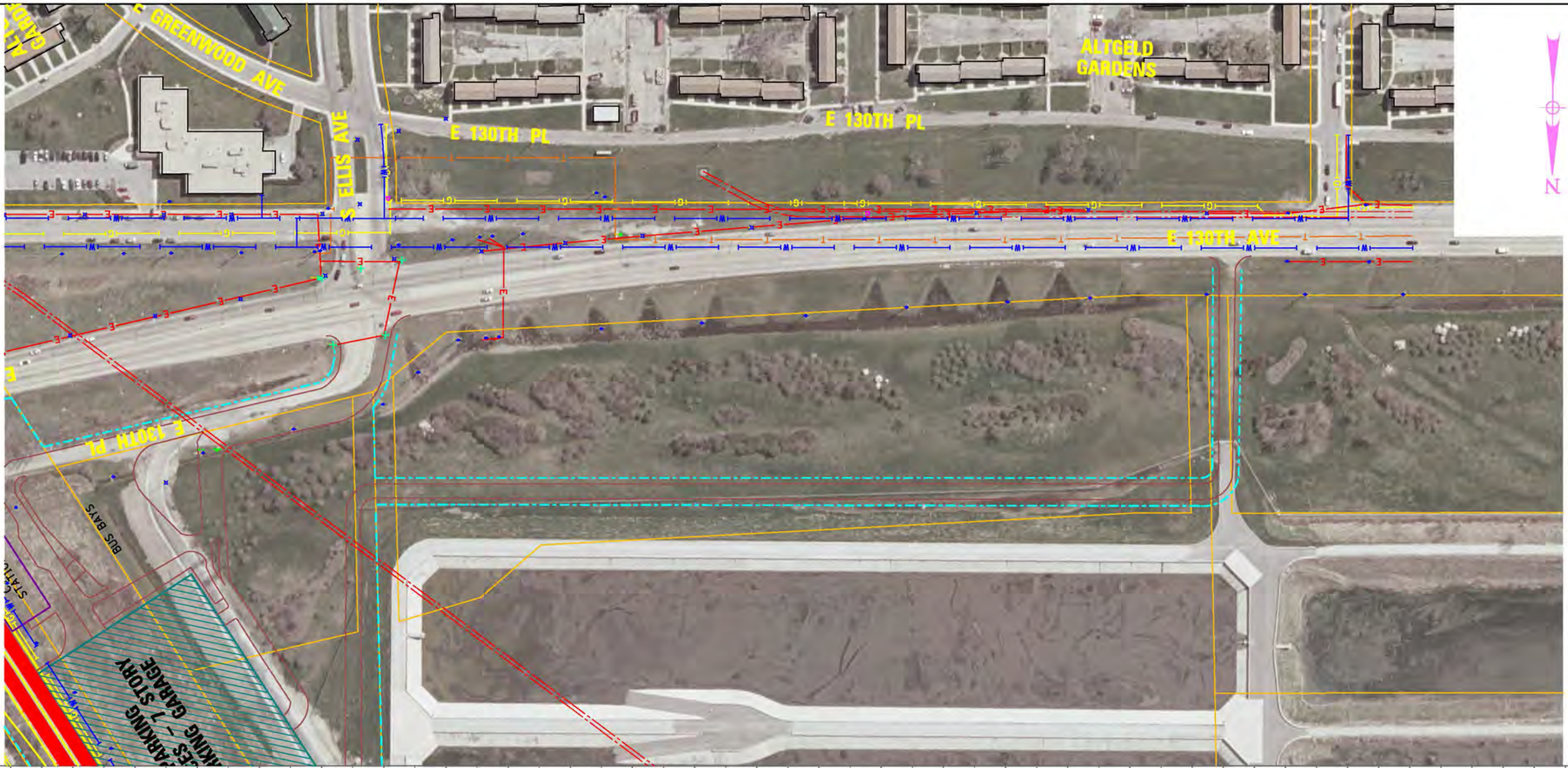

LEGEND

PLAN
- EX CENTERLINE
- PR CENTERLINE
- EX TRACK CENTERLINE
- PR TRACK CENTERLINE
- PR TRACK STRUCTURE
- EX ROADWAY RIGHT-OF-WAY
- EX RAILROAD RIGHT-OF-WAY
- PR PERMANENT ENVELOPE
- PR ROADWAY/HARDSCAPE
- PR STATION PLATFORM
- EX BUILDING OUTLINE
- PR BUILDING OUTLINE
- PR PARKING
- PR CTA SUBSTATION
- PR UPRR TRACK CENTERLINE

UTILITIES
- EXISTING WATER LINES
- EXISTING SEWER LINE
- EXISTING GAS LINE
- EXISTING ELECTRIC LINE
- EXISTING TELEPHONE LINE

ENTRANCES
- PRIMARY ENTRANCE
- SECONDARY ENTRANCE
- EXIT ONLY
- PROPOSED PARKING ENTRANCE

PROFILE
- EX GROUND
- PR TOP OF RAIL
- PR ELEVATED STRUCTURE DEPTH
- PLATFORM LOCATION

PRELIMINARY DRAFT

CWC Transit Group

cta

CHICAGO TRANSIT
AUTHORITY

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RED LINE EXTENSION
ENVIRONMENTAL IMPACT STUDY
UNION PACIFIC RAILROAD
ALTERNATIVE
EAST OPTION

18 OF 51

IN CHARGE
APPROVED BY
CHECKED BY
DESIGNED BY
DRAWN BY
PROJECT NO CTA-RLE
FILE NAME CTARLE_CT_PP_UPRRE_PREF_114.dgn

100 0 100 200
SCALE H 1" = 100'-0"
V 1" = 10'-0"

MARK	DATE	DESCRIPTION

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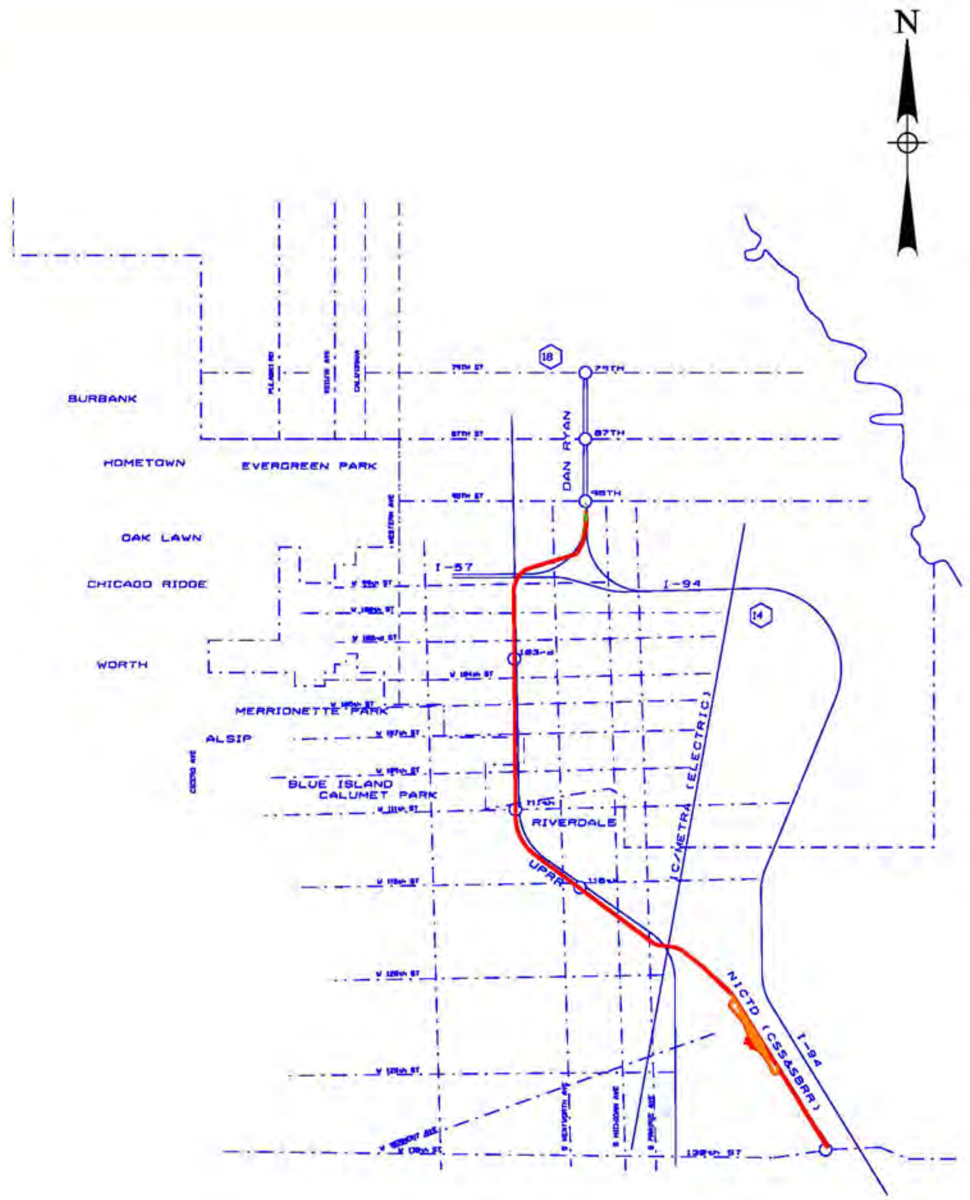
DRAFT ENVIRONMENTAL IMPACT STATEMENT
CTA RED LINE EXTENSION
UNION PACIFIC RAILROAD
WEST OPTION


N
BURBANK
HOMETOWN
EVERGREEN PARK
OAK LAWN
CHICAGO RIDGE
WORTH
MERRIONETTE PARK
ALSIP
BLUE ISLAND
CALUMET PARK
RIVERDALE
18
14
79TH ST
87TH ST
95TH ST
79TH
87TH
95TH
DAN RYAN
I-57
I-94
103rd
111th
116th
UPRR
IC/METRA (ELECTRIC)
NICTD (CSS&SBRR)
I-94
130th ST

ORIENTATION MAP

INDEX

UNION PACIFIC RAILROAD ALTERNATIVE

WEST OPTION 19 - 34

MAY 1, 2015

PRELIMINARY DRAFT

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CHICAGO TRANSIT AUTHORITY

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RED LINE EXTENSION
ENVIRONMENTAL IMPACT STUDY
UNION PACIFIC RAILROAD
ALTERNATIVE
WEST OPTION

19 OF 51

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APPROVED BY
CHECKED BY
DESIGNED BY
DRAWN BY
PROJECT NO CTA-RLE
FILE NAME CTARLE_G_COVER.dgn

MARK	DATE	DESCRIPTION

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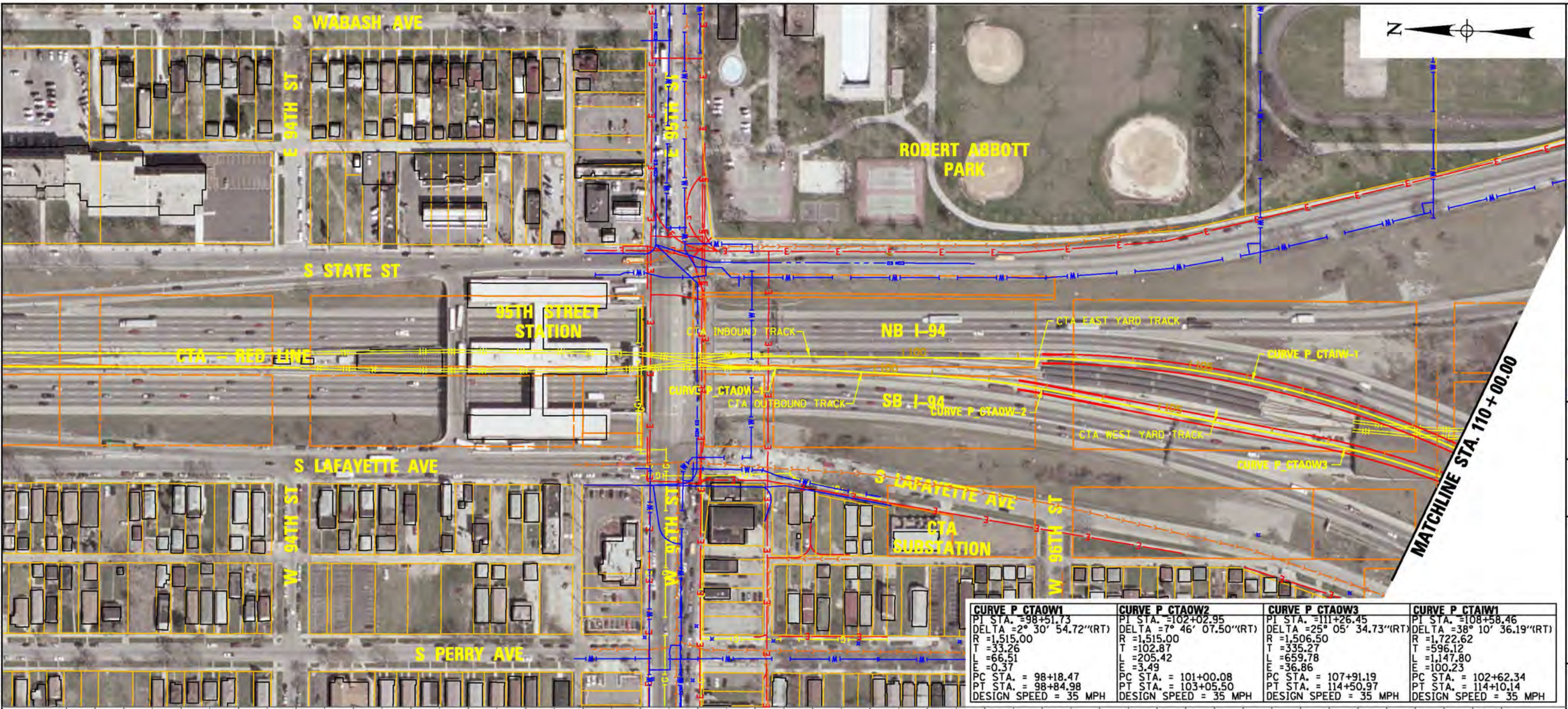
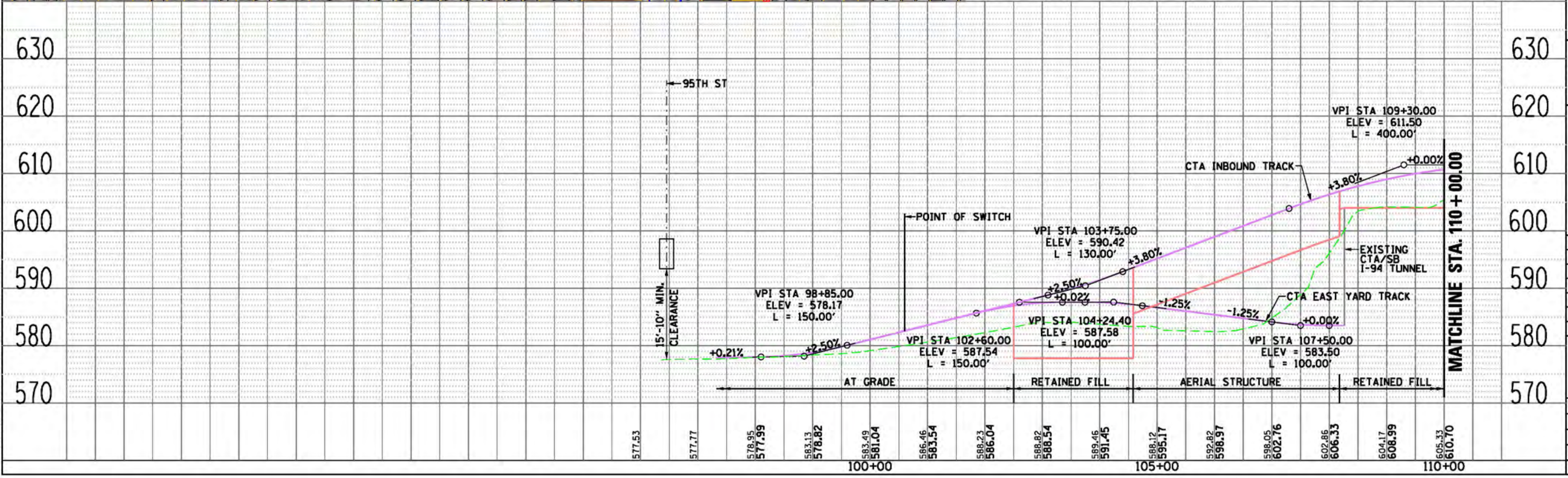

S WABASH AVE
E 94TH ST
E 95TH ST
ROBERT ABBOTT PARK
S STATE ST
95TH STREET STATION
CTA - RED LINE
CTA INBOUND TRACK
NB I-94
CTA EAST YARD TRACK
CURVE P_CTAIW1
CURVE P_CTAOW1
CTA OUTBOUND TRACK
SB I-94
CURVE P_CTAOW2
CTA WEST YARD TRACK
CURVE P_CTAOW3
S LAFAYETTE AVE
S LAFAYETTE AVE
W 94TH ST
W 95TH ST
CTA SUBSTATION
W 96TH ST
S PERRY AVE
MATCHLINE STA. 110+00.00
N

CURVE P_CTAOW1	CURVE P_CTAOW2	CURVE P_CTAOW3	CURVE P_CTAIW1
PI STA. =98+51.73	PI STA. =102+02.95	PI STA. =111+26.45	PI STA. =108+58.46
DELTA =2° 30′ 54.72″(RT)	DELTA =7° 46′ 07.50″(RT)	DELTA =25° 05′ 34.73″(RT)	DELTA =38° 10′ 36.19″(RT)
R =1,515.00	R =1,515.00	R =1,506.50	R =1,722.62
T =33.26	T =102.87	T =335.27	T =596.12
L =66.51	L =205.42	L =659.78	L =1,147.80
E =0.37	E =3.49	E =36.86	E =100.23
PC STA. = 98+18.47	PC STA. = 101+00.08	PC STA. = 107+91.19	PC STA. = 102+62.34
PT STA. = 98+84.98	PT STA. = 103+05.50	PT STA. = 114+50.97	PT STA. = 114+10.14
DESIGN SPEED = 35 MPH	DESIGN SPEED = 35 MPH	DESIGN SPEED = 35 MPH	DESIGN SPEED = 35 MPH


630
620
610
600
590
580
570
95TH ST
15'-10" MIN. CLEARANCE
+0.21%
+2.50%
VPI STA 98+85.00
ELEV = 578.17
L = 150.00'
POINT OF SWITCH
VPI STA 102+60.00
ELEV = 587.54
L = 150.00'
VPI STA 103+75.00
ELEV = 590.42
L = 130.00'
+2.50%
+0.02%
+3.80%
-1.25%
VPI STA 104+24.40
ELEV = 587.58
L = 100.00'
CTA INBOUND TRACK
+3.80%
VPI STA 109+30.00
ELEV = 611.50
L = 400.00'
+0.00%
EXISTING CTA/SB I-94 TUNNEL
CTA EAST YARD TRACK
-1.25%
+0.00%
VPI STA 107+50.00
ELEV = 583.50
L = 100.00'
AT GRADE
RETAINED FILL
AERIAL STRUCTURE
RETAINED FILL
MATCHLINE STA. 110+00.00
577.53
577.77
578.95
577.99
583.13
578.82
583.49
581.04
586.46
583.54
588.23
586.04
588.82
588.54
589.46
591.45
588.12
595.17
592.82
598.97
598.05
602.76
602.86
606.33
604.17
608.99
605.33
610.70
100+00
105+00
110+00

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LEGEND

PLAN
- EX CENTERLINE
- PR CENTERLINE
- EX TRACK CENTERLINE
- PR TRACK CENTERLINE
- PR TRACK STRUCTURE
- EX ROADWAY RIGHT-OF-WAY
- EX RAILROAD RIGHT-OF-WAY
- PR PERMANENT ENVELOPE
- PR ROADWAY/HARDSCAPE
- PR STATION PLATFORM
- EX BUILDING OUTLINE
- PR BUILDING OUTLINE
- PR PARKING
- PR CTA SUBSTATION

UTILITIES
- EXISTING WATER LINES
- EXISTING SEWER LINE
- EXISTING GAS LINE
- EXISTING ELECTRIC LINE
- EXISTING TELEPHONE LINE

ENTRANCES
- ▲ PRIMARY ENTRANCE
- △ SECONDARY ENTRANCE
- EXIT ONLY
- PROPOSED PARKING ENTRANCE

PROFILE
- EX GROUND
- PR TOP OF RAIL
- PR ELEVATED STRUCTURE DEPTH
- PLATFORM LOCATION

PRELIMINARY DRAFT

CH2M HILL Transit Group

CHICAGO TRANSIT AUTHORITY

SENSITIVE SECURITY INFORMATION

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RED LINE EXTENSION
ENVIRONMENTAL IMPACT STUDY
UNION PACIFIC RAILROAD
ALTERNATIVE
WEST OPTION

20 OF 51

IN CHARGE
APPROVED BY
CHECKED BY
DESIGNED BY
DRAWN BY
PROJECT NO CTA-RLE
FILE NAME CTARLE_CT_PP_UPRRW_PREFERRED_101.dgn

100 0 100 200
SCALE H 1" = 100'-0"
V 1" = 10'-0"

MARK	DATE	DESCRIPTION

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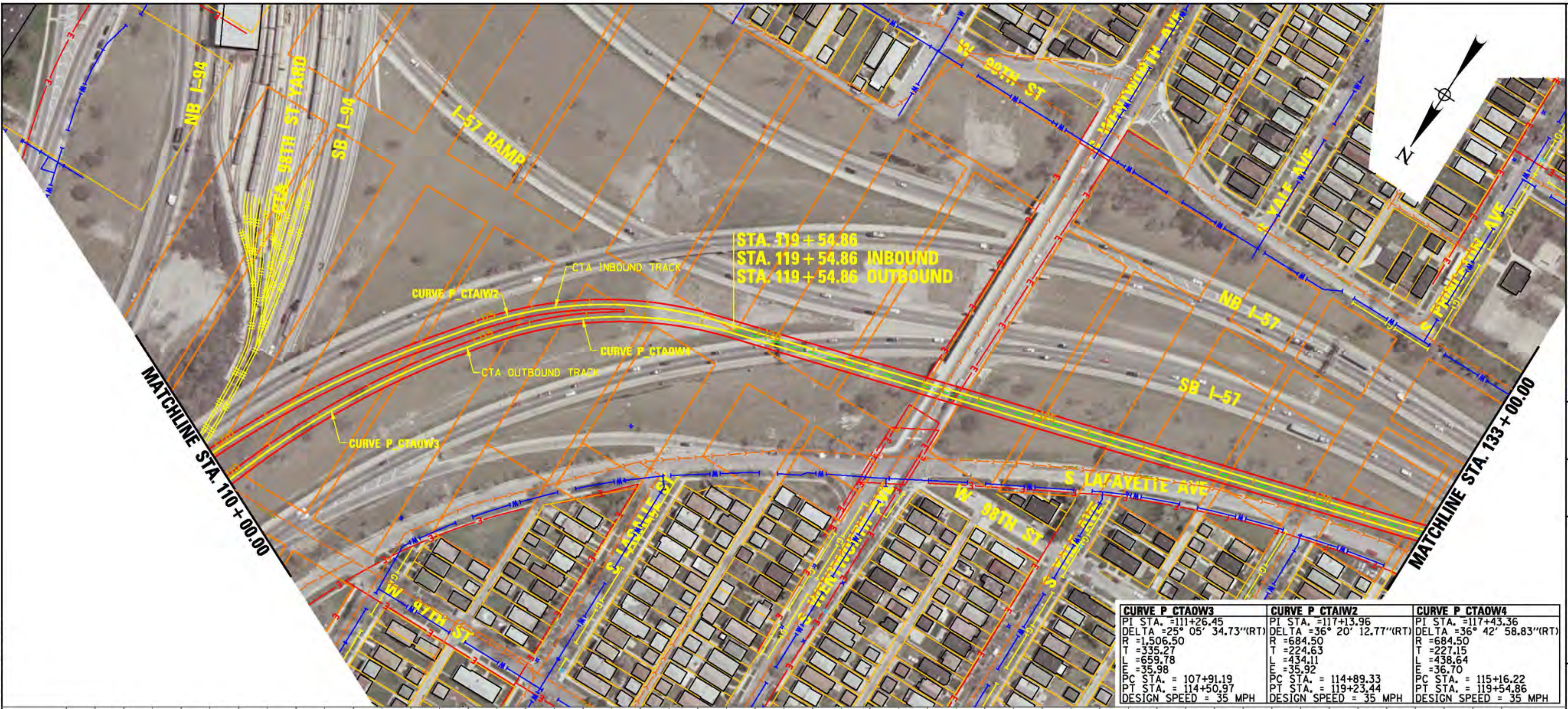
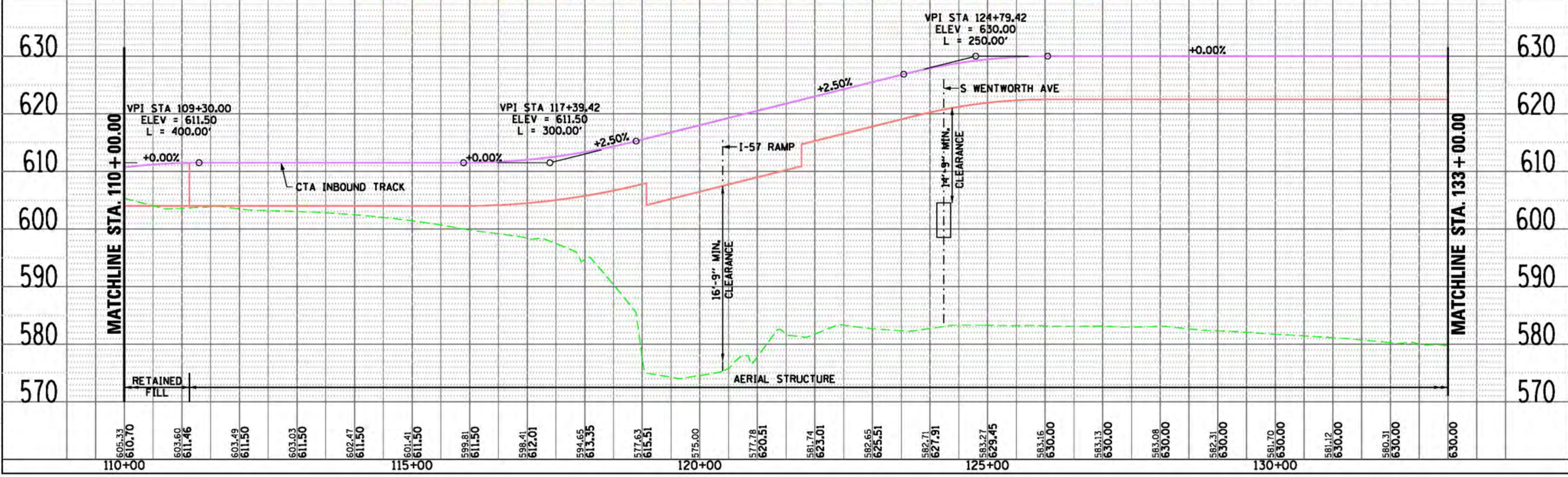

NB I-94
98TH ST YARD
SB I-94
I-57 RAMP
W 99TH ST
S WENTWORTH AVE
S YALE AVE
S PRINCETON AVE
N
STA. 119+54.86
STA. 119+54.86 INBOUND
STA. 119+54.86 OUTBOUND
CTA INBOUND TRACK
CURVE P_CTAIW2
CURVE P_CTAOW4
CTA OUTBOUND TRACK
CURVE P_CTAOW3
NB I-57
SB I-57
S LAFAYETTE AVE
S LASALLE ST
W 98TH ST
W 97TH ST
MATCHLINE STA. 110+00.00
MATCHLINE STA. 133+00.00

CURVE P_CTAOW3	CURVE P_CTAIW2	CURVE P_CTAOW4
PI STA. =111+26.45	PI STA. =117+13.96	PI STA. =117+43.36
DELTA =25° 05′ 34.73″(RT)	DELTA =36° 20′ 12.77″(RT)	DELTA =36° 42′ 58.83″(RT)
R =1,506.50	R =684.50	R =684.50
T =335.27	T =224.63	T =227.15
L =659.78	L =434.11	L =438.64
E =35.98	E =35.92	E =36.70
PC STA. = 107+91.19	PC STA. = 114+89.33	PC STA. = 115+16.22
PT STA. = 114+50.97	PT STA. = 119+23.44	PT STA. = 119+54.86
DESIGN SPEED = 35 MPH	DESIGN SPEED = 35 MPH	DESIGN SPEED = 35 MPH



LEGEND

PLAN
- EX CENTERLINE
- PR CENTERLINE
- EX TRACK CENTERLINE
- PR TRACK CENTERLINE
- PR TRACK STRUCTURE
- EX ROADWAY RIGHT-OF-WAY
- EX RAILROAD RIGHT-OF-WAY
- PR PERMANENT ENVELOPE
- PR ROADWAY/HARDSCAPE
- PR STATION PLATFORM
- EX BUILDING OUTLINE
- PR BUILDING OUTLINE
- PR PARKING
- PR CTA SUBSTATION

UTILITIES
- EXISTING WATER LINES
- EXISTING SEWER LINE
- EXISTING GAS LINE
- EXISTING ELECTRIC LINE
- EXISTING TELEPHONE LINE

ENTRANCES
- ▲ PRIMARY ENTRANCE
- △ SECONDARY ENTRANCE
- EXIT ONLY
- PROPOSED PARKING ENTRANCE

PROFILE
- EX GROUND
- PR TOP OF RAIL
- PR ELEVATED STRUCTURE DEPTH
- PLATFORM LOCATION

PRELIMINARY DRAFT

CWC Transit Group

cta

CHICAGO TRANSIT AUTHORITY

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RED LINE EXTENSION
ENVIRONMENTAL IMPACT STUDY
UNION PACIFIC RAILROAD
ALTERNATIVE
WEST OPTION

21 OF 51

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CHECKED BY
DESIGNED BY
DRAWN BY
PROJECT NO CTA-RLE
FILE NAME CTARLE_CT_PP_UPRRW_PREFERRED_102.dgn

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SCALE H 1″ = 100′-0″
V 1″ = 10′-0″

MARK	DATE	DESCRIPTION

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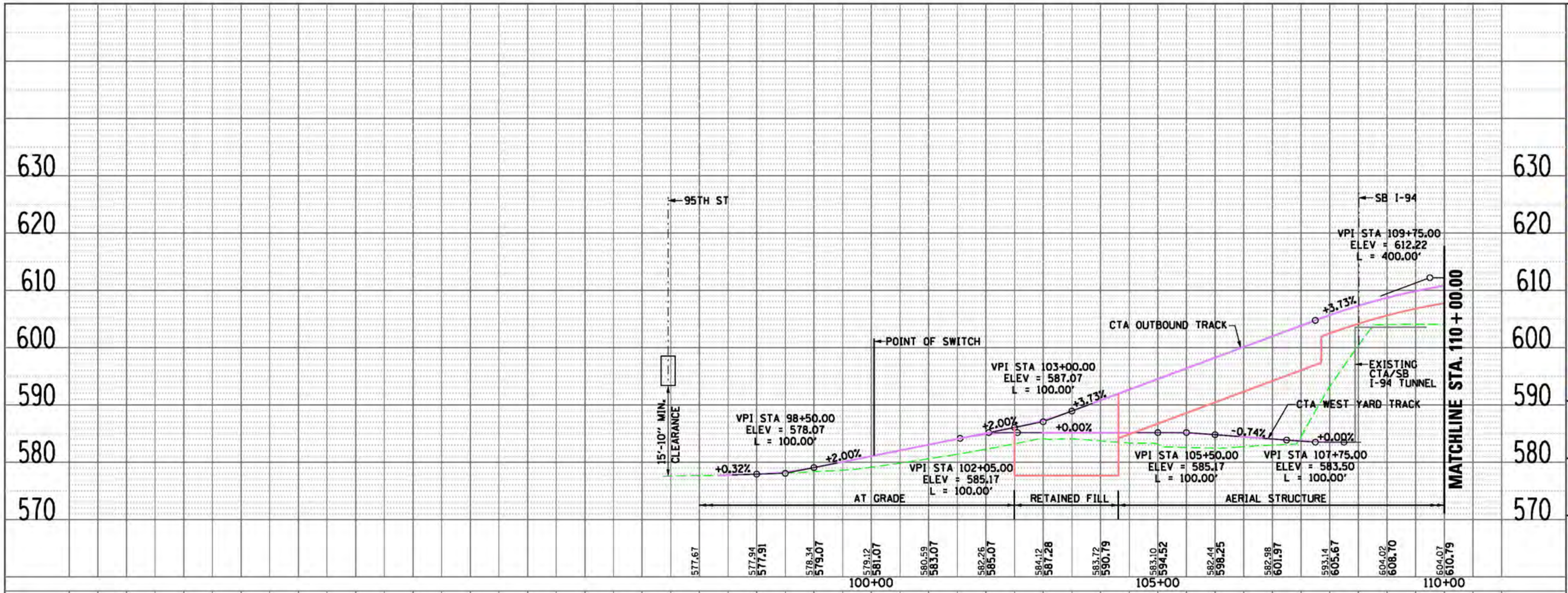
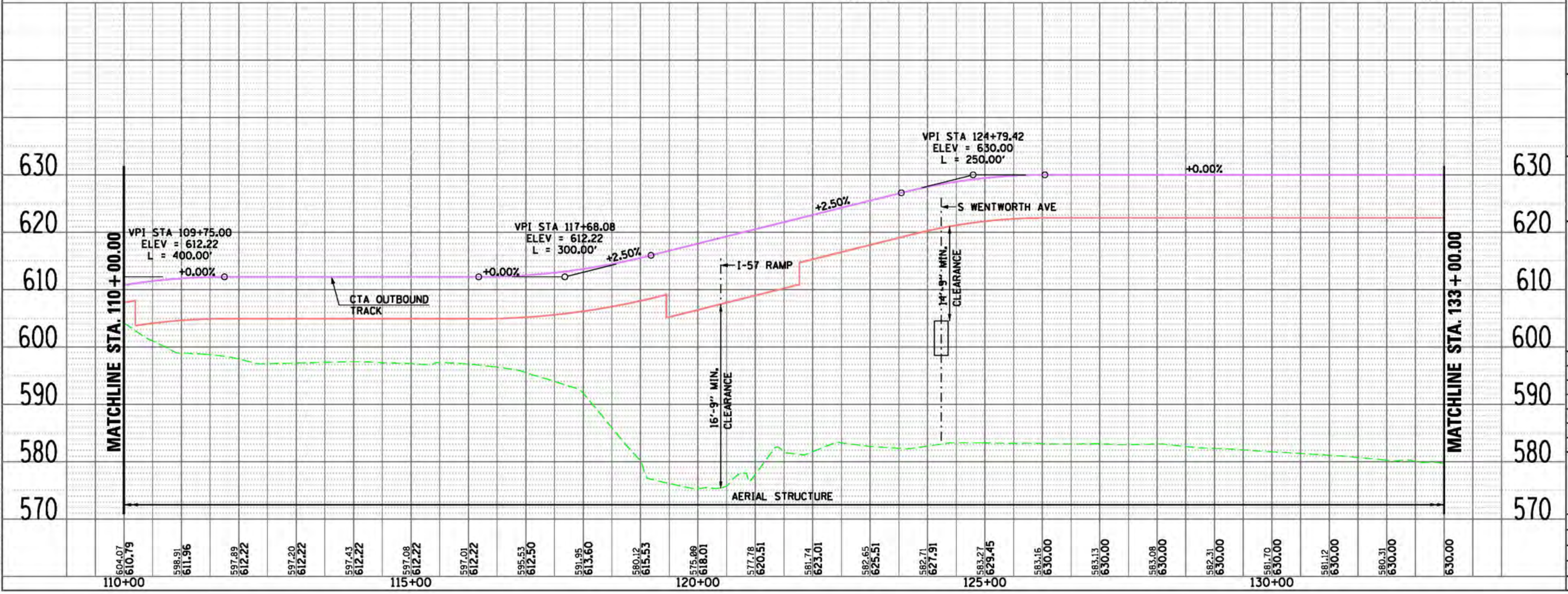

630
620
610
600
590
580
570
95TH ST
15'-10" MIN. CLEARANCE
POINT OF SWITCH
VPI STA 98+50.00
ELEV = 578.07
L = 100.00'
+0.32%
+2.00%
VPI STA 102+05.00
ELEV = 585.17
L = 100.00'
+2.00%
VPI STA 103+00.00
ELEV = 587.07
L = 100.00'
+3.73%
+0.00%
CTA OUTBOUND TRACK
+3.73%
VPI STA 105+50.00
ELEV = 585.17
L = 100.00'
-0.74%
CTA WEST YARD TRACK
VPI STA 107+75.00
ELEV = 583.50
L = 100.00'
+0.00%
EXISTING CTA/SB I-94 TUNNEL
SB I-94
VPI STA 109+75.00
ELEV = 612.22
L = 400.00'
AT GRADE
RETAINED FILL
AERIAL STRUCTURE
MATCHLINE STA. 110 + 00.00
577.67
577.94 577.91
578.34 579.07
579.12 581.07
580.59 583.07
582.26 585.07
584.12 587.28
583.72 590.79
583.10 594.52
582.44 598.25
582.98 601.97
593.14 605.67
604.02 608.70
604.07 610.79
100+00
105+00
110+00


630
620
610
600
590
580
570
MATCHLINE STA. 110 + 00.00
VPI STA 109+75.00
ELEV = 612.22
L = 400.00'
+0.00%
CTA OUTBOUND TRACK
VPI STA 117+68.08
ELEV = 612.22
L = 300.00'
+0.00%
+2.50%
I-57 RAMP
16'-9" MIN. CLEARANCE
+2.50%
VPI STA 124+79.42
ELEV = 630.00
L = 250.00'
S WENTWORTH AVE
14'-9" MIN. CLEARANCE
+0.00%
AERIAL STRUCTURE
MATCHLINE STA. 133 + 00.00
604.07 610.79
598.91 611.96
597.89 612.22
597.20 612.22
597.43 612.22
597.08 612.22
597.01 612.22
595.53 612.50
591.95 613.60
580.12 615.53
575.89 618.01
577.78 620.51
581.74 623.01
582.65 625.51
582.71 627.91
583.27 629.45
583.16 630.00
583.13 630.00
583.08 630.00
582.31 630.00
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581.12 630.00
580.31 630.00
630.00
110+00
115+00
120+00
125+00
130+00

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LEGEND

PLAN
EX CENTERLINE
PR CENTERLINE
EX TRACK CENTERLINE
PR TRACK CENTERLINE
PR TRACK STRUCTURE
EX ROADWAY RIGHT-OF-WAY
EX RAILROAD RIGHT-OF-WAY
PR PERMANENT ENVELOPE
PR ROADWAY/HARDSCAPE
PR STATION PLATFORM
EX BUILDING OUTLINE
PR BUILDING OUTLINE
PR PARKING
PR CTA SUBSTATION
PR UPRR TRACK CENTERLINE

UTILITIES
EXISTING WATER LINES
EXISTING SEWER LINE
EXISTING GAS LINE
EXISTING ELECTRIC LINE
EXISTING TELEPHONE LINE

ENTRANCES
PRIMARY ENTRANCE
SECONDARY ENTRANCE
EXIT ONLY
PROPOSED PARKING ENTRANCE

PROFILE
EX GROUND
PR TOP OF RAIL
PR ELEVATED STRUCTURE DEPTH
PLATFORM LOCATION

PRELIMINARY DRAFT

CWE Transit Group

cta

CHICAGO TRANSIT
AUTHORITY

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RED LINE EXTENSION
ENVIRONMENTAL IMPACT STUDY
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ALTERNATIVE
WEST OPTION

22 OF 51

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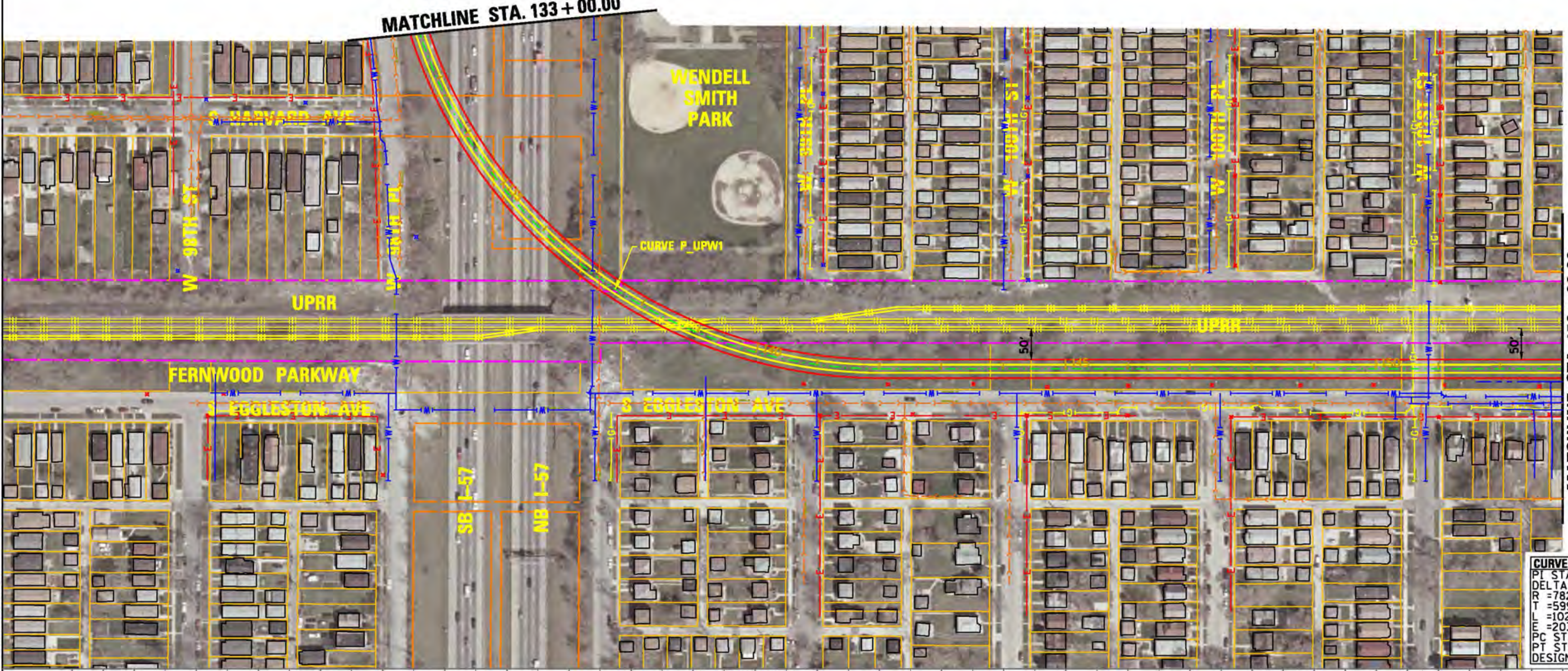
DESIGNED BY
DRAWN BY
PROJECT NO CTA-RLE
FILE NAME CTARLE_CT_PP_UPRRW_PREFERRED_102A.dgn

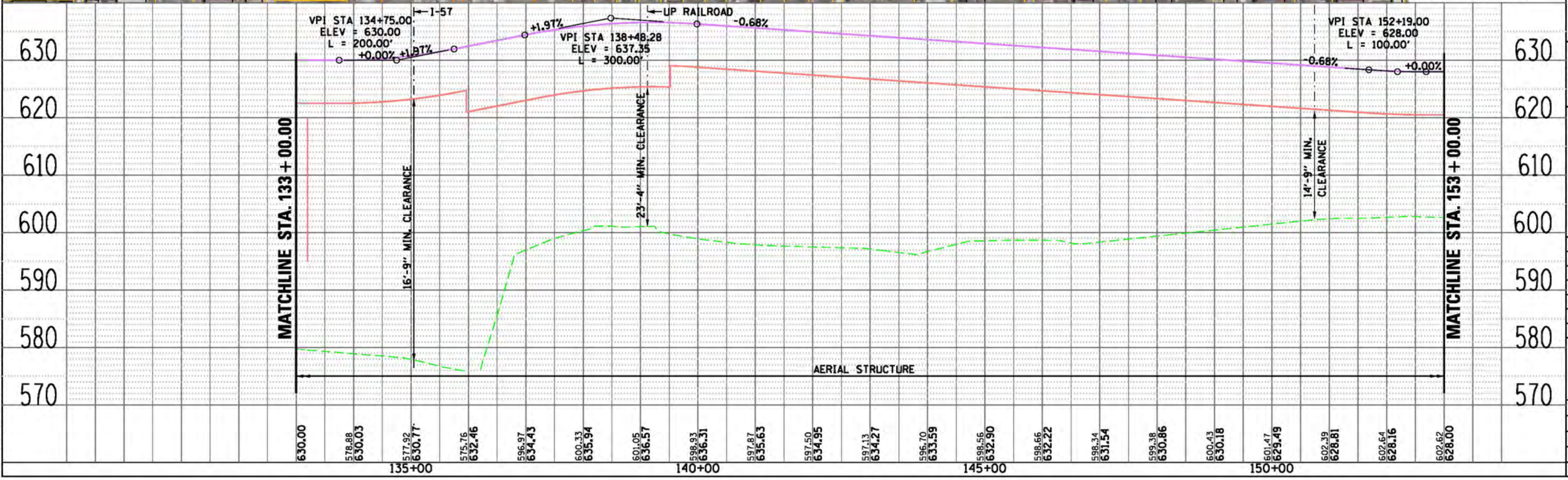
100 0 100 200
SCALE H 1" = 100'-0"
V 1" = 10'-0"

MARK	DATE	DESCRIPTION

SHEET TITLE


N
MATCHLINE STA. 133+00.00
MATCHLINE STA. 153+00.00
WENDELL SMITH PARK
S. HARVARD AVE
W. 98TH ST
W. 98TH PL
W. 99TH PL
W. 100TH ST
W. 100TH PL
W. 101ST ST
CURVE P_UPW1
UPRR
FERNWOOD PARKWAY
S. EGGLESTON AVE
SB I-57
NB I-57
50'

CURVE P_UPW1
PI STA. =137+81.18
DELTA =74° 56′ 54.61″(LT)
R =782.29
T =599.71
L =1023.31
E =203.43
PC STA. = 131+81.46
PT STA. = 142+04.78
DESIGN SPEED = 35 MPH


VPI STA 134+75.00
ELEV = 630.00
L = 200.00'
+0.00%
+1.97%
I-57
+1.97%
VPI STA 138+48.28
ELEV = 637.35
L = 300.00'
UP RAILROAD
-0.68%
VPI STA 152+19.00
ELEV = 628.00
L = 100.00'
-0.68%
+0.00%
16'-9" MIN. CLEARANCE
23'-4" MIN. CLEARANCE
14'-9" MIN. CLEARANCE
MATCHLINE STA. 133+00.00
MATCHLINE STA. 153+00.00
AERIAL STRUCTURE
630
620
610
600
590
580
570
630.00
578.88
630.03
577.92
630.77
575.76
632.46
596.97
634.43
600.33
635.94
601.05
636.57
598.93
636.31
597.87
635.63
597.50
634.95
597.13
634.27
596.70
633.59
598.56
632.90
598.66
632.22
598.34
631.54
599.38
630.86
600.43
630.18
601.47
629.49
602.39
628.81
602.64
628.16
602.62
628.00
135+00
140+00
145+00
150+00

7/24/2015 8:26:46 AM
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LEGEND

PLAN

— · —	EX CENTERLINE
— · —	PR CENTERLINE
═══	EX TRACK CENTERLINE
═══	PR TRACK CENTERLINE
───	PR TRACK STRUCTURE
——	EX ROADWAY RIGHT-OF-WAY
——	EX RAILROAD RIGHT-OF-WAY
— · —	PR PERMANENT ENVELOPE
───	PR ROADWAY/HARDSCAPE
🟥	PR STATION PLATFORM
▭	EX BUILDING OUTLINE
▭	PR BUILDING OUTLINE
▨	PR PARKING
▨	PR CTA SUBSTATION

UTILITIES

—W—	EXISTING WATER LINES
—>—	EXISTING SEWER LINE
—G—	EXISTING GAS LINE
—E—	EXISTING ELECTRIC LINE
—T—	EXISTING TELEPHONE LINE

ENTRANCES

▲	PRIMARY ENTRANCE
△	SECONDARY ENTRANCE
△	EXIT ONLY
↑	PROPOSED PARKING ENTRANCE

PROFILE

— — —	EX GROUND
───	PR TOP OF RAIL
───	PR ELEVATED STRUCTURE DEPTH
▨	PLATFORM LOCATION

PRELIMINARY DRAFT

CWE Transit Group

cta

CHICAGO TRANSIT AUTHORITY

SENSITIVE SECURITY INFORMATION

WARNING: THIS RECORD CONTAINS SENSITIVE SECURITY INFORMATION THAT IS CONTROLLED UNDER 49 CFR PARTS 15 AND 1520. NO PART OF THIS RECORD MAY BE DISCLOSED TO PERSONS WITHOUT A "NEED TO KNOW" AS DEFINED IN CFR PARTS 15 AND 1520, EXCEPT WITH THE WRITTEN PERMISSION OF THE ADMINISTRATOR OF THE TRANSPORTATION SECURITY ADMINISTRATION OR THE SECRETARY OF TRANSPORTATION. UNAUTHORIZED RELEASE MAY RESULT IN CIVIL PENALTY OR OTHER ACTION. FOR U.S. GOVERNMENT AGENCIES, PUBLIC DISCLOSURE IS GOVERNED BY 5 U.S.C. 552 AND 49 CFR PARTS 15 AND 1520.

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RED LINE EXTENSION
ENVIRONMENTAL IMPACT STUDY
UNION PACIFIC RAILROAD
ALTERNATIVE
WEST OPTION

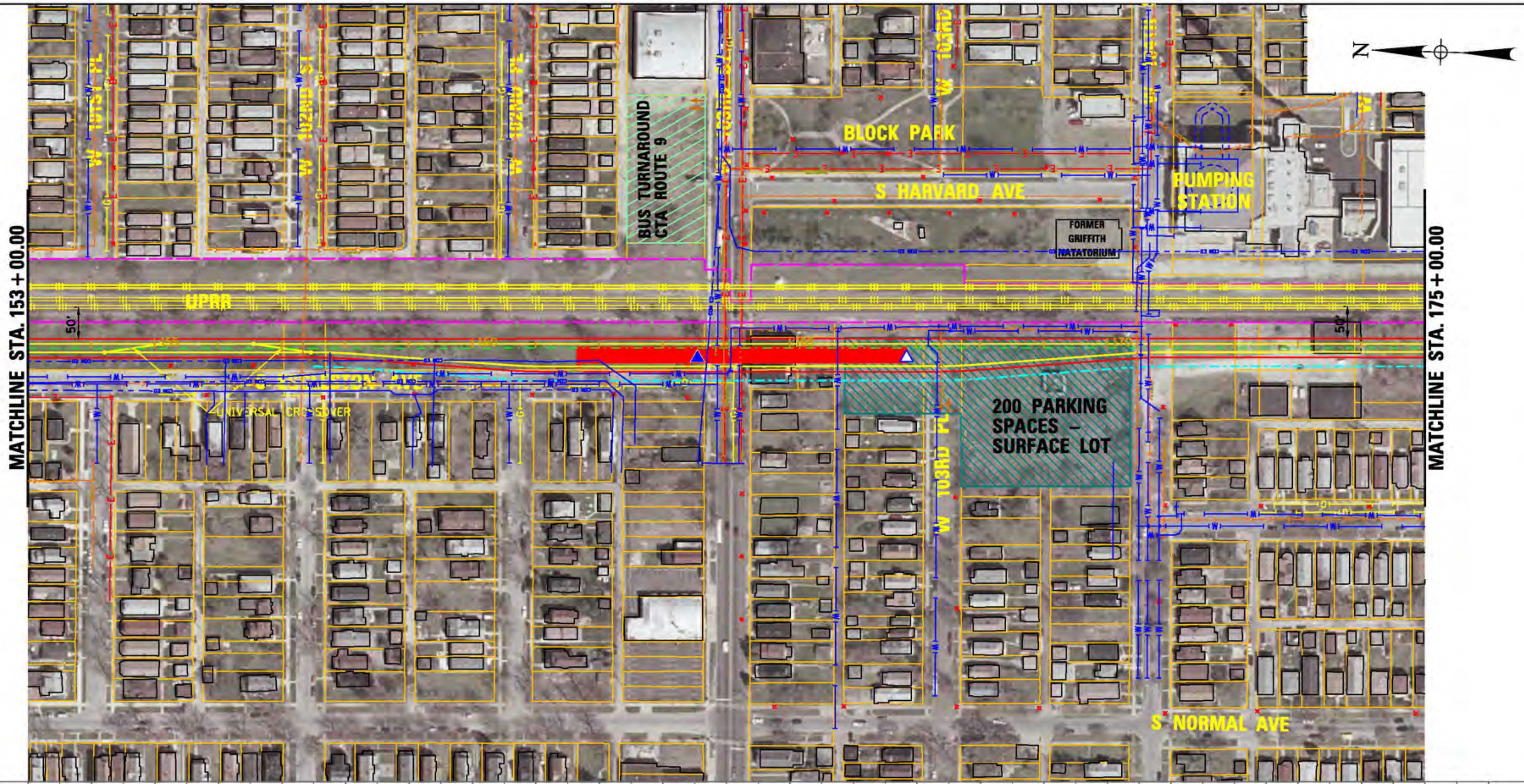
23 OF 51

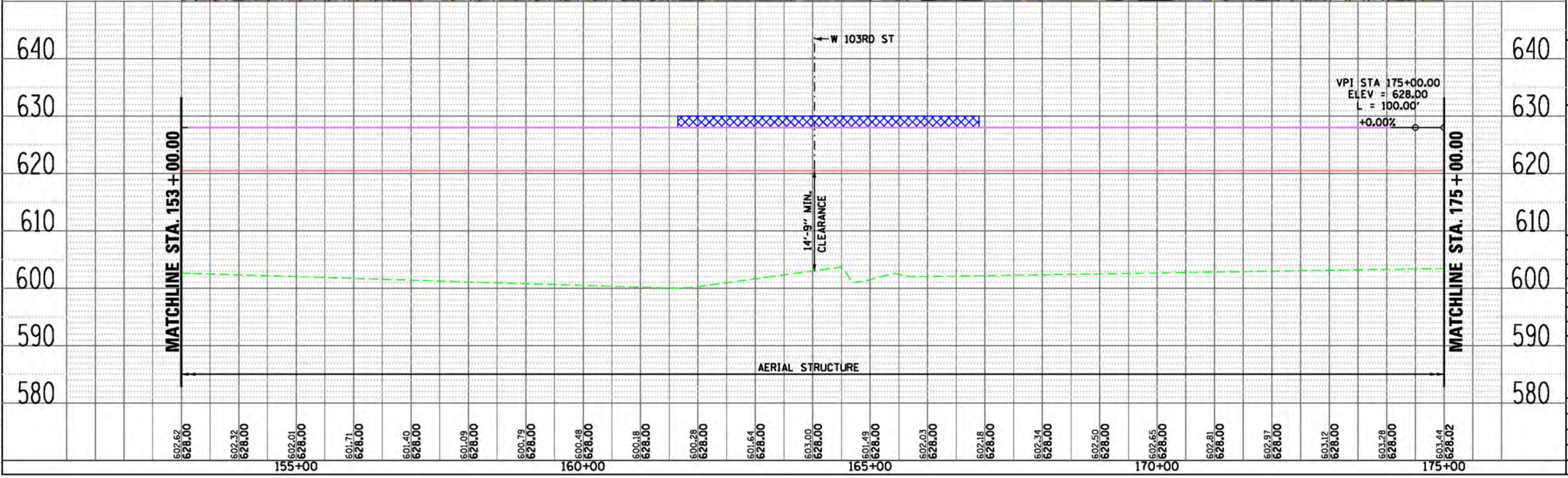
IN CHARGE
APPROVED BY
CHECKED BY
DESIGNED BY
DRAWN BY
PROJECT NO CTA-RLE
FILE NAME CTARLE_CT_PP_UPRRW_PREFERRED_103.dgn

100 0 100 200
SCALE H 1" = 100'-0"
V 1" = 10'-0"

MARK	DATE	DESCRIPTION

SHEET TITLE


N
MATCHLINE STA. 153+00.00
MATCHLINE STA. 175+00.00
W 101ST PL
W 102ND ST
W 102ND PL
BUS TURNAROUND CTA ROUTE 9
W 103RD ST
BLOCK PARK
W 103RD
S HARVARD AVE
PUMPING STATION
FORMER GRIFFITH NATATORIUM
UPRR
50'
UNIVERSAL CROSSOVER
200 PARKING SPACES - SURFACE LOT
W 103RD PL
S NORMAL AVE


640
630
620
610
600
590
580
W 103RD ST
MATCHLINE STA. 153+00.00
MATCHLINE STA. 175+00.00
VPI STA 175+00.00
ELEV = 628.00
L = 100.00'
+0.00%
14'-9" MIN. CLEARANCE
AERIAL STRUCTURE
602.62 628.00
602.32 628.00
602.01 628.00
601.71 628.00
601.40 628.00
601.09 628.00
600.79 628.00
600.48 628.00
600.18 628.00
600.28 628.00
601.64 628.00
603.00 628.00
601.49 628.00
602.03 628.00
602.18 628.00
602.34 628.00
602.50 628.00
602.65 628.00
602.81 628.00
602.97 628.00
603.12 628.00
603.28 628.00
603.44 628.02
155+00
160+00
165+00
170+00
175+00

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LEGEND

PLAN

EX CENTERLINE
PR CENTERLINE
EX TRACK CENTERLINE
PR TRACK CENTERLINE
PR TRACK STRUCTURE
EX ROADWAY RIGHT-OF-WAY
EX RAILROAD RIGHT-OF-WAY
PR PERMANENT ENVELOPE
PR ROADWAY/HARDSCAPE
🟥 PR STATION PLATFORM
EX BUILDING OUTLINE
PR BUILDING OUTLINE
▨ PR PARKING
▨ PR CTA SUBSTATION
PR UPRR TRACK CENTERLINE

UTILITIES

EXISTING WATER LINES
EXISTING SEWER LINE
EXISTING GAS LINE
EXISTING ELECTRIC LINE
EXISTING TELEPHONE LINE

ENTRANCES

▲ PRIMARY ENTRANCE
△ SECONDARY ENTRANCE
EXIT ONLY
PROPOSED PARKING ENTRANCE

PROFILE

EX GROUND
PR TOP OF RAIL
PR ELEVATED STRUCTURE DEPTH
▩ PLATFORM LOCATION

PRELIMINARY DRAFT

CWE Transit Group

cta

CHICAGO TRANSIT AUTHORITY

SENSITIVE SECURITY INFORMATION

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RED LINE EXTENSION ENVIRONMENTAL IMPACT STUDY UNION PACIFIC RAILROAD ALTERNATIVE WEST OPTION

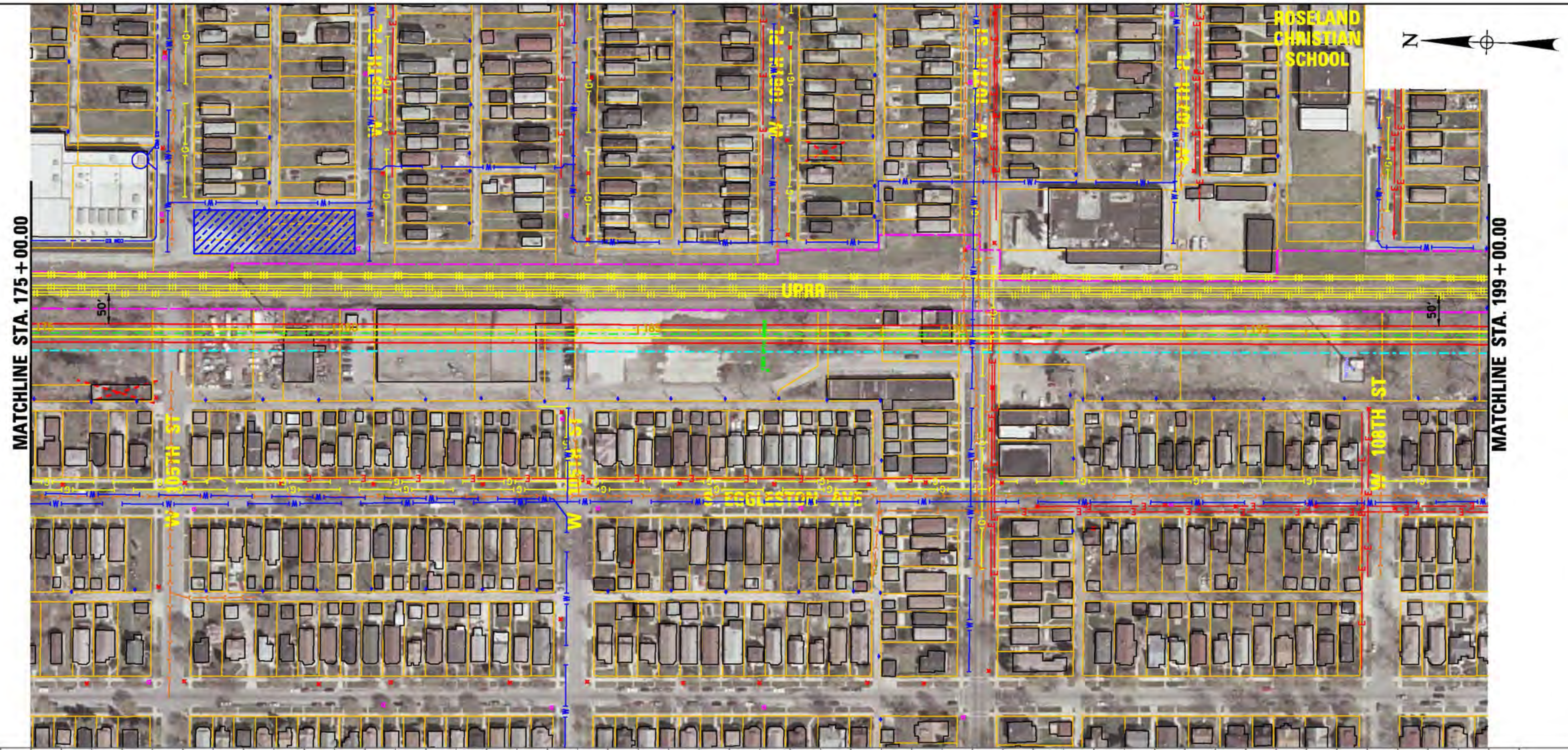
24 OF 51

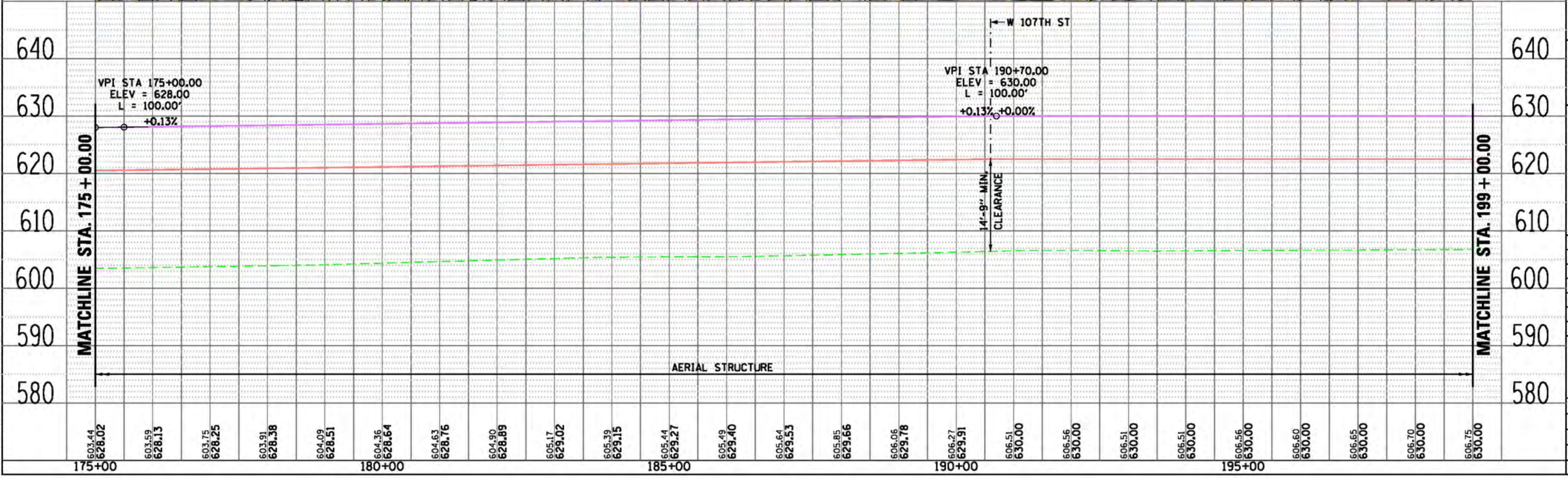
IN CHARGE
APPROVED BY
CHECKED BY
DESIGNED BY
DRAWN BY
PROJECT NO CTA-RLE
FILE NAME CTARLE_CT_PP_UPRRW_PREFERRED_104.dgn

100 0 100 200
SCALE H 1" = 100'-0"
V 1" = 10'-0"

MARK	DATE	DESCRIPTION

SHEET TITLE





LEGEND

PLAN

	EX CENTERLINE
	PR CENTERLINE
	EX TRACK CENTERLINE
	PR TRACK CENTERLINE
	PR TRACK STRUCTURE
	EX ROADWAY RIGHT-OF-WAY
	EX RAILROAD RIGHT-OF-WAY
	PR PERMANENT ENVELOPE
	PR ROADWAY/HARDSCAPE
🟥	PR STATION PLATFORM
	EX BUILDING OUTLINE
	PR BUILDING OUTLINE
▨	PR PARKING
▨	PR CTA SUBSTATION
	PR UPRR TRACK CENTERLINE

UTILITIES

W	EXISTING WATER LINES
	EXISTING SEWER LINE
	EXISTING GAS LINE
E	EXISTING ELECTRIC LINE
T	EXISTING TELEPHONE LINE

ENTRANCES

▲	PRIMARY ENTRANCE
△	SECONDARY ENTRANCE
	EXIT ONLY
	PROPOSED PARKING ENTRANCE

PROFILE

	EX GROUND
	PR TOP OF RAIL
	PR ELEVATED STRUCTURE DEPTH
▨	PLATFORM LOCATION

PRELIMINARY DRAFT

CWE Transit Group

cta

CHICAGO TRANSIT AUTHORITY

SENSITIVE SECURITY INFORMATION

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RED LINE EXTENSION
ENVIRONMENTAL IMPACT STUDY
UNION PACIFIC RAILROAD
ALTERNATIVE
WEST OPTION

25 OF 51

IN CHARGE
APPROVED BY
CHECKED BY
DESIGNED BY
DRAWN BY
PROJECT NO CTA-RLE
FILE NAME CTARLE_CT_PP_UPRRW_PREFERRED_105.dgn

100 0 100 200
SCALE H 1" = 100'-0"
V 1" = 10'-0"

MARK	DATE	DESCRIPTION

SHEET TITLE

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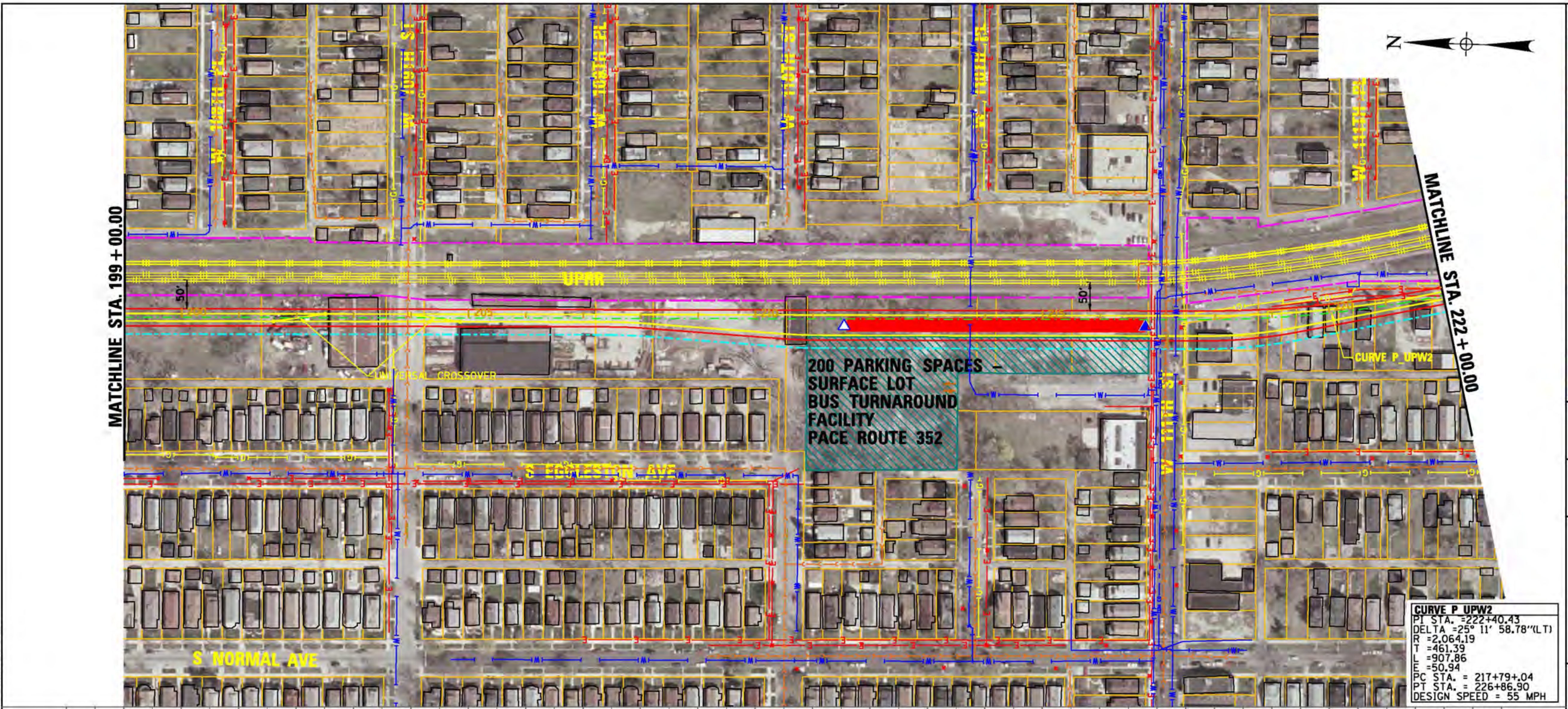
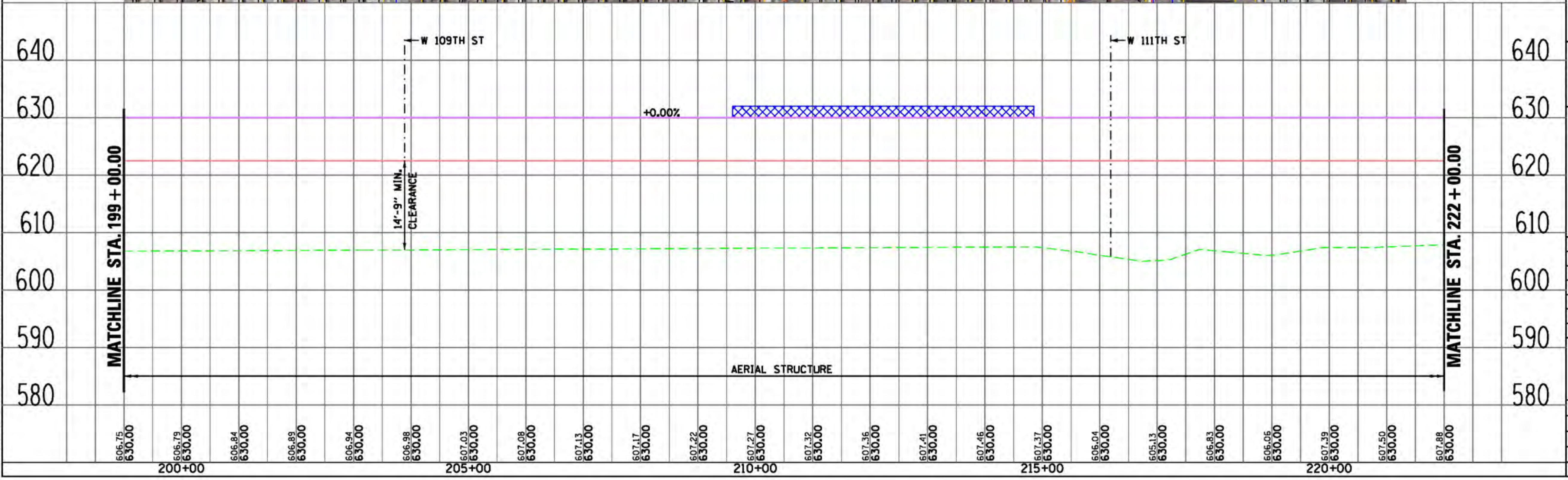

MATCHLINE STA. 199+00.00
MATCHLINE STA. 222+00.00
N
W 108TH PL
W 109TH ST
W 109TH PL
W 110TH ST
W 110TH PL
W 111TH ST
W 111TH PL
UPRR
50'
UNIVERSAL CROSSOVER
CURVE P UPW2
200 PARKING SPACES – SURFACE LOT
BUS TURNAROUND FACILITY
PACE ROUTE 352
S EGGLESTON AVE
S NORMAL AVE

CURVE P UPW2
PI STA. =222+40.43
DELTA =25° 11' 58.78"(LT)
R =2,064.19
T =461.39
L =907.86
E =50.94
PC STA. = 217+79+.04
PT STA. = 226+86.90
DESIGN SPEED = 55 MPH


640
630
620
610
600
590
580
W 109TH ST
W 111TH ST
+0.00%
14'-9" MIN. CLEARANCE
MATCHLINE STA. 199+00.00
MATCHLINE STA. 222+00.00
AERIAL STRUCTURE
606.75 630.00
606.79 630.00
606.84 630.00
606.89 630.00
606.94 630.00
606.98 630.00
607.03 630.00
607.08 630.00
607.13 630.00
607.17 630.00
607.22 630.00
607.27 630.00
607.32 630.00
607.36 630.00
607.41 630.00
607.46 630.00
607.37 630.00
606.04 630.00
605.13 630.00
606.83 630.00
606.06 630.00
607.39 630.00
607.50 630.00
607.88 630.00
200+00
205+00
210+00
215+00
220+00

7/24/2015 8:27:06 AM
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LEGEND

PLAN

— · —	EX CENTERLINE
— · —	PR CENTERLINE
═╫═	EX TRACK CENTERLINE
——	PR TRACK CENTERLINE
——	PR TRACK STRUCTURE
— —	EX ROADWAY RIGHT-OF-WAY
— —	EX RAILROAD RIGHT-OF-WAY
- · -	PR PERMANENT ENVELOPE
——	PR ROADWAY/HARDSCAPE
🟥	PR STATION PLATFORM
▭	EX BUILDING OUTLINE
▭	PR BUILDING OUTLINE
▨	PR PARKING
▨	PR CTA SUBSTATION
═╫═	PR UPRR TRACK CENTERLINE

UTILITIES

—W—	EXISTING WATER LINES
—›—›—	EXISTING SEWER LINE
—G—	EXISTING GAS LINE
—E—	EXISTING ELECTRIC LINE
—T—	EXISTING TELEPHONE LINE

ENTRANCES

▲	PRIMARY ENTRANCE
△	SECONDARY ENTRANCE
△	EXIT ONLY
⇄	PROPOSED PARKING ENTRANCE

PROFILE

— — —	EX GROUND
——	PR TOP OF RAIL
——	PR ELEVATED STRUCTURE DEPTH
▩	PLATFORM LOCATION

PRELIMINARY DRAFT

CWC Transit Group

cta
CHICAGO TRANSIT AUTHORITY

SENSITIVE SECURITY INFORMATION

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RED LINE EXTENSION ENVIRONMENTAL IMPACT STUDY
UNION PACIFIC RAILROAD ALTERNATIVE WEST OPTION

26 OF 51

IN CHARGE
APPROVED BY
CHECKED BY
DESIGNED BY
DRAWN BY
PROJECT NO CTA-RLE
FILE NAME CTARLE_CT_PP_UPRRW_PREFERRED_106.dgn

100 0 100 200
SCALE H 1" = 100'-0"
V 1" = 10'-0"

MARK	DATE	DESCRIPTION

SHEET TITLE

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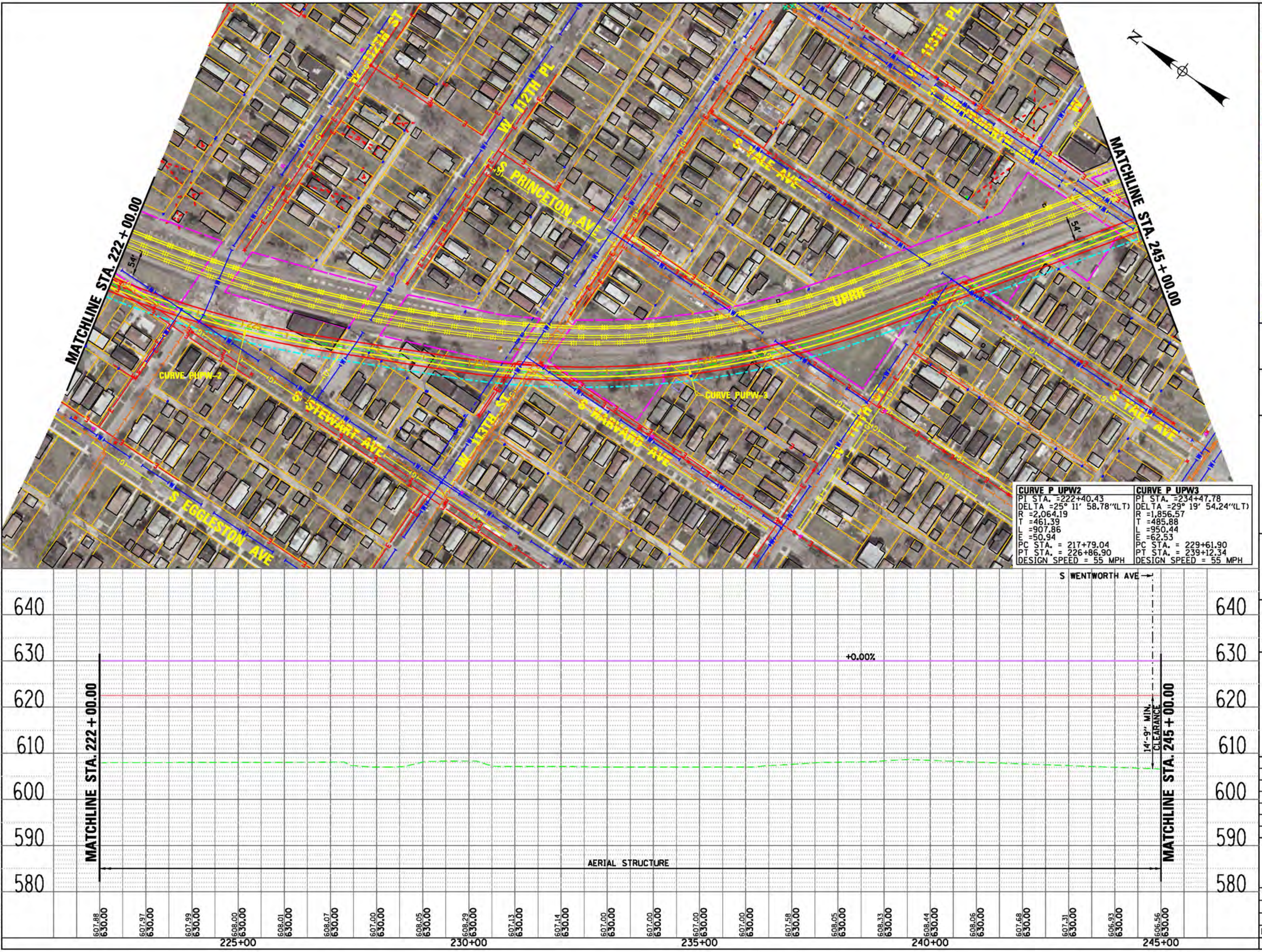
N
MATCHLINE STA. 222+00.00
MATCHLINE STA. 245+00.00
W 112TH ST
W 112TH PL
S PRINCETON AVE
S YALE AVE
113TH PL
W 113TH ST
S STEWART AVE
S HARVARD AVE
S EGGLESTON AVE
UPRR
CURVE PUPW-2
CURVE PUPW-3
54'
S WENTWORTH AVE
640
630
620
610
600
590
580
+0.00%
14'-9" MIN. CLEARANCE
AERIAL STRUCTURE
607.88 630.00
607.97 630.00
607.99 630.00
608.00 630.00
608.01 630.00
608.07 630.00
607.00 630.00
608.05 630.00
608.29 630.00
607.13 630.00
607.14 630.00
607.00 630.00
607.00 630.00
607.00 630.00
607.00 630.00
607.58 630.00
608.05 630.00
608.33 630.00
608.44 630.00
608.06 630.00
607.68 630.00
607.31 630.00
606.93 630.00
606.56 630.00
225+00
230+00
235+00
240+00
245+00

CURVE P_UPW2	CURVE P_UPW3
PI STA. =222+40.43	PI STA. =234+47.78
DELTA =25° 11′ 58.78″(LT)	DELTA =29° 19′ 54.24″(LT)
R =2,064.19	R =1,856.57
T =461.39	T =485.88
L =907.86	L =950.44
E =50.94	E =62.53
PC STA. = 217+79.04	PC STA. = 229+61.90
PT STA. = 226+86.90	PT STA. = 239+12.34
DESIGN SPEED = 55 MPH	DESIGN SPEED = 55 MPH

LEGEND

PLAN
- EX CENTERLINE
- PR CENTERLINE
- EX TRACK CENTERLINE
- PR TRACK CENTERLINE
- PR TRACK STRUCTURE
- EX ROADWAY RIGHT-OF-WAY
- EX RAILROAD RIGHT-OF-WAY
- PR PERMANENT ENVELOPE
- PR ROADWAY/HARDSCAPE
- PR STATION PLATFORM
- EX BUILDING OUTLINE
- PR BUILDING OUTLINE
- PR PARKING
- PR CTA SUBSTATION

UTILITIES
- EXISTING WATER LINES
- EXISTING SEWER LINE
- EXISTING GAS LINE
- EXISTING ELECTRIC LINE
- EXISTING TELEPHONE LINE

ENTRANCES
- PRIMARY ENTRANCE
- SECONDARY ENTRANCE
- EXIT ONLY
- PROPOSED PARKING ENTRANCE

PROFILE
- EX GROUND
- PR TOP OF RAIL
- PR ELEVATED STRUCTURE DEPTH
- PLATFORM LOCATION

PRELIMINARY DRAFT

CWE Transit Group

cta

CHICAGO TRANSIT AUTHORITY

SENSITIVE SECURITY INFORMATION

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RED LINE EXTENSION
ENVIRONMENTAL IMPACT STUDY
UNION PACIFIC RAILROAD
ALTERNATIVE
WEST OPTION

27 OF 51

IN CHARGE
APPROVED BY
CHECKED BY
DESIGNED BY
DRAWN BY
PROJECT NO CTA-RLE
FILE NAME CTARLE_CT_PP_UPRRW_PREFERRED_107.dgn

100 0 100 200
SCALE H 1" = 100'-0"
V 1" = 10'-0"

MARK	DATE	DESCRIPTION

SHEET TITLE

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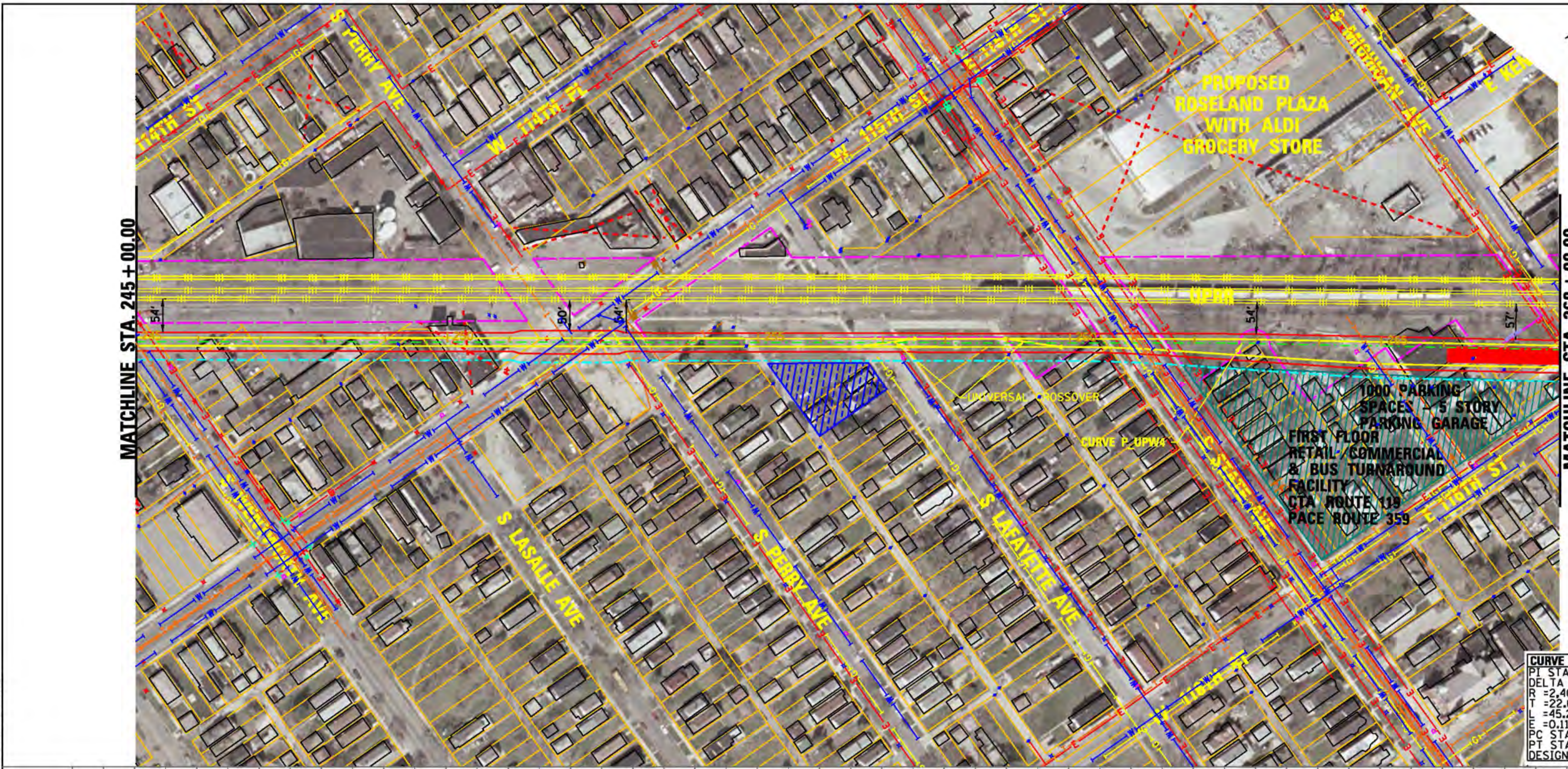
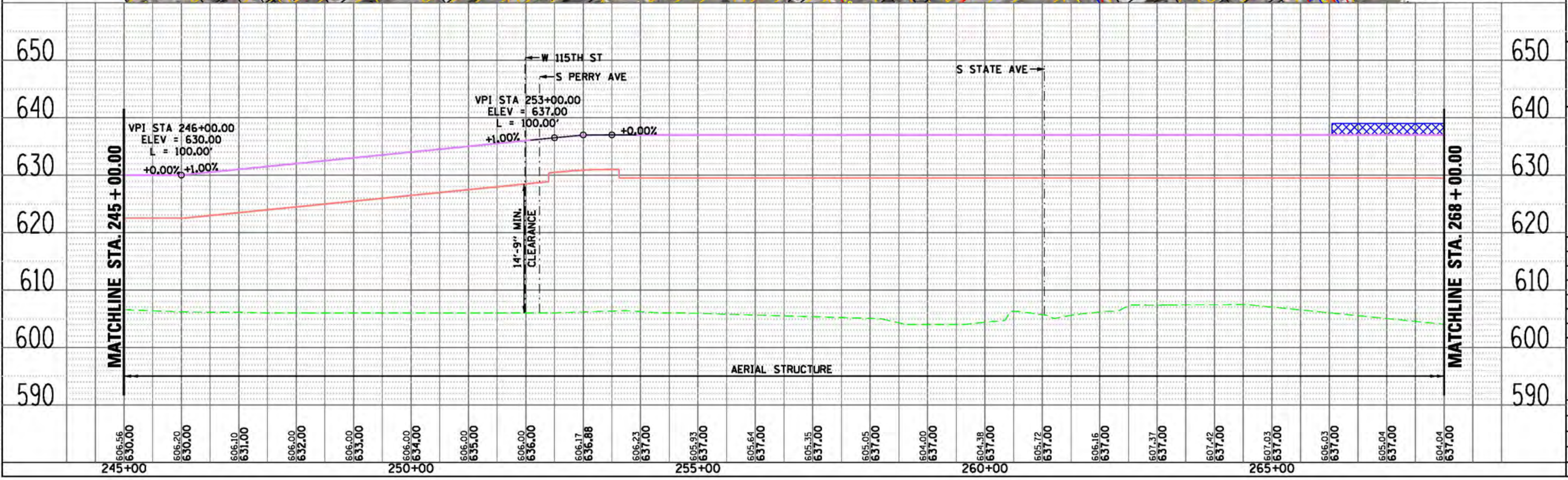

MATCHLINE STA. 245+00.00
MATCHLINE STA. 268+00.00
N
W 114TH ST
W 114TH PL
W 115TH ST
E 115TH ST
S PERRY AVE
S MICHIGAN AVE
E KENSINGTON AVE
PROPOSED ROSELAND PLAZA WITH ALDI GROCERY STORE
UPRR
54'
50'
54'
54'
57'
UNIVERSAL CROSSOVER
CURVE P_UPW4
1000 PARKING SPACES - 5 STORY PARKING GARAGE
FIRST FLOOR RETAIL / COMMERCIAL & BUS TURNAROUND FACILITY
CTA ROUTE 119
PACE ROUTE 359
S STATE AVE
E 116TH ST
S LASALLE AVE
S PERRY AVE
S LAFAYETTE AVE
S WENTWORTH AVE

CURVE P UPW4
PI STA. =262+76.52
DELTA =1° 04′ 46.06″(LT)
R =2,400.00
T =22.61
L =45.22
E =0.11
PC STA. = 262+53.91
PT STA. = 262+99.12
DESIGN SPEED = 55 MPH



LEGEND

PLAN
- EX CENTERLINE
- PR CENTERLINE
- EX TRACK CENTERLINE
- PR TRACK CENTERLINE
- PR TRACK STRUCTURE
- EX ROADWAY RIGHT-OF-WAY
- EX RAILROAD RIGHT-OF-WAY
- PR PERMANENT ENVELOPE
- PR ROADWAY/HARDSCAPE
- 🟥 PR STATION PLATFORM
- EX BUILDING OUTLINE
- PR BUILDING OUTLINE
- ▨ PR PARKING
- ▨ PR CTA SUBSTATION
- PR UPRR TRACK CENTERLINE

UTILITIES
- EXISTING WATER LINES
- EXISTING SEWER LINE
- EXISTING GAS LINE
- EXISTING ELECTRIC LINE
- EXISTING TELEPHONE LINE

ENTRANCES
- ▲ PRIMARY ENTRANCE
- △ SECONDARY ENTRANCE
- EXIT ONLY
- PROPOSED PARKING ENTRANCE

PROFILE
- EX GROUND
- PR TOP OF RAIL
- PR ELEVATED STRUCTURE DEPTH
- ▨ PLATFORM LOCATION

PRELIMINARY DRAFT

CWE Transit Group

cta

CHICAGO TRANSIT AUTHORITY

SENSITIVE SECURITY INFORMATION

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RED LINE EXTENSION ENVIRONMENTAL IMPACT STUDY
UNION PACIFIC RAILROAD ALTERNATIVE WEST OPTION

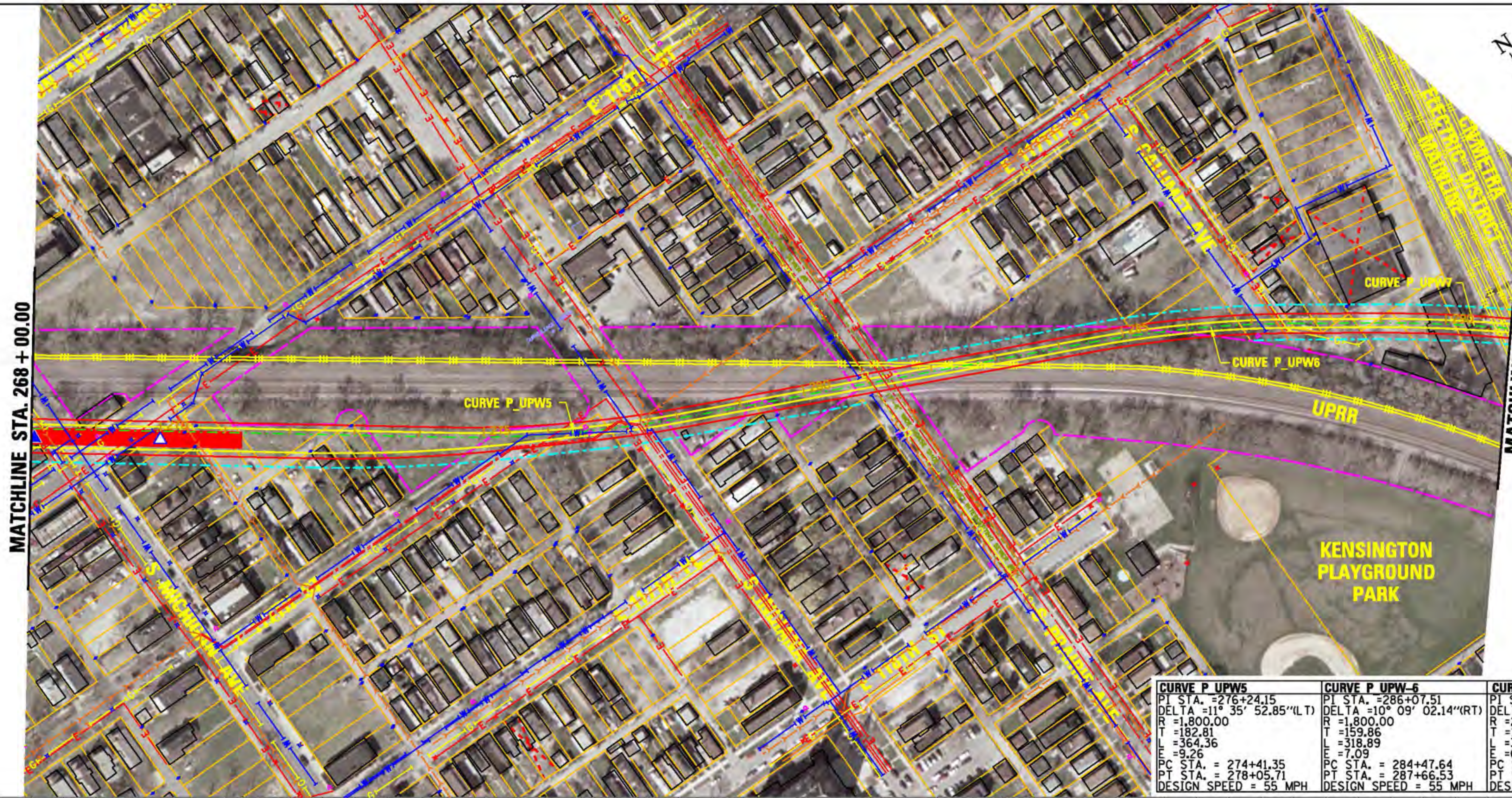
28 OF 51

IN CHARGE
APPROVED BY
CHECKED BY
DESIGNED BY
DRAWN BY
PROJECT NO CTA-RLE
FILE NAME CTARLE_CT_PP_UPRRW_PREFERRED_108.dgn

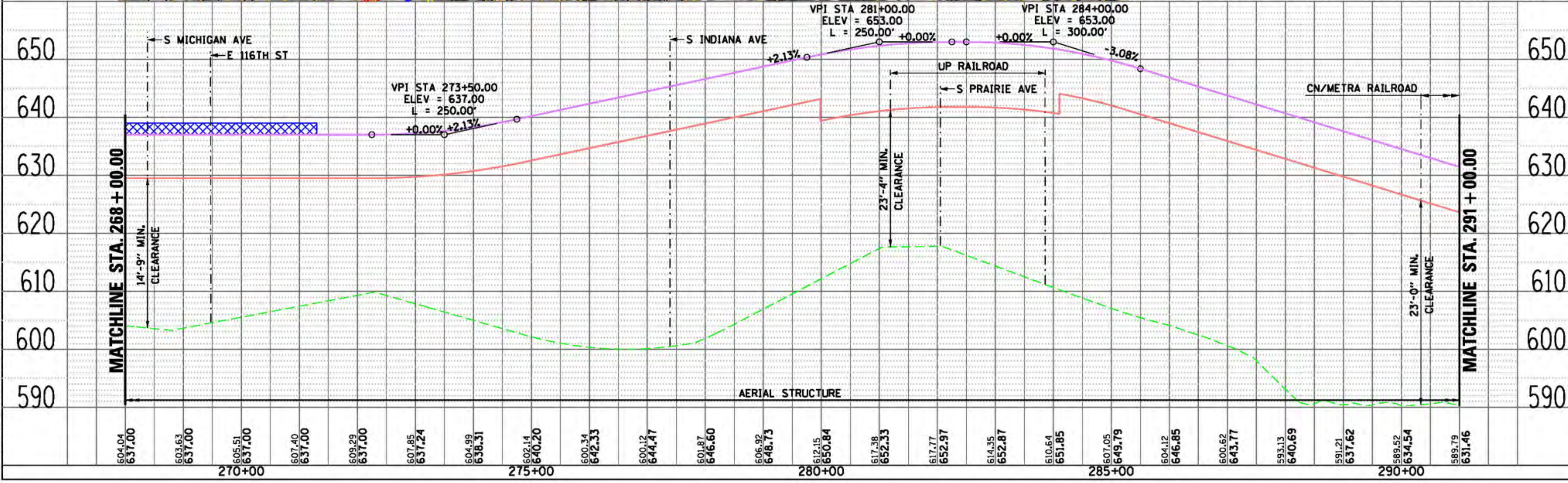
100 0 100 200
SCALE H 1" = 100'-0"
V 1" = 10'-0"

MARK	DATE	DESCRIPTION

SHEET TITLE


MATCHLINE STA. 268+00.00
MATCHLINE STA. 291+00.00
N
CURVE P_UPW5
CURVE P_UPW6
CURVE P_UPW7
UPRR
KENSINGTON PLAYGROUND PARK
E 116TH ST
S MICHIGAN AVE
S INDIANA AVE
S PRAIRIE AVE
S CALUMET AVE
METRA ELECTRIC DISTRICT MAINLINE

CURVE P_UPW5	CURVE P_UPW-6	CURVE P_UPW-7
PI STA. =276+24.15	PI STA. =286+07.51	PI STA. =290+64.94
DELTA =11° 35′ 52.85″(LT)	DELTA =10° 09′ 02.14″(RT)	DELTA =8° 22′ 49.78″(RT)
R =1,800.00	R =1,800.00	R =2,400.00
T =182.81	T =159.86	T =175.83
L =364.36	L =318.89	L =351.04
E =9.26	E =7.09	E =6.43
PC STA. = 274+41.35	PC STA. = 284+47.64	PC STA. = 288+89.11
PT STA. = 278+05.71	PT STA. = 287+66.53	PT STA. = 292+40.15
DESIGN SPEED = 55 MPH	DESIGN SPEED = 55 MPH	DESIGN SPEED = 55 MPH


650
640
630
620
610
600
590
MATCHLINE STA. 268+00.00
MATCHLINE STA. 291+00.00
S MICHIGAN AVE
E 116TH ST
S INDIANA AVE
VPI STA 273+50.00
ELEV = 637.00
L = 250.00′
+0.00%
+2.13%
VPI STA 281+00.00
ELEV = 653.00
L = 250.00′
+2.13%
+0.00%
VPI STA 284+00.00
ELEV = 653.00
L = 300.00′
+0.00%
-3.08%
UP RAILROAD
S PRAIRIE AVE
CN/METRA RAILROAD
14′-9″ MIN. CLEARANCE
23′-4″ MIN. CLEARANCE
23′-0″ MIN. CLEARANCE
AERIAL STRUCTURE
604.04 637.00
603.63 637.00
605.51 637.00
607.40 637.00
609.29 637.00
607.85 637.24
604.99 638.31
602.14 640.20
600.34 642.33
600.12 644.47
601.87 646.60
606.92 648.73
612.15 650.84
617.38 652.33
617.77 652.97
614.35 652.87
610.64 651.85
607.05 649.79
604.12 646.85
600.62 643.77
593.13 640.69
591.21 637.62
589.52 634.54
589.79 631.46
270+00
275+00
280+00
285+00
290+00

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LEGEND

PLAN
- EX CENTERLINE
- PR CENTERLINE
- EX TRACK CENTERLINE
- PR TRACK CENTERLINE
- PR TRACK STRUCTURE
- EX ROADWAY RIGHT-OF-WAY
- EX RAILROAD RIGHT-OF-WAY
- PR PERMANENT ENVELOPE
- PR ROADWAY/HARDSCAPE
- PR STATION PLATFORM
- EX BUILDING OUTLINE
- PR BUILDING OUTLINE
- PR PARKING
- PR CTA SUBSTATION
- PR UPRR TRACK CENTERLINE

UTILITIES
- EXISTING WATER LINES
- EXISTING SEWER LINE
- EXISTING GAS LINE
- EXISTING ELECTRIC LINE
- EXISTING TELEPHONE LINE

ENTRANCES
- ▲ PRIMARY ENTRANCE
- △ SECONDARY ENTRANCE
- EXIT ONLY
- PROPOSED PARKING ENTRANCE

PROFILE
- EX GROUND
- PR TOP OF RAIL
- PR ELEVATED STRUCTURE DEPTH
- PLATFORM LOCATION

PRELIMINARY DRAFT

CWE Transit Group

cta

CHICAGO TRANSIT AUTHORITY

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RED LINE EXTENSION
ENVIRONMENTAL IMPACT STUDY
UNION PACIFIC RAILROAD
ALTERNATIVE
WEST OPTION

29 OF 51

IN CHARGE
APPROVED BY
CHECKED BY
DESIGNED BY
DRAWN BY
PROJECT NO CTA-RLE
FILE NAME CTARLE_CT_PP_UPRRW_PREFERRED_109.dgn

100 0 100 200
SCALE H 1″ = 100′-0″
V 1″ = 10′-0″

MARK	DATE	DESCRIPTION

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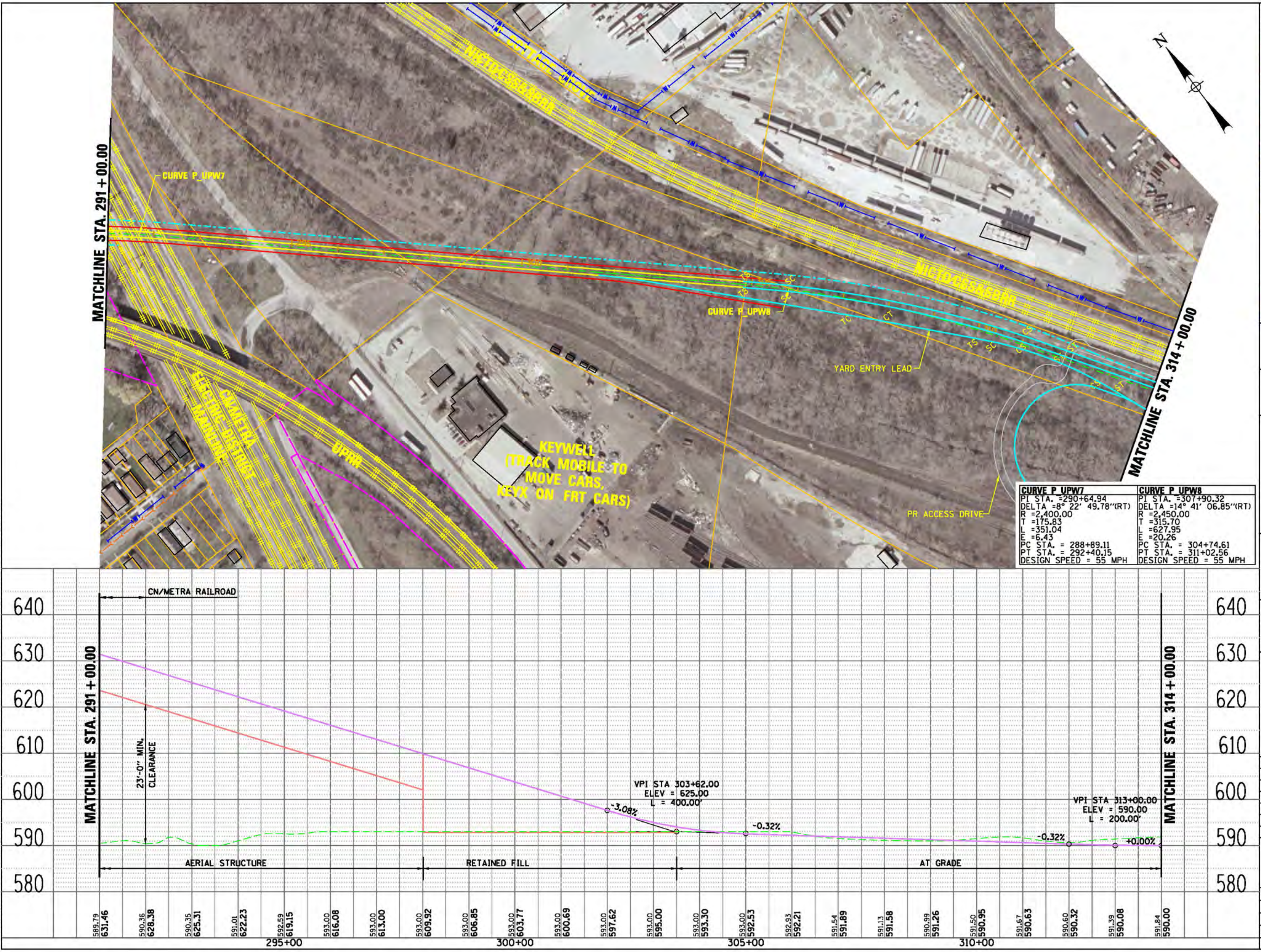
MATCHLINE STA. 291+00.00
MATCHLINE STA. 314+00.00
N
CURVE P_UPW7
CURVE P_UPW8
YARD ENTRY LEAD
PR ACCESS DRIVE
NICTD/CSS&SBRR
CN/METRA
ELECTRIC DISTRICT
MAINLINE
UPRR
KEYWELL (TRACK MOBILE TO MOVE CARS, KEYX ON FRT CARS)
TS
SC
CS
ST
TC
CT
CN/METRA RAILROAD
23'-0" MIN. CLEARANCE
VPI STA 303+62.00
ELEV = 625.00
L = 400.00'
VPI STA 313+00.00
ELEV = 590.00
L = 200.00'
-3.08%
-0.32%
-0.32%
+0.00%
AERIAL STRUCTURE
RETAINED FILL
AT GRADE
640
630
620
610
600
590
580
589.79 631.46
590.36 628.38
590.35 625.31
591.01 622.23
592.59 619.15
593.00 616.08
593.00 613.00
593.00 609.92
593.00 606.85
593.00 603.77
593.00 600.69
593.00 597.62
593.00 595.00
593.00 593.30
593.00 592.53
592.93 592.21
591.54 591.89
591.13 591.58
590.99 591.26
591.50 590.95
591.67 590.63
590.60 590.32
591.39 590.08
591.84 590.00
295+00
300+00
305+00
310+00

CURVE P_UPW7	CURVE P_UPW8
PI STA. =290+64.94	PI STA. =307+90.32
DELTA =8° 22' 49.78"(RT)	DELTA =14° 41' 06.85"(RT)
R =2,400.00	R =2,450.00
T =175.83	T =315.70
L =351.04	L =627.95
E =6.43	E =20.26
PC STA. = 288+89.11	PC STA. = 304+74.61
PT STA. = 292+40.15	PT STA. = 311+02.56
DESIGN SPEED = 55 MPH	DESIGN SPEED = 55 MPH

LEGEND

PLAN

—·—·—	EX CENTERLINE
—·—·—	PR CENTERLINE
═══	EX TRACK CENTERLINE
═══	PR TRACK CENTERLINE
———	PR TRACK STRUCTURE
—— —	EX ROADWAY RIGHT-OF-WAY
—— —	EX RAILROAD RIGHT-OF-WAY
—·—·—	PR PERMANENT ENVELOPE
———	PR ROADWAY/HARDSCAPE
▬	PR STATION PLATFORM
▭	EX BUILDING OUTLINE
▭	PR BUILDING OUTLINE
▨	PR PARKING
▨	PR CTA SUBSTATION
═══	PR UPRR TRACK CENTERLINE

UTILITIES

——W——	EXISTING WATER LINES
—›—›—	EXISTING SEWER LINE
——G——	EXISTING GAS LINE
——E——	EXISTING ELECTRIC LINE
——T——	EXISTING TELEPHONE LINE

ENTRANCES

▲	PRIMARY ENTRANCE
△	SECONDARY ENTRANCE
△	EXIT ONLY
➡	PROPOSED PARKING ENTRANCE

PROFILE

- - -	EX GROUND
———	PR TOP OF RAIL
———	PR ELEVATED STRUCTURE DEPTH
▨	PLATFORM LOCATION

PRELIMINARY DRAFT

CWE Transit Group

cta

CHICAGO TRANSIT
AUTHORITY

SENSITIVE SECURITY INFORMATION

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RED LINE EXTENSION
ENVIRONMENTAL IMPACT STUDY
UNION PACIFIC RAILROAD
ALTERNATIVE
WEST OPTION

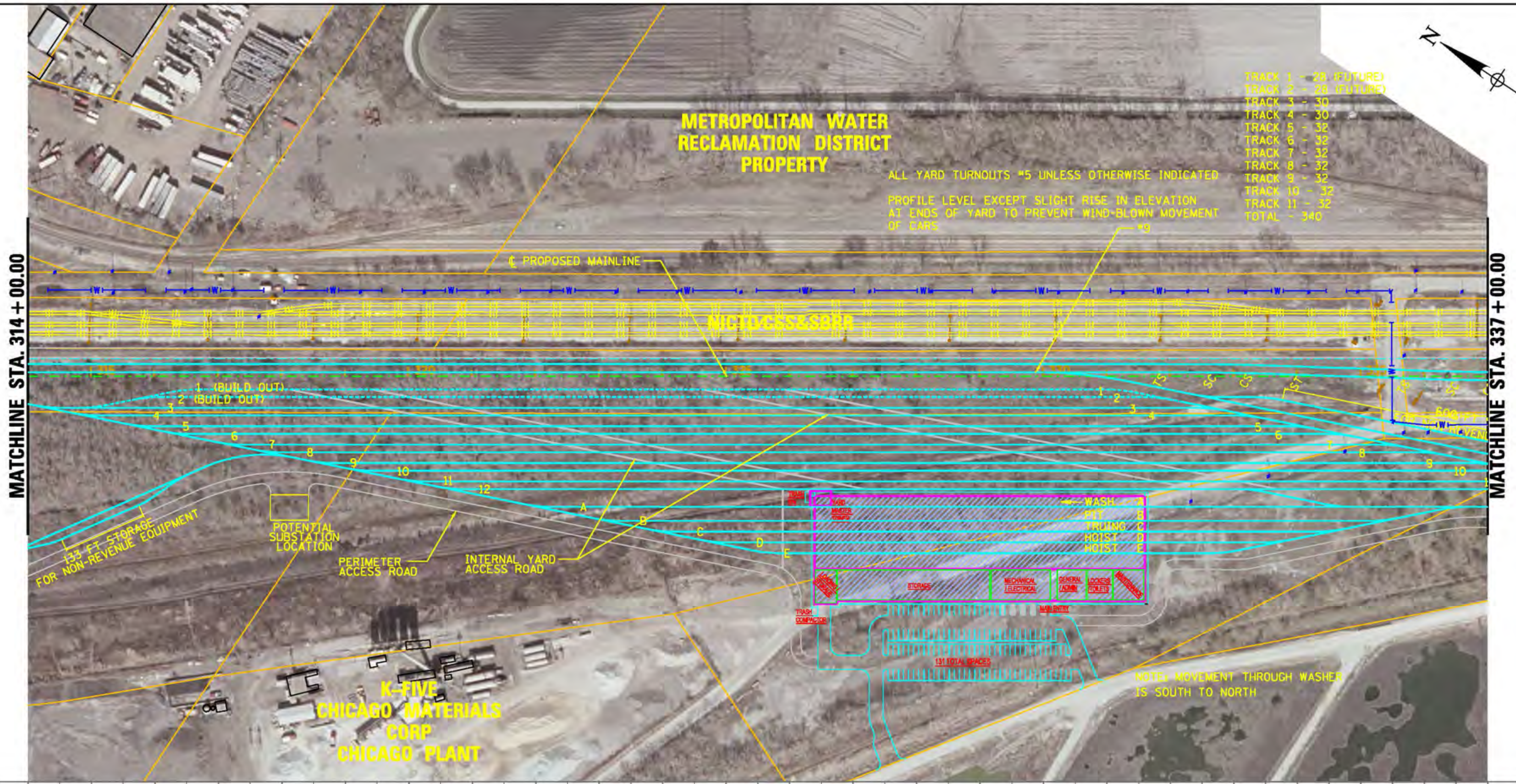
30 OF 51

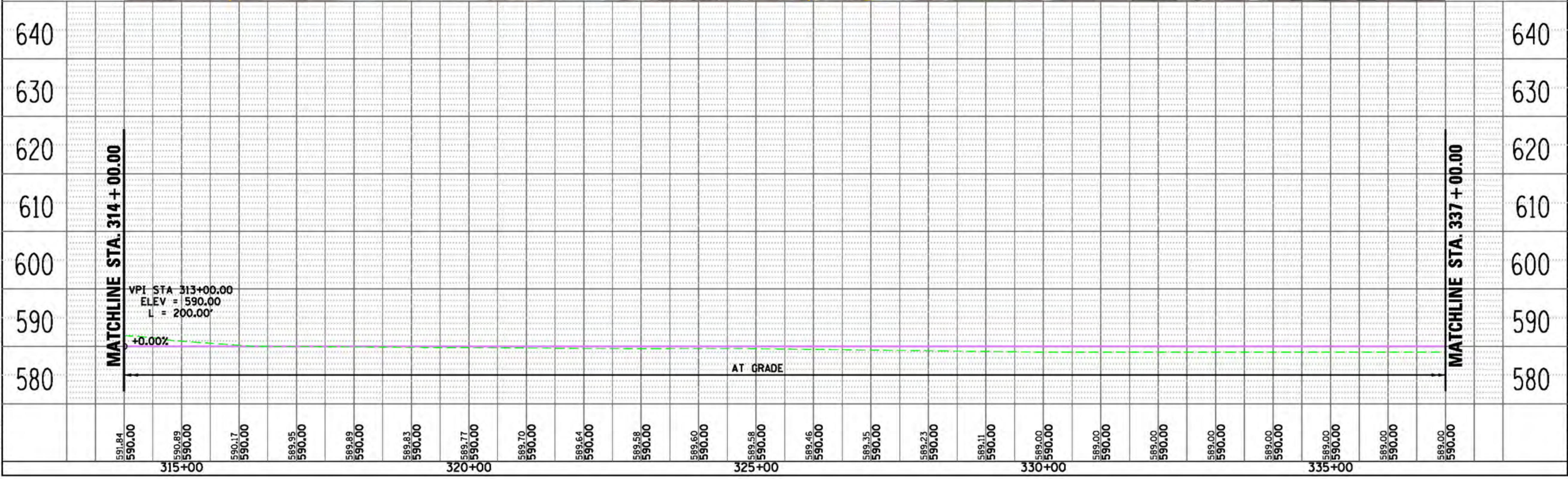
IN CHARGE	
APPROVED BY	
CHECKED BY	
DESIGNED BY	
DRAWN BY	
PROJECT NO	CTA-RLE
FILE NAME	CTARLE_CT_PP_UPRRW_PREFERRED_110.dgn

100 0 100 200
SCALE H 1" = 100'-0"
V 1" = 10'-0"

MARK	DATE	DESCRIPTION

SHEET TITLE


MATCHLINE STA. 314+00.00
MATCHLINE STA. 337+00.00
N
METROPOLITAN WATER RECLAMATION DISTRICT PROPERTY
ALL YARD TURNOUTS #5 UNLESS OTHERWISE INDICATED
PROFILE LEVEL EXCEPT SLIGHT RISE IN ELEVATION AT ENDS OF YARD TO PREVENT WIND-BLOWN MOVEMENT OF CARS
#9
TRACK 1 - 28 (FUTURE)
TRACK 2 - 28 (FUTURE)
TRACK 3 - 30
TRACK 4 - 30
TRACK 5 - 32
TRACK 6 - 32
TRACK 7 - 32
TRACK 8 - 32
TRACK 9 - 32
TRACK 10 - 32
TRACK 11 - 32
TOTAL - 340
℄ PROPOSED MAINLINE
NICTD/CSS&SBRR
1 (BUILD OUT)
2 (BUILD OUT)
3
4
5
6
7
8
9
10
11
12
A
B
C
D
E
TS
SC
CS
ST
135 FT STORAGE FOR NON-REVENUE EQUIPMENT
POTENTIAL SUBSTATION LOCATION
PERIMETER ACCESS ROAD
INTERNAL YARD ACCESS ROAD
TRASH BIN
YARD MASTER TOWER
WASH A
PIT B
TRUING C
HOIST D
HOIST E
LOADING STORAGE
STORAGE
MECHANICAL / ELECTRICAL
GENERAL / ADMIN
LOCKERS /TOILETS
MAINTENANCE
MAIN ENTRY
TRASH COMPACTOR
131 TOTAL SPACES
NOTE: MOVEMENT THROUGH WASHER IS SOUTH TO NORTH
K-FIVE CHICAGO MATERIALS CORP CHICAGO PLANT



LEGEND

PLAN

- EX CENTERLINE
- PR CENTERLINE
- EX TRACK CENTERLINE
- PR TRACK CENTERLINE
- PR TRACK STRUCTURE
- EX ROADWAY RIGHT-OF-WAY
- EX RAILROAD RIGHT-OF-WAY
- PR PERMANENT ENVELOPE
- PR ROADWAY/HARDSCAPE
- PR STATION PLATFORM
- EX BUILDING OUTLINE
- PR BUILDING OUTLINE
- PR PARKING
- PR CTA SUBSTATION

UTILITIES

- EXISTING WATER LINES
- EXISTING SEWER LINE
- EXISTING GAS LINE
- EXISTING ELECTRIC LINE
- EXISTING TELEPHONE LINE

ENTRANCES

- ▲ PRIMARY ENTRANCE
- △ SECONDARY ENTRANCE
- EXIT ONLY
- ⇄ PROPOSED PARKING ENTRANCE

PROFILE

- EX GROUND
- PR TOP OF RAIL
- PR ELEVATED STRUCTURE DEPTH
- PLATFORM LOCATION

PRELIMINARY DRAFT

CWE Transit Group

cta

CHICAGO TRANSIT AUTHORITY

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RED LINE EXTENSION
ENVIRONMENTAL IMPACT STUDY
UNION PACIFIC RAILROAD
ALTERNATIVE
WEST OPTION

30 OF 51

IN CHARGE	
APPROVED BY	
CHECKED BY	
DESIGNED BY	
DRAWN BY	
PROJECT NO	CTA-RLE
FILE NAME	CTARLE_CT_PP_UPRRW_PREFERRED_111.dgn

100 0 100 200
SCALE H 1" = 100'-0"
V 1" = 10'-0"

MARK	DATE	DESCRIPTION

SHEET TITLE

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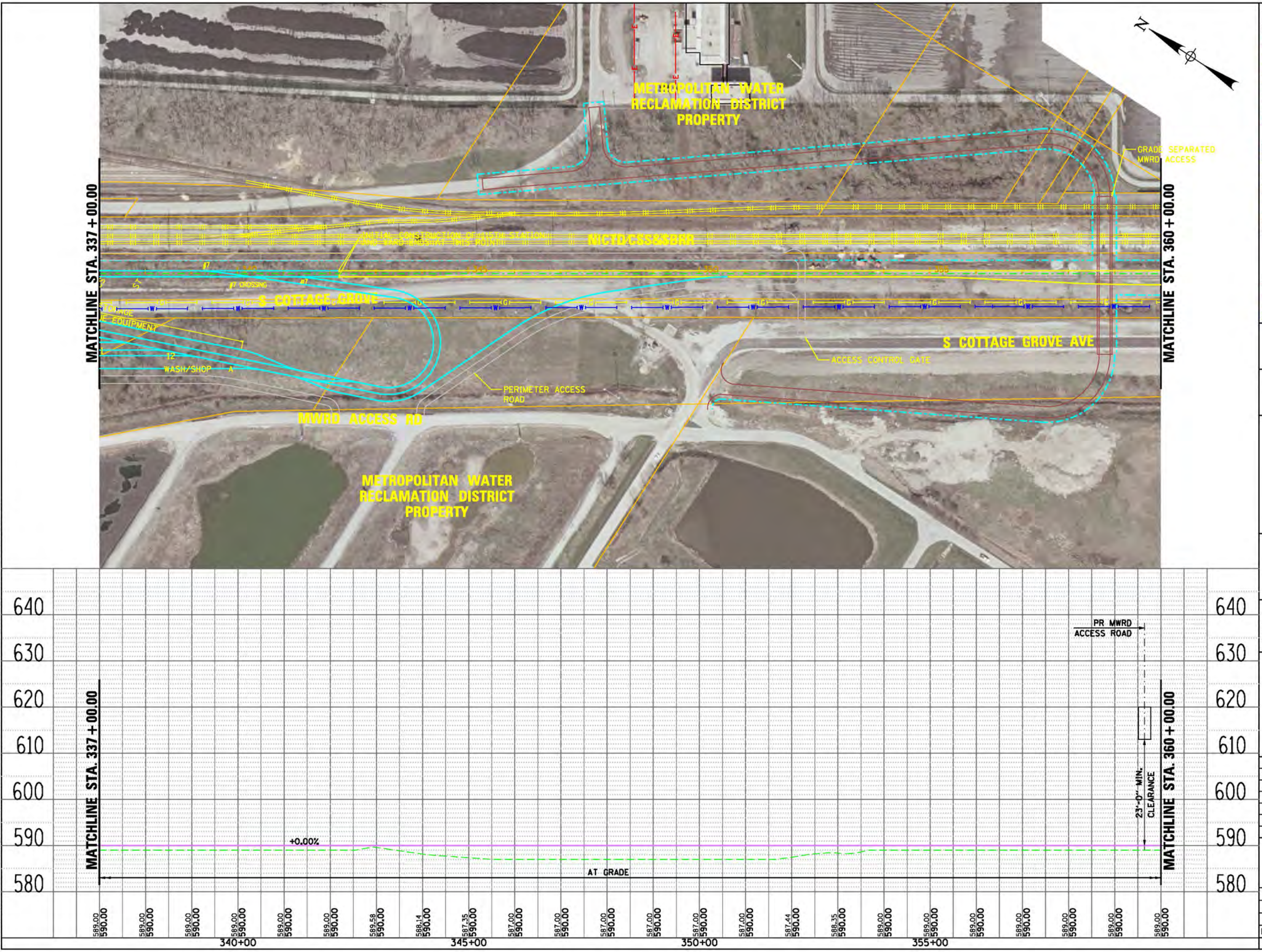
METROPOLITAN WATER RECLAMATION DISTRICT PROPERTY
GRADE SEPARATED MWRD ACCESS
NICTD/CSS&SBRR
S COTTAGE GROVE
#7 CROSSING
STORAGE
EQUIPMENT
WASH/SHOP
12
S COTTAGE GROVE AVE
ACCESS CONTROL GATE
PERIMETER ACCESS ROAD
MWRD ACCESS RD
METROPOLITAN WATER RECLAMATION DISTRICT PROPERTY
MATCHLINE STA. 337+00.00
MATCHLINE STA. 360+00.00
640
630
620
610
600
590
580
PR MWRD ACCESS ROAD
23'-0" MIN. CLEARANCE
+0.00%
AT GRADE
589.00 590.00
589.00 590.00
589.00 590.00
589.00 590.00
589.00 590.00
589.00 590.00
589.58 590.00
588.14 590.00
587.35 590.00
587.00 590.00
587.00 590.00
587.00 590.00
587.00 590.00
587.00 590.00
587.00 590.00
587.44 590.00
588.35 590.00
589.00 590.00
589.00 590.00
589.00 590.00
589.00 590.00
589.00 590.00
589.00 590.00
589.00 590.00
340+00
345+00
350+00
355+00
N

7/24/2015 8:27:43 AM
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LEGEND

PLAN

- EX CENTERLINE
- PR CENTERLINE
- EX TRACK CENTERLINE
- PR TRACK CENTERLINE
- PR TRACK STRUCTURE
- EX ROADWAY RIGHT-OF-WAY
- EX RAILROAD RIGHT-OF-WAY
- PR PERMANENT ENVELOPE
- PR ROADWAY/HARDSCAPE
- PR STATION PLATFORM
- EX BUILDING OUTLINE
- PR BUILDING OUTLINE
- PR PARKING
- PR CTA SUBSTATION

UTILITIES

- EXISTING WATER LINES
- EXISTING SEWER LINE
- EXISTING GAS LINE
- EXISTING ELECTRIC LINE
- EXISTING TELEPHONE LINE

ENTRANCES

- ▲ PRIMARY ENTRANCE
- △ SECONDARY ENTRANCE
- EXIT ONLY
- PROPOSED PARKING ENTRANCE

PROFILE

- EX GROUND
- PR TOP OF RAIL
- PR ELEVATED STRUCTURE DEPTH
- PLATFORM LOCATION

PRELIMINARY DRAFT

CWE Transit Group

CHICAGO TRANSIT AUTHORITY

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RED LINE EXTENSION
ENVIRONMENTAL IMPACT STUDY
UNION PACIFIC RAILROAD
ALTERNATIVE
WEST OPTION

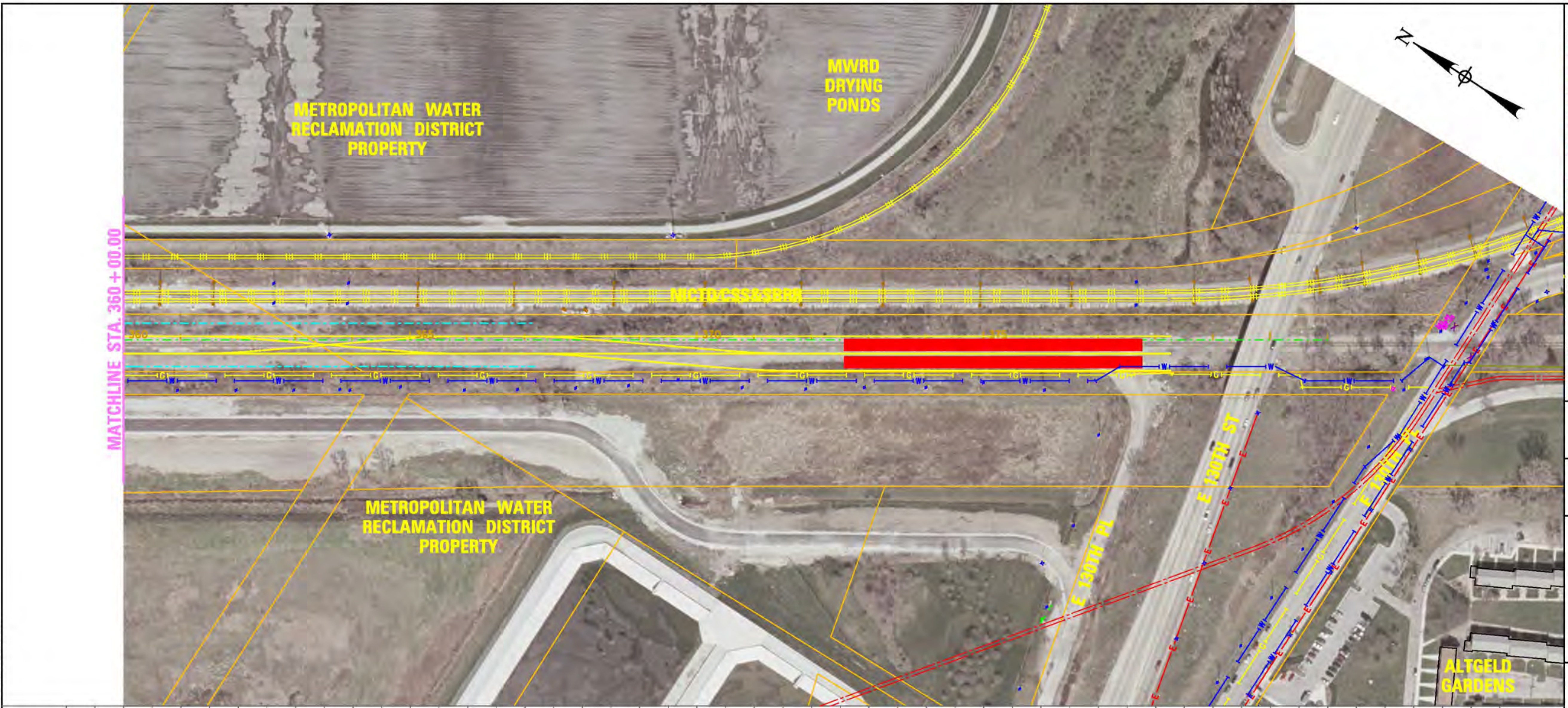
32 OF 51

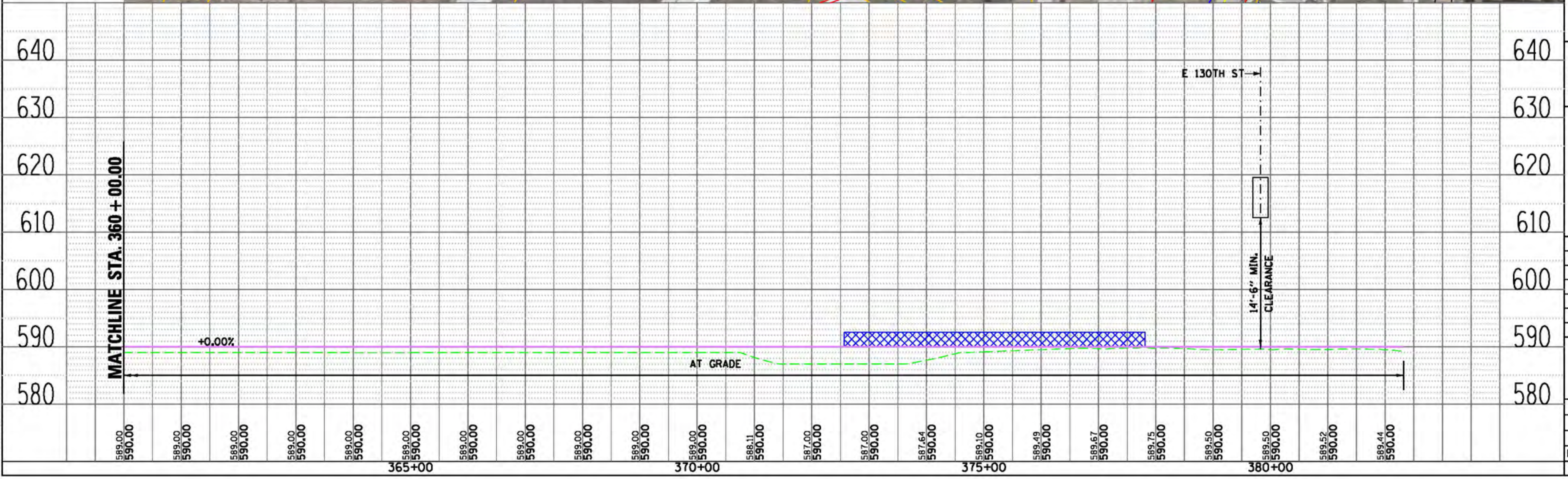
IN CHARGE
APPROVED BY
CHECKED BY
DESIGNED BY
DRAWN BY
PROJECT NO CTA-RLE
FILE NAME CTARLE_CT_PP_UPRRW_PREFERRED_112.dgn

100 0 100 200
SCALE H 1" = 100'-0"
V 1" = 10'-0"

MARK	DATE	DESCRIPTION

SHEET TITLE


METROPOLITAN WATER RECLAMATION DISTRICT PROPERTY
MWRD DRYING PONDS
N
NICTD CSS&SBRR
MATCHLINE STA. 360+00.00
360
365
370
375
METROPOLITAN WATER RECLAMATION DISTRICT PROPERTY
E 130TH PL
E 130TH ST
ALTGELD GARDENS



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LEGEND

PLAN

—·—·—	EX CENTERLINE
—·—·—	PR CENTERLINE
═╪═	EX TRACK CENTERLINE
——	PR TRACK CENTERLINE
——	PR TRACK STRUCTURE
— — —	EX ROADWAY RIGHT-OF-WAY
— — —	EX RAILROAD RIGHT-OF-WAY
—·—·—	PR PERMANENT ENVELOPE
——	PR ROADWAY/HARDSCAPE
🟥	PR STATION PLATFORM
▭	EX BUILDING OUTLINE
▭	PR BUILDING OUTLINE
▨	PR PARKING
▨	PR CTA SUBSTATION
═╪═	PR UPRR TRACK CENTERLINE

UTILITIES

—W—	EXISTING WATER LINES
—>—>—	EXISTING SEWER LINE
—G—	EXISTING GAS LINE
—E—	EXISTING ELECTRIC LINE
—T—	EXISTING TELEPHONE LINE

ENTRANCES

▲	PRIMARY ENTRANCE
△	SECONDARY ENTRANCE
⇣	EXIT ONLY
⇄	PROPOSED PARKING ENTRANCE

PROFILE

— — —	EX GROUND
——	PR TOP OF RAIL
——	PR ELEVATED STRUCTURE DEPTH
▩	PLATFORM LOCATION

PRELIMINARY DRAFT

CWC Transit Group

cta

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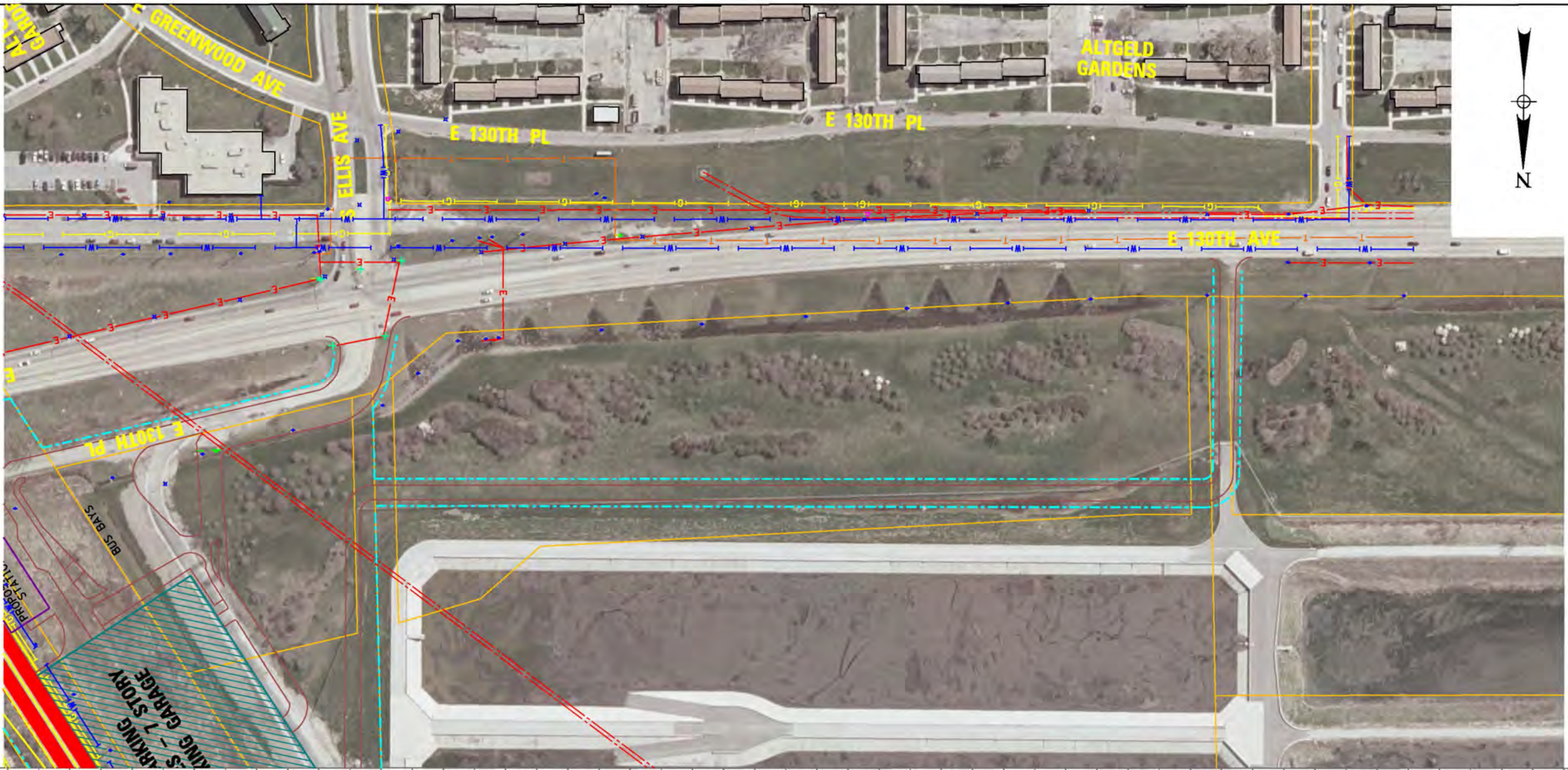
RED LINE EXTENSION
ENVIRONMENTAL IMPACT STUDY
UNION PACIFIC RAILROAD
ALTERNATIVE
WEST OPTION

IN CHARGE	
APPROVED BY	
CHECKED BY	
DESIGNED BY	
DRAWN BY	
PROJECT NO	CTA-RLE
FILE NAME	CTARLE_CT_PP_UPRRW_PREFERRED_113.dgn

100 0 100 200
SCALE H 1" = 100'-0"
V 1" = 10'-0"

MARK	DATE	DESCRIPTION

SHEET TITLE



LEGEND

PLAN

— · — · —	EX CENTERLINE
— · — · —	PR CENTERLINE
═══	EX TRACK CENTERLINE
———	PR TRACK CENTERLINE
———	PR TRACK STRUCTURE
— — —	EX ROADWAY RIGHT-OF-WAY
— — —	EX RAILROAD RIGHT-OF-WAY
- · - · -	PR PERMANENT ENVELOPE
———	PR ROADWAY/HARDSCAPE
🟥	PR STATION PLATFORM
▭	EX BUILDING OUTLINE
▭	PR BUILDING OUTLINE
▨	PR PARKING
▨	PR CTA SUBSTATION
═══	PR UPRR TRACK CENTERLINE

UTILITIES

—W—	EXISTING WATER LINES
›—›—›	EXISTING SEWER LINE
—G—	EXISTING GAS LINE
—E—	EXISTING ELECTRIC LINE
—T—	EXISTING TELEPHONE LINE

ENTRANCES

▲	PRIMARY ENTRANCE
△	SECONDARY ENTRANCE
△	EXIT ONLY
⇄	PROPOSED PARKING ENTRANCE

PROFILE

— — —	EX GROUND
———	PR TOP OF RAIL
———	PR ELEVATED STRUCTURE DEPTH
▩	PLATFORM LOCATION

PRELIMINARY DRAFT

CWC Transit Group

cta

CHICAGO TRANSIT
AUTHORITY

SENSITIVE SECURITY INFORMATION

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RED LINE EXTENSION
ENVIRONMENTAL IMPACT STUDY
UNION PACIFIC RAILROAD
ALTERNATIVE
WEST OPTION

34 OF 51

IN CHARGE
APPROVED BY
CHECKED BY
DESIGNED BY
DRAWN BY
PROJECT NO CTA-RLE
FILE NAME CTARLE_CT_PP_UPRRW_PREFERRED_114.dgn

100 0 100 200
SCALE H 1" = 100'-0"
V 1" = 10'-0"

MARK	DATE	DESCRIPTION

SHEET TITLE

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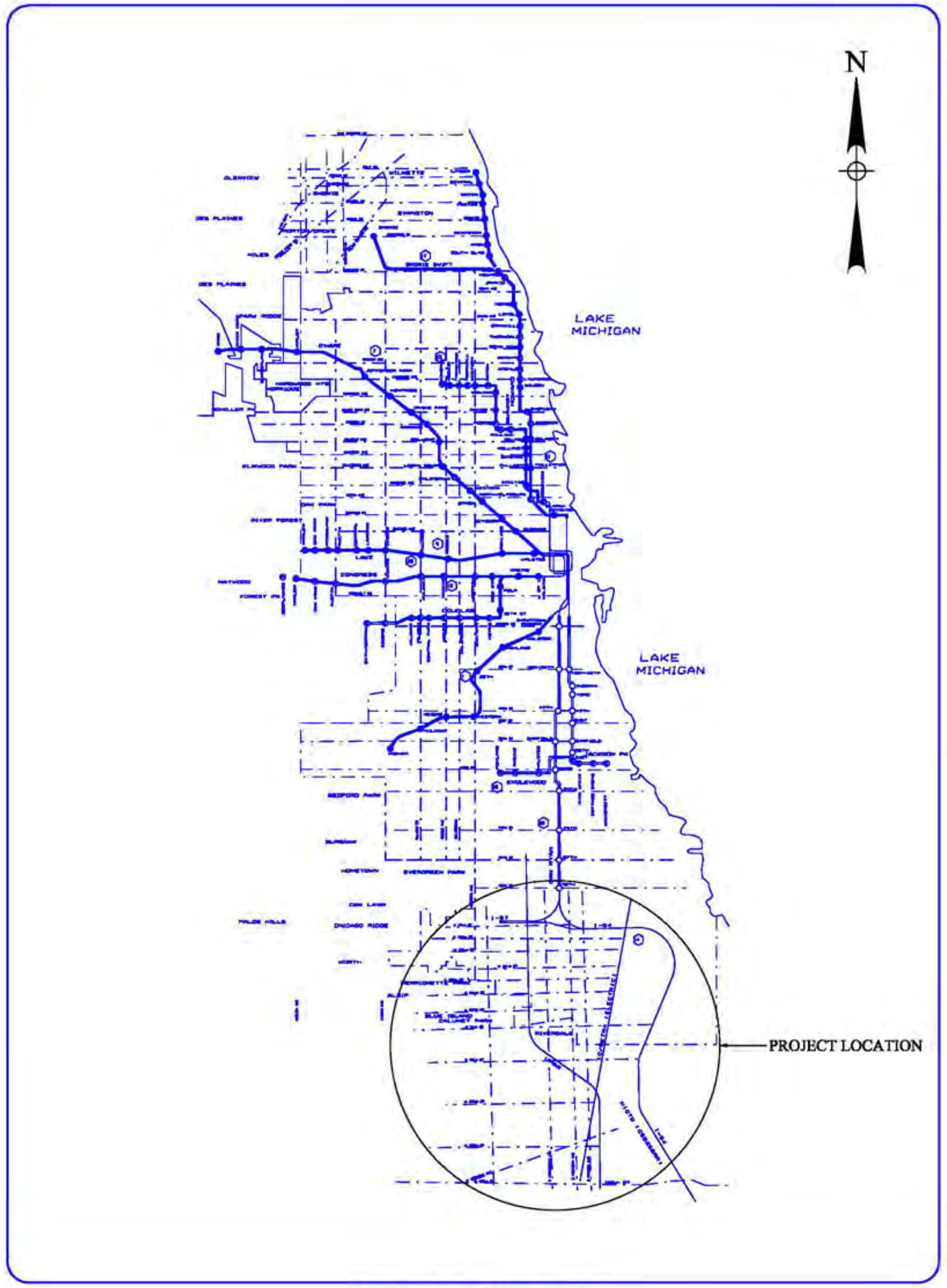
DRAFT ENVIRONMENTAL IMPACT STATEMENT
CTA RED LINE EXTENSION
ALL ALTERNATIVES
PIER LOCATIONS



ORIENTATION MAP

INDEX

ALL ALTERNATIVES

PIER LOCATIONS 35 - 43

MAY 1, 2015

PRELIMINARY DRAFT

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RED LINE EXTENSION
ENVIRONMENTAL IMPACT STUDY
ALL ALTERNATIVES
PIER LOCATIONS

IN CHARGE
APPROVED BY
CHECKED BY
DESIGNED BY
DRAWN BY
PROJECT NO CTA-RLE
FILE NAME CTARLE_G_COVER_PIERS.dgn

MARK	DATE	DESCRIPTION

SHEET TITLE

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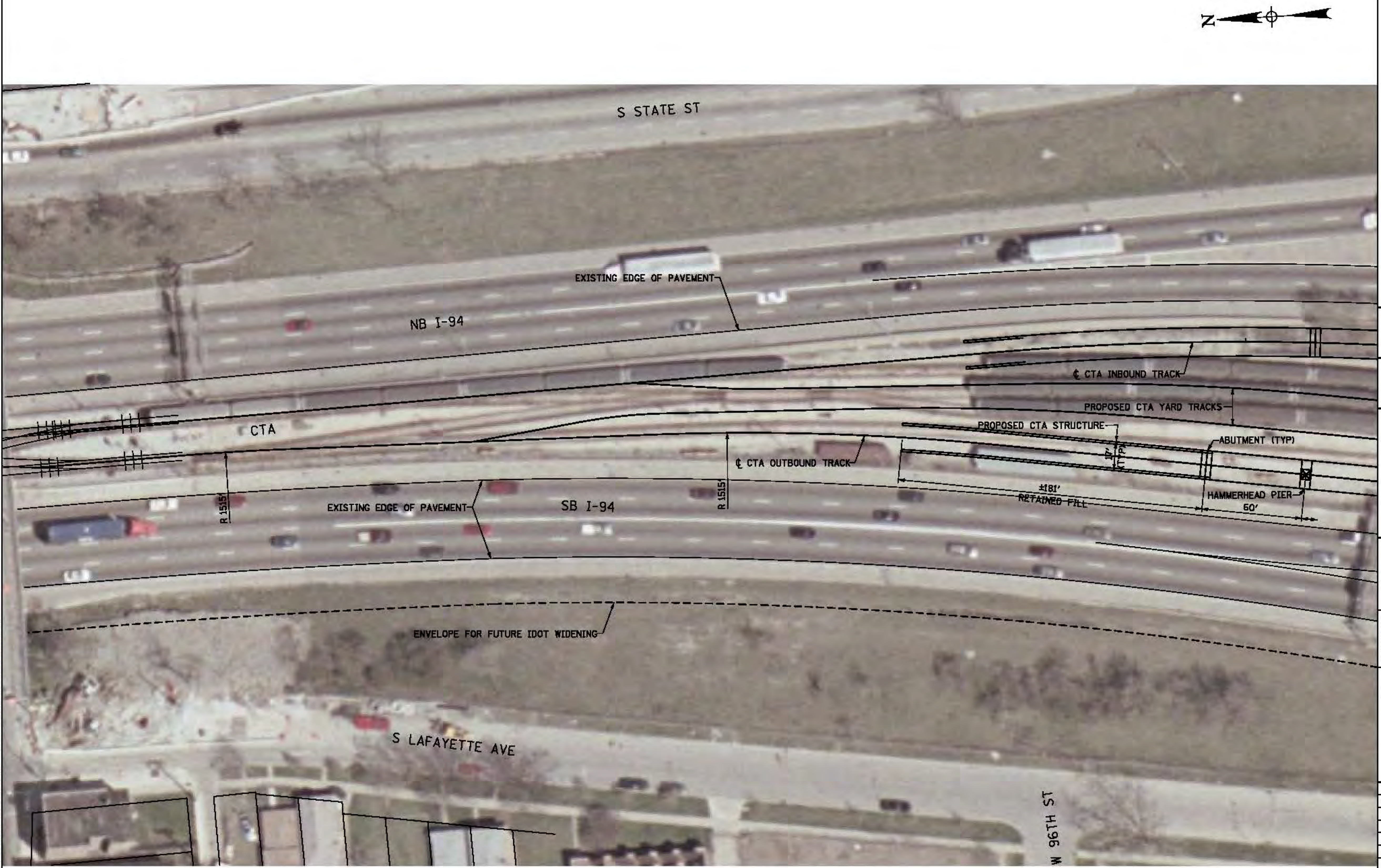
N
S STATE ST
EXISTING EDGE OF PAVEMENT
NB I-94
℄ CTA INBOUND TRACK
PROPOSED CTA YARD TRACKS
CTA
PROPOSED CTA STRUCTURE
ABUTMENT (TYP)
12' (TYP)
℄ CTA OUTBOUND TRACK
R 1515'
R 1515'
EXISTING EDGE OF PAVEMENT
SB I-94
±181'
RETAINED FILL
HAMMERHEAD PIER
60'
ENVELOPE FOR FUTURE IDOT WIDENING
S LAFAYETTE AVE
W 96TH ST

PLAN

PRELIMINARY DRAFT

CWC Transit Group

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RED LINE EXTENSION
ENVIRONMENTAL IMPACT STUDY

ALL ALTERNATIVES
PIER LOCATION
SOUTH OF 95TH ST STATION

36 OF 51

IN CHARGE
APPROVED BY
CHECKED BY
DESIGNED BY
DRAWN BY
PROJECT NO CTA-RLE
FILE NAME EXH_CTARLE_ST_P_95THPIER01_North.dgn

30 0 30 60
SCALE H 1" = 30'-0"

MARK	DATE	DESCRIPTION

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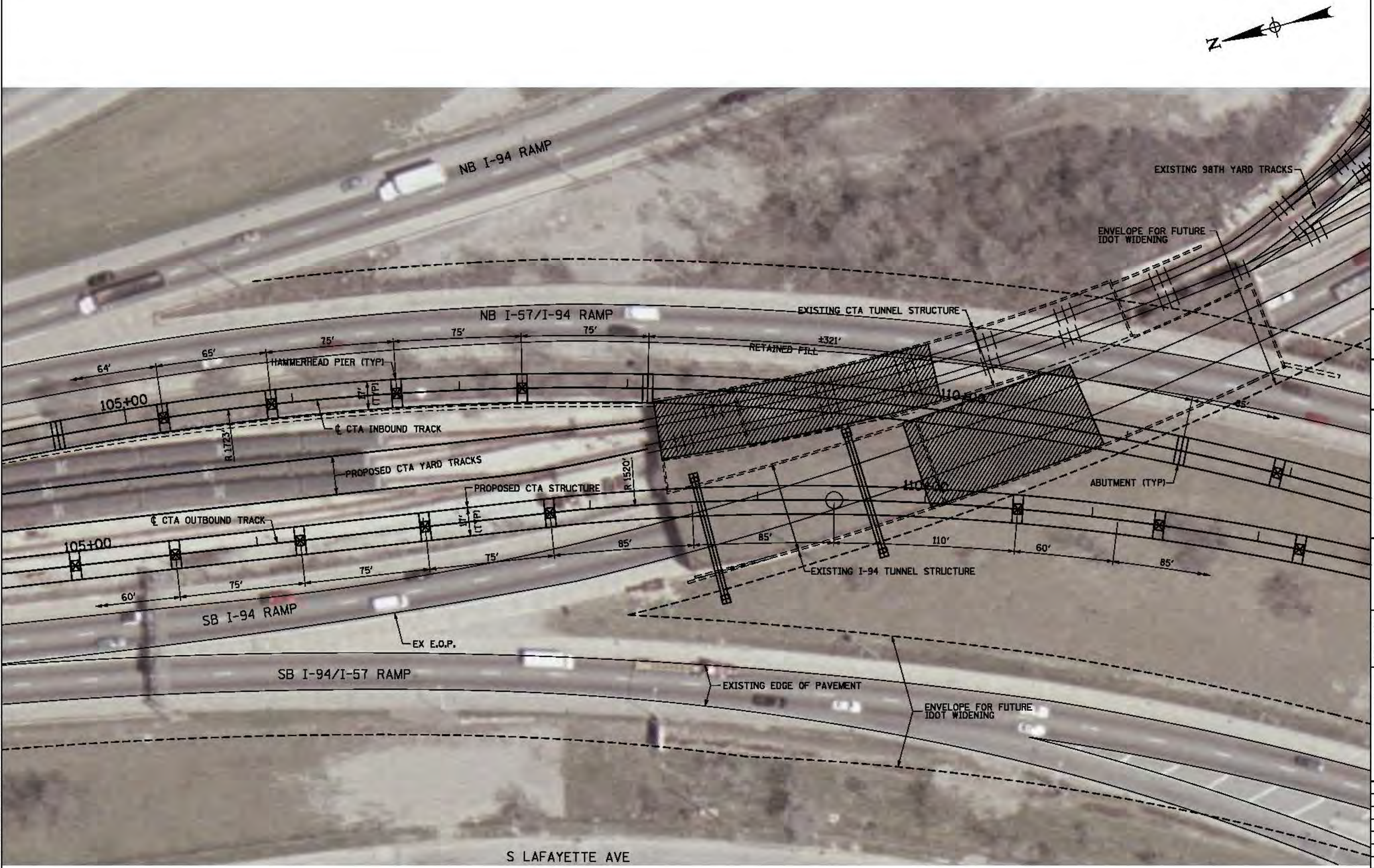
N
NB I-94 RAMP
EXISTING 98TH YARD TRACKS
ENVELOPE FOR FUTURE IDOT WIDENING
NB I-57/I-94 RAMP
EXISTING CTA TUNNEL STRUCTURE
±321'
RETAINED FILL
64'
65'
75'
75'
75'
HAMMERHEAD PIER (TYP)
17' (TYP)
105+00
℄ CTA INBOUND TRACK
R 1723'
PROPOSED CTA YARD TRACKS
R 1520'
PROPOSED CTA STRUCTURE
110+00
110+00
85'
ABUTMENT (TYP)
℄ CTA OUTBOUND TRACK
17' (TYP)
105+00
85'
85'
110'
60'
85'
75'
75'
75'
60'
EXISTING I-94 TUNNEL STRUCTURE
SB I-94 RAMP
EX E.O.P.
SB I-94/I-57 RAMP
EXISTING EDGE OF PAVEMENT
ENVELOPE FOR FUTURE IDOT WIDENING
S LAFAYETTE AVE

PLAN

LEGEND

▨ RE-DECK EXISTING TUNNEL SUPERSTRUCTURE

PRELIMINARY DRAFT

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RED LINE EXTENSION
ENVIRONMENTAL IMPACT STUDY

ALL ALTERNATIVES
PIER LOCATION
SOUTH OF 95TH ST STATION

37 OF 51

IN CHARGE	
APPROVED BY	
CHECKED BY	
DESIGNED BY	
DRAWN BY	
PROJECT NO	CTA–RLE
FILE NAME	EXH_CTARLE_ST_P_95THPIER02_North.dgn

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SCALE H 1" = 30'-0"

MARK	DATE	DESCRIPTION

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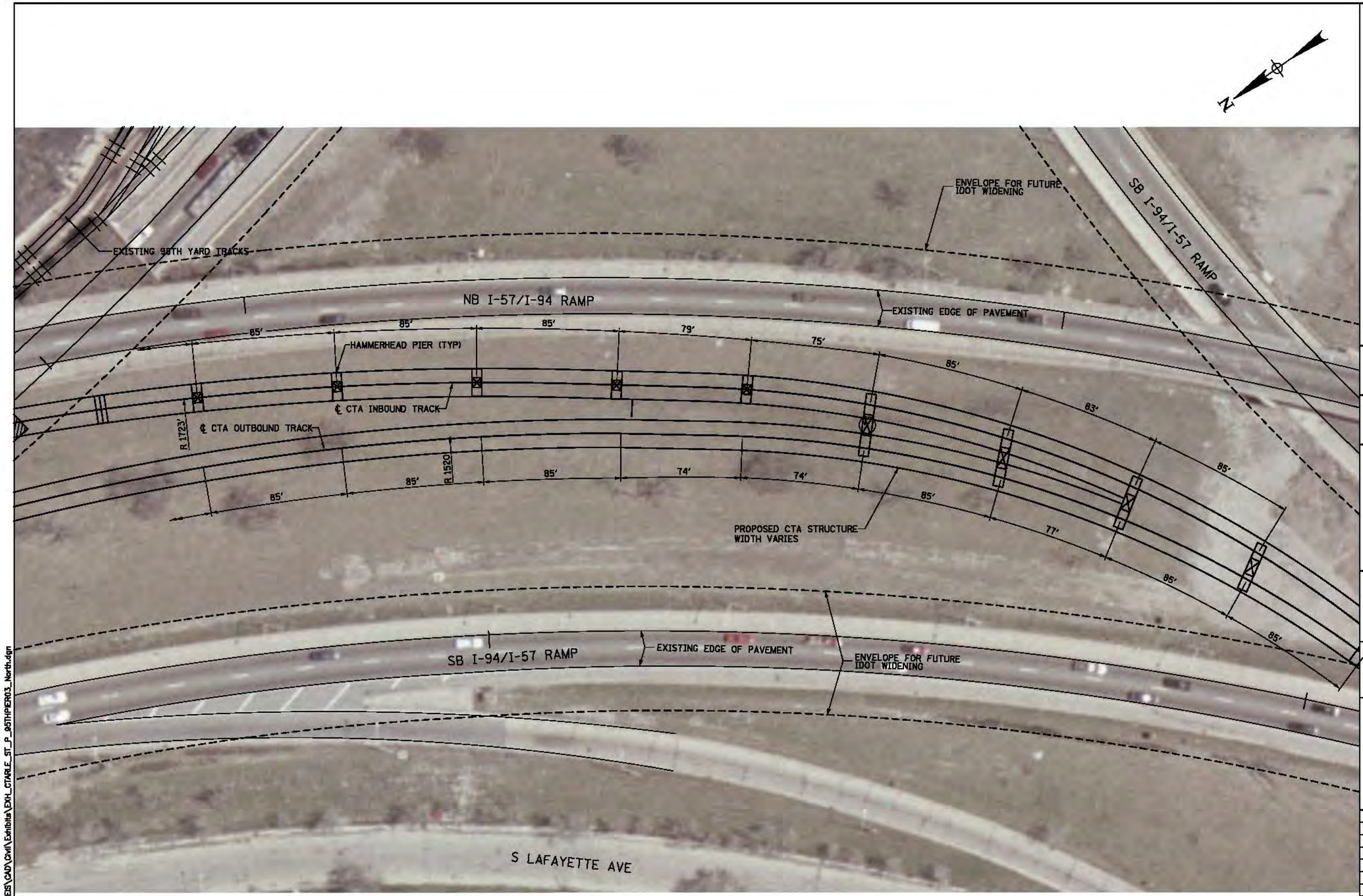
N
ENVELOPE FOR FUTURE IDOT WIDENING
SB I-94/I-57 RAMP
EXISTING 95TH YARD TRACKS
NB I-57/I-94 RAMP
EXISTING EDGE OF PAVEMENT
85'
85'
79'
75'
85'
83'
85'
85'
HAMMERHEAD PIER (TYP)
℄ CTA INBOUND TRACK
℄ CTA OUTBOUND TRACK
R 1723'
R 1520'
85'
85'
85'
74'
74'
85'
77'
85'
PROPOSED CTA STRUCTURE WIDTH VARIES
SB I-94/I-57 RAMP
EXISTING EDGE OF PAVEMENT
ENVELOPE FOR FUTURE IDOT WIDENING
S LAFAYETTE AVE

PLAN

PRELIMINARY DRAFT

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RED LINE EXTENSION
ENVIRONMENTAL IMPACT STUDY

ALL ALTERNATIVES
PIER LOCATION
SOUTH OF 95TH ST STATION

38 OF 51

IN CHARGE
APPROVED BY
CHECKED BY
DESIGNED BY
DRAWN BY
PROJECT NO CTA-RLE
FILE NAME EXH_CTARLE_ST_P_95THPIER03_North.dgn

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SCALE H 1" = 30'-0"

MARK	DATE	DESCRIPTION

SHEET TITLE

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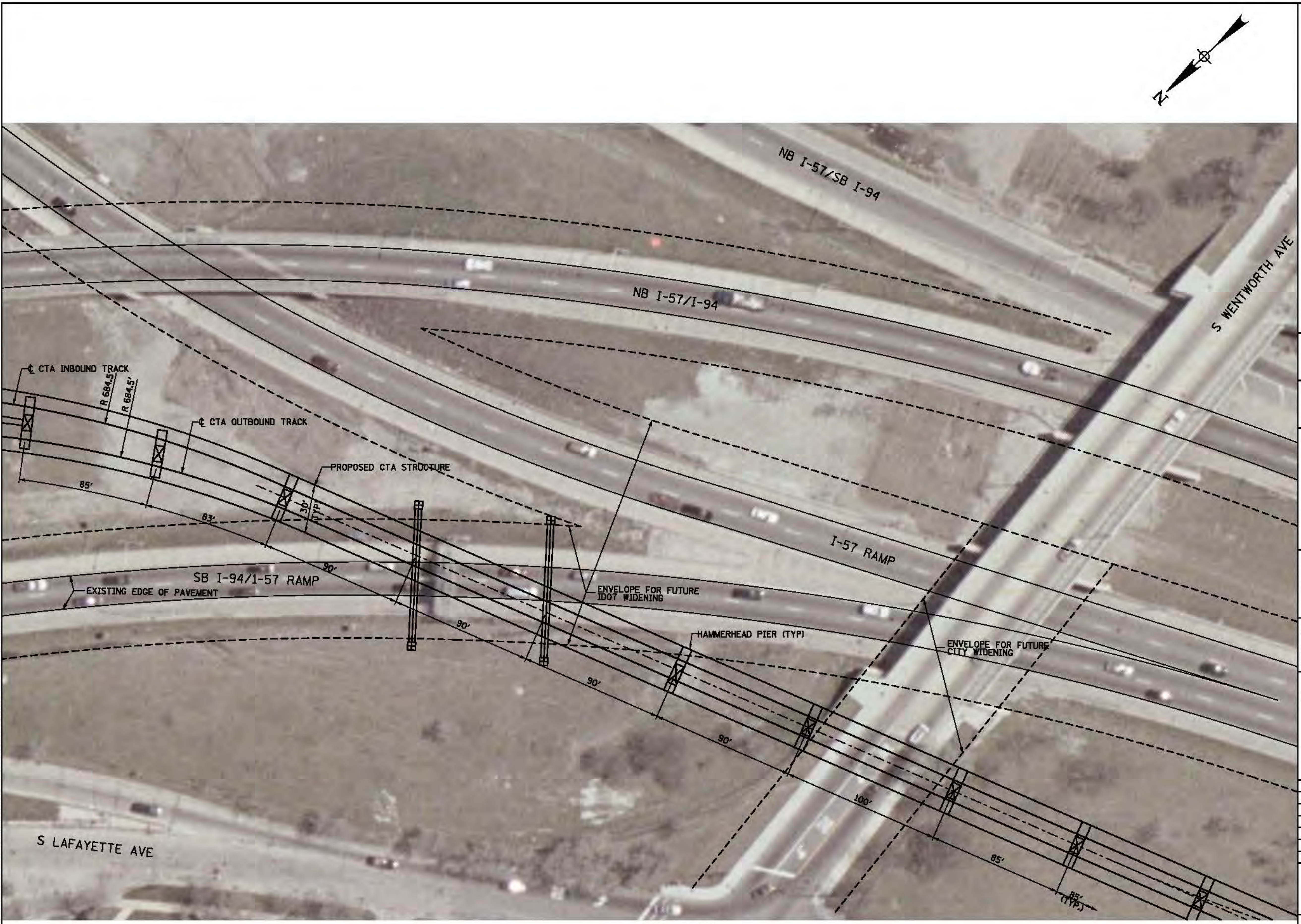
N
NB I-57/SB I-94
S WENTWORTH AVE
NB I-57/I-94
℄ CTA INBOUND TRACK
R 684.5'
R 684.5'
℄ CTA OUTBOUND TRACK
PROPOSED CTA STRUCTURE
85'
83'
30' (TYP)
90'
I-57 RAMP
SB I-94/I-57 RAMP
EXISTING EDGE OF PAVEMENT
ENVELOPE FOR FUTURE IDOT WIDENING
90'
HAMMERHEAD PIER (TYP)
ENVELOPE FOR FUTURE CITY WIDENING
90'
90'
100'
85'
85' (TYP.)
S LAFAYETTE AVE

PLAN

PRELIMINARY DRAFT

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RED LINE EXTENSION
ENVIRONMENTAL IMPACT STUDY

ALL ALTERNATIVES
PIER LOCATION
SOUTH OF 95TH ST STATION

39 OF 51

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DRAWN BY
PROJECT NO CTA–RLE
FILE NAME EXH_CTARLE_ST_P_95THPIER04_North.dgn

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SCALE H 1" = 30'-0"

MARK	DATE	DESCRIPTION

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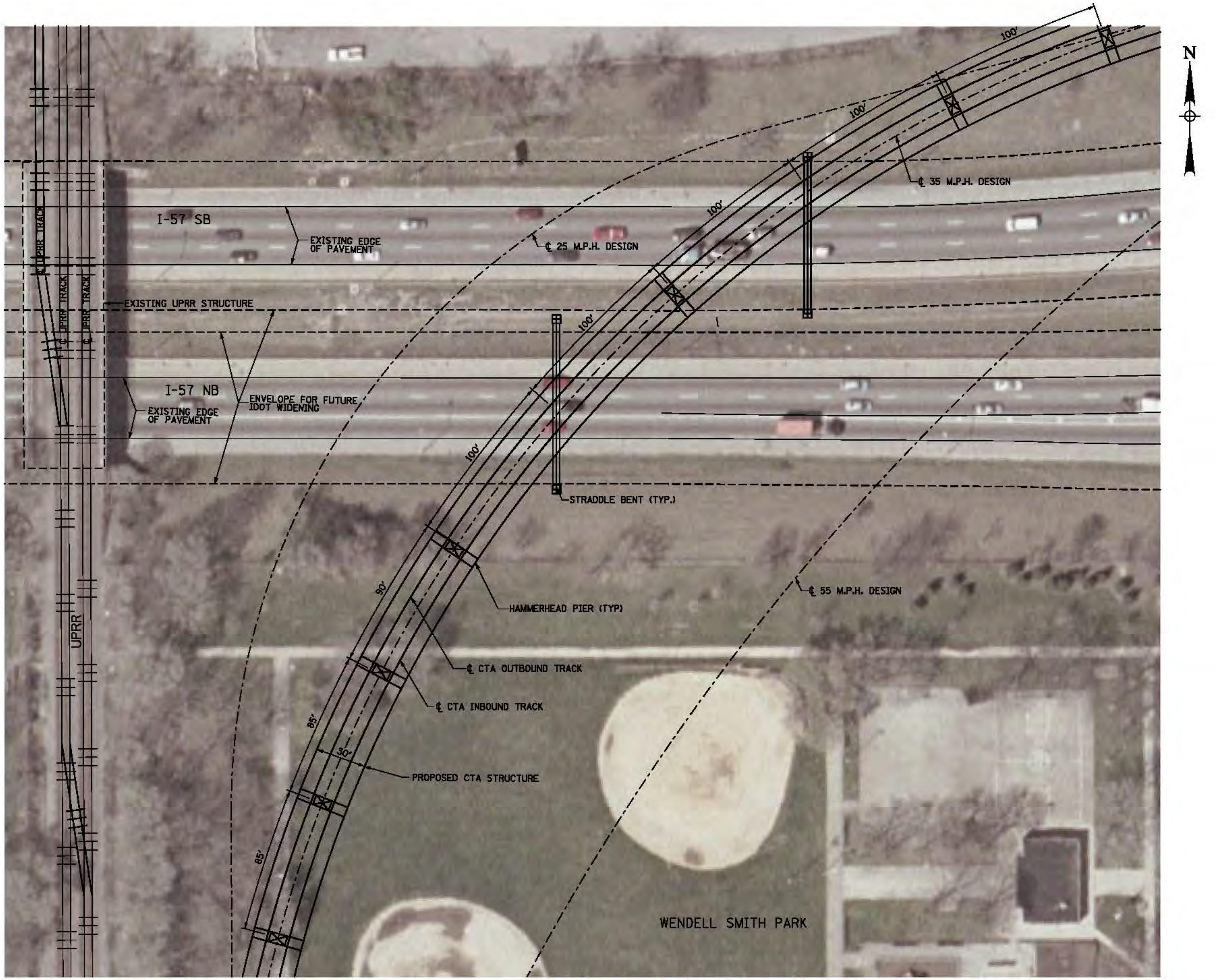
N
100'
100'
100'
100'
100'
90'
85'
85'
30'
℄ 35 M.P.H. DESIGN
I-57 SB
EXISTING EDGE OF PAVEMENT
℄ 25 M.P.H. DESIGN
℄ UPRR TRACK
℄ UPRR TRACK
℄ UPRR TRACK
EXISTING UPRR STRUCTURE
I-57 NB
ENVELOPE FOR FUTURE IDOT WIDENING
EXISTING EDGE OF PAVEMENT
STRADDLE BENT (TYP.)
℄ 55 M.P.H. DESIGN
HAMMERHEAD PIER (TYP)
UPRR
℄ CTA OUTBOUND TRACK
℄ CTA INBOUND TRACK
PROPOSED CTA STRUCTURE
WENDELL SMITH PARK

PRELIMINARY DRAFT

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RED LINE EXTENSION
ENVIRONMENTAL IMPACT STUDY
UNION PACIFIC RAILROAD
EAST SIDE ALTERNATIVE
PIER LOCATION OVER I-57

40 OF 51

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DESIGNED BY
DRAWN BY
PROJECT NO CTA-RLE
FILE NAME EXH_CTARLE_ST_P_95THPIER05_NorthEastA2.dg

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SCALE H 1" = 30'-0"

MARK	DATE	DESCRIPTION

SHEET TITLE

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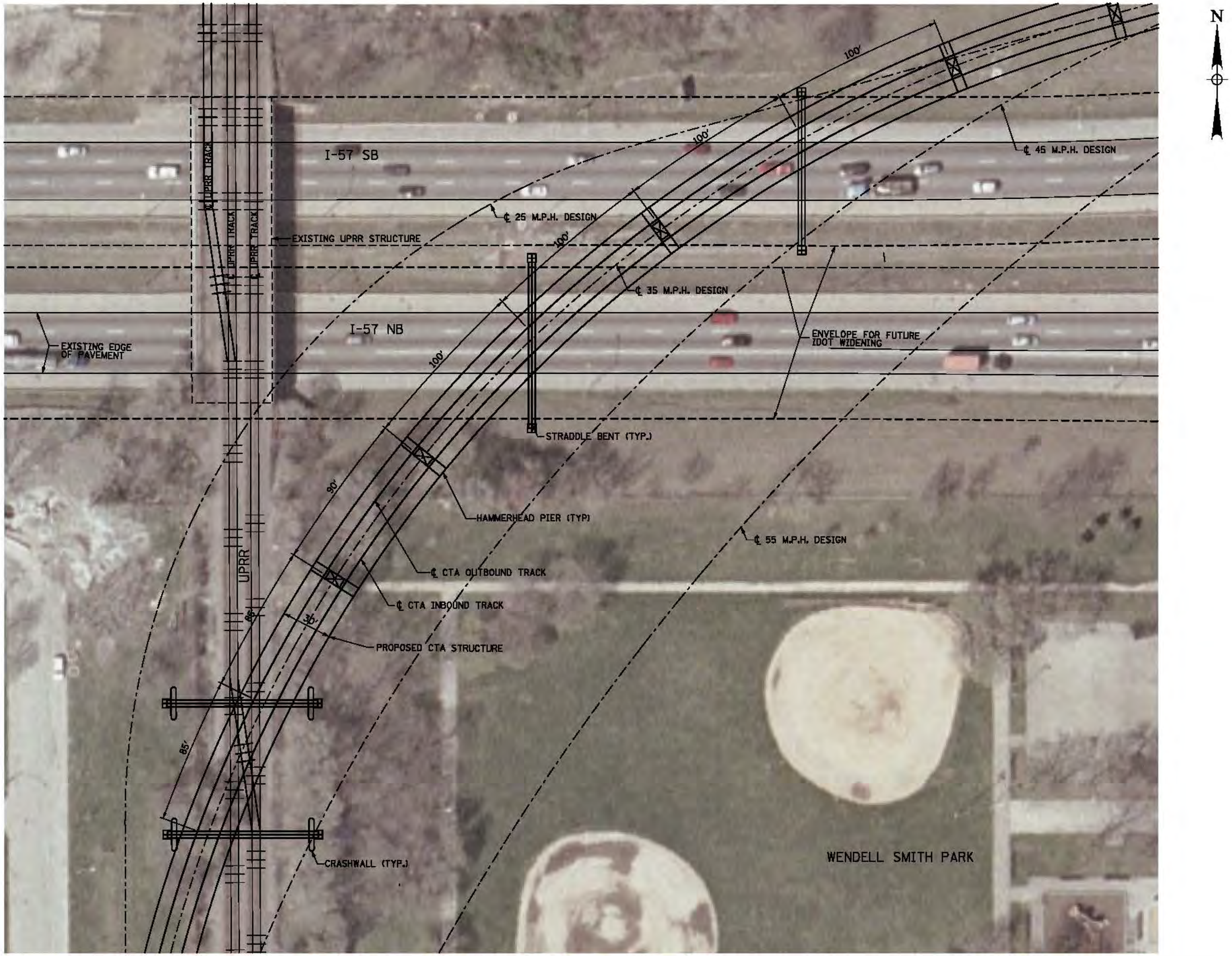
N
I-57 SB
I-57 NB
UPRR TRACK
UPRR TRACK
UPRR TRACK
UPRR
EXISTING UPRR STRUCTURE
EXISTING EDGE OF PAVEMENT
℄ 25 M.P.H. DESIGN
℄ 35 M.P.H. DESIGN
℄ 45 M.P.H. DESIGN
℄ 55 M.P.H. DESIGN
ENVELOPE FOR FUTURE IDOT WIDENING
STRADDLE BENT (TYP.)
HAMMERHEAD PIER (TYP)
℄ CTA OUTBOUND TRACK
℄ CTA INBOUND TRACK
PROPOSED CTA STRUCTURE
CRASHWALL (TYP.)
WENDELL SMITH PARK
100'
100'
100'
100'
90'
85'
88'
30'

PRELIMINARY DRAFT

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RED LINE EXTENSION
ENVIRONMENTAL IMPACT STUDY
UNION PACIFIC RAILROAD
WEST SIDE ALTERNATIVE
PIER LOCATION OVER I-57

41 OF 51

IN CHARGE	
APPROVED BY	
CHECKED BY	
DESIGNED BY	
DRAWN BY	
PROJECT NO	CTA–RLE
FILE NAME	EXH_CTARLE_ST_P_95THPIER05_NorthWESTA2.dg

30 0 30 60
SCALE H 1" = 30'-0"

MARK	DATE	DESCRIPTION

SHEET TITLE

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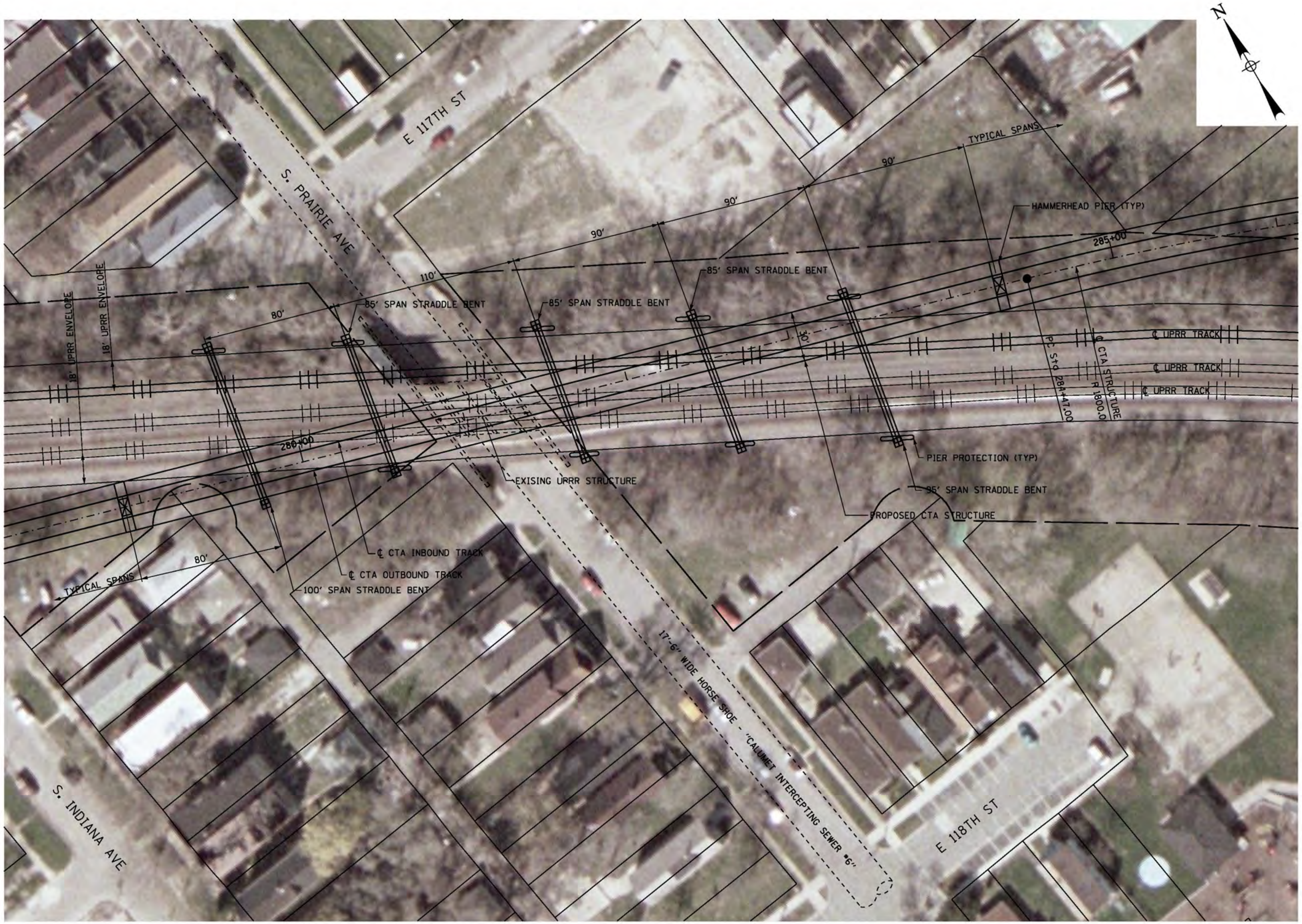
N
E 117TH ST
S. PRAIRIE AVE
S. INDIANA AVE
E 118TH ST
18' UPRR ENVELOPE
18' UPRR ENVELOPE
80'
110'
90'
90'
90'
TYPICAL SPANS
HAMMERHEAD PIER (TYP)
285+00
85' SPAN STRADDLE BENT
85' SPAN STRADDLE BENT
85' SPAN STRADDLE BENT
85' SPAN STRADDLE BENT
30'
PC Sta 284+47.00
R 1800.0
℄ CTA STRUCTURE
℄ UPRR TRACK
℄ UPRR TRACK
℄ UPRR TRACK
280+00
PIER PROTECTION (TYP)
EXISING UPRR STRUCTURE
95' SPAN STRADDLE BENT
PROPOSED CTA STRUCTURE
℄ CTA INBOUND TRACK
℄ CTA OUTBOUND TRACK
80'
TYPICAL SPANS
100' SPAN STRADDLE BENT
17'-6" WIDE HORSE SHOE "CALUMET INTERCEPTING SEWER #6"

PLAN

7/24/2015 9:23:40 AM
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PRELIMINARY DRAFT

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RED LINE EXTENSION
ENVIRONMENTAL IMPACT STUDY
UNION PACIFIC RAILROAD
WEST SIDE ALTERNATIVE
PIER LOCATION OVER PRAIRIE AVE

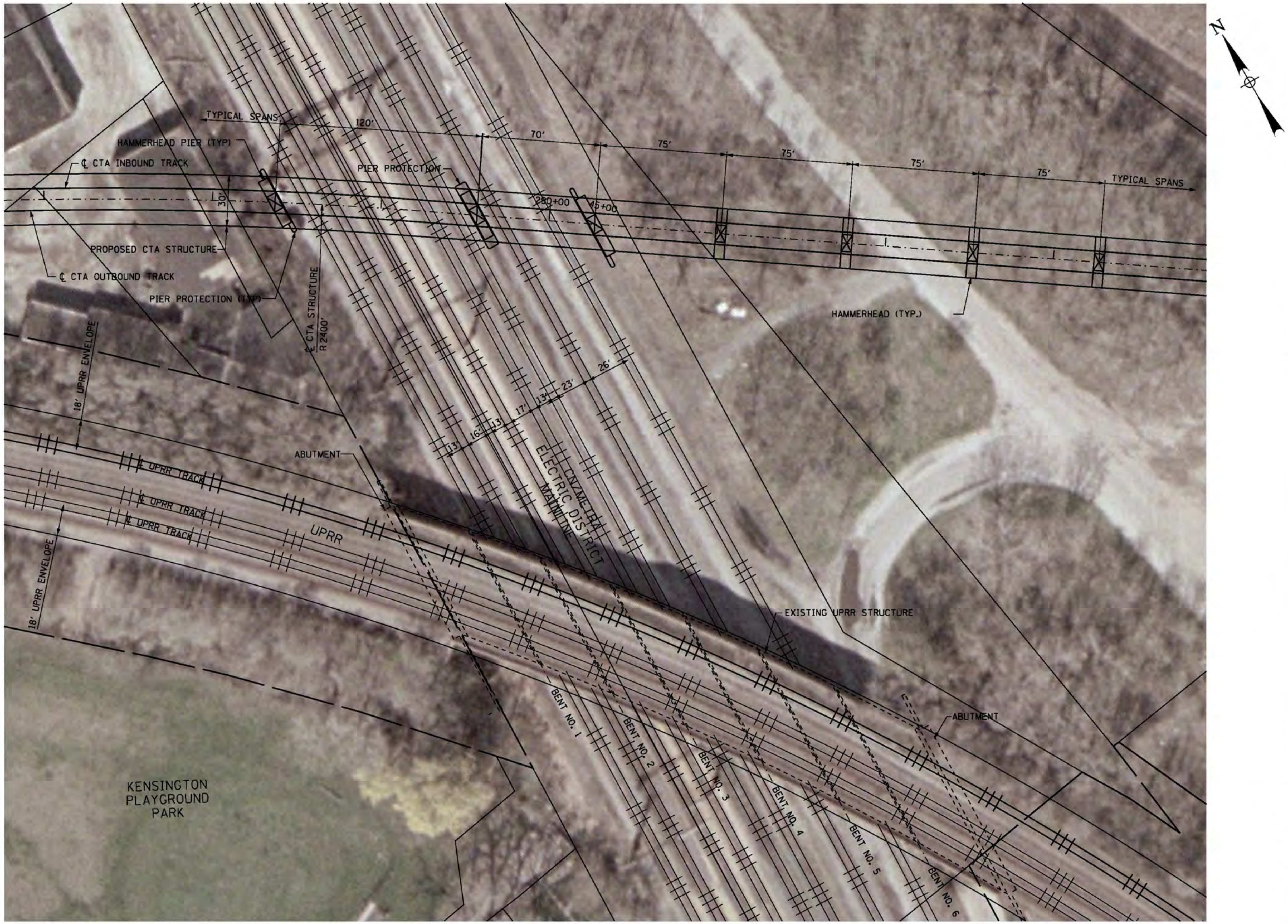
42 OF 51

IN CHARGE
APPROVED BY
CHECKED BY
DESIGNED BY
DRAWN BY
PROJECT NO CTA-RLE
FILE NAME CTARLE_ST_P_UPWPRPIER.dgn

30 0 30 60
SCALE H 1" = 30'-0"

MARK	DATE	DESCRIPTION

SHEET TITLE


N
TYPICAL SPANS
120'
70'
75'
75'
75'
75'
TYPICAL SPANS
HAMMERHEAD PIER (TYP)
℄ CTA INBOUND TRACK
PIER PROTECTION
30'
250+00
255+00
PROPOSED CTA STRUCTURE
℄ CTA OUTBOUND TRACK
PIER PROTECTION (TYP)
℄ CTA STRUCTURE R 2400'
HAMMERHEAD (TYP.)
18' UPRR ENVELOPE
26'
23'
13'
17'
13'
16'
13'
ABUTMENT
CN/METRA ELECTRIC DISTRICT MAIN LINE
℄ UPRR TRACK
℄ UPRR TRACK
℄ UPRR TRACK
UPRR
18' UPRR ENVELOPE
EXISTING UPRR STRUCTURE
ABUTMENT
BENT NO. 1
BENT NO. 2
BENT NO. 3
BENT NO. 4
BENT NO. 5
BENT NO. 6
KENSINGTON PLAYGROUND PARK

PLAN

PRELIMINARY DRAFT

CWC Transit Group

cta

CHICAGO TRANSIT AUTHORITY

SENSITIVE SECURITY INFORMATION

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RED LINE EXTENSION
ENVIRONMENTAL IMPACT STUDY
UNION PACIFIC RAILROAD
EAST & WEST SIDE ALTERNATIVE
PIER LOCATION OVER CN/METRA

43 OF 51

IN CHARGE
APPROVED BY
CHECKED BY
DESIGNED BY
DRAWN BY
PROJECT NO CTA-RLE
FILE NAME CTARLE_ST_P_UPEMETPIER.dgn

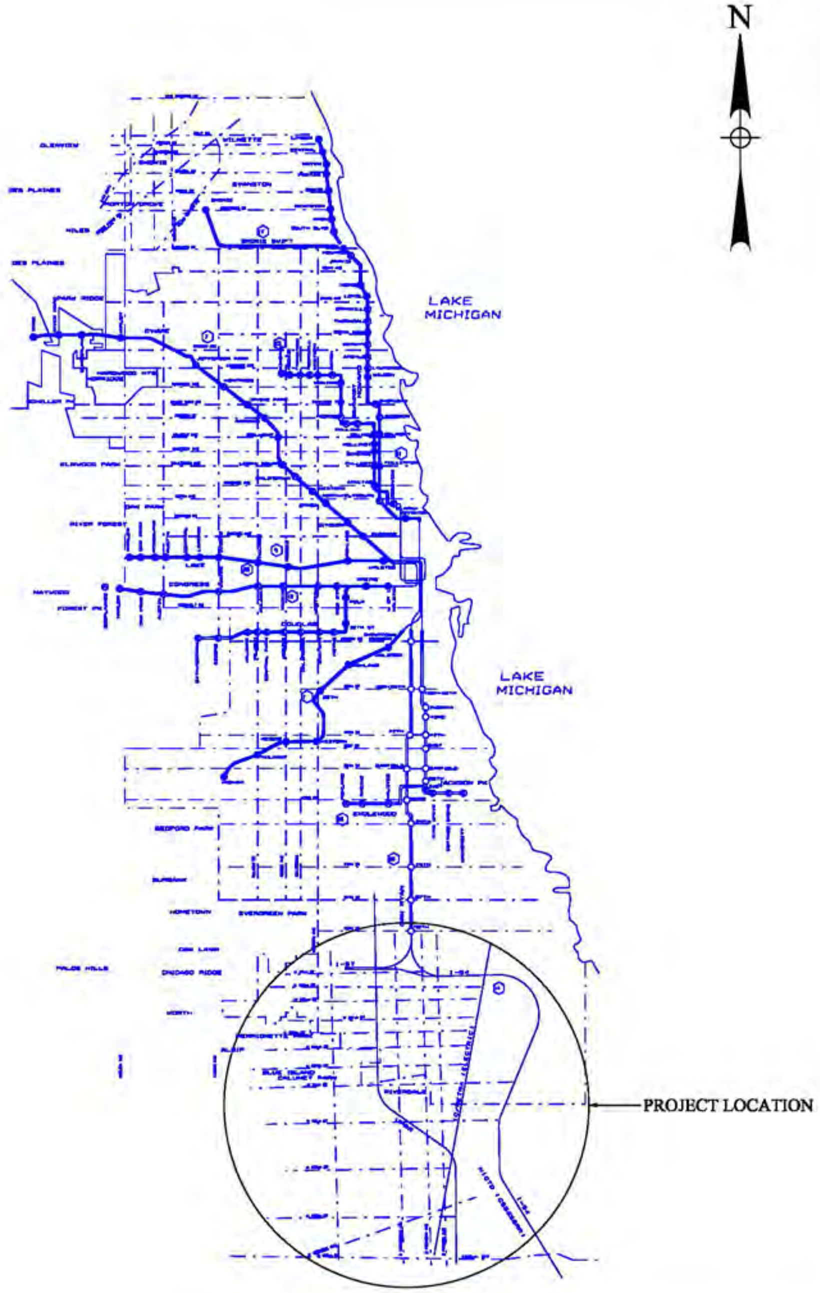
30 0 30 60
SCALE H 1" = 30'-0"

MARK	DATE	DESCRIPTION

SHEET TITLE

7/24/2015 9:24:40 AM
G:\ENG\06-3690-08-RLE_EIS\CAD\Civil\02_Sheets\CTARLE_ST_P_UPEMETPIER.dgn

DRAFT ENVIRONMENTAL IMPACT STATEMENT
CTA RED LINE EXTENSION
ALL ALTERNATIVES
SECTIONS



ORIENTATION MAP

INDEX

ALL ALTERNATIVES

SECTIONS 44 - 51

MAY 1, 2015

PRELIMINARY DRAFT

CWC Transit Group

cta

CHICAGO TRANSIT AUTHORITY

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RED LINE EXTENSION
ENVIRONMENTAL IMPACT STUDY
ALL ALTERNATIVES
SECTIONS

44 OF 51

IN CHARGE
APPROVED BY
CHECKED BY
DESIGNED BY
DRAWN BY
PROJECT NO CTA-RLE
FILE NAME CTARLE_G_COVER_Sections.dgn

MARK	DATE	DESCRIPTION

SHEET TITLE

7/24/2015 9:30:15 AM
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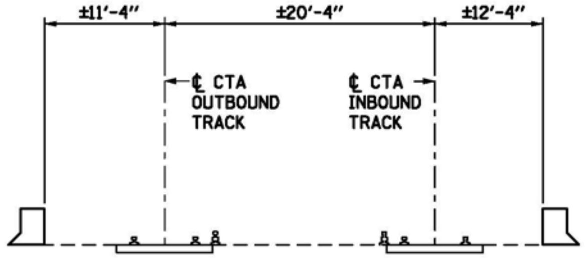
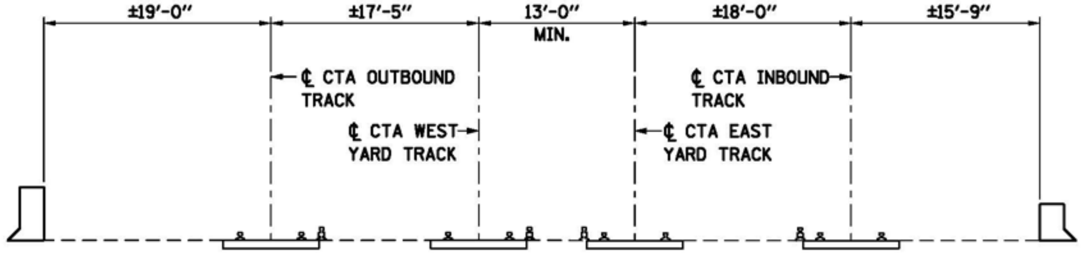

±11'-4"
±20'-4"
±12'-4"
℄ CTA OUTBOUND TRACK
℄ CTA INBOUND TRACK

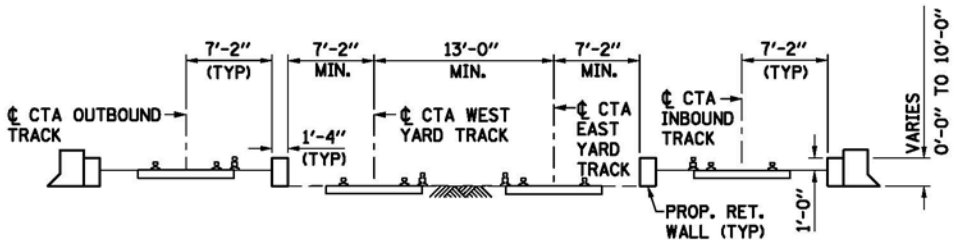
SECTION LEAVING 95TH ST. STATION

LOOKING NORTH


±19'-0"
±17'-5"
13'-0" MIN.
±18'-0"
±15'-9"
℄ CTA OUTBOUND TRACK
℄ CTA WEST YARD TRACK
℄ CTA INBOUND TRACK
℄ CTA EAST YARD TRACK

SECTION AT END OF AT-GRADE TRACK

LOOKING NORTH


7'-2" (TYP)
7'-2" MIN.
13'-0" MIN.
7'-2" MIN.
7'-2" (TYP)
℄ CTA OUTBOUND TRACK
1'-4" (TYP)
℄ CTA WEST YARD TRACK
℄ CTA EAST YARD TRACK
℄ CTA INBOUND TRACK
PROP. RET. WALL (TYP)
1'-0"
VARIES 0'-0" TO 10'-0"

SECTION IN RETAINED EMBANKMENT STRUCTURE

LOOKING NORTH

PRELIMINARY DRAFT

CWC Transit Group

cta

CHICAGO TRANSIT
AUTHORITY

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RED LINE EXTENSION
ENVIRONMENTAL IMPACT STUDY
ALL ALTERNATIVES
SECTIONS SOUTH OF 95TH ST.

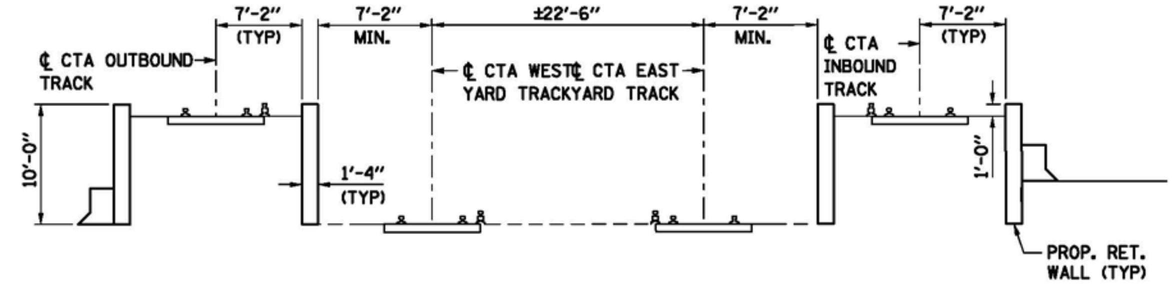
45 OF 51

IN CHARGE
APPROVED BY
CHECKED BY
DESIGNED BY
DRAWN BY
PROJECT NO CTA-RLE
FILE NAME CTARLE_ST_TS_95THSECT01.dgn

MARK	DATE	DESCRIPTION

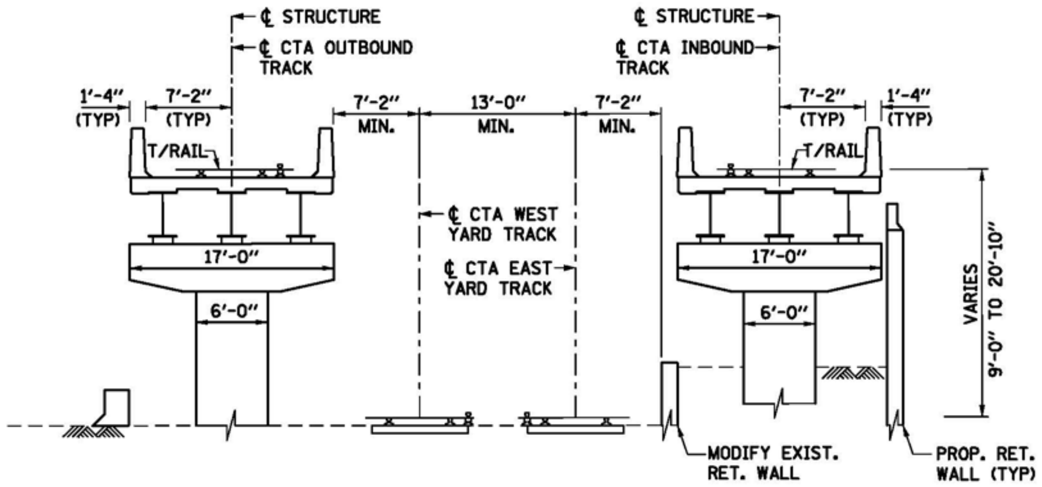
SHEET TITLE

7/24/2015 8:43:05 AM
G:\ENG\06-3690-08-RLE_EIS\CAD\Civil\02_Sheets\CTARLE_ST_TS_95THSECT01.dgn


7'-2" (TYP)
7'-2" MIN.
±22'-6"
7'-2" MIN.
7'-2" (TYP)
℄ CTA OUTBOUND TRACK
℄ CTA WEST YARD TRACK
℄ CTA EAST YARD TRACK
℄ CTA INBOUND TRACK
10'-0"
1'-4" (TYP)
1'-0"
PROP. RET. WALL (TYP)

SECTION AT END OF RETAINED EMBANKMENT STRUCTURE

LOOKING NORTH


℄ STRUCTURE
℄ CTA OUTBOUND TRACK
℄ STRUCTURE
℄ CTA INBOUND TRACK
1'-4" (TYP)
7'-2" (TYP)
7'-2" MIN.
13'-0" MIN.
7'-2" MIN.
7'-2" (TYP)
1'-4" (TYP)
T/RAIL
T/RAIL
℄ CTA WEST YARD TRACK
℄ CTA EAST YARD TRACK
17'-0"
17'-0"
6'-0"
6'-0"
VARIES 9'-0" TO 20'-10"
MODIFY EXIST. RET. WALL
PROP. RET. WALL (TYP)

AERIAL STRUCTURE

LOOKING NORTH

PRELIMINARY DRAFT

CWC Transit Group

cta

CHICAGO TRANSIT
AUTHORITY

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RED LINE EXTENSION
ENVIRONMENTAL IMPACT STUDY
ALL ALTERNATIVES
SECTIONS SOUTH OF 95TH ST.

46 OF 51

IN CHARGE	
APPROVED BY	
CHECKED BY	
DESIGNED BY	
DRAWN BY	
PROJECT NO	CTA–RLE
FILE NAME	CTARLE_ST_TS_95THSECT02.dgn

MARK	DATE	DESCRIPTION

SHEET TITLE

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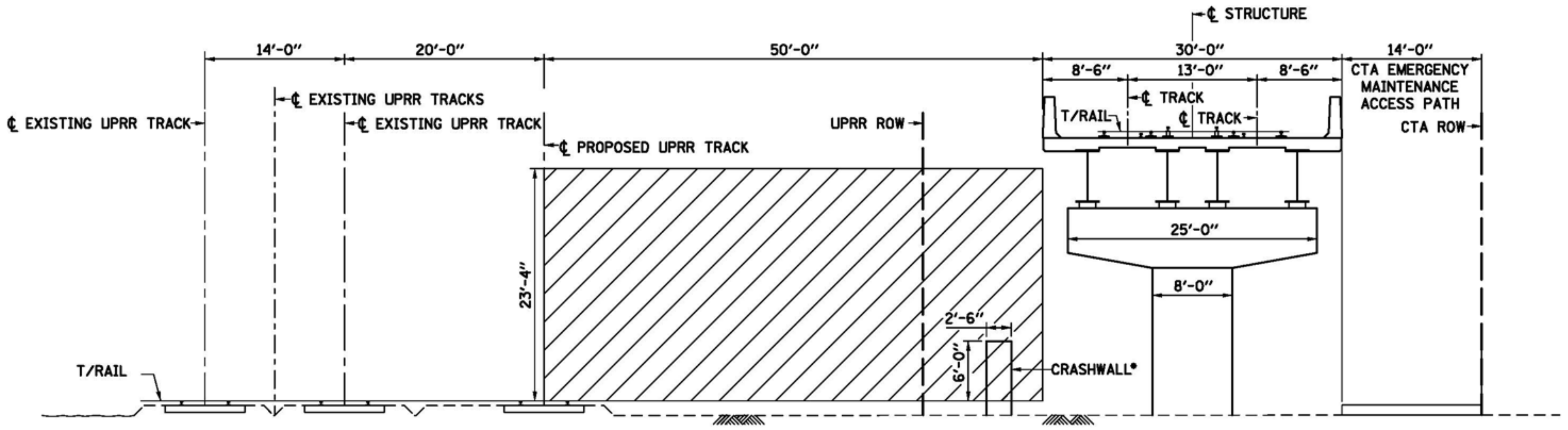
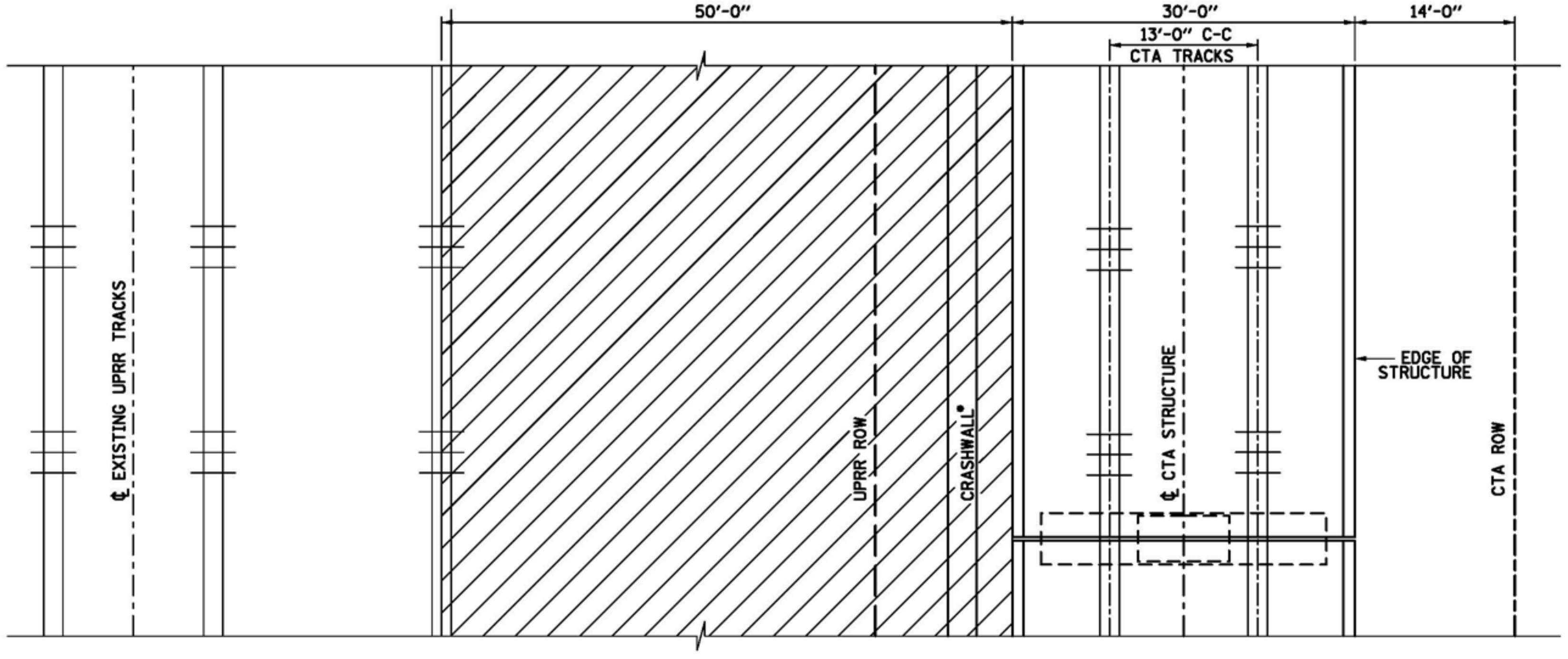

℄ STRUCTURE
14'-0"
20'-0"
50'-0"
30'-0"
14'-0"
8'-6"
13'-0"
8'-6"
CTA EMERGENCY MAINTENANCE ACCESS PATH
CTA ROW
℄ EXISTING UPRR TRACKS
℄ EXISTING UPRR TRACK
℄ EXISTING UPRR TRACK
℄ PROPOSED UPRR TRACK
UPRR ROW
T/RAIL
℄ TRACK
℄ TRACK
25'-0"
8'-0"
23'-4"
2'-6"
6'-0"
CRASHWALL*
T/RAIL

SECTION

*REQUIRED IF CTA STRUCTURE IS LESS THAN 50' FROM ℄ NEAREST UPRR TRACK

LEGEND

▨ REQUIRED UPRR CLEARANCE


50'-0"
30'-0"
14'-0"
13'-0" C-C
CTA TRACKS
℄ EXISTING UPRR TRACKS
UPRR ROW
CRASHWALL*
℄ CTA STRUCTURE
EDGE OF STRUCTURE
CTA ROW

PLAN

7/24/2015 8:43:07 AM
G:\ENG\06-3690-08-RLE_EIS\CAD\Civil\02_Sheets\CTARLE_ST_TS_201_UPCLEAR.dgn

PRELIMINARY DRAFT

CWE Transit Group

cta

CHICAGO TRANSIT
AUTHORITY

SENSITIVE SECURITY INFORMATION

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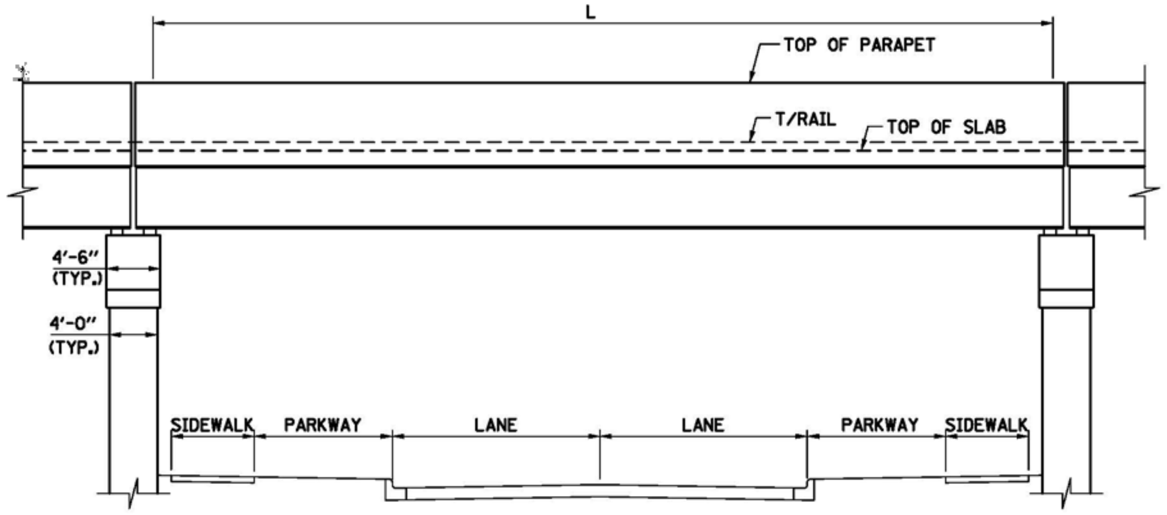
RED LINE EXTENSION
ENVIRONMENTAL IMPACT STUDY
UNION PACIFIC RAILROAD
ALTERNATIVE
CLEARANCE

47 OF 51

IN CHARGE
APPROVED BY
CHECKED BY
DESIGNED BY
DRAWN BY
PROJECT NO CTA-RLE
FILE NAME CTARLE_ST_TS_201_UPCLEAR.dgn

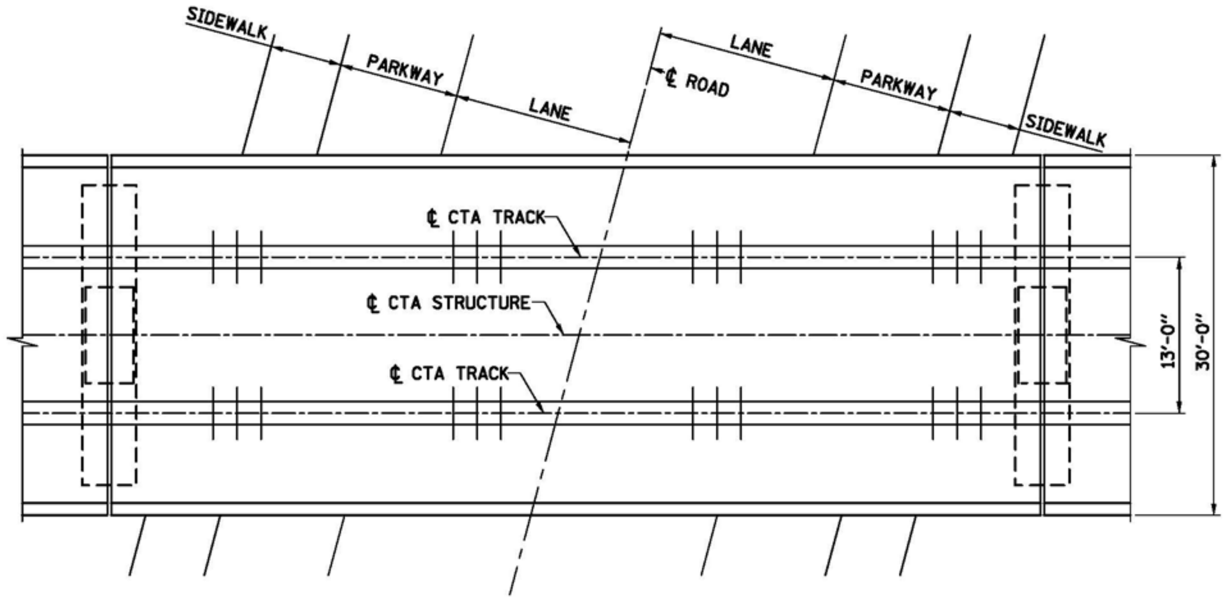
MARK	DATE	DESCRIPTION

SHEET TITLE

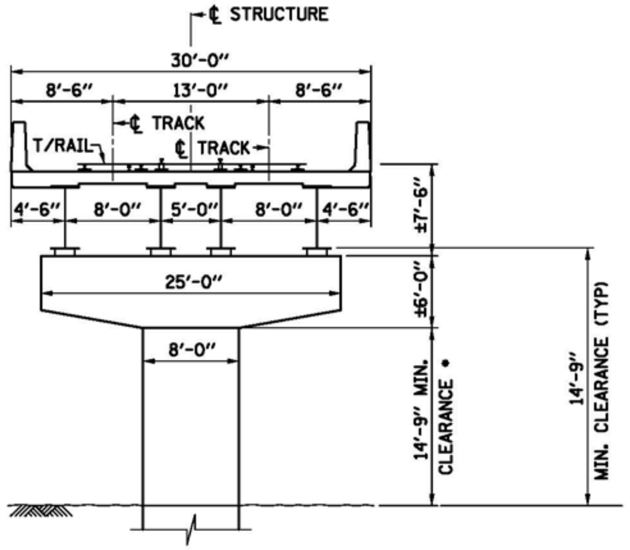

L
TOP OF PARAPET
T/RAIL
TOP OF SLAB
4'-6" (TYP.)
4'-0" (TYP.)
SIDEWALK
PARKWAY
LANE
LANE
PARKWAY
SIDEWALK

ELEVATION

TYP. SPAN (L)	CROSSING FOR UPRR EAST, WEST, & ROW ALT.
75'	W. 101ST, W. 107TH, W. 109TH, W. 11TH, S. PRAIRIE AVE. (E)
85'	W. 103RD, S. WENTWORTH AVE., S. PERRY AVE. (W), S. MICHIGAN AVE., S. INDIANA AVE.


SIDEWALK
PARKWAY
LANE
℄ ROAD
LANE
PARKWAY
SIDEWALK
℄ CTA TRACK
℄ CTA STRUCTURE
℄ CTA TRACK
13'-0"
30'-0"

PLAN


℄ STRUCTURE
30'-0"
8'-6"
13'-0"
8'-6"
℄ TRACK
T/RAIL
℄ TRACK
4'-6"
8'-0"
5'-0"
8'-0"
4'-6"
±7'-6"
25'-0"
±6'-0"
8'-0"
14'-9" MIN. CLEARANCE •
14'-9" MIN. CLEARANCE (TYP)

SECTION

• MINIMUM VERTICAL CLEARANCE IS TO BOTTOM OF PIER CAP WHERE PIER CAP OVERHANGS TRAVELD ROADWAY.

7/24/2015 8:43:08 AM
G:\ENG\06-3690-08-RLE_EIS\CAD\Civil\02_Sheets\CTARLE_ST_TS_202_UP85.dgn

PRELIMINARY DRAFT

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CHICAGO TRANSIT
AUTHORITY

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RED LINE EXTENSION
ENVIRONMENTAL IMPACT STUDY
UNION PACIFIC RAILROAD
ALTERNATIVE
VIADUCT CROSSING
75' AND 85' SPAN

48 OF 51

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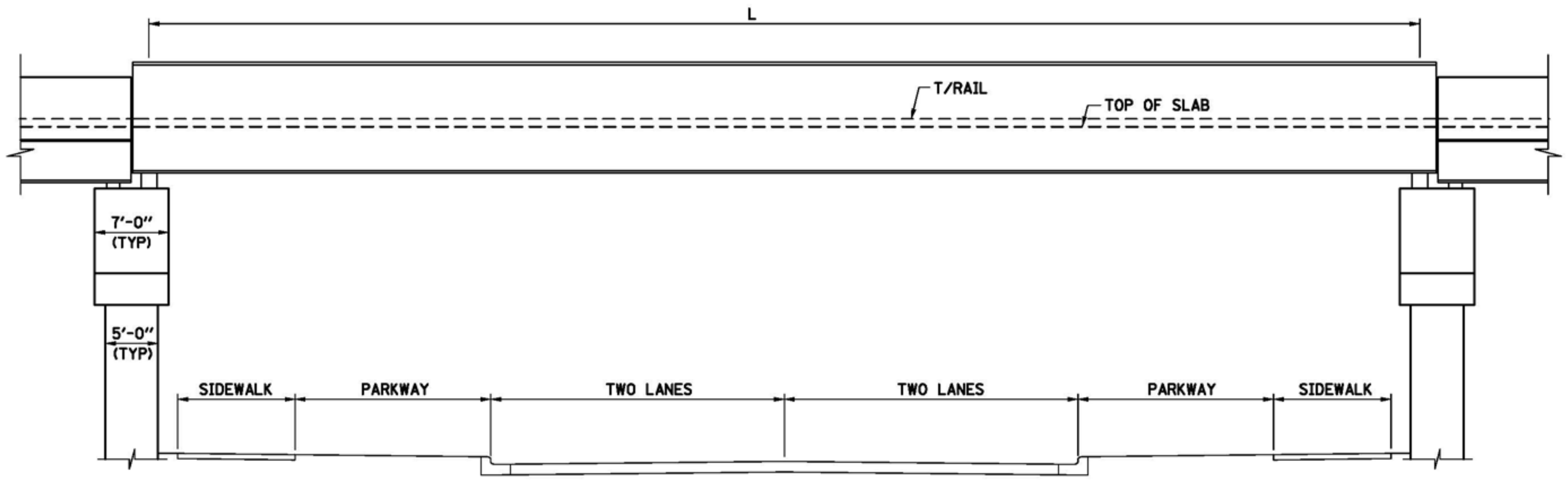
DESIGNED BY
DRAWN BY
PROJECT NO CTA-RLE
FILE NAME CTARLE_ST_TS_202_UP85.dgn

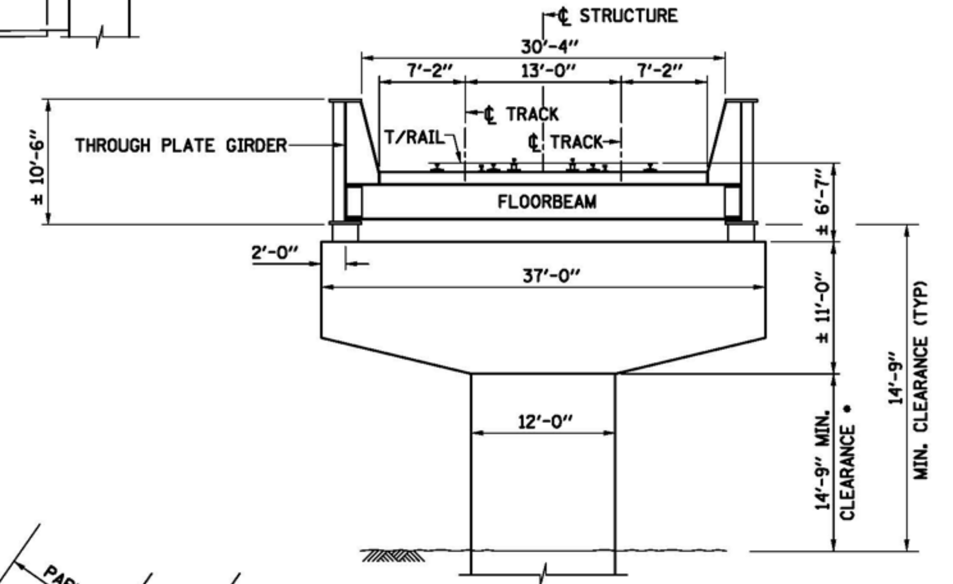
MARK	DATE	DESCRIPTION

SHEET TITLE


L
T/RAIL
TOP OF SLAB
7'-0"
(TYP)
5'-0"
(TYP)
SIDEWALK
PARKWAY
TWO LANES
TWO LANES
PARKWAY
SIDEWALK

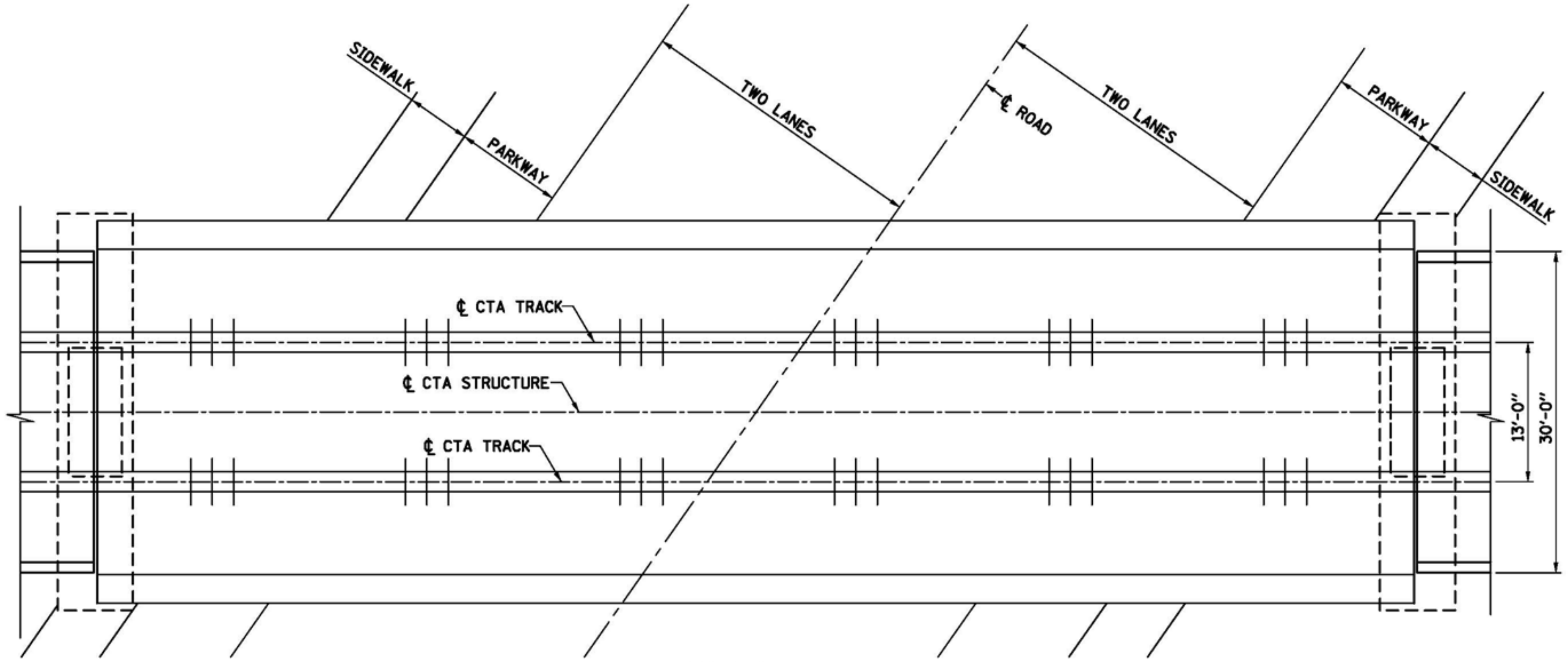
ELEVATION

TYP. SPAN (L)	CROSSING FOR UPRR EAST, ROW, AND WEST ALT.
120' (TPG)	W. 115TH, W. 1116TH


℄ STRUCTURE
30'-4"
7'-2"
13'-0"
7'-2"
℄ TRACK
T/RAIL
℄ TRACK
THROUGH PLATE GIRDER
± 10'-6"
FLOORBEAM
± 6'-7"
2'-0"
37'-0"
± 11'-0"
12'-0"
14'-9" MIN. CLEARANCE •
14'-9" MIN. CLEARANCE (TYP)

SECTION

• MINIMUM VERTICAL CLEARANCE IS TO BOTTOM OF PIER CAP WHERE PIER CAP OVERHANGS TRAVELD ROADWAY.


SIDEWALK
PARKWAY
TWO LANES
℄ ROAD
TWO LANES
PARKWAY
SIDEWALK
℄ CTA TRACK
℄ CTA STRUCTURE
℄ CTA TRACK
13'-0"
30'-0"

PLAN

7/24/2015 8:43:10 AM
G:\ENG\06-3690-08-RLE_EIS\CAD\Civil\02_Sheets\CTARLE_ST_TS_203_UP120.dgn

PRELIMINARY DRAFT

CWE Transit Group

cta

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RED LINE EXTENSION
ENVIRONMENTAL IMPACT STUDY
UNION PACIFIC RAILROAD
ALTERNATIVE
VIADUCT CROSSING
120' SPAN

49 OF 51

IN CHARGE
APPROVED BY
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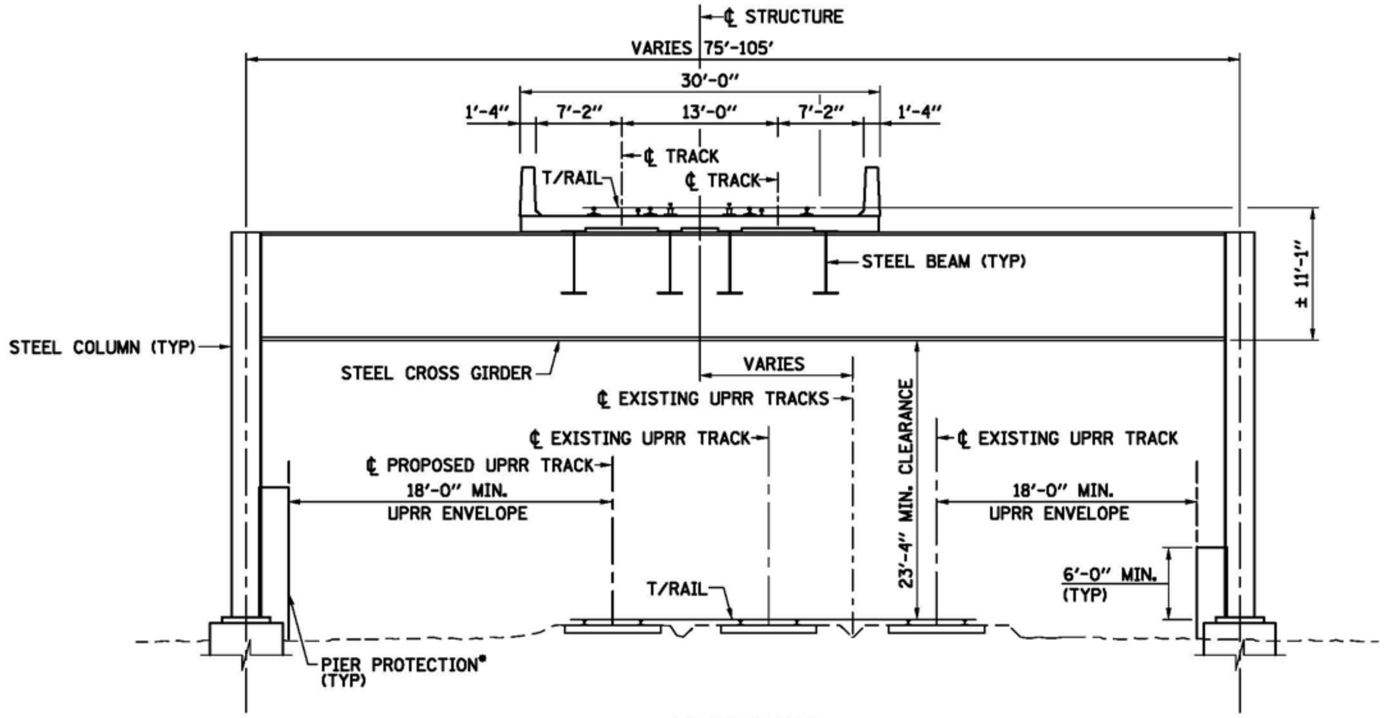
DESIGNED BY
DRAWN BY
PROJECT NO CTA-RLE
FILE NAME CTARLE_ST_TS_203_UP120.dgn

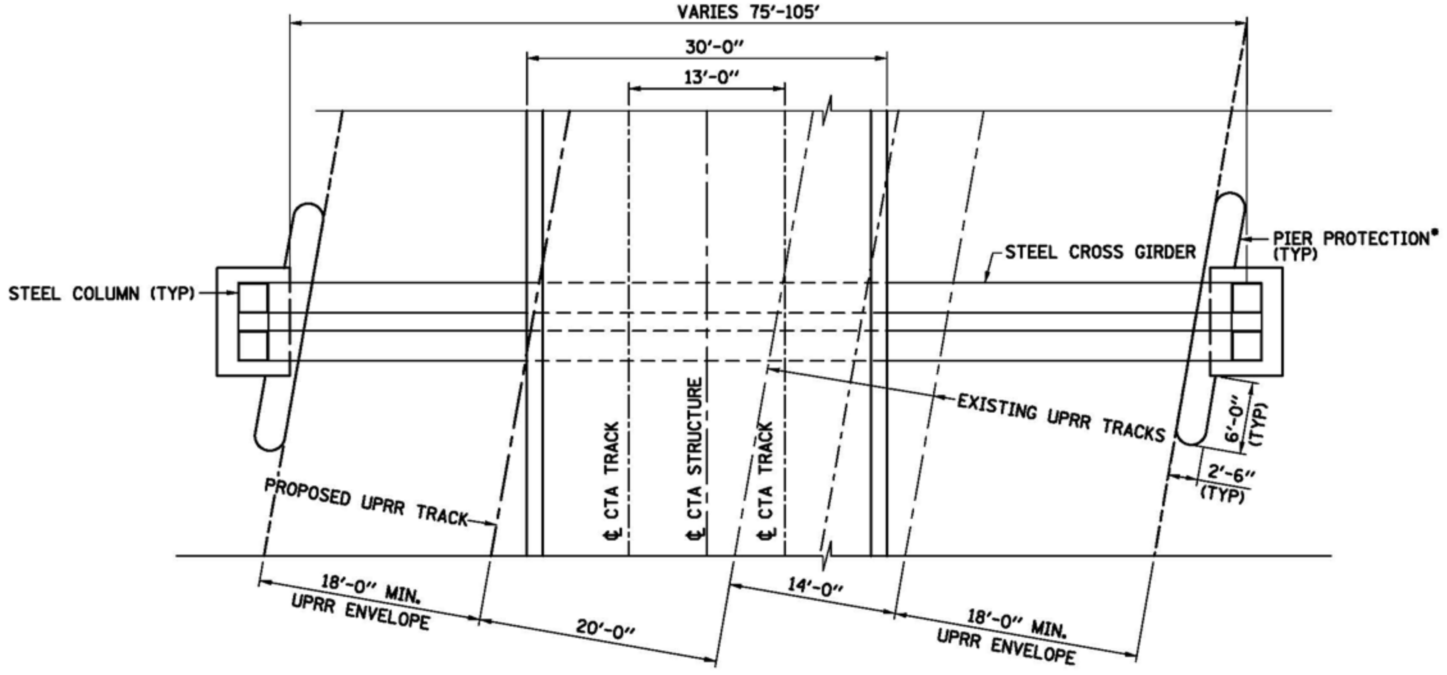
MARK	DATE	DESCRIPTION

SHEET TITLE


℄ STRUCTURE
VARIES 75'-105'
30'-0"
1'-4"
7'-2"
13'-0"
7'-2"
1'-4"
℄ TRACK
℄ TRACK
T/RAIL
STEEL BEAM (TYP)
± 11'-1"
STEEL COLUMN (TYP)
STEEL CROSS GIRDER
VARIES
℄ EXISTING UPRR TRACKS
℄ EXISTING UPRR TRACK
℄ EXISTING UPRR TRACK
℄ PROPOSED UPRR TRACK
18'-0" MIN.
UPRR ENVELOPE
23'-4" MIN. CLEARANCE
18'-0" MIN.
UPRR ENVELOPE
6'-0" MIN.
(TYP)
T/RAIL
PIER PROTECTION*
(TYP)

SECTION

*REQUIRED IF CTA FOUNDATION IS WITHIN 25' OF CENTERLINE OF UPRR TRACK


VARIES 75'-105'
30'-0"
13'-0"
STEEL COLUMN (TYP)
STEEL CROSS GIRDER
PIER PROTECTION*
(TYP)
EXISTING UPRR TRACKS
6'-0"
(TYP)
2'-6"
(TYP)
PROPOSED UPRR TRACK
℄ CTA TRACK
℄ CTA STRUCTURE
℄ CTA TRACK
18'-0" MIN.
UPRR ENVELOPE
20'-0"
14'-0"
18'-0" MIN.
UPRR ENVELOPE

PLAN

7/24/2015 8:43:11 AM
G:\ENG\06-3690-08-RLE_EIS\CAD\Civil\02_Sheets\CTARLE_ST_TS_204_UPBENT.dgn

PRELIMINARY DRAFT

CWC Transit Group

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AUTHORITY

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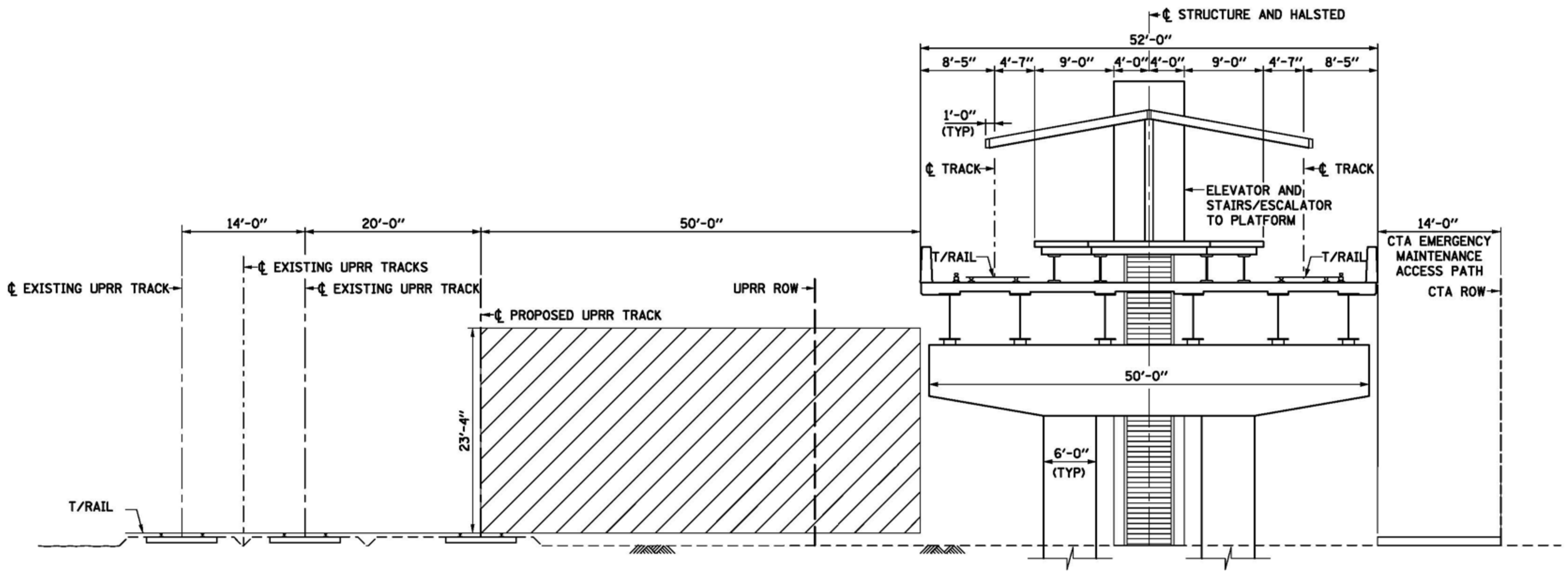
RED LINE EXTENSION
ENVIRONMENTAL IMPACT STUDY
UNION PACIFIC RAILROAD
ALTERNATIVE
THRU BENT SECTION

50 OF 51

IN CHARGE
APPROVED BY
CHECKED BY
DESIGNED BY
DRAWN BY
PROJECT NO CTA-RLE
FILE NAME CTARLE_ST_TS_204_UPBENT.dgn

MARK	DATE	DESCRIPTION

SHEET TITLE

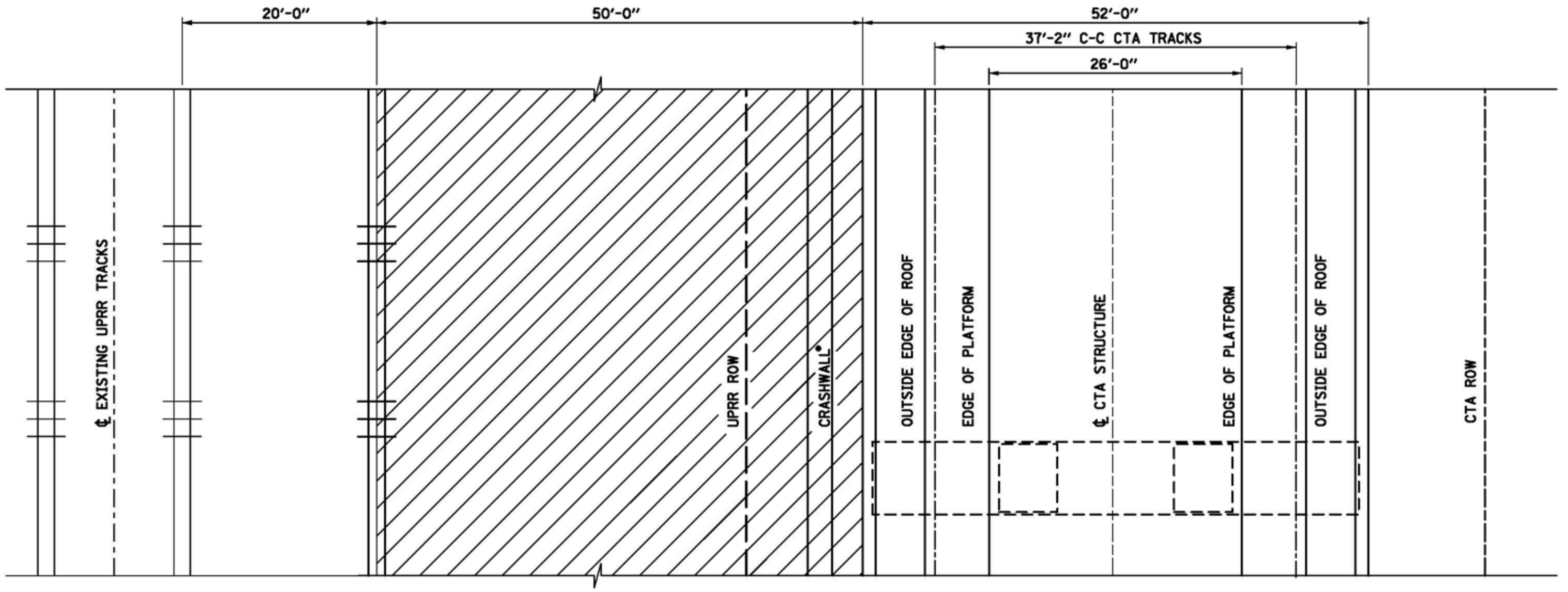


℄ STRUCTURE AND HALSTED
52'-0"
8'-5"
4'-7"
9'-0"
4'-0"
4'-0"
9'-0"
4'-7"
8'-5"
1'-0" (TYP)
℄ TRACK
℄ TRACK
ELEVATOR AND STAIRS/ESCALATOR TO PLATFORM
T/RAIL
T/RAIL
14'-0"
CTA EMERGENCY MAINTENANCE ACCESS PATH
CTA ROW
50'-0"
6'-0" (TYP)
14'-0"
20'-0"
50'-0"
℄ EXISTING UPRR TRACKS
℄ EXISTING UPRR TRACK
℄ EXISTING UPRR TRACK
UPRR ROW
℄ PROPOSED UPRR TRACK
23'-4"
T/RAIL

SECTION

LEGEND

▨ REQUIRED UPRR CLEARANCE



20'-0"
50'-0"
52'-0"
37'-2" C-C CTA TRACKS
26'-0"
℄ EXISTING UPRR TRACKS
UPRR ROW
CRASHWALL*
OUTSIDE EDGE OF ROOF
EDGE OF PLATFORM
℄ CTA STRUCTURE
EDGE OF PLATFORM
OUTSIDE EDGE OF ROOF
CTA ROW

PLAN

7/24/2015 8:43:12 AM
G:\ENG\06-3690-08-RLE_EIS\CAD\Civil\02_Sheets\CTARLE_ST_TS_205_UPSTCLR.dgn

PRELIMINARY DRAFT

CWC Transit Group

cta

CHICAGO TRANSIT
AUTHORITY

SENSITIVE SECURITY INFORMATION

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RED LINE EXTENSION
ENVIRONMENTAL IMPACT STUDY
UNION PACIFIC RAILROAD
ALTERNATIVE
TYPICAL STATION SECTION

51 OF 51

IN CHARGE
APPROVED BY
CHECKED BY
DESIGNED BY
DRAWN BY
PROJECT NO CTA-RLE
FILE NAME CTARLE_ST_TS_205_UPSTCLR.dgn

MARK	DATE	DESCRIPTION

SHEET TITLE

Memorandum

To: *CTA, Sonali Tandon*

From: *CWC - Wight & Company*

Date: *January 6, 2015, revised March 16, 2015*

Subject: *Evaluation of Conceptual Red Line Extension Alignment*

Purpose

The purpose of this memo is to verify that the conceptual Red Line Extension (RLE) alignment meets certain minimum design criteria and to analyze the potential benefits or drawbacks of different variations of the two Union Pacific Railroad (UPRR) Alignments. Both the East and West Options have been checked for horizontal clearance and curves.

Verification #1: UPRR Horizontal Clearance

We checked the proposed alignment to verify that it would provide a minimum fifty foot horizontal clearance from the centerline of UPRR's future third track on east side of the UPRR corridor.

The minimum clearance distance is met along the entire East Alignment, with the exception of the following two locations:

- The proposed alignment would shift west to avoid an existing pump station at 104th Street (proposed alignment stationing 166+00 through 182+25). The centerline of UPRR's potential third track and the centerline of the proposed RLE would have a minimum separation of 27.6 feet. If the UPRR East Option is selected, the minimum separation distance would not be met through this segment of the extension. Relocating the existing pump station so the alignment could be adjusted is not feasible. A crash wall could be provided between the UPRR tracks and the proposed extension.

- Farther south from 104th Street, the proposed alignment again shifts west towards the UPRR tracks north of the proposed Michigan Avenue station (near 116th Street, from approximate station 257+00 to 278+00). The centerline of UPRR's potential third track and the centerline of the proposed RLE have a minimum separation of 46.8 feet. More detailed design could likely adjust the proposed alignment through this section to provide the minimum required separation. Note that the proposed alignment in this area is entirely outside the existing UPRR right-of-way.

The minimum clearance distance would be met along the entire West Option except where the CTA facility would cross the UPRR at I-57 and near the Metra Electric District tracks.

Verification #2: Design Speed at Wendell Smith Park

The proposed alignment from April 2013 had a 15 mph (335-foot radius) curve connecting the East-West portion of the extension (which runs along I-57) to the North-South portion of the extension (which would run along the east edge of the UPRR right-of-way.) The small radius was intended to minimize the impacts the proposed improvement would have on Wendell Smith Park. A curve speed of 15 mph would be a severe constraint on a new rail alignment and has been dropped from further consideration. We checked the possibility of increasing the design speed through this turn to improve future operations. (See the February 27, 2015 memorandum *Documentation of Red Line Extension Curve Speed Discussion* for curve speed criteria.) The attached Exhibit 1 depicts the various design speeds that were analyzed and their corresponding impacts to the park.

Generally, as the design speed increases the impacts on the park would become more severe. A 25 mph (388.80-foot radius) curve could provide a faster operation speed for the CTA with minimal additional impacts on the park compared to the proposed 15 mph curve. Increasing to a 35 mph (730.13-foot radius) curve for the East Option would cause severe impacts to the park, specifically eliminating the ability to use the existing baseball fields. Curves of 45 mph and 55 mph are not recommended with either alignment due to impacts at the park.

Verification #3: Location of Proposed 103rd St Station

The proposed 103rd Street station would be located one block north of the historic Roseland Pump Station, located at 351 West 104th Street. The Roseland Pump Station provides water to approximately 750,000 residents of the City of Chicago and south suburbs. The minimum separation between the edge of the proposed track structure and the face of the pump station building is 8.8 feet. We checked to see if adjusting the location of the proposed 103rd Street station could increase this spacing. Shifting the station to the north would have no impact on the spacing between the proposed CTA structure and the pump station. The minimum spacing occurs south of the point of tangency of the southernmost curve associated with the 103rd Street station, as shown in the attached Exhibit 2; therefore, shifting the station north has no effect on this minimum spacing. Shifting the station south would decrease this minimum spacing.

The station could be shifted approximately 265 feet north to avoid conflict with the existing communications tower located just west of the intersection of Harvard Avenue and 103rd Place. This shift would require two additional properties to be acquired where the northernmost station curves tie back into the alignment. The distance pedestrians would walk from both the surface lot (at the southwest corner of the UPRR and 103rd Street) and the bus turnaround lot (at the northeast corner to the station platform) would be increased by this shift. The shift of the 103rd Street station to the north to avoid the tower is not included on the plan sheets as additional residential displacements would be required.

Verification #4: Illinois Department of Transportation Comments

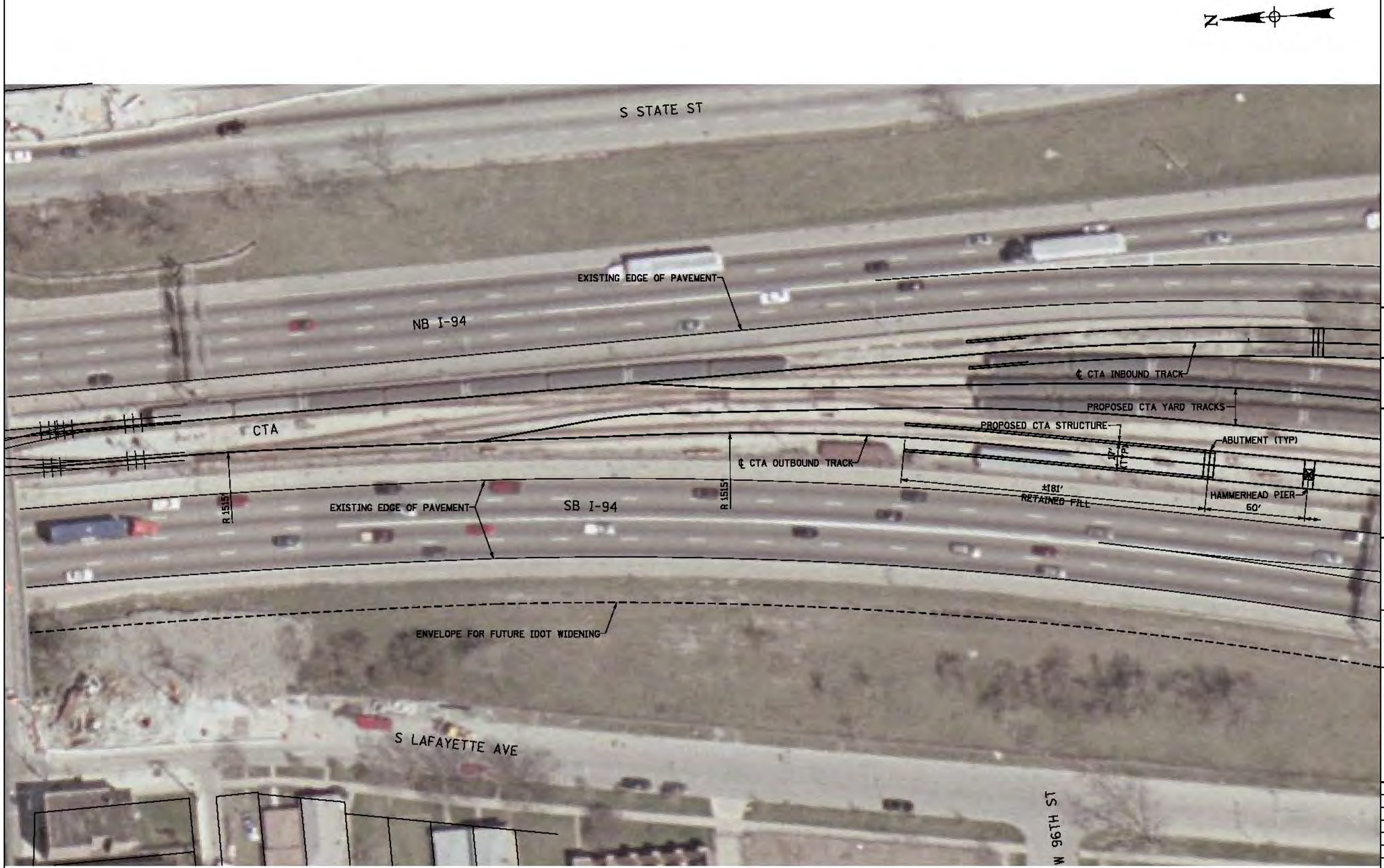
The Illinois Department of Transportation (IDOT) provided several comments via e-mail (attached Exhibit 3) after reviewing the proposed RLE horizontal alignment in the area of I-90/94, I-57, and 95th Street.

IDOT commented that the piers for the proposed RLE structure "should be placed such that the Department has the flexibility to widen our roadways either towards the roadway's median or outward with standard cross-section elements. As such any pier(s) placed in our medians should be placed in the middle of our medians, not immediately behind any existing or proposed barrier walls. Also, any piers proposed on the outside of our roadways should be placed at least 27feet from the existing outside edges of pavement to account for any additional lanes, shoulders, and barrier walls that are needed to protect the pier from being struck by a vehicle." Exhibit 1 depicts the conceptual pier locations for the proposed alignment from the existing 95th street station south to Wendell Smith Park. CWC adjusted the pier locations to fall outside the limits of IDOT's future widening.

IDOT pointed out that any structure crossing a roadway should provide a minimum of 15'-0" of vertical clearance. The RLE would cross the following IDOT facilities: 95th Street, southbound I-94, I-57 ramp, and I-57 mainline. The extension would not modify the existing 15'-10" clearance at 95th Street. The proposed extension would cross the existing southbound I-94 tunnel. This clearance would not be affected by the RLE. The profile would rise from the tunnel, cross the I-57 ramp, and eventually cross over Wentworth Avenue. A 16-foot clearance is provided over Wentworth Avenue, which would lead to an approximately 31-foot clearance over the I-57 ramp. The alignment would then cross the I-57 mainline with an approximately 39-foot clearance. Excessive clearance is provided over the IDOT roadways because of the height the profile reaches to go over Wentworth Avenue.

IDOT also commented on the need for barrier warrant analysis, permitting, and air rights agreements. These tasks will be addressed in the future when the project moves from conceptual to preliminary design.

cc: file


N
S STATE ST
EXISTING EDGE OF PAVEMENT
NB I-94
℄ CTA INBOUND TRACK
PROPOSED CTA YARD TRACKS
CTA
PROPOSED CTA STRUCTURE
ABUTMENT (TYP)
12' (TYP)
℄ CTA OUTBOUND TRACK
R 1515'
R 1515'
EXISTING EDGE OF PAVEMENT
SB I-94
±181'
RETAINED FILL
HAMMERHEAD PIER
60'
ENVELOPE FOR FUTURE IDOT WIDENING
S LAFAYETTE AVE
W 96TH ST

PLAN

CWC Transit Group

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CHICAGO TRANSIT AUTHORITY

SENSITIVE SECURITY INFORMATION

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RED LINE EXTENSION
ENVIRONMENTAL IMPACT STUDY

ALL ALTERNATIVES
PIER LOCATION
SOUTH OF 95TH ST STATION

IN CHARGE
APPROVED BY
CHECKED BY
DESIGNED BY
DRAWN BY
PROJECT NO CTA-RLE
FILE NAME $FILES$

30 0 30 60
SCALE H 1" = 30'-0"

MARK	DATE	DESCRIPTION

SHEET TITLE

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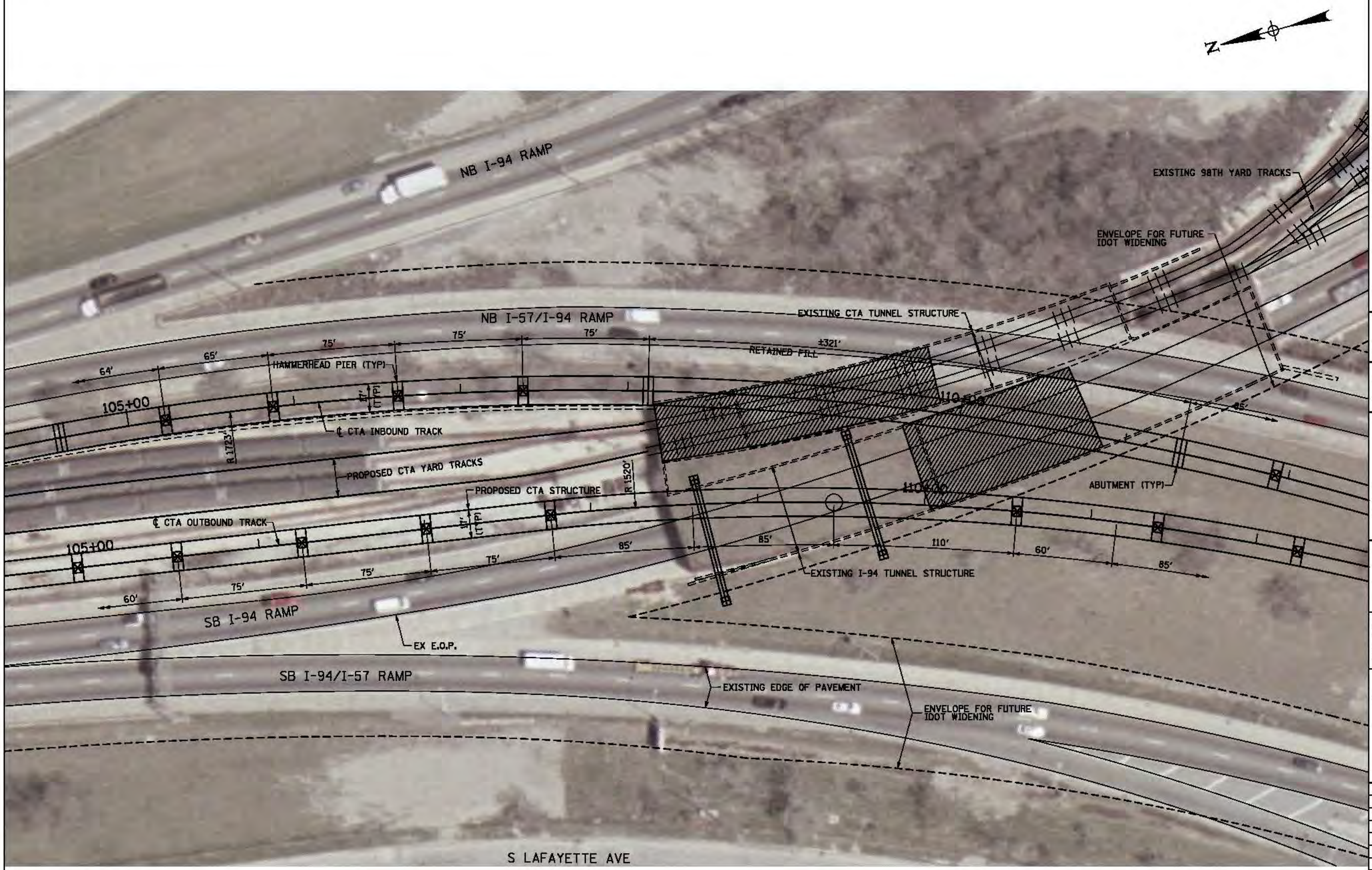
$DATE$
$FILES$

EXHIBIT 1 - CURVES AT WENDALL SMITH AND PIER LOCATIONS (1/6)



N
NB I-94 RAMP
NB I-57/I-94 RAMP
EXISTING CTA TUNNEL STRUCTURE
RETAINED FILL
±321'
EXISTING 98TH YARD TRACKS
ENVELOPE FOR FUTURE IDOT WIDENING
64'
65'
75'
75'
75'
HAMMERHEAD PIER (TYP)
17' (TYP)
105+00
℄ CTA INBOUND TRACK
R 1723'
PROPOSED CTA YARD TRACKS
PROPOSED CTA STRUCTURE
R 1520'
17' (TYP)
℄ CTA OUTBOUND TRACK
105+00
110+00
110+00
85'
ABUTMENT (TYP)
60'
75'
75'
75'
85'
85'
110'
60'
85'
EXISTING I-94 TUNNEL STRUCTURE
SB I-94 RAMP
EX E.O.P.
SB I-94/I-57 RAMP
EXISTING EDGE OF PAVEMENT
ENVELOPE FOR FUTURE IDOT WIDENING
S LAFAYETTE AVE

PLAN

LEGEND

▨ RE-DECK EXISTING TUNNEL SUPERSTRUCTURE

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RED LINE EXTENSION
ENVIRONMENTAL IMPACT STUDY

ALL ALTERNATIVES
PIER LOCATION
SOUTH OF 95TH ST STATION

IN CHARGE
APPROVED BY
CHECKED BY
DESIGNED BY
DRAWN BY
PROJECT NO CTA-RLE
FILE NAME $FILES$

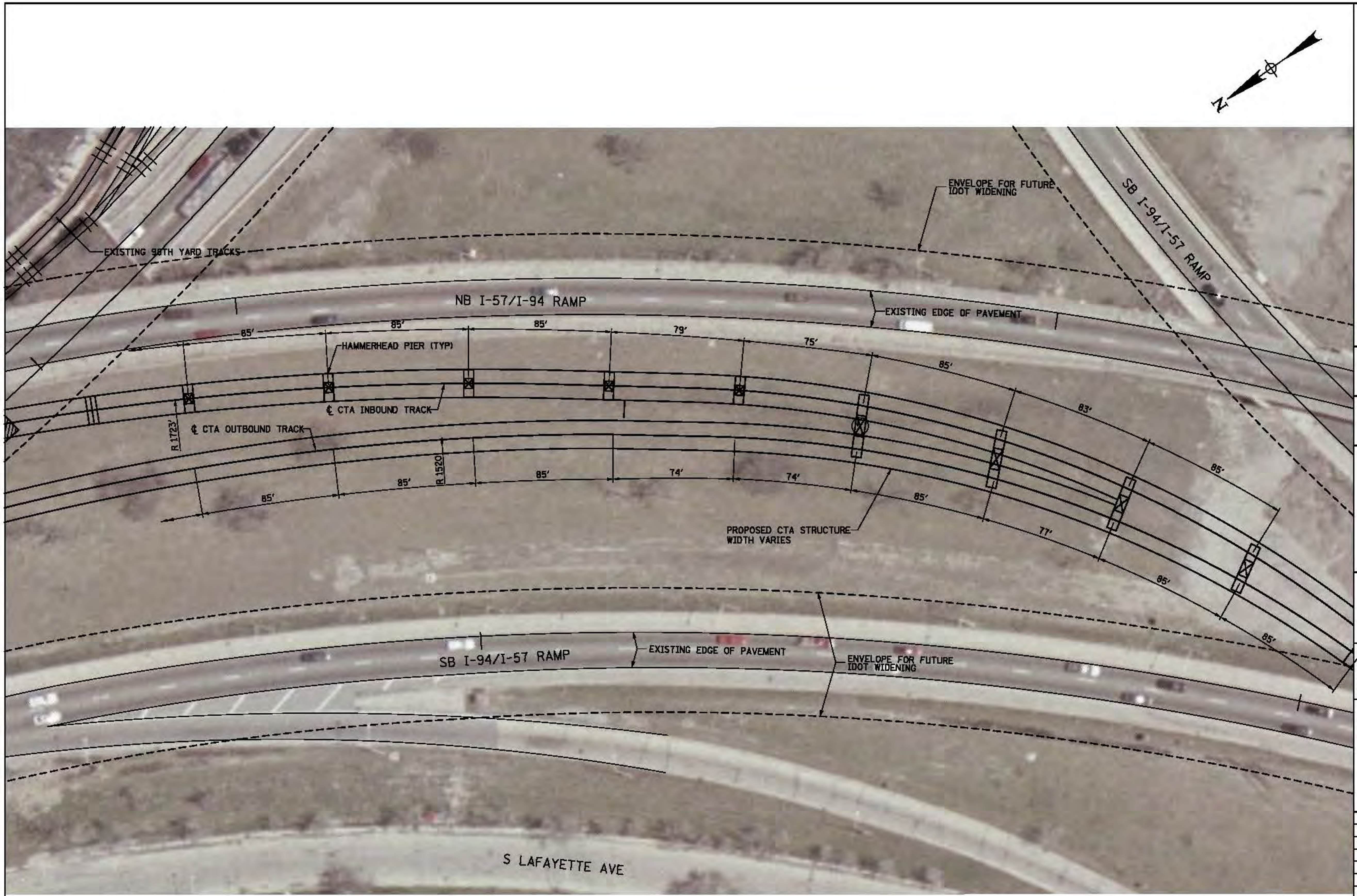
30 0 30 60
SCALE H 1" = 30'-0"

MARK	DATE	DESCRIPTION

SHEET TITLE

$TIME$
$DATE$
$FILES$

EXHIBIT 1 - CURVES AT WENDALL SMITH AND PIER LOCATIONS (2/6)


N
ENVELOPE FOR FUTURE IDOT WIDENING
SB I-94/I-57 RAMP
EXISTING 95TH YARD TRACKS
NB I-57/I-94 RAMP
EXISTING EDGE OF PAVEMENT
85'
85'
85'
79'
75'
85'
83'
85'
85'
85'
HAMMERHEAD PIER (TYP)
℄ CTA INBOUND TRACK
℄ CTA OUTBOUND TRACK
R 1723'
R 1520'
85'
85'
85'
74'
74'
85'
77'
85'
PROPOSED CTA STRUCTURE WIDTH VARIES
SB I-94/I-57 RAMP
EXISTING EDGE OF PAVEMENT
ENVELOPE FOR FUTURE IDOT WIDENING
S LAFAYETTE AVE

PLAN

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RED LINE EXTENSION
ENVIRONMENTAL IMPACT STUDY

ALL ALTERNATIVES
PIER LOCATION
SOUTH OF 95TH ST STATION

IN CHARGE
APPROVED BY
CHECKED BY
DESIGNED BY
DRAWN BY
PROJECT NO CTA-RLE
FILE NAME $FILES$

30 0 30 60
SCALE H 1" = 30'-0"

MARK	DATE	DESCRIPTION

SHEET TITLE

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$DATE$
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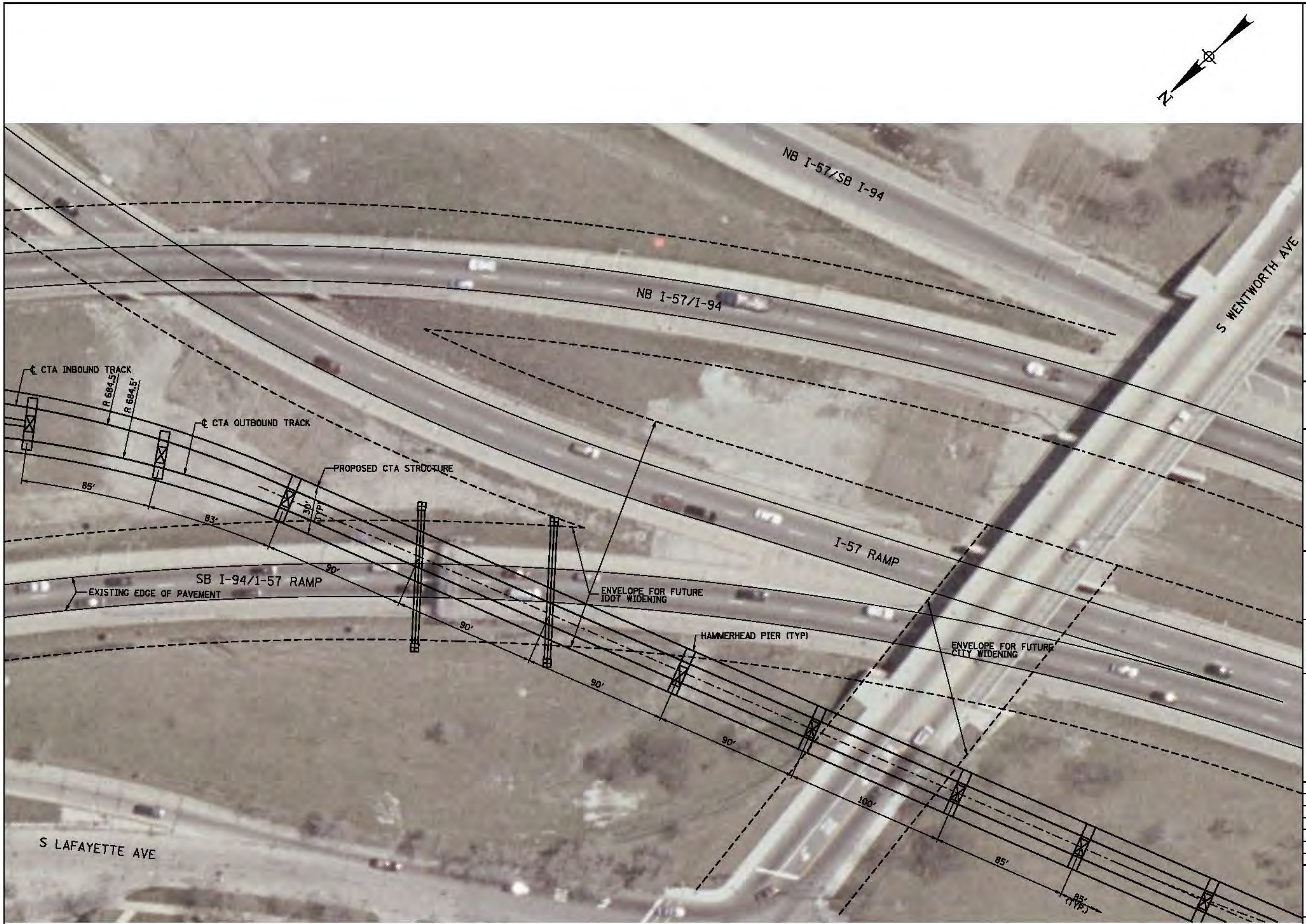
EXHIBIT 1 - CURVES AT WENDALL SMITH AND PIER LOCATIONS (3/6)


N
NB I-57/SB I-94
S WENTWORTH AVE
NB I-57/I-94
℄ CTA INBOUND TRACK
R 684.5'
R 684.5'
℄ CTA OUTBOUND TRACK
PROPOSED CTA STRUCTURE
30' (TYP)
85'
83'
90'
90'
90'
90'
100'
85'
85' (TYP.)
I-57 RAMP
SB I-94/I-57 RAMP
EXISTING EDGE OF PAVEMENT
ENVELOPE FOR FUTURE IDOT WIDENING
HAMMERHEAD PIER (TYP)
ENVELOPE FOR FUTURE CITY WIDENING
S LAFAYETTE AVE

PLAN

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RED LINE EXTENSION
ENVIRONMENTAL IMPACT STUDY

ALL ALTERNATIVES
PIER LOCATION
SOUTH OF 95TH ST STATION

IN CHARGE
APPROVED BY
CHECKED BY
DESIGNED BY
DRAWN BY
PROJECT NO CTA-RLE
FILE NAME $FILES$

30 0 30 60
SCALE H 1" = 30'-0"

MARK	DATE	DESCRIPTION

SHEET TITLE

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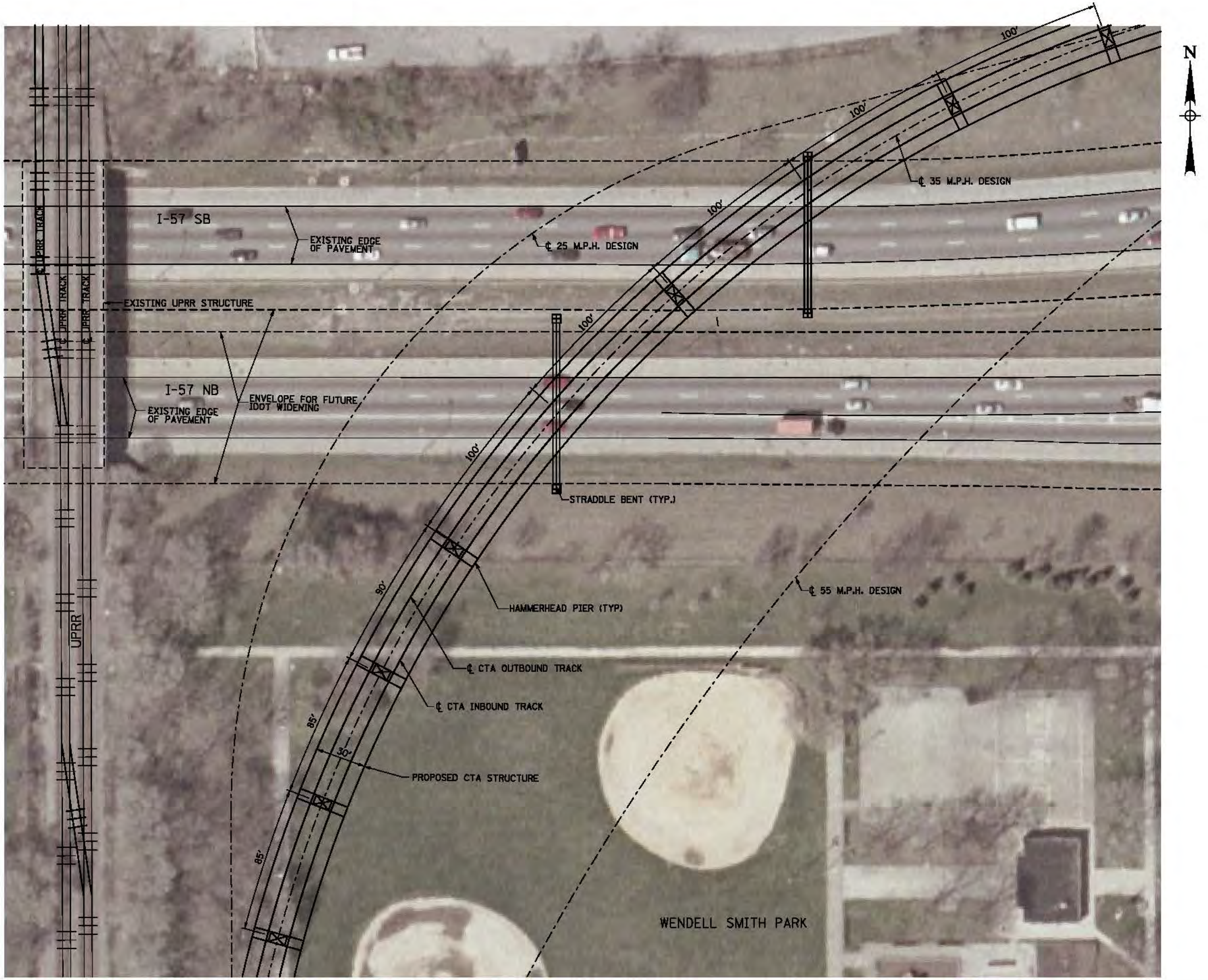
EXHIBIT 1 - CURVES AT WENDALL SMITH AND PIER LOCATIONS (4/6)


N
100'
100'
¢ 35 M.P.H. DESIGN
I-57 SB
EXISTING EDGE OF PAVEMENT
¢ 25 M.P.H. DESIGN
100'
UPRR TRACK
¢ UPRR TRACK
¢ UPRR TRACK
EXISTING UPRR STRUCTURE
100'
I-57 NB
ENVELOPE FOR FUTURE IDOT WIDENING
EXISTING EDGE OF PAVEMENT
100'
STRADDLE BENT (TYP.)
90'
HAMMERHEAD PIER (TYP)
¢ 55 M.P.H. DESIGN
UPRR
¢ CTA OUTBOUND TRACK
¢ CTA INBOUND TRACK
85'
30'
PROPOSED CTA STRUCTURE
85'
WENDELL SMITH PARK

CWC Transit Group

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AUTHORITY

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RED LINE EXTENSION
ENVIRONMENTAL IMPACT STUDY
UNION PACIFIC RAILROAD
EAST SIDE ALTERNATIVE
PIER LOCATION OVER I-57

IN CHARGE
APPROVED BY
CHECKED BY
DESIGNED BY
DRAWN BY
PROJECT NO CTA-RLE
FILE NAME $FILES$

30 0 30 60
SCALE H 1" = 30'-0"

MARK	DATE	DESCRIPTION

SHEET TITLE

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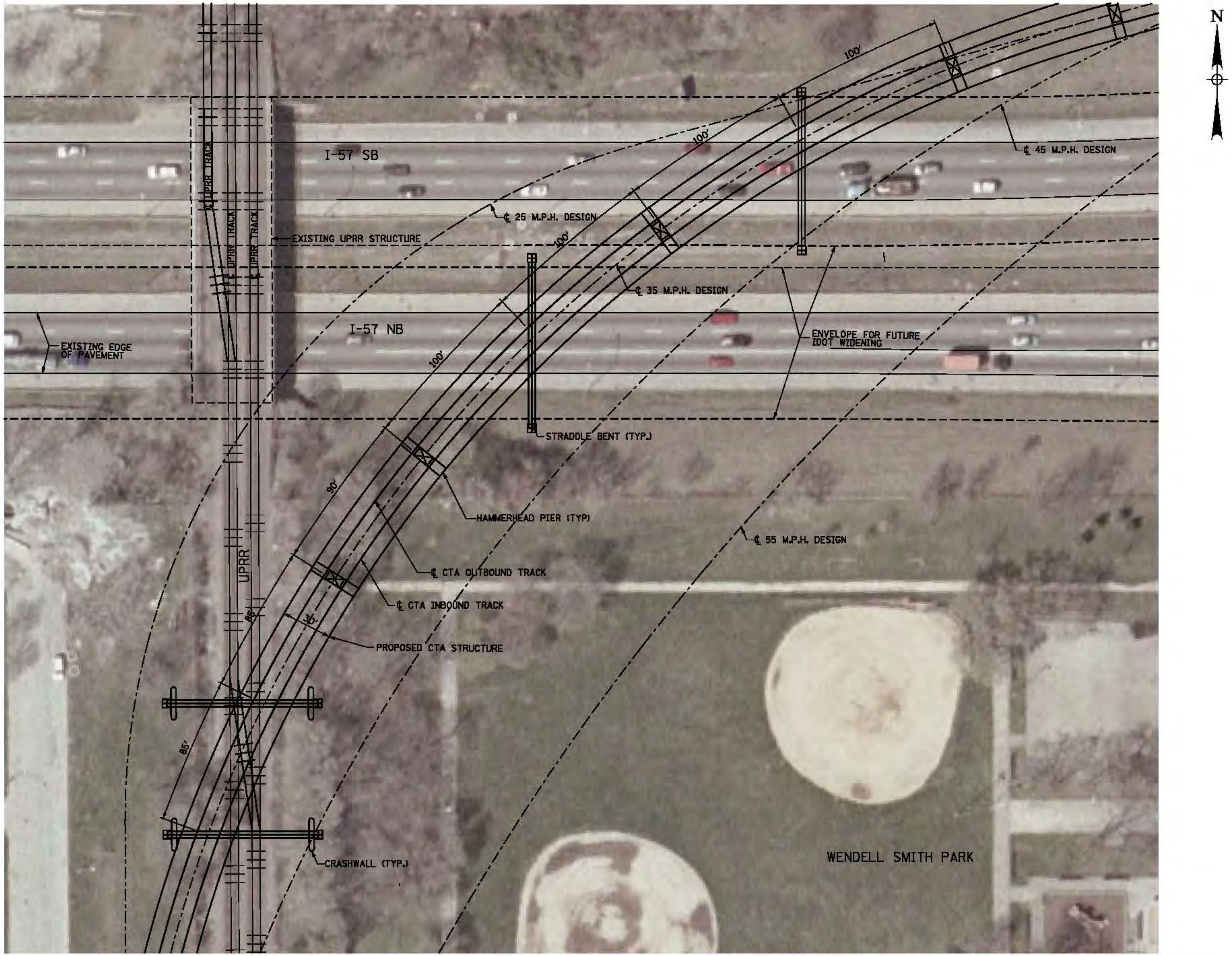
EXHIBIT 1 - CURVES AT WENDALL SMITH AND PIER LOCATIONS (5/6)


N
I-57 SB
I-57 NB
UPRR TRACK
UPRR TRACK
UPRR TRACK
EXISTING UPRR STRUCTURE
EXISTING EDGE OF PAVEMENT
UPRR
100'
100'
100'
100'
90'
85'
30'
℄ 25 M.P.H. DESIGN
℄ 35 M.P.H. DESIGN
℄ 45 M.P.H. DESIGN
℄ 55 M.P.H. DESIGN
ENVELOPE FOR FUTURE IDOT WIDENING
STRADDLE BENT (TYP.)
HAMMERHEAD PIER (TYP)
℄ CTA OUTBOUND TRACK
℄ CTA INBOUND TRACK
PROPOSED CTA STRUCTURE
CRASHWALL (TYP.)
WENDELL SMITH PARK

$TIME$

$DATE$
$FILES$

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cta

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RED LINE EXTENSION
ENVIRONMENTAL IMPACT STUDY
UNION PACIFIC RAILROAD
WEST SIDE ALTERNATIVE
PIER LOCATION OVER I-57

IN CHARGE	
APPROVED BY	
CHECKED BY	
DESIGNED BY	
DRAWN BY	
PROJECT NO	CTA-RLE
FILE NAME	$FILES$

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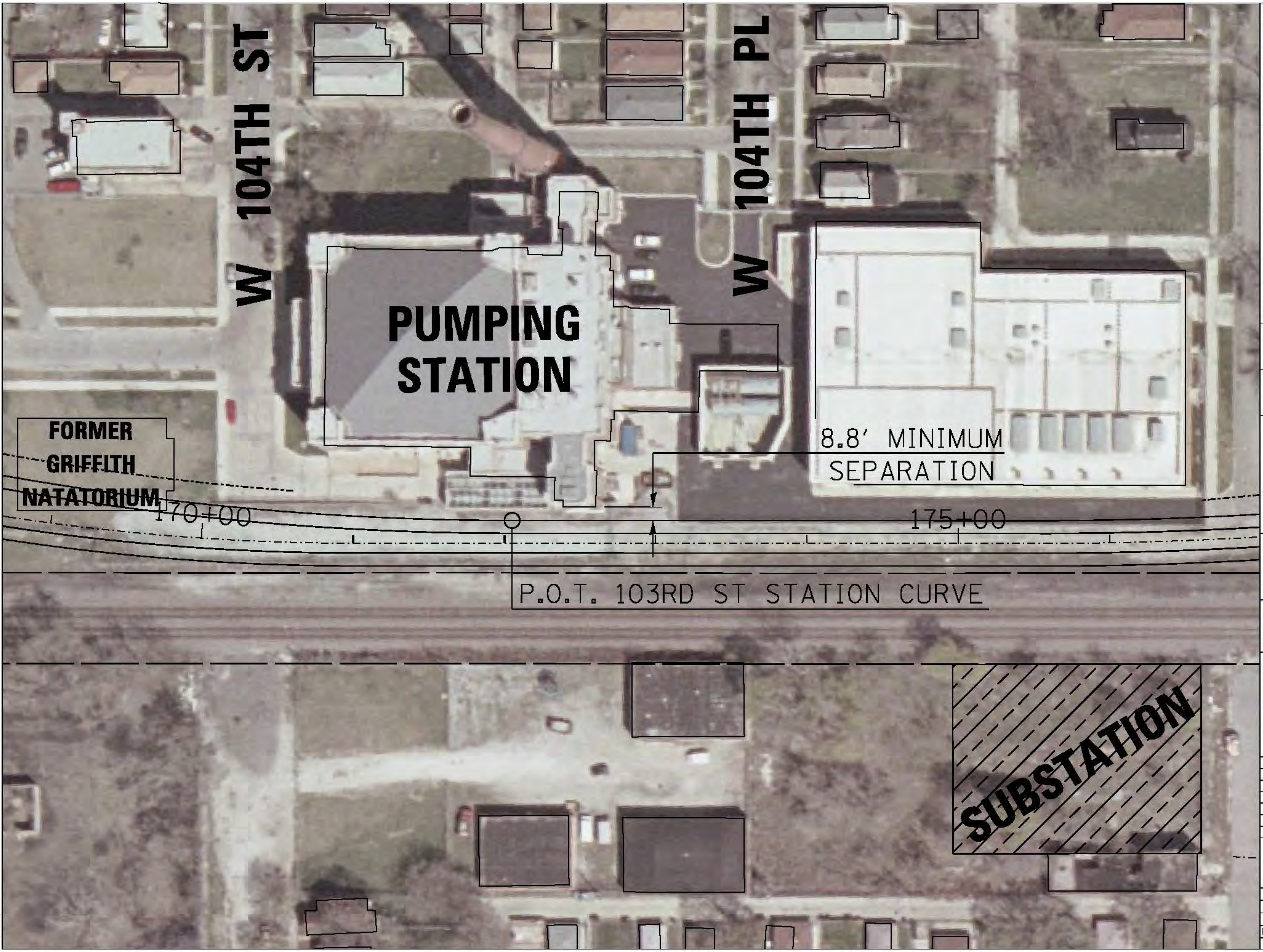
SCALE H 1" = 30'-0"

MARK	DATE	DESCRIPTION

SHEET TITLE

EXHIBIT 1 - CURVES AT WENDALL SMITH AND PIER LOCATIONS (6/6)



1/5/2015 10:13:04 AM
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LEGEND

PLAN
- EX CENTERLINE
- PR CENTERLINE
- EX TRACK CENTERLINE
- PR TRACK CENTERLINE
- PR TRACK STRUCTURE
- EX ROADWAY RIGHT-OF-WAY
- EX RAILROAD RIGHT-OF-WAY
- PR PERMANENT ENVELOPE
- PR ROADWAY/HARDSCAPE
- PR STATION PLATFORM
- EX BUILDING OUTLINE
- PR BUILDING OUTLINE
- PR PARKING
- PR CTA SUBSTATION
- PR UPRR TRACK CENTERLINE

UTILITIES
- EXISTING WATER LINES
- EXISTING SEWER LINE

ENTRANCES
- PRIMARY ENTRANCE
- SECONDARY ENTRANCE
- EXIT ONLY
- PROPOSED PARKING ENTRANCE

PROFILE
- EX GROUND
- PR TOP OF RAIL
- PR ELEVATED STRUCTURE DEPTH
- PLATFORM LOCATION

CWC Transit Group

cta

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AUTHORITY

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RED LINE EXTENSION
ENVIRONMENTAL IMPACT STUDY
UNION PACIFIC RAILROAD
ALTERNATIVE
EAST SIDE OPTION

IN CHARGE
APPROVED BY
CHECKED BY
DESIGNED BY
DRAWN BY
PROJECT NO CTA-RLE
FILE NAME EXH_CTARLE_CT_LAY_UPRREAST_A3_103rdStati

100 0 100 200
SCALE H 1" = 100'-0"
V 1" = 10'-0"

MARK	DATE	DESCRIPTION

SHEET TITLE

EXHIBIT 2 - 103RD ST STATION ANALYSIS (1/1)

From: Salley, Jason R [mailto:Jason.Salley@illinois.gov]
Sent: Tuesday, December 16, 2014 8:39 AM
To: Tandon, Sonali; Baczek, John A
Subject: RE: CTA Red Line Extension

Sonali,
Good morning.

We have looked at your proposed alignment of the CTA's Red Line Extension near I-90/94 at I-57 & 95th St and we offer the following comments:

1. The piers for the structures carrying the Red-Line over any of the Department's roadways should be placed such that the Department has the flexibility to widen our roadways either towards the roadway's median or outward with standard cross-section elements. As such any pier(s) placed in our medians should be placed in the middle of our medians, not immediately behind any existing or proposed barrier walls. Also, any piers proposed on the outside of our roadways should be placed at least 27-ft from the existing outside edges of pavement to account for any additional lanes, shoulders and barrier walls that are needed to protect the pier from being struck by a vehicle.
2. Any structures carrying the Red-Line over our roadways should provide at least 15'-0" of vertical clearance over our roadways.
3. The existing barrier walls along I-57 may have to be extended and/or replaced in order to adequately protect any proposed piers along I-57 from being struck by vehicles. The length of the extensions will be subject to barrier warrant and length of need analyses to be done during Contract Plan preparation should this project proceed towards construction. New barrier walls or guardrail may also be required if piers are proposed along I-57 where there are no existing barrier walls to extend. Lastly, existing barrier that are to be extended to protect proposed CTA piers may need to be rehabilitated or replaced depending on their condition at the time of the construction of this project. The cost sharing of this work is to be determined at the time of the preparation of the Contract Plans.
4. Should the extension of the Red-Line move towards Contract Plan preparation, the CTA should ascertain a Permit from the Department for the construction of the extension within our Right-of-Way.
5. The extension of the Red-Line as depicted will require an Air Rights Agreement with the Federal Highway Administration as well as the Department.
6. Wentworth Ave is under the Jurisdiction and Maintenance of the City of Chicago. Please coordinate this extension with them in order to ascertain any requirements or concerns that they might have. Please share their comments with the Department so that all concerns are shared with all of the interested parties along the corridor.

Attached you will find a copy of the geometrics for I-57 south of its interchange with I-90/94 as per the Department's Phase I report for I-90/94 from 31st Street to I-57.

Please contact me or John Baczek if you have any questions or need any clarifications.

Sincerely,
Jason Salley, P.E.
Geometrics Engineer
IDOT - District 1
P: 847.705.4085
F: 847.705.4159

EXHIBIT 3 - IDOT Comments (1/1)

CWC Transit Group

Memorandum

To: *CTA, Sonali Tandon*

From: *CWC - Wight & Company*

Date: *December 2, 2014, revised March 16, 2015*

Subject: *Evaluation of Grade Separation of Red Line Extension*

Purpose

The purpose of this memo is to compare the potential benefits or drawbacks of constructing the proposed Red Line Extension (RLE) as an elevated track structure with the benefits or drawbacks of constructing the RLE as an at-grade track with roadway overpasses or underpasses.

The proposed extension must be elevated from 95th Street until south of Interstate 57 (I-57) (approximately station 135+00) to provide the required clearance over the expressway. South of I-57, the proposed track structure could potentially be lowered to match existing grade. Using the maximum allowable grade, this match point would occur 950 feet south of the interstate (approximately station 144+50.) The profile of this option is shown in the attached Exhibit A. The proposed track can potentially remain at grade for 2.57 miles (approximately station 280+00), at which point the track must be elevated to clear the CN/Metra Electric District mainline tracks.

Costs presented in this memorandum are macro-level estimates based on 2012 dollars. The costs presented are for comparison of the construction costs and do not include soft costs and unallocated contingencies. These costs do not represent the full cost of implementing the RLE.

Option #1: Aerial Track Structure

The initial planning phases, including the Alternatives Analysis study that was completed in 2009, has the RLE on aerial track structure.

Approximate construction cost = $100 to $120 million per mile of double track

Estimated Total Construction Cost ~ $120 M * 2.57 miles = $308.4 Million

Benefits:

- Minimizes effects on the neighborhood
- Minimizes noise levels as compared to at-grade trains
- Built-in security by being above grade
- Maintains existing roadway access

Drawbacks:

- Cost of aerial structure
- Public perception of visual impacts due to height of the structure

Option #2: At-grade track, roads overpass track

Approximate construction cost = $10 million per mile of double track.

Track construction cost ~ $10 M * 2.57 miles = $25.7 Million

Roadway overpasses would be constructed at 101st Street, 103rd Street, 107th Street, 109th Street, 111th Street, Wentworth Avenue, 115th Street, and State Street (8 Crossings).

Overpass construction cost ~ $25 million / each * 8 = $200 Million

Estimated Total Construction Cost ~ $25.7 Million + $200 Million = $225.7 Million

Benefits:

- Potential $82.7M construction savings versus Option #1: Aerial Track Option (Note: Potential construction savings would not outweigh the additional right-of-way acquisition covered under “Drawbacks” below.)
- CTA at-grade, vehicular traffic is grade separated from the CTA and Union Pacific Railroad (UPRR)

Drawbacks:

- An analysis of the potential 107th Street overpass revealed approximately 220 residents would be adversely affected by the construction of the overpass (reduced access, increased travel distance and time, perceived visual impacts of overpasses, additional displacements, neighborhood interruption during construction, etc.) Extrapolating to the entire project, approximately 1,500 homes would have some adverse impact. Refer to Exhibit B.
- Additional right-of-way acquisition. Refer to Exhibit B.

- Closure of some cross streets where they intersect with the embankment for bridge approaches.
- Relocation of utilities along the roadways and cross streets.
- Community impacts due to neighborhood isolation.
- Potential visual impacts for homes near overpasses (abutting an approximately 30-foot tall embankment).
- Additional security may be required to protect the train operations and third rail as compared to aerial track structure.
- Potential increase in noise levels affecting adjoining residents.

Option #3: At-grade track, cross-roads underpass track

Approximate construction cost = $10 million per mile of double track.

Track construction cost ~ $10 M * 2.57 miles = $25.7 Million

Roadway underpasses would be constructed at 101st Street, 103rd Street, 107th Street, 109th Street, 111th Street, Wentworth Avenue, 115th Street, and State Street (8 Crossings).

Underpass construction cost ~ $60 million / each * 8 = $480 Million

Estimated Total Construction Cost ~ $25.7 Million + $480 Million = $505.7 Million

Benefits:

- CTA at-grade, vehicular traffic is grade separated from the CTA and UPRR

Drawbacks:

- Costs of structure is significantly higher than Options #1 and #2.
- Property impacts similar to Option #2; additional property impacts would occur to accommodate the underpass structure (reduced access due to grade difference and needed retaining wall for underpass structure).
- Additional right-of-way acquisition.
- Closure of some cross streets required where the streets intersect or would require lowing cross streets to intersect at grade. Lowering of cross streets would require additional right-of-way and additional property impacts due to access.
- Community impacts due to neighborhood isolation.

- Additional costs associated with a pumping station for drainage (flood prevention).
- Relocation of utilities along the major roadways and cross streets.
- Additional security may be required to protect the train operations and third rail as compared to aerial track structure.
- No additional benefits over the Options #1 or #2

Option #4: At-grade track between crossroads, maximum allowable grade

Another option considered to take advantage of the significantly lower cost of constructing at-grade track is to lower the profile of the proposed extension between crossroads to run at-grade as much as possible while avoiding the prohibitive adverse effects of constructing roadway overpasses or underpasses. Using the maximum allowable grades provided in the *CTA Infrastructure Design Criteria Manual*, and the minimum vertical curves recommended by AREMA, Exhibit C was created to show what the proposed profile would look like if the track were lowered to grade between crossroads. Note that Exhibit C does not show a realistic construction alternative; its purpose is solely to show the maximum possible length of at-grade construction between crossroads.

The combination of the tight existing crossroad spacing and the relatively shallow maximum allowable profile grade prevents the profile from dropping down to grade in all but two locations: 950 feet between 103rd Street/ 107th Street, and 1000 feet between 111th Street/ Wentworth Avenue.

Benefits:

- Potential construction savings versus Option #1: Aerial Track Option =

1950 ft/5280 ft * ($120 Million - $10 Million) = $ 40.6 Million

Drawbacks:

- Potential customer discomfort caused by constantly varying profile (a “rollercoaster” feel).
- Increased train spacing to provide safe braking distance which would lead to increased running time and need for additional cars.
- Increased operational risks related to traction.
- Additional energy consumption, vehicle wear and tear, and wheel/track maintenance.

Option #5: Track on retained embankment

After analyzing the option of varying the vertical alignment at the maximum allowable grade, we considered varying the vertical alignment at a gentler grade which would avoid the "rollercoaster" feel of the maximum grade while taking advantage of shorter structure heights. In conjunction with the gentler grade, we evaluated where it would be feasible to install the tracks on embankment with retaining walls rather than aerial track structure.

A significant portion of the alignment could potentially be built on embankment with retaining walls. Below are the approximate station ranges of the UPRR East Option which could be built on retained embankment:

Start Station	End Station	Retaining Wall Length
137+50	150+00	1,250 ft
150+75	159+85	910 ft
165+80	189+60	2,380 ft
190+30	203+08	1,278 ft
203+83	209+85	602 ft
217+13	241+34	2,421 ft
242+04	252+14	1,010 ft
252+84	257+55	471 ft
258+25	264+27	602 ft
270+40	280+00	960 ft
	Total	11,884 ft

Benefits:

- Track structure on retained embankment can be constructed for approximately $50 Million / mile. Potential construction savings for this option versus Option #1: Aerial Track Option = 11884 ft/5280 ft * ($120 Million - $50 Million) = $ 157.5 Million (Note that the "planning level" costs per mile are intended to show the order of magnitude of cost savings in order to determine whether an alternative has merit for further study in the Preliminary Engineering phase. If additional crossings are required, the order of magnitude cost savings would be similar.)

- Potential for reduced noise impacts based on use of ballasted track system on the embankment.

- Potential lower maintenance for retaining walls versus aerial track structure.

Drawbacks:

- Visual impacts (and accompanying community impacts) from retaining walls (approximate 23′ retained height above grade).
- Visual impacts from potential graffiti (and accompanying increased maintenance cost).

Conclusions:

- Constructing the proposed extension at-grade, with roadway underpasses is the most expensive option, and offers no unique benefits.
- Constructing the proposed extension at-grade, with roadway overpasses offers potential construction savings on the track, but could potentially adversely affect more homes than Option #1: Aerial Track Structure. Although a detailed analysis of the additional right-of-way acquisition was not performed, the potential adverse impacts on such a large number of homes likely outweigh the potential $100 million in savings.
- The small cost benefits of Option #4 (which shows only a short section of track has the potential to be constructed at-grade) would not outweigh the operational drawbacks of the inclines.
- Options #1 and #5: Aerial Track Structure and Track on Retained Embankment would extend transit service with the best balance of cost and neighborhood impacts over Options #2, #3, and#4. Option #5 has the potential for a sizable construction cost savings (over $100 million) if the potential community impacts (including visual impacts) are acceptable or can be mitigated.

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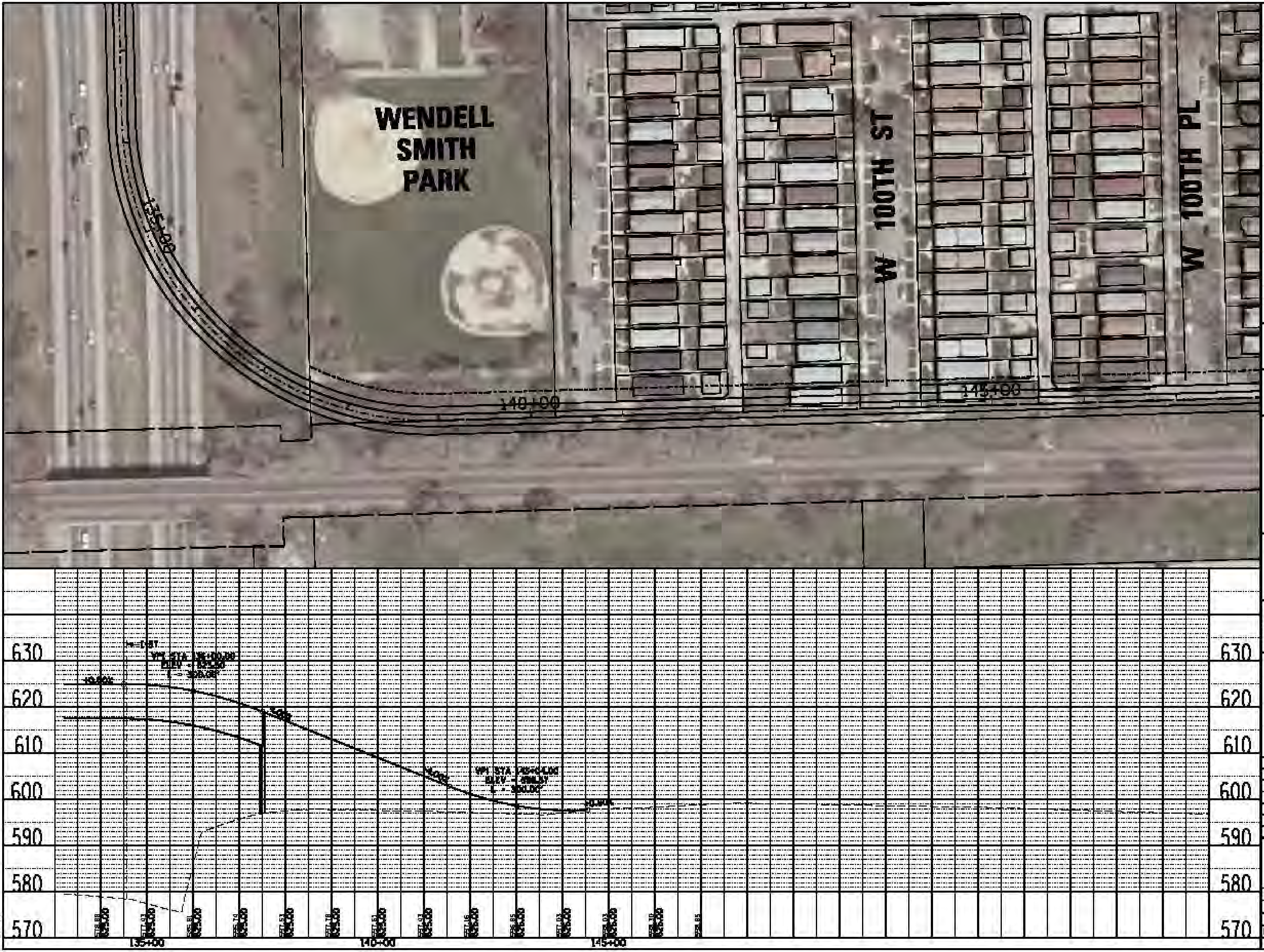
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- EX RAILROAD RIGHT-OF-WAY
- PR PERMANENT ENVELOPE
- PR ROADWAY/HARDSCAPE
- PR STATION PLATFORM
- EX BUILDING OUTLINE
- PR BUILDING OUTLINE
- PR PARKING
- PR CTA SUBSTATION
- PR UPRR TRACK CENTERLINE

UTILITIES
- EXISTING WATER LINES
- EXISTING SEWER LINE

ENTRANCES
- PRIMARY ENTRANCE
- SECONDARY ENTRANCE
- EXIT ONLY
- PROPOSED PARKING ENTRANCE

PROFILE
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- PLATFORM LOCATION

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RED LINE EXTENSION
ENVIRONMENTAL IMPACT STUDY

UNION PACIFIC RAILROAD ALTERNATIVE
EAST SIDE OPTION
- AT GRADE PROFILE

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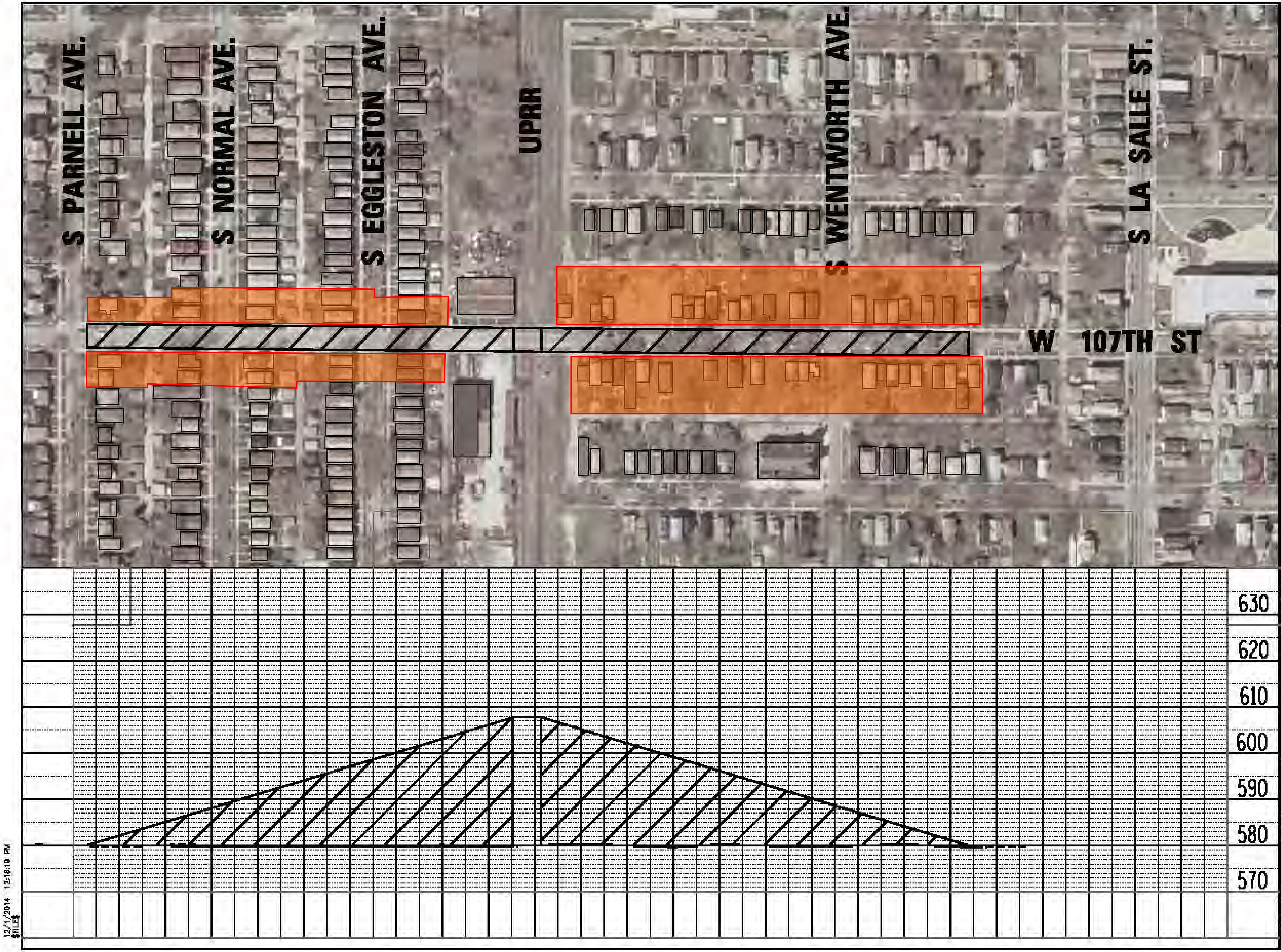
EXHIBIT A - AT GRADE OPTION ANALYSIS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- ▨ MSE WALL - BRIDGE APPROACH

CWE Transit Group

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RED LINE EXTENSION ENVIRONMENTAL IMPACT STUDY
UNION PACIFIC RAILROAD ALTERNATIVE EAST SIDE OPTION - PROPOSED ROADWAY OVERPASS

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PROJECT NO CTA-RLE
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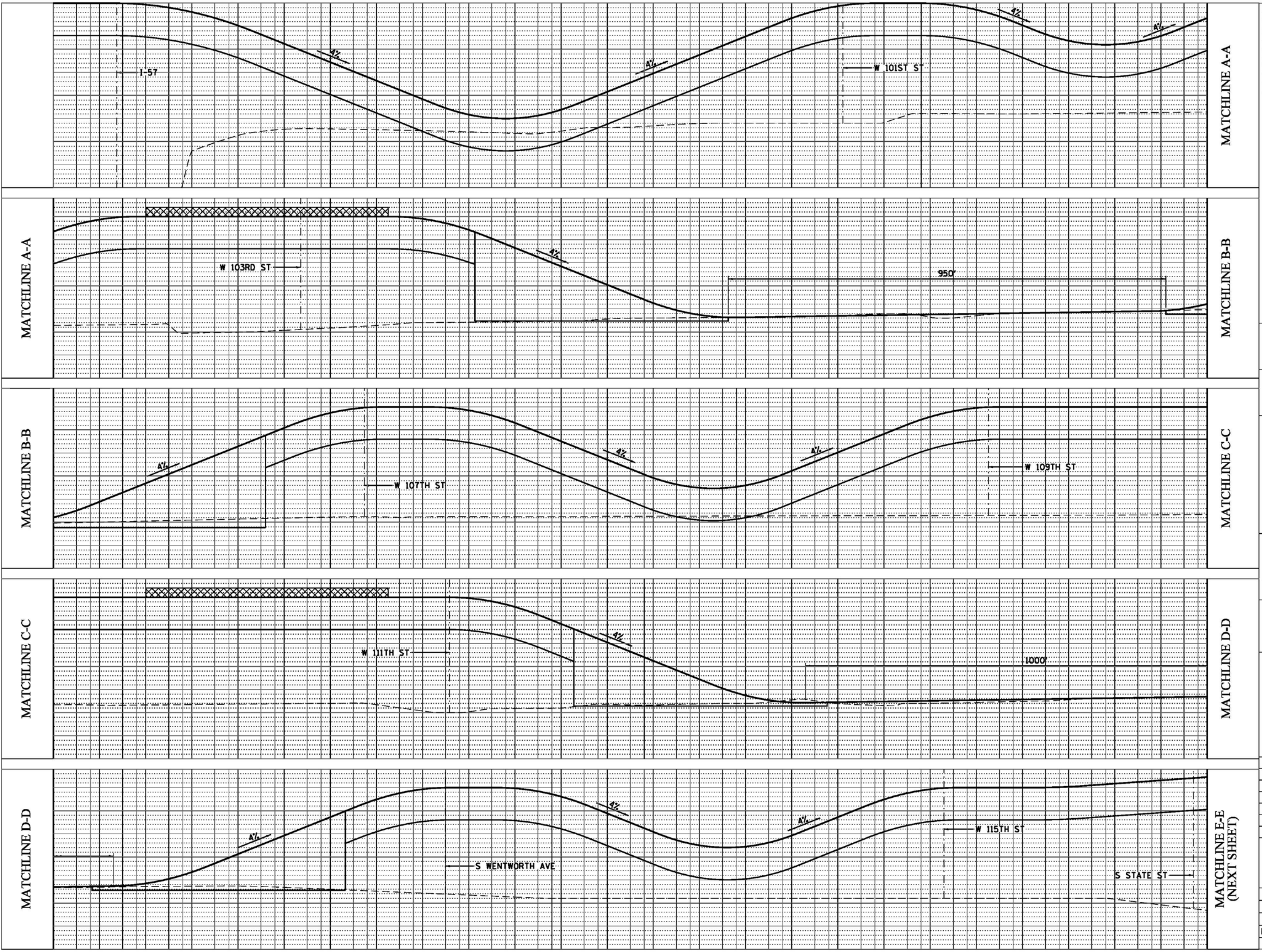
EXHIBIT B - AT GRADE OPTION ANALYSIS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CWE Transit Group

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AUTHORITY

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RED LINE EXTENSION
ENVIRONMENTAL IMPACT STUDY
UNION PACIFIC RAILROAD
ALTERNATIVE
EAST SIDE OPTION -
MAXIMUM PROFILE GRADES

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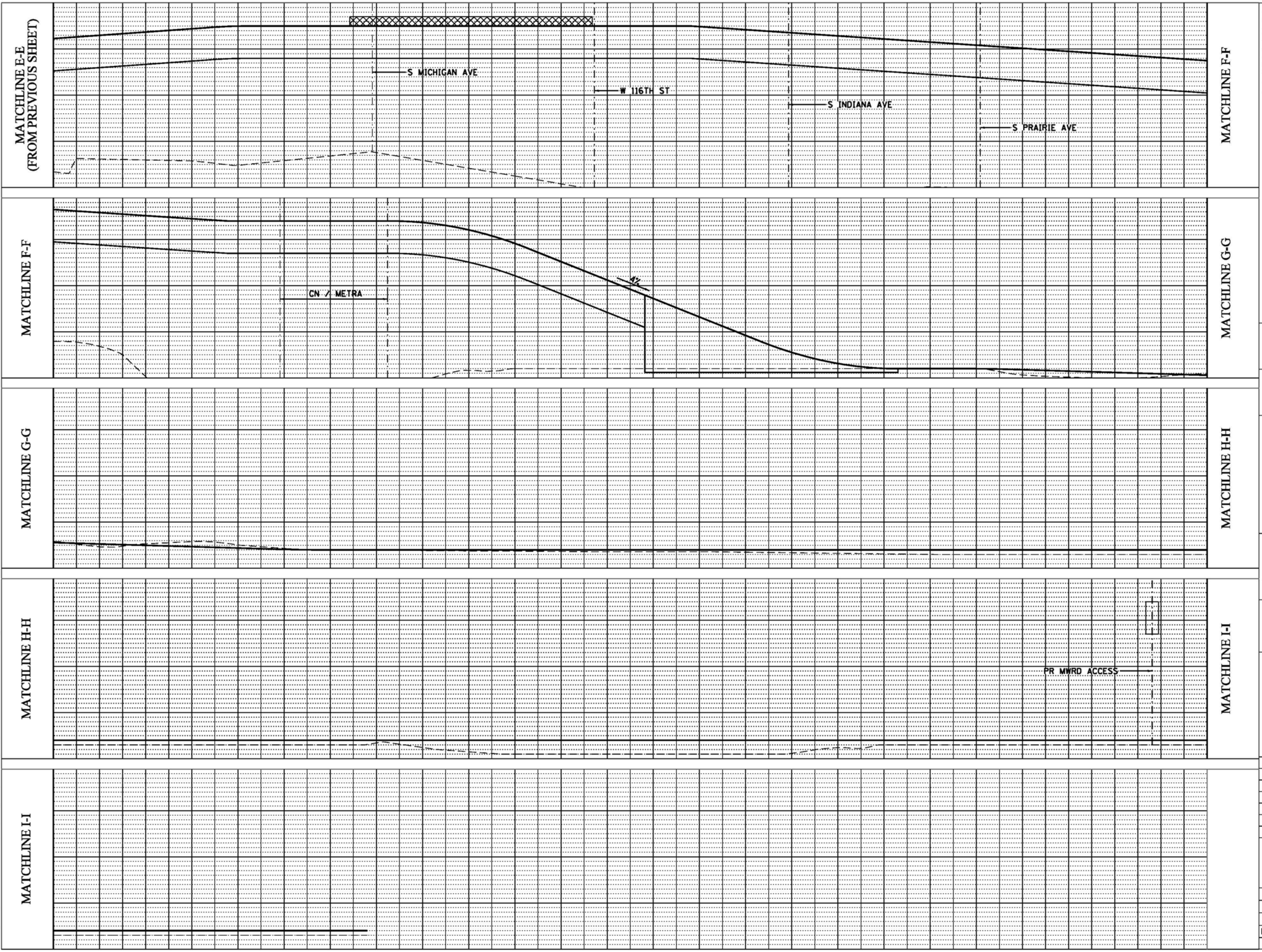
EXHIBIT C - MAXIMUM GRADE PROFILE OPTION ANALYSIS -1/2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RED LINE EXTENSION
ENVIRONMENTAL IMPACT STUDY
UNION PACIFIC RAILROAD
ALTERNATIVE
EAST SIDE OPTION -
MAXIMUM PROFILE GRADES

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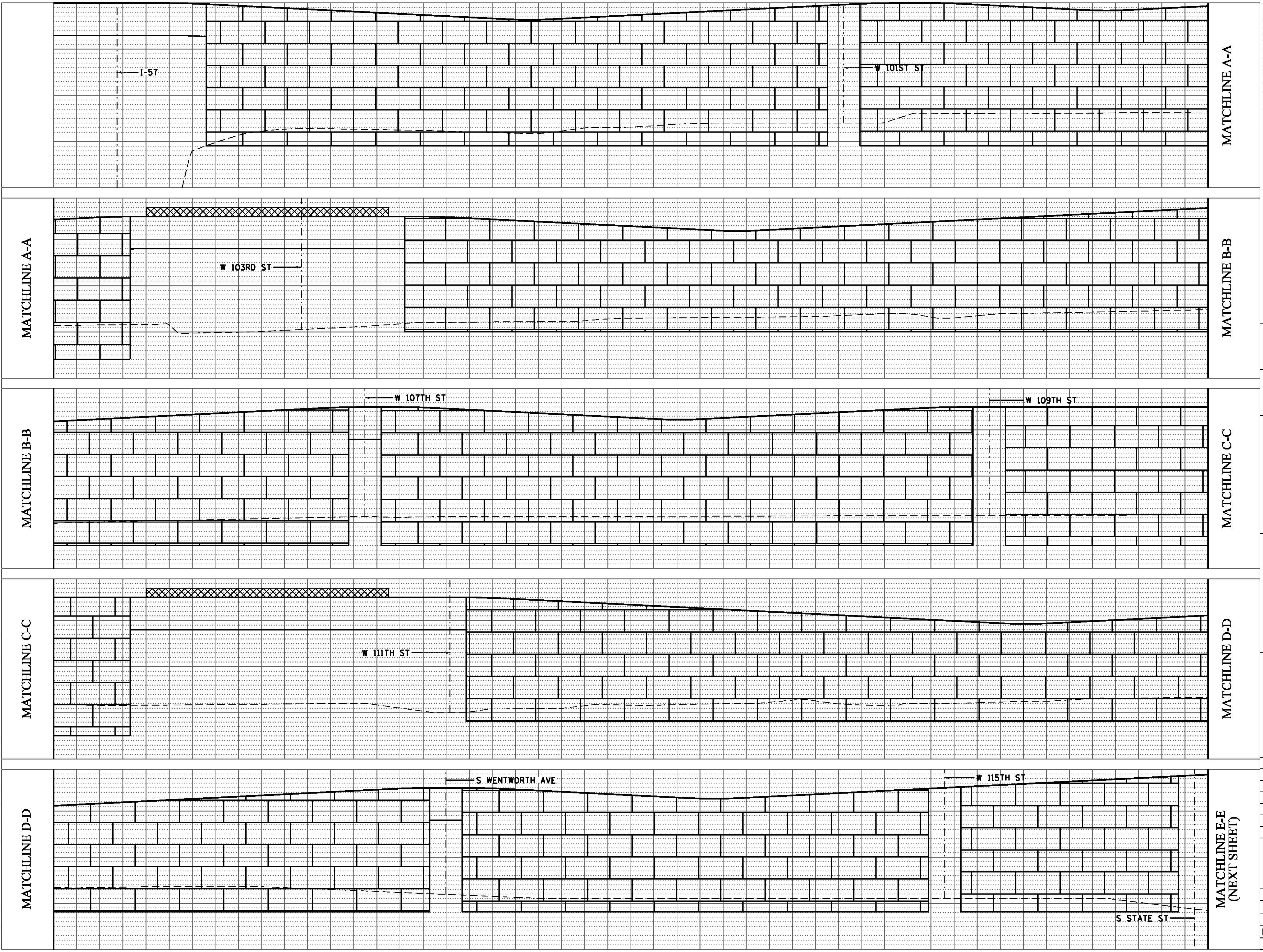
EXHIBIT C - MAXIMUM GRADE PROFILE OPTION ANALYSIS -2/2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RED LINE EXTENSION
ENVIRONMENTAL IMPACT STUDY
UNION PACIFIC RAILROAD
ALTERNATIVE
EAST SIDE OPTION -
REALISTIC PROFILE GRADES

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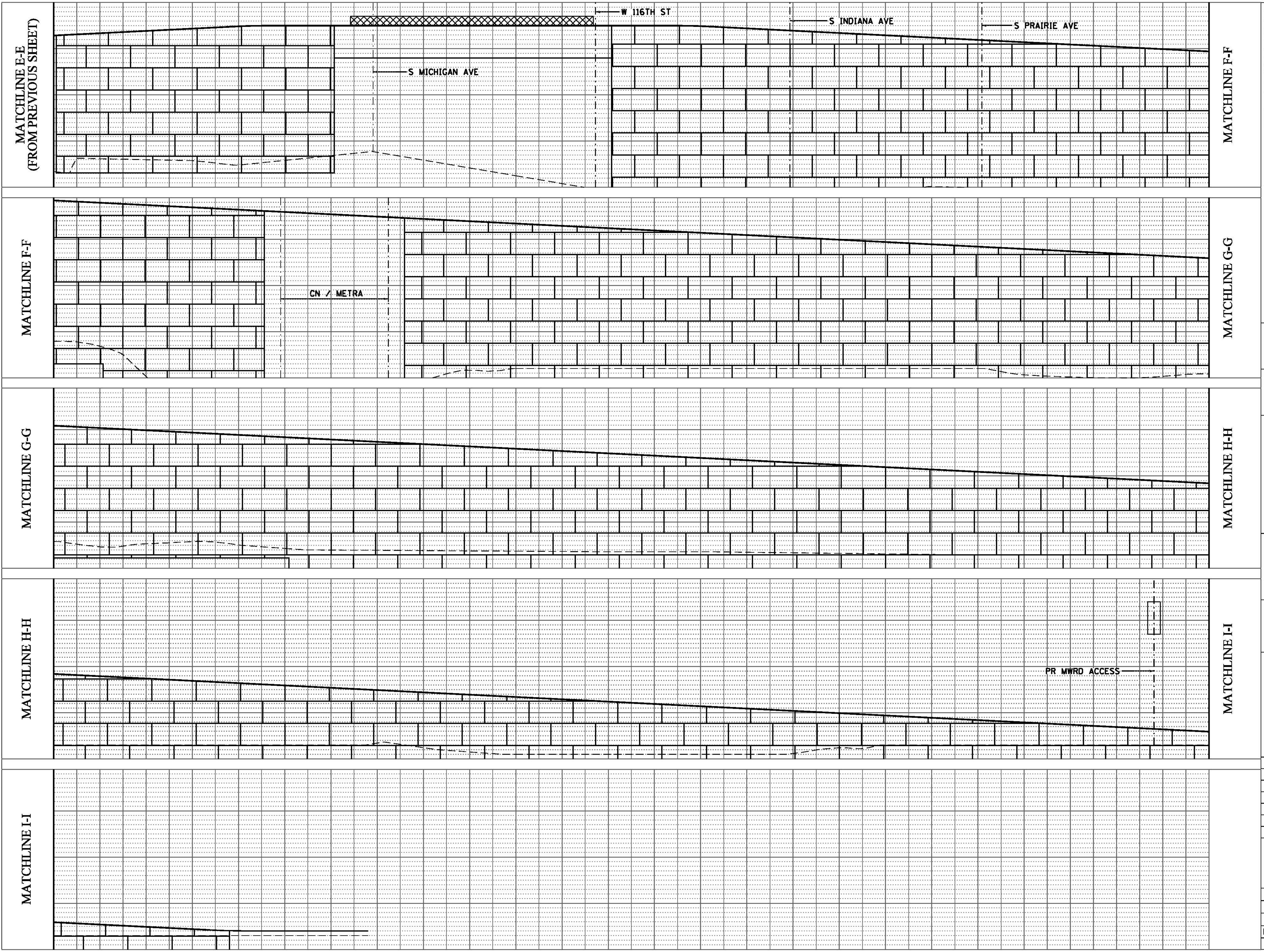
EXHIBIT D - RETAINING WALL OPTION ANALYSIS -1/2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CWC Transit Group

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RED LINE EXTENSION
ENVIRONMENTAL IMPACT STUDY
UNION PACIFIC RAILROAD ALTERNATIVE
EAST SIDE OPTION - REALISTIC PROFILE GRADES

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EXHIBIT D - RETAINING WALL OPTION ANALYSIS -2/2

Memorandum

To: *Sonali Tandon*

From: *CWC, Wight & Company*

Date: *December 2, 2014, revised June 11, 2015*

Subject: *120th Street Rail Shop and Yard Program*

The purpose of this document is to summarize program data collected for a Red Line Extension (RLE) yard for use in a future design phase of the project. This document was developed through meetings with CTA Rail Operations, Infrastructure, Planning, Maintenance, and Scheduling. The programming elements listed in this document indicate an ideal yard and are based on past experiences and lessons learned. The design and layout of the Midway yard was used as a guide when developing this document as Midway represents a yard on the current CTA system with good flow and operations. At the time of design, current CTA design criteria pertinent to yards (as found in the Infrastructure Design Criteria Manual) should be reflected in the layout and design.

Note that the conceptual layout related to this document was required to function with an intermediate RLE phase having service terminating at 115th Street and the ultimate RLE extension to 130th Street. In the intermediate phase, yard storage should accommodate a minimum of 288 cars on storage tracks. (Potential storage on the interior cleaning track, shop leads, or yard leads would not be included in this count.) In the ultimate build-out, yard storage should accommodate a minimum of 340 cars. See the yard capacity attachment to this memorandum for further detail.

The existing 98th Street Yard could be used to store extra trains or for sweeping cars. The use of the existing 98th Street Yard should be considered when designing the future yard. The 98th Street Yard should not be used as a maintenance facility after the new yard becomes active.

GENERAL

This scope document was developed to indicate the overall scope of the Red Line Extension - 120th Street Rail Shop and Yard and indicate the general design parameters. The scope does not indicate or describe all the work required for the full performance and completion of the project. The materials, details, sizes and quantities of the rail shop and yard are to be designed by a future designer and constructed by a contactor. The designer and contractor shall provide all the requirements of the scope documents and shall include all items and services reasonably inferable from the scope documents. The designer and contractor shall only have contact with the firm retained to prepare these scope documents as authorized by the CTA. The preparer of the scope documents will not be responsible for the acts or omissions of the designer, contractor or any subcontractor or sub-consultant.

PROJECT LOCATION & EXISTING CONDITIONS:

The site of the proposed Red Line Extension Rail Yard is generally industrial in nature. It is located west of the I-94 expressway and Lake Calumet at approximately 122nd Street. The site is accessible by Cottage Grove Avenue as well as local access drives. The Metropolitan Water Reclamation District currently owns the site as well as much of the adjacent properties to the south and east. Three existing train tracks directly to the east of the site are operated by the Northern Indiana Commuter Transportation District, Chicago South Shore and South Bend Railroads. The K-Five Materials Corporation plant is directly northwest of the proposed site.

CODE COMPLIANCE

The entire project shall comply with the City of Chicago, State of Illinois and Federal Code requirements and the American with Disabilities Act (ADA) as applicable.

The entire project shall also comply with the Chicago Transit Authority standards, unless otherwise shown.

ARCHITECTURAL SCOPE

Site

Yard:

- 11 Storage tracks – various combinations of train lengths for a total of 340 cars not including any shop tracks, shop leads, or yard leads

- Track 12 (adjacent to shop) shall have door level cleaning platform with area allocated for trash containers.

- Sidewalks between every storage track, or utility vehicle access width between every other storage track – see yard section alternatives attachment to this memorandum.

- The storage track shall accommodate two 16-foot drives crossing the storage tracks generally running southwest to northeast from each end of the shop building – see plan view.

- The yard should generally be level and should be raised above the potential flood elevation. The profile should include slight upward slopes at each end to prevent wind-driven roll-away trains.

- The use of photovoltaic panels should be studied to cover and protect the parked trains or a portion of the parked trains from the elements and to offset the building electrical load.
- A yard master tower is required. Master tower is depicted in the exhibit documents on the roof of the shop.
- The site lighting should be carefully planned to be energy efficient, vandal resistant, easy to maintain, and meet safety regulations. American Railway Engineering Maintenance of Way Association (AREMA) policy should be used as a minimum standard and guideline for the lighting of the yard. Fixtures utilizing the latest available technologies should be considered.
- A secure fence shall be provided around the entire yard and coordinated with the security system. (Perimeter cameras with infrared and analytics should be considered.)

Other Site Requirements (including exterior of shop):

- Minimum of 130 vehicle parking spaces including handicap accessible spots as required by code.
- All site utilities shall be coordinated for clearances and cover depths to meet each specific utilities requirement.
- Site drainage shall conform to the City of Chicago Stormwater Management Ordinance Manual and City of Chicago Regulations for Sewer Construction and Stormwater Management. Best Management Practices shall be utilized wherever possible.
- Loading dock is required for parts delivery. Truck turning radius required to be coordinated with CTA.
- Landscape shall be in accordance with the City of Chicago zoning code.
- Provide locations for snow and track/bulk material storage.
- Trash compactor located near loading dock.
- Trash bin near cleaning platform.
- Provide sections of short track for non-revenue equipment storage.

Building

The floor area of the entire shop including the track bays, administration, maintenance and ancillary areas is depicted in the exhibit document as 85,000 SF. The final area should be coordinated with CTA to confirm all building requirements are met. The envelope design must properly address performance concerns including thermal, condensation, durability, constructability and economy. Daylighting and high performance glazing shall be utilized in the shop and administration areas. The floor area depicted in the exhibit drawings show all the programed space located on the main level but multiple levels may be utilized if it is found to be economical. Stairs and an elevator would need to be added to the program if multiple floors are utilized. Depending on the type of hoists used, a partial basement may be required.

Shop:

- Five required track bays - All five tracks run all the way through shop
- Interior Wash Track:
    - No Pit
    - Minimum capacity of 10 cars
    - Pull Through access with overhead doors at both ends
    - Out-to-out width for the bay to accommodate the brushes and control room
    - Water treatment and water recycling equipment
- Pit Track:
    - Minimum capacity of 10 cars
    - Overhead door access on both ends
- Wheel Truing Track:
    - Truing machine (4-car length) with hoists on the remainder of the track
- Two (2) Shop Tracks with Hoists
    - Minimum capacity of 10 cars each
    - Overhead door access on both ends

General/Administration:

- Shop Office (must be located on 1st floor)
- Superintendent Office
- Conference/Classroom
- Lunch Room
- Pantry/Kitchen

- Janitor Closets (2)
- Building Maintenance
- Grounds Maintenance
- Track Maintenance
- Cab Signal Maintenance
- Yard Master Tower

Toilet/Lockers:

- Main Men's Locker Room
- Main Women's Locker Room
- Maintenance Men's Locker Room
- Maintenance Women's Locker
- Office Unisex Toilet

Mechanical/Electrical:

- Mechanical Equipment Room
- Electrical Equipment Room
- Communications/IT Room

Storage Areas:

- General Building Storage
- Small Part Storage
- Hazardous Material Storage
- Oil Storage

STRUCTURAL

The foundation and slab system shall be designed by a structural engineer based on recommendations from the geotechnical engineering report. The structural framing system shall be designed in accordance with generally accepted engineering principles. The structural system shall be selected so that the chemicals and materials used in the shop and wash track shall not have a negative impact on the structural systems performance.

MEP

Mechanical

The HVAC system shall be selected to be energy efficient, meet all indoor air quality and thermal comfort requirements and must be straightforward to operate and maintain. Incorporation of renewable energy sources into the design of the building is recommended where possible. An appropriate system includes wind turbines and photovoltaic panels capable of generating electric energy to offset the building's electrical load.

Electrical

Incoming electrical service should be discussed with the CTA and selected to meet the facility needs. The size of the electrical service equipment shall be determined by a Professional Engineer to conform to the City of Chicago Building Code and the National Electrical Code. Interior Lighting shall be provided to meet the requirements of the occupants and utilize a minimum number of separate lamps for building maintenance.

Plumbing/Fire Protection

The building shall provide restrooms facilities capable of meeting CTA requirements and plumbing and accessibility codes. Low water consumption fixtures should be selected. Selection of toilet accessories, partitions and lockers should be durable and easy to maintain. The design shall include fire protection according to applicable codes including heat and smoke detectors, and associated alarm sirens and strobes. The fire alarm system shall be integrated with the City of Chicago security annunciation system to alert proper authorities. An automatic sprinkler system shall also be included. The fire alarm system will be of addressable type, and be in accordance with the City of Chicago Building Code, National Fire Protection Association and the requirements of the Bureau of Fire Prevention, whichever is more stringent.

Communications

The provisions for information technology shall be coordinate with the CTA IT department. The data system shall be a combination of direct cable and wireless.

Automation, Measurement & Verifications

The building shall include a Building Automation System (BAS). The systems that tie into the BAS system shall be discussed with the CTA. The controls system shall integrate to a Graphical User Interface (GUI). A measurement and verification system to monitor energy use should be considered and shall be discussed with CTA.

SECURITY

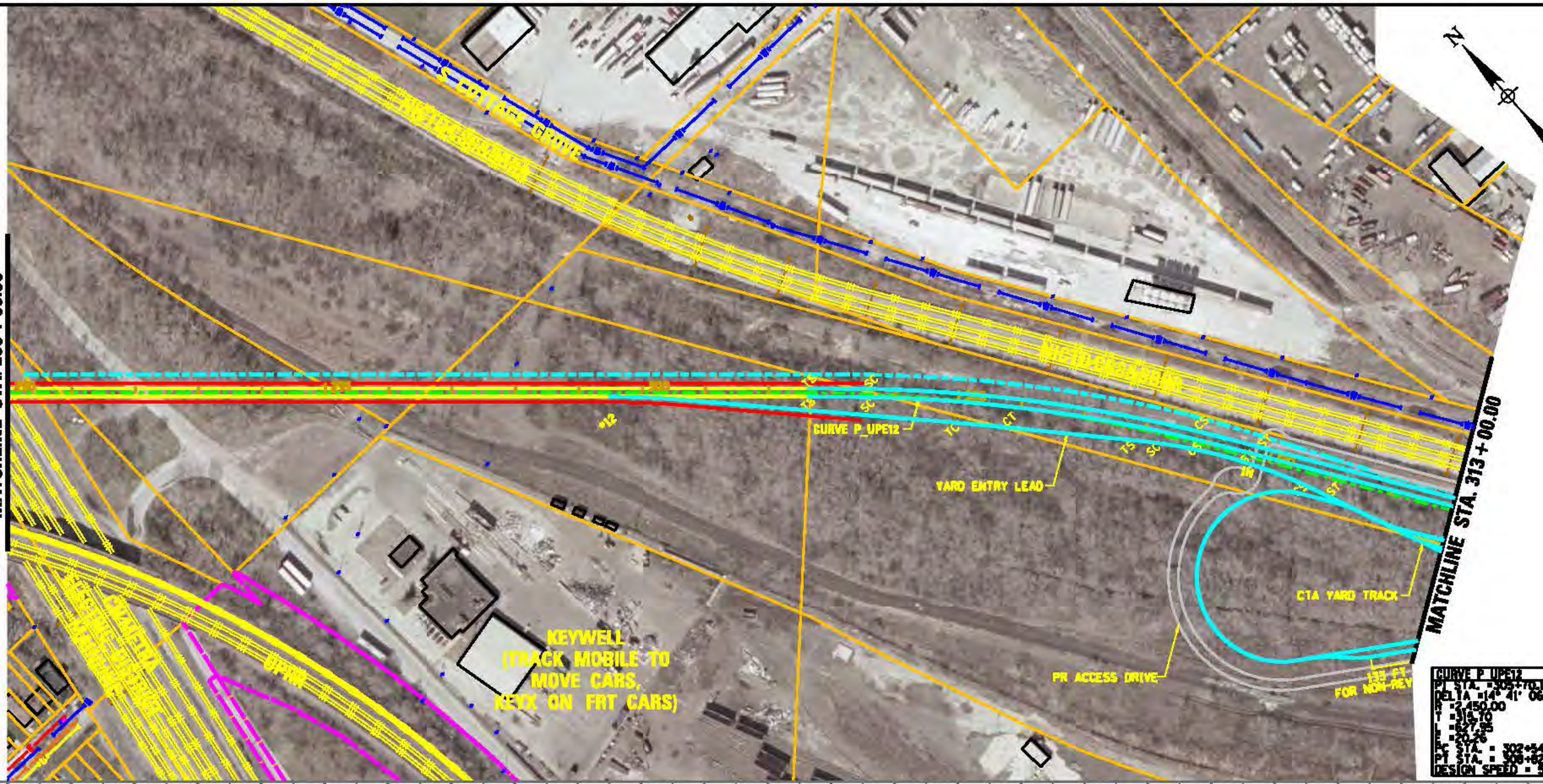
The security system shall consist of intrusion detection/access control and Surveillance System. The security system will be monitored, if required, by a third party security contract, or with a direct link to the Chicago Police Department local precinct. A direct link to the CTA Control Center will also be included. The surveillance system shall be provided with Raceways, Closed-

Circuit Television (CCTV)-UTP cables, jacks, patch panels, patch cords, high resolution Pan Tilt Zoom (PTZ) cameras, infrared cameras, multiplexes, monitors, Digital Video Recorder (DVR), interface modules, fiber distribution and all appurtenances for a complete surveillance system. The surveillance system coverage shall include but not be limited to, the building interior, the rail yard, loading areas and parking areas. Exterior cameras shall have the capability to send the video signal to the OEMC (Office of Emergency Management and Communications) upon request as a part of the Third Party Initiative Program. Camera selection shall be coordinated with OEMC for their compatibility.

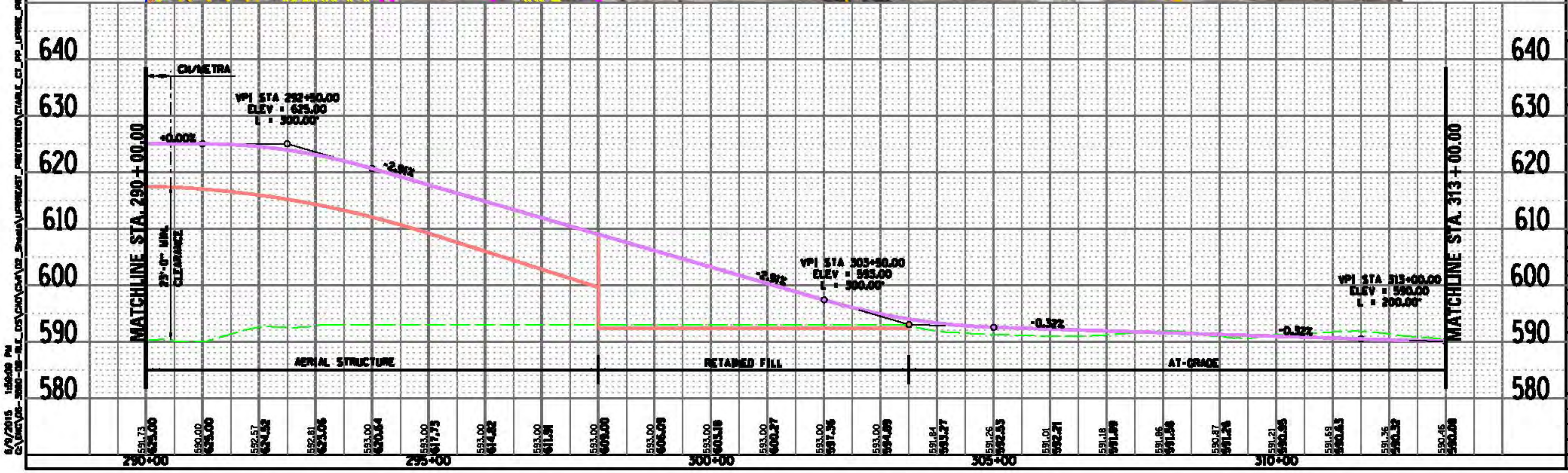
Attachments:

- Plan view conceptual schematics of yard and shop
- Yard capacity detail
- Flow schematics (into and out of the yard, and internal movements)
- Yard Storage Track Spacing Alternatives

cc: File


MATCHLINE STA. 290+00.00
MATCHLINE STA. 313+00.00
N
CURVE P_UPE12
TS
SC
TC
CT
CS
ST
IN
YARD ENTRY LEAD
CTA YARD TRACK
PR ACCESS DRIVE
135 FT FOR NON-REV
KEYWELL (TRACK MOBILE TO MOVE CARS, KEYX ON FRT CARS)
UPRR

CURVE P_UPE12
PI STA. =305+70.14
DELTA =14° 41' 06.85"(RT)
R =2,450.00
T =315.70
L =627.95
E =20.26
PC STA. = 302+54.43
PT STA. = 308+82.38
DESIGN SPEED = 55 MPH


640
630
620
610
600
590
580
MATCHLINE STA. 290+00.00
MATCHLINE STA. 313+00.00
CN/METRA
25'-0" MIN. CLEARANCE
VPI STA 292+50.00
ELEV = 625.00
L = 300.00'
+0.00%
-2.91%
VPI STA 303+50.00
ELEV = 593.00
L = 300.00'
-2.91%
-0.32%
-0.32%
VPI STA 313+00.00
ELEV = 590.00
L = 200.00'
AERIAL STRUCTURE
RETAINED FILL
AT-GRADE
591.73 625.00
590.00 625.00
592.57 624.52
592.81 623.06
593.00 620.64
593.00 617.73
593.00 614.82
593.00 611.91
593.00 609.00
593.00 606.09
593.00 603.18
593.00 600.27
593.00 597.36
593.00 594.89
591.84 593.27
591.26 592.53
591.01 592.21
591.18 591.89
591.86 591.58
590.87 591.26
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300+00
305+00
310+00

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LEGEND

PLAN

— · — · —	EX CENTERLINE
— · — · —	PR CENTERLINE
═╪═	EX TRACK CENTERLINE
═	PR TRACK CENTERLINE
—	PR TRACK STRUCTURE
— — —	EX ROADWAY RIGHT-OF-WAY
— — —	EX RAILROAD RIGHT-OF-WAY
- - -	PR PERMANENT ENVELOPE
—	PR ROADWAY/HARDSCAPE
■	PR STATION PLATFORM
▭	EX BUILDING OUTLINE
▭	PR BUILDING OUTLINE
▨	PR PARKING
▨	PR CTA SUBSTATION
═	PR UPRR TRACK CENTERLINE

UTILITIES

—■—	EXISTING WATER LINES
—●—	EXISTING SEWER LINE
—■—	EXISTING GAS LINE
—E—	EXISTING ELECTRIC LINE
—T—	EXISTING TELEPHONE LINE

ENTRANCES

▲	PRIMARY ENTRANCE
△	SECONDARY ENTRANCE
△	EXIT ONLY
⇄	PROPOSED PARKING ENTRANCE

PROFILE

— — —	EX GROUND
—	PR TOP OF RAIL
—	PR ELEVATED STRUCTURE DEPTH
☒	PLATFORM LOCATION

CWC Transit Group

cta

CHICAGO TRANSIT
AUTHORITY

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RED LINE EXTENSION
ENVIRONMENTAL IMPACT STUDY
UNION PACIFIC RAILROAD ALTERNATIVE
EAST SIDE OPTION

13 OF 51

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PROJECT NO	CTA-RLE
FILE NAME	CTARLE_CT_PP_UPRRE_PREF_110.dgn

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V 1" = 10'-0"

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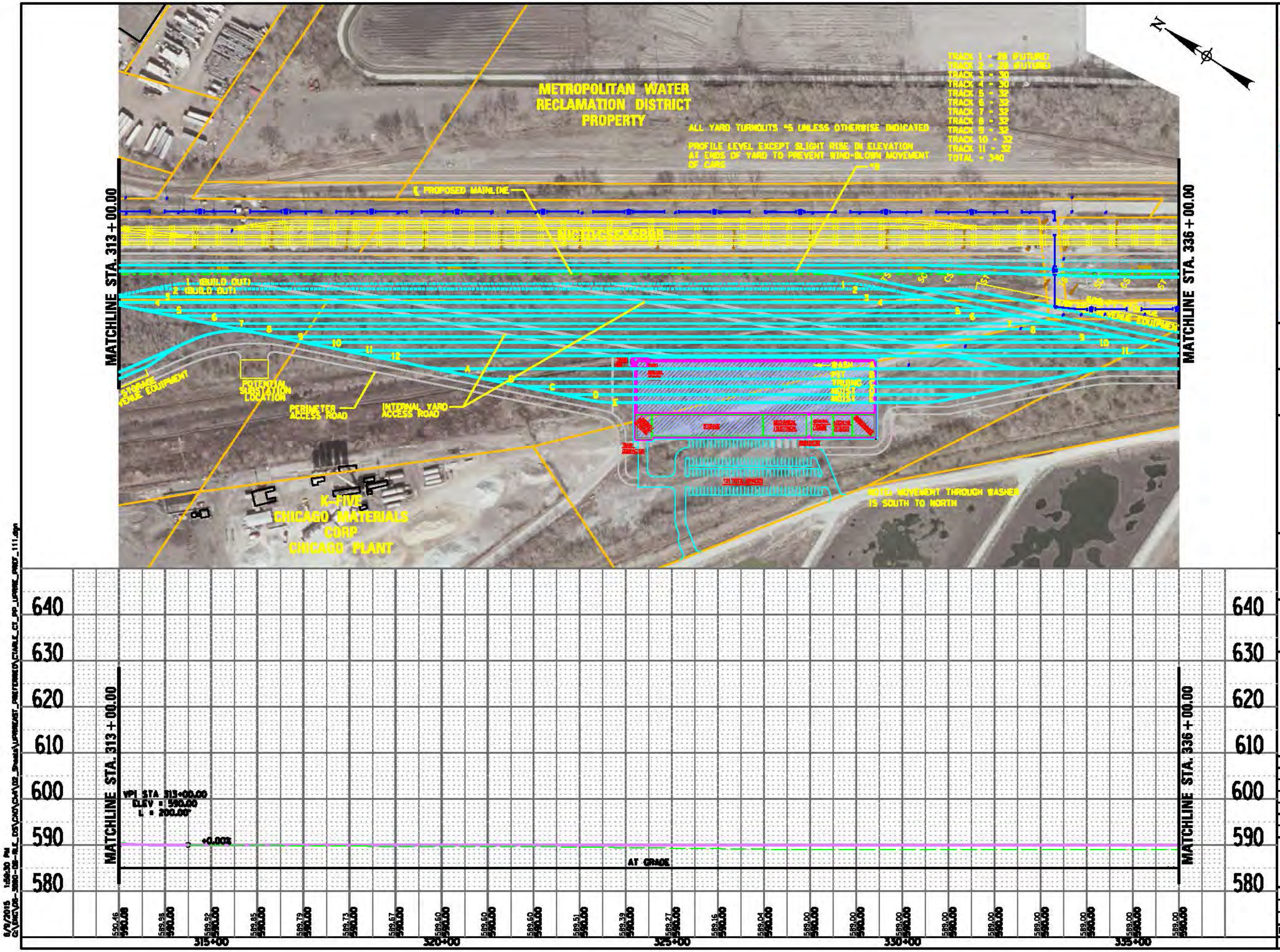
METROPOLITAN WATER RECLAMATION DISTRICT PROPERTY
ALL YARD TURNOUTS #5 UNLESS OTHERWISE INDICATED
PROFILE LEVEL EXCEPT SLIGHT RISE IN ELEVATION AT ENDS OF YARD TO PREVENT WIND-BLOWN MOVEMENT OF CARS
#8
TRACK 1 - 28 (FUTURE)
TRACK 2 - 28 (FUTURE)
TRACK 3 - 30
TRACK 4 - 30
TRACK 5 - 32
TRACK 6 - 32
TRACK 7 - 32
TRACK 8 - 32
TRACK 9 - 32
TRACK 10 - 32
TRACK 11 - 32
TOTAL - 340
N
℄ PROPOSED MAINLINE
1 (BUILD OUT)
2 (BUILD OUT)
3
4
5
6
7
8
9
10
11
12
A
B
C
D
E
STORAGE VENUE EQUIPMENT
POTENTIAL SUBSTATION LOCATION
PERIMETER ACCESS ROAD
INTERNAL YARD ACCESS ROAD
WASH A
PIT B
TRUING C
HOIST D
HOIST E
STORAGE
MECHANICAL ELECTRICAL
GENERAL
LOCKER
TRASH COMPACTOR
131 TOTAL SPACES
NOTE: MOVEMENT THROUGH WASHER IS SOUTH TO NORTH
K-FIVE CHICAGO MATERIALS CORP CHICAGO PLANT
MATCHLINE STA. 313+00.00
MATCHLINE STA. 336+00.00
640
630
620
610
600
590
580
VPI STA 313+00.00
ELEV = 590.00
L = 200.00'
+0.00%
AT GRADE
590.46 590.00
589.98 590.00
589.92 590.00
589.85 590.00
589.79 590.00
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589.67 590.00
589.60 590.00
589.60 590.00
589.60 590.00
589.51 590.00
589.39 590.00
589.27 590.00
589.16 590.00
589.04 590.00
589.00 590.00
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LEGEND

PLAN

— · —	EX CENTERLINE
— · —	PR CENTERLINE
═	EX TRACK CENTERLINE
━	PR TRACK CENTERLINE
━	PR TRACK STRUCTURE
— —	EX ROADWAY RIGHT-OF-WAY
— —	EX RAILROAD RIGHT-OF-WAY
— —	PR PERMANENT ENVELOPE
—	PR ROADWAY/HARDSCAPE
🟥	PR STATION PLATFORM
▭	EX BUILDING OUTLINE
▭	PR BUILDING OUTLINE
▨	PR PARKING
▨	PR CTA SUBSTATION

UTILITIES

—	EXISTING WATER LINES
—	EXISTING SEWER LINE
—	EXISTING GAS LINE
—E—	EXISTING ELECTRIC LINE
—T—	EXISTING TELEPHONE LINE

ENTRANCES

▲	PRIMARY ENTRANCE
△	SECONDARY ENTRANCE
△	EXIT ONLY
⇄	PROPOSED PARKING ENTRANCE

PROFILE

— —	EX GROUND
—	PR TOP OF RAIL
—	PR ELEVATED STRUCTURE DEPTH
▩	PLATFORM LOCATION

CWC Transit Group

cta
CHICAGO TRANSIT AUTHORITY

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RED LINE EXTENSION
ENVIRONMENTAL IMPACT STUDY
UNION PACIFIC RAILROAD ALTERNATIVE
EAST SIDE OPTION

14 OF 51

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PROJECT NO	CTA-RLE
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V 1" = 10'-0"

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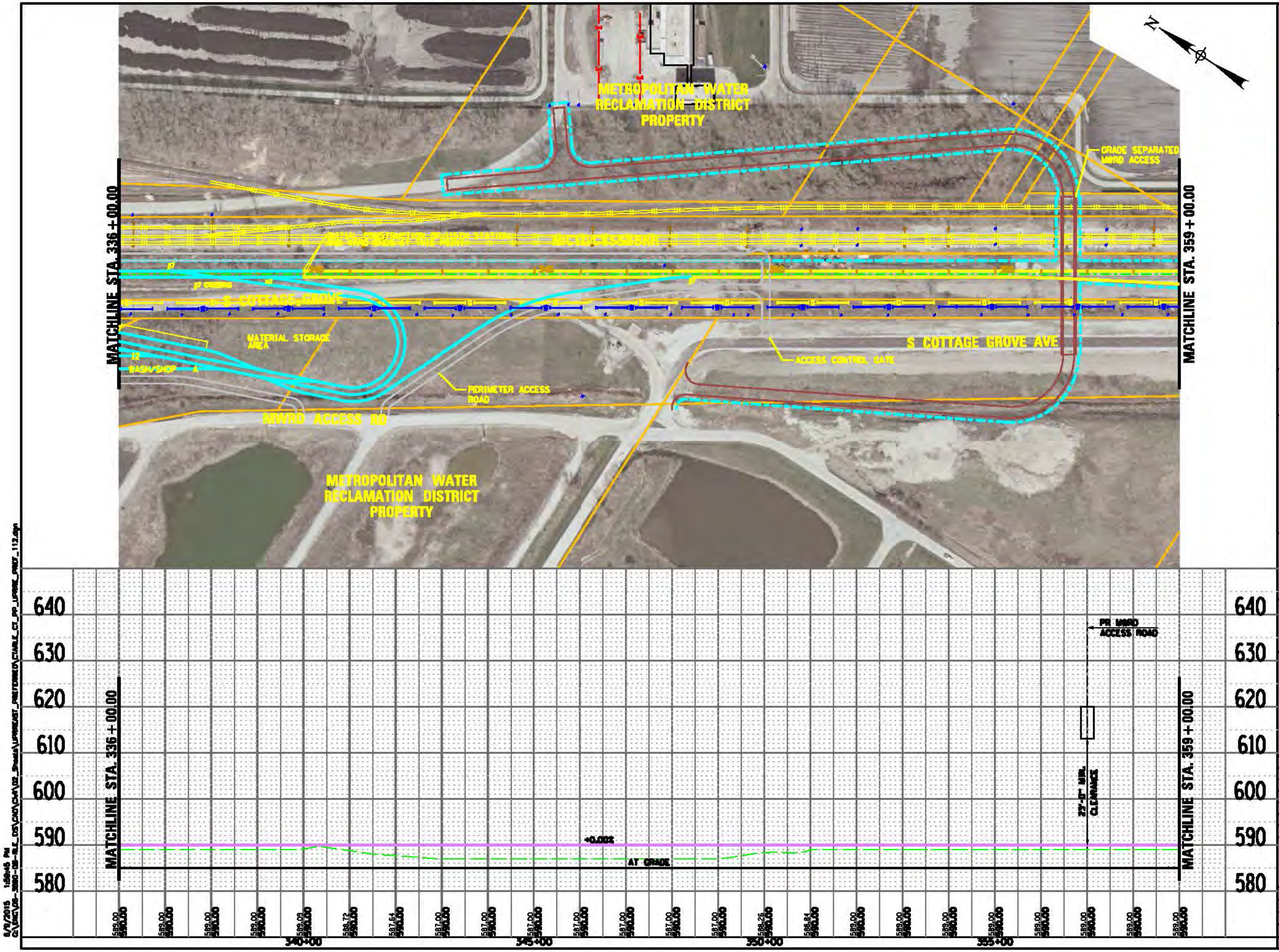
METROPOLITAN WATER RECLAMATION DISTRICT PROPERTY
GRADE SEPARATED MWRD ACCESS
MATCHLINE STA. 336+00.00
MATCHLINE STA. 359+00.00
S COTTAGE GROVE
S COTTAGE GROVE AVE
MATERIAL STORAGE AREA
WASH/SHOP
ACCESS CONTROL GATE
PERIMETER ACCESS ROAD
MWRD ACCESS RD
METROPOLITAN WATER RECLAMATION DISTRICT PROPERTY
N
640
630
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600
590
580
PR MWRD ACCESS ROAD
23'-0" MIN. CLEARANCE
+0.00%
AT GRADE
589.00 590.00
589.00 590.00
589.00 590.00
589.00 590.00
589.09 590.00
588.72 590.00
587.64 590.00
587.00 590.00
587.00 590.00
587.00 590.00
587.00 590.00
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LEGEND

PLAN

EX CENTERLINE
PR CENTERLINE
EX TRACK CENTERLINE
PR TRACK CENTERLINE
PR TRACK STRUCTURE
EX ROADWAY RIGHT-OF-WAY
EX RAILROAD RIGHT-OF-WAY
PR PERMANENT ENVELOPE
PR ROADWAY/HARDSCAPE
PR STATION PLATFORM
EX BUILDING OUTLINE
PR BUILDING OUTLINE
PR PARKING
PR CTA SUBSTATION

UTILITIES

EXISTING WATER LINES
EXISTING SEWER LINE
EXISTING GAS LINE
EXISTING ELECTRIC LINE
EXISTING TELEPHONE LINE

ENTRANCES

PRIMARY ENTRANCE
SECONDARY ENTRANCE
EXIT ONLY
PROPOSED PARKING ENTRANCE

PROFILE

EX GROUND
PR TOP OF RAIL
PR ELEVATED STRUCTURE DEPTH
PLATFORM LOCATION

CWC Transit Group

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RED LINE EXTENSION
ENVIRONMENTAL IMPACT STUDY
UNION PACIFIC RAILROAD ALTERNATIVE
EAST SIDE OPTION

15 OF 51

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PROJECT NO	CTA-RLE
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V 1" = 10'-0"

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SHEET TITLE

RLE Yard Storage Requirements

Ultimate Build-Out

Assumptions:

- Store 80 cars (8 x 10-car trains) for RPM ultimate build-out
- Replace maximum storage in 98th Yard
- Store 78 additional cars for RLE operation
- The minimum number of Red Line cars in operation (due to 7/24 service) is 40 cars (10 trains x 4 cars)
- Do not assume any trains stored on yard leads
- Discount storage requirements by 12 cars (~3%) for cars in shop undergoing maintenance, wheel truing, washing or interior cleaning

At night when 4-car trains are operating, ten 10-car trains are broken into ten 4-car trains (in service) plus ten 6-car trains which need to be stored

RPM	80	cars
98th Yard	234	cars
RLE	78	cars
Total	392	cars
In Service	(40)	cars
In Shop	(12)	cars
Storage	**340**	**cars**

5 Storage Tracks @ 32 cars (2 trains x 10 cars/train + 2 trains x 6 cars/train) +
6 Storage Tracks @ 30 cars (3 trains x 10 cars/train) = 340 cars

RPM Phase 1 and RLE to 115th Street

Assumptions:

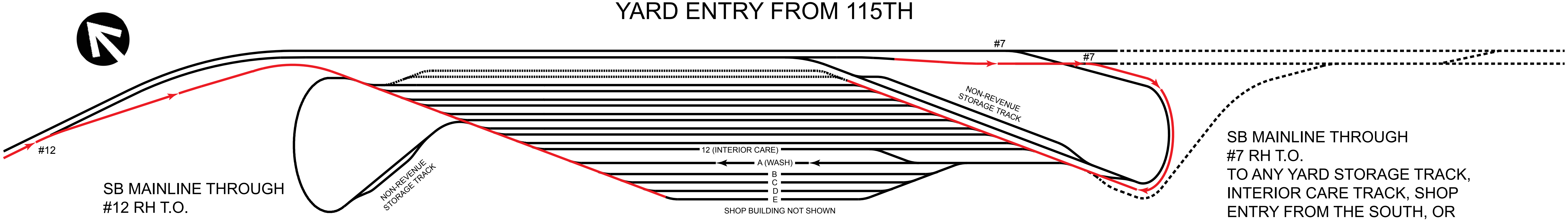
- Store 40 cars (5 x 8-car trains) for RPM Phase 1
- Replace maximum storage in 98th Yard
- Store 64 additional cars for RLE operation to 115th Street
- The minimum number of Red Line cars in operation (due to 7 day/24 hour service) is 40 cars (10 trains x 4 cars)
- Do not assume any trains stored on yard leads
- Discount storage requirements by 10 cars (~3%) for cars in shop undergoing maintenance, wheel truing, washing or interior cleaning

At night when 4-car trains are operating, five 8-car trains are broken into ten 4-car trains - no need to store partial trains

RPM	40	cars
98th Yard	234	cars
RLE	64	cars
Total	338	cars
In Service	(40)	cars
In Shop	(10)	cars
Storage	**288**	**cars**

9 Storage Tracks @ 32 cars (4 trains x 8 cars/train) = 288 cars

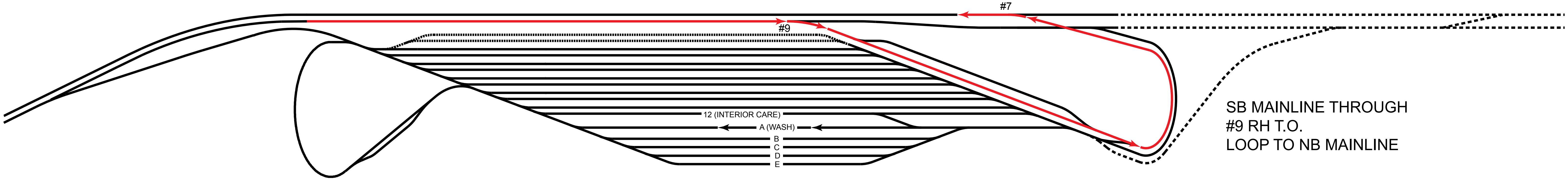
YARD ENTRY FROM 115TH


#7
#7
#12
NON-REVENUE STORAGE TRACK
NON-REVENUE STORAGE TRACK
12 (INTERIOR CARE)
A (WASH)
B
C
D
E
SHOP BUILDING NOT SHOWN

SB MAINLINE THROUGH
#12 RH T.O.
TO ANY YARD STORAGE TRACK,
INTERIOR CARE TRACK, OR SHOP
ENTRY FROM THE NORTH

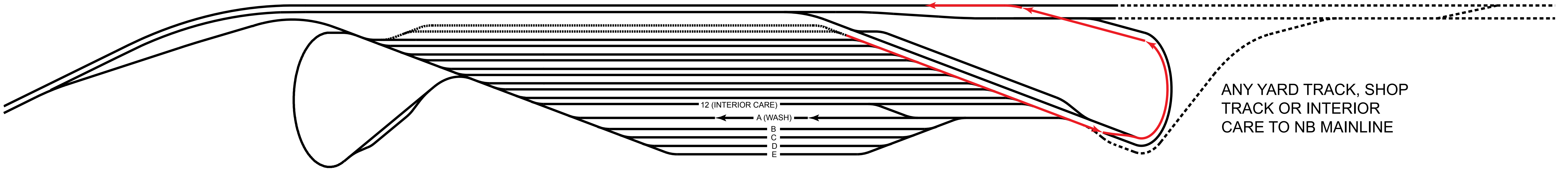
SB MAINLINE THROUGH
#7 RH T.O.
TO ANY YARD STORAGE TRACK,
INTERIOR CARE TRACK, SHOP
ENTRY FROM THE SOUTH, OR
WASH TRACK

RETURN TO SERVICE FROM 115TH


#7
#9
12 (INTERIOR CARE)
A (WASH)
B
C
D
E

SB MAINLINE THROUGH
#9 RH T.O.
LOOP TO NB MAINLINE

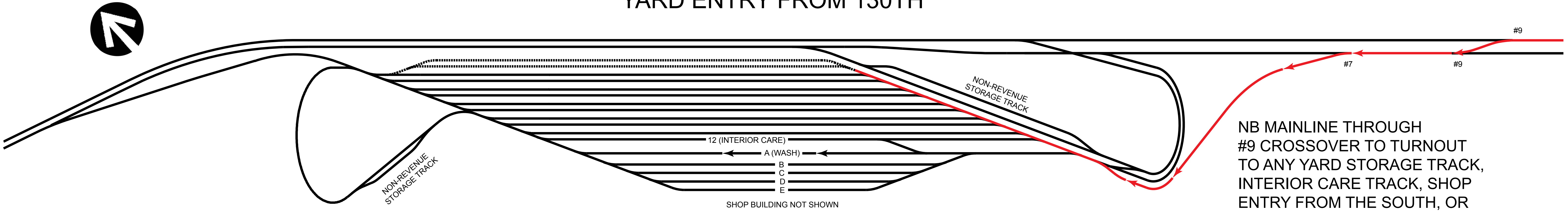
EXIT YARD TO 115TH


12 (INTERIOR CARE)
A (WASH)
B
C
D
E

ANY YARD TRACK, SHOP
TRACK OR INTERIOR
CARE TO NB MAINLINE

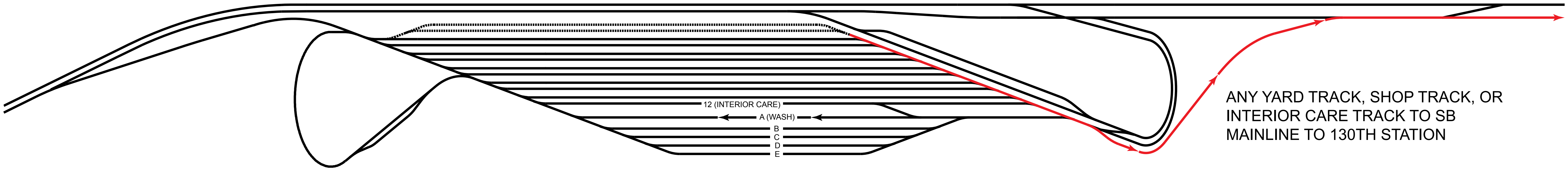
NTS

YARD ENTRY FROM 130TH


#9
#7
#9
NON-REVENUE STORAGE TRACK
NON-REVENUE STORAGE TRACK
12 (INTERIOR CARE)
A (WASH)
B
C
D
E
SHOP BUILDING NOT SHOWN

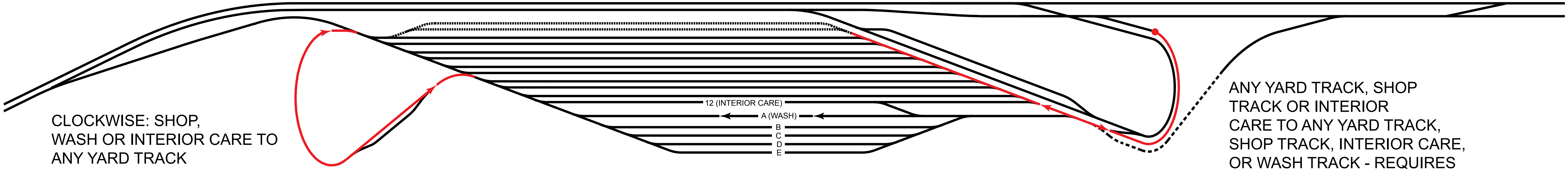
NB MAINLINE THROUGH
#9 CROSSOVER TO TURNOUT
TO ANY YARD STORAGE TRACK,
INTERIOR CARE TRACK, SHOP
ENTRY FROM THE SOUTH, OR
WASH TRACK

EXIT YARD TO 130TH


12 (INTERIOR CARE)
A (WASH)
B
C
D
E

ANY YARD TRACK, SHOP TRACK, OR
INTERIOR CARE TRACK TO SB
MAINLINE TO 130TH STATION

INTERNAL YARD MOVEMENTS


12 (INTERIOR CARE)
A (WASH)
B
C
D
E

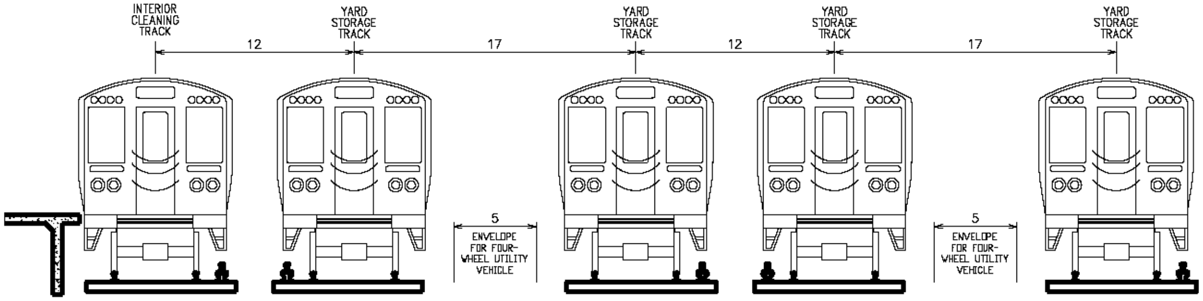
CLOCKWISE: SHOP,
WASH OR INTERIOR CARE TO
ANY YARD TRACK

COUNTER CLOCKWISE: ANY YARD TRACK TO SHOP
(NORTH ENTRANCE) OR INTERIOR CARE

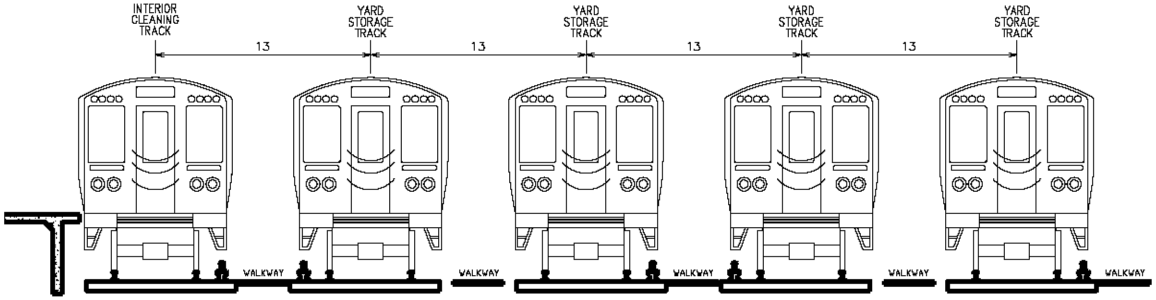
ALL INTERNAL YARD TURNOUTS ARE #5

ANY YARD TRACK, SHOP
TRACK OR INTERIOR
CARE TO ANY YARD TRACK,
SHOP TRACK, INTERIOR CARE,
OR WASH TRACK - REQUIRES
REVERSAL OF TRAIN AT ●

NTS


INTERIOR CLEANING TRACK
YARD STORAGE TRACK
YARD STORAGE TRACK
YARD STORAGE TRACK
YARD STORAGE TRACK
12
17
12
17
5
ENVELOPE FOR FOUR-WHEEL UTILITY VEHICLE
5
ENVELOPE FOR FOUR-WHEEL UTILITY VEHICLE

POTENTIAL YARD TRACK LAYOUT WITH ROOM FOR UTILITY VEHICLE BETWEEN EVERY OTHER TRACK


INTERIOR CLEANING TRACK
YARD STORAGE TRACK
YARD STORAGE TRACK
YARD STORAGE TRACK
YARD STORAGE TRACK
13
13
13
13
WALKWAY
WALKWAY
WALKWAY
WALKWAY
WALKWAY

POTENTIAL YARD TRACK LAYOUT WITH WALKWAY BETWEEN EACH TRACK

CWC Transit Group

Memorandum

To: *Sonali Tandon*

From: *CWC, Wight & Company*

Date: *February 19, 2015, revised March 16, 2015*

Subject: *130th Street Terminal Station Options*

The purpose of this memorandum is to provide a decision support document for the elimination of one of the station options for the extension of the Red Line to 130th Street. To date, the Union Pacific Railroad (UPRR) Rail Alternative has included two options for the 130th Street terminal station: the South and West Station Options. FTA has indicated that CTA should prepare the Draft Environmental Impact Statement (EIS) for the Red Line Extension (RLE) with the preferred alternative clearly identified to streamline the environmental process. To streamline the Draft EIS, CTA would like to present one terminal station in the Draft EIS; this memorandum serves as documentation.

This memorandum briefly describes the station options and evaluates the pros and cons of each option. This memorandum also provides a recommendation for the preferred station location.

130th South Station Option (Figure 1)

The South Station Option would be located immediately west of the Northern Indiana Commuter Transportation District/Chicago South Short & South Bend Railroad (NICTD/CSS&SBRR) right-of-way at 130th Street. The station and platform would be at grade. The station area would have three tracks running to the station. The platform would extend underneath 130th Street and would terminate before 130th Place, south of 130th Street. A total of 2,300 parking spaces are proposed in a seven-story parking structure. Pedestrians would access the station from 130th Place or from the parking structure. Vehicles would access the parking structure from 130th Street. Pedestrians from Altgeld Gardens would access the station from 130th Place, not needing to cross 130th Street.

130th West Station Option (Figure 2)

The West Station Option would be located along the north side of 130th Street at Evans Avenue. The station and platform would be at grade. A total of 2,300 parking spaces are proposed in a four-story parking structure plus a surface parking lot. Pedestrians from Altgeld Gardens would access the station through a pedestrian cross walk on 130th Street. A traffic signal at 130th Street, marked crosswalk, and curb ramps would be provided as part of the project.

Evaluation of Station Options

The City of Chicago Department of Transportation conducted a Market/Access study for the 130th Street Station in 2010 which evaluated the two station options. The study built upon CTA's Alternatives Analysis from 2009 but did not provide a recommendation for the final location of the station. The results of the study indicated that the South Station Option provided the best opportunity to meet the goals of the 130th Street Gateway Vision. The 130th Street Gateway Vision is to develop 130th Street into a gateway for the City of Chicago as well as the greater Calumet Area. The study stated that the South Station Option would:

- Promote possible development of a joint intermodal station with NICTD
- Support future studies to extend the Red Line across the Little Calumet River
- Encourage the visioning conducted by the Chicago Housing Authority for Altgeld Gardens
- Establish pedestrian and bicycle accessibility between 130th Street Station and the City's proposed Kensington Bikeway, Carver Military Academy and Altgeld Gardens
- Provide a potential catalyst for other public and private investment in the study area and as identified in the City's plans for the Calumet Region.

Stakeholders from the project area have indicated a preference for the South Station Option, as indicated in *Summary Report of the Developing Communities Project Community Visioning Session for the Proposed Red Line Extension*, compiled in September 2010. The master planning process undertaken by the Chicago Housing Authority (CHA) for the Altgeld Gardens Murray Homes in 2013 included evaluating the existing conditions, land uses in the planning area, and community facilities. The comprehensive master planning process recommended the South Station Option because it provided better connectivity to the Community Center and Ellis Avenue, which is a major north-south street that includes proposed retail. Stakeholders also indicated their preference for the South Station Option during the CTA public informational meeting held May 13, 2014.

The South Station Option is on tangent track leading to/from the proposed yard, which would be north of the station. To access the West Station Option, the tracks would curve to the west. In addition to the curved tracks, the cost of approximately 1100 feet of additional track needed for the West Station Option increases the cost over the South Station Option by nearly $30 million, assuming all other amenities to the station would be of equal value. The additional track and curve leading to the West Station Option would create higher operational costs over the South Station Option.

Based on the results of the environmental analysis performed for the RLE Draft EIS in 2012–2015, the West Station Option would have an impact on pedestrian safety; however, the proposed traffic signal at 130th Street and the pedestrian crosswalk would mitigate the impact. Both station options have the potential for wetland impacts. Fieldwork would be required at either location to determine if jurisdictional wetlands are present. Both station options would have traffic impacts related to the park & ride facilities off of 130th Street. Mitigation measures to minimize the traffic impacts include optimizing the traffic cycles and adding in turn-lanes. Both station options would also require land acquisition from the Metropolitan Water Reclamation District of Greater Chicago (MWRD).

The South Station Option would better serve the Carver Military Academy High School, located east of the station area, south of 130th Street. Students and faculty of the Carver Military Academy would be able to access the station through Doty Avenue. The South Station Option would be closer to the Ford Motor Company on Torrence Avenue.

The South Station Option would provide the best opportunity for a future connection to NICTD, because the NICTD tracks would parallel the proposed RLE at this station. Improving regional rail connections and linkages to other public transportation modes in the project area is one element of the RLE Project's purpose and need. The West Station Option would not accommodate a direct regional rail connection to other public transportation.

During a meeting with MWRD on September 16, 2013 regarding the proposed RLE yard and station options, MWRD indicated that they do not have future plans for any of the parcels where the station options are proposed. MWRD indicated that the vacant parcels are intended to act as buffers (both visually and for odors) for the lagoons to the surrounding communities. MWRD tentatively indicated that the South Station Option would be better than the West Station Option.

Recommendations

Based on the evaluation of station options, input from the local community, and project costs, the South Station Option is the preferred station location for the 130th Street Terminal Station. The South Station Option would provide benefits to the project and would best meet the project's purpose and need of providing other transit connections to NICTD in the future.

cc: CWC, File

Appendix G
Description of Construction and Phasing for Build Alternatives

RED AHEAD
Moving Ahead to a Better Red

Red Line Extension

Chicago Red Line Extension Project

Description of Construction and Phasing for Build Alternatives

July 28, 2015

Prepared for:
Chicago Transit Authority
567 W. Lake Street
Chicago, IL 60661

Prepared by:
CWC Transit Group
125 S. Wacker Drive
Suite 600
Chicago, IL 60606

cta

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Attachments

Attachment A – Construction Activity Matrices for the Build Alternatives

Attachment B – Construction Schedules for the Build Alternatives

Abbreviations

ADA	Americans with Disabilities Act
AREMA	American Railway Engineering and Maintenance-of-Way Association
BRT	bus rapid transit
Chicago DIGGER	Chicago Utility Alert Network
CMAP	Chicago Metropolitan Agency for Planning
CN	Canadian National
CTA	Chicago Transit Authority
EIS	Environmental Impact Statement
IDOT	Illinois Department of Transportation
JULIE	Joint Utility Locating Information for Excavators
MWRD	Metropolitan Water Reclamation District of Greater Chicago
NB	northbound
NEPA	National Environmental Policy Act
NICTD/CSS & SBRR	Northern Indiana Commuter Transportation District Chicago South Shore & South Bend Railroad
OUC	Office of Underground Coordination
RLE	Red Line Extension
ROW	right-of-way
SB	southbound
UPRR	Union Pacific Railroad
WB	westbound

Section 1
Introduction

The Chicago Transit Authority (CTA) is proposing to extend the heavy rail Red Line from the 95th Street Terminal to the vicinity of 130th Street, subject to the availability of funding. The proposed Red Line Extension (RLE) Project would include four stops. Each stop would include bus transfer and parking facilities. This project is one part of the Red Ahead Program to extend and enhance the entire Red Line.

The project area is 11 miles south of the Chicago central business district (commonly referred to as the Loop) and encompasses approximately 20 square miles. The boundaries of the project area are 95th Street on the north, Ashland Avenue on the west, Stony Island Avenue on the east, and the Calumet-Sag Channel/Little Calumet River and 134th Street on the south. The I-57 Expressway (I-57) and I-94 Bishop Ford Freeway (I-94) cross the western and eastern edges of the project area, respectively. Lake Calumet is in the eastern portion of the project area. Figure 1-1 shows the project area.

The project area encompasses parts of nine community areas in the City of Chicago and the eastern section of the Village of Calumet Park. Chicago community areas include Beverly, Washington Heights, Roseland, Morgan Park, Pullman, West Pullman, Riverdale, and South Deering. The project area comprises residential (primarily single family), industrial (both existing and vacant), transportation (including freight), and commercial development.

The Description of Construction summarizes analysis for the following alternatives (shown in Figure 1-2) that emerged from the Alternatives Analysis and National Environmental Policy Act (NEPA) scoping process. This list includes alternatives considered but not pursued.

- No Build Alternative
- Bus Rapid Transit (BRT) Alternative
- Union Pacific Railroad (UPRR) Rail Alternative
    - Right-of-Way (ROW) Option
    - East Option
    - West Option
- Halsted Rail Alternative

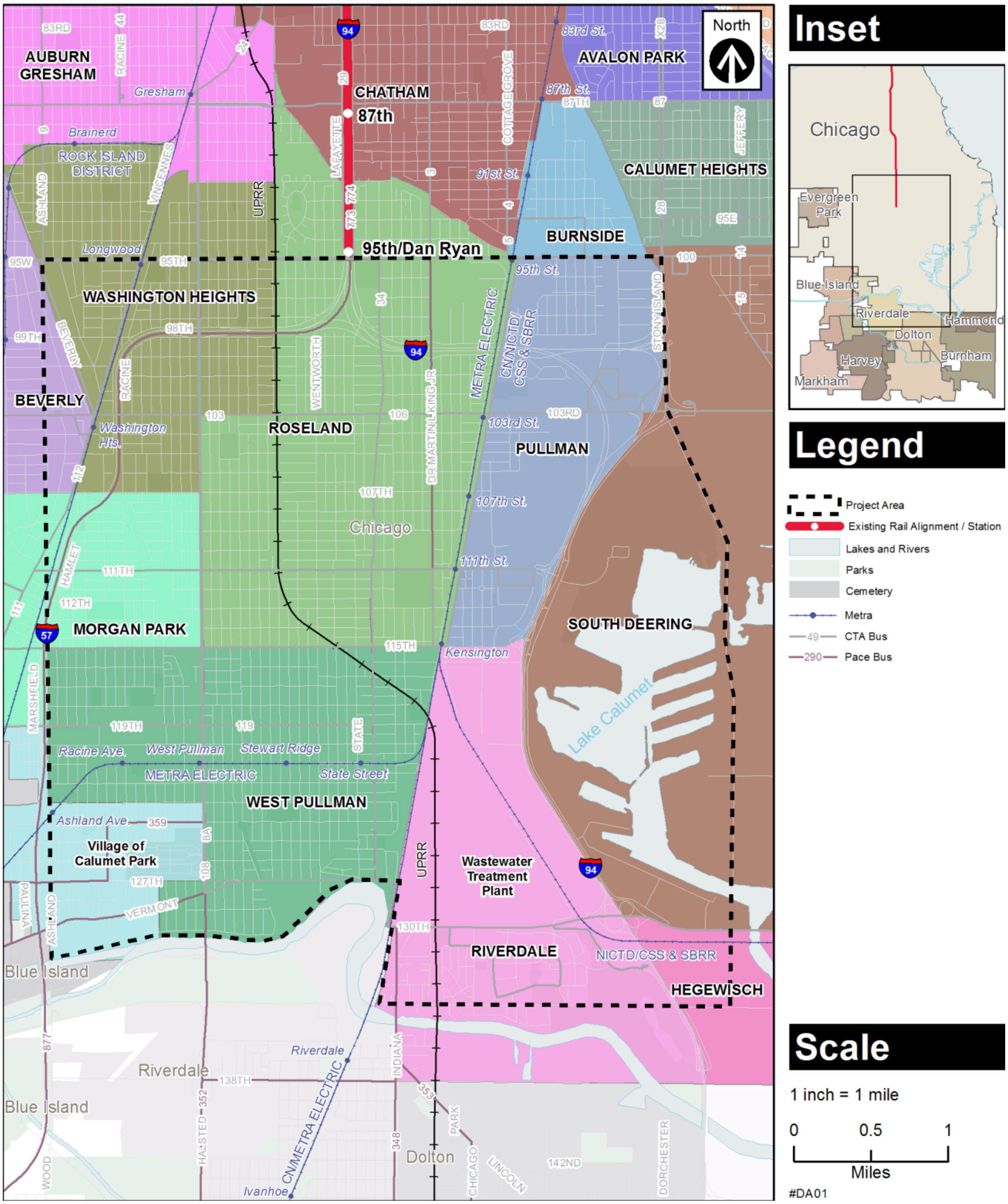

North
Inset
Chicago
Evergreen Park
Blue Island
Riverdale
Dolton
Hammond
Harvey
Burnham
Markham
Legend
Project Area
Existing Rail Alignment / Station
Lakes and Rivers
Parks
Cemetery
Metra
49 CTA Bus
290 Pace Bus
Scale
1 inch = 1 mile
0
0.5
1
Miles
#DA01
AUBURN GRESHAM
CHATHAM
87th
AVALON PARK
CALUMET HEIGHTS
ROCK ISLAND DISTRICT
BURNSIDE
95th/Dan Ryan
WASHINGTON HEIGHTS
BEVERLY
ROSELAND
PULLMAN
MORGAN PARK
SOUTH DEERING
WEST PULLMAN
Village of Calumet Park
Wastewater Treatment Plant
RIVERDALE
HEGEWISCH
NICTD/CSS & SBRR
Lake Calumet
Chicago
Blue Island
Riverdale
Dolton
Gresham
Brainerd
Longwood
Washington Hts.
Racine Ave.
West Pullman
Stewart Ridge
State Street
Ashland Ave.
Kensington
83rd St.
87th St.
91st St.
95th St.
103rd St.
107th St.
111th St.
Riverdale
Ivanhoe
METRA ELECTRIC
CN/NICTD/ CSS & SBRR
CN/METRA ELECTRIC
UPRR
94
57
83RD
87TH
95TH
95W
95E
98TH
99TH
103RD
107TH
111TH
112TH
115TH
119TH
127TH
130TH
138TH
142ND
ASHLAND
RACINE
VINCENNES
BEVERLY
HAMLET
MARSHFIELD
PAULINA
WOOD
LAFAYETTE
WENTWORTH
DR MARTIN L KING JR
COTTAGE GROVE
STONY ISLAND
JEFFERY
STATE
VERMONT
HALSTED
INDIANA
PARK
CHICAGO
LINCOLN
DORCHESTER
X28
3
4
5
6
8A
9
14
15
24
28
29
34
44
87
100
103
106
108
111
112
119
348
352
353
359
773
774
877

Figure 1-1: RLE Project Area and Community Areas within the City of Chicago

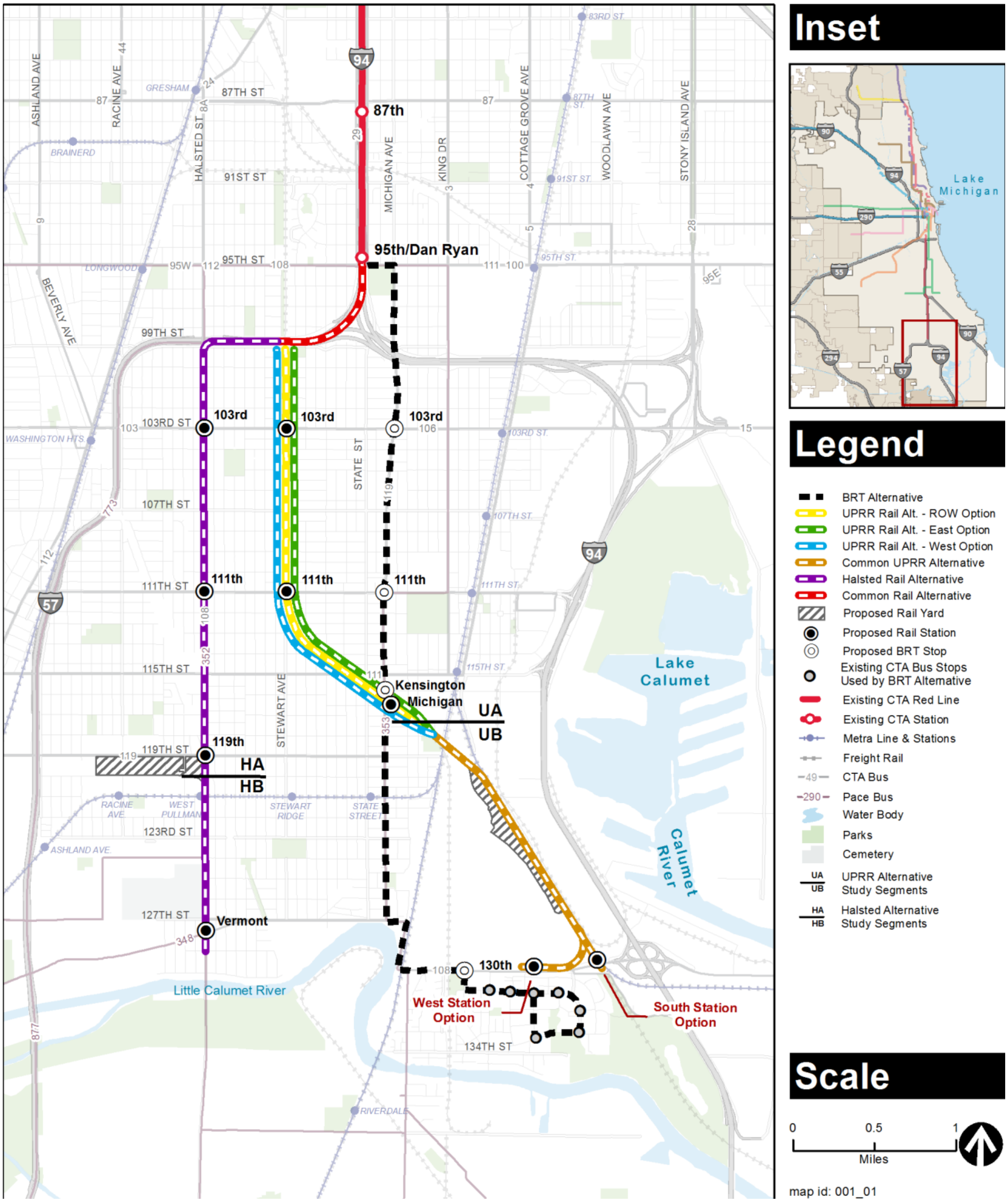

Inset
Lake Michigan
Legend
BRT Alternative
UPRR Rail Alt. - ROW Option
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
Common UPRR Alternative
Halsted Rail Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Proposed BRT Stop
Existing CTA Bus Stops Used by BRT Alternative
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
CTA Bus
Pace Bus
Water Body
Parks
Cemetery
UA UB UPRR Alternative Study Segments
HA HB Halsted Alternative Study Segments
Scale
0
0.5
1
Miles
map id: 001_01
87th
95th/Dan Ryan
103rd
111th
Kensington
Michigan
119th
Vermont
130th
West Station Option
South Station Option
UA
UB
HA
HB
87TH ST
91ST ST
95TH ST
99TH ST
103RD ST
107TH ST
111TH ST
115TH ST
119TH ST
123RD ST
127TH ST
134TH ST
ASHLAND AVE
RACINE AVE
HALSTED ST
MICHIGAN AVE
STATE ST
STEWART AVE
KING DR
COTTAGE GROVE AVE
WOODLAWN AVE
STONY ISLAND AVE
BEVERLY AVE
GRESHAM
BRAINERD
LONGWOOD
WASHINGTON HTS
RACINE AVE
WEST PULLMAN
STEWART RIDGE
STATE STREET
RIVERDALE
Lake Calumet
Calumet River
Little Calumet River
94
57

Figure 1-2: RLE Project Alternatives

Section 2
Description of Build Alternatives

The following three alternatives are discussed in this technical memorandum: BRT Alternative, UPRR Rail Alternative, and Halsted Rail Alternative. One of the alternatives, the UPRR Rail Alternative, has three options. For a more detailed description of the alternatives, including the proposed transit operations, refer to the *Description of Alternatives*. Two alternatives and one option are no longer being pursued (for reasons stated in the Draft Environmental Impact Statement: BRT Alternative (Section 2.1), UPRR Rail Alternative – ROW Option (Section 2.2.1.1), and Halsted Rail Alternative (Section 2.3 including the 119th Street Yard and Shop). The UPRR Rail Alternative West Station Option is also no longer being pursued.

2.1 BRT Alternative

The proposed BRT Alternative is a 5.5-mile long BRT alternative that would operate between the existing 95th Street Terminal and 130th Street via 95th Street, Michigan Avenue, 127th Street, Indiana Avenue, and 130th Street. Four stops with improved bus shelters would be built at 103rd Street and Michigan Avenue, 111th Street and Michigan Avenue, Kensington Avenue and Michigan Avenue, and 130th Street and Eberhart Avenue. The bus route would continue through Altgeld Gardens with stops at 131st Street and Langley Avenue, 131st Street and Corliss Avenue, 131st Street and Ingleside Avenue, 132nd Street and Ellis Avenue, 133rd Street and Ellis Avenue, and 133rd Place and Corliss Avenue. The BRT Alternative is illustrated in Figure 2-1.

The streets on which the BRT Alternative would operate are summarized in Table 2-1.

Table 2-1: BRT Alternative Street Summary

Street	Width (feet)	Number of Lanes	Center Turn Lane	Parking
95th Street	80	4	Yes	No
Michigan Avenue	40	2	No	Yes
127th Street	40	4	No	No
Indiana Avenue	40	4	No	No
130th Street	60	4	Yes	No

2.1.1 Infrastructure

Projects already committed through the Chicago Metropolitan Agency for Planning Fiscal Year 2010–2015 Transportation Improvement Program would be constructed. Regular maintenance of existing track and structures would continue.

No new dedicated bus lanes would be provided for the BRT Alternative. Parking lanes would be removed along some portions of the alignment.

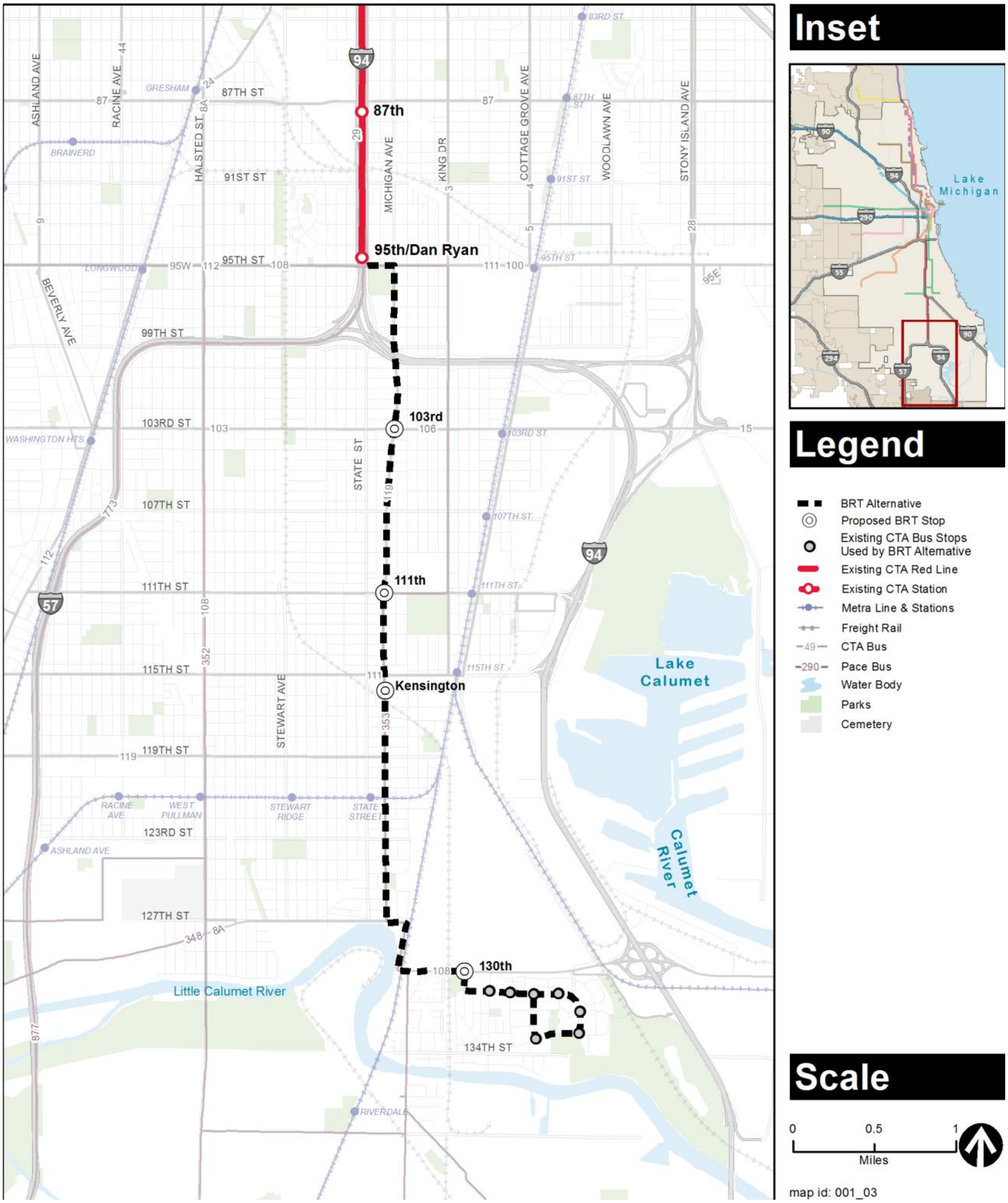

Inset
Lake Michigan
Legend
BRT Alternative
Proposed BRT Stop
Existing CTA Bus Stops Used by BRT Alternative
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
CTA Bus
Pace Bus
Water Body
Parks
Cemetery
Scale
0
0.5
1
Miles
map id: 001_03
87th
95th/Dan Ryan
103rd
111th
Kensington
130th
87TH ST
91ST ST
95TH ST
99TH ST
103RD ST
107TH ST
111TH ST
115TH ST
119TH ST
123RD ST
127TH ST
134TH ST
ASHLAND AVE
RACINE AVE
HALSTED ST
MICHIGAN AVE
KING DR
COTTAGE GROVE AVE
WOODLAWN AVE
STONY ISLAND AVE
STATE ST
STEWART AVE
BEVERLY AVE
GRESHAM
BRAINERD
LONGWOOD
WASHINGTON HTS
RACINE AVE
WEST PULLMAN
STEWART RIDGE
STATE STREET
ASHLAND AVE
RIVERDALE
83RD ST
87TH ST
91ST ST
95TH ST
103RD ST
107TH ST
111TH ST
115TH ST
Lake Calumet
Calumet River
Little Calumet River
94
57
95E

Figure 2-1: BRT Alternative

2.1.2 Stops

Improved bus shelters would be provided at the 103rd Street, 111th Street, Kensington Avenue, and 130th Street stops. Park & ride facilities with a total capacity of 700 parking spaces in the year of construction and up to 2,800 parking spaces in a later year (2030) would be constructed at the stop locations, as shown in Table 2-2.

Table 2-2: BRT Alternative Park & Ride Facilities

Location	Construction Year	Horizon Year (2030)
103rd Street	100	200
111th Street	100	200
Kensington Avenue	100	1,000
130th Street	400	1,400
Total	**700**	**2,800**

2.1.3 Yard

The 98th Street yard and shop at the south end of the existing Red Line would continue to be used for Red Line trains. Currently all Red Line cars are operated and maintained from the Howard and 98th Street facilities. The 98th Street shop facility is more than 40 years old, having been constructed in 1969 as part of the original Dan Ryan Line construction project. The 98th Street shop is within an expressway median and is difficult to access for material delivery because of its grade separation from local streets. The 98th Street yard and shop would eventually need to be replaced regardless of the RLE Project. There is capacity at existing CTA bus garages to store buses for the BRT Alternative, and the 103rd Street Garage would be primarily used.

2.2 UPRR Rail Alternative

The UPRR Rail Alternative would extend the heavy rail transit Red Line from the existing 95th Street Terminal to a terminal location at 130th Street. The Chicago Transit Board adopted the UPRR Rail Alternative as the Locally Preferred Alternative at its August 12, 2009 meeting.

The UPRR Rail Alternative is a 5.3-mile extension of the existing Red Line. The Red Line would operate on an elevated structure heading south from 95th Street along I-57 for nearly ½ mile until reaching the UPRR corridor in the vicinity of Eggleston Avenue. It would then turn south along the UPRR corridor to approximately 111th Street where it would head southeast. East of Prairie Avenue, the alignment crosses over the Canadian National (CN)/Metra Electric tracks near 119th Street, where it would transition to an at-grade profile and then continue southeast alongside the Northern Indiana Commuter Transportation District Chicago South Shore & South Bend Railroad (NICTD/CSS & SBRR) ROW using a portion of Norfolk Southern Railway and Consolidated Rail Corporation right-of-ways to terminate at 130th Street. Four stations are planned at 103rd Street, 111th Street, Michigan Avenue, and 130th Street. The UPRR Rail Alternative is illustrated in Figure 2-2.

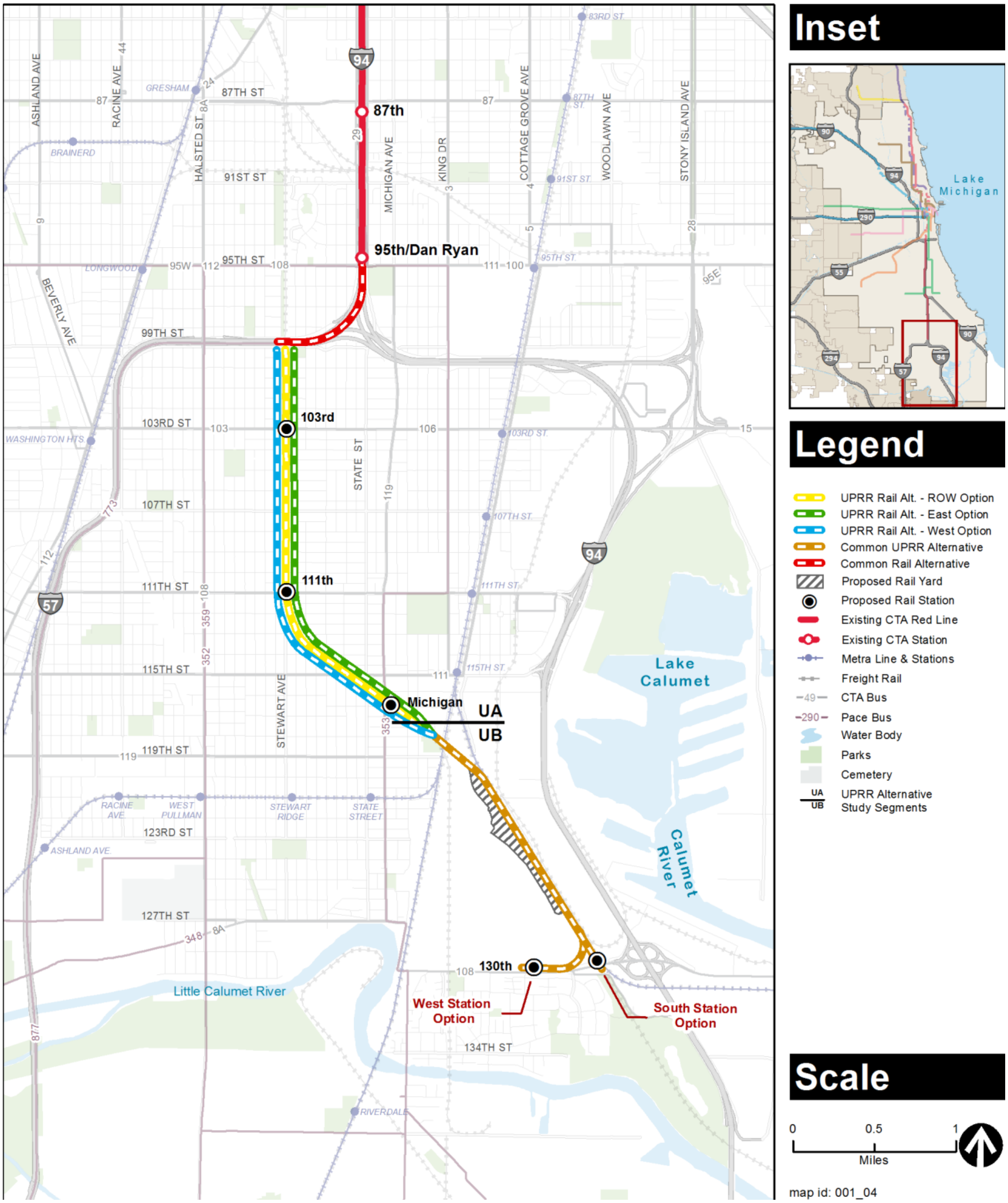

87th
95th/Dan Ryan
103rd
111th
Michigan
UA
UB
130th
West Station Option
South Station Option
87TH ST
91ST ST
95TH ST
99TH ST
103RD ST
107TH ST
111TH ST
115TH ST
119TH ST
123RD ST
127TH ST
134TH ST
ASHLAND AVE
RACINE AVE
HALSTED ST
MICHIGAN AVE
KING DR
COTTAGE GROVE AVE
WOODLAWN AVE
STONY ISLAND AVE
STATE ST
STEWART AVE
BEVERLY AVE
GRESHAM
BRAINERD
LONGWOOD
WASHINGTON HTS
RACINE AVE
WEST PULLMAN
STEWART RIDGE
STATE STREET
ASHLAND AVE
RIVERDALE
83RD ST
87TH ST
91ST ST
95TH ST
103RD ST
107TH ST
111TH ST
115TH ST
Lake Calumet
Calumet River
Little Calumet River
94
57
Inset
Lake Michigan
90
94
290
55
294
57
Legend
UPRR Rail Alt. - ROW Option
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
Common UPRR Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
49 CTA Bus
290 Pace Bus
Water Body
Parks
Cemetery
UA UB UPRR Alternative Study Segments
Scale
0
0.5
1
Miles
map id: 001_04

Figure 2-2: UPRR Rail Alternative with ROW, East, and West Options

Three UPRR Rail Alternative options for the length between I-57 and the CN/Metra Electric tracks will be studied in the EIS:

- ROW Option: CTA tracks placed in the UPRR ROW; UPRR trains would relocate to another corridor as part of a separate, independent project under study by the City of Chicago
- East Option: CTA tracks placed immediately adjacent to the UPRR ROW to the east
- West Option: CTA tracks placed immediately adjacent to the UPRR ROW to the west

Two options for the 130th Street station would be studied in the EIS:

- South Station Option: located to the west of the NICTD/CSS & SBRR ROW at 130th Street
- West Station Option: located along the north side of 130th Street to the west of the NICTD/CSS & SBRR route

2.2.1 Infrastructure

All three UPRR Rail Alternative options would include operations on elevated structure from 95th Street to the CN/Metra Electric tracks near 119th Street. The alignment would then continue at grade through an industrial area with no public through streets. Existing service driveways and Metropolitan Water Reclamation District of Greater Chicago (MWRD) access roads would be grade separated.

The elevated substructure would consist of reinforced cast-in-place concrete hammerhead piers on drilled shafts or steel piles. The superstructure would consist of steel girders with a concrete deck supporting direct fixation track. A typical cross section is shown on Figure 2-3.

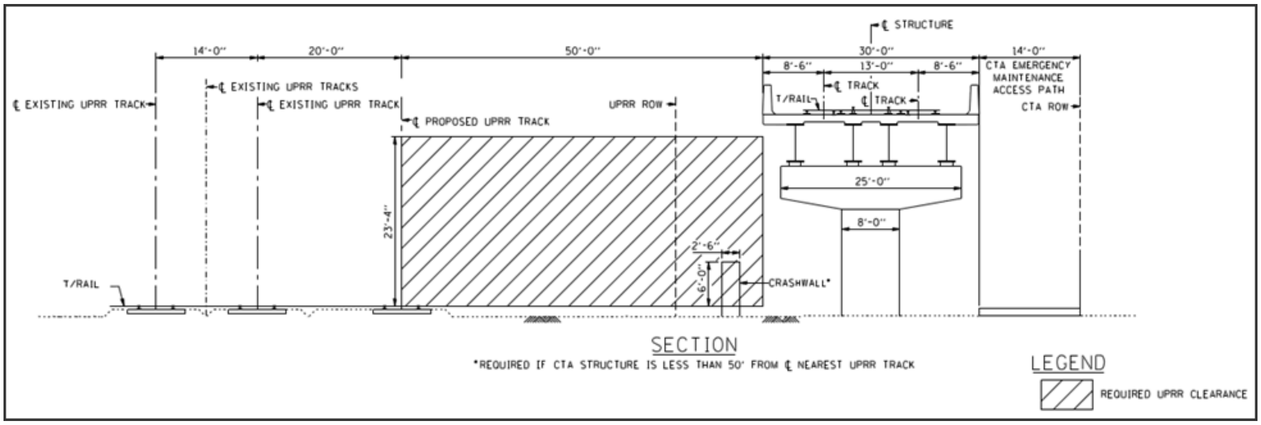

℄ STRUCTURE
14'-0"
20'-0"
50'-0"
30'-0"
14'-0"
8'-6"
13'-0"
8'-6"
℄ EXISTING UPRR TRACKS
℄ EXISTING UPRR TRACK
℄ EXISTING UPRR TRACK
℄ PROPOSED UPRR TRACK
UPRR ROW
T/RAIL
℄ TRACK
℄ TRACK
CTA EMERGENCY MAINTENANCE ACCESS PATH
CTA ROW
25'-0"
8'-0"
23'-4"
2'-6"
6'-0"
CRASHWALL*
T/RAIL
SECTION
*REQUIRED IF CTA STRUCTURE IS LESS THAN 50' FROM ℄ NEAREST UPRR TRACK
LEGEND
REQUIRED UPRR CLEARANCE

Figure 2-3: UPRR Rail Alternative Side Option Typical Cross Section

The minimum vertical clearances are 14 feet 9 inches for local roadways and 16 feet 9 inches for freeways. At locations where the alignment would cross UPRR tracks, the minimum vertical clearance would be 23 feet 4 inches in accordance with UPRR standards. The minimum vertical clearance for all other railroads is 23 feet 0 inches. IDOT has requested a minimum of 27'-0" from existing edge of pavement along I-57 to the face of any pier to preserve room for future widening.

Spans between piers are expected to typically be 60 to 100 feet, and as long as 140 feet. Span length is based on site conditions, geometrics, and clearance requirements.

2.2.1.1 ROW Option

As part of the UPRR Rail Alternative ROW Option, the CTA tracks would be placed in the UPRR ROW between I-57 and the CN/Metra Electric tracks. The UPRR tracks may be relocated to another corridor as part of a separate, independent project under study by the City of Chicago.

Substations are tentatively proposed at the following locations: to the west of the CTA tracks between 104th and 105th Street; to the west of the CTA tracks between Perry Avenue and Lafayette Avenue; and to the west of the CTA tracks north of the proposed parking structure for the South Station Option, or along the curve of the CTA tracks near 130th Street for the West Station Option. An additional substation is proposed within the 120th Street yard and shop facility.

2.2.1.2 East Option

As part of the East Option, the CTA tracks would be placed immediately adjacent to the UPRR ROW to the east between I-57 and the CN/Metra Electric tracks. UPRR anticipates adding a third track to the east of their existing two tracks. The distance between the centerline of the proposed UPRR third track and the CTA structure would be 50 feet except for the following locations: 103rd Street station (approximate stationing 154+00 to 181+00 and between State Street and Michigan Avenue (approximate stationing 255+00 to 270+00).

Substations are proposed at the following locations: 98th Street Yard and Shop, near 101st Street, near 107th Street, near Lafayette Avenue, within the 120th Street yard and shop area, and near the 130th Street station.

2.2.1.3 West Option

As part of the West Option, the CTA tracks would be placed immediately adjacent to the UPRR ROW to the west between I-57 on the north end and the UPPR tracks near Kensington Park on the south end. The distance between the UPRR centerline of existing west track and the proposed CTA structure would be 50 feet except for the following locations: 99th Street (approximate stationing 138+00 to 142+00) and at the Prairie Avenue/UPRR crossing (approximate stationing 275+00 to 285+00).

Substations are proposed at the following locations: 98th Street Yard and Shop, near 101st Street, near 107th Street, near Lafayette Avenue, within the 120th Street yard and shop area, and near the 130th Street station.

2.2.2 Stations

Four stations are proposed for the UPRR Rail Alternative options: 103rd Street, 111th Street, Michigan Avenue, and 130th Street. Two station options are under evaluation for the 130th Street station: a South Station Option and a West Station Option.

All intermediate stations are proposed as island platforms, 26 feet wide and 520 feet long. Platforms would be built to accommodate ten-car trains. All stations would be Americans with Disabilities Act (ADA) accessible with elevators.

Bus transfer and park & ride facilities are planned for all stations with a capacity of 1,500 parking spaces in the year of construction and up to 3,700 parking spaces in a later year (2030), as shown in Table 2-3.

Table 2-3: UPRR Rail Alternative Park & Ride Facilities

Location	Construction Year	Horizon Year (2030)
103rd Street	200	200
111th Street	200	200
Michigan Avenue	200	1,000
130th Street	900	2,300
Total	**1,500**	**3,700**

A brief description of the stations and parking is provided below. For more details, please refer to the *Description of Alternatives*.

2.2.2.1 103rd Street Station

The primary entrance to the 103rd Street station would be located on the north side of 103rd Street, and the auxiliary entrance would be located on the north side of 103rd Place. The station would be ADA accessible with elevators.

As part of the ROW Option, two surface parking lots would be located to the northeast and southwest of the intersection of 103rd Street with the UPRR tracks. A bus turnaround for CTA bus route #9 would be included at the northeast parking lot.

As part of the East Option, a surface parking lot would be located to the east of the tracks north of 103rd Street and a second surface parking lot would be located to the west of the tracks between 103rd Street and 103rd Place. A bus turnaround for CTA bus route #9 would be included at the northeast parking lot.

As part of the West Option, a surface parking lot would be located to the west of the tracks between 103rd Place and 104th Street. A bus turnaround for CTA bus route #9 would be included at the northeast corner of the 103rd Street and UPRR tracks intersection.

2.2.2.2 111th Street Station

For the ROW and West Options, the primary entrance to the 111th Street station would be located near 110th Place. The auxiliary entrance would be located north of 110th Street. For the East Option, the primary entrance to the 111th Street station would be located at 110th Street. The auxiliary entrance would be located between 109th Street and 109th Place. The station would be ADA accessible with elevators.

As part of the ROW Option, two surface parking lots would be located to the northeast and northwest of the intersection of 111th Street with the UPRR tracks. A bus turnaround for Pace bus route #352 would be included at the northwestern parking lot.

As part of the East Option, a surface parking lot would be located to the east of the tracks north of 110th Place, and a second surface parking lot would be located to the west of the tracks between 111th Street and 110th Street. A bus turnaround for Pace bus route #352 would be included at the northwestern parking lot.

As part of the West Option, a surface parking lot would be located to the west of the tracks between 110th Place and 110th Street. A bus turnaround for Pace bus route #352 would be included at the parking lot.

2.2.2.3 Michigan Avenue Station

For the ROW and West Options, the primary entrance to the Michigan Avenue station would be located on the west side of Michigan Avenue, and the auxiliary entrance would be located on the south side of 116th Street. For the East Option, the primary entrance to the Michigan Avenue station would be located on the east side of Michigan Avenue. The auxiliary entrance would be located on the north side of 116th Street. The station would be ADA accessible with elevators.

As part of the ROW Option, a three-story parking garage would be constructed. The ground level of the parking garage would be available for retail and/or community facilities and would include a bus turnaround facility for CTA route #119 and Pace route #359. A second surface lot would be located to the east of the tracks, between 116th Street and Kensington Avenue.

As part of the East Option, a three-story parking garage would be constructed. The ground level of the parking garage would be available for retail and/or community facilities, and would include a bus turnaround facility for CTA route #119 and Pace route #359. A second surface lot would be located to the east of the tracks, between 116th Street and Kensington Avenue.

As part of the West Option, a five-story parking garage would be constructed. The ground level of the parking garage would be available for retail and/or community facilities, and would include a bus turnaround facility for CTA route #119 and Pace route #359.

2.2.2.4 130th Street Station

Two options for the 130th Street station are being studied in the EIS:

- South Station Option: located along the west side of the NICTD/CSS & SBRR ROW, just north of 130th Street
- West Station Option: located to the west of the NICTD/CSS & SBRR ROW and along the north side of 130th Street

As part of both station options, the station building would be approximately 15,000 square feet (200 feet by 75 feet), which would follow CTA's typical design standards for stations. The station house would provide sufficient space for CTA customer operations, maintenance, mechanical rooms, staff offices, and areas for small retail stores. The retail area would primarily serve commuters and local residents.

Both the South and West Station Options would be configured with three tracks, creating a 600-foot-long side and center platform arrangement. The boarding platform would allow for ten-car trains. The primary entrance to the station house would be ADA accessible.

Each station option would include a bus terminal with four bus bays and an overhead canopy. Buses would queue directly outside the primary entrance of the station to provide the closest possible connection between the rail line and bus routes. An auto drop-off area would be located near the station house in addition to a park & ride facility. Secure, weather-protected bicycle parking would be provided.

2.2.2.4.1 South Station Option

The South Station Option site would be between the MWRD facility (on the west) and the NICTD/CSS & SBRR rail track (on the east), using a portion of the Indiana Harbor Belt alignment. There would be a primary station entrance north of 130th Street at 130th Place, and an auxiliary entrance south of 130th Street between 130th Street and Doty Avenue; the tracks and platforms would extend beneath 130th Street. The ADA-accessible auxiliary entrance on Doty Avenue would provide a more convenient and direct access to Altgeld Gardens and Carver Military Academy.

The South Station Option site is constrained due to its tight location between the MWRD drying ponds and the train tracks. The parking area would be located to the east of the existing MWRD fence. The parking area would be would consist of a multi-story parking garage with capacity for 2,300 vehicles.

Bus and vehicle traffic would enter and leave the station area from the current intersection of 130th Street and Cottage Grove Avenue. Cottage Grove Avenue, which primarily provides access to the MWRD drying ponds and semi-truck traffic, would be relocated to circulate around the station.

2.2.2.4.2 West Station Option

The West Station Option site would be on the north side of 130th Street across from Evans Avenue, nearly ¼ mile west of the South Station Option site. The site is west of where Evans Avenue meets 130th Street, across from Altgeld Gardens. The West Station Option site is nearly twice the size of the South Station Option site, primarily due to available open land along the north side of 130th Street, south of the MWRD facility. The dimensions of the station, bus terminal, and surface parking areas would be similar in total area to those in the South Station Option. The station area would be located outside the existing MWRD fence. Parking would include a surface parking lot that could accommodate up to 350 parking spaces and a multi-storage garage that could accommodate 1,950 parking spaces.

There are no crosswalks on 130th Street between Indiana Avenue and Cottage Grove Avenue. As a result, a signal and pedestrian crosswalk is proposed at the intersection of 130th Street and Evans Avenue to accommodate pedestrians from the south side of 130th Street. The proposed pedestrian crossing and signalized intersection would be located south of the primary station entrance.

2.2.3 120th Street Yard and Shop

A yard (with capacity for up to 340 cars) and shop facility would be located on a combination of industrial and vacant land to the east of the CN/Metra Electric tracks and west of the NICTD/CSS & SBRR tracks at approximately 120th Street and Cottage Grove. The yard would be entirely at grade. A nominal amount of parking for employees would be included at the yard. The proposed yard location is shown in Figure 2-2. A tentative substation is proposed within the 120th Street yard on the west of the existing railroad tracks and to the east of the proposed shop facility.

2.3 Halsted Rail Alternative

The proposed Halsted Rail Alternative is a 5-mile extension of the existing Red Line. The Red Line would operate on an elevated structure heading south from 95th Street along I-57 until Halsted Street. It would then turn south and continue along Halsted Street past the intersection of Halsted Street and Vermont Avenue and end near 129th Street. Four stations are planned: for 103rd Street, 111th Street, 119th Street, and Vermont Avenue. The Halsted Rail Alternative is illustrated in Figure 2-4.

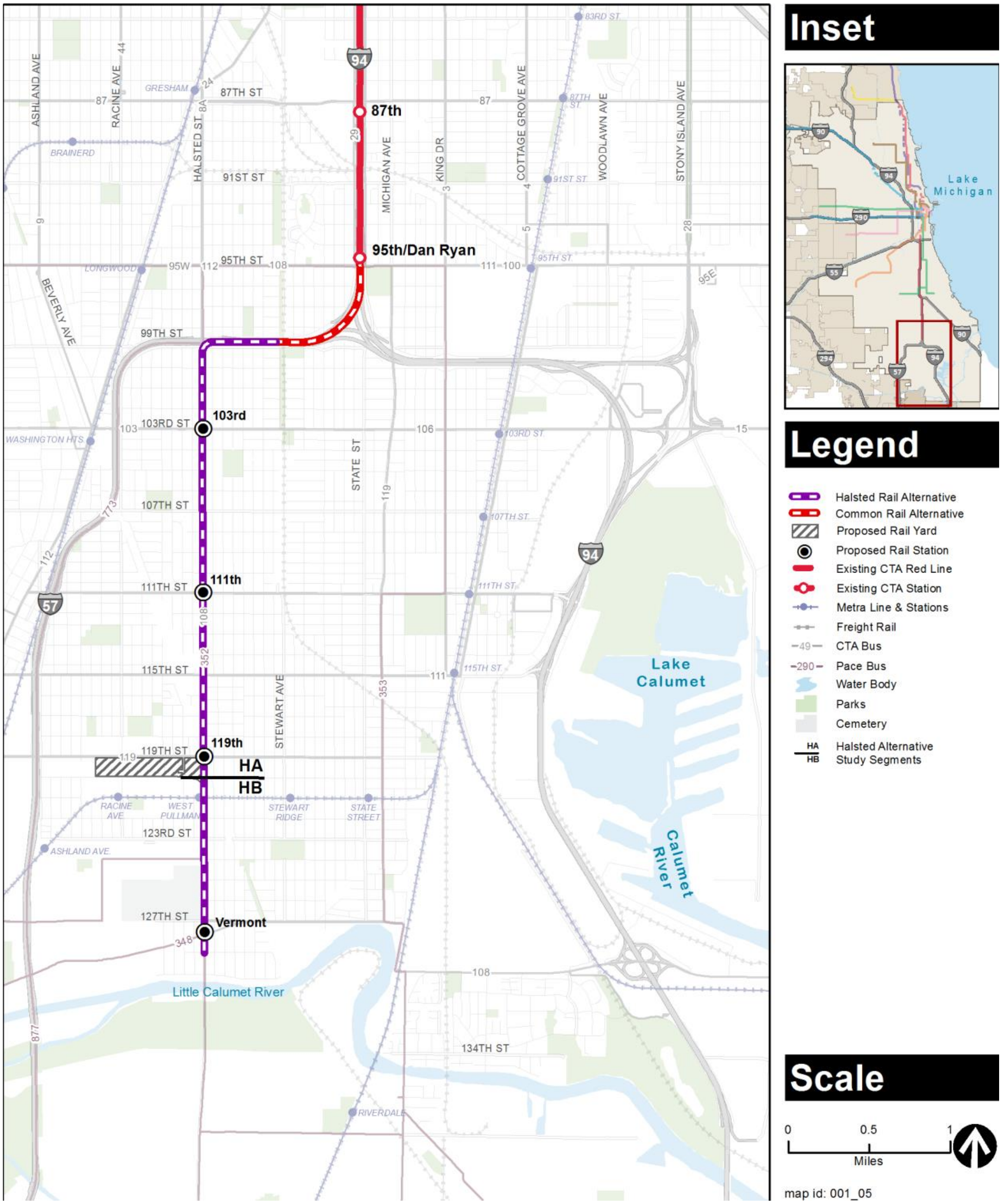
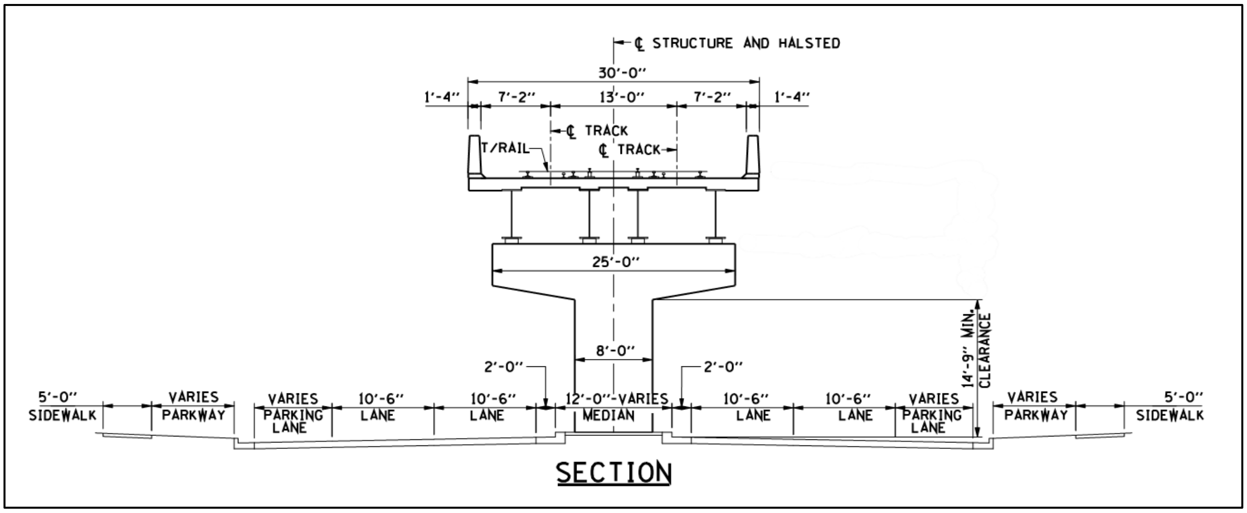

87th
95th/Dan Ryan
103rd
111th
119th
Vermont
HA
HB
87TH ST
91ST ST
95TH ST
99TH ST
103RD ST
107TH ST
111TH ST
115TH ST
119TH ST
123RD ST
127TH ST
134TH ST
ASHLAND AVE
RACINE AVE
HALSTED ST
MICHIGAN AVE
KING DR
COTTAGE GROVE AVE
WOODLAWN AVE
STONY ISLAND AVE
STATE ST
STEWART AVE
BEVERLY AVE
GRESHAM
BRAINERD
LONGWOOD
WASHINGTON HTS
RACINE AVE
WEST PULLMAN
STEWART RIDGE
STATE STREET
ASHLAND AVE
RIVERDALE
83RD ST
87TH ST
91ST ST
95TH ST
103RD ST
107TH ST
111TH ST
115TH ST
Lake Calumet
Calumet River
Little Calumet River
Inset
Lake Michigan
Legend
Halsted Rail Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
CTA Bus
Pace Bus
Water Body
Parks
Cemetery
Halsted Alternative Study Segments
Scale
0
0.5
1
Miles
map id: 001_05

Figure 2-4: Halsted Rail Alternative

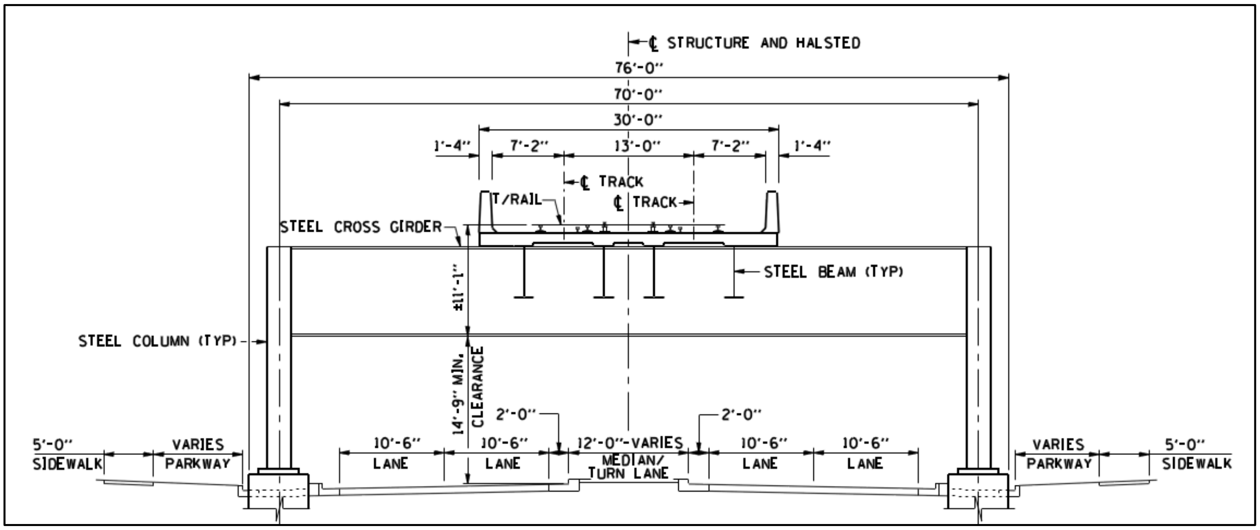
2.3.1 Infrastructure

The proposed corridor would be elevated and would be required to span over I-94 and I-57, UPRR and Metra Electric, local roads, and pedestrian facilities. A typical section is shown on Figure 2-5 and Figure 2-6.


℄ STRUCTURE AND HALSTED
30'-0"
1'-4"
7'-2"
13'-0"
7'-2"
1'-4"
℄ TRACK
T/RAIL
℄ TRACK
25'-0"
8'-0"
2'-0"
2'-0"
14'-9" MIN. CLEARANCE
5'-0" SIDEWALK
VARIES PARKWAY
VARIES PARKING LANE
10'-6" LANE
10'-6" LANE
12'-0"-VARIES MEDIAN
10'-6" LANE
10'-6" LANE
VARIES PARKING LANE
VARIES PARKWAY
5'-0" SIDEWALK
SECTION

Source: *Red Line Extension Plans and Profiles*

Figure 2-5: Typical Hammerhead Cross Section for Halsted Rail Alternative


℄ STRUCTURE AND HALSTED
76'-0"
70'-0"
30'-0"
1'-4"
7'-2"
13'-0"
7'-2"
1'-4"
℄ TRACK
T/RAIL
℄ TRACK
STEEL CROSS GIRDER
STEEL BEAM (TYP)
±11'-1"
STEEL COLUMN (TYP)
14'-9" MIN. CLEARANCE
2'-0"
2'-0"
5'-0" SIDEWALK
VARIES PARKWAY
10'-6" LANE
10'-6" LANE
12'-0"-VARIES MEDIAN/ TURN LANE
10'-6" LANE
10'-6" LANE
VARIES PARKWAY
5'-0" SIDEWALK

Source: *Red Line Extension Plans and Profiles*

Figure 2-6: Typical Straddle Bent Cross-Section for Halsted Rail Alternative

The proposed typical structure required for the elevated section is anticipated to be similar to sections on the CTA's elevated Orange Line. Spans between piers are expected to typically be 60 to 100 feet, and as long as 140 feet. Span length is based on site conditions, geometries, and clearance requirements. At specific locations, steel cross girder bents would be used. Lengths would be based on geometries, horizontal clearances, and the use of pier protection crash walls per American Railway Engineering and Maintenance-of-Way (AREMA) manual.

The substructure would consist of reinforced cast-in-place concrete hammerhead piers on drilled shafts or steel piles. The superstructure would consist of steel girders with a concrete deck supporting direct fixation track. Crossing I-57 at Halsted Street, the profile height would be approximately 22 feet over Halsted Street pavement, and approximately 34 feet over the expressway.

Minimum vertical clearances would be 14 feet 9 inches above local roads and 16 feet 6 inches above urban expressways. At locations where the Halsted Rail alignment would cross the UPRR, the minimum vertical clearance would be 23 feet 4 inches, per the UPRR standards. The minimum vertical clearance for the Metra Electric tracks would be 23 feet zero inches per AREMA standards.

Substations are proposed at the following locations: the northeast corner at the intersection of 101st Street and Halsted Street, the southeast corner at the intersection of 110th Street and Halsted Street, along Halsted Street between 120th Street and Metra Electric tracks, the southeast corner at the intersection of 126th Street and Halsted Street, and at the entrance to the yard along Peoria Street.

2.3.2 Stations

Four stations are proposed for the Halsted Rail Alternative: 103rd Street, 111th Street, 119th Street, and Vermont Avenue. All stations are proposed as side platforms, each a minimum of 14 feet wide and 520 feet long with shelters. Bus and park & ride facilities are planned for all stations. The anticipated number of parking spots is provided in Table 2-4.

Table 2-4: Halsted Rail Alternative Park & Ride Facilities

Location	Construction Year	Horizon Year (2030)
103rd Street	200	200
111th Street	200	200
119th Street	200	1,000
Vermont Avenue	900	2,300
Total	**1,500**	**3,700**

2.3.2.1 103rd Street Station

Station entrances to the 103rd Street station would be located on the east and west sidewalks of Halsted Street at the intersection with 103rd Street. The primary station entrances would be north of the intersection and the auxiliary entrances would be south of the intersection. Each entrance area would be on street level and would contain an elevator and stairs.

The 103rd Street station would have a park & ride lot on the northwest parcel adjacent to the station at the intersection of 103rd Street and Halsted Street. This lot would provide approximately 200 new parking spaces. A bus turnaround for CTA bus route #9 would be included at the northeast parking lot.

2.3.2.2 111th Street Station

Station entrances to the 111th Street station would be located on the east and west sidewalks of Halsted Street at the intersection with 111th Street. The primary station entrances would be north of the intersection and the auxiliary entrances would be south of the intersection. Each entrance area would be on street level and would contain an elevator and stairs.

The 111th Street station would have a park & ride lot on the northwest parcel adjacent to the station at the intersection of 111th Street and Halsted Street. This lot would provide approximately 200 new parking spaces.

2.3.2.3 119th Street Station

Station entrances to the 119th Street station would be located on the east and west sidewalks of Halsted Street between 118th Street and 119th Street. The primary station entrances would be north of 119th Street and the auxiliary entrances would be south of 118th Street. Each entrance area would be on street level and would contain an elevator and stairs.

The 119th Street station would have a new multi-story park & ride facility that would hold approximately 1,000 parking spaces. The lot would be on the southwest parcel at the intersection of 119th Street and Halsted Street. A bus turnaround for Pace bus route #359 would be included at the parking lot.

2.3.2.4 Vermont Avenue Station

Station entrances to the Vermont Avenue station would be located on the east and west sidewalks of Halsted Street between the 128th Street and Vermont Avenue. The primary station entrances would be south of Vermont Avenue and the auxiliary entrances would be north of 128th Street. Each entrance area would be on street level and would contain an elevator and stairs.

The Vermont Avenue station would have a new, multi-story park & ride facility with approximately 2,300 parking spaces. The lot would be located on the south side of the intersection of Halsted and Vermont Avenues. The ground level of the parking garage would be available for CTA office space as well as retail and/or community facilities. Bus bays for CTA bus route #8A and Pace routes #348 and #352 would be included at the station.

2.3.3 119th Street Yard and Shop

The 119th Street yard and shop would be located south of the 119th Street station and north of the Vermont Avenue station to the west of Halsted Street. The parcel on which the yard would be constructed is west of the proposed park & ride facility at the 119th Street station. Track height would transition from elevated at station height to at grade between Halsted Street and Morgan Street, through the proposed park & ride facility. The yard would be entirely at grade. A nominal amount of parking for employees would be included at the yard. The location of the proposed yard is shown in Figure 2-4.

The 98th Street yard and shop at the south end of the existing Red Line would continue to be used for Red Line trains. The CTA is considering utilizing the existing 98th Street shop for non-revenue equipment repairs once a new revenue equipment shop is constructed at 119th Street.

Section 3
Description of Construction

3.1 Construction Phasing and Segments

Section 3.3 describes the anticipated construction activities and methods of construction. Please refer to Section 3.3 for more details regarding construction methods. The estimated quantities and potential equipment are summarized in Attachment A.

3.1.1 Construction Assumptions For All Alternatives

The following are the major constructability, construction sequencing, and phasing assumptions. Phasing and construction segments may change due to refined engineering, available funding, and other factors later in the project implementation stage.

3.1.1.1 Constructability Assumptions

The coordinated construction of infrastructure and stations is a key component of planning and design. Assumptions that affect design solutions include the following:

- Ultimate station, park & ride facility, and yard locations.
- Ultimate aerial structure type. New construction of elevated structure includes foundation, columns, superstructure, and deck. New construction of retained fill structures includes foundation and two parallel reinforced concrete retaining walls with fill in between.
- The ability to construct facilities in sequences and phases to facilitate CTA operations, specifically around the 95th Street Terminal and 98th Street yard and shop. This includes systems (trackwork, traction power, signals and communications).
- The ability to construct facilities in sequences and phases to facilitate UPRR operations.
- The location and size of proposed foundations and structural members, potentially limited by clearance requirements (e.g., caisson size and depth, concrete pour access, steel piece weight and size, etc.)
- The ability to construct structures in sequences and phases to facilitate vehicular traffic operations on I-94 and 1-57.

The following parameters have been assumed for all build alternatives:

- The methods of construction required along the proposed alignments are anticipated to be conventional, utilizing standard construction methods and materials including cast-in-place concrete, pre-cast concrete, and structural steel.

- Streets with adjacent alleys would be used for site access during construction. New construction in and around the 95th Street Terminal would require some tracks to be taken out of service or realigned to access and perform the work. To perform this work in an efficient manner while maintaining reasonable service and access to the 98th Street yard and shop, it is anticipated that construction would be sequenced and phased to maintain access to the 98th Street yard and shop.

- Space for storage and staging of construction materials, equipment, and temporary facilities would be needed within and/or adjacent to the ROW. Construction material storage and contractor yard areas appear to be available along the alignments through a combination of publicly owned and privately owned properties. Construction access adjacent to the ROW could be required, especially during embankment, viaduct, and station construction durations.

- During construction, access to work zones adjacent to the expressway would require shoulder and lane closures. For the superstructure erection over expressway traffic lanes, temporary shutdown of all traffic would be required. Temporary shutdown of traffic would occur at nighttime and low traffic volume intervals per Illinois Department of Transportation (IDOT) approval. Construction adjacent to or over railroads would require flagging operations and scheduled track closures.

- It is anticipated that streets crossed by stations and viaducts, along with adjacent alleys, would be closed temporarily or the number of travel lanes would be reduced during heavy construction. Viaduct construction activities, along with all construction access, would be centered upon or phased around these streets and alleys.

Prior to construction, advance work would be necessary to verify existing site conditions, relocate and protect utilities, provide any temporary modifications to signal systems including the 95th Street Terminal as well as along or across any viaduct or roadway crossings, and provide special or temporary trackwork at required construction interface zones.

Constructability is a key issue that must be coordinated with the design to ensure the ability to construct facilities in sequences and phases as required in facilitating CTA, UPRR, and highway operations.

3.1.2 BRT Alternative

3.1.2.1 Construction Segments

Construction activities would be grouped by type of work and location. Overall schedule and coordination of all construction segments would be phased and scheduled to maintain CTA operations at the 95th Street Terminal and 98th Street yard and shop, and vehicular traffic on affected expressways and roadways. Construction for the single segment could be sequenced to coordinate with CTA operations at the 95th Street Terminal.

The corridor is divided into one segment for the purposes of describing construction activities. The construction segment for the BRT Alternative is shown on Figure 3-1. The conceptual engineering plans for the alternative have been provided separately.

3.1.2.2 Construction Phasing

Work activities within the single segment for the BRT Alternative are described below.

Segment BRT-B-1: From the 95th Street Terminal to the Eberhart Avenue stop.

Work Activities

- New construction of BRT shelters and amenities at BRT stops
- New construction of park & ride facilities
- New construction of pavement markings and crosswalks
- New construction of signage
- New construction of sidewalk improvements at BRT stops
- New construction of ADA-compliant ramps at BRT stops
- New construction of bus pads at BRT stops
- New construction of lighting at BRT stops
- New construction of a traffic signal at the 130th Street/Eberhart Avenue intersection
- New construction of transit signal priority detectors and improvement of traffic signal controllers at existing signalized intersections
- Utility relocation or new construction at BRT stops, park & ride facilities, and signalized intersections
- Removal of on-street parking spaces at BRT stops

Construction Phasing

All of the construction work activities may require temporary shutdown of traffic. Temporary shutdown of traffic would occur at nighttime and low traffic volume intervals per IDOT approval. Work zones along the BRT Alternative would likely require temporary lane closures. Work would be sequenced to minimize impacts on adjacent roadways and both commercial and residential buildings.

Existing utilities would be protected during construction of the BRT stations, park & ride facilities, and traffic signal improvements.

3.1.3 UPRR Rail Alternative

3.1.3.1 Right-Of-Way Option

3.1.3.1.1 Construction Segments

Construction activities would be grouped by type of work and location. Overall schedule and coordination of all construction segments would be phased and scheduled to maintain CTA operations at the 95th Street Terminal and 98th Street yard and shop, and vehicular traffic on affected expressways and roadways. Special or temporary trackwork may be required between the 95th Street Terminal and the 98th Street yard and shop. Construction for single segments or groups of adjacent segments could be sequenced to coordinate with CTA operations at the 95th Street Terminal.

The corridor is divided into seven segments for the purposes of describing construction activities. The construction segments discussed in the proceeding sections do not correspond to Segments UA and UB that are being used in the environmental analysis for the UPRR Rail Alternative. Segments UA and UB are described in the *Description of Alternatives*. Construction segments for the three UPRR Rail Alternative Options are shown on Figure 3-1. The conceptual engineering plans for each of the alternatives and options have been provided separately.

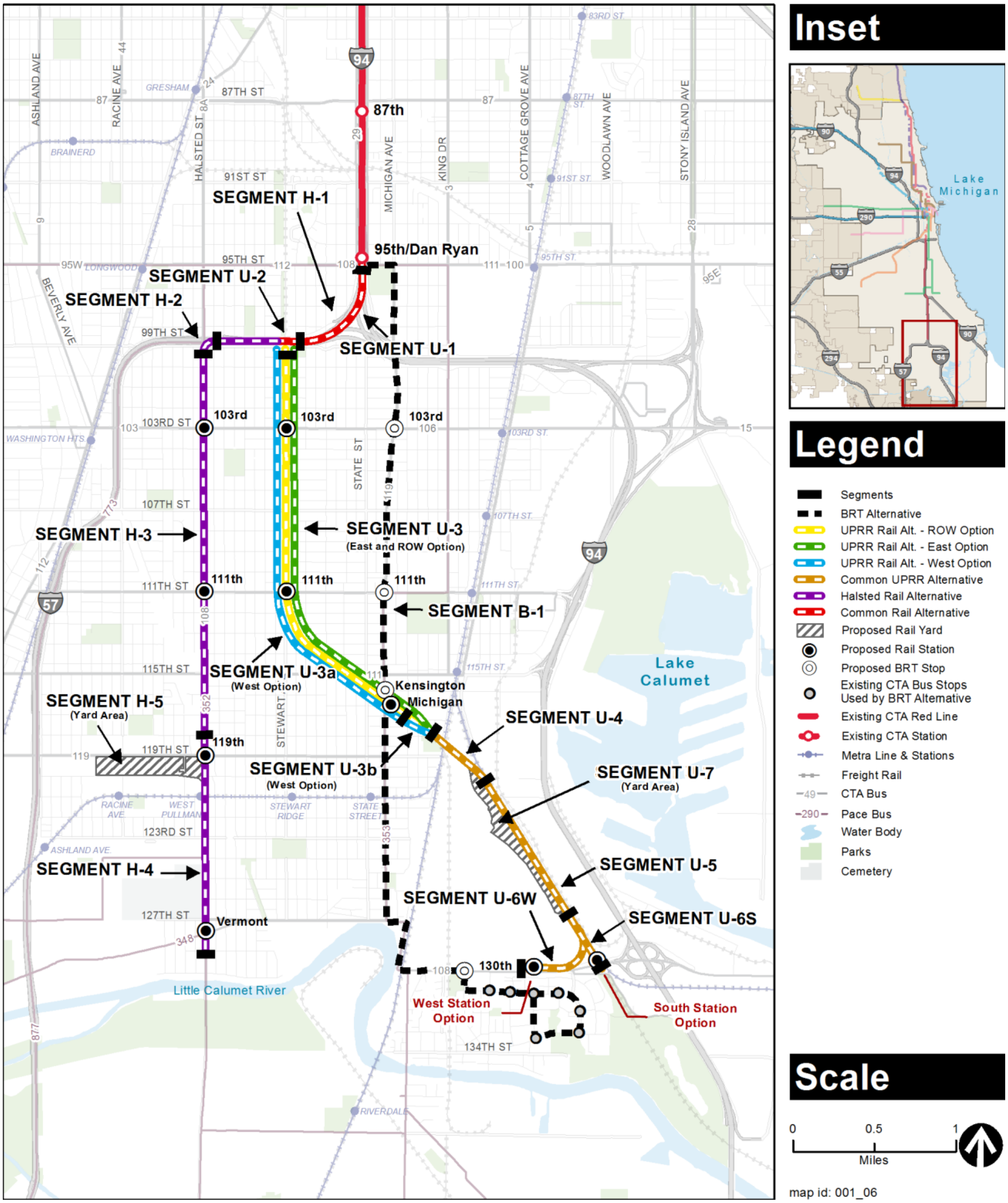

SEGMENT H-1
SEGMENT H-2
SEGMENT H-3
SEGMENT H-4
SEGMENT H-5
(Yard Area)
SEGMENT U-1
SEGMENT U-2
SEGMENT U-3
(East and ROW Option)
SEGMENT U-3a
(West Option)
SEGMENT U-3b
(West Option)
SEGMENT U-4
SEGMENT U-5
SEGMENT U-6W
SEGMENT U-6S
SEGMENT U-7
(Yard Area)
SEGMENT B-1
87th
95th/Dan Ryan
103rd
111th
Kensington
Michigan
119th
Vermont
130th
West Station Option
South Station Option
Lake Calumet
Little Calumet River
87TH ST
91ST ST
95TH ST
99TH ST
103RD ST
107TH ST
111TH ST
115TH ST
119TH ST
123RD ST
127TH ST
134TH ST
ASHLAND AVE
RACINE AVE
HALSTED ST
MICHIGAN AVE
STATE ST
STEWART
KING DR
COTTAGE GROVE AVE
WOODLAWN AVE
STONY ISLAND AVE
BEVERLY AVE
GRESHAM
BRAINERD
LONGWOOD
WASHINGTON HTS
RACINE AVE
WEST PULLMAN
STEWART RIDGE
STATE STREET
ASHLAND AVE
RIVERDALE
83RD ST
87TH ST
91ST ST
95TH ST
103RD ST
107TH ST
111TH ST
115TH ST
94
57
95E
Inset
Lake Michigan
Legend
Segments
BRT Alternative
UPRR Rail Alt. - ROW Option
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
Common UPRR Alternative
Halsted Rail Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Proposed BRT Stop
Existing CTA Bus Stops Used by BRT Alternative
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
49 CTA Bus
290 Pace Bus
Water Body
Parks
Cemetery
Scale
0
0.5
1
Miles
map id: 001_06

Figure 3-1: RLE Alternatives Construction Segment Map

3.1.3.1.2 Construction Phasing

Work activities within the eight segments for the ROW Option are described below.

Segment UPRR-ROW-U-1: From the 95th Street Terminal to the beginning of the horizontal curve at the UPRR crossing (approximate stationing 96+60 to 132+00)

Work Activities

- New trackwork and signals to tie into the 95th Street Terminal.
- Possible relocation of trackwork between 95th Street Terminal and the 98th Street yard and shop.
- New construction of retained fill structure south of 95th Street Terminal.
- New construction of single track, elevated structures over existing CTA tracks leading to the 98th Street yard and shop and over the existing CTA/SB 1-94 tunnel.
- New construction of dual track, elevated structure through the I-94/I-57 interchange, across the westbound (WB) I-57 entrance ramp from northbound (NB) I-94, and along the I-57 corridor.
- Proposed structure construction would be sequenced to minimally affect traffic flow on the WB I-57 entrance ramp from NB I-94. For superstructure erection over expressway traffic lanes, temporary shutdown of all traffic would be required. Temporary shutdown of traffic would occur at nighttime and low traffic volume intervals per IDOT approval.

Construction Phasing

It may be necessary to relocate trackwork leading from the 95th Street Terminal to the 98th Street yard and shop to allow construction of proposed substructure within CTA ROW. Tying proposed trackwork and structure into existing trackwork at the 95th Street Terminal would be sequenced to provide rail car access to the 98th Street yard and shop. Proposed structure construction would be sequenced to maintain operating routes from the 95th Street Terminal to the 98th Street yard and shop as well as maintain traffic flow on I-94 through the tunnel.

Superstructure erection over the CTA tracks, I-94, the WB I-57 entrance ramp from NB I-94, and Wentworth Avenue would require temporary shutdown of CTA non-revenue operations and traffic. Temporary shutdown of traffic would occur at nighttime and low traffic volume intervals per IDOT approval. CTA non-revenue operations would be shutdown during off-peak hours or weekends. Work would be sequenced to minimize impacts on traffic flow on the I-57/I-94 interchange as well as in the I-57 corridor. Work zones adjacent to the expressway would require shoulder and probably lane closures.

The existing 6.5-foot-diameter sewer underneath both 99th Street and 102nd Street would be protected during construction. See Section 3.4 for more information regarding the protection of utilities during construction.

Segment UPRR-ROW-U-2: The horizontal curve at the UPRR crossing (approximate stationing 132+00 to 142+19)

Work Activities

- New construction of dual track, elevated structure consisting of multiple types of superstructure and substructure spanning along and across I-57 and within the UPRR corridor

Construction Phasing

Work would be sequenced to minimize impacts on traffic flow on I-57. Work zones adjacent to the expressway would require temporary shoulder and lane closures. Superstructure erection over I-57 would require temporary shutdown of northbound traffic.

The existing 10-foot-diameter Stewart Avenue water tunnel would be protected during construction of the foundations. See Section 3.4 for more information regarding the protection of utilities during construction.

Segment UPRR-ROW-U-3: From the end of the horizontal curve at the UPRR crossing to the CN/Metra Electric crossing (approximate stationing 142+19 to 286+12)

Work Activities

- New construction of elevated structure within the UPRR corridor
- New station construction at 103rd Street, 111th Street, and 115th Street
- New construction of surface parking lots and bus turnarounds at 103rd Street station and 111th Street station and new construction of a structured parking lot and bus turnaround at 1115th Street station
- New construction of two substations (approximate stationing 174+50 and 254+50)

Construction Phasing

Signaling would need to be replaced following construction of viaducts for the following at-grade UPRR crossings: 101st Street, 103rd Street, 107th Street, 109th Street, 111th Street, 115th Street, and State Street.

All existing structures and underground utilities will be identified. All existing utilities would be protected or relocated. The following known existing utilities and structures would be protected during construction activities. Section 3.4 discusses methods for protecting nearby utilities and structures.

- 10-foot-diameter Stewart Avenue water tunnel
- Roseland Pumping Station and the associated underground pipes and vaults
- 10-foot-diameter sewer underneath Wentworth Avenue near 114th Street
- 17.5 foot, horseshoe shaped, MWRD Calumet Intercepting Sewer tunnel

Segment UPRR-ROW-U-4: From the CN/Metra Electric crossing to at-grade track (approximate stationing 286+12 to 310+03)

Work Activities

- New construction of dual track, elevated structure within the UPRR corridor, branching off and running along the east side of the corridor and over CN/Metra Electric
- New construction of elevated structure to 120th Street yard and shop track tie-in
- New construction of retained embankment structure to carry elevated structure to grade

Construction Phasing

Construction at the CN/Metra Electric crossing would be phased to minimize impacts on CN and Metra operations. Construction over and adjacent to the railroads would require flagging operations and potential limited track closures.

Segment UPRR-ROW-U-5: From at-grade track to the beginning of 130th Street station options (approximate stationing 310+03 to 360+02)

Work Activities

- Removal of Norfolk Southern Railway and Consolidated Rail Corporation right-of-way tracks. New construction of track roadbed at grade (including removal of any unsuitable soils, as applicable).
- New construction of the MWRD access road and bridge over the proposed CTA tracks and the NICTD/CSS & SBRR crossing (approximate stationing 357+00)

Construction Phasing

Coordination with MWRD is necessary to maintain operations during new track roadbed construction. If necessary, construction would be sequenced to construct the proposed access road and bridge over the CTA tracks first to allow MWRD facilities to continue operation.

Coordination with the NICTD/CSS & SBRR would be necessary as construction over and adjacent to the railroads would require flagging operations and scheduled track closures.

Segment UPRR-ROW-U-6S: South Station Option (approximate stationing 360+02 to 380+29)

Work Activities

- New construction of track roadbed
- New construction of the 130th Street station
- New construction of parking lots and a multi-story garage for the 130th Street station
- New construction for land development, bus bays, and road access for the 130th Street station
- New construction of the MWRD access road to 130th Street
- New construction of a substation (approximate stationing at 365+60)

Construction Phasing

Coordination with MWRD would be necessary to maintain current operations during new track roadbed construction and during the new road access for the 130th Street station. If necessary, construction would be sequenced to construct the proposed MWRD access road to the west of the proposed station first, allowing MWRD facilities to continue operation. Coordination with the NICTD/CSS & SBRR is also necessary as construction over and adjacent to the railroads would require flagging operations and scheduled track closures.

Segment UPRR-ROW-U-6W: West Station Option (approximate stationing 380+29 to 395+40)

Work Activities

- New construction of track roadbed
- New construction of the 130th Street station
- New construction of parking lots and a multi-story garage for 130th Street station
- New construction for land development, bus bays, and road access for the 130th Street station
- New construction of the MWRD access road and bridge to 130th Street
- New construction of a substation (approximate stationing at 375+50)
- New construction of crosswalks and signalized intersection at 130th Street and Evans Avenue

Construction Phasing

Coordination with MWRD would be necessary to maintain current operations during new track roadbed construction and during the new road access for the 130th Street station. If necessary, construction would be sequenced to construct the proposed MWRD access road and bridge crossing the proposed CTA tracks near station 371+00 first, allowing MWRD facilities to continue operation. Coordination with the NICTD/CSS & SBRR is also necessary as construction over and adjacent to the railroads would require flagging operations and scheduled track closures.

Segment UPRR-ROW-U-7: 120th Street yard and shop (approximate stationing 291+85/45+00 to 352+69/106+12)

See Section 3.2 for construction phasing and group information.

3.1.3.2 East Option

3.1.3.2.1 Construction Segments

Construction activities would be grouped by type of work and location. Overall schedule and coordination of all construction segments would be phased and scheduled to maintain CTA operations at the 95th Street Terminal and 98th Street yard and shop, and vehicular traffic on affected expressways and roadways. Special or temporary trackwork may be required between the 95th Street Terminal and the 98th Street yard and shop. Construction for single segments or groups of adjacent segments could be sequenced to coordinate with CTA operations at the 95th Street Terminal.

The corridor is divided into seven segments for the purposes of describing construction activities. Construction segments for the three UPRR Rail Alternative Options are shown on Figure 3-1.

3.1.3.2.2 Construction Phasing

Work activities within the eight segments for the East Option are described below.

Segment UPRR-E-U-1: From the 95th Street Terminal to the beginning of the horizontal curve at the UPRR crossing (approximate stationing 96+60 to 132+00)

Work activities (same as Segment UPRR-ROW-U-1)

- New trackwork and signals to tie into the 95th Street Terminal. Possible relocation of trackwork between the 95th Street Terminal and the 98th Street yard and shop.
- New construction of retained fill structure south of 95th Street Terminal.
- New construction of single track, elevated structures over existing CTA tracks leading to the 98th Street yard and shop and over the existing CTA/southbound (SB) I-94 tunnel.
- New construction of dual track, elevated structure through the I-94/I-57 interchange, across the WB I-57 entrance ramp from NB I-94, and within the I-57 corridor.

- Proposed structure construction would be sequenced to minimally affect traffic flow on the WB I-57 entrance ramp from NB I-94. For superstructure erection over expressway traffic lanes, temporary shutdown of all traffic would be required. Temporary shutdown of traffic would occur at nighttime and low traffic volume intervals per IDOT approval.

Construction Phasing (same as Segment UPRR-ROW-U-1)

It will be necessary to relocate trackwork leading from the 95th Street Terminal to the 98th Street yard and shop to allow construction of proposed substructure within CTA ROW. Tying proposed trackwork and structure into existing trackwork at 95th Street Terminal would be sequenced to provide rail car access to 98th Street yard. Proposed structure construction would be sequenced to maintain operating routes from 95th Street Terminal to 98th Street yard and maintain traffic flow on I-94 through the tunnel.

Superstructure erection over the CTA tracks, I-94, the WB I-57 entrance ramp from NB I-94, and Wentworth Avenue would require temporary shutdown of CTA non-revenue operations and traffic. Temporary shutdown of traffic would occur at nighttime and low traffic volume intervals per IDOT approval. Work would be sequenced to minimize impacts on traffic flow on the I-57/I-94 interchange as well as in the I-57 corridor. Work zones adjacent to the expressway would require shoulder and probably lane closures. Work activities would also affect traffic flow on the north frontage road to I-57 (also called Lafayette Avenue and 98th Place).

The existing 6.5-foot-diameter sewer underneath both 99th Street and 102nd Street would be protected during construction. See Section 3.4 for more information regarding the protection of utilities during construction.

Segment UPRR-E-U-2: The horizontal curve at the UPRR crossing (approximate stationing 132+00 to 142+00)

Work Activities (same as Segment UPRR-ROW-U-2)

- New construction of dual track, elevated structure consisting of multiple types of superstructure and substructure spanning along and across I-57 and within the UPRR corridor

- For the East Option, this construction segment crosses the western portion of Wendell Smith Park

Construction Phasing

Work would be sequenced to minimize impacts on traffic flow on I-57 and UPRR operations. Work zones adjacent to the expressway may require temporary shoulder and lane closures. Superstructure erection over I-57 would require temporary shutdown of northbound traffic. Construction adjacent to railroads would require flagging operations and scheduled track closures.

The existing 10-foot-diameter Stewart Avenue water tunnel would be protected during construction of the foundations. See Section 3.4 for more information regarding the protection of utilities during construction.

The construction activities in the western portion of Wendell Smith Park would include construction of foundations, placement of beams, and construction of the superstructure. Activities require access of a variety of construction equipment, material delivery, haul trucks, and labor. Construction fencing would be required to separate activities occurring in the eastern portion of the park from the construction activities in the western portion.

Segment UPRR-E-U-3: From the end of the horizontal curve at the UPRR crossing to the CN/Metra Electric crossing (approximate stationing 142+00 to 285+00)

Work Activities

- Demolition of existing buildings and structures in the proposed ROW where necessary. The conceptual engineering plans and profiles (provided separately) show the proposed ROW and construction easements necessary to conduct this work.
- Demolition or relocation of the communication tower currently located in Block Park.
- New construction of dual track, elevated structure consisting of multiple types of superstructure and substructure along the east side of the UPRR corridor. New construction of elevated structure includes foundation, columns, and deck.
- New station construction of stations at 103rd Street, 111th Street, and 115th Street.
- New construction of surface parking lots and bus turnarounds at 103rd Street station and 111th Street station and new construction of a structured parking lot and bus turnaround at 115th Street station.
- New construction of two substations (approximate stationing 174+30 and 253+60) with ductbanks to be constructed beneath the UPRR tracks.
- UPRR at-grade crossing gate and signal infrastructure replacement at seven crossings.

Construction Phasing

Work would be sequenced along the UPRR corridor to minimize impacts on UPRR operations. Construction adjacent to railroads would require flagging operations and scheduled track closures. Flagging operations would be needed to replace existing at-grade crossing gates and signals during construction of viaducts for the following at-grade UPRR crossings: 101st Street, 103rd Street, 107th Street, 109th Street, 111th Street, 115th Street, and State Street.

All existing structures and underground utilities will be identified. All existing utilities will be protected or relocated. The following known existing utilities and structures would be protected during construction activities:

- 10-foot-diameter Stewart Avenue water tunnel along the UPRR corridor
- Former Griffith Natatorium
- Roseland Pumping Station and the associated underground pipes and vaults
- 10-foot-diameter sewer underneath Wentworth Avenue near 114th Street
- 17.5 foot, horseshoe shaped, MWRD Calumet Intercepting Sewer tunnel

Segment UPRR-E-U-4: From the CN/Metra Electric crossing to at-grade track (approximate stationing 285+00 to 308+83)

Work Activities

- Demolition of existing buildings and structures in the proposed ROW where necessary. The conceptual engineering plans and profiles (provided separately) show the proposed ROW and construction easements necessary to conduct this work.
- New construction of dual track, elevated structure along the east side of the UPRR corridor and over the CN/Metra Electric tracks. Construction of track bed may include removal of unsuitable soils (as applicable).
- New construction of CTA yard and shop and substation construction.
- New construction of retained embankment structure to carry elevated structure to grade.

Construction Phasing

Construction at the CN/Metra Electric crossing would be phased to minimize impacts on CN and Metra operations. Construction over and adjacent to the railroads would require flagging operations and potential limited track closures.

Segment UPRR-E-U-5: From the at-grade track to the beginning of the 130th Street station options (approximate stationing 308+83 to 359+00)

Same as Segment UPRR-ROW-U-5. See Section 3.1.3.1 Segment UPRR-ROW-U-5 for more information.

Segment UPRR-E-U-6S: South Station Option (approximate stationing 359+00 to 379+27)

Work Activities (same as Segment UPRR-ROW-U-6S)

- Remove Norfolk Southern Railway and Consolidated Rail Corporation right-of-way tracks. New construction of track roadbed (including removal of any unsuitable soils as applicable) and systems elements
- New construction of the 130th Street station
- New construction of the parking lot and multi-story garage for 130th Street station
- New construction for land development, bus bays, and road access for the 130th Street station
- New construction for the MWRD access road to 130th Street
- New construction of a substation (approximate stationing at 365+60)

Construction Phasing (same as Segment UPRR-ROW-U-6S)

Coordination with MWRD would be necessary to maintain current operations during new track roadbed construction and during the new road access for the 130th Street station. If necessary, construction would be sequenced to construct the proposed MWRD access road to the west of the proposed station first, allowing MWRD facilities to continue operation. Coordination with the NICTD/CSS & SBRR would be necessary as construction over and adjacent to the railroads would require flagging operations and scheduled track closures. Construction of access roads will require temporary shoulder and lane closures.

Segment UPRR-E-U-6W: West Station Option (approximate stationing 379+27 to 394+38)

Work Activities (same as Segment UPRR-ROW-U-6W)

- New construction of track roadbed
- New construction of the 130th Street station
- New construction of parking for the 130th Street station
- New construction for land development, bus bays, and road access for the 130th Street station
- New construction of the MWRD access road and bridge to 130th Street
- New construction of a substation (approximate stationing at 375+50)
- New construction of crosswalks and signalized intersection at 130th Street and Evans Avenue

Construction Phasing (same as Segment UPRR-ROW-U-6W)

Coordination with MWRD would be necessary to maintain current operations during new track roadbed construction and during the new road access for the 130th Street station. If necessary, construction would be sequenced to construct the proposed MWRD access road and bridge crossing proposed CTA tracks (approximate stationing 370+00) first, allowing MWRD facilities to continue operation. Coordination with the NICTD/CSS & SBRR would be necessary as construction over and adjacent to the railroads would require flagging operations and scheduled track closures

Segment UPRR-E-U-7: 120th Street yard and shop (approximate stationing 290+26/45+00 to 351+67/106+79)

See Section 3.2 for construction phasing and group information for the 120th Street yard and shop.

3.1.3.3 West Option

3.1.3.3.1 Construction Segments

Construction activities would be grouped by type of work and location. Overall schedule and coordination of all construction segments would be phased and scheduled to maintain CTA operations at the 95th Street Terminal and 98th Street yard and shop, and vehicular traffic on affected expressways and roadways. Special or temporary trackwork may be required between the 95th Street Terminal and the 98th Street yard and shop. Construction for single segments or groups of adjacent segments could be sequenced to coordinate with CTA operations at the 95th Street Terminal.

The corridor is divided into seven segments for the purposes of describing construction activities. Construction segments for the three UPRR Rail Alternative Options are shown on Figure 3-1.

3.1.3.3.2 Construction Phasing

Work activities within the segments for the West Option are described below.

Segment UPRR-W-U-1: From the 95th Street Terminal to the beginning of the horizontal curve at the UPRR crossing (approximate stationing 96+60 to 132+00)

Work Activities (same as Segment UPRR-ROW-U-1)

- New trackwork and signals to tie into the 95th Street Terminal.
- Modifications of trackwork traction power and signals between the 95th Street Terminal and the 98th Street yard and shop.
- New construction of retained fill structures south of 95th Street Terminal.
- New construction of single track, elevated structures over existing CTA tracks leading to the 98th Street yard and shop and over the existing CTA/SB I-94 tunnel. New construction of dual

track, elevated structure through the I-94/I-57 interchange, across the WB I-57 entrance ramp from NB I-94 and along the I-57 corridor.

- Proposed structure construction would be sequenced to minimally affect traffic flow on the WB I-57 entrance ramp from NB I-94. For superstructure erection over expressway traffic lanes, temporary shutdown of all traffic would be required.

Construction Phasing (same as Segment UPRR-ROW-U-1)

It will be necessary to relocate trackwork leading from the 95th Street Terminal to the 98th Street yard and shop to allow construction of proposed substructure within CTA ROW. Tying proposed trackwork and structure into existing trackwork at 95th Street Terminal would be sequenced to provide rail car access to 98th Street yard and shop. Proposed structure construction would be sequenced to maintain operating routes from the 95th Street Terminal to the 98th Street yard and shop and maintain traffic flow on I-94 through the tunnel.

Superstructure erection over CTA tracks and I-94, the I-57 ramp, and Wentworth Avenue would require temporary shutdown of operation and traffic. Work would be sequenced to minimize impacts on traffic flow on the I-57/I-94 interchange as well as in the I-57 corridor. Work zones adjacent to the expressway would require shoulder and probably lane closures. Work activities would also affect traffic flow on the north frontage road to I-57 (also called Lafayette Avenue and 98th Place).

The existing 6.5-foot-diameter sewer underneath 99th Street and 102nd Street would be protected during construction. See Section 3.4 for more information regarding the protection of utilities during construction.

Segment UPRR-W-U-2: Horizontal curve at the UPRR crossing (approximate stationing 132+00 to 142+43)

Work Activities (same as Segment UPRR-ROW-U-2)

- New construction of dual track, elevated structure consisting of multiple types of substructure spanning along and across I-57 and the UPRR corridor

Construction Phasing

Work zones adjacent to the expressway and Eggleston Avenue may require temporary shoulder and lane closures. Superstructure erection over I-57 would require temporary shutdown of northbound traffic. Construction adjacent and across railroads would require flagging operations and scheduled track closures.

The existing 10-foot-diameter Stewart Avenue water tunnel would be protected during foundation construction. See section 3.4 for more information regarding the protection of utilities during construction.

Segment UPRR-W-U-3a: From the end of the horizontal curve at the UPRR crossing to the Prairie Street crossing (approximate stationing 142+43 to 275+00)

Work Activities

- Demolition of existing buildings and structures in the proposed ROW where necessary. The conceptual engineering plans and profiles (provided separately) show the proposed ROW and construction easements.
- New construction of dual track, elevated structure along the west side of the UPRR corridor.
- New construction of stations at 103rd Street, 111th Street, and Michigan Avenue.
- New construction of surface parking lots and bus turnarounds at 103rd Street station and 111th Street station and new construction of a structured parking lot and bus turnaround at 115th Street station.
- New construction of two substations and ductbanks beneath the UPRR ROW (approximate stationing 179+00 and 256+00).

Construction Phasing

Work would be sequenced along the UPRR corridor to minimize impacts on UPRR operations. Construction adjacent to railroads would require flagging operations and scheduled track closures. Flagging operations would be needed to replace existing at-grade crossing gates and signals during construction of viaducts for the following at-grade UPRR crossings: 101st Street, 103rd Street, 107th Street, 109th Street, 111th Street, 115th Street, and State Street.

The underground pipes and vaults associated with the Roseland Pumping Station and the 10-foot-diameter sewer underneath Wentworth Avenue near 114th Street would be protected during construction.

Segment UPRR-W-U-3b: From the Prairie Street crossing to the CN/Metra Electric crossing (approximate stationing 275+00 to 287+20)

Work Activities

- New construction of dual track, elevated structure along the east and west side of the UPRR corridor as well as across the UPRR tracks would consist of multiple types of super- and substructure spanning along and across the UPRR corridor and Prairie Avenue.

Construction Phasing

Work would be sequenced along and across the UPRR corridor to minimize impacts on UPRR operations. Construction adjacent to railroads would require flagging operations and scheduled track closures. Work zones adjacent to Prairie Avenue may require lane closures and may cause temporary shutdown of all traffic.

The existing 17.5 foot, horseshoe shaped, MWRD Calumet Intercepting Sewer tunnel would be protected during construction.

Segment UPRR-W-U-4: From the CN/Metra Electric crossing to at-grade track (approximate stationing 287+20 to 311+02)

Work Activities

- Demolition of existing buildings and structures in the proposed ROW where necessary. The conceptual engineering plans and profiles (provided separately) show the proposed ROW and the construction easements.
- New construction of dual track, elevated structure along the east side of the UPRR corridor and over the CN/Metra Electric tracks.
- New construction of 120th Street yard and shop track tie-in and substation.
- New construction of retained embankment structure to carry elevated structure to grade.

Construction Phasing

Construction at the CN/Metra Electric crossing would be phased to minimize impacts on CN and Metra operations. Construction over and adjacent to the railroads would require flagging operations and potential limited track closures.

Segment UPRR-W-U-5: From the at-grade track to the beginning of the 130th Street station options (approximate stationing 311+02 to 361+19)

Same as Segment UPRR-ROW-U-5. See Section 3.1.3.1 Segment UPRR-ROW-U-5 for more information.

Segment UPRR-W-U-6S: South Station Option (approximate stationing 361+19 to 381+46)

Same as Segment UPRR-ROW-U-6S. See Section 3.1.3.1 Segment UPRR-ROW-U-6S for more information.

Segment UPRR-W-U-6W: West Station Option (approximate stationing 381+46 to 396+57)

Same as Segment UPRR-ROW-U6W. See Section 3.1.3.1 Segment UPRR-ROW-U-6W for more information.

Segment UPRR-W-U-7: 120th Street yard and shop (approximate stationing 292+45/45+00 to 353+86/106+79)

See Section 3.1.3.4 description of construction for the 120th Street yard and shop.

3.1.3.4 120th Street Yard and Shop

Overall schedule and coordination of construction for the 120th Street yard and shop would be scheduled in order to maintain operations at the MWRD facilities.

Work Activities

- Preparation of site (including removal of unsuitable soils, as applicable) and installation of drainage systems.
- Construction of the new yard and trackwork
- Construction of the new shop building
- Construction of the yard and shop access roads and parking
- Construction of new substation (approximate stationing at 320+90)

Construction Phasing

Work would be sequenced to minimize impacts on adjacent roadways and both commercial and residential buildings.

3.1.4 Halsted Rail Alternative

3.1.4.1 Construction Segments

Construction activities would be grouped by type of work and location. Overall schedule and coordination of all construction segments would be phased and scheduled to maintain CTA operations at the 95th Street Terminal and 98th Street yard and shop, and vehicular traffic on affected expressways and roadways. Special or temporary trackwork may be required between the 95th Street Terminal and the 98th Street yard and shop. Construction for single segments or groups of adjacent segments could be sequenced to coordinate with CTA operations at the 95th Street Terminal.

The corridor is divided into five segments for the purposes of describing construction activities. Construction segments for the Halsted Alternative are shown on Figure 3-1. The construction segments discussed in the proceeding sections do not correspond to Segments HA and HB that are being used in the environmental analysis for the Halsted Rail Alternative. Segments HA and HB are described in the *Description of Alternatives*.

3.1.4.2 Construction Phasing

Work activities within the five segments for the Halsted Alternative are described below.

Segment H-1: From the 95th Street Terminal to the beginning of the horizontal curve at the I-57 crossing (approximate stationing 96+60 to 158+00)

Work Activities

- New trackwork and signals to tie into the 95th Street Terminal. Possible relocation of trackwork between the 95th Street Terminal and the 98th Street yard and shop.
- New construction of retained fill structure south of 95th Street Terminal.
- New construction of single track, elevated structures over the existing CTA tracks leading to the 98th Street yard and shop and over the existing CTA/SB I-94 tunnel.
- New construction of dual track, elevated structure through the I-94/I-57 interchange, across the WB I-57 entrance ramp from NB I-94, and along the I-57 corridor.
- Proposed structure construction would be sequenced to minimally affect traffic flow on the WB I-57 entrance ramp from NB I-94. For superstructure erection over expressway traffic lanes, temporary shutdown of all traffic would be required. Temporary shutdown of traffic would occur at nighttime and low traffic volume intervals per IDOT approval.

Construction Phasing

It may be necessary to relocate trackwork leading from the 95th Street Terminal to the 98th Street yard and shop to allow construction of proposed substructure within CTA ROW. Tying proposed trackwork and structure into existing trackwork at 95th Street Terminal would also be sequenced to provide rail car access to 98th Street yard and shop. Proposed single track, elevated structure construction would be sequenced to maintain CTA operation between the 95th Street Terminal and the 98th Street yard and shop as well as to maintain vehicular traffic flow on I-94 through the tunnel. Superstructure erection over the existing CTA/SB I-94 tunnel would require temporary shutdown of vehicular traffic and CTA non-revenue operations to and from the 98th Street yard and shop.

Work would be sequenced to minimize impacts on traffic flow on the I-57/I-94 interchange, in the I-57 corridor, and in the I-57 corridor. Work zones adjacent to the expressway would require shoulder and probably lane closures. Superstructure erection over the I-57 ramp and Parnell Avenue would require temporary shutdown of traffic. Temporary shutdown of traffic would occur at nighttime and low traffic volume intervals per IDOT approval. Superstructure erection over and construction near the UPRR structure would require flagging operations and scheduled track closures.

The existing 6.5-foot-diameter sewer underneath both 99th and 102nd Streets would be protected during construction. See Section 3.4 for more information regarding the protection of utilities during construction.

Segment H-2: The horizontal curve at the I-57 crossing (approximate stationing 158+00 to 168+00)

Work Activities

- New construction of dual track, elevated structure consisting of multiple types of super- and substructure spanning along and across I-57 and across Halsted Street

Construction Phasing

Work zones adjacent to and across the expressway may require shoulder and lane closures. Superstructure erection would require temporary shutdown of NB traffic on I-57 and at the intersection of 99th Street and Halsted Street.

Segment H-3: From the end of the horizontal curve at the I-57 crossing to 119th Street station (approximate stationing 168+00 to 285+00)

Work Activities

- New construction of dual track, elevated structure consisting of multiple types of substructure along the Halsted Street corridor
- New construction of stations at 103rd Street and 111th Street
- New construction of surface parking lot and bus turnaround at 103rd Street station
- New construction of surface parking lot at 111th Street station
- New construction of two substations (approximate stationing 175+00 and 237+00)

Construction Phasing

Work would be phased to minimize traffic impacts on Halsted Street and adjoining streets. Elevated structure construction would require lane and street closures. Parking would potentially be eliminated along Halsted Street during construction to increase traffic flow. Superstructure erection would require temporary shutdown of all traffic along segments of Halsted Street during off-peak or weekend hours. Traffic would be detoured to the next major north/south roadway to minimize traffic impacts. Detour routes for Halsted Street would be identified in a Maintenance of Traffic Plan as part of final engineering.

Segment H-4: From 119th Street station to Vermont Avenue station (approximate stationing 285+00 to 367+30)

Work Activities

- Work will be tied into adjacent improvements.
- New construction of dual track, elevated structure consisting of multiple types of substructure along the Halsted Street corridor.
- New construction of stations at 119th Street and Vermont Avenue.
- New construction of surface parking lot and bus turnaround at 119th Street station.
- New construction of both surface and structured parking lots as well as bus bays at Vermont Avenue station.
- New construction of two substations (approximate stationing 293+50 and 343+00).
- New construction of three track, elevated structure south of the Vermont Avenue station.

Construction Phasing

Work would be phased to minimize traffic impacts on Halsted Street and adjoining streets. Elevated structure construction would require lane and street closures. Parking would potentially be eliminated from Halsted during construction to increase traffic flow. Superstructure erection would require temporary shutdown of all traffic along Halsted Street. Detour routes for Halsted Street would be identified as part of final engineering.

Segment H-5: 119th Street Yard and Shop (approximate stationing 299+47/500+00 to 306+96/1014+64)

See Section 3.1.4.3 for construction phasing and group information for the 119th Street yard and shop.

3.1.4.3 119th Street Yard and Shop

For analysis of construction, the 119th Street yard and shop has been separated from the Halsted Rail segments.

Work Activities

- Demolition of existing buildings and structures in the proposed ROW where necessary
- Construction of the new yard and track
- Construction of the new shop building

- Construction of the yard and shop access road and parking

Construction Phasing

Work would be sequenced to minimize impacts on adjacent roadways and buildings.

3.2 Potential Construction Staging Areas

Construction staging would be within the proposed ROW or within construction easements of stations and alternative alignments as indicated on the plan and profile drawings (provided separately). Construction staging areas are required to function for the following basic use criteria:

- Provide access to the construction work for construction personnel. Staging areas would include areas for office trailers, subcontractor site trailers, personnel facilities, and similar.
- Provide access to the construction work for construction equipment. This would include on-site storage of equipment being used on a continuous basis.
- Provide room for the construction personnel and equipment to perform the construction work.
- Provide access for trucks and associated loading equipment to remove materials generated on site, such as demolition salvaged materials and debris and excavation spoils. This type of material handling typically requires on-site segregation and interim on-site storage.
- Provide access, if possible, to store excavated material acceptable for reuse on the site.
- Provide access to receive and store permanent construction materials such as backfill and sub-base aggregates, steel reinforcing bars, and structural steel.
- Provide access to receive and store temporary construction materials such as concrete forms, shoring materials, scaffolding, and excavation support items.

Each construction site would have specific attributes to be accommodated, including the design of the proposed structure, existing conditions such as adjacent structures, and limited access from both an off-site and an on-site perspective. A productive and useful site access plan, with actual known requirements, would be developed after the proposed structure design is complete and adjacent property site conditions are known. Construction access is a critical contractor requirement that directly equates to an efficient construction process.

While the specific design and adjacent land uses at the time of construction would ultimately dictate the access plan, the following provides a general description of the types of properties typically targeted for construction staging in order to minimize impacts:

- CTA-acquired parcels, obtained for increased future infrastructure envelopes. Whole parcels or groups of parcels may be acquired and utilized during construction. After construction, residual property may be sold.

- Nearby parking lots may be used through the establishment of temporary construction easements.

- Abandoned adjacent parcels may be used through the establishment of temporary construction easements.

Because of limited available space adjacent to the construction site, off-site CTA, municipal, or privately owned storage yards may need to be provided for the contractor's use. This would allow secure storage of an equipment fleet or permanent materials needing large storage or assembly areas.

Attempts to define required access limits may not prove to be effective at this time due to lack of a constructible design.

3.2.1 BRT Alternative

The BRT Alternative has been divided into one construction segment, as defined in Section 3.1.2.1. Segment BRT-B-1 consists of new construction from the 95th Street Terminal to the Eberhart Avenue stop. The construction of the BRT segment may require limited temporary construction easements on adjacent streets and on parcels, including parking lots, abandoned properties, and other adjacent properties.

3.2.2 UPRR Rail Alternative

3.2.2.1 ROW Option

The ROW Option has been divided into eight construction segments, as defined in Section 3.1.3.1.

Segment UPRR-ROW-U-1 consists of all new construction south of the 95th Street Terminal within the CTA ROW, over the CTA track/1-94 tunnel, the WB I-57 entrance ramp from NB I-94, and Wentworth Avenue structure within the I-57 corridor. These construction segments may require the following:

- Numerous temporary construction easements on the adjacent expressway, requiring shoulder and lane closures as well as temporary shutdown of traffic.

- Off-site construction materials storage yards, due to limited space adjacent to the construction site. Storage yards may be located on parcels acquired for the project in adjacent construction segments to minimize impacts on the surrounding neighborhoods and communities.

Segment UPRR-ROW-U-2 consists of all new construction along the I-57 corridor, across NB I-57 and along Wendell Smith Park. This construction segment may require the following:

- Numerous temporary construction easements on the adjacent expressway requiring shoulder and lane closures as well as temporary shutdown of traffic.
- Off-site construction materials storage yards due to limited space adjacent to the construction site. Storage yards may be located on parcels acquired for the project in adjacent construction segments to minimize impacts on the surrounding neighborhoods and communities.
- Numerous temporary construction easements on adjacent streets, parks, and parcels including parking lots, abandoned properties, and other adjacent properties.

Segment UPRR-ROW-U-3 consists of new construction along the east side of the UPRR corridor. This construction segment may require the following:

- Numerous temporary construction easements on adjacent streets, parks, and parcels including parking lots, abandoned properties, and other adjacent properties.

Segment UPRR-ROW-U-4 consists of new construction over the CN/Metra Electric tracks. This construction segment may require the following:

- CTA-acquired parcels would provide most required access needs.
- Temporary construction easements on adjacent parcels including abandoned properties, MWRD property, and other adjacent properties.

Segments UPRR-ROW-U-5, UPRR-ROW-U-6S, and UPRR-ROW-U-6W consist of new construction along the NICTD/CSS & SBRR tracks and in the vicinity of the 130th Street station option. These construction segments may require the following:

- CTA-acquired parcels would provide most required access needs.
- A limited amount of temporary construction easements on adjacent parcels including abandoned properties and MWRD property.

Staging requirements of Segment UPRR-ROW-U-7 are discussed in Section 3.2.3.

3.2.2.2 East Option

The East Option has been divided into eight construction segments, as defined in Section 3.1.3.2.

Possible staging area requirements for Segments UPRR-E-U-1 and UPRR-E-U-2 are the same as those for Segments UPRR-ROW-U-1 and UPRR-ROW-U-2, respectively.

Segment UPRR-E-U-3 may require more temporary construction staging areas than Segment UPRR-ROW-U-3 because the UPRR ROW provides space for construction needs.

Possible staging area requirements for Segments UPRR-E-U-4, UPRR-E-U-5, UPRR-E-U-6S, and UPRR-E-U-6W are the same as those for Segments UPRR-ROW-U-4, UPRR-ROW-U-5, UPRR-ROW-U-6S, and UPRR-ROW-U-6W, respectively.

Staging requirements of Segment UPRR-E-U-7 are discussed in Section 3.2.3.

3.2.2.3 West Option

The West Option has been divided into seven construction segments, as defined in Section 3.1.3.3.

Possible staging area requirements of Segments UPRR-W-U-1 and UPRR-W-U-2 match those of Segments UPRR-ROW-U-1 and UPRR-ROW-U-2, respectively.

Segment UPRR-W-U-3a staging area requirements match those of Segment UPRR-ROW-U-3.

Segment and UPRR-W-U-3b consists of new construction of crossings over the UPRR tracks and Prairie Avenue. These construction segments may require the following:

- Temporary construction easements on adjacent streets and parcels including parking lots, abandoned properties, and other adjacent properties. Temporary lane closures and shutdown of traffic may be required on Prairie Avenue.

Possible staging area requirements for Segments UPRR-W-U-4, UPRR-W-U-5, UPRR-W-U-6, and UPRR-W-U-7 match those of Segments UPRR-E-U-4, UPRR-E-U-5, UPRR-E-U-6S, and UPRR-E-U-6W, respectively.

Staging requirements of Segment UPRR-W-U-7 are discussed in Section 3.2.3.

3.2.3 120th Street Yard and Shop

The 120th Street yard and shop is considered construction segments UPRR-ROW-U-7, UPRR-E-U-7, and UPRR-W-U-7 for the UPRR Alternative options.

Possible staging area requirements for the yard and shop are minimal. Parcels would be acquired by CTA in the area and would provide most construction area requirements.

3.2.4 Halsted Rail Alternative

The Halsted Rail Alternative has been divided into five segments, as defined in Section 3.1.6.

Possible staging area requirements of Segment H-1 match Segment UPRR-ROW-U-1. Segment H-2 consists of new construction within the I-57 corridor and across northbound I-57 and Halsted Street. This construction segment may include the following:

- Temporary construction easements on the adjacent expressway requiring shoulder and lane closures as well as temporary shutdown of traffic.
- Temporary construction easements on adjacent streets, parks, and parcels including parking lots, abandoned properties, and other adjacent properties.

Segment H-3 and Segment H-4 consist of new construction within the Halsted Street corridor. These construction segments may require the following:

- Temporary construction easements on Halsted Street and adjacent streets, parking lots, abandoned properties, and other adjacent properties. Temporary lane closures and shutdown of traffic may be required on streets.

3.2.5 119th Street Yard and Shop

The 119th Street yard and shop is Segment H-5 for the Halsted Rail Alternative. Possible staging area requirements for the yard and shop are minimal. Parcels would be acquired by CTA in the area and would provide most construction area requirements.

3.3 Description of Anticipated Construction Activities and Methods

3.3.1 Basic Construction Activities and Methods

Construction for the UPRR Rail Alternative options and the Halsted Rail Alternative would be very similar. Construction activities and methods for these alternatives are discussed interchangeably in this section unless otherwise noted.

Off-site and staging yard assembly of construction items would be performed to the fullest extent possible, especially in Segments U-1 and U-2 of each alternative and Segment H-3 and Segment H-4 based on site-specific access requirements.

The construction matrix for each build alternative is presented as Attachment A. The construction matrix summarizes the construction activities that would be completed including potential construction equipment; estimated quantities of soil, concrete, and steel based on conceptual engineering; and estimated duration of construction activities. Section 4 presents the estimated construction schedule for the alternatives.

3.3.2 Preconstruction Activities

Contractor preconstruction activities would include development of construction schedules, quality plans, and procurement schedules. Process plans would be developed for coordination of work activities to match construction constraints and site access. Existing conditions would be verified for design and construction interface criteria. Survey control establishment would be essential to the verification of site, existing conditions, and utility conflict/relocation information.

Utility protection/relocation information would be coordinated and verified in the sequence of scheduled construction, far in advance of the early construction activities.

Community notifications would be initiated by the CTA and the contractor as early as possible to afford the community best fit conditions for understanding the construction schedule, neighborhood conditions, and related environmental impacts.

Demolition and building permits would be obtained at the earliest opportunity. Office of Underground Coordination requirements (e.g., shoring designs, support of excavation, drilled shaft procedures) must all be coordinated and approved before permits are issued.

The proposed UPRR Alignments are in a residential area coexisting with various homes, parks, schools, and businesses. Therefore, construction activities would be evaluated locally to ensure that the local dynamics of the area and the needs of the property owners and businesses, as well as the end users, are incorporated into the project. While the Halsted Rail Alternative would primarily affect commercial buildings, the aforementioned applies to the Halsted Rail Alternative as well.

Construction activities would include new, at grade, retained embankment, and elevated structure, station, substation, parking, yard, and access road construction. The following construction activities would be expected for the infrastructure and station construction.

3.3.3 Traffic Rerouting

During construction, vehicles, pedestrians, and buses may need to be rerouted around the construction site. Rerouting of traffic is normally done by using detours and complete street closures. The street closures may include main streets, side streets, and alleys and access points. To help mitigate the impacts on traffic routes, station and viaduct construction activities would be sequenced around these street and alley closures. However, complete closure of streets may not always be possible because residents and businesses would still need access. Therefore, temporary traffic lanes, temporary access points, or staged construction would be used. The following activities would be part of traffic rerouting activities:

- Construction signage and temporary traffic barriers.
- Temporary reduction (from two to one) in the number of thru-traffic lanes in each direction, if feasible.
- One-way traffic may be implemented on a temporary basis.
- Detours/complete street closures including alleys and access points.

- Temporary traffic lanes.
- Designated space for storage and staging of construction materials, equipment, and temporary facilities within and/or adjacent to the ROW.
- Construction vehicle access points within and/or adjacent to the ROW.
- Business, residential, and pedestrian impacts including limited parking or parking bans.

3.3.4 Demolition

All RLE alternatives require complete removal or partial demolition of existing buildings or structures. The demolition process would result in increased noise and debris. Work would be performed in accordance with local ordinances for construction activities. In general, pedestrian and vehicular traffic would not be allowed into demolition areas.

The demolition process may include concrete removal, requiring construction workers to saw cut, jackhammer, and/or knock out the existing concrete, cut or remove the existing reinforcement, or completely demolish existing concrete structures.

For removal of foundations and/or streets, to relocate existing utilities, or excavate existing ground, the contractor would excavate using bulldozers, compact tractors, or backhoes to dig and remove earth. The disposal material would be placed in dump trucks and trucked off-site. During excavation, temporary shoring may be required to protect adjacent buildings or structures.

Construction vehicles would access the construction site on a regular basis and would require special hauling routes to deliver materials and equipment to the site and remove the debris from the site. The routes may require complete street closures, temporary street shutdowns, or traffic rerouting. Depending on the type of material being removed, special handling of waste may be necessary. For example, older buildings with asbestos would require special handling. All materials would be disposed of in the proper manner, following federal, state, and local regulations.

3.3.5 Temporary Shoring

During demolition and excavation, temporary shoring may be required to protect adjacent property. The shoring would consist of steel sheet piling driven into the ground with a vibratory pile driver. The rig may be located within the construction zone or outside the ROW depending on the space limitations and access points. The temporary shoring may require the use of tiebacks. Tiebacks are long rods that would be drilled through the sheet piling, embedded into sound rock, or other approved materials, and then grouted into place.

3.3.6 Foundations

Due to the variety of structures, including CTA elevated structure, buildings, and parking garages, there would be a variety of foundations on the RLE Project. Foundations can consist of concrete spread footings, steel pile foundations, or concrete drilled shafts. Foundation type depends on site conditions and location. To determine the geotechnical properties of the soil, a geotechnical engineer would drill exploratory borings and take soil samples. The geotechnical engineer would then test the samples, determine soil properties, and make recommendations on the type of foundation to use, as part of the design process.

All types of spread or shallow type foundations would require excavation and removal of earth to form the concrete footings. As stated above in Section 3.3.4, the use of bulldozers, bobcats, or backhoes would be used to dig and remove earth. The earth may be placed in dump trucks and shipped off-site or stored for use on the construction site for backfill. Materials shipped off-site for disposal would be handled through approved facilities.

Large cranes with pile driving leads that help guide the piles into position would be used for installation of pile foundations. A diesel hammer would drive the piles into the ground by impact. A test pile would be driven to test the pile length and capacity. Based on soil properties, the test pile would determine whether piles would be driven to a different elevation, designed to a different capacity, or would encounter rocks or boulders in the ground. Pile shoes or pile tips would be added to the end of the piles or a pre-drilled hole supported by a steel casing would be used to aid the pile installation process. It is very important for the contractor to locate existing utilities such as sewer, or cable lines before excavation or pile installation to avoid damaging the services. Evaluation of nearby foundations may be required to prevent damage to existing structures during new foundation construction.

Drilled shaft construction is performed with a crane-mounted drill rig. An auger of the design diameter would be drilled into the ground and soil would be piled nearby for removal. As the auger advanced, extensions would be added to the supporting shaft. The drill hole would be fitted with a lining where required by unsuitable soils. A pre-formed reinforcement cage would be installed and concrete would be placed to form the drilled shaft support.

3.3.7 Concrete Placement

Part of the construction logistics and process plan would be to determine the concrete plant based on location and availability of the required concrete mix. The plant would supply and deliver the concrete to the site using concrete trucks. Temporary street closures and truck routes may need to be established to access the construction site. Coordination of multiple trucks may be necessary for large pours and may require special access and scheduling. The contractor may elect to create an on-site ready mix plant to supply the concrete if space limitations and location of the nearest concrete plant require it.

Before the concrete can be poured, all necessary reinforcement and concrete forms would need to be in place. The reinforcement would be delivered on large flatbed trucks and would be stored on-site in bundles. The contractor would assure that the number of bars (and the size of bars, spacing of bars, edge clearances, etc.) is per contract documents before the concrete is poured. The formwork may consist of large steel panels or plywood to hold the wet concrete in place. To maintain the weight of the concrete until it cures, the formwork would be braced or temporarily supported.

After arriving on-site, the truck would be positioned at the location required for the pour. If the truck could not access the location of the pour, the concrete would need to be placed by pump, conveyor system, or other method. Concrete would need to be poured within 1 to 1.5 hours after loading depending on the outside temperature and whether the truck has a retarder. During the pouring, workers would push and move the concrete into position. The concrete would be vibrated to eliminate any voids and smoothed to obtain a good finish. The concrete may need to cure for a week before forms can be removed. Concrete is typically not loaded for 28 days after placement.

3.3.8 Structural Steel Erection

Standard structural steel erection would be required for most new construction on the RLE Project. Structural steel can consist of plates, angles, girders, beams, columns, cross frames, and related elements. The steel can vary in size, length, weight, and use.

Steel members would be delivered to the site on large flatbed trucks or semi-trucks and could require special hauling permits. The construction zone would require special access areas so that the steel could be delivered, assembled on-site, stored, or moved into position. Cranes would be used to pick the pieces off the trucks, move the material overhead, and place into position. Iron workers would be located on the structure to help move the pieces into place by bolting or welding the members. The ironworkers would perform most of the steel erection procedures, which could consist of framing, bolting, welding, coping, cutting, hammering, and similar activities.

3.3.9 Equipment Definition

Demolition - Heavy equipment, efficiently sized to match available access and reach requirements, including cranes with a demolition ball, front-end loaders, shears mounted to backhoes, concrete breakers mounted to combination tractors or backhoes, dump trucks, and off-site tractors with dump trailers.

Excavation - Heavy equipment, efficiently sized to match available access and reach requirements, including backhoes, front-end loaders, concrete breakers mounted to combination tractors or backhoes, dump trucks, and off-site tractors with dump trailers.

On-site hoisting - Heavy equipment used to hoist or move materials about the construction site, efficiently sized to match available access and reach requirements, including telehandlers, front-end loaders, mobile cranes of varying sizes, crawler-mounted cranes, and track-mounted equipment.

Concrete Placement - Heavy equipment efficiently sized to match available access and reach requirements. If concrete trucks cannot directly access the pour location, concrete would typically be placed utilizing a truck/trailer mounted concrete pump(s) or truck/trailer mounted concrete /material type conveyors.

Steel Erection - Heavy equipment, efficiently sized to match available access and reach requirements, including truck cranes, all-terrain cranes, and mobile cranes of varying sizes. Crawler-mounted cranes would typically be used to hoist and erect steel members under normal conditions, while track-mounted equipment (rail-borne equipment) may be used where platform steel and precast materials, including canopy steel framing, track work materials, and similar cannot be reached from normal ground access locations or where there are limited staging area restrictions.

3.4 Methods for Protecting Nearby Utilities and Adjacent Structures

Methods for protecting nearby utilities and adjacent structures include standard industry practice techniques. These techniques include coordinating with existing utilities and field verifying locations. The Office of Underground Coordination (OUC) requires a review of foundations that are within two feet of the property line. Dig requests must be submitted to Chicago DIGGER (Chicago Utility Alert Network) for areas within the limits of the City of Chicago and JULIE (Joint Utility Locating Information for Excavators) for areas outside the City of Chicago limits before any excavation can begin.

3.4.1 Utility Identification

Major utilities can be found on the conceptual engineering plan and profile sheets for each of the build alternatives. Further work would be required to verify the location of all utilities for each alternative.

3.4.2 Industry Practice

- Designer of Record/Owner - Identify existing location (and condition) during preliminary engineering phase for foundation design. Develop review criteria for further coordination of new underground structures, for example, foundations, cable trenches, and ductwork.
- Coordination with existing utilities.
- Leave as is if no conflict.
- Field verify locations, if a potential conflict exists, during preliminary design phase.
- Determine need to protect, redesign to clear, or relocate to allow completion of design. May require a cost impact analysis for redesign versus relocate costs.
- Plat of Survey with location of existing underground structures, with size and location of all existing private and public utilities (below and above ground).

- OUC Review.
- Department of Water Management Review with water review and sewer review.
- Preconstruction - with contractor identification and location.
- Utility contact with digger location.
- Relocation cost.
- Coordination with contractor.
- Field verify locations.
- Pothole at caisson location prior to placing temporary liner.
- Coordination with all parties.
- Identify and protect/relocate away from construction zone all known cables/systems (typically: cable TV, AT&T, gas, electric, Chicago sewer and water, fiber optic, CTA signals, CTA communications, CTA traction power, and similar). May need specific plan written into project specifications delineating contractor responsibility.

3.4.3 Adjacent Structures

New structure protection would be provided along the UPRR track for structures within 50 feet of the centerline of the adjacent UPRR track. Structure protection would be a crash wall running parallel to the UPRR track per the AREMA Manual. If the proposed CTA structure would come within 18 to 25 feet of the centerline of the adjacent UPRR track, pier protection would be provided per the Manual for Railway Engineering (AREMA 2012) and Guidelines for Railroad Grade Separation Projects (BNSF Railway and UPRR, 2007).

For conflicts with existing adjacent structures, field verification of structure location during the design phase would be necessary to evaluate the potential conflict.

3.4.4 Foundations at Interface Areas

An OUC review is required for foundations within two feet of the property line within the City of Chicago. Earth retention systems, with a named sheeting contractor and with sealed earth retention design, are to comply with OUC restrictions.

3.4.5 Monitoring of Adjacent Structures

- The contractor would develop, obtain CTA approval for, and institute a program for monitoring settlement, noise, and vibration of buildings and structures on or adjacent to the ROW. Prior to mobilization, the contractor would survey (both physically and with photos and videos) existing conditions of all areas that are to be occupied, worked on, restored or affected in any way. The contractor would be responsible for and must repair or replace any portions of such areas damaged by his acts.

- Monitoring for settlement, noise, and vibration of buildings and structures on or adjacent to the ROW would start prior to the start of excavation, foundation work, work requiring the use of heavy equipment, or work which may cause damage to CTA or adjacent structures. Monitoring would accommodate vertical and horizontal controls.

- Settlement and vibration monitoring programs for specific structures and locations would be defined during design.

- Special provisions would be included in the construction documents to ensure that all monitoring requirements are completely outlined for contractor clarity.

Section 4
Project Schedule

The estimated project schedule to construct the proposed alternatives is presented in Attachment B. The schedule is based on unconstrained funding and design limitations. The schedule for each alternative assumes advance work that may take one to two years. The final engineering and advance work could start in 2018 and go through 2021. The advance work would consist of utility relocations, land acquisition, and other work necessary prior to starting heavy construction work. The heavy construction work is estimated to require three years and could be phased according to construction in the work segments. It is anticipated that the heavy construction work may occur during the 2022 through 2025, including one year of testing. With this construction schedule, the opening year of the RLE would be 2026.

Section 5
References

AREMA. 2012. Manual for Railway Engineering.

BNSF Railway and Union Pacific Railway. 2007. Guidelines for Railroad Grade Separation Projects. Accessed at http://www.uprr.com/reus/roadxing/industry/process/grade_separation.shtml.

CMAP. 2012. Transportation Improvement Program (2010-2015). Accessed at http://www.cmap.illinois.gov/tip.

Attachment A
Construction Activity Matrices for the Build Alternatives

UPRR HRT ROW Option		Construction Equipment												
Construction Activity	Duration (Months)	Haul Truck	Concrete Truck	Front End Loader	Excavator	Crane	Drill Rig	Compressor	Flatbed	Soil (CY)	Concrete (CY)	Structural Steel (LB)	Avg Truck Trips Per Work Day	Avg Workers Per Work Day
Segment U-1: 95th Street Station to Beginning of Horizontal Curve at UPRR (96+60 to 132+00)	**12-36**													
Advance Work														
Signal/cross-over installation; utility relocation; staging	12	x				x							1	5-10
At Grade														
Single Track	12-18	x		x	x	x		x	x	6,830	50	500	1	5-10
Retained Embankment														
Single Track	24	x	x	x	x	x	x	x	x	1,750	1,750	500	5-10	10-15
Elevated Concrete Structure														
Single Track-Rehab/Modify Existing CTA/IDOT tunnel	24	x	x	x	x	x	x	x	x	2,600	1,300	500	5-10	10-15
Elevated Steel Structure														
Single Track - Hammerhead Substructure	24	x	x	x	x	x	x	x	x	4,100	7,870	2,012,500	5-10	10-15
Double Track - Hammerhead Substructure	24-36	x	x	x	x	x	x	x	x	6,090	11,917	3,701,705	5-10	10-15
Segment U-2: Horizontal Curve at UPRR (132+00 to 142+19)	**12-30**													
Advance Work														
Utility relocation; staging	12	x				x							1	5-10
Elevated Steel Structure														
Double Track - Hammerhead Substructure	24-30	x	x	x	x	x	x	x	x	600	1,174	364,700	5-10	10-15
Double Track - TPG, Hammerhead Substructure	24-30	x	x	x	x	x	x	x	x	1,000	2,070	1,825,800	5-10	10-15
Double Track - Straddle Bent Substructure	24-30	x	x	x	x	x	x	x	x	170	457	892,100	5-10	10-15
Segment U-3: End of Horizontal Curve to Metra/CN Crossing (142+19 to 286+12)	**12-36**													
Advance Work														
Utility relocation; staging	12	x				x							1	5-10
Stations														
Construct - 103rd Street	24-36	x	x	x	x	x	x	x	x	7,800	9,967	3,484,100	5-10	20-30
Construct - 111th Street	24-36	x	x	x	x	x	x	x	x	7,800	9,967	3,484,100	5-10	20-30
Construct - Michigan Avenue	24-36	x	x	x	x	x	x	x	x	7,800	9,967	3,484,100	5-10	20-30
Parking														
Construct - 103rd Street	12	x	x	x	x			x		9,300	3,100		2-5	5-10
Construct - 111th Street	12	x	x	x	x	x		x	x	9,300	3,100		2-6	5-11
Construct - Michigan Avenue (2 lots)	24	x	x	x	x			x		18,600	6,200		2-7	5-12
Elevated Steel Structure														
Double Track - Hammerhead Substructure	36	x	x	x	x	x	x	x	x	43,200	84,528	26,258,400	50-100	30-35
Traction Power														
Substation - 175+00	24	x	x	x	x	x		x	x	5,000	1,100	160,000	2-5	10-15
Substation - 254+00	24	x	x	x	x	x		x	x	5,000	1,100	160,000	2-5	10-15

UPRR HRT ROW Option	Duration (Months)	Construction Equipment								Soil (CY)	Concrete (CY)	Structural Steel (LB)	Avg Truck Trips Per Work Day	Avg Workers Per Work Day
Construction Activity		Haul Truck	Concrete Truck	Front End Loader	Excavator	Crane	Drill Rig	Compressor	Flatbed					
Segment U-4: Metra/CN Crossing to At Grade Track (286+12 to 310+03)	**12-36**													
Advance Work														
Retained Embankment														
Double Track	24	x	x	x	x	x	x	x	x	2,771	926		5-10	10-15
Double Track - Hammerhead Substructure	24-36									6,300	12,327	3,829,350		
Double Track - TPG, Hammerhead Substructure	24-36									400	895	730,320		
Segment U-5: At Grade Track to 130th Street Station Options (310+03 to 360+02)	**12-36**													
Advance Work														
	12													
Double Track										22,950				
Access Road														
Crossing proposed tracks at 358+00	12-24	x	x	x	x			x		6,778	2,260		5-10	5-10
Bridge for Access Road, Crossing at 358+00	24	x	x	x	x	x		x	x	3,105	4,610	495,000	5-10	10-15
Connector access road, West of Proposed CTA tracks	12	x	x	x	x			x		717	239		5-10	5-10
Segment U-6S: 130th Street South Station Option (360+02 to 380+29)	**12-36**													
Advance Work														
	12	x				x							1	5-10
Station														
Construct - 130th Street South Station Option										6,773	2,653	696,305		
Construct - 130th Street South Station Option	24	x	x	x	x			x					2-5	5-10
Double Track	24-36									5,400				
Triple Track	24									7,000				
Access Road														
At South Station Option	12-24	x	x	x	x			x		5,778	1,926		5-10	5-10
Segment U-6W: 130th Street West Station Option (380+29 to 395+40)	**12-36**													
Advance Work														
	12	x				x							1	5-10

UPRR HRT ROW Option	Duration (Months)	Construction Equipment								Soil (CY)	Concrete (CY)	Structural Steel (LB)	Avg Truck Trips Per Work Day	Avg Workers Per Work Day
Construction Activity		Haul Truck	Concrete Truck	Front End Loader	Excavator	Crane	Drill Rig	Compressor	Flatbed					
Station														
Construct - 130th Street West Station Option	24-36	x	x	x	x	x	x	x	x	3,148	1,565	467,055	5-10	20-30
Parking														
Construct - 130th Street West Station Option (2 lots)	24	x	x	x	x			x					2-5	5-10
At Grade														
Double Track	24-36	x		x	x			x	x	12,600				
Triple Track	24	x		x	x			x	x	6,300				
Access Road														
At West Station Option	12-24	x	x	x	x			x		6,512	2,171		5-10	5-10
Bridge for Access Road, Crossing at 371+00	24	x	x	x	x	x		x	x	1,553	2,305	247,500	5-10	10-15
Segment U-7: 120th Street Yard and Shop (291+85/45+00 to 352+69/106+12)	**12-36**													
Advance Work														
Utility relocation; staging	12	x				x							1	5-10
Access Road														
Construct	12-24	x	x	x	x			x		10,977	3,659		5-10	5-10
At Grade														
Single Track	36	x		x	x	x		x	x	89,500	1,000		5-10	10-15
Double Track	36	x		x	x	x		x	x	8,100			5-10	10-15
Retained Embankment														
Double Track	24	x	x	x	x	x	x	x	x	2,771	926	500	5-10	10-15
Elevated Steel Structure														
Double Track - Hammerhead Substructure	24	x	x	x	x	x	x	x	x	2,100	4,109	1,276,450	5-10	10-15
Shop Facility														
Construct-Shop Building	24-36	x	x	x	x	x	x	x	x	10,380	3,114	1,038,000	5-10	20-30
Parking														
Construct - Shop	24	x	x	x	x			x		9,300	3,100		2-5	5-10
Traction Power														
Substation - Yard	24	x	x	x	x	x		x	x	5,000	1,100	160,000	2-5	10-15
Final Phase - 95th Street station to 130th Street (96+50 to 380+50/396+00)	**10 - 12**													
Signal/Communication														
Signal/Interlocking	10 - 12							x	x	--	--	--	2-5	10 - 20
Communication System	10 - 12							x	x	--	--	--	2-5	10 - 20

UPRR HRT East Side Option Construction Activity	Duration (Months)	**Construction Equipment**								Soil (CY)	Concrete (CY)	Structural Steel (LB)	Avg Truck Trips Per Work Day	Avg Workers Per Work Day
		Haul Truck	Concrete Truck	Front End Loader	Excavator	Crane	Drill Rig	Compressor	Flatbed					
Segment U-1: 95th Street station to Beginning of Horizontal Curve at UPRR (96+60 to 132+00)	**12-36**													
Advance Work														
Signal/cross-over installation; utility relocation; staging	12	x				x							1	5-10
At Grade														
Single Track	12-18	x		x	x	x		x	x	6,830	50	500	1	5-10
Retained Embankment														
Single Track	24	x	x	x	x	x	x	x	x	1,750	1,750	500	5-10	10-15
Elevated Concrete Structure														
Single Track-Rehab/Modify Existing CTA/IDOT tunnel	24	x	x	x	x	x	x	x	x	2,600	1,300	500	5-10	10-15
Elevated Steel Structure														
Single Track - Hammerhead Substructure	24	x	x	x	x	x	x	x	x	4,100	7,870	2,012,500	5-10	10-15
Double Track - Hammerhead Substructure	24-36	x	x	x	x	x	x	x	x	6,090	11,917	3,701,705	5-10	10-15
Segment U-2: Horizontal Curve at UPRR (132+00 to 142+00)	**12-36**													
Advance Work														
Utility relocation; staging	12	x				x							1	5-10
Elevated Steel Structure														
Double Track - Hammerhead Substructure	24-30	x	x	x	x	x	x	x	x	300	587	182,350	5-10	10-15
Double Track - TPG, Hammerhead Substructure	24-30	x	x	x	x	x	x	x	x	1,000	2,070	1,825,800	5-10	10-15
Double Track - Straddle Bent Substructure	24-30	x	x	x	x	x	x	x	x	170	457	916,100	5-10	10-15
Segment U-3: End of Horizontal Curve to Metra/CN Crossing (142+00 to 285+00)	**12-36**													
Advance Work														
Utility relocation; staging	12	x				x							1	5-10
Stations														
Construct - 103rd Street	24-36	x	x	x	x	x	x	x	x	9,000	11,767	4,030,800	5-10	20-30
Construct - 111th Street	24-36	x	x	x	x	x	x	x	x	9,000	11,767	4,030,800	5-10	20-30
Construct - Michigan Avenue	24-36	x	x	x	x	x	x	x	x	9,000	11,767	4,030,800	5-10	20-30
Parking														
Construct - 103rd Street	12	x	x	x	x			x		9,300	3,100		2-5	5-10
Construct - 111th Street	12	x	x	x	x			x		9,300	3,100		2-6	5-11
Construct - Michigan Avenue (2 lots)	24	x	x	x	x			x		18,600	6,200		2-7	5-12
Elevated Steel Structure														
Double Track - Hammerhead Substructure	36	x	x	x	x	x	x	x	x	32,700	63,983	19,876,150	50-100	30-35
Traction Power														
Substation - 175+00	24	x	x	x	x	x		x	x	5,000	1,100	160,000	2-5	10-15
Substation - 254+00	24	x	x	x	x	x		x	x	5,000	1,100	160,000	2-5	10-15

UPRR HRT East Side Option Construction Activity	Duration (Months)	**Construction Equipment**								Soil (CY)	Concrete (CY)	Structural Steel (LB)	Avg Truck Trips Per Work Day	Avg Workers Per Work Day
		Haul Truck	Concrete Truck	Front End Loader	Excavator	Crane	Drill Rig	Compressor	Flatbed					
Segment U-4: Metra/CN Crossing to At Grade Track (285+00 to 308+83)	**12-36**													
Advance Work														
													1	
Double Track	24									2,771	926			
Double Track - Hammerhead Substructure	24-36									6,300	12,327	3,829,350		
Double Track - TPG, Hammerhead Substructure	24-36									400	897	730,320		
Segment U-5: At Grade Track to 130th Street Station Options (308+83 to 359+00)	**12-36**													
Advance Work														
	12													
At Grade														
Double Track										22,950				
Access Road														
Crossing proposed tracks at 357+00	12-24	x	x	x	x			x		6,778	2,260		5-10	5-10
Bridge for access Road, Crossing at 357+00	24	x	x	x	x	x		x	x	3,105	4,610	495,000	5-11	10-15
Connector access road, West of Proposed CTA tracks	12	x	x	x	x			x		717	239		5-10	5-10
Segment U-6S: 130th Street South Station Option (359+00 to 379+27)	**12-36**													
Advance Work														
	12	x				x							1	5-10
Station														
Construct - 130th Street South Station Option										6,773	2,653	696,305		
Parking														
At South Station Option	24	x	x	x	x			x		13,900	4,700		2-5	5-10
At Grade														
Double Track	24-36								x	4,500				
Triple Track	24								x	7,700				
Access Road														
At South Station Option	12-24	x	x	x	x			x		5,778	1,926		5-10	5-10
Segment U-6W: 130th Street West Station Option (379+27 to 394+38)	**12-36**													
Advance Work														
	12	x				x							1	5-10
Station														
Construct - 130th Street West Station Option										3,148	1,565	467,055		

UPRR HRT East Side Option Construction Activity	Duration (Months)	Construction Equipment								Soil (CY)	Concrete (CY)	Structural Steel (LB)	Avg Truck Trips Per Work Day	Avg Workers Per Work Day
		Haul Truck	Concrete Truck	Front End Loader	Excavator	Crane	Drill Rig	Compressor	Flatbed					
Parking														
At West Station Option (2 lots)	24	x	x	x	x			x		27,800	9,400		2-5	5-10
At Grade														
Double Track	24-36									12,150				
Triple Track	24									6,300				
Access Road														
At West Station Option	12-24	x	x	x	x			x		6,512	2,171		5-10	5-10
Bridge for Access Road, Crossing at 369+50	24	x	x	x	x	x		x	x	1,553	2,305	247,500	5-10	10-15
Segment U-7: 120th Street Yard and Shop (290+26/45+00 to 351+67/106+79)	**12-36**													
Advance Work														
Access Road														
Construct	12-24	x	x	x	x			x		10,977	3,659		5-10	5-10
At Grade														
Single Track		x		x	x	x		x	x	89,500	1,000		5-10	
Double Track		x		x	x	x		x	x	8,100			5-10	
Retained Embankment														
Double Track	24									2,771	926	500		
Elevated Steel Structure														
Double Track - Hammerhead Substructure	24									2,100	4,109	1,276,450		
Shop Facility														
Construct-Shop Building										10,380	3,114	1,038,000		
Parking														
Construct - Shop	24	x	x	x	x			x		9,300	3,100		2-5	5-10
Traction Power														
										5,000	1,100	160,000		

UPRR HRT West Side Option	Duration (Months)	Construction Equipment								Soil (CY)	Concrete (CY)	Structural Steel (LB)	Avg Truck Trips Per Work Day	Avg Workers Per Work Day
Construction Activity		Haul Truck	Concrete Truck	Front End Loader	Excavator	Crane	Drill Rig	Compressor	Flatbed					
Segment U-1: 95th Street Station to Beginning of Horizontal Curve at UPRR (96+60 to 132+00)	**12-36**													
Advance Work														
Signal/cross-over installation; utility relocation; staging	12	x				x							1	5-10
At Grade														
Single Track	12-18	x		x	x	x		x	x	6,830	50	500	1	5-10
Retained Embankment														
Single Track	24	x	x	x	x	x	x	x	x	1,750	1,750	500	5-10	10-15
Elevated Concrete Structure														
Single Track-Rehab/Modify Existing CTA/IDOT tunnel	24	x	x	x	x	x	x	x	x	2,600	1,300	500	5-10	10-15
Elevated Steel Structure														
Single Track - Hammerhead Substructure	24	x	x	x	x	x	x	x	x	4,100	7,870	2,012,500	5-10	10-15
Double Track - Hammerhead Substructure	24-36	x	x	x	x	x	x	x	x	6,090	11,917	3,701,705	5-10	10-15
Segment U-2: Horizontal Curve at UPRR (132+00 to 142+43)	**12-36**													
Advance Work														
Utility relocation; staging	12	x				x							1	5-10
Elevated Steel Structure														
Double Track - Hammerhead Substructure	24-30	x	x	x	x	x	x	x	x	600	1,174	364,700	5-10	10-15
Double Track - TPG, Hammerhead Substructure	24-30	x	x	x	x	x	x	x	x	1,000	2,070	1,825,800	5-10	10-15
Double Track - Straddle Bent Substructure	24-30	x	x	x	x	x	x	x	x	340	951	1,581,000	5-10	10-15
Segment U-3A: End of Horizontal Curve to Prairie/UPRR Crossing (142+43 to 275+00)	**12-36**													
Advance Work														
Utility relocation; staging	12	x				x							1	5-10
Stations														
Construct - 103rd Street	24-36	x	x	x	x	x	x	x	x	9,000	11,767	4,030,800	5-10	20-30
Construct - 111th Street	24-36	x	x	x	x	x	x	x	x	9,000	11,767	4,030,800	5-10	20-30
Construct - Michigan Avenue	24-36	x	x	x	x	x	x	x	x	9,000	11,767	4,030,800	5-10	20-30
Parking														
Construct - 103rd Street	12	x	x	x	x			x		9,300	3,100		2-5	5-10
Construct - 111th Street	12	x	x	x	x	x		x	x	9,300	3,100		2-5	5-10
Construct -Michigan Avenue (2 lots)	24	x	x	x	x			x		18,600	6,200		2-5	5-10
Elevated Steel Structure														
Double Track - Hammerhead Substructure	36	x	x	x	x	x	x	x	x	29,700	58,113	18,052,650	50-100	30-35
Traction Power														
Substation - 180+00	24	x	x	x	x	x		x	x	5,000	1,100	160,000	2-5	10-15
Substation - 260+00	24	x	x	x	x	x		x	x	5,000	1,100	160,000	2-5	10-15

UPRR HRT West Side Option		**Construction Equipment**												
Construction Activity	Duration (Months)	Haul Truck	Concrete Truck	Front End Loader	Excavator	Crane	Drill Rig	Compressor	Flatbed	Soil (CY)	Concrete (CY)	Structural Steel (LB)	Avg Truck Trips Per Work Day	Avg Workers Per Work Day
Segment U-3B: Prairie/UPRR crossing to Metra/CN Crossing (275+00 to 287+20)	**24-36**													
Advance Work														
Utility relocation; staging														
Elevated Steel Structure														
Double Track -Hammerhead Substructure	36									1,200	2,438	729,400		
Double Track - Straddle Bent Substructure	36									1,020	3,014	3,948,600		
Segment U-4: Metra/CN Crossing to At Grade Track (287+20 to 311+02)	**12-36**													
Advance Work														
Utility relocation; staging														
Retained Embankment														
Double Track	24	x	x	x	x	x	x	x	x	2,771	926		5-10	10-15
Elevated Steel Structure														
Double Track - Hammerhead Substructure	24-36									5,700	11,153	3,464,650		
Double Track - TPG, Hammerhead Substructure	24-36									400	895	730,320		
Segment U-5: At Grade Track to 130th Street Station Options (311+02 to 361+19)	**12-36**													
Advance Work														
Utility relocation; staging	12													
At Grade														
Double Track										23,400				
Access Road														
Crossing proposed tracks at 360+00	12-24	x	x	x	x			x		6,778	2,260		5-10	5-10
Bridge for Access Road, Crossing at 360+00	24	x	x	x	x	x		x	x	3,105	4,610	495,000	5-10	10-15
Connector access road, West of Proposed CTA tracks	12	x	x	x	x			x		717	239		5-10	5-10
Segment U-6S: South 130th Street Station Option (361+19 to 381+46)	**12-36**													
Advance Work														
Utility relocation; staging	12	x				x							1	5-10
Station														
Construct - 130th Street South Station Option										6,773	2,653	696,305		
Parking														
Construct - 130th Street South Station Option	24	x	x	x	x			x		13,900	4,700		2-5	5-10
At Grade														

UPRR HRT West Side Option	Duration (Months)	Construction Equipment								Soil (CY)	Concrete (CY)	Structural Steel (LB)	Avg Truck Trips Per Work Day	Avg Workers Per Work Day
Construction Activity		Haul Truck	Concrete Truck	Front End Loader	Excavator	Crane	Drill Rig	Compressor	Flatbed					
Double Track	24-36									5,400				
Triple Track	24									7,700				
Access Road														
At South Station Option	12-24	x	x	x	x			x		5,778	1,926		5-10	5-10
Segment U-6W: West 130th Street Station Option (381+46 to 396+57)	**12-36**													
Advance Work														
Utility relocation; staging	12	x				x							1	5-10
Station														
Construct - 130th Street West Option										3,148	1,565	467,055		
Parking														
Construct - 130th Street West Option (2 lots)	24	x	x	x	x			x		27,800	9,400		2-5	5-10
At Grade														
Double Track	24-36	x		x	x			x	x	13,050				
Triple Track	24	x		x	x			x	x	5,600				
Access Road														
At West Station Option	12-24	x	x	x	x			x		6,512	2,171		5-10	5-10
Bridge for Access Road, Crossing at 372+00	24	x	x	x	x			x		1,553	2,305	247,500	5-10	10-15
Segment U-7: 120th Street Yard and Shop (292+45/45+00 to 353+86/106+79)	**12-36**													
Advance Work														
Utility relocation; staging														
Access Road														
Construct	12-24	x	x	x	x			x		10,977	3,659		5-10	5-10
At Grade														
Single Track		x		x	x	x		x	x	89,500	1000		5-10	10-15
Double Track		x		x	x	x		x	x	8,100			5-10	10-15
Retained Embankment														
Double Track	24									2,771	926	500		
Elevated Steel Structure														
Double Track - Hammerhead Substructure	24									2,100	4,109	1,276,450		
Shop Facility														
Construct-Shop Building										10,380	3,114	1,038,000		
Parking														
Construct - Shop	24	x	x	x	x			x		9,300	3,100		2-5	5-10
Traction Power														
Substation - Yard										5,000	1,100	160,000		

UPRR HRT West Side Option	Duration (Months)	Construction Equipment								Soil (CY)	Concrete (CY)	Structural Steel (LB)	Avg Truck Trips Per Work Day	Avg Workers Per Work Day
Construction Activity		Haul Truck	Concrete Truck	Front End Loader	Excavator	Crane	Drill Rig	Compressor	Flatbed					
Final Phase - 95th Street Station to 130th Street (96+50 to 382+30/396+50)														
Signal/Communication														
Signal/Interlocking														
Communication System														

Halsted Street HRT		Construction Equipment												
Construction Activity	Duration (Months)	Haul Truck	Concrete Truck	Front End Loader	Excavator	Crane	Drill Rig	Compressor	Flatbed	Soil (CY)	Concrete (CY)	Structural Steel (LB)	Avg Truck Trips Per Work Day	Avg Workers Per Work Day
Segment H-1: 95th Street Station to Beginning of Horizontal Curve at Halsted (96+60 to 158+00)	**12-36**													
Advance Work														
Signal/cross-over installation; utility relocation; staging	12	x				x							1	5-10
At Grade														
Single Track	12-18	x		x	x	x		x	x	6,830	50	500	1	5-10
Retained Embankment														
Single Track	24	x	x	x	x	x	x	x	x	1,750	1,500	500	5-10	10-15
Elevated Concrete Structure														
Single Track-Rehab/Modify Existing CTA/IDOT tunnel	24	x	x	x	x	x	x	x	x	2,600	1,300	500	5-10	10-15
Elevated Steel Structure														
Single Track-Hammerhead Substructure	24	x	x	x	x	x	x	x	x	2,381	7,870	2,012,500	5-10	10-15
Double Track - Hammerhead Substructure	24-36	x	x	x	x	x	x	x	x	8,344	26,820	8,625,155	5-10	10-15
Segment H-2: Horizontal Curve at Halsted (158+00 to 168+00)	**12-36**													
Advance Work														
Utility relocation; staging	12	x				x							1	5-10
Elevated Steel Structure														
Double Track -TPG, Hammerhead Substructure	24-30	x	x	x	x	x	x	x	x	1,000	2,070	1,825,800	5-10	10-15
Double Track - Straddle Bent Substructure	24-30	x	x	x	x	x	x	x	x	340	914	1,664,200	5-10	10-15
Segment H-3: End of Horizontal Curve to 119th Street Station (168+00 to 285+00)	**12-36**													
Advance Work														
Utility relocation; staging	12	x				x							1	5-10
Stations														
Construct - 103rd Street	24-36	x	x	x	x	x	x	x	x	2,903	4,052	4,764,000	5-10	20-30
Construct - 111th Street	24-36	x	x	x	x	x	x	x	x	2,903	4,052	4,764,000	5-10	20-30
Parking														
Construct - 103rd Street	12	x	x	x	x			x		9,300	3,100		2-5	5-10
Construct - 111th Street	12	x	x	x	x			x		9,300	3,100		2-5	5-10
Elevated Steel Structure														
Double Track - Hammerhead Substructure	24-36	x	x	x	x	x	x	x	x	12,600	23,814	7,658,700	50-100	30-35
Double Track - Straddle Bent Substructure	24-36	x	x	x	x	x	x	x	x	13,104	32,261	45,252,480	50-100	30-35
Traction Power														
Substations - 101st Street	24	x	x	x	x	x		x	x	5,000	1,100	160,000	2-5	10-15
Substations - 110th Street	24	x	x	x	x	x		x	x	5,000	1,100	160,000	2-5	10-15

Halsted Street HRT	Duration (Months)	Construction Equipment								Soil (CY)	Concrete (CY)	Structural Steel (LB)	Avg Truck Trips Per Work Day	Avg Workers Per Work Day
Construction Activity		Haul Truck	Concrete Truck	Front End Loader	Excavator	Crane	Drill Rig	Compressor	Flatbed					
Segment H-4: 119th Street station to Vermont Avenue station (285+00 to 367+30)	**12-36**													
Advance Work														
	12													
Stations														
Construct - 119th Street										2,903	4,052	4,764,000		
Construct - Vermont Avenue										3,363	3,914	4,741,000		
Parking														
Construct - 119th Street	12									9,300	3,100		2-5	5-10
Construct - Vermont Avenue	24									13,900	4,700		2-5	5-10
Double Track - Hammerhead Substructure	24-36									8,400	15,876	5,105,800		
Double Track - Straddle Bent Substructure	24-36									8,736	21,507	30,168,320		
Triple Track - Straddle Bent Substructure	12-24									1,260	3,420	5,875,200		
										5,000	1,100	160,000		
										5,000	1,100	160,000		
Segment H-5: 119th Street Yard and Shop (299+47/500+00 to 306+96/1014+64)	**12-36**													
Advance Work														
Single Track		x		x	x	x		x	x	87,000	1,000		5-10	
Double Track		x		x	x	x		x	x	3,150			5-10	
Double Track	24									3,709	1,242	500		
Double Track - Hammerhead Substructure	24									3,300	6,237	2,005,850		
Double Track - Straddle Bent Substructure	24-36									2,520	6,204	8,702,400		
Parking														
Construct - Shop	24	x	x	x	x			x		9,300	3,100		2-5	5-10
Construct-Shop Building	24-36	x	x	x	x	x	x	x	x	8,075	2,423	807,500	5-10	20-30
Access Road														
Construct	12-24	x	x	x	x			x		7,041	2,347		2-5	5-10
										5,000	1,100	160,000		

Halsted Street HRT	Duration (Months)	Construction Equipment								Soil (CY)	Concrete (CY)	Structural Steel (LB)	Avg Truck Trips Per Work Day	Avg Workers Per Work Day
Construction Activity		Haul Truck	Concrete Truck	Front End Loader	Excavator	Crane	Drill Rig	Compressor	Flatbed					

Conditions/Assumptions used in the Construction Matrix

The intent of this Construction Matrix is to provide a general level of construction activity that may occur with each alternative and is to be used for the NEPA process. The Construction Matrix identifies a range of potential impacts based on currently available information and is not intended to be used for scheduling construction nor is it intended to be used for cost estimating construction.

Activity

Segments and grouping of activities based on the Conceptual Engineering Plan and Profile Drawings, July 2012, revised September 2012.
Work elements based on the Conceptual Engineering Plans.
Stationing based on the Conceptual Engineering Plan and Profile Drawings.
Trackwork is included with the listed activity.

Duration (Months)

Estimate of the expected duration of work for the activity row.
Activities are not sequential except for Advance Work if required in the segment.
Construction implementation and maintaining operations will have a significant impact on construction durations.

Construction Equipment

Possible types of construction equipment that may be used for some duration within an activity.

Soil (CY)

Represents the potential soil or aggregate that may be excavated, removed, or fill. Concrete removed is included in quantity.
Includes caisson and foundation excavation.

Concrete(CY)

Represents the potential quantity of new concrete including caissons.
Concrete at stations includes building and platforms. Concrete for track support included in Elevated Structure

Structural Steel (LB)

Represents the potential quantity of new structural steel.
Structural Steel at stations includes building and platforms. Structural Steel for track support included in Elevated Structure.

Avg Truck Trips Per Work Day

Estimated average number of truck trips for an activity per work day. Excludes minor vehicles and worker vehicles.

Ave. Workers Per Work Day

Estimated average number of workers for an activity per work day.

Attachment B
Construction Schedules for the Build Alternatives

Bus Rapid Transit (BRT) Alternative Construction Schedule	Duration (Weeks)	Quarter Years											
		1			2			3			4		
		1	2	3	4	5	6	7	8	9	10	11	12
Advance Work													
Utility relocation; staging	12	🟨	🟨	🟨									
Stop													
Construct - 103rd Street	8					🟨	🟨						
Construct - 111th Street	8							🟨	🟨				
Construct - Kensington Avenue	8					🟨	🟨						
Construct - 130th Street	8							🟨	🟨				
Parking Lot													
Construct - 103rd Street	12						🟨	🟨	🟨				
Construct - 111th Street	16						🟨	🟨	🟨	🟨			
Construct - Kensington Avenue	20					🟨	🟨	🟨	🟨	🟨			
Construct -130th Street	26			🟨	🟨	🟨	🟨	🟨	🟨	🟨			
Signal/Communication													
Traffic Signal Prioritization													
Upgrade-Lafayette Ave	3					🟨							
Upgrade-State Street	3					🟨							
Upgrade-Michigan Avenue	3					🟨							
Upgrade-99th Place	3					🟨							
Upgrade-100th Street	3							🟨	🟨				
Upgrade-103rd Street	3						🟨						
Upgrade-107th Street	3					🟨							
Upgrade-111th Street	3							🟨	🟨				
Upgrade-115th Street	3						🟨						
Upgrade-119th Street	3					🟨							
Upgrade-127th Street	3						🟨						
Traffic Signal													
Construct-130th Street	4								🟨	🟨			
Roadway													
Pavement Markings	2								🟨	🟨			
ADA compliance													
103rd Street	2					🟨	🟨						
Kensington Avenue	2					🟨	🟨						
130th Street	2								🟨	🟨			

Stop Assumptions:

Stops will be constructed one direction of traffic at a time to reduce traffic due to construction activities and to reduce disturbance to existing bus services.

Stop construction start dates are staggered to reduce disturbance to existing bus service.

Traffic Signal Assumptions:

Eberhart Avenue signal constructed once 130th Street parking lot is near completion. Possible entrance of parking lot at Eberhart Avenue therefore signal shall be constructed after entrance to parking lot is constructed.

Traffic Signal Prioritization Assumptions:

Traffic signal prioritization assumes that light poles will be upgraded with detector and equipment. The installation is staggered to reduce traffic during construction activities.

UPRR HRT ROW Option Construction Schedule	Duration (Months)	YEARS									
		1		2		3		4		5	
Segment U-1: 95th Street Station to Beginning of Horizontal Curve at UPRR (96+60 to 132+00)	**12-36**										
Advance Work											
Signal/cross-over installation; utility relocation; staging	12	🟨	🟨								
At Grade											
Single Track	12-18					🟨	🟨	🟨			
Retained Embankment											
Single Track	24					🟨	🟨	🟨	🟨		
Elevated Concrete Structure											
Single Track-Rehab/Modify Existing CTA/IDOT tunnel	24				🟨	🟨	🟨	🟨			
Elevated Steel Structure											
Single Track - Hammerhead Substructure	24					🟨	🟨	🟨	🟨		
Double Track - Hammerhead Substructure	24-36			🟨	🟨	🟨	🟨	🟨	🟨		
Segment U-2: Horizontal Curve at UPRR (132+00 to 142+19)	**12-36**										
Advance Work											
Utility relocation; staging	12	🟨	🟨								
Elevated Steel Structure											
Double Track - Hammerhead Substructure	24-30			🟨	🟨	🟨	🟨	🟨			
Double Track - TPG, Hammerhead Substructure	24-30				🟨	🟨	🟨	🟨	🟨		
Double Track - Straddle Bent Substructure	24-30				🟨	🟨	🟨	🟨	🟨		
Segment U-3: End of Horizontal Curve to Metra/CN Crossing (142+19 to 286+12)	**12-36**										
Advance Work											
Utility relocation; staging	12	🟨	🟨								
Stations											
Construct - 103rd Street	24-36			🟨	🟨	🟨	🟨	🟨	🟨		
Construct - 111th Street	24-36			🟨	🟨	🟨	🟨	🟨	🟨		
Construct - Michigan Avenue	24-36			🟨	🟨	🟨	🟨	🟨	🟨		
Parking											
Construct - 103rd Street	12					🟨	🟨				
Construct - 111th Street	12						🟨	🟨			
Construct - Michigan Avenue (2 lots)	24							🟨	🟨		
Elevated Steel Structure											
Double Track - Hammerhead Substructure	36			🟨	🟨	🟨	🟨	🟨	🟨		
Traction Power											
Substation - 175+00	24					🟨	🟨	🟨	🟨		
Substation - 254+00	24					🟨	🟨	🟨	🟨		
Segment U-4: Metra/CN Crossing to At Grade Track (286+12 to 310+03)	**12-36**										
Advance Work											
Utility relocation; staging	12	🟨	🟨								
Retained Embankment											
Double Track	24				🟨	🟨	🟨	🟨	🟨		
Elevated Steel Structure											
Double Track - Hammerhead Substructure	24-36			🟨	🟨	🟨	🟨	🟨	🟨		
Double Track - TPG, Hammerhead Substructure	24-36			🟨	🟨	🟨	🟨	🟨	🟨		
Segment U-5: At Grade Track to 130th Street Station Options (310+03 to 360+02)	**12-36**										
Advance Work											
Utility relocation; staging	12	🟨	🟨								
At Grade											
Double Track	24-36			🟨	🟨	🟨	🟨	🟨	🟨		
Access Road											
Crossing proposed tracks at 358+00	12-24				🟨	🟨	🟨	🟨			
Bridge for Access Road, Crossing at 358+00	24					🟨	🟨	🟨	🟨		
Connector access road, West of Proposed CTA tracks	12							🟨	🟨		
Segment U-6S: 130th Street South Station Option (360+02 to 380+29)	**12-36**										
Advance Work											
Utility relocation; staging	12	🟨	🟨								
Station											
Construct - 130th Street South Station Option	24-36			🟨	🟨	🟨	🟨	🟨	🟨		
Parking											
Construct - 130th Street South Station Option	24					🟨	🟨	🟨	🟨		
At Grade											
Double Track	24-36			🟨	🟨	🟨	🟨	🟨	🟨		
Triple Track	24					🟨	🟨	🟨	🟨		
Access Road											
At South Station Option	12-24					🟨	🟨	🟨	🟨		
Segment U-6W: 130th Street West Station Option (380+29 to 395+40)	**12-36**										
Advance Work											
Utility relocation; staging	24	🟨	🟨	🟨	🟨						
Station											
Construct - 130th Street West Station Option	24-36			🟨	🟨	🟨	🟨	🟨	🟨		
Parking											
Construct - 130th Street West Station Option (2 lots)	24					🟨	🟨	🟨	🟨		
At Grade											
Double Track	24-36			🟨	🟨	🟨	🟨	🟨	🟨		
Triple Track	24					🟨	🟨	🟨	🟨		
Access Road											
At West Station Option	12-24					🟨	🟨	🟨	🟨		
Bridge for Access Road, Crossing at 371+00	24				🟨	🟨	🟨	🟨			
Segment U-7: 120th Street Yard and Shop (291+85/45+00 to 352+69/106+12)	**12-36**										
Advance Work											
Utility relocation; staging	24	🟨	🟨	🟨	🟨						
Access Road											
Construct	12-24				🟨	🟨	🟨	🟨			
At Grade											
Single Track	36			🟨	🟨	🟨	🟨	🟨	🟨		
Double Track	36			🟨	🟨	🟨	🟨	🟨	🟨		
Retained Embankment											
Double Track	24				🟨	🟨	🟨	🟨			
Elevated Steel Structure											
Double Track - Hammerhead Substructure	24				🟨	🟨	🟨	🟨			
Shop Facility											
Construct-Shop Building	24-36			🟨	🟨	🟨	🟨	🟨	🟨		
Parking											
Construct - Shop	24					🟨	🟨	🟨	🟨		
Traction Power											
Substation - Yard	24					🟨	🟨	🟨	🟨		
Final Phase - 95th Street Station to 130th Street (96+50 to 380+50/396+00)	**10 - 12**										
Signal/Communication											
Signal/Interlocking	12									🟨	🟨
Communication System	12									🟨	🟨

UPRR HRT East Side Option Construction Schedule	Duration (Months)	**YEARS**									
		1		2		3		4		5	
Segment U-1: 95th Street Station to Beginning of Horizontal Curve at UPRR (96+60 to 132+00)	**12-36**										
Advance Work											
Signal/cross-over installation; utility relocation; staging	12	🟨	🟨								
At Grade											
Single Track	12-18					🟨	🟨	🟨			
Retained Embankment											
Single Track	24					🟨	🟨	🟨	🟨		
Elevated Concrete Structure											
Single Track-Rehab/Modify Existing CTA/IDOT tunnel	24				🟨	🟨	🟨	🟨			
Elevated Steel Structure											
Single Track - Hammerhead Substructure	24					🟨	🟨	🟨	🟨		
Double Track - Hammerhead Substructure	24-36			🟨	🟨	🟨	🟨	🟨	🟨		
Segment U-2: Horizontal Curve at UPRR (132+00 to 142+00)	**24-36**										
Advance Work											
Utility relocation; staging	12	🟨	🟨								
Elevated Steel Structure											
Double Track - Hammerhead Substructure	24-30			🟨	🟨	🟨	🟨	🟨			
Double Track - TPG, Hammerhead Substructure	24-30				🟨	🟨	🟨	🟨	🟨		
Double Track - Straddle Bent Substructure	24-30				🟨	🟨	🟨	🟨	🟨		
Segment U-3: End of Horizontal Curve to Metra/CN Crossing (142+00 to 285+00)	**12-36**										
Advance Work											
Utility relocation; staging	12	🟨	🟨								
Stations											
Construct - 103rd Street	24-36			🟨	🟨	🟨	🟨	🟨	🟨		
Construct - 111th Street	24-36			🟨	🟨	🟨	🟨	🟨	🟨		
Construct - Michigan Avenue	24-36			🟨	🟨	🟨	🟨	🟨	🟨		
Parking											
Construct - 103rd Street	12					🟨	🟨				
Construct - 111th Street	12						🟨	🟨			
Construct - Michigan Avenue (2 lots)	24							🟨	🟨		
Elevated Steel Structure								🟨	🟨		
Double Track - Hammerhead Substructure	36			🟨	🟨	🟨	🟨	🟨	🟨		
Traction Power											
Substation - 175+00	24					🟨	🟨	🟨	🟨		
Substation - 254+00	24					🟨	🟨	🟨	🟨		
Segment U-4: Metra/CN Crossing to At Grade Track (285+00 to 308+83)	**12-36**										
Advance Work											
Utility relocation; staging	12	🟨	🟨								
Retained Embankment											
Double Track	24				🟨	🟨	🟨	🟨	🟨		
Elevated Steel Structure											
Double Track - Hammerhead Substructure	24-36			🟨	🟨	🟨	🟨	🟨	🟨		
Double Track - TPG, Hammerhead Substructure	24-36			🟨	🟨	🟨	🟨	🟨	🟨		
Segment U-5: At Grade Track to 130th Street Station Options (308+83 to 359+00)	**12-36**										
Advance Work											
Utility relocation; staging	12	🟨	🟨								
At Grade											
Double Track	24-36			🟨	🟨	🟨	🟨	🟨	🟨		
Access Road											
Crossing proposed tracks at 357+00	12-24				🟨	🟨	🟨	🟨			
Bridge for Access Road, Crossing at 357+00	24					🟨	🟨	🟨	🟨		
Connector access road, West of Proposed CTA tracks	12							🟨	🟨		
Segment U-6S: 130th Street South Station Option (359+00 to 379+27)	**12-36**										
Advance Work											
Utility relocation; staging	24	🟨	🟨	🟨	🟨						
Station											
Construct - 130th Street South Station Option	24-36			🟨	🟨	🟨	🟨	🟨	🟨		
Parking											
At South Station Option	24					🟨	🟨	🟨	🟨		
At Grade											
Double Track	24-36			🟨	🟨	🟨	🟨	🟨	🟨		
Triple Track	24					🟨	🟨	🟨	🟨		
Access Road											
At South Station Option	12-24					🟨	🟨	🟨	🟨		
Segment U-6W: 130th Street West Station Option (379+27 to 394+38)	**12-36**										
Advance Work											
Utility relocation; staging	12	🟨	🟨								
Station											
Construct - 130th Street West Station Option	24-36			🟨	🟨	🟨	🟨	🟨	🟨		
Parking											
At West Station Option (2 lots)	24					🟨	🟨	🟨	🟨		
At Grade											
Double Track	24-36			🟨	🟨	🟨	🟨	🟨	🟨		
Triple Track	24					🟨	🟨	🟨	🟨		
Access Road											
At West Station Option	12-24					🟨	🟨	🟨	🟨		
Bridge for Access Road, Crossing at 369+50	24				🟨	🟨	🟨	🟨			
Segment U-7: 120th Street Yard and Shop (290+26/45+00 to 351+67/106+79)	**12-36**										
Advance Work											
Utility relocation; staging	24	🟨	🟨	🟨	🟨						
Access Road											
Construct	12-24				🟨	🟨	🟨	🟨			
At Grade											
Single Track	36			🟨	🟨	🟨	🟨	🟨	🟨		
Double Track	36			🟨	🟨	🟨	🟨	🟨	🟨		
Retained Embankment											
Double Track	24				🟨	🟨	🟨	🟨			
Elevated Steel Structure											
Double Track - Hammerhead Substructure	24				🟨	🟨	🟨	🟨			
Shop Facility											
Construct-Shop Building	24-36			🟨	🟨	🟨	🟨	🟨	🟨		
Parking											
Construct - Shop	24					🟨	🟨	🟨	🟨		
Traction Power											
Substation - Yard	24					🟨	🟨	🟨	🟨		
Final Phase - 95th Street Station to 130th Street (96+50 to 379+70/394+53)	**10 - 12**										
Signal/Communication											
Signal/Interlocking	12									🟨	🟨
Communication System	12									🟨	🟨

UPRR HRT West Side Option Construction Schedule	Duration (Months)	YEARS									
		1		2		3		4		5	
Segment U-1: 95th Street Station to Beginning of Horizontal Curve at UPRR (96+60 to 132+00)	**12-36**										
Advance Work											
Signal/cross-over installation; utility relocation; staging	12	🟨	🟨								
At Grade											
Single Track	12-18					🟨	🟨	🟨			
Retained Embankment											
Single Track	24					🟨	🟨	🟨	🟨		
Elevated Concrete Structure											
Single Track-Rehab/Modify Existing CTA/IDOT tunnel	24				🟨	🟨	🟨	🟨			
Elevated Steel Structure											
Single Track - Hammerhead Substructure	24					🟨	🟨	🟨	🟨		
Double Track - Hammerhead Substructure	24-36			🟨	🟨	🟨	🟨	🟨	🟨		
Segment U-2: Horizontal Curve at UPRR (132+00 to 142+43)	24-36										
Advance Work											
Utility relocation; staging	12	🟨	🟨								
Elevated Steel Structure											
Double Track - Hammerhead Substructure	24-30			🟨	🟨	🟨	🟨	🟨			
Double Track - TPG, Hammerhead Substructure	24-30				🟨	🟨	🟨	🟨	🟨		
Double Track - Straddle Bent Substructure	24-30				🟨	🟨	🟨	🟨	🟨		
Segment U-3A: End of Horizontal Curve to Prairie/UPRR Crossing (142+43 to 275+00)	**12-36**										
Advance Work											
Utility relocation; staging	12	🟨	🟨								
Stations											
Construct - 103rd Street	24-36			🟨	🟨	🟨	🟨	🟨	🟨		
Construct - 111th Street	24-36			🟨	🟨	🟨	🟨	🟨	🟨		
Construct - Michigan Avenue.	24-36			🟨	🟨	🟨	🟨	🟨	🟨		
Parking											
Construct - 103rd Street	12					🟨	🟨				
Construct - 111th Street	12						🟨	🟨			
Construct -Michigan Avenue (2 lots)	24							🟨	🟨		
Elevated Steel Structure								🟨	🟨		
Double Track - Hammerhead Substructure	24-36			🟨	🟨	🟨	🟨	🟨	🟨		
Traction Power											
Substation - 180+00	24					🟨	🟨	🟨	🟨		
Substation - 260+00	24					🟨	🟨	🟨	🟨		
Segment U-3B: Prairie/UPRR crossing to Metra/CN Crossing (275+00 to 287+20)	**36**										
Advance Work											
Utility relocation; staging	24	🟨	🟨								
Elevated Steel Structure											
Double Track -Hammerhead Substructure	24				🟨	🟨	🟨	🟨			
Double Track - Straddle Bent Substructure	36			🟨	🟨	🟨	🟨	🟨	🟨		
Segment U-4: Metra/CN Crossing to At Grade Track (287+20 to 311+02)	**24-36**										
Advance Work											
Utility relocation; staging	24	🟨	🟨								
Retained Embankment											
Double Track	24				🟨	🟨	🟨	🟨	🟨		
Elevated Steel Structure											
Double Track - Hammerhead Substructure	24-36			🟨	🟨	🟨	🟨	🟨	🟨		
Double Track - TPG, Hammerhead Substructure	24-36			🟨	🟨	🟨	🟨	🟨	🟨		
Segment U-5: At Grade Track to 130th Street Station Options (311+02 to 361+19)	**12-36**										
Advance Work											
Utility relocation; staging	24	🟨	🟨								
At Grade											
Double Track	24-36			🟨	🟨	🟨	🟨	🟨	🟨		
Access Road											
Crossing proposed tracks at 360+00	12-24				🟨	🟨	🟨	🟨			
Bridge for Access Road, Crossing at 360+00	24					🟨	🟨	🟨	🟨		
Connector access road, West of Proposed CTA tracks	12							🟨	🟨		
Segment U-6S: South 130th Street Station Option (361+19 to 381+46)	**24-36**										
Advance Work											
Utility relocation; staging	24	🟨	🟨								
Station											
Construct - 130th Street South Station Option	24-36			🟨	🟨	🟨	🟨	🟨	🟨		
Parking											
Construct - 130th Street South Station Option	24					🟨	🟨	🟨	🟨		
At Grade											
Double Track	24-36			🟨	🟨	🟨	🟨	🟨	🟨		
Triple Track	24					🟨	🟨	🟨	🟨		
Access Road											
At South Station Option	12-24					🟨	🟨	🟨	🟨		
Segment U-6W: West 130th Street Station Option (381+46 to 396+57)	**12-36**										
Advance Work											
Utility relocation; staging	24	🟨	🟨								
Station											
Construct - 130th Street West Option	24-36			🟨	🟨	🟨	🟨	🟨	🟨		
Parking											
Construct - 130th Street West Option (2 lots)	24					🟨	🟨	🟨	🟨		
At Grade											
Double Track	24-36			🟨	🟨	🟨	🟨	🟨	🟨		
Triple Track	24					🟨	🟨	🟨	🟨		
Access Road											
At West Station Option	12-24					🟨	🟨	🟨	🟨		
Bridge for Access Road, Crossing at 372+00	24				🟨	🟨	🟨	🟨			
Segment U-7: 120th Street Yard and Shop (292+45/45+00 to 353+86/106+79)	**12-36**										
Advance Work											
Utility relocation; staging	24	🟨	🟨	🟨	🟨						
Access Road											
Construct	12-24				🟨	🟨	🟨	🟨			
At Grade											
Single Track	36			🟨	🟨	🟨	🟨	🟨	🟨		
Double Track	36			🟨	🟨	🟨	🟨	🟨	🟨		
Retained Embankment											
Double Track	24				🟨	🟨	🟨	🟨			
Elevated Steel Structure											
Double Track - Hammerhead Substructure	24				🟨	🟨	🟨	🟨			
Shop Facility											
Construct-Shop Building	24-36			🟨	🟨	🟨	🟨	🟨	🟨		
Parking											
Construct - Shop	24					🟨	🟨	🟨	🟨		
Traction Power											
Substation - Yard	24					🟨	🟨	🟨	🟨		
Final Phase - 95th Street Station to 130th Street (96+50 to 382+30/396+50)	**10 - 12**										
Signal/Communication											
Signal/Interlocking	12									🟨	🟨
Communication System	12									🟨	🟨

Halsted Street HRT Construction Schedule	Duration (Months)	YEARS									
		1		2		3		4		5	
Segment H-1: 95th Street Station to Beginning of Horizontal Curve at Halsted (96+50 to 158+00)	**12-36**										
Advance Work											
Signal/cross-over installation; utility relocation; staging	12	■	■								
At Grade											
Single Track	12-18					■	■	■			
Retained Embankment											
Single Track	24					■	■	■	■		
Elevated Concrete Structure											
Single Track-Rehab/Modify Existing CTA/IDOT tunnel	24				■	■	■	■			
Elevated Steel Structure											
Single Track-Hammerhead Substructure	24					■	■	■	■		
Double Track - Hammerhead Substructure	24-36			■	■	■	■	■	■		
Segment H-2: Horizontal Curve at Halsted (158+00 to 168+00)	**12-30**										
Advance Work											
Utility relocation; staging	12	■	■								
Elevated Steel Structure											
Double Track -TPG, Hammerhead Substructure	24-30			■	■	■	■	■			
Double Track - Straddle Bent Substructure	24-30				■	■	■	■	■		
Segment H-3: End of Horizontal Curve to 119th Street Station (168+00 to 285+00)	**12-36**										
Advance Work											
Utility relocation; staging	12	■	■								
Stations											
Construct - 103rd Street	24-36		■	■	■	■	■	■			
Construct - 111th Street	24-36			■	■	■	■	■	■		
Parking											
Construct - 103rd Street	12					■	■				
Construct - 111th Street	12						■	■			
Elevated Steel Structure											
Double Track - Hammerhead Substructure	24-36			■	■	■	■	■	■		
Double Track - Straddle Bent Substructure	24-36			■	■	■	■	■	■		
Traction Power											
Substations - 101st Street	24			■	■	■	■				
Substations - 110th Street	24				■	■	■	■			
Segment H-4: 119th Street station to Vermont Avenue station (285+00 to 367+30)	**12-36**										
Advance Work											
Utility relocation; staging	12	■	■								
Stations											
Construct - 119th Street	24-36			■	■	■	■	■	■		
Construct - Vermont Avenue	24-36			■	■	■	■	■	■		
Parking											
Construct - 119th Street	12							■	■		
Construct - Vermont Avenue	12							■	■		
Elevated Steel Structure											
Double Track - Hammerhead Substructure	24-36			■	■	■	■	■	■		
Double Track - Straddle Bent Substructure	24-36			■	■	■	■	■	■		
Triple Track - Straddle Bent Substructure	12-24					■	■	■	■		
Traction Power											
Substations - 118th Place	24					■	■	■	■		
Substations - 126th Street	24					■	■	■	■		
Segment H-5: 119th Street Yard and Shop (299+47/500+00 to 306+96/1014+64)	**12-36**										
Advance Work											
Utility relocation; staging	12	■	■								
At Grade											
Single Track	24-36			■	■	■	■	■	■		
Double Track	24-36			■	■	■	■	■	■		
Retained Embankment											
Double Track	24										
Elevated Steel Structure											
Double Track - Hammerhead Substructure	24					■	■	■	■		
Double Track - Straddle Bent Substructure	24-36			■	■	■	■	■	■		
Parking											
Construct - Shop	24					■	■	■	■		
Shop Facility											
Construct-Shop Building	24-36			■	■	■	■	■	■		
Access Road											
Construct	12-24				■	■	■	■			
Traction Power											
Substations - Yard	24					■	■	■	■		
Final Phase - 95th Street Station to 129th Street (STA 96+50 to 367+00)	**10 - 12**										
Signal/Communication											
Signal/Interlocking	12									■	■
Communication System	12									■	■

Attachment C
2014-2015 Red Line Extension Project Update

2014–2015 Red Line Extension Project Update

From 2012-2014, CTA evaluated benefits and impacts of four alternatives: the No Build Alternative, the Bus Rapid Transit Alternative (along Michigan Avenue), the Union Pacific Railroad (UPRR) Rail Alternative, and the Halsted Alternative. CTA evaluated three options of the UPRR Rail Alternative: Right-of-Way Option, East Option, and West Option. CTA also evaluated two options of the UPRR Rail Alternative 130th Street station: a South Station Option and a West Station Option. Based on the project description provided in Section 2 of this technical memorandum, CTA analyzed the impacts of these alternatives and station options. The benefits and impacts are included in the technical memoranda prepared in 2012-2014.

In August 2014, based on the technical analysis and public input, CTA announced the NEPA Preferred Alternative–the UPRR Rail Alternative. Additional conceptual engineering was conducted on the UPRR Rail Alternative to refine the East and West Option alignments. In addition, CTA is considering only the South Station Option of the 130th Street Station.

In late 2014 and early 2015, CTA conducted additional engineering and revised assumptions on the East and West Options to refine the alignments. The refinement of the East and West Options consisted of the following items:

- For the segment of the alignment along I-57, CTA shifted the proposed alignment from the median of I-57 to the north side of I-57 within the existing expressway right-of-way. The construction would be less complex, safer for construction workers, and have a shorter duration. The shift would also allow for fewer impacts to Wendell Smith Park for the East Option, and would allow for no permanent impacts to Wendell Smith Park for the West Option.

- CTA modified the curve speeds as the alignment heads south from I-57 along the UPRR tracks. The curve speed for both the East and West Options would be 35 mph.

- CTA shifted the East Option alignment near 103rd Street station to minimize impacts to Block Park and the Roseland Pumping Station.

- CTA modified the curves south of 103rd Street for both the East and West Options to 55 mph to maximize the train speed.

- CTA refined the layout of the 120th Street yard and shop to optimize yard operations. The refined layout of the yard would accommodate 340 train cars.

The refinement of the East and West Option alignments minimizes potential impacts to parks while providing flexibility for future design phases. The Draft Environmental Impact Statement contains the benefits and impacts of the refined East and West Option alignments and supersedes information presented in other chapters of this technical memorandum.

The refined East and West Option alignments would have no additional or different impacts from those described in the technical memoranda for the following resource areas: construction, transportation, land use and economic development, historic and cultural resources, safety and security, hazardous materials, indirect and cumulative, air quality, floodplains, vegetation and wildlife habitat, threatened and endangered species, and geology and soils.

Appendix H
Transportation Technical Memorandum

RED AHEAD
Moving Ahead to a Better Red

Red Line Extension

Chicago Red Line Extension Project

Transportation
Technical Memorandum

October 14, 2013
Updated July 27, 2015

Prepared for:
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Abbreviations

ADA	Americans with Disabilities Act
API	area of potential impact
BRT	Bus Rapid Transit
CCHD	Cook County Highway Department
CDOT	Chicago Department of Transportation
CIP	CREATE 75th Street Corridor Improvement Project
CN/ME	Canadian National/Metra Electric District
CMAP	Chicago Metropolitan Agency for Planning
CN	Canadian National
CREATE	Chicago Region Environmental and Transportation Efficiency
CSS & SBRR	Chicago South Shore & South Bend Railroad
CTA	Chicago Transit Authority
EIS	Environmental Impact Statement
FTA	Federal Transit Administration
GIS	Geographic Information System
IDOT	Illinois Department of Transportation
IHB	Indiana Harbor Belt
LOS	level of service
ME	Metra Electric
MWRD	Metropolitan Water Reclamation District
NEPA	National Environmental Policy Act
NICTD	Northern Indiana Commuter Transportation District
NS	Norfolk Southern
Pace	Pace Suburban Bus Service
RI	Metra Rock Island
RLE	Red Line Extension
ROW	right-of-way
SAFETEA-LU	Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users
UPRR	Union Pacific Railroad

Section 1
Summary

This technical memorandum analyzes the potential impacts of the Red Line Extension (RLE) Project on transportation facilities that include public transportation, vehicular and freight traffic, bicycle, pedestrians, and parking.

Impacts on the transportation facilities were identified based on the predicted changes from the existing conditions to the horizon year of 2030, using the regional travel demand model. The impacts on transportation facilities were evaluated through a combination of qualitative and quantitative analysis. Section 3 presents the specific methods used to determine impacts. The following paragraphs describe the impacts and proposed mitigation measures for each alternative.

People using public transportation would benefit from the extension of the Red Line south from the 95th Street Terminal. Various bus routes within the project area would be rerouted to complement the rail alternatives and provide a means for connectivity to the expanded service. The extension of the Red Line would provide an alternative mode of travel to reach downtown Chicago (and destinations between downtown Chicago and 95th Street) for people south of the 95th Street Terminal. There would be no permanent adverse impacts on public transportation services for any of the alternatives. Temporary construction impacts on public transportation, including intermittent delays and detours, would occur.

The traffic analysis consisted of analyzing 76 intersections within the area of potential impact (API). Table 1-1 provides a summary of the intersections that would require mitigation measures to minimize the level of impact from any of the build alternatives. At intersections where adverse impacts are expected, potential mitigation measures have been identified to offset the portion of the level of service (LOS) deterioration that is attributable to the RLE Project. After mitigation, there would be no adverse permanent impacts from any of the build alternatives. The minimum acceptable LOS for roadway intersections is “D” for urban areas. Temporary construction impacts on traffic would occur during construction activities. The temporary impacts would be mitigated by following the applicable federal, state, and local requirements for construction activities.

There would be no permanent impacts on freight transportation due to the implementation of any of the build alternatives. There would be temporary impacts due to the construction of Union Pacific Railroad (UPRR) Rail and Halsted Rail Alternatives due to temporary closures of the roadways or highways to erect the aerial structures and superstructures. Railroad flagging would be included where any construction crosses or is adjacent to railroad operations.

There would be no adverse permanent impacts on pedestrians after mitigation for any of the build alternatives. Mitigation measures for pedestrians include the addition of traffic signal or pedestrian refuge islands and/or other pedestrian crossing treatments at the Kensington Avenue stop for the BRT Alternative. Mitigation measures for the UPRR Alternative alignment include pedestrian crosswalks and/or pedestrian crossing gates at the at-grade railroad crossings near the proposed UPRR Alternative alignment.

Bicycle facilities would not be affected by the implementation of the project alternatives. There would be temporary construction impacts on bicycle facilities for the Halsted Rail Alternative.

There would be no permanent impacts on parking. Minor parking impacts would occur during construction activities for the Halsted Rail Alternative.

Only the UPRR East Option and UPRR West Option have potential for cumulative impacts. With both the UPRR East Option and UPRR West Option, freight traffic would remain on the existing UPRR tracks. Although the project would not increase the number of freight trains, with increased traffic bound for stations (including bus traffic, bicyclists, and pedestrians), delays at the at-grade crossings may increase.

Updated July 27, 2015
In August 2014, based on the technical analysis and public input until then, CTA announced the NEPA Preferred Alternative—the UPRR Rail Alternative. CTA is considering two alignment (route) options of this alternative: the East Option and the West Option. At this time, CTA is also considering only the South Station Option of the 130th Street Station. In late 2014 and early 2015, CTA conducted additional engineering on the East and West Options to refine the East and West Option alignments. Appendix F of this technical memorandum summarizes the refined alignments and any additional or different impacts that would result. The information in Appendix F supersedes information presented in other chapters of this technical memorandum.

Table 1-1: Summary of Mitigated Intersections within the Area of Potential Impact for the Build Alternatives

ID	Intersection	Existing (2012)		2030 Baseline		2030 BRT Mitigated		2030 UPRR Mitigated		2030 Halsted Mitigated	
		AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
		LOS	LOS	LOS	LOS	LOS	LOS	LOS	LOS	LOS	LOS
14	103rd Street and Vincennes Avenue and Beverly Avenue	D	F	E	F	NA	NA	NA	NA	E	F
16	103rd Street and Halsted Street	E	D	F	D	NA	NA	F	C	F	D
41	111th Street and Cottage Grove Avenue	B	C	C	D	C	C	C	C	C	C
42	111th Street and Ellis Avenue	C	B	C	C	C	C	NA	NA	NA	NA
52	115th Street and Michigan Avenue	B	C	B	D	C	D	B	C	NA	NA
54	115th Street and Martin Luther King Drive	D	F	D	F	D	F	D	F	D	F
55a	115th Street and Cottage Grove Avenue	C	C	D	C	C	D	B	C	D	C
55b	115th Street and Cottage Grove Avenue East	D	C	E	C	C	B	C	B	B	C
59	119th Street and Ashland Avenue	D	F	D	F	NA	NA	D	F	D	F
60	119th Street and Halsted Street	C	C	C	C	NA	NA	NA	NA	D	D
61	119th Street and Wentworth Avenue	B	B	B	B	NA	NA	B	B	NA	NA
62	119th Street and State Street	B	B	B	B	C	B	C	B	NA	NA
63	119th Street and Michigan Avenue	A	A	A	A	NA	NA	C	B	NA	NA
64	127th Street and Paulina Street	C	C	C	C	NA	NA	B	C	B	C
65	127th Street and Marshfield Avenue	C	B	C	C	C	C	C	C	D	D

ID	Intersection	Existing (2012)		2030 Baseline		2030 BRT Mitigated		2030 UPRR Mitigated		2030 Halsted Mitigated	
		AM LOS	PM LOS	AM LOS	PM LOS	AM LOS	PM LOS	AM LOS	PM LOS	AM LOS	PM LOS
66	127th Street and Ashland Avenue	C	C	C	C	NA	NA	C	C	C	D
67	Ashland Avenue and Vermont Avenue	C	C	C	C	C	C	C	C	C	C
68	127th Street and Halsted Street	C	C	C	C	C	C	C	D	C	D
69	Vermont Avenue and Halsted Street	B	B	B	B	NA	NA	NA	NA	D	D
70	127th Street and Vermont Avenue and Wallace Street	C	D	D	D	C	C	C	D	C	C
71	127th Street and State Street	A	B	B	B	C	C	B	C	D	B
72	127th Street and Michigan Avenue	A	B	A	B	NA	NA	B	C	B	C
73	130th Street and Indiana Avenue	B	C	C	C	D	C	D	D	C	D
74	130th Street and Ellis Avenue	A	A	A	A	NA	NA	B	B	NA	NA

Notes: BRT = Bus Rapid Transit, UPRR = Union Pacific Railroad, LOS = level of service, NA = Not applicable. Intersection did not require mitigation.

Section 2
Project Description

The Chicago Transit Authority (CTA) is proposing to extend the Red Line from the existing 95th Street Terminal to the vicinity of 130th Street, subject to the availability of funding. The RLE would include four stations. Each station would include bus transfer and parking facilities. This project is one part of the Red Ahead Program to extend and enhance the entire Red Line. The CTA is also planning 95th Street Terminal improvements that are anticipated to be completed prior to the proposed RLE construction.

The project area is 11 miles south of the Chicago central business district (commonly referred to as the Loop) and encompasses approximately 20 square miles. The boundaries of the project area are 95th Street on the north, Ashland Avenue on the west, Stony Island Avenue on the east, and the Calumet-Sag Channel/Little Calumet River and 134th Street on the south. The I-57 Expressway and I-94 Bishop Ford Freeway cross the western and eastern edges of the project area, respectively. Lake Calumet is in the eastern portion of the project area. The project area encompasses parts of nine community areas in the City of Chicago and the eastern section of the Village of Calumet Park. Chicago community areas include Beverly, Washington Heights, Roseland, Morgan Park, Pullman, West Pullman, Riverdale, Hegewisch, and South Deering. The project area comprises residential (primarily single family), industrial (both existing and vacant), transportation (including freight), and commercial development.

The Draft Environmental Impact Statement (EIS) focuses on the following alternatives (shown in Figure 2-1), which emerged from the Alternatives Analysis and the National Environmental Policy Act (NEPA) scoping process:

- No Build Alternative
- Bus Rapid Transit (BRT) Alternative
- UPRR Rail Alternative
    - Right-of-Way (ROW) Option
    - East Option
    - West Option
- Halsted Rail Alternative

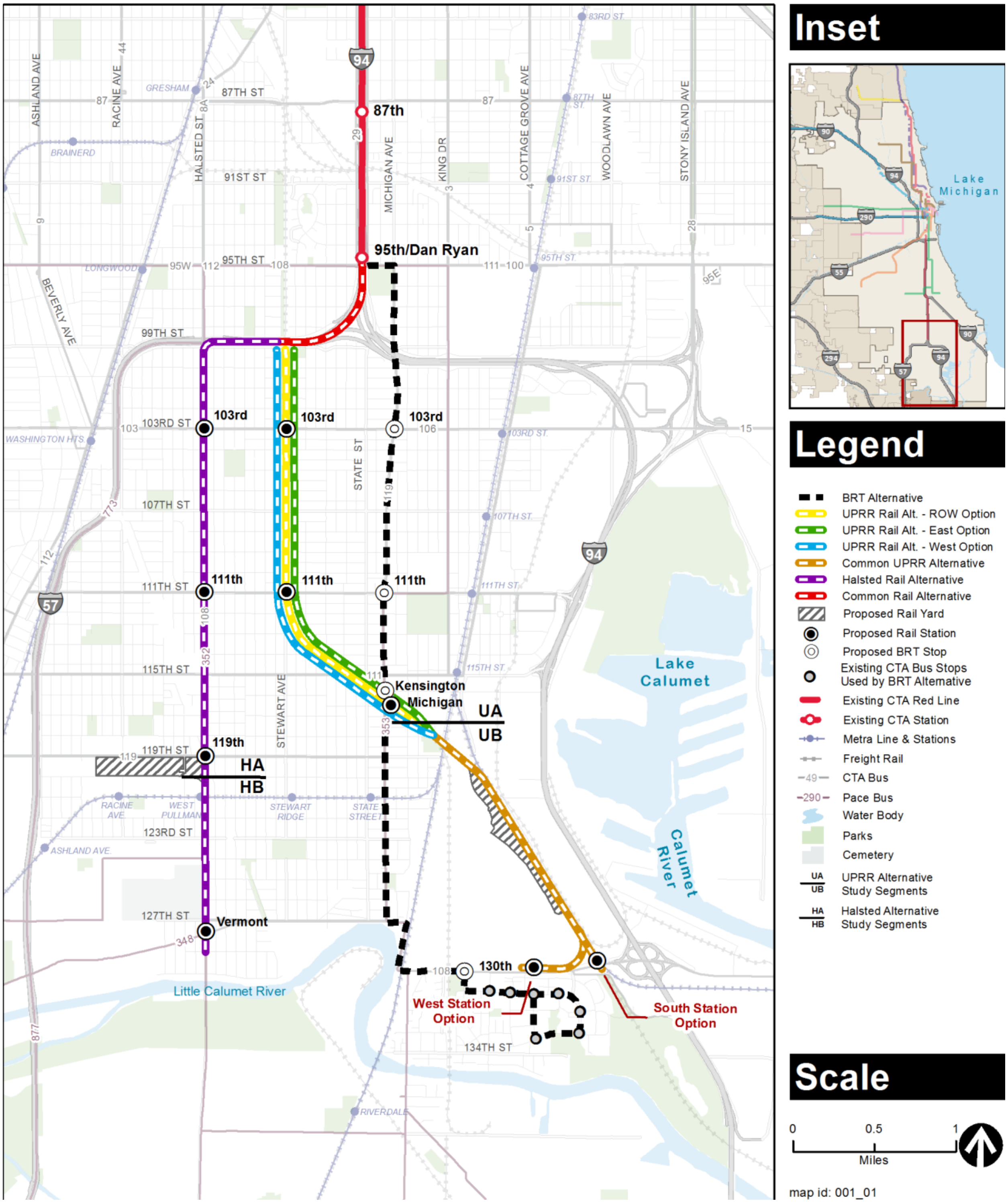

Inset
Lake Michigan
Legend
BRT Alternative
UPRR Rail Alt. - ROW Option
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
Common UPRR Alternative
Halsted Rail Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Proposed BRT Stop
Existing CTA Bus Stops Used by BRT Alternative
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
CTA Bus
Pace Bus
Water Body
Parks
Cemetery
UA UB UPRR Alternative Study Segments
HA HB Halsted Alternative Study Segments
Scale
0 0.5 1
Miles
map id: 001_01
87th
95th/Dan Ryan
103rd
111th
119th
Vermont
Kensington
Michigan
130th
UA
UB
HA
HB
West Station Option
South Station Option
Lake Calumet
Calumet River
Little Calumet River
87TH ST
91ST ST
95TH ST
99TH ST
103RD ST
107TH ST
111TH ST
115TH ST
119TH ST
123RD ST
127TH ST
134TH ST
ASHLAND AVE
RACINE AVE
HALSTED ST
MICHIGAN AVE
KING DR
COTTAGE GROVE AVE
WOODLAWN AVE
STONY ISLAND AVE
STATE ST
STEWART AVE
BEVERLY AVE
GRESHAM
BRAINERD
LONGWOOD
WASHINGTON HTS.
RACINE AVE
WEST PULLMAN
STEWART RIDGE
STATE STREET
ASHLAND AVE.
RIVERDALE
83RD ST
87TH ST
91ST ST
95TH ST
103RD ST
107TH ST
111TH ST
115TH ST

Figure 2-1: Red Line Extension Alternatives

The No Build Alternative is a required alternative as part of the NEPA environmental analysis and is used for comparison purposes to assess the relative benefits and impacts of extending the Red Line. The No Build Alternative is carried into the Draft EIS phase of the project development regardless of its performance versus the build alternatives under consideration. No new infrastructure would be constructed as part of the No Build Alternative other than committed transportation improvements that are already in the Chicago Metropolitan Agency for Planning (CMAP) Fiscal Year 2010–2015 Transportation Improvement Program which includes the improvements to 95th Street Terminal. The Transportation Improvement Program projects within the project area consist of four bridge reconstructions, several road improvement projects including resurfacing and coordination of signal timing on 95th Street, work on Metra's facilities, construction of a bicycle/pedestrian multi-use trail, and preservation of historic facilities. The No Build Alternative includes regular maintenance of existing track and structures, and bus transit service would be focused on the preservation of existing services and projects. All elements of the No Build Alternative are included in each of the other alternatives. Under this alternative, travel times would not improve from existing conditions.

The BRT Alternative (formerly referred to as the Transportation Systems Management Alternative) is a 5.0-mile, limited-stop, enhanced BRT route, which is assumed to operate 24 hours per day between the existing 95th Street Terminal and the intersection of 130th Street and Eberhart Avenue. No dedicated bus lanes would be provided for the BRT Alternative; however, parking lanes would be removed for some portions of the alignment and four stops with improved bus shelters and park & ride facilities would be created at 103rd Street and Michigan Avenue, 111th Street and Michigan Avenue, Kensington Avenue and Michigan Avenue, and 130th Street and Eberhart Avenue. Although BRT service elements would not continue south of the 130th Street stop, the bus route would continue through Altgeld Gardens along the existing route with six stops. The BRT Alternative would be consistent with bus routing changes that may occur as part of improvements to the 95th Street Terminal. Under this alternative, travel times between 130th Street and the Loop would improve over existing conditions.

The UPRR Rail Alternative is a 5.3-mile extension of the heavy rail transit Red Line from its existing 95th Street Terminal to 130th Street, just west of I-94. The Chicago Transit Board designated the UPRR Rail Alternative as the Locally Preferred Alternative at its August 12, 2009 board meeting. This alternative includes construction and operation of new heavy rail transit tracks, mostly in existing transportation corridors. The UPRR Rail Alternative has three options for alignment (ROW, East, and West), all of which would include operation on elevated structure from 95th Street to just past the Canadian National/Metra Electric District (CN/ME) tracks near 119th Street. The alignment would then transition to at-grade through an industrial area with no public through streets, terminating at 130th Street in the vicinity of Altgeld Gardens. Four new stations would be constructed at 103rd Street, 111th Street, Michigan Avenue, and 130th Street. The 130th Street station would be the terminal station, with two options under evaluation: the South Station Option and the West Station Option. A new yard and shop facility would be sited near 120th Street and Cottage Grove Avenue. The bus routes in the vicinity of the UPRR Rail Alternative would be modified to enhance connectivity between the Red Line and the bus network. The hours of operation and service frequency for the UPRR Rail Alternative are assumed to be the same as for the current Red Line. Under this alternative, travel times between 130th Street and the Loop would improve substantially over existing conditions.

The Halsted Rail Alternative is a 5.0-mile heavy rail transit extension of the existing Red Line. In this alternative, the Red Line would operate on an elevated structure running south from 95th Street along I-57 until Halsted Street. The alignment would then turn south and continue along Halsted Street to the intersection of Halsted Street and Vermont Avenue near 127th Street. This alternative would include four new stations at 103rd Street, 111th Street, 119th Street, and Vermont Avenue. The Vermont Avenue station would be the terminal station. A new yard and shop would be sited west of Halsted Street and between the 119th Street and Vermont Avenue stations. The bus routes in the vicinity of the Halsted Rail Alternative would be modified to enhance connectivity to the Red Line. The hours of operation and service frequency for the Halsted Rail Alternative are assumed to be the same as for the current Red Line. Under this alternative, travel times between 127th Street and the Loop would improve substantially over existing conditions. This alternative would not extend rail service to Altgeld Gardens, which would be served by bus connecting to the Vermont terminal station.

Section 3
Methods for Impact Evaluation

This section describes the process used to conduct a qualitative and quantitative analysis of potential temporary, permanent, and cumulative transportation effects that could result from the construction and operation of the project alternatives.

3.1 Regulatory Framework

Future transit improvements along the project corridor could be financed with a mix of local, state, and federal funds. Accordingly, this transportation analysis was executed in compliance with current Federal Transit Administration (FTA) guidelines, NEPA regulations, and the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) requirements, as detailed below.

3.1.1 Federal

NEPA requires that federal agencies consider environmental impacts before taking actions that could affect the human environment. Transportation, including public transit, traffic, parking, and bicycle and pedestrian transportation are elements typically assessed in NEPA documentation.

Applicable federal regulation for the analysis of transportation impacts also includes the SAFETEA-LU Public Law 109-59, August 10, 2005. The SAFETEA-LU focuses on reducing traffic congestion, increasing intermodal connectivity, and protecting the environment; SAFETEA-LU gives state and local transportation decision-makers more flexibility over previous legislation for solving transportation problems in their communities (Federal Highway Administration 2005).

3.1.2 State

Illinois state law does not require additional transportation environmental analysis to be performed for proposed projects subject to NEPA.

3.1.3 Local

The City of Chicago, Cook County, and the Village of Calumet Park do not require additional transportation environmental analyses to be performed for proposed projects subject to NEPA. The following local resources were used to understand the regional and local transportation network near the project area.

The CMAP is the planning organization for the Chicago region. CMAP has prepared the *GO TO 2040* Regional Plan (2010) that provides strategies for the regional transportation network. In addition, the City of Chicago and Cook County have developed their own strategies and planning activities for their transportation network.

3.2 Impact Analysis Thresholds

The transportation analysis included both quantitative and qualitative analysis of impacts based on a future baseline year of 2030. The traffic analysis also included quantitative analysis of impacts based on a future construction year of 2026. Where quantitative analyses were performed, accepted impact analysis thresholds were developed with CTA, Chicago Department of Transportation (CDOT), Illinois Department of Transportation (IDOT), and Cook County Highway Department (CCHD). The thresholds were used to establish the level of impact. Thresholds for qualitative analysis were determined based on professional judgment, with potential impacts being generally evaluated at three levels: low, moderate, and high.

3.2.1 Public Transportation

For the purpose of this EIS, a public transportation impact (rail or bus service) would be adverse if it would result in negative changes associated with the following:

- Geographic areas of service and routing
- Travel time
- Frequency and hours of service
- Transit patronage and demand, including transit mode share
- Station/stop access and circulation
- Traffic around stations/stops

Impacts may be positive or negative in nature, and the amount of change would determine whether the impacts would be low, moderate, or high. The determination of low, moderate, or high impacts was based on professional judgment. Moderate to high negative impacts would be considered adverse and substantially adverse, respectively.

3.2.2 Traffic

For the purpose of this EIS, a traffic (passenger or freight vehicle) impact would be substantial (impacts may be positive or negative in nature) if it were to result in a degradation (following mitigation) in peak-hour LOS at any intersection within the API (defined in Section 3.3) which leads to:

- A change in traffic distribution and local circulation patterns
- A change in vehicle occupancy levels
- A change in road capacity
- A change in road traffic volumes

The LOS for roadway intersections typically ranges from A to F (Transportation Research Board 2010) and LOSs are defined for this EIS as follows:

- LOS A represents virtually free flow of traffic with no congestion or delay.
- LOS B represents stable traffic flow, but other vehicles in the flow are noticeable.
- LOS C represents stable flow, but marks the beginning of the range where individual vehicles become substantially affected by interactions with other vehicles in the traffic stream.
- LOS D represents high density of traffic but stable flow.
- LOS E represents operating conditions at or near capacity level. All speeds are reduced to a low but relatively uniform flow.
- LOS F represents a breakdown in the operating conditions resulting in substantial congestion and delay.

A change in intersection LOS (with mitigation) from LOS A, B, C, or D to LOS E or F would result in an adverse or substantially adverse impact, respectively. If an intersection operates with LOS E or F for the No Build Alternative and would remain LOS E or F with a build alternative, no impact results.

3.2.3 Freight Transportation

The freight transportation analysis included a qualitative discussion of impacts on freight rail traffic specific to the build alternatives that involve the UPRR and Canadian National (CN) Railroad ROWs. The qualitative analysis broadly discusses the potential impacts and summarizes the coordination activities conducted with UPRR and CN.

3.2.4 Bicycle

For the purpose of this EIS, a bicycle impact would be adverse if it were to result in a disruption of existing or planned bicycle pathways or bicycle parking facilities.

3.2.5 Pedestrians

For the purpose of this EIS, a pedestrian impact would be adverse if it were to result in the following:

- Disruption of existing or planned pedestrian pathway
- Limited pedestrian access to proposed station entrances
- Existence of non-ADA (Americans with Disabilities Act) compliant pedestrian pathways to proposed station entrances

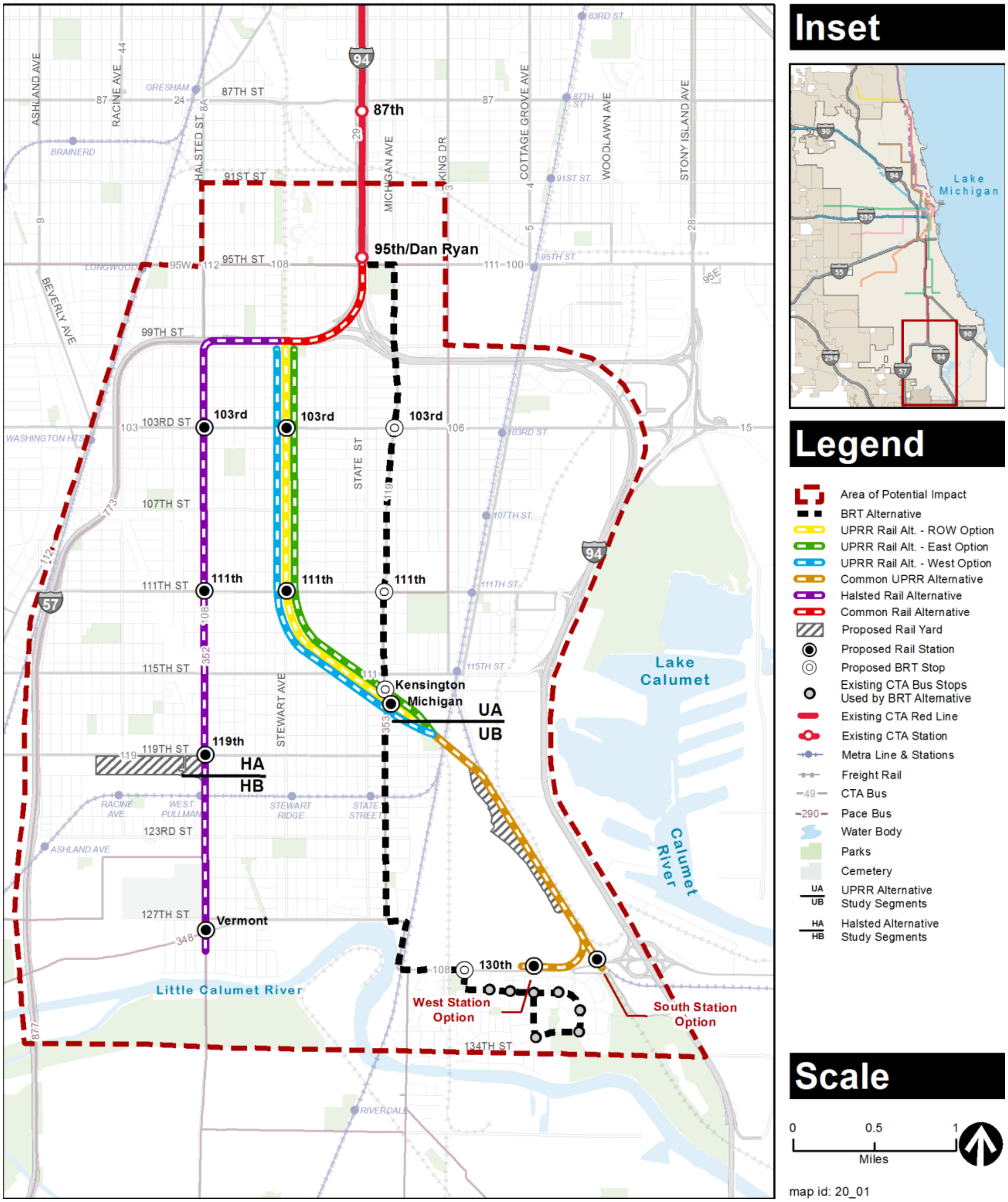
3.2.6 Parking

Potential parking impacts include changes in parking supply as a result of transit facility construction/service expansion, addition of park & ride facilities, and removal of existing parking spaces. Recent criteria regarding parking impacts were not available; however, guidance regarding parking impacts is provided in the United States Department of Transportation, Urban Mass Transportation Administration (now FTA) Circular C 5620.1 “Guidelines for Preparing Environmental Assessments,” dated October 16, 1979. The FTA circular was used as guidance for determining the potential for impacts and the intensity of those impacts. For the purpose of this EIS, a parking impact would be adverse if it were to result in the following:

- Reduction in parking spaces by 10 to 50 spaces. (A reduction by 50 or more parking spaces would be a substantially adverse impact.)
- Substantial reduction in accommodation for future programs requiring parking spaces, such as car sharing.
- Reduction in frequently used existing transit parking and park & ride capacity.
- Inadequate parking capacity for proposed transit service.

3.3 Area of Potential Impact

The project area used in the Alternatives Analysis is situated 11 miles south of the downtown Chicago (commonly referred to as the “Loop”) and encompasses approximately 20 square miles. The boundaries of the project area are 95th Street on the north, Ashland Avenue on the west, Stony Island Avenue on the east, and the Calumet-Sag Channel/Little Calumet River and 134th Street on the south. The I-57 Expressway and I-94 Bishop Ford Freeway traverse the western and eastern edges of the project area, respectively. Lake Calumet is in the eastern portion of the project area. The Red Line currently terminates at the 95th Street Terminal. Figure 3-1 shows the API.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Area of Potential Impact
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UPRR Rail Alt. - ROW Option
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
Common UPRR Alternative
Halsted Rail Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Proposed BRT Stop
Existing CTA Bus Stops Used by BRT Alternative
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
CTA Bus
Pace Bus
Water Body
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UPRR Alternative Study Segments
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WOODLAWN AVE
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STATE ST
STEWART AVE
BEVERLY AVE
GRESHAM
BRAINERD
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WASHINGTON HTS
RACINE AVE
WEST PULLMAN
STEWART RIDGE
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ASHLAND AVE
RIVERDALE
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Figure 3-1: Area of Potential Impact

The API boundaries are as follows:

- On the north by 91st Street (four blocks north of the existing 95th Street Terminal);
- On the south by a varying boundary that includes Jackson Street/134th Street (four blocks south of both the UPRR Rail Alternative and Halsted Rail Alternative) station locations;
- On the east by a varying boundary that includes Martin Luther King Drive, Michigan Avenue, and I-94 (from the north to south);
- On the west by a varying boundary that includes Halsted Street, South Vincennes Avenue, and I-57 (from north to south).

The API interfaces with the CTA rail Red Line, Metra commuter rail lines, Pace bus routes, and numerous CTA bus routes. The project area also includes the 98th Street Yard and Shop, which is south of 95th Street and has a capacity of 234 rail cars.

The alternative alignments run through a number of neighborhoods in the southern section of the City of Chicago and the Village of Calumet Park. Community areas in the City of Chicago that may be affected by the improvements include Washington Heights, Morgan Park, Roseland, Pullman, West Pullman, and Riverdale.

3.4 Methods

Transportation data used in the analysis of transportation impacts was collected from the following state and local agencies:

- CTA
- CDOT
- CMAP
- CCHD
- IDOT
- Metra Commuter Rail
- Northern Indiana Commuter Transportation District (NICTD)
- Pace Suburban Bus Service
- Regional Transportation Authority
- UPRR

3.4.1 Public Transportation

A description of the existing conditions within the API was developed for the public transportation environment (rail and bus services) by compiling and reviewing CTA rail, CTA bus, Metra commuter rail, and Pace bus service data. The following public transportation data was compiled and reviewed for this purpose:

- Geographic areas of service and routes
- Travel time
- Frequency and hours of service
- Ridership levels
- Transit mode share
- Station/stop locations

Project horizon year (2030) ridership estimates were projected using the Chicago New Starts forecasting model, which was developed in coordination with CMAP. CTA developed bus service plans for each build alternative that realign existing bus services to serve each alternative.

3.4.2 Traffic

Seventy-six study intersections were identified for traffic analysis within the API, as listed in Table 3-1 and presented on Figure 3-2. Existing traffic count data from CDOT, CMAP, and IDOT along with new manual traffic counts were compiled to develop peak-hour turning movements to understand the existing traffic conditions within the project area, as shown on Figure 3-3. At several minor intersections, counts were not conducted. Volumes were estimated, per CDOT direction, using counts at adjacent intersections along with simple distribution assumptions. Intersections with estimated turning movement volumes are indicated on Figure 3-3. The following traffic data was compiled and reviewed for this purpose:

- Traffic distribution and local circulation patterns
- Vehicle occupancy levels
- Road capacity levels
- Road peak-hour traffic volumes
- Intersection lane geometry and traffic signal timing plans
- Planned roadway improvements

The above data was used to calculate intersection LOS, using Synchro 7 isolated intersection analysis. Peak-hour traffic volumes and lane geometry used for the intersection LOS analysis are included in Appendix A.

Table 3-1: Area of Potential Impact Study Intersections

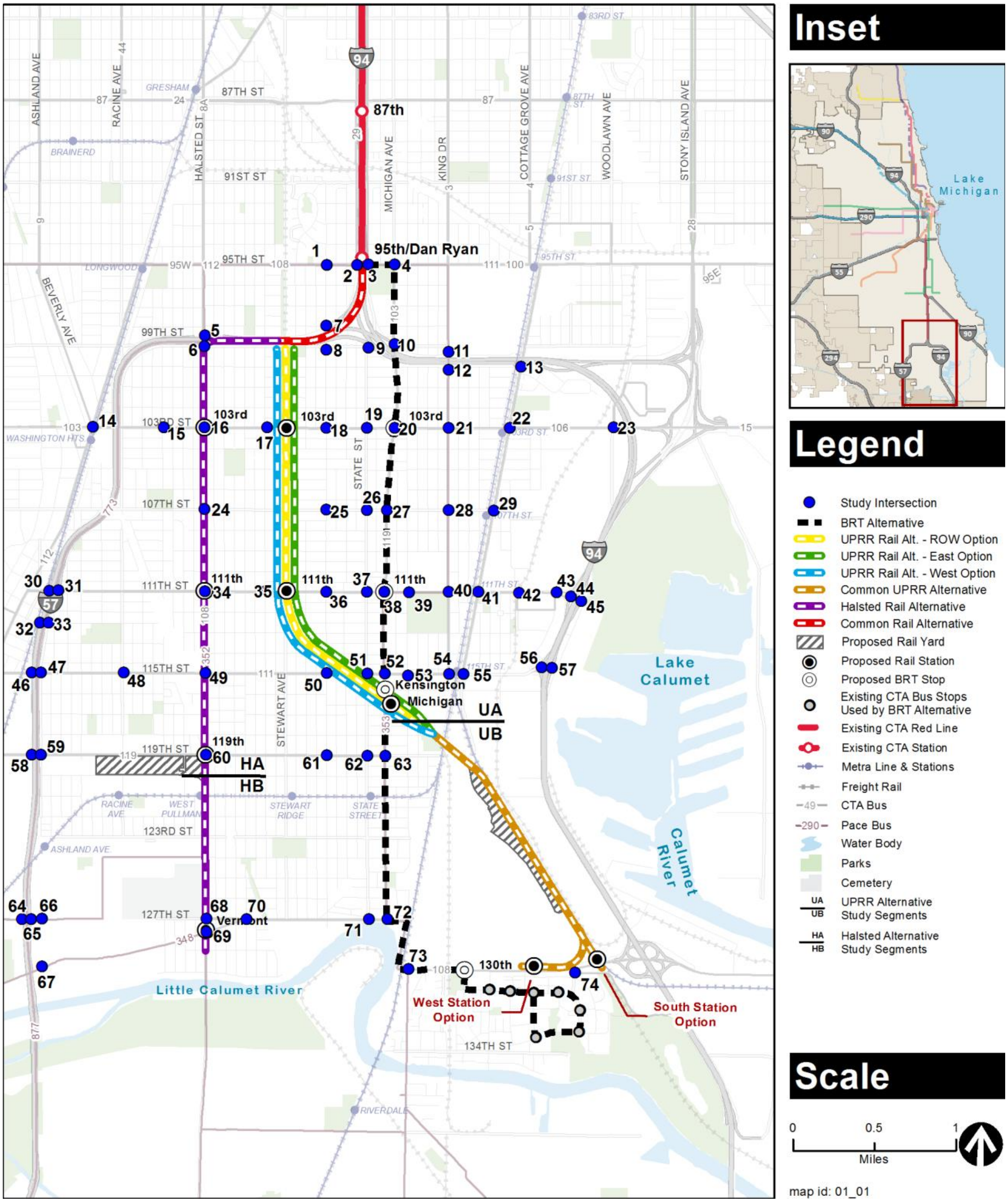
Intersection ID	Intersection	Control Type	Jurisdiction	Freeway Ramp
1	95th Street and Wentworth Avenue	Signalized	IDOT/CDOT	No
2	95th Street and Lafayette Avenue	Signalized	IDOT/CDOT	Yes
3	95th Street and State Street	Signalized	IDOT/CDOT	Yes
4	95th Street and Michigan Avenue	Signalized	IDOT/CDOT	No
5	98th Place and Halsted Street	Signalized	IDOT/CDOT	Yes
6	99th Street and Halsted Street	Signalized	IDOT/CDOT	Yes
7	98th Place and Wentworth Avenue	Signalized	IDOT/CDOT	Yes
8	99th Street and Wentworth Avenue	Signalized	IDOT/CDOT	No
9	99th Street and State Street	Signalized	CDOT	No
10	99th Street and Michigan Avenue	Signalized	IDOT/CDOT	Yes
11	99th Place and Martin Luther King Drive	Signalized	IDOT/CCHD	No
12	100th Street and Martin Luther King Drive	Signalized	CCHD/CDOT	No
13	100th Street and Cottage Grove Avenue	Unsignalized	CCHD/CDOT	No
14	103rd Street and Vincennes Avenue and Beverly Avenue	Signalized	CCHD/CDOT	No
15	103rd Street and Morgan Street	Signalized	CCHD/CDOT	No
16	103rd Street and Halsted Street	Signalized	IDOT/CCHD	No
17	103rd Street and Normal Avenue	Signalized	CCHD/CDOT	No
18	103rd Street and Wentworth Avenue	Signalized	CCHD/CDOT	No

Intersection ID	Intersection	Control Type	Jurisdiction	Freeway Ramp
19	103rd Street and State Street	Signalized	CCHD/CDOT	No
20	103rd Street and Michigan Avenue	Signalized	CCHD/CDOT	No
21	103rd Street and Martin Luther King Drive	Signalized	CCHD/CDOT	No
22	103rd Street and Cottage Grove Avenue	Signalized	CCHD/CDOT	No
23	103rd Street and Woodlawn Avenue	Signalized	IDOT/CDOT	No
24	107th Street and Halsted Street	Signalized	IDOT/CDOT	No
25	107th Street and Wentworth Avenue	Signalized	CDOT	No
26	107th Street and State Street	Signalized	CDOT	No
27	107th Street and Michigan Avenue	Signalized	CDOT	No
28	107th Street and Martin Luther King Drive	Signalized	CCHD/CDOT	No
29	107th Street and Cottage Grove Avenue	Signalized	CCHD/CDOT	No
30	111th Street and Marshfield Avenue	Signalized	IDOT/CDOT	Yes
31	111th Street and Hamlet Avenue	Signalized	IDOT	Yes
32	112th Place and Marshfield Avenue	Signalized	IDOT/CDOT	Yes
33	112th Place and Hamlet Avenue	Signalized	IDOT/CDOT	Yes
34	111th Street and Halsted Street	Signalized	IDOT/CCHD	No
35	111th Street and Normal Avenue	Signalized	CCHD/CDOT	No
36	111th Street and Wentworth Avenue	Signalized	CCHD/CDOT	No
37	111th Street and State Street	Signalized	CCHD/CDOT	No
38	111th Street and Michigan Avenue	Signalized	CCHD/CDOT	No
39	111th Street and Indiana Avenue	Signalized	CCHD/CDOT	No

Intersection ID	Intersection	Control Type	Jurisdiction	Freeway Ramp
40	111th Street and Martin Luther King Drive	Signalized	CCHD	No
41	111th Street and Cottage Grove Avenue	Signalized	IDOT/CCHD	No
42a	111th Street and Langley Avenue	Signalized	CCHD	No
42b	111th Street and Ellis Avenue	Signalized	CCHD	No
43	111th Street and Doty Avenue	Signalized	IDOT/CDOT	No
44	111th Street and Bishop Ford eastbound Ramps	Unsignalized	IDOT	Yes
45	111th Street and Bishop Ford westbound Ramps	Unsignalized	IDOT	Yes
46	115th Street and Marshfield Avenue	Signalized	CDOT	No
47	115th Street and Ashland Avenue	Signalized	IDOT/CDOT	No
48	115th Street and Racine Avenue	Signalized	IDOT/CDOT	No
49	115th Street and Halsted Street	Signalized	IDOT	No
50	115th Street and Wentworth Avenue	Signalized	CDOT	No
51	115th Street and State Street	Signalized	CCHD/CDOT	No
52	115th Street and Michigan Avenue	Signalized	CCHD/CDOT	No
53	115th Street and Indiana Avenue	Signalized	CCHD/CDOT	No
54	115th Street and Martin Luther King Drive	Unsignalized	CCHD	No
55a	115th Street and Cottage Grove Avenue	Signalized	CCHD/CDOT	No
55b	115th Street and Cottage Grove Avenue East	Signalized	CCHD/CDOT	No
56	115th Street and Bishop Ford Freeway eastbound Ramps	Unsignalized	IDOT	Yes
57	115th Street and Bishop Ford Freeway westbound Ramps	Unsignalized	IDOT	Yes

Intersection ID	Intersection	Control Type	Jurisdiction	Freeway Ramp
58	119th Street and Marshfield Avenue	Signalized	IDOT/CDOT	Yes
59	119th Street and Ashland Avenue	Signalized	IDOT/CDOT	Yes
60	119th Street and Halsted Street	Signalized	IDOT/CDOT	No
61	119th Street and Wentworth Avenue	Signalized	CDOT	No
62	119th Street and State Street	Signalized	IDOT/CCHD/ CDOT	No
63	119th Street and Michigan Avenue	Signalized	CDOT	No
64	127th Street and Paulina Street	Signalized	IDOT	Yes
65	127th Street and Marshfield Avenue	Signalized	IDOT	Yes
66	127th Street and Ashland Avenue	Signalized	IDOT	No
67	Ashland Avenue and Vermont Avenue	Signalized	IDOT	No
68	127th Street and Halsted Street	Signalized	IDOT	No
69	Vermont Avenue and Halsted Street	Signalized	IDOT	No
70	127th Street and Vermont Avenue and Wallace Street	Signalized	IDOT/CDOT	No
71	127th Street and State Street	Signalized	IDOT	No
72	127th Street and Michigan Avenue	Signalized	IDOT/CDOT	No
73	130th Street and Indiana Avenue	Signalized	IDOT	No
74	130th Street and Ellis Avenue	Signalized	IDOT/CDOT	No

Note: IDOT - Illinois Department of Transportation; CCHD - Cook County Highway Department; CDOT - Chicago Department of Transportation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● Study Intersection
BRT Alternative
UPRR Rail Alt. - ROW Option
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
Common UPRR Alternative
Halsted Rail Alternative
Common Rail Alternative
▨ Proposed Rail Yard
Proposed Rail Station
Proposed BRT Stop
Existing CTA Bus Stops Used by BRT Alternative
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
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Pace Bus
Water Body
Parks
Cemetery
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MICHIGAN AVE
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STONY ISLAND AVE
BEVERLY AVE
GRESHAM
BRAINERD
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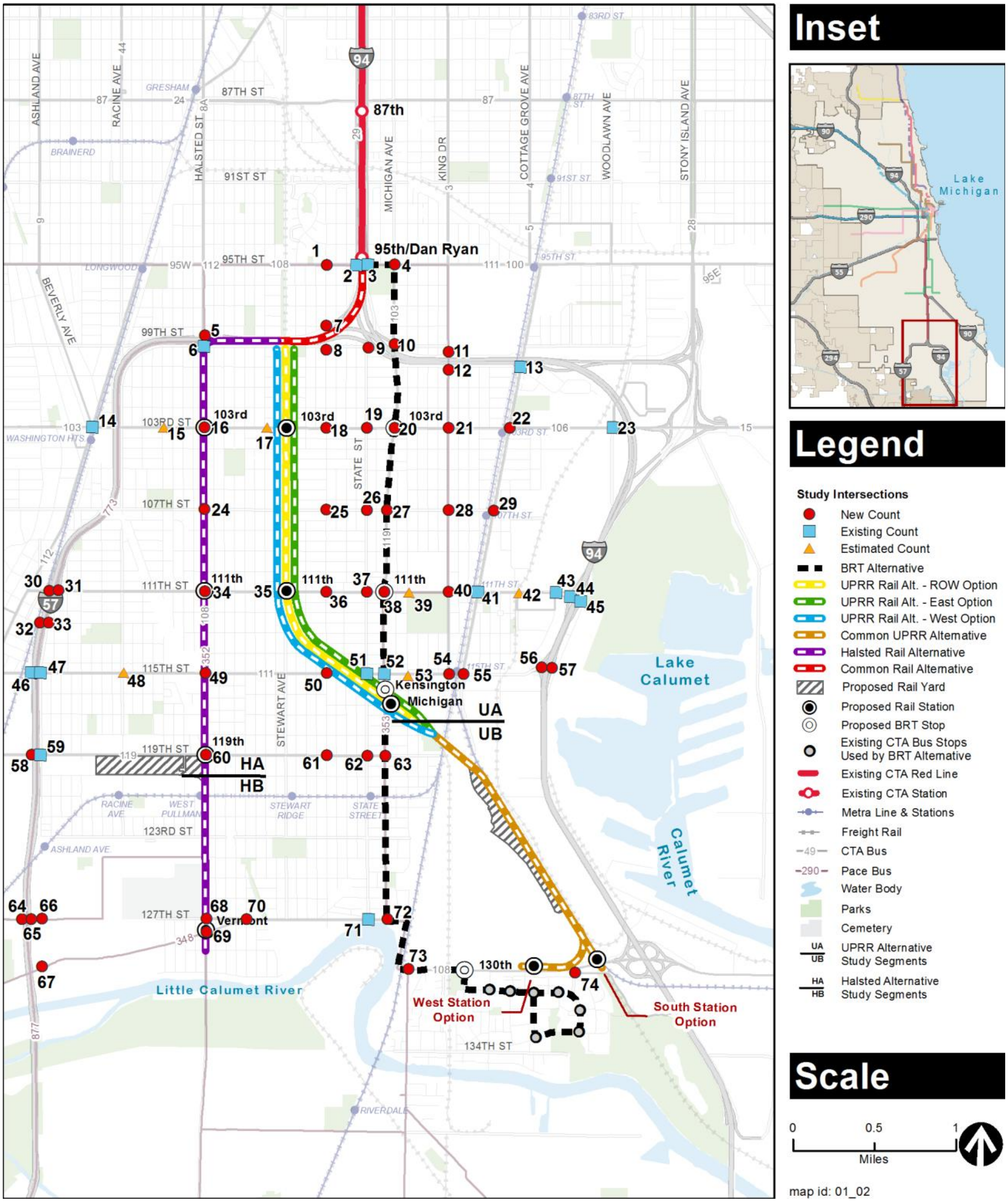
Figure 3-2: Area of Potential Impact Study Intersections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Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Proposed BRT Stop
Existing CTA Bus Stops Used by BRT Alternative
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
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290 Pace Bus
Water Body
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Figure 3-3: Area of Potential Impact Study Intersection Traffic Counts

One future base year model run was performed to simulate project horizon year (2030) conditions without the project (i.e., the No Build Alternative). Data from CMAP's 2030 regional travel demand model was used to develop "no-project" intersection-level traffic projections. These "no-project" traffic projections accounted for the background growth in traffic due to additional regional and subregional land use development and population growth. To simulate project construction year (2026) conditions without the project, background traffic growth was interpolated between existing year (2012) and horizon year (2030) No Build Alternative conditions. The No Build Alternative traffic projections served as the baseline for evaluating the future "with project," (i.e., the build alternatives). The future build alternative conditions included the introduction of park & ride automobile trips to the proposed stations and an overall decrease in project area traffic as a result of trip diversions to transit. Existing and planned lane geometry and traffic signal timing plans were used for the analysis of No Build Alternative and build alternative conditions.

Using Institute of Transportation Engineers trip generation rates (Volume 2, Transit Station with Parking) and trip distribution assumptions from the RLE Alternatives Analysis Traffic Impacts Reports (CTA 2009b and CTA 2009c), the build alternative-generated trips were manually added to the No Build Alternative traffic projections to develop the build alternative traffic volumes. The build alternative intersection LOS analysis was conducted for the study intersections for each alternative. Appendix A includes the build alternative trip generation and trip distribution assumptions used for the intersection LOS analysis.

3.4.3 Freight Transportation

Coordination was conducted with the UPRR regarding the build alternatives that would directly affect the UPRR ROW. Through the coordination process, potential impacts were identified and are qualitatively discussed and presented in this technical memorandum.

3.4.4 Bicycle Facilities

A description of the existing conditions (the affected environment) for bicycles was developed by reviewing the existing and proposed bicycle facilities for the City of Chicago and the *Chicago Streets for Cycling Plan 2020* (City of Chicago 2012c). IDOT's 2012 bicycle map was also used to develop the description of existing conditions for bicycle facilities.

The existing and proposed bicycle facilities were plotted on maps showing the build alternatives. The relationship of the bicycle facilities to the proposed stations in each build alternative was evaluated. The proposed CTA stations would include bicycle parking. The analysis also included an assessment of whether the proposed station locations would conform to the objectives of the bicycle plans for an area within a ½-mile radius of the stations.

3.4.5 Pedestrians

A description of the existing conditions (the affected environment) for pedestrians was developed by compiling and reviewing data from aerial images, Chicago GIS data, and the *Chicago Pedestrian Plan (*City of Chicago 2012b). Pedestrian facilities within immediate area of the proposed station locations were reviewed for ADA accessibility and conformity to transit station planning.

3.4.6 Parking

A description of the existing parking conditions (the affected environment) was developed through field observations, community resources, and aerial imagery. Using the No Build Alternative as the baseline, an analysis was conducted to determine the extent to which the proposed alternatives would affect on-street parking and parking facilities (off-street) through construction limit encroachment or displacement.

Parking capacity near each of the proposed stations and at the park & ride facilities was reviewed for potential impacts on the surrounding neighborhoods.

Section 4
Affected Environment

This section describes the existing conditions of the transportation facilities within the API. The API includes transit facilities, including rail and bus, expressways, regional arterials, truck routes, intermodal connectors, secondary arterials, local streets, and bicycle and pedestrian facilities. Expressways within the API include I-57 and I-94. Halsted Street is the only north-south arterial road that crosses the Calumet-Sag Channel.

The CTA Red Line service currently ends at the 95th Street Terminal. Customers accessing the station by bus experience measurable delays resulting from poor performance of the roadway network. Difficulty reaching the station by alternative modes of transportation isolates residents and results in lengthy travel times by both auto and transit to jobs north of 95th Street, including the major employment centers in downtown Chicago. According to the American Community Survey the average travel time to work for residents within the project area is 39 minutes. The average commute time in the Chicago region[1] is 32 minutes. The existing travel time from 130th Street to the 95th Street Terminal is 33 minutes and 32 minutes from the 95th Street Terminal to Clark/Division (AECOM 2009). The limited transit services in the project area and complex transfers to reach the 95th Street Terminal make commute times to downtown Chicago area more than an hour for some residents. Many of the residents, 10 percent in 2010, do not own a car and depend on transit for mobility (American Community Survey 2010). The home-based work transit mode share was 25 percent in 2010 (American Community Survey 2010).

Substantial expressway congestion occurs within and surrounding the API. The expressway network was at or over capacity during the morning peak periods in 2010 and congestion is expected to worsen by 2030. (See Figure 4-3 and Figure 4-4.) Arterial street reliability is compromised by delays from at-grade freight railroad crossings, affecting travel times to the 95th Street Terminal. Short traffic delays are experienced due to the Metra Electric (ME) District commuter trains that operate at-grade and cross several arterials in the API.

The following sections provide additional details on the existing conditions for each transportation mode within the API.

4.1 Public Transportation

The existing public transportation systems in use within the API are CTA rail service, CTA bus routes, Pace bus routes, and commuter rail service provided by Metra. The following public transportation services are within the API:

---

[1] The Chicago region is the seven county area for which CMAP provides regional planning. The counties include Cook, DuPage, Lake, Kane, Kendall, McHenry, and Will counties.

- CTA Red Line
- CTA bus routes: #3, #8A, #9, #28, #29, #34, #95E, #95W, #100, #103, #106, #108, #111, #112, #115, #119, #N5
- Pace bus routes: #348, #352, #353, #359, #381
- Metra: ME District Mainline, ME District Blue Island Branch, RI District Mainline

Figure 4-1 shows the existing bus routes provided by CTA and Pace. The Metra routes and station locations are also shown on Figure 4-1. The following sections provide a more detailed description of the existing public transportation services.

NICTD trains pass through the API but NICTD has no stops within the API.

4.1.1 CTA Rail Service

CTA currently provides rail service within the northern boundary of the API. The Red Line 95th Street Terminal is the only CTA rail station within the API. The 95th Street Terminal is the southernmost CTA rail station. A total of 18 bus routes serve the terminal, many of which serve residents living within the boundaries of the API. The 2012 average weekday ridership for this station was approximately 13,390 based on the *October 2012 Monthly Ridership Report* (CTA 2012). Travel time from 95th Street Terminal to Clark/Division is 33 minutes. The frequency of service during peak periods is 5 minutes, and service is provided around the clock.

4.1.2 CTA and Pace Bus Services

CTA and Pace bus services are provided on east/west and north/south thoroughfares in the API, with 16 CTA and 6 Pace bus routes operating within the API (not including night bus routes). Of those bus routes, 18 serve the 95th Street Terminal on the Red Line. Table 4-1 provides a summary of the existing bus routes within the API. Table 4-1 also indicates which routes serve the 95th Street Terminal. Two columns of ridership data are presented: average weekday for the calendar year 2012 and maximum average monthly weekday ridership for the 12 months from May, 2012 to April, 2013. (Starting in May, 2013, the Red Line Reconstruction project changed ridership patterns into the 95th Street Terminal.) In December, 2012, CTA split the #111 into two routes: the #111 111th/King Drive and the #115 Pullman/115th, both of which serve the 95th Street Terminal. Ridership data for these two routes is only provided starting in January, 2013, the first full month following the route split. Table 4-2 provides weekday hours of service and headways (time between buses) in peak hours for CTA bus service.

Table 4-1: Existing Bus Route Information within the Area of Potential Impact

Route Number and Name	2012 Average Weekday Ridership	Maximum Monthly Average Weekday Ridership (May 2012 to April 2013)	Serves 95th Street Terminal
#3 King Drive	22,418	24,205	N
#8A South Halsted	4,042	4,416	N
#9 Ashland	31,565	33,689	Y
#28 Stony Island	5,251	8,290	N
#29 State	15,212	16,341	Y
#34 South Michigan	6,198	6,648	Y
#95E 93rd/95th	4,904	5,489	Y
#95W West 95th	4,730	5,037	Y
#100 Jeffery Manor Express	950	1,195	Y
#103 West 103rd	3,484	3,920	Y
#106 East 103rd	2,259	2,883	Y
#108 Halsted/95th	2,050	2,373	Y
#111 111th/King Drive		3,847	Y
#112 Vincennes/111th	3,008	3,441	Y
#115 Pullman/115th		3,765	Y
#119 Michigan/119th	5,928	6,388	Y
#348 Harvey - Riverdale - Blue Island	368	480	N
#352 Halsted	6,294	6,913	Y
#353 95th - Riverdale-Homewood	2,874	3,193	Y
#359 Robbins/South Kedzie Avenue	1,590	1,778	Y
#381 95th Street	3,464	4,189	Y
#395 CTA 95th – UPS	442	506	Y

Notes:

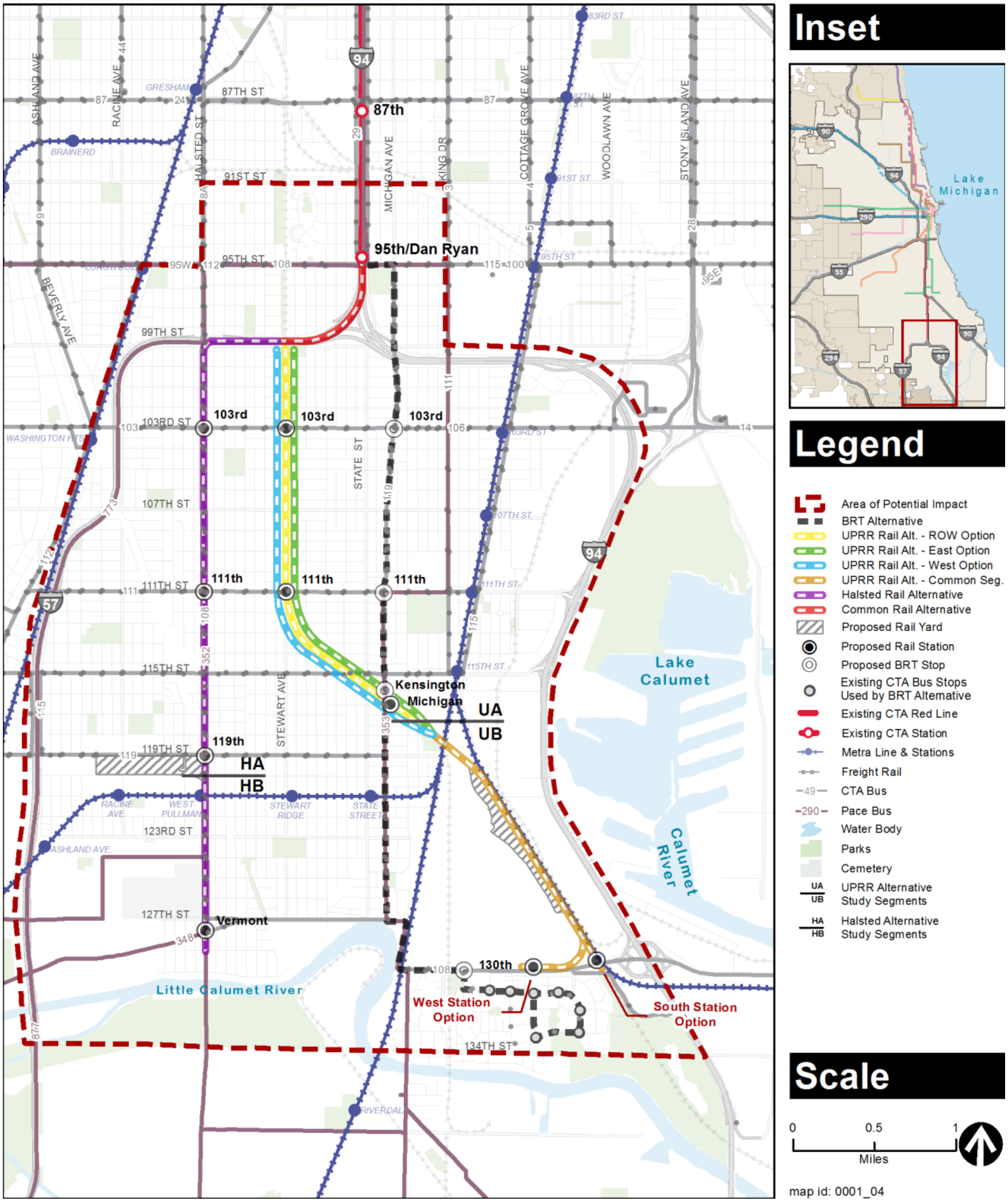
- Only months since January 2013 are shown for #111 and #115 due to route change in December 2012.
- Maximum monthly average weekday ridership is based on the 12-month period from May 2012 to April 2013. In May 2013, Red Line (Dan Ryan) reconstruction changed ridership patterns during construction.
- #9 Ashland serves the 95th Street Terminal only with the Night Owl Service.
- Night service route #N5 is not included in the above table.
- Service to the 95th Street Terminal is based on route maps current as of July 31, 2013.
- Source: May 2012 to April 2013 CTA Ridership Reports and RTAMS Pace Ridership dataset.

Table 4-2: Existing CTA Bus Service Hours and Peak Headways

Route Number and Name	Weekday Hours of Service	Headway in Peak Hours (minutes)
#3 King Drive	4:45a-11:05p	3-4
#8A South Halsted	6:00a-8:40p	5-10
#9 Ashland	24 hours	6-10
#28 Stony Island	5:40a-10:10p	6-13
#29 State	4:00a-12:30a	9-10
#34 South Michigan	24 hours	12
#95E 93rd/95th	4:50a-12:10a	10
#95W West 95th	4:30a-12:25a	18-20
#100 Jeffery Manor Express	Peak Periods Only	16-20
#103 West 103rd	4:35a-11:20p	15
#106 East 103rd	4:45a-10:30p	14-20
#108 Halsted/95th	4:10a-12:55a	11
#111 111th/King Drive	4:35a-11:05p	10-15
#112 Vincennes/111th	4:30a-10:20p	10-15
#115 Pullman/115th	4:25a-11:15p	11-14
#119 Michigan/119th	4:00a-1:00a	12

Notes:

- Service to the 95th Street Terminal is based on route maps current as of July 31, 2013.


Inset
Lake Michigan
Legend
Area of Potential Impact
BRT Alternative
UPRR Rail Alt. - ROW Option
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
UPRR Rail Alt. - Common Seg.
Halsted Rail Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Proposed BRT Stop
Existing CTA Bus Stops Used by BRT Alternative
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
CTA Bus
Pace Bus
Water Body
Parks
Cemetery
UPRR Alternative Study Segments
Halsted Alternative Study Segments
Scale
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0.5
1
Miles
map id: 0001_04
87th
95th/Dan Ryan
103rd
103rd
103rd
111th
111th
111th
Kensington
Michigan
119th
Vermont
130th
UA
UB
HA
HB
West Station Option
South Station Option
Lake Calumet
Calumet River
Little Calumet River
87TH ST
91ST ST
95TH ST
99TH ST
103RD ST
107TH ST
111TH ST
115TH ST
119TH ST
123RD ST
127TH ST
134TH ST
ASHLAND AVE
RACINE AVE
HALSTED ST
MICHIGAN AVE
KING DR
COTTAGE GROVE AVE
WOODLAWN AVE
STONY ISLAND AVE
STATE ST
STEWART AVE
BEVERLY AVE
GRESHAM
BRAINERD
LONGWOOD
WASHINGTON HTS
RACINE AVE
WEST PULLMAN
STEWART RIDGE
STATE STREET
ASHLAND AVE
RIVERDALE
83RD ST
87TH ST
91ST ST
95TH ST
103RD ST
107TH ST
111TH ST
115TH ST
94
57

Figure 4-1: Existing Public Transportation Services

4.1.2.1 Bus Rapid Transit Alternative

The existing bus services in the vicinity of the proposed stops of the BRT Alternative are provided below.

103rd Street Stop

Bus routes #34, #103, #106, and #119 currently stop at 103rd Street and Michigan Avenue. The existing stops are at the northeast corner of the intersection for the northbound direction and at the northwest corner of the intersection for the southbound direction. Both locations do not have any existing bus shelters. The ME District station, 103rd/Rosemoor Park & Ride, is a few blocks east of Michigan Avenue.

111th Street Stop

Bus routes #34, #111, and #119 stop at 111th Street. The bus route has an existing stop at the southwest corner of the intersection of 111th Street and Michigan Avenue in the eastbound direction and the northwest corner of the intersection in the westbound direction. There are no existing bus shelters.

Kensington Avenue Stop

Bus routes #34 and #119 stop at Kensington Avenue and Michigan Avenue. The existing stops are at the southeast corner of Kensington Avenue and Michigan Avenue in the northbound direction and on the west side of Michigan Avenue in the southbound direction. There is an existing bus shelter on the west side of Michigan Avenue but none in the northbound direction.

130th Street Stop

CTA Bus route #34 operates from the 95th Street Terminal to 130th Street, looping around the Altgeld Gardens neighborhood. This bus serves Harlan High School, Roseland Hospital, Carver Military Academy, and residents of the Altgeld Gardens neighborhood. There are no bus shelters at the existing bus stop locations.

4.1.2.2 Union Pacific Railroad Rail Alternative

The existing bus services in the vicinity of the proposed station areas for all options of the UPRR Alternative are provided below. Due to the proximity of UPRR Alternative option alignments, the existing bus services would be the same for each option. Since there are no existing bus stops at the at-grade UPRR crossings, there are no bus shelters at the station locations for this alternative.

103rd Street Station

Currently, CTA bus route #103 accommodates passengers from Pulaski Road to the 95th Street Terminal. This bus route operates west of Michigan Avenue and serves Harlan High School, Julian High School, St. Xavier University, Mother McAuley High School and Brother Rice High School. This route also crosses the Metra Rock Island (RI) District line at two stations: 103rd Street - Washington Heights and 103rd Street – Beverly Hills. The RI District line is on the edge of the

API. There are existing bus stops at 103rd Street and Michigan Avenue. The northbound bus stops at the northeast corner of the intersection and the southbound bus stops at the northwest corner of the intersection. CTA route #106 provides service west of Michigan Avenue on 103rd Street from 95th Street Terminal to Stony Island Avenue. This bus route serves Olive Harvey College, Corliss High School, and Harlan High School. CTA route #106 also crosses near the 103rd/Rosemoor ME District station.

111th Street Station

The 111th/King Drive CTA route #111 provides service from 95th Street Terminal to 111th Street. This serves Gwendolyn Brooks High School. The bus route has an existing stop at the southwest corner of the intersection of 111th Street and Michigan Avenue in the eastbound direction and the northwest corner of the intersection in the westbound direction.

Michigan Avenue Station

The CTA route #111 has an existing stop at the southwest corner of the intersection of 115th Street and Michigan Avenue in the eastbound direction and the northeast corner of the intersection in the westbound direction.

CTA route #119 operates from Western Avenue to Michigan Avenue on 119th Street, then Michigan Avenue to 95th Street Terminal. This route serves Roseland Hospital and Harlan High School. The existing bus stops at 119th Street and Michigan Avenue are at the northeast corner for the northbound direction and at the northwest corner for the southbound direction. The route also has a stop near the RI District 119th Street station. Pace bus route #353 provides additional service along Michigan Avenue between 111th and 127th Streets.

130th Street Station

CTA Bus route #34 operates from the 95th Street Terminal to 130th Street, looping around the Altgeld Gardens neighborhood. This bus serves Harlan High School, Roseland Hospital, Carver Military Academy, and residents of the Altgeld Gardens neighborhood. There are no bus shelters at the existing bus stop locations.

4.1.2.3 Halsted Rail Alternative

CTA route #8A runs north/south on Halsted Street from 95th Street Terminal to 127th Street and Vermont Street. Existing bus stops along Halsted Street include 103rd Street, 111th Street, 115th Street, 119th Street and Vermont Avenue.

CTA route #108 runs north/south on Halsted Street from the 95th Street Terminal to 127th Street and then continues east on 127th Street. This route is similar to the #8A route and has bus stops at the same locations as listed above for route #8A.

103rd Street Station

Currently, CTA bus route #103 accommodates passengers from Pulaski Road to the 95th Street Terminal. This bus route operates west of Michigan Avenue and serves Harlan High School, Julian High School, St. Xavier University, Mother McAuley High School, and Brother Rice High School. 103rd Street and Halsted bus stop locations are at the southwest corner of the intersection for the eastbound direction, and the westbound direction bus stop locations are at the northwest corner of the intersection. These bus stop locations do not have bus shelters.

111th Street Station

The 111th/King Drive CTA route #111 provides service from the 95th Street Terminal to 111th Street. This route serves Gwendolyn Brooks High School. The bus route has an existing bus shelter at the southeast corner of the intersection of 111th Street and Halsted Street for the eastbound direction and the northeast corner of the intersection for the westbound direction. These bus stops have shelters.

119th Street Station

CTA route #119 operates from Western Avenue to Michigan Avenue on 119th Street, then Michigan Avenue to the 95th Street Terminal. This route serves Roseland Hospital and Harlan High School. The existing bus stops at 119th Street and Halsted Street are at the northwest corner of the intersection for the westbound direction and at the southwest corner of the intersection for the eastbound direction. The eastbound #119 stop and southbound #8A stop have shelters.

The Pace bus route #352 is a north/south bus route from the 95th Street Terminal to Pace Chicago Heights Transportation Center. The route serves St. James Hospital, Prairie State College, and the Illinois Department of Human Services.

Vermont Avenue Station

Pace bus route #348 is an east/west route that stops at Vermont Street and Halsted Street. These stops do not have shelters.

4.1.3 Commuter Rail Service

Metra provides commuter rail service within the API. The NICTD South Shore line used to provide limited commuter rail service to the Kensington/115th Street station until early 2012 when service was discontinued at this station. Metra commuter rail service in the API includes the ME District Mainline, the ME District Blue Island Branch, and the RI District Mainline. There are a total of eleven commuter rail stations within the API. Figure 4-1 shows the location of the stations along the ME District and RI District lines. Stations within the API are listed below:

ME District Mainline

- 103rd Street (Rosemoor)
- 107th Street

- 111th Street (Pullman)
- Kensington/115th Street

ME District Blue Island Branch

- State Street
- Stewart Ridge
- West Pullman
- Racine Avenue
- Ashland Avenue

RI District Mainline

- 95th Street/Longwood
- 103rd Street/Washington Heights

The Kensington/115th Street station provides connecting service to CTA route #111 and Pace route #353, with park & ride facilities. The Kensington/115th Street station is served by 19 inbound trains between 6:00 AM and 9:00 AM on a typical weekday. The other ME District mainline stations within the API are served by four to five inbound trains during the morning peak period. The five stations in the API on the Blue Island Branch of the ME District are served by six inbound trains in the morning peak period (between 6:00 and 9:00 AM). The two stations in the API on the RI District Mainline are served by three inbound trains in the morning peak period. Approximately two-thirds of the Metra stations have available parking. Table 4-3 presents a summary of the 2006 daily boardings and the 2012 parking statistics at the Metra stations within the API.

Table 4-3: Metra Boardings and Parking by Station

Line/Station	2006 Daily Boardings	Parking Available?	Spaces Available (2012)	Parking Utilization Rate (2012)
Metra Electric District Mainline				
103rd Street (Rosemoor)	70	Y	38	5%
107th Street	34	N	-	-
111th Street (Pullman)	27	N	-	-
Kensington/115th Street	1,577	Y	402	90%
Metra Electric District Blue Island Branch				
State Street	85	N	-	-
Stewart Ridge	61	N	-	-
West Pullman	24	Y	27	0%
Racine Avenue	53	Y	29	24%
Ashland Avenue	165	Y	90	52%
Metra Rock Island Mainline				
95th Street/Longwood	147	Y	104	51%
103rd Street/ Washington Heights	249*	Y	267	30%

Source: Regional Transportation Authority Mapping & Statistics
*2002 Boardings. Boardings for 2006 at 103rd Street/Washington Heights were not available.

4.2 Traffic

There are numerous Interstate, regional, and local roadways that provide multiple parallel north/south and east/west routes for automobile travel within the API, including the following:

East/West	North/South
■ 95th Street	■ Interstate 57
■ 99th Street	■ Halsted Street
■ 103rd Street	■ Wentworth Avenue
■ 107th Street	■ State Street
■ 111th Street	■ Michigan Avenue
■ 115th Street	■ Indiana Avenue
■ 119th Street	■ Martin Luther King Drive
■ 127th Street	■ Cottage Grove Avenue
■ 130th Street	■ Interstate 94 (Dan Ryan Expressway/Bishop Ford Freeway)

Table 3-1 identifies whether an intersection is signalized or unsignalized and indicates what agency has jurisdiction over the intersection. Figure 4-2 shows the signalized and unsignalized intersections within the project area. The existing traffic data can be found in Appendix A, Existing Conditions. Existing intersection lane geometry and traffic volumes (2012) for the intersections are on pages A-1 through A-6. The existing traffic counts are on pages A-7 through A-415. The capacity analysis for each intersection is on pages A-416 through A-571.

Table 4-4 presents a summary of the existing (2012) conditions. Under existing (2012) conditions, most of the study intersections within the API operate at LOS "D" or better in both the AM and PM peak hours. Under existing (2012) conditions, the following intersections operate at LOS "E" or "F" in either or both the AM and PM peak hours:

- 98th Place and Halsted Street - AM LOS = F; PM LOS = F
- 103rd Street and Vincennes Avenue and Beverly Avenue - PM LOS = F
- 103rd Street and Halsted Street - AM LOS = E
- 107th Street and Halsted Street - AM LOS = F
- 115th Street and Martin Luther King Drive - PM LOS = F
- 119th Street and Ashland Avenue - PM LOS = F

For a graphic depiction of existing congestion within the API, refer to Figure 4-3 and Figure 4-4 which show estimated congestion based on volume-to-capacity ratios for 2010 and 2030.

Table 4-4: Existing (2012) Intersection Level of Service

ID	Intersection	Control Type	AM Peak-Hour LOS	PM Peak-Hour LOS
1	95th Street and Wentworth Avenue	Signalized	B	B
2	95th Street and Lafayette Avenue	Signalized	D	D
3	95th Street and State Street	Signalized	C	C
4	95th Street and Michigan Avenue	Signalized	B	B
5	98th Place and Halsted Street	Signalized	**F**	**F**
6	99th Street and Halsted Street	Signalized	C	D
7	98th Place and Wentworth Avenue	Signalized	B	B
8	99th Street and Wentworth Avenue	Signalized	B	B
9	99th Street and State Street	Signalized	A	B
10	99th Street and Michigan Avenue	Signalized	B	B
11	99th Place and Martin Luther King Drive	Signalized	B	B
12	100th Street and Martin Luther King Drive	Signalized	B	A
13	100th Street and Cottage Grove Avenue	Unsignalized	A	B
14	103rd Street and Vincennes Avenue and Beverly Avenue	Signalized	D	**F**
15	103rd Street and Morgan Street	Signalized	B	B
16	103rd Street and Halsted Street	Signalized	**E**	D
17	103rd Street and Normal Avenue	Signalized	B	B
18	103rd Street and Wentworth Avenue	Signalized	B	B

ID	Intersection	Control Type	AM Peak-Hour LOS	PM Peak-Hour LOS
19	103rd Street and State Street	Signalized	B	B
20	103rd Street and Michigan Avenue	Signalized	B	B
21	103rd Street and Martin Luther King Drive	Signalized	C	C
22	103rd Street and Cottage Grove Avenue	Signalized	B	B
23	103rd Street and Woodlawn Avenue	Signalized	A	A
24	107th Street and Halsted Street	Signalized	**F**	C
25	107th Street and Wentworth Avenue	Signalized	B	B
26	107th Street and State Street	Signalized	A	A
27	107th Street and Michigan Avenue	Signalized	B	B
28	107th Street and Martin Luther King Drive	Signalized	B	B
29	107th Street and Cottage Grove Avenue	Signalized	B	B
30	111th Street and Marshfield Avenue	Signalized	C	C
31	111th Street and Hamlet Avenue	Signalized	C	C
32	112th Place and Marshfield Avenue	Signalized	C	C
33	112th Place and Hamlet Avenue	Signalized	D	C
34	111th Street and Halsted Street	Signalized	C	C
35	111th Street and Normal Avenue	Signalized	A	A
36	111th Street and Wentworth Avenue	Signalized	A	A
37	111th Street and State Street	Signalized	A	B
38	111th Street and Michigan Avenue	Signalized	B	B
39	111th Street and Indiana Avenue	Signalized	B	B
40	111th Street and Martin Luther King Drive	Signalized	B	A
41	111th Street and Cottage Grove Avenue	Signalized	B	C
42a	111th Street and Langley Avenue	Signalized	B	C
42b	111th Street and Ellis Avenue	Signalized	C	B
43	111th Street and Doty Avenue	Signalized	C	C
44	111th Street and Bishop Ford eastbound Ramps	Unsignalized	C	B
45	111th Street and Bishop Ford westbound Ramps	Unsignalized	C	B
46	115th Street and Marshfield Avenue	Signalized	B	B
47	115th Street and Ashland Avenue	Signalized	B	B
48	115th Street and Racine Avenue	Signalized	B	C
49	115th Street and Halsted Street	Signalized	C	C

ID	Intersection	Control Type	AM Peak-Hour LOS	PM Peak-Hour LOS
50	115th Street and Wentworth Avenue	Signalized	B	B
51	115th Street and State Street	Signalized	B	B
52	115th Street and Michigan Avenue	Signalized	B	C
53	115th Street and Indiana Avenue	Signalized	B	B
54	115th Street and Martin Luther King Drive	Unsignalized	D	**F**
55a	115th Street and Cottage Grove Avenue	Signalized	C	C
55b	115th Street and Cottage Grove Avenue East	Signalized	D	C
56	115th Street and Bishop Ford Freeway eastbound Ramps	Unsignalized	C	B
57	115th Street and Bishop Ford Freeway westbound Ramps	Unsignalized	D	B
58	119th Street and Marshfield Avenue	Signalized	D	D
59	119th Street and Ashland Avenue	Signalized	D	**F**
60	119th Street and Halsted Street	Signalized	C	C
61	119th Street and Wentworth Avenue	Signalized	B	B
62	119th Street and State Street	Signalized	B	B
63	119th Street and Michigan Avenue	Signalized	A	A
64	127th Street and Paulina Street	Signalized	C	C
65	127th Street and Marshfield Avenue	Signalized	C	B
66	127th Street and Ashland Avenue	Signalized	C	C
67	Ashland Avenue and Vermont Avenue	Signalized	C	C
68	127th Street and Halsted Street	Signalized	C	C
69	Vermont Avenue and Halsted Street	Signalized	B	B
70	127th Street and Vermont Avenue and Wallace Street	Signalized	C	D
71	127th Street and State Street	Signalized	A	B
72	127th Street and Michigan Avenue	Signalized	A	B
73	130th Street and Indiana Avenue	Signalized	B	C
74	130th Street and Ellis Avenue	Signalized	A	A

Notes:
LOS = level of service
Signalized intersection LOS reported as the average for all movements. Unsignalized LOS reported is the LOS of the worst movement. LOS “E” and “F” are shown in bold.

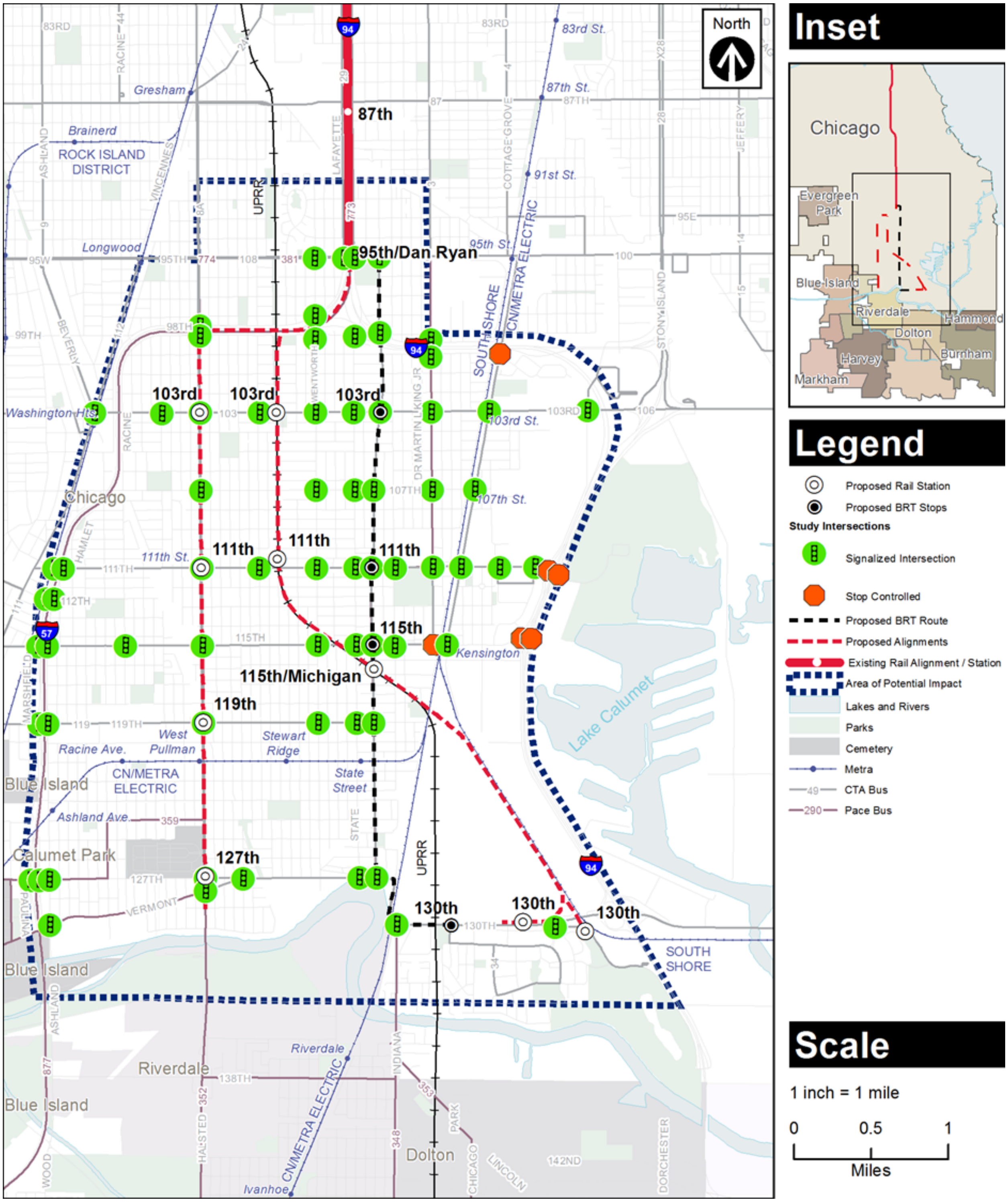
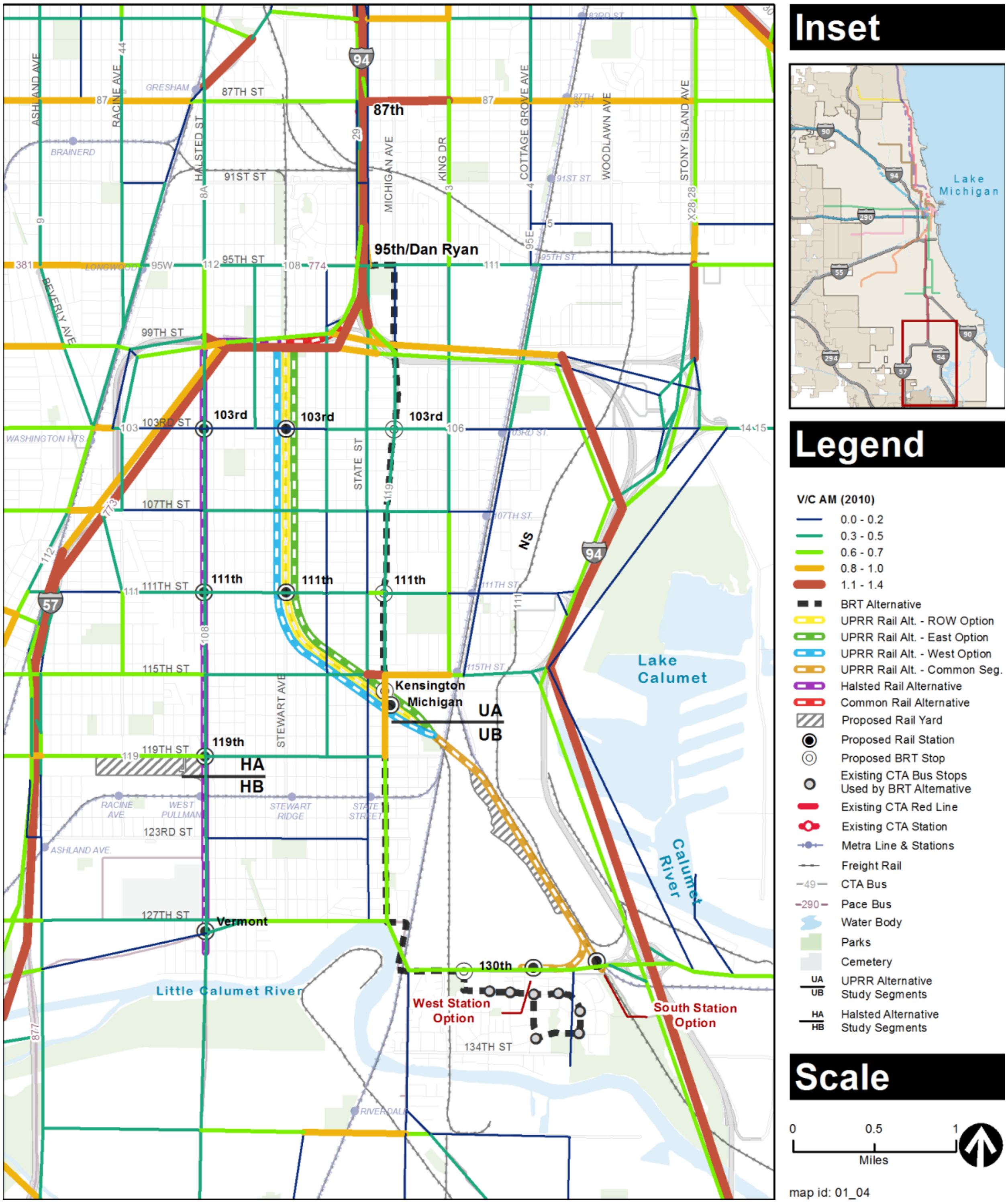

North
87th
95th/Dan Ryan
103rd
103rd
103rd
111th
111th
111th
115th
115th/Michigan
119th
127th
130th
130th
130th
Gresham
Brainerd
ROCK ISLAND
DISTRICT
Longwood
Washington Hts.
Chicago
111th St.
West
Pullman
Stewart
Ridge
Racine Ave.
CN/METRA
ELECTRIC
State
Street
Ashland Ave.
Calumet Park
Blue Island
Blue Island
Blue Island
Riverdale
Riverdale
Ivanhoe
Dolton
Kensington
Lake Calumet
SOUTH
SHORE
SOUTH SHORE
CN/METRA ELECTRIC
UPRR
UPRR
83rd St.
87th St.
91st St.
95th St.
103rd St.
107th St.
Inset
Chicago
Evergreen
Park
Blue Island
Riverdale
Dolton
Hammond
Harvey
Burnham
Markham
Legend
Proposed Rail Station
Proposed BRT Stops
Study Intersections
Signalized Intersection
Stop Controlled
Proposed BRT Route
Proposed Alignments
Existing Rail Alignment / Station
Area of Potential Impact
Lakes and Rivers
Parks
Cemetery
Metra
49 CTA Bus
290 Pace Bus
Scale
1 inch = 1 mile
0
0.5
1
Miles

Figure 4-2: Signalized and Unsignalized Intersections within the Area of Potential Impact


Inset
Lake Michigan
Legend
V/C AM (2010)
0.0 - 0.2
0.3 - 0.5
0.6 - 0.7
0.8 - 1.0
1.1 - 1.4
BRT Alternative
UPRR Rail Alt. - ROW Option
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
UPRR Rail Alt. - Common Seg.
Halsted Rail Alternative
Common Rail Alternative
Proposed Rail Yard
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Parks
Cemetery
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Scale
0
0.5
1
Miles
map id: 01_04
87th
95th/Dan Ryan
103rd
103rd
103rd
111th
111th
111th
Kensington
Michigan
119th
Vermont
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West Station Option
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Lake Calumet
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87TH ST
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ASHLAND AVE
RACINE AVE
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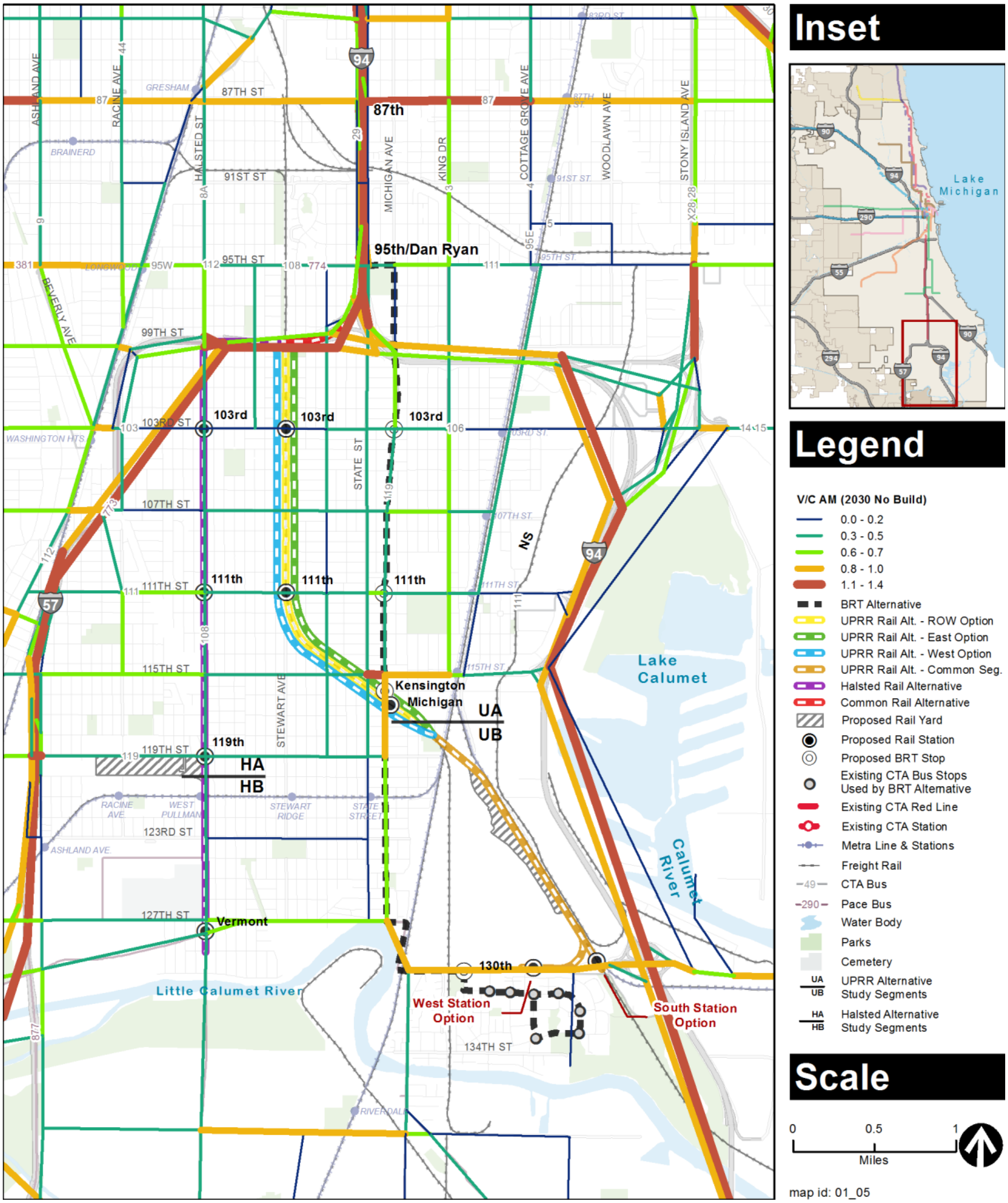
COTTAGE GROVE AVE
WOODLAWN AVE
STONY ISLAND AVE
STATE ST
STEWART AVE
BEVERLY AVE
WASHINGTON HTS
GRESHAM
BRAINERD
LONGWOOD
RACINE AVE
WEST PULLMAN
STEWART RIDGE
STATE STREET
ASHLAND AVE
RIVERDALE
94
57

Figure 4-3: Existing (2010) Congestion (Volume/Capacity Ratio) Map


Inset
Lake Michigan
90
94
290
55
294
57
Legend
V/C AM (2030 No Build)
0.0 - 0.2
0.3 - 0.5
0.6 - 0.7
0.8 - 1.0
1.1 - 1.4
BRT Alternative
UPRR Rail Alt. - ROW Option
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
UPRR Rail Alt. - Common Seg.
Halsted Rail Alternative
Common Rail Alternative
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Existing CTA Bus Stops Used by BRT Alternative
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49 CTA Bus
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Water Body
Parks
Cemetery
UA UB UPRR Alternative Study Segments
HA HB Halsted Alternative Study Segments
Scale
0
0.5
1
Miles
map id: 01_05
87th
95th/Dan Ryan
103rd
103rd
103rd
111th
111th
111th
Kensington
Michigan
UA
UB
119th
HA
HB
Vermont
130th
West Station Option
South Station Option
Lake Calumet
Calumet River
Little Calumet River
87TH ST
91ST ST
95TH ST
99TH ST
103RD ST
107TH ST
111TH ST
115TH ST
119TH ST
123RD ST
127TH ST
134TH ST
ASHLAND AVE
RACINE AVE
HALSTED ST
MICHIGAN AVE
KING DR
COTTAGE GROVE AVE
WOODLAWN AVE
STONY ISLAND AVE
STATE ST
STEWART AVE
BEVERLY AVE
GRESHAM
BRAINERD
LONGWOOD
WASHINGTON HTS
RACINE AVE
WEST PULLMAN
STEWART RIDGE
STATE STREET
ASHLAND AVE
RIVERDALE
94
57
NS

Figure 4-4: 2030 No Build Congestion (Volume/Capacity Ratio) Map

4.3 Freight Transportation

Nearly 500 freight trains per day operate in the Chicago region (Chicago Metropolis 2020). In 2007, regional rail tonnage was estimated at more than 631 million tons, with about 24,000 trailers and containers and about 16,800 carload units moving into, out of, or through the region daily (CMAP 2012). The following active freight train tracks run through the API:

- UPRR Railroad
- CN/Metra Electric Railroad
- NICTD Chicago South Shore & South Bend Railroad (NICTD/CSS & SBRR)
- Norfolk Southern (NS) Railroad
- Indiana Harbor Belt (IHB) Railroad

The UPRR tracks run north/south from the 80th Street junction past the Cal-Sag Channel/Little Calumet River and continue south outside of the API. At the 80th Street junction, near 80th Street and Wallace Avenue, the UPRR tracks converge with RI District, NS, and Belt Railway of Chicago tracks. The UPRR tracks cross over the CN/Metra tracks near 119th Street with a flyover.

The CN freight tracks are west of Cottage Grove Avenue. South of 115th Street, the CN tracks are west of the Metropolitan Water Reclamation District (MWRD) facilities. At 127th Street, the tracks run east of Indiana Avenue and continue south. These tracks carry both passenger and freight trains.

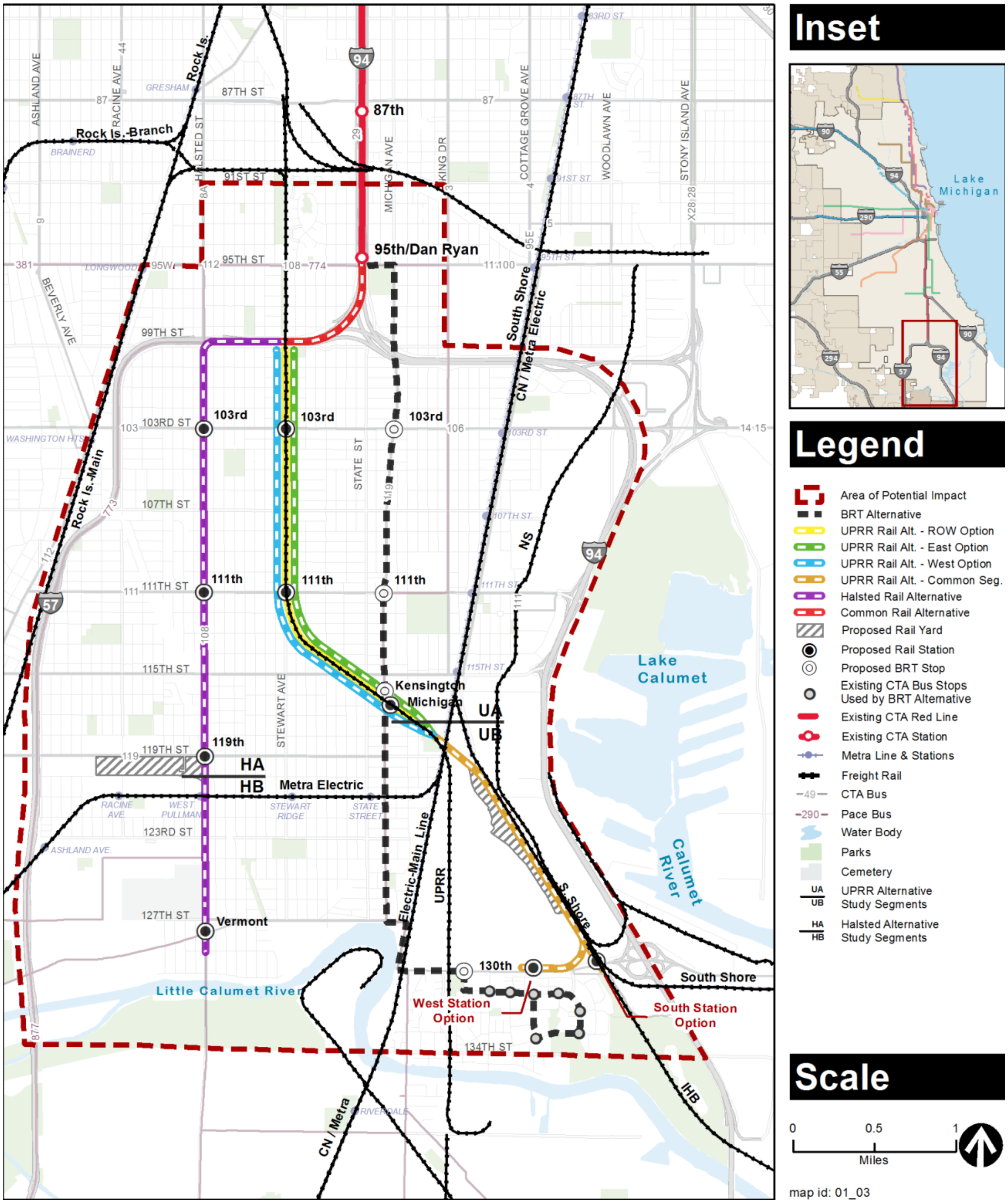
The NICTD/CSS & SBRR tracks run west of Cottage Grove Avenue from Kensington Avenue. This line converges with the CN/Metra tracks between 115th Street and Kensington Avenue. The line continues south between the MWRD facilities and then heads east once the tracks cross under the 130th Street/I-94 Interchange. These tracks carry both passenger and freight trains.

The NS freight tracks are east of the NICTD/CSS & SBRR tracks.

The IHB tracks are west of the NICTD/CSS & SBRR tracks and east of the CN/Metra Tracks.

Figure 4-5 shows the location of the freight railroads within the API.

Table 4-5 lists the existing volumes of passenger and freight trains that pass through the API.


Inset
Lake Michigan
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Area of Potential Impact
BRT Alternative
UPRR Rail Alt. - ROW Option
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Existing CTA Bus Stops Used by BRT Alternative
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
CTA Bus
Pace Bus
Water Body
Parks
Cemetery
UPRR Alternative Study Segments
Halsted Alternative Study Segments
Scale
0
0.5
1
Miles
map id: 01_03
87th
95th/Dan Ryan
103rd
111th
119th
Vermont
Kensington
Michigan
130th
UA
UB
HA
HB
Rock Is.-Branch
Rock Is.-Main
Rock Is.
Metra Electric
Electric-Main Line
UPRR
CN / Metra
South Shore
CN / Metra Electric
NS
S. Shore
IHB
Lake Calumet
Calumet River
Little Calumet River
West Station Option
South Station Option
87TH ST
91ST ST
95TH ST
99TH ST
103RD ST
107TH ST
111TH ST
115TH ST
119TH ST
123RD ST
127TH ST
134TH ST
ASHLAND AVE
RACINE AVE
HALSTED ST
BEVERLY AVE
STEWART AVE
STATE ST
MICHIGAN AVE
KING DR
COTTAGE GROVE AVE
WOODLAWN AVE
STONY ISLAND AVE
GRESHAM
BRAINERD
LONGWOOD
WASHINGTON HTS
RACINE AVE
WEST PULLMAN
STEWART RIDGE
STATE STREET
ASHLAND AVE
RIVERDALE
94
57

Figure 4-5: Freight Railroads within the Area of Potential Impact

Table 4-5: Existing Train Volumes (2009)

Location	Peak Day	Passenger	Freight	Total
BRC/NS/UP, 75th St. Wye to 80th St. Jct.	Friday	2	62	64
BRC/UP, 80th St. Jct. to 86th Street	Friday	2	41	43
UP, South of 86th Street	Friday	2	24*	26
NS, 80th St Jct. to State St.	Saturday	0	16	16
BRC, 86th St. to State St.	Saturday	0	17	17
BRC/NS, East of State St.	Saturday	0	33	33

Source: CREATE 75th Street CIP Train Model volumes from the Chicago Transportation Coordination Office
Notes: NS = Norfolk Southern; UP = Union Pacific; BRC = Belt Railway Company; Jct. = junction
*On May 15, 2009, UPRR directly reported to CTA that freight volume was 27 trains in the peak day rather than the 24 trains in the peak day used in the CREATE model.

4.4 Bicycle Facilities

The City of Chicago is known as a bicycle-friendly community. Chicago's vision is to make bicycling an integral part of daily life (City of Chicago 2006). Chicago has 117 miles of on-street bike lanes and more than 30 miles of marked lanes on the City streets (City of Chicago 2012c). The *Chicago Streets for Cycling Plan 2020* network consists of 645 miles of on-street bike routes. These routes include Neighborhood Bike Routes, Crosstown Bike Routes and Spoke Routes. The *Chicago Streets for Cycling Plan 2020* will guide the development of a citywide network of innovative bikeways. The existing bike facilities within ½ mile of the alternatives were identified and are shown on Figure 4-6. Bike facilities recommended in the *Chicago Bike 2015 Plan* and pertinent recommended bike routes from the *Chicago Streets for Cycling Plan 2020* are also shown on the figure.

Only one off-street bike trail passes through the project area. Major Taylor Trail is an off-street bike trail that runs through the project area and is intersected by Halsted Street north of the intersection of 119th Street and Halsted Street. There are no other marked bike lanes within the roadway along or crossing the alternative alignments.

The 95th Street Terminal has indoor bicycle parking facilities.

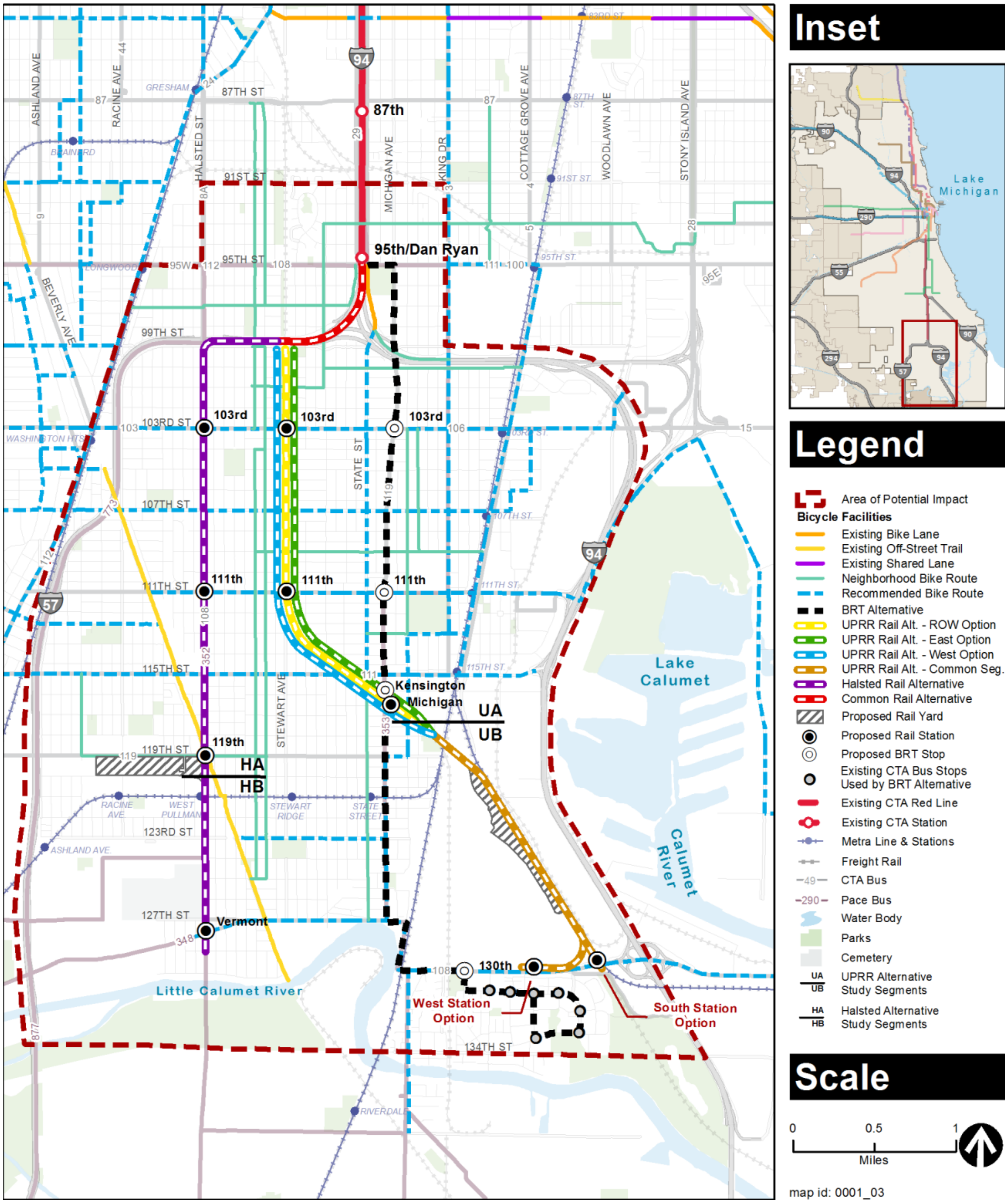
87th
95th/Dan Ryan
103rd
111th
119th
Vermont
Kensington
Michigan
130th
UA
UB
HA
HB
West Station Option
South Station Option
Lake Calumet
Calumet River
Little Calumet River
87TH ST
91ST ST
95TH ST
99TH ST
103RD ST
107TH ST
111TH ST
115TH ST
119TH ST
123RD ST
127TH ST
134TH ST
ASHLAND AVE
RACINE AVE
HALSTED ST
MICHIGAN AVE
KING DR
STATE ST
STEWART AVE
COTTAGE GROVE AVE
WOODLAWN AVE
STONY ISLAND AVE
BEVERLY AVE
GRESHAM
BRAINERD
LONGWOOD
WASHINGTON HTS
RACINE AVE
WEST PULLMAN
STEWART RIDGE
STATE STREET
ASHLAND AVE
RIVERDALE
83RD ST
87TH ST
91ST ST
95TH ST
103RD ST
107TH ST
111TH ST
115TH ST
94
57
Inset
Lake Michigan
90
94
290
55
294
57
94
Legend
Area of Potential Impact
Bicycle Facilities
Existing Bike Lane
Existing Off-Street Trail
Existing Shared Lane
Neighborhood Bike Route
Recommended Bike Route
BRT Alternative
UPRR Rail Alt. - ROW Option
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
UPRR Rail Alt. - Common Seg.
Halsted Rail Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Proposed BRT Stop
Existing CTA Bus Stops Used by BRT Alternative
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
49 CTA Bus
290 Pace Bus
Water Body
Parks
Cemetery
UA UB UPRR Alternative Study Segments
HA HB Halsted Alternative Study Segments
Scale
0
0.5
1
Miles
map id: 0001_03

Figure 4-6: Existing and Recommended Bicycle Facilities within the Area of Potential Impact

4.5 Pedestrians

The API for the RLE Project is an urban area with residential and commercial land uses. The sidewalk system within the API is extensive, with sidewalks on both sides of most of the arterial and collector roads. Sidewalks were reviewed qualitatively within the API. The width of sidewalks varies in the API with arterial streets having a standard 6-foot-wide sidewalk. Collector streets have sidewalks that are approximately 12 to 17 feet wide. These widths are average widths; sidewalk widths vary along most streets within the API.

Along the BRT Alternative, sidewalks are present at the 103rd Street, 111th Street, and Kensington Avenue stops.

- At Michigan Avenue and 103rd Street, sidewalks are approximately 8 feet wide along Michigan Avenue and vary from 6 to 8 feet wide along 103rd Street. The sidewalks are directly in back of the curb. Although ramps are present, all ramps are based on older standards which do not comply with current ADA practice. Crossing the street is controlled by pedestrian signals.

- At Michigan Avenue and 111th Street, sidewalks on all four legs vary from approximately 12 to 16 feet in width, all directly in back of the curb. All ramps in the four quadrants appear to be ADA-compliant.[2] Crossing the street is controlled by pedestrian signals.

- At Michigan Avenue and Kensington Avenue, the sidewalks along Michigan Avenue vary between approximately 10 and 12 feet in width and are directly behind the curb. Along Kensington Avenue, the width varies from approximately 6 to 8 feet and, away from the intersection, are separated from the street by a grassy boulevard. Ramps are not ADA-compliant at this intersection. This intersection is uncontrolled (with a stop sign on Kensington Avenue).

- At the proposed 130th Street stop location, no sidewalks are present along 130th Street. Six-foot wide sidewalks run along both sides of Eberhart Avenue separated from the street by a grassy boulevard. The ramps at Eberhart Avenue are not ADA-compliant. This intersection is uncontrolled (with a stop sign on Eberhart Avenue).

Near the proposed stations for the UPRR Rail Alternative options, sidewalks are present along 103rd Street, 111th Street, and Michigan Avenue.

- Where 103rd Street crosses the existing UPRR tracks, sidewalks run on both sides of 103rd Street and are approximately 6 feet wide. Along Eggleston Avenue, immediately to the west of the tracks and north of 103rd Street, a single sidewalk runs along the west side of the road. The ramp at the corner of 103rd Street and Eggleston Avenue (in the northwest quadrant) is ADA-compliant.

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[2] All assessment of ADA compliance in this section is based on visual inspection only, examining the configuration of the ramp and presence of tactile warning. Field survey and measurement for precise slopes and other compliance features was not conducted.

- At 111th Street, sidewalks are on both sides of the road and are approximately 6 feet wide. While ramps are present at the nearby intersections, the ramps do not meet all current ADA standards.
- At Michigan Avenue, sidewalks are on both sides of the road and are approximately 12 feet wide. Ramps are present at the nearby corners, but the ramps do not meet current ADA standards.
- There are no sidewalks along 130th Street at the locations of the 130th Street South and West Station Options.

For the Halsted Rail Alternative, sidewalks are present along 103rd, 111th, and 119th Streets near their intersections with Halsted Street. Sidewalks are present along both sides of Halsted Street except on the west side between 124th and 127th Streets.

- In the vicinity of 103rd Street, sidewalks along Halsted Street are generally 14 to 16 feet wide. Sidewalks along 103rd Street are approximately 9 to 11 feet wide. ADA-compliant ramps are present on all but the northeast corner of the 103rd Street and Halsted Street intersection.
- At 111th Street, sidewalks along Halsted Street are 13 to 17 feet wide. Sidewalks on 111th Street are approximately 11 to 13 feet wide. Only the ramps on the east side of Halsted Street are ADA-compliant.
- At 119th Street, sidewalks along Halsted Street are approximately 16 feet wide at the intersection, but narrow to 6 feet wide north of the intersection. Sidewalks along 119th Street vary from 12 to 19 feet wide. The sidewalk on the south side of 119th Street ends at the alley west of Halsted Street. Only the ramps on the west side of Halsted Street are ADA-compliant.
- Vermont Avenue has sidewalks (6 to 10 feet wide) at the immediate vicinity of its intersection with Halsted Street but the sidewalk does not continue after the alley on the northeast leg of the intersection. Sidewalks on Halsted Street vary from 13 to 17 feet wide. No ramps at this intersection meet the newest ADA standards.

In order to remain compliant with current ADA codes, the City of Chicago is continually updating intersection curb ramps to make the city accessible to everyone. There are curb ramps to allow for wheelchair accessibility at most of the intersections within the API. Most of these curb ramps are not compliant with current ADA standards, which require detectable warning tiles for the visually impaired.

The Chicago Department of Transportation is implementing its *Chicago Pedestrian Plan*. Some of the goals of the plan are to increase pedestrian safety, identify and eliminate gaps and barriers in the pedestrian network, increase the amount and quality of pedestrian space, and increase the number of pedestrian trips for enjoyment, school, work, and daily errands.

4.6 Parking

The existing parking facilities were identified by field observation, aerial imagery, or through published information regarding parking facilities from the City of Chicago. Most of the streets in the API have on-street parking. Table 4-6 is a summary of the on-street parking along some of the major roadways along the alternative alignments. On-street parking is allowed (as posted) on most of the local streets not listed in this table. There is currently no park & ride facility at the existing 95th Street Terminal.

Table 4-6: Existing On-Street Parking

Street	Roadway Functional Class	On-Street Parking
95th Street	other principal arterial	No
99th Street	local road or street	Yes
103rd Street	minor arterial	Yes
107th Street	major collector	No
111th Street	minor arterial	Yes
115th Street	major collector	Yes
Halsted Street	minor arterial	Yes
Wentworth Avenue	major collector	Yes
State Street	minor arterial	Yes
Michigan Avenue	major collector	Yes
Indiana Avenue	minor arterial	No
130th Street	other principal arterial	No

A permit or fee is not required to park on the streets within the API. There are no existing off-street surface parking lots or parking garages that are used for public parking within the API. Many of the commercial and retail buildings within the API have plenty of parking available either through on-street or parking lots associated with the buildings.

Section 5
Impacts and Mitigations

This section describes the transportation impacts for each of the four alternatives under consideration for the RLE Project. The impacts are discussed in three categories for each alternative: permanent impacts, construction impacts, and cumulative impacts. Permanent impacts occur after the project is fully constructed and operational. Construction impacts refer to impacts that occur during the construction phase of the project and are temporary in nature. Cumulative impacts result from the incremental impact of the alternative combined with other past, present and reasonably foreseeable future actions. Where applicable, potential mitigation measures are also presented.

5.1 No Build Alternative

5.1.1 Permanent Impacts and Mitigations - No Build Alternative

5.1.1.1 Public Transportation

The No Build Alternative would not have any impacts on existing bus or rail transit conditions within the API. The existing services would continue to operate under the same conditions as they do today.

5.1.1.2 Traffic

Under No Build (2026) conditions, 88 percent of the study intersections within the API would operate at LOS “D” or better in both the AM and PM peak hours, as shown in Table 5-1. Appendix B contains the No Build traffic data used in the traffic impact analysis. Under No Build (2026) conditions, there would be nine intersections that would operate at LOS “E” or “F” in either or both the AM and PM peak hours. The nine intersections that would operate at LOS “E” or “F” are shown in bold in Table 5-1.

Under No Build (2030) conditions, 87 percent of the study intersections within the API would operate at LOS “D” or better in both the AM and PM peak hours, as shown in Table 5-1. See Appendix B for the No Build traffic data. Under No Build (2030) conditions, there would be ten intersections that would operate at LOS “E” or “F” in either or both the AM and PM peak hours. The ten intersections are shown in bold in Table 5-1.

Table 5-1: No Build (2026 and 2030) Intersection Level of Service

ID	Intersection	Control Type	2026 No Build Alternative		2030 No Build Alternative	
			AM Peak-Hour LOS	PM Peak-Hour LOS	AM Peak-Hour LOS	PM Peak-Hour LOS
1	95th Street and Wentworth Avenue	Signalized	B	B	B	B
2	95th Street and Lafayette Avenue	Signalized	D	D	D	D
3	95th Street and State Street	Signalized	D	C	D	C
4	95th Street and Michigan Avenue	Signalized	B	B	B	B
5	98th Place and Halsted Street	Signalized	**F**	**F**	**F**	**F**
6	99th Street and Halsted Street	Signalized	D	D	D	D
7	98th Place and Wentworth Avenue	Signalized	B	B	B	B
8	99th Street and Wentworth Avenue	Signalized	B	B	B	B
9	99th Street and State Street	Signalized	A	B	A	B
10	99th Street and Michigan Avenue	Signalized	C	B	C	B
11	99th Place and Martin Luther King Drive	Signalized	B	B	B	B
12	100th Street and Martin Luther King Drive	Signalized	B	A	B	A
13	100th Street and Cottage Grove Avenue	Unsignalized	A	B	A	C
14	103rd Street and Vincennes Avenue and Beverly Avenue	Signalized	**E**	**F**	**E**	**F**
15	103rd Street and Morgan Street	Signalized	B	B	B	B
16	103rd Street and Halsted Street	Signalized	**F**	D	**F**	D
17	103rd Street and Normal Avenue	Signalized	B	B	B	B
18	103rd Street and Wentworth Avenue	Signalized	B	B	B	B
19	103rd Street and State Street	Signalized	B	B	B	B
20	103rd Street and Michigan Avenue	Signalized	B	B	B	B
21	103rd Street and Martin Luther King Drive	Signalized	C	C	C	C
22	103rd Street and Cottage Grove Avenue	Signalized	B	B	B	B
23	103rd Street and Woodlawn Avenue	Signalized	A	A	A	A
24	107th Street and Halsted Street	Signalized	**F**	C	**F**	C
25	107th Street and Wentworth Avenue	Signalized	B	B	B	B
26	107th Street and State Street	Signalized	A	A	A	A
27	107th Street and Michigan Avenue	Signalized	B	B	B	B
28	107th Street and Martin Luther King Drive	Signalized	B	B	B	B
29	107th Street and Cottage Grove Avenue	Signalized	B	B	B	B

ID	Intersection	Control Type	2026 No Build Alternative		2030 No Build Alternative	
			AM Peak-Hour LOS	PM Peak-Hour LOS	AM Peak-Hour LOS	PM Peak-Hour LOS
30	111th Street and Marshfield Avenue	Signalized	C	C	C	C
31	111th Street and Hamlet Avenue	Signalized	D	D	D	D
32	112th Place and Marshfield Avenue	Signalized	B	C	B	C
33	112th Place and Hamlet Avenue	Signalized	**E**	C	**E**	C
34	111th Street and Halsted Street	Signalized	C	C	C	C
35	111th Street and Normal Avenue	Signalized	B	A	B	A
36	111th Street and Wentworth Avenue	Signalized	A	A	B	A
37	111th Street and State Street	Signalized	A	B	A	B
38	111th Street and Michigan Avenue	Signalized	B	B	B	B
39	111th Street and Indiana Avenue	Signalized	B	B	B	B
40	111th Street and Martin Luther King Drive	Signalized	B	A	B	A
41	111th Street and Cottage Grove Avenue	Signalized	C	D	C	D
42a	111th Street and Langley Avenue	Signalized	B	C	B	C
42b	111th Street and Ellis Avenue	Signalized	C	C	C	C
43	111th Street and Doty Avenue	Signalized	C	C	C	C
44	111th Street and Bishop Ford eastbound Ramps	Unsignalized	D	C	**E**	C
45	111th Street and Bishop Ford westbound Ramps	Unsignalized	**E**	B	**E**	B
46	115th Street and Marshfield Avenue	Signalized	B	B	B	B
47	115th Street and Ashland Avenue	Signalized	B	B	B	B
48	115th Street and Racine Avenue	Signalized	B	C	B	C
49	115th Street and Halsted Street	Signalized	C	C	C	C
50	115th Street and Wentworth Avenue	Signalized	B	B	B	B
51	115th Street and State Street	Signalized	B	B	B	B
52	115th Street and Michigan Avenue	Signalized	B	D	B	D
53	115th Street and Indiana Avenue	Signalized	B	B	B	B
54	115th Street and Martin Luther King Drive	Unsignalized	D	**F**	D	**F**
55a	115th Street and Cottage Grove Avenue	Signalized	D	C	D	C
55b	115th Street and Cottage Grove Avenue East	Signalized	**E**	C	**E**	C
56	115th Street and Bishop Ford Freeway eastbound Ramps	Unsignalized	D	C	D	C

ID	Intersection	Control Type	2026 No Build Alternative		2030 No Build Alternative	
			AM Peak-Hour LOS	PM Peak-Hour LOS	AM Peak-Hour LOS	PM Peak-Hour LOS
57	115th Street and Bishop Ford Freeway westbound Ramps	Unsignalized	D	B	D	C
58	119th Street and Marshfield Avenue	Signalized	D	D	D	D
59	119th Street and Ashland Avenue	Signalized	D	**F**	D	**F**
60	119th Street and Halsted Street	Signalized	C	C	C	C
61	119th Street and Wentworth Avenue	Signalized	B	B	B	B
62	119th Street and State Street	Signalized	B	B	B	B
63	119th Street and Michigan Avenue	Signalized	A	A	A	A
64	127th Street and Paulina Street	Signalized	C	C	C	C
65	127th Street and Marshfield Avenue	Signalized	C	C	C	C
66	127th Street and Ashland Avenue	Signalized	C	C	C	C
67	Ashland Avenue and Vermont Avenue	Signalized	C	C	C	C
68	127th Street and Halsted Street	Signalized	C	C	C	C
69	Vermont Avenue and Halsted Street	Signalized	B	B	B	B
70	127th Street and Vermont Avenue and Wallace Street	Signalized	C	D	D	D
71	127th Street and State Street	Signalized	B	B	B	B
72	127th Street and Michigan Avenue	Signalized	A	B	A	B
73	130th Street and Indiana Avenue	Signalized	C	C	C	C
74	130th Street and Ellis Avenue	Signalized	A	A	A	A

Notes:
LOS = level of service
Signalized intersection LOS reported as the average for all movements. Unsignalized LOS reported is the LOS of the worst movement. LOS “E” and “F” are shown in bold.

5.1.1.3 Freight Transportation

Rail tonnage moving to, from, and through the Chicago region is expected to increase by more than 60 percent by 2040 (CMAP 2010b). Tonnage carried by truck in the Chicago region may grow by more than 70 percent (CMAP 2010b). Table 5-2 shows the forecasted freight rail volumes for 2029 developed by the Chicago Transportation Coordination Office.[3] These forecasts are not available beyond the year 2029. The No Build Alternative would not have any impacts on the freight transportation within the API.

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[3] The Chicago Transportation Coordination Office was established in 1999 to develop managerial solutions wherever possible to railroad operating problems in Chicago, to work with public agencies on the public impacts of rail service, and to assist in continuing the capital planning process. The coordination efforts by the Chicago Transportation Coordination Office were a forerunner to the coordination established in the CREATE program in 2003. Still playing a

Table 5-2: Forecasted Train Volumes (2029 No Build)

Location	Peak Day	Passenger	Freight	Total
BRC/NS/UP, 75th St. Wye to 80th St. Jct.	Thursday	4	77	81
BRC/UP, 80th St. Jct. to 86th Street	Friday	4	51	55
UP, South of 86th Street	Friday	4	23	27
NS, 80th St Jct. to State St.	Saturday	0	22	22
BRC, 86th St. to State St.	Saturday	0	28	28
BRC/NS, East of State St.	Saturday	0	50	50

Source: CREATE 75th Street CIP Train Model volumes from the Chicago Transportation Coordination Office
Notes: NS = Norfolk Southern; UP = Union Pacific; BRC = Belt Railway Company

5.1.1.4 Bicycle Facilities

The No Build Alternative would not have any impacts on existing bike routes or recommended bike routes within the API. Recommended bicycle routes from the *Streets for Cycling Plan 2020* are shown on Figure 4-6.

5.1.1.5 Pedestrians

The No Build Alternative would not upgrade any intersections that currently do not meet the ADA accessibility code except as upgraded as part of the Chicago ADA Sidewalk Ramp Program. The conditions under the No Build Alternative would be the same as the existing conditions.

5.1.1.6 Parking

Under the No Build Alternative parking facilities are expected to remain the same as under existing conditions.

5.1.2 Construction Impacts and Mitigations - No Build Alternative

The only construction activities associated with this alternative would be the already funded and committed roadway and public transportation projects in the API, plus typical repairs required to keep roadways, intersections, and transit service operational.

5.1.3 Cumulative Impacts and Mitigations - No Build Alternative

There would be no cumulative impacts associated with the No Build Alternative. However, the No-Build Alternative would not realize the economic benefits from transportation improvements as the other build alternatives.

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vital role today, the Chicago Transportation Coordination Office focuses on process improvements and enhanced communication to help trains flow better through the region (while CREATE focuses on capital projects).

5.2 Bus Rapid Transit Alternative

5.2.1 Permanent Impacts and Mitigations - Bus Rapid Transit Alternative

5.2.1.1 Public Transportation

The BRT Alternative would provide an enhanced bus route with transit signal priority along the existing #34 South Michigan bus route. Figure 5-1 shows the proposed alignment of the BRT Alternative. The anticipated overall runtime from 130th Street to the 95th Street Terminal and the wait time at 130th Street would decrease. The headway for the route #34 would be changed to 12 minutes due to the addition of the enhanced bus route. The BRT Alternative would have 4-minute headways from 6:00 AM to 8:00 PM and 15-minute headways at all other times of service. The BRT Alternative would add 250 bus runs along the BRT Alternative alignment relative to existing conditions. Table 5-3 summarizes the additional bus service for the BRT Alternative. No other changes to existing bus routes would be made with the BRT Alternative.

Table 5-3: Bus Services for the Bus Rapid Transit Alternative

	Headway (minutes)		Bus Runs		
	6 AM-8 PM	Rest of Day	6 AM-8 PM	Rest of Day	Total
Weekday	4	15	210	40	250
Weekend	15	15	56	40	96

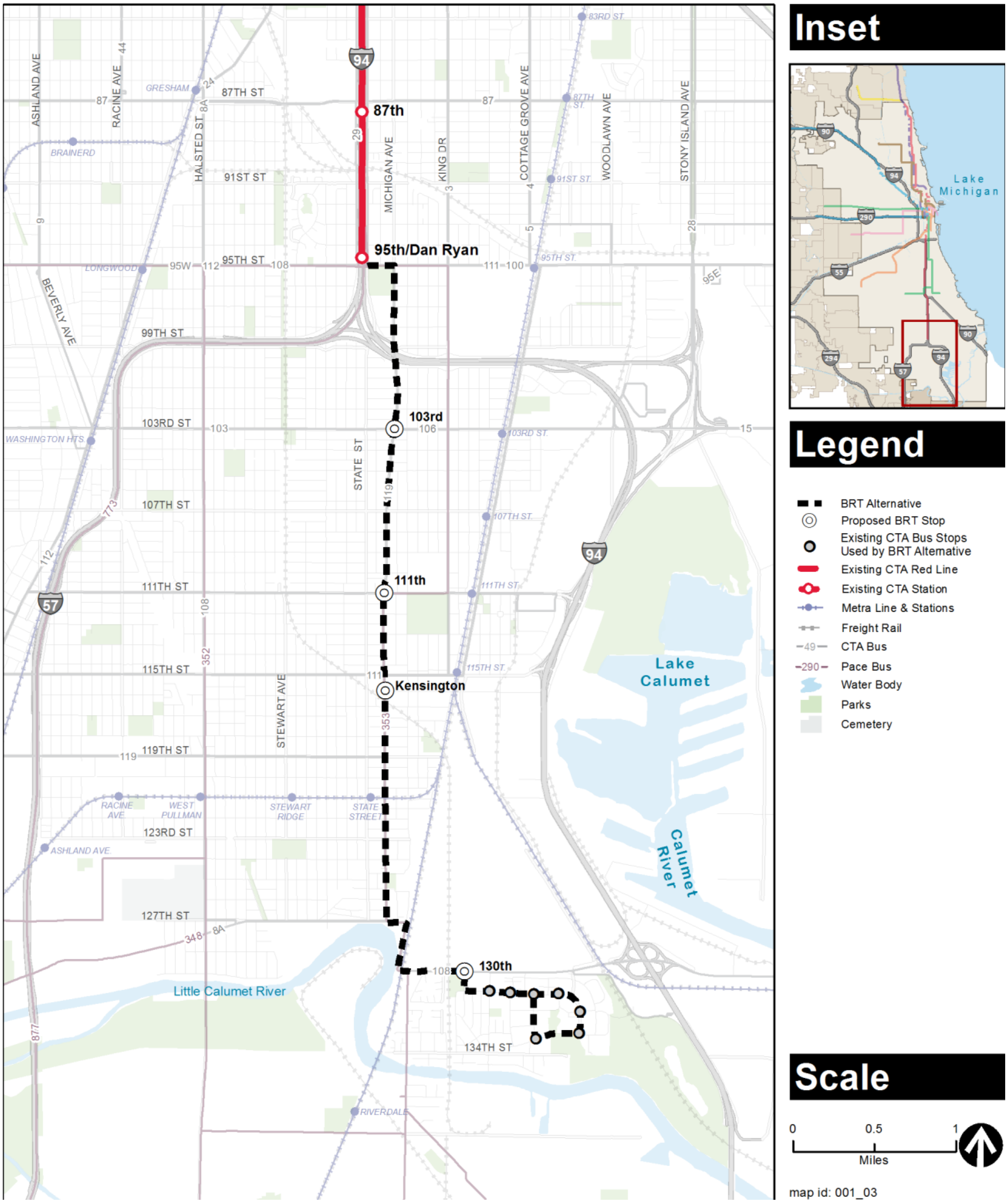
87th
95th/Dan Ryan
103rd
111th
Kensington
130th
87TH ST
91ST ST
95TH ST
99TH ST
103RD ST
107TH ST
111TH ST
115TH ST
119TH ST
123RD ST
127TH ST
134TH ST
ASHLAND AVE
RACINE AVE
HALSTED ST
MICHIGAN AVE
KING DR
COTTAGE GROVE AVE
WOODLAWN AVE
STONY ISLAND AVE
STATE ST
STEWART AVE
BEVERLY AVE
GRESHAM
BRAINERD
LONGWOOD
WASHINGTON HTS
RACINE AVE
WEST PULLMAN
STEWART RIDGE
STATE STREET
ASHLAND AVE
RIVERDALE
83RD ST
87TH ST
91ST ST
95TH ST
103RD ST
107TH ST
111TH ST
115TH ST
Lake Calumet
Calumet River
Little Calumet River
Inset
Lake Michigan
Legend
BRT Alternative
Proposed BRT Stop
Existing CTA Bus Stops Used by BRT Alternative
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
49 CTA Bus
290 Pace Bus
Water Body
Parks
Cemetery
Scale
0
0.5
1
Miles
map id: 001_03

Figure 5-1: Bus Rapid Transit Alternative

The BRT Alternative would have positive impacts on public transportation service. The transportation model indicates 374 new daily riders for the BRT Alternative and total project weekday boardings of 3,190 (AECOM 2009). The additional services would reduce travel times for passengers compared to existing conditions. (Average existing travel time for existing #34 between 7 AM and 9 AM from 131st Street/Eberhart is 28 minutes. Expected travel time for the BRT Alternative from 130th Street to the 95th Street Terminal is 23 minutes. Average wait time for the existing #34 between 7 AM and 9 AM is 5 minutes, or half the average headway of 10 minutes. The expected average wait time for the BRT Alternative is two minutes, or half the average headway of four minutes during the entire 6 AM to 8 PM time period.) The transportation model indicates an average "user benefit" of 9 minutes per boarding for the BRT Alternative (AECOM 2009). In addition to benefits for passengers making use of the BRT Alternative, passengers using the local #34 would likely experience benefits. With fewer boardings on the local #34, dwell time would be decreased, marginally improving end-to-end run times. Also, with a shift in passengers to the BRT Alternative, peak-hour local buses would be less crowded. (In peak hours, the existing #34 buses run at or near capacity.)

5.2.1.2 Traffic

Under BRT Alternative (2026) conditions, most of the study intersections within the API would operate at an acceptable LOS (LOS "D" or better) in both the AM and PM peak hours, as shown in Table 5-4. The traffic data and Synchro results are in Appendix C for the BRT Alternative. All changes in traffic volumes are related to access to parking at BRT stations. Under BRT Alternative (2026) conditions, there would be 15 intersections that would operate at an unacceptable LOS (LOS "E" or "F") in either or both the AM and PM peak hours. Of those 15 intersections, 7 would operate at conditions worse than the No Build conditions. The intersections that would operate at worse than the No Build conditions are shown in bold in Table 5-4 and are listed below:

- 115th Street and Michigan Avenue (ID #52) - **AM LOS = E; PM LOS = F**
- 115th Street and Cottage Grove Avenue (ID #55a) - **AM LOS = E; PM LOS = F**
- 115th Street and Cottage Grove Avenue East (ID # 55b) - **AM LOS = F**
- 119th Street and State Street (ID #62) - **PM LOS = E**
- 127th Street and Halsted Street (ID #68) - **PM LOS = E**
- 127th Street and Vermont Avenue and Wallace Street (ID #70) - **AM LOS = F; PM LOS = F**
- 130th Street and Indiana Avenue (ID #73)– **AM LOS = E; PM LOS = F**

Under BRT Alternative (2030) conditions, most of the study intersections within the API would operate at LOS "D" or better in both the AM and PM peak hours, as shown in Table 5-4. Under BRT Alternative (2030) conditions, there would be 17 intersections that would operate at LOS "E" or "F" in either or both the AM and PM peak hours. Of the 17 intersections, 10 would operate at worse than the No Build conditions. The 10 intersections that would operate at worse than the No Build conditions are the following, and are shown in bold text in Table 5-4:

- 103rd Street and Halsted Street (ID #16) - AM LOS = F; **PM LOS = E**
- 111th Street and Cottage Grove Avenue (ID #41) - **PM LOS = E**
- 115th Street and Michigan Avenue (ID #52) - **AM LOS = E; PM LOS = F**
- 115th Street and Martin Luther King Drive (ID #54) - **AM LOS = E**; PM LOS = F
- 115th Street and Cottage Grove Avenue (ID #55a) - **AM LOS = E; PM LOS = F**
- 115th Street and Cottage Grove Avenue East (ID #55b) - **AM LOS = F**
- 119th Street and State Street (ID #62) - **PM LOS = E**
- 127th Street and Halsted Street (ID #68) - **PM LOS = E**
- 127th Street and Vermont Avenue and Wallace Street (ID #70) - **AM LOS = F; PM LOS = F**
- 130th Street and Indiana Avenue (ID # 73) - **AM LOS = E; PM LOS = F**

Table 5-4: Bus Rapid Transit Alternative (2026 and 2030) Intersection Level of Service

ID	Intersection	Control Type	2026 BRT Alternative		2030 BRT Alternative	
			AM Peak-Hour LOS	PM Peak-Hour LOS	AM Peak-Hour LOS	PM Peak-Hour LOS
1	95th Street and Wentworth Avenue	Signalized	B	B	B	B
2	95th Street and Lafayette Avenue	Signalized	D	D	D	D
3	95th Street and State Street	Signalized	D	C	D	C
4	95th Street and Michigan Avenue	Signalized	B	B	B	B
5	98th Place and Halsted Street	Signalized	**F**	**F**	**F**	**F**
6	99th Street and Halsted Street	Signalized	D	C	D	C
7	98th Place and Wentworth Avenue	Signalized	B	B	B	B
8	99th Street and Wentworth Avenue	Signalized	B	B	B	B
9	99th Street and State Street	Signalized	A	B	A	B
10	99th Street and Michigan Avenue	Signalized	C	B	C	B
11	99th Place and Martin Luther King Drive	Signalized	B	B	B	B
12	100th Street and Martin Luther King Drive	Signalized	B	A	B	A
13	100th Street and Cottage Grove Avenue	Unsignalized	A	C	A	C

ID	Intersection	Control Type	2026 BRT Alternative		2030 BRT Alternative	
			AM Peak-Hour LOS	PM Peak-Hour LOS	AM Peak-Hour LOS	PM Peak-Hour LOS
14	103rd Street and Vincennes Avenue and Beverly Avenue	Signalized	**E**	**F**	**E**	**F**
15	103rd Street and Morgan Street	Signalized	B	B	B	B
16	103rd Street and Halsted Street	Signalized	**F**	D	**F**	**E**
17	103rd Street and Normal Avenue	Signalized	B	B	B	B
18	103rd Street and Wentworth Avenue	Signalized	B	B	B	B
19	103rd Street and State Street	Signalized	B	B	B	B
20	103rd Street and Michigan Avenue	Signalized	B	B	B	B
21	103rd Street and Martin Luther King Drive	Signalized	C	C	C	C
22	103rd Street and Cottage Grove Avenue	Signalized	B	B	B	B
23	103rd Street and Woodlawn Avenue	Signalized	A	A	A	A
24	107th Street and Halsted Street	Signalized	**F**	C	**F**	C
25	107th Street and Wentworth Avenue	Signalized	B	B	B	B
26	107th Street and State Street	Signalized	A	B	A	B
27	107th Street and Michigan Avenue	Signalized	B	B	B	B
28	107th Street and Martin Luther King Drive	Signalized	B	B	B	B
29	107th Street and Cottage Grove Avenue	Signalized	B	B	B	B
30	111th Street and Marshfield Avenue	Signalized	C	C	C	C
31	111th Street and Hamlet Avenue	Signalized	D	D	D	D
32	112th Place and Marshfield Avenue	Signalized	B	C	C	C
33	112th Place and Hamlet Avenue	Signalized	**E**	C	**E**	C
34	111th Street and Halsted Street	Signalized	C	C	C	C
35	111th Street and Normal Avenue	Signalized	B	B	B	B
36	111th Street and Wentworth Avenue	Signalized	B	A	B	A
37	111th Street and State Street	Signalized	B	B	B	B
38	111th Street and Michigan Avenue	Signalized	B	B	B	B
39	111th Street and Indiana Avenue	Signalized	B	B	B	B
40	111th Street and Martin Luther King Drive	Signalized	B	A	B	A
41	111th Street and Cottage Grove Avenue	Signalized	C	D	C	**E**
42a	111th Street and Langley Avenue	Signalized	B	C	B	C
42b	111th Street and Ellis Avenue	Signalized	C	C	D	D
43	111th Street and Doty Avenue	Signalized	C	C	C	C
44	111th Street and Bishop Ford eastbound Ramps	Unsignalized	D	C	**E**	C

ID	Intersection	Control Type	2026 BRT Alternative		2030 BRT Alternative	
			AM Peak-Hour LOS	PM Peak-Hour LOS	AM Peak-Hour LOS	PM Peak-Hour LOS
45	111th Street and Bishop Ford westbound Ramps	Unsignalized	**E**	C	**E**	C
46	115th Street and Marshfield Avenue	Signalized	B	B	B	B
47	115th Street and Ashland Avenue	Signalized	B	B	B	B
48	115th Street and Racine Avenue	Signalized	B	D	B	D
49	115th Street and Halsted Street	Signalized	C	C	C	C
50	115th Street and Wentworth Avenue	Signalized	B	B	B	B
51	115th Street and State Street	Signalized	B	B	B	B
52	115th Street and Michigan Avenue	Signalized	**E**	**F**	**E**	**F**
53	115th Street and Indiana Avenue	Signalized	B	B	B	C
54	115th Street and Martin Luther King Drive	Unsignalized	D	**F**	**E**	**F**
55a	115th Street and Cottage Grove Avenue	Signalized	**E**	**F**	**E**	**F**
55b	115th Street and Cottage Grove Avenue East	Signalized	**F**	D	**F**	D
56	115th Street and Bishop Ford Freeway eastbound Ramps	Unsignalized	D	C	D	C
57	115th Street and Bishop Ford Freeway westbound Ramps	Unsignalized	D	C	D	C
58	119th Street and Marshfield Avenue	Signalized	D	D	D	D
59	119th Street and Ashland Avenue	Signalized	D	**F**	D	**F**
60	119th Street and Halsted Street	Signalized	C	C	C	C
61	119th Street and Wentworth Avenue	Signalized	B	B	B	B
62	119th Street and State Street	Signalized	C	**E**	C	**E**
63	119th Street and Michigan Avenue	Signalized	B	B	B	B
64	127th Street and Paulina Street	Signalized	C	C	C	C
65	127th Street and Marshfield Avenue	Signalized	C	C	C	C
66	127th Street and Ashland Avenue	Signalized	C	C	C	C
67	Ashland Avenue and Vermont Avenue	Signalized	C	C	C	C
68	127th Street and Halsted Street	Signalized	D	**E**	D	**E**
69	Vermont Avenue and Halsted Street	Signalized	B	B	B	B
70	127th Street and Vermont Avenue and Wallace Street	Signalized	**F**	**F**	**F**	**F**
71	127th Street and State Street	Signalized	B	D	B	D

ID	Intersection	Control Type	2026 BRT Alternative		2030 BRT Alternative	
			AM Peak-Hour LOS	PM Peak-Hour LOS	AM Peak-Hour LOS	PM Peak-Hour LOS
72	127th Street and Michigan Avenue	Signalized	A	C	A	C
73	130th Street and Indiana Avenue	Signalized	**E**	**F**	**E**	**F**
74	130th Street and Ellis Avenue	Signalized	A	B	A	B

Notes:
BRT = Bus Rapid Transit.
Signalized intersection level of service (LOS) reported as the average for all movements. Unsignalized LOS reported is the LOS of the worst movement. Intersections with LOS “E” or “F” that would be worse than the No Build conditions shown in bold.

Mitigation measures to reduce or minimize the impacts were evaluated using Synchro for the transportation network surrounding the BRT Alternative alignment. Mitigation measures for intersections near the affected intersection may also be necessary to provide better flow of traffic; therefore, the mitigation measures include the affected intersections as well as adjacent or nearby intersections. Table 5-5 lists the mitigation measures that would address impacts on the study intersections under BRT Alternative (2030) conditions. At intersections where adverse impacts are expected, potential mitigation measures have been identified to offset the portion of the LOS deterioration attributable to the BRT Alternative.

Table 5-5: Mitigation Measures for the Bus Rapid Transit Alternative (2030) Conditions

ID	Intersection	Mitigation Measure
41	111th Street and Cottage Grove Avenue	PM: Optimize cycle length/splits.
42	111th Street and Ellis Avenue	AM/PM: Optimize cycle length/splits.
52	115th Street and Michigan Avenue	AM/PM: Optimize cycle length/splits.
54	115th Street and Martin Luther King Drive	Remove on-street parking lane for additional through eastbound/westbound lane on 115th Street.
55a	115th Street and Cottage Grove Avenue	AM/PM: Optimize cycle length/splits.
55b	115th Street and Cottage Grove Avenue East	AM/PM: Optimize cycle length/splits.
62	119th Street and State Street	PM: Optimize cycle length/splits.
65	127th Street and Marshfield Avenue	AM: Optimize cycle length/splits.
68	127th Street and Halsted Street	AM/PM: Optimize cycle length/splits.

ID	Intersection	Mitigation Measure
70	127th Street and Vermont Avenue and Wallace Street	Change westbound through/left to dedicated westbound left turn lane. Restrict northeast bound to northbound movement. Actuate signal. Optimize cycle length/splits.
71	127th Street and State Street	PM: Optimize cycle length/splits.
73	130th Street and Indiana Avenue	AM/PM: Add northbound right turn lane. Optimize cycle length/splits.

Under BRT Alternative mitigated (2030) conditions, most of the study intersections within the API would operate at LOS "D" or better in both the AM and PM peak hours, as shown in Table 5-6. Under BRT Alternative (2030) mitigated conditions, some intersections would operate at LOS "E" or "F;" however, these intersections would be no worse than No Build (2030) conditions. Mitigated conditions would not result in additional intersections with unacceptable LOS. As such, there would be no adverse permanent traffic impacts for this alternative. LOS D is considered to be acceptable for urban areas.

Table 5-6: Bus Rapid Transit Alternative Mitigated (2030) Intersection Level of Service

ID	Intersection	Control Type	2030 No Build Alternative		2030 BRT Alternative Mitigated	
			AM Peak-Hour LOS	PM Peak-Hour LOS	AM Peak-Hour LOS	PM Peak-Hour LOS
1	95th Street and Wentworth Avenue	Signalized	B	B	B	B
2	95th Street and Lafayette Avenue	Signalized	D	D	D	D
3	95th Street and State Street	Signalized	D	C	D	C
4	95th Street and Michigan Avenue	Signalized	B	B	B	B
5	98th Place and Halsted Street	Signalized	**F**	**F**	**F**	**F**
6	99th Street and Halsted Street	Signalized	D	D	D	C
7	98th Place and Wentworth Avenue	Signalized	B	B	B	B
8	99th Street and Wentworth Avenue	Signalized	B	B	B	B
9	99th Street and State Street	Signalized	A	B	A	B
10	99th Street and Michigan Avenue	Signalized	C	B	C	B
11	99th Place and Martin Luther King Drive	Signalized	B	B	B	B
12	100th Street and Martin Luther King Drive	Signalized	B	A	B	A
13	100th Street and Cottage Grove Avenue	Unsignalized	A	C	A	C
14	103rd Street and Vincennes Avenue and Beverly Avenue	Signalized	**E**	**F**	**E**	**F**
15	103rd Street and Morgan Street	Signalized	B	B	B	B
16	103rd Street and Halsted Street	Signalized	**F**	D	**F**	D

ID	Intersection	Control Type	2030 No Build Alternative		2030 BRT Alternative Mitigated	
			AM Peak-Hour LOS	PM Peak-Hour LOS	AM Peak-Hour LOS	PM Peak-Hour LOS
17	103rd Street and Normal Avenue	Signalized	B	B	B	B
18	103rd Street and Wentworth Avenue	Signalized	B	B	B	B
19	103rd Street and State Street	Signalized	B	B	B	B
20	103rd Street and Michigan Avenue	Signalized	B	B	B	B
21	103rd Street and Martin Luther King Drive	Signalized	C	C	C	C
22	103rd Street and Cottage Grove Avenue	Signalized	B	B	B	B
23	103rd Street and Woodlawn Avenue	Signalized	A	A	A	A
24	107th Street and Halsted Street	Signalized	**F**	C	**F**	C
25	107th Street and Wentworth Avenue	Signalized	B	B	B	B
26	107th Street and State Street	Signalized	A	A	A	B
27	107th Street and Michigan Avenue	Signalized	B	B	B	B
28	107th Street and Martin Luther King Drive	Signalized	B	B	B	B
29	107th Street and Cottage Grove Avenue	Signalized	B	B	B	B
30	111th Street and Marshfield Avenue	Signalized	C	C	C	C
31	111th Street and Hamlet Avenue	Signalized	D	D	D	D
32	112th Place and Marshfield Avenue	Signalized	B	C	C	C
33	112th Place and Hamlet Avenue	Signalized	**E**	C	**E**	C
34	111th Street and Halsted Street	Signalized	C	C	C	C
35	111th Street and Normal Avenue	Signalized	B	A	B	B
36	111th Street and Wentworth Avenue	Signalized	B	A	B	A
37	111th Street and State Street	Signalized	A	B	B	B
38	111th Street and Michigan Avenue	Signalized	B	B	B	B
39	111th Street and Indiana Avenue	Signalized	B	B	B	B
40	111th Street and Martin Luther King Drive	Signalized	B	A	B	A
41	111th Street and Cottage Grove Avenue	Signalized	C	D	C	C
42a	111th Street and Langley Avenue	Signalized	B	C	B	D
42b	111th Street and Ellis Avenue	Signalized	C	C	C	C
43	111th Street and Doty Avenue	Signalized	C	C	C	C
44	111th Street and Bishop Ford eastbound Ramps	Unsignalized	**E**	C	**E**	C
45	111th Street and Bishop Ford westbound Ramps	Unsignalized	**E**	B	**E**	C
46	115th Street and Marshfield Avenue	Signalized	B	B	B	B
47	115th Street and Ashland Avenue	Signalized	B	B	B	B

ID	Intersection	Control Type	2030 No Build Alternative		2030 BRT Alternative Mitigated	
			AM Peak-Hour LOS	PM Peak-Hour LOS	AM Peak-Hour LOS	PM Peak-Hour LOS
48	115th Street and Racine Avenue	Signalized	B	C	B	D
49	115th Street and Halsted Street	Signalized	C	C	C	C
50	115th Street and Wentworth Avenue	Signalized	B	B	B	B
51	115th Street and State Street	Signalized	B	B	B	B
52	115th Street and Michigan Avenue	Signalized	B	D	C	D
53	115th Street and Indiana Avenue	Signalized	B	B	B	C
54	115th Street and Martin Luther King Drive	Unsignalized	D	**F**	D	**F**
55a	115th Street and Cottage Grove Avenue	Signalized	D	C	C	D
55b	115th Street and Cottage Grove Avenue East	Signalized	**E**	C	C	B
56	115th Street and Bishop Ford Freeway eastbound Ramps	Unsignalized	D	C	D	C
57	115th Street and Bishop Ford Freeway westbound Ramps	Unsignalized	D	C	D	C
58	119th Street and Marshfield Avenue	Signalized	D	D	D	D
59	119th Street and Ashland Avenue	Signalized	D	**F**	D	**F**
60	119th Street and Halsted Street	Signalized	C	C	C	C
61	119th Street and Wentworth Avenue	Signalized	B	B	B	B
62	119th Street and State Street	Signalized	B	B	C	B
63	119th Street and Michigan Avenue	Signalized	A	A	B	B
64	127th Street and Paulina Street	Signalized	C	C	B	C
65	127th Street and Marshfield Avenue	Signalized	C	C	C	C
66	127th Street and Ashland Avenue	Signalized	C	C	C	D
67	Ashland Avenue and Vermont Avenue	Signalized	C	C	C	C
68	127th Street and Halsted Street	Signalized	C	C	C	C
69	Vermont Avenue and Halsted Street	Signalized	B	B	B	B
70	127th Street and Vermont Avenue and Wallace Street	Signalized	D	D	C	C
71	127th Street and State Street	Signalized	B	B	C	C
72	127th Street and Michigan Avenue	Signalized	A	B	B	C
73	130th Street and Indiana Avenue	Signalized	C	C	D	C
74	130th Street and Ellis Avenue	Signalized	A	A	A	B

Notes:
BRT = Bus Rapid Transit
Signalized intersection level of service (LOS) reported as the average for all movements. Unsignalized LOS reported is the LOS of the worst movement. LOS “E” and “F” are shown in bold.

The BRT Alternative includes Transit Signal Priority (TSP). TSP is an operational strategy that is applied to reduce the delay transit vehicles experience at traffic signals. TSP involves communication between buses and traffic signals so that a signal can alter its timing to give priority to transit operations. Priority may be accomplished through a number of methods, such as extending the duration of the green signal for the bus or providing an earlier red signal for side-street traffic. TSP is different from signal preemption, which interrupts the normal signal cycle to accommodate special events (e.g., a train approaching a railroad grade crossing adjacent to a signal or an emergency vehicle responding to a call). With preemption, certain signal phases may be skipped for the intersecting streets.

With TSP, however, the transit detection system communicates a priority request to the traffic signal that may or may not be granted. The TSP communication can fall in four categories:

1. If the bus will pass through a green signal with no alteration of the timing, then no change is made to the timing.

2. If the bus will be stopped at a red signal regardless of an alteration of the timing, then no change is made to the timing.

3. If the transit detection system calculates that keeping the signal green for a few more seconds (as determined by the priority algorithm) will allow the bus to clear the intersection, then the duration of the green signal is extended by a few seconds. “Green time” is reallocated for the benefit of the transit vehicle for this particular signal cycle.

4. If the transit detection system calculates that the bus will just catch the tail end of a red signal, the side street may be given a shorter green signal so that the BRT vehicle may be given an early green signal. Again, “green time” is reallocated for the benefit of the transit vehicle. Note that minimum side-street green times and minimum pedestrian crossing times are always checked in the priority algorithm.

In categories 3 and 4 when a request is granted, the traffic signal timing is altered to serve the priority request without disrupting coordination. In this situation, the normal signal operations process and overall signal cycle are maintained. With TSP, side-street phases would not be skipped, although the timing of the side-street phases will be altered in order to benefit the transit vehicle.

Because of the reallocation of green time, there is potential for additional delays to cross-street traffic. This potential is limited, based on the TSP algorithm to be developed in the design phase. Reallocation of green time typically occurs in less than ten percent of signal cycles because of the algorithm, constraints related to minimum green times, and granting of the TSP request only when the BRT vehicle is behind schedule. For another comparable study (Columbia Pike in Arlington, Virginia), there was only a one percent increase in overall delay with the use of TSP. Because the potential for change in delay (and level of service associated with delay) is small, and because the TSP algorithm is typically developed in the design phase (with refinement during operation), TSP impacts were not included in the traffic analysis for intersections within API.

5.2.1.3 Freight Transportation

There is an existing grade separation between the UPRR and the BRT Alternative on Michigan Avenue. The increase in bus service would therefore not affect the freight rail operations on the UPRR. The CN is separated from vehicular traffic with a grade separation structure at 130th and Indiana Avenue. The CN freight operations would not be affected.

The BRT Alternative would not affect freight transportation. Michigan Avenue is not a designated truck route; therefore, impacts on freight truck traffic would be minimal.

5.2.1.4 Bicycle Facilities

The City of Chicago has recommended a bike route along Michigan Avenue from 119th Street to 127th Street; however, the *Chicago Streets for Cycling Plan 2020* does not indicate a bike route along Michigan Avenue at this location. The *Streets for Cycling Plan 2020* has a recommended neighborhood bike route on State Street, west of Michigan Avenue at this location. Because the *Chicago Streets for Cycling Plan 2020* was adopted by the City of Chicago, it is assumed that the preferred route would be along State Street. There would be no impacts on bicycle facilities from the BRT Alternative.

5.2.1.5 Pedestrians

Pedestrian crossings are uncontrolled at the intersection of Kensington Street and Michigan Avenue. The proposed park & ride facility would have 1,000 spaces at this location. Due to the large number of potential riders, there would be a large number of passengers crossing Michigan Avenue at an unprotected location. There are existing crosswalks that could be improved to mitigate the potential impacts. Mitigation measures could include a public awareness campaign of pedestrian crosswalks, pedestrian refuge islands with signage, or signalization of the intersection.

Implementing the BRT Alternative would result in beneficial impacts by upgrading intersections with ADA-compliant curb ramps and replacing deteriorated sidewalks at bus stop locations with improved bus shelters. Improved bus shelters would be added to provide pedestrians protection from weather conditions. Proposed parking lots would have convenient and safe access to stop locations. Pedestrian access would benefit at the Eberhart Avenue stop with a new traffic signal, marked crosswalks, and ADA-compliant curb ramps. These improvements would provide access for all users and increase pedestrian safety.

5.2.1.6 Parking

Four park & ride locations are proposed with this alternative. The park & ride facilities would expand the reach of the BRT Alternative ridership, while providing enough parking capacity to prevent spillover parking into the surrounding neighborhoods. Table 5-7 lists the parking facility locations and capacity.

Table 5-7: Bus Rapid Transit Alternative Park & Ride Facilities

Location	Description	Parking Spaces Horizon Year (2030)
103rd Street	Surface Parking Lot	200
111th Street	Surface Parking Lot	200
Kensington Avenue	Three-Story Parking Garage	1,000
130th Street	Three-Story Parking Garage	1,400
Total		2,800

103rd Street

The BRT Alternative would stop in the same location that the existing CTA route #34 stops. Because there is already a no parking zone in the area of the bus lane, there would be no impact on any on-street parking at this stop. No off-street parking would be affected.

111th Street

The BRT Alternative would stop in the same location that the existing CTA route #34 stops in the farside configuration in the northbound direction and in the nearside configuration in the southbound direction. Because there is already a no parking zone in the area of the bus lane there would be no impact on any on-street parking at this stop. There is a proposed nearside configuration in the northbound direction, which is not currently a location of an existing bus stop. This configuration would eliminate approximately two to three on-street parking spaces. No off-street parking would be affected.

Kensington Avenue

The BRT Alternative would stop in the same location that the existing CTA route #34 stops. Because there is already a no parking zone in the area of the bus lane there would be no impact on any on-street parking at this stop. No off-street parking would be affected.

130th Street

There would be no impact on any on-street or off-street parking at this location.

5.2.2 Construction Impacts and Mitigations - Bus Rapid Transit Alternative

5.2.2.1 Public Transportation

The BRT Alternative would include construction of improved bus shelters at four locations, four park & ride parking lots or parking structures, and one proposed traffic signal. Existing traffic signals would be reprioritized. The construction activities associated with this alternative would temporarily affect the physical capacity of roadways and intersections, although construction zones at BRT stops typically occupy only one lane and are less than 200 feet in length. This may lead to increased travel times, a possible shift in traffic volumes, and the need to temporarily reroute bus transit service and move stop locations. Bus stops for routes along Michigan Avenue

(#34, #103, #106, and #119) will have changes in stops as construction progresses along the corridor. Bus stops for routes intersecting Michigan Avenue (#111 and #115) will require changes only when construction activities are in the vicinity of the applicable intersection. With adherence to local, state, and federal construction and temporary traffic management programs, as well as public transportation management guidelines, no lasting adverse impacts from the BRT Alternative would result.

5.2.2.2 Traffic

The construction activities associated with this alternative would temporarily affect the physical capacity of local roadways and intersections. Construction of BRT stops typically create only minor construction impacts since the work zones at BRT stops occupy only one lane and are less than 200 feet in length. This may lead to increased travel times and possible shift in traffic volumes and traffic patterns during construction. Detours to other nearby streets are not anticipated for BRT stop construction.

Adherence to local, state, and federal construction and temporary traffic management guidelines would result in no lasting adverse traffic impacts from the BRT Alternative.

5.2.2.3 Freight Transportation

Construction of the proposed parking lot northeast of the UPRR tracks may require some temporary scheduled track closures. Construction activities would be phased to ensure that impacts on freight trains are minimized.

5.2.2.4 Bicycle Facilities

Temporary construction impacts for bicycle facilities associated with the BRT Alternative may occur in locations where new bus shelters and surface parking lots are proposed. Some construction activities may reduce the capacity of the roadway due to maintenance of traffic during construction activities. This may lead to increased travel times for bicyclists. There are no existing or recommended routes along Michigan Avenue, which is the proposed alignment of the BRT Alternative.

5.2.2.5 Pedestrians

Temporary construction impacts for pedestrians associated with the BRT Alternative would occur in locations of the four upgraded bus shelters and park & ride lots or structures. Some construction activities may result in a temporary sidewalk closure on one side of the street.

5.2.2.6 Parking

On-street parking along the roadways would be temporarily affected for construction of park & ride lots or structures and bus shelters due to maintenance of traffic during construction activities.

5.2.3 Cumulative Impacts and Mitigations - Bus Rapid Transit Alternative

There would be no cumulative impacts due to the BRT Alternative.

5.3 Union Pacific Railroad Rail Alternative - Right-of-Way Option

The Union Pacific Railroad (UPRR) Rail Alternative Right-of-Way (ROW) Option would include construction of an elevated structure heading south from 95th Street along I-57 until reaching the UPRR corridor in the vicinity of Eggleston Avenue. The alignment would then turn south along the UPRR corridor to approximately 111th Street, where it would turn southeast. East of Prairie Avenue, the alignment would cross over the CN/ME tracks near 119th Street, where it would transition to an at-grade profile and then continue southeast along the NICTD/CSS & SBRR ROW using a portion of the IHB alignment to terminate at 130th Street. Four stations would be included at 103rd Street, 111th Street, Michigan Avenue, and 130th Street. CTA tracks would be placed in the UPRR ROW. CDOT is preparing the Far South Railroad Relocation Feasibility Study (FSRRFS). The study examines a possible project to move the existing freight operations out of the UPRR corridor, leaving the corridor vacant. The CTA would implement the ROW Option only if this separate project occurs prior to RLE. If the relocation project does not occur, then the CTA would need to choose either the East Option or West Option in order to pursue the UPRR Rail Alternative.

Figure 5-2 shows the UPRR ROW Option. The impact analysis was conducted for two segments within the UPRR Rail Alternative options. Segments UA and UB are shown on Figure 5-2. (Segment UB is the same for the three UPRR options, although impacts are not the same across all categories.) Because the traffic analysis was conducted on a regional basis, the traffic discussion was not divided into segments.

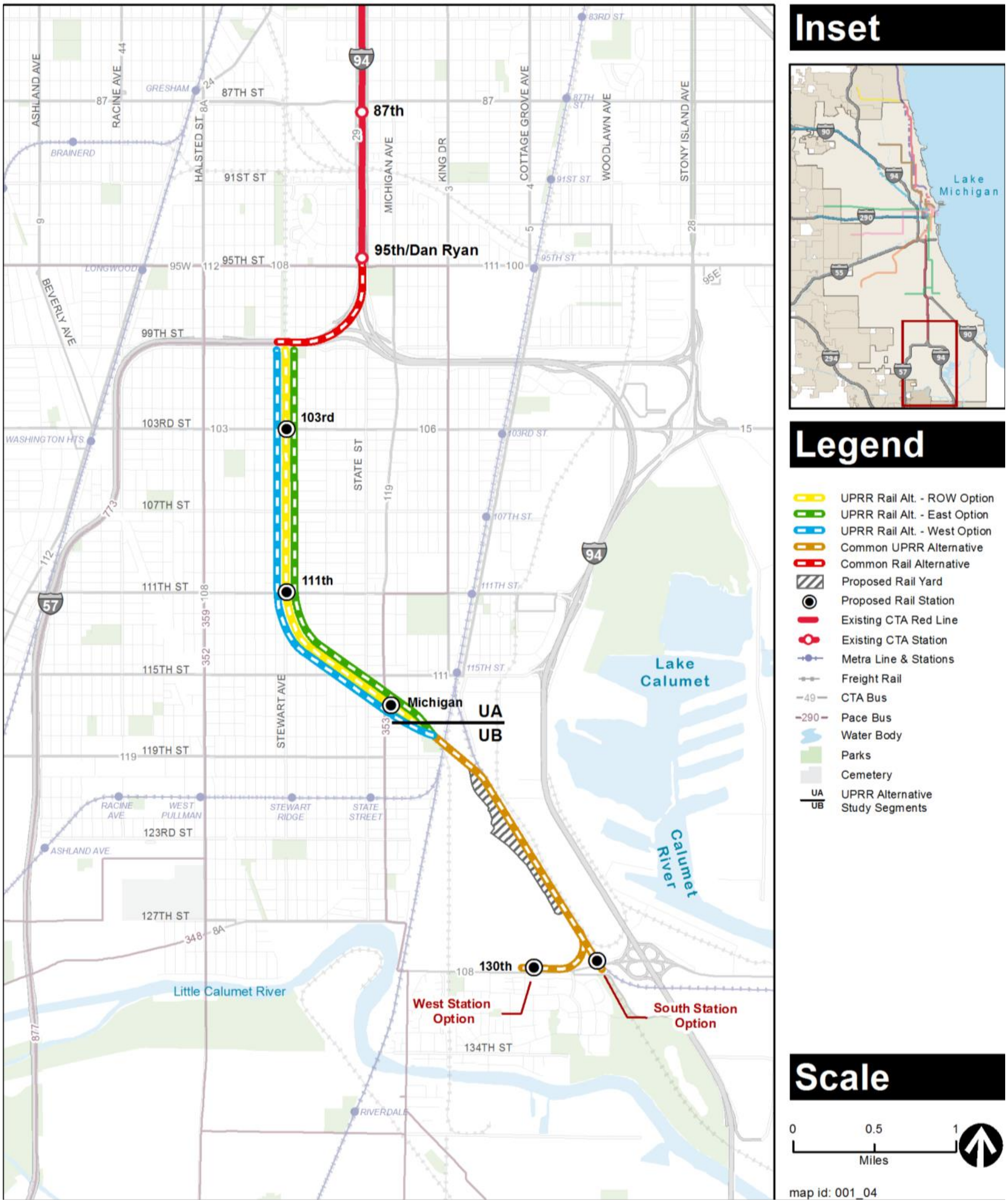
87th
95th/Dan Ryan
103rd
111th
Michigan
UA
UB
130th
West Station Option
South Station Option
87TH ST
91ST ST
95TH ST
99TH ST
103RD ST
107TH ST
111TH ST
115TH ST
119TH ST
123RD ST
127TH ST
134TH ST
ASHLAND AVE
RACINE AVE
HALSTED ST
BEVERLY AVE
STEWART AVE
STATE ST
MICHIGAN AVE
KING DR
COTTAGE GROVE AVE
WOODLAWN AVE
STONY ISLAND AVE
GRESHAM
BRAINERD
LONGWOOD
WASHINGTON HTS
RACINE AVE
WEST PULLMAN
STEWART RIDGE
STATE STREET
ASHLAND AVE
RIVERDALE
83RD ST
87TH ST
91ST ST
95TH ST
103RD ST
107TH ST
111TH ST
115TH ST
Lake Calumet
Calumet River
Little Calumet River
94
57
Inset
Lake Michigan
90
94
290
55
294
57
Legend
UPRR Rail Alt. - ROW Option
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
Common UPRR Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
49 CTA Bus
290 Pace Bus
Water Body
Parks
Cemetery
UA UB UPRR Alternative Study Segments
Scale
0
0.5
1
Miles
map id: 001_04

Figure 5-2: Union Pacific Railroad Rail Alternative

5.3.1 Permanent Impacts and Mitigations - Union Pacific Railroad Rail Alternative - Right-of-Way Option

5.3.1.1 Public Transportation

Currently the 95th Street Terminal is the southern terminus of the Red Line. Many of the existing bus routes within the project area terminate at this location. From this station, passengers continue to travel north on the Red Line or connect to a different bus route. With the expansion of the Red Line, some existing bus routes would be rerouted to feed into the proposed stations. Passengers would benefit from reduced travel times to connecting rail service, further south of the 95th Street Terminal. The transportation modeling indicates approximately 4,050 new riders for the UPRR Rail Alternative and total project weekday boardings of 41,500 (AECOM 2009).

The following describes changes to existing bus routes as a result of the UPRR ROW Option:

Segment UA

- CTA route #9 Ashland would terminate at the 103rd Street station, allowing passengers to continue to travel south of 104th Street, where the existing route #9 currently terminates. A proposed bus turnaround would be included in the surface parking lot.
- CTA route #103 West 103rd and #106 East 103rd would be combined into one route operating between a west terminal at Pulaski Road and an east terminal at Stony Island Avenue. This change would reduce the number of bus routes that terminate at 95th Street while still providing service to the proposed Red Line. This route would serve transit users east and west of the proposed UPRR Rail Alternative alignment.
- The CTA route #108 Halsted/95th would be eliminated because the addition of the rail extension would reduce the need for this express bus service.
- CTA routes #112 Vincennes/111th and #111 111th/King Drive would be restructured to simplify route paths and better serve the new alignment. Route #111 would operate on 111th Street between 111th Street/Pulaski Road and 111th Street/Corliss Avenue, serving the new 111th Street station. A new CTA route #115 would operate as a two-directional loop on 115th Street, Cottage Grove Avenue, 95th Street, and Vincennes Avenue. CTA route #112 would be eliminated.
- CTA route #119 Michigan/119th would stop at the Michigan Avenue station. This route provides service to transit users west of the proposed UPRR Rail Alternative alignment.

Segment UB

- Pace route #348 would terminate at 130th Street/I-94, extending the route from its current southern turnaround location at 136th Street/Indiana Avenue. CTA route #30 South Chicago would terminate at the 130th Street station from its current terminal at 130th Street/Exchange Avenue. Pace route #353, rather than run on the expressway to the 95th Street Terminal, would provide passengers a transfer at the 130th Street station.
- Pace routes #352 and #359 would terminate at the 111th Street station instead of 95th Street.

"User benefit" is a measure of travel time improvement for each person boarding the system. This measure indicates the overall reduction in travel time including travel to the station, wait time, transfer time, and on-transit time. For the UPRR Alternative, the average user benefit per boarding passenger would be 10 minutes (AECOM 2009). Public transportation would be restructured to supplement the UPRR Alternative, allowing patrons reduced travel times to the Loop. The congestion at 95th Street Terminal would be reduced by minimizing the number of bus transfers patrons need because they would be able to transfer to or directly board at the proposed stations.

There would be no adverse impacts on public transportation from the UPRR ROW Option. Public transportation would benefit from the UPRR ROW Option.

5.3.1.2 Traffic

Under UPRR ROW Option (2026) conditions, most of the study intersections within the API would operate at LOS "D" or better in both the AM and PM peak hours, as shown in Table 5-8. The traffic data and Synchro results are in Appendix D for the UPRR ROW Option. All increases in traffic volumes are related to vehicle access to park & ride facilities at stations. Under UPRR ROW Option (2026) conditions, there would be 18 intersections that would operate at an unacceptable LOS (LOS "E" or "F") in either or both the AM and PM peak hours. Of those 18 intersections, 11 would operate at conditions worse than the No Build conditions. The intersections that would operate at worse than the No Build conditions are shown in bold in Table 5-8 and are listed below:

- 103rd Street and Halsted Street - AM LOS = F; **PM LOS = E**
- 115th Street and Michigan Avenue - **AM LOS = F; PM LOS = E**
- 115th Street and Cottage Grove Avenue - **AM LOS = F; PM LOS = F**
- 115th Street and Cottage Grove Avenue East - **AM LOS = E**
- 119th Street and Wentworth Avenue - **PM LOS = E**
- 119th Street and State Street - **AM LOS = F; PM LOS = F**
- 119th Street and Michigan Avenue - **AM LOS = E**
- 127th Street and Halsted Street - **AM LOS = E; PM LOS = F**
- 127th Street and Vermont Avenue and Wallace Street - **AM LOS = F; PM LOS = F**
- 127th Street and State Street - **PM LOS = E**
- 130th Street and Indiana Avenue - **AM LOS = F; PM LOS = F**

Under UPRR ROW Option (2030) conditions, most of the study intersections within the API would operate at LOS "D" or better in both the AM and PM peak hours, as shown in Table 5-8. Under UPRR ROW Option (2030) conditions, there would be 21 intersections operating at LOS "E" or "F" in either or both the AM and PM peak hours. Of the 21 intersections, 15 would operate at worse than the No Build conditions. The following 15 intersections would operate at worse than the No Build conditions (shown in bold text in Table 5-8):

- 103rd Street and Halsted Street - AM LOS = F; **PM LOS = E**
- 111th Street and Cottage Grove Avenue - **PM LOS = E**
- 115th Street and Michigan Avenue - **AM LOS = F; PM LOS = E**
- 115th Street and Martin Luther King Drive - **AM LOS = E**; PM LOS = F
- 115th Street and Cottage Grove Avenue - **PM LOS = F**
- 115th Street and Cottage Grove Avenue East - **AM LOS = F**
- 119th Street and Ashland Avenue - **AM LOS = E**; PM LOS = F
- 119th Street and Wentworth Avenue - **PM LOS = F**
- 119th Street and State Street - **AM LOS = F; PM LOS = F**
- 119th Street and Michigan Avenue - **AM LOS = E**
- 127th Street and Halsted Street - **AM LOS = E; PM LOS = F**
- 127th Street and Vermont Avenue and Wallace Street - **AM LOS = F; PM LOS = F**
- 127th Street and State Street - **AM LOS = E; PM LOS = E**
- 130th Street and Indiana Avenue - **AM LOS = F; PM LOS = F**
- 130th Street and Ellis Avenue - **PM LOS = E**

Table 5-8: Union Pacific Railroad Rail Alternative Right-of-Way Option (2026 and 2030) Intersection Level of Service

ID	Intersection	Control Type	2026 UPRR ROW Option		2030 UPRR ROW Option	
			AM Peak-Hour LOS	PM Peak-Hour LOS	AM Peak-Hour LOS	PM Peak-Hour LOS
1	95th Street and Wentworth Avenue	Signalized	B	B	B	B
2	95th Street and Lafayette Avenue	Signalized	D	D	D	D
3	95th Street and State Street	Signalized	D	C	D	C
4	95th Street and Michigan Avenue	Signalized	B	B	B	B
5	98th Place and Halsted Street	Signalized	F	F	F	F
6	99th Street and Halsted Street	Signalized	D	C	D	C
7	98th Place and Wentworth Avenue	Signalized	B	B	B	B
8	99th Street and Wentworth Avenue	Signalized	B	B	B	B
9	99th Street and State Street	Signalized	A	B	A	B
10	99th Street and Michigan Avenue	Signalized	C	B	C	B
11	99th Place and Martin Luther King Drive	Signalized	B	B	B	B
12	100th Street and Martin Luther King Drive	Signalized	B	A	B	A
13	100th Street and Cottage Grove Avenue	Unsignalized	A	C	A	C
14	103rd Street and Vincennes Avenue and Beverly Avenue	Signalized	E	F	E	F
15	103rd Street and Morgan Street	Signalized	B	B	B	B
16	103rd Street and Halsted Street	Signalized	F	**E**	F	**E**
17	103rd Street and Normal Avenue	Signalized	B	B	B	C
18	103rd Street and Wentworth Avenue	Signalized	B	B	B	B
19	103rd Street and State Street	Signalized	B	B	B	B
20	103rd Street and Michigan Avenue	Signalized	B	B	B	B
21	103rd Street and Martin Luther King Drive	Signalized	C	C	C	C
22	103rd Street and Cottage Grove Avenue	Signalized	B	B	B	B
23	103rd Street and Woodlawn Avenue	Signalized	A	A	A	A
24	107th Street and Halsted Street	Signalized	F	C	F	C
25	107th Street and Wentworth Avenue	Signalized	B	B	B	B
26	107th Street and State Street	Signalized	A	B	A	A
27	107th Street and Michigan Avenue	Signalized	B	B	B	B
28	107th Street and Martin Luther King Drive	Signalized	B	B	B	B
29	107th Street and Cottage Grove Avenue	Signalized	B	B	B	B
30	111th Street and Marshfield Avenue	Signalized	C	C	C	C

ID	Intersection	Control Type	2026 UPRR ROW Option		2030 UPRR ROW Option	
			AM Peak-Hour LOS	PM Peak-Hour LOS	AM Peak-Hour LOS	PM Peak-Hour LOS
31	111th Street and Hamlet Avenue	Signalized	D	D	D	D
32	112th Place and Marshfield Avenue	Signalized	B	C	C	C
33	112th Place and Hamlet Avenue	Signalized	E	C	E	C
34	111th Street and Halsted Street	Signalized	C	C	C	C
35	111th Street and Normal Avenue	Signalized	B	B	B	B
36	111th Street and Wentworth Avenue	Signalized	B	A	B	A
37	111th Street and State Street	Signalized	A	B	A	B
38	111th Street and Michigan Avenue	Signalized	B	B	B	B
39	111th Street and Indiana Avenue	Signalized	B	B	B	B
40	111th Street and Martin Luther King Drive	Signalized	B	A	B	A
41	111th Street and Cottage Grove Avenue	Signalized	C	D	C	**E**
42a	111th Street and Langley Avenue	Signalized	B	C	B	C
42b	111th Street and Ellis Avenue	Signalized	C	C	D	D
43	111th Street and Doty Avenue	Signalized	C	C	C	C
44	111th Street and Bishop Ford eastbound Ramps	Unsignalized	D	C	E	C
45	111th Street and Bishop Ford westbound Ramps	Unsignalized	E	C	E	C
46	115th Street and Marshfield Avenue	Signalized	B	B	B	B
47	115th Street and Ashland Avenue	Signalized	B	B	B	B
48	115th Street and Racine Avenue	Signalized	B	C	B	C
49	115th Street and Halsted Street	Signalized	C	C	C	C
50	115th Street and Wentworth Avenue	Signalized	B	B	B	B
51	115th Street and State Street	Signalized	B	B	B	B
52	115th Street and Michigan Avenue	Signalized	**F**	**E**	**F**	**E**
53	115th Street and Indiana Avenue	Signalized	B	B	B	C
54	115th Street and Martin Luther King Drive	Unsignalized	D	F	**E**	F
55a	115th Street and Cottage Grove Avenue	Signalized	**F**	**F**	D	**F**
55b	115th Street and Cottage Grove Avenue East	Signalized	**E**	D	**F**	D
56	115th Street and Bishop Ford Freeway eastbound Ramps	Unsignalized	D	C	D	C
57	115th Street and Bishop Ford Freeway westbound Ramps	Unsignalized	D	C	D	C
58	119th Street and Marshfield Avenue	Signalized	D	D	D	D
59	119th Street and Ashland Avenue	Signalized	D	F	**E**	F
60	119th Street and Halsted Street	Signalized	C	D	C	D

ID	Intersection	Control Type	2026 UPRR ROW Option		2030 UPRR ROW Option	
			AM Peak-Hour LOS	PM Peak-Hour LOS	AM Peak-Hour LOS	PM Peak-Hour LOS
61	119th Street and Wentworth Avenue	Signalized	B	**E**	B	**F**
62	119th Street and State Street	Signalized	**F**	**F**	**F**	**F**
63	119th Street and Michigan Avenue	Signalized	**E**	B	**E**	B
64	127th Street and Paulina Street	Signalized	C	D	C	D
65	127th Street and Marshfield Avenue	Signalized	D	C	D	C
66	127th Street and Ashland Avenue	Signalized	C	D	C	D
67	Ashland Avenue and Vermont Avenue	Signalized	C	C	C	C
68	127th Street and Halsted Street	Signalized	**E**	**F**	**E**	**F**
69	Vermont Avenue and Halsted Street	Signalized	B	B	B	B
70	127th Street and Vermont Avenue and Wallace Street	Signalized	**F**	**F**	**F**	**F**
71	127th Street and State Street	Signalized	D	**E**	**E**	**E**
72	127th Street and Michigan Avenue	Signalized	A	D	B	D
73	130th Street and Indiana Avenue	Signalized	**F**	**F**	**F**	**F**
74	130th Street and Ellis Avenue	Signalized	A	D	B	**E**

Notes:
UPRR = Union Pacific Railroad, LOS = level of service
Signalized intersection LOS reported as the average for all movements. Unsignalized LOS reported is the LOS of the worst movement. LOS “E” and “F” are shown in bold.

Mitigation measures to reduce or minimize the impacts were evaluated for the transportation network surrounding the UPRR ROW Option. Mitigation measures for intersections near the affected intersection may also be necessary to provide better flow of traffic; therefore, the provided mitigation measures include the affected intersections as well as adjacent or nearby intersections. Table 5-9 lists the mitigation measures that would address impacts on the study intersections under UPRR ROW Option (2030) conditions. At intersections where adverse impacts are expected, potential mitigation measures have been identified to offset the portion of the LOS deterioration attributable to the RLE Project.

Table 5-9: Mitigation Measures for the Union Pacific Railroad Rail Alternative Right-of-Way Option (2030) Conditions

ID	Intersection	Mitigation Measure
16	103rd Street and Halsted Street	PM: Optimize cycle length/splits.
41	111th Street and Cottage Grove Avenue	PM: Optimize splits.
52	115th Street and Michigan Avenue	AM: Optimize splits. PM: Optimize cycle length/splits.
54	115th Street and Martin Luther King Drive	Remove on-street parking lane for additional through eastbound/westbound lane on 115th Street.
55a	115th Street and Cottage Grove Avenue	AM/PM: Optimize Cycle length. Optimize PM splits.
55b	115th Street and Cottage Grove Avenue East	AM/PM: Optimize Cycle length. Optimize PM splits.
59	119th Street and Ashland Avenue	PM: Optimize splits
61	119th Street and Wentworth Avenue	PM: Optimize splits
62	119th Street and State Street	AM/PM: Optimize splits.
63	119th Street and Michigan Avenue	AM: Optimize splits.
64	127th Street and Paulina Street	AM/PM: Optimize cycle length/splits.
65	127th Street and Marshfield Avenue	AM/PM: Optimize cycle length/splits.
66	127th Street and Ashland Avenue	AM/PM: Optimize cycle length/splits.
68	127th Street and Halsted Street	AM/PM: Optimize cycle length and splits.
70	127th Street and Vermont Avenue and Wallace Street	Add additional northeast right turn lane. Change westbound through/left to dedicated westbound left turn lane. Restrict northeast bound to northbound movement. Actuate signal. Optimize cycle length/splits.
71	127th Street and State Street	AM/PM: Optimize cycle length/splits
72	127th Street and Michigan Avenue	PM: Optimize cycle length/splits
73	130th Street and Indiana Avenue	AM/PM: Add northbound right turn lane. Optimize cycle length/splits
74	130th Street and Ellis Avenue	PM: Optimize splits

Under UPRR ROW Option mitigated (2030) conditions, most of the study intersections within the API would operate at LOS “D” or better in both the AM and PM peak hours, as shown in Table 5-10. Under UPRR ROW Option mitigated (2030) conditions, some intersections would operate at LOS “E” or “F;” however, these intersections would be no worse than No Build (2030) conditions. Mitigated conditions would not result in additional intersections with unacceptable LOS. As such, there would be no adverse permanent traffic impacts for this alternative. Coordination regarding LOS thresholds was conducted with IDOT and CDOT. LOS D is considered to be acceptable for urban areas.

Table 5-10: Union Pacific Railroad Rail Alternative Right-of-Way Option Mitigated Alternative (2030) Intersection Level of Service

ID	Intersection	Control Type	2030 No Build Alternative		2030 UPRR ROW Option Mitigated	
			AM Peak-Hour LOS	PM Peak-Hour LOS	AM Peak-Hour LOS	PM Peak-Hour LOS
1	95th Street and Wentworth Avenue	Signalized	B	B	B	B
2	95th Street and Lafayette Avenue	Signalized	D	D	D	D
3	95th Street and State Street	Signalized	D	C	D	C
4	95th Street and Michigan Avenue	Signalized	B	B	B	B
5	98th Place and Halsted Street	Signalized	**F**	**F**	**F**	**F**
6	99th Street and Halsted Street	Signalized	D	D	D	C
7	98th Place and Wentworth Avenue	Signalized	B	B	B	B
8	99th Street and Wentworth Avenue	Signalized	B	B	B	B
9	99th Street and State Street	Signalized	A	B	A	B
10	99th Street and Michigan Avenue	Signalized	C	B	C	B
11	99th Place and Martin Luther King Drive	Signalized	B	B	B	B
12	100th Street and Martin Luther King Drive	Signalized	B	A	B	A
13	100th Street and Cottage Grove Avenue	Unsignalized	A	C	A	C
14	103rd Street and Vincennes Avenue and Beverly Avenue	Signalized	**E**	**F**	**E**	**F**
15	103rd Street and Morgan Street	Signalized	B	B	B	B
16	103rd Street and Halsted Street	Signalized	**F**	D	**F**	C
17	103rd Street and Normal Avenue	Signalized	B	B	B	C
18	103rd Street and Wentworth Avenue	Signalized	B	B	B	B
19	103rd Street and State Street	Signalized	B	B	B	B
20	103rd Street and Michigan Avenue	Signalized	B	B	B	B
21	103rd Street and Martin Luther King Drive	Signalized	C	C	C	C
22	103rd Street and Cottage Grove Avenue	Signalized	B	B	B	B
23	103rd Street and Woodlawn Avenue	Signalized	A	A	A	A
24	107th Street and Halsted Street	Signalized	**F**	C	**F**	C
25	107th Street and Wentworth Avenue	Signalized	B	B	B	B
26	107th Street and State Street	Signalized	A	A	A	A
27	107th Street and Michigan Avenue	Signalized	B	B	B	B
28	107th Street and Martin Luther King Drive	Signalized	B	B	B	B

ID	Intersection	Control Type	2030 No Build Alternative		2030 UPRR ROW Option Mitigated	
			AM Peak-Hour LOS	PM Peak-Hour LOS	AM Peak-Hour LOS	PM Peak-Hour LOS
29	107th Street and Cottage Grove Avenue	Signalized	B	B	B	B
30	111th Street and Marshfield Avenue	Signalized	C	C	C	C
31	111th Street and Hamlet Avenue	Signalized	D	D	D	D
32	112th Place and Marshfield Avenue	Signalized	B	C	C	C
33	112th Place and Hamlet Avenue	Signalized	**E**	C	**E**	C
34	111th Street and Halsted Street	Signalized	C	C	C	C
35	111th Street and Normal Avenue	Signalized	B	A	B	B
36	111th Street and Wentworth Avenue	Signalized	B	A	B	A
37	111th Street and State Street	Signalized	A	B	B	B
38	111th Street and Michigan Avenue	Signalized	B	B	B	B
39	111th Street and Indiana Avenue	Signalized	B	B	B	B
40	111th Street and Martin Luther King Drive	Signalized	B	A	B	A
41	111th Street and Cottage Grove Avenue	Signalized	C	D	C	C
42a	111th Street and Langley Avenue	Signalized	B	C	B	C
42b	111th Street and Ellis Avenue	Signalized	C	C	D	D
43	111th Street and Doty Avenue	Signalized	C	C	C	C
44	111th Street and Bishop Ford eastbound Ramps	Unsignalized	**E**	C	**E**	C
45	111th Street and Bishop Ford westbound Ramps	Unsignalized	**E**	B	**E**	C
46	115th Street and Marshfield Avenue	Signalized	B	B	B	B
47	115th Street and Ashland Avenue	Signalized	B	B	B	B
48	115th Street and Racine Avenue	Signalized	B	C	B	C
49	115th Street and Halsted Street	Signalized	C	C	C	C
50	115th Street and Wentworth Avenue	Signalized	B	B	B	B
51	115th Street and State Street	Signalized	B	B	B	B
52	115th Street and Michigan Avenue	Signalized	B	D	B	C
53	115th Street and Indiana Avenue	Signalized	B	B	B	C
54	115th Street and Martin Luther King Drive	Unsignalized	D	**F**	D	**F**
55a	115th Street and Cottage Grove Avenue	Signalized	D	C	B	C
55b	115th Street and Cottage Grove Avenue East	Signalized	**E**	C	C	B

ID	Intersection	Control Type	2030 No Build Alternative		2030 UPRR ROW Option Mitigated	
			AM Peak-Hour LOS	PM Peak-Hour LOS	AM Peak-Hour LOS	PM Peak-Hour LOS
56	115th Street and Bishop Ford Freeway eastbound Ramps	Unsignalized	D	C	D	C
57	115th Street and Bishop Ford Freeway westbound Ramps	Unsignalized	D	C	D	C
58	119th Street and Marshfield Avenue	Signalized	D	D	D	D
59	119th Street and Ashland Avenue	Signalized	D	**F**	D	**F**
60	119th Street and Halsted Street	Signalized	C	C	C	D
61	119th Street and Wentworth Avenue	Signalized	B	B	B	B
62	119th Street and State Street	Signalized	B	B	C	B
63	119th Street and Michigan Avenue	Signalized	A	A	C	B
64	127th Street and Paulina Street	Signalized	C	C	B	C
65	127th Street and Marshfield Avenue	Signalized	C	C	C	C
66	127th Street and Ashland Avenue	Signalized	C	C	C	C
67	Ashland Avenue and Vermont Avenue	Signalized	C	C	C	C
68	127th Street and Halsted Street	Signalized	C	C	C	D
69	Vermont Avenue and Halsted Street	Signalized	B	B	B	B
70	127th Street and Vermont Avenue and Wallace Street	Signalized	D	D	C	D
71	127th Street and State Street	Signalized	B	B	B	C
72	127th Street and Michigan Avenue	Signalized	A	B	B	C
73	130th Street and Indiana Avenue	Signalized	C	C	D	D
74	130th Street and Ellis Avenue	Signalized	A	A	B	B

Notes:
UPRR = Union Pacific Railroad, ROW = right-of=way, LOS = level of service
Signalized intersection LOS reported as the average for all movements. Unsignalized LOS reported is the LOS of the worst movement. LOS “E” and “F” are shown in bold.

5.3.1.3 Freight Transportation

Rail

As part of the UPRR ROW Option the UPRR trains would be relocated to another corridor as part of a separate, earlier project that may occur regardless of the RLE implementation; therefore, no adverse permanent impacts would result from by UPRR operations. There would be no adverse permanent impacts on the CN or IHB freight operations.

Truck

The biggest challenge to the trucking industry is highway congestion, according to the *GO TO 2040 Regional Plan*. Congestion data prepared by CMAP shows that on several corridors where truck volumes are over 10,000 per day, congestion during morning peak periods increases travel times an average of 60 percent. The 130th Street station park & ride facility may divert motorists from I-94 commuting into the city during these peak periods. With the extension of the Red Line to 130th Street, the regional vehicle-miles traveled would be reduced by 0.02 percent, removing some motorists from the surrounding roadways (CMAP 2012b).

5.3.1.4 Bicycle Facilities

Under the UPRR ROW Option there would be no adverse permanent impacts on existing or recommended bike routes. Recommended bike routes along 103rd, 107th, 111th, and 115th Streets have the potential to be used by bicyclists to access the RLE (see Figure 4-6). The stations for the UPRR Alternative would have bicycle parking to accommodate bicyclists. This alternative would create easy and efficient transit connections to the RLE and the larger network of CTA stops and stations for bicyclists.

5.3.1.5 Pedestrians

The UPRR ROW Option would provide pedestrians with more choices, flexibility, and potentially reduced travel times as compared to other UPRR options. Under this option the existing at-grade crossings at 101st Street, 103rd Street, 107th Street, 109th Street, 111th Street, 115th Street, and State Street would no longer be active railroad crossings. This change would improve pedestrian safety at the 103rd Street, 111th Street, and Michigan Avenue stations as compared to other UPRR options.

Implementing the UPRR ROW Option would result in beneficial impacts at stations by upgrading intersections with ADA-compliant curb ramps and replacing deteriorated sidewalks. These improvements would provide access for all users and increase pedestrian safety.

Segment UA

103rd Street Station

Existing striped crosswalks at Eggleston Avenue and 103rd Street and Harvard Avenue and 103rd Street could be used to access the station and the surface parking lots. These crosswalks would be improved with the construction of the proposed surface lots. Entrances to the station would be near the surface parking lots, allowing for a direct route from the platform to the parking lot, allowing users to avoid crossing 103rd Street. The entrance to the parking lot east of the station would be in the southeast corner of the parking lot. The parking lot on the south side of 103rd Street would have an entrance at the intersection of 103rd Street and Eggleston Avenue, allowing cars to leave the parking lot farther away from the station, where the majority of pedestrian traffic would occur. All of these improvements would contribute to convenient, safe, and secure access for all users.

111th Street Station

Because the majority of the existing properties adjacent to the existing railroad tracks are undeveloped, sidewalks would need to be provided for pedestrian access to the primary and auxiliary entrances of the proposed station. Existing striped crosswalks are not close to the location of the proposed station's primary entrance. The surface parking lots would be on the east and west side of the station, allowing for a direct route from the platform to the parking lot, in which users could avoid crossing 111th Street. The east surface parking lot would have an entrance at the southeast corner of the lot and the west surface parking lot would have an entrance along Eggleston Avenue. Both of these entrances would be away from the proposed station location where the majority of pedestrian traffic would occur. Eggleston Avenue is currently a dead-end street and has little traffic. The majority of traffic on the street would occur from the surface parking lot. All of these improvements would contribute to convenient, safe, and secure access for all users.

Potential pedestrian conflicts with vehicular traffic would be mitigated through the addition of a striped crosswalk on 111th Street at the location of the primary entrance due to the tendency of pedestrians to cross at the entrance/exit of the station.

Michigan Avenue Station

The existing pedestrian access on 116th Street east of Michigan Avenue would be improved with the construction of the surface lot and the auxiliary station entrance. The existing viaduct and existing sidewalks would be replaced, providing a continuous ADA-accessible route east and west of the station and sidewalk connectivity to the existing homes east of the station on 116th Street. The parking garage would be located close to the primary entrance of the proposed station, allowing commuters who park in this garage to avoid crossing Michigan Avenue or 116th Street. Parking lot entrances would be on State Street and 116th Street, which are a good distance from the station, where pedestrian traffic would be concentrated. The surface parking lot would be near the auxiliary entrance of the station. Commuters would have a direct route from the surface lot to the platform without any need to cross 116th Street.

Segment UB

130th Street Station

- South Station Option: The existing parcels in the location of the proposed station are currently undeveloped land. Proposed sidewalks along 130th Street and Ellis Avenue, as well as striped crosswalks at the intersection of 130th Street and Ellis Avenue, would provide a safe pedestrian access for the Altgeld Gardens neighborhood residents. The auxiliary entrance would also provide direct access to the Altgeld Gardens neighborhood by eliminating the need to cross 130th Street. It would also provide access to students and faculty at the Carver Military Academy High School, east of the station on Doty Avenue.

- West Station Option: Part of the proposed station improvements include sidewalks along 130th Street and Evans Avenue, a proposed traffic signal, and marked crosswalks. These improvements would provide a continuous ADA-accessible route from the Altgeld Gardens neighborhood to the station.

There would be no adverse impacts on pedestrians from the UPRR ROW Option.

5.3.1.6 Parking

The UPRR ROW Option alignment is within the existing ROW of the UPRR. On-street parking restrictions already exist at the railroad crossings. There would be no impact on on-street parking due to the proposed stations. Existing bus stops are on 103rd Street and 111th Street at the location of the proposed stations. These existing stops already have a no parking zone in the locations of the existing bus lanes, so there would be no impact on on-street parking due to bus stop locations. There are two existing bus stops on Michigan Avenue from Kensington Avenue to 116th Street. These existing bus stop locations could serve the proposed station; therefore, no on-street parking would be affected by adding bus stop locations.

Each of the proposed stations would have surface parking lots and/or parking garages, which would expand the reach of the RLE and provide an opportunity for users to access the station by car. Users may benefit from reduced travel time and reduced travel cost by riding the Red Line. Another benefit would be that motorists could be diverted from congested sections of roadway. Sufficient parking capacity would be provided in all locations to avoid spillover parking into the residential areas near the station locations. Table 5-11 presents a summary of the proposed parking for each of the stations.

Segment UA

Table 5-11: Segment UA Proposed Park & Ride Facilities

Station	Parking Type	Capacity	Location	Description
103rd Street	Surface lot	100	East of station, North side of 103rd Street	Bus turnaround within the lot for route #9
	Surface lot	100	Adjacent to station on the south side of 103rd Street	
111th Street	Surface lot	100	East of station. North side of 111th Street	
	Surface lot	100	West of station. North side of 111th Street	Bus turnaround within the lot for route #352
Michigan Avenue	Three-Story Parking Garage	750	Southwest of station	Parking garage with ground level available for retail and/or community facilities. Bus turnaround on the ground level for route #119 and #359
	Surface lot	250	Located northeast of the station.	

Segment UB

130th Street Station

There would be no adverse impact on any existing off-street or on-street parking as a result of the South Station Option or the West Station Option. Each of the station options would include a bus terminal with four bus bays and an overhead canopy. A park & ride facility with 2,300 parking spaces would be constructed by 2030 for the South Station Option. The West Station Option would include a park & ride facility with 1,950 parking spaces plus a surface lot with 350 parking spaces. The park & ride facility would be near the I-94 Bishop Ford Freeway and 130th Street interchange. This facility would expand the reach of the RLE to the south suburban and northwest Indiana automobile commuters. These commuters could benefit from decreased travel times and cost by riding the Red Line and avoiding congestion and travel delays on the Dan Ryan Expressway. See Table 5-12 for summary of proposed parking options for the 130th Street station.

Table 5-12: Segment UB Proposed Park & Ride Facilities

Station	Parking Type	Capacity	Location	Description
130th Street South Station Option	Seven-Story Parking Garage	2,300	North of 130th Street adjacent to the NICTD/CSS & SBRR tracks	Bus terminals with 4 bus bays and an overhead canopy
130th Street West Station Option	Four-Story Parking Garage	1,950	North of 130th Street	Bus terminals with 4 bus bays and an overhead canopy
	Surface lot	350		

5.3.2 Construction Impacts and Mitigations - Union Pacific Railroad Rail Alternative - Right-of-Way Option

5.3.2.1 Public Transportation

Bus Transit

The construction activities associated with the UPRR ROW Option would temporarily affect the physical capacity of roadways and intersections requiring detours. This may lead to increased travel times and possible shift in traffic volumes, increasing travel times for bus transit users. Bus stop locations may be eliminated or relocated temporarily and buses rerouted during construction activities. Bus stops for routes intersecting the UPRR Alternative (#34, #103, #111, and #115) will have changes only when construction activities are in the vicinity of the applicable crossing. With adherence to local, state, and federal construction and temporary traffic and public transportation management guidelines, no adverse construction impacts from the UPRR ROW Option would result.

Commuter Rail

The UPRR ROW Option would consist of new construction of dual-track, elevated structure within the UPRR ROW, branching off and running along the east side of the corridor and over existing CN/ME tracks. Construction at the CN/ME crossing would be phased to minimize the impacts on Metra operations. This impact is expected only in segment UB.

During new track roadbed construction for the 120th Street yard and shop and the new access road for the existing MWRD facility, construction over and adjacent to the NICTD/CSS & SBRR ROW would occur. Flagging operations and scheduled track closures would occur during these construction activities. Construction would be phased to minimize the impacts on passenger trains.

5.3.2.2 Traffic

Construction activities associated with this alternative would temporarily affect the physical capacity of local roadways and intersections. This may lead to increased travel times, possible shift in traffic volumes, and the need to reroute traffic patterns during construction. On the local streets, steel beam placement across a street would require temporary shutdown of traffic across the crossing. Detours would be to adjacent parallel streets with existing crossings of the UPRR tracks.

Work within the median of I-94 would require temporary lane closures. Proposed structure construction would be sequenced to minimally affect traffic flow on I-94. Increased traffic congestion due to construction activities may temporarily increase travel times along this portion of I-94.

Dual-track, elevated structures would be constructed through the I-94/I-57 interchange, across the westbound I-57 entrance ramp from northbound I-94, and within the I-57 corridor. For superstructure erection over expressway traffic lanes, temporary shutdown of all traffic would be required at nighttime, per IDOT approval, typically at times of low traffic volume. Proposed structure construction would be sequenced to minimally affect traffic flow on I-57. Increased traffic congestion due to construction activities may temporarily increase travel times along this portion of I-57. With adherence to local, state, and federal construction and temporary traffic management guidelines, no lasting adverse traffic impacts would result from the UPRR ROW Option.

5.3.2.3 Freight Transportation

Segment UA

Rail

The UPRR ROW Option would consist of new construction of a dual-track, elevated structure within the UPRR corridor, branching off and running along the east side of the corridor and over existing CN/ME tracks. There would be no impact on the UPRR operations due to construction activities because UPRR trains would be relocated to another corridor as part of a separate, earlier project.

Truck

Work within the median of I-94 would require temporary lane closures. Proposed structure construction would be sequenced to minimally affect traffic flow on I-94. Increased traffic congestion due to construction activities may temporarily increase freight truck travel times for shipping routes that include this portion of I-94.

Dual-track, elevated structures would be constructed through the I-94/I-57 interchange, across the westbound I-57 entrance ramp from northbound I-94, and within the I-57 corridor. For superstructure erection over expressway traffic lanes, intermittent, temporary shutdown (typically no more than 15-minute increments) of all traffic would be required at nighttime, per IDOT approval. Proposed structure construction would be sequenced to minimally affect traffic flow on I-57. Increased traffic congestion due to construction activities may temporarily increase freight truck travel times for shipping routes that include this portion of I-57.[4]

Segment UB

Construction at the CN/ME crossing would be phased to minimize the impacts on CN and Metra operations. Railroad flagging and scheduled track closures would be needed to construct the crossing.

During new track roadbed construction for the 120th Street yard and shop and the new access road for the existing MWRD facility, construction over and adjacent to the NICTD/CSS & SBRR ROW would occur. Flagging operations and scheduled track closures would also occur during these construction activities. Construction would be phased to minimize impacts on freight operations.

A portion of the new track alignment would be constructed over IHB tracks north of 130th Place. Construction activities would be coordinated with IHB railroad to ensure that no construction activities would affect freight operations.

5.3.2.4 Bicycle Facilities

Bicyclists using recommended low traffic residential streets such as 103rd Street, 111th Street, or 115th Street may incur increased travel times due to detours or increase vehicular traffic due to construction activities.

5.3.2.5 Pedestrians

Due to the construction of the aerial structure and stations, sidewalks would need to be temporarily closed during these construction activities. Increased travel distance and time may be incurred due to pedestrian traffic reroutes.

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[4] Per IDOT Average Daily Truck Traffic maps, an average of 5,700 trucks per day travel along I-57 just east of Halsted Street. Based on time-of-day truck distribution, less than one percent of this daily average travel during each hour between midnight and 4:00 AM weekdays.

5.3.2.6 Parking

On-street parking would be temporarily affected during construction of the aerial structure and stations. Construction of park & ride lots would also contribute to temporary on-street parking loss due to maintenance of traffic during construction activities.

5.3.3 Cumulative Impacts and Mitigations - Union Pacific Railroad Rail Alternative - Right-of-Way Option

There would be no adverse cumulative impacts due to the implementation of the UPRR ROW Option. Cumulative benefits, related to the earlier project to remove UPRR trains from the corridor, include decreased delay for vehicles and buses at at-grade railroad crossings and increased pedestrian safety at the crossings.

5.3.4 120th Street Yard and Shop

A 270-car yard and shop facility would be constructed on a combination of industrial/vacant land to the east of the CN/ME tracks and west of the NICTD/CSS & SBRR tracks at approximately 120th Street and Cottage Grove Avenue. The yard would be entirely at grade. A nominal amount of parking for employees would be included at the yard. A substation is tentatively proposed for a location within the 120th Street yard, west of the existing railroad tracks and east of the proposed shop facility.

5.3.4.1 Permanent Impacts and Mitigations

Under the UPRR ROW Option there would be no permanent impacts on bicycle or pedestrians because the existing site is a combination of industrial and vacant land. Pedestrian access by the general public would be restricted and discouraged. Because of the location of the yard, no public transportation or parking facilities would be affected by this alternative. Some proposed parking would be provided for yard employees.

5.3.4.2 Construction Impacts and Mitigations

During new track roadbed construction for the 120th Street yard and shop and the new access road for the existing MWRD facility, construction over and adjacent to the NICTD/CSS & SBRR ROW would occur. Flagging operations and scheduled track closures would also occur during these construction activities. Construction would be phased to minimize impacts on MWRD operations and NICTD/CSS & SBRR operations.

5.4 Union Pacific Railroad Rail Alternative - East Option

The UPRR Rail Alternative East Option would include construction of an elevated structure following an alignment similar to that of the UPRR ROW Option. The difference is that CTA tracks would be placed immediately adjacent to and east of the UPRR ROW Option alignment. Four stations would be included at 103rd Street, 111th Street, Michigan Avenue, and 130th Street.

5.4.1 Permanent Impacts and Mitigations - Union Pacific Railroad Rail Alternative - East Option

5.4.1.1 Public Transportation

The UPRR Rail Alternative option alignments are in similar locations. See Section 5.3.1.1 for permanent impacts on public transportation in Segments UA and UB.

5.4.1.2 Traffic

The UPRR Rail Alternative option alignments are in similar locations. See Section 5.3.1.2 for permanent traffic impacts. Delays waiting for freight trains to pass through at-grade crossings would be similar to the No Build Alternative.

5.4.1.3 Freight Transportation

Rail

As part of the East Option, the UPRR tracks would continue to be operational. Because the proposed track would be elevated, there would be no permanent impacts on the UPRR freight train operations. Future freight train movements on the UPRR track may increase, causing additional delays to motorists at at-grade crossings; however, freight train movements typically occur during off-peak traffic travel times.

Truck

The East Option would have a similar impact on freight truck operations as the UPRR ROW Option. Because the proposed track would be elevated, there would be no impact on truck routes. The 130th Street station park & ride facility may divert motorists from I-94 commuting into the city during these peak periods. This may help alleviate congestion on the expressway, reducing freight truck travel times and cost.

5.4.1.4 Bicycle Facilities

The UPRR Rail Alternative option alignments are in similar locations. See Section 5.3.1.4 for permanent impacts on bicyclists.

5.4.1.5 Pedestrians

The East Option would provide pedestrians with more mode choices, flexibility, and potentially reduced travel times as compared to the No Build Alternative. This option alignment is east of the existing UPRR tracks. The existing at-grade crossings at 101st Street, 103rd Street, 107th Street, 109th Street, 111th Street, 115th Street, and State Street would remain.

Implementing the East Option would result in beneficial impacts at stations by upgrading intersections with ADA-compliant curb ramps and replacing deteriorated sidewalks. These improvements would provide access for all users and increase pedestrian safety.

Segment UA

103rd Street Station

Existing striped crosswalks at Eggleston Avenue and 103rd Street, and Harvard Avenue and 103rd Street, could be used to access the station and the surface parking lots. These crosswalks would be improved with the construction of the proposed surface lots. Entrances to the station would be near the surface parking lots, allowing for a direct route from the platform to the parking lot. The location of the surface lot west of the UPRR tracks would require pedestrians to cross the tracks to access the station. Existing railroad crossing signals with road gates and railroad crossing pavement markings are at the crossing on 103rd Street. Pedestrian gates would need to be installed to prevent pedestrians from crossing the active UPRR tracks during freight movements. The parking lot on the south side of 103rd Street would have an entrance at the intersection of 103rd and Eggleston Avenue, allowing cars to leave the parking lot farther away from the station, where the majority of pedestrian traffic would occur. The entrance to the parking lot east of the proposed station would be in the southeast corner of the parking lot. All of these improvements would contribute to convenient, safe, and secure access for all users.

There would be no adverse impacts on pedestrians after mitigating for pedestrian crossing gates at 103rd street.

111th Street Station

Because the majority of the properties adjacent to the existing railroad tracks are currently undeveloped, proposed sidewalks would need to be provided for pedestrian access to the primary and auxiliary entrances of the station. Existing striped crosswalks are not close to the proposed primary entrance of the station. The surface parking lots would be on the east and west sides of the station, allowing for a direct route from the platform to the parking lot in which users could avoid crossing 111th Street. The location of the surface lot west of the UPRR tracks would require pedestrians to cross the tracks to access the station. Existing railroad crossing signals with road gates and railroad crossing pavement markings are at the crossing on 111th Street. The east surface parking lot would have an entrance at the southeast corner of the lot and the west surface parking lot would have an entrance along Eggleston Avenue. Both of these entrances would be away from the proposed station location, where the majority of pedestrian traffic would occur. Eggleston Avenue north of 11th Street is a dead-end street less than one block in length. The majority of traffic on the street would occur from the surface parking lot. All of these improvements would contribute to convenient, safe, and secure access for all users.

There would be no adverse impacts after mitigating for the pedestrian crossing gates at 111th Street and providing striped crosswalks.

Michigan Avenue Station

The existing pedestrian access on 116th Street east of Michigan Avenue would be improved with the construction of the surface lot and the auxiliary station entrance. The sidewalk under and adjacent to the existing viaduct for the UPRR tracks would be replaced, providing a continuous

ADA-accessible route east and west of the station and sidewalk connectivity to the existing residential homes east of the station on 116th Street. The parking garage would be close to the primary entrance of the station, allowing commuters who park in this garage to avoid crossing Michigan Avenue or 116th Street. Pedestrians would not have to cross the UPRR tracks on 116th Street or Michigan Avenue, because the tracks would be elevated. There would be an entrance on State Street and 116th Street, which would be a good distance from the station, where pedestrian traffic would be concentrated. The surface parking lot would be near the auxiliary entrance of the station. Commuters would have a direct route from the surface lot to the platform without any need to cross 116th Street.

Segment UB

The UPRR Rail Alternative option alignments are in similar locations. See Section 5.3.1.5 for permanent impacts on Segment UB.

5.4.1.6 Parking

Each of the station locations would have surface parking lots and/or parking garages. These parking facilities would expand the reach of the RLE and provide an opportunity for users to access the station by car. These users may benefit from reduced travel time and reduced travel cost. Another benefit would be that motorists could be diverted from congested sections of roadway. Sufficient parking capacity would be provided in all locations to avoid spillover parking into the residential areas near the station locations. Table 5-13 presents a summary of the proposed parking for each of the stations.

Segment UA

Table 5-13: Union Pacific Railroad Rail Alternative East Option Park & Ride Facilities

Station	Parking Type	Capacity	Location	Description
103rd Street	Surface Lot	75	East of proposed station, North side of 103rd Street	Bus turnaround within the lot for route #9
	Surface Lot	125	West of proposed station on the south side of 103rd Street	
111th Street	Surface Lot	55	East of proposed station. North side of 110th Place	
	Surface Lot	145	West of proposed station. North side of 111th Street	Bus turnaround within the lot for route #352
Michigan Avenue	Three-Story Parking Garage	825	Southwest of proposed station	Parking garage with ground level available for retail and/or community facilities. Bus turnaround on the ground level for route #119 and #359
	Surface Lot	175	Located northeast of the station.	

Segment UB

130th Street Station

The 130th Street South Station Option and West Station Option would be the same for all of the UPRR Rail Alternatives. Refer to Section 5.3.1.6, for permanent impacts on Segment UB Parking Facilities.

5.4.2 Construction Impacts and Mitigations - Union Pacific Railroad Rail Alternative - East Option

5.4.2.1 Public Transportation

Bus Transit

- The construction activities associated with the East Option would temporarily affect the physical capacity of roadways and intersections requiring detours. This may lead to increased travel times and possible shift in traffic volumes, increasing travel times for bus transit users. Bus stop locations may be eliminated or relocated temporarily and buses rerouted during construction activities. With adherence to local, state, and federal construction and temporary traffic and public transportation management guidelines, no adverse impacts would result from the East Option.

Commuter Rail

Segment UA

The East Option would consist of new construction of dual-track, elevated structure immediately adjacent to and east of the UPRR ROW, branching off and running along the east side of the corridor and over existing CN/ME tracks.

Segment UB

Refer to Section 5.3.2.1 for construction impacts on Segment UB.

5.4.2.2 Traffic

The construction activities associated with this alternative would temporarily affect the physical capacity of local roadways and intersections. This may lead to increased travel times, possible shift in traffic volumes, and the need to reroute traffic patterns during construction.

Work within the median of I-94 would require temporary lane closures. Proposed structure construction would be sequenced to minimally affect traffic flow on I-94. Increased traffic congestion due to construction activities may temporarily increase travel times along this portion of I-94.

The East Option alignment curves over I-57 and runs parallel to the UPRR tracks. Dual-track, elevated structures would be constructed through the I-94/I-57 interchange, across the westbound I-57 entrance ramp from northbound I-94, and within the I-57 corridor. For superstructure erection over expressway traffic lanes, intermittent, temporary shutdown of all traffic would be required at nighttime, per IDOT approval. Temporary shutdown of other traffic lanes (for work in the adjacent median) would occur at nighttime and low traffic volume intervals per IDOT approval. Proposed structure construction would be sequenced to minimally affect traffic flow on I-57. Increased traffic congestion due to construction activities may temporarily increase travel times along this portion of I-57.

With adherence to local, state, and federal construction and temporary traffic management guidelines, no lasting adverse traffic impacts would result from the East Option.

5.4.2.3 Freight Transportation

Segment UA

Rail

The East Option would consist of new construction of dual-track, elevated structure immediately adjacent to and east of the UPRR ROW, branching off and running along the east side of the corridor and over existing CN/ME tracks. The East Option would require construction activities to occur while UPRR tracks are operational. The work would be sequenced along the UPRR corridor to minimize impacts on UPRR operations. Construction adjacent to railroads would require flagging operations and scheduled track closures. Signal devices would need to be moved or temporary signals installed to replace existing signals during construction of viaducts for the following at-grade crossings: 101st Street, 103rd Street, 107th Street, 109th Street, 111th Street, 115th Street, and State Street.

Truck

Work within the median of I-94 would require temporary lane closures. Proposed structure construction would be sequenced to minimally affect traffic flow on I-94. Increased traffic congestion due to construction activities may temporarily increase freight truck travel times for shipping routes that include this portion of I-94.

The East Option alignment curves over I-57 and runs parallel to the UPRR tracks. Dual-track, elevated structures would be constructed through the I-94/I-57 interchange, across the westbound I-57 entrance ramp from northbound I-94, and within the I-57 corridor. For superstructure erection over expressway traffic lanes, intermittent, temporary shutdown of all traffic would be required at nighttime, per IDOT approval. Temporary shutdown of other traffic would occur at nighttime and low traffic volume intervals per IDOT approval. Proposed structure construction would be sequenced to minimally affect traffic flow on I-57. Increased traffic congestion due to construction activities may temporarily increase freight truck travel times for shipping routes that include this portion of I-57.

Segment UB

Refer to Section 5.3.2.3 for construction impacts on Segment UB related to freight transportation.

5.4.2.4 Bicycle Facilities

The UPRR Rail Alternative option alignments are in similar locations. See Section 5.3.2.4 for construction impacts on bicyclists.

5.4.2.5 Pedestrians

The UPRR Rail Alternative option alignments are in similar locations. See Section 5.3.2.5 for construction impacts on pedestrians.

5.4.2.6 Parking

The UPRR Rail Alternative option alignments are in similar locations. See Section 5.3.2.6 for construction impacts on parking facilities.

5.4.3 Cumulative Impacts and Mitigations - Union Pacific Railroad Rail Alternative - East Option

5.4.3.1 Segment UA

Freight Transportation

The Chicago Region Environmental and Transportation Efficiency (CREATE) Program 75th Street Corridor Improvement Project (CIP) consists of the following improvements:

- Reconfiguring the Belt Railway of Chicago main tracks between the Dan Ryan and Belt Junction, where there are existing conflicts between the freight railroads and Metra SouthWest Service.
- Reconfiguring and building a third Belt Railway Company main track, and constructing a flyover to connect the Metra SouthWest Service to the RI District Line in the vicinity of 74th Street and Normal Avenue and 75th Street and Parnell Avenue.
- Constructing a bridge that substantially reduces conflicts between CSX and Belt Railway Company, Metra (Rock Island District) and NS.
- Road-rail grade separation of 71st Street and CSX freight line north of project boundary

The corridor improvements would be north of the proposed UPRR Rail Alternative alignments. Table 5-14 summarizes the CIP train model volumes based on the above improvements for the UPRR.

Table 5-14: Existing and Forecast Train Volumes for Union Pacific Railroad South of 86th Street

	Peak Day	Passenger	Freight	Total
Existing Volumes (2009)	Friday	2	24	26
Forecast Volumes (2029 No Build)	Friday	4	23	27
Forecast Volumes (2029 Build Alternative)	Saturday	4	44	48

Source: CREATE 75th Street Corridor Improvement Project train model. In this table, “No Build” and “Build Alternative” refer to the CREATE Project.

Freight volumes would increase substantially by the forecasted 2029 build year. Because the UPRR tracks would remain in the East Option, freight trains may have potential impacts on pedestrian and vehicular traffic near the proposed stations. This could affect travel times for bus transit servicing the station and increase delays for commuters who choose to park & ride.

5.4.3.2 Segment UB

There would be no adverse cumulative impacts on Segment UB of the East Option.

5.5 Union Pacific Railroad Rail Alternative - West Option

The UPRR Rail Alternative West Option would include construction of an elevated structure following a similar alignment to the UPRR ROW Option. The difference is that CTA tracks would be placed immediately adjacent to and west of the UPRR ROW. Four stations would be included at 103rd Street, 111th Street, Michigan Avenue, and 130th Street.

5.5.1 Permanent Impacts and Mitigations - Union Pacific Railroad Rail Alternative - West Option

5.5.1.1 Public Transportation

The UPRR Rail Alternative option alignments are in similar locations. See Section 5.3.1.1 for permanent impacts on public transportation in Segment UA and Segment UB.

5.5.1.2 Traffic

The UPRR Rail Alternative option alignments are in similar locations. See Section 5.3.1.2 for permanent traffic impacts. Delays waiting for freight trains to pass through the at-grade crossings would be similar to the No Build Alternative. (The UPRR West Option would not receive the same benefit as the UPRR ROW Option with regard to removal of delay due to freight trains on the UPRR tracks.)

5.5.1.3 Freight Transportation

Rail

As part of the West Option, the UPRR tracks would continue to be operational. Because the proposed rail would be elevated, there would be no permanent impacts on the UPRR train operations.

Truck

The West Option would have a similar impact on freight truck operations as the East Option. Because the track would be elevated, there would be no impact on truck routes. The 130th Street station park & ride facility may divert motorists from I-94 commuting into the city during these peak periods. This may help alleviate congestion on the expressway, reducing freight truck travel times and cost.

5.5.1.4 Bicycle Facilities

The UPRR Rail Alternative option alignments are in similar locations. See Section 5.3.1.4 for permanent impacts on bicyclists in Segment UA and Segment UB.

5.5.1.5 Pedestrians

The West Option would provide pedestrians with more choices, flexibility, and potentially reduced travel times as compared to No Build. The existing at-grade crossings at 101st Street, 103rd Street, 107th Street, 109th Street, 111th Street, 115th Street, and State Street would remain. All parking facilities for each station would be west of the UPRR tracks. Commuters who park & ride would not have to cross the UPRR tracks. Railroad crossing signals with road gates and railroad crossing pavement markings exist at all existing at-grade crossings. Some pedestrians traveling from the east would need to cross the UPRR tracks to access the station; therefore, during the design phase, additional pedestrian control devices, such as increased lighting and gates at the sidewalk, would be considered to improve pedestrian safety at the crossings. All railroad track crossings would be ADA-compliant.

Implementing the West Option would result in beneficial impacts at stations by upgrading intersections with ADA-compliant curb ramps and replacing deteriorated sidewalks. These improvements would provide access for all users and increase pedestrian safety.

Segment UA

103rd Street Station

Existing striped crosswalks at Eggleston Avenue and 103rd Street, and Harvard Avenue and 103rd Street, could be used to access the station. These crosswalks would be improved with the construction of the proposed bus turnaround and station. The auxiliary entrance to the station would be within the surface parking lot, allowing for a direct route from the platform to the parking lot. The parking lot on the south side of 103rd Street would have an entrance at 103rd Place, allowing cars to leave the parking lot farther away from the station, where the majority of pedestrian traffic would occur. All of these improvements would contribute to convenient, safe, and secure access for all users.

111th Street Station

Because the majority of the existing properties adjacent to the existing railroad tracks are undeveloped, proposed sidewalks would need to be provided for pedestrian access to the primary and auxiliary entrances of the proposed station. Existing striped crosswalks are not close to the location of the primary entrance of the station. It would be beneficial to add a striped crosswalk on 111th Street at the location of the primary entrance, as this is likely to be the area that passengers would cross to access the south side of 111th Street. The surface parking lot would be on the west side of the station, which would allow for a direct route from the platform to the parking lot in which users could avoid crossing 111th Street. The west surface parking lot would have an entrance at Eggleston Avenue. This entrance would be away from the proposed station location, where the majority of pedestrian traffic would occur. Eggleston Avenue is currently a dead-end street and has little traffic. The majority of traffic on the street would occur from the surface parking lot. All of these improvements would contribute to convenient, safe, and secure access for all users.

Michigan Avenue Station

The existing pedestrian access on 116th Street east of Michigan Avenue would be improved with the construction of the station. The sidewalk under and adjacent to the existing viaduct for the UPRR tracks would be replaced, providing a continuous ADA-accessible route east of the station and sidewalk connectivity to the existing residential homes east of the station on 116th Street. The parking garage would be close to the primary entrance of the station. Commuters who park in this garage would not have to cross Michigan Avenue or 116th Street. There would be an entrance on State Street and 116th Street, which are a good distance from the station, where pedestrian traffic would be concentrated.

Segment UB

The UPRR Rail Alternative option alignments are in similar locations. See Section 5.3.1.5 for permanent impacts on Segment UB.

5.5.1.6 Parking

Each of the station locations would have surface parking lots and/or parking garages. These parking facilities would expand the reach of the RLE and provide an opportunity for commuters to access the station by car. These commuters may benefit from reduced travel time and reduced travel cost by riding the Red Line. Another benefit would be that motorists could be diverted from congested sections of roadway. Sufficient parking capacity would be provided in all locations to avoid spillover parking into the residential areas near the station locations. Table 5-15 provides a summary of the proposed parking for each of the stations.

Segment UA

Table 5-15: Union Pacific Railroad Rail Alternative West Option Park & Ride Facilities

Station	Parking Type	Capacity	Location	Description
103rd Street	Surface Lot	200	North of 104th Street adjacent to proposed station	Bus turnaround east of proposed station and north of 103rd Street for route #9. No parking provided.
111th Street	Surface Lot	200	West of proposed station. North side of 111th Street	Bus turnaround within the lot for route #352
Michigan Avenue	Five-Story Parking Garage	1000	Southwest of proposed station	Parking garage with ground level available for retail and/or community facilities. Bus turnaround on the ground level for route #119 and #359

Segment UB

130th Street Station

The 130th Street South Station Option and West Station Option would be the same for all of the UPRR Rail Alternatives. Refer to Section 5.3.1.6, for permanent impacts on segment UB parking facilities.

5.5.2 Construction Impacts and Mitigations - Union Pacific Railroad Rail Alternative - West Option

5.5.2.1 Public Transportation

Bus Transit

The construction activities associated with the West Option would temporarily affect the physical capacity of roadways and intersections requiring detours. This may lead to increased travel times and possible shift in traffic volumes, increasing travel times for bus transit users. Bus stop locations may be eliminated or relocated temporarily and buses rerouted during construction activities. With adherence to local, state, and federal construction and temporary traffic and public transportation management guidelines, no adverse impacts would result from the West Option.

Commuter Rail

Segment UA

The West Option would consist of new construction of dual-track, elevated structure immediately adjacent to and east of the UPRR ROW, branching off and running along the east side of the corridor and over existing CN/ME tracks.

Segment UB

Refer to Section 5.3.2.1 for construction impacts on Segment UB.

5.5.2.2 Traffic

The construction activities associated with this alternative would temporarily affect the physical capacity of local roadways and intersections. This may lead to increased travel times and possible shift in traffic volumes and the need to reroute traffic patterns during construction.

Work within the median of I-94 would require temporary lane closures. Proposed structure construction would be sequenced to minimally affect traffic flow on I-94. Increased traffic congestion due to construction activities may temporarily increase travel times along this portion of I-94.

Dual-track, elevated structures would be constructed through the I-94/I-57 interchange, across the westbound I-57 entrance ramp from northbound I-94, and within the I-57 corridor. For superstructure erection over expressway traffic lanes, intermittent, temporary shutdown of all traffic would be required at nighttime, per IDOT approval. Temporary shutdown of other traffic would occur at nighttime and low traffic volume intervals per IDOT approval. Proposed structure construction would be sequenced to minimally affect traffic flow on I-57. Increased traffic congestion due to construction activities may temporarily increase travel times along this portion of I-57.

With adherence to local, state, and federal construction and temporary traffic management guidelines, no adverse traffic impacts would result from the West Option.

5.5.2.3 Freight Transportation

Segment UA

Rail

The West Option would consist of new construction of dual-track, elevated structure crossing over the UPRR at Fernwood Parkway just south of I-57 and continuing immediately adjacent to and west of the UPRR ROW, crossing over the UPRR tracks again at Prairie Avenue and running along the east side of the corridor and over existing CN/ME tracks. The West Option would require the construction activities to occur while UPRR tracks are operational. This alternative would have two additional crossings over the active UPRR tracks at Fernwood Parkway and Prairie Avenue that the East option would not have. Construction at this crossing would be phased to minimize impacts on UPRR freight operations. Construction adjacent to railroads would require flagging operations and scheduled track closures. Signal devices would need to be moved or temporary signals installed to replace existing signals during construction of viaducts for the following at-grade crossings: 101st Street, 103rd Street, 107th Street, 109th Street, 111th Street, 115th Street, and State Street. Construction activities would be phased to reduce construction impacts on the UPRR operations as much as possible.

Truck

Work within the median of I-94 would require temporary lane closures. Proposed structure construction would be sequenced to minimally affect traffic flow on I-94. Increased traffic congestion due to construction activities may temporarily increase freight truck travel times for shipping routes that include this portion of I-94.

Dual-track, elevated structures would be constructed through the I-94/I-57 interchange, across the westbound I-57 entrance ramp from northbound I-94, and within the I-57 corridor. For superstructure erection over expressway traffic lanes, intermittent, temporary shutdown of all traffic would be required at nighttime, per IDOT approval. Temporary shutdown of other traffic would occur at nighttime and low traffic volume intervals per IDOT approval. Proposed structure construction would be sequenced to minimally affect traffic flow on I-57. Increased traffic congestion due to construction activities may temporarily increase freight truck travel times for shipping routes that include this portion of I-57.

Segment UB

Refer to Section 5.3.2.3 for construction impacts on Segment UB related to freight transportation.

5.5.2.4 Bicycle Facilities

The UPRR Rail Alternative options would have similar alignments. See Section 5.3.2.4 for construction impacts on bicyclists.

5.5.2.5 Pedestrians

The UPRR Rail Alternative options would have similar alignments. See Section 5.3.2.5 for construction impacts on pedestrians.

5.5.2.6 Parking

The UPRR Rail Alternative options would have similar alignments. See Section 5.3.2.6 for construction impacts on parking facilities.

5.5.3 Cumulative Impacts and Mitigations - Union Pacific Railroad Rail Alternative - West Option

See Section 5.4.3 for cumulative impacts on freight transportation. Because the UPRR tracks would still be in operation under both the East and West Options, the impacts would be the same under the East and West Options.

5.6 Halsted Rail Alternative

The proposed Halsted Rail Alternative is a 5-mile extension of the existing Red Line. It would operate on an elevated structure running south from 95th Street along I-57 until Halsted Street. It would then turn south and continue along Halsted Street to the intersection of Halsted Street and Vermont Avenue near 127th Street. Four stations would be at 103rd Street, 111th Street, 119th Street, and Vermont Avenue.

5.6.1 Permanent Impacts and Mitigations - Halsted Rail Alternative

Figure 5-3 shows the Halsted Rail Alternative. The impact analysis was conducted for two segments within the Halsted Rail Alternative. Segments HA and HB are shown on Figure 5-3. Because the traffic analysis was conducted on a regional basis, the traffic discussion was not divided into segments.

5.6.1.1 Public Transportation

Currently the 95th Street Terminal is the southern terminus of the Red Line. Many of the existing bus routes within the project area terminate at this location. From this station, passengers continue to travel north on the Red Line or connect to a different bus route. With the expansion of the Red Line, some existing bus routes would be rerouted to feed into the proposed stations. Passengers would benefit from reduced travel times to connecting rail service, further south of the 95th Street Terminal. The transportation model indicates approximately 5,980 new riders for the Halsted Rail Alternative and total project weekday boardings of 35,300 (AECOM 2009).

The following describes changes to existing bus routes as a result of the Halsted Rail Alternative:

Segment HA

- CTA route #9 Ashland would terminate at the 103rd Street station, allowing passengers to continue to travel south of 104th Street where the existing route #9 currently terminates.
- CTA route #103 West 103rd and #106 East 103rd would be combined into one route operating between a west terminal at Pulaski Road and an east terminal at Stony Island Avenue. This change would reduce the number of bus routes that terminate at 95th Street while still providing service to the Red Line.
- The CTA route #108 Halsted/95th would be eliminated because the rail extension would replace this bus route.

- Routes #112 Vincennes/111th and #111 111th/King Drive would be reconstructed to simplify route paths and better serve the new alignment. Route #111 would operate on 111th Street between 111th Street/Pulaski Road and 111th Street/Corliss Avenue, serving the new 111th Street station. A new route #115 would operate as a two-directional loop on 115th Street, Cottage Grove Avenue, 95th Street, and Vincennes Avenue. Route #112 would be eliminated.

- Route# 119 Michigan Avenue/119th Street would terminate at the 119th Street station.

Segment HB

- Pace route #348 would terminate at the Vermont Avenue station.

- Pace route #352 Halsted would terminate at the Vermont Avenue station. Route #359 Robbins/South Kedzie would terminate at the 119th Street station instead of the 95th Street Terminal.

"User benefit" is a measure of travel time improvement for each person boarding the system. This measure indicates the overall reduction in travel time including travel to the station, wait time, transfer time, and on-transit time. For the Halsted Rail Alternative, the average user benefit per boarding passenger would be 14 minutes (AECOM 2009). With expansion of the Red Line, some existing bus routes would be rerouted to feed into the proposed stations. Passengers would benefit from reduced travel times to connecting rail service, further south of the 95th Street Terminal. Congestion at 95th Street Terminal would be reduced as fewer buses would be routed to the 95th Street Terminal for transfers to the Red Line. There would be no adverse impacts on public transportation from the Halsted Rail Alternative.

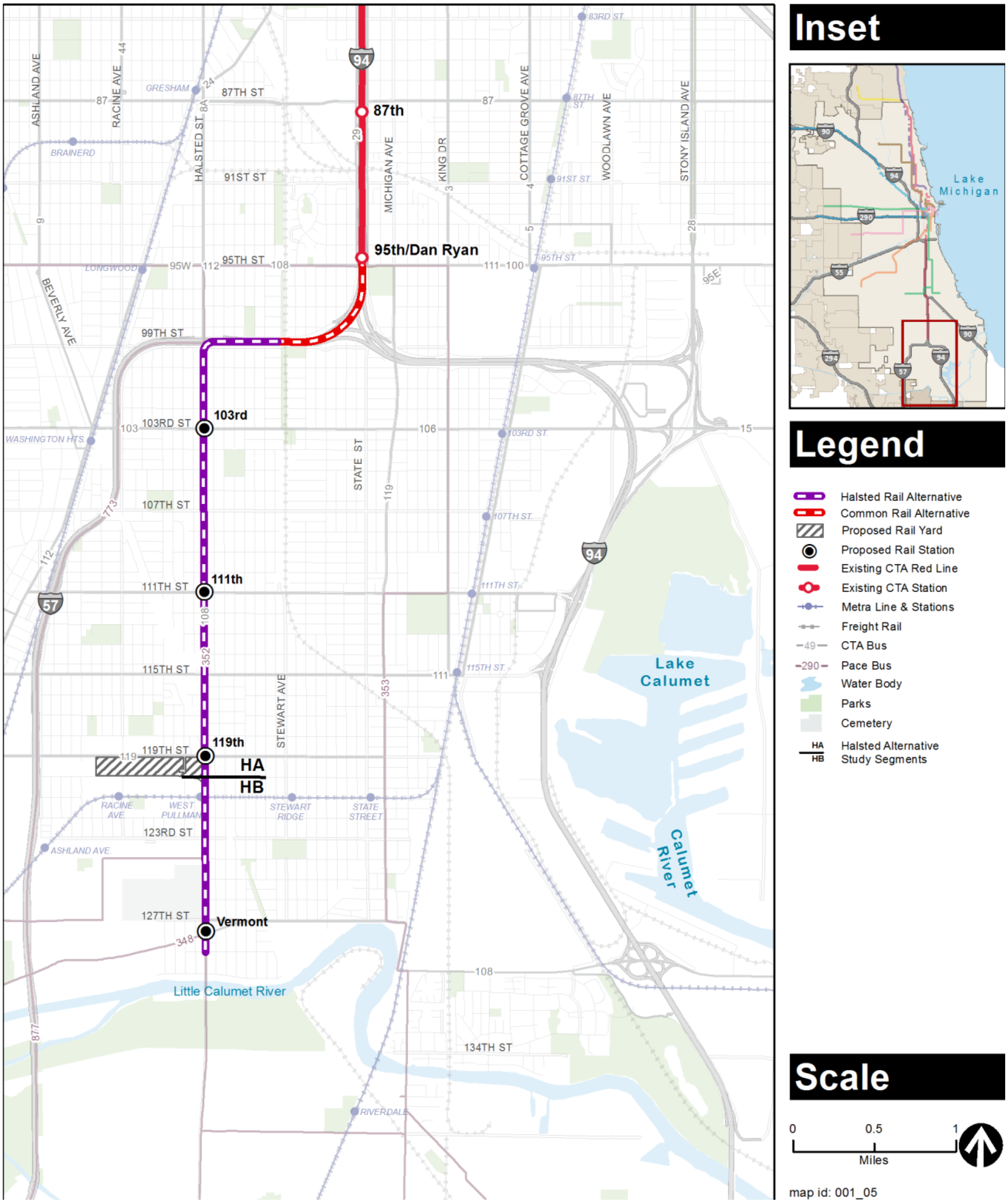
87th
95th/Dan Ryan
103rd
111th
119th
Vermont
HA
HB
87TH ST
91ST ST
95TH ST
99TH ST
103RD ST
107TH ST
111TH ST
115TH ST
119TH ST
123RD ST
127TH ST
134TH ST
ASHLAND AVE
RACINE AVE
HALSTED ST
MICHIGAN AVE
KING DR
COTTAGE GROVE AVE
WOODLAWN AVE
STONY ISLAND AVE
STATE ST
STEWART AVE
BEVERLY AVE
GRESHAM
BRAINERD
LONGWOOD
WASHINGTON HTS
RACINE AVE
WEST PULLMAN
STEWART RIDGE
STATE STREET
ASHLAND AVE
RIVERDALE
83RD ST
87TH ST
91ST ST
95TH ST
103RD ST
107TH ST
111TH ST
115TH ST
Lake Calumet
Calumet River
Little Calumet River
94
57
Inset
Lake Michigan
Legend
Halsted Rail Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
CTA Bus
Pace Bus
Water Body
Parks
Cemetery
Halsted Alternative Study Segments
Scale
0
0.5
1
Miles
map id: 001_05

Figure 5-3: Halsted Rail Alternative

5.6.1.2 Traffic

Under Halsted Rail Alternative (2026) conditions, 75 percent of the study intersections within the API would operate at LOS "D" or better in both the AM and PM peak hours, as shown in Table 5-16. Appendix E contains the traffic data and Synchro results for the Halsted Rail Alternative. All increases in traffic volumes are related to vehicle access to park & ride facilities at stations. Under Halsted Rail Alternative (2026) conditions, 19 of the 76 study intersections would operate at an unacceptable LOS (LOS "E" or "F") in either or both the AM and PM peak hours. Of those 19 intersections, 13 would operate at conditions worse than the No Build conditions. The intersections that operate at worse than the No Build conditions are shown in bold in Table 5-16 and are listed below:

- 103rd Street and Halsted Street - AM LOS = F; **PM LOS = E**
- 115th Street and Cottage Grove Avenue East - **AM LOS = F**
- 119th Street and Ashland Avenue - **AM LOS = E**; PM LOS = F
- 119th Street and Halsted Street - **PM LOS = E**
- 127th Street and Paulina Street - **PM LOS = E**
- 127th Street and Marshfield Avenue - **AM LOS = E**
- 127th Street and Ashland Avenue - **PM LOS = F**
- 127th Street and Halsted Street - **AM LOS = F; PM LOS = F**
- Vermont Avenue and Halsted Street - **AM LOS = F; PM LOS = F**
- 127th Street and Vermont Avenue and Wallace Street - **AM LOS = F; PM LOS = F**
- 127th Street and State Street - **PM LOS = F**
- 127th Street and Michigan Avenue - **PM LOS = F**
- 130th Street and Indiana Avenue - **PM LOS = F**

Under Halsted Rail Alternative (2030) conditions, most of the study intersections within the API would operate at LOS "D" or better in both the AM and PM peak hours, as shown in Table 5-16. Under Halsted Rail Alternative (2030) conditions, there would be 22 intersections that would operate at LOS "E" or "F" in either or both the AM and PM peak hours. Of the 22 intersections, 15 would operate at worse than the No Build conditions. The 15 intersections that would operate at worse than the No Build conditions are shown in Table 5-16 in bold text and are listed below:

- 103rd Street and Halsted Street - AM LOS = F; **PM LOS = F**
- 111th Street and Cottage Grove Avenue - **PM LOS = E**

- 115th Street and Cottage Grove Avenue– **AM LOS = E**
- 115th Street and Cottage Grove Avenue East - **AM LOS = F**
- 119th Street and Ashland Avenue - **AM LOS = E**; PM LOS = F
- 119th Street and Halsted Street - **PM LOS = E**
- 127th Street and Paulina Street - **PM LOS = E**
- 127th Street and Marshfield Avenue - **AM LOS = F**
- 127th Street and Ashland Avenue - **PM LOS = F**
- 127th Street and Halsted Street - **AM LOS = F; PM LOS = F**
- Vermont Avenue and Halsted Street - **AM LOS = F; PM LOS = F**
- 127th Street and Vermont Avenue and Wallace Street - **AM LOS = F; PM LOS = F**
- 127th Street and State Street - **PM LOS = F**
- 127th Street and Michigan Avenue - **PM LOS = F**
- 130th Street and Indiana Avenue - **PM LOS = F**

Table 5-16: Halsted Rail Alternative (2026 and 2030) Intersection Level of Service

ID	Intersection	Control Type	2026 Halsted Rail Alternative		2030 Halsted Rail Alternative	
			AM Peak-Hour LOS	PM Peak-Hour LOS	AM Peak-Hour LOS	PM Peak-Hour LOS
1	95th Street and Wentworth Avenue	Signalized	B	B	B	B
2	95th Street and Lafayette Avenue	Signalized	D	D	D	D
3	95th Street and State Street	Signalized	D	C	D	C
4	95th Street and Michigan Avenue	Signalized	B	B	B	B
5	98th Place and Halsted Street	Signalized	F	F	F	F
6	99th Street and Halsted Street	Signalized	D	C	D	C
7	98th Place and Wentworth Avenue	Signalized	B	B	B	B
8	99th Street and Wentworth Avenue	Signalized	B	B	B	B
9	99th Street and State Street	Signalized	A	B	A	B
10	99th Street and Michigan Avenue	Signalized	C	B	C	B
11	99th Place and Martin Luther King Drive	Signalized	B	B	B	B

ID	Intersection	Control Type	2026 Halsted Rail Alternative		2030 Halsted Rail Alternative	
			AM Peak-Hour LOS	PM Peak-Hour LOS	AM Peak-Hour LOS	PM Peak-Hour LOS
12	100th Street and Martin Luther King Drive	Signalized	B	A	B	A
13	100th Street and Cottage Grove Avenue	Unsignalized	A	C	A	C
14	103rd Street and Vincennes Avenue and Beverly Avenue	Signalized	E	F	E	F
15	103rd Street and Morgan Street	Signalized	B	B	B	B
16	103rd Street and Halsted Street	Signalized	F	**E**	F	**F**
17	103rd Street and Normal Avenue	Signalized	B	B	B	C
18	103rd Street and Wentworth Avenue	Signalized	B	B	B	B
19	103rd Street and State Street	Signalized	B	B	B	B
20	103rd Street and Michigan Avenue	Signalized	B	B	B	B
21	103rd Street and Martin Luther King Drive	Signalized	C	C	C	C
22	103rd Street and Cottage Grove Avenue	Signalized	B	B	B	B
23	103rd Street and Woodlawn Avenue	Signalized	A	A	A	A
24	107th Street and Halsted Street	Signalized	F	C	F	C
25	107th Street and Wentworth Avenue	Signalized	B	B	B	B
26	107th Street and State Street	Signalized	A	A	A	A
27	107th Street and Michigan Avenue	Signalized	B	B	B	B
28	107th Street and Martin Luther King Drive	Signalized	B	B	B	B
29	107th Street and Cottage Grove Avenue	Signalized	B	B	B	B
30	111th Street and Marshfield Avenue	Signalized	C	C	C	C
31	111th Street and Hamlet Avenue	Signalized	D	D	D	D
32	112th Place and Marshfield Avenue	Signalized	C	C	C	C
33	112th Place and Hamlet Avenue	Signalized	E	C	E	C
34	111th Street and Halsted Street	Signalized	C	C	C	C
35	111th Street and Normal Avenue	Signalized	B	B	B	B
36	111th Street and Wentworth Avenue	Signalized	B	A	B	A
37	111th Street and State Street	Signalized	A	B	A	B
38	111th Street and Michigan Avenue	Signalized	B	B	B	B
39	111th Street and Indiana Avenue	Signalized	B	B	B	B
40	111th Street and Martin Luther King Drive	Signalized	B	A	B	A

ID	Intersection	Control Type	2026 Halsted Rail Alternative		2030 Halsted Rail Alternative	
			AM Peak-Hour LOS	PM Peak-Hour LOS	AM Peak-Hour LOS	PM Peak-Hour LOS
41	111th Street and Cottage Grove Avenue	Signalized	C	D	C	**E**
42a	111th Street and Langley Avenue	Signalized	B	C	B	C
42b	111th Street and Ellis Avenue	Signalized	C	C	D	C
43	111th Street and Doty Avenue	Signalized	C	C	C	C
44	111th Street and Bishop Ford eastbound Ramps	Unsignalized	D	C	E	C
45	111th Street and Bishop Ford westbound Ramps	Unsignalized	E	C	E	C
46	115th Street and Marshfield Avenue	Signalized	B	B	B	B
47	115th Street and Ashland Avenue	Signalized	B	B	B	B
48	115th Street and Racine Avenue	Signalized	B	C	B	C
49	115th Street and Halsted Street	Signalized	C	C	C	C
50	115th Street and Wentworth Avenue	Signalized	B	B	B	B
51	115th Street and State Street	Signalized	B	B	B	B
52	115th Street and Michigan Avenue	Signalized	B	D	B	D
53	115th Street and Indiana Avenue	Signalized	B	B	B	B
54	115th Street and Martin Luther King Drive	Unsignalized	D	F	D	F
55a	115th Street and Cottage Grove Avenue	Signalized	D	D	**E**	D
55b	115th Street and Cottage Grove Avenue East	Signalized	**F**	D	**F**	D
56	115th Street and Bishop Ford Freeway eastbound Ramps	Unsignalized	D	C	D	C
57	115th Street and Bishop Ford Freeway westbound Ramps	Unsignalized	D	C	D	C
58	119th Street and Marshfield Avenue	Signalized	D	D	D	D
59	119th Street and Ashland Avenue	Signalized	**E**	F	**E**	F
60	119th Street and Halsted Street	Signalized	C	**E**	D	**E**
61	119th Street and Wentworth Avenue	Signalized	B	B	B	B
62	119th Street and State Street	Signalized	B	C	B	C
63	119th Street and Michigan Avenue	Signalized	A	A	A	A
64	127th Street and Paulina Street	Signalized	C	**E**	C	**E**
65	127th Street and Marshfield Avenue	Signalized	**E**	C	**F**	D
66	127th Street and Ashland Avenue	Signalized	C	**F**	D	**F**
67	Ashland Avenue and Vermont Avenue	Signalized	C	C	C	C

ID	Intersection	Control Type	2026 Halsted Rail Alternative		2030 Halsted Rail Alternative	
			AM Peak-Hour LOS	PM Peak-Hour LOS	AM Peak-Hour LOS	PM Peak-Hour LOS
68	127th Street and Halsted Street	Signalized	**F**	**F**	**F**	**F**
69	Vermont Avenue and Halsted Street	Signalized	**F**	**F**	**F**	**F**
70	127th Street and Vermont Avenue and Wallace Street	Signalized	**F**	**F**	**F**	**F**
71	127th Street and State Street	Signalized	C	**F**	C	**F**
72	127th Street and Michigan Avenue	Signalized	B	**F**	B	**F**
73	130th Street and Indiana Avenue	Signalized	D	**F**	D	**F**
74	130th Street and Ellis Avenue	Signalized	B	B	B	B

Notes:
LOS = level of service
Signalized intersection LOS reported as the average for all movements. Unsignalized LOS reported is the LOS of the worst movement. LOS “E” and “F” are shown in bold.

Mitigation measures to reduce or minimize the impacts were evaluated for the transportation network surrounding the Halsted Rail Alternative. Mitigation measures for intersections near the affected intersection may also be necessary to provide better flow of traffic; therefore, the mitigation measures include the affected intersections as well as adjacent or nearby intersections. Table 5-17 lists the mitigation measures that would address impacts on the study intersections under Halsted Rail Alternative (2030) conditions:

Table 5-17: Mitigation Measures for the Halsted Rail Alternative (2030) Conditions

ID	Intersection	Mitigation Measure
14	103rd Street and Vincennes Avenue and Beverly Avenue	PM: Optimize cycle length/splits.
16	103rd Street and Halsted Street	AM/PM: Optimize cycle length/splits.
41	111th Street and Cottage Grove Avenue	PM: Optimize splits.
55a	115th Street and Cottage Grove Avenue	AM/PM: Increase cycle length, Optimize splits
55b	115th Street and Cottage Grove Avenue East	AM/PM: Increase cycle length, Optimize splits
59	119th Street and Ashland Avenue	PM: Optimize splits.
60	119th Street and Halsted Street	PM: Optimize splits
64	127th Street and Paulina Street	AM: Decrease cycle length. Optimize splits. PM: Increase cycle length. Optimize splits. Add westbound turn lane take from eastbound turn lane in other direction. There does appear to be sufficient width on bridge to have double left turns in both directions.
65	127th Street and Marshfield Avenue	AM: Decrease cycle length. Optimize splits. PM: Increase cycle length. Optimize splits.

ID	Intersection	Mitigation Measure
66	127th Street and Ashland Avenue	AM: Decrease cycle length. Optimize splits. PM: Increase cycle length. Optimize splits.
68	127th Street and Halsted Street	Add eastbound left turn lane. Add northbound left turn lane (remove parking). AM: Optimize cycle length. PM: Increase cycle length. Optimize splits. Actuate and coordinate signal.
69	Vermont Avenue and Halsted Street	Add eastbound right turn lane. Add westbound left turn lane. Add southbound right turn lane. Increase cycle length. Optimize splits. Actuate and coordinate signal.
70	127th Street and Vermont Avenue and Wallace Street	Add additional NE right turn lane. Change westbound through/left to dedicated westbound left turn lane. Restrict northeast bound to northbound movement. Actuate signal. Optimize cycle length/splits.
71	127th Street and State Street	Add eastbound left turn lane.
72	127th Street and Michigan Avenue	PM: Increase cycle length. Optimize splits.
73	130th Street and Indiana Avenue	Add northbound right turn lane. PM: Increase cycle length. Optimize splits.

Under Halsted Rail mitigated (2030) conditions, most of the study intersections within the API would operate at LOS “D” or better in both the AM and PM peak hours, as shown in Table 5-18. Under Halsted Rail mitigated (2030) conditions, some intersections would operate at “E” or “F;” however, these intersections would be no worse than No Build (2030) conditions. Mitigated conditions would not result in additional intersections with unacceptable LOS. As such, there would be no adverse permanent traffic impacts for this alternative. LOS D is considered to be acceptable for an urban area.

Table 5-18: Halsted Rail Alternative Mitigated (2030) Intersection Level of Service

ID	Intersection	Control Type	2030 No Build Alternative		2030 Halsted Rail Alternative Mitigated	
			AM Peak-Hour LOS	PM Peak-Hour LOS	AM Peak-Hour LOS	PM Peak-Hour LOS
1	95th Street and Wentworth Avenue	Signalized	B	B	B	B
2	95th Street and Lafayette Avenue	Signalized	D	D	D	D
3	95th Street and State Street	Signalized	D	C	D	C
4	95th Street and Michigan Avenue	Signalized	B	B	B	B
5	98th Place and Halsted Street	Signalized	**F**	**F**	**F**	**F**
6	99th Street and Halsted Street	Signalized	D	D	D	C
7	98th Place and Wentworth Avenue	Signalized	B	B	B	B
8	99th Street and Wentworth Avenue	Signalized	B	B	B	B
9	99th Street and State Street	Signalized	A	B	A	B
10	99th Street and Michigan Avenue	Signalized	C	B	C	B
11	99th Place and Martin Luther King Drive	Signalized	B	B	B	B

ID	Intersection	Control Type	2030 No Build Alternative		2030 Halsted Rail Alternative Mitigated	
			AM Peak-Hour LOS	PM Peak-Hour LOS	AM Peak-Hour LOS	PM Peak-Hour LOS
12	100th Street and Martin Luther King Drive	Signalized	B	A	B	A
13	100th Street and Cottage Grove Avenue	Unsignalized	A	C	A	C
14	103rd Street and Vincennes Avenue and Beverly Avenue	Signalized	**E**	**F**	**E**	**F**
15	103rd Street and Morgan Street	Signalized	B	B	B	B
16	103rd Street and Halsted Street	Signalized	**F**	D	**F**	C
17	103rd Street and Normal Avenue	Signalized	B	B	B	C
18	103rd Street and Wentworth Avenue	Signalized	B	B	B	B
19	103rd Street and State Street	Signalized	B	B	B	B
20	103rd Street and Michigan Avenue	Signalized	B	B	B	B
21	103rd Street and Martin Luther King Drive	Signalized	C	C	C	C
22	103rd Street and Cottage Grove Avenue	Signalized	B	B	B	B
23	103rd Street and Woodlawn Avenue	Signalized	A	A	A	A
24	107th Street and Halsted Street	Signalized	**F**	C	**F**	C
25	107th Street and Wentworth Avenue	Signalized	B	B	B	B
26	107th Street and State Street	Signalized	A	A	A	A
27	107th Street and Michigan Avenue	Signalized	B	B	B	B
28	107th Street and Martin Luther King Drive	Signalized	B	B	B	B
29	107th Street and Cottage Grove Avenue	Signalized	B	B	B	B
30	111th Street and Marshfield Avenue	Signalized	C	C	C	C
31	111th Street and Hamlet Avenue	Signalized	D	D	D	D
32	112th Place and Marshfield Avenue	Signalized	B	C	C	C
33	112th Place and Hamlet Avenue	Signalized	**E**	C	**E**	C
34	111th Street and Halsted Street	Signalized	C	C	C	C
35	111th Street and Normal Avenue	Signalized	B	A	B	B
36	111th Street and Wentworth Avenue	Signalized	B	A	B	A
37	111th Street and State Street	Signalized	A	B	B	B
38	111th Street and Michigan Avenue	Signalized	B	B	B	B
39	111th Street and Indiana Avenue	Signalized	B	B	B	B
40	111th Street and Martin Luther King Drive	Signalized	B	A	B	A
41	111th Street and Cottage Grove Avenue	Signalized	C	D	C	C
42a	111th Street and Langley Avenue	Signalized	B	C	B	C

ID	Intersection	Control Type	2030 No Build Alternative		2030 Halsted Rail Alternative Mitigated	
			AM Peak-Hour LOS	PM Peak-Hour LOS	AM Peak-Hour LOS	PM Peak-Hour LOS
42b	111th Street and Ellis Avenue	Signalized	C	C	D	D
43	111th Street and Doty Avenue	Signalized	C	C	C	C
44	111th Street and Bishop Ford eastbound Ramps	Unsignalized	**E**	C	**E**	C
45	111th Street and Bishop Ford westbound Ramps	Unsignalized	**E**	B	**E**	C
46	115th Street and Marshfield Avenue	Signalized	B	B	B	B
47	115th Street and Ashland Avenue	Signalized	B	B	B	B
48	115th Street and Racine Avenue	Signalized	B	C	B	C
49	115th Street and Halsted Street	Signalized	C	C	C	C
50	115th Street and Wentworth Avenue	Signalized	B	B	B	B
51	115th Street and State Street	Signalized	B	B	B	B
52	115th Street and Michigan Avenue	Signalized	B	D	B	C
53	115th Street and Indiana Avenue	Signalized	B	B	B	C
54	115th Street and Martin Luther King Drive	Unsignalized	D	**F**	D	**F**
55a	115th Street and Cottage Grove Avenue	Signalized	D	C	B	D
55b	115th Street and Cottage Grove Avenue East	Signalized	**E**	C	C	B
56	115th Street and Bishop Ford Freeway eastbound Ramps	Unsignalized	D	C	D	C
57	115th Street and Bishop Ford Freeway westbound Ramps	Unsignalized	D	C	D	C
58	119th Street and Marshfield Avenue	Signalized	D	D	D	D
59	119th Street and Ashland Avenue	Signalized	D	**F**	D	**F**
60	119th Street and Halsted Street	Signalized	C	C	C	D
61	119th Street and Wentworth Avenue	Signalized	B	B	B	B
62	119th Street and State Street	Signalized	B	B	C	B
63	119th Street and Michigan Avenue	Signalized	A	A	C	B
64	127th Street and Paulina Street	Signalized	C	C	C	C
65	127th Street and Marshfield Avenue	Signalized	C	C	C	C
66	127th Street and Ashland Avenue	Signalized	C	C	C	C
67	Ashland Avenue and Vermont Avenue	Signalized	C	C	C	C
68	127th Street and Halsted Street	Signalized	C	C	C	D
69	Vermont Avenue and Halsted Street	Signalized	B	B	B	B
70	127th Street and Vermont Avenue and Wallace Street	Signalized	D	D	C	D
71	127th Street and State Street	Signalized	B	B	B	C
72	127th Street and Michigan Avenue	Signalized	A	B	B	C

ID	Intersection	Control Type	2030 No Build Alternative		2030 Halsted Rail Alternative Mitigated	
			AM Peak-Hour LOS	PM Peak-Hour LOS	AM Peak-Hour LOS	PM Peak-Hour LOS
73	130th Street and Indiana Avenue	Signalized	C	C	D	D
74	130th Street and Ellis Avenue	Signalized	A	A	B	B

Notes:
LOS = level of service
Signalized intersection LOS reported as the average for all movements. Unsignalized LOS reported is the LOS of the worst movement. LOS “E” and “F” are shown in bold.

5.6.1.3 Freight Transportation

Rail

The Halsted Rail Alternative alignment crosses over the UPRR at Fernwood Parkway and I-57. Because this would be an aerial structure, there would be no permanent impact on UPRR freight operations.

Truck

Because the rail line would be elevated, there would be no impacts on freight truck traffic on Halsted Street. The minimum clearance between the aerial structure and the roadway is 14 feet 9 inches, the minimum clearance required for local roadways.

5.6.1.4 Bicycle Facilities

The existing off-street bike trail, Major Taylor Trail, runs north/south from 83rd Street to the Cal-Sag Channel. The trail is divided by Halsted Street at 119th Street. Currently, the portion of the trail west of Halsted Street ends at the existing sidewalk north of the 119th Street and Halsted Street intersection. Bike riders must use approximately 170 feet of existing sidewalk along the west side of Halsted Street to access the intersection of 119th Street and Halsted Street. The existing crosswalks are used to cross to the continuation of the bike trail east of Halsted Street near the southeast corner of the intersection. Because the Halsted Rail Alternative would use an elevated structure, the existing trail would not be permanently affected by the operation of the station. Careful attention to the entrance location and location of the stair/escalator would be made to ensure that there would be no disconnect created in the existing bike route. Enough space would be provided to avoid a conflict with bicycle and pedestrian traffic.

Due to the close proximity of the existing off-street bike trail and Halsted Street, bicyclists would easily be able to access the Red Line. Bicyclists would have the option to park & ride or to bring their bicycles on the trains. Bicyclists are currently restricted from bringing bicycles onto trains during weekday rush periods, which would increase the need for bicycle parking at stations for weekday work commuters.

5.6.1.5 Pedestrians

The Halsted Rail Alternative would provide pedestrians with more choices, flexibility and potentially reduced travel times as compared to No Build. Implementing the Halsted Rail Alternative would result in beneficial impacts at stations by upgrading intersections with ADA-compliant curb ramps and replacing deteriorated sidewalks. These improvements would provide access for all users and increase pedestrian safety.

Segment HA

103rd Street Station

The curb ramps and sidewalks would be improved with the construction of the proposed surface lots and aerial structure. Entrances to the station would be near the surface parking lot, allowing for a direct route from the platform to the parking lot. The entrance to the parking lot would be on the north side of 103rd Street and west of the proposed station, allowing cars to leave the parking lot farther away from the station, where the majority of pedestrian traffic would occur. All of these improvements would contribute to convenient, safe, and secure access for all users.

111th Street Station

The curb ramps and sidewalks would be improved with the construction of the proposed surface lots and aerial structure. The surface parking lot would be west of the station, allowing for a direct route from the platform to the parking lot. The parking lot entrances would be located on 111th Street and Green Street, a safe distance from the majority of pedestrian traffic. All of these improvements would contribute to convenient, safe, and secure access for all users.

119th Street Station

The curb ramps and sidewalks would be improved with the construction of the proposed surface lots and aerial structure. The surface parking lot would be at the southwest corner of the intersection, which is south of the station. Access to the station would require the crossing of 119th Street and/or Halsted Street. Because the intersection is signalized and has marked cross walks, pedestrians would have a safe route between the parking lot and the platform. The parking lot entrances would be located at 119th Street and Green Street, a safe distance from the majority of pedestrian traffic. All of these improvements would contribute to convenient, safe, and secure access for all users.

Segment HB

Vermont Avenue Station

The curb ramps (including the intersections of Halsted Street with 128th Street and with Vermont Avenue) and sidewalks would be improved with the construction of the aerial structure, the Vermont Avenue station, the proposed surface lot to the east of Halsted Street, and the parking structure to the west of Halsted Street. Bus bays for connecting CTA and Pace buses would be included at the station. These improvements would contribute to convenient, safe, and secure access for all users.

5.6.1.6 Parking

Each of the station locations would have surface parking lots and/or parking garages. These parking facilities would expand the reach of the RLE and provide an opportunity for commuters to access the station by car. These users may benefit from reduced travel time and reduced travel cost by riding the Red Line. Another benefit would be that motorists could be diverted from congested sections of roadway. Sufficient parking capacity would be provided in all locations to avoid spillover parking into the residential areas near the station locations. Table 5-19 presents a summary of the proposed parking for each of the stations.

Segment HA

Table 5-19: Halsted Rail Alternative Park & Ride Facilities Segment UA

Station	Parking Type	Capacity	Location	Description
103rd Street	Surface lot	200	North of 103rd Street west of proposed station	Bus turnaround East of proposed station and north of 103rd for route #9. No parking provided.
111th Street	Surface lot	200	North of 111th Street west of proposed station	Bus turnaround within the lot for route #352
119th Street	Surface lot	1,000	South of 119th Street west of proposed station	Bus turnaround within the lot for route #359

Segment HB

The park & ride facility at Vermont Avenue station would be near the I-57 Expressway and 127th Street interchange. It would be just over 3 miles from the I-94 Bishop Ford Freeway and 130th Street interchange. This facility would expand the reach of the RLE to the south suburban and northwest Indiana automobile commuters. These commuters could benefit from decreases in travel times and cost by riding the Red Line and avoiding congestion and travel delays on the Dan Ryan Expressway and I-57 Expressway. Table 5-20 presents a summary of the parking for the Vermont Avenue station.

Table 5-20: Halsted Rail Alternative Park & Ride Facilities Segment UB

Station	Parking Type	Capacity	Location	Description
Vermont Avenue	7 Story Parking Garage	2,000	West of proposed station	Parking garage with ground level available for retail and/or community facilities. Bus bays located on Halsted for route #8A, #348 and #352

On-street parking is provided all along Halsted Street with parking restrictions at locations of bus stops, fire hydrants, and driveway entrances. On-street parking is allowed from I-57 to 129th Street. Permits are not required for on-street parking. The straddle bent beam column locations would decrease the number of on-street parking spots on Halsted Street. Bump-outs in the concrete sidewalk would provide protection to the columns and allow for parking in the current parking lane between column spans. The adverse impact on on-street parking would be minimal.

The mitigation measure to expand the left-turn lane for the intersection of 127th Street and Halsted Street may require the removal of on-street parking to accommodate the left turn and shift the intersection back to a typical alignment. The removal of these spaces would not be adverse. Parking is available on adjacent streets (and at the Vermont Avenue parking garage). The frequency of driveways near this intersection limits the parking availability and current use of the street for parking.

5.6.2 Construction Impacts and Mitigations - Halsted Rail Alternative

5.6.2.1 Public Transportation

The construction activities associated with the Halsted Rail Alternative would temporarily affect the physical capacity of roadways and intersections requiring detours. Superstructure erection would require temporary shutdown of all traffic on Halsted Street. This may lead to increased travel times and possible shift in traffic volumes, increasing travel times for bus transit users. Bus stop locations may be eliminated or relocated temporarily and buses rerouted during construction activities. Bus stops for routes along Halsted Street (#8A, #108, and Pace #352) will have changes in stops as construction work progresses along the corridor. Bus stops for routes intersecting with Halsted Street (#103, #111, #115, #119, and Pace #348) will have changes only when construction activities are in the vicinity of the applicable intersection. With adherence to local, state, and federal construction and temporary traffic and public transportation management guidelines, no adverse construction impacts would result from the Halsted Rail Alternative.

The ME Blue Island line crosses Halsted Street between 120th Street and 122nd Street. The West Pullman Station is west of Halsted Street. Construction of the aerial structure would require temporary scheduled track closures. Construction would be phased to minimize impacts on Metra operations.

5.6.2.2 Traffic

The construction activities associated with this alternative would temporarily affect the physical capacity of local roadways and intersections. This may lead to increased travel times, possible shift in traffic volumes, and the need to reroute traffic patterns during construction.

Work within the median of I-94 would require temporary lane closures. Proposed structure construction would be sequenced to minimally affect traffic flow on I-94. Increased traffic congestion due to construction activities may temporarily increase travel times along this portion of I-94.

Dual-track, elevated structures would be constructed through the I-94/I-57 interchange, across the westbound I-57 entrance ramp from northbound I-94, and within the I-57 corridor. For superstructure erection over expressway traffic lanes, intermittent, temporary shutdown of all traffic would be required at nighttime, per IDOT approval. Proposed structure construction would be sequenced to minimally affect traffic flow on I-57. Increased traffic congestion due to construction activities may temporarily increase travel times along this portion of I-57.

The construction activities associated with the Halsted Rail Alternative would temporarily affect the physical capacity of roadways and intersections. This may lead to increased travel times and possible shift in traffic volumes, increasing travel times for traffic using Halsted Street. Steel beam placement transverse to Halsted Street or across intersections would require temporary shutdown of all traffic on Halsted Street and/or the intersecting street. Beam placement is typically done during late night hours to minimize traffic impacts. Temporary traffic stoppage usually occurs in 15-minute intervals as beams are lifted off trucks and secured in position. Marked alternate routes would likely include Vincennes Road on the west and Wentworth Avenue on the east, although local drivers will likely use nearby streets. With adherence to local, state, and federal construction and temporary traffic management guidelines, no adverse traffic impacts would result from the Halsted Rail Alternative.

5.6.2.3 Freight Transportation

Rail

There would be no construction impacts on rail freight transportation, because no freight train tracks are near or cross the Halsted Rail Alternative alignment.

Truck

Work within the median of I-94 would require temporary lane closures. Proposed structure construction would be sequenced to minimally affect traffic flow on I-94. Increased traffic congestion due to construction activities may temporarily increase freight truck travel times for shipping routes that include this portion of I-94.

The Halsted Rail Alternative alignment crosses over the UPRR at Fernwood Parkway and I-57. Dual-track, elevated structures would be constructed through the I-94/I-57 interchange, across the westbound I-57 entrance ramp from northbound I-94, and within the I-57 corridor. For superstructure erection over expressway traffic lanes, intermittent, temporary shutdown of all traffic would be required at nighttime, per IDOT approval. Proposed structure construction would be sequenced to minimally affect traffic flow on I-57. Increased traffic congestion due to construction activities may temporarily increase freight truck travel times for shipping routes that include this portion of I-57.

The construction activities associated with the Halsted Rail Alternative would temporarily affect the physical capacity of roadways and intersections requiring detours. Superstructure erection would require temporary shutdown of all traffic on Halsted Street. This may lead to increased travel times and possible shift in traffic volumes, increasing travel times for freight trucks using Halsted Street.

5.6.2.4 Bicycle

Portions of the Major Taylor Trail would need to be closed temporarily during the construction of the 119th Street station and the aerial structure. Bicycle travel times may increase due to detours or shifting of routes.

5.6.2.5 Pedestrian

Due to the construction of the aerial structure and stations sidewalks would need to be temporarily closed. Increased travel distance and time may be incurred due to pedestrian traffic reroutes.

5.6.2.6 Parking

On-street parking would be temporarily affected during construction of the aerial structure and stations. Parking would potentially be eliminated from Halsted Street during construction to increase traffic flow. Construction of park & ride lots would also contribute to temporary on-street parking loss due to maintenance of traffic during construction activities.

5.6.3 Cumulative Impacts and Mitigations - Halsted Rail Alternative

There would be no adverse cumulative impacts for the Halsted Rail Alternative.

5.6.4 119th Street Yard and Shop

The 119th Street yard and shop would be located south of the 119th Street station and north of Vermont Avenue station to the west of Halsted Street. The parcel on which the yard and shop would be constructed is west of the park & ride facility location at the 119th Street station. Track height would transition from elevated at station height to at-grade between Halsted Street and Morgan Street, through the proposed park & ride facility. The yard would be entirely at grade.

5.6.4.1 Permanent Impacts and Mitigations

Under the Halsted Rail Alternative there would be no adverse permanent impacts on bicycle or pedestrian access. Pedestrian access by the general public would be restricted and discouraged. Existing sidewalks within the ROW of 119th Street, 120th Street, and Peoria Street would remain. Because of the location of the yard no public transportation would be affected. Existing on-street parking on Peoria Street would not be affected. Some parking would be provided for yard employees.

5.6.4.2 Construction Impacts and Mitigations

The construction activities associated with the 119th Street yard and shop would temporarily affect the physical capacity of roadways and intersections requiring detours at 120th Street and Halsted Street. Superstructure erection would require temporary shutdown of all traffic on Halsted Street. This may lead to increased travel times and possible shift in traffic volumes, increasing travel times for bus transit users. Bus stop locations may be eliminated or relocated temporarily and buses rerouted during construction activities. Lane closure on 119th Street and 120th Street may occur due to maintenance of traffic activities during construction. With adherence to local, state, and federal construction and temporary traffic and public transportation management guidelines, no adverse construction impacts would result from the Halsted Rail Alternative.

Section 6
Impacts Remaining After Mitigation

Impacts can be adverse or beneficial. In the category of transportation, as summarized for each alternative below, there would be no adverse impacts after mitigation. The project will provide transportation benefits by improving travel times and transit access. Existing average travel times to work are higher in the RLE API than many other parts of Chicago. Within the API, some sections (particularly along 130th Street) are somewhat isolated from transit access. Benefits which directly address needs within the API are summarized below for each alternative.

6.1 No Build Alternative

There would be no impacts for the No Build Alternative.

6.2 Bus Rapid Transit Alternative

After mitigation, there would be no adverse impacts on transportation facilities.

Benefits of the BRT Alternative include:

- more frequent service throughout the day along the BRT alignment (4 minutes versus existing 12 minutes);
- approximately 3 minutes faster travel time from 130th Street to the 95th Street Terminal compared to existing bus service; and
- routing of service along and south of 130th Street to areas currently isolated from transportation connectivity.

6.3 Union Pacific Railroad Rail Alternative - Right-of-Way Option

Benefits applicable to all options for the UPRR Alternative include:

- an average “user benefit” (a measure of the combined time savings of travel time to stations, wait time at stations, transfer time, and on-transit time) of 12 minutes per boarding; and
- direct rail service (without requiring one or more bus transfers) from 130th Street, an area currently isolated from transportation connectivity.

6.3.1 Segment UA

After mitigation, there would be no adverse impacts on transportation facilities.

6.3.2 Segment UB

After mitigation, there would be no adverse impacts on transportation facilities.

6.3.3 120th Street Yard and Shop

There would be no impacts on transportation facilities from the 120th Street yard and shop.

6.4 Union Pacific Railroad Rail Alternative - East Option

6.4.1 Segment UA

After mitigation, there would be no adverse impacts on transportation facilities.

6.4.2 Segment UB

After mitigation, there would be no adverse impacts on transportation facilities.

6.4.3 120th Street Yard and Shop

There would be no impacts on transportation facilities from the 120th Street yard and shop

6.5 Union Pacific Railroad Rail Alternative - West Option

6.5.1 Segment UA

After mitigation, there would be no adverse impacts on transportation facilities.

6.5.2 Segment UB

After mitigation, there would be no adverse impacts on transportation facilities.

6.5.3 120th Street Yard and Shop

There would be no impacts on transportation facilities.

6.6 Halsted Rail Alternative

Benefits for the Halsted Rail Alternative include:

- an average “user benefit” of 14 minutes per boarding (which is a savings in travel time to stations, wait time, transfer time, and on-transit time); and
- direct rail service from the area surrounding Halsted Street. (Note that the area surrounding Halsted Street and Vermont Avenue currently has among the longest travel times to work in Chicago, ranging from 45 to 60 minutes.)

6.6.1 Segment HA

After mitigation, there would be no adverse impacts on transportation facilities.

6.6.2 Segment HB

After mitigation, there would be no adverse impacts on transportation facilities.

6.6.3 119th Street Yard and Shop

There would be no impacts on transportation facilities.

Section 7
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Appendix A
Existing Conditions

Red Line Extension Traffic Methodology

Existing Volumes

Intersection turning movement volumes were taken from two sources, existing counts from other studies and new counts conducted for this study. Adjustments were made when appropriate to match existing count volumes to volumes gathered from new counts. For locations with adjacent signalized intersections, such as frontage road intersection pairs along the interstates, counts were balanced to reflect more accurate traffic flow patterns.

Peak hour time periods used in this analysis are between 7:30 and 8:30 A.M. and 5:00 and 6:00 P.M. Peak hour factors for each individual intersection were used based on the existing 15-minute peak volume distributions.

There were several minor intersections where turning movement counts were not conducted. Turning movement volumes were estimated using adjacent intersection volume counts as approach and departure volumes and then applying a simple distribution assumption to generate turning movement volumes.

2026 and 2030 Base Volumes

Growth rates for 2030 traffic volumes were calculated from CMAP regional AM and PM peak models for existing, 2030 without-project, and 2030 with-project. To account for growth in the traffic between existing and future scenarios, existing intersection turning movement volumes for each intersection approach were adjusted based on the proportional change of volume between the corresponding CMAP model links. For intersection approaches without corresponding CMAP model links, the proportional change for these approaches was taken from the approaches at the same intersection that did have corresponding CMAP links. A floor of 1.0 and a ceiling of 1.3 were applied to the proportional changes. To estimate 2026 volumes, a simple linear growth rate from existing to 2030 base volumes was assumed.

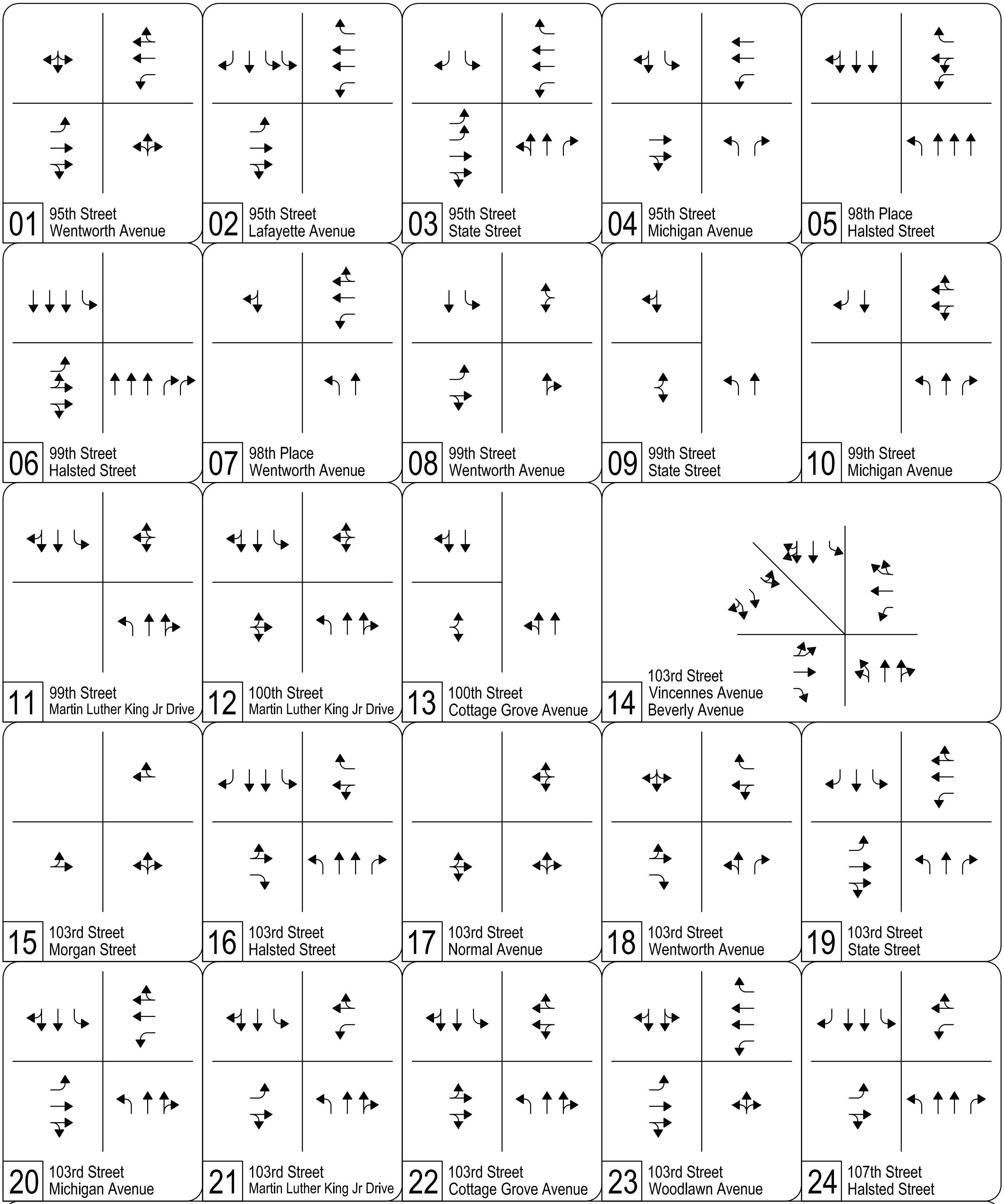
2026 and 2030 With-Project Volumes

Trip generation rates from the ITE Trip Generation Manual are used to estimate the number of AM and PM peak traffic entering and exiting the park and ride locations for each project scenario based on the number of parking spaces that are to be constructed for the corresponding year of analysis. The project trips are then distributed across the transportation network based on an assumed distribution pattern.
The project traffic was added to the 2026 and 2030 base volumes to get the 2026 and 2030 with-project traffic for each project scenario.

Future peak hour factors (PHF) of 0.9 were used for all intersections with existing PHFs of 0.9 or less. A PHF of 0.95 was used for all intersections with existing PHFs of 0.9 to 0.95. If the existing peak hour factor was greater than 0.95, then the existing PHF was used as the future PHF.

Synchro Analysis and Mitigation

An analysis of each year and each project scenario was performed using Synchro 7. The results of the Synchro analysis were used to determine which intersections were impacted by each project scenario. Potential mitigation for impacted intersections included signal modifications, such as optimization or actuation; additional lanes or lane configuration modifications within existing pavement; and as a last resort, adding turn lanes that would require pavement widening.



01 95th Street Wentworth Avenue

02 95th Street Lafayette Avenue

03 95th Street State Street

04 95th Street Michigan Avenue

05 98th Place Halsted Street

06 99th Street Halsted Street

07 98th Place Wentworth Avenue

08 99th Street Wentworth Avenue

09 99th Street State Street

10 99th Street Michigan Avenue

11 99th Street Martin Luther King Jr Drive

12 100th Street Martin Luther King Jr Drive

13 100th Street Cottage Grove Avenue

14 103rd Street Vincennes Avenue Beverly Avenue

15 103rd Street Morgan Street

16 103rd Street Halsted Street

17 103rd Street Normal Avenue

18 103rd Street Wentworth Avenue

19 103rd Street State Street

20 103rd Street Michigan Avenue

21 103rd Street Martin Luther King Jr Drive

22 103rd Street Cottage Grove Avenue

23 103rd Street Woodlawn Avenue

24 107th Street Halsted Street

Existing (2012) Intersection Lane Geometry

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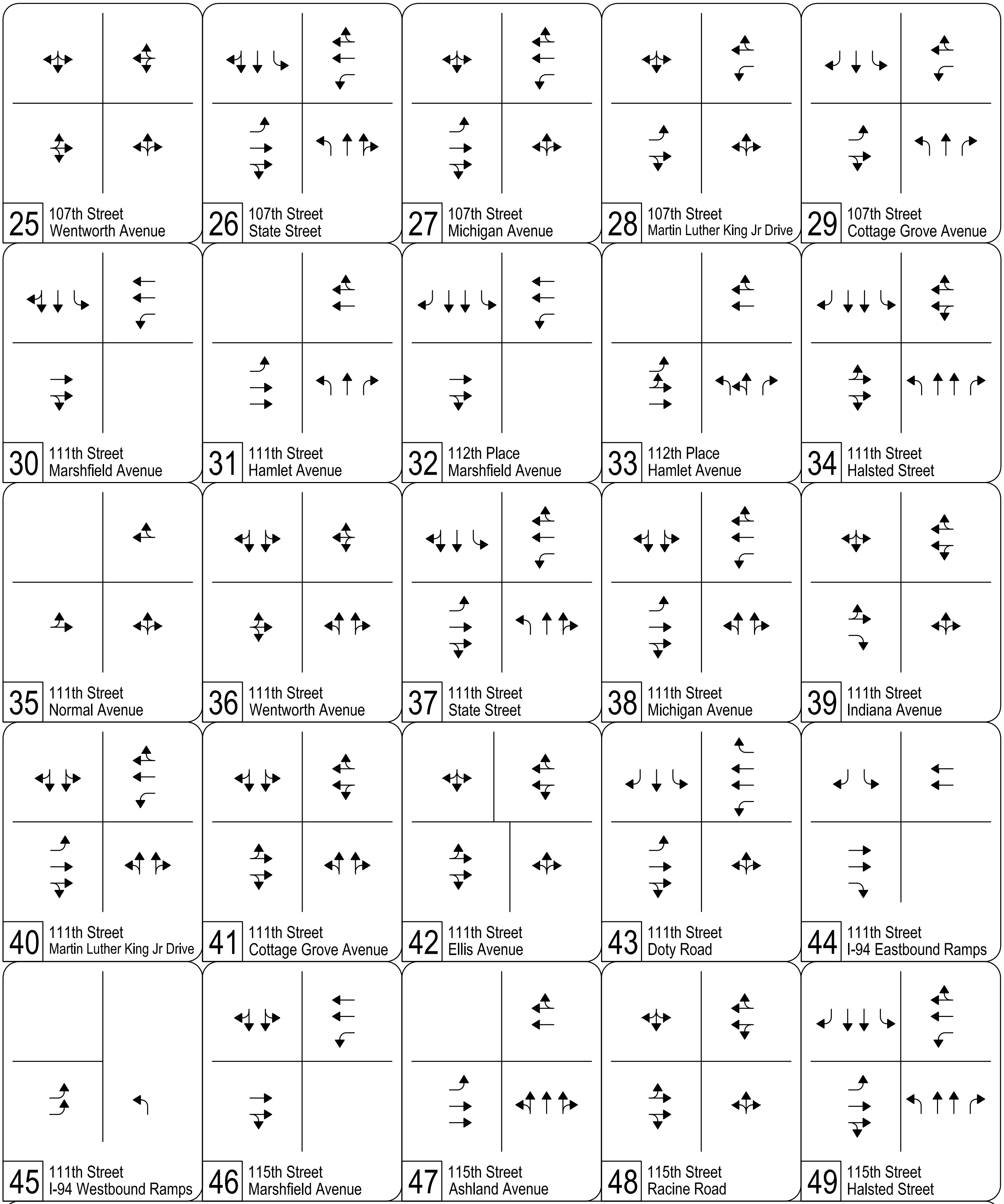


25 107th Street Wentworth Avenue

26 107th Street State Street

27 107th Street Michigan Avenue

28 107th Street Martin Luther King Jr Drive

29 107th Street Cottage Grove Avenue

30 111th Street Marshfield Avenue

31 111th Street Hamlet Avenue

32 112th Place Marshfield Avenue

33 112th Place Hamlet Avenue

34 111th Street Halsted Street

35 111th Street Normal Avenue

36 111th Street Wentworth Avenue

37 111th Street State Street

38 111th Street Michigan Avenue

39 111th Street Indiana Avenue

40 111th Street Martin Luther King Jr Drive

41 111th Street Cottage Grove Avenue

42 111th Street Ellis Avenue

43 111th Street Doty Road

44 111th Street I-94 Eastbound Ramps

45 111th Street I-94 Westbound Ramps

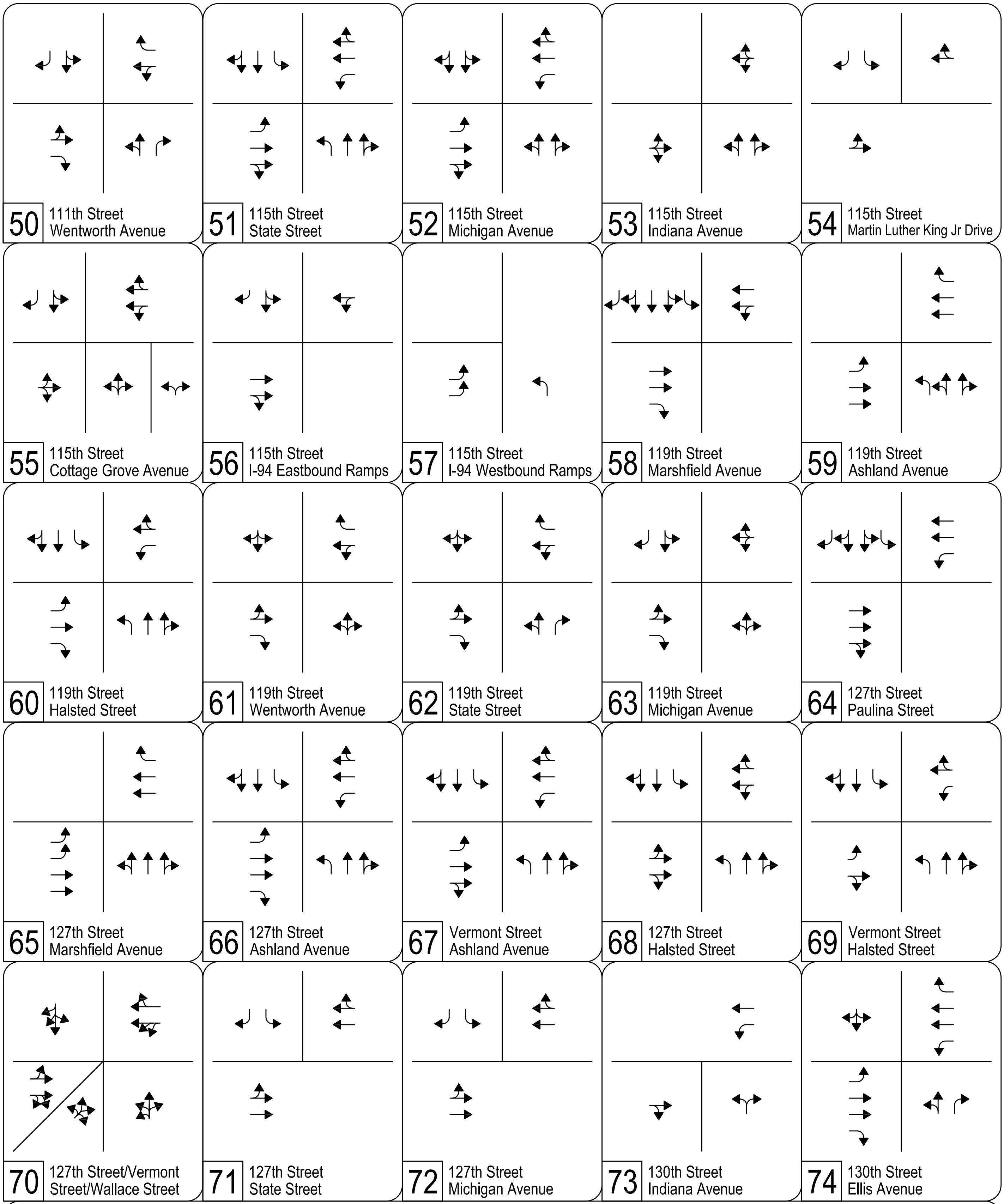
46 115th Street Marshfield Avenue

47 115th Street Ashland Avenue

48 115th Street Racine Road

49 115th Street Halsted Street

Existing (2012) Intersection Lane Geometry
Page 2 of 3



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52 115th Street Michigan Avenue

53 115th Street Indiana Avenue

54 115th Street Martin Luther King Jr Drive

55 115th Street Cottage Grove Avenue

56 115th Street I-94 Eastbound Ramps

57 115th Street I-94 Westbound Ramps

58 119th Street Marshfield Avenue

59 119th Street Ashland Avenue

60 119th Street Halsted Street

61 119th Street Wentworth Avenue

62 119th Street State Street

63 119th Street Michigan Avenue

64 127th Street Paulina Street

65 127th Street Marshfield Avenue

66 127th Street Ashland Avenue

67 Vermont Street Ashland Avenue

68 127th Street Halsted Street

69 Vermont Street Halsted Street

70 127th Street/Vermont Street/Wallace Street

71 127th Street State Street

72 127th Street Michigan Avenue

73 130th Street Indiana Avenue

74 130th Street Ellis Avenue

Existing (2012) Intersection Lane Geometry

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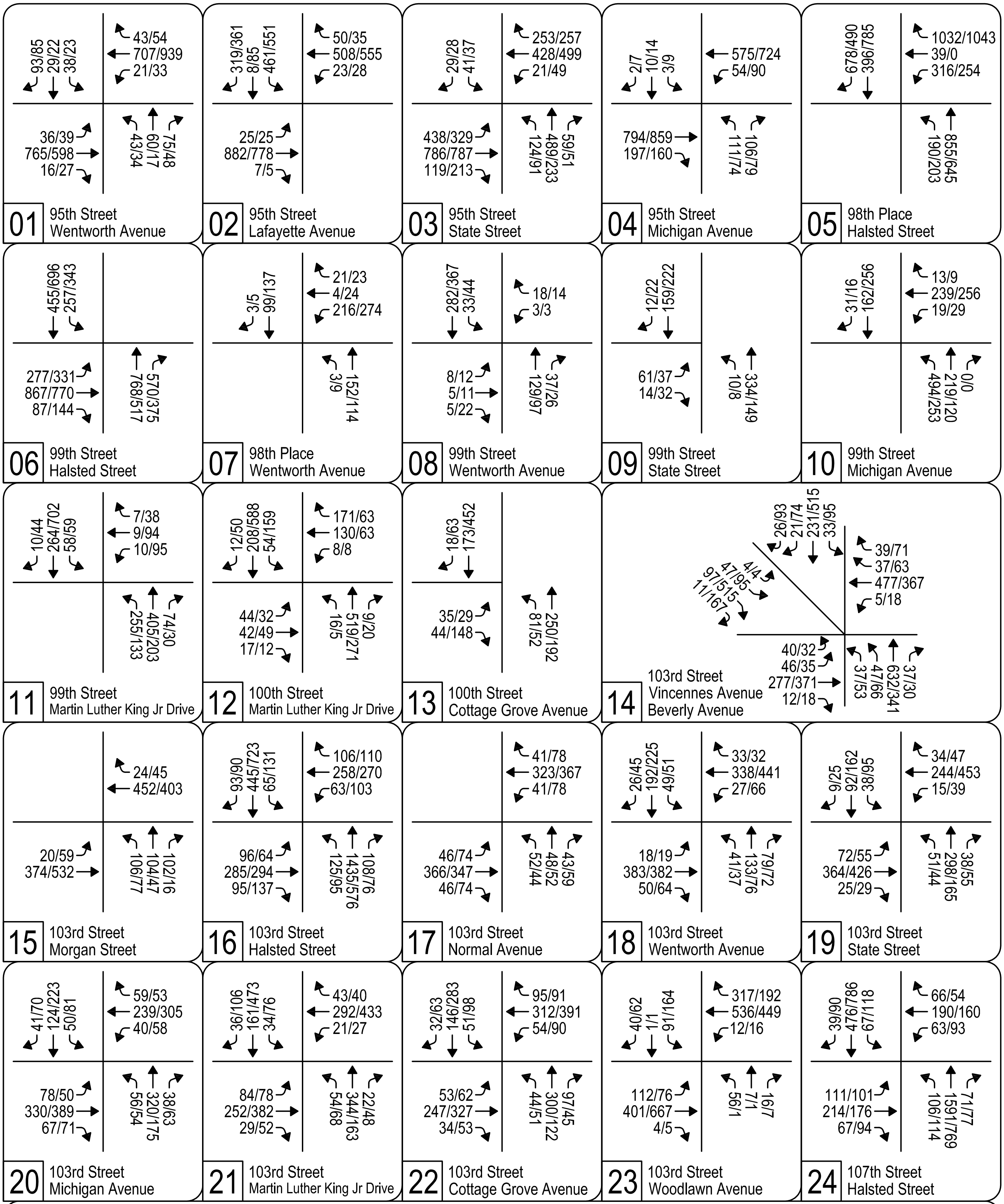
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43/54
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36/39
765/598
16/27
43/34
60/17
75/48
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95th Street
Wentworth Avenue
319/361
8/85
461/551
50/35
508/555
23/28
25/25
882/778
7/5
02
95th Street
Lafayette Avenue
29/28
41/37
253/257
428/499
21/49
438/329
786/787
119/213
124/91
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794/859
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State Street
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9/20
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Martin Luther King Jr Drive
18/63
173/452
35/29
44/148
81/52
250/192
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477/367
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97/515
11/167
40/32
46/35
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12/18
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Beverly Avenue
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56/1
7/1
16/7
23
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Woodlawn Avenue
39/90
476/786
67/118
66/54
190/160
63/93
111/101
214/176
67/94
106/114
1591/769
71/77
24
107th Street
Halsted Street

Existing (2012) Intersection Traffic Volumes

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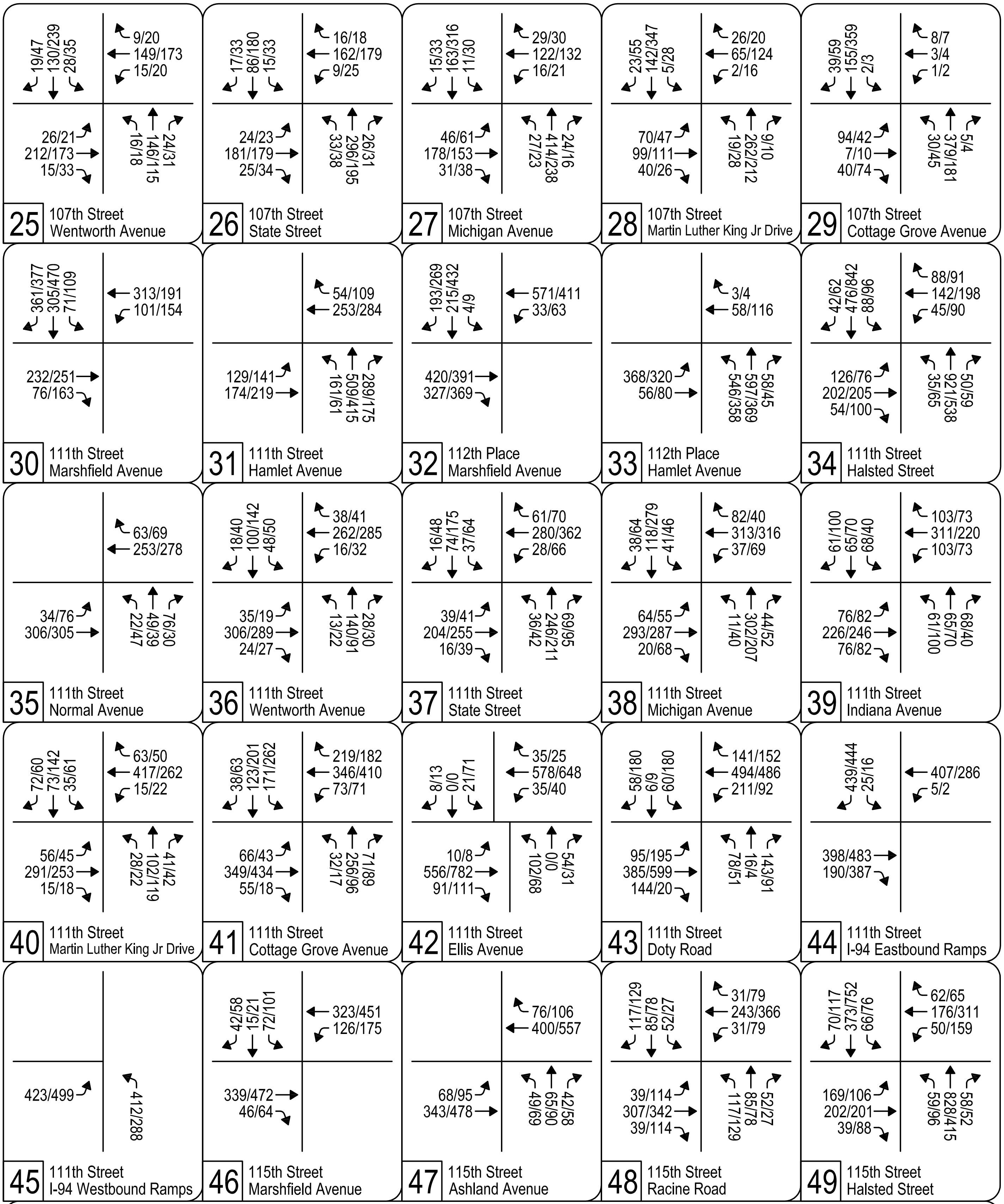
Legend: AM/PM Peak Hour Volumes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76/82
226/246
76/82
61/100
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68/40
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111th Street
Indiana Avenue
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63/50
417/262
15/22
56/45
291/253
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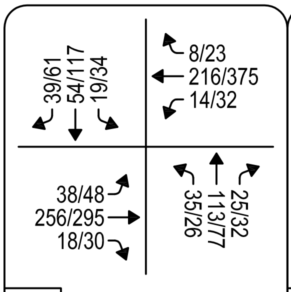
41/42
40
111th Street
Martin Luther King Jr Drive
38/63
123/201
171/262
219/182
346/410
73/71
66/43
349/434
55/18
32/17
256/96
71/89
41
111th Street
Cottage Grove Avenue
8/13
0/0
21/71
35/25
578/648
35/40
10/8
556/782
91/111
102/68
0/0
54/31
42
111th Street
Ellis Avenue
58/180
6/9
60/180
141/152
494/486
211/92
95/195
385/599
144/20
78/51
16/4
143/91
43
111th Street
Doty Road
439/444
25/16
407/286
5/2
398/483
190/387
44
111th Street
I-94 Eastbound Ramps
423/499
412/288
45
111th Street
I-94 Westbound Ramps
42/58
15/21
72/101
323/451
126/175
339/472
46/64
46
115th Street
Marshfield Avenue
76/106
400/557
68/95
343/478
49/69
65/90
42/58
47
115th Street
Ashland Avenue
117/129
85/78
52/27
31/79
243/366
31/79
39/114
307/342
39/114
117/129
85/78
52/27
48
115th Street
Racine Road
70/117
373/752
66/76
62/65
176/311
50/159
169/106
202/201
39/88
59/96
828/415
58/52
49
115th Street
Halsted Street

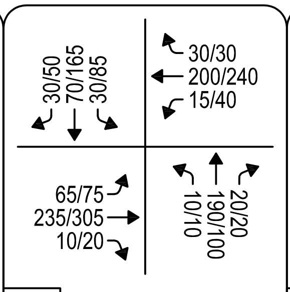
Existing (2012) Intersection Traffic Volumes

Page 2 of 3

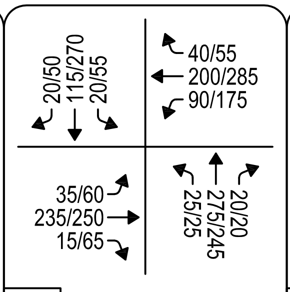
Legend: AM/PM Peak Hour Volumes


39/61
54/117
19/34
8/23
216/375
14/32
38/48
256/295
18/30
35/26
113/77
25/32

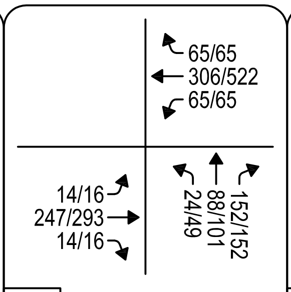
50 111th Street
Wentworth Avenue


30/50
70/165
30/85
30/30
200/240
15/40
65/75
235/305
10/20
10/10
190/100
20/20

51 115th Street
State Street


20/50
115/270
20/55
40/55
200/285
90/175
35/60
235/250
15/65
25/25
275/245
20/20

52 115th Street
Michigan Avenue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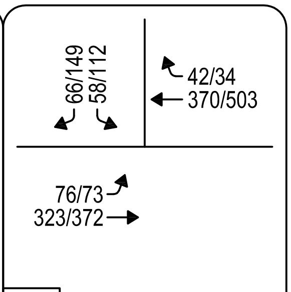
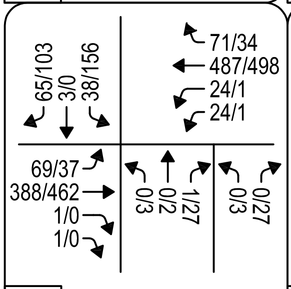
306/522
65/65
14/16
247/293
14/16
24/49
88/101
152/152

53 115th Street
Indiana Avenue


66/149
58/112
42/34
370/503
76/73
323/372

54 115th Street
Martin Luther King Jr Drive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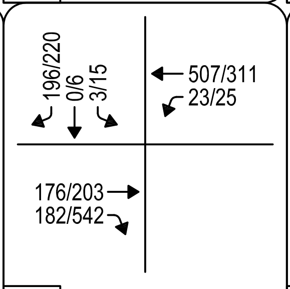
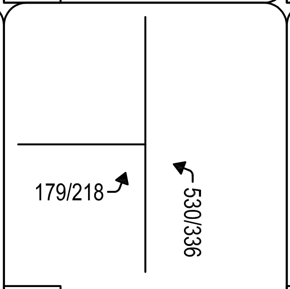
3/0
38/156
71/34
487/498
24/1
24/1
69/37
388/462
1/0
1/0
0/3
0/2
1/27
0/3
0/27

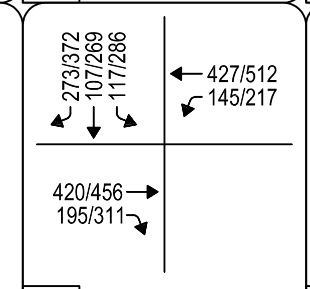
55 115th Street
Cottage Grove Avenue


196/220
0/6
3/15
507/311
23/25
176/203
182/542

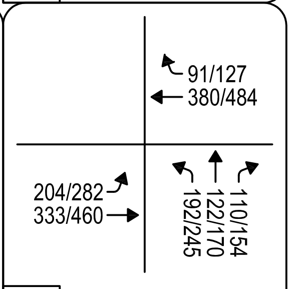
56 115th Street
I-94 Eastbound Ramps


179/218
530/336

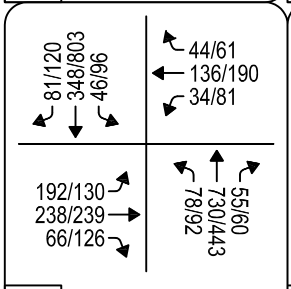
57 115th Street
I-94 Westbound Ramps


273/372
107/269
117/286
427/512
145/217
420/456
195/311

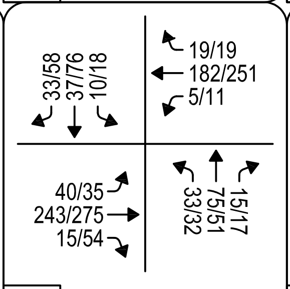
58 119th Street
Marshfield Avenue


91/127
380/484
204/282
333/460
192/245
122/170
110/154

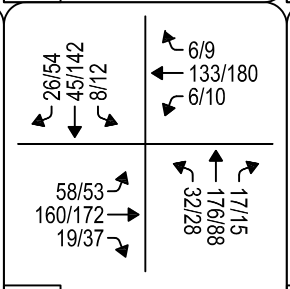
59 119th Street
Ashland Avenue


81/120
348/803
46/96
44/61
136/190
34/81
192/130
238/239
66/126
78/92
730/443
55/60

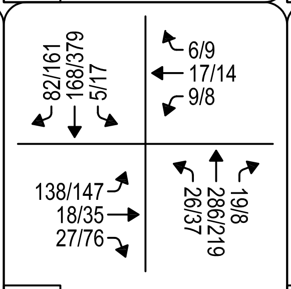
60 119th Street
Halsted Street


33/58
37/76
10/18
19/19
182/251
5/11
40/35
243/275
15/54
33/32
75/51
15/17

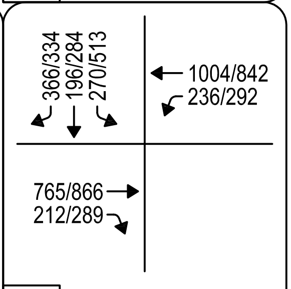
61 119th Street
Wentworth Avenue


26/54
45/142
8/12
6/9
133/180
6/10
58/53
160/172
19/37
32/28
176/88
17/15

62 119th Street
State Street


82/161
168/379
5/17
6/9
17/14
9/8
138/147
18/35
27/76
26/37
286/219
19/8

63 119th Street
Michigan Avenue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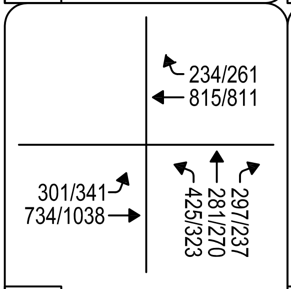
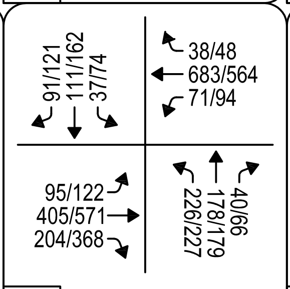
270/513
1004/842
236/292
765/866
212/289

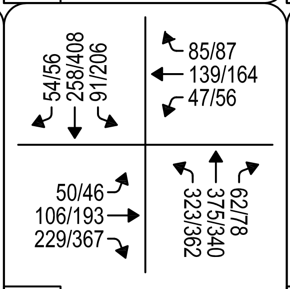
64 127th Street
Paulina Street


234/261
815/811
301/341
734/1038
425/323
281/270
297/237

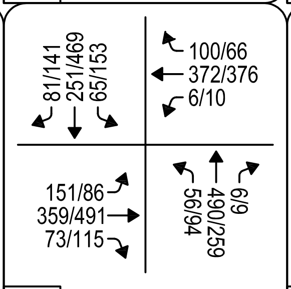
65 127th Street
Marshfield Avenue


91/121
111/162
37/74
38/48
683/564
71/94
95/122
405/571
204/368
226/227
178/179
40/66

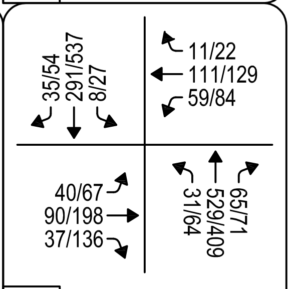
66 127th Street
Ashland Avenue


54/56
258/408
91/206
85/87
139/164
47/56
50/46
106/193
229/367
323/362
375/340
62/78

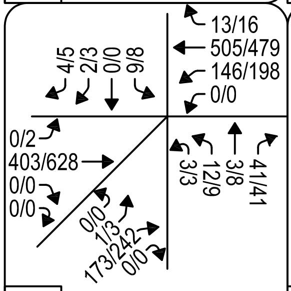
67 Vermont Street
Ashland Avenue


81/141
251/469
65/153
100/66
372/376
6/10
151/86
359/491
73/115
56/94
490/259
6/9

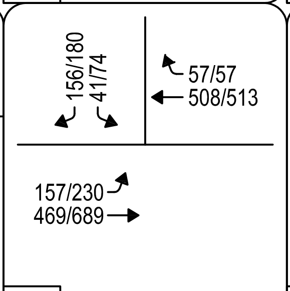
68 127th Street
Halsted Street


35/54
291/537
8/27
11/22
111/129
59/84
40/67
90/198
37/136
31/64
529/409
65/71

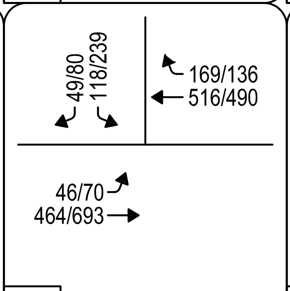
69 Vermont Street
Halsted Street


4/5
2/3
0/0
9/8
13/16
505/479
146/198
0/0
0/2
403/628
0/0
0/0
3/3
12/9
3/8
41/41
0/0
1/3
173/242
0/0

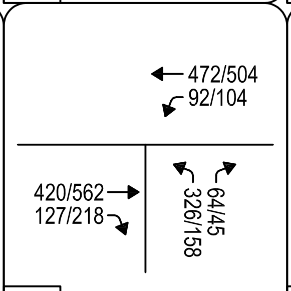
70 127th Street/Vermont
Street/Wallace Street


156/180
41/74
57/57
508/513
157/230
469/689

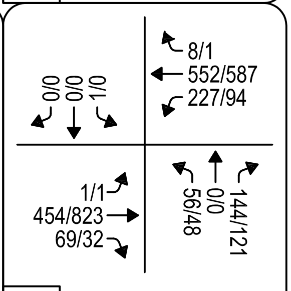
71 127th Street
State Street


49/80
118/239
169/136
516/490
46/70
464/693

72 127th Street
Michigan Avenue


472/504
92/104
420/562
127/218
326/158
64/45

73 130th Street
Indiana Avenue


0/0
0/0
1/0
8/1
552/587
227/94
1/1
454/823
69/32
56/48
0/0
144/121

74 130th Street
Ellis Avenue

Existing (2012) Intersection Traffic Volumes

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Legend: AM/PM Peak Hour Volumes

Fish Transportation Group
801 South Blvd Suite 5
Oak Park, IL 60302

Chicago
Halsted & 99th Street
Combined (All Vechiles + Peds)

File Name : Halsted & 99th St
Site Code : 00002423
Start Date : 9/23/2008
Page No : 1

Groups Printed- Cars - Heavy - Semi

	Halsted From North (SB)				99th Street From East (WB)				Halsted From South (NB)				99th Street From West (EB)				
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Int. Total
07:00 AM	78	84	0	0	0	0	0	0	0	190	106	5	78	258	6	0	805
07:15 AM	105	86	0	0	0	0	0	0	0	219	138	1	81	244	4	1	879
07:30 AM	93	118	0	1	0	0	0	0	0	194	150	11	71	205	9	1	853
07:45 AM	62	143	0	1	0	0	0	0	0	243	155	0	70	212	16	2	904
Total	338	431	0	2	0	0	0	0	0	846	549	17	300	919	35	4	3441
08:00 AM	97	150	0	0	0	0	0	2	0	156	135	2	68	258	19	0	887
08:15 AM	68	156	0	2	0	0	0	1	0	211	130	1	81	192	43	1	886
08:30 AM	76	138	0	0	0	0	0	1	0	173	142	21	81	191	26	0	849
08:45 AM	68	160	0	0	0	0	0	0	0	137	90	0	96	215	18	0	784
Total	309	604	0	2	0	0	0	4	0	677	497	24	326	856	106	1	3406

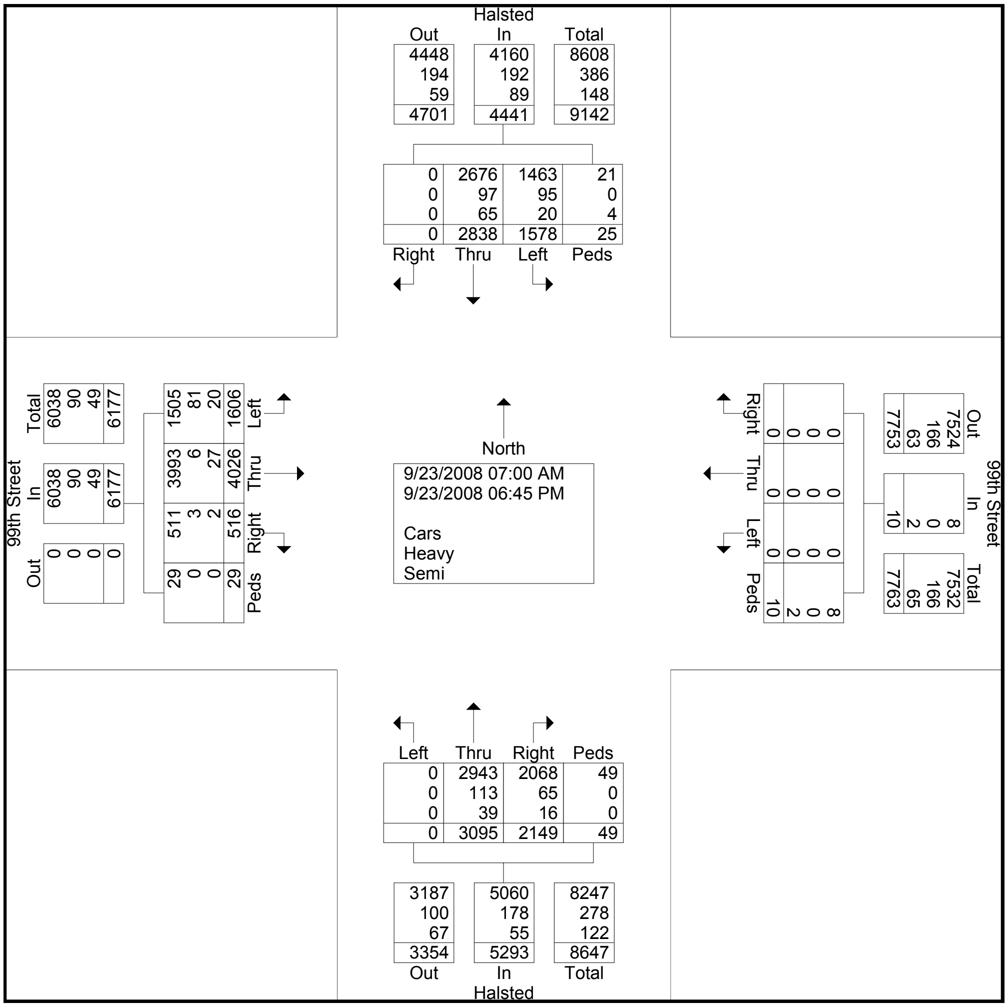
*** BREAK ***

	Halsted From North (SB)				99th Street From East (WB)				Halsted From South (NB)				99th Street From West (EB)				
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Int. Total
04:00 PM	64	112	0	2	0	0	0	1	0	150	98	1	62	160	32	5	687
04:15 PM	78	132	0	3	0	0	0	0	0	114	64	0	86	226	32	1	736
04:30 PM	69	171	0	4	0	0	0	0	0	161	104	2	103	210	27	2	853
04:45 PM	79	135	0	3	0	0	0	0	0	85	76	0	53	183	26	0	640
Total	290	550	0	12	0	0	0	1	0	510	342	3	304	779	117	8	2916
05:00 PM	80	150	0	0	0	0	0	0	0	147	97	0	83	177	27	1	762
05:15 PM	54	140	0	3	0	0	0	0	0	138	99	0	93	208	42	2	779
05:30 PM	84	159	0	3	0	0	0	0	0	129	79	1	108	202	46	1	812
05:45 PM	96	189	0	0	0	0	0	0	0	159	100	0	82	183	29	2	840
Total	314	638	0	6	0	0	0	0	0	573	375	1	366	770	144	6	3193
06:00 PM	80	186	0	1	0	0	0	0	0	128	96	0	62	185	31	4	773
06:15 PM	73	161	0	1	0	0	0	1	0	121	104	0	88	163	31	1	744
06:30 PM	86	128	0	0	0	0	0	3	0	115	86	2	79	159	22	1	681
06:45 PM	88	140	0	1	0	0	0	1	0	125	100	2	81	195	30	4	767
Total	327	615	0	3	0	0	0	5	0	489	386	4	310	702	114	10	2965
Grand Total	1578	2838	0	25	0	0	0	10	0	3095	2149	49	1606	4026	516	29	15921
Apprch %	35.5	63.9	0	0.6	0	0	0	100	0	58.5	40.6	0.9	26	65.2	8.4	0.5	
Total %	9.9	17.8	0	0.2	0	0	0	0.1	0	19.4	13.5	0.3	10.1	25.3	3.2	0.2	
Cars	1463	2676	0	21	0	0	0	8	0	2943	2068	49	1505	3993	511	29	15266
% Cars	92.7	94.3	0	84	0	0	0	80	0	95.1	96.2	100	93.7	99.2	99	100	95.9
Heavy	95	97	0	0	0	0	0	0	0	113	65	0	81	6	3	0	460
% Heavy	6	3.4	0	0	0	0	0	0	0	3.7	3	0	5	0.1	0.6	0	2.9
Semi	20	65	0	4	0	0	0	2	0	39	16	0	20	27	2	0	195
% Semi	1.3	2.3	0	16	0	0	0	20	0	1.3	0.7	0	1.2	0.7	0.4	0	1.2

Fish Transportation Group
801 South Blvd Suite 5
Oak Park, IL 60302

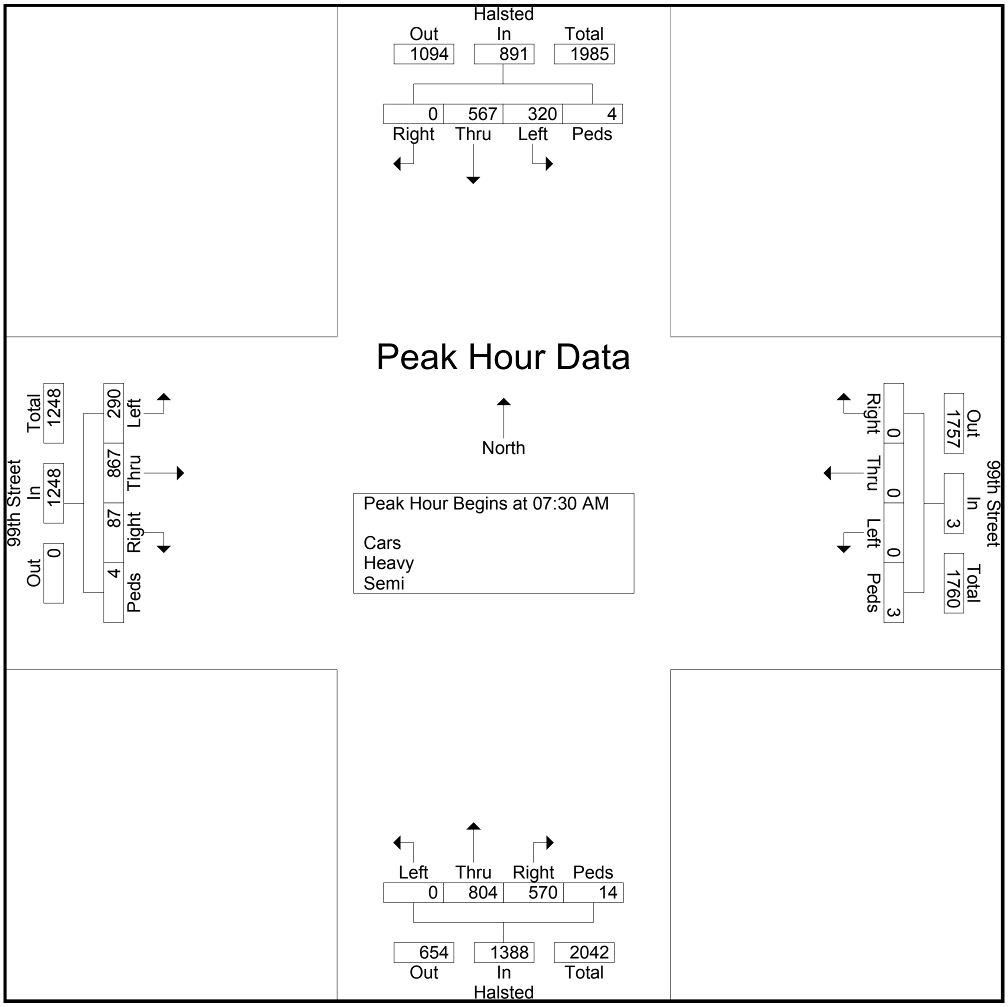
Chicago
Halsted & 99th Street
Combined (All Vechiles + Peds)

File Name : Halsted & 99th St
Site Code : 00002423
Start Date : 9/23/2008
Page No : 2


Halsted
Out In Total
4448 4160 8608
194 192 386
59 89 148
4701 4441 9142
0 2676 1463 21
0 97 95 0
0 65 20 4
0 2838 1578 25
Right Thru Left Peds
99th Street
Total 6038 90 49 6177
In 6038 90 49 6177
Out 0 0 0 0
Left 1505 81 20 1606
Thru 3993 6 27 4026
Right 511 3 2 516
Peds 29 0 0 29
North
9/23/2008 07:00 AM
9/23/2008 06:45 PM
Cars
Heavy
Semi
Right 0 0 0 0
Thru 0 0 0 0
Left 0 0 0 0
Peds 8 0 2 10
99th Street
Out 7524 166 63 7753
In 8 0 2 10
Total 7532 166 65 7763
Left Thru Right Peds
0 2943 2068 49
0 113 65 0
0 39 16 0
0 3095 2149 49
3187 5060 8247
100 178 278
67 55 122
3354 5293 8647
Out In Total
Halsted

Chicago
Halsted & 99th Street
Combined (All Vechiles + Peds)

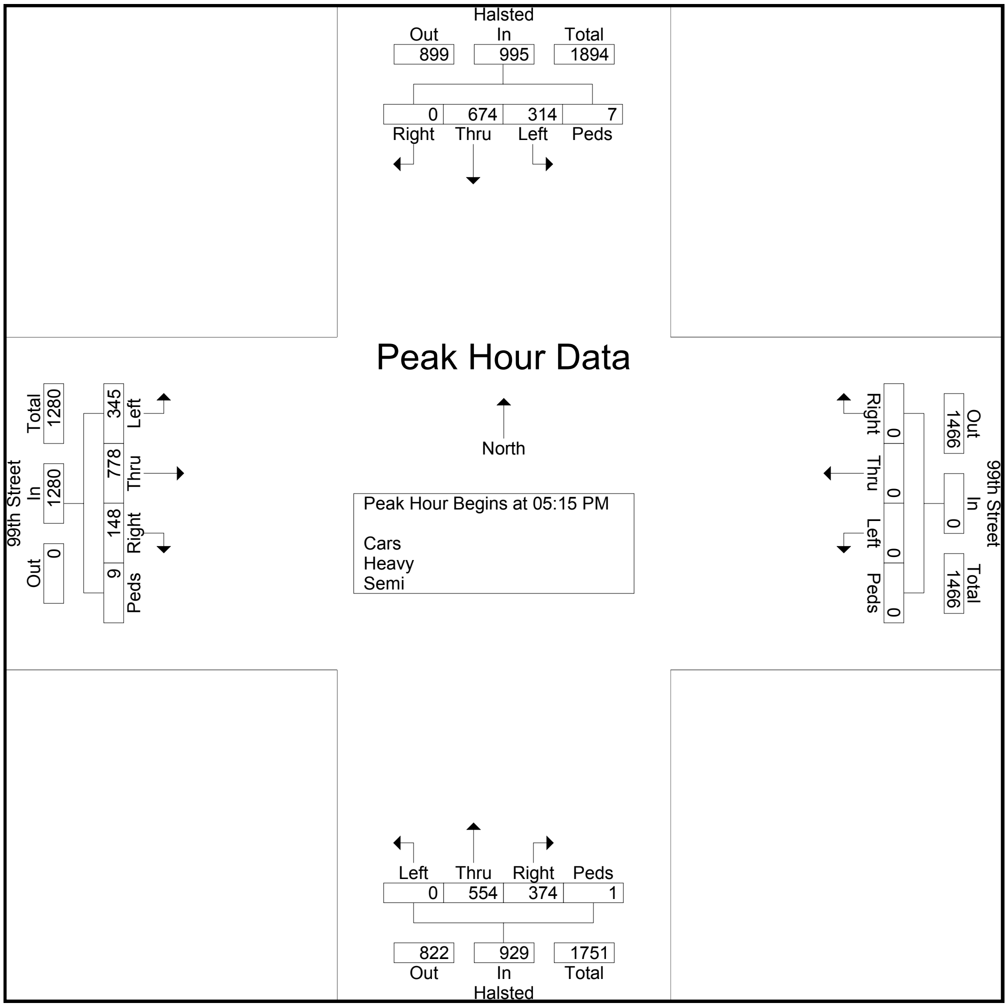
	Halsted From North (SB)					**99th Street From East (WB)**					**Halsted From South (NB)**					**99th Street From West (EB)**					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	93	118	0	1	212	0	0	0	0	0	0	194	150	11	355	71	205	9	1	286	853
07:45 AM	62	143	0	1	206	0	0	0	0	0	0	243	155	0	398	70	212	16	2	300	904
08:00 AM	97	150	0	0	247	0	0	0	2	2	0	156	135	2	293	68	258	19	0	345	887
08:15 AM	68	156	0	2	226	0	0	0	1	1	0	211	130	1	342	81	192	43	1	317	886
Total Volume	320	567	0	4	891	0	0	0	3	3	0	804	570	14	1388	290	867	87	4	1248	3530
% App. Total	35.9	63.6	0	0.4		0	0	0	100		0	57.9	41.1	1		23.2	69.5	7	0.3		
PHF	.825	.909	.000	.500	.902	.000	.000	.000	.375	.375	.000	.827	.919	.318	.872	.895	.840	.506	.500	.904	.976


Halsted
Out In Total
1094 891 1985
0 567 320 4
Right Thru Left Peds
Peak Hour Data
North
Peak Hour Begins at 07:30 AM
Cars
Heavy
Semi
99th Street
Total 1248
In 1248
Out 0
290 Left
867 Thru
87 Right
4 Peds
99th Street
Out 1757
In 3
Total 1760
0 Right
0 Thru
0 Left
3 Peds
Left Thru Right Peds
0 804 570 14
654 1388 2042
Out In Total
Halsted

Chicago
Halsted & 99th Street
Combined (All Vechiles + Peds)

File Name : Halsted & 99th St
Site Code : 00002423
Start Date : 9/23/2008
Page No : 4

	Halsted From North (SB)					**99th Street From East (WB)**					**Halsted From South (NB)**					**99th Street From West (EB)**					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 06:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:15 PM																					
05:15 PM	54	140	0	3	197	0	0	0	0	0	0	138	99	0	237	93	208	42	2	345	779
05:30 PM	84	159	0	3	246	0	0	0	0	0	0	129	79	1	209	108	202	46	1	357	812
05:45 PM	96	189	0	0	285	0	0	0	0	0	0	159	100	0	259	82	183	29	2	296	840
06:00 PM	80	186	0	1	267	0	0	0	0	0	0	128	96	0	224	62	185	31	4	282	773
Total Volume	314	674	0	7	995	0	0	0	0	0	0	554	374	1	929	345	778	148	9	1280	3204
% App. Total	31.6	67.7	0	0.7		0	0	0	0		0	59.6	40.3	0.1		27	60.8	11.6	0.7		
PHF	.818	.892	.000	.583	.873	.000	.000	.000	.000	.000	.000	.871	.935	.250	.897	.799	.935	.804	.563	.896	.954


Halsted
Out In Total
899 995 1894
0 674 314 7
Right Thru Left Peds
Peak Hour Data
North
Peak Hour Begins at 05:15 PM
Cars
Heavy
Semi
99th Street
Total 1280
In 1280
Out 0
345 Left
778 Thru
148 Right
9 Peds
Right 0
Thru 0
Left 0
Peds 0
Out 1466
In 0
Total 1466
99th Street
Left Thru Right Peds
0 554 374 1
822 929 1751
Out In Total
Halsted

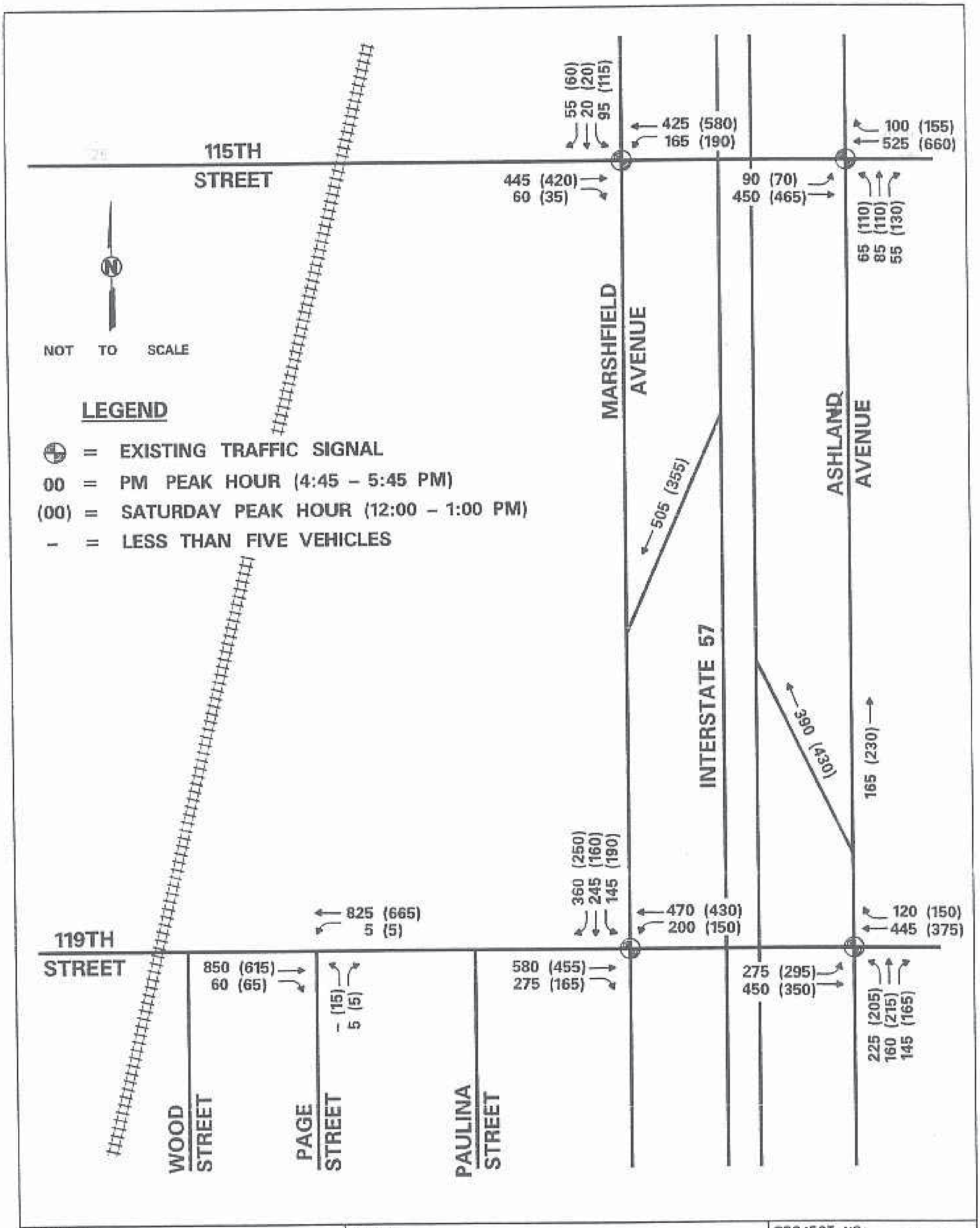
Cottage Grove Ave. & 100th St.
City: **Chicago**
County: **Cook**
District: **1**

Summary
State Of Illinois
Department of Transportation
Bureau of Traffic
Summary of Traffic Survey

Dates: 7/25/2008 **(AM)**
7/21/2008 **(PM)**

Route	Traffic From: N **Cottage Grove** Going				Traffic From: S **Cottage Grove** Going				**TOTAL NORTH**	Traffic From: **100th St.** Going				Traffic From: W **100th St.** Going				**TOTAL EAST**	**GRAND TOTAL**
Start Hour		**S**	**W**	**TOTAL**	**W**	**N**		**TOTAL**	**SOUTH**	**S**	**W**	**N**	**TOTAL**	**N**		**S**	**TOTAL**	**WEST**	
6:00	0	56	16	72	72	152	0	224	**296**	0	0	0	0	16	0	19	35	**35**	**331**
7:00	0	128	22	150	68	285	0	353	**503**	0	0	0	0	25	0	27	52	**52**	**555**
8:00	0	173	18	191	81	250	0	331	**522**	0	0	0	0	35	0	44	79	**79**	**601**
9:00	0	147	22	169	60	200	0	260	**429**	0	0	0	0	29	0	45	74	**74**	**503**
10:00	0	161	32	193	47	219	0	266	**459**	0	0	0	0	36	0	49	85	**85**	**544**
11:00	0	144	32	176	47	183	0	230	**406**	0	0	0	0	38	0	28	66	**66**	**472**
12:00	0	212	60	272	59	205	0	264	**536**	0	0	0	0	31	0	72	103	**103**	**639**
13:00	0	219	48	267	57	203	0	260	**527**	0	0	0	0	35	0	73	108	**108**	**635**
14:00	0	267	48	315	55	191	0	246	**561**	0	0	0	0	24	0	72	96	**96**	**657**
15:00	0	287	50	337	53	217	0	270	**607**	0	0	0	0	19	0	60	79	**79**	**686**
16:00	0	391	62	453	51	220	0	271	**724**	0	0	0	0	17	0	105	122	**122**	**846**
17:00	0	452	63	515	52	192	0	244	**759**	0	0	0	0	29	0	148	177	**177**	**936**

Property of Illinois Department of Transportation
Traffic Report 4 leg Version 2.5


115TH STREET
NOT TO SCALE
LEGEND
= EXISTING TRAFFIC SIGNAL
00 = PM PEAK HOUR (4:45 – 5:45 PM)
(00) = SATURDAY PEAK HOUR (12:00 – 1:00 PM)
– = LESS THAN FIVE VEHICLES
55 (60)
20 (20)
95 (115)
425 (580)
165 (190)
445 (420)
60 (35)
100 (155)
525 (660)
90 (70)
450 (465)
65 (110)
85 (110)
55 (130)
MARSHFIELD AVENUE
ASHLAND AVENUE
INTERSTATE 57
505 (355)
390 (430)
165 (230)
360 (250)
245 (160)
145 (190)
470 (430)
200 (150)
580 (455)
275 (165)
120 (150)
445 (375)
275 (295)
450 (350)
225 (205)
160 (215)
145 (165)
119TH STREET
825 (665)
5 (5)
850 (615)
60 (65)
– (15)
5 (5)
WOOD STREET
PAGE STREET
PAULINA STREET

PROJECT:

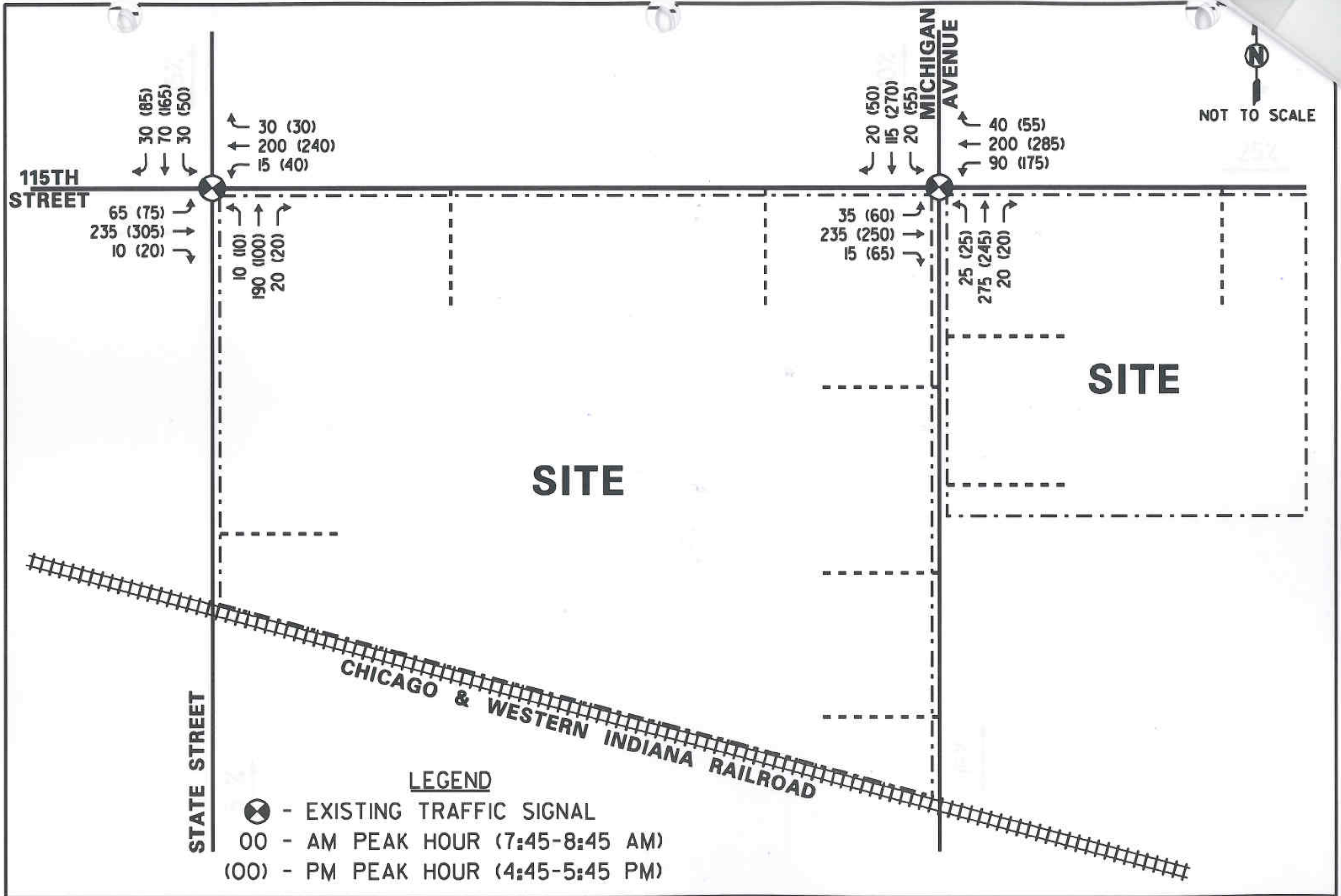
PROPOSED SHOPPING CENTER
CHICAGO, ILLINOIS

TITLE:

EXISTING PEAK HOUR VOLUMES

PROJECT NO: 05-402

FIGURE NO: 2


NOT TO SCALE
N
115TH STREET
STATE STREET
MICHIGAN AVENUE
SITE
SITE
CHICAGO & WESTERN INDIANA RAILROAD
30 (85)
70 (165)
30 (50)
30 (30)
200 (240)
15 (40)
65 (75)
235 (305)
10 (20)
10 (10)
190 (100)
20 (20)
20 (50)
115 (270)
20 (55)
40 (55)
200 (285)
90 (175)
35 (60)
235 (250)
15 (65)
25 (25)
275 (245)
20 (20)
LEGEND
- EXISTING TRAFFIC SIGNAL
00 - AM PEAK HOUR (7:45-8:45 AM)
(00) - PM PEAK HOUR (4:45-5:45 PM)

PROJECT:

PROPOSED ROSELAND PLAZA
CHICAGO, ILLINOIS

TITLE:

EXISTING PEAK HOUR TRAFFIC VOLUMES

PROJECT NO: 08-293

KLOA

FIGURE NO: 2

Fish Transportation Group

801 South Blvd Suite 5
Oak Park,IL 60302

Chicago
Vincennes - 103rd St - Beverly
Combined (All Vehicles + Pedestrians)

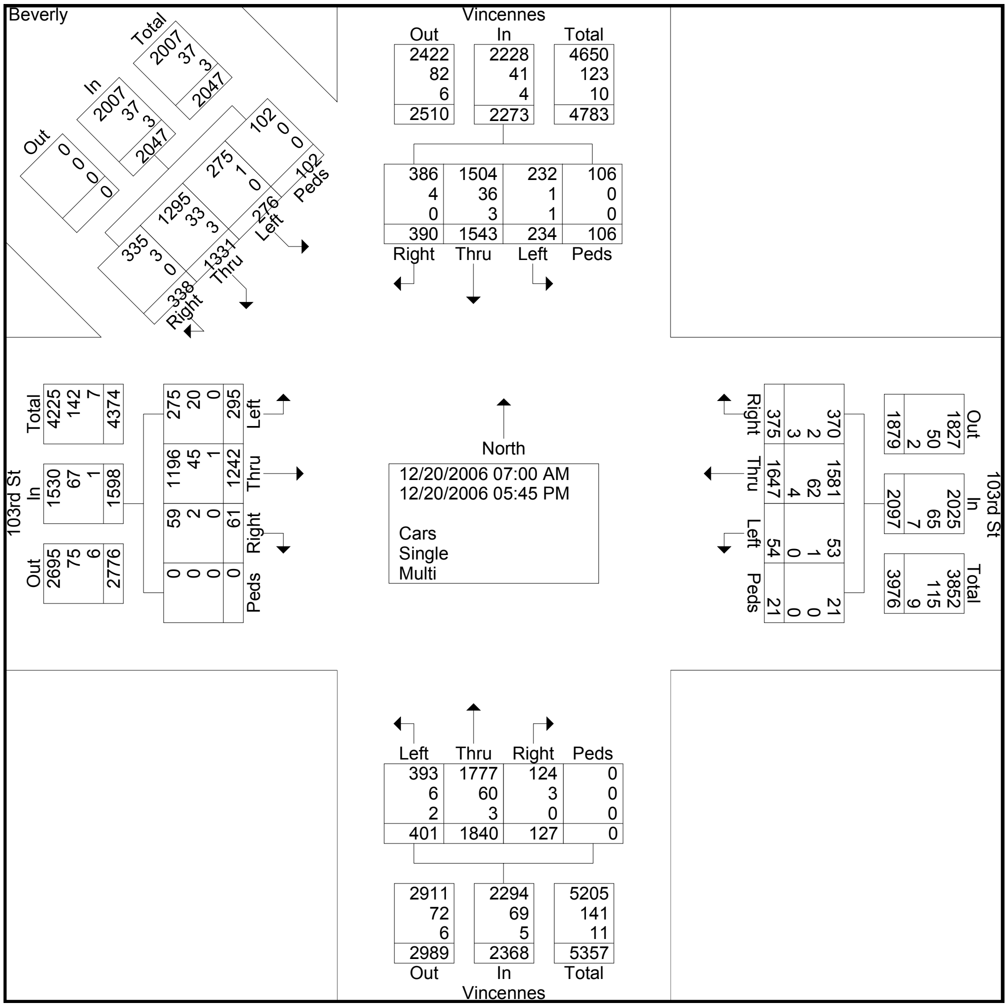
File Name : Vincennes - Beverly & 103rd Rpt
Site Code : 00002244
Start Date : 12/20/2006
Page No : 1

Groups Printed- Cars - Single - Multi

	Vincennes From North				**103rd St From East**				**Vincennes From South**				**103rd St From West**				**Beverly From Northwest**				
Start Time	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Int. Total
07:00 AM	3	6	26	5	1	14	60	1	0	5	93	12	0	2	44	25	0	5	22	9	333
07:15 AM	1	6	25	1	1	8	104	1	0	11	154	8	0	0	59	22	2	2	20	8	433
07:30 AM	1	6	37	6	1	18	98	1	0	1	101	14	0	0	41	17	1	4	19	10	376
07:45 AM	2	16	53	6	0	14	124	2	0	11	222	20	0	3	91	28	2	3	23	13	633
Total	7	34	141	18	3	54	386	5	0	28	570	54	0	5	235	92	5	14	84	40	1775
08:00 AM	2	13	58	4	4	34	139	1	0	15	167	13	0	9	102	26	1	3	26	14	631
08:15 AM	0	12	83	17	1	10	116	1	0	10	142	37	0	0	43	15	0	1	29	10	527
08:30 AM	1	6	68	5	1	13	119	5	0	7	127	47	0	0	52	13	1	3	30	11	509
08:45 AM	1	15	66	7	2	15	113	5	0	8	138	19	0	4	82	21	0	7	35	18	556
Total	4	46	275	33	8	72	487	12	0	40	574	116	0	13	279	75	2	14	120	53	2223
*** BREAK ***																					
04:00 PM	42	31	98	21	2	19	61	4	0	3	67	20	0	3	50	9	42	31	98	21	622
04:15 PM	16	34	172	15	3	25	112	7	0	9	92	34	0	8	87	14	16	34	172	15	865
04:30 PM	0	24	171	26	2	33	127	6	0	3	114	32	0	7	115	12	0	24	171	26	893
04:45 PM	12	54	171	26	0	38	107	2	0	14	82	26	0	7	105	26	12	54	171	26	933
Total	70	143	612	88	7	115	407	19	0	29	355	112	0	25	357	61	70	143	612	88	3313
05:00 PM	3	39	104	16	3	37	94	4	0	7	84	25	0	6	106	20	3	39	104	16	710
05:15 PM	6	40	126	26	0	24	81	5	0	7	86	40	0	3	87	23	6	40	126	26	752
05:30 PM	11	48	157	35	0	45	115	4	0	8	88	29	0	3	89	10	11	48	157	35	893
05:45 PM	5	40	128	18	0	28	77	5	0	8	83	25	0	6	89	14	5	40	128	18	717
Total	25	167	515	95	3	134	367	18	0	30	341	119	0	18	371	67	25	167	515	95	3072
Grand Total	106	390	1543	234	21	375	1647	54	0	127	1840	401	0	61	1242	295	102	338	1331	276	10383
Apprch %	4.7	17.2	67.9	10.3	1	17.9	78.5	2.6	0	5.4	77.7	16.9	0	3.8	77.7	18.5	5	16.5	65	13.5	
Total %	1	3.8	14.9	2.3	0.2	3.6	15.9	0.5	0	1.2	17.7	3.9	0	0.6	12	2.8	1	3.3	12.8	2.7	
Cars	106	386	1504	232	21	370	1581	53	0	124	1777	393	0	59	1196	275	102	335	1295	275	10084
% Cars	100	99	97.5	99.1	100	98.7	96	98.1	0	97.6	96.6	98	0	96.7	96.3	93.2	100	99.1	97.3	99.6	97.1
Single	0	4	36	1	0	2	62	1	0	3	60	6	0	2	45	20	0	3	33	1	279
% Single	0	1	2.3	0.4	0	0.5	3.8	1.9	0	2.4	3.3	1.5	0	3.3	3.6	6.8	0	0.9	2.5	0.4	2.7
Multi	0	0	3	1	0	3	4	0	0	0	3	2	0	0	1	0	0	0	3	0	20
% Multi	0	0	0.2	0.4	0	0.8	0.2	0	0	0	0.2	0.5	0	0	0.1	0	0	0	0.2	0	0.2

Chicago
Vincennes - 103rd St - Beverly
Combined (All Vehicles + Pedestrians)

File Name : Vincennes - Beverly & 103rd Rpt
Site Code : 00002244
Start Date : 12/20/2006
Page No : 2


Beverly
Out 0 0 0 0
In 2007 37 3 2047
Total 2007 37 3 2047
335 3 0 338 Right
1295 33 3 1331 Thru
275 1 0 276 Left
102 0 0 102 Peds
Vincennes
Out 2422 82 6 2510
In 2228 41 4 2273
Total 4650 123 10 4783
Right 386 4 0 390
Thru 1504 36 3 1543
Left 232 1 1 234
Peds 106 0 0 106
103rd St
Total 4225 142 7 4374
In 1530 67 1 1598
Out 2695 75 6 2776
Left 275 20 0 295
Thru 1196 45 1 1242
Right 59 2 0 61
Peds 0 0 0 0
North
12/20/2006 07:00 AM
12/20/2006 05:45 PM
Cars
Single
Multi
103rd St
Out 1827 50 2 1879
In 2025 65 7 2097
Total 3852 115 9 3976
Right 370 2 3 375
Thru 1581 62 4 1647
Left 53 1 0 54
Peds 21 0 0 21
Left 393 6 2 401
Thru 1777 60 3 1840
Right 124 3 0 127
Peds 0 0 0 0
Out 2911 72 6 2989
In 2294 69 5 2368
Total 5205 141 11 5357
Vincennes

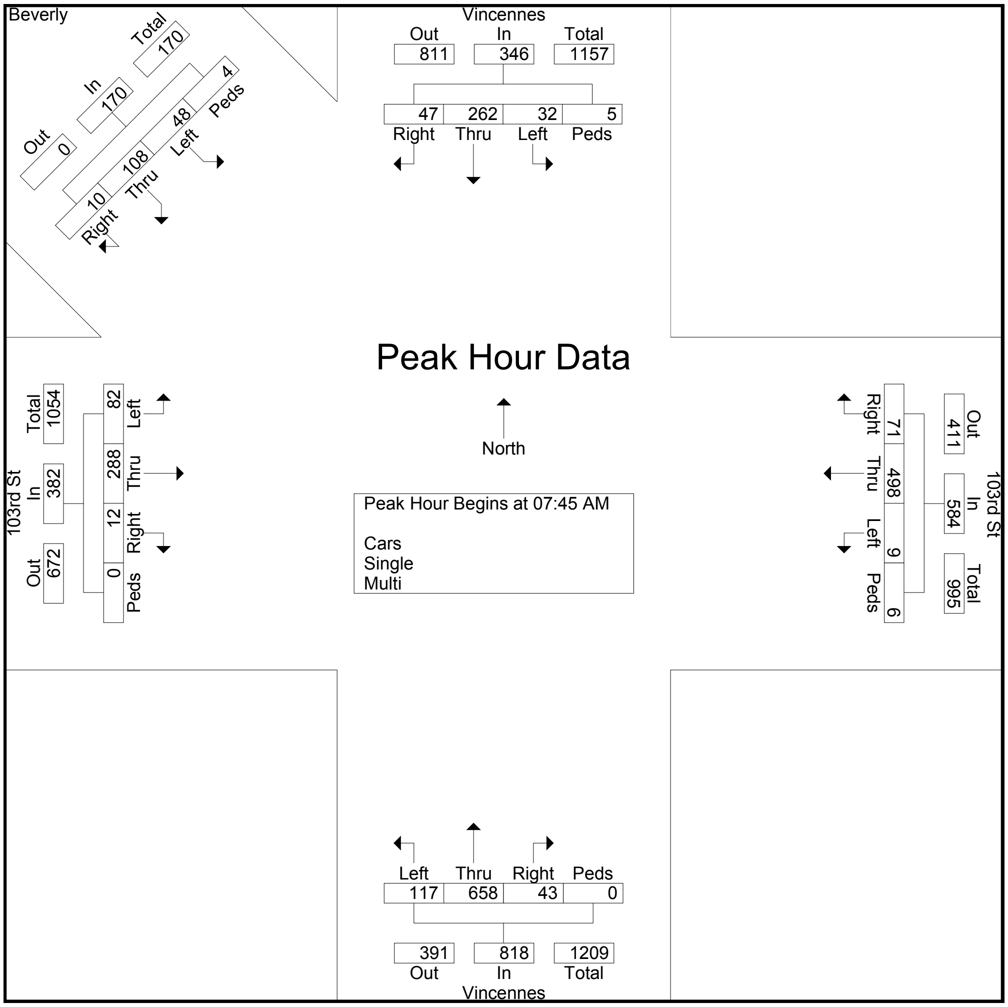
Fish Transportation Group

801 South Blvd Suite 5
Oak Park,IL 60302

Chicago
Vincennes - 103rd St - Beverly
Combined (All Vehicles + Pedestrians)

File Name : Vincennes - Beverly & 103rd Rpt
Site Code : 00002244
Start Date : 12/20/2006
Page No : 3

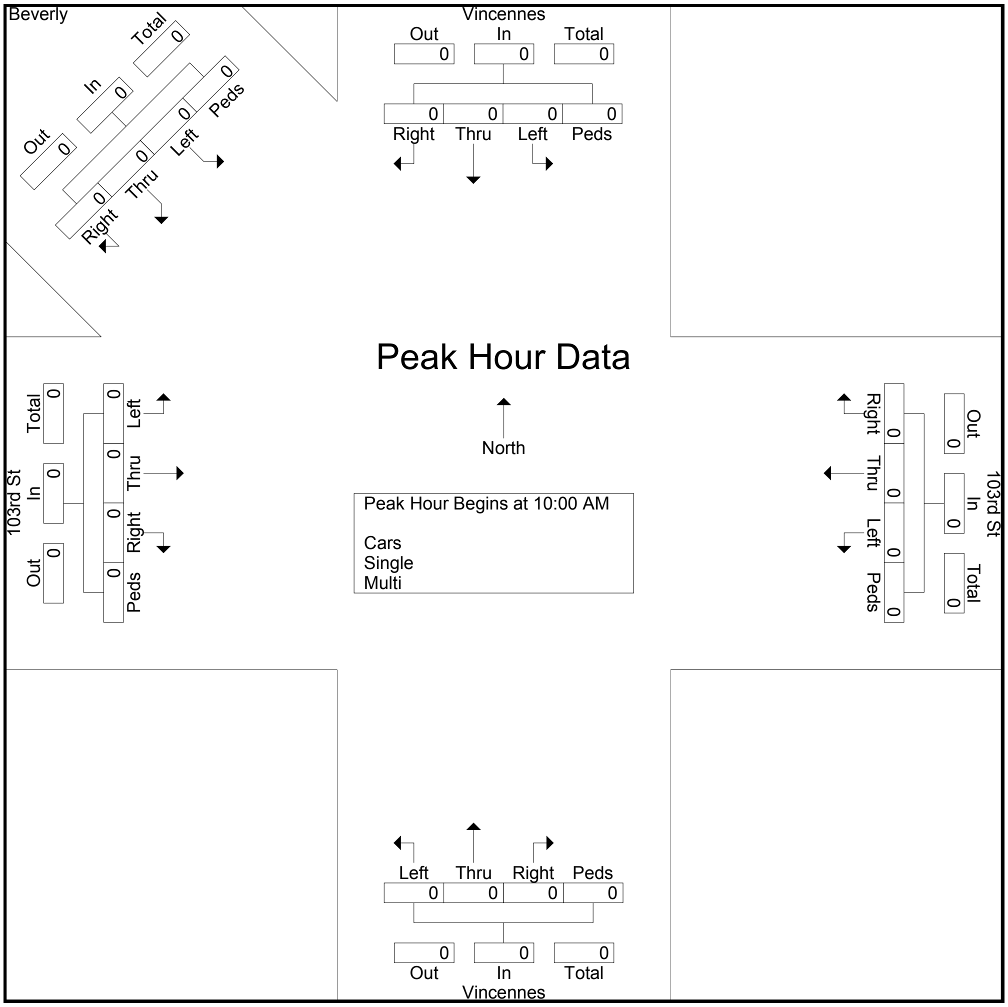
	Vincennes From North					103rd St From East					Vincennes From South					103rd St From West					Beverly From Northwest					
Start Time	Peds	Right	Thru	Left	App. Total	Peds	Right	Thru	Left	App. Total	Peds	Right	Thru	Left	App. Total	Peds	Right	Thru	Left	App. Total	Peds	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1																										
Peak Hour for Entire Intersection Begins at 07:45 AM																										
07:45 AM	2	16	53	6	77	0	14	124	2	140	0	11	222	20	253	0	3	91	28	122	2	3	23	13	41	633
08:00 AM	2	13	58	4	77	4	34	139	1	178	0	15	167	13	195	0	9	102	26	137	1	3	26	14	44	631
08:15 AM	0	12	83	17	112	1	10	116	1	128	0	10	142	37	189	0	0	43	15	58	0	1	29	10	40	527
08:30 AM	1	6	68	5	80	1	13	119	5	138	0	7	127	47	181	0	0	52	13	65	1	3	30	11	45	509
Total Volume	5	47	262	32	346	6	71	498	9	584	0	43	658	117	818	0	12	288	82	382	4	10	108	48	170	2300
% App. Total	1.4	13.6	75.7	9.2		1	12.2	85.3	1.5		0	5.3	80.4	14.3		0	3.1	75.4	21.5		2.4	5.9	63.5	28.2		
PHF	.625	.734	.789	.471	.772	.375	.522	.896	.450	.820	.000	.717	.741	.622	.808	.000	.333	.706	.732	.697	.500	.833	.900	.857	.944	.908


Beverly
Total 170
In 170
Out 0
4 Peds
48 Left
108 Thru
10 Right
Vincennes
Out 811
In 346
Total 1157
47 Right
262 Thru
32 Left
5 Peds
Peak Hour Data
North
103rd St
Total 1054
In 382
Out 672
82 Left
288 Thru
12 Right
0 Peds
103rd St
Out 411
In 584
Total 995
71 Right
498 Thru
9 Left
6 Peds
Peak Hour Begins at 07:45 AM
Cars
Single
Multi
Left 117
Thru 658
Right 43
Peds 0
391 Out
818 In
1209 Total
Vincennes

Chicago
Vincennes - 103rd St - Beverly
Combined (All Vehicles + Pedestrians)

File Name : Vincennes - Beverly & 103rd Rpt
Site Code : 00002244
Start Date : 12/20/2006
Page No : 4

	Vincennes From North					**103rd St From East**					**Vincennes From South**					**103rd St From West**					**Beverly From Northwest**					
Start Time	Peds	Right	Thru	Left	App. Total	Peds	Right	Thru	Left	App. Total	Peds	Right	Thru	Left	App. Total	Peds	Right	Thru	Left	App. Total	Peds	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1																										
Peak Hour for Entire Intersection Begins at 10:00 AM																										
10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

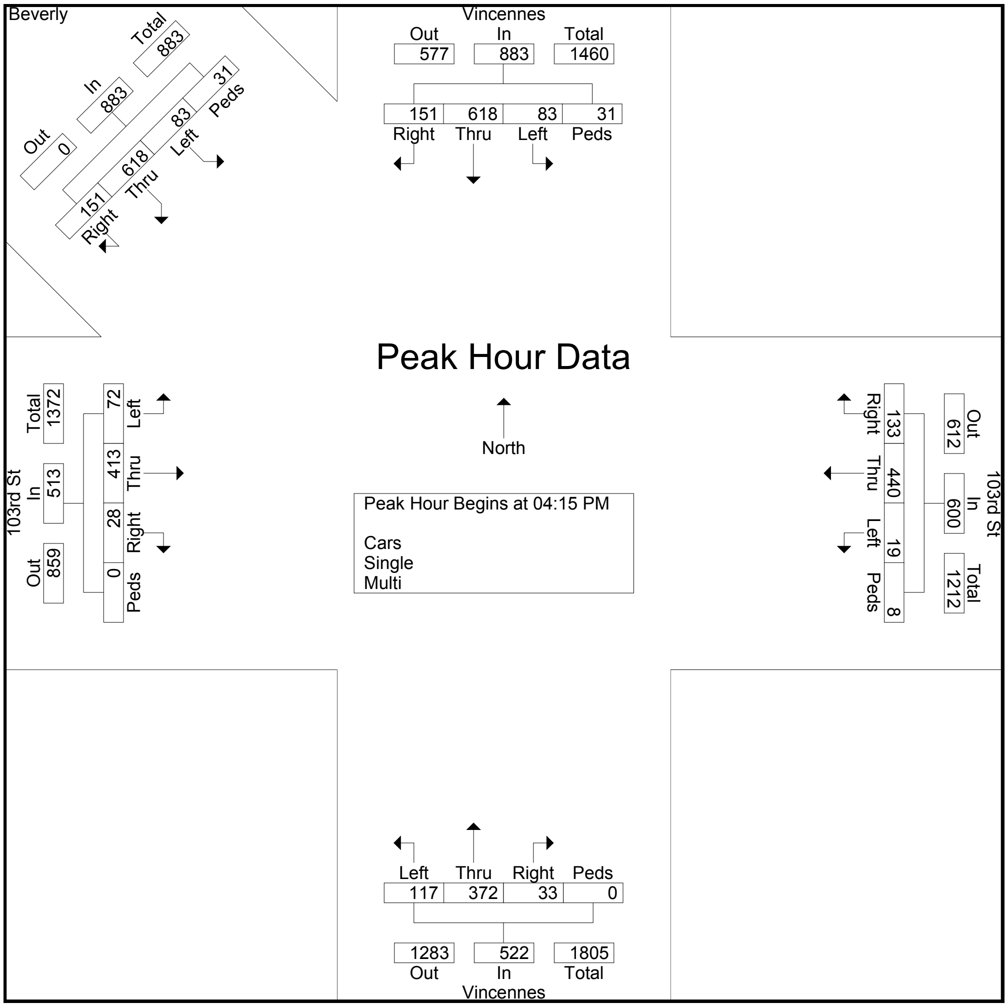

Beverly
Total 0
In 0
Out 0
0 Peds
0 Left
0 Thru
0 Right
Vincennes
Out 0
In 0
Total 0
0 0 0 0
Right Thru Left Peds
Peak Hour Data
North
Total 0
In 0
Out 0
103rd St
0 Left
0 Thru
0 Right
0 Peds
Right 0
Thru 0
Left 0
Peds 0
Out 0
In 0
Total 0
103rd St
Peak Hour Begins at 10:00 AM
Cars
Single
Multi
Left Thru Right Peds
0 0 0 0
0 0 0
Out In Total
Vincennes

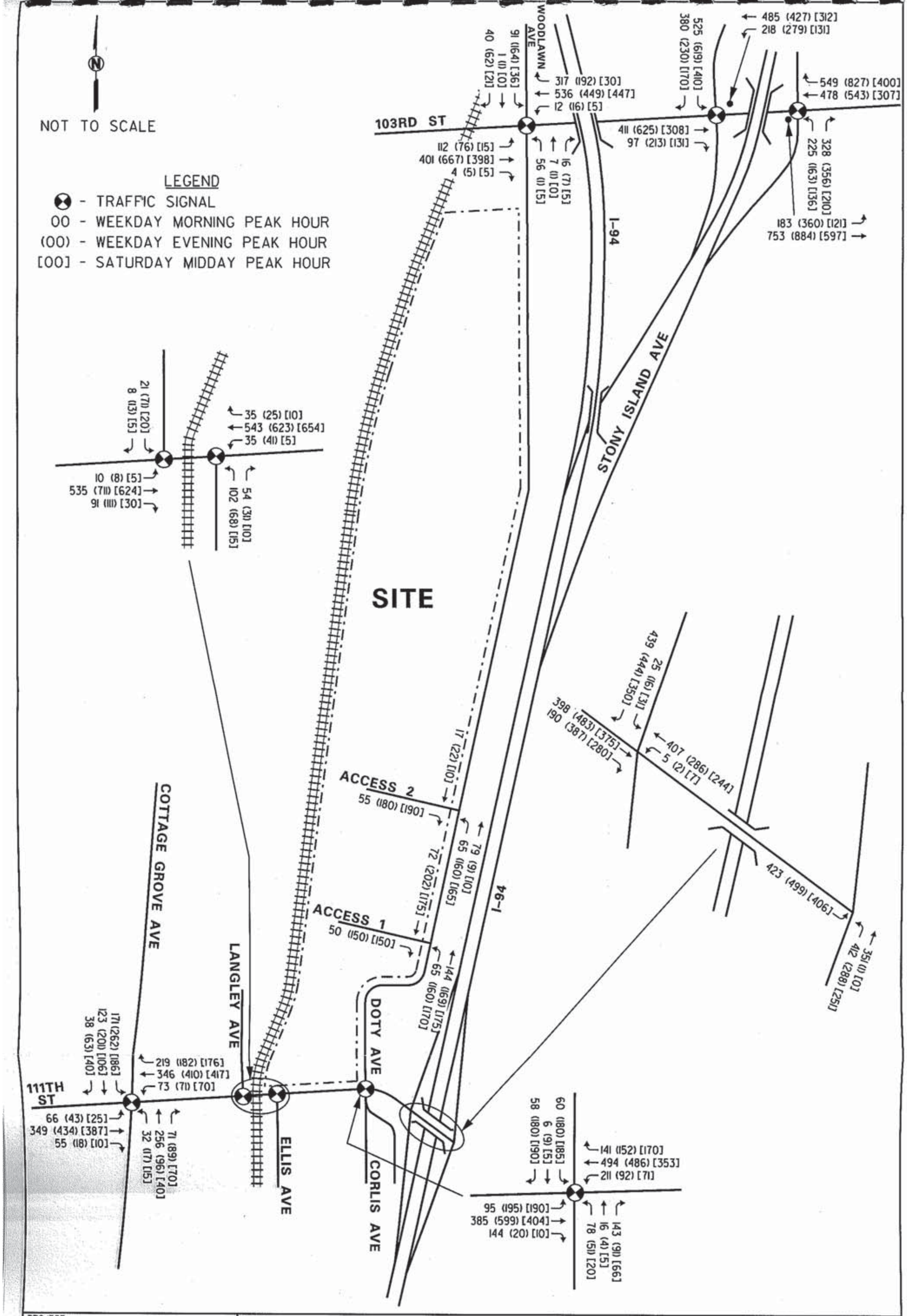
Chicago
Vincennes - 103rd St - Beverly
Combined (All Vehicles + Pedestrians)

File Name : Vincennes - Beverly & 103rd Rpt
Site Code : 00002244
Start Date : 12/20/2006
Page No : 5

Peak Hour Analysis From 02:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 04:15 PM

	Vincennes From North					**103rd St From East**					**Vincennes From South**					**103rd St From West**					**Beverly From Northwest**					
Start Time	Peds	Right	Thru	Left	App. Total	Peds	Right	Thru	Left	App. Total	Peds	Right	Thru	Left	App. Total	Peds	Right	Thru	Left	App. Total	Peds	Right	Thru	Left	App. Total	Int. Total
04:15 PM	16	34	172	15	237	3	25	112	7	147	0	9	92	34	135	0	8	87	14	109	16	34	172	15	237	865
04:30 PM	0	24	171	26	221	2	33	127	6	168	0	3	114	32	149	0	7	115	12	134	0	24	171	26	221	893
04:45 PM	12	54	171	26	263	0	38	107	2	147	0	14	82	26	122	0	7	105	26	138	12	54	171	26	263	933
05:00 PM	3	39	104	16	162	3	37	94	4	138	0	7	84	25	116	0	6	106	20	132	3	39	104	16	162	710
Total Volume	31	151	618	83	883	8	133	440	19	600	0	33	372	117	522	0	28	413	72	513	31	151	618	83	883	3401
% App. Total	3.5	17.1	70	9.4		1.3	22.2	73.3	3.2		0	6.3	71.3	22.4		0	5.5	80.5	14		3.5	17.1	70	9.4		
PHF	.484	.699	.898	.798	.839	.667	.875	.866	.679	.893	.000	.589	.816	.860	.876	.000	.875	.898	.692	.929	.484	.699	.898	.798	.839	.911


Beverly
Out 0
In 883
Total 883
151 Right
618 Thru
83 Left
31 Peds
Vincennes
Out 577
In 883
Total 1460
151 Right
618 Thru
83 Left
31 Peds
Peak Hour Data
North
Peak Hour Begins at 04:15 PM
Cars
Single
Multi
103rd St
Total 1372
In 513
Out 859
72 Left
413 Thru
28 Right
0 Peds
103rd St
Out 612
In 600
Total 1212
133 Right
440 Thru
19 Left
8 Peds
Left 117
Thru 372
Right 33
Peds 0
1283 Out
522 In
1805 Total
Vincennes


N
NOT TO SCALE
LEGEND
- TRAFFIC SIGNAL
00 - WEEKDAY MORNING PEAK HOUR
(00) - WEEKDAY EVENING PEAK HOUR
[00] - SATURDAY MIDDAY PEAK HOUR
103RD ST
WOODLAWN AVE
91 (164) [36]
1 (1) [0]
40 (62) [21]
317 (192) [30]
536 (449) [447]
12 (16) [5]
112 (76) [15]
401 (667) [398]
4 (5) [5]
16 (7) [5]
7 (1) [0]
56 (1) [5]
525 (619) [410]
380 (230) [170]
485 (427) [312]
218 (279) [131]
411 (625) [308]
97 (213) [131]
549 (827) [400]
478 (543) [307]
328 (356) [210]
225 (163) [136]
183 (360) [121]
753 (884) [597]
I-94
STONY ISLAND AVE
21 (71) [20]
8 (13) [5]
35 (25) [10]
543 (623) [654]
35 (41) [5]
10 (8) [5]
535 (711) [624]
91 (111) [30]
54 (31) [10]
102 (68) [15]
SITE
25 (16) [31]
439 (444) [350]
398 (483) [375]
190 (387) [280]
407 (286) [244]
5 (2) [7]
423 (499) [406]
351 (1) [0]
412 (288) [25]
ACCESS 2
17 (22) [10]
55 (180) [190]
79 (9) [10]
65 (160) [165]
72 (202) [175]
ACCESS 1
50 (150) [150]
144 (169) [175]
65 (160) [170]
I-94
COTTAGE GROVE AVE
LANGLEY AVE
DOTY AVE
ELLIS AVE
CORLIS AVE
111TH ST
171 (262) [186]
123 (201) [106]
38 (63) [40]
219 (182) [176]
346 (410) [417]
73 (71) [70]
66 (43) [25]
349 (434) [387]
55 (18) [10]
71 (89) [70]
256 (96) [40]
32 (17) [15]
60 (180) [185]
6 (9) [5]
58 (180) [190]
141 (152) [170]
494 (486) [353]
211 (92) [71]
95 (195) [190]
385 (599) [404]
144 (20) [10]
143 (91) [66]
16 (4) [5]
78 (51) [20]

PROJECT:	TITLE:	PROJECT NO: 10-075
PULLMAN REDEVELOPMENT PROJECT CHICAGO, ILLINOIS	YEAR 2012 - PHASE I TOTAL PEAK HOUR VOLUMES (WAL-MART STORE ONLY)	KLOA FIGURE NO: 9

100th St and Martin Luther King Dr
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/5/2012
Page No : 1

Groups Printed- PC - SU - MU

	Martin Luther King Dr From North				**100th St From East**				**Martin Luther King Dr From South**				**100th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	3	24	7	34	27	28	2	57	0	73	3	76	2	5	4	11	178
07:15 AM	2	39	5	46	30	27	0	57	2	110	3	115	2	6	6	14	232
07:30 AM	2	47	13	62	39	37	2	78	4	118	4	126	2	3	6	11	277
07:45 AM	1	45	10	56	52	40	3	95	1	132	3	136	5	13	11	29	316
Total	8	155	35	198	148	132	7	287	7	433	13	453	11	27	27	65	1003
08:00 AM	3	47	15	65	41	32	3	76	1	142	4	147	7	12	14	33	321
08:15 AM	5	54	12	71	39	21	0	60	3	125	5	133	3	14	13	30	294
08:30 AM	7	67	11	85	42	24	0	66	3	125	1	129	1	15	15	31	311
08:45 AM	1	87	24	112	47	34	2	83	2	125	1	128	3	14	33	50	373
Total	16	255	62	333	169	111	5	285	9	517	11	537	14	55	75	144	1299
Grand Total	24	410	97	531	317	243	12	572	16	950	24	990	25	82	102	209	2302
Apprch %	4.5	77.2	18.3		55.4	42.5	2.1		1.6	96	2.4		12	39.2	48.8		
Total %	1	17.8	4.2	23.1	13.8	10.6	0.5	24.8	0.7	41.3	1	43	1.1	3.6	4.4	9.1	
PC	24	390	94	508	313	236	11	560	16	920	24	960	25	80	101	206	2234
% PC	100	95.1	96.9	95.7	98.7	97.1	91.7	97.9	100	96.8	100	97	100	97.6	99	98.6	97
SU	0	19	3	22	4	7	1	12	0	28	0	28	0	2	1	3	65
% SU	0	4.6	3.1	4.1	1.3	2.9	8.3	2.1	0	2.9	0	2.8	0	2.4	1	1.4	2.8
MU	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
% MU	0	0.2	0	0.2	0	0	0	0	0	0.2	0	0.2	0	0	0	0	0.1

	Martin Luther King Dr From North				**100th St From East**				**Martin Luther King Dr From South**				**100th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	3	47	15	65	41	32	**3**	76	1	**142**	4	**147**	**7**	12	14	33	321
08:15 AM	5	54	12	71	39	21	0	60	**3**	125	**5**	133	3	14	13	30	294
08:30 AM	**7**	67	11	85	42	24	0	66	3	125	1	129	1	**15**	15	31	311
08:45 AM	1	**87**	**24**	**112**	**47**	**34**	2	**83**	2	125	1	128	3	14	**33**	**50**	**373**
Total Volume	16	255	62	333	169	111	5	285	9	517	11	537	14	55	75	144	1299
% App. Total	4.8	76.6	18.6		59.3	38.9	1.8		1.7	96.3	2		9.7	38.2	52.1		
PHF	.571	.733	.646	.743	.899	.816	.417	.858	.750	.910	.550	.913	.500	.917	.568	.720	.871

100th St and Martin Luther King Dr
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/5/2012

Groups Printed- SU

	Martin Luther King Dr From North				**100th St From East**				**Martin Luther King Dr From South**				**100th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	1	0	1	0	1	0	1	0	5	0	5	0	0	0	0	7
07:15 AM	0	4	0	4	0	0	0	0	0	5	0	5	0	1	0	1	10
07:30 AM	0	4	0	4	0	0	0	0	0	1	0	1	0	0	0	0	5
07:45 AM	0	1	1	2	0	2	0	2	0	7	0	7	0	0	0	0	11
Total	0	10	1	11	0	3	0	3	0	18	0	18	0	1	0	1	33
08:00 AM	0	1	0	1	1	1	1	3	0	4	0	4	0	0	0	0	8
08:15 AM	0	3	1	4	2	0	0	2	0	0	0	0	0	0	0	0	6
08:30 AM	0	2	0	2	0	1	0	1	0	4	0	4	0	0	1	1	8
08:45 AM	0	3	1	4	1	2	0	3	0	2	0	2	0	1	0	1	10
Total	0	9	2	11	4	4	1	9	0	10	0	10	0	1	1	2	32
Grand Total	0	19	3	22	4	7	1	12	0	28	0	28	0	2	1	3	65
Apprch %	0	86.4	13.6		33.3	58.3	8.3		0	100	0		0	66.7	33.3		
Total %	0	29.2	4.6	33.8	6.2	10.8	1.5	18.5	0	43.1	0	43.1	0	3.1	1.5	4.6	

100th St and Martin Luther King Dr
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/5/2012
Page No : 3

Groups Printed- MU

	Martin Luther King Dr From North				**100th St From East**				**Martin Luther King Dr From South**				**100th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
07:15 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Grand Total	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
Apprch %	0	100	0		0	0	0		0	100	0		0	0	0		
Total %	0	33.3	0	33.3	0	0	0	0	0	66.7	0	66.7	0	0	0	0	

100th St and Martin Luther King Dr
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 6/5/2012
Page No : 4

Groups Printed- Peds & Bikes

	Martin Luther King Dr Crossing North Leg			**100th St Crossing East Leg**			**Martin Luther King Dr Crossing South Leg**			**100th St Crossing West Leg**			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
07:00 AM	0	2	2	0	2	2	0	0	0	0	0	0	4
07:15 AM	0	0	0	0	2	2	0	3	3	0	1	1	6
07:30 AM	0	0	0	0	1	1	0	0	0	0	0	0	1
07:45 AM	0	0	0	0	1	1	0	0	0	0	0	0	1
Total	0	2	2	0	6	6	0	3	3	0	1	1	12
08:00 AM	0	0	0	0	2	2	0	0	0	0	0	0	2
08:15 AM	0	0	0	0	2	2	1	0	1	0	0	0	3
08:30 AM	0	1	1	1	4	5	0	0	0	0	0	0	6
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	1	1	8	9	1	0	1	0	0	0	11
Grand Total	0	3	3	1	14	15	1	3	4	0	1	1	23
Apprch %	0	100		6.7	93.3		25	75		0	100		
Total %	0	13	13	4.3	60.9	65.2	4.3	13	17.4	0	4.3	4.3	

100th St and Martin Luther King Dr
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/5/2012
Page No : 5

Groups Printed- PC - SU - MU

	Martin Luther King Dr From North				**100th St From East**				**Martin Luther King Dr From South**				**100th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	8	154	33	195	11	12	0	23	5	69	0	74	5	13	14	32	324
04:15 PM	14	145	33	192	15	19	0	34	7	77	2	86	2	8	9	19	331
04:30 PM	4	137	26	167	20	15	1	36	3	73	0	76	2	24	7	33	312
04:45 PM	14	152	30	196	16	17	0	33	5	77	3	85	1	12	11	24	338
Total	40	588	122	750	62	63	1	126	20	296	5	321	10	57	41	108	1305
05:00 PM	12	160	45	217	20	14	1	35	7	53	0	60	6	11	10	27	339
05:15 PM	14	145	26	185	15	23	2	40	3	74	1	78	1	9	6	16	319
05:30 PM	9	103	39	151	11	14	3	28	7	67	0	74	3	17	9	29	282
05:45 PM	7	88	24	119	15	12	2	29	3	67	4	74	2	12	6	20	242
Total	42	496	134	672	61	63	8	132	20	261	5	286	12	49	31	92	1182
Grand Total	82	1084	256	1422	123	126	9	258	40	557	10	607	22	106	72	200	2487
Apprch %	5.8	76.2	18		47.7	48.8	3.5		6.6	91.8	1.6		11	53	36		
Total %	3.3	43.6	10.3	57.2	4.9	5.1	0.4	10.4	1.6	22.4	0.4	24.4	0.9	4.3	2.9	8	
PC	82	1071	256	1409	123	123	9	255	40	545	10	595	22	105	72	199	2458
% PC	100	98.8	100	99.1	100	97.6	100	98.8	100	97.8	100	98	100	99.1	100	99.5	98.8
SU	0	9	0	9	0	2	0	2	0	12	0	12	0	0	0	0	23
% SU	0	0.8	0	0.6	0	1.6	0	0.8	0	2.2	0	2	0	0	0	0	0.9
MU	0	4	0	4	0	1	0	1	0	0	0	0	0	1	0	1	6
% MU	0	0.4	0	0.3	0	0.8	0	0.4	0	0	0	0	0	0.9	0	0.5	0.2

	Martin Luther King Dr From North				**100th St From East**				**Martin Luther King Dr From South**				**100th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	**14**	145	33	192	15	**19**	0	34	**7**	**77**	2	**86**	2	8	9	19	331
04:30 PM	4	137	26	167	**20**	15	**1**	**36**	3	73	0	76	2	**24**	7	**33**	312
04:45 PM	14	152	30	196	16	17	0	33	5	77	**3**	85	1	12	**11**	24	338
05:00 PM	12	**160**	**45**	**217**	20	14	1	35	7	53	0	60	**6**	11	10	27	**339**
Total Volume	44	594	134	772	71	65	2	138	22	280	5	307	11	55	37	103	1320
% App. Total	5.7	76.9	17.4		51.4	47.1	1.4		7.2	91.2	1.6		10.7	53.4	35.9		
PHF	.786	.928	.744	.889	.888	.855	.500	.958	.786	.909	.417	.892	.458	.573	.841	.780	.973

100th St and Martin Luther King Dr
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/5/2012
Page No : 6

Groups Printed- SU

	Martin Luther King Dr From North				**100th St From East**				**Martin Luther King Dr From South**				**100th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
04:15 PM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
04:30 PM	0	1	0	1	0	1	0	1	0	1	0	1	0	0	0	0	3
04:45 PM	0	1	0	1	0	0	0	0	0	3	0	3	0	0	0	0	4
Total	0	5	0	5	0	1	0	1	0	5	0	5	0	0	0	0	11
05:00 PM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
05:15 PM	0	1	0	1	0	1	0	1	0	3	0	3	0	0	0	0	5
05:30 PM	0	2	0	2	0	0	0	0	0	1	0	1	0	0	0	0	3
05:45 PM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
Total	0	4	0	4	0	1	0	1	0	7	0	7	0	0	0	0	12
Grand Total	0	9	0	9	0	2	0	2	0	12	0	12	0	0	0	0	23
Apprch %	0	100	0		0	100	0		0	100	0		0	0	0		
Total %	0	39.1	0	39.1	0	8.7	0	8.7	0	52.2	0	52.2	0	0	0	0	

100th St and Martin Luther King Dr
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/5/2012
Page No : 7

Groups Printed- MU

	Martin Luther King Dr From North				**100th St From East**				**Martin Luther King Dr From South**				**100th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:15 PM	0	1	0	1	0	1	0	1	0	0	0	0	0	0	0	0	2
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	2	0	2	0	1	0	1	0	0	0	0	0	1	0	1	4
05:00 PM	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
Grand Total	0	4	0	4	0	1	0	1	0	0	0	0	0	1	0	1	6
Apprch %	0	100	0		0	100	0		0	0	0		0	100	0		
Total %	0	66.7	0	66.7	0	16.7	0	16.7	0	0	0	0	0	16.7	0	16.7	

100th St and Martin Luther King Dr
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 6/5/2012
Page No : 8

Groups Printed- Peds & Bikes

	Martin Luther King Dr Crossing North Leg			**100th St Crossing East Leg**			**Martin Luther King Dr Crossing South Leg**			**100th St Crossing West Leg**			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
04:00 PM	0	1	1	0	0	0	0	0	0	0	1	1	2
04:15 PM	0	2	2	0	1	1	0	0	0	0	0	0	3
04:30 PM	0	0	0	0	3	3	0	0	0	0	0	0	3
04:45 PM	0	0	0	0	1	1	0	0	0	0	0	0	1
Total	0	3	3	0	5	5	0	0	0	0	1	1	9
05:00 PM	0	0	0	0	1	1	0	0	0	0	0	0	1
05:15 PM	0	0	0	0	0	0	1	0	1	3	0	3	4
05:30 PM	0	2	2	0	4	4	0	0	0	0	1	1	7
05:45 PM	0	0	0	0	1	1	0	0	0	0	0	0	1
Total	0	2	2	0	6	6	1	0	1	3	1	4	13
Grand Total	0	5	5	0	11	11	1	0	1	3	2	5	22
Apprch %	0	100		0	100		100	0		60	40		
Total %	0	22.7	22.7	0	50	50	4.5	0	4.5	13.6	9.1	22.7	

103rd St & Michigan Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM No Peds
Site Code : 00000000
Start Date : 5/2/2012
Page No : 1

Groups Printed- PC - SU - MU

	Michigan Ave From North				**103rd St From East**				**Michigan Ave From South**				**103rd St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	6	16	4	26	14	37	2	53	7	67	8	82	11	31	20	62	223
07:15 AM	8	31	3	42	10	60	13	83	10	85	12	107	9	48	11	68	300
07:30 AM	7	24	7	38	18	52	11	81	10	101	8	119	10	70	17	97	335
07:45 AM	14	36	11	61	11	65	8	84	12	65	10	87	23	80	17	120	352
Total	35	107	25	167	53	214	34	301	39	318	38	395	53	229	65	347	1210
08:00 AM	12	37	17	66	16	61	12	89	6	83	18	107	18	87	17	122	384
08:15 AM	8	27	15	50	14	61	9	84	10	71	20	101	16	93	27	136	371
08:30 AM	12	33	10	55	15	53	8	76	12	80	14	106	12	101	21	134	371
08:45 AM	14	34	22	70	18	69	7	94	18	62	16	96	16	98	11	125	385
Total	46	131	64	241	63	244	36	343	46	296	68	410	62	379	76	517	1511
Grand Total	81	238	89	408	116	458	70	644	85	614	106	805	115	608	141	864	2721
Apprch %	19.9	58.3	21.8		18	71.1	10.9		10.6	76.3	13.2		13.3	70.4	16.3		
Total %	3	8.7	3.3	15	4.3	16.8	2.6	23.7	3.1	22.6	3.9	29.6	4.2	22.3	5.2	31.8	
PC	69	211	78	358	101	436	64	601	79	571	105	755	111	572	129	812	2526
% PC	85.2	88.7	87.6	87.7	87.1	95.2	91.4	93.3	92.9	93	99.1	93.8	96.5	94.1	91.5	94	92.8
SU	12	27	11	50	15	19	5	39	5	42	1	48	4	30	12	46	183
% SU	14.8	11.3	12.4	12.3	12.9	4.1	7.1	6.1	5.9	6.8	0.9	6	3.5	4.9	8.5	5.3	6.7
MU	0	0	0	0	0	3	1	4	1	1	0	2	0	6	0	6	12
% MU	0	0	0	0	0	0.7	1.4	0.6	1.2	0.2	0	0.2	0	1	0	0.7	0.4

	Michigan Ave From North				**103rd St From East**				**Michigan Ave From South**				**103rd St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	12	**37**	17	66	16	61	**12**	89	6	**83**	18	**107**	**18**	87	17	122	384
08:15 AM	8	27	15	50	14	61	9	84	10	71	**20**	101	16	93	**27**	**136**	371
08:30 AM	12	33	10	55	15	53	8	76	12	80	14	106	12	**101**	21	134	371
08:45 AM	**14**	34	**22**	**70**	**18**	**69**	7	**94**	**18**	62	16	96	16	98	11	125	**385**
Total Volume	46	131	64	241	63	244	36	343	46	296	68	410	62	379	76	517	1511
% App. Total	19.1	54.4	26.6		18.4	71.1	10.5		11.2	72.2	16.6		12	73.3	14.7		
PHF	.821	.885	.727	.861	.875	.884	.750	.912	.639	.892	.850	.958	.861	.938	.704	.950	.981

103rd St & Michigan Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM No Peds
Site Code : 00000000
Start Date : 5/2/2012
Page No : 2

Groups Printed- SU

	Michigan Ave From North				**103rd St From East**				**Michigan Ave From South**				**103rd St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	1	3	1	5	2	3	0	5	0	10	0	10	0	1	2	3	23
07:15 AM	1	4	1	6	4	1	2	7	0	6	0	6	0	3	2	5	24
07:30 AM	4	3	1	8	0	4	0	4	0	4	0	4	1	5	1	7	23
07:45 AM	2	4	2	8	2	2	0	4	1	5	0	6	1	2	1	4	22
Total	8	14	5	27	8	10	2	20	1	25	0	26	2	11	6	19	92
08:00 AM	1	3	1	5	1	3	0	4	2	2	1	5	0	3	1	4	18
08:15 AM	1	4	1	6	1	2	0	3	2	7	0	9	1	4	1	6	24
08:30 AM	1	2	1	4	1	1	2	4	0	3	0	3	1	6	3	10	21
08:45 AM	1	4	3	8	4	3	1	8	0	5	0	5	0	6	1	7	28
Total	4	13	6	23	7	9	3	19	4	17	1	22	2	19	6	27	91
Grand Total	12	27	11	50	15	19	5	39	5	42	1	48	4	30	12	46	183
Apprch %	24	54	22		38.5	48.7	12.8		10.4	87.5	2.1		8.7	65.2	26.1		
Total %	6.6	14.8	6	27.3	8.2	10.4	2.7	21.3	2.7	23	0.5	26.2	2.2	16.4	6.6	25.1	

103rd St & Michigan Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM No Peds
Site Code : 00000000
Start Date : 5/2/2012
Page No : 3

Groups Printed- MU

	Michigan Ave From North				**103rd St From East**				**Michigan Ave From South**				**103rd St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
07:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Total	0	0	0	0	0	1	0	1	1	0	0	1	0	1	0	1	3
08:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
08:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	1	2
08:30 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	3	0	3	4
08:45 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	2	1	3	0	1	0	1	0	5	0	5	9
Grand Total	0	0	0	0	0	3	1	4	1	1	0	2	0	6	0	6	12
Apprch %	0	0	0		0	75	25		50	50	0		0	100	0		
Total %	0	0	0	0	0	25	8.3	33.3	8.3	8.3	0	16.7	0	50	0	50	

103rd St & Michigan Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM Peds + Bikes
Site Code : 00000000
Start Date : 5/2/2012
Page No : 4

Groups Printed- Peds & Bikes

	Michigan Ave Crossing North Leg			**103rd St Crossing East Leg**			**Michigan Ave Crossing South Leg**			**103rd St Crossing West Leg**			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
07:00 AM	0	28	28	0	14	14	0	3	3	0	9	9	54
07:15 AM	0	32	32	0	23	23	0	6	6	0	2	2	63
07:30 AM	0	21	21	0	11	11	0	1	1	0	7	7	40
07:45 AM	0	36	36	0	5	5	0	1	1	0	7	7	49
Total	0	117	117	0	53	53	0	11	11	0	25	25	206
08:00 AM	0	23	23	0	2	2	0	2	2	0	7	7	34
08:15 AM	0	18	18	0	34	34	0	6	6	0	7	7	65
08:30 AM	0	43	43	0	21	21	0	2	2	0	8	8	74
08:45 AM	0	35	35	0	9	9	0	7	7	0	8	8	59
Total	0	119	119	0	66	66	0	17	17	0	30	30	232
Grand Total	0	236	236	0	119	119	0	28	28	0	55	55	438
Apprch %	0	100		0	100		0	100		0	100		
Total %	0	53.9	53.9	0	27.2	27.2	0	6.4	6.4	0	12.6	12.6	

103rd St & Michigan Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : PM No Peds
Site Code : 00000000
Start Date : 5/2/2012
Page No : 5

Groups Printed- PC - SU - MU

	Michigan Ave From North				**103rd St From East**				**Michigan Ave From South**				**103rd St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	16	71	12	99	11	68	13	92	13	55	11	79	14	74	15	103	373
04:15 PM	20	47	12	79	19	79	17	115	10	49	8	67	26	73	14	113	374
04:30 PM	16	69	19	104	15	71	16	102	10	40	14	64	26	98	13	137	407
04:45 PM	10	54	16	80	20	63	9	92	7	40	16	63	30	111	14	155	390
Total	62	241	59	362	65	281	55	401	40	184	49	273	96	356	56	508	1544
05:00 PM	22	50	23	95	17	85	12	114	10	43	15	68	13	109	12	134	411
05:15 PM	17	50	18	85	14	72	14	100	17	38	12	67	20	102	18	140	392
05:30 PM	15	54	20	89	14	79	14	107	17	50	14	81	21	89	10	120	397
05:45 PM	16	69	20	105	8	69	18	95	19	44	13	76	17	89	10	116	392
Total	70	223	81	374	53	305	58	416	63	175	54	292	71	389	50	510	1592
Grand Total	132	464	140	736	118	586	113	817	103	359	103	565	167	745	106	1018	3136
Apprch %	17.9	63	19		14.4	71.7	13.8		18.2	63.5	18.2		16.4	73.2	10.4		
Total %	4.2	14.8	4.5	23.5	3.8	18.7	3.6	26.1	3.3	11.4	3.3	18	5.3	23.8	3.4	32.5	
PC	120	441	133	694	108	580	113	801	102	335	102	539	167	738	91	996	3030
% PC	90.9	95	95	94.3	91.5	99	100	98	99	93.3	99	95.4	100	99.1	85.8	97.8	96.6
SU	12	23	7	42	10	6	0	16	1	24	1	26	0	6	14	20	104
% SU	9.1	5	5	5.7	8.5	1	0	2	1	6.7	1	4.6	0	0.8	13.2	2	3.3
MU	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	2
% MU	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.9	0.2	0.1

	Michigan Ave From North				**103rd St From East**				**Michigan Ave From South**				**103rd St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	16	**69**	19	**104**	15	71	**16**	102	10	40	14	64	26	98	13	137	407
04:45 PM	10	54	16	80	**20**	63	9	92	7	40	**16**	63	**30**	**111**	14	**155**	390
05:00 PM	**22**	50	**23**	95	17	**85**	12	**114**	10	**43**	15	**68**	13	109	12	134	**411**
05:15 PM	17	50	18	85	14	72	14	100	**17**	38	12	67	20	102	**18**	140	392
Total Volume	65	223	76	364	66	291	51	408	44	161	57	262	89	420	57	566	1600
% App. Total	17.9	61.3	20.9		16.2	71.3	12.5		16.8	61.5	21.8		15.7	74.2	10.1		
PHF	.739	.808	.826	.875	.825	.856	.797	.895	.647	.936	.891	.963	.742	.946	.792	.913	.973

103rd St & Michigan Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : PM No Peds
Site Code : 00000000
Start Date : 5/2/2012

Groups Printed- SU

	Michigan Ave From North				**103rd St From East**				**Michigan Ave From South**				**103rd St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	2	4	0	6	1	2	0	3	0	3	0	3	0	0	3	3	15
04:15 PM	3	0	0	3	1	0	0	1	0	3	0	3	0	0	1	1	8
04:30 PM	1	3	2	6	1	1	0	2	0	2	0	2	0	0	1	1	11
04:45 PM	1	5	1	7	2	0	0	2	0	2	1	3	0	2	2	4	16
Total	7	12	3	22	5	3	0	8	0	10	1	11	0	2	7	9	50
05:00 PM	1	3	1	5	1	1	0	2	0	4	0	4	0	0	1	1	12
05:15 PM	1	3	1	5	1	0	0	1	1	2	0	3	0	0	3	3	12
05:30 PM	2	3	1	6	1	2	0	3	0	5	0	5	0	3	1	4	18
05:45 PM	1	2	1	4	2	0	0	2	0	3	0	3	0	1	2	3	12
Total	5	11	4	20	5	3	0	8	1	14	0	15	0	4	7	11	54
Grand Total	12	23	7	42	10	6	0	16	1	24	1	26	0	6	14	20	104
Apprch %	28.6	54.8	16.7		62.5	37.5	0		3.8	92.3	3.8		0	30	70		
Total %	11.5	22.1	6.7	40.4	9.6	5.8	0	15.4	1	23.1	1	25	0	5.8	13.5	19.2	

103rd St & Michigan Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : PM No Peds
Site Code : 00000000
Start Date : 5/2/2012
Page No : 7

Groups Printed- MU

	Michigan Ave From North				**103rd St From East**				**Michigan Ave From South**				**103rd St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	2
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	2
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	2
Apprch %	0	0	0		0	0	0		0	0	0		0	50	50		
Total %	0	0	0	0	0	0	0	0	0	0	0	0	0	50	50	100	

103rd St & Michigan Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM Peds + Bikes
Site Code : 00000000
Start Date : 5/2/2012
Page No : 8

Groups Printed- Peds & Bikes

	Michigan Ave Crossing North Leg			**103rd St Crossing East Leg**			**Michigan Ave Crossing South Leg**			**103rd St Crossing West Leg**			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
04:00 PM	0	48	48	0	23	23	0	19	19	0	0	0	90
04:15 PM	0	39	39	0	23	23	0	22	22	0	4	4	88
04:30 PM	0	27	27	0	6	6	0	27	27	0	8	8	68
04:45 PM	0	35	35	0	20	20	0	18	18	0	11	11	84
Total	0	149	149	0	72	72	0	86	86	0	23	23	330
05:00 PM	0	25	25	1	8	9	0	26	26	0	5	5	65
05:15 PM	0	36	36	0	14	14	0	30	30	0	2	2	82
05:30 PM	0	23	23	0	12	12	0	21	21	0	7	7	63
05:45 PM	0	28	28	0	19	19	0	22	22	0	9	9	78
Total	0	112	112	1	53	54	0	99	99	0	23	23	288
Grand Total	0	261	261	1	125	126	0	185	185	0	46	46	618
Apprch %	0	100		0.8	99.2		0	100		0	100		
Total %	0	42.2	42.2	0.2	20.2	20.4	0	29.9	29.9	0	7.4	7.4	

103rd St and Cottage Grove Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/8/2012
Page No : 1

Groups Printed- PC - SU - MU

	Cottage Grove Ave From North				**103rd St From East**				**Cottage Grove Ave From South**				**103rd St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	11	23	5	39	19	57	2	78	17	48	9	74	3	37	4	44	235
07:15 AM	6	24	12	42	14	90	12	116	14	71	15	100	8	42	13	63	321
07:30 AM	10	33	6	49	19	59	15	93	26	65	8	99	9	41	13	63	304
07:45 AM	7	44	21	72	25	90	17	132	32	97	17	146	12	65	15	92	442
Total	34	124	44	202	77	296	46	419	89	281	49	419	32	185	45	262	1302
08:00 AM	6	39	11	56	17	76	9	102	25	78	12	115	8	74	16	98	371
08:15 AM	9	30	13	52	34	87	13	134	14	60	7	81	5	67	9	81	348
08:30 AM	9	38	12	59	17	81	10	108	22	93	4	119	13	80	4	97	383
08:45 AM	11	54	11	76	26	100	14	140	22	70	9	101	10	71	9	90	407
Total	35	161	47	243	94	344	46	484	83	301	32	416	36	292	38	366	1509
Grand Total	69	285	91	445	171	640	92	903	172	582	81	835	68	477	83	628	2811
Apprch %	15.5	64	20.4		18.9	70.9	10.2		20.6	69.7	9.7		10.8	76	13.2		
Total %	2.5	10.1	3.2	15.8	6.1	22.8	3.3	32.1	6.1	20.7	2.9	29.7	2.4	17	3	22.3	
PC	66	268	89	423	160	584	74	818	166	552	79	797	65	438	76	579	2617
% PC	95.7	94	97.8	95.1	93.6	91.2	80.4	90.6	96.5	94.8	97.5	95.4	95.6	91.8	91.6	92.2	93.1
SU	3	17	2	22	7	40	13	60	5	29	1	35	3	38	6	47	164
% SU	4.3	6	2.2	4.9	4.1	6.2	14.1	6.6	2.9	5	1.2	4.2	4.4	8	7.2	7.5	5.8
MU	0	0	0	0	4	16	5	25	1	1	1	3	0	1	1	2	30
% MU	0	0	0	0	2.3	2.5	5.4	2.8	0.6	0.2	1.2	0.4	0	0.2	1.2	0.3	1.1

	Cottage Grove Ave From North				**103rd St From East**				**Cottage Grove Ave From South**				**103rd St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	7	**44**	**21**	**72**	25	**90**	**17**	132	**32**	**97**	**17**	**146**	12	65	15	92	**442**
08:00 AM	6	39	11	56	17	76	9	102	25	78	12	115	8	74	**16**	**98**	371
08:15 AM	**9**	30	13	52	**34**	87	13	**134**	14	60	7	81	5	67	9	81	348
08:30 AM	9	38	12	59	17	81	10	108	22	93	4	119	**13**	**80**	4	97	383
Total Volume	31	151	57	239	93	334	49	476	93	328	40	461	38	286	44	368	1544
% App. Total	13	63.2	23.8		19.5	70.2	10.3		20.2	71.1	8.7		10.3	77.7	12		
PHF	.861	.858	.679	.830	.684	.928	.721	.888	.727	.845	.588	.789	.731	.894	.688	.939	.873

103rd St and Cottage Grove Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/8/2012
Page No : 2

Groups Printed- SU

	Cottage Grove Ave From North				**103rd St From East**				**Cottage Grove Ave From South**				**103rd St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	1	0	1	1	12	1	14	1	2	1	4	1	4	1	6	25
07:15 AM	0	1	1	2	0	7	1	8	1	2	0	3	0	4	1	5	18
07:30 AM	2	1	0	3	1	2	5	8	1	2	0	3	0	6	1	7	21
07:45 AM	0	1	0	1	0	4	0	4	0	5	0	5	0	5	0	5	15
Total	2	4	1	7	2	25	7	34	3	11	1	15	1	19	3	23	79
08:00 AM	0	3	0	3	0	5	1	6	0	3	0	3	0	3	2	5	17
08:15 AM	1	3	0	4	4	3	3	10	1	1	0	2	0	8	1	9	25
08:30 AM	0	2	0	2	1	3	1	5	0	2	0	2	1	5	0	6	15
08:45 AM	0	5	1	6	0	4	1	5	1	12	0	13	1	3	0	4	28
Total	1	13	1	15	5	15	6	26	2	18	0	20	2	19	3	24	85
Grand Total	3	17	2	22	7	40	13	60	5	29	1	35	3	38	6	47	164
Apprch %	13.6	77.3	9.1		11.7	66.7	21.7		14.3	82.9	2.9		6.4	80.9	12.8		
Total %	1.8	10.4	1.2	13.4	4.3	24.4	7.9	36.6	3	17.7	0.6	21.3	1.8	23.2	3.7	28.7	

Regina Webster & Associates, Inc.

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103rd St and Cottage Grove Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/8/2012
Page No : 3

Groups Printed- MU

	Cottage Grove Ave From North				103rd St From East				Cottage Grove Ave From South				103rd St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
07:15 AM	0	0	0	0	1	3	1	5	0	1	0	1	0	1	0	1	7
07:30 AM	0	0	0	0	0	2	1	3	0	0	0	0	0	0	0	0	3
07:45 AM	0	0	0	0	1	2	3	6	0	0	0	0	0	0	0	0	6
Total	0	0	0	0	2	7	5	14	1	1	0	2	0	1	0	1	17
08:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
08:15 AM	0	0	0	0	0	2	0	2	0	0	1	1	0	0	1	1	4
08:30 AM	0	0	0	0	1	3	0	4	0	0	0	0	0	0	0	0	4
08:45 AM	0	0	0	0	1	3	0	4	0	0	0	0	0	0	0	0	4
Total	0	0	0	0	2	9	0	11	0	0	1	1	0	0	1	1	13
Grand Total	0	0	0	0	4	16	5	25	1	1	1	3	0	1	1	2	30
Apprch %	0	0	0		16	64	20		33.3	33.3	33.3		0	50	50		
Total %	0	0	0	0	13.3	53.3	16.7	83.3	3.3	3.3	3.3	10	0	3.3	3.3	6.7	

103rd St and Cottage Grove Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 5/8/2012
Page No : 4

Groups Printed- Peds & Bikes

	Cottage Grove Ave Crossing North Leg			103rd St Crossing East Leg			Cottage Grove Ave Crossing South Leg			103rd St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
07:00 AM	0	3	3	0	2	2	0	2	2	0	2	2	9
07:15 AM	0	2	2	0	8	8	0	1	1	0	0	0	11
07:30 AM	0	4	4	0	3	3	0	1	1	0	4	4	12
07:45 AM	2	2	4	2	6	8	0	6	6	0	0	0	18
Total	2	11	13	2	19	21	0	10	10	0	6	6	50
08:00 AM	0	6	6	0	6	6	0	3	3	0	1	1	16
08:15 AM	0	8	8	0	18	18	0	6	6	0	0	0	32
08:30 AM	0	11	11	0	5	5	0	10	10	0	11	11	37
08:45 AM	0	18	18	0	11	11	0	10	10	0	1	1	40
Total	0	43	43	0	40	40	0	29	29	0	13	13	125
Grand Total	2	54	56	2	59	61	0	39	39	0	19	19	175
Apprch %	3.6	96.4		3.3	96.7		0	100		0	100		
Total %	1.1	30.9	32	1.1	33.7	34.9	0	22.3	22.3	0	10.9	10.9	

103rd St and Cottage Grove Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/8/2012
Page No : 5

Groups Printed- PC - SU - MU

	Cottage Grove Ave From North				**103rd St From East**				**Cottage Grove Ave From South**				**103rd St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	18	70	21	109	35	145	24	204	11	29	18	58	18	69	14	101	472
04:15 PM	11	46	24	81	18	83	13	114	19	38	15	72	15	72	19	106	373
04:30 PM	12	65	27	104	29	118	14	161	15	40	7	62	17	88	9	114	441
04:45 PM	18	76	33	127	28	72	20	120	12	31	9	52	15	84	18	117	416
Total	59	257	105	421	110	418	71	599	57	138	49	244	65	313	60	438	1702
05:00 PM	21	62	22	105	26	101	29	156	15	29	10	54	13	79	15	107	422
05:15 PM	11	86	28	125	22	97	18	137	10	44	21	75	18	82	14	114	451
05:30 PM	10	79	23	112	17	89	13	119	8	25	13	46	10	87	18	115	392
05:45 PM	21	56	25	102	26	104	30	160	12	24	7	43	12	79	15	106	411
Total	63	283	98	444	91	391	90	572	45	122	51	218	53	327	62	442	1676
Grand Total	122	540	203	865	201	809	161	1171	102	260	100	462	118	640	122	880	3378
Apprch %	14.1	62.4	23.5		17.2	69.1	13.7		22.1	56.3	21.6		13.4	72.7	13.9		
Total %	3.6	16	6	25.6	6	23.9	4.8	34.7	3	7.7	3	13.7	3.5	18.9	3.6	26.1	
PC	120	522	200	842	200	788	155	1143	101	252	99	452	117	619	122	858	3295
% PC	98.4	96.7	98.5	97.3	99.5	97.4	96.3	97.6	99	96.9	99	97.8	99.2	96.7	100	97.5	97.5
SU	2	18	3	23	1	13	5	19	1	7	1	9	1	21	0	22	73
% SU	1.6	3.3	1.5	2.7	0.5	1.6	3.1	1.6	1	2.7	1	1.9	0.8	3.3	0	2.5	2.2
MU	0	0	0	0	0	8	1	9	0	1	0	1	0	0	0	0	10
% MU	0	0	0	0	0	1	0.6	0.8	0	0.4	0	0.2	0	0	0	0	0.3

	Cottage Grove Ave From North				**103rd St From East**				**Cottage Grove Ave From South**				**103rd St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	7	**44**	**21**	**72**	25	**90**	**17**	132	**32**	**97**	**17**	**146**	12	65	15	92	**442**
08:00 AM	6	39	11	56	17	76	9	102	25	78	12	115	8	74	**16**	**98**	371
08:15 AM	**9**	30	13	52	**34**	87	13	**134**	14	60	7	81	5	67	9	81	348
08:30 AM	9	38	12	59	17	81	10	108	22	93	4	119	**13**	**80**	4	97	383
Total Volume	31	151	57	239	93	334	49	476	93	328	40	461	38	286	44	368	1544
% App. Total	13	63.2	23.8		19.5	70.2	10.3		20.2	71.1	8.7		10.3	77.7	12		
PHF	.861	.858	.679	.830	.684	.928	.721	.888	.727	.845	.588	.789	.731	.894	.688	.939	.873

103rd St and Cottage Grove Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/8/2012
Page No : 6

Groups Printed- SU

	Cottage Grove Ave From North				103rd St From East				Cottage Grove Ave From South				103rd St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	3	0	3	0	2	3	5	0	1	1	2	1	4	0	5	15
04:15 PM	0	4	0	4	1	2	0	3	0	3	0	3	0	1	0	1	11
04:30 PM	0	3	0	3	0	2	0	2	1	1	0	2	0	3	0	3	10
04:45 PM	0	2	1	3	0	1	1	2	0	1	0	1	0	2	0	2	8
Total	0	12	1	13	1	7	4	12	1	6	1	8	1	10	0	11	44
05:00 PM	0	2	0	2	0	2	1	3	0	1	0	1	0	2	0	2	8
05:15 PM	2	2	0	4	0	1	0	1	0	0	0	0	0	2	0	2	7
05:30 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	2	0	2	4
05:45 PM	0	2	2	4	0	1	0	1	0	0	0	0	0	5	0	5	10
Total	2	6	2	10	0	6	1	7	0	1	0	1	0	11	0	11	29
Grand Total	2	18	3	23	1	13	5	19	1	7	1	9	1	21	0	22	73
Apprch %	8.7	78.3	13		5.3	68.4	26.3		11.1	77.8	11.1		4.5	95.5	0		
Total %	2.7	24.7	4.1	31.5	1.4	17.8	6.8	26	1.4	9.6	1.4	12.3	1.4	28.8	0	30.1	

103rd St and Cottage Grove Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/8/2012
Page No : 7

Groups Printed- MU

	Cottage Grove Ave From North				**103rd St From East**				**Cottage Grove Ave From South**				**103rd St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
04:15 PM	0	0	0	0	0	1	0	1	0	1	0	1	0	0	0	0	2
04:30 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	2
04:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	5	0	5	0	1	0	1	0	0	0	0	6
05:00 PM	0	0	0	0	0	1	1	2	0	0	0	0	0	0	0	0	2
05:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
05:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	3	1	4	0	0	0	0	0	0	0	0	4
Grand Total	0	0	0	0	0	8	1	9	0	1	0	1	0	0	0	0	10
Apprch %	0	0	0		0	88.9	11.1		0	100	0		0	0	0		
Total %	0	0	0	0	0	80	10	90	0	10	0	10	0	0	0	0	

103rd St and Cottage Grove Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 5/8/2012
Page No : 8

Groups Printed- Peds & Bikes

	Cottage Grove Ave Crossing North Leg			**103rd St Crossing East Leg**			**Cottage Grove Ave Crossing South Leg**			**103rd St Crossing West Leg**			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
04:00 PM	1	46	47	0	20	20	0	65	65	0	13	13	145
04:15 PM	0	8	8	1	7	8	3	15	18	0	1	1	35
04:30 PM	0	9	9	0	5	5	2	11	13	0	0	0	27
04:45 PM	2	14	16	0	3	3	0	5	5	0	2	2	26
Total	3	77	80	1	35	36	5	96	101	0	16	16	233
05:00 PM	0	11	11	0	5	5	0	11	11	0	0	0	27
05:15 PM	0	4	4	0	2	2	0	5	5	0	0	0	11
05:30 PM	1	6	7	0	10	10	0	6	6	0	1	1	24
05:45 PM	2	2	4	0	3	3	0	8	8	0	0	0	15
Total	3	23	26	0	20	20	0	30	30	0	1	1	77
Grand Total	6	100	106	1	55	56	5	126	131	0	17	17	310
Apprch %	5.7	94.3		1.8	98.2		3.8	96.2		0	100		
Total %	1.9	32.3	34.2	0.3	17.7	18.1	1.6	40.6	42.3	0	5.5	5.5	

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103rd St and Halsted St
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/2/2012
Page No : 1

Groups Printed- PC - SU - MU

	Halsted St From North				103rd St From East				Halsted St From South				103rd St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	6	75	10	91	13	42	13	68	10	270	21	301	10	22	17	49	509
07:15 AM	17	80	15	112	24	60	11	95	16	244	24	284	11	43	21	75	566
07:30 AM	15	91	21	127	28	53	8	89	17	357	34	408	20	58	18	96	720
07:45 AM	25	114	10	149	24	75	16	115	30	384	39	453	19	69	27	115	832
Total	63	360	56	479	89	230	48	367	73	1255	118	1446	60	192	83	335	2627
08:00 AM	23	109	15	147	27	66	13	106	33	385	28	446	34	82	29	145	844
08:15 AM	30	131	19	180	27	64	26	117	28	309	24	361	22	76	22	120	778
08:30 AM	17	120	20	157	24	63	12	99	21	266	22	309	19	85	16	120	685
08:45 AM	19	111	38	168	14	52	13	79	21	233	20	274	29	53	17	99	620
Total	89	471	92	652	92	245	64	401	103	1193	94	1390	104	296	84	484	2927
Grand Total	152	831	148	1131	181	475	112	768	176	2448	212	2836	164	488	167	819	5554
Apprch %	13.4	73.5	13.1		23.6	61.8	14.6		6.2	86.3	7.5		20	59.6	20.4		
Total %	2.7	15	2.7	20.4	3.3	8.6	2	13.8	3.2	44.1	3.8	51.1	3	8.8	3	14.7	
PC	145	759	138	1042	173	444	111	728	169	2344	201	2714	156	465	158	779	5263
% PC	95.4	91.3	93.2	92.1	95.6	93.5	99.1	94.8	96	95.8	94.8	95.7	95.1	95.3	94.6	95.1	94.8
SU	7	67	7	81	7	30	1	38	5	97	11	113	7	23	9	39	271
% SU	4.6	8.1	4.7	7.2	3.9	6.3	0.9	4.9	2.8	4	5.2	4	4.3	4.7	5.4	4.8	4.9
MU	0	5	3	8	1	1	0	2	2	7	0	9	1	0	0	1	20
% MU	0	0.6	2	0.7	0.6	0.2	0	0.3	1.1	0.3	0	0.3	0.6	0	0	0.1	0.4

	Halsted St From North				103rd St From East				Halsted St From South				103rd St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	15	91	**21**	127	**28**	53	8	89	17	357	34	408	20	58	18	96	720
07:45 AM	25	114	10	149	24	**75**	16	115	30	384	**39**	**453**	19	69	27	115	832
08:00 AM	23	109	15	147	27	66	13	106	**33**	**385**	28	446	**34**	**82**	**29**	**145**	**844**
08:15 AM	**30**	**131**	19	**180**	27	64	**26**	**117**	28	309	24	361	22	76	22	120	778
Total Volume	93	445	65	603	106	258	63	427	108	1435	125	1668	95	285	96	476	3174
% App. Total	15.4	73.8	10.8		24.8	60.4	14.8		6.5	86	7.5		20	59.9	20.2		
PHF	.775	.849	.774	.838	.946	.860	.606	.912	.818	.932	.801	.921	.699	.869	.828	.821	.940

103rd St and Halsted St
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/2/2012
Page No : 2

Groups Printed- SU

	Halsted St From North				103rd St From East				Halsted St From South				103rd St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	1	13	0	14	1	3	0	4	0	20	2	22	0	1	0	1	41
07:15 AM	0	6	1	7	2	4	0	6	0	14	1	15	2	3	1	6	34
07:30 AM	1	6	2	9	2	1	0	3	0	14	0	14	1	2	0	3	29
07:45 AM	2	8	1	11	0	6	0	6	2	13	4	19	0	4	2	6	42
Total	4	33	4	41	5	14	0	19	2	61	7	70	3	10	3	16	146
08:00 AM	1	5	0	6	1	4	0	5	0	10	0	10	1	2	2	5	26
08:15 AM	0	12	0	12	1	4	0	5	1	7	3	11	1	3	2	6	34
08:30 AM	1	10	0	11	0	5	1	6	2	8	0	10	2	3	2	7	34
08:45 AM	1	7	3	11	0	3	0	3	0	11	1	12	0	5	0	5	31
Total	3	34	3	40	2	16	1	19	3	36	4	43	4	13	6	23	125
Grand Total	7	67	7	81	7	30	1	38	5	97	11	113	7	23	9	39	271
Apprch %	8.6	82.7	8.6		18.4	78.9	2.6		4.4	85.8	9.7		17.9	59	23.1		
Total %	2.6	24.7	2.6	29.9	2.6	11.1	0.4	14	1.8	35.8	4.1	41.7	2.6	8.5	3.3	14.4	

103rd St and Halsted St
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/2/2012
Page No : 3

Groups Printed- MU

	Halsted St From North				103rd St From East				Halsted St From South				103rd St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
07:30 AM	0	2	0	2	1	0	0	1	0	0	0	0	0	0	0	0	3
07:45 AM	0	0	1	1	0	0	0	0	0	2	0	2	0	0	0	0	3
Total	0	3	1	4	1	0	0	1	0	4	0	4	0	0	0	0	9
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	1	1	2	0	1	0	1	1	0	0	1	0	0	0	0	4
08:30 AM	0	0	1	1	0	0	0	0	0	2	0	2	0	0	0	0	3
08:45 AM	0	1	0	1	0	0	0	0	1	1	0	2	1	0	0	1	4
Total	0	2	2	4	0	1	0	1	2	3	0	5	1	0	0	1	11
Grand Total	0	5	3	8	1	1	0	2	2	7	0	9	1	0	0	1	20
Apprch %	0	62.5	37.5		50	50	0		22.2	77.8	0		100	0	0		
Total %	0	25	15	40	5	5	0	10	10	35	0	45	5	0	0	5	

103rd St and Halsted St
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 5/2/2012

Groups Printed- Peds & Bikes

	Halsted St Crossing North Leg			103rd St Crossing East Leg			Halsted St Crossing South Leg			103rd St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
07:00 AM	0	10	10	0	2	2	0	1	1	0	1	1	14
07:15 AM	0	12	12	0	0	0	0	8	8	0	0	0	20
07:30 AM	0	11	11	0	0	0	0	15	15	0	4	4	30
07:45 AM	0	6	6	0	3	3	0	13	13	0	8	8	30
Total	0	39	39	0	5	5	0	37	37	0	13	13	94
08:00 AM	0	22	22	0	3	3	0	5	5	0	5	5	35
08:15 AM	0	3	3	1	2	3	0	6	6	0	3	3	15
08:30 AM	0	7	7	0	5	5	0	6	6	0	2	2	20
08:45 AM	0	3	3	0	4	4	0	4	4	0	5	5	16
Total	0	35	35	1	14	15	0	21	21	0	15	15	86
Grand Total	0	74	74	1	19	20	0	58	58	0	28	28	180
Apprch %	0	100		5	95		0	100		0	100		
Total %	0	41.1	41.1	0.6	10.6	11.1	0	32.2	32.2	0	15.6	15.6	

103rd St and Halsted St
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/2/2012
Page No : 5

Groups Printed- PC - SU - MU

	Halsted St From North				103rd St From East				Halsted St From South				103rd St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	26	149	33	208	18	54	22	94	17	166	19	202	30	62	18	110	614
04:15 PM	43	126	35	204	25	58	23	106	27	133	23	183	45	96	21	162	655
04:30 PM	16	194	19	229	20	66	17	103	21	155	24	200	32	77	16	125	657
04:45 PM	15	166	30	211	22	64	29	115	21	150	19	190	24	56	20	100	616
Total	100	635	117	852	85	242	91	418	86	604	85	775	131	291	75	497	2542
05:00 PM	20	150	32	202	27	75	26	128	18	141	27	186	45	86	16	147	663
05:15 PM	28	213	33	274	29	75	32	136	14	150	24	188	31	71	19	121	719
05:30 PM	13	184	32	229	25	69	20	114	22	133	19	174	32	69	20	121	638
05:45 PM	29	176	34	239	29	51	25	105	22	152	25	199	29	68	9	106	649
Total	90	723	131	944	110	270	103	483	76	576	95	747	137	294	64	495	2669
Grand Total	190	1358	248	1796	195	512	194	901	162	1180	180	1522	268	585	139	992	5211
Apprch %	10.6	75.6	13.8		21.6	56.8	21.5		10.6	77.5	11.8		27	59	14		
Total %	3.6	26.1	4.8	34.5	3.7	9.8	3.7	17.3	3.1	22.6	3.5	29.2	5.1	11.2	2.7	19	
PC	185	1300	245	1730	190	493	190	873	159	1121	174	1454	265	571	136	972	5029
% PC	97.4	95.7	98.8	96.3	97.4	96.3	97.9	96.9	98.1	95	96.7	95.5	98.9	97.6	97.8	98	96.5
SU	5	57	2	64	5	19	4	28	3	58	6	67	3	13	3	19	178
% SU	2.6	4.2	0.8	3.6	2.6	3.7	2.1	3.1	1.9	4.9	3.3	4.4	1.1	2.2	2.2	1.9	3.4
MU	0	1	1	2	0	0	0	0	0	1	0	1	0	1	0	1	4
% MU	0	0.1	0.4	0.1	0	0	0	0	0	0.1	0	0.1	0	0.2	0	0.1	0.1

	Halsted St From North				103rd St From East				Halsted St From South				103rd St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	15	91	**21**	127	**28**	53	8	89	17	357	34	408	20	58	18	96	720
07:45 AM	25	114	10	149	24	**75**	16	115	30	384	**39**	**453**	19	69	27	115	832
08:00 AM	23	109	15	147	27	66	13	106	**33**	**385**	28	446	**34**	**82**	**29**	**145**	**844**
08:15 AM	**30**	**131**	19	**180**	27	64	**26**	**117**	28	309	24	361	22	76	22	120	778
Total Volume	93	445	65	603	106	258	63	427	108	1435	125	1668	95	285	96	476	3174
% App. Total	15.4	73.8	10.8		24.8	60.4	14.8		6.5	86	7.5		20	59.9	20.2		
PHF	.775	.849	.774	.838	.946	.860	.606	.912	.818	.932	.801	.921	.699	.869	.828	.821	.940

103rd St and Halsted St
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/2/2012
Page No : 6

Groups Printed- SU

	Halsted St From North				103rd St From East				Halsted St From South				103rd St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	6	0	6	1	3	0	4	1	9	1	11	0	3	1	4	25
04:15 PM	1	9	0	10	1	5	1	7	1	9	1	11	0	1	0	1	29
04:30 PM	1	8	0	9	0	1	1	2	0	7	0	7	0	2	0	2	20
04:45 PM	0	5	1	6	1	3	0	4	0	7	1	8	0	1	1	2	20
Total	2	28	1	31	3	12	2	17	2	32	3	37	0	7	2	9	94
05:00 PM	1	7	0	8	2	2	0	4	0	6	2	8	1	1	0	2	22
05:15 PM	0	9	0	9	0	1	0	1	0	5	0	5	1	2	1	4	19
05:30 PM	1	8	1	10	0	1	1	2	1	7	1	9	0	1	0	1	22
05:45 PM	1	5	0	6	0	3	1	4	0	8	0	8	1	2	0	3	21
Total	3	29	1	33	2	7	2	11	1	26	3	30	3	6	1	10	84
Grand Total	5	57	2	64	5	19	4	28	3	58	6	67	3	13	3	19	178
Apprch %	7.8	89.1	3.1		17.9	67.9	14.3		4.5	86.6	9		15.8	68.4	15.8		
Total %	2.8	32	1.1	36	2.8	10.7	2.2	15.7	1.7	32.6	3.4	37.6	1.7	7.3	1.7	10.7	

103rd St and Halsted St
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/2/2012
Page No : 7

Groups Printed- MU

	Halsted St From North				103rd St From East				Halsted St From South				103rd St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	1	1	2	0	0	0	0	0	0	0	0	0	1	0	1	3
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	1	2	0	0	0	0	0	0	0	0	0	1	0	1	3
Grand Total	0	1	1	2	0	0	0	0	0	1	0	1	0	1	0	1	4
Apprch %	0	50	50		0	0	0		0	100	0		0	100	0		
Total %	0	25	25	50	0	0	0	0	0	25	0	25	0	25	0	25	

103rd St and Halsted St
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 5/2/2012
Page No : 8

Groups Printed- Peds & Bikes

	Halsted St Crossing North Leg			103rd St Crossing East Leg			Halsted St Crossing South Leg			103rd St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
04:00 PM	0	5	5	0	1	1	0	9	9	0	7	7	22
04:15 PM	0	12	12	1	3	4	0	12	12	0	4	4	32
04:30 PM	0	7	7	1	11	12	0	4	4	0	14	14	37
04:45 PM	1	2	3	1	6	7	0	2	2	0	8	8	20
Total	1	26	27	3	21	24	0	27	27	0	33	33	111
05:00 PM	0	2	2	0	6	6	0	14	14	0	5	5	27
05:15 PM	1	8	9	0	3	3	0	9	9	0	5	5	26
05:30 PM	0	2	2	0	9	9	0	14	14	0	12	12	37
05:45 PM	0	12	12	0	6	6	0	8	8	0	14	14	40
Total	1	24	25	0	24	24	0	45	45	0	36	36	130
Grand Total	2	50	52	3	45	48	0	72	72	0	69	69	241
Apprch %	3.8	96.2		6.2	93.8		0	100		0	100		
Total %	0.8	20.7	21.6	1.2	18.7	19.9	0	29.9	29.9	0	28.6	28.6	

103rd St and Martin Luther King Dr
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/7/2012
Page No : 1

Groups Printed- PC - SU - MU

	Martin Luther King Dr From North				**103rd St From East**				**Martin Luther King Dr From South**				**103rd St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	6	10	3	19	5	70	3	78	1	41	12	54	5	43	12	60	211
07:15 AM	13	21	2	36	9	67	3	79	6	84	9	99	4	39	25	68	282
07:30 AM	13	22	9	44	1	76	3	80	4	81	12	97	7	57	16	80	301
07:45 AM	12	56	4	72	18	66	4	88	7	95	17	119	12	48	16	76	355
Total	44	109	18	171	33	279	13	325	18	301	50	369	28	187	69	284	1149
08:00 AM	8	38	13	59	8	69	8	85	6	102	10	118	5	72	30	107	369
08:15 AM	3	45	8	56	16	81	6	103	5	66	15	86	5	75	22	102	347
08:30 AM	14	49	16	79	7	99	8	114	4	80	15	99	3	76	25	104	396
08:45 AM	9	46	13	68	8	88	7	103	5	86	11	102	10	73	22	105	378
Total	34	178	50	262	39	337	29	405	20	334	51	405	23	296	99	418	1490
Grand Total	78	287	68	433	72	616	42	730	38	635	101	774	51	483	168	702	2639
Apprch %	18	66.3	15.7		9.9	84.4	5.8		4.9	82	13		7.3	68.8	23.9		
Total %	3	10.9	2.6	16.4	2.7	23.3	1.6	27.7	1.4	24.1	3.8	29.3	1.9	18.3	6.4	26.6	
PC	76	268	64	408	70	570	42	682	37	616	99	752	48	444	163	655	2497
% PC	97.4	93.4	94.1	94.2	97.2	92.5	100	93.4	97.4	97	98	97.2	94.1	91.9	97	93.3	94.6
SU	2	17	4	23	2	41	0	43	1	19	1	21	3	37	5	45	132
% SU	2.6	5.9	5.9	5.3	2.8	6.7	0	5.9	2.6	3	1	2.7	5.9	7.7	3	6.4	5
MU	0	2	0	2	0	5	0	5	0	0	1	1	0	2	0	2	10
% MU	0	0.7	0	0.5	0	0.8	0	0.7	0	0	1	0.1	0	0.4	0	0.3	0.4

	Martin Luther King Dr From North				**103rd St From East**				**Martin Luther King Dr From South**				**103rd St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	8	38	13	59	8	69	**8**	85	**6**	**102**	10	**118**	5	72	**30**	**107**	369
08:15 AM	3	45	8	56	**16**	81	6	103	5	66	**15**	86	5	75	22	102	347
08:30 AM	**14**	**49**	**16**	**79**	7	**99**	8	**114**	4	80	15	99	3	**76**	25	104	**396**
08:45 AM	9	46	13	68	8	88	7	103	5	86	11	102	**10**	73	22	105	378
Total Volume	34	178	50	262	39	337	29	405	20	334	51	405	23	296	99	418	1490
% App. Total	13	67.9	19.1		9.6	83.2	7.2		4.9	82.5	12.6		5.5	70.8	23.7		
PHF	.607	.908	.781	.829	.609	.851	.906	.888	.833	.819	.850	.858	.575	.974	.825	.977	.941

103rd St and Martin Luther King Dr
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/7/2012
Page No : 2

Groups Printed- SU

	Martin Luther King Dr From North				**103rd St From East**				**Martin Luther King Dr From South**				**103rd St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	2	0	2	0	7	0	7	0	3	0	3	0	4	1	5	17
07:15 AM	0	1	0	1	0	4	0	4	1	1	0	2	0	3	1	4	11
07:30 AM	2	3	2	7	0	6	0	6	0	4	0	4	0	3	1	4	21
07:45 AM	0	4	0	4	2	4	0	6	0	1	0	1	2	3	1	6	17
Total	2	10	2	14	2	21	0	23	1	9	0	10	2	13	4	19	66
08:00 AM	0	1	2	3	0	3	0	3	0	5	0	5	1	9	1	11	22
08:15 AM	0	2	0	2	0	9	0	9	0	0	0	0	0	4	0	4	15
08:30 AM	0	2	0	2	0	1	0	1	0	2	1	3	0	6	0	6	12
08:45 AM	0	2	0	2	0	7	0	7	0	3	0	3	0	5	0	5	17
Total	0	7	2	9	0	20	0	20	0	10	1	11	1	24	1	26	66
Grand Total	2	17	4	23	2	41	0	43	1	19	1	21	3	37	5	45	132
Apprch %	8.7	73.9	17.4		4.7	95.3	0		4.8	90.5	4.8		6.7	82.2	11.1		
Total %	1.5	12.9	3	17.4	1.5	31.1	0	32.6	0.8	14.4	0.8	15.9	2.3	28	3.8	34.1	

103rd St and Martin Luther King Dr
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/7/2012
Page No : 3

Groups Printed- MU

	Martin Luther King Dr From North				**103rd St From East**				**Martin Luther King Dr From South**				**103rd St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	1	0	1	0	0	1	1	0	0	0	0	2
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	2	0	2	0	0	1	1	0	0	0	0	3
08:00 AM	0	2	0	2	0	2	0	2	0	0	0	0	0	0	0	0	4
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
08:30 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Total	0	2	0	2	0	3	0	3	0	0	0	0	0	2	0	2	7
Grand Total	0	2	0	2	0	5	0	5	0	0	1	1	0	2	0	2	10
Apprch %	0	100	0		0	100	0		0	0	100		0	100	0		
Total %	0	20	0	20	0	50	0	50	0	0	10	10	0	20	0	20	

103rd St and Martin Luther King Dr
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 6/7/2012
Page No : 4

Groups Printed- Peds & Bikes

	Martin Luther King Dr Crossing North Leg			**103rd St Crossing East Leg**			**Martin Luther King Dr Crossing South Leg**			**103rd St Crossing West Leg**			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
07:00 AM	0	0	0	0	2	2	0	4	4	0	2	2	8
07:15 AM	0	1	1	0	0	0	1	3	4	0	4	4	9
07:30 AM	0	2	2	0	3	3	0	1	1	0	3	3	9
07:45 AM	0	0	0	1	4	5	0	7	7	0	0	0	12
Total	0	3	3	1	9	10	1	15	16	0	9	9	38
08:00 AM	0	3	3	0	1	1	1	8	9	0	5	5	18
08:15 AM	1	2	3	0	0	0	1	7	8	1	2	3	14
08:30 AM	0	6	6	0	0	0	1	27	28	1	8	9	43
08:45 AM	0	0	0	0	0	0	0	6	6	0	3	3	9
Total	1	11	12	0	1	1	3	48	51	2	18	20	84
Grand Total	1	14	15	1	10	11	4	63	67	2	27	29	122
Apprch %	6.7	93.3		9.1	90.9		6	94		6.9	93.1		
Total %	0.8	11.5	12.3	0.8	8.2	9	3.3	51.6	54.9	1.6	22.1	23.8	

103rd St and Martin Luther King Dr
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/7/2012
Page No : 5

Groups Printed- PC - SU - MU

	Martin Luther King Dr From North				**103rd St From East**				**Martin Luther King Dr From South**				**103rd St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	25	100	28	153	23	98	8	129	7	37	18	62	10	104	20	134	478
04:15 PM	27	121	20	168	6	108	12	126	14	45	20	79	11	105	23	139	512
04:30 PM	30	83	18	131	7	102	12	121	6	39	22	67	13	87	26	126	445
04:45 PM	21	82	27	130	14	107	11	132	10	45	14	69	15	71	14	100	431
Total	103	386	93	582	50	415	43	508	37	166	74	277	49	367	83	499	1866
05:00 PM	41	130	23	194	6	87	9	102	13	48	13	74	8	93	20	121	491
05:15 PM	26	114	22	162	23	109	9	141	11	43	15	69	15	98	28	141	513
05:30 PM	24	119	16	159	7	116	8	131	14	36	24	74	11	84	12	107	471
05:45 PM	15	110	15	140	4	121	1	126	10	36	16	62	18	107	18	143	471
Total	106	473	76	655	40	433	27	500	48	163	68	279	52	382	78	512	1946
Grand Total	209	859	169	1237	90	848	70	1008	85	329	142	556	101	749	161	1011	3812
Apprch %	16.9	69.4	13.7		8.9	84.1	6.9		15.3	59.2	25.5		10	74.1	15.9		
Total %	5.5	22.5	4.4	32.5	2.4	22.2	1.8	26.4	2.2	8.6	3.7	14.6	2.6	19.6	4.2	26.5	
PC	207	836	165	1208	84	830	68	982	84	316	142	542	101	727	161	989	3721
% PC	99	97.3	97.6	97.7	93.3	97.9	97.1	97.4	98.8	96	100	97.5	100	97.1	100	97.8	97.6
SU	2	12	2	16	3	9	1	13	1	12	0	13	0	19	0	19	61
% SU	1	1.4	1.2	1.3	3.3	1.1	1.4	1.3	1.2	3.6	0	2.3	0	2.5	0	1.9	1.6
MU	0	11	2	13	3	9	1	13	0	1	0	1	0	3	0	3	30
% MU	0	1.3	1.2	1.1	3.3	1.1	1.4	1.3	0	0.3	0	0.2	0	0.4	0	0.3	0.8

	Martin Luther King Dr From North				**103rd St From East**				**Martin Luther King Dr From South**				**103rd St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	**41**	**130**	**23**	**194**	6	87	**9**	102	13	**48**	13	**74**	8	93	20	121	491
05:15 PM	26	114	22	162	**23**	109	9	**141**	11	43	15	69	15	98	**28**	141	**513**
05:30 PM	24	119	16	159	7	116	8	131	**14**	36	**24**	74	11	84	12	107	471
05:45 PM	15	110	15	140	4	**121**	1	126	10	36	16	62	**18**	**107**	18	**143**	471
Total Volume	106	473	76	655	40	433	27	500	48	163	68	279	52	382	78	512	1946
% App. Total	16.2	72.2	11.6		8	86.6	5.4		17.2	58.4	24.4		10.2	74.6	15.2		
PHF	.646	.910	.826	.844	.435	.895	.750	.887	.857	.849	.708	.943	.722	.893	.696	.895	.948

103rd St and Martin Luther King Dr
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/7/2012
Page No : 6

Groups Printed- SU

	Martin Luther King Dr From North				**103rd St From East**				**Martin Luther King Dr From South**				**103rd St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	3	2	5	3	0	0	3	0	3	0	3	0	2	0	2	13
04:15 PM	0	3	0	3	0	2	0	2	0	2	0	2	0	5	0	5	12
04:30 PM	0	2	0	2	0	1	0	1	0	0	0	0	0	2	0	2	5
04:45 PM	1	0	0	1	0	2	0	2	1	2	0	3	0	3	0	3	9
Total	1	8	2	11	3	5	0	8	1	7	0	8	0	12	0	12	39
05:00 PM	1	1	0	2	0	0	0	0	0	1	0	1	0	2	0	2	5
05:15 PM	0	1	0	1	0	1	0	1	0	1	0	1	0	3	0	3	6
05:30 PM	0	1	0	1	0	2	1	3	0	0	0	0	0	1	0	1	5
05:45 PM	0	1	0	1	0	1	0	1	0	3	0	3	0	1	0	1	6
Total	1	4	0	5	0	4	1	5	0	5	0	5	0	7	0	7	22
Grand Total	2	12	2	16	3	9	1	13	1	12	0	13	0	19	0	19	61
Apprch %	12.5	75	12.5		23.1	69.2	7.7		7.7	92.3	0		0	100	0		
Total %	3.3	19.7	3.3	26.2	4.9	14.8	1.6	21.3	1.6	19.7	0	21.3	0	31.1	0	31.1	

103rd St and Martin Luther King Dr
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/7/2012
Page No : 7

Groups Printed- MU

	Martin Luther King Dr From North				**103rd St From East**				**Martin Luther King Dr From South**				**103rd St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	3	2	5	3	0	0	3	0	1	0	1	0	0	0	0	9
04:15 PM	0	2	0	2	0	2	0	2	0	0	0	0	0	0	0	0	4
04:30 PM	0	2	0	2	0	1	0	1	0	0	0	0	0	0	0	0	3
04:45 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	1	3
Total	0	7	2	9	3	5	0	8	0	1	0	1	0	1	0	1	19
05:00 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:15 PM	0	1	0	1	0	1	0	1	0	0	0	0	0	1	0	1	3
05:30 PM	0	1	0	1	0	2	1	3	0	0	0	0	0	0	0	0	4
05:45 PM	0	1	0	1	0	1	0	1	0	0	0	0	0	1	0	1	3
Total	0	4	0	4	0	4	1	5	0	0	0	0	0	2	0	2	11
Grand Total	0	11	2	13	3	9	1	13	0	1	0	1	0	3	0	3	30
Apprch %	0	84.6	15.4		23.1	69.2	7.7		0	100	0		0	100	0		
Total %	0	36.7	6.7	43.3	10	30	3.3	43.3	0	3.3	0	3.3	0	10	0	10	

103rd St and Martin Luther King Dr
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 6/7/2012
Page No : 8

Groups Printed- Peds & Bikes

	Martin Luther King Dr Crossing North Leg			**103rd St Crossing East Leg**			**Martin Luther King Dr Crossing South Leg**			**103rd St Crossing West Leg**			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
04:00 PM	0	4	4	0	4	4	5	42	47	0	7	7	62
04:15 PM	0	5	5	0	9	9	0	24	24	0	10	10	48
04:30 PM	0	5	5	0	1	1	2	12	14	2	12	14	34
04:45 PM	1	10	11	0	2	2	0	22	22	0	7	7	42
Total	1	24	25	0	16	16	7	100	107	2	36	38	186
05:00 PM	0	2	2	0	5	5	0	23	23	0	13	13	43
05:15 PM	0	10	10	0	3	3	0	22	22	1	14	15	50
05:30 PM	1	1	2	0	0	0	1	20	21	1	6	7	30
05:45 PM	1	8	9	0	0	0	2	30	32	0	3	3	44
Total	2	21	23	0	8	8	3	95	98	2	36	38	167
Grand Total	3	45	48	0	24	24	10	195	205	4	72	76	353
Apprch %	6.2	93.8		0	100		4.9	95.1		5.3	94.7		
Total %	0.8	12.7	13.6	0	6.8	6.8	2.8	55.2	58.1	1.1	20.4	21.5	

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103rd St and State St
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/5/2012
Page No : 1

Groups Printed- PC - SU - MU

	State St From North				103rd St From East				State St From South				103rd St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	3	13	3	19	2	38	2	42	10	64	4	78	5	50	21	76	215
07:15 AM	1	7	9	17	7	51	1	59	4	66	8	78	7	53	8	68	222
07:30 AM	2	16	8	26	11	55	4	70	12	73	19	104	6	85	14	105	305
07:45 AM	2	24	7	33	10	69	3	82	8	93	9	110	5	101	32	138	363
Total	8	60	27	95	30	213	10	253	34	296	40	370	23	289	75	387	1105
08:00 AM	4	30	10	44	7	65	2	74	8	63	10	81	7	80	15	102	301
08:15 AM	1	22	13	36	6	55	6	67	10	69	13	92	7	98	11	116	311
08:30 AM	3	24	7	34	3	75	4	82	13	56	10	79	9	93	16	118	313
08:45 AM	1	32	10	43	3	54	4	61	7	67	16	90	7	90	15	112	306
Total	9	108	40	157	19	249	16	284	38	255	49	342	30	361	57	448	1231
Grand Total	17	168	67	252	49	462	26	537	72	551	89	712	53	650	132	835	2336
Apprch %	6.7	66.7	26.6		9.1	86	4.8		10.1	77.4	12.5		6.3	77.8	15.8		
Total %	0.7	7.2	2.9	10.8	2.1	19.8	1.1	23	3.1	23.6	3.8	30.5	2.3	27.8	5.7	35.7	
PC	15	157	63	235	46	425	24	495	68	536	87	691	51	612	124	787	2208
% PC	88.2	93.5	94	93.3	93.9	92	92.3	92.2	94.4	97.3	97.8	97.1	96.2	94.2	93.9	94.3	94.5
SU	2	10	4	16	3	35	2	40	4	14	2	20	2	36	7	45	121
% SU	11.8	6	6	6.3	6.1	7.6	7.7	7.4	5.6	2.5	2.2	2.8	3.8	5.5	5.3	5.4	5.2
MU	0	1	0	1	0	2	0	2	0	1	0	1	0	2	1	3	7
% MU	0	0.6	0	0.4	0	0.4	0	0.4	0	0.2	0	0.1	0	0.3	0.8	0.4	0.3

	State St From North				103rd St From East				State St From South				103rd St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	2	24	7	33	**10**	69	3	**82**	8	**93**	9	**110**	5	**101**	**32**	**138**	**363**
08:00 AM	**4**	**30**	10	**44**	7	65	2	74	8	63	10	81	7	80	15	102	301
08:15 AM	1	22	**13**	36	6	55	**6**	67	10	69	**13**	92	7	98	11	116	311
08:30 AM	3	24	7	34	3	**75**	4	82	**13**	56	10	79	**9**	93	16	118	313
Total Volume	10	100	37	147	26	264	15	305	39	281	42	362	28	372	74	474	1288
% App. Total	6.8	68	25.2		8.5	86.6	4.9		10.8	77.6	11.6		5.9	78.5	15.6		
PHF	.625	.833	.712	.835	.650	.880	.625	.930	.750	.755	.808	.823	.778	.921	.578	.859	.887

103rd St and State St
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/5/2012
Page No : 2

Groups Printed- SU

	State St From North				103rd St From East				State St From South				103rd St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	1	1	2	1	3	0	4	1	2	0	3	0	5	1	6	15
07:15 AM	0	1	0	1	0	5	0	5	0	3	0	3	0	2	0	2	11
07:30 AM	0	0	0	0	0	5	1	6	1	2	0	3	0	4	1	5	14
07:45 AM	1	1	0	2	0	4	1	5	1	0	2	3	0	9	3	12	22
Total	1	3	1	5	1	17	2	20	3	7	2	12	0	20	5	25	62
08:00 AM	1	3	1	5	1	4	0	5	0	3	0	3	0	4	1	5	18
08:15 AM	0	3	1	4	0	4	0	4	1	1	0	2	0	4	0	4	14
08:30 AM	0	0	0	0	1	9	0	10	0	1	0	1	1	4	1	6	17
08:45 AM	0	1	1	2	0	1	0	1	0	2	0	2	1	4	0	5	10
Total	1	7	3	11	2	18	0	20	1	7	0	8	2	16	2	20	59
Grand Total	2	10	4	16	3	35	2	40	4	14	2	20	2	36	7	45	121
Apprch %	12.5	62.5	25		7.5	87.5	5		20	70	10		4.4	80	15.6		
Total %	1.7	8.3	3.3	13.2	2.5	28.9	1.7	33.1	3.3	11.6	1.7	16.5	1.7	29.8	5.8	37.2	

103rd St and State St
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/5/2012
Page No : 3

Groups Printed- MU

	State St From North				103rd St From East				State St From South				103rd St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	2
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Total	0	0	0	0	0	0	0	0	0	1	0	1	0	2	1	3	4
08:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
08:15 AM	0	1	0	1	0	1	0	1	0	0	0	0	0	0	0	0	2
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	1	0	2	0	2	0	0	0	0	0	0	0	0	3
Grand Total	0	1	0	1	0	2	0	2	0	1	0	1	0	2	1	3	7
Apprch %	0	100	0		0	100	0		0	100	0		0	66.7	33.3		
Total %	0	14.3	0	14.3	0	28.6	0	28.6	0	14.3	0	14.3	0	28.6	14.3	42.9	

103rd St and State St
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 6/5/2012
Page No : 4

Groups Printed- Peds & Bikes

	State St Crossing North Leg			103rd St Crossing East Leg			State St Crossing South Leg			103rd St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
07:00 AM	1	4	5	0	0	0	0	2	2	0	1	1	8
07:15 AM	0	3	3	0	0	0	0	3	3	0	0	0	6
07:30 AM	0	2	2	0	0	0	0	0	0	0	1	1	3
07:45 AM	0	7	7	0	4	4	0	8	8	0	0	0	19
Total	1	16	17	0	4	4	0	13	13	0	2	2	36
08:00 AM	0	5	5	0	1	1	0	0	0	0	0	0	6
08:15 AM	0	2	2	0	0	0	0	1	1	0	0	0	3
08:30 AM	1	3	4	0	0	0	0	2	2	0	10	10	16
08:45 AM	0	3	3	0	0	0	0	0	0	0	12	12	15
Total	1	13	14	0	1	1	0	3	3	0	22	22	40
Grand Total	2	29	31	0	5	5	0	16	16	0	24	24	76
Apprch %	6.5	93.5		0	100		0	100		0	100		
Total %	2.6	38.2	40.8	0	6.6	6.6	0	21.1	21.1	0	31.6	31.6	

103rd St and State St
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/5/2012

Groups Printed- PC - SU - MU

	State St From North				103rd St From East				State St From South				103rd St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	8	49	32	89	11	83	9	103	11	25	13	49	5	96	12	113	354
04:15 PM	6	47	22	75	15	122	9	146	17	47	11	75	16	118	11	145	441
04:30 PM	6	34	19	59	12	109	6	127	21	40	13	74	21	101	8	130	390
04:45 PM	4	24	11	39	17	119	5	141	20	41	15	76	11	98	11	120	376
Total	24	154	84	262	55	433	29	517	69	153	52	274	53	413	42	508	1561
05:00 PM	5	31	22	58	15	143	14	172	17	34	11	62	7	103	15	125	417
05:15 PM	9	50	20	79	14	119	12	145	18	46	8	72	5	84	14	103	399
05:30 PM	9	33	26	68	6	104	8	118	13	50	10	73	4	146	14	164	423
05:45 PM	2	48	27	77	12	87	5	104	7	35	15	57	13	93	12	118	356
Total	25	162	95	282	47	453	39	539	55	165	44	264	29	426	55	510	1595
Grand Total	49	316	179	544	102	886	68	1056	124	318	96	538	82	839	97	1018	3156
Apprch %	9	58.1	32.9		9.7	83.9	6.4		23	59.1	17.8		8.1	82.4	9.5		
Total %	1.6	10	5.7	17.2	3.2	28.1	2.2	33.5	3.9	10.1	3	17	2.6	26.6	3.1	32.3	
PC	47	313	175	535	101	870	68	1039	122	314	96	532	80	821	95	996	3102
% PC	95.9	99.1	97.8	98.3	99	98.2	100	98.4	98.4	98.7	100	98.9	97.6	97.9	97.9	97.8	98.3
SU	2	3	4	9	1	15	0	16	2	4	0	6	2	18	2	22	53
% SU	4.1	0.9	2.2	1.7	1	1.7	0	1.5	1.6	1.3	0	1.1	2.4	2.1	2.1	2.2	1.7
MU	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
% MU	0	0	0	0	0	0.1	0	0.1	0	0	0	0	0	0	0	0	0

	State St From North				103rd St From East				State St From South				103rd St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	**6**	**47**	**22**	**75**	15	122	9	146	17	**47**	11	75	16	**118**	11	**145**	**441**
04:30 PM	6	34	19	59	12	109	6	127	**21**	40	13	74	**21**	101	8	130	390
04:45 PM	4	24	11	39	**17**	119	5	141	20	41	**15**	**76**	11	98	11	120	376
05:00 PM	5	31	22	58	15	**143**	**14**	**172**	17	34	11	62	7	103	**15**	125	417
Total Volume	21	136	74	231	59	493	34	586	75	162	50	287	55	420	45	520	1624
% App. Total	9.1	58.9	32		10.1	84.1	5.8		26.1	56.4	17.4		10.6	80.8	8.7		
PHF	.875	.723	.841	.770	.868	.862	.607	.852	.893	.862	.833	.944	.655	.890	.750	.897	.921

103rd St and State St
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/5/2012

Groups Printed- SU

	State St From North				103rd St From East				State St From South				103rd St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	2	0	1	3	1	3	0	4	1	1	0	2	0	2	0	2	11
04:15 PM	0	1	1	2	0	1	0	1	0	1	0	1	0	2	1	3	7
04:30 PM	0	1	0	1	0	2	0	2	0	1	0	1	1	2	0	3	7
04:45 PM	0	1	1	2	0	3	0	3	0	0	0	0	0	1	0	1	6
Total	2	3	3	8	1	9	0	10	1	3	0	4	1	7	1	9	31
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	3
05:15 PM	0	0	0	0	0	2	0	2	0	1	0	1	1	3	0	4	7
05:30 PM	0	0	0	0	0	3	0	3	0	0	0	0	0	1	0	1	4
05:45 PM	0	0	1	1	0	1	0	1	1	0	0	1	0	4	1	5	8
Total	0	0	1	1	0	6	0	6	1	1	0	2	1	11	1	13	22
Grand Total	2	3	4	9	1	15	0	16	2	4	0	6	2	18	2	22	53
Apprch %	22.2	33.3	44.4		6.2	93.8	0		33.3	66.7	0		9.1	81.8	9.1		
Total %	3.8	5.7	7.5	17	1.9	28.3	0	30.2	3.8	7.5	0	11.3	3.8	34	3.8	41.5	

103rd St and State St
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/5/2012
Page No : 7

Groups Printed- MU

	State St From North				103rd St From East				State St From South				103rd St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Grand Total	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Apprch %	0	0	0		0	100	0		0	0	0		0	0	0		
Total %	0	0	0	0	0	100	0	100	0	0	0	0	0	0	0	0	

103rd St and State St
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 6/5/2012
Page No : 8

Groups Printed- Peds & Bikes

	State St Crossing North Leg			103rd St Crossing East Leg			State St Crossing South Leg			103rd St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
04:00 PM	0	9	9	0	0	0	0	5	5	0	7	7	21
04:15 PM	0	16	16	0	4	4	0	0	0	0	4	4	24
04:30 PM	0	14	14	0	4	4	0	1	1	0	3	3	22
04:45 PM	0	14	14	1	4	5	0	0	0	0	0	0	19
Total	0	53	53	1	12	13	0	6	6	0	14	14	86
05:00 PM	0	14	14	0	8	8	0	0	0	0	4	4	26
05:15 PM	0	14	14	0	0	0	0	1	1	0	2	2	17
05:30 PM	0	18	18	0	2	2	0	0	0	0	3	3	23
05:45 PM	0	5	5	0	3	3	0	2	2	0	4	4	14
Total	0	51	51	0	13	13	0	3	3	0	13	13	80
Grand Total	0	104	104	1	25	26	0	9	9	0	27	27	166
Apprch %	0	100		3.8	96.2		0	100		0	100		
Total %	0	62.7	62.7	0.6	15.1	15.7	0	5.4	5.4	0	16.3	16.3	

103rd St and Wentworth Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM No Peds
Site Code : 00000000
Start Date : 5/2/2012
Page No : 1

Groups Printed- PC - SU - MU

	Wentworth Ave From North				**103rd St From East**				**Wentworth Ave From South**				**103rd St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	5	26	6	37	4	59	6	69	14	24	5	43	5	47	1	53	202
07:15 AM	3	33	7	43	4	75	6	85	15	27	8	50	8	54	5	67	245
07:30 AM	6	44	7	57	7	58	6	71	16	37	13	66	15	85	3	103	297
07:45 AM	6	49	13	68	10	94	8	112	18	39	10	67	12	102	4	118	365
Total	20	152	33	205	25	286	26	337	63	127	36	226	40	288	13	341	1109
08:00 AM	2	48	14	64	9	93	5	107	29	32	9	70	14	106	7	127	368
08:15 AM	12	51	15	78	7	93	8	108	16	25	9	50	9	90	4	103	339
08:30 AM	8	43	7	58	10	78	7	95	36	28	8	72	11	106	3	120	345
08:45 AM	5	40	15	60	9	88	2	99	17	34	10	61	10	79	3	92	312
Total	27	182	51	260	35	352	22	409	98	119	36	253	44	381	17	442	1364
Grand Total	47	334	84	465	60	638	48	746	161	246	72	479	84	669	30	783	2473
Apprch %	10.1	71.8	18.1		8	85.5	6.4		33.6	51.4	15		10.7	85.4	3.8		
Total %	1.9	13.5	3.4	18.8	2.4	25.8	1.9	30.2	6.5	9.9	2.9	19.4	3.4	27.1	1.2	31.7	
PC	44	315	78	437	57	609	42	708	160	237	71	468	73	630	29	732	2345
% PC	93.6	94.3	92.9	94	95	95.5	87.5	94.9	99.4	96.3	98.6	97.7	86.9	94.2	96.7	93.5	94.8
SU	3	19	6	28	3	27	6	36	1	8	1	10	11	33	0	44	118
% SU	6.4	5.7	7.1	6	5	4.2	12.5	4.8	0.6	3.3	1.4	2.1	13.1	4.9	0	5.6	4.8
MU	0	0	0	0	0	2	0	2	0	1	0	1	0	6	1	7	10
% MU	0	0	0	0	0	0.3	0	0.3	0	0.4	0	0.2	0	0.9	3.3	0.9	0.4

	Wentworth Ave From North				**103rd St From East**				**Wentworth Ave From South**				**103rd St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	6	49	13	68	**10**	**94**	**8**	**112**	18	**39**	**10**	67	12	102	4	118	365
08:00 AM	2	48	14	64	9	93	5	107	29	32	9	70	**14**	**106**	**7**	**127**	**368**
08:15 AM	**12**	**51**	**15**	**78**	7	93	8	108	16	25	9	50	9	90	4	103	339
08:30 AM	8	43	7	58	10	78	7	95	**36**	28	8	**72**	11	106	3	120	345
Total Volume	28	191	49	268	36	358	28	422	99	124	36	259	46	404	18	468	1417
% App. Total	10.4	71.3	18.3		8.5	84.8	6.6		38.2	47.9	13.9		9.8	86.3	3.8		
PHF	.583	.936	.817	.859	.900	.952	.875	.942	.688	.795	.900	.899	.821	.953	.643	.921	.963

103rd St and Wentworth Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM No Peds
Site Code : 00000000
Start Date : 5/2/2012
Page No : 2

Groups Printed- SU

	Wentworth Ave From North				**103rd St From East**				**Wentworth Ave From South**				**103rd St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	1	0	0	1	0	5	1	6	0	1	0	1	1	0	0	1	9
07:15 AM	0	1	0	1	0	2	0	2	0	1	0	1	1	1	0	2	6
07:30 AM	1	3	1	5	0	4	1	5	1	0	0	1	1	6	0	7	18
07:45 AM	0	2	1	3	1	2	3	6	0	0	0	0	2	7	0	9	18
Total	2	6	2	10	1	13	5	19	1	2	0	3	5	14	0	19	51
08:00 AM	0	7	0	7	2	4	0	6	0	2	0	2	3	4	0	7	22
08:15 AM	1	1	3	5	0	5	1	6	0	1	1	2	1	2	0	3	16
08:30 AM	0	3	1	4	0	3	0	3	0	3	0	3	0	8	0	8	18
08:45 AM	0	2	0	2	0	2	0	2	0	0	0	0	2	5	0	7	11
Total	1	13	4	18	2	14	1	17	0	6	1	7	6	19	0	25	67
Grand Total	3	19	6	28	3	27	6	36	1	8	1	10	11	33	0	44	118
Apprch %	10.7	67.9	21.4		8.3	75	16.7		10	80	10		25	75	0		
Total %	2.5	16.1	5.1	23.7	2.5	22.9	5.1	30.5	0.8	6.8	0.8	8.5	9.3	28	0	37.3	

103rd St and Wentworth Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM No Peds
Site Code : 00000000
Start Date : 5/2/2012

Groups Printed- MU

	Wentworth Ave From North				**103rd St From East**				**Wentworth Ave From South**				**103rd St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
07:15 AM	0	0	0	0	0	1	0	1	0	1	0	1	0	1	1	2	4
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	1	0	1	0	1	0	1	0	2	1	3	5
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0	2	3
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	1	0	1	0	0	0	0	0	4	0	4	5
Grand Total	0	0	0	0	0	2	0	2	0	1	0	1	0	6	1	7	10
Apprch %	0	0	0		0	100	0		0	100	0		0	85.7	14.3		
Total %	0	0	0	0	0	20	0	20	0	10	0	10	0	60	10	70	

103rd St and Wentworth Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM PEDS
Site Code : 00000000
Start Date : 5/2/2012
Page No : 4

Groups Printed- Peds & Bikes

	Wentworth Ave Crossing North Leg			103rd St Crossing East Leg			Wentworth Ave Crossing South Leg			103rd St Crossing West Leg			
Start Time	Left	Peds	App. Total	Left	Peds	App. Total	Left	Peds	App. Total	Left	Peds	App. Total	Int. Total
07:00 AM	0	8	8	0	4	4	0	3	3	0	5	5	20
07:15 AM	0	4	4	0	1	1	0	5	5	1	12	13	23
07:30 AM	2	6	8	0	2	2	0	5	5	0	8	8	23
07:45 AM	2	5	7	0	1	1	0	3	3	0	25	25	36
Total	4	23	27	0	8	8	0	16	16	1	50	51	102
08:00 AM	0	17	17	0	1	1	0	4	4	0	20	20	42
08:15 AM	0	5	5	0	1	1	0	3	3	0	15	15	24
08:30 AM	0	3	3	0	1	1	0	4	4	0	10	10	18
08:45 AM	0	10	10	0	5	5	0	3	3	0	3	3	21
Total	0	35	35	0	8	8	0	14	14	0	48	48	105
Grand Total	4	58	62	0	16	16	0	30	30	1	98	99	207
Apprch %	6.5	93.5		0	100		0	100		1	99		
Total %	1.9	28	30	0	7.7	7.7	0	14.5	14.5	0.5	47.3	47.8	

103rd St and Wentworth Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM No Peds
Site Code : 00000000
Start Date : 5/2/2012
Page No : 5

Groups Printed- PC - SU - MU

	Wentworth Ave From North				**103rd St From East**				**Wentworth Ave From South**				**103rd St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	13	37	12	62	8	95	9	112	16	24	12	52	17	79	2	98	324
04:15 PM	13	51	13	77	8	106	13	127	27	22	7	56	9	116	6	131	391
04:30 PM	5	61	9	75	8	93	10	111	16	19	12	47	12	85	6	103	336
04:45 PM	4	68	12	84	8	99	13	120	16	26	14	56	15	92	7	114	374
Total	35	217	46	298	32	393	45	470	75	91	45	211	53	372	21	446	1425
05:00 PM	13	60	10	83	9	117	21	147	18	17	8	43	13	101	6	120	393
05:15 PM	10	54	12	76	5	129	13	147	19	18	11	48	19	101	8	128	399
05:30 PM	11	55	13	79	12	96	12	120	17	26	5	48	20	91	2	113	360
05:45 PM	11	56	16	83	6	99	20	125	18	15	13	46	12	89	3	104	358
Total	45	225	51	321	32	441	66	539	72	76	37	185	64	382	19	465	1510
Grand Total	80	442	97	619	64	834	111	1009	147	167	82	396	117	754	40	911	2935
Apprch %	12.9	71.4	15.7		6.3	82.7	11		37.1	42.2	20.7		12.8	82.8	4.4		
Total %	2.7	15.1	3.3	21.1	2.2	28.4	3.8	34.4	5	5.7	2.8	13.5	4	25.7	1.4	31	
PC	78	437	96	611	64	813	110	987	145	165	82	392	114	733	39	886	2876
% PC	97.5	98.9	99	98.7	100	97.5	99.1	97.8	98.6	98.8	100	99	97.4	97.2	97.5	97.3	98
SU	2	4	1	7	0	21	1	22	2	2	0	4	3	20	1	24	57
% SU	2.5	0.9	1	1.1	0	2.5	0.9	2.2	1.4	1.2	0	1	2.6	2.7	2.5	2.6	1.9
MU	0	1	0	1	0	0	0	0	0	0	0	0	0	1	0	1	2
% MU	0	0.2	0	0.2	0	0	0	0	0	0	0	0	0	0.1	0	0.1	0.1

	Wentworth Ave From North				**103rd St From East**				**Wentworth Ave From South**				**103rd St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	6	49	13	68	**10**	**94**	**8**	**112**	18	**39**	**10**	67	12	102	4	118	365
08:00 AM	2	48	14	64	9	93	5	107	29	32	9	70	**14**	**106**	**7**	**127**	**368**
08:15 AM	**12**	**51**	**15**	**78**	7	93	8	108	16	25	9	50	9	90	4	103	339
08:30 AM	8	43	7	58	10	78	7	95	**36**	28	8	**72**	11	106	3	120	345
Total Volume	28	191	49	268	36	358	28	422	99	124	36	259	46	404	18	468	1417
% App. Total	10.4	71.3	18.3		8.5	84.8	6.6		38.2	47.9	13.9		9.8	86.3	3.8		
PHF	.583	.936	.817	.859	.900	.952	.875	.942	.688	.795	.900	.899	.821	.953	.643	.921	.963

103rd St and Wentworth Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM No Peds
Site Code : 00000000
Start Date : 5/2/2012
Page No : 6

Groups Printed- SU

	Wentworth Ave From North				103rd St From East				Wentworth Ave From South				103rd St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	2	1	1	4	0	4	0	4	0	1	0	1	1	3	0	4	13
04:15 PM	0	0	0	0	0	5	0	5	0	0	0	0	0	3	0	3	8
04:30 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	0	1	1	3
04:45 PM	0	0	0	0	0	4	1	5	1	0	0	1	0	3	0	3	9
Total	2	1	1	4	0	15	1	16	1	1	0	2	1	9	1	11	33
05:00 PM	0	0	0	0	0	2	0	2	1	0	0	1	1	1	0	2	5
05:15 PM	0	2	0	2	0	1	0	1	0	1	0	1	0	2	0	2	6
05:30 PM	0	1	0	1	0	1	0	1	0	0	0	0	1	6	0	7	9
05:45 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	2	0	2	4
Total	0	3	0	3	0	6	0	6	1	1	0	2	2	11	0	13	24
Grand Total	2	4	1	7	0	21	1	22	2	2	0	4	3	20	1	24	57
Apprch %	28.6	57.1	14.3		0	95.5	4.5		50	50	0		12.5	83.3	4.2		
Total %	3.5	7	1.8	12.3	0	36.8	1.8	38.6	3.5	3.5	0	7	5.3	35.1	1.8	42.1	

103rd St and Wentworth Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM No Peds
Site Code : 00000000
Start Date : 5/2/2012
Page No : 7

Groups Printed- MU

	Wentworth Ave From North				**103rd St From East**				**Wentworth Ave From South**				**103rd St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Grand Total	0	1	0	1	0	0	0	0	0	0	0	0	0	1	0	1	2
Apprch %	0	100	0		0	0	0		0	0	0		0	100	0		
Total %	0	50	0	50	0	0	0	0	0	0	0	0	0	50	0	50	

103rd St and Wentworth Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM PEDS
Site Code : 00000000
Start Date : 5/2/2012
Page No : 8

Groups Printed- Peds & Bikes

	Wentworth Ave Crossing North Leg			**103rd St Crossing East Leg**			**Wentworth Ave Crossing South Leg**			**103rd St Crossing West Leg**			
Start Time	Left	Peds	App. Total	Left	Peds	App. Total	Left	Peds	App. Total	Left	Peds	App. Total	Int. Total
04:00 PM	0	9	9	0	3	3	0	17	17	2	10	12	41
04:15 PM	0	3	3	0	0	0	0	4	4	1	17	18	25
04:30 PM	0	4	4	0	1	1	0	6	6	0	9	9	20
04:45 PM	0	16	16	0	0	0	0	22	22	1	35	36	74
Total	0	32	32	0	4	4	0	49	49	4	71	75	160
05:00 PM	0	4	4	0	8	8	0	1	1	2	18	20	33
05:15 PM	0	6	6	0	6	6	2	9	11	1	7	8	31
05:30 PM	0	6	6	0	10	10	0	4	4	0	6	6	26
05:45 PM	1	9	10	0	6	6	0	5	5	0	5	5	26
Total	1	25	26	0	30	30	2	19	21	3	36	39	116
Grand Total	1	57	58	0	34	34	2	68	70	7	107	114	276
Apprch %	1.7	98.3		0	100		2.9	97.1		6.1	93.9		
Total %	0.4	20.7	21	0	12.3	12.3	0.7	24.6	25.4	2.5	38.8	41.3	

Regina Webster & Associates, Inc.
8619 West Bryn Mawr Avenue, Suite 602, Chicago, Illinois 60631
773-283-2600 Fax: 773-283-2602
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107th St and Cottage Grove Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/9/2012
Page No : 1

Groups Printed- PC - SU - MU

	Cottage Grove Ave From North				**107th St From East**				**Cottage Grove Ave From South**				**107th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	5	28	2	35	3	1	0	4	0	43	3	46	3	0	17	20	105
07:15 AM	9	26	2	37	3	3	1	7	0	67	5	72	7	0	24	31	147
07:30 AM	12	37	0	49	1	1	0	2	1	71	7	79	11	2	17	30	160
07:45 AM	10	45	0	55	4	2	0	6	2	113	4	119	15	1	26	42	222
Total	36	136	4	176	11	7	1	19	3	294	19	316	36	3	84	123	634
08:00 AM	8	40	1	49	2	0	0	2	1	99	5	105	6	1	29	36	192
08:15 AM	9	33	1	43	1	0	1	2	1	96	14	111	8	3	22	33	189
08:30 AM	20	44	2	66	0	0	1	1	2	101	10	113	3	4	15	22	202
08:45 AM	18	72	1	91	2	4	0	6	3	101	16	120	9	2	33	44	261
Total	55	189	5	249	5	4	2	11	7	397	45	449	26	10	99	135	844
Grand Total	91	325	9	425	16	11	3	30	10	691	64	765	62	13	183	258	1478
Apprch %	21.4	76.5	2.1		53.3	36.7	10		1.3	90.3	8.4		24	5	70.9		
Total %	6.2	22	0.6	28.8	1.1	0.7	0.2	2	0.7	46.8	4.3	51.8	4.2	0.9	12.4	17.5	
PC	80	305	8	393	15	8	3	26	9	659	61	729	60	11	175	246	1394
% PC	87.9	93.8	88.9	92.5	93.8	72.7	100	86.7	90	95.4	95.3	95.3	96.8	84.6	95.6	95.3	94.3
SU	11	20	0	31	1	2	0	3	0	27	2	29	2	2	8	12	75
% SU	12.1	6.2	0	7.3	6.2	18.2	0	10	0	3.9	3.1	3.8	3.2	15.4	4.4	4.7	5.1
MU	0	0	1	1	0	1	0	1	1	5	1	7	0	0	0	0	9
% MU	0	0	11.1	0.2	0	9.1	0	3.3	10	0.7	1.6	0.9	0	0	0	0	0.6

	Cottage Grove Ave From North				**107th St From East**				**Cottage Grove Ave From South**				**107th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	8	40	1	49	**2**	0	0	2	1	99	5	105	6	1	29	36	192
08:15 AM	9	33	1	43	1	0	**1**	2	1	96	14	111	8	3	22	33	189
08:30 AM	**20**	44	**2**	66	0	0	1	1	2	**101**	10	113	3	**4**	15	22	202
08:45 AM	18	**72**	1	**91**	2	**4**	0	**6**	**3**	101	**16**	**120**	**9**	2	**33**	**44**	**261**
Total Volume	55	189	5	249	5	4	2	11	7	397	45	449	26	10	99	135	844
% App. Total	22.1	75.9	2		45.5	36.4	18.2		1.6	88.4	10		19.3	7.4	73.3		
PHF	.688	.656	.625	.684	.625	.250	.500	.458	.583	.983	.703	.935	.722	.625	.750	.767	.808

107th St and Cottage Grove Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/9/2012
Page No : 2

Groups Printed- SU

	Cottage Grove Ave From North				**107th St From East**				**Cottage Grove Ave From South**				**107th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	1	2	0	3	0	0	0	0	0	2	0	2	0	0	1	1	6
07:15 AM	2	1	0	3	0	1	0	1	0	3	0	3	0	0	2	2	9
07:30 AM	0	2	0	2	0	0	0	0	0	2	0	2	1	0	0	1	5
07:45 AM	0	4	0	4	1	1	0	2	0	3	1	4	1	0	1	2	12
Total	3	9	0	12	1	2	0	3	0	10	1	11	2	0	4	6	32
08:00 AM	1	2	0	3	0	0	0	0	0	1	0	1	0	0	1	1	5
08:15 AM	1	3	0	4	0	0	0	0	0	5	0	5	0	1	3	4	13
08:30 AM	3	4	0	7	0	0	0	0	0	3	1	4	0	1	0	1	12
08:45 AM	3	2	0	5	0	0	0	0	0	8	0	8	0	0	0	0	13
Total	8	11	0	19	0	0	0	0	0	17	1	18	0	2	4	6	43
Grand Total	11	20	0	31	1	2	0	3	0	27	2	29	2	2	8	12	75
Apprch %	35.5	64.5	0		33.3	66.7	0		0	93.1	6.9		16.7	16.7	66.7		
Total %	14.7	26.7	0	41.3	1.3	2.7	0	4	0	36	2.7	38.7	2.7	2.7	10.7	16	

107th St and Cottage Grove Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/9/2012
Page No : 3

Groups Printed- MU

	Cottage Grove Ave From North				107th St From East				Cottage Grove Ave From South				107th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	1	1	0	0	0	0	0	1	0	1	0	0	0	0	2
07:30 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
07:45 AM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
Total	0	0	1	1	0	1	0	1	0	3	0	3	0	0	0	0	5
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
08:30 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
08:45 AM	0	0	0	0	0	0	0	0	1	1	0	2	0	0	0	0	2
Total	0	0	0	0	0	0	0	0	1	2	1	4	0	0	0	0	4
Grand Total	0	0	1	1	0	1	0	1	1	5	1	7	0	0	0	0	9
Apprch %	0	0	100		0	100	0		14.3	71.4	14.3		0	0	0		
Total %	0	0	11.1	11.1	0	11.1	0	11.1	11.1	55.6	11.1	77.8	0	0	0	0	

107th St and Cottage Grove Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 5/9/2012
Page No : 4

Groups Printed- Peds & Bikes

	Cottage Grove Ave Crossing North Leg			**107th St Crossing East Leg**			**Cottage Grove Ave Crossing South Leg**			**107th St Crossing West Leg**			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
07:00 AM	0	3	3	0	1	1	0	2	2	0	0	0	6
07:15 AM	0	1	1	0	0	0	0	0	0	0	0	0	1
07:30 AM	0	2	2	0	0	0	0	0	0	0	0	0	2
07:45 AM	0	1	1	0	2	2	0	0	0	0	0	0	3
Total	0	7	7	0	3	3	0	2	2	0	0	0	12
08:00 AM	0	2	2	0	0	0	0	0	0	0	0	0	2
08:15 AM	0	4	4	0	4	4	0	0	0	0	1	1	9
08:30 AM	0	5	5	0	1	1	0	0	0	0	0	0	6
08:45 AM	0	8	8	0	0	0	0	1	1	0	1	1	10
Total	0	19	19	0	5	5	0	1	1	0	2	2	27
Grand Total	0	26	26	0	8	8	0	3	3	0	2	2	39
Apprch %	0	100		0	100		0	100		0	100		
Total %	0	66.7	66.7	0	20.5	20.5	0	7.7	7.7	0	5.1	5.1	

107th St and Cottage Grove Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/9/2012
Page No : 5

Groups Printed- PC - SU - MU

	Cottage Grove Ave From North				**107th St From East**				**Cottage Grove Ave From South**				**107th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	12	91	4	107	5	2	0	7	1	48	20	69	16	0	9	25	208
04:15 PM	11	80	1	92	2	5	0	7	3	47	22	72	19	3	15	37	208
04:30 PM	12	78	2	92	1	1	1	3	2	39	7	48	16	3	16	35	178
04:45 PM	9	106	3	118	8	0	1	9	2	52	12	66	9	2	12	23	216
Total	44	355	10	409	16	8	2	26	8	186	61	255	60	8	52	120	810
05:00 PM	14	105	0	119	3	0	1	4	2	53	8	63	25	2	12	39	225
05:15 PM	21	107	1	129	0	2	1	3	0	48	15	63	11	3	6	20	215
05:30 PM	11	72	0	83	2	2	0	4	1	36	12	49	12	5	9	26	162
05:45 PM	13	75	2	90	2	0	0	2	1	44	10	55	26	0	15	41	188
Total	59	359	3	421	7	4	2	13	4	181	45	230	74	10	42	126	790
Grand Total	103	714	13	830	23	12	4	39	12	367	106	485	134	18	94	246	1600
Apprch %	12.4	86	1.6		59	30.8	10.3		2.5	75.7	21.9		54.5	7.3	38.2		
Total %	6.4	44.6	0.8	51.9	1.4	0.8	0.2	2.4	0.8	22.9	6.6	30.3	8.4	1.1	5.9	15.4	
PC	103	696	12	811	20	11	4	35	12	354	105	471	132	16	94	242	1559
% PC	100	97.5	92.3	97.7	87	91.7	100	89.7	100	96.5	99.1	97.1	98.5	88.9	100	98.4	97.4
SU	0	18	1	19	3	1	0	4	0	12	1	13	2	2	0	4	40
% SU	0	2.5	7.7	2.3	13	8.3	0	10.3	0	3.3	0.9	2.7	1.5	11.1	0	1.6	2.5
MU	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
% MU	0	0	0	0	0	0	0	0	0	0.3	0	0.2	0	0	0	0	0.1

	Cottage Grove Ave From North				**107th St From East**				**Cottage Grove Ave From South**				**107th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	8	40	1	49	**2**	0	0	2	1	99	5	105	6	1	29	36	192
08:15 AM	9	33	1	43	1	0	**1**	2	1	96	14	111	8	3	22	33	189
08:30 AM	**20**	44	**2**	66	0	0	1	1	2	**101**	10	113	3	**4**	15	22	202
08:45 AM	18	**72**	1	**91**	2	**4**	0	**6**	**3**	101	**16**	**120**	**9**	2	**33**	**44**	**261**
Total Volume	55	189	5	249	5	4	2	11	7	397	45	449	26	10	99	135	844
% App. Total	22.1	75.9	2		45.5	36.4	18.2		1.6	88.4	10		19.3	7.4	73.3		
PHF	.688	.656	.625	.684	.625	.250	.500	.458	.583	.983	.703	.935	.722	.625	.750	.767	.808

107th St and Cottage Grove Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/9/2012
Page No : 6

Groups Printed- SU

	Cottage Grove Ave From North				**107th St From East**				**Cottage Grove Ave From South**				**107th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	3	1	4	0	0	0	0	0	1	1	2	0	0	0	0	6
04:15 PM	0	2	0	2	0	1	0	1	0	4	0	4	0	0	0	0	7
04:30 PM	0	4	0	4	0	0	0	0	0	0	0	0	1	2	0	3	7
04:45 PM	0	1	0	1	3	0	0	3	0	3	0	3	0	0	0	0	7
Total	0	10	1	11	3	1	0	4	0	8	1	9	1	2	0	3	27
05:00 PM	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
05:15 PM	0	2	0	2	0	0	0	0	0	2	0	2	0	0	0	0	4
05:30 PM	0	1	0	1	0	0	0	0	0	0	0	0	1	0	0	1	2
05:45 PM	0	2	0	2	0	0	0	0	0	2	0	2	0	0	0	0	4
Total	0	8	0	8	0	0	0	0	0	4	0	4	1	0	0	1	13
Grand Total	0	18	1	19	3	1	0	4	0	12	1	13	2	2	0	4	40
Apprch %	0	94.7	5.3		75	25	0		0	92.3	7.7		50	50	0		
Total %	0	45	2.5	47.5	7.5	2.5	0	10	0	30	2.5	32.5	5	5	0	10	

107th St and Cottage Grove Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/9/2012
Page No : 7

Groups Printed- MU

	Cottage Grove Ave From North				**107th St From East**				**Cottage Grove Ave From South**				**107th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Apprch %	0	0	0		0	0	0		0	100	0		0	0	0		
Total %	0	0	0	0	0	0	0	0	0	100	0	100	0	0	0	0	

107th St and Cottage Grove Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 5/9/2012
Page No : 8

Groups Printed- Peds & Bikes

	Cottage Grove Ave Crossing North Leg			**107th St Crossing East Leg**			**Cottage Grove Ave Crossing South Leg**			**107th St Crossing West Leg**			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
04:00 PM	0	2	2	0	0	0	0	1	1	0	1	1	4
04:15 PM	0	1	1	0	0	0	0	0	0	0	0	0	1
04:30 PM	0	5	5	0	2	2	0	2	2	0	0	0	9
04:45 PM	0	0	0	0	0	0	0	2	2	0	0	0	2
Total	0	8	8	0	2	2	0	5	5	0	1	1	16
05:00 PM	0	3	3	0	0	0	0	1	1	0	2	2	6
05:15 PM	0	2	2	0	0	0	0	1	1	0	0	0	3
05:30 PM	0	0	0	0	0	0	0	1	1	0	0	0	1
05:45 PM	0	0	0	0	0	0	0	2	2	0	1	1	3
Total	0	5	5	0	0	0	0	5	5	0	3	3	13
Grand Total	0	13	13	0	2	2	0	10	10	0	4	4	29
Apprch %	0	100		0	100		0	100		0	100		
Total %	0	44.8	44.8	0	6.9	6.9	0	34.5	34.5	0	13.8	13.8	

Regina Webster & Associates, Inc.
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107th St and Halsted St
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/3/2012
Page No : 1

Groups Printed- PC - SU - MU

	Halsted St From North				107th St From East				Halsted St From South				107th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	5	77	11	93	7	23	18	48	13	256	16	285	10	20	22	52	478
07:15 AM	7	79	7	93	20	35	8	63	12	352	23	387	12	25	25	62	605
07:30 AM	9	99	16	124	16	63	13	92	14	403	23	440	16	55	31	102	758
07:45 AM	5	134	10	149	20	42	17	79	17	456	26	499	17	70	31	118	845
Total	26	389	44	459	63	163	56	282	56	1467	88	1611	55	170	109	334	2686
08:00 AM	9	123	22	154	17	45	14	76	14	366	37	417	22	47	30	99	746
08:15 AM	16	120	19	155	13	40	19	72	26	366	20	412	12	42	19	73	712
08:30 AM	19	119	18	156	15	29	10	54	21	335	23	379	14	39	23	76	665
08:45 AM	14	119	26	159	7	49	15	71	17	259	29	305	11	42	22	75	610
Total	58	481	85	624	52	163	58	273	78	1326	109	1513	59	170	94	323	2733
Grand Total	84	870	129	1083	115	326	114	555	134	2793	197	3124	114	340	203	657	5419
Apprch %	7.8	80.3	11.9		20.7	58.7	20.5		4.3	89.4	6.3		17.4	51.8	30.9		
Total %	1.6	16.1	2.4	20	2.1	6	2.1	10.2	2.5	51.5	3.6	57.6	2.1	6.3	3.7	12.1	
PC	77	803	121	1001	114	321	109	544	127	2678	193	2998	108	330	198	636	5179
% PC	91.7	92.3	93.8	92.4	99.1	98.5	95.6	98	94.8	95.9	98	96	94.7	97.1	97.5	96.8	95.6
SU	7	65	8	80	1	5	4	10	7	100	4	111	6	10	5	21	222
% SU	8.3	7.5	6.2	7.4	0.9	1.5	3.5	1.8	5.2	3.6	2	3.6	5.3	2.9	2.5	3.2	4.1
MU	0	2	0	2	0	0	1	1	0	15	0	15	0	0	0	0	18
% MU	0	0.2	0	0.2	0	0	0.9	0.2	0	0.5	0	0.5	0	0	0	0	0.3

	Halsted St From North				107th St From East				Halsted St From South				107th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	9	99	16	124	16	**63**	13	**92**	14	403	23	440	16	55	**31**	102	758
07:45 AM	5	**134**	10	149	**20**	42	17	79	17	**456**	26	**499**	17	**70**	31	**118**	**845**
08:00 AM	9	123	**22**	154	17	45	14	76	14	366	**37**	417	**22**	47	30	99	746
08:15 AM	**16**	120	19	**155**	13	40	**19**	72	**26**	366	20	412	12	42	19	73	712
Total Volume	39	476	67	582	66	190	63	319	71	1591	106	1768	67	214	111	392	3061
% App. Total	6.7	81.8	11.5		20.7	59.6	19.7		4	90	6		17.1	54.6	28.3		
PHF	.609	.888	.761	.939	.825	.754	.829	.867	.683	.872	.716	.886	.761	.764	.895	.831	.906

107th St and Halsted St
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/3/2012
Page No : 2

Groups Printed- SU

	Halsted St From North				107th St From East				Halsted St From South				107th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	1	9	3	13	0	0	2	2	2	14	0	16	1	3	1	5	36
07:15 AM	2	11	1	14	0	0	0	0	0	16	1	17	1	0	1	2	33
07:30 AM	1	10	0	11	0	0	0	0	0	10	1	11	1	1	1	3	25
07:45 AM	0	8	0	8	1	1	0	2	1	12	0	13	2	3	2	7	30
Total	4	38	4	46	1	1	2	4	3	52	2	57	5	7	5	17	124
08:00 AM	0	7	2	9	0	1	0	1	0	15	1	16	0	0	0	0	26
08:15 AM	0	6	2	8	0	0	1	1	2	11	1	14	0	2	0	2	25
08:30 AM	1	7	0	8	0	1	0	1	1	12	0	13	0	1	0	1	23
08:45 AM	2	7	0	9	0	2	1	3	1	10	0	11	1	0	0	1	24
Total	3	27	4	34	0	4	2	6	4	48	2	54	1	3	0	4	98
Grand Total	7	65	8	80	1	5	4	10	7	100	4	111	6	10	5	21	222
Apprch %	8.8	81.2	10		10	50	40		6.3	90.1	3.6		28.6	47.6	23.8		
Total %	3.2	29.3	3.6	36	0.5	2.3	1.8	4.5	3.2	45	1.8	50	2.7	4.5	2.3	9.5	

107th St and Halsted St
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/3/2012
Page No : 3

Groups Printed- MU

	Halsted St From North				107th St From East				Halsted St From South				107th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
07:15 AM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
07:30 AM	0	0	0	0	0	0	1	1	0	3	0	3	0	0	0	0	4
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	1	0	0	1	1	0	7	0	7	0	0	0	0	9
08:00 AM	0	0	0	0	0	0	0	0	0	4	0	4	0	0	0	0	4
08:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
08:30 AM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
08:45 AM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
Total	0	1	0	1	0	0	0	0	0	8	0	8	0	0	0	0	9
Grand Total	0	2	0	2	0	0	1	1	0	15	0	15	0	0	0	0	18
Apprch %	0	100	0		0	0	100		0	100	0		0	0	0		
Total %	0	11.1	0	11.1	0	0	5.6	5.6	0	83.3	0	83.3	0	0	0	0	

107th St and Halsted St
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM PEDS
Site Code : 00000000
Start Date : 5/3/2012
Page No : 4

Groups Printed- Peds & Bikes

	Halsted St Crossing North Leg			107th St Crossing East Leg			Halsted St Crossing South Leg			107th St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
07:00 AM	0	0	0	1	2	3	0	0	0	0	0	0	3
07:15 AM	0	2	2	1	10	11	2	3	5	0	4	4	22
07:30 AM	0	3	3	0	1	1	0	3	3	0	1	1	8
07:45 AM	0	0	0	1	5	6	0	2	2	0	2	2	10
Total	0	5	5	3	18	21	2	8	10	0	7	7	43
08:00 AM	0	0	0	0	4	4	0	0	0	0	3	3	7
08:15 AM	0	1	1	0	6	6	0	4	4	0	0	0	11
08:30 AM	0	1	1	0	1	1	0	1	1	0	6	6	9
08:45 AM	0	5	5	0	3	3	0	3	3	0	2	2	13
Total	0	7	7	0	14	14	0	8	8	0	11	11	40
Grand Total	0	12	12	3	32	35	2	16	18	0	18	18	83
Apprch %	0	100		8.6	91.4		11.1	88.9		0	100		
Total %	0	14.5	14.5	3.6	38.6	42.2	2.4	19.3	21.7	0	21.7	21.7	

107th St and Halsted St
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/3/2012
Page No : 5

Groups Printed- PC - SU - MU

	Halsted St From North				107th St From East				Halsted St From South				107th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	31	201	27	259	14	38	18	70	15	192	21	228	21	35	18	74	631
04:15 PM	32	187	33	252	11	37	25	73	15	162	27	204	21	38	20	79	608
04:30 PM	22	194	24	240	14	34	33	81	19	170	22	211	16	47	20	83	615
04:45 PM	28	217	22	267	13	38	18	69	15	201	17	233	20	34	20	74	643
Total	113	799	106	1018	52	147	94	293	64	725	87	876	78	154	78	310	2497
05:00 PM	23	167	30	220	14	45	22	81	21	181	32	234	18	49	25	92	627
05:15 PM	20	223	20	263	7	41	22	70	16	213	30	259	20	41	19	80	672
05:30 PM	20	217	36	273	16	36	22	74	22	189	30	241	36	36	32	104	692
05:45 PM	27	179	32	238	17	38	27	82	18	186	22	226	20	50	25	95	641
Total	90	786	118	994	54	160	93	307	77	769	114	960	94	176	101	371	2632
Grand Total	203	1585	224	2012	106	307	187	600	141	1494	201	1836	172	330	179	681	5129
Apprch %	10.1	78.8	11.1		17.7	51.2	31.2		7.7	81.4	10.9		25.3	48.5	26.3		
Total %	4	30.9	4.4	39.2	2.1	6	3.6	11.7	2.7	29.1	3.9	35.8	3.4	6.4	3.5	13.3	
PC	198	1527	223	1948	105	305	185	595	141	1433	197	1771	169	325	175	669	4983
% PC	97.5	96.3	99.6	96.8	99.1	99.3	98.9	99.2	100	95.9	98	96.5	98.3	98.5	97.8	98.2	97.2
SU	4	56	1	61	1	2	2	5	0	59	4	63	3	5	3	11	140
% SU	2	3.5	0.4	3	0.9	0.7	1.1	0.8	0	3.9	2	3.4	1.7	1.5	1.7	1.6	2.7
MU	1	2	0	3	0	0	0	0	0	2	0	2	0	0	1	1	6
% MU	0.5	0.1	0	0.1	0	0	0	0	0	0.1	0	0.1	0	0	0.6	0.1	0.1

	Halsted St From North				107th St From East				Halsted St From South				107th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	9	99	16	124	16	**63**	13	**92**	14	403	23	440	16	55	**31**	102	758
07:45 AM	5	**134**	10	149	**20**	42	17	79	17	**456**	26	**499**	17	**70**	31	**118**	**845**
08:00 AM	9	123	**22**	154	17	45	14	76	14	366	**37**	417	**22**	47	30	99	746
08:15 AM	**16**	120	19	**155**	13	40	**19**	72	**26**	366	20	412	12	42	19	73	712
Total Volume	39	476	67	582	66	190	63	319	71	1591	106	1768	67	214	111	392	3061
% App. Total	6.7	81.8	11.5		20.7	59.6	19.7		4	90	6		17.1	54.6	28.3		
PHF	.609	.888	.761	.939	.825	.754	.829	.867	.683	.872	.716	.886	.761	.764	.895	.831	.906

107th St and Halsted St
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/3/2012
Page No : 6

Groups Printed- SU

	Halsted St From North				107th St From East				Halsted St From South				107th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	1	10	0	11	0	0	0	0	0	8	1	9	1	0	1	2	22
04:15 PM	2	8	0	10	0	0	0	0	0	12	0	12	0	1	0	1	23
04:30 PM	0	5	0	5	0	0	0	0	0	4	0	4	0	3	0	3	12
04:45 PM	1	10	0	11	0	0	0	0	0	6	0	6	1	0	1	2	19
Total	4	33	0	37	0	0	0	0	0	30	1	31	2	4	2	8	76
05:00 PM	0	5	0	5	0	0	2	2	0	8	0	8	1	0	0	1	16
05:15 PM	0	7	0	7	0	0	0	0	0	9	0	9	0	1	1	2	18
05:30 PM	0	5	1	6	1	2	0	3	0	8	2	10	0	0	0	0	19
05:45 PM	0	6	0	6	0	0	0	0	0	4	1	5	0	0	0	0	11
Total	0	23	1	24	1	2	2	5	0	29	3	32	1	1	1	3	64
Grand Total	4	56	1	61	1	2	2	5	0	59	4	63	3	5	3	11	140
Apprch %	6.6	91.8	1.6		20	40	40		0	93.7	6.3		27.3	45.5	27.3		
Total %	2.9	40	0.7	43.6	0.7	1.4	1.4	3.6	0	42.1	2.9	45	2.1	3.6	2.1	7.9	

107th St and Halsted St
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/3/2012
Page No : 7

Groups Printed- MU

	Halsted St From North				107th St From East				Halsted St From South				107th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	1	1	0	2	0	0	0	0	0	1	0	1	0	0	0	0	3
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:45 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Total	0	1	0	1	0	0	0	0	0	1	0	1	0	0	1	1	3
Grand Total	1	2	0	3	0	0	0	0	0	2	0	2	0	0	1	1	6
Apprch %	33.3	66.7	0		0	0	0		0	100	0		0	0	100		
Total %	16.7	33.3	0	50	0	0	0	0	0	33.3	0	33.3	0	0	16.7	16.7	

107th St and Halsted St
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM PEDS
Site Code : 00000000
Start Date : 5/3/2012
Page No : 8

Groups Printed- Peds & Bikes

	Halsted St Crossing North Leg			107th St Crossing East Leg			Halsted St Crossing South Leg			107th St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
04:00 PM	0	3	3	1	2	3	0	3	3	1	4	5	14
04:15 PM	1	1	2	3	2	5	0	1	1	0	2	2	10
04:30 PM	0	3	3	0	2	2	0	10	10	0	4	4	19
04:45 PM	0	4	4	0	2	2	1	2	3	0	1	1	10
Total	1	11	12	4	8	12	1	16	17	1	11	12	53
05:00 PM	0	1	1	1	2	3	0	1	1	1	5	6	11
05:15 PM	2	2	4	0	1	1	0	1	1	1	2	3	9
05:30 PM	0	0	0	0	3	3	0	6	6	0	4	4	13
05:45 PM	0	7	7	0	1	1	0	5	5	0	7	7	20
Total	2	10	12	1	7	8	0	13	13	2	18	20	53
Grand Total	3	21	24	5	15	20	1	29	30	3	29	32	106
Apprch %	12.5	87.5		25	75		3.3	96.7		9.4	90.6		
Total %	2.8	19.8	22.6	4.7	14.2	18.9	0.9	27.4	28.3	2.8	27.4	30.2	

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107th St and Martin Luther King Dr
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/6/2012
Page No : 1

Groups Printed- PC - SU - MU

	Martin Luther King Dr From North				**107th St From East**				**Martin Luther King Dr From South**				**107th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	3	20	2	25	4	20	2	26	3	44	4	51	4	14	4	22	124
07:15 AM	8	23	4	35	5	18	0	23	2	65	6	73	2	19	5	26	157
07:30 AM	11	40	3	54	7	20	0	27	1	78	8	87	16	25	18	59	227
07:45 AM	4	40	1	45	6	13	0	19	3	72	4	79	14	31	14	59	202
Total	26	123	10	159	22	71	2	95	9	259	22	290	36	89	41	166	710
08:00 AM	4	27	1	32	7	14	1	22	4	61	4	69	6	20	19	45	168
08:15 AM	4	35	0	39	6	18	1	25	1	51	3	55	4	23	19	46	165
08:30 AM	2	30	6	38	8	29	6	43	5	87	10	102	9	31	10	50	233
08:45 AM	5	37	2	44	5	31	3	39	9	51	4	64	9	58	8	75	222
Total	15	129	9	153	26	92	11	129	19	250	21	290	28	132	56	216	788
Grand Total	41	252	19	312	48	163	13	224	28	509	43	580	64	221	97	382	1498
Apprch %	13.1	80.8	6.1		21.4	72.8	5.8		4.8	87.8	7.4		16.8	57.9	25.4		
Total %	2.7	16.8	1.3	20.8	3.2	10.9	0.9	15	1.9	34	2.9	38.7	4.3	14.8	6.5	25.5	
PC	41	240	19	300	44	155	12	211	26	494	41	561	62	215	95	372	1444
% PC	100	95.2	100	96.2	91.7	95.1	92.3	94.2	92.9	97.1	95.3	96.7	96.9	97.3	97.9	97.4	96.4
SU	0	12	0	12	4	8	1	13	2	15	2	19	0	6	2	8	52
% SU	0	4.8	0	3.8	8.3	4.9	7.7	5.8	7.1	2.9	4.7	3.3	0	2.7	2.1	2.1	3.5
MU	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2
% MU	0	0	0	0	0	0	0	0	0	0	0	0	3.1	0	0	0.5	0.1

	Martin Luther King Dr From North				**107th St From East**				**Martin Luther King Dr From South**				**107th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	4	27	1	32	7	14	1	22	4	61	4	69	6	20	**19**	45	168
08:15 AM	4	35	0	39	6	18	1	25	1	51	3	55	4	23	19	46	165
08:30 AM	2	30	**6**	38	**8**	29	**6**	**43**	5	**87**	**10**	**102**	**9**	31	10	50	**233**
08:45 AM	**5**	**37**	2	**44**	5	**31**	3	39	**9**	51	4	64	9	**58**	8	**75**	222
Total Volume	15	129	9	153	26	92	11	129	19	250	21	290	28	132	56	216	788
% App. Total	9.8	84.3	5.9		20.2	71.3	8.5		6.6	86.2	7.2		13	61.1	25.9		
PHF	.750	.872	.375	.869	.813	.742	.458	.750	.528	.718	.525	.711	.778	.569	.737	.720	.845

107th St and Martin Luther King Dr
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/6/2012
Page No : 2

Groups Printed- SU

	Martin Luther King Dr From North				107th St From East				Martin Luther King Dr From South				107th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	1	1	0	2	1	2	0	3	0	1	0	1	6
07:15 AM	0	1	0	1	0	1	0	1	0	2	0	2	0	0	0	0	4
07:30 AM	0	1	0	1	0	1	0	1	0	5	0	5	0	1	1	2	9
07:45 AM	0	3	0	3	0	1	0	1	0	0	0	0	0	0	0	0	4
Total	0	5	0	5	1	4	0	5	1	9	0	10	0	2	1	3	23
08:00 AM	0	1	0	1	0	0	0	0	0	3	0	3	0	1	1	2	6
08:15 AM	0	1	0	1	0	2	0	2	0	0	0	0	0	1	0	1	4
08:30 AM	0	2	0	2	2	1	1	4	1	3	2	6	0	1	0	1	13
08:45 AM	0	3	0	3	1	1	0	2	0	0	0	0	0	1	0	1	6
Total	0	7	0	7	3	4	1	8	1	6	2	9	0	4	1	5	29
Grand Total	0	12	0	12	4	8	1	13	2	15	2	19	0	6	2	8	52
Apprch %	0	100	0		30.8	61.5	7.7		10.5	78.9	10.5		0	75	25		
Total %	0	23.1	0	23.1	7.7	15.4	1.9	25	3.8	28.8	3.8	36.5	0	11.5	3.8	15.4	

107th St and Martin Luther King Dr
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/6/2012
Page No : 3

Groups Printed- MU

	Martin Luther King Dr From North				**107th St From East**				**Martin Luther King Dr From South**				**107th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
Total	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2
Apprch %	0	0	0		0	0	0		0	0	0		100	0	0		
Total %	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	100	

107th St and Martin Luther King Dr
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 6/6/2012
Page No : 4

Groups Printed- Peds & Bikes

	Martin Luther King Dr Crossing North Leg			**107th St Crossing East Leg**			**Martin Luther King Dr Crossing South Leg**			**107th St Crossing West Leg**			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
07:00 AM	0	1	1	0	0	0	0	2	2	0	0	0	3
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	2	2	0	1	1	0	0	0	3
07:45 AM	0	0	0	0	2	2	0	2	2	0	1	1	5
Total	0	1	1	0	4	4	0	5	5	0	1	1	11
08:00 AM	0	0	0	0	1	1	0	5	5	0	0	0	6
08:15 AM	0	0	0	0	3	3	0	0	0	0	0	0	3
08:30 AM	0	1	1	0	1	1	0	0	0	0	0	0	2
08:45 AM	0	18	18	0	2	2	0	8	8	0	0	0	28
Total	0	19	19	0	7	7	0	13	13	0	0	0	39
Grand Total	0	20	20	0	11	11	0	18	18	0	1	1	50
Apprch %	0	100		0	100		0	100		0	100		
Total %	0	40	40	0	22	22	0	36	36	0	2	2	

107th St and Martin Luther King Dr
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/6/2012

Groups Printed- PC - SU - MU

	Martin Luther King Dr From North				**107th St From East**				**Martin Luther King Dr From South**				**107th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	10	73	1	84	5	22	4	31	2	27	0	29	2	30	9	41	185
04:15 PM	8	85	3	96	7	20	3	30	4	42	1	47	9	20	11	40	213
04:30 PM	18	83	7	108	5	14	2	21	5	47	5	57	5	19	12	36	222
04:45 PM	15	73	8	96	9	19	2	30	5	45	8	58	3	27	10	40	224
Total	51	314	19	384	26	75	11	112	16	161	14	191	19	96	42	157	844
05:00 PM	19	69	11	99	4	27	5	36	2	64	5	71	11	25	8	44	250
05:15 PM	14	129	6	149	7	32	3	42	2	44	8	54	6	37	8	51	296
05:30 PM	13	82	4	99	7	39	2	48	4	57	8	69	7	30	15	52	268
05:45 PM	9	67	7	83	2	26	6	34	2	47	7	56	2	19	16	37	210
Total	55	347	28	430	20	124	16	160	10	212	28	250	26	111	47	184	1024
Grand Total	106	661	47	814	46	199	27	272	26	373	42	441	45	207	89	341	1868
Apprch %	13	81.2	5.8		16.9	73.2	9.9		5.9	84.6	9.5		13.2	60.7	26.1		
Total %	5.7	35.4	2.5	43.6	2.5	10.7	1.4	14.6	1.4	20	2.2	23.6	2.4	11.1	4.8	18.3	
PC	106	650	47	803	45	196	27	268	26	363	42	431	45	207	87	339	1841
% PC	100	98.3	100	98.6	97.8	98.5	100	98.5	100	97.3	100	97.7	100	100	97.8	99.4	98.6
SU	0	10	0	10	1	3	0	4	0	9	0	9	0	0	1	1	24
% SU	0	1.5	0	1.2	2.2	1.5	0	1.5	0	2.4	0	2	0	0	1.1	0.3	1.3
MU	0	1	0	1	0	0	0	0	0	1	0	1	0	0	1	1	3
% MU	0	0.2	0	0.1	0	0	0	0	0	0.3	0	0.2	0	0	1.1	0.3	0.2

	Martin Luther King Dr From North				**107th St From East**				**Martin Luther King Dr From South**				**107th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	15	73	8	96	**9**	19	2	30	**5**	45	**8**	58	3	27	10	40	224
05:00 PM	**19**	69	**11**	99	4	27	**5**	36	2	**64**	5	**71**	**11**	25	8	44	250
05:15 PM	14	**129**	6	**149**	7	32	3	42	2	44	8	54	6	**37**	8	51	**296**
05:30 PM	13	82	4	99	7	**39**	2	**48**	4	57	8	69	7	30	**15**	**52**	268
Total Volume	61	353	29	443	27	117	12	156	13	210	29	252	27	119	41	187	1038
% App. Total	13.8	79.7	6.5		17.3	75	7.7		5.2	83.3	11.5		14.4	63.6	21.9		
PHF	.803	.684	.659	.743	.750	.750	.600	.813	.650	.820	.906	.887	.614	.804	.683	.899	.877

107th St and Martin Luther King Dr
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/6/2012
Page No : 6

Groups Printed- SU

	Martin Luther King Dr From North				**107th St From East**				**Martin Luther King Dr From South**				**107th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	3	0	3	0	1	0	1	0	1	0	1	0	0	1	1	6
04:15 PM	0	1	0	1	1	1	0	2	0	1	0	1	0	0	0	0	4
04:30 PM	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
04:45 PM	0	2	0	2	0	0	0	0	0	1	0	1	0	0	0	0	3
Total	0	7	0	7	1	2	0	3	0	5	0	5	0	0	1	1	16
05:00 PM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
05:15 PM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
05:30 PM	0	1	0	1	0	1	0	1	0	0	0	0	0	0	0	0	2
05:45 PM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
Total	0	3	0	3	0	1	0	1	0	4	0	4	0	0	0	0	8
Grand Total	0	10	0	10	1	3	0	4	0	9	0	9	0	0	1	1	24
Apprch %	0	100	0		25	75	0		0	100	0		0	0	100		
Total %	0	41.7	0	41.7	4.2	12.5	0	16.7	0	37.5	0	37.5	0	0	4.2	4.2	

107th St and Martin Luther King Dr
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/6/2012
Page No : 7

Groups Printed- MU

	Martin Luther King Dr From North				**107th St From East**				**Martin Luther King Dr From South**				**107th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	1	2
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	1	2
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Grand Total	0	1	0	1	0	0	0	0	0	1	0	1	0	0	1	1	3
Apprch %	0	100	0		0	0	0		0	100	0		0	0	100		
Total %	0	33.3	0	33.3	0	0	0	0	0	33.3	0	33.3	0	0	33.3	33.3	

107th St and Martin Luther King Dr
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 6/6/2012
Page No : 8

Groups Printed- Peds & Bikes

	Martin Luther King Dr Crossing North Leg			**107th St Crossing East Leg**			**Martin Luther King Dr Crossing South Leg**			**107th St Crossing West Leg**			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
04:00 PM	0	1	1	0	0	0	0	0	0	0	1	1	2
04:15 PM	0	1	1	0	0	0	0	2	2	0	2	2	5
04:30 PM	0	0	0	0	4	4	0	0	0	0	1	1	5
04:45 PM	0	1	1	0	0	0	0	1	1	0	0	0	2
Total	0	3	3	0	4	4	0	3	3	0	4	4	14
05:00 PM	0	1	1	0	1	1	0	1	1	0	1	1	4
05:15 PM	0	0	0	0	2	2	0	3	3	0	0	0	5
05:30 PM	0	0	0	0	1	1	0	5	5	0	0	0	6
05:45 PM	0	0	0	0	1	1	0	1	1	0	1	1	3
Total	0	1	1	0	5	5	0	10	10	0	2	2	18
Grand Total	0	4	4	0	9	9	0	13	13	0	6	6	32
Apprch %	0	100		0	100		0	100		0	100		
Total %	0	12.5	12.5	0	28.1	28.1	0	40.6	40.6	0	18.8	18.8	

Regina Webster & Associates, Inc.
8619 West Bryn Mawr Avenue, Suite 602, Chicago, Illinois 60631
773-283-2600 Fax: 773-283-2602
www.RWAengineers.com

107th St and Michigan Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/9/2012
Page No : 1

Groups Printed- PC - SU - MU

	Michigan Ave From North				**107th St From East**				**Michigan Ave From South**				**107th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	1	24	0	25	10	19	3	32	2	87	6	95	5	16	7	28	180
07:15 AM	6	31	0	37	5	31	6	42	2	91	10	103	4	31	18	53	235
07:30 AM	3	30	5	38	4	29	1	34	4	88	5	97	6	36	12	54	223
07:45 AM	3	57	0	60	14	28	5	47	7	108	7	122	10	45	17	72	301
Total	13	142	5	160	33	107	15	155	15	374	28	417	25	128	54	207	939
08:00 AM	4	43	3	50	6	27	4	37	5	114	8	127	6	52	10	68	282
08:15 AM	5	33	3	41	5	38	6	49	8	104	7	119	9	45	7	61	270
08:30 AM	6	27	2	35	6	32	3	41	3	79	5	87	7	38	12	57	220
08:45 AM	4	25	2	31	11	32	8	51	11	91	8	110	11	58	15	84	276
Total	19	128	10	157	28	129	21	178	27	388	28	443	33	193	44	270	1048
Grand Total	32	270	15	317	61	236	36	333	42	762	56	860	58	321	98	477	1987
Apprch %	10.1	85.2	4.7		18.3	70.9	10.8		4.9	88.6	6.5		12.2	67.3	20.5		
Total %	1.6	13.6	0.8	16	3.1	11.9	1.8	16.8	2.1	38.3	2.8	43.3	2.9	16.2	4.9	24	
PC	32	239	15	286	61	226	35	322	41	703	53	797	55	310	91	456	1861
% PC	100	88.5	100	90.2	100	95.8	97.2	96.7	97.6	92.3	94.6	92.7	94.8	96.6	92.9	95.6	93.7
SU	0	27	0	27	0	10	1	11	1	50	3	54	3	11	6	20	112
% SU	0	10	0	8.5	0	4.2	2.8	3.3	2.4	6.6	5.4	6.3	5.2	3.4	6.1	4.2	5.6
MU	0	4	0	4	0	0	0	0	0	9	0	9	0	0	1	1	14
% MU	0	1.5	0	1.3	0	0	0	0	0	1.2	0	1	0	0	1	0.2	0.7

	Michigan Ave From North				**107th St From East**				**Michigan Ave From South**				**107th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	3	30	**5**	38	4	29	1	34	4	88	5	97	6	36	12	54	223
07:45 AM	3	**57**	0	**60**	**14**	28	5	47	7	108	7	122	**10**	45	**17**	**72**	**301**
08:00 AM	4	43	3	50	6	27	4	37	5	**114**	**8**	**127**	6	**52**	10	68	282
08:15 AM	**5**	33	3	41	5	**38**	**6**	**49**	**8**	104	7	119	9	45	7	61	270
Total Volume	15	163	11	189	29	122	16	167	24	414	27	465	31	178	46	255	1076
% App. Total	7.9	86.2	5.8		17.4	73.1	9.6		5.2	89	5.8		12.2	69.8	18		
PHF	.750	.715	.550	.788	.518	.803	.667	.852	.750	.908	.844	.915	.775	.856	.676	.885	.894

107th St and Michigan Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/9/2012
Page No : 2

Groups Printed- SU

	Michigan Ave From North				**107th St From East**				**Michigan Ave From South**				**107th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	4	0	4	0	1	0	1	0	8	1	9	0	2	1	3	17
07:15 AM	0	1	0	1	0	1	1	2	0	6	1	7	0	1	1	2	12
07:30 AM	0	3	0	3	0	2	0	2	1	5	0	6	1	1	1	3	14
07:45 AM	0	6	0	6	0	0	0	0	0	9	0	9	0	3	0	3	18
Total	0	14	0	14	0	4	1	5	1	28	2	31	1	7	3	11	61
08:00 AM	0	6	0	6	0	2	0	2	0	4	0	4	0	1	0	1	13
08:15 AM	0	3	0	3	0	1	0	1	0	10	0	10	2	2	0	4	18
08:30 AM	0	1	0	1	0	2	0	2	0	5	0	5	0	1	2	3	11
08:45 AM	0	3	0	3	0	1	0	1	0	3	1	4	0	0	1	1	9
Total	0	13	0	13	0	6	0	6	0	22	1	23	2	4	3	9	51
Grand Total	0	27	0	27	0	10	1	11	1	50	3	54	3	11	6	20	112
Apprch %	0	100	0		0	90.9	9.1		1.9	92.6	5.6		15	55	30		
Total %	0	24.1	0	24.1	0	8.9	0.9	9.8	0.9	44.6	2.7	48.2	2.7	9.8	5.4	17.9	

107th St and Michigan Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/9/2012
Page No : 3

Groups Printed- MU

	Michigan Ave From North				**107th St From East**				**Michigan Ave From South**				**107th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
07:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1	1	2
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	4	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4
Total	0	4	0	4	0	0	0	0	0	2	0	2	0	0	1	1	7
08:00 AM	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	0	3
08:15 AM	0	0	0	0	0	0	0	0	0	4	0	4	0	0	0	0	4
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	7	0	7	0	0	0	0	7
Grand Total	0	4	0	4	0	0	0	0	0	9	0	9	0	0	1	1	14
Apprch %	0	100	0		0	0	0		0	100	0		0	0	100		
Total %	0	28.6	0	28.6	0	0	0	0	0	64.3	0	64.3	0	0	7.1	7.1	

107th St and Michigan Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 5/9/2012
Page No : 4

Groups Printed- Peds & Bikes

	Michigan Ave Crossing North Leg			**107th St Crossing East Leg**			**Michigan Ave Crossing South Leg**			**107th St Crossing West Leg**			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
07:00 AM	0	3	3	0	1	1	0	11	11	0	7	7	22
07:15 AM	0	3	3	0	2	2	0	9	9	0	1	1	15
07:30 AM	0	2	2	1	1	2	0	9	9	0	5	5	18
07:45 AM	0	3	3	1	2	3	0	3	3	0	3	3	12
Total	0	11	11	2	6	8	0	32	32	0	16	16	67
08:00 AM	0	0	0	0	2	2	0	8	8	0	6	6	16
08:15 AM	0	5	5	0	5	5	0	9	9	0	3	3	22
08:30 AM	0	16	16	0	6	6	0	0	0	0	12	12	34
08:45 AM	0	4	4	0	3	3	0	3	3	0	3	3	13
Total	0	25	25	0	16	16	0	20	20	0	24	24	85
Grand Total	0	36	36	2	22	24	0	52	52	0	40	40	152
Apprch %	0	100		8.3	91.7		0	100		0	100		
Total %	0	23.7	23.7	1.3	14.5	15.8	0	34.2	34.2	0	26.3	26.3	

107th St and Michigan Ave
Chicago, IL
4:00PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/9/2012
Page No : 5

Groups Printed- PC - SU - MU

	Michigan Ave From North				**107th St From East**				**Michigan Ave From South**				**107th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	10	66	4	80	5	39	4	48	3	72	3	78	17	45	19	81	287
04:15 PM	11	60	8	79	10	26	9	45	6	64	8	78	11	41	13	65	267
04:30 PM	3	76	3	82	5	37	4	46	8	66	14	88	13	51	15	79	295
04:45 PM	6	74	4	84	8	21	5	34	12	67	12	91	11	43	13	67	276
Total	30	276	19	325	28	123	22	173	29	269	37	335	52	180	60	292	1125
05:00 PM	9	73	9	91	13	29	8	50	4	65	8	77	14	33	14	61	279
05:15 PM	8	87	6	101	6	35	5	46	2	61	6	69	10	29	14	53	269
05:30 PM	10	77	8	95	4	39	5	48	3	57	4	64	7	39	15	61	268
05:45 PM	6	79	7	92	7	29	3	39	7	55	5	67	7	52	18	77	275
Total	33	316	30	379	30	132	21	183	16	238	23	277	38	153	61	252	1091
Grand Total	63	592	49	704	58	255	43	356	45	507	60	612	90	333	121	544	2216
Apprch %	8.9	84.1	7		16.3	71.6	12.1		7.4	82.8	9.8		16.5	61.2	22.2		
Total %	2.8	26.7	2.2	31.8	2.6	11.5	1.9	16.1	2	22.9	2.7	27.6	4.1	15	5.5	24.5	
PC	63	565	49	677	56	252	43	351	44	480	58	582	90	331	119	540	2150
% PC	100	95.4	100	96.2	96.6	98.8	100	98.6	97.8	94.7	96.7	95.1	100	99.4	98.3	99.3	97
SU	0	27	0	27	2	3	0	5	1	27	2	30	0	2	2	4	66
% SU	0	4.6	0	3.8	3.4	1.2	0	1.4	2.2	5.3	3.3	4.9	0	0.6	1.7	0.7	3
MU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% MU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	Michigan Ave From North				**107th St From East**				**Michigan Ave From South**				**107th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	3	30	**5**	38	4	29	1	34	4	88	5	97	6	36	12	54	223
07:45 AM	3	**57**	0	**60**	**14**	28	5	47	7	108	7	122	**10**	45	**17**	**72**	**301**
08:00 AM	4	43	3	50	6	27	4	37	5	**114**	**8**	**127**	6	**52**	10	68	282
08:15 AM	**5**	33	3	41	5	**38**	**6**	**49**	**8**	104	7	119	9	45	7	61	270
Total Volume	15	163	11	189	29	122	16	167	24	414	27	465	31	178	46	255	1076
% App. Total	7.9	86.2	5.8		17.4	73.1	9.6		5.2	89	5.8		12.2	69.8	18		
PHF	.750	.715	.550	.788	.518	.803	.667	.852	.750	.908	.844	.915	.775	.856	.676	.885	.894

107th St and Michigan Ave
Chicago, IL
4:00PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/9/2012
Page No : 6

Groups Printed- SU

	Michigan Ave From North				**107th St From East**				**Michigan Ave From South**				**107th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	6	0	6	0	2	0	2	0	3	0	3	0	0	1	1	12
04:15 PM	0	2	0	2	1	0	0	1	0	4	0	4	0	0	0	0	7
04:30 PM	0	2	0	2	0	0	0	0	0	6	0	6	0	1	0	1	9
04:45 PM	0	5	0	5	0	0	0	0	1	2	1	4	0	0	0	0	9
Total	0	15	0	15	1	2	0	3	1	15	1	17	0	1	1	2	37
05:00 PM	0	3	0	3	0	0	0	0	0	1	1	2	0	0	0	0	5
05:15 PM	0	1	0	1	1	1	0	2	0	5	0	5	0	0	1	1	9
05:30 PM	0	4	0	4	0	0	0	0	0	3	0	3	0	1	0	1	8
05:45 PM	0	4	0	4	0	0	0	0	0	3	0	3	0	0	0	0	7
Total	0	12	0	12	1	1	0	2	0	12	1	13	0	1	1	2	29
Grand Total	0	27	0	27	2	3	0	5	1	27	2	30	0	2	2	4	66
Apprch %	0	100	0		40	60	0		3.3	90	6.7		0	50	50		
Total %	0	40.9	0	40.9	3	4.5	0	7.6	1.5	40.9	3	45.5	0	3	3	6.1	

107th St and Michigan Ave
Chicago, IL
4:00PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/9/2012
Page No : 7

Groups Printed- MU

	Michigan Ave From North				**107th St From East**				**Michigan Ave From South**				**107th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0		0	0	0		0	0	0		0	0	0		
Total %																	

107th St and Michigan Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 5/9/2012
Page No : 8

Groups Printed- Peds & Bikes

	Michigan Ave Crossing North Leg			**107th St Crossing East Leg**			**Michigan Ave Crossing South Leg**			**107th St Crossing West Leg**			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
04:00 PM	0	9	9	0	2	2	0	7	7	0	7	7	25
04:15 PM	0	8	8	1	5	6	0	4	4	0	10	10	28
04:30 PM	0	0	0	0	7	7	0	5	5	0	10	10	22
04:45 PM	0	1	1	1	2	3	0	6	6	0	4	4	14
Total	0	18	18	2	16	18	0	22	22	0	31	31	89
05:00 PM	0	5	5	0	2	2	0	5	5	0	4	4	16
05:15 PM	0	1	1	0	2	2	0	1	1	0	3	3	7
05:30 PM	0	3	3	0	2	2	0	8	8	0	15	15	28
05:45 PM	0	2	2	0	1	1	0	3	3	0	4	4	10
Total	0	11	11	0	7	7	0	17	17	0	26	26	61
Grand Total	0	29	29	2	23	25	0	39	39	0	57	57	150
Apprch %	0	100		8	92		0	100		0	100		
Total %	0	19.3	19.3	1.3	15.3	16.7	0	26	26	0	38	38	

Regina Webster & Associates, Inc.
8619 West Bryn Mawr Avenue, Suite 602, Chicago, Illinois 60631
773-283-2600 Fax: 773-283-2602
www.RWAengineers.com

107th St and State St
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/12/2012
Page No : 1

Groups Printed- PC - SU - MU

	State St From North				107th St From East				State St From South				107th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	2	9	0	11	1	19	2	22	4	68	7	79	3	25	7	35	147
07:15 AM	2	15	6	23	3	34	3	40	9	60	5	74	3	26	8	37	174
07:30 AM	5	18	1	24	3	39	2	44	4	63	7	74	3	44	6	53	195
07:45 AM	3	25	1	29	7	41	2	50	5	73	4	82	8	57	4	69	230
Total	12	67	8	87	14	133	9	156	22	264	23	309	17	152	25	194	746
08:00 AM	6	16	5	27	3	37	0	40	6	66	13	85	9	36	5	50	202
08:15 AM	3	27	8	38	3	45	5	53	11	94	9	114	5	44	9	58	263
08:30 AM	4	23	2	29	3	60	5	68	6	72	8	86	7	30	11	48	231
08:45 AM	7	31	4	42	5	56	6	67	3	69	10	82	6	56	15	77	268
Total	20	97	19	136	14	198	16	228	26	301	40	367	27	166	40	233	964
Grand Total	32	164	27	223	28	331	25	384	48	565	63	676	44	318	65	427	1710
Apprch %	14.3	73.5	12.1		7.3	86.2	6.5		7.1	83.6	9.3		10.3	74.5	15.2		
Total %	1.9	9.6	1.6	13	1.6	19.4	1.5	22.5	2.8	33	3.7	39.5	2.6	18.6	3.8	25	
PC	31	150	25	206	26	324	23	373	47	550	60	657	43	304	63	410	1646
% PC	96.9	91.5	92.6	92.4	92.9	97.9	92	97.1	97.9	97.3	95.2	97.2	97.7	95.6	96.9	96	96.3
SU	1	13	2	16	2	7	2	11	1	12	3	16	1	14	2	17	60
% SU	3.1	7.9	7.4	7.2	7.1	2.1	8	2.9	2.1	2.1	4.8	2.4	2.3	4.4	3.1	4	3.5
MU	0	1	0	1	0	0	0	0	0	3	0	3	0	0	0	0	4
% MU	0	0.6	0	0.4	0	0	0	0	0	0.5	0	0.4	0	0	0	0	0.2

	State St From North				107th St From East				State St From South				107th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	6	16	5	27	3	37	0	40	6	66	**13**	85	**9**	36	5	50	202
08:15 AM	3	27	**8**	38	3	45	5	53	**11**	**94**	9	**114**	5	44	9	58	263
08:30 AM	4	23	2	29	3	**60**	5	**68**	6	72	8	86	7	30	11	48	231
08:45 AM	**7**	**31**	4	**42**	**5**	56	**6**	67	3	69	10	82	6	**56**	**15**	**77**	**268**
Total Volume	20	97	19	136	14	198	16	228	26	301	40	367	27	166	40	233	964
% App. Total	14.7	71.3	14		6.1	86.8	7		7.1	82	10.9		11.6	71.2	17.2		
PHF	.714	.782	.594	.810	.700	.825	.667	.838	.591	.801	.769	.805	.750	.741	.667	.756	.899

107th St and State St
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/12/2012
Page No : 2

Groups Printed- SU

	State St From North				107th St From East				State St From South				107th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	1	0	1	0	0	0	0	0	4	0	4	0	2	1	3	8
07:15 AM	0	0	0	0	0	0	0	0	1	2	0	3	0	2	0	2	5
07:30 AM	0	0	1	1	0	1	1	2	0	1	0	1	0	3	0	3	7
07:45 AM	0	4	0	4	0	1	1	2	0	1	0	1	0	1	0	1	8
Total	0	5	1	6	0	2	2	4	1	8	0	9	0	8	1	9	28
08:00 AM	0	0	0	0	1	2	0	3	0	1	1	2	0	2	0	2	7
08:15 AM	1	3	0	4	0	0	0	0	0	0	0	0	0	1	1	2	6
08:30 AM	0	1	1	2	0	2	0	2	0	1	1	2	0	0	0	0	6
08:45 AM	0	4	0	4	1	1	0	2	0	2	1	3	1	3	0	4	13
Total	1	8	1	10	2	5	0	7	0	4	3	7	1	6	1	8	32
Grand Total	1	13	2	16	2	7	2	11	1	12	3	16	1	14	2	17	60
Apprch %	6.2	81.2	12.5		18.2	63.6	18.2		6.2	75	18.8		5.9	82.4	11.8		
Total %	1.7	21.7	3.3	26.7	3.3	11.7	3.3	18.3	1.7	20	5	26.7	1.7	23.3	3.3	28.3	

107th St and State St
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/12/2012
Page No : 3

Groups Printed- MU

	State St From North				107th St From East				State St From South				107th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
07:15 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
07:45 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Total	0	1	0	1	0	0	0	0	0	3	0	3	0	0	0	0	4
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	1	0	1	0	0	0	0	0	3	0	3	0	0	0	0	4
Apprch %	0	100	0		0	0	0		0	100	0		0	0	0		
Total %	0	25	0	25	0	0	0	0	0	75	0	75	0	0	0	0	

107th St and State St
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 6/12/2012
Page No : 4

Groups Printed- Peds & Bikes

	State St Crossing North Leg			107th St Crossing East Leg			State St Crossing South Leg			107th St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
07:00 AM	0	0	0	2	0	2	7	1	8	6	0	6	16
07:15 AM	6	5	11	3	2	5	5	8	13	8	2	10	39
07:30 AM	0	2	2	1	0	1	7	2	9	6	4	10	22
07:45 AM	1	9	10	1	0	1	4	3	7	4	5	9	27
Total	7	16	23	7	2	9	23	14	37	24	11	35	104
08:00 AM	5	12	17	0	0	0	12	0	12	5	3	8	37
08:15 AM	8	12	20	5	0	5	9	1	10	8	6	14	49
08:30 AM	1	4	5	5	0	5	7	1	8	11	0	11	29
08:45 AM	4	1	5	6	0	6	9	5	14	15	3	18	43
Total	18	29	47	16	0	16	37	7	44	39	12	51	158
Grand Total	25	45	70	23	2	25	60	21	81	63	23	86	262
Apprch %	35.7	64.3		92	8		74.1	25.9		73.3	26.7		
Total %	9.5	17.2	26.7	8.8	0.8	9.5	22.9	8	30.9	24	8.8	32.8	

107th St and State St
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/12/2012
Page No : 5

Groups Printed- PC - SU - MU

	State St From North				107th St From East				State St From South				107th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	5	49	5	59	8	39	6	53	11	49	9	69	7	33	7	47	228
04:15 PM	5	50	7	62	4	46	7	57	9	42	12	63	8	44	8	60	242
04:30 PM	5	50	8	63	7	35	4	46	17	55	9	81	11	48	4	63	253
04:45 PM	6	36	6	48	6	52	12	70	9	43	13	65	9	47	6	62	245
Total	21	185	26	232	25	172	29	226	46	189	43	278	35	172	25	232	968
05:00 PM	7	41	8	56	4	37	10	51	6	49	11	66	10	43	0	53	226
05:15 PM	5	47	11	63	6	49	2	57	8	42	8	58	6	39	8	53	231
05:30 PM	12	41	8	61	3	45	5	53	8	39	10	57	11	57	7	75	246
05:45 PM	9	51	6	66	5	48	8	61	9	65	9	83	7	40	8	55	265
Total	33	180	33	246	18	179	25	222	31	195	38	264	34	179	23	236	968
Grand Total	54	365	59	478	43	351	54	448	77	384	81	542	69	351	48	468	1936
Apprch %	11.3	76.4	12.3		9.6	78.3	12.1		14.2	70.8	14.9		14.7	75	10.3		
Total %	2.8	18.9	3	24.7	2.2	18.1	2.8	23.1	4	19.8	4.2	28	3.6	18.1	2.5	24.2	
PC	52	357	56	465	43	349	54	446	77	383	79	539	69	347	47	463	1913
% PC	96.3	97.8	94.9	97.3	100	99.4	100	99.6	100	99.7	97.5	99.4	100	98.9	97.9	98.9	98.8
SU	2	8	3	13	0	1	0	1	0	1	2	3	0	4	1	5	22
% SU	3.7	2.2	5.1	2.7	0	0.3	0	0.2	0	0.3	2.5	0.6	0	1.1	2.1	1.1	1.1
MU	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
% MU	0	0	0	0	0	0.3	0	0.2	0	0	0	0	0	0	0	0	0.1

	State St From North				107th St From East				State St From South				107th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	5	49	5	59	**8**	39	6	53	11	49	9	69	7	33	7	47	228
04:15 PM	5	**50**	7	62	4	46	7	57	9	42	12	63	8	44	**8**	60	242
04:30 PM	5	50	**8**	**63**	7	35	4	46	**17**	**55**	9	**81**	**11**	**48**	4	**63**	**253**
04:45 PM	**6**	36	6	48	6	**52**	**12**	**70**	9	43	**13**	65	9	47	6	62	245
Total Volume	21	185	26	232	25	172	29	226	46	189	43	278	35	172	25	232	968
% App. Total	9.1	79.7	11.2		11.1	76.1	12.8		16.5	68	15.5		15.1	74.1	10.8		
PHF	.875	.925	.813	.921	.781	.827	.604	.807	.676	.859	.827	.858	.795	.896	.781	.921	.957

107th St and State St
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/12/2012
Page No : 6

Groups Printed- SU

	State St From North				107th St From East				State St From South				107th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	1	1	1	3	0	0	0	0	0	0	0	0	0	0	0	0	3
04:15 PM	1	2	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
04:30 PM	0	2	0	2	0	1	0	1	0	0	0	0	0	0	0	0	3
04:45 PM	0	1	1	2	0	0	0	0	0	1	0	1	0	2	0	2	5
Total	2	6	2	10	0	1	0	1	0	1	0	1	0	2	0	2	14
05:00 PM	0	2	0	2	0	0	0	0	0	0	0	0	0	1	0	1	3
05:15 PM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1	2
05:30 PM	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	2
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Total	0	2	1	3	0	0	0	0	0	0	2	2	0	2	1	3	8
Grand Total	2	8	3	13	0	1	0	1	0	1	2	3	0	4	1	5	22
Apprch %	15.4	61.5	23.1		0	100	0		0	33.3	66.7		0	80	20		
Total %	9.1	36.4	13.6	59.1	0	4.5	0	4.5	0	4.5	9.1	13.6	0	18.2	4.5	22.7	

107th St and State St
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/12/2012
Page No : 7

Groups Printed- MU

	State St From North				107th St From East				State St From South				107th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Apprch %	0	0	0		0	100	0		0	0	0		0	0	0		
Total %	0	0	0	0	0	100	0	100	0	0	0	0	0	0	0	0	

107th St and State St
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 6/12/2012
Page No : 8

Groups Printed- Peds & Bikes

	State St Crossing North Leg			107th St Crossing East Leg			State St Crossing South Leg			107th St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
04:00 PM	4	4	8	6	0	6	9	10	19	7	1	8	41
04:15 PM	7	5	12	7	0	7	12	0	12	8	1	9	40
04:30 PM	8	10	18	4	0	4	9	3	12	4	0	4	38
04:45 PM	5	4	9	12	0	12	13	0	13	6	3	9	43
Total	24	23	47	29	0	29	43	13	56	25	5	30	162
05:00 PM	8	5	13	10	0	10	11	4	15	0	0	0	38
05:15 PM	10	5	15	2	0	2	8	4	12	7	2	9	38
05:30 PM	8	4	12	5	0	5	8	4	12	7	0	7	36
05:45 PM	6	6	12	8	0	8	9	5	14	8	0	8	42
Total	32	20	52	25	0	25	36	17	53	22	2	24	154
Grand Total	56	43	99	54	0	54	79	30	109	47	7	54	316
Apprch %	56.6	43.4		100	0		72.5	27.5		87	13		
Total %	17.7	13.6	31.3	17.1	0	17.1	25	9.5	34.5	14.9	2.2	17.1	

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107th St and Wentworth Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/7/2012
Page No : 1

Groups Printed- PC - SU - MU

	Wentworth Ave From North				**107th St From East**				**Wentworth Ave From South**				**107th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	5	24	2	31	3	28	1	32	5	20	7	32	2	41	6	49	144
07:15 AM	3	21	3	27	0	34	2	36	3	32	3	38	1	33	9	43	144
07:30 AM	4	19	5	28	4	39	3	46	6	42	2	50	0	66	6	72	196
07:45 AM	5	37	7	49	1	40	2	43	6	43	3	52	2	49	8	59	203
Total	17	101	17	135	8	141	8	157	20	137	15	172	5	189	29	223	687
08:00 AM	3	40	7	50	3	36	5	44	5	35	7	47	7	46	9	62	203
08:15 AM	7	34	9	50	1	34	5	40	7	26	4	37	6	51	3	60	187
08:30 AM	10	28	3	41	1	35	3	39	7	31	2	40	4	40	11	55	175
08:45 AM	5	37	6	48	3	33	5	41	8	38	7	53	6	50	6	62	204
Total	25	139	25	189	8	138	18	164	27	130	20	177	23	187	29	239	769
Grand Total	42	240	42	324	16	279	26	321	47	267	35	349	28	376	58	462	1456
Apprch %	13	74.1	13		5	86.9	8.1		13.5	76.5	10		6.1	81.4	12.6		
Total %	2.9	16.5	2.9	22.3	1.1	19.2	1.8	22	3.2	18.3	2.4	24	1.9	25.8	4	31.7	
PC	40	231	42	313	16	275	22	313	42	251	32	325	27	367	54	448	1399
% PC	95.2	96.2	100	96.6	100	98.6	84.6	97.5	89.4	94	91.4	93.1	96.4	97.6	93.1	97	96.1
SU	2	8	0	10	0	3	4	7	5	15	3	23	1	9	4	14	54
% SU	4.8	3.3	0	3.1	0	1.1	15.4	2.2	10.6	5.6	8.6	6.6	3.6	2.4	6.9	3	3.7
MU	0	1	0	1	0	1	0	1	0	1	0	1	0	0	0	0	3
% MU	0	0.4	0	0.3	0	0.4	0	0.3	0	0.4	0	0.3	0	0	0	0	0.2

	Wentworth Ave From North				**107th St From East**				**Wentworth Ave From South**				**107th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	4	19	5	28	**4**	39	3	**46**	6	42	2	50	0	**66**	6	**72**	196
07:45 AM	5	37	7	49	1	**40**	2	43	6	**43**	3	**52**	2	49	8	59	**203**
08:00 AM	3	**40**	7	**50**	3	36	**5**	44	5	35	**7**	47	**7**	46	**9**	62	203
08:15 AM	**7**	34	**9**	50	1	34	5	40	**7**	26	4	37	6	51	3	60	187
Total Volume	19	130	28	177	9	149	15	173	24	146	16	186	15	212	26	253	789
% App. Total	10.7	73.4	15.8		5.2	86.1	8.7		12.9	78.5	8.6		5.9	83.8	10.3		
PHF	.679	.813	.778	.885	.563	.931	.750	.940	.857	.849	.571	.894	.536	.803	.722	.878	.972

107th St and Wentworth Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/7/2012
Page No : 2

Groups Printed- SU

	Wentworth Ave From North				**107th St From East**				**Wentworth Ave From South**				**107th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	1	1	0	2	0	0	0	0	1	2	0	3	1	2	2	5	10
07:15 AM	0	1	0	1	0	1	0	1	2	4	0	6	0	1	0	1	9
07:30 AM	0	0	0	0	0	1	1	2	0	1	0	1	0	1	1	2	5
07:45 AM	0	1	0	1	0	0	0	0	1	3	1	5	0	1	0	1	7
Total	1	3	0	4	0	2	1	3	4	10	1	15	1	5	3	9	31
08:00 AM	0	2	0	2	0	1	0	1	0	1	0	1	0	1	0	1	5
08:15 AM	1	0	0	1	0	0	2	2	1	0	1	2	0	1	0	1	6
08:30 AM	0	1	0	1	0	0	1	1	0	3	1	4	0	1	1	2	8
08:45 AM	0	2	0	2	0	0	0	0	0	1	0	1	0	1	0	1	4
Total	1	5	0	6	0	1	3	4	1	5	2	8	0	4	1	5	23
Grand Total	2	8	0	10	0	3	4	7	5	15	3	23	1	9	4	14	54
Apprch %	20	80	0		0	42.9	57.1		21.7	65.2	13		7.1	64.3	28.6		
Total %	3.7	14.8	0	18.5	0	5.6	7.4	13	9.3	27.8	5.6	42.6	1.9	16.7	7.4	25.9	

107th St and Wentworth Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/7/2012
Page No : 3

Groups Printed- MU

	Wentworth Ave From North				**107th St From East**				**Wentworth Ave From South**				**107th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	1	0	1	0	1	0	1	0	0	0	0	0	0	0	0	2
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Grand Total	0	1	0	1	0	1	0	1	0	1	0	1	0	0	0	0	3
Apprch %	0	100	0		0	100	0		0	100	0		0	0	0		
Total %	0	33.3	0	33.3	0	33.3	0	33.3	0	33.3	0	33.3	0	0	0	0	

107th St and Wentworth Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 6/7/2012
Page No : 4

Groups Printed- Peds & Bikes

	Wentworth Ave Crossing North Leg			**107th St Crossing East Leg**			**Wentworth Ave Crossing South Leg**			**107th St Crossing West Leg**			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
07:00 AM	0	1	1	0	2	2	0	1	1	0	2	2	6
07:15 AM	0	0	0	0	2	2	0	1	1	0	1	1	4
07:30 AM	0	2	2	0	7	7	2	1	3	0	0	0	12
07:45 AM	0	1	1	0	1	1	0	2	2	0	0	0	4
Total	0	4	4	0	12	12	2	5	7	0	3	3	26
08:00 AM	0	2	2	0	3	3	0	1	1	0	1	1	7
08:15 AM	0	0	0	0	23	23	1	7	8	0	6	6	37
08:30 AM	0	1	1	0	7	7	1	8	9	0	4	4	21
08:45 AM	0	2	2	0	7	7	0	4	4	0	1	1	14
Total	0	5	5	0	40	40	2	20	22	0	12	12	79
Grand Total	0	9	9	0	52	52	4	25	29	0	15	15	105
Apprch %	0	100		0	100		13.8	86.2		0	100		
Total %	0	8.6	8.6	0	49.5	49.5	3.8	23.8	27.6	0	14.3	14.3	

107th St and Wentworth Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/7/2012
Page No : 5

Groups Printed- PC - SU - MU

	Wentworth Ave From North				**107th St From East**				**Wentworth Ave From South**				**107th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	6	59	5	70	1	37	4	42	9	35	6	50	8	50	5	63	225
04:15 PM	11	51	6	68	4	45	4	53	9	23	3	35	6	52	9	67	223
04:30 PM	11	49	8	68	5	25	6	36	7	16	6	29	4	39	4	47	180
04:45 PM	5	51	0	56	5	43	6	54	2	30	5	37	5	47	11	63	210
Total	33	210	19	262	15	150	20	185	27	104	20	151	23	188	29	240	838
05:00 PM	19	59	7	85	6	36	3	45	8	28	4	40	5	47	8	60	230
05:15 PM	8	67	9	84	4	44	3	51	7	32	3	42	15	49	5	69	246
05:30 PM	11	60	9	80	4	43	7	54	11	28	6	45	8	41	5	54	233
05:45 PM	9	53	10	72	6	50	7	63	5	27	5	37	5	36	3	44	216
Total	47	239	35	321	20	173	20	213	31	115	18	164	33	173	21	227	925
Grand Total	80	449	54	583	35	323	40	398	58	219	38	315	56	361	50	467	1763
Apprch %	13.7	77	9.3		8.8	81.2	10.1		18.4	69.5	12.1		12	77.3	10.7		
Total %	4.5	25.5	3.1	33.1	2	18.3	2.3	22.6	3.3	12.4	2.2	17.9	3.2	20.5	2.8	26.5	
PC	80	444	54	578	35	321	39	395	58	214	35	307	53	360	50	463	1743
% PC	100	98.9	100	99.1	100	99.4	97.5	99.2	100	97.7	92.1	97.5	94.6	99.7	100	99.1	98.9
SU	0	5	0	5	0	2	1	3	0	5	3	8	3	1	0	4	20
% SU	0	1.1	0	0.9	0	0.6	2.5	0.8	0	2.3	7.9	2.5	5.4	0.3	0	0.9	1.1
MU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% MU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	Wentworth Ave From North				**107th St From East**				**Wentworth Ave From South**				**107th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	**19**	59	7	**85**	**6**	36	3	45	8	28	4	40	5	47	**8**	60	230
05:15 PM	8	**67**	9	84	4	44	3	51	7	**32**	3	42	**15**	**49**	5	**69**	**246**
05:30 PM	11	60	9	80	4	43	**7**	54	**11**	28	**6**	**45**	8	41	5	54	233
05:45 PM	9	53	**10**	72	6	**50**	7	**63**	5	27	5	37	5	36	3	44	216
Total Volume	47	239	35	321	20	173	20	213	31	115	18	164	33	173	21	227	925
% App. Total	14.6	74.5	10.9		9.4	81.2	9.4		18.9	70.1	11		14.5	76.2	9.3		
PHF	.618	.892	.875	.944	.833	.865	.714	.845	.705	.898	.750	.911	.550	.883	.656	.822	.940

107th St and Wentworth Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/7/2012
Page No : 6

Groups Printed- SU

	Wentworth Ave From North				**107th St From East**				**Wentworth Ave From South**				**107th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	1	0	1	0	0	0	0	0	0	0	0	1	0	0	1	2
04:15 PM	0	1	0	1	0	1	0	1	0	1	1	2	1	0	0	1	5
04:30 PM	0	2	0	2	0	0	0	0	0	1	2	3	1	0	0	1	6
04:45 PM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
Total	0	5	0	5	0	1	0	1	0	3	3	6	3	0	0	3	15
05:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
05:15 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
05:30 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
05:45 PM	0	0	0	0	0	0	1	1	0	0	0	0	0	1	0	1	2
Total	0	0	0	0	0	1	1	2	0	2	0	2	0	1	0	1	5
Grand Total	0	5	0	5	0	2	1	3	0	5	3	8	3	1	0	4	20
Apprch %	0	100	0		0	66.7	33.3		0	62.5	37.5		75	25	0		
Total %	0	25	0	25	0	10	5	15	0	25	15	40	15	5	0	20	

107th St and Wentworth Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/7/2012
Page No : 7

Groups Printed- MU

	Wentworth Ave From North				**107th St From East**				**Wentworth Ave From South**				**107th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0		0	0	0		0	0	0		0	0	0		
Total %																	

107th St and Wentworth Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 6/7/2012
Page No : 8

Groups Printed- Peds & Bikes

	Wentworth Ave Crossing North Leg			**107th St Crossing East Leg**			**Wentworth Ave Crossing South Leg**			**107th St Crossing West Leg**			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
04:00 PM	0	0	0	0	1	1	0	8	8	0	7	7	16
04:15 PM	0	9	9	1	14	15	2	12	14	0	9	9	47
04:30 PM	0	8	8	0	18	18	0	5	5	0	0	0	31
04:45 PM	0	3	3	2	3	5	0	14	14	0	9	9	31
Total	0	20	20	3	36	39	2	39	41	0	25	25	125
05:00 PM	0	10	10	0	8	8	1	13	14	0	5	5	37
05:15 PM	0	5	5	0	0	0	1	6	7	1	3	4	16
05:30 PM	0	2	2	4	8	12	1	9	10	0	3	3	27
05:45 PM	0	1	1	0	3	3	3	6	9	0	5	5	18
Total	0	18	18	4	19	23	6	34	40	1	16	17	98
Grand Total	0	38	38	7	55	62	8	73	81	1	41	42	223
Apprch %	0	100		11.3	88.7		9.9	90.1		2.4	97.6		
Total %	0	17	17	3.1	24.7	27.8	3.6	32.7	36.3	0.4	18.4	18.8	

Regina Webster & Associates, Inc.

8619 West Bryn Mawr Avenue, Suite 602, Chicago, Illinois 60631
773-283-2600 Fax: 773-283-2602
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111th St and Halsted Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/8/2012
Page No : 1

Groups Printed- PC - SU - MU

	Halsted Ave From North				**111th St From East**				**Halsted Ave From South**				**111th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	11	61	14	86	23	24	5	52	8	198	6	212	6	27	24	57	407
07:15 AM	3	88	10	101	10	28	8	46	5	224	7	236	14	32	29	75	458
07:30 AM	8	108	19	135	19	29	10	58	17	271	7	295	6	47	45	98	586
07:45 AM	15	113	18	146	25	33	14	72	10	253	13	276	14	45	35	94	588
Total	37	370	61	468	77	114	37	228	40	946	33	1019	40	151	133	324	2039
08:00 AM	5	146	25	176	24	44	12	80	18	202	9	229	20	45	21	86	571
08:15 AM	14	109	26	149	20	36	9	65	5	195	6	206	14	65	25	104	524
08:30 AM	9	91	22	122	13	24	14	51	9	164	12	185	16	34	15	65	423
08:45 AM	5	113	31	149	18	39	11	68	14	159	17	190	18	51	16	85	492
Total	33	459	104	596	75	143	46	264	46	720	44	810	68	195	77	340	2010
Grand Total	70	829	165	1064	152	257	83	492	86	1666	77	1829	108	346	210	664	4049
Apprch %	6.6	77.9	15.5		30.9	52.2	16.9		4.7	91.1	4.2		16.3	52.1	31.6		
Total %	1.7	20.5	4.1	26.3	3.8	6.3	2	12.2	2.1	41.1	1.9	45.2	2.7	8.5	5.2	16.4	
PC	65	764	156	985	147	236	77	460	85	1598	74	1757	104	325	194	623	3825
% PC	92.9	92.2	94.5	92.6	96.7	91.8	92.8	93.5	98.8	95.9	96.1	96.1	96.3	93.9	92.4	93.8	94.5
SU	5	63	9	77	5	21	6	32	1	64	3	68	4	20	15	39	216
% SU	7.1	7.6	5.5	7.2	3.3	8.2	7.2	6.5	1.2	3.8	3.9	3.7	3.7	5.8	7.1	5.9	5.3
MU	0	2	0	2	0	0	0	0	0	4	0	4	0	1	1	2	8
% MU	0	0.2	0	0.2	0	0	0	0	0	0.2	0	0.2	0	0.3	0.5	0.3	0.2

	Halsted Ave From North				**111th St From East**				**Halsted Ave From South**				**111th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	8	108	19	135	19	29	10	58	17	**271**	7	**295**	6	47	**45**	98	586
07:45 AM	**15**	113	18	146	**25**	33	**14**	72	10	253	**13**	276	14	45	35	94	**588**
08:00 AM	5	**146**	25	**176**	24	**44**	12	**80**	**18**	202	9	229	**20**	45	21	86	571
08:15 AM	14	109	**26**	149	20	36	9	65	5	195	6	206	14	**65**	25	**104**	524
Total Volume	42	476	88	606	88	142	45	275	50	921	35	1006	54	202	126	382	2269
% App. Total	6.9	78.5	14.5		32	51.6	16.4		5	91.6	3.5		14.1	52.9	33		
PHF	.700	.815	.846	.861	.880	.807	.804	.859	.694	.850	.673	.853	.675	.777	.700	.918	.965

111th St and Halsted Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/8/2012
Page No : 2

Groups Printed- SU

	Halsted Ave From North				**111th St From East**				**Halsted Ave From South**				**111th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	1	6	2	9	1	3	0	4	0	7	0	7	1	1	3	5	25
07:15 AM	1	5	0	6	0	2	0	2	0	11	0	11	1	1	1	3	22
07:30 AM	1	8	1	10	2	3	0	5	0	8	0	8	0	3	3	6	29
07:45 AM	1	10	0	11	1	2	1	4	0	10	2	12	0	5	6	11	38
Total	4	29	3	36	4	10	1	15	0	36	2	38	2	10	13	25	114
08:00 AM	0	10	1	11	0	1	3	4	0	10	0	10	0	2	1	3	28
08:15 AM	0	11	1	12	1	4	0	5	0	4	0	4	2	3	1	6	27
08:30 AM	1	8	0	9	0	2	2	4	1	9	0	10	0	0	0	0	23
08:45 AM	0	5	4	9	0	4	0	4	0	5	1	6	0	5	0	5	24
Total	1	34	6	41	1	11	5	17	1	28	1	30	2	10	2	14	102
Grand Total	5	63	9	77	5	21	6	32	1	64	3	68	4	20	15	39	216
Apprch %	6.5	81.8	11.7		15.6	65.6	18.8		1.5	94.1	4.4		10.3	51.3	38.5		
Total %	2.3	29.2	4.2	35.6	2.3	9.7	2.8	14.8	0.5	29.6	1.4	31.5	1.9	9.3	6.9	18.1	

111th St and Halsted Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/8/2012
Page No : 3

Groups Printed- MU

	Halsted Ave From North				**111th St From East**				**Halsted Ave From South**				**111th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
07:30 AM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	2
Total	0	1	0	1	0	0	0	0	0	3	0	3	0	1	1	2	6
08:00 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
Grand Total	0	2	0	2	0	0	0	0	0	4	0	4	0	1	1	2	8
Apprch %	0	100	0		0	0	0		0	100	0		0	50	50		
Total %	0	25	0	25	0	0	0	0	0	50	0	50	0	12.5	12.5	25	

111th St and Halsted Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 5/8/2012
Page No : 4

Groups Printed- Peds & Bikes

	Halsted Ave Crossing North Leg			**111th St Crossing East Leg**			**Halsted Ave Crossing South Leg**			**111th St Crossing West Leg**			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
07:00 AM	0	12	12	0	8	8	1	8	9	1	5	6	35
07:15 AM	0	16	16	0	4	4	0	18	18	0	11	11	49
07:30 AM	1	9	10	0	2	2	0	7	7	0	12	12	31
07:45 AM	1	19	20	0	2	2	0	9	9	0	8	8	39
Total	2	56	58	0	16	16	1	42	43	1	36	37	154
08:00 AM	0	16	16	0	4	4	0	2	2	0	2	2	24
08:15 AM	0	5	5	0	0	0	0	2	2	0	4	4	11
08:30 AM	0	20	20	1	8	9	0	7	7	1	4	5	41
08:45 AM	2	9	11	0	2	2	0	3	3	1	7	8	24
Total	2	50	52	1	14	15	0	14	14	2	17	19	100
Grand Total	4	106	110	1	30	31	1	56	57	3	53	56	254
Apprch %	3.6	96.4		3.2	96.8		1.8	98.2		5.4	94.6		
Total %	1.6	41.7	43.3	0.4	11.8	12.2	0.4	22	22.4	1.2	20.9	22	

111th St and Halsted Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/8/2012
Page No : 5

Groups Printed- PC - SU - MU

	Halsted Ave From North				**111th St From East**				**Halsted Ave From South**				**111th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	21	225	29	275	14	49	18	81	13	139	13	165	34	57	11	102	623
04:15 PM	13	174	25	212	26	50	24	100	15	125	17	157	19	37	17	73	542
04:30 PM	13	207	28	248	21	47	27	95	12	137	21	170	31	47	23	101	614
04:45 PM	10	194	32	236	25	49	24	98	19	137	12	168	22	34	29	85	587
Total	57	800	114	971	86	195	93	374	59	538	63	660	106	175	80	361	2366
05:00 PM	18	217	19	254	17	55	23	95	14	147	14	175	24	52	22	98	622
05:15 PM	20	217	23	260	23	50	28	101	12	129	12	153	33	54	18	105	619
05:30 PM	9	181	25	215	22	53	13	88	23	134	18	175	23	47	20	90	568
05:45 PM	15	227	29	271	29	40	26	95	10	128	21	159	20	52	16	88	613
Total	62	842	96	1000	91	198	90	379	59	538	65	662	100	205	76	381	2422
Grand Total	119	1642	210	1971	177	393	183	753	118	1076	128	1322	206	380	156	742	4788
Apprch %	6	83.3	10.7		23.5	52.2	24.3		8.9	81.4	9.7		27.8	51.2	21		
Total %	2.5	34.3	4.4	41.2	3.7	8.2	3.8	15.7	2.5	22.5	2.7	27.6	4.3	7.9	3.3	15.5	
PC	116	1587	208	1911	173	377	180	730	117	1029	125	1271	203	361	155	719	4631
% PC	97.5	96.7	99	97	97.7	95.9	98.4	96.9	99.2	95.6	97.7	96.1	98.5	95	99.4	96.9	96.7
SU	3	52	2	57	4	14	2	20	0	42	2	44	3	19	0	22	143
% SU	2.5	3.2	1	2.9	2.3	3.6	1.1	2.7	0	3.9	1.6	3.3	1.5	5	0	3	3
MU	0	3	0	3	0	2	1	3	1	5	1	7	0	0	1	1	14
% MU	0	0.2	0	0.2	0	0.5	0.5	0.4	0.8	0.5	0.8	0.5	0	0	0.6	0.1	0.3

	Halsted Ave From North				**111th St From East**				**Halsted Ave From South**				**111th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	8	108	19	135	19	29	10	58	17	**271**	7	**295**	6	47	**45**	98	586
07:45 AM	**15**	113	18	146	**25**	33	**14**	72	10	253	**13**	276	14	45	35	94	**588**
08:00 AM	5	**146**	25	**176**	24	**44**	12	**80**	**18**	202	9	229	**20**	45	21	86	571
08:15 AM	14	109	**26**	149	20	36	9	65	5	195	6	206	14	**65**	25	**104**	524
Total Volume	42	476	88	606	88	142	45	275	50	921	35	1006	54	202	126	382	2269
% App. Total	6.9	78.5	14.5		32	51.6	16.4		5	91.6	3.5		14.1	52.9	33		
PHF	.700	.815	.846	.861	.880	.807	.804	.859	.694	.850	.673	.853	.675	.777	.700	.918	.965

111th St and Halsted Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/8/2012
Page No : 6

Groups Printed- SU

	Halsted Ave From North				111th St From East				Halsted Ave From South				111th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	1	10	0	11	0	2	1	3	0	5	0	5	1	4	0	5	24
04:15 PM	0	5	0	5	0	5	1	6	0	6	1	7	0	2	0	2	20
04:30 PM	0	10	0	10	0	1	0	1	0	5	0	5	1	3	0	4	20
04:45 PM	1	6	0	7	1	1	0	2	0	6	0	6	1	1	0	2	17
Total	2	31	0	33	1	9	2	12	0	22	1	23	3	10	0	13	81
05:00 PM	0	7	0	7	0	1	0	1	0	5	0	5	0	3	0	3	16
05:15 PM	1	6	0	7	0	1	0	1	0	6	0	6	0	3	0	3	17
05:30 PM	0	3	2	5	0	1	0	1	0	1	1	2	0	0	0	0	8
05:45 PM	0	5	0	5	3	2	0	5	0	8	0	8	0	3	0	3	21
Total	1	21	2	24	3	5	0	8	0	20	1	21	0	9	0	9	62
Grand Total	3	52	2	57	4	14	2	20	0	42	2	44	3	19	0	22	143
Apprch %	5.3	91.2	3.5		20	70	10		0	95.5	4.5		13.6	86.4	0		
Total %	2.1	36.4	1.4	39.9	2.8	9.8	1.4	14	0	29.4	1.4	30.8	2.1	13.3	0	15.4	

111th St and Halsted Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/8/2012
Page No : 7

Groups Printed- MU

	Halsted Ave From North				111th St From East				Halsted Ave From South				111th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	0	3
04:15 PM	0	1	0	1	0	0	0	0	0	1	1	2	0	0	0	0	3
04:30 PM	0	1	0	1	0	1	0	1	0	0	0	0	0	0	0	0	2
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	2	0	2	0	1	0	1	0	4	1	5	0	0	0	0	8
05:00 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
05:15 PM	0	0	0	0	0	1	1	2	0	0	0	0	0	0	1	1	3
05:30 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:45 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
Total	0	1	0	1	0	1	1	2	1	1	0	2	0	0	1	1	6
Grand Total	0	3	0	3	0	2	1	3	1	5	1	7	0	0	1	1	14
Apprch %	0	100	0		0	66.7	33.3		14.3	71.4	14.3		0	0	100		
Total %	0	21.4	0	21.4	0	14.3	7.1	21.4	7.1	35.7	7.1	50	0	0	7.1	7.1	

111th St and Halsted Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 5/8/2012
Page No : 8

Groups Printed- Peds & Bikes

	Halsted Ave Crossing North Leg			**111th St Crossing East Leg**			**Halsted Ave Crossing South Leg**			**111th St Crossing West Leg**			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
04:00 PM	0	18	18	0	6	6	0	9	9	0	13	13	46
04:15 PM	0	5	5	0	8	8	1	11	12	1	6	7	32
04:30 PM	0	20	20	0	3	3	2	19	21	2	9	11	55
04:45 PM	3	17	20	0	1	1	0	4	4	0	4	4	29
Total	3	60	63	0	18	18	3	43	46	3	32	35	162
05:00 PM	0	5	5	0	2	2	0	7	7	0	7	7	21
05:15 PM	0	10	10	0	4	4	0	12	12	1	10	11	37
05:30 PM	1	7	8	0	0	0	0	4	4	0	8	8	20
05:45 PM	0	13	13	0	2	2	0	7	7	0	9	9	31
Total	1	35	36	0	8	8	0	30	30	1	34	35	109
Grand Total	4	95	99	0	26	26	3	73	76	4	66	70	271
Apprch %	4	96		0	100		3.9	96.1		5.7	94.3		
Total %	1.5	35.1	36.5	0	9.6	9.6	1.1	26.9	28	1.5	24.4	25.8	

111th St and Hamlet Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/5/2012
Page No : 1

Groups Printed- PC - SU - MU

	Hamlet Ave From North				111th St From East				Hamlet Ave From South				111th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	16	27	0	43	37	139	36	212	0	27	48	75	330
07:15 AM	0	0	0	0	18	62	0	80	36	131	45	212	0	24	40	64	356
07:30 AM	0	0	0	0	21	60	0	81	59	123	37	219	0	42	46	88	388
07:45 AM	0	0	0	0	12	51	0	63	71	143	58	272	0	46	43	89	424
Total	0	0	0	0	67	200	0	267	203	536	176	915	0	139	177	316	1498
08:00 AM	0	0	0	0	14	94	0	108	88	122	43	253	0	43	26	69	430
08:15 AM	0	0	0	0	7	65	0	72	71	121	34	226	0	54	23	77	375
08:30 AM	0	0	0	0	10	56	0	66	61	123	24	208	0	66	27	93	367
08:45 AM	0	0	0	0	23	71	0	94	55	123	14	192	0	61	21	82	368
Total	0	0	0	0	54	286	0	340	275	489	115	879	0	224	97	321	1540
Grand Total	0	0	0	0	121	486	0	607	478	1025	291	1794	0	363	274	637	3038
Apprch %	0	0	0		19.9	80.1	0		26.6	57.1	16.2		0	57	43		
Total %	0	0	0	0	4	16	0	20	15.7	33.7	9.6	59.1	0	11.9	9	21	
PC	0	0	0	0	110	457	0	567	465	1013	286	1764	0	320	266	586	2917
% PC	0	0	0	0	90.9	94	0	93.4	97.3	98.8	98.3	98.3	0	88.2	97.1	92	96
SU	0	0	0	0	11	28	0	39	11	9	4	24	0	42	8	50	113
% SU	0	0	0	0	9.1	5.8	0	6.4	2.3	0.9	1.4	1.3	0	11.6	2.9	7.8	3.7
MU	0	0	0	0	0	1	0	1	2	3	1	6	0	1	0	1	8
% MU	0	0	0	0	0	0.2	0	0.2	0.4	0.3	0.3	0.3	0	0.3	0	0.2	0.3

	Hamlet Ave From North				111th St From East				Hamlet Ave From South				111th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	0	0	**21**	60	0	81	59	123	37	219	0	42	**46**	88	388
07:45 AM	0	0	0	0	12	51	0	63	71	**143**	**58**	**272**	0	46	43	**89**	424
08:00 AM	0	0	0	0	14	**94**	0	**108**	**88**	122	43	253	0	43	26	69	**430**
08:15 AM	0	0	0	0	7	65	0	72	71	121	34	226	0	**54**	23	77	375
Total Volume	0	0	0	0	54	270	0	324	289	509	172	970	0	185	138	323	1617
% App. Total	0	0	0		16.7	83.3	0		29.8	52.5	17.7		0	57.3	42.7		
PHF	.000	.000	.000	.000	.643	.718	.000	.750	.821	.890	.741	.892	.000	.856	.750	.907	.940

111th St and Hamlet Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/5/2012
Page No : 2

Groups Printed- SU

	Hamlet Ave From North				111th St From East				Hamlet Ave From South				111th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	4	2	0	6	0	0	0	0	0	0	1	1	7
07:15 AM	0	0	0	0	3	7	0	10	1	1	2	4	0	4	2	6	20
07:30 AM	0	0	0	0	0	3	0	3	3	2	0	5	0	6	1	7	15
07:45 AM	0	0	0	0	0	1	0	1	1	1	1	3	0	5	0	5	9
Total	0	0	0	0	7	13	0	20	5	4	3	12	0	15	4	19	51
08:00 AM	0	0	0	0	2	5	0	7	3	0	0	3	0	4	1	5	15
08:15 AM	0	0	0	0	0	4	0	4	1	0	0	1	0	6	1	7	12
08:30 AM	0	0	0	0	1	4	0	5	1	3	0	4	0	10	2	12	21
08:45 AM	0	0	0	0	1	2	0	3	1	2	1	4	0	7	0	7	14
Total	0	0	0	0	4	15	0	19	6	5	1	12	0	27	4	31	62
Grand Total	0	0	0	0	11	28	0	39	11	9	4	24	0	42	8	50	113
Apprch %	0	0	0		28.2	71.8	0		45.8	37.5	16.7		0	84	16		
Total %	0	0	0	0	9.7	24.8	0	34.5	9.7	8	3.5	21.2	0	37.2	7.1	44.2	

111th St and Hamlet Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/5/2012
Page No : 3

Groups Printed- MU

	Hamlet Ave From North				111th St From East				Hamlet Ave From South				111th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Total	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	1	2
08:00 AM	0	0	0	0	0	1	0	1	1	0	1	2	0	0	0	0	3
08:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	1	1	0	2	0	0	0	0	2
Total	0	0	0	0	0	1	0	1	2	2	1	5	0	0	0	0	6
Grand Total	0	0	0	0	0	1	0	1	2	3	1	6	0	1	0	1	8
Apprch %	0	0	0		0	100	0		33.3	50	16.7		0	100	0		
Total %	0	0	0	0	0	12.5	0	12.5	25	37.5	12.5	75	0	12.5	0	12.5	

111th St and Hamlet Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 6/5/2012

Groups Printed- Peds & Bikes

	Hamlet Ave Crossing North Leg			111th St Crossing East Leg			Hamlet Ave Crossing South Leg			111th St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
07:00 AM	0	1	1	0	0	0	0	1	1	0	0	0	2
07:15 AM	0	7	7	0	0	0	0	2	2	0	0	0	9
07:30 AM	1	4	5	1	0	1	0	4	4	0	0	0	10
07:45 AM	0	5	5	0	0	0	0	0	0	0	0	0	5
Total	1	17	18	1	0	1	0	7	7	0	0	0	26
08:00 AM	0	1	1	0	1	1	0	4	4	0	0	0	6
08:15 AM	0	4	4	0	0	0	0	8	8	0	0	0	12
08:30 AM	0	3	3	0	0	0	0	11	11	0	0	0	14
08:45 AM	0	3	3	0	3	3	0	3	3	0	0	0	9
Total	0	11	11	0	4	4	0	26	26	0	0	0	41
Grand Total	1	28	29	1	4	5	0	33	33	0	0	0	67
Apprch %	3.4	96.6		20	80		0	100		0	0		
Total %	1.5	41.8	43.3	1.5	6	7.5	0	49.3	49.3	0	0	0	

111th St and Hamlet Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/5/2012

Groups Printed- PC - SU - MU

	Hamlet Ave From North				111th St From East				Hamlet Ave From South				111th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	18	74	0	92	47	95	20	162	0	54	25	79	333
04:15 PM	0	0	0	0	31	86	0	117	41	105	16	162	0	76	46	122	401
04:30 PM	0	0	0	0	23	73	0	96	45	113	21	179	0	54	31	85	360
04:45 PM	0	0	0	0	19	52	0	71	44	88	16	148	0	46	29	75	294
Total	0	0	0	0	91	285	0	376	177	401	73	651	0	230	131	361	1388
05:00 PM	0	0	0	0	31	62	0	93	41	90	8	139	0	52	45	97	329
05:15 PM	0	0	0	0	33	75	0	108	36	108	20	164	0	68	33	101	373
05:30 PM	0	0	0	0	20	70	0	90	50	89	10	149	0	56	27	83	322
05:45 PM	0	0	0	0	25	70	0	95	48	128	22	198	0	56	44	100	393
Total	0	0	0	0	109	277	0	386	175	415	60	650	0	232	149	381	1417
Grand Total	0	0	0	0	200	562	0	762	352	816	133	1301	0	462	280	742	2805
Apprch %	0	0	0		26.2	73.8	0		27.1	62.7	10.2		0	62.3	37.7		
Total %	0	0	0	0	7.1	20	0	27.2	12.5	29.1	4.7	46.4	0	16.5	10	26.5	
PC	0	0	0	0	197	550	0	747	351	807	133	1291	0	408	274	682	2720
% PC	0	0	0	0	98.5	97.9	0	98	99.7	98.9	100	99.2	0	88.3	97.9	91.9	97
SU	0	0	0	0	3	12	0	15	1	8	0	9	0	54	6	60	84
% SU	0	0	0	0	1.5	2.1	0	2	0.3	1	0	0.7	0	11.7	2.1	8.1	3
MU	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
% MU	0	0	0	0	0	0	0	0	0	0.1	0	0.1	0	0	0	0	0

	Hamlet Ave From North				111th St From East				Hamlet Ave From South				111th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	0	0	0	31	62	0	93	41	90	8	139	0	52	**45**	97	329
05:15 PM	0	0	0	0	**33**	**75**	0	**108**	36	108	20	164	0	**68**	33	**101**	373
05:30 PM	0	0	0	0	20	70	0	90	**50**	89	10	149	0	56	27	83	322
05:45 PM	0	0	0	0	25	70	0	95	48	**128**	**22**	**198**	0	56	44	100	**393**
Total Volume	0	0	0	0	109	277	0	386	175	415	60	650	0	232	149	381	1417
% App. Total	0	0	0		28.2	71.8	0		26.9	63.8	9.2		0	60.9	39.1		
PHF	.000	.000	.000	.000	.826	.923	.000	.894	.875	.811	.682	.821	.000	.853	.828	.943	.901

111th St and Hamlet Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/5/2012
Page No : 6

Groups Printed- SU

	Hamlet Ave From North				111th St From East				Hamlet Ave From South				111th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	1	2	0	3	0	7	1	8	11
04:15 PM	0	0	0	0	2	2	0	4	0	1	0	1	0	11	0	11	16
04:30 PM	0	0	0	0	0	2	0	2	0	1	0	1	0	13	2	15	18
04:45 PM	0	0	0	0	0	1	0	1	0	1	0	1	0	6	0	6	8
Total	0	0	0	0	2	5	0	7	1	5	0	6	0	37	3	40	53
05:00 PM	0	0	0	0	1	3	0	4	0	0	0	0	0	5	1	6	10
05:15 PM	0	0	0	0	0	3	0	3	0	0	0	0	0	5	0	5	8
05:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	4	0	4	5
05:45 PM	0	0	0	0	0	0	0	0	0	3	0	3	0	3	2	5	8
Total	0	0	0	0	1	7	0	8	0	3	0	3	0	17	3	20	31
Grand Total	0	0	0	0	3	12	0	15	1	8	0	9	0	54	6	60	84
Apprch %	0	0	0		20	80	0		11.1	88.9	0		0	90	10		
Total %	0	0	0	0	3.6	14.3	0	17.9	1.2	9.5	0	10.7	0	64.3	7.1	71.4	

111th St and Hamlet Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/5/2012
Page No : 7

Groups Printed- MU

	Hamlet Ave From North				111th St From East				Hamlet Ave From South				111th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Grand Total	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Apprch %	0	0	0		0	0	0		0	100	0		0	0	0		
Total %	0	0	0	0	0	0	0	0	0	100	0	100	0	0	0	0	

111th St and Hamlet Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 6/5/2012
Page No : 8

Groups Printed- Peds & Bikes

	Hamlet Ave Crossing North Leg			111th St Crossing East Leg			Hamlet Ave Crossing South Leg			111th St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	1	6	7	0	0	0	7
04:15 PM	0	3	3	0	0	0	0	0	0	0	0	0	3
04:30 PM	1	1	2	0	0	0	0	0	0	0	0	0	2
04:45 PM	1	1	2	1	0	1	0	2	2	0	0	0	5
Total	2	5	7	1	0	1	1	8	9	0	0	0	17
05:00 PM	1	0	1	0	0	0	0	6	6	0	0	0	7
05:15 PM	0	0	0	0	0	0	0	1	1	0	0	0	1
05:30 PM	2	4	6	0	1	1	0	6	6	0	0	0	13
05:45 PM	0	5	5	0	0	0	0	0	0	0	0	0	5
Total	3	9	12	0	1	1	0	13	13	0	0	0	26
Grand Total	5	14	19	1	1	2	1	21	22	0	0	0	43
Apprch %	26.3	73.7		50	50		4.5	95.5		0	0		
Total %	11.6	32.6	44.2	2.3	2.3	4.7	2.3	48.8	51.2	0	0	0	

111th St and Marshfield Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/30/2012
Page No : 1

Groups Printed- PC - SU - MU

	Marshfield Ave From North				111th St From East				Marshfield Ave From South				111th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	60	58	7	125	0	38	10	48	0	0	0	0	11	75	0	86	259
07:15 AM	92	76	11	179	0	73	20	93	0	0	0	0	15	63	0	78	350
07:30 AM	117	82	13	212	0	61	21	82	0	0	0	0	15	60	0	75	369
07:45 AM	108	80	18	206	0	86	21	107	0	0	0	0	16	60	0	76	389
Total	377	296	49	722	0	258	72	330	0	0	0	0	57	258	0	315	1367
08:00 AM	64	61	18	143	0	78	20	98	0	0	0	0	25	43	0	68	309
08:15 AM	72	82	17	171	0	67	32	99	0	0	0	0	20	53	0	73	343
08:30 AM	47	62	23	132	0	76	30	106	0	0	0	0	17	44	0	61	299
08:45 AM	67	68	32	167	0	64	28	92	0	0	0	0	10	51	0	61	320
Total	250	273	90	613	0	285	110	395	0	0	0	0	72	191	0	263	1271
Grand Total	627	569	139	1335	0	543	182	725	0	0	0	0	129	449	0	578	2638
Apprch %	47	42.6	10.4		0	74.9	25.1		0	0	0		22.3	77.7	0		
Total %	23.8	21.6	5.3	50.6	0	20.6	6.9	27.5	0	0	0	0	4.9	17	0	21.9	
PC	604	555	125	1284	0	512	174	686	0	0	0	0	125	418	0	543	2513
% PC	96.3	97.5	89.9	96.2	0	94.3	95.6	94.6	0	0	0	0	96.9	93.1	0	93.9	95.3
SU	19	12	14	45	0	29	8	37	0	0	0	0	4	30	0	34	116
% SU	3	2.1	10.1	3.4	0	5.3	4.4	5.1	0	0	0	0	3.1	6.7	0	5.9	4.4
MU	4	2	0	6	0	2	0	2	0	0	0	0	0	1	0	1	9
% MU	0.6	0.4	0	0.4	0	0.4	0	0.3	0	0	0	0	0	0.2	0	0.2	0.3

	Marshfield Ave From North				111th St From East				Marshfield Ave From South				111th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	92	76	11	179	0	73	20	93	0	0	0	0	15	**63**	0	**78**	350
07:30 AM	**117**	**82**	13	**212**	0	61	**21**	82	0	0	0	0	15	60	0	75	369
07:45 AM	108	80	**18**	206	0	**86**	21	**107**	0	0	0	0	16	60	0	76	**389**
08:00 AM	64	61	18	143	0	78	20	98	0	0	0	0	**25**	43	0	68	309
Total Volume	381	299	60	740	0	298	82	380	0	0	0	0	71	226	0	297	1417
% App. Total	51.5	40.4	8.1		0	78.4	21.6		0	0	0		23.9	76.1	0		
PHF	.814	.912	.833	.873	.000	.866	.976	.888	.000	.000	.000	.000	.710	.897	.000	.952	.911

111th St and Marshfield Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/30/2012
Page No : 2

Groups Printed- SU

	Marshfield Ave From North				111th St From East				Marshfield Ave From South				111th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	1	1	0	2	0	4	0	4	0	0	0	0	0	1	0	1	7
07:15 AM	2	0	1	3	0	3	0	3	0	0	0	0	0	5	0	5	11
07:30 AM	2	2	1	5	0	3	2	5	0	0	0	0	0	7	0	7	17
07:45 AM	5	2	0	7	0	5	1	6	0	0	0	0	1	4	0	5	18
Total	10	5	2	17	0	15	3	18	0	0	0	0	1	17	0	18	53
08:00 AM	1	2	1	4	0	3	0	3	0	0	0	0	2	2	0	4	11
08:15 AM	4	0	1	5	0	2	2	4	0	0	0	0	0	5	0	5	14
08:30 AM	2	1	4	7	0	5	1	6	0	0	0	0	0	3	0	3	16
08:45 AM	2	4	6	12	0	4	2	6	0	0	0	0	1	3	0	4	22
Total	9	7	12	28	0	14	5	19	0	0	0	0	3	13	0	16	63
Grand Total	19	12	14	45	0	29	8	37	0	0	0	0	4	30	0	34	116
Apprch %	42.2	26.7	31.1		0	78.4	21.6		0	0	0		11.8	88.2	0		
Total %	16.4	10.3	12.1	38.8	0	25	6.9	31.9	0	0	0	0	3.4	25.9	0	29.3	

111th St and Marshfield Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/30/2012
Page No : 3

Groups Printed- MU

	Marshfield Ave From North				111th St From East				Marshfield Ave From South				111th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
07:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
07:30 AM	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
07:45 AM	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	3	0	0	3	0	1	0	1	0	0	0	0	0	0	0	0	4
08:00 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
08:30 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
08:45 AM	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
Total	1	2	0	3	0	1	0	1	0	0	0	0	0	1	0	1	5
Grand Total	4	2	0	6	0	2	0	2	0	0	0	0	0	1	0	1	9
Apprch %	66.7	33.3	0		0	100	0		0	0	0		0	100	0		
Total %	44.4	22.2	0	66.7	0	22.2	0	22.2	0	0	0	0	0	11.1	0	11.1	

111th St and Marshfield Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 5/30/2012
Page No : 4

Groups Printed- Peds & Bikes

	Marshfield Ave Crossing North Leg			111th St Crossing East Leg			Marshfield Ave Crossing South Leg			111th St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
07:00 AM	0	7	7	0	0	0	0	0	0	0	0	0	7
07:15 AM	0	12	12	0	0	0	0	2	2	0	0	0	14
07:30 AM	0	3	3	0	0	0	0	3	3	0	0	0	6
07:45 AM	0	4	4	0	0	0	1	3	4	0	0	0	8
Total	0	26	26	0	0	0	1	8	9	0	0	0	35
08:00 AM	0	3	3	0	0	0	0	13	13	0	8	8	24
08:15 AM	0	4	4	0	0	0	0	13	13	0	6	6	23
08:30 AM	0	11	11	0	0	0	2	3	5	0	2	2	18
08:45 AM	1	3	4	0	0	0	0	1	1	0	1	1	6
Total	1	21	22	0	0	0	2	30	32	0	17	17	71
Grand Total	1	47	48	0	0	0	3	38	41	0	17	17	106
Apprch %	2.1	97.9		0	0		7.3	92.7		0	100		
Total %	0.9	44.3	45.3	0	0	0	2.8	35.8	38.7	0	16	16	

111th St and Marshfield Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/30/2012

Groups Printed- PC - SU - MU

	Marshfield Ave From North				111th St From East				Marshfield Ave From South				111th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	135	135	41	311	0	44	28	72	0	0	0	0	32	52	0	84	467
04:15 PM	91	101	30	222	0	60	46	106	0	0	0	0	34	66	0	100	428
04:30 PM	102	107	34	243	0	66	44	110	0	0	0	0	37	54	0	91	444
04:45 PM	85	127	36	248	0	45	23	68	0	0	0	0	28	66	0	94	410
Total	413	470	141	1024	0	215	141	356	0	0	0	0	131	238	0	369	1749
05:00 PM	100	124	35	259	0	47	38	85	0	0	0	0	54	55	0	109	453
05:15 PM	93	137	25	255	0	50	34	84	0	0	0	0	36	69	0	105	444
05:30 PM	78	99	22	199	0	60	42	102	0	0	0	0	35	65	0	100	401
05:45 PM	106	110	21	237	0	38	44	82	0	0	0	0	38	46	0	84	403
Total	377	470	103	950	0	195	158	353	0	0	0	0	163	235	0	398	1701
Grand Total	790	940	244	1974	0	410	299	709	0	0	0	0	294	473	0	767	3450
Apprch %	40	47.6	12.4		0	57.8	42.2		0	0	0		38.3	61.7	0		
Total %	22.9	27.2	7.1	57.2	0	11.9	8.7	20.6	0	0	0	0	8.5	13.7	0	22.2	
PC	779	928	200	1907	0	395	292	687	0	0	0	0	292	451	0	743	3337
% PC	98.6	98.7	82	96.6	0	96.3	97.7	96.9	0	0	0	0	99.3	95.3	0	96.9	96.7
SU	10	12	44	66	0	14	7	21	0	0	0	0	2	22	0	24	111
% SU	1.3	1.3	18	3.3	0	3.4	2.3	3	0	0	0	0	0.7	4.7	0	3.1	3.2
MU	1	0	0	1	0	1	0	1	0	0	0	0	0	0	0	0	2
% MU	0.1	0	0	0.1	0	0.2	0	0.1	0	0	0	0	0	0	0	0	0.1

	Marshfield Ave From North				111th St From East				Marshfield Ave From South				111th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	**102**	107	34	243	0	**66**	**44**	**110**	0	0	0	0	37	54	0	91	444
04:45 PM	85	127	**36**	248	0	45	23	68	0	0	0	0	28	66	0	94	410
05:00 PM	100	124	35	**259**	0	47	38	85	0	0	0	0	**54**	55	0	**109**	**453**
05:15 PM	93	**137**	25	255	0	50	34	84	0	0	0	0	36	**69**	0	105	444
Total Volume	380	495	130	1005	0	208	139	347	0	0	0	0	155	244	0	399	1751
% App. Total	37.8	49.3	12.9		0	59.9	40.1		0	0	0		38.8	61.2	0		
PHF	.931	.903	.903	.970	.000	.788	.790	.789	.000	.000	.000	.000	.718	.884	.000	.915	.966

111th St and Marshfield Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/30/2012
Page No : 6

Groups Printed- SU

	Marshfield Ave From North				111th St From East				Marshfield Ave From South				111th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	6	2	7	15	0	2	0	2	0	0	0	0	0	4	0	4	21
04:15 PM	2	0	10	12	0	3	2	5	0	0	0	0	0	4	0	4	21
04:30 PM	0	2	8	10	0	1	3	4	0	0	0	0	0	3	0	3	17
04:45 PM	0	0	9	9	0	2	0	2	0	0	0	0	0	2	0	2	13
Total	8	4	34	46	0	8	5	13	0	0	0	0	0	13	0	13	72
05:00 PM	0	0	4	4	0	2	1	3	0	0	0	0	2	4	0	6	13
05:15 PM	1	4	4	9	0	2	1	3	0	0	0	0	0	2	0	2	14
05:30 PM	0	2	0	2	0	1	0	1	0	0	0	0	0	2	0	2	5
05:45 PM	1	2	2	5	0	1	0	1	0	0	0	0	0	1	0	1	7
Total	2	8	10	20	0	6	2	8	0	0	0	0	2	9	0	11	39
Grand Total	10	12	44	66	0	14	7	21	0	0	0	0	2	22	0	24	111
Apprch %	15.2	18.2	66.7		0	66.7	33.3		0	0	0		8.3	91.7	0		
Total %	9	10.8	39.6	59.5	0	12.6	6.3	18.9	0	0	0	0	1.8	19.8	0	21.6	

111th St and Marshfield Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/30/2012
Page No : 7

Groups Printed- MU

	Marshfield Ave From North				111th St From East				Marshfield Ave From South				111th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Grand Total	1	0	0	1	0	1	0	1	0	0	0	0	0	0	0	0	2
Apprch %	100	0	0		0	100	0		0	0	0		0	0	0		
Total %	50	0	0	50	0	50	0	50	0	0	0	0	0	0	0	0	

111th St and Marshfield Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 5/30/2012
Page No : 8

Groups Printed- Peds & Bikes

	Marshfield Ave Crossing North Leg			111th St Crossing East Leg			Marshfield Ave Crossing South Leg			111th St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
04:00 PM	0	2	2	0	0	0	1	0	1	0	0	0	3
04:15 PM	0	3	3	0	0	0	0	2	2	0	1	1	6
04:30 PM	0	2	2	0	0	0	0	5	5	0	0	0	7
04:45 PM	0	2	2	0	0	0	0	1	1	0	0	0	3
Total	0	9	9	0	0	0	1	8	9	0	1	1	19
05:00 PM	0	2	2	0	0	0	0	2	2	0	1	1	5
05:15 PM	0	15	15	0	0	0	0	0	0	0	0	0	15
05:30 PM	0	0	0	0	0	0	0	1	1	0	0	0	1
05:45 PM	0	1	1	0	0	0	0	0	0	0	0	0	1
Total	0	18	18	0	0	0	0	3	3	0	1	1	22
Grand Total	0	27	27	0	0	0	1	11	12	0	2	2	41
Apprch %	0	100		0	0		8.3	91.7		0	100		
Total %	0	65.9	65.9	0	0	0	2.4	26.8	29.3	0	4.9	4.9	

111th St and Martin Luther King Dr
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/12/2012
Page No : 1

Groups Printed- PC - SU - MU

	Martin Luther King Dr				111th St				Martin Luther King Dr				111th St				
	From North				From East				From South				From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	6	11	7	24	9	36	0	45	5	24	2	31	3	24	8	35	135
07:15 AM	9	14	4	27	20	56	1	77	4	12	4	20	3	58	7	68	192
07:30 AM	18	19	9	46	15	73	2	90	14	28	4	46	1	61	14	76	258
07:45 AM	24	9	11	44	17	132	4	153	11	27	12	50	4	65	15	84	331
Total	57	53	31	141	61	297	7	365	34	91	22	147	11	208	44	263	916
08:00 AM	21	25	5	51	19	118	7	144	10	25	4	39	5	85	20	110	344
08:15 AM	9	20	10	39	12	94	2	108	6	22	8	36	5	80	7	92	275
08:30 AM	11	18	5	34	15	85	5	105	14	30	8	52	4	59	15	78	269
08:45 AM	6	20	13	39	12	87	3	102	11	32	4	47	7	54	19	80	268
Total	47	83	33	163	58	384	17	459	41	109	24	174	21	278	61	360	1156
Grand Total	104	136	64	304	119	681	24	824	75	200	46	321	32	486	105	623	2072
Apprch %	34.2	44.7	21.1		14.4	82.6	2.9		23.4	62.3	14.3		5.1	78	16.9		
Total %	5	6.6	3.1	14.7	5.7	32.9	1.2	39.8	3.6	9.7	2.2	15.5	1.5	23.5	5.1	30.1	
PC	92	133	63	288	117	652	24	793	62	194	46	302	32	458	95	585	1968
% PC	88.5	97.8	98.4	94.7	98.3	95.7	100	96.2	82.7	97	100	94.1	100	94.2	90.5	93.9	95
SU	12	3	1	16	2	29	0	31	13	6	0	19	0	25	10	35	101
% SU	11.5	2.2	1.6	5.3	1.7	4.3	0	3.8	17.3	3	0	5.9	0	5.1	9.5	5.6	4.9
MU	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	3
% MU	0	0	0	0	0	0	0	0	0	0	0	0	0	0.6	0	0.5	0.1

	Martin Luther King Dr				111th St				Martin Luther King Dr				111th St				
	From North				From East				From South				From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	**24**	9	**11**	44	17	**132**	4	**153**	11	27	**12**	50	4	65	15	84	331
08:00 AM	21	**25**	5	**51**	**19**	118	**7**	144	10	25	4	39	**5**	**85**	**20**	**110**	**344**
08:15 AM	9	20	10	39	12	94	2	108	6	22	8	36	5	80	7	92	275
08:30 AM	11	18	5	34	15	85	5	105	**14**	**30**	8	**52**	4	59	15	78	269
Total Volume	65	72	31	168	63	429	18	510	41	104	32	177	18	289	57	364	1219
% App. Total	38.7	42.9	18.5		12.4	84.1	3.5		23.2	58.8	18.1		4.9	79.4	15.7		
PHF	.677	.720	.705	.824	.829	.813	.643	.833	.732	.867	.667	.851	.900	.850	.713	.827	.886

111th St and Martin Luther King Dr
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/12/2012
Page No : 2

Groups Printed- SU

	Martin Luther King Dr From North				111th St From East				Martin Luther King Dr From South				111th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	2	0	1	3	1	1	0	2	2	1	0	3	0	1	2	3	11
07:15 AM	2	1	0	3	0	4	0	4	0	1	0	1	0	6	1	7	15
07:30 AM	1	1	0	2	1	5	0	6	4	1	0	5	0	3	1	4	17
07:45 AM	1	1	0	2	0	3	0	3	2	0	0	2	0	3	1	4	11
Total	6	3	1	10	2	13	0	15	8	3	0	11	0	13	5	18	54
08:00 AM	3	0	0	3	0	5	0	5	1	0	0	1	0	3	1	4	13
08:15 AM	1	0	0	1	0	5	0	5	2	2	0	4	0	3	1	4	14
08:30 AM	1	0	0	1	0	3	0	3	1	1	0	2	0	3	2	5	11
08:45 AM	1	0	0	1	0	3	0	3	1	0	0	1	0	3	1	4	9
Total	6	0	0	6	0	16	0	16	5	3	0	8	0	12	5	17	47
Grand Total	12	3	1	16	2	29	0	31	13	6	0	19	0	25	10	35	101
Apprch %	75	18.8	6.2		6.5	93.5	0		68.4	31.6	0		0	71.4	28.6		
Total %	11.9	3	1	15.8	2	28.7	0	30.7	12.9	5.9	0	18.8	0	24.8	9.9	34.7	

111th St and Martin Luther King Dr
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/12/2012
Page No : 3

Groups Printed- MU

	Martin Luther King Dr From North				111th St From East				Martin Luther King Dr From South				111th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	3
Apprch %	0	0	0		0	0	0		0	0	0		0	100	0		
Total %	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	100	

111th St and Martin Luther King Dr
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 6/12/2012
Page No : 4

Groups Printed- Peds & Bikes

	Martin Luther King Dr Crossing North Leg			111th St Crossing East Leg			Martin Luther King Dr Crossing South Leg			111th St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
07:00 AM	0	4	4	0	1	1	1	6	7	2	2	4	16
07:15 AM	0	4	4	0	2	2	0	5	5	0	1	1	12
07:30 AM	0	6	6	0	1	1	0	16	16	0	7	7	30
07:45 AM	0	6	6	0	0	0	0	7	7	0	8	8	21
Total	0	20	20	0	4	4	1	34	35	2	18	20	79
08:00 AM	0	6	6	0	1	1	0	9	9	0	0	0	16
08:15 AM	0	4	4	0	1	1	2	8	10	1	3	4	19
08:30 AM	0	5	5	0	2	2	0	6	6	0	0	0	13
08:45 AM	0	2	2	0	5	5	0	9	9	0	2	2	18
Total	0	17	17	0	9	9	2	32	34	1	5	6	66
Grand Total	0	37	37	0	13	13	3	66	69	3	23	26	145
Apprch %	0	100		0	100		4.3	95.7		11.5	88.5		
Total %	0	25.5	25.5	0	9	9	2.1	45.5	47.6	2.1	15.9	17.9	

111th St and Martin Luther King Dr
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/12/2012

Groups Printed- PC - SU - MU

	Martin Luther King Dr From North				111th St From East				Martin Luther King Dr From South				111th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	20	28	13	61	9	76	5	90	14	27	2	43	1	71	14	86	280
04:15 PM	21	34	12	67	6	70	3	79	11	21	4	36	1	73	14	88	270
04:30 PM	9	41	17	67	15	59	5	79	8	18	4	30	3	80	13	96	272
04:45 PM	14	34	19	67	10	67	6	83	15	27	6	48	3	76	14	93	291
Total	64	137	61	262	40	272	19	331	48	93	16	157	8	300	55	363	1113
05:00 PM	17	31	18	66	12	70	5	87	9	19	6	34	7	61	7	75	262
05:15 PM	17	28	12	57	12	73	4	89	9	44	7	60	4	63	17	84	290
05:30 PM	19	53	13	85	15	66	9	90	10	26	4	40	2	62	9	73	288
05:45 PM	7	30	18	55	11	53	4	68	14	30	5	49	5	67	12	84	256
Total	60	142	61	263	50	262	22	334	42	119	22	183	18	253	45	316	1096
Grand Total	124	279	122	525	90	534	41	665	90	212	38	340	26	553	100	679	2209
Apprch %	23.6	53.1	23.2		13.5	80.3	6.2		26.5	62.4	11.2		3.8	81.4	14.7		
Total %	5.6	12.6	5.5	23.8	4.1	24.2	1.9	30.1	4.1	9.6	1.7	15.4	1.2	25	4.5	30.7	
PC	113	279	122	514	89	517	41	647	82	211	38	331	26	533	92	651	2143
% PC	91.1	100	100	97.9	98.9	96.8	100	97.3	91.1	99.5	100	97.4	100	96.4	92	95.9	97
SU	11	0	0	11	1	17	0	18	8	1	0	9	0	20	8	28	66
% SU	8.9	0	0	2.1	1.1	3.2	0	2.7	8.9	0.5	0	2.6	0	3.6	8	4.1	3
MU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% MU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	Martin Luther King Dr From North				111th St From East				Martin Luther King Dr From South				111th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	14	34	**19**	67	10	67	6	83	**15**	27	6	48	3	**76**	14	**93**	**291**
05:00 PM	17	31	18	66	12	70	5	87	9	19	6	34	**7**	61	7	75	262
05:15 PM	17	28	12	57	12	**73**	4	89	9	**44**	**7**	**60**	4	63	**17**	84	290
05:30 PM	**19**	**53**	13	**85**	**15**	66	**9**	**90**	10	26	4	40	2	62	9	73	288
Total Volume	67	146	62	275	49	276	24	349	43	116	23	182	16	262	47	325	1131
% App. Total	24.4	53.1	22.5		14	79.1	6.9		23.6	63.7	12.6		4.9	80.6	14.5		
PHF	.882	.689	.816	.809	.817	.945	.667	.969	.717	.659	.821	.758	.571	.862	.691	.874	.972

111th St and Martin Luther King Dr
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/12/2012

Groups Printed- SU

	Martin Luther King Dr From North				111th St From East				Martin Luther King Dr From South				111th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	2	0	0	2	0	2	0	2	0	0	0	0	0	2	1	3	7
04:15 PM	2	0	0	2	1	2	0	3	2	0	0	2	0	5	1	6	13
04:30 PM	1	0	0	1	0	1	0	1	1	0	0	1	0	1	1	2	5
04:45 PM	1	0	0	1	0	4	0	4	1	0	0	1	0	3	1	4	10
Total	6	0	0	6	1	9	0	10	4	0	0	4	0	11	4	15	35
05:00 PM	2	0	0	2	0	2	0	2	1	0	0	1	0	3	1	4	9
05:15 PM	1	0	0	1	0	2	0	2	1	1	0	2	0	0	2	2	7
05:30 PM	1	0	0	1	0	3	0	3	1	0	0	1	0	4	1	5	10
05:45 PM	1	0	0	1	0	1	0	1	1	0	0	1	0	2	0	2	5
Total	5	0	0	5	0	8	0	8	4	1	0	5	0	9	4	13	31
Grand Total	11	0	0	11	1	17	0	18	8	1	0	9	0	20	8	28	66
Apprch %	100	0	0		5.6	94.4	0		88.9	11.1	0		0	71.4	28.6		
Total %	16.7	0	0	16.7	1.5	25.8	0	27.3	12.1	1.5	0	13.6	0	30.3	12.1	42.4	

111th St and Martin Luther King Dr
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/12/2012
Page No : 7

Groups Printed- MU

	Martin Luther King Dr From North				111th St From East				Martin Luther King Dr From South				111th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0		0	0	0		0	0	0		0	0	0		
Total %																	

11th St and Martin Luther King Dr
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 6/12/2012
Page No : 8

Groups Printed- Peds & Bikes

	Martin Luther King Dr Crossing North Leg			111th St Crossing East Leg			Martin Luther King Dr Crossing South Leg			111th St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
04:00 PM	0	6	6	0	2	2	0	16	16	0	5	5	29
04:15 PM	0	14	14	0	6	6	0	20	20	0	6	6	46
04:30 PM	0	3	3	0	3	3	0	15	15	0	0	0	21
04:45 PM	0	7	7	0	3	3	2	25	27	0	2	2	39
Total	0	30	30	0	14	14	2	76	78	0	13	13	135
05:00 PM	0	7	7	0	7	7	0	3	3	0	2	2	19
05:15 PM	0	6	6	0	25	25	0	15	15	0	1	1	47
05:30 PM	0	1	1	0	2	2	3	16	19	1	6	7	29
05:45 PM	0	10	10	0	2	2	1	13	14	0	0	0	26
Total	0	24	24	0	36	36	4	47	51	1	9	10	121
Grand Total	0	54	54	0	50	50	6	123	129	1	22	23	256
Apprch %	0	100		0	100		4.7	95.3		4.3	95.7		
Total %	0	21.1	21.1	0	19.5	19.5	2.3	48	50.4	0.4	8.6	9	

111th St and Michigan Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/10/2012
Page No : 1

Groups Printed- PC - SU - MU

	Michigan Ave From North				**111th St From East**				**Michigan Ave From South**				**111th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	10	20	5	35	8	32	5	45	3	57	1	61	4	37	9	50	191
07:15 AM	7	23	5	35	22	46	8	76	7	65	2	74	5	56	11	72	257
07:30 AM	9	24	12	45	15	50	11	76	14	60	3	77	6	67	18	91	289
07:45 AM	10	29	10	49	30	85	8	123	11	81	2	94	3	78	17	98	364
Total	36	96	32	164	75	213	32	320	35	263	8	306	18	238	55	311	1101
08:00 AM	8	33	12	53	22	92	11	125	14	82	5	101	4	80	14	98	377
08:15 AM	11	32	7	50	15	86	7	108	5	79	1	85	7	68	15	90	333
08:30 AM	12	30	7	49	12	55	3	70	3	56	6	65	11	89	11	111	295
08:45 AM	8	41	13	62	20	81	12	113	8	49	6	63	12	58	14	84	322
Total	39	136	39	214	69	314	33	416	30	266	18	314	34	295	54	383	1327
Grand Total	75	232	71	378	144	527	65	736	65	529	26	620	52	533	109	694	2428
Apprch %	19.8	61.4	18.8		19.6	71.6	8.8		10.5	85.3	4.2		7.5	76.8	15.7		
Total %	3.1	9.6	2.9	15.6	5.9	21.7	2.7	30.3	2.7	21.8	1.1	25.5	2.1	22	4.5	28.6	
PC	71	202	68	341	141	497	55	693	49	481	25	555	51	503	104	658	2247
% PC	94.7	87.1	95.8	90.2	97.9	94.3	84.6	94.2	75.4	90.9	96.2	89.5	98.1	94.4	95.4	94.8	92.5
SU	4	30	3	37	3	29	10	42	16	47	1	64	1	30	3	34	177
% SU	5.3	12.9	4.2	9.8	2.1	5.5	15.4	5.7	24.6	8.9	3.8	10.3	1.9	5.6	2.8	4.9	7.3
MU	0	0	0	0	0	1	0	1	0	1	0	1	0	0	2	2	4
% MU	0	0	0	0	0	0.2	0	0.1	0	0.2	0	0.2	0	0	1.8	0.3	0.2

	Michigan Ave From North				**111th St From East**				**Michigan Ave From South**				**111th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	10	29	10	49	**30**	85	8	123	11	81	2	94	3	78	**17**	98	364
08:00 AM	8	**33**	**12**	**53**	22	**92**	**11**	**125**	**14**	**82**	5	**101**	4	80	14	98	**377**
08:15 AM	11	32	7	50	15	86	7	108	5	79	1	85	7	68	15	90	333
08:30 AM	**12**	30	7	49	12	55	3	70	3	56	**6**	65	**11**	**89**	11	**111**	295
Total Volume	41	124	36	201	79	318	29	426	33	298	14	345	25	315	57	397	1369
% App. Total	20.4	61.7	17.9		18.5	74.6	6.8		9.6	86.4	4.1		6.3	79.3	14.4		
PHF	.854	.939	.750	.948	.658	.864	.659	.852	.589	.909	.583	.854	.568	.885	.838	.894	.908

111th St and Michigan Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/10/2012
Page No : 2

Groups Printed- SU

	Michigan Ave From North				**111th St From East**				**Michigan Ave From South**				**111th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	4	0	4	2	2	1	5	1	5	0	6	0	4	0	4	19
07:15 AM	0	2	1	3	0	2	1	3	1	8	0	9	0	4	0	4	19
07:30 AM	0	5	1	6	0	5	1	6	5	4	0	9	0	2	1	3	24
07:45 AM	0	5	0	5	0	7	1	8	1	9	0	10	0	2	0	2	25
Total	0	16	2	18	2	16	4	22	8	26	0	34	0	12	1	13	87
08:00 AM	2	4	0	6	0	4	2	6	2	7	0	9	0	8	0	8	29
08:15 AM	0	4	1	5	1	3	1	5	1	6	0	7	0	3	2	5	22
08:30 AM	2	3	0	5	0	5	1	6	2	5	1	8	1	5	0	6	25
08:45 AM	0	3	0	3	0	1	2	3	3	3	0	6	0	2	0	2	14
Total	4	14	1	19	1	13	6	20	8	21	1	30	1	18	2	21	90
Grand Total	4	30	3	37	3	29	10	42	16	47	1	64	1	30	3	34	177
Apprch %	10.8	81.1	8.1		7.1	69	23.8		25	73.4	1.6		2.9	88.2	8.8		
Total %	2.3	16.9	1.7	20.9	1.7	16.4	5.6	23.7	9	26.6	0.6	36.2	0.6	16.9	1.7	19.2	

111th St and Michigan Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/10/2012
Page No : 3

Groups Printed- MU

	Michigan Ave From North				**111th St From East**				**Michigan Ave From South**				**111th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	1	0	1	0	1	0	1	0	0	0	0	2
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
Total	0	0	0	0	0	1	0	1	0	1	0	1	0	0	1	1	3
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
Grand Total	0	0	0	0	0	1	0	1	0	1	0	1	0	0	2	2	4
Apprch %	0	0	0		0	100	0		0	100	0		0	0	100		
Total %	0	0	0	0	0	25	0	25	0	25	0	25	0	0	50	50	

111th St and Michigan Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 5/10/2012
Page No : 4

Groups Printed- Peds & Bikes

	Michigan Ave Crossing North Leg			**111th St Crossing East Leg**			**Michigan Ave Crossing South Leg**			**111th St Crossing West Leg**			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
07:00 AM	0	18	18	0	9	9	2	1	3	0	7	7	37
07:15 AM	0	22	22	1	7	8	0	8	8	0	9	9	47
07:30 AM	0	5	5	0	7	7	0	12	12	0	21	21	45
07:45 AM	0	14	14	0	4	4	0	10	10	0	8	8	36
Total	0	59	59	1	27	28	2	31	33	0	45	45	165
08:00 AM	0	23	23	0	13	13	0	11	11	0	16	16	63
08:15 AM	0	11	11	0	4	4	0	1	1	0	22	22	38
08:30 AM	0	18	18	1	7	8	0	2	2	0	17	17	45
08:45 AM	0	9	9	0	3	3	0	0	0	0	21	21	33
Total	0	61	61	1	27	28	0	14	14	0	76	76	179
Grand Total	0	120	120	2	54	56	2	45	47	0	121	121	344
Apprch %	0	100		3.6	96.4		4.3	95.7		0	100		
Total %	0	34.9	34.9	0.6	15.7	16.3	0.6	13.1	13.7	0	35.2	35.2	

111th St and Michigan Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/10/2012
Page No : 5

Groups Printed- PC - SU - MU

	Michigan Ave From North				**111th St From East**				**Michigan Ave From South**				**111th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	25	60	16	101	9	78	13	100	12	48	9	69	16	70	20	106	376
04:15 PM	20	63	18	101	9	66	8	83	9	74	5	88	25	75	19	119	391
04:30 PM	24	69	13	106	13	56	15	84	19	61	7	87	27	84	17	128	405
04:45 PM	21	59	9	89	6	79	20	105	8	54	7	69	13	66	15	94	357
Total	90	251	56	397	37	279	56	372	48	237	28	313	81	295	71	447	1529
05:00 PM	16	65	15	96	9	70	16	95	10	58	9	77	19	59	11	89	357
05:15 PM	12	85	10	107	9	83	18	110	20	48	10	78	20	74	6	100	395
05:30 PM	20	68	9	97	11	86	17	114	10	48	17	75	15	76	26	117	403
05:45 PM	16	61	12	89	11	77	18	106	12	53	4	69	14	78	12	104	368
Total	64	279	46	389	40	316	69	425	52	207	40	299	68	287	55	410	1523
Grand Total	154	530	102	786	77	595	125	797	100	444	68	612	149	582	126	857	3052
Apprch %	19.6	67.4	13		9.7	74.7	15.7		16.3	72.5	11.1		17.4	67.9	14.7		
Total %	5	17.4	3.3	25.8	2.5	19.5	4.1	26.1	3.3	14.5	2.2	20.1	4.9	19.1	4.1	28.1	
PC	150	503	101	754	77	575	114	766	90	421	67	578	148	561	124	833	2931
% PC	97.4	94.9	99	95.9	100	96.6	91.2	96.1	90	94.8	98.5	94.4	99.3	96.4	98.4	97.2	96
SU	4	27	1	32	0	20	11	31	9	23	1	33	1	21	2	24	120
% SU	2.6	5.1	1	4.1	0	3.4	8.8	3.9	9	5.2	1.5	5.4	0.7	3.6	1.6	2.8	3.9
MU	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
% MU	0	0	0	0	0	0	0	0	1	0	0	0.2	0	0	0	0	0

	Michigan Ave From North				**111th St From East**				**Michigan Ave From South**				**111th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	**25**	60	16	101	9	78	13	100	12	48	**9**	69	16	70	**20**	106	376
04:15 PM	20	63	**18**	101	9	66	8	83	9	**74**	5	**88**	25	75	19	119	391
04:30 PM	24	**69**	13	**106**	**13**	56	15	84	**19**	61	7	87	**27**	**84**	17	**128**	**405**
04:45 PM	21	59	9	89	6	**79**	**20**	**105**	8	54	7	69	13	66	15	94	357
Total Volume	90	251	56	397	37	279	56	372	48	237	28	313	81	295	71	447	1529
% App. Total	22.7	63.2	14.1		9.9	75	15.1		15.3	75.7	8.9		18.1	66	15.9		
PHF	.900	.909	.778	.936	.712	.883	.700	.886	.632	.801	.778	.889	.750	.878	.888	.873	.944

111th St and Michigan Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/10/2012
Page No : 6

Groups Printed- SU

	Michigan Ave From North				111th St From East				Michigan Ave From South				111th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	4	0	4	0	4	2	6	1	1	0	2	0	2	1	3	15
04:15 PM	0	3	0	3	0	4	1	5	0	5	1	6	0	5	1	6	20
04:30 PM	0	1	0	1	0	2	1	3	2	2	0	4	1	3	0	4	12
04:45 PM	1	5	0	6	0	4	2	6	1	3	0	4	0	3	0	3	19
Total	1	13	0	14	0	14	6	20	4	11	1	16	1	13	2	16	66
05:00 PM	1	4	0	5	0	1	2	3	1	3	0	4	0	2	0	2	14
05:15 PM	2	3	1	6	0	1	1	2	1	5	0	6	0	1	0	1	15
05:30 PM	0	4	0	4	0	3	1	4	2	2	0	4	0	2	0	2	14
05:45 PM	0	3	0	3	0	1	1	2	1	2	0	3	0	3	0	3	11
Total	3	14	1	18	0	6	5	11	5	12	0	17	0	8	0	8	54
Grand Total	4	27	1	32	0	20	11	31	9	23	1	33	1	21	2	24	120
Apprch %	12.5	84.4	3.1		0	64.5	35.5		27.3	69.7	3		4.2	87.5	8.3		
Total %	3.3	22.5	0.8	26.7	0	16.7	9.2	25.8	7.5	19.2	0.8	27.5	0.8	17.5	1.7	20	

111th St and Michigan Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/10/2012
Page No : 7

Groups Printed- MU

	Michigan Ave From North				**111th St From East**				**Michigan Ave From South**				**111th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
Apprch %	0	0	0		0	0	0		100	0	0		0	0	0		
Total %	0	0	0	0	0	0	0	0	100	0	0	100	0	0	0	0	

111th St and Michigan Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 5/10/2012
Page No : 8

Groups Printed- Peds & Bikes

	Michigan Ave Crossing North Leg			**111th St Crossing East Leg**			**Michigan Ave Crossing South Leg**			**111th St Crossing West Leg**			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
04:00 PM	0	8	8	0	19	19	0	11	11	0	31	31	69
04:15 PM	0	15	15	0	7	7	0	5	5	0	40	40	67
04:30 PM	0	23	23	1	11	12	0	1	1	0	30	30	66
04:45 PM	0	7	7	0	5	5	0	0	0	0	37	37	49
Total	0	53	53	1	42	43	0	17	17	0	138	138	251
05:00 PM	0	14	14	0	12	12	0	0	0	0	32	32	58
05:15 PM	0	3	3	1	15	16	0	2	2	0	30	30	51
05:30 PM	0	13	13	0	13	13	0	5	5	0	25	25	56
05:45 PM	0	8	8	0	13	13	0	10	10	0	38	38	69
Total	0	38	38	1	53	54	0	17	17	0	125	125	234
Grand Total	0	91	91	2	95	97	0	34	34	0	263	263	485
Apprch %	0	100		2.1	97.9		0	100		0	100		
Total %	0	18.8	18.8	0.4	19.6	20	0	7	7	0	54.2	54.2	

Regina Webster & Associates, Inc.

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www.RWAengineers.com

111th St and State St
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/6/2012
Page No : 1

Groups Printed- PC - SU - MU

	State St From North				**111th St From East**				**State St From South**				**111th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	3	11	7	21	3	62	2	67	14	49	4	67	5	31	7	43	198
07:15 AM	3	14	8	25	9	49	7	65	14	52	9	75	5	40	4	49	214
07:30 AM	3	11	6	20	18	59	5	82	24	55	4	83	6	49	15	70	255
07:45 AM	7	14	12	33	10	77	4	91	15	78	10	103	5	64	13	82	309
Total	16	50	33	99	40	247	18	305	67	234	27	328	21	184	39	244	976
08:00 AM	6	24	7	37	14	78	10	102	19	62	11	92	4	49	6	59	290
08:15 AM	0	25	12	37	19	66	9	94	11	51	11	73	1	42	5	48	252
08:30 AM	4	31	8	43	22	61	7	90	24	60	7	91	6	55	11	72	296
08:45 AM	2	29	8	39	9	67	5	81	20	59	12	91	6	70	8	84	295
Total	12	109	35	156	64	272	31	367	74	232	41	347	17	216	30	263	1133
Grand Total	28	159	68	255	104	519	49	672	141	466	68	675	38	400	69	507	2109
Apprch %	11	62.4	26.7		15.5	77.2	7.3		20.9	69	10.1		7.5	78.9	13.6		
Total %	1.3	7.5	3.2	12.1	4.9	24.6	2.3	31.9	6.7	22.1	3.2	32	1.8	19	3.3	24	
PC	25	153	67	245	101	489	47	637	135	454	65	654	34	369	63	466	2002
% PC	89.3	96.2	98.5	96.1	97.1	94.2	95.9	94.8	95.7	97.4	95.6	96.9	89.5	92.2	91.3	91.9	94.9
SU	3	6	1	10	3	26	2	31	6	12	3	21	4	29	5	38	100
% SU	10.7	3.8	1.5	3.9	2.9	5	4.1	4.6	4.3	2.6	4.4	3.1	10.5	7.2	7.2	7.5	4.7
MU	0	0	0	0	0	4	0	4	0	0	0	0	0	2	1	3	7
% MU	0	0	0	0	0	0.8	0	0.6	0	0	0	0	0	0.5	1.4	0.6	0.3

	State St From North				**111th St From East**				**State St From South**				**111th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	**7**	14	**12**	33	10	77	4	91	15	**78**	10	**103**	5	**64**	**13**	**82**	**309**
08:00 AM	6	24	7	37	14	**78**	**10**	**102**	19	62	**11**	92	4	49	6	59	290
08:15 AM	0	25	12	37	19	66	9	94	11	51	11	73	1	42	5	48	252
08:30 AM	4	**31**	8	**43**	**22**	61	7	90	**24**	60	7	91	**6**	55	11	72	296
Total Volume	17	94	39	150	65	282	30	377	69	251	39	359	16	210	35	261	1147
% App. Total	11.3	62.7	26		17.2	74.8	8		19.2	69.9	10.9		6.1	80.5	13.4		
PHF	.607	.758	.813	.872	.739	.904	.750	.924	.719	.804	.886	.871	.667	.820	.673	.796	.928

111th St and State St
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/6/2012
Page No : 2

Groups Printed- SU

	State St From North				**111th St From East**				**State St From South**				**111th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	4	0	4	1	3	0	4	1	4	2	7	15
07:15 AM	1	1	1	3	1	3	0	4	0	1	1	2	1	3	1	5	14
07:30 AM	0	0	0	0	1	6	0	7	1	1	0	2	1	3	1	5	14
07:45 AM	0	0	0	0	0	3	0	3	0	2	0	2	1	2	0	3	8
Total	1	1	1	3	2	16	0	18	2	7	1	10	4	12	4	20	51
08:00 AM	2	2	0	4	0	4	0	4	0	0	1	1	0	4	1	5	14
08:15 AM	0	1	0	1	0	4	0	4	1	0	1	2	0	4	0	4	11
08:30 AM	0	2	0	2	1	1	1	3	3	3	0	6	0	3	0	3	14
08:45 AM	0	0	0	0	0	1	1	2	0	2	0	2	0	6	0	6	10
Total	2	5	0	7	1	10	2	13	4	5	2	11	0	17	1	18	49
Grand Total	3	6	1	10	3	26	2	31	6	12	3	21	4	29	5	38	100
Apprch %	30	60	10		9.7	83.9	6.5		28.6	57.1	14.3		10.5	76.3	13.2		
Total %	3	6	1	10	3	26	2	31	6	12	3	21	4	29	5	38	

111th St and State St
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/6/2012
Page No : 3

Groups Printed- MU

	State St From North				**111th St From East**				**State St From South**				**111th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
07:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0	2	3
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
08:30 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	1	2
08:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	3	0	3	0	0	0	0	0	0	1	1	4
Grand Total	0	0	0	0	0	4	0	4	0	0	0	0	0	2	1	3	7
Apprch %	0	0	0		0	100	0		0	0	0		0	66.7	33.3		
Total %	0	0	0	0	0	57.1	0	57.1	0	0	0	0	0	28.6	14.3	42.9	

111th St and State St
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 6/6/2012
Page No : 4

Groups Printed- Peds & Bikes

	State St Crossing North Leg			**111th St Crossing East Leg**			**State St Crossing South Leg**			**111th St Crossing West Leg**			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
07:00 AM	0	4	4	0	3	3	1	1	2	0	2	2	11
07:15 AM	1	5	6	0	3	3	0	5	5	0	3	3	17
07:30 AM	0	9	9	0	2	2	0	4	4	0	2	2	17
07:45 AM	0	6	6	1	0	1	0	2	2	0	2	2	11
Total	1	24	25	1	8	9	1	12	13	0	9	9	56
08:00 AM	0	6	6	0	1	1	0	5	5	0	5	5	17
08:15 AM	1	4	5	0	1	1	0	3	3	0	3	3	12
08:30 AM	0	9	9	1	4	5	0	6	6	0	3	3	23
08:45 AM	0	9	9	0	4	4	0	8	8	0	4	4	25
Total	1	28	29	1	10	11	0	22	22	0	15	15	77
Grand Total	2	52	54	2	18	20	1	34	35	0	24	24	133
Apprch %	3.7	96.3		10	90		2.9	97.1		0	100		
Total %	1.5	39.1	40.6	1.5	13.5	15	0.8	25.6	26.3	0	18	18	

111th St and State St
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/6/2012
Page No : 5

Groups Printed- PC - SU - MU

	State St From North				**111th St From East**				**State St From South**				**111th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	14	34	18	66	16	61	21	98	34	52	10	96	9	90	15	114	374
04:15 PM	8	42	23	73	15	65	18	98	20	56	13	89	7	77	14	98	358
04:30 PM	6	47	17	70	11	74	19	104	19	54	9	82	15	52	23	90	346
04:45 PM	12	47	19	78	15	75	21	111	25	34	11	70	7	60	13	80	339
Total	40	170	77	287	57	275	79	411	98	196	43	337	38	279	65	382	1417
05:00 PM	11	53	15	79	18	84	20	122	21	62	13	96	12	62	11	85	382
05:15 PM	11	44	11	66	14	75	17	106	25	54	10	89	7	61	11	79	340
05:30 PM	13	39	20	72	23	107	16	146	17	49	9	75	11	75	10	96	389
05:45 PM	13	39	18	70	15	96	13	124	32	46	10	88	9	57	9	75	357
Total	48	175	64	287	70	362	66	498	95	211	42	348	39	255	41	335	1468
Grand Total	88	345	141	574	127	637	145	909	193	407	85	685	77	534	106	717	2885
Apprch %	15.3	60.1	24.6		14	70.1	16		28.2	59.4	12.4		10.7	74.5	14.8		
Total %	3.1	12	4.9	19.9	4.4	22.1	5	31.5	6.7	14.1	2.9	23.7	2.7	18.5	3.7	24.9	
PC	87	344	141	572	127	622	145	894	188	403	85	676	76	519	102	697	2839
% PC	98.9	99.7	100	99.7	100	97.6	100	98.3	97.4	99	100	98.7	98.7	97.2	96.2	97.2	98.4
SU	1	1	0	2	0	15	0	15	5	4	0	9	1	15	3	19	45
% SU	1.1	0.3	0	0.3	0	2.4	0	1.7	2.6	1	0	1.3	1.3	2.8	2.8	2.6	1.6
MU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
% MU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.9	0.1	0

	State St From North				**111th St From East**				**State St From South**				**111th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	11	**53**	15	**79**	18	84	**20**	122	21	**62**	**13**	**96**	**12**	62	**11**	85	382
05:15 PM	11	44	11	66	14	75	17	106	25	54	10	89	7	61	11	79	340
05:30 PM	**13**	39	**20**	72	**23**	**107**	16	**146**	17	49	9	75	11	**75**	10	**96**	**389**
05:45 PM	13	39	18	70	15	96	13	124	**32**	46	10	88	9	57	9	75	357
Total Volume	48	175	64	287	70	362	66	498	95	211	42	348	39	255	41	335	1468
% App. Total	16.7	61	22.3		14.1	72.7	13.3		27.3	60.6	12.1		11.6	76.1	12.2		
PHF	.923	.825	.800	.908	.761	.846	.825	.853	.742	.851	.808	.906	.813	.850	.932	.872	.943

111th St and State St
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/6/2012
Page No : 6

Groups Printed- SU

	State St From North				111th St From East				State St From South				111th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	1	0	1	0	3	0	3	1	0	0	1	1	2	0	3	8
04:15 PM	0	0	0	0	0	3	0	3	1	0	0	1	0	2	1	3	7
04:30 PM	1	0	0	1	0	3	0	3	1	0	0	1	0	2	1	3	8
04:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
Total	1	1	0	2	0	10	0	10	3	0	0	3	1	7	2	10	25
05:00 PM	0	0	0	0	0	1	0	1	1	3	0	4	0	2	0	2	7
05:15 PM	0	0	0	0	0	2	0	2	1	0	0	1	0	4	0	4	7
05:30 PM	0	0	0	0	0	1	0	1	0	1	0	1	0	1	1	2	4
05:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
Total	0	0	0	0	0	5	0	5	2	4	0	6	0	8	1	9	20
Grand Total	1	1	0	2	0	15	0	15	5	4	0	9	1	15	3	19	45
Apprch %	50	50	0		0	100	0		55.6	44.4	0		5.3	78.9	15.8		
Total %	2.2	2.2	0	4.4	0	33.3	0	33.3	11.1	8.9	0	20	2.2	33.3	6.7	42.2	

111th St and State St
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/6/2012

Groups Printed- MU

	State St From North				111th St From East				State St From South				111th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
Apprch %	0	0	0		0	0	0		0	0	0		0	0	100		
Total %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	100	

111th St and State St
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 6/6/2012
Page No : 8

Groups Printed- Peds & Bikes

	State St Crossing North Leg			**111th St Crossing East Leg**			**State St Crossing South Leg**			**111th St Crossing West Leg**			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
04:00 PM	0	14	14	0	1	1	4	6	10	1	7	8	33
04:15 PM	0	16	16	0	4	4	1	12	13	0	4	4	37
04:30 PM	2	12	14	0	11	11	0	11	11	1	2	3	39
04:45 PM	0	6	6	0	2	2	0	13	13	3	6	9	30
Total	2	48	50	0	18	18	5	42	47	5	19	24	139
05:00 PM	0	8	8	1	5	6	0	6	6	1	5	6	26
05:15 PM	0	5	5	2	7	9	0	12	12	0	3	3	29
05:30 PM	0	3	3	0	5	5	0	6	6	0	6	6	20
05:45 PM	0	4	4	0	3	3	0	7	7	0	2	2	16
Total	0	20	20	3	20	23	0	31	31	1	16	17	91
Grand Total	2	68	70	3	38	41	5	73	78	6	35	41	230
Apprch %	2.9	97.1		7.3	92.7		6.4	93.6		14.6	85.4		
Total %	0.9	29.6	30.4	1.3	16.5	17.8	2.2	31.7	33.9	2.6	15.2	17.8	

111th St and Wentworth Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/16/2012
Page No : 1

Groups Printed- PC - SU - MU

	Wentworth Ave From North				**111th St From East**				**Wentworth Ave From South**				**111th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	6	15	3	24	8	31	5	44	10	21	3	34	1	45	4	50	152
07:15 AM	4	16	8	28	2	48	5	55	3	29	6	38	1	55	6	62	183
07:30 AM	4	23	9	36	10	49	1	60	8	33	3	44	7	90	4	101	241
07:45 AM	6	19	11	36	10	68	5	83	10	33	4	47	6	56	12	74	240
Total	20	73	31	124	30	196	16	242	31	116	16	163	15	246	26	287	816
08:00 AM	3	29	11	43	10	68	2	80	4	29	3	36	6	81	5	92	251
08:15 AM	5	29	17	51	8	77	8	93	6	45	3	54	5	79	14	98	296
08:30 AM	12	23	16	51	7	59	2	68	5	25	7	37	10	86	6	102	258
08:45 AM	4	26	12	42	10	97	5	112	11	25	9	45	5	69	10	84	283
Total	24	107	56	187	35	301	17	353	26	124	22	172	26	315	35	376	1088
Grand Total	44	180	87	311	65	497	33	595	57	240	38	335	41	561	61	663	1904
Apprch %	14.1	57.9	28		10.9	83.5	5.5		17	71.6	11.3		6.2	84.6	9.2		
Total %	2.3	9.5	4.6	16.3	3.4	26.1	1.7	31.2	3	12.6	2	17.6	2.2	29.5	3.2	34.8	
PC	42	175	83	300	60	458	30	548	56	227	37	320	40	524	56	620	1788
% PC	95.5	97.2	95.4	96.5	92.3	92.2	90.9	92.1	98.2	94.6	97.4	95.5	97.6	93.4	91.8	93.5	93.9
SU	2	5	3	10	5	38	3	46	1	12	1	14	1	35	4	40	110
% SU	4.5	2.8	3.4	3.2	7.7	7.6	9.1	7.7	1.8	5	2.6	4.2	2.4	6.2	6.6	6	5.8
MU	0	0	1	1	0	1	0	1	0	1	0	1	0	2	1	3	6
% MU	0	0	1.1	0.3	0	0.2	0	0.2	0	0.4	0	0.3	0	0.4	1.6	0.5	0.3

	Wentworth Ave From North				**111th St From East**				**Wentworth Ave From South**				**111th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	3	**29**	11	43	**10**	68	2	80	4	29	3	36	6	81	5	92	251
08:15 AM	5	29	**17**	**51**	8	77	**8**	93	6	**45**	3	**54**	5	79	**14**	98	**296**
08:30 AM	**12**	23	16	51	7	59	2	68	5	25	7	37	**10**	**86**	6	**102**	258
08:45 AM	4	26	12	42	10	**97**	5	**112**	**11**	25	**9**	45	5	69	10	84	283
Total Volume	24	107	56	187	35	301	17	353	26	124	22	172	26	315	35	376	1088
% App. Total	12.8	57.2	29.9		9.9	85.3	4.8		15.1	72.1	12.8		6.9	83.8	9.3		
PHF	.500	.922	.824	.917	.875	.776	.531	.788	.591	.689	.611	.796	.650	.916	.625	.922	.919

111th St and Wentworth Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/16/2012
Page No : 2

Groups Printed- SU

	Wentworth Ave From North				111th St From East				Wentworth Ave From South				111th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	3	1	4	0	1	0	1	0	3	1	4	9
07:15 AM	0	0	1	1	0	3	0	3	0	5	0	5	0	5	1	6	15
07:30 AM	0	1	0	1	0	4	0	4	1	0	0	1	0	5	0	5	11
07:45 AM	0	1	1	2	1	6	2	9	0	1	0	1	1	4	0	5	17
Total	0	2	2	4	1	16	3	20	1	7	0	8	1	17	2	20	52
08:00 AM	1	2	0	3	3	6	0	9	0	1	0	1	0	5	0	5	18
08:15 AM	0	0	0	0	1	4	0	5	0	2	0	2	0	4	0	4	11
08:30 AM	1	1	1	3	0	4	0	4	0	1	0	1	0	5	0	5	13
08:45 AM	0	0	0	0	0	8	0	8	0	1	1	2	0	4	2	6	16
Total	2	3	1	6	4	22	0	26	0	5	1	6	0	18	2	20	58
Grand Total	2	5	3	10	5	38	3	46	1	12	1	14	1	35	4	40	110
Apprch %	20	50	30		10.9	82.6	6.5		7.1	85.7	7.1		2.5	87.5	10		
Total %	1.8	4.5	2.7	9.1	4.5	34.5	2.7	41.8	0.9	10.9	0.9	12.7	0.9	31.8	3.6	36.4	

111th St and Wentworth Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/16/2012
Page No : 3

Groups Printed- MU

	Wentworth Ave From North				**111th St From East**				**Wentworth Ave From South**				**111th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	1	2
07:45 AM	0	0	1	1	0	1	0	1	0	0	0	0	0	1	0	1	3
Total	0	0	1	1	0	1	0	1	0	1	0	1	0	2	0	2	5
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
Grand Total	0	0	1	1	0	1	0	1	0	1	0	1	0	2	1	3	6
Apprch %	0	0	100		0	100	0		0	100	0		0	66.7	33.3		
Total %	0	0	16.7	16.7	0	16.7	0	16.7	0	16.7	0	16.7	0	33.3	16.7	50	

111th St and Wentworth Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 5/16/2012
Page No : 4

Groups Printed- Peds & Bikes

	Wentworth Ave Crossing North Leg			**111th St Crossing East Leg**			**Wentworth Ave Crossing South Leg**			**111th St Crossing West Leg**			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
07:00 AM	0	2	2	0	2	2	0	4	4	0	4	4	12
07:15 AM	0	3	3	0	2	2	0	3	3	0	5	5	13
07:30 AM	0	7	7	0	0	0	0	1	1	0	8	8	16
07:45 AM	0	6	6	0	3	3	0	6	6	0	1	1	16
Total	0	18	18	0	7	7	0	14	14	0	18	18	57
08:00 AM	1	11	12	0	4	4	0	2	2	0	14	14	32
08:15 AM	0	5	5	0	7	7	0	7	7	1	5	6	25
08:30 AM	0	5	5	0	2	2	0	7	7	0	1	1	15
08:45 AM	0	1	1	0	3	3	0	1	1	0	4	4	9
Total	1	22	23	0	16	16	0	17	17	1	24	25	81
Grand Total	1	40	41	0	23	23	0	31	31	1	42	43	138
Apprch %	2.4	97.6		0	100		0	100		2.3	97.7		
Total %	0.7	29	29.7	0	16.7	16.7	0	22.5	22.5	0.7	30.4	31.2	

111th St and Wentworth Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/16/2012

Groups Printed- PC - SU - MU

	Wentworth Ave From North				**111th St From East**				**Wentworth Ave From South**				**111th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	11	42	9	62	14	70	12	96	8	27	4	39	3	78	11	92	289
04:15 PM	4	40	16	60	7	77	12	96	7	19	7	33	6	73	7	86	275
04:30 PM	6	36	10	52	3	63	10	76	7	26	9	42	10	69	8	87	257
04:45 PM	5	48	14	67	12	68	11	91	8	19	4	31	11	56	6	73	262
Total	26	166	49	241	36	278	45	359	30	91	24	145	30	276	32	338	1083
05:00 PM	12	31	12	55	13	80	14	107	7	20	3	30	6	55	1	62	254
05:15 PM	10	35	14	59	9	73	8	90	10	23	4	37	10	78	10	98	284
05:30 PM	10	34	17	61	13	65	5	83	2	26	7	35	4	77	7	88	267
05:45 PM	8	42	7	57	6	67	5	78	11	22	8	41	7	79	1	87	263
Total	40	142	50	232	41	285	32	358	30	91	22	143	27	289	19	335	1068
Grand Total	66	308	99	473	77	563	77	717	60	182	46	288	57	565	51	673	2151
Apprch %	14	65.1	20.9		10.7	78.5	10.7		20.8	63.2	16		8.5	84	7.6		
Total %	3.1	14.3	4.6	22	3.6	26.2	3.6	33.3	2.8	8.5	2.1	13.4	2.6	26.3	2.4	31.3	
PC	65	306	97	468	75	543	76	694	58	181	46	285	56	547	50	653	2100
% PC	98.5	99.4	98	98.9	97.4	96.4	98.7	96.8	96.7	99.5	100	99	98.2	96.8	98	97	97.6
SU	1	2	2	5	2	20	1	23	2	1	0	3	1	17	0	18	49
% SU	1.5	0.6	2	1.1	2.6	3.6	1.3	3.2	3.3	0.5	0	1	1.8	3	0	2.7	2.3
MU	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	2
% MU	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	2	0.3	0.1

	Wentworth Ave From North				**111th St From East**				**Wentworth Ave From South**				**111th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	**11**	42	9	62	**14**	70	**12**	**96**	**8**	**27**	4	39	3	**78**	**11**	**92**	**289**
04:15 PM	4	40	**16**	60	7	**77**	12	96	7	19	7	33	6	73	7	86	275
04:30 PM	6	36	10	52	3	63	10	76	7	26	**9**	**42**	10	69	8	87	257
04:45 PM	5	**48**	14	**67**	12	68	11	91	8	19	4	31	**11**	56	6	73	262
Total Volume	26	166	49	241	36	278	45	359	30	91	24	145	30	276	32	338	1083
% App. Total	10.8	68.9	20.3		10	77.4	12.5		20.7	62.8	16.6		8.9	81.7	9.5		
PHF	.591	.865	.766	.899	.643	.903	.938	.935	.938	.843	.667	.863	.682	.885	.727	.918	.937

111th St and Wentworth Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/16/2012
Page No : 6

Groups Printed- SU

	Wentworth Ave From North				**111th St From East**				**Wentworth Ave From South**				**111th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	1	0	0	1	1	3	0	4	0	0	0	0	0	4	0	4	9
04:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0	2	3
04:30 PM	0	1	0	1	1	5	0	6	0	0	0	0	0	2	0	2	9
04:45 PM	0	1	0	1	0	3	0	3	0	1	0	1	1	2	0	3	8
Total	1	2	0	3	2	12	0	14	0	1	0	1	1	10	0	11	29
05:00 PM	0	0	1	1	0	4	1	5	0	0	0	0	0	3	0	3	9
05:15 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	2	0	2	4
05:30 PM	0	0	1	1	0	1	0	1	2	0	0	2	0	1	0	1	5
05:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
Total	0	0	2	2	0	8	1	9	2	0	0	2	0	7	0	7	20
Grand Total	1	2	2	5	2	20	1	23	2	1	0	3	1	17	0	18	49
Apprch %	20	40	40		8.7	87	4.3		66.7	33.3	0		5.6	94.4	0		
Total %	2	4.1	4.1	10.2	4.1	40.8	2	46.9	4.1	2	0	6.1	2	34.7	0	36.7	

111th St and Wentworth Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/16/2012
Page No : 7

Groups Printed- MU

	Wentworth Ave From North				**111th St From East**				**Wentworth Ave From South**				**111th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	2
Apprch %	0	0	0		0	0	0		0	0	0		0	50	50		
Total %	0	0	0	0	0	0	0	0	0	0	0	0	0	50	50	100	

111th St and Wentworth Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 5/16/2012
Page No : 8

Groups Printed- Peds & Bikes

	Wentworth Ave Crossing North Leg			111th St Crossing East Leg			Wentworth Ave Crossing South Leg			111th St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
04:00 PM	0	0	0	1	2	3	0	2	2	0	1	1	6
04:15 PM	0	2	2	0	4	4	0	5	5	0	21	21	32
04:30 PM	0	3	3	0	8	8	0	6	6	0	6	6	23
04:45 PM	0	14	14	0	3	3	0	7	7	2	5	7	31
Total	0	19	19	1	17	18	0	20	20	2	33	35	92
05:00 PM	2	10	12	2	8	10	1	6	7	1	18	19	48
05:15 PM	0	6	6	0	3	3	0	2	2	0	5	5	16
05:30 PM	0	8	8	0	10	10	0	8	8	0	13	13	39
05:45 PM	1	8	9	0	3	3	1	9	10	3	23	26	48
Total	3	32	35	2	24	26	2	25	27	4	59	63	151
Grand Total	3	51	54	3	41	44	2	45	47	6	92	98	243
Apprch %	5.6	94.4		6.8	93.2		4.3	95.7		6.1	93.9		
Total %	1.2	21	22.2	1.2	16.9	18.1	0.8	18.5	19.3	2.5	37.9	40.3	

112th Pl and Hamlet St
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/7/2012
Page No : 1

Groups Printed- PC - SU - MU

	Hamlet St From North				112th Pl From East				Hamlet St From South				112th Pl From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	2	12	0	14	4	94	81	179	0	10	102	112	305
07:15 AM	0	0	0	0	1	18	0	19	8	135	112	255	0	8	111	119	393
07:30 AM	0	0	0	0	1	15	0	16	13	128	148	289	0	8	91	99	404
07:45 AM	0	0	0	0	0	16	0	16	11	155	131	297	0	19	81	100	413
Total	0	0	0	0	4	61	0	65	36	512	472	1020	0	45	385	430	1515
08:00 AM	0	0	0	0	1	12	0	13	13	156	109	278	0	13	101	114	405
08:15 AM	0	0	0	0	1	13	0	14	21	158	143	322	0	13	75	88	424
08:30 AM	0	0	0	0	1	10	0	11	16	110	99	225	0	10	100	110	346
08:45 AM	0	0	0	0	0	26	0	26	12	95	115	222	0	11	92	103	351
Total	0	0	0	0	3	61	0	64	62	519	466	1047	0	47	368	415	1526
Grand Total	0	0	0	0	7	122	0	129	98	1031	938	2067	0	92	753	845	3041
Apprch %	0	0	0		5.4	94.6	0		4.7	49.9	45.4		0	10.9	89.1		
Total %	0	0	0	0	0.2	4	0	4.2	3.2	33.9	30.8	68	0	3	24.8	27.8	
PC	0	0	0	0	7	119	0	126	97	1010	921	2028	0	90	734	824	2978
% PC	0	0	0	0	100	97.5	0	97.7	99	98	98.2	98.1	0	97.8	97.5	97.5	97.9
SU	0	0	0	0	0	3	0	3	1	19	12	32	0	2	11	13	48
% SU	0	0	0	0	0	2.5	0	2.3	1	1.8	1.3	1.5	0	2.2	1.5	1.5	1.6
MU	0	0	0	0	0	0	0	0	0	2	5	7	0	0	8	8	15
% MU	0	0	0	0	0	0	0	0	0	0.2	0.5	0.3	0	0	1.1	0.9	0.5

	Hamlet St From North				112th Pl From East				Hamlet St From South				112th Pl From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	0	0	**1**	15	0	**16**	13	128	**148**	289	0	8	91	99	404
07:45 AM	0	0	0	0	0	**16**	0	16	11	155	131	297	0	**19**	81	100	413
08:00 AM	0	0	0	0	1	12	0	13	13	156	109	278	0	13	**101**	**114**	405
08:15 AM	0	0	0	0	1	13	0	14	**21**	**158**	143	**322**	0	13	75	88	**424**
Total Volume	0	0	0	0	3	56	0	59	58	597	531	1186	0	53	348	401	1646
% App. Total	0	0	0		5.1	94.9	0		4.9	50.3	44.8		0	13.2	86.8		
PHF	.000	.000	.000	.000	.750	.875	.000	.922	.690	.945	.897	.921	.000	.697	.861	.879	.971

112th Pl and Hamlet St
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/7/2012
Page No : 2

Groups Printed- SU

	Hamlet St From North				112th Pl From East				Hamlet St From South				112th Pl From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	1	0	1	0	2	2	4	0	1	1	2	7
07:15 AM	0	0	0	0	0	1	0	1	0	2	5	7	0	0	2	2	10
07:30 AM	0	0	0	0	0	1	0	1	0	3	0	3	0	1	0	1	5
07:45 AM	0	0	0	0	0	0	0	0	1	4	2	7	0	0	1	1	8
Total	0	0	0	0	0	3	0	3	1	11	9	21	0	2	4	6	30
08:00 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1	1	2
08:15 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	3	3	4
08:30 AM	0	0	0	0	0	0	0	0	0	4	2	6	0	0	2	2	8
08:45 AM	0	0	0	0	0	0	0	0	0	3	0	3	0	0	1	1	4
Total	0	0	0	0	0	0	0	0	0	8	3	11	0	0	7	7	18
Grand Total	0	0	0	0	0	3	0	3	1	19	12	32	0	2	11	13	48
Apprch %	0	0	0		0	100	0		3.1	59.4	37.5		0	15.4	84.6		
Total %	0	0	0	0	0	6.2	0	6.2	2.1	39.6	25	66.7	0	4.2	22.9	27.1	

112th Pl and Hamlet St
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/7/2012
Page No : 3

Groups Printed- MU

	Hamlet St From North				112th Pl From East				Hamlet St From South				112th Pl From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
Total	0	0	0	0	0	0	0	0	0	1	1	2	0	0	1	1	3
08:00 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	2	3
08:15 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	2	3
08:30 AM	0	0	0	0	0	0	0	0	0	1	2	3	0	0	3	3	6
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	1	4	5	0	0	7	7	12
Grand Total	0	0	0	0	0	0	0	0	0	2	5	7	0	0	8	8	15
Apprch %	0	0	0		0	0	0		0	28.6	71.4		0	0	100		
Total %	0	0	0	0	0	0	0	0	0	13.3	33.3	46.7	0	0	53.3	53.3	

112th Pl and Hamlet St
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 6/7/2012
Page No : 4

Groups Printed- Peds & Bikes

	Hamlet St Crossing North Leg			112th Pl Crossing East Leg			Hamlet St Crossing South Leg			112th Pl Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
07:00 AM	0	3	3	0	0	0	0	0	0	0	0	0	3
07:15 AM	0	12	12	0	0	0	0	0	0	0	0	0	12
07:30 AM	0	6	6	1	2	3	0	2	2	0	0	0	11
07:45 AM	1	8	9	0	0	0	0	0	0	0	0	0	9
Total	1	29	30	1	2	3	0	2	2	0	0	0	35
08:00 AM	0	6	6	0	0	0	0	0	0	0	0	0	6
08:15 AM	2	10	12	1	2	3	0	0	0	0	0	0	15
08:30 AM	0	4	4	0	1	1	0	2	2	0	0	0	7
08:45 AM	0	12	12	0	0	0	0	0	0	0	0	0	12
Total	2	32	34	1	3	4	0	2	2	0	0	0	40
Grand Total	3	61	64	2	5	7	0	4	4	0	0	0	75
Apprch %	4.7	95.3		28.6	71.4		0	100		0	0		
Total %	4	81.3	85.3	2.7	6.7	9.3	0	5.3	5.3	0	0	0	

112th Pl and Hamlet St
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/7/2012
Page No : 5

Groups Printed- PC - SU - MU

	Hamlet St From North				112th Pl From East				Hamlet St From South				112th Pl From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	17	0	17	10	93	90	193	0	14	80	94	304
04:15 PM	0	0	0	0	0	15	0	15	9	92	83	184	0	24	86	110	309
04:30 PM	0	0	0	0	0	15	0	15	12	84	115	211	0	26	76	102	328
04:45 PM	0	0	0	0	1	18	0	19	18	88	102	208	0	25	75	100	327
Total	0	0	0	0	1	65	0	66	49	357	390	796	0	89	317	406	1268
05:00 PM	0	0	0	0	2	36	0	38	10	76	79	165	0	24	80	104	307
05:15 PM	0	0	0	0	2	22	0	24	15	99	85	199	0	27	74	101	324
05:30 PM	0	0	0	0	0	22	0	22	11	97	104	212	0	16	86	102	336
05:45 PM	0	0	0	0	0	38	0	38	9	97	100	206	0	15	87	102	346
Total	0	0	0	0	4	118	0	122	45	369	368	782	0	82	327	409	1313
Grand Total	0	0	0	0	5	183	0	188	94	726	758	1578	0	171	644	815	2581
Apprch %	0	0	0		2.7	97.3	0		6	46	48		0	21	79		
Total %	0	0	0	0	0.2	7.1	0	7.3	3.6	28.1	29.4	61.1	0	6.6	25	31.6	
PC	0	0	0	0	5	181	0	186	93	719	750	1562	0	168	634	802	2550
% PC	0	0	0	0	100	98.9	0	98.9	98.9	99	98.9	99	0	98.2	98.4	98.4	98.8
SU	0	0	0	0	0	2	0	2	1	4	5	10	0	3	9	12	24
% SU	0	0	0	0	0	1.1	0	1.1	1.1	0.6	0.7	0.6	0	1.8	1.4	1.5	0.9
MU	0	0	0	0	0	0	0	0	0	3	3	6	0	0	1	1	7
% MU	0	0	0	0	0	0	0	0	0	0.4	0.4	0.4	0	0	0.2	0.1	0.3

	Hamlet St From North				112th Pl From East				Hamlet St From South				112th Pl From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	0	0	0	**2**	36	0	**38**	10	76	79	165	0	24	80	**104**	307
05:15 PM	0	0	0	0	2	22	0	24	**15**	**99**	85	199	0	**27**	74	101	324
05:30 PM	0	0	0	0	0	22	0	22	11	97	**104**	**212**	0	16	86	102	336
05:45 PM	0	0	0	0	0	**38**	0	38	9	97	100	206	0	15	**87**	102	**346**
Total Volume	0	0	0	0	4	118	0	122	45	369	368	782	0	82	327	409	1313
% App. Total	0	0	0		3.3	96.7	0		5.8	47.2	47.1		0	20	80		
PHF	.000	.000	.000	.000	.500	.776	.000	.803	.750	.932	.885	.922	.000	.759	.940	.983	.949

112th Pl and Hamlet St
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/7/2012
Page No : 6

Groups Printed- SU

	Hamlet St From North				112th Pl From East				Hamlet St From South				112th Pl From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	1	0	1	0	2	0	2	0	0	1	1	4
04:15 PM	0	0	0	0	0	1	0	1	0	2	1	3	0	1	3	4	8
04:30 PM	0	0	0	0	0	0	0	0	1	0	1	2	0	0	0	0	2
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Total	0	0	0	0	0	2	0	2	1	4	2	7	0	2	4	6	15
05:00 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	3	3	4
05:15 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	1	1	2	3
05:30 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1	1	2
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	3	3	0	1	5	6	9
Grand Total	0	0	0	0	0	2	0	2	1	4	5	10	0	3	9	12	24
Apprch %	0	0	0		0	100	0		10	40	50		0	25	75		
Total %	0	0	0	0	0	8.3	0	8.3	4.2	16.7	20.8	41.7	0	12.5	37.5	50	

112th Pl and Hamlet St
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/7/2012
Page No : 7

Groups Printed- MU

	Hamlet St From North				112th Pl From East				Hamlet St From South				112th Pl From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
04:45 PM	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	2
Total	0	0	0	0	0	0	0	0	0	2	2	4	0	0	0	0	4
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	1	1	2	0	0	1	1	3
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	1	1	2	0	0	1	1	3
Grand Total	0	0	0	0	0	0	0	0	0	3	3	6	0	0	1	1	7
Apprch %	0	0	0		0	0	0		0	50	50		0	0	100		
Total %	0	0	0	0	0	0	0	0	0	42.9	42.9	85.7	0	0	14.3	14.3	

112th Pl and Hamlet St
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 6/7/2012
Page No : 8

Groups Printed- Peds & Bikes

	Hamlet St Crossing North Leg			112th Pl Crossing East Leg			Hamlet St Crossing South Leg			112th Pl Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
04:00 PM	0	2	2	1	0	1	1	0	1	0	0	0	4
04:15 PM	0	3	3	1	1	2	0	1	1	0	0	0	6
04:30 PM	0	2	2	0	1	1	0	0	0	0	0	0	3
04:45 PM	0	2	2	0	0	0	0	0	0	0	0	0	2
Total	0	9	9	2	2	4	1	1	2	0	0	0	15
05:00 PM	1	4	5	1	3	4	0	4	4	0	0	0	13
05:15 PM	0	5	5	0	4	4	0	1	1	0	0	0	10
05:30 PM	0	2	2	1	1	2	0	1	1	0	0	0	5
05:45 PM	0	2	2	0	0	0	0	0	0	0	0	0	2
Total	1	13	14	2	8	10	0	6	6	0	0	0	30
Grand Total	1	22	23	4	10	14	1	7	8	0	0	0	45
Apprch %	4.3	95.7		28.6	71.4		12.5	87.5		0	0		
Total %	2.2	48.9	51.1	8.9	22.2	31.1	2.2	15.6	17.8	0	0	0	

112th Pl and Marshfield Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/6/2012
Page No : 1

Groups Printed- PC - SU - MU

	Marshfield Ave From North				112th Pl From East				Marshfield Ave From South				112th Pl From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	29	37	0	66	0	83	4	87	0	0	0	0	37	108	0	145	298
07:15 AM	48	35	1	84	0	99	5	104	0	0	0	0	63	108	0	171	359
07:30 AM	65	51	1	117	0	148	8	156	0	0	0	0	81	109	0	190	463
07:45 AM	47	54	0	101	0	136	4	140	0	0	0	0	82	135	0	217	458
Total	189	177	2	368	0	466	21	487	0	0	0	0	263	460	0	723	1578
08:00 AM	40	54	1	95	0	149	10	159	0	0	0	0	67	91	0	158	412
08:15 AM	41	56	2	99	0	153	12	165	0	0	0	0	97	107	0	204	468
08:30 AM	38	60	1	99	0	126	7	133	0	0	0	0	80	101	0	181	413
08:45 AM	37	66	3	106	0	152	14	166	0	0	0	0	74	94	0	168	440
Total	156	236	7	399	0	580	43	623	0	0	0	0	318	393	0	711	1733
Grand Total	345	413	9	767	0	1046	64	1110	0	0	0	0	581	853	0	1434	3311
Apprch %	45	53.8	1.2		0	94.2	5.8		0	0	0		40.5	59.5	0		
Total %	10.4	12.5	0.3	23.2	0	31.6	1.9	33.5	0	0	0	0	17.5	25.8	0	43.3	
PC	326	405	9	740	0	1023	62	1085	0	0	0	0	570	829	0	1399	3224
% PC	94.5	98.1	100	96.5	0	97.8	96.9	97.7	0	0	0	0	98.1	97.2	0	97.6	97.4
SU	14	5	0	19	0	21	2	23	0	0	0	0	9	16	0	25	67
% SU	4.1	1.2	0	2.5	0	2	3.1	2.1	0	0	0	0	1.5	1.9	0	1.7	2
MU	5	3	0	8	0	2	0	2	0	0	0	0	2	8	0	10	20
% MU	1.4	0.7	0	1	0	0.2	0	0.2	0	0	0	0	0.3	0.9	0	0.7	0.6

	Marshfield Ave From North				112th Pl From East				Marshfield Ave From South				112th Pl From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	**65**	51	1	**117**	0	148	8	156	0	0	0	0	81	109	0	190	463
07:45 AM	47	54	0	101	0	136	4	140	0	0	0	0	82	**135**	0	**217**	458
08:00 AM	40	54	1	95	0	149	10	159	0	0	0	0	67	91	0	158	412
08:15 AM	41	**56**	**2**	99	0	**153**	**12**	**165**	0	0	0	0	**97**	107	0	204	**468**
Total Volume	193	215	4	412	0	586	34	620	0	0	0	0	327	442	0	769	1801
% App. Total	46.8	52.2	1		0	94.5	5.5		0	0	0		42.5	57.5	0		
PHF	.742	.960	.500	.880	.000	.958	.708	.939	.000	.000	.000	.000	.843	.819	.000	.886	.962

112th Pl and Marshfield Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/6/2012
Page No : 2

Groups Printed- SU

	Marshfield Ave From North				112th Pl From East				Marshfield Ave From South				112th Pl From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	2	1	0	3	0	2	0	2	0	0	0	0	0	4	0	4	9
07:15 AM	0	0	0	0	0	5	0	5	0	0	0	0	1	1	0	2	7
07:30 AM	2	0	0	2	0	1	1	2	0	0	0	0	1	0	0	1	5
07:45 AM	4	0	0	4	0	0	0	0	0	0	0	0	3	3	0	6	10
Total	8	1	0	9	0	8	1	9	0	0	0	0	5	8	0	13	31
08:00 AM	1	1	0	2	0	3	0	3	0	0	0	0	0	0	0	0	5
08:15 AM	2	0	0	2	0	3	1	4	0	0	0	0	0	2	0	2	8
08:30 AM	0	0	0	0	0	3	0	3	0	0	0	0	3	3	0	6	9
08:45 AM	3	3	0	6	0	4	0	4	0	0	0	0	1	3	0	4	14
Total	6	4	0	10	0	13	1	14	0	0	0	0	4	8	0	12	36
Grand Total	14	5	0	19	0	21	2	23	0	0	0	0	9	16	0	25	67
Apprch %	73.7	26.3	0		0	91.3	8.7		0	0	0		36	64	0		
Total %	20.9	7.5	0	28.4	0	31.3	3	34.3	0	0	0	0	13.4	23.9	0	37.3	

112th Pl and Marshfield Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/6/2012
Page No : 3

Groups Printed- MU

	Marshfield Ave From North				112th Pl From East				Marshfield Ave From South				112th Pl From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	3
07:15 AM	2	0	0	2	0	0	0	0	0	0	0	0	0	1	0	1	3
07:30 AM	1	0	0	1	0	0	0	0	0	0	0	0	1	0	0	1	2
07:45 AM	0	1	0	1	0	0	0	0	0	0	0	0	1	0	0	1	2
Total	3	1	0	4	0	0	0	0	0	0	0	0	2	4	0	6	10
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
08:15 AM	1	1	0	2	0	0	0	0	0	0	0	0	0	1	0	1	3
08:30 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
08:45 AM	1	1	0	2	0	1	0	1	0	0	0	0	0	1	0	1	4
Total	2	2	0	4	0	2	0	2	0	0	0	0	0	4	0	4	10
Grand Total	5	3	0	8	0	2	0	2	0	0	0	0	2	8	0	10	20
Apprch %	62.5	37.5	0		0	100	0		0	0	0		20	80	0		
Total %	25	15	0	40	0	10	0	10	0	0	0	0	10	40	0	50	

112th Pl and Marshfield Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 6/6/2012
Page No : 4

Groups Printed- Peds & Bikes

	Marshfield Ave Crossing North Leg			112th Pl Crossing East Leg			Marshfield Ave Crossing South Leg			112th Pl Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
07:00 AM	0	1	1	4	0	4	0	0	0	0	0	0	5
07:15 AM	1	5	6	5	0	5	0	0	0	0	0	0	11
07:30 AM	1	12	13	7	0	7	0	1	1	0	0	0	21
07:45 AM	0	5	5	4	0	4	0	2	2	0	0	0	11
Total	2	23	25	20	0	20	0	3	3	0	0	0	48
08:00 AM	1	4	5	10	0	10	0	0	0	0	0	0	15
08:15 AM	2	1	3	11	0	11	0	0	0	0	0	0	14
08:30 AM	1	6	7	7	0	7	0	0	0	0	0	0	14
08:45 AM	3	10	13	14	0	14	0	0	0	0	0	0	27
Total	7	21	28	42	0	42	0	0	0	0	0	0	70
Grand Total	9	44	53	62	0	62	0	3	3	0	0	0	118
Apprch %	17	83		100	0		0	100		0	0		
Total %	7.6	37.3	44.9	52.5	0	52.5	0	2.5	2.5	0	0	0	

112th Pl and Marshfield Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/6/2012
Page No : 5

Groups Printed- PC - SU - MU

	Marshfield Ave From North				112th Pl From East				Marshfield Ave From South				112th Pl From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	86	93	1	180	0	84	9	93	0	0	0	0	80	94	0	174	447
04:15 PM	71	113	1	185	0	99	11	110	0	0	0	0	97	99	0	196	491
04:30 PM	79	81	3	163	0	125	17	142	0	0	0	0	89	90	0	179	484
04:45 PM	85	105	2	192	0	96	7	103	0	0	0	0	90	113	0	203	498
Total	321	392	7	720	0	404	44	448	0	0	0	0	356	396	0	752	1920
05:00 PM	80	89	3	172	0	86	15	101	0	0	0	0	92	86	0	178	451
05:15 PM	54	99	0	153	0	112	20	132	0	0	0	0	101	104	0	205	490
05:30 PM	72	131	4	207	0	122	14	136	0	0	0	0	90	100	0	190	533
05:45 PM	63	113	2	178	0	80	12	92	0	0	0	0	86	92	0	178	448
Total	269	432	9	710	0	400	61	461	0	0	0	0	369	382	0	751	1922
Grand Total	590	824	16	1430	0	804	105	909	0	0	0	0	725	778	0	1503	3842
Apprch %	41.3	57.6	1.1		0	88.4	11.6		0	0	0		48.2	51.8	0		
Total %	15.4	21.4	0.4	37.2	0	20.9	2.7	23.7	0	0	0	0	18.9	20.2	0	39.1	
PC	584	822	16	1422	0	802	104	906	0	0	0	0	714	768	0	1482	3810
% PC	99	99.8	100	99.4	0	99.8	99	99.7	0	0	0	0	98.5	98.7	0	98.6	99.2
SU	6	2	0	8	0	1	1	2	0	0	0	0	8	10	0	18	28
% SU	1	0.2	0	0.6	0	0.1	1	0.2	0	0	0	0	1.1	1.3	0	1.2	0.7
MU	0	0	0	0	0	1	0	1	0	0	0	0	3	0	0	3	4
% MU	0	0	0	0	0	0.1	0	0.1	0	0	0	0	0.4	0	0	0.2	0.1

	Marshfield Ave From North				112th Pl From East				Marshfield Ave From South				112th Pl From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	**85**	105	2	192	0	96	7	103	0	0	0	0	90	**113**	0	203	498
05:00 PM	80	89	3	172	0	86	15	101	0	0	0	0	92	86	0	178	451
05:15 PM	54	99	0	153	0	112	**20**	132	0	0	0	0	**101**	104	0	**205**	490
05:30 PM	72	**131**	**4**	**207**	0	**122**	14	**136**	0	0	0	0	90	100	0	190	**533**
Total Volume	291	424	9	724	0	416	56	472	0	0	0	0	373	403	0	776	1972
% App. Total	40.2	58.6	1.2		0	88.1	11.9		0	0	0		48.1	51.9	0		
PHF	.856	.809	.563	.874	.000	.852	.700	.868	.000	.000	.000	.000	.923	.892	.000	.946	.925

112th Pl and Marshfield Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/6/2012
Page No : 6

Groups Printed- SU

	Marshfield Ave From North				112th Pl From East				Marshfield Ave From South				112th Pl From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	3	0	0	3	0	1	0	1	0	0	0	0	2	1	0	3	7
04:15 PM	2	1	0	3	0	0	1	1	0	0	0	0	0	2	0	2	6
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
Total	5	1	0	6	0	1	1	2	0	0	0	0	2	6	0	8	16
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	4	1	0	5	5
05:15 PM	1	1	0	2	0	0	0	0	0	0	0	0	1	0	0	1	3
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	2
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
Total	1	1	0	2	0	0	0	0	0	0	0	0	6	4	0	10	12
Grand Total	6	2	0	8	0	1	1	2	0	0	0	0	8	10	0	18	28
Apprch %	75	25	0		0	50	50		0	0	0		44.4	55.6	0		
Total %	21.4	7.1	0	28.6	0	3.6	3.6	7.1	0	0	0	0	28.6	35.7	0	64.3	

112th Pl and Marshfield Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/6/2012
Page No : 7

Groups Printed- MU

	Marshfield Ave From North				112th Pl From East				Marshfield Ave From South				112th Pl From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	3
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	3
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Grand Total	0	0	0	0	0	1	0	1	0	0	0	0	3	0	0	3	4
Apprch %	0	0	0		0	100	0		0	0	0		100	0	0		
Total %	0	0	0	0	0	25	0	25	0	0	0	0	75	0	0	75	

112th Pl and Marshfield Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 6/6/2012
Page No : 8

Groups Printed- Peds & Bikes

	Marshfield Ave Crossing North Leg			112th Pl Crossing East Leg			Marshfield Ave Crossing South Leg			112th Pl Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
04:00 PM	1	9	10	9	0	9	0	1	1	0	0	0	20
04:15 PM	1	3	4	10	0	10	0	0	0	0	0	0	14
04:30 PM	3	0	3	17	0	17	0	3	3	0	0	0	23
04:45 PM	2	5	7	7	0	7	0	1	1	0	1	1	16
Total	7	17	24	43	0	43	0	5	5	0	1	1	73
05:00 PM	3	3	6	15	0	15	0	2	2	0	0	0	23
05:15 PM	0	1	1	20	0	20	0	0	0	0	0	0	21
05:30 PM	4	2	6	14	0	14	0	5	5	0	0	0	25
05:45 PM	2	2	4	12	0	12	0	1	1	0	3	3	20
Total	9	8	17	61	0	61	0	8	8	0	3	3	89
Grand Total	16	25	41	104	0	104	0	13	13	0	4	4	162
Apprch %	39	61		100	0		0	100		0	100		
Total %	9.9	15.4	25.3	64.2	0	64.2	0	8	8	0	2.5	2.5	

Regina Webster & Associates, Inc.
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115th St and Bishop Ford Fwy
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/6/2012
Page No : 1

Groups Printed- PC - SU - MU

	Bishop Ford Fwy From North				115th St From East				Bishop Ford Fwy From South				115th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	48	0	0	48	0	101	9	110	0	0	0	0	39	22	0	61	219
07:15 AM	47	0	1	48	0	115	2	117	0	0	0	0	42	43	0	85	250
07:30 AM	48	0	2	50	0	117	9	126	0	0	0	0	55	44	0	99	275
07:45 AM	56	0	0	56	0	155	7	162	0	0	0	0	51	49	0	100	318
Total	199	0	3	202	0	488	27	515	0	0	0	0	187	158	0	345	1062
08:00 AM	48	0	0	48	0	112	4	116	0	0	0	0	37	49	0	86	250
08:15 AM	44	0	1	45	0	123	3	126	0	0	0	0	39	34	0	73	244
08:30 AM	52	0	0	52	0	115	6	121	0	0	0	0	54	38	0	92	265
08:45 AM	57	0	0	57	0	93	2	95	0	0	0	0	45	40	0	85	237
Total	201	0	1	202	0	443	15	458	0	0	0	0	175	161	0	336	996
Grand Total	400	0	4	404	0	931	42	973	0	0	0	0	362	319	0	681	2058
Apprch %	99	0	1		0	95.7	4.3		0	0	0		53.2	46.8	0		
Total %	19.4	0	0.2	19.6	0	45.2	2	47.3	0	0	0	0	17.6	15.5	0	33.1	
PC	388	0	4	392	0	893	14	907	0	0	0	0	336	307	0	643	1942
% PC	97	0	100	97	0	95.9	33.3	93.2	0	0	0	0	92.8	96.2	0	94.4	94.4
SU	10	0	0	10	0	9	5	14	0	0	0	0	6	6	0	12	36
% SU	2.5	0	0	2.5	0	1	11.9	1.4	0	0	0	0	1.7	1.9	0	1.8	1.7
MU	2	0	0	2	0	29	23	52	0	0	0	0	20	6	0	26	80
% MU	0.5	0	0	0.5	0	3.1	54.8	5.3	0	0	0	0	5.5	1.9	0	3.8	3.9

	Bishop Ford Fwy From North				115th St From East				Bishop Ford Fwy From South				115th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	47	0	1	48	0	115	2	117	0	0	0	0	42	43	0	85	250
07:30 AM	48	0	**2**	50	0	117	**9**	126	0	0	0	0	**55**	44	0	99	275
07:45 AM	**56**	0	0	**56**	0	**155**	7	**162**	0	0	0	0	51	**49**	0	**100**	**318**
08:00 AM	48	0	0	48	0	112	4	116	0	0	0	0	37	49	0	86	250
Total Volume	199	0	3	202	0	499	22	521	0	0	0	0	185	185	0	370	1093
% App. Total	98.5	0	1.5		0	95.8	4.2		0	0	0		50	50	0		
PHF	.888	.000	.375	.902	.000	.805	.611	.804	.000	.000	.000	.000	.841	.944	.000	.925	.859

115th St and Bishop Ford Fwy
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/6/2012
Page No : 2

Groups Printed- SU

	Bishop Ford Fwy From North				115th St From East				Bishop Ford Fwy From South				115th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	2	0	0	2	0	1	0	1	0	0	0	0	0	0	0	0	3
07:15 AM	3	0	0	3	0	1	1	2	0	0	0	0	0	0	0	0	5
07:30 AM	2	0	0	2	0	2	1	3	0	0	0	0	0	0	0	0	5
07:45 AM	1	0	0	1	0	0	1	1	0	0	0	0	2	2	0	4	6
Total	8	0	0	8	0	4	3	7	0	0	0	0	2	2	0	4	19
08:00 AM	1	0	0	1	0	1	0	1	0	0	0	0	1	0	0	1	3
08:15 AM	1	0	0	1	0	2	0	2	0	0	0	0	0	0	0	0	3
08:30 AM	0	0	0	0	0	0	2	2	0	0	0	0	1	2	0	3	5
08:45 AM	0	0	0	0	0	2	0	2	0	0	0	0	2	2	0	4	6
Total	2	0	0	2	0	5	2	7	0	0	0	0	4	4	0	8	17
Grand Total	10	0	0	10	0	9	5	14	0	0	0	0	6	6	0	12	36
Apprch %	100	0	0		0	64.3	35.7		0	0	0		50	50	0		
Total %	27.8	0	0	27.8	0	25	13.9	38.9	0	0	0	0	16.7	16.7	0	33.3	

115th St and Bishop Ford Fwy
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/6/2012
Page No : 3

Groups Printed- MU

	Bishop Ford Fwy From North				115th St From East				Bishop Ford Fwy From South				115th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	5	4	9	0	0	0	0	6	0	0	6	15
07:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	3	2	0	5	6
07:30 AM	0	0	0	0	0	3	5	8	0	0	0	0	1	0	0	1	9
07:45 AM	2	0	0	2	0	6	5	11	0	0	0	0	2	0	0	2	15
Total	2	0	0	2	0	15	14	29	0	0	0	0	12	2	0	14	45
08:00 AM	0	0	0	0	0	4	3	7	0	0	0	0	2	3	0	5	12
08:15 AM	0	0	0	0	0	2	1	3	0	0	0	0	1	0	0	1	4
08:30 AM	0	0	0	0	0	5	3	8	0	0	0	0	2	0	0	2	10
08:45 AM	0	0	0	0	0	3	2	5	0	0	0	0	3	1	0	4	9
Total	0	0	0	0	0	14	9	23	0	0	0	0	8	4	0	12	35
Grand Total	2	0	0	2	0	29	23	52	0	0	0	0	20	6	0	26	80
Apprch %	100	0	0		0	55.8	44.2		0	0	0		76.9	23.1	0		
Total %	2.5	0	0	2.5	0	36.2	28.8	65	0	0	0	0	25	7.5	0	32.5	

115th St and Bishop Ford Fwy
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/6/2012
Page No : 4

Groups Printed- PC - SU - MU

	Bishop Ford Fwy From North				115th St From East				Bishop Ford Fwy From South				115th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	40	2	0	42	0	56	19	75	0	0	0	0	80	43	0	123	240
04:15 PM	49	7	4	60	0	59	18	77	0	0	0	0	116	54	0	170	307
04:30 PM	66	1	3	70	0	65	8	73	0	0	0	0	140	44	0	184	327
04:45 PM	46	1	6	53	0	81	8	89	0	0	0	0	83	53	0	136	278
Total	201	11	13	225	0	261	53	314	0	0	0	0	419	194	0	613	1152
05:00 PM	49	0	0	49	0	88	12	100	0	0	0	0	159	45	0	204	353
05:15 PM	46	1	4	51	0	73	7	80	0	0	0	0	129	53	0	182	313
05:30 PM	52	3	3	58	0	73	2	75	0	0	0	0	128	53	0	181	314
05:45 PM	73	2	8	83	0	77	4	81	0	0	0	0	126	52	0	178	342
Total	220	6	15	241	0	311	25	336	0	0	0	0	542	203	0	745	1322
Grand Total	421	17	28	466	0	572	78	650	0	0	0	0	961	397	0	1358	2474
Apprch %	90.3	3.6	6		0	88	12		0	0	0		70.8	29.2	0		
Total %	17	0.7	1.1	18.8	0	23.1	3.2	26.3	0	0	0	0	38.8	16	0	54.9	
PC	412	17	27	456	0	558	72	630	0	0	0	0	953	392	0	1345	2431
% PC	97.9	100	96.4	97.9	0	97.6	92.3	96.9	0	0	0	0	99.2	98.7	0	99	98.3
SU	7	0	1	8	0	5	1	6	0	0	0	0	5	3	0	8	22
% SU	1.7	0	3.6	1.7	0	0.9	1.3	0.9	0	0	0	0	0.5	0.8	0	0.6	0.9
MU	2	0	0	2	0	9	5	14	0	0	0	0	3	2	0	5	21
% MU	0.5	0	0	0.4	0	1.6	6.4	2.2	0	0	0	0	0.3	0.5	0	0.4	0.8

	Bishop Ford Fwy From North				115th St From East				Bishop Ford Fwy From South				115th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	49	0	0	49	0	**88**	**12**	**100**	0	0	0	0	**159**	45	0	**204**	**353**
05:15 PM	46	1	4	51	0	73	7	80	0	0	0	0	129	**53**	0	182	313
05:30 PM	52	**3**	3	58	0	73	2	75	0	0	0	0	128	53	0	181	314
05:45 PM	**73**	2	**8**	**83**	0	77	4	81	0	0	0	0	126	52	0	178	342
Total Volume	220	6	15	241	0	311	25	336	0	0	0	0	542	203	0	745	1322
% App. Total	91.3	2.5	6.2		0	92.6	7.4		0	0	0		72.8	27.2	0		
PHF	.753	.500	.469	.726	.000	.884	.521	.840	.000	.000	.000	.000	.852	.958	.000	.913	.936

115th St and Bishop Ford Fwy
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/6/2012
Page No : 5

Groups Printed- SU

	Bishop Ford Fwy From North				115th St From East				Bishop Ford Fwy From South				115th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	1	3
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	3	3
04:30 PM	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
04:45 PM	3	0	1	4	0	1	0	1	0	0	0	0	1	0	0	1	6
Total	5	0	1	6	0	3	0	3	0	0	0	0	2	3	0	5	14
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
05:15 PM	0	0	0	0	0	0	1	1	0	0	0	0	2	0	0	2	3
05:30 PM	1	0	0	1	0	1	0	1	0	0	0	0	0	0	0	0	2
05:45 PM	1	0	0	1	0	1	0	1	0	0	0	0	0	0	0	0	2
Total	2	0	0	2	0	2	1	3	0	0	0	0	3	0	0	3	8
Grand Total	7	0	1	8	0	5	1	6	0	0	0	0	5	3	0	8	22
Apprch %	87.5	0	12.5		0	83.3	16.7		0	0	0		62.5	37.5	0		
Total %	31.8	0	4.5	36.4	0	22.7	4.5	27.3	0	0	0	0	22.7	13.6	0	36.4	

115th St and Bishop Ford Fwy
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/6/2012
Page No : 6

Groups Printed- MU

	Bishop Ford Fwy From North				115th St From East				Bishop Ford Fwy From South				115th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	3	1	4	0	0	0	0	0	0	0	0	4
04:15 PM	0	0	0	0	0	1	2	3	0	0	0	0	1	0	0	1	4
04:30 PM	0	0	0	0	0	2	2	4	0	0	0	0	0	0	0	0	4
04:45 PM	0	0	0	0	0	2	0	2	0	0	0	0	1	1	0	2	4
Total	0	0	0	0	0	8	5	13	0	0	0	0	2	1	0	3	16
05:00 PM	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
*** BREAK ***																	
05:45 PM	1	0	0	1	0	1	0	1	0	0	0	0	0	1	0	1	3
Total	2	0	0	2	0	1	0	1	0	0	0	0	1	1	0	2	5
Grand Total	2	0	0	2	0	9	5	14	0	0	0	0	3	2	0	5	21
Apprch %	100	0	0		0	64.3	35.7		0	0	0		60	40	0		
Total %	9.5	0	0	9.5	0	42.9	23.8	66.7	0	0	0	0	14.3	9.5	0	23.8	

115th St and Cottage Grove Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/10/2012
Page No : 1

Groups Printed- PC - SU - MU

	Cottage Grove Ave From North				**115th St From East**				**Cottage Grove Ave From South**				**115th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	15	1	7	23	6	82	16	104	1	0	0	1	2	57	6	65	193
07:15 AM	11	0	3	14	19	124	19	162	0	0	0	0	1	84	19	104	280
07:30 AM	14	1	7	22	14	92	16	122	1	0	0	1	1	96	13	110	255
07:45 AM	25	1	13	39	20	138	15	173	0	0	0	0	0	112	20	132	344
Total	65	3	30	98	59	436	66	561	2	0	0	2	4	349	58	411	1072
08:00 AM	15	0	10	25	15	141	9	165	0	0	0	0	1	99	20	120	310
08:15 AM	11	1	8	20	22	116	7	145	0	0	0	0	0	81	16	97	262
08:30 AM	12	0	6	18	29	143	2	174	0	0	1	1	0	77	14	91	284
08:45 AM	28	0	14	42	15	122	1	138	0	0	0	0	0	87	21	108	288
Total	66	1	38	105	81	522	19	622	0	0	1	1	1	344	71	416	1144
Grand Total	131	4	68	203	140	958	85	1183	2	0	1	3	5	693	129	827	2216
Apprch %	64.5	2	33.5		11.8	81	7.2		66.7	0	33.3		0.6	83.8	15.6		
Total %	5.9	0.2	3.1	9.2	6.3	43.2	3.8	53.4	0.1	0	0	0.1	0.2	31.3	5.8	37.3	
PC	117	4	64	185	139	923	85	1147	2	0	1	3	5	672	124	801	2136
% PC	89.3	100	94.1	91.1	99.3	96.3	100	97	100	0	100	100	100	97	96.1	96.9	96.4
SU	14	0	2	16	1	30	0	31	0	0	0	0	0	21	5	26	73
% SU	10.7	0	2.9	7.9	0.7	3.1	0	2.6	0	0	0	0	0	3	3.9	3.1	3.3
MU	0	0	2	2	0	5	0	5	0	0	0	0	0	0	0	0	7
% MU	0	0	2.9	1	0	0.5	0	0.4	0	0	0	0	0	0	0	0	0.3

	Cottage Grove Ave From North				**115th St From East**				**Cottage Grove Ave From South**				**115th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	**25**	**1**	**13**	**39**	20	138	**15**	173	0	0	0	0	0	**112**	**20**	**132**	**344**
08:00 AM	15	0	10	25	15	141	9	165	0	0	0	0	**1**	99	20	120	310
08:15 AM	11	1	8	20	22	116	7	145	0	0	0	0	0	81	16	97	262
08:30 AM	12	0	6	18	**29**	**143**	2	**174**	0	0	**1**	**1**	0	77	14	91	284
Total Volume	63	2	37	102	86	538	33	657	0	0	1	1	1	369	70	440	1200
% App. Total	61.8	2	36.3		13.1	81.9	5		0	0	100		0.2	83.9	15.9		
PHF	.630	.500	.712	.654	.741	.941	.550	.944	.000	.000	.250	.250	.250	.824	.875	.833	.872

115th St and Cottage Grove Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/10/2012
Page No : 2

Groups Printed- SU

	Cottage Grove Ave From North				**115th St From East**				**Cottage Grove Ave From South**				**115th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	1	0	1	2	0	4	0	4	0	0	0	0	0	1	0	1	7
07:15 AM	0	0	0	0	0	4	0	4	0	0	0	0	0	4	1	5	9
07:30 AM	1	0	0	1	0	1	0	1	0	0	0	0	0	3	1	4	6
07:45 AM	2	0	1	3	0	8	0	8	0	0	0	0	0	1	0	1	12
Total	4	0	2	6	0	17	0	17	0	0	0	0	0	9	2	11	34
08:00 AM	1	0	0	1	0	1	0	1	0	0	0	0	0	3	0	3	5
08:15 AM	3	0	0	3	0	4	0	4	0	0	0	0	0	5	2	7	14
08:30 AM	2	0	0	2	1	3	0	4	0	0	0	0	0	2	1	3	9
08:45 AM	4	0	0	4	0	5	0	5	0	0	0	0	0	2	0	2	11
Total	10	0	0	10	1	13	0	14	0	0	0	0	0	12	3	15	39
Grand Total	14	0	2	16	1	30	0	31	0	0	0	0	0	21	5	26	73
Apprch %	87.5	0	12.5		3.2	96.8	0		0	0	0		0	80.8	19.2		
Total %	19.2	0	2.7	21.9	1.4	41.1	0	42.5	0	0	0	0	0	28.8	6.8	35.6	

115th St and Cottage Grove Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/10/2012
Page No : 3

Groups Printed- MU

	Cottage Grove Ave From North				**115th St From East**				**Cottage Grove Ave From South**				**115th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0	0	3
07:45 AM	0	0	1	1	0	2	0	2	0	0	0	0	0	0	0	0	3
Total	0	0	1	1	0	5	0	5	0	0	0	0	0	0	0	0	6
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Grand Total	0	0	2	2	0	5	0	5	0	0	0	0	0	0	0	0	7
Apprch %	0	0	100		0	100	0		0	0	0		0	0	0		
Total %	0	0	28.6	28.6	0	71.4	0	71.4	0	0	0	0	0	0	0	0	

115th St and Cottage Grove Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 5/10/2012
Page No : 4

Groups Printed- Peds & Bikes

	Cottage Grove Ave Crossing North Leg			**115th St Crossing East Leg**			**Cottage Grove Ave Crossing South Leg**			**115th St Crossing West Leg**			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
07:00 AM	0	8	8	0	0	0	0	0	0	0	7	7	15
07:15 AM	0	10	10	0	3	3	0	2	2	0	5	5	20
07:30 AM	0	5	5	0	8	8	0	9	9	0	9	9	31
07:45 AM	0	7	7	0	1	1	1	0	1	0	10	10	19
Total	0	30	30	0	12	12	1	11	12	0	31	31	85
08:00 AM	0	15	15	0	4	4	0	4	4	0	4	4	27
08:15 AM	1	6	7	0	0	0	0	0	0	0	6	6	13
08:30 AM	0	9	9	0	1	1	0	0	0	0	0	0	10
08:45 AM	0	5	5	0	4	4	0	0	0	0	4	4	13
Total	1	35	36	0	9	9	0	4	4	0	14	14	63
Grand Total	1	65	66	0	21	21	1	15	16	0	45	45	148
Apprch %	1.5	98.5		0	100		6.2	93.8		0	100		
Total %	0.7	43.9	44.6	0	14.2	14.2	0.7	10.1	10.8	0	30.4	30.4	

115th St and Cottage Grove Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/10/2012
Page No : 5

Groups Printed- PC - SU - MU

	Cottage Grove Ave From North				**115th St From East**				**Cottage Grove Ave From South**				**115th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	22	0	18	40	15	96	0	111	1	0	0	1	1	94	11	106	258
04:15 PM	19	0	31	50	10	133	0	143	3	0	0	3	0	95	10	105	301
04:30 PM	26	0	17	43	10	139	0	149	11	0	0	11	0	113	12	125	328
04:45 PM	36	0	44	80	10	171	0	181	2	0	2	4	0	126	11	137	402
Total	103	0	110	213	45	539	0	584	17	0	2	19	1	428	44	473	1289
05:00 PM	20	0	37	57	6	128	0	134	21	0	2	23	0	108	6	114	328
05:15 PM	38	0	44	82	12	166	2	180	14	0	2	16	0	105	13	118	396
05:30 PM	21	0	37	58	9	178	0	187	9	0	0	9	0	105	10	115	369
05:45 PM	24	0	38	62	7	188	0	195	9	2	1	12	0	144	8	152	421
Total	103	0	156	259	34	660	2	696	53	2	5	60	0	462	37	499	1514
Grand Total	206	0	266	472	79	1199	2	1280	70	2	7	79	1	890	81	972	2803
Apprch %	43.6	0	56.4		6.2	93.7	0.2		88.6	2.5	8.9		0.1	91.6	8.3		
Total %	7.3	0	9.5	16.8	2.8	42.8	0.1	45.7	2.5	0.1	0.2	2.8	0	31.8	2.9	34.7	
PC	191	0	262	453	78	1188	2	1268	70	2	6	78	1	877	81	959	2758
% PC	92.7	0	98.5	96	98.7	99.1	100	99.1	100	100	85.7	98.7	100	98.5	100	98.7	98.4
SU	15	0	3	18	0	10	0	10	0	0	1	1	0	12	0	12	41
% SU	7.3	0	1.1	3.8	0	0.8	0	0.8	0	0	14.3	1.3	0	1.3	0	1.2	1.5
MU	0	0	1	1	1	1	0	2	0	0	0	0	0	1	0	1	4
% MU	0	0	0.4	0.2	1.3	0.1	0	0.2	0	0	0	0	0	0.1	0	0.1	0.1

	Cottage Grove Ave From North				**115th St From East**				**Cottage Grove Ave From South**				**115th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	20	0	37	57	6	128	0	134	**21**	0	**2**	**23**	0	108	6	114	328
05:15 PM	**38**	0	**44**	**82**	**12**	166	**2**	180	14	0	2	16	0	105	**13**	118	396
05:30 PM	21	0	37	58	9	178	0	187	9	0	0	9	0	105	10	115	369
05:45 PM	24	0	38	62	7	**188**	0	**195**	9	**2**	1	12	0	**144**	8	**152**	**421**
Total Volume	103	0	156	259	34	660	2	696	53	2	5	60	0	462	37	499	1514
% App. Total	39.8	0	60.2		4.9	94.8	0.3		88.3	3.3	8.3		0	92.6	7.4		
PHF	.678	.000	.886	.790	.708	.878	.250	.892	.631	.250	.625	.652	.000	.802	.712	.821	.899

115th St and Cottage Grove Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/10/2012
Page No : 6

Groups Printed- SU

	Cottage Grove Ave From North				**115th St From East**				**Cottage Grove Ave From South**				**115th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	3	0	2	5	0	0	0	0	0	0	0	0	0	0	0	0	5
04:15 PM	2	0	0	2	0	0	0	0	0	0	0	0	0	1	0	1	3
04:30 PM	2	0	0	2	0	2	0	2	0	0	0	0	0	4	0	4	8
04:45 PM	1	0	1	2	0	2	0	2	0	0	0	0	0	1	0	1	5
Total	8	0	3	11	0	4	0	4	0	0	0	0	0	6	0	6	21
05:00 PM	3	0	0	3	0	1	0	1	0	0	0	0	0	2	0	2	6
05:15 PM	2	0	0	2	0	1	0	1	0	0	1	1	0	2	0	2	6
05:30 PM	1	0	0	1	0	1	0	1	0	0	0	0	0	1	0	1	3
05:45 PM	1	0	0	1	0	3	0	3	0	0	0	0	0	1	0	1	5
Total	7	0	0	7	0	6	0	6	0	0	1	1	0	6	0	6	20
Grand Total	15	0	3	18	0	10	0	10	0	0	1	1	0	12	0	12	41
Apprch %	83.3	0	16.7		0	100	0		0	0	100		0	100	0		
Total %	36.6	0	7.3	43.9	0	24.4	0	24.4	0	0	2.4	2.4	0	29.3	0	29.3	

115th St and Cottage Grove Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/10/2012
Page No : 7

Groups Printed- MU

	Cottage Grove Ave From North				**115th St From East**				**Cottage Grove Ave From South**				**115th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
05:00 PM	0	0	1	1	1	0	0	1	0	0	0	0	0	0	0	0	2
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	1	1	1	0	0	1	0	0	0	0	0	0	0	0	2
Grand Total	0	0	1	1	1	1	0	2	0	0	0	0	0	1	0	1	4
Apprch %	0	0	100		50	50	0		0	0	0		0	100	0		
Total %	0	0	25	25	25	25	0	50	0	0	0	0	0	25	0	25	

115th St and Cottage Grove Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 5/10/2012
Page No : 8

Groups Printed- Peds & Bikes

	Cottage Grove Ave Crossing North Leg			115th St Crossing East Leg			Cottage Grove Ave Crossing South Leg			115th St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
04:00 PM	0	2	2	0	1	1	0	0	0	0	0	0	3
04:15 PM	0	10	10	0	0	0	0	1	1	0	0	0	11
04:30 PM	0	5	5	0	0	0	0	10	10	0	4	4	19
04:45 PM	0	5	5	0	0	0	0	0	0	0	0	0	5
Total	0	22	22	0	1	1	0	11	11	0	4	4	38
05:00 PM	0	17	17	0	0	0	0	15	15	0	5	5	37
05:15 PM	0	8	8	0	1	1	0	11	11	0	2	2	22
05:30 PM	1	18	19	0	0	0	0	9	9	0	4	4	32
05:45 PM	0	17	17	0	9	9	0	9	9	0	3	3	38
Total	1	60	61	0	10	10	0	44	44	0	14	14	129
Grand Total	1	82	83	0	11	11	0	55	55	0	18	18	167
Apprch %	1.2	98.8		0	100		0	100		0	100		
Total %	0.6	49.1	49.7	0	6.6	6.6	0	32.9	32.9	0	10.8	10.8	

115th St and Halsted St
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/9/2012
Page No : 1

Groups Printed- PC - SU - MU

	Halsted St From North				115th St From East				Halsted St From South				115th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	11	59	5	75	17	30	8	55	9	185	7	201	7	46	21	74	405
07:15 AM	21	62	8	91	24	52	8	84	7	201	9	217	4	38	30	72	464
07:30 AM	15	77	14	106	15	48	11	74	10	189	19	218	6	44	42	92	490
07:45 AM	24	76	20	120	18	44	14	76	15	246	8	269	14	55	55	124	589
Total	71	274	47	392	74	174	41	289	41	821	43	905	31	183	148	362	1948
08:00 AM	10	104	16	130	15	54	12	81	9	184	14	207	11	44	30	85	503
08:15 AM	21	116	16	153	14	30	13	57	24	209	18	251	8	59	42	109	570
08:30 AM	18	96	18	132	26	41	12	79	16	172	9	197	11	47	30	88	496
08:45 AM	25	81	18	124	13	44	12	69	16	161	19	196	21	40	37	98	487
Total	74	397	68	539	68	169	49	286	65	726	60	851	51	190	139	380	2056
Grand Total	145	671	115	931	142	343	90	575	106	1547	103	1756	82	373	287	742	4004
Apprch %	15.6	72.1	12.4		24.7	59.7	15.7		6	88.1	5.9		11.1	50.3	38.7		
Total %	3.6	16.8	2.9	23.3	3.5	8.6	2.2	14.4	2.6	38.6	2.6	43.9	2	9.3	7.2	18.5	
PC	139	619	112	870	135	323	89	547	104	1471	100	1675	80	355	282	717	3809
% PC	95.9	92.3	97.4	93.4	95.1	94.2	98.9	95.1	98.1	95.1	97.1	95.4	97.6	95.2	98.3	96.6	95.1
SU	6	48	3	57	7	20	1	28	2	64	3	69	2	18	4	24	178
% SU	4.1	7.2	2.6	6.1	4.9	5.8	1.1	4.9	1.9	4.1	2.9	3.9	2.4	4.8	1.4	3.2	4.4
MU	0	4	0	4	0	0	0	0	0	12	0	12	0	0	1	1	17
% MU	0	0.6	0	0.4	0	0	0	0	0	0.8	0	0.7	0	0	0.3	0.1	0.4

	Halsted St From North				115th St From East				Halsted St From South				115th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	**24**	76	**20**	120	18	44	**14**	76	15	**246**	8	**269**	**14**	55	**55**	**124**	**589**
08:00 AM	10	104	16	130	15	**54**	12	**81**	9	184	14	207	11	44	30	85	503
08:15 AM	21	**116**	16	**153**	14	30	13	57	**24**	209	**18**	251	8	**59**	42	109	570
08:30 AM	18	96	18	132	**26**	41	12	79	16	172	9	197	11	47	30	88	496
Total Volume	73	392	70	535	73	169	51	293	64	811	49	924	44	205	157	406	2158
% App. Total	13.6	73.3	13.1		24.9	57.7	17.4		6.9	87.8	5.3		10.8	50.5	38.7		
PHF	.760	.845	.875	.874	.702	.782	.911	.904	.667	.824	.681	.859	.786	.869	.714	.819	.916

115th St and Halsted St
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/9/2012
Page No : 2

Groups Printed- SU

	Halsted St From North				115th St From East				Halsted St From South				115th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	5	0	5	2	4	0	6	0	11	0	11	1	3	0	4	26
07:15 AM	0	8	0	8	0	3	1	4	0	3	1	4	0	2	0	2	18
07:30 AM	1	4	1	6	0	2	0	2	0	3	0	3	0	4	2	6	17
07:45 AM	1	6	0	7	0	2	0	2	0	10	1	11	0	2	1	3	23
Total	2	23	1	26	2	11	1	14	0	27	2	29	1	11	3	15	84
08:00 AM	0	2	0	2	0	5	0	5	0	11	1	12	0	1	0	1	20
08:15 AM	1	7	1	9	1	1	0	2	0	10	0	10	0	1	1	2	23
08:30 AM	3	8	1	12	3	2	0	5	2	7	0	9	0	3	0	3	29
08:45 AM	0	8	0	8	1	1	0	2	0	9	0	9	1	2	0	3	22
Total	4	25	2	31	5	9	0	14	2	37	1	40	1	7	1	9	94
Grand Total	6	48	3	57	7	20	1	28	2	64	3	69	2	18	4	24	178
Apprch %	10.5	84.2	5.3		25	71.4	3.6		2.9	92.8	4.3		8.3	75	16.7		
Total %	3.4	27	1.7	32	3.9	11.2	0.6	15.7	1.1	36	1.7	38.8	1.1	10.1	2.2	13.5	

115th St and Halsted St
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/9/2012
Page No : 3

Groups Printed- MU

	Halsted St From North				115th St From East				Halsted St From South				115th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
07:15 AM	0	0	0	0	0	0	0	0	0	3	0	3	0	0	1	1	4
07:30 AM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
07:45 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Total	0	2	0	2	0	0	0	0	0	7	0	7	0	0	1	1	10
08:00 AM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
08:15 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:30 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
08:45 AM	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
Total	0	2	0	2	0	0	0	0	0	5	0	5	0	0	0	0	7
Grand Total	0	4	0	4	0	0	0	0	0	12	0	12	0	0	1	1	17
Apprch %	0	100	0		0	0	0		0	100	0		0	0	100		
Total %	0	23.5	0	23.5	0	0	0	0	0	70.6	0	70.6	0	0	5.9	5.9	

115th St and Halsted St
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 5/9/2012

Groups Printed- Peds & Bikes

	Halsted St Crossing North Leg			115th St Crossing East Leg			Halsted St Crossing South Leg			115th St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
07:00 AM	1	7	8	0	7	7	0	3	3	0	8	8	26
07:15 AM	0	9	9	0	4	4	0	1	1	0	12	12	26
07:30 AM	0	7	7	0	4	4	0	2	2	0	9	9	22
07:45 AM	0	3	3	0	0	0	0	1	1	0	9	9	13
Total	1	26	27	0	15	15	0	7	7	0	38	38	87
08:00 AM	0	1	1	0	6	6	0	2	2	0	7	7	16
08:15 AM	0	20	20	1	2	3	0	2	2	0	12	12	37
08:30 AM	0	13	13	0	8	8	0	4	4	0	9	9	34
08:45 AM	0	13	13	0	1	1	0	2	2	0	13	13	29
Total	0	47	47	1	17	18	0	10	10	0	41	41	116
Grand Total	1	73	74	1	32	33	0	17	17	0	79	79	203
Apprch %	1.4	98.6		3	97		0	100		0	100		
Total %	0.5	36	36.5	0.5	15.8	16.3	0	8.4	8.4	0	38.9	38.9	

115th St and Halsted St
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/9/2012
Page No : 5

Groups Printed- PC - SU - MU

	Halsted St From North				115th St From East				Halsted St From South				115th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	32	170	22	224	14	53	27	94	12	109	19	140	15	51	22	88	546
04:15 PM	24	143	29	196	11	52	24	87	20	122	21	163	27	59	19	105	551
04:30 PM	37	166	15	218	26	64	28	118	17	98	21	136	26	60	30	116	588
04:45 PM	32	163	28	223	16	55	31	102	13	118	32	163	35	34	23	92	580
Total	125	642	94	861	67	224	110	401	62	447	93	602	103	204	94	401	2265
05:00 PM	24	166	13	203	20	72	41	133	13	102	23	138	21	56	22	99	573
05:15 PM	36	190	18	244	16	77	36	129	12	100	20	132	23	43	30	96	601
05:30 PM	25	201	20	246	18	77	37	132	12	116	25	153	27	51	34	112	643
05:45 PM	32	195	25	252	11	85	45	141	15	97	28	140	17	51	20	88	621
Total	117	752	76	945	65	311	159	535	52	415	96	563	88	201	106	395	2438
Grand Total	242	1394	170	1806	132	535	269	936	114	862	189	1165	191	405	200	796	4703
Apprch %	13.4	77.2	9.4		14.1	57.2	28.7		9.8	74	16.2		24	50.9	25.1		
Total %	5.1	29.6	3.6	38.4	2.8	11.4	5.7	19.9	2.4	18.3	4	24.8	4.1	8.6	4.3	16.9	
PC	240	1347	166	1753	130	521	267	918	112	823	184	1119	188	395	198	781	4571
% PC	99.2	96.6	97.6	97.1	98.5	97.4	99.3	98.1	98.2	95.5	97.4	96.1	98.4	97.5	99	98.1	97.2
SU	2	45	3	50	2	14	2	18	2	37	5	44	2	10	2	14	126
% SU	0.8	3.2	1.8	2.8	1.5	2.6	0.7	1.9	1.8	4.3	2.6	3.8	1	2.5	1	1.8	2.7
MU	0	2	1	3	0	0	0	0	0	2	0	2	1	0	0	1	6
% MU	0	0.1	0.6	0.2	0	0	0	0	0	0.2	0	0.2	0.5	0	0	0.1	0.1

	Halsted St From North				115th St From East				Halsted St From South				115th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	24	166	13	203	**20**	72	41	133	13	102	23	138	21	**56**	22	99	573
05:15 PM	**36**	190	18	244	16	77	36	129	12	100	20	132	23	43	30	96	601
05:30 PM	25	**201**	20	246	18	77	37	132	12	**116**	25	**153**	**27**	51	**34**	**112**	**643**
05:45 PM	32	195	**25**	**252**	11	**85**	**45**	**141**	**15**	97	**28**	140	17	51	20	88	621
Total Volume	117	752	76	945	65	311	159	535	52	415	96	563	88	201	106	395	2438
% App. Total	12.4	79.6	8		12.1	58.1	29.7		9.2	73.7	17.1		22.3	50.9	26.8		
PHF	.813	.935	.760	.938	.813	.915	.883	.949	.867	.894	.857	.920	.815	.897	.779	.882	.948

115th St and Halsted St
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/9/2012
Page No : 6

Groups Printed- SU

	Halsted St From North				115th St From East				Halsted St From South				115th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	2	6	0	8	0	2	0	2	0	6	0	6	0	3	0	3	19
04:15 PM	0	5	2	7	0	2	1	3	0	3	1	4	1	0	0	1	15
04:30 PM	0	6	0	6	1	3	0	4	0	5	1	6	1	1	0	2	18
04:45 PM	0	6	0	6	0	1	0	1	2	7	1	10	0	2	0	2	19
Total	2	23	2	27	1	8	1	10	2	21	3	26	2	6	0	8	71
05:00 PM	0	6	1	7	0	0	0	0	0	6	1	7	0	2	0	2	16
05:15 PM	0	7	0	7	0	3	0	3	0	4	0	4	0	0	1	1	15
05:30 PM	0	4	0	4	1	2	0	3	0	1	1	2	0	2	0	2	11
05:45 PM	0	5	0	5	0	1	1	2	0	5	0	5	0	0	1	1	13
Total	0	22	1	23	1	6	1	8	0	16	2	18	0	4	2	6	55
Grand Total	2	45	3	50	2	14	2	18	2	37	5	44	2	10	2	14	126
Apprch %	4	90	6		11.1	77.8	11.1		4.5	84.1	11.4		14.3	71.4	14.3		
Total %	1.6	35.7	2.4	39.7	1.6	11.1	1.6	14.3	1.6	29.4	4	34.9	1.6	7.9	1.6	11.1	

115th St and Halsted St
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/9/2012
Page No : 7

Groups Printed- MU

	Halsted St From North				115th St From East				Halsted St From South				115th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:15 PM	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0	1	2
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	1	1	0	0	0	0	0	1	0	1	1	0	0	1	3
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
05:30 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	2	0	2	0	0	0	0	0	1	0	1	0	0	0	0	3
Grand Total	0	2	1	3	0	0	0	0	0	2	0	2	1	0	0	1	6
Apprch %	0	66.7	33.3		0	0	0		0	100	0		100	0	0		
Total %	0	33.3	16.7	50	0	0	0	0	0	33.3	0	33.3	16.7	0	0	16.7	

115th St and Halsted St
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 5/9/2012
Page No : 8

Groups Printed- Peds & Bikes

	Halsted St Crossing North Leg			115th St Crossing East Leg			Halsted St Crossing South Leg			115th St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
04:00 PM	1	7	8	1	16	17	0	0	0	0	4	4	29
04:15 PM	0	2	2	1	7	8	0	10	10	0	7	7	27
04:30 PM	0	14	14	1	5	6	1	7	8	0	7	7	35
04:45 PM	0	8	8	0	1	1	0	6	6	0	1	1	16
Total	1	31	32	3	29	32	1	23	24	0	19	19	107
05:00 PM	0	3	3	0	13	13	0	10	10	0	5	5	31
05:15 PM	0	9	9	0	2	2	0	2	2	0	4	4	17
05:30 PM	0	4	4	0	5	5	0	3	3	0	4	4	16
05:45 PM	0	3	3	0	5	5	0	1	1	0	9	9	18
Total	0	19	19	0	25	25	0	16	16	0	22	22	82
Grand Total	1	50	51	3	54	57	1	39	40	0	41	41	189
Apprch %	2	98		5.3	94.7		2.5	97.5		0	100		
Total %	0.5	26.5	27	1.6	28.6	30.2	0.5	20.6	21.2	0	21.7	21.7	

Regina Webster & Associates, Inc.
8619 West Bryn Mawr Avenue, Suite 602, Chicago, Illinois 60631
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www.RWAengineers.com

115th St and Martin Luther King Dr
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/12/2012
Page No : 1

Groups Printed- PC - SU - MU

	Martin Luther King Dr From North				115th St From East				Martin Luther King Dr From South				115th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	8	0	13	21	9	68	0	77	0	0	0	0	0	62	19	81	179
07:15 AM	9	0	11	20	5	82	0	87	0	0	0	0	0	76	15	91	198
07:30 AM	9	0	16	25	9	74	0	83	0	0	0	0	0	77	14	91	199
07:45 AM	14	0	14	28	7	102	0	109	0	0	0	0	0	93	27	120	257
Total	40	0	54	94	30	326	0	356	0	0	0	0	0	308	75	383	833
08:00 AM	21	0	15	36	13	96	0	109	0	0	0	0	0	81	19	100	245
08:15 AM	22	0	13	35	13	98	0	111	0	0	0	0	0	72	16	88	234
08:30 AM	14	0	11	25	9	123	0	132	0	0	0	0	0	89	18	107	264
08:45 AM	21	0	5	26	8	124	0	132	0	0	0	0	0	92	30	122	280
Total	78	0	44	122	43	441	0	484	0	0	0	0	0	334	83	417	1023
Grand Total	118	0	98	216	73	767	0	840	0	0	0	0	0	642	158	800	1856
Apprch %	54.6	0	45.4		8.7	91.3	0		0	0	0		0	80.2	19.8		
Total %	6.4	0	5.3	11.6	3.9	41.3	0	45.3	0	0	0	0	0	34.6	8.5	43.1	
PC	116	0	97	213	71	729	0	800	0	0	0	0	0	621	144	765	1778
% PC	98.3	0	99	98.6	97.3	95	0	95.2	0	0	0	0	0	96.7	91.1	95.6	95.8
SU	2	0	1	3	2	36	0	38	0	0	0	0	0	21	14	35	76
% SU	1.7	0	1	1.4	2.7	4.7	0	4.5	0	0	0	0	0	3.3	8.9	4.4	4.1
MU	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	2
% MU	0	0	0	0	0	0.3	0	0.2	0	0	0	0	0	0	0	0	0.1

	Martin Luther King Dr From North				115th St From East				Martin Luther King Dr From South				115th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	21	0	**15**	**36**	**13**	96	0	109	0	0	0	0	0	81	19	100	245
08:15 AM	**22**	0	13	35	13	98	0	111	0	0	0	0	0	72	16	88	234
08:30 AM	14	0	11	25	9	123	0	**132**	0	0	0	0	0	89	18	107	264
08:45 AM	21	0	5	26	8	**124**	0	132	0	0	0	0	0	**92**	**30**	**122**	**280**
Total Volume	78	0	44	122	43	441	0	484	0	0	0	0	0	334	83	417	1023
% App. Total	63.9	0	36.1		8.9	91.1	0		0	0	0		0	80.1	19.9		
PHF	.886	.000	.733	.847	.827	.889	.000	.917	.000	.000	.000	.000	.000	.908	.692	.855	.913

115th St and Martin Luther King Dr
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/12/2012
Page No : 2

Groups Printed- SU

	Martin Luther King Dr From North				115th St From East				Martin Luther King Dr From South				115th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	1	3	0	4	0	0	0	0	0	1	2	3	7
07:15 AM	1	0	0	1	0	9	0	9	0	0	0	0	0	4	1	5	15
07:30 AM	0	0	1	1	0	2	0	2	0	0	0	0	0	4	3	7	10
07:45 AM	0	0	0	0	0	5	0	5	0	0	0	0	0	2	1	3	8
Total	1	0	1	2	1	19	0	20	0	0	0	0	0	11	7	18	40
08:00 AM	1	0	0	1	0	6	0	6	0	0	0	0	0	2	2	4	11
08:15 AM	0	0	0	0	0	4	0	4	0	0	0	0	0	2	3	5	9
08:30 AM	0	0	0	0	1	3	0	4	0	0	0	0	0	4	1	5	9
08:45 AM	0	0	0	0	0	4	0	4	0	0	0	0	0	2	1	3	7
Total	1	0	0	1	1	17	0	18	0	0	0	0	0	10	7	17	36
Grand Total	2	0	1	3	2	36	0	38	0	0	0	0	0	21	14	35	76
Apprch %	66.7	0	33.3		5.3	94.7	0		0	0	0		0	60	40		
Total %	2.6	0	1.3	3.9	2.6	47.4	0	50	0	0	0	0	0	27.6	18.4	46.1	

115th St and Martin Luther King Dr
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/12/2012
Page No : 3

Groups Printed- MU

	Martin Luther King Dr From North				115th St From East				Martin Luther King Dr From South				115th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	2
Total	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	2
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	2
Apprch %	0	0	0		0	100	0		0	0	0		0	0	0		
Total %	0	0	0	0	0	100	0	100	0	0	0	0	0	0	0	0	

115th St and Martin Luther King Dr
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM Ped
Site Code : 00000000
Start Date : 6/12/2012
Page No : 4

Groups Printed- Peds & Bikes

	Martin Luther King Dr Crossing North Leg			115th St Crossing East Leg			Martin Luther King Dr Crossing South Leg			115th St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
07:00 AM	0	3	3	0	0	0	0	3	3	0	0	0	6
07:15 AM	0	1	1	0	0	0	0	0	0	0	0	0	1
07:30 AM	0	7	7	0	0	0	0	6	6	0	2	2	15
07:45 AM	0	6	6	1	2	3	2	3	5	0	1	1	15
Total	0	17	17	1	2	3	2	12	14	0	3	3	37
08:00 AM	0	5	5	0	2	2	0	3	3	0	0	0	10
08:15 AM	0	3	3	1	1	2	0	7	7	0	0	0	12
08:30 AM	0	8	8	0	3	3	0	6	6	0	3	3	20
08:45 AM	0	8	8	0	0	0	0	2	2	0	2	2	12
Total	0	24	24	1	6	7	0	18	18	0	5	5	54
Grand Total	0	41	41	2	8	10	2	30	32	0	8	8	91
Apprch %	0	100		20	80		6.2	93.8		0	100		
Total %	0	45.1	45.1	2.2	8.8	11	2.2	33	35.2	0	8.8	8.8	

115th St and Martin Luther King Dr
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/12/2012
Page No : 5

Groups Printed- PC - SU - MU

	Martin Luther King Dr From North				115th St From East				Martin Luther King Dr From South				115th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	20	0	12	32	9	92	0	101	0	0	0	0	0	96	26	122	255
04:15 PM	38	0	21	59	6	112	0	118	0	0	0	0	0	93	15	108	285
04:30 PM	30	0	24	54	5	104	0	109	0	0	0	0	0	86	17	103	266
04:45 PM	33	0	10	43	3	84	0	87	0	0	0	0	0	58	21	79	209
Total	121	0	67	188	23	392	0	415	0	0	0	0	0	333	79	412	1015
05:00 PM	27	0	26	53	8	103	0	111	0	0	0	0	0	94	19	113	277
05:15 PM	36	0	21	57	6	103	0	109	0	0	0	0	0	87	23	110	276
05:30 PM	54	0	30	84	12	128	0	140	0	0	0	0	0	96	14	110	334
05:45 PM	32	0	35	67	8	99	0	107	0	0	0	0	0	95	17	112	286
Total	149	0	112	261	34	433	0	467	0	0	0	0	0	372	73	445	1173
Grand Total	270	0	179	449	57	825	0	882	0	0	0	0	0	705	152	857	2188
Apprch %	60.1	0	39.9		6.5	93.5	0		0	0	0		0	82.3	17.7		
Total %	12.3	0	8.2	20.5	2.6	37.7	0	40.3	0	0	0	0	0	32.2	6.9	39.2	
PC	270	0	179	449	57	800	0	857	0	0	0	0	0	695	144	839	2145
% PC	100	0	100	100	100	97	0	97.2	0	0	0	0	0	98.6	94.7	97.9	98
SU	0	0	0	0	0	24	0	24	0	0	0	0	0	10	8	18	42
% SU	0	0	0	0	0	2.9	0	2.7	0	0	0	0	0	1.4	5.3	2.1	1.9
MU	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
% MU	0	0	0	0	0	0.1	0	0.1	0	0	0	0	0	0	0	0	0

	Martin Luther King Dr From North				115th St From East				Martin Luther King Dr From South				115th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	27	0	26	53	8	103	0	111	0	0	0	0	0	94	19	**113**	277
05:15 PM	36	0	21	57	6	103	0	109	0	0	0	0	0	87	**23**	110	276
05:30 PM	**54**	0	30	**84**	**12**	**128**	0	**140**	0	0	0	0	0	**96**	14	110	**334**
05:45 PM	32	0	**35**	67	8	99	0	107	0	0	0	0	0	95	17	112	286
Total Volume	149	0	112	261	34	433	0	467	0	0	0	0	0	372	73	445	1173
% App. Total	57.1	0	42.9		7.3	92.7	0		0	0	0		0	83.6	16.4		
PHF	.690	.000	.800	.777	.708	.846	.000	.834	.000	.000	.000	.000	.000	.969	.793	.985	.878

115th St and Martin Luther King Dr
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/12/2012
Page No : 6

Groups Printed- SU

	Martin Luther King Dr From North				115th St From East				Martin Luther King Dr From South				115th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	4	0	4	0	0	0	0	0	1	0	1	5
04:15 PM	0	0	0	0	0	5	0	5	0	0	0	0	0	2	2	4	9
04:30 PM	0	0	0	0	0	4	0	4	0	0	0	0	0	1	1	2	6
04:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	1	2
Total	0	0	0	0	0	14	0	14	0	0	0	0	0	4	4	8	22
05:00 PM	0	0	0	0	0	5	0	5	0	0	0	0	0	2	1	3	8
05:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	2	1	3	4
05:30 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	0	1	1	3
05:45 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	2	1	3	5
Total	0	0	0	0	0	10	0	10	0	0	0	0	0	6	4	10	20
Grand Total	0	0	0	0	0	24	0	24	0	0	0	0	0	10	8	18	42
Apprch %	0	0	0		0	100	0		0	0	0		0	55.6	44.4		
Total %	0	0	0	0	0	57.1	0	57.1	0	0	0	0	0	23.8	19	42.9	

115th St and Martin Luther King Dr
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/12/2012
Page No : 7

Groups Printed- MU

	Martin Luther King Dr From North				115th St From East				Martin Luther King Dr From South				115th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Apprch %	0	0	0		0	100	0		0	0	0		0	0	0		
Total %	0	0	0	0	0	100	0	100	0	0	0	0	0	0	0	0	

115th St and Martin Luther King Dr
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM Ped
Site Code : 00000000
Start Date : 6/12/2012
Page No : 8

Groups Printed- Peds & Bikes

	Martin Luther King Dr Crossing North Leg			115th St Crossing East Leg			Martin Luther King Dr Crossing South Leg			115th St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
04:00 PM	0	0	0	0	1	1	0	3	3	0	0	0	4
04:15 PM	0	4	4	0	0	0	0	0	0	0	1	1	5
04:30 PM	0	7	7	0	0	0	0	1	1	0	0	0	8
04:45 PM	0	7	7	0	0	0	0	0	0	1	1	2	9
Total	0	18	18	0	1	1	0	4	4	1	2	3	26
05:00 PM	0	2	2	0	3	3	0	6	6	0	0	0	11
05:15 PM	2	11	13	0	0	0	0	2	2	0	4	4	19
05:30 PM	1	3	4	1	2	3	0	1	1	0	1	1	9
05:45 PM	0	1	1	0	1	1	0	4	4	0	0	0	6
Total	3	17	20	1	6	7	0	13	13	0	5	5	45
Grand Total	3	35	38	1	7	8	0	17	17	1	7	8	71
Apprch %	7.9	92.1		12.5	87.5		0	100		12.5	87.5		
Total %	4.2	49.3	53.5	1.4	9.9	11.3	0	23.9	23.9	1.4	9.9	11.3	

115th St and Wentworth Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/17/2012
Page No : 1

Groups Printed- PC - SU - MU

	Wentworth Ave From North				**115th St From East**				**Wentworth Ave From South**				**115th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	7	11	4	22	2	41	2	45	10	32	5	47	2	55	6	63	177
07:15 AM	9	17	3	29	3	64	3	70	8	17	10	35	4	48	7	59	193
07:30 AM	10	18	3	31	0	60	2	62	8	32	6	46	4	62	7	73	212
07:45 AM	15	12	7	34	2	49	3	54	9	23	15	47	6	76	13	95	230
Total	41	58	17	116	7	214	10	231	35	104	36	175	16	241	33	290	812
08:00 AM	8	15	7	30	1	54	5	60	4	26	6	36	5	71	9	85	211
08:15 AM	6	9	2	17	5	53	4	62	4	32	8	44	3	47	9	59	182
08:30 AM	10	18	4	32	5	53	6	64	10	23	12	45	3	61	7	71	212
08:45 AM	11	17	5	33	7	86	6	99	7	17	9	33	4	67	9	80	245
Total	35	59	18	112	18	246	21	285	25	98	35	158	15	246	34	295	850
Grand Total	76	117	35	228	25	460	31	516	60	202	71	333	31	487	67	585	1662
Apprch %	33.3	51.3	15.4		4.8	89.1	6		18	60.7	21.3		5.3	83.2	11.5		
Total %	4.6	7	2.1	13.7	1.5	27.7	1.9	31	3.6	12.2	4.3	20	1.9	29.3	4	35.2	
PC	73	110	33	216	22	438	29	489	57	199	69	325	30	467	64	561	1591
% PC	96.1	94	94.3	94.7	88	95.2	93.5	94.8	95	98.5	97.2	97.6	96.8	95.9	95.5	95.9	95.7
SU	3	7	2	12	3	19	2	24	3	3	2	8	1	20	3	24	68
% SU	3.9	6	5.7	5.3	12	4.1	6.5	4.7	5	1.5	2.8	2.4	3.2	4.1	4.5	4.1	4.1
MU	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0	0	3
% MU	0	0	0	0	0	0.7	0	0.6	0	0	0	0	0	0	0	0	0.2

	Wentworth Ave From North				**115th St From East**				**Wentworth Ave From South**				**115th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	8	15	**7**	30	1	54	5	60	4	26	6	36	**5**	**71**	**9**	**85**	211
08:15 AM	6	9	2	17	5	53	4	62	4	**32**	8	44	3	47	9	59	182
08:30 AM	10	**18**	4	32	5	53	**6**	64	**10**	23	**12**	**45**	3	61	7	71	212
08:45 AM	**11**	17	5	**33**	**7**	**86**	6	**99**	7	17	9	33	4	67	9	80	**245**
Total Volume	35	59	18	112	18	246	21	285	25	98	35	158	15	246	34	295	850
% App. Total	31.2	52.7	16.1		6.3	86.3	7.4		15.8	62	22.2		5.1	83.4	11.5		
PHF	.795	.819	.643	.848	.643	.715	.875	.720	.625	.766	.729	.878	.750	.866	.944	.868	.867

115th St and Wentworth Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/17/2012
Page No : 2

Groups Printed- SU

	Wentworth Ave From North				**115th St From East**				**Wentworth Ave From South**				**115th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	1	1	0	2	0	2	0	2	0	0	0	0	0	3	0	3	7
07:15 AM	0	1	0	1	1	4	0	5	1	1	0	2	0	1	1	2	10
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	4	4
07:45 AM	1	0	0	1	0	3	0	3	0	0	0	0	0	2	0	2	6
Total	2	2	0	4	1	9	0	10	1	1	0	2	0	10	1	11	27
08:00 AM	1	2	0	3	0	2	1	3	1	0	2	3	1	3	0	4	13
08:15 AM	0	1	0	1	1	1	0	2	0	1	0	1	0	3	2	5	9
08:30 AM	0	1	0	1	1	5	0	6	1	1	0	2	0	1	0	1	10
08:45 AM	0	1	2	3	0	2	1	3	0	0	0	0	0	3	0	3	9
Total	1	5	2	8	2	10	2	14	2	2	2	6	1	10	2	13	41
Grand Total	3	7	2	12	3	19	2	24	3	3	2	8	1	20	3	24	68
Apprch %	25	58.3	16.7		12.5	79.2	8.3		37.5	37.5	25		4.2	83.3	12.5		
Total %	4.4	10.3	2.9	17.6	4.4	27.9	2.9	35.3	4.4	4.4	2.9	11.8	1.5	29.4	4.4	35.3	

115th St and Wentworth Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/17/2012
Page No : 3

Groups Printed- MU

	Wentworth Ave From North				**115th St From East**				**Wentworth Ave From South**				**115th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
07:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	2
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Grand Total	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0	0	3
Apprch %	0	0	0		0	100	0		0	0	0		0	0	0		
Total %	0	0	0	0	0	100	0	100	0	0	0	0	0	0	0	0	

115th St and Wentworth Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 5/17/2012
Page No : 4

Groups Printed- Peds and Bikes

	Wentworth Ave Crossing North Leg			**115th St Crossing East Leg**			**Wentworth Ave Crossing South Leg**			**115th St Crossing West Leg**			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
07:00 AM	0	1	1	0	0	0	0	6	6	0	1	1	8
07:15 AM	1	1	2	0	1	1	0	4	4	0	3	3	10
07:30 AM	0	0	0	0	0	0	0	1	1	0	4	4	5
07:45 AM	0	2	2	0	0	0	0	1	1	0	1	1	4
Total	1	4	5	0	1	1	0	12	12	0	9	9	27
08:00 AM	0	2	2	0	0	0	0	4	4	0	1	1	7
08:15 AM	0	1	1	0	1	1	0	15	15	0	3	3	20
08:30 AM	1	2	3	2	5	7	0	4	4	0	0	0	14
08:45 AM	1	3	4	0	2	2	0	5	5	0	0	0	11
Total	2	8	10	2	8	10	0	28	28	0	4	4	52
Grand Total	3	12	15	2	9	11	0	40	40	0	13	13	79
Apprch %	20	80		18.2	81.8		0	100		0	100		
Total %	3.8	15.2	19	2.5	11.4	13.9	0	50.6	50.6	0	16.5	16.5	

115th St and Wentworth Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/17/2012
Page No : 5

Groups Printed- PC - SU - MU

	Wentworth Ave From North				**115th St From East**				**Wentworth Ave From South**				**115th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	12	30	4	46	5	76	10	91	6	18	5	29	3	80	9	92	258
04:15 PM	19	25	2	46	1	48	2	51	6	24	9	39	7	77	8	92	228
04:30 PM	15	31	9	55	6	126	11	143	3	20	4	27	13	69	12	94	319
04:45 PM	13	35	10	58	3	77	5	85	6	15	5	26	6	74	14	94	263
Total	59	121	25	205	15	327	28	370	21	77	23	121	29	300	43	372	1068
05:00 PM	25	30	10	65	8	100	11	119	6	16	5	27	5	66	12	83	294
05:15 PM	11	18	12	41	6	102	5	113	8	15	6	29	11	72	11	94	277
05:30 PM	13	41	7	61	4	85	4	93	6	25	8	39	4	67	11	82	275
05:45 PM	12	28	5	45	5	88	12	105	12	21	7	40	10	90	14	114	304
Total	61	117	34	212	23	375	32	430	32	77	26	135	30	295	48	373	1150
Grand Total	120	238	59	417	38	702	60	800	53	154	49	256	59	595	91	745	2218
Apprch %	28.8	57.1	14.1		4.8	87.8	7.5		20.7	60.2	19.1		7.9	79.9	12.2		
Total %	5.4	10.7	2.7	18.8	1.7	31.7	2.7	36.1	2.4	6.9	2.2	11.5	2.7	26.8	4.1	33.6	
PC	120	237	58	415	38	692	60	790	52	153	49	254	58	582	89	729	2188
% PC	100	99.6	98.3	99.5	100	98.6	100	98.8	98.1	99.4	100	99.2	98.3	97.8	97.8	97.9	98.6
SU	0	1	1	2	0	10	0	10	1	1	0	2	1	13	2	16	30
% SU	0	0.4	1.7	0.5	0	1.4	0	1.2	1.9	0.6	0	0.8	1.7	2.2	2.2	2.1	1.4
MU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% MU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	Wentworth Ave From North				**115th St From East**				**Wentworth Ave From South**				**115th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	15	31	9	55	6	**126**	**11**	**143**	3	**20**	4	27	**13**	69	12	**94**	**319**
04:45 PM	13	**35**	10	58	3	77	5	85	6	15	5	26	6	**74**	**14**	94	263
05:00 PM	**25**	30	10	**65**	**8**	100	11	119	6	16	5	27	5	66	12	83	294
05:15 PM	11	18	**12**	41	6	102	5	113	**8**	15	**6**	**29**	11	72	11	94	277
Total Volume	64	114	41	219	23	405	32	460	23	66	20	109	35	281	49	365	1153
% App. Total	29.2	52.1	18.7		5	88	7		21.1	60.6	18.3		9.6	77	13.4		
PHF	.640	.814	.854	.842	.719	.804	.727	.804	.719	.825	.833	.940	.673	.949	.875	.971	.904

115th St and Wentworth Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/17/2012
Page No : 6

Groups Printed- SU

	Wentworth Ave From North				**115th St From East**				**Wentworth Ave From South**				**115th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	2	0	2	1	0	0	1	0	1	0	1	4
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	2
04:30 PM	0	0	0	0	0	1	0	1	0	1	0	1	0	1	0	1	3
04:45 PM	0	0	1	1	0	1	0	1	0	0	0	0	0	2	0	2	4
Total	0	0	1	1	0	4	0	4	1	1	0	2	1	5	0	6	13
05:00 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	4	1	5	7
05:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
05:30 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	2	1	3	5
05:45 PM	0	1	0	1	0	1	0	1	0	0	0	0	0	1	0	1	3
Total	0	1	0	1	0	6	0	6	0	0	0	0	0	8	2	10	17
Grand Total	0	1	1	2	0	10	0	10	1	1	0	2	1	13	2	16	30
Apprch %	0	50	50		0	100	0		50	50	0		6.2	81.2	12.5		
Total %	0	3.3	3.3	6.7	0	33.3	0	33.3	3.3	3.3	0	6.7	3.3	43.3	6.7	53.3	

115th St and Wentworth Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/17/2012
Page No : 7

Groups Printed- MU

	Wentworth Ave From North				**115th St From East**				**Wentworth Ave From South**				**115th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0		0	0	0		0	0	0		0	0	0		
Total %																	

115th St and Wentworth Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 5/17/2012

Groups Printed- Peds and Bikes

	Wentworth Ave Crossing North Leg			**115th St Crossing East Leg**			**Wentworth Ave Crossing South Leg**			**115th St Crossing West Leg**			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
04:00 PM	0	6	6	0	2	2	0	6	6	0	1	1	15
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	5	5	0	4	4	0	6	6	1	4	5	20
04:45 PM	0	0	0	0	0	0	0	5	5	0	2	2	7
Total	0	11	11	0	6	6	0	17	17	1	7	8	42
05:00 PM	0	3	3	0	1	1	1	5	6	0	0	0	10
05:15 PM	0	2	2	1	3	4	0	4	4	0	0	0	10
05:30 PM	1	2	3	0	0	0	0	5	5	0	1	1	9
05:45 PM	0	4	4	0	0	0	0	6	6	0	0	0	10
Total	1	11	12	1	4	5	1	20	21	0	1	1	39
Grand Total	1	22	23	1	10	11	1	37	38	1	8	9	81
Apprch %	4.3	95.7		9.1	90.9		2.6	97.4		11.1	88.9		
Total %	1.2	27.2	28.4	1.2	12.3	13.6	1.2	45.7	46.9	1.2	9.9	11.1	

119th St and Halsted Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/10/2012
Page No : 1

Groups Printed- PC - SU - MU

	Halsted Ave From North				119th St From East				Halsted Ave From South				119th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	12	47	8	67	19	27	3	49	7	195	13	215	10	38	23	71	402
07:15 AM	14	47	6	67	19	40	2	61	7	205	23	235	10	39	33	82	445
07:30 AM	14	71	8	93	10	31	10	51	16	203	9	228	16	53	44	113	485
07:45 AM	22	88	12	122	13	43	8	64	17	195	25	237	15	70	46	131	554
Total	62	253	34	349	61	141	23	225	47	798	70	915	51	200	146	397	1886
08:00 AM	21	92	15	128	9	26	11	46	10	180	17	207	21	57	50	128	509
08:15 AM	24	97	11	132	12	36	5	53	12	152	27	191	14	58	52	124	500
08:30 AM	24	76	15	115	13	30	10	53	7	155	16	178	19	52	34	105	451
08:45 AM	18	107	11	136	11	35	4	50	9	108	25	142	17	53	32	102	430
Total	87	372	52	511	45	127	30	202	38	595	85	718	71	220	168	459	1890
Grand Total	149	625	86	860	106	268	53	427	85	1393	155	1633	122	420	314	856	3776
Apprch %	17.3	72.7	10		24.8	62.8	12.4		5.2	85.3	9.5		14.3	49.1	36.7		
Total %	3.9	16.6	2.3	22.8	2.8	7.1	1.4	11.3	2.3	36.9	4.1	43.2	3.2	11.1	8.3	22.7	
PC	136	583	83	802	101	252	52	405	77	1332	148	1557	116	386	302	804	3568
% PC	91.3	93.3	96.5	93.3	95.3	94	98.1	94.8	90.6	95.6	95.5	95.3	95.1	91.9	96.2	93.9	94.5
SU	12	39	3	54	5	15	1	21	7	57	6	70	6	33	11	50	195
% SU	8.1	6.2	3.5	6.3	4.7	5.6	1.9	4.9	8.2	4.1	3.9	4.3	4.9	7.9	3.5	5.8	5.2
MU	1	3	0	4	0	1	0	1	1	4	1	6	0	1	1	2	13
% MU	0.7	0.5	0	0.5	0	0.4	0	0.2	1.2	0.3	0.6	0.4	0	0.2	0.3	0.2	0.3

	Halsted Ave From North				119th St From East				Halsted Ave From South				119th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	14	71	8	93	10	31	10	51	16	**203**	9	228	16	53	44	113	485
07:45 AM	22	88	12	122	**13**	**43**	8	**64**	**17**	195	25	**237**	15	**70**	46	**131**	**554**
08:00 AM	21	92	**15**	128	9	26	**11**	46	10	180	17	207	**21**	57	50	128	509
08:15 AM	**24**	**97**	11	**132**	12	36	5	53	12	152	**27**	191	14	58	**52**	124	500
Total Volume	81	348	46	475	44	136	34	214	55	730	78	863	66	238	192	496	2048
% App. Total	17.1	73.3	9.7		20.6	63.6	15.9		6.4	84.6	9		13.3	48	38.7		
PHF	.844	.897	.767	.900	.846	.791	.773	.836	.809	.899	.722	.910	.786	.850	.923	.947	.924

119th St and Halsted Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/10/2012
Page No : 2

Groups Printed- SU

	Halsted Ave From North				119th St From East				Halsted Ave From South				119th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	2	5	1	8	2	2	1	5	1	6	0	7	1	4	0	5	25
07:15 AM	1	5	0	6	1	3	0	4	0	7	0	7	1	3	2	6	23
07:30 AM	1	5	1	7	0	0	0	0	1	10	1	12	1	6	3	10	29
07:45 AM	1	8	0	9	0	3	0	3	1	10	0	11	1	5	2	8	31
Total	5	23	2	30	3	8	1	12	3	33	1	37	4	18	7	29	108
08:00 AM	2	2	0	4	1	2	0	3	2	8	1	11	2	6	0	8	26
08:15 AM	2	4	0	6	1	3	0	4	2	7	1	10	0	2	1	3	23
08:30 AM	2	4	1	7	0	2	0	2	0	7	2	9	0	5	2	7	25
08:45 AM	1	6	0	7	0	0	0	0	0	2	1	3	0	2	1	3	13
Total	7	16	1	24	2	7	0	9	4	24	5	33	2	15	4	21	87
Grand Total	12	39	3	54	5	15	1	21	7	57	6	70	6	33	11	50	195
Apprch %	22.2	72.2	5.6		23.8	71.4	4.8		10	81.4	8.6		12	66	22		
Total %	6.2	20	1.5	27.7	2.6	7.7	0.5	10.8	3.6	29.2	3.1	35.9	3.1	16.9	5.6	25.6	

119th St and Halsted Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/10/2012
Page No : 3

Groups Printed- MU

	Halsted Ave From North				119th St From East				Halsted Ave From South				119th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	1	2	0	3	0	1	0	1	4
07:15 AM	0	0	0	0	0	0	0	0	0	1	1	2	0	0	1	1	3
07:30 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
07:45 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	2	0	2	0	0	0	0	1	3	1	5	0	1	1	2	9
08:00 AM	1	0	0	1	0	1	0	1	0	0	0	0	0	0	0	0	2
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	1	0	2	0	1	0	1	0	1	0	1	0	0	0	0	4
Grand Total	1	3	0	4	0	1	0	1	1	4	1	6	0	1	1	2	13
Apprch %	25	75	0		0	100	0		16.7	66.7	16.7		0	50	50		
Total %	7.7	23.1	0	30.8	0	7.7	0	7.7	7.7	30.8	7.7	46.2	0	7.7	7.7	15.4	

119th St and Halsted Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 5/10/2012
Page No : 4

Groups Printed- Peds & Bikes

	Halsted Ave Crossing North Leg			119th St Crossing East Leg			Halsted Ave Crossing South Leg			119th St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
07:00 AM	1	13	14	0	0	0	0	0	0	0	10	10	24
07:15 AM	0	4	4	1	2	3	0	1	1	1	1	2	10
07:30 AM	0	4	4	0	4	4	0	0	0	0	9	9	17
07:45 AM	0	14	14	0	2	2	0	2	2	0	16	16	34
Total	1	35	36	1	8	9	0	3	3	1	36	37	85
08:00 AM	0	6	6	0	1	1	0	1	1	1	5	6	14
08:15 AM	0	9	9	0	1	1	0	0	0	0	12	12	22
08:30 AM	0	1	1	0	0	0	0	0	0	0	5	5	6
08:45 AM	1	5	6	0	1	1	0	2	2	1	2	3	12
Total	1	21	22	0	3	3	0	3	3	2	24	26	54
Grand Total	2	56	58	1	11	12	0	6	6	3	60	63	139
Apprch %	3.4	96.6		8.3	91.7		0	100		4.8	95.2		
Total %	1.4	40.3	41.7	0.7	7.9	8.6	0	4.3	4.3	2.2	43.2	45.3	

119th St and Halsted Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/10/2012
Page No : 5

Groups Printed- PC - SU - MU

	Halsted Ave From North				119th St From East				Halsted Ave From South				119th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	24	141	25	190	19	49	10	78	19	117	24	160	27	64	30	121	549
04:15 PM	34	139	29	202	21	41	16	78	20	98	34	152	30	57	32	119	551
04:30 PM	39	202	39	280	18	38	16	72	15	129	24	168	27	69	38	134	654
04:45 PM	36	179	25	240	16	50	7	73	14	127	28	169	19	50	21	90	572
Total	133	661	118	912	74	178	49	301	68	471	110	649	103	240	121	464	2326
05:00 PM	31	199	22	252	19	51	21	91	13	106	21	140	28	55	48	131	614
05:15 PM	36	216	22	274	11	39	19	69	21	126	18	165	34	58	24	116	624
05:30 PM	26	202	20	248	9	45	21	75	12	110	31	153	37	60	25	122	598
05:45 PM	27	186	32	245	22	55	20	97	14	101	22	137	27	66	33	126	605
Total	120	803	96	1019	61	190	81	332	60	443	92	595	126	239	130	495	2441
Grand Total	253	1464	214	1931	135	368	130	633	128	914	202	1244	229	479	251	959	4767
Apprch %	13.1	75.8	11.1		21.3	58.1	20.5		10.3	73.5	16.2		23.9	49.9	26.2		
Total %	5.3	30.7	4.5	40.5	2.8	7.7	2.7	13.3	2.7	19.2	4.2	26.1	4.8	10	5.3	20.1	
PC	241	1422	213	1876	132	351	126	609	127	876	200	1203	225	463	250	938	4626
% PC	95.3	97.1	99.5	97.2	97.8	95.4	96.9	96.2	99.2	95.8	99	96.7	98.3	96.7	99.6	97.8	97
SU	11	40	1	52	3	17	4	24	1	37	1	39	4	16	1	21	136
% SU	4.3	2.7	0.5	2.7	2.2	4.6	3.1	3.8	0.8	4	0.5	3.1	1.7	3.3	0.4	2.2	2.9
MU	1	2	0	3	0	0	0	0	0	1	1	2	0	0	0	0	5
% MU	0.4	0.1	0	0.2	0	0	0	0	0	0.1	0.5	0.2	0	0	0	0	0.1

	Halsted Ave From North				119th St From East				Halsted Ave From South				119th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	**39**	202	**39**	**280**	18	38	16	72	15	**129**	24	168	27	**69**	38	**134**	**654**
04:45 PM	36	179	25	240	16	50	7	73	14	127	**28**	**169**	19	50	21	90	572
05:00 PM	31	199	22	252	**19**	**51**	**21**	**91**	13	106	21	140	28	55	**48**	131	614
05:15 PM	36	**216**	22	274	11	39	19	69	**21**	126	18	165	**34**	58	24	116	624
Total Volume	142	796	108	1046	64	178	63	305	63	488	91	642	108	232	131	471	2464
% App. Total	13.6	76.1	10.3		21	58.4	20.7		9.8	76	14.2		22.9	49.3	27.8		
PHF	.910	.921	.692	.934	.842	.873	.750	.838	.750	.946	.813	.950	.794	.841	.682	.879	.942

119th St and Halsted Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/10/2012
Page No : 6

Groups Printed- SU

	Halsted Ave From North				119th St From East				Halsted Ave From South				119th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	1	3	0	4	2	3	2	7	1	4	0	5	1	2	0	3	19
04:15 PM	1	6	1	8	1	4	1	6	0	5	1	6	0	1	0	1	21
04:30 PM	3	3	0	6	0	1	1	2	0	6	0	6	1	1	0	2	16
04:45 PM	2	7	0	9	0	2	0	2	0	4	0	4	0	1	0	1	16
Total	7	19	1	27	3	10	4	17	1	19	1	21	2	5	0	7	72
05:00 PM	1	6	0	7	0	0	0	0	0	2	0	2	0	3	1	4	13
05:15 PM	1	7	0	8	0	3	0	3	0	9	0	9	1	1	0	2	22
05:30 PM	0	2	0	2	0	3	0	3	0	1	0	1	1	2	0	3	9
05:45 PM	2	6	0	8	0	1	0	1	0	6	0	6	0	5	0	5	20
Total	4	21	0	25	0	7	0	7	0	18	0	18	2	11	1	14	64
Grand Total	11	40	1	52	3	17	4	24	1	37	1	39	4	16	1	21	136
Apprch %	21.2	76.9	1.9		12.5	70.8	16.7		2.6	94.9	2.6		19	76.2	4.8		
Total %	8.1	29.4	0.7	38.2	2.2	12.5	2.9	17.6	0.7	27.2	0.7	28.7	2.9	11.8	0.7	15.4	

119th St and Halsted Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/10/2012
Page No : 7

Groups Printed- MU

	Halsted Ave From North				119th St From East				Halsted Ave From South				119th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	1	0	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
Total	1	1	0	2	0	0	0	0	0	1	0	1	0	0	0	0	3
05:00 PM	0	1	0	1	0	0	0	0	0	0	1	1	0	0	0	0	2
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	1	0	0	0	0	0	0	1	1	0	0	0	0	2
Grand Total	1	2	0	3	0	0	0	0	0	1	1	2	0	0	0	0	5
Apprch %	33.3	66.7	0		0	0	0		0	50	50		0	0	0		
Total %	20	40	0	60	0	0	0	0	0	20	20	40	0	0	0	0	

119th St and Halsted Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 5/10/2012
Page No : 8

Groups Printed- Peds & Bikes

	Halsted Ave Crossing North Leg			119th St Crossing East Leg			Halsted Ave Crossing South Leg			119th St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
04:00 PM	0	6	6	1	3	4	0	2	2	0	2	2	14
04:15 PM	0	4	4	0	2	2	0	2	2	0	8	8	16
04:30 PM	0	2	2	0	4	4	0	2	2	1	25	26	34
04:45 PM	1	8	9	3	5	8	0	5	5	1	12	13	35
Total	1	20	21	4	14	18	0	11	11	2	47	49	99
05:00 PM	0	6	6	0	4	4	0	1	1	0	5	5	16
05:15 PM	0	7	7	0	2	2	0	1	1	0	16	16	26
05:30 PM	0	2	2	0	4	4	0	3	3	0	9	9	18
05:45 PM	3	13	16	2	1	3	0	3	3	1	29	30	52
Total	3	28	31	2	11	13	0	8	8	1	59	60	112
Grand Total	4	48	52	6	25	31	0	19	19	3	106	109	211
Apprch %	7.7	92.3		19.4	80.6		0	100		2.8	97.2		
Total %	1.9	22.7	24.6	2.8	11.8	14.7	0	9	9	1.4	50.2	51.7	

119th St and Marshfield Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/10/2012
Page No : 1

Groups Printed- PC - SU - MU

	Marshfield Ave From North				**119th St From East**				**Marshfield Ave From South**				**119th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	48	18	8	74	0	99	28	127	0	0	0	0	14	61	0	75	276
07:15 AM	65	23	11	99	0	108	30	138	0	0	0	0	28	78	0	106	343
07:30 AM	71	27	15	113	0	118	35	153	0	0	0	0	36	98	0	134	400
07:45 AM	76	30	20	126	0	125	37	162	0	0	0	0	59	118	0	177	465
Total	260	98	54	412	0	450	130	580	0	0	0	0	137	355	0	492	1484
08:00 AM	59	23	45	127	0	115	53	168	0	0	0	0	62	97	0	159	454
08:15 AM	67	27	34	128	0	115	36	151	0	0	0	0	38	95	0	133	412
08:30 AM	55	30	54	139	0	131	32	163	0	0	0	0	35	136	0	171	473
08:45 AM	67	37	32	136	0	96	32	128	0	0	0	0	43	103	0	146	410
Total	248	117	165	530	0	457	153	610	0	0	0	0	178	431	0	609	1749
Grand Total	508	215	219	942	0	907	283	1190	0	0	0	0	315	786	0	1101	3233
Apprch %	53.9	22.8	23.2		0	76.2	23.8		0	0	0		28.6	71.4	0		
Total %	15.7	6.7	6.8	29.1	0	28.1	8.8	36.8	0	0	0	0	9.7	24.3	0	34.1	
PC	498	211	216	925	0	877	277	1154	0	0	0	0	288	724	0	1012	3091
% PC	98	98.1	98.6	98.2	0	96.7	97.9	97	0	0	0	0	91.4	92.1	0	91.9	95.6
SU	9	3	3	15	0	21	6	27	0	0	0	0	12	38	0	50	92
% SU	1.8	1.4	1.4	1.6	0	2.3	2.1	2.3	0	0	0	0	3.8	4.8	0	4.5	2.8
MU	1	1	0	2	0	9	0	9	0	0	0	0	15	24	0	39	50
% MU	0.2	0.5	0	0.2	0	1	0	0.8	0	0	0	0	4.8	3.1	0	3.5	1.5

	Marshfield Ave From North				**119th St From East**				**Marshfield Ave From South**				**119th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	**76**	**30**	20	126	0	125	37	162	0	0	0	0	59	118	0	**177**	465
08:00 AM	59	23	45	127	0	115	**53**	**168**	0	0	0	0	**62**	97	0	159	454
08:15 AM	67	27	34	128	0	115	36	151	0	0	0	0	38	95	0	133	412
08:30 AM	55	30	**54**	**139**	0	**131**	32	163	0	0	0	0	35	**136**	0	171	**473**
Total Volume	257	110	153	520	0	486	158	644	0	0	0	0	194	446	0	640	1804
% App. Total	49.4	21.2	29.4		0	75.5	24.5		0	0	0		30.3	69.7	0		
PHF	.845	.917	.708	.935	.000	.927	.745	.958	.000	.000	.000	.000	.782	.820	.000	.904	.953

119th St and Marshfield Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/10/2012
Page No : 2

Groups Printed- SU

	Marshfield Ave From North				**119th St From East**				**Marshfield Ave From South**				**119th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
07:45 AM	1	1	1	3	0	4	1	5	0	0	0	0	0	11	0	11	19
Total	1	1	1	3	0	4	1	5	0	0	0	0	0	12	0	12	20
08:00 AM	3	0	1	4	0	4	2	6	0	0	0	0	5	8	0	13	23
08:15 AM	2	0	0	2	0	2	0	2	0	0	0	0	0	6	0	6	10
08:30 AM	0	0	0	0	0	6	1	7	0	0	0	0	5	9	0	14	21
08:45 AM	3	2	1	6	0	5	2	7	0	0	0	0	2	3	0	5	18
Total	8	2	2	12	0	17	5	22	0	0	0	0	12	26	0	38	72
Grand Total	9	3	3	15	0	21	6	27	0	0	0	0	12	38	0	50	92
Apprch %	60	20	20		0	77.8	22.2		0	0	0		24	76	0		
Total %	9.8	3.3	3.3	16.3	0	22.8	6.5	29.3	0	0	0	0	13	41.3	0	54.3	

119th St and Marshfield Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/10/2012
Page No : 3

Groups Printed- MU

	Marshfield Ave From North				119th St From East				Marshfield Ave From South				119th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	1	0	1	0	3	0	3	0	0	0	0	5	6	0	11	15
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	2	5	0	7	7
Total	0	1	0	1	0	3	0	3	0	0	0	0	7	11	0	18	22
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	5	4	0	9	9
08:15 AM	0	0	0	0	0	4	0	4	0	0	0	0	0	3	0	3	7
08:30 AM	1	0	0	1	0	1	0	1	0	0	0	0	2	4	0	6	8
08:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	1	2	0	3	4
Total	1	0	0	1	0	6	0	6	0	0	0	0	8	13	0	21	28
Grand Total	1	1	0	2	0	9	0	9	0	0	0	0	15	24	0	39	50
Apprch %	50	50	0		0	100	0		0	0	0		38.5	61.5	0		
Total %	2	2	0	4	0	18	0	18	0	0	0	0	30	48	0	78	

119th St and Marshfield Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 5/10/2012
Page No : 4

Groups Printed- Peds & Bikes

	Marshfield Ave Crossing North Leg			**119th St Crossing East Leg**			**Marshfield Ave Crossing South Leg**			**119th St Crossing West Leg**			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	4	4	0	0	0	0	0	0	0	0	0	4
Total	0	4	4	0	0	0	0	0	0	0	0	0	4
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	1	1	0	0	0	0	3	3	0	0	0	4
08:30 AM	0	0	0	0	0	0	0	0	0	0	3	3	3
08:45 AM	0	0	0	0	0	0	0	1	1	0	0	0	1
Total	0	1	1	0	0	0	0	4	4	0	3	3	8
Grand Total	0	5	5	0	0	0	0	4	4	0	3	3	12
Apprch %	0	100		0	0		0	100		0	100		
Total %	0	41.7	41.7	0	0	0	0	33.3	33.3	0	25	25	

119th St and Marshfield Ave
Chicago, IL
4:00 Pm - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/10/2012
Page No : 5

Groups Printed- PC - SU - MU

	Marshfield Ave From North				**119th St From East**				**Marshfield Ave From South**				**119th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	121	57	71	249	0	149	39	188	0	0	0	0	90	120	0	210	647
04:15 PM	103	69	58	230	0	138	58	196	0	0	0	0	71	128	0	199	625
04:30 PM	86	55	57	198	0	140	54	194	0	0	0	0	79	99	0	178	570
04:45 PM	96	63	53	212	0	114	70	184	0	0	0	0	77	91	0	168	564
Total	406	244	239	889	0	541	221	762	0	0	0	0	317	438	0	755	2406
05:00 PM	103	60	74	237	0	155	59	214	0	0	0	0	86	111	0	197	648
05:15 PM	77	65	71	213	0	136	55	191	0	0	0	0	74	91	0	165	569
05:30 PM	96	81	59	236	0	146	49	195	0	0	0	0	74	115	0	189	620
05:45 PM	104	59	72	235	0	129	47	176	0	0	0	0	78	105	0	183	594
Total	380	265	276	921	0	566	210	776	0	0	0	0	312	422	0	734	2431
Grand Total	786	509	515	1810	0	1107	431	1538	0	0	0	0	629	860	0	1489	4837
Apprch %	43.4	28.1	28.5		0	72	28		0	0	0		42.2	57.8	0		
Total %	16.2	10.5	10.6	37.4	0	22.9	8.9	31.8	0	0	0	0	13	17.8	0	30.8	
PC	780	504	513	1797	0	1090	426	1516	0	0	0	0	598	829	0	1427	4740
% PC	99.2	99	99.6	99.3	0	98.5	98.8	98.6	0	0	0	0	95.1	96.4	0	95.8	98
SU	4	4	2	10	0	14	4	18	0	0	0	0	18	21	0	39	67
% SU	0.5	0.8	0.4	0.6	0	1.3	0.9	1.2	0	0	0	0	2.9	2.4	0	2.6	1.4
MU	2	1	0	3	0	3	1	4	0	0	0	0	13	10	0	23	30
% MU	0.3	0.2	0	0.2	0	0.3	0.2	0.3	0	0	0	0	2.1	1.2	0	1.5	0.6

	Marshfield Ave From North				**119th St From East**				**Marshfield Ave From South**				**119th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	103	60	**74**	**237**	0	**155**	**59**	**214**	0	0	0	0	**86**	111	0	**197**	**648**
05:15 PM	77	65	71	213	0	136	55	191	0	0	0	0	74	91	0	165	569
05:30 PM	96	**81**	59	236	0	146	49	195	0	0	0	0	74	**115**	0	189	620
05:45 PM	**104**	59	72	235	0	129	47	176	0	0	0	0	78	105	0	183	594
Total Volume	380	265	276	921	0	566	210	776	0	0	0	0	312	422	0	734	2431
% App. Total	41.3	28.8	30		0	72.9	27.1		0	0	0		42.5	57.5	0		
PHF	.913	.818	.932	.972	.000	.913	.890	.907	.000	.000	.000	.000	.907	.917	.000	.931	.938

119th St and Marshfield Ave
Chicago, IL
4:00 Pm - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/10/2012
Page No : 6

Groups Printed- SU

	Marshfield Ave From North				**119th St From East**				**Marshfield Ave From South**				**119th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	1	1	2	0	0	0	0	3	2	0	5	7
04:15 PM	0	0	0	0	0	2	0	2	0	0	0	0	1	3	0	4	6
04:30 PM	1	0	0	1	0	2	1	3	0	0	0	0	3	4	0	7	11
04:45 PM	1	1	0	2	0	0	1	1	0	0	0	0	1	0	0	1	4
Total	2	1	0	3	0	5	3	8	0	0	0	0	8	9	0	17	28
05:00 PM	0	1	0	1	0	2	1	3	0	0	0	0	3	3	0	6	10
05:15 PM	1	1	1	3	0	4	0	4	0	0	0	0	3	0	0	3	10
05:30 PM	1	0	1	2	0	2	0	2	0	0	0	0	1	2	0	3	7
05:45 PM	0	1	0	1	0	1	0	1	0	0	0	0	3	7	0	10	12
Total	2	3	2	7	0	9	1	10	0	0	0	0	10	12	0	22	39
Grand Total	4	4	2	10	0	14	4	18	0	0	0	0	18	21	0	39	67
Apprch %	40	40	20		0	77.8	22.2		0	0	0		46.2	53.8	0		
Total %	6	6	3	14.9	0	20.9	6	26.9	0	0	0	0	26.9	31.3	0	58.2	

119th St and Marshfield Ave
Chicago, IL
4:00 Pm - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/10/2012
Page No : 7

Groups Printed- MU

	Marshfield Ave From North				**119th St From East**				**Marshfield Ave From South**				**119th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	1	1	0	2	0	0	0	0	0	0	0	0	0	2	0	2	4
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2
04:45 PM	1	0	0	1	0	0	0	0	0	0	0	0	3	2	0	5	6
Total	2	1	0	3	0	0	0	0	0	0	0	0	5	4	0	9	12
05:00 PM	0	0	0	0	0	0	1	1	0	0	0	0	1	1	0	2	3
05:15 PM	0	0	0	0	0	3	0	3	0	0	0	0	1	1	0	2	5
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	5	2	0	7	7
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	3	3
Total	0	0	0	0	0	3	1	4	0	0	0	0	8	6	0	14	18
Grand Total	2	1	0	3	0	3	1	4	0	0	0	0	13	10	0	23	30
Apprch %	66.7	33.3	0		0	75	25		0	0	0		56.5	43.5	0		
Total %	6.7	3.3	0	10	0	10	3.3	13.3	0	0	0	0	43.3	33.3	0	76.7	

119th St and Marshfield Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 5/10/2012
Page No : 8

Groups Printed- Peds & Bikes

	Marshfield Ave Crossing North Leg			**119th St Crossing East Leg**			**Marshfield Ave Crossing South Leg**			**119th St Crossing West Leg**			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
04:00 PM	0	8	8	0	0	0	0	0	0	0	0	0	8
04:15 PM	0	3	3	0	0	0	0	4	4	0	0	0	7
04:30 PM	2	3	5	0	0	0	0	1	1	0	0	0	6
04:45 PM	0	2	2	0	0	0	0	8	8	0	0	0	10
Total	2	16	18	0	0	0	0	13	13	0	0	0	31
05:00 PM	0	0	0	0	0	0	0	5	5	0	0	0	5
05:15 PM	0	2	2	0	0	0	0	0	0	0	0	0	2
05:30 PM	0	1	1	0	0	0	0	1	1	0	0	0	2
05:45 PM	0	1	1	0	0	0	0	0	0	0	0	0	1
Total	0	4	4	0	0	0	0	6	6	0	0	0	10
Grand Total	2	20	22	0	0	0	0	19	19	0	0	0	41
Apprch %	9.1	90.9		0	0		0	100		0	0		
Total %	4.9	48.8	53.7	0	0	0	0	46.3	46.3	0	0	0	

Regina Webster & Associates, Inc.

8619 West Bryn Mawr Avenue, Suite 602, Chicago, Illinois 60631
773-283-2600 Fax: 773-283-2602
www.RWAengineers.com

119th St and Michigan Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/15/2012
Page No : 1

Groups Printed- PC - SU - MU

	Michigan Ave From North				**119th St From East**				**Michigan Ave From South**				**119th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	19	28	0	47	2	1	0	3	4	56	5	65	5	2	32	39	154
07:15 AM	22	23	1	46	1	6	1	8	3	70	7	80	6	3	31	40	174
07:30 AM	21	36	0	57	2	4	3	9	4	78	4	86	7	6	35	48	200
07:45 AM	16	53	4	73	4	5	3	12	8	70	7	85	6	6	42	54	224
Total	78	140	5	223	9	16	7	32	19	274	23	316	24	17	140	181	752
08:00 AM	26	36	0	62	0	5	1	6	5	73	10	88	9	3	30	42	198
08:15 AM	19	43	1	63	0	3	2	5	2	65	5	72	5	3	31	39	179
08:30 AM	19	41	0	60	1	4	0	5	2	74	8	84	17	6	29	52	201
08:45 AM	23	48	5	76	3	6	1	10	2	71	12	85	14	7	34	55	226
Total	87	168	6	261	4	18	4	26	11	283	35	329	45	19	124	188	804
Grand Total	165	308	11	484	13	34	11	58	30	557	58	645	69	36	264	369	1556
Apprch %	34.1	63.6	2.3		22.4	58.6	19		4.7	86.4	9		18.7	9.8	71.5		
Total %	10.6	19.8	0.7	31.1	0.8	2.2	0.7	3.7	1.9	35.8	3.7	41.5	4.4	2.3	17	23.7	
PC	147	283	11	441	13	34	11	58	29	542	58	629	66	35	237	338	1466
% PC	89.1	91.9	100	91.1	100	100	100	100	96.7	97.3	100	97.5	95.7	97.2	89.8	91.6	94.2
SU	17	25	0	42	0	0	0	0	1	15	0	16	3	0	25	28	86
% SU	10.3	8.1	0	8.7	0	0	0	0	3.3	2.7	0	2.5	4.3	0	9.5	7.6	5.5
MU	1	0	0	1	0	0	0	0	0	0	0	0	0	1	2	3	4
% MU	0.6	0	0	0.2	0	0	0	0	0	0	0	0	0	2.8	0.8	0.8	0.3

	Michigan Ave From North				**119th St From East**				**Michigan Ave From South**				**119th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	**26**	36	0	62	0	5	1	6	**5**	73	10	**88**	9	3	30	42	198
08:15 AM	19	43	1	63	0	3	**2**	5	2	65	5	72	5	3	31	39	179
08:30 AM	19	41	0	60	1	4	0	5	2	**74**	8	84	**17**	6	29	52	201
08:45 AM	23	**48**	**5**	**76**	**3**	**6**	1	**10**	2	71	**12**	85	14	**7**	**34**	**55**	**226**
Total Volume	87	168	6	261	4	18	4	26	11	283	35	329	45	19	124	188	804
% App. Total	33.3	64.4	2.3		15.4	69.2	15.4		3.3	86	10.6		23.9	10.1	66		
PHF	.837	.875	.300	.859	.333	.750	.500	.650	.550	.956	.729	.935	.662	.679	.912	.855	.889

119th St and Michigan Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/15/2012
Page No : 2

Groups Printed- SU

	Michigan Ave From North				**119th St From East**				**Michigan Ave From South**				**119th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	4	2	0	6	0	0	0	0	1	1	0	2	0	0	3	3	11
07:15 AM	2	2	0	4	0	0	0	0	0	3	0	3	0	0	6	6	13
07:30 AM	2	3	0	5	0	0	0	0	0	1	0	1	0	0	3	3	9
07:45 AM	2	5	0	7	0	0	0	0	0	1	0	1	2	0	4	6	14
Total	10	12	0	22	0	0	0	0	1	6	0	7	2	0	16	18	47
08:00 AM	1	3	0	4	0	0	0	0	0	1	0	1	0	0	2	2	7
08:15 AM	2	4	0	6	0	0	0	0	0	4	0	4	0	0	3	3	13
08:30 AM	1	4	0	5	0	0	0	0	0	3	0	3	1	0	2	3	11
08:45 AM	3	2	0	5	0	0	0	0	0	1	0	1	0	0	2	2	8
Total	7	13	0	20	0	0	0	0	0	9	0	9	1	0	9	10	39
Grand Total	17	25	0	42	0	0	0	0	1	15	0	16	3	0	25	28	86
Apprch %	40.5	59.5	0		0	0	0		6.2	93.8	0		10.7	0	89.3		
Total %	19.8	29.1	0	48.8	0	0	0	0	1.2	17.4	0	18.6	3.5	0	29.1	32.6	

119th St and Michigan Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/15/2012
Page No : 3

Groups Printed- MU

	Michigan Ave From North				**119th St From East**				**Michigan Ave From South**				**119th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
08:45 AM	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	1	2
Total	1	0	0	1	0	0	0	0	0	0	0	0	0	1	2	3	4
Grand Total	1	0	0	1	0	0	0	0	0	0	0	0	0	1	2	3	4
Apprch %	100	0	0		0	0	0		0	0	0		0	33.3	66.7		
Total %	25	0	0	25	0	0	0	0	0	0	0	0	0	25	50	75	

119th St and Michigan Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 5/15/2012
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Groups Printed- Peds & Bikes

	Michigan Ave Crossing North Leg			119th St Crossing East Leg			Michigan Ave Crossing South Leg			119th St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
07:00 AM	0	10	10	0	3	3	0	1	1	0	4	4	18
07:15 AM	0	8	8	0	4	4	0	0	0	0	6	6	18
07:30 AM	1	6	7	0	4	4	0	1	1	0	4	4	16
07:45 AM	0	11	11	0	2	2	0	2	2	0	6	6	21
Total	1	35	36	0	13	13	0	4	4	0	20	20	73
08:00 AM	0	14	14	0	8	8	0	7	7	0	9	9	38
08:15 AM	0	18	18	0	3	3	0	12	12	0	15	15	48
08:30 AM	0	9	9	0	8	8	0	22	22	0	13	13	52
08:45 AM	0	10	10	0	3	3	0	6	6	0	11	11	30
Total	0	51	51	0	22	22	0	47	47	0	48	48	168
Grand Total	1	86	87	0	35	35	0	51	51	0	68	68	241
Apprch %	1.1	98.9		0	100		0	100		0	100		
Total %	0.4	35.7	36.1	0	14.5	14.5	0	21.2	21.2	0	28.2	28.2	

119th St and Michigan Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/15/2012
Page No : 5

Groups Printed- PC - SU - MU

	Michigan Ave From North				119th St From East				Michigan Ave From South				119th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	35	73	3	111	0	5	1	6	1	57	7	65	18	8	26	52	234
04:15 PM	32	79	4	115	4	2	1	7	7	60	11	78	10	8	35	53	253
04:30 PM	32	89	2	123	5	4	1	10	3	57	9	69	21	8	28	57	259
04:45 PM	32	67	2	101	2	4	4	10	3	62	12	77	25	6	31	62	250
Total	131	308	11	450	11	15	7	33	14	236	39	289	74	30	120	224	996
05:00 PM	45	94	4	143	3	6	1	10	2	50	10	62	17	13	31	61	276
05:15 PM	46	91	5	142	1	3	3	7	2	51	8	61	22	7	42	71	281
05:30 PM	30	98	2	130	3	1	1	5	3	57	6	66	17	6	36	59	260
05:45 PM	40	96	6	142	2	4	3	9	1	61	13	75	20	9	38	67	293
Total	161	379	17	557	9	14	8	31	8	219	37	264	76	35	147	258	1110
Grand Total	292	687	28	1007	20	29	15	64	22	455	76	553	150	65	267	482	2106
Apprch %	29	68.2	2.8		31.2	45.3	23.4		4	82.3	13.7		31.1	13.5	55.4		
Total %	13.9	32.6	1.3	47.8	0.9	1.4	0.7	3	1	21.6	3.6	26.3	7.1	3.1	12.7	22.9	
PC	278	660	28	966	19	29	15	63	22	447	76	545	148	64	254	466	2040
% PC	95.2	96.1	100	95.9	95	100	100	98.4	100	98.2	100	98.6	98.7	98.5	95.1	96.7	96.9
SU	14	27	0	41	1	0	0	1	0	8	0	8	2	1	13	16	66
% SU	4.8	3.9	0	4.1	5	0	0	1.6	0	1.8	0	1.4	1.3	1.5	4.9	3.3	3.1
MU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% MU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	Michigan Ave From North				119th St From East				Michigan Ave From South				119th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	45	94	4	**143**	**3**	**6**	1	**10**	2	50	10	62	17	**13**	31	61	276
05:15 PM	**46**	91	5	142	1	3	**3**	7	2	51	8	61	**22**	7	**42**	**71**	281
05:30 PM	30	**98**	2	130	3	1	1	5	**3**	57	6	66	17	6	36	59	260
05:45 PM	40	96	**6**	142	2	4	3	9	1	**61**	**13**	**75**	20	9	38	67	**293**
Total Volume	161	379	17	557	9	14	8	31	8	219	37	264	76	35	147	258	1110
% App. Total	28.9	68	3.1		29	45.2	25.8		3	83	14		29.5	13.6	57		
PHF	.875	.967	.708	.974	.750	.583	.667	.775	.667	.898	.712	.880	.864	.673	.875	.908	.947

119th St and Michigan Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/15/2012
Page No : 6

Groups Printed- SU

	Michigan Ave From North				119th St From East				Michigan Ave From South				119th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	3	4	0	7	0	0	0	0	0	1	0	1	0	0	2	2	10
04:15 PM	1	3	0	4	1	0	0	1	0	1	0	1	0	0	1	1	7
04:30 PM	2	4	0	6	0	0	0	0	0	1	0	1	0	1	1	2	9
04:45 PM	1	4	0	5	0	0	0	0	0	3	0	3	1	0	3	4	12
Total	7	15	0	22	1	0	0	1	0	6	0	6	1	1	7	9	38
05:00 PM	1	3	0	4	0	0	0	0	0	0	0	0	0	0	1	1	5
05:15 PM	2	4	0	6	0	0	0	0	0	0	0	0	1	0	2	3	9
05:30 PM	1	3	0	4	0	0	0	0	0	1	0	1	0	0	1	1	6
05:45 PM	3	2	0	5	0	0	0	0	0	1	0	1	0	0	2	2	8
Total	7	12	0	19	0	0	0	0	0	2	0	2	1	0	6	7	28
Grand Total	14	27	0	41	1	0	0	1	0	8	0	8	2	1	13	16	66
Apprch %	34.1	65.9	0		100	0	0		0	100	0		12.5	6.2	81.2		
Total %	21.2	40.9	0	62.1	1.5	0	0	1.5	0	12.1	0	12.1	3	1.5	19.7	24.2	

119th St and Michigan Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/15/2012
Page No : 7

Groups Printed- MU

	Michigan Ave From North				**119th St From East**				**Michigan Ave From South**				**119th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0		0	0	0		0	0	0		0	0	0		
Total %																	

119th St and Michigan Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 5/15/2012
Page No : 8

Groups Printed- Peds & Bikes

	Michigan Ave Crossing North Leg			**119th St Crossing East Leg**			**Michigan Ave Crossing South Leg**			**119th St Crossing West Leg**			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
04:00 PM	0	17	17	0	12	12	0	9	9	0	15	15	53
04:15 PM	0	20	20	0	3	3	0	5	5	0	24	24	52
04:30 PM	0	14	14	0	8	8	0	9	9	0	21	21	52
04:45 PM	0	13	13	0	9	9	0	9	9	1	13	14	45
Total	0	64	64	0	32	32	0	32	32	1	73	74	202
05:00 PM	0	9	9	0	10	10	0	16	16	1	12	13	48
05:15 PM	0	12	12	0	24	24	0	16	16	0	13	13	65
05:30 PM	0	8	8	0	6	6	0	9	9	1	7	8	31
05:45 PM	0	8	8	0	14	14	0	12	12	0	7	7	41
Total	0	37	37	0	54	54	0	53	53	2	39	41	185
Grand Total	0	101	101	0	86	86	0	85	85	3	112	115	387
Apprch %	0	100		0	100		0	100		2.6	97.4		
Total %	0	26.1	26.1	0	22.2	22.2	0	22	22	0.8	28.9	29.7	

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119th St and State St
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/12/2012
Page No : 1

Groups Printed- PC - SU - MU

	State St From North				119th St From East				State St From South				119th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	5	4	1	10	1	18	1	20	3	32	5	40	3	29	14	46	116
07:15 AM	12	12	1	25	0	29	0	29	8	33	8	49	10	29	18	57	160
07:30 AM	4	6	5	15	1	23	1	25	4	46	8	58	5	41	11	57	155
07:45 AM	6	15	1	22	3	34	2	39	5	55	8	68	3	38	15	56	185
Total	27	37	8	72	5	104	4	113	20	166	29	215	21	137	58	216	616
08:00 AM	11	10	1	22	1	38	2	41	3	39	6	48	4	43	17	64	175
08:15 AM	5	14	1	20	1	38	1	40	5	36	10	51	7	38	15	60	171
08:30 AM	9	18	3	30	2	47	2	51	10	35	13	58	9	35	16	60	199
08:45 AM	11	18	1	30	2	36	1	39	2	41	8	51	8	35	17	60	180
Total	36	60	6	102	6	159	6	171	20	151	37	208	28	151	65	244	725
Grand Total	63	97	14	174	11	263	10	284	40	317	66	423	49	288	123	460	1341
Apprch %	36.2	55.7	8		3.9	92.6	3.5		9.5	74.9	15.6		10.7	62.6	26.7		
Total %	4.7	7.2	1	13	0.8	19.6	0.7	21.2	3	23.6	4.9	31.5	3.7	21.5	9.2	34.3	
PC	59	95	14	168	11	238	8	257	38	312	63	413	46	265	118	429	1267
% PC	93.7	97.9	100	96.6	100	90.5	80	90.5	95	98.4	95.5	97.6	93.9	92	95.9	93.3	94.5
SU	4	2	0	6	0	24	2	26	2	5	3	10	3	22	5	30	72
% SU	6.3	2.1	0	3.4	0	9.1	20	9.2	5	1.6	4.5	2.4	6.1	7.6	4.1	6.5	5.4
MU	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
% MU	0	0	0	0	0	0.4	0	0.4	0	0	0	0	0	0.3	0	0.2	0.1

	State St From North				119th St From East				State St From South				119th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	6	15	1	22	**3**	34	**2**	39	5	**55**	8	**68**	3	38	15	56	185
08:00 AM	**11**	10	1	22	1	38	2	41	3	39	6	48	4	**43**	**17**	**64**	175
08:15 AM	5	14	1	20	1	38	1	40	5	36	10	51	7	38	15	60	171
08:30 AM	9	**18**	**3**	**30**	2	**47**	2	**51**	**10**	35	**13**	58	**9**	35	16	60	**199**
Total Volume	31	57	6	94	7	157	7	171	23	165	37	225	23	154	63	240	730
% App. Total	33	60.6	6.4		4.1	91.8	4.1		10.2	73.3	16.4		9.6	64.2	26.2		
PHF	.705	.792	.500	.783	.583	.835	.875	.838	.575	.750	.712	.827	.639	.895	.926	.938	.917

119th St and State St
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/12/2012
Page No : 2

Groups Printed- SU

	State St From North				119th St From East				State St From South				119th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	3	0	3	0	0	0	0	0	2	4	6	9
07:15 AM	1	0	0	1	0	2	0	2	1	1	1	3	1	1	0	2	8
07:30 AM	1	0	0	1	0	4	0	4	0	1	0	1	0	3	0	3	9
07:45 AM	1	0	0	1	0	4	1	5	0	1	0	1	1	5	0	6	13
Total	3	0	0	3	0	13	1	14	1	3	1	5	2	11	4	17	39
08:00 AM	0	0	0	0	0	2	1	3	1	0	0	1	0	3	0	3	7
08:15 AM	0	0	0	0	0	3	0	3	0	0	2	2	0	4	0	4	9
08:30 AM	0	0	0	0	0	1	0	1	0	2	0	2	0	2	0	2	5
08:45 AM	1	2	0	3	0	5	0	5	0	0	0	0	1	2	1	4	12
Total	1	2	0	3	0	11	1	12	1	2	2	5	1	11	1	13	33
Grand Total	4	2	0	6	0	24	2	26	2	5	3	10	3	22	5	30	72
Apprch %	66.7	33.3	0		0	92.3	7.7		20	50	30		10	73.3	16.7		
Total %	5.6	2.8	0	8.3	0	33.3	2.8	36.1	2.8	6.9	4.2	13.9	4.2	30.6	6.9	41.7	

119th St and State St
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/12/2012
Page No : 3

Groups Printed- MU

	State St From North				119th St From East				State St From South				119th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
Apprch %	0	0	0		0	100	0		0	0	0		0	100	0		
Total %	0	0	0	0	0	50	0	50	0	0	0	0	0	50	0	50	

119th St and State St
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 6/12/2012

Groups Printed- Peds & Bikes

	State St Crossing North Leg			119th St Crossing East Leg			State St Crossing South Leg			119th St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
07:00 AM	0	1	1	0	0	0	1	0	1	0	0	0	2
07:15 AM	0	4	4	0	1	1	0	6	6	0	0	0	11
07:30 AM	1	2	3	0	4	4	0	6	6	0	2	2	15
07:45 AM	0	2	2	0	2	2	1	4	5	1	0	1	10
Total	1	9	10	0	7	7	2	16	18	1	2	3	38
08:00 AM	0	5	5	0	2	2	0	4	4	0	1	1	12
08:15 AM	0	2	2	0	9	9	0	3	3	0	1	1	15
08:30 AM	0	12	12	0	4	4	0	9	9	0	5	5	30
08:45 AM	0	7	7	1	1	2	0	3	3	0	0	0	12
Total	0	26	26	1	16	17	0	19	19	0	7	7	69
Grand Total	1	35	36	1	23	24	2	35	37	1	9	10	107
Apprch %	2.8	97.2		4.2	95.8		5.4	94.6		10	90		
Total %	0.9	32.7	33.6	0.9	21.5	22.4	1.9	32.7	34.6	0.9	8.4	9.3	

119th St and State St
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/12/2012
Page No : 5

Groups Printed- PC - SU - MU

	State St From North				119th St From East				State St From South				119th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	15	36	5	56	2	41	2	45	3	37	6	46	8	41	13	62	209
04:15 PM	15	39	3	57	4	34	2	40	3	27	7	37	13	46	14	73	207
04:30 PM	11	34	4	49	3	49	4	56	2	16	4	22	11	49	7	67	194
04:45 PM	11	46	2	59	0	35	2	37	3	23	9	35	14	54	15	83	214
Total	52	155	14	221	9	159	10	178	11	103	26	140	46	190	49	285	824
05:00 PM	12	40	1	53	2	49	1	52	1	31	8	40	4	47	12	63	208
05:15 PM	10	36	4	50	5	53	4	62	2	14	7	23	10	48	11	69	204
05:30 PM	14	41	6	61	1	47	0	48	5	22	6	33	10	38	19	67	209
05:45 PM	18	25	1	44	1	31	5	37	7	21	7	35	13	39	11	63	179
Total	54	142	12	208	9	180	10	199	15	88	28	131	37	172	53	262	800
Grand Total	106	297	26	429	18	339	20	377	26	191	54	271	83	362	102	547	1624
Apprch %	24.7	69.2	6.1		4.8	89.9	5.3		9.6	70.5	19.9		15.2	66.2	18.6		
Total %	6.5	18.3	1.6	26.4	1.1	20.9	1.2	23.2	1.6	11.8	3.3	16.7	5.1	22.3	6.3	33.7	
PC	103	296	26	425	18	325	20	363	26	185	54	265	82	352	102	536	1589
% PC	97.2	99.7	100	99.1	100	95.9	100	96.3	100	96.9	100	97.8	98.8	97.2	100	98	97.8
SU	3	1	0	4	0	14	0	14	0	5	0	5	1	10	0	11	34
% SU	2.8	0.3	0	0.9	0	4.1	0	3.7	0	2.6	0	1.8	1.2	2.8	0	2	2.1
MU	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
% MU	0	0	0	0	0	0	0	0	0	0.5	0	0.4	0	0	0	0	0.1

	State St From North				119th St From East				State St From South				119th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	11	**46**	2	59	0	35	2	37	3	23	**9**	35	**14**	**54**	15	**83**	**214**
05:00 PM	12	40	1	53	2	49	1	52	1	**31**	8	**40**	4	47	12	63	208
05:15 PM	10	36	4	50	**5**	**53**	**4**	**62**	2	14	7	23	10	48	11	69	204
05:30 PM	**14**	41	**6**	**61**	1	47	0	48	**5**	22	6	33	10	38	**19**	67	209
Total Volume	47	163	13	223	8	184	7	199	11	90	30	131	38	187	57	282	835
% App. Total	21.1	73.1	5.8		4	92.5	3.5		8.4	68.7	22.9		13.5	66.3	20.2		
PHF	.839	.886	.542	.914	.400	.868	.438	.802	.550	.726	.833	.819	.679	.866	.750	.849	.975

119th St and State St
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/12/2012
Page No : 6

Groups Printed- SU

	State St From North				119th St From East				State St From South				119th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	3	0	3	0	1	0	1	0	2	0	2	6
04:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	1	1	0	2	3
04:30 PM	2	0	0	2	0	2	0	2	0	0	0	0	0	1	0	1	5
04:45 PM	0	1	0	1	0	1	0	1	0	1	0	1	0	2	0	2	5
Total	2	1	0	3	0	7	0	7	0	2	0	2	1	6	0	7	19
05:00 PM	1	0	0	1	0	2	0	2	0	1	0	1	0	1	0	1	5
05:15 PM	0	0	0	0	0	1	0	1	0	2	0	2	0	1	0	1	4
05:30 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	1	3
05:45 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	1	3
Total	1	0	0	1	0	7	0	7	0	3	0	3	0	4	0	4	15
Grand Total	3	1	0	4	0	14	0	14	0	5	0	5	1	10	0	11	34
Apprch %	75	25	0		0	100	0		0	100	0		9.1	90.9	0		
Total %	8.8	2.9	0	11.8	0	41.2	0	41.2	0	14.7	0	14.7	2.9	29.4	0	32.4	

119th St and State St
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/12/2012
Page No : 7

Groups Printed- MU

	State St From North				119th St From East				State St From South				119th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Grand Total	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Apprch %	0	0	0		0	0	0		0	100	0		0	0	0		
Total %	0	0	0	0	0	0	0	0	0	100	0	100	0	0	0	0	

119th St and State St
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 6/12/2012
Page No : 8

Groups Printed- Peds & Bikes

	State St Crossing North Leg			119th St Crossing East Leg			State St Crossing South Leg			119th St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
04:00 PM	2	7	9	0	3	3	0	6	6	0	3	3	21
04:15 PM	1	4	5	0	0	0	0	3	3	1	0	1	9
04:30 PM	1	3	4	0	4	4	1	5	6	1	0	1	15
04:45 PM	0	4	4	1	0	1	0	6	6	0	0	0	11
Total	4	18	22	1	7	8	1	20	21	2	3	5	56
05:00 PM	0	7	7	0	1	1	0	3	3	0	2	2	13
05:15 PM	0	3	3	1	0	1	0	7	7	0	0	0	11
05:30 PM	0	1	1	0	2	2	1	8	9	0	0	0	12
05:45 PM	1	8	9	0	3	3	1	7	8	0	1	1	21
Total	1	19	20	1	6	7	2	25	27	0	3	3	57
Grand Total	5	37	42	2	13	15	3	45	48	2	6	8	113
Apprch %	11.9	88.1		13.3	86.7		6.2	93.8		25	75		
Total %	4.4	32.7	37.2	1.8	11.5	13.3	2.7	39.8	42.5	1.8	5.3	7.1	

Regina Webster & Associates, Inc.
8619 West Bryn Mawr Avenue, Suite 602, Chicago, Illinois 60631
773-283-2600 Fax: 773-283-2602
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119th St and Wentworth Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/5/2012
Page No : 1

Groups Printed- PC - SU - MU

	Wentworth Ave From North				119th St From East				Wentworth Ave From South				119th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	5	2	3	10	4	27	1	32	1	10	7	18	7	39	3	49	109
07:15 AM	9	8	4	21	1	40	0	41	6	26	4	36	2	45	7	54	152
07:30 AM	4	6	0	10	5	34	1	40	6	19	6	31	2	62	11	75	156
07:45 AM	11	10	0	21	11	47	1	59	4	23	9	36	3	61	11	75	191
Total	29	26	7	62	21	148	3	172	17	78	26	121	14	207	32	253	608
08:00 AM	9	9	5	23	2	59	2	63	3	18	4	25	4	61	8	73	184
08:15 AM	9	12	5	26	1	42	1	44	2	15	14	31	6	59	10	75	176
08:30 AM	9	10	3	22	2	53	0	55	2	19	9	30	5	58	12	75	182
08:45 AM	14	8	3	25	3	53	4	60	4	21	9	34	4	49	8	61	180
Total	41	39	16	96	8	207	7	222	11	73	36	120	19	227	38	284	722
Grand Total	70	65	23	158	29	355	10	394	28	151	62	241	33	434	70	537	1330
Apprch %	44.3	41.1	14.6		7.4	90.1	2.5		11.6	62.7	25.7		6.1	80.8	13		
Total %	5.3	4.9	1.7	11.9	2.2	26.7	0.8	29.6	2.1	11.4	4.7	18.1	2.5	32.6	5.3	40.4	
PC	69	64	22	155	26	333	10	369	28	150	61	239	32	405	70	507	1270
% PC	98.6	98.5	95.7	98.1	89.7	93.8	100	93.7	100	99.3	98.4	99.2	97	93.3	100	94.4	95.5
SU	1	1	1	3	3	21	0	24	0	1	1	2	1	27	0	28	57
% SU	1.4	1.5	4.3	1.9	10.3	5.9	0	6.1	0	0.7	1.6	0.8	3	6.2	0	5.2	4.3
MU	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0	2	3
% MU	0	0	0	0	0	0.3	0	0.3	0	0	0	0	0	0.5	0	0.4	0.2

	Wentworth Ave From North				119th St From East				Wentworth Ave From South				119th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	**11**	10	0	21	**11**	47	1	59	**4**	**23**	9	**36**	3	**61**	11	**75**	**191**
08:00 AM	9	9	**5**	23	2	**59**	**2**	**63**	3	18	4	25	4	61	8	73	184
08:15 AM	9	**12**	5	**26**	1	42	1	44	2	15	**14**	31	**6**	59	10	75	176
08:30 AM	9	10	3	22	2	53	0	55	2	19	9	30	5	58	**12**	75	182
Total Volume	38	41	13	92	16	201	4	221	11	75	36	122	18	239	41	298	733
% App. Total	41.3	44.6	14.1		7.2	91	1.8		9	61.5	29.5		6	80.2	13.8		
PHF	.864	.854	.650	.885	.364	.852	.500	.877	.688	.815	.643	.847	.750	.980	.854	.993	.959

119th St and Wentworth Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/5/2012
Page No : 2

Groups Printed- SU

	Wentworth Ave From North				119th St From East				Wentworth Ave From South				119th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	3	0	3	0	1	0	1	1	3	0	4	8
07:15 AM	0	1	0	1	0	4	0	4	0	0	0	0	0	3	0	3	8
07:30 AM	1	0	0	1	1	2	0	3	0	0	0	0	0	4	0	4	8
07:45 AM	0	0	0	0	1	3	0	4	0	0	0	0	0	6	0	6	10
Total	1	1	0	2	2	12	0	14	0	1	0	1	1	16	0	17	34
08:00 AM	0	0	0	0	1	1	0	2	0	0	0	0	0	3	0	3	5
08:15 AM	0	0	1	1	0	2	0	2	0	0	0	0	0	3	0	3	6
08:30 AM	0	0	0	0	0	3	0	3	0	0	1	1	0	4	0	4	8
08:45 AM	0	0	0	0	0	3	0	3	0	0	0	0	0	1	0	1	4
Total	0	0	1	1	1	9	0	10	0	0	1	1	0	11	0	11	23
Grand Total	1	1	1	3	3	21	0	24	0	1	1	2	1	27	0	28	57
Apprch %	33.3	33.3	33.3		12.5	87.5	0		0	50	50		3.6	96.4	0		
Total %	1.8	1.8	1.8	5.3	5.3	36.8	0	42.1	0	1.8	1.8	3.5	1.8	47.4	0	49.1	

119th St and Wentworth Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/5/2012
Page No : 3

Groups Printed- MU

	Wentworth Ave From North				119th St From East				Wentworth Ave From South				119th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
07:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0	2	3
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0	2	3
Apprch %	0	0	0		0	100	0		0	0	0		0	100	0		
Total %	0	0	0	0	0	33.3	0	33.3	0	0	0	0	0	66.7	0	66.7	

119th St and Wentworth Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 6/5/2012
Page No : 4

Groups Printed- Peds & Bikes

	Wentworth Ave Crossing North Leg			119th St Crossing East Leg			Wentworth Ave Crossing South Leg			119th St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
07:00 AM	0	0	0	0	1	1	0	3	3	0	1	1	5
07:15 AM	0	0	0	0	1	1	0	8	8	0	1	1	10
07:30 AM	0	1	1	0	1	1	1	6	7	0	2	2	11
07:45 AM	0	1	1	1	0	1	0	2	2	0	0	0	4
Total	0	2	2	1	3	4	1	19	20	0	4	4	30
08:00 AM	1	1	2	0	4	4	0	1	1	0	1	1	8
08:15 AM	0	3	3	0	3	3	0	2	2	0	1	1	9
08:30 AM	0	4	4	0	0	0	0	8	8	0	0	0	12
08:45 AM	1	1	2	0	1	1	0	8	8	0	3	3	14
Total	2	9	11	0	8	8	0	19	19	0	5	5	43
Grand Total	2	11	13	1	11	12	1	38	39	0	9	9	73
Apprch %	15.4	84.6		8.3	91.7		2.6	97.4		0	100		
Total %	2.7	15.1	17.8	1.4	15.1	16.4	1.4	52.1	53.4	0	12.3	12.3	

119th St and Wentworth Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/5/2012
Page No : 5

Groups Printed- PC - SU - MU

	Wentworth Ave From North				119th St From East				Wentworth Ave From South				119th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	15	17	1	33	5	53	4	62	4	13	2	19	8	59	6	73	187
04:15 PM	9	8	4	21	5	61	3	69	1	9	8	18	7	78	12	97	205
04:30 PM	11	14	2	27	3	67	1	71	8	12	5	25	11	64	15	90	213
04:45 PM	9	27	11	47	4	62	2	68	4	10	6	20	9	61	8	78	213
Total	44	66	18	128	17	243	10	270	17	44	21	82	35	262	41	338	818
05:00 PM	13	20	6	39	4	67	4	75	3	16	11	30	18	74	11	103	247
05:15 PM	15	19	6	40	8	55	2	65	2	9	9	20	14	77	11	102	227
05:30 PM	18	12	3	33	5	76	2	83	7	12	6	25	11	53	7	71	212
05:45 PM	12	25	3	40	2	53	3	58	5	14	6	25	11	71	6	88	211
Total	58	76	18	152	19	251	11	281	17	51	32	100	54	275	35	364	897
Grand Total	102	142	36	280	36	494	21	551	34	95	53	182	89	537	76	702	1715
Apprch %	36.4	50.7	12.9		6.5	89.7	3.8		18.7	52.2	29.1		12.7	76.5	10.8		
Total %	5.9	8.3	2.1	16.3	2.1	28.8	1.2	32.1	2	5.5	3.1	10.6	5.2	31.3	4.4	40.9	
PC	99	140	36	275	36	475	21	532	34	94	53	181	88	524	75	687	1675
% PC	97.1	98.6	100	98.2	100	96.2	100	96.6	100	98.9	100	99.5	98.9	97.6	98.7	97.9	97.7
SU	3	2	0	5	0	18	0	18	0	1	0	1	1	12	1	14	38
% SU	2.9	1.4	0	1.8	0	3.6	0	3.3	0	1.1	0	0.5	1.1	2.2	1.3	2	2.2
MU	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
% MU	0	0	0	0	0	0.2	0	0.2	0	0	0	0	0	0.2	0	0.1	0.1

	Wentworth Ave From North				119th St From East				Wentworth Ave From South				119th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	11	14	2	27	3	**67**	1	71	**8**	12	5	25	11	64	**15**	90	213
04:45 PM	9	**27**	**11**	**47**	4	62	2	68	4	10	6	20	9	61	8	78	213
05:00 PM	13	20	6	39	4	67	**4**	**75**	3	**16**	**11**	**30**	**18**	74	11	**103**	**247**
05:15 PM	**15**	19	6	40	**8**	55	2	65	2	9	9	20	14	**77**	11	102	227
Total Volume	48	80	25	153	19	251	9	279	17	47	31	95	52	276	45	373	900
% App. Total	31.4	52.3	16.3		6.8	90	3.2		17.9	49.5	32.6		13.9	74	12.1		
PHF	.800	.741	.568	.814	.594	.937	.563	.930	.531	.734	.705	.792	.722	.896	.750	.905	.911

119th St and Wentworth Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/5/2012
Page No : 6

Groups Printed- SU

	Wentworth Ave From North				119th St From East				Wentworth Ave From South				119th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	1	1	0	2	0	4	0	4	0	1	0	1	0	2	0	2	9
04:15 PM	0	0	0	0	0	3	0	3	0	0	0	0	1	3	0	4	7
04:30 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	2
04:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
Total	1	1	0	2	0	10	0	10	0	1	0	1	1	6	0	7	20
05:00 PM	1	0	0	1	0	1	0	1	0	0	0	0	0	2	1	3	5
05:15 PM	0	1	0	1	0	3	0	3	0	0	0	0	0	1	0	1	5
05:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0	2	3
05:45 PM	1	0	0	1	0	3	0	3	0	0	0	0	0	1	0	1	5
Total	2	1	0	3	0	8	0	8	0	0	0	0	0	6	1	7	18
Grand Total	3	2	0	5	0	18	0	18	0	1	0	1	1	12	1	14	38
Apprch %	60	40	0		0	100	0		0	100	0		7.1	85.7	7.1		
Total %	7.9	5.3	0	13.2	0	47.4	0	47.4	0	2.6	0	2.6	2.6	31.6	2.6	36.8	

119th St and Wentworth Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/5/2012
Page No : 7

Groups Printed- MU

	Wentworth Ave From North				119th St From East				Wentworth Ave From South				119th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Grand Total	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
Apprch %	0	0	0		0	100	0		0	0	0		0	100	0		
Total %	0	0	0	0	0	50	0	50	0	0	0	0	0	50	0	50	

119th St and Wentworth Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 6/5/2012
Page No : 8

Groups Printed- Peds & Bikes

	Wentworth Ave Crossing North Leg			119th St Crossing East Leg			Wentworth Ave Crossing South Leg			119th St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
04:00 PM	0	6	6	0	4	4	0	0	0	0	3	3	13
04:15 PM	0	2	2	0	5	5	1	12	13	0	0	0	20
04:30 PM	0	4	4	0	5	5	1	8	9	0	6	6	24
04:45 PM	0	3	3	1	3	4	0	4	4	0	1	1	12
Total	0	15	15	1	17	18	2	24	26	0	10	10	69
05:00 PM	0	1	1	0	0	0	0	6	6	0	0	0	7
05:15 PM	0	4	4	0	1	1	0	6	6	0	3	3	14
05:30 PM	0	7	7	0	0	0	2	2	4	0	1	1	12
05:45 PM	1	0	1	1	1	2	0	6	6	0	4	4	13
Total	1	12	13	1	2	3	2	20	22	0	8	8	46
Grand Total	1	27	28	2	19	21	4	44	48	0	18	18	115
Apprch %	3.6	96.4		9.5	90.5		8.3	91.7		0	100		
Total %	0.9	23.5	24.3	1.7	16.5	18.3	3.5	38.3	41.7	0	15.7	15.7	

127th St and Ashland Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/23/2012
Page No : 1

Groups Printed- PC - SU - MU

	Ashland Ave From North				**127th St From East**				**Ashland Ave From South**				**127th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	14	19	7	40	6	130	18	154	13	35	60	108	45	89	35	169	471
07:15 AM	23	17	7	47	16	153	15	184	11	45	62	118	51	124	32	207	556
07:30 AM	21	18	5	44	9	182	12	203	12	47	57	116	52	119	26	197	560
07:45 AM	31	32	9	72	6	183	23	212	5	38	51	94	36	94	29	159	537
Total	89	86	28	203	37	648	68	753	41	165	230	436	184	426	122	732	2124
08:00 AM	18	29	8	55	13	145	18	176	7	43	51	101	57	77	21	155	487
08:15 AM	21	32	15	68	10	173	18	201	16	50	67	133	59	115	19	193	595
08:30 AM	23	29	10	62	5	179	31	215	15	30	38	83	62	129	16	207	567
08:45 AM	23	22	8	53	12	145	25	182	12	37	65	114	56	98	20	174	523
Total	85	112	41	238	40	642	92	774	50	160	221	431	234	419	76	729	2172
Grand Total	174	198	69	441	77	1290	160	1527	91	325	451	867	418	845	198	1461	4296
Apprch %	39.5	44.9	15.6		5	84.5	10.5		10.5	37.5	52		28.6	57.8	13.6		
Total %	4.1	4.6	1.6	10.3	1.8	30	3.7	35.5	2.1	7.6	10.5	20.2	9.7	19.7	4.6	34	
PC	165	184	67	416	73	1226	157	1456	84	310	406	800	392	780	192	1364	4036
% PC	94.8	92.9	97.1	94.3	94.8	95	98.1	95.4	92.3	95.4	90	92.3	93.8	92.3	97	93.4	93.9
SU	7	11	2	20	4	42	2	48	7	13	34	54	21	37	5	63	185
% SU	4	5.6	2.9	4.5	5.2	3.3	1.2	3.1	7.7	4	7.5	6.2	5	4.4	2.5	4.3	4.3
MU	2	3	0	5	0	22	1	23	0	2	11	13	5	28	1	34	75
% MU	1.1	1.5	0	1.1	0	1.7	0.6	1.5	0	0.6	2.4	1.5	1.2	3.3	0.5	2.3	1.7

	Ashland Ave From North				**127th St From East**				**Ashland Ave From South**				**127th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	**31**	**32**	9	**72**	6	**183**	23	212	5	38	51	94	36	94	**29**	159	537
08:00 AM	18	29	8	55	**13**	145	18	176	7	43	51	101	57	77	21	155	487
08:15 AM	21	32	**15**	68	10	173	18	201	**16**	**50**	**67**	**133**	59	115	19	193	**595**
08:30 AM	23	29	10	62	5	179	**31**	**215**	15	30	38	83	**62**	**129**	16	**207**	567
Total Volume	93	122	42	257	34	680	90	804	43	161	207	411	214	415	85	714	2186
% App. Total	36.2	47.5	16.3		4.2	84.6	11.2		10.5	39.2	50.4		30	58.1	11.9		
PHF	.750	.953	.700	.892	.654	.929	.726	.935	.672	.805	.772	.773	.863	.804	.733	.862	.918

127th St and Ashland Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/23/2012
Page No : 2

Groups Printed- SU

	Ashland Ave From North				**127th St From East**				**Ashland Ave From South**				**127th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	5	1	6	3	3	2	8	3	6	0	9	23
07:15 AM	3	1	0	4	0	6	0	6	2	4	9	15	3	7	0	10	35
07:30 AM	0	0	0	0	0	8	0	8	1	0	3	4	5	7	0	12	24
07:45 AM	1	5	0	6	0	4	0	4	0	3	2	5	0	2	1	3	18
Total	4	6	0	10	0	23	1	24	6	10	16	32	11	22	1	34	100
08:00 AM	0	2	0	2	1	4	1	6	0	0	4	4	3	2	0	5	17
08:15 AM	2	0	1	3	0	5	0	5	0	1	6	7	1	6	0	7	22
08:30 AM	1	1	1	3	0	6	0	6	0	0	3	3	2	4	1	7	19
08:45 AM	0	2	0	2	3	4	0	7	1	2	5	8	4	3	3	10	27
Total	3	5	2	10	4	19	1	24	1	3	18	22	10	15	4	29	85
Grand Total	7	11	2	20	4	42	2	48	7	13	34	54	21	37	5	63	185
Apprch %	35	55	10		8.3	87.5	4.2		13	24.1	63		33.3	58.7	7.9		
Total %	3.8	5.9	1.1	10.8	2.2	22.7	1.1	25.9	3.8	7	18.4	29.2	11.4	20	2.7	34.1	

127th St and Ashland Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/23/2012
Page No : 3

Groups Printed- MU

	Ashland Ave From North				**127th St From East**				**Ashland Ave From South**				**127th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	4	0	4	0	1	1	2	1	2	0	3	9
07:15 AM	0	0	0	0	0	0	0	0	0	0	2	2	1	3	0	4	6
07:30 AM	0	1	0	1	0	5	1	6	0	0	3	3	1	7	0	8	18
07:45 AM	0	0	0	0	0	3	0	3	0	0	0	0	0	3	1	4	7
Total	0	1	0	1	0	12	1	13	0	1	6	7	3	15	1	19	40
08:00 AM	0	0	0	0	0	3	0	3	0	0	2	2	0	4	0	4	9
08:15 AM	1	0	0	1	0	0	0	0	0	1	2	3	1	2	0	3	7
08:30 AM	0	0	0	0	0	4	0	4	0	0	0	0	0	2	0	2	6
08:45 AM	1	2	0	3	0	3	0	3	0	0	1	1	1	5	0	6	13
Total	2	2	0	4	0	10	0	10	0	1	5	6	2	13	0	15	35
Grand Total	2	3	0	5	0	22	1	23	0	2	11	13	5	28	1	34	75
Apprch %	40	60	0		0	95.7	4.3		0	15.4	84.6		14.7	82.4	2.9		
Total %	2.7	4	0	6.7	0	29.3	1.3	30.7	0	2.7	14.7	17.3	6.7	37.3	1.3	45.3	

127th St and Ashland Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 5/23/2012
Page No : 4

Groups Printed- Peds & Bikes

	Ashland Ave Crossing North Leg			**127th St Crossing East Leg**			**Ashland Ave Crossing South Leg**			**127th St Crossing West Leg**			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	3	3	0	1	1	4
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	1	1	0	2	2	0	2	2	0	2	2	7
07:45 AM	0	0	0	0	1	1	0	2	2	0	2	2	5
Total	0	1	1	0	3	3	0	7	7	0	5	5	16
08:00 AM	0	0	0	0	3	3	0	4	4	0	1	1	8
08:15 AM	0	2	2	0	0	0	0	4	4	0	4	4	10
08:30 AM	0	1	1	0	0	0	0	0	0	0	3	3	4
08:45 AM	0	2	2	0	3	3	0	3	3	0	0	0	8
Total	0	5	5	0	6	6	0	11	11	0	8	8	30
Grand Total	0	6	6	0	9	9	0	18	18	0	13	13	46
Apprch %	0	100		0	100		0	100		0	100		
Total %	0	13	13	0	19.6	19.6	0	39.1	39.1	0	28.3	28.3	

127th St and Ashland Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/23/2012
Page No : 5

Groups Printed- PC - SU - MU

	Ashland Ave From North				**127th St From East**				**Ashland Ave From South**				**127th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	31	48	20	99	14	170	26	210	14	56	70	140	90	153	36	279	728
04:15 PM	18	50	13	81	17	193	22	232	15	43	79	137	98	165	20	283	733
04:30 PM	20	27	22	69	9	173	20	202	21	38	74	133	93	156	20	269	673
04:45 PM	19	28	14	61	16	164	28	208	20	40	49	109	116	161	38	315	693
Total	88	153	69	310	56	700	96	852	70	177	272	519	397	635	114	1146	2827
05:00 PM	23	39	19	81	11	157	33	201	11	37	52	100	80	146	25	251	633
05:15 PM	34	42	17	93	9	136	26	171	23	42	56	121	114	164	27	305	690
05:30 PM	31	44	23	98	14	149	19	182	12	43	56	111	90	146	31	267	658
05:45 PM	33	37	15	85	14	122	16	152	20	57	63	140	84	115	39	238	615
Total	121	162	74	357	48	564	94	706	66	179	227	472	368	571	122	1061	2596
Grand Total	209	315	143	667	104	1264	190	1558	136	356	499	991	765	1206	236	2207	5423
Apprch %	31.3	47.2	21.4		6.7	81.1	12.2		13.7	35.9	50.4		34.7	54.6	10.7		
Total %	3.9	5.8	2.6	12.3	1.9	23.3	3.5	28.7	2.5	6.6	9.2	18.3	14.1	22.2	4.4	40.7	
PC	208	314	141	663	102	1227	187	1516	133	350	489	972	745	1189	230	2164	5315
% PC	99.5	99.7	98.6	99.4	98.1	97.1	98.4	97.3	97.8	98.3	98	98.1	97.4	98.6	97.5	98.1	98
SU	0	1	2	3	1	29	3	33	2	4	7	13	13	8	3	24	73
% SU	0	0.3	1.4	0.4	1	2.3	1.6	2.1	1.5	1.1	1.4	1.3	1.7	0.7	1.3	1.1	1.3
MU	1	0	0	1	1	8	0	9	1	2	3	6	7	9	3	19	35
% MU	0.5	0	0	0.1	1	0.6	0	0.6	0.7	0.6	0.6	0.6	0.9	0.7	1.3	0.9	0.6

	Ashland Ave From North				**127th St From East**				**Ashland Ave From South**				**127th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	**31**	48	20	**99**	14	170	26	210	14	**56**	70	**140**	90	153	36	279	728
04:15 PM	18	**50**	13	81	**17**	**193**	22	**232**	15	43	**79**	137	98	**165**	20	283	**733**
04:30 PM	20	27	**22**	69	9	173	20	202	**21**	38	74	133	93	156	20	269	673
04:45 PM	19	28	14	61	16	164	**28**	208	20	40	49	109	**116**	161	**38**	**315**	693
Total Volume	88	153	69	310	56	700	96	852	70	177	272	519	397	635	114	1146	2827
% App. Total	28.4	49.4	22.3		6.6	82.2	11.3		13.5	34.1	52.4		34.6	55.4	9.9		
PHF	.710	.765	.784	.783	.824	.907	.857	.918	.833	.790	.861	.927	.856	.962	.750	.910	.964

127th St and Ashland Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/23/2012
Page No : 6

Groups Printed- SU

	Ashland Ave From North				**127th St From East**				**Ashland Ave From South**				**127th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	1	0	1	0	3	0	3	1	2	1	4	2	3	1	6	14
04:15 PM	0	0	0	0	1	6	0	7	0	1	1	2	1	0	0	1	10
04:30 PM	0	0	0	0	0	4	0	4	0	0	1	1	3	1	1	5	10
04:45 PM	0	0	0	0	0	2	0	2	0	1	1	2	1	1	0	2	6
Total	0	1	0	1	1	15	0	16	1	4	4	9	7	5	2	14	40
05:00 PM	0	0	0	0	0	4	3	7	0	0	3	3	2	2	0	4	14
05:15 PM	0	0	1	1	0	3	0	3	1	0	0	1	0	0	0	0	5
05:30 PM	0	0	0	0	0	6	0	6	0	0	0	0	3	1	1	5	11
05:45 PM	0	0	1	1	0	1	0	1	0	0	0	0	1	0	0	1	3
Total	0	0	2	2	0	14	3	17	1	0	3	4	6	3	1	10	33
Grand Total	0	1	2	3	1	29	3	33	2	4	7	13	13	8	3	24	73
Apprch %	0	33.3	66.7		3	87.9	9.1		15.4	30.8	53.8		54.2	33.3	12.5		
Total %	0	1.4	2.7	4.1	1.4	39.7	4.1	45.2	2.7	5.5	9.6	17.8	17.8	11	4.1	32.9	

127th St and Ashland Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/23/2012
Page No : 7

Groups Printed- MU

	Ashland Ave From North				127th St From East				Ashland Ave From South				127th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	1	0	1	1	0	2	3	0	0	1	1	5
04:15 PM	0	0	0	0	0	2	0	2	0	1	1	2	0	1	1	2	6
04:30 PM	0	0	0	0	1	1	0	2	0	0	0	0	1	2	0	3	5
04:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	2	3	0	5	6
Total	0	0	0	0	1	5	0	6	1	1	3	5	3	6	2	11	22
05:00 PM	1	0	0	1	0	1	0	1	0	0	0	0	0	1	0	1	3
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2
05:30 PM	0	0	0	0	0	1	0	1	0	1	0	1	2	1	0	3	5
05:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	1	2	3
Total	1	0	0	1	0	3	0	3	0	1	0	1	4	3	1	8	13
Grand Total	1	0	0	1	1	8	0	9	1	2	3	6	7	9	3	19	35
Apprch %	100	0	0		11.1	88.9	0		16.7	33.3	50		36.8	47.4	15.8		
Total %	2.9	0	0	2.9	2.9	22.9	0	25.7	2.9	5.7	8.6	17.1	20	25.7	8.6	54.3	

127th St and Ashland Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 5/23/2012
Page No : 8

Groups Printed- Peds & Bikes

	Ashland Ave Crossing North Leg			**127th St Crossing East Leg**			**Ashland Ave Crossing South Leg**			**127th St Crossing West Leg**			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
04:00 PM	0	4	4	0	3	3	0	5	5	0	1	1	13
04:15 PM	0	3	3	0	6	6	0	13	13	0	1	1	23
04:30 PM	1	2	3	0	0	0	0	4	4	0	6	6	13
04:45 PM	0	1	1	0	0	0	0	4	4	0	2	2	7
Total	1	10	11	0	9	9	0	26	26	0	10	10	56
05:00 PM	0	0	0	0	3	3	0	5	5	0	3	3	11
05:15 PM	0	2	2	0	4	4	0	4	4	0	1	1	11
05:30 PM	0	3	3	0	2	2	0	3	3	0	0	0	8
05:45 PM	0	6	6	1	3	4	0	11	11	0	4	4	25
Total	0	11	11	1	12	13	0	23	23	0	8	8	55
Grand Total	1	21	22	1	21	22	0	49	49	0	18	18	111
Apprch %	4.5	95.5		4.5	95.5		0	100		0	100		
Total %	0.9	18.9	19.8	0.9	18.9	19.8	0	44.1	44.1	0	16.2	16.2	

Regina Webster & Associates, Inc.

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127th St and Halsted Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/16/2012
Page No : 1

Groups Printed- PC - SU - MU

	Halsted Ave From North				127th St From East				Halsted Ave From South				127th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	19	33	17	69	18	77	1	96	2	107	26	135	12	61	20	93	393
07:15 AM	19	45	14	78	21	84	0	105	0	127	13	140	10	95	50	155	478
07:30 AM	20	52	15	87	23	106	0	129	3	120	14	137	20	74	46	140	493
07:45 AM	23	57	15	95	25	102	1	128	1	141	11	153	29	115	52	196	572
Total	81	187	61	329	87	369	2	458	6	495	64	565	71	345	168	584	1936
08:00 AM	20	72	22	114	20	87	3	110	1	97	15	113	14	99	25	138	475
08:15 AM	18	70	13	101	32	77	2	111	1	132	16	149	10	71	28	109	470
08:30 AM	37	69	18	124	29	70	4	103	2	104	16	122	12	92	16	120	469
08:45 AM	22	90	14	126	20	72	0	92	9	111	16	136	13	84	26	123	477
Total	97	301	67	465	101	306	9	416	13	444	63	520	49	346	95	490	1891
Grand Total	178	488	128	794	188	675	11	874	19	939	127	1085	120	691	263	1074	3827
Apprch %	22.4	61.5	16.1		21.5	77.2	1.3		1.8	86.5	11.7		11.2	64.3	24.5		
Total %	4.7	12.8	3.3	20.7	4.9	17.6	0.3	22.8	0.5	24.5	3.3	28.4	3.1	18.1	6.9	28.1	
PC	173	451	121	745	173	639	5	817	12	900	118	1030	103	649	253	1005	3597
% PC	97.2	92.4	94.5	93.8	92	94.7	45.5	93.5	63.2	95.8	92.9	94.9	85.8	93.9	96.2	93.6	94
SU	4	35	5	44	13	22	1	36	0	31	7	38	8	24	7	39	157
% SU	2.2	7.2	3.9	5.5	6.9	3.3	9.1	4.1	0	3.3	5.5	3.5	6.7	3.5	2.7	3.6	4.1
MU	1	2	2	5	2	14	5	21	7	8	2	17	9	18	3	30	73
% MU	0.6	0.4	1.6	0.6	1.1	2.1	45.5	2.4	36.8	0.9	1.6	1.6	7.5	2.6	1.1	2.8	1.9

	Halsted Ave From North				127th St From East				Halsted Ave From South				127th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	19	45	14	78	21	84	0	105	0	127	13	140	10	95	50	155	478
07:30 AM	20	52	15	87	23	**106**	0	**129**	**3**	120	14	137	20	74	46	140	493
07:45 AM	**23**	57	15	95	**25**	102	1	128	1	**141**	11	**153**	**29**	**115**	**52**	**196**	**572**
08:00 AM	20	**72**	**22**	**114**	20	87	**3**	110	1	97	**15**	113	14	99	25	138	475
Total Volume	82	226	66	374	89	379	4	472	5	485	53	543	73	383	173	629	2018
% App. Total	21.9	60.4	17.6		18.9	80.3	0.8		0.9	89.3	9.8		11.6	60.9	27.5		
PHF	.891	.785	.750	.820	.890	.894	.333	.915	.417	.860	.883	.887	.629	.833	.832	.802	.882

127th St and Halsted Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/16/2012
Page No : 2

Groups Printed- SU

	Halsted Ave From North				127th St From East				Halsted Ave From South				127th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	2	1	3	1	2	0	3	0	6	2	8	0	5	1	6	20
07:15 AM	1	5	1	7	4	2	0	6	0	3	2	5	1	2	1	4	22
07:30 AM	1	4	0	5	1	2	0	3	0	5	0	5	2	0	1	3	16
07:45 AM	0	4	1	5	1	5	0	6	0	2	1	3	3	3	1	7	21
Total	2	15	3	20	7	11	0	18	0	16	5	21	6	10	4	20	79
08:00 AM	0	4	1	5	2	4	0	6	0	3	1	4	2	5	0	7	22
08:15 AM	1	5	0	6	2	4	1	7	0	5	0	5	0	3	0	3	21
08:30 AM	1	5	0	6	1	2	0	3	0	3	0	3	0	3	0	3	15
08:45 AM	0	6	1	7	1	1	0	2	0	4	1	5	0	3	3	6	20
Total	2	20	2	24	6	11	1	18	0	15	2	17	2	14	3	19	78
Grand Total	4	35	5	44	13	22	1	36	0	31	7	38	8	24	7	39	157
Apprch %	9.1	79.5	11.4		36.1	61.1	2.8		0	81.6	18.4		20.5	61.5	17.9		
Total %	2.5	22.3	3.2	28	8.3	14	0.6	22.9	0	19.7	4.5	24.2	5.1	15.3	4.5	24.8	

127th St and Halsted Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/16/2012
Page No : 3

Groups Printed- MU

	Halsted Ave From North				127th St From East				Halsted Ave From South				127th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	1	1	1	1	0	2	1	2	0	3	6
07:15 AM	1	0	0	1	1	4	0	5	0	2	0	2	1	0	1	2	10
07:30 AM	0	0	0	0	0	1	0	1	2	0	1	3	2	3	1	6	10
07:45 AM	0	0	0	0	0	2	0	2	1	1	0	2	2	5	0	7	11
Total	1	0	0	1	1	7	1	9	4	4	1	9	6	10	2	18	37
08:00 AM	0	1	1	2	0	4	1	5	0	1	0	1	1	0	1	2	10
08:15 AM	0	0	1	1	0	0	1	1	0	0	1	1	1	3	0	4	7
08:30 AM	0	0	0	0	1	2	2	5	0	2	0	2	0	3	0	3	10
08:45 AM	0	1	0	1	0	1	0	1	3	1	0	4	1	2	0	3	9
Total	0	2	2	4	1	7	4	12	3	4	1	8	3	8	1	12	36
Grand Total	1	2	2	5	2	14	5	21	7	8	2	17	9	18	3	30	73
Apprch %	20	40	40		9.5	66.7	23.8		41.2	47.1	11.8		30	60	10		
Total %	1.4	2.7	2.7	6.8	2.7	19.2	6.8	28.8	9.6	11	2.7	23.3	12.3	24.7	4.1	41.1	

127th St and Halsted Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 5/16/2012
Page No : 4

Groups Printed- Peds & Bikes

	Halsted Ave Crossing North Leg			127th St Crossing East Leg			Halsted Ave Crossing South Leg			127th St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
07:00 AM	0	1	1	0	6	6	0	3	3	0	3	3	13
07:15 AM	0	0	0	0	3	3	0	1	1	0	2	2	6
07:30 AM	0	4	4	0	2	2	0	3	3	0	4	4	13
07:45 AM	0	2	2	0	4	4	0	0	0	0	2	2	8
Total	0	7	7	0	15	15	0	7	7	0	11	11	40
08:00 AM	0	1	1	0	4	4	0	4	4	0	3	3	12
08:15 AM	0	2	2	0	4	4	0	4	4	0	2	2	12
08:30 AM	0	1	1	0	3	3	0	2	2	0	2	2	8
08:45 AM	0	3	3	0	3	3	0	2	2	0	4	4	12
Total	0	7	7	0	14	14	0	12	12	0	11	11	44
Grand Total	0	14	14	0	29	29	0	19	19	0	22	22	84
Apprch %	0	100		0	100		0	100		0	100		
Total %	0	16.7	16.7	0	34.5	34.5	0	22.6	22.6	0	26.2	26.2	

127th St and Halsted Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/16/2012
Page No : 5

Groups Printed- PC - SU - MU

	Halsted Ave From North				127th St From East				Halsted Ave From South				127th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	38	106	23	167	23	101	6	130	3	84	25	112	18	108	24	150	559
04:15 PM	33	114	38	185	18	76	3	97	3	78	23	104	27	121	33	181	567
04:30 PM	47	113	34	194	13	67	2	82	3	61	19	83	31	127	43	201	560
04:45 PM	34	125	33	192	8	84	1	93	1	60	12	73	31	101	27	159	517
Total	152	458	128	738	62	328	12	402	10	283	79	372	107	457	127	691	2203
05:00 PM	34	104	38	176	11	77	2	90	2	54	26	82	18	125	18	161	509
05:15 PM	47	120	39	206	16	114	2	132	3	73	20	96	22	138	17	177	611
05:30 PM	27	126	37	190	16	97	3	116	1	50	26	77	40	123	30	193	576
05:45 PM	33	119	39	191	23	88	3	114	3	82	22	107	35	105	21	161	573
Total	141	469	153	763	66	376	10	452	9	259	94	362	115	491	86	692	2269
Grand Total	293	927	281	1501	128	704	22	854	19	542	173	734	222	948	213	1383	4472
Apprch %	19.5	61.8	18.7		15	82.4	2.6		2.6	73.8	23.6		16.1	68.5	15.4		
Total %	6.6	20.7	6.3	33.6	2.9	15.7	0.5	19.1	0.4	12.1	3.9	16.4	5	21.2	4.8	30.9	
PC	285	893	277	1455	115	691	22	828	19	531	160	710	209	923	210	1342	4335
% PC	97.3	96.3	98.6	96.9	89.8	98.2	100	97	100	98	92.5	96.7	94.1	97.4	98.6	97	96.9
SU	8	32	3	43	13	8	0	21	0	9	4	13	8	16	3	27	104
% SU	2.7	3.5	1.1	2.9	10.2	1.1	0	2.5	0	1.7	2.3	1.8	3.6	1.7	1.4	2	2.3
MU	0	2	1	3	0	5	0	5	0	2	9	11	5	9	0	14	33
% MU	0	0.2	0.4	0.2	0	0.7	0	0.6	0	0.4	5.2	1.5	2.3	0.9	0	1	0.7

	Halsted Ave From North				127th St From East				Halsted Ave From South				127th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	34	104	38	176	11	77	2	90	2	54	**26**	82	18	125	18	161	509
05:15 PM	**47**	120	**39**	**206**	16	**114**	2	**132**	**3**	73	20	96	22	**138**	17	177	**611**
05:30 PM	27	**126**	37	190	16	97	**3**	116	1	50	26	77	**40**	123	**30**	**193**	576
05:45 PM	33	119	39	191	**23**	88	3	114	3	**82**	22	**107**	35	105	21	161	573
Total Volume	141	469	153	763	66	376	10	452	9	259	94	362	115	491	86	692	2269
% App. Total	18.5	61.5	20.1		14.6	83.2	2.2		2.5	71.5	26		16.6	71	12.4		
PHF	.750	.931	.981	.926	.717	.825	.833	.856	.750	.790	.904	.846	.719	.889	.717	.896	.928

127th St and Halsted Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/16/2012
Page No : 6

Groups Printed- SU

	Halsted Ave From North				127th St From East				Halsted Ave From South				127th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	2	5	2	9	2	1	0	3	0	2	2	4	0	2	2	4	20
04:15 PM	0	3	0	3	2	0	0	2	0	2	0	2	3	2	0	5	12
04:30 PM	2	2	1	5	4	0	0	4	0	0	0	0	2	2	0	4	13
04:45 PM	0	6	0	6	1	2	0	3	0	0	0	0	1	2	0	3	12
Total	4	16	3	23	9	3	0	12	0	4	2	6	6	8	2	16	57
05:00 PM	1	4	0	5	1	3	0	4	0	2	1	3	0	1	0	1	13
05:15 PM	1	5	0	6	1	1	0	2	0	1	0	1	1	2	0	3	12
05:30 PM	0	5	0	5	1	1	0	2	0	2	0	2	0	2	1	3	12
05:45 PM	2	2	0	4	1	0	0	1	0	0	1	1	1	3	0	4	10
Total	4	16	0	20	4	5	0	9	0	5	2	7	2	8	1	11	47
Grand Total	8	32	3	43	13	8	0	21	0	9	4	13	8	16	3	27	104
Apprch %	18.6	74.4	7		61.9	38.1	0		0	69.2	30.8		29.6	59.3	11.1		
Total %	7.7	30.8	2.9	41.3	12.5	7.7	0	20.2	0	8.7	3.8	12.5	7.7	15.4	2.9	26	

127th St and Halsted Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/16/2012
Page No : 7

Groups Printed- MU

	Halsted Ave From North				127th St From East				Halsted Ave From South				127th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	1	0	1	0	1	2	3	1	0	0	1	5
04:15 PM	0	0	0	0	0	2	0	2	0	0	1	1	0	4	0	4	7
04:30 PM	0	0	0	0	0	0	0	0	0	1	2	3	1	2	0	3	6
04:45 PM	0	2	0	2	0	1	0	1	0	0	0	0	3	1	0	4	7
Total	0	2	0	2	0	4	0	4	0	2	5	7	5	7	0	12	25
05:00 PM	0	0	1	1	0	0	0	0	0	0	1	1	0	0	0	0	2
05:15 PM	0	0	0	0	0	0	0	0	0	0	2	2	0	1	0	1	3
05:30 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
05:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
Total	0	0	1	1	0	1	0	1	0	0	4	4	0	2	0	2	8
Grand Total	0	2	1	3	0	5	0	5	0	2	9	11	5	9	0	14	33
Apprch %	0	66.7	33.3		0	100	0		0	18.2	81.8		35.7	64.3	0		
Total %	0	6.1	3	9.1	0	15.2	0	15.2	0	6.1	27.3	33.3	15.2	27.3	0	42.4	

127th St and Halsted Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 5/16/2012
Page No : 8

Groups Printed- Peds & Bikes

	Halsted Ave Crossing North Leg			127th St Crossing East Leg			Halsted Ave Crossing South Leg			127th St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
04:00 PM	0	0	0	0	11	11	1	2	3	0	1	1	15
04:15 PM	0	3	3	0	1	1	0	3	3	0	10	10	17
04:30 PM	0	2	2	1	3	4	0	3	3	0	4	4	13
04:45 PM	2	1	3	0	5	5	1	0	1	2	8	10	19
Total	2	6	8	1	20	21	2	8	10	2	23	25	64
05:00 PM	0	0	0	0	1	1	0	0	0	0	3	3	4
05:15 PM	0	4	4	0	1	1	0	0	0	2	1	3	8
05:30 PM	0	0	0	0	0	0	0	0	0	0	1	1	1
05:45 PM	0	0	0	0	2	2	0	2	2	0	3	3	7
Total	0	4	4	0	4	4	0	2	2	2	8	10	20
Grand Total	2	10	12	1	24	25	2	10	12	4	31	35	84
Apprch %	16.7	83.3		4	96		16.7	83.3		11.4	88.6		
Total %	2.4	11.9	14.3	1.2	28.6	29.8	2.4	11.9	14.3	4.8	36.9	41.7	

127th St and Marshfield Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/22/2012
Page No : 1

Groups Printed- PC - SU - MU

	Marshfield Ave From North				127th St From East				Marshfield Ave From South				127th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	61	118	0	179	70	77	105	252	0	151	84	235	666
07:15 AM	0	0	0	0	61	148	0	209	83	76	109	268	0	162	81	243	720
07:30 AM	0	0	0	0	64	156	0	220	100	72	131	303	0	160	73	233	756
07:45 AM	0	0	0	0	53	162	0	215	75	77	132	284	0	191	87	278	777
Total	0	0	0	0	239	584	0	823	328	302	477	1107	0	664	325	989	2919
08:00 AM	0	0	0	0	62	139	0	201	60	64	97	221	0	225	73	298	720
08:15 AM	0	0	0	0	55	138	0	193	62	68	94	224	0	159	69	228	645
08:30 AM	0	0	0	0	59	169	0	228	45	64	66	175	0	177	94	271	674
08:45 AM	0	0	0	0	61	170	0	231	50	73	82	205	0	173	70	243	679
Total	0	0	0	0	237	616	0	853	217	269	339	825	0	734	306	1040	2718
Grand Total	0	0	0	0	476	1200	0	1676	545	571	816	1932	0	1398	631	2029	5637
Apprch %	0	0	0		28.4	71.6	0		28.2	29.6	42.2		0	68.9	31.1		
Total %	0	0	0	0	8.4	21.3	0	29.7	9.7	10.1	14.5	34.3	0	24.8	11.2	36	
PC	0	0	0	0	456	1094	0	1550	519	554	777	1850	0	1283	564	1847	5247
% PC	0	0	0	0	95.8	91.2	0	92.5	95.2	97	95.2	95.8	0	91.8	89.4	91	93.1
SU	0	0	0	0	12	73	0	85	16	15	17	48	0	83	52	135	268
% SU	0	0	0	0	2.5	6.1	0	5.1	2.9	2.6	2.1	2.5	0	5.9	8.2	6.7	4.8
MU	0	0	0	0	8	33	0	41	10	2	22	34	0	32	15	47	122
% MU	0	0	0	0	1.7	2.8	0	2.4	1.8	0.4	2.7	1.8	0	2.3	2.4	2.3	2.2

	Marshfield Ave From North				127th St From East				Marshfield Ave From South				127th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	0	0	61	148	0	209	83	76	109	268	0	162	81	243	720
07:30 AM	0	0	0	0	**64**	156	0	**220**	**100**	72	131	**303**	0	160	73	233	756
07:45 AM	0	0	0	0	53	**162**	0	215	75	**77**	**132**	284	0	191	**87**	278	**777**
08:00 AM	0	0	0	0	62	139	0	201	60	64	97	221	0	**225**	73	**298**	720
Total Volume	0	0	0	0	240	605	0	845	318	289	469	1076	0	738	314	1052	2973
% App. Total	0	0	0		28.4	71.6	0		29.6	26.9	43.6		0	70.2	29.8		
PHF	.000	.000	.000	.000	.938	.934	.000	.960	.795	.938	.888	.888	.000	.820	.902	.883	.957

127th St and Marshfield Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/22/2012
Page No : 2

Groups Printed- SU

	Marshfield Ave From North				127th St From East				Marshfield Ave From South				127th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	2	7	0	9	1	2	4	7	0	9	10	19	35
07:15 AM	0	0	0	0	4	14	0	18	2	0	1	3	0	5	9	14	35
07:30 AM	0	0	0	0	1	5	0	6	5	4	7	16	0	15	9	24	46
07:45 AM	0	0	0	0	0	7	0	7	1	2	2	5	0	12	10	22	34
Total	0	0	0	0	7	33	0	40	9	8	14	31	0	41	38	79	150
08:00 AM	0	0	0	0	3	10	0	13	1	1	0	2	0	11	3	14	29
08:15 AM	0	0	0	0	0	6	0	6	1	1	1	3	0	9	1	10	19
08:30 AM	0	0	0	0	1	14	0	15	1	1	0	2	0	12	6	18	35
08:45 AM	0	0	0	0	1	10	0	11	4	4	2	10	0	10	4	14	35
Total	0	0	0	0	5	40	0	45	7	7	3	17	0	42	14	56	118
Grand Total	0	0	0	0	12	73	0	85	16	15	17	48	0	83	52	135	268
Apprch %	0	0	0		14.1	85.9	0		33.3	31.2	35.4		0	61.5	38.5		
Total %	0	0	0	0	4.5	27.2	0	31.7	6	5.6	6.3	17.9	0	31	19.4	50.4	

127th St and Marshfield Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/22/2012
Page No : 3

Groups Printed- MU

	Marshfield Ave From North				127th St From East				Marshfield Ave From South				127th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	1	1	0	2	1	0	5	6	0	1	3	4	12
07:15 AM	0	0	0	0	1	4	0	5	1	0	2	3	0	4	1	5	13
07:30 AM	0	0	0	0	0	4	0	4	2	0	4	6	0	3	2	5	15
07:45 AM	0	0	0	0	2	0	0	2	4	0	2	6	0	5	1	6	14
Total	0	0	0	0	4	9	0	13	8	0	13	21	0	13	7	20	54
08:00 AM	0	0	0	0	1	6	0	7	1	0	2	3	0	6	2	8	18
08:15 AM	0	0	0	0	2	7	0	9	0	1	1	2	0	4	1	5	16
08:30 AM	0	0	0	0	0	3	0	3	1	1	2	4	0	4	3	7	14
08:45 AM	0	0	0	0	1	8	0	9	0	0	4	4	0	5	2	7	20
Total	0	0	0	0	4	24	0	28	2	2	9	13	0	19	8	27	68
Grand Total	0	0	0	0	8	33	0	41	10	2	22	34	0	32	15	47	122
Apprch %	0	0	0		19.5	80.5	0		29.4	5.9	64.7		0	68.1	31.9		
Total %	0	0	0	0	6.6	27	0	33.6	8.2	1.6	18	27.9	0	26.2	12.3	38.5	

127th St and Marshfield Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 5/22/2012
Page No : 4

Groups Printed- Peds & Bikes

	Marshfield Ave Crossing North Leg			127th St Crossing East Leg			Marshfield Ave Crossing South Leg			127th St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
07:00 AM	0	0	0	0	1	1	0	1	1	0	0	0	2
07:15 AM	0	1	1	0	0	0	0	1	1	0	0	0	2
07:30 AM	0	3	3	0	0	0	0	0	0	0	0	0	3
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	4	4	0	1	1	0	2	2	0	0	0	7
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	1	1	0	0	0	0	0	0	0	0	0	1
08:30 AM	0	1	1	0	1	1	0	1	1	0	0	0	3
08:45 AM	0	3	3	0	0	0	0	2	2	0	0	0	5
Total	0	5	5	0	1	1	0	3	3	0	0	0	9
Grand Total	0	9	9	0	2	2	0	5	5	0	0	0	16
Apprch %	0	100		0	100		0	100		0	0		
Total %	0	56.2	56.2	0	12.5	12.5	0	31.2	31.2	0	0	0	

127th St and Marshfield Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/22/2012
Page No : 5

Groups Printed- PC - SU - MU

	Marshfield Ave From North				127th St From East				Marshfield Ave From South				127th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	57	157	0	214	62	70	74	206	0	247	83	330	750
04:15 PM	0	0	0	0	66	176	0	242	68	66	67	201	0	256	94	350	793
04:30 PM	0	0	0	0	63	160	0	223	54	63	83	200	0	280	105	385	808
04:45 PM	0	0	0	0	82	207	0	289	52	68	74	194	0	243	95	338	821
Total	0	0	0	0	268	700	0	968	236	267	298	801	0	1026	377	1403	3172
05:00 PM	0	0	0	0	70	176	0	246	60	67	79	206	0	265	69	334	786
05:15 PM	0	0	0	0	67	172	0	239	67	62	83	212	0	254	101	355	806
05:30 PM	0	0	0	0	58	124	0	182	62	70	96	228	0	229	79	308	718
05:45 PM	0	0	0	0	66	182	0	248	48	71	62	181	0	248	78	326	755
Total	0	0	0	0	261	654	0	915	237	270	320	827	0	996	327	1323	3065
Grand Total	0	0	0	0	529	1354	0	1883	473	537	618	1628	0	2022	704	2726	6237
Apprch %	0	0	0		28.1	71.9	0		29.1	33	38		0	74.2	25.8		
Total %	0	0	0	0	8.5	21.7	0	30.2	7.6	8.6	9.9	26.1	0	32.4	11.3	43.7	
PC	0	0	0	0	518	1312	0	1830	458	526	607	1591	0	1968	674	2642	6063
% PC	0	0	0	0	97.9	96.9	0	97.2	96.8	98	98.2	97.7	0	97.3	95.7	96.9	97.2
SU	0	0	0	0	6	27	0	33	6	5	6	17	0	31	11	42	92
% SU	0	0	0	0	1.1	2	0	1.8	1.3	0.9	1	1	0	1.5	1.6	1.5	1.5
MU	0	0	0	0	5	15	0	20	9	6	5	20	0	23	19	42	82
% MU	0	0	0	0	0.9	1.1	0	1.1	1.9	1.1	0.8	1.2	0	1.1	2.7	1.5	1.3

	Marshfield Ave From North				127th St From East				Marshfield Ave From South				127th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	0	0	0	63	160	0	223	54	63	**83**	200	0	**280**	**105**	**385**	808
04:45 PM	0	0	0	0	**82**	**207**	0	**289**	52	**68**	74	194	0	243	95	338	**821**
05:00 PM	0	0	0	0	70	176	0	246	60	67	79	206	0	265	69	334	786
05:15 PM	0	0	0	0	67	172	0	239	**67**	62	83	**212**	0	254	101	355	806
Total Volume	0	0	0	0	282	715	0	997	233	260	319	812	0	1042	370	1412	3221
% App. Total	0	0	0		28.3	71.7	0		28.7	32	39.3		0	73.8	26.2		
PHF	.000	.000	.000	.000	.860	.864	.000	.862	.869	.956	.961	.958	.000	.930	.881	.917	.981

127th St and Marshfield Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/22/2012
Page No : 6

Groups Printed- SU

	Marshfield Ave From North				127th St From East				Marshfield Ave From South				127th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	6	0	6	0	0	1	1	0	5	1	6	13
04:15 PM	0	0	0	0	3	3	0	6	0	0	0	0	0	5	2	7	13
04:30 PM	0	0	0	0	0	4	0	4	1	1	0	2	0	4	1	5	11
04:45 PM	0	0	0	0	1	5	0	6	2	1	3	6	0	5	5	10	22
Total	0	0	0	0	4	18	0	22	3	2	4	9	0	19	9	28	59
05:00 PM	0	0	0	0	1	0	0	1	1	0	2	3	0	3	0	3	7
05:15 PM	0	0	0	0	1	4	0	5	1	1	0	2	0	4	1	5	12
05:30 PM	0	0	0	0	0	1	0	1	1	2	0	3	0	2	0	2	6
05:45 PM	0	0	0	0	0	4	0	4	0	0	0	0	0	3	1	4	8
Total	0	0	0	0	2	9	0	11	3	3	2	8	0	12	2	14	33
Grand Total	0	0	0	0	6	27	0	33	6	5	6	17	0	31	11	42	92
Apprch %	0	0	0		18.2	81.8	0		35.3	29.4	35.3		0	73.8	26.2		
Total %	0	0	0	0	6.5	29.3	0	35.9	6.5	5.4	6.5	18.5	0	33.7	12	45.7	

127th St and Marshfield Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/22/2012

Groups Printed- MU

	Marshfield Ave From North				127th St From East				Marshfield Ave From South				127th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	1	0	0	1	0	1	1	2	0	4	5	9	12
04:15 PM	0	0	0	0	1	5	0	6	3	2	0	5	0	2	3	5	16
04:30 PM	0	0	0	0	1	2	0	3	0	0	0	0	0	2	7	9	12
04:45 PM	0	0	0	0	1	2	0	3	2	2	0	4	0	2	0	2	9
Total	0	0	0	0	4	9	0	13	5	5	1	11	0	10	15	25	49
05:00 PM	0	0	0	0	0	4	0	4	0	0	1	1	0	5	0	5	10
05:15 PM	0	0	0	0	1	1	0	2	0	0	2	2	0	4	1	5	9
05:30 PM	0	0	0	0	0	1	0	1	3	1	1	5	0	2	0	2	8
05:45 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	2	3	5	6
Total	0	0	0	0	1	6	0	7	4	1	4	9	0	13	4	17	33
Grand Total	0	0	0	0	5	15	0	20	9	6	5	20	0	23	19	42	82
Apprch %	0	0	0		25	75	0		45	30	25		0	54.8	45.2		
Total %	0	0	0	0	6.1	18.3	0	24.4	11	7.3	6.1	24.4	0	28	23.2	51.2	

127th St and Marshfield Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 5/22/2012
Page No : 8

Groups Printed- Peds & Bikes

	Marshfield Ave Crossing North Leg			127th St Crossing East Leg			Marshfield Ave Crossing South Leg			127th St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
04:00 PM	0	1	1	0	0	0	0	0	0	0	0	0	1
04:15 PM	1	2	3	0	0	0	0	1	1	0	0	0	4
04:30 PM	0	3	3	0	2	2	1	0	1	0	0	0	6
04:45 PM	1	2	3	0	0	0	0	2	2	0	0	0	5
Total	2	8	10	0	2	2	1	3	4	0	0	0	16
05:00 PM	0	4	4	0	0	0	0	1	1	0	0	0	5
05:15 PM	1	0	1	0	0	0	0	0	0	0	0	0	1
05:30 PM	0	0	0	0	0	0	1	2	3	0	0	0	3
05:45 PM	0	3	3	0	0	0	0	2	2	0	0	0	5
Total	1	7	8	0	0	0	1	5	6	0	0	0	14
Grand Total	3	15	18	0	2	2	2	8	10	0	0	0	30
Apprch %	16.7	83.3		0	100		20	80		0	0		
Total %	10	50	60	0	6.7	6.7	6.7	26.7	33.3	0	0	0	

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773-283-2600 Fax: 773-283-2602
www.RWAengineers.com

127th St and Michigan Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/17/2012
Page No : 1

Groups Printed- PC - SU - MU

	Michigan Ave From North				**127th St From East**				**Michigan Ave From South**				**127th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	6	0	15	21	28	108	0	136	0	0	0	0	0	106	6	112	269
07:15 AM	16	0	28	44	35	114	0	149	0	0	0	0	0	116	17	133	326
07:30 AM	11	0	31	42	40	122	0	162	0	0	0	0	0	121	9	130	334
07:45 AM	15	0	34	49	40	136	0	176	0	0	0	0	0	128	12	140	365
Total	48	0	108	156	143	480	0	623	0	0	0	0	0	471	44	515	1294
08:00 AM	11	0	31	42	45	124	0	169	0	0	0	0	0	113	13	126	337
08:15 AM	12	0	22	34	44	134	0	178	0	0	0	0	0	102	12	114	326
08:30 AM	6	0	34	40	45	117	0	162	0	0	0	0	0	121	16	137	339
08:45 AM	18	0	30	48	46	150	0	196	0	0	0	0	0	106	13	119	363
Total	47	0	117	164	180	525	0	705	0	0	0	0	0	442	54	496	1365
Grand Total	95	0	225	320	323	1005	0	1328	0	0	0	0	0	913	98	1011	2659
Apprch %	29.7	0	70.3		24.3	75.7	0		0	0	0		0	90.3	9.7		
Total %	3.6	0	8.5	12	12.1	37.8	0	49.9	0	0	0	0	0	34.3	3.7	38	
PC	92	0	203	295	285	916	0	1201	0	0	0	0	0	824	95	919	2415
% PC	96.8	0	90.2	92.2	88.2	91.1	0	90.4	0	0	0	0	0	90.3	96.9	90.9	90.8
SU	3	0	22	25	38	52	0	90	0	0	0	0	0	45	3	48	163
% SU	3.2	0	9.8	7.8	11.8	5.2	0	6.8	0	0	0	0	0	4.9	3.1	4.7	6.1
MU	0	0	0	0	0	37	0	37	0	0	0	0	0	44	0	44	81
% MU	0	0	0	0	0	3.7	0	2.8	0	0	0	0	0	4.8	0	4.4	3

	Michigan Ave From North				**127th St From East**				**Michigan Ave From South**				**127th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	**15**	0	**34**	**49**	40	**136**	0	176	0	0	0	0	0	**128**	12	**140**	**365**
08:00 AM	11	0	31	42	**45**	124	0	169	0	0	0	0	0	113	13	126	337
08:15 AM	12	0	22	34	44	134	0	**178**	0	0	0	0	0	102	12	114	326
08:30 AM	6	0	34	40	45	117	0	162	0	0	0	0	0	121	**16**	137	339
Total Volume	44	0	121	165	174	511	0	685	0	0	0	0	0	464	53	517	1367
% App. Total	26.7	0	73.3		25.4	74.6	0		0	0	0		0	89.7	10.3		
PHF	.733	.000	.890	.842	.967	.939	.000	.962	.000	.000	.000	.000	.000	.906	.828	.923	.936

127th St and Michigan Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/17/2012
Page No : 2

Groups Printed- SU

	Michigan Ave From North				**127th St From East**				**Michigan Ave From South**				**127th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	4	4	5	4	0	9	0	0	0	0	0	6	1	7	20
07:15 AM	0	0	2	2	6	9	0	15	0	0	0	0	0	11	0	11	28
07:30 AM	1	0	3	4	4	4	0	8	0	0	0	0	0	7	0	7	19
07:45 AM	0	0	2	2	4	4	0	8	0	0	0	0	0	3	0	3	13
Total	1	0	11	12	19	21	0	40	0	0	0	0	0	27	1	28	80
08:00 AM	1	0	5	6	5	8	0	13	0	0	0	0	0	3	1	4	23
08:15 AM	0	0	1	1	7	9	0	16	0	0	0	0	0	4	1	5	22
08:30 AM	1	0	3	4	3	7	0	10	0	0	0	0	0	4	0	4	18
08:45 AM	0	0	2	2	4	7	0	11	0	0	0	0	0	7	0	7	20
Total	2	0	11	13	19	31	0	50	0	0	0	0	0	18	2	20	83
Grand Total	3	0	22	25	38	52	0	90	0	0	0	0	0	45	3	48	163
Apprch %	12	0	88		42.2	57.8	0		0	0	0		0	93.8	6.2		
Total %	1.8	0	13.5	15.3	23.3	31.9	0	55.2	0	0	0	0	0	27.6	1.8	29.4	

127th St and Michigan Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/17/2012

Groups Printed- MU

	Michigan Ave From North				**127th St From East**				**Michigan Ave From South**				**127th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	4	0	4	0	0	0	0	0	6	0	6	10
07:15 AM	0	0	0	0	0	5	0	5	0	0	0	0	0	3	0	3	8
07:30 AM	0	0	0	0	0	6	0	6	0	0	0	0	0	6	0	6	12
07:45 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	7	0	7	9
Total	0	0	0	0	0	17	0	17	0	0	0	0	0	22	0	22	39
08:00 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	7	0	7	9
08:15 AM	0	0	0	0	0	6	0	6	0	0	0	0	0	7	0	7	13
08:30 AM	0	0	0	0	0	6	0	6	0	0	0	0	0	2	0	2	8
08:45 AM	0	0	0	0	0	6	0	6	0	0	0	0	0	6	0	6	12
Total	0	0	0	0	0	20	0	20	0	0	0	0	0	22	0	22	42
Grand Total	0	0	0	0	0	37	0	37	0	0	0	0	0	44	0	44	81
Apprch %	0	0	0		0	100	0		0	0	0		0	100	0		
Total %	0	0	0	0	0	45.7	0	45.7	0	0	0	0	0	54.3	0	54.3	

127th St and Michigan Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 5/17/2012
Page No : 4

Groups Printed- Peds & Bikes

	Michigan Ave Crossing North Leg			**127th St Crossing East Leg**			**Michigan Ave Crossing South Leg**			**127th St Crossing West Leg**			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	1	1	0	0	0	0	0	0	0	0	0	1
07:30 AM	0	1	1	0	0	0	0	0	0	0	0	0	1
07:45 AM	1	0	1	0	0	0	0	0	0	0	0	0	1
Total	1	2	3	0	0	0	0	0	0	0	0	0	3
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	2	2	0	0	0	0	0	0	0	0	0	2
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	2	2	0	0	0	0	0	0	0	0	0	2
Grand Total	1	4	5	0	0	0	0	0	0	0	0	0	5
Apprch %	20	80		0	0		0	0		0	0		
Total %	20	80	100	0	0	0	0	0	0	0	0	0	

127th St and Michigan Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/17/2012
Page No : 5

Groups Printed- PC - SU - MU

	Michigan Ave From North				127th St From East				Michigan Ave From South				127th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	12	0	45	57	43	127	0	170	0	0	0	0	0	159	16	175	402
04:15 PM	26	0	59	85	47	127	0	174	0	0	0	0	0	164	20	184	443
04:30 PM	32	0	52	84	23	99	0	122	0	0	0	0	0	159	17	176	382
04:45 PM	26	0	48	74	37	194	0	231	0	0	0	0	0	185	16	201	506
Total	96	0	204	300	150	547	0	697	0	0	0	0	0	667	69	736	1733
05:00 PM	17	0	50	67	38	137	0	175	0	0	0	0	0	155	15	170	412
05:15 PM	26	0	73	99	30	116	0	146	0	0	0	0	0	186	20	206	451
05:30 PM	19	0	60	79	32	97	0	129	0	0	0	0	0	157	18	175	383
05:45 PM	18	0	56	74	36	140	0	176	0	0	0	0	0	195	17	212	462
Total	80	0	239	319	136	490	0	626	0	0	0	0	0	693	70	763	1708
Grand Total	176	0	443	619	286	1037	0	1323	0	0	0	0	0	1360	139	1499	3441
Apprch %	28.4	0	71.6		21.6	78.4	0		0	0	0		0	90.7	9.3		
Total %	5.1	0	12.9	18	8.3	30.1	0	38.4	0	0	0	0	0	39.5	4	43.6	
PC	172	0	416	588	261	1010	0	1271	0	0	0	0	0	1328	138	1466	3325
% PC	97.7	0	93.9	95	91.3	97.4	0	96.1	0	0	0	0	0	97.6	99.3	97.8	96.6
SU	4	0	27	31	25	18	0	43	0	0	0	0	0	18	1	19	93
% SU	2.3	0	6.1	5	8.7	1.7	0	3.3	0	0	0	0	0	1.3	0.7	1.3	2.7
MU	0	0	0	0	0	9	0	9	0	0	0	0	0	14	0	14	23
% MU	0	0	0	0	0	0.9	0	0.7	0	0	0	0	0	1	0	0.9	0.7

	Michigan Ave From North				127th St From East				Michigan Ave From South				127th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	**26**	0	48	74	37	**194**	0	**231**	0	0	0	0	0	185	16	201	**506**
05:00 PM	17	0	50	67	**38**	137	0	175	0	0	0	0	0	155	15	170	412
05:15 PM	26	0	**73**	**99**	30	116	0	146	0	0	0	0	0	**186**	**20**	**206**	451
05:30 PM	19	0	60	79	32	97	0	129	0	0	0	0	0	157	18	175	383
Total Volume	88	0	231	319	137	544	0	681	0	0	0	0	0	683	69	752	1752
% App. Total	27.6	0	72.4		20.1	79.9	0		0	0	0		0	90.8	9.2		
PHF	.846	.000	.791	.806	.901	.701	.000	.737	.000	.000	.000	.000	.000	.918	.863	.913	.866

127th St and Michigan Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/17/2012
Page No : 6

Groups Printed- SU

	Michigan Ave From North				**127th St From East**				**Michigan Ave From South**				**127th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	4	4	5	2	0	7	0	0	0	0	0	1	0	1	12
04:15 PM	0	0	3	3	3	4	0	7	0	0	0	0	0	6	0	6	16
04:30 PM	0	0	3	3	4	3	0	7	0	0	0	0	0	2	0	2	12
04:45 PM	0	0	3	3	0	1	0	1	0	0	0	0	0	1	0	1	5
Total	0	0	13	13	12	10	0	22	0	0	0	0	0	10	0	10	45
05:00 PM	2	0	6	8	5	1	0	6	0	0	0	0	0	4	0	4	18
05:15 PM	0	0	3	3	1	2	0	3	0	0	0	0	0	1	1	2	8
05:30 PM	2	0	4	6	3	1	0	4	0	0	0	0	0	3	0	3	13
05:45 PM	0	0	1	1	4	4	0	8	0	0	0	0	0	0	0	0	9
Total	4	0	14	18	13	8	0	21	0	0	0	0	0	8	1	9	48
Grand Total	4	0	27	31	25	18	0	43	0	0	0	0	0	18	1	19	93
Apprch %	12.9	0	87.1		58.1	41.9	0		0	0	0		0	94.7	5.3		
Total %	4.3	0	29	33.3	26.9	19.4	0	46.2	0	0	0	0	0	19.4	1.1	20.4	

127th St and Michigan Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/17/2012
Page No : 7

Groups Printed- MU

	Michigan Ave From North				**127th St From East**				**Michigan Ave From South**				**127th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
04:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	3	0	3	4
04:30 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	2	0	2	4
04:45 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	3	0	3	5
Total	0	0	0	0	0	5	0	5	0	0	0	0	0	10	0	10	15
05:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
05:15 PM	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0	0	3
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Total	0	0	0	0	0	4	0	4	0	0	0	0	0	4	0	4	8
Grand Total	0	0	0	0	0	9	0	9	0	0	0	0	0	14	0	14	23
Apprch %	0	0	0		0	100	0		0	0	0		0	100	0		
Total %	0	0	0	0	0	39.1	0	39.1	0	0	0	0	0	60.9	0	60.9	

127th St and Michigan Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 5/17/2012
Page No : 8

Groups Printed- Peds & Bikes

	Michigan Ave Crossing North Leg			127th St Crossing East Leg			Michigan Ave Crossing South Leg			127th St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	1	1	0	0	0	0	0	0	0	0	0	1
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	1	0	0	0	0	0	0	0	0	0	1
05:00 PM	0	2	2	0	0	0	0	0	0	0	0	0	2
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	1	1	1
Total	0	2	2	0	0	0	0	0	0	0	1	1	3
Grand Total	0	3	3	0	0	0	0	0	0	0	1	1	4
Apprch %	0	100		0	0		0	0		0	100		
Total %	0	75	75	0	0	0	0	0	0	0	25	25	

127th St and Paulina St
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/22/2012
Page No : 1

Groups Printed- PC - SU - MU

	Paulina St From North				127th St From East				Paulina St From South				127th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	72	34	55	161	0	187	52	239	0	0	0	0	42	211	0	253	653
07:15 AM	80	56	76	212	0	299	57	356	0	0	0	0	51	300	0	351	919
07:30 AM	112	58	120	290	0	306	60	366	0	0	0	0	61	368	0	429	1085
07:45 AM	117	85	110	312	0	324	72	396	0	0	0	0	66	377	0	443	1151
Total	381	233	361	975	0	1116	241	1357	0	0	0	0	220	1256	0	1476	3808
08:00 AM	67	46	116	229	0	217	48	265	0	0	0	0	57	418	0	475	969
08:15 AM	86	52	145	283	0	217	77	294	0	0	0	0	30	381	0	411	988
08:30 AM	69	55	112	236	0	217	54	271	0	0	0	0	48	404	0	452	959
08:45 AM	80	49	178	307	0	211	63	274	0	0	0	0	25	268	0	293	874
Total	302	202	551	1055	0	862	242	1104	0	0	0	0	160	1471	0	1631	3790
Grand Total	683	435	912	2030	0	1978	483	2461	0	0	0	0	380	2727	0	3107	7598
Apprch %	33.6	21.4	44.9		0	80.4	19.6		0	0	0		12.2	87.8	0		
Total %	9	5.7	12	26.7	0	26	6.4	32.4	0	0	0	0	5	35.9	0	40.9	
PC	629	418	878	1925	0	1871	442	2313	0	0	0	0	358	2587	0	2945	7183
% PC	92.1	96.1	96.3	94.8	0	94.6	91.5	94	0	0	0	0	94.2	94.9	0	94.8	94.5
SU	32	11	25	68	0	71	15	86	0	0	0	0	11	89	0	100	254
% SU	4.7	2.5	2.7	3.3	0	3.6	3.1	3.5	0	0	0	0	2.9	3.3	0	3.2	3.3
MU	22	6	9	37	0	36	26	62	0	0	0	0	11	51	0	62	161
% MU	3.2	1.4	1	1.8	0	1.8	5.4	2.5	0	0	0	0	2.9	1.9	0	2	2.1

	Paulina St From North				127th St From East				Paulina St From South				127th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	112	58	120	290	0	306	60	366	0	0	0	0	61	368	0	429	1085
07:45 AM	**117**	**85**	110	**312**	0	**324**	72	**396**	0	0	0	0	**66**	377	0	443	**1151**
08:00 AM	67	46	116	229	0	217	48	265	0	0	0	0	57	**418**	0	**475**	969
08:15 AM	86	52	**145**	283	0	217	**77**	294	0	0	0	0	30	381	0	411	988
Total Volume	382	241	491	1114	0	1064	257	1321	0	0	0	0	214	1544	0	1758	4193
% App. Total	34.3	21.6	44.1		0	80.5	19.5		0	0	0		12.2	87.8	0		
PHF	.816	.709	.847	.893	.000	.821	.834	.834	.000	.000	.000	.000	.811	.923	.000	.925	.911

127th St and Paulina St
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/22/2012
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Groups Printed- SU

	Paulina St From North				127th St From East				Paulina St From South				127th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	3	0	0	3	0	10	2	12	0	0	0	0	2	18	0	20	35
07:15 AM	3	3	1	7	0	12	1	13	0	0	0	0	1	5	0	6	26
07:30 AM	3	2	5	10	0	9	0	9	0	0	0	0	4	19	0	23	42
07:45 AM	3	3	3	9	0	8	4	12	0	0	0	0	1	14	0	15	36
Total	12	8	9	29	0	39	7	46	0	0	0	0	8	56	0	64	139
08:00 AM	3	1	2	6	0	9	1	10	0	0	0	0	0	10	0	10	26
08:15 AM	4	1	1	6	0	5	1	6	0	0	0	0	1	6	0	7	19
08:30 AM	4	1	4	9	0	11	4	15	0	0	0	0	1	10	0	11	35
08:45 AM	9	0	9	18	0	7	2	9	0	0	0	0	1	7	0	8	35
Total	20	3	16	39	0	32	8	40	0	0	0	0	3	33	0	36	115
Grand Total	32	11	25	68	0	71	15	86	0	0	0	0	11	89	0	100	254
Apprch %	47.1	16.2	36.8		0	82.6	17.4		0	0	0		11	89	0		
Total %	12.6	4.3	9.8	26.8	0	28	5.9	33.9	0	0	0	0	4.3	35	0	39.4	

127th St and Paulina St
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/22/2012

Groups Printed- MU

	Paulina St From North				127th St From East				Paulina St From South				127th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	2	0	1	3	0	5	0	5	0	0	0	0	1	3	0	4	12
07:15 AM	1	0	0	1	0	6	2	8	0	0	0	0	4	10	0	14	23
07:30 AM	6	1	1	8	0	5	5	10	0	0	0	0	4	5	0	9	27
07:45 AM	5	1	1	7	0	1	0	1	0	0	0	0	1	10	0	11	19
Total	14	2	3	19	0	17	7	24	0	0	0	0	10	28	0	38	81
08:00 AM	2	0	0	2	0	5	4	9	0	0	0	0	1	7	0	8	19
08:15 AM	0	0	2	2	0	3	6	9	0	0	0	0	0	4	0	4	15
08:30 AM	3	0	2	5	0	3	2	5	0	0	0	0	0	5	0	5	15
08:45 AM	3	4	2	9	0	8	7	15	0	0	0	0	0	7	0	7	31
Total	8	4	6	18	0	19	19	38	0	0	0	0	1	23	0	24	80
Grand Total	22	6	9	37	0	36	26	62	0	0	0	0	11	51	0	62	161
Apprch %	59.5	16.2	24.3		0	58.1	41.9		0	0	0		17.7	82.3	0		
Total %	13.7	3.7	5.6	23	0	22.4	16.1	38.5	0	0	0	0	6.8	31.7	0	38.5	

127th St and Paulina St
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 5/22/2012
Page No : 4

Groups Printed- Peds & Bikes

	Paulina St Crossing North Leg			127th St Crossing East Leg			Paulina St Crossing South Leg			127th St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
07:00 AM	0	1	1	0	0	0	0	2	2	0	0	0	3
07:15 AM	0	2	2	0	0	0	0	0	0	0	0	0	2
07:30 AM	0	3	3	0	0	0	0	2	2	0	4	4	9
07:45 AM	0	1	1	0	0	0	0	1	1	0	1	1	3
Total	0	7	7	0	0	0	0	5	5	0	5	5	17
08:00 AM	0	5	5	0	0	0	0	2	2	0	3	3	10
08:15 AM	0	1	1	0	1	1	0	0	0	0	0	0	2
08:30 AM	0	2	2	0	1	1	0	4	4	0	0	0	7
08:45 AM	0	4	4	0	0	0	0	5	5	0	0	0	9
Total	0	12	12	0	2	2	0	11	11	0	3	3	28
Grand Total	0	19	19	0	2	2	0	16	16	0	8	8	45
Apprch %	0	100		0	100		0	100		0	100		
Total %	0	42.2	42.2	0	4.4	4.4	0	35.6	35.6	0	17.8	17.8	

127th St and Paulina St
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/22/2012

Groups Printed- PC - SU - MU

	Paulina St From North				127th St From East				Paulina St From South				127th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	139	70	286	495	0	173	66	239	0	0	0	0	156	557	0	713	1447
04:15 PM	94	79	260	433	0	187	56	243	0	0	0	0	135	402	0	537	1213
04:30 PM	107	78	304	489	0	192	61	253	0	0	0	0	145	608	0	753	1495
04:45 PM	136	64	267	467	0	242	78	320	0	0	0	0	122	575	0	697	1484
Total	476	291	1117	1884	0	794	261	1055	0	0	0	0	558	2142	0	2700	5639
05:00 PM	128	113	295	536	7	187	87	281	0	0	0	0	132	539	0	671	1488
05:15 PM	123	100	333	556	0	226	77	303	0	0	0	0	102	502	0	604	1463
05:30 PM	108	101	321	530	0	163	72	235	0	0	0	0	135	465	0	600	1365
05:45 PM	118	89	201	408	0	253	60	313	0	0	0	0	61	448	0	509	1230
Total	477	403	1150	2030	7	829	296	1132	0	0	0	0	430	1954	0	2384	5546
Grand Total	953	694	2267	3914	7	1623	557	2187	0	0	0	0	988	4096	0	5084	11185
Apprch %	24.3	17.7	57.9		0.3	74.2	25.5		0	0	0		19.4	80.6	0		
Total %	8.5	6.2	20.3	35	0.1	14.5	5	19.6	0	0	0	0	8.8	36.6	0	45.5	
PC	918	682	2253	3853	7	1575	548	2130	0	0	0	0	969	4016	0	4985	10968
% PC	96.3	98.3	99.4	98.4	100	97	98.4	97.4	0	0	0	0	98.1	98	0	98.1	98.1
SU	25	8	6	39	0	33	5	38	0	0	0	0	8	32	0	40	117
% SU	2.6	1.2	0.3	1	0	2	0.9	1.7	0	0	0	0	0.8	0.8	0	0.8	1
MU	10	4	8	22	0	15	4	19	0	0	0	0	11	48	0	59	100
% MU	1	0.6	0.4	0.6	0	0.9	0.7	0.9	0	0	0	0	1.1	1.2	0	1.2	0.9

	Paulina St From North				127th St From East				Paulina St From South				127th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	107	78	304	489	0	192	61	253	0	0	0	0	**145**	**608**	0	**753**	**1495**
04:45 PM	**136**	64	267	467	0	**242**	78	**320**	0	0	0	0	122	575	0	697	1484
05:00 PM	128	**113**	295	536	**7**	187	**87**	281	0	0	0	0	132	539	0	671	1488
05:15 PM	123	100	**333**	**556**	0	226	77	303	0	0	0	0	102	502	0	604	1463
Total Volume	494	355	1199	2048	7	847	303	1157	0	0	0	0	501	2224	0	2725	5930
% App. Total	24.1	17.3	58.5		0.6	73.2	26.2		0	0	0		18.4	81.6	0		
PHF	.908	.785	.900	.921	.250	.875	.871	.904	.000	.000	.000	.000	.864	.914	.000	.905	.992

127th St and Paulina St
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/22/2012
Page No : 6

Groups Printed- SU

	Paulina St From North				127th St From East				Paulina St From South				127th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	10	3	1	14	0	7	2	9	0	0	0	0	0	5	0	5	28
04:15 PM	6	1	0	7	0	6	0	6	0	0	0	0	0	4	0	4	17
04:30 PM	3	1	2	6	0	3	0	3	0	0	0	0	0	3	0	3	12
04:45 PM	1	0	1	2	0	6	1	7	0	0	0	0	0	9	0	9	18
Total	20	5	4	29	0	22	3	25	0	0	0	0	0	21	0	21	75
05:00 PM	2	2	1	5	0	4	0	4	0	0	0	0	7	2	0	9	18
05:15 PM	0	1	0	1	0	3	2	5	0	0	0	0	1	4	0	5	11
05:30 PM	2	0	0	2	0	1	0	1	0	0	0	0	0	2	0	2	5
05:45 PM	1	0	1	2	0	3	0	3	0	0	0	0	0	3	0	3	8
Total	5	3	2	10	0	11	2	13	0	0	0	0	8	11	0	19	42
Grand Total	25	8	6	39	0	33	5	38	0	0	0	0	8	32	0	40	117
Apprch %	64.1	20.5	15.4		0	86.8	13.2		0	0	0		20	80	0		
Total %	21.4	6.8	5.1	33.3	0	28.2	4.3	32.5	0	0	0	0	6.8	27.4	0	34.2	

127th St and Paulina St
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/22/2012
Page No : 7

Groups Printed- MU

	Paulina St From North				127th St From East				Paulina St From South				127th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	4	4	3	11	0	1	1	2	0	0	0	0	6	10	0	16	29
04:15 PM	0	0	4	4	0	2	0	2	0	0	0	0	0	7	0	7	13
04:30 PM	2	0	1	3	0	2	0	2	0	0	0	0	2	7	0	9	14
04:45 PM	1	0	0	1	0	1	2	3	0	0	0	0	2	2	0	4	8
Total	7	4	8	19	0	6	3	9	0	0	0	0	10	26	0	36	64
05:00 PM	1	0	0	1	0	4	1	5	0	0	0	0	1	5	0	6	12
05:15 PM	0	0	0	0	0	3	0	3	0	0	0	0	0	8	0	8	11
05:30 PM	2	0	0	2	0	2	0	2	0	0	0	0	0	4	0	4	8
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	5	5
Total	3	0	0	3	0	9	1	10	0	0	0	0	1	22	0	23	36
Grand Total	10	4	8	22	0	15	4	19	0	0	0	0	11	48	0	59	100
Apprch %	45.5	18.2	36.4		0	78.9	21.1		0	0	0		18.6	81.4	0		
Total %	10	4	8	22	0	15	4	19	0	0	0	0	11	48	0	59	

127th St and Paulina St
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/22/2012
Page No : 8

Groups Printed- PC - SU - MU

	Paulina St From North				127th St From East				Paulina St From South				127th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	139	70	286	495	0	173	66	239	0	0	0	0	156	557	0	713	1447
04:15 PM	94	79	260	433	0	187	56	243	0	0	0	0	135	402	0	537	1213
04:30 PM	107	78	304	489	0	192	61	253	0	0	0	0	145	608	0	753	1495
04:45 PM	136	64	267	467	0	242	78	320	0	0	0	0	122	575	0	697	1484
Total	476	291	1117	1884	0	794	261	1055	0	0	0	0	558	2142	0	2700	5639
05:00 PM	128	113	295	536	0	187	87	274	0	0	0	0	132	539	0	671	1481
05:15 PM	123	100	333	556	0	226	77	303	0	0	0	0	102	502	0	604	1463
05:30 PM	108	101	321	530	0	163	72	235	0	0	0	0	135	465	0	600	1365
05:45 PM	118	89	201	408	0	253	60	313	0	0	0	0	61	448	0	509	1230
Total	477	403	1150	2030	0	829	296	1125	0	0	0	0	430	1954	0	2384	5539
Grand Total	953	694	2267	3914	0	1623	557	2180	0	0	0	0	988	4096	0	5084	11178
Apprch %	24.3	17.7	57.9		0	74.4	25.6		0	0	0		19.4	80.6	0		
Total %	8.5	6.2	20.3	35	0	14.5	5	19.5	0	0	0	0	8.8	36.6	0	45.5	
PC	918	682	2253	3853	0	1575	548	2123	0	0	0	0	969	4016	0	4985	10961
% PC	96.3	98.3	99.4	98.4	0	97	98.4	97.4	0	0	0	0	98.1	98	0	98.1	98.1
SU	25	8	6	39	0	33	5	38	0	0	0	0	8	32	0	40	117
% SU	2.6	1.2	0.3	1	0	2	0.9	1.7	0	0	0	0	0.8	0.8	0	0.8	1
MU	10	4	8	22	0	15	4	19	0	0	0	0	11	48	0	59	100
% MU	1	0.6	0.4	0.6	0	0.9	0.7	0.9	0	0	0	0	1.1	1.2	0	1.2	0.9

	Paulina St From North				127th St From East				Paulina St From South				127th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	107	78	304	489	0	192	61	253	0	0	0	0	**145**	**608**	0	**753**	**1495**
04:45 PM	**136**	64	267	467	0	**242**	78	**320**	0	0	0	0	122	575	0	697	1484
05:00 PM	128	**113**	295	536	0	187	**87**	274	0	0	0	0	132	539	0	671	1481
05:15 PM	123	100	**333**	**556**	0	226	77	303	0	0	0	0	102	502	0	604	1463
Total Volume	494	355	1199	2048	0	847	303	1150	0	0	0	0	501	2224	0	2725	5923
% App. Total	24.1	17.3	58.5		0	73.7	26.3		0	0	0		18.4	81.6	0		
PHF	.908	.785	.900	.921	.000	.875	.871	.898	.000	.000	.000	.000	.864	.914	.000	.905	.990

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127th St, Wallace St and Vermont Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : FINAL COMB
Site Code : 00000000
Start Date : 5/23/2012
Page No : 1

Groups Printed- PC - SU - MU

	Wallace St From North					127th St From East					Wallace St From South					Vermont Ave From Southwest					127th St From West						
Start Time	Right	Bear Right	Thru	Left	App. Total	Right	Thru	Bear Left	Left	App. Total	Right	Thru	Left	Hard Left	App. Total	Hard Right	Bear Right	Bear Left	Hard Left	App. Total	Hard Right	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	3	1	0	1	5	1	91	37	0	129	8	1	2	0	11	0	32	0	0	32	0	0	63	0	0	63	240
07:15 AM	0	0	0	0	0	0	114	36	0	150	10	1	4	0	15	0	50	1	0	51	0	0	100	0	0	100	316
07:30 AM	1	0	0	1	2	1	139	45	0	185	13	0	3	0	16	0	50	0	0	50	0	0	95	0	0	95	348
07:45 AM	1	1	0	2	4	6	138	37	0	181	14	2	1	2	19	0	43	0	0	43	0	0	94	0	1	95	342
Total	5	2	0	4	11	8	482	155	0	645	45	4	10	2	61	0	175	1	0	176	0	0	352	0	1	353	1246
08:00 AM	1	0	0	1	2	3	133	38	0	174	8	0	3	1	12	0	43	1	0	44	0	0	89	0	0	89	321
08:15 AM	1	1	0	5	7	3	95	26	0	124	6	1	5	0	12	0	37	0	0	37	0	0	125	0	2	127	307
08:30 AM	2	0	0	1	3	3	116	43	0	162	9	1	5	0	15	0	51	0	0	51	0	0	97	1	4	102	333
08:45 AM	3	0	0	3	6	1	102	28	0	131	8	0	4	1	13	0	38	0	0	38	0	0	68	0	4	72	260
Total	7	1	0	10	18	10	446	135	0	591	31	2	17	2	52	0	169	1	0	170	0	0	379	1	10	390	1221
Grand Total	12	3	0	14	29	18	928	290	0	1236	76	6	27	4	113	0	344	2	0	346	0	0	731	1	11	743	2467
Apprch %	41.4	10.3	0	48.3		1.5	75.1	23.5	0		67.3	5.3	23.9	3.5		0	99.4	0.6	0		0	0	98.4	0.1	1.5		
Total %	0.5	0.1	0	0.6	1.2	0.7	37.6	11.8	0	50.1	3.1	0.2	1.1	0.2	4.6	0	13.9	0.1	0	14	0	0	29.6	0	0.4	30.1	
PC	12	3	0	14	29	18	872	266	0	1156	73	6	26	4	109	0	316	2	0	318	0	0	674	1	11	686	2298
% PC	100	100	0	100	100	100	94	91.7	0	93.5	96.1	100	96.3	100	96.5	0	91.9	100	0	91.9	0	0	92.2	100	100	92.3	93.1
SU	0	0	0	0	0	0	27	21	0	48	3	0	1	0	4	0	22	0	0	22	0	0	28	0	0	28	102
% SU	0	0	0	0	0	0	2.9	7.2	0	3.9	3.9	0	3.7	0	3.5	0	6.4	0	0	6.4	0	0	3.8	0	0	3.8	4.1
MU	0	0	0	0	0	0	29	3	0	32	0	0	0	0	0	0	6	0	0	6	0	0	29	0	0	29	67
% MU	0	0	0	0	0	0	3.1	1	0	2.6	0	0	0	0	0	0	1.7	0	0	1.7	0	0	4	0	0	3.9	2.7

	Wallace St From North					127th St From East					Wallace St From South					Vermont Ave From Southwest					127th St From West						
Start Time	Right	Bear Right	Thru	Left	App. Total	Right	Thru	Bear Left	Left	App. Total	Right	Thru	Left	Hard Left	App. Total	Hard Right	Bear Right	Bear Left	Hard Left	App. Total	Hard Right	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																											
Peak Hour for Entire Intersection Begins at 07:15 AM																											
07:15 AM	0	0	0	0	0	0	114	36	0	150	10	1	**4**	0	15	0	**50**	**1**	0	**51**	0	0	**100**	0	0	**100**	316
07:30 AM	**1**	0	0	1	2	1	**139**	**45**	0	**185**	13	0	3	0	16	0	50	0	0	50	0	0	95	0	0	95	**348**
07:45 AM	1	**1**	0	**2**	**4**	**6**	138	37	0	181	**14**	**2**	1	**2**	**19**	0	43	0	0	43	0	0	94	0	**1**	95	342
08:00 AM	1	0	0	1	2	3	133	38	0	174	8	0	3	1	12	0	43	1	0	44	0	0	89	0	0	89	321
Total Volume	3	1	0	4	8	10	524	156	0	690	45	3	11	3	62	0	186	2	0	188	0	0	378	0	1	379	1327
% App. Total	37.5	12.5	0	50		1.4	75.9	22.6	0		72.6	4.8	17.7	4.8		0	98.9	1.1	0		0	0	99.7	0	0.3		
PHF	.750	.250	.000	.500	.500	.417	.942	.867	.000	.932	.804	.375	.688	.375	.816	.000	.930	.500	.000	.922	.000	.000	.945	.000	.250	.948	.953

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127th St, Wallce St and Vemont Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : FINAL COMB
Site Code : 00000000
Start Date : 5/23/2012
Page No : 2

Groups Printed- SU

	Wallace St From North					127th St From East					Wallace St From South					Vermont Ave From Southwest					127th St From West						
Start Time	Right	Bear Right	Thru	Left	App. Total	Right	Thru	Bear Left	Left	App. Total	Right	Thru	Left	Hard Left	App. Total	Hard Right	Bear Right	Bear Left	Hard Left	App. Total	Hard Right	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	2	2	0	4	0	0	0	0	0	0	6	0	0	6	0	0	5	0	0	5	15
07:15 AM	0	0	0	0	0	0	5	2	0	7	0	0	0	0	0	0	1	0	0	1	0	0	4	0	0	4	12
07:30 AM	0	0	0	0	0	0	4	3	0	7	0	0	0	0	0	0	6	0	0	6	0	0	4	0	0	4	17
07:45 AM	0	0	0	0	0	0	2	1	0	3	0	0	0	0	0	0	5	0	0	5	0	0	6	0	0	6	14
Total	0	0	0	0	0	0	13	8	0	21	0	0	0	0	0	0	18	0	0	18	0	0	19	0	0	19	58
08:00 AM	0	0	0	0	0	0	9	4	0	13	1	0	0	0	1	0	1	0	0	1	0	0	3	0	0	3	18
08:15 AM	0	0	0	0	0	0	1	1	0	2	1	0	1	0	2	0	2	0	0	2	0	0	2	0	0	2	8
08:30 AM	0	0	0	0	0	0	4	7	0	11	0	0	0	0	0	0	1	0	0	1	0	0	3	0	0	3	15
08:45 AM	0	0	0	0	0	0	0	1	0	1	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	1	3
Total	0	0	0	0	0	0	14	13	0	27	3	0	1	0	4	0	4	0	0	4	0	0	9	0	0	9	44
Grand Total	0	0	0	0	0	0	27	21	0	48	3	0	1	0	4	0	22	0	0	22	0	0	28	0	0	28	102
Apprch %	0	0	0	0		0	56.2	43.8	0		75	0	25	0		0	100	0	0		0	0	100	0	0		
Total %	0	0	0	0	0	0	26.5	20.6	0	47.1	2.9	0	1	0	3.9	0	21.6	0	0	21.6	0	0	27.5	0	0	27.5	

127th St, Wallce St and Vemont Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : FINAL COMB
Site Code : 00000000
Start Date : 5/23/2012
Page No : 3

Groups Printed- MU

	Wallace St From North					**127th St From East**					**Wallace St From South**					**Vermont Ave From Southwest**					**127th St From West**						
Start Time	Right	Bear Right	Thru	Left	App. Total	Right	Thru	Bear Left	Left	App. Total	Right	Thru	Left	Hard Left	App. Total	Hard Right	Bear Right	Bear Left	Hard Left	App. Total	Hard Right	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	3
07:15 AM	0	0	0	0	0	0	5	1	0	6	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	7	13
07:30 AM	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	5	12
07:45 AM	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	9
Total	0	0	0	0	0	0	19	1	0	20	0	0	0	0	0	0	1	0	0	1	0	0	16	0	0	16	37
08:00 AM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	0	0	7	0	0	7	11
08:15 AM	0	0	0	0	0	0	2	2	0	4	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	5
08:30 AM	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	1	0	0	1	0	0	3	0	0	3	8
08:45 AM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	0	0	2	0	0	2	6
Total	0	0	0	0	0	0	10	2	0	12	0	0	0	0	0	0	5	0	0	5	0	0	13	0	0	13	30
Grand Total	0	0	0	0	0	0	29	3	0	32	0	0	0	0	0	0	6	0	0	6	0	0	29	0	0	29	67
Apprch %	0	0	0	0		0	90.6	9.4	0		0	0	0	0		0	100	0	0		0	0	100	0	0		
Total %	0	0	0	0	0	0	43.3	4.5	0	47.8	0	0	0	0	0	0	9	0	0	9	0	0	43.3	0	0	43.3	

127th St, Wallce St and Vemont Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 5/23/2012
Page No : 4

Groups Printed- Peds & Bikes

	Wallace St Crossing North Leg			127th St Crossing East Leg			Wallace St Crossing South Leg			Vermont Ave Crossing Southwest Leg			127th St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
07:00 AM	0	2	2	0	0	0	0	2	2	0	0	0	0	0	0	4
07:15 AM	0	2	2	0	1	1	0	5	5	0	0	0	0	0	0	8
07:30 AM	0	2	2	0	0	0	1	3	4	0	0	0	0	0	0	6
07:45 AM	0	1	1	0	0	0	0	1	1	0	0	0	0	1	1	3
Total	0	7	7	0	1	1	1	11	12	0	0	0	0	1	1	21
08:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:15 AM	0	2	2	0	0	0	0	3	3	0	0	0	0	2	2	7
08:30 AM	0	5	5	0	4	4	0	6	6	0	0	0	0	4	4	19
08:45 AM	1	2	3	0	1	1	0	5	5	0	0	0	0	4	4	13
Total	1	10	11	0	5	5	0	14	14	0	0	0	0	10	10	40
Grand Total	1	17	18	0	6	6	1	25	26	0	0	0	0	11	11	61
Apprch %	5.6	94.4		0	100		3.8	96.2		0	0		0	100		
Total %	1.6	27.9	29.5	0	9.8	9.8	1.6	41	42.6	0	0	0	0	18	18	

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127th St, Wallace St and Vermont Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : FINAL COMB
Site Code : 00000000
Start Date : 5/23/2012
Page No : 5

Groups Printed- PC - SU - MU

	Wallace St From North					127th St From East					Wallace St From South					Vermont Ave From Southwest					127th St From West						
Start Time	Right	Bear Right	Thru	Left	App. Total	Right	Thru	Bear Left	Left	App. Total	Right	Thru	Left	Hard Left	App. Total	Hard Right	Bear Right	Bear Left	Hard Left	App. Total	Hard Right	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	1	0	0	3	4	7	145	48	0	200	4	2	2	0	8	0	62	0	0	62	0	0	138	1	0	139	413
04:15 PM	4	0	0	2	6	4	141	44	0	189	3	1	2	0	6	0	52	2	0	54	0	0	146	1	0	147	402
04:30 PM	3	1	0	0	4	1	130	50	0	181	8	1	3	2	14	0	60	1	1	62	0	0	140	2	0	142	403
04:45 PM	1	0	0	4	5	4	131	56	0	191	8	0	3	0	11	0	44	0	0	44	0	0	158	0	0	158	409
Total	9	1	0	9	19	16	547	198	0	761	23	4	10	2	39	0	218	3	1	222	0	0	582	4	0	586	1627
05:00 PM	1	1	0	2	4	0	119	47	0	166	10	1	1	1	13	0	61	0	0	61	0	0	163	1	0	164	408
05:15 PM	1	1	0	2	4	5	132	49	0	186	12	4	2	1	19	0	67	1	0	68	0	0	168	0	1	169	446
05:30 PM	2	0	0	2	4	7	115	49	0	171	9	1	3	1	14	0	51	1	0	52	0	0	175	0	2	177	418
05:45 PM	1	1	0	2	4	4	113	53	0	170	10	2	3	0	15	0	63	1	0	64	0	0	122	1	6	129	382
Total	5	3	0	8	16	16	479	198	0	693	41	8	9	3	61	0	242	3	0	245	0	0	628	2	9	639	1654
Grand Total	14	4	0	17	35	32	1026	396	0	1454	64	12	19	5	100	0	460	6	1	467	0	0	1210	6	9	1225	3281
Apprch %	40	11.4	0	48.6		2.2	70.6	27.2	0		64	12	19	5		0	98.5	1.3	0.2		0	0	98.8	0.5	0.7		
Total %	0.4	0.1	0	0.5	1.1	1	31.3	12.1	0	44.3	2	0.4	0.6	0.2	3	0	14	0.2	0	14.2	0	0	36.9	0.2	0.3	37.3	
PC	14	4	0	17	35	31	1003	382	0	1416	63	12	18	5	98	0	454	6	1	461	0	0	1187	5	7	1199	3209
% PC	100	100	0	100	100	96.9	97.8	96.5	0	97.4	98.4	100	94.7	100	98	0	98.7	100	100	98.7	0	0	98.1	83.3	77.8	97.9	97.8
SU	0	0	0	0	0	1	13	7	0	21	1	0	1	0	2	0	4	0	0	4	0	0	14	1	2	17	44
% SU	0	0	0	0	0	3.1	1.3	1.8	0	1.4	1.6	0	5.3	0	2	0	0.9	0	0	0.9	0	0	1.2	16.7	22.2	1.4	1.3
MU	0	0	0	0	0	0	10	7	0	17	0	0	0	0	0	0	2	0	0	2	0	0	9	0	0	9	28
% MU	0	0	0	0	0	0	1	1.8	0	1.2	0	0	0	0	0	0	0.4	0	0	0.4	0	0	0.7	0	0	0.7	0.9

	Wallace St From North					127th St From East					Wallace St From South					Vermont Ave From Southwest					127th St From West						
Start Time	Right	Bear Right	Thru	Left	App. Total	Right	Thru	Bear Left	Left	App. Total	Right	Thru	Left	Hard Left	App. Total	Hard Right	Bear Right	Bear Left	Hard Left	App. Total	Hard Right	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																											
Peak Hour for Entire Intersection Begins at 04:45 PM																											
04:45 PM	1	0	0	**4**	**5**	4	131	**56**	0	**191**	8	0	**3**	0	11	0	44	0	0	44	0	0	158	0	0	158	409
05:00 PM	1	**1**	0	2	4	0	119	47	0	166	10	1	1	**1**	13	0	61	0	0	61	0	0	163	**1**	0	164	408
05:15 PM	1	1	0	2	4	5	**132**	49	0	186	**12**	**4**	2	1	**19**	0	**67**	**1**	0	**68**	0	0	168	0	1	169	**446**
05:30 PM	**2**	0	0	2	4	**7**	115	49	0	171	9	1	3	1	14	0	51	1	0	52	0	0	**175**	0	**2**	**177**	418
Total Volume	5	2	0	10	17	16	497	201	0	714	39	6	9	3	57	0	223	2	0	225	0	0	664	1	3	668	1681
% App. Total	29.4	11.8	0	58.8		2.2	69.6	28.2	0		68.4	10.5	15.8	5.3		0	99.1	0.9	0		0	0	99.4	0.1	0.4		
PHF	.625	.500	.000	.625	.850	.571	.941	.897	.000	.935	.813	.375	.750	.750	.750	.000	.832	.500	.000	.827	.000	.000	.949	.250	.375	.944	.942

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127th St, Wallce St and Vemont Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : FINAL COMB
Site Code : 00000000
Start Date : 5/23/2012
Page No : 6

Groups Printed- SU

	Wallace St From North					**127th St From East**					**Wallace St From South**					**Vermont Ave From Southwest**					**127th St From West**						
Start Time	Right	Bear Right	Thru	Left	App. Total	Right	Thru	Bear Left	Left	App. Total	Right	Thru	Left	Hard Left	App. Total	Hard Right	Bear Right	Bear Left	Hard Left	App. Total	Hard Right	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	1	0	0	1	0	0	1	0	1	0	0	0	0	0	0	0	3	0	0	3	5
04:15 PM	0	0	0	0	0	0	7	2	0	9	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	11
04:30 PM	0	0	0	0	0	0	3	2	0	5	0	0	0	0	0	0	1	0	0	1	0	0	1	1	0	2	8
04:45 PM	0	0	0	0	0	0	1	0	0	1	1	0	0	0	1	0	2	0	0	2	0	0	2	0	0	2	6
Total	0	0	0	0	0	0	12	4	0	16	1	0	1	0	2	0	3	0	0	3	0	0	8	1	0	9	30
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2
05:15 PM	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	1	0	0	1	0	0	2	0	1	3	6
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
05:45 PM	0	0	0	0	0	1	1	1	0	3	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2	5
Total	0	0	0	0	0	1	1	3	0	5	0	0	0	0	0	0	1	0	0	1	0	0	6	0	2	8	14
Grand Total	0	0	0	0	0	1	13	7	0	21	1	0	1	0	2	0	4	0	0	4	0	0	14	1	2	17	44
Apprch %	0	0	0	0		4.8	61.9	33.3	0		50	0	50	0		0	100	0	0		0	0	82.4	5.9	11.8		
Total %	0	0	0	0	0	2.3	29.5	15.9	0	47.7	2.3	0	2.3	0	4.5	0	9.1	0	0	9.1	0	0	31.8	2.3	4.5	38.6	

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127th St, Wallce St and Vemont Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : FINAL COMB
Site Code : 00000000
Start Date : 5/23/2012
Page No : 7

Groups Printed- MU

	Wallace St From North					127th St From East					Wallace St From South					Vermont Ave From Southwest					127th St From West						
Start Time	Right	Bear Right	Thru	Left	App. Total	Right	Thru	Bear Left	Left	App. Total	Right	Thru	Left	Hard Left	App. Total	Hard Right	Bear Right	Bear Left	Hard Left	App. Total	Hard Right	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	0	1	0	0	1	0	0	2	0	0	2	5
04:15 PM	0	0	0	0	0	0	3	2	0	5	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	7
04:30 PM	0	0	0	0	0	0	1	2	0	3	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	5
04:45 PM	0	0	0	0	0	0	2	1	0	3	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	4
Total	0	0	0	0	0	0	7	6	0	13	0	0	0	0	0	0	2	0	0	2	0	0	6	0	0	6	21
05:00 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	3
05:15 PM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
05:30 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	3
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	3	1	0	4	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	7
Grand Total	0	0	0	0	0	0	10	7	0	17	0	0	0	0	0	0	2	0	0	2	0	0	9	0	0	9	28
Apprch %	0	0	0	0		0	58.8	41.2	0		0	0	0	0		0	100	0	0		0	0	100	0	0		
Total %	0	0	0	0	0	0	35.7	25	0	60.7	0	0	0	0	0	0	7.1	0	0	7.1	0	0	32.1	0	0	32.1	

127th St, Wallce St and Vemont Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 5/23/2012
Page No : 8

Groups Printed- Peds & Bikes

	Wallace St Crossing North Leg			127th St Crossing East Leg			Wallace St Crossing South Leg			Vermont Ave Crossing Southwest Leg			127th St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
04:00 PM	1	1	2	0	0	0	0	3	3	0	0	0	0	0	0	5
04:15 PM	0	2	2	0	0	0	1	1	2	0	0	0	0	0	0	4
04:30 PM	0	2	2	0	0	0	0	2	2	0	0	0	0	0	0	4
04:45 PM	0	2	2	0	0	0	0	1	1	0	0	0	0	0	0	3
Total	1	7	8	0	0	0	1	7	8	0	0	0	0	0	0	16
05:00 PM	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:15 PM	0	5	5	2	2	4	0	2	2	0	0	0	1	0	1	12
05:30 PM	0	0	0	0	0	0	0	2	2	0	0	0	0	2	2	4
05:45 PM	0	1	1	0	0	0	0	0	0	0	0	0	1	5	6	7
Total	0	7	7	2	2	4	0	4	4	0	0	0	2	7	9	24
Grand Total	1	14	15	2	2	4	1	11	12	0	0	0	2	7	9	40
Apprch %	6.7	93.3		50	50		8.3	91.7		0	0		22.2	77.8		
Total %	2.5	35	37.5	5	5	10	2.5	27.5	30	0	0	0	5	17.5	22.5	

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130th St and Ellis Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/23/2012
Page No : 1

Groups Printed- PC - SU - MU

	Water Treatment Plant Entrance From North				**130th St From East**				**Ellis Ave From South**				**130th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	133	41	174	12	0	8	20	8	81	0	89	283
07:15 AM	0	0	0	0	0	140	44	184	24	0	8	32	8	114	0	122	338
07:30 AM	0	0	0	0	0	147	58	205	31	0	17	48	22	127	0	149	402
07:45 AM	0	0	0	0	7	146	89	242	59	0	18	77	20	118	0	138	457
Total	0	0	0	0	7	566	232	805	126	0	51	177	58	440	0	498	1480
08:00 AM	0	0	0	0	0	150	52	202	31	0	14	45	19	107	0	126	373
08:15 AM	0	0	1	1	1	109	28	138	23	0	7	30	8	102	1	111	280
08:30 AM	0	0	1	1	0	111	34	145	27	0	8	35	6	125	0	131	312
08:45 AM	0	0	0	0	0	138	46	184	28	0	10	38	9	113	1	123	345
Total	0	0	2	2	1	508	160	669	109	0	39	148	42	447	2	491	1310
Grand Total	0	0	2	2	8	1074	392	1474	235	0	90	325	100	887	2	989	2790
Apprch %	0	0	100		0.5	72.9	26.6		72.3	0	27.7		10.1	89.7	0.2		
Total %	0	0	0.1	0.1	0.3	38.5	14.1	52.8	8.4	0	3.2	11.6	3.6	31.8	0.1	35.4	
PC	0	0	1	1	7	980	375	1362	224	0	73	297	96	807	1	904	2564
% PC	0	0	50	50	87.5	91.2	95.7	92.4	95.3	0	81.1	91.4	96	91	50	91.4	91.9
SU	0	0	0	0	0	50	15	65	10	0	17	27	4	43	1	48	140
% SU	0	0	0	0	0	4.7	3.8	4.4	4.3	0	18.9	8.3	4	4.8	50	4.9	5
MU	0	0	1	1	1	44	2	47	1	0	0	1	0	37	0	37	86
% MU	0	0	50	50	12.5	4.1	0.5	3.2	0.4	0	0	0.3	0	4.2	0	3.7	3.1

	Water Treatment Plant Entrance From North				**130th St From East**				**Ellis Ave From South**				**130th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	0	0	0	140	44	184	24	0	8	32	8	114	0	122	338
07:30 AM	0	0	0	0	0	147	58	205	31	0	17	48	**22**	**127**	0	**149**	402
07:45 AM	0	0	0	0	**7**	146	**89**	**242**	**59**	0	**18**	**77**	20	118	0	138	**457**
08:00 AM	0	0	0	0	0	**150**	52	202	31	0	14	45	19	107	0	126	373
Total Volume	0	0	0	0	7	583	243	833	145	0	57	202	69	466	0	535	1570
% App. Total	0	0	0		0.8	70	29.2		71.8	0	28.2		12.9	87.1	0		
PHF	.000	.000	.000	.000	.250	.972	.683	.861	.614	.000	.792	.656	.784	.917	.000	.898	.859

130th St and Ellis Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/23/2012
Page No : 2

Groups Printed- SU

	Water Treatment Plant Entrance From North				130th St From East				Ellis Ave From South				130th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	5	2	7	0	0	4	4	1	6	0	7	18
07:15 AM	0	0	0	0	0	6	3	9	1	0	3	4	0	10	0	10	23
07:30 AM	0	0	0	0	0	8	4	12	3	0	5	8	3	4	0	7	27
07:45 AM	0	0	0	0	0	5	1	6	3	0	2	5	0	7	0	7	18
Total	0	0	0	0	0	24	10	34	7	0	14	21	4	27	0	31	86
08:00 AM	0	0	0	0	0	9	3	12	0	0	3	3	0	6	0	6	21
08:15 AM	0	0	0	0	0	3	0	3	2	0	0	2	0	3	0	3	8
08:30 AM	0	0	0	0	0	8	0	8	0	0	0	0	0	5	0	5	13
08:45 AM	0	0	0	0	0	6	2	8	1	0	0	1	0	2	1	3	12
Total	0	0	0	0	0	26	5	31	3	0	3	6	0	16	1	17	54
Grand Total	0	0	0	0	0	50	15	65	10	0	17	27	4	43	1	48	140
Apprch %	0	0	0		0	76.9	23.1		37	0	63		8.3	89.6	2.1		
Total %	0	0	0	0	0	35.7	10.7	46.4	7.1	0	12.1	19.3	2.9	30.7	0.7	34.3	

130th St and Ellis Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/23/2012
Page No : 3

Groups Printed- MU

	Water Treatment Plant Entrance From North				**130th St From East**				**Ellis Ave From South**				**130th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	4	1	5	0	0	0	0	0	3	0	3	8
07:15 AM	0	0	0	0	0	8	0	8	0	0	0	0	0	1	0	1	9
07:30 AM	0	0	0	0	0	5	0	5	0	0	0	0	0	8	0	8	13
07:45 AM	0	0	0	0	0	5	0	5	0	0	0	0	0	3	0	3	8
Total	0	0	0	0	0	22	1	23	0	0	0	0	0	15	0	15	38
08:00 AM	0	0	0	0	0	6	0	6	0	0	0	0	0	10	0	10	16
08:15 AM	0	0	1	1	1	6	0	7	0	0	0	0	0	6	0	6	14
08:30 AM	0	0	0	0	0	7	1	8	0	0	0	0	0	3	0	3	11
08:45 AM	0	0	0	0	0	3	0	3	1	0	0	1	0	3	0	3	7
Total	0	0	1	1	1	22	1	24	1	0	0	1	0	22	0	22	48
Grand Total	0	0	1	1	1	44	2	47	1	0	0	1	0	37	0	37	86
Apprch %	0	0	100		2.1	93.6	4.3		100	0	0		0	100	0		
Total %	0	0	1.2	1.2	1.2	51.2	2.3	54.7	1.2	0	0	1.2	0	43	0	43	

130th St and Ellis Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/23/2012
Page No : 4

Groups Printed- PC - SU - MU

	Water Treatment Plant Entrance From North				**130th St From East**				**Ellis Ave From South**				**130th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	134	24	158	37	0	14	51	11	223	0	234	443
04:15 PM	0	0	0	0	1	151	27	179	33	0	13	46	12	167	0	179	404
04:30 PM	0	0	0	0	0	160	26	186	33	0	8	41	5	218	0	223	450
04:45 PM	0	0	1	1	1	144	18	163	36	0	8	44	10	176	0	186	394
Total	0	0	1	1	2	589	95	686	139	0	43	182	38	784	0	822	1691
05:00 PM	0	0	0	0	0	164	25	189	33	0	7	40	9	192	1	202	431
05:15 PM	0	0	0	0	1	132	18	151	23	0	13	36	10	209	0	219	406
05:30 PM	0	0	0	0	0	141	26	167	32	0	20	52	6	218	0	224	443
05:45 PM	0	0	0	0	0	150	25	175	33	0	8	41	7	204	0	211	427
Total	0	0	0	0	1	587	94	682	121	0	48	169	32	823	1	856	1707
Grand Total	0	0	1	1	3	1176	189	1368	260	0	91	351	70	1607	1	1678	3398
Apprch %	0	0	100		0.2	86	13.8		74.1	0	25.9		4.2	95.8	0.1		
Total %	0	0	0	0	0.1	34.6	5.6	40.3	7.7	0	2.7	10.3	2.1	47.3	0	49.4	
PC	0	0	1	1	1	1135	184	1320	256	0	90	346	69	1571	1	1641	3308
% PC	0	0	100	100	33.3	96.5	97.4	96.5	98.5	0	98.9	98.6	98.6	97.8	100	97.8	97.4
SU	0	0	0	0	1	21	4	26	4	0	1	5	1	25	0	26	57
% SU	0	0	0	0	33.3	1.8	2.1	1.9	1.5	0	1.1	1.4	1.4	1.6	0	1.5	1.7
MU	0	0	0	0	1	20	1	22	0	0	0	0	0	11	0	11	33
% MU	0	0	0	0	33.3	1.7	0.5	1.6	0	0	0	0	0	0.7	0	0.7	1

	Water Treatment Plant Entrance From North				**130th St From East**				**Ellis Ave From South**				**130th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	0	0	0	0	**164**	25	**189**	**33**	0	7	40	9	192	**1**	202	431
05:15 PM	0	0	0	0	**1**	132	18	151	23	0	13	36	**10**	209	0	219	406
05:30 PM	0	0	0	0	0	141	**26**	167	32	0	**20**	**52**	6	**218**	0	**224**	**443**
05:45 PM	0	0	0	0	0	150	25	175	33	0	8	41	7	204	0	211	427
Total Volume	0	0	0	0	1	587	94	682	121	0	48	169	32	823	1	856	1707
% App. Total	0	0	0		0.1	86.1	13.8		71.6	0	28.4		3.7	96.1	0.1		
PHF	.000	.000	.000	.000	.250	.895	.904	.902	.917	.000	.600	.813	.800	.944	.250	.955	.963

130th St and Ellis Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/23/2012
Page No : 5

Groups Printed- SU

	Water Treatment Plant Entrance From North				**130th St From East**				**Ellis Ave From South**				**130th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	4	1	5	0	0	1	1	0	3	0	3	9
04:15 PM	0	0	0	0	0	2	0	2	1	0	0	1	0	2	0	2	5
04:30 PM	0	0	0	0	0	3	0	3	1	0	0	1	0	2	0	2	6
04:45 PM	0	0	0	0	1	3	0	4	0	0	0	0	1	3	0	4	8
Total	0	0	0	0	1	12	1	14	2	0	1	3	1	10	0	11	28
05:00 PM	0	0	0	0	0	2	2	4	2	0	0	2	0	4	0	4	10
05:15 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	4	0	4	6
05:30 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	5	0	5	7
05:45 PM	0	0	0	0	0	3	1	4	0	0	0	0	0	2	0	2	6
Total	0	0	0	0	0	9	3	12	2	0	0	2	0	15	0	15	29
Grand Total	0	0	0	0	1	21	4	26	4	0	1	5	1	25	0	26	57
Apprch %	0	0	0		3.8	80.8	15.4		80	0	20		3.8	96.2	0		
Total %	0	0	0	0	1.8	36.8	7	45.6	7	0	1.8	8.8	1.8	43.9	0	45.6	

130th St and Ellis Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/23/2012
Page No : 6

Groups Printed- MU

	Water Treatment Plant Entrance From North				130th St From East				Ellis Ave From South				130th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	5	0	5	0	0	0	0	0	2	0	2	7
04:15 PM	0	0	0	0	1	3	0	4	0	0	0	0	0	0	0	0	4
04:30 PM	0	0	0	0	0	4	0	4	0	0	0	0	0	1	0	1	5
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	1	12	0	13	0	0	0	0	0	3	0	3	16
05:00 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	1	3
05:15 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	3	0	3	5
05:30 PM	0	0	0	0	0	1	1	2	0	0	0	0	0	2	0	2	4
05:45 PM	0	0	0	0	0	3	0	3	0	0	0	0	0	2	0	2	5
Total	0	0	0	0	0	8	1	9	0	0	0	0	0	8	0	8	17
Grand Total	0	0	0	0	1	20	1	22	0	0	0	0	0	11	0	11	33
Apprch %	0	0	0		4.5	90.9	4.5		0	0	0		0	100	0		
Total %	0	0	0	0	3	60.6	3	66.7	0	0	0	0	0	33.3	0	33.3	

Regina Webster & Associates, Inc.
8619 West Bryn Mawr Avenue, Suite 602, Chicago, Illinois 60631
773-283-2600 Fax: 773-283-2602
www.RWAengineers.com

130th St and Indiana Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/3/2012
Page No : 1

Groups Printed- PC - SU - MU

	Indiana Ave From North				**130th St From East**				**Indiana Ave From South**				**130th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	88	12	100	16	0	49	65	23	96	0	119	284
07:15 AM	0	0	0	0	0	101	18	119	11	0	58	69	20	104	0	124	312
07:30 AM	0	0	0	0	0	99	22	121	16	0	58	74	21	136	0	157	352
07:45 AM	0	0	0	0	0	138	26	164	20	0	120	140	22	100	0	122	426
Total	0	0	0	0	0	426	78	504	63	0	285	348	86	436	0	522	1374
08:00 AM	0	0	0	0	0	106	22	128	12	0	83	95	49	95	0	144	367
08:15 AM	0	0	0	0	0	129	22	151	16	0	65	81	35	89	0	124	356
08:30 AM	0	0	0	0	0	131	26	157	30	0	26	56	22	95	0	117	330
08:45 AM	0	0	0	0	0	109	33	142	27	0	63	90	40	92	0	132	364
Total	0	0	0	0	0	475	103	578	85	0	237	322	146	371	0	517	1417
Grand Total	0	0	0	0	0	901	181	1082	148	0	522	670	232	807	0	1039	2791
Apprch %	0	0	0		0	83.3	16.7		22.1	0	77.9		22.3	77.7	0		
Total %	0	0	0	0	0	32.3	6.5	38.8	5.3	0	18.7	24	8.3	28.9	0	37.2	
PC	0	0	0	0	0	827	163	990	139	0	505	644	216	723	0	939	2573
% PC	0	0	0	0	0	91.8	90.1	91.5	93.9	0	96.7	96.1	93.1	89.6	0	90.4	92.2
SU	0	0	0	0	0	48	15	63	5	0	14	19	15	55	0	70	152
% SU	0	0	0	0	0	5.3	8.3	5.8	3.4	0	2.7	2.8	6.5	6.8	0	6.7	5.4
MU	0	0	0	0	0	26	3	29	4	0	3	7	1	29	0	30	66
% MU	0	0	0	0	0	2.9	1.7	2.7	2.7	0	0.6	1	0.4	3.6	0	2.9	2.4

	Indiana Ave From North				**130th St From East**				**Indiana Ave From South**				**130th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	0	0	0	99	22	121	16	0	58	74	21	**136**	0	**157**	352
07:45 AM	0	0	0	0	0	**138**	**26**	**164**	**20**	0	**120**	**140**	22	100	0	122	**426**
08:00 AM	0	0	0	0	0	106	22	128	12	0	83	95	**49**	95	0	144	367
08:15 AM	0	0	0	0	0	129	22	151	16	0	65	81	35	89	0	124	356
Total Volume	0	0	0	0	0	472	92	564	64	0	326	390	127	420	0	547	1501
% App. Total	0	0	0		0	83.7	16.3		16.4	0	83.6		23.2	76.8	0		
PHF	.000	.000	.000	.000	.000	.855	.885	.860	.800	.000	.679	.696	.648	.772	.000	.871	.881

130th St and Indiana Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/3/2012
Page No : 2

Groups Printed- SU

	Indiana Ave From North				**130th St From East**				**Indiana Ave From South**				**130th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	3	1	4	1	0	2	3	3	5	0	8	15
07:15 AM	0	0	0	0	0	9	5	14	0	0	3	3	1	11	0	12	29
07:30 AM	0	0	0	0	0	8	1	9	0	0	0	0	2	5	0	7	16
07:45 AM	0	0	0	0	0	6	1	7	0	0	2	2	0	10	0	10	19
Total	0	0	0	0	0	26	8	34	1	0	7	8	6	31	0	37	79
08:00 AM	0	0	0	0	0	3	1	4	0	0	1	1	5	7	0	12	17
08:15 AM	0	0	0	0	0	7	0	7	1	0	3	4	1	9	0	10	21
08:30 AM	0	0	0	0	0	6	3	9	1	0	1	2	2	4	0	6	17
08:45 AM	0	0	0	0	0	6	3	9	2	0	2	4	1	4	0	5	18
Total	0	0	0	0	0	22	7	29	4	0	7	11	9	24	0	33	73
Grand Total	0	0	0	0	0	48	15	63	5	0	14	19	15	55	0	70	152
Apprch %	0	0	0		0	76.2	23.8		26.3	0	73.7		21.4	78.6	0		
Total %	0	0	0	0	0	31.6	9.9	41.4	3.3	0	9.2	12.5	9.9	36.2	0	46.1	

130th St and Indiana Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/3/2012
Page No : 3

Groups Printed- MU

	Indiana Ave From North				**130th St From East**				**Indiana Ave From South**				**130th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	4	0	4	0	0	0	0	0	3	0	3	7
07:15 AM	0	0	0	0	0	5	0	5	1	0	0	1	0	3	0	3	9
07:30 AM	0	0	0	0	0	3	0	3	0	0	1	1	0	1	0	1	5
07:45 AM	0	0	0	0	0	4	0	4	0	0	0	0	0	7	0	7	11
Total	0	0	0	0	0	16	0	16	1	0	1	2	0	14	0	14	32
08:00 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	6	0	6	8
08:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	1	0	0	1	2
08:30 AM	0	0	0	0	0	3	0	3	1	0	2	3	0	5	0	5	11
08:45 AM	0	0	0	0	0	4	3	7	2	0	0	2	0	4	0	4	13
Total	0	0	0	0	0	10	3	13	3	0	2	5	1	15	0	16	34
Grand Total	0	0	0	0	0	26	3	29	4	0	3	7	1	29	0	30	66
Apprch %	0	0	0		0	89.7	10.3		57.1	0	42.9		3.3	96.7	0		
Total %	0	0	0	0	0	39.4	4.5	43.9	6.1	0	4.5	10.6	1.5	43.9	0	45.5	

130th St and Indiana Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 5/3/2012

Groups Printed- Peds & Bikes

	Indiana Ave Crossing North Leg			**130th St Crossing East Leg**			**Indiana Ave Crossing South Leg**			**130th St Crossing West Leg**			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	4	4	0	2	2	0	0	0	6
Total	0	0	0	0	4	4	0	2	2	0	0	0	6
08:00 AM	0	0	0	0	3	3	0	2	2	0	0	0	5
08:15 AM	0	0	0	0	1	1	0	0	0	0	0	0	1
08:30 AM	0	0	0	0	0	0	0	1	1	0	1	1	2
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	4	4	0	3	3	0	1	1	8
Grand Total	0	0	0	0	8	8	0	5	5	0	1	1	14
Apprch %	0	0		0	100		0	100		0	100		
Total %	0	0	0	0	57.1	57.1	0	35.7	35.7	0	7.1	7.1	

130th St and Indiana Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/3/2012
Page No : 5

Groups Printed- PC - SU - MU

	Indiana Ave From North				**130th St From East**				**Indiana Ave From South**				**130th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	126	34	160	48	0	26	74	58	149	0	207	441
04:15 PM	0	0	0	0	0	126	28	154	20	0	49	69	53	150	0	203	426
04:30 PM	0	0	0	0	0	125	23	148	10	0	44	54	30	146	0	176	378
04:45 PM	0	0	0	0	0	147	21	168	22	0	51	73	48	163	0	211	452
Total	0	0	0	0	0	524	106	630	100	0	170	270	189	608	0	797	1697
05:00 PM	0	0	0	0	0	149	22	171	10	0	38	48	54	145	0	199	418
05:15 PM	0	0	0	0	0	129	26	155	15	0	52	67	63	152	0	215	437
05:30 PM	0	0	0	0	0	132	29	161	11	0	31	42	52	149	0	201	404
05:45 PM	0	0	0	0	0	94	27	121	9	0	37	46	49	116	0	165	332
Total	0	0	0	0	0	504	104	608	45	0	158	203	218	562	0	780	1591
Grand Total	0	0	0	0	0	1028	210	1238	145	0	328	473	407	1170	0	1577	3288
Apprch %	0	0	0		0	83	17		30.7	0	69.3		25.8	74.2	0		
Total %	0	0	0	0	0	31.3	6.4	37.7	4.4	0	10	14.4	12.4	35.6	0	48	
PC	0	0	0	0	0	981	206	1187	143	0	312	455	397	1140	0	1537	3179
% PC	0	0	0	0	0	95.4	98.1	95.9	98.6	0	95.1	96.2	97.5	97.4	0	97.5	96.7
SU	0	0	0	0	0	36	2	38	2	0	16	18	10	21	0	31	87
% SU	0	0	0	0	0	3.5	1	3.1	1.4	0	4.9	3.8	2.5	1.8	0	2	2.6
MU	0	0	0	0	0	11	2	13	0	0	0	0	0	9	0	9	22
% MU	0	0	0	0	0	1.1	1	1.1	0	0	0	0	0	0.8	0	0.6	0.7

	Indiana Ave From North				**130th St From East**				**Indiana Ave From South**				**130th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	0	0	0	147	21	168	**22**	0	51	**73**	48	**163**	0	211	**452**
05:00 PM	0	0	0	0	0	**149**	22	**171**	10	0	38	48	54	145	0	199	418
05:15 PM	0	0	0	0	0	129	26	155	15	0	**52**	67	**63**	152	0	**215**	437
05:30 PM	0	0	0	0	0	132	**29**	161	11	0	31	42	52	149	0	201	404
Total Volume	0	0	0	0	0	557	98	655	58	0	172	230	217	609	0	826	1711
% App. Total	0	0	0		0	85	15		25.2	0	74.8		26.3	73.7	0		
PHF	.000	.000	.000	.000	.000	.935	.845	.958	.659	.000	.827	.788	.861	.934	.000	.960	.946

130th St and Indiana Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/3/2012
Page No : 6

Groups Printed- SU

	Indiana Ave From North				**130th St From East**				**Indiana Ave From South**				**130th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	6	0	6	0	0	1	1	1	2	0	3	10
04:15 PM	0	0	0	0	0	5	1	6	2	0	2	4	2	3	0	5	15
04:30 PM	0	0	0	0	0	4	0	4	0	0	1	1	3	3	0	6	11
04:45 PM	0	0	0	0	0	7	0	7	0	0	1	1	0	4	0	4	12
Total	0	0	0	0	0	22	1	23	2	0	5	7	6	12	0	18	48
05:00 PM	0	0	0	0	0	4	0	4	0	0	1	1	2	0	0	2	7
05:15 PM	0	0	0	0	0	3	0	3	0	0	5	5	0	3	0	3	11
05:30 PM	0	0	0	0	0	2	1	3	0	0	3	3	1	3	0	4	10
05:45 PM	0	0	0	0	0	5	0	5	0	0	2	2	1	3	0	4	11
Total	0	0	0	0	0	14	1	15	0	0	11	11	4	9	0	13	39
Grand Total	0	0	0	0	0	36	2	38	2	0	16	18	10	21	0	31	87
Apprch %	0	0	0		0	94.7	5.3		11.1	0	88.9		32.3	67.7	0		
Total %	0	0	0	0	0	41.4	2.3	43.7	2.3	0	18.4	20.7	11.5	24.1	0	35.6	

130th St and Indiana Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/3/2012
Page No : 7

Groups Printed- MU

	Indiana Ave From North				**130th St From East**				**Indiana Ave From South**				**130th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0	2	3
04:15 PM	0	0	0	0	0	1	1	2	0	0	0	0	0	1	0	1	3
04:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
04:45 PM	0	0	0	0	0	3	0	3	0	0	0	0	0	2	0	2	5
Total	0	0	0	0	0	6	1	7	0	0	0	0	0	6	0	6	13
05:00 PM	0	0	0	0	0	1	1	2	0	0	0	0	0	1	0	1	3
05:15 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	1	3
05:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
05:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
Total	0	0	0	0	0	5	1	6	0	0	0	0	0	3	0	3	9
Grand Total	0	0	0	0	0	11	2	13	0	0	0	0	0	9	0	9	22
Apprch %	0	0	0		0	84.6	15.4		0	0	0		0	100	0		
Total %	0	0	0	0	0	50	9.1	59.1	0	0	0	0	0	40.9	0	40.9	

130th St and Indiana Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 5/3/2012
Page No : 8

Groups Printed- Peds & Bikes

	Indiana Ave Crossing North Leg			**130th St Crossing East Leg**			**Indiana Ave Crossing South Leg**			**130th St Crossing West Leg**			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	3	3	0	0	0	0	0	0	3
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	3	3	0	0	0	0	0	0	3
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	1	1	0	0	0	0	0	0	1
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	1	1	0	0	0	0	0	0	1
Grand Total	0	0	0	0	4	4	0	0	0	0	0	0	4
Apprch %	0	0		0	100		0	0		0	0		
Total %	0	0	0	0	100	100	0	0	0	0	0	0	

Regina Webster & Associates, Inc.

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95th St & Michigan Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM no ped
Site Code : 00000000
Start Date : 4/26/2012
Page No : 1

Groups Printed- PC - SU - MU

	Michigan Ave From North				**95th St From East**				**Michigan Ave From South**				**95th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	2	3	5	0	112	12	124	20	0	31	51	37	131	0	168	348
07:15 AM	1	1	1	3	0	164	24	188	19	0	33	52	66	154	0	220	463
07:30 AM	1	3	1	5	0	137	18	155	36	0	41	77	73	212	0	285	522
07:45 AM	0	5	1	6	0	145	12	157	28	0	26	54	47	179	0	226	443
Total	2	11	6	19	0	558	66	624	103	0	131	234	223	676	0	899	1776
08:00 AM	1	0	0	1	0	140	17	157	23	0	21	44	33	207	0	240	442
08:15 AM	0	2	1	3	0	153	7	160	19	0	23	42	44	196	0	240	445
08:30 AM	0	1	0	1	0	150	10	160	18	0	19	37	33	219	0	252	450
08:45 AM	1	0	1	2	0	135	13	148	16	0	16	32	32	213	0	245	427
Total	2	3	2	7	0	578	47	625	76	0	79	155	142	835	0	977	1764
Grand Total	4	14	8	26	0	1136	113	1249	179	0	210	389	365	1511	0	1876	3540
Apprch %	15.4	53.8	30.8		0	91	9		46	0	54		19.5	80.5	0		
Total %	0.1	0.4	0.2	0.7	0	32.1	3.2	35.3	5.1	0	5.9	11	10.3	42.7	0	53	
PC	4	14	7	25	0	1034	111	1145	174	0	158	332	310	1401	0	1711	3213
% PC	100	100	87.5	96.2	0	91	98.2	91.7	97.2	0	75.2	85.3	84.9	92.7	0	91.2	90.8
SU	0	0	1	1	0	81	2	83	5	0	52	57	55	97	0	152	293
% SU	0	0	12.5	3.8	0	7.1	1.8	6.6	2.8	0	24.8	14.7	15.1	6.4	0	8.1	8.3
MU	0	0	0	0	0	21	0	21	0	0	0	0	0	13	0	13	34
% MU	0	0	0	0	0	1.8	0	1.7	0	0	0	0	0	0.9	0	0.7	1

	Michigan Ave From North				**95th St From East**				**Michigan Ave From South**				**95th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	**1**	1	**1**	3	0	**164**	**24**	**188**	19	0	33	52	66	154	0	220	463
07:30 AM	1	3	1	5	0	137	18	155	**36**	0	**41**	**77**	**73**	**212**	0	**285**	**522**
07:45 AM	0	**5**	1	**6**	0	145	12	157	28	0	26	54	47	179	0	226	443
08:00 AM	1	0	0	1	0	140	17	157	23	0	21	44	33	207	0	240	442
Total Volume	3	9	3	15	0	586	71	657	106	0	121	227	219	752	0	971	1870
% App. Total	20	60	20		0	89.2	10.8		46.7	0	53.3		22.6	77.4	0		
PHF	.750	.450	.750	.625	.000	.893	.740	.874	.736	.000	.738	.737	.750	.887	.000	.852	.896

95th St & Michigan Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM no ped
Site Code : 00000000
Start Date : 4/26/2012
Page No : 2

Groups Printed- SU

	Michigan Ave From North				95th St From East				Michigan Ave From South				95th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	6	2	8	0	0	6	6	9	20	0	29	43
07:15 AM	0	0	1	1	0	11	0	11	1	0	8	9	7	13	0	20	41
07:30 AM	0	0	0	0	0	13	0	13	1	0	9	10	6	11	0	17	40
07:45 AM	0	0	0	0	0	18	0	18	0	0	5	5	6	16	0	22	45
Total	0	0	1	1	0	48	2	50	2	0	28	30	28	60	0	88	169
08:00 AM	0	0	0	0	0	8	0	8	0	0	6	6	8	9	0	17	31
08:15 AM	0	0	0	0	0	12	0	12	1	0	6	7	8	8	0	16	35
08:30 AM	0	0	0	0	0	8	0	8	2	0	7	9	5	12	0	17	34
08:45 AM	0	0	0	0	0	5	0	5	0	0	5	5	6	8	0	14	24
Total	0	0	0	0	0	33	0	33	3	0	24	27	27	37	0	64	124
Grand Total	0	0	1	1	0	81	2	83	5	0	52	57	55	97	0	152	293
Apprch %	0	0	100		0	97.6	2.4		8.8	0	91.2		36.2	63.8	0		
Total %	0	0	0.3	0.3	0	27.6	0.7	28.3	1.7	0	17.7	19.5	18.8	33.1	0	51.9	

95th St & Michigan Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM no ped
Site Code : 00000000
Start Date : 4/26/2012
Page No : 3

Groups Printed- MU

	Michigan Ave From North				95th St From East				Michigan Ave From South				95th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	3	0	3	0	0	0	0	0	1	0	1	4
07:15 AM	0	0	0	0	0	4	0	4	0	0	0	0	0	0	0	0	4
07:30 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	2	0	2	4
07:45 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	1	3
Total	0	0	0	0	0	11	0	11	0	0	0	0	0	4	0	4	15
08:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	4	0	4	5
08:15 AM	0	0	0	0	0	4	0	4	0	0	0	0	0	0	0	0	4
08:30 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	3	0	3	5
08:45 AM	0	0	0	0	0	3	0	3	0	0	0	0	0	2	0	2	5
Total	0	0	0	0	0	10	0	10	0	0	0	0	0	9	0	9	19
Grand Total	0	0	0	0	0	21	0	21	0	0	0	0	0	13	0	13	34
Apprch %	0	0	0		0	100	0		0	0	0		0	100	0		
Total %	0	0	0	0	0	61.8	0	61.8	0	0	0	0	0	38.2	0	38.2	

95th & Michigan
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM peds
Site Code : 00000000
Start Date : 4/26/2012
Page No : 4

Groups Printed- Bikes & Peds

	Michigan Ave Crossing North Leg			**95th St Crossing East Leg**			**Michigan Ave Crossing South Leg**			**95th St Crossing West Leg**			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
07:00 AM	0	14	14	0	1	1	1	5	6	0	0	0	21
07:15 AM	0	17	17	0	5	5	0	4	4	0	0	0	26
07:30 AM	0	21	21	0	2	2	0	0	0	0	0	0	23
07:45 AM	0	8	8	0	5	5	0	2	2	0	0	0	15
Total	0	60	60	0	13	13	1	11	12	0	0	0	85
08:00 AM	0	12	12	0	3	3	0	13	13	0	0	0	28
08:15 AM	0	8	8	0	2	2	0	0	0	0	0	0	10
08:30 AM	0	11	11	0	7	7	0	1	1	0	0	0	19
08:45 AM	0	9	9	0	3	3	0	7	7	0	0	0	19
Total	0	40	40	0	15	15	0	21	21	0	0	0	76
Grand Total	0	100	100	0	28	28	1	32	33	0	0	0	161
Apprch %	0	100		0	100		3	97		0	0		
Total %	0	62.1	62.1	0	17.4	17.4	0.6	19.9	20.5	0	0	0	

95th St & Michigan Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : PM no ped
Site Code : 00000000
Start Date : 4/26/2012
Page No : 5

Groups Printed- PC - SU - MU

	Michigan Ave From North				**95th St From East**				**Michigan Ave From South**				**95th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	1	1	0	193	22	215	20	0	28	48	34	214	0	248	512
04:15 PM	1	5	2	8	0	153	18	171	20	0	24	44	30	199	0	229	452
04:30 PM	2	6	2	10	0	153	16	169	19	0	15	34	42	188	0	230	443
04:45 PM	0	5	3	8	0	193	19	212	12	0	16	28	32	214	0	246	494
Total	3	16	8	27	0	692	75	767	71	0	83	154	138	815	0	953	1901
05:00 PM	3	0	3	6	0	193	21	214	16	0	20	36	55	182	0	237	493
05:15 PM	0	7	1	8	0	196	23	219	23	0	13	36	35	197	0	232	495
05:30 PM	2	4	3	9	0	172	19	191	18	0	26	44	32	248	0	280	524
05:45 PM	2	3	2	7	0	163	27	190	22	0	15	37	38	232	0	270	504
Total	7	14	9	30	0	724	90	814	79	0	74	153	160	859	0	1019	2016
Grand Total	10	30	17	57	0	1416	165	1581	150	0	157	307	298	1674	0	1972	3917
Apprch %	17.5	52.6	29.8		0	89.6	10.4		48.9	0	51.1		15.1	84.9	0		
Total %	0.3	0.8	0.4	1.5	0	36.2	4.2	40.4	3.8	0	4	7.8	7.6	42.7	0	50.3	
PC	10	30	16	56	0	1339	165	1504	148	0	121	269	261	1627	0	1888	3717
% PC	100	100	94.1	98.2	0	94.6	100	95.1	98.7	0	77.1	87.6	87.6	97.2	0	95.7	94.9
SU	0	0	1	1	0	72	0	72	1	0	36	37	37	41	0	78	188
% SU	0	0	5.9	1.8	0	5.1	0	4.6	0.7	0	22.9	12.1	12.4	2.4	0	4	4.8
MU	0	0	0	0	0	5	0	5	1	0	0	1	0	6	0	6	12
% MU	0	0	0	0	0	0.4	0	0.3	0.7	0	0	0.3	0	0.4	0	0.3	0.3

	Michigan Ave From North				**95th St From East**				**Michigan Ave From South**				**95th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	**3**	0	**3**	6	0	193	21	214	16	0	20	36	**55**	182	0	237	493
05:15 PM	0	**7**	1	8	0	**196**	23	**219**	**23**	0	13	36	35	197	0	232	495
05:30 PM	2	4	3	**9**	0	172	19	191	18	0	**26**	**44**	32	**248**	0	**280**	**524**
05:45 PM	2	3	2	7	0	163	**27**	190	22	0	15	37	38	232	0	270	504
Total Volume	7	14	9	30	0	724	90	814	79	0	74	153	160	859	0	1019	2016
% App. Total	23.3	46.7	30		0	88.9	11.1		51.6	0	48.4		15.7	84.3	0		
PHF	.583	.500	.750	.833	.000	.923	.833	.929	.859	.000	.712	.869	.727	.866	.000	.910	.962

95th St & Michigan Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : PM no ped
Site Code : 00000000
Start Date : 4/26/2012
Page No : 6

Groups Printed- SU

	Michigan Ave From North				95th St From East				Michigan Ave From South				95th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	13	0	13	0	0	5	5	5	7	0	12	30
04:15 PM	0	0	1	1	0	9	0	9	0	0	6	6	5	5	0	10	26
04:30 PM	0	0	0	0	0	7	0	7	0	0	5	5	4	6	0	10	22
04:45 PM	0	0	0	0	0	10	0	10	0	0	6	6	6	4	0	10	26
Total	0	0	1	1	0	39	0	39	0	0	22	22	20	22	0	42	104
05:00 PM	0	0	0	0	0	7	0	7	0	0	4	4	5	6	0	11	22
05:15 PM	0	0	0	0	0	7	0	7	1	0	2	3	4	3	0	7	17
05:30 PM	0	0	0	0	0	9	0	9	0	0	6	6	4	6	0	10	25
05:45 PM	0	0	0	0	0	10	0	10	0	0	2	2	4	4	0	8	20
Total	0	0	0	0	0	33	0	33	1	0	14	15	17	19	0	36	84
Grand Total	0	0	1	1	0	72	0	72	1	0	36	37	37	41	0	78	188
Apprch %	0	0	100		0	100	0		2.7	0	97.3		47.4	52.6	0		
Total %	0	0	0.5	0.5	0	38.3	0	38.3	0.5	0	19.1	19.7	19.7	21.8	0	41.5	

95th St & Michigan Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : PM no ped
Site Code : 00000000
Start Date : 4/26/2012
Page No : 7

Groups Printed- MU

	Michigan Ave From North				**95th St From East**				**Michigan Ave From South**				**95th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0	0	3
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
04:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	4	0	4	5
Total	0	0	0	0	0	4	0	4	0	0	0	0	0	6	0	6	10
05:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
Total	0	0	0	0	0	1	0	1	1	0	0	1	0	0	0	0	2
Grand Total	0	0	0	0	0	5	0	5	1	0	0	1	0	6	0	6	12
Apprch %	0	0	0		0	100	0		100	0	0		0	100	0		
Total %	0	0	0	0	0	41.7	0	41.7	8.3	0	0	8.3	0	50	0	50	

Michigan Ave & 95th St
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : PM Peds
Site Code : 00000000
Start Date : 4/26/2012
Page No : 8

Groups Printed- Bikes & Peds

	Michigan Ave Crossing North Leg			**95th St Crossing East Leg**			**Michigan Ave Crossing South Leg**			**95th St Crossing West Leg**			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	BIkes	Peds	App. Total	Int. Total
04:00 PM	0	9	9	0	3	3	0	8	8	0	5	5	25
04:15 PM	0	19	19	0	1	1	0	6	6	0	8	8	34
04:30 PM	0	16	16	0	1	1	0	4	4	0	9	9	30
04:45 PM	0	16	16	0	3	3	0	4	4	0	8	8	31
Total	0	60	60	0	8	8	0	22	22	0	30	30	120
05:00 PM	0	26	26	0	2	2	0	6	6	0	13	13	47
05:15 PM	0	16	16	0	3	3	1	3	4	0	1	1	24
05:30 PM	0	18	18	0	5	5	0	4	4	0	16	16	43
05:45 PM	0	7	7	0	2	2	0	6	6	0	8	8	23
Total	0	67	67	0	12	12	1	19	20	0	38	38	137
Grand Total	0	127	127	0	20	20	1	41	42	0	68	68	257
Apprch %	0	100		0	100		2.4	97.6		0	100		
Total %	0	49.4	49.4	0	7.8	7.8	0.4	16	16.3	0	26.5	26.5	

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95TH ST & WENTWORTH AVE
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM no peds
Site Code : 00000000
Start Date : 4/25/2012
Page No : 1

Groups Printed- PC - SU - MU

	WENTWORTH AVE From North				95TH ST From East				WENTWORTH AVE From South				95TH ST From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	8	2	2	12	2	127	7	136	13	10	6	29	0	149	4	153	330
07:15 AM	14	2	4	20	1	140	3	144	20	13	12	45	1	148	5	154	363
07:30 AM	22	6	9	37	11	174	4	189	23	17	12	52	1	175	16	192	470
07:45 AM	26	8	12	46	12	188	5	205	25	18	17	60	2	201	9	212	523
Total	70	18	27	115	26	629	19	674	81	58	47	186	4	673	34	711	1686
08:00 AM	27	6	10	43	11	193	6	210	14	15	8	37	5	221	5	231	521
08:15 AM	18	9	7	34	9	152	6	167	13	10	6	29	8	168	6	182	412
08:30 AM	23	3	5	31	9	163	3	175	23	7	11	41	4	194	14	212	459
08:45 AM	16	5	5	26	11	180	9	200	12	11	14	37	8	195	13	216	479
Total	84	23	27	134	40	688	24	752	62	43	39	144	25	778	38	841	1871
Grand Total	154	41	54	249	66	1317	43	1426	143	101	86	330	29	1451	72	1552	3557
Apprch %	61.8	16.5	21.7		4.6	92.4	3		43.3	30.6	26.1		1.9	93.5	4.6		
Total %	4.3	1.2	1.5	7	1.9	37	1.2	40.1	4	2.8	2.4	9.3	0.8	40.8	2	43.6	
PC	148	38	49	235	65	1205	43	1313	139	88	84	311	29	1340	66	1435	3294
% PC	96.1	92.7	90.7	94.4	98.5	91.5	100	92.1	97.2	87.1	97.7	94.2	100	92.4	91.7	92.5	92.6
SU	6	3	5	14	1	94	0	95	4	13	2	19	0	97	6	103	231
% SU	3.9	7.3	9.3	5.6	1.5	7.1	0	6.7	2.8	12.9	2.3	5.8	0	6.7	8.3	6.6	6.5
MU	0	0	0	0	0	18	0	18	0	0	0	0	0	14	0	14	32
% MU	0	0	0	0	0	1.4	0	1.3	0	0	0	0	0	1	0	0.9	0.9

	WENTWORTH AVE From North				95TH ST From East				WENTWORTH AVE From South				95TH ST From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	22	6	9	37	11	174	4	189	23	17	12	52	1	175	**16**	192	470
07:45 AM	26	8	**12**	**46**	**12**	188	5	205	**25**	**18**	**17**	**60**	2	201	9	212	**523**
08:00 AM	**27**	6	10	43	11	**193**	**6**	**210**	14	15	8	37	5	**221**	5	**231**	521
08:15 AM	18	**9**	7	34	9	152	6	167	13	10	6	29	**8**	168	6	182	412
Total Volume	93	29	38	160	43	707	21	771	75	60	43	178	16	765	36	817	1926
% App. Total	58.1	18.1	23.8		5.6	91.7	2.7		42.1	33.7	24.2		2	93.6	4.4		
PHF	.861	.806	.792	.870	.896	.916	.875	.918	.750	.833	.632	.742	.500	.865	.563	.884	.921

95TH ST & WENTWORTH AVE
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM no peds
Site Code : 00000000
Start Date : 4/25/2012
Page No : 2

Groups Printed- SU

	WENTWORTH AVE From North				95TH ST From East				WENTWORTH AVE From South				95TH ST From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	9	0	9	1	3	0	4	0	10	0	10	23
07:15 AM	1	0	1	2	0	15	0	15	0	3	0	3	0	11	0	11	31
07:30 AM	0	0	0	0	0	14	0	14	1	0	0	1	0	18	2	20	35
07:45 AM	0	1	1	2	0	7	0	7	1	1	0	2	0	9	2	11	22
Total	1	1	2	4	0	45	0	45	3	7	0	10	0	48	4	52	111
08:00 AM	3	1	0	4	1	12	0	13	0	2	1	3	0	13	0	13	33
08:15 AM	0	0	1	1	0	8	0	8	1	1	0	2	0	7	0	7	18
08:30 AM	1	0	1	2	0	15	0	15	0	1	1	2	0	15	1	16	35
08:45 AM	1	1	1	3	0	14	0	14	0	2	0	2	0	14	1	15	34
Total	5	2	3	10	1	49	0	50	1	6	2	9	0	49	2	51	120
Grand Total	6	3	5	14	1	94	0	95	4	13	2	19	0	97	6	103	231
Apprch %	42.9	21.4	35.7		1.1	98.9	0		21.1	68.4	10.5		0	94.2	5.8		
Total %	2.6	1.3	2.2	6.1	0.4	40.7	0	41.1	1.7	5.6	0.9	8.2	0	42	2.6	44.6	

95TH ST & WENTWORTH AVE
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM no peds
Site Code : 00000000
Start Date : 4/25/2012
Page No : 3

Groups Printed- MU

	WENTWORTH AVE From North				95TH ST From East				WENTWORTH AVE From South				95TH ST From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
07:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0	2	3
07:30 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	1	3
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
Total	0	0	0	0	0	4	0	4	0	0	0	0	0	5	0	5	9
08:00 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	4	0	4	6
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
08:30 AM	0	0	0	0	0	7	0	7	0	0	0	0	0	2	0	2	9
08:45 AM	0	0	0	0	0	5	0	5	0	0	0	0	0	2	0	2	7
Total	0	0	0	0	0	14	0	14	0	0	0	0	0	9	0	9	23
Grand Total	0	0	0	0	0	18	0	18	0	0	0	0	0	14	0	14	32
Apprch %	0	0	0		0	100	0		0	0	0		0	100	0		
Total %	0	0	0	0	0	56.2	0	56.2	0	0	0	0	0	43.8	0	43.8	

95TH AND WENTWORTH AVE
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM peds
Site Code : 00000000
Start Date : 4/25/2012
Page No : 4

Groups Printed- Peds & Bikes

	WENTWORTH AVE Crossing North Leg			95TH ST Crossing East Leg			WENTWORTH AVE Crossing South Leg			95TH ST Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
07:00 AM	0	6	6	0	0	0	0	0	0	0	0	0	6
07:15 AM	0	10	10	0	0	0	0	1	1	0	0	0	11
07:30 AM	0	7	7	0	0	0	1	1	2	0	0	0	9
07:45 AM	0	13	13	0	0	0	0	4	4	0	1	1	18
Total	0	36	36	0	0	0	1	6	7	0	1	1	44
08:00 AM	0	23	23	0	3	3	0	4	4	0	2	2	32
08:15 AM	1	18	19	0	2	2	0	2	2	0	0	0	23
08:30 AM	0	16	16	0	4	4	0	1	1	0	1	1	22
08:45 AM	0	9	9	0	1	1	0	0	0	0	0	0	10
Total	1	66	67	0	10	10	0	7	7	0	3	3	87
Grand Total	1	102	103	0	10	10	1	13	14	0	4	4	131
Apprch %	1	99		0	100		7.1	92.9		0	100		
Total %	0.8	77.9	78.6	0	7.6	7.6	0.8	9.9	10.7	0	3.1	3.1	

95TH ST AND WENTWORTH AVE
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : PM no peds
Site Code : 00000000
Start Date : 4/25/2012

Groups Printed- PC - SU - MU

	WENTWORTH AVE				95TH ST				WENTWORTH AVE				95TH ST				
	From North				From East				From South				From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	17	10	8	35	7	207	9	223	15	9	10	34	9	190	3	202	494
04:15 PM	19	11	4	34	9	213	2	224	12	9	6	27	5	168	6	179	464
04:30 PM	17	10	2	29	7	187	7	201	14	8	8	30	10	169	12	191	451
04:45 PM	16	13	6	35	6	192	10	208	8	7	8	23	12	175	10	197	463
Total	69	44	20	133	29	799	28	856	49	33	32	114	36	702	31	769	1872
05:00 PM	21	5	7	33	13	218	10	241	17	6	11	34	9	168	12	189	497
05:15 PM	19	8	6	33	14	241	8	263	5	5	6	16	2	118	7	127	439
05:30 PM	21	5	4	30	21	215	9	245	14	4	10	28	9	177	11	197	500
05:45 PM	24	4	6	34	6	265	6	277	12	2	7	21	7	135	9	151	483
Total	85	22	23	130	54	939	33	1026	48	17	34	99	27	598	39	664	1919
06:00 PM	20	3	3	26	5	238	5	248	8	1	8	17	5	113	6	124	415
Grand Total	174	69	46	289	88	1976	66	2130	105	51	74	230	68	1413	76	1557	4206
Apprch %	60.2	23.9	15.9		4.1	92.8	3.1		45.7	22.2	32.2		4.4	90.8	4.9		
Total %	4.1	1.6	1.1	6.9	2.1	47	1.6	50.6	2.5	1.2	1.8	5.5	1.6	33.6	1.8	37	
PC	174	68	45	287	87	1875	64	2026	103	50	74	227	67	1342	75	1484	4024
% PC	100	98.6	97.8	99.3	98.9	94.9	97	95.1	98.1	98	100	98.7	98.5	95	98.7	95.3	95.7
SU	0	1	1	2	1	84	2	87	2	1	0	3	1	67	1	69	161
% SU	0	1.4	2.2	0.7	1.1	4.3	3	4.1	1.9	2	0	1.3	1.5	4.7	1.3	4.4	3.8
MU	0	0	0	0	0	17	0	17	0	0	0	0	0	4	0	4	21
% MU	0	0	0	0	0	0.9	0	0.8	0	0	0	0	0	0.3	0	0.3	0.5

	WENTWORTH AVE				95TH ST				WENTWORTH AVE				95TH ST				
	From North				From East				From South				From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	21	5	**7**	33	13	218	**10**	241	**17**	**6**	**11**	**34**	**9**	168	**12**	189	497
05:15 PM	19	**8**	6	33	14	241	8	263	5	5	6	16	2	118	7	127	439
05:30 PM	21	5	4	30	**21**	215	9	245	14	4	10	28	9	**177**	11	**197**	**500**
05:45 PM	**24**	4	6	**34**	6	**265**	6	**277**	12	2	7	21	7	135	9	151	483
Total Volume	85	22	23	130	54	939	33	1026	48	17	34	99	27	598	39	664	1919
% App. Total	65.4	16.9	17.7		5.3	91.5	3.2		48.5	17.2	34.3		4.1	90.1	5.9		
PHF	.885	.688	.821	.956	.643	.886	.825	.926	.706	.708	.773	.728	.750	.845	.813	.843	.960

95TH ST AND WENTWORTH AVE
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : PM no peds
Site Code : 00000000
Start Date : 4/25/2012
Page No : 6

Groups Printed- SU

	WENTWORTH AVE From North				95TH ST From East				WENTWORTH AVE From South				95TH ST From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	1	0	1	0	12	1	13	1	0	0	1	0	8	0	8	23
04:15 PM	0	0	1	1	0	16	0	16	0	1	0	1	0	6	1	7	25
04:30 PM	0	0	0	0	0	10	1	11	1	0	0	1	1	12	0	13	25
04:45 PM	0	0	0	0	0	6	0	6	0	0	0	0	0	9	0	9	15
Total	0	1	1	2	0	44	2	46	2	1	0	3	1	35	1	37	88
05:00 PM	0	0	0	0	0	11	0	11	0	0	0	0	0	6	0	6	17
05:15 PM	0	0	0	0	0	9	0	9	0	0	0	0	0	6	0	6	15
05:30 PM	0	0	0	0	1	9	0	10	0	0	0	0	0	9	0	9	19
05:45 PM	0	0	0	0	0	6	0	6	0	0	0	0	0	7	0	7	13
Total	0	0	0	0	1	35	0	36	0	0	0	0	0	28	0	28	64
06:00 PM	0	0	0	0	0	5	0	5	0	0	0	0	0	4	0	4	9
Grand Total	0	1	1	2	1	84	2	87	2	1	0	3	1	67	1	69	161
Apprch %	0	50	50		1.1	96.6	2.3		66.7	33.3	0		1.4	97.1	1.4		
Total %	0	0.6	0.6	1.2	0.6	52.2	1.2	54	1.2	0.6	0	1.9	0.6	41.6	0.6	42.9	

95TH ST AND WENTWORTH AVE
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : PM no peds
Site Code : 00000000
Start Date : 4/25/2012
Page No : 7

Groups Printed- MU

	WENTWORTH AVE From North				95TH ST From East				WENTWORTH AVE From South				95TH ST From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	2
04:15 PM	0	0	0	0	0	4	0	4	0	0	0	0	0	0	0	0	4
04:30 PM	0	0	0	0	0	4	0	4	0	0	0	0	0	0	0	0	4
04:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
Total	0	0	0	0	0	11	0	11	0	0	0	0	0	1	0	1	12
05:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
05:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
05:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
05:45 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	1	3
Total	0	0	0	0	0	5	0	5	0	0	0	0	0	2	0	2	7
06:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
Grand Total	0	0	0	0	0	17	0	17	0	0	0	0	0	4	0	4	21
Apprch %	0	0	0		0	100	0		0	0	0		0	100	0		
Total %	0	0	0	0	0	81	0	81	0	0	0	0	0	19	0	19	

95TH ST AND WENTWORTH AVE
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : PM peds
Site Code : 00000000
Start Date : 4/25/2012
Page No : 8

Groups Printed- Peds & Bikes

	WENTWORTH AVE Crossing North Leg			95TH ST Crossing East Leg			WENTWORTH AVE Crossing South Leg			95TH ST Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
04:00 PM	1	12	13	0	4	4	0	3	3	0	0	0	20
04:15 PM	0	12	12	0	8	8	0	13	13	0	0	0	33
04:30 PM	1	21	22	0	0	0	0	0	0	0	2	2	24
04:45 PM	0	28	28	0	0	0	0	1	1	0	2	2	31
Total	2	73	75	0	12	12	0	17	17	0	4	4	108
05:00 PM	2	31	33	1	6	7	0	7	7	0	3	3	50
05:15 PM	1	50	51	0	9	9	0	7	7	0	8	8	75
05:30 PM	1	28	29	0	1	1	0	1	1	0	3	3	34
05:45 PM	1	36	37	1	3	4	0	1	1	0	3	3	45
Total	5	145	150	2	19	21	0	16	16	0	17	17	204
06:00 PM	1	28	29	1	1	2	0	1	1	0	2	2	34
Grand Total	8	246	254	3	32	35	0	34	34	0	23	23	346
Apprch %	3.1	96.9		8.6	91.4		0	100		0	100		
Total %	2.3	71.1	73.4	0.9	9.2	10.1	0	9.8	9.8	0	6.6	6.6	

98TH PL AND HALSTED ST
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : am no peds
Site Code : 00000000
Start Date : 4/26/2012
Page No : 1

Groups Printed- PC - SU - MU

	HALSTED ST From North				98TH PL From East				HALSTED ST From South				98TH PL From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	97	37	0	134	189	7	56	252	0	143	28	171	0	0	0	0	557
07:15 AM	133	56	0	189	206	7	42	255	0	183	43	226	0	0	0	0	670
07:30 AM	154	67	0	221	278	16	61	355	0	192	53	245	0	0	0	0	821
07:45 AM	196	89	0	285	252	9	45	306	0	203	46	249	0	0	0	0	840
Total	580	249	0	829	925	39	204	1168	0	721	170	891	0	0	0	0	2888
08:00 AM	145	78	0	223	277	8	81	366	0	216	36	252	0	0	0	0	841
08:15 AM	183	65	0	248	225	6	51	282	0	203	46	249	0	0	0	0	779
08:30 AM	160	52	0	212	212	6	53	271	0	221	28	249	0	0	0	0	732
08:45 AM	131	82	0	213	217	7	59	283	0	164	40	204	0	0	0	0	700
Total	619	277	0	896	931	27	244	1202	0	804	150	954	0	0	0	0	3052
Grand Total	1199	526	0	1725	1856	66	448	2370	0	1525	320	1845	0	0	0	0	5940
Apprch %	69.5	30.5	0		78.3	2.8	18.9		0	82.7	17.3		0	0	0		
Total %	20.2	8.9	0	29	31.2	1.1	7.5	39.9	0	25.7	5.4	31.1	0	0	0	0	
PC	1101	505	0	1606	1814	62	429	2305	0	1437	306	1743	0	0	0	0	5654
% PC	91.8	96	0	93.1	97.7	93.9	95.8	97.3	0	94.2	95.6	94.5	0	0	0	0	95.2
SU	78	14	0	92	26	3	19	48	0	76	13	89	0	0	0	0	229
% SU	6.5	2.7	0	5.3	1.4	4.5	4.2	2	0	5	4.1	4.8	0	0	0	0	3.9
MU	20	7	0	27	16	1	0	17	0	12	1	13	0	0	0	0	57
% MU	1.7	1.3	0	1.6	0.9	1.5	0	0.7	0	0.8	0.3	0.7	0	0	0	0	1

	HALSTED ST From North				98TH PL From East				HALSTED ST From South				98TH PL From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	154	67	0	221	**278**	**16**	61	355	0	192	**53**	245	0	0	0	0	821
07:45 AM	**196**	**89**	0	**285**	252	9	45	306	0	203	46	249	0	0	0	0	840
08:00 AM	145	78	0	223	277	8	**81**	**366**	0	**216**	36	**252**	0	0	0	0	**841**
08:15 AM	183	65	0	248	225	6	51	282	0	203	46	249	0	0	0	0	779
Total Volume	678	299	0	977	1032	39	238	1309	0	814	181	995	0	0	0	0	3281
% App. Total	69.4	30.6	0		78.8	3	18.2		0	81.8	18.2		0	0	0		
PHF	.865	.840	.000	.857	.928	.609	.735	.894	.000	.942	.854	.987	.000	.000	.000	.000	.975

98TH PL AND HALSTED ST
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : am no peds
Site Code : 00000000
Start Date : 4/26/2012
Page No : 2

Groups Printed- SU

	HALSTED ST From North				98TH PL From East				HALSTED ST From South				98TH PL From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	14	1	0	15	2	0	2	4	0	15	2	17	0	0	0	0	36
07:15 AM	6	0	0	6	3	1	2	6	0	11	3	14	0	0	0	0	26
07:30 AM	11	1	0	12	7	1	1	9	0	9	1	10	0	0	0	0	31
07:45 AM	11	3	0	14	2	0	2	4	0	7	0	7	0	0	0	0	25
Total	42	5	0	47	14	2	7	23	0	42	6	48	0	0	0	0	118
08:00 AM	8	0	0	8	2	0	5	7	0	9	1	10	0	0	0	0	25
08:15 AM	14	3	0	17	3	0	0	3	0	9	4	13	0	0	0	0	33
08:30 AM	8	2	0	10	5	0	3	8	0	11	0	11	0	0	0	0	29
08:45 AM	6	4	0	10	2	1	4	7	0	5	2	7	0	0	0	0	24
Total	36	9	0	45	12	1	12	25	0	34	7	41	0	0	0	0	111
Grand Total	78	14	0	92	26	3	19	48	0	76	13	89	0	0	0	0	229
Apprch %	84.8	15.2	0		54.2	6.2	39.6		0	85.4	14.6		0	0	0		
Total %	34.1	6.1	0	40.2	11.4	1.3	8.3	21	0	33.2	5.7	38.9	0	0	0	0	

98TH PL AND HALSTED ST
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : am no peds
Site Code : 00000000
Start Date : 4/26/2012

Groups Printed- MU

	HALSTED ST From North				98TH PL From East				HALSTED ST From South				98TH PL From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	1	0	0	1	2	0	0	2	0	0	0	0	0	0	0	0	3
07:15 AM	3	0	0	3	3	0	0	3	0	3	1	4	0	0	0	0	10
07:30 AM	0	4	0	4	2	0	0	2	0	1	0	1	0	0	0	0	7
07:45 AM	3	1	0	4	3	1	0	4	0	2	0	2	0	0	0	0	10
Total	7	5	0	12	10	1	0	11	0	6	1	7	0	0	0	0	30
08:00 AM	3	1	0	4	2	0	0	2	0	2	0	2	0	0	0	0	8
08:15 AM	2	1	0	3	1	0	0	1	0	0	0	0	0	0	0	0	4
08:30 AM	3	0	0	3	2	0	0	2	0	3	0	3	0	0	0	0	8
08:45 AM	5	0	0	5	1	0	0	1	0	1	0	1	0	0	0	0	7
Total	13	2	0	15	6	0	0	6	0	6	0	6	0	0	0	0	27
Grand Total	20	7	0	27	16	1	0	17	0	12	1	13	0	0	0	0	57
Apprch %	74.1	25.9	0		94.1	5.9	0		0	92.3	7.7		0	0	0		
Total %	35.1	12.3	0	47.4	28.1	1.8	0	29.8	0	21.1	1.8	22.8	0	0	0	0	

98TH PL AND HALSTED ST
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM Peds
Site Code : 00000000
Start Date : 4/26/2012
Page No : 4

Groups Printed- Peds & Bikes

	HALSTED ST Crossing North Leg			98TH PL Crossing East Leg			HALSTED ST Crossing South Leg			98TH PL Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
07:00 AM	0	0	0	0	2	2	0	0	0	0	0	0	2
07:15 AM	0	0	0	0	3	3	0	0	0	0	3	3	6
07:30 AM	0	0	0	0	1	1	0	0	0	0	3	3	4
07:45 AM	0	1	1	0	3	3	0	0	0	0	4	4	8
Total	0	1	1	0	9	9	0	0	0	0	10	10	20
08:00 AM	0	1	1	0	3	3	0	0	0	0	0	0	4
08:15 AM	0	0	0	0	1	1	0	0	0	0	5	5	6
08:30 AM	0	5	5	0	0	0	0	0	0	1	0	1	6
08:45 AM	0	3	3	0	2	2	0	0	0	0	5	5	10
Total	0	9	9	0	6	6	0	0	0	1	10	11	26
Grand Total	0	10	10	0	15	15	0	0	0	1	20	21	46
Apprch %	0	100		0	100		0	0		4.8	95.2		
Total %	0	21.7	21.7	0	32.6	32.6	0	0	0	2.2	43.5	45.7	

98TH PL AND HALSTED ST
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : PM no peds
Site Code : 00000000
Start Date : 4/26/2012
Page No : 5

Groups Printed- PC - SU - MU

	HALSTED ST From North				98TH PL From East				HALSTED ST From South				98TH PL From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	111	193	0	304	226	0	69	295	0	160	53	213	0	0	0	0	812
04:15 PM	83	162	0	245	307	0	98	405	0	125	55	180	0	0	0	0	830
04:30 PM	126	175	0	301	213	0	66	279	0	134	42	176	0	0	0	0	756
04:45 PM	86	213	0	299	289	0	80	369	0	134	33	167	0	0	0	0	835
Total	406	743	0	1149	1035	0	313	1348	0	553	183	736	0	0	0	0	3233
05:00 PM	106	205	0	311	278	0	70	348	0	145	34	179	0	0	0	0	838
05:15 PM	133	193	0	326	236	0	66	302	0	147	53	200	0	0	0	0	828
05:30 PM	128	229	0	357	264	0	73	337	0	145	45	190	0	0	0	0	884
05:45 PM	123	224	0	347	265	0	66	331	0	139	49	188	0	0	0	0	866
Total	490	851	0	1341	1043	0	275	1318	0	576	181	757	0	0	0	0	3416
Grand Total	896	1594	0	2490	2078	0	588	2666	0	1129	364	1493	0	0	0	0	6649
Apprch %	36	64	0		77.9	0	22.1		0	75.6	24.4		0	0	0		
Total %	13.5	24	0	37.4	31.3	0	8.8	40.1	0	17	5.5	22.5	0	0	0	0	
PC	874	1514	0	2388	2053	0	575	2628	0	1070	350	1420	0	0	0	0	6436
% PC	97.5	95	0	95.9	98.8	0	97.8	98.6	0	94.8	96.2	95.1	0	0	0	0	96.8
SU	16	63	0	79	10	0	11	21	0	53	9	62	0	0	0	0	162
% SU	1.8	4	0	3.2	0.5	0	1.9	0.8	0	4.7	2.5	4.2	0	0	0	0	2.4
MU	6	17	0	23	15	0	2	17	0	6	5	11	0	0	0	0	51
% MU	0.7	1.1	0	0.9	0.7	0	0.3	0.6	0	0.5	1.4	0.7	0	0	0	0	0.8

	HALSTED ST From North				98TH PL From East				HALSTED ST From South				98TH PL From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	106	205	0	311	**278**	0	70	**348**	0	145	34	179	0	0	0	0	838
05:15 PM	**133**	193	0	326	236	0	66	302	0	**147**	**53**	**200**	0	0	0	0	828
05:30 PM	128	**229**	0	**357**	264	0	**73**	337	0	145	45	190	0	0	0	0	**884**
05:45 PM	123	224	0	347	265	0	66	331	0	139	49	188	0	0	0	0	866
Total Volume	490	851	0	1341	1043	0	275	1318	0	576	181	757	0	0	0	0	3416
% App. Total	36.5	63.5	0		79.1	0	20.9		0	76.1	23.9		0	0	0		
PHF	.921	.929	.000	.939	.938	.000	.942	.947	.000	.980	.854	.946	.000	.000	.000	.000	.966

98TH PL AND HALSTED ST
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : PM no peds
Site Code : 00000000
Start Date : 4/26/2012
Page No : 6

Groups Printed- SU

	HALSTED ST From North				98TH PL From East				HALSTED ST From South				98TH PL From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	3	9	0	12	3	0	2	5	0	7	2	9	0	0	0	0	26
04:15 PM	1	8	0	9	3	0	2	5	0	8	0	8	0	0	0	0	22
04:30 PM	3	9	0	12	1	0	0	1	0	3	2	5	0	0	0	0	18
04:45 PM	3	6	0	9	1	0	2	3	0	8	0	8	0	0	0	0	20
Total	10	32	0	42	8	0	6	14	0	26	4	30	0	0	0	0	86
05:00 PM	1	9	0	10	1	0	0	1	0	8	2	10	0	0	0	0	21
05:15 PM	3	6	0	9	1	0	1	2	0	9	1	10	0	0	0	0	21
05:30 PM	2	9	0	11	0	0	1	1	0	3	2	5	0	0	0	0	17
05:45 PM	0	7	0	7	0	0	3	3	0	7	0	7	0	0	0	0	17
Total	6	31	0	37	2	0	5	7	0	27	5	32	0	0	0	0	76
Grand Total	16	63	0	79	10	0	11	21	0	53	9	62	0	0	0	0	162
Apprch %	20.3	79.7	0		47.6	0	52.4		0	85.5	14.5		0	0	0		
Total %	9.9	38.9	0	48.8	6.2	0	6.8	13	0	32.7	5.6	38.3	0	0	0	0	

98TH PL AND HALSTED ST
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : PM no peds
Site Code : 00000000
Start Date : 4/26/2012
Page No : 7

Groups Printed- MU

	HALSTED ST From North				98TH PL From East				HALSTED ST From South				98TH PL From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	2	2	0	4	5	0	1	6	0	0	1	1	0	0	0	0	11
04:15 PM	1	1	0	2	1	0	0	1	0	1	0	1	0	0	0	0	4
04:30 PM	1	3	0	4	7	0	1	8	0	0	1	1	0	0	0	0	13
04:45 PM	1	4	0	5	0	0	0	0	0	0	0	0	0	0	0	0	5
Total	5	10	0	15	13	0	2	15	0	1	2	3	0	0	0	0	33
05:00 PM	1	2	0	3	2	0	0	2	0	2	0	2	0	0	0	0	7
05:15 PM	0	3	0	3	0	0	0	0	0	0	1	1	0	0	0	0	4
05:30 PM	0	1	0	1	0	0	0	0	0	2	1	3	0	0	0	0	4
05:45 PM	0	1	0	1	0	0	0	0	0	1	1	2	0	0	0	0	3
Total	1	7	0	8	2	0	0	2	0	5	3	8	0	0	0	0	18
Grand Total	6	17	0	23	15	0	2	17	0	6	5	11	0	0	0	0	51
Apprch %	26.1	73.9	0		88.2	0	11.8		0	54.5	45.5		0	0	0		
Total %	11.8	33.3	0	45.1	29.4	0	3.9	33.3	0	11.8	9.8	21.6	0	0	0	0	

98TH PL AND HALSTED ST
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : PM Peds
Site Code : 00000000
Start Date : 4/26/2012
Page No : 8

Groups Printed- Peds & Bikes

	HALSTED ST Crossing North Leg			98TH PL Crossing East Leg			HALSTED ST Crossing South Leg			98TH PL Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
04:00 PM	0	1	1	0	0	0	0	0	0	0	4	4	5
04:15 PM	0	0	0	0	1	1	0	0	0	0	4	4	5
04:30 PM	0	2	2	0	0	0	0	0	0	0	2	2	4
04:45 PM	0	1	1	0	3	3	0	0	0	1	5	6	10
Total	0	4	4	0	4	4	0	0	0	1	15	16	24
05:00 PM	0	0	0	0	0	0	0	0	0	0	3	3	3
05:15 PM	0	2	2	0	3	3	0	0	0	0	4	4	9
05:30 PM	0	0	0	0	0	0	0	0	0	0	7	7	7
05:45 PM	0	0	0	0	0	0	0	0	0	0	4	4	4
Total	0	2	2	0	3	3	0	0	0	0	18	18	23
Grand Total	0	6	6	0	7	7	0	0	0	1	33	34	47
Apprch %	0	100		0	100		0	0		2.9	97.1		
Total %	0	12.8	12.8	0	14.9	14.9	0	0	0	2.1	70.2	72.3	

Regina Webster & Associates, Inc.

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98th Pl and Wentworth Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/30/2012
Page No : 1

Groups Printed- PC - SU - MU

	Wentworth Ave From North				98th Pl From East				Wentworth Ave From South				98th Pl From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	10	0	10	3	2	36	41	0	29	0	29	0	0	0	0	80
07:15 AM	0	18	0	18	1	0	30	31	0	41	3	44	0	0	0	0	93
07:30 AM	0	22	0	22	2	1	49	52	0	38	0	38	0	0	0	0	112
07:45 AM	1	20	0	21	6	0	58	64	0	38	0	38	0	0	0	0	123
Total	1	70	0	71	12	3	173	188	0	146	3	149	0	0	0	0	408
08:00 AM	1	32	0	33	8	3	65	76	0	58	3	61	0	0	0	0	170
08:15 AM	1	29	0	30	5	0	55	60	0	31	0	31	0	0	0	0	121
08:30 AM	0	24	0	24	4	0	57	61	0	35	0	35	0	0	0	0	120
08:45 AM	0	15	0	15	5	4	69	78	0	17	2	19	0	0	0	0	112
Total	2	100	0	102	22	7	246	275	0	141	5	146	0	0	0	0	523
Grand Total	3	170	0	173	34	10	419	463	0	287	8	295	0	0	0	0	931
Apprch %	1.7	98.3	0		7.3	2.2	90.5		0	97.3	2.7		0	0	0		
Total %	0.3	18.3	0	18.6	3.7	1.1	45	49.7	0	30.8	0.9	31.7	0	0	0	0	
PC	2	166	0	168	31	9	391	431	0	275	7	282	0	0	0	0	881
% PC	66.7	97.6	0	97.1	91.2	90	93.3	93.1	0	95.8	87.5	95.6	0	0	0	0	94.6
SU	1	4	0	5	3	1	25	29	0	12	1	13	0	0	0	0	47
% SU	33.3	2.4	0	2.9	8.8	10	6	6.3	0	4.2	12.5	4.4	0	0	0	0	5
MU	0	0	0	0	0	0	3	3	0	0	0	0	0	0	0	0	3
% MU	0	0	0	0	0	0	0.7	0.6	0	0	0	0	0	0	0	0	0.3

	Wentworth Ave From North				98th Pl From East				Wentworth Ave From South				98th Pl From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	**1**	20	0	21	6	0	58	64	0	38	0	38	0	0	0	0	123
08:00 AM	1	**32**	0	**33**	**8**	**3**	**65**	**76**	0	**58**	**3**	**61**	0	0	0	0	**170**
08:15 AM	1	29	0	30	5	0	55	60	0	31	0	31	0	0	0	0	121
08:30 AM	0	24	0	24	4	0	57	61	0	35	0	35	0	0	0	0	120
Total Volume	3	105	0	108	23	3	235	261	0	162	3	165	0	0	0	0	534
% App. Total	2.8	97.2	0		8.8	1.1	90		0	98.2	1.8		0	0	0		
PHF	.750	.820	.000	.818	.719	.250	.904	.859	.000	.698	.250	.676	.000	.000	.000	.000	.785

98th Pl and Wentworth Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/30/2012
Page No : 2

Groups Printed- SU

	Wentworth Ave From North				98th Pl From East				Wentworth Ave From South				98th Pl From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	1	0	4	5	0	3	0	3	0	0	0	0	8
07:15 AM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
07:30 AM	0	0	0	0	0	0	3	3	0	0	0	0	0	0	0	0	3
07:45 AM	0	1	0	1	0	0	5	5	0	0	0	0	0	0	0	0	6
Total	0	1	0	1	1	0	12	13	0	5	0	5	0	0	0	0	19
08:00 AM	1	2	0	3	1	1	4	6	0	3	1	4	0	0	0	0	13
08:15 AM	0	0	0	0	0	0	3	3	0	0	0	0	0	0	0	0	3
08:30 AM	0	0	0	0	0	0	1	1	0	4	0	4	0	0	0	0	5
08:45 AM	0	1	0	1	1	0	5	6	0	0	0	0	0	0	0	0	7
Total	1	3	0	4	2	1	13	16	0	7	1	8	0	0	0	0	28
Grand Total	1	4	0	5	3	1	25	29	0	12	1	13	0	0	0	0	47
Apprch %	20	80	0		10.3	3.4	86.2		0	92.3	7.7		0	0	0		
Total %	2.1	8.5	0	10.6	6.4	2.1	53.2	61.7	0	25.5	2.1	27.7	0	0	0	0	

98th Pl and Wentworth Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/30/2012
Page No : 3

Groups Printed- MU

	Wentworth Ave From North				98th Pl From East				Wentworth Ave From South				98th Pl From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
08:00 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
08:15 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	2
Grand Total	0	0	0	0	0	0	3	3	0	0	0	0	0	0	0	0	3
Apprch %	0	0	0		0	0	100		0	0	0		0	0	0		
Total %	0	0	0	0	0	0	100	100	0	0	0	0	0	0	0	0	

98th Pl and Wentworth Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 5/30/2012

Groups Printed- Peds & Bikes

	Wentworth Ave Crossing North Leg			98th Pl Crossing East Leg			Wentworth Ave Crossing South Leg			98th Pl Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	1	1	0	0	0	0	0	0	1
07:30 AM	0	2	2	0	0	0	0	0	0	0	2	2	4
07:45 AM	0	0	0	0	0	0	0	2	2	0	1	1	3
Total	0	2	2	0	1	1	0	2	2	0	3	3	8
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	1	1	0	0	0	0	1	1	0	0	0	2
08:45 AM	0	1	1	0	0	0	0	0	0	0	2	2	3
Total	0	2	2	0	0	0	0	1	1	0	2	2	5
Grand Total	0	4	4	0	1	1	0	3	3	0	5	5	13
Apprch %	0	100		0	100		0	100		0	100		
Total %	0	30.8	30.8	0	7.7	7.7	0	23.1	23.1	0	38.5	38.5	

98th Pl and Wentworth Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/30/2012
Page No : 5

Groups Printed- PC - SU - MU

	Wentworth Ave From North				98th Pl From East				Wentworth Ave From South				98th Pl From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	1	29	0	30	9	7	72	88	0	26	3	29	0	0	0	0	147
04:15 PM	1	38	0	39	6	11	68	85	0	29	1	30	0	0	0	0	154
04:30 PM	4	35	0	39	7	2	66	75	0	25	1	26	0	0	0	0	140
04:45 PM	1	26	0	27	7	4	74	85	0	16	1	17	0	0	0	0	129
Total	7	128	0	135	29	24	280	333	0	96	6	102	0	0	0	0	570
05:00 PM	0	30	0	30	11	2	72	85	0	17	2	19	0	0	0	0	134
05:15 PM	1	37	0	38	5	5	56	66	0	36	3	39	0	0	0	0	143
05:30 PM	2	37	0	39	3	7	71	81	0	24	0	24	0	0	0	0	144
05:45 PM	2	32	0	34	4	10	72	86	0	27	3	30	0	0	0	0	150
Total	5	136	0	141	23	24	271	318	0	104	8	112	0	0	0	0	571
Grand Total	12	264	0	276	52	48	551	651	0	200	14	214	0	0	0	0	1141
Apprch %	4.3	95.7	0		8	7.4	84.6		0	93.5	6.5		0	0	0		
Total %	1.1	23.1	0	24.2	4.6	4.2	48.3	57.1	0	17.5	1.2	18.8	0	0	0	0	
PC	12	257	0	269	52	47	541	640	0	195	14	209	0	0	0	0	1118
% PC	100	97.3	0	97.5	100	97.9	98.2	98.3	0	97.5	100	97.7	0	0	0	0	98
SU	0	7	0	7	0	1	9	10	0	5	0	5	0	0	0	0	22
% SU	0	2.7	0	2.5	0	2.1	1.6	1.5	0	2.5	0	2.3	0	0	0	0	1.9
MU	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
% MU	0	0	0	0	0	0	0.2	0.2	0	0	0	0	0	0	0	0	0.1

	Wentworth Ave From North				98th Pl From East				Wentworth Ave From South				98th Pl From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	30	0	30	**11**	2	**72**	85	0	17	2	19	0	0	0	0	134
05:15 PM	1	**37**	0	38	5	5	56	66	0	**36**	**3**	**39**	0	0	0	0	143
05:30 PM	**2**	37	0	**39**	3	7	71	81	0	24	0	24	0	0	0	0	144
05:45 PM	2	32	0	34	4	**10**	72	**86**	0	27	3	30	0	0	0	0	**150**
Total Volume	5	136	0	141	23	24	271	318	0	104	8	112	0	0	0	0	571
% App. Total	3.5	96.5	0		7.2	7.5	85.2		0	92.9	7.1		0	0	0		
PHF	.625	.919	.000	.904	.523	.600	.941	.924	.000	.722	.667	.718	.000	.000	.000	.000	.952

98th Pl and Wentworth Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/30/2012
Page No : 6

Groups Printed- SU

	Wentworth Ave From North				98th Pl From East				Wentworth Ave From South				98th Pl From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	1	3	4	0	0	0	0	0	0	0	0	4
04:15 PM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
04:30 PM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
04:45 PM	0	1	0	1	0	0	3	3	0	0	0	0	0	0	0	0	4
Total	0	2	0	2	0	1	7	8	0	1	0	1	0	0	0	0	11
05:00 PM	0	3	0	3	0	0	1	1	0	2	0	2	0	0	0	0	6
05:15 PM	0	2	0	2	0	0	0	0	0	1	0	1	0	0	0	0	3
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	1	1	0	1	0	1	0	0	0	0	2
Total	0	5	0	5	0	0	2	2	0	4	0	4	0	0	0	0	11
Grand Total	0	7	0	7	0	1	9	10	0	5	0	5	0	0	0	0	22
Apprch %	0	100	0		0	10	90		0	100	0		0	0	0		
Total %	0	31.8	0	31.8	0	4.5	40.9	45.5	0	22.7	0	22.7	0	0	0	0	

98th Pl and Wentworth Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/30/2012
Page No : 7

Groups Printed- MU

	Wentworth Ave From North				98th Pl From East				Wentworth Ave From South				98th Pl From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
Grand Total	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
Apprch %	0	0	0		0	0	100		0	0	0		0	0	0		
Total %	0	0	0	0	0	0	100	100	0	0	0	0	0	0	0	0	

98th Pl and Wentworth Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 5/30/2012
Page No : 8

Groups Printed- Peds & Bikes

	Wentworth Ave Crossing North Leg			98th Pl Crossing East Leg			Wentworth Ave Crossing South Leg			98th Pl Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	1	1	0	3	3	4
04:30 PM	0	0	0	0	0	0	1	1	2	0	5	5	7
04:45 PM	0	1	1	0	1	1	0	0	0	0	0	0	2
Total	0	1	1	0	1	1	1	2	3	0	8	8	13
05:00 PM	0	0	0	0	0	0	0	1	1	0	0	0	1
05:15 PM	0	0	0	0	1	1	0	0	0	0	0	0	1
05:30 PM	0	1	1	0	2	2	0	0	0	0	0	0	3
05:45 PM	0	1	1	1	3	4	0	1	1	0	0	0	6
Total	0	2	2	1	6	7	0	2	2	0	0	0	11
Grand Total	0	3	3	1	7	8	1	4	5	0	8	8	24
Apprch %	0	100		12.5	87.5		20	80		0	100		
Total %	0	12.5	12.5	4.2	29.2	33.3	4.2	16.7	20.8	0	33.3	33.3	

99th Pl and Martin Luther King Dr
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/30/2012
Page No : 1

Groups Printed- PC - SU - MU

	Martin Luther King Dr From North				**99th Pl From East**				**Martin Luther King Dr From South**				**99th Pl From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	5	45	4	54	0	3	2	5	8	66	51	125	0	0	0	0	184
07:15 AM	4	57	3	64	0	1	2	3	6	78	64	148	0	0	0	0	215
07:30 AM	0	53	8	61	2	2	3	7	5	85	71	161	0	0	0	0	229
07:45 AM	4	92	15	111	1	3	3	7	23	121	65	209	0	0	0	0	327
Total	13	247	30	290	3	9	10	22	42	350	251	643	0	0	0	0	955
08:00 AM	4	69	12	85	1	1	1	3	15	104	69	188	0	0	0	0	276
08:15 AM	2	69	23	94	3	3	4	10	31	96	51	178	0	0	0	0	282
08:30 AM	7	58	20	85	0	0	8	8	22	90	59	171	0	0	0	0	264
08:45 AM	3	111	27	141	4	4	2	10	29	85	57	171	0	0	0	0	322
Total	16	307	82	405	8	8	15	31	97	375	236	708	0	0	0	0	1144
Grand Total	29	554	112	695	11	17	25	53	139	725	487	1351	0	0	0	0	2099
Apprch %	4.2	79.7	16.1		20.8	32.1	47.2		10.3	53.7	36		0	0	0		
Total %	1.4	26.4	5.3	33.1	0.5	0.8	1.2	2.5	6.6	34.5	23.2	64.4	0	0	0	0	
PC	27	526	112	665	11	16	25	52	138	700	476	1314	0	0	0	0	2031
% PC	93.1	94.9	100	95.7	100	94.1	100	98.1	99.3	96.6	97.7	97.3	0	0	0	0	96.8
SU	2	26	0	28	0	1	0	1	1	25	11	37	0	0	0	0	66
% SU	6.9	4.7	0	4	0	5.9	0	1.9	0.7	3.4	2.3	2.7	0	0	0	0	3.1
MU	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
% MU	0	0.4	0	0.3	0	0	0	0	0	0	0	0	0	0	0	0	0.1

	Martin Luther King Dr From North				**99th Pl From East**				**Martin Luther King Dr From South**				**99th Pl From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 09:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	4	**92**	15	**111**	1	**3**	3	7	23	**121**	65	**209**	0	0	0	0	**327**
08:00 AM	4	69	12	85	1	1	1	3	15	104	**69**	188	0	0	0	0	276
08:15 AM	2	69	**23**	94	**3**	3	4	**10**	**31**	96	51	178	0	0	0	0	282
08:30 AM	**7**	58	20	85	0	0	**8**	8	22	90	59	171	0	0	0	0	264
Total Volume	17	288	70	375	5	7	16	28	91	411	244	746	0	0	0	0	1149
% App. Total	4.5	76.8	18.7		17.9	25	57.1		12.2	55.1	32.7		0	0	0		
PHF	.607	.783	.761	.845	.417	.583	.500	.700	.734	.849	.884	.892	.000	.000	.000	.000	.878

99th Pl and Martin Luther King Dr
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/30/2012
Page No : 2

Groups Printed- SU

	Martin Luther King Dr From North				**99th Pl From East**				**Martin Luther King Dr From South**				**99th Pl From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	2	2	0	4	0	0	0	0	0	6	0	6	0	0	0	0	10
07:15 AM	0	4	0	4	0	0	0	0	1	2	2	5	0	0	0	0	9
07:30 AM	0	1	0	1	0	1	0	1	0	3	2	5	0	0	0	0	7
07:45 AM	0	8	0	8	0	0	0	0	0	5	0	5	0	0	0	0	13
Total	2	15	0	17	0	1	0	1	1	16	4	21	0	0	0	0	39
08:00 AM	0	2	0	2	0	0	0	0	0	2	0	2	0	0	0	0	4
08:15 AM	0	3	0	3	0	0	0	0	0	2	0	2	0	0	0	0	5
08:30 AM	0	3	0	3	0	0	0	0	0	3	3	6	0	0	0	0	9
08:45 AM	0	3	0	3	0	0	0	0	0	2	4	6	0	0	0	0	9
Total	0	11	0	11	0	0	0	0	0	9	7	16	0	0	0	0	27
Grand Total	2	26	0	28	0	1	0	1	1	25	11	37	0	0	0	0	66
Apprch %	7.1	92.9	0		0	100	0		2.7	67.6	29.7		0	0	0		
Total %	3	39.4	0	42.4	0	1.5	0	1.5	1.5	37.9	16.7	56.1	0	0	0	0	

99th Pl and Martin Luther King Dr
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/30/2012
Page No : 3

Groups Printed- MU

	Martin Luther King Dr From North				**99th Pl From East**				**Martin Luther King Dr From South**				**99th Pl From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Grand Total	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
Apprch %	0	100	0		0	0	0		0	0	0		0	0	0		
Total %	0	100	0	100	0	0	0	0	0	0	0	0	0	0	0	0	

99th Pl and Martin Luther King Dr
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 5/30/2012
Page No : 4

Groups Printed- Peds & Bikes

	Martin Luther King Dr Crossing North Leg			99th Pl Crossing East Leg			Martin Luther King Dr Crossing South Leg			99th Pl Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	1	1	0	0	0	0	1	1	2
07:30 AM	0	0	0	0	8	8	0	0	0	0	1	1	9
07:45 AM	0	0	0	0	1	1	0	0	0	0	1	1	2
Total	0	0	0	0	10	10	0	0	0	0	3	3	13
08:00 AM	0	2	2	1	9	10	0	0	0	0	0	0	12
08:15 AM	0	0	0	0	2	2	0	0	0	0	4	4	6
08:30 AM	0	0	0	0	2	2	0	0	0	0	3	3	5
08:45 AM	0	0	0	0	1	1	1	0	1	0	1	1	3
Total	0	2	2	1	14	15	1	0	1	0	8	8	26
Grand Total	0	2	2	1	24	25	1	0	1	0	11	11	39
Apprch %	0	100		4	96		100	0		0	100		
Total %	0	5.1	5.1	2.6	61.5	64.1	2.6	0	2.6	0	28.2	28.2	

99th Pl and Martin Luther King Dr
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/30/2012
Page No : 5

Groups Printed- PC - SU - MU

	Martin Luther King Dr From North				**99th Pl From East**				**Martin Luther King Dr From South**				**99th Pl From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	13	163	18	194	10	19	23	52	13	68	49	130	0	0	0	0	376
04:15 PM	16	206	6	228	10	19	21	50	17	61	23	101	0	0	0	0	379
04:30 PM	12	176	16	204	13	22	25	60	14	71	25	110	0	0	0	0	374
04:45 PM	9	272	33	314	9	20	12	41	19	67	33	119	0	0	0	0	474
Total	50	817	73	940	42	80	81	203	63	267	130	460	0	0	0	0	1603
05:00 PM	6	232	19	257	17	32	40	89	14	63	31	108	0	0	0	0	454
05:15 PM	21	192	19	232	7	31	37	75	8	43	44	95	0	0	0	0	402
05:30 PM	7	201	7	215	6	21	20	47	3	54	33	90	0	0	0	0	352
05:45 PM	10	187	14	211	8	10	13	31	6	50	30	86	0	0	0	0	328
Total	44	812	59	915	38	94	110	242	31	210	138	379	0	0	0	0	1536
Grand Total	94	1629	132	1855	80	174	191	445	94	477	268	839	0	0	0	0	3139
Apprch %	5.1	87.8	7.1		18	39.1	42.9		11.2	56.9	31.9		0	0	0		
Total %	3	51.9	4.2	59.1	2.5	5.5	6.1	14.2	3	15.2	8.5	26.7	0	0	0	0	
PC	94	1614	132	1840	80	174	191	445	93	467	268	828	0	0	0	0	3113
% PC	100	99.1	100	99.2	100	100	100	100	98.9	97.9	100	98.7	0	0	0	0	99.2
SU	0	14	0	14	0	0	0	0	1	10	0	11	0	0	0	0	25
% SU	0	0.9	0	0.8	0	0	0	0	1.1	2.1	0	1.3	0	0	0	0	0.8
MU	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
% MU	0	0.1	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0

	Martin Luther King Dr From North				**99th Pl From East**				**Martin Luther King Dr From South**				**99th Pl From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	12	176	16	204	13	22	25	60	14	**71**	25	110	0	0	0	0	374
04:45 PM	9	**272**	**33**	**314**	9	20	12	41	**19**	67	33	**119**	0	0	0	0	**474**
05:00 PM	6	232	19	257	**17**	**32**	**40**	**89**	14	63	31	108	0	0	0	0	454
05:15 PM	**21**	192	19	232	7	31	37	75	8	43	**44**	95	0	0	0	0	402
Total Volume	48	872	87	1007	46	105	114	265	55	244	133	432	0	0	0	0	1704
% App. Total	4.8	86.6	8.6		17.4	39.6	43		12.7	56.5	30.8		0	0	0		
PHF	.571	.801	.659	.802	.676	.820	.713	.744	.724	.859	.756	.908	.000	.000	.000	.000	.899

99th Pl and Martin Luther King Dr
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/30/2012
Page No : 6

Groups Printed- SU

	Martin Luther King Dr From North				**99th Pl From East**				**Martin Luther King Dr From South**				**99th Pl From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	2	0	2	0	0	0	0	0	2	0	2	0	0	0	0	4
04:15 PM	0	3	0	3	0	0	0	0	1	1	0	2	0	0	0	0	5
04:30 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:45 PM	0	3	0	3	0	0	0	0	0	2	0	2	0	0	0	0	5
Total	0	9	0	9	0	0	0	0	1	5	0	6	0	0	0	0	15
05:00 PM	0	2	0	2	0	0	0	0	0	1	0	1	0	0	0	0	3
05:15 PM	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
05:30 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:45 PM	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
Total	0	5	0	5	0	0	0	0	0	5	0	5	0	0	0	0	10
Grand Total	0	14	0	14	0	0	0	0	1	10	0	11	0	0	0	0	25
Apprch %	0	100	0		0	0	0		9.1	90.9	0		0	0	0		
Total %	0	56	0	56	0	0	0	0	4	40	0	44	0	0	0	0	

99th Pl and Martin Luther King Dr
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/30/2012
Page No : 7

Groups Printed- MU

	Martin Luther King Dr From North				**99th Pl From East**				**Martin Luther King Dr From South**				**99th Pl From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Grand Total	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Apprch %	0	100	0		0	0	0		0	0	0		0	0	0		
Total %	0	100	0	100	0	0	0	0	0	0	0	0	0	0	0	0	

99th Pl and Martin Luther King Dr
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 5/30/2012
Page No : 8

Groups Printed- Peds & Bikes

	Martin Luther King Dr Crossing North Leg			**99th Pl Crossing East Leg**			**Martin Luther King Dr Crossing South Leg**			**99th Pl Crossing West Leg**			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
04:00 PM	0	0	0	0	1	1	0	0	0	3	1	4	5
04:15 PM	0	0	0	0	0	0	0	0	0	0	2	2	2
04:30 PM	0	0	0	0	1	1	0	0	0	0	1	1	2
04:45 PM	0	0	0	1	2	3	0	0	0	0	7	7	10
Total	0	0	0	1	4	5	0	0	0	3	11	14	19
05:00 PM	0	0	0	0	0	0	0	0	0	0	2	2	2
05:15 PM	0	0	0	0	1	1	0	0	0	0	0	0	1
05:30 PM	0	0	0	0	3	3	0	0	0	0	1	1	4
05:45 PM	0	0	0	0	1	1	0	0	0	0	2	2	3
Total	0	0	0	0	5	5	0	0	0	0	5	5	10
Grand Total	0	0	0	1	9	10	0	0	0	3	16	19	29
Apprch %	0	0		10	90		0	0		15.8	84.2		
Total %	0	0	0	3.4	31	34.5	0	0	0	10.3	55.2	65.5	

99th St and Michigan Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/8/2012
Page No : 1

Groups Printed- PC - SU - MU

	Michigan Ave From North				**99th St From East**				**Michigan Ave From South**				**99th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	2	22	0	24	2	61	2	65	0	28	122	150	0	0	0	0	239
07:15 AM	6	28	0	34	5	74	0	79	0	42	144	186	0	0	0	0	299
07:30 AM	12	31	0	43	2	61	5	68	0	50	129	179	0	0	0	0	290
07:45 AM	9	47	0	56	4	61	2	67	0	73	137	210	0	0	0	0	333
Total	29	128	0	157	13	257	9	279	0	193	532	725	0	0	0	0	1161
08:00 AM	5	37	0	42	5	64	4	73	0	60	130	190	0	0	0	0	305
08:15 AM	5	47	0	52	2	53	8	63	0	36	98	134	0	0	0	0	249
08:30 AM	2	36	0	38	2	31	7	40	0	36	87	123	0	0	0	0	201
08:45 AM	1	47	0	48	3	50	13	66	0	42	94	136	0	0	0	0	250
Total	13	167	0	180	12	198	32	242	0	174	409	583	0	0	0	0	1005
Grand Total	42	295	0	337	25	455	41	521	0	367	941	1308	0	0	0	0	2166
Apprch %	12.5	87.5	0		4.8	87.3	7.9		0	28.1	71.9		0	0	0		
Total %	1.9	13.6	0	15.6	1.2	21	1.9	24.1	0	16.9	43.4	60.4	0	0	0	0	
PC	39	244	0	283	25	445	39	509	0	311	907	1218	0	0	0	0	2010
% PC	92.9	82.7	0	84	100	97.8	95.1	97.7	0	84.7	96.4	93.1	0	0	0	0	92.8
SU	3	51	0	54	0	10	2	12	0	55	31	86	0	0	0	0	152
% SU	7.1	17.3	0	16	0	2.2	4.9	2.3	0	15	3.3	6.6	0	0	0	0	7
MU	0	0	0	0	0	0	0	0	0	1	3	4	0	0	0	0	4
% MU	0	0	0	0	0	0	0	0	0	0.3	0.3	0.3	0	0	0	0	0.2

	Michigan Ave From North				**99th St From East**				**Michigan Ave From South**				**99th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	6	28	0	34	**5**	**74**	0	**79**	0	42	**144**	186	0	0	0	0	299
07:30 AM	**12**	31	0	43	2	61	**5**	68	0	50	129	179	0	0	0	0	290
07:45 AM	9	**47**	0	**56**	4	61	2	67	0	**73**	137	**210**	0	0	0	0	**333**
08:00 AM	5	37	0	42	5	64	4	73	0	60	130	190	0	0	0	0	305
Total Volume	32	143	0	175	16	260	11	287	0	225	540	765	0	0	0	0	1227
% App. Total	18.3	81.7	0		5.6	90.6	3.8		0	29.4	70.6		0	0	0		
PHF	.667	.761	.000	.781	.800	.878	.550	.908	.000	.771	.938	.911	.000	.000	.000	.000	.921

99th St and Michigan Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/8/2012
Page No : 2

Groups Printed- SU

	Michigan Ave From North				**99th St From East**				**Michigan Ave From South**				**99th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	6	0	6	0	2	0	2	0	8	6	14	0	0	0	0	22
07:15 AM	0	6	0	6	0	1	0	1	0	8	4	12	0	0	0	0	19
07:30 AM	1	7	0	8	0	1	0	1	0	5	3	8	0	0	0	0	17
07:45 AM	0	8	0	8	0	1	1	2	0	9	4	13	0	0	0	0	23
Total	1	27	0	28	0	5	1	6	0	30	17	47	0	0	0	0	81
08:00 AM	1	7	0	8	0	1	0	1	0	5	3	8	0	0	0	0	17
08:15 AM	1	4	0	5	0	1	1	2	0	9	2	11	0	0	0	0	18
08:30 AM	0	6	0	6	0	0	0	0	0	5	1	6	0	0	0	0	12
08:45 AM	0	7	0	7	0	3	0	3	0	6	8	14	0	0	0	0	24
Total	2	24	0	26	0	5	1	6	0	25	14	39	0	0	0	0	71
Grand Total	3	51	0	54	0	10	2	12	0	55	31	86	0	0	0	0	152
Apprch %	5.6	94.4	0		0	83.3	16.7		0	64	36		0	0	0		
Total %	2	33.6	0	35.5	0	6.6	1.3	7.9	0	36.2	20.4	56.6	0	0	0	0	

99th St and Michigan Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/8/2012
Page No : 3

Groups Printed- MU

	Michigan Ave From North				**99th St From East**				**Michigan Ave From South**				**99th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	2
08:00 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
08:15 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	2
Grand Total	0	0	0	0	0	0	0	0	0	1	3	4	0	0	0	0	4
Apprch %	0	0	0		0	0	0		0	25	75		0	0	0		
Total %	0	0	0	0	0	0	0	0	0	25	75	100	0	0	0	0	

99th St and Michigan Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 5/8/2012
Page No : 4

Groups Printed- Peds & Bikes

	Michigan Ave Crossing North Leg			99th St Crossing East Leg			Michigan Ave Crossing South Leg			99th St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
07:00 AM	0	0	0	0	5	5	0	0	0	0	0	0	5
07:15 AM	0	0	0	0	3	3	0	0	0	0	0	0	3
07:30 AM	0	0	0	0	4	4	0	0	0	0	0	0	4
07:45 AM	0	0	0	0	13	13	0	0	0	0	0	0	13
Total	0	0	0	0	25	25	0	0	0	0	0	0	25
08:00 AM	0	0	0	0	11	11	0	0	0	0	0	0	11
08:15 AM	0	0	0	0	2	2	0	0	0	0	0	0	2
08:30 AM	0	0	0	0	4	4	0	0	0	0	0	0	4
08:45 AM	0	4	4	0	0	0	0	0	0	0	0	0	4
Total	0	4	4	0	17	17	0	0	0	0	0	0	21
Grand Total	0	4	4	0	42	42	0	0	0	0	0	0	46
Apprch %	0	100		0	100		0	0		0	0		
Total %	0	8.7	8.7	0	91.3	91.3	0	0	0	0	0	0	

99th St and Michigan Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/8/2012
Page No : 5

Groups Printed- PC - SU - MU

	Michigan Ave From North				**99th St From East**				**Michigan Ave From South**				**99th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	9	82	0	91	1	58	8	67	0	27	52	79	0	0	0	0	237
04:15 PM	2	72	0	74	1	41	12	54	0	33	78	111	0	0	0	0	239
04:30 PM	9	71	0	80	2	42	5	49	0	42	68	110	0	0	0	0	239
04:45 PM	1	71	0	72	1	38	6	45	0	33	70	103	0	0	0	0	220
Total	21	296	0	317	5	179	31	215	0	135	268	403	0	0	0	0	935
05:00 PM	4	66	0	70	2	60	6	68	0	33	69	102	0	0	0	0	240
05:15 PM	2	66	0	68	0	81	7	88	0	32	60	92	0	0	0	0	248
05:30 PM	5	57	0	62	4	64	8	76	0	23	58	81	0	0	0	0	219
05:45 PM	5	67	0	72	3	51	8	62	0	32	66	98	0	0	0	0	232
Total	16	256	0	272	9	256	29	294	0	120	253	373	0	0	0	0	939
Grand Total	37	552	0	589	14	435	60	509	0	255	521	776	0	0	0	0	1874
Apprch %	6.3	93.7	0		2.8	85.5	11.8		0	32.9	67.1		0	0	0		
Total %	2	29.5	0	31.4	0.7	23.2	3.2	27.2	0	13.6	27.8	41.4	0	0	0	0	
PC	37	513	0	550	14	427	60	501	0	210	514	724	0	0	0	0	1775
% PC	100	92.9	0	93.4	100	98.2	100	98.4	0	82.4	98.7	93.3	0	0	0	0	94.7
SU	0	39	0	39	0	8	0	8	0	45	7	52	0	0	0	0	99
% SU	0	7.1	0	6.6	0	1.8	0	1.6	0	17.6	1.3	6.7	0	0	0	0	5.3
MU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% MU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	Michigan Ave From North				**99th St From East**				**Michigan Ave From South**				**99th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	6	28	0	34	**5**	**74**	0	**79**	0	42	**144**	186	0	0	0	0	299
07:30 AM	**12**	31	0	43	2	61	**5**	68	0	50	129	179	0	0	0	0	290
07:45 AM	9	**47**	0	**56**	4	61	2	67	0	**73**	137	**210**	0	0	0	0	**333**
08:00 AM	5	37	0	42	5	64	4	73	0	60	130	190	0	0	0	0	305
Total Volume	32	143	0	175	16	260	11	287	0	225	540	765	0	0	0	0	1227
% App. Total	18.3	81.7	0		5.6	90.6	3.8		0	29.4	70.6		0	0	0		
PHF	.667	.761	.000	.781	.800	.878	.550	.908	.000	.771	.938	.911	.000	.000	.000	.000	.921

99th St and Michigan Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/8/2012
Page No : 6

Groups Printed- SU

	Michigan Ave From North				**99th St From East**				**Michigan Ave From South**				**99th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	4	0	4	0	1	0	1	0	5	0	5	0	0	0	0	10
04:15 PM	0	5	0	5	0	1	0	1	0	7	2	9	0	0	0	0	15
04:30 PM	0	6	0	6	0	0	0	0	0	6	1	7	0	0	0	0	13
04:45 PM	0	5	0	5	0	2	0	2	0	6	2	8	0	0	0	0	15
Total	0	20	0	20	0	4	0	4	0	24	5	29	0	0	0	0	53
05:00 PM	0	6	0	6	0	1	0	1	0	5	1	6	0	0	0	0	13
05:15 PM	0	4	0	4	0	1	0	1	0	6	1	7	0	0	0	0	12
05:30 PM	0	3	0	3	0	0	0	0	0	3	0	3	0	0	0	0	6
05:45 PM	0	6	0	6	0	2	0	2	0	7	0	7	0	0	0	0	15
Total	0	19	0	19	0	4	0	4	0	21	2	23	0	0	0	0	46
Grand Total	0	39	0	39	0	8	0	8	0	45	7	52	0	0	0	0	99
Apprch %	0	100	0		0	100	0		0	86.5	13.5		0	0	0		
Total %	0	39.4	0	39.4	0	8.1	0	8.1	0	45.5	7.1	52.5	0	0	0	0	

99th St and Michigan Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/8/2012
Page No : 7

Groups Printed- MU

	Michigan Ave From North				**99th St From East**				**Michigan Ave From South**				**99th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0		0	0	0		0	0	0		0	0	0		
Total %																	

99th St and Michigan Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 5/8/2012
Page No : 8

Groups Printed- Peds & Bikes

	Michigan Ave Crossing North Leg			**99th St Crossing East Leg**			**Michigan Ave Crossing South Leg**			**99th St Crossing West Leg**			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
04:00 PM	0	0	0	0	3	3	0	0	0	0	0	0	3
04:15 PM	0	1	1	0	5	5	0	0	0	0	0	0	6
04:30 PM	0	1	1	0	3	3	0	0	0	0	0	0	4
04:45 PM	0	0	0	0	1	1	0	0	0	0	0	0	1
Total	0	2	2	0	12	12	0	0	0	0	0	0	14
05:00 PM	0	0	0	0	4	4	0	0	0	0	0	0	4
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	1	1	0	1	1	0	0	0	0	0	0	2
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	1	0	5	5	0	0	0	0	0	0	6
Grand Total	0	3	3	0	17	17	0	0	0	0	0	0	20
Apprch %	0	100		0	100		0	0		0	0		
Total %	0	15	15	0	85	85	0	0	0	0	0	0	

Regina Webster & Associates, Inc.

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99th St and State St
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/30/2012
Page No : 1

Groups Printed- PC - SU - MU

	State St From North				**99th St From East**				**State St From South**				**99th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	27	0	27	0	0	0	0	0	70	0	70	4	0	11	15	112
07:15 AM	0	27	0	27	0	0	0	0	0	71	0	71	5	0	11	16	114
07:30 AM	4	26	0	30	0	0	0	0	0	83	2	85	2	0	9	11	126
07:45 AM	0	56	0	56	0	0	0	0	0	92	3	95	0	0	15	15	166
Total	4	136	0	140	0	0	0	0	0	316	5	321	11	0	46	57	518
08:00 AM	3	34	0	37	0	0	0	0	0	72	3	75	7	0	18	25	137
08:15 AM	5	43	0	48	0	0	0	0	0	87	2	89	5	0	19	24	161
08:30 AM	2	39	0	41	0	0	0	0	0	66	1	67	8	0	5	13	121
08:45 AM	0	54	0	54	0	0	0	0	0	74	2	76	6	0	11	17	147
Total	10	170	0	180	0	0	0	0	0	299	8	307	26	0	53	79	566
Grand Total	14	306	0	320	0	0	0	0	0	615	13	628	37	0	99	136	1084
Apprch %	4.4	95.6	0		0	0	0		0	97.9	2.1		27.2	0	72.8		
Total %	1.3	28.2	0	29.5	0	0	0	0	0	56.7	1.2	57.9	3.4	0	9.1	12.5	
PC	14	296	0	310	0	0	0	0	0	601	13	614	35	0	98	133	1057
% PC	100	96.7	0	96.9	0	0	0	0	0	97.7	100	97.8	94.6	0	99	97.8	97.5
SU	0	9	0	9	0	0	0	0	0	12	0	12	2	0	1	3	24
% SU	0	2.9	0	2.8	0	0	0	0	0	2	0	1.9	5.4	0	1	2.2	2.2
MU	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
% MU	0	0.3	0	0.3	0	0	0	0	0	0.3	0	0.3	0	0	0	0	0.3

	State St From North				**99th St From East**				**State St From South**				**99th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	4	26	0	30	0	0	0	0	0	83	2	85	2	0	9	11	126
07:45 AM	0	**56**	0	**56**	0	0	0	0	0	**92**	**3**	**95**	0	0	15	15	**166**
08:00 AM	3	34	0	37	0	0	0	0	0	72	3	75	**7**	0	18	**25**	137
08:15 AM	**5**	43	0	48	0	0	0	0	0	87	2	89	5	0	**19**	24	161
Total Volume	12	159	0	171	0	0	0	0	0	334	10	344	14	0	61	75	590
% App. Total	7	93	0		0	0	0		0	97.1	2.9		18.7	0	81.3		
PHF	.600	.710	.000	.763	.000	.000	.000	.000	.000	.908	.833	.905	.500	.000	.803	.750	.889

99th St and State St
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/30/2012

Groups Printed- SU

	State St From North				**99th St From East**				**State St From South**				**99th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	5	0	5	0	0	0	0	0	3	0	3	1	0	0	1	9
07:15 AM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	1	1	3
07:30 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
07:45 AM	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
Total	0	6	0	6	0	0	0	0	0	8	0	8	1	0	1	2	16
08:00 AM	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
08:15 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:30 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
08:45 AM	0	1	0	1	0	0	0	0	0	1	0	1	1	0	0	1	3
Total	0	3	0	3	0	0	0	0	0	4	0	4	1	0	0	1	8
Grand Total	0	9	0	9	0	0	0	0	0	12	0	12	2	0	1	3	24
Apprch %	0	100	0		0	0	0		0	100	0		66.7	0	33.3		
Total %	0	37.5	0	37.5	0	0	0	0	0	50	0	50	8.3	0	4.2	12.5	

99th St and State St
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/30/2012
Page No : 3

Groups Printed- MU

	State St From North				**99th St From East**				**State St From South**				**99th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Total	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Grand Total	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
Apprch %	0	100	0		0	0	0		0	100	0		0	0	0		
Total %	0	33.3	0	33.3	0	0	0	0	0	66.7	0	66.7	0	0	0	0	

99th St and State St
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 5/30/2012
Page No : 4

Groups Printed- Peds & Bikes

	State St Crossing North Leg			**99th St Crossing East Leg**			**State St Crossing South Leg**			**99th St Crossing West Leg**			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	1	1	0	0	0	1
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	1	1	0	0	0	1
07:45 AM	0	0	0	0	0	0	0	1	1	0	0	0	1
Total	0	0	0	0	0	0	0	3	3	0	0	0	3
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	1	1	0	0	0	0	0	0	0	3	3	4
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	1	0	0	0	0	0	0	0	3	3	4
Grand Total	0	1	1	0	0	0	0	3	3	0	3	3	7
Apprch %	0	100		0	0		0	100		0	100		
Total %	0	14.3	14.3	0	0	0	0	42.9	42.9	0	42.9	42.9	

99th St and State St
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/30/2012
Page No : 5

Groups Printed- PC - SU - MU

	State St From North				**99th St From East**				**State St From South**				**99th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	2	47	0	49	0	0	0	0	0	43	5	48	6	0	16	22	119
04:15 PM	1	63	0	64	0	0	0	0	0	46	4	50	6	0	9	15	129
04:30 PM	2	44	0	46	0	0	0	0	0	44	2	46	6	0	6	12	104
04:45 PM	4	49	0	53	0	0	0	0	0	50	1	51	8	0	8	16	120
Total	9	203	0	212	0	0	0	0	0	183	12	195	26	0	39	65	472
05:00 PM	4	42	0	46	0	0	0	0	0	43	0	43	5	0	13	18	107
05:15 PM	3	57	0	60	0	0	0	0	0	28	3	31	5	0	5	10	101
05:30 PM	12	72	0	84	0	0	0	0	0	44	1	45	8	0	8	16	145
05:45 PM	3	51	0	54	0	0	0	0	0	34	4	38	14	0	11	25	117
Total	22	222	0	244	0	0	0	0	0	149	8	157	32	0	37	69	470
Grand Total	31	425	0	456	0	0	0	0	0	332	20	352	58	0	76	134	942
Apprch %	6.8	93.2	0		0	0	0		0	94.3	5.7		43.3	0	56.7		
Total %	3.3	45.1	0	48.4	0	0	0	0	0	35.2	2.1	37.4	6.2	0	8.1	14.2	
PC	31	423	0	454	0	0	0	0	0	327	20	347	57	0	76	133	934
% PC	100	99.5	0	99.6	0	0	0	0	0	98.5	100	98.6	98.3	0	100	99.3	99.2
SU	0	2	0	2	0	0	0	0	0	5	0	5	1	0	0	1	8
% SU	0	0.5	0	0.4	0	0	0	0	0	1.5	0	1.4	1.7	0	0	0.7	0.8
MU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% MU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	State St From North				**99th St From East**				**State St From South**				**99th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	4	49	0	53	0	0	0	0	0	**50**	1	**51**	**8**	0	8	16	120
05:00 PM	4	42	0	46	0	0	0	0	0	43	0	43	5	0	**13**	**18**	107
05:15 PM	3	57	0	60	0	0	0	0	0	28	**3**	31	5	0	5	10	101
05:30 PM	**12**	**72**	0	**84**	0	0	0	0	0	44	1	45	8	0	8	16	**145**
Total Volume	23	220	0	243	0	0	0	0	0	165	5	170	26	0	34	60	473
% App. Total	9.5	90.5	0		0	0	0		0	97.1	2.9		43.3	0	56.7		
PHF	.479	.764	.000	.723	.000	.000	.000	.000	.000	.825	.417	.833	.813	.000	.654	.833	.816

99th St and State St
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/30/2012
Page No : 6

Groups Printed- SU

	State St From North				99th St From East				State St From South				99th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	2	0	2	0	0	0	0	0	2	0	2	0	0	0	0	4
04:15 PM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
Total	0	2	0	2	0	0	0	0	0	4	0	4	1	0	0	1	7
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Grand Total	0	2	0	2	0	0	0	0	0	5	0	5	1	0	0	1	8
Apprch %	0	100	0		0	0	0		0	100	0		100	0	0		
Total %	0	25	0	25	0	0	0	0	0	62.5	0	62.5	12.5	0	0	12.5	

99th St and State St
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/30/2012

Groups Printed- MU

	State St From North				**99th St From East**				**State St From South**				**99th St From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0		0	0	0		0	0	0		0	0	0		
Total %																	

99th St and State St
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 5/30/2012
Page No : 8

Groups Printed- Peds & Bikes

	State St **Crossing North Leg**			**99th St** **Crossing East Leg**			**State St** **Crossing South Leg**			**99th St** **Crossing West Leg**			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	1	1	1
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	1	1	1
05:00 PM	0	0	0	0	0	0	0	0	0	0	2	2	2
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	2	2	2
Grand Total	0	0	0	0	0	0	0	0	0	0	3	3	3
Apprch %	0	0		0	0		0	0		0	100		
Total %	0	0	0	0	0	0	0	0	0	0	100	100	

99th St and Wentworth Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/5/2012
Page No : 1

Groups Printed- PC - SU - MU

	Wentworth Ave From North				99th St From East				Wentworth Ave From South				99th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	49	2	51	0	0	0	0	9	17	0	26	0	0	4	4	81
07:15 AM	0	57	3	60	2	0	0	2	6	41	0	47	3	3	2	8	117
07:30 AM	0	60	5	65	3	0	0	3	6	32	0	38	0	1	3	4	110
07:45 AM	0	71	6	77	4	0	2	6	12	32	0	44	3	2	2	7	134
Total	0	237	16	253	9	0	2	11	33	122	0	155	6	6	11	23	442
08:00 AM	0	67	13	80	5	0	1	6	5	29	0	34	2	1	2	5	125
08:15 AM	0	70	7	77	4	0	0	4	14	23	0	37	0	1	0	1	119
08:30 AM	0	64	8	72	1	0	0	1	12	32	0	44	3	3	3	9	126
08:45 AM	0	69	12	81	5	0	2	7	6	29	0	35	2	3	2	7	130
Total	0	270	40	310	15	0	3	18	37	113	0	150	7	8	7	22	500
Grand Total	0	507	56	563	24	0	5	29	70	235	0	305	13	14	18	45	942
Apprch %	0	90.1	9.9		82.8	0	17.2		23	77	0		28.9	31.1	40		
Total %	0	53.8	5.9	59.8	2.5	0	0.5	3.1	7.4	24.9	0	32.4	1.4	1.5	1.9	4.8	
PC	0	481	55	536	24	0	4	28	69	223	0	292	13	13	18	44	900
% PC	0	94.9	98.2	95.2	100	0	80	96.6	98.6	94.9	0	95.7	100	92.9	100	97.8	95.5
SU	0	25	1	26	0	0	1	1	1	12	0	13	0	1	0	1	41
% SU	0	4.9	1.8	4.6	0	0	20	3.4	1.4	5.1	0	4.3	0	7.1	0	2.2	4.4
MU	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
% MU	0	0.2	0	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0.1

	Wentworth Ave From North				99th St From East				Wentworth Ave From South				99th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	0	**71**	6	77	4	0	**2**	**6**	12	**32**	0	**44**	**3**	2	2	7	**134**
08:00 AM	0	67	**13**	**80**	**5**	0	1	6	5	29	0	34	2	1	2	5	125
08:15 AM	0	70	7	77	4	0	0	4	**14**	23	0	37	0	1	0	1	119
08:30 AM	0	64	8	72	1	0	0	1	12	32	0	44	3	**3**	**3**	**9**	126
Total Volume	0	272	34	306	14	0	3	17	43	116	0	159	8	7	7	22	504
% App. Total	0	88.9	11.1		82.4	0	17.6		27	73	0		36.4	31.8	31.8		
PHF	.000	.958	.654	.956	.700	.000	.375	.708	.768	.906	.000	.903	.667	.583	.583	.611	.940

99th St and Wentworth Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/5/2012
Page No : 2

Groups Printed- SU

	Wentworth Ave From North				99th St From East				Wentworth Ave From South				99th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	3	0	3	0	0	0	0	0	4	0	4	0	0	0	0	7
07:15 AM	0	1	0	1	0	0	0	0	0	2	0	2	0	1	0	1	4
07:30 AM	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
07:45 AM	0	6	0	6	0	0	0	0	0	0	0	0	0	0	0	0	6
Total	0	13	0	13	0	0	0	0	0	6	0	6	0	1	0	1	20
08:00 AM	0	4	0	4	0	0	0	0	0	2	0	2	0	0	0	0	6
08:15 AM	0	3	0	3	0	0	0	0	1	1	0	2	0	0	0	0	5
08:30 AM	0	3	0	3	0	0	0	0	0	3	0	3	0	0	0	0	6
08:45 AM	0	2	1	3	0	0	1	1	0	0	0	0	0	0	0	0	4
Total	0	12	1	13	0	0	1	1	1	6	0	7	0	0	0	0	21
Grand Total	0	25	1	26	0	0	1	1	1	12	0	13	0	1	0	1	41
Apprch %	0	96.2	3.8		0	0	100		7.7	92.3	0		0	100	0		
Total %	0	61	2.4	63.4	0	0	2.4	2.4	2.4	29.3	0	31.7	0	2.4	0	2.4	

99th St and Wentworth Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/5/2012
Page No : 3

Groups Printed- MU

	Wentworth Ave From North				99th St From East				Wentworth Ave From South				99th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Grand Total	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Apprch %	0	100	0		0	0	0		0	0	0		0	0	0		
Total %	0	100	0	100	0	0	0	0	0	0	0	0	0	0	0	0	

99th St and Wentworth Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 6/5/2012
Page No : 4

Groups Printed- Peds & Bikes

	Wentworth Ave Crossing North Leg			99th St Crossing East Leg			Wentworth Ave Crossing South Leg			99th St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	6	6	0	0	0	6
07:30 AM	0	0	0	0	0	0	0	2	2	0	2	2	4
07:45 AM	0	0	0	0	0	0	0	0	0	0	1	1	1
Total	0	0	0	0	0	0	0	8	8	0	3	3	11
08:00 AM	0	0	0	0	1	1	0	1	1	0	1	1	3
08:15 AM	0	0	0	0	1	1	0	0	0	0	1	1	2
08:30 AM	0	0	0	0	0	0	0	1	1	0	1	1	2
08:45 AM	0	4	4	0	4	4	0	0	0	0	1	1	9
Total	0	4	4	0	6	6	0	2	2	0	4	4	16
Grand Total	0	4	4	0	6	6	0	10	10	0	7	7	27
Apprch %	0	100		0	100		0	100		0	100		
Total %	0	14.8	14.8	0	22.2	22.2	0	37	37	0	25.9	25.9	

99th St and Wentworth Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/5/2012
Page No : 5

Groups Printed- PC - SU - MU

	Wentworth Ave From North				99th St From East				Wentworth Ave From South				99th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	83	15	98	2	0	0	2	4	16	0	20	3	2	1	6	126
04:15 PM	0	87	14	101	3	0	0	3	8	21	0	29	4	1	1	6	139
04:30 PM	0	87	6	93	1	0	1	2	8	20	0	28	7	0	5	12	135
04:45 PM	0	83	13	96	2	0	2	4	6	18	0	24	5	5	2	12	136
Total	0	340	48	388	8	0	3	11	26	75	0	101	19	8	9	36	536
05:00 PM	0	97	9	106	4	0	1	5	6	32	0	38	4	4	3	11	160
05:15 PM	0	84	9	93	3	0	0	3	6	24	0	30	5	2	4	11	137
05:30 PM	0	107	13	120	4	0	1	5	6	28	0	34	8	2	6	16	175
05:45 PM	0	82	13	95	4	0	1	5	8	22	0	30	5	3	0	8	138
Total	0	370	44	414	15	0	3	18	26	106	0	132	22	11	13	46	610
Grand Total	0	710	92	802	23	0	6	29	52	181	0	233	41	19	22	82	1146
Apprch %	0	88.5	11.5		79.3	0	20.7		22.3	77.7	0		50	23.2	26.8		
Total %	0	62	8	70	2	0	0.5	2.5	4.5	15.8	0	20.3	3.6	1.7	1.9	7.2	
PC	0	706	92	798	23	0	6	29	52	179	0	231	41	19	22	82	1140
% PC	0	99.4	100	99.5	100	0	100	100	100	98.9	0	99.1	100	100	100	100	99.5
SU	0	4	0	4	0	0	0	0	0	2	0	2	0	0	0	0	6
% SU	0	0.6	0	0.5	0	0	0	0	0	1.1	0	0.9	0	0	0	0	0.5
MU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% MU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	Wentworth Ave From North				99th St From East				Wentworth Ave From South				99th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	97	9	106	**4**	0	**1**	**5**	6	**32**	0	**38**	4	**4**	3	11	160
05:15 PM	0	84	9	93	3	0	0	3	6	24	0	30	5	2	4	11	137
05:30 PM	0	**107**	**13**	**120**	4	0	1	5	6	28	0	34	**8**	2	**6**	**16**	**175**
05:45 PM	0	82	13	95	4	0	1	5	**8**	22	0	30	5	3	0	8	138
Total Volume	0	370	44	414	15	0	3	18	26	106	0	132	22	11	13	46	610
% App. Total	0	89.4	10.6		83.3	0	16.7		19.7	80.3	0		47.8	23.9	28.3		
PHF	.000	.864	.846	.863	.938	.000	.750	.900	.813	.828	.000	.868	.688	.688	.542	.719	.871

99th St and Wentworth Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/5/2012

Groups Printed- SU

	Wentworth Ave From North				99th St From East				Wentworth Ave From South				99th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:15 PM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
04:30 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	3	0	3	0	0	0	0	0	1	0	1	0	0	0	0	4
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
05:30 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
Grand Total	0	4	0	4	0	0	0	0	0	2	0	2	0	0	0	0	6
Apprch %	0	100	0		0	0	0		0	100	0		0	0	0		
Total %	0	66.7	0	66.7	0	0	0	0	0	33.3	0	33.3	0	0	0	0	

99th St and Wentworth Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/5/2012
Page No : 7

Groups Printed- MU

	Wentworth Ave From North				99th St From East				Wentworth Ave From South				99th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0		0	0	0		0	0	0		0	0	0		
Total %																	

99th St and Wentworth Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 6/5/2012
Page No : 8

Groups Printed- Peds & Bikes

	Wentworth Ave Crossing North Leg			99th St Crossing East Leg			Wentworth Ave Crossing South Leg			99th St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
04:00 PM	0	0	0	0	3	3	0	7	7	0	2	2	12
04:15 PM	0	0	0	1	2	3	0	4	4	0	3	3	10
04:30 PM	0	0	0	0	5	5	1	1	2	0	0	0	7
04:45 PM	0	0	0	1	1	2	0	1	1	0	0	0	3
Total	0	0	0	2	11	13	1	13	14	0	5	5	32
05:00 PM	0	1	1	2	2	4	0	5	5	0	0	0	10
05:15 PM	0	0	0	0	4	4	0	1	1	1	1	2	7
05:30 PM	0	0	0	0	1	1	2	4	6	0	0	0	7
05:45 PM	0	0	0	0	3	3	0	1	1	0	0	0	4
Total	0	1	1	2	10	12	2	11	13	1	1	2	28
Grand Total	0	1	1	4	21	25	3	24	27	1	6	7	60
Apprch %	0	100		16	84		11.1	88.9		14.3	85.7		
Total %	0	1.7	1.7	6.7	35	41.7	5	40	45	1.7	10	11.7	

Ashland Ave and Vermont Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/22/2012
Page No : 1

Groups Printed- PC - SU - MU

	Ashland Ave From North				**Vermont Ave From East**				**Ashland Ave From South**				**Vermont Ave From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	5	50	14	69	14	25	11	50	10	65	75	150	47	19	12	78	347
07:15 AM	8	56	22	86	10	24	6	40	12	81	93	186	41	16	4	61	373
07:30 AM	11	50	14	75	17	26	7	50	14	94	81	189	55	28	9	92	406
07:45 AM	21	62	26	109	29	48	14	91	16	101	78	195	59	20	11	90	485
Total	45	218	76	339	70	123	38	231	52	341	327	720	202	83	36	321	1611
08:00 AM	11	79	27	117	22	34	13	69	19	97	76	192	52	33	21	106	484
08:15 AM	11	67	24	102	17	31	13	61	13	83	88	184	63	25	9	97	444
08:30 AM	13	45	24	82	22	32	15	69	16	79	86	181	72	15	7	94	426
08:45 AM	11	87	24	122	18	27	17	62	14	82	75	171	47	16	9	72	427
Total	46	278	99	423	79	124	58	261	62	341	325	728	234	89	46	369	1781
Grand Total	91	496	175	762	149	247	96	492	114	682	652	1448	436	172	82	690	3392
Apprch %	11.9	65.1	23		30.3	50.2	19.5		7.9	47.1	45		63.2	24.9	11.9		
Total %	2.7	14.6	5.2	22.5	4.4	7.3	2.8	14.5	3.4	20.1	19.2	42.7	12.9	5.1	2.4	20.3	
PC	91	475	170	736	138	232	84	454	109	640	615	1364	414	165	77	656	3210
% PC	100	95.8	97.1	96.6	92.6	93.9	87.5	92.3	95.6	93.8	94.3	94.2	95	95.9	93.9	95.1	94.6
SU	0	17	4	21	8	13	8	29	5	30	34	69	20	7	5	32	151
% SU	0	3.4	2.3	2.8	5.4	5.3	8.3	5.9	4.4	4.4	5.2	4.8	4.6	4.1	6.1	4.6	4.5
MU	0	4	1	5	3	2	4	9	0	12	3	15	2	0	0	2	31
% MU	0	0.8	0.6	0.7	2	0.8	4.2	1.8	0	1.8	0.5	1	0.5	0	0	0.3	0.9

	Ashland Ave From North				**Vermont Ave From East**				**Ashland Ave From South**				**Vermont Ave From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	**21**	62	26	109	**29**	**48**	14	**91**	16	**101**	78	**195**	59	20	11	90	**485**
08:00 AM	11	**79**	**27**	**117**	22	34	13	69	**19**	97	76	192	52	**33**	**21**	**106**	484
08:15 AM	11	67	24	102	17	31	13	61	13	83	**88**	184	63	25	9	97	444
08:30 AM	13	45	24	82	22	32	**15**	69	16	79	86	181	**72**	15	7	94	426
Total Volume	56	253	101	410	90	145	55	290	64	360	328	752	246	93	48	387	1839
% App. Total	13.7	61.7	24.6		31	50	19		8.5	47.9	43.6		63.6	24	12.4		
PHF	.667	.801	.935	.876	.776	.755	.917	.797	.842	.891	.932	.964	.854	.705	.571	.913	.948

Ashland Ave and Vermont Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/22/2012
Page No : 2

Groups Printed- SU

	Ashland Ave From North				**Vermont Ave From East**				**Ashland Ave From South**				**Vermont Ave From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	2	0	2	2	2	1	5	2	5	3	10	1	1	1	3	20
07:15 AM	0	0	1	1	2	0	0	2	0	5	12	17	4	0	1	5	25
07:30 AM	0	3	0	3	0	1	0	1	0	2	5	7	4	3	0	7	18
07:45 AM	0	2	0	2	1	3	4	8	2	5	2	9	2	0	0	2	21
Total	0	7	1	8	5	6	5	16	4	17	22	43	11	4	2	17	84
08:00 AM	0	3	1	4	0	1	0	1	1	6	3	10	1	2	2	5	20
08:15 AM	0	1	1	2	1	2	0	3	0	1	1	2	4	0	0	4	11
08:30 AM	0	0	0	0	1	0	2	3	0	4	3	7	3	0	1	4	14
08:45 AM	0	6	1	7	1	4	1	6	0	2	5	7	1	1	0	2	22
Total	0	10	3	13	3	7	3	13	1	13	12	26	9	3	3	15	67
Grand Total	0	17	4	21	8	13	8	29	5	30	34	69	20	7	5	32	151
Apprch %	0	81	19		27.6	44.8	27.6		7.2	43.5	49.3		62.5	21.9	15.6		
Total %	0	11.3	2.6	13.9	5.3	8.6	5.3	19.2	3.3	19.9	22.5	45.7	13.2	4.6	3.3	21.2	

Ashland Ave and Vermont Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/22/2012
Page No : 3

Groups Printed- MU

	Ashland Ave From North				**Vermont Ave From East**				**Ashland Ave From South**				**Vermont Ave From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	1	0	1	0	0	1	1	0	1	0	1	0	0	0	0	3
07:15 AM	0	2	0	2	1	0	0	1	0	0	0	0	0	0	0	0	3
07:30 AM	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	2
07:45 AM	0	0	0	0	2	0	1	3	0	3	0	3	0	0	0	0	6
Total	0	3	0	3	3	0	2	5	0	5	1	6	0	0	0	0	14
08:00 AM	0	0	0	0	0	1	1	2	0	1	1	2	1	0	0	1	5
08:15 AM	0	0	1	1	0	0	0	0	0	3	0	3	1	0	0	1	5
08:30 AM	0	0	0	0	0	0	0	0	0	2	1	3	0	0	0	0	3
08:45 AM	0	1	0	1	0	1	1	2	0	1	0	1	0	0	0	0	4
Total	0	1	1	2	0	2	2	4	0	7	2	9	2	0	0	2	17
Grand Total	0	4	1	5	3	2	4	9	0	12	3	15	2	0	0	2	31
Apprch %	0	80	20		33.3	22.2	44.4		0	80	20		100	0	0		
Total %	0	12.9	3.2	16.1	9.7	6.5	12.9	29	0	38.7	9.7	48.4	6.5	0	0	6.5	

Ashland Ave and Vermont Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 5/22/2012
Page No : 4

Groups Printed- Peds & Bikes

	Ashland Ave Crossing North Leg			Vermont Ave Crossing East Leg			Ashland Ave Crossing South Leg			Vermont Ave Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
07:00 AM	0	1	1	0	0	0	0	0	0	0	1	1	2
07:15 AM	0	4	4	0	0	0	0	0	0	0	0	0	4
07:30 AM	0	5	5	0	1	1	0	0	0	0	1	1	7
07:45 AM	0	5	5	0	1	1	0	0	0	0	0	0	6
Total	0	15	15	0	2	2	0	0	0	0	2	2	19
08:00 AM	0	6	6	0	0	0	0	0	0	0	0	0	6
08:15 AM	0	4	4	0	0	0	0	0	0	0	0	0	4
08:30 AM	0	2	2	0	0	0	0	1	1	0	0	0	3
08:45 AM	0	1	1	0	0	0	0	0	0	0	0	0	1
Total	0	13	13	0	0	0	0	1	1	0	0	0	14
Grand Total	0	28	28	0	2	2	0	1	1	0	2	2	33
Apprch %	0	100		0	100		0	100		0	100		
Total %	0	84.8	84.8	0	6.1	6.1	0	3	3	0	6.1	6.1	

Ashland Ave and Vermont Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/22/2012
Page No : 5

Groups Printed- PC - SU - MU

	Ashland Ave From North				**Vermont Ave From East**				**Ashland Ave From South**				**Vermont Ave From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	16	110	42	168	28	38	17	83	16	84	99	199	70	23	9	102	552
04:15 PM	18	107	50	175	18	40	15	73	15	84	80	179	84	47	14	145	572
04:30 PM	14	94	53	161	24	35	8	67	16	105	92	213	85	32	10	127	568
04:45 PM	17	101	31	149	18	34	17	69	11	86	83	180	63	35	14	112	510
Total	65	412	176	653	88	147	57	292	58	359	354	771	302	137	47	486	2202
05:00 PM	14	99	52	165	32	41	20	93	23	86	83	192	127	53	18	198	648
05:15 PM	21	115	53	189	9	43	8	60	16	84	102	202	86	48	10	144	595
05:30 PM	12	97	47	156	25	39	5	69	22	70	90	182	88	52	8	148	555
05:45 PM	9	97	54	160	21	41	23	85	17	100	87	204	66	40	10	116	565
Total	56	408	206	670	87	164	56	307	78	340	362	780	367	193	46	606	2363
Grand Total	121	820	382	1323	175	311	113	599	136	699	716	1551	669	330	93	1092	4565
Apprch %	9.1	62	28.9		29.2	51.9	18.9		8.8	45.1	46.2		61.3	30.2	8.5		
Total %	2.7	18	8.4	29	3.8	6.8	2.5	13.1	3	15.3	15.7	34	14.7	7.2	2	23.9	
PC	120	801	379	1300	172	309	112	593	135	683	702	1520	657	324	91	1072	4485
% PC	99.2	97.7	99.2	98.3	98.3	99.4	99.1	99	99.3	97.7	98	98	98.2	98.2	97.8	98.2	98.2
SU	1	12	2	15	1	2	1	4	1	12	10	23	8	6	2	16	58
% SU	0.8	1.5	0.5	1.1	0.6	0.6	0.9	0.7	0.7	1.7	1.4	1.5	1.2	1.8	2.2	1.5	1.3
MU	0	7	1	8	2	0	0	2	0	4	4	8	4	0	0	4	22
% MU	0	0.9	0.3	0.6	1.1	0	0	0.3	0	0.6	0.6	0.5	0.6	0	0	0.4	0.5

	Ashland Ave From North				**Vermont Ave From East**				**Ashland Ave From South**				**Vermont Ave From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	14	99	52	165	**32**	41	20	**93**	**23**	86	83	192	**127**	**53**	**18**	**198**	**648**
05:15 PM	**21**	**115**	53	**189**	9	**43**	8	60	16	84	**102**	202	86	48	10	144	595
05:30 PM	12	97	47	156	25	39	5	69	22	70	90	182	88	52	8	148	555
05:45 PM	9	97	**54**	160	21	41	**23**	85	17	**100**	87	**204**	66	40	10	116	565
Total Volume	56	408	206	670	87	164	56	307	78	340	362	780	367	193	46	606	2363
% App. Total	8.4	60.9	30.7		28.3	53.4	18.2		10	43.6	46.4		60.6	31.8	7.6		
PHF	.667	.887	.954	.886	.680	.953	.609	.825	.848	.850	.887	.956	.722	.910	.639	.765	.912

Ashland Ave and Vermont Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/22/2012
Page No : 6

Groups Printed- SU

	Ashland Ave From North				**Vermont Ave From East**				**Ashland Ave From South**				**Vermont Ave From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	2	0	2	0	0	0	0	0	3	3	6	1	0	1	2	10
04:15 PM	0	0	0	0	0	1	0	1	0	2	2	4	1	1	1	3	8
04:30 PM	0	2	0	2	0	0	1	1	1	2	1	4	1	2	0	3	10
04:45 PM	1	3	0	4	0	0	0	0	0	2	0	2	0	0	0	0	6
Total	1	7	0	8	0	1	1	2	1	9	6	16	3	3	2	8	34
05:00 PM	0	3	2	5	0	0	0	0	0	0	0	0	4	1	0	5	10
05:15 PM	0	0	0	0	0	1	0	1	0	2	2	4	1	0	0	1	6
05:30 PM	0	2	0	2	1	0	0	1	0	0	2	2	0	1	0	1	6
05:45 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	1	2
Total	0	5	2	7	1	1	0	2	0	3	4	7	5	3	0	8	24
Grand Total	1	12	2	15	1	2	1	4	1	12	10	23	8	6	2	16	58
Apprch %	6.7	80	13.3		25	50	25		4.3	52.2	43.5		50	37.5	12.5		
Total %	1.7	20.7	3.4	25.9	1.7	3.4	1.7	6.9	1.7	20.7	17.2	39.7	13.8	10.3	3.4	27.6	

Ashland Ave and Vermont Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/22/2012
Page No : 7

Groups Printed- MU

	Ashland Ave From North				**Vermont Ave From East**				**Ashland Ave From South**				**Vermont Ave From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	2	0	2	1	0	0	1	0	0	0	0	1	0	0	1	4
04:15 PM	0	2	0	2	0	0	0	0	0	1	0	1	0	0	0	0	3
04:30 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
04:45 PM	0	1	0	1	1	0	0	1	0	2	1	3	0	0	0	0	5
Total	0	5	0	5	2	0	0	2	0	3	2	5	1	0	0	1	13
05:00 PM	0	1	0	1	0	0	0	0	0	0	0	0	1	0	0	1	2
05:15 PM	0	0	1	1	0	0	0	0	0	0	0	0	1	0	0	1	2
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
05:45 PM	0	1	0	1	0	0	0	0	0	1	2	3	0	0	0	0	4
Total	0	2	1	3	0	0	0	0	0	1	2	3	3	0	0	3	9
Grand Total	0	7	1	8	2	0	0	2	0	4	4	8	4	0	0	4	22
Apprch %	0	87.5	12.5		100	0	0		0	50	50		100	0	0		
Total %	0	31.8	4.5	36.4	9.1	0	0	9.1	0	18.2	18.2	36.4	18.2	0	0	18.2	

Ashland Ave and Vermont Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 5/22/2012
Page No : 8

Groups Printed- Peds & Bikes

	Ashland Ave Crossing North Leg			**Vermont Ave Crossing East Leg**			**Ashland Ave Crossing South Leg**			**Vermont Ave Crossing West Leg**			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
04:00 PM	0	7	7	0	4	4	0	5	5	0	3	3	19
04:15 PM	0	8	8	0	0	0	0	4	4	0	3	3	15
04:30 PM	0	3	3	0	0	0	0	3	3	0	1	1	7
04:45 PM	0	0	0	0	0	0	0	3	3	0	2	2	5
Total	0	18	18	0	4	4	0	15	15	0	9	9	46
05:00 PM	0	4	4	0	0	0	0	0	0	0	1	1	5
05:15 PM	0	0	0	0	0	0	0	2	2	0	2	2	4
05:30 PM	0	3	3	0	0	0	0	1	1	0	2	2	6
05:45 PM	0	5	5	0	0	0	0	0	0	0	0	0	5
Total	0	12	12	0	0	0	0	3	3	0	5	5	20
Grand Total	0	30	30	0	4	4	0	18	18	0	14	14	66
Apprch %	0	100		0	100		0	100		0	100		
Total %	0	45.5	45.5	0	6.1	6.1	0	27.3	27.3	0	21.2	21.2	

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Halsted St and Vermont Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/17/2012
Page No : 1

Groups Printed- PC - SU - MU

	Halsted St From North				**Vermont Ave From East**				**Halsted St From South**				**Vermont Ave From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	4	53	3	60	1	16	11	28	17	146	6	169	11	26	9	46	303
07:15 AM	4	53	5	62	2	18	18	38	20	157	3	180	6	19	4	29	309
07:30 AM	7	74	1	82	4	26	11	41	20	146	5	171	9	19	15	43	337
07:45 AM	9	66	3	78	4	33	15	52	24	130	7	161	6	20	9	35	326
Total	24	246	12	282	11	93	55	159	81	579	21	681	32	84	37	153	1275
08:00 AM	10	71	2	83	0	32	21	53	13	126	11	150	11	19	4	34	320
08:15 AM	9	80	2	91	3	20	12	35	8	127	8	143	11	32	12	55	324
08:30 AM	8	71	0	79	4	22	13	39	29	118	13	160	6	31	9	46	324
08:45 AM	9	87	5	101	2	31	9	42	11	111	12	134	7	19	7	33	310
Total	36	309	9	354	9	105	55	169	61	482	44	587	35	101	32	168	1278
Grand Total	60	555	21	636	20	198	110	328	142	1061	65	1268	67	185	69	321	2553
Apprch %	9.4	87.3	3.3		6.1	60.4	33.5		11.2	83.7	5.1		20.9	57.6	21.5		
Total %	2.4	21.7	0.8	24.9	0.8	7.8	4.3	12.8	5.6	41.6	2.5	49.7	2.6	7.2	2.7	12.6	
PC	58	516	12	586	20	191	103	314	129	1015	61	1205	63	176	68	307	2412
% PC	96.7	93	57.1	92.1	100	96.5	93.6	95.7	90.8	95.7	93.8	95	94	95.1	98.6	95.6	94.5
SU	2	26	9	37	0	5	3	8	3	36	4	43	4	6	1	11	99
% SU	3.3	4.7	42.9	5.8	0	2.5	2.7	2.4	2.1	3.4	6.2	3.4	6	3.2	1.4	3.4	3.9
MU	0	13	0	13	0	2	4	6	10	10	0	20	0	3	0	3	42
% MU	0	2.3	0	2	0	1	3.6	1.8	7	0.9	0	1.6	0	1.6	0	0.9	1.6

	Halsted St From North				**Vermont Ave From East**				**Halsted St From South**				**Vermont Ave From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	7	74	1	82	**4**	26	11	41	20	**146**	5	**171**	9	19	**15**	43	**337**
07:45 AM	9	66	**3**	78	4	**33**	15	52	**24**	130	7	161	6	20	9	35	326
08:00 AM	**10**	71	2	83	0	32	**21**	**53**	13	126	**11**	150	**11**	19	4	34	320
08:15 AM	9	**80**	2	**91**	3	20	12	35	8	127	8	143	11	**32**	12	**55**	324
Total Volume	35	291	8	334	11	111	59	181	65	529	31	625	37	90	40	167	1307
% App. Total	10.5	87.1	2.4		6.1	61.3	32.6		10.4	84.6	5		22.2	53.9	24		
PHF	.875	.909	.667	.918	.688	.841	.702	.854	.677	.906	.705	.914	.841	.703	.667	.759	.970

Halsted St and Vermont Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/17/2012
Page No : 2

Groups Printed- SU

	Halsted St From North				**Vermont Ave From East**				**Halsted St From South**				**Vermont Ave From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	4	1	5	0	0	0	0	1	7	1	9	0	0	0	0	14
07:15 AM	0	5	2	7	0	0	0	0	2	6	0	8	0	1	0	1	16
07:30 AM	1	2	1	4	0	1	0	1	0	8	0	8	1	0	1	2	15
07:45 AM	0	2	1	3	0	1	0	1	0	3	0	3	0	1	0	1	8
Total	1	13	5	19	0	2	0	2	3	24	1	28	1	2	1	4	53
08:00 AM	1	3	1	5	0	0	0	0	0	1	1	2	0	0	0	0	7
08:15 AM	0	5	1	6	0	0	0	0	0	3	0	3	1	2	0	3	12
08:30 AM	0	2	0	2	0	1	3	4	0	7	1	8	1	1	0	2	16
08:45 AM	0	3	2	5	0	2	0	2	0	1	1	2	1	1	0	2	11
Total	1	13	4	18	0	3	3	6	0	12	3	15	3	4	0	7	46
Grand Total	2	26	9	37	0	5	3	8	3	36	4	43	4	6	1	11	99
Apprch %	5.4	70.3	24.3		0	62.5	37.5		7	83.7	9.3		36.4	54.5	9.1		
Total %	2	26.3	9.1	37.4	0	5.1	3	8.1	3	36.4	4	43.4	4	6.1	1	11.1	

Halsted St and Vermont Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/17/2012
Page No : 3

Groups Printed- MU

	Halsted St From North				**Vermont Ave From East**				**Halsted St From South**				**Vermont Ave From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	1	0	1	0	0	0	0	2	0	0	2	0	2	0	2	5
07:15 AM	0	4	0	4	0	0	1	1	0	2	0	2	0	0	0	0	7
07:30 AM	0	1	0	1	0	0	1	1	1	2	0	3	0	0	0	0	5
07:45 AM	0	0	0	0	0	1	0	1	0	1	0	1	0	0	0	0	2
Total	0	6	0	6	0	1	2	3	3	5	0	8	0	2	0	2	19
08:00 AM	0	1	0	1	0	1	1	2	4	1	0	5	0	0	0	0	8
08:15 AM	0	2	0	2	0	0	1	1	0	1	0	1	0	1	0	1	5
08:30 AM	0	2	0	2	0	0	0	0	2	0	0	2	0	0	0	0	4
08:45 AM	0	2	0	2	0	0	0	0	1	3	0	4	0	0	0	0	6
Total	0	7	0	7	0	1	2	3	7	5	0	12	0	1	0	1	23
Grand Total	0	13	0	13	0	2	4	6	10	10	0	20	0	3	0	3	42
Apprch %	0	100	0		0	33.3	66.7		50	50	0		0	100	0		
Total %	0	31	0	31	0	4.8	9.5	14.3	23.8	23.8	0	47.6	0	7.1	0	7.1	

Halsted St and Vermont Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 5/17/2012
Page No : 4

Groups Printed- Peds & Bikes

	Halsted St Crossing North Leg			**Vermont Ave Crossing East Leg**			**Halsted St Crossing South Leg**			**Vermont Ave Crossing West Leg**			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
07:00 AM	0	1	1	0	0	0	0	1	1	0	2	2	4
07:15 AM	0	4	4	0	1	1	0	2	2	0	0	0	7
07:30 AM	0	1	1	0	1	1	0	0	0	0	0	0	2
07:45 AM	0	1	1	0	2	2	0	3	3	0	0	0	6
Total	0	7	7	0	4	4	0	6	6	0	2	2	19
08:00 AM	0	5	5	0	3	3	3	7	10	0	3	3	21
08:15 AM	0	3	3	0	0	0	1	6	7	0	1	1	11
08:30 AM	0	3	3	0	7	7	1	11	12	0	5	5	27
08:45 AM	0	0	0	0	5	5	0	7	7	0	0	0	12
Total	0	11	11	0	15	15	5	31	36	0	9	9	71
Grand Total	0	18	18	0	19	19	5	37	42	0	11	11	90
Apprch %	0	100		0	100		11.9	88.1		0	100		
Total %	0	20	20	0	21.1	21.1	5.6	41.1	46.7	0	12.2	12.2	

Halsted St and Vermont Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/17/2012
Page No : 5

Groups Printed- PC - SU - MU

	Halsted St From North				**Vermont Ave From East**				**Halsted St From South**				**Vermont Ave From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	14	125	7	146	4	23	16	43	22	117	16	155	11	34	8	53	397
04:15 PM	14	128	6	148	6	31	19	56	19	119	19	157	15	51	15	81	442
04:30 PM	13	138	5	156	3	27	20	50	18	122	9	149	14	48	17	79	434
04:45 PM	21	130	7	158	3	44	24	71	13	95	12	120	14	43	19	76	425
Total	62	521	25	608	16	125	79	220	72	453	56	581	54	176	59	289	1698
05:00 PM	21	116	10	147	6	25	18	49	15	99	11	125	24	46	17	87	408
05:15 PM	13	130	4	147	8	37	24	69	20	104	21	145	68	44	13	125	486
05:30 PM	11	157	8	176	4	31	18	53	22	100	16	138	21	53	17	91	458
05:45 PM	9	134	5	148	4	36	24	64	14	106	16	136	23	55	20	98	446
Total	54	537	27	618	22	129	84	235	71	409	64	544	136	198	67	401	1798
Grand Total	116	1058	52	1226	38	254	163	455	143	862	120	1125	190	374	126	690	3496
Apprch %	9.5	86.3	4.2		8.4	55.8	35.8		12.7	76.6	10.7		27.5	54.2	18.3		
Total %	3.3	30.3	1.5	35.1	1.1	7.3	4.7	13	4.1	24.7	3.4	32.2	5.4	10.7	3.6	19.7	
PC	115	1027	42	1184	38	252	157	447	137	833	117	1087	188	371	125	684	3402
% PC	99.1	97.1	80.8	96.6	100	99.2	96.3	98.2	95.8	96.6	97.5	96.6	98.9	99.2	99.2	99.1	97.3
SU	1	25	10	36	0	2	4	6	3	24	2	29	2	3	1	6	77
% SU	0.9	2.4	19.2	2.9	0	0.8	2.5	1.3	2.1	2.8	1.7	2.6	1.1	0.8	0.8	0.9	2.2
MU	0	6	0	6	0	0	2	2	3	5	1	9	0	0	0	0	17
% MU	0	0.6	0	0.5	0	0	1.2	0.4	2.1	0.6	0.8	0.8	0	0	0	0	0.5

	Halsted St From North				**Vermont Ave From East**				**Halsted St From South**				**Vermont Ave From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	**21**	116	**10**	147	6	25	18	49	15	99	11	125	24	46	17	87	408
05:15 PM	13	130	4	147	**8**	**37**	**24**	**69**	20	104	**21**	**145**	**68**	44	13	**125**	**486**
05:30 PM	11	**157**	8	**176**	4	31	18	53	**22**	100	16	138	21	53	17	91	458
05:45 PM	9	134	5	148	4	36	24	64	14	**106**	16	136	23	**55**	**20**	98	446
Total Volume	54	537	27	618	22	129	84	235	71	409	64	544	136	198	67	401	1798
% App. Total	8.7	86.9	4.4		9.4	54.9	35.7		13.1	75.2	11.8		33.9	49.4	16.7		
PHF	.643	.855	.675	.878	.688	.872	.875	.851	.807	.965	.762	.938	.500	.900	.838	.802	.925

Halsted St and Vermont Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/17/2012
Page No : 6

Groups Printed- SU

	Halsted St From North				Vermont Ave From East				Halsted St From South				Vermont Ave From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	6	1	7	0	0	0	0	0	8	0	8	0	0	0	0	15
04:15 PM	0	3	2	5	0	1	0	1	0	3	1	4	0	1	0	1	11
04:30 PM	0	1	1	2	0	1	1	2	0	2	0	2	0	1	1	2	8
04:45 PM	0	3	1	4	0	0	0	0	0	1	0	1	1	1	0	2	7
Total	0	13	5	18	0	2	1	3	0	14	1	15	1	3	1	5	41
05:00 PM	0	2	1	3	0	0	2	2	0	2	0	2	0	0	0	0	7
05:15 PM	1	0	2	3	0	0	1	1	0	4	1	5	0	0	0	0	9
05:30 PM	0	7	0	7	0	0	0	0	3	2	0	5	0	0	0	0	12
05:45 PM	0	3	2	5	0	0	0	0	0	2	0	2	1	0	0	1	8
Total	1	12	5	18	0	0	3	3	3	10	1	14	1	0	0	1	36
Grand Total	1	25	10	36	0	2	4	6	3	24	2	29	2	3	1	6	77
Apprch %	2.8	69.4	27.8		0	33.3	66.7		10.3	82.8	6.9		33.3	50	16.7		
Total %	1.3	32.5	13	46.8	0	2.6	5.2	7.8	3.9	31.2	2.6	37.7	2.6	3.9	1.3	7.8	

Halsted St and Vermont Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/17/2012
Page No : 7

Groups Printed- MU

	Halsted St From North				**Vermont Ave From East**				**Halsted St From South**				**Vermont Ave From West**				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	2	0	2	0	0	0	0	2	2	0	4	0	0	0	0	6
04:15 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
04:30 PM	0	1	0	1	0	0	0	0	0	0	1	1	0	0	0	0	2
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	3	0	3	0	0	0	0	2	3	1	6	0	0	0	0	9
05:00 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:15 PM	0	0	0	0	0	0	2	2	1	2	0	3	0	0	0	0	5
05:30 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:45 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	3	0	3	0	0	2	2	1	2	0	3	0	0	0	0	8
Grand Total	0	6	0	6	0	0	2	2	3	5	1	9	0	0	0	0	17
Apprch %	0	100	0		0	0	100		33.3	55.6	11.1		0	0	0		
Total %	0	35.3	0	35.3	0	0	11.8	11.8	17.6	29.4	5.9	52.9	0	0	0	0	

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Halsted St and Vermont Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 5/17/2012
Page No : 8

Groups Printed- Peds & Bikes

	Halsted St Crossing North Leg			**Vermont Ave Crossing East Leg**			**Halsted St Crossing South Leg**			**Vermont Ave Crossing West Leg**			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
04:00 PM	0	3	3	1	2	3	0	2	2	0	6	6	14
04:15 PM	0	3	3	0	0	0	0	3	3	0	7	7	13
04:30 PM	0	2	2	1	11	12	0	8	8	0	2	2	24
04:45 PM	0	0	0	0	1	1	0	11	11	0	0	0	12
Total	0	8	8	2	14	16	0	24	24	0	15	15	63
05:00 PM	0	3	3	0	0	0	0	3	3	1	1	2	8
05:15 PM	0	0	0	1	0	1	1	8	9	1	0	1	11
05:30 PM	0	0	0	1	2	3	0	9	9	0	1	1	13
05:45 PM	0	0	0	0	1	1	0	0	0	0	0	0	1
Total	0	3	3	2	3	5	1	20	21	2	2	4	33
Grand Total	0	11	11	4	17	21	1	44	45	2	17	19	96
Apprch %	0	100		19	81		2.2	97.8		10.5	89.5		
Total %	0	11.5	11.5	4.2	17.7	21.9	1	45.8	46.9	2.1	17.7	19.8	

HCM Signalized Intersection Capacity Analysis
1001: 95th Street & Wentworth Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			✥			✥	
Volume (vph)	36	765	16	21	707	43	43	60	75	38	29	93
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	16	10	10	16	8	15	8	8	14	8
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			0.99			0.99	
Flpb, ped/bikes	0.98	1.00		1.00	1.00			1.00			1.00	
Frt	1.00	1.00		1.00	0.99			0.94			0.92	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1412	2976		1591	2978			1752			1663	
Flt Permitted	0.30	1.00		0.29	1.00			0.90			0.90	
Satd. Flow (perm)	448	2976		481	2978			1600			1520	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	38	797	17	22	736	45	45	62	78	40	30	97
RTOR Reduction (vph)	0	2	0	0	7	0	0	40	0	0	63	0
Lane Group Flow (vph)	38	812	0	22	774	0	0	145	0	0	104	0
Confl. Peds. (#/hr)	61		11	11		61	3		5	5		3
Confl. Bikes (#/hr)	1		1	1		1						
Heavy Vehicles (%)	11%	7%	0%	0%	6%	2%	2%	7%	4%	5%	7%	3%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	34.0	34.0		34.0	34.0			22.0			22.0	
Effective Green, g (s)	34.0	34.0		34.0	34.0			23.0			23.0	
Actuated g/C Ratio	0.52	0.52		0.52	0.52			0.35			0.35	
Clearance Time (s)	4.0	4.0		4.0	4.0			5.0			5.0	
Lane Grp Cap (vph)	234	1557		252	1558			566			538	
v/s Ratio Prot		c0.27			0.26							
v/s Ratio Perm	0.08			0.05				c0.09			0.07	
v/c Ratio	0.16	0.52		0.09	0.50			0.26			0.19	
Uniform Delay, d1	8.1	10.2		7.7	10.0			14.9			14.6	
Progression Factor	1.00	1.00		0.75	1.01			1.00			1.00	
Incremental Delay, d2	1.5	1.3		0.6	1.0			1.1			0.8	
Delay (s)	9.6	11.4		6.5	11.1			16.0			15.4	
Level of Service	A	B		A	B			B			B	
Approach Delay (s)		11.3			11.0			16.0			15.4	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	12.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	50.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1002: 95th Street & Lafayette Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↑	↱				↰↰	↑	↱
Volume (vph)	25	882	7	23	508	50	0	0	0	461	8	319
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	5.0	5.0		3.0	3.0	3.0				5.0	5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00				0.97	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.67				1.00	1.00	0.96
Flpb, ped/bikes	0.90	1.00		1.00	1.00	1.00				1.00	1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85				1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00				0.95	1.00	1.00
Satd. Flow (prot)	770	3284		1710	3138	512				3100	1440	1399
Flt Permitted	0.45	1.00		0.14	1.00	1.00				0.95	1.00	1.00
Satd. Flow (perm)	363	3284		248	3138	512				3100	1440	1399
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	27	948	8	25	546	54	0	0	0	496	9	343
RTOR Reduction (vph)	0	1	0	0	0	24	0	0	0	0	0	175
Lane Group Flow (vph)	27	955	0	25	546	30	0	0	0	496	9	168
Confl. Peds. (#/hr)	354		13	13		354	22		22	22		22
Confl. Bikes (#/hr)	4					4			1	1		
Heavy Vehicles (%)	100%	4%	0%	0%	9%	100%	0%	0%	0%	7%	25%	5%
Turn Type	pm+pt			pm+pt		Perm				Split		Perm
Protected Phases	7	4		3	8					6	6	
Permitted Phases	4			8		8						6
Actuated Green, G (s)	43.0	43.0		73.0	73.0	73.0				30.0	30.0	30.0
Effective Green, g (s)	43.0	43.0		73.0	73.0	73.0				30.0	30.0	30.0
Actuated g/C Ratio	0.33	0.33		0.56	0.56	0.56				0.23	0.23	0.23
Clearance Time (s)	5.0	5.0		3.0	3.0	3.0				5.0	5.0	5.0
Lane Grp Cap (vph)	164	1086		634	1762	288				715	332	323
v/s Ratio Prot	0.02	c0.29		0.01	c0.17					c0.16	0.01	
v/s Ratio Perm	0.04			0.01		0.06						0.12
v/c Ratio	0.16	0.88		0.04	0.31	0.11				0.69	0.03	0.52
Uniform Delay, d1	31.4	41.1		15.1	15.1	13.3				45.8	38.7	43.7
Progression Factor	0.81	0.84		0.33	0.64	1.54				1.00	1.00	1.00
Incremental Delay, d2	1.9	9.3		0.1	0.3	0.5				5.5	0.2	5.9
Delay (s)	27.6	43.6		5.0	10.0	21.0				51.3	38.9	49.5
Level of Service	C	D		A	B	C				D	D	D
Approach Delay (s)		43.2			10.8			0.0			50.4	
Approach LOS		D			B			A			D	

Intersection Summary			
HCM Average Control Delay	37.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	48.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1003: 95th Street & State Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↱		↰	↑↑	↱		↰↑	↱	↰		↱
Volume (vph)	438	786	119	21	428	253	124	489	59	41	0	29
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0	3.0		5.0	5.0	5.0		5.0	5.0	5.0		5.0
Lane Util. Factor	0.97	0.95		1.00	0.95	1.00		0.95	1.00	1.00		1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.65		1.00	0.94	1.00		0.96
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Frt	1.00	0.98		1.00	1.00	0.85		1.00	0.85	1.00		0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.99	1.00	0.95		1.00
Satd. Flow (prot)	3190	3106		1555	2923	944		3300	1417	855		734
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.99	1.00	0.95		1.00
Satd. Flow (perm)	3190	3106		1555	2923	944		3300	1417	855		734
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	466	836	127	22	455	269	132	520	63	44	0	31
RTOR Reduction (vph)	0	9	0	0	0	170	0	0	25	0	0	29
Lane Group Flow (vph)	466	954	0	22	455	99	0	652	38	44	0	2
Confl. Peds. (#/hr)	425		21	21		425	6		34	34		6
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	4%	8%	3%	10%	17%	5%	1%	3%	2%	100%	0%	100%
Turn Type	Prot			Prot		Perm	Split		Perm	Prot		custom
Protected Phases	7	4		3	8		2	2		6		
Permitted Phases						8			2			6
Actuated Green, G (s)	43.0	65.0		9.0	31.0	31.0		30.0	30.0	8.0		8.0
Effective Green, g (s)	43.0	65.0		9.0	31.0	31.0		30.0	30.0	8.0		8.0
Actuated g/C Ratio	0.33	0.50		0.07	0.24	0.24		0.23	0.23	0.06		0.06
Clearance Time (s)	3.0	3.0		5.0	5.0	5.0		5.0	5.0	5.0		5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0	3.0	3.0		3.0
Lane Grp Cap (vph)	1055	1553		108	697	225		762	327	53		45
v/s Ratio Prot	0.15	c0.31		0.01	c0.16			c0.20		c0.05		
v/s Ratio Perm						0.11			0.03			0.00
v/c Ratio	0.44	0.61		0.20	0.65	0.44		0.86	0.12	0.83		0.04
Uniform Delay, d1	34.1	23.5		57.1	44.6	42.1		47.9	39.5	60.3		57.4
Progression Factor	0.73	0.17		1.00	1.00	1.00		0.94	0.88	1.00		1.00
Incremental Delay, d2	0.7	1.0		4.2	4.7	6.2		11.6	0.7	65.2		0.4
Delay (s)	25.5	5.0		61.3	49.4	48.3		56.6	35.7	125.5		57.8
Level of Service	C	A		E	D	D		E	D	F		E
Approach Delay (s)		11.7			49.3			54.8			97.5	
Approach LOS		B			D			D			F	

Intersection Summary			
HCM Average Control Delay	33.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	68.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1004: 95th Street & Michigan Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱		↰	↑↑		↰		↱	↰	↱	
Volume (vph)	0	794	197	54	575	0	111	0	106	3	10	2
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	11	11	8	12	12	12	14	15	12
Total Lost time (s)		4.0		4.0	4.0		4.0		4.0	4.0	4.0	
Lane Util. Factor		0.95		1.00	0.95		1.00		1.00	1.00	1.00	
Frpb, ped/bikes		0.99		1.00	1.00		1.00		0.98	1.00	1.00	
Flpb, ped/bikes		1.00		1.00	1.00		1.00		1.00	0.99	1.00	
Frt		0.97		1.00	1.00		1.00		0.85	1.00	0.97	
Flt Protected		1.00		0.95	1.00		0.95		1.00	0.95	1.00	
Satd. Flow (prot)		2860		1649	3005		1390		1465	1803	1930	
Flt Permitted		1.00		0.22	1.00		0.75		1.00	0.95	1.00	
Satd. Flow (perm)		2860		375	3005		1097		1465	1803	1930	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	0	827	205	56	599	0	116	0	110	3	10	2
RTOR Reduction (vph)	0	22	0	0	0	0	0	0	75	0	1	0
Lane Group Flow (vph)	0	1010	0	56	599	0	116	0	35	3	11	0
Confl. Peds. (#/hr)	49		15	15		49			12	12		
Heavy Vehicles (%)	0%	6%	14%	0%	10%	0%	23%	0%	2%	0%	0%	0%
Turn Type				Perm			custom		custom	Perm		
Protected Phases		4			8						6	
Permitted Phases				8			2		2	6		
Actuated Green, G (s)		60.0		60.0	60.0		32.0		32.0	32.0	32.0	
Effective Green, g (s)		60.0		60.0	60.0		32.0		32.0	32.0	32.0	
Actuated g/C Ratio		0.60		0.60	0.60		0.32		0.32	0.32	0.32	
Clearance Time (s)		4.0		4.0	4.0		4.0		4.0	4.0	4.0	
Lane Grp Cap (vph)		1716		225	1803		351		469	577	618	
v/s Ratio Prot		c0.35			0.20						0.01	
v/s Ratio Perm				0.15			c0.11		0.02	0.00		
v/c Ratio		0.59		0.25	0.33		0.33		0.08	0.01	0.02	
Uniform Delay, d1		12.4		9.4	10.0		25.9		23.7	23.2	23.2	
Progression Factor		1.00		1.00	1.00		1.00		1.00	1.00	1.00	
Incremental Delay, d2		1.5		2.6	0.5		2.5		0.3	0.0	0.1	
Delay (s)		13.9		12.0	10.5		28.4		24.0	23.2	23.3	
Level of Service		B		B	B		C		C	C	C	
Approach Delay (s)		13.9			10.6			26.2			23.3	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM Average Control Delay	14.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1005: 98th Place & Halsted Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↰	↰	↱	↰	↑↑↑			↑↑↱	
Volume (vph)	0	0	0	316	39	1032	190	855	0	0	396	678
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	12	12	10	10	12	12	11	12
Total Lost time (s)				4.0	4.0	5.0	3.0	4.0			4.0	
Lane Util. Factor				0.95	0.95	1.00	1.00	0.91			0.91	
Frpb, ped/bikes				1.00	1.00	0.99	1.00	1.00			0.97	
Flpb, ped/bikes				1.00	1.00	1.00	1.00	1.00			1.00	
Frt				1.00	1.00	0.85	1.00	1.00			0.91	
Flt Protected				0.95	1.00	1.00	0.95	1.00			1.00	
Satd. Flow (prot)				1525	1629	1479	1550	4368			3922	
Flt Permitted				0.95	1.00	1.00	0.95	1.00			1.00	
Satd. Flow (perm)				1525	1629	1479	1550	4368			3922	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	0	0	0	326	40	1064	196	881	0	0	408	699
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	326	40	1064	196	881	0	0	1107	0
Confl. Peds. (#/hr)	2					2	12		8	8		12
Heavy Vehicles (%)	0%	0%	0%	3%	5%	2%	3%	5%	0%	0%	5%	8%
Turn Type				Perm		Perm	Prot					
Protected Phases					8		5	2			6	
Permitted Phases				8		8						
Actuated Green, G (s)				30.0	30.0	30.0	32.0	66.0			31.0	
Effective Green, g (s)				31.0	31.0	30.0	32.0	66.0			31.0	
Actuated g/C Ratio				0.30	0.30	0.29	0.30	0.63			0.30	
Clearance Time (s)				5.0	5.0	5.0	3.0	4.0			4.0	
Lane Grp Cap (vph)				450	481	423	472	2746			1158	
v/s Ratio Prot							c0.13	0.20			c0.28	
v/s Ratio Perm				0.21	0.02	c0.72						
v/c Ratio				0.72	0.08	2.52	0.42	0.32			1.74dr	
Uniform Delay, d1				33.2	26.7	37.5	29.1	9.1			36.3	
Progression Factor				1.00	1.00	1.00	0.64	2.30			1.00	
Incremental Delay, d2				9.7	0.3	688.9	2.0	0.2			17.8	
Delay (s)				42.9	27.1	726.4	20.6	21.1			54.1	
Level of Service				D	C	F	C	C			D	
Approach Delay (s)		0.0			551.0			21.0			54.1	
Approach LOS		A			F			C			D	

Intersection Summary			
HCM Average Control Delay	240.9	HCM Level of Service	F
HCM Volume to Capacity ratio	1.27		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	92.6%	ICU Level of Service	F
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1006: 99th Street & Halsted Street

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↰↑↱						↑↑↑	↗↗	↰	↑↑↑	
Volume (vph)	277	867	87	0	0	0	0	768	570	257	455	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	13	12	12	12	12	12	10	10	8	12	12	12
Total Lost time (s)	5.0	5.0						4.0	4.0	3.0	4.0	
Lane Util. Factor	0.91	0.91						0.91	0.88	1.00	0.91	
Frpb, ped/bikes	1.00	1.00						1.00	0.97	1.00	1.00	
Flpb, ped/bikes	1.00	1.00						1.00	1.00	1.00	1.00	
Frt	1.00	0.99						1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00						1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1497	3186						4368	2187	1583	4636	
Flt Permitted	0.95	1.00						1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1497	3186						4368	2187	1583	4636	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	292	913	92	0	0	0	0	808	600	271	479	0
RTOR Reduction (vph)	0	7	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	263	1027	0	0	0	0	0	808	600	271	479	0
Confl. Peds. (#/hr)	4		14	14		4	4		3	3		4
Heavy Vehicles (%)	7%	1%	0%	0%	0%	0%	0%	5%	4%	8%	6%	0%
Turn Type	Perm								Perm	Prot		
Protected Phases		4						2		1	6	
Permitted Phases	4								2			
Actuated Green, G (s)	34.0	34.0						28.0	28.0	31.0	62.0	
Effective Green, g (s)	34.0	34.0						28.0	28.0	31.0	62.0	
Actuated g/C Ratio	0.32	0.32						0.27	0.27	0.30	0.59	
Clearance Time (s)	5.0	5.0						4.0	4.0	3.0	4.0	
Lane Grp Cap (vph)	485	1032						1165	583	467	2737	
v/s Ratio Prot								0.18		c0.17	0.10	
v/s Ratio Perm	0.18	0.32							c0.27			
v/c Ratio	0.54	1.00						0.69	1.03	0.58	0.18	
Uniform Delay, d1	29.1	35.4						34.6	38.5	31.5	9.8	
Progression Factor	1.00	1.00						0.45	0.47	1.06	0.44	
Incremental Delay, d2	4.3	26.9						0.3	19.7	2.7	0.1	
Delay (s)	33.4	62.4						15.8	37.9	36.2	4.4	
Level of Service	C	E						B	D	D	A	
Approach Delay (s)		56.5			0.0			25.2			15.9	
Approach LOS		E			A			C			B	

Intersection Summary			
HCM Average Control Delay	34.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	92.6%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1007: 98th Place & Wentworth Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↰	↑↱		↰	↑			↱	
Volume (vph)	0	0	0	216	4	21	3	152	0	0	99	3
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	14	12	12	16	12
Total Lost time (s)				4.0	4.0		4.0	4.0			-3.0	
Lane Util. Factor				1.00	0.95		1.00	1.00			1.00	
Frpb, ped/bikes				1.00	0.98		1.00	1.00			1.00	
Flpb, ped/bikes				1.00	1.00		1.00	1.00			1.00	
Frt				1.00	0.87		1.00	1.00			1.00	
Flt Protected				0.95	1.00		0.95	1.00			1.00	
Satd. Flow (prot)				1578	2709		1285	1882			1956	
Flt Permitted				0.95	1.00		0.60	1.00			1.00	
Satd. Flow (perm)				1578	2709		812	1882			1956	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	0	227	4	22	3	160	0	0	104	3
RTOR Reduction (vph)	0	0	0	0	18	0	0	0	0	0	1	0
Lane Group Flow (vph)	0	0	0	227	8	0	3	160	0	0	106	0
Confl. Peds. (#/hr)	2		2	2		2	3					3
Heavy Vehicles (%)	0%	0%	0%	8%	25%	5%	33%	2%	0%	0%	3%	33%
Turn Type				Perm			pm+pt					
Protected Phases					8		7	2			6	
Permitted Phases				8			2					
Actuated Green, G (s)				27.0	27.0		50.0	50.0			40.0	
Effective Green, g (s)				27.0	27.0		50.0	50.0			46.0	
Actuated g/C Ratio				0.32	0.32		0.59	0.59			0.54	
Clearance Time (s)				4.0	4.0		4.0	4.0			3.0	
Lane Grp Cap (vph)				501	861		517	1107			1059	
v/s Ratio Prot					0.00		0.00	c0.09			0.05	
v/s Ratio Perm				c0.14			0.00					
v/c Ratio				0.45	0.01		0.01	0.14			0.10	
Uniform Delay, d1				23.1	19.8		9.7	7.9			9.5	
Progression Factor				1.00	1.00		1.01	1.18			1.00	
Incremental Delay, d2				2.9	0.0		0.0	0.3			0.2	
Delay (s)				26.1	19.9		9.8	9.5			9.6	
Level of Service				C	B		A	A			A	
Approach Delay (s)		0.0			25.4			9.5			9.6	
Approach LOS		A			C			A			A	

Intersection Summary			
HCM Average Control Delay	17.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.25		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	33.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1008: 99th St & Wentworth Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱			✥			↱		↰	↑	
Volume (vph)	8	5	5	3	0	18	0	129	37	33	282	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	16	15	12	8	12	8	12	12	12	10	13	12
Total Lost time (s)	4.0	4.0			4.0			3.0		4.0	4.0	
Lane Util. Factor	1.00	1.00			1.00			1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.99			1.00			1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00			1.00			1.00		1.00	1.00	
Frt	1.00	0.93			0.88			0.97		1.00	1.00	
Flt Protected	0.95	1.00			0.99			1.00		0.95	1.00	
Satd. Flow (prot)	1938	1809			1577			1686		1595	1755	
Flt Permitted	0.74	1.00			0.99			1.00		0.60	1.00	
Satd. Flow (perm)	1513	1809			1564			1686		1012	1755	
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	9	6	6	3	0	21	0	148	43	38	324	0
RTOR Reduction (vph)	0	4	0	0	14	0	0	12	0	0	0	0
Lane Group Flow (vph)	9	8	0	0	10	0	0	179	0	38	324	0
Confl. Peds. (#/hr)			3	3			5		2	2		5
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	3%	3%	0%	6%	0%
Turn Type	Perm			Perm						pm+pt		
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8						6		
Actuated Green, G (s)	27.0	27.0			27.0			40.0		50.0	50.0	
Effective Green, g (s)	27.0	27.0			27.0			40.0		50.0	50.0	
Actuated g/C Ratio	0.32	0.32			0.32			0.47		0.59	0.59	
Clearance Time (s)	4.0	4.0			4.0			3.0		4.0	4.0	
Lane Grp Cap (vph)	481	575			497			793		643	1032	
v/s Ratio Prot		0.00						0.11		0.00	c0.18	
v/s Ratio Perm	0.01				c0.01					0.03		
v/c Ratio	0.02	0.01			0.02			0.23		0.06	0.31	
Uniform Delay, d1	19.9	19.9			19.9			13.3		8.5	8.8	
Progression Factor	1.00	1.00			1.00			1.00		0.92	0.83	
Incremental Delay, d2	0.1	0.0			0.1			0.7		0.2	0.8	
Delay (s)	20.0	19.9			20.0			14.0		8.0	8.1	
Level of Service	B	B			B			B		A	A	
Approach Delay (s)		19.9			20.0			14.0			8.1	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM Average Control Delay	10.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.21		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	40.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

	↗	↘	↖	↑	↓	↙
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	Y		↰	↑	↱	
Volume (vph)	61	14	10	334	159	12
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	14	12	13	12	10	12
Total Lost time (s)	4.0		4.0	4.0	4.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.98		1.00	1.00	0.99	
Flt Protected	0.96		0.95	1.00	1.00	
Satd. Flow (prot)	1791		1767	1765	1634	
Flt Permitted	0.96		0.63	1.00	1.00	
Satd. Flow (perm)	1791		1164	1765	1634	
Peak-hour factor, PHF	0.81	0.81	0.81	0.81	0.81	0.81
Adj. Flow (vph)	75	17	12	412	196	15
RTOR Reduction (vph)	12	0	0	0	4	0
Lane Group Flow (vph)	80	0	12	412	207	0
Confl. Peds. (#/hr)		2				
Heavy Vehicles (%)	0%	0%	0%	2%	2%	0%
Turn Type			Perm			
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	21.0		36.0	36.0	36.0	
Effective Green, g (s)	21.0		36.0	36.0	36.0	
Actuated g/C Ratio	0.32		0.55	0.55	0.55	
Clearance Time (s)	4.0		4.0	4.0	4.0	
Lane Grp Cap (vph)	579		645	978	905	
v/s Ratio Prot	c0.04			c0.23	0.13	
v/s Ratio Perm			0.01			
v/c Ratio	0.14		0.02	0.42	0.23	
Uniform Delay, d1	15.6		6.5	8.4	7.4	
Progression Factor	1.00		0.31	0.55	1.17	
Incremental Delay, d2	0.5		0.0	1.2	0.6	
Delay (s)	16.1		2.1	5.9	9.2	
Level of Service	B		A	A	A	
Approach Delay (s)	16.1			5.8	9.2	
Approach LOS	B			A	A	

Intersection Summary			
HCM Average Control Delay	8.1	HCM Level of Service	A
HCM Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	38.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1010: 99th St & Michigan Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↰↑ ↑↱		↰	↑			↑	↱
Volume (vph)	0	0	0	19	239	13	494	219	0	0	162	31
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	14	16	12	12	15	12	12	13	10
Total Lost time (s)					4.0		4.0	4.0			3.0	3.0
Lane Util. Factor					0.95		1.00	1.00			1.00	1.00
Frpb, ped/bikes					1.00		1.00	1.00			1.00	1.00
Flpb, ped/bikes					1.00		1.00	1.00			1.00	1.00
Frt					0.99		1.00	1.00			1.00	0.85
Flt Protected					1.00		0.95	1.00			1.00	1.00
Satd. Flow (prot)					3739		1660	1752			1603	1298
Flt Permitted					1.00		0.62	1.00			1.00	1.00
Satd. Flow (perm)					3739		1081	1752			1603	1298
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	0	20	252	14	520	231	0	0	171	33
RTOR Reduction (vph)	0	0	0	0	4	0	0	0	0	0	0	18
Lane Group Flow (vph)	0	0	0	0	282	0	520	231	0	0	171	15
Confl. Peds. (#/hr)									30	30		
Heavy Vehicles (%)	0%	0%	0%	11%	2%	0%	3%	13%	0%	0%	16%	10%
Turn Type				Split			pm+pt					Perm
Protected Phases				8	8		7	2			6	
Permitted Phases							2					6
Actuated Green, G (s)					26.0		51.0	51.0			38.0	38.0
Effective Green, g (s)					26.0		51.0	51.0			38.0	38.0
Actuated g/C Ratio					0.31		0.60	0.60			0.45	0.45
Clearance Time (s)					4.0		4.0	4.0			3.0	3.0
Lane Grp Cap (vph)					1144		717	1051			717	580
v/s Ratio Prot					c0.08		c0.09	0.13			0.11	
v/s Ratio Perm							c0.35					0.01
v/c Ratio					0.25		0.73	0.22			0.24	0.03
Uniform Delay, d1					22.1		14.0	7.8			14.5	13.1
Progression Factor					1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2					0.5		6.3	0.5			0.8	0.1
Delay (s)					22.7		20.3	8.3			15.3	13.2
Level of Service					C		C	A			B	B
Approach Delay (s)		0.0			22.7			16.6			15.0	
Approach LOS		A			C			B			B	

Intersection Summary			
HCM Average Control Delay	17.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	55.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1011: 99th Street & Martin Luther King Jr Drive

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↰↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	0	0	0	10	9	7	255	405	74	58	264	10
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	15	12	12	12	12	12	13	12
Total Lost time (s)					4.0		3.0	4.0		3.0	4.0	
Lane Util. Factor					1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes					1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes					1.00		1.00	1.00		1.00	1.00	
Frt					0.97		1.00	0.98		1.00	0.99	
Flt Protected					0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)					1798		1691	3237		1705	3351	
Flt Permitted					0.98		0.55	1.00		0.39	1.00	
Satd. Flow (perm)					1798		982	3237		696	3351	
Peak-hour factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Adj. Flow (vph)	0	0	0	12	11	8	300	476	87	68	311	12
RTOR Reduction (vph)	0	0	0	0	6	0	0	20	0	0	4	0
Lane Group Flow (vph)	0	0	0	0	25	0	300	543	0	68	319	0
Confl. Peds. (#/hr)	2					2	6		20	20		6
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	0%	0%	0%	0%	11%	0%	1%	3%	0%	0%	5%	0%
Turn Type				Split			pm+pt			pm+pt		
Protected Phases				8	8		5	2		1	6	
Permitted Phases							2			6		
Actuated Green, G (s)					23.0		41.0	34.0		41.0	34.0	
Effective Green, g (s)					23.0		41.0	34.0		41.0	34.0	
Actuated g/C Ratio					0.31		0.55	0.45		0.55	0.45	
Clearance Time (s)					4.0		3.0	4.0		3.0	4.0	
Lane Grp Cap (vph)					551		603	1467		475	1519	
v/s Ratio Prot					c0.01		c0.05	0.17		0.01	0.10	
v/s Ratio Perm							c0.23			0.06		
v/c Ratio					0.05		0.50	0.37		0.14	0.21	
Uniform Delay, d1					18.3		11.2	13.5		10.6	12.4	
Progression Factor					1.00		0.74	0.74		1.00	1.00	
Incremental Delay, d2					0.2		2.8	0.7		0.6	0.3	
Delay (s)					18.4		11.1	10.6		11.2	12.7	
Level of Service					B		B	B		B	B	
Approach Delay (s)		0.0			18.4			10.8			12.4	
Approach LOS		A			B			B			B	

Intersection Summary			
HCM Average Control Delay	11.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	51.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1012: 100th Street & Martin Luther King Jr Drive

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣		↰	↑↱		↰	↑↱	
Volume (vph)	44	42	17	8	130	171	16	519	9	54	208	12
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	16	12	12	10	11	12	12	11	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.98			0.93		1.00	1.00		1.00	0.99	
Flt Protected		0.98			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1948			1626		1596	3233		1641	3131	
Flt Permitted		0.77			0.99		0.60	1.00		0.39	1.00	
Satd. Flow (perm)		1527			1619		1000	3233		675	3131	
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	51	48	20	9	149	197	18	597	10	62	239	14
RTOR Reduction (vph)	0	10	0	0	60	0	0	2	0	0	6	0
Lane Group Flow (vph)	0	109	0	0	295	0	18	605	0	62	247	0
Confl. Peds. (#/hr)									6	6		
Confl. Bikes (#/hr)			1	1								
Heavy Vehicles (%)	0%	0%	0%	12%	2%	2%	0%	2%	0%	4%	5%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		25.0			25.0		42.0	42.0		42.0	42.0	
Effective Green, g (s)		25.0			25.0		42.0	42.0		42.0	42.0	
Actuated g/C Ratio		0.33			0.33		0.56	0.56		0.56	0.56	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		509			540		560	1810		378	1753	
v/s Ratio Prot								c0.19			0.08	
v/s Ratio Perm		0.07			c0.18		0.02			0.09		
v/c Ratio		0.21			0.55		0.03	0.33		0.16	0.14	
Uniform Delay, d1		17.9			20.4		7.4	8.9		8.0	7.9	
Progression Factor		1.00			1.00		1.00	1.00		0.14	0.06	
Incremental Delay, d2		1.0			3.9		0.1	0.5		0.9	0.2	
Delay (s)		18.9			24.3		7.5	9.4		2.0	0.6	
Level of Service		B			C		A	A		A	A	
Approach Delay (s)		18.9			24.3			9.4			0.9	
Approach LOS		B			C			A			A	

Intersection Summary			
HCM Average Control Delay	12.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis
1013: 100th Street & Cottage Grove Avenue

1/14/2013

	↗	↘	↖	↑	↓	↙
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	Y			↰↑	↑↱	
Sign Control	Stop			Stop	Stop	
Volume (vph)	35	44	81	250	173	18
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	38	47	87	269	186	19

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	85	177	179	124	81
Volume Left (vph)	38	87	0	0	0
Volume Right (vph)	47	0	0	0	19
Hadj (s)	-0.16	0.33	0.09	0.08	-0.08
Departure Headway (s)	5.0	5.2	5.0	5.1	5.0
Degree Utilization, x	0.12	0.26	0.25	0.18	0.11
Capacity (veh/h)	665	671	703	676	700
Control Delay (s)	8.6	8.9	8.4	8.1	7.4
Approach Delay (s)	8.6	8.6		7.8	
Approach LOS	A	A		A	

Intersection Summary			
Delay	8.4		
HCM Level of Service	A		
Intersection Capacity Utilization	30.3%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Signalized Intersection Capacity Analysis
1014: 103rd Street & Vincennes Avenue

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR
Lane Configurations		↰	↑	↱	↰	↑	↱			↰	↑↱	
Volume (vph)	40	46	277	12	5	477	37	39	37	47	632	37
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		3.5	4.0	4.0	4.0	4.0	4.0			4.0	4.0	
Lane Util. Factor		1.00	1.00	1.00	1.00	1.00	1.00			1.00	0.95	
Frpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	0.97			1.00	1.00	
Flpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	
Frt		1.00	1.00	0.85	1.00	1.00	0.85			1.00	0.99	
Flt Protected		0.95	1.00	1.00	0.95	1.00	1.00			0.95	1.00	
Satd. Flow (prot)		1575	1731	1530	1710	1731	1487			1710	3292	
Flt Permitted		0.11	1.00	1.00	0.57	1.00	1.00			0.47	1.00	
Satd. Flow (perm)		187	1731	1530	1022	1731	1487			851	3292	
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	46	53	318	14	6	548	43	45	43	54	726	43
RTOR Reduction (vph)	0	0	0	7	0	0	31	0	0	0	4	0
Lane Group Flow (vph)	0	99	318	7	6	548	57	0	0	97	765	0
Confl. Peds. (#/hr)		5					5					6
Heavy Vehicles (%)	8%	9%	4%	0%	0%	4%	0%	0%	0%	0%	3%	0%
Turn Type	Perm	pm+pt		Perm	Perm		Perm		Perm	Perm		
Protected Phases		7	4			8					2	
Permitted Phases	4	4		4	8		8		2	2		
Actuated Green, G (s)		50.0	50.0	50.0	32.0	32.0	32.0			25.0	25.0	
Effective Green, g (s)		50.0	50.0	50.0	32.0	32.0	32.0			25.0	25.0	
Actuated g/C Ratio		0.48	0.48	0.48	0.30	0.30	0.30			0.24	0.24	
Clearance Time (s)		3.5	4.0	4.0	4.0	4.0	4.0			4.0	4.0	
Lane Grp Cap (vph)		281	824	729	311	528	453			203	784	
v/s Ratio Prot		0.05	c0.18			c0.32					c0.23	
v/s Ratio Perm		0.12		0.00	0.01		0.04			0.11		
v/c Ratio		0.35	0.39	0.01	0.02	1.04	0.13			0.48	0.98	
Uniform Delay, d1		20.4	17.6	14.5	25.5	36.5	26.4			34.4	39.7	
Progression Factor		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	
Incremental Delay, d2		3.4	1.4	0.0	0.1	49.3	0.6			7.9	26.8	
Delay (s)		23.8	19.0	14.5	25.6	85.8	27.0			42.2	66.5	
Level of Service		C	B	B	C	F	C			D	E	
Approach Delay (s)			20.0			77.2					63.8	
Approach LOS			B			E					E	

Intersection Summary			
HCM Average Control Delay	54.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	75.4%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1014: 103rd Street & Vincennes Avenue

	↘	↓	↙	↙	↗	↘	↘	↙
Movement	SBL	SBT	SBR	SBR2	SEL2	SEL	SER	SER2
Lane Configurations	↰	↑↱				↰	↱↱	
Volume (vph)	33	231	21	26	4	47	97	11
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.5	4.5				4.5	4.5	
Lane Util. Factor	1.00	0.95				1.00	0.88	
Frpb, ped/bikes	1.00	1.00				1.00	1.00	
Flpb, ped/bikes	1.00	1.00				1.00	1.00	
Frt	1.00	0.97				1.00	0.85	
Flt Protected	0.95	1.00				0.95	1.00	
Satd. Flow (prot)	1705	3279				1710	2622	
Flt Permitted	0.16	1.00				0.95	1.00	
Satd. Flow (perm)	293	3279				1710	2622	
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	38	266	24	30	5	54	111	13
RTOR Reduction (vph)	0	8	0	0	0	0	8	0
Lane Group Flow (vph)	38	312	0	0	0	59	117	0
Confl. Peds. (#/hr)	6							
Heavy Vehicles (%)	0%	2%	0%	0%	0%	0%	3%	0%
Turn Type	Perm				Split		Perm	
Protected Phases		6			9	9		
Permitted Phases	6						9	
Actuated Green, G (s)	24.5	24.5				17.5	17.5	
Effective Green, g (s)	24.5	24.5				17.5	17.5	
Actuated g/C Ratio	0.23	0.23				0.17	0.17	
Clearance Time (s)	4.5	4.5				4.5	4.5	
Lane Grp Cap (vph)	68	765				285	437	
v/s Ratio Prot		0.10				0.03		
v/s Ratio Perm	0.13						c0.04	
v/c Ratio	0.56	0.41				0.21	0.27	
Uniform Delay, d1	35.5	34.1				37.8	38.2	
Progression Factor	1.00	1.00				1.00	1.00	
Incremental Delay, d2	29.2	1.6				1.6	1.5	
Delay (s)	64.7	35.7				39.4	39.6	
Level of Service	E	D				D	D	
Approach Delay (s)		38.8				39.6		
Approach LOS		D				D		

Intersection Summary

HCM Signalized Intersection Capacity Analysis
1015: 103rd Street & Morgan Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰			↱			✥				
Volume (vph)	20	374	0	0	452	24	106	104	102	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	11	11	11	16	11	12	15	12	12	15	12
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		1.00			0.99			0.96				
Flt Protected		1.00			1.00			0.98				
Satd. Flow (prot)		1653			1930			1772				
Flt Permitted		0.97			1.00			0.98				
Satd. Flow (perm)		1603			1930			1772				
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	22	402	0	0	486	26	114	112	110	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	424	0	0	512	0	0	336	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)		31.0			31.0			26.0				
Effective Green, g (s)		31.0			31.0			26.0				
Actuated g/C Ratio		0.48			0.48			0.40				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		765			920			709				
v/s Ratio Prot					c0.27							
v/s Ratio Perm		0.26						0.19				
v/c Ratio		0.55			0.56			0.47				
Uniform Delay, d1		12.1			12.1			14.4				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		2.9			2.4			2.3				
Delay (s)		15.0			14.5			16.7				
Level of Service		B			B			B				
Approach Delay (s)		15.0			14.5			16.7			0.0	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM Average Control Delay	15.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	63.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1016: 103rd Street & Halsted Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑	↱		↰↑	↱	↰	↑↑	↱	↰	↑↑	↱
Volume (vph)	96	285	95	63	258	106	125	1435	108	65	445	93
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	10	10	9	9	10	9
Total Lost time (s)		4.0	4.0		4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		1.00	0.96		1.00	0.96	1.00	1.00	0.97	1.00	1.00	0.96
Flpb, ped/bikes		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.99	1.00		0.99	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1920	1426		1922	1396	1501	3099	1284	1425	2956	1265
Flt Permitted		0.69	1.00		0.72	1.00	0.39	1.00	1.00	0.09	1.00	1.00
Satd. Flow (perm)		1342	1426		1404	1396	617	3099	1284	142	2956	1265
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	103	306	102	68	277	114	134	1543	116	70	478	100
RTOR Reduction (vph)	0	0	60	0	0	67	0	0	29	0	0	60
Lane Group Flow (vph)	0	409	42	0	345	47	134	1543	87	70	478	40
Confl. Peds. (#/hr)	42		39	39		42	20		8	8		20
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	6%	4%	3%	0%	6%	5%	6%	3%	4%	8%	8%	4%
Turn Type	pm+pt		Perm	Perm		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)		43.0	43.0		43.0	43.0	53.0	44.4	44.4	49.0	42.4	42.4
Effective Green, g (s)		43.0	43.0		43.0	43.0	53.0	44.4	44.4	49.0	42.4	42.4
Actuated g/C Ratio		0.41	0.41		0.41	0.41	0.50	0.42	0.42	0.47	0.40	0.40
Clearance Time (s)		4.0	4.0		4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		550	584		575	572	384	1310	543	147	1194	511
v/s Ratio Prot							c0.03	c0.50		c0.03	0.16	
v/s Ratio Perm		c0.30	0.03		0.25	0.03	0.15		0.07	0.19		0.03
v/c Ratio		0.74	0.07		0.60	0.08	0.35	1.18	0.16	0.48	0.40	0.08
Uniform Delay, d1		26.3	18.9		24.3	18.9	14.5	30.3	18.8	23.1	22.3	19.3
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.07	0.82	0.55
Incremental Delay, d2		5.4	0.2		4.6	0.3	0.6	88.3	0.6	2.4	1.0	0.3
Delay (s)		31.7	19.1		28.8	19.2	15.1	118.6	19.4	27.0	19.3	10.8
Level of Service		C	B		C	B	B	F	B	C	B	B
Approach Delay (s)		29.2			26.5			104.4			18.8	
Approach LOS		C			C			F			B	

Intersection Summary			
HCM Average Control Delay	66.4	HCM Level of Service	E
HCM Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	98.5%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1017: 103rd Street & Normal Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			✥				
Volume (vph)	46	366	46	41	323	41	52	48	43	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	15	12	12	15	12
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		0.99			0.99			0.96				
Flt Protected		1.00			0.99			0.98				
Satd. Flow (prot)		1627			1626			1777				
Flt Permitted		0.93			0.93			0.98				
Satd. Flow (perm)		1524			1516			1777				
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	49	394	49	44	347	44	56	52	46	0	0	0
RTOR Reduction (vph)	0	6	0	0	6	0	0	23	0	0	0	0
Lane Group Flow (vph)	0	486	0	0	429	0	0	131	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm			Perm					
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Actuated Green, G (s)		38.0			38.0			19.0				
Effective Green, g (s)		38.0			38.0			19.0				
Actuated g/C Ratio		0.58			0.58			0.29				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		891			886			519				
v/s Ratio Prot												
v/s Ratio Perm		c0.32			0.28			0.07				
v/c Ratio		0.55			0.48			0.25				
Uniform Delay, d1		8.2			7.8			17.6				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		2.4			1.9			1.2				
Delay (s)		10.6			9.7			18.7				
Level of Service		B			A			B				
Approach Delay (s)		10.6			9.7			18.7			0.0	
Approach LOS		B			A			B			A	

Intersection Summary			
HCM Average Control Delay	11.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	49.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1018: 103rd Street & Wentworth Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱		↰	↱		✥	
Volume (vph)	18	383	50	27	338	33	41	133	79	49	192	26
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	11	12	12	15	12
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frpb, ped/bikes		1.00	0.97		1.00	0.95		1.00	0.98		0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		0.99	1.00		1.00	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		0.99	
Flt Protected		1.00	1.00		1.00	1.00		0.99	1.00		0.99	
Satd. Flow (prot)		1656	1255		1634	1288		1663	1490		1776	
Flt Permitted		0.98	1.00		0.96	1.00		0.89	1.00		0.92	
Satd. Flow (perm)		1624	1255		1572	1288		1505	1490		1642	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	19	403	53	28	356	35	43	140	83	52	202	27
RTOR Reduction (vph)	0	0	23	0	0	15	0	0	56	0	5	0
Lane Group Flow (vph)	0	422	30	0	384	20	0	183	27	0	276	0
Confl. Peds. (#/hr)	33		15	15		33	68		5	5		68
Confl. Bikes (#/hr)	4					4						
Heavy Vehicles (%)	0%	5%	14%	19%	5%	9%	2%	2%	1%	10%	7%	8%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		43.0	43.0		43.0	43.0		24.0	24.0		24.0	
Effective Green, g (s)		43.0	43.0		43.0	43.0		24.0	24.0		24.0	
Actuated g/C Ratio		0.57	0.57		0.57	0.57		0.32	0.32		0.32	
Clearance Time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	
Lane Grp Cap (vph)		931	720		901	738		482	477		525	
v/s Ratio Prot												
v/s Ratio Perm		c0.26	0.02		0.24	0.02		0.12	0.02		c0.17	
v/c Ratio		0.45	0.04		0.43	0.03		0.38	0.06		0.52	
Uniform Delay, d1		9.2	7.0		9.0	6.9		19.7	17.7		20.8	
Progression Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2		1.6	0.1		1.5	0.1		2.3	0.2		3.7	
Delay (s)		10.8	7.1		10.5	7.0		22.0	17.9		24.6	
Level of Service		B	A		B	A		C	B		C	
Approach Delay (s)		10.4			10.2			20.7			24.6	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM Average Control Delay	15.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	81.3%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑	↱	↰	↑	↱
Volume (vph)	72	364	25	15	244	34	51	298	38	38	92	9
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	11	16	8	10	10	10	10	10	10
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	0.98	1.00	1.00	0.99
Flpb, ped/bikes	0.99	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1461	2989		1458	3528		1534	1647	1301	1517	1541	1156
Flt Permitted	0.57	1.00		0.50	1.00		0.69	1.00	1.00	0.47	1.00	1.00
Satd. Flow (perm)	878	2989		765	3528		1120	1647	1301	756	1541	1156
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	77	387	27	16	260	36	54	317	40	40	98	10
RTOR Reduction (vph)	0	8	0	0	17	0	0	0	22	0	0	6
Lane Group Flow (vph)	77	406	0	16	279	0	54	317	18	40	98	4
Confl. Peds. (#/hr)	16		9	9		16	1		5	5		1
Heavy Vehicles (%)	8%	6%	0%	13%	8%	3%	4%	2%	8%	5%	9%	22%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	31.0	31.0		31.0	31.0		26.0	26.0	26.0	26.0	26.0	26.0
Effective Green, g (s)	31.0	31.0		31.0	31.0		26.0	26.0	26.0	26.0	26.0	26.0
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.40	0.40	0.40	0.40	0.40	0.40
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	419	1426		365	1683		448	659	520	302	616	462
v/s Ratio Prot		c0.14			0.08			c0.19			0.06	
v/s Ratio Perm	0.09			0.02			0.05		0.01	0.05		0.00
v/c Ratio	0.18	0.28		0.04	0.17		0.12	0.48	0.03	0.13	0.16	0.01
Uniform Delay, d1	9.7	10.3		9.1	9.7		12.3	14.5	11.9	12.4	12.5	11.7
Progression Factor	1.00	1.00		1.00	1.00		0.77	0.87	0.57	0.51	0.50	0.26
Incremental Delay, d2	1.0	0.5		0.2	0.2		0.5	2.5	0.1	0.9	0.5	0.0
Delay (s)	10.7	10.8		9.3	9.9		10.0	15.1	6.9	7.1	6.9	3.1
Level of Service	B	B		A	A		B	B	A	A	A	A
Approach Delay (s)		10.8			9.8			13.6			6.7	
Approach LOS		B			A			B			A	

Intersection Summary			
HCM Average Control Delay	11.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	50.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1020: 103rd Street & Michigan Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	78	330	67	40	239	59	56	320	38	50	124	41
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	11	10	11	11	10	11	11	10	11	11
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	0.96	1.00		0.99	1.00		0.98	1.00		0.96	1.00	
Frt	1.00	0.97		1.00	0.97		1.00	0.98		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1459	3058		1587	3000		1540	3022		1397	2790	
Flt Permitted	0.56	1.00		0.49	1.00		0.64	1.00		0.51	1.00	
Satd. Flow (perm)	868	3058		824	3000		1044	3022		749	2790	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	80	340	69	41	246	61	58	330	39	52	128	42
RTOR Reduction (vph)	0	0	0	0	0	0	0	12	0	0	25	0
Lane Group Flow (vph)	80	409	0	41	307	0	58	357	0	52	145	0
Confl. Peds. (#/hr)	98		10	10		98	28		52	52		28
Heavy Vehicles (%)	5%	5%	4%	0%	5%	7%	2%	6%	13%	10%	11%	20%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	36.0	36.0		36.0	36.0		31.0	31.0		31.0	31.0	
Effective Green, g (s)	36.0	36.0		36.0	36.0		31.0	31.0		31.0	31.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.41	0.41		0.41	0.41	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	417	1468		396	1440		432	1249		310	1153	
v/s Ratio Prot		c0.13			0.10			c0.12			0.05	
v/s Ratio Perm	0.09			0.05			0.06			0.07		
v/c Ratio	0.19	0.28		0.10	0.21		0.13	0.29		0.17	0.13	
Uniform Delay, d1	11.2	11.7		10.7	11.3		13.7	14.6		13.9	13.6	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.0	0.5		0.5	0.3		0.6	0.6		1.2	0.2	
Delay (s)	12.2	12.2		11.2	11.6		14.3	15.2		15.0	13.8	
Level of Service	B	B		B	B		B	B		B	B	
Approach Delay (s)		12.2			11.6			15.1			14.1	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	13.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	47.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1021: 103rd Street & Martin Luther King Jr Drive

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱		↰	↑↱		↰	↑↱	
Volume (vph)	84	252	29	21	292	43	54	344	22	34	161	36
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	12	8	16	12	9	10	10	9	10	10
Total Lost time (s)	3.0	7.0		3.0	7.0		3.0	7.0		3.0	7.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.99		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1533	1575		1470	1840		1532	3072		1371	2892	
Flt Permitted	0.49	1.00		0.55	1.00		0.62	1.00		0.49	1.00	
Satd. Flow (perm)	787	1575		852	1840		1003	3072		711	2892	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	88	265	31	22	307	45	57	362	23	36	169	38
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	88	296	0	22	352	0	57	385	0	36	207	0
Confl. Peds. (#/hr)	7		23	23		7	10		8	8		10
Confl. Bikes (#/hr)	1		2	2		1	1		1	1		1
Heavy Vehicles (%)	4%	8%	10%	0%	9%	5%	0%	3%	0%	12%	7%	6%
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	47.0	41.8		40.6	38.6		26.8	22.2		23.6	20.6	
Effective Green, g (s)	47.0	39.8		40.6	36.6		26.8	20.2		23.6	18.6	
Actuated g/C Ratio	0.55	0.47		0.48	0.43		0.32	0.24		0.28	0.22	
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	5.0		3.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	481	737		421	792		345	730		221	633	
v/s Ratio Prot	c0.01	0.19		0.00	c0.19		c0.01	c0.13		0.01	0.07	
v/s Ratio Perm	0.09			0.02			0.04			0.04		
v/c Ratio	0.18	0.40		0.05	0.44		0.17	0.53		0.16	0.33	
Uniform Delay, d1	11.9	14.8		12.9	17.0		21.1	28.2		24.2	27.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.2	1.6		0.1	1.8		0.2	2.7		0.3	1.4	
Delay (s)	12.1	16.4		13.0	18.8		21.4	31.0		24.6	29.3	
Level of Service	B	B		B	B		C	C		C	C	
Approach Delay (s)		15.4			18.5			29.7			28.6	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM Average Control Delay	22.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	59.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1022: 103rd Street & Cottage Grove Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	53	247	34	54	312	95	44	300	97	51	146	32
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	11	11	11	11	12	12	10	10	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			0.99		1.00	0.99		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		0.99	1.00	
Frt		0.98			0.97		1.00	0.96		1.00	0.97	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3492			2910		1614	3156		1577	2926	
Flt Permitted		0.82			0.87		0.63	1.00		0.47	1.00	
Satd. Flow (perm)		2902			2546		1073	3156		785	2926	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	57	266	37	58	335	102	47	323	104	55	157	34
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	360	0	0	495	0	47	427	0	55	191	0
Confl. Peds. (#/hr)	20		16	16		20	5		33	33		5
Confl. Bikes (#/hr)	2					2			2	2		
Heavy Vehicles (%)	9%	9%	0%	24%	7%	6%	2%	4%	2%	0%	5%	9%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		33.0			33.0		32.0	32.0		32.0	32.0	
Effective Green, g (s)		34.0			34.0		33.0	33.0		33.0	33.0	
Actuated g/C Ratio		0.45			0.45		0.44	0.44		0.44	0.44	
Clearance Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)		1316			1154		472	1389		345	1287	
v/s Ratio Prot								c0.14			0.07	
v/s Ratio Perm		0.12			c0.19		0.04			0.07		
v/c Ratio		0.27			0.43		0.10	0.31		0.16	0.15	
Uniform Delay, d1		12.8			13.9		12.3	13.6		12.6	12.6	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.5			1.2		0.4	0.6		1.0	0.2	
Delay (s)		13.3			15.1		12.7	14.2		13.6	12.8	
Level of Service		B			B		B	B		B	B	
Approach Delay (s)		13.3			15.1			14.0			13.0	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	14.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	57.7%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1023: 103rd Street & Woodlawn Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↑	↱		✥			↰↑↱	
Volume (vph)	112	401	4	12	536	317	56	7	16	91	1	40
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	12	12	12	12	12	12	13	13	13
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00			0.95	
Frt	1.00	1.00		1.00	1.00	0.85		0.97			0.95	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.97			0.97	
Satd. Flow (prot)	1574	3144		1629	3257	1457		1611			3106	
Flt Permitted	0.43	1.00		0.50	1.00	1.00		0.72			0.78	
Satd. Flow (perm)	721	3144		856	3257	1457		1197			2522	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	120	431	4	13	576	341	60	8	17	98	1	43
RTOR Reduction (vph)	0	1	0	0	0	102	0	14	0	0	35	0
Lane Group Flow (vph)	120	434	0	13	576	239	0	71	0	0	107	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	46.9	46.9		46.9	46.9	46.9		11.9			11.9	
Effective Green, g (s)	46.9	46.9		46.9	46.9	46.9		11.9			11.9	
Actuated g/C Ratio	0.70	0.70		0.70	0.70	0.70		0.18			0.18	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		8.0			8.0	
Lane Grp Cap (vph)	506	2207		601	2287	1023		213			449	
v/s Ratio Prot		0.14			c0.18							
v/s Ratio Perm	0.17			0.02		0.16		c0.06			0.04	
v/c Ratio	0.24	0.20		0.02	0.25	0.23		0.33			0.24	
Uniform Delay, d1	3.6	3.4		3.0	3.6	3.5		24.0			23.6	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00			1.00	
Incremental Delay, d2	1.1	0.2		0.1	0.3	0.5		3.9			1.2	
Delay (s)	4.7	3.6		3.1	3.9	4.1		27.9			24.7	
Level of Service	A	A		A	A	A		C			C	
Approach Delay (s)		3.9			3.9			27.9			24.7	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM Average Control Delay	6.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.27		
Actuated Cycle Length (s)	66.8	Sum of lost time (s)	8.0
Intersection Capacity Utilization	49.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1024: 107th Street & Halsted Street

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Lane Configurations	↰	↱		↰	↱		↰	↑↑	↱	↰	↑↑	↱
Volume (vph)	111	214	67	63	190	66	106	1591	71	67	476	39
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	9	12	10	10	12	9	10	9	9	10	9
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00	0.96	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.96		1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1548	1505		1547	1589		1493	3069	1271	1452	2983	1301
Flt Permitted	0.38	1.00		0.34	1.00		0.41	1.00	1.00	0.12	1.00	1.00
Satd. Flow (perm)	625	1505		547	1589		636	3069	1271	180	2983	1301
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	117	225	71	66	200	69	112	1675	75	71	501	41
RTOR Reduction (vph)	0	13	0	0	15	0	0	0	18	0	0	24
Lane Group Flow (vph)	117	283	0	66	254	0	112	1675	57	71	501	17
Confl. Peds. (#/hr)	4		9	9		4	6		16	16		6
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	3%	3%	4%	3%	1%	2%	3%	4%	4%	6%	7%	3%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	28.0	21.0		28.0	21.0		42.0	35.0	35.0	42.0	35.0	35.0
Effective Green, g (s)	26.0	22.0		26.0	22.0		40.0	35.0	35.0	40.0	35.0	35.0
Actuated g/C Ratio	0.31	0.26		0.31	0.26		0.47	0.41	0.41	0.47	0.41	0.41
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)	256	390		238	411		360	1264	523	174	1228	536
v/s Ratio Prot	c0.03	c0.19		0.02	0.16		0.02	c0.55		c0.03	0.17	
v/s Ratio Perm	0.11			0.07			0.12		0.04	0.16		0.01
v/c Ratio	0.46	0.72		0.28	0.62		0.31	1.33	0.11	0.41	0.41	0.03
Uniform Delay, d1	22.5	28.7		21.8	27.8		13.0	25.0	15.4	18.1	17.7	14.9
Progression Factor	1.00	1.00		1.00	1.00		0.62	0.69	0.46	1.00	1.00	1.00
Incremental Delay, d2	5.8	11.1		2.9	6.8		2.0	151.4	0.4	6.9	1.0	0.1
Delay (s)	28.3	39.9		24.7	34.6		10.1	168.6	7.4	25.0	18.7	15.0
Level of Service	C	D		C	C		B	F	A	C	B	B
Approach Delay (s)		36.6			32.7			152.6			19.2	
Approach LOS		D			C			F			B	

Intersection Summary			
HCM Average Control Delay	99.9	HCM Level of Service	F
HCM Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	85.1%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1025: 107th Street & Wentworth Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			✥			✥	
Volume (vph)	26	212	15	15	149	9	16	146	24	28	130	19
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	14	12	12	14	12	12	16	12	12	16	12
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		1.00			1.00			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.99			0.99			0.98			0.99	
Flt Protected		0.99			1.00			1.00			0.99	
Satd. Flow (prot)		1851			1846			1901			1931	
Flt Permitted		0.96			0.97			0.97			0.94	
Satd. Flow (perm)		1791			1795			1860			1835	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	28	226	16	16	159	10	17	155	26	30	138	20
RTOR Reduction (vph)	0	4	0	0	3	0	0	9	0	0	6	0
Lane Group Flow (vph)	0	266	0	0	182	0	0	189	0	0	182	0
Confl. Peds. (#/hr)	5		11	11		5	7		34	34		7
Confl. Bikes (#/hr)			3	3								
Heavy Vehicles (%)	4%	2%	0%	20%	1%	0%	12%	3%	8%	0%	3%	5%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		27.0			27.0			30.0			30.0	
Effective Green, g (s)		27.0			27.0			30.0			30.0	
Actuated g/C Ratio		0.42			0.42			0.46			0.46	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		744			746			858			847	
v/s Ratio Prot												
v/s Ratio Perm		c0.15			0.10			c0.10			0.10	
v/c Ratio		0.36			0.24			0.22			0.21	
Uniform Delay, d1		13.0			12.4			10.5			10.5	
Progression Factor		1.00			0.55			1.07			1.00	
Incremental Delay, d2		1.3			0.8			0.6			0.6	
Delay (s)		14.4			7.6			11.8			11.0	
Level of Service		B			A			B			B	
Approach Delay (s)		14.4			7.6			11.8			11.0	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM Average Control Delay	11.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.29		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	42.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1026: 107th Street & State Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	24	181	25	9	162	16	33	296	26	15	86	17
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	0.95	1.00		1.00	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.99		1.00	0.99		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1465	3013		1302	3048		1529	3092		1492	2867	
Flt Permitted	0.63	1.00		0.61	1.00		0.68	1.00		0.54	1.00	
Satd. Flow (perm)	969	3013		837	3048		1094	3092		848	2867	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	26	199	27	10	178	18	36	325	29	16	95	19
RTOR Reduction (vph)	0	16	0	0	12	0	0	10	0	0	8	0
Lane Group Flow (vph)	26	210	0	10	184	0	36	344	0	16	106	0
Confl. Peds. (#/hr)	35		6	6		35	18					18
Confl. Bikes (#/hr)	14		32	32		14	23		7	7		23
Heavy Vehicles (%)	4%	4%	0%	22%	2%	6%	3%	2%	0%	7%	8%	6%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.0	20.0		20.0	20.0		39.0	39.0		39.0	39.0	
Effective Green, g (s)	19.0	19.0		19.0	19.0		38.0	38.0		38.0	38.0	
Actuated g/C Ratio	0.29	0.29		0.29	0.29		0.58	0.58		0.58	0.58	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	283	881		245	891		640	1808		496	1676	
v/s Ratio Prot		c0.07			0.06			c0.11			0.04	
v/s Ratio Perm	0.03			0.01			0.03			0.02		
v/c Ratio	0.09	0.24		0.04	0.21		0.06	0.19		0.03	0.06	
Uniform Delay, d1	16.7	17.5		16.5	17.3		5.8	6.3		5.7	5.8	
Progression Factor	0.69	0.70		0.77	0.76		0.92	0.93		0.47	0.43	
Incremental Delay, d2	0.6	0.6		0.3	0.5		0.2	0.2		0.1	0.1	
Delay (s)	12.2	12.9		13.1	13.7		5.5	6.1		2.8	2.6	
Level of Service	B	B		B	B		A	A		A	A	
Approach Delay (s)		12.8			13.7			6.1			2.6	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	9.0	HCM Level of Service	A
HCM Volume to Capacity ratio	0.21		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	40.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1027: 107th Street & Michigan Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			↰↑↱			↰↑↱	
Volume (vph)	46	178	31	16	122	29	27	414	24	11	163	15
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	9	9	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	
Flpb, ped/bikes	0.99	1.00		0.98	1.00			1.00			1.00	
Frt	1.00	0.98		1.00	0.97			0.99			0.99	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1555	2960		1514	2884			1878			1806	
Flt Permitted	0.65	1.00		0.62	1.00			0.98			0.97	
Satd. Flow (perm)	1071	2960		985	2884			1843			1763	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	47	182	32	16	124	30	28	422	24	11	166	15
RTOR Reduction (vph)	0	19	0	0	18	0	0	3	0	0	5	0
Lane Group Flow (vph)	47	195	0	16	136	0	0	471	0	0	187	0
Confl. Peds. (#/hr)	10		29	29		10	17		10	10		17
Confl. Bikes (#/hr)									2	2		
Heavy Vehicles (%)	2%	4%	10%	0%	4%	0%	0%	8%	4%	0%	13%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	26.0	26.0		26.0	26.0			31.0			31.0	
Effective Green, g (s)	26.0	26.0		26.0	26.0			31.0			31.0	
Actuated g/C Ratio	0.40	0.40		0.40	0.40			0.48			0.48	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	428	1184		394	1154			879			841	
v/s Ratio Prot		c0.07			0.05							
v/s Ratio Perm	0.04			0.02				c0.26			0.11	
v/c Ratio	0.11	0.16		0.04	0.12			0.54			0.22	
Uniform Delay, d1	12.2	12.5		11.9	12.3			11.9			9.9	
Progression Factor	1.00	0.90		0.87	0.88			1.06			1.00	
Incremental Delay, d2	0.5	0.3		0.2	0.2			2.3			0.6	
Delay (s)	12.8	11.6		10.6	11.0			14.9			10.6	
Level of Service	B	B		B	B			B			B	
Approach Delay (s)		11.8			11.0			14.9			10.6	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	12.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	60.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1028: 107th Street & Martin Luther King Jr Drive

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱			✥			✥	
Volume (vph)	70	99	40	2	65	26	19	262	9	5	142	23
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	16	12	10	16	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00			1.00			1.00	
Flpb, ped/bikes	1.00	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.96		1.00	0.96			1.00			0.98	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1605	1889		1586	1873			1971			1931	
Flt Permitted	0.69	1.00		0.64	1.00			0.98			0.99	
Satd. Flow (perm)	1163	1889		1068	1873			1935			1918	
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	81	115	47	2	76	30	22	305	10	6	165	27
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	81	162	0	2	106	0	0	337	0	0	198	0
Confl. Peds. (#/hr)			8	8			1		8	8		1
Heavy Vehicles (%)	3%	3%	2%	0%	6%	0%	0%	3%	0%	0%	4%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.0	20.0		20.0	20.0			37.0			37.0	
Effective Green, g (s)	20.0	20.0		20.0	20.0			37.0			37.0	
Actuated g/C Ratio	0.31	0.31		0.31	0.31			0.57			0.57	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	358	581		329	576			1101			1092	
v/s Ratio Prot		c0.09			0.06							
v/s Ratio Perm	0.07			0.00				c0.17			0.10	
v/c Ratio	0.23	0.28		0.01	0.18			0.31			0.18	
Uniform Delay, d1	16.7	17.0		15.6	16.5			7.3			6.7	
Progression Factor	0.85	0.83		0.92	0.90			0.91			1.00	
Incremental Delay, d2	1.4	1.2		0.0	0.7			0.7			0.4	
Delay (s)	15.6	15.3		14.4	15.6			7.3			7.1	
Level of Service	B	B		B	B			A			A	
Approach Delay (s)		15.4			15.6			7.3			7.1	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	10.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	44.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1029: 107th Street & Cottage Grove Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱		↰	↑	↱	↰	↑	↱
Volume (vph)	94	7	40	1	3	8	30	379	5	2	155	39
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	10	10	10	11	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.97		1.00	1.00	0.98	1.00	1.00	0.98
Flpb, ped/bikes	0.98	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.87		1.00	0.89		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1603	1674		1710	1401		1491	1631	1392	1649	1907	1427
Flt Permitted	0.75	1.00		0.72	1.00		0.65	1.00	1.00	0.46	1.00	1.00
Satd. Flow (perm)	1265	1674		1300	1401		1014	1631	1392	793	1907	1427
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	107	8	45	1	3	9	34	431	6	2	176	44
RTOR Reduction (vph)	0	33	0	0	7	0	0	0	2	0	0	18
Lane Group Flow (vph)	107	20	0	1	5	0	34	431	4	2	176	26
Confl. Peds. (#/hr)	9					9	1		6	6		1
Heavy Vehicles (%)	5%	14%	5%	0%	67%	12%	7%	3%	0%	0%	7%	5%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	17.0	17.0		17.0	17.0		39.0	39.0	39.0	39.0	39.0	39.0
Effective Green, g (s)	18.0	18.0		18.0	18.0		39.0	39.0	39.0	39.0	39.0	39.0
Actuated g/C Ratio	0.28	0.28		0.28	0.28		0.60	0.60	0.60	0.60	0.60	0.60
Clearance Time (s)	5.0	5.0		5.0	5.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	350	464		360	388		608	979	835	476	1144	856
v/s Ratio Prot		0.01			0.00			c0.26			0.09	
v/s Ratio Perm	c0.08			0.00			0.03		0.00	0.00		0.02
v/c Ratio	0.31	0.04		0.00	0.01		0.06	0.44	0.00	0.00	0.15	0.03
Uniform Delay, d1	18.6	17.2		17.0	17.1		5.4	7.1	5.2	5.2	5.7	5.3
Progression Factor	1.52	2.41		1.00	1.00		0.90	0.91	0.89	1.00	1.00	1.00
Incremental Delay, d2	2.2	0.2		0.0	0.1		0.2	1.3	0.0	0.0	0.3	0.1
Delay (s)	30.5	41.6		17.0	17.1		5.0	7.7	4.6	5.2	6.0	5.4
Level of Service	C	D		B	B		A	A	A	A	A	A
Approach Delay (s)		34.1			17.1			7.5			5.9	
Approach LOS		C			B			A			A	

Intersection Summary			
HCM Average Control Delay	12.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	46.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱		↰	↑↑					↰	↑↱	
Volume (vph)	0	232	76	101	313	0	0	0	0	71	305	361
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	12	12	12	12	12	11	11	12
Total Lost time (s)		4.0		3.0	3.0					5.0	5.0	
Lane Util. Factor		0.95		1.00	0.95					1.00	0.95	
Frpb, ped/bikes		0.99		1.00	1.00					1.00	0.99	
Flpb, ped/bikes		1.00		0.99	1.00					1.00	1.00	
Frt		0.96		1.00	1.00					1.00	0.92	
Flt Protected		1.00		0.95	1.00					0.95	1.00	
Satd. Flow (prot)		2823		1620	3288					1574	2906	
Flt Permitted		1.00		0.50	1.00					0.95	1.00	
Satd. Flow (perm)		2823		855	3288					1574	2906	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	0	247	81	107	333	0	0	0	0	76	324	384
RTOR Reduction (vph)	0	31	0	0	0	0	0	0	0	0	216	0
Lane Group Flow (vph)	0	297	0	107	333	0	0	0	0	76	492	0
Confl. Peds. (#/hr)	14		32	32		14	14					14
Confl. Bikes (#/hr)			1	1								
Heavy Vehicles (%)	0%	9%	4%	5%	4%	0%	0%	0%	0%	5%	2%	4%
Turn Type				D.P+P						custom		
Protected Phases		8		7	7 8					6	6	
Permitted Phases				8						6		
Actuated Green, G (s)		33.0		56.0	59.0					32.0	32.0	
Effective Green, g (s)		33.0		56.0	59.0					32.0	32.0	
Actuated g/C Ratio		0.33		0.56	0.59					0.32	0.32	
Clearance Time (s)		4.0		3.0						5.0	5.0	
Lane Grp Cap (vph)		932		655	1940					504	930	
v/s Ratio Prot		c0.11		0.04	c0.10					0.05	c0.17	
v/s Ratio Perm				0.05								
v/c Ratio		0.32		0.16	0.17					0.15	0.53	
Uniform Delay, d1		25.1		10.4	9.4					24.3	27.8	
Progression Factor		1.00		1.88	1.97					1.00	1.00	
Incremental Delay, d2		0.9		0.5	0.2					0.6	2.2	
Delay (s)		26.0		20.0	18.6					24.9	30.0	
Level of Service		C		C	B					C	C	
Approach Delay (s)		26.0			18.9			0.0			29.5	
Approach LOS		C			B			A			C	

Intersection Summary				
HCM Average Control Delay		25.8	HCM Level of Service	C
HCM Volume to Capacity ratio		0.36		
Actuated Cycle Length (s)		100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization		60.0%	ICU Level of Service	B
Analysis Period (min)		15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1031: 111th Street & Ashland Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑			↑↱		↰	↑	↱			
Volume (vph)	129	174	0	0	253	54	161	509	289	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	9	12	13	12	13	12	12	12
Total Lost time (s)	4.0	4.0			4.0		5.0	5.0	5.0			
Lane Util. Factor	1.00	0.95			0.95		1.00	1.00	1.00			
Frpb, ped/bikes	1.00	1.00			0.99		1.00	1.00	0.99			
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.97		1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1671	3054			2832		1750	1782	1514			
Flt Permitted	0.42	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	744	3054			2832		1750	1782	1514			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	143	193	0	0	281	60	179	566	321	0	0	0
RTOR Reduction (vph)	0	0	0	0	18	0	0	0	215	0	0	0
Lane Group Flow (vph)	143	193	0	0	323	0	179	566	106	0	0	0
Confl. Peds. (#/hr)	14		16	16		14			1	1		
Confl. Bikes (#/hr)	1					1			1	1		
Heavy Vehicles (%)	2%	12%	0%	0%	5%	4%	1%	1%	3%	0%	0%	0%
Turn Type	pm+pt						custom		Perm			
Protected Phases	4	1 4			1		2	2				
Permitted Phases	1 4						2		2			
Actuated Green, G (s)	54.0	58.0			21.0		33.0	33.0	33.0			
Effective Green, g (s)	54.0	58.0			21.0		33.0	33.0	33.0			
Actuated g/C Ratio	0.54	0.58			0.21		0.33	0.33	0.33			
Clearance Time (s)	4.0				4.0		5.0	5.0	5.0			
Lane Grp Cap (vph)	708	1771			595		578	588	500			
v/s Ratio Prot	c0.07	0.06			c0.11		0.10	c0.32				
v/s Ratio Perm	0.04								0.07			
v/c Ratio	0.20	0.11			0.54		0.31	0.96	0.21			
Uniform Delay, d1	11.7	9.4			35.2		25.0	32.9	24.1			
Progression Factor	0.28	0.28			1.00		0.75	0.79	1.87			
Incremental Delay, d2	0.6	0.1			3.5		1.0	23.4	0.7			
Delay (s)	3.9	2.8			38.7		19.7	49.3	45.8			
Level of Service	A	A			D		B	D	D			
Approach Delay (s)		3.2			38.7			43.3			0.0	
Approach LOS		A			D			D			A	

Intersection Summary			
HCM Average Control Delay	34.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	60.0%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱		↰	↑↑					↰	↑↑	↱
Volume (vph)	0	420	327	33	571	0	0	0	0	4	215	193
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	11	12	12	12	12	10	10	12
Total Lost time (s)		4.0		4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.95		1.00	0.95					1.00	0.95	1.00
Frpb, ped/bikes		0.99		1.00	1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Frt		0.93		1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00					0.95	1.00	1.00
Satd. Flow (prot)		3113		1613	3273					1596	3160	1443
Flt Permitted		1.00		0.18	1.00					0.95	1.00	1.00
Satd. Flow (perm)		3113		312	3273					1596	3160	1443
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	467	363	37	634	0	0	0	0	4	239	214
RTOR Reduction (vph)	0	141	0	0	0	0	0	0	0	0	0	141
Lane Group Flow (vph)	0	689	0	37	634	0	0	0	0	4	239	73
Confl. Peds. (#/hr)	22		3	3		22						
Confl. Bikes (#/hr)	4					4			32	32		
Heavy Vehicles (%)	0%	2%	2%	6%	1%	0%	0%	0%	0%	0%	1%	6%
Turn Type				pm+pt						Split		Prot
Protected Phases		8		7	7 8					6	6	6
Permitted Phases				7 8								
Actuated Green, G (s)		36.0		54.0	58.0					34.0	34.0	34.0
Effective Green, g (s)		36.0		54.0	58.0					34.0	34.0	34.0
Actuated g/C Ratio		0.36		0.54	0.58					0.34	0.34	0.34
Clearance Time (s)		4.0		4.0						4.0	4.0	4.0
Lane Grp Cap (vph)		1121		403	1898					543	1074	491
v/s Ratio Prot		c0.22		0.02	c0.19					0.00	c0.08	0.05
v/s Ratio Perm				0.03								
v/c Ratio		0.61		0.09	0.33					0.01	0.22	0.15
Uniform Delay, d1		26.3		12.3	10.9					21.8	23.6	22.9
Progression Factor		1.00		0.57	0.73					0.78	0.82	1.04
Incremental Delay, d2		2.5		0.2	0.2					0.0	0.4	0.6
Delay (s)		28.8		7.3	8.2					17.0	19.8	24.4
Level of Service		C		A	A					B	B	C
Approach Delay (s)		28.8			8.1			0.0			21.9	
Approach LOS		C			A			A			C	

Intersection Summary			
HCM Average Control Delay	20.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	83.6%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1033: 112th Place & Ashland Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↰↑			↑↱		↰	↰	↱			
Volume (vph)	368	56	0	0	58	3	546	597	58	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	12	12	12	10	12	11	11	12	12	12	12
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0	4.0			
Lane Util. Factor	0.91	0.91			0.95		0.95	0.95	1.00			
Frpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Flpb, ped/bikes	0.99	0.99			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.99		1.00	1.00	0.85			
Flt Protected	0.95	0.96			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1444	3042			3099		1555	1637	1500			
Flt Permitted	0.71	0.74			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	1084	2341			3099		1555	1637	1500			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	387	59	0	0	61	3	575	628	61	0	0	0
RTOR Reduction (vph)	0	0	0	0	3	0	0	0	38	0	0	0
Lane Group Flow (vph)	193	253	0	0	61	0	575	628	23	0	0	0
Confl. Peds. (#/hr)	30		2	2		30			4	4		
Confl. Bikes (#/hr)	3					3			2	2		
Heavy Vehicles (%)	3%	2%	0%	0%	2%	0%	1%	1%	2%	0%	0%	0%
Turn Type	pm+pt						custom		custom			
Protected Phases	4	1 4			1		2	2	2			
Permitted Phases	1 4						2		2			
Actuated Green, G (s)	51.0	51.0			15.0		37.0	37.0	37.0			
Effective Green, g (s)	51.0	51.0			15.0		37.0	37.0	37.0			
Actuated g/C Ratio	0.51	0.51			0.15		0.37	0.37	0.37			
Clearance Time (s)	4.0				4.0		4.0	4.0	4.0			
Lane Grp Cap (vph)	682	1446			465		575	606	555			
v/s Ratio Prot	c0.10	0.06			0.02		0.37	c0.38	0.02			
v/s Ratio Perm	c0.04	0.03										
v/c Ratio	0.28	0.17			0.13		1.00	1.04	0.04			
Uniform Delay, d1	13.9	13.2			36.9		31.5	31.5	20.1			
Progression Factor	0.24	0.25			1.00		1.00	1.00	1.00			
Incremental Delay, d2	0.8	0.2			0.6		37.5	46.3	0.1			
Delay (s)	4.1	3.5			37.4		69.0	77.8	20.3			
Level of Service	A	A			D		E	E	C			
Approach Delay (s)		3.7			37.4			71.0			0.0	
Approach LOS		A			D			E			A	

Intersection Summary			
HCM Average Control Delay	52.9	HCM Level of Service	D
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	83.6%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱		↰	↑↑	↱	↰	↑↑	↱
Volume (vph)	126	202	54	45	142	88	35	921	50	88	476	42
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	9	10	9	9	10	9
Total Lost time (s)		4.0			4.0		4.0	3.5	4.0	4.0	3.5	4.0
Lane Util. Factor		0.95			0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		1.00			0.98		1.00	1.00	0.97	1.00	1.00	0.97
Flpb, ped/bikes		0.99			1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.98			0.95		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.98			0.99		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		2832			2768		1447	3069	1336	1494	2956	1270
Flt Permitted		0.73			0.84		0.40	1.00	1.00	0.15	1.00	1.00
Satd. Flow (perm)		2093			2348		605	3069	1336	233	2956	1270
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	130	208	56	46	146	91	36	949	52	91	491	43
RTOR Reduction (vph)	0	16	0	0	61	0	0	0	24	0	0	26
Lane Group Flow (vph)	0	378	0	0	222	0	36	949	28	91	491	17
Confl. Peds. (#/hr)	49		20	20		49	26		8	8		26
Confl. Bikes (#/hr)	2					2						
Heavy Vehicles (%)	10%	7%	4%	9%	7%	5%	6%	4%	0%	3%	8%	5%
Turn Type	pm+pt			Perm			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)		35.0			27.0		38.0	33.0	33.0	38.0	33.0	33.0
Effective Green, g (s)		36.0			28.0		36.0	33.5	33.0	36.0	33.5	33.0
Actuated g/C Ratio		0.42			0.33		0.42	0.39	0.39	0.42	0.39	0.39
Clearance Time (s)		5.0			5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)		939			773		296	1210	519	158	1165	493
v/s Ratio Prot		c0.03					0.01	c0.31		c0.03	0.17	
v/s Ratio Perm		0.14			0.09		0.05		0.02	0.22		0.01
v/c Ratio		0.40			0.29		0.12	0.78	0.05	0.58	0.42	0.03
Uniform Delay, d1		17.0			21.1		14.6	22.6	16.2	17.0	18.7	16.1
Progression Factor		1.00			1.00		1.16	0.77	1.21	1.81	1.66	3.17
Incremental Delay, d2		1.3			0.9		0.6	3.9	0.1	13.3	1.0	0.1
Delay (s)		18.3			22.0		17.6	21.2	19.8	44.0	32.0	51.3
Level of Service		B			C		B	C	B	D	C	D
Approach Delay (s)		18.3			22.0			21.0			35.1	
Approach LOS		B			C			C			D	

Intersection Summary			
HCM Average Control Delay	24.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	11.5
Intersection Capacity Utilization	72.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1035: 111th Street & Normal Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰			↱			✥				
Volume (vph)	34	306	0	0	253	63	22	49	76	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		1.00			0.97			0.93				
Flt Protected		0.99			1.00			0.99				
Satd. Flow (prot)		1706			1668			1583				
Flt Permitted		0.95			1.00			0.99				
Satd. Flow (perm)		1623			1668			1583				
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	37	329	0	0	272	68	24	53	82	0	0	0
RTOR Reduction (vph)	0	0	0	0	14	0	0	53	0	0	0	0
Lane Group Flow (vph)	0	366	0	0	326	0	0	106	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)		34.0			34.0			23.0				
Effective Green, g (s)		34.0			34.0			23.0				
Actuated g/C Ratio		0.52			0.52			0.35				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		849			872			560				
v/s Ratio Prot					0.20							
v/s Ratio Perm		c0.23						0.07				
v/c Ratio		0.43			0.37			0.19				
Uniform Delay, d1		9.5			9.2			14.5				
Progression Factor		1.00			0.45			1.00				
Incremental Delay, d2		1.6			1.2			0.7				
Delay (s)		11.1			5.3			15.3				
Level of Service		B			A			B				
Approach Delay (s)		11.1			5.3			15.3			0.0	
Approach LOS		B			A			B			A	

Intersection Summary			
HCM Average Control Delay	9.6	HCM Level of Service	A
HCM Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1036: 111th Street & Wentworth Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			↰↑↱			↰↑↱	
Volume (vph)	35	306	24	16	262	38	13	140	28	48	100	18
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	12	12	12	12	12
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		1.00			1.00			0.99			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.99			0.98			0.98			0.98	
Flt Protected		1.00			1.00			1.00			0.99	
Satd. Flow (prot)		1886			1833			3185			3152	
Flt Permitted		0.95			0.98			0.94			0.85	
Satd. Flow (perm)		1797			1794			2991			2705	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	37	326	26	17	279	40	14	149	30	51	106	19
RTOR Reduction (vph)	0	4	0	0	8	0	0	18	0	0	11	0
Lane Group Flow (vph)	0	385	0	0	328	0	0	175	0	0	165	0
Confl. Peds. (#/hr)	29		16	16		29	28		14	14		28
Confl. Bikes (#/hr)	1					1	1					1
Heavy Vehicles (%)	3%	7%	4%	12%	8%	13%	0%	4%	4%	4%	4%	6%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		30.0			30.0			27.0			27.0	
Effective Green, g (s)		30.0			30.0			27.0			27.0	
Actuated g/C Ratio		0.46			0.46			0.42			0.42	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		829			828			1242			1124	
v/s Ratio Prot												
v/s Ratio Perm		c0.21			0.18			0.06			c0.06	
v/c Ratio		0.46			0.40			0.14			0.15	
Uniform Delay, d1		12.0			11.5			11.8			11.8	
Progression Factor		0.61			0.45			0.85			0.57	
Incremental Delay, d2		1.7			1.4			0.2			0.3	
Delay (s)		9.1			6.6			10.2			7.0	
Level of Service		A			A			B			A	
Approach Delay (s)		9.1			6.6			10.2			7.0	
Approach LOS		A			A			B			A	

Intersection Summary			
HCM Average Control Delay	8.2	HCM Level of Service	A
HCM Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	68.4%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1037: 111th Street & State Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	39	204	16	28	280	61	36	246	69	37	74	16
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	9	10	10	9	10	10	12	10	10	12
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		0.99	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.97		1.00	0.97		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1500	2936		1582	2932		1497	3034		1594	2938	
Flt Permitted	0.51	1.00		0.61	1.00		0.69	1.00		0.55	1.00	
Satd. Flow (perm)	803	2936		1009	2932		1090	3034		923	2938	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	41	217	17	30	298	65	38	262	73	39	79	17
RTOR Reduction (vph)	0	9	0	0	28	0	0	34	0	0	8	0
Lane Group Flow (vph)	41	225	0	30	335	0	38	301	0	39	88	0
Confl. Peds. (#/hr)	25		14	14		25	12		4	4		12
Confl. Bikes (#/hr)	1					1			1	1		
Heavy Vehicles (%)	5%	7%	12%	0%	6%	2%	6%	1%	3%	0%	4%	12%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	22.0	22.0		22.0	22.0		35.0	35.0		35.0	35.0	
Effective Green, g (s)	22.0	22.0		22.0	22.0		35.0	35.0		35.0	35.0	
Actuated g/C Ratio	0.34	0.34		0.34	0.34		0.54	0.54		0.54	0.54	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	272	994		342	992		587	1634		497	1582	
v/s Ratio Prot		0.08			c0.11			c0.10			0.03	
v/s Ratio Perm	0.05			0.03			0.03			0.04		
v/c Ratio	0.15	0.23		0.09	0.34		0.06	0.18		0.08	0.06	
Uniform Delay, d1	15.0	15.4		14.7	16.1		7.2	7.7		7.2	7.1	
Progression Factor	0.66	0.64		0.74	0.73		0.68	0.71		1.27	1.28	
Incremental Delay, d2	1.1	0.5		0.5	0.9		0.2	0.2		0.3	0.1	
Delay (s)	11.0	10.4		11.4	12.6		5.1	5.7		9.5	9.2	
Level of Service	B	B		B	B		A	A		A	A	
Approach Delay (s)		10.5			12.5			5.7			9.3	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	9.5	HCM Level of Service	A
HCM Volume to Capacity ratio	0.24		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	46.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1038: 111th Street & Michigan Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			↰↑↱			↰↑↱	
Volume (vph)	64	293	20	37	313	82	11	302	44	41	118	38
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	9	10	9	9	16	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.98			1.00			0.99	
Flpb, ped/bikes	0.97	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.97			0.98			0.97	
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.99	
Satd. Flow (prot)	1381	3014		1332	3523			3432			3309	
Flt Permitted	0.49	1.00		0.55	1.00			0.95			0.84	
Satd. Flow (perm)	718	3014		772	3523			3252			2811	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	68	312	21	39	333	87	12	321	47	44	126	40
RTOR Reduction (vph)	0	7	0	0	36	0	0	17	0	0	24	0
Lane Group Flow (vph)	68	326	0	39	384	0	0	363	0	0	186	0
Confl. Peds. (#/hr)	53		34	34		53	67		28	28		67
Heavy Vehicles (%)	8%	5%	0%	14%	6%	1%	0%	9%	20%	5%	15%	5%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	31.0	31.0		31.0	31.0			26.0			26.0	
Effective Green, g (s)	31.0	31.0		31.0	31.0			26.0			26.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48			0.40			0.40	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	342	1437		368	1680			1301			1124	
v/s Ratio Prot		0.11			c0.11							
v/s Ratio Perm	0.09			0.05				c0.11			0.07	
v/c Ratio	0.20	0.23		0.11	0.23			0.28			0.17	
Uniform Delay, d1	9.8	10.0		9.4	10.0			13.2			12.5	
Progression Factor	1.59	1.63		0.74	0.68			0.53			0.64	
Incremental Delay, d2	1.3	0.4		0.5	0.3			0.5			0.3	
Delay (s)	16.9	16.6		7.5	7.1			7.5			8.3	
Level of Service	B	B		A	A			A			A	
Approach Delay (s)		16.7			7.1			7.5			8.3	
Approach LOS		B			A			A			A	

Intersection Summary			
HCM Average Control Delay	10.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.25		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	57.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1039: 111th Street & Indiana Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑	↱		↰↑↑↱			↰↑↱			↰↑↱	
Volume (vph)	76	226	76	103	311	103	61	65	68	68	65	61
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	16	12	12	16	12
Total Lost time (s)		5.0	5.0		5.0			5.0			5.0	
Lane Util. Factor		1.00	1.00		0.95			1.00			1.00	
Frt		1.00	0.85		0.97			0.95			0.96	
Flt Protected		0.99	1.00		0.99			0.98			0.98	
Satd. Flow (prot)		1636	1409		3024			1822			1828	
Flt Permitted		0.78	1.00		0.81			0.86			0.84	
Satd. Flow (perm)		1286	1409		2480			1590			1571	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	82	243	82	111	334	111	66	70	73	73	70	66
RTOR Reduction (vph)	0	0	39	0	34	0	0	30	0	0	26	0
Lane Group Flow (vph)	0	325	43	0	522	0	0	179	0	0	183	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm		Perm	Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)		34.0	34.0		34.0			21.0			21.0	
Effective Green, g (s)		34.0	34.0		34.0			21.0			21.0	
Actuated g/C Ratio		0.52	0.52		0.52			0.32			0.32	
Clearance Time (s)		5.0	5.0		5.0			5.0			5.0	
Lane Grp Cap (vph)		673	737		1297			514			508	
v/s Ratio Prot												
v/s Ratio Perm		c0.25	0.03		0.21			0.11			c0.12	
v/c Ratio		0.48	0.06		0.40			0.35			0.36	
Uniform Delay, d1		9.9	7.6		9.4			16.8			16.9	
Progression Factor		2.13	5.31		0.34			1.00			1.00	
Incremental Delay, d2		2.4	0.1		0.9			1.9			2.0	
Delay (s)		23.5	40.6		4.0			18.6			18.8	
Level of Service		C	D		A			B			B	
Approach Delay (s)		26.9			4.0			18.6			18.8	
Approach LOS		C			A			B			B	

Intersection Summary			
HCM Average Control Delay	15.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	61.0%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1040: 111th Street & Martin Luther King Jr Drive

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			↰↑↱			↰↑↱	
Volume (vph)	56	291	15	15	417	63	28	102	41	35	73	72
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	15	8	16	8	8	16	8
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			1.00			0.99	
Flpb, ped/bikes	0.99	1.00		0.98	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.98			0.96			0.94	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1474	3019		1568	2999			3444			3420	
Flt Permitted	0.42	1.00		0.55	1.00			0.90			0.89	
Satd. Flow (perm)	655	3019		915	2999			3123			3063	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	60	310	16	16	444	67	30	109	44	37	78	77
RTOR Reduction (vph)	0	6	0	0	18	0	0	24	0	0	43	0
Lane Group Flow (vph)	60	320	0	16	493	0	0	159	0	0	149	0
Confl. Peds. (#/hr)	22		40	40		22	18		3	3		18
Confl. Bikes (#/hr)			2	2			1					1
Heavy Vehicles (%)	7%	5%	0%	0%	4%	2%	0%	3%	22%	0%	3%	8%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	28.0	28.0		28.0	28.0			29.0			29.0	
Effective Green, g (s)	28.0	28.0		28.0	28.0			29.0			29.0	
Actuated g/C Ratio	0.43	0.43		0.43	0.43			0.45			0.45	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	282	1300		394	1292			1393			1367	
v/s Ratio Prot		0.11			c0.16							
v/s Ratio Perm	0.09			0.02				c0.05			0.05	
v/c Ratio	0.21	0.25		0.04	0.38			0.11			0.11	
Uniform Delay, d1	11.6	11.8		10.7	12.6			10.5			10.5	
Progression Factor	1.09	1.09		0.83	0.73			1.01			0.75	
Incremental Delay, d2	1.6	0.4		0.2	0.8			0.2			0.2	
Delay (s)	14.2	13.2		9.1	10.0			10.7			8.0	
Level of Service	B	B		A	B			B			A	
Approach Delay (s)		13.4			10.0			10.7			8.0	
Approach LOS		B			A			B			A	

Intersection Summary			
HCM Average Control Delay	10.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.25		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	57.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1041: 111th Street & Cottage Grove Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↑↱			↰↑↑↱			↰↑↑↱			↰↑↑↱	
Volume (vph)	66	349	55	73	346	219	32	256	71	171	123	38
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			0.95			0.95	
Frt		0.98			0.95			0.97			0.98	
Flt Protected		0.99			0.99			1.00			0.97	
Satd. Flow (prot)		3178			3072			3147			3121	
Flt Permitted		0.77			0.83			0.91			0.67	
Satd. Flow (perm)		2479			2572			2881			2129	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	71	375	59	78	372	235	34	275	76	184	132	41
RTOR Reduction (vph)	0	16	0	0	103	0	0	33	0	0	15	0
Lane Group Flow (vph)	0	489	0	0	582	0	0	352	0	0	342	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm			pm+pt			Perm		
Protected Phases		4			8		5	2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		26.0			26.0			29.0			20.0	
Effective Green, g (s)		26.0			26.0			29.0			20.0	
Actuated g/C Ratio		0.40			0.40			0.45			0.31	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		992			1029			1310			655	
v/s Ratio Prot								c0.02				
v/s Ratio Perm		0.20			c0.23			0.10			c0.16	
v/c Ratio		0.49			0.57			0.27			0.52	
Uniform Delay, d1		14.6			15.1			11.3			18.6	
Progression Factor		1.85			1.00			1.00			0.87	
Incremental Delay, d2		1.7			2.2			0.5			3.0	
Delay (s)		28.7			17.4			11.8			19.2	
Level of Service		C			B			B			B	
Approach Delay (s)		28.7			17.4			11.8			19.2	
Approach LOS		C			B			B			B	

Intersection Summary			
HCM Average Control Delay	19.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	71.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1042: 111th Street & Ellis Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↑↱			↰↑↑↱			✥			✥	
Volume (vph)	0	556	91	35	578	0	102	0	54	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	10	10	12	12	12	12	10	10	10
Total Lost time (s)		5.0			5.0			5.0				
Lane Util. Factor		0.95			0.95			1.00				
Frt		0.98			1.00			0.95				
Flt Protected		1.00			1.00			0.97				
Satd. Flow (prot)		2976			3031			1583				
Flt Permitted		1.00			0.88			0.80				
Satd. Flow (perm)		2976			2666			1311				
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	0	598	98	38	622	0	110	0	58	0	0	0
RTOR Reduction (vph)	0	18	0	0	0	0	0	21	0	0	0	0
Lane Group Flow (vph)	0	678	0	0	660	0	0	147	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	custom			Perm			Perm			Perm		
Protected Phases		4 5 6 11			8			2			2	
Permitted Phases	4 6 11			8			2			2		
Actuated Green, G (s)		65.0			33.0			16.0				
Effective Green, g (s)		58.0			33.0			16.0				
Actuated g/C Ratio		0.64			0.37			0.18				
Clearance Time (s)					5.0			5.0				
Lane Grp Cap (vph)		1918			978			233				
v/s Ratio Prot		c0.23										
v/s Ratio Perm					c0.25			c0.11				
v/c Ratio		0.35			0.67			0.63				
Uniform Delay, d1		7.4			24.0			34.3				
Progression Factor		0.00			1.47			1.00				
Incremental Delay, d2		0.4			3.6			12.2				
Delay (s)		0.4			38.9			46.5				
Level of Service		A			D			D				
Approach Delay (s)		0.4			38.9			46.5			0.0	
Approach LOS		A			D			D			A	

Intersection Summary			
HCM Average Control Delay	22.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	59.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1043: 111th Street & Doty Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↑	↱		✣		↰	↑	↱
Volume (vph)	95	385	144	211	494	141	78	16	143	60	6	58
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	10	12	12	12	12	16	12	12	12	12
Total Lost time (s)	3.0	5.0		3.0	5.0	3.0		5.0		3.0	5.0	3.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00		1.00	1.00	1.00
Frt	1.00	0.96		1.00	1.00	0.85		0.92		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.98		0.95	1.00	1.00
Satd. Flow (prot)	1520	3020		1629	3257	1457		1756		1629	1714	1457
Flt Permitted	0.45	1.00		0.35	1.00	1.00		0.89		0.42	1.00	1.00
Satd. Flow (perm)	723	3020		599	3257	1457		1584		715	1714	1457
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	102	414	155	227	531	152	84	17	154	65	6	62
RTOR Reduction (vph)	0	37	0	0	0	68	0	78	0	0	0	38
Lane Group Flow (vph)	102	532	0	227	531	84	0	177	0	65	6	24
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	pm+pt			pm+pt		pm+ov	pm+pt			pm+pt		pm+ov
Protected Phases	7	4		3	8	1	5	2		1	6	7
Permitted Phases	4			8		8	2			6		6
Actuated Green, G (s)	45.7	38.2		52.3	41.8	49.9		16.6		27.7	27.7	35.2
Effective Green, g (s)	45.7	38.2		52.3	41.8	49.9		16.6		27.7	27.7	35.2
Actuated g/C Ratio	0.51	0.42		0.58	0.46	0.55		0.18		0.31	0.31	0.39
Clearance Time (s)	3.0	5.0		3.0	5.0	3.0		5.0		3.0	5.0	3.0
Vehicle Extension (s)	4.0	3.0		4.0	3.0	3.0		4.0		3.0	4.0	4.0
Lane Grp Cap (vph)	434	1282		475	1513	808		292		302	528	570
v/s Ratio Prot	0.02	0.18		c0.06	0.16	0.01				c0.02	0.00	0.00
v/s Ratio Perm	0.10			c0.22		0.05		c0.11		0.05		0.01
v/c Ratio	0.24	0.42		0.48	0.35	0.10		0.61		0.22	0.01	0.04
Uniform Delay, d1	11.7	18.1		9.7	15.4	9.5		33.7		23.6	21.6	17.0
Progression Factor	1.94	1.70		1.00	1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2	0.4	0.9		1.0	0.6	0.1		4.1		0.4	0.0	0.0
Delay (s)	23.0	31.7		10.8	16.1	9.5		37.8		24.0	21.7	17.0
Level of Service	C	C		B	B	A		D		C	C	B
Approach Delay (s)		30.4			13.7			37.8			20.6	
Approach LOS		C			B			D			C	

Intersection Summary			
HCM Average Control Delay	23.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	61.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
1044: 111th Street & Bishop Ford Freeway EB Ramps

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Lane Configurations		↑↑	↱		↑↑					↰		↱
Volume (veh/h)	0	398	190	5	407	0	0	0	0	25	0	439
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	0	428	204	5	438	0	0	0	0	27	0	472
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		498										
pX, platoon unblocked												
vC, conflicting volume	438			428			658	876	214	662	876	219
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	438			428			658	876	214	662	876	219
tC, single (s)	4.2			4.2			7.6	6.6	7.0	7.6	6.6	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	100	92	100	39
cM capacity (veh/h)	1098			1107			134	279	782	340	279	776

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1	SB 2
Volume Total	214	214	204	151	292	27	472
Volume Left	0	0	0	5	0	27	0
Volume Right	0	0	204	0	0	0	472
cSH	1700	1700	1700	1107	1700	340	776
Volume to Capacity	0.13	0.13	0.12	0.00	0.17	0.08	0.61
Queue Length 95th (ft)	0	0	0	0	0	6	105
Control Delay (s)	0.0	0.0	0.0	0.3	0.0	16.5	16.6
Lane LOS				A		C	C
Approach Delay (s)	0.0			0.1		16.6	
Approach LOS						C	

Intersection Summary			
Average Delay	5.3		
Intersection Capacity Utilization	47.4%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
1045: 111th Street & Bishop Ford Freeway WB Ramps

1/14/2013

	↗	↘	↖	↑	↓	↙
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰↰		↰			
Sign Control	Stop			Stop	Stop	
Volume (vph)	423	0	412	0	0	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	455	0	443	0	0	0

Direction, Lane #	EB 1	EB 2	NB 1
Volume Total (vph)	227	227	443
Volume Left (vph)	227	227	443
Volume Right (vph)	0	0	0
Hadj (s)	0.58	0.58	0.29
Departure Headway (s)	6.4	6.4	5.4
Degree Utilization, x	0.40	0.40	0.66
Capacity (veh/h)	545	546	646
Control Delay (s)	12.4	12.4	18.4
Approach Delay (s)	12.4		18.4
Approach LOS	B		C

Intersection Summary			
Delay	15.4		
HCM Level of Service	C		
Intersection Capacity Utilization	43.5%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Signalized Intersection Capacity Analysis
1046: 115th Street & Marshield Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱		↰	↑↑						↰↑↱	
Volume (vph)	0	339	46	126	323	0	0	0	0	72	15	42
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	12	12	12	12	12
Total Lost time (s)		3.0		4.0	4.0						5.0	
Lane Util. Factor		0.95		1.00	0.95						0.95	
Frt		0.98		1.00	1.00						0.95	
Flt Protected		1.00		0.95	1.00						0.97	
Satd. Flow (prot)		3093		1574	3149						3014	
Flt Permitted		1.00		0.46	1.00						0.97	
Satd. Flow (perm)		3093		763	3149						3014	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	0	365	49	135	347	0	0	0	0	77	16	45
RTOR Reduction (vph)	0	12	0	0	0	0	0	0	0	0	31	0
Lane Group Flow (vph)	0	402	0	135	347	0	0	0	0	0	107	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type				pm+pt						Split		
Protected Phases		4		3	8					6	6	
Permitted Phases				8								
Actuated Green, G (s)		36.0		49.0	49.0						27.0	
Effective Green, g (s)		36.0		49.0	49.0						27.0	
Actuated g/C Ratio		0.42		0.58	0.58						0.32	
Clearance Time (s)		3.0		4.0	4.0						5.0	
Lane Grp Cap (vph)		1310		535	1815						957	
v/s Ratio Prot		c0.13		c0.03	0.11						c0.04	
v/s Ratio Perm				0.12								
v/c Ratio		0.31		0.25	0.19						0.11	
Uniform Delay, d1		16.2		11.1	8.6						20.5	
Progression Factor		1.00		0.27	0.25						1.00	
Incremental Delay, d2		0.6		1.1	0.2						0.2	
Delay (s)		16.8		4.1	2.4						20.8	
Level of Service		B		A	A						C	
Approach Delay (s)		16.8			2.9			0.0			20.8	
Approach LOS		B			A			A			C	

Intersection Summary			
HCM Average Control Delay	10.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.22		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	33.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1047: 115th Street & Ashland Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑			↑↱			↰↑↱				
Volume (vph)	68	343	0	0	400	76	49	65	42	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	11	11	12	12	12	12	12	12
Total Lost time (s)	5.0	5.0			3.0			5.0				
Lane Util. Factor	1.00	0.95			0.95			0.91				
Frt	1.00	1.00			0.98			0.96				
Flt Protected	0.95	1.00			1.00			0.98				
Satd. Flow (prot)	1629	3257			3073			4422				
Flt Permitted	0.39	1.00			1.00			0.98				
Satd. Flow (perm)	673	3257			3073			4422				
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	73	369	0	0	430	82	53	70	45	0	0	0
RTOR Reduction (vph)	0	0	0	0	19	0	0	31	0	0	0	0
Lane Group Flow (vph)	73	369	0	0	493	0	0	137	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	pm+pt						Split					
Protected Phases	7	4			8		2	2				
Permitted Phases	4											
Actuated Green, G (s)	48.0	48.0			35.0			27.0				
Effective Green, g (s)	48.0	48.0			35.0			27.0				
Actuated g/C Ratio	0.56	0.56			0.41			0.32				
Clearance Time (s)	5.0	5.0			3.0			5.0				
Lane Grp Cap (vph)	493	1839			1265			1405				
v/s Ratio Prot	0.02	c0.11			c0.16			c0.03				
v/s Ratio Perm	0.07											
v/c Ratio	0.15	0.20			0.39			0.10				
Uniform Delay, d1	11.9	9.1			17.5			20.4				
Progression Factor	0.34	0.34			1.00			1.00				
Incremental Delay, d2	0.6	0.2			0.9			0.1				
Delay (s)	4.6	3.3			18.4			20.6				
Level of Service	A	A			B			C				
Approach Delay (s)		3.5			18.4			20.6			0.0	
Approach LOS		A			B			C			A	

Intersection Summary			
HCM Average Control Delay	12.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.24		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	33.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1048: 115th Street & Racine Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↑↱			↰↑↑↱			↰↑↱			↰↑↱	
Volume (vph)	39	307	39	31	243	31	117	85	52	52	85	117
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	10	12	12	15	12	12	15	12
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			1.00			1.00	
Frt		0.98			0.98			0.97			0.94	
Flt Protected		0.99			0.99			0.98			0.99	
Satd. Flow (prot)		2979			2979			1792			1750	
Flt Permitted		0.89			0.89			0.76			0.89	
Satd. Flow (perm)		2663			2652			1390			1579	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	42	330	42	33	261	33	126	91	56	56	91	126
RTOR Reduction (vph)	0	13	0	0	13	0	0	14	0	0	48	0
Lane Group Flow (vph)	0	401	0	0	314	0	0	259	0	0	225	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		23.0			23.0			32.0			32.0	
Effective Green, g (s)		23.0			23.0			32.0			32.0	
Actuated g/C Ratio		0.35			0.35			0.49			0.49	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		942			938			684			777	
v/s Ratio Prot												
v/s Ratio Perm		c0.15			0.12			c0.19			0.14	
v/c Ratio		0.43			0.33			0.38			0.29	
Uniform Delay, d1		16.0			15.4			10.3			9.8	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		1.4			1.0			1.6			0.9	
Delay (s)		17.4			16.4			11.9			10.7	
Level of Service		B			B			B			B	
Approach Delay (s)		17.4			16.4			11.9			10.7	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	14.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	62.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1049: 115th Street & Halsted Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↑	↱	↰	↑↑	↱
Volume (vph)	169	202	39	50	176	62	59	828	58	66	373	70
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	12	10	16	12	9	10	9	9	10	9
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00	0.98	1.00	1.00	0.96
Flpb, ped/bikes	0.99	1.00		1.00	1.00		0.99	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.98		1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1548	3005		1592	3512		1484	3040	1347	1494	3011	1271
Flt Permitted	0.59	1.00		0.58	1.00		0.48	1.00	1.00	0.19	1.00	1.00
Satd. Flow (perm)	954	3005		975	3512		743	3040	1347	291	3011	1271
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	178	213	41	53	185	65	62	872	61	69	393	74
RTOR Reduction (vph)	0	19	0	0	41	0	0	0	37	0	0	45
Lane Group Flow (vph)	178	235	0	53	209	0	62	872	24	69	393	29
Confl. Peds. (#/hr)	31		7	7		31	37		12	12		37
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	2%	4%	0%	0%	6%	2%	3%	5%	0%	3%	6%	4%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	32.0	27.0		32.0	27.0		38.0	33.0	33.0	38.0	33.0	33.0
Effective Green, g (s)	30.0	28.0		30.0	28.0		36.0	33.0	33.0	36.0	33.0	33.0
Actuated g/C Ratio	0.35	0.33		0.35	0.33		0.42	0.39	0.39	0.42	0.39	0.39
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)	365	990		373	1157		350	1180	523	180	1169	493
v/s Ratio Prot	c0.02	0.08		0.01	0.06		0.01	c0.29		c0.02	0.13	
v/s Ratio Perm	c0.15			0.04			0.07		0.02	0.14		0.02
v/c Ratio	0.49	0.24		0.14	0.18		0.18	0.74	0.05	0.38	0.34	0.06
Uniform Delay, d1	20.6	20.7		18.4	20.3		14.8	22.3	16.2	16.1	18.3	16.3
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.55	0.60	0.84
Incremental Delay, d2	4.6	0.6		0.8	0.3		1.1	4.2	0.2	5.6	0.7	0.2
Delay (s)	25.2	21.3		19.2	20.7		15.9	26.5	16.4	30.6	11.7	13.8
Level of Service	C	C		B	C		B	C	B	C	B	B
Approach Delay (s)		22.9			20.4			25.2			14.4	
Approach LOS		C			C			C			B	

Intersection Summary			
HCM Average Control Delay	21.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	64.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1050: 115th Street & Wentworth Avenue

1/14/2013

	⬈	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱		↰	↱		↰	↱
Volume (vph)	38	256	18	14	216	8	35	113	25	19	54	39
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	16	12	12	16	12
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frpb, ped/bikes		1.00	0.96		1.00	0.97		1.00	0.99		1.00	0.98
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frt		1.00	0.85		1.00	0.85		1.00	0.85		1.00	0.85
Flt Protected		0.99	1.00		1.00	1.00		0.99	1.00		0.99	1.00
Satd. Flow (prot)		1929	1382		1950	1331		1970	1452		1928	1430
Flt Permitted		0.94	1.00		0.98	1.00		0.93	1.00		0.93	1.00
Satd. Flow (perm)		1829	1382		1910	1331		1861	1452		1814	1430
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	40	269	19	15	227	8	37	119	26	20	57	41
RTOR Reduction (vph)	0	0	10	0	0	4	0	0	15	0	0	24
Lane Group Flow (vph)	0	309	9	0	242	4	0	156	11	0	77	17
Confl. Peds. (#/hr)	5		21	21		5	9		1	1		9
Heavy Vehicles (%)	5%	5%	6%	7%	4%	12%	6%	1%	4%	0%	6%	5%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)		30.0	30.0		30.0	30.0		27.0	27.0		27.0	27.0
Effective Green, g (s)		30.0	30.0		30.0	30.0		27.0	27.0		27.0	27.0
Actuated g/C Ratio		0.46	0.46		0.46	0.46		0.42	0.42		0.42	0.42
Clearance Time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		844	638		882	614		773	603		754	594
v/s Ratio Prot												
v/s Ratio Perm		c0.17	0.01		0.13	0.00		c0.08	0.01		0.04	0.01
v/c Ratio		0.37	0.01		0.27	0.01		0.20	0.02		0.10	0.03
Uniform Delay, d1		11.3	9.5		10.8	9.4		12.1	11.2		11.6	11.2
Progression Factor		1.00	1.00		0.46	0.36		1.37	1.84		0.89	0.78
Incremental Delay, d2		1.2	0.0		0.8	0.0		0.6	0.1		0.3	0.1
Delay (s)		12.6	9.5		5.8	3.4		17.2	20.6		10.6	8.8
Level of Service		B	A		A	A		B	C		B	A
Approach Delay (s)		12.4			5.7			17.7			10.0	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM Average Control Delay	11.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.29		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	65	235	10	15	200	30	10	190	20	30	70	30
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	0.98		1.00	0.99		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1520	3021		1520	2981		1520	2996		1520	2904	
Flt Permitted	0.95	1.00		0.59	1.00		0.68	1.00		0.61	1.00	
Satd. Flow (perm)	1520	3021		942	2981		1095	2996		977	2904	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	70	253	11	16	215	32	11	204	22	32	75	32
RTOR Reduction (vph)	0	5	0	0	18	0	0	12	0	0	19	0
Lane Group Flow (vph)	70	259	0	16	229	0	11	214	0	32	88	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Prot			Perm			Perm			Perm		
Protected Phases	7	4			8			2			6	
Permitted Phases				8			2			6		
Actuated Green, G (s)	7.0	32.0		22.0	22.0		27.0	27.0		27.0	27.0	
Effective Green, g (s)	7.0	32.0		22.0	22.0		27.0	27.0		27.0	27.0	
Actuated g/C Ratio	0.11	0.49		0.34	0.34		0.42	0.42		0.42	0.42	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	164	1487		319	1009		455	1244		406	1206	
v/s Ratio Prot	c0.05	0.09			c0.08			c0.07			0.03	
v/s Ratio Perm				0.02			0.01			0.03		
v/c Ratio	0.43	0.17		0.05	0.23		0.02	0.17		0.08	0.07	
Uniform Delay, d1	27.1	9.2		14.5	15.4		11.2	12.0		11.5	11.5	
Progression Factor	0.82	0.38		0.82	0.74		0.64	0.72		1.15	1.21	
Incremental Delay, d2	7.7	0.2		0.3	0.5		0.1	0.3		0.4	0.1	
Delay (s)	30.0	3.7		12.2	11.9		7.3	8.8		13.6	14.0	
Level of Service	C	A		B	B		A	A		B	B	
Approach Delay (s)		9.2			11.9			8.8			13.9	
Approach LOS		A			B			A			B	

Intersection Summary			
HCM Average Control Delay	10.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.23		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	33.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis

1052: 115th Street & Michigan Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			↰↑↱			↰↑↱	
Volume (vph)	35	235	15	90	200	40	25	275	20	20	115	20
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	12	12	12	12	12	12
Total Lost time (s)	4.0	4.0		3.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frt	1.00	0.99		1.00	0.97			0.99			0.98	
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.99	
Satd. Flow (prot)	1520	3013		1520	2964			3213			3172	
Flt Permitted	0.59	1.00		0.95	1.00			0.93			0.90	
Satd. Flow (perm)	948	3013		1520	2964			2993			2867	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	38	253	16	97	215	43	27	296	22	22	124	22
RTOR Reduction (vph)	0	7	0	0	24	0	0	7	0	0	14	0
Lane Group Flow (vph)	38	262	0	97	234	0	0	338	0	0	154	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Prot			Perm			Perm		
Protected Phases		4		3	8			2			6	
Permitted Phases	4						2			6		
Actuated Green, G (s)	20.0	20.0		6.0	29.0			25.0			25.0	
Effective Green, g (s)	20.0	20.0		6.0	29.0			25.0			25.0	
Actuated g/C Ratio	0.31	0.31		0.09	0.45			0.38			0.38	
Clearance Time (s)	4.0	4.0		3.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	292	927		140	1322			1151			1103	
v/s Ratio Prot		c0.09		c0.06	0.08							
v/s Ratio Perm	0.04							c0.11			0.05	
v/c Ratio	0.13	0.28		0.69	0.18			0.29			0.14	
Uniform Delay, d1	16.2	17.1		28.6	10.8			13.9			13.0	
Progression Factor	0.60	0.59		1.36	0.92			0.62			0.80	
Incremental Delay, d2	0.9	0.8		22.3	0.3			0.6			0.3	
Delay (s)	10.7	10.8		61.2	10.3			9.3			10.6	
Level of Service	B	B		E	B			A			B	
Approach Delay (s)		10.8			24.2			9.3			10.6	
Approach LOS		B			C			A			B	

Intersection Summary			
HCM Average Control Delay	14.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	40.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1053: 115th Street & Indiana Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			↰↑↱				
Volume (vph)	14	247	14	65	306	65	24	88	152	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	12	14	12	10	15	10
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			0.95				
Frt		0.99			0.98			0.91				
Flt Protected		1.00			0.99			1.00				
Satd. Flow (prot)		1585			1556			3161				
Flt Permitted		0.98			0.92			1.00				
Satd. Flow (perm)		1551			1437			3161				
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	15	266	15	70	329	70	26	95	163	0	0	0
RTOR Reduction (vph)	0	2	0	0	8	0	0	127	0	0	0	0
Lane Group Flow (vph)	0	294	0	0	461	0	0	157	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm			Perm					
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Actuated Green, G (s)		42.8			42.8			14.2				
Effective Green, g (s)		42.8			42.8			14.2				
Actuated g/C Ratio		0.66			0.66			0.22				
Clearance Time (s)		4.0			4.0			4.0				
Vehicle Extension (s)		3.0			3.0			8.0				
Lane Grp Cap (vph)		1021			946			691				
v/s Ratio Prot												
v/s Ratio Perm		0.19			c0.32			0.05				
v/c Ratio		0.29			0.49			0.23				
Uniform Delay, d1		4.7			5.6			20.9				
Progression Factor		2.04			1.00			1.00				
Incremental Delay, d2		0.7			1.8			0.7				
Delay (s)		10.2			7.4			21.6				
Level of Service		B			A			C				
Approach Delay (s)		10.2			7.4			21.6			0.0	
Approach LOS		B			A			C			A	

Intersection Summary			
HCM Average Control Delay	12.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	58.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

	↗	→	←	↖	↘	↙
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰	↱		↰	↱
Volume (veh/h)	76	323	370	42	58	66
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	86	367	420	48	66	75
Pedestrians		3	5		21	
Lane Width (ft)		16.0	16.0		10.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		0	1		1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		1319	491			
pX, platoon unblocked	0.87				0.87	0.87
vC, conflicting volume	489				1010	468
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	338				937	314
tC, single (s)	4.2				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.3				3.5	3.3
p0 queue free %	91				71	88
cM capacity (veh/h)	1001				229	620

Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total	453	468	66	75
Volume Left	86	0	66	0
Volume Right	0	48	0	75
cSH	1001	1700	229	620
Volume to Capacity	0.09	0.28	0.29	0.12
Queue Length 95th (ft)	7	0	29	10
Control Delay (s)	2.5	0.0	27.0	11.6
Lane LOS	A		D	B
Approach Delay (s)	2.5	0.0	18.8	
Approach LOS			C	

Intersection Summary			
Average Delay	3.6		
Intersection Capacity Utilization	60.2%	ICU Level of Service	B
Analysis Period (min)	15		

HCM Signalized Intersection Capacity Analysis
1055: 115th Street & Cottage Grove Avenue

1/14/2013

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↱			↰	↖↗	
Volume (vph)	426	1	24	582	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0			4.0		
Lane Util. Factor	1.00			1.00		
Frt	1.00			1.00		
Flt Protected	1.00			1.00		
Satd. Flow (prot)	1714			1711		
Flt Permitted	1.00			0.97		
Satd. Flow (perm)	1714			1667		
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	458	1	26	626	0	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	459	0	0	652	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%
Turn Type			Perm			
Protected Phases	1 2 4			4	3	
Permitted Phases			4			
Actuated Green, G (s)	63.0			31.0		
Effective Green, g (s)	59.0			31.0		
Actuated g/C Ratio	0.69			0.36		
Clearance Time (s)				4.0		
Lane Grp Cap (vph)	1190			608		
v/s Ratio Prot	c0.27					
v/s Ratio Perm				c0.39		
v/c Ratio	0.39			1.07		
Uniform Delay, d1	5.4			27.0		
Progression Factor	0.02			1.00		
Incremental Delay, d2	0.4			57.4		
Delay (s)	0.5			84.4		
Level of Service	A			F		
Approach Delay (s)	0.5			84.4	0.0	
Approach LOS	A			F	A	

Intersection Summary			
HCM Average Control Delay	49.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	56.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
1056: 115th Street & Bishop Ford Fwy

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱			↰						↰	↱
Volume (veh/h)	0	176	182	23	507	0	0	0	0	3	0	196
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	0	187	194	24	539	0	0	0	0	3	0	209
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	539			187			872	872	190	682	776	539
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	539			187			872	872	190	682	776	539
tC, single (s)	4.1			5.5			7.5	6.5	6.9	7.5	6.5	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.9			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			98			100	100	100	99	100	57
cM capacity (veh/h)	1039			1005			138	284	825	334	323	481

Direction, Lane #	EB 1	EB 2	WB 1	SB 1	SB 2
Volume Total	125	256	564	3	209
Volume Left	0	0	24	3	0
Volume Right	0	194	0	0	209
cSH	1700	1700	1005	334	481
Volume to Capacity	0.07	0.15	0.02	0.01	0.43
Queue Length 95th (ft)	0	0	2	1	54
Control Delay (s)	0.0	0.0	0.7	15.9	18.1
Lane LOS			A	C	C
Approach Delay (s)	0.0		0.7	18.0	
Approach LOS				C	

Intersection Summary			
Average Delay	3.6		
Intersection Capacity Utilization	54.1%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
1057: 115th Street &

1/14/2013

	↗	↘	↖	↑	↓	↙
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰↰		↰			
Sign Control	Stop			Stop	Stop	
Volume (vph)	179	0	530	0	0	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	192	0	570	0	0	0

Direction, Lane #	EB 1	EB 2	NB 1
Volume Total (vph)	96	96	570
Volume Left (vph)	96	96	570
Volume Right (vph)	0	0	0
Hadj (s)	0.58	0.58	0.29
Departure Headway (s)	6.6	6.6	4.8
Degree Utilization, x	0.18	0.18	0.76
Capacity (veh/h)	513	513	737
Control Delay (s)	9.8	9.8	21.1
Approach Delay (s)	9.8		21.1
Approach LOS	A		C

Intersection Summary			
Delay	18.2		
HCM Level of Service	C		
Intersection Capacity Utilization	43.1%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Signalized Intersection Capacity Analysis
1058: 119th Street & Marshield Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↰↑					↰	↰↑↱	↱
Volume (vph)	0	420	195	145	427	0	0	0	0	117	107	273
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	12	13	12	12	12	12	10	10	11
Total Lost time (s)		6.0	6.0		6.0					6.0	6.0	6.0
Lane Util. Factor		0.95	1.00		0.95					0.86	0.81	0.86
Frpb, ped/bikes		1.00	0.98		1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00					1.00	1.00	1.00
Frt		1.00	0.85		1.00					1.00	0.93	0.85
Flt Protected		1.00	1.00		0.99					0.95	0.99	1.00
Satd. Flow (prot)		2978	1202		3372					1346	3693	1122
Flt Permitted		1.00	1.00		0.99					0.95	0.99	1.00
Satd. Flow (perm)		2978	1202		3372					1346	3693	1122
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	0	447	207	154	454	0	0	0	0	124	114	290
RTOR Reduction (vph)	0	0	153	0	0	0	0	0	0	0	99	87
Lane Group Flow (vph)	0	447	54	0	608	0	0	0	0	68	216	58
Confl. Peds. (#/hr)	5		3	3		5						
Heavy Vehicles (%)	0%	11%	9%	2%	4%	0%	0%	0%	0%	2%	2%	2%
Parking (#/hr)			0									0
Turn Type			Perm	Split						Split		custom
Protected Phases		2		10 12 14	10 12 14					4	4	
Permitted Phases			2									4 2
Actuated Green, G (s)		39.7	39.7		73.7					18.8	18.8	64.5
Effective Green, g (s)		39.7	39.7		73.7					18.8	18.8	64.5
Actuated g/C Ratio		0.25	0.25		0.46					0.12	0.12	0.40
Clearance Time (s)		6.0	6.0							6.0	6.0	
Vehicle Extension (s)		3.0	3.0							3.0	3.0	
Lane Grp Cap (vph)		739	298		1553					158	434	452
v/s Ratio Prot		c0.15			c0.18					0.05	c0.06	
v/s Ratio Perm			0.04									0.05
v/c Ratio		0.60	0.18		0.39					0.43	0.50	0.13
Uniform Delay, d1		53.2	47.3		28.4					65.6	66.2	30.1
Progression Factor		1.00	1.00		0.02					1.00	1.00	1.00
Incremental Delay, d2		3.7	1.3		0.1					1.9	0.9	0.1
Delay (s)		56.9	48.7		0.6					67.5	67.1	30.2
Level of Service		E	D		A					E	E	C
Approach Delay (s)		54.3			0.6			0.0			57.0	
Approach LOS		D			A			A			E	

Intersection Summary			
HCM Average Control Delay	36.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	29.8
Intersection Capacity Utilization	50.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1059: 119th Street & Ashland Avenue

	⤴	→	⤵	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑			↑↑	↱	↰	↰↑↱				
Volume (vph)	204	333	0	0	380	91	192	122	110	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	13	12	12	11	12	13	13	14	12	12	12
Total Lost time (s)	6.0	6.0			6.0	6.0	6.0	6.0				
Lane Util. Factor	1.00	0.95			0.95	1.00	0.91	0.91				
Frt	1.00	1.00			1.00	0.85	1.00	0.94				
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.99				
Satd. Flow (prot)	1574	3366			3149	1457	1531	3008				
Flt Permitted	0.95	1.00			1.00	1.00	0.95	0.99				
Satd. Flow (perm)	1574	3366			3149	1457	1531	3008				
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	219	358	0	0	409	98	206	131	118	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	79	0	52	0	0	0	0
Lane Group Flow (vph)	219	358	0	0	409	19	154	249	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Split					Perm	Split					
Protected Phases	2 4 8	2 4 8			10		12	12				
Permitted Phases						10						
Actuated Green, G (s)	78.3	78.3			30.8	30.8	24.1	24.1				
Effective Green, g (s)	78.3	78.3			30.8	30.8	24.1	24.1				
Actuated g/C Ratio	0.49	0.49			0.19	0.19	0.15	0.15				
Clearance Time (s)					6.0	6.0	6.0	6.0				
Vehicle Extension (s)					3.0	3.0	3.0	3.0				
Lane Grp Cap (vph)	770	1647			606	280	231	453				
v/s Ratio Prot	c0.14	0.11			c0.13		c0.10	0.08				
v/s Ratio Perm						0.01						
v/c Ratio	0.28	0.22			0.67	0.07	0.67	0.55				
Uniform Delay, d1	24.2	23.3			60.0	52.8	64.2	62.9				
Progression Factor	0.04	0.04			1.00	1.00	1.00	1.00				
Incremental Delay, d2	0.2	0.1			3.0	0.1	7.1	1.4				
Delay (s)	1.1	1.0			62.9	53.0	71.2	64.4				
Level of Service	A	A			E	D	E	E				
Approach Delay (s)		1.1			61.0			66.7			0.0	
Approach LOS		A			E			E			A	

Intersection Summary			
HCM Average Control Delay	40.2	HCM Level of Service	D
HCM Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	28.8
Intersection Capacity Utilization	46.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑↱		↰	↑↑↱		↰	↑↑↱	
Volume (vph)	192	238	66	34	136	44	78	730	55	46	348	81
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	14	12	10	10	12	9	10	12
Total Lost time (s)	4.0	4.0	5.0	4.0	5.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.99	1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	0.99	1.00	1.00	1.00	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.96		1.00	0.99		1.00	0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1535	1556	1328	1594	1718		1520	2990		1508	2869	
Flt Permitted	0.54	1.00	1.00	0.56	1.00		0.42	1.00		0.23	1.00	
Satd. Flow (perm)	866	1556	1328	939	1718		669	2990		369	2869	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	196	243	67	35	139	45	80	745	56	47	355	83
RTOR Reduction (vph)	0	0	44	0	12	0	0	6	0	0	22	0
Lane Group Flow (vph)	196	243	23	35	172	0	80	795	0	47	416	0
Confl. Peds. (#/hr)	33		3	3		33	42		8	8		42
Confl. Bikes (#/hr)							1					1
Heavy Vehicles (%)	3%	8%	6%	0%	7%	5%	4%	5%	11%	2%	6%	9%
Turn Type	pm+pt		Perm	pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)	38.2	31.2	31.2	32.4	28.3		41.5	36.0		38.7	34.6	
Effective Green, g (s)	36.2	32.2	31.2	30.4	28.3		39.5	36.0		36.7	34.6	
Actuated g/C Ratio	0.40	0.36	0.35	0.34	0.31		0.44	0.40		0.41	0.38	
Clearance Time (s)	3.0	5.0	5.0	3.0	5.0		3.0	4.0		3.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	391	554	458	338	538		335	1191		189	1098	
v/s Ratio Prot	c0.03	0.16		0.00	0.10		c0.01	c0.27		0.01	0.14	
v/s Ratio Perm	c0.17		0.02	0.03			0.09			0.09		
v/c Ratio	0.50	0.44	0.05	0.10	0.32		0.24	0.67		0.25	0.38	
Uniform Delay, d1	19.8	22.2	19.7	20.4	23.7		15.3	22.3		17.2	20.1	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.0	2.5	0.2	0.1	1.6		0.4	3.0		0.7	1.0	
Delay (s)	20.8	24.7	19.9	20.5	25.3		15.7	25.3		17.9	21.1	
Level of Service	C	C	B	C	C		B	C		B	C	
Approach Delay (s)		22.6			24.5			24.4			20.8	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	23.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	90.4	Sum of lost time (s)	12.0
Intersection Capacity Utilization	67.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1061: 119th Street & Wentworth Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱		✥			✥	
Volume (vph)	40	243	15	5	182	19	33	75	15	10	37	33
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	10	10	10	12	15	12	12	16	12
Total Lost time (s)		3.0	3.0		3.0	3.0		3.0			3.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00			1.00	
Frpb, ped/bikes		1.00	0.97		1.00	0.97		1.00			0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00			1.00	
Frt		1.00	0.85		1.00	0.85		0.98			0.94	
Flt Protected		0.99	1.00		1.00	1.00		0.99			0.99	
Satd. Flow (prot)		1910	1482		1600	1198		1913			1848	
Flt Permitted		0.94	1.00		0.99	1.00		0.93			0.97	
Satd. Flow (perm)		1815	1482		1592	1198		1800			1812	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	44	267	16	5	200	21	36	82	16	11	41	36
RTOR Reduction (vph)	0	0	8	0	0	11	0	8	0	0	21	0
Lane Group Flow (vph)	0	311	8	0	205	10	0	126	0	0	67	0
Confl. Peds. (#/hr)	6		11	11		6	4		8	8		4
Confl. Bikes (#/hr)	1		1	1		1			1	1		
Heavy Vehicles (%)	0%	7%	0%	0%	5%	16%	0%	0%	0%	10%	0%	3%
Turn Type	Perm		Perm	Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)		32.0	32.0		32.0	32.0		27.0			27.0	
Effective Green, g (s)		32.0	32.0		32.0	32.0		27.0			27.0	
Actuated g/C Ratio		0.49	0.49		0.49	0.49		0.42			0.42	
Clearance Time (s)		3.0	3.0		3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)		894	730		784	590		748			753	
v/s Ratio Prot												
v/s Ratio Perm		c0.17	0.01		0.13	0.01		c0.07			0.04	
v/c Ratio		0.35	0.01		0.26	0.02		0.17			0.09	
Uniform Delay, d1		10.1	8.4		9.6	8.4		11.9			11.5	
Progression Factor		1.00	1.00		2.02	2.98		1.00			1.51	
Incremental Delay, d2		1.1	0.0		0.8	0.1		0.5			0.2	
Delay (s)		11.2	8.4		20.2	25.3		12.4			17.7	
Level of Service		B	A		C	C		B			B	
Approach Delay (s)		11.0			20.7			12.4			17.7	
Approach LOS		B			C			B			B	

Intersection Summary			
HCM Average Control Delay	14.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.27		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	52.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1062: 119th Street & State Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱		↰	↱		✥	
Volume (vph)	58	160	19	6	133	6	32	176	17	8	45	26
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frpb, ped/bikes		1.00	0.96		1.00	0.98		1.00	0.96		0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		0.96	
Flt Protected		0.99	1.00		1.00	1.00		0.99	1.00		1.00	
Satd. Flow (prot)		1663	1392		1604	1497		1754	1390		1652	
Flt Permitted		0.89	1.00		0.99	1.00		0.96	1.00		0.97	
Satd. Flow (perm)		1496	1392		1588	1497		1690	1390		1618	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	60	167	20	6	139	6	33	183	18	8	47	27
RTOR Reduction (vph)	0	0	13	0	0	4	0	0	9	0	14	0
Lane Group Flow (vph)	0	227	7	0	145	2	0	216	9	0	68	0
Confl. Peds. (#/hr)	11		17	17		11	4		17	17		4
Confl. Bikes (#/hr)	1		1	1		1	1					1
Heavy Vehicles (%)	0%	9%	5%	33%	11%	0%	6%	1%	6%	0%	0%	8%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		23.0	23.0		23.0	23.0		32.0	32.0		32.0	
Effective Green, g (s)		23.0	23.0		23.0	23.0		32.0	32.0		32.0	
Actuated g/C Ratio		0.35	0.35		0.35	0.35		0.49	0.49		0.49	
Clearance Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	
Lane Grp Cap (vph)		529	493		562	530		832	684		797	
v/s Ratio Prot												
v/s Ratio Perm		c0.15	0.01		0.09	0.00		c0.13	0.01		0.04	
v/c Ratio		0.43	0.01		0.26	0.00		0.26	0.01		0.09	
Uniform Delay, d1		16.0	13.6		14.9	13.6		9.6	8.4		8.7	
Progression Factor		1.98	3.07		0.92	0.91		0.39	0.40		0.99	
Incremental Delay, d2		2.4	0.1		1.1	0.0		0.7	0.0		0.2	
Delay (s)		34.1	42.0		14.8	12.4		4.4	3.4		8.8	
Level of Service		C	D		B	B		A	A		A	
Approach Delay (s)		34.8			14.7			4.3			8.8	
Approach LOS		C			B			A			A	

Intersection Summary			
HCM Average Control Delay	17.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	56.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		✥			✥			↰	↱
Volume (vph)	138	18	27	9	17	6	26	286	19	5	168	82
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	14	12	12	16	12	12	16	12
Total Lost time (s)		3.0	3.0		3.0			3.0			3.0	3.0
Lane Util. Factor		1.00	1.00		1.00			1.00			1.00	1.00
Frpb, ped/bikes		1.00	0.97		0.99			1.00			1.00	0.95
Flpb, ped/bikes		0.98	1.00		0.99			1.00			1.00	1.00
Frt		1.00	0.85		0.98			0.99			1.00	0.85
Flt Protected		0.96	1.00		0.99			1.00			1.00	1.00
Satd. Flow (prot)		1770	1390		1815			1974			1873	1328
Flt Permitted		0.76	1.00		0.94			0.97			0.99	1.00
Satd. Flow (perm)		1413	1390		1726			1931			1862	1328
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	145	19	28	9	18	6	27	301	20	5	177	86
RTOR Reduction (vph)	0	0	16	0	4	0	0	4	0	0	0	44
Lane Group Flow (vph)	0	164	12	0	29	0	0	344	0	0	182	42
Confl. Peds. (#/hr)	49		22	22		49	34		17	17		34
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	9%	0%	7%	0%	0%	0%	0%	2%	0%	0%	9%	9%
Turn Type	pm+pt		Perm	Perm			Perm			Perm		Perm
Protected Phases	7	4			8			2			6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)		27.0	27.0		17.0			32.0			32.0	32.0
Effective Green, g (s)		27.0	27.0		17.0			32.0			32.0	32.0
Actuated g/C Ratio		0.42	0.42		0.26			0.49			0.49	0.49
Clearance Time (s)		3.0	3.0		3.0			3.0			3.0	3.0
Lane Grp Cap (vph)		631	577		451			951			917	654
v/s Ratio Prot		c0.03										
v/s Ratio Perm		0.08	0.01		0.02			c0.18			0.10	0.03
v/c Ratio		0.26	0.02		0.06			0.36			0.20	0.06
Uniform Delay, d1		12.5	11.2		18.0			10.2			9.3	8.7
Progression Factor		0.48	0.67		1.00			0.55			0.46	0.33
Incremental Delay, d2		0.9	0.1		0.3			1.0			0.5	0.2
Delay (s)		6.9	7.6		18.3			6.7			4.8	3.0
Level of Service		A	A		B			A			A	A
Approach Delay (s)		7.0			18.3			6.7			4.2	
Approach LOS		A			B			A			A	

Intersection Summary			
HCM Average Control Delay	6.4	HCM Level of Service	A
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	57.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1064: 127th Street & S Paulina St

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↱		↰	↑↑					↰	↰↑↱	↱
Volume (vph)	0	765	212	236	1004	0	0	0	0	270	196	366
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	12	11	8	8	8	11	12	14
Total Lost time (s)		6.0		4.5	6.0					6.0	6.0	6.0
Lane Util. Factor		0.91		1.00	0.95					0.91	0.86	0.91
Frpb, ped/bikes		1.00		1.00	1.00					1.00	0.99	0.99
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Frt		0.97		1.00	1.00					1.00	0.94	0.85
Flt Protected		1.00		0.95	1.00					0.95	0.99	1.00
Satd. Flow (prot)		4303		1589	3226					1419	2712	1355
Flt Permitted		1.00		0.22	1.00					0.95	0.99	1.00
Satd. Flow (perm)		4303		366	3226					1419	2712	1355
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	781	216	241	1024	0	0	0	0	276	200	373
RTOR Reduction (vph)	0	38	0	0	0	0	0	0	0	0	87	90
Lane Group Flow (vph)	0	959	0	241	1024	0	0	0	0	221	343	108
Confl. Peds. (#/hr)	6		4	4		6	2					2
Heavy Vehicles (%)	0%	11%	7%	4%	6%	0%	0%	0%	0%	6%	4%	8%
Turn Type				pm+pt						Perm		Perm
Protected Phases		2		1	6						4	
Permitted Phases				6						4		4
Actuated Green, G (s)		53.0		70.3	70.3					22.7	22.7	22.7
Effective Green, g (s)		53.0		70.3	70.3					22.7	22.7	22.7
Actuated g/C Ratio		0.50		0.67	0.67					0.22	0.22	0.22
Clearance Time (s)		6.0		4.5	6.0					6.0	6.0	6.0
Vehicle Extension (s)		7.0		3.5	7.0					3.5	3.5	3.5
Lane Grp Cap (vph)		2172		394	2160					307	586	293
v/s Ratio Prot		0.22		c0.07	0.32							
v/s Ratio Perm				c0.33						c0.16	0.13	0.08
v/c Ratio		0.44		0.61	0.47					0.72	0.59	0.37
Uniform Delay, d1		16.6		8.1	8.4					38.2	36.9	35.0
Progression Factor		1.00		1.62	1.58					1.00	1.00	1.00
Incremental Delay, d2		0.7		2.1	0.5					8.1	1.6	0.9
Delay (s)		17.2		15.3	13.8					46.3	38.5	36.0
Level of Service		B		B	B					D	D	D
Approach Delay (s)		17.2			14.1			0.0			40.0	
Approach LOS		B			B			A			D	

Intersection Summary			
HCM Average Control Delay	22.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	10.5
Intersection Capacity Utilization	69.7%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1065: 127th Street & Marshfield Ave

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↑			↑↑	↱		↰↑↱				
Volume (vph)	301	734	0	0	815	234	425	281	297	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	12	12	12	11	12	12	12	12	12	12	12
Total Lost time (s)	6.0	6.0			6.0	6.0		6.0				
Lane Util. Factor	0.97	0.95			0.95	1.00		0.91				
Frpb, ped/bikes	1.00	1.00			1.00	0.99		1.00				
Flpb, ped/bikes	1.00	1.00			1.00	1.00		1.00				
Frt	1.00	1.00			1.00	0.85		0.96				
Flt Protected	0.95	1.00			1.00	1.00		0.98				
Satd. Flow (prot)	2915	3138			3119	1450		4421				
Flt Permitted	0.21	1.00			1.00	1.00		0.98				
Satd. Flow (perm)	633	3138			3119	1450		4421				
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	317	773	0	0	858	246	447	296	313	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	107	0	72	0	0	0	0
Lane Group Flow (vph)	317	773	0	0	858	139	0	984	0	0	0	0
Confl. Peds. (#/hr)	4					4						
Heavy Vehicles (%)	10%	9%	0%	0%	6%	4%	4%	3%	5%	0%	0%	0%
Turn Type	pm+pt					Perm	Perm					
Protected Phases	5	2			6			8				
Permitted Phases	2					6	8					
Actuated Green, G (s)	63.5	63.5			46.4	46.4		29.5				
Effective Green, g (s)	63.5	63.5			46.4	46.4		29.5				
Actuated g/C Ratio	0.60	0.60			0.44	0.44		0.28				
Clearance Time (s)	6.0	6.0			6.0	6.0		6.0				
Vehicle Extension (s)	3.5	7.0			7.0	7.0		5.0				
Lane Grp Cap (vph)	624	1898			1378	641		1242				
v/s Ratio Prot	c0.05	0.25			c0.28							
v/s Ratio Perm	0.25					0.10		0.22				
v/c Ratio	0.51	0.41			0.62	0.22		0.79				
Uniform Delay, d1	11.9	10.9			22.6	18.1		34.9				
Progression Factor	0.93	1.03			0.90	1.16		1.00				
Incremental Delay, d2	0.7	0.6			1.6	0.6		4.1				
Delay (s)	11.7	11.8			21.9	21.6		39.0				
Level of Service	B	B			C	C		D				
Approach Delay (s)		11.8			21.8			39.0			0.0	
Approach LOS		B			C			D			A	

Intersection Summary			
HCM Average Control Delay	24.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	69.7%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1066: 127th Street & S Ashland

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Lane Configurations	↰	↑↑	↱	↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	95	405	204	71	683	38	226	178	40	37	111	91
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	12	11	12	12	10	10	13	10	10	10
Total Lost time (s)	3.5	6.0	3.5	3.5	6.0		3.5	6.0		3.5	6.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.97		1.00	0.93	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1565	3061	1292	1601	3232		1446	3007		1544	2782	
Flt Permitted	0.17	1.00	1.00	0.50	1.00		0.52	1.00		0.61	1.00	
Satd. Flow (perm)	284	3061	1292	844	3232		787	3007		987	2782	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	101	431	217	76	727	40	240	189	43	39	118	97
RTOR Reduction (vph)	0	0	90	0	4	0	0	21	0	0	80	0
Lane Group Flow (vph)	101	431	127	76	763	0	240	211	0	39	135	0
Confl. Peds. (#/hr)	3		12	12		3	9		6	6		9
Heavy Vehicles (%)	2%	8%	5%	3%	5%	3%	10%	3%	2%	3%	7%	4%
Parking (#/hr)			0									
Turn Type	pm+pt		pm+ov	pm+pt			pm+pt			pm+pt		
Protected Phases	5	2	3	1	6		3	8		7	4	
Permitted Phases	2		2	6			8			4		
Actuated Green, G (s)	61.7	51.9	61.6	38.4	32.1		31.3	22.8		23.1	18.1	
Effective Green, g (s)	61.7	51.9	61.6	38.4	32.1		31.3	22.8		23.1	18.1	
Actuated g/C Ratio	0.59	0.49	0.59	0.37	0.31		0.30	0.22		0.22	0.17	
Clearance Time (s)	3.5	6.0	3.5	3.5	6.0		3.5	6.0		3.5	6.0	
Vehicle Extension (s)	3.0	7.0	3.0	3.0	7.0		3.0	7.0		3.0	7.0	
Lane Grp Cap (vph)	485	1513	758	354	988		295	653		244	480	
v/s Ratio Prot	c0.05	c0.14	0.02	0.01	c0.24		c0.08	0.07		0.01	0.05	
v/s Ratio Perm	0.07		0.08	0.07			c0.17			0.03		
v/c Ratio	0.21	0.28	0.17	0.21	0.77		0.81	0.32		0.16	0.28	
Uniform Delay, d1	11.5	15.6	9.9	22.2	33.1		32.6	34.6		32.8	37.8	
Progression Factor	0.84	0.95	2.07	1.00	1.00		0.90	0.84		1.00	1.00	
Incremental Delay, d2	0.8	0.4	0.1	0.3	5.8		15.1	1.0		0.3	1.1	
Delay (s)	10.5	15.3	20.7	22.5	39.0		44.5	30.0		33.1	38.9	
Level of Service	B	B	C	C	D		D	C		C	D	
Approach Delay (s)		16.2			37.5			37.4			38.0	
Approach LOS		B			D			D			D	

Intersection Summary			
HCM Average Control Delay	30.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	19.0
Intersection Capacity Utilization	69.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1067: Vermont St & S Ashland

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	50	106	229	47	139	85	323	375	62	91	258	54
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	11	12	11	12	12	11	13	12	10	11	12
Total Lost time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.90		1.00	0.94		1.00	0.98		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1632	2807		1463	3016		1589	3257		1549	3136	
Flt Permitted	0.60	1.00		0.47	1.00		0.45	1.00		0.48	1.00	
Satd. Flow (perm)	1029	2807		728	3016		750	3257		779	3136	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	55	116	252	52	153	93	355	412	68	100	284	59
RTOR Reduction (vph)	0	183	0	0	67	0	0	13	0	0	16	0
Lane Group Flow (vph)	55	185	0	52	179	0	355	467	0	100	327	0
Confl. Peds. (#/hr)	20					20	1		2	2		1
Heavy Vehicles (%)	4%	5%	6%	13%	6%	5%	4%	6%	5%	3%	3%	0%
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	35.7	28.9		35.9	29.0		53.2	41.9		38.3	31.0	
Effective Green, g (s)	35.7	28.9		35.9	29.0		53.2	41.9		38.3	31.0	
Actuated g/C Ratio	0.34	0.28		0.34	0.28		0.51	0.40		0.36	0.30	
Clearance Time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	3.5	7.0		3.5	7.0		3.5	7.0		3.5	7.0	
Lane Grp Cap (vph)	389	773		297	833		525	1300		338	926	
v/s Ratio Prot	0.01	c0.07		c0.01	0.06		c0.12	0.14		0.02	0.10	
v/s Ratio Perm	0.04			0.05			c0.23			0.09		
v/c Ratio	0.14	0.24		0.18	0.21		0.68	0.36		0.30	0.35	
Uniform Delay, d1	23.7	29.5		23.6	29.2		16.8	22.1		22.6	29.1	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.01	0.90	
Incremental Delay, d2	0.2	0.7		0.3	0.6		3.6	0.8		0.6	1.0	
Delay (s)	23.9	30.3		24.0	29.8		20.3	22.9		23.5	27.2	
Level of Service	C	C		C	C		C	C		C	C	
Approach Delay (s)		29.4			28.8			21.8			26.4	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	25.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	65.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1068: 127th Street & Halsted Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	151	359	73	6	372	100	56	490	6	65	251	81
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	10	12	9	11	12	9	9	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.98			0.97		1.00	1.00		1.00	0.96	
Flt Protected		0.99			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		2889			2888		1435	3187		1450	2789	
Flt Permitted		0.61			0.95		0.51	1.00		0.37	1.00	
Satd. Flow (perm)		1772			2739		776	3187		569	2789	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	162	386	78	6	400	108	60	527	6	70	270	87
RTOR Reduction (vph)	0	17	0	0	37	0	0	1	0	0	48	0
Lane Group Flow (vph)	0	609	0	0	477	0	60	532	0	70	309	0
Confl. Peds. (#/hr)	9		11	11		9	11		14	14		11
Heavy Vehicles (%)	3%	6%	18%	50%	6%	6%	7%	3%	50%	6%	7%	2%
Turn Type	pm+pt			Perm			pm+pt			pm+pt		
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		27.0			19.0		26.0	22.0		26.0	22.0	
Effective Green, g (s)		27.0			19.0		26.0	22.0		26.0	22.0	
Actuated g/C Ratio		0.42			0.29		0.40	0.34		0.40	0.34	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		805			801		351	1079		282	944	
v/s Ratio Prot		c0.05					0.01	c0.17		c0.02	0.11	
v/s Ratio Perm		c0.27			0.17		0.06			0.08		
v/c Ratio		0.76			0.60		0.17	0.49		0.25	0.33	
Uniform Delay, d1		16.2			19.7		12.2	17.1		12.4	16.0	
Progression Factor		1.00			1.62		0.80	0.67		1.00	1.00	
Incremental Delay, d2		6.6			1.9		1.0	1.5		2.1	0.9	
Delay (s)		22.8			33.8		10.8	12.9		14.5	16.9	
Level of Service		C			C		B	B		B	B	
Approach Delay (s)		22.8			33.8			12.7			16.5	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM Average Control Delay	21.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	64.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1069: Vermont St & Halsted Street

1/14/2013

	⤴	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱		↰	↑↱		↰	↑↱	
Volume (vph)	40	90	37	59	111	11	31	529	65	8	291	35
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	12	12	12	12	12
Total Lost time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.96		1.00	0.99		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1665	1856		1611	1938		1658	3211		1137	3196	
Flt Permitted	0.67	1.00		0.67	1.00		0.54	1.00		0.37	1.00	
Satd. Flow (perm)	1178	1856		1134	1938		942	3211		441	3196	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	43	98	40	64	121	12	34	575	71	9	316	38
RTOR Reduction (vph)	0	23	0	0	6	0	0	15	0	0	14	0
Lane Group Flow (vph)	43	115	0	64	127	0	34	631	0	9	340	0
Confl. Peds. (#/hr)	10		16	16		10	4		6	6		4
Confl. Bikes (#/hr)			4	4								
Heavy Vehicles (%)	2%	4%	5%	5%	4%	0%	3%	4%	8%	50%	5%	6%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	24.0	24.0		24.0	24.0		31.0	31.0		31.0	31.0	
Effective Green, g (s)	24.0	24.0		24.0	24.0		31.0	31.0		31.0	31.0	
Actuated g/C Ratio	0.37	0.37		0.37	0.37		0.48	0.48		0.48	0.48	
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)	435	685		419	716		449	1531		210	1524	
v/s Ratio Prot		0.06			c0.07			c0.20			0.11	
v/s Ratio Perm	0.04			0.06			0.04			0.02		
v/c Ratio	0.10	0.17		0.15	0.18		0.08	0.41		0.04	0.22	
Uniform Delay, d1	13.4	13.8		13.7	13.8		9.2	11.1		9.1	10.0	
Progression Factor	1.00	1.00		1.77	1.85		1.00	1.00		0.59	0.61	
Incremental Delay, d2	0.5	0.5		0.6	0.4		0.3	0.8		0.4	0.3	
Delay (s)	13.9	14.3		24.8	25.9		9.6	11.9		5.7	6.4	
Level of Service	B	B		C	C		A	B		A	A	
Approach Delay (s)		14.2			25.6			11.8			6.4	
Approach LOS		B			C			B			A	

Intersection Summary			
HCM Average Control Delay	12.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	54.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1070: 127th Street & S Wallance St

1/14/2013

	→	↙	←	↖	↰	↖	↑	↗	↘	↓	↙	↙
Movement	**EBT**	**WBL**	**WBT**	**WBR**	**NBL2**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**	**SBR2**
Lane Configurations	↰↱		↰↱				✥			✥		
Volume (vph)	403	146	505	13	3	12	3	41	9	0	2	4
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	12	12	16	12	12	16	12	12
Total Lost time (s)	5.0		5.0				4.0			4.0		
Lane Util. Factor	0.95		0.95				1.00			1.00		
Frpb, ped/bikes	1.00		1.00				1.00			0.99		
Flpb, ped/bikes	1.00		1.00				1.00			1.00		
Frt	1.00		1.00				0.90			0.95		
Flt Protected	1.00		0.99				0.99			0.97		
Satd. Flow (prot)	2956		2958				1732			1859		
Flt Permitted	1.00		0.67				0.95			0.88		
Satd. Flow (perm)	2956		1999				1657			1681		
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	448	162	561	14	3	13	3	46	10	0	2	4
RTOR Reduction (vph)	0	0	2	0	0	0	36	0	0	3	0	0
Lane Group Flow (vph)	448	0	735	0	0	0	29	0	0	13	0	0
Confl. Peds. (#/hr)		7		6		3					3	
Confl. Bikes (#/hr)		1										
Heavy Vehicles (%)	8%	8%	6%	0%	0%	8%	0%	5%	0%	0%	0%	0%
Turn Type		custom			Perm	Perm			Perm			
Protected Phases	8	7	4				2			6		
Permitted Phases		4 7			2	2			6			
Actuated Green, G (s)	18.0		27.0				14.0			14.0		
Effective Green, g (s)	18.0		27.0				14.0			14.0		
Actuated g/C Ratio	0.28		0.42				0.22			0.22		
Clearance Time (s)	5.0		5.0				4.0			4.0		
Lane Grp Cap (vph)	819		919				357			362		
v/s Ratio Prot	0.15		c0.07									
v/s Ratio Perm			c0.26				c0.02			0.01		
v/c Ratio	0.55		0.80				0.08			0.04		
Uniform Delay, d1	20.0		16.6				20.4			20.2		
Progression Factor	1.32		0.84				1.00			1.00		
Incremental Delay, d2	1.9		7.0				0.4			0.2		
Delay (s)	28.4		21.0				20.8			20.3		
Level of Service	C		C				C			C		
Approach Delay (s)	28.4		21.0				20.8			20.3		
Approach LOS	C		C				C			C		

Intersection Summary			
HCM Average Control Delay	29.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	73.5%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	NEL	NER
Lane Configurations		
Volume (vph)	1	173
Ideal Flow (vphpl)	1800	1800
Lane Width	12	12
Total Lost time (s)	5.0	
Lane Util. Factor	1.00	
Frpb, ped/bikes	1.00	
Flpb, ped/bikes	1.00	
Frt	0.87	
Flt Protected	1.00	
Satd. Flow (prot)	1430	
Flt Permitted	1.00	
Satd. Flow (perm)	1430	
Peak-hour factor, PHF	0.90	0.90
Adj. Flow (vph)	1	192
RTOR Reduction (vph)	0	0
Lane Group Flow (vph)	193	0
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		
Heavy Vehicles (%)	0%	9%
Turn Type		
Protected Phases	3	
Permitted Phases		
Actuated Green, G (s)	10.0	
Effective Green, g (s)	10.0	
Actuated g/C Ratio	0.15	
Clearance Time (s)	5.0	
Lane Grp Cap (vph)	220	
v/s Ratio Prot	c0.13	
v/s Ratio Perm		
v/c Ratio	0.88	
Uniform Delay, d1	26.9	
Progression Factor	1.11	
Incremental Delay, d2	35.1	
Delay (s)	64.8	
Level of Service	E	
Approach Delay (s)	64.8	
Approach LOS	E	

Intersection Summary

HCM Signalized Intersection Capacity Analysis
1071: 127th Street & State Street

1/14/2013

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰↑	↑↱		↰	↱
Volume (vph)	157	469	508	57	41	156
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		1.00	1.00
Frt		1.00	0.98		1.00	0.85
Flt Protected		0.99	1.00		0.95	1.00
Satd. Flow (prot)		3217	3208		1629	1457
Flt Permitted		0.69	1.00		0.95	1.00
Satd. Flow (perm)		2253	3208		1629	1457
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	169	504	546	61	44	168
RTOR Reduction (vph)	0	0	13	0	0	124
Lane Group Flow (vph)	0	673	594	0	44	44
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%
Turn Type	Perm					Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)		40.0	40.0		17.0	17.0
Effective Green, g (s)		40.0	40.0		17.0	17.0
Actuated g/C Ratio		0.62	0.62		0.26	0.26
Clearance Time (s)		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		1386	1974		426	381
v/s Ratio Prot			0.19		0.03	
v/s Ratio Perm		c0.30				c0.03
v/c Ratio		0.49	0.30		0.10	0.12
Uniform Delay, d1		6.9	5.9		18.2	18.3
Progression Factor		1.21	1.38		0.92	0.78
Incremental Delay, d2		1.0	0.4		0.5	0.6
Delay (s)		9.3	8.5		17.2	14.9
Level of Service		A	A		B	B
Approach Delay (s)		9.3	8.5		15.4	
Approach LOS		A	A		B	

Intersection Summary			
HCM Average Control Delay	9.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	48.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1072: 127th Street & Michigan Avenue

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰↑	↑↱		↰	↱
Volume (vph)	46	464	516	169	118	49
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	12	10	11	12	10	10
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		1.00	1.00
Frpb, ped/bikes		1.00	0.99		1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00
Frt		1.00	0.96		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		2927	2905		1464	1373
Flt Permitted		0.85	1.00		0.95	1.00
Satd. Flow (perm)		2501	2905		1464	1373
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	50	504	561	184	128	53
RTOR Reduction (vph)	0	0	49	0	0	38
Lane Group Flow (vph)	0	554	696	0	128	15
Confl. Peds. (#/hr)	1			1		
Confl. Bikes (#/hr)	1			1		
Heavy Vehicles (%)	4%	9%	8%	12%	9%	4%
Turn Type	Perm					Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)		38.0	38.0		19.0	19.0
Effective Green, g (s)		38.0	38.0		19.0	19.0
Actuated g/C Ratio		0.58	0.58		0.29	0.29
Clearance Time (s)		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		1462	1698		428	401
v/s Ratio Prot			c0.24		c0.09	
v/s Ratio Perm		0.22				0.01
v/c Ratio		0.38	0.41		0.30	0.04
Uniform Delay, d1		7.2	7.4		17.8	16.5
Progression Factor		0.21	0.54		0.87	0.99
Incremental Delay, d2		0.7	0.6		1.8	0.2
Delay (s)		2.2	4.6		17.2	16.5
Level of Service		A	A		B	B
Approach Delay (s)		2.2	4.6		17.0	
Approach LOS		A	A		B	

Intersection Summary			
HCM Average Control Delay	5.2	HCM Level of Service	A
HCM Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	52.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1073: 130th Street & Indiana Ave

1/14/2013

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↱		↰	↑	Y	
Volume (vph)	420	127	92	472	326	64
Ideal Flow (vphpl)	2300	1800	1800	2300	1800	1800
Lane Width	15	12	14	16	15	12
Total Lost time (s)	5.0		5.0	5.0	5.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	0.99		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.97		1.00	1.00	0.98	
Flt Protected	1.00		0.95	1.00	0.96	
Satd. Flow (prot)	2214		1768	2436	1817	
Flt Permitted	1.00		0.27	1.00	0.96	
Satd. Flow (perm)	2214		496	2436	1817	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	462	140	101	519	358	70
RTOR Reduction (vph)	17	0	0	0	11	0
Lane Group Flow (vph)	585	0	101	519	417	0
Confl. Peds. (#/hr)		4	4			8
Heavy Vehicles (%)	11%	7%	3%	7%	2%	2%
Turn Type			Perm			
Protected Phases	4			8	2	
Permitted Phases			8			
Actuated Green, G (s)	31.0		31.0	31.0	24.0	
Effective Green, g (s)	31.0		31.0	31.0	24.0	
Actuated g/C Ratio	0.48		0.48	0.48	0.37	
Clearance Time (s)	5.0		5.0	5.0	5.0	
Lane Grp Cap (vph)	1056		237	1162	671	
v/s Ratio Prot	c0.26			0.21	c0.23	
v/s Ratio Perm			0.20			
v/c Ratio	0.55		0.43	0.45	0.62	
Uniform Delay, d1	12.1		11.2	11.3	16.8	
Progression Factor	1.20		1.00	1.00	1.00	
Incremental Delay, d2	2.0		5.5	1.2	4.3	
Delay (s)	16.5		16.7	12.5	21.1	
Level of Service	B		B	B	C	
Approach Delay (s)	16.5			13.2	21.1	
Approach LOS	B			B	C	

Intersection Summary			
HCM Average Control Delay	16.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	65.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1074: 130th Street & Ellis Ave

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑↑	↱		↰↑	↱		✥	
Volume (vph)	1	454	69	227	552	8	56	0	144	1	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	15	13	11	11	12	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0	4.0	3.0	3.0	4.0		4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85		1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.95	1.00		0.95	
Satd. Flow (prot)	1881	3213	1422	1589	3138	1366		1642	1443		969	
Flt Permitted	0.44	1.00	1.00	0.45	1.00	1.00		0.76	1.00		0.72	
Satd. Flow (perm)	863	3213	1422	748	3138	1366		1309	1443		734	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	1	473	72	236	575	8	58	0	150	1	0	0
RTOR Reduction (vph)	0	0	26	0	0	2	0	0	134	0	0	0
Lane Group Flow (vph)	1	473	46	236	575	6	0	58	16	0	1	0
Heavy Vehicles (%)	0%	10%	4%	4%	9%	12%	18%	0%	6%	100%	0%	0%
Turn Type	Perm		Perm	custom		custom	Perm		Perm	Perm		
Protected Phases		4		3	3 8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)	53.9	53.9	53.9	67.7	67.7	67.7		9.3	9.3		9.3	
Effective Green, g (s)	53.9	53.9	53.9	67.7	67.7	67.7		9.3	9.3		9.3	
Actuated g/C Ratio	0.63	0.63	0.63	0.80	0.80	0.80		0.11	0.11		0.11	
Clearance Time (s)	4.0	4.0	4.0	3.0		4.0		4.0	4.0		4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0		3.0	3.0		3.0	
Lane Grp Cap (vph)	547	2037	902	703	2499	1088		143	158		80	
v/s Ratio Prot		0.15		c0.04	0.18							
v/s Ratio Perm	0.00		0.03	c0.22		0.00		c0.04	0.01		0.00	
v/c Ratio	0.00	0.23	0.05	0.34	0.23	0.01		0.41	0.10		0.01	
Uniform Delay, d1	5.7	6.7	5.9	2.2	2.2	1.8		35.3	34.1		33.8	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2	0.0	0.3	0.1	0.3	0.0	0.0		1.9	0.3		0.1	
Delay (s)	5.7	6.9	6.0	2.5	2.2	1.8		37.2	34.4		33.8	
Level of Service	A	A	A	A	A	A		D	C		C	
Approach Delay (s)		6.8			2.3			35.2			33.8	
Approach LOS		A			A			D			C	

Intersection Summary			
HCM Average Control Delay	8.2	HCM Level of Service	A
HCM Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	7.0
Intersection Capacity Utilization	41.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1942: 111th Street & Langley Avenue

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰↑	↑↱		↰↱	
Volume (vph)	10	626	645	35	21	8
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	12	10	10
Total Lost time (s)		5.0	5.0		3.0	
Lane Util. Factor		0.95	0.95		1.00	
Frt		1.00	0.99		0.96	
Flt Protected		1.00	1.00		0.97	
Satd. Flow (prot)		3038	3016		1486	
Flt Permitted		0.94	1.00		0.97	
Satd. Flow (perm)		2858	3016		1486	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	11	673	694	38	23	9
RTOR Reduction (vph)	0	0	4	0	8	0
Lane Group Flow (vph)	0	684	728	0	24	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%
Turn Type	Perm					
Protected Phases		4	8 2 11		5	
Permitted Phases	4					
Actuated Green, G (s)		33.0	64.0		7.0	
Effective Green, g (s)		33.0	64.0		7.0	
Actuated g/C Ratio		0.37	0.71		0.08	
Clearance Time (s)		5.0			3.0	
Lane Grp Cap (vph)		1048	2145		116	
v/s Ratio Prot			c0.24		c0.02	
v/s Ratio Perm		c0.24				
v/c Ratio		0.65	0.34		0.20	
Uniform Delay, d1		23.7	4.9		38.9	
Progression Factor		1.00	0.01		1.00	
Incremental Delay, d2		3.2	0.3		3.9	
Delay (s)		26.9	0.3		42.8	
Level of Service		C	A		D	
Approach Delay (s)		26.9	0.3		42.8	
Approach LOS		C	A		D	

Intersection Summary			
HCM Average Control Delay	13.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	36.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↑↱			↰↑↱			↰↑	↱
Volume (vph)	69	388	1	24	487	71	0	0	1	38	3	65
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	12	12	11	12	11
Total Lost time (s)		4.0			4.0			3.0			3.0	3.0
Lane Util. Factor		1.00			0.95			1.00			1.00	1.00
Frpb, ped/bikes		1.00			1.00			0.92			1.00	0.96
Flpb, ped/bikes		1.00			1.00			1.00			0.98	1.00
Frt		1.00			0.98			0.86			1.00	0.85
Flt Protected		0.99			1.00			1.00			0.96	1.00
Satd. Flow (prot)		1729			3229			1432			1611	1282
Flt Permitted		0.82			0.94			1.00			0.96	1.00
Satd. Flow (perm)		1435			3030			1432			1619	1282
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	77	431	1	27	541	79	0	0	1	42	3	72
RTOR Reduction (vph)	0	0	0	0	13	0	0	1	0	0	0	48
Lane Group Flow (vph)	0	509	0	0	634	0	0	0	0	0	45	24
Confl. Peds. (#/hr)	33		13	13		33	29		13	13		29
Confl. Bikes (#/hr)	1		1	1		1						
Heavy Vehicles (%)	4%	3%	0%	0%	4%	0%	0%	0%	0%	5%	0%	11%
Turn Type	Perm			Prot			Perm			pm+pt		Perm
Protected Phases		4		3	3 4			1		2	1 2	
Permitted Phases	4				3		1	1		1 2		1 2
Actuated Green, G (s)		31.0			45.0			9.0			25.0	28.0
Effective Green, g (s)		31.0			45.0			9.0			25.0	28.0
Actuated g/C Ratio		0.36			0.53			0.11			0.29	0.33
Clearance Time (s)		4.0						3.0				
Lane Grp Cap (vph)		523			1637			152			475	422
v/s Ratio Prot					c0.06			0.00			c0.02	
v/s Ratio Perm		c0.35			0.14						c0.01	0.02
v/c Ratio		0.97			0.39			0.00			0.09	0.06
Uniform Delay, d1		26.6			11.8			34.0			21.8	19.5
Progression Factor		1.00			1.38			1.00			1.00	1.00
Incremental Delay, d2		33.3			0.1			0.0			0.4	0.3
Delay (s)		59.9			16.4			34.0			22.2	19.7
Level of Service		E			B			C			C	B
Approach Delay (s)		59.9			16.4			34.0			20.7	
Approach LOS		E			B			C			C	

Intersection Summary			
HCM Average Control Delay	34.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	66.7%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			✥			✥	
Volume (vph)	39	598	27	33	939	54	34	17	48	23	22	85
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	16	10	10	16	8	15	8	8	14	8
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			0.99			0.98	
Flpb, ped/bikes	0.97	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.99			0.93			0.91	
Flt Protected	0.95	1.00		0.95	1.00			0.98			0.99	
Satd. Flow (prot)	1551	3022		1587	3021			1787			1701	
Flt Permitted	0.20	1.00		0.37	1.00			0.89			0.95	
Satd. Flow (perm)	327	3022		610	3021			1614			1628	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	41	623	28	34	978	56	35	18	50	24	23	89
RTOR Reduction (vph)	0	5	0	0	6	0	0	32	0	0	27	0
Lane Group Flow (vph)	41	646	0	34	1028	0	0	71	0	0	109	0
Confl. Peds. (#/hr)	145		16	16		145	17		19	19		17
Confl. Bikes (#/hr)	5					5			2	2		
Heavy Vehicles (%)	0%	5%	0%	0%	4%	2%	0%	0%	0%	0%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	34.0	34.0		34.0	34.0			22.0			22.0	
Effective Green, g (s)	34.0	34.0		34.0	34.0			23.0			23.0	
Actuated g/C Ratio	0.52	0.52		0.52	0.52			0.35			0.35	
Clearance Time (s)	4.0	4.0		4.0	4.0			5.0			5.0	
Lane Grp Cap (vph)	171	1581		319	1580			571			576	
v/s Ratio Prot		0.21			c0.34							
v/s Ratio Perm	0.13			0.06				0.04			c0.07	
v/c Ratio	0.24	0.41		0.11	0.65			0.12			0.19	
Uniform Delay, d1	8.5	9.4		7.8	11.2			14.2			14.5	
Progression Factor	1.00	1.00		0.72	1.29			1.00			1.00	
Incremental Delay, d2	3.3	0.8		0.6	1.9			0.4			0.7	
Delay (s)	11.7	10.2		6.3	16.3			14.6			15.3	
Level of Service	B	B		A	B			B			B	
Approach Delay (s)		10.3			16.0			14.6			15.3	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	13.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1002: 95th Street & Lafayette Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↑	↱				↰↰	↑	↱
Volume (vph)	25	778	5	28	555	35	0	0	0	551	85	361
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	5.0	5.0		3.0	3.0	3.0				5.0	5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00				0.97	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.67				1.00	1.00	0.98
Flpb, ped/bikes	0.91	1.00		1.00	1.00	1.00				1.00	1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85				1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00				0.95	1.00	1.00
Satd. Flow (prot)	780	3379		1710	3226	514				3285	1731	1481
Flt Permitted	0.43	1.00		0.14	1.00	1.00				0.95	1.00	1.00
Satd. Flow (perm)	350	3379		248	3226	514				3285	1731	1481
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	27	837	5	30	597	38	0	0	0	592	91	388
RTOR Reduction (vph)	0	0	0	0	0	17	0	0	0	0	0	172
Lane Group Flow (vph)	27	842	0	30	597	21	0	0	0	592	91	216
Confl. Peds. (#/hr)	350		4	4		350	8		6	6		8
Confl. Bikes (#/hr)	7		1	1		7						
Heavy Vehicles (%)	100%	1%	20%	0%	6%	100%	0%	0%	0%	1%	4%	1%
Turn Type	pm+pt			pm+pt		Perm				Split		Perm
Protected Phases	7	4		3	8					6	6	
Permitted Phases	4			8		8						6
Actuated Green, G (s)	43.0	43.0		73.0	73.0	73.0				30.0	30.0	30.0
Effective Green, g (s)	43.0	43.0		73.0	73.0	73.0				30.0	30.0	30.0
Actuated g/C Ratio	0.33	0.33		0.56	0.56	0.56				0.23	0.23	0.23
Clearance Time (s)	5.0	5.0		3.0	3.0	3.0				5.0	5.0	5.0
Lane Grp Cap (vph)	162	1118		634	1812	289				758	399	342
v/s Ratio Prot	0.02	c0.25		0.02	c0.19					c0.18	0.05	
v/s Ratio Perm	0.04			0.01		0.04						0.15
v/c Ratio	0.17	0.75		0.05	0.33	0.07				0.78	0.23	0.63
Uniform Delay, d1	31.5	38.8		15.2	15.3	13.0				46.9	40.6	45.0
Progression Factor	0.84	0.86		0.37	0.77	1.35				1.00	1.00	1.00
Incremental Delay, d2	2.1	4.6		0.1	0.4	0.4				7.8	1.3	8.6
Delay (s)	28.6	37.8		5.8	12.2	17.9				54.8	41.9	53.7
Level of Service	C	D		A	B	B				D	D	D
Approach Delay (s)		37.5			12.2			0.0			53.3	
Approach LOS		D			B			A			D	

Intersection Summary			
HCM Average Control Delay	37.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	48.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1003: 95th Street & State Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↱		↰	↑↑	↱		↰↑	↱	↰		↱
Volume (vph)	329	787	213	49	499	257	91	233	51	37	0	28
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0	3.0		5.0	5.0	5.0		5.0	5.0	5.0		5.0
Lane Util. Factor	0.97	0.95		1.00	0.95	1.00		0.95	1.00	1.00		1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.67		1.00	0.91	1.00		0.96
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Frt	1.00	0.97		1.00	1.00	0.85		1.00	0.85	1.00		0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.99	1.00	0.95		1.00
Satd. Flow (prot)	3285	3262		1710	3138	1018		3301	1359	855		734
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.99	1.00	0.95		1.00
Satd. Flow (perm)	3285	3262		1710	3138	1018		3301	1359	855		734
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	350	837	227	52	531	273	97	248	54	39	0	30
RTOR Reduction (vph)	0	18	0	0	0	206	0	0	42	0	0	28
Lane Group Flow (vph)	350	1046	0	52	531	67	0	345	12	39	0	2
Confl. Peds. (#/hr)	327		13	13		327	6		60	60		6
Confl. Bikes (#/hr)	6					6						
Heavy Vehicles (%)	1%	1%	0%	0%	9%	1%	0%	3%	2%	100%	0%	100%
Turn Type	Prot			Prot		Perm	Split		Perm	Prot		custom
Protected Phases	7	4		3	8		2	2		6		
Permitted Phases						8			2			6
Actuated Green, G (s)	44.0	68.0		8.0	32.0	32.0		28.0	28.0	8.0		8.0
Effective Green, g (s)	44.0	68.0		8.0	32.0	32.0		28.0	28.0	8.0		8.0
Actuated g/C Ratio	0.34	0.52		0.06	0.25	0.25		0.22	0.22	0.06		0.06
Clearance Time (s)	3.0	3.0		5.0	5.0	5.0		5.0	5.0	5.0		5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0	3.0	3.0		3.0
Lane Grp Cap (vph)	1112	1706		105	772	251		711	293	53		45
v/s Ratio Prot	0.11	c0.32		0.03	c0.17			c0.10		c0.05		
v/s Ratio Perm						0.07			0.01			0.00
v/c Ratio	0.31	0.61		0.50	0.69	0.27		0.49	0.04	0.74		0.04
Uniform Delay, d1	31.8	21.8		59.0	44.5	39.5		44.7	40.4	60.0		57.4
Progression Factor	0.92	0.16		1.00	1.00	1.00		0.95	1.01	1.00		1.00
Incremental Delay, d2	0.5	1.0		15.7	5.0	2.6		2.4	0.3	41.0		0.4
Delay (s)	29.8	4.6		74.8	49.4	42.1		44.6	41.2	100.9		57.8
Level of Service	C	A		E	D	D		D	D	F		E
Approach Delay (s)		10.8			48.6			44.2			82.2	
Approach LOS		B			D			D			F	

Intersection Summary			
HCM Average Control Delay	29.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	67.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1004: 95th Street & Michigan Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱		↰	↑↑		↰		↱	↰	↱	
Volume (vph)	0	859	160	90	724	0	74	0	79	9	14	7
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	11	11	8	12	12	12	14	15	12
Total Lost time (s)		4.0		4.0	4.0		4.0		4.0	4.0	4.0	
Lane Util. Factor		0.95		1.00	0.95		1.00		1.00	1.00	1.00	
Frpb, ped/bikes		0.99		1.00	1.00		1.00		0.98	1.00	0.99	
Flpb, ped/bikes		1.00		1.00	1.00		0.97		1.00	0.99	1.00	
Frt		0.98		1.00	1.00		1.00		0.85	1.00	0.95	
Flt Protected		1.00		0.95	1.00		0.95		1.00	0.95	1.00	
Satd. Flow (prot)		2997		1648	3149		1387		1451	1803	1857	
Flt Permitted		1.00		0.21	1.00		0.74		1.00	0.95	1.00	
Satd. Flow (perm)		2997		358	3149		1085		1451	1803	1857	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	0	895	167	94	754	0	77	0	82	9	15	7
RTOR Reduction (vph)	0	15	0	0	0	0	0	0	56	0	5	0
Lane Group Flow (vph)	0	1047	0	94	754	0	77	0	26	9	17	0
Confl. Peds. (#/hr)	67		19	19		67	38		12	12		38
Confl. Bikes (#/hr)			1	1								
Heavy Vehicles (%)	0%	2%	11%	0%	5%	0%	19%	0%	3%	0%	0%	0%
Turn Type				Perm			custom		custom	Perm		
Protected Phases		4			8						6	
Permitted Phases				8			2		2	6		
Actuated Green, G (s)		60.0		60.0	60.0		32.0		32.0	32.0	32.0	
Effective Green, g (s)		60.0		60.0	60.0		32.0		32.0	32.0	32.0	
Actuated g/C Ratio		0.60		0.60	0.60		0.32		0.32	0.32	0.32	
Clearance Time (s)		4.0		4.0	4.0		4.0		4.0	4.0	4.0	
Lane Grp Cap (vph)		1798		215	1889		347		464	577	594	
v/s Ratio Prot		c0.35			0.24						0.01	
v/s Ratio Perm				0.26			c0.07		0.02	0.00		
v/c Ratio		0.58		0.44	0.40		0.22		0.06	0.02	0.03	
Uniform Delay, d1		12.3		10.8	10.5		24.9		23.5	23.2	23.3	
Progression Factor		1.00		1.00	1.00		1.00		1.00	1.00	1.00	
Incremental Delay, d2		1.4		6.3	0.6		1.5		0.2	0.0	0.1	
Delay (s)		13.7		17.2	11.2		26.4		23.8	23.3	23.4	
Level of Service		B		B	B		C		C	C	C	
Approach Delay (s)		13.7			11.8			25.0			23.4	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM Average Control Delay	13.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	59.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1005: 98th Place & Halsted Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↰	↰↑	↱	↰	↑↑↑			↑↑↱	
Volume (vph)	0	0	0	254	0	1043	203	645	0	0	785	490
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	12	12	10	10	12	12	11	12
Total Lost time (s)				4.0		5.0	3.0	4.0			4.0	
Lane Util. Factor				0.95		1.00	1.00	0.91			0.91	
Frpb, ped/bikes				1.00		1.00	1.00	1.00			0.98	
Flpb, ped/bikes				1.00		1.00	1.00	1.00			1.00	
Frt				1.00		0.85	1.00	1.00			0.94	
Flt Protected				0.95		1.00	0.95	1.00			1.00	
Satd. Flow (prot)				1540		1530	1535	4327			4269	
Flt Permitted				0.95		1.00	0.95	1.00			1.00	
Satd. Flow (perm)				1540		1530	1535	4327			4269	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	0	0	0	262	0	1075	209	665	0	0	809	505
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	262	0	1075	209	665	0	0	1314	0
Confl. Peds. (#/hr)	2					2	18		3	3		18
Heavy Vehicles (%)	0%	0%	0%	2%	0%	0%	4%	6%	0%	0%	4%	1%
Turn Type				Split		Prot	Prot					
Protected Phases				8	8	8	5	2			6	
Permitted Phases												
Actuated Green, G (s)				30.0		30.0	32.0	66.0			31.0	
Effective Green, g (s)				31.0		30.0	32.0	66.0			31.0	
Actuated g/C Ratio				0.30		0.29	0.30	0.63			0.30	
Clearance Time (s)				5.0		5.0	3.0	4.0			4.0	
Lane Grp Cap (vph)				455		437	468	2720			1260	
v/s Ratio Prot				0.17		c0.70	c0.14	0.15			c0.31	
v/s Ratio Perm												
v/c Ratio				0.58		2.46	0.45	0.24			1.17dr	
Uniform Delay, d1				31.4		37.5	29.4	8.6			37.0	
Progression Factor				1.00		1.00	0.62	2.01			1.00	
Incremental Delay, d2				5.2		663.8	2.6	0.2			37.3	
Delay (s)				36.6		701.3	20.8	17.4			74.3	
Level of Service				D		F	C	B			E	
Approach Delay (s)		0.0			571.1			18.2			74.3	
Approach LOS		A			F			B			E	

Intersection Summary			
HCM Average Control Delay	248.8	HCM Level of Service	F
HCM Volume to Capacity ratio	1.29		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	89.2%	ICU Level of Service	E
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↰↱						↑↑↑	↱↱	↰	↑↑↑	
Volume (vph)	331	770	144	0	0	0	0	517	375	343	696	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	13	12	12	12	12	12	10	10	8	12	12	12
Total Lost time (s)	5.0	5.0						4.0	4.0	3.0	4.0	
Lane Util. Factor	0.91	0.91						0.91	0.88	1.00	0.91	
Frpb, ped/bikes	1.00	1.00						1.00	1.00	1.00	1.00	
Flpb, ped/bikes	0.99	1.00						1.00	1.00	1.00	1.00	
Frt	1.00	0.98						1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00						1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1509	3156						4368	2244	1598	4680	
Flt Permitted	0.95	1.00						1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1509	3156						4368	2244	1598	4680	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	348	811	152	0	0	0	0	544	395	361	733	0
RTOR Reduction (vph)	0	13	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	313	985	0	0	0	0	0	544	395	361	733	0
Confl. Peds. (#/hr)	6		1	1		6	6					6
Heavy Vehicles (%)	6%	1%	0%	0%	0%	0%	0%	5%	4%	7%	5%	0%
Turn Type	Perm								Perm	Prot		
Protected Phases		4						2		1	6	
Permitted Phases	4								2			
Actuated Green, G (s)	34.0	34.0						28.0	28.0	31.0	62.0	
Effective Green, g (s)	34.0	34.0						28.0	28.0	31.0	62.0	
Actuated g/C Ratio	0.32	0.32						0.27	0.27	0.30	0.59	
Clearance Time (s)	5.0	5.0						4.0	4.0	3.0	4.0	
Lane Grp Cap (vph)	489	1022						1165	598	472	2763	
v/s Ratio Prot								0.12		c0.23	0.16	
v/s Ratio Perm	0.21	0.31							c0.18			
v/c Ratio	0.64	0.96						0.47	0.66	0.76	0.27	
Uniform Delay, d1	30.3	34.9						32.2	34.3	33.7	10.4	
Progression Factor	1.00	1.00						1.14	1.14	0.84	0.16	
Incremental Delay, d2	6.3	20.7						1.2	5.2	4.7	0.1	
Delay (s)	36.6	55.6						38.0	44.4	33.1	1.8	
Level of Service	D	E						D	D	C	A	
Approach Delay (s)		51.1			0.0			40.7			12.1	
Approach LOS		D			A			D			B	

Intersection Summary			
HCM Average Control Delay	35.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	89.2%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1007: 98th Place & Wentworth Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↰	↑↱		↰	↑			↱	
Volume (vph)	0	0	0	274	24	23	9	114	0	0	137	5
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	14	12	12	16	12
Total Lost time (s)				4.0	4.0		4.0	4.0			-3.0	
Lane Util. Factor				1.00	0.95		1.00	1.00			1.00	
Frpb, ped/bikes				1.00	0.99		1.00	1.00			1.00	
Flpb, ped/bikes				1.00	1.00		1.00	1.00			1.00	
Frt				1.00	0.93		1.00	1.00			1.00	
Flt Protected				0.95	1.00		0.95	1.00			1.00	
Satd. Flow (prot)				1688	3133		1710	1846			1955	
Flt Permitted				0.95	1.00		0.56	1.00			1.00	
Satd. Flow (perm)				1688	3133		1011	1846			1955	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	0	288	25	24	9	120	0	0	144	5
RTOR Reduction (vph)	0	0	0	0	16	0	0	0	0	0	1	0
Lane Group Flow (vph)	0	0	0	288	33	0	9	120	0	0	148	0
Confl. Peds. (#/hr)	2		2	2		2			6	6		
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	0%	0%	0%	1%	0%	0%	0%	4%	0%	0%	4%	0%
Turn Type				Perm			pm+pt					
Protected Phases					8		7	2			6	
Permitted Phases				8			2					
Actuated Green, G (s)				27.0	27.0		50.0	50.0			40.0	
Effective Green, g (s)				27.0	27.0		50.0	50.0			46.0	
Actuated g/C Ratio				0.32	0.32		0.59	0.59			0.54	
Clearance Time (s)				4.0	4.0		4.0	4.0			3.0	
Lane Grp Cap (vph)				536	995		652	1086			1058	
v/s Ratio Prot					0.01		0.00	c0.07			c0.08	
v/s Ratio Perm				c0.17			0.01					
v/c Ratio				0.54	0.03		0.01	0.11			0.14	
Uniform Delay, d1				23.9	20.0		10.2	7.7			9.7	
Progression Factor				1.00	1.00		1.07	1.16			1.00	
Incremental Delay, d2				3.8	0.1		0.0	0.2			0.3	
Delay (s)				27.7	20.1		10.9	9.1			10.0	
Level of Service				C	C		B	A			A	
Approach Delay (s)		0.0			26.6			9.3			10.0	
Approach LOS		A			C			A			A	

Intersection Summary			
HCM Average Control Delay	18.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.25		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	1.0
Intersection Capacity Utilization	36.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1008: 99th Street & Wentworth Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱			✥			↱		↰	↑	
Volume (vph)	12	11	22	3	0	14	0	97	26	44	367	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	16	15	12	8	12	8	12	12	12	10	13	12
Total Lost time (s)	4.0	4.0			4.0			3.0		4.0	4.0	
Lane Util. Factor	1.00	1.00			1.00			1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.97			0.98			0.99		1.00	1.00	
Flpb, ped/bikes	1.00	1.00			1.00			1.00		1.00	1.00	
Frt	1.00	0.90			0.89			0.97		1.00	1.00	
Flt Protected	0.95	1.00			0.99			1.00		0.95	1.00	
Satd. Flow (prot)	1935	1739			1550			1723		1589	1860	
Flt Permitted	0.75	1.00			0.98			1.00		0.65	1.00	
Satd. Flow (perm)	1517	1739			1533			1723		1094	1860	
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	14	13	25	3	0	16	0	111	30	51	422	0
RTOR Reduction (vph)	0	17	0	0	11	0	0	12	0	0	0	0
Lane Group Flow (vph)	14	21	0	0	8	0	0	129	0	51	422	0
Confl. Peds. (#/hr)	1		11	11		1	1		10	10		1
Confl. Bikes (#/hr)			2	2			1		2	2		1
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%
Turn Type	Perm			Perm						pm+pt		
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8						6		
Actuated Green, G (s)	27.0	27.0			27.0			40.0		50.0	50.0	
Effective Green, g (s)	27.0	27.0			27.0			40.0		50.0	50.0	
Actuated g/C Ratio	0.32	0.32			0.32			0.47		0.59	0.59	
Clearance Time (s)	4.0	4.0			4.0			3.0		4.0	4.0	
Lane Grp Cap (vph)	482	552			487			811		684	1094	
v/s Ratio Prot		c0.01						0.08		0.01	c0.23	
v/s Ratio Perm	0.01				0.01					0.04		
v/c Ratio	0.03	0.04			0.02			0.16		0.07	0.39	
Uniform Delay, d1	20.0	20.0			19.9			12.9		7.9	9.3	
Progression Factor	1.00	1.00			1.00			1.00		0.97	0.86	
Incremental Delay, d2	0.1	0.1			0.1			0.4		0.2	1.0	
Delay (s)	20.1	20.2			20.0			13.3		7.9	9.0	
Level of Service	C	C			B			B		A	A	
Approach Delay (s)		20.1			20.0			13.3			8.9	
Approach LOS		C			B			B			A	

Intersection Summary			
HCM Average Control Delay	10.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	40.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰↱		↰	↑	↱	
Volume (vph)	37	32	8	149	222	22
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	14	12	13	12	10	12
Total Lost time (s)	4.0		4.0	4.0	4.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.94		1.00	1.00	0.99	
Flt Protected	0.97		0.95	1.00	1.00	
Satd. Flow (prot)	1753		1765	1782	1656	
Flt Permitted	0.97		0.55	1.00	1.00	
Satd. Flow (perm)	1753		1017	1782	1656	
Peak-hour factor, PHF	0.81	0.81	0.81	0.81	0.81	0.81
Adj. Flow (vph)	46	40	10	184	274	27
RTOR Reduction (vph)	27	0	0	0	5	0
Lane Group Flow (vph)	59	0	10	184	296	0
Confl. Peds. (#/hr)			2			2
Heavy Vehicles (%)	0%	0%	0%	1%	0%	0%
Turn Type			Perm			
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	21.0		36.0	36.0	36.0	
Effective Green, g (s)	21.0		36.0	36.0	36.0	
Actuated g/C Ratio	0.32		0.55	0.55	0.55	
Clearance Time (s)	4.0		4.0	4.0	4.0	
Lane Grp Cap (vph)	566		563	987	917	
v/s Ratio Prot	c0.03			0.10	c0.18	
v/s Ratio Perm			0.01			
v/c Ratio	0.10		0.02	0.19	0.32	
Uniform Delay, d1	15.4		6.5	7.2	7.9	
Progression Factor	1.00		0.46	0.58	1.46	
Incremental Delay, d2	0.4		0.1	0.4	0.8	
Delay (s)	15.8		3.0	4.6	12.3	
Level of Service	B		A	A	B	
Approach Delay (s)	15.8			4.5	12.3	
Approach LOS	B			A	B	

Intersection Summary			
HCM Average Control Delay	10.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.24		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	24.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1010: 99th Street & Michigan Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↰↱		↰	↑			↑	↱
Volume (vph)	0	0	0	29	256	9	253	120	0	0	256	16
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	14	16	12	12	15	12	12	13	10
Total Lost time (s)					4.0		4.0	4.0			3.0	3.0
Lane Util. Factor					0.95		1.00	1.00			1.00	1.00
Frpb, ped/bikes					1.00		1.00	1.00			1.00	1.00
Flpb, ped/bikes					1.00		1.00	1.00			1.00	1.00
Frt					1.00		1.00	1.00			1.00	0.85
Flt Protected					1.00		0.95	1.00			1.00	1.00
Satd. Flow (prot)					3772		1693	1678			1738	1428
Flt Permitted					1.00		0.52	1.00			1.00	1.00
Satd. Flow (perm)					3772		922	1678			1738	1428
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	0	31	269	9	266	126	0	0	269	17
RTOR Reduction (vph)	0	0	0	0	3	0	0	0	0	0	0	9
Lane Group Flow (vph)	0	0	0	0	306	0	266	126	0	0	269	8
Confl. Peds. (#/hr)	1					1			5	5		
Heavy Vehicles (%)	0%	0%	0%	0%	2%	0%	1%	18%	0%	0%	7%	0%
Turn Type				Split			pm+pt					Perm
Protected Phases				8	8		7	2			6	
Permitted Phases							2					6
Actuated Green, G (s)					26.0		51.0	51.0			38.0	38.0
Effective Green, g (s)					26.0		51.0	51.0			38.0	38.0
Actuated g/C Ratio					0.31		0.60	0.60			0.45	0.45
Clearance Time (s)					4.0		4.0	4.0			3.0	3.0
Lane Grp Cap (vph)					1154		644	1007			777	638
v/s Ratio Prot					c0.08		c0.05	0.08			0.15	
v/s Ratio Perm							c0.20					0.01
v/c Ratio					0.27		0.41	0.13			0.35	0.01
Uniform Delay, d1					22.3		12.1	7.4			15.4	13.1
Progression Factor					1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2					0.6		2.0	0.3			1.2	0.0
Delay (s)					22.8		14.1	7.6			16.6	13.1
Level of Service					C		B	A			B	B
Approach Delay (s)		0.0			22.8			12.0			16.4	
Approach LOS		A			C			B			B	

Intersection Summary			
HCM Average Control Delay	16.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	52.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1011: 99th Street & Martin Luther King Jr Drive

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					✥		↰	↑↱		↰	↑↱	
Volume (vph)	0	0	0	95	94	38	133	203	30	59	702	44
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	15	12	12	12	12	12	13	12
Total Lost time (s)					4.0		3.0	4.0		3.0	4.0	
Lane Util. Factor					1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes					1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes					1.00		1.00	1.00		1.00	1.00	
Frt					0.98		1.00	0.98		1.00	0.99	
Flt Protected					0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)					1896		1710	3286		1707	3467	
Flt Permitted					0.98		0.23	1.00		0.58	1.00	
Satd. Flow (perm)					1896		408	3286		1048	3467	
Peak-hour factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Adj. Flow (vph)	0	0	0	112	111	45	156	239	35	69	826	52
RTOR Reduction (vph)	0	0	0	0	10	0	0	15	0	0	6	0
Lane Group Flow (vph)	0	0	0	0	258	0	156	259	0	69	872	0
Confl. Peds. (#/hr)							5		5	5		5
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	1%	0%
Turn Type				Split			pm+pt			pm+pt		
Protected Phases				8	8		5	2		1	6	
Permitted Phases							2			6		
Actuated Green, G (s)					23.0		41.0	34.0		41.0	34.0	
Effective Green, g (s)					23.0		41.0	34.0		41.0	34.0	
Actuated g/C Ratio					0.31		0.55	0.45		0.55	0.45	
Clearance Time (s)					4.0		3.0	4.0		3.0	4.0	
Lane Grp Cap (vph)					581		345	1490		634	1572	
v/s Ratio Prot					c0.14		c0.04	0.08		0.01	c0.25	
v/s Ratio Perm							0.21			0.05		
v/c Ratio					0.44		0.45	0.17		0.11	0.55	
Uniform Delay, d1					20.9		17.8	12.2		8.2	15.0	
Progression Factor					1.00		0.81	0.81		1.00	1.00	
Incremental Delay, d2					2.5		4.2	0.3		0.3	1.4	
Delay (s)					23.3		18.6	10.1		8.6	16.4	
Level of Service					C		B	B		A	B	
Approach Delay (s)		0.0			23.3			13.2			15.8	
Approach LOS		A			C			B			B	

Intersection Summary			
HCM Average Control Delay	16.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	53.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1012: 100th Street & Martin Luther King Jr Drive

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Lane Configurations		✥			✥		↰	↑↱		↰	↑↱	
Volume (vph)	32	49	12	8	63	63	5	271	20	159	588	50
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	16	12	12	10	11	12	12	11	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.98			0.94		1.00	0.99		1.00	0.99	
Flt Protected		0.98			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1966			1654		1596	3177		1704	3232	
Flt Permitted		0.88			0.99		0.33	1.00		0.55	1.00	
Satd. Flow (perm)		1761			1638		552	3177		987	3232	
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	37	56	14	9	72	72	6	311	23	183	676	57
RTOR Reduction (vph)	0	7	0	0	43	0	0	7	0	0	8	0
Lane Group Flow (vph)	0	100	0	0	110	0	6	327	0	183	725	0
Confl. Peds. (#/hr)	2					2	1		6	6		1
Confl. Bikes (#/hr)			1	1			3					3
Heavy Vehicles (%)	0%	0%	0%	0%	2%	0%	0%	3%	0%	0%	1%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		25.0			25.0		42.0	42.0		42.0	42.0	
Effective Green, g (s)		25.0			25.0		42.0	42.0		42.0	42.0	
Actuated g/C Ratio		0.33			0.33		0.56	0.56		0.56	0.56	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		587			546		309	1779		553	1810	
v/s Ratio Prot								0.10			c0.22	
v/s Ratio Perm		0.06			c0.07		0.01			0.19		
v/c Ratio		0.17			0.20		0.02	0.18		0.33	0.40	
Uniform Delay, d1		17.7			17.9		7.3	8.1		8.9	9.4	
Progression Factor		1.00			1.00		1.00	1.00		0.26	0.25	
Incremental Delay, d2		0.6			0.8		0.1	0.2		1.4	0.6	
Delay (s)		18.3			18.7		7.5	8.3		3.7	2.9	
Level of Service		B			B		A	A		A	A	
Approach Delay (s)		18.3			18.7			8.3			3.0	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	6.9	HCM Level of Service	A
HCM Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	49.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis
1013: 100th Street & Cottage Grove Avenue

1/14/2013

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰↱			↰↑	↑↱	
Sign Control	Stop			Stop	Stop	
Volume (vph)	29	148	52	192	452	63
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	31	159	56	206	486	68

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	190	125	138	324	230
Volume Left (vph)	31	56	0	0	0
Volume Right (vph)	159	0	0	0	68
Hadj (s)	-0.42	0.28	0.05	0.05	-0.16
Departure Headway (s)	5.2	5.9	5.7	5.4	5.2
Degree Utilization, x	0.28	0.21	0.22	0.49	0.33
Capacity (veh/h)	637	580	602	647	672
Control Delay (s)	10.2	9.3	9.1	12.2	9.5
Approach Delay (s)	10.2	9.2		11.1	
Approach LOS	B	A		B	

Intersection Summary			
Delay	10.4		
HCM Level of Service	B		
Intersection Capacity Utilization	43.8%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Signalized Intersection Capacity Analysis
1014: 103rd Street & Vincennes Avenue

1/14/2013

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR
Lane Configurations		↰	↑	↱	↰	↑	↱			↰	↑↱	
Volume (vph)	32	35	371	18	18	367	63	71	53	66	341	30
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		3.5	4.0	4.0	4.0	4.0	4.0			4.0	4.0	
Lane Util. Factor		1.00	1.00	1.00	1.00	1.00	1.00			1.00	0.95	
Frpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	0.93			1.00	1.00	
Flpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	
Frt		1.00	1.00	0.85	1.00	1.00	0.85			1.00	0.99	
Flt Protected		0.95	1.00	1.00	0.95	1.00	1.00			0.95	1.00	
Satd. Flow (prot)		1611	1731	1530	1710	1731	1421			1710	3252	
Flt Permitted		0.14	1.00	1.00	0.51	1.00	1.00			0.14	1.00	
Satd. Flow (perm)		238	1731	1530	925	1731	1421			257	3252	
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	37	40	426	21	21	422	72	82	61	76	392	34
RTOR Reduction (vph)	0	0	0	12	0	0	39	0	0	0	6	0
Lane Group Flow (vph)	0	77	426	9	21	422	115	0	0	137	420	0
Confl. Peds. (#/hr)		25					25					3
Heavy Vehicles (%)	6%	6%	4%	0%	0%	4%	0%	0%	0%	0%	4%	0%
Turn Type	Perm	pm+pt		Perm	Perm		Perm		Perm	Perm		
Protected Phases		7	4			8					2	
Permitted Phases	4	4		4	8		8		2	2		
Actuated Green, G (s)		44.0	44.0	44.0	25.0	25.0	25.0			28.0	28.0	
Effective Green, g (s)		44.0	44.0	44.0	25.0	25.0	25.0			28.0	28.0	
Actuated g/C Ratio		0.42	0.42	0.42	0.24	0.24	0.24			0.27	0.27	
Clearance Time (s)		3.5	4.0	4.0	4.0	4.0	4.0			4.0	4.0	
Lane Grp Cap (vph)		302	725	641	220	412	338			69	867	
v/s Ratio Prot		0.04	c0.25			c0.24					0.13	
v/s Ratio Perm		0.07		0.01	0.02		0.08			c0.53		
v/c Ratio		0.25	0.59	0.01	0.10	1.02	0.34			1.99	0.48	
Uniform Delay, d1		21.5	23.5	17.8	31.2	40.0	33.2			38.5	32.4	
Progression Factor		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	
Incremental Delay, d2		2.0	3.5	0.0	0.9	50.7	2.7			491.0	1.9	
Delay (s)		23.5	27.0	17.9	32.0	90.7	35.9			529.5	34.4	
Level of Service		C	C	B	C	F	D			F	C	
Approach Delay (s)			26.1			74.5					154.8	
Approach LOS			C			E					F	

Intersection Summary			
HCM Average Control Delay	116.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.37		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	94.6%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1014: 103rd Street & Vincennes Avenue

1/14/2013

Movement	SBL	SBT	SBR	SBR2	SEL2	SEL	SER	SER2
Lane Configurations	↰	↑↱				↰	↱↱	
Volume (vph)	95	515	74	93	4	95	515	167
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.5	4.5				4.5	4.5	
Lane Util. Factor	1.00	0.95				1.00	0.88	
Frpb, ped/bikes	1.00	1.00				1.00	1.00	
Flpb, ped/bikes	1.00	1.00				1.00	1.00	
Frt	1.00	0.96				1.00	0.85	
Flt Protected	0.95	1.00				0.95	1.00	
Satd. Flow (prot)	1705	3245				1710	2633	
Flt Permitted	0.38	1.00				0.95	1.00	
Satd. Flow (perm)	675	3245				1710	2633	
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	109	592	85	107	5	109	592	192
RTOR Reduction (vph)	0	12	0	0	0	0	26	0
Lane Group Flow (vph)	109	772	0	0	0	114	758	0
Confl. Peds. (#/hr)	3							
Heavy Vehicles (%)	0%	2%	0%	0%	0%	0%	3%	0%
Turn Type	Perm				Split		Perm	
Protected Phases		6			9	9		
Permitted Phases	6						9	
Actuated Green, G (s)	27.5	27.5				20.5	20.5	
Effective Green, g (s)	27.5	27.5				20.5	20.5	
Actuated g/C Ratio	0.26	0.26				0.20	0.20	
Clearance Time (s)	4.5	4.5				4.5	4.5	
Lane Grp Cap (vph)	177	850				334	514	
v/s Ratio Prot		0.24				0.07		
v/s Ratio Perm	0.16						c0.29	
v/c Ratio	0.62	0.91				0.34	1.48	
Uniform Delay, d1	34.1	37.5				36.4	42.2	
Progression Factor	1.00	1.00				1.00	1.00	
Incremental Delay, d2	15.0	15.3				2.8	224.2	
Delay (s)	49.1	52.8				39.2	266.5	
Level of Service	D	D				D	F	
Approach Delay (s)		52.4				237.6		
Approach LOS		D				F		

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰			↱			✣				
Volume (vph)	59	532	0	0	403	45	77	47	16	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	11	11	11	16	11	12	15	12	12	15	12
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		1.00			0.99			0.98				
Flt Protected		1.00			1.00			0.97				
Satd. Flow (prot)		1681			1954			1842				
Flt Permitted		0.92			1.00			0.97				
Satd. Flow (perm)		1557			1954			1842				
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	63	572	0	0	433	48	83	51	17	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	635	0	0	481	0	0	151	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)		40.0			40.0			17.0				
Effective Green, g (s)		40.0			40.0			17.0				
Actuated g/C Ratio		0.62			0.62			0.26				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		958			1202			482				
v/s Ratio Prot					0.25							
v/s Ratio Perm		c0.41						0.08				
v/c Ratio		0.66			0.40			0.31				
Uniform Delay, d1		8.1			6.4			19.3				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		3.6			1.0			1.7				
Delay (s)		11.7			7.4			21.0				
Level of Service		B			A			C				
Approach Delay (s)		11.7			7.4			21.0			0.0	
Approach LOS		B			A			C			A	

Intersection Summary			
HCM Average Control Delay	11.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	76.4%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱	↰	↑↑	↱	↰	↑↑	↱
Volume (vph)	64	294	137	103	270	110	95	576	76	131	723	90
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	10	10	9	9	10	9
Total Lost time (s)		4.0	4.0		4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		1.00	0.96		1.00	0.96	1.00	1.00	0.95	1.00	1.00	0.94
Flpb, ped/bikes		1.00	1.00		0.99	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.99	1.00		0.99	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1981	1434		1944	1444	1546	3040	1296	1505	3069	1252
Flt Permitted		0.54	1.00		0.78	1.00	0.24	1.00	1.00	0.32	1.00	1.00
Satd. Flow (perm)		1077	1434		1541	1444	391	3040	1296	503	3069	1252
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	69	316	147	111	290	118	102	619	82	141	777	97
RTOR Reduction (vph)	0	0	87	0	0	84	0	0	49	0	0	50
Lane Group Flow (vph)	0	385	60	0	401	34	102	619	33	141	777	47
Confl. Peds. (#/hr)	24		45	45		24	36		24	24		36
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	2%	2%	2%	2%	3%	2%	3%	5%	1%	2%	4%	3%
Turn Type	pm+pt		Perm	Perm		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)		43.0	43.0		30.0	30.0	50.6	42.4	42.4	51.4	42.8	42.8
Effective Green, g (s)		43.0	43.0		30.0	30.0	50.6	42.4	42.4	51.4	42.8	42.8
Actuated g/C Ratio		0.41	0.41		0.29	0.29	0.48	0.40	0.40	0.49	0.41	0.41
Clearance Time (s)		4.0	4.0		4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		527	587		440	413	279	1228	523	328	1251	510
v/s Ratio Prot		c0.07					0.03	0.20		c0.04	c0.25	
v/s Ratio Perm		0.23	0.04		c0.26	0.02	0.15		0.03	0.18		0.04
v/c Ratio		0.73	0.10		0.91	0.08	0.37	0.50	0.06	0.43	0.62	0.09
Uniform Delay, d1		26.1	19.1		36.2	27.4	16.2	23.4	19.2	15.7	24.7	19.1
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.79	1.58	2.83
Incremental Delay, d2		8.6	0.4		25.6	0.4	0.8	1.5	0.2	0.9	2.2	0.3
Delay (s)		34.8	19.5		61.8	27.8	17.0	24.9	19.4	29.0	41.2	54.4
Level of Service		C	B		E	C	B	C	B	C	D	D
Approach Delay (s)		30.5			54.1			23.3			40.8	
Approach LOS		C			D			C			D	

Intersection Summary			
HCM Average Control Delay	36.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	81.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1017: 103rd Street & Normal Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			✥				
Volume (vph)	74	347	74	78	367	78	44	52	59	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	15	12	12	15	12
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		0.98			0.98			0.95				
Flt Protected		0.99			0.99			0.99				
Satd. Flow (prot)		1643			1643			1798				
Flt Permitted		0.86			0.87			0.99				
Satd. Flow (perm)		1430			1437			1798				
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	80	373	80	84	395	84	47	56	63	0	0	0
RTOR Reduction (vph)	0	10	0	0	10	0	0	34	0	0	0	0
Lane Group Flow (vph)	0	523	0	0	553	0	0	132	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm			Perm					
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Actuated Green, G (s)		40.0			40.0			17.0				
Effective Green, g (s)		40.0			40.0			17.0				
Actuated g/C Ratio		0.62			0.62			0.26				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		880			884			470				
v/s Ratio Prot												
v/s Ratio Perm		0.37			c0.38			0.07				
v/c Ratio		0.59			0.63			0.28				
Uniform Delay, d1		7.6			7.8			19.1				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		3.0			3.3			1.5				
Delay (s)		10.5			11.2			20.6				
Level of Service		B			B			C				
Approach Delay (s)		10.5			11.2			20.6			0.0	
Approach LOS		B			B			C			A	

Intersection Summary			
HCM Average Control Delay	12.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.0%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱		↰	↱		↰↑↱	
Volume (vph)	19	382	64	66	441	32	37	76	72	51	225	45
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	11	12	12	15	12
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frpb, ped/bikes		1.00	0.96		1.00	0.96		1.00	0.96		0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		0.99	1.00		1.00	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		0.98	
Flt Protected		1.00	1.00		0.99	1.00		0.98	1.00		0.99	
Satd. Flow (prot)		1687	1382		1712	1417		1685	1455		1886	
Flt Permitted		0.97	1.00		0.90	1.00		0.85	1.00		0.94	
Satd. Flow (perm)		1641	1382		1558	1417		1449	1455		1781	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	20	402	67	69	464	34	39	80	76	54	237	47
RTOR Reduction (vph)	0	0	29	0	0	12	0	0	52	0	7	0
Lane Group Flow (vph)	0	422	38	0	533	22	0	119	24	0	331	0
Confl. Peds. (#/hr)	25		19	19		25	36		30	30		36
Confl. Bikes (#/hr)	1		2	2		1	3					3
Heavy Vehicles (%)	0%	3%	3%	0%	1%	0%	0%	1%	1%	0%	1%	0%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		43.0	43.0		43.0	43.0		24.0	24.0		24.0	
Effective Green, g (s)		43.0	43.0		43.0	43.0		24.0	24.0		24.0	
Actuated g/C Ratio		0.57	0.57		0.57	0.57		0.32	0.32		0.32	
Clearance Time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	
Lane Grp Cap (vph)		941	792		893	812		464	466		570	
v/s Ratio Prot												
v/s Ratio Perm		0.26	0.03		c0.34	0.02		0.08	0.02		c0.19	
v/c Ratio		0.45	0.05		0.60	0.03		0.26	0.05		0.58	
Uniform Delay, d1		9.2	7.0		10.4	6.9		18.9	17.6		21.3	
Progression Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2		1.5	0.1		2.9	0.1		1.3	0.2		4.3	
Delay (s)		10.7	7.1		13.3	7.0		20.2	17.8		25.6	
Level of Service		B	A		B	A		C	B		C	
Approach Delay (s)		10.2			12.9			19.3			25.6	
Approach LOS		B			B			B			C	

Intersection Summary			
HCM Average Control Delay	15.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	86.1%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1019: 103rd Street & State Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑	↱	↰	↑	↱
Volume (vph)	55	426	29	39	453	47	44	165	55	95	162	25
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	11	16	8	10	10	10	10	10	10
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00	0.98	1.00	1.00	0.98
Flpb, ped/bikes	0.98	1.00		1.00	1.00		0.99	1.00	1.00	0.99	1.00	1.00
Frt	1.00	0.99		1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1526	3067		1651	3728		1584	1663	1370	1568	1680	1397
Flt Permitted	0.42	1.00		0.45	1.00		0.65	1.00	1.00	0.64	1.00	1.00
Satd. Flow (perm)	677	3067		785	3728		1076	1663	1370	1057	1680	1397
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	59	453	31	41	482	50	47	176	59	101	172	27
RTOR Reduction (vph)	0	8	0	0	12	0	0	0	35	0	0	16
Lane Group Flow (vph)	59	476	0	41	520	0	47	176	24	101	172	11
Confl. Peds. (#/hr)	51		3	3		51	13		13	13		13
Heavy Vehicles (%)	2%	3%	3%	0%	2%	0%	0%	1%	2%	1%	0%	0%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	31.0	31.0		31.0	31.0		26.0	26.0	26.0	26.0	26.0	26.0
Effective Green, g (s)	31.0	31.0		31.0	31.0		26.0	26.0	26.0	26.0	26.0	26.0
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.40	0.40	0.40	0.40	0.40	0.40
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	323	1463		374	1778		430	665	548	423	672	559
v/s Ratio Prot		c0.16			0.14			c0.11			0.10	
v/s Ratio Perm	0.09			0.05			0.04		0.02	0.10		0.01
v/c Ratio	0.18	0.33		0.11	0.29		0.11	0.26	0.04	0.24	0.26	0.02
Uniform Delay, d1	9.7	10.5		9.4	10.3		12.2	13.1	11.9	12.9	13.0	11.8
Progression Factor	1.00	1.00		1.00	1.00		0.88	0.94	0.88	0.54	0.54	0.29
Incremental Delay, d2	1.2	0.6		0.6	0.4		0.5	1.0	0.1	1.3	0.9	0.1
Delay (s)	11.0	11.1		10.0	10.8		11.3	13.3	10.6	8.3	8.0	3.4
Level of Service	B	B		A	B		B	B	B	A	A	A
Approach Delay (s)		11.1			10.7			12.4			7.7	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM Average Control Delay	10.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	50.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1020: 103rd Street & Michigan Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	50	389	71	58	305	53	54	175	63	81	223	70
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	11	10	11	11	10	11	11	10	11	11
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.98		1.00	0.99		1.00	0.98		1.00	0.99	
Flpb, ped/bikes	0.96	1.00		0.95	1.00		0.99	1.00		0.95	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.96		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1319	3143		1513	3125		1579	2917		1451	3002	
Flt Permitted	0.52	1.00		0.45	1.00		0.56	1.00		0.60	1.00	
Satd. Flow (perm)	724	3143		717	3125		935	2917		916	3002	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	52	401	73	60	314	55	56	180	65	84	230	72
RTOR Reduction (vph)	0	0	0	0	0	0	0	38	0	0	40	0
Lane Group Flow (vph)	52	474	0	60	369	0	56	207	0	84	262	0
Confl. Peds. (#/hr)	112		99	99		112	23		53	53		23
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	16%	1%	0%	0%	1%	9%	0%	8%	2%	5%	5%	7%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	36.0	36.0		36.0	36.0		31.0	31.0		31.0	31.0	
Effective Green, g (s)	36.0	36.0		36.0	36.0		31.0	31.0		31.0	31.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.41	0.41		0.41	0.41	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	348	1509		344	1500		386	1206		379	1241	
v/s Ratio Prot		c0.15			0.12			0.07			0.09	
v/s Ratio Perm	0.07			0.08			0.06			c0.09		
v/c Ratio	0.15	0.31		0.17	0.25		0.15	0.17		0.22	0.21	
Uniform Delay, d1	10.9	11.9		11.1	11.5		13.7	13.9		14.2	14.1	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.9	0.5		1.1	0.4		0.8	0.3		1.3	0.4	
Delay (s)	11.8	12.5		12.2	11.9		14.5	14.2		15.6	14.5	
Level of Service	B	B		B	B		B	B		B	B	
Approach Delay (s)		12.4			11.9			14.3			14.8	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	13.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.27		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	49.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1021: 103rd Street & Martin Luther King Jr Drive

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱		↰	↑↱		↰	↑↱	
Volume (vph)	78	382	52	27	433	40	68	163	48	76	473	106
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	12	8	16	12	9	10	10	9	10	10
Total Lost time (s)	3.0	7.0		3.0	7.0		3.0	7.0		3.0	7.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		0.98	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.99		1.00	0.97		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1594	1654		1362	1973		1534	2997		1534	3015	
Flt Permitted	0.34	1.00		0.39	1.00		0.28	1.00		0.61	1.00	
Satd. Flow (perm)	577	1654		554	1973		446	2997		989	3015	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	82	402	55	28	456	42	72	172	51	80	498	112
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	82	457	0	28	498	0	72	223	0	80	610	0
Confl. Peds. (#/hr)	21		95	95		21	36		8	8		36
Confl. Bikes (#/hr)	2		3	3		2	2					2
Heavy Vehicles (%)	0%	2%	0%	7%	2%	0%	0%	3%	0%	0%	2%	1%
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	46.4	41.2		40.0	38.0		25.8	21.2		25.8	21.2	
Effective Green, g (s)	46.4	39.2		40.0	36.0		25.8	19.2		25.8	19.2	
Actuated g/C Ratio	0.55	0.46		0.47	0.42		0.30	0.23		0.30	0.23	
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	5.0		3.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	377	763		280	836		194	677		330	681	
v/s Ratio Prot	c0.01	c0.28		0.00	0.25		c0.02	0.07		0.01	c0.20	
v/s Ratio Perm	0.11			0.04			0.09			0.06		
v/c Ratio	0.22	0.60		0.10	0.60		0.37	0.33		0.24	0.90	
Uniform Delay, d1	16.6	17.0		17.6	18.9		29.1	27.5		22.4	31.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.3	3.5		0.2	3.1		1.2	1.3		0.4	16.7	
Delay (s)	16.9	20.5		17.7	22.0		30.3	28.8		22.8	48.7	
Level of Service	B	C		B	C		C	C		C	D	
Approach Delay (s)		20.0			21.8			29.2			45.7	
Approach LOS		B			C			C			D	

Intersection Summary			
HCM Average Control Delay	30.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	71.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1022: 103rd Street & Cottage Grove Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑ ↑↱			↰↑ ↑↱		↰	↑ ↑↱		↰	↑ ↑↱	
Volume (vph)	62	327	53	90	391	91	51	122	45	98	283	63
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	11	11	11	11	12	12	10	10	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		0.99	1.00	
Frt		0.98			0.98		1.00	0.96		1.00	0.97	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3681			3130		1652	3236		1548	3026	
Flt Permitted		0.80			0.80		0.51	1.00		0.64	1.00	
Satd. Flow (perm)		2979			2521		891	3236		1041	3026	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	67	352	57	97	420	98	55	131	48	105	304	68
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	476	0	0	615	0	55	179	0	105	372	0
Confl. Peds. (#/hr)	23		30	30		23	1		20	20		1
Confl. Bikes (#/hr)	3					3						
Heavy Vehicles (%)	0%	3%	0%	2%	2%	0%	0%	1%	0%	2%	2%	3%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		33.0			33.0		32.0	32.0		32.0	32.0	
Effective Green, g (s)		34.0			34.0		33.0	33.0		33.0	33.0	
Actuated g/C Ratio		0.45			0.45		0.44	0.44		0.44	0.44	
Clearance Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)		1350			1143		392	1424		458	1331	
v/s Ratio Prot								0.06			c0.12	
v/s Ratio Perm		0.16			c0.24		0.06			0.10		
v/c Ratio		0.35			0.54		0.14	0.13		0.23	0.28	
Uniform Delay, d1		13.3			14.8		12.5	12.4		13.1	13.4	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.7			1.8		0.7	0.2		1.2	0.5	
Delay (s)		14.1			16.6		13.3	12.6		14.2	13.9	
Level of Service		B			B		B	B		B	B	
Approach Delay (s)		14.1			16.6			12.8			14.0	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	14.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	63.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1023: 103rd Street & Woodlawn Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↑	↱		↰↑↱			↰↑↱	
Volume (vph)	76	667	5	16	449	192	1	1	7	164	1	62
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	12	12	12	12	12	12	13	13	13
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00			0.95	
Frt	1.00	1.00		1.00	1.00	0.85		0.89			0.96	
Flt Protected	0.95	1.00		0.95	1.00	1.00		1.00			0.97	
Satd. Flow (prot)	1605	3206		1660	3320	1485		1551			3175	
Flt Permitted	0.48	1.00		0.36	1.00	1.00		0.98			0.77	
Satd. Flow (perm)	804	3206		622	3320	1485		1523			2544	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	82	717	5	17	483	206	1	1	8	176	1	67
RTOR Reduction (vph)	0	0	0	0	0	72	0	6	0	0	51	0
Lane Group Flow (vph)	82	722	0	17	483	134	0	4	0	0	193	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	46.0	46.0		46.0	46.0	46.0		16.7			16.7	
Effective Green, g (s)	46.0	46.0		46.0	46.0	46.0		16.7			16.7	
Actuated g/C Ratio	0.65	0.65		0.65	0.65	0.65		0.24			0.24	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		8.0			8.0	
Lane Grp Cap (vph)	523	2086		405	2160	966		360			601	
v/s Ratio Prot		c0.23			0.15							
v/s Ratio Perm	0.10			0.03		0.09		0.00			c0.08	
v/c Ratio	0.16	0.35		0.04	0.22	0.14		0.01			0.32	
Uniform Delay, d1	4.8	5.6		4.4	5.0	4.7		20.7			22.3	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00			1.00	
Incremental Delay, d2	0.6	0.5		0.2	0.2	0.3		0.1			1.3	
Delay (s)	5.4	6.0		4.6	5.3	5.0		20.7			23.6	
Level of Service	A	A		A	A	A		C			C	
Approach Delay (s)		6.0			5.2			20.7			23.6	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM Average Control Delay	8.2	HCM Level of Service	A
HCM Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	70.7	Sum of lost time (s)	8.0
Intersection Capacity Utilization	49.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1024: 107th Street & Halsted Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↑	↱	↰	↑↑	↱
Volume (vph)	101	176	94	93	160	54	114	769	77	118	786	90
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	9	12	10	10	12	9	10	9	9	10	9
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00	0.97	1.00	1.00	0.96
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.95		1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1560	1506		1561	1586		1493	3069	1337	1523	3099	1318
Flt Permitted	0.46	1.00		0.36	1.00		0.22	1.00	1.00	0.23	1.00	1.00
Satd. Flow (perm)	761	1506		587	1586		347	3069	1337	368	3099	1318
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	106	185	99	98	168	57	120	809	81	124	827	95
RTOR Reduction (vph)	0	23	0	0	14	0	0	0	40	0	0	46
Lane Group Flow (vph)	106	261	0	98	211	0	120	809	41	124	827	49
Confl. Peds. (#/hr)	10		13	13		10	18		7	7		18
Confl. Bikes (#/hr)	2					2	2		1	1		2
Heavy Vehicles (%)	2%	1%	1%	2%	1%	2%	3%	4%	0%	1%	3%	0%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	28.0	21.0		28.0	21.0		42.0	35.0	35.0	42.0	35.0	35.0
Effective Green, g (s)	26.0	22.0		26.0	22.0		40.0	35.0	35.0	40.0	35.0	35.0
Actuated g/C Ratio	0.31	0.26		0.31	0.26		0.47	0.41	0.41	0.47	0.41	0.41
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)	289	390		248	410		244	1264	551	255	1276	543
v/s Ratio Prot	0.03	c0.17		c0.03	0.13		c0.03	0.26		0.03	c0.27	
v/s Ratio Perm	0.09			0.09			0.20		0.03	0.19		0.04
v/c Ratio	0.37	0.67		0.40	0.51		0.49	0.64	0.07	0.49	0.65	0.09
Uniform Delay, d1	22.1	28.2		22.2	26.9		14.0	20.0	15.2	14.0	20.1	15.3
Progression Factor	1.00	1.00		1.00	1.00		0.62	0.79	0.57	1.00	1.00	1.00
Incremental Delay, d2	3.6	8.8		4.7	4.6		6.7	2.4	0.3	6.5	2.6	0.3
Delay (s)	25.7	37.1		26.9	31.5		15.4	18.1	8.8	20.5	22.6	15.6
Level of Service	C	D		C	C		B	B	A	C	C	B
Approach Delay (s)		34.0			30.1			17.1			21.7	
Approach LOS		C			C			B			C	

Intersection Summary			
HCM Average Control Delay	22.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	64.7%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1025: 107th Street & Wentworth Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Lane Configurations		✥			✥			✥			✥	
Volume (vph)	21	173	33	20	173	20	18	115	31	35	239	47
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	14	12	12	14	12	12	16	12	12	16	12
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		0.99			1.00			1.00			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.98			0.99			0.97			0.98	
Flt Protected		1.00			1.00			0.99			0.99	
Satd. Flow (prot)		1840			1852			1938			1976	
Flt Permitted		0.97			0.97			0.95			0.96	
Satd. Flow (perm)		1786			1795			1858			1905	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	22	184	35	21	184	21	19	122	33	37	254	50
RTOR Reduction (vph)	0	9	0	0	6	0	0	13	0	0	10	0
Lane Group Flow (vph)	0	232	0	0	220	0	0	161	0	0	331	0
Confl. Peds. (#/hr)	18		34	34		18	16		19	19		16
Confl. Bikes (#/hr)			6	6			1		4	4		1
Heavy Vehicles (%)	0%	1%	0%	5%	1%	0%	0%	2%	0%	0%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		27.0			27.0			30.0			30.0	
Effective Green, g (s)		27.0			27.0			30.0			30.0	
Actuated g/C Ratio		0.42			0.42			0.46			0.46	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		742			746			858			879	
v/s Ratio Prot												
v/s Ratio Perm		c0.13			0.12			0.09			c0.17	
v/c Ratio		0.31			0.30			0.19			0.38	
Uniform Delay, d1		12.8			12.7			10.3			11.4	
Progression Factor		1.00			0.60			1.20			1.00	
Incremental Delay, d2		1.1			1.0			0.5			1.2	
Delay (s)		13.9			8.6			12.9			12.6	
Level of Service		B			A			B			B	
Approach Delay (s)		13.9			8.6			12.9			12.6	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM Average Control Delay	12.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	48.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1026: 107th Street & State Street

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	23	179	34	25	179	18	38	195	31	33	180	33
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	0.97	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.99		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1496	3063		1576	3121		1518	3117		1550	3075	
Flt Permitted	0.62	1.00		0.61	1.00		0.61	1.00		0.60	1.00	
Satd. Flow (perm)	970	3063		1005	3121		968	3117		975	3075	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	25	197	37	27	197	20	42	214	34	36	198	36
RTOR Reduction (vph)	0	24	0	0	12	0	0	14	0	0	15	0
Lane Group Flow (vph)	25	210	0	27	205	0	42	234	0	36	219	0
Confl. Peds. (#/hr)	20		17	17		20	2					2
Confl. Bikes (#/hr)	32		36	36		32	22		25	25		22
Heavy Vehicles (%)	4%	1%	0%	0%	0%	0%	5%	0%	0%	3%	1%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.0	20.0		20.0	20.0		39.0	39.0		39.0	39.0	
Effective Green, g (s)	19.0	19.0		19.0	19.0		38.0	38.0		38.0	38.0	
Actuated g/C Ratio	0.29	0.29		0.29	0.29		0.58	0.58		0.58	0.58	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	284	895		294	912		566	1822		570	1798	
v/s Ratio Prot		c0.07			0.07			c0.08			0.07	
v/s Ratio Perm	0.03			0.03			0.04			0.04		
v/c Ratio	0.09	0.23		0.09	0.22		0.07	0.13		0.06	0.12	
Uniform Delay, d1	16.7	17.5		16.7	17.4		5.9	6.1		5.8	6.0	
Progression Factor	0.86	0.87		0.83	0.83		1.14	1.11		0.48	0.45	
Incremental Delay, d2	0.6	0.6		0.6	0.6		0.3	0.1		0.2	0.1	
Delay (s)	15.0	15.8		14.5	15.0		6.9	6.9		3.0	2.9	
Level of Service	B	B		B	B		A	A		A	A	
Approach Delay (s)		15.7			15.0			6.9			2.9	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	9.9	HCM Level of Service	A
HCM Volume to Capacity ratio	0.16		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	46.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1027: 107th Street & Michigan Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			↰↑↱			↰↑↱	
Volume (vph)	61	153	38	21	132	30	23	238	16	30	316	33
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	9	9	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	
Flpb, ped/bikes	0.99	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.97		1.00	0.97			0.99			0.99	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1554	3057		1524	2940			1923			1938	
Flt Permitted	0.65	1.00		0.63	1.00			0.96			0.96	
Satd. Flow (perm)	1058	3057		1009	2940			1851			1874	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	62	156	39	21	135	31	23	243	16	31	322	34
RTOR Reduction (vph)	0	23	0	0	19	0	0	3	0	0	5	0
Lane Group Flow (vph)	62	172	0	21	147	0	0	279	0	0	382	0
Confl. Peds. (#/hr)	11		17	17		11	26		7	7		26
Heavy Vehicles (%)	2%	1%	0%	0%	1%	3%	4%	5%	0%	0%	4%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	26.0	26.0		26.0	26.0			31.0			31.0	
Effective Green, g (s)	26.0	26.0		26.0	26.0			31.0			31.0	
Actuated g/C Ratio	0.40	0.40		0.40	0.40			0.48			0.48	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	423	1223		404	1176			883			894	
v/s Ratio Prot		0.06			0.05							
v/s Ratio Perm	c0.06			0.02				0.15			c0.20	
v/c Ratio	0.15	0.14		0.05	0.13			0.32			0.43	
Uniform Delay, d1	12.4	12.4		11.9	12.3			10.5			11.2	
Progression Factor	0.98	0.91		0.78	0.77			0.95			1.00	
Incremental Delay, d2	0.7	0.2		0.2	0.2			0.9			1.5	
Delay (s)	12.9	11.5		9.5	9.7			10.8			12.7	
Level of Service	B	B		A	A			B			B	
Approach Delay (s)		11.8			9.7			10.8			12.7	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM Average Control Delay	11.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1028: 107th Street & Martin Luther King Jr Drive

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱			✥			✥	
Volume (vph)	47	111	26	16	124	20	28	212	10	28	347	55
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	16	12	10	16	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	
Flpb, ped/bikes	1.00	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.97		1.00	0.98			0.99			0.98	
Flt Protected	0.95	1.00		0.95	1.00			0.99			1.00	
Satd. Flow (prot)	1652	1974		1584	1977			1982			1979	
Flt Permitted	0.63	1.00		0.64	1.00			0.93			0.97	
Satd. Flow (perm)	1099	1974		1074	1977			1848			1924	
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	55	129	30	19	144	23	33	247	12	33	403	64
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	55	159	0	19	167	0	0	292	0	0	500	0
Confl. Peds. (#/hr)	1		10	10		1	2		5	5		2
Heavy Vehicles (%)	0%	0%	0%	0%	1%	0%	0%	2%	0%	0%	1%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.0	20.0		20.0	20.0			37.0			37.0	
Effective Green, g (s)	20.0	20.0		20.0	20.0			37.0			37.0	
Actuated g/C Ratio	0.31	0.31		0.31	0.31			0.57			0.57	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	338	607		330	608			1052			1095	
v/s Ratio Prot		0.08			c0.08							
v/s Ratio Perm	0.05			0.02				0.16			c0.26	
v/c Ratio	0.16	0.26		0.06	0.27			0.28			0.46	
Uniform Delay, d1	16.4	16.9		15.9	17.0			7.2			8.1	
Progression Factor	0.79	0.78		0.92	0.91			0.99			1.00	
Incremental Delay, d2	1.0	1.0		0.3	1.1			0.7			1.4	
Delay (s)	14.0	14.3		15.0	16.6			7.7			9.5	
Level of Service	B	B		B	B			A			A	
Approach Delay (s)		14.2			16.4			7.7			9.5	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	11.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	55.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1029: 107th Street & Cottage Grove Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱		↰	↑	↱	↰	↑	↱
Volume (vph)	42	10	74	2	4	7	45	181	4	3	359	59
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	10	10	10	11	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.98		1.00	0.98		1.00	1.00	1.00	1.00	1.00	0.98
Flpb, ped/bikes	0.99	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.87		1.00	0.91		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1695	1727		1702	1819		1594	1647	1428	1653	2000	1496
Flt Permitted	0.75	1.00		0.70	1.00		0.47	1.00	1.00	0.63	1.00	1.00
Satd. Flow (perm)	1336	1727		1246	1819		795	1647	1428	1094	2000	1496
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	48	11	84	2	5	8	51	206	5	3	408	67
RTOR Reduction (vph)	0	61	0	0	6	0	0	0	2	0	0	27
Lane Group Flow (vph)	48	34	0	2	7	0	51	206	3	3	408	40
Confl. Peds. (#/hr)	5		5	5		5	3					3
Heavy Vehicles (%)	0%	0%	1%	0%	0%	0%	0%	2%	0%	0%	2%	0%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	17.0	17.0		17.0	17.0		39.0	39.0	39.0	39.0	39.0	39.0
Effective Green, g (s)	18.0	18.0		18.0	18.0		39.0	39.0	39.0	39.0	39.0	39.0
Actuated g/C Ratio	0.28	0.28		0.28	0.28		0.60	0.60	0.60	0.60	0.60	0.60
Clearance Time (s)	5.0	5.0		5.0	5.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	370	478		345	504		477	988	857	656	1200	898
v/s Ratio Prot		0.02			0.00			0.13			c0.20	
v/s Ratio Perm	c0.04			0.00			0.06		0.00	0.00		0.03
v/c Ratio	0.13	0.07		0.01	0.01		0.11	0.21	0.00	0.00	0.34	0.04
Uniform Delay, d1	17.6	17.3		17.0	17.1		5.6	5.9	5.2	5.2	6.5	5.3
Progression Factor	1.44	2.79		1.00	1.00		0.69	0.66	0.67	1.00	1.00	1.00
Incremental Delay, d2	0.7	0.3		0.0	0.1		0.4	0.4	0.0	0.0	0.8	0.1
Delay (s)	26.0	48.7		17.1	17.1		4.2	4.3	3.5	5.2	7.3	5.4
Level of Service	C	D		B	B		A	A	A	A	A	A
Approach Delay (s)		41.1			17.1			4.3			7.0	
Approach LOS		D			B			A			A	

Intersection Summary			
HCM Average Control Delay	11.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.27		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	46.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱		↰	↑↑					↰	↑↱	
Volume (vph)	0	251	163	154	191	0	0	0	0	109	470	377
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	12	12	12	12	12	11	11	12
Total Lost time (s)		4.0		3.0	3.0					5.0	5.0	
Lane Util. Factor		0.95		1.00	0.95					1.00	0.95	
Frpb, ped/bikes		0.99		1.00	1.00					1.00	0.99	
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	
Frt		0.94		1.00	1.00					1.00	0.93	
Flt Protected		1.00		0.95	1.00					0.95	1.00	
Satd. Flow (prot)		2904		1693	3288					1503	3021	
Flt Permitted		1.00		0.40	1.00					0.95	1.00	
Satd. Flow (perm)		2904		719	3288					1503	3021	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	0	267	173	164	203	0	0	0	0	116	500	401
RTOR Reduction (vph)	0	104	0	0	0	0	0	0	0	0	141	0
Lane Group Flow (vph)	0	337	0	164	203	0	0	0	0	116	760	0
Confl. Peds. (#/hr)	18		3	3		18	1					1
Heavy Vehicles (%)	0%	4%	1%	1%	4%	0%	0%	0%	0%	10%	2%	1%
Turn Type				D.P+P						Split		
Protected Phases		8		7	7 8					6	6	
Permitted Phases				8								
Actuated Green, G (s)		33.0		53.0	56.0					37.0	37.0	
Effective Green, g (s)		33.0		53.0	56.0					37.0	37.0	
Actuated g/C Ratio		0.32		0.52	0.55					0.36	0.36	
Clearance Time (s)		4.0		3.0						5.0	5.0	
Lane Grp Cap (vph)		940		565	1805					545	1096	
v/s Ratio Prot		c0.12		c0.06	0.06					0.08	c0.25	
v/s Ratio Perm				0.09								
v/c Ratio		0.36		0.29	0.11					0.21	0.69	
Uniform Delay, d1		26.4		13.3	11.1					22.4	27.7	
Progression Factor		1.00		2.23	2.17					1.00	1.00	
Incremental Delay, d2		1.1		1.1	0.1					0.9	3.6	
Delay (s)		27.5		30.7	24.1					23.3	31.3	
Level of Service		C		C	C					C	C	
Approach Delay (s)		27.5			27.1			0.0			30.4	
Approach LOS		C			C			A			C	

Intersection Summary			
HCM Average Control Delay	29.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	102.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	59.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1031: 111th Street & Hamlet Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑			↑↱		↰	↑	↱			
Volume (vph)	141	219	0	0	284	109	61	415	175	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	9	12	13	12	13	12	12	12
Total Lost time (s)	4.0	4.0			4.0		5.0	5.0	5.0			
Lane Util. Factor	1.00	0.95			0.95		1.00	1.00	1.00			
Frpb, ped/bikes	1.00	1.00			0.99		1.00	1.00	0.99			
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.96		1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1674	3196			2847		1767	1782	1560			
Flt Permitted	0.36	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	637	3196			2847		1767	1782	1560			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	157	243	0	0	316	121	68	461	194	0	0	0
RTOR Reduction (vph)	0	0	0	0	39	0	0	0	137	0	0	0
Lane Group Flow (vph)	157	243	0	0	398	0	68	461	57	0	0	0
Confl. Peds. (#/hr)	9		13	13		9			1	1		
Confl. Bikes (#/hr)	3					3						
Heavy Vehicles (%)	2%	7%	0%	0%	3%	1%	0%	1%	0%	0%	0%	0%
Turn Type	pm+pt						custom		Perm			
Protected Phases	4	1 4			1		2	2				
Permitted Phases	1 4						2		2			
Actuated Green, G (s)	59.0	63.0			26.0		30.0	30.0	30.0			
Effective Green, g (s)	59.0	63.0			26.0		30.0	30.0	30.0			
Actuated g/C Ratio	0.58	0.62			0.25		0.29	0.29	0.29			
Clearance Time (s)	4.0				4.0		5.0	5.0	5.0			
Lane Grp Cap (vph)	704	1974			726		520	524	459			
v/s Ratio Prot	c0.07	0.08			c0.14		0.04	c0.26				
v/s Ratio Perm	0.06								0.04			
v/c Ratio	0.22	0.12			0.55		0.13	0.88	0.12			
Uniform Delay, d1	10.3	8.1			32.9		26.4	34.3	26.4			
Progression Factor	0.44	0.45			1.00		1.00	1.00	1.00			
Incremental Delay, d2	0.7	0.1			3.0		0.5	18.7	0.6			
Delay (s)	5.3	3.8			35.9		26.9	53.0	26.9			
Level of Service	A	A			D		C	D	C			
Approach Delay (s)		4.3			35.9			43.5			0.0	
Approach LOS		A			D			D			A	

Intersection Summary			
HCM Average Control Delay	31.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	102.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	59.7%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1032: 112th Place & Marshield Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱		↰	↑↑					↰	↑↑	↱
Volume (vph)	0	391	369	63	411	0	0	0	0	9	432	269
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	11	12	12	12	12	10	10	12
Total Lost time (s)		4.0		4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.95		1.00	0.95					1.00	0.95	1.00
Frpb, ped/bikes		0.99		1.00	1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Frt		0.93		1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00					0.95	1.00	1.00
Satd. Flow (prot)		3096		1710	3306					1596	3192	1530
Flt Permitted		1.00		0.18	1.00					0.95	1.00	1.00
Satd. Flow (perm)		3096		318	3306					1596	3192	1530
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	434	410	70	457	0	0	0	0	10	480	299
RTOR Reduction (vph)	0	172	0	0	0	0	0	0	0	0	0	197
Lane Group Flow (vph)	0	672	0	70	457	0	0	0	0	10	480	102
Confl. Peds. (#/hr)	8		8	8		8	3					3
Confl. Bikes (#/hr)	9					9			61	61		
Heavy Vehicles (%)	0%	1%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type				pm+pt						Split		Prot
Protected Phases		8		7	7 8					6	6	6
Permitted Phases				7 8								
Actuated Green, G (s)		36.0		54.0	58.0					34.0	34.0	34.0
Effective Green, g (s)		36.0		54.0	58.0					34.0	34.0	34.0
Actuated g/C Ratio		0.36		0.54	0.58					0.34	0.34	0.34
Clearance Time (s)		4.0		4.0						4.0	4.0	4.0
Lane Grp Cap (vph)		1115		422	1917					543	1085	520
v/s Ratio Prot		c0.22		0.03	c0.14					0.01	c0.15	0.07
v/s Ratio Perm				0.06								
v/c Ratio		0.60		0.17	0.24					0.02	0.44	0.20
Uniform Delay, d1		26.2		12.7	10.2					21.9	25.6	23.3
Progression Factor		1.00		1.05	1.25					1.00	1.00	1.00
Incremental Delay, d2		2.4		0.7	0.3					0.1	1.3	0.8
Delay (s)		28.6		14.0	13.0					22.0	26.9	24.2
Level of Service		C		B	B					C	C	C
Approach Delay (s)		28.6			13.1			0.0			25.8	
Approach LOS		C			B			A			C	

Intersection Summary			
HCM Average Control Delay	23.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	51.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1033: 112th Place & Hamlet Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↰↑			↑↱		↰	↰	↱			
Volume (vph)	320	80	0	0	116	4	358	369	45	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	12	12	12	10	12	11	11	12	12	12	12
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0	4.0			
Lane Util. Factor	0.91	0.91			0.95		0.95	0.95	1.00			
Frpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			1.00		1.00	1.00	0.85			
Flt Protected	0.95	0.97			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1469	3109			3173		1555	1653	1530			
Flt Permitted	0.67	0.73			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	1039	2346			3173		1555	1653	1530			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	337	84	0	0	122	4	377	388	47	0	0	0
RTOR Reduction (vph)	0	0	0	0	3	0	0	0	30	0	0	0
Lane Group Flow (vph)	168	253	0	0	123	0	377	388	17	0	0	0
Confl. Peds. (#/hr)	13		6	6		13			8	8		
Confl. Bikes (#/hr)	1					1			2	2		
Heavy Vehicles (%)	2%	1%	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%
Turn Type	pm+pt						custom		custom			
Protected Phases	4	1 4			1		2	2	2			
Permitted Phases	1 4						2		2			
Actuated Green, G (s)	51.0	51.0			15.0		37.0	37.0	37.0			
Effective Green, g (s)	51.0	51.0			15.0		37.0	37.0	37.0			
Actuated g/C Ratio	0.51	0.51			0.15		0.37	0.37	0.37			
Clearance Time (s)	4.0				4.0		4.0	4.0	4.0			
Lane Grp Cap (vph)	685	1471			476		575	612	566			
v/s Ratio Prot	c0.09	0.06			c0.04		c0.24	0.23	0.01			
v/s Ratio Perm	0.04	0.03										
v/c Ratio	0.25	0.17			0.26		0.66	0.63	0.03			
Uniform Delay, d1	13.6	13.2			37.6		26.2	25.9	20.1			
Progression Factor	0.29	0.31			1.00		1.00	1.00	1.00			
Incremental Delay, d2	0.7	0.2			1.3		5.7	4.9	0.1			
Delay (s)	4.6	4.2			38.9		31.9	30.9	20.2			
Level of Service	A	A			D		C	C	C			
Approach Delay (s)		4.4			38.9			30.8			0.0	
Approach LOS		A			D			C			A	

Intersection Summary			
HCM Average Control Delay	23.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	51.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1034: 111th Street & Halsted Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↱			↰↱		↰	↑↑	↱	↰	↑↑	↱
Volume (vph)	76	205	100	90	198	91	65	538	59	96	842	62
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	9	10	9	9	10	9
Total Lost time (s)		4.0			4.0		4.0	3.5	4.0	4.0	3.5	4.0
Lane Util. Factor		0.95			0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		0.99			0.99		1.00	1.00	0.97	1.00	1.00	0.96
Flpb, ped/bikes		1.00			1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.96			0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.99			0.99		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		2934			2924		1508	3069	1309	1507	3099	1298
Flt Permitted		0.80			0.77		0.18	1.00	1.00	0.35	1.00	1.00
Satd. Flow (perm)		2384			2271		291	3069	1309	562	3099	1298
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	78	211	103	93	204	94	67	555	61	99	868	64
RTOR Reduction (vph)	0	42	0	0	36	0	0	0	37	0	0	33
Lane Group Flow (vph)	0	350	0	0	355	0	67	555	24	99	868	31
Confl. Peds. (#/hr)	35		30	30		35	34		8	8		34
Confl. Bikes (#/hr)	1					1	1					1
Heavy Vehicles (%)	1%	4%	0%	1%	3%	3%	2%	4%	2%	2%	3%	2%
Turn Type	pm+pt			Perm			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)		35.0			27.0		38.0	33.0	33.0	38.0	33.0	33.0
Effective Green, g (s)		36.0			28.0		36.0	33.5	33.0	36.0	33.5	33.0
Actuated g/C Ratio		0.42			0.33		0.42	0.39	0.39	0.42	0.39	0.39
Clearance Time (s)		5.0			5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)		1049			748		181	1210	508	282	1221	504
v/s Ratio Prot		c0.02					c0.02	0.18		0.02	c0.28	
v/s Ratio Perm		0.12			c0.16		0.14		0.02	0.13		0.02
v/c Ratio		0.33			0.48		0.37	0.46	0.05	0.35	0.71	0.06
Uniform Delay, d1		16.4			22.7		16.1	19.0	16.2	15.4	21.7	16.3
Progression Factor		1.00			1.00		1.05	0.70	0.47	1.09	1.19	1.91
Incremental Delay, d2		0.9			2.2		5.5	1.2	0.2	2.7	2.8	0.2
Delay (s)		17.3			24.8		22.5	14.5	7.8	19.5	28.5	31.3
Level of Service		B			C		C	B	A	B	C	C
Approach Delay (s)		17.3			24.8			14.7			27.8	
Approach LOS		B			C			B			C	

Intersection Summary			
HCM Average Control Delay	22.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	68.4%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1035: 111th Street & Normal Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰			↱			✥				
Volume (vph)	76	305	0	0	278	69	47	39	30	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		1.00			0.97			0.97				
Flt Protected		0.99			1.00			0.98				
Satd. Flow (prot)		1730			1701			1653				
Flt Permitted		0.87			1.00			0.98				
Satd. Flow (perm)		1518			1701			1653				
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	82	328	0	0	299	74	51	42	32	0	0	0
RTOR Reduction (vph)	0	0	0	0	14	0	0	19	0	0	0	0
Lane Group Flow (vph)	0	410	0	0	359	0	0	106	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)		38.0			38.0			19.0				
Effective Green, g (s)		38.0			38.0			19.0				
Actuated g/C Ratio		0.58			0.58			0.29				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		887			994			483				
v/s Ratio Prot					0.21							
v/s Ratio Perm		c0.27						0.06				
v/c Ratio		0.46			0.36			0.22				
Uniform Delay, d1		7.7			7.1			17.4				
Progression Factor		1.00			0.49			1.00				
Incremental Delay, d2		1.7			1.0			1.0				
Delay (s)		9.4			4.4			18.4				
Level of Service		A			A			B				
Approach Delay (s)		9.4			4.4			18.4			0.0	
Approach LOS		A			A			B			A	

Intersection Summary			
HCM Average Control Delay	8.6	HCM Level of Service	A
HCM Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	58.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			↰↑↱			↰↑↱	
Volume (vph)	19	289	27	32	285	41	22	91	30	50	142	40
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	10	12	12	10	12
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		1.00			1.00			0.99			0.98	
Flpb, ped/bikes		1.00			1.00			0.99			0.99	
Frt		0.99			0.98			0.97			0.97	
Flt Protected		1.00			1.00			0.99			0.99	
Satd. Flow (prot)		1955			1938			2969			2985	
Flt Permitted		0.97			0.95			0.90			0.87	
Satd. Flow (perm)		1907			1852			2698			2637	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	20	307	29	34	303	44	23	97	32	53	151	43
RTOR Reduction (vph)	0	5	0	0	7	0	0	19	0	0	25	0
Lane Group Flow (vph)	0	351	0	0	374	0	0	133	0	0	222	0
Confl. Peds. (#/hr)	32		25	25		32	59		24	24		59
Confl. Bikes (#/hr)	3		2	2		3	4		2	2		4
Heavy Vehicles (%)	0%	3%	0%	3%	3%	0%	0%	0%	7%	4%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		30.0			30.0			27.0			27.0	
Effective Green, g (s)		30.0			30.0			27.0			27.0	
Actuated g/C Ratio		0.46			0.46			0.42			0.42	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		880			855			1121			1095	
v/s Ratio Prot												
v/s Ratio Perm		0.18			c0.20			0.05			c0.08	
v/c Ratio		0.40			0.44			0.12			0.20	
Uniform Delay, d1		11.6			11.8			11.7			12.1	
Progression Factor		0.57			0.45			1.25			0.45	
Incremental Delay, d2		1.2			1.5			0.2			0.4	
Delay (s)		7.8			6.9			14.8			5.8	
Level of Service		A			A			B			A	
Approach Delay (s)		7.8			6.9			14.8			5.8	
Approach LOS		A			A			B			A	

Intersection Summary			
HCM Average Control Delay	8.0	HCM Level of Service	A
HCM Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	66.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1037: 111th Street & State Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	41	255	39	66	362	70	42	211	95	64	175	48
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	9	10	10	9	10	10	12	10	10	12
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		0.98	1.00		0.99	1.00		0.99	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.95		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1507	3034		1568	3074		1586	2961		1585	3075	
Flt Permitted	0.43	1.00		0.55	1.00		0.60	1.00		0.56	1.00	
Satd. Flow (perm)	680	3034		914	3074		1009	2961		926	3075	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	44	271	41	70	385	74	45	224	101	68	186	51
RTOR Reduction (vph)	0	19	0	0	24	0	0	47	0	0	24	0
Lane Group Flow (vph)	44	293	0	70	435	0	45	278	0	68	213	0
Confl. Peds. (#/hr)	20		31	31		20	16		20	20		16
Confl. Bikes (#/hr)							1		3	3		1
Heavy Vehicles (%)	5%	3%	0%	0%	1%	0%	0%	2%	2%	0%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	22.0	22.0		22.0	22.0		35.0	35.0		35.0	35.0	
Effective Green, g (s)	22.0	22.0		22.0	22.0		35.0	35.0		35.0	35.0	
Actuated g/C Ratio	0.34	0.34		0.34	0.34		0.54	0.54		0.54	0.54	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	230	1027		309	1040		543	1594		499	1656	
v/s Ratio Prot		0.10			c0.14			c0.09			0.07	
v/s Ratio Perm	0.06			0.08			0.04			0.07		
v/c Ratio	0.19	0.29		0.23	0.42		0.08	0.17		0.14	0.13	
Uniform Delay, d1	15.2	15.7		15.4	16.6		7.2	7.6		7.5	7.4	
Progression Factor	0.73	0.70		0.95	0.96		0.83	0.81		1.13	1.14	
Incremental Delay, d2	1.8	0.7		1.7	1.2		0.3	0.2		0.6	0.2	
Delay (s)	12.8	11.8		16.4	17.1		6.3	6.5		9.0	8.7	
Level of Service	B	B		B	B		A	A		A	A	
Approach Delay (s)		11.9			17.0			6.4			8.7	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	11.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.27		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	47.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1038: 111th Street & Michigan Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			↰↑↱			↰↑↱	
Volume (vph)	55	287	68	69	316	40	40	207	52	46	279	64
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	9	10	9	9	16	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			0.99			0.98	
Flpb, ped/bikes	0.98	1.00		0.99	1.00			0.99			1.00	
Frt	1.00	0.97		1.00	0.98			0.97			0.98	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1503	3014		1429	3719			3486			3519	
Flt Permitted	0.52	1.00		0.52	1.00			0.87			0.88	
Satd. Flow (perm)	827	3014		789	3719			3043			3131	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	59	305	72	73	336	43	43	220	55	49	297	68
RTOR Reduction (vph)	0	32	0	0	15	0	0	27	0	0	25	0
Lane Group Flow (vph)	59	345	0	73	364	0	0	291	0	0	389	0
Confl. Peds. (#/hr)	38		17	17		38	125		53	53		125
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	0%	3%	0%	7%	2%	0%	0%	6%	10%	2%	5%	5%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	31.0	31.0		31.0	31.0			26.0			26.0	
Effective Green, g (s)	31.0	31.0		31.0	31.0			26.0			26.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48			0.40			0.40	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	394	1437		376	1774			1217			1252	
v/s Ratio Prot		c0.11			0.10							
v/s Ratio Perm	0.07			0.09				0.10			c0.12	
v/c Ratio	0.15	0.24		0.19	0.21			0.24			0.31	
Uniform Delay, d1	9.6	10.0		9.8	9.9			12.9			13.4	
Progression Factor	1.59	1.75		1.18	1.18			0.46			0.68	
Incremental Delay, d2	0.8	0.4		1.1	0.2			0.5			0.6	
Delay (s)	16.0	17.9		12.7	11.9			6.4			9.7	
Level of Service	B	B		B	B			A			A	
Approach Delay (s)		17.7			12.0			6.4			9.7	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	11.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.27		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	57.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1039: 111th Street & Indiana Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰↱			✥			✥	
Volume (vph)	82	246	82	73	220	73	100	70	40	40	70	100
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	16	12	12	16	12
Total Lost time (s)		5.0	5.0		5.0			5.0			5.0	
Lane Util. Factor		1.00	1.00		0.95			1.00			1.00	
Frt		1.00	0.85		0.97			0.97			0.94	
Flt Protected		0.99	1.00		0.99			0.98			0.99	
Satd. Flow (prot)		1669	1436		3084			1885			1835	
Flt Permitted		0.82	1.00		0.82			0.75			0.91	
Satd. Flow (perm)		1385	1436		2565			1438			1679	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	88	265	88	78	237	78	108	75	43	43	75	108
RTOR Reduction (vph)	0	0	42	0	33	0	0	13	0	0	51	0
Lane Group Flow (vph)	0	353	46	0	360	0	0	213	0	0	175	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm		Perm	Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)		34.0	34.0		34.0			21.0			21.0	
Effective Green, g (s)		34.0	34.0		34.0			21.0			21.0	
Actuated g/C Ratio		0.52	0.52		0.52			0.32			0.32	
Clearance Time (s)		5.0	5.0		5.0			5.0			5.0	
Lane Grp Cap (vph)		724	751		1342			465			542	
v/s Ratio Prot												
v/s Ratio Perm		c0.25	0.03		0.14			c0.15			0.10	
v/c Ratio		0.49	0.06		0.27			0.46			0.32	
Uniform Delay, d1		9.9	7.6		8.6			17.5			16.6	
Progression Factor		1.83	4.35		0.56			1.00			1.00	
Incremental Delay, d2		2.3	0.2		0.5			3.2			1.6	
Delay (s)		20.5	33.4		5.3			20.7			18.2	
Level of Service		C	C		A			C			B	
Approach Delay (s)		23.1			5.3			20.7			18.2	
Approach LOS		C			A			C			B	

Intersection Summary			
HCM Average Control Delay	16.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	68.4%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			↰↑↱			↰↑↱	
Volume (vph)	45	253	18	22	262	50	22	119	42	61	142	60
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	15	8	16	8	8	16	8
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			0.99			1.00	
Flpb, ped/bikes	0.98	1.00		0.98	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.98			0.97			0.97	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1440	3038		1563	3017			3580			3601	
Flt Permitted	0.55	1.00		0.58	1.00			0.91			0.85	
Satd. Flow (perm)	836	3038		947	3017			3272			3104	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	48	269	19	23	279	53	23	127	45	65	151	64
RTOR Reduction (vph)	0	8	0	0	24	0	0	26	0	0	37	0
Lane Group Flow (vph)	48	280	0	23	308	0	0	169	0	0	243	0
Confl. Peds. (#/hr)	24		47	47		24	9		36	36		9
Confl. Bikes (#/hr)			4	4			1					1
Heavy Vehicles (%)	9%	4%	0%	0%	3%	0%	0%	1%	10%	0%	0%	8%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	30.0	30.0		30.0	30.0			27.0			27.0	
Effective Green, g (s)	30.0	30.0		30.0	30.0			27.0			27.0	
Actuated g/C Ratio	0.46	0.46		0.46	0.46			0.42			0.42	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	386	1402		437	1392			1359			1289	
v/s Ratio Prot		0.09			c0.10							
v/s Ratio Perm	0.06			0.02				0.05			c0.08	
v/c Ratio	0.12	0.20		0.05	0.22			0.12			0.19	
Uniform Delay, d1	10.0	10.4		9.7	10.5			11.7			12.0	
Progression Factor	0.72	0.73		0.59	0.47			1.06			0.39	
Incremental Delay, d2	0.6	0.3		0.2	0.3			0.2			0.3	
Delay (s)	7.8	7.9		5.9	5.2			12.6			5.0	
Level of Service	A	A		A	A			B			A	
Approach Delay (s)		7.9			5.3			12.6			5.0	
Approach LOS		A			A			B			A	

Intersection Summary			
HCM Average Control Delay	7.2	HCM Level of Service	A
HCM Volume to Capacity ratio	0.21		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.7%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1041: 111th Street & Cottage Grove Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱			↰↑↱			↰↑↱	
Volume (vph)	43	434	18	71	410	182	17	96	89	262	201	63
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			0.95			0.95	
Frt		0.99			0.96			0.93			0.98	
Flt Protected		1.00			0.99			1.00			0.98	
Satd. Flow (prot)		3288			3167			3087			3181	
Flt Permitted		0.85			0.83			0.93			0.73	
Satd. Flow (perm)		2798			2654			2888			2376	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	46	467	19	76	441	196	18	103	96	282	216	68
RTOR Reduction (vph)	0	4	0	0	61	0	0	52	0	0	16	0
Lane Group Flow (vph)	0	528	0	0	652	0	0	165	0	0	550	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm			pm+pt			Perm		
Protected Phases		4			8		5	2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		25.0			25.0			30.0			17.0	
Effective Green, g (s)		25.0			25.0			30.0			17.0	
Actuated g/C Ratio		0.38			0.38			0.46			0.26	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		1076			1021			1364			621	
v/s Ratio Prot								c0.02				
v/s Ratio Perm		0.19			c0.25			0.04			c0.23	
v/c Ratio		0.49			0.64			0.12			0.95dl	
Uniform Delay, d1		15.2			16.3			10.0			23.1	
Progression Factor		1.49			1.00			1.00			0.80	
Incremental Delay, d2		1.6			3.1			0.2			16.5	
Delay (s)		24.2			19.4			10.2			35.0	
Level of Service		C			B			B			D	
Approach Delay (s)		24.2			19.4			10.2			35.0	
Approach LOS		C			B			B			D	

Intersection Summary			
HCM Average Control Delay	24.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	73.9%	ICU Level of Service	D
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1042: 111th Street & Ellis Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱			✥			✥	
Volume (vph)	0	782	111	40	648	0	68	0	31	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	10	10	12	12	12	12	12	12	12
Total Lost time (s)		5.0			5.0			5.0				
Lane Util. Factor		0.95			0.95			1.00				
Frt		0.98			1.00			0.96				
Flt Protected		1.00			1.00			0.97				
Satd. Flow (prot)		3041			3090			1618				
Flt Permitted		1.00			0.84			0.79				
Satd. Flow (perm)		3041			2600			1329				
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	0	841	119	43	697	0	73	0	33	0	0	0
RTOR Reduction (vph)	0	15	0	0	0	0	0	18	0	0	0	0
Lane Group Flow (vph)	0	945	0	0	740	0	0	88	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	custom			Perm			Perm			Perm		
Protected Phases		4 5 6 11			8			2			2	
Permitted Phases	4 6 11			8			2			2		
Actuated Green, G (s)		65.0			33.0			16.0				
Effective Green, g (s)		58.0			33.0			16.0				
Actuated g/C Ratio		0.64			0.37			0.18				
Clearance Time (s)					5.0			5.0				
Lane Grp Cap (vph)		1960			953			236				
v/s Ratio Prot		c0.31										
v/s Ratio Perm					c0.28			c0.07				
v/c Ratio		0.48			0.78			0.37				
Uniform Delay, d1		8.3			25.2			32.6				
Progression Factor		0.00			1.30			1.00				
Incremental Delay, d2		0.5			6.0			4.5				
Delay (s)		0.5			38.8			37.0				
Level of Service		A			D			D				
Approach Delay (s)		0.5			38.8			37.0			0.0	
Approach LOS		A			D			D			A	

Intersection Summary			
HCM Average Control Delay	18.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	64.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1043: 111th Street & Doty Road

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↑	↱		✥		↰	↑	↱
Volume (vph)	195	599	20	92	486	152	51	4	91	180	9	180
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	10	12	12	12	12	16	12	12	12	12
Total Lost time (s)	3.0	5.0		3.0	5.0	3.0		5.0		3.0	5.0	3.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00		1.00	1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85		0.92		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.98		0.95	1.00	1.00
Satd. Flow (prot)	1550	3194		1660	3320	1485		1782		1660	1748	1485
Flt Permitted	0.39	1.00		0.39	1.00	1.00		0.88		0.46	1.00	1.00
Satd. Flow (perm)	636	3194		681	3320	1485		1596		797	1748	1485
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	210	644	22	99	523	163	55	4	98	194	10	194
RTOR Reduction (vph)	0	2	0	0	0	70	0	87	0	0	0	118
Lane Group Flow (vph)	210	664	0	99	523	93	0	70	0	194	10	76
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	pm+pt			pm+pt		pm+ov	pm+pt			pm+pt		pm+ov
Protected Phases	7	4		3	8	1	5	2		1	6	7
Permitted Phases	4			8		8	2			6		6
Actuated Green, G (s)	56.7	46.4		49.1	41.8	51.6		10.5		23.3	23.3	35.2
Effective Green, g (s)	56.7	46.4		49.1	41.8	51.6		10.5		23.3	23.3	35.2
Actuated g/C Ratio	0.63	0.52		0.55	0.46	0.57		0.12		0.26	0.26	0.39
Clearance Time (s)	3.0	5.0		3.0	5.0	3.0		5.0		3.0	5.0	3.0
Vehicle Extension (s)	4.0	3.0		4.0	3.0	3.0		4.0		3.0	4.0	4.0
Lane Grp Cap (vph)	522	1647		451	1542	851		186		300	453	581
v/s Ratio Prot	c0.05	c0.21		0.02	0.16	0.01				c0.07	0.01	0.02
v/s Ratio Perm	0.20			0.10		0.05		0.04		c0.10		0.03
v/c Ratio	0.40	0.40		0.22	0.34	0.11		0.38		0.65	0.02	0.13
Uniform Delay, d1	7.5	13.3		9.9	15.3	8.7		36.7		28.5	24.9	17.6
Progression Factor	2.52	1.99		1.00	1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2	0.6	0.7		0.3	0.6	0.1		1.8		4.7	0.0	0.1
Delay (s)	19.4	27.2		10.2	15.9	8.8		38.5		33.3	24.9	17.7
Level of Service	B	C		B	B	A		D		C	C	B
Approach Delay (s)		25.4			13.7			38.5			25.5	
Approach LOS		C			B			D			C	

Intersection Summary			
HCM Average Control Delay	22.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	54.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
1044: 111th Street & Bishop Ford Freeway EB Ramps

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↑↑					↰		↱
Volume (veh/h)	0	483	387	2	286	0	0	0	0	16	0	444
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	0	519	416	2	308	0	0	0	0	17	0	477
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		498										
pX, platoon unblocked												
vC, conflicting volume	308			519			677	831	260	572	831	154
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	308			519			677	831	260	572	831	154
tC, single (s)	4.2			4.2			7.6	6.6	7.0	7.6	6.6	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	100	96	100	45
cM capacity (veh/h)	1243			1036			150	301	736	401	301	862

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1	SB 2
Volume Total	260	260	416	105	205	17	477
Volume Left	0	0	0	2	0	17	0
Volume Right	0	0	416	0	0	0	477
cSH	1700	1700	1700	1036	1700	401	862
Volume to Capacity	0.15	0.15	0.24	0.00	0.12	0.04	0.55
Queue Length 95th (ft)	0	0	0	0	0	3	87
Control Delay (s)	0.0	0.0	0.0	0.2	0.0	14.4	14.2
Lane LOS				A		B	B
Approach Delay (s)	0.0			0.1		14.2	
Approach LOS						B	

Intersection Summary			
Average Delay	4.1		
Intersection Capacity Utilization	44.1%	ICU Level of Service	A
Analysis Period (min)	15		

	↗	↘	↖	↑	↓	↙
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰↰		↰			
Sign Control	Stop			Stop	Stop	
Volume (vph)	499	0	288	0	0	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	537	0	310	0	0	0

Direction, Lane #	EB 1	EB 2	NB 1
Volume Total (vph)	268	268	310
Volume Left (vph)	268	268	310
Volume Right (vph)	0	0	0
Hadj (s)	0.55	0.55	0.25
Departure Headway (s)	6.0	6.0	5.4
Degree Utilization, x	0.44	0.44	0.47
Capacity (veh/h)	587	590	639
Control Delay (s)	12.4	12.4	13.2
Approach Delay (s)	12.4		13.2
Approach LOS	B		B

Intersection Summary			
Delay	12.7		
HCM Level of Service	B		
Intersection Capacity Utilization	38.5%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Signalized Intersection Capacity Analysis
1046: 115th Street & Marshield Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱		↰	↑↑						↰↱	
Volume (vph)	0	472	64	175	451	0	0	0	0	101	21	58
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	12	12	12	12	12
Total Lost time (s)		3.0		4.0	4.0						5.0	
Lane Util. Factor		0.95		1.00	0.95						0.95	
Frt		0.98		1.00	1.00						0.95	
Flt Protected		1.00		0.95	1.00						0.97	
Satd. Flow (prot)		3152		1605	3210						3075	
Flt Permitted		1.00		0.36	1.00						0.97	
Satd. Flow (perm)		3152		604	3210						3075	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	0	508	69	188	485	0	0	0	0	109	23	62
RTOR Reduction (vph)	0	13	0	0	0	0	0	0	0	0	42	0
Lane Group Flow (vph)	0	564	0	188	485	0	0	0	0	0	152	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type				pm+pt						Split		
Protected Phases		4		3	8					6	6	
Permitted Phases				8								
Actuated Green, G (s)		36.0		49.0	49.0						27.0	
Effective Green, g (s)		36.0		49.0	49.0						27.0	
Actuated g/C Ratio		0.42		0.58	0.58						0.32	
Clearance Time (s)		3.0		4.0	4.0						5.0	
Lane Grp Cap (vph)		1335		466	1850						977	
v/s Ratio Prot		c0.18		c0.05	0.15						c0.05	
v/s Ratio Perm				0.19								
v/c Ratio		0.42		0.40	0.26						0.16	
Uniform Delay, d1		17.2		14.6	9.0						20.8	
Progression Factor		1.00		0.36	0.23						1.00	
Incremental Delay, d2		1.0		2.3	0.3						0.3	
Delay (s)		18.2		7.6	2.4						21.2	
Level of Service		B		A	A						C	
Approach Delay (s)		18.2			3.8			0.0			21.2	
Approach LOS		B			A			A			C	

Intersection Summary			
HCM Average Control Delay	11.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	42.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1047: 115th Street & Ashland Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑			↑↱			↰↑↱				
Volume (vph)	95	478	0	0	557	106	69	90	58	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	11	11	12	12	12	12	12	12
Total Lost time (s)	5.0	5.0			3.0			5.0				
Lane Util. Factor	1.00	0.95			0.95			0.91				
Frt	1.00	1.00			0.98			0.96				
Flt Protected	0.95	1.00			1.00			0.98				
Satd. Flow (prot)	1660	3320			3133			4509				
Flt Permitted	0.28	1.00			1.00			0.98				
Satd. Flow (perm)	487	3320			3133			4509				
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	102	514	0	0	599	114	74	97	62	0	0	0
RTOR Reduction (vph)	0	0	0	0	18	0	0	42	0	0	0	0
Lane Group Flow (vph)	102	514	0	0	695	0	0	191	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	pm+pt						Split					
Protected Phases	7	4			8		2	2				
Permitted Phases	4											
Actuated Green, G (s)	48.0	48.0			35.0			27.0				
Effective Green, g (s)	48.0	48.0			35.0			27.0				
Actuated g/C Ratio	0.56	0.56			0.41			0.32				
Clearance Time (s)	5.0	5.0			3.0			5.0				
Lane Grp Cap (vph)	413	1875			1290			1432				
v/s Ratio Prot	0.03	c0.15			c0.22			c0.04				
v/s Ratio Perm	0.11											
v/c Ratio	0.25	0.27			0.54			0.13				
Uniform Delay, d1	15.5	9.5			18.9			20.7				
Progression Factor	0.35	0.32			1.00			1.00				
Incremental Delay, d2	1.3	0.3			1.6			0.2				
Delay (s)	6.8	3.4			20.5			20.9				
Level of Service	A	A			C			C				
Approach Delay (s)		3.9			20.5			20.9			0.0	
Approach LOS		A			C			C			A	

Intersection Summary			
HCM Average Control Delay	14.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	42.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1048: 115th Street & Racine Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↑↱			↰↑↑↱			↰↑↱			↰↑↱	
Volume (vph)	114	342	114	79	366	79	129	78	27	27	78	129
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	10	12	12	15	12	12	15	12
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			1.00			1.00	
Frt		0.97			0.98			0.98			0.93	
Flt Protected		0.99			0.99			0.97			0.99	
Satd. Flow (prot)		2976			3006			1842			1769	
Flt Permitted		0.68			0.74			0.73			0.95	
Satd. Flow (perm)		2050			2242			1387			1691	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	123	368	123	85	394	85	139	84	29	29	84	139
RTOR Reduction (vph)	0	34	0	0	22	0	0	7	0	0	68	0
Lane Group Flow (vph)	0	580	0	0	542	0	0	245	0	0	184	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		23.0			23.0			32.0			32.0	
Effective Green, g (s)		23.0			23.0			32.0			32.0	
Actuated g/C Ratio		0.35			0.35			0.49			0.49	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		725			793			683			832	
v/s Ratio Prot												
v/s Ratio Perm		c0.28			0.24			c0.18			0.11	
v/c Ratio		0.80			0.68			0.36			0.22	
Uniform Delay, d1		18.9			17.9			10.2			9.4	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		9.0			4.7			1.5			0.6	
Delay (s)		27.9			22.6			11.6			10.0	
Level of Service		C			C			B			B	
Approach Delay (s)		27.9			22.6			11.6			10.0	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM Average Control Delay	21.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	77.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1049: 115th Street & Halsted Street

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↑	↱	↰	↑↑	↱
Volume (vph)	106	201	88	159	311	65	96	415	52	76	752	117
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	12	10	16	12	9	10	9	9	10	9
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00	0.97	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.95		1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1559	2980		1573	3683		1508	3069	1333	1518	3099	1336
Flt Permitted	0.45	1.00		0.53	1.00		0.21	1.00	1.00	0.43	1.00	1.00
Satd. Flow (perm)	739	2980		880	3683		330	3069	1333	692	3099	1336
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	112	212	93	167	327	68	101	437	55	80	792	123
RTOR Reduction (vph)	0	58	0	0	21	0	0	0	35	0	0	78
Lane Group Flow (vph)	112	247	0	167	374	0	101	437	20	80	792	45
Confl. Peds. (#/hr)	19		16	16		19	22		25	25		22
Heavy Vehicles (%)	2%	2%	0%	1%	2%	2%	2%	4%	0%	1%	3%	0%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	32.0	27.0		32.0	27.0		38.0	31.0	31.0	38.0	31.0	31.0
Effective Green, g (s)	30.0	28.0		30.0	28.0		36.0	31.0	31.0	36.0	31.0	31.0
Actuated g/C Ratio	0.35	0.33		0.35	0.33		0.42	0.36	0.36	0.42	0.36	0.36
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)	299	982		343	1213		223	1119	486	351	1130	487
v/s Ratio Prot	0.02	0.08		c0.02	0.10		c0.03	0.14		0.02	c0.26	
v/s Ratio Perm	0.11			c0.15			0.16		0.02	0.08		0.03
v/c Ratio	0.37	0.25		0.49	0.31		0.45	0.39	0.04	0.23	0.70	0.09
Uniform Delay, d1	19.4	20.8		20.7	21.3		16.2	20.0	17.4	15.0	23.0	17.7
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.47	1.07	2.37
Incremental Delay, d2	3.6	0.6		4.9	0.7		6.5	1.0	0.2	1.1	2.7	0.3
Delay (s)	23.0	21.5		25.5	21.9		22.7	21.0	17.6	23.1	27.4	42.3
Level of Service	C	C		C	C		C	C	B	C	C	D
Approach Delay (s)		21.9			23.0			21.0			28.9	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	24.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	63.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1050: 115th Street & Wentworth Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑	↱		↰↑	↱		↰↑	↱		↰↑	↱
Volume (vph)	48	295	30	32	375	23	26	77	32	34	117	61
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	16	12	12	16	12
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frpb, ped/bikes		1.00	0.96		1.00	0.97		1.00	0.98		1.00	0.99
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frt		1.00	0.85		1.00	0.85		1.00	0.85		1.00	0.85
Flt Protected		0.99	1.00		1.00	1.00		0.99	1.00		0.99	1.00
Satd. Flow (prot)		1962	1466		1993	1480		2015	1506		2001	1511
Flt Permitted		0.90	1.00		0.96	1.00		0.92	1.00		0.93	1.00
Satd. Flow (perm)		1787	1466		1912	1480		1882	1506		1884	1511
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	51	311	32	34	395	24	27	81	34	36	123	64
RTOR Reduction (vph)	0	0	17	0	0	13	0	0	20	0	0	37
Lane Group Flow (vph)	0	362	15	0	429	11	0	108	14	0	159	27
Confl. Peds. (#/hr)	11		20	20		11	1		4	4		1
Confl. Bikes (#/hr)	1		1	1		1			1	1		
Heavy Vehicles (%)	4%	3%	0%	0%	2%	0%	0%	0%	0%	0%	1%	0%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)		30.0	30.0		30.0	30.0		27.0	27.0		27.0	27.0
Effective Green, g (s)		30.0	30.0		30.0	30.0		27.0	27.0		27.0	27.0
Actuated g/C Ratio		0.46	0.46		0.46	0.46		0.42	0.42		0.42	0.42
Clearance Time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		825	677		882	683		782	626		783	628
v/s Ratio Prot												
v/s Ratio Perm		0.20	0.01		c0.22	0.01		0.06	0.01		c0.08	0.02
v/c Ratio		0.44	0.02		0.49	0.02		0.14	0.02		0.20	0.04
Uniform Delay, d1		11.8	9.5		12.2	9.5		11.8	11.2		12.1	11.3
Progression Factor		1.00	1.00		0.62	0.51		1.26	1.61		0.97	0.84
Incremental Delay, d2		1.7	0.1		1.9	0.0		0.4	0.1		0.6	0.1
Delay (s)		13.5	9.6		9.4	4.9		15.2	18.1		12.3	9.6
Level of Service		B	A		A	A		B	B		B	A
Approach Delay (s)		13.2			9.2			15.9			11.6	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM Average Control Delay	11.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	67.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1051: 115th Street & State Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	75	305	20	40	240	30	10	100	20	85	165	50
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	0.98		1.00	0.97		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1550	3070		1550	3048		1550	3020		1550	2990	
Flt Permitted	0.95	1.00		0.54	1.00		0.61	1.00		0.67	1.00	
Satd. Flow (perm)	1550	3070		884	3048		991	3020		1092	2990	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	81	328	22	43	258	32	11	108	22	91	177	54
RTOR Reduction (vph)	0	8	0	0	15	0	0	13	0	0	32	0
Lane Group Flow (vph)	81	342	0	43	275	0	11	117	0	91	199	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Prot			Perm			Perm			Perm		
Protected Phases	7	4			8			2			6	
Permitted Phases				8			2			6		
Actuated Green, G (s)	7.0	32.0		22.0	22.0		27.0	27.0		27.0	27.0	
Effective Green, g (s)	7.0	32.0		22.0	22.0		27.0	27.0		27.0	27.0	
Actuated g/C Ratio	0.11	0.49		0.34	0.34		0.42	0.42		0.42	0.42	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	167	1511		299	1032		412	1254		454	1242	
v/s Ratio Prot	c0.05	0.11			c0.09			0.04			0.07	
v/s Ratio Perm				0.05			0.01			c0.08		
v/c Ratio	0.49	0.23		0.14	0.27		0.03	0.09		0.20	0.16	
Uniform Delay, d1	27.3	9.4		15.0	15.6		11.2	11.6		12.1	11.9	
Progression Factor	0.92	0.50		0.81	0.77		0.98	1.04		1.17	1.18	
Incremental Delay, d2	9.3	0.3		1.0	0.6		0.1	0.1		1.0	0.3	
Delay (s)	34.5	5.0		13.0	12.7		11.1	12.2		15.1	14.3	
Level of Service	C	A		B	B		B	B		B	B	
Approach Delay (s)		10.6			12.7			12.1			14.5	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	12.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	34.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1052: 115th Street & Michigan Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			↰↑↱			↰↑↱	
Volume (vph)	60	250	65	175	285	55	25	245	20	55	270	50
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	12	12	12	12	12	12
Total Lost time (s)	4.0	4.0		3.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frt	1.00	0.97		1.00	0.98			0.99			0.98	
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.99	
Satd. Flow (prot)	1550	3003		1550	3024			3271			3230	
Flt Permitted	0.53	1.00		0.95	1.00			0.91			0.87	
Satd. Flow (perm)	871	3003		1550	3024			2974			2815	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	65	269	70	188	306	59	27	263	22	59	290	54
RTOR Reduction (vph)	0	36	0	0	24	0	0	9	0	0	19	0
Lane Group Flow (vph)	65	303	0	188	341	0	0	303	0	0	384	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Prot			Perm			Perm		
Protected Phases		4		3	8			2			6	
Permitted Phases	4						2			6		
Actuated Green, G (s)	20.0	20.0		6.0	29.0			25.0			25.0	
Effective Green, g (s)	20.0	20.0		6.0	29.0			25.0			25.0	
Actuated g/C Ratio	0.31	0.31		0.09	0.45			0.38			0.38	
Clearance Time (s)	4.0	4.0		3.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	268	924		143	1349			1144			1083	
v/s Ratio Prot		c0.10		c0.12	0.11							
v/s Ratio Perm	0.07							0.10			c0.14	
v/c Ratio	0.24	0.33		1.31	0.25			0.27			0.35	
Uniform Delay, d1	16.8	17.3		29.5	11.2			13.7			14.3	
Progression Factor	0.64	0.59		1.31	1.08			0.79			0.75	
Incremental Delay, d2	2.1	0.9		172.6	0.3			0.6			0.9	
Delay (s)	12.9	11.1		211.2	12.4			11.4			11.6	
Level of Service	B	B		F	B			B			B	
Approach Delay (s)		11.4			80.0			11.4			11.6	
Approach LOS		B			E			B			B	

Intersection Summary			
HCM Average Control Delay	34.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	52.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1053: 115th Street & Indiana Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			↰↑↱				
Volume (vph)	16	293	16	65	522	65	49	101	152	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	12	14	12	10	15	10
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			0.95				
Frt		0.99			0.99			0.92				
Flt Protected		1.00			1.00			0.99				
Satd. Flow (prot)		1616			1601			3249				
Flt Permitted		0.97			0.94			0.99				
Satd. Flow (perm)		1564			1505			3249				
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	17	315	17	70	561	70	53	109	163	0	0	0
RTOR Reduction (vph)	0	3	0	0	5	0	0	125	0	0	0	0
Lane Group Flow (vph)	0	346	0	0	696	0	0	200	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm			Perm					
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Actuated Green, G (s)		41.7			41.7			15.3				
Effective Green, g (s)		41.7			41.7			15.3				
Actuated g/C Ratio		0.64			0.64			0.24				
Clearance Time (s)		4.0			4.0			4.0				
Vehicle Extension (s)		3.0			3.0			8.0				
Lane Grp Cap (vph)		1003			966			765				
v/s Ratio Prot												
v/s Ratio Perm		0.22			c0.46			0.06				
v/c Ratio		0.35			0.72			0.26				
Uniform Delay, d1		5.4			7.8			20.2				
Progression Factor		1.64			1.00			1.00				
Incremental Delay, d2		0.9			4.6			0.8				
Delay (s)		9.7			12.4			21.0				
Level of Service		A			B			C				
Approach Delay (s)		9.7			12.4			21.0			0.0	
Approach LOS		A			B			C			A	

Intersection Summary			
HCM Average Control Delay	13.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	74.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
1054: 115th Street & Martin Luther King Jr Drive

	↗	→	←	↖	↘	↙
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰↑	↑↱		↰	↱
Volume (veh/h)	73	372	503	34	112	149
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	83	423	572	39	127	169
Pedestrians		5	6		17	
Lane Width (ft)		16.0	16.0		10.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		1	1		1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		1319	491			
pX, platoon unblocked	0.85				0.85	0.85
vC, conflicting volume	627				1203	613
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	473				1150	456
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	91				24	67
cM capacity (veh/h)	901				168	508

Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total	506	610	127	169
Volume Left	83	0	127	0
Volume Right	0	39	0	169
cSH	901	1700	168	508
Volume to Capacity	0.09	0.36	0.76	0.33
Queue Length 95th (ft)	8	0	121	36
Control Delay (s)	2.5	0.0	73.7	15.6
Lane LOS	A		F	C
Approach Delay (s)	2.5	0.0	40.5	
Approach LOS			E	

Intersection Summary			
Average Delay	9.4		
Intersection Capacity Utilization	72.7%	ICU Level of Service	C
Analysis Period (min)	15		

HCM Signalized Intersection Capacity Analysis
1055: 115th Street & Cottage Grove Avenue

1/14/2013

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↱			↰	↖↗	
Volume (vph)	645	0	1	530	3	27
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0			4.0	4.0	
Lane Util. Factor	1.00			1.00	1.00	
Frt	1.00			1.00	0.88	
Flt Protected	1.00			1.00	1.00	
Satd. Flow (prot)	1748			1747	1527	
Flt Permitted	1.00			1.00	1.00	
Satd. Flow (perm)	1748			1746	1527	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	694	0	1	570	3	29
RTOR Reduction (vph)	0	0	0	0	24	0
Lane Group Flow (vph)	694	0	0	571	8	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type			Perm			
Protected Phases	1 2 4			4	3	
Permitted Phases			4			
Actuated Green, G (s)	63.0			31.0	14.0	
Effective Green, g (s)	59.0			31.0	14.0	
Actuated g/C Ratio	0.69			0.36	0.16	
Clearance Time (s)				4.0	4.0	
Lane Grp Cap (vph)	1213			637	252	
v/s Ratio Prot	c0.40				c0.01	
v/s Ratio Perm				c0.33		
v/c Ratio	0.57			0.90	0.03	
Uniform Delay, d1	6.6			25.5	29.8	
Progression Factor	0.08			1.00	1.00	
Incremental Delay, d2	1.3			17.7	0.2	
Delay (s)	1.8			43.2	30.0	
Level of Service	A			D	C	
Approach Delay (s)	1.8			43.2	30.0	
Approach LOS	A			D	C	

Intersection Summary			
HCM Average Control Delay	20.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	45.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
1056: 115th Street & Bishop Ford Fwy

1/14/2013

	↰	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱			↰						↰	↱
Volume (veh/h)	0	203	542	25	311	0	0	0	0	15	6	220
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	0	216	577	27	331	0	0	0	0	16	6	234
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	331			216			891	888	396	492	600	331
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	331			216			891	888	396	492	600	331
tC, single (s)	4.1			4.2			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			98			100	100	100	97	98	65
cM capacity (veh/h)	1240			1337			151	279	609	457	409	665

Direction, Lane #	EB 1	EB 2	WB 1	SB 1	SB 2
Volume Total	144	649	357	22	234
Volume Left	0	0	27	16	0
Volume Right	0	577	0	0	234
cSH	1700	1700	1337	442	665
Volume to Capacity	0.08	0.38	0.02	0.05	0.35
Queue Length 95th (ft)	0	0	2	4	40
Control Delay (s)	0.0	0.0	0.8	13.6	13.3
Lane LOS			A	B	B
Approach Delay (s)	0.0		0.8	13.3	
Approach LOS				B	

Intersection Summary			
Average Delay	2.6		
Intersection Capacity Utilization	49.1%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
1057: 115th Street &

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰↰		↰			
Sign Control	Stop			Stop	Stop	
Volume (vph)	218	0	336	0	0	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	234	0	361	0	0	0

Direction, Lane #	EB 1	EB 2	NB 1
Volume Total (vph)	117	117	361
Volume Left (vph)	117	117	361
Volume Right (vph)	0	0	0
Hadj (s)	0.55	0.55	0.25
Departure Headway (s)	6.0	6.0	4.8
Degree Utilization, x	0.20	0.20	0.48
Capacity (veh/h)	570	572	729
Control Delay (s)	9.2	9.2	12.2
Approach Delay (s)	9.2		12.2
Approach LOS	A		B

Intersection Summary			
Delay	11.1		
HCM Level of Service	B		
Intersection Capacity Utilization	32.9%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Signalized Intersection Capacity Analysis
1058: 119th Street & Marshield Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↰↑					↰	↰↑↱	↱
Volume (vph)	0	456	311	217	512	0	0	0	0	286	269	372
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	12	13	12	12	12	12	10	10	11
Total Lost time (s)		6.0	6.0		6.0					6.0	6.0	6.0
Lane Util. Factor		0.95	1.00		0.95					0.86	0.81	0.86
Frpb, ped/bikes		1.00	0.97		1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00					1.00	1.00	1.00
Frt		1.00	0.85		1.00					1.00	0.95	0.85
Flt Protected		1.00	1.00		0.99					0.95	0.99	1.00
Satd. Flow (prot)		3179	1215		3424					1359	3807	1133
Flt Permitted		1.00	1.00		0.99					0.95	0.99	1.00
Satd. Flow (perm)		3179	1215		3424					1359	3807	1133
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	0	485	331	231	545	0	0	0	0	304	286	396
RTOR Reduction (vph)	0	0	228	0	0	0	0	0	0	0	53	114
Lane Group Flow (vph)	0	485	103	0	776	0	0	0	0	167	568	84
Confl. Peds. (#/hr)	4		6	6		4						
Heavy Vehicles (%)	0%	4%	6%	1%	2%	0%	0%	0%	0%	1%	1%	1%
Parking (#/hr)			0									0
Turn Type			Perm	Split						Split		custom
Protected Phases		2		10 12 14	10 12 14					4	4	
Permitted Phases			2									4 2
Actuated Green, G (s)		38.9	38.9		68.3					23.0	23.0	67.9
Effective Green, g (s)		38.9	38.9		68.3					23.0	23.0	67.9
Actuated g/C Ratio		0.24	0.24		0.43					0.14	0.14	0.42
Clearance Time (s)		6.0	6.0							6.0	6.0	
Vehicle Extension (s)		3.0	3.0							3.0	3.0	
Lane Grp Cap (vph)		773	295		1462					195	547	481
v/s Ratio Prot		c0.15			c0.23					0.12	c0.15	
v/s Ratio Perm			0.08									0.07
v/c Ratio		0.63	0.35		0.53					0.86	1.04	0.17
Uniform Delay, d1		54.1	50.1		34.0					66.9	68.5	28.6
Progression Factor		1.00	1.00		0.02					1.00	1.00	1.00
Incremental Delay, d2		3.8	3.2		0.1					28.9	48.7	0.2
Delay (s)		57.9	53.3		0.7					95.8	117.2	28.8
Level of Service		E	D		A					F	F	C
Approach Delay (s)		56.1			0.7			0.0			95.9	
Approach LOS		E			A			A			F	

Intersection Summary			
HCM Average Control Delay	54.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	31.8
Intersection Capacity Utilization	68.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑			↑↑	↱	↰	↰↑↱				
Volume (vph)	282	460	0	0	484	127	245	170	154	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	13	12	12	11	12	13	13	14	12	12	12
Total Lost time (s)	6.0	6.0			6.0	6.0	6.0	6.0				
Lane Util. Factor	1.00	0.95			0.95	1.00	0.91	0.91				
Frt	1.00	1.00			1.00	0.85	1.00	0.94				
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.99				
Satd. Flow (prot)	1605	3431			3210	1485	1561	3063				
Flt Permitted	0.95	1.00			1.00	1.00	0.95	0.99				
Satd. Flow (perm)	1605	3431			3210	1485	1561	3063				
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	303	495	0	0	520	137	263	183	166	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	92	0	66	0	0	0	0
Lane Group Flow (vph)	303	495	0	0	520	45	208	338	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Split					Perm	Split					
Protected Phases	2 4 8	2 4 8			10		12	12				
Permitted Phases						10						
Actuated Green, G (s)	83.7	83.7			35.2	35.2	14.1	14.1				
Effective Green, g (s)	83.7	83.7			35.2	35.2	14.1	14.1				
Actuated g/C Ratio	0.52	0.52			0.22	0.22	0.09	0.09				
Clearance Time (s)					6.0	6.0	6.0	6.0				
Vehicle Extension (s)					3.0	3.0	3.0	3.0				
Lane Grp Cap (vph)	840	1795			706	327	138	270				
v/s Ratio Prot	c0.19	0.14			c0.16		c0.13	0.11				
v/s Ratio Perm						0.03						
v/c Ratio	0.36	0.28			0.74	0.14	1.51	1.25				
Uniform Delay, d1	22.4	21.3			58.1	50.2	73.0	73.0				
Progression Factor	0.02	0.03			1.00	1.00	1.00	1.00				
Incremental Delay, d2	0.2	0.1			4.0	0.2	262.0	140.6				
Delay (s)	0.7	0.6			62.1	50.4	335.0	213.6				
Level of Service	A	A			E	D	F	F				
Approach Delay (s)		0.6			59.7			254.8			0.0	
Approach LOS		A			E			F			A	

Intersection Summary			
HCM Average Control Delay	94.7	HCM Level of Service	F
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	29.0
Intersection Capacity Utilization	57.4%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑↱		↰	↑↑↱		↰	↑↑↱	
Volume (vph)	130	239	126	81	190	61	92	443	60	96	803	120
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	14	12	10	10	12	9	10	12
Total Lost time (s)	4.0	4.0	5.0	4.0	5.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	0.99	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.96		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1571	1600	1373	1592	1778		1578	3015		1536	3001	
Flt Permitted	0.46	1.00	1.00	0.52	1.00		0.15	1.00		0.38	1.00	
Satd. Flow (perm)	758	1600	1373	875	1778		246	3015		618	3001	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	133	244	129	83	194	62	94	452	61	98	819	122
RTOR Reduction (vph)	0	0	87	0	12	0	0	12	0	0	13	0
Lane Group Flow (vph)	133	244	42	83	244	0	94	501	0	98	928	0
Confl. Peds. (#/hr)	28		8	8		28	59		11	11		59
Confl. Bikes (#/hr)	3					3	1		2	2		1
Heavy Vehicles (%)	1%	5%	2%	0%	4%	0%	1%	4%	0%	0%	3%	3%
Turn Type	pm+pt		Perm	pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)	36.3	29.3	29.3	33.3	27.8		39.6	34.1		39.6	34.1	
Effective Green, g (s)	34.3	30.3	29.3	31.3	27.8		37.6	34.1		37.6	34.1	
Actuated g/C Ratio	0.38	0.34	0.33	0.35	0.31		0.42	0.38		0.42	0.38	
Clearance Time (s)	3.0	5.0	5.0	3.0	5.0		3.0	4.0		3.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	345	542	450	342	553		171	1150		306	1145	
v/s Ratio Prot	c0.03	c0.15		0.01	0.14		c0.03	0.17		0.02	c0.31	
v/s Ratio Perm	0.12		0.03	0.07			0.20			0.12		
v/c Ratio	0.39	0.45	0.09	0.24	0.44		0.55	0.44		0.32	0.81	
Uniform Delay, d1	18.8	23.1	20.8	20.0	24.6		17.9	20.5		16.2	24.8	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.7	2.7	0.4	0.4	2.5		3.6	1.2		0.6	6.3	
Delay (s)	19.6	25.7	21.3	20.4	27.1		21.5	21.7		16.9	31.0	
Level of Service	B	C	C	C	C		C	C		B	C	
Approach Delay (s)		23.0			25.5			21.7			29.7	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	25.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	89.4	Sum of lost time (s)	12.0
Intersection Capacity Utilization	70.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑	↱		↰↑	↱		↰↑↱			↰↑↱	
Volume (vph)	35	275	54	11	251	19	32	51	17	18	76	58
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	10	10	10	12	15	12	12	16	12
Total Lost time (s)		3.0	3.0		3.0	3.0		3.0			3.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00			1.00	
Frpb, ped/bikes		1.00	0.96		1.00	0.97		1.00			0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00			1.00	
Frt		1.00	0.85		1.00	0.85		0.98			0.95	
Flt Protected		0.99	1.00		1.00	1.00		0.98			0.99	
Satd. Flow (prot)		1968	1467		1629	1381		1892			1871	
Flt Permitted		0.95	1.00		0.99	1.00		0.90			0.97	
Satd. Flow (perm)		1877	1467		1609	1381		1730			1827	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	38	302	59	12	276	21	35	56	19	20	84	64
RTOR Reduction (vph)	0	0	30	0	0	11	0	11	0	0	34	0
Lane Group Flow (vph)	0	340	29	0	288	10	0	99	0	0	134	0
Confl. Peds. (#/hr)	12		20	20		12	8		2	2		8
Confl. Bikes (#/hr)	1		2	2		1			1	1		
Heavy Vehicles (%)	3%	3%	0%	0%	3%	0%	0%	0%	0%	0%	1%	3%
Turn Type	Perm		Perm	Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)		32.0	32.0		32.0	32.0		27.0			27.0	
Effective Green, g (s)		32.0	32.0		32.0	32.0		27.0			27.0	
Actuated g/C Ratio		0.49	0.49		0.49	0.49		0.42			0.42	
Clearance Time (s)		3.0	3.0		3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)		924	722		792	680		719			759	
v/s Ratio Prot												
v/s Ratio Perm		c0.18	0.02		0.18	0.01		0.06			c0.07	
v/c Ratio		0.37	0.04		0.36	0.02		0.14			0.18	
Uniform Delay, d1		10.2	8.5		10.2	8.4		11.8			12.0	
Progression Factor		1.00	1.00		1.98	2.85		1.00			1.96	
Incremental Delay, d2		1.1	0.1		1.3	0.0		0.4			0.5	
Delay (s)		11.4	8.7		21.4	24.1		12.2			23.9	
Level of Service		B	A		C	C		B			C	
Approach Delay (s)		11.0			21.6			12.2			23.9	
Approach LOS		B			C			B			C	

Intersection Summary			
HCM Average Control Delay	16.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	55.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1062: 119th Street & State Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱		↰	↱		✥	
Volume (vph)	53	172	37	10	180	9	28	88	15	12	142	54
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frpb, ped/bikes		1.00	0.94		1.00	0.97		1.00	0.97		0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		0.96	
Flt Protected		0.99	1.00		1.00	1.00		0.99	1.00		1.00	
Satd. Flow (prot)		1747	1443		1728	1487		1713	1489		1712	
Flt Permitted		0.89	1.00		0.98	1.00		0.91	1.00		0.99	
Satd. Flow (perm)		1571	1443		1702	1487		1581	1489		1694	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	55	179	39	10	188	9	29	92	16	12	148	56
RTOR Reduction (vph)	0	0	25	0	0	6	0	0	8	0	19	0
Lane Group Flow (vph)	0	234	14	0	198	3	0	121	8	0	197	0
Confl. Peds. (#/hr)	19		25	25		19	3		6	6		3
Confl. Bikes (#/hr)	1		2	2		1			1	1		
Heavy Vehicles (%)	0%	2%	0%	0%	4%	0%	0%	5%	0%	0%	0%	2%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		23.0	23.0		23.0	23.0		32.0	32.0		32.0	
Effective Green, g (s)		23.0	23.0		23.0	23.0		32.0	32.0		32.0	
Actuated g/C Ratio		0.35	0.35		0.35	0.35		0.49	0.49		0.49	
Clearance Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	
Lane Grp Cap (vph)		556	511		602	526		778	733		834	
v/s Ratio Prot												
v/s Ratio Perm		c0.15	0.01		0.12	0.00		0.08	0.01		c0.12	
v/c Ratio		0.42	0.03		0.33	0.01		0.16	0.01		0.24	
Uniform Delay, d1		15.9	13.7		15.4	13.6		9.1	8.4		9.5	
Progression Factor		1.95	3.44		0.97	0.99		0.21	0.26		1.08	
Incremental Delay, d2		2.2	0.1		1.4	0.0		0.3	0.0		0.7	
Delay (s)		33.3	47.3		16.3	13.5		2.3	2.2		10.9	
Level of Service		C	D		B	B		A	A		B	
Approach Delay (s)		35.3			16.2			2.3			10.9	
Approach LOS		D			B			A			B	

Intersection Summary			
HCM Average Control Delay	18.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	58.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		✣			✣			↰	↱
Volume (vph)	147	35	76	8	14	9	37	219	8	17	379	161
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	14	12	12	16	12	12	16	12
Total Lost time (s)		3.0	3.0		3.0			3.0			3.0	3.0
Lane Util. Factor		1.00	1.00		1.00			1.00			1.00	1.00
Frpb, ped/bikes		1.00	0.95		0.98			1.00			1.00	0.94
Flpb, ped/bikes		0.98	1.00		0.99			1.00			1.00	1.00
Frt		1.00	0.85		0.96			1.00			1.00	0.85
Flt Protected		0.96	1.00		0.99			0.99			1.00	1.00
Satd. Flow (prot)		1871	1440		1776			1992			1976	1382
Flt Permitted		0.78	1.00		0.94			0.92			0.98	1.00
Satd. Flow (perm)		1509	1440		1693			1845			1950	1382
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	155	37	80	8	15	9	39	231	8	18	399	169
RTOR Reduction (vph)	0	0	47	0	7	0	0	2	0	0	0	86
Lane Group Flow (vph)	0	192	33	0	25	0	0	276	0	0	417	83
Confl. Peds. (#/hr)	37		53	53		37	39		54	54		39
Confl. Bikes (#/hr)							2					2
Heavy Vehicles (%)	4%	0%	1%	0%	0%	0%	0%	1%	0%	0%	3%	4%
Turn Type	pm+pt		Perm	Perm			Perm			Perm		Perm
Protected Phases	7	4			8			2			6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)		27.0	27.0		17.0			32.0			32.0	32.0
Effective Green, g (s)		27.0	27.0		17.0			32.0			32.0	32.0
Actuated g/C Ratio		0.42	0.42		0.26			0.49			0.49	0.49
Clearance Time (s)		3.0	3.0		3.0			3.0			3.0	3.0
Lane Grp Cap (vph)		671	598		443			908			960	680
v/s Ratio Prot		c0.04										
v/s Ratio Perm		0.08	0.02		0.01			0.15			c0.21	0.06
v/c Ratio		0.29	0.06		0.06			0.30			0.43	0.12
Uniform Delay, d1		12.6	11.4		18.0			9.9			10.7	8.9
Progression Factor		0.57	0.58		1.00			0.62			0.53	0.27
Incremental Delay, d2		1.0	0.2		0.2			0.8			1.1	0.3
Delay (s)		8.2	6.8		18.2			6.9			6.7	2.7
Level of Service		A	A		B			A			A	A
Approach Delay (s)		7.8			18.2			6.9			5.6	
Approach LOS		A			B			A			A	

Intersection Summary			
HCM Average Control Delay	6.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	64.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1064: 127th Street & S Paulina St

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↱		↰	↑↑					↰	↰↑↱	↱
Volume (vph)	0	866	289	292	842	0	0	0	0	513	284	334
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	12	11	8	8	8	11	12	14
Total Lost time (s)		6.0		4.5	6.0					6.0	6.0	6.0
Lane Util. Factor		0.91		1.00	0.95					0.91	0.86	0.91
Frpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Frt		0.96		1.00	1.00					1.00	0.98	0.85
Flt Protected		1.00		0.95	1.00					0.95	0.98	1.00
Satd. Flow (prot)		4570		1620	3320					1489	2913	1442
Flt Permitted		1.00		0.15	1.00					0.95	0.98	1.00
Satd. Flow (perm)		4570		255	3320					1489	2913	1442
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	884	295	298	859	0	0	0	0	523	290	341
RTOR Reduction (vph)	0	42	0	0	0	0	0	0	0	0	9	135
Lane Group Flow (vph)	0	1137	0	298	859	0	0	0	0	298	584	128
Confl. Peds. (#/hr)	15		11	11		15						
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	0%	3%	3%	2%	3%	0%	0%	0%	0%	1%	3%	3%
Turn Type				pm+pt						Perm		Perm
Protected Phases		2		1	6						4	
Permitted Phases				6						4		4
Actuated Green, G (s)		50.4		75.2	75.2					27.8	27.8	27.8
Effective Green, g (s)		50.4		75.2	75.2					27.8	27.8	27.8
Actuated g/C Ratio		0.44		0.65	0.65					0.24	0.24	0.24
Clearance Time (s)		6.0		4.5	6.0					6.0	6.0	6.0
Vehicle Extension (s)		7.0		3.5	7.0					3.5	3.5	3.5
Lane Grp Cap (vph)		2003		408	2171					360	704	349
v/s Ratio Prot		0.25		c0.13	0.26							
v/s Ratio Perm				c0.35						0.20	0.20	0.09
v/c Ratio		0.57		0.73	0.40					0.83	0.83	0.37
Uniform Delay, d1		24.2		17.7	9.3					41.3	41.4	36.3
Progression Factor		1.00		1.32	1.20					1.00	1.00	1.00
Incremental Delay, d2		1.2		5.6	0.4					14.8	8.2	0.8
Delay (s)		25.3		28.9	11.6					56.1	49.6	37.1
Level of Service		C		C	B					E	D	D
Approach Delay (s)		25.3			16.1			0.0			48.4	
Approach LOS		C			B			A			D	

Intersection Summary			
HCM Average Control Delay	29.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	10.5
Intersection Capacity Utilization	92.8%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1065: 127th Street & Marshfield Ave

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↑			↑↑	↱		↰↑↱				
Volume (vph)	341	1038	0	0	811	261	323	270	237	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	12	12	12	11	12	12	12	12	12	12	12
Total Lost time (s)	6.0	6.0			6.0	6.0		6.0				
Lane Util. Factor	0.97	0.95			0.95	1.00		0.91				
Frpb, ped/bikes	1.00	1.00			1.00	0.98		1.00				
Flpb, ped/bikes	1.00	1.00			1.00	1.00		1.00				
Frt	1.00	1.00			1.00	0.85		0.96				
Flt Protected	0.95	1.00			1.00	1.00		0.98				
Satd. Flow (prot)	3143	3353			3241	1490		4525				
Flt Permitted	0.23	1.00			1.00	1.00		0.98				
Satd. Flow (perm)	755	3353			3241	1490		4525				
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	359	1093	0	0	854	275	340	284	249	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	112	0	63	0	0	0	0
Lane Group Flow (vph)	359	1093	0	0	854	163	0	810	0	0	0	0
Confl. Peds. (#/hr)	7		5	5		7						
Confl. Bikes (#/hr)	1		1	1		1						
Heavy Vehicles (%)	2%	2%	0%	0%	2%	1%	2%	1%	3%	0%	0%	0%
Turn Type	pm+pt					Perm	Perm					
Protected Phases	5	2			6			8				
Permitted Phases	2					6	8					
Actuated Green, G (s)	73.9	73.9			56.5	56.5		29.1				
Effective Green, g (s)	73.9	73.9			56.5	56.5		29.1				
Actuated g/C Ratio	0.64	0.64			0.49	0.49		0.25				
Clearance Time (s)	6.0	6.0			6.0	6.0		6.0				
Vehicle Extension (s)	3.5	7.0			7.0	7.0		5.0				
Lane Grp Cap (vph)	722	2155			1592	732		1145				
v/s Ratio Prot	0.05	c0.33			c0.26							
v/s Ratio Perm	0.27					0.11		0.18				
v/c Ratio	0.50	0.51			0.54	0.22		0.71				
Uniform Delay, d1	10.7	10.9			20.2	16.7		39.1				
Progression Factor	0.30	0.32			1.02	1.21		1.00				
Incremental Delay, d2	0.5	0.7			1.1	0.6		2.5				
Delay (s)	3.7	4.1			21.8	20.8		41.6				
Level of Service	A	A			C	C		D				
Approach Delay (s)		4.0			21.5			41.6			0.0	
Approach LOS		A			C			D			A	

Intersection Summary			
HCM Average Control Delay	19.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	92.8%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1066: 127th Street & Ashland Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	122	571	368	94	564	48	227	179	66	74	162	121
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	12	11	12	12	10	10	13	10	10	10
Total Lost time (s)	3.5	6.0	3.5	3.5	6.0		3.5	6.0		3.5	6.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		0.99	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.96		1.00	0.94	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1564	3273	1313	1600	3279		1578	3002		1540	2940	
Flt Permitted	0.21	1.00	1.00	0.42	1.00		0.39	1.00		0.59	1.00	
Satd. Flow (perm)	344	3273	1313	711	3279		648	3002		958	2940	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	130	607	391	100	600	51	241	190	70	79	172	129
RTOR Reduction (vph)	0	0	157	0	6	0	0	38	0	0	108	0
Lane Group Flow (vph)	130	607	234	100	645	0	241	222	0	79	193	0
Confl. Peds. (#/hr)	11		23	23		11	8		12	12		8
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	2%	1%	3%	3%	3%	0%	1%	1%	2%	3%	0%	1%
Parking (#/hr)			0									
Turn Type	pm+pt		pm+ov	pm+pt			pm+pt			pm+pt		
Protected Phases	5	2	3	1	6		3	8		7	4	
Permitted Phases	2		2	6			8			4		
Actuated Green, G (s)	64.7	52.4	68.9	40.6	31.8		38.3	26.8		26.3	18.3	
Effective Green, g (s)	64.7	52.4	68.9	40.6	31.8		38.3	26.8		26.3	18.3	
Actuated g/C Ratio	0.56	0.46	0.60	0.35	0.28		0.33	0.23		0.23	0.16	
Clearance Time (s)	3.5	6.0	3.5	3.5	6.0		3.5	6.0		3.5	6.0	
Vehicle Extension (s)	3.0	7.0	3.0	3.0	7.0		3.0	7.0		3.0	7.0	
Lane Grp Cap (vph)	505	1491	787	319	907		349	700		260	468	
v/s Ratio Prot	0.07	c0.19	0.04	c0.02	c0.20		c0.10	0.07		0.02	0.07	
v/s Ratio Perm	0.08		0.14	0.09			c0.13			0.05		
v/c Ratio	0.26	0.41	0.30	0.31	0.71		0.69	0.32		0.30	0.41	
Uniform Delay, d1	13.6	20.9	11.2	25.7	37.5		30.5	36.5		36.1	43.5	
Progression Factor	0.68	0.86	4.05	1.00	1.00		0.81	0.88		1.00	1.00	
Incremental Delay, d2	1.1	0.7	0.2	0.6	4.7		5.6	0.9		0.7	2.1	
Delay (s)	10.3	18.7	45.8	26.2	42.2		30.4	33.0		36.7	45.6	
Level of Service	B	B	D	C	D		C	C		D	D	
Approach Delay (s)		27.1			40.1			31.8			43.7	
Approach LOS		C			D			C			D	

Intersection Summary			
HCM Average Control Delay	33.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	19.0
Intersection Capacity Utilization	67.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1067: Vermont Street & Ashland Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	46	193	367	56	164	87	362	340	78	206	408	56
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	11	12	11	12	12	11	13	12	10	11	12
Total Lost time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.90		1.00	0.95		1.00	0.97		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1704	2894		1653	3183		1620	3407		1580	3183	
Flt Permitted	0.58	1.00		0.28	1.00		0.30	1.00		0.49	1.00	
Satd. Flow (perm)	1034	2894		485	3183		512	3407		810	3183	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	51	212	403	62	180	96	398	374	86	226	448	62
RTOR Reduction (vph)	0	269	0	0	58	0	0	17	0	0	9	0
Lane Group Flow (vph)	51	346	0	62	218	0	398	443	0	226	501	0
Confl. Peds. (#/hr)	12		3	3		12	5					5
Heavy Vehicles (%)	0%	2%	2%	0%	1%	1%	2%	1%	0%	1%	2%	0%
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	42.2	35.4		43.4	36.0		56.2	44.2		39.7	31.7	
Effective Green, g (s)	42.2	35.4		43.4	36.0		56.2	44.2		39.7	31.7	
Actuated g/C Ratio	0.37	0.31		0.38	0.31		0.49	0.38		0.35	0.28	
Clearance Time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	3.5	7.0		3.5	7.0		3.5	7.0		3.5	7.0	
Lane Grp Cap (vph)	419	891		258	996		448	1309		333	877	
v/s Ratio Prot	0.01	c0.12		c0.02	0.07		c0.16	0.13		0.05	0.16	
v/s Ratio Perm	0.04			0.08			c0.28			0.19		
v/c Ratio	0.12	0.39		0.24	0.22		0.89	0.34		0.68	0.57	
Uniform Delay, d1	23.8	31.3		23.8	29.1		21.3	25.1		29.5	35.8	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	0.98	
Incremental Delay, d2	0.2	1.3		0.6	0.5		19.2	0.7		5.4	2.6	
Delay (s)	23.9	32.6		24.4	29.6		40.5	25.8		34.9	37.8	
Level of Service	C	C		C	C		D	C		C	D	
Approach Delay (s)		31.9			28.7			32.6			36.9	
Approach LOS		C			C			C			D	

Intersection Summary			
HCM Average Control Delay	33.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	73.4%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1068: 127th Street & Halsted Street

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	86	491	115	10	376	66	94	259	9	153	469	141
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	10	12	9	11	12	9	9	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.97			0.98		1.00	0.99		1.00	0.97	
Flt Protected		0.99			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3029			3034		1451	3225		1522	2871	
Flt Permitted		0.74			0.93		0.31	1.00		0.58	1.00	
Satd. Flow (perm)		2268			2838		468	3225		922	2871	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	92	528	124	11	404	71	101	278	10	165	504	152
RTOR Reduction (vph)	0	26	0	0	21	0	0	4	0	0	44	0
Lane Group Flow (vph)	0	718	0	0	465	0	101	284	0	165	612	0
Confl. Peds. (#/hr)	4		2	2		4	8		4	4		8
Confl. Bikes (#/hr)							2					2
Heavy Vehicles (%)	1%	2%	2%	0%	2%	6%	6%	2%	0%	1%	3%	3%
Turn Type	pm+pt			Perm			pm+pt			pm+pt		
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		25.0			17.0		28.0	24.0		28.0	24.0	
Effective Green, g (s)		25.0			17.0		28.0	24.0		28.0	24.0	
Actuated g/C Ratio		0.38			0.26		0.43	0.37		0.43	0.37	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		919			742		262	1191		434	1060	
v/s Ratio Prot		c0.05					c0.02	0.09		0.02	c0.21	
v/s Ratio Perm		c0.25			0.16		0.14			0.14		
v/c Ratio		0.78			0.63		0.39	0.24		0.38	0.58	
Uniform Delay, d1		17.6			21.2		11.6	14.2		11.8	16.4	
Progression Factor		1.00			1.52		0.71	0.61		1.00	1.00	
Incremental Delay, d2		6.6			1.4		4.1	0.5		2.5	2.3	
Delay (s)		24.2			33.7		12.4	9.1		14.3	18.7	
Level of Service		C			C		B	A		B	B	
Approach Delay (s)		24.2			33.7			9.9			17.9	
Approach LOS		C			C			A			B	

Intersection Summary			
HCM Average Control Delay	21.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	71.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1069: Vermont Street & Halsted Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱		↰	↑↱		↰	↑↱	
Volume (vph)	67	198	136	84	129	22	64	409	71	27	537	54
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	12	12	12	12	12
Total Lost time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.94		1.00	0.98		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1707	1885		1599	1991		1676	3221		1435	3273	
Flt Permitted	0.65	1.00		0.42	1.00		0.37	1.00		0.44	1.00	
Satd. Flow (perm)	1174	1885		712	1991		652	3221		668	3273	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	73	215	148	91	140	24	70	445	77	29	584	59
RTOR Reduction (vph)	0	38	0	0	9	0	0	21	0	0	12	0
Lane Group Flow (vph)	73	325	0	91	155	0	70	501	0	29	631	0
Confl. Peds. (#/hr)	3		20	20		3	2		3	3		2
Confl. Bikes (#/hr)			1	1			2		2	2		2
Heavy Vehicles (%)	0%	0%	1%	6%	0%	0%	2%	3%	6%	19%	3%	2%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	24.0	24.0		24.0	24.0		31.0	31.0		31.0	31.0	
Effective Green, g (s)	24.0	24.0		24.0	24.0		31.0	31.0		31.0	31.0	
Actuated g/C Ratio	0.37	0.37		0.37	0.37		0.48	0.48		0.48	0.48	
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)	433	696		263	735		311	1536		319	1561	
v/s Ratio Prot		c0.17			0.08			0.16			c0.19	
v/s Ratio Perm	0.06			0.13			0.11			0.04		
v/c Ratio	0.17	0.47		0.35	0.21		0.23	0.33		0.09	0.40	
Uniform Delay, d1	13.8	15.6		14.8	14.0		10.0	10.5		9.3	11.0	
Progression Factor	1.00	1.00		1.35	1.37		1.00	1.00		0.86	0.75	
Incremental Delay, d2	0.8	2.2		1.9	0.3		1.7	0.6		0.5	0.6	
Delay (s)	14.6	17.9		21.9	19.5		11.6	11.1		8.4	8.9	
Level of Service	B	B		C	B		B	B		A	A	
Approach Delay (s)		17.3			20.4			11.2			8.9	
Approach LOS		B			C			B			A	

Intersection Summary			
HCM Average Control Delay	12.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	63.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

	↗	→	↙	←	↖	↰	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	WBL	WBT	WBR	NBL2	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱		↰↑↱				✥			✥	
Volume (vph)	2	628	198	479	16	3	9	8	41	8	0	3
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	10	10	10	12	12	16	12	12	16	12
Total Lost time (s)		5.0		5.0				4.0			4.0	
Lane Util. Factor		0.95		0.95				1.00			1.00	
Frpb, ped/bikes		1.00		1.00				0.99			0.98	
Flpb, ped/bikes		1.00		1.00				1.00			1.00	
Frt		1.00		1.00				0.91			0.93	
Flt Protected		1.00		0.99				0.99			0.98	
Satd. Flow (prot)		3160		3090				1812			1817	
Flt Permitted		0.95		0.55				0.96			0.90	
Satd. Flow (perm)		3011		1730				1754			1673	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	2	698	220	532	18	3	10	9	46	9	0	3
RTOR Reduction (vph)	0	0	0	2	0	0	0	36	0	0	5	0
Lane Group Flow (vph)	0	700	0	768	0	0	0	32	0	0	13	0
Confl. Peds. (#/hr)	7		4		7		7		2	2		7
Confl. Bikes (#/hr)							2		2	2		2
Heavy Vehicles (%)	0%	1%	2%	1%	6%	0%	0%	0%	0%	0%	0%	0%
Turn Type	Perm		custom			Perm	Perm			Perm		
Protected Phases		8	7	4				2			6	
Permitted Phases	8		4 7			2	2			6		
Actuated Green, G (s)		18.0		27.0				14.0			14.0	
Effective Green, g (s)		18.0		27.0				14.0			14.0	
Actuated g/C Ratio		0.28		0.42				0.22			0.22	
Clearance Time (s)		5.0		5.0				4.0			4.0	
Lane Grp Cap (vph)		834		844				378			360	
v/s Ratio Prot				c0.08								
v/s Ratio Perm		0.23		c0.29				c0.02			0.01	
v/c Ratio		0.84		1.02dl				0.08			0.04	
Uniform Delay, d1		22.1		17.9				20.4			20.2	
Progression Factor		1.47		0.92				1.00			1.00	
Incremental Delay, d2		7.4		15.1				0.4			0.2	
Delay (s)		40.0		31.6				20.8			20.4	
Level of Service		D		C				C			C	
Approach Delay (s)		40.0		31.6				20.8			20.4	
Approach LOS		D		C				C			C	

Intersection Summary			
HCM Average Control Delay	47.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	84.1%	ICU Level of Service	E
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.
c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1070: 127th Street & Wallace Street

1/14/2013

Movement	SBR2	NEL	NER
Lane Configurations			
Volume (vph)	5	3	242
Ideal Flow (vphpl)	1800	1800	1800
Lane Width	12	12	12
Total Lost time (s)		5.0	
Lane Util. Factor		1.00	
Frpb, ped/bikes		1.00	
Flpb, ped/bikes		1.00	
Frt		0.87	
Flt Protected		1.00	
Satd. Flow (prot)		1559	
Flt Permitted		1.00	
Satd. Flow (perm)		1559	
Peak-hour factor, PHF	0.90	0.90	0.90
Adj. Flow (vph)	6	3	269
RTOR Reduction (vph)	0	0	0
Lane Group Flow (vph)	0	272	0
Confl. Peds. (#/hr)			
Confl. Bikes (#/hr)			
Heavy Vehicles (%)	0%	0%	0%
Turn Type			
Protected Phases		3	
Permitted Phases			
Actuated Green, G (s)		10.0	
Effective Green, g (s)		10.0	
Actuated g/C Ratio		0.15	
Clearance Time (s)		5.0	
Lane Grp Cap (vph)		240	
v/s Ratio Prot		c0.17	
v/s Ratio Perm			
v/c Ratio		1.13	
Uniform Delay, d1		27.5	
Progression Factor		0.85	
Incremental Delay, d2		96.6	
Delay (s)		120.1	
Level of Service		F	
Approach Delay (s)		120.1	
Approach LOS		F	

Intersection Summary

HCM Signalized Intersection Capacity Analysis
1071: 127th Street & State Street

1/14/2013

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰↑	↑↱		↰	↱
Volume (vph)	230	689	513	57	74	180
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		1.00	1.00
Frt		1.00	0.99		1.00	0.85
Flt Protected		0.99	1.00		0.95	1.00
Satd. Flow (prot)		3279	3271		1660	1485
Flt Permitted		0.67	1.00		0.95	1.00
Satd. Flow (perm)		2208	3271		1660	1485
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	247	741	552	61	80	194
RTOR Reduction (vph)	0	0	13	0	0	143
Lane Group Flow (vph)	0	988	600	0	80	51
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type	Perm					Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)		40.0	40.0		17.0	17.0
Effective Green, g (s)		40.0	40.0		17.0	17.0
Actuated g/C Ratio		0.62	0.62		0.26	0.26
Clearance Time (s)		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		1359	2013		434	388
v/s Ratio Prot			0.18		c0.05	
v/s Ratio Perm		c0.45				0.03
v/c Ratio		0.73	0.30		0.18	0.13
Uniform Delay, d1		8.7	5.9		18.6	18.4
Progression Factor		1.30	1.33		1.19	1.93
Incremental Delay, d2		1.6	0.4		0.9	0.7
Delay (s)		12.8	8.2		23.0	36.1
Level of Service		B	A		C	D
Approach Delay (s)		12.8	8.2		32.3	
Approach LOS		B	A		C	

Intersection Summary			
HCM Average Control Delay	14.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	58.4%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1072: 127th Street & Michigan Avenue

1/14/2013

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰↑	↑↱		↰	↱
Volume (vph)	70	693	490	136	239	80
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	12	10	11	12	10	10
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		1.00	1.00
Frpb, ped/bikes		1.00	1.00		1.00	0.99
Flpb, ped/bikes		1.00	1.00		1.00	1.00
Frt		1.00	0.97		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		3118	3068		1506	1343
Flt Permitted		0.83	1.00		0.95	1.00
Satd. Flow (perm)		2612	3068		1506	1343
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	76	753	533	148	260	87
RTOR Reduction (vph)	0	0	39	0	0	56
Lane Group Flow (vph)	0	829	642	0	260	31
Confl. Peds. (#/hr)	2			2		1
Heavy Vehicles (%)	1%	2%	2%	10%	6%	5%
Turn Type	Perm					Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)		34.0	34.0		23.0	23.0
Effective Green, g (s)		34.0	34.0		23.0	23.0
Actuated g/C Ratio		0.52	0.52		0.35	0.35
Clearance Time (s)		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		1366	1605		533	475
v/s Ratio Prot			0.21		c0.17	
v/s Ratio Perm		c0.32				0.02
v/c Ratio		0.61	0.40		0.49	0.06
Uniform Delay, d1		10.8	9.3		16.4	13.9
Progression Factor		1.00	1.04		1.60	3.14
Incremental Delay, d2		1.5	0.7		3.0	0.2
Delay (s)		12.3	10.5		29.2	43.9
Level of Service		B	B		C	D
Approach Delay (s)		12.3	10.5		32.9	
Approach LOS		B	B		C	

Intersection Summary			
HCM Average Control Delay	15.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	65.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1073: 130th Street & Indiana Avenue

1/14/2013

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↱		↰	↑	↰↱	
Volume (vph)	562	218	104	504	158	45
Ideal Flow (vphpl)	2300	1800	1800	2300	1800	1800
Lane Width	15	12	14	16	15	12
Total Lost time (s)	5.0		5.0	5.0	5.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.96		1.00	1.00	0.97	
Flt Protected	1.00		0.95	1.00	0.96	
Satd. Flow (prot)	2387		1788	2506	1748	
Flt Permitted	1.00		0.13	1.00	0.96	
Satd. Flow (perm)	2387		243	2506	1748	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	618	240	114	554	174	49
RTOR Reduction (vph)	21	0	0	0	16	0
Lane Group Flow (vph)	837	0	114	554	207	0
Confl. Peds. (#/hr)						1
Heavy Vehicles (%)	2%	2%	2%	4%	7%	0%
Turn Type			Perm			
Protected Phases	4			8	2	
Permitted Phases			8			
Actuated Green, G (s)	31.0		31.0	31.0	24.0	
Effective Green, g (s)	31.0		31.0	31.0	24.0	
Actuated g/C Ratio	0.48		0.48	0.48	0.37	
Clearance Time (s)	5.0		5.0	5.0	5.0	
Lane Grp Cap (vph)	1138		116	1195	645	
v/s Ratio Prot	0.35			0.22	c0.12	
v/s Ratio Perm			c0.47			
v/c Ratio	0.74		0.98	0.46	0.32	
Uniform Delay, d1	13.7		16.7	11.4	14.7	
Progression Factor	1.28		1.00	1.00	1.00	
Incremental Delay, d2	3.5		79.1	1.3	1.3	
Delay (s)	21.0		95.8	12.7	16.0	
Level of Service	C		F	B	B	
Approach Delay (s)	21.0			26.9	16.0	
Approach LOS	C			C	B	

Intersection Summary			
HCM Average Control Delay	22.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	67.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1074: 130th Street & Ellis Ave

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑↑	↱		↰↑	↱		✣	
Volume (vph)	1	823	32	94	587	1	48	0	121	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	15	13	11	11	12	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0	4.0	3.0	3.0	4.0		4.0	4.0			
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00	1.00			
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85			
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.95	1.00			
Satd. Flow (prot)	1881	3431	1479	1589	3320	1530		1938	1500			
Flt Permitted	0.42	1.00	1.00	0.28	1.00	1.00		0.76	1.00			
Satd. Flow (perm)	833	3431	1479	470	3320	1530		1545	1500			
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	1	857	33	98	611	1	50	0	126	0	0	0
RTOR Reduction (vph)	0	0	11	0	0	0	0	0	114	0	0	0
Lane Group Flow (vph)	1	857	22	98	611	1	0	50	12	0	0	0
Heavy Vehicles (%)	0%	3%	0%	4%	3%	0%	0%	0%	2%	0%	0%	0%
Turn Type	Perm		Perm	custom		custom	Perm		Perm	Perm		
Protected Phases		4		3	3 8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)	55.8	55.8	55.8	68.7	68.7	68.7		8.3	8.3			
Effective Green, g (s)	55.8	55.8	55.8	68.7	68.7	68.7		8.3	8.3			
Actuated g/C Ratio	0.66	0.66	0.66	0.81	0.81	0.81		0.10	0.10			
Clearance Time (s)	4.0	4.0	4.0	3.0		4.0		4.0	4.0			
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0		3.0	3.0			
Lane Grp Cap (vph)	547	2252	971	510	2683	1237		151	146			
v/s Ratio Prot		c0.25		0.02	c0.18							
v/s Ratio Perm	0.00		0.01	0.13		0.00		c0.03	0.01			
v/c Ratio	0.00	0.38	0.02	0.19	0.23	0.00		0.33	0.08			
Uniform Delay, d1	5.0	6.7	5.1	2.2	1.9	1.6		35.8	34.9			
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00			
Incremental Delay, d2	0.0	0.5	0.0	0.2	0.0	0.0		1.3	0.2			
Delay (s)	5.0	7.2	5.1	2.4	2.0	1.6		37.1	35.1			
Level of Service	A	A	A	A	A	A		D	D			
Approach Delay (s)		7.1			2.0			35.7			0.0	
Approach LOS		A			A			D			A	

Intersection Summary			
HCM Average Control Delay	7.9	HCM Level of Service	A
HCM Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	44.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1942: 111th Street & Langley Avenue

1/14/2013

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰↑	↑↱		↲↳	
Volume (vph)	8	822	691	25	71	13
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10
Total Lost time (s)		5.0	5.0		3.0	
Lane Util. Factor		0.95	0.95		1.00	
Frt		1.00	0.99		0.98	
Flt Protected		1.00	1.00		0.96	
Satd. Flow (prot)		3097	3083		1532	
Flt Permitted		0.95	1.00		0.96	
Satd. Flow (perm)		2931	3083		1532	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	9	884	743	27	76	14
RTOR Reduction (vph)	0	0	3	0	7	0
Lane Group Flow (vph)	0	893	767	0	83	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type	Perm					
Protected Phases		4	8 2 11		5	
Permitted Phases	4					
Actuated Green, G (s)		33.0	64.0		7.0	
Effective Green, g (s)		33.0	64.0		7.0	
Actuated g/C Ratio		0.37	0.71		0.08	
Clearance Time (s)		5.0			3.0	
Lane Grp Cap (vph)		1075	2192		119	
v/s Ratio Prot			c0.25		c0.05	
v/s Ratio Perm		c0.30				
v/c Ratio		0.83	0.35		0.69	
Uniform Delay, d1		26.0	5.0		40.5	
Progression Factor		1.00	0.01		1.00	
Incremental Delay, d2		7.5	0.3		28.5	
Delay (s)		33.4	0.3		68.9	
Level of Service		C	A		E	
Approach Delay (s)		33.4	0.3		68.9	
Approach LOS		C	A		E	

Intersection Summary			
HCM Average Control Delay	20.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	42.4%	ICU Level of Service	A
Analysis Period (min)	15		

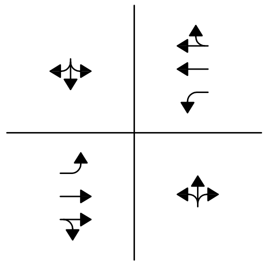
c Critical Lane Group

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			↰↱			✥			↰	↱
Volume (vph)	37	462	0	1	498	34	3	2	27	156	0	103
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	12	12	11	12	11
Total Lost time (s)		4.0			4.0			3.0			3.0	3.0
Lane Util. Factor		1.00			0.95			1.00			1.00	1.00
Frpb, ped/bikes		1.00			1.00			0.94			1.00	0.98
Flpb, ped/bikes		1.00			1.00			1.00			0.99	1.00
Frt		1.00			0.99			0.88			1.00	0.85
Flt Protected		1.00			1.00			1.00			0.95	1.00
Satd. Flow (prot)		1774			3339			1466			1669	1348
Flt Permitted		0.93			0.95			0.97			0.89	1.00
Satd. Flow (perm)		1649			3189			1435			1556	1348
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	41	513	0	1	553	38	3	2	30	173	0	114
RTOR Reduction (vph)	0	0	0	0	6	0	0	27	0	0	0	76
Lane Group Flow (vph)	0	554	0	0	586	0	0	8	0	0	173	38
Confl. Peds. (#/hr)	60		44	44		60	14		10	10		14
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	0%	1%	0%	0%	1%	3%	20%	0%	0%	1%	0%	7%
Turn Type	Perm			Prot			Perm			pm+pt		Perm
Protected Phases		4		3	3 4			1		2	1 2	
Permitted Phases	4				3		1	1		1 2		1 2
Actuated Green, G (s)		31.0			45.0			9.0			25.0	28.0
Effective Green, g (s)		31.0			45.0			9.0			25.0	28.0
Actuated g/C Ratio		0.36			0.53			0.11			0.29	0.33
Clearance Time (s)		4.0						3.0				
Lane Grp Cap (vph)		601			1713			152			479	444
v/s Ratio Prot					c0.06						c0.07	
v/s Ratio Perm		c0.34			0.12			0.01			c0.04	0.03
v/c Ratio		0.92			0.34			0.05			0.36	0.08
Uniform Delay, d1		25.8			11.5			34.2			23.7	19.7
Progression Factor		1.00			0.91			1.00			1.00	1.00
Incremental Delay, d2		21.8			0.3			0.7			2.1	0.4
Delay (s)		47.6			10.7			34.8			25.8	20.0
Level of Service		D			B			C			C	C
Approach Delay (s)		47.6			10.7			34.8			23.5	
Approach LOS		D			B			C			C	

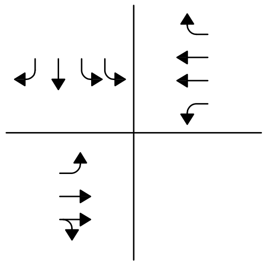
Intersection Summary			
HCM Average Control Delay	27.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	69.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Appendix B
No Build Alternative



01
95th Street
Wentworth Avenue



02
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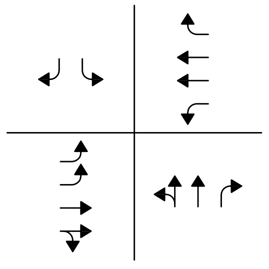
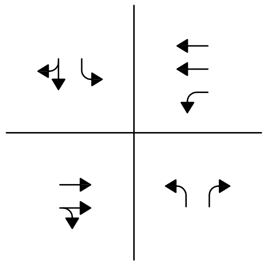
Lafayette Avenue



03
95th Street
State Street



04
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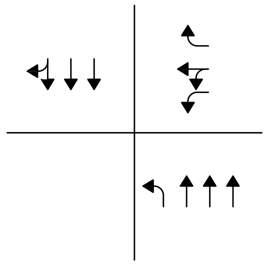
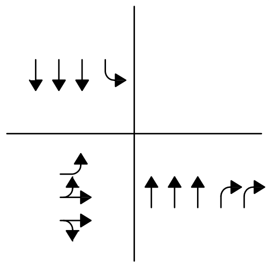
Michigan Avenue



05
98th Place
Halsted Street



06
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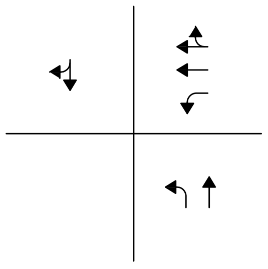
Halsted Street



07
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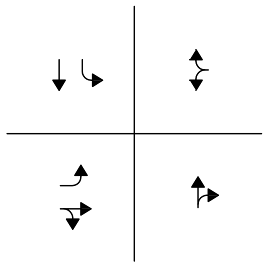
Wentworth Avenue



08
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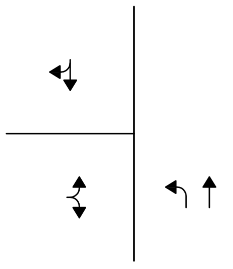
Wentworth Avenue



09
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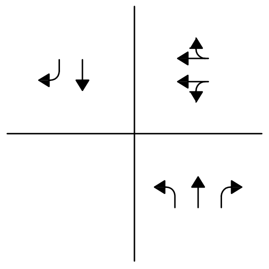
State Street



10
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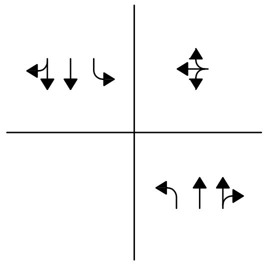
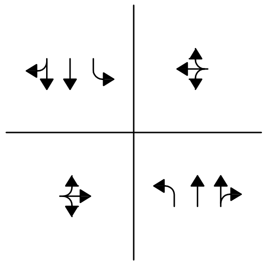
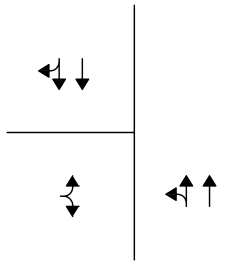
Michigan Avenue



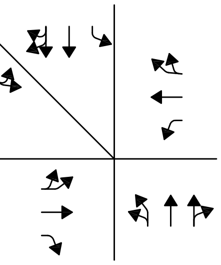
11
99th Street
Martin Luther King Jr Drive



12
100th Street
Martin Luther King Jr Drive



13
100th Street
Cottage Grove Avenue



14
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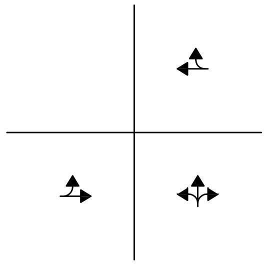
Vincennes Avenue
Beverly Avenue



15
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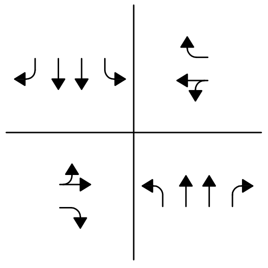

16
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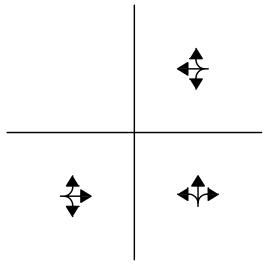
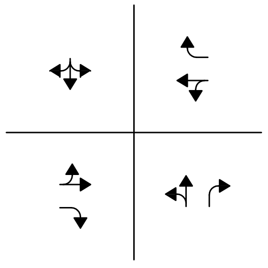
Halsted Street



17
103rd Street
Normal Avenue



18
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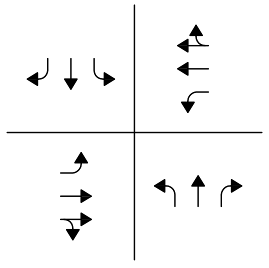
Wentworth Avenue



19
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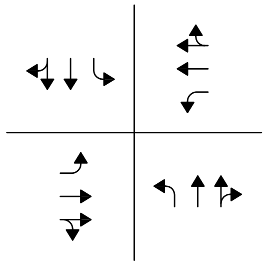
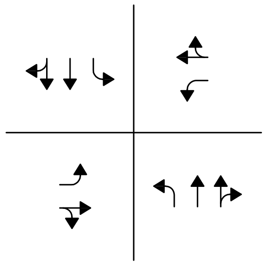
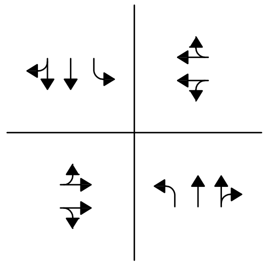
State Street



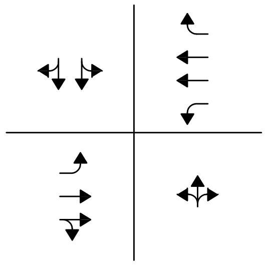
20
103rd Street
Michigan Avenue



21
103rd Street
Martin Luther King Jr Drive



22
103rd Street
Cottage Grove Avenue



23
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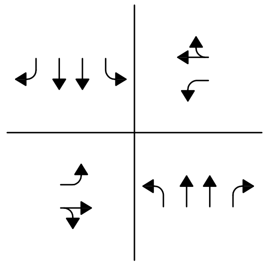
Woodlawn Avenue



24
107th Street
Halsted Street

No Build (2026) Intersection Lane Geometry

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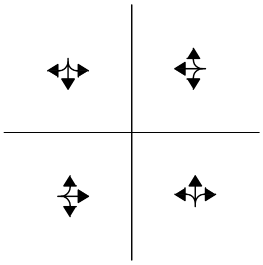
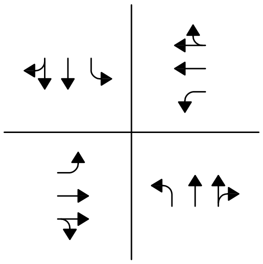

25 107th Street
Wentworth Avenue


26 107th Street
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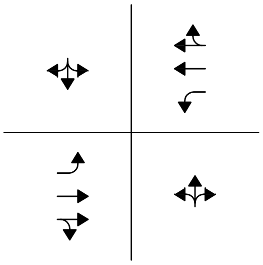
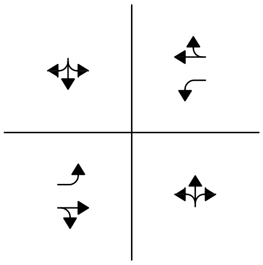

27 107th Street
Michigan Avenue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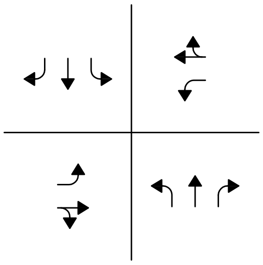
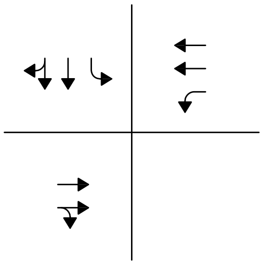
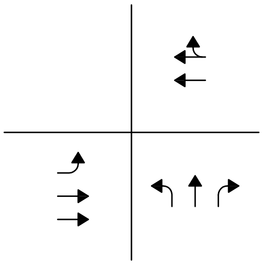

29 107th Street
Cottage Grove Avenue


30 111th Street
Marshfield Avenue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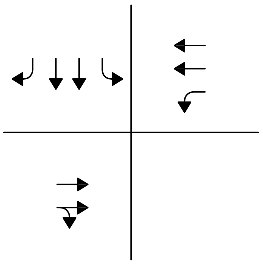
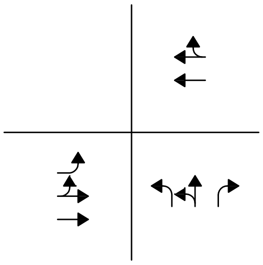
Hamlet Avenue


32 112th Place
Marshfield Avenue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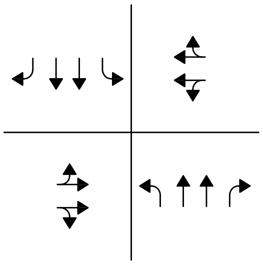
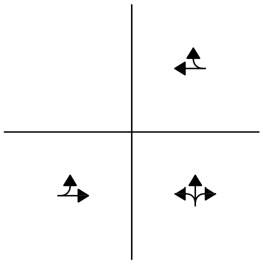
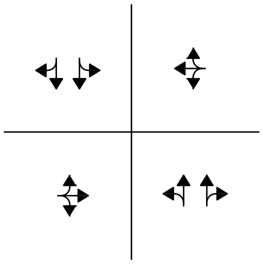
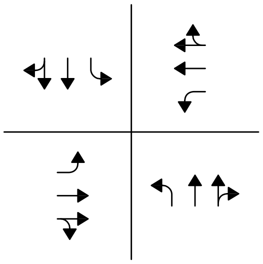
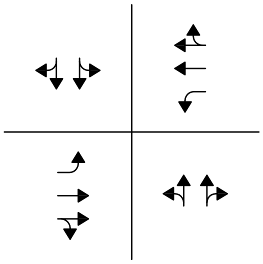
Hamlet Avenue

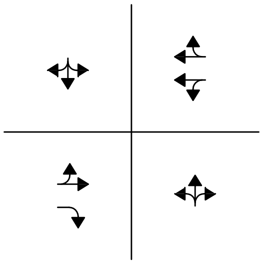

34 111th Street
Halsted Street

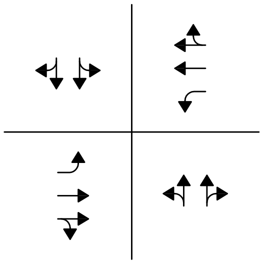

35 111th Street
Normal Avenue

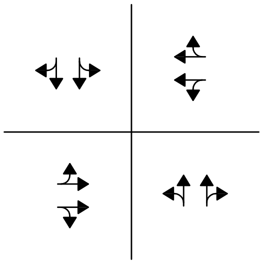

36 111th Street
Wentworth Avenue

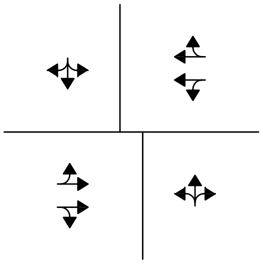

37 111th Street
State Street

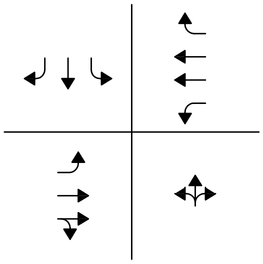

38 111th Street
Michigan Avenue

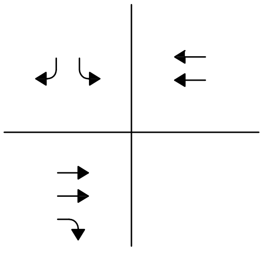

39 111th Street
Indiana Avenue

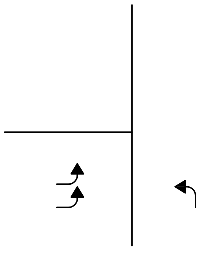

40 111th Street
Martin Luther King Jr Drive


41 111th Street
Cottage Grove Avenue


42 111th Street
Ellis Avenue


43 111th Street
Doty Road


44 111th Street
I-94 Eastbound Ramps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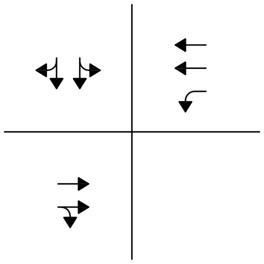
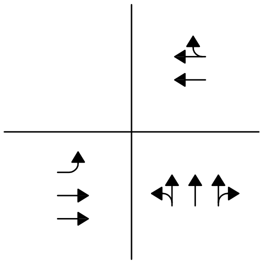
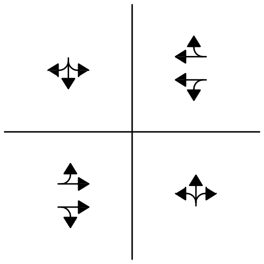
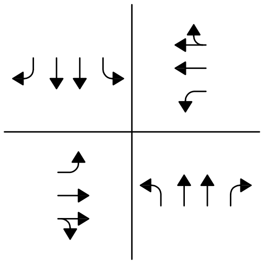

46 115th Street
Marshfield Avenue


47 115th Street
Ashland Avenue


48 115th Street
Racine Road


49 115th Street
Halsted Street

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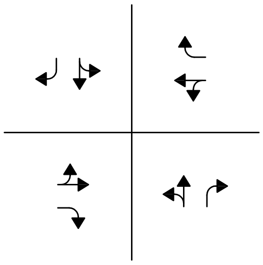
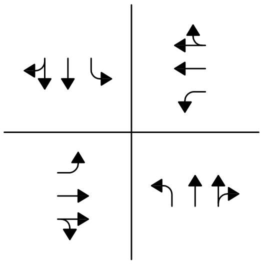


50 111th Street
Wentworth Avenue



51 115th Street
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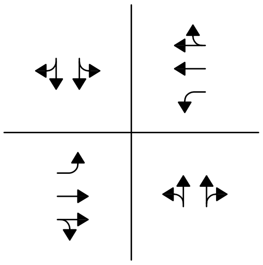
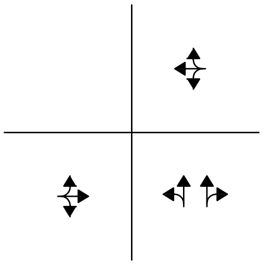
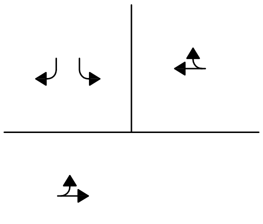


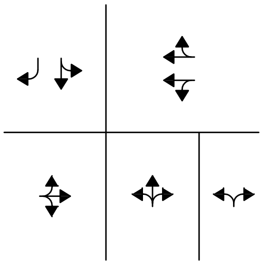
52 115th Street
Michigan Avenue



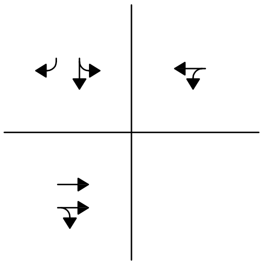
53 115th Street
Indiana Avenue



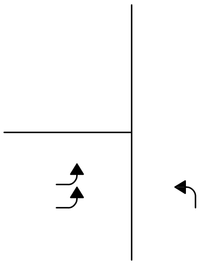
54 115th Street
Martin Luther King Jr Drive



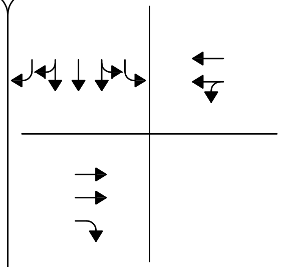
55 115th Street
Cottage Grove Avenue



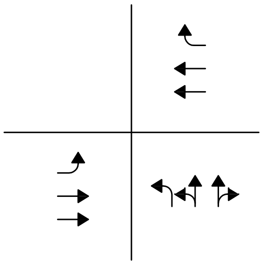
56 115th Street
I-94 Eastbound Ramps



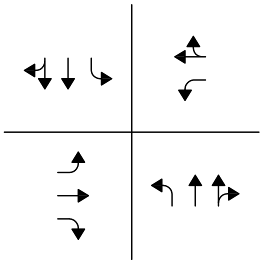
57 115th Street
I-94 Westbound Ramps



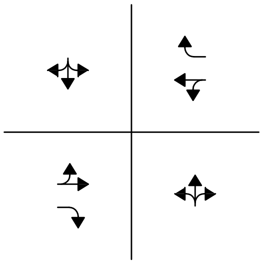
58 119th Street
Marshfield Avenue



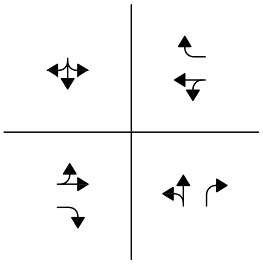
59 119th Street
Ashland Avenue



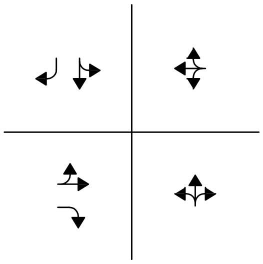
60 119th Street
Halsted Street



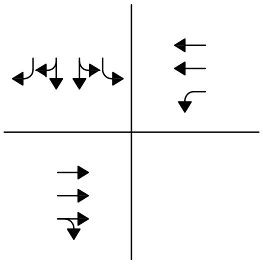
61 119th Street
Wentworth Avenue



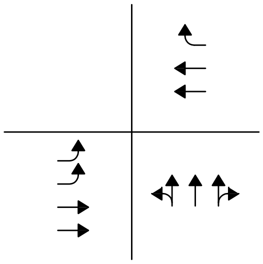
62 119th Street
State Street



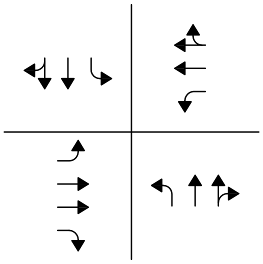
63 119th Street
Michigan Avenue



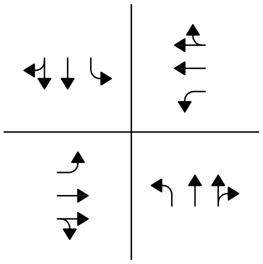
64 127th Street
Paulina Street



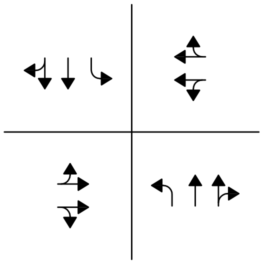
65 127th Street
Marshfield Avenue



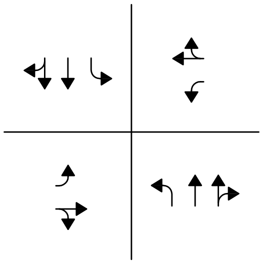
66 127th Street
Ashland Avenue



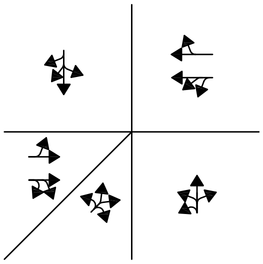
67 Vermont Street
Ashland Avenue



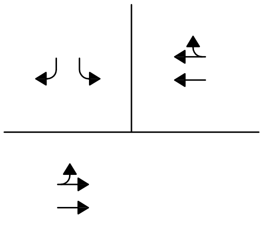
68 127th Street
Halsted Street



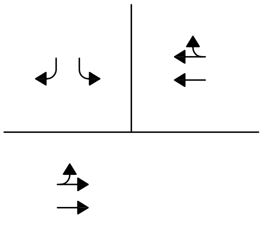
69 Vermont Street
Halsted Street



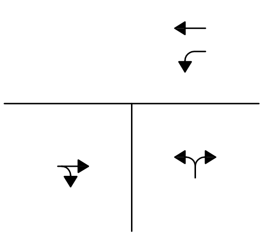
70 127th Street/Vermont
Street/Wallace Street



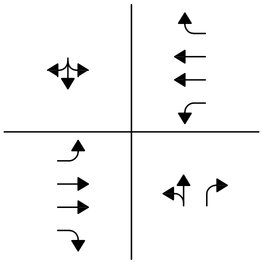
71 127th Street
State Street



72 127th Street
Michigan Avenue



73 130th Street
Indiana Avenue



74 130th Street
Ellis Avenue

No Build (2026) Intersection Lane Geometry

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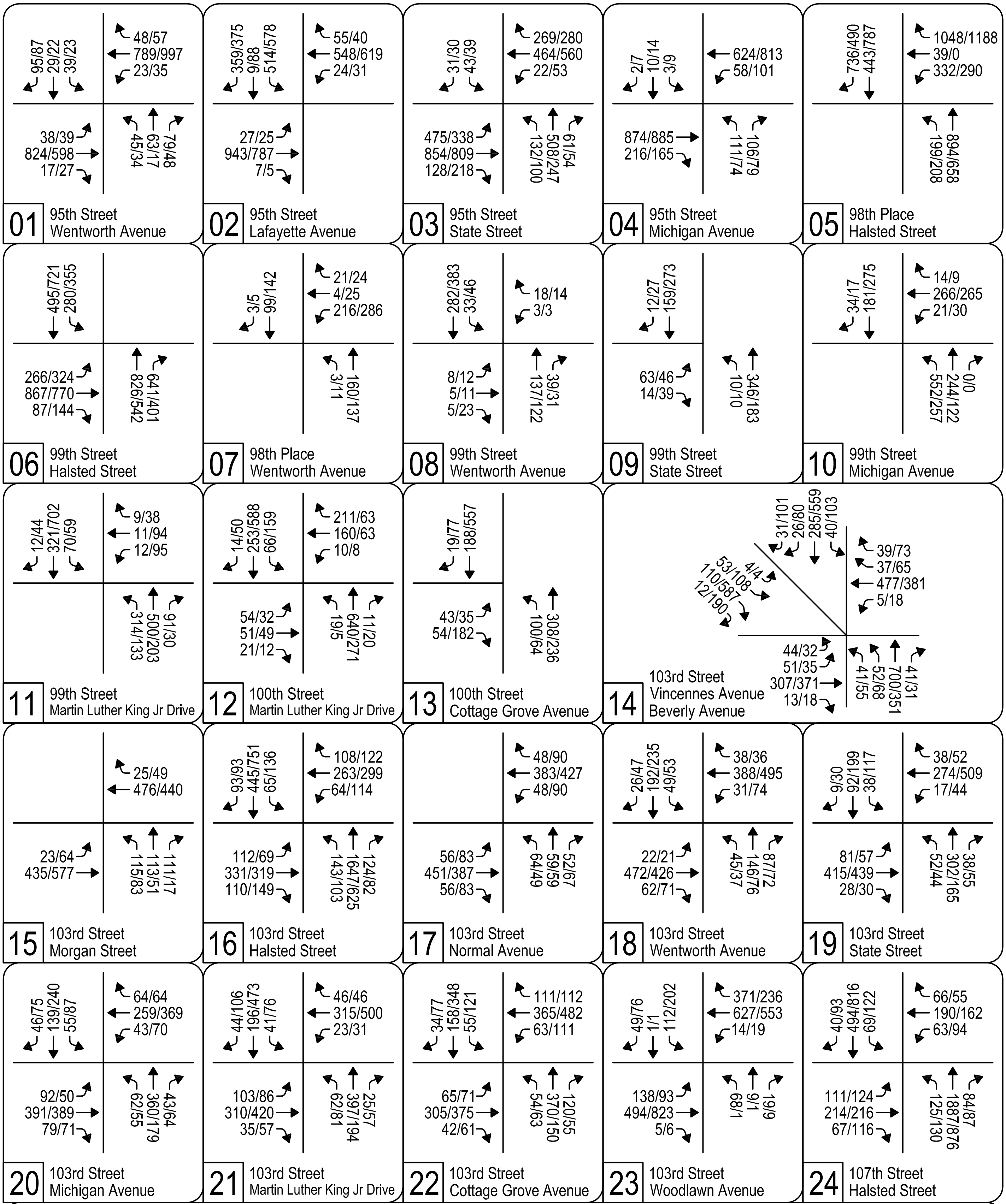
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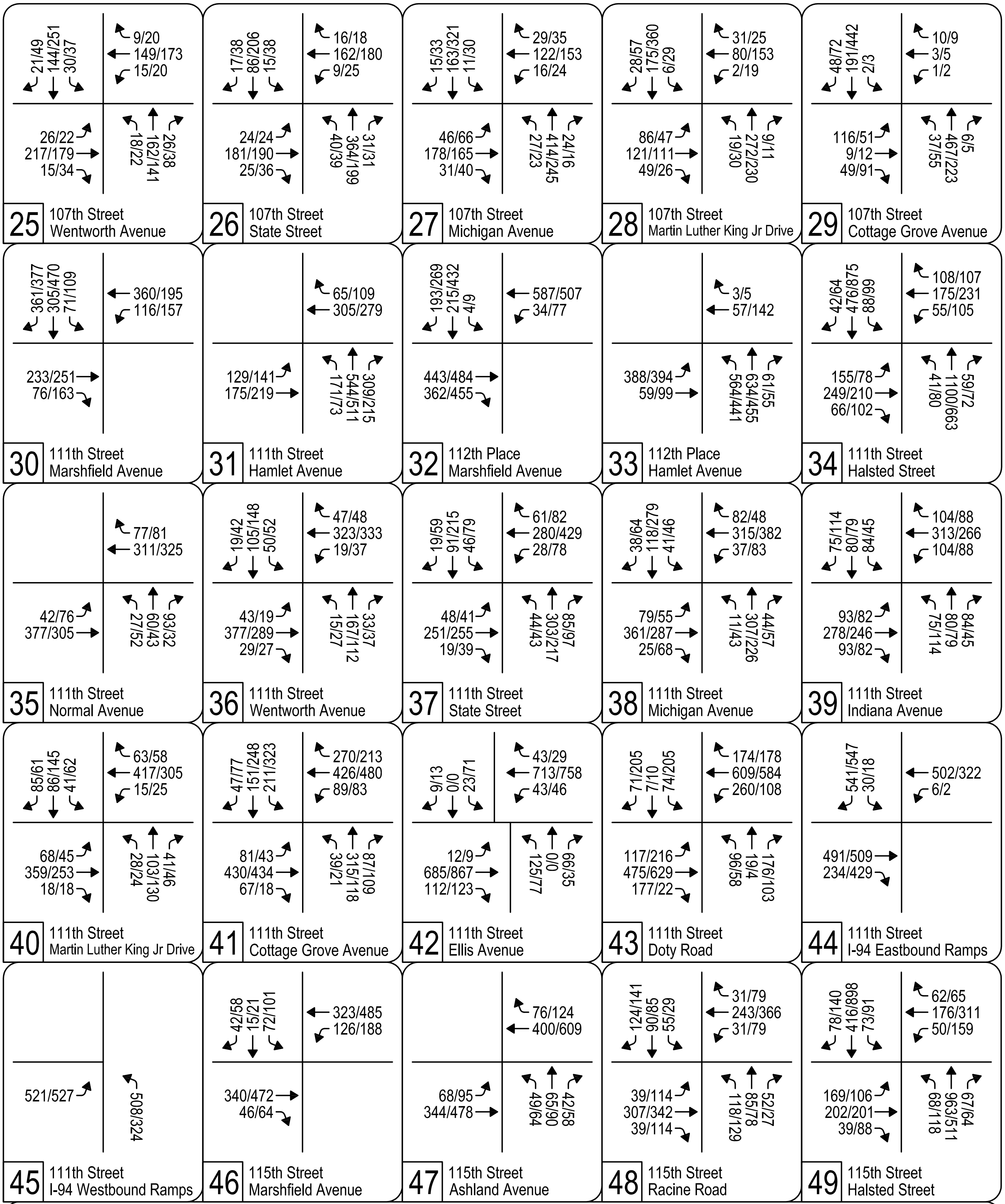
29/22
39/23
48/57
789/997
23/35
38/39
824/598
17/27
45/34
63/17
79/48
01
95th Street
Wentworth Avenue
359/375
9/88
514/578
55/40
548/619
24/31
27/25
943/787
7/5
02
95th Street
Lafayette Avenue
31/30
43/39
269/280
464/560
22/53
475/338
854/809
128/218
132/100
508/247
61/54
03
95th Street
State Street
2/7
10/14
3/9
624/813
58/101
874/885
216/165
111/74
106/79
04
95th Street
Michigan Avenue
736/490
443/787
1048/1188
39/0
332/290
199/208
894/658
05
98th Place
Halsted Street
495/721
280/355
266/324
867/770
87/144
826/542
641/401
06
99th Street
Halsted Street
3/5
99/142
21/24
4/25
216/286
3/11
160/137
07
98th Place
Wentworth Avenue
282/383
33/46
18/14
3/3
8/12
5/11
5/23
137/122
39/31
08
99th Street
Wentworth Avenue
12/27
159/273
63/46
14/39
10/10
346/183
09
99th Street
State Street
34/17
181/275
14/9
266/265
21/30
552/257
244/122
0/0
10
99th Street
Michigan Avenue
12/44
321/702
70/59
9/38
11/94
12/95
314/133
500/203
91/30
11
99th Street
Martin Luther King Jr Drive
14/50
253/588
66/159
211/63
160/63
10/8
54/32
51/49
21/12
19/5
640/271
11/20
12
100th Street
Martin Luther King Jr Drive
19/77
188/557
43/35
54/182
100/64
308/236
13
100th Street
Cottage Grove Avenue
31/101
26/80
285/559
40/103
39/73
37/65
477/381
5/18
4/4
53/108
110/587
12/190
44/32
51/35
307/371
13/18
41/55
52/68
700/351
41/31
14
103rd Street
Vincennes Avenue
Beverly Avenue
25/49
476/440
23/64
435/577
115/83
113/51
111/17
15
103rd Street
Morgan Street
93/93
445/751
65/136
108/122
263/299
64/114
112/69
331/319
110/149
143/103
1647/625
124/82
16
103rd Street
Halsted Street
48/90
383/427
48/90
56/83
451/387
56/83
64/49
59/59
52/67
17
103rd Street
Normal Avenue
26/47
192/235
49/53
38/36
388/495
31/74
22/21
472/426
62/71
45/37
146/76
87/72
18
103rd Street
Wentworth Avenue
9/30
92/199
38/117
38/52
274/509
17/44
81/57
415/439
28/30
52/44
302/165
38/55
19
103rd Street
State Street
46/75
139/240
55/87
64/64
259/369
43/70
92/50
391/389
79/71
62/55
360/179
43/64
20
103rd Street
Michigan Avenue
44/106
196/473
41/76
46/46
315/500
23/31
103/86
310/420
35/57
62/81
397/194
25/57
21
103rd Street
Martin Luther King Jr Drive
34/77
158/348
55/121
111/112
365/482
63/111
65/71
305/375
42/61
54/63
370/150
120/55
22
103rd Street
Cottage Grove Avenue
49/76
1/1
112/202
371/236
627/553
14/19
138/93
494/823
5/6
68/1
9/1
19/9
23
103rd Street
Woodlawn Avenue
40/93
494/816
69/122
66/55
190/162
63/94
111/124
214/216
67/116
125/130
1887/876
84/87
24
107th Street
Halsted Street

No Build (2026) Intersection Traffic Volumes

Page 1 of 3

Legend: AM/PM Peak Hour Volumes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9/20
149/173
15/20
26/22
217/179
15/34
18/22
162/141
26/38
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107th Street
Wentworth Avenue
17/38
86/206
15/38
16/18
162/180
9/25
24/24
181/190
25/36
40/39
364/199
31/31
26
107th Street
State Street
15/33
163/321
11/30
29/35
122/153
16/24
46/66
178/165
31/40
27/23
414/245
24/16
27
107th Street
Michigan Avenue
28/57
175/360
6/29
31/25
80/153
2/19
86/47
121/111
49/26
19/30
272/230
9/11
28
107th Street
Martin Luther King Jr Drive
48/72
191/442
2/3
10/9
3/5
1/2
116/51
9/12
49/91
37/55
467/223
6/5
29
107th Street
Cottage Grove Avenue
361/377
305/470
71/109
360/195
116/157
233/251
76/163
30
111th Street
Marshfield Avenue
65/109
305/279
129/141
175/219
171/73
544/511
309/215
31
111th Street
Hamlet Avenue
193/269
215/432
4/9
587/507
34/77
443/484
362/455
32
112th Place
Marshfield Avenue
3/5
57/142
388/394
59/99
564/441
634/455
61/55
33
112th Place
Hamlet Avenue
42/64
476/875
88/99
108/107
175/231
55/105
155/78
249/210
66/102
41/80
1100/663
59/72
34
111th Street
Halsted Street
77/81
311/325
42/76
377/305
27/52
60/43
93/32
35
111th Street
Normal Avenue
19/42
105/148
50/52
47/48
323/333
19/37
43/19
377/289
29/27
15/27
167/112
33/37
36
111th Street
Wentworth Avenue
19/59
91/215
46/79
61/82
280/429
28/78
48/41
251/255
19/39
44/43
303/217
85/97
37
111th Street
State Street
38/64
118/279
41/46
82/48
315/382
37/83
79/55
361/287
25/68
11/43
307/226
44/57
38
111th Street
Michigan Avenue
75/114
80/79
84/45
104/88
313/266
104/88
93/82
278/246
93/82
75/114
80/79
84/45
39
111th Street
Indiana Avenue
85/61
86/145
41/62
63/58
417/305
15/25
68/45
359/253
18/18
28/24
103/130
41/46
40
111th Street
Martin Luther King Jr Drive
47/77
151/248
211/323
270/213
426/480
89/83
81/43
430/434
67/18
39/21
315/118
87/109
41
111th Street
Cottage Grove Avenue
9/13
0/0
23/71
43/29
713/758
43/46
12/9
685/867
112/123
125/77
0/0
66/35
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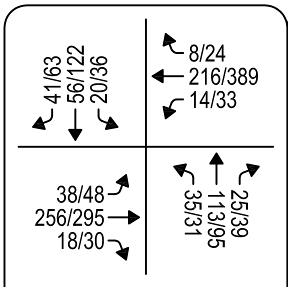
111th Street
Ellis Avenue
71/205
7/10
74/205
174/178
609/584
260/108
117/216
475/629
177/22
96/58
19/4
176/103
43
111th Street
Doty Road
541/547
30/18
502/322
6/2
491/509
234/429
44
111th Street
I-94 Eastbound Ramps
521/527
508/324
45
111th Street
I-94 Westbound Ramps
42/58
15/21
72/101
323/485
126/188
340/472
46/64
46
115th Street
Marshfield Avenue
76/124
400/609
68/95
344/478
49/64
65/90
42/58
47
115th Street
Ashland Avenue
124/141
90/85
55/29
31/79
243/366
31/79
39/114
307/342
39/114
118/129
85/78
52/27
48
115th Street
Racine Road
78/140
416/898
73/91
62/65
176/311
50/159
169/106
202/201
39/88
68/118
963/511
67/64
49
115th Street
Halsted Street

No Build (2026) Intersection Traffic Volumes

Page 2 of 3

Legend: AM/PM Peak Hour Volumes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14/33
38/48
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18/30
35/31
113/95
25/39

50
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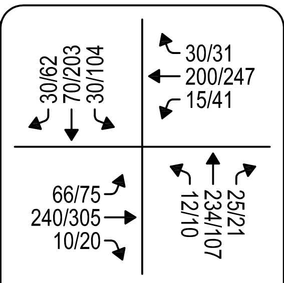
Wentworth Avenue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30/104
30/31
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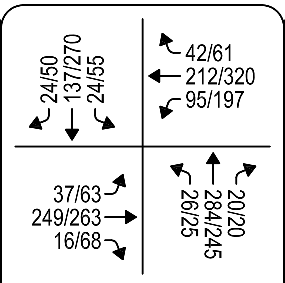
15/41
66/75
240/305
10/20
12/10
234/107
25/21

51
115th Street
State Street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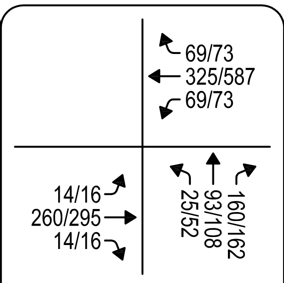
137/270
24/55
42/61
212/320
95/197
37/63
249/263
16/68
26/25
284/245
20/20

52
115th Street
Michigan Avenue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325/587
69/73
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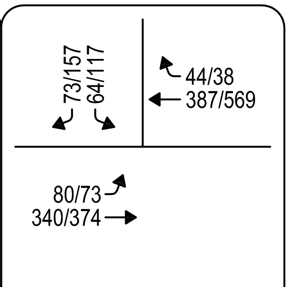
14/16
25/52
93/108
160/162

53
115th Street
Indiana Avenue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44/38
387/569
80/73
340/374

54
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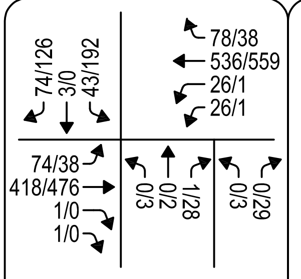
Martin Luther King Jr Drive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536/559
26/1
26/1
74/38
418/476
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1/0
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0/2
1/28
0/3
0/29

55
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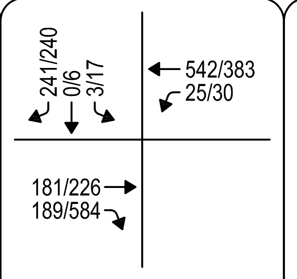
Cottage Grove Avenue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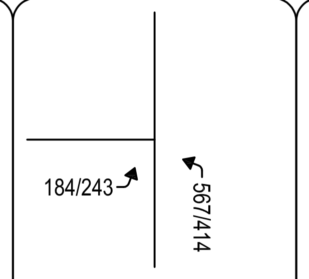
542/383
25/30
181/226
189/584

56
115th Street
I-94 Eastbound Ramps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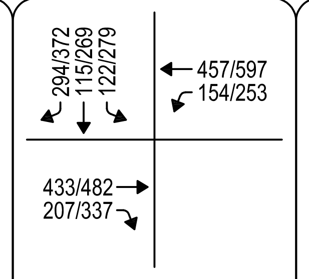
I-94 Westbound Ramps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457/597
154/253
433/482
207/337

58
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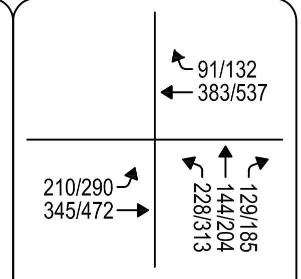
Marshfield Avenue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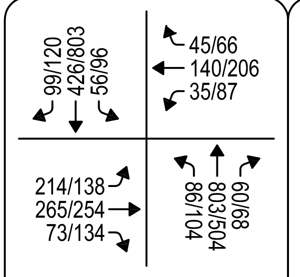
210/290
345/472
228/313
144/204
129/185

59
119th Street
Ashland Avenue


99/120
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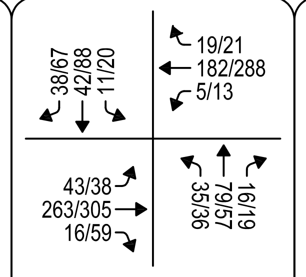
35/87
214/138
265/254
73/134
86/104
803/504
60/68

60
119th Street
Halsted Street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16/19

61
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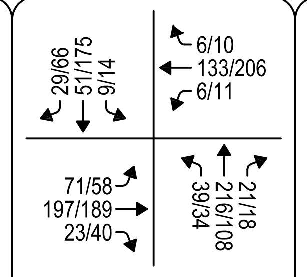
Wentworth Avenue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39/34
216/108
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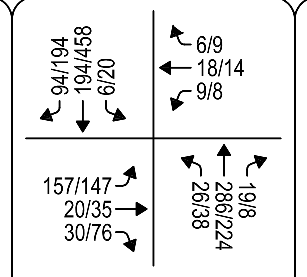
62
119th Street
State Street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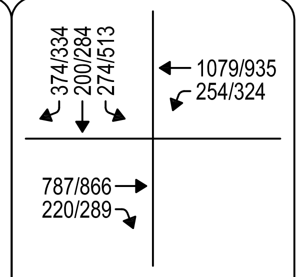
19/8

63
119th Street
Michigan Avenue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787/866
220/289

64
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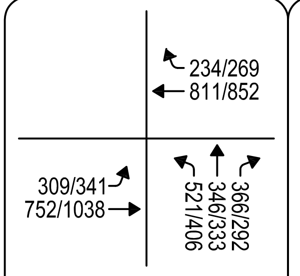
Paulina Street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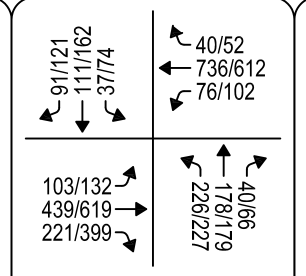
366/292

65
127th Street
Marshfield Avenue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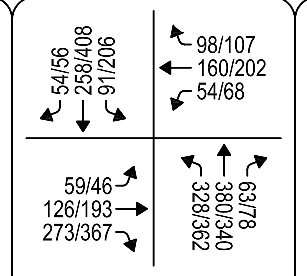
178/179
40/66

66
127th Street
Ashland Avenue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258/408
91/206
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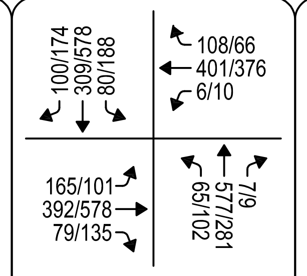
67
Vermont Street
Ashland Avenue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392/578
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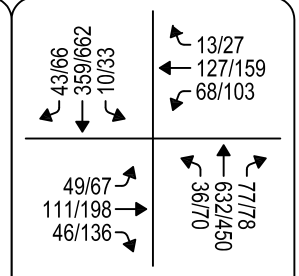
65/102
577/281
7/9

68
127th Street
Halsted Street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359/662
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68/103
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111/198
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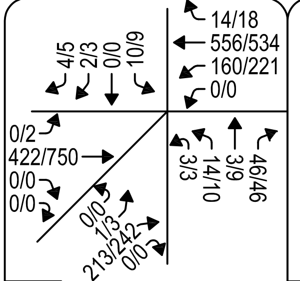
36/70
632/450
77/78

69
Vermont Street
Halsted Street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160/221
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422/750
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0/0
3/3
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3/9
46/46
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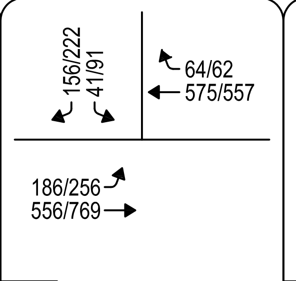
1/3
213/242
0/0

70
127th Street/Vermont
Street/Wallace Street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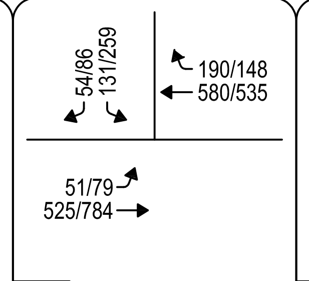
556/769

71
127th Street
State Street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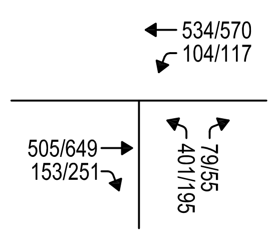
72
127th Street
Michigan Avenue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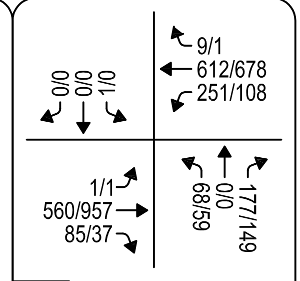
104/117
505/649
153/251
401/195
79/55

73
130th Street
Indiana Avenue


0/0
0/0
1/0
9/1
612/678
251/108
1/1
560/957
85/37
68/59
0/0
177/149

74
130th Street
Ellis Avenue

No Build (2026) Intersection Traffic Volumes

Page 3 of 3

Legend: AM/PM Peak Hour Volumes

HCM Signalized Intersection Capacity Analysis
1001: 95th Street & Wentworth Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			✥			✥	
Volume (vph)	38	824	17	23	789	48	45	63	79	39	29	95
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	16	10	10	16	8	15	8	8	14	8
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			0.99			0.99	
Flpb, ped/bikes	0.98	1.00		1.00	1.00			1.00			1.00	
Frt	1.00	1.00		1.00	0.99			0.94			0.92	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1416	2976		1592	2978			1752			1663	
Flt Permitted	0.26	1.00		0.26	1.00			0.90			0.90	
Satd. Flow (perm)	384	2976		430	2978			1598			1515	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	40	867	18	24	831	51	47	66	83	41	31	100
RTOR Reduction (vph)	0	2	0	0	7	0	0	41	0	0	63	0
Lane Group Flow (vph)	40	883	0	24	875	0	0	155	0	0	109	0
Confl. Peds. (#/hr)	61		11	11		61	3		5	5		3
Confl. Bikes (#/hr)	1		1	1		1						
Heavy Vehicles (%)	11%	7%	0%	0%	6%	2%	2%	7%	4%	5%	7%	3%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	34.0	34.0		34.0	34.0			22.0			22.0	
Effective Green, g (s)	34.0	34.0		34.0	34.0			23.0			23.0	
Actuated g/C Ratio	0.52	0.52		0.52	0.52			0.35			0.35	
Clearance Time (s)	4.0	4.0		4.0	4.0			5.0			5.0	
Lane Grp Cap (vph)	201	1557		225	1558			565			536	
v/s Ratio Prot		c0.30			0.29							
v/s Ratio Perm	0.10			0.06				c0.10			0.07	
v/c Ratio	0.20	0.57		0.11	0.56			0.27			0.20	
Uniform Delay, d1	8.3	10.5		7.8	10.5			15.0			14.6	
Progression Factor	1.00	1.00		0.81	1.13			1.00			1.00	
Incremental Delay, d2	2.2	1.5		0.8	1.3			1.2			0.9	
Delay (s)	10.5	12.0		7.2	13.1			16.2			15.5	
Level of Service	B	B		A	B			B			B	
Approach Delay (s)		11.9			12.9			16.2			15.5	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	13.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	53.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↑	↱				↰↰	↑	↱
Volume (vph)	27	943	7	24	548	55	0	0	0	514	9	359
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	5.0	5.0		3.0	3.0	3.0				5.0	5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00				0.97	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.67				1.00	1.00	0.96
Flpb, ped/bikes	0.91	1.00		1.00	1.00	1.00				1.00	1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85				1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00				0.95	1.00	1.00
Satd. Flow (prot)	776	3285		1710	3138	512				3100	1440	1399
Flt Permitted	0.43	1.00		0.14	1.00	1.00				0.95	1.00	1.00
Satd. Flow (perm)	355	3285		248	3138	512				3100	1440	1399
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	28	993	7	25	577	58	0	0	0	541	9	378
RTOR Reduction (vph)	0	1	0	0	0	25	0	0	0	0	0	172
Lane Group Flow (vph)	28	999	0	25	577	33	0	0	0	541	9	206
Confl. Peds. (#/hr)	354		13	13		354	22		22	22		22
Confl. Bikes (#/hr)	4					4			1	1		
Heavy Vehicles (%)	100%	4%	0%	0%	9%	100%	0%	0%	0%	7%	25%	5%
Turn Type	pm+pt			pm+pt		Perm				Split		Perm
Protected Phases	7	4		3	8					6	6	
Permitted Phases	4			8		8						6
Actuated Green, G (s)	43.0	43.0		73.0	73.0	73.0				30.0	30.0	30.0
Effective Green, g (s)	43.0	43.0		73.0	73.0	73.0				30.0	30.0	30.0
Actuated g/C Ratio	0.33	0.33		0.56	0.56	0.56				0.23	0.23	0.23
Clearance Time (s)	5.0	5.0		3.0	3.0	3.0				5.0	5.0	5.0
Lane Grp Cap (vph)	163	1087		634	1762	288				715	332	323
v/s Ratio Prot	0.02	c0.30		0.01	c0.18					c0.17	0.01	
v/s Ratio Perm	0.04			0.01		0.06						0.15
v/c Ratio	0.17	0.92		0.04	0.33	0.11				0.76	0.03	0.64
Uniform Delay, d1	31.6	41.8		15.1	15.3	13.3				46.6	38.7	45.1
Progression Factor	0.80	0.82		0.30	0.63	1.55				1.00	1.00	1.00
Incremental Delay, d2	2.0	12.2		0.1	0.3	0.5				7.3	0.2	9.2
Delay (s)	27.3	46.7		4.6	10.0	21.2				53.9	38.9	54.3
Level of Service	C	D		A	A	C				D	D	D
Approach Delay (s)		46.2			10.8			0.0			54.0	
Approach LOS		D			B			A			D	

Intersection Summary			
HCM Average Control Delay	40.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	51.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1003: 95th Street & State Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↱		↰	↑↑	↱		↰↑	↱	↰		↱
Volume (vph)	475	854	128	22	464	269	132	508	61	43	0	31
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0	3.0		5.0	5.0	5.0		5.0	5.0	5.0		5.0
Lane Util. Factor	0.97	0.95		1.00	0.95	1.00		0.95	1.00	1.00		1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.65		1.00	0.94	1.00		0.96
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Frt	1.00	0.98		1.00	1.00	0.85		1.00	0.85	1.00		0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.99	1.00	0.95		1.00
Satd. Flow (prot)	3190	3107		1555	2923	944		3300	1417	855		734
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.99	1.00	0.95		1.00
Satd. Flow (perm)	3190	3107		1555	2923	944		3300	1417	855		734
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	500	899	135	23	488	283	139	535	64	45	0	33
RTOR Reduction (vph)	0	9	0	0	0	161	0	0	25	0	0	31
Lane Group Flow (vph)	500	1026	0	23	488	122	0	674	39	45	0	2
Confl. Peds. (#/hr)	425		21	21		425	6		34	34		6
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	4%	8%	3%	10%	17%	5%	1%	3%	2%	100%	0%	100%
Turn Type	Prot			Prot		Perm	Split		Perm	Prot		custom
Protected Phases	7	4		3	8		2	2		6		
Permitted Phases						8			2			6
Actuated Green, G (s)	43.0	65.0		9.0	31.0	31.0		30.0	30.0	8.0		8.0
Effective Green, g (s)	43.0	65.0		9.0	31.0	31.0		30.0	30.0	8.0		8.0
Actuated g/C Ratio	0.33	0.50		0.07	0.24	0.24		0.23	0.23	0.06		0.06
Clearance Time (s)	3.0	3.0		5.0	5.0	5.0		5.0	5.0	5.0		5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0	3.0	3.0		3.0
Lane Grp Cap (vph)	1055	1554		108	697	225		762	327	53		45
v/s Ratio Prot	0.16	c0.33		0.01	c0.17			c0.20		c0.05		
v/s Ratio Perm						0.13			0.03			0.00
v/c Ratio	0.47	0.66		0.21	0.70	0.54		0.88	0.12	0.85		0.05
Uniform Delay, d1	34.5	24.3		57.2	45.3	43.3		48.3	39.5	60.4		57.4
Progression Factor	0.75	0.19		1.00	1.00	1.00		0.95	0.90	1.00		1.00
Incremental Delay, d2	0.7	1.1		4.5	5.8	9.0		14.1	0.7	70.0		0.4
Delay (s)	26.6	5.7		61.6	51.0	52.3		59.8	36.2	130.4		57.8
Level of Service	C	A		E	D	D		E	D	F		E
Approach Delay (s)		12.5			51.8			57.7			99.7	
Approach LOS		B			D			E			F	

Intersection Summary			
HCM Average Control Delay	35.2	HCM Level of Service	D
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	71.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1004: 95th Street & Michigan Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱		↰	↑↑		↰		↱	↰	↱	
Volume (vph)	0	874	216	58	624	0	111	0	106	3	10	2
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	11	11	8	12	12	12	14	15	12
Total Lost time (s)		4.0		4.0	4.0		4.0		4.0	4.0	4.0	
Lane Util. Factor		0.95		1.00	0.95		1.00		1.00	1.00	1.00	
Frpb, ped/bikes		0.99		1.00	1.00		1.00		0.98	1.00	1.00	
Flpb, ped/bikes		1.00		1.00	1.00		1.00		1.00	0.99	1.00	
Frt		0.97		1.00	1.00		1.00		0.85	1.00	0.98	
Flt Protected		1.00		0.95	1.00		0.95		1.00	0.95	1.00	
Satd. Flow (prot)		2860		1650	3005		1390		1465	1803	1934	
Flt Permitted		1.00		0.16	1.00		0.75		1.00	0.95	1.00	
Satd. Flow (perm)		2860		283	3005		1096		1465	1803	1934	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	971	240	64	693	0	123	0	118	3	11	2
RTOR Reduction (vph)	0	22	0	0	0	0	0	0	80	0	1	0
Lane Group Flow (vph)	0	1189	0	64	693	0	123	0	38	3	12	0
Confl. Peds. (#/hr)	49		15	15		49			12	12		
Heavy Vehicles (%)	0%	6%	14%	0%	10%	0%	23%	0%	2%	0%	0%	0%
Turn Type				Perm			custom		custom	Perm		
Protected Phases		4			8						6	
Permitted Phases				8			2		2	6		
Actuated Green, G (s)		60.0		60.0	60.0		32.0		32.0	32.0	32.0	
Effective Green, g (s)		60.0		60.0	60.0		32.0		32.0	32.0	32.0	
Actuated g/C Ratio		0.60		0.60	0.60		0.32		0.32	0.32	0.32	
Clearance Time (s)		4.0		4.0	4.0		4.0		4.0	4.0	4.0	
Lane Grp Cap (vph)		1716		170	1803		351		469	577	619	
v/s Ratio Prot		c0.42			0.23						0.01	
v/s Ratio Perm				0.23			c0.11		0.03	0.00		
v/c Ratio		0.69		0.38	0.38		0.35		0.08	0.01	0.02	
Uniform Delay, d1		13.7		10.3	10.4		26.0		23.7	23.2	23.3	
Progression Factor		1.00		1.00	1.00		1.00		1.00	1.00	1.00	
Incremental Delay, d2		2.3		6.3	0.6		2.7		0.3	0.0	0.1	
Delay (s)		16.0		16.6	11.0		28.8		24.1	23.2	23.3	
Level of Service		B		B	B		C		C	C	C	
Approach Delay (s)		16.0			11.5			26.5			23.3	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM Average Control Delay	15.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	59.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1005: 98th Place & Halsted Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↰	↰↑	↱	↰	↑↑↑			↑↑↱	
Volume (vph)	0	0	0	332	39	1048	199	894	0	0	443	736
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	12	12	10	10	12	12	11	12
Total Lost time (s)				4.0	4.0	5.0	3.0	4.0			4.0	
Lane Util. Factor				0.95	0.95	1.00	1.00	0.91			0.91	
Frpb, ped/bikes				1.00	1.00	0.99	1.00	1.00			0.98	
Flpb, ped/bikes				1.00	1.00	1.00	1.00	1.00			1.00	
Frt				1.00	1.00	0.85	1.00	1.00			0.91	
Flt Protected				0.95	1.00	1.00	0.95	1.00			1.00	
Satd. Flow (prot)				1525	1629	1479	1550	4368			3928	
Flt Permitted				0.95	1.00	1.00	0.95	1.00			1.00	
Satd. Flow (perm)				1525	1629	1479	1550	4368			3928	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	0	0	339	40	1069	203	912	0	0	452	751
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	339	40	1069	203	912	0	0	1203	0
Confl. Peds. (#/hr)	2					2	12		8	8		12
Heavy Vehicles (%)	0%	0%	0%	3%	5%	2%	3%	5%	0%	0%	5%	8%
Turn Type				Perm		Perm	Prot					
Protected Phases					8		5	2			6	
Permitted Phases				8		8						
Actuated Green, G (s)				30.0	30.0	30.0	32.0	66.0			31.0	
Effective Green, g (s)				31.0	31.0	30.0	32.0	66.0			31.0	
Actuated g/C Ratio				0.30	0.30	0.29	0.30	0.63			0.30	
Clearance Time (s)				5.0	5.0	5.0	3.0	4.0			4.0	
Lane Grp Cap (vph)				450	481	423	472	2746			1160	
v/s Ratio Prot							c0.13	0.21			c0.31	
v/s Ratio Perm				0.22	0.02	c0.72						
v/c Ratio				0.75	0.08	2.53	0.43	0.33			1.87dr	
Uniform Delay, d1				33.5	26.7	37.5	29.2	9.2			37.0	
Progression Factor				1.00	1.00	1.00	0.65	2.37			1.00	
Incremental Delay, d2				11.1	0.3	694.2	2.0	0.2			36.5	
Delay (s)				44.6	27.1	731.7	21.2	21.9			73.5	
Level of Service				D	C	F	C	C			E	
Approach Delay (s)		0.0			551.4			21.8			73.5	
Approach LOS		A			F			C			E	

Intersection Summary			
HCM Average Control Delay	241.9	HCM Level of Service	F
HCM Volume to Capacity ratio	1.31		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	94.4%	ICU Level of Service	F
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1006: 99th Street & Halsted Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↰↑↱						↑↑↑	↱↱	↰	↑↑↑	
Volume (vph)	266	867	87	0	0	0	0	826	641	280	495	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	13	12	12	12	12	12	10	10	8	12	12	12
Total Lost time (s)	5.0	5.0						4.0	4.0	3.0	4.0	
Lane Util. Factor	0.91	0.91						0.91	0.88	1.00	0.91	
Frpb, ped/bikes	1.00	1.00						1.00	0.97	1.00	1.00	
Flpb, ped/bikes	1.00	1.00						1.00	1.00	1.00	1.00	
Frt	1.00	0.99						1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00						1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1497	3186						4368	2187	1583	4636	
Flt Permitted	0.95	1.00						1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1497	3186						4368	2187	1583	4636	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	274	894	90	0	0	0	0	852	661	289	510	0
RTOR Reduction (vph)	0	7	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	247	1004	0	0	0	0	0	852	661	289	510	0
Confl. Peds. (#/hr)	4		14	14		4	4		3	3		4
Heavy Vehicles (%)	7%	1%	0%	0%	0%	0%	0%	5%	4%	8%	6%	0%
Turn Type	Perm								Perm	Prot		
Protected Phases		4						2		1	6	
Permitted Phases	4								2			
Actuated Green, G (s)	34.0	34.0						28.0	28.0	31.0	62.0	
Effective Green, g (s)	34.0	34.0						28.0	28.0	31.0	62.0	
Actuated g/C Ratio	0.32	0.32						0.27	0.27	0.30	0.59	
Clearance Time (s)	5.0	5.0						4.0	4.0	3.0	4.0	
Lane Grp Cap (vph)	485	1032						1165	583	467	2737	
v/s Ratio Prot								0.20		c0.18	0.11	
v/s Ratio Perm	0.16	0.32							c0.30			
v/c Ratio	0.51	0.97						0.73	1.13	0.62	0.19	
Uniform Delay, d1	28.7	35.0						35.1	38.5	31.9	9.9	
Progression Factor	1.00	1.00						0.44	0.47	1.06	0.44	
Incremental Delay, d2	3.8	22.2						0.4	62.5	2.5	0.1	
Delay (s)	32.5	57.3						15.7	80.4	36.4	4.4	
Level of Service	C	E						B	F	D	A	
Approach Delay (s)		52.4			0.0			44.0			16.0	
Approach LOS		D			A			D			B	

Intersection Summary			
HCM Average Control Delay	40.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	94.4%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↰	↑↱		↰	↑			↱	
Volume (vph)	0	0	0	216	4	21	3	160	0	0	99	3
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	14	12	12	16	12
Total Lost time (s)				4.0	4.0		4.0	4.0			-3.0	
Lane Util. Factor				1.00	0.95		1.00	1.00			1.00	
Frpb, ped/bikes				1.00	0.98		1.00	1.00			1.00	
Flpb, ped/bikes				1.00	1.00		1.00	1.00			1.00	
Frt				1.00	0.87		1.00	1.00			1.00	
Flt Protected				0.95	1.00		0.95	1.00			1.00	
Satd. Flow (prot)				1578	2709		1285	1882			1958	
Flt Permitted				0.95	1.00		0.59	1.00			1.00	
Satd. Flow (perm)				1578	2709		805	1882			1958	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	240	4	23	3	178	0	0	110	3
RTOR Reduction (vph)	0	0	0	0	18	0	0	0	0	0	1	0
Lane Group Flow (vph)	0	0	0	240	9	0	3	178	0	0	112	0
Confl. Peds. (#/hr)	2		2	2		2	3					3
Heavy Vehicles (%)	0%	0%	0%	8%	25%	5%	33%	2%	0%	0%	3%	33%
Turn Type				Perm			pm+pt					
Protected Phases					8		7	2			6	
Permitted Phases				8			2					
Actuated Green, G (s)				27.0	27.0		50.0	50.0			40.0	
Effective Green, g (s)				27.0	27.0		50.0	50.0			46.0	
Actuated g/C Ratio				0.32	0.32		0.59	0.59			0.54	
Clearance Time (s)				4.0	4.0		4.0	4.0			3.0	
Lane Grp Cap (vph)				501	861		513	1107			1060	
v/s Ratio Prot					0.00		0.00	c0.09			0.06	
v/s Ratio Perm				c0.15			0.00					
v/c Ratio				0.48	0.01		0.01	0.16			0.11	
Uniform Delay, d1				23.3	19.9		9.7	8.0			9.5	
Progression Factor				1.00	1.00		1.04	1.18			1.00	
Incremental Delay, d2				3.3	0.0		0.0	0.3			0.2	
Delay (s)				26.6	19.9		10.1	9.7			9.7	
Level of Service				C	B		B	A			A	
Approach Delay (s)		0.0			25.9			9.7			9.7	
Approach LOS		A			C			A			A	

Intersection Summary			
HCM Average Control Delay	17.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.27		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	33.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1008: 99th St & Wentworth Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱			✥			↱		↰	↑	
Volume (vph)	8	5	5	3	0	18	0	137	39	33	282	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	16	15	12	8	12	8	12	12	12	10	13	12
Total Lost time (s)	4.0	4.0			4.0			3.0		4.0	4.0	
Lane Util. Factor	1.00	1.00			1.00			1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.99			1.00			1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00			1.00			1.00		1.00	1.00	
Frt	1.00	0.93			0.88			0.97		1.00	1.00	
Flt Protected	0.95	1.00			0.99			1.00		0.95	1.00	
Satd. Flow (prot)	1938	1809			1578			1687		1595	1755	
Flt Permitted	0.74	1.00			0.98			1.00		0.61	1.00	
Satd. Flow (perm)	1516	1809			1565			1687		1022	1755	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	8	5	5	3	0	19	0	144	41	35	297	0
RTOR Reduction (vph)	0	3	0	0	13	0	0	12	0	0	0	0
Lane Group Flow (vph)	8	7	0	0	9	0	0	173	0	35	297	0
Confl. Peds. (#/hr)			3	3			5		2	2		5
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	3%	3%	0%	6%	0%
Turn Type	Perm			Perm						pm+pt		
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8						6		
Actuated Green, G (s)	27.0	27.0			27.0			40.0		50.0	50.0	
Effective Green, g (s)	27.0	27.0			27.0			40.0		50.0	50.0	
Actuated g/C Ratio	0.32	0.32			0.32			0.47		0.59	0.59	
Clearance Time (s)	4.0	4.0			4.0			3.0		4.0	4.0	
Lane Grp Cap (vph)	482	575			497			794		648	1032	
v/s Ratio Prot		0.00						0.10		0.00	c0.17	
v/s Ratio Perm	0.01				c0.01					0.03		
v/c Ratio	0.02	0.01			0.02			0.22		0.05	0.29	
Uniform Delay, d1	19.9	19.9			19.9			13.3		8.4	8.7	
Progression Factor	1.00	1.00			1.00			1.00		0.92	0.84	
Incremental Delay, d2	0.1	0.0			0.1			0.6		0.2	0.7	
Delay (s)	20.0	19.9			20.0			13.9		7.9	7.9	
Level of Service	B	B			B			B		A	A	
Approach Delay (s)		19.9			20.0			13.9			7.9	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM Average Control Delay	10.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.19		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	40.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1009: 99th St & State Street

	↗	↘	↖	↑	↓	↙
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	Y		↰	↑	↱	
Volume (vph)	63	14	10	346	159	12
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	14	12	13	12	10	12
Total Lost time (s)	4.0		4.0	4.0	4.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.97		1.00	1.00	0.99	
Flt Protected	0.96		0.95	1.00	1.00	
Satd. Flow (prot)	1791		1767	1765	1634	
Flt Permitted	0.96		0.64	1.00	1.00	
Satd. Flow (perm)	1791		1187	1765	1634	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	70	16	11	384	177	13
RTOR Reduction (vph)	11	0	0	0	4	0
Lane Group Flow (vph)	75	0	11	384	186	0
Confl. Peds. (#/hr)		2				
Heavy Vehicles (%)	0%	0%	0%	2%	2%	0%
Turn Type			Perm			
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	21.0		36.0	36.0	36.0	
Effective Green, g (s)	21.0		36.0	36.0	36.0	
Actuated g/C Ratio	0.32		0.55	0.55	0.55	
Clearance Time (s)	4.0		4.0	4.0	4.0	
Lane Grp Cap (vph)	579		657	978	905	
v/s Ratio Prot	c0.04			c0.22	0.11	
v/s Ratio Perm			0.01			
v/c Ratio	0.13		0.02	0.39	0.21	
Uniform Delay, d1	15.5		6.5	8.3	7.3	
Progression Factor	1.00		0.32	0.51	1.17	
Incremental Delay, d2	0.5		0.0	1.1	0.5	
Delay (s)	16.0		2.1	5.3	9.0	
Level of Service	B		A	A	A	
Approach Delay (s)	16.0			5.2	9.0	
Approach LOS	B			A	A	

Intersection Summary			
HCM Average Control Delay	7.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	39.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1010: 99th St & Michigan Avenue

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↰↑↱		↰	↑			↑	↱
Volume (vph)	0	0	0	21	266	14	552	244	0	0	181	34
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	14	16	12	12	15	12	12	13	10
Total Lost time (s)					4.0		4.0	4.0			3.0	3.0
Lane Util. Factor					0.95		1.00	1.00			1.00	1.00
Frpb, ped/bikes					1.00		1.00	1.00			1.00	1.00
Flpb, ped/bikes					1.00		1.00	1.00			1.00	1.00
Frt					0.99		1.00	1.00			1.00	0.85
Flt Protected					1.00		0.95	1.00			1.00	1.00
Satd. Flow (prot)					3741		1660	1752			1603	1298
Flt Permitted					1.00		0.59	1.00			1.00	1.00
Satd. Flow (perm)					3741		1025	1752			1603	1298
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	23	296	16	613	271	0	0	201	38
RTOR Reduction (vph)	0	0	0	0	4	0	0	0	0	0	0	21
Lane Group Flow (vph)	0	0	0	0	331	0	613	271	0	0	201	17
Confl. Peds. (#/hr)									30	30		
Heavy Vehicles (%)	0%	0%	0%	11%	2%	0%	3%	13%	0%	0%	16%	10%
Turn Type				Split			pm+pt					Perm
Protected Phases				8	8		7	2			6	
Permitted Phases							2					6
Actuated Green, G (s)					26.0		51.0	51.0			38.0	38.0
Effective Green, g (s)					26.0		51.0	51.0			38.0	38.0
Actuated g/C Ratio					0.31		0.60	0.60			0.45	0.45
Clearance Time (s)					4.0		4.0	4.0			3.0	3.0
Lane Grp Cap (vph)					1144		690	1051			717	580
v/s Ratio Prot					c0.09		c0.10	0.15			0.13	
v/s Ratio Perm							c0.43					0.01
v/c Ratio					0.29		0.89	0.26			0.28	0.03
Uniform Delay, d1					22.5		16.6	8.0			14.9	13.2
Progression Factor					1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2					0.6		15.8	0.6			1.0	0.1
Delay (s)					23.1		32.4	8.6			15.8	13.3
Level of Service					C		C	A			B	B
Approach Delay (s)		0.0			23.1			25.1			15.4	
Approach LOS		A			C			C			B	

Intersection Summary			
HCM Average Control Delay	23.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	61.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					✥		↰	↑↱		↰	↑↱	
Volume (vph)	0	0	0	12	11	9	314	500	91	70	321	12
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	15	12	12	12	12	12	13	12
Total Lost time (s)					4.0		3.0	4.0		3.0	4.0	
Lane Util. Factor					1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes					1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes					1.00		1.00	1.00		1.00	1.00	
Frt					0.96		1.00	0.98		1.00	0.99	
Flt Protected					0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)					1794		1691	3237		1707	3352	
Flt Permitted					0.98		0.52	1.00		0.33	1.00	
Satd. Flow (perm)					1794		919	3237		600	3352	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	13	12	10	349	556	101	78	357	13
RTOR Reduction (vph)	0	0	0	0	7	0	0	20	0	0	3	0
Lane Group Flow (vph)	0	0	0	0	28	0	349	637	0	78	367	0
Confl. Peds. (#/hr)	2					2	6		20	20		6
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	0%	0%	0%	0%	11%	0%	1%	3%	0%	0%	5%	0%
Turn Type				Split			pm+pt			pm+pt		
Protected Phases				8	8		5	2		1	6	
Permitted Phases							2			6		
Actuated Green, G (s)					23.0		41.0	34.0		41.0	34.0	
Effective Green, g (s)					23.0		41.0	34.0		41.0	34.0	
Actuated g/C Ratio					0.31		0.55	0.45		0.55	0.45	
Clearance Time (s)					4.0		3.0	4.0		3.0	4.0	
Lane Grp Cap (vph)					550		574	1467		431	1520	
v/s Ratio Prot					c0.02		c0.06	0.20		0.02	0.11	
v/s Ratio Perm							c0.28			0.08		
v/c Ratio					0.05		0.61	0.43		0.18	0.24	
Uniform Delay, d1					18.3		12.9	14.0		11.8	12.6	
Progression Factor					1.00		0.71	0.73		1.00	1.00	
Incremental Delay, d2					0.2		4.4	0.9		0.9	0.4	
Delay (s)					18.5		13.6	11.0		12.7	13.0	
Level of Service					B		B	B		B	B	
Approach Delay (s)		0.0			18.5			11.9			12.9	
Approach LOS		A			B			B			B	

Intersection Summary			
HCM Average Control Delay	12.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	55.0%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1012: 100th Street & Martin Luther King Jr Drive

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥		↰	↑↱		↰	↑↱	
Volume (vph)	54	51	21	10	160	211	19	640	11	66	253	14
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	16	12	12	10	11	12	12	11	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.98			0.93		1.00	1.00		1.00	0.99	
Flt Protected		0.98			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1949			1626		1596	3232		1641	3131	
Flt Permitted		0.71			0.99		0.58	1.00		0.35	1.00	
Satd. Flow (perm)		1411			1617		973	3232		606	3131	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	57	54	22	11	168	222	20	674	12	69	266	15
RTOR Reduction (vph)	0	9	0	0	59	0	0	2	0	0	5	0
Lane Group Flow (vph)	0	124	0	0	342	0	20	684	0	69	276	0
Confl. Peds. (#/hr)									6	6		
Confl. Bikes (#/hr)			1	1								
Heavy Vehicles (%)	0%	0%	0%	12%	2%	2%	0%	2%	0%	4%	5%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		25.0			25.0		42.0	42.0		42.0	42.0	
Effective Green, g (s)		25.0			25.0		42.0	42.0		42.0	42.0	
Actuated g/C Ratio		0.33			0.33		0.56	0.56		0.56	0.56	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		470			539		545	1810		339	1753	
v/s Ratio Prot								c0.21			0.09	
v/s Ratio Perm		0.09			c0.21		0.02			0.11		
v/c Ratio		0.26			0.63		0.04	0.38		0.20	0.16	
Uniform Delay, d1		18.3			21.1		7.4	9.2		8.2	8.0	
Progression Factor		1.00			1.00		1.00	1.00		0.15	0.05	
Incremental Delay, d2		1.4			5.6		0.1	0.6		1.3	0.2	
Delay (s)		19.6			26.7		7.5	9.8		2.5	0.6	
Level of Service		B			C		A	A		A	A	
Approach Delay (s)		19.6			26.7			9.7			1.0	
Approach LOS		B			C			A			A	

Intersection Summary			
HCM Average Control Delay	12.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	66.7%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis
1013: 100th Street & Cottage Grove Avenue

1/14/2013

	↗	↘	↖	↑	↓	↙
Movement	**EBL**	**EBR**	**NBL**	**NBT**	**SBT**	**SBR**
Lane Configurations	↰↱			↰↑↑	↑↑↱	
Sign Control	Stop			Stop	Stop	
Volume (vph)	43	54	100	308	188	19
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	48	60	111	342	209	21

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	108	225	228	139	91
Volume Left (vph)	48	111	0	0	0
Volume Right (vph)	60	0	0	0	21
Hadj (s)	-0.16	0.33	0.09	0.09	-0.08
Departure Headway (s)	5.2	5.4	5.1	5.3	5.2
Degree Utilization, x	0.16	0.34	0.32	0.21	0.13
Capacity (veh/h)	635	657	688	648	668
Control Delay (s)	9.2	9.8	9.3	8.5	7.8
Approach Delay (s)	9.2	9.6		8.2	
Approach LOS	A	A		A	

Intersection Summary			
Delay	9.1		
HCM Level of Service	A		
Intersection Capacity Utilization	34.2%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Signalized Intersection Capacity Analysis
1014: 103rd Street & Vincennes Avenue

1/14/2013

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR
Lane Configurations		↰	↑	↱	↰	↑	↱			↰	↑↱	
Volume (vph)	44	51	307	13	5	477	37	39	41	52	700	41
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		3.5	4.0	4.0	4.0	4.0	4.0			4.0	4.0	
Lane Util. Factor		1.00	1.00	1.00	1.00	1.00	1.00			1.00	0.95	
Frpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	0.97			1.00	1.00	
Flpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	
Frt		1.00	1.00	0.85	1.00	1.00	0.85			1.00	0.99	
Flt Protected		0.95	1.00	1.00	0.95	1.00	1.00			0.95	1.00	
Satd. Flow (prot)		1575	1731	1530	1710	1731	1487			1710	3292	
Flt Permitted		0.11	1.00	1.00	0.56	1.00	1.00			0.41	1.00	
Satd. Flow (perm)		187	1731	1530	1000	1731	1487			737	3292	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	49	57	341	14	6	530	41	43	46	58	778	46
RTOR Reduction (vph)	0	0	0	7	0	0	30	0	0	0	4	0
Lane Group Flow (vph)	0	106	341	7	6	530	54	0	0	104	820	0
Confl. Peds. (#/hr)		5					5					6
Heavy Vehicles (%)	8%	9%	4%	0%	0%	4%	0%	0%	0%	0%	3%	0%
Turn Type	Perm	pm+pt		Perm	Perm		Perm		Perm	Perm		
Protected Phases		7	4			8					2	
Permitted Phases	4	4		4	8		8		2	2		
Actuated Green, G (s)		50.0	50.0	50.0	32.0	32.0	32.0			25.0	25.0	
Effective Green, g (s)		50.0	50.0	50.0	32.0	32.0	32.0			25.0	25.0	
Actuated g/C Ratio		0.48	0.48	0.48	0.30	0.30	0.30			0.24	0.24	
Clearance Time (s)		3.5	4.0	4.0	4.0	4.0	4.0			4.0	4.0	
Lane Grp Cap (vph)		281	824	729	305	528	453			175	784	
v/s Ratio Prot		0.05	c0.20			c0.31					c0.25	
v/s Ratio Perm		0.13		0.00	0.01		0.04			0.14		
v/c Ratio		0.38	0.41	0.01	0.02	1.00	0.12			0.59	1.05	
Uniform Delay, d1		20.1	17.9	14.5	25.5	36.5	26.3			35.5	40.0	
Progression Factor		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	
Incremental Delay, d2		3.8	1.5	0.0	0.1	40.1	0.5			14.0	44.9	
Delay (s)		24.0	19.5	14.5	25.6	76.6	26.9			49.5	84.9	
Level of Service		C	B	B	C	E	C			D	F	
Approach Delay (s)			20.4			69.4					80.9	
Approach LOS			C			E					F	

Intersection Summary			
HCM Average Control Delay	58.1	HCM Level of Service	E
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	78.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1014: 103rd Street & Vincennes Avenue

1/14/2013

	↘	↓	↙	↲	↰	↘	↓	↲
Movement	SBL	SBT	SBR	SBR2	SEL2	SEL	SER	SER2
Lane Configurations	↰	↑↱				↰	↱↰	
Volume (vph)	40	285	26	31	4	53	110	12
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.5	4.5				4.5	4.5	
Lane Util. Factor	1.00	0.95				1.00	0.88	
Frpb, ped/bikes	1.00	1.00				1.00	1.00	
Flpb, ped/bikes	1.00	1.00				1.00	1.00	
Frt	1.00	0.98				1.00	0.85	
Flt Protected	0.95	1.00				0.95	1.00	
Satd. Flow (prot)	1706	3280				1710	2622	
Flt Permitted	0.16	1.00				0.95	1.00	
Satd. Flow (perm)	293	3280				1710	2622	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	44	317	29	34	4	59	122	13
RTOR Reduction (vph)	0	7	0	0	0	0	7	0
Lane Group Flow (vph)	44	373	0	0	0	63	128	0
Confl. Peds. (#/hr)	6							
Heavy Vehicles (%)	0%	2%	0%	0%	0%	0%	3%	0%
Turn Type	Perm				Split		Perm	
Protected Phases		6			9	9		
Permitted Phases	6						9	
Actuated Green, G (s)	24.5	24.5				17.5	17.5	
Effective Green, g (s)	24.5	24.5				17.5	17.5	
Actuated g/C Ratio	0.23	0.23				0.17	0.17	
Clearance Time (s)	4.5	4.5				4.5	4.5	
Lane Grp Cap (vph)	68	765				285	437	
v/s Ratio Prot		0.11				0.04		
v/s Ratio Perm	0.15						c0.05	
v/c Ratio	0.65	0.49				0.22	0.29	
Uniform Delay, d1	36.3	34.8				37.9	38.3	
Progression Factor	1.00	1.00				1.00	1.00	
Incremental Delay, d2	39.0	2.2				1.8	1.7	
Delay (s)	75.3	37.0				39.6	40.0	
Level of Service	E	D				D	D	
Approach Delay (s)		41.0				39.9		
Approach LOS		D				D		

Intersection Summary

HCM Signalized Intersection Capacity Analysis
1015: 103rd Street & Morgan Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰			↱			✥				
Volume (vph)	23	435	0	0	476	25	115	113	111	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	11	11	11	16	11	12	15	12	12	15	12
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		1.00			0.99			0.96				
Flt Protected		1.00			1.00			0.98				
Satd. Flow (prot)		1653			1930			1773				
Flt Permitted		0.96			1.00			0.98				
Satd. Flow (perm)		1596			1930			1773				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	26	483	0	0	529	28	128	126	123	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	509	0	0	557	0	0	377	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)		31.0			31.0			26.0				
Effective Green, g (s)		31.0			31.0			26.0				
Actuated g/C Ratio		0.48			0.48			0.40				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		761			920			709				
v/s Ratio Prot					0.29							
v/s Ratio Perm		c0.32						0.21				
v/c Ratio		0.67			0.61			0.53				
Uniform Delay, d1		13.1			12.5			14.9				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		4.6			3.0			2.8				
Delay (s)		17.7			15.5			17.7				
Level of Service		B			B			B				
Approach Delay (s)		17.7			15.5			17.7			0.0	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM Average Control Delay	16.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	70.8%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1016: 103rd Street & Halsted Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱	↰	↑↑	↱	↰	↑↑	↱
Volume (vph)	112	331	110	64	263	108	143	1647	124	65	445	93
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	10	10	9	9	10	9
Total Lost time (s)		4.0	4.0		4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		1.00	0.96		1.00	0.96	1.00	1.00	0.97	1.00	1.00	0.96
Flpb, ped/bikes		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.99	1.00		0.99	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1919	1426		1923	1396	1500	3099	1284	1425	2956	1265
Flt Permitted		0.67	1.00		0.65	1.00	0.40	1.00	1.00	0.09	1.00	1.00
Satd. Flow (perm)		1293	1426		1267	1396	625	3099	1284	142	2956	1265
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	118	348	116	67	277	114	151	1734	131	68	468	98
RTOR Reduction (vph)	0	0	68	0	0	67	0	0	29	0	0	59
Lane Group Flow (vph)	0	466	48	0	344	47	151	1734	102	68	468	39
Confl. Peds. (#/hr)	42		39	39		42	20		8	8		20
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	6%	4%	3%	0%	6%	5%	6%	3%	4%	8%	8%	4%
Turn Type	pm+pt		Perm	Perm		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)		43.0	43.0		43.0	43.0	53.1	44.4	44.4	48.9	42.3	42.3
Effective Green, g (s)		43.0	43.0		43.0	43.0	53.1	44.4	44.4	48.9	42.3	42.3
Actuated g/C Ratio		0.41	0.41		0.41	0.41	0.51	0.42	0.42	0.47	0.40	0.40
Clearance Time (s)		4.0	4.0		4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		530	584		519	572	389	1310	543	147	1191	510
v/s Ratio Prot							c0.03	c0.56		c0.03	0.16	
v/s Ratio Perm		c0.36	0.03		0.27	0.03	0.16		0.08	0.19		0.03
v/c Ratio		0.88	0.08		0.66	0.08	0.39	1.32	0.19	0.46	0.39	0.08
Uniform Delay, d1		28.6	18.9		25.1	18.9	14.6	30.3	19.0	23.1	22.2	19.3
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.09	0.78	0.45
Incremental Delay, d2		15.3	0.3		6.5	0.3	0.6	151.1	0.8	2.2	0.9	0.3
Delay (s)		43.9	19.2		31.7	19.2	15.3	181.4	19.8	27.3	18.3	9.0
Level of Service		D	B		C	B	B	F	B	C	B	A
Approach Delay (s)		39.0			28.6			158.4			17.8	
Approach LOS		D			C			F			B	

Intersection Summary			
HCM Average Control Delay	99.3	HCM Level of Service	F
HCM Volume to Capacity ratio	1.06		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	108.5%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1017: 103rd Street & Normal Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			✥				
Volume (vph)	56	451	56	48	383	48	64	59	52	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	15	12	12	15	12
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		0.99			0.99			0.96				
Flt Protected		1.00			1.00			0.98				
Satd. Flow (prot)		1627			1627			1778				
Flt Permitted		0.92			0.91			0.98				
Satd. Flow (perm)		1496			1484			1778				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	62	501	62	53	426	53	71	66	58	0	0	0
RTOR Reduction (vph)	0	6	0	0	6	0	0	23	0	0	0	0
Lane Group Flow (vph)	0	619	0	0	526	0	0	172	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm			Perm					
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Actuated Green, G (s)		38.0			38.0			19.0				
Effective Green, g (s)		38.0			38.0			19.0				
Actuated g/C Ratio		0.58			0.58			0.29				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		875			868			520				
v/s Ratio Prot												
v/s Ratio Perm		c0.41			0.35			0.10				
v/c Ratio		0.71			0.61			0.33				
Uniform Delay, d1		9.6			8.7			18.0				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		4.8			3.1			1.7				
Delay (s)		14.4			11.8			19.7				
Level of Service		B			B			B				
Approach Delay (s)		14.4			11.8			19.7			0.0	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM Average Control Delay	14.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	59.1%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1018: 103rd Street & Wentworth Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱		↰	↱		✥	
Volume (vph)	22	472	62	31	388	38	45	146	87	49	192	26
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	11	12	12	15	12
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frpb, ped/bikes		1.00	0.97		1.00	0.95		1.00	0.98		0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		0.99	1.00		1.00	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		0.99	
Flt Protected		1.00	1.00		1.00	1.00		0.99	1.00		0.99	
Satd. Flow (prot)		1656	1255		1634	1288		1663	1490		1776	
Flt Permitted		0.97	1.00		0.95	1.00		0.89	1.00		0.91	
Satd. Flow (perm)		1618	1255		1552	1288		1499	1490		1636	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	23	497	65	33	408	40	47	154	92	52	202	27
RTOR Reduction (vph)	0	0	28	0	0	17	0	0	63	0	5	0
Lane Group Flow (vph)	0	520	37	0	441	23	0	201	29	0	276	0
Confl. Peds. (#/hr)	33		15	15		33	68		5	5		68
Confl. Bikes (#/hr)	4					4						
Heavy Vehicles (%)	0%	5%	14%	19%	5%	9%	2%	2%	1%	10%	7%	8%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		43.0	43.0		43.0	43.0		24.0	24.0		24.0	
Effective Green, g (s)		43.0	43.0		43.0	43.0		24.0	24.0		24.0	
Actuated g/C Ratio		0.57	0.57		0.57	0.57		0.32	0.32		0.32	
Clearance Time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	
Lane Grp Cap (vph)		928	720		890	738		480	477		524	
v/s Ratio Prot												
v/s Ratio Perm		c0.32	0.03		0.28	0.02		0.13	0.02		c0.17	
v/c Ratio		0.56	0.05		0.50	0.03		0.42	0.06		0.53	
Uniform Delay, d1		10.1	7.0		9.5	7.0		20.0	17.7		20.8	
Progression Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2		2.4	0.1		2.0	0.1		2.7	0.2		3.7	
Delay (s)		12.5	7.2		11.5	7.0		22.7	17.9		24.6	
Level of Service		B	A		B	A		C	B		C	
Approach Delay (s)		11.9			11.1			21.2			24.6	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM Average Control Delay	15.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	87.6%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑↱		↰	↑↑↱		↰	↑	↱	↰	↑	↱
Volume (vph)	81	415	28	17	274	38	52	302	38	38	92	9
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	11	16	8	10	10	10	10	10	10
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	0.98	1.00	1.00	0.99
Flpb, ped/bikes	0.99	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1462	2990		1459	3528		1534	1647	1301	1517	1541	1156
Flt Permitted	0.54	1.00		0.45	1.00		0.69	1.00	1.00	0.45	1.00	1.00
Satd. Flow (perm)	838	2990		685	3528		1116	1647	1301	722	1541	1156
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	90	461	31	19	304	42	58	336	42	42	102	10
RTOR Reduction (vph)	0	7	0	0	17	0	0	0	22	0	0	6
Lane Group Flow (vph)	90	485	0	19	329	0	58	336	20	42	102	4
Confl. Peds. (#/hr)	16		9	9		16	1		5	5		1
Heavy Vehicles (%)	8%	6%	0%	13%	8%	3%	4%	2%	8%	5%	9%	22%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	31.0	31.0		31.0	31.0		26.0	26.0	26.0	26.0	26.0	26.0
Effective Green, g (s)	31.0	31.0		31.0	31.0		26.0	26.0	26.0	26.0	26.0	26.0
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.40	0.40	0.40	0.40	0.40	0.40
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	400	1426		327	1683		446	659	520	289	616	462
v/s Ratio Prot		c0.16			0.09			c0.20			0.07	
v/s Ratio Perm	0.11			0.03			0.05		0.02	0.06		0.00
v/c Ratio	0.23	0.34		0.06	0.20		0.13	0.51	0.04	0.15	0.17	0.01
Uniform Delay, d1	10.0	10.6		9.1	9.8		12.3	14.7	11.9	12.4	12.5	11.7
Progression Factor	1.00	1.00		1.00	1.00		0.64	0.78	0.37	0.52	0.52	0.28
Incremental Delay, d2	1.3	0.6		0.3	0.3		0.6	2.8	0.1	1.0	0.6	0.0
Delay (s)	11.3	11.3		9.5	10.1		8.5	14.2	4.5	7.5	7.1	3.4
Level of Service	B	B		A	B		A	B	A	A	A	A
Approach Delay (s)		11.3			10.0			12.5			7.0	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM Average Control Delay	10.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	51.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1020: 103rd Street & Michigan Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	92	391	79	43	259	64	62	360	43	55	139	46
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	11	10	11	11	10	11	11	10	11	11
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	0.96	1.00		0.99	1.00		0.98	1.00		0.97	1.00	
Frt	1.00	0.97		1.00	0.97		1.00	0.98		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1462	3059		1588	3001		1540	3021		1402	2789	
Flt Permitted	0.54	1.00		0.44	1.00		0.63	1.00		0.47	1.00	
Satd. Flow (perm)	835	3059		730	3001		1021	3021		691	2789	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	97	412	83	45	273	67	65	379	45	58	146	48
RTOR Reduction (vph)	0	0	0	0	0	0	0	12	0	0	28	0
Lane Group Flow (vph)	97	495	0	45	340	0	65	412	0	58	166	0
Confl. Peds. (#/hr)	98		10	10		98	28		52	52		28
Heavy Vehicles (%)	5%	5%	4%	0%	5%	7%	2%	6%	13%	10%	11%	20%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	36.0	36.0		36.0	36.0		31.0	31.0		31.0	31.0	
Effective Green, g (s)	36.0	36.0		36.0	36.0		31.0	31.0		31.0	31.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.41	0.41		0.41	0.41	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	401	1468		350	1440		422	1249		286	1153	
v/s Ratio Prot		c0.16			0.11			c0.14			0.06	
v/s Ratio Perm	0.12			0.06			0.06			0.08		
v/c Ratio	0.24	0.34		0.13	0.24		0.15	0.33		0.20	0.14	
Uniform Delay, d1	11.5	12.1		10.8	11.4		13.8	14.9		14.1	13.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.4	0.6		0.8	0.4		0.8	0.7		1.6	0.3	
Delay (s)	12.9	12.7		11.6	11.8		14.6	15.6		15.7	14.0	
Level of Service	B	B		B	B		B	B		B	B	
Approach Delay (s)		12.7			11.8			15.5			14.4	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	13.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	49.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1021: 103rd Street & Martin Luther King Jr Drive

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱		↰	↑↱		↰	↑↱	
Volume (vph)	103	310	35	23	315	46	62	397	25	41	196	44
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	12	8	16	12	9	10	10	9	10	10
Total Lost time (s)	3.0	7.0		3.0	7.0		3.0	7.0		3.0	7.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.99		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1533	1576		1473	1841		1533	3073		1372	2892	
Flt Permitted	0.46	1.00		0.48	1.00		0.60	1.00		0.43	1.00	
Satd. Flow (perm)	742	1576		748	1841		961	3073		622	2892	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	108	326	37	24	332	48	65	418	26	43	206	46
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	108	363	0	24	380	0	65	444	0	43	252	0
Confl. Peds. (#/hr)	7		23	23		7	10		8	8		10
Confl. Bikes (#/hr)	1		2	2		1	1		1	1		1
Heavy Vehicles (%)	4%	8%	10%	0%	9%	5%	0%	3%	0%	12%	7%	6%
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	47.0	41.8		40.6	38.6		26.8	22.2		23.6	20.6	
Effective Green, g (s)	47.0	39.8		40.6	36.6		26.8	20.2		23.6	18.6	
Actuated g/C Ratio	0.55	0.47		0.48	0.43		0.32	0.24		0.28	0.22	
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	5.0		3.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	459	738		374	793		334	730		199	633	
v/s Ratio Prot	c0.01	c0.23		0.00	0.21		c0.01	c0.14		0.01	0.09	
v/s Ratio Perm	0.12			0.03			0.05			0.05		
v/c Ratio	0.24	0.49		0.06	0.48		0.19	0.61		0.22	0.40	
Uniform Delay, d1	13.0	15.6		14.4	17.4		21.4	28.9		25.7	28.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.3	2.3		0.1	2.1		0.3	3.7		0.5	1.9	
Delay (s)	13.2	18.0		14.5	19.4		21.7	32.6		26.2	30.3	
Level of Service	B	B		B	B		C	C		C	C	
Approach Delay (s)		16.9			19.1			31.2			29.7	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM Average Control Delay	24.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	61.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1022: 103rd Street & Cottage Grove Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	65	305	42	63	365	111	54	370	120	55	158	34
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	11	11	11	11	12	12	10	10	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			0.99		1.00	0.99		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		0.99	1.00	
Frt		0.98			0.97		1.00	0.96		1.00	0.97	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3493			2911		1614	3156		1580	2926	
Flt Permitted		0.79			0.85		0.62	1.00		0.40	1.00	
Satd. Flow (perm)		2786			2478		1049	3156		658	2926	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	72	339	47	70	406	123	60	411	133	61	176	38
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	458	0	0	599	0	60	544	0	61	214	0
Confl. Peds. (#/hr)	20		16	16		20	5		33	33		5
Confl. Bikes (#/hr)	2					2			2	2		
Heavy Vehicles (%)	9%	9%	0%	24%	7%	6%	2%	4%	2%	0%	5%	9%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		33.0			33.0		32.0	32.0		32.0	32.0	
Effective Green, g (s)		34.0			34.0		33.0	33.0		33.0	33.0	
Actuated g/C Ratio		0.45			0.45		0.44	0.44		0.44	0.44	
Clearance Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)		1263			1123		462	1389		290	1287	
v/s Ratio Prot								c0.17			0.07	
v/s Ratio Perm		0.16			c0.24		0.06			0.09		
v/c Ratio		0.36			0.53		0.13	0.39		0.21	0.17	
Uniform Delay, d1		13.4			14.8		12.5	14.2		13.0	12.7	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.8			1.8		0.6	0.8		1.6	0.3	
Delay (s)		14.2			16.6		13.1	15.0		14.6	13.0	
Level of Service		B			B		B	B		B	B	
Approach Delay (s)		14.2			16.6			14.8			13.3	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	15.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	62.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1023: 103rd Street & Woodlawn Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↑	↱		↰↑↱			↰↑↱	
Volume (vph)	138	494	5	14	627	371	68	9	19	112	1	49
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	12	12	12	12	12	12	13	13	13
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00			0.95	
Frt	1.00	1.00		1.00	1.00	0.85		0.97			0.95	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.97			0.97	
Satd. Flow (prot)	1574	3143		1629	3257	1457		1612			3106	
Flt Permitted	0.37	1.00		0.44	1.00	1.00		0.70			0.75	
Satd. Flow (perm)	609	3143		749	3257	1457		1174			2411	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	153	549	6	16	697	412	76	10	21	124	1	54
RTOR Reduction (vph)	0	1	0	0	0	143	0	12	0	0	41	0
Lane Group Flow (vph)	153	554	0	16	697	269	0	95	0	0	138	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	46.0	46.0		46.0	46.0	46.0		16.4			16.4	
Effective Green, g (s)	46.0	46.0		46.0	46.0	46.0		16.4			16.4	
Actuated g/C Ratio	0.65	0.65		0.65	0.65	0.65		0.23			0.23	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		8.0			8.0	
Lane Grp Cap (vph)	398	2054		489	2128	952		273			562	
v/s Ratio Prot		0.18			0.21							
v/s Ratio Perm	c0.25			0.02		0.18		c0.08			0.06	
v/c Ratio	0.38	0.27		0.03	0.33	0.28		0.35			0.24	
Uniform Delay, d1	5.6	5.1		4.3	5.4	5.2		22.5			22.0	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00			1.00	
Incremental Delay, d2	2.8	0.3		0.1	0.4	0.7		3.3			1.0	
Delay (s)	8.4	5.5		4.4	5.8	5.9		25.8			22.9	
Level of Service	A	A		A	A	A		C			C	
Approach Delay (s)		6.1			5.8			25.8			22.9	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM Average Control Delay	8.4	HCM Level of Service	A
HCM Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	70.4	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1024: 107th Street & Halsted Street

1/14/2013

	↰	→	↘	↙	←	↖	↰	↑	↱	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱		↰	↑↑	↱	↰	↑↑	↱
Volume (vph)	111	214	67	63	190	66	125	1887	84	69	494	40
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	9	12	10	10	12	9	10	9	9	10	9
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00	0.96	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.96		1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1548	1505		1547	1589		1493	3069	1271	1452	2983	1301
Flt Permitted	0.38	1.00		0.34	1.00		0.39	1.00	1.00	0.12	1.00	1.00
Satd. Flow (perm)	625	1505		547	1589		617	3069	1271	180	2983	1301
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	117	225	71	66	200	69	132	1986	88	73	520	42
RTOR Reduction (vph)	0	13	0	0	15	0	0	0	18	0	0	25
Lane Group Flow (vph)	117	283	0	66	254	0	132	1986	70	73	520	17
Confl. Peds. (#/hr)	4		9	9		4	6		16	16		6
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	3%	3%	4%	3%	1%	2%	3%	4%	4%	6%	7%	3%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	28.0	21.0		28.0	21.0		42.0	35.0	35.0	42.0	35.0	35.0
Effective Green, g (s)	26.0	22.0		26.0	22.0		40.0	35.0	35.0	40.0	35.0	35.0
Actuated g/C Ratio	0.31	0.26		0.31	0.26		0.47	0.41	0.41	0.47	0.41	0.41
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)	256	390		238	411		352	1264	523	174	1228	536
v/s Ratio Prot	c0.03	c0.19		0.02	0.16		0.03	c0.65		c0.03	0.17	
v/s Ratio Perm	0.11			0.07			0.15		0.06	0.17		0.01
v/c Ratio	0.46	0.72		0.28	0.62		0.38	1.57	0.13	0.42	0.42	0.03
Uniform Delay, d1	22.5	28.7		21.8	27.8		13.2	25.0	15.6	18.1	17.8	14.9
Progression Factor	1.00	1.00		1.00	1.00		0.61	0.70	0.48	1.00	1.00	1.00
Incremental Delay, d2	5.8	11.1		2.9	6.8		2.6	260.3	0.4	7.3	1.1	0.1
Delay (s)	28.3	39.9		24.7	34.6		10.7	277.7	7.9	25.4	18.9	15.0
Level of Service	C	D		C	C		B	F	A	C	B	B
Approach Delay (s)		36.6			32.7			250.9			19.4	
Approach LOS		D			C			F			B	

Intersection Summary			
HCM Average Control Delay	164.9	HCM Level of Service	F
HCM Volume to Capacity ratio	1.10		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	93.8%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1025: 107th Street & Wentworth Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			✥			✥	
Volume (vph)	26	217	15	15	149	9	18	162	26	30	144	21
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	14	12	12	14	12	12	16	12	12	16	12
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		1.00			1.00			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.99			0.99			0.98			0.99	
Flt Protected		0.99			1.00			1.00			0.99	
Satd. Flow (prot)		1852			1848			1902			1931	
Flt Permitted		0.96			0.97			0.97			0.94	
Satd. Flow (perm)		1795			1800			1856			1832	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	27	224	15	15	154	9	19	167	27	31	148	22
RTOR Reduction (vph)	0	4	0	0	3	0	0	8	0	0	7	0
Lane Group Flow (vph)	0	262	0	0	175	0	0	205	0	0	194	0
Confl. Peds. (#/hr)	5		11	11		5	7		34	34		7
Confl. Bikes (#/hr)			3	3								
Heavy Vehicles (%)	4%	2%	0%	20%	1%	0%	12%	3%	8%	0%	3%	5%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		27.0			27.0			30.0			30.0	
Effective Green, g (s)		27.0			27.0			30.0			30.0	
Actuated g/C Ratio		0.42			0.42			0.46			0.46	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		746			748			857			846	
v/s Ratio Prot												
v/s Ratio Perm		c0.15			0.10			c0.11			0.11	
v/c Ratio		0.35			0.23			0.24			0.23	
Uniform Delay, d1		13.0			12.3			10.6			10.5	
Progression Factor		1.00			0.59			1.07			1.00	
Incremental Delay, d2		1.3			0.7			0.6			0.6	
Delay (s)		14.3			8.0			12.0			11.2	
Level of Service		B			A			B			B	
Approach Delay (s)		14.3			8.0			12.0			11.2	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM Average Control Delay	11.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.29		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	44.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1026: 107th Street & State Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	24	181	25	9	162	16	40	364	31	15	86	17
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	0.95	1.00		1.00	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.99		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1465	3012		1302	3049		1529	3094		1492	2868	
Flt Permitted	0.63	1.00		0.61	1.00		0.68	1.00		0.50	1.00	
Satd. Flow (perm)	967	3012		835	3049		1093	3094		781	2868	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	27	201	28	10	180	18	44	404	34	17	96	19
RTOR Reduction (vph)	0	17	0	0	11	0	0	10	0	0	8	0
Lane Group Flow (vph)	27	212	0	10	187	0	44	428	0	17	107	0
Confl. Peds. (#/hr)	35		6	6		35	18					18
Confl. Bikes (#/hr)	14		32	32		14	23		7	7		23
Heavy Vehicles (%)	4%	4%	0%	22%	2%	6%	3%	2%	0%	7%	8%	6%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.0	20.0		20.0	20.0		39.0	39.0		39.0	39.0	
Effective Green, g (s)	19.0	19.0		19.0	19.0		38.0	38.0		38.0	38.0	
Actuated g/C Ratio	0.29	0.29		0.29	0.29		0.58	0.58		0.58	0.58	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	283	880		244	891		639	1809		457	1677	
v/s Ratio Prot		c0.07			0.06			c0.14			0.04	
v/s Ratio Perm	0.03			0.01			0.04			0.02		
v/c Ratio	0.10	0.24		0.04	0.21		0.07	0.24		0.04	0.06	
Uniform Delay, d1	16.7	17.5		16.5	17.3		5.8	6.5		5.7	5.8	
Progression Factor	0.71	0.72		0.74	0.72		0.89	0.94		0.50	0.46	
Incremental Delay, d2	0.6	0.6		0.3	0.5		0.2	0.3		0.2	0.1	
Delay (s)	12.6	13.2		12.5	13.0		5.4	6.4		3.0	2.7	
Level of Service	B	B		B	B		A	A		A	A	
Approach Delay (s)		13.2			13.0			6.3			2.8	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	8.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.24		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	40.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1027: 107th Street & Michigan Avenue

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			✥			✥	
Volume (vph)	46	178	31	16	122	29	27	414	24	11	163	15
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	9	9	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	
Flpb, ped/bikes	0.99	1.00		0.98	1.00			1.00			1.00	
Frt	1.00	0.98		1.00	0.97			0.99			0.99	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1555	2962		1515	2886			1878			1805	
Flt Permitted	0.65	1.00		0.61	1.00			0.98			0.97	
Satd. Flow (perm)	1057	2962		968	2886			1840			1758	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	51	198	34	18	136	32	30	460	27	12	181	17
RTOR Reduction (vph)	0	20	0	0	19	0	0	3	0	0	5	0
Lane Group Flow (vph)	51	212	0	18	149	0	0	514	0	0	205	0
Confl. Peds. (#/hr)	10		29	29		10	17		10	10		17
Confl. Bikes (#/hr)									2	2		
Heavy Vehicles (%)	2%	4%	10%	0%	4%	0%	0%	8%	4%	0%	13%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	26.0	26.0		26.0	26.0			31.0			31.0	
Effective Green, g (s)	26.0	26.0		26.0	26.0			31.0			31.0	
Actuated g/C Ratio	0.40	0.40		0.40	0.40			0.48			0.48	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	423	1185		387	1154			878			838	
v/s Ratio Prot		c0.07			0.05							
v/s Ratio Perm	0.05			0.02				c0.28			0.12	
v/c Ratio	0.12	0.18		0.05	0.13			0.59			0.24	
Uniform Delay, d1	12.3	12.6		11.9	12.3			12.3			10.1	
Progression Factor	1.00	0.91		0.87	0.88			1.02			1.00	
Incremental Delay, d2	0.6	0.3		0.2	0.2			2.8			0.7	
Delay (s)	12.9	11.7		10.6	11.1			15.4			10.8	
Level of Service	B	B		B	B			B			B	
Approach Delay (s)		11.9			11.1			15.4			10.8	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	13.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	60.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1028: 107th Street & Martin Luther King Jr Drive

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱			✣			✣	
Volume (vph)	86	121	49	2	80	31	19	272	9	6	175	28
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	16	12	10	16	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00			1.00			1.00	
Flpb, ped/bikes	1.00	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.96		1.00	0.96			1.00			0.98	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1605	1890		1587	1874			1971			1932	
Flt Permitted	0.68	1.00		0.60	1.00			0.98			0.99	
Satd. Flow (perm)	1145	1890		1001	1874			1934			1918	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	96	134	54	2	89	34	21	302	10	7	194	31
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	96	188	0	2	123	0	0	333	0	0	232	0
Confl. Peds. (#/hr)			8	8			1		8	8		1
Heavy Vehicles (%)	3%	3%	2%	0%	6%	0%	0%	3%	0%	0%	4%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.0	20.0		20.0	20.0			37.0			37.0	
Effective Green, g (s)	20.0	20.0		20.0	20.0			37.0			37.0	
Actuated g/C Ratio	0.31	0.31		0.31	0.31			0.57			0.57	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	352	582		308	577			1101			1092	
v/s Ratio Prot		c0.10			0.07							
v/s Ratio Perm	0.08			0.00				c0.17			0.12	
v/c Ratio	0.27	0.32		0.01	0.21			0.30			0.21	
Uniform Delay, d1	17.0	17.3		15.6	16.7			7.3			6.9	
Progression Factor	0.89	0.88		0.87	0.92			0.92			1.00	
Incremental Delay, d2	1.9	1.5		0.0	0.8			0.7			0.4	
Delay (s)	17.0	16.6		13.6	16.2			7.4			7.3	
Level of Service	B	B		B	B			A			A	
Approach Delay (s)		16.7			16.1			7.4			7.3	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	11.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	44.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1029: 107th Street & Cottage Grove Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑	↱	↰	↑	↱
Volume (vph)	116	9	49	1	3	10	37	467	6	2	191	48
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	10	10	10	11	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.97		1.00	1.00	0.98	1.00	1.00	0.98
Flpb, ped/bikes	0.98	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.87		1.00	0.88		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1603	1675		1710	1413		1491	1631	1392	1649	1907	1427
Flt Permitted	0.75	1.00		0.72	1.00		0.63	1.00	1.00	0.39	1.00	1.00
Satd. Flow (perm)	1262	1675		1288	1413		981	1631	1392	682	1907	1427
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	129	10	54	1	3	11	41	519	7	2	212	53
RTOR Reduction (vph)	0	39	0	0	8	0	0	0	3	0	0	21
Lane Group Flow (vph)	129	25	0	1	6	0	41	519	4	2	212	32
Confl. Peds. (#/hr)	9					9	1		6	6		1
Heavy Vehicles (%)	5%	14%	5%	0%	67%	12%	7%	3%	0%	0%	7%	5%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	17.0	17.0		17.0	17.0		39.0	39.0	39.0	39.0	39.0	39.0
Effective Green, g (s)	18.0	18.0		18.0	18.0		39.0	39.0	39.0	39.0	39.0	39.0
Actuated g/C Ratio	0.28	0.28		0.28	0.28		0.60	0.60	0.60	0.60	0.60	0.60
Clearance Time (s)	5.0	5.0		5.0	5.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	349	464		357	391		589	979	835	409	1144	856
v/s Ratio Prot		0.01			0.00			c0.32			0.11	
v/s Ratio Perm	c0.10			0.00			0.04		0.00	0.00		0.02
v/c Ratio	0.37	0.05		0.00	0.02		0.07	0.53	0.01	0.00	0.19	0.04
Uniform Delay, d1	18.9	17.2		17.0	17.1		5.4	7.6	5.2	5.2	5.9	5.3
Progression Factor	1.49	2.40		1.00	1.00		1.12	1.05	1.29	1.00	1.00	1.00
Incremental Delay, d2	2.9	0.2		0.0	0.1		0.2	1.6	0.0	0.0	0.4	0.1
Delay (s)	31.1	41.6		17.0	17.1		6.2	9.7	6.8	5.2	6.2	5.4
Level of Service	C	D		B	B		A	A	A	A	A	A
Approach Delay (s)		34.6			17.1			9.4			6.0	
Approach LOS		C			B			A			A	

Intersection Summary			
HCM Average Control Delay	13.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	52.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1030: 111th Street & Marshield Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱		↰	↑↑					↰	↑↱	
Volume (vph)	0	233	76	116	360	0	0	0	0	71	305	361
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	12	12	12	12	12	11	11	12
Total Lost time (s)		4.0		3.0	3.0					5.0	5.0	
Lane Util. Factor		0.95		1.00	0.95					1.00	0.95	
Frpb, ped/bikes		0.99		1.00	1.00					1.00	0.99	
Flpb, ped/bikes		1.00		0.99	1.00					1.00	1.00	
Frt		0.96		1.00	1.00					1.00	0.92	
Flt Protected		1.00		0.95	1.00					0.95	1.00	
Satd. Flow (prot)		2824		1620	3288					1574	2907	
Flt Permitted		1.00		0.50	1.00					0.95	1.00	
Satd. Flow (perm)		2824		860	3288					1574	2907	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	245	80	122	379	0	0	0	0	75	321	380
RTOR Reduction (vph)	0	31	0	0	0	0	0	0	0	0	214	0
Lane Group Flow (vph)	0	294	0	122	379	0	0	0	0	75	487	0
Confl. Peds. (#/hr)	14		32	32		14	14					14
Confl. Bikes (#/hr)			1	1								
Heavy Vehicles (%)	0%	9%	4%	5%	4%	0%	0%	0%	0%	5%	2%	4%
Turn Type				D.P+P						custom		
Protected Phases		8		7	7 8					6	6	
Permitted Phases				8						6		
Actuated Green, G (s)		33.0		56.0	59.0					32.0	32.0	
Effective Green, g (s)		33.0		56.0	59.0					32.0	32.0	
Actuated g/C Ratio		0.33		0.56	0.59					0.32	0.32	
Clearance Time (s)		4.0		3.0						5.0	5.0	
Lane Grp Cap (vph)		932		656	1940					504	930	
v/s Ratio Prot		c0.10		0.04	c0.12					0.05	c0.17	
v/s Ratio Perm				0.06								
v/c Ratio		0.31		0.19	0.20					0.15	0.52	
Uniform Delay, d1		25.0		10.5	9.5					24.3	27.8	
Progression Factor		1.00		1.94	2.05					1.00	1.00	
Incremental Delay, d2		0.9		0.5	0.2					0.6	2.1	
Delay (s)		25.9		20.9	19.6					24.9	29.9	
Level of Service		C		C	B					C	C	
Approach Delay (s)		25.9			19.9			0.0			29.4	
Approach LOS		C			B			A			C	

Intersection Summary			
HCM Average Control Delay	25.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	61.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1031: 111th Street & Ashland Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Lane Configurations	↰	↑↑			↑↱		↰	↑	↱			
Volume (vph)	129	175	0	0	305	65	171	544	309	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	9	12	13	12	13	12	12	12
Total Lost time (s)	4.0	4.0			4.0		5.0	5.0	5.0			
Lane Util. Factor	1.00	0.95			0.95		1.00	1.00	1.00			
Frpb, ped/bikes	1.00	1.00			0.99		1.00	1.00	0.99			
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.97		1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1672	3054			2832		1750	1782	1514			
Flt Permitted	0.37	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	650	3054			2832		1750	1782	1514			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	136	184	0	0	321	68	180	573	325	0	0	0
RTOR Reduction (vph)	0	0	0	0	18	0	0	0	218	0	0	0
Lane Group Flow (vph)	136	184	0	0	371	0	180	573	107	0	0	0
Confl. Peds. (#/hr)	14		16	16		14			1	1		
Confl. Bikes (#/hr)	1					1			1	1		
Heavy Vehicles (%)	2%	12%	0%	0%	5%	4%	1%	1%	3%	0%	0%	0%
Turn Type	pm+pt						custom		Perm			
Protected Phases	4	1 4			1		2	2				
Permitted Phases	1 4						2		2			
Actuated Green, G (s)	54.0	58.0			21.0		33.0	33.0	33.0			
Effective Green, g (s)	54.0	58.0			21.0		33.0	33.0	33.0			
Actuated g/C Ratio	0.54	0.58			0.21		0.33	0.33	0.33			
Clearance Time (s)	4.0				4.0		5.0	5.0	5.0			
Lane Grp Cap (vph)	688	1771			595		578	588	500			
v/s Ratio Prot	c0.07	0.06			c0.13		0.10	c0.32				
v/s Ratio Perm	0.04								0.07			
v/c Ratio	0.20	0.10			0.62		0.31	0.97	0.21			
Uniform Delay, d1	11.7	9.4			35.9		25.0	33.1	24.2			
Progression Factor	0.25	0.25			1.00		0.74	0.78	1.91			
Incremental Delay, d2	0.6	0.1			4.9		0.9	24.4	0.6			
Delay (s)	3.6	2.5			40.8		19.4	50.3	46.8			
Level of Service	A	A			D		B	D	D			
Approach Delay (s)		3.0			40.8			44.1			0.0	
Approach LOS		A			D			D			A	

Intersection Summary			
HCM Average Control Delay	36.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	61.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1032: 112th Place & Marshield Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱		↰	↑↑					↰	↑↑	↱
Volume (vph)	0	443	362	34	587	0	0	0	0	4	215	193
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	11	12	12	12	12	10	10	12
Total Lost time (s)		4.0		4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.95		1.00	0.95					1.00	0.95	1.00
Frpb, ped/bikes		0.99		1.00	1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Frt		0.93		1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00					0.95	1.00	1.00
Satd. Flow (prot)		3106		1613	3273					1596	3160	1443
Flt Permitted		1.00		0.18	1.00					0.95	1.00	1.00
Satd. Flow (perm)		3106		305	3273					1596	3160	1443
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	0	461	377	35	611	0	0	0	0	4	224	201
RTOR Reduction (vph)	0	148	0	0	0	0	0	0	0	0	0	133
Lane Group Flow (vph)	0	690	0	35	611	0	0	0	0	4	224	68
Confl. Peds. (#/hr)	22		3	3		22						
Confl. Bikes (#/hr)	4					4			32	32		
Heavy Vehicles (%)	0%	2%	2%	6%	1%	0%	0%	0%	0%	0%	1%	6%
Turn Type				pm+pt						Split		Prot
Protected Phases		8		7	7 8					6	6	6
Permitted Phases				7 8								
Actuated Green, G (s)		36.0		54.0	58.0					34.0	34.0	34.0
Effective Green, g (s)		36.0		54.0	58.0					34.0	34.0	34.0
Actuated g/C Ratio		0.36		0.54	0.58					0.34	0.34	0.34
Clearance Time (s)		4.0		4.0						4.0	4.0	4.0
Lane Grp Cap (vph)		1118		400	1898					543	1074	491
v/s Ratio Prot		c0.22		0.02	c0.19					0.00	c0.07	0.05
v/s Ratio Perm				0.03								
v/c Ratio		0.62		0.09	0.32					0.01	0.21	0.14
Uniform Delay, d1		26.3		12.3	10.8					21.8	23.4	22.9
Progression Factor		1.00		0.55	0.69					0.74	0.80	0.95
Incremental Delay, d2		2.6		0.2	0.2					0.0	0.4	0.5
Delay (s)		28.9		6.9	7.6					16.2	19.1	22.2
Level of Service		C		A	A					B	B	C
Approach Delay (s)		28.9			7.6			0.0			20.5	
Approach LOS		C			A			A			C	

Intersection Summary			
HCM Average Control Delay	19.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	87.0%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↰↑			↑↱		↰	↰	↱			
Volume (vph)	388	59	0	0	57	3	564	634	61	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	12	12	12	10	12	11	11	12	12	12	12
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0	4.0			
Lane Util. Factor	0.91	0.91			0.95		0.95	0.95	1.00			
Frpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Flpb, ped/bikes	0.99	0.99			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.99		1.00	1.00	0.85			
Flt Protected	0.95	0.96			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1444	3042			3098		1555	1637	1500			
Flt Permitted	0.71	0.74			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	1086	2344			3098		1555	1637	1500			
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	400	61	0	0	59	3	581	654	63	0	0	0
RTOR Reduction (vph)	0	0	0	0	3	0	0	0	38	0	0	0
Lane Group Flow (vph)	200	261	0	0	59	0	581	654	25	0	0	0
Confl. Peds. (#/hr)	30		2	2		30			4	4		
Confl. Bikes (#/hr)	3					3			2	2		
Heavy Vehicles (%)	3%	2%	0%	0%	2%	0%	1%	1%	2%	0%	0%	0%
Turn Type	pm+pt						custom		custom			
Protected Phases	4	1 4			1		2	2	2			
Permitted Phases	1 4						2		2			
Actuated Green, G (s)	51.0	51.0			15.0		37.0	37.0	37.0			
Effective Green, g (s)	51.0	51.0			15.0		37.0	37.0	37.0			
Actuated g/C Ratio	0.51	0.51			0.15		0.37	0.37	0.37			
Clearance Time (s)	4.0				4.0		4.0	4.0	4.0			
Lane Grp Cap (vph)	683	1447			465		575	606	555			
v/s Ratio Prot	c0.11	0.06			0.02		0.37	c0.40	0.02			
v/s Ratio Perm	c0.04	0.03										
v/c Ratio	0.29	0.18			0.13		1.01	1.08	0.04			
Uniform Delay, d1	13.9	13.2			36.8		31.5	31.5	20.2			
Progression Factor	0.25	0.26			1.00		1.00	1.00	1.00			
Incremental Delay, d2	0.8	0.2			0.6		40.1	59.8	0.2			
Delay (s)	4.2	3.6			37.4		71.6	91.3	20.3			
Level of Service	A	A			D		E	F	C			
Approach Delay (s)		3.9			37.4			79.0			0.0	
Approach LOS		A			D			E			A	

Intersection Summary			
HCM Average Control Delay	58.6	HCM Level of Service	E
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	87.0%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1034: 111th Street & Halsted Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↑↱			↰↑↑↱		↰	↑↑	↱	↰	↑↑	↱
Volume (vph)	155	249	66	55	175	108	41	1100	59	88	476	42
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	9	10	9	9	10	9
Total Lost time (s)		4.0			4.0		4.0	3.5	4.0	4.0	3.5	4.0
Lane Util. Factor		0.95			0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		1.00			0.98		1.00	1.00	0.97	1.00	1.00	0.97
Flpb, ped/bikes		1.00			1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.98			0.95		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.98			0.99		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		2835			2770		1447	3069	1336	1494	2956	1270
Flt Permitted		0.67			0.81		0.39	1.00	1.00	0.12	1.00	1.00
Satd. Flow (perm)		1945			2269		600	3069	1336	197	2956	1270
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	161	259	69	57	182	112	43	1146	61	92	496	44
RTOR Reduction (vph)	0	16	0	0	65	0	0	0	24	0	0	27
Lane Group Flow (vph)	0	473	0	0	286	0	43	1146	37	92	496	17
Confl. Peds. (#/hr)	49		20	20		49	26		8	8		26
Confl. Bikes (#/hr)	2					2						
Heavy Vehicles (%)	10%	7%	4%	9%	7%	5%	6%	4%	0%	3%	8%	5%
Turn Type	pm+pt			Perm			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)		35.0			27.0		38.0	33.0	33.0	38.0	33.0	33.0
Effective Green, g (s)		36.0			28.0		36.0	33.5	33.0	36.0	33.5	33.0
Actuated g/C Ratio		0.42			0.33		0.42	0.39	0.39	0.42	0.39	0.39
Clearance Time (s)		5.0			5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)		887			747		294	1210	519	144	1165	493
v/s Ratio Prot		c0.04					0.01	c0.37		c0.03	0.17	
v/s Ratio Perm		0.19			0.13		0.06		0.03	0.24		0.01
v/c Ratio		0.53			0.38		0.15	0.95	0.07	0.64	0.43	0.03
Uniform Delay, d1		18.2			21.9		14.7	24.9	16.4	18.5	18.7	16.1
Progression Factor		1.00			1.00		1.31	0.84	1.39	1.85	1.66	3.22
Incremental Delay, d2		2.3			1.5		0.6	11.2	0.2	18.2	1.0	0.1
Delay (s)		20.5			23.4		19.9	32.2	22.9	52.3	32.2	52.0
Level of Service		C			C		B	C	C	D	C	D
Approach Delay (s)		20.5			23.4			31.3			36.5	
Approach LOS		C			C			C			D	

Intersection Summary			
HCM Average Control Delay	29.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	11.5
Intersection Capacity Utilization	78.4%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1035: 111th Street & Normal Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰			↱			✥				
Volume (vph)	42	377	0	0	311	77	27	60	93	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		1.00			0.97			0.93				
Flt Protected		0.99			1.00			0.99				
Satd. Flow (prot)		1706			1668			1583				
Flt Permitted		0.93			1.00			0.99				
Satd. Flow (perm)		1597			1668			1583				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	47	419	0	0	346	86	30	67	103	0	0	0
RTOR Reduction (vph)	0	0	0	0	14	0	0	59	0	0	0	0
Lane Group Flow (vph)	0	466	0	0	418	0	0	141	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)		34.0			34.0			23.0				
Effective Green, g (s)		34.0			34.0			23.0				
Actuated g/C Ratio		0.52			0.52			0.35				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		835			872			560				
v/s Ratio Prot					0.25							
v/s Ratio Perm		c0.29						0.09				
v/c Ratio		0.56			0.48			0.25				
Uniform Delay, d1		10.4			9.9			14.9				
Progression Factor		1.00			0.47			1.00				
Incremental Delay, d2		2.7			1.7			1.1				
Delay (s)		13.1			6.4			16.0				
Level of Service		B			A			B				
Approach Delay (s)		13.1			6.4			16.0			0.0	
Approach LOS		B			A			B			A	

Intersection Summary			
HCM Average Control Delay	11.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	66.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1036: 111th Street & Wentworth Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			✥✥			✥✥	
Volume (vph)	43	377	29	19	323	47	15	167	33	50	105	19
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	12	12	12	12	12
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		1.00			1.00			0.99			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.99			0.98			0.98			0.98	
Flt Protected		1.00			1.00			1.00			0.99	
Satd. Flow (prot)		1887			1833			3186			3153	
Flt Permitted		0.93			0.97			0.93			0.83	
Satd. Flow (perm)		1768			1782			2985			2659	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	48	419	32	21	359	52	17	186	37	56	117	21
RTOR Reduction (vph)	0	4	0	0	8	0	0	22	0	0	12	0
Lane Group Flow (vph)	0	495	0	0	424	0	0	218	0	0	182	0
Confl. Peds. (#/hr)	29		16	16		29	28		14	14		28
Confl. Bikes (#/hr)	1					1	1					1
Heavy Vehicles (%)	3%	7%	4%	12%	8%	13%	0%	4%	4%	4%	4%	6%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		30.0			30.0			27.0			27.0	
Effective Green, g (s)		30.0			30.0			27.0			27.0	
Actuated g/C Ratio		0.46			0.46			0.42			0.42	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		816			822			1240			1105	
v/s Ratio Prot												
v/s Ratio Perm		c0.28			0.24			c0.07			0.07	
v/c Ratio		0.61			0.52			0.18			0.16	
Uniform Delay, d1		13.1			12.4			12.0			11.9	
Progression Factor		0.60			0.54			0.88			0.55	
Incremental Delay, d2		2.9			2.3			0.3			0.3	
Delay (s)		10.8			9.0			10.9			6.9	
Level of Service		B			A			B			A	
Approach Delay (s)		10.8			9.0			10.9			6.9	
Approach LOS		B			A			B			A	

Intersection Summary			
HCM Average Control Delay	9.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	75.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1037: 111th Street & State Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	48	251	19	28	280	61	44	303	85	46	91	19
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	9	10	10	9	10	10	12	10	10	12
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		0.99	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.97		1.00	0.97		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1501	2937		1583	2932		1497	3034		1594	2941	
Flt Permitted	0.49	1.00		0.57	1.00		0.67	1.00		0.50	1.00	
Satd. Flow (perm)	781	2937		942	2932		1063	3034		833	2941	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	53	279	21	31	311	68	49	337	94	51	101	21
RTOR Reduction (vph)	0	9	0	0	28	0	0	39	0	0	10	0
Lane Group Flow (vph)	53	291	0	31	351	0	49	392	0	51	112	0
Confl. Peds. (#/hr)	25		14	14		25	12		4	4		12
Confl. Bikes (#/hr)	1					1			1	1		
Heavy Vehicles (%)	5%	7%	12%	0%	6%	2%	6%	1%	3%	0%	4%	12%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	22.0	22.0		22.0	22.0		35.0	35.0		35.0	35.0	
Effective Green, g (s)	22.0	22.0		22.0	22.0		35.0	35.0		35.0	35.0	
Actuated g/C Ratio	0.34	0.34		0.34	0.34		0.54	0.54		0.54	0.54	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	264	994		319	992		572	1634		449	1584	
v/s Ratio Prot		0.10			c0.12			c0.13			0.04	
v/s Ratio Perm	0.07			0.03			0.05			0.06		
v/c Ratio	0.20	0.29		0.10	0.35		0.09	0.24		0.11	0.07	
Uniform Delay, d1	15.3	15.8		14.7	16.2		7.3	7.9		7.4	7.2	
Progression Factor	0.61	0.59		0.77	0.78		0.65	0.69		1.22	1.22	
Incremental Delay, d2	1.5	0.6		0.6	1.0		0.3	0.3		0.5	0.1	
Delay (s)	10.8	10.0		12.0	13.5		5.0	5.8		9.5	8.8	
Level of Service	B	A		B	B		A	A		A	A	
Approach Delay (s)		10.1			13.4			5.7			9.0	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	9.4	HCM Level of Service	A
HCM Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	46.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			↰↑↱			↰↑↱	
Volume (vph)	79	361	25	37	315	82	11	307	44	41	118	38
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	9	10	9	9	16	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.98			1.00			0.99	
Flpb, ped/bikes	0.97	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.97			0.98			0.97	
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.99	
Satd. Flow (prot)	1381	3014		1334	3524			3435			3308	
Flt Permitted	0.50	1.00		0.50	1.00			0.95			0.84	
Satd. Flow (perm)	720	3014		707	3524			3255			2815	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	83	380	26	39	332	86	12	323	46	43	124	40
RTOR Reduction (vph)	0	8	0	0	36	0	0	16	0	0	24	0
Lane Group Flow (vph)	83	398	0	39	382	0	0	365	0	0	183	0
Confl. Peds. (#/hr)	53		34	34		53	67		28	28		67
Heavy Vehicles (%)	8%	5%	0%	14%	6%	1%	0%	9%	20%	5%	15%	5%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	31.0	31.0		31.0	31.0			26.0			26.0	
Effective Green, g (s)	31.0	31.0		31.0	31.0			26.0			26.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48			0.40			0.40	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	343	1437		337	1681			1302			1126	
v/s Ratio Prot		c0.13			0.11							
v/s Ratio Perm	0.12			0.06				c0.11			0.07	
v/c Ratio	0.24	0.28		0.12	0.23			0.28			0.16	
Uniform Delay, d1	10.1	10.2		9.4	10.0			13.2			12.5	
Progression Factor	1.59	1.63		0.81	0.79			0.52			0.64	
Incremental Delay, d2	1.6	0.5		0.6	0.3			0.5			0.3	
Delay (s)	17.6	17.2		8.2	8.1			7.4			8.3	
Level of Service	B	B		A	A			A			A	
Approach Delay (s)		17.2			8.1			7.4			8.3	
Approach LOS		B			A			A			A	

Intersection Summary			
HCM Average Control Delay	10.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	58.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1039: 111th Street & Indiana Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑	↱		↰↑ ↑↱			↰↑↱			↰↑↱	
Volume (vph)	93	278	93	104	313	104	75	80	84	84	80	75
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	16	12	12	16	12
Total Lost time (s)		5.0	5.0		5.0			5.0			5.0	
Lane Util. Factor		1.00	1.00		0.95			1.00			1.00	
Frt		1.00	0.85		0.97			0.95			0.96	
Flt Protected		0.99	1.00		0.99			0.98			0.98	
Satd. Flow (prot)		1637	1409		3024			1822			1829	
Flt Permitted		0.76	1.00		0.77			0.82			0.79	
Satd. Flow (perm)		1254	1409		2353			1523			1476	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	103	309	103	116	348	116	83	89	93	93	89	83
RTOR Reduction (vph)	0	0	49	0	34	0	0	30	0	0	25	0
Lane Group Flow (vph)	0	412	54	0	546	0	0	235	0	0	240	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm		Perm	Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)		34.0	34.0		34.0			21.0			21.0	
Effective Green, g (s)		34.0	34.0		34.0			21.0			21.0	
Actuated g/C Ratio		0.52	0.52		0.52			0.32			0.32	
Clearance Time (s)		5.0	5.0		5.0			5.0			5.0	
Lane Grp Cap (vph)		656	737		1231			492			477	
v/s Ratio Prot												
v/s Ratio Perm		c0.33	0.04		0.23			0.15			c0.16	
v/c Ratio		0.63	0.07		0.44			0.48			0.50	
Uniform Delay, d1		11.0	7.7		9.6			17.6			17.8	
Progression Factor		2.04	5.53		0.37			1.00			1.00	
Incremental Delay, d2		4.4	0.2		1.1			3.3			3.8	
Delay (s)		26.9	42.7		4.7			20.9			21.5	
Level of Service		C	D		A			C			C	
Approach Delay (s)		30.0			4.7			20.9			21.5	
Approach LOS		C			A			C			C	

Intersection Summary			
HCM Average Control Delay	18.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	68.7%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1040: 111th Street & Martin Luther King Jr Drive

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			↰↑↱			↰↑↱	
Volume (vph)	68	359	18	15	417	63	28	103	41	41	86	85
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	15	8	16	8	8	16	8
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			1.00			0.99	
Flpb, ped/bikes	0.99	1.00		0.98	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.98			0.96			0.94	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1474	3019		1572	2999			3444			3422	
Flt Permitted	0.41	1.00		0.49	1.00			0.89			0.88	
Satd. Flow (perm)	633	3019		804	2999			3102			3035	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	76	399	20	17	463	70	31	114	46	46	96	94
RTOR Reduction (vph)	0	6	0	0	18	0	0	25	0	0	52	0
Lane Group Flow (vph)	76	413	0	17	515	0	0	166	0	0	184	0
Confl. Peds. (#/hr)	22		40	40		22	18		3	3		18
Confl. Bikes (#/hr)			2	2			1					1
Heavy Vehicles (%)	7%	5%	0%	0%	4%	2%	0%	3%	22%	0%	3%	8%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	28.0	28.0		28.0	28.0			29.0			29.0	
Effective Green, g (s)	28.0	28.0		28.0	28.0			29.0			29.0	
Actuated g/C Ratio	0.43	0.43		0.43	0.43			0.45			0.45	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	273	1300		346	1292			1384			1354	
v/s Ratio Prot		0.14			c0.17							
v/s Ratio Perm	0.12			0.02				0.05			c0.06	
v/c Ratio	0.28	0.32		0.05	0.40			0.12			0.14	
Uniform Delay, d1	12.0	12.2		10.8	12.7			10.5			10.6	
Progression Factor	1.02	1.04		1.10	0.92			1.01			0.72	
Incremental Delay, d2	2.1	0.5		0.2	0.5			0.2			0.2	
Delay (s)	14.3	13.2		12.0	12.2			10.8			7.9	
Level of Service	B	B		B	B			B			A	
Approach Delay (s)		13.4			12.2			10.8			7.9	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM Average Control Delay	11.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	58.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1041: 111th Street & Cottage Grove Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↑↱			↰↑↑↱			↰↑↑↱			↰↑↑↱	
Volume (vph)	81	430	67	89	426	270	39	315	87	211	151	47
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			0.95			0.95	
Frt		0.98			0.95			0.97			0.98	
Flt Protected		0.99			0.99			1.00			0.97	
Satd. Flow (prot)		3179			3072			3147			3121	
Flt Permitted		0.66			0.76			0.90			0.64	
Satd. Flow (perm)		2125			2352			2831			2036	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	90	478	74	99	473	300	43	350	97	234	168	52
RTOR Reduction (vph)	0	16	0	0	104	0	0	33	0	0	15	0
Lane Group Flow (vph)	0	626	0	0	768	0	0	457	0	0	439	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm			pm+pt			Perm		
Protected Phases		4			8		5	2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		26.0			26.0			29.0			20.0	
Effective Green, g (s)		26.0			26.0			29.0			20.0	
Actuated g/C Ratio		0.40			0.40			0.45			0.31	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		850			941			1292			626	
v/s Ratio Prot								c0.03				
v/s Ratio Perm		0.29			c0.33			0.13			c0.22	
v/c Ratio		0.74			0.82			0.35			0.88dl	
Uniform Delay, d1		16.6			17.4			11.8			19.9	
Progression Factor		1.76			1.00			1.00			0.89	
Incremental Delay, d2		5.6			7.7			0.8			6.4	
Delay (s)		34.7			25.1			12.6			24.1	
Level of Service		C			C			B			C	
Approach Delay (s)		34.7			25.1			12.6			24.1	
Approach LOS		C			C			B			C	

Intersection Summary			
HCM Average Control Delay	24.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	84.0%	ICU Level of Service	E
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1042: 111th Street & Ellis Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↑↱			↰↑↑↱			↰↑↱			↰↑↱	
Volume (vph)	0	685	112	43	713	0	125	0	66	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	10	10	12	12	12	12	10	10	10
Total Lost time (s)		5.0			5.0			5.0				
Lane Util. Factor		0.95			0.95			1.00				
Frt		0.98			1.00			0.95				
Flt Protected		1.00			1.00			0.97				
Satd. Flow (prot)		2976			3031			1583				
Flt Permitted		1.00			0.84			0.80				
Satd. Flow (perm)		2976			2566			1311				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	761	124	48	792	0	139	0	73	0	0	0
RTOR Reduction (vph)	0	18	0	0	0	0	0	21	0	0	0	0
Lane Group Flow (vph)	0	867	0	0	840	0	0	191	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	custom			Perm			Perm			Perm		
Protected Phases		4 5 6 11			8			2			2	
Permitted Phases	4 6 11			8			2			2		
Actuated Green, G (s)		65.0			33.0			16.0				
Effective Green, g (s)		58.0			33.0			16.0				
Actuated g/C Ratio		0.64			0.37			0.18				
Clearance Time (s)					5.0			5.0				
Lane Grp Cap (vph)		1918			941			233				
v/s Ratio Prot		c0.29										
v/s Ratio Perm					c0.33			c0.15				
v/c Ratio		0.45			0.89			0.82				
Uniform Delay, d1		8.0			26.8			35.6				
Progression Factor		0.00			1.57			1.00				
Incremental Delay, d2		0.4			11.4			26.3				
Delay (s)		0.5			53.6			61.9				
Level of Service		A			D			E				
Approach Delay (s)		0.5			53.6			61.9			0.0	
Approach LOS		A			D			E			A	

Intersection Summary			
HCM Average Control Delay	30.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	69.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1043: 111th Street & Doty Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↑	↱		✣		↰	↑	↱
Volume (vph)	117	475	177	260	609	174	96	19	176	74	7	71
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	10	12	12	12	12	16	12	12	12	12
Total Lost time (s)	3.0	5.0		3.0	5.0	3.0		5.0		3.0	5.0	3.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00		1.00	1.00	1.00
Frt	1.00	0.96		1.00	1.00	0.85		0.92		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.98		0.95	1.00	1.00
Satd. Flow (prot)	1520	3020		1629	3257	1457		1755		1629	1714	1457
Flt Permitted	0.34	1.00		0.23	1.00	1.00		0.89		0.40	1.00	1.00
Satd. Flow (perm)	536	3020		402	3257	1457		1582		692	1714	1457
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	130	528	197	289	677	193	107	21	196	82	8	79
RTOR Reduction (vph)	0	40	0	0	0	97	0	75	0	0	0	43
Lane Group Flow (vph)	130	685	0	289	677	96	0	249	0	82	8	36
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	pm+pt			pm+pt		pm+ov	pm+pt			pm+pt		pm+ov
Protected Phases	7	4		3	8	1	5	2		1	6	7
Permitted Phases	4			8		8	2			6		6
Actuated Green, G (s)	42.0	32.7		48.4	36.1	44.7		20.0		31.6	31.6	40.9
Effective Green, g (s)	42.0	32.7		48.4	36.1	44.7		20.0		31.6	31.6	40.9
Actuated g/C Ratio	0.47	0.36		0.54	0.40	0.50		0.22		0.35	0.35	0.45
Clearance Time (s)	3.0	5.0		3.0	5.0	3.0		5.0		3.0	5.0	3.0
Vehicle Extension (s)	4.0	3.0		4.0	3.0	3.0		4.0		3.0	4.0	4.0
Lane Grp Cap (vph)	352	1097		389	1306	724		352		333	602	662
v/s Ratio Prot	0.04	0.23		c0.10	0.21	0.01				c0.02	0.00	0.01
v/s Ratio Perm	0.13			c0.29		0.05		c0.16		0.06		0.02
v/c Ratio	0.37	0.62		0.74	0.52	0.13		0.71		0.25	0.01	0.05
Uniform Delay, d1	14.2	23.6		13.5	20.4	12.2		32.3		21.5	19.0	13.7
Progression Factor	1.92	1.62		1.00	1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2	0.8	2.5		8.0	1.5	0.1		6.8		0.4	0.0	0.0
Delay (s)	28.0	40.7		21.5	21.9	12.3		39.1		21.9	19.0	13.8
Level of Service	C	D		C	C	B		D		C	B	B
Approach Delay (s)		38.7			20.2			39.1			18.0	
Approach LOS		D			C			D			B	

Intersection Summary			
HCM Average Control Delay	28.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	71.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
1044: 111th Street & Bishop Ford Freeway EB Ramps

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↑↑					↰		↱
Volume (veh/h)	0	491	234	6	502	0	0	0	0	30	0	541
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	546	260	7	558	0	0	0	0	33	0	601
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		498										
pX, platoon unblocked												
vC, conflicting volume	558			546			838	1117	273	844	1117	279
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	558			546			838	1117	273	844	1117	279
tC, single (s)	4.2			4.2			7.6	6.6	7.0	7.6	6.6	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			100	100	100	87	100	15
cM capacity (veh/h)	989			999			39	200	716	250	200	709

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1	SB 2
Volume Total	273	273	260	193	372	33	601
Volume Left	0	0	0	7	0	33	0
Volume Right	0	0	260	0	0	0	601
cSH	1700	1700	1700	999	1700	250	709
Volume to Capacity	0.16	0.16	0.15	0.01	0.22	0.13	0.85
Queue Length 95th (ft)	0	0	0	1	0	11	243
Control Delay (s)	0.0	0.0	0.0	0.4	0.0	21.6	31.5
Lane LOS				A		C	D
Approach Delay (s)	0.0			0.1		31.0	
Approach LOS						D	

Intersection Summary			
Average Delay	9.9		
Intersection Capacity Utilization	56.9%	ICU Level of Service	B
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
1045: 111th Street & Bishop Ford Freeway WB Ramps

1/14/2013

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰↰		↰			
Sign Control	Stop			Stop	Stop	
Volume (vph)	521	0	508	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	579	0	564	0	0	0

Direction, Lane #	EB 1	EB 2	NB 1
Volume Total (vph)	289	289	564
Volume Left (vph)	289	289	564
Volume Right (vph)	0	0	0
Hadj (s)	0.58	0.58	0.29
Departure Headway (s)	6.8	6.8	5.7
Degree Utilization, x	0.55	0.55	0.89
Capacity (veh/h)	515	505	627
Control Delay (s)	16.6	16.6	38.0
Approach Delay (s)	16.6		38.0
Approach LOS	C		E

Intersection Summary			
Delay	27.2		
HCM Level of Service	D		
Intersection Capacity Utilization	52.1%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Signalized Intersection Capacity Analysis
1046: 115th Street & Marshield Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱		↰	↑↑						↰↑↱	
Volume (vph)	0	340	46	126	323	0	0	0	0	72	15	42
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	12	12	12	12	12
Total Lost time (s)		3.0		4.0	4.0						5.0	
Lane Util. Factor		0.95		1.00	0.95						0.95	
Frt		0.98		1.00	1.00						0.95	
Flt Protected		1.00		0.95	1.00						0.97	
Satd. Flow (prot)		3092		1574	3149						3014	
Flt Permitted		1.00		0.45	1.00						0.97	
Satd. Flow (perm)		3092		746	3149						3014	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	378	51	140	359	0	0	0	0	80	17	47
RTOR Reduction (vph)	0	12	0	0	0	0	0	0	0	0	32	0
Lane Group Flow (vph)	0	417	0	140	359	0	0	0	0	0	112	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type				pm+pt						Split		
Protected Phases		4		3	8					6	6	
Permitted Phases				8								
Actuated Green, G (s)		36.0		49.0	49.0						27.0	
Effective Green, g (s)		36.0		49.0	49.0						27.0	
Actuated g/C Ratio		0.42		0.58	0.58						0.32	
Clearance Time (s)		3.0		4.0	4.0						5.0	
Lane Grp Cap (vph)		1310		527	1815						957	
v/s Ratio Prot		c0.13		c0.03	0.11						c0.04	
v/s Ratio Perm				0.12								
v/c Ratio		0.32		0.27	0.20						0.12	
Uniform Delay, d1		16.3		11.3	8.6						20.6	
Progression Factor		1.00		0.27	0.25						1.00	
Incremental Delay, d2		0.6		1.2	0.2						0.2	
Delay (s)		17.0		4.2	2.4						20.8	
Level of Service		B		A	A						C	
Approach Delay (s)		17.0			2.9			0.0			20.8	
Approach LOS		B			A			A			C	

Intersection Summary			
HCM Average Control Delay	10.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.23		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	33.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1047: 115th Street & Ashland Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑			↑↱			↰↑↱				
Volume (vph)	68	344	0	0	400	76	49	65	42	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	11	11	12	12	12	12	12	12
Total Lost time (s)	5.0	5.0			3.0			5.0				
Lane Util. Factor	1.00	0.95			0.95			0.91				
Frt	1.00	1.00			0.98			0.96				
Flt Protected	0.95	1.00			1.00			0.98				
Satd. Flow (prot)	1629	3257			3073			4420				
Flt Permitted	0.38	1.00			1.00			0.98				
Satd. Flow (perm)	656	3257			3073			4420				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	76	382	0	0	444	84	54	72	47	0	0	0
RTOR Reduction (vph)	0	0	0	0	18	0	0	32	0	0	0	0
Lane Group Flow (vph)	76	382	0	0	510	0	0	141	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	pm+pt						Split					
Protected Phases	7	4			8		2	2				
Permitted Phases	4											
Actuated Green, G (s)	48.0	48.0			35.0			27.0				
Effective Green, g (s)	48.0	48.0			35.0			27.0				
Actuated g/C Ratio	0.56	0.56			0.41			0.32				
Clearance Time (s)	5.0	5.0			3.0			5.0				
Lane Grp Cap (vph)	485	1839			1265			1404				
v/s Ratio Prot	0.02	c0.12			c0.17			c0.03				
v/s Ratio Perm	0.07											
v/c Ratio	0.16	0.21			0.40			0.10				
Uniform Delay, d1	12.1	9.1			17.6			20.4				
Progression Factor	0.34	0.33			1.00			1.00				
Incremental Delay, d2	0.7	0.2			1.0			0.1				
Delay (s)	4.7	3.3			18.6			20.6				
Level of Service	A	A			B			C				
Approach Delay (s)		3.5			18.6			20.6			0.0	
Approach LOS		A			B			C			A	

Intersection Summary			
HCM Average Control Delay	12.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.25		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	33.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1048: 115th Street & Racine Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱			✥			✥	
Volume (vph)	39	307	39	31	243	31	118	85	52	55	90	124
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	10	12	12	15	12	12	15	12
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			1.00			1.00	
Frt		0.98			0.98			0.97			0.94	
Flt Protected		0.99			0.99			0.98			0.99	
Satd. Flow (prot)		2979			2979			1792			1750	
Flt Permitted		0.89			0.88			0.75			0.89	
Satd. Flow (perm)		2659			2645			1376			1571	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	43	341	43	34	270	34	131	94	58	61	100	138
RTOR Reduction (vph)	0	13	0	0	13	0	0	14	0	0	48	0
Lane Group Flow (vph)	0	414	0	0	325	0	0	269	0	0	251	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		23.0			23.0			32.0			32.0	
Effective Green, g (s)		23.0			23.0			32.0			32.0	
Actuated g/C Ratio		0.35			0.35			0.49			0.49	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		941			936			677			773	
v/s Ratio Prot												
v/s Ratio Perm		c0.16			0.12			c0.20			0.16	
v/c Ratio		0.44			0.35			0.40			0.33	
Uniform Delay, d1		16.1			15.5			10.4			10.0	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		1.5			1.0			1.7			1.1	
Delay (s)		17.6			16.5			12.2			11.1	
Level of Service		B			B			B			B	
Approach Delay (s)		17.6			16.5			12.2			11.1	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	14.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	63.1%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1049: 115th Street & Halsted Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↑	↱	↰	↑↑	↱
Volume (vph)	169	202	39	50	176	62	68	963	67	73	416	78
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	12	10	16	12	9	10	9	9	10	9
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00	0.98	1.00	1.00	0.96
Flpb, ped/bikes	0.99	1.00		1.00	1.00		0.99	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.98		1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1548	3005		1592	3512		1486	3040	1347	1494	3011	1271
Flt Permitted	0.59	1.00		0.58	1.00		0.44	1.00	1.00	0.12	1.00	1.00
Satd. Flow (perm)	954	3005		975	3512		690	3040	1347	197	3011	1271
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	178	213	41	53	185	65	72	1014	71	77	438	82
RTOR Reduction (vph)	0	19	0	0	41	0	0	0	43	0	0	50
Lane Group Flow (vph)	178	235	0	53	209	0	72	1014	28	77	438	32
Confl. Peds. (#/hr)	31		7	7		31	37		12	12		37
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	2%	4%	0%	0%	6%	2%	3%	5%	0%	3%	6%	4%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	32.0	27.0		32.0	27.0		38.0	33.0	33.0	38.0	33.0	33.0
Effective Green, g (s)	30.0	28.0		30.0	28.0		36.0	33.0	33.0	36.0	33.0	33.0
Actuated g/C Ratio	0.35	0.33		0.35	0.33		0.42	0.39	0.39	0.42	0.39	0.39
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)	365	990		373	1157		330	1180	523	144	1169	493
v/s Ratio Prot	c0.02	0.08		0.01	0.06		0.01	c0.33		c0.03	0.15	
v/s Ratio Perm	c0.15			0.04			0.08		0.02	0.20		0.03
v/c Ratio	0.49	0.24		0.14	0.18		0.22	0.86	0.05	0.53	0.37	0.06
Uniform Delay, d1	20.6	20.7		18.4	20.3		14.9	23.9	16.2	17.2	18.6	16.3
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	2.06	0.61	0.84
Incremental Delay, d2	4.6	0.6		0.8	0.3		1.5	8.2	0.2	12.4	0.8	0.2
Delay (s)	25.2	21.3		19.2	20.7		16.4	32.1	16.4	47.8	12.2	13.9
Level of Service	C	C		B	C		B	C	B	D	B	B
Approach Delay (s)		22.9			20.4			30.2			17.0	
Approach LOS		C			C			C			B	

Intersection Summary			
HCM Average Control Delay	24.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	68.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1050: 115th Street & Wentworth Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱		↰	↱		↰	↱
Volume (vph)	38	256	18	14	216	8	35	113	25	20	56	41
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	16	12	12	16	12
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frpb, ped/bikes		1.00	0.96		1.00	0.97		1.00	0.99		1.00	0.98
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frt		1.00	0.85		1.00	0.85		1.00	0.85		1.00	0.85
Flt Protected		0.99	1.00		1.00	1.00		0.99	1.00		0.99	1.00
Satd. Flow (prot)		1929	1382		1950	1331		1970	1452		1928	1430
Flt Permitted		0.94	1.00		0.98	1.00		0.93	1.00		0.93	1.00
Satd. Flow (perm)		1829	1382		1910	1331		1860	1452		1810	1430
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	40	269	19	15	227	8	37	119	26	21	59	43
RTOR Reduction (vph)	0	0	10	0	0	4	0	0	15	0	0	25
Lane Group Flow (vph)	0	309	9	0	242	4	0	156	11	0	80	18
Confl. Peds. (#/hr)	5		21	21		5	9		1	1		9
Heavy Vehicles (%)	5%	5%	6%	7%	4%	12%	6%	1%	4%	0%	6%	5%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)		30.0	30.0		30.0	30.0		27.0	27.0		27.0	27.0
Effective Green, g (s)		30.0	30.0		30.0	30.0		27.0	27.0		27.0	27.0
Actuated g/C Ratio		0.46	0.46		0.46	0.46		0.42	0.42		0.42	0.42
Clearance Time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		844	638		882	614		773	603		752	594
v/s Ratio Prot												
v/s Ratio Perm		c0.17	0.01		0.13	0.00		c0.08	0.01		0.04	0.01
v/c Ratio		0.37	0.01		0.27	0.01		0.20	0.02		0.11	0.03
Uniform Delay, d1		11.3	9.5		10.8	9.4		12.1	11.2		11.6	11.2
Progression Factor		1.00	1.00		0.47	0.37		1.38	1.86		0.93	0.82
Incremental Delay, d2		1.2	0.0		0.8	0.0		0.6	0.1		0.3	0.1
Delay (s)		12.6	9.5		5.8	3.5		17.3	20.9		11.0	9.3
Level of Service		B	A		A	A		B	C		B	A
Approach Delay (s)		12.4			5.7			17.8			10.4	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM Average Control Delay	11.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.29		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1051: 115th Street & State Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	66	240	10	15	200	30	12	234	25	30	70	30
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	0.98		1.00	0.99		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1520	3022		1520	2981		1520	2996		1520	2904	
Flt Permitted	0.95	1.00		0.58	1.00		0.68	1.00		0.56	1.00	
Satd. Flow (perm)	1520	3022		929	2981		1091	2996		904	2904	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	73	267	11	17	222	33	13	260	28	33	78	33
RTOR Reduction (vph)	0	5	0	0	18	0	0	12	0	0	19	0
Lane Group Flow (vph)	73	273	0	17	237	0	13	276	0	33	92	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Prot			Perm			Perm			Perm		
Protected Phases	7	4			8			2			6	
Permitted Phases				8			2			6		
Actuated Green, G (s)	7.0	32.0		22.0	22.0		27.0	27.0		27.0	27.0	
Effective Green, g (s)	7.0	32.0		22.0	22.0		27.0	27.0		27.0	27.0	
Actuated g/C Ratio	0.11	0.49		0.34	0.34		0.42	0.42		0.42	0.42	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	164	1488		314	1009		453	1244		376	1206	
v/s Ratio Prot	c0.05	0.09			c0.08			c0.09			0.03	
v/s Ratio Perm				0.02			0.01			0.04		
v/c Ratio	0.45	0.18		0.05	0.24		0.03	0.22		0.09	0.08	
Uniform Delay, d1	27.2	9.2		14.5	15.5		11.2	12.2		11.5	11.5	
Progression Factor	0.83	0.41		0.82	0.75		0.59	0.66		1.09	1.13	
Incremental Delay, d2	8.3	0.3		0.3	0.5		0.1	0.4		0.5	0.1	
Delay (s)	30.8	4.1		12.3	12.2		6.7	8.5		13.1	13.1	
Level of Service	C	A		B	B		A	A		B	B	
Approach Delay (s)		9.6			12.2			8.4			13.1	
Approach LOS		A			B			A			B	

Intersection Summary			
HCM Average Control Delay	10.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.25		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	35.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1052: 115th Street & Michigan Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			↰↑↱			↰↑↱	
Volume (vph)	37	249	16	95	212	42	26	284	20	24	137	24
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	12	12	12	12	12	12
Total Lost time (s)	4.0	4.0		3.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frt	1.00	0.99		1.00	0.98			0.99			0.98	
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.99	
Satd. Flow (prot)	1520	3012		1520	2964			3215			3172	
Flt Permitted	0.58	1.00		0.95	1.00			0.92			0.89	
Satd. Flow (perm)	925	3012		1520	2964			2981			2842	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	41	277	18	106	236	47	29	316	22	27	152	27
RTOR Reduction (vph)	0	8	0	0	25	0	0	7	0	0	17	0
Lane Group Flow (vph)	41	287	0	106	258	0	0	360	0	0	189	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Prot			Perm			Perm		
Protected Phases		4		3	8			2			6	
Permitted Phases	4						2			6		
Actuated Green, G (s)	20.0	20.0		6.0	29.0			25.0			25.0	
Effective Green, g (s)	20.0	20.0		6.0	29.0			25.0			25.0	
Actuated g/C Ratio	0.31	0.31		0.09	0.45			0.38			0.38	
Clearance Time (s)	4.0	4.0		3.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	285	927		140	1322			1147			1093	
v/s Ratio Prot		c0.10		c0.07	0.09							
v/s Ratio Perm	0.04							c0.12			0.07	
v/c Ratio	0.14	0.31		0.76	0.19			0.31			0.17	
Uniform Delay, d1	16.3	17.2		28.8	10.9			14.0			13.2	
Progression Factor	0.61	0.60		1.35	0.97			0.70			0.76	
Incremental Delay, d2	1.1	0.9		27.5	0.3			0.7			0.3	
Delay (s)	11.0	11.2		66.3	10.8			10.4			10.4	
Level of Service	B	B		E	B			B			B	
Approach Delay (s)		11.1			25.9			10.4			10.4	
Approach LOS		B			C			B			B	

Intersection Summary			
HCM Average Control Delay	15.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	42.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			↰↑↱				
Volume (vph)	14	260	14	69	325	69	25	93	160	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	12	14	12	10	15	10
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			0.95				
Frt		0.99			0.98			0.91				
Flt Protected		1.00			0.99			1.00				
Satd. Flow (prot)		1585			1556			3160				
Flt Permitted		0.97			0.91			1.00				
Satd. Flow (perm)		1548			1426			3160				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	16	289	16	77	361	77	28	103	178	0	0	0
RTOR Reduction (vph)	0	2	0	0	8	0	0	139	0	0	0	0
Lane Group Flow (vph)	0	319	0	0	507	0	0	170	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm			Perm					
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Actuated Green, G (s)		42.6			42.6			14.4				
Effective Green, g (s)		42.6			42.6			14.4				
Actuated g/C Ratio		0.66			0.66			0.22				
Clearance Time (s)		4.0			4.0			4.0				
Vehicle Extension (s)		3.0			3.0			8.0				
Lane Grp Cap (vph)		1015			935			700				
v/s Ratio Prot												
v/s Ratio Perm		0.21			c0.36			0.05				
v/c Ratio		0.31			0.54			0.24				
Uniform Delay, d1		4.9			6.0			20.8				
Progression Factor		2.05			1.00			1.00				
Incremental Delay, d2		0.8			2.3			0.8				
Delay (s)		10.8			8.2			21.6				
Level of Service		B			A			C				
Approach Delay (s)		10.8			8.2			21.6			0.0	
Approach LOS		B			A			C			A	

Intersection Summary			
HCM Average Control Delay	12.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	61.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
1054: 115th Street & Martin Luther King Jr Drive

1/14/2013

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰	↱		↰	↱
Volume (veh/h)	80	340	387	44	64	73
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	84	358	407	46	67	77
Pedestrians		3	5		21	
Lane Width (ft)		16.0	16.0		10.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		0	1		1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		1319	491			
pX, platoon unblocked	0.87				0.87	0.87
vC, conflicting volume	475				983	455
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	323				906	300
tC, single (s)	4.2				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.3				3.5	3.3
p0 queue free %	92				72	88
cM capacity (veh/h)	1015				240	633

Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total	442	454	67	77
Volume Left	84	0	67	0
Volume Right	0	46	0	77
cSH	1015	1700	240	633
Volume to Capacity	0.08	0.27	0.28	0.12
Queue Length 95th (ft)	7	0	28	10
Control Delay (s)	2.4	0.0	25.8	11.5
Lane LOS	A		D	B
Approach Delay (s)	2.4	0.0	18.2	
Approach LOS			C	

Intersection Summary			
Average Delay	3.6		
Intersection Capacity Utilization	62.7%	ICU Level of Service	B
Analysis Period (min)	15		

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↱			↰	↖↗	
Volume (vph)	461	1	16	630	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0			4.0		
Lane Util. Factor	1.00			1.00		
Frt	1.00			1.00		
Flt Protected	1.00			1.00		
Satd. Flow (prot)	1714			1712		
Flt Permitted	1.00			0.98		
Satd. Flow (perm)	1714			1685		
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	512	1	18	700	0	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	513	0	0	718	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%
Turn Type			Perm			
Protected Phases	1 2 4			4	3	
Permitted Phases			4			
Actuated Green, G (s)	63.0			31.0		
Effective Green, g (s)	59.0			31.0		
Actuated g/C Ratio	0.69			0.36		
Clearance Time (s)				4.0		
Lane Grp Cap (vph)	1190			615		
v/s Ratio Prot	c0.30					
v/s Ratio Perm				c0.43		
v/c Ratio	0.43			1.17		
Uniform Delay, d1	5.7			27.0		
Progression Factor	0.04			1.00		
Incremental Delay, d2	0.3			92.1		
Delay (s)	0.5			119.1		
Level of Service	A			F		
Approach Delay (s)	0.5			119.1	0.0	
Approach LOS	A			F	A	

Intersection Summary			
HCM Average Control Delay	69.7	HCM Level of Service	E
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	51.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
1056: 115th Street & Bishop Ford Fwy

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱			↰↑						↰↑	↱
Volume (veh/h)	0	181	189	25	542	0	0	0	0	3	0	241
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	201	210	28	602	0	0	0	0	3	0	268
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	602			201			964	964	206	758	859	602
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	602			201			964	964	206	758	859	602
tC, single (s)	4.1			5.5			7.5	6.5	6.9	7.5	6.5	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.9			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			97			100	100	100	99	100	39
cM capacity (veh/h)	985			989			81	250	807	293	288	438

Direction, Lane #	EB 1	EB 2	WB 1	SB 1	SB 2
Volume Total	134	277	630	3	268
Volume Left	0	0	28	3	0
Volume Right	0	210	0	0	268
cSH	1700	1700	989	293	438
Volume to Capacity	0.08	0.16	0.03	0.01	0.61
Queue Length 95th (ft)	0	0	2	1	100
Control Delay (s)	0.0	0.0	0.7	17.4	25.3
Lane LOS			A	C	D
Approach Delay (s)	0.0		0.7	25.3	
Approach LOS				D	

Intersection Summary			
Average Delay	5.6		
Intersection Capacity Utilization	56.6%	ICU Level of Service	B
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
1057: 115th Street &

1/14/2013

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰↰		↰			
Sign Control	Stop			Stop	Stop	
Volume (vph)	184	0	567	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	204	0	630	0	0	0

Direction, Lane #	EB 1	EB 2	NB 1
Volume Total (vph)	102	102	630
Volume Left (vph)	102	102	630
Volume Right (vph)	0	0	0
Hadj (s)	0.58	0.58	0.29
Departure Headway (s)	6.7	6.7	4.8
Degree Utilization, x	0.19	0.19	0.85
Capacity (veh/h)	511	511	735
Control Delay (s)	10.1	10.1	28.3
Approach Delay (s)	10.1		28.3
Approach LOS	B		D

Intersection Summary			
Delay	23.8		
HCM Level of Service	C		
Intersection Capacity Utilization	45.4%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Signalized Intersection Capacity Analysis
1058: 119th Street & Marshield Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↰↑					↰	↰↑↱	↱
Volume (vph)	0	433	207	154	457	0	0	0	0	122	115	294
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	12	13	12	12	12	12	10	10	11
Total Lost time (s)		6.0	6.0		6.0					6.0	6.0	6.0
Lane Util. Factor		0.95	1.00		0.95					0.86	0.81	0.86
Frpb, ped/bikes		1.00	0.98		1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00					1.00	1.00	1.00
Frt		1.00	0.85		1.00					1.00	0.93	0.85
Flt Protected		1.00	1.00		0.99					0.95	0.99	1.00
Satd. Flow (prot)		2978	1202		3372					1346	3692	1122
Flt Permitted		1.00	1.00		0.99					0.95	0.99	1.00
Satd. Flow (perm)		2978	1202		3372					1346	3692	1122
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	456	218	162	481	0	0	0	0	128	121	309
RTOR Reduction (vph)	0	0	159	0	0	0	0	0	0	0	102	92
Lane Group Flow (vph)	0	456	59	0	643	0	0	0	0	70	232	62
Confl. Peds. (#/hr)	5		3	3		5						
Heavy Vehicles (%)	0%	11%	9%	2%	4%	0%	0%	0%	0%	2%	2%	2%
Parking (#/hr)			0									0
Turn Type			Perm	Split						Split		custom
Protected Phases		2		10 12 14	10 12 14					4	4	
Permitted Phases			2									4 2
Actuated Green, G (s)		39.2	39.2		73.6					19.3	19.3	64.5
Effective Green, g (s)		39.2	39.2		73.6					19.3	19.3	64.5
Actuated g/C Ratio		0.25	0.25		0.46					0.12	0.12	0.40
Clearance Time (s)		6.0	6.0							6.0	6.0	
Vehicle Extension (s)		3.0	3.0							3.0	3.0	
Lane Grp Cap (vph)		730	294		1551					162	445	452
v/s Ratio Prot		c0.15			c0.19					0.05	c0.06	
v/s Ratio Perm			0.05									0.06
v/c Ratio		0.62	0.20		0.41					0.43	0.52	0.14
Uniform Delay, d1		53.8	47.9		28.8					65.3	66.0	30.2
Progression Factor		1.00	1.00		0.02					1.00	1.00	1.00
Incremental Delay, d2		4.0	1.5		0.1					1.8	1.1	0.1
Delay (s)		57.9	49.5		0.6					67.1	67.1	30.3
Level of Service		E	D		A					E	E	C
Approach Delay (s)		55.1			0.6			0.0			57.0	
Approach LOS		E			A			A			E	

Intersection Summary			
HCM Average Control Delay	37.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	29.9
Intersection Capacity Utilization	52.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1059: 119th Street & Ashland Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑			↑↑	↱	↰	↰↑↱				
Volume (vph)	210	345	0	0	383	91	228	144	129	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	13	12	12	11	12	13	13	14	12	12	12
Total Lost time (s)	6.0	6.0			6.0	6.0	6.0	6.0				
Lane Util. Factor	1.00	0.95			0.95	1.00	0.91	0.91				
Frt	1.00	1.00			1.00	0.85	1.00	0.94				
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.99				
Satd. Flow (prot)	1574	3366			3149	1457	1531	3009				
Flt Permitted	0.95	1.00			1.00	1.00	0.95	0.99				
Satd. Flow (perm)	1574	3366			3149	1457	1531	3009				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	233	383	0	0	426	101	253	160	143	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	81	0	52	0	0	0	0
Lane Group Flow (vph)	233	383	0	0	426	20	190	314	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Split					Perm	Split					
Protected Phases	2 4 8	2 4 8			10		12	12				
Permitted Phases						10						
Actuated Green, G (s)	78.4	78.4			32.2	32.2	22.6	22.6				
Effective Green, g (s)	78.4	78.4			32.2	32.2	22.6	22.6				
Actuated g/C Ratio	0.49	0.49			0.20	0.20	0.14	0.14				
Clearance Time (s)					6.0	6.0	6.0	6.0				
Vehicle Extension (s)					3.0	3.0	3.0	3.0				
Lane Grp Cap (vph)	771	1649			634	293	216	425				
v/s Ratio Prot	c0.15	0.11			c0.14		c0.12	0.10				
v/s Ratio Perm						0.01						
v/c Ratio	0.30	0.23			0.67	0.07	0.88	0.74				
Uniform Delay, d1	24.4	23.5			59.0	51.8	67.4	65.9				
Progression Factor	0.07	0.08			1.00	1.00	1.00	1.00				
Incremental Delay, d2	0.2	0.1			2.8	0.1	30.8	6.6				
Delay (s)	2.0	1.9			61.8	51.9	98.1	72.5				
Level of Service	A	A			E	D	F	E				
Approach Delay (s)		1.9			59.9			81.3			0.0	
Approach LOS		A			E			F			A	

Intersection Summary			
HCM Average Control Delay	45.9	HCM Level of Service	D
HCM Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	28.8
Intersection Capacity Utilization	48.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1060: 119th Street & Halsted Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑↱		↰	↑↑↱		↰	↑↑↱	
Volume (vph)	214	265	73	35	140	45	86	803	60	56	426	99
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	14	12	10	10	12	9	10	12
Total Lost time (s)	4.0	4.0	5.0	4.0	5.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.99	1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	0.99	1.00	1.00	1.00	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.96		1.00	0.99		1.00	0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1536	1556	1328	1595	1719		1524	2990		1508	2869	
Flt Permitted	0.52	1.00	1.00	0.51	1.00		0.35	1.00		0.16	1.00	
Satd. Flow (perm)	846	1556	1328	854	1719		569	2990		255	2869	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	225	279	77	37	147	47	91	845	63	59	448	104
RTOR Reduction (vph)	0	0	50	0	12	0	0	6	0	0	22	0
Lane Group Flow (vph)	225	279	27	37	182	0	91	902	0	59	530	0
Confl. Peds. (#/hr)	33		3	3		33	42		8	8		42
Confl. Bikes (#/hr)							1					1
Heavy Vehicles (%)	3%	8%	6%	0%	7%	5%	4%	5%	11%	2%	6%	9%
Turn Type	pm+pt		Perm	pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)	38.2	31.2	31.2	32.4	28.3		39.6	34.1		39.6	34.1	
Effective Green, g (s)	36.2	32.2	31.2	30.4	28.3		37.6	34.1		37.6	34.1	
Actuated g/C Ratio	0.40	0.36	0.35	0.34	0.31		0.42	0.38		0.42	0.38	
Clearance Time (s)	3.0	5.0	5.0	3.0	5.0		3.0	4.0		3.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	387	557	461	314	541		286	1134		169	1088	
v/s Ratio Prot	c0.04	0.18		0.00	0.11		0.02	c0.30		c0.02	0.18	
v/s Ratio Perm	c0.20		0.02	0.04			0.12			0.13		
v/c Ratio	0.58	0.50	0.06	0.12	0.34		0.32	0.80		0.35	0.49	
Uniform Delay, d1	20.6	22.6	19.6	20.2	23.6		16.5	24.8		17.5	21.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.2	3.2	0.2	0.2	1.7		0.6	5.8		1.3	1.6	
Delay (s)	22.9	25.8	19.8	20.4	25.3		17.1	30.6		18.7	22.8	
Level of Service	C	C	B	C	C		B	C		B	C	
Approach Delay (s)		23.8			24.5			29.4			22.4	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	25.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	89.9	Sum of lost time (s)	16.0
Intersection Capacity Utilization	71.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1061: 119th Street & Wentworth Avenue

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱		✥			✥	
Volume (vph)	43	263	16	5	182	19	35	79	16	11	42	38
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	10	10	10	12	15	12	12	16	12
Total Lost time (s)		3.0	3.0		3.0	3.0		3.0			3.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00			1.00	
Frpb, ped/bikes		1.00	0.97		1.00	0.97		1.00			0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00			1.00	
Frt		1.00	0.85		1.00	0.85		0.98			0.94	
Flt Protected		0.99	1.00		1.00	1.00		0.99			0.99	
Satd. Flow (prot)		1910	1482		1600	1198		1912			1846	
Flt Permitted		0.94	1.00		0.99	1.00		0.93			0.97	
Satd. Flow (perm)		1817	1482		1592	1198		1794			1807	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	45	277	17	5	192	20	37	83	17	12	44	40
RTOR Reduction (vph)	0	0	9	0	0	10	0	8	0	0	23	0
Lane Group Flow (vph)	0	322	8	0	197	10	0	129	0	0	73	0
Confl. Peds. (#/hr)	6		11	11		6	4		8	8		4
Confl. Bikes (#/hr)	1		1	1		1			1	1		
Heavy Vehicles (%)	0%	7%	0%	0%	5%	16%	0%	0%	0%	10%	0%	3%
Turn Type	Perm		Perm	Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)		32.0	32.0		32.0	32.0		27.0			27.0	
Effective Green, g (s)		32.0	32.0		32.0	32.0		27.0			27.0	
Actuated g/C Ratio		0.49	0.49		0.49	0.49		0.42			0.42	
Clearance Time (s)		3.0	3.0		3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)		895	730		784	590		745			751	
v/s Ratio Prot												
v/s Ratio Perm		c0.18	0.01		0.12	0.01		c0.07			0.04	
v/c Ratio		0.36	0.01		0.25	0.02		0.17			0.10	
Uniform Delay, d1		10.2	8.4		9.6	8.4		12.0			11.6	
Progression Factor		1.00	1.00		2.02	2.97		1.00			1.55	
Incremental Delay, d2		1.1	0.0		0.8	0.1		0.5			0.3	
Delay (s)		11.3	8.5		20.0	25.1		12.5			18.2	
Level of Service		B	A		C	C		B			B	
Approach Delay (s)		11.2			20.5			12.5			18.2	
Approach LOS		B			C			B			B	

Intersection Summary			
HCM Average Control Delay	14.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.27		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	54.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1062: 119th Street & State Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱		↰	↱		✥	
Volume (vph)	71	197	23	6	133	6	39	216	21	9	51	29
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frpb, ped/bikes		1.00	0.96		1.00	0.98		1.00	0.96		0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		0.96	
Flt Protected		0.99	1.00		1.00	1.00		0.99	1.00		1.00	
Satd. Flow (prot)		1663	1392		1604	1497		1754	1390		1652	
Flt Permitted		0.88	1.00		0.99	1.00		0.95	1.00		0.97	
Satd. Flow (perm)		1483	1392		1585	1497		1681	1390		1612	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	75	207	24	6	140	6	41	227	22	9	54	31
RTOR Reduction (vph)	0	0	16	0	0	4	0	0	11	0	16	0
Lane Group Flow (vph)	0	282	8	0	146	2	0	268	11	0	78	0
Confl. Peds. (#/hr)	11		17	17		11	4		17	17		4
Confl. Bikes (#/hr)	1		1	1		1	1					1
Heavy Vehicles (%)	0%	9%	5%	33%	11%	0%	6%	1%	6%	0%	0%	8%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		23.0	23.0		23.0	23.0		32.0	32.0		32.0	
Effective Green, g (s)		23.0	23.0		23.0	23.0		32.0	32.0		32.0	
Actuated g/C Ratio		0.35	0.35		0.35	0.35		0.49	0.49		0.49	
Clearance Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	
Lane Grp Cap (vph)		525	493		561	530		828	684		794	
v/s Ratio Prot												
v/s Ratio Perm		c0.19	0.01		0.09	0.00		c0.16	0.01		0.05	
v/c Ratio		0.54	0.02		0.26	0.00		0.32	0.02		0.10	
Uniform Delay, d1		16.8	13.7		14.9	13.6		10.0	8.4		8.8	
Progression Factor		1.94	3.17		0.92	0.92		0.32	0.32		1.03	
Incremental Delay, d2		3.7	0.1		1.1	0.0		0.9	0.0		0.2	
Delay (s)		36.3	43.3		14.8	12.6		4.1	2.7		9.3	
Level of Service		D	D		B	B		A	A		A	
Approach Delay (s)		36.9			14.7			4.0			9.3	
Approach LOS		D			B			A			A	

Intersection Summary			
HCM Average Control Delay	18.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	61.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1063: 119th Street & Michigan Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		✥			✥			↰	↱
Volume (vph)	157	20	30	9	18	6	26	286	19	6	194	94
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	14	12	12	16	12	12	16	12
Total Lost time (s)		3.0	3.0		3.0			3.0			3.0	3.0
Lane Util. Factor		1.00	1.00		1.00			1.00			1.00	1.00
Frpb, ped/bikes		1.00	0.97		0.99			1.00			1.00	0.95
Flpb, ped/bikes		0.98	1.00		0.99			1.00			1.00	1.00
Frt		1.00	0.85		0.97			0.99			1.00	0.85
Flt Protected		0.96	1.00		0.99			1.00			1.00	1.00
Satd. Flow (prot)		1768	1390		1813			1974			1873	1328
Flt Permitted		0.80	1.00		0.93			0.97			0.99	1.00
Satd. Flow (perm)		1474	1390		1713			1924			1858	1328
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	174	22	33	10	20	7	29	318	21	7	216	104
RTOR Reduction (vph)	0	0	19	0	5	0	0	4	0	0	0	53
Lane Group Flow (vph)	0	196	14	0	32	0	0	364	0	0	223	51
Confl. Peds. (#/hr)	49		22	22		49	34		17	17		34
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	9%	0%	7%	0%	0%	0%	0%	2%	0%	0%	9%	9%
Turn Type	pm+pt		Perm	Perm			Perm			Perm		Perm
Protected Phases	7	4			8			2			6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)		27.0	27.0		17.0			32.0			32.0	32.0
Effective Green, g (s)		27.0	27.0		17.0			32.0			32.0	32.0
Actuated g/C Ratio		0.42	0.42		0.26			0.49			0.49	0.49
Clearance Time (s)		3.0	3.0		3.0			3.0			3.0	3.0
Lane Grp Cap (vph)		648	577		448			947			915	654
v/s Ratio Prot		c0.04										
v/s Ratio Perm		0.09	0.01		0.02			c0.19			0.12	0.04
v/c Ratio		0.30	0.02		0.07			0.38			0.24	0.08
Uniform Delay, d1		12.7	11.2		18.1			10.3			9.5	8.7
Progression Factor		0.70	1.15		1.00			0.55			0.49	0.34
Incremental Delay, d2		1.1	0.1		0.3			1.1			0.6	0.2
Delay (s)		9.9	13.0		18.4			6.8			5.3	3.2
Level of Service		A	B		B			A			A	A
Approach Delay (s)		10.4			18.4			6.8			4.6	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	7.4	HCM Level of Service	A
HCM Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	59.0%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1064: 127th Street & S Paulina St

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↱		↰	↑↑					↰	↰↱	↱
Volume (vph)	0	787	220	254	1079	0	0	0	0	274	200	374
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	12	11	8	8	8	11	12	14
Total Lost time (s)		6.0		4.5	6.0					6.0	6.0	6.0
Lane Util. Factor		0.91		1.00	0.95					0.91	0.86	0.91
Frpb, ped/bikes		1.00		1.00	1.00					1.00	0.99	0.99
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Frt		0.97		1.00	1.00					1.00	0.94	0.85
Flt Protected		1.00		0.95	1.00					0.95	0.99	1.00
Satd. Flow (prot)		4302		1589	3226					1419	2711	1355
Flt Permitted		1.00		0.20	1.00					0.95	0.99	1.00
Satd. Flow (perm)		4302		327	3226					1419	2711	1355
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	828	232	267	1136	0	0	0	0	288	211	394
RTOR Reduction (vph)	0	40	0	0	0	0	0	0	0	0	69	69
Lane Group Flow (vph)	0	1020	0	267	1136	0	0	0	0	233	382	140
Confl. Peds. (#/hr)	6		4	4		6	2					2
Heavy Vehicles (%)	0%	11%	7%	4%	6%	0%	0%	0%	0%	6%	4%	8%
Turn Type				pm+pt						Perm		Perm
Protected Phases		2		1	6						4	
Permitted Phases				6						4		4
Actuated Green, G (s)		50.9		69.3	69.3					23.7	23.7	23.7
Effective Green, g (s)		50.9		69.3	69.3					23.7	23.7	23.7
Actuated g/C Ratio		0.48		0.66	0.66					0.23	0.23	0.23
Clearance Time (s)		6.0		4.5	6.0					6.0	6.0	6.0
Vehicle Extension (s)		7.0		3.5	7.0					3.5	3.5	3.5
Lane Grp Cap (vph)		2085		383	2129					320	612	306
v/s Ratio Prot		0.24		c0.09	0.35							
v/s Ratio Perm				c0.37						c0.16	0.14	0.10
v/c Ratio		0.49		0.70	0.53					0.73	0.62	0.46
Uniform Delay, d1		18.3		9.5	9.4					37.7	36.6	35.1
Progression Factor		1.00		1.38	1.53					1.00	1.00	1.00
Incremental Delay, d2		0.8		3.6	0.6					8.3	2.1	1.3
Delay (s)		19.1		16.7	14.9					46.0	38.7	36.4
Level of Service		B		B	B					D	D	D
Approach Delay (s)		19.1			15.3			0.0			40.1	
Approach LOS		B			B			A			D	

Intersection Summary			
HCM Average Control Delay	23.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	10.5
Intersection Capacity Utilization	96.2%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1065: 127th Street & Marshfield Ave

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↑			↑↑	↱		↰↑↱				
Volume (vph)	309	752	0	0	811	234	521	346	366	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	12	12	12	11	12	12	12	12	12	12	12
Total Lost time (s)	6.0	6.0			6.0	6.0		6.0				
Lane Util. Factor	0.97	0.95			0.95	1.00		0.91				
Frpb, ped/bikes	1.00	1.00			1.00	0.99		1.00				
Flpb, ped/bikes	1.00	1.00			1.00	1.00		1.00				
Frt	1.00	1.00			1.00	0.85		0.96				
Flt Protected	0.95	1.00			1.00	1.00		0.98				
Satd. Flow (prot)	2915	3138			3119	1449		4421				
Flt Permitted	0.20	1.00			1.00	1.00		0.98				
Satd. Flow (perm)	617	3138			3119	1449		4421				
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	325	792	0	0	854	246	548	364	385	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	111	0	71	0	0	0	0
Lane Group Flow (vph)	325	792	0	0	854	135	0	1226	0	0	0	0
Confl. Peds. (#/hr)	4					4						
Heavy Vehicles (%)	10%	9%	0%	0%	6%	4%	4%	3%	5%	0%	0%	0%
Turn Type	pm+pt					Perm	Perm					
Protected Phases	5	2			6			8				
Permitted Phases	2					6	8					
Actuated Green, G (s)	62.2	62.2			44.9	44.9		30.8				
Effective Green, g (s)	62.2	62.2			44.9	44.9		30.8				
Actuated g/C Ratio	0.59	0.59			0.43	0.43		0.29				
Clearance Time (s)	6.0	6.0			6.0	6.0		6.0				
Vehicle Extension (s)	3.5	7.0			7.0	7.0		5.0				
Lane Grp Cap (vph)	613	1859			1334	620		1297				
v/s Ratio Prot	c0.06	0.25			c0.27							
v/s Ratio Perm	0.26					0.09		0.28				
v/c Ratio	0.53	0.43			0.64	0.22		0.99dl				
Uniform Delay, d1	12.6	11.7			23.7	19.0		36.3				
Progression Factor	0.74	0.87			0.93	1.37		1.00				
Incremental Delay, d2	0.9	0.6			1.6	0.5		14.3				
Delay (s)	10.3	10.8			23.7	26.5		50.6				
Level of Service	B	B			C	C		D				
Approach Delay (s)		10.6			24.3			50.6			0.0	
Approach LOS		B			C			D			A	

Intersection Summary			
HCM Average Control Delay	29.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	96.2%	ICU Level of Service	F
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1066: 127th Street & S Ashland

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	103	439	221	76	736	40	226	178	40	37	111	91
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	12	11	12	12	10	10	13	10	10	10
Total Lost time (s)	3.5	6.0	3.5	3.5	6.0		3.5	6.0		3.5	6.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.97		1.00	0.93	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1565	3061	1291	1601	3233		1446	3008		1544	2782	
Flt Permitted	0.15	1.00	1.00	0.49	1.00		0.52	1.00		0.61	1.00	
Satd. Flow (perm)	250	3061	1291	820	3233		789	3008		990	2782	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	108	462	233	80	775	42	238	187	42	39	117	96
RTOR Reduction (vph)	0	0	97	0	4	0	0	20	0	0	79	0
Lane Group Flow (vph)	108	462	136	80	813	0	238	209	0	39	134	0
Confl. Peds. (#/hr)	3		12	12		3	9		6	6		9
Heavy Vehicles (%)	2%	8%	5%	3%	5%	3%	10%	3%	2%	3%	7%	4%
Parking (#/hr)			0									
Turn Type	pm+pt		pm+ov	pm+pt			pm+pt			pm+pt		
Protected Phases	5	2	3	1	6		3	8		7	4	
Permitted Phases	2		2	6			8			4		
Actuated Green, G (s)	61.9	52.0	61.5	39.1	32.7		31.1	22.6		23.1	18.1	
Effective Green, g (s)	61.9	52.0	61.5	39.1	32.7		31.1	22.6		23.1	18.1	
Actuated g/C Ratio	0.59	0.50	0.59	0.37	0.31		0.30	0.22		0.22	0.17	
Clearance Time (s)	3.5	6.0	3.5	3.5	6.0		3.5	6.0		3.5	6.0	
Vehicle Extension (s)	3.0	7.0	3.0	3.0	7.0		3.0	7.0		3.0	7.0	
Lane Grp Cap (vph)	469	1516	756	353	1007		293	647		244	480	
v/s Ratio Prot	c0.06	c0.15	0.02	0.01	c0.25		c0.07	0.07		0.01	0.05	
v/s Ratio Perm	0.08		0.09	0.07			c0.17			0.03		
v/c Ratio	0.23	0.30	0.18	0.23	0.81		0.81	0.32		0.16	0.28	
Uniform Delay, d1	11.9	15.8	10.1	21.8	33.3		32.8	34.7		32.8	37.8	
Progression Factor	0.92	1.00	2.24	1.00	1.00		0.91	0.85		1.00	1.00	
Incremental Delay, d2	0.9	0.4	0.1	0.3	6.9		15.1	1.0		0.3	1.1	
Delay (s)	11.9	16.2	22.7	22.1	40.2		45.1	30.7		33.1	38.9	
Level of Service	B	B	C	C	D		D	C		C	D	
Approach Delay (s)		17.5			38.6			38.0			38.0	
Approach LOS		B			D			D			D	

Intersection Summary			
HCM Average Control Delay	31.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	19.0
Intersection Capacity Utilization	71.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

1067: Vermont St & S Ashland

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	59	126	273	54	160	98	328	380	63	91	258	54
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	11	12	11	12	12	11	13	12	10	11	12
Total Lost time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.90		1.00	0.94		1.00	0.98		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1633	2808		1463	3015		1589	3257		1549	3135	
Flt Permitted	0.57	1.00		0.42	1.00		0.46	1.00		0.48	1.00	
Satd. Flow (perm)	986	2808		653	3015		772	3257		790	3135	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	62	133	287	57	168	103	345	400	66	96	272	57
RTOR Reduction (vph)	0	208	0	0	75	0	0	13	0	0	17	0
Lane Group Flow (vph)	62	212	0	57	196	0	345	453	0	96	312	0
Confl. Peds. (#/hr)	20					20	1		2	2		1
Heavy Vehicles (%)	4%	5%	6%	13%	6%	5%	4%	6%	5%	3%	3%	0%
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	35.8	28.8		35.8	28.8		53.2	41.9		38.6	31.3	
Effective Green, g (s)	35.8	28.8		35.8	28.8		53.2	41.9		38.6	31.3	
Actuated g/C Ratio	0.34	0.27		0.34	0.27		0.51	0.40		0.37	0.30	
Clearance Time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	3.5	7.0		3.5	7.0		3.5	7.0		3.5	7.0	
Lane Grp Cap (vph)	379	770		277	827		530	1300		343	935	
v/s Ratio Prot	0.01	c0.08		c0.01	0.07		c0.11	0.14		0.02	0.10	
v/s Ratio Perm	0.04			0.06			c0.22			0.08		
v/c Ratio	0.16	0.27		0.21	0.24		0.65	0.35		0.28	0.33	
Uniform Delay, d1	23.7	29.9		23.8	29.6		16.6	22.0		22.4	28.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		0.99	0.87	
Incremental Delay, d2	0.2	0.9		0.4	0.7		3.0	0.7		0.5	0.9	
Delay (s)	23.9	30.8		24.3	30.3		19.6	22.8		22.8	26.0	
Level of Service	C	C		C	C		B	C		C	C	
Approach Delay (s)		29.9			29.2			21.4			25.3	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	25.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	66.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

1068: 127th Street & Halsted Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	165	392	79	6	401	108	65	577	7	80	309	100
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	10	12	9	11	12	9	9	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.98			0.97		1.00	1.00		1.00	0.96	
Flt Protected		0.99			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		2890			2887		1436	3185		1450	2788	
Flt Permitted		0.58			0.95		0.43	1.00		0.29	1.00	
Satd. Flow (perm)		1703			2733		654	3185		448	2788	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	183	436	88	7	446	120	72	641	8	89	343	111
RTOR Reduction (vph)	0	17	0	0	37	0	0	1	0	0	48	0
Lane Group Flow (vph)	0	690	0	0	536	0	72	648	0	89	406	0
Confl. Peds. (#/hr)	9		11	11		9	11		14	14		11
Heavy Vehicles (%)	3%	6%	18%	50%	6%	6%	7%	3%	50%	6%	7%	2%
Turn Type	pm+pt			Perm			pm+pt			pm+pt		
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		27.0			19.0		26.0	22.0		26.0	22.0	
Effective Green, g (s)		27.0			19.0		26.0	22.0		26.0	22.0	
Actuated g/C Ratio		0.42			0.29		0.40	0.34		0.40	0.34	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		780			799		310	1078		241	944	
v/s Ratio Prot		c0.05					0.01	c0.20		c0.02	0.15	
v/s Ratio Perm		c0.31			0.20		0.08			0.13		
v/c Ratio		0.88			0.67		0.23	0.60		0.37	0.43	
Uniform Delay, d1		17.6			20.2		12.4	17.9		12.8	16.6	
Progression Factor		1.00			1.58		0.88	0.69		1.00	1.00	
Incremental Delay, d2		14.0			2.3		1.6	2.3		4.3	1.4	
Delay (s)		31.5			34.4		12.5	14.6		17.1	18.1	
Level of Service		C			C		B	B		B	B	
Approach Delay (s)		31.5			34.4			14.4			17.9	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM Average Control Delay	24.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	70.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1069: Vermont St & Halsted Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱		↰	↑↱		↰	↑↱	
Volume (vph)	49	111	46	68	127	13	36	632	77	10	359	43
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	12	12	12	12	12
Total Lost time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.96		1.00	0.99		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1665	1856		1612	1938		1658	3213		1138	3197	
Flt Permitted	0.67	1.00		0.66	1.00		0.51	1.00		0.32	1.00	
Satd. Flow (perm)	1166	1856		1111	1938		889	3213		386	3197	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	51	114	47	70	131	13	37	652	79	10	370	44
RTOR Reduction (vph)	0	23	0	0	6	0	0	14	0	0	14	0
Lane Group Flow (vph)	51	138	0	70	138	0	37	717	0	10	400	0
Confl. Peds. (#/hr)	10		16	16		10	4		6	6		4
Confl. Bikes (#/hr)			4	4								
Heavy Vehicles (%)	2%	4%	5%	5%	4%	0%	3%	4%	8%	50%	5%	6%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	24.0	24.0		24.0	24.0		31.0	31.0		31.0	31.0	
Effective Green, g (s)	24.0	24.0		24.0	24.0		31.0	31.0		31.0	31.0	
Actuated g/C Ratio	0.37	0.37		0.37	0.37		0.48	0.48		0.48	0.48	
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)	431	685		410	716		424	1532		184	1525	
v/s Ratio Prot		c0.07			0.07			c0.22			0.13	
v/s Ratio Perm	0.04			0.06			0.04			0.03		
v/c Ratio	0.12	0.20		0.17	0.19		0.09	0.47		0.05	0.26	
Uniform Delay, d1	13.5	14.0		13.8	13.9		9.3	11.4		9.1	10.2	
Progression Factor	1.00	1.00		1.73	1.80		1.00	1.00		0.50	0.51	
Incremental Delay, d2	0.6	0.7		0.7	0.4		0.4	1.0		0.5	0.4	
Delay (s)	14.1	14.6		24.5	25.4		9.7	12.5		5.1	5.6	
Level of Service	B	B		C	C		A	B		A	A	
Approach Delay (s)		14.5			25.1			12.3			5.5	
Approach LOS		B			C			B			A	

Intersection Summary			
HCM Average Control Delay	12.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	58.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1070: 127th Street & S Wallance St

1/14/2013

Movement	EBT	WBL	WBT	WBR	NBL2	NBL	NBT	NBR	SBL	SBT	SBR	SBR2
Lane Configurations	↰↑↱		↰↑↱				✣			✣		
Volume (vph)	422	160	556	14	3	14	3	46	10	0	2	4
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	12	12	16	12	12	16	12	12
Total Lost time (s)	5.0		5.0				4.0			4.0		
Lane Util. Factor	0.95		0.95				1.00			1.00		
Frpb, ped/bikes	1.00		1.00				1.00			0.99		
Flpb, ped/bikes	1.00		1.00				1.00			1.00		
Frt	1.00		1.00				0.91			0.95		
Flt Protected	1.00		0.99				0.99			0.97		
Satd. Flow (prot)	2956		2958				1732			1864		
Flt Permitted	1.00		0.67				0.94			0.87		
Satd. Flow (perm)	2956		2007				1650			1672		
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	444	168	585	15	3	15	3	48	11	0	2	4
RTOR Reduction (vph)	0	0	2	0	0	0	38	0	0	3	0	0
Lane Group Flow (vph)	444	0	766	0	0	0	31	0	0	14	0	0
Confl. Peds. (#/hr)		7		6		3					3	
Confl. Bikes (#/hr)		1										
Heavy Vehicles (%)	8%	8%	6%	0%	0%	8%	0%	5%	0%	0%	0%	0%
Turn Type		custom			Perm	Perm			Perm			
Protected Phases	8	7	4				2			6		
Permitted Phases		4 7			2	2			6			
Actuated Green, G (s)	18.0		27.0				14.0			14.0		
Effective Green, g (s)	18.0		27.0				14.0			14.0		
Actuated g/C Ratio	0.28		0.42				0.22			0.22		
Clearance Time (s)	5.0		5.0				4.0			4.0		
Lane Grp Cap (vph)	819		921				355			360		
v/s Ratio Prot	0.15		c0.08									
v/s Ratio Perm			c0.27				c0.02			0.01		
v/c Ratio	0.54		0.83				0.09			0.04		
Uniform Delay, d1	20.0		17.0				20.4			20.2		
Progression Factor	1.33		0.76				1.00			1.00		
Incremental Delay, d2	1.5		8.3				0.5			0.2		
Delay (s)	28.1		21.2				20.9			20.4		
Level of Service	C		C				C			C		
Approach Delay (s)	28.1		21.2				20.9			20.4		
Approach LOS	C		C				C			C		

Intersection Summary			
HCM Average Control Delay	34.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	78.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1070: 127th Street & S Wallance St

Movement	NEL	NER
Lane Configurations		
Volume (vph)	1	213
Ideal Flow (vphpl)	1800	1800
Lane Width	12	12
Total Lost time (s)	5.0	
Lane Util. Factor	1.00	
Frpb, ped/bikes	1.00	
Flpb, ped/bikes	1.00	
Frt	0.87	
Flt Protected	1.00	
Satd. Flow (prot)	1430	
Flt Permitted	1.00	
Satd. Flow (perm)	1430	
Peak-hour factor, PHF	0.95	0.95
Adj. Flow (vph)	1	224
RTOR Reduction (vph)	0	0
Lane Group Flow (vph)	225	0
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		
Heavy Vehicles (%)	0%	9%
Turn Type		
Protected Phases	3	
Permitted Phases		
Actuated Green, G (s)	10.0	
Effective Green, g (s)	10.0	
Actuated g/C Ratio	0.15	
Clearance Time (s)	5.0	
Lane Grp Cap (vph)	220	
v/s Ratio Prot	c0.16	
v/s Ratio Perm		
v/c Ratio	1.02	
Uniform Delay, d1	27.5	
Progression Factor	1.08	
Incremental Delay, d2	65.9	
Delay (s)	95.6	
Level of Service	F	
Approach Delay (s)	95.6	
Approach LOS	F	

Intersection Summary

HCM Signalized Intersection Capacity Analysis
1071: 127th Street & State Street

1/14/2013

	↗	→	←	↖	↘	↙
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰↑	↑↱		↰	↱
Volume (vph)	186	556	575	64	41	156
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		1.00	1.00
Frt		1.00	0.98		1.00	0.85
Flt Protected		0.99	1.00		0.95	1.00
Satd. Flow (prot)		3217	3208		1629	1457
Flt Permitted		0.64	1.00		0.95	1.00
Satd. Flow (perm)		2071	3208		1629	1457
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	207	618	639	71	46	173
RTOR Reduction (vph)	0	0	13	0	0	128
Lane Group Flow (vph)	0	825	697	0	46	45
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%
Turn Type	Perm					Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)		40.0	40.0		17.0	17.0
Effective Green, g (s)		40.0	40.0		17.0	17.0
Actuated g/C Ratio		0.62	0.62		0.26	0.26
Clearance Time (s)		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		1274	1974		426	381
v/s Ratio Prot			0.22		0.03	
v/s Ratio Perm		c0.40				c0.03
v/c Ratio		0.65	0.35		0.11	0.12
Uniform Delay, d1		8.0	6.1		18.2	18.3
Progression Factor		1.40	1.25		0.93	0.86
Incremental Delay, d2		2.1	0.5		0.5	0.6
Delay (s)		13.3	8.2		17.5	16.3
Level of Service		B	A		B	B
Approach Delay (s)		13.3	8.2		16.6	
Approach LOS		B	A		B	

Intersection Summary			
HCM Average Control Delay	11.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

1072: 127th Street & Michigan Avenue

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰↑	↑↱		↰	↱
Volume (vph)	51	525	580	190	131	54
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	12	10	11	12	10	10
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		1.00	1.00
Frpb, ped/bikes		1.00	0.99		1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00
Frt		1.00	0.96		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		2927	2906		1464	1373
Flt Permitted		0.84	1.00		0.95	1.00
Satd. Flow (perm)		2467	2906		1464	1373
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	54	553	611	200	138	57
RTOR Reduction (vph)	0	0	49	0	0	40
Lane Group Flow (vph)	0	607	762	0	138	17
Confl. Peds. (#/hr)	1			1		
Confl. Bikes (#/hr)	1			1		
Heavy Vehicles (%)	4%	9%	8%	12%	9%	4%
Turn Type	Perm					Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)		38.0	38.0		19.0	19.0
Effective Green, g (s)		38.0	38.0		19.0	19.0
Actuated g/C Ratio		0.58	0.58		0.29	0.29
Clearance Time (s)		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		1442	1699		428	401
v/s Ratio Prot			c0.26		c0.09	
v/s Ratio Perm		0.25				0.01
v/c Ratio		0.42	0.45		0.32	0.04
Uniform Delay, d1		7.4	7.6		18.0	16.5
Progression Factor		0.49	0.53		0.94	1.18
Incremental Delay, d2		0.7	0.7		2.0	0.2
Delay (s)		4.4	4.7		18.9	19.6
Level of Service		A	A		B	B
Approach Delay (s)		4.4	4.7		19.1	
Approach LOS		A	A		B	

Intersection Summary			
HCM Average Control Delay	6.3	HCM Level of Service	A
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	57.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1073: 130th Street & Indiana Ave

1/14/2013

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↱		↰	↑	↰↱	
Volume (vph)	505	153	104	534	401	79
Ideal Flow (vphpl)	2300	1800	1800	2300	1800	1800
Lane Width	15	12	14	16	15	12
Total Lost time (s)	5.0		5.0	5.0	5.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	0.99		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.97		1.00	1.00	0.98	
Flt Protected	1.00		0.95	1.00	0.96	
Satd. Flow (prot)	2214		1769	2436	1816	
Flt Permitted	1.00		0.16	1.00	0.96	
Satd. Flow (perm)	2214		297	2436	1816	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	561	170	116	593	446	88
RTOR Reduction (vph)	17	0	0	0	11	0
Lane Group Flow (vph)	714	0	116	593	523	0
Confl. Peds. (#/hr)		4	4			8
Heavy Vehicles (%)	11%	7%	3%	7%	2%	2%
Turn Type			Perm			
Protected Phases	4			8	2	
Permitted Phases			8			
Actuated Green, G (s)	31.0		31.0	31.0	24.0	
Effective Green, g (s)	31.0		31.0	31.0	24.0	
Actuated g/C Ratio	0.48		0.48	0.48	0.37	
Clearance Time (s)	5.0		5.0	5.0	5.0	
Lane Grp Cap (vph)	1056		142	1162	671	
v/s Ratio Prot	0.32			0.24	c0.29	
v/s Ratio Perm			c0.39			
v/c Ratio	0.68		0.82	0.51	0.78	
Uniform Delay, d1	13.1		14.6	11.8	18.2	
Progression Factor	1.23		1.00	1.00	1.00	
Incremental Delay, d2	3.3		38.5	1.6	8.7	
Delay (s)	19.4		53.1	13.4	26.9	
Level of Service	B		D	B	C	
Approach Delay (s)	19.4			19.9	26.9	
Approach LOS	B			B	C	

Intersection Summary			
HCM Average Control Delay	21.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	77.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1074: 130th Street & Ellis Ave

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑↑	↱		↰↑	↱		✣	
Volume (vph)	1	560	85	251	612	9	68	0	177	1	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	15	13	11	11	12	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0	4.0	3.0	3.0	4.0		4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85		1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.95	1.00		0.95	
Satd. Flow (prot)	1881	3213	1422	1589	3138	1366		1642	1443		969	
Flt Permitted	0.39	1.00	1.00	0.37	1.00	1.00		0.76	1.00		0.71	
Satd. Flow (perm)	778	3213	1422	614	3138	1366		1309	1443		722	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1	622	94	279	680	10	76	0	197	1	0	0
RTOR Reduction (vph)	0	0	37	0	0	2	0	0	173	0	0	0
Lane Group Flow (vph)	1	622	57	279	680	8	0	76	24	0	1	0
Heavy Vehicles (%)	0%	10%	4%	4%	9%	12%	18%	0%	6%	100%	0%	0%
Turn Type	Perm		Perm	custom		custom	Perm		Perm	Perm		
Protected Phases		4		3	3 8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)	51.5	51.5	51.5	66.6	66.6	66.6		10.4	10.4		10.4	
Effective Green, g (s)	51.5	51.5	51.5	66.6	66.6	66.6		10.4	10.4		10.4	
Actuated g/C Ratio	0.61	0.61	0.61	0.78	0.78	0.78		0.12	0.12		0.12	
Clearance Time (s)	4.0	4.0	4.0	3.0		4.0		4.0	4.0		4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0		3.0	3.0		3.0	
Lane Grp Cap (vph)	471	1947	862	620	2459	1070		160	177		88	
v/s Ratio Prot		0.19		c0.06	0.22							
v/s Ratio Perm	0.00		0.04	c0.29		0.01		c0.06	0.02		0.00	
v/c Ratio	0.00	0.32	0.07	0.45	0.28	0.01		0.47	0.14		0.01	
Uniform Delay, d1	6.6	8.2	6.9	2.8	2.5	2.0		34.8	33.3		32.8	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2	0.0	0.4	0.1	0.5	0.1	0.0		2.2	0.4		0.1	
Delay (s)	6.6	8.6	7.0	3.3	2.6	2.0		37.0	33.6		32.8	
Level of Service	A	A	A	A	A	A		D	C		C	
Approach Delay (s)		8.4			2.8			34.6			32.8	
Approach LOS		A			A			C			C	

Intersection Summary

HCM Average Control Delay	9.3	HCM Level of Service	A
HCM Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	7.0
Intersection Capacity Utilization	46.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1942: 111th Street & Langley Avenue

	↗	→	←	↖	↘	↙
Movement	**EBL**	**EBT**	**WBT**	**WBR**	**SBL**	**SBR**
Lane Configurations		↰↑	↑↱		Y	
Volume (vph)	12	774	795	43	23	9
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	12	10	10
Total Lost time (s)		5.0	5.0		3.0	
Lane Util. Factor		0.95	0.95		1.00	
Frt		1.00	0.99		0.96	
Flt Protected		1.00	1.00		0.97	
Satd. Flow (prot)		3038	3016		1486	
Flt Permitted		0.94	1.00		0.97	
Satd. Flow (perm)		2843	3016		1486	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	13	860	883	48	26	10
RTOR Reduction (vph)	0	0	4	0	9	0
Lane Group Flow (vph)	0	873	927	0	27	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%
Turn Type	Perm					
Protected Phases		4	8 2 11		5	
Permitted Phases	4					
Actuated Green, G (s)		33.0	64.0		7.0	
Effective Green, g (s)		33.0	64.0		7.0	
Actuated g/C Ratio		0.37	0.71		0.08	
Clearance Time (s)		5.0			3.0	
Lane Grp Cap (vph)		1042	2145		116	
v/s Ratio Prot			c0.31		c0.02	
v/s Ratio Perm		c0.31				
v/c Ratio		0.84	0.43		0.23	
Uniform Delay, d1		26.1	5.4		39.0	
Progression Factor		1.00	0.00		1.00	
Incremental Delay, d2		8.0	0.3		4.6	
Delay (s)		34.1	0.3		43.6	
Level of Service		C	A		D	
Approach Delay (s)		34.1	0.3		43.6	
Approach LOS		C	A		D	

Intersection Summary			
HCM Average Control Delay	17.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	42.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1955: 115th Street & Cottage Grove Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↑↱			↰↑↱			↰↑	↱
Volume (vph)	74	418	1	16	536	78	0	0	1	43	3	74
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	12	12	11	12	11
Total Lost time (s)		4.0			4.0			3.0			3.0	3.0
Lane Util. Factor		1.00			0.95			1.00			1.00	1.00
Frpb, ped/bikes		1.00			1.00			0.92			1.00	0.96
Flpb, ped/bikes		1.00			1.00			1.00			0.98	1.00
Frt		1.00			0.98			0.86			1.00	0.85
Flt Protected		0.99			1.00			1.00			0.96	1.00
Satd. Flow (prot)		1729			3229			1432			1610	1282
Flt Permitted		0.81			0.95			1.00			0.94	1.00
Satd. Flow (perm)		1411			3063			1432			1581	1282
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	82	464	1	18	596	87	0	0	1	48	3	82
RTOR Reduction (vph)	0	0	0	0	13	0	0	1	0	0	0	55
Lane Group Flow (vph)	0	547	0	0	688	0	0	0	0	0	51	27
Confl. Peds. (#/hr)	33		13	13		33	29		13	13		29
Confl. Bikes (#/hr)	1		1	1		1						
Heavy Vehicles (%)	4%	3%	0%	0%	4%	0%	0%	0%	0%	5%	0%	11%
Turn Type	Perm			Prot			Perm			pm+pt		Perm
Protected Phases		4		3	3 4			1		2	1 2	
Permitted Phases	4				3		1	1		1 2		1 2
Actuated Green, G (s)		31.0			45.0			9.0			25.0	28.0
Effective Green, g (s)		31.0			45.0			9.0			25.0	28.0
Actuated g/C Ratio		0.36			0.53			0.11			0.29	0.33
Clearance Time (s)		4.0						3.0				
Lane Grp Cap (vph)		515			1649			152			470	422
v/s Ratio Prot					c0.07			0.00			c0.02	
v/s Ratio Perm		c0.39			0.15						c0.01	0.02
v/c Ratio		1.06			0.42			0.00			0.11	0.06
Uniform Delay, d1		27.0			12.1			34.0			21.9	19.5
Progression Factor		1.00			1.67			1.00			1.00	1.00
Incremental Delay, d2		57.2			0.1			0.0			0.5	0.3
Delay (s)		84.2			20.2			34.0			22.3	19.8
Level of Service		F			C			C			C	B
Approach Delay (s)		84.2			20.2			34.0			20.8	
Approach LOS		F			C			C			C	

Intersection Summary			
HCM Average Control Delay	45.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	70.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑↱		↰	↑↑↱			✥			✥	
Volume (vph)	39	598	27	35	997	57	34	17	48	23	22	87
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	16	10	10	16	8	15	8	8	14	8
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			0.99			0.98	
Flpb, ped/bikes	0.97	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.99			0.93			0.91	
Flt Protected	0.95	1.00		0.95	1.00			0.98			0.99	
Satd. Flow (prot)	1555	3022		1587	3022			1787			1700	
Flt Permitted	0.18	1.00		0.37	1.00			0.89			0.95	
Satd. Flow (perm)	292	3022		610	3022			1613			1628	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	41	623	28	36	1039	59	35	18	50	24	23	91
RTOR Reduction (vph)	0	5	0	0	6	0	0	32	0	0	23	0
Lane Group Flow (vph)	41	646	0	36	1092	0	0	71	0	0	115	0
Confl. Peds. (#/hr)	145		16	16		145	17		19	19		17
Confl. Bikes (#/hr)	5					5			2	2		
Heavy Vehicles (%)	0%	5%	0%	0%	4%	2%	0%	0%	0%	0%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	34.0	34.0		34.0	34.0			22.0			22.0	
Effective Green, g (s)	34.0	34.0		34.0	34.0			23.0			23.0	
Actuated g/C Ratio	0.52	0.52		0.52	0.52			0.35			0.35	
Clearance Time (s)	4.0	4.0		4.0	4.0			5.0			5.0	
Lane Grp Cap (vph)	153	1581		319	1581			571			576	
v/s Ratio Prot		0.21			c0.36							
v/s Ratio Perm	0.14			0.06				0.04			c0.07	
v/c Ratio	0.27	0.41		0.11	0.69			0.12			0.20	
Uniform Delay, d1	8.6	9.4		7.9	11.6			14.2			14.6	
Progression Factor	1.00	1.00		0.70	1.37			1.00			1.00	
Incremental Delay, d2	4.3	0.8		0.6	2.2			0.4			0.8	
Delay (s)	12.8	10.2		6.1	18.1			14.6			15.4	
Level of Service	B	B		A	B			B			B	
Approach Delay (s)		10.3			17.7			14.6			15.4	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	15.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1002: 95th Street & Lafayette Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↑	↱				↰↰	↑	↱
Volume (vph)	25	787	5	31	619	40	0	0	0	578	88	375
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	5.0	5.0		3.0	3.0	3.0				5.0	5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00				0.97	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.67				1.00	1.00	0.98
Flpb, ped/bikes	0.92	1.00		1.00	1.00	1.00				1.00	1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85				1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00				0.95	1.00	1.00
Satd. Flow (prot)	790	3379		1710	3226	514				3285	1731	1481
Flt Permitted	0.40	1.00		0.14	1.00	1.00				0.95	1.00	1.00
Satd. Flow (perm)	336	3379		248	3226	514				3285	1731	1481
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	26	828	5	33	652	42	0	0	0	608	93	395
RTOR Reduction (vph)	0	0	0	0	0	18	0	0	0	0	0	168
Lane Group Flow (vph)	26	833	0	33	652	24	0	0	0	608	93	227
Confl. Peds. (#/hr)	350		4	4		350	8		6	6		8
Confl. Bikes (#/hr)	7		1	1		7						
Heavy Vehicles (%)	100%	1%	20%	0%	6%	100%	0%	0%	0%	1%	4%	1%
Turn Type	pm+pt			pm+pt		Perm				Split		Perm
Protected Phases	7	4		3	8					6	6	
Permitted Phases	4			8		8						6
Actuated Green, G (s)	43.0	43.0		73.0	73.0	73.0				30.0	30.0	30.0
Effective Green, g (s)	43.0	43.0		73.0	73.0	73.0				30.0	30.0	30.0
Actuated g/C Ratio	0.33	0.33		0.56	0.56	0.56				0.23	0.23	0.23
Clearance Time (s)	5.0	5.0		3.0	3.0	3.0				5.0	5.0	5.0
Lane Grp Cap (vph)	160	1118		634	1812	289				758	399	342
v/s Ratio Prot	0.02	c0.25		0.02	c0.20					c0.19	0.05	
v/s Ratio Perm	0.04			0.01		0.05						0.15
v/c Ratio	0.16	0.75		0.05	0.36	0.08				0.80	0.23	0.66
Uniform Delay, d1	31.6	38.6		15.2	15.7	13.1				47.2	40.6	45.4
Progression Factor	0.84	0.86		0.34	0.75	1.27				1.00	1.00	1.00
Incremental Delay, d2	2.1	4.4		0.1	0.4	0.4				8.8	1.4	9.8
Delay (s)	28.6	37.4		5.2	12.2	17.0				56.0	42.0	55.2
Level of Service	C	D		A	B	B				E	D	E
Approach Delay (s)		37.2			12.1			0.0			54.5	
Approach LOS		D			B			A			D	

Intersection Summary			
HCM Average Control Delay	37.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	52.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1003: 95th Street & State Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↱		↰	↑↑	↱		↰↑	↱	↰		↱
Volume (vph)	338	809	218	53	560	280	100	247	54	39	0	30
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0	3.0		5.0	5.0	5.0		5.0	5.0	5.0		5.0
Lane Util. Factor	0.97	0.95		1.00	0.95	1.00		0.95	1.00	1.00		1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.67		1.00	0.91	1.00		0.96
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Frt	1.00	0.97		1.00	1.00	0.85		1.00	0.85	1.00		0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.99	1.00	0.95		1.00
Satd. Flow (prot)	3285	3263		1710	3138	1018		3301	1359	855		734
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.99	1.00	0.95		1.00
Satd. Flow (perm)	3285	3263		1710	3138	1018		3301	1359	855		734
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	356	852	229	56	589	295	105	260	57	41	0	32
RTOR Reduction (vph)	0	18	0	0	0	222	0	0	42	0	0	30
Lane Group Flow (vph)	356	1063	0	56	589	73	0	365	15	41	0	2
Confl. Peds. (#/hr)	327		13	13		327	6		60	60		6
Confl. Bikes (#/hr)	6					6						
Heavy Vehicles (%)	1%	1%	0%	0%	9%	1%	0%	3%	2%	100%	0%	100%
Turn Type	Prot			Prot		Perm	Split		Perm	Prot		custom
Protected Phases	7	4		3	8		2	2		6		
Permitted Phases						8			2			6
Actuated Green, G (s)	44.0	68.0		8.0	32.0	32.0		28.0	28.0	8.0		8.0
Effective Green, g (s)	44.0	68.0		8.0	32.0	32.0		28.0	28.0	8.0		8.0
Actuated g/C Ratio	0.34	0.52		0.06	0.25	0.25		0.22	0.22	0.06		0.06
Clearance Time (s)	3.0	3.0		5.0	5.0	5.0		5.0	5.0	5.0		5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0	3.0	3.0		3.0
Lane Grp Cap (vph)	1112	1707		105	772	251		711	293	53		45
v/s Ratio Prot	0.11	c0.33		0.03	c0.19			c0.11		c0.05		
v/s Ratio Perm						0.07			0.01			0.00
v/c Ratio	0.32	0.62		0.53	0.76	0.29		0.51	0.05	0.77		0.04
Uniform Delay, d1	31.9	21.9		59.2	45.5	39.8		45.0	40.5	60.1		57.4
Progression Factor	0.94	0.17		1.00	1.00	1.00		0.94	1.00	1.00		1.00
Incremental Delay, d2	0.5	1.1		18.0	7.0	2.9		2.6	0.3	49.7		0.4
Delay (s)	30.5	4.7		77.2	52.5	42.7		45.1	40.7	109.9		57.8
Level of Service	C	A		E	D	D		D	D	F		E
Approach Delay (s)		11.1			50.9			44.5			87.0	
Approach LOS		B			D			D			F	

Intersection Summary			
HCM Average Control Delay	31.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	68.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1004: 95th Street & Michigan Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱		↰	↑↑		↰		↱	↰	↱	
Volume (vph)	0	885	165	101	813	0	74	0	79	9	14	7
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	11	11	8	12	12	12	14	15	12
Total Lost time (s)		4.0		4.0	4.0		4.0		4.0	4.0	4.0	
Lane Util. Factor		0.95		1.00	0.95		1.00		1.00	1.00	1.00	
Frpb, ped/bikes		0.99		1.00	1.00		1.00		0.98	1.00	0.99	
Flpb, ped/bikes		1.00		1.00	1.00		0.97		1.00	0.99	1.00	
Frt		0.98		1.00	1.00		1.00		0.85	1.00	0.95	
Flt Protected		1.00		0.95	1.00		0.95		1.00	0.95	1.00	
Satd. Flow (prot)		2997		1648	3149		1387		1451	1803	1857	
Flt Permitted		1.00		0.20	1.00		0.74		1.00	0.95	1.00	
Satd. Flow (perm)		2997		341	3149		1085		1451	1803	1857	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	0	922	172	105	847	0	77	0	82	9	15	7
RTOR Reduction (vph)	0	15	0	0	0	0	0	0	56	0	5	0
Lane Group Flow (vph)	0	1079	0	105	847	0	77	0	26	9	17	0
Confl. Peds. (#/hr)	67		19	19		67	38		12	12		38
Confl. Bikes (#/hr)			1	1								
Heavy Vehicles (%)	0%	2%	11%	0%	5%	0%	19%	0%	3%	0%	0%	0%
Turn Type				Perm			custom		custom	Perm		
Protected Phases		4			8						6	
Permitted Phases				8			2		2	6		
Actuated Green, G (s)		60.0		60.0	60.0		32.0		32.0	32.0	32.0	
Effective Green, g (s)		60.0		60.0	60.0		32.0		32.0	32.0	32.0	
Actuated g/C Ratio		0.60		0.60	0.60		0.32		0.32	0.32	0.32	
Clearance Time (s)		4.0		4.0	4.0		4.0		4.0	4.0	4.0	
Lane Grp Cap (vph)		1798		205	1889		347		464	577	594	
v/s Ratio Prot		c0.36			0.27						0.01	
v/s Ratio Perm				0.31			c0.07		0.02	0.00		
v/c Ratio		0.60		0.51	0.45		0.22		0.06	0.02	0.03	
Uniform Delay, d1		12.5		11.5	10.9		24.9		23.5	23.2	23.3	
Progression Factor		1.00		1.00	1.00		1.00		1.00	1.00	1.00	
Incremental Delay, d2		1.5		8.9	0.8		1.5		0.2	0.0	0.1	
Delay (s)		14.0		20.4	11.7		26.4		23.8	23.3	23.4	
Level of Service		B		C	B		C		C	C	C	
Approach Delay (s)		14.0			12.7			25.0			23.4	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM Average Control Delay	14.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	60.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1005: 98th Place & Halsted Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↰	↰	↱	↰	↑↑↑			↑↑↱	
Volume (vph)	0	0	0	290	0	1188	208	658	0	0	787	490
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	12	12	10	10	12	12	11	12
Total Lost time (s)				4.0		5.0	3.0	4.0			4.0	
Lane Util. Factor				0.95		1.00	1.00	0.91			0.91	
Frpb, ped/bikes				1.00		1.00	1.00	1.00			0.98	
Flpb, ped/bikes				1.00		1.00	1.00	1.00			1.00	
Frt				1.00		0.85	1.00	1.00			0.94	
Flt Protected				0.95		1.00	0.95	1.00			1.00	
Satd. Flow (prot)				1540		1530	1535	4327			4269	
Flt Permitted				0.95		1.00	0.95	1.00			1.00	
Satd. Flow (perm)				1540		1530	1535	4327			4269	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	0	0	0	299	0	1225	214	678	0	0	811	505
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	299	0	1225	214	678	0	0	1316	0
Confl. Peds. (#/hr)	2					2	18		3	3		18
Heavy Vehicles (%)	0%	0%	0%	2%	0%	0%	4%	6%	0%	0%	4%	1%
Turn Type				Split		Prot	Prot					
Protected Phases				8	8	8	5	2			6	
Permitted Phases												
Actuated Green, G (s)				30.0		30.0	32.0	66.0			31.0	
Effective Green, g (s)				31.0		30.0	32.0	66.0			31.0	
Actuated g/C Ratio				0.30		0.29	0.30	0.63			0.30	
Clearance Time (s)				5.0		5.0	3.0	4.0			4.0	
Lane Grp Cap (vph)				455		437	468	2720			1260	
v/s Ratio Prot				0.19		c0.80	c0.14	0.16			c0.31	
v/s Ratio Perm												
v/c Ratio				0.66		2.80	0.46	0.25			1.17dr	
Uniform Delay, d1				32.4		37.5	29.5	8.6			37.0	
Progression Factor				1.00		1.00	0.63	2.06			1.00	
Incremental Delay, d2				7.2		817.8	2.7	0.2			37.8	
Delay (s)				39.6		855.3	21.3	17.8			74.8	
Level of Service				D		F	C	B			E	
Approach Delay (s)		0.0			695.3			18.7			74.8	
Approach LOS		A			F			B			E	

Intersection Summary			
HCM Average Control Delay	314.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.41		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	98.8%	ICU Level of Service	F
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

c Critical Lane Group

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↰↑↱						↑↑↑	↱↱	↰	↑↑↑	
Volume (vph)	324	770	144	0	0	0	0	542	401	355	721	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	13	12	12	12	12	12	10	10	8	12	12	12
Total Lost time (s)	5.0	5.0						4.0	4.0	3.0	4.0	
Lane Util. Factor	0.91	0.91						0.91	0.88	1.00	0.91	
Frpb, ped/bikes	1.00	1.00						1.00	1.00	1.00	1.00	
Flpb, ped/bikes	0.99	1.00						1.00	1.00	1.00	1.00	
Frt	1.00	0.98						1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00						1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1509	3157						4368	2244	1598	4680	
Flt Permitted	0.95	1.00						1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1509	3157						4368	2244	1598	4680	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	341	811	152	0	0	0	0	571	422	374	759	0
RTOR Reduction (vph)	0	13	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	307	984	0	0	0	0	0	571	422	374	759	0
Confl. Peds. (#/hr)	6		1	1		6	6					6
Heavy Vehicles (%)	6%	1%	0%	0%	0%	0%	0%	5%	4%	7%	5%	0%
Turn Type	Perm								Perm	Prot		
Protected Phases		4						2		1	6	
Permitted Phases	4								2			
Actuated Green, G (s)	34.0	34.0						28.0	28.0	31.0	62.0	
Effective Green, g (s)	34.0	34.0						28.0	28.0	31.0	62.0	
Actuated g/C Ratio	0.32	0.32						0.27	0.27	0.30	0.59	
Clearance Time (s)	5.0	5.0						4.0	4.0	3.0	4.0	
Lane Grp Cap (vph)	489	1022						1165	598	472	2763	
v/s Ratio Prot								0.13		c0.23	0.16	
v/s Ratio Perm	0.20	0.31							c0.19			
v/c Ratio	0.63	0.96						0.49	0.71	0.79	0.27	
Uniform Delay, d1	30.1	34.9						32.5	34.8	34.0	10.5	
Progression Factor	1.00	1.00						1.14	1.14	0.86	0.22	
Incremental Delay, d2	6.0	20.5						1.3	6.3	5.2	0.1	
Delay (s)	36.1	55.4						38.3	45.8	34.6	2.4	
Level of Service	D	E						D	D	C	A	
Approach Delay (s)		50.9			0.0			41.5			13.0	
Approach LOS		D			A			D			B	

Intersection Summary			
HCM Average Control Delay	35.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	98.8%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1007: 98th Place & Wentworth Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↰	↑↱		↰	↑			↱	
Volume (vph)	0	0	0	286	25	24	11	137	0	0	142	5
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	14	12	12	16	12
Total Lost time (s)				4.0	4.0		4.0	4.0			-3.0	
Lane Util. Factor				1.00	0.95		1.00	1.00			1.00	
Frpb, ped/bikes				1.00	0.99		1.00	1.00			1.00	
Flpb, ped/bikes				1.00	1.00		1.00	1.00			1.00	
Frt				1.00	0.93		1.00	1.00			1.00	
Flt Protected				0.95	1.00		0.95	1.00			1.00	
Satd. Flow (prot)				1688	3133		1710	1846			1955	
Flt Permitted				0.95	1.00		0.56	1.00			1.00	
Satd. Flow (perm)				1688	3133		1003	1846			1955	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	0	301	26	25	12	144	0	0	149	5
RTOR Reduction (vph)	0	0	0	0	17	0	0	0	0	0	1	0
Lane Group Flow (vph)	0	0	0	301	34	0	12	144	0	0	153	0
Confl. Peds. (#/hr)	2		2	2		2			6	6		
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	0%	0%	0%	1%	0%	0%	0%	4%	0%	0%	4%	0%
Turn Type				Perm			pm+pt					
Protected Phases					8		7	2			6	
Permitted Phases				8			2					
Actuated Green, G (s)				27.0	27.0		50.0	50.0			40.0	
Effective Green, g (s)				27.0	27.0		50.0	50.0			46.0	
Actuated g/C Ratio				0.32	0.32		0.59	0.59			0.54	
Clearance Time (s)				4.0	4.0		4.0	4.0			3.0	
Lane Grp Cap (vph)				536	995		648	1086			1058	
v/s Ratio Prot					0.01		0.00	c0.08			c0.08	
v/s Ratio Perm				c0.18			0.01					
v/c Ratio				0.56	0.03		0.02	0.13			0.14	
Uniform Delay, d1				24.1	20.0		10.3	7.8			9.7	
Progression Factor				1.00	1.00		1.06	1.18			1.00	
Incremental Delay, d2				4.2	0.1		0.1	0.3			0.3	
Delay (s)				28.3	20.1		11.0	9.5			10.0	
Level of Service				C	C		B	A			A	
Approach Delay (s)		0.0			27.1			9.6			10.0	
Approach LOS		A			C			A			A	

Intersection Summary			
HCM Average Control Delay	19.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	1.0
Intersection Capacity Utilization	36.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1008: 99th St & Wentworth Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱			✥			↱		↰	↑	
Volume (vph)	12	11	23	3	0	14	0	122	31	46	383	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	16	15	12	8	12	8	12	12	12	10	13	12
Total Lost time (s)	4.0	4.0			4.0			3.0		4.0	4.0	
Lane Util. Factor	1.00	1.00			1.00			1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.97			0.98			0.99		1.00	1.00	
Flpb, ped/bikes	1.00	1.00			1.00			1.00		1.00	1.00	
Frt	1.00	0.90			0.89			0.97		1.00	1.00	
Flt Protected	0.95	1.00			0.99			1.00		0.95	1.00	
Satd. Flow (prot)	1935	1729			1550			1726		1590	1860	
Flt Permitted	0.75	1.00			0.98			1.00		0.62	1.00	
Satd. Flow (perm)	1517	1729			1533			1726		1044	1860	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	13	12	26	3	0	16	0	136	34	51	426	0
RTOR Reduction (vph)	0	18	0	0	11	0	0	11	0	0	0	0
Lane Group Flow (vph)	13	20	0	0	8	0	0	159	0	51	426	0
Confl. Peds. (#/hr)	1		11	11		1	1		10	10		1
Confl. Bikes (#/hr)			2	2			1		2	2		1
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%
Turn Type	Perm			Perm						pm+pt		
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8						6		
Actuated Green, G (s)	27.0	27.0			27.0			40.0		50.0	50.0	
Effective Green, g (s)	27.0	27.0			27.0			40.0		50.0	50.0	
Actuated g/C Ratio	0.32	0.32			0.32			0.47		0.59	0.59	
Clearance Time (s)	4.0	4.0			4.0			3.0		4.0	4.0	
Lane Grp Cap (vph)	482	549			487			812		659	1094	
v/s Ratio Prot		c0.01						0.09		0.01	c0.23	
v/s Ratio Perm	0.01				0.01					0.04		
v/c Ratio	0.03	0.04			0.02			0.20		0.08	0.39	
Uniform Delay, d1	20.0	20.0			19.9			13.1		8.3	9.3	
Progression Factor	1.00	1.00			1.00			1.00		0.96	0.85	
Incremental Delay, d2	0.1	0.1			0.1			0.5		0.2	1.0	
Delay (s)	20.1	20.1			20.0			13.7		8.2	8.9	
Level of Service	C	C			B			B		A	A	
Approach Delay (s)		20.1			20.0			13.7			8.8	
Approach LOS		C			B			B			A	

Intersection Summary			
HCM Average Control Delay	11.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.27		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	41.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

	↗	↘	↖	↑	↓	↙
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↖↗		↰	↑	↱	
Volume (vph)	46	39	10	183	273	27
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	14	12	13	12	10	12
Total Lost time (s)	4.0		4.0	4.0	4.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.94		1.00	1.00	0.99	
Flt Protected	0.97		0.95	1.00	1.00	
Satd. Flow (prot)	1754		1765	1782	1656	
Flt Permitted	0.97		0.52	1.00	1.00	
Satd. Flow (perm)	1754		966	1782	1656	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	51	43	11	203	303	30
RTOR Reduction (vph)	29	0	0	0	5	0
Lane Group Flow (vph)	65	0	11	203	328	0
Confl. Peds. (#/hr)			2			2
Heavy Vehicles (%)	0%	0%	0%	1%	0%	0%
Turn Type			Perm			
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	21.0		36.0	36.0	36.0	
Effective Green, g (s)	21.0		36.0	36.0	36.0	
Actuated g/C Ratio	0.32		0.55	0.55	0.55	
Clearance Time (s)	4.0		4.0	4.0	4.0	
Lane Grp Cap (vph)	567		535	987	917	
v/s Ratio Prot	c0.04			0.11	c0.20	
v/s Ratio Perm			0.01			
v/c Ratio	0.11		0.02	0.21	0.36	
Uniform Delay, d1	15.5		6.5	7.3	8.1	
Progression Factor	1.00		0.46	0.60	1.44	
Incremental Delay, d2	0.4		0.1	0.5	0.9	
Delay (s)	15.9		3.1	4.8	12.6	
Level of Service	B		A	A	B	
Approach Delay (s)	15.9			4.7	12.6	
Approach LOS	B			A	B	

Intersection Summary			
HCM Average Control Delay	10.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.27		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	28.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1010: 99th St & Michigan Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↰↑↱		↰	↑			↑	↱
Volume (vph)	0	0	0	30	265	9	257	122	0	0	275	17
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	14	16	12	12	15	12	12	13	10
Total Lost time (s)					4.0		4.0	4.0			3.0	3.0
Lane Util. Factor					0.95		1.00	1.00			1.00	1.00
Frpb, ped/bikes					1.00		1.00	1.00			1.00	1.00
Flpb, ped/bikes					1.00		1.00	1.00			1.00	1.00
Frt					1.00		1.00	1.00			1.00	0.85
Flt Protected					1.00		0.95	1.00			1.00	1.00
Satd. Flow (prot)					3772		1693	1678			1738	1428
Flt Permitted					1.00		0.50	1.00			1.00	1.00
Satd. Flow (perm)					3772		887	1678			1738	1428
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	0	32	279	9	271	128	0	0	289	18
RTOR Reduction (vph)	0	0	0	0	2	0	0	0	0	0	0	10
Lane Group Flow (vph)	0	0	0	0	318	0	271	128	0	0	289	8
Confl. Peds. (#/hr)	1					1			5	5		
Heavy Vehicles (%)	0%	0%	0%	0%	2%	0%	1%	18%	0%	0%	7%	0%
Turn Type				Split			pm+pt					Perm
Protected Phases				8	8		7	2			6	
Permitted Phases							2					6
Actuated Green, G (s)					26.0		51.0	51.0			38.0	38.0
Effective Green, g (s)					26.0		51.0	51.0			38.0	38.0
Actuated g/C Ratio					0.31		0.60	0.60			0.45	0.45
Clearance Time (s)					4.0		4.0	4.0			3.0	3.0
Lane Grp Cap (vph)					1154		627	1007			777	638
v/s Ratio Prot					c0.08		c0.05	0.08			0.17	
v/s Ratio Perm							c0.21					0.01
v/c Ratio					0.28		0.43	0.13			0.37	0.01
Uniform Delay, d1					22.4		12.7	7.4			15.6	13.1
Progression Factor					1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2					0.6		2.2	0.3			1.4	0.0
Delay (s)					23.0		14.9	7.6			17.0	13.1
Level of Service					C		B	A			B	B
Approach Delay (s)		0.0			23.0			12.6			16.7	
Approach LOS		A			C			B			B	

Intersection Summary			
HCM Average Control Delay	17.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	53.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1011: 99th Street & Martin Luther King Jr Drive

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					✥		↰	↑↱		↰	↑↱	
Volume (vph)	0	0	0	95	94	38	133	203	30	59	702	44
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	15	12	12	12	12	12	13	12
Total Lost time (s)					4.0		3.0	4.0		3.0	4.0	
Lane Util. Factor					1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes					1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes					1.00		1.00	1.00		1.00	1.00	
Frt					0.98		1.00	0.98		1.00	0.99	
Flt Protected					0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)					1896		1710	3286		1707	3467	
Flt Permitted					0.98		0.25	1.00		0.59	1.00	
Satd. Flow (perm)					1896		447	3286		1063	3467	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	106	104	42	148	226	33	66	780	49
RTOR Reduction (vph)	0	0	0	0	10	0	0	15	0	0	6	0
Lane Group Flow (vph)	0	0	0	0	242	0	148	244	0	66	823	0
Confl. Peds. (#/hr)							5		5	5		5
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	1%	0%
Turn Type				Split			pm+pt			pm+pt		
Protected Phases				8	8		5	2		1	6	
Permitted Phases							2			6		
Actuated Green, G (s)					23.0		41.0	34.0		41.0	34.0	
Effective Green, g (s)					23.0		41.0	34.0		41.0	34.0	
Actuated g/C Ratio					0.31		0.55	0.45		0.55	0.45	
Clearance Time (s)					4.0		3.0	4.0		3.0	4.0	
Lane Grp Cap (vph)					581		362	1490		641	1572	
v/s Ratio Prot					c0.13		c0.04	0.07		0.01	c0.24	
v/s Ratio Perm							0.19			0.05		
v/c Ratio					0.42		0.41	0.16		0.10	0.52	
Uniform Delay, d1					20.7		16.4	12.1		8.2	14.7	
Progression Factor					1.00		0.83	0.80		1.00	1.00	
Incremental Delay, d2					2.2		3.4	0.2		0.3	1.3	
Delay (s)					22.9		17.0	9.9		8.5	15.9	
Level of Service					C		B	A		A	B	
Approach Delay (s)		0.0			22.9			12.5			15.4	
Approach LOS		A			C			B			B	

Intersection Summary			
HCM Average Control Delay	15.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	53.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1012: 100th Street & Martin Luther King Jr Drive

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣		↰	↑↱		↰	↑↱	
Volume (vph)	32	49	12	8	63	63	5	271	20	159	588	50
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	16	12	12	10	11	12	12	11	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.98			0.94		1.00	0.99		1.00	0.99	
Flt Protected		0.98			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1967			1654		1595	3178		1704	3231	
Flt Permitted		0.88			0.99		0.34	1.00		0.56	1.00	
Satd. Flow (perm)		1765			1638		571	3178		998	3231	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	36	54	13	9	70	70	6	301	22	177	653	56
RTOR Reduction (vph)	0	7	0	0	43	0	0	7	0	0	8	0
Lane Group Flow (vph)	0	96	0	0	106	0	6	316	0	177	701	0
Confl. Peds. (#/hr)	2					2	1		6	6		1
Confl. Bikes (#/hr)			1	1			3					3
Heavy Vehicles (%)	0%	0%	0%	0%	2%	0%	0%	3%	0%	0%	1%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		25.0			25.0		42.0	42.0		42.0	42.0	
Effective Green, g (s)		25.0			25.0		42.0	42.0		42.0	42.0	
Actuated g/C Ratio		0.33			0.33		0.56	0.56		0.56	0.56	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		588			546		320	1780		559	1809	
v/s Ratio Prot								0.10			c0.22	
v/s Ratio Perm		0.05			c0.06		0.01			0.18		
v/c Ratio		0.16			0.19		0.02	0.18		0.32	0.39	
Uniform Delay, d1		17.6			17.8		7.3	8.1		8.8	9.3	
Progression Factor		1.00			1.00		1.00	1.00		0.27	0.25	
Incremental Delay, d2		0.6			0.8		0.1	0.2		1.3	0.5	
Delay (s)		18.2			18.6		7.4	8.3		3.7	2.9	
Level of Service		B			B		A	A		A	A	
Approach Delay (s)		18.2			18.6			8.3			3.0	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	6.9	HCM Level of Service	A
HCM Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	49.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis
1013: 100th Street & Cottage Grove Avenue

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰↱			↰↑ ↑	↑ ↑↱	
Sign Control	Stop			Stop	Stop	
Volume (vph)	35	182	64	236	557	77
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	37	192	67	248	586	81

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	228	150	166	391	276
Volume Left (vph)	37	67	0	0	0
Volume Right (vph)	192	0	0	0	81
Hadj (s)	-0.42	0.28	0.05	0.05	-0.15
Departure Headway (s)	5.5	6.3	6.1	5.7	5.5
Degree Utilization, x	0.35	0.26	0.28	0.62	0.42
Capacity (veh/h)	607	548	568	620	642
Control Delay (s)	11.5	10.3	10.2	16.2	11.2
Approach Delay (s)	11.5	10.3		14.1	
Approach LOS	B	B		B	

Intersection Summary			
Delay	12.6		
HCM Level of Service	B		
Intersection Capacity Utilization	51.6%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Signalized Intersection Capacity Analysis
1014: 103rd Street & Vincennes Avenue

1/14/2013

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR
Lane Configurations		↰	↑	↱	↰	↑	↱			↰	↑↱	
Volume (vph)	32	35	371	18	18	381	65	73	55	68	351	31
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		3.5	4.0	4.0	4.0	4.0	4.0			4.0	4.0	
Lane Util. Factor		1.00	1.00	1.00	1.00	1.00	1.00			1.00	0.95	
Frpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	0.93			1.00	1.00	
Flpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	
Frt		1.00	1.00	0.85	1.00	1.00	0.85			1.00	0.99	
Flt Protected		0.95	1.00	1.00	0.95	1.00	1.00			0.95	1.00	
Satd. Flow (prot)		1612	1731	1530	1710	1731	1421			1710	3252	
Flt Permitted		0.14	1.00	1.00	0.52	1.00	1.00			0.14	1.00	
Satd. Flow (perm)		238	1731	1530	937	1731	1421			257	3252	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	36	39	412	20	20	423	72	81	61	76	390	34
RTOR Reduction (vph)	0	0	0	12	0	0	39	0	0	0	6	0
Lane Group Flow (vph)	0	75	412	8	20	423	114	0	0	137	418	0
Confl. Peds. (#/hr)		25					25					3
Heavy Vehicles (%)	6%	6%	4%	0%	0%	4%	0%	0%	0%	0%	4%	0%
Turn Type	Perm	pm+pt		Perm	Perm		Perm		Perm	Perm		
Protected Phases		7	4			8					2	
Permitted Phases	4	4		4	8		8		2	2		
Actuated Green, G (s)		44.0	44.0	44.0	25.0	25.0	25.0			28.0	28.0	
Effective Green, g (s)		44.0	44.0	44.0	25.0	25.0	25.0			28.0	28.0	
Actuated g/C Ratio		0.42	0.42	0.42	0.24	0.24	0.24			0.27	0.27	
Clearance Time (s)		3.5	4.0	4.0	4.0	4.0	4.0			4.0	4.0	
Lane Grp Cap (vph)		303	725	641	223	412	338			69	867	
v/s Ratio Prot		0.04	c0.24			c0.24					0.13	
v/s Ratio Perm		0.07		0.01	0.02		0.08			c0.53		
v/c Ratio		0.25	0.57	0.01	0.09	1.03	0.34			1.99	0.48	
Uniform Delay, d1		21.5	23.3	17.8	31.1	40.0	33.1			38.5	32.4	
Progression Factor		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	
Incremental Delay, d2		1.9	3.2	0.0	0.8	51.3	2.7			491.0	1.9	
Delay (s)		23.4	26.5	17.9	31.9	91.3	35.8			529.5	34.3	
Level of Service		C	C	B	C	F	D			F	C	
Approach Delay (s)			25.7			75.1					155.2	
Approach LOS			C			E					F	

Intersection Summary			
HCM Average Control Delay	137.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.41		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	100.9%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1014: 103rd Street & Vincennes Avenue

1/14/2013

Movement	SBL	SBT	SBR	SBR2	SEL2	SEL	SER	SER2
Lane Configurations	↰	↑↱				↰	↱↰	
Volume (vph)	103	559	80	101	4	108	587	190
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.5	4.5				4.5	4.5	
Lane Util. Factor	1.00	0.95				1.00	0.88	
Frpb, ped/bikes	1.00	1.00				1.00	1.00	
Flpb, ped/bikes	1.00	1.00				1.00	1.00	
Frt	1.00	0.96				1.00	0.85	
Flt Protected	0.95	1.00				0.95	1.00	
Satd. Flow (prot)	1705	3246				1710	2633	
Flt Permitted	0.38	1.00				0.95	1.00	
Satd. Flow (perm)	678	3246				1710	2633	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	114	621	89	112	4	120	652	211
RTOR Reduction (vph)	0	12	0	0	0	0	26	0
Lane Group Flow (vph)	114	810	0	0	0	124	837	0
Confl. Peds. (#/hr)	3							
Heavy Vehicles (%)	0%	2%	0%	0%	0%	0%	3%	0%
Turn Type	Perm				Split		Perm	
Protected Phases		6			9	9		
Permitted Phases	6						9	
Actuated Green, G (s)	27.5	27.5				20.5	20.5	
Effective Green, g (s)	27.5	27.5				20.5	20.5	
Actuated g/C Ratio	0.26	0.26				0.20	0.20	
Clearance Time (s)	4.5	4.5				4.5	4.5	
Lane Grp Cap (vph)	178	850				334	514	
v/s Ratio Prot		0.25				0.07		
v/s Ratio Perm	0.17						c0.32	
v/c Ratio	0.64	0.95				0.37	1.63	
Uniform Delay, d1	34.4	38.1				36.7	42.2	
Progression Factor	1.00	1.00				1.00	1.00	
Incremental Delay, d2	16.4	21.4				3.1	291.8	
Delay (s)	50.7	59.5				39.8	334.0	
Level of Service	D	E				D	F	
Approach Delay (s)		58.4				297.1		
Approach LOS		E				F		

Intersection Summary

HCM Signalized Intersection Capacity Analysis
1015: 103rd Street & Morgan Street

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰			↱			✥				
Volume (vph)	64	577	0	0	440	49	83	51	17	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	11	11	11	16	11	12	15	12	12	15	12
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		1.00			0.99			0.98				
Flt Protected		1.00			1.00			0.97				
Satd. Flow (prot)		1681			1954			1843				
Flt Permitted		0.92			1.00			0.97				
Satd. Flow (perm)		1547			1954			1843				
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	67	607	0	0	463	52	87	54	18	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	674	0	0	515	0	0	159	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)		40.0			40.0			17.0				
Effective Green, g (s)		40.0			40.0			17.0				
Actuated g/C Ratio		0.62			0.62			0.26				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		952			1202			482				
v/s Ratio Prot					0.26							
v/s Ratio Perm		c0.44						0.09				
v/c Ratio		0.71			0.43			0.33				
Uniform Delay, d1		8.5			6.5			19.4				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		4.4			1.1			1.8				
Delay (s)		13.0			7.6			21.2				
Level of Service		B			A			C				
Approach Delay (s)		13.0			7.6			21.2			0.0	
Approach LOS		B			A			C			A	

Intersection Summary			
HCM Average Control Delay	11.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	82.1%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1016: 103rd Street & Halsted Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱	↰	↑↑	↱	↰	↑↑	↱
Volume (vph)	69	319	149	114	299	122	103	625	82	136	751	93
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	10	10	9	9	10	9
Total Lost time (s)		4.0	4.0		4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		1.00	0.96		1.00	0.96	1.00	1.00	0.95	1.00	1.00	0.94
Flpb, ped/bikes		1.00	1.00		0.99	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.99	1.00		0.99	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1981	1434		1945	1444	1546	3040	1296	1505	3069	1252
Flt Permitted		0.46	1.00		0.75	1.00	0.23	1.00	1.00	0.30	1.00	1.00
Satd. Flow (perm)		918	1434		1485	1444	379	3040	1296	468	3069	1252
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	73	336	157	120	315	128	108	658	86	143	791	98
RTOR Reduction (vph)	0	0	93	0	0	91	0	0	51	0	0	49
Lane Group Flow (vph)	0	409	64	0	435	37	108	658	35	143	791	49
Confl. Peds. (#/hr)	24		45	45		24	36		24	24		36
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	2%	2%	2%	2%	3%	2%	3%	5%	1%	2%	4%	3%
Turn Type	pm+pt		Perm	Perm		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)		43.0	43.0		30.0	30.0	50.6	42.3	42.3	51.4	42.7	42.7
Effective Green, g (s)		43.0	43.0		30.0	30.0	50.6	42.3	42.3	51.4	42.7	42.7
Actuated g/C Ratio		0.41	0.41		0.29	0.29	0.48	0.40	0.40	0.49	0.41	0.41
Clearance Time (s)		4.0	4.0		4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		477	587		424	413	275	1225	522	315	1248	509
v/s Ratio Prot		c0.08					0.03	0.22		c0.04	c0.26	
v/s Ratio Perm		0.27	0.04		c0.29	0.03	0.16		0.03	0.18		0.04
v/c Ratio		0.86	0.11		1.03	0.09	0.39	0.54	0.07	0.45	0.63	0.10
Uniform Delay, d1		28.2	19.2		37.5	27.5	16.4	23.9	19.2	15.9	24.9	19.2
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.75	1.55	2.68
Incremental Delay, d2		17.8	0.4		50.5	0.4	0.9	1.7	0.2	1.0	2.4	0.4
Delay (s)		46.0	19.5		88.0	27.9	17.3	25.6	19.5	28.9	41.1	52.0
Level of Service		D	B		F	C	B	C	B	C	D	D
Approach Delay (s)		38.6			74.3			23.9			40.4	
Approach LOS		D			E			C			D	

Intersection Summary			
HCM Average Control Delay	41.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	86.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1017: 103rd Street & Normal Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣				
Volume (vph)	83	387	83	90	427	90	49	59	67	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	15	12	12	15	12
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		0.98			0.98			0.95				
Flt Protected		0.99			0.99			0.99				
Satd. Flow (prot)		1643			1643			1797				
Flt Permitted		0.85			0.85			0.99				
Satd. Flow (perm)		1401			1415			1797				
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	87	407	87	95	449	95	52	62	71	0	0	0
RTOR Reduction (vph)	0	10	0	0	10	0	0	35	0	0	0	0
Lane Group Flow (vph)	0	571	0	0	629	0	0	150	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm			Perm					
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Actuated Green, G (s)		40.0			40.0			17.0				
Effective Green, g (s)		40.0			40.0			17.0				
Actuated g/C Ratio		0.62			0.62			0.26				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		862			871			470				
v/s Ratio Prot												
v/s Ratio Perm		0.41			c0.44			0.08				
v/c Ratio		0.66			0.72			0.32				
Uniform Delay, d1		8.1			8.7			19.3				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		4.0			5.2			1.8				
Delay (s)		12.1			13.8			21.1				
Level of Service		B			B			C				
Approach Delay (s)		12.1			13.8			21.1			0.0	
Approach LOS		B			B			C			A	

Intersection Summary			
HCM Average Control Delay	14.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	63.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1018: 103rd Street & Wentworth Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱		↰	↱		✥	
Volume (vph)	21	426	71	74	495	36	37	76	72	53	235	47
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	11	12	12	15	12
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frpb, ped/bikes		1.00	0.96		1.00	0.96		1.00	0.96		0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		0.99	1.00		1.00	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		0.98	
Flt Protected		1.00	1.00		0.99	1.00		0.98	1.00		0.99	
Satd. Flow (prot)		1687	1382		1712	1417		1686	1455		1886	
Flt Permitted		0.97	1.00		0.89	1.00		0.84	1.00		0.94	
Satd. Flow (perm)		1634	1382		1537	1417		1436	1455		1780	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	22	448	75	78	521	38	39	80	76	56	247	49
RTOR Reduction (vph)	0	0	32	0	0	12	0	0	52	0	7	0
Lane Group Flow (vph)	0	470	43	0	599	26	0	119	24	0	345	0
Confl. Peds. (#/hr)	25		19	19		25	36		30	30		36
Confl. Bikes (#/hr)	1		2	2		1	3					3
Heavy Vehicles (%)	0%	3%	3%	0%	1%	0%	0%	1%	1%	0%	1%	0%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		43.0	43.0		43.0	43.0		24.0	24.0		24.0	
Effective Green, g (s)		43.0	43.0		43.0	43.0		24.0	24.0		24.0	
Actuated g/C Ratio		0.57	0.57		0.57	0.57		0.32	0.32		0.32	
Clearance Time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	
Lane Grp Cap (vph)		937	792		881	812		460	466		570	
v/s Ratio Prot												
v/s Ratio Perm		0.29	0.03		c0.39	0.02		0.08	0.02		c0.19	
v/c Ratio		0.50	0.05		0.68	0.03		0.26	0.05		0.60	
Uniform Delay, d1		9.6	7.0		11.2	7.0		18.9	17.6		21.5	
Progression Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2		1.9	0.1		4.2	0.1		1.4	0.2		4.7	
Delay (s)		11.5	7.2		15.4	7.0		20.3	17.8		26.2	
Level of Service		B	A		B	A		C	B		C	
Approach Delay (s)		10.9			14.9			19.3			26.2	
Approach LOS		B			B			B			C	

Intersection Summary			
HCM Average Control Delay	16.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	93.0%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1019: 103rd Street & State Street

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑	↱	↰	↑	↱
Volume (vph)	57	439	30	44	509	52	44	165	55	117	199	30
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	11	16	8	10	10	10	10	10	10
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00	0.98	1.00	1.00	0.98
Flpb, ped/bikes	0.98	1.00		1.00	1.00		0.99	1.00	1.00	0.99	1.00	1.00
Frt	1.00	0.99		1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1530	3066		1651	3729		1585	1663	1370	1568	1680	1397
Flt Permitted	0.39	1.00		0.44	1.00		0.60	1.00	1.00	0.64	1.00	1.00
Satd. Flow (perm)	621	3066		773	3729		1001	1663	1370	1061	1680	1397
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	60	462	32	46	536	55	46	174	58	123	209	32
RTOR Reduction (vph)	0	8	0	0	12	0	0	0	35	0	0	19
Lane Group Flow (vph)	60	486	0	46	579	0	46	174	23	123	209	13
Confl. Peds. (#/hr)	51		3	3		51	13		13	13		13
Heavy Vehicles (%)	2%	3%	3%	0%	2%	0%	0%	1%	2%	1%	0%	0%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	31.0	31.0		31.0	31.0		26.0	26.0	26.0	26.0	26.0	26.0
Effective Green, g (s)	31.0	31.0		31.0	31.0		26.0	26.0	26.0	26.0	26.0	26.0
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.40	0.40	0.40	0.40	0.40	0.40
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	296	1462		369	1778		400	665	548	424	672	559
v/s Ratio Prot		c0.16			0.16			0.10			c0.12	
v/s Ratio Perm	0.10			0.06			0.05		0.02	0.12		0.01
v/c Ratio	0.20	0.33		0.12	0.33		0.12	0.26	0.04	0.29	0.31	0.02
Uniform Delay, d1	9.8	10.6		9.5	10.5		12.3	13.1	11.9	13.2	13.4	11.8
Progression Factor	1.00	1.00		1.00	1.00		0.87	0.92	0.81	0.56	0.56	0.25
Incremental Delay, d2	1.5	0.6		0.7	0.5		0.6	1.0	0.1	1.7	1.2	0.1
Delay (s)	11.4	11.2		10.1	11.0		11.2	13.0	9.8	9.1	8.7	3.1
Level of Service	B	B		B	B		B	B	A	A	A	A
Approach Delay (s)		11.2			11.0			12.1			8.3	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM Average Control Delay	10.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	53.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1020: 103rd Street & Michigan Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	50	389	71	70	369	64	55	179	64	87	240	75
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	11	10	11	11	10	11	11	10	11	11
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.98		1.00	0.99		1.00	0.98		1.00	0.99	
Flpb, ped/bikes	0.96	1.00		0.95	1.00		0.99	1.00		0.95	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.96		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1325	3143		1513	3126		1579	2918		1451	3002	
Flt Permitted	0.47	1.00		0.45	1.00		0.54	1.00		0.60	1.00	
Satd. Flow (perm)	654	3143		717	3126		906	2918		911	3002	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	52	401	73	72	380	66	57	185	66	90	247	77
RTOR Reduction (vph)	0	0	0	0	0	0	0	39	0	0	39	0
Lane Group Flow (vph)	52	474	0	72	446	0	57	212	0	90	285	0
Confl. Peds. (#/hr)	112		99	99		112	23		53	53		23
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	16%	1%	0%	0%	1%	9%	0%	8%	2%	5%	5%	7%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	36.0	36.0		36.0	36.0		31.0	31.0		31.0	31.0	
Effective Green, g (s)	36.0	36.0		36.0	36.0		31.0	31.0		31.0	31.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.41	0.41		0.41	0.41	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	314	1509		344	1500		374	1206		377	1241	
v/s Ratio Prot		c0.15			0.14			0.07			0.09	
v/s Ratio Perm	0.08			0.10			0.06			c0.10		
v/c Ratio	0.17	0.31		0.21	0.30		0.15	0.18		0.24	0.23	
Uniform Delay, d1	11.0	11.9		11.3	11.8		13.8	13.9		14.3	14.3	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.1	0.5		1.4	0.5		0.9	0.3		1.5	0.4	
Delay (s)	12.1	12.5		12.7	12.3		14.6	14.2		15.8	14.7	
Level of Service	B	B		B	B		B	B		B	B	
Approach Delay (s)		12.5			12.4			14.3			14.9	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	13.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	50.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1021: 103rd Street & Martin Luther King Jr Drive

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱		↰	↑↱		↰	↑↱	
Volume (vph)	86	420	57	31	500	46	81	194	57	76	473	106
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	12	8	16	12	9	10	10	9	10	10
Total Lost time (s)	3.0	7.0		3.0	7.0		3.0	7.0		3.0	7.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.98		1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.99		1.00	0.97		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1594	1654		1367	1974		1534	2998		1534	3016	
Flt Permitted	0.27	1.00		0.33	1.00		0.28	1.00		0.59	1.00	
Satd. Flow (perm)	446	1654		482	1974		457	2998		951	3016	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	91	442	60	33	526	48	85	204	60	80	498	112
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	91	502	0	33	574	0	85	264	0	80	610	0
Confl. Peds. (#/hr)	21		95	95		21	36		8	8		36
Confl. Bikes (#/hr)	2		3	3		2	2					2
Heavy Vehicles (%)	0%	2%	0%	7%	2%	0%	0%	3%	0%	0%	2%	1%
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	44.0	39.4		40.8	37.8		26.6	21.8		26.6	21.8	
Effective Green, g (s)	44.0	37.4		40.8	35.8		26.6	19.8		26.6	19.8	
Actuated g/C Ratio	0.52	0.44		0.48	0.42		0.31	0.23		0.31	0.23	
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	5.0		3.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	293	728		263	831		204	698		331	703	
v/s Ratio Prot	c0.02	c0.30		0.00	0.29		c0.02	0.09		0.01	c0.20	
v/s Ratio Perm	0.14			0.06			0.11			0.06		
v/c Ratio	0.31	0.69		0.13	0.69		0.42	0.38		0.24	0.87	
Uniform Delay, d1	21.8	19.1		19.1	20.1		28.9	27.4		21.9	31.3	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.6	5.3		0.2	4.7		1.4	1.6		0.4	13.7	
Delay (s)	22.4	24.4		19.3	24.8		30.3	29.0		22.3	45.0	
Level of Service	C	C		B	C		C	C		C	D	
Approach Delay (s)		24.1			24.5			29.3			42.4	
Approach LOS		C			C			C			D	

Intersection Summary			
HCM Average Control Delay	30.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	76.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1022: 103rd Street & Cottage Grove Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	71	375	61	111	482	112	63	150	55	121	348	77
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	11	11	11	11	12	12	10	10	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		0.99	1.00	
Frt		0.98			0.98		1.00	0.96		1.00	0.97	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3681			3130		1652	3236		1549	3027	
Flt Permitted		0.76			0.76		0.46	1.00		0.62	1.00	
Satd. Flow (perm)		2811			2400		798	3236		1005	3027	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	75	395	64	117	507	118	66	158	58	127	366	81
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	534	0	0	742	0	66	216	0	127	447	0
Confl. Peds. (#/hr)	23		30	30		23	1		20	20		1
Confl. Bikes (#/hr)	3					3						
Heavy Vehicles (%)	0%	3%	0%	2%	2%	0%	0%	1%	0%	2%	2%	3%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		33.0			33.0		32.0	32.0		32.0	32.0	
Effective Green, g (s)		34.0			34.0		33.0	33.0		33.0	33.0	
Actuated g/C Ratio		0.45			0.45		0.44	0.44		0.44	0.44	
Clearance Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)		1274			1088		351	1424		442	1332	
v/s Ratio Prot								0.07			c0.15	
v/s Ratio Perm		0.19			c0.31		0.08			0.13		
v/c Ratio		0.42			0.68		0.19	0.15		0.29	0.34	
Uniform Delay, d1		13.8			16.2		12.8	12.6		13.5	13.8	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		1.0			3.5		1.2	0.2		1.6	0.7	
Delay (s)		14.9			19.7		14.0	12.8		15.1	14.5	
Level of Service		B			B		B	B		B	B	
Approach Delay (s)		14.9			19.7			13.1			14.6	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	16.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	70.8%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1023: 103rd Street & Woodlawn Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↑	↱		✥			↰↱	
Volume (vph)	93	823	6	19	553	236	1	1	9	202	1	76
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	12	12	12	12	12	12	13	13	13
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00			0.95	
Frt	1.00	1.00		1.00	1.00	0.85		0.89			0.96	
Flt Protected	0.95	1.00		0.95	1.00	1.00		1.00			0.97	
Satd. Flow (prot)	1605	3206		1660	3320	1485		1548			3176	
Flt Permitted	0.42	1.00		0.29	1.00	1.00		0.98			0.77	
Satd. Flow (perm)	710	3206		508	3320	1485		1520			2538	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	98	866	6	20	582	248	1	1	9	213	1	80
RTOR Reduction (vph)	0	0	0	0	0	89	0	7	0	0	53	0
Lane Group Flow (vph)	98	872	0	20	582	159	0	4	0	0	241	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	46.1	46.1		46.1	46.1	46.1		18.0			18.0	
Effective Green, g (s)	46.1	46.1		46.1	46.1	46.1		18.0			18.0	
Actuated g/C Ratio	0.64	0.64		0.64	0.64	0.64		0.25			0.25	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		8.0			8.0	
Lane Grp Cap (vph)	454	2050		325	2123	949		379			634	
v/s Ratio Prot		c0.27			0.18							
v/s Ratio Perm	0.14			0.04		0.11		0.00			c0.09	
v/c Ratio	0.22	0.43		0.06	0.27	0.17		0.01			0.38	
Uniform Delay, d1	5.4	6.4		4.9	5.7	5.2		20.4			22.4	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00			1.00	
Incremental Delay, d2	1.1	0.6		0.4	0.3	0.4		0.1			1.6	
Delay (s)	6.5	7.1		5.2	6.0	5.6		20.4			24.0	
Level of Service	A	A		A	A	A		C			C	
Approach Delay (s)		7.0			5.9			20.4			24.0	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM Average Control Delay	9.0	HCM Level of Service	A
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	72.1	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱		↰	↑↑	↱	↰	↑↑	↱
Volume (vph)	124	216	116	94	162	55	130	876	87	122	816	93
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	9	12	10	10	12	9	10	9	9	10	9
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00	0.97	1.00	1.00	0.96
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.95		1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1560	1506		1563	1586		1493	3069	1337	1523	3099	1318
Flt Permitted	0.46	1.00		0.24	1.00		0.21	1.00	1.00	0.18	1.00	1.00
Satd. Flow (perm)	749	1506		401	1586		323	3069	1337	285	3099	1318
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	131	227	122	99	171	58	137	922	92	128	859	98
RTOR Reduction (vph)	0	23	0	0	14	0	0	0	40	0	0	46
Lane Group Flow (vph)	131	326	0	99	215	0	137	922	52	128	859	52
Confl. Peds. (#/hr)	10		13	13		10	18		7	7		18
Confl. Bikes (#/hr)	2					2	2		1	1		2
Heavy Vehicles (%)	2%	1%	1%	2%	1%	2%	3%	4%	0%	1%	3%	0%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	28.0	21.0		28.0	21.0		42.0	35.0	35.0	42.0	35.0	35.0
Effective Green, g (s)	26.0	22.0		26.0	22.0		40.0	35.0	35.0	40.0	35.0	35.0
Actuated g/C Ratio	0.31	0.26		0.31	0.26		0.47	0.41	0.41	0.47	0.41	0.41
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)	286	390		205	410		235	1264	551	222	1276	543
v/s Ratio Prot	0.03	c0.22		c0.03	0.14		c0.04	c0.30		0.04	0.28	
v/s Ratio Perm	0.11			0.11			0.23		0.04	0.23		0.04
v/c Ratio	0.46	0.84		0.48	0.52		0.58	0.73	0.09	0.58	0.67	0.10
Uniform Delay, d1	22.5	29.8		22.7	27.0		14.4	21.0	15.3	14.7	20.3	15.3
Progression Factor	1.00	1.00		1.00	1.00		0.63	0.79	0.52	1.00	1.00	1.00
Incremental Delay, d2	5.2	18.8		7.9	4.7		9.4	3.5	0.3	10.5	2.9	0.4
Delay (s)	27.7	48.5		30.6	31.7		18.6	20.0	8.3	25.1	23.2	15.7
Level of Service	C	D		C	C		B	B	A	C	C	B
Approach Delay (s)		42.9			31.4			18.9			22.7	
Approach LOS		D			C			B			C	

Intersection Summary			
HCM Average Control Delay	25.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	71.4%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

1025: 107th Street & Wentworth Avenue

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			✥			✥	
Volume (vph)	22	179	34	20	173	20	22	141	38	37	251	49
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	14	12	12	14	12	12	16	12	12	16	12
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		0.99			1.00			1.00			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.98			0.99			0.97			0.98	
Flt Protected		1.00			1.00			0.99			0.99	
Satd. Flow (prot)		1839			1851			1938			1976	
Flt Permitted		0.97			0.96			0.95			0.95	
Satd. Flow (perm)		1784			1794			1849			1895	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	23	188	36	21	182	21	23	148	40	39	264	52
RTOR Reduction (vph)	0	9	0	0	6	0	0	13	0	0	10	0
Lane Group Flow (vph)	0	238	0	0	218	0	0	198	0	0	345	0
Confl. Peds. (#/hr)	18		34	34		18	16		19	19		16
Confl. Bikes (#/hr)			6	6			1		4	4		1
Heavy Vehicles (%)	0%	1%	0%	5%	1%	0%	0%	2%	0%	0%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		27.0			27.0			30.0			30.0	
Effective Green, g (s)		27.0			27.0			30.0			30.0	
Actuated g/C Ratio		0.42			0.42			0.46			0.46	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		741			745			853			875	
v/s Ratio Prot												
v/s Ratio Perm		c0.13			0.12			0.11			c0.18	
v/c Ratio		0.32			0.29			0.23			0.39	
Uniform Delay, d1		12.8			12.6			10.6			11.5	
Progression Factor		1.00			0.65			1.16			1.00	
Incremental Delay, d2		1.1			1.0			0.6			1.3	
Delay (s)		14.0			9.2			12.9			12.9	
Level of Service		B			A			B			B	
Approach Delay (s)		14.0			9.2			12.9			12.9	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM Average Control Delay	12.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	50.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	24	190	36	25	180	18	39	199	31	38	206	38
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	0.97	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.99		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1495	3062		1576	3122		1518	3118		1550	3074	
Flt Permitted	0.62	1.00		0.60	1.00		0.59	1.00		0.60	1.00	
Satd. Flow (perm)	978	3062		1002	3122		947	3118		981	3074	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	25	200	38	26	189	19	41	209	33	40	217	40
RTOR Reduction (vph)	0	24	0	0	12	0	0	14	0	0	17	0
Lane Group Flow (vph)	25	214	0	26	196	0	41	228	0	40	240	0
Confl. Peds. (#/hr)	20		17	17		20	2					2
Confl. Bikes (#/hr)	32		36	36		32	22		25	25		22
Heavy Vehicles (%)	4%	1%	0%	0%	0%	0%	5%	0%	0%	3%	1%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.0	20.0		20.0	20.0		39.0	39.0		39.0	39.0	
Effective Green, g (s)	19.0	19.0		19.0	19.0		38.0	38.0		38.0	38.0	
Actuated g/C Ratio	0.29	0.29		0.29	0.29		0.58	0.58		0.58	0.58	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	286	895		293	913		554	1823		574	1797	
v/s Ratio Prot		c0.07			0.06			0.07			c0.08	
v/s Ratio Perm	0.03			0.03			0.04			0.04		
v/c Ratio	0.09	0.24		0.09	0.21		0.07	0.13		0.07	0.13	
Uniform Delay, d1	16.7	17.5		16.7	17.4		5.9	6.1		5.8	6.1	
Progression Factor	0.89	0.91		0.75	0.74		1.23	1.22		0.40	0.36	
Incremental Delay, d2	0.6	0.6		0.6	0.5		0.3	0.1		0.2	0.2	
Delay (s)	15.4	16.5		13.1	13.3		7.5	7.5		2.6	2.3	
Level of Service	B	B		B	B		A	A		A	A	
Approach Delay (s)		16.4			13.3			7.5			2.4	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	9.5	HCM Level of Service	A
HCM Volume to Capacity ratio	0.17		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	46.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			✥			✥	
Volume (vph)	66	165	40	24	153	35	23	245	16	30	321	33
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	9	9	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	
Flpb, ped/bikes	0.99	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.97		1.00	0.97			0.99			0.99	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1555	3059		1524	2940			1923			1938	
Flt Permitted	0.63	1.00		0.62	1.00			0.96			0.96	
Satd. Flow (perm)	1033	3059		996	2940			1852			1874	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	67	168	41	24	156	36	23	250	16	31	328	34
RTOR Reduction (vph)	0	25	0	0	22	0	0	3	0	0	5	0
Lane Group Flow (vph)	67	184	0	24	170	0	0	286	0	0	388	0
Confl. Peds. (#/hr)	11		17	17		11	26		7	7		26
Heavy Vehicles (%)	2%	1%	0%	0%	1%	3%	4%	5%	0%	0%	4%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	26.0	26.0		26.0	26.0			31.0			31.0	
Effective Green, g (s)	26.0	26.0		26.0	26.0			31.0			31.0	
Actuated g/C Ratio	0.40	0.40		0.40	0.40			0.48			0.48	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	413	1224		398	1176			883			894	
v/s Ratio Prot		0.06			0.06							
v/s Ratio Perm	c0.06			0.02				0.15			c0.21	
v/c Ratio	0.16	0.15		0.06	0.14			0.32			0.43	
Uniform Delay, d1	12.5	12.5		12.0	12.4			10.5			11.2	
Progression Factor	0.98	0.91		0.77	0.76			0.98			1.00	
Incremental Delay, d2	0.8	0.3		0.3	0.2			1.0			1.5	
Delay (s)	13.1	11.6		9.5	9.7			11.2			12.7	
Level of Service	B	B		A	A			B			B	
Approach Delay (s)		12.0			9.7			11.2			12.7	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM Average Control Delay	11.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	55.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1028: 107th Street & Martin Luther King Jr Drive

1/14/2013

	↰	→	↳	↲	←	↖	↰	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱			✥			✥	
Volume (vph)	47	111	26	19	153	25	30	230	11	29	360	57
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	16	12	10	16	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	
Flpb, ped/bikes	1.00	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.97		1.00	0.98			0.99			0.98	
Flt Protected	0.95	1.00		0.95	1.00			0.99			1.00	
Satd. Flow (prot)	1652	1973		1583	1976			1983			1979	
Flt Permitted	0.58	1.00		0.66	1.00			0.93			0.97	
Satd. Flow (perm)	1015	1973		1092	1976			1853			1925	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	52	123	29	21	170	28	33	256	12	32	400	63
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	52	152	0	21	198	0	0	301	0	0	495	0
Confl. Peds. (#/hr)	1		10	10		1	2		5	5		2
Heavy Vehicles (%)	0%	0%	0%	0%	1%	0%	0%	2%	0%	0%	1%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.0	20.0		20.0	20.0			37.0			37.0	
Effective Green, g (s)	20.0	20.0		20.0	20.0			37.0			37.0	
Actuated g/C Ratio	0.31	0.31		0.31	0.31			0.57			0.57	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	312	607		336	608			1055			1096	
v/s Ratio Prot		0.08			c0.10							
v/s Ratio Perm	0.05			0.02				0.16			c0.26	
v/c Ratio	0.17	0.25		0.06	0.33			0.29			0.45	
Uniform Delay, d1	16.4	16.9		15.9	17.3			7.2			8.1	
Progression Factor	0.80	0.78		0.92	0.92			0.97			1.00	
Incremental Delay, d2	1.1	1.0		0.4	1.4			0.7			1.3	
Delay (s)	14.3	14.2		14.9	17.3			7.7			9.5	
Level of Service	B	B		B	B			A			A	
Approach Delay (s)		14.2			17.1			7.7			9.5	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	11.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱		↰	↑	↱	↰	↑	↱
Volume (vph)	51	12	91	2	5	9	55	223	5	3	442	72
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	10	10	10	11	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.98		1.00	0.98		1.00	1.00	1.00	1.00	1.00	0.98
Flpb, ped/bikes	0.99	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.87		1.00	0.91		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1695	1726		1702	1815		1594	1647	1428	1653	2000	1496
Flt Permitted	0.75	1.00		0.68	1.00		0.41	1.00	1.00	0.60	1.00	1.00
Satd. Flow (perm)	1333	1726		1225	1815		693	1647	1428	1049	2000	1496
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	57	13	101	2	6	10	61	248	6	3	491	80
RTOR Reduction (vph)	0	73	0	0	7	0	0	0	2	0	0	28
Lane Group Flow (vph)	57	41	0	2	9	0	61	248	4	3	491	52
Confl. Peds. (#/hr)	5		5	5		5	3					3
Heavy Vehicles (%)	0%	0%	1%	0%	0%	0%	0%	2%	0%	0%	2%	0%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	17.0	17.0		17.0	17.0		39.0	39.0	39.0	39.0	39.0	39.0
Effective Green, g (s)	18.0	18.0		18.0	18.0		39.0	39.0	39.0	39.0	39.0	39.0
Actuated g/C Ratio	0.28	0.28		0.28	0.28		0.60	0.60	0.60	0.60	0.60	0.60
Clearance Time (s)	5.0	5.0		5.0	5.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	369	478		339	503		416	988	857	629	1200	898
v/s Ratio Prot		0.02			0.00			0.15			c0.25	
v/s Ratio Perm	c0.04			0.00			0.09		0.00	0.00		0.04
v/c Ratio	0.15	0.09		0.01	0.02		0.15	0.25	0.00	0.00	0.41	0.06
Uniform Delay, d1	17.8	17.4		17.0	17.1		5.7	6.1	5.2	5.2	6.9	5.4
Progression Factor	1.43	2.88		1.00	1.00		0.79	0.73	0.87	1.00	1.00	1.00
Incremental Delay, d2	0.9	0.3		0.0	0.1		0.6	0.5	0.0	0.0	1.0	0.1
Delay (s)	26.3	50.5		17.1	17.1		5.1	5.0	4.6	5.2	7.9	5.5
Level of Service	C	D		B	B		A	A	A	A	A	A
Approach Delay (s)		42.5			17.1			5.0			7.6	
Approach LOS		D			B			A			A	

Intersection Summary			
HCM Average Control Delay	12.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	51.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1030: 111th Street & Marshield Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱		↰	↑↑					↰	↑↱	
Volume (vph)	0	251	163	157	195	0	0	0	0	109	470	377
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	12	12	12	12	12	11	11	12
Total Lost time (s)		4.0		3.0	3.0					5.0	5.0	
Lane Util. Factor		0.95		1.00	0.95					1.00	0.95	
Frpb, ped/bikes		0.99		1.00	1.00					1.00	0.99	
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	
Frt		0.94		1.00	1.00					1.00	0.93	
Flt Protected		1.00		0.95	1.00					0.95	1.00	
Satd. Flow (prot)		2904		1693	3288					1503	3021	
Flt Permitted		1.00		0.41	1.00					0.95	1.00	
Satd. Flow (perm)		2904		725	3288					1503	3021	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	264	172	165	205	0	0	0	0	115	495	397
RTOR Reduction (vph)	0	106	0	0	0	0	0	0	0	0	141	0
Lane Group Flow (vph)	0	330	0	165	205	0	0	0	0	115	751	0
Confl. Peds. (#/hr)	18		3	3		18	1					1
Heavy Vehicles (%)	0%	4%	1%	1%	4%	0%	0%	0%	0%	10%	2%	1%
Turn Type				D.P+P						Split		
Protected Phases		8		7	7 8					6	6	
Permitted Phases				8								
Actuated Green, G (s)		33.0		53.0	56.0					37.0	37.0	
Effective Green, g (s)		33.0		53.0	56.0					37.0	37.0	
Actuated g/C Ratio		0.32		0.52	0.55					0.36	0.36	
Clearance Time (s)		4.0		3.0						5.0	5.0	
Lane Grp Cap (vph)		940		567	1805					545	1096	
v/s Ratio Prot		c0.11		c0.06	0.06					0.08	c0.25	
v/s Ratio Perm				0.09								
v/c Ratio		0.35		0.29	0.11					0.21	0.68	
Uniform Delay, d1		26.3		13.3	11.1					22.4	27.6	
Progression Factor		1.00		2.17	2.12					1.00	1.00	
Incremental Delay, d2		1.0		1.2	0.1					0.9	3.5	
Delay (s)		27.4		30.0	23.5					23.3	31.0	
Level of Service		C		C	C					C	C	
Approach Delay (s)		27.4			26.4			0.0			30.2	
Approach LOS		C			C			A			C	

Intersection Summary			
HCM Average Control Delay	28.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	102.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	60.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1031: 111th Street & Hamlet Avenue

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑			↑↱		↰	↑	↱			
Volume (vph)	141	219	0	0	279	109	73	511	215	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	9	12	13	12	13	12	12	12
Total Lost time (s)	4.0	4.0			4.0		5.0	5.0	5.0			
Lane Util. Factor	1.00	0.95			0.95		1.00	1.00	1.00			
Frpb, ped/bikes	1.00	1.00			0.99		1.00	1.00	0.99			
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.96		1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1674	3196			2844		1767	1782	1560			
Flt Permitted	0.39	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	683	3196			2844		1767	1782	1560			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	148	231	0	0	294	115	77	538	226	0	0	0
RTOR Reduction (vph)	0	0	0	0	40	0	0	0	160	0	0	0
Lane Group Flow (vph)	148	231	0	0	369	0	77	538	66	0	0	0
Confl. Peds. (#/hr)	9		13	13		9			1	1		
Confl. Bikes (#/hr)	3					3						
Heavy Vehicles (%)	2%	7%	0%	0%	3%	1%	0%	1%	0%	0%	0%	0%
Turn Type	pm+pt						custom		Perm			
Protected Phases	4	1 4			1		2	2				
Permitted Phases	1 4						2		2			
Actuated Green, G (s)	59.0	63.0			26.0		30.0	30.0	30.0			
Effective Green, g (s)	59.0	63.0			26.0		30.0	30.0	30.0			
Actuated g/C Ratio	0.58	0.62			0.25		0.29	0.29	0.29			
Clearance Time (s)	4.0				4.0		5.0	5.0	5.0			
Lane Grp Cap (vph)	716	1974			725		520	524	459			
v/s Ratio Prot	c0.07	0.07			c0.13		0.04	c0.30				
v/s Ratio Perm	0.05								0.04			
v/c Ratio	0.21	0.12			0.51		0.15	1.03	0.14			
Uniform Delay, d1	10.2	8.0			32.5		26.6	36.0	26.5			
Progression Factor	0.43	0.44			1.00		1.00	1.00	1.00			
Incremental Delay, d2	0.6	0.1			2.5		0.6	46.3	0.7			
Delay (s)	5.0	3.6			35.1		27.2	82.3	27.2			
Level of Service	A	A			D		C	F	C			
Approach Delay (s)		4.2			35.1			62.4			0.0	
Approach LOS		A			D			E			A	

Intersection Summary			
HCM Average Control Delay	42.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	102.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	60.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1032: 112th Place & Marshield Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱		↰	↑↑					↰	↑↑	↱
Volume (vph)	0	484	455	77	507	0	0	0	0	9	432	269
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	11	12	12	12	12	10	10	12
Total Lost time (s)		4.0		4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.95		1.00	0.95					1.00	0.95	1.00
Frpb, ped/bikes		0.99		1.00	1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Frt		0.93		1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00					0.95	1.00	1.00
Satd. Flow (prot)		3097		1710	3306					1596	3192	1530
Flt Permitted		1.00		0.11	1.00					0.95	1.00	1.00
Satd. Flow (perm)		3097		203	3306					1596	3192	1530
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	509	479	81	534	0	0	0	0	9	455	283
RTOR Reduction (vph)	0	171	0	0	0	0	0	0	0	0	0	187
Lane Group Flow (vph)	0	817	0	81	534	0	0	0	0	9	455	96
Confl. Peds. (#/hr)	8		8	8		8	3					3
Confl. Bikes (#/hr)	9					9			61	61		
Heavy Vehicles (%)	0%	1%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type				pm+pt						Split		Prot
Protected Phases		8		7	7 8					6	6	6
Permitted Phases				7 8								
Actuated Green, G (s)		36.0		54.0	58.0					34.0	34.0	34.0
Effective Green, g (s)		36.0		54.0	58.0					34.0	34.0	34.0
Actuated g/C Ratio		0.36		0.54	0.58					0.34	0.34	0.34
Clearance Time (s)		4.0		4.0						4.0	4.0	4.0
Lane Grp Cap (vph)		1115		381	1917					543	1085	520
v/s Ratio Prot		c0.26		0.04	c0.16					0.01	c0.14	0.06
v/s Ratio Perm				0.08								
v/c Ratio		0.73		0.21	0.28					0.02	0.42	0.19
Uniform Delay, d1		27.8		14.0	10.5					21.9	25.4	23.2
Progression Factor		1.00		1.02	1.19					1.00	1.00	1.00
Incremental Delay, d2		4.3		0.9	0.3					0.1	1.2	0.8
Delay (s)		32.1		15.1	12.8					22.0	26.6	24.0
Level of Service		C		B	B					C	C	C
Approach Delay (s)		32.1			13.1			0.0			25.6	
Approach LOS		C			B			A			C	

Intersection Summary			
HCM Average Control Delay	25.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	88.4%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1033: 112th Place & Hamlet Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↰↑			↑↱		↰	↰	↱			
Volume (vph)	394	99	0	0	142	5	441	455	55	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	12	12	12	10	12	11	11	12	12	12	12
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0	4.0			
Lane Util. Factor	0.91	0.91			0.95		0.95	0.95	1.00			
Frpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			1.00		1.00	1.00	0.85			
Flt Protected	0.95	0.97			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1469	3109			3172		1555	1653	1530			
Flt Permitted	0.65	0.72			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	1011	2310			3172		1555	1653	1530			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	415	104	0	0	149	5	464	479	58	0	0	0
RTOR Reduction (vph)	0	0	0	0	3	0	0	0	37	0	0	0
Lane Group Flow (vph)	207	312	0	0	151	0	464	479	21	0	0	0
Confl. Peds. (#/hr)	13		6	6		13			8	8		
Confl. Bikes (#/hr)	1					1			2	2		
Heavy Vehicles (%)	2%	1%	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%
Turn Type	pm+pt						custom		custom			
Protected Phases	4	1 4			1		2	2	2			
Permitted Phases	1 4						2		2			
Actuated Green, G (s)	51.0	51.0			15.0		37.0	37.0	37.0			
Effective Green, g (s)	51.0	51.0			15.0		37.0	37.0	37.0			
Actuated g/C Ratio	0.51	0.51			0.15		0.37	0.37	0.37			
Clearance Time (s)	4.0				4.0		4.0	4.0	4.0			
Lane Grp Cap (vph)	680	1466			476		575	612	566			
v/s Ratio Prot	c0.11	0.08			c0.05		c0.30	0.29	0.01			
v/s Ratio Perm	0.05	0.03										
v/c Ratio	0.30	0.21			0.32		0.81	0.78	0.04			
Uniform Delay, d1	14.0	13.5			37.9		28.3	27.9	20.1			
Progression Factor	0.25	0.26			1.00		1.00	1.00	1.00			
Incremental Delay, d2	0.7	0.2			1.8		11.6	9.6	0.1			
Delay (s)	4.3	3.8			39.7		39.8	37.6	20.3			
Level of Service	A	A			D		D	D	C			
Approach Delay (s)		4.0			39.7			37.6			0.0	
Approach LOS		A			D			D			A	

Intersection Summary			
HCM Average Control Delay	27.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	88.4%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1034: 111th Street & Halsted Street

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↑↱			↰↑↑↱		↰	↑↑	↱	↰	↑↑	↱
Volume (vph)	78	210	102	105	231	107	80	663	72	99	875	64
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	9	10	9	9	10	9
Total Lost time (s)		4.0			4.0		4.0	3.5	4.0	4.0	3.5	4.0
Lane Util. Factor		0.95			0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		0.99			0.99		1.00	1.00	0.97	1.00	1.00	0.96
Flpb, ped/bikes		1.00			1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.96			0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.99			0.99		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		2936			2923		1508	3069	1309	1508	3099	1298
Flt Permitted		0.77			0.76		0.17	1.00	1.00	0.28	1.00	1.00
Satd. Flow (perm)		2281			2240		267	3069	1309	439	3099	1298
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	80	216	105	108	238	110	82	684	74	102	902	66
RTOR Reduction (vph)	0	42	0	0	36	0	0	0	45	0	0	33
Lane Group Flow (vph)	0	359	0	0	420	0	82	684	29	102	902	33
Confl. Peds. (#/hr)	35		30	30		35	34		8	8		34
Confl. Bikes (#/hr)	1					1	1					1
Heavy Vehicles (%)	1%	4%	0%	1%	3%	3%	2%	4%	2%	2%	3%	2%
Turn Type	pm+pt			Perm			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)		35.0			27.0		38.0	33.0	33.0	38.0	33.0	33.0
Effective Green, g (s)		36.0			28.0		36.0	33.5	33.0	36.0	33.5	33.0
Actuated g/C Ratio		0.42			0.33		0.42	0.39	0.39	0.42	0.39	0.39
Clearance Time (s)		5.0			5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)		1012			738		171	1210	508	236	1221	504
v/s Ratio Prot		c0.03					c0.02	0.22		0.02	c0.29	
v/s Ratio Perm		0.13			c0.19		0.18		0.02	0.16		0.03
v/c Ratio		0.35			0.57		0.48	0.57	0.06	0.43	0.74	0.07
Uniform Delay, d1		16.6			23.5		16.5	20.1	16.3	15.8	22.0	16.3
Progression Factor		1.00			1.00		1.30	0.68	0.54	1.10	1.17	1.79
Incremental Delay, d2		1.0			3.2		8.8	1.8	0.2	4.2	3.0	0.2
Delay (s)		17.6			26.7		30.3	15.4	9.0	21.5	28.8	29.5
Level of Service		B			C		C	B	A	C	C	C
Approach Delay (s)		17.6			26.7			16.3			28.1	
Approach LOS		B			C			B			C	

Intersection Summary			
HCM Average Control Delay	22.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	71.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1035: 111th Street & Normal Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰			↱			✢				
Volume (vph)	76	305	0	0	325	81	52	43	32	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		1.00			0.97			0.97				
Flt Protected		0.99			1.00			0.98				
Satd. Flow (prot)		1730			1701			1654				
Flt Permitted		0.86			1.00			0.98				
Satd. Flow (perm)		1500			1701			1654				
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	80	321	0	0	342	85	55	45	34	0	0	0
RTOR Reduction (vph)	0	0	0	0	14	0	0	19	0	0	0	0
Lane Group Flow (vph)	0	401	0	0	413	0	0	115	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)		38.0			38.0			19.0				
Effective Green, g (s)		38.0			38.0			19.0				
Actuated g/C Ratio		0.58			0.58			0.29				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		877			994			483				
v/s Ratio Prot					0.24							
v/s Ratio Perm		c0.27						0.07				
v/c Ratio		0.46			0.42			0.24				
Uniform Delay, d1		7.7			7.4			17.5				
Progression Factor		1.00			0.62			1.00				
Incremental Delay, d2		1.7			1.2			1.2				
Delay (s)		9.4			5.7			18.7				
Level of Service		A			A			B				
Approach Delay (s)		9.4			5.7			18.7			0.0	
Approach LOS		A			A			B			A	

Intersection Summary			
HCM Average Control Delay	9.0	HCM Level of Service	A
HCM Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	62.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1036: 111th Street & Wentworth Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			↰↑↑↱			↰↑↑↱	
Volume (vph)	19	289	27	37	333	48	27	112	37	52	148	42
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	10	12	12	10	12
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		1.00			1.00			0.99			0.98	
Flpb, ped/bikes		1.00			1.00			0.99			1.00	
Frt		0.99			0.98			0.97			0.97	
Flt Protected		1.00			1.00			0.99			0.99	
Satd. Flow (prot)		1956			1939			2969			2987	
Flt Permitted		0.97			0.95			0.90			0.87	
Satd. Flow (perm)		1901			1849			2681			2614	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	20	304	28	39	351	51	28	118	39	55	156	44
RTOR Reduction (vph)	0	5	0	0	7	0	0	23	0	0	26	0
Lane Group Flow (vph)	0	347	0	0	434	0	0	162	0	0	229	0
Confl. Peds. (#/hr)	32		25	25		32	59		24	24		59
Confl. Bikes (#/hr)	3		2	2		3	4		2	2		4
Heavy Vehicles (%)	0%	3%	0%	3%	3%	0%	0%	0%	7%	4%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		30.0			30.0			27.0			27.0	
Effective Green, g (s)		30.0			30.0			27.0			27.0	
Actuated g/C Ratio		0.46			0.46			0.42			0.42	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		877			853			1114			1086	
v/s Ratio Prot												
v/s Ratio Perm		0.18			c0.23			0.06			c0.09	
v/c Ratio		0.40			0.51			0.15			0.21	
Uniform Delay, d1		11.5			12.3			11.8			12.2	
Progression Factor		0.58			0.42			1.10			0.43	
Incremental Delay, d2		1.2			2.0			0.3			0.4	
Delay (s)		7.9			7.2			13.3			5.7	
Level of Service		A			A			B			A	
Approach Delay (s)		7.9			7.2			13.3			5.7	
Approach LOS		A			A			B			A	

Intersection Summary			
HCM Average Control Delay	8.0	HCM Level of Service	A
HCM Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	71.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1037: 111th Street & State Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	41	255	39	78	429	82	43	217	97	79	215	59
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	9	10	10	9	10	10	12	10	10	12
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		0.98	1.00		0.99	1.00		0.99	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.95		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1508	3033		1568	3075		1586	2962		1585	3075	
Flt Permitted	0.37	1.00		0.56	1.00		0.58	1.00		0.55	1.00	
Satd. Flow (perm)	586	3033		919	3075		961	2962		922	3075	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	43	268	41	82	452	86	45	228	102	83	226	62
RTOR Reduction (vph)	0	19	0	0	24	0	0	47	0	0	29	0
Lane Group Flow (vph)	43	290	0	82	514	0	45	283	0	83	259	0
Confl. Peds. (#/hr)	20		31	31		20	16		20	20		16
Confl. Bikes (#/hr)							1		3	3		1
Heavy Vehicles (%)	5%	3%	0%	0%	1%	0%	0%	2%	2%	0%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	22.0	22.0		22.0	22.0		35.0	35.0		35.0	35.0	
Effective Green, g (s)	22.0	22.0		22.0	22.0		35.0	35.0		35.0	35.0	
Actuated g/C Ratio	0.34	0.34		0.34	0.34		0.54	0.54		0.54	0.54	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	198	1027		311	1041		517	1595		496	1656	
v/s Ratio Prot		0.10			c0.17			c0.10			0.08	
v/s Ratio Perm	0.07			0.09			0.05			0.09		
v/c Ratio	0.22	0.28		0.26	0.49		0.09	0.18		0.17	0.16	
Uniform Delay, d1	15.4	15.7		15.6	17.1		7.3	7.7		7.6	7.6	
Progression Factor	0.78	0.75		0.92	0.93		0.83	0.81		1.09	1.09	
Incremental Delay, d2	2.4	0.7		2.0	1.6		0.3	0.2		0.7	0.2	
Delay (s)	14.3	12.4		16.4	17.4		6.3	6.5		9.0	8.4	
Level of Service	B	B		B	B		A	A		A	A	
Approach Delay (s)		12.7			17.3			6.4			8.6	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	12.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	50.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1038: 111th Street & Michigan Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			↰↑↱			↰↑↱	
Volume (vph)	55	287	68	83	382	48	43	226	57	46	279	64
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	9	10	9	9	16	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			0.99			0.98	
Flpb, ped/bikes	0.98	1.00		0.99	1.00			0.99			1.00	
Frt	1.00	0.97		1.00	0.98			0.97			0.98	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1507	3013		1429	3719			3485			3520	
Flt Permitted	0.47	1.00		0.53	1.00			0.87			0.88	
Satd. Flow (perm)	748	3013		792	3719			3045			3123	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	58	302	72	87	402	51	45	238	60	48	294	67
RTOR Reduction (vph)	0	32	0	0	15	0	0	28	0	0	25	0
Lane Group Flow (vph)	58	342	0	87	438	0	0	315	0	0	384	0
Confl. Peds. (#/hr)	38		17	17		38	125		53	53		125
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	0%	3%	0%	7%	2%	0%	0%	6%	10%	2%	5%	5%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	31.0	31.0		31.0	31.0			26.0			26.0	
Effective Green, g (s)	31.0	31.0		31.0	31.0			26.0			26.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48			0.40			0.40	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	357	1437		378	1774			1218			1249	
v/s Ratio Prot		0.11			c0.12							
v/s Ratio Perm	0.08			0.11				0.10			c0.12	
v/c Ratio	0.16	0.24		0.23	0.25			0.26			0.31	
Uniform Delay, d1	9.6	10.0		10.0	10.1			13.1			13.3	
Progression Factor	1.53	1.68		1.14	1.13			0.47			0.68	
Incremental Delay, d2	1.0	0.4		1.3	0.3			0.5			0.6	
Delay (s)	15.7	17.2		12.7	11.7			6.6			9.7	
Level of Service	B	B		B	B			A			A	
Approach Delay (s)		17.0			11.9			6.6			9.7	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	11.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.27		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	58.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1039: 111th Street & Indiana Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰↱			✥			✥	
Volume (vph)	82	246	82	88	266	88	114	79	45	45	79	114
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	16	12	12	16	12
Total Lost time (s)		5.0	5.0		5.0			5.0			5.0	
Lane Util. Factor		1.00	1.00		0.95			1.00			1.00	
Frt		1.00	0.85		0.97			0.97			0.94	
Flt Protected		0.99	1.00		0.99			0.98			0.99	
Satd. Flow (prot)		1669	1436		3083			1885			1835	
Flt Permitted		0.80	1.00		0.82			0.71			0.91	
Satd. Flow (perm)		1352	1436		2540			1363			1681	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	86	259	86	93	280	93	120	83	47	47	83	120
RTOR Reduction (vph)	0	0	41	0	34	0	0	13	0	0	51	0
Lane Group Flow (vph)	0	345	45	0	432	0	0	237	0	0	199	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm		Perm	Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)		34.0	34.0		34.0			21.0			21.0	
Effective Green, g (s)		34.0	34.0		34.0			21.0			21.0	
Actuated g/C Ratio		0.52	0.52		0.52			0.32			0.32	
Clearance Time (s)		5.0	5.0		5.0			5.0			5.0	
Lane Grp Cap (vph)		707	751		1329			440			543	
v/s Ratio Prot												
v/s Ratio Perm		c0.26	0.03		0.17			c0.17			0.12	
v/c Ratio		0.49	0.06		0.33			0.54			0.37	
Uniform Delay, d1		9.9	7.6		8.9			18.0			16.9	
Progression Factor		1.83	4.37		0.52			1.00			1.00	
Incremental Delay, d2		2.4	0.1		0.6			4.7			1.9	
Delay (s)		20.5	33.5		5.3			22.7			18.8	
Level of Service		C	C		A			C			B	
Approach Delay (s)		23.1			5.3			22.7			18.8	
Approach LOS		C			A			C			B	

Intersection Summary			
HCM Average Control Delay	16.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	74.5%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1040: 111th Street & Martin Luther King Jr Drive

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			↰↑↱			↰↑↱	
Volume (vph)	45	253	18	25	305	58	24	130	46	62	145	61
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	15	8	16	8	8	16	8
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			0.99			1.00	
Flpb, ped/bikes	0.98	1.00		0.98	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.98			0.97			0.97	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1442	3037		1563	3017			3582			3604	
Flt Permitted	0.52	1.00		0.58	1.00			0.91			0.85	
Satd. Flow (perm)	787	3037		949	3017			3266			3096	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	47	266	19	26	321	61	25	137	48	65	153	64
RTOR Reduction (vph)	0	8	0	0	24	0	0	28	0	0	37	0
Lane Group Flow (vph)	47	277	0	26	358	0	0	182	0	0	245	0
Confl. Peds. (#/hr)	24		47	47		24	9		36	36		9
Confl. Bikes (#/hr)			4	4			1					1
Heavy Vehicles (%)	9%	4%	0%	0%	3%	0%	0%	1%	10%	0%	0%	8%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	30.0	30.0		30.0	30.0			27.0			27.0	
Effective Green, g (s)	30.0	30.0		30.0	30.0			27.0			27.0	
Actuated g/C Ratio	0.46	0.46		0.46	0.46			0.42			0.42	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	363	1402		438	1392			1357			1286	
v/s Ratio Prot		0.09			c0.12							
v/s Ratio Perm	0.06			0.03				0.06			c0.08	
v/c Ratio	0.13	0.20		0.06	0.26			0.13			0.19	
Uniform Delay, d1	10.0	10.4		9.7	10.7			11.8			12.1	
Progression Factor	0.77	0.78		0.75	0.58			1.06			0.40	
Incremental Delay, d2	0.7	0.3		0.2	0.3			0.2			0.3	
Delay (s)	8.3	8.3		7.4	6.5			12.7			5.2	
Level of Service	A	A		A	A			B			A	
Approach Delay (s)		8.3			6.5			12.7			5.2	
Approach LOS		A			A			B			A	

Intersection Summary			
HCM Average Control Delay	7.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.23		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.7%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1041: 111th Street & Cottage Grove Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↑↱			↰↑↑↱			↰↑↑↱			↰↑↑↱	
Volume (vph)	43	434	18	83	480	213	21	118	109	323	248	77
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			0.95			0.95	
Frt		0.99			0.96			0.93			0.98	
Flt Protected		1.00			0.99			1.00			0.98	
Satd. Flow (prot)		3288			3167			3088			3182	
Flt Permitted		0.82			0.83			0.92			0.71	
Satd. Flow (perm)		2716			2640			2852			2325	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	45	457	19	87	505	224	22	124	115	340	261	81
RTOR Reduction (vph)	0	4	0	0	60	0	0	62	0	0	16	0
Lane Group Flow (vph)	0	517	0	0	756	0	0	199	0	0	666	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm			pm+pt			Perm		
Protected Phases		4			8		5	2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		25.0			25.0			30.0			17.0	
Effective Green, g (s)		25.0			25.0			30.0			17.0	
Actuated g/C Ratio		0.38			0.38			0.46			0.26	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		1045			1015			1353			608	
v/s Ratio Prot								c0.02				
v/s Ratio Perm		0.19			c0.29			0.05			c0.29	
v/c Ratio		0.49			0.74			0.15			1.19dl	
Uniform Delay, d1		15.2			17.2			10.1			24.0	
Progression Factor		1.49			1.00			1.00			0.80	
Incremental Delay, d2		1.7			5.0			0.2			64.5	
Delay (s)		24.3			22.2			10.3			83.6	
Level of Service		C			C			B			F	
Approach Delay (s)		24.3			22.2			10.3			83.6	
Approach LOS		C			C			B			F	

Intersection Summary			
HCM Average Control Delay	39.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	82.5%	ICU Level of Service	E
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱			✥			✥	
Volume (vph)	0	867	123	46	758	0	77	0	35	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	10	10	12	12	12	12	12	12	12
Total Lost time (s)		5.0			5.0			5.0				
Lane Util. Factor		0.95			0.95			1.00				
Frt		0.98			1.00			0.96				
Flt Protected		1.00			1.00			0.97				
Satd. Flow (prot)		3041			3090			1618				
Flt Permitted		1.00			0.82			0.79				
Satd. Flow (perm)		3041			2552			1330				
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	913	129	48	798	0	81	0	37	0	0	0
RTOR Reduction (vph)	0	15	0	0	0	0	0	18	0	0	0	0
Lane Group Flow (vph)	0	1027	0	0	846	0	0	100	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	custom			Perm			Perm			Perm		
Protected Phases		4 5 6 11			8			2			2	
Permitted Phases	4 6 11			8			2			2		
Actuated Green, G (s)		65.0			33.0			16.0				
Effective Green, g (s)		58.0			33.0			16.0				
Actuated g/C Ratio		0.64			0.37			0.18				
Clearance Time (s)					5.0			5.0				
Lane Grp Cap (vph)		1960			936			236				
v/s Ratio Prot		c0.34										
v/s Ratio Perm					c0.33			c0.08				
v/c Ratio		0.52			0.90			0.42				
Uniform Delay, d1		8.6			27.0			32.9				
Progression Factor		0.06			1.35			1.00				
Incremental Delay, d2		0.4			13.1			5.5				
Delay (s)		0.9			49.6			38.4				
Level of Service		A			D			D				
Approach Delay (s)		0.9			49.6			38.4			0.0	
Approach LOS		A			D			D			A	

Intersection Summary			
HCM Average Control Delay	23.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	72.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1043: 111th Street & Doty Road

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↑	↱		✥		↰	↑	↱
Volume (vph)	216	629	22	108	584	178	58	4	103	205	10	205
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	10	12	12	12	12	16	12	12	12	12
Total Lost time (s)	3.0	5.0		3.0	5.0	3.0		5.0		3.0	5.0	3.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	1.00	0.85		0.92		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.98		0.95	1.00	1.00
Satd. Flow (prot)	1550	3194		1660	3320	1485		1782		1660	1748	1485
Flt Permitted	0.33	1.00		0.38	1.00	1.00		0.88		0.44	1.00	1.00
Satd. Flow (perm)	544	3194		662	3320	1485		1594		769	1748	1485
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	227	662	23	114	615	187	61	4	108	216	11	216
RTOR Reduction (vph)	0	2	0	0	0	82	0	92	0	0	0	128
Lane Group Flow (vph)	227	683	0	114	615	105	0	81	0	216	11	88
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	pm+pt			pm+pt		pm+ov	pm+pt			pm+pt		pm+ov
Protected Phases	7	4		3	8	1	5	2		1	6	7
Permitted Phases	4			8		8	2			6		6
Actuated Green, G (s)	56.0	45.4		48.1	40.5	50.5		11.0		24.0	24.0	36.5
Effective Green, g (s)	56.0	45.4		48.1	40.5	50.5		11.0		24.0	24.0	36.5
Actuated g/C Ratio	0.62	0.50		0.53	0.45	0.56		0.12		0.27	0.27	0.41
Clearance Time (s)	3.0	5.0		3.0	5.0	3.0		5.0		3.0	5.0	3.0
Vehicle Extension (s)	4.0	3.0		4.0	3.0	3.0		4.0		3.0	4.0	4.0
Lane Grp Cap (vph)	478	1611		438	1494	833		195		304	466	602
v/s Ratio Prot	c0.07	0.21		0.02	0.19	0.01				c0.08	0.01	0.02
v/s Ratio Perm	c0.23			0.12		0.06		0.05		c0.11		0.04
v/c Ratio	0.47	0.42		0.26	0.41	0.13		0.41		0.71	0.02	0.15
Uniform Delay, d1	8.2	14.1		10.5	16.7	9.3		36.5		28.4	24.4	16.9
Progression Factor	2.60	1.95		1.00	1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2	0.9	0.7		0.4	0.8	0.1		1.9		7.6	0.0	0.2
Delay (s)	22.1	28.2		10.9	17.5	9.4		38.5		36.0	24.4	17.1
Level of Service	C	C		B	B	A		D		D	C	B
Approach Delay (s)		26.7			15.1			38.5			26.5	
Approach LOS		C			B			D			C	

Intersection Summary			
HCM Average Control Delay	23.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	60.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
1044: 111th Street & Bishop Ford Freeway EB Ramps

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↑↑					↰		↱
Volume (veh/h)	0	509	429	2	322	0	0	0	0	18	0	547
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	536	452	2	339	0	0	0	0	19	0	576
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		498										
pX, platoon unblocked												
vC, conflicting volume	339			536			709	879	268	611	879	169
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	339			536			709	879	268	611	879	169
tC, single (s)	4.2			4.2			7.6	6.6	7.0	7.6	6.6	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	100	95	100	32
cM capacity (veh/h)	1210			1021			101	282	727	375	282	842

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1	SB 2
Volume Total	268	268	452	115	226	19	576
Volume Left	0	0	0	2	0	19	0
Volume Right	0	0	452	0	0	0	576
cSH	1700	1700	1700	1021	1700	375	842
Volume to Capacity	0.16	0.16	0.27	0.00	0.13	0.05	0.68
Queue Length 95th (ft)	0	0	0	0	0	4	139
Control Delay (s)	0.0	0.0	0.0	0.2	0.0	15.1	18.0
Lane LOS				A		C	C
Approach Delay (s)	0.0			0.1		17.9	
Approach LOS						C	

Intersection Summary			
Average Delay	5.5		
Intersection Capacity Utilization	51.9%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
1045: 111th Street & Bishop Ford Freeway WB Ramps

1/14/2013

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰↰		↰			
Sign Control	Stop			Stop	Stop	
Volume (vph)	527	0	324	0	0	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	555	0	341	0	0	0

Direction, Lane #	EB 1	EB 2	NB 1
Volume Total (vph)	277	277	341
Volume Left (vph)	277	277	341
Volume Right (vph)	0	0	0
Hadj (s)	0.55	0.55	0.25
Departure Headway (s)	6.1	6.1	5.5
Degree Utilization, x	0.47	0.47	0.52
Capacity (veh/h)	577	579	636
Control Delay (s)	13.1	13.1	14.3
Approach Delay (s)	13.1		14.3
Approach LOS	B		B

Intersection Summary			
Delay	13.5		
HCM Level of Service	B		
Intersection Capacity Utilization	41.5%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Signalized Intersection Capacity Analysis
1046: 115th Street & Marshield Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱		↰	↑↑						↲↓↳	
Volume (vph)	0	472	64	188	485	0	0	0	0	101	21	58
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	12	12	12	12	12
Total Lost time (s)		3.0		4.0	4.0						5.0	
Lane Util. Factor		0.95		1.00	0.95						0.95	
Frt		0.98		1.00	1.00						0.95	
Flt Protected		1.00		0.95	1.00						0.97	
Satd. Flow (prot)		3153		1605	3210						3073	
Flt Permitted		1.00		0.36	1.00						0.97	
Satd. Flow (perm)		3153		617	3210						3073	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	497	67	198	511	0	0	0	0	106	22	61
RTOR Reduction (vph)	0	12	0	0	0	0	0	0	0	0	42	0
Lane Group Flow (vph)	0	552	0	198	511	0	0	0	0	0	147	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type				pm+pt						Split		
Protected Phases		4		3	8					6	6	
Permitted Phases				8								
Actuated Green, G (s)		36.0		49.0	49.0						27.0	
Effective Green, g (s)		36.0		49.0	49.0						27.0	
Actuated g/C Ratio		0.42		0.58	0.58						0.32	
Clearance Time (s)		3.0		4.0	4.0						5.0	
Lane Grp Cap (vph)		1335		472	1850						976	
v/s Ratio Prot		0.18		c0.05	0.16						c0.05	
v/s Ratio Perm				c0.19								
v/c Ratio		0.41		0.42	0.28						0.15	
Uniform Delay, d1		17.1		14.6	9.1						20.8	
Progression Factor		1.00		0.33	0.20						1.00	
Incremental Delay, d2		0.9		2.3	0.3						0.3	
Delay (s)		18.1		7.1	2.1						21.1	
Level of Service		B		A	A						C	
Approach Delay (s)		18.1			3.5			0.0			21.1	
Approach LOS		B			A			A			C	

Intersection Summary			
HCM Average Control Delay	11.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	43.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1047: 115th Street & Ashland Ave

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑			↑↱			↰↑↱				
Volume (vph)	95	478	0	0	609	124	64	90	58	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	11	11	12	12	12	12	12	12
Total Lost time (s)	5.0	5.0			3.0			5.0				
Lane Util. Factor	1.00	0.95			0.95			0.91				
Frt	1.00	1.00			0.97			0.96				
Flt Protected	0.95	1.00			1.00			0.99				
Satd. Flow (prot)	1660	3320			3128			4507				
Flt Permitted	0.25	1.00			1.00			0.99				
Satd. Flow (perm)	436	3320			3128			4507				
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	100	503	0	0	641	131	67	95	61	0	0	0
RTOR Reduction (vph)	0	0	0	0	20	0	0	42	0	0	0	0
Lane Group Flow (vph)	100	503	0	0	752	0	0	181	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	pm+pt						Split					
Protected Phases	7	4			8		2	2				
Permitted Phases	4											
Actuated Green, G (s)	48.0	48.0			35.0			27.0				
Effective Green, g (s)	48.0	48.0			35.0			27.0				
Actuated g/C Ratio	0.56	0.56			0.41			0.32				
Clearance Time (s)	5.0	5.0			3.0			5.0				
Lane Grp Cap (vph)	390	1875			1288			1432				
v/s Ratio Prot	0.03	c0.15			c0.24			c0.04				
v/s Ratio Perm	0.11											
v/c Ratio	0.26	0.27			0.58			0.13				
Uniform Delay, d1	16.5	9.5			19.4			20.6				
Progression Factor	0.38	0.32			1.00			1.00				
Incremental Delay, d2	1.5	0.3			1.9			0.2				
Delay (s)	7.8	3.3			21.3			20.8				
Level of Service	A	A			C			C				
Approach Delay (s)		4.1			21.3			20.8			0.0	
Approach LOS		A			C			C			A	

Intersection Summary			
HCM Average Control Delay	14.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	43.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1048: 115th Street & Racine Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↑↱			↰↑↑↱			↰↑↱			↰↑↱	
Volume (vph)	114	342	114	79	366	79	129	78	27	29	85	141
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	10	12	12	15	12	12	15	12
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			1.00			1.00	
Frt		0.97			0.98			0.98			0.93	
Flt Protected		0.99			0.99			0.97			0.99	
Satd. Flow (prot)		2976			3006			1842			1769	
Flt Permitted		0.69			0.75			0.73			0.95	
Satd. Flow (perm)		2070			2273			1379			1690	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	120	360	120	83	385	83	136	82	28	31	89	148
RTOR Reduction (vph)	0	34	0	0	22	0	0	7	0	0	69	0
Lane Group Flow (vph)	0	566	0	0	529	0	0	239	0	0	199	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		23.0			23.0			32.0			32.0	
Effective Green, g (s)		23.0			23.0			32.0			32.0	
Actuated g/C Ratio		0.35			0.35			0.49			0.49	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		732			804			679			832	
v/s Ratio Prot												
v/s Ratio Perm		c0.27			0.23			c0.17			0.12	
v/c Ratio		0.77			0.66			0.35			0.24	
Uniform Delay, d1		18.7			17.7			10.1			9.5	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		7.8			4.2			1.4			0.7	
Delay (s)		26.5			21.9			11.6			10.2	
Level of Service		C			C			B			B	
Approach Delay (s)		26.5			21.9			11.6			10.2	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM Average Control Delay	20.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	78.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1049: 115th Street & Halsted Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↑	↱	↰	↑↑	↱
Volume (vph)	106	201	88	159	311	65	118	511	64	91	898	140
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	12	10	16	12	9	10	9	9	10	9
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00	0.97	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.95		1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1559	2980		1573	3683		1508	3069	1333	1520	3099	1336
Flt Permitted	0.45	1.00		0.53	1.00		0.14	1.00	1.00	0.36	1.00	1.00
Satd. Flow (perm)	739	2980		880	3683		214	3069	1333	576	3099	1336
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	112	212	93	167	327	68	124	538	67	96	945	147
RTOR Reduction (vph)	0	58	0	0	21	0	0	0	43	0	0	93
Lane Group Flow (vph)	112	247	0	167	374	0	124	538	24	96	945	54
Confl. Peds. (#/hr)	19		16	16		19	22		25	25		22
Heavy Vehicles (%)	2%	2%	0%	1%	2%	2%	2%	4%	0%	1%	3%	0%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	32.0	27.0		32.0	27.0		38.0	31.0	31.0	38.0	31.0	31.0
Effective Green, g (s)	30.0	28.0		30.0	28.0		36.0	31.0	31.0	36.0	31.0	31.0
Actuated g/C Ratio	0.35	0.33		0.35	0.33		0.42	0.36	0.36	0.42	0.36	0.36
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)	299	982		343	1213		182	1119	486	311	1130	487
v/s Ratio Prot	0.02	0.08		c0.02	0.10		c0.05	0.18		0.02	c0.30	
v/s Ratio Perm	0.11			c0.15			0.24		0.02	0.11		0.04
v/c Ratio	0.37	0.25		0.49	0.31		0.68	0.48	0.05	0.31	0.84	0.11
Uniform Delay, d1	19.4	20.8		20.7	21.3		17.6	20.8	17.5	15.3	24.7	17.9
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.43	1.05	2.41
Incremental Delay, d2	3.6	0.6		4.9	0.7		18.7	1.5	0.2	1.9	5.7	0.3
Delay (s)	23.0	21.5		25.5	21.9		36.3	22.3	17.7	23.9	31.7	43.5
Level of Service	C	C		C	C		D	C	B	C	C	D
Approach Delay (s)		21.9			23.0			24.2			32.5	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	27.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	69.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1050: 115th Street & Wentworth Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱		↰	↱		↰	↱
Volume (vph)	48	295	30	33	389	24	31	95	39	36	122	63
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	16	12	12	16	12
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frpb, ped/bikes		1.00	0.96		1.00	0.97		1.00	0.98		1.00	0.99
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frt		1.00	0.85		1.00	0.85		1.00	0.85		1.00	0.85
Flt Protected		0.99	1.00		1.00	1.00		0.99	1.00		0.99	1.00
Satd. Flow (prot)		1962	1466		1993	1480		2015	1506		2000	1511
Flt Permitted		0.90	1.00		0.96	1.00		0.92	1.00		0.92	1.00
Satd. Flow (perm)		1782	1466		1912	1480		1869	1506		1870	1511
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	51	311	32	35	409	25	33	100	41	38	128	66
RTOR Reduction (vph)	0	0	17	0	0	13	0	0	24	0	0	39
Lane Group Flow (vph)	0	362	15	0	444	12	0	133	17	0	166	27
Confl. Peds. (#/hr)	11		20	20		11	1		4	4		1
Confl. Bikes (#/hr)	1		1	1		1			1	1		
Heavy Vehicles (%)	4%	3%	0%	0%	2%	0%	0%	0%	0%	0%	1%	0%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)		30.0	30.0		30.0	30.0		27.0	27.0		27.0	27.0
Effective Green, g (s)		30.0	30.0		30.0	30.0		27.0	27.0		27.0	27.0
Actuated g/C Ratio		0.46	0.46		0.46	0.46		0.42	0.42		0.42	0.42
Clearance Time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		822	677		882	683		776	626		777	628
v/s Ratio Prot												
v/s Ratio Perm		0.20	0.01		c0.23	0.01		0.07	0.01		c0.09	0.02
v/c Ratio		0.44	0.02		0.50	0.02		0.17	0.03		0.21	0.04
Uniform Delay, d1		11.8	9.5		12.3	9.5		12.0	11.2		12.2	11.3
Progression Factor		1.00	1.00		0.65	0.58		1.22	1.56		0.97	0.84
Incremental Delay, d2		1.7	0.1		2.0	0.0		0.5	0.1		0.6	0.1
Delay (s)		13.5	9.6		10.0	5.6		15.1	17.6		12.5	9.7
Level of Service		B	A		A	A		B	B		B	A
Approach Delay (s)		13.2			9.8			15.7			11.7	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM Average Control Delay	12.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	82.7%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1051: 115th Street & State Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	75	305	20	41	247	31	10	107	21	104	203	62
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	0.98		1.00	0.98		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1550	3070		1550	3047		1550	3023		1550	2991	
Flt Permitted	0.95	1.00		0.55	1.00		0.57	1.00		0.67	1.00	
Satd. Flow (perm)	1550	3070		891	3047		933	3023		1087	2991	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	79	321	21	43	260	33	11	113	22	109	214	65
RTOR Reduction (vph)	0	7	0	0	15	0	0	13	0	0	38	0
Lane Group Flow (vph)	79	335	0	43	278	0	11	122	0	109	241	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Prot			Perm			Perm			Perm		
Protected Phases	7	4			8			2			6	
Permitted Phases				8			2			6		
Actuated Green, G (s)	7.0	32.0		22.0	22.0		27.0	27.0		27.0	27.0	
Effective Green, g (s)	7.0	32.0		22.0	22.0		27.0	27.0		27.0	27.0	
Actuated g/C Ratio	0.11	0.49		0.34	0.34		0.42	0.42		0.42	0.42	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	167	1511		302	1031		388	1256		452	1242	
v/s Ratio Prot	c0.05	0.11			c0.09			0.04			0.08	
v/s Ratio Perm				0.05			0.01			c0.10		
v/c Ratio	0.47	0.22		0.14	0.27		0.03	0.10		0.24	0.19	
Uniform Delay, d1	27.3	9.4		14.9	15.7		11.2	11.6		12.3	12.1	
Progression Factor	0.92	0.50		0.77	0.74		0.89	0.94		1.12	1.12	
Incremental Delay, d2	8.9	0.3		1.0	0.6		0.1	0.2		1.3	0.3	
Delay (s)	34.1	5.0		12.4	12.2		10.2	11.0		15.1	13.8	
Level of Service	C	A		B	B		B	B		B	B	
Approach Delay (s)		10.5			12.3			10.9			14.2	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	12.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	37.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1052: 115th Street & Michigan Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			↰↑↱			↰↑↱	
Volume (vph)	63	263	68	197	320	61	25	245	20	55	270	50
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	12	12	12	12	12	12
Total Lost time (s)	4.0	4.0		3.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frt	1.00	0.97		1.00	0.98			0.99			0.98	
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.99	
Satd. Flow (prot)	1550	3003		1550	3025			3272			3230	
Flt Permitted	0.52	1.00		0.95	1.00			0.91			0.87	
Satd. Flow (perm)	841	3003		1550	3025			2982			2820	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	66	277	72	207	337	64	26	258	21	58	284	53
RTOR Reduction (vph)	0	35	0	0	24	0	0	9	0	0	19	0
Lane Group Flow (vph)	66	314	0	207	377	0	0	296	0	0	376	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Prot			Perm			Perm		
Protected Phases		4		3	8			2			6	
Permitted Phases	4						2			6		
Actuated Green, G (s)	20.0	20.0		6.0	29.0			25.0			25.0	
Effective Green, g (s)	20.0	20.0		6.0	29.0			25.0			25.0	
Actuated g/C Ratio	0.31	0.31		0.09	0.45			0.38			0.38	
Clearance Time (s)	4.0	4.0		3.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	259	924		143	1350			1147			1085	
v/s Ratio Prot		c0.10		c0.13	0.12							
v/s Ratio Perm	0.08							0.10			c0.13	
v/c Ratio	0.25	0.34		1.45	0.28			0.26			0.35	
Uniform Delay, d1	16.9	17.4		29.5	11.4			13.7			14.2	
Progression Factor	0.65	0.61		1.29	1.13			0.76			0.73	
Incremental Delay, d2	2.3	1.0		224.5	0.3			0.5			0.9	
Delay (s)	13.3	11.5		262.6	13.2			11.0			11.3	
Level of Service	B	B		F	B			B			B	
Approach Delay (s)		11.8			98.1			11.0			11.3	
Approach LOS		B			F			B			B	

Intersection Summary			
HCM Average Control Delay	42.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	54.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1053: 115th Street & Indiana Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣✣				
Volume (vph)	16	295	16	73	587	73	52	108	162	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	12	14	12	10	15	10
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			0.95				
Frt		0.99			0.99			0.92				
Flt Protected		1.00			1.00			0.99				
Satd. Flow (prot)		1616			1601			3248				
Flt Permitted		0.96			0.93			0.99				
Satd. Flow (perm)		1557			1503			3248				
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	17	311	17	77	618	77	55	114	171	0	0	0
RTOR Reduction (vph)	0	3	0	0	5	0	0	130	0	0	0	0
Lane Group Flow (vph)	0	342	0	0	767	0	0	210	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm			Perm					
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Actuated Green, G (s)		41.6			41.6			15.4				
Effective Green, g (s)		41.6			41.6			15.4				
Actuated g/C Ratio		0.64			0.64			0.24				
Clearance Time (s)		4.0			4.0			4.0				
Vehicle Extension (s)		3.0			3.0			8.0				
Lane Grp Cap (vph)		996			962			770				
v/s Ratio Prot												
v/s Ratio Perm		0.22			c0.51			0.06				
v/c Ratio		0.34			0.80			0.27				
Uniform Delay, d1		5.4			8.6			20.2				
Progression Factor		1.59			1.00			1.00				
Incremental Delay, d2		0.9			6.8			0.8				
Delay (s)		9.5			15.4			21.0				
Level of Service		A			B			C				
Approach Delay (s)		9.5			15.4			21.0			0.0	
Approach LOS		A			B			C			A	

Intersection Summary			
HCM Average Control Delay	15.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	80.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
1054: 115th Street & Martin Luther King Jr Drive

1/14/2013

	↗	→	←	↖	↘	↙
Movement	**EBL**	**EBT**	**WBT**	**WBR**	**SBL**	**SBR**
Lane Configurations		↰↑	↑↱		↰	↱
Volume (veh/h)	73	374	569	38	117	157
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	81	416	632	42	130	174
Pedestrians		5	6		17	
Lane Width (ft)		16.0	16.0		10.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		1	1		1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		1319	491			
pX, platoon unblocked	0.84				0.84	0.84
vC, conflicting volume	691				1254	675
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	532				1206	512
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	90				14	62
cM capacity (veh/h)	842				152	464

Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total	497	674	130	174
Volume Left	81	0	130	0
Volume Right	0	42	0	174
cSH	842	1700	152	464
Volume to Capacity	0.10	0.40	0.86	0.38
Queue Length 95th (ft)	8	0	144	43
Control Delay (s)	2.6	0.0	97.4	17.4
Lane LOS	A		F	C
Approach Delay (s)	2.6	0.0	51.5	
Approach LOS			F	

Intersection Summary			
Average Delay	11.5		
Intersection Capacity Utilization	77.0%	ICU Level of Service	D
Analysis Period (min)	15		

HCM Signalized Intersection Capacity Analysis
1055: 115th Street & Cottage Grove Avenue

1/14/2013

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↱			↰	↰↱	
Volume (vph)	664	0	1	595	3	29
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0			4.0	4.0	
Lane Util. Factor	1.00			1.00	1.00	
Frt	1.00			1.00	0.88	
Flt Protected	1.00			1.00	1.00	
Satd. Flow (prot)	1748			1747	1526	
Flt Permitted	1.00			1.00	1.00	
Satd. Flow (perm)	1748			1747	1526	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	699	0	1	626	3	31
RTOR Reduction (vph)	0	0	0	0	26	0
Lane Group Flow (vph)	699	0	0	627	8	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type			Perm			
Protected Phases	1 2 4			4	3	
Permitted Phases			4			
Actuated Green, G (s)	63.0			31.0	14.0	
Effective Green, g (s)	59.0			31.0	14.0	
Actuated g/C Ratio	0.69			0.36	0.16	
Clearance Time (s)				4.0	4.0	
Lane Grp Cap (vph)	1213			637	251	
v/s Ratio Prot	c0.40				c0.01	
v/s Ratio Perm				0.36		
v/c Ratio	0.58			0.98	0.03	
Uniform Delay, d1	6.6			26.8	29.8	
Progression Factor	0.06			1.00	1.00	
Incremental Delay, d2	1.3			32.0	0.2	
Delay (s)	1.7			58.8	30.1	
Level of Service	A			E	C	
Approach Delay (s)	1.7			58.8	30.1	
Approach LOS	A			E	C	

Intersection Summary			
HCM Average Control Delay	28.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	46.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
1056: 115th Street & Bishop Ford Fwy

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱			↰						↰	↱
Volume (veh/h)	0	226	584	30	383	0	0	0	0	17	6	240
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	238	615	32	403	0	0	0	0	18	6	253
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	403			238			1015	1012	426	585	704	403
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	403			238			1015	1012	426	585	704	403
tC, single (s)	4.1			4.2			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			98			100	100	100	95	98	58
cM capacity (veh/h)	1166			1312			109	235	582	391	355	597

Direction, Lane #	EB 1	EB 2	WB 1	SB 1	SB 2
Volume Total	159	694	435	24	253
Volume Left	0	0	32	18	0
Volume Right	0	615	0	0	253
cSH	1700	1700	1312	381	597
Volume to Capacity	0.09	0.41	0.02	0.06	0.42
Queue Length 95th (ft)	0	0	2	5	52
Control Delay (s)	0.0	0.0	0.8	15.1	15.4
Lane LOS			A	C	C
Approach Delay (s)	0.0		0.8	15.4	
Approach LOS				C	

Intersection Summary			
Average Delay	2.9		
Intersection Capacity Utilization	57.4%	ICU Level of Service	B
Analysis Period (min)	15		

	↗	↘	↖	↑	↓	↙
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰↰		↰			
Sign Control	Stop			Stop	Stop	
Volume (vph)	243	0	414	0	0	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	256	0	436	0	0	0

Direction, Lane #	EB 1	EB 2	NB 1
Volume Total (vph)	128	128	436
Volume Left (vph)	128	128	436
Volume Right (vph)	0	0	0
Hadj (s)	0.55	0.55	0.25
Departure Headway (s)	6.2	6.2	4.9
Degree Utilization, x	0.22	0.22	0.59
Capacity (veh/h)	550	551	721
Control Delay (s)	9.8	9.8	14.7
Approach Delay (s)	9.8		14.7
Approach LOS	A		B

Intersection Summary			
Delay	12.9		
HCM Level of Service	B		
Intersection Capacity Utilization	38.2%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Signalized Intersection Capacity Analysis
1058: 119th Street & Marshield Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↰↑					↰	↰↑↱	↱
Volume (vph)	0	482	337	253	597	0	0	0	0	279	269	372
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	12	13	12	12	12	12	10	10	11
Total Lost time (s)		6.0	6.0		6.0					6.0	6.0	6.0
Lane Util. Factor		0.95	1.00		0.95					0.86	0.81	0.86
Frpb, ped/bikes		1.00	0.98		1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00					1.00	1.00	1.00
Frt		1.00	0.85		1.00					1.00	0.95	0.85
Flt Protected		1.00	1.00		0.99					0.95	0.99	1.00
Satd. Flow (prot)		3179	1232		3424					1359	3806	1133
Flt Permitted		1.00	1.00		0.99					0.95	0.99	1.00
Satd. Flow (perm)		3179	1232		3424					1359	3806	1133
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	507	355	266	628	0	0	0	0	294	283	392
RTOR Reduction (vph)	0	0	234	0	0	0	0	0	0	0	53	113
Lane Group Flow (vph)	0	507	121	0	894	0	0	0	0	162	558	83
Confl. Peds. (#/hr)	4		6	6		4						
Heavy Vehicles (%)	0%	4%	6%	1%	2%	0%	0%	0%	0%	1%	1%	1%
Parking (#/hr)			0									0
Turn Type			Perm	Split						Split		custom
Protected Phases		2		10 12 14	10 12 14					4	4	
Permitted Phases			2									4 2
Actuated Green, G (s)		38.9	38.9		68.3					23.0	23.0	67.9
Effective Green, g (s)		38.9	38.9		68.3					23.0	23.0	67.9
Actuated g/C Ratio		0.24	0.24		0.43					0.14	0.14	0.42
Clearance Time (s)		6.0	6.0							6.0	6.0	
Vehicle Extension (s)		3.0	3.0							3.0	3.0	
Lane Grp Cap (vph)		773	300		1462					195	547	481
v/s Ratio Prot		c0.16			c0.26					0.12	c0.15	
v/s Ratio Perm			0.10									0.07
v/c Ratio		0.66	0.40		0.61					0.83	1.02	0.17
Uniform Delay, d1		54.5	50.8		35.6					66.6	68.5	28.6
Progression Factor		1.00	1.00		0.04					1.00	1.00	1.00
Incremental Delay, d2		4.3	4.0		0.1					24.9	43.6	0.2
Delay (s)		58.8	54.8		1.6					91.5	112.1	28.8
Level of Service		E	D		A					F	F	C
Approach Delay (s)		57.2			1.6			0.0			91.8	
Approach LOS		E			A			A			F	

Intersection Summary			
HCM Average Control Delay	51.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	31.8
Intersection Capacity Utilization	73.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1059: 119th Street & Ashland Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑			↑↑	↱	↰	↰↑↱				
Volume (vph)	290	472	0	0	537	132	313	204	185	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	13	12	12	11	12	13	13	14	12	12	12
Total Lost time (s)	6.0	6.0			6.0	6.0	6.0	6.0				
Lane Util. Factor	1.00	0.95			0.95	1.00	0.91	0.91				
Frt	1.00	1.00			1.00	0.85	1.00	0.94				
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.99				
Satd. Flow (prot)	1605	3431			3210	1485	1561	3065				
Flt Permitted	0.95	1.00			1.00	1.00	0.95	0.99				
Satd. Flow (perm)	1605	3431			3210	1485	1561	3065				
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	305	497	0	0	565	139	329	215	195	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	86	0	59	0	0	0	0
Lane Group Flow (vph)	305	497	0	0	565	53	250	430	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Split					Perm	Split					
Protected Phases	2 4 8	2 4 8			10		12	12				
Permitted Phases						10						
Actuated Green, G (s)	83.7	83.7			36.6	36.6	12.7	12.7				
Effective Green, g (s)	83.7	83.7			36.6	36.6	12.7	12.7				
Actuated g/C Ratio	0.52	0.52			0.23	0.23	0.08	0.08				
Clearance Time (s)					6.0	6.0	6.0	6.0				
Vehicle Extension (s)					3.0	3.0	3.0	3.0				
Lane Grp Cap (vph)	840	1795			734	340	124	243				
v/s Ratio Prot	c0.19	0.14			c0.18		c0.16	0.14				
v/s Ratio Perm						0.04						
v/c Ratio	0.36	0.28			0.77	0.16	2.02	1.77				
Uniform Delay, d1	22.5	21.3			57.8	49.4	73.7	73.7				
Progression Factor	0.01	0.02			1.00	1.00	1.00	1.00				
Incremental Delay, d2	0.2	0.1			4.9	0.2	484.4	362.7				
Delay (s)	0.5	0.4			62.6	49.6	558.1	436.4				
Level of Service	A	A			E	D	F	F				
Approach Delay (s)		0.4			60.1			477.5			0.0	
Approach LOS		A			E			F			A	

Intersection Summary			
HCM Average Control Delay	176.2	HCM Level of Service	F
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	29.0
Intersection Capacity Utilization	62.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↱		↰	↑↱		↰	↑↱	
Volume (vph)	138	254	134	87	206	66	104	504	68	96	803	120
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	14	12	10	10	12	9	10	12
Total Lost time (s)	4.0	4.0	5.0	4.0	5.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	0.99	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.96		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1572	1600	1373	1593	1778		1578	3016		1537	3001	
Flt Permitted	0.43	1.00	1.00	0.50	1.00		0.15	1.00		0.34	1.00	
Satd. Flow (perm)	710	1600	1373	838	1778		246	3016		544	3001	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	141	259	137	89	210	67	106	514	69	98	819	122
RTOR Reduction (vph)	0	0	92	0	12	0	0	12	0	0	13	0
Lane Group Flow (vph)	141	259	45	89	265	0	106	571	0	98	928	0
Confl. Peds. (#/hr)	28		8	8		28	59		11	11		59
Confl. Bikes (#/hr)	3					3	1		2	2		1
Heavy Vehicles (%)	1%	5%	2%	0%	4%	0%	1%	4%	0%	0%	3%	3%
Turn Type	pm+pt		Perm	pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)	36.3	29.3	29.3	33.3	27.8		39.6	34.1		39.6	34.1	
Effective Green, g (s)	34.3	30.3	29.3	31.3	27.8		37.6	34.1		37.6	34.1	
Actuated g/C Ratio	0.38	0.34	0.33	0.35	0.31		0.42	0.38		0.42	0.38	
Clearance Time (s)	3.0	5.0	5.0	3.0	5.0		3.0	4.0		3.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	330	542	450	331	553		171	1150		279	1145	
v/s Ratio Prot	c0.03	c0.16		0.01	0.15		c0.03	0.19		0.02	c0.31	
v/s Ratio Perm	0.14		0.03	0.08			0.23			0.13		
v/c Ratio	0.43	0.48	0.10	0.27	0.48		0.62	0.50		0.35	0.81	
Uniform Delay, d1	19.0	23.3	20.9	20.1	24.9		18.1	21.1		16.4	24.8	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.9	3.0	0.4	0.4	2.9		6.5	1.5		0.8	6.3	
Delay (s)	19.9	26.3	21.3	20.6	27.9		24.7	22.6		17.1	31.0	
Level of Service	B	C	C	C	C		C	C		B	C	
Approach Delay (s)		23.4			26.1			23.0			29.7	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	26.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	89.4	Sum of lost time (s)	12.0
Intersection Capacity Utilization	72.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1061: 119th Street & Wentworth Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱		✥			✥	
Volume (vph)	38	305	59	13	288	21	36	57	19	20	88	67
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	10	10	10	12	15	12	12	16	12
Total Lost time (s)		3.0	3.0		3.0	3.0		3.0			3.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00			1.00	
Frpb, ped/bikes		1.00	0.96		1.00	0.97		1.00			0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00			1.00	
Frt		1.00	0.85		1.00	0.85		0.98			0.95	
Flt Protected		0.99	1.00		1.00	1.00		0.98			0.99	
Satd. Flow (prot)		1968	1467		1629	1381		1892			1870	
Flt Permitted		0.95	1.00		0.98	1.00		0.89			0.97	
Satd. Flow (perm)		1870	1467		1605	1381		1716			1827	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	40	321	62	14	303	22	38	60	20	21	93	71
RTOR Reduction (vph)	0	0	31	0	0	11	0	11	0	0	34	0
Lane Group Flow (vph)	0	361	31	0	317	11	0	107	0	0	151	0
Confl. Peds. (#/hr)	12		20	20		12	8		2	2		8
Confl. Bikes (#/hr)	1		2	2		1			1	1		
Heavy Vehicles (%)	3%	3%	0%	0%	3%	0%	0%	0%	0%	0%	1%	3%
Turn Type	Perm		Perm	Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)		32.0	32.0		32.0	32.0		27.0			27.0	
Effective Green, g (s)		32.0	32.0		32.0	32.0		27.0			27.0	
Actuated g/C Ratio		0.49	0.49		0.49	0.49		0.42			0.42	
Clearance Time (s)		3.0	3.0		3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)		921	722		790	680		713			759	
v/s Ratio Prot												
v/s Ratio Perm		0.19	0.02		c0.20	0.01		0.06			c0.08	
v/c Ratio		0.39	0.04		0.40	0.02		0.15			0.20	
Uniform Delay, d1		10.4	8.6		10.4	8.4		11.8			12.1	
Progression Factor		1.00	1.00		1.95	2.83		1.00			1.96	
Incremental Delay, d2		1.3	0.1		1.5	0.0		0.4			0.6	
Delay (s)		11.6	8.7		21.8	24.0		12.3			24.3	
Level of Service		B	A		C	C		B			C	
Approach Delay (s)		11.2			22.0			12.3			24.3	
Approach LOS		B			C			B			C	

Intersection Summary			
HCM Average Control Delay	17.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	59.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1062: 119th Street & State Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑	↱		↰↑	↱		↰↑	↱		↰↑↱	
Volume (vph)	58	189	40	11	206	10	34	108	18	14	175	66
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frpb, ped/bikes		1.00	0.94		1.00	0.97		1.00	0.97		0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		0.96	
Flt Protected		0.99	1.00		1.00	1.00		0.99	1.00		1.00	
Satd. Flow (prot)		1748	1443		1728	1487		1713	1489		1712	
Flt Permitted		0.88	1.00		0.98	1.00		0.90	1.00		0.98	
Satd. Flow (perm)		1555	1443		1701	1487		1555	1489		1690	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	60	197	42	11	215	10	35	112	19	15	182	69
RTOR Reduction (vph)	0	0	27	0	0	6	0	0	10	0	19	0
Lane Group Flow (vph)	0	257	15	0	226	4	0	147	9	0	247	0
Confl. Peds. (#/hr)	19		25	25		19	3		6	6		3
Confl. Bikes (#/hr)	1		2	2		1			1	1		
Heavy Vehicles (%)	0%	2%	0%	0%	4%	0%	0%	5%	0%	0%	0%	2%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		23.0	23.0		23.0	23.0		32.0	32.0		32.0	
Effective Green, g (s)		23.0	23.0		23.0	23.0		32.0	32.0		32.0	
Actuated g/C Ratio		0.35	0.35		0.35	0.35		0.49	0.49		0.49	
Clearance Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	
Lane Grp Cap (vph)		550	511		602	526		766	733		832	
v/s Ratio Prot												
v/s Ratio Perm		c0.17	0.01		0.13	0.00		0.09	0.01		c0.15	
v/c Ratio		0.47	0.03		0.38	0.01		0.19	0.01		0.30	
Uniform Delay, d1		16.3	13.7		15.6	13.6		9.3	8.4		9.8	
Progression Factor		1.93	3.45		0.96	0.97		0.20	0.25		1.02	
Incremental Delay, d2		2.7	0.1		1.7	0.0		0.4	0.0		0.9	
Delay (s)		34.0	47.4		16.7	13.1		2.2	2.1		10.9	
Level of Service		C	D		B	B		A	A		B	
Approach Delay (s)		35.9			16.6			2.2			10.9	
Approach LOS		D			B			A			B	

Intersection Summary			
HCM Average Control Delay	18.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	61.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		✥			✥			↰	↱
Volume (vph)	147	35	76	8	14	9	38	224	8	20	458	194
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	14	12	12	16	12	12	16	12
Total Lost time (s)		3.0	3.0		3.0			3.0			3.0	3.0
Lane Util. Factor		1.00	1.00		1.00			1.00			1.00	1.00
Frpb, ped/bikes		1.00	0.95		0.98			1.00			1.00	0.94
Flpb, ped/bikes		0.98	1.00		0.99			1.00			1.00	1.00
Frt		1.00	0.85		0.96			1.00			1.00	0.85
Flt Protected		0.96	1.00		0.99			0.99			1.00	1.00
Satd. Flow (prot)		1871	1440		1776			1993			1976	1382
Flt Permitted		0.78	1.00		0.94			0.91			0.98	1.00
Satd. Flow (perm)		1509	1440		1693			1820			1948	1382
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	155	37	80	8	15	9	40	236	8	21	482	204
RTOR Reduction (vph)	0	0	47	0	7	0	0	2	0	0	0	90
Lane Group Flow (vph)	0	192	33	0	25	0	0	282	0	0	503	114
Confl. Peds. (#/hr)	37		53	53		37	39		54	54		39
Confl. Bikes (#/hr)							2					2
Heavy Vehicles (%)	4%	0%	1%	0%	0%	0%	0%	1%	0%	0%	3%	4%
Turn Type	pm+pt		Perm	Perm			Perm			Perm		Perm
Protected Phases	7	4			8			2			6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)		27.0	27.0		17.0			32.0			32.0	32.0
Effective Green, g (s)		27.0	27.0		17.0			32.0			32.0	32.0
Actuated g/C Ratio		0.42	0.42		0.26			0.49			0.49	0.49
Clearance Time (s)		3.0	3.0		3.0			3.0			3.0	3.0
Lane Grp Cap (vph)		671	598		443			896			959	680
v/s Ratio Prot		c0.04										
v/s Ratio Perm		0.08	0.02		0.01			0.16			c0.26	0.08
v/c Ratio		0.29	0.06		0.06			0.32			0.52	0.17
Uniform Delay, d1		12.6	11.4		18.0			9.9			11.3	9.1
Progression Factor		0.63	0.77		1.00			0.61			0.62	0.22
Incremental Delay, d2		1.0	0.2		0.2			0.8			1.6	0.4
Delay (s)		8.9	8.9		18.2			6.9			8.6	2.5
Level of Service		A	A		B			A			A	A
Approach Delay (s)		8.9			18.2			6.9			6.9	
Approach LOS		A			B			A			A	

Intersection Summary			
HCM Average Control Delay	7.6	HCM Level of Service	A
HCM Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	69.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1064: 127th Street & S Paulina St

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↱		↰	↑↑					↰	↰↑↱	↱
Volume (vph)	0	866	289	324	935	0	0	0	0	513	284	334
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	12	11	8	8	8	11	12	14
Total Lost time (s)		6.0		4.5	6.0					6.0	6.0	6.0
Lane Util. Factor		0.91		1.00	0.95					0.91	0.86	0.91
Frpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Frt		0.96		1.00	1.00					1.00	0.98	0.85
Flt Protected		1.00		0.95	1.00					0.95	0.98	1.00
Satd. Flow (prot)		4569		1620	3320					1489	2913	1442
Flt Permitted		1.00		0.14	1.00					0.95	0.98	1.00
Satd. Flow (perm)		4569		242	3320					1489	2913	1442
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	884	295	331	954	0	0	0	0	523	290	341
RTOR Reduction (vph)	0	44	0	0	0	0	0	0	0	0	9	111
Lane Group Flow (vph)	0	1135	0	331	954	0	0	0	0	298	584	152
Confl. Peds. (#/hr)	15		11	11		15						
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	0%	3%	3%	2%	3%	0%	0%	0%	0%	1%	3%	3%
Turn Type				pm+pt						Perm		Perm
Protected Phases		2		1	6						4	
Permitted Phases				6						4		4
Actuated Green, G (s)		47.8		75.2	75.2					27.8	27.8	27.8
Effective Green, g (s)		47.8		75.2	75.2					27.8	27.8	27.8
Actuated g/C Ratio		0.42		0.65	0.65					0.24	0.24	0.24
Clearance Time (s)		6.0		4.5	6.0					6.0	6.0	6.0
Vehicle Extension (s)		7.0		3.5	7.0					3.5	3.5	3.5
Lane Grp Cap (vph)		1899		433	2171					360	704	349
v/s Ratio Prot		0.25		c0.15	0.29							
v/s Ratio Perm				c0.35						0.20	0.20	0.11
v/c Ratio		0.60		0.76	0.44					0.83	0.83	0.44
Uniform Delay, d1		26.1		21.5	9.7					41.3	41.4	37.0
Progression Factor		1.00		1.09	1.51					1.00	1.00	1.00
Incremental Delay, d2		1.4		6.0	0.5					14.8	8.2	1.0
Delay (s)		27.5		29.5	15.1					56.1	49.6	38.0
Level of Service		C		C	B					E	D	D
Approach Delay (s)		27.5			18.8			0.0			48.6	
Approach LOS		C			B			A			D	

Intersection Summary			
HCM Average Control Delay	31.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	10.5
Intersection Capacity Utilization	98.4%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↑			↑↑	↱		↰↑↱				
Volume (vph)	341	1038	0	0	852	269	406	333	292	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	12	12	12	11	12	12	12	12	12	12	12
Total Lost time (s)	6.0	6.0			6.0	6.0		6.0				
Lane Util. Factor	0.97	0.95			0.95	1.00		0.91				
Frpb, ped/bikes	1.00	1.00			1.00	0.98		1.00				
Flpb, ped/bikes	1.00	1.00			1.00	1.00		1.00				
Frt	1.00	1.00			1.00	0.85		0.96				
Flt Protected	0.95	1.00			1.00	1.00		0.98				
Satd. Flow (prot)	3144	3353			3241	1489		4526				
Flt Permitted	0.20	1.00			1.00	1.00		0.98				
Satd. Flow (perm)	647	3353			3241	1489		4526				
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	359	1093	0	0	897	283	427	351	307	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	99	0	59	0	0	0	0
Lane Group Flow (vph)	359	1093	0	0	897	184	0	1026	0	0	0	0
Confl. Peds. (#/hr)	7		5	5		7						
Confl. Bikes (#/hr)	1		1	1		1						
Heavy Vehicles (%)	2%	2%	0%	0%	2%	1%	2%	1%	3%	0%	0%	0%
Turn Type	pm+pt					Perm	Perm					
Protected Phases	5	2			6			8				
Permitted Phases	2					6	8					
Actuated Green, G (s)	70.0	70.0			52.2	52.2		33.0				
Effective Green, g (s)	70.0	70.0			52.2	52.2		33.0				
Actuated g/C Ratio	0.61	0.61			0.45	0.45		0.29				
Clearance Time (s)	6.0	6.0			6.0	6.0		6.0				
Vehicle Extension (s)	3.5	7.0			7.0	7.0		5.0				
Lane Grp Cap (vph)	650	2041			1471	676		1299				
v/s Ratio Prot	0.06	c0.33			c0.28							
v/s Ratio Perm	0.28					0.12		0.23				
v/c Ratio	0.55	0.54			0.61	0.27		0.79				
Uniform Delay, d1	13.2	13.1			23.7	19.6		37.8				
Progression Factor	0.48	0.30			0.97	1.10		1.00				
Incremental Delay, d2	0.8	0.8			1.6	0.8		3.8				
Delay (s)	7.2	4.6			24.5	22.3		41.6				
Level of Service	A	A			C	C		D				
Approach Delay (s)		5.3			24.0			41.6			0.0	
Approach LOS		A			C			D			A	

Intersection Summary			
HCM Average Control Delay	21.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	98.4%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1066: 127th Street & S Ashland

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	132	619	399	102	612	52	227	179	66	74	162	121
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	12	11	12	12	10	10	13	10	10	10
Total Lost time (s)	3.5	6.0	3.5	3.5	6.0		3.5	6.0		3.5	6.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		0.99	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.96		1.00	0.94	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1564	3273	1313	1600	3283		1578	3002		1540	2941	
Flt Permitted	0.19	1.00	1.00	0.40	1.00		0.39	1.00		0.59	1.00	
Satd. Flow (perm)	308	3273	1313	681	3283		652	3002		961	2941	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	139	652	420	107	644	55	239	188	69	78	171	127
RTOR Reduction (vph)	0	0	169	0	6	0	0	38	0	0	107	0
Lane Group Flow (vph)	139	652	251	107	693	0	239	219	0	78	191	0
Confl. Peds. (#/hr)	11		23	23		11	8		12	12		8
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	2%	1%	3%	3%	3%	0%	1%	1%	2%	3%	0%	1%
Parking (#/hr)			0									
Turn Type	pm+pt		pm+ov	pm+pt			pm+pt			pm+pt		
Protected Phases	5	2	3	1	6		3	8		7	4	
Permitted Phases	2		2	6			8			4		
Actuated Green, G (s)	65.0	52.5	68.8	41.7	32.7		38.0	26.6		26.1	18.2	
Effective Green, g (s)	65.0	52.5	68.8	41.7	32.7		38.0	26.6		26.1	18.2	
Actuated g/C Ratio	0.57	0.46	0.60	0.36	0.28		0.33	0.23		0.23	0.16	
Clearance Time (s)	3.5	6.0	3.5	3.5	6.0		3.5	6.0		3.5	6.0	
Vehicle Extension (s)	3.0	7.0	3.0	3.0	7.0		3.0	7.0		3.0	7.0	
Lane Grp Cap (vph)	489	1494	786	319	934		347	694		258	465	
v/s Ratio Prot	0.07	c0.20	0.05	c0.03	c0.21		c0.10	0.07		0.02	0.06	
v/s Ratio Perm	0.09		0.15	0.10			c0.13			0.05		
v/c Ratio	0.28	0.44	0.32	0.34	0.74		0.69	0.32		0.30	0.41	
Uniform Delay, d1	13.9	21.2	11.5	25.0	37.3		30.6	36.7		36.2	43.6	
Progression Factor	0.67	0.82	2.95	1.00	1.00		0.85	0.93		1.00	1.00	
Incremental Delay, d2	1.2	0.8	0.2	0.6	5.3		5.4	0.9		0.7	2.1	
Delay (s)	10.5	18.3	34.1	25.7	42.6		31.6	34.9		36.9	45.7	
Level of Service	B	B	C	C	D		C	C		D	D	
Approach Delay (s)		22.9			40.4			33.3			43.8	
Approach LOS		C			D			C			D	

Intersection Summary			
HCM Average Control Delay	32.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	19.0
Intersection Capacity Utilization	70.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1067: Vermont St & S Ashland

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	46	193	367	68	202	107	362	340	78	206	408	56
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	11	12	11	12	12	11	13	12	10	11	12
Total Lost time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.90		1.00	0.95		1.00	0.97		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1705	2894		1653	3184		1620	3407		1580	3183	
Flt Permitted	0.54	1.00		0.29	1.00		0.32	1.00		0.50	1.00	
Satd. Flow (perm)	961	2894		504	3184		544	3407		826	3183	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	48	203	386	72	213	113	381	358	82	217	429	59
RTOR Reduction (vph)	0	269	0	0	56	0	0	17	0	0	9	0
Lane Group Flow (vph)	48	320	0	72	270	0	381	423	0	217	479	0
Confl. Peds. (#/hr)	12		3	3		12	5					5
Heavy Vehicles (%)	0%	2%	2%	0%	1%	1%	2%	1%	0%	1%	2%	0%
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	41.7	35.0		43.9	36.1		56.2	44.2		40.1	32.1	
Effective Green, g (s)	41.7	35.0		43.9	36.1		56.2	44.2		40.1	32.1	
Actuated g/C Ratio	0.36	0.30		0.38	0.31		0.49	0.38		0.35	0.28	
Clearance Time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	3.5	7.0		3.5	7.0		3.5	7.0		3.5	7.0	
Lane Grp Cap (vph)	392	881		270	999		454	1309		340	888	
v/s Ratio Prot	0.01	c0.11		c0.02	0.08		c0.15	0.12		0.04	0.15	
v/s Ratio Perm	0.04			0.08			c0.26			0.18		
v/c Ratio	0.12	0.36		0.27	0.27		0.84	0.32		0.64	0.54	
Uniform Delay, d1	24.0	31.3		23.6	29.6		20.8	24.9		28.8	35.2	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	0.98	
Incremental Delay, d2	0.2	1.2		0.6	0.7		13.1	0.7		3.9	2.2	
Delay (s)	24.2	32.5		24.3	30.2		33.9	25.5		32.6	36.5	
Level of Service	C	C		C	C		C	C		C	D	
Approach Delay (s)		31.8			29.2			29.4			35.3	
Approach LOS		C			C			C			D	

Intersection Summary			
HCM Average Control Delay	31.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	74.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1068: 127th Street & Halsted Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	101	578	135	10	376	66	102	281	9	188	578	174
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	10	12	9	11	12	9	9	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.98			0.98		1.00	1.00		1.00	0.97	
Flt Protected		0.99			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3029			3035		1451	3227		1522	2872	
Flt Permitted		0.72			0.93		0.23	1.00		0.57	1.00	
Satd. Flow (perm)		2209			2826		351	3227		906	2872	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	106	608	142	11	396	69	107	296	9	198	608	183
RTOR Reduction (vph)	0	25	0	0	21	0	0	3	0	0	44	0
Lane Group Flow (vph)	0	831	0	0	455	0	107	302	0	198	747	0
Confl. Peds. (#/hr)	4		2	2		4	8		4	4		8
Confl. Bikes (#/hr)							2					2
Heavy Vehicles (%)	1%	2%	2%	0%	2%	6%	6%	2%	0%	1%	3%	3%
Turn Type	pm+pt			Perm			pm+pt			pm+pt		
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		25.0			17.0		28.0	24.0		28.0	24.0	
Effective Green, g (s)		25.0			17.0		28.0	24.0		28.0	24.0	
Actuated g/C Ratio		0.38			0.26		0.43	0.37		0.43	0.37	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		900			739		219	1192		428	1060	
v/s Ratio Prot		c0.06					c0.03	0.09		0.03	c0.26	
v/s Ratio Perm		c0.30			0.16		0.18			0.17		
v/c Ratio		0.92			0.62		0.49	0.25		0.46	0.71	
Uniform Delay, d1		19.1			21.1		12.0	14.3		12.2	17.5	
Progression Factor		1.00			1.51		0.95	0.59		1.00	1.00	
Incremental Delay, d2		16.3			1.0		7.3	0.5		3.6	3.9	
Delay (s)		35.4			33.0		18.8	9.0		15.8	21.4	
Level of Service		D			C		B	A		B	C	
Approach Delay (s)		35.4			33.0			11.5			20.3	
Approach LOS		D			C			B			C	

Intersection Summary			
HCM Average Control Delay	25.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	80.3%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1069: Vermont St & Halsted Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱		↰	↑↱		↰	↑↱	
Volume (vph)	67	198	136	103	159	27	70	450	78	33	662	66
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	12	12	12	12	12
Total Lost time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.94		1.00	0.98		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1707	1885		1599	1992		1676	3221		1435	3274	
Flt Permitted	0.64	1.00		0.44	1.00		0.31	1.00		0.42	1.00	
Satd. Flow (perm)	1141	1885		736	1992		538	3221		636	3274	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	71	208	143	108	167	28	74	474	82	35	697	69
RTOR Reduction (vph)	0	38	0	0	9	0	0	21	0	0	12	0
Lane Group Flow (vph)	71	313	0	108	186	0	74	535	0	35	754	0
Confl. Peds. (#/hr)	3		20	20		3	2		3	3		2
Confl. Bikes (#/hr)			1	1			2		2	2		2
Heavy Vehicles (%)	0%	0%	1%	6%	0%	0%	2%	3%	6%	19%	3%	2%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	24.0	24.0		24.0	24.0		31.0	31.0		31.0	31.0	
Effective Green, g (s)	24.0	24.0		24.0	24.0		31.0	31.0		31.0	31.0	
Actuated g/C Ratio	0.37	0.37		0.37	0.37		0.48	0.48		0.48	0.48	
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)	421	696		272	736		257	1536		303	1561	
v/s Ratio Prot		c0.17			0.09			0.17			c0.23	
v/s Ratio Perm	0.06			0.15			0.14			0.06		
v/c Ratio	0.17	0.45		0.40	0.25		0.29	0.35		0.12	0.48	
Uniform Delay, d1	13.8	15.5		15.2	14.3		10.3	10.7		9.4	11.6	
Progression Factor	1.00	1.00		1.31	1.33		1.00	1.00		1.07	0.88	
Incremental Delay, d2	0.9	2.1		2.6	0.5		2.8	0.6		0.5	0.7	
Delay (s)	14.7	17.6		22.5	19.4		13.1	11.3		10.6	10.9	
Level of Service	B	B		C	B		B	B		B	B	
Approach Delay (s)		17.1			20.5			11.5			10.9	
Approach LOS		B			C			B			B	

Intersection Summary			
HCM Average Control Delay	13.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	68.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1070: 127th Street & S Wallance St

1/14/2013

Movement	EBL	EBT	WBL	WBT	WBR	NBL2	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↑↱		↰↑↑↱				↰↑↱			↰↑↱	
Volume (vph)	2	750	221	534	18	3	10	9	46	9	0	3
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	10	10	10	12	12	16	12	12	16	12
Total Lost time (s)		5.0		5.0				4.0			4.0	
Lane Util. Factor		0.95		0.95				1.00			1.00	
Frpb, ped/bikes		1.00		1.00				0.99			0.98	
Flpb, ped/bikes		1.00		1.00				1.00			1.00	
Frt		1.00		1.00				0.91			0.94	
Flt Protected		1.00		0.99				0.99			0.97	
Satd. Flow (prot)		3160		3090				1811			1824	
Flt Permitted		0.95		0.56				0.96			0.89	
Satd. Flow (perm)		3012		1746				1750			1672	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	2	789	233	562	19	3	11	9	48	9	0	3
RTOR Reduction (vph)	0	0	0	2	0	0	0	38	0	0	4	0
Lane Group Flow (vph)	0	791	0	812	0	0	0	33	0	0	13	0
Confl. Peds. (#/hr)	7		4		7		7		2	2		7
Confl. Bikes (#/hr)							2		2	2		2
Heavy Vehicles (%)	0%	1%	2%	1%	6%	0%	0%	0%	0%	0%	0%	0%
Turn Type	Perm		custom			Perm	Perm			Perm		
Protected Phases		8	7	4				2			6	
Permitted Phases	8		4 7			2	2			6		
Actuated Green, G (s)		18.0		27.0				14.0			14.0	
Effective Green, g (s)		18.0		27.0				14.0			14.0	
Actuated g/C Ratio		0.28		0.42				0.22			0.22	
Clearance Time (s)		5.0		5.0				4.0			4.0	
Lane Grp Cap (vph)		834		849				377			360	
v/s Ratio Prot				c0.09								
v/s Ratio Perm		0.26		c0.31				c0.02			0.01	
v/c Ratio		0.95		1.11dl				0.09			0.04	
Uniform Delay, d1		23.0		18.4				20.4			20.2	
Progression Factor		1.45		0.89				1.00			1.00	
Incremental Delay, d2		14.0		21.2				0.5			0.2	
Delay (s)		47.5		37.7				20.9			20.4	
Level of Service		D		D				C			C	
Approach Delay (s)		47.5		37.7				20.9			20.4	
Approach LOS		D		D				C			C	

Intersection Summary			
HCM Average Control Delay	49.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	90.1%	ICU Level of Service	E
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1070: 127th Street & S Wallance St

1/14/2013

Movement	SBR2	NEL	NER
Lane Configurations			
Volume (vph)	5	3	242
Ideal Flow (vphpl)	1800	1800	1800
Lane Width	12	12	12
Total Lost time (s)		5.0	
Lane Util. Factor		1.00	
Frpb, ped/bikes		1.00	
Flpb, ped/bikes		1.00	
Frt		0.87	
Flt Protected		1.00	
Satd. Flow (prot)		1559	
Flt Permitted		1.00	
Satd. Flow (perm)		1559	
Peak-hour factor, PHF	0.95	0.95	0.95
Adj. Flow (vph)	5	3	255
RTOR Reduction (vph)	0	0	0
Lane Group Flow (vph)	0	258	0
Confl. Peds. (#/hr)			
Confl. Bikes (#/hr)			
Heavy Vehicles (%)	0%	0%	0%
Turn Type			
Protected Phases		3	
Permitted Phases			
Actuated Green, G (s)		10.0	
Effective Green, g (s)		10.0	
Actuated g/C Ratio		0.15	
Clearance Time (s)		5.0	
Lane Grp Cap (vph)		240	
v/s Ratio Prot		c0.17	
v/s Ratio Perm			
v/c Ratio		1.07	
Uniform Delay, d1		27.5	
Progression Factor		0.87	
Incremental Delay, d2		77.3	
Delay (s)		101.2	
Level of Service		F	
Approach Delay (s)		101.2	
Approach LOS		F	

Intersection Summary

HCM Signalized Intersection Capacity Analysis
1071: 127th Street & State Street

1/14/2013

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰↑	↑↱		↰	↱
Volume (vph)	256	769	557	62	91	222
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		1.00	1.00
Frt		1.00	0.99		1.00	0.85
Flt Protected		0.99	1.00		0.95	1.00
Satd. Flow (prot)		3279	3271		1660	1485
Flt Permitted		0.65	1.00		0.95	1.00
Satd. Flow (perm)		2168	3271		1660	1485
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	269	809	586	65	96	234
RTOR Reduction (vph)	0	0	13	0	0	173
Lane Group Flow (vph)	0	1078	638	0	96	61
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type	Perm					Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)		40.0	40.0		17.0	17.0
Effective Green, g (s)		40.0	40.0		17.0	17.0
Actuated g/C Ratio		0.62	0.62		0.26	0.26
Clearance Time (s)		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		1334	2013		434	388
v/s Ratio Prot			0.20		c0.06	
v/s Ratio Perm		c0.50				0.04
v/c Ratio		0.81	0.32		0.22	0.16
Uniform Delay, d1		9.6	6.0		18.8	18.5
Progression Factor		1.22	1.24		1.27	2.35
Incremental Delay, d2		1.9	0.4		1.2	0.9
Delay (s)		13.6	7.8		25.1	44.3
Level of Service		B	A		C	D
Approach Delay (s)		13.6	7.8		38.7	
Approach LOS		B	A		D	

Intersection Summary			
HCM Average Control Delay	15.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	63.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰↑	↑↱		↰	↱
Volume (vph)	79	784	535	148	259	86
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	12	10	11	12	10	10
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		1.00	1.00
Frpb, ped/bikes		1.00	1.00		1.00	0.99
Flpb, ped/bikes		1.00	1.00		1.00	1.00
Frt		1.00	0.97		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		3118	3069		1506	1343
Flt Permitted		0.82	1.00		0.95	1.00
Satd. Flow (perm)		2578	3069		1506	1343
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	83	825	563	156	273	91
RTOR Reduction (vph)	0	0	39	0	0	59
Lane Group Flow (vph)	0	908	680	0	273	32
Confl. Peds. (#/hr)	2			2		1
Heavy Vehicles (%)	1%	2%	2%	10%	6%	5%
Turn Type	Perm					Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)		34.0	34.0		23.0	23.0
Effective Green, g (s)		34.0	34.0		23.0	23.0
Actuated g/C Ratio		0.52	0.52		0.35	0.35
Clearance Time (s)		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		1348	1605		533	475
v/s Ratio Prot			0.22		c0.18	
v/s Ratio Perm		c0.35				0.02
v/c Ratio		0.67	0.42		0.51	0.07
Uniform Delay, d1		11.4	9.5		16.6	13.9
Progression Factor		1.05	1.09		1.64	3.32
Incremental Delay, d2		1.8	0.7		3.2	0.2
Delay (s)		13.8	11.1		30.4	46.4
Level of Service		B	B		C	D
Approach Delay (s)		13.8	11.1		34.4	
Approach LOS		B	B		C	

Intersection Summary			
HCM Average Control Delay	16.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	71.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↱		↰	↑	↰↱	
Volume (vph)	649	251	117	570	195	55
Ideal Flow (vphpl)	2300	1800	1800	2300	1800	1800
Lane Width	15	12	14	16	15	12
Total Lost time (s)	5.0		5.0	5.0	5.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.96		1.00	1.00	0.97	
Flt Protected	1.00		0.95	1.00	0.96	
Satd. Flow (prot)	2387		1788	2506	1748	
Flt Permitted	1.00		0.13	1.00	0.96	
Satd. Flow (perm)	2387		243	2506	1748	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	683	264	123	600	205	58
RTOR Reduction (vph)	21	0	0	0	16	0
Lane Group Flow (vph)	926	0	123	600	247	0
Confl. Peds. (#/hr)						1
Heavy Vehicles (%)	2%	2%	2%	4%	7%	0%
Turn Type			Perm			
Protected Phases	4			8	2	
Permitted Phases			8			
Actuated Green, G (s)	31.0		31.0	31.0	24.0	
Effective Green, g (s)	31.0		31.0	31.0	24.0	
Actuated g/C Ratio	0.48		0.48	0.48	0.37	
Clearance Time (s)	5.0		5.0	5.0	5.0	
Lane Grp Cap (vph)	1138		116	1195	645	
v/s Ratio Prot	0.39			0.24	c0.14	
v/s Ratio Perm			c0.51			
v/c Ratio	0.81		1.06	0.50	0.38	
Uniform Delay, d1	14.5		17.0	11.7	15.1	
Progression Factor	1.33		1.00	1.00	1.00	
Incremental Delay, d2	5.0		100.7	1.5	1.7	
Delay (s)	24.4		117.7	13.2	16.8	
Level of Service	C		F	B	B	
Approach Delay (s)	24.4			31.0	16.8	
Approach LOS	C			C	B	

Intersection Summary			
HCM Average Control Delay	25.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	75.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑↑	↱		↰↑	↱		✥	
Volume (vph)	1	957	37	108	678	1	59	0	149	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	15	13	11	11	12	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0	4.0	3.0	3.0	4.0		4.0	4.0			
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00	1.00			
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85			
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.95	1.00			
Satd. Flow (prot)	1881	3431	1479	1589	3320	1530		1938	1500			
Flt Permitted	0.38	1.00	1.00	0.23	1.00	1.00		0.76	1.00			
Satd. Flow (perm)	759	3431	1479	380	3320	1530		1545	1500			
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	1	997	39	112	706	1	61	0	155	0	0	0
RTOR Reduction (vph)	0	0	14	0	0	0	0	0	139	0	0	0
Lane Group Flow (vph)	1	997	25	112	706	1	0	61	16	0	0	0
Heavy Vehicles (%)	0%	3%	0%	4%	3%	0%	0%	0%	2%	0%	0%	0%
Turn Type	Perm		Perm	custom		custom	Perm		Perm	Perm		
Protected Phases		4		3	3 8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)	53.7	53.7	53.7	68.1	68.1	68.1		8.9	8.9			
Effective Green, g (s)	53.7	53.7	53.7	68.1	68.1	68.1		8.9	8.9			
Actuated g/C Ratio	0.63	0.63	0.63	0.80	0.80	0.80		0.10	0.10			
Clearance Time (s)	4.0	4.0	4.0	3.0		4.0		4.0	4.0			
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0		3.0	3.0			
Lane Grp Cap (vph)	480	2168	934	467	2660	1226		162	157			
v/s Ratio Prot		c0.29		0.03	c0.21							
v/s Ratio Perm	0.00		0.02	0.16		0.00		c0.04	0.01			
v/c Ratio	0.00	0.46	0.03	0.24	0.27	0.00		0.38	0.10			
Uniform Delay, d1	5.8	8.1	5.9	2.9	2.1	1.7		35.5	34.4			
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00			
Incremental Delay, d2	0.0	0.7	0.1	0.3	0.1	0.0		1.5	0.3			
Delay (s)	5.8	8.8	5.9	3.2	2.2	1.7		36.9	34.7			
Level of Service	A	A	A	A	A	A		D	C			
Approach Delay (s)		8.7			2.3			35.4			0.0	
Approach LOS		A			A			D			A	

Intersection Summary			
HCM Average Control Delay	9.0	HCM Level of Service	A
HCM Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	49.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1942: 111th Street & Langley Avenue

1/14/2013

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰↑	↑↱		↲↳	
Volume (vph)	9	918	807	29	71	13
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10
Total Lost time (s)		5.0	5.0		3.0	
Lane Util. Factor		0.95	0.95		1.00	
Frt		1.00	0.99		0.98	
Flt Protected		1.00	1.00		0.96	
Satd. Flow (prot)		3098	3083		1532	
Flt Permitted		0.95	1.00		0.96	
Satd. Flow (perm)		2929	3083		1532	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	9	966	849	31	75	14
RTOR Reduction (vph)	0	0	3	0	7	0
Lane Group Flow (vph)	0	975	877	0	82	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type	Perm					
Protected Phases		4	8 2 11		5	
Permitted Phases	4					
Actuated Green, G (s)		33.0	64.0		7.0	
Effective Green, g (s)		33.0	64.0		7.0	
Actuated g/C Ratio		0.37	0.71		0.08	
Clearance Time (s)		5.0			3.0	
Lane Grp Cap (vph)		1074	2192		119	
v/s Ratio Prot			c0.28		c0.05	
v/s Ratio Perm		c0.33				
v/c Ratio		0.91	0.40		0.69	
Uniform Delay, d1		27.1	5.2		40.4	
Progression Factor		1.00	0.01		1.00	
Incremental Delay, d2		12.6	0.3		27.6	
Delay (s)		39.7	0.3		68.1	
Level of Service		D	A		E	
Approach Delay (s)		39.7	0.3		68.1	
Approach LOS		D	A		E	

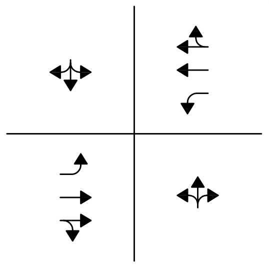
Intersection Summary			
HCM Average Control Delay	23.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	45.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↑↱			↰↑↱			↰↑	↱
Volume (vph)	38	476	0	1	559	38	3	2	28	192	0	126
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	12	12	11	12	11
Total Lost time (s)		4.0			4.0			3.0			3.0	3.0
Lane Util. Factor		1.00			0.95			1.00			1.00	1.00
Frpb, ped/bikes		1.00			1.00			0.94			1.00	0.98
Flpb, ped/bikes		1.00			1.00			1.00			0.99	1.00
Frt		1.00			0.99			0.88			1.00	0.85
Flt Protected		1.00			1.00			1.00			0.95	1.00
Satd. Flow (prot)		1774			3340			1467			1669	1348
Flt Permitted		0.92			0.95			0.97			0.89	1.00
Satd. Flow (perm)		1643			3190			1432			1568	1348
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	40	501	0	1	588	40	3	2	29	202	0	133
RTOR Reduction (vph)	0	0	0	0	6	0	0	26	0	0	0	89
Lane Group Flow (vph)	0	541	0	0	623	0	0	8	0	0	202	44
Confl. Peds. (#/hr)	60		44	44		60	14		10	10		14
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	0%	1%	0%	0%	1%	3%	20%	0%	0%	1%	0%	7%
Turn Type	Perm			Prot			Perm			pm+pt		Perm
Protected Phases		4		3	3 4			1		2	1 2	
Permitted Phases	4				3		1	1		1 2		1 2
Actuated Green, G (s)		31.0			45.0			9.0			25.0	28.0
Effective Green, g (s)		31.0			45.0			9.0			25.0	28.0
Actuated g/C Ratio		0.36			0.53			0.11			0.29	0.33
Clearance Time (s)		4.0						3.0				
Lane Grp Cap (vph)		599			1714			152			480	444
v/s Ratio Prot					c0.06						c0.08	
v/s Ratio Perm		c0.33			0.13			0.01			c0.04	0.03
v/c Ratio		0.90			0.36			0.05			0.42	0.10
Uniform Delay, d1		25.6			11.7			34.2			24.2	19.8
Progression Factor		1.00			1.11			1.00			1.00	1.00
Incremental Delay, d2		19.4			0.2			0.7			2.7	0.4
Delay (s)		45.0			13.1			34.8			26.9	20.2
Level of Service		D			B			C			C	C
Approach Delay (s)		45.0			13.1			34.8			24.2	
Approach LOS		D			B			C			C	

Intersection Summary			
HCM Average Control Delay	27.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	74.5%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group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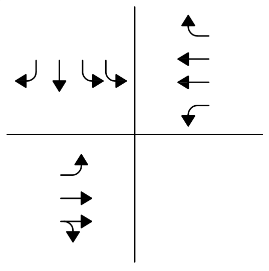
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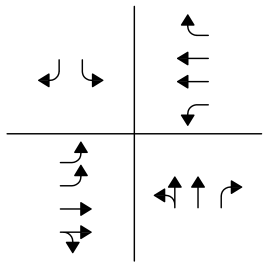
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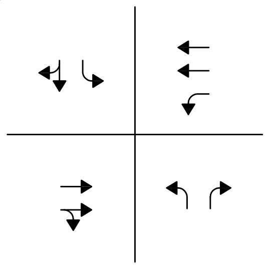
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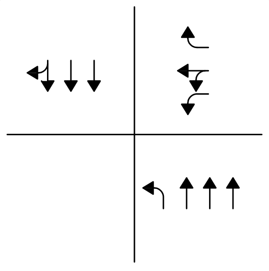
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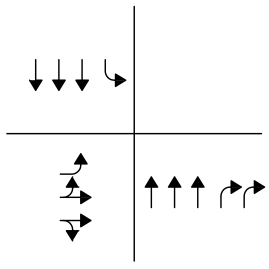
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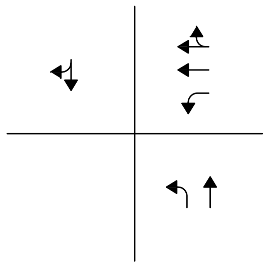
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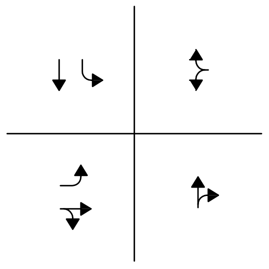
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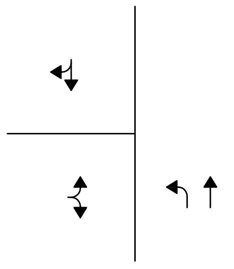
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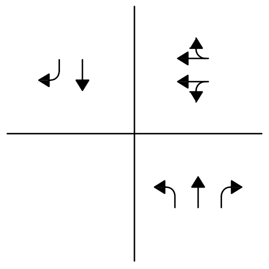
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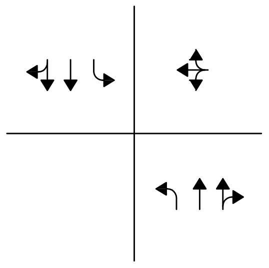
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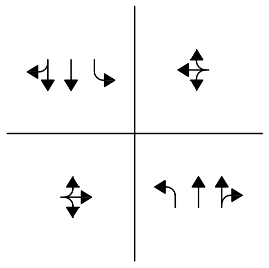
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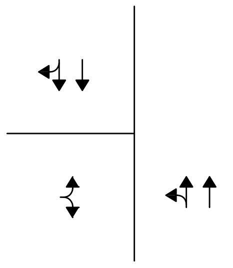
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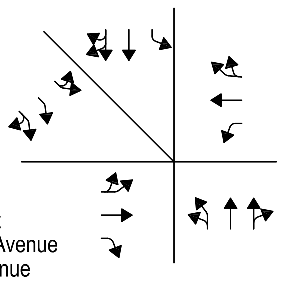
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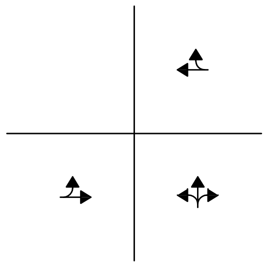
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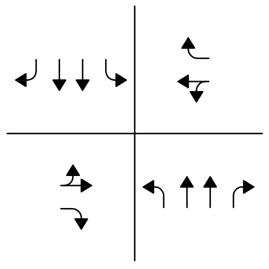
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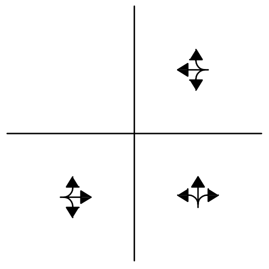
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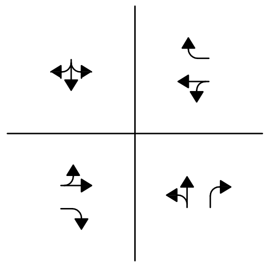
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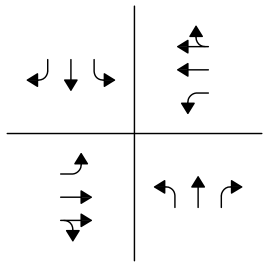
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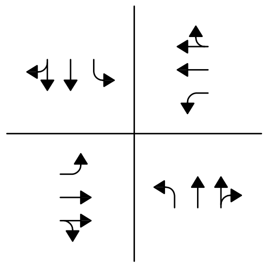
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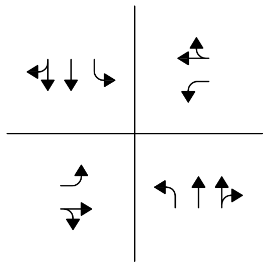
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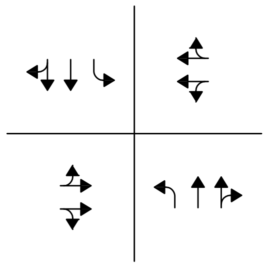
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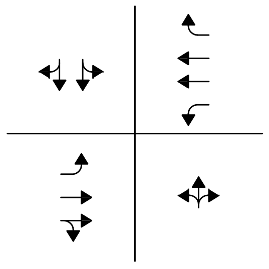
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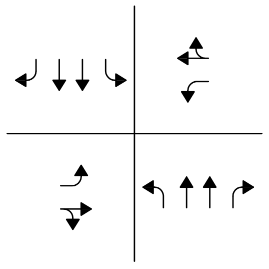
24 107th Street
Halsted Street

No Build (2030) Intersection Lane Geometry

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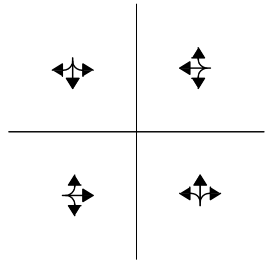
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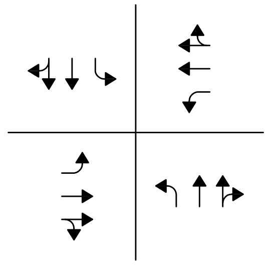
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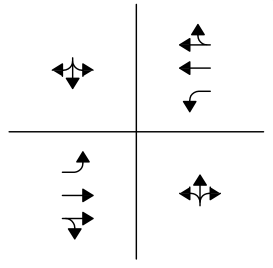
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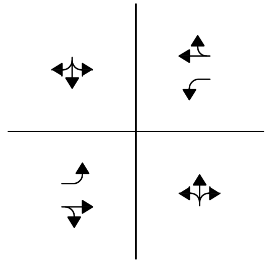
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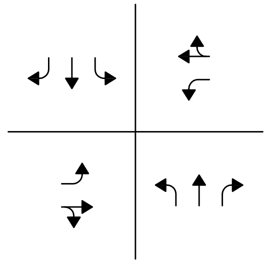
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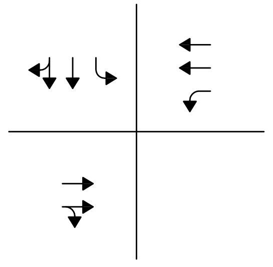
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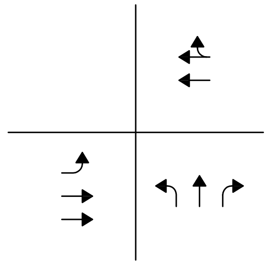
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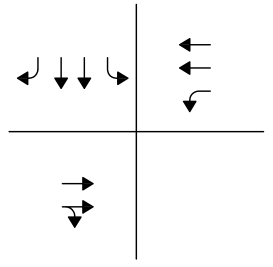
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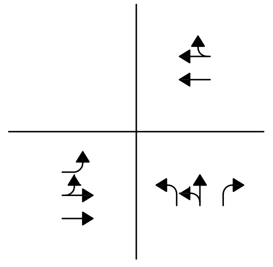
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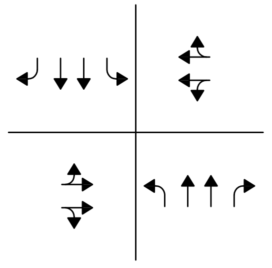
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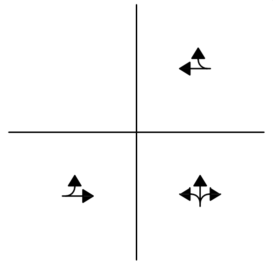
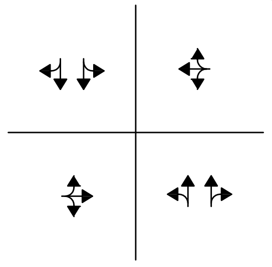

35 111th Street
Normal Avenue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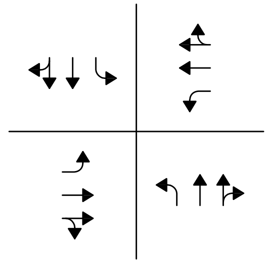
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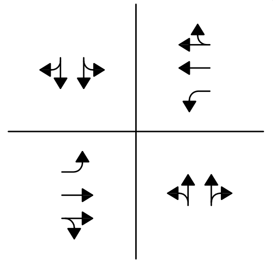
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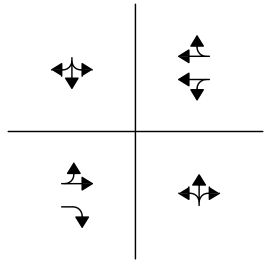
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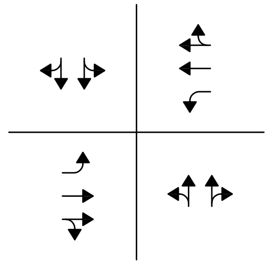
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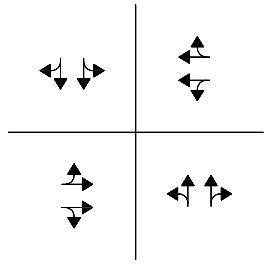
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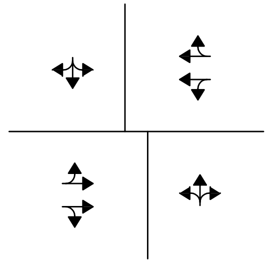
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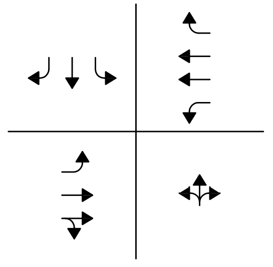
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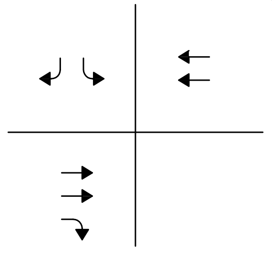
Doty Road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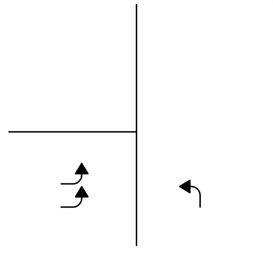
I-94 Eastbound Ramps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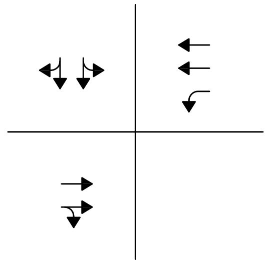
I-94 Westbound Ramps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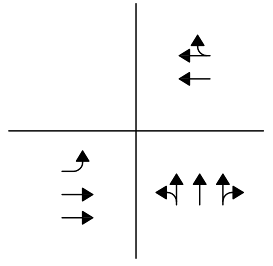
Marshfield Avenue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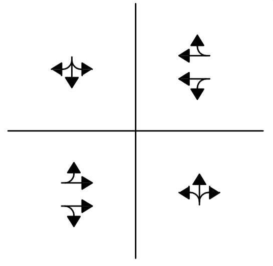
Ashland Avenue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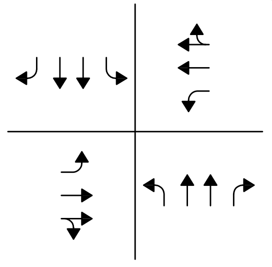
Racine Road


49 115th Street
Halsted Street

No Build (2030) Intersection Lane Geometry

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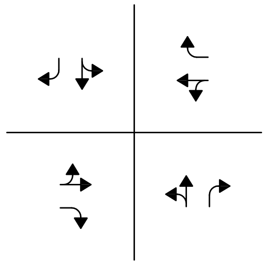

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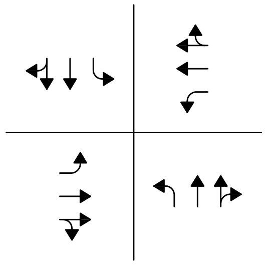
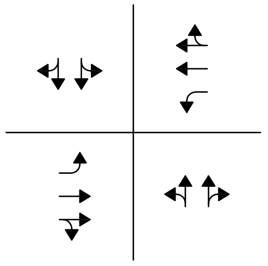
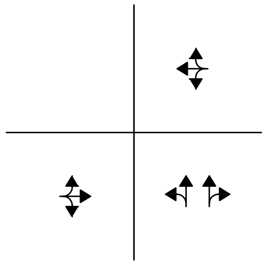
Wentworth Avenue



51 115th Street
State Street



52 115th Street
Michigan Avenue



53 115th Street
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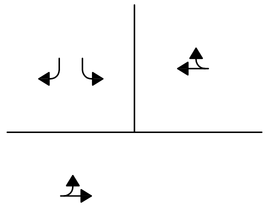

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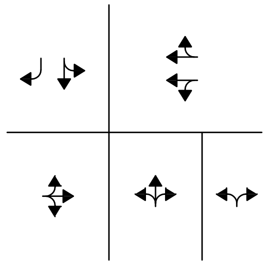
Martin Luther King Jr Drive



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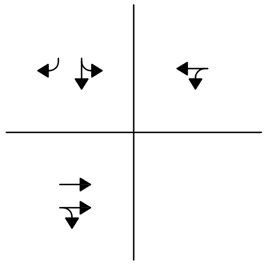
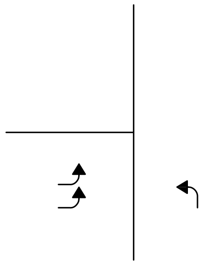


56 115th Street
I-94 Eastbound Ramps



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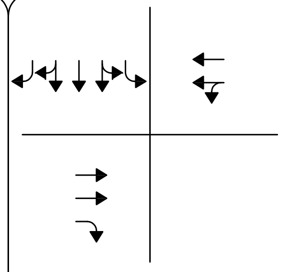
I-94 Westbound Ramps



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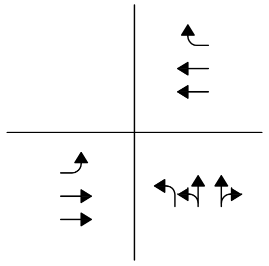

59 119th Street
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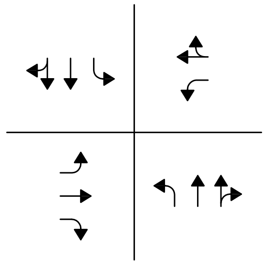

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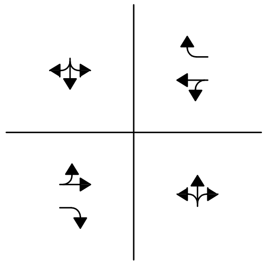

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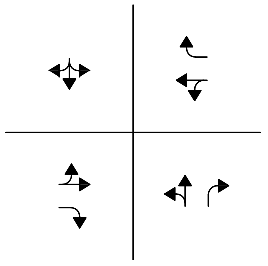

62 119th Street
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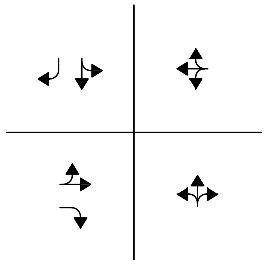
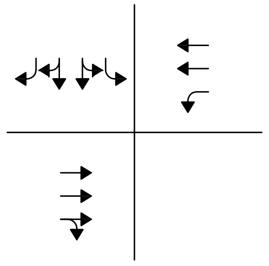
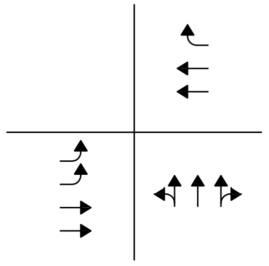


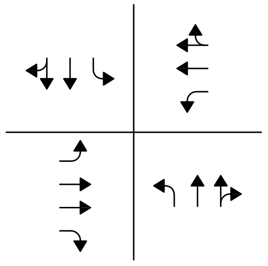
63 119th Street
Michigan Avenue



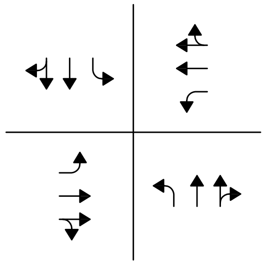
64 127th Street
Paulina Street



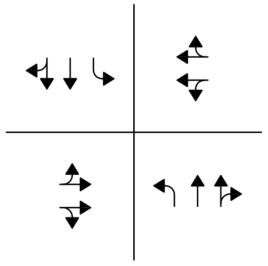
65 127th Street
Marshfield Avenue



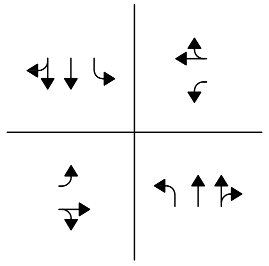
66 127th Street
Ashland Avenue



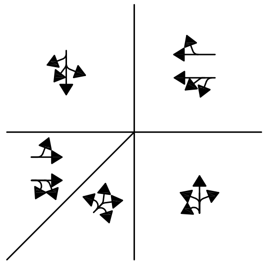
67 Vermont Street
Ashland Avenue



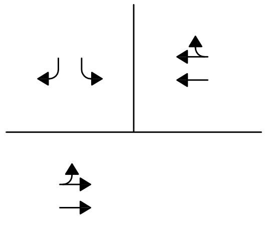
68 127th Street
Halsted Street



69 Vermont Street
Halsted Street



70 127th Street/Vermont
Street/Wallace Street



71 127th Street
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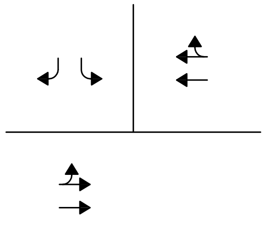

72 127th Street
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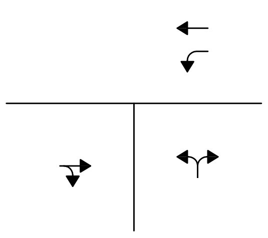
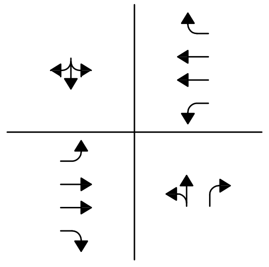


73 130th Street
Indiana Avenue



74 130th Street
Ellis Avenue

No Build (2030) Intersection Lane Geometry

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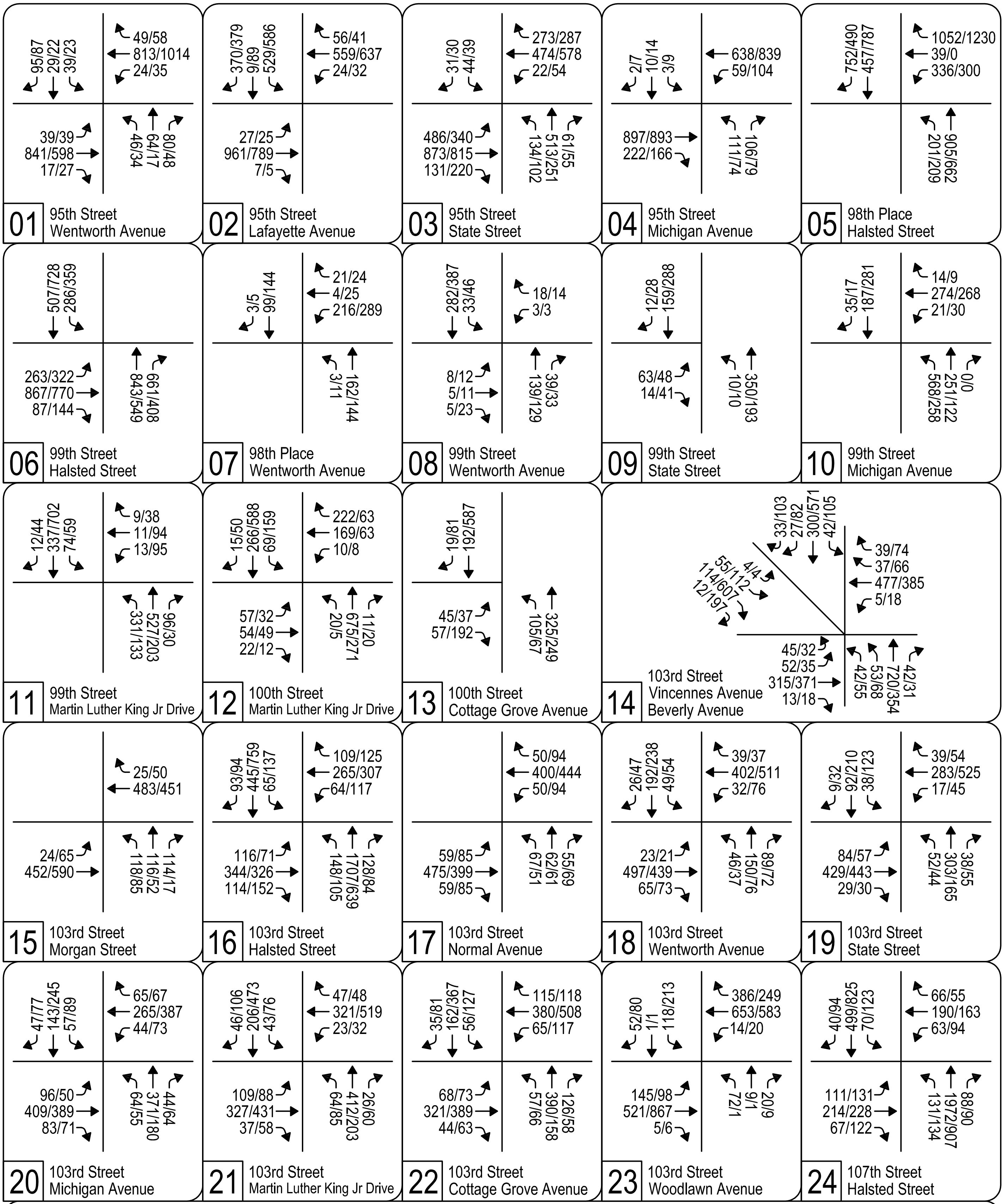
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841/598
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46/34
64/17
80/48
02
95th Street
Lafayette Avenue
370/379
9/89
529/586
56/41
559/637
24/32
27/25
961/789
7/5
03
95th Street
State Street
31/30
44/39
273/287
474/578
22/54
486/340
873/815
131/220
134/102
513/251
61/55
04
95th Street
Michigan Avenue
2/7
10/14
3/9
638/839
59/104
897/893
222/166
111/74
106/79
05
98th Place
Halsted Street
752/490
457/787
1052/1230
39/0
336/300
201/209
905/662
06
99th Street
Halsted Street
507/728
286/359
263/322
867/770
87/144
843/549
661/408
07
98th Place
Wentworth Avenue
3/5
99/144
21/24
4/25
216/289
3/11
162/144
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99th Street
Wentworth Avenue
282/387
33/46
18/14
3/3
8/12
5/11
5/23
139/129
39/33
09
99th Street
State Street
12/28
159/288
63/48
14/41
10/10
350/193
10
99th Street
Michigan Avenue
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187/281
14/9
274/268
21/30
568/258
251/122
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11
99th Street
Martin Luther King Jr Drive
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337/702
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9/38
11/94
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527/203
96/30
12
100th Street
Martin Luther King Jr Drive
15/50
266/588
69/159
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169/63
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675/271
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Cottage Grove Avenue
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57/192
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325/249
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Vincennes Avenue
Beverly Avenue
33/103
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300/571
42/105
39/74
37/66
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5/18
4/4
55/112
114/607
12/197
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52/35
315/371
13/18
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53/68
720/354
42/31
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103rd Street
Morgan Street
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24/65
452/590
118/85
116/52
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Halsted Street
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445/759
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344/326
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128/84
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Normal Avenue
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Wentworth Avenue
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State Street
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Halsted Street
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190/163
63/94
111/131
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1972/907
88/90

No Build (2030) Intersection Traffic Volumes

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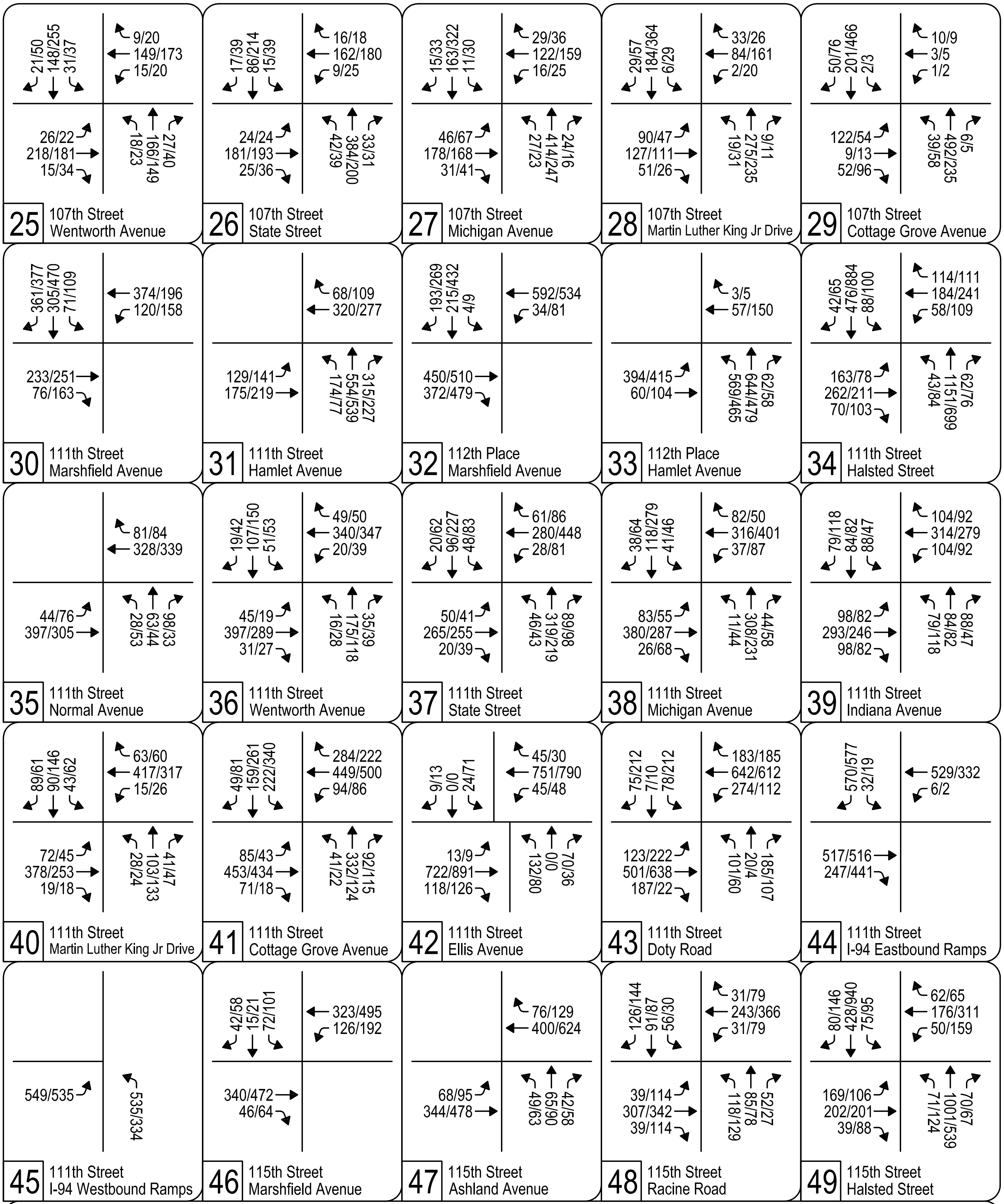
Legend: AM/PM Peak Hour Volumes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Wentworth Avenue
17/39
86/214
15/39
16/18
162/180
9/25
24/24
181/193
25/36
42/39
384/200
33/31
26
107th Street
State Street
15/33
163/322
11/30
29/36
122/159
16/25
46/67
178/168
31/41
27/23
414/247
24/16
27
107th Street
Michigan Avenue
29/57
184/364
6/29
33/26
84/161
2/20
90/47
127/111
51/26
19/31
275/235
9/11
28
107th Street
Martin Luther King Jr Drive
50/76
201/466
2/3
10/9
3/5
1/2
122/54
9/13
52/96
39/58
492/235
6/5
29
107th Street
Cottage Grove Avenue
361/377
305/470
71/109
374/196
120/158
233/251
76/163
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111th Street
Marshfield Avenue
68/109
320/277
129/141
175/219
174/77
554/539
315/227
31
111th Street
Hamlet Avenue
193/269
215/432
4/9
592/534
34/81
450/510
372/479
32
112th Place
Marshfield Avenue
3/5
57/150
394/415
60/104
569/465
644/479
62/58
33
112th Place
Hamlet Avenue
42/65
476/884
88/100
114/111
184/241
58/109
163/78
262/211
70/103
43/84
1151/699
62/76
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111th Street
Halsted Street
81/84
328/339
44/76
397/305
28/53
63/44
98/33
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111th Street
Normal Avenue
19/42
107/150
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49/50
340/347
20/39
45/19
397/289
31/27
16/28
175/118
35/39
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111th Street
Wentworth Avenue
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48/83
61/86
280/448
28/81
50/41
265/255
20/39
46/43
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111th Street
State Street
38/64
118/279
41/46
82/50
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37/87
83/55
380/287
26/68
11/44
308/231
44/58
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111th Street
Michigan Avenue
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111th Street
Indiana Avenue
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90/146
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63/60
417/317
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72/45
378/253
19/18
28/24
103/133
41/47
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111th Street
Martin Luther King Jr Drive
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449/500
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132/80
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642/612
274/112
123/222
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111th Street
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529/332
6/2
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111th Street
I-94 Eastbound Ramps
549/535
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111th Street
I-94 Westbound Ramps
42/58
15/21
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323/495
126/192
340/472
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115th Street
Ashland Avenue
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31/79
243/366
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52/27
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115th Street
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202/201
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Halsted Street

No Build (2030) Intersection Traffic Volumes

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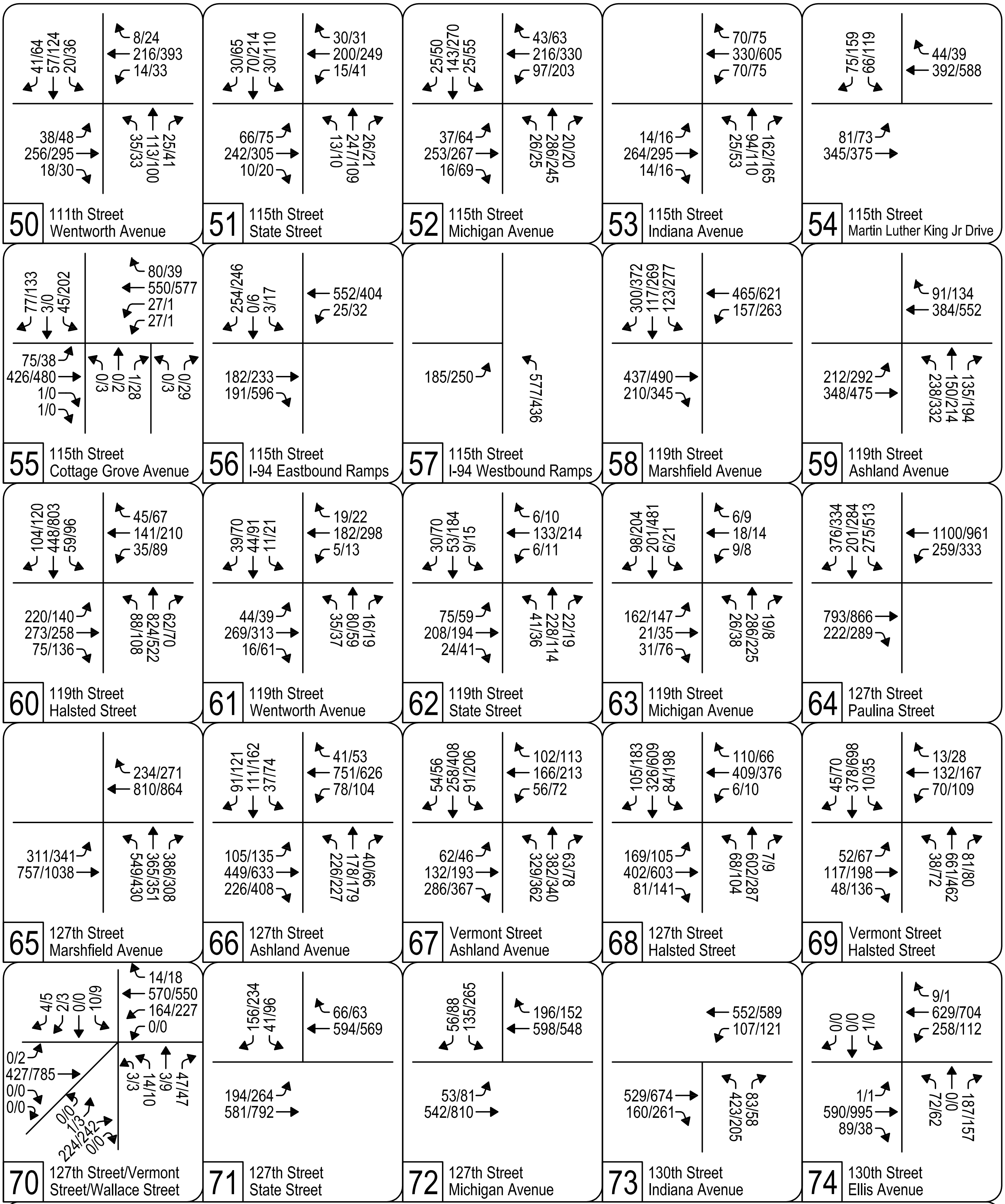
Legend: AM/PM Peak Hour Volumes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14/33
38/48
256/295
18/30
35/33
113/100
25/41
50
111th Street
Wentworth Avenue
30/65
70/214
30/110
30/31
200/249
15/41
66/75
242/305
10/20
13/10
247/109
26/21
51
115th Street
State Street
25/50
143/270
25/55
43/63
216/330
97/203
37/64
253/267
16/69
26/25
286/245
20/20
52
115th Street
Michigan Avenue
70/75
330/605
70/75
14/16
264/295
14/16
25/53
94/110
162/165
53
115th Street
Indiana Avenue
75/159
66/119
44/39
392/588
81/73
345/375
54
115th Street
Martin Luther King Jr Drive
77/133
3/0
45/202
80/39
550/577
27/1
27/1
75/38
426/480
1/0
1/0
0/3
0/2
1/28
0/3
0/29
55
115th Street
Cottage Grove Avenue
254/246
0/6
3/17
552/404
25/32
182/233
191/596
56
115th Street
I-94 Eastbound Ramps
185/250
577/436
57
115th Street
I-94 Westbound Ramps
300/372
117/269
123/277
465/621
157/263
437/490
210/345
58
119th Street
Marshfield Avenue
91/134
384/552
212/292
348/475
238/332
150/214
135/194
59
119th Street
Ashland Avenue
104/120
448/803
59/96
45/67
141/210
35/89
220/140
273/258
75/136
88/108
824/522
62/70
60
119th Street
Halsted Street
39/70
44/91
11/21
19/22
182/298
5/13
44/39
269/313
16/61
35/37
80/59
16/19
61
119th Street
Wentworth Avenue
30/70
53/184
9/15
6/10
133/214
6/11
75/59
208/194
24/41
41/36
228/114
22/19
62
119th Street
State Street
98/204
201/481
6/21
6/9
18/14
9/8
162/147
21/35
31/76
26/38
286/225
19/8
63
119th Street
Michigan Avenue
376/334
201/284
275/513
1100/961
259/333
793/866
222/289
64
127th Street
Paulina Street
234/271
810/864
311/341
757/1038
549/430
365/351
386/308
65
127th Street
Marshfield Avenue
91/121
111/162
37/74
41/53
751/626
78/104
105/135
449/633
226/408
226/227
178/179
40/66
66
127th Street
Ashland Avenue
54/56
258/408
91/206
102/113
166/213
56/72
62/46
132/193
286/367
329/362
382/340
63/78
67
Vermont Street
Ashland Avenue
105/183
326/609
84/198
110/66
409/376
6/10
169/105
402/603
81/141
68/104
602/287
7/9
68
127th Street
Halsted Street
45/70
378/698
10/35
13/28
132/167
70/109
52/67
117/198
48/136
38/72
661/462
81/80
69
Vermont Street
Halsted Street
4/5
2/3
0/0
10/9
14/18
570/550
164/227
0/0
0/2
427/785
0/0
0/0
3/3
14/10
3/9
47/47
0/0
1/3
224/242
0/0
70
127th Street/Vermont
Street/Wallace Street
156/234
41/96
66/63
594/569
194/264
581/792
71
127th Street
State Street
56/88
135/265
196/152
598/548
53/81
542/810
72
127th Street
Michigan Avenue
552/589
107/121
529/674
160/261
423/205
83/58
73
130th Street
Indiana Avenue
0/0
0/0
1/0
9/1
629/704
258/112
1/1
590/995
89/38
72/62
0/0
187/157
74
130th Street
Ellis Avenue

No Build (2030) Intersection Traffic Volumes

Page 3 of 3

Legend: AM/PM Peak Hour Volumes

HCM Signalized Intersection Capacity Analysis
1001: 95th Street & Wentworth Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			↰↑↱			↰↓↱	
Volume (vph)	39	841	17	24	813	49	46	64	80	39	29	95
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	16	10	10	16	8	15	8	8	14	8
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			0.99			0.99	
Flpb, ped/bikes	0.99	1.00		1.00	1.00			1.00			1.00	
Frt	1.00	1.00		1.00	0.99			0.94			0.92	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1417	2976		1592	2979			1752			1663	
Flt Permitted	0.25	1.00		0.25	1.00			0.90			0.90	
Satd. Flow (perm)	369	2976		418	2979			1596			1514	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	41	885	18	25	856	52	48	67	84	41	31	100
RTOR Reduction (vph)	0	2	0	0	7	0	0	41	0	0	59	0
Lane Group Flow (vph)	41	901	0	25	901	0	0	158	0	0	113	0
Confl. Peds. (#/hr)	61		11	11		61	3		5	5		3
Confl. Bikes (#/hr)	1		1	1		1						
Heavy Vehicles (%)	11%	7%	0%	0%	6%	2%	2%	7%	4%	5%	7%	3%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	34.0	34.0		34.0	34.0			22.0			22.0	
Effective Green, g (s)	34.0	34.0		34.0	34.0			23.0			23.0	
Actuated g/C Ratio	0.52	0.52		0.52	0.52			0.35			0.35	
Clearance Time (s)	4.0	4.0		4.0	4.0			5.0			5.0	
Lane Grp Cap (vph)	193	1557		219	1558			565			536	
v/s Ratio Prot		c0.30			0.30							
v/s Ratio Perm	0.11			0.06				c0.10			0.07	
v/c Ratio	0.21	0.58		0.11	0.58			0.28			0.21	
Uniform Delay, d1	8.3	10.6		7.9	10.6			15.1			14.7	
Progression Factor	1.00	1.00		0.83	1.16			1.00			1.00	
Incremental Delay, d2	2.5	1.6		0.9	1.4			1.2			0.9	
Delay (s)	10.8	12.2		7.5	13.7			16.3			15.6	
Level of Service	B	B		A	B			B			B	
Approach Delay (s)		12.1			13.5			16.3			15.6	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	13.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1002: 95th Street & Lafayette Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↑	↱				↰↰	↑	↱
Volume (vph)	27	961	7	24	559	56	0	0	0	529	9	370
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	5.0	5.0		3.0	3.0	3.0				5.0	5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00				0.97	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.67				1.00	1.00	0.96
Flpb, ped/bikes	0.91	1.00		1.00	1.00	1.00				1.00	1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85				1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00				0.95	1.00	1.00
Satd. Flow (prot)	778	3285		1710	3138	512				3100	1440	1399
Flt Permitted	0.43	1.00		0.14	1.00	1.00				0.95	1.00	1.00
Satd. Flow (perm)	352	3285		248	3138	512				3100	1440	1399
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	28	1012	7	25	588	59	0	0	0	557	9	389
RTOR Reduction (vph)	0	1	0	0	0	26	0	0	0	0	0	172
Lane Group Flow (vph)	28	1018	0	25	588	33	0	0	0	557	9	217
Confl. Peds. (#/hr)	354		13	13		354	22		22	22		22
Confl. Bikes (#/hr)	4					4			1	1		
Heavy Vehicles (%)	100%	4%	0%	0%	9%	100%	0%	0%	0%	7%	25%	5%
Turn Type	pm+pt			pm+pt		Perm				Split		Perm
Protected Phases	7	4		3	8					6	6	
Permitted Phases	4			8		8						6
Actuated Green, G (s)	43.0	43.0		73.0	73.0	73.0				30.0	30.0	30.0
Effective Green, g (s)	43.0	43.0		73.0	73.0	73.0				30.0	30.0	30.0
Actuated g/C Ratio	0.33	0.33		0.56	0.56	0.56				0.23	0.23	0.23
Clearance Time (s)	5.0	5.0		3.0	3.0	3.0				5.0	5.0	5.0
Lane Grp Cap (vph)	162	1087		634	1762	288				715	332	323
v/s Ratio Prot	0.02	c0.31		0.01	c0.19					c0.18	0.01	
v/s Ratio Perm	0.04			0.01		0.06						0.16
v/c Ratio	0.17	0.94		0.04	0.33	0.12				0.78	0.03	0.67
Uniform Delay, d1	31.6	42.2		15.1	15.4	13.4				46.9	38.7	45.5
Progression Factor	0.80	0.82		0.29	0.63	1.53				1.00	1.00	1.00
Incremental Delay, d2	2.0	14.1		0.1	0.3	0.5				8.2	0.2	10.7
Delay (s)	27.4	48.8		4.5	10.0	20.9				55.1	38.9	56.2
Level of Service	C	D		A	A	C				E	D	E
Approach Delay (s)		48.2			10.7			0.0			55.4	
Approach LOS		D			B			A			E	

Intersection Summary			
HCM Average Control Delay	41.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	52.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1003: 95th Street & State Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↱		↰	↑↑	↱		↰↑	↱	↰		↱
Volume (vph)	486	873	131	22	474	273	134	513	61	44	0	31
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0	3.0		5.0	5.0	5.0		5.0	5.0	5.0		5.0
Lane Util. Factor	0.97	0.95		1.00	0.95	1.00		0.95	1.00	1.00		1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.65		1.00	0.94	1.00		0.96
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Frt	1.00	0.98		1.00	1.00	0.85		1.00	0.85	1.00		0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.99	1.00	0.95		1.00
Satd. Flow (prot)	3190	3107		1555	2923	944		3300	1417	855		734
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.99	1.00	0.95		1.00
Satd. Flow (perm)	3190	3107		1555	2923	944		3300	1417	855		734
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	512	919	138	23	499	287	141	540	64	46	0	33
RTOR Reduction (vph)	0	9	0	0	0	158	0	0	25	0	0	31
Lane Group Flow (vph)	512	1049	0	23	499	129	0	681	39	46	0	2
Confl. Peds. (#/hr)	425		21	21		425	6		34	34		6
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	4%	8%	3%	10%	17%	5%	1%	3%	2%	100%	0%	100%
Turn Type	Prot			Prot		Perm	Split		Perm	Prot		custom
Protected Phases	7	4		3	8		2	2		6		
Permitted Phases						8			2			6
Actuated Green, G (s)	43.0	65.0		9.0	31.0	31.0		30.0	30.0	8.0		8.0
Effective Green, g (s)	43.0	65.0		9.0	31.0	31.0		30.0	30.0	8.0		8.0
Actuated g/C Ratio	0.33	0.50		0.07	0.24	0.24		0.23	0.23	0.06		0.06
Clearance Time (s)	3.0	3.0		5.0	5.0	5.0		5.0	5.0	5.0		5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0	3.0	3.0		3.0
Lane Grp Cap (vph)	1055	1554		108	697	225		762	327	53		45
v/s Ratio Prot	0.16	c0.34		0.01	c0.17			c0.21		c0.05		
v/s Ratio Perm						0.14			0.03			0.00
v/c Ratio	0.49	0.67		0.21	0.72	0.57		0.89	0.12	0.87		0.05
Uniform Delay, d1	34.7	24.5		57.2	45.5	43.6		48.5	39.5	60.5		57.4
Progression Factor	0.75	0.20		1.00	1.00	1.00		0.95	0.89	1.00		1.00
Incremental Delay, d2	0.7	1.1		4.5	6.2	10.1		14.9	0.7	76.0		0.4
Delay (s)	26.9	6.0		61.6	51.7	53.8		60.7	36.1	136.5		57.8
Level of Service	C	A		E	D	D		E	D	F		E
Approach Delay (s)		12.8			52.7			58.6			103.6	
Approach LOS		B			D			E			F	

Intersection Summary			
HCM Average Control Delay	35.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	72.7%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1004: 95th Street & Michigan Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↱		↰	↑↑		↰		↱	↰	↑↱	
Volume (vph)	0	897	222	59	638	0	111	0	106	3	10	2
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	11	11	8	12	12	12	14	15	12
Total Lost time (s)		4.0		4.0	4.0		4.0		4.0	4.0	4.0	
Lane Util. Factor		0.95		1.00	0.95		1.00		1.00	1.00	1.00	
Frpb, ped/bikes		0.99		1.00	1.00		1.00		0.98	1.00	1.00	
Flpb, ped/bikes		1.00		1.00	1.00		1.00		1.00	0.99	1.00	
Frt		0.97		1.00	1.00		1.00		0.85	1.00	0.98	
Flt Protected		1.00		0.95	1.00		0.95		1.00	0.95	1.00	
Satd. Flow (prot)		2860		1650	3005		1390		1465	1803	1934	
Flt Permitted		1.00		0.15	1.00		0.75		1.00	0.95	1.00	
Satd. Flow (perm)		2860		267	3005		1096		1465	1803	1934	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	997	247	66	709	0	123	0	118	3	11	2
RTOR Reduction (vph)	0	22	0	0	0	0	0	0	77	0	1	0
Lane Group Flow (vph)	0	1222	0	66	709	0	123	0	41	3	12	0
Confl. Peds. (#/hr)	49		15	15		49			12	12		
Heavy Vehicles (%)	0%	6%	14%	0%	10%	0%	23%	0%	2%	0%	0%	0%
Turn Type				Perm			custom		custom	Perm		
Protected Phases		4			8						6	
Permitted Phases				8			2		2	6		
Actuated Green, G (s)		60.0		60.0	60.0		32.0		32.0	32.0	32.0	
Effective Green, g (s)		60.0		60.0	60.0		32.0		32.0	32.0	32.0	
Actuated g/C Ratio		0.60		0.60	0.60		0.32		0.32	0.32	0.32	
Clearance Time (s)		4.0		4.0	4.0		4.0		4.0	4.0	4.0	
Lane Grp Cap (vph)		1716		160	1803		351		469	577	619	
v/s Ratio Prot		c0.43			0.24						0.01	
v/s Ratio Perm				0.25			c0.11		0.03	0.00		
v/c Ratio		0.71		0.41	0.39		0.35		0.09	0.01	0.02	
Uniform Delay, d1		14.0		10.6	10.5		26.0		23.8	23.2	23.3	
Progression Factor		1.00		1.00	1.00		1.00		1.00	1.00	1.00	
Incremental Delay, d2		2.5		7.7	0.6		2.7		0.4	0.0	0.1	
Delay (s)		16.5		18.3	11.1		28.8		24.2	23.2	23.3	
Level of Service		B		B	B		C		C	C	C	
Approach Delay (s)		16.5			11.7			26.5			23.3	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM Average Control Delay	16.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	60.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1005: 98th Place & Halsted Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↰	↰↑	↱	↰	↑↑↑			↑↑↱	
Volume (vph)	0	0	0	336	39	1052	201	905	0	0	457	752
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	12	12	10	10	12	12	11	12
Total Lost time (s)				4.0	4.0	5.0	3.0	4.0			4.0	
Lane Util. Factor				0.95	0.95	1.00	1.00	0.91			0.91	
Frpb, ped/bikes				1.00	1.00	0.99	1.00	1.00			0.98	
Flpb, ped/bikes				1.00	1.00	1.00	1.00	1.00			1.00	
Frt				1.00	1.00	0.85	1.00	1.00			0.91	
Flt Protected				0.95	1.00	1.00	0.95	1.00			1.00	
Satd. Flow (prot)				1525	1629	1479	1550	4368			3930	
Flt Permitted				0.95	1.00	1.00	0.95	1.00			1.00	
Satd. Flow (perm)				1525	1629	1479	1550	4368			3930	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	0	0	343	40	1073	205	923	0	0	466	767
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	343	40	1073	205	923	0	0	1233	0
Confl. Peds. (#/hr)	2					2	12		8	8		12
Heavy Vehicles (%)	0%	0%	0%	3%	5%	2%	3%	5%	0%	0%	5%	8%
Turn Type				Perm		Perm	Prot					
Protected Phases					8		5	2			6	
Permitted Phases				8		8						
Actuated Green, G (s)				30.0	30.0	30.0	32.0	66.0			31.0	
Effective Green, g (s)				31.0	31.0	30.0	32.0	66.0			31.0	
Actuated g/C Ratio				0.30	0.30	0.29	0.30	0.63			0.30	
Clearance Time (s)				5.0	5.0	5.0	3.0	4.0			4.0	
Lane Grp Cap (vph)				450	481	423	472	2746			1160	
v/s Ratio Prot							c0.13	0.21			c0.31	
v/s Ratio Perm				0.22	0.02	c0.73						
v/c Ratio				0.76	0.08	2.54	0.43	0.34			1.91dr	
Uniform Delay, d1				33.6	26.7	37.5	29.2	9.2			37.0	
Progression Factor				1.00	1.00	1.00	0.66	2.38			1.00	
Incremental Delay, d2				11.6	0.3	698.4	2.0	0.2			44.9	
Delay (s)				45.2	27.1	735.9	21.2	22.1			81.9	
Level of Service				D	C	F	C	C			F	
Approach Delay (s)		0.0			553.8			21.9			81.9	
Approach LOS		A			F			C			F	

Intersection Summary			
HCM Average Control Delay	244.2	HCM Level of Service	F
HCM Volume to Capacity ratio	1.32		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	94.9%	ICU Level of Service	F
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1006: 99th Street & Halsted Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↰↑↱						↑↑↑	↱↱	↰	↑↑↑	
Volume (vph)	263	867	87	0	0	0	0	843	661	286	507	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	13	12	12	12	12	12	10	10	8	12	12	12
Total Lost time (s)	5.0	5.0						4.0	4.0	3.0	4.0	
Lane Util. Factor	0.91	0.91						0.91	0.88	1.00	0.91	
Frpb, ped/bikes	1.00	1.00						1.00	0.97	1.00	1.00	
Flpb, ped/bikes	1.00	1.00						1.00	1.00	1.00	1.00	
Frt	1.00	0.99						1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00						1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1497	3186						4368	2187	1583	4636	
Flt Permitted	0.95	1.00						1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1497	3186						4368	2187	1583	4636	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	271	894	90	0	0	0	0	869	681	295	523	0
RTOR Reduction (vph)	0	7	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	244	1004	0	0	0	0	0	869	681	295	523	0
Confl. Peds. (#/hr)	4		14	14		4	4		3	3		4
Heavy Vehicles (%)	7%	1%	0%	0%	0%	0%	0%	5%	4%	8%	6%	0%
Turn Type	Perm								Perm	Prot		
Protected Phases		4						2		1	6	
Permitted Phases	4								2			
Actuated Green, G (s)	34.0	34.0						28.0	28.0	31.0	62.0	
Effective Green, g (s)	34.0	34.0						28.0	28.0	31.0	62.0	
Actuated g/C Ratio	0.32	0.32						0.27	0.27	0.30	0.59	
Clearance Time (s)	5.0	5.0						4.0	4.0	3.0	4.0	
Lane Grp Cap (vph)	485	1032						1165	583	467	2737	
v/s Ratio Prot								0.20		c0.19	0.11	
v/s Ratio Perm	0.16	0.32							c0.31			
v/c Ratio	0.50	0.97						0.75	1.17	0.63	0.19	
Uniform Delay, d1	28.7	35.0						35.2	38.5	32.1	9.9	
Progression Factor	1.00	1.00						0.44	0.46	1.06	0.44	
Incremental Delay, d2	3.7	22.2						0.4	77.5	2.4	0.1	
Delay (s)	32.4	57.3						15.7	95.3	36.5	4.4	
Level of Service	C	E						B	F	D	A	
Approach Delay (s)		52.4			0.0			50.7			16.0	
Approach LOS		D			A			D			B	

Intersection Summary			
HCM Average Control Delay	43.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	94.9%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1007: 98th Place & Wentworth Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↰	↑↱		↰	↑			↱	
Volume (vph)	0	0	0	216	4	21	3	162	0	0	99	3
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	14	12	12	16	12
Total Lost time (s)				4.0	4.0		4.0	4.0			-3.0	
Lane Util. Factor				1.00	0.95		1.00	1.00			1.00	
Frpb, ped/bikes				1.00	0.98		1.00	1.00			1.00	
Flpb, ped/bikes				1.00	1.00		1.00	1.00			1.00	
Frt				1.00	0.87		1.00	1.00			1.00	
Flt Protected				0.95	1.00		0.95	1.00			1.00	
Satd. Flow (prot)				1578	2709		1285	1882			1958	
Flt Permitted				0.95	1.00		0.59	1.00			1.00	
Satd. Flow (perm)				1578	2709		805	1882			1958	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	240	4	23	3	180	0	0	110	3
RTOR Reduction (vph)	0	0	0	0	18	0	0	0	0	0	1	0
Lane Group Flow (vph)	0	0	0	240	9	0	3	180	0	0	112	0
Confl. Peds. (#/hr)	2		2	2		2	3					3
Heavy Vehicles (%)	0%	0%	0%	8%	25%	5%	33%	2%	0%	0%	3%	33%
Turn Type				Perm			pm+pt					
Protected Phases					8		7	2			6	
Permitted Phases				8			2					
Actuated Green, G (s)				27.0	27.0		50.0	50.0			40.0	
Effective Green, g (s)				27.0	27.0		50.0	50.0			46.0	
Actuated g/C Ratio				0.32	0.32		0.59	0.59			0.54	
Clearance Time (s)				4.0	4.0		4.0	4.0			3.0	
Lane Grp Cap (vph)				501	861		513	1107			1060	
v/s Ratio Prot					0.00		0.00	c0.10			0.06	
v/s Ratio Perm				c0.15			0.00					
v/c Ratio				0.48	0.01		0.01	0.16			0.11	
Uniform Delay, d1				23.3	19.9		9.7	8.0			9.5	
Progression Factor				1.00	1.00		1.04	1.19			1.00	
Incremental Delay, d2				3.3	0.0		0.0	0.3			0.2	
Delay (s)				26.6	19.9		10.1	9.8			9.7	
Level of Service				C	B		B	A			A	
Approach Delay (s)		0.0			25.9			9.8			9.7	
Approach LOS		A			C			A			A	

Intersection Summary			
HCM Average Control Delay	17.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.27		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	33.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1008: 99th St & Wentworth Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱			✥			↱		↰	↑	
Volume (vph)	8	5	5	3	0	18	0	139	39	33	282	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	16	15	12	8	12	8	12	12	12	10	13	12
Total Lost time (s)	4.0	4.0			4.0			3.0		4.0	4.0	
Lane Util. Factor	1.00	1.00			1.00			1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.99			1.00			1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00			1.00			1.00		1.00	1.00	
Frt	1.00	0.93			0.88			0.97		1.00	1.00	
Flt Protected	0.95	1.00			0.99			1.00		0.95	1.00	
Satd. Flow (prot)	1938	1809			1578			1688		1595	1755	
Flt Permitted	0.74	1.00			0.98			1.00		0.61	1.00	
Satd. Flow (perm)	1516	1809			1565			1688		1019	1755	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	8	5	5	3	0	19	0	146	41	35	297	0
RTOR Reduction (vph)	0	3	0	0	13	0	0	12	0	0	0	0
Lane Group Flow (vph)	8	7	0	0	9	0	0	175	0	35	297	0
Confl. Peds. (#/hr)			3	3			5		2	2		5
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	3%	3%	0%	6%	0%
Turn Type	Perm			Perm						pm+pt		
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8						6		
Actuated Green, G (s)	27.0	27.0			27.0			40.0		50.0	50.0	
Effective Green, g (s)	27.0	27.0			27.0			40.0		50.0	50.0	
Actuated g/C Ratio	0.32	0.32			0.32			0.47		0.59	0.59	
Clearance Time (s)	4.0	4.0			4.0			3.0		4.0	4.0	
Lane Grp Cap (vph)	482	575			497			794		647	1032	
v/s Ratio Prot		0.00						0.10		0.00	c0.17	
v/s Ratio Perm	0.01				c0.01					0.03		
v/c Ratio	0.02	0.01			0.02			0.22		0.05	0.29	
Uniform Delay, d1	19.9	19.9			19.9			13.3		8.4	8.7	
Progression Factor	1.00	1.00			1.00			1.00		0.92	0.84	
Incremental Delay, d2	0.1	0.0			0.1			0.6		0.2	0.7	
Delay (s)	20.0	19.9			20.0			13.9		7.9	7.9	
Level of Service	B	B			B			B		A	A	
Approach Delay (s)		19.9			20.0			13.9			7.9	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM Average Control Delay	10.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.19		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	40.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

	↗	↘	↖	↑	↓	↙
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰↱		↰	↑	↑↱	
Volume (vph)	63	14	10	350	159	12
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	14	12	13	12	10	12
Total Lost time (s)	4.0		4.0	4.0	4.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.97		1.00	1.00	0.99	
Flt Protected	0.96		0.95	1.00	1.00	
Satd. Flow (prot)	1791		1767	1765	1634	
Flt Permitted	0.96		0.64	1.00	1.00	
Satd. Flow (perm)	1791		1187	1765	1634	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	70	16	11	389	177	13
RTOR Reduction (vph)	11	0	0	0	4	0
Lane Group Flow (vph)	75	0	11	389	186	0
Confl. Peds. (#/hr)		2				
Heavy Vehicles (%)	0%	0%	0%	2%	2%	0%
Turn Type			Perm			
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	21.0		36.0	36.0	36.0	
Effective Green, g (s)	21.0		36.0	36.0	36.0	
Actuated g/C Ratio	0.32		0.55	0.55	0.55	
Clearance Time (s)	4.0		4.0	4.0	4.0	
Lane Grp Cap (vph)	579		657	978	905	
v/s Ratio Prot	c0.04			c0.22	0.11	
v/s Ratio Perm			0.01			
v/c Ratio	0.13		0.02	0.40	0.21	
Uniform Delay, d1	15.5		6.5	8.3	7.3	
Progression Factor	1.00		0.32	0.51	1.16	
Incremental Delay, d2	0.5		0.0	1.1	0.4	
Delay (s)	16.0		2.1	5.4	8.9	
Level of Service	B		A	A	A	
Approach Delay (s)	16.0			5.3	8.9	
Approach LOS	B			A	A	

Intersection Summary			
HCM Average Control Delay	7.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	39.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1010: 99th St & Michigan Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↰↑↑↱		↰	↑			↑	↱
Volume (vph)	0	0	0	21	274	14	568	251	0	0	187	35
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	14	16	12	12	15	12	12	13	10
Total Lost time (s)					4.0		4.0	4.0			3.0	3.0
Lane Util. Factor					0.95		1.00	1.00			1.00	1.00
Frpb, ped/bikes					1.00		1.00	1.00			1.00	1.00
Flpb, ped/bikes					1.00		1.00	1.00			1.00	1.00
Frt					0.99		1.00	1.00			1.00	0.85
Flt Protected					1.00		0.95	1.00			1.00	1.00
Satd. Flow (prot)					3742		1660	1752			1603	1298
Flt Permitted					1.00		0.58	1.00			1.00	1.00
Satd. Flow (perm)					3742		1013	1752			1603	1298
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	23	304	16	631	279	0	0	208	39
RTOR Reduction (vph)	0	0	0	0	4	0	0	0	0	0	0	22
Lane Group Flow (vph)	0	0	0	0	339	0	631	279	0	0	208	17
Confl. Peds. (#/hr)									30	30		
Heavy Vehicles (%)	0%	0%	0%	11%	2%	0%	3%	13%	0%	0%	16%	10%
Turn Type				Split			pm+pt					Perm
Protected Phases				8	8		7	2			6	
Permitted Phases							2					6
Actuated Green, G (s)					26.0		51.0	51.0			38.0	38.0
Effective Green, g (s)					26.0		51.0	51.0			38.0	38.0
Actuated g/C Ratio					0.31		0.60	0.60			0.45	0.45
Clearance Time (s)					4.0		4.0	4.0			3.0	3.0
Lane Grp Cap (vph)					1145		684	1051			717	580
v/s Ratio Prot					c0.09		c0.11	0.16			0.13	
v/s Ratio Perm							c0.45					0.01
v/c Ratio					0.30		0.92	0.27			0.29	0.03
Uniform Delay, d1					22.5		16.9	8.1			14.9	13.2
Progression Factor					1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2					0.7		19.9	0.6			1.0	0.1
Delay (s)					23.2		36.8	8.7			16.0	13.3
Level of Service					C		D	A			B	B
Approach Delay (s)		0.0			23.2			28.2			15.5	
Approach LOS		A			C			C			B	

Intersection Summary			
HCM Average Control Delay	25.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	62.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

1011: 99th Street & Martin Luther King Jr Drive

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↰↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	0	0	0	13	11	9	331	527	96	74	337	12
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	15	12	12	12	12	12	13	12
Total Lost time (s)					4.0		3.0	4.0		3.0	4.0	
Lane Util. Factor					1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes					1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes					1.00		1.00	1.00		1.00	1.00	
Frt					0.96		1.00	0.98		1.00	0.99	
Flt Protected					0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)					1796		1692	3237		1707	3352	
Flt Permitted					0.98		0.50	1.00		0.31	1.00	
Satd. Flow (perm)					1796		897	3237		566	3352	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	14	12	10	368	586	107	82	374	13
RTOR Reduction (vph)	0	0	0	0	7	0	0	20	0	0	3	0
Lane Group Flow (vph)	0	0	0	0	29	0	368	673	0	82	384	0
Confl. Peds. (#/hr)	2					2	6		20	20		6
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	0%	0%	0%	0%	11%	0%	1%	3%	0%	0%	5%	0%
Turn Type				Split			pm+pt			pm+pt		
Protected Phases				8	8		5	2		1	6	
Permitted Phases							2			6		
Actuated Green, G (s)					23.0		41.0	34.0		41.0	34.0	
Effective Green, g (s)					23.0		41.0	34.0		41.0	34.0	
Actuated g/C Ratio					0.31		0.55	0.45		0.55	0.45	
Clearance Time (s)					4.0		3.0	4.0		3.0	4.0	
Lane Grp Cap (vph)					551		565	1467		416	1520	
v/s Ratio Prot					c0.02		c0.06	0.21		0.02	0.11	
v/s Ratio Perm							c0.30			0.09		
v/c Ratio					0.05		0.65	0.46		0.20	0.25	
Uniform Delay, d1					18.3		13.7	14.2		12.3	12.7	
Progression Factor					1.00		0.69	0.74		1.00	1.00	
Incremental Delay, d2					0.2		5.3	0.9		1.1	0.4	
Delay (s)					18.5		14.7	11.4		13.4	13.1	
Level of Service					B		B	B		B	B	
Approach Delay (s)		0.0			18.5			12.6			13.1	
Approach LOS		A			B			B			B	

Intersection Summary			
HCM Average Control Delay	12.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	56.0%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥		↰	↑↱		↰	↑↱	
Volume (vph)	57	54	22	10	169	222	20	675	11	69	266	15
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	16	12	12	10	11	12	12	11	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.98			0.93		1.00	1.00		1.00	0.99	
Flt Protected		0.98			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1949			1627		1596	3233		1641	3131	
Flt Permitted		0.68			0.99		0.57	1.00		0.33	1.00	
Satd. Flow (perm)		1354			1618		959	3233		576	3131	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	60	57	23	11	178	234	21	711	12	73	280	16
RTOR Reduction (vph)	0	9	0	0	59	0	0	2	0	0	5	0
Lane Group Flow (vph)	0	131	0	0	364	0	21	721	0	73	291	0
Confl. Peds. (#/hr)									6	6		
Confl. Bikes (#/hr)			1	1								
Heavy Vehicles (%)	0%	0%	0%	12%	2%	2%	0%	2%	0%	4%	5%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		25.0			25.0		42.0	42.0		42.0	42.0	
Effective Green, g (s)		25.0			25.0		42.0	42.0		42.0	42.0	
Actuated g/C Ratio		0.33			0.33		0.56	0.56		0.56	0.56	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		451			539		537	1810		323	1753	
v/s Ratio Prot								c0.22			0.09	
v/s Ratio Perm		0.10			c0.22		0.02			0.13		
v/c Ratio		0.29			0.67		0.04	0.40		0.23	0.17	
Uniform Delay, d1		18.4			21.5		7.4	9.3		8.3	8.0	
Progression Factor		1.00			1.00		1.00	1.00		0.17	0.06	
Incremental Delay, d2		1.6			6.6		0.1	0.7		1.6	0.2	
Delay (s)		20.1			28.1		7.6	10.0		3.0	0.7	
Level of Service		C			C		A	B		A	A	
Approach Delay (s)		20.1			28.1			9.9			1.1	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM Average Control Delay	13.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	69.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

1013: 100th Street & Cottage Grove Avenue

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↖↗			↰↑	↑↱	
Sign Control	Stop			Stop	Stop	
Volume (vph)	45	57	105	325	192	19
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	50	63	117	361	213	21

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	113	237	241	142	92
Volume Left (vph)	50	117	0	0	0
Volume Right (vph)	63	0	0	0	21
Hadj (s)	-0.16	0.33	0.08	0.09	-0.08
Departure Headway (s)	5.3	5.4	5.1	5.4	5.2
Degree Utilization, x	0.17	0.35	0.34	0.21	0.13
Capacity (veh/h)	629	654	684	641	660
Control Delay (s)	9.3	10.1	9.6	8.7	7.8
Approach Delay (s)	9.3	9.9		8.3	
Approach LOS	A	A		A	

Intersection Summary			
Delay	9.4		
HCM Level of Service	A		
Intersection Capacity Utilization	35.3%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Signalized Intersection Capacity Analysis
1014: 103rd Street & Vincennes Avenue

1/14/2013

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR
Lane Configurations		↰	↑	↱	↰	↑	↱			↰	↑↱	
Volume (vph)	45	52	315	13	5	477	37	39	42	53	720	42
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		3.5	4.0	4.0	4.0	4.0	4.0			4.0	4.0	
Lane Util. Factor		1.00	1.00	1.00	1.00	1.00	1.00			1.00	0.95	
Frpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	0.97			1.00	1.00	
Flpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	
Frt		1.00	1.00	0.85	1.00	1.00	0.85			1.00	0.99	
Flt Protected		0.95	1.00	1.00	0.95	1.00	1.00			0.95	1.00	
Satd. Flow (prot)		1575	1731	1530	1710	1731	1487			1710	3292	
Flt Permitted		0.11	1.00	1.00	0.55	1.00	1.00			0.39	1.00	
Satd. Flow (perm)		187	1731	1530	992	1731	1487			700	3292	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	50	58	350	14	6	530	41	43	47	59	800	47
RTOR Reduction (vph)	0	0	0	7	0	0	30	0	0	0	4	0
Lane Group Flow (vph)	0	108	350	7	6	530	54	0	0	106	843	0
Confl. Peds. (#/hr)		5					5					6
Heavy Vehicles (%)	8%	9%	4%	0%	0%	4%	0%	0%	0%	0%	3%	0%
Turn Type	Perm	pm+pt		Perm	Perm		Perm		Perm	Perm		
Protected Phases		7	4			8					2	
Permitted Phases	4	4		4	8		8		2	2		
Actuated Green, G (s)		50.0	50.0	50.0	32.0	32.0	32.0			25.0	25.0	
Effective Green, g (s)		50.0	50.0	50.0	32.0	32.0	32.0			25.0	25.0	
Actuated g/C Ratio		0.48	0.48	0.48	0.30	0.30	0.30			0.24	0.24	
Clearance Time (s)		3.5	4.0	4.0	4.0	4.0	4.0			4.0	4.0	
Lane Grp Cap (vph)		281	824	729	302	528	453			167	784	
v/s Ratio Prot		0.05	c0.20			c0.31					c0.26	
v/s Ratio Perm		0.13		0.00	0.01		0.04			0.15		
v/c Ratio		0.38	0.42	0.01	0.02	1.00	0.12			0.63	1.08	
Uniform Delay, d1		20.2	18.1	14.5	25.5	36.5	26.3			35.9	40.0	
Progression Factor		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	
Incremental Delay, d2		3.9	1.6	0.0	0.1	40.1	0.5			17.0	54.4	
Delay (s)		24.1	19.7	14.5	25.7	76.6	26.9			52.9	94.4	
Level of Service		C	B	B	C	E	C			D	F	
Approach Delay (s)			20.5			69.4					89.8	
Approach LOS			C			E					F	

Intersection Summary			
HCM Average Control Delay	61.3	HCM Level of Service	E
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	78.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBL	SBT	SBR	SBR2	SEL2	SEL	SER	SER2
Lane Configurations	↰	↑↱				↰	↱↱	
Volume (vph)	42	300	27	33	4	55	114	12
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.5	4.5				4.5	4.5	
Lane Util. Factor	1.00	0.95				1.00	0.88	
Frpb, ped/bikes	1.00	1.00				1.00	1.00	
Flpb, ped/bikes	1.00	1.00				1.00	1.00	
Frt	1.00	0.97				1.00	0.85	
Flt Protected	0.95	1.00				0.95	1.00	
Satd. Flow (prot)	1706	3279				1710	2621	
Flt Permitted	0.16	1.00				0.95	1.00	
Satd. Flow (perm)	293	3279				1710	2621	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	47	333	30	37	4	61	127	13
RTOR Reduction (vph)	0	8	0	0	0	0	7	0
Lane Group Flow (vph)	47	392	0	0	0	65	133	0
Confl. Peds. (#/hr)	6							
Heavy Vehicles (%)	0%	2%	0%	0%	0%	0%	3%	0%
Turn Type	Perm				Split		Perm	
Protected Phases		6			9	9		
Permitted Phases	6						9	
Actuated Green, G (s)	24.5	24.5				17.5	17.5	
Effective Green, g (s)	24.5	24.5				17.5	17.5	
Actuated g/C Ratio	0.23	0.23				0.17	0.17	
Clearance Time (s)	4.5	4.5				4.5	4.5	
Lane Grp Cap (vph)	68	765				285	437	
v/s Ratio Prot		0.12				0.04		
v/s Ratio Perm	0.16						c0.05	
v/c Ratio	0.69	0.51				0.23	0.31	
Uniform Delay, d1	36.8	35.1				37.9	38.4	
Progression Factor	1.00	1.00				1.00	1.00	
Incremental Delay, d2	44.8	2.4				1.9	1.8	
Delay (s)	81.6	37.5				39.8	40.2	
Level of Service	F	D				D	D	
Approach Delay (s)		42.1				40.1		
Approach LOS		D				D		

Intersection Summary

HCM Signalized Intersection Capacity Analysis
1015: 103rd Street & Morgan Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰			↱			✢				
Volume (vph)	24	452	0	0	483	25	118	116	114	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	11	11	11	16	11	12	15	12	12	15	12
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		1.00			0.99			0.96				
Flt Protected		1.00			1.00			0.98				
Satd. Flow (prot)		1653			1930			1772				
Flt Permitted		0.96			1.00			0.98				
Satd. Flow (perm)		1594			1930			1772				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	27	502	0	0	537	28	131	129	127	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	529	0	0	565	0	0	387	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)		31.0			31.0			26.0				
Effective Green, g (s)		31.0			31.0			26.0				
Actuated g/C Ratio		0.48			0.48			0.40				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		760			920			709				
v/s Ratio Prot					0.29							
v/s Ratio Perm		c0.33						0.22				
v/c Ratio		0.70			0.61			0.55				
Uniform Delay, d1		13.3			12.6			15.0				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		5.2			3.1			3.0				
Delay (s)		18.5			15.6			18.0				
Level of Service		B			B			B				
Approach Delay (s)		18.5			15.6			18.0			0.0	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM Average Control Delay	17.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	73.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1016: 103rd Street & Halsted Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑	↱		↰↑	↱	↰	↑↑	↱	↰	↑↑	↱
Volume (vph)	116	344	114	64	265	109	148	1707	128	65	445	93
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	10	10	9	9	10	9
Total Lost time (s)		4.0	4.0		4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		1.00	0.96		1.00	0.96	1.00	1.00	0.97	1.00	1.00	0.96
Flpb, ped/bikes		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.99	1.00		0.99	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1920	1426		1923	1396	1500	3099	1284	1425	2956	1265
Flt Permitted		0.66	1.00		0.63	1.00	0.40	1.00	1.00	0.09	1.00	1.00
Satd. Flow (perm)		1278	1426		1221	1396	625	3099	1284	142	2956	1265
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	122	362	120	67	279	115	156	1797	135	68	468	98
RTOR Reduction (vph)	0	0	71	0	0	68	0	0	29	0	0	59
Lane Group Flow (vph)	0	484	49	0	346	47	156	1797	106	68	468	39
Confl. Peds. (#/hr)	42		39	39		42	20		8	8		20
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	6%	4%	3%	0%	6%	5%	6%	3%	4%	8%	8%	4%
Turn Type	pm+pt		Perm	Perm		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)		43.0	43.0		43.0	43.0	53.1	44.4	44.4	48.9	42.3	42.3
Effective Green, g (s)		43.0	43.0		43.0	43.0	53.1	44.4	44.4	48.9	42.3	42.3
Actuated g/C Ratio		0.41	0.41		0.41	0.41	0.51	0.42	0.42	0.47	0.40	0.40
Clearance Time (s)		4.0	4.0		4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		523	584		500	572	389	1310	543	147	1191	510
v/s Ratio Prot							c0.03	c0.58		c0.03	0.16	
v/s Ratio Perm		c0.38	0.03		0.28	0.03	0.17		0.08	0.19		0.03
v/c Ratio		0.93	0.08		0.69	0.08	0.40	1.37	0.19	0.46	0.39	0.08
Uniform Delay, d1		29.5	19.0		25.5	18.9	14.7	30.3	19.1	23.1	22.2	19.3
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.09	0.77	0.42
Incremental Delay, d2		22.4	0.3		7.7	0.3	0.7	172.2	0.8	2.2	0.9	0.3
Delay (s)		51.8	19.2		33.2	19.2	15.4	202.5	19.9	27.4	18.0	8.5
Level of Service		D	B		C	B	B	F	B	C	B	A
Approach Delay (s)		45.4			29.7			176.7			17.5	
Approach LOS		D			C			F			B	

Intersection Summary			
HCM Average Control Delay	111.2	HCM Level of Service	F
HCM Volume to Capacity ratio	1.10		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	111.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1017: 103rd Street & Normal Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣				
Volume (vph)	59	475	59	50	400	50	67	62	55	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	15	12	12	15	12
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		0.99			0.99			0.96				
Flt Protected		1.00			0.99			0.98				
Satd. Flow (prot)		1627			1626			1777				
Flt Permitted		0.91			0.90			0.98				
Satd. Flow (perm)		1487			1472			1777				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	66	528	66	56	444	56	74	69	61	0	0	0
RTOR Reduction (vph)	0	6	0	0	6	0	0	23	0	0	0	0
Lane Group Flow (vph)	0	654	0	0	550	0	0	181	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm			Perm					
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Actuated Green, G (s)		38.0			38.0			19.0				
Effective Green, g (s)		38.0			38.0			19.0				
Actuated g/C Ratio		0.58			0.58			0.29				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		869			861			519				
v/s Ratio Prot												
v/s Ratio Perm		c0.44			0.37			0.10				
v/c Ratio		0.75			0.64			0.35				
Uniform Delay, d1		10.0			8.9			18.1				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		6.0			3.6			1.8				
Delay (s)		16.0			12.6			20.0				
Level of Service		B			B			B				
Approach Delay (s)		16.0			12.6			20.0			0.0	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM Average Control Delay	15.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	61.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1018: 103rd Street & Wentworth Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱		↰	↱		✥	
Volume (vph)	23	497	65	32	402	39	46	150	89	49	192	26
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	11	12	12	15	12
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frpb, ped/bikes		1.00	0.97		1.00	0.95		1.00	0.98		0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		0.99	1.00		1.00	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		0.99	
Flt Protected		1.00	1.00		1.00	1.00		0.99	1.00		0.99	
Satd. Flow (prot)		1656	1255		1634	1288		1663	1490		1776	
Flt Permitted		0.97	1.00		0.94	1.00		0.89	1.00		0.91	
Satd. Flow (perm)		1616	1255		1548	1288		1497	1490		1634	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	24	523	68	34	423	41	48	158	94	52	202	27
RTOR Reduction (vph)	0	0	29	0	0	17	0	0	64	0	5	0
Lane Group Flow (vph)	0	547	39	0	457	24	0	206	30	0	276	0
Confl. Peds. (#/hr)	33		15	15		33	68		5	5		68
Confl. Bikes (#/hr)	4					4						
Heavy Vehicles (%)	0%	5%	14%	19%	5%	9%	2%	2%	1%	10%	7%	8%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		43.0	43.0		43.0	43.0		24.0	24.0		24.0	
Effective Green, g (s)		43.0	43.0		43.0	43.0		24.0	24.0		24.0	
Actuated g/C Ratio		0.57	0.57		0.57	0.57		0.32	0.32		0.32	
Clearance Time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	
Lane Grp Cap (vph)		927	720		888	738		479	477		523	
v/s Ratio Prot												
v/s Ratio Perm		c0.34	0.03		0.30	0.02		0.14	0.02		c0.17	
v/c Ratio		0.59	0.05		0.51	0.03		0.43	0.06		0.53	
Uniform Delay, d1		10.3	7.0		9.7	7.0		20.1	17.7		20.9	
Progression Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2		2.8	0.1		2.1	0.1		2.8	0.3		3.8	
Delay (s)		13.1	7.2		11.8	7.0		22.9	18.0		24.6	
Level of Service		B	A		B	A		C	B		C	
Approach Delay (s)		12.4			11.4			21.4			24.6	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM Average Control Delay	15.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	89.2%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1019: 103rd Street & State Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑	↱	↰	↑	↱
Volume (vph)	84	429	29	17	283	39	52	303	38	38	92	9
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	11	16	8	10	10	10	10	10	10
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	0.98	1.00	1.00	0.99
Flpb, ped/bikes	0.99	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1463	2990		1459	3528		1534	1647	1301	1517	1541	1156
Flt Permitted	0.54	1.00		0.44	1.00		0.69	1.00	1.00	0.45	1.00	1.00
Satd. Flow (perm)	829	2990		669	3528		1116	1647	1301	720	1541	1156
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	93	477	32	19	314	43	58	337	42	42	102	10
RTOR Reduction (vph)	0	7	0	0	16	0	0	0	22	0	0	6
Lane Group Flow (vph)	93	502	0	19	341	0	58	337	20	42	102	4
Confl. Peds. (#/hr)	16		9	9		16	1		5	5		1
Heavy Vehicles (%)	8%	6%	0%	13%	8%	3%	4%	2%	8%	5%	9%	22%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	31.0	31.0		31.0	31.0		26.0	26.0	26.0	26.0	26.0	26.0
Effective Green, g (s)	31.0	31.0		31.0	31.0		26.0	26.0	26.0	26.0	26.0	26.0
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.40	0.40	0.40	0.40	0.40	0.40
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	395	1426		319	1683		446	659	520	288	616	462
v/s Ratio Prot		c0.17			0.10			c0.20			0.07	
v/s Ratio Perm	0.11			0.03			0.05		0.02	0.06		0.00
v/c Ratio	0.24	0.35		0.06	0.20		0.13	0.51	0.04	0.15	0.17	0.01
Uniform Delay, d1	10.0	10.7		9.2	9.8		12.3	14.7	11.9	12.4	12.5	11.7
Progression Factor	1.00	1.00		1.00	1.00		0.61	0.76	0.33	0.51	0.52	0.28
Incremental Delay, d2	1.4	0.7		0.4	0.3		0.6	2.8	0.1	1.1	0.6	0.0
Delay (s)	11.4	11.4		9.5	10.1		8.2	13.9	4.1	7.4	7.1	3.3
Level of Service	B	B		A	B		A	B	A	A	A	A
Approach Delay (s)		11.4			10.1			12.2			7.0	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM Average Control Delay	10.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	51.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1020: 103rd Street & Michigan Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	96	409	83	44	265	65	64	371	44	57	143	47
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	11	10	11	11	10	11	11	10	11	11
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	0.96	1.00		1.00	1.00		0.98	1.00		0.97	1.00	
Frt	1.00	0.97		1.00	0.97		1.00	0.98		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1463	3059		1588	3002		1541	3022		1403	2791	
Flt Permitted	0.54	1.00		0.42	1.00		0.63	1.00		0.46	1.00	
Satd. Flow (perm)	828	3059		707	3002		1015	3022		678	2791	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	101	431	87	46	279	68	67	391	46	60	151	49
RTOR Reduction (vph)	0	0	0	0	0	0	0	12	0	0	29	0
Lane Group Flow (vph)	101	518	0	46	347	0	67	425	0	60	171	0
Confl. Peds. (#/hr)	98		10	10		98	28		52	52		28
Heavy Vehicles (%)	5%	5%	4%	0%	5%	7%	2%	6%	13%	10%	11%	20%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	36.0	36.0		36.0	36.0		31.0	31.0		31.0	31.0	
Effective Green, g (s)	36.0	36.0		36.0	36.0		31.0	31.0		31.0	31.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.41	0.41		0.41	0.41	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	397	1468		339	1441		420	1249		280	1154	
v/s Ratio Prot		c0.17			0.12			c0.14			0.06	
v/s Ratio Perm	0.12			0.07			0.07			0.09		
v/c Ratio	0.25	0.35		0.14	0.24		0.16	0.34		0.21	0.15	
Uniform Delay, d1	11.6	12.2		10.8	11.5		13.8	15.0		14.2	13.8	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.5	0.7		0.8	0.4		0.8	0.7		1.7	0.3	
Delay (s)	13.1	12.9		11.7	11.9		14.6	15.8		15.9	14.0	
Level of Service	B	B		B	B		B	B		B	B	
Approach Delay (s)		12.9			11.8			15.6			14.5	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	13.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	49.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱		↰	↑↱		↰	↑↱	
Volume (vph)	109	327	37	23	321	47	64	412	26	43	206	46
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	12	8	16	12	9	10	10	9	10	10
Total Lost time (s)	3.0	7.0		3.0	7.0		3.0	7.0		3.0	7.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.99		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1533	1576		1473	1841		1533	3073		1372	2893	
Flt Permitted	0.45	1.00		0.46	1.00		0.59	1.00		0.41	1.00	
Satd. Flow (perm)	731	1576		717	1841		949	3073		597	2893	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	115	344	39	24	338	49	67	434	27	45	217	48
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	115	383	0	24	387	0	67	461	0	45	265	0
Confl. Peds. (#/hr)	7		23	23		7	10		8	8		10
Confl. Bikes (#/hr)	1		2	2		1	1		1	1		1
Heavy Vehicles (%)	4%	8%	10%	0%	9%	5%	0%	3%	0%	12%	7%	6%
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	47.0	41.8		40.6	38.6		26.8	22.2		23.6	20.6	
Effective Green, g (s)	47.0	39.8		40.6	36.6		26.8	20.2		23.6	18.6	
Actuated g/C Ratio	0.55	0.47		0.48	0.43		0.32	0.24		0.28	0.22	
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	5.0		3.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	453	738		360	793		331	730		193	633	
v/s Ratio Prot	c0.02	c0.24		0.00	0.21		c0.01	c0.15		0.01	0.09	
v/s Ratio Perm	0.12			0.03			0.05			0.06		
v/c Ratio	0.25	0.52		0.07	0.49		0.20	0.63		0.23	0.42	
Uniform Delay, d1	13.3	15.9		14.9	17.4		21.4	29.1		26.1	28.6	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.3	2.6		0.1	2.1		0.3	4.1		0.6	2.0	
Delay (s)	13.6	18.5		15.0	19.6		21.7	33.2		26.8	30.6	
Level of Service	B	B		B	B		C	C		C	C	
Approach Delay (s)		17.3			19.3			31.7			30.0	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM Average Control Delay	24.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	62.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↱			↰↱		↰	↑↱		↰	↑↱	
Volume (vph)	68	321	44	65	380	115	57	390	126	56	162	35
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	11	11	11	11	12	12	10	10	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			0.99		1.00	0.99		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		0.99	1.00	
Frt		0.98			0.97		1.00	0.96		1.00	0.97	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3493			2911		1614	3156		1581	2925	
Flt Permitted		0.78			0.84		0.61	1.00		0.38	1.00	
Satd. Flow (perm)		2757			2464		1044	3156		628	2925	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	76	357	49	72	422	128	63	433	140	62	180	39
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	482	0	0	622	0	63	573	0	62	219	0
Confl. Peds. (#/hr)	20		16	16		20	5		33	33		5
Confl. Bikes (#/hr)	2					2			2	2		
Heavy Vehicles (%)	9%	9%	0%	24%	7%	6%	2%	4%	2%	0%	5%	9%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		33.0			33.0		32.0	32.0		32.0	32.0	
Effective Green, g (s)		34.0			34.0		33.0	33.0		33.0	33.0	
Actuated g/C Ratio		0.45			0.45		0.44	0.44		0.44	0.44	
Clearance Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)		1250			1117		459	1389		276	1287	
v/s Ratio Prot								c0.18			0.07	
v/s Ratio Perm		0.17			c0.25		0.06			0.10		
v/c Ratio		0.39			0.56		0.14	0.41		0.22	0.17	
Uniform Delay, d1		13.6			15.0		12.5	14.4		13.0	12.7	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.9			2.0		0.6	0.9		1.9	0.3	
Delay (s)		14.5			17.0		13.1	15.3		14.9	13.0	
Level of Service		B			B		B	B		B	B	
Approach Delay (s)		14.5			17.0			15.1			13.4	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	15.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	63.7%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1023: 103rd Street & Woodlawn Avenue

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↑	↱		✥			↰↑↱	
Volume (vph)	145	521	5	14	653	386	72	9	20	118	1	52
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	12	12	12	12	12	12	13	13	13
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00			0.95	
Frt	1.00	1.00		1.00	1.00	0.85		0.97			0.95	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.97			0.97	
Satd. Flow (prot)	1574	3144		1629	3257	1457		1611			3105	
Flt Permitted	0.35	1.00		0.42	1.00	1.00		0.69			0.75	
Satd. Flow (perm)	587	3144		722	3257	1457		1158			2398	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	161	579	6	16	726	429	80	10	22	131	1	58
RTOR Reduction (vph)	0	1	0	0	0	150	0	12	0	0	44	0
Lane Group Flow (vph)	161	584	0	16	726	279	0	100	0	0	146	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	46.0	46.0		46.0	46.0	46.0		16.7			16.7	
Effective Green, g (s)	46.0	46.0		46.0	46.0	46.0		16.7			16.7	
Actuated g/C Ratio	0.65	0.65		0.65	0.65	0.65		0.24			0.24	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		8.0			8.0	
Lane Grp Cap (vph)	382	2046		470	2119	948		274			566	
v/s Ratio Prot		0.19			0.22							
v/s Ratio Perm	c0.27			0.02		0.19		c0.09			0.06	
v/c Ratio	0.42	0.29		0.03	0.34	0.29		0.36			0.26	
Uniform Delay, d1	5.9	5.3		4.4	5.6	5.3		22.6			22.0	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00			1.00	
Incremental Delay, d2	3.4	0.4		0.1	0.4	0.8		3.5			1.0	
Delay (s)	9.3	5.7		4.5	6.0	6.1		26.1			23.0	
Level of Service	A	A		A	A	A		C			C	
Approach Delay (s)		6.4			6.0			26.1			23.0	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM Average Control Delay	8.6	HCM Level of Service	A
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	70.7	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱		↰	↑↑	↱	↰	↑↑	↱
Volume (vph)	111	214	67	63	190	66	131	1972	88	70	499	40
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	9	12	10	10	12	9	10	9	9	10	9
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00	0.96	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.96		1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1548	1505		1547	1589		1493	3069	1271	1452	2983	1301
Flt Permitted	0.38	1.00		0.34	1.00		0.39	1.00	1.00	0.12	1.00	1.00
Satd. Flow (perm)	625	1505		547	1589		612	3069	1271	180	2983	1301
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	117	225	71	66	200	69	138	2076	93	74	525	42
RTOR Reduction (vph)	0	13	0	0	15	0	0	0	18	0	0	25
Lane Group Flow (vph)	117	283	0	66	254	0	138	2076	75	74	525	17
Confl. Peds. (#/hr)	4		9	9		4	6		16	16		6
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	3%	3%	4%	3%	1%	2%	3%	4%	4%	6%	7%	3%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	28.0	21.0		28.0	21.0		42.0	35.0	35.0	42.0	35.0	35.0
Effective Green, g (s)	26.0	22.0		26.0	22.0		40.0	35.0	35.0	40.0	35.0	35.0
Actuated g/C Ratio	0.31	0.26		0.31	0.26		0.47	0.41	0.41	0.47	0.41	0.41
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)	256	390		238	411		350	1264	523	174	1228	536
v/s Ratio Prot	c0.03	c0.19		0.02	0.16		0.03	c0.68		c0.03	0.18	
v/s Ratio Perm	0.11			0.07			0.16		0.06	0.17		0.01
v/c Ratio	0.46	0.72		0.28	0.62		0.39	1.64	0.14	0.43	0.43	0.03
Uniform Delay, d1	22.5	28.7		21.8	27.8		13.3	25.0	15.6	18.1	17.8	14.9
Progression Factor	1.00	1.00		1.00	1.00		0.61	0.70	0.49	1.00	1.00	1.00
Incremental Delay, d2	5.8	11.1		2.9	6.8		2.7	292.0	0.5	7.4	1.1	0.1
Delay (s)	28.3	39.9		24.7	34.6		10.8	309.5	8.1	25.6	18.9	15.0
Level of Service	C	D		C	C		B	F	A	C	B	B
Approach Delay (s)		36.6			32.7			279.5			19.4	
Approach LOS		D			C			F			B	

Intersection Summary			
HCM Average Control Delay	184.9	HCM Level of Service	F
HCM Volume to Capacity ratio	1.14		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	96.4%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1025: 107th Street & Wentworth Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			✥			✥	
Volume (vph)	26	218	15	15	149	9	18	166	27	31	148	21
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	14	12	12	14	12	12	16	12	12	16	12
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		1.00			1.00			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.99			0.99			0.98			0.99	
Flt Protected		0.99			1.00			1.00			0.99	
Satd. Flow (prot)		1852			1848			1902			1932	
Flt Permitted		0.96			0.97			0.97			0.94	
Satd. Flow (perm)		1796			1800			1856			1830	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	27	225	15	15	154	9	19	171	28	32	153	22
RTOR Reduction (vph)	0	4	0	0	3	0	0	8	0	0	6	0
Lane Group Flow (vph)	0	263	0	0	175	0	0	210	0	0	201	0
Confl. Peds. (#/hr)	5		11	11		5	7		34	34		7
Confl. Bikes (#/hr)			3	3								
Heavy Vehicles (%)	4%	2%	0%	20%	1%	0%	12%	3%	8%	0%	3%	5%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		27.0			27.0			30.0			30.0	
Effective Green, g (s)		27.0			27.0			30.0			30.0	
Actuated g/C Ratio		0.42			0.42			0.46			0.46	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		746			748			857			845	
v/s Ratio Prot												
v/s Ratio Perm		c0.15			0.10			c0.11			0.11	
v/c Ratio		0.35			0.23			0.24			0.24	
Uniform Delay, d1		13.0			12.3			10.6			10.6	
Progression Factor		1.00			0.62			1.08			1.00	
Incremental Delay, d2		1.3			0.7			0.7			0.7	
Delay (s)		14.3			8.3			12.1			11.2	
Level of Service		B			A			B			B	
Approach Delay (s)		14.3			8.3			12.1			11.2	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM Average Control Delay	11.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	45.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1026: 107th Street & State Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	24	181	25	9	162	16	42	384	33	15	86	17
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	0.95	1.00		1.00	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.99		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1465	3012		1302	3049		1529	3093		1492	2868	
Flt Permitted	0.63	1.00		0.61	1.00		0.68	1.00		0.48	1.00	
Satd. Flow (perm)	967	3012		835	3049		1093	3093		757	2868	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	27	201	28	10	180	18	47	427	37	17	96	19
RTOR Reduction (vph)	0	17	0	0	11	0	0	10	0	0	8	0
Lane Group Flow (vph)	27	212	0	10	187	0	47	454	0	17	107	0
Confl. Peds. (#/hr)	35		6	6		35	18					18
Confl. Bikes (#/hr)	14		32	32		14	23		7	7		23
Heavy Vehicles (%)	4%	4%	0%	22%	2%	6%	3%	2%	0%	7%	8%	6%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.0	20.0		20.0	20.0		39.0	39.0		39.0	39.0	
Effective Green, g (s)	19.0	19.0		19.0	19.0		38.0	38.0		38.0	38.0	
Actuated g/C Ratio	0.29	0.29		0.29	0.29		0.58	0.58		0.58	0.58	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	283	880		244	891		639	1808		443	1677	
v/s Ratio Prot		c0.07			0.06			c0.15			0.04	
v/s Ratio Perm	0.03			0.01			0.04			0.02		
v/c Ratio	0.10	0.24		0.04	0.21		0.07	0.25		0.04	0.06	
Uniform Delay, d1	16.7	17.5		16.5	17.3		5.9	6.6		5.7	5.8	
Progression Factor	0.72	0.73		0.72	0.71		0.89	0.93		0.49	0.44	
Incremental Delay, d2	0.6	0.6		0.3	0.5		0.2	0.3		0.2	0.1	
Delay (s)	12.8	13.4		12.2	12.9		5.4	6.4		3.0	2.6	
Level of Service	B	B		B	B		A	A		A	A	
Approach Delay (s)		13.3			12.9			6.3			2.7	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	8.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.25		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	40.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1027: 107th Street & Michigan Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			✥			✥	
Volume (vph)	46	178	31	16	122	29	27	414	24	11	163	15
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	9	9	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	
Flpb, ped/bikes	0.99	1.00		0.98	1.00			1.00			1.00	
Frt	1.00	0.98		1.00	0.97			0.99			0.99	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1555	2962		1515	2886			1878			1805	
Flt Permitted	0.65	1.00		0.61	1.00			0.98			0.97	
Satd. Flow (perm)	1057	2962		968	2886			1840			1758	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	51	198	34	18	136	32	30	460	27	12	181	17
RTOR Reduction (vph)	0	20	0	0	19	0	0	3	0	0	5	0
Lane Group Flow (vph)	51	212	0	18	149	0	0	514	0	0	205	0
Confl. Peds. (#/hr)	10		29	29		10	17		10	10		17
Confl. Bikes (#/hr)									2	2		
Heavy Vehicles (%)	2%	4%	10%	0%	4%	0%	0%	8%	4%	0%	13%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	26.0	26.0		26.0	26.0			31.0			31.0	
Effective Green, g (s)	26.0	26.0		26.0	26.0			31.0			31.0	
Actuated g/C Ratio	0.40	0.40		0.40	0.40			0.48			0.48	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	423	1185		387	1154			878			838	
v/s Ratio Prot		c0.07			0.05							
v/s Ratio Perm	0.05			0.02				c0.28			0.12	
v/c Ratio	0.12	0.18		0.05	0.13			0.59			0.24	
Uniform Delay, d1	12.3	12.6		11.9	12.3			12.3			10.1	
Progression Factor	0.99	0.90		0.86	0.88			1.01			1.00	
Incremental Delay, d2	0.6	0.3		0.2	0.2			2.8			0.7	
Delay (s)	12.8	11.7		10.5	11.1			15.2			10.8	
Level of Service	B	B		B	B			B			B	
Approach Delay (s)		11.9			11.0			15.2			10.8	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	13.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	60.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1028: 107th Street & Martin Luther King Jr Drive

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱			✥			✥	
Volume (vph)	90	127	51	2	84	33	19	275	9	6	184	29
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	16	12	10	16	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00			1.00			1.00	
Flpb, ped/bikes	1.00	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.96		1.00	0.96			1.00			0.98	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1605	1890		1587	1873			1971			1933	
Flt Permitted	0.67	1.00		0.58	1.00			0.98			0.99	
Satd. Flow (perm)	1138	1890		975	1873			1933			1919	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	100	141	57	2	93	37	21	306	10	7	204	32
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	100	198	0	2	130	0	0	337	0	0	243	0
Confl. Peds. (#/hr)			8	8			1		8	8		1
Heavy Vehicles (%)	3%	3%	2%	0%	6%	0%	0%	3%	0%	0%	4%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.0	20.0		20.0	20.0			37.0			37.0	
Effective Green, g (s)	20.0	20.0		20.0	20.0			37.0			37.0	
Actuated g/C Ratio	0.31	0.31		0.31	0.31			0.57			0.57	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	350	582		300	576			1100			1092	
v/s Ratio Prot		c0.10			0.07							
v/s Ratio Perm	0.09			0.00				c0.17			0.13	
v/c Ratio	0.29	0.34		0.01	0.23			0.31			0.22	
Uniform Delay, d1	17.1	17.4		15.6	16.7			7.3			6.9	
Progression Factor	0.90	0.88		0.85	0.92			0.93			1.00	
Incremental Delay, d2	2.0	1.6		0.0	0.9			0.7			0.5	
Delay (s)	17.3	16.9		13.4	16.3			7.5			7.4	
Level of Service	B	B		B	B			A			A	
Approach Delay (s)		17.1			16.2			7.5			7.4	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	11.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	45.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1029: 107th Street & Cottage Grove Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑	↱	↰	↑	↱
Volume (vph)	122	9	52	1	3	10	39	492	6	2	201	50
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	10	10	10	11	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.97		1.00	1.00	0.98	1.00	1.00	0.98
Flpb, ped/bikes	0.98	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.87		1.00	0.88		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1603	1673		1710	1413		1491	1631	1392	1649	1907	1427
Flt Permitted	0.75	1.00		0.71	1.00		0.62	1.00	1.00	0.37	1.00	1.00
Satd. Flow (perm)	1262	1673		1283	1413		971	1631	1392	648	1907	1427
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	136	10	58	1	3	11	43	547	7	2	223	56
RTOR Reduction (vph)	0	42	0	0	8	0	0	0	3	0	0	22
Lane Group Flow (vph)	136	26	0	1	6	0	43	547	4	2	223	34
Confl. Peds. (#/hr)	9					9	1		6	6		1
Heavy Vehicles (%)	5%	14%	5%	0%	67%	12%	7%	3%	0%	0%	7%	5%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	17.0	17.0		17.0	17.0		39.0	39.0	39.0	39.0	39.0	39.0
Effective Green, g (s)	18.0	18.0		18.0	18.0		39.0	39.0	39.0	39.0	39.0	39.0
Actuated g/C Ratio	0.28	0.28		0.28	0.28		0.60	0.60	0.60	0.60	0.60	0.60
Clearance Time (s)	5.0	5.0		5.0	5.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	349	463		355	391		583	979	835	389	1144	856
v/s Ratio Prot		0.02			0.00			c0.34			0.12	
v/s Ratio Perm	c0.11			0.00			0.04		0.00	0.00		0.02
v/c Ratio	0.39	0.06		0.00	0.02		0.07	0.56	0.01	0.01	0.19	0.04
Uniform Delay, d1	19.0	17.3		17.0	17.1		5.4	7.8	5.2	5.2	5.9	5.3
Progression Factor	1.48	2.42		1.00	1.00		1.17	1.10	1.34	1.00	1.00	1.00
Incremental Delay, d2	3.2	0.2		0.0	0.1		0.2	1.7	0.0	0.0	0.4	0.1
Delay (s)	31.4	42.1		17.0	17.1		6.6	10.3	7.0	5.2	6.3	5.4
Level of Service	C	D		B	B		A	B	A	A	A	A
Approach Delay (s)		34.9			17.1			10.0			6.1	
Approach LOS		C			B			A			A	

Intersection Summary			
HCM Average Control Delay	13.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1030: 111th Street & Marshield Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱		↰	↑↑					↰	↑↱	
Volume (vph)	0	233	76	120	374	0	0	0	0	71	305	361
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	12	12	12	12	12	11	11	12
Total Lost time (s)		4.0		3.0	3.0					5.0	5.0	
Lane Util. Factor		0.95		1.00	0.95					1.00	0.95	
Frpb, ped/bikes		0.99		1.00	1.00					1.00	0.99	
Flpb, ped/bikes		1.00		0.99	1.00					1.00	1.00	
Frt		0.96		1.00	1.00					1.00	0.92	
Flt Protected		1.00		0.95	1.00					0.95	1.00	
Satd. Flow (prot)		2824		1620	3288					1574	2907	
Flt Permitted		1.00		0.50	1.00					0.95	1.00	
Satd. Flow (perm)		2824		860	3288					1574	2907	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	245	80	126	394	0	0	0	0	75	321	380
RTOR Reduction (vph)	0	31	0	0	0	0	0	0	0	0	214	0
Lane Group Flow (vph)	0	294	0	126	394	0	0	0	0	75	487	0
Confl. Peds. (#/hr)	14		32	32		14	14					14
Confl. Bikes (#/hr)			1	1								
Heavy Vehicles (%)	0%	9%	4%	5%	4%	0%	0%	0%	0%	5%	2%	4%
Turn Type				D.P+P						custom		
Protected Phases		8		7	7 8					6	6	
Permitted Phases				8						6		
Actuated Green, G (s)		33.0		56.0	59.0					32.0	32.0	
Effective Green, g (s)		33.0		56.0	59.0					32.0	32.0	
Actuated g/C Ratio		0.33		0.56	0.59					0.32	0.32	
Clearance Time (s)		4.0		3.0						5.0	5.0	
Lane Grp Cap (vph)		932		656	1940					504	930	
v/s Ratio Prot		c0.10		0.04	c0.12					0.05	c0.17	
v/s Ratio Perm				0.06								
v/c Ratio		0.31		0.19	0.20					0.15	0.52	
Uniform Delay, d1		25.0		10.5	9.5					24.3	27.8	
Progression Factor		1.00		1.94	2.06					1.00	1.00	
Incremental Delay, d2		0.9		0.6	0.2					0.6	2.1	
Delay (s)		25.9		21.0	19.8					24.9	29.9	
Level of Service		C		C	B					C	C	
Approach Delay (s)		25.9			20.1			0.0			29.4	
Approach LOS		C			C			A			C	

Intersection Summary			
HCM Average Control Delay	25.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	62.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

1031: 111th Street & Ashland Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑			↑↱		↰	↑	↱			
Volume (vph)	129	175	0	0	320	68	174	554	315	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	9	12	13	12	13	12	12	12
Total Lost time (s)	4.0	4.0			4.0		5.0	5.0	5.0			
Lane Util. Factor	1.00	0.95			0.95		1.00	1.00	1.00			
Frpb, ped/bikes	1.00	1.00			0.99		1.00	1.00	0.99			
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.97		1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1673	3054			2831		1750	1782	1514			
Flt Permitted	0.35	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	612	3054			2831		1750	1782	1514			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	136	184	0	0	337	72	183	583	332	0	0	0
RTOR Reduction (vph)	0	0	0	0	18	0	0	0	222	0	0	0
Lane Group Flow (vph)	136	184	0	0	391	0	183	583	110	0	0	0
Confl. Peds. (#/hr)	14		16	16		14			1	1		
Confl. Bikes (#/hr)	1					1			1	1		
Heavy Vehicles (%)	2%	12%	0%	0%	5%	4%	1%	1%	3%	0%	0%	0%
Turn Type	pm+pt						custom		Perm			
Protected Phases	4	1 4			1		2	2				
Permitted Phases	1 4						2		2			
Actuated Green, G (s)	54.0	58.0			21.0		33.0	33.0	33.0			
Effective Green, g (s)	54.0	58.0			21.0		33.0	33.0	33.0			
Actuated g/C Ratio	0.54	0.58			0.21		0.33	0.33	0.33			
Clearance Time (s)	4.0				4.0		5.0	5.0	5.0			
Lane Grp Cap (vph)	681	1771			595		578	588	500			
v/s Ratio Prot	c0.07	0.06			c0.14		0.10	c0.33				
v/s Ratio Perm	0.04								0.07			
v/c Ratio	0.20	0.10			0.66		0.32	0.99	0.22			
Uniform Delay, d1	11.8	9.4			36.2		25.1	33.4	24.2			
Progression Factor	0.25	0.25			1.00		0.75	0.79	1.93			
Incremental Delay, d2	0.6	0.1			5.6		0.9	27.7	0.6			
Delay (s)	3.6	2.5			41.8		19.7	54.1	47.2			
Level of Service	A	A			D		B	D	D			
Approach Delay (s)		3.0			41.8			46.3			0.0	
Approach LOS		A			D			D			A	

Intersection Summary			
HCM Average Control Delay	37.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	62.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱		↰	↑↑					↰	↑↑	↱
Volume (vph)	0	450	372	34	592	0	0	0	0	4	215	193
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	11	12	12	12	12	10	10	12
Total Lost time (s)		4.0		4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.95		1.00	0.95					1.00	0.95	1.00
Frpb, ped/bikes		0.99		1.00	1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Frt		0.93		1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00					0.95	1.00	1.00
Satd. Flow (prot)		3105		1613	3273					1596	3160	1443
Flt Permitted		1.00		0.17	1.00					0.95	1.00	1.00
Satd. Flow (perm)		3105		290	3273					1596	3160	1443
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	0	469	388	35	617	0	0	0	0	4	224	201
RTOR Reduction (vph)	0	150	0	0	0	0	0	0	0	0	0	133
Lane Group Flow (vph)	0	707	0	35	617	0	0	0	0	4	224	68
Confl. Peds. (#/hr)	22		3	3		22						
Confl. Bikes (#/hr)	4					4			32	32		
Heavy Vehicles (%)	0%	2%	2%	6%	1%	0%	0%	0%	0%	0%	1%	6%
Turn Type				pm+pt						Split		Prot
Protected Phases		8		7	7 8					6	6	6
Permitted Phases				7 8								
Actuated Green, G (s)		36.0		54.0	58.0					34.0	34.0	34.0
Effective Green, g (s)		36.0		54.0	58.0					34.0	34.0	34.0
Actuated g/C Ratio		0.36		0.54	0.58					0.34	0.34	0.34
Clearance Time (s)		4.0		4.0						4.0	4.0	4.0
Lane Grp Cap (vph)		1118		395	1898					543	1074	491
v/s Ratio Prot		c0.23		0.02	c0.19					0.00	c0.07	0.05
v/s Ratio Perm				0.03								
v/c Ratio		0.63		0.09	0.33					0.01	0.21	0.14
Uniform Delay, d1		26.5		12.4	10.9					21.8	23.4	22.9
Progression Factor		1.00		0.55	0.69					0.74	0.79	0.93
Incremental Delay, d2		2.7		0.2	0.2					0.0	0.4	0.5
Delay (s)		29.2		7.0	7.6					16.1	18.9	21.8
Level of Service		C		A	A					B	B	C
Approach Delay (s)		29.2			7.6			0.0			20.2	
Approach LOS		C			A			A			C	

Intersection Summary			
HCM Average Control Delay	20.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	88.0%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↰↑			↑↱		↰	↰	↱			
Volume (vph)	394	60	0	0	57	3	569	644	62	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	12	12	12	10	12	11	11	12	12	12	12
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0	4.0			
Lane Util. Factor	0.91	0.91			0.95		0.95	0.95	1.00			
Frpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Flpb, ped/bikes	0.99	0.99			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.99		1.00	1.00	0.85			
Flt Protected	0.95	0.96			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1444	3042			3098		1555	1637	1500			
Flt Permitted	0.71	0.74			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	1086	2344			3098		1555	1637	1500			
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	406	62	0	0	59	3	587	664	64	0	0	0
RTOR Reduction (vph)	0	0	0	0	3	0	0	0	38	0	0	0
Lane Group Flow (vph)	203	265	0	0	59	0	587	664	26	0	0	0
Confl. Peds. (#/hr)	30		2	2		30			4	4		
Confl. Bikes (#/hr)	3					3			2	2		
Heavy Vehicles (%)	3%	2%	0%	0%	2%	0%	1%	1%	2%	0%	0%	0%
Turn Type	pm+pt						custom		custom			
Protected Phases	4	1 4			1		2	2	2			
Permitted Phases	1 4						2		2			
Actuated Green, G (s)	51.0	51.0			15.0		37.0	37.0	37.0			
Effective Green, g (s)	51.0	51.0			15.0		37.0	37.0	37.0			
Actuated g/C Ratio	0.51	0.51			0.15		0.37	0.37	0.37			
Clearance Time (s)	4.0				4.0		4.0	4.0	4.0			
Lane Grp Cap (vph)	683	1447			465		575	606	555			
v/s Ratio Prot	c0.11	0.07			0.02		0.38	c0.41	0.02			
v/s Ratio Perm	c0.04	0.03										
v/c Ratio	0.30	0.18			0.13		1.02	1.10	0.05			
Uniform Delay, d1	14.0	13.2			36.8		31.5	31.5	20.2			
Progression Factor	0.24	0.26			1.00		1.00	1.00	1.00			
Incremental Delay, d2	0.8	0.2			0.6		42.9	65.4	0.2			
Delay (s)	4.2	3.6			37.4		74.4	96.9	20.3			
Level of Service	A	A			D		E	F	C			
Approach Delay (s)		3.9			37.4			83.2			0.0	
Approach LOS		A			D			F			A	

Intersection Summary			
HCM Average Control Delay	61.5	HCM Level of Service	E
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	88.0%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1034: 111th Street & Halsted Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱		↰	↑↑	↱	↰	↑↑	↱
Volume (vph)	163	262	70	58	184	114	43	1151	62	88	476	42
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	9	10	9	9	10	9
Total Lost time (s)		4.0			4.0		4.0	3.5	4.0	4.0	3.5	4.0
Lane Util. Factor		0.95			0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		1.00			0.98		1.00	1.00	0.97	1.00	1.00	0.97
Flpb, ped/bikes		1.00			1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.98			0.95		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.98			0.99		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		2835			2770		1447	3069	1336	1494	2956	1270
Flt Permitted		0.66			0.80		0.39	1.00	1.00	0.12	1.00	1.00
Satd. Flow (perm)		1916			2247		600	3069	1336	197	2956	1270
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	170	273	73	60	192	119	45	1199	65	92	496	44
RTOR Reduction (vph)	0	16	0	0	66	0	0	0	24	0	0	27
Lane Group Flow (vph)	0	500	0	0	305	0	45	1199	41	92	496	17
Confl. Peds. (#/hr)	49		20	20		49	26		8	8		26
Confl. Bikes (#/hr)	2					2						
Heavy Vehicles (%)	10%	7%	4%	9%	7%	5%	6%	4%	0%	3%	8%	5%
Turn Type	pm+pt			Perm			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)		35.0			27.0		38.0	33.0	33.0	38.0	33.0	33.0
Effective Green, g (s)		36.0			28.0		36.0	33.5	33.0	36.0	33.5	33.0
Actuated g/C Ratio		0.42			0.33		0.42	0.39	0.39	0.42	0.39	0.39
Clearance Time (s)		5.0			5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)		876			740		294	1210	519	144	1165	493
v/s Ratio Prot		c0.04					0.01	c0.39		c0.03	0.17	
v/s Ratio Perm		0.20			0.14		0.06		0.03	0.24		0.01
v/c Ratio		0.57			0.41		0.15	0.99	0.08	0.64	0.43	0.03
Uniform Delay, d1		18.6			22.1		14.7	25.6	16.4	19.0	18.7	16.1
Progression Factor		1.00			1.00		1.33	0.86	1.42	1.86	1.67	3.21
Incremental Delay, d2		2.7			1.7		0.6	17.7	0.2	18.1	1.0	0.1
Delay (s)		21.3			23.8		20.3	39.8	23.4	53.3	32.3	51.8
Level of Service		C			C		C	D	C	D	C	D
Approach Delay (s)		21.3			23.8			38.3			36.7	
Approach LOS		C			C			D			D	

Intersection Summary			
HCM Average Control Delay	32.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	11.5
Intersection Capacity Utilization	80.7%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1035: 111th Street & Normal Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰			↱			✢				
Volume (vph)	44	397	0	0	328	81	28	63	98	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		1.00			0.97			0.93				
Flt Protected		1.00			1.00			0.99				
Satd. Flow (prot)		1706			1668			1582				
Flt Permitted		0.93			1.00			0.99				
Satd. Flow (perm)		1592			1668			1582				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	49	441	0	0	364	90	31	70	109	0	0	0
RTOR Reduction (vph)	0	0	0	0	14	0	0	60	0	0	0	0
Lane Group Flow (vph)	0	490	0	0	440	0	0	150	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)		34.0			34.0			23.0				
Effective Green, g (s)		34.0			34.0			23.0				
Actuated g/C Ratio		0.52			0.52			0.35				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		833			872			560				
v/s Ratio Prot					0.26							
v/s Ratio Perm		c0.31						0.09				
v/c Ratio		0.59			0.50			0.27				
Uniform Delay, d1		10.7			10.0			15.0				
Progression Factor		1.00			0.50			1.00				
Incremental Delay, d2		3.0			1.9			1.2				
Delay (s)		13.7			6.9			16.2				
Level of Service		B			A			B				
Approach Delay (s)		13.7			6.9			16.2			0.0	
Approach LOS		B			A			B			A	

Intersection Summary			
HCM Average Control Delay	11.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	69.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1036: 111th Street & Wentworth Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			↰↑↱			↰↑↱	
Volume (vph)	45	397	31	20	340	49	16	175	35	51	107	19
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	12	12	12	12	12
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		1.00			1.00			0.99			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.99			0.98			0.98			0.98	
Flt Protected		1.00			1.00			1.00			0.99	
Satd. Flow (prot)		1887			1833			3185			3154	
Flt Permitted		0.93			0.97			0.93			0.83	
Satd. Flow (perm)		1763			1780			2981			2649	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	50	441	34	22	378	54	18	194	39	57	119	21
RTOR Reduction (vph)	0	4	0	0	8	0	0	23	0	0	12	0
Lane Group Flow (vph)	0	521	0	0	446	0	0	228	0	0	185	0
Confl. Peds. (#/hr)	29		16	16		29	28		14	14		28
Confl. Bikes (#/hr)	1					1	1					1
Heavy Vehicles (%)	3%	7%	4%	12%	8%	13%	0%	4%	4%	4%	4%	6%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		30.0			30.0			27.0			27.0	
Effective Green, g (s)		30.0			30.0			27.0			27.0	
Actuated g/C Ratio		0.46			0.46			0.42			0.42	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		814			822			1238			1100	
v/s Ratio Prot												
v/s Ratio Perm		c0.30			0.25			c0.08			0.07	
v/c Ratio		0.64			0.54			0.18			0.17	
Uniform Delay, d1		13.4			12.6			12.0			11.9	
Progression Factor		0.62			0.57			0.89			0.53	
Incremental Delay, d2		3.3			2.5			0.3			0.3	
Delay (s)		11.6			9.7			11.0			6.6	
Level of Service		B			A			B			A	
Approach Delay (s)		11.6			9.7			11.0			6.6	
Approach LOS		B			A			B			A	

Intersection Summary			
HCM Average Control Delay	10.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	77.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1037: 111th Street & State Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	50	265	20	28	280	61	46	319	89	48	96	20
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	9	10	10	9	10	10	12	10	10	12
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		0.99	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.97		1.00	0.97		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1501	2938		1583	2932		1497	3034		1594	2943	
Flt Permitted	0.49	1.00		0.55	1.00		0.67	1.00		0.48	1.00	
Satd. Flow (perm)	781	2938		917	2932		1056	3034		809	2943	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	56	294	22	31	311	68	51	354	99	53	107	22
RTOR Reduction (vph)	0	9	0	0	28	0	0	39	0	0	10	0
Lane Group Flow (vph)	56	307	0	31	351	0	51	414	0	53	119	0
Confl. Peds. (#/hr)	25		14	14		25	12		4	4		12
Confl. Bikes (#/hr)	1					1			1	1		
Heavy Vehicles (%)	5%	7%	12%	0%	6%	2%	6%	1%	3%	0%	4%	12%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	22.0	22.0		22.0	22.0		35.0	35.0		35.0	35.0	
Effective Green, g (s)	22.0	22.0		22.0	22.0		35.0	35.0		35.0	35.0	
Actuated g/C Ratio	0.34	0.34		0.34	0.34		0.54	0.54		0.54	0.54	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	264	994		310	992		569	1634		436	1585	
v/s Ratio Prot		0.10			c0.12			c0.14			0.04	
v/s Ratio Perm	0.07			0.03			0.05			0.07		
v/c Ratio	0.21	0.31		0.10	0.35		0.09	0.25		0.12	0.07	
Uniform Delay, d1	15.3	15.9		14.7	16.2		7.3	8.0		7.4	7.2	
Progression Factor	0.60	0.58		0.78	0.78		0.64	0.68		1.21	1.21	
Incremental Delay, d2	1.5	0.7		0.6	1.0		0.3	0.4		0.6	0.1	
Delay (s)	10.7	9.9		12.1	13.7		5.0	5.8		9.5	8.8	
Level of Service	B	A		B	B		A	A		A	A	
Approach Delay (s)		10.0			13.5			5.7			9.0	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	9.4	HCM Level of Service	A
HCM Volume to Capacity ratio	0.29		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	46.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1038: 111th Street & Michigan Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			↰↑↱			↰↑↱	
Volume (vph)	83	380	26	37	316	82	11	308	44	41	118	38
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	9	10	9	9	16	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.98			1.00			0.99	
Flpb, ped/bikes	0.97	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.97			0.98			0.97	
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.99	
Satd. Flow (prot)	1381	3014		1334	3524			3436			3308	
Flt Permitted	0.49	1.00		0.49	1.00			0.95			0.84	
Satd. Flow (perm)	719	3014		687	3524			3255			2814	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	87	400	27	39	333	86	12	324	46	43	124	40
RTOR Reduction (vph)	0	7	0	0	35	0	0	16	0	0	24	0
Lane Group Flow (vph)	87	420	0	39	384	0	0	366	0	0	183	0
Confl. Peds. (#/hr)	53		34	34		53	67		28	28		67
Heavy Vehicles (%)	8%	5%	0%	14%	6%	1%	0%	9%	20%	5%	15%	5%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	31.0	31.0		31.0	31.0			26.0			26.0	
Effective Green, g (s)	31.0	31.0		31.0	31.0			26.0			26.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48			0.40			0.40	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	343	1437		328	1681			1302			1126	
v/s Ratio Prot		c0.14			0.11							
v/s Ratio Perm	0.12			0.06				c0.11			0.07	
v/c Ratio	0.25	0.29		0.12	0.23			0.28			0.16	
Uniform Delay, d1	10.1	10.3		9.4	10.0			13.2			12.5	
Progression Factor	1.58	1.62		0.83	0.81			0.52			0.64	
Incremental Delay, d2	1.7	0.5		0.7	0.3			0.5			0.3	
Delay (s)	17.7	17.3		8.4	8.4			7.3			8.3	
Level of Service	B	B		A	A			A			A	
Approach Delay (s)		17.4			8.4			7.3			8.3	
Approach LOS		B			A			A			A	

Intersection Summary			
HCM Average Control Delay	11.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.29		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	58.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1039: 111th Street & Indiana Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰↱			✢			✢	
Volume (vph)	98	293	98	104	314	104	79	84	88	88	84	79
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	16	12	12	16	12
Total Lost time (s)		5.0	5.0		5.0			5.0			5.0	
Lane Util. Factor		1.00	1.00		0.95			1.00			1.00	
Frt		1.00	0.85		0.97			0.95			0.96	
Flt Protected		0.99	1.00		0.99			0.98			0.98	
Satd. Flow (prot)		1637	1409		3024			1822			1828	
Flt Permitted		0.75	1.00		0.76			0.81			0.78	
Satd. Flow (perm)		1247	1409		2316			1497			1448	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	109	326	109	116	349	116	88	93	98	98	93	88
RTOR Reduction (vph)	0	0	52	0	34	0	0	30	0	0	26	0
Lane Group Flow (vph)	0	435	57	0	547	0	0	249	0	0	253	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm		Perm	Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)		34.0	34.0		34.0			21.0			21.0	
Effective Green, g (s)		34.0	34.0		34.0			21.0			21.0	
Actuated g/C Ratio		0.52	0.52		0.52			0.32			0.32	
Clearance Time (s)		5.0	5.0		5.0			5.0			5.0	
Lane Grp Cap (vph)		652	737		1211			484			468	
v/s Ratio Prot												
v/s Ratio Perm		c0.35	0.04		0.24			0.17			c0.17	
v/c Ratio		0.67	0.08		0.45			0.51			0.54	
Uniform Delay, d1		11.4	7.7		9.7			17.9			18.0	
Progression Factor		2.01	5.61		0.39			1.00			1.00	
Incremental Delay, d2		5.2	0.2		1.2			3.9			4.4	
Delay (s)		28.1	43.4		4.9			21.7			22.5	
Level of Service		C	D		A			C			C	
Approach Delay (s)		31.2			4.9			21.7			22.5	
Approach LOS		C			A			C			C	

Intersection Summary			
HCM Average Control Delay	19.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	70.8%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1040: 111th Street & Martin Luther King Jr Drive

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			↰↑↱			↰↑↱	
Volume (vph)	72	378	19	15	417	63	28	103	41	43	90	89
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	15	8	16	8	8	16	8
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			1.00			0.99	
Flpb, ped/bikes	0.99	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.98			0.96			0.94	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1474	3019		1573	2999			3444			3420	
Flt Permitted	0.41	1.00		0.47	1.00			0.89			0.88	
Satd. Flow (perm)	633	3019		778	2999			3097			3029	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	80	420	21	17	463	70	31	114	46	48	100	99
RTOR Reduction (vph)	0	6	0	0	18	0	0	25	0	0	55	0
Lane Group Flow (vph)	80	435	0	17	515	0	0	166	0	0	192	0
Confl. Peds. (#/hr)	22		40	40		22	18		3	3		18
Confl. Bikes (#/hr)			2	2			1					1
Heavy Vehicles (%)	7%	5%	0%	0%	4%	2%	0%	3%	22%	0%	3%	8%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	28.0	28.0		28.0	28.0			29.0			29.0	
Effective Green, g (s)	28.0	28.0		28.0	28.0			29.0			29.0	
Actuated g/C Ratio	0.43	0.43		0.43	0.43			0.45			0.45	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	273	1300		335	1292			1382			1351	
v/s Ratio Prot		0.14			c0.17							
v/s Ratio Perm	0.13			0.02				0.05			c0.06	
v/c Ratio	0.29	0.33		0.05	0.40			0.12			0.14	
Uniform Delay, d1	12.1	12.3		10.8	12.7			10.5			10.6	
Progression Factor	1.00	1.02		1.14	0.98			1.00			0.71	
Incremental Delay, d2	2.1	0.5		0.1	0.5			0.2			0.2	
Delay (s)	14.1	13.2		12.4	12.9			10.7			7.8	
Level of Service	B	B		B	B			B			A	
Approach Delay (s)		13.3			12.9			10.7			7.8	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM Average Control Delay	11.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.27		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	58.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1041: 111th Street & Cottage Grove Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱			↰↑↱			↰↑↱	
Volume (vph)	85	453	71	94	449	284	41	332	92	222	159	49
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			0.95			0.95	
Frt		0.98			0.95			0.97			0.98	
Flt Protected		0.99			0.99			1.00			0.97	
Satd. Flow (prot)		3178			3072			3147			3121	
Flt Permitted		0.64			0.74			0.89			0.63	
Satd. Flow (perm)		2051			2284			2813			2013	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	94	503	79	104	499	316	46	369	102	247	177	54
RTOR Reduction (vph)	0	16	0	0	104	0	0	33	0	0	15	0
Lane Group Flow (vph)	0	660	0	0	815	0	0	484	0	0	463	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm			pm+pt			Perm		
Protected Phases		4			8		5	2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		26.0			26.0			29.0			20.0	
Effective Green, g (s)		26.0			26.0			29.0			20.0	
Actuated g/C Ratio		0.40			0.40			0.45			0.31	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		820			914			1286			619	
v/s Ratio Prot								c0.03				
v/s Ratio Perm		0.32			c0.36			0.13			c0.23	
v/c Ratio		0.81			0.89			0.38			0.96dl	
Uniform Delay, d1		17.3			18.2			12.0			20.2	
Progression Factor		1.74			1.00			1.00			0.89	
Incremental Delay, d2		8.2			12.8			0.8			8.0	
Delay (s)		38.1			31.0			12.8			26.0	
Level of Service		D			C			B			C	
Approach Delay (s)		38.1			31.0			12.8			26.0	
Approach LOS		D			C			B			C	

Intersection Summary			
HCM Average Control Delay	28.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	87.6%	ICU Level of Service	E
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1042: 111th Street & Ellis Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↑↱			↰↑↑↱			↰↑↱			↰↑↱	
Volume (vph)	0	722	118	45	751	0	132	0	70	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	10	10	12	12	12	12	10	10	10
Total Lost time (s)		5.0			5.0			5.0				
Lane Util. Factor		0.95			0.95			1.00				
Frt		0.98			1.00			0.95				
Flt Protected		1.00			1.00			0.97				
Satd. Flow (prot)		2976			3031			1582				
Flt Permitted		1.00			0.84			0.80				
Satd. Flow (perm)		2976			2542			1311				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	802	131	50	834	0	147	0	78	0	0	0
RTOR Reduction (vph)	0	18	0	0	0	0	0	21	0	0	0	0
Lane Group Flow (vph)	0	915	0	0	884	0	0	204	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	custom			Perm			Perm			Perm		
Protected Phases		4 5 6 11			8			2			2	
Permitted Phases	4 6 11			8			2			2		
Actuated Green, G (s)		65.0			33.0			16.0				
Effective Green, g (s)		58.0			33.0			16.0				
Actuated g/C Ratio		0.64			0.37			0.18				
Clearance Time (s)					5.0			5.0				
Lane Grp Cap (vph)		1918			932			233				
v/s Ratio Prot		c0.31										
v/s Ratio Perm					c0.35			c0.16				
v/c Ratio		0.48			0.95			0.87				
Uniform Delay, d1		8.2			27.7			36.0				
Progression Factor		0.04			1.57			1.00				
Incremental Delay, d2		0.4			17.4			33.6				
Delay (s)		0.7			60.9			69.6				
Level of Service		A			E			E				
Approach Delay (s)		0.7			60.9			69.6			0.0	
Approach LOS		A			E			E			A	

Intersection Summary			
HCM Average Control Delay	34.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	73.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1043: 111th Street & Doty Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑↱		↰	↑↑	↱		✥		↰	↑	↱
Volume (vph)	123	501	187	274	642	183	101	20	185	78	7	75
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	10	12	12	12	12	16	12	12	12	12
Total Lost time (s)	3.0	5.0		3.0	5.0	3.0		5.0		3.0	5.0	3.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00		1.00	1.00	1.00
Frt	1.00	0.96		1.00	1.00	0.85		0.92		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.98		0.95	1.00	1.00
Satd. Flow (prot)	1520	3020		1629	3257	1457		1755		1629	1714	1457
Flt Permitted	0.32	1.00		0.20	1.00	1.00		0.89		0.40	1.00	1.00
Satd. Flow (perm)	516	3020		342	3257	1457		1582		685	1714	1457
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	137	557	208	304	713	203	112	22	206	87	8	83
RTOR Reduction (vph)	0	42	0	0	0	104	0	75	0	0	0	45
Lane Group Flow (vph)	137	723	0	304	713	99	0	265	0	87	8	38
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	pm+pt			pm+pt		pm+ov	pm+pt			pm+pt		pm+ov
Protected Phases	7	4		3	8	1	5	2		1	6	7
Permitted Phases	4			8		8	2			6		6
Actuated Green, G (s)	40.1	30.7		47.8	35.4	44.0		20.6		32.2	32.2	41.6
Effective Green, g (s)	40.1	30.7		47.8	35.4	44.0		20.6		32.2	32.2	41.6
Actuated g/C Ratio	0.45	0.34		0.53	0.39	0.49		0.23		0.36	0.36	0.46
Clearance Time (s)	3.0	5.0		3.0	5.0	3.0		5.0		3.0	5.0	3.0
Vehicle Extension (s)	4.0	3.0		4.0	3.0	3.0		4.0		3.0	4.0	4.0
Lane Grp Cap (vph)	335	1030		383	1281	712		362		335	613	673
v/s Ratio Prot	0.04	0.24		c0.12	0.22	0.01				c0.02	0.00	0.01
v/s Ratio Perm	0.14			c0.30		0.05		c0.17		0.07		0.02
v/c Ratio	0.41	0.70		0.79	0.56	0.14		0.73		0.26	0.01	0.06
Uniform Delay, d1	15.4	25.7		14.6	21.2	12.6		32.1		21.3	18.6	13.4
Progression Factor	1.90	1.58		1.00	1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2	1.0	3.6		11.4	1.7	0.1		7.9		0.4	0.0	0.0
Delay (s)	30.2	44.3		26.0	23.0	12.7		40.1		21.7	18.7	13.4
Level of Service	C	D		C	C	B		D		C	B	B
Approach Delay (s)		42.1			22.0			40.1			17.7	
Approach LOS		D			C			D			B	

Intersection Summary			
HCM Average Control Delay	30.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	74.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
1044: 111th Street & Bishop Ford Freeway EB Ramps

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↑↑					↰		↱
Volume (veh/h)	0	517	247	6	529	0	0	0	0	32	0	570
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	574	274	7	588	0	0	0	0	36	0	633
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		498										
pX, platoon unblocked												
vC, conflicting volume	588			574			882	1176	287	888	1176	294
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	588			574			882	1176	287	888	1176	294
tC, single (s)	4.2			4.2			7.6	6.6	7.0	7.6	6.6	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			100	100	100	85	100	9
cM capacity (veh/h)	963			974			20	184	701	232	184	694

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1	SB 2
Volume Total	287	287	274	203	392	36	633
Volume Left	0	0	0	7	0	36	0
Volume Right	0	0	274	0	0	0	633
cSH	1700	1700	1700	974	1700	232	694
Volume to Capacity	0.17	0.17	0.16	0.01	0.23	0.15	0.91
Queue Length 95th (ft)	0	0	0	1	0	13	302
Control Delay (s)	0.0	0.0	0.0	0.4	0.0	23.3	40.8
Lane LOS				A		C	E
Approach Delay (s)	0.0			0.1		39.9	
Approach LOS						E	

Intersection Summary			
Average Delay	12.7		
Intersection Capacity Utilization	59.5%	ICU Level of Service	B
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
1045: 111th Street & Bishop Ford Freeway WB Ramps

1/14/2013

	↗	↘	↖	↑	↓	↙
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰↰		↰			
Sign Control	Stop			Stop	Stop	
Volume (vph)	549	0	535	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	610	0	594	0	0	0

Direction, Lane #	EB 1	EB 2	NB 1
Volume Total (vph)	305	305	594
Volume Left (vph)	305	305	594
Volume Right (vph)	0	0	0
Hadj (s)	0.58	0.58	0.29
Departure Headway (s)	6.9	6.9	5.8
Degree Utilization, x	0.59	0.59	0.95
Capacity (veh/h)	500	499	618
Control Delay (s)	18.2	18.2	48.3
Approach Delay (s)	18.2		48.3
Approach LOS	C		E

Intersection Summary			
Delay	33.1		
HCM Level of Service	D		
Intersection Capacity Utilization	54.5%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Signalized Intersection Capacity Analysis
1046: 115th Street & Marshield Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱		↰	↑↑						↰↑↱	
Volume (vph)	0	340	46	126	323	0	0	0	0	72	15	42
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	12	12	12	12	12
Total Lost time (s)		3.0		4.0	4.0						5.0	
Lane Util. Factor		0.95		1.00	0.95						0.95	
Frt		0.98		1.00	1.00						0.95	
Flt Protected		1.00		0.95	1.00						0.97	
Satd. Flow (prot)		3092		1574	3149						3014	
Flt Permitted		1.00		0.45	1.00						0.97	
Satd. Flow (perm)		3092		746	3149						3014	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	378	51	140	359	0	0	0	0	80	17	47
RTOR Reduction (vph)	0	12	0	0	0	0	0	0	0	0	32	0
Lane Group Flow (vph)	0	417	0	140	359	0	0	0	0	0	112	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type				pm+pt						Split		
Protected Phases		4		3	8					6	6	
Permitted Phases				8								
Actuated Green, G (s)		36.0		49.0	49.0						27.0	
Effective Green, g (s)		36.0		49.0	49.0						27.0	
Actuated g/C Ratio		0.42		0.58	0.58						0.32	
Clearance Time (s)		3.0		4.0	4.0						5.0	
Lane Grp Cap (vph)		1310		527	1815						957	
v/s Ratio Prot		c0.13		c0.03	0.11						c0.04	
v/s Ratio Perm				0.12								
v/c Ratio		0.32		0.27	0.20						0.12	
Uniform Delay, d1		16.3		11.3	8.6						20.6	
Progression Factor		1.00		0.27	0.25						1.00	
Incremental Delay, d2		0.6		1.2	0.2						0.2	
Delay (s)		17.0		4.2	2.4						20.8	
Level of Service		B		A	A						C	
Approach Delay (s)		17.0			2.9			0.0			20.8	
Approach LOS		B			A			A			C	

Intersection Summary			
HCM Average Control Delay	10.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.23		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	33.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1047: 115th Street & Ashland Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Lane Configurations	↰	↑↑			↑↱			↰↑↱				
Volume (vph)	68	344	0	0	400	76	49	65	42	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	11	11	12	12	12	12	12	12
Total Lost time (s)	5.0	5.0			3.0			5.0				
Lane Util. Factor	1.00	0.95			0.95			0.91				
Frt	1.00	1.00			0.98			0.96				
Flt Protected	0.95	1.00			1.00			0.98				
Satd. Flow (prot)	1629	3257			3073			4420				
Flt Permitted	0.38	1.00			1.00			0.98				
Satd. Flow (perm)	656	3257			3073			4420				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	76	382	0	0	444	84	54	72	47	0	0	0
RTOR Reduction (vph)	0	0	0	0	18	0	0	32	0	0	0	0
Lane Group Flow (vph)	76	382	0	0	510	0	0	141	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	pm+pt						Split					
Protected Phases	7	4			8		2	2				
Permitted Phases	4											
Actuated Green, G (s)	48.0	48.0			35.0			27.0				
Effective Green, g (s)	48.0	48.0			35.0			27.0				
Actuated g/C Ratio	0.56	0.56			0.41			0.32				
Clearance Time (s)	5.0	5.0			3.0			5.0				
Lane Grp Cap (vph)	485	1839			1265			1404				
v/s Ratio Prot	0.02	c0.12			c0.17			c0.03				
v/s Ratio Perm	0.07											
v/c Ratio	0.16	0.21			0.40			0.10				
Uniform Delay, d1	12.1	9.1			17.6			20.4				
Progression Factor	0.34	0.33			1.00			1.00				
Incremental Delay, d2	0.7	0.2			1.0			0.1				
Delay (s)	4.7	3.3			18.6			20.6				
Level of Service	A	A			B			C				
Approach Delay (s)		3.5			18.6			20.6			0.0	
Approach LOS		A			B			C			A	

Intersection Summary			
HCM Average Control Delay	12.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.25		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	33.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1048: 115th Street & Racine Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↑↱			↰↑↑↱			↰↑↱			↰↑↱	
Volume (vph)	39	307	39	31	243	31	118	85	52	56	91	126
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	10	12	12	15	12	12	15	12
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			1.00			1.00	
Frt		0.98			0.98			0.97			0.94	
Flt Protected		0.99			0.99			0.98			0.99	
Satd. Flow (prot)		2979			2979			1792			1750	
Flt Permitted		0.89			0.88			0.75			0.89	
Satd. Flow (perm)		2659			2645			1373			1569	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	43	341	43	34	270	34	131	94	58	62	101	140
RTOR Reduction (vph)	0	13	0	0	13	0	0	14	0	0	48	0
Lane Group Flow (vph)	0	414	0	0	325	0	0	269	0	0	255	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		23.0			23.0			32.0			32.0	
Effective Green, g (s)		23.0			23.0			32.0			32.0	
Actuated g/C Ratio		0.35			0.35			0.49			0.49	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		941			936			676			772	
v/s Ratio Prot												
v/s Ratio Perm		c0.16			0.12			c0.20			0.16	
v/c Ratio		0.44			0.35			0.40			0.33	
Uniform Delay, d1		16.1			15.5			10.4			10.0	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		1.5			1.0			1.7			1.1	
Delay (s)		17.6			16.5			12.2			11.2	
Level of Service		B			B			B			B	
Approach Delay (s)		17.6			16.5			12.2			11.2	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	14.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	63.1%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1049: 115th Street & Halsted Street

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↑	↱	↰	↑↑	↱
Volume (vph)	169	202	39	50	176	62	71	1001	70	75	428	80
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	12	10	16	12	9	10	9	9	10	9
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00	0.98	1.00	1.00	0.96
Flpb, ped/bikes	0.99	1.00		1.00	1.00		0.99	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.98		1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1548	3005		1592	3512		1486	3040	1347	1494	3011	1271
Flt Permitted	0.59	1.00		0.58	1.00		0.43	1.00	1.00	0.12	1.00	1.00
Satd. Flow (perm)	954	3005		975	3512		675	3040	1347	197	3011	1271
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	178	213	41	53	185	65	75	1054	74	79	451	84
RTOR Reduction (vph)	0	19	0	0	41	0	0	0	44	0	0	51
Lane Group Flow (vph)	178	235	0	53	209	0	75	1054	30	79	451	33
Confl. Peds. (#/hr)	31		7	7		31	37		12	12		37
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	2%	4%	0%	0%	6%	2%	3%	5%	0%	3%	6%	4%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	32.0	27.0		32.0	27.0		38.0	33.0	33.0	38.0	33.0	33.0
Effective Green, g (s)	30.0	28.0		30.0	28.0		36.0	33.0	33.0	36.0	33.0	33.0
Actuated g/C Ratio	0.35	0.33		0.35	0.33		0.42	0.39	0.39	0.42	0.39	0.39
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)	365	990		373	1157		324	1180	523	144	1169	493
v/s Ratio Prot	c0.02	0.08		0.01	0.06		0.01	c0.35		c0.03	0.15	
v/s Ratio Perm	c0.15			0.04			0.09		0.02	0.21		0.03
v/c Ratio	0.49	0.24		0.14	0.18		0.23	0.89	0.06	0.55	0.39	0.07
Uniform Delay, d1	20.6	20.7		18.4	20.3		15.0	24.3	16.3	17.5	18.7	16.3
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	2.05	0.61	0.83
Incremental Delay, d2	4.6	0.6		0.8	0.3		1.7	10.5	0.2	13.0	0.9	0.2
Delay (s)	25.2	21.3		19.2	20.7		16.6	34.8	16.5	48.9	12.2	13.7
Level of Service	C	C		B	C		B	C	B	D	B	B
Approach Delay (s)		22.9			20.4			32.6			17.1	
Approach LOS		C			C			C			B	

Intersection Summary			
HCM Average Control Delay	25.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	70.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1050: 115th Street & Wentworth Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱		↰	↱		↰	↱
Volume (vph)	38	256	18	14	216	8	35	113	25	20	57	41
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	16	12	12	16	12
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frpb, ped/bikes		1.00	0.96		1.00	0.97		1.00	0.99		1.00	0.98
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frt		1.00	0.85		1.00	0.85		1.00	0.85		1.00	0.85
Flt Protected		0.99	1.00		1.00	1.00		0.99	1.00		0.99	1.00
Satd. Flow (prot)		1929	1382		1950	1331		1970	1452		1928	1430
Flt Permitted		0.94	1.00		0.98	1.00		0.93	1.00		0.93	1.00
Satd. Flow (perm)		1829	1382		1910	1331		1860	1452		1811	1430
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	40	269	19	15	227	8	37	119	26	21	60	43
RTOR Reduction (vph)	0	0	10	0	0	4	0	0	15	0	0	25
Lane Group Flow (vph)	0	309	9	0	242	4	0	156	11	0	81	18
Confl. Peds. (#/hr)	5		21	21		5	9		1	1		9
Heavy Vehicles (%)	5%	5%	6%	7%	4%	12%	6%	1%	4%	0%	6%	5%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)		30.0	30.0		30.0	30.0		27.0	27.0		27.0	27.0
Effective Green, g (s)		30.0	30.0		30.0	30.0		27.0	27.0		27.0	27.0
Actuated g/C Ratio		0.46	0.46		0.46	0.46		0.42	0.42		0.42	0.42
Clearance Time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		844	638		882	614		773	603		752	594
v/s Ratio Prot												
v/s Ratio Perm		c0.17	0.01		0.13	0.00		c0.08	0.01		0.04	0.01
v/c Ratio		0.37	0.01		0.27	0.01		0.20	0.02		0.11	0.03
Uniform Delay, d1		11.3	9.5		10.8	9.4		12.1	11.2		11.6	11.2
Progression Factor		1.00	1.00		0.48	0.39		1.38	1.85		0.94	0.85
Incremental Delay, d2		1.2	0.0		0.8	0.0		0.6	0.1		0.3	0.1
Delay (s)		12.6	9.5		5.9	3.7		17.3	20.8		11.2	9.6
Level of Service		B	A		A	A		B	C		B	A
Approach Delay (s)		12.4			5.8			17.8			10.6	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM Average Control Delay	11.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.29		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1051: 115th Street & State Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	66	242	10	15	200	30	13	247	26	30	70	30
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	0.98		1.00	0.99		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1520	3022		1520	2981		1520	2996		1520	2904	
Flt Permitted	0.95	1.00		0.58	1.00		0.68	1.00		0.55	1.00	
Satd. Flow (perm)	1520	3022		928	2981		1091	2996		884	2904	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	73	269	11	17	222	33	14	274	29	33	78	33
RTOR Reduction (vph)	0	5	0	0	18	0	0	12	0	0	19	0
Lane Group Flow (vph)	73	275	0	17	237	0	14	291	0	33	92	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Prot			Perm			Perm			Perm		
Protected Phases	7	4			8			2			6	
Permitted Phases				8			2			6		
Actuated Green, G (s)	7.0	32.0		22.0	22.0		27.0	27.0		27.0	27.0	
Effective Green, g (s)	7.0	32.0		22.0	22.0		27.0	27.0		27.0	27.0	
Actuated g/C Ratio	0.11	0.49		0.34	0.34		0.42	0.42		0.42	0.42	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	164	1488		314	1009		453	1244		367	1206	
v/s Ratio Prot	c0.05	0.09			c0.08			c0.10			0.03	
v/s Ratio Perm				0.02			0.01			0.04		
v/c Ratio	0.45	0.19		0.05	0.24		0.03	0.23		0.09	0.08	
Uniform Delay, d1	27.2	9.2		14.5	15.5		11.3	12.3		11.5	11.5	
Progression Factor	0.83	0.42		0.83	0.75		0.58	0.65		1.08	1.11	
Incremental Delay, d2	8.3	0.3		0.3	0.5		0.1	0.4		0.5	0.1	
Delay (s)	30.9	4.1		12.4	12.2		6.7	8.4		13.0	12.8	
Level of Service	C	A		B	B		A	A		B	B	
Approach Delay (s)		9.7			12.2			8.3			12.9	
Approach LOS		A			B			A			B	

Intersection Summary			
HCM Average Control Delay	10.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	35.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			↰↑↱			↰↑↱	
Volume (vph)	37	253	16	97	216	43	26	286	20	25	143	25
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	12	12	12	12	12	12
Total Lost time (s)	4.0	4.0		3.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frt	1.00	0.99		1.00	0.97			0.99			0.98	
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.99	
Satd. Flow (prot)	1520	3013		1520	2964			3215			3173	
Flt Permitted	0.58	1.00		0.95	1.00			0.92			0.89	
Satd. Flow (perm)	921	3013		1520	2964			2980			2839	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	41	281	18	108	240	48	29	318	22	28	159	28
RTOR Reduction (vph)	0	7	0	0	25	0	0	7	0	0	17	0
Lane Group Flow (vph)	41	292	0	108	263	0	0	362	0	0	198	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Prot			Perm			Perm		
Protected Phases		4		3	8			2			6	
Permitted Phases	4						2			6		
Actuated Green, G (s)	20.0	20.0		6.0	29.0			25.0			25.0	
Effective Green, g (s)	20.0	20.0		6.0	29.0			25.0			25.0	
Actuated g/C Ratio	0.31	0.31		0.09	0.45			0.38			0.38	
Clearance Time (s)	4.0	4.0		3.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	283	927		140	1322			1146			1092	
v/s Ratio Prot		c0.10		c0.07	0.09							
v/s Ratio Perm	0.04							c0.12			0.07	
v/c Ratio	0.14	0.32		0.77	0.20			0.32			0.18	
Uniform Delay, d1	16.3	17.2		28.8	10.9			14.0			13.2	
Progression Factor	0.61	0.60		1.35	0.97			0.72			0.76	
Incremental Delay, d2	1.1	0.9		28.9	0.3			0.7			0.4	
Delay (s)	11.0	11.2		67.9	10.9			10.7			10.4	
Level of Service	B	B		E	B			B			B	
Approach Delay (s)		11.2			26.4			10.7			10.4	
Approach LOS		B			C			B			B	

Intersection Summary			
HCM Average Control Delay	15.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	42.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1053: 115th Street & Indiana Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱			↰↑↑↱				
Volume (vph)	14	264	14	70	330	70	25	94	162	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	12	14	12	10	15	10
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			0.95				
Frt		0.99			0.98			0.91				
Flt Protected		1.00			0.99			1.00				
Satd. Flow (prot)		1585			1556			3159				
Flt Permitted		0.97			0.91			1.00				
Satd. Flow (perm)		1548			1425			3159				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	16	293	16	78	367	78	28	104	180	0	0	0
RTOR Reduction (vph)	0	2	0	0	8	0	0	140	0	0	0	0
Lane Group Flow (vph)	0	323	0	0	515	0	0	172	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm			Perm					
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Actuated Green, G (s)		42.4			42.4			14.6				
Effective Green, g (s)		42.4			42.4			14.6				
Actuated g/C Ratio		0.65			0.65			0.22				
Clearance Time (s)		4.0			4.0			4.0				
Vehicle Extension (s)		3.0			3.0			8.0				
Lane Grp Cap (vph)		1010			930			710				
v/s Ratio Prot												
v/s Ratio Perm		0.21			c0.36			0.05				
v/c Ratio		0.32			0.55			0.24				
Uniform Delay, d1		5.0			6.2			20.7				
Progression Factor		2.07			1.00			1.00				
Incremental Delay, d2		0.8			2.4			0.8				
Delay (s)		11.1			8.5			21.4				
Level of Service		B			A			C				
Approach Delay (s)		11.1			8.5			21.4			0.0	
Approach LOS		B			A			C			A	

Intersection Summary			
HCM Average Control Delay	12.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	62.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
1054: 115th Street & Martin Luther King Jr Drive

1/14/2013

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰↑	↑↱		↰	↱
Volume (veh/h)	81	345	392	44	66	75
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	85	363	413	46	69	79
Pedestrians		3	5		21	
Lane Width (ft)		16.0	16.0		10.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		0	1		1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		1319	491			
pX, platoon unblocked	0.87				0.87	0.87
vC, conflicting volume	480				995	460
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	325				919	302
tC, single (s)	4.2				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.3				3.5	3.3
p0 queue free %	92				70	87
cM capacity (veh/h)	1010				235	629

Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total	448	459	69	79
Volume Left	85	0	69	0
Volume Right	0	46	0	79
cSH	1010	1700	235	629
Volume to Capacity	0.08	0.27	0.30	0.13
Queue Length 95th (ft)	7	0	30	11
Control Delay (s)	2.5	0.0	26.7	11.5
Lane LOS	A		D	B
Approach Delay (s)	2.5	0.0	18.6	
Approach LOS			C	

Intersection Summary			
Average Delay	3.7		
Intersection Capacity Utilization	63.5%	ICU Level of Service	B
Analysis Period (min)	15		

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↱			↰	⋎	
Volume (vph)	471	1	14	644	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0			4.0		
Lane Util. Factor	1.00			1.00		
Frt	1.00			1.00		
Flt Protected	1.00			1.00		
Satd. Flow (prot)	1714			1712		
Flt Permitted	1.00			0.99		
Satd. Flow (perm)	1714			1690		
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	523	1	16	716	0	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	524	0	0	732	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%
Turn Type			Perm			
Protected Phases	1 2 4			4	3	
Permitted Phases			4			
Actuated Green, G (s)	63.0			31.0		
Effective Green, g (s)	59.0			31.0		
Actuated g/C Ratio	0.69			0.36		
Clearance Time (s)				4.0		
Lane Grp Cap (vph)	1190			616		
v/s Ratio Prot	c0.31					
v/s Ratio Perm				c0.43		
v/c Ratio	0.44			1.19		
Uniform Delay, d1	5.7			27.0		
Progression Factor	0.05			1.00		
Incremental Delay, d2	0.3			100.3		
Delay (s)	0.6			127.3		
Level of Service	A			F		
Approach Delay (s)	0.6			127.3	0.0	
Approach LOS	A			F	A	

Intersection Summary			
HCM Average Control Delay	74.5	HCM Level of Service	E
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	51.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
1056: 115th Street & Bishop Ford Fwy

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱			↰						↰	↱
Volume (veh/h)	0	182	191	25	552	0	0	0	0	3	0	254
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	202	212	28	613	0	0	0	0	3	0	282
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	613			202			977	977	207	770	871	613
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	613			202			977	977	207	770	871	613
tC, single (s)	4.1			5.5			7.5	6.5	6.9	7.5	6.5	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.9			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			97			100	100	100	99	100	34
cM capacity (veh/h)	976			988			70	246	805	287	283	430

Direction, Lane #	EB 1	EB 2	WB 1	SB 1	SB 2
Volume Total	135	280	641	3	282
Volume Left	0	0	28	3	0
Volume Right	0	212	0	0	282
cSH	1700	1700	988	287	430
Volume to Capacity	0.08	0.16	0.03	0.01	0.66
Queue Length 95th (ft)	0	0	2	1	115
Control Delay (s)	0.0	0.0	0.7	17.7	27.9
Lane LOS			A	C	D
Approach Delay (s)	0.0		0.7	27.8	
Approach LOS				D	

Intersection Summary			
Average Delay	6.3		
Intersection Capacity Utilization	57.2%	ICU Level of Service	B
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
1057: 115th Street &

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰↰		↰			
Sign Control	Stop			Stop	Stop	
Volume (vph)	185	0	577	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	206	0	641	0	0	0

Direction, Lane #	EB 1	EB 2	NB 1
Volume Total (vph)	103	103	641
Volume Left (vph)	103	103	641
Volume Right (vph)	0	0	0
Hadj (s)	0.58	0.58	0.29
Departure Headway (s)	6.8	6.8	4.8
Degree Utilization, x	0.19	0.19	0.86
Capacity (veh/h)	511	511	735
Control Delay (s)	10.2	10.2	30.0
Approach Delay (s)	10.2		30.0
Approach LOS	B		D

Intersection Summary			
Delay	25.2		
HCM Level of Service	D		
Intersection Capacity Utilization	46.0%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Signalized Intersection Capacity Analysis
1058: 119th Street & Marshield Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↰↑					↰	↰↑↱	↱
Volume (vph)	0	437	210	157	465	0	0	0	0	123	117	300
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	12	13	12	12	12	12	10	10	11
Total Lost time (s)		6.0	6.0		6.0					6.0	6.0	6.0
Lane Util. Factor		0.95	1.00		0.95					0.86	0.81	0.86
Frpb, ped/bikes		1.00	0.98		1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00					1.00	1.00	1.00
Frt		1.00	0.85		1.00					1.00	0.93	0.85
Flt Protected		1.00	1.00		0.99					0.95	0.99	1.00
Satd. Flow (prot)		2978	1202		3372					1346	3691	1122
Flt Permitted		1.00	1.00		0.99					0.95	0.99	1.00
Satd. Flow (perm)		2978	1202		3372					1346	3691	1122
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	460	221	165	489	0	0	0	0	129	123	316
RTOR Reduction (vph)	0	0	160	0	0	0	0	0	0	0	101	94
Lane Group Flow (vph)	0	460	61	0	654	0	0	0	0	71	238	64
Confl. Peds. (#/hr)	5		3	3		5						
Heavy Vehicles (%)	0%	11%	9%	2%	4%	0%	0%	0%	0%	2%	2%	2%
Parking (#/hr)			0									0
Turn Type			Perm	Split						Split		custom
Protected Phases		2		10 12 14	10 12 14					4	4	
Permitted Phases			2									4 2
Actuated Green, G (s)		39.2	39.2		73.3					19.6	19.6	64.8
Effective Green, g (s)		39.2	39.2		73.3					19.6	19.6	64.8
Actuated g/C Ratio		0.25	0.25		0.46					0.12	0.12	0.40
Clearance Time (s)		6.0	6.0							6.0	6.0	
Vehicle Extension (s)		3.0	3.0							3.0	3.0	
Lane Grp Cap (vph)		730	294		1545					165	452	454
v/s Ratio Prot		c0.15			c0.19					0.05	c0.06	
v/s Ratio Perm			0.05									0.06
v/c Ratio		0.63	0.21		0.42					0.43	0.53	0.14
Uniform Delay, d1		53.9	48.0		29.1					65.0	65.8	30.0
Progression Factor		1.00	1.00		0.02					1.00	1.00	1.00
Incremental Delay, d2		4.1	1.6		0.1					1.8	1.1	0.1
Delay (s)		58.0	49.6		0.7					66.8	67.0	30.2
Level of Service		E	D		A					E	E	C
Approach Delay (s)		55.3			0.7			0.0			56.7	
Approach LOS		E			A			A			E	

Intersection Summary			
HCM Average Control Delay	36.9	HCM Level of Service	D
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	29.9
Intersection Capacity Utilization	53.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1059: 119th Street & Ashland Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑			↑↑	↱	↰	↰↑↱				
Volume (vph)	212	348	0	0	384	91	238	150	135	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	13	12	12	11	12	13	13	14	12	12	12
Total Lost time (s)	6.0	6.0			6.0	6.0	6.0	6.0				
Lane Util. Factor	1.00	0.95			0.95	1.00	0.91	0.91				
Frt	1.00	1.00			1.00	0.85	1.00	0.94				
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.99				
Satd. Flow (prot)	1574	3366			3149	1457	1531	3009				
Flt Permitted	0.95	1.00			1.00	1.00	0.95	0.99				
Satd. Flow (perm)	1574	3366			3149	1457	1531	3009				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	236	387	0	0	427	101	264	167	150	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	81	0	53	0	0	0	0
Lane Group Flow (vph)	236	387	0	0	427	20	198	330	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Split					Perm	Split					
Protected Phases	2 4 8	2 4 8			10		12	12				
Permitted Phases						10						
Actuated Green, G (s)	78.7	78.7			32.3	32.3	22.2	22.2				
Effective Green, g (s)	78.7	78.7			32.3	32.3	22.2	22.2				
Actuated g/C Ratio	0.49	0.49			0.20	0.20	0.14	0.14				
Clearance Time (s)					6.0	6.0	6.0	6.0				
Vehicle Extension (s)					3.0	3.0	3.0	3.0				
Lane Grp Cap (vph)	774	1656			636	294	212	417				
v/s Ratio Prot	c0.15	0.11			c0.14		c0.13	0.11				
v/s Ratio Perm						0.01						
v/c Ratio	0.30	0.23			0.67	0.07	0.93	0.79				
Uniform Delay, d1	24.3	23.3			59.0	51.7	68.2	66.7				
Progression Factor	0.07	0.08			1.00	1.00	1.00	1.00				
Incremental Delay, d2	0.2	0.1			2.8	0.1	43.4	9.9				
Delay (s)	2.0	1.9			61.7	51.8	111.5	76.6				
Level of Service	A	A			E	D	F	E				
Approach Delay (s)		1.9			59.8			88.5			0.0	
Approach LOS		A			E			F			A	

Intersection Summary			
HCM Average Control Delay	48.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	28.8
Intersection Capacity Utilization	49.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1060: 119th Street & Halsted Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑↱		↰	↑↑↱		↰	↑↑↱	
Volume (vph)	220	273	75	35	141	45	88	824	62	59	448	104
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	14	12	10	10	12	9	10	12
Total Lost time (s)	4.0	4.0	5.0	4.0	5.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.99	1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	0.99	1.00	1.00	1.00	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.96		1.00	0.99		1.00	0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1536	1556	1328	1595	1719		1525	2990		1509	2870	
Flt Permitted	0.52	1.00	1.00	0.50	1.00		0.34	1.00		0.15	1.00	
Satd. Flow (perm)	844	1556	1328	835	1719		539	2990		238	2870	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	232	287	79	37	148	47	93	867	65	62	472	109
RTOR Reduction (vph)	0	0	52	0	12	0	0	6	0	0	22	0
Lane Group Flow (vph)	232	287	27	37	183	0	93	926	0	62	559	0
Confl. Peds. (#/hr)	33		3	3		33	42		8	8		42
Confl. Bikes (#/hr)							1					1
Heavy Vehicles (%)	3%	8%	6%	0%	7%	5%	4%	5%	11%	2%	6%	9%
Turn Type	pm+pt		Perm	pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)	38.2	31.2	31.2	32.4	28.3		39.6	34.1		39.6	34.1	
Effective Green, g (s)	36.2	32.2	31.2	30.4	28.3		37.6	34.1		37.6	34.1	
Actuated g/C Ratio	0.40	0.36	0.35	0.34	0.31		0.42	0.38		0.42	0.38	
Clearance Time (s)	3.0	5.0	5.0	3.0	5.0		3.0	4.0		3.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	386	557	461	309	541		275	1134		163	1089	
v/s Ratio Prot	c0.04	0.18		0.00	0.11		0.02	c0.31		c0.02	0.19	
v/s Ratio Perm	c0.20		0.02	0.04			0.12			0.14		
v/c Ratio	0.60	0.52	0.06	0.12	0.34		0.34	0.82		0.38	0.51	
Uniform Delay, d1	20.9	22.7	19.6	20.3	23.6		16.6	25.1		17.7	21.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.6	3.4	0.2	0.2	1.7		0.7	6.5		1.5	1.7	
Delay (s)	23.5	26.1	19.8	20.4	25.3		17.3	31.6		19.2	23.2	
Level of Service	C	C	B	C	C		B	C		B	C	
Approach Delay (s)		24.3			24.5			30.3			22.8	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	26.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	89.9	Sum of lost time (s)	16.0
Intersection Capacity Utilization	72.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱		✥			✥	
Volume (vph)	44	269	16	5	182	19	35	80	16	11	44	39
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	10	10	10	12	15	12	12	16	12
Total Lost time (s)		3.0	3.0		3.0	3.0		3.0			3.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00			1.00	
Frpb, ped/bikes		1.00	0.97		1.00	0.97		1.00			0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00			1.00	
Frt		1.00	0.85		1.00	0.85		0.98			0.94	
Flt Protected		0.99	1.00		1.00	1.00		0.99			0.99	
Satd. Flow (prot)		1910	1482		1600	1198		1912			1848	
Flt Permitted		0.94	1.00		0.99	1.00		0.93			0.97	
Satd. Flow (perm)		1816	1482		1592	1198		1794			1810	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	46	283	17	5	192	20	37	84	17	12	46	41
RTOR Reduction (vph)	0	0	9	0	0	10	0	8	0	0	24	0
Lane Group Flow (vph)	0	329	8	0	197	10	0	130	0	0	75	0
Confl. Peds. (#/hr)	6		11	11		6	4		8	8		4
Confl. Bikes (#/hr)	1		1	1		1			1	1		
Heavy Vehicles (%)	0%	7%	0%	0%	5%	16%	0%	0%	0%	10%	0%	3%
Turn Type	Perm		Perm	Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)		32.0	32.0		32.0	32.0		27.0			27.0	
Effective Green, g (s)		32.0	32.0		32.0	32.0		27.0			27.0	
Actuated g/C Ratio		0.49	0.49		0.49	0.49		0.42			0.42	
Clearance Time (s)		3.0	3.0		3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)		894	730		784	590		745			752	
v/s Ratio Prot												
v/s Ratio Perm		c0.18	0.01		0.12	0.01		c0.07			0.04	
v/c Ratio		0.37	0.01		0.25	0.02		0.18			0.10	
Uniform Delay, d1		10.2	8.4		9.6	8.4		12.0			11.6	
Progression Factor		1.00	1.00		2.00	2.96		1.00			1.55	
Incremental Delay, d2		1.2	0.0		0.8	0.1		0.5			0.3	
Delay (s)		11.4	8.5		19.9	25.0		12.5			18.2	
Level of Service		B	A		B	C		B			B	
Approach Delay (s)		11.3			20.4			12.5			18.2	
Approach LOS		B			C			B			B	

Intersection Summary			
HCM Average Control Delay	14.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	55.1%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1062: 119th Street & State Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱		↰	↱		✥	
Volume (vph)	75	208	24	6	133	6	41	228	22	9	53	30
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frpb, ped/bikes		1.00	0.96		1.00	0.98		1.00	0.96		0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		0.96	
Flt Protected		0.99	1.00		1.00	1.00		0.99	1.00		1.00	
Satd. Flow (prot)		1663	1392		1604	1497		1755	1390		1653	
Flt Permitted		0.88	1.00		0.99	1.00		0.95	1.00		0.97	
Satd. Flow (perm)		1481	1392		1585	1497		1680	1390		1612	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	79	219	25	6	140	6	43	240	23	9	56	32
RTOR Reduction (vph)	0	0	16	0	0	4	0	0	12	0	16	0
Lane Group Flow (vph)	0	298	9	0	146	2	0	283	11	0	81	0
Confl. Peds. (#/hr)	11		17	17		11	4		17	17		4
Confl. Bikes (#/hr)	1		1	1		1	1					1
Heavy Vehicles (%)	0%	9%	5%	33%	11%	0%	6%	1%	6%	0%	0%	8%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		23.0	23.0		23.0	23.0		32.0	32.0		32.0	
Effective Green, g (s)		23.0	23.0		23.0	23.0		32.0	32.0		32.0	
Actuated g/C Ratio		0.35	0.35		0.35	0.35		0.49	0.49		0.49	
Clearance Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	
Lane Grp Cap (vph)		524	493		561	530		827	684		794	
v/s Ratio Prot												
v/s Ratio Perm		c0.20	0.01		0.09	0.00		c0.17	0.01		0.05	
v/c Ratio		0.57	0.02		0.26	0.00		0.34	0.02		0.10	
Uniform Delay, d1		17.0	13.7		14.9	13.6		10.1	8.4		8.8	
Progression Factor		1.90	3.09		0.92	0.93		0.32	0.30		1.02	
Incremental Delay, d2		4.2	0.1		1.1	0.0		0.9	0.0		0.3	
Delay (s)		36.6	42.2		14.9	12.7		4.1	2.5		9.3	
Level of Service		D	D		B	B		A	A		A	
Approach Delay (s)		37.0			14.8			4.0			9.3	
Approach LOS		D			B			A			A	

Intersection Summary			
HCM Average Control Delay	18.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	63.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		✥			✥			↰	↱
Volume (vph)	162	21	31	9	18	6	26	286	19	6	201	98
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	14	12	12	16	12	12	16	12
Total Lost time (s)		3.0	3.0		3.0			3.0			3.0	3.0
Lane Util. Factor		1.00	1.00		1.00			1.00			1.00	1.00
Frpb, ped/bikes		1.00	0.97		0.99			1.00			1.00	0.95
Flpb, ped/bikes		0.98	1.00		0.99			1.00			1.00	1.00
Frt		1.00	0.85		0.97			0.99			1.00	0.85
Flt Protected		0.96	1.00		0.99			1.00			1.00	1.00
Satd. Flow (prot)		1768	1390		1813			1974			1873	1328
Flt Permitted		0.80	1.00		0.93			0.97			0.99	1.00
Satd. Flow (perm)		1475	1390		1711			1923			1859	1328
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	180	23	34	10	20	7	29	318	21	7	223	109
RTOR Reduction (vph)	0	0	20	0	5	0	0	4	0	0	0	55
Lane Group Flow (vph)	0	203	14	0	32	0	0	364	0	0	230	54
Confl. Peds. (#/hr)	49		22	22		49	34		17	17		34
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	9%	0%	7%	0%	0%	0%	0%	2%	0%	0%	9%	9%
Turn Type	pm+pt		Perm	Perm			Perm			Perm		Perm
Protected Phases	7	4			8			2			6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)		27.0	27.0		17.0			32.0			32.0	32.0
Effective Green, g (s)		27.0	27.0		17.0			32.0			32.0	32.0
Actuated g/C Ratio		0.42	0.42		0.26			0.49			0.49	0.49
Clearance Time (s)		3.0	3.0		3.0			3.0			3.0	3.0
Lane Grp Cap (vph)		649	577		447			947			915	654
v/s Ratio Prot		c0.04										
v/s Ratio Perm		0.09	0.01		0.02			c0.19			0.12	0.04
v/c Ratio		0.31	0.02		0.07			0.38			0.25	0.08
Uniform Delay, d1		12.8	11.2		18.1			10.3			9.6	8.7
Progression Factor		0.77	1.28		1.00			0.54			0.49	0.34
Incremental Delay, d2		1.1	0.1		0.3			1.1			0.6	0.2
Delay (s)		10.9	14.4		18.4			6.7			5.3	3.2
Level of Service		B	B		B			A			A	A
Approach Delay (s)		11.4			18.4			6.7			4.6	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	7.5	HCM Level of Service	A
HCM Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	59.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1064: 127th Street & S Paulina St

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↱		↰	↑↑					↰	↰↱	↱
Volume (vph)	0	793	222	259	1100	0	0	0	0	275	201	376
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	12	11	8	8	8	11	12	14
Total Lost time (s)		6.0		4.5	6.0					6.0	6.0	6.0
Lane Util. Factor		0.91		1.00	0.95					0.91	0.86	0.91
Frpb, ped/bikes		1.00		1.00	1.00					1.00	0.99	0.99
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Frt		0.97		1.00	1.00					1.00	0.94	0.85
Flt Protected		1.00		0.95	1.00					0.95	0.99	1.00
Satd. Flow (prot)		4302		1589	3226					1419	2711	1355
Flt Permitted		1.00		0.19	1.00					0.95	0.99	1.00
Satd. Flow (perm)		4302		322	3226					1419	2711	1355
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	835	234	273	1158	0	0	0	0	289	212	396
RTOR Reduction (vph)	0	40	0	0	0	0	0	0	0	0	66	66
Lane Group Flow (vph)	0	1029	0	273	1158	0	0	0	0	234	387	144
Confl. Peds. (#/hr)	6		4	4		6	2					2
Heavy Vehicles (%)	0%	11%	7%	4%	6%	0%	0%	0%	0%	6%	4%	8%
Turn Type				pm+pt						Perm		Perm
Protected Phases		2		1	6						4	
Permitted Phases				6						4		4
Actuated Green, G (s)		50.6		69.3	69.3					23.7	23.7	23.7
Effective Green, g (s)		50.6		69.3	69.3					23.7	23.7	23.7
Actuated g/C Ratio		0.48		0.66	0.66					0.23	0.23	0.23
Clearance Time (s)		6.0		4.5	6.0					6.0	6.0	6.0
Vehicle Extension (s)		7.0		3.5	7.0					3.5	3.5	3.5
Lane Grp Cap (vph)		2073		384	2129					320	612	306
v/s Ratio Prot		0.24		c0.10	0.36							
v/s Ratio Perm				c0.37						c0.16	0.14	0.11
v/c Ratio		0.50		0.71	0.54					0.73	0.63	0.47
Uniform Delay, d1		18.5		9.8	9.5					37.7	36.7	35.2
Progression Factor		1.00		1.35	1.53					1.00	1.00	1.00
Incremental Delay, d2		0.9		3.8	0.6					8.6	2.2	1.4
Delay (s)		19.4		17.0	15.1					46.3	39.0	36.6
Level of Service		B		B	B					D	D	D
Approach Delay (s)		19.4			15.5			0.0			40.3	
Approach LOS		B			B			A			D	

Intersection Summary			
HCM Average Control Delay	23.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	10.5
Intersection Capacity Utilization	97.9%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

	⤴	→	⤵	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↑			↑↑	↱		↰↑↱				
Volume (vph)	311	757	0	0	810	234	549	365	386	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	12	12	12	11	12	12	12	12	12	12	12
Total Lost time (s)	6.0	6.0			6.0	6.0		6.0				
Lane Util. Factor	0.97	0.95			0.95	1.00		0.91				
Frpb, ped/bikes	1.00	1.00			1.00	0.99		1.00				
Flpb, ped/bikes	1.00	1.00			1.00	1.00		1.00				
Frt	1.00	1.00			1.00	0.85		0.96				
Flt Protected	0.95	1.00			1.00	1.00		0.98				
Satd. Flow (prot)	2915	3138			3119	1449		4421				
Flt Permitted	0.20	1.00			1.00	1.00		0.98				
Satd. Flow (perm)	617	3138			3119	1449		4421				
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	327	797	0	0	853	246	578	384	406	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	111	0	71	0	0	0	0
Lane Group Flow (vph)	327	797	0	0	853	135	0	1297	0	0	0	0
Confl. Peds. (#/hr)	4					4						
Heavy Vehicles (%)	10%	9%	0%	0%	6%	4%	4%	3%	5%	0%	0%	0%
Turn Type	pm+pt					Perm	Perm					
Protected Phases	5	2			6			8				
Permitted Phases	2					6	8					
Actuated Green, G (s)	62.2	62.2			44.8	44.8		30.8				
Effective Green, g (s)	62.2	62.2			44.8	44.8		30.8				
Actuated g/C Ratio	0.59	0.59			0.43	0.43		0.29				
Clearance Time (s)	6.0	6.0			6.0	6.0		6.0				
Vehicle Extension (s)	3.5	7.0			7.0	7.0		5.0				
Lane Grp Cap (vph)	615	1859			1331	618		1297				
v/s Ratio Prot	c0.06	0.25			c0.27							
v/s Ratio Perm	0.26					0.09		0.29				
v/c Ratio	0.53	0.43			0.64	0.22		1.05dl				
Uniform Delay, d1	12.6	11.7			23.8	19.0		37.1				
Progression Factor	0.72	0.86			0.96	1.43		1.00				
Incremental Delay, d2	0.9	0.6			1.6	0.5		25.1				
Delay (s)	10.0	10.6			24.3	27.8		62.2				
Level of Service	B	B			C	C		E				
Approach Delay (s)		10.5			25.0			62.2			0.0	
Approach LOS		B			C			E			A	

Intersection Summary			
HCM Average Control Delay	34.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	97.9%	ICU Level of Service	F
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	105	449	226	78	751	41	226	178	40	37	111	91
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	12	11	12	12	10	10	13	10	10	10
Total Lost time (s)	3.5	6.0	3.5	3.5	6.0		3.5	6.0		3.5	6.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.97		1.00	0.93	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1565	3061	1291	1601	3233		1446	3008		1544	2782	
Flt Permitted	0.14	1.00	1.00	0.48	1.00		0.52	1.00		0.61	1.00	
Satd. Flow (perm)	238	3061	1291	811	3233		789	3008		990	2782	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	111	473	238	82	791	43	238	187	42	39	117	96
RTOR Reduction (vph)	0	0	99	0	4	0	0	20	0	0	79	0
Lane Group Flow (vph)	111	473	139	82	830	0	238	209	0	39	134	0
Confl. Peds. (#/hr)	3		12	12		3	9		6	6		9
Heavy Vehicles (%)	2%	8%	5%	3%	5%	3%	10%	3%	2%	3%	7%	4%
Parking (#/hr)			0									
Turn Type	pm+pt		pm+ov	pm+pt			pm+pt			pm+pt		
Protected Phases	5	2	3	1	6		3	8		7	4	
Permitted Phases	2		2	6			8			4		
Actuated Green, G (s)	61.9	51.9	61.4	39.3	32.8		31.1	22.6		23.1	18.1	
Effective Green, g (s)	61.9	51.9	61.4	39.3	32.8		31.1	22.6		23.1	18.1	
Actuated g/C Ratio	0.59	0.49	0.58	0.37	0.31		0.30	0.22		0.22	0.17	
Clearance Time (s)	3.5	6.0	3.5	3.5	6.0		3.5	6.0		3.5	6.0	
Vehicle Extension (s)	3.0	7.0	3.0	3.0	7.0		3.0	7.0		3.0	7.0	
Lane Grp Cap (vph)	464	1513	755	352	1010		293	647		244	480	
v/s Ratio Prot	c0.06	c0.15	0.02	0.01	c0.26		c0.07	0.07		0.01	0.05	
v/s Ratio Perm	0.08		0.09	0.07			c0.17			0.03		
v/c Ratio	0.24	0.31	0.18	0.23	0.82		0.81	0.32		0.16	0.28	
Uniform Delay, d1	12.1	15.9	10.1	21.7	33.4		32.8	34.7		32.8	37.8	
Progression Factor	0.94	1.02	2.33	1.00	1.00		0.92	0.86		1.00	1.00	
Incremental Delay, d2	1.0	0.4	0.1	0.3	7.5		15.1	1.0		0.3	1.1	
Delay (s)	12.4	16.7	23.7	22.0	40.9		45.2	30.9		33.1	38.9	
Level of Service	B	B	C	C	D		D	C		C	D	
Approach Delay (s)		18.1			39.2			38.2			38.0	
Approach LOS		B			D			D			D	

Intersection Summary			
HCM Average Control Delay	31.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	19.0
Intersection Capacity Utilization	72.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	62	132	286	56	166	102	329	382	63	91	258	54
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	11	12	11	12	12	11	13	12	10	11	12
Total Lost time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.90		1.00	0.94		1.00	0.98		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1634	2807		1463	3015		1589	3257		1549	3135	
Flt Permitted	0.56	1.00		0.41	1.00		0.46	1.00		0.48	1.00	
Satd. Flow (perm)	966	2807		625	3015		772	3257		788	3135	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	65	139	301	59	175	107	346	402	66	96	272	57
RTOR Reduction (vph)	0	218	0	0	78	0	0	12	0	0	17	0
Lane Group Flow (vph)	65	222	0	59	204	0	346	456	0	96	312	0
Confl. Peds. (#/hr)	20					20	1		2	2		1
Heavy Vehicles (%)	4%	5%	6%	13%	6%	5%	4%	6%	5%	3%	3%	0%
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	35.8	28.8		35.8	28.8		53.2	41.9		38.6	31.3	
Effective Green, g (s)	35.8	28.8		35.8	28.8		53.2	41.9		38.6	31.3	
Actuated g/C Ratio	0.34	0.27		0.34	0.27		0.51	0.40		0.37	0.30	
Clearance Time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	3.5	7.0		3.5	7.0		3.5	7.0		3.5	7.0	
Lane Grp Cap (vph)	374	770		269	827		530	1300		343	935	
v/s Ratio Prot	0.01	c0.08		c0.01	0.07		c0.11	0.14		0.02	0.10	
v/s Ratio Perm	0.05			0.06			c0.22			0.08		
v/c Ratio	0.17	0.29		0.22	0.25		0.65	0.35		0.28	0.33	
Uniform Delay, d1	23.8	30.0		23.9	29.7		16.6	22.0		22.4	28.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		0.99	0.87	
Incremental Delay, d2	0.3	0.9		0.5	0.7		3.0	0.7		0.5	0.9	
Delay (s)	24.0	31.0		24.4	30.4		19.6	22.8		22.8	26.0	
Level of Service	C	C		C	C		B	C		C	C	
Approach Delay (s)		30.1			29.3			21.4			25.2	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	25.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	66.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1068: 127th Street & Halsted Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Lane Configurations		↰↑↑↱			↰↑↑↱		↰	↑↑↱		↰	↑↑↱	
Volume (vph)	169	402	81	6	409	110	68	602	7	84	326	105
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	10	12	9	11	12	9	9	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.98			0.97		1.00	1.00		1.00	0.96	
Flt Protected		0.99			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		2890			2888		1436	3186		1451	2788	
Flt Permitted		0.58			0.95		0.41	1.00		0.28	1.00	
Satd. Flow (perm)		1692			2733		624	3186		421	2788	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	188	447	90	7	454	122	76	669	8	93	362	117
RTOR Reduction (vph)	0	17	0	0	37	0	0	1	0	0	48	0
Lane Group Flow (vph)	0	708	0	0	546	0	76	676	0	93	431	0
Confl. Peds. (#/hr)	9		11	11		9	11		14	14		11
Heavy Vehicles (%)	3%	6%	18%	50%	6%	6%	7%	3%	50%	6%	7%	2%
Turn Type	pm+pt			Perm			pm+pt			pm+pt		
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		27.0			19.0		26.0	22.0		26.0	22.0	
Effective Green, g (s)		27.0			19.0		26.0	22.0		26.0	22.0	
Actuated g/C Ratio		0.42			0.29		0.40	0.34		0.40	0.34	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		777			799		300	1078		232	944	
v/s Ratio Prot		c0.06					0.02	c0.21		c0.02	0.15	
v/s Ratio Perm		c0.32			0.20		0.09			0.14		
v/c Ratio		0.91			0.68		0.25	0.63		0.40	0.46	
Uniform Delay, d1		17.9			20.3		12.4	18.1		12.9	16.8	
Progression Factor		1.00			1.57		0.92	0.71		1.00	1.00	
Incremental Delay, d2		16.8			2.3		1.8	2.5		5.1	1.6	
Delay (s)		34.6			34.3		13.2	15.3		18.0	18.4	
Level of Service		C			C		B	B		B	B	
Approach Delay (s)		34.6			34.3			15.1			18.3	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM Average Control Delay	25.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	71.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱		↰	↑↱		↰	↑↱	
Volume (vph)	52	117	48	70	132	13	38	661	81	10	378	45
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	12	12	12	12	12
Total Lost time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.96		1.00	0.99		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1665	1857		1612	1939		1658	3211		1138	3197	
Flt Permitted	0.66	1.00		0.65	1.00		0.50	1.00		0.31	1.00	
Satd. Flow (perm)	1161	1857		1102	1939		870	3211		366	3197	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	54	121	49	72	136	13	39	681	84	10	390	46
RTOR Reduction (vph)	0	23	0	0	5	0	0	15	0	0	14	0
Lane Group Flow (vph)	54	147	0	72	144	0	39	750	0	10	422	0
Confl. Peds. (#/hr)	10		16	16		10	4		6	6		4
Confl. Bikes (#/hr)			4	4								
Heavy Vehicles (%)	2%	4%	5%	5%	4%	0%	3%	4%	8%	50%	5%	6%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	24.0	24.0		24.0	24.0		31.0	31.0		31.0	31.0	
Effective Green, g (s)	24.0	24.0		24.0	24.0		31.0	31.0		31.0	31.0	
Actuated g/C Ratio	0.37	0.37		0.37	0.37		0.48	0.48		0.48	0.48	
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)	429	686		407	716		415	1531		175	1525	
v/s Ratio Prot		c0.08			0.07			c0.23			0.13	
v/s Ratio Perm	0.05			0.07			0.04			0.03		
v/c Ratio	0.13	0.21		0.18	0.20		0.09	0.49		0.06	0.28	
Uniform Delay, d1	13.6	14.0		13.8	14.0		9.3	11.6		9.1	10.2	
Progression Factor	1.00	1.00		1.72	1.77		1.00	1.00		0.49	0.49	
Incremental Delay, d2	0.6	0.7		0.7	0.4		0.4	1.1		0.5	0.4	
Delay (s)	14.2	14.8		24.4	25.2		9.8	12.7		5.0	5.4	
Level of Service	B	B		C	C		A	B		A	A	
Approach Delay (s)		14.6			24.9			12.6			5.4	
Approach LOS		B			C			B			A	

Intersection Summary			
HCM Average Control Delay	12.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	59.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1070: 127th Street & S Wallance St

1/14/2013

	→	↙	←	↖	↰	↖	↑	↗	↘	↓	↙	↙
Movement	EBT	WBL	WBT	WBR	NBL2	NBL	NBT	NBR	SBL	SBT	SBR	SBR2
Lane Configurations	↰↑↑↱		↰↑↑↱				↰↑↱			↰↑↱		
Volume (vph)	427	164	570	14	3	14	3	47	10	0	2	4
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	12	12	16	12	12	16	12	12
Total Lost time (s)	5.0		5.0				4.0			4.0		
Lane Util. Factor	0.95		0.95				1.00			1.00		
Frpb, ped/bikes	1.00		1.00				1.00			0.99		
Flpb, ped/bikes	1.00		1.00				1.00			1.00		
Frt	1.00		1.00				0.91			0.95		
Flt Protected	1.00		0.99				0.99			0.97		
Satd. Flow (prot)	2956		2958				1732			1864		
Flt Permitted	1.00		0.67				0.94			0.87		
Satd. Flow (perm)	2956		1998				1650			1671		
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	449	173	600	15	3	15	3	49	11	0	2	4
RTOR Reduction (vph)	0	0	2	0	0	0	38	0	0	3	0	0
Lane Group Flow (vph)	449	0	786	0	0	0	32	0	0	14	0	0
Confl. Peds. (#/hr)		7		6		3					3	
Confl. Bikes (#/hr)		1										
Heavy Vehicles (%)	8%	8%	6%	0%	0%	8%	0%	5%	0%	0%	0%	0%
Turn Type		custom			Perm	Perm			Perm			
Protected Phases	8	7	4				2			6		
Permitted Phases		4 7			2	2			6			
Actuated Green, G (s)	18.0		27.0				14.0			14.0		
Effective Green, g (s)	18.0		27.0				14.0			14.0		
Actuated g/C Ratio	0.28		0.42				0.22			0.22		
Clearance Time (s)	5.0		5.0				4.0			4.0		
Lane Grp Cap (vph)	819		919				355			360		
v/s Ratio Prot	0.15		c0.08									
v/s Ratio Perm			c0.28				c0.02			0.01		
v/c Ratio	0.55		0.85				0.09			0.04		
Uniform Delay, d1	20.0		17.2				20.4			20.2		
Progression Factor	1.33		0.75				1.00			1.00		
Incremental Delay, d2	1.4		9.6				0.5			0.2		
Delay (s)	28.2		22.4				20.9			20.4		
Level of Service	C		C				C			C		
Approach Delay (s)	28.2		22.4				20.9			20.4		
Approach LOS	C		C				C			C		

Intersection Summary			
HCM Average Control Delay	37.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	79.3%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	NEL	NER
Lane Configurations	↰↱	
Volume (vph)	1	224
Ideal Flow (vphpl)	1800	1800
Lane Width	12	12
Total Lost time (s)	5.0	
Lane Util. Factor	1.00	
Frpb, ped/bikes	1.00	
Flpb, ped/bikes	1.00	
Frt	0.87	
Flt Protected	1.00	
Satd. Flow (prot)	1430	
Flt Permitted	1.00	
Satd. Flow (perm)	1430	
Peak-hour factor, PHF	0.95	0.95
Adj. Flow (vph)	1	236
RTOR Reduction (vph)	0	0
Lane Group Flow (vph)	237	0
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		
Heavy Vehicles (%)	0%	9%
Turn Type		
Protected Phases	3	
Permitted Phases		
Actuated Green, G (s)	10.0	
Effective Green, g (s)	10.0	
Actuated g/C Ratio	0.15	
Clearance Time (s)	5.0	
Lane Grp Cap (vph)	220	
v/s Ratio Prot	c0.17	
v/s Ratio Perm		
v/c Ratio	1.08	
Uniform Delay, d1	27.5	
Progression Factor	1.07	
Incremental Delay, d2	81.8	
Delay (s)	111.3	
Level of Service	F	
Approach Delay (s)	111.3	
Approach LOS	F	

Intersection Summary

HCM Signalized Intersection Capacity Analysis
1071: 127th Street & State Street

1/14/2013

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰↑	↑↱		↰	↱
Volume (vph)	194	581	594	66	41	156
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		1.00	1.00
Frt		1.00	0.99		1.00	0.85
Flt Protected		0.99	1.00		0.95	1.00
Satd. Flow (prot)		3217	3208		1629	1457
Flt Permitted		0.63	1.00		0.95	1.00
Satd. Flow (perm)		2042	3208		1629	1457
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	216	646	660	73	46	173
RTOR Reduction (vph)	0	0	13	0	0	128
Lane Group Flow (vph)	0	862	720	0	46	45
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%
Turn Type	Perm					Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)		40.0	40.0		17.0	17.0
Effective Green, g (s)		40.0	40.0		17.0	17.0
Actuated g/C Ratio		0.62	0.62		0.26	0.26
Clearance Time (s)		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		1257	1974		426	381
v/s Ratio Prot			0.22		0.03	
v/s Ratio Perm		c0.42				c0.03
v/c Ratio		0.69	0.36		0.11	0.12
Uniform Delay, d1		8.3	6.2		18.2	18.3
Progression Factor		1.43	1.23		0.93	0.87
Incremental Delay, d2		2.5	0.5		0.5	0.6
Delay (s)		14.3	8.1		17.6	16.5
Level of Service		B	A		B	B
Approach Delay (s)		14.3	8.1		16.7	
Approach LOS		B	A		B	

Intersection Summary			
HCM Average Control Delay	12.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	55.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰↑	↑↱		↰	↱
Volume (vph)	53	542	598	196	135	56
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	12	10	11	12	10	10
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		1.00	1.00
Frpb, ped/bikes		1.00	0.99		1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00
Frt		1.00	0.96		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		2927	2906		1464	1373
Flt Permitted		0.83	1.00		0.95	1.00
Satd. Flow (perm)		2451	2906		1464	1373
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	56	571	629	206	142	59
RTOR Reduction (vph)	0	0	49	0	0	42
Lane Group Flow (vph)	0	627	786	0	142	17
Confl. Peds. (#/hr)	1			1		
Confl. Bikes (#/hr)	1			1		
Heavy Vehicles (%)	4%	9%	8%	12%	9%	4%
Turn Type	Perm					Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)		38.0	38.0		19.0	19.0
Effective Green, g (s)		38.0	38.0		19.0	19.0
Actuated g/C Ratio		0.58	0.58		0.29	0.29
Clearance Time (s)		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		1433	1699		428	401
v/s Ratio Prot			c0.27		c0.10	
v/s Ratio Perm		0.26				0.01
v/c Ratio		0.44	0.46		0.33	0.04
Uniform Delay, d1		7.5	7.7		18.0	16.5
Progression Factor		0.57	0.54		0.96	1.22
Incremental Delay, d2		0.7	0.7		2.0	0.2
Delay (s)		5.0	4.8		19.4	20.4
Level of Service		A	A		B	C
Approach Delay (s)		5.0	4.8		19.6	
Approach LOS		A	A		B	

Intersection Summary			
HCM Average Control Delay	6.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	59.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↱		↰	↑	↰↱	
Volume (vph)	529	160	107	552	423	83
Ideal Flow (vphpl)	2300	1800	1800	2300	1800	1800
Lane Width	15	12	14	16	15	12
Total Lost time (s)	5.0		5.0	5.0	5.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	0.99		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.97		1.00	1.00	0.98	
Flt Protected	1.00		0.95	1.00	0.96	
Satd. Flow (prot)	2214		1769	2436	1817	
Flt Permitted	1.00		0.13	1.00	0.96	
Satd. Flow (perm)	2214		244	2436	1817	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	588	178	119	613	470	92
RTOR Reduction (vph)	17	0	0	0	11	0
Lane Group Flow (vph)	749	0	119	613	551	0
Confl. Peds. (#/hr)		4	4			8
Heavy Vehicles (%)	11%	7%	3%	7%	2%	2%
Turn Type			Perm			
Protected Phases	4			8	2	
Permitted Phases			8			
Actuated Green, G (s)	31.0		31.0	31.0	24.0	
Effective Green, g (s)	31.0		31.0	31.0	24.0	
Actuated g/C Ratio	0.48		0.48	0.48	0.37	
Clearance Time (s)	5.0		5.0	5.0	5.0	
Lane Grp Cap (vph)	1056		116	1162	671	
v/s Ratio Prot	0.34			0.25	c0.30	
v/s Ratio Perm			c0.49			
v/c Ratio	0.71		1.03	0.53	0.82	
Uniform Delay, d1	13.4		17.0	11.9	18.6	
Progression Factor	1.25		1.00	1.00	1.00	
Incremental Delay, d2	3.8		90.7	1.7	10.9	
Delay (s)	20.6		107.7	13.6	29.4	
Level of Service	C		F	B	C	
Approach Delay (s)	20.6			28.9	29.4	
Approach LOS	C			C	C	

Intersection Summary			
HCM Average Control Delay	25.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	80.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑↑	↱		↰↑	↱		✥	
Volume (vph)	1	590	89	258	629	9	72	0	187	1	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	15	13	11	11	12	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0	4.0	3.0	3.0	4.0		4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85		1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.95	1.00		0.95	
Satd. Flow (prot)	1881	3213	1422	1589	3138	1366		1642	1443		969	
Flt Permitted	0.39	1.00	1.00	0.35	1.00	1.00		0.76	1.00		0.70	
Satd. Flow (perm)	764	3213	1422	584	3138	1366		1309	1443		719	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1	656	99	287	699	10	80	0	208	1	0	0
RTOR Reduction (vph)	0	0	40	0	0	2	0	0	182	0	0	0
Lane Group Flow (vph)	1	656	59	287	699	8	0	80	26	0	1	0
Heavy Vehicles (%)	0%	10%	4%	4%	9%	12%	18%	0%	6%	100%	0%	0%
Turn Type	Perm		Perm	custom		custom	Perm		Perm	Perm		
Protected Phases		4		3	3 8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)	50.8	50.8	50.8	66.4	66.4	66.4		10.6	10.6		10.6	
Effective Green, g (s)	50.8	50.8	50.8	66.4	66.4	66.4		10.6	10.6		10.6	
Actuated g/C Ratio	0.60	0.60	0.60	0.78	0.78	0.78		0.12	0.12		0.12	
Clearance Time (s)	4.0	4.0	4.0	3.0		4.0		4.0	4.0		4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0		3.0	3.0		3.0	
Lane Grp Cap (vph)	457	1920	850	605	2451	1067		163	180		90	
v/s Ratio Prot		0.20		c0.07	0.22							
v/s Ratio Perm	0.00		0.04	c0.30		0.01		c0.06	0.02		0.00	
v/c Ratio	0.00	0.34	0.07	0.47	0.29	0.01		0.49	0.14		0.01	
Uniform Delay, d1	6.9	8.6	7.2	3.0	2.6	2.0		34.7	33.2		32.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2	0.0	0.5	0.2	0.6	0.1	0.0		2.3	0.4		0.0	
Delay (s)	6.9	9.1	7.3	3.6	2.7	2.1		37.0	33.5		32.7	
Level of Service	A	A	A	A	A	A		D	C		C	
Approach Delay (s)		8.9			2.9			34.5			32.7	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM Average Control Delay	9.6	HCM Level of Service	A
HCM Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	7.0
Intersection Capacity Utilization	47.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰↑	↑↱		↲↳	
Volume (vph)	13	816	838	45	24	9
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	12	10	10
Total Lost time (s)		5.0	5.0		3.0	
Lane Util. Factor		0.95	0.95		1.00	
Frt		1.00	0.99		0.96	
Flt Protected		1.00	1.00		0.96	
Satd. Flow (prot)		3038	3017		1487	
Flt Permitted		0.93	1.00		0.96	
Satd. Flow (perm)		2835	3017		1487	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	14	907	931	50	27	10
RTOR Reduction (vph)	0	0	4	0	9	0
Lane Group Flow (vph)	0	921	977	0	28	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%
Turn Type	Perm					
Protected Phases		4	8 2 11		5	
Permitted Phases	4					
Actuated Green, G (s)		33.0	64.0		7.0	
Effective Green, g (s)		33.0	64.0		7.0	
Actuated g/C Ratio		0.37	0.71		0.08	
Clearance Time (s)		5.0			3.0	
Lane Grp Cap (vph)		1040	2145		116	
v/s Ratio Prot			c0.32		c0.02	
v/s Ratio Perm		c0.32				
v/c Ratio		0.89	0.46		0.24	
Uniform Delay, d1		26.7	5.6		39.0	
Progression Factor		1.00	0.00		1.00	
Incremental Delay, d2		11.0	0.2		4.8	
Delay (s)		37.8	0.3		43.8	
Level of Service		D	A		D	
Approach Delay (s)		37.8	0.3		43.8	
Approach LOS		D	A		D	

Intersection Summary			
HCM Average Control Delay	18.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	44.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↑↱			↰↑↱			↰↑	↱
Volume (vph)	75	426	1	14	550	80	0	0	1	45	3	77
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	12	12	11	12	11
Total Lost time (s)		4.0			4.0			3.0			3.0	3.0
Lane Util. Factor		1.00			0.95			1.00			1.00	1.00
Frpb, ped/bikes		1.00			1.00			0.92			1.00	0.96
Flpb, ped/bikes		1.00			1.00			1.00			0.98	1.00
Frt		1.00			0.98			0.86			1.00	0.85
Flt Protected		0.99			1.00			1.00			0.95	1.00
Satd. Flow (prot)		1729			3229			1432			1610	1282
Flt Permitted		0.81			0.95			1.00			0.93	1.00
Satd. Flow (perm)		1405			3069			1432			1569	1282
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	83	473	1	16	611	89	0	0	1	50	3	86
RTOR Reduction (vph)	0	0	0	0	13	0	0	1	0	0	0	58
Lane Group Flow (vph)	0	557	0	0	703	0	0	0	0	0	53	28
Confl. Peds. (#/hr)	33		13	13		33	29		13	13		29
Confl. Bikes (#/hr)	1		1	1		1						
Heavy Vehicles (%)	4%	3%	0%	0%	4%	0%	0%	0%	0%	5%	0%	11%
Turn Type	Perm			Prot			Perm			pm+pt		Perm
Protected Phases		4		3	3 4			1		2	1 2	
Permitted Phases	4				3		1	1		1 2		1 2
Actuated Green, G (s)		31.0			45.0			9.0			25.0	28.0
Effective Green, g (s)		31.0			45.0			9.0			25.0	28.0
Actuated g/C Ratio		0.36			0.53			0.11			0.29	0.33
Clearance Time (s)		4.0						3.0				
Lane Grp Cap (vph)		512			1651			152			469	422
v/s Ratio Prot					c0.07			0.00			c0.02	
v/s Ratio Perm		c0.40			0.16						c0.01	0.02
v/c Ratio		1.09			0.43			0.00			0.11	0.07
Uniform Delay, d1		27.0			12.1			34.0			21.9	19.5
Progression Factor		1.00			1.73			1.00			1.00	1.00
Incremental Delay, d2		65.7			0.1			0.0			0.5	0.3
Delay (s)		92.7			21.0			34.0			22.4	19.9
Level of Service		F			C			C			C	B
Approach Delay (s)		92.7			21.0			34.0			20.8	
Approach LOS		F			C			C			C	

Intersection Summary			
HCM Average Control Delay	49.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	71.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1001: 95th Street & Wentworth Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			↰↑↱			↰↑↱	
Volume (vph)	39	598	27	35	1014	58	34	17	48	23	22	87
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	16	10	10	16	8	15	8	8	14	8
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			0.99			0.98	
Flpb, ped/bikes	0.98	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.99			0.93			0.91	
Flt Protected	0.95	1.00		0.95	1.00			0.98			0.99	
Satd. Flow (prot)	1557	3022		1587	3022			1787			1700	
Flt Permitted	0.17	1.00		0.37	1.00			0.89			0.95	
Satd. Flow (perm)	283	3022		610	3022			1613			1628	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	41	623	28	36	1056	60	35	18	50	24	23	91
RTOR Reduction (vph)	0	5	0	0	6	0	0	32	0	0	22	0
Lane Group Flow (vph)	41	646	0	36	1110	0	0	71	0	0	116	0
Confl. Peds. (#/hr)	145		16	16		145	17		19	19		17
Confl. Bikes (#/hr)	5					5			2	2		
Heavy Vehicles (%)	0%	5%	0%	0%	4%	2%	0%	0%	0%	0%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	34.0	34.0		34.0	34.0			22.0			22.0	
Effective Green, g (s)	34.0	34.0		34.0	34.0			23.0			23.0	
Actuated g/C Ratio	0.52	0.52		0.52	0.52			0.35			0.35	
Clearance Time (s)	4.0	4.0		4.0	4.0			5.0			5.0	
Lane Grp Cap (vph)	148	1581		319	1581			571			576	
v/s Ratio Prot		0.21			c0.37							
v/s Ratio Perm	0.14			0.06				0.04			c0.07	
v/c Ratio	0.28	0.41		0.11	0.70			0.12			0.20	
Uniform Delay, d1	8.6	9.4		7.9	11.7			14.2			14.6	
Progression Factor	1.00	1.00		0.69	1.41			1.00			1.00	
Incremental Delay, d2	4.6	0.8		0.6	2.3			0.4			0.8	
Delay (s)	13.2	10.2		6.1	18.8			14.6			15.4	
Level of Service	B	B		A	B			B			B	
Approach Delay (s)		10.4			18.4			14.6			15.4	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	15.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1002: 95th Street & Lafayette Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↑	↱				↰↰	↑	↱
Volume (vph)	25	789	5	32	637	41	0	0	0	586	89	379
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	5.0	5.0		3.0	3.0	3.0				5.0	5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00				0.97	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.67				1.00	1.00	0.98
Flpb, ped/bikes	0.93	1.00		1.00	1.00	1.00				1.00	1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85				1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00				0.95	1.00	1.00
Satd. Flow (prot)	793	3379		1710	3226	514				3285	1731	1481
Flt Permitted	0.40	1.00		0.14	1.00	1.00				0.95	1.00	1.00
Satd. Flow (perm)	331	3379		248	3226	514				3285	1731	1481
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	26	831	5	34	671	43	0	0	0	617	94	399
RTOR Reduction (vph)	0	0	0	0	0	19	0	0	0	0	0	166
Lane Group Flow (vph)	26	836	0	34	671	24	0	0	0	617	94	233
Confl. Peds. (#/hr)	350		4	4		350	8		6	6		8
Confl. Bikes (#/hr)	7		1	1		7						
Heavy Vehicles (%)	100%	1%	20%	0%	6%	100%	0%	0%	0%	1%	4%	1%
Turn Type	pm+pt			pm+pt		Perm				Split		Perm
Protected Phases	7	4		3	8					6	6	
Permitted Phases	4			8		8						6
Actuated Green, G (s)	43.0	43.0		73.0	73.0	73.0				30.0	30.0	30.0
Effective Green, g (s)	43.0	43.0		73.0	73.0	73.0				30.0	30.0	30.0
Actuated g/C Ratio	0.33	0.33		0.56	0.56	0.56				0.23	0.23	0.23
Clearance Time (s)	5.0	5.0		3.0	3.0	3.0				5.0	5.0	5.0
Lane Grp Cap (vph)	159	1118		634	1812	289				758	399	342
v/s Ratio Prot	0.02	c0.25		0.02	c0.21					c0.19	0.05	
v/s Ratio Perm	0.04			0.01		0.05						0.16
v/c Ratio	0.16	0.75		0.05	0.37	0.08				0.81	0.24	0.68
Uniform Delay, d1	31.6	38.7		15.2	15.8	13.1				47.4	40.7	45.6
Progression Factor	0.84	0.86		0.33	0.75	1.24				1.00	1.00	1.00
Incremental Delay, d2	2.1	4.4		0.1	0.4	0.4				9.3	1.4	10.5
Delay (s)	28.6	37.5		5.1	12.2	16.6				56.7	42.1	56.1
Level of Service	C	D		A	B	B				E	D	E
Approach Delay (s)		37.3			12.2			0.0			55.2	
Approach LOS		D			B			A			E	

Intersection Summary			
HCM Average Control Delay	37.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	53.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1003: 95th Street & State Street

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↱		↰	↑↑	↱		↰↑	↱	↰		↱
Volume (vph)	340	815	220	54	578	287	102	251	55	39	0	30
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0	3.0		5.0	5.0	5.0		5.0	5.0	5.0		5.0
Lane Util. Factor	0.97	0.95		1.00	0.95	1.00		0.95	1.00	1.00		1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.67		1.00	0.91	1.00		0.96
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Frt	1.00	0.97		1.00	1.00	0.85		1.00	0.85	1.00		0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.99	1.00	0.95		1.00
Satd. Flow (prot)	3285	3262		1710	3138	1018		3301	1359	855		734
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.99	1.00	0.95		1.00
Satd. Flow (perm)	3285	3262		1710	3138	1018		3301	1359	855		734
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	358	858	232	57	608	302	107	264	58	41	0	32
RTOR Reduction (vph)	0	18	0	0	0	228	0	0	42	0	0	30
Lane Group Flow (vph)	358	1072	0	57	608	74	0	371	16	41	0	2
Confl. Peds. (#/hr)	327		13	13		327	6		60	60		6
Confl. Bikes (#/hr)	6					6						
Heavy Vehicles (%)	1%	1%	0%	0%	9%	1%	0%	3%	2%	100%	0%	100%
Turn Type	Prot			Prot		Perm	Split		Perm	Prot		custom
Protected Phases	7	4		3	8		2	2		6		
Permitted Phases						8			2			6
Actuated Green, G (s)	44.0	68.0		8.0	32.0	32.0		28.0	28.0	8.0		8.0
Effective Green, g (s)	44.0	68.0		8.0	32.0	32.0		28.0	28.0	8.0		8.0
Actuated g/C Ratio	0.34	0.52		0.06	0.25	0.25		0.22	0.22	0.06		0.06
Clearance Time (s)	3.0	3.0		5.0	5.0	5.0		5.0	5.0	5.0		5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0	3.0	3.0		3.0
Lane Grp Cap (vph)	1112	1706		105	772	251		711	293	53		45
v/s Ratio Prot	0.11	c0.33		0.03	c0.19			c0.11		c0.05		
v/s Ratio Perm						0.07			0.01			0.00
v/c Ratio	0.32	0.63		0.54	0.79	0.30		0.52	0.06	0.77		0.04
Uniform Delay, d1	31.9	22.0		59.2	45.8	39.8		45.1	40.5	60.1		57.4
Progression Factor	0.95	0.16		1.00	1.00	1.00		0.94	0.99	1.00		1.00
Incremental Delay, d2	0.5	1.1		18.7	8.0	3.0		2.7	0.4	49.7		0.4
Delay (s)	30.7	4.7		77.9	53.8	42.8		45.2	40.3	109.9		57.8
Level of Service	C	A		E	D	D		D	D	F		E
Approach Delay (s)		11.1			51.8			44.5			87.0	
Approach LOS		B			D			D			F	

Intersection Summary			
HCM Average Control Delay	31.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	68.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

1004: 95th Street & Michigan Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱		↰	↑↑		↰		↱	↰	↱	
Volume (vph)	0	893	166	104	839	0	74	0	79	9	14	7
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	11	11	8	12	12	12	14	15	12
Total Lost time (s)		4.0		4.0	4.0		4.0		4.0	4.0	4.0	
Lane Util. Factor		0.95		1.00	0.95		1.00		1.00	1.00	1.00	
Frpb, ped/bikes		0.99		1.00	1.00		1.00		0.98	1.00	0.99	
Flpb, ped/bikes		1.00		1.00	1.00		0.97		1.00	0.99	1.00	
Frt		0.98		1.00	1.00		1.00		0.85	1.00	0.95	
Flt Protected		1.00		0.95	1.00		0.95		1.00	0.95	1.00	
Satd. Flow (prot)		2997		1648	3149		1387		1451	1803	1857	
Flt Permitted		1.00		0.19	1.00		0.74		1.00	0.95	1.00	
Satd. Flow (perm)		2997		336	3149		1085		1451	1803	1857	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	0	930	173	108	874	0	77	0	82	9	15	7
RTOR Reduction (vph)	0	15	0	0	0	0	0	0	56	0	5	0
Lane Group Flow (vph)	0	1088	0	108	874	0	77	0	26	9	17	0
Confl. Peds. (#/hr)	67		19	19		67	38		12	12		38
Confl. Bikes (#/hr)			1	1								
Heavy Vehicles (%)	0%	2%	11%	0%	5%	0%	19%	0%	3%	0%	0%	0%
Turn Type				Perm			custom		custom	Perm		
Protected Phases		4			8						6	
Permitted Phases				8			2		2	6		
Actuated Green, G (s)		60.0		60.0	60.0		32.0		32.0	32.0	32.0	
Effective Green, g (s)		60.0		60.0	60.0		32.0		32.0	32.0	32.0	
Actuated g/C Ratio		0.60		0.60	0.60		0.32		0.32	0.32	0.32	
Clearance Time (s)		4.0		4.0	4.0		4.0		4.0	4.0	4.0	
Lane Grp Cap (vph)		1798		202	1889		347		464	577	594	
v/s Ratio Prot		c0.36			0.28						0.01	
v/s Ratio Perm				0.32			c0.07		0.02	0.00		
v/c Ratio		0.61		0.53	0.46		0.22		0.06	0.02	0.03	
Uniform Delay, d1		12.6		11.8	11.1		24.9		23.5	23.2	23.3	
Progression Factor		1.00		1.00	1.00		1.00		1.00	1.00	1.00	
Incremental Delay, d2		1.5		9.8	0.8		1.5		0.2	0.0	0.1	
Delay (s)		14.1		21.6	11.9		26.4		23.8	23.3	23.4	
Level of Service		B		C	B		C		C	C	C	
Approach Delay (s)		14.1			13.0			25.0			23.4	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM Average Control Delay	14.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	61.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1005: 98th Place & Halsted Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↰	↰↑	↱	↰	↑↑↑			↑↑↱	
Volume (vph)	0	0	0	300	0	1230	209	662	0	0	787	490
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	12	12	10	10	12	12	11	12
Total Lost time (s)				4.0		5.0	3.0	4.0			4.0	
Lane Util. Factor				0.95		1.00	1.00	0.91			0.91	
Frpb, ped/bikes				1.00		1.00	1.00	1.00			0.98	
Flpb, ped/bikes				1.00		1.00	1.00	1.00			1.00	
Frt				1.00		0.85	1.00	1.00			0.94	
Flt Protected				0.95		1.00	0.95	1.00			1.00	
Satd. Flow (prot)				1540		1530	1535	4327			4269	
Flt Permitted				0.95		1.00	0.95	1.00			1.00	
Satd. Flow (perm)				1540		1530	1535	4327			4269	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	0	0	0	309	0	1268	215	682	0	0	811	505
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	309	0	1268	215	682	0	0	1316	0
Confl. Peds. (#/hr)	2					2	18		3	3		18
Heavy Vehicles (%)	0%	0%	0%	2%	0%	0%	4%	6%	0%	0%	4%	1%
Turn Type				Split		Prot	Prot					
Protected Phases				8	8	8	5	2			6	
Permitted Phases												
Actuated Green, G (s)				30.0		30.0	32.0	66.0			31.0	
Effective Green, g (s)				31.0		30.0	32.0	66.0			31.0	
Actuated g/C Ratio				0.30		0.29	0.30	0.63			0.30	
Clearance Time (s)				5.0		5.0	3.0	4.0			4.0	
Lane Grp Cap (vph)				455		437	468	2720			1260	
v/s Ratio Prot				0.20		c0.83	c0.14	0.16			c0.31	
v/s Ratio Perm												
v/c Ratio				0.68		2.90	0.46	0.25			1.17dr	
Uniform Delay, d1				32.6		37.5	29.5	8.6			37.0	
Progression Factor				1.00		1.00	0.63	2.07			1.00	
Incremental Delay, d2				7.9		862.0	2.7	0.2			37.8	
Delay (s)				40.6		899.5	21.4	18.0			74.8	
Level of Service				D		F	C	B			E	
Approach Delay (s)		0.0			731.2			18.8			74.8	
Approach LOS		A			F			B			E	

Intersection Summary			
HCM Average Control Delay	334.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.44		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	101.6%	ICU Level of Service	G
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1006: 99th Street & Halsted Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↰↑↱						↑↑↑	↱↱	↰	↑↑↑	
Volume (vph)	322	770	144	0	0	0	0	549	408	359	728	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	13	12	12	12	12	12	10	10	8	12	12	12
Total Lost time (s)	5.0	5.0						4.0	4.0	3.0	4.0	
Lane Util. Factor	0.91	0.91						0.91	0.88	1.00	0.91	
Frpb, ped/bikes	1.00	1.00						1.00	1.00	1.00	1.00	
Flpb, ped/bikes	0.99	1.00						1.00	1.00	1.00	1.00	
Frt	1.00	0.98						1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00						1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1509	3157						4368	2244	1598	4680	
Flt Permitted	0.95	1.00						1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1509	3157						4368	2244	1598	4680	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	339	811	152	0	0	0	0	578	429	378	766	0
RTOR Reduction (vph)	0	13	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	305	984	0	0	0	0	0	578	429	378	766	0
Confl. Peds. (#/hr)	6		1	1		6	6					6
Heavy Vehicles (%)	6%	1%	0%	0%	0%	0%	0%	5%	4%	7%	5%	0%
Turn Type	Perm								Perm	Prot		
Protected Phases		4						2		1	6	
Permitted Phases	4								2			
Actuated Green, G (s)	34.0	34.0						28.0	28.0	31.0	62.0	
Effective Green, g (s)	34.0	34.0						28.0	28.0	31.0	62.0	
Actuated g/C Ratio	0.32	0.32						0.27	0.27	0.30	0.59	
Clearance Time (s)	5.0	5.0						4.0	4.0	3.0	4.0	
Lane Grp Cap (vph)	489	1022						1165	598	472	2763	
v/s Ratio Prot								0.13		c0.24	0.16	
v/s Ratio Perm	0.20	0.31							c0.19			
v/c Ratio	0.62	0.96						0.50	0.72	0.80	0.28	
Uniform Delay, d1	30.1	34.9						32.5	34.9	34.2	10.5	
Progression Factor	1.00	1.00						1.14	1.14	0.87	0.23	
Incremental Delay, d2	5.9	20.5						1.4	6.5	5.4	0.1	
Delay (s)	36.0	55.4						38.4	46.2	35.0	2.5	
Level of Service	D	E						D	D	D	A	
Approach Delay (s)		50.9			0.0			41.7			13.3	
Approach LOS		D			A			D			B	

Intersection Summary			
HCM Average Control Delay	35.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	101.6%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1007: 98th Place & Wentworth Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↰	↑↱		↰	↑			↱	
Volume (vph)	0	0	0	289	25	24	11	144	0	0	144	5
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	14	12	12	16	12
Total Lost time (s)				4.0	4.0		4.0	4.0			-3.0	
Lane Util. Factor				1.00	0.95		1.00	1.00			1.00	
Frpb, ped/bikes				1.00	0.99		1.00	1.00			1.00	
Flpb, ped/bikes				1.00	1.00		1.00	1.00			1.00	
Frt				1.00	0.93		1.00	1.00			1.00	
Flt Protected				0.95	1.00		0.95	1.00			1.00	
Satd. Flow (prot)				1688	3133		1710	1846			1956	
Flt Permitted				0.95	1.00		0.55	1.00			1.00	
Satd. Flow (perm)				1688	3133		998	1846			1956	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	0	304	26	25	12	152	0	0	152	5
RTOR Reduction (vph)	0	0	0	0	17	0	0	0	0	0	1	0
Lane Group Flow (vph)	0	0	0	304	34	0	12	152	0	0	156	0
Confl. Peds. (#/hr)	2		2	2		2			6	6		
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	0%	0%	0%	1%	0%	0%	0%	4%	0%	0%	4%	0%
Turn Type				Perm			pm+pt					
Protected Phases					8		7	2			6	
Permitted Phases				8			2					
Actuated Green, G (s)				27.0	27.0		50.0	50.0			40.0	
Effective Green, g (s)				27.0	27.0		50.0	50.0			46.0	
Actuated g/C Ratio				0.32	0.32		0.59	0.59			0.54	
Clearance Time (s)				4.0	4.0		4.0	4.0			3.0	
Lane Grp Cap (vph)				536	995		646	1086			1059	
v/s Ratio Prot					0.01		0.00	c0.08			c0.08	
v/s Ratio Perm				c0.18			0.01					
v/c Ratio				0.57	0.03		0.02	0.14			0.15	
Uniform Delay, d1				24.1	20.0		10.3	7.9			9.7	
Progression Factor				1.00	1.00		1.06	1.18			1.00	
Incremental Delay, d2				4.3	0.1		0.1	0.3			0.3	
Delay (s)				28.4	20.1		11.0	9.5			10.0	
Level of Service				C	C		B	A			B	
Approach Delay (s)		0.0			27.2			9.6			10.0	
Approach LOS		A			C			A			B	

Intersection Summary			
HCM Average Control Delay	19.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.27		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	1.0
Intersection Capacity Utilization	36.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1008: 99th Street & Wentworth Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱			✥			↱		↰	↑	
Volume (vph)	12	11	23	3	0	14	0	129	33	46	387	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	16	15	12	8	12	8	12	12	12	10	13	12
Total Lost time (s)	4.0	4.0			4.0			3.0		4.0	4.0	
Lane Util. Factor	1.00	1.00			1.00			1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.97			0.98			0.99		1.00	1.00	
Flpb, ped/bikes	1.00	1.00			1.00			1.00		1.00	1.00	
Frt	1.00	0.90			0.89			0.97		1.00	1.00	
Flt Protected	0.95	1.00			0.99			1.00		0.95	1.00	
Satd. Flow (prot)	1935	1729			1550			1725		1590	1860	
Flt Permitted	0.75	1.00			0.98			1.00		0.61	1.00	
Satd. Flow (perm)	1517	1729			1533			1725		1027	1860	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	13	12	26	3	0	16	0	143	37	51	430	0
RTOR Reduction (vph)	0	18	0	0	11	0	0	11	0	0	0	0
Lane Group Flow (vph)	13	20	0	0	8	0	0	169	0	51	430	0
Confl. Peds. (#/hr)	1		11	11		1	1		10	10		1
Confl. Bikes (#/hr)			2	2			1		2	2		1
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%
Turn Type	Perm			Perm						pm+pt		
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8						6		
Actuated Green, G (s)	27.0	27.0			27.0			40.0		50.0	50.0	
Effective Green, g (s)	27.0	27.0			27.0			40.0		50.0	50.0	
Actuated g/C Ratio	0.32	0.32			0.32			0.47		0.59	0.59	
Clearance Time (s)	4.0	4.0			4.0			3.0		4.0	4.0	
Lane Grp Cap (vph)	482	549			487			812		650	1094	
v/s Ratio Prot		c0.01						0.10		0.01	c0.23	
v/s Ratio Perm	0.01				0.01					0.04		
v/c Ratio	0.03	0.04			0.02			0.21		0.08	0.39	
Uniform Delay, d1	20.0	20.0			19.9			13.2		8.5	9.4	
Progression Factor	1.00	1.00			1.00			1.00		0.96	0.85	
Incremental Delay, d2	0.1	0.1			0.1			0.6		0.2	1.0	
Delay (s)	20.1	20.1			20.0			13.8		8.3	9.0	
Level of Service	C	C			B			B		A	A	
Approach Delay (s)		20.1			20.0			13.8			8.9	
Approach LOS		C			B			B			A	

Intersection Summary			
HCM Average Control Delay	11.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.27		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	41.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBR	NBL	NBT	SBT	SBR
	↗	↘	↖	↑	↓	↙
Lane Configurations	↰↱		↰	↑	↑↱	
Volume (vph)	48	41	10	193	288	28
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	14	12	13	12	10	12
Total Lost time (s)	4.0		4.0	4.0	4.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.94		1.00	1.00	0.99	
Flt Protected	0.97		0.95	1.00	1.00	
Satd. Flow (prot)	1753		1765	1782	1657	
Flt Permitted	0.97		0.50	1.00	1.00	
Satd. Flow (perm)	1753		937	1782	1657	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	53	46	11	214	320	31
RTOR Reduction (vph)	31	0	0	0	5	0
Lane Group Flow (vph)	68	0	11	214	346	0
Confl. Peds. (#/hr)			2			2
Heavy Vehicles (%)	0%	0%	0%	1%	0%	0%
Turn Type			Perm			
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	21.0		36.0	36.0	36.0	
Effective Green, g (s)	21.0		36.0	36.0	36.0	
Actuated g/C Ratio	0.32		0.55	0.55	0.55	
Clearance Time (s)	4.0		4.0	4.0	4.0	
Lane Grp Cap (vph)	566		519	987	918	
v/s Ratio Prot	c0.04			0.12	c0.21	
v/s Ratio Perm			0.01			
v/c Ratio	0.12		0.02	0.22	0.38	
Uniform Delay, d1	15.5		6.5	7.4	8.2	
Progression Factor	1.00		0.46	0.61	1.43	
Incremental Delay, d2	0.4		0.1	0.5	1.0	
Delay (s)	15.9		3.1	5.0	12.7	
Level of Service	B		A	A	B	
Approach Delay (s)	15.9			4.9	12.7	
Approach LOS	B			A	B	

Intersection Summary			
HCM Average Control Delay	10.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	29.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1010: 99th Street & Michigan Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↰↑↑↱		↰	↑			↑	↱
Volume (vph)	0	0	0	30	268	9	258	122	0	0	281	17
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	14	16	12	12	15	12	12	13	10
Total Lost time (s)					4.0		4.0	4.0			3.0	3.0
Lane Util. Factor					0.95		1.00	1.00			1.00	1.00
Frpb, ped/bikes					1.00		1.00	1.00			1.00	1.00
Flpb, ped/bikes					1.00		1.00	1.00			1.00	1.00
Frt					1.00		1.00	1.00			1.00	0.85
Flt Protected					1.00		0.95	1.00			1.00	1.00
Satd. Flow (prot)					3773		1693	1678			1738	1428
Flt Permitted					1.00		0.49	1.00			1.00	1.00
Satd. Flow (perm)					3773		875	1678			1738	1428
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	0	32	282	9	272	128	0	0	296	18
RTOR Reduction (vph)	0	0	0	0	2	0	0	0	0	0	0	10
Lane Group Flow (vph)	0	0	0	0	321	0	272	128	0	0	296	8
Confl. Peds. (#/hr)	1					1			5	5		
Heavy Vehicles (%)	0%	0%	0%	0%	2%	0%	1%	18%	0%	0%	7%	0%
Turn Type				Split			pm+pt					Perm
Protected Phases				8	8		7	2			6	
Permitted Phases							2					6
Actuated Green, G (s)					26.0		51.0	51.0			38.0	38.0
Effective Green, g (s)					26.0		51.0	51.0			38.0	38.0
Actuated g/C Ratio					0.31		0.60	0.60			0.45	0.45
Clearance Time (s)					4.0		4.0	4.0			3.0	3.0
Lane Grp Cap (vph)					1154		621	1007			777	638
v/s Ratio Prot					c0.09		c0.05	0.08			0.17	
v/s Ratio Perm							c0.21					0.01
v/c Ratio					0.28		0.44	0.13			0.38	0.01
Uniform Delay, d1					22.4		12.9	7.4			15.7	13.1
Progression Factor					1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2					0.6		2.2	0.3			1.4	0.0
Delay (s)					23.0		15.2	7.6			17.1	13.1
Level of Service					C		B	A			B	B
Approach Delay (s)		0.0			23.0			12.8			16.9	
Approach LOS		A			C			B			B	

Intersection Summary			
HCM Average Control Delay	17.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1011: 99th Street & Martin Luther King Jr Drive

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					✥		↰	↑↱		↰	↑↱	
Volume (vph)	0	0	0	95	94	38	133	203	30	59	702	44
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	15	12	12	12	12	12	13	12
Total Lost time (s)					4.0		3.0	4.0		3.0	4.0	
Lane Util. Factor					1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes					1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes					1.00		1.00	1.00		1.00	1.00	
Frt					0.98		1.00	0.98		1.00	0.99	
Flt Protected					0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)					1896		1710	3286		1707	3467	
Flt Permitted					0.98		0.25	1.00		0.59	1.00	
Satd. Flow (perm)					1896		447	3286		1063	3467	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	106	104	42	148	226	33	66	780	49
RTOR Reduction (vph)	0	0	0	0	10	0	0	15	0	0	6	0
Lane Group Flow (vph)	0	0	0	0	242	0	148	244	0	66	823	0
Confl. Peds. (#/hr)							5		5	5		5
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	1%	0%
Turn Type				Split			pm+pt			pm+pt		
Protected Phases				8	8		5	2		1	6	
Permitted Phases							2			6		
Actuated Green, G (s)					23.0		41.0	34.0		41.0	34.0	
Effective Green, g (s)					23.0		41.0	34.0		41.0	34.0	
Actuated g/C Ratio					0.31		0.55	0.45		0.55	0.45	
Clearance Time (s)					4.0		3.0	4.0		3.0	4.0	
Lane Grp Cap (vph)					581		362	1490		641	1572	
v/s Ratio Prot					c0.13		c0.04	0.07		0.01	c0.24	
v/s Ratio Perm							0.19			0.05		
v/c Ratio					0.42		0.41	0.16		0.10	0.52	
Uniform Delay, d1					20.7		16.4	12.1		8.2	14.7	
Progression Factor					1.00		0.83	0.80		1.00	1.00	
Incremental Delay, d2					2.2		3.4	0.2		0.3	1.3	
Delay (s)					22.9		17.0	9.9		8.5	15.9	
Level of Service					C		B	A		A	B	
Approach Delay (s)		0.0			22.9			12.5			15.4	
Approach LOS		A			C			B			B	

Intersection Summary			
HCM Average Control Delay	15.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	53.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣		↰	↑↱		↰	↑↱	
Volume (vph)	32	49	12	8	63	63	5	271	20	159	588	50
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	16	12	12	10	11	12	12	11	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.98			0.94		1.00	0.99		1.00	0.99	
Flt Protected		0.98			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1967			1654		1595	3178		1704	3231	
Flt Permitted		0.88			0.99		0.34	1.00		0.56	1.00	
Satd. Flow (perm)		1765			1638		571	3178		998	3231	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	36	54	13	9	70	70	6	301	22	177	653	56
RTOR Reduction (vph)	0	7	0	0	43	0	0	7	0	0	8	0
Lane Group Flow (vph)	0	96	0	0	106	0	6	316	0	177	701	0
Confl. Peds. (#/hr)	2					2	1		6	6		1
Confl. Bikes (#/hr)			1	1			3					3
Heavy Vehicles (%)	0%	0%	0%	0%	2%	0%	0%	3%	0%	0%	1%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		25.0			25.0		42.0	42.0		42.0	42.0	
Effective Green, g (s)		25.0			25.0		42.0	42.0		42.0	42.0	
Actuated g/C Ratio		0.33			0.33		0.56	0.56		0.56	0.56	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		588			546		320	1780		559	1809	
v/s Ratio Prot								0.10			c0.22	
v/s Ratio Perm		0.05			c0.06		0.01			0.18		
v/c Ratio		0.16			0.19		0.02	0.18		0.32	0.39	
Uniform Delay, d1		17.6			17.8		7.3	8.1		8.8	9.3	
Progression Factor		1.00			1.00		1.00	1.00		0.27	0.25	
Incremental Delay, d2		0.6			0.8		0.1	0.2		1.3	0.5	
Delay (s)		18.2			18.6		7.4	8.3		3.7	2.9	
Level of Service		B			B		A	A		A	A	
Approach Delay (s)		18.2			18.6			8.3			3.0	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	6.9	HCM Level of Service	A
HCM Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	49.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis
1013: 100th Street & Cottage Grove Avenue

1/14/2013

	↗	↘	↖	↑	↓	↙
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰↱			↰↑	↑↱	
Sign Control	Stop			Stop	Stop	
Volume (vph)	37	192	67	249	587	81
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	39	202	71	262	618	85

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	241	158	175	412	291
Volume Left (vph)	39	71	0	0	0
Volume Right (vph)	202	0	0	0	85
Hadj (s)	-0.42	0.27	0.05	0.05	-0.15
Departure Headway (s)	5.6	6.4	6.2	5.8	5.6
Degree Utilization, x	0.38	0.28	0.30	0.66	0.45
Capacity (veh/h)	600	538	557	612	633
Control Delay (s)	12.0	10.7	10.6	18.0	11.8
Approach Delay (s)	12.0	10.7		15.5	
Approach LOS	B	B		C	

Intersection Summary			
Delay	13.6		
HCM Level of Service	B		
Intersection Capacity Utilization	53.8%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Signalized Intersection Capacity Analysis
1014: 103rd Street & Vincennes Avenue

1/14/2013

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR
Lane Configurations		↰	↑	↱	↰	↑	↱			↰	↑↱	
Volume (vph)	32	35	371	18	18	385	66	74	55	68	354	31
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		3.5	4.0	4.0	4.0	4.0	4.0			4.0	4.0	
Lane Util. Factor		1.00	1.00	1.00	1.00	1.00	1.00			1.00	0.95	
Frpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	0.93			1.00	1.00	
Flpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	
Frt		1.00	1.00	0.85	1.00	1.00	0.85			1.00	0.99	
Flt Protected		0.95	1.00	1.00	0.95	1.00	1.00			0.95	1.00	
Satd. Flow (prot)		1611	1731	1530	1710	1731	1421			1710	3253	
Flt Permitted		0.14	1.00	1.00	0.52	1.00	1.00			0.14	1.00	
Satd. Flow (perm)		238	1731	1530	937	1731	1421			257	3253	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	36	39	412	20	20	428	73	82	61	76	393	34
RTOR Reduction (vph)	0	0	0	12	0	0	39	0	0	0	6	0
Lane Group Flow (vph)	0	75	412	8	20	428	116	0	0	137	421	0
Confl. Peds. (#/hr)		25					25					3
Heavy Vehicles (%)	6%	6%	4%	0%	0%	4%	0%	0%	0%	0%	4%	0%
Turn Type	Perm	pm+pt		Perm	Perm		Perm		Perm	Perm		
Protected Phases		7	4			8					2	
Permitted Phases	4	4		4	8		8		2	2		
Actuated Green, G (s)		44.0	44.0	44.0	25.0	25.0	25.0			28.0	28.0	
Effective Green, g (s)		44.0	44.0	44.0	25.0	25.0	25.0			28.0	28.0	
Actuated g/C Ratio		0.42	0.42	0.42	0.24	0.24	0.24			0.27	0.27	
Clearance Time (s)		3.5	4.0	4.0	4.0	4.0	4.0			4.0	4.0	
Lane Grp Cap (vph)		302	725	641	223	412	338			69	867	
v/s Ratio Prot		0.04	c0.24			c0.25					0.13	
v/s Ratio Perm		0.07		0.01	0.02		0.08			c0.53		
v/c Ratio		0.25	0.57	0.01	0.09	1.04	0.34			1.99	0.49	
Uniform Delay, d1		21.6	23.3	17.8	31.1	40.0	33.2			38.5	32.4	
Progression Factor		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	
Incremental Delay, d2		2.0	3.2	0.0	0.8	54.8	2.8			491.0	1.9	
Delay (s)		23.5	26.5	17.9	31.9	94.8	36.0			529.5	34.4	
Level of Service		C	C	B	C	F	D			F	C	
Approach Delay (s)			25.7			77.6					154.6	
Approach LOS			C			E					F	

Intersection Summary			
HCM Average Control Delay	145.9	HCM Level of Service	F
HCM Volume to Capacity ratio	1.42		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	102.6%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1014: 103rd Street & Vincennes Avenue

1/14/2013

	↘	↓	↙	↲	⤴	↘	↘	⤶
Movement	SBL	SBT	SBR	SBR2	SEL2	SEL	SER	SER2
Lane Configurations	↰	↑↱				↰	↱↱	
Volume (vph)	105	571	82	103	4	112	607	197
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.5	4.5				4.5	4.5	
Lane Util. Factor	1.00	0.95				1.00	0.88	
Frpb, ped/bikes	1.00	1.00				1.00	1.00	
Flpb, ped/bikes	1.00	1.00				1.00	1.00	
Frt	1.00	0.96				1.00	0.85	
Flt Protected	0.95	1.00				0.95	1.00	
Satd. Flow (prot)	1705	3246				1710	2633	
Flt Permitted	0.38	1.00				0.95	1.00	
Satd. Flow (perm)	674	3246				1710	2633	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	117	634	91	114	4	124	674	219
RTOR Reduction (vph)	0	12	0	0	0	0	26	0
Lane Group Flow (vph)	117	827	0	0	0	128	867	0
Confl. Peds. (#/hr)	3							
Heavy Vehicles (%)	0%	2%	0%	0%	0%	0%	3%	0%
Turn Type	Perm				Split		Perm	
Protected Phases		6			9	9		
Permitted Phases	6						9	
Actuated Green, G (s)	27.5	27.5				20.5	20.5	
Effective Green, g (s)	27.5	27.5				20.5	20.5	
Actuated g/C Ratio	0.26	0.26				0.20	0.20	
Clearance Time (s)	4.5	4.5				4.5	4.5	
Lane Grp Cap (vph)	177	850				334	514	
v/s Ratio Prot		0.25				0.07		
v/s Ratio Perm	0.17						c0.33	
v/c Ratio	0.66	0.97				0.38	1.69	
Uniform Delay, d1	34.6	38.4				36.8	42.2	
Progression Factor	1.00	1.00				1.00	1.00	
Incremental Delay, d2	17.8	25.0				3.3	317.6	
Delay (s)	52.4	63.4				40.1	359.9	
Level of Service	D	E				D	F	
Approach Delay (s)		62.0				319.8		
Approach LOS		E				F		

Intersection Summary

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰			↱			✥				
Volume (vph)	65	590	0	0	451	50	85	52	17	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	11	11	11	16	11	12	15	12	12	15	12
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		1.00			0.99			0.98				
Flt Protected		1.00			1.00			0.97				
Satd. Flow (prot)		1681			1954			1843				
Flt Permitted		0.91			1.00			0.97				
Satd. Flow (perm)		1544			1954			1843				
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	68	621	0	0	475	53	89	55	18	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	689	0	0	528	0	0	162	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)		40.0			40.0			17.0				
Effective Green, g (s)		40.0			40.0			17.0				
Actuated g/C Ratio		0.62			0.62			0.26				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		950			1202			482				
v/s Ratio Prot					0.27							
v/s Ratio Perm		c0.45						0.09				
v/c Ratio		0.73			0.44			0.34				
Uniform Delay, d1		8.7			6.6			19.4				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		4.8			1.2			1.9				
Delay (s)		13.5			7.8			21.3				
Level of Service		B			A			C				
Approach Delay (s)		13.5			7.8			21.3			0.0	
Approach LOS		B			A			C			A	

Intersection Summary			
HCM Average Control Delay	12.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	83.8%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1016: 103rd Street & Halsted Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑	↱		↰↑	↱	↰	↑↑	↱	↰	↑↑	↱
Volume (vph)	71	326	152	117	307	125	105	639	84	137	759	94
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	10	10	9	9	10	9
Total Lost time (s)		4.0	4.0		4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		1.00	0.96		1.00	0.96	1.00	1.00	0.95	1.00	1.00	0.94
Flpb, ped/bikes		1.00	1.00		0.99	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.99	1.00		0.99	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1981	1434		1945	1444	1546	3040	1296	1506	3069	1252
Flt Permitted		0.43	1.00		0.73	1.00	0.23	1.00	1.00	0.29	1.00	1.00
Satd. Flow (perm)		860	1434		1445	1444	373	3040	1296	455	3069	1252
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	75	343	160	123	323	132	111	673	88	144	799	99
RTOR Reduction (vph)	0	0	94	0	0	94	0	0	53	0	0	49
Lane Group Flow (vph)	0	418	66	0	446	38	111	673	35	144	799	50
Confl. Peds. (#/hr)	24		45	45		24	36		24	24		36
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	2%	2%	2%	2%	3%	2%	3%	5%	1%	2%	4%	3%
Turn Type	pm+pt		Perm	Perm		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)		43.0	43.0		30.0	30.0	50.6	42.3	42.3	51.4	42.7	42.7
Effective Green, g (s)		43.0	43.0		30.0	30.0	50.6	42.3	42.3	51.4	42.7	42.7
Actuated g/C Ratio		0.41	0.41		0.29	0.29	0.48	0.40	0.40	0.49	0.41	0.41
Clearance Time (s)		4.0	4.0		4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		459	587		413	413	272	1225	522	310	1248	509
v/s Ratio Prot		c0.09					0.03	0.22		c0.04	c0.26	
v/s Ratio Perm		0.29	0.05		c0.31	0.03	0.16		0.03	0.19		0.04
v/c Ratio		0.91	0.11		1.08	0.09	0.41	0.55	0.07	0.46	0.64	0.10
Uniform Delay, d1		29.2	19.2		37.5	27.5	16.4	24.0	19.2	16.0	25.0	19.2
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.75	1.54	2.62
Incremental Delay, d2		24.7	0.4		67.4	0.4	1.0	1.8	0.3	1.1	2.4	0.4
Delay (s)		53.9	19.6		104.9	27.9	17.4	25.8	19.5	29.0	41.0	50.9
Level of Service		D	B		F	C	B	C	B	C	D	D
Approach Delay (s)		44.4			87.3			24.1			40.2	
Approach LOS		D			F			C			D	

Intersection Summary			
HCM Average Control Delay	45.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	87.8%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1017: 103rd Street & Normal Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			✥				
Volume (vph)	85	399	85	94	444	94	51	61	69	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	15	12	12	15	12
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		0.98			0.98			0.95				
Flt Protected		0.99			0.99			0.99				
Satd. Flow (prot)		1643			1643			1798				
Flt Permitted		0.84			0.85			0.99				
Satd. Flow (perm)		1392			1406			1798				
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	89	420	89	99	467	99	54	64	73	0	0	0
RTOR Reduction (vph)	0	10	0	0	10	0	0	34	0	0	0	0
Lane Group Flow (vph)	0	588	0	0	655	0	0	157	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm			Perm					
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Actuated Green, G (s)		40.0			40.0			17.0				
Effective Green, g (s)		40.0			40.0			17.0				
Actuated g/C Ratio		0.62			0.62			0.26				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		857			865			470				
v/s Ratio Prot												
v/s Ratio Perm		0.42			c0.47			0.09				
v/c Ratio		0.69			0.76			0.33				
Uniform Delay, d1		8.3			9.0			19.4				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		4.5			6.2			1.9				
Delay (s)		12.8			15.2			21.3				
Level of Service		B			B			C				
Approach Delay (s)		12.8			15.2			21.3			0.0	
Approach LOS		B			B			C			A	

Intersection Summary			
HCM Average Control Delay	15.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	65.8%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1018: 103rd Street & Wentworth Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱		↰	↱		✣	
Volume (vph)	21	439	73	76	511	37	37	76	72	54	238	47
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	11	12	12	15	12
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frpb, ped/bikes		1.00	0.96		1.00	0.96		1.00	0.96		0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		0.99	1.00		1.00	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		0.98	
Flt Protected		1.00	1.00		0.99	1.00		0.98	1.00		0.99	
Satd. Flow (prot)		1687	1382		1712	1417		1686	1455		1887	
Flt Permitted		0.97	1.00		0.89	1.00		0.84	1.00		0.94	
Satd. Flow (perm)		1634	1382		1533	1417		1432	1455		1779	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	22	462	77	80	538	39	39	80	76	57	251	49
RTOR Reduction (vph)	0	0	33	0	0	12	0	0	52	0	7	0
Lane Group Flow (vph)	0	484	44	0	618	27	0	119	24	0	350	0
Confl. Peds. (#/hr)	25		19	19		25	36		30	30		36
Confl. Bikes (#/hr)	1		2	2		1	3					3
Heavy Vehicles (%)	0%	3%	3%	0%	1%	0%	0%	1%	1%	0%	1%	0%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		43.0	43.0		43.0	43.0		24.0	24.0		24.0	
Effective Green, g (s)		43.0	43.0		43.0	43.0		24.0	24.0		24.0	
Actuated g/C Ratio		0.57	0.57		0.57	0.57		0.32	0.32		0.32	
Clearance Time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	
Lane Grp Cap (vph)		937	792		879	812		458	466		569	
v/s Ratio Prot												
v/s Ratio Perm		0.30	0.03		c0.40	0.02		0.08	0.02		c0.20	
v/c Ratio		0.52	0.06		0.70	0.03		0.26	0.05		0.61	
Uniform Delay, d1		9.7	7.1		11.4	7.0		18.9	17.6		21.6	
Progression Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2		2.0	0.1		4.7	0.1		1.4	0.2		4.9	
Delay (s)		11.7	7.2		16.1	7.0		20.3	17.8		26.5	
Level of Service		B	A		B	A		C	B		C	
Approach Delay (s)		11.1			15.6			19.3			26.5	
Approach LOS		B			B			B			C	

Intersection Summary			
HCM Average Control Delay	16.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	94.9%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1019: 103rd Street & State Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑	↱	↰	↑	↱
Volume (vph)	57	443	30	45	525	54	44	165	55	123	210	32
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	11	16	8	10	10	10	10	10	10
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00	0.98	1.00	1.00	0.98
Flpb, ped/bikes	0.98	1.00		1.00	1.00		0.99	1.00	1.00	0.99	1.00	1.00
Frt	1.00	0.99		1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1531	3066		1651	3728		1585	1663	1370	1568	1680	1397
Flt Permitted	0.38	1.00		0.44	1.00		0.59	1.00	1.00	0.64	1.00	1.00
Satd. Flow (perm)	604	3066		769	3728		977	1663	1370	1061	1680	1397
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	60	466	32	47	553	57	46	174	58	129	221	34
RTOR Reduction (vph)	0	8	0	0	12	0	0	0	35	0	0	20
Lane Group Flow (vph)	60	490	0	47	598	0	46	174	23	129	221	14
Confl. Peds. (#/hr)	51		3	3		51	13		13	13		13
Heavy Vehicles (%)	2%	3%	3%	0%	2%	0%	0%	1%	2%	1%	0%	0%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	31.0	31.0		31.0	31.0		26.0	26.0	26.0	26.0	26.0	26.0
Effective Green, g (s)	31.0	31.0		31.0	31.0		26.0	26.0	26.0	26.0	26.0	26.0
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.40	0.40	0.40	0.40	0.40	0.40
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	288	1462		367	1778		391	665	548	424	672	559
v/s Ratio Prot		0.16			c0.16			0.10			c0.13	
v/s Ratio Perm	0.10			0.06			0.05		0.02	0.12		0.01
v/c Ratio	0.21	0.34		0.13	0.34		0.12	0.26	0.04	0.30	0.33	0.02
Uniform Delay, d1	9.9	10.6		9.5	10.6		12.3	13.1	11.9	13.3	13.5	11.8
Progression Factor	1.00	1.00		1.00	1.00		0.86	0.91	0.80	0.55	0.56	0.25
Incremental Delay, d2	1.6	0.6		0.7	0.5		0.6	1.0	0.1	1.8	1.3	0.1
Delay (s)	11.5	11.2		10.2	11.1		11.2	12.9	9.6	9.1	8.8	3.0
Level of Service	B	B		B	B		B	B	A	A	A	A
Approach Delay (s)		11.2			11.0			11.9			8.4	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM Average Control Delay	10.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1020: 103rd Street & Michigan Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	50	389	71	73	387	67	55	180	64	89	245	77
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	11	10	11	11	10	11	11	10	11	11
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.98		1.00	0.99		1.00	0.98		1.00	0.99	
Flpb, ped/bikes	0.96	1.00		0.95	1.00		0.99	1.00		0.95	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.96		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1327	3143		1513	3126		1579	2919		1451	3002	
Flt Permitted	0.45	1.00		0.45	1.00		0.54	1.00		0.60	1.00	
Satd. Flow (perm)	634	3143		717	3126		895	2919		910	3002	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	52	401	73	75	399	69	57	186	66	92	253	79
RTOR Reduction (vph)	0	0	0	0	0	0	0	39	0	0	39	0
Lane Group Flow (vph)	52	474	0	75	468	0	57	213	0	92	293	0
Confl. Peds. (#/hr)	112		99	99		112	23		53	53		23
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	16%	1%	0%	0%	1%	9%	0%	8%	2%	5%	5%	7%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	36.0	36.0		36.0	36.0		31.0	31.0		31.0	31.0	
Effective Green, g (s)	36.0	36.0		36.0	36.0		31.0	31.0		31.0	31.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.41	0.41		0.41	0.41	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	304	1509		344	1500		370	1207		376	1241	
v/s Ratio Prot		c0.15			0.15			0.07			0.10	
v/s Ratio Perm	0.08			0.10			0.06			c0.10		
v/c Ratio	0.17	0.31		0.22	0.31		0.15	0.18		0.24	0.24	
Uniform Delay, d1	11.0	11.9		11.3	11.9		13.8	13.9		14.4	14.3	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.2	0.5		1.5	0.5		0.9	0.3		1.5	0.4	
Delay (s)	12.3	12.5		12.8	12.5		14.7	14.2		15.9	14.7	
Level of Service	B	B		B	B		B	B		B	B	
Approach Delay (s)		12.5			12.5			14.3			15.0	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	13.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	50.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1021: 103rd Street & Martin Luther King Jr Drive

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱		↰	↑↱		↰	↑↱	
Volume (vph)	88	431	58	32	519	48	85	203	60	76	473	106
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	12	8	16	12	9	10	10	9	10	10
Total Lost time (s)	3.0	7.0		3.0	7.0		3.0	7.0		3.0	7.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.98		1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.99		1.00	0.97		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1595	1654		1369	1973		1534	2998		1535	3016	
Flt Permitted	0.24	1.00		0.32	1.00		0.28	1.00		0.58	1.00	
Satd. Flow (perm)	411	1654		464	1973		457	2998		939	3016	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	93	454	61	34	546	51	89	214	63	80	498	112
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	93	515	0	34	597	0	89	277	0	80	610	0
Confl. Peds. (#/hr)	21		95	95		21	36		8	8		36
Confl. Bikes (#/hr)	2		3	3		2	2					2
Heavy Vehicles (%)	0%	2%	0%	7%	2%	0%	0%	3%	0%	0%	2%	1%
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	44.0	39.4		40.8	37.8		26.6	21.8		26.6	21.8	
Effective Green, g (s)	44.0	37.4		40.8	35.8		26.6	19.8		26.6	19.8	
Actuated g/C Ratio	0.52	0.44		0.48	0.42		0.31	0.23		0.31	0.23	
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	5.0		3.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	277	728		255	831		204	698		328	703	
v/s Ratio Prot	c0.02	c0.31		0.00	0.30		c0.02	0.09		0.01	c0.20	
v/s Ratio Perm	0.16			0.06			0.11			0.06		
v/c Ratio	0.34	0.71		0.13	0.72		0.44	0.40		0.24	0.87	
Uniform Delay, d1	23.0	19.4		19.6	20.4		29.1	27.6		21.9	31.3	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.7	5.7		0.2	5.3		1.5	1.7		0.4	13.7	
Delay (s)	23.7	25.1		19.8	25.7		30.6	29.2		22.3	45.0	
Level of Service	C	C		B	C		C	C		C	D	
Approach Delay (s)		24.9			25.4			29.6			42.4	
Approach LOS		C			C			C			D	

Intersection Summary			
HCM Average Control Delay	31.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	78.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1022: 103rd Street & Cottage Grove Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	73	389	63	117	508	118	66	158	58	127	367	81
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	11	11	11	11	12	12	10	10	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		0.99	1.00	
Frt		0.98			0.98		1.00	0.96		1.00	0.97	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3682			3131		1652	3236		1549	3028	
Flt Permitted		0.74			0.75		0.44	1.00		0.61	1.00	
Satd. Flow (perm)		2746			2356		769	3236		995	3028	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	77	409	66	123	535	124	69	166	61	134	386	85
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	552	0	0	782	0	69	227	0	134	471	0
Confl. Peds. (#/hr)	23		30	30		23	1		20	20		1
Confl. Bikes (#/hr)	3					3						
Heavy Vehicles (%)	0%	3%	0%	2%	2%	0%	0%	1%	0%	2%	2%	3%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		33.0			33.0		32.0	32.0		32.0	32.0	
Effective Green, g (s)		34.0			34.0		33.0	33.0		33.0	33.0	
Actuated g/C Ratio		0.45			0.45		0.44	0.44		0.44	0.44	
Clearance Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)		1245			1068		338	1424		438	1332	
v/s Ratio Prot								0.07			c0.16	
v/s Ratio Perm		0.20			c0.33		0.09			0.13		
v/c Ratio		0.44			0.73		0.20	0.16		0.31	0.35	
Uniform Delay, d1		14.0			16.8		12.9	12.6		13.6	13.9	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		1.1			4.4		1.4	0.2		1.8	0.7	
Delay (s)		15.2			21.2		14.3	12.9		15.4	14.7	
Level of Service		B			C		B	B		B	B	
Approach Delay (s)		15.2			21.2			13.2			14.8	
Approach LOS		B			C			B			B	

Intersection Summary			
HCM Average Control Delay	16.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	72.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1023: 103rd Street & Woodlawn Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↑	↱		✥			↰↑↱	
Volume (vph)	98	867	6	20	583	249	1	1	9	213	1	80
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	12	12	12	12	12	12	13	13	13
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00			0.95	
Frt	1.00	1.00		1.00	1.00	0.85		0.89			0.96	
Flt Protected	0.95	1.00		0.95	1.00	1.00		1.00			0.97	
Satd. Flow (prot)	1605	3207		1660	3320	1485		1548			3176	
Flt Permitted	0.40	1.00		0.27	1.00	1.00		0.98			0.77	
Satd. Flow (perm)	680	3207		475	3320	1485		1520			2537	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	103	913	6	21	614	262	1	1	9	224	1	84
RTOR Reduction (vph)	0	0	0	0	0	96	0	7	0	0	53	0
Lane Group Flow (vph)	103	919	0	21	614	166	0	4	0	0	256	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	46.1	46.1		46.1	46.1	46.1		18.6			18.6	
Effective Green, g (s)	46.1	46.1		46.1	46.1	46.1		18.6			18.6	
Actuated g/C Ratio	0.63	0.63		0.63	0.63	0.63		0.26			0.26	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		8.0			8.0	
Lane Grp Cap (vph)	431	2034		301	2105	942		389			649	
v/s Ratio Prot		c0.29			0.18							
v/s Ratio Perm	0.15			0.04		0.11		0.00			c0.10	
v/c Ratio	0.24	0.45		0.07	0.29	0.18		0.01			0.39	
Uniform Delay, d1	5.7	6.8		5.1	6.0	5.5		20.2			22.4	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00			1.00	
Incremental Delay, d2	1.3	0.7		0.4	0.4	0.4		0.0			1.7	
Delay (s)	7.0	7.5		5.5	6.3	5.9		20.2			24.1	
Level of Service	A	A		A	A	A		C			C	
Approach Delay (s)		7.5			6.2			20.2			24.1	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM Average Control Delay	9.3	HCM Level of Service	A
HCM Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	72.7	Sum of lost time (s)	8.0
Intersection Capacity Utilization	58.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱		↰	↑↑	↱	↰	↑↑	↱
Volume (vph)	131	228	122	94	163	55	134	907	90	123	825	94
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	9	12	10	10	12	9	10	9	9	10	9
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00	0.97	1.00	1.00	0.96
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.95		1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1560	1506		1563	1586		1493	3069	1337	1523	3099	1318
Flt Permitted	0.45	1.00		0.21	1.00		0.20	1.00	1.00	0.16	1.00	1.00
Satd. Flow (perm)	746	1506		348	1586		317	3069	1337	263	3099	1318
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	138	240	128	99	172	58	141	955	95	129	868	99
RTOR Reduction (vph)	0	22	0	0	14	0	0	0	40	0	0	46
Lane Group Flow (vph)	138	346	0	99	216	0	141	955	55	129	868	53
Confl. Peds. (#/hr)	10		13	13		10	18		7	7		18
Confl. Bikes (#/hr)	2					2	2		1	1		2
Heavy Vehicles (%)	2%	1%	1%	2%	1%	2%	3%	4%	0%	1%	3%	0%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	28.0	21.0		28.0	21.0		42.0	35.0	35.0	42.0	35.0	35.0
Effective Green, g (s)	26.0	22.0		26.0	22.0		40.0	35.0	35.0	40.0	35.0	35.0
Actuated g/C Ratio	0.31	0.26		0.31	0.26		0.47	0.41	0.41	0.47	0.41	0.41
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)	286	390		192	410		232	1264	551	213	1276	543
v/s Ratio Prot	0.03	c0.23		c0.04	0.14		c0.04	c0.31		0.04	0.28	
v/s Ratio Perm	0.11			0.12			0.24		0.04	0.24		0.04
v/c Ratio	0.48	0.89		0.52	0.53		0.61	0.76	0.10	0.61	0.68	0.10
Uniform Delay, d1	22.6	30.3		22.8	27.0		14.5	21.3	15.3	14.9	20.4	15.3
Progression Factor	1.00	1.00		1.00	1.00		0.64	0.79	0.52	1.00	1.00	1.00
Incremental Delay, d2	5.7	24.4		9.6	4.8		10.3	3.9	0.3	12.1	2.9	0.4
Delay (s)	28.4	54.7		32.4	31.8		19.6	20.7	8.3	27.1	23.4	15.7
Level of Service	C	D		C	C		B	C	A	C	C	B
Approach Delay (s)		47.5			32.0			19.6			23.1	
Approach LOS		D			C			B			C	

Intersection Summary			
HCM Average Control Delay	26.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	73.5%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1025: 107th Street & Wentworth Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			✥			✥	
Volume (vph)	22	181	34	20	173	20	23	149	40	37	255	50
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	14	12	12	14	12	12	16	12	12	16	12
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		0.99			1.00			1.00			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.98			0.99			0.97			0.98	
Flt Protected		1.00			1.00			0.99			0.99	
Satd. Flow (prot)		1840			1851			1939			1976	
Flt Permitted		0.97			0.96			0.95			0.95	
Satd. Flow (perm)		1785			1793			1848			1893	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	23	191	36	21	182	21	24	157	42	39	268	53
RTOR Reduction (vph)	0	9	0	0	6	0	0	13	0	0	10	0
Lane Group Flow (vph)	0	241	0	0	218	0	0	210	0	0	350	0
Confl. Peds. (#/hr)	18		34	34		18	16		19	19		16
Confl. Bikes (#/hr)			6	6			1		4	4		1
Heavy Vehicles (%)	0%	1%	0%	5%	1%	0%	0%	2%	0%	0%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		27.0			27.0			30.0			30.0	
Effective Green, g (s)		27.0			27.0			30.0			30.0	
Actuated g/C Ratio		0.42			0.42			0.46			0.46	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		741			745			853			874	
v/s Ratio Prot												
v/s Ratio Perm		c0.13			0.12			0.11			c0.19	
v/c Ratio		0.32			0.29			0.25			0.40	
Uniform Delay, d1		12.8			12.6			10.6			11.6	
Progression Factor		1.00			0.65			1.15			1.00	
Incremental Delay, d2		1.2			1.0			0.7			1.4	
Delay (s)		14.0			9.3			12.9			12.9	
Level of Service		B			A			B			B	
Approach Delay (s)		14.0			9.3			12.9			12.9	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM Average Control Delay	12.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	51.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1026: 107th Street & State Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	24	193	36	25	180	18	39	200	31	39	214	39
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	0.97	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.99		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1495	3063		1576	3122		1518	3118		1550	3075	
Flt Permitted	0.62	1.00		0.60	1.00		0.59	1.00		0.60	1.00	
Satd. Flow (perm)	978	3063		999	3122		939	3118		979	3075	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	25	203	38	26	189	19	41	211	33	41	225	41
RTOR Reduction (vph)	0	23	0	0	12	0	0	14	0	0	17	0
Lane Group Flow (vph)	25	218	0	26	196	0	41	230	0	41	249	0
Confl. Peds. (#/hr)	20		17	17		20	2					2
Confl. Bikes (#/hr)	32		36	36		32	22		25	25		22
Heavy Vehicles (%)	4%	1%	0%	0%	0%	0%	5%	0%	0%	3%	1%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.0	20.0		20.0	20.0		39.0	39.0		39.0	39.0	
Effective Green, g (s)	19.0	19.0		19.0	19.0		38.0	38.0		38.0	38.0	
Actuated g/C Ratio	0.29	0.29		0.29	0.29		0.58	0.58		0.58	0.58	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	286	895		292	913		549	1823		572	1798	
v/s Ratio Prot		c0.07			0.06			0.07			c0.08	
v/s Ratio Perm	0.03			0.03			0.04			0.04		
v/c Ratio	0.09	0.24		0.09	0.21		0.07	0.13		0.07	0.14	
Uniform Delay, d1	16.7	17.5		16.7	17.4		5.9	6.1		5.9	6.1	
Progression Factor	0.89	0.91		0.73	0.72		1.25	1.26		0.38	0.34	
Incremental Delay, d2	0.6	0.6		0.6	0.5		0.3	0.1		0.2	0.2	
Delay (s)	15.4	16.6		12.8	13.0		7.6	7.7		2.4	2.2	
Level of Service	B	B		B	B		A	A		A	A	
Approach Delay (s)		16.5			13.0			7.7			2.2	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	9.4	HCM Level of Service	A
HCM Volume to Capacity ratio	0.17		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	46.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1027: 107th Street & Michigan Avenue

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			✣			✣	
Volume (vph)	67	168	41	25	159	36	23	247	16	30	322	33
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	9	9	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	
Flpb, ped/bikes	0.99	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.97		1.00	0.97			0.99			0.99	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1555	3058		1524	2941			1923			1938	
Flt Permitted	0.63	1.00		0.62	1.00			0.96			0.96	
Satd. Flow (perm)	1026	3058		992	2941			1853			1874	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	68	171	42	26	162	37	23	252	16	31	329	34
RTOR Reduction (vph)	0	25	0	0	22	0	0	3	0	0	5	0
Lane Group Flow (vph)	68	188	0	26	177	0	0	288	0	0	389	0
Confl. Peds. (#/hr)	11		17	17		11	26		7	7		26
Heavy Vehicles (%)	2%	1%	0%	0%	1%	3%	4%	5%	0%	0%	4%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	26.0	26.0		26.0	26.0			31.0			31.0	
Effective Green, g (s)	26.0	26.0		26.0	26.0			31.0			31.0	
Actuated g/C Ratio	0.40	0.40		0.40	0.40			0.48			0.48	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	410	1223		397	1176			884			894	
v/s Ratio Prot		0.06			0.06							
v/s Ratio Perm	c0.07			0.03				0.16			c0.21	
v/c Ratio	0.17	0.15		0.07	0.15			0.33			0.43	
Uniform Delay, d1	12.5	12.5		12.0	12.4			10.5			11.2	
Progression Factor	1.01	0.94		0.77	0.76			0.99			1.00	
Incremental Delay, d2	0.9	0.3		0.3	0.3			1.0			1.5	
Delay (s)	13.5	12.0		9.5	9.7			11.3			12.8	
Level of Service	B	B		A	A			B			B	
Approach Delay (s)		12.4			9.7			11.3			12.8	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM Average Control Delay	11.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	55.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1028: 107th Street & Martin Luther King Jr Drive

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱			✣			✣	
Volume (vph)	47	111	26	20	161	26	31	235	11	29	364	57
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	16	12	10	16	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	
Flpb, ped/bikes	1.00	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.97		1.00	0.98			0.99			0.98	
Flt Protected	0.95	1.00		0.95	1.00			0.99			1.00	
Satd. Flow (prot)	1652	1973		1583	1977			1983			1979	
Flt Permitted	0.57	1.00		0.66	1.00			0.93			0.97	
Satd. Flow (perm)	989	1973		1092	1977			1850			1925	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	52	123	29	22	179	29	34	261	12	32	404	63
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	52	152	0	22	208	0	0	307	0	0	499	0
Confl. Peds. (#/hr)	1		10	10		1	2		5	5		2
Heavy Vehicles (%)	0%	0%	0%	0%	1%	0%	0%	2%	0%	0%	1%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.0	20.0		20.0	20.0			37.0			37.0	
Effective Green, g (s)	20.0	20.0		20.0	20.0			37.0			37.0	
Actuated g/C Ratio	0.31	0.31		0.31	0.31			0.57			0.57	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	304	607		336	608			1053			1096	
v/s Ratio Prot		0.08			c0.11							
v/s Ratio Perm	0.05			0.02				0.17			c0.26	
v/c Ratio	0.17	0.25		0.07	0.34			0.29			0.46	
Uniform Delay, d1	16.4	16.9		15.9	17.4			7.2			8.1	
Progression Factor	0.81	0.79		0.93	0.92			0.97			1.00	
Incremental Delay, d2	1.2	1.0		0.4	1.5			0.7			1.4	
Delay (s)	14.5	14.3		15.1	17.6			7.7			9.5	
Level of Service	B	B		B	B			A			A	
Approach Delay (s)		14.4			17.3			7.7			9.5	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	11.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1029: 107th Street & Cottage Grove Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑	↱	↰	↑	↱
Volume (vph)	54	13	96	2	5	9	58	235	5	3	466	76
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	10	10	10	11	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.98		1.00	0.98		1.00	1.00	1.00	1.00	1.00	0.98
Flpb, ped/bikes	0.99	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.87		1.00	0.91		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1695	1727		1702	1815		1594	1647	1428	1653	2000	1496
Flt Permitted	0.75	1.00		0.68	1.00		0.39	1.00	1.00	0.59	1.00	1.00
Satd. Flow (perm)	1333	1727		1217	1815		660	1647	1428	1030	2000	1496
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	60	14	107	2	6	10	64	261	6	3	518	84
RTOR Reduction (vph)	0	77	0	0	7	0	0	0	2	0	0	28
Lane Group Flow (vph)	60	44	0	2	9	0	64	261	4	3	518	56
Confl. Peds. (#/hr)	5		5	5		5	3					3
Heavy Vehicles (%)	0%	0%	1%	0%	0%	0%	0%	2%	0%	0%	2%	0%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	17.0	17.0		17.0	17.0		39.0	39.0	39.0	39.0	39.0	39.0
Effective Green, g (s)	18.0	18.0		18.0	18.0		39.0	39.0	39.0	39.0	39.0	39.0
Actuated g/C Ratio	0.28	0.28		0.28	0.28		0.60	0.60	0.60	0.60	0.60	0.60
Clearance Time (s)	5.0	5.0		5.0	5.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	369	478		337	503		396	988	857	618	1200	898
v/s Ratio Prot		0.03			0.00			0.16			c0.26	
v/s Ratio Perm	c0.05			0.00			0.10		0.00	0.00		0.04
v/c Ratio	0.16	0.09		0.01	0.02		0.16	0.26	0.00	0.00	0.43	0.06
Uniform Delay, d1	17.8	17.4		17.0	17.1		5.8	6.2	5.2	5.2	7.0	5.4
Progression Factor	1.41	2.79		1.00	1.00		0.79	0.73	0.88	1.00	1.00	1.00
Incremental Delay, d2	0.9	0.4		0.0	0.1		0.7	0.5	0.0	0.0	1.1	0.1
Delay (s)	26.0	49.0		17.1	17.1		5.2	5.1	4.6	5.2	8.2	5.5
Level of Service	C	D		B	B		A	A	A	A	A	A
Approach Delay (s)		41.4			17.1			5.1			7.8	
Approach LOS		D			B			A			A	

Intersection Summary			
HCM Average Control Delay	12.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	52.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1030: 111th Street & Marshield Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱		↰	↑↑					↰	↑↱	
Volume (vph)	0	251	163	158	196	0	0	0	0	109	470	377
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	12	12	12	12	12	11	11	12
Total Lost time (s)		4.0		3.0	3.0					5.0	5.0	
Lane Util. Factor		0.95		1.00	0.95					1.00	0.95	
Frpb, ped/bikes		0.99		1.00	1.00					1.00	0.99	
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	
Frt		0.94		1.00	1.00					1.00	0.93	
Flt Protected		1.00		0.95	1.00					0.95	1.00	
Satd. Flow (prot)		2904		1693	3288					1503	3021	
Flt Permitted		1.00		0.41	1.00					0.95	1.00	
Satd. Flow (perm)		2904		725	3288					1503	3021	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	264	172	166	206	0	0	0	0	115	495	397
RTOR Reduction (vph)	0	106	0	0	0	0	0	0	0	0	141	0
Lane Group Flow (vph)	0	330	0	166	206	0	0	0	0	115	751	0
Confl. Peds. (#/hr)	18		3	3		18	1					1
Heavy Vehicles (%)	0%	4%	1%	1%	4%	0%	0%	0%	0%	10%	2%	1%
Turn Type				D.P+P						Split		
Protected Phases		8		7	7 8					6	6	
Permitted Phases				8								
Actuated Green, G (s)		33.0		53.0	56.0					37.0	37.0	
Effective Green, g (s)		33.0		53.0	56.0					37.0	37.0	
Actuated g/C Ratio		0.32		0.52	0.55					0.36	0.36	
Clearance Time (s)		4.0		3.0						5.0	5.0	
Lane Grp Cap (vph)		940		567	1805					545	1096	
v/s Ratio Prot		c0.11		c0.06	0.06					0.08	c0.25	
v/s Ratio Perm				0.09								
v/c Ratio		0.35		0.29	0.11					0.21	0.68	
Uniform Delay, d1		26.3		13.3	11.1					22.4	27.6	
Progression Factor		1.00		2.14	2.09					1.00	1.00	
Incremental Delay, d2		1.0		1.2	0.1					0.9	3.5	
Delay (s)		27.4		29.6	23.2					23.3	31.0	
Level of Service		C		C	C					C	C	
Approach Delay (s)		27.4			26.1			0.0			30.2	
Approach LOS		C			C			A			C	

Intersection Summary			
HCM Average Control Delay	28.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	102.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	62.4%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1031: 111th Street & Hamlet Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑			↑↱		↰	↑	↱			
Volume (vph)	141	219	0	0	277	109	77	539	227	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	9	12	13	12	13	12	12	12
Total Lost time (s)	4.0	4.0			4.0		5.0	5.0	5.0			
Lane Util. Factor	1.00	0.95			0.95		1.00	1.00	1.00			
Frpb, ped/bikes	1.00	1.00			0.99		1.00	1.00	0.99			
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.96		1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1674	3196			2844		1767	1782	1560			
Flt Permitted	0.39	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	686	3196			2844		1767	1782	1560			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	148	231	0	0	292	115	81	567	239	0	0	0
RTOR Reduction (vph)	0	0	0	0	41	0	0	0	164	0	0	0
Lane Group Flow (vph)	148	231	0	0	366	0	81	567	75	0	0	0
Confl. Peds. (#/hr)	9		13	13		9			1	1		
Confl. Bikes (#/hr)	3					3						
Heavy Vehicles (%)	2%	7%	0%	0%	3%	1%	0%	1%	0%	0%	0%	0%
Turn Type	pm+pt						custom		Perm			
Protected Phases	4	1 4			1		2	2				
Permitted Phases	1 4						2		2			
Actuated Green, G (s)	59.0	63.0			26.0		30.0	30.0	30.0			
Effective Green, g (s)	59.0	63.0			26.0		30.0	30.0	30.0			
Actuated g/C Ratio	0.58	0.62			0.25		0.29	0.29	0.29			
Clearance Time (s)	4.0				4.0		5.0	5.0	5.0			
Lane Grp Cap (vph)	716	1974			725		520	524	459			
v/s Ratio Prot	c0.07	0.07			c0.13		0.05	c0.32				
v/s Ratio Perm	0.05								0.05			
v/c Ratio	0.21	0.12			0.50		0.16	1.08	0.16			
Uniform Delay, d1	10.2	8.0			32.5		26.6	36.0	26.7			
Progression Factor	0.43	0.44			1.00		1.00	1.00	1.00			
Incremental Delay, d2	0.6	0.1			2.5		0.6	63.3	0.8			
Delay (s)	5.0	3.6			35.0		27.3	99.3	27.5			
Level of Service	A	A			C		C	F	C			
Approach Delay (s)		4.2			35.0			73.4			0.0	
Approach LOS		A			C			E			A	

Intersection Summary			
HCM Average Control Delay	48.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	102.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	62.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1032: 112th Place & Marshield Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱		↰	↑↑					↰	↑↑	↱
Volume (vph)	0	510	479	81	534	0	0	0	0	9	432	269
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	11	12	12	12	12	10	10	12
Total Lost time (s)		4.0		4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.95		1.00	0.95					1.00	0.95	1.00
Frpb, ped/bikes		0.99		1.00	1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Frt		0.93		1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00					0.95	1.00	1.00
Satd. Flow (prot)		3097		1710	3306					1596	3192	1530
Flt Permitted		1.00		0.11	1.00					0.95	1.00	1.00
Satd. Flow (perm)		3097		200	3306					1596	3192	1530
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	537	504	85	562	0	0	0	0	9	455	283
RTOR Reduction (vph)	0	170	0	0	0	0	0	0	0	0	0	187
Lane Group Flow (vph)	0	871	0	85	562	0	0	0	0	9	455	96
Confl. Peds. (#/hr)	8		8	8		8	3					3
Confl. Bikes (#/hr)	9					9			61	61		
Heavy Vehicles (%)	0%	1%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type				pm+pt						Split		Prot
Protected Phases		8		7	7 8					6	6	6
Permitted Phases				7 8								
Actuated Green, G (s)		36.0		54.0	58.0					34.0	34.0	34.0
Effective Green, g (s)		36.0		54.0	58.0					34.0	34.0	34.0
Actuated g/C Ratio		0.36		0.54	0.58					0.34	0.34	0.34
Clearance Time (s)		4.0		4.0						4.0	4.0	4.0
Lane Grp Cap (vph)		1115		380	1917					543	1085	520
v/s Ratio Prot		c0.28		0.04	c0.17					0.01	c0.14	0.06
v/s Ratio Perm				0.08								
v/c Ratio		0.78		0.22	0.29					0.02	0.42	0.19
Uniform Delay, d1		28.5		14.5	10.6					21.9	25.4	23.2
Progression Factor		1.00		1.01	1.18					1.00	1.00	1.00
Incremental Delay, d2		5.5		0.9	0.3					0.1	1.2	0.8
Delay (s)		34.0		15.5	12.8					22.0	26.6	24.0
Level of Service		C		B	B					C	C	C
Approach Delay (s)		34.0			13.2			0.0			25.6	
Approach LOS		C			B			A			C	

Intersection Summary			
HCM Average Control Delay	25.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	91.3%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1033: 112th Place & Hamlet Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↰↑			↑↱		↰	↰	↱			
Volume (vph)	415	104	0	0	150	5	465	479	58	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	12	12	12	10	12	11	11	12	12	12	12
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0	4.0			
Lane Util. Factor	0.91	0.91			0.95		0.95	0.95	1.00			
Frpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			1.00		1.00	1.00	0.85			
Flt Protected	0.95	0.97			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1469	3109			3174		1555	1653	1530			
Flt Permitted	0.64	0.71			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	986	2282			3174		1555	1653	1530			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	437	109	0	0	158	5	489	504	61	0	0	0
RTOR Reduction (vph)	0	0	0	0	3	0	0	0	38	0	0	0
Lane Group Flow (vph)	218	328	0	0	160	0	489	504	23	0	0	0
Confl. Peds. (#/hr)	13		6	6		13			8	8		
Confl. Bikes (#/hr)	1					1			2	2		
Heavy Vehicles (%)	2%	1%	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%
Turn Type	pm+pt						custom		custom			
Protected Phases	4	1 4			1		2	2	2			
Permitted Phases	1 4						2		2			
Actuated Green, G (s)	51.0	51.0			15.0		37.0	37.0	37.0			
Effective Green, g (s)	51.0	51.0			15.0		37.0	37.0	37.0			
Actuated g/C Ratio	0.51	0.51			0.15		0.37	0.37	0.37			
Clearance Time (s)	4.0				4.0		4.0	4.0	4.0			
Lane Grp Cap (vph)	677	1462			476		575	612	566			
v/s Ratio Prot	c0.12	0.08			c0.05		c0.31	0.30	0.01			
v/s Ratio Perm	0.05	0.03										
v/c Ratio	0.32	0.22			0.34		0.85	0.82	0.04			
Uniform Delay, d1	14.1	13.6			38.0		29.0	28.5	20.1			
Progression Factor	0.24	0.25			1.00		1.00	1.00	1.00			
Incremental Delay, d2	0.7	0.2			1.9		14.6	11.9	0.1			
Delay (s)	4.1	3.6			40.0		43.6	40.5	20.3			
Level of Service	A	A			D		D	D	C			
Approach Delay (s)		3.8			40.0			40.7			0.0	
Approach LOS		A			D			D			A	

Intersection Summary			
HCM Average Control Delay	29.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	91.3%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱		↰	↑↑	↱	↰	↑↑	↱
Volume (vph)	78	211	103	109	241	111	84	699	76	100	884	65
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	9	10	9	9	10	9
Total Lost time (s)		4.0			4.0		4.0	3.5	4.0	4.0	3.5	4.0
Lane Util. Factor		0.95			0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		0.99			0.99		1.00	1.00	0.97	1.00	1.00	0.96
Flpb, ped/bikes		1.00			1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.96			0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.99			0.99		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		2936			2924		1508	3069	1309	1508	3099	1298
Flt Permitted		0.76			0.75		0.16	1.00	1.00	0.26	1.00	1.00
Satd. Flow (perm)		2259			2233		261	3069	1309	407	3099	1298
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	80	218	106	112	248	114	87	721	78	103	911	67
RTOR Reduction (vph)	0	42	0	0	36	0	0	0	48	0	0	33
Lane Group Flow (vph)	0	362	0	0	438	0	87	721	30	103	911	34
Confl. Peds. (#/hr)	35		30	30		35	34		8	8		34
Confl. Bikes (#/hr)	1					1	1					1
Heavy Vehicles (%)	1%	4%	0%	1%	3%	3%	2%	4%	2%	2%	3%	2%
Turn Type	pm+pt			Perm			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)		35.0			27.0		38.0	33.0	33.0	38.0	33.0	33.0
Effective Green, g (s)		36.0			28.0		36.0	33.5	33.0	36.0	33.5	33.0
Actuated g/C Ratio		0.42			0.33		0.42	0.39	0.39	0.42	0.39	0.39
Clearance Time (s)		5.0			5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)		1005			736		169	1210	508	224	1221	504
v/s Ratio Prot		c0.03					c0.02	0.23		0.02	c0.29	
v/s Ratio Perm		0.13			c0.20		0.19		0.02	0.17		0.03
v/c Ratio		0.36			0.60		0.51	0.60	0.06	0.46	0.75	0.07
Uniform Delay, d1		16.7			23.8		16.6	20.4	16.3	15.9	22.1	16.3
Progression Factor		1.00			1.00		1.35	0.68	0.62	1.11	1.17	1.76
Incremental Delay, d2		1.0			3.5		10.1	2.0	0.2	4.8	3.0	0.2
Delay (s)		17.7			27.3		32.5	15.9	10.3	22.4	28.8	28.9
Level of Service		B			C		C	B	B	C	C	C
Approach Delay (s)		17.7			27.3			17.1			28.2	
Approach LOS		B			C			B			C	

Intersection Summary			
HCM Average Control Delay	23.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	72.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰			↱			✣				
Volume (vph)	76	305	0	0	339	84	53	44	33	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		1.00			0.97			0.97				
Flt Protected		0.99			1.00			0.98				
Satd. Flow (prot)		1730			1701			1654				
Flt Permitted		0.85			1.00			0.98				
Satd. Flow (perm)		1493			1701			1654				
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	80	321	0	0	357	88	56	46	35	0	0	0
RTOR Reduction (vph)	0	0	0	0	14	0	0	19	0	0	0	0
Lane Group Flow (vph)	0	401	0	0	431	0	0	118	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)		38.0			38.0			19.0				
Effective Green, g (s)		38.0			38.0			19.0				
Actuated g/C Ratio		0.58			0.58			0.29				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		873			994			483				
v/s Ratio Prot					0.25							
v/s Ratio Perm		c0.27						0.07				
v/c Ratio		0.46			0.43			0.24				
Uniform Delay, d1		7.7			7.5			17.5				
Progression Factor		1.00			0.65			1.00				
Incremental Delay, d2		1.7			1.2			1.2				
Delay (s)		9.4			6.1			18.7				
Level of Service		A			A			B				
Approach Delay (s)		9.4			6.1			18.7			0.0	
Approach LOS		A			A			B			A	

Intersection Summary			
HCM Average Control Delay	9.2	HCM Level of Service	A
HCM Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	63.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1036: 111th Street & Wentworth Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	19	289	27	39	347	50	28	118	39	53	150	42
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	10	12	12	10	12
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		1.00			1.00			0.99			0.98	
Flpb, ped/bikes		1.00			1.00			0.99			1.00	
Frt		0.99			0.98			0.97			0.97	
Flt Protected		1.00			1.00			0.99			0.99	
Satd. Flow (prot)		1956			1938			2969			2988	
Flt Permitted		0.97			0.95			0.90			0.86	
Satd. Flow (perm)		1899			1846			2679			2606	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	20	304	28	41	365	53	29	124	41	56	158	44
RTOR Reduction (vph)	0	5	0	0	7	0	0	24	0	0	26	0
Lane Group Flow (vph)	0	347	0	0	452	0	0	170	0	0	232	0
Confl. Peds. (#/hr)	32		25	25		32	59		24	24		59
Confl. Bikes (#/hr)	3		2	2		3	4		2	2		4
Heavy Vehicles (%)	0%	3%	0%	3%	3%	0%	0%	0%	7%	4%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		30.0			30.0			27.0			27.0	
Effective Green, g (s)		30.0			30.0			27.0			27.0	
Actuated g/C Ratio		0.46			0.46			0.42			0.42	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		876			852			1113			1082	
v/s Ratio Prot												
v/s Ratio Perm		0.18			c0.24			0.06			c0.09	
v/c Ratio		0.40			0.53			0.15			0.21	
Uniform Delay, d1		11.5			12.5			11.9			12.2	
Progression Factor		0.58			0.41			1.06			0.43	
Incremental Delay, d2		1.2			2.1			0.3			0.4	
Delay (s)		7.9			7.3			12.9			5.6	
Level of Service		A			A			B			A	
Approach Delay (s)		7.9			7.3			12.9			5.6	
Approach LOS		A			A			B			A	

Intersection Summary			
HCM Average Control Delay	8.0	HCM Level of Service	A
HCM Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	73.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1037: 111th Street & State Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	41	255	39	81	448	86	43	219	98	83	227	62
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	9	10	10	9	10	10	12	10	10	12
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		0.98	1.00		0.99	1.00		0.99	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.95		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1509	3033		1568	3074		1587	2962		1585	3076	
Flt Permitted	0.35	1.00		0.56	1.00		0.57	1.00		0.55	1.00	
Satd. Flow (perm)	558	3033		919	3074		946	2962		918	3076	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	43	268	41	85	472	91	45	231	103	87	239	65
RTOR Reduction (vph)	0	19	0	0	24	0	0	48	0	0	30	0
Lane Group Flow (vph)	43	290	0	85	539	0	45	286	0	87	274	0
Confl. Peds. (#/hr)	20		31	31		20	16		20	20		16
Confl. Bikes (#/hr)							1		3	3		1
Heavy Vehicles (%)	5%	3%	0%	0%	1%	0%	0%	2%	2%	0%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	22.0	22.0		22.0	22.0		35.0	35.0		35.0	35.0	
Effective Green, g (s)	22.0	22.0		22.0	22.0		35.0	35.0		35.0	35.0	
Actuated g/C Ratio	0.34	0.34		0.34	0.34		0.54	0.54		0.54	0.54	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	189	1027		311	1040		509	1595		494	1656	
v/s Ratio Prot		0.10			c0.18			c0.10			0.09	
v/s Ratio Perm	0.08			0.09			0.05			0.09		
v/c Ratio	0.23	0.28		0.27	0.52		0.09	0.18		0.18	0.17	
Uniform Delay, d1	15.4	15.7		15.7	17.2		7.3	7.7		7.6	7.6	
Progression Factor	0.79	0.76		0.91	0.92		0.82	0.81		1.07	1.07	
Incremental Delay, d2	2.7	0.7		2.1	1.8		0.3	0.2		0.8	0.2	
Delay (s)	14.8	12.6		16.4	17.7		6.3	6.4		9.0	8.4	
Level of Service	B	B		B	B		A	A		A	A	
Approach Delay (s)		12.9			17.5			6.4			8.5	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	12.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	51.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1038: 111th Street & Michigan Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			↰↑↱			↰↑↱	
Volume (vph)	55	287	68	87	401	50	44	231	58	46	279	64
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	9	10	9	9	16	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			0.99			0.98	
Flpb, ped/bikes	0.98	1.00		0.99	1.00			0.99			1.00	
Frt	1.00	0.97		1.00	0.98			0.97			0.98	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1508	3013		1429	3720			3485			3521	
Flt Permitted	0.46	1.00		0.53	1.00			0.87			0.88	
Satd. Flow (perm)	726	3013		792	3720			3042			3120	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	58	302	72	92	422	53	46	243	61	48	294	67
RTOR Reduction (vph)	0	32	0	0	15	0	0	28	0	0	25	0
Lane Group Flow (vph)	58	342	0	92	460	0	0	322	0	0	384	0
Confl. Peds. (#/hr)	38		17	17		38	125		53	53		125
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	0%	3%	0%	7%	2%	0%	0%	6%	10%	2%	5%	5%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	31.0	31.0		31.0	31.0			26.0			26.0	
Effective Green, g (s)	31.0	31.0		31.0	31.0			26.0			26.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48			0.40			0.40	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	346	1437		378	1774			1217			1248	
v/s Ratio Prot		0.11			c0.12							
v/s Ratio Perm	0.08			0.12				0.11			c0.12	
v/c Ratio	0.17	0.24		0.24	0.26			0.26			0.31	
Uniform Delay, d1	9.7	10.0		10.1	10.1			13.1			13.3	
Progression Factor	1.52	1.66		1.12	1.12			0.47			0.68	
Incremental Delay, d2	1.0	0.4		1.4	0.3			0.5			0.6	
Delay (s)	15.8	17.0		12.7	11.7			6.7			9.7	
Level of Service	B	B		B	B			A			A	
Approach Delay (s)		16.8			11.9			6.7			9.7	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	11.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	58.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1039: 111th Street & Indiana Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰↱			✥			✥	
Volume (vph)	82	246	82	92	279	92	118	82	47	47	82	118
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	16	12	12	16	12
Total Lost time (s)		5.0	5.0		5.0			5.0			5.0	
Lane Util. Factor		1.00	1.00		0.95			1.00			1.00	
Frt		1.00	0.85		0.97			0.97			0.94	
Flt Protected		0.99	1.00		0.99			0.98			0.99	
Satd. Flow (prot)		1669	1436		3083			1885			1835	
Flt Permitted		0.79	1.00		0.81			0.69			0.91	
Satd. Flow (perm)		1342	1436		2535			1338			1680	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	86	259	86	97	294	97	124	86	49	49	86	124
RTOR Reduction (vph)	0	0	41	0	33	0	0	13	0	0	51	0
Lane Group Flow (vph)	0	345	45	0	455	0	0	246	0	0	208	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm		Perm	Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)		34.0	34.0		34.0			21.0			21.0	
Effective Green, g (s)		34.0	34.0		34.0			21.0			21.0	
Actuated g/C Ratio		0.52	0.52		0.52			0.32			0.32	
Clearance Time (s)		5.0	5.0		5.0			5.0			5.0	
Lane Grp Cap (vph)		702	751		1326			432			543	
v/s Ratio Prot												
v/s Ratio Perm		c0.26	0.03		0.18			c0.18			0.12	
v/c Ratio		0.49	0.06		0.34			0.57			0.38	
Uniform Delay, d1		10.0	7.6		9.0			18.3			17.0	
Progression Factor		1.82	4.36		0.51			1.00			1.00	
Incremental Delay, d2		2.4	0.1		0.7			5.4			2.0	
Delay (s)		20.5	33.4		5.3			23.6			19.0	
Level of Service		C	C		A			C			B	
Approach Delay (s)		23.1			5.3			23.6			19.0	
Approach LOS		C			A			C			B	

Intersection Summary			
HCM Average Control Delay	16.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	76.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			↰↑↱			↰↑↱	
Volume (vph)	45	253	18	26	317	60	24	133	47	62	146	61
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	15	8	16	8	8	16	8
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			0.99			1.00	
Flpb, ped/bikes	0.99	1.00		0.98	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.98			0.97			0.97	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1443	3037		1563	3017			3582			3605	
Flt Permitted	0.51	1.00		0.58	1.00			0.91			0.85	
Satd. Flow (perm)	771	3037		949	3017			3268			3094	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	47	266	19	27	334	63	25	140	49	65	154	64
RTOR Reduction (vph)	0	8	0	0	24	0	0	29	0	0	37	0
Lane Group Flow (vph)	47	277	0	27	373	0	0	185	0	0	246	0
Confl. Peds. (#/hr)	24		47	47		24	9		36	36		9
Confl. Bikes (#/hr)			4	4			1					1
Heavy Vehicles (%)	9%	4%	0%	0%	3%	0%	0%	1%	10%	0%	0%	8%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	30.0	30.0		30.0	30.0			27.0			27.0	
Effective Green, g (s)	30.0	30.0		30.0	30.0			27.0			27.0	
Actuated g/C Ratio	0.46	0.46		0.46	0.46			0.42			0.42	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	356	1402		438	1392			1357			1285	
v/s Ratio Prot		0.09			c0.12							
v/s Ratio Perm	0.06			0.03				0.06			c0.08	
v/c Ratio	0.13	0.20		0.06	0.27			0.14			0.19	
Uniform Delay, d1	10.0	10.4		9.7	10.8			11.8			12.1	
Progression Factor	0.78	0.79		0.77	0.60			1.06			0.40	
Incremental Delay, d2	0.7	0.3		0.1	0.3			0.2			0.3	
Delay (s)	8.5	8.5		7.6	6.7			12.7			5.2	
Level of Service	A	A		A	A			B			A	
Approach Delay (s)		8.5			6.8			12.7			5.2	
Approach LOS		A			A			B			A	

Intersection Summary			
HCM Average Control Delay	7.9	HCM Level of Service	A
HCM Volume to Capacity ratio	0.23		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.7%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1041: 111th Street & Cottage Grove Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↑↱			↰↑↑↱			↰↑↑↱			↰↑↑↱	
Volume (vph)	43	434	18	86	500	222	22	124	115	340	261	81
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			0.95			0.95	
Frt		0.99			0.96			0.93			0.98	
Flt Protected		1.00			0.99			1.00			0.98	
Satd. Flow (prot)		3288			3167			3088			3182	
Flt Permitted		0.81			0.83			0.92			0.71	
Satd. Flow (perm)		2668			2627			2843			2309	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	45	457	19	91	526	234	23	131	121	358	275	85
RTOR Reduction (vph)	0	4	0	0	60	0	0	65	0	0	16	0
Lane Group Flow (vph)	0	517	0	0	791	0	0	210	0	0	702	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm			pm+pt			Perm		
Protected Phases		4			8		5	2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		25.0			25.0			30.0			17.0	
Effective Green, g (s)		25.0			25.0			30.0			17.0	
Actuated g/C Ratio		0.38			0.38			0.46			0.26	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		1026			1010			1350			604	
v/s Ratio Prot								c0.02				
v/s Ratio Perm		0.19			c0.30			0.05			c0.30	
v/c Ratio		0.50			0.78			0.16			1.27dl	
Uniform Delay, d1		15.3			17.6			10.2			24.0	
Progression Factor		1.49			1.00			1.00			0.79	
Incremental Delay, d2		1.8			6.1			0.2			89.5	
Delay (s)		24.5			23.7			10.4			108.4	
Level of Service		C			C			B			F	
Approach Delay (s)		24.5			23.7			10.4			108.4	
Approach LOS		C			C			B			F	

Intersection Summary			
HCM Average Control Delay	48.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	84.9%	ICU Level of Service	E
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1042: 111th Street & Ellis Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↑↱			↰↑↑↱			↰↑↱			↰↑↱	
Volume (vph)	0	891	126	48	790	0	80	0	36	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	10	10	12	12	12	12	12	12	12
Total Lost time (s)		5.0			5.0			5.0				
Lane Util. Factor		0.95			0.95			1.00				
Frt		0.98			1.00			0.96				
Flt Protected		1.00			1.00			0.97				
Satd. Flow (prot)		3041			3090			1618				
Flt Permitted		1.00			0.81			0.79				
Satd. Flow (perm)		3041			2522			1329				
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	938	133	51	832	0	84	0	38	0	0	0
RTOR Reduction (vph)	0	15	0	0	0	0	0	18	0	0	0	0
Lane Group Flow (vph)	0	1056	0	0	883	0	0	104	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	custom			Perm			Perm			Perm		
Protected Phases		4 5 6 11			8			2			2	
Permitted Phases	4 6 11			8			2			2		
Actuated Green, G (s)		65.0			33.0			16.0				
Effective Green, g (s)		58.0			33.0			16.0				
Actuated g/C Ratio		0.64			0.37			0.18				
Clearance Time (s)					5.0			5.0				
Lane Grp Cap (vph)		1960			925			236				
v/s Ratio Prot		c0.35										
v/s Ratio Perm					c0.35			c0.08				
v/c Ratio		0.54			0.95			0.44				
Uniform Delay, d1		8.7			27.8			33.0				
Progression Factor		0.08			1.40			1.00				
Incremental Delay, d2		0.4			19.6			5.9				
Delay (s)		1.1			58.4			38.9				
Level of Service		A			E			D				
Approach Delay (s)		1.1			58.4			38.9			0.0	
Approach LOS		A			E			D			A	

Intersection Summary			
HCM Average Control Delay	27.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	74.3%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1043: 111th Street & Doty Road

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↑	↱		✥		↰	↑	↱
Volume (vph)	222	638	22	112	612	185	60	4	107	212	10	212
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	10	12	12	12	12	16	12	12	12	12
Total Lost time (s)	3.0	5.0		3.0	5.0	3.0		5.0		3.0	5.0	3.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00		1.00	1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85		0.92		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.98		0.95	1.00	1.00
Satd. Flow (prot)	1550	3194		1660	3320	1485		1782		1660	1748	1485
Flt Permitted	0.31	1.00		0.36	1.00	1.00		0.88		0.43	1.00	1.00
Satd. Flow (perm)	513	3194		626	3320	1485		1594		758	1748	1485
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	234	672	23	118	644	195	63	4	113	223	11	223
RTOR Reduction (vph)	0	2	0	0	0	88	0	94	0	0	0	130
Lane Group Flow (vph)	234	693	0	118	644	107	0	86	0	223	11	93
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	pm+pt			pm+pt		pm+ov	pm+pt			pm+pt		pm+ov
Protected Phases	7	4		3	8	1	5	2		1	6	7
Permitted Phases	4			8		8	2			6		6
Actuated Green, G (s)	55.7	43.5		48.8	39.6	49.6		11.3		24.3	24.3	37.4
Effective Green, g (s)	55.7	43.5		48.8	39.6	49.6		11.3		24.3	24.3	37.4
Actuated g/C Ratio	0.62	0.48		0.54	0.44	0.55		0.13		0.27	0.27	0.42
Clearance Time (s)	3.0	5.0		3.0	5.0	3.0		5.0		3.0	5.0	3.0
Vehicle Extension (s)	4.0	3.0		4.0	3.0	3.0		4.0		3.0	4.0	4.0
Lane Grp Cap (vph)	468	1544		445	1461	818		200		305	472	617
v/s Ratio Prot	c0.07	0.22		0.03	0.19	0.01				c0.08	0.01	0.02
v/s Ratio Perm	c0.24			0.12		0.06		0.05		c0.12		0.04
v/c Ratio	0.50	0.45		0.27	0.44	0.13		0.43		0.73	0.02	0.15
Uniform Delay, d1	8.5	15.3		10.2	17.5	9.8		36.4		28.5	24.1	16.4
Progression Factor	2.64	1.92		1.00	1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2	1.0	0.8		0.4	1.0	0.1		2.0		8.7	0.0	0.2
Delay (s)	23.5	30.3		10.6	18.5	9.8		38.4		37.2	24.2	16.5
Level of Service	C	C		B	B	A		D		D	C	B
Approach Delay (s)		28.6			15.8			38.4			26.8	
Approach LOS		C			B			D			C	

Intersection Summary			
HCM Average Control Delay	24.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	61.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

1044: 111th Street & Bishop Ford Freeway EB Ramps

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↑↑					↰		↱
Volume (veh/h)	0	516	441	2	332	0	0	0	0	19	0	577
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	543	464	2	349	0	0	0	0	20	0	607
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		498										
pX, platoon unblocked												
vC, conflicting volume	349			543			722	897	272	625	897	175
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	349			543			722	897	272	625	897	175
tC, single (s)	4.2			4.2			7.6	6.6	7.0	7.6	6.6	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	100	95	100	27
cM capacity (veh/h)	1199			1015			85	276	723	366	276	835

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1	SB 2
Volume Total	272	272	464	119	233	20	607
Volume Left	0	0	0	2	0	20	0
Volume Right	0	0	464	0	0	0	607
cSH	1700	1700	1700	1015	1700	366	835
Volume to Capacity	0.16	0.16	0.27	0.00	0.14	0.05	0.73
Queue Length 95th (ft)	0	0	0	0	0	4	163
Control Delay (s)	0.0	0.0	0.0	0.2	0.0	15.4	19.9
Lane LOS				A		C	C
Approach Delay (s)	0.0			0.1		19.7	
Approach LOS						C	

Intersection Summary			
Average Delay	6.2		
Intersection Capacity Utilization	54.1%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
1045: 111th Street & Bishop Ford Freeway WB Ramps

1/14/2013

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰↰		↰			
Sign Control	Stop			Stop	Stop	
Volume (vph)	535	0	334	0	0	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	563	0	352	0	0	0

Direction, Lane #	EB 1	EB 2	NB 1
Volume Total (vph)	282	282	352
Volume Left (vph)	282	282	352
Volume Right (vph)	0	0	0
Hadj (s)	0.55	0.55	0.25
Departure Headway (s)	6.1	6.1	5.5
Degree Utilization, x	0.48	0.48	0.54
Capacity (veh/h)	574	576	624
Control Delay (s)	13.3	13.3	14.7
Approach Delay (s)	13.3		14.7
Approach LOS	B		B

Intersection Summary			
Delay	13.9		
HCM Level of Service	B		
Intersection Capacity Utilization	42.3%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Signalized Intersection Capacity Analysis
1046: 115th Street & Marshield Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱		↰	↑↑						↰↑↱	
Volume (vph)	0	472	64	192	495	0	0	0	0	101	21	58
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	12	12	12	12	12
Total Lost time (s)		3.0		4.0	4.0						5.0	
Lane Util. Factor		0.95		1.00	0.95						0.95	
Frt		0.98		1.00	1.00						0.95	
Flt Protected		1.00		0.95	1.00						0.97	
Satd. Flow (prot)		3153		1605	3210						3073	
Flt Permitted		1.00		0.36	1.00						0.97	
Satd. Flow (perm)		3153		617	3210						3073	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	497	67	202	521	0	0	0	0	106	22	61
RTOR Reduction (vph)	0	12	0	0	0	0	0	0	0	0	42	0
Lane Group Flow (vph)	0	552	0	202	521	0	0	0	0	0	147	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type				pm+pt						Split		
Protected Phases		4		3	8					6	6	
Permitted Phases				8								
Actuated Green, G (s)		36.0		49.0	49.0						27.0	
Effective Green, g (s)		36.0		49.0	49.0						27.0	
Actuated g/C Ratio		0.42		0.58	0.58						0.32	
Clearance Time (s)		3.0		4.0	4.0						5.0	
Lane Grp Cap (vph)		1335		472	1850						976	
v/s Ratio Prot		0.18		c0.05	0.16						c0.05	
v/s Ratio Perm				c0.20								
v/c Ratio		0.41		0.43	0.28						0.15	
Uniform Delay, d1		17.1		14.7	9.1						20.8	
Progression Factor		1.00		0.33	0.19						1.00	
Incremental Delay, d2		0.9		2.4	0.3						0.3	
Delay (s)		18.1		7.2	2.1						21.1	
Level of Service		B		A	A						C	
Approach Delay (s)		18.1			3.5			0.0			21.1	
Approach LOS		B			A			A			C	

Intersection Summary			
HCM Average Control Delay	11.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	44.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1047: 115th Street & Ashland Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑			↑↱			↰↑↱				
Volume (vph)	95	478	0	0	624	129	63	90	58	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	11	11	12	12	12	12	12	12
Total Lost time (s)	5.0	5.0			3.0			5.0				
Lane Util. Factor	1.00	0.95			0.95			0.91				
Frt	1.00	1.00			0.97			0.96				
Flt Protected	0.95	1.00			1.00			0.99				
Satd. Flow (prot)	1660	3320			3127			4507				
Flt Permitted	0.24	1.00			1.00			0.99				
Satd. Flow (perm)	419	3320			3127			4507				
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	100	503	0	0	657	136	66	95	61	0	0	0
RTOR Reduction (vph)	0	0	0	0	21	0	0	42	0	0	0	0
Lane Group Flow (vph)	100	503	0	0	772	0	0	180	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	pm+pt						Split					
Protected Phases	7	4			8		2	2				
Permitted Phases	4											
Actuated Green, G (s)	48.0	48.0			35.0			27.0				
Effective Green, g (s)	48.0	48.0			35.0			27.0				
Actuated g/C Ratio	0.56	0.56			0.41			0.32				
Clearance Time (s)	5.0	5.0			3.0			5.0				
Lane Grp Cap (vph)	383	1875			1288			1432				
v/s Ratio Prot	0.03	c0.15			c0.25			c0.04				
v/s Ratio Perm	0.12											
v/c Ratio	0.26	0.27			0.60			0.13				
Uniform Delay, d1	16.9	9.5			19.5			20.6				
Progression Factor	0.39	0.32			1.00			1.00				
Incremental Delay, d2	1.6	0.3			2.1			0.2				
Delay (s)	8.2	3.3			21.6			20.8				
Level of Service	A	A			C			C				
Approach Delay (s)		4.1			21.6			20.8			0.0	
Approach LOS		A			C			C			A	

Intersection Summary			
HCM Average Control Delay	15.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	44.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱			✥			✥	
Volume (vph)	114	342	114	79	366	79	129	78	27	30	87	144
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	10	12	12	15	12	12	15	12
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			1.00			1.00	
Frt		0.97			0.98			0.98			0.93	
Flt Protected		0.99			0.99			0.97			0.99	
Satd. Flow (prot)		2976			3006			1842			1769	
Flt Permitted		0.69			0.75			0.73			0.95	
Satd. Flow (perm)		2070			2273			1374			1689	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	120	360	120	83	385	83	136	82	28	32	92	152
RTOR Reduction (vph)	0	34	0	0	22	0	0	7	0	0	68	0
Lane Group Flow (vph)	0	566	0	0	529	0	0	239	0	0	208	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		23.0			23.0			32.0			32.0	
Effective Green, g (s)		23.0			23.0			32.0			32.0	
Actuated g/C Ratio		0.35			0.35			0.49			0.49	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		732			804			676			832	
v/s Ratio Prot												
v/s Ratio Perm		c0.27			0.23			c0.17			0.12	
v/c Ratio		0.77			0.66			0.35			0.25	
Uniform Delay, d1		18.7			17.7			10.1			9.6	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		7.8			4.2			1.4			0.7	
Delay (s)		26.5			21.9			11.6			10.3	
Level of Service		C			C			B			B	
Approach Delay (s)		26.5			21.9			11.6			10.3	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM Average Control Delay	20.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	79.3%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1049: 115th Street & Halsted Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↑	↱	↰	↑↑	↱
Volume (vph)	106	201	88	159	311	65	124	539	67	95	940	146
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	12	10	16	12	9	10	9	9	10	9
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00	0.97	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.95		1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1559	2980		1573	3683		1508	3069	1333	1520	3099	1336
Flt Permitted	0.45	1.00		0.53	1.00		0.13	1.00	1.00	0.34	1.00	1.00
Satd. Flow (perm)	739	2980		880	3683		212	3069	1333	545	3099	1336
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	112	212	93	167	327	68	131	567	71	100	989	154
RTOR Reduction (vph)	0	58	0	0	21	0	0	0	45	0	0	98
Lane Group Flow (vph)	112	247	0	167	374	0	131	567	26	100	989	56
Confl. Peds. (#/hr)	19		16	16		19	22		25	25		22
Heavy Vehicles (%)	2%	2%	0%	1%	2%	2%	2%	4%	0%	1%	3%	0%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	32.0	27.0		32.0	27.0		38.0	31.0	31.0	38.0	31.0	31.0
Effective Green, g (s)	30.0	28.0		30.0	28.0		36.0	31.0	31.0	36.0	31.0	31.0
Actuated g/C Ratio	0.35	0.33		0.35	0.33		0.42	0.36	0.36	0.42	0.36	0.36
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)	299	982		343	1213		181	1119	486	300	1130	487
v/s Ratio Prot	0.02	0.08		c0.02	0.10		c0.05	0.18		0.02	c0.32	
v/s Ratio Perm	0.11			c0.15			0.26		0.02	0.12		0.04
v/c Ratio	0.37	0.25		0.49	0.31		0.72	0.51	0.05	0.33	0.88	0.12
Uniform Delay, d1	19.4	20.8		20.7	21.3		18.0	21.0	17.5	15.4	25.2	17.9
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.42	1.04	2.39
Incremental Delay, d2	3.6	0.6		4.9	0.7		22.1	1.6	0.2	2.3	7.6	0.4
Delay (s)	23.0	21.5		25.5	21.9		40.1	22.7	17.7	24.2	33.9	43.2
Level of Service	C	C		C	C		D	C	B	C	C	D
Approach Delay (s)		21.9			23.0			25.2			34.3	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	28.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	70.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1050: 115th Street & Wentworth Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱		↰	↱		↰	↱
Volume (vph)	48	295	30	33	393	24	33	100	41	36	124	64
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	16	12	12	16	12
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frpb, ped/bikes		1.00	0.96		1.00	0.97		1.00	0.98		1.00	0.99
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frt		1.00	0.85		1.00	0.85		1.00	0.85		1.00	0.85
Flt Protected		0.99	1.00		1.00	1.00		0.99	1.00		0.99	1.00
Satd. Flow (prot)		1962	1466		1993	1480		2015	1506		2001	1511
Flt Permitted		0.90	1.00		0.96	1.00		0.91	1.00		0.92	1.00
Satd. Flow (perm)		1781	1466		1913	1480		1863	1506		1870	1511
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	51	311	32	35	414	25	35	105	43	38	131	67
RTOR Reduction (vph)	0	0	17	0	0	13	0	0	25	0	0	39
Lane Group Flow (vph)	0	362	15	0	449	12	0	140	18	0	169	28
Confl. Peds. (#/hr)	11		20	20		11	1		4	4		1
Confl. Bikes (#/hr)	1		1	1		1			1	1		
Heavy Vehicles (%)	4%	3%	0%	0%	2%	0%	0%	0%	0%	0%	1%	0%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)		30.0	30.0		30.0	30.0		27.0	27.0		27.0	27.0
Effective Green, g (s)		30.0	30.0		30.0	30.0		27.0	27.0		27.0	27.0
Actuated g/C Ratio		0.46	0.46		0.46	0.46		0.42	0.42		0.42	0.42
Clearance Time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		822	677		883	683		774	626		777	628
v/s Ratio Prot												
v/s Ratio Perm		0.20	0.01		c0.23	0.01		0.08	0.01		c0.09	0.02
v/c Ratio		0.44	0.02		0.51	0.02		0.18	0.03		0.22	0.04
Uniform Delay, d1		11.8	9.5		12.3	9.5		12.0	11.2		12.2	11.3
Progression Factor		1.00	1.00		0.66	0.59		1.21	1.56		0.98	0.83
Incremental Delay, d2		1.7	0.1		2.1	0.0		0.5	0.1		0.6	0.1
Delay (s)		13.5	9.6		10.1	5.7		15.1	17.6		12.6	9.5
Level of Service		B	A		B	A		B	B		B	A
Approach Delay (s)		13.2			9.9			15.7			11.7	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM Average Control Delay	12.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	82.9%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑↱		↰	↑↑↱		↰	↑↑↱		↰	↑↑↱	
Volume (vph)	75	305	20	41	249	31	10	109	21	110	214	65
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	0.98		1.00	0.98		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1550	3070		1550	3047		1550	3024		1550	2991	
Flt Permitted	0.95	1.00		0.55	1.00		0.56	1.00		0.67	1.00	
Satd. Flow (perm)	1550	3070		891	3047		915	3024		1085	2991	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	79	321	21	43	262	33	11	115	22	116	225	68
RTOR Reduction (vph)	0	7	0	0	15	0	0	13	0	0	40	0
Lane Group Flow (vph)	79	335	0	43	280	0	11	124	0	116	253	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Prot			Perm			Perm			Perm		
Protected Phases	7	4			8			2			6	
Permitted Phases				8			2			6		
Actuated Green, G (s)	7.0	32.0		22.0	22.0		27.0	27.0		27.0	27.0	
Effective Green, g (s)	7.0	32.0		22.0	22.0		27.0	27.0		27.0	27.0	
Actuated g/C Ratio	0.11	0.49		0.34	0.34		0.42	0.42		0.42	0.42	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	167	1511		302	1031		380	1256		451	1242	
v/s Ratio Prot	c0.05	0.11			c0.09			0.04			0.08	
v/s Ratio Perm				0.05			0.01			c0.11		
v/c Ratio	0.47	0.22		0.14	0.27		0.03	0.10		0.26	0.20	
Uniform Delay, d1	27.3	9.4		14.9	15.7		11.2	11.6		12.4	12.1	
Progression Factor	0.92	0.50		0.76	0.73		0.86	0.90		1.10	1.10	
Incremental Delay, d2	8.9	0.3		1.0	0.6		0.1	0.2		1.4	0.4	
Delay (s)	34.0	5.1		12.3	12.1		9.8	10.6		15.1	13.7	
Level of Service	C	A		B	B		A	B		B	B	
Approach Delay (s)		10.5			12.1			10.5			14.1	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	12.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.29		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	38.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			↰↑↱			↰↑↱	
Volume (vph)	64	267	69	203	330	63	25	245	20	55	270	50
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	12	12	12	12	12	12
Total Lost time (s)	4.0	4.0		3.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frt	1.00	0.97		1.00	0.98			0.99			0.98	
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.99	
Satd. Flow (prot)	1550	3003		1550	3025			3272			3230	
Flt Permitted	0.51	1.00		0.95	1.00			0.91			0.87	
Satd. Flow (perm)	832	3003		1550	3025			2982			2820	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	67	281	73	214	347	66	26	258	21	58	284	53
RTOR Reduction (vph)	0	36	0	0	24	0	0	9	0	0	19	0
Lane Group Flow (vph)	67	318	0	214	389	0	0	296	0	0	376	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Prot			Perm			Perm		
Protected Phases		4		3	8			2			6	
Permitted Phases	4						2			6		
Actuated Green, G (s)	20.0	20.0		6.0	29.0			25.0			25.0	
Effective Green, g (s)	20.0	20.0		6.0	29.0			25.0			25.0	
Actuated g/C Ratio	0.31	0.31		0.09	0.45			0.38			0.38	
Clearance Time (s)	4.0	4.0		3.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	256	924		143	1350			1147			1085	
v/s Ratio Prot		c0.11		c0.14	0.13							
v/s Ratio Perm	0.08							0.10			c0.13	
v/c Ratio	0.26	0.34		1.50	0.29			0.26			0.35	
Uniform Delay, d1	16.9	17.4		29.5	11.4			13.7			14.2	
Progression Factor	0.65	0.62		1.29	1.14			0.76			0.73	
Incremental Delay, d2	2.4	1.0		244.3	0.3			0.5			0.9	
Delay (s)	13.5	11.7		282.2	13.4			10.9			11.2	
Level of Service	B	B		F	B			B			B	
Approach Delay (s)		12.0			105.1			10.9			11.2	
Approach LOS		B			F			B			B	

Intersection Summary			
HCM Average Control Delay	45.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	55.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1053: 115th Street & Indiana Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			↰↑↱				
Volume (vph)	16	295	16	75	605	75	53	110	165	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	12	14	12	10	15	10
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			0.95				
Frt		0.99			0.99			0.92				
Flt Protected		1.00			1.00			0.99				
Satd. Flow (prot)		1616			1601			3248				
Flt Permitted		0.96			0.93			0.99				
Satd. Flow (perm)		1556			1502			3248				
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	17	311	17	79	637	79	56	116	174	0	0	0
RTOR Reduction (vph)	0	3	0	0	5	0	0	133	0	0	0	0
Lane Group Flow (vph)	0	342	0	0	790	0	0	213	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm			Perm					
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Actuated Green, G (s)		41.6			41.6			15.4				
Effective Green, g (s)		41.6			41.6			15.4				
Actuated g/C Ratio		0.64			0.64			0.24				
Clearance Time (s)		4.0			4.0			4.0				
Vehicle Extension (s)		3.0			3.0			8.0				
Lane Grp Cap (vph)		996			961			770				
v/s Ratio Prot												
v/s Ratio Perm		0.22			c0.53			0.07				
v/c Ratio		0.34			0.82			0.28				
Uniform Delay, d1		5.4			8.9			20.3				
Progression Factor		1.59			1.00			1.00				
Incremental Delay, d2		0.9			7.9			0.8				
Delay (s)		9.5			16.8			21.1				
Level of Service		A			B			C				
Approach Delay (s)		9.5			16.8			21.1			0.0	
Approach LOS		A			B			C			A	

Intersection Summary			
HCM Average Control Delay	16.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	81.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

1054: 115th Street & Martin Luther King Jr Drive

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰	↱		↰	↱
Volume (veh/h)	73	375	588	39	119	159
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	81	417	653	43	132	177
Pedestrians		5	6		17	
Lane Width (ft)		16.0	16.0		10.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		1	1		1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		1319	491			
pX, platoon unblocked	0.83				0.83	0.83
vC, conflicting volume	714				1277	697
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	551				1231	531
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	90				9	61
cM capacity (veh/h)	822				145	450

Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total	498	697	132	177
Volume Left	81	0	132	0
Volume Right	0	43	0	177
cSH	822	1700	145	450
Volume to Capacity	0.10	0.41	0.91	0.39
Queue Length 95th (ft)	8	0	157	46
Control Delay (s)	2.7	0.0	112.8	18.1
Lane LOS	A		F	C
Approach Delay (s)	2.7	0.0	58.6	
Approach LOS			F	

Intersection Summary			
Average Delay	12.9		
Intersection Capacity Utilization	78.3%	ICU Level of Service	D
Analysis Period (min)	15		

HCM Signalized Intersection Capacity Analysis
1055: 115th Street & Cottage Grove Avenue

1/14/2013

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↱			↰	↰↱	
Volume (vph)	670	0	1	614	3	29
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0			4.0	4.0	
Lane Util. Factor	1.00			1.00	1.00	
Frt	1.00			1.00	0.88	
Flt Protected	1.00			1.00	1.00	
Satd. Flow (prot)	1748			1747	1526	
Flt Permitted	1.00			1.00	1.00	
Satd. Flow (perm)	1748			1747	1526	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	705	0	1	646	3	31
RTOR Reduction (vph)	0	0	0	0	26	0
Lane Group Flow (vph)	705	0	0	647	8	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type			Perm			
Protected Phases	1 2 4			4	3	
Permitted Phases			4			
Actuated Green, G (s)	63.0			31.0	14.0	
Effective Green, g (s)	59.0			31.0	14.0	
Actuated g/C Ratio	0.69			0.36	0.16	
Clearance Time (s)				4.0	4.0	
Lane Grp Cap (vph)	1213			637	251	
v/s Ratio Prot	c0.40				c0.01	
v/s Ratio Perm				0.37		
v/c Ratio	0.58			1.02	0.03	
Uniform Delay, d1	6.7			27.0	29.8	
Progression Factor	0.06			1.00	1.00	
Incremental Delay, d2	1.3			39.6	0.2	
Delay (s)	1.7			66.6	30.1	
Level of Service	A			E	C	
Approach Delay (s)	1.7			66.6	30.1	
Approach LOS	A			E	C	

Intersection Summary			
HCM Average Control Delay	32.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	47.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱			↰↑						↰↑	↱
Volume (veh/h)	0	233	596	32	404	0	0	0	0	17	6	246
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	245	627	34	425	0	0	0	0	18	6	259
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	425			245			1055	1052	436	615	738	425
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	425			245			1055	1052	436	615	738	425
tC, single (s)	4.1			4.2			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			97			100	100	100	95	98	55
cM capacity (veh/h)	1145			1303			97	223	574	372	339	577

Direction, Lane #	EB 1	EB 2	WB 1	SB 1	SB 2
Volume Total	164	709	459	24	259
Volume Left	0	0	34	18	0
Volume Right	0	627	0	0	259
cSH	1700	1700	1303	363	577
Volume to Capacity	0.10	0.42	0.03	0.07	0.45
Queue Length 95th (ft)	0	0	2	5	58
Control Delay (s)	0.0	0.0	0.8	15.6	16.2
Lane LOS			A	C	C
Approach Delay (s)	0.0		0.8	16.2	
Approach LOS				C	

Intersection Summary			
Average Delay	3.1		
Intersection Capacity Utilization	60.3%	ICU Level of Service	B
Analysis Period (min)	15		

	↗	↘	↖	↑	↓	↙
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰↰		↰			
Sign Control	Stop			Stop	Stop	
Volume (vph)	250	0	436	0	0	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	263	0	459	0	0	0

Direction, Lane #	EB 1	EB 2	NB 1
Volume Total (vph)	132	132	459
Volume Left (vph)	132	132	459
Volume Right (vph)	0	0	0
Hadj (s)	0.55	0.55	0.25
Departure Headway (s)	6.3	6.3	4.9
Degree Utilization, x	0.23	0.23	0.63
Capacity (veh/h)	544	545	708
Control Delay (s)	9.9	9.9	15.8
Approach Delay (s)	9.9		15.8
Approach LOS	A		C

Intersection Summary			
Delay	13.6		
HCM Level of Service	B		
Intersection Capacity Utilization	39.7%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Signalized Intersection Capacity Analysis
1058: 119th Street & Marshield Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↰↑					↰	↰↑↱	↱
Volume (vph)	0	490	345	263	621	0	0	0	0	277	269	372
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	12	13	12	12	12	12	10	10	11
Total Lost time (s)		6.0	6.0		6.0					6.0	6.0	6.0
Lane Util. Factor		0.95	1.00		0.95					0.86	0.81	0.86
Frpb, ped/bikes		1.00	0.98		1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00					1.00	1.00	1.00
Frt		1.00	0.85		1.00					1.00	0.95	0.85
Flt Protected		1.00	1.00		0.99					0.95	0.99	1.00
Satd. Flow (prot)		3179	1232		3424					1359	3806	1133
Flt Permitted		1.00	1.00		0.99					0.95	0.99	1.00
Satd. Flow (perm)		3179	1232		3424					1359	3806	1133
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	516	363	277	654	0	0	0	0	292	283	392
RTOR Reduction (vph)	0	0	234	0	0	0	0	0	0	0	54	113
Lane Group Flow (vph)	0	516	129	0	931	0	0	0	0	161	556	83
Confl. Peds. (#/hr)	4		6	6		4						
Heavy Vehicles (%)	0%	4%	6%	1%	2%	0%	0%	0%	0%	1%	1%	1%
Parking (#/hr)			0									0
Turn Type			Perm	Split						Split		custom
Protected Phases		2		10 12 14	10 12 14					4	4	
Permitted Phases			2									4 2
Actuated Green, G (s)		39.0	39.0		68.2					23.0	23.0	68.0
Effective Green, g (s)		39.0	39.0		68.2					23.0	23.0	68.0
Actuated g/C Ratio		0.24	0.24		0.43					0.14	0.14	0.42
Clearance Time (s)		6.0	6.0							6.0	6.0	
Vehicle Extension (s)		3.0	3.0							3.0	3.0	
Lane Grp Cap (vph)		775	300		1459					195	547	482
v/s Ratio Prot		c0.16			c0.27					0.12	c0.15	
v/s Ratio Perm			0.10									0.07
v/c Ratio		0.67	0.43		0.64					0.83	1.02	0.17
Uniform Delay, d1		54.6	51.1		36.2					66.6	68.5	28.5
Progression Factor		1.00	1.00		0.06					1.00	1.00	1.00
Incremental Delay, d2		4.5	4.4		0.1					23.9	42.7	0.2
Delay (s)		59.1	55.5		2.4					90.4	111.2	28.7
Level of Service		E	E		A					F	F	C
Approach Delay (s)		57.6			2.4			0.0			91.0	
Approach LOS		E			A			A			F	

Intersection Summary			
HCM Average Control Delay	50.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	31.8
Intersection Capacity Utilization	75.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1059: 119th Street & Ashland Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑			↑↑	↱	↰	↰↑↱				
Volume (vph)	292	475	0	0	552	134	332	214	194	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	13	12	12	11	12	13	13	14	12	12	12
Total Lost time (s)	6.0	6.0			6.0	6.0	6.0	6.0				
Lane Util. Factor	1.00	0.95			0.95	1.00	0.91	0.91				
Frt	1.00	1.00			1.00	0.85	1.00	0.94				
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.99				
Satd. Flow (prot)	1605	3431			3210	1485	1561	3065				
Flt Permitted	0.95	1.00			1.00	1.00	0.95	0.99				
Satd. Flow (perm)	1605	3431			3210	1485	1561	3065				
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	307	500	0	0	581	141	349	225	204	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	84	0	59	0	0	0	0
Lane Group Flow (vph)	307	500	0	0	581	57	265	454	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Split					Perm	Split					
Protected Phases	2 4 8	2 4 8			10		12	12				
Permitted Phases						10						
Actuated Green, G (s)	83.8	83.8			37.0	37.0	12.2	12.2				
Effective Green, g (s)	83.8	83.8			37.0	37.0	12.2	12.2				
Actuated g/C Ratio	0.52	0.52			0.23	0.23	0.08	0.08				
Clearance Time (s)					6.0	6.0	6.0	6.0				
Vehicle Extension (s)					3.0	3.0	3.0	3.0				
Lane Grp Cap (vph)	841	1797			742	343	119	234				
v/s Ratio Prot	c0.19	0.15			c0.18		c0.17	0.15				
v/s Ratio Perm						0.04						
v/c Ratio	0.37	0.28			0.78	0.17	2.23	1.94				
Uniform Delay, d1	22.4	21.2			57.7	49.2	73.9	73.9				
Progression Factor	0.01	0.02			1.00	1.00	1.00	1.00				
Incremental Delay, d2	0.2	0.1			5.4	0.2	578.3	438.2				
Delay (s)	0.5	0.4			63.1	49.4	652.2	512.1				
Level of Service	A	A			E	D	F	F				
Approach Delay (s)		0.4			60.5			559.8			0.0	
Approach LOS		A			E			F			A	

Intersection Summary			
HCM Average Control Delay	207.9	HCM Level of Service	F
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	29.0
Intersection Capacity Utilization	63.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1060: 119th Street & Halsted Street

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Lane Configurations	↰	↑	↱	↰	↱		↰	↑↱		↰	↑↱	
Volume (vph)	140	258	136	89	210	67	108	522	70	96	803	120
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	14	12	10	10	12	9	10	12
Total Lost time (s)	4.0	4.0	5.0	4.0	5.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	0.99	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.96		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1572	1600	1373	1593	1778		1578	3016		1537	3001	
Flt Permitted	0.42	1.00	1.00	0.49	1.00		0.15	1.00		0.32	1.00	
Satd. Flow (perm)	698	1600	1373	828	1778		246	3016		522	3001	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	143	263	139	91	214	68	110	533	71	98	819	122
RTOR Reduction (vph)	0	0	93	0	12	0	0	11	0	0	13	0
Lane Group Flow (vph)	143	263	46	91	270	0	110	593	0	98	928	0
Confl. Peds. (#/hr)	28		8	8		28	59		11	11		59
Confl. Bikes (#/hr)	3					3	1		2	2		1
Heavy Vehicles (%)	1%	5%	2%	0%	4%	0%	1%	4%	0%	0%	3%	3%
Turn Type	pm+pt		Perm	pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)	36.3	29.3	29.3	33.3	27.8		39.6	34.1		39.6	34.1	
Effective Green, g (s)	34.3	30.3	29.3	31.3	27.8		37.6	34.1		37.6	34.1	
Actuated g/C Ratio	0.38	0.34	0.33	0.35	0.31		0.42	0.38		0.42	0.38	
Clearance Time (s)	3.0	5.0	5.0	3.0	5.0		3.0	4.0		3.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	326	542	450	328	553		171	1150		271	1145	
v/s Ratio Prot	c0.03	c0.16		0.01	0.15		c0.03	0.20		0.02	c0.31	
v/s Ratio Perm	0.14		0.03	0.08			0.24			0.13		
v/c Ratio	0.44	0.49	0.10	0.28	0.49		0.64	0.52		0.36	0.81	
Uniform Delay, d1	19.1	23.4	20.9	20.2	25.0		18.2	21.3		16.4	24.8	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.9	3.1	0.5	0.5	3.1		8.0	1.7		0.8	6.3	
Delay (s)	20.0	26.5	21.3	20.6	28.1		26.2	22.9		17.3	31.0	
Level of Service	C	C	C	C	C		C	C		B	C	
Approach Delay (s)		23.5			26.3			23.4			29.7	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	26.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	89.4	Sum of lost time (s)	12.0
Intersection Capacity Utilization	73.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1061: 119th Street & Wentworth Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱		✥			✥	
Volume (vph)	39	313	61	13	298	22	37	59	19	21	91	70
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	10	10	10	12	15	12	12	16	12
Total Lost time (s)		3.0	3.0		3.0	3.0		3.0			3.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00			1.00	
Frpb, ped/bikes		1.00	0.96		1.00	0.97		1.00			0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00			1.00	
Frt		1.00	0.85		1.00	0.85		0.98			0.95	
Flt Protected		0.99	1.00		1.00	1.00		0.98			0.99	
Satd. Flow (prot)		1968	1467		1629	1381		1894			1870	
Flt Permitted		0.94	1.00		0.98	1.00		0.89			0.97	
Satd. Flow (perm)		1867	1467		1605	1381		1712			1824	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	41	329	64	14	314	23	39	62	20	22	96	74
RTOR Reduction (vph)	0	0	32	0	0	12	0	11	0	0	34	0
Lane Group Flow (vph)	0	370	32	0	328	11	0	110	0	0	158	0
Confl. Peds. (#/hr)	12		20	20		12	8		2	2		8
Confl. Bikes (#/hr)	1		2	2		1			1	1		
Heavy Vehicles (%)	3%	3%	0%	0%	3%	0%	0%	0%	0%	0%	1%	3%
Turn Type	Perm		Perm	Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)		32.0	32.0		32.0	32.0		27.0			27.0	
Effective Green, g (s)		32.0	32.0		32.0	32.0		27.0			27.0	
Actuated g/C Ratio		0.49	0.49		0.49	0.49		0.42			0.42	
Clearance Time (s)		3.0	3.0		3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)		919	722		790	680		711			758	
v/s Ratio Prot												
v/s Ratio Perm		0.20	0.02		c0.20	0.01		0.06			c0.09	
v/c Ratio		0.40	0.04		0.42	0.02		0.15			0.21	
Uniform Delay, d1		10.4	8.6		10.5	8.4		11.9			12.2	
Progression Factor		1.00	1.00		1.93	2.82		1.00			1.95	
Incremental Delay, d2		1.3	0.1		1.5	0.0		0.5			0.6	
Delay (s)		11.8	8.7		21.9	23.9		12.3			24.4	
Level of Service		B	A		C	C		B			C	
Approach Delay (s)		11.3			22.0			12.3			24.4	
Approach LOS		B			C			B			C	

Intersection Summary			
HCM Average Control Delay	17.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	61.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1062: 119th Street & State Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱		↰	↱		✥	
Volume (vph)	59	194	41	11	214	10	36	114	19	15	184	70
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frpb, ped/bikes		1.00	0.94		1.00	0.97		1.00	0.97		0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		0.96	
Flt Protected		0.99	1.00		1.00	1.00		0.99	1.00		1.00	
Satd. Flow (prot)		1748	1443		1728	1487		1713	1489		1712	
Flt Permitted		0.88	1.00		0.98	1.00		0.89	1.00		0.98	
Satd. Flow (perm)		1552	1443		1701	1487		1542	1489		1689	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	61	202	43	11	223	10	38	119	20	16	192	73
RTOR Reduction (vph)	0	0	28	0	0	6	0	0	10	0	19	0
Lane Group Flow (vph)	0	263	15	0	234	4	0	157	10	0	262	0
Confl. Peds. (#/hr)	19		25	25		19	3		6	6		3
Confl. Bikes (#/hr)	1		2	2		1			1	1		
Heavy Vehicles (%)	0%	2%	0%	0%	4%	0%	0%	5%	0%	0%	0%	2%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		23.0	23.0		23.0	23.0		32.0	32.0		32.0	
Effective Green, g (s)		23.0	23.0		23.0	23.0		32.0	32.0		32.0	
Actuated g/C Ratio		0.35	0.35		0.35	0.35		0.49	0.49		0.49	
Clearance Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	
Lane Grp Cap (vph)		549	511		602	526		759	733		832	
v/s Ratio Prot												
v/s Ratio Perm		c0.17	0.01		0.14	0.00		0.10	0.01		c0.15	
v/c Ratio		0.48	0.03		0.39	0.01		0.21	0.01		0.31	
Uniform Delay, d1		16.3	13.7		15.7	13.6		9.3	8.4		9.9	
Progression Factor		1.92	3.44		0.96	0.95		0.19	0.24		1.00	
Incremental Delay, d2		2.8	0.1		1.8	0.0		0.4	0.0		1.0	
Delay (s)		34.2	47.3		16.9	12.9		2.2	2.1		10.9	
Level of Service		C	D		B	B		A	A		B	
Approach Delay (s)		36.0			16.7			2.2			10.9	
Approach LOS		D			B			A			B	

Intersection Summary			
HCM Average Control Delay	18.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	62.4%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1063: 119th Street & Michigan Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		✣			✣			↰	↱
Volume (vph)	147	35	76	8	14	9	38	225	8	21	481	204
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	14	12	12	16	12	12	16	12
Total Lost time (s)		3.0	3.0		3.0			3.0			3.0	3.0
Lane Util. Factor		1.00	1.00		1.00			1.00			1.00	1.00
Frpb, ped/bikes		1.00	0.95		0.98			1.00			1.00	0.94
Flpb, ped/bikes		0.98	1.00		0.99			1.00			1.00	1.00
Frt		1.00	0.85		0.96			1.00			1.00	0.85
Flt Protected		0.96	1.00		0.99			0.99			1.00	1.00
Satd. Flow (prot)		1871	1440		1776			1993			1976	1382
Flt Permitted		0.78	1.00		0.94			0.90			0.98	1.00
Satd. Flow (perm)		1509	1440		1693			1814			1948	1382
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	155	37	80	8	15	9	40	237	8	22	506	215
RTOR Reduction (vph)	0	0	47	0	7	0	0	2	0	0	0	90
Lane Group Flow (vph)	0	192	33	0	25	0	0	283	0	0	528	125
Confl. Peds. (#/hr)	37		53	53		37	39		54	54		39
Confl. Bikes (#/hr)							2					2
Heavy Vehicles (%)	4%	0%	1%	0%	0%	0%	0%	1%	0%	0%	3%	4%
Turn Type	pm+pt		Perm	Perm			Perm			Perm		Perm
Protected Phases	7	4			8			2			6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)		27.0	27.0		17.0			32.0			32.0	32.0
Effective Green, g (s)		27.0	27.0		17.0			32.0			32.0	32.0
Actuated g/C Ratio		0.42	0.42		0.26			0.49			0.49	0.49
Clearance Time (s)		3.0	3.0		3.0			3.0			3.0	3.0
Lane Grp Cap (vph)		671	598		443			893			959	680
v/s Ratio Prot		c0.04										
v/s Ratio Perm		0.08	0.02		0.01			0.16			c0.27	0.09
v/c Ratio		0.29	0.06		0.06			0.32			0.55	0.18
Uniform Delay, d1		12.6	11.4		18.0			9.9			11.5	9.2
Progression Factor		0.64	0.82		1.00			0.60			0.64	0.23
Incremental Delay, d2		1.0	0.2		0.2			0.8			1.8	0.5
Delay (s)		9.0	9.5		18.2			6.8			9.2	2.6
Level of Service		A	A		B			A			A	A
Approach Delay (s)		9.2			18.2			6.8			7.3	
Approach LOS		A			B			A			A	

Intersection Summary			
HCM Average Control Delay	7.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	70.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1064: 127th Street & S Paulina St

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↱		↰	↑↑					↰	↰↱	↱
Volume (vph)	0	866	289	333	961	0	0	0	0	513	284	334
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	12	11	8	8	8	11	12	14
Total Lost time (s)		6.0		4.5	6.0					6.0	6.0	6.0
Lane Util. Factor		0.91		1.00	0.95					0.91	0.86	0.91
Frpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Frt		0.96		1.00	1.00					1.00	0.98	0.85
Flt Protected		1.00		0.95	1.00					0.95	0.98	1.00
Satd. Flow (prot)		4569		1620	3320					1489	2913	1442
Flt Permitted		1.00		0.14	1.00					0.95	0.98	1.00
Satd. Flow (perm)		4569		238	3320					1489	2913	1442
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	884	295	340	981	0	0	0	0	523	290	341
RTOR Reduction (vph)	0	44	0	0	0	0	0	0	0	0	9	105
Lane Group Flow (vph)	0	1135	0	340	981	0	0	0	0	298	584	158
Confl. Peds. (#/hr)	15		11	11		15						
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	0%	3%	3%	2%	3%	0%	0%	0%	0%	1%	3%	3%
Turn Type				pm+pt						Perm		Perm
Protected Phases		2		1	6						4	
Permitted Phases				6						4		4
Actuated Green, G (s)		47.1		75.2	75.2					27.8	27.8	27.8
Effective Green, g (s)		47.1		75.2	75.2					27.8	27.8	27.8
Actuated g/C Ratio		0.41		0.65	0.65					0.24	0.24	0.24
Clearance Time (s)		6.0		4.5	6.0					6.0	6.0	6.0
Vehicle Extension (s)		7.0		3.5	7.0					3.5	3.5	3.5
Lane Grp Cap (vph)		1871		439	2171					360	704	349
v/s Ratio Prot		0.25		c0.16	0.30							
v/s Ratio Perm				c0.35						0.20	0.20	0.11
v/c Ratio		0.61		0.77	0.45					0.83	0.83	0.45
Uniform Delay, d1		26.7		22.4	9.8					41.3	41.4	37.1
Progression Factor		1.00		1.05	1.59					1.00	1.00	1.00
Incremental Delay, d2		1.5		6.2	0.5					14.8	8.2	1.1
Delay (s)		28.1		29.6	16.0					56.1	49.6	38.2
Level of Service		C		C	B					E	D	D
Approach Delay (s)		28.1			19.5			0.0			48.7	
Approach LOS		C			B			A			D	

Intersection Summary			
HCM Average Control Delay	31.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	10.5
Intersection Capacity Utilization	100.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1065: 127th Street & Marshfield Ave

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↑			↑↑	↱		↰↑↱				
Volume (vph)	341	1038	0	0	864	271	430	351	308	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	12	12	12	11	12	12	12	12	12	12	12
Total Lost time (s)	6.0	6.0			6.0	6.0		6.0				
Lane Util. Factor	0.97	0.95			0.95	1.00		0.91				
Frpb, ped/bikes	1.00	1.00			1.00	0.98		1.00				
Flpb, ped/bikes	1.00	1.00			1.00	1.00		1.00				
Frt	1.00	1.00			1.00	0.85		0.96				
Flt Protected	0.95	1.00			1.00	1.00		0.98				
Satd. Flow (prot)	3144	3353			3241	1489		4526				
Flt Permitted	0.19	1.00			1.00	1.00		0.98				
Satd. Flow (perm)	615	3353			3241	1489		4526				
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	359	1093	0	0	909	285	453	369	324	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	95	0	58	0	0	0	0
Lane Group Flow (vph)	359	1093	0	0	909	190	0	1088	0	0	0	0
Confl. Peds. (#/hr)	7		5	5		7						
Confl. Bikes (#/hr)	1		1	1		1						
Heavy Vehicles (%)	2%	2%	0%	0%	2%	1%	2%	1%	3%	0%	0%	0%
Turn Type	pm+pt					Perm	Perm					
Protected Phases	5	2			6			8				
Permitted Phases	2					6	8					
Actuated Green, G (s)	68.8	68.8			50.9	50.9		34.2				
Effective Green, g (s)	68.8	68.8			50.9	50.9		34.2				
Actuated g/C Ratio	0.60	0.60			0.44	0.44		0.30				
Clearance Time (s)	6.0	6.0			6.0	6.0		6.0				
Vehicle Extension (s)	3.5	7.0			7.0	7.0		5.0				
Lane Grp Cap (vph)	630	2006			1434	659		1346				
v/s Ratio Prot	0.06	c0.33			c0.28							
v/s Ratio Perm	0.28					0.13		0.24				
v/c Ratio	0.57	0.54			0.63	0.29		0.81				
Uniform Delay, d1	14.1	13.8			24.8	20.5		37.4				
Progression Factor	0.64	0.32			0.94	1.07		1.00				
Incremental Delay, d2	1.0	0.8			1.8	0.9		4.2				
Delay (s)	10.0	5.1			25.1	22.8		41.6				
Level of Service	A	A			C	C		D				
Approach Delay (s)		6.3			24.5			41.6			0.0	
Approach LOS		A			C			D			A	

Intersection Summary			
HCM Average Control Delay	22.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	100.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1066: 127th Street & Ashland Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	135	633	408	104	626	53	227	179	66	74	162	121
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	12	11	12	12	10	10	13	10	10	10
Total Lost time (s)	3.5	6.0	3.5	3.5	6.0		3.5	6.0		3.5	6.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		0.99	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.96		1.00	0.94	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1564	3273	1313	1600	3283		1578	3002		1540	2941	
Flt Permitted	0.18	1.00	1.00	0.40	1.00		0.39	1.00		0.59	1.00	
Satd. Flow (perm)	296	3273	1313	671	3283		652	3002		961	2941	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	142	666	429	109	659	56	239	188	69	78	171	127
RTOR Reduction (vph)	0	0	173	0	6	0	0	38	0	0	107	0
Lane Group Flow (vph)	142	666	256	109	709	0	239	219	0	78	191	0
Confl. Peds. (#/hr)	11		23	23		11	8		12	12		8
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	2%	1%	3%	3%	3%	0%	1%	1%	2%	3%	0%	1%
Parking (#/hr)			0									
Turn Type	pm+pt		pm+ov	pm+pt			pm+pt			pm+pt		
Protected Phases	5	2	3	1	6		3	8		7	4	
Permitted Phases	2		2	6			8			4		
Actuated Green, G (s)	64.9	52.3	68.7	42.0	32.9		38.1	26.7		26.1	18.2	
Effective Green, g (s)	64.9	52.3	68.7	42.0	32.9		38.1	26.7		26.1	18.2	
Actuated g/C Ratio	0.56	0.45	0.60	0.37	0.29		0.33	0.23		0.23	0.16	
Clearance Time (s)	3.5	6.0	3.5	3.5	6.0		3.5	6.0		3.5	6.0	
Vehicle Extension (s)	3.0	7.0	3.0	3.0	7.0		3.0	7.0		3.0	7.0	
Lane Grp Cap (vph)	481	1489	784	319	939		348	697		258	465	
v/s Ratio Prot	0.07	c0.20	0.05	c0.03	c0.22		c0.10	0.07		0.02	0.06	
v/s Ratio Perm	0.09		0.15	0.10			c0.13			0.05		
v/c Ratio	0.30	0.45	0.33	0.34	0.76		0.69	0.31		0.30	0.41	
Uniform Delay, d1	14.1	21.5	11.6	24.9	37.4		30.6	36.6		36.2	43.6	
Progression Factor	0.67	0.81	2.63	1.00	1.00		0.86	0.94		1.00	1.00	
Incremental Delay, d2	1.3	0.8	0.2	0.6	5.6		5.4	0.9		0.7	2.1	
Delay (s)	10.8	18.1	30.6	25.5	43.0		31.8	35.1		36.9	45.7	
Level of Service	B	B	C	C	D		C	D		D	D	
Approach Delay (s)		21.6			40.7			33.5			43.8	
Approach LOS		C			D			C			D	

Intersection Summary			
HCM Average Control Delay	31.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	19.0
Intersection Capacity Utilization	70.7%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	46	193	367	72	213	113	362	340	78	206	408	56
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	11	12	11	12	12	11	13	12	10	11	12
Total Lost time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.90		1.00	0.95		1.00	0.97		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1705	2894		1653	3184		1620	3407		1580	3183	
Flt Permitted	0.52	1.00		0.29	1.00		0.32	1.00		0.50	1.00	
Satd. Flow (perm)	934	2894		502	3184		544	3407		826	3183	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	48	203	386	76	224	119	381	358	82	217	429	59
RTOR Reduction (vph)	0	269	0	0	56	0	0	17	0	0	9	0
Lane Group Flow (vph)	48	320	0	76	287	0	381	423	0	217	479	0
Confl. Peds. (#/hr)	12		3	3		12	5					5
Heavy Vehicles (%)	0%	2%	2%	0%	1%	1%	2%	1%	0%	1%	2%	0%
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	41.6	34.9		44.0	36.1		56.2	44.2		40.1	32.1	
Effective Green, g (s)	41.6	34.9		44.0	36.1		56.2	44.2		40.1	32.1	
Actuated g/C Ratio	0.36	0.30		0.38	0.31		0.49	0.38		0.35	0.28	
Clearance Time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	3.5	7.0		3.5	7.0		3.5	7.0		3.5	7.0	
Lane Grp Cap (vph)	383	878		271	999		454	1309		340	888	
v/s Ratio Prot	0.01	c0.11		c0.02	0.09		c0.15	0.12		0.04	0.15	
v/s Ratio Perm	0.04			0.09			c0.26			0.18		
v/c Ratio	0.13	0.36		0.28	0.29		0.84	0.32		0.64	0.54	
Uniform Delay, d1	24.1	31.4		23.7	29.7		20.8	24.9		28.8	35.2	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		0.99	0.98	
Incremental Delay, d2	0.2	1.2		0.7	0.7		13.1	0.7		3.8	2.2	
Delay (s)	24.3	32.5		24.3	30.5		33.9	25.5		32.3	36.6	
Level of Service	C	C		C	C		C	C		C	D	
Approach Delay (s)		31.9			29.4			29.4			35.3	
Approach LOS		C			C			C			D	

Intersection Summary			
HCM Average Control Delay	31.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	74.2%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1068: 127th Street & Halsted Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	105	603	141	10	376	66	104	287	9	198	609	183
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	10	12	9	11	12	9	9	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.98			0.98		1.00	1.00		1.00	0.97	
Flt Protected		0.99			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3029			3035		1452	3228		1522	2872	
Flt Permitted		0.72			0.93		0.21	1.00		0.56	1.00	
Satd. Flow (perm)		2185			2822		318	3228		898	2872	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	111	635	148	11	396	69	109	302	9	208	641	193
RTOR Reduction (vph)	0	25	0	0	21	0	0	3	0	0	44	0
Lane Group Flow (vph)	0	869	0	0	455	0	109	308	0	208	790	0
Confl. Peds. (#/hr)	4		2	2		4	8		4	4		8
Confl. Bikes (#/hr)							2					2
Heavy Vehicles (%)	1%	2%	2%	0%	2%	6%	6%	2%	0%	1%	3%	3%
Turn Type	pm+pt			Perm			pm+pt			pm+pt		
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		25.0			17.0		28.0	24.0		28.0	24.0	
Effective Green, g (s)		25.0			17.0		28.0	24.0		28.0	24.0	
Actuated g/C Ratio		0.38			0.26		0.43	0.37		0.43	0.37	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		892			738		207	1192		425	1060	
v/s Ratio Prot		c0.06					c0.03	0.10		0.03	c0.28	
v/s Ratio Perm		c0.31			0.16		0.19			0.18		
v/c Ratio		0.97			0.62		0.53	0.26		0.49	0.75	
Uniform Delay, d1		19.7			21.1		12.2	14.3		12.4	17.8	
Progression Factor		1.00			1.51		1.06	0.59		1.00	1.00	
Incremental Delay, d2		24.5			0.4		8.9	0.5		4.0	4.8	
Delay (s)		44.1			32.2		21.9	8.9		16.4	22.6	
Level of Service		D			C		C	A		B	C	
Approach Delay (s)		44.1			32.2			12.3			21.4	
Approach LOS		D			C			B			C	

Intersection Summary			
HCM Average Control Delay	29.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	82.7%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

1069: Vermont Street & Halsted Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱		↰	↑↱		↰	↑↱	
Volume (vph)	67	198	136	109	167	28	72	462	80	35	698	70
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	12	12	12	12	12
Total Lost time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.94		1.00	0.98		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1707	1885		1599	1993		1676	3221		1435	3273	
Flt Permitted	0.62	1.00		0.44	1.00		0.28	1.00		0.41	1.00	
Satd. Flow (perm)	1118	1885		736	1993		502	3221		623	3273	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	71	208	143	115	176	29	76	486	84	37	735	74
RTOR Reduction (vph)	0	38	0	0	9	0	0	21	0	0	12	0
Lane Group Flow (vph)	71	313	0	115	196	0	76	549	0	37	797	0
Confl. Peds. (#/hr)	3		20	20		3	2		3	3		2
Confl. Bikes (#/hr)			1	1			2		2	2		2
Heavy Vehicles (%)	0%	0%	1%	6%	0%	0%	2%	3%	6%	19%	3%	2%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	24.0	24.0		24.0	24.0		31.0	31.0		31.0	31.0	
Effective Green, g (s)	24.0	24.0		24.0	24.0		31.0	31.0		31.0	31.0	
Actuated g/C Ratio	0.37	0.37		0.37	0.37		0.48	0.48		0.48	0.48	
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)	413	696		272	736		239	1536		297	1561	
v/s Ratio Prot		c0.17			0.10			0.17			c0.24	
v/s Ratio Perm	0.06			0.16			0.15			0.06		
v/c Ratio	0.17	0.45		0.42	0.27		0.32	0.36		0.12	0.51	
Uniform Delay, d1	13.8	15.5		15.3	14.3		10.5	10.7		9.5	11.8	
Progression Factor	1.00	1.00		1.30	1.31		1.00	1.00		1.12	0.91	
Incremental Delay, d2	0.9	2.1		3.0	0.5		3.5	0.6		0.6	0.8	
Delay (s)	14.7	17.6		22.9	19.4		14.0	11.4		11.1	11.5	
Level of Service	B	B		C	B		B	B		B	B	
Approach Delay (s)		17.1			20.7			11.7			11.5	
Approach LOS		B			C			B			B	

Intersection Summary			
HCM Average Control Delay	13.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	70.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1070: 127th Street & Wallace Street

1/14/2013

Movement	EBL	EBT	WBL	WBT	WBR	NBL2	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇄		⇄				✥			✥	
Volume (vph)	2	785	227	550	18	3	10	9	47	9	0	3
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	10	10	10	12	12	16	12	12	16	12
Total Lost time (s)		5.0		5.0				4.0			4.0	
Lane Util. Factor		0.95		0.95				1.00			1.00	
Frpb, ped/bikes		1.00		1.00				0.99			0.98	
Flpb, ped/bikes		1.00		1.00				1.00			1.00	
Frt		1.00		1.00				0.91			0.94	
Flt Protected		1.00		0.99				0.99			0.97	
Satd. Flow (prot)		3160		3091				1810			1824	
Flt Permitted		0.95		0.56				0.96			0.89	
Satd. Flow (perm)		3012		1753				1750			1671	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	2	826	239	579	19	3	11	9	49	9	0	3
RTOR Reduction (vph)	0	0	0	2	0	0	0	38	0	0	4	0
Lane Group Flow (vph)	0	828	0	835	0	0	0	34	0	0	13	0
Confl. Peds. (#/hr)	7		4		7		7		2	2		7
Confl. Bikes (#/hr)							2		2	2		2
Heavy Vehicles (%)	0%	1%	2%	1%	6%	0%	0%	0%	0%	0%	0%	0%
Turn Type	Perm		custom			Perm	Perm			Perm		
Protected Phases		8	7	4				2			6	
Permitted Phases	8		4 7			2	2			6		
Actuated Green, G (s)		18.0		27.0				14.0			14.0	
Effective Green, g (s)		18.0		27.0				14.0			14.0	
Actuated g/C Ratio		0.28		0.42				0.22			0.22	
Clearance Time (s)		5.0		5.0				4.0			4.0	
Lane Grp Cap (vph)		834		852				377			360	
v/s Ratio Prot				c0.09								
v/s Ratio Perm		0.27		c0.32				c0.02			0.01	
v/c Ratio		0.99		1.14dl				0.09			0.04	
Uniform Delay, d1		23.4		18.7				20.4			20.2	
Progression Factor		1.45		0.88				1.00			1.00	
Incremental Delay, d2		20.4		25.5				0.5			0.2	
Delay (s)		54.3		41.9				20.9			20.4	
Level of Service		D		D				C			C	
Approach Delay (s)		54.3		41.9				20.9			20.4	
Approach LOS		D		D				C			C	

Intersection Summary			
HCM Average Control Delay	53.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	91.8%	ICU Level of Service	F
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1070: 127th Street & Wallace Street

1/14/2013

Movement	SBR2	NEL	NER
Lane Configurations			
Volume (vph)	5	3	242
Ideal Flow (vphpl)	1800	1800	1800
Lane Width	12	12	12
Total Lost time (s)		5.0	
Lane Util. Factor		1.00	
Frpb, ped/bikes		1.00	
Flpb, ped/bikes		1.00	
Frt		0.87	
Flt Protected		1.00	
Satd. Flow (prot)		1559	
Flt Permitted		1.00	
Satd. Flow (perm)		1559	
Peak-hour factor, PHF	0.95	0.95	0.95
Adj. Flow (vph)	5	3	255
RTOR Reduction (vph)	0	0	0
Lane Group Flow (vph)	0	258	0
Confl. Peds. (#/hr)			
Confl. Bikes (#/hr)			
Heavy Vehicles (%)	0%	0%	0%
Turn Type			
Protected Phases		3	
Permitted Phases			
Actuated Green, G (s)		10.0	
Effective Green, g (s)		10.0	
Actuated g/C Ratio		0.15	
Clearance Time (s)		5.0	
Lane Grp Cap (vph)		240	
v/s Ratio Prot		c0.17	
v/s Ratio Perm			
v/c Ratio		1.07	
Uniform Delay, d1		27.5	
Progression Factor		0.87	
Incremental Delay, d2		77.3	
Delay (s)		101.4	
Level of Service		F	
Approach Delay (s)		101.4	
Approach LOS		F	

Intersection Summary

HCM Signalized Intersection Capacity Analysis
1071: 127th Street & State Street

	↗	→	←	↖	↘	↙
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰↑	↑↱		↰	↱
Volume (vph)	264	792	569	63	96	234
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		1.00	1.00
Frt		1.00	0.99		1.00	0.85
Flt Protected		0.99	1.00		0.95	1.00
Satd. Flow (prot)		3279	3271		1660	1485
Flt Permitted		0.65	1.00		0.95	1.00
Satd. Flow (perm)		2152	3271		1660	1485
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	278	834	599	66	101	246
RTOR Reduction (vph)	0	0	13	0	0	182
Lane Group Flow (vph)	0	1112	652	0	101	64
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type	Perm					Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)		40.0	40.0		17.0	17.0
Effective Green, g (s)		40.0	40.0		17.0	17.0
Actuated g/C Ratio		0.62	0.62		0.26	0.26
Clearance Time (s)		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		1324	2013		434	388
v/s Ratio Prot			0.20		c0.06	
v/s Ratio Perm		c0.52				0.04
v/c Ratio		0.84	0.32		0.23	0.17
Uniform Delay, d1		10.0	6.0		18.9	18.5
Progression Factor		1.20	1.19		1.29	2.46
Incremental Delay, d2		2.0	0.4		1.2	0.9
Delay (s)		13.9	7.5		25.6	46.4
Level of Service		B	A		C	D
Approach Delay (s)		13.9	7.5		40.4	
Approach LOS		B	A		D	

Intersection Summary			
HCM Average Control Delay	16.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	65.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰↑	↑↱		↰	↱
Volume (vph)	81	810	548	152	265	88
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	12	10	11	12	10	10
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		1.00	1.00
Frpb, ped/bikes		1.00	1.00		1.00	0.99
Flpb, ped/bikes		1.00	1.00		1.00	1.00
Frt		1.00	0.97		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		3118	3068		1506	1343
Flt Permitted		0.82	1.00		0.95	1.00
Satd. Flow (perm)		2567	3068		1506	1343
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	85	853	577	160	279	93
RTOR Reduction (vph)	0	0	39	0	0	60
Lane Group Flow (vph)	0	938	698	0	279	33
Confl. Peds. (#/hr)	2			2		1
Heavy Vehicles (%)	1%	2%	2%	10%	6%	5%
Turn Type	Perm					Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)		34.0	34.0		23.0	23.0
Effective Green, g (s)		34.0	34.0		23.0	23.0
Actuated g/C Ratio		0.52	0.52		0.35	0.35
Clearance Time (s)		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		1343	1605		533	475
v/s Ratio Prot			0.23		c0.19	
v/s Ratio Perm		c0.37				0.02
v/c Ratio		0.70	0.44		0.52	0.07
Uniform Delay, d1		11.6	9.6		16.7	13.9
Progression Factor		1.08	1.11		1.65	3.36
Incremental Delay, d2		1.9	0.8		3.2	0.3
Delay (s)		14.5	11.4		30.8	46.9
Level of Service		B	B		C	D
Approach Delay (s)		14.5	11.4		34.8	
Approach LOS		B	B		C	

Intersection Summary			
HCM Average Control Delay	17.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	72.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↱		↰	↑	↰↱	
Volume (vph)	674	261	121	589	205	58
Ideal Flow (vphpl)	2300	1800	1800	2300	1800	1800
Lane Width	15	12	14	16	15	12
Total Lost time (s)	5.0		5.0	5.0	5.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.96		1.00	1.00	0.97	
Flt Protected	1.00		0.95	1.00	0.96	
Satd. Flow (prot)	2387		1788	2506	1748	
Flt Permitted	1.00		0.13	1.00	0.96	
Satd. Flow (perm)	2387		243	2506	1748	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	709	275	127	620	216	61
RTOR Reduction (vph)	21	0	0	0	16	0
Lane Group Flow (vph)	963	0	127	620	261	0
Confl. Peds. (#/hr)						1
Heavy Vehicles (%)	2%	2%	2%	4%	7%	0%
Turn Type			Perm			
Protected Phases	4			8	2	
Permitted Phases			8			
Actuated Green, G (s)	31.0		31.0	31.0	24.0	
Effective Green, g (s)	31.0		31.0	31.0	24.0	
Actuated g/C Ratio	0.48		0.48	0.48	0.37	
Clearance Time (s)	5.0		5.0	5.0	5.0	
Lane Grp Cap (vph)	1138		116	1195	645	
v/s Ratio Prot	0.40			0.25	c0.15	
v/s Ratio Perm			c0.52			
v/c Ratio	0.85		1.09	0.52	0.41	
Uniform Delay, d1	14.9		17.0	11.8	15.2	
Progression Factor	1.34		1.00	1.00	1.00	
Incremental Delay, d2	6.0		111.3	1.6	1.9	
Delay (s)	25.9		128.3	13.4	17.1	
Level of Service	C		F	B	B	
Approach Delay (s)	25.9			33.0	17.1	
Approach LOS	C			C	B	

Intersection Summary			
HCM Average Control Delay	27.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	77.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑↑	↱		↰↑	↱		✥	
Volume (vph)	1	995	38	112	704	1	62	0	157	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	15	13	11	11	12	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0	4.0	3.0	3.0	4.0		4.0	4.0			
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00	1.00			
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85			
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.95	1.00			
Satd. Flow (prot)	1881	3431	1479	1589	3320	1530		1938	1500			
Flt Permitted	0.37	1.00	1.00	0.21	1.00	1.00		0.76	1.00			
Satd. Flow (perm)	739	3431	1479	356	3320	1530		1545	1500			
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	1	1036	40	117	733	1	65	0	164	0	0	0
RTOR Reduction (vph)	0	0	15	0	0	0	0	0	146	0	0	0
Lane Group Flow (vph)	1	1036	25	117	733	1	0	65	18	0	0	0
Heavy Vehicles (%)	0%	3%	0%	4%	3%	0%	0%	0%	2%	0%	0%	0%
Turn Type	Perm		Perm	custom		custom	Perm		Perm	Perm		
Protected Phases		4		3	3 8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)	53.0	53.0	53.0	67.9	67.9	67.9		9.1	9.1			
Effective Green, g (s)	53.0	53.0	53.0	67.9	67.9	67.9		9.1	9.1			
Actuated g/C Ratio	0.62	0.62	0.62	0.80	0.80	0.80		0.11	0.11			
Clearance Time (s)	4.0	4.0	4.0	3.0		4.0		4.0	4.0			
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0		3.0	3.0			
Lane Grp Cap (vph)	461	2139	922	457	2652	1222		165	161			
v/s Ratio Prot		c0.30		0.04	c0.22							
v/s Ratio Perm	0.00		0.02	0.17		0.00		c0.04	0.01			
v/c Ratio	0.00	0.48	0.03	0.26	0.28	0.00		0.39	0.11			
Uniform Delay, d1	6.0	8.6	6.1	3.2	2.2	1.7		35.4	34.3			
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00			
Incremental Delay, d2	0.0	0.8	0.1	0.3	0.1	0.0		1.6	0.3			
Delay (s)	6.0	9.4	6.2	3.5	2.3	1.7		36.9	34.6			
Level of Service	A	A	A	A	A	A		D	C			
Approach Delay (s)		9.3			2.4			35.3			0.0	
Approach LOS		A			A			D			A	

Intersection Summary			
HCM Average Control Delay	9.3	HCM Level of Service	A
HCM Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	50.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1942: 111th Street & Langley Avenue

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰↑	↑↱		↲↳	
Volume (vph)	9	946	840	30	71	13
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10
Total Lost time (s)		5.0	5.0		3.0	
Lane Util. Factor		0.95	0.95		1.00	
Frt		1.00	0.99		0.98	
Flt Protected		1.00	1.00		0.96	
Satd. Flow (prot)		3098	3083		1532	
Flt Permitted		0.94	1.00		0.96	
Satd. Flow (perm)		2928	3083		1532	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	9	996	884	32	75	14
RTOR Reduction (vph)	0	0	3	0	7	0
Lane Group Flow (vph)	0	1005	913	0	82	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type	Perm					
Protected Phases		4	8 2 11		5	
Permitted Phases	4					
Actuated Green, G (s)		33.0	64.0		7.0	
Effective Green, g (s)		33.0	64.0		7.0	
Actuated g/C Ratio		0.37	0.71		0.08	
Clearance Time (s)		5.0			3.0	
Lane Grp Cap (vph)		1074	2192		119	
v/s Ratio Prot			c0.30		c0.05	
v/s Ratio Perm		c0.34				
v/c Ratio		0.94	0.42		0.69	
Uniform Delay, d1		27.5	5.3		40.4	
Progression Factor		1.00	0.01		1.00	
Incremental Delay, d2		15.8	0.2		27.6	
Delay (s)		43.3	0.3		68.1	
Level of Service		D	A		E	
Approach Delay (s)		43.3	0.3		68.1	
Approach LOS		D	A		E	

Intersection Summary			
HCM Average Control Delay	24.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	46.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1955: 115th Street & Cottage Grove Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			↰↑↑↱			✥			↰↑	↱
Volume (vph)	38	480	0	1	577	39	3	2	28	202	0	133
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	12	12	11	12	11
Total Lost time (s)		4.0			4.0			3.0			3.0	3.0
Lane Util. Factor		1.00			0.95			1.00			1.00	1.00
Frpb, ped/bikes		1.00			1.00			0.94			1.00	0.98
Flpb, ped/bikes		1.00			1.00			1.00			0.99	1.00
Frt		1.00			0.99			0.88			1.00	0.85
Flt Protected		1.00			1.00			1.00			0.95	1.00
Satd. Flow (prot)		1774			3340			1467			1669	1348
Flt Permitted		0.92			0.95			0.93			0.89	1.00
Satd. Flow (perm)		1640			3190			1369			1568	1348
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	40	505	0	1	607	41	3	2	29	213	0	140
RTOR Reduction (vph)	0	0	0	0	6	0	0	26	0	0	0	94
Lane Group Flow (vph)	0	545	0	0	643	0	0	8	0	0	213	46
Confl. Peds. (#/hr)	60		44	44		60	14		10	10		14
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	0%	1%	0%	0%	1%	3%	20%	0%	0%	1%	0%	7%
Turn Type	Perm			Prot			Perm			pm+pt		Perm
Protected Phases		4		3	3 4			1		2	1 2	
Permitted Phases	4				3		1	1		1 2		1 2
Actuated Green, G (s)		31.0			45.0			9.0			25.0	28.0
Effective Green, g (s)		31.0			45.0			9.0			25.0	28.0
Actuated g/C Ratio		0.36			0.53			0.11			0.29	0.33
Clearance Time (s)		4.0						3.0				
Lane Grp Cap (vph)		598			1714			145			480	444
v/s Ratio Prot					c0.06						c0.08	
v/s Ratio Perm		c0.33			0.14			0.01			c0.05	0.03
v/c Ratio		0.91			0.38			0.06			0.44	0.10
Uniform Delay, d1		25.7			11.7			34.2			24.4	19.8
Progression Factor		1.00			1.19			1.00			1.00	1.00
Incremental Delay, d2		20.5			0.1			0.7			3.0	0.5
Delay (s)		46.2			14.0			34.9			27.3	20.3
Level of Service		D			B			C			C	C
Approach Delay (s)		46.2			14.0			34.9			24.5	
Approach LOS		D			B			C			C	

Intersection Summary			
HCM Average Control Delay	27.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	75.8%	ICU Level of Service	D
Analysis Period (min)	15		

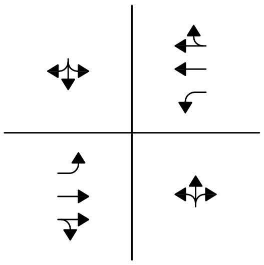
c Critical Lane Group

Appendix C
Bus Rapid Transit (BRT) Alternative

BRT Alternative Project Traffic Estimates

ITE Land Use	Unit	Trip Generation Rate			Peak Hour Direction			
		Daily	AM Peak Hour	PM Peak Hour	AM In	AM Out	PM In	PM Out
Light Rail with Park and Ride	Parking Spaces	2.51	1.07	1.24	80%	20%	20%	80%

BRT Alternative Park and Ride Facilities		Estimated Project Traffic						
Location	Parking Spaces	Daily	AM In	AM Out	AM Total	PM In	PM Out	PM Total
103rd Street	200	502	171	43	214	50	198	248
111th Street	200	502	171	43	214	50	198	248
Kensington Avenue	1,000	2,510	856	214	1,070	248	992	1,240
130th Street	1,400	3,514	1,198	300	1,498	347	1,389	1,736
Total	**2,800**	**7,028**	**2,396**	**600**	**2,996**	**695**	**2,777**	**3,472**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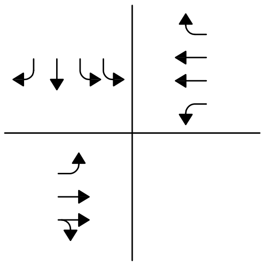
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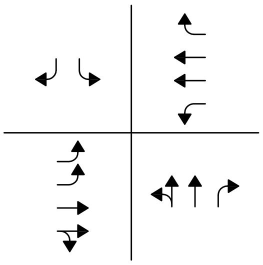
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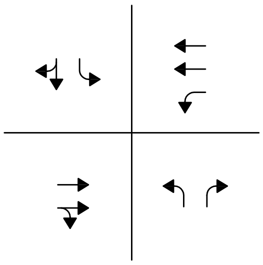
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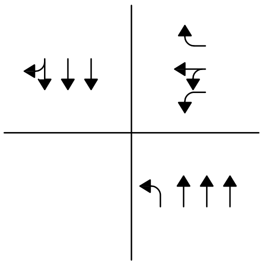
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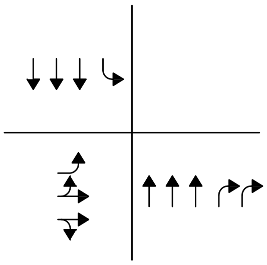
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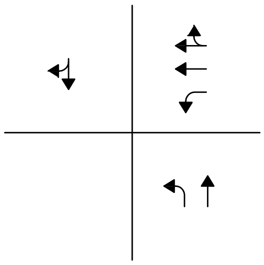
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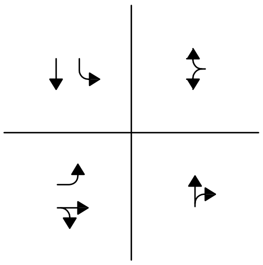
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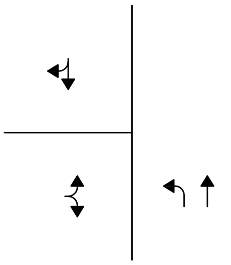
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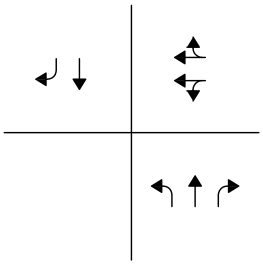
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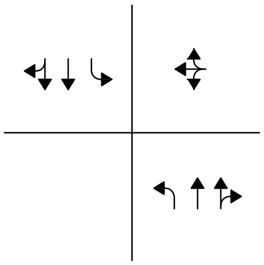
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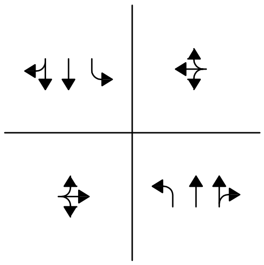
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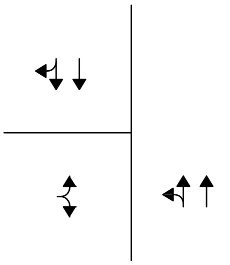
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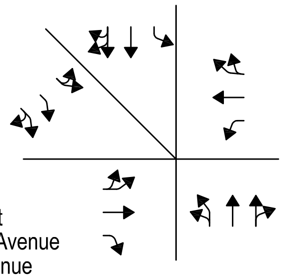
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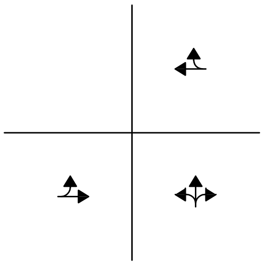
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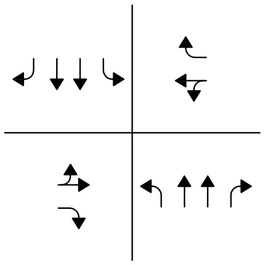
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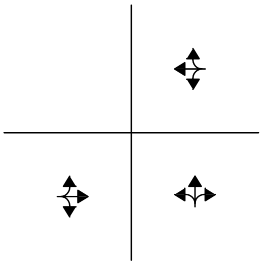
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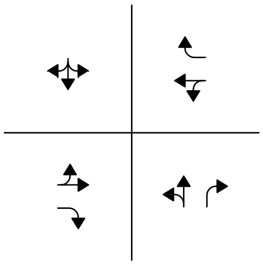
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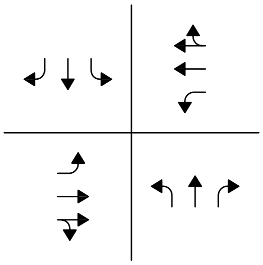
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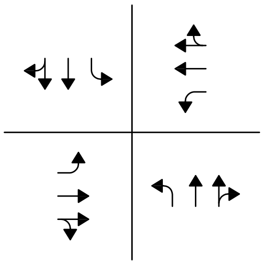
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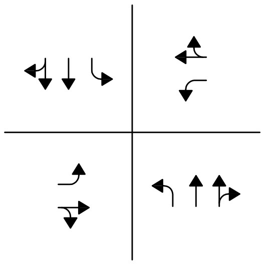
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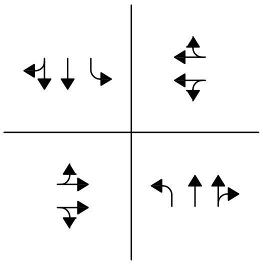
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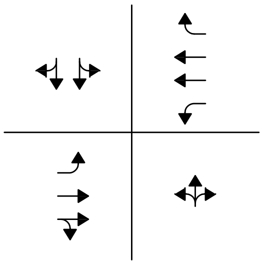
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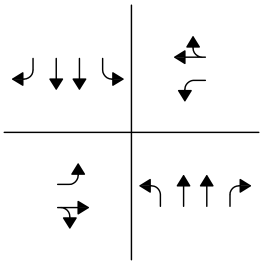
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BRT Alternative (2026) Intersection Lane Geometry

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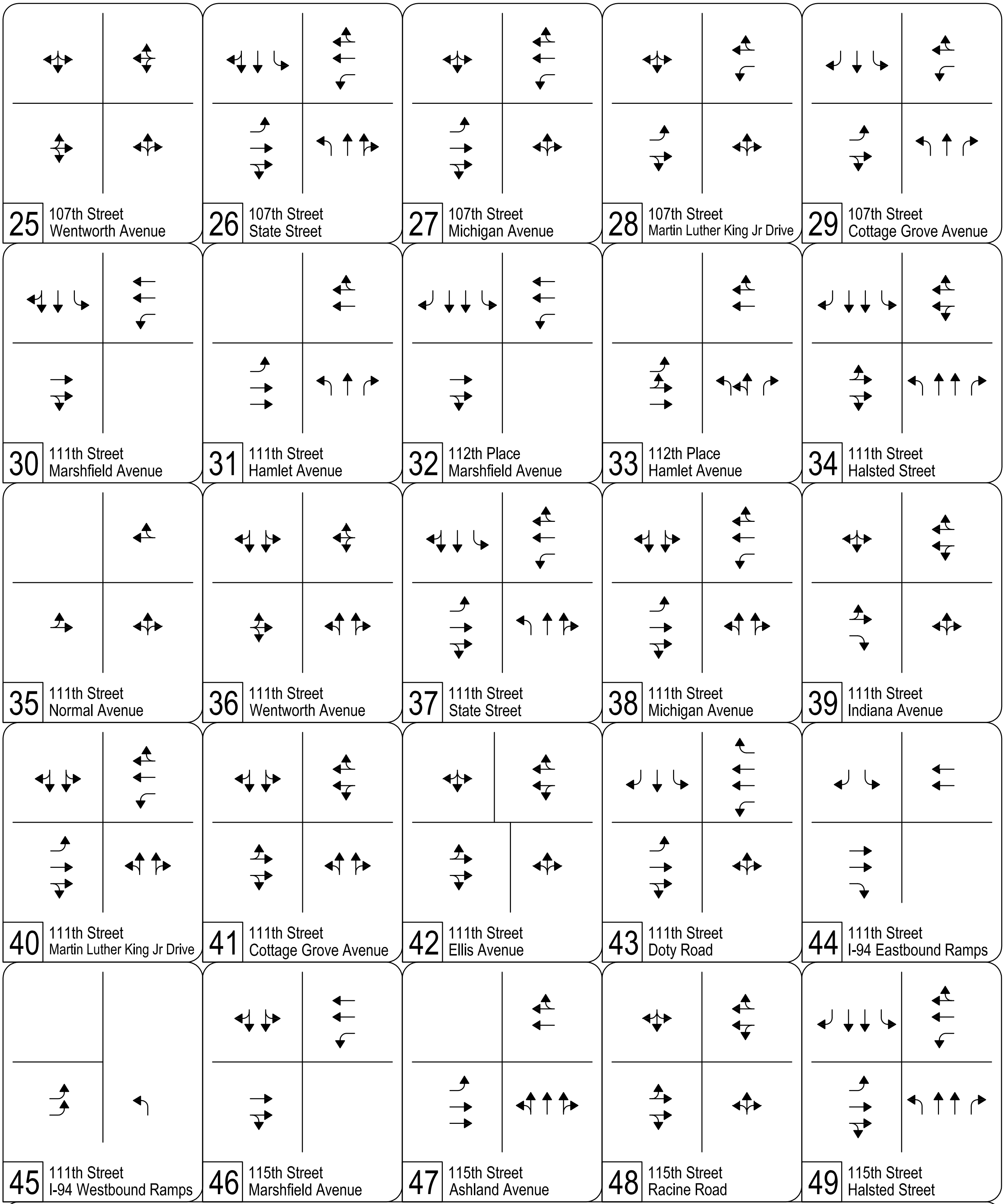

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30 111th Street Marshfield Avenue

31 111th Street Hamlet Avenue

32 112th Place Marshfield Avenue

33 112th Place Hamlet Avenue

34 111th Street Halsted Street

35 111th Street Normal Avenue

36 111th Street Wentworth Avenue

37 111th Street State Street

38 111th Street Michigan Avenue

39 111th Street Indiana Avenue

40 111th Street Martin Luther King Jr Drive

41 111th Street Cottage Grove Avenue

42 111th Street Ellis Avenue

43 111th Street Doty Road

44 111th Street I-94 Eastbound Ramps

45 111th Street I-94 Westbound Ramps

46 115th Street Marshfield Avenue

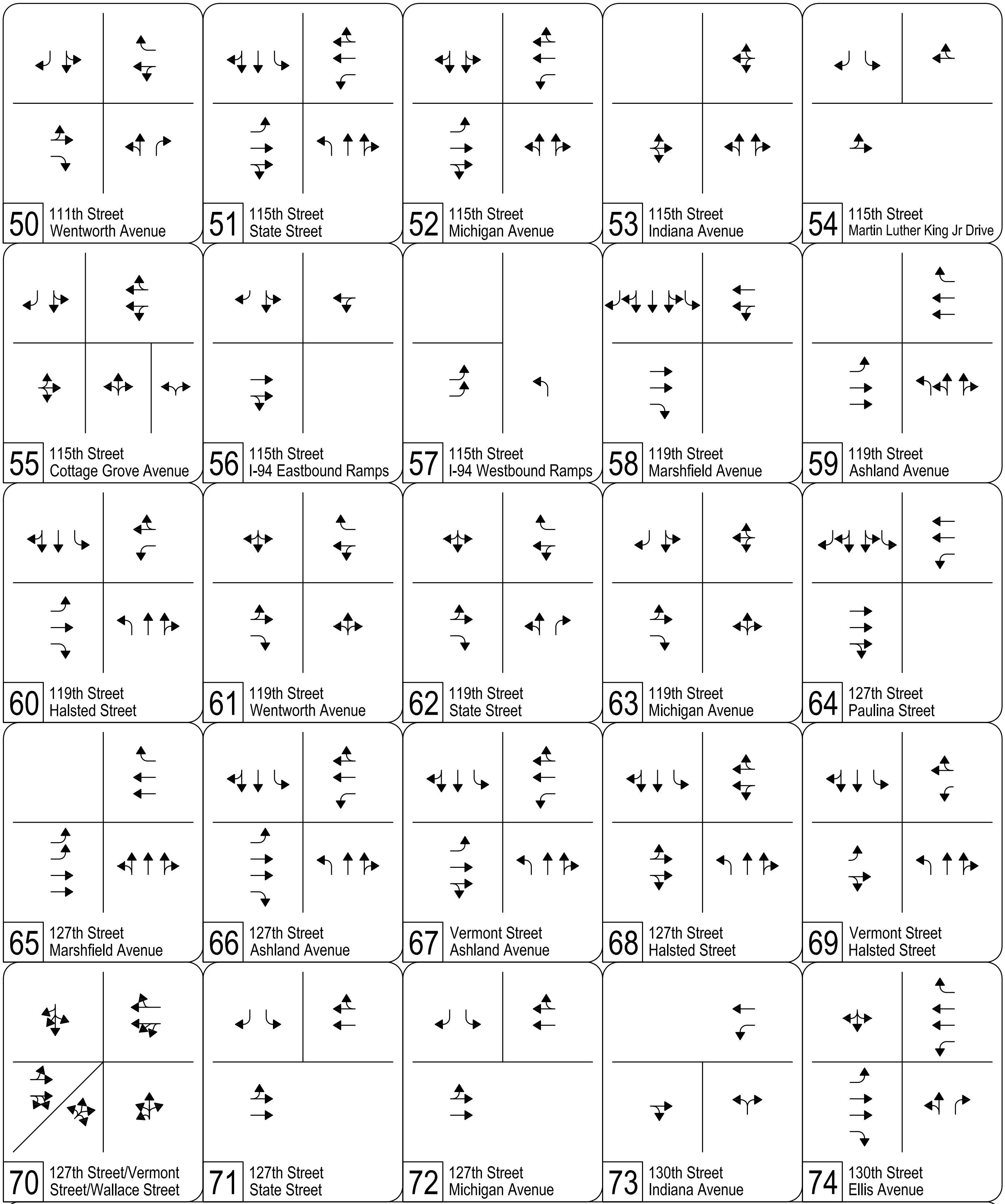
47 115th Street Ashland Avenue

48 115th Street Racine Road

49 115th Street Halsted Street

BRT Alternative (2026) Intersection Lane Geometry

Page 2 of 3



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55 115th Street Cottage Grove Avenue

56 115th Street I-94 Eastbound Ramps

57 115th Street I-94 Westbound Ramps

58 119th Street Marshfield Avenue

59 119th Street Ashland Avenue

60 119th Street Halsted Street

61 119th Street Wentworth Avenue

62 119th Street State Street

63 119th Street Michigan Avenue

64 127th Street Paulina Street

65 127th Street Marshfield Avenue

66 127th Street Ashland Avenue

67 Vermont Street Ashland Avenue

68 127th Street Halsted Street

69 Vermont Street Halsted Street

70 127th Street/Vermont Street/Wallace Street

71 127th Street State Street

72 127th Street Michigan Avenue

73 130th Street Indiana Avenue

74 130th Street Ellis Avenue

BRT Alternative (2026) Intersection Lane Geometry

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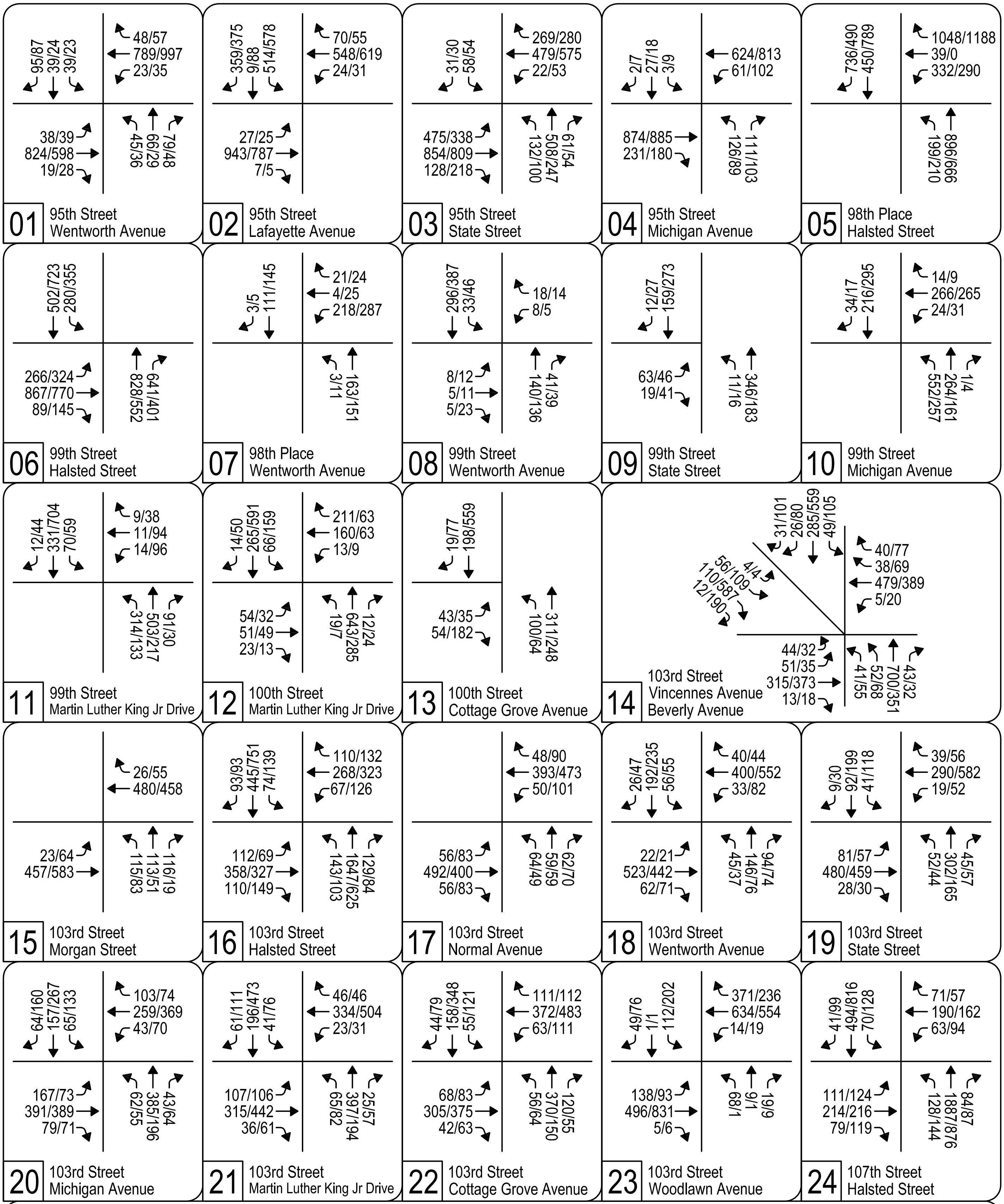
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19/28
45/36
66/29
79/48
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95th Street
Wentworth Avenue
359/375
9/88
514/578
70/55
548/619
24/31
27/25
943/787
7/5
02
95th Street
Lafayette Avenue
31/30
58/54
269/280
479/575
22/53
475/338
854/809
128/218
132/100
508/247
61/54
03
95th Street
State Street
2/7
27/18
3/9
624/813
61/102
874/885
231/180
126/89
111/103
04
95th Street
Michigan Avenue
736/490
450/789
1048/1188
39/0
332/290
199/210
896/666
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98th Place
Halsted Street
502/723
280/355
266/324
867/770
89/145
828/552
641/401
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99th Street
Halsted Street
3/5
111/145
21/24
4/25
218/287
3/11
163/151
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Wentworth Avenue
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33/46
18/14
8/5
8/12
5/11
5/23
140/136
41/39
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Wentworth Avenue
12/27
159/273
63/46
19/41
11/16
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State Street
34/17
216/295
14/9
266/265
24/31
552/257
264/161
1/4
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Michigan Avenue
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9/38
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99th Street
Martin Luther King Jr Drive
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66/159
211/63
160/63
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51/49
23/13
19/7
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100/64
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Morgan Street
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Normal Avenue
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107/106
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65/82
397/194
25/57
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Martin Luther King Jr Drive
44/79
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42/63
56/64
370/150
120/55
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103rd Street
Cottage Grove Avenue
49/76
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371/236
634/554
14/19
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5/6
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9/1
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103rd Street
Woodlawn Avenue
41/99
494/816
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71/57
190/162
63/94
111/124
214/216
79/119
128/144
1887/876
84/87
24
107th Street
Halsted Street

BRT Alternative (2026) Intersection Traffic Volumes

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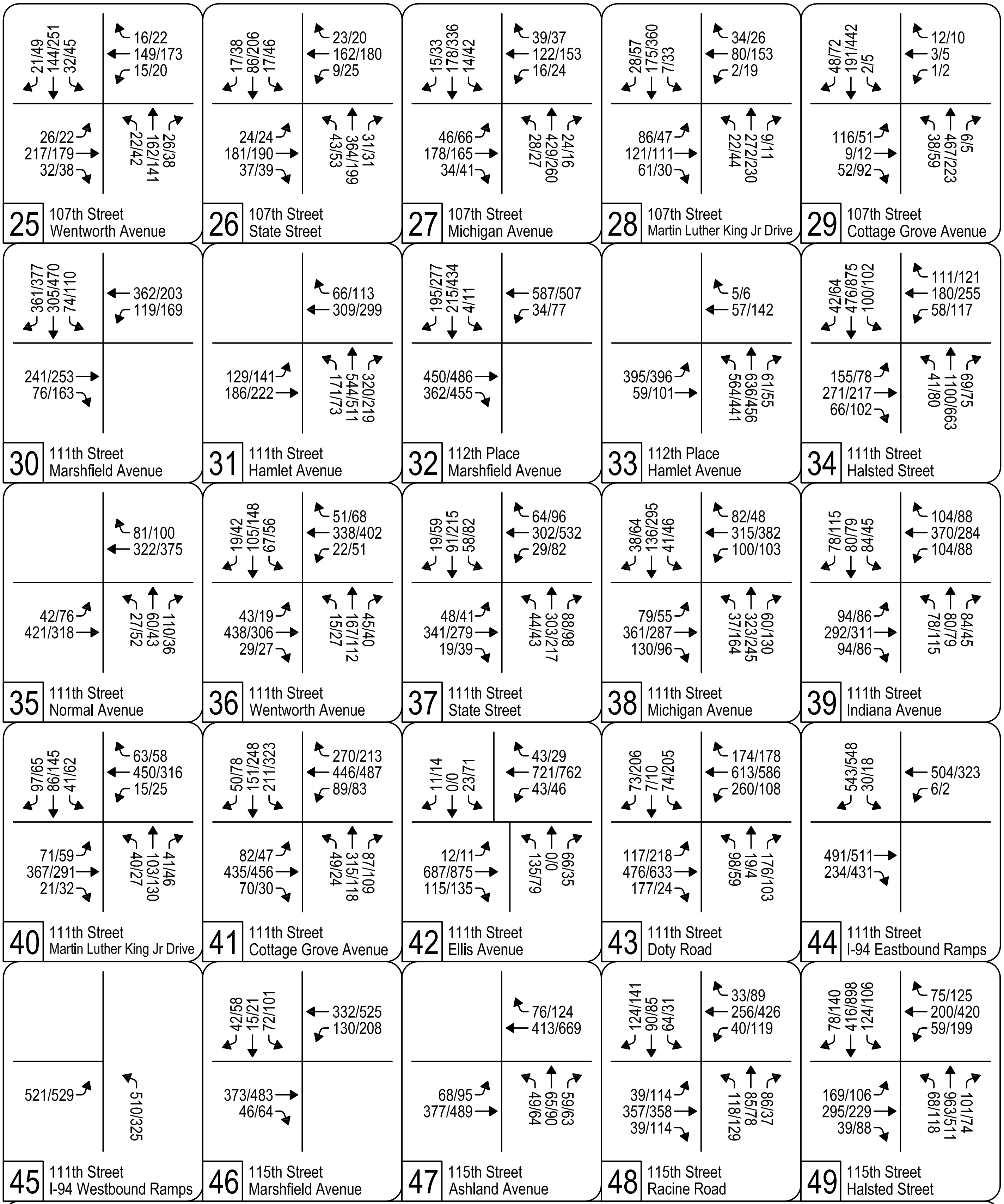
Legend: AM/PM Peak Hour Volumes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162/180
9/25
24/24
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43/53
364/199
31/31
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107th Street
State Street
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14/42
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46/66
178/165
34/41
28/27
429/260
24/16
27
107th Street
Michigan Avenue
28/57
175/360
7/33
34/26
80/153
2/19
86/47
121/111
61/30
22/44
272/230
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Martin Luther King Jr Drive
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3/5
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241/253
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Marshfield Avenue
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309/299
129/141
186/222
171/73
544/511
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Hamlet Avenue
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215/434
4/11
587/507
34/77
450/486
362/455
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112th Place
Marshfield Avenue
5/6
57/142
395/396
59/101
564/441
636/456
61/55
33
112th Place
Hamlet Avenue
42/64
476/875
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111/121
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58/117
155/78
271/217
66/102
41/80
1100/663
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19/42
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29/27
15/27
167/112
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100/103
79/55
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63/58
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I-94 Westbound Ramps
42/58
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72/101
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Racine Road
78/140
416/898
124/106
75/125
200/420
59/199
169/106
295/229
39/88
68/118
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101/74
49
115th Street
Halsted Street

BRT Alternative (2026) Intersection Traffic Volumes

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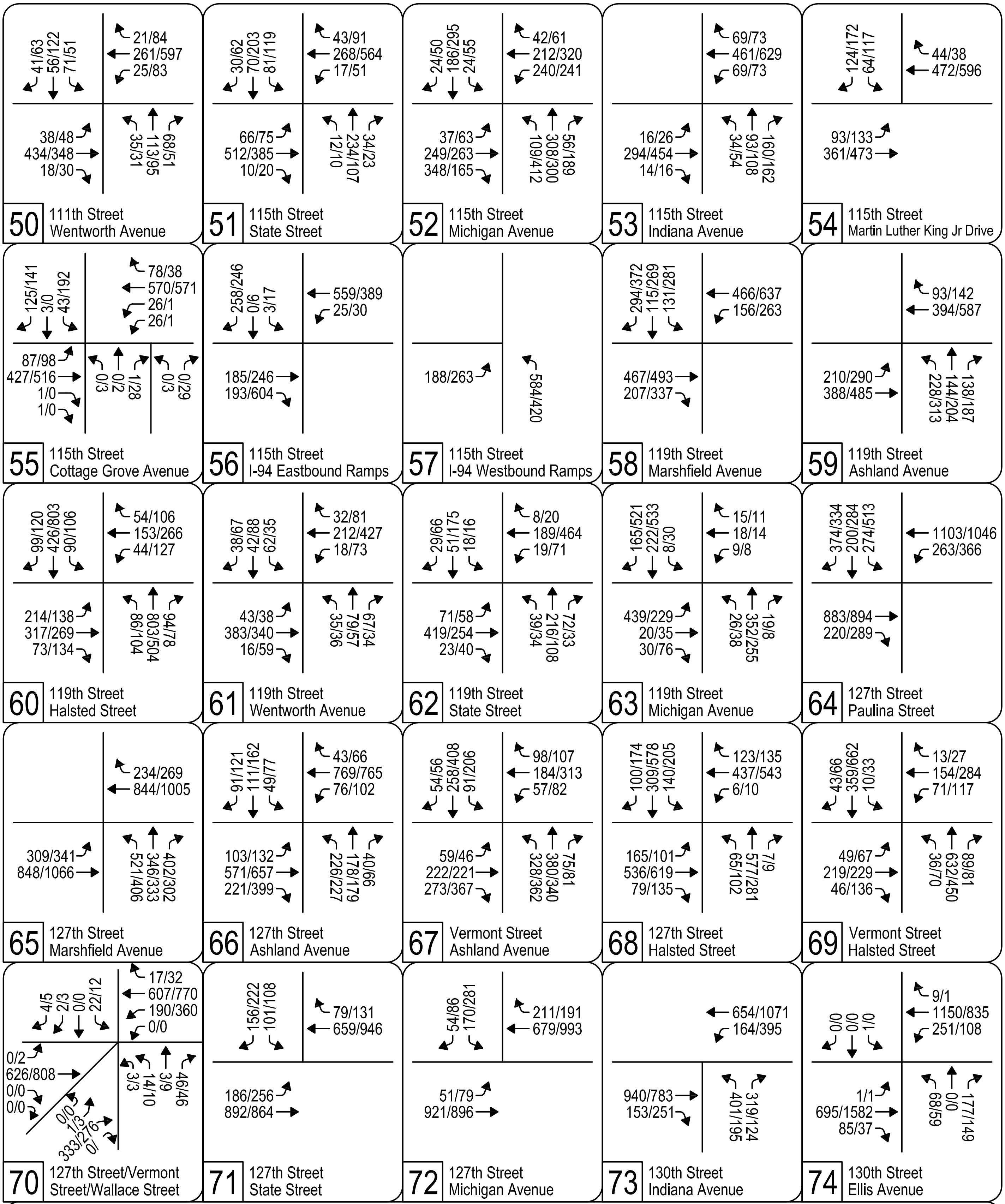
Legend: AM/PM Peak Hour Volumes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35/31
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30/62
70/203
81/119
43/91
268/564
17/51
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512/385
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12/10
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I-94 Eastbound Ramps
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695/1582
85/37
68/59
0/0
177/149
74
130th Street
Ellis Avenue

BRT Alternative (2026) Intersection Traffic Volumes

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Legend: AM/PM Peak Hour Volumes

HCM Signalized Intersection Capacity Analysis
1001: 95th Street & Wentworth Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			✥			✥	
Volume (vph)	38	824	19	23	789	48	45	66	79	39	39	95
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	16	10	10	16	8	15	8	8	14	8
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			0.99			0.99	
Flpb, ped/bikes	0.98	1.00		1.00	1.00			1.00			1.00	
Frt	1.00	1.00		1.00	0.99			0.94			0.93	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1416	2975		1592	2978			1753			1670	
Flt Permitted	0.26	1.00		0.26	1.00			0.90			0.90	
Satd. Flow (perm)	384	2975		429	2978			1597			1527	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	40	867	20	24	831	51	47	69	83	41	41	100
RTOR Reduction (vph)	0	2	0	0	7	0	0	39	0	0	63	0
Lane Group Flow (vph)	40	885	0	24	875	0	0	160	0	0	119	0
Confl. Peds. (#/hr)	61		11	11		61	3		5	5		3
Confl. Bikes (#/hr)	1		1	1		1						
Heavy Vehicles (%)	11%	7%	0%	0%	6%	2%	2%	7%	4%	5%	7%	3%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	34.0	34.0		34.0	34.0			22.0			22.0	
Effective Green, g (s)	34.0	34.0		34.0	34.0			23.0			23.0	
Actuated g/C Ratio	0.52	0.52		0.52	0.52			0.35			0.35	
Clearance Time (s)	4.0	4.0		4.0	4.0			5.0			5.0	
Lane Grp Cap (vph)	201	1556		224	1558			565			540	
v/s Ratio Prot		c0.30			0.29							
v/s Ratio Perm	0.10			0.06				c0.10			0.08	
v/c Ratio	0.20	0.57		0.11	0.56			0.28			0.22	
Uniform Delay, d1	8.3	10.5		7.8	10.5			15.1			14.7	
Progression Factor	1.00	1.00		0.81	1.13			1.00			1.00	
Incremental Delay, d2	2.2	1.5		0.8	1.3			1.2			0.9	
Delay (s)	10.5	12.0		7.2	13.1			16.3			15.7	
Level of Service	B	B		A	B			B			B	
Approach Delay (s)		12.0			12.9			16.3			15.7	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	13.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1002: 95th Street & Lafayette Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↑	↱				↰↰	↑	↱
Volume (vph)	27	943	7	24	548	70	0	0	0	514	9	359
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	5.0	5.0		3.0	3.0	3.0				5.0	5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00				0.97	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.67				1.00	1.00	0.96
Flpb, ped/bikes	0.91	1.00		1.00	1.00	1.00				1.00	1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85				1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00				0.95	1.00	1.00
Satd. Flow (prot)	776	3285		1710	3138	512				3100	1440	1399
Flt Permitted	0.43	1.00		0.14	1.00	1.00				0.95	1.00	1.00
Satd. Flow (perm)	355	3285		248	3138	512				3100	1440	1399
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	28	993	7	25	577	74	0	0	0	541	9	378
RTOR Reduction (vph)	0	1	0	0	0	32	0	0	0	0	0	172
Lane Group Flow (vph)	28	999	0	25	577	42	0	0	0	541	9	206
Confl. Peds. (#/hr)	354		13	13		354	22		22	22		22
Confl. Bikes (#/hr)	4					4			1	1		
Heavy Vehicles (%)	100%	4%	0%	0%	9%	100%	0%	0%	0%	7%	25%	5%
Turn Type	pm+pt			pm+pt		Perm				Split		Perm
Protected Phases	7	4		3	8					6	6	
Permitted Phases	4			8		8						6
Actuated Green, G (s)	43.0	43.0		73.0	73.0	73.0				30.0	30.0	30.0
Effective Green, g (s)	43.0	43.0		73.0	73.0	73.0				30.0	30.0	30.0
Actuated g/C Ratio	0.33	0.33		0.56	0.56	0.56				0.23	0.23	0.23
Clearance Time (s)	5.0	5.0		3.0	3.0	3.0				5.0	5.0	5.0
Lane Grp Cap (vph)	163	1087		634	1762	288				715	332	323
v/s Ratio Prot	0.02	c0.30		0.01	c0.18					c0.17	0.01	
v/s Ratio Perm	0.04			0.01		0.08						0.15
v/c Ratio	0.17	0.92		0.04	0.33	0.14				0.76	0.03	0.64
Uniform Delay, d1	31.6	41.8		15.1	15.3	13.6				46.6	38.7	45.1
Progression Factor	0.80	0.82		0.29	0.62	1.95				1.00	1.00	1.00
Incremental Delay, d2	2.0	12.2		0.1	0.3	0.7				7.3	0.2	9.2
Delay (s)	27.2	46.7		4.5	9.8	27.2				53.9	38.9	54.3
Level of Service	C	D		A	A	C				D	D	D
Approach Delay (s)		46.2			11.5			0.0			54.0	
Approach LOS		D			B			A			D	

Intersection Summary			
HCM Average Control Delay	40.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	51.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1003: 95th Street & State Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↱		↰	↑↑	↱		↰↑	↱	↰		↱
Volume (vph)	475	854	128	22	479	269	132	508	61	58	0	31
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0	3.0		5.0	5.0	5.0		5.0	5.0	5.0		5.0
Lane Util. Factor	0.97	0.95		1.00	0.95	1.00		0.95	1.00	1.00		1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.65		1.00	0.95	1.00		0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Frt	1.00	0.98		1.00	1.00	0.85		1.00	0.85	1.00		0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.99	1.00	0.95		1.00
Satd. Flow (prot)	3190	3107		1555	2923	944		3300	1419	855		738
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.99	1.00	0.95		1.00
Satd. Flow (perm)	3190	3107		1555	2923	944		3300	1419	855		738
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	500	899	135	23	504	283	139	535	64	61	0	33
RTOR Reduction (vph)	0	9	0	0	0	161	0	0	25	0	0	30
Lane Group Flow (vph)	500	1025	0	23	504	122	0	674	39	61	0	3
Confl. Peds. (#/hr)	425		21	21		425	6		34	34		6
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	4%	8%	3%	10%	17%	5%	1%	3%	2%	100%	0%	100%
Turn Type	Prot			Prot		Perm	Split		Perm	Prot		custom
Protected Phases	7	4		3	8		2	2		6		
Permitted Phases						8			2			6
Actuated Green, G (s)	40.0	62.0		9.0	31.0	31.0		31.0	31.0	10.0		10.0
Effective Green, g (s)	40.0	62.0		9.0	31.0	31.0		31.0	31.0	10.0		10.0
Actuated g/C Ratio	0.31	0.48		0.07	0.24	0.24		0.24	0.24	0.08		0.08
Clearance Time (s)	3.0	3.0		5.0	5.0	5.0		5.0	5.0	5.0		5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0	3.0	3.0		3.0
Lane Grp Cap (vph)	982	1482		108	697	225		787	338	66		57
v/s Ratio Prot	0.16	c0.33		0.01	c0.17			c0.20		c0.07		
v/s Ratio Perm						0.13			0.03			0.00
v/c Ratio	0.51	0.69		0.21	0.72	0.54		0.86	0.11	0.92		0.04
Uniform Delay, d1	36.9	26.5		57.2	45.6	43.3		47.4	38.8	59.6		55.6
Progression Factor	0.75	0.21		1.00	1.00	1.00		0.94	0.89	1.00		1.00
Incremental Delay, d2	0.9	1.3		4.5	6.4	9.0		11.4	0.7	83.9		0.3
Delay (s)	28.5	6.9		61.6	52.0	52.3		56.2	35.3	143.5		55.9
Level of Service	C	A		E	D	D		E	D	F		E
Approach Delay (s)		13.9			52.3			54.4			112.7	
Approach LOS		B			D			D			F	

Intersection Summary			
HCM Average Control Delay	36.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	71.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱		↰	↑↑		↰		↱	↰	↱	
Volume (vph)	0	874	231	61	624	0	126	0	111	3	27	2
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	11	11	8	12	12	12	14	15	12
Total Lost time (s)		4.0		4.0	4.0		4.0		4.0	4.0	4.0	
Lane Util. Factor		0.95		1.00	0.95		1.00		1.00	1.00	1.00	
Frpb, ped/bikes		0.99		1.00	1.00		1.00		0.98	1.00	1.00	
Flpb, ped/bikes		1.00		1.00	1.00		1.00		1.00	0.99	1.00	
Frt		0.97		1.00	1.00		1.00		0.85	1.00	0.99	
Flt Protected		1.00		0.95	1.00		0.95		1.00	0.95	1.00	
Satd. Flow (prot)		2852		1650	3005		1390		1465	1803	1961	
Flt Permitted		1.00		0.16	1.00		0.74		1.00	0.95	1.00	
Satd. Flow (perm)		2852		275	3005		1078		1465	1803	1961	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	971	257	68	693	0	140	0	123	3	30	2
RTOR Reduction (vph)	0	24	0	0	0	0	0	0	82	0	1	0
Lane Group Flow (vph)	0	1204	0	68	693	0	140	0	41	3	31	0
Confl. Peds. (#/hr)	49		15	15		49			12	12		
Heavy Vehicles (%)	0%	6%	14%	0%	10%	0%	23%	0%	2%	0%	0%	0%
Turn Type				Perm			custom		custom	Perm		
Protected Phases		4			8						6	
Permitted Phases				8			2		2	6		
Actuated Green, G (s)		60.0		60.0	60.0		32.0		32.0	32.0	32.0	
Effective Green, g (s)		60.0		60.0	60.0		32.0		32.0	32.0	32.0	
Actuated g/C Ratio		0.60		0.60	0.60		0.32		0.32	0.32	0.32	
Clearance Time (s)		4.0		4.0	4.0		4.0		4.0	4.0	4.0	
Lane Grp Cap (vph)		1711		165	1803		345		469	577	628	
v/s Ratio Prot		c0.42			0.23						0.02	
v/s Ratio Perm				0.25			c0.13		0.03	0.00		
v/c Ratio		0.70		0.41	0.38		0.41		0.09	0.01	0.05	
Uniform Delay, d1		13.8		10.6	10.4		26.6		23.8	23.2	23.5	
Progression Factor		1.00		1.00	1.00		1.00		1.00	1.00	1.00	
Incremental Delay, d2		2.5		7.4	0.6		3.5		0.4	0.0	0.1	
Delay (s)		16.3		18.1	11.0		30.1		24.2	23.2	23.6	
Level of Service		B		B	B		C		C	C	C	
Approach Delay (s)		16.3			11.6			27.3			23.6	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM Average Control Delay	16.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	61.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↰	↰↑	↱	↰	↑↑↑			↑↑↱	
Volume (vph)	0	0	0	332	39	1048	199	896	0	0	450	736
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	12	12	10	10	12	12	11	12
Total Lost time (s)				4.0	4.0	5.0	3.0	4.0			4.0	
Lane Util. Factor				0.95	0.95	1.00	1.00	0.91			0.91	
Frpb, ped/bikes				1.00	1.00	0.99	1.00	1.00			0.98	
Flpb, ped/bikes				1.00	1.00	1.00	1.00	1.00			1.00	
Frt				1.00	1.00	0.85	1.00	1.00			0.91	
Flt Protected				0.95	1.00	1.00	0.95	1.00			1.00	
Satd. Flow (prot)				1525	1629	1479	1550	4368			3931	
Flt Permitted				0.95	1.00	1.00	0.95	1.00			1.00	
Satd. Flow (perm)				1525	1629	1479	1550	4368			3931	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	0	0	339	40	1069	203	914	0	0	459	751
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	339	40	1069	203	914	0	0	1210	0
Confl. Peds. (#/hr)	2					2	12		8	8		12
Heavy Vehicles (%)	0%	0%	0%	3%	5%	2%	3%	5%	0%	0%	5%	8%
Turn Type				Perm		Perm	Prot					
Protected Phases					8		5	2			6	
Permitted Phases				8		8						
Actuated Green, G (s)				30.0	30.0	30.0	32.0	66.0			31.0	
Effective Green, g (s)				31.0	31.0	30.0	32.0	66.0			31.0	
Actuated g/C Ratio				0.30	0.30	0.29	0.30	0.63			0.30	
Clearance Time (s)				5.0	5.0	5.0	3.0	4.0			4.0	
Lane Grp Cap (vph)				450	481	423	472	2746			1161	
v/s Ratio Prot							c0.13	0.21			c0.31	
v/s Ratio Perm				0.22	0.02	c0.72						
v/c Ratio				0.75	0.08	2.53	0.43	0.33			1.87dr	
Uniform Delay, d1				33.5	26.7	37.5	29.2	9.2			37.0	
Progression Factor				1.00	1.00	1.00	0.65	2.37			1.00	
Incremental Delay, d2				11.1	0.3	694.2	2.0	0.2			38.1	
Delay (s)				44.6	27.1	731.7	21.2	21.9			75.1	
Level of Service				D	C	F	C	C			E	
Approach Delay (s)		0.0			551.4			21.8			75.1	
Approach LOS		A			F			C			E	

Intersection Summary			
HCM Average Control Delay	242.0	HCM Level of Service	F
HCM Volume to Capacity ratio	1.31		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	94.5%	ICU Level of Service	F
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.
c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1006: 99th Street & Halsted Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↰↑↱						↑↑↑	↱↱	↰	↑↑↑	
Volume (vph)	266	867	89	0	0	0	0	828	641	280	502	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	13	12	12	12	12	12	10	10	8	12	12	12
Total Lost time (s)	5.0	5.0						4.0	4.0	3.0	4.0	
Lane Util. Factor	0.91	0.91						0.91	0.88	1.00	0.91	
Frpb, ped/bikes	1.00	1.00						1.00	0.97	1.00	1.00	
Flpb, ped/bikes	1.00	1.00						1.00	1.00	1.00	1.00	
Frt	1.00	0.99						1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00						1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1497	3185						4368	2187	1583	4636	
Flt Permitted	0.95	1.00						1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1497	3185						4368	2187	1583	4636	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	274	894	92	0	0	0	0	854	661	289	518	0
RTOR Reduction (vph)	0	7	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	247	1006	0	0	0	0	0	854	661	289	518	0
Confl. Peds. (#/hr)	4		14	14		4	4		3	3		4
Heavy Vehicles (%)	7%	1%	0%	0%	0%	0%	0%	5%	4%	8%	6%	0%
Turn Type	Perm								Perm	Prot		
Protected Phases		4						2		1	6	
Permitted Phases	4								2			
Actuated Green, G (s)	34.0	34.0						28.0	28.0	31.0	62.0	
Effective Green, g (s)	34.0	34.0						28.0	28.0	31.0	62.0	
Actuated g/C Ratio	0.32	0.32						0.27	0.27	0.30	0.59	
Clearance Time (s)	5.0	5.0						4.0	4.0	3.0	4.0	
Lane Grp Cap (vph)	485	1031						1165	583	467	2737	
v/s Ratio Prot								0.20		c0.18	0.11	
v/s Ratio Perm	0.16	0.32							c0.30			
v/c Ratio	0.51	0.98						0.73	1.13	0.62	0.19	
Uniform Delay, d1	28.7	35.1						35.1	38.5	31.9	9.9	
Progression Factor	1.00	1.00						0.44	0.46	1.06	0.43	
Incremental Delay, d2	3.8	22.8						0.4	62.5	2.5	0.1	
Delay (s)	32.5	57.9						15.7	80.3	36.4	4.3	
Level of Service	C	E						B	F	D	A	
Approach Delay (s)		52.9			0.0			43.9			15.8	
Approach LOS		D			A			D			B	

Intersection Summary			
HCM Average Control Delay	40.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	94.5%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1007: 98th Place & Wentworth Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↰	↑↱		↰	↑			↱	
Volume (vph)	0	0	0	218	4	21	3	163	0	0	111	3
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	14	12	12	16	12
Total Lost time (s)				4.0	4.0		4.0	4.0			-3.0	
Lane Util. Factor				1.00	0.95		1.00	1.00			1.00	
Frpb, ped/bikes				1.00	0.98		1.00	1.00			1.00	
Flpb, ped/bikes				1.00	1.00		1.00	1.00			1.00	
Frt				1.00	0.87		1.00	1.00			1.00	
Flt Protected				0.95	1.00		0.95	1.00			1.00	
Satd. Flow (prot)				1578	2709		1285	1882			1960	
Flt Permitted				0.95	1.00		0.58	1.00			1.00	
Satd. Flow (perm)				1578	2709		788	1882			1960	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	242	4	23	3	181	0	0	123	3
RTOR Reduction (vph)	0	0	0	0	18	0	0	0	0	0	1	0
Lane Group Flow (vph)	0	0	0	242	9	0	3	181	0	0	125	0
Confl. Peds. (#/hr)	2		2	2		2	3					3
Heavy Vehicles (%)	0%	0%	0%	8%	25%	5%	33%	2%	0%	0%	3%	33%
Turn Type				Perm			pm+pt					
Protected Phases					8		7	2			6	
Permitted Phases				8			2					
Actuated Green, G (s)				27.0	27.0		50.0	50.0			40.0	
Effective Green, g (s)				27.0	27.0		50.0	50.0			46.0	
Actuated g/C Ratio				0.32	0.32		0.59	0.59			0.54	
Clearance Time (s)				4.0	4.0		4.0	4.0			3.0	
Lane Grp Cap (vph)				501	861		504	1107			1061	
v/s Ratio Prot					0.00		0.00	c0.10			0.06	
v/s Ratio Perm				c0.15			0.00					
v/c Ratio				0.48	0.01		0.01	0.16			0.12	
Uniform Delay, d1				23.4	19.9		9.9	8.0			9.6	
Progression Factor				1.00	1.00		1.06	1.18			1.00	
Incremental Delay, d2				3.3	0.0		0.0	0.3			0.2	
Delay (s)				26.7	19.9		10.5	9.7			9.8	
Level of Service				C	B		B	A			A	
Approach Delay (s)		0.0			26.0			9.8			9.8	
Approach LOS		A			C			A			A	

Intersection Summary			
HCM Average Control Delay	17.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	33.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1008: 99th St & Wentworth Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱			✥			↱		↰	↑	
Volume (vph)	8	5	5	8	0	18	0	140	41	33	296	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	16	15	12	8	12	8	12	12	12	10	13	12
Total Lost time (s)	4.0	4.0			4.0			3.0		4.0	4.0	
Lane Util. Factor	1.00	1.00			1.00			1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.99			1.00			1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00			1.00			1.00		1.00	1.00	
Frt	1.00	0.93			0.91			0.97		1.00	1.00	
Flt Protected	0.95	1.00			0.99			1.00		0.95	1.00	
Satd. Flow (prot)	1938	1809			1603			1686		1595	1755	
Flt Permitted	0.74	1.00			0.96			1.00		0.60	1.00	
Satd. Flow (perm)	1509	1809			1558			1686		1013	1755	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	8	5	5	8	0	19	0	147	43	35	312	0
RTOR Reduction (vph)	0	3	0	0	13	0	0	12	0	0	0	0
Lane Group Flow (vph)	8	7	0	0	14	0	0	178	0	35	312	0
Confl. Peds. (#/hr)			3	3			5		2	2		5
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	3%	3%	0%	6%	0%
Turn Type	Perm			Perm						pm+pt		
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8						6		
Actuated Green, G (s)	27.0	27.0			27.0			40.0		50.0	50.0	
Effective Green, g (s)	27.0	27.0			27.0			40.0		50.0	50.0	
Actuated g/C Ratio	0.32	0.32			0.32			0.47		0.59	0.59	
Clearance Time (s)	4.0	4.0			4.0			3.0		4.0	4.0	
Lane Grp Cap (vph)	479	575			495			793		644	1032	
v/s Ratio Prot		0.00						0.11		0.00	c0.18	
v/s Ratio Perm	0.01				c0.01					0.03		
v/c Ratio	0.02	0.01			0.03			0.22		0.05	0.30	
Uniform Delay, d1	19.9	19.9			20.0			13.3		8.5	8.8	
Progression Factor	1.00	1.00			1.00			1.00		0.99	0.90	
Incremental Delay, d2	0.1	0.0			0.1			0.7		0.2	0.7	
Delay (s)	20.0	19.9			20.1			14.0		8.6	8.6	
Level of Service	B	B			C			B		A	A	
Approach Delay (s)		19.9			20.1			14.0			8.6	
Approach LOS		B			C			B			A	

Intersection Summary			
HCM Average Control Delay	11.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.21		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	40.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1009: 99th St & State Street

1/14/2013

	↗	↘	↖	↑	↓	↙
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰↱		↰	↑	↓↳	
Volume (vph)	63	19	11	346	159	12
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	14	12	13	12	10	12
Total Lost time (s)	4.0		4.0	4.0	4.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	0.99		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.97		1.00	1.00	0.99	
Flt Protected	0.96		0.95	1.00	1.00	
Satd. Flow (prot)	1782		1767	1765	1634	
Flt Permitted	0.96		0.64	1.00	1.00	
Satd. Flow (perm)	1782		1187	1765	1634	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	70	21	12	384	177	13
RTOR Reduction (vph)	14	0	0	0	4	0
Lane Group Flow (vph)	77	0	12	384	186	0
Confl. Peds. (#/hr)		2				
Heavy Vehicles (%)	0%	0%	0%	2%	2%	0%
Turn Type			Perm			
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	21.0		36.0	36.0	36.0	
Effective Green, g (s)	21.0		36.0	36.0	36.0	
Actuated g/C Ratio	0.32		0.55	0.55	0.55	
Clearance Time (s)	4.0		4.0	4.0	4.0	
Lane Grp Cap (vph)	576		657	978	905	
v/s Ratio Prot	c0.04			c0.22	0.11	
v/s Ratio Perm			0.01			
v/c Ratio	0.13		0.02	0.39	0.21	
Uniform Delay, d1	15.6		6.5	8.3	7.3	
Progression Factor	1.00		0.31	0.51	1.13	
Incremental Delay, d2	0.5		0.0	1.1	0.4	
Delay (s)	16.0		2.1	5.3	8.7	
Level of Service	B		A	A	A	
Approach Delay (s)	16.0			5.2	8.7	
Approach LOS	B			A	A	

Intersection Summary			
HCM Average Control Delay	7.6	HCM Level of Service	A
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	39.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↰↑↑↱		↰	↑			↑	↱
Volume (vph)	0	0	0	24	266	14	552	264	1	0	216	34
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	14	16	12	12	15	12	12	13	10
Total Lost time (s)					4.0		4.0	4.0			3.0	3.0
Lane Util. Factor					0.95		1.00	1.00			1.00	1.00
Frpb, ped/bikes					1.00		1.00	1.00			1.00	1.00
Flpb, ped/bikes					1.00		1.00	1.00			1.00	1.00
Frt					0.99		1.00	1.00			1.00	0.85
Flt Protected					1.00		0.95	1.00			1.00	1.00
Satd. Flow (prot)					3735		1660	1752			1603	1298
Flt Permitted					1.00		0.55	1.00			1.00	1.00
Satd. Flow (perm)					3735		955	1752			1603	1298
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	27	296	16	613	293	1	0	240	38
RTOR Reduction (vph)	0	0	0	0	4	0	0	0	0	0	0	21
Lane Group Flow (vph)	0	0	0	0	335	0	613	294	0	0	240	17
Confl. Peds. (#/hr)									30	30		
Heavy Vehicles (%)	0%	0%	0%	11%	2%	0%	3%	13%	0%	0%	16%	10%
Turn Type				Split			pm+pt					Perm
Protected Phases				8	8		7	2			6	
Permitted Phases							2					6
Actuated Green, G (s)					26.0		51.0	51.0			38.0	38.0
Effective Green, g (s)					26.0		51.0	51.0			38.0	38.0
Actuated g/C Ratio					0.31		0.60	0.60			0.45	0.45
Clearance Time (s)					4.0		4.0	4.0			3.0	3.0
Lane Grp Cap (vph)					1142		656	1051			717	580
v/s Ratio Prot					c0.09		c0.11	0.17			0.15	
v/s Ratio Perm							c0.45					0.01
v/c Ratio					0.29		0.93	0.28			0.33	0.03
Uniform Delay, d1					22.5		17.5	8.2			15.3	13.2
Progression Factor					1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2					0.7		22.3	0.7			1.3	0.1
Delay (s)					23.1		39.8	8.8			16.5	13.3
Level of Service					C		D	A			B	B
Approach Delay (s)		0.0			23.1			29.8			16.1	
Approach LOS		A			C			C			B	

Intersection Summary			
HCM Average Control Delay	25.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	63.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1011: 99th Street & Martin Luther King Jr Drive

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					✥		↰	↑↱		↰	↑↱	
Volume (vph)	0	0	0	14	11	9	314	503	91	70	331	12
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	15	12	12	12	12	12	13	12
Total Lost time (s)					4.0		3.0	4.0		3.0	4.0	
Lane Util. Factor					1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes					1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes					1.00		1.00	1.00		1.00	1.00	
Frt					0.96		1.00	0.98		1.00	0.99	
Flt Protected					0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)					1801		1692	3238		1707	3352	
Flt Permitted					0.98		0.51	1.00		0.33	1.00	
Satd. Flow (perm)					1801		905	3238		597	3352	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	16	12	10	349	559	101	78	368	13
RTOR Reduction (vph)	0	0	0	0	7	0	0	20	0	0	3	0
Lane Group Flow (vph)	0	0	0	0	31	0	349	640	0	78	378	0
Confl. Peds. (#/hr)	2					2	6		20	20		6
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	0%	0%	0%	0%	11%	0%	1%	3%	0%	0%	5%	0%
Turn Type				Split			pm+pt			pm+pt		
Protected Phases				8	8		5	2		1	6	
Permitted Phases							2			6		
Actuated Green, G (s)					23.0		41.0	34.0		41.0	34.0	
Effective Green, g (s)					23.0		41.0	34.0		41.0	34.0	
Actuated g/C Ratio					0.31		0.55	0.45		0.55	0.45	
Clearance Time (s)					4.0		3.0	4.0		3.0	4.0	
Lane Grp Cap (vph)					552		568	1468		430	1520	
v/s Ratio Prot					c0.02		c0.06	0.20		0.02	0.11	
v/s Ratio Perm							c0.28			0.08		
v/c Ratio					0.06		0.61	0.44		0.18	0.25	
Uniform Delay, d1					18.3		13.1	14.0		11.8	12.6	
Progression Factor					1.00		0.71	0.73		1.00	1.00	
Incremental Delay, d2					0.2		4.5	0.9		0.9	0.4	
Delay (s)					18.5		13.9	11.1		12.8	13.0	
Level of Service					B		B	B		B	B	
Approach Delay (s)		0.0			18.5			12.0			13.0	
Approach LOS		A			B			B			B	

Intersection Summary			
HCM Average Control Delay	12.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	55.0%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1012: 100th Street & Martin Luther King Jr Drive

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥		↰	↑↱		↰	↑↱	
Volume (vph)	54	51	23	13	160	211	19	643	12	66	265	14
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	16	12	12	10	11	12	12	11	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.98			0.93		1.00	1.00		1.00	0.99	
Flt Protected		0.98			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1945			1625		1596	3232		1641	3132	
Flt Permitted		0.71			0.99		0.57	1.00		0.35	1.00	
Satd. Flow (perm)		1411			1612		961	3232		603	3132	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	57	54	24	14	168	222	20	677	13	69	279	15
RTOR Reduction (vph)	0	11	0	0	59	0	0	2	0	0	5	0
Lane Group Flow (vph)	0	124	0	0	345	0	20	688	0	69	289	0
Confl. Peds. (#/hr)									6	6		
Confl. Bikes (#/hr)			1	1								
Heavy Vehicles (%)	0%	0%	0%	12%	2%	2%	0%	2%	0%	4%	5%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		25.0			25.0		42.0	42.0		42.0	42.0	
Effective Green, g (s)		25.0			25.0		42.0	42.0		42.0	42.0	
Actuated g/C Ratio		0.33			0.33		0.56	0.56		0.56	0.56	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		470			537		538	1810		338	1754	
v/s Ratio Prot								c0.21			0.09	
v/s Ratio Perm		0.09			c0.21		0.02			0.11		
v/c Ratio		0.26			0.64		0.04	0.38		0.20	0.16	
Uniform Delay, d1		18.3			21.2		7.4	9.2		8.2	8.0	
Progression Factor		1.00			1.00		1.00	1.00		0.16	0.07	
Incremental Delay, d2		1.4			5.8		0.1	0.6		1.3	0.2	
Delay (s)		19.7			27.0		7.5	9.8		2.6	0.8	
Level of Service		B			C		A	A		A	A	
Approach Delay (s)		19.7			27.0			9.8			1.1	
Approach LOS		B			C			A			A	

Intersection Summary			
HCM Average Control Delay	13.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	67.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis
1013: 100th Street & Cottage Grove Avenue

1/14/2013

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	Y			↰↑	↑↱	
Sign Control	Stop			Stop	Stop	
Volume (vph)	43	54	100	311	198	19
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	48	60	111	346	220	21

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	108	226	230	147	94
Volume Left (vph)	48	111	0	0	0
Volume Right (vph)	60	0	0	0	21
Hadj (s)	-0.16	0.33	0.08	0.09	-0.07
Departure Headway (s)	5.2	5.4	5.1	5.4	5.2
Degree Utilization, x	0.16	0.34	0.33	0.22	0.14
Capacity (veh/h)	631	655	686	647	666
Control Delay (s)	9.2	9.9	9.4	8.6	7.8
Approach Delay (s)	9.2	9.6		8.3	
Approach LOS	A	A		A	

Intersection Summary			
Delay	9.2		
HCM Level of Service	A		
Intersection Capacity Utilization	34.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR
Lane Configurations		↰	↑	↱	↰	↑	↱			↰	↑↱	
Volume (vph)	44	51	315	13	5	479	38	40	41	52	700	43
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		3.5	4.0	4.0	4.0	4.0	4.0			4.0	4.0	
Lane Util. Factor		1.00	1.00	1.00	1.00	1.00	1.00			1.00	0.95	
Frpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	0.97			1.00	1.00	
Flpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	
Frt		1.00	1.00	0.85	1.00	1.00	0.85			1.00	0.99	
Flt Protected		0.95	1.00	1.00	0.95	1.00	1.00			0.95	1.00	
Satd. Flow (prot)		1575	1731	1530	1710	1731	1487			1710	3291	
Flt Permitted		0.11	1.00	1.00	0.55	1.00	1.00			0.41	1.00	
Satd. Flow (perm)		187	1731	1530	992	1731	1487			737	3291	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	49	57	350	14	6	532	42	44	46	58	778	48
RTOR Reduction (vph)	0	0	0	7	0	0	31	0	0	0	5	0
Lane Group Flow (vph)	0	106	350	7	6	532	55	0	0	104	821	0
Confl. Peds. (#/hr)		5					5					6
Heavy Vehicles (%)	8%	9%	4%	0%	0%	4%	0%	0%	0%	0%	3%	0%
Turn Type	Perm	pm+pt		Perm	Perm		Perm		Perm	Perm		
Protected Phases		7	4			8					2	
Permitted Phases	4	4		4	8		8		2	2		
Actuated Green, G (s)		50.0	50.0	50.0	32.0	32.0	32.0			25.0	25.0	
Effective Green, g (s)		50.0	50.0	50.0	32.0	32.0	32.0			25.0	25.0	
Actuated g/C Ratio		0.48	0.48	0.48	0.30	0.30	0.30			0.24	0.24	
Clearance Time (s)		3.5	4.0	4.0	4.0	4.0	4.0			4.0	4.0	
Lane Grp Cap (vph)		281	824	729	302	528	453			175	784	
v/s Ratio Prot		0.05	c0.20			c0.31					c0.25	
v/s Ratio Perm		0.13		0.00	0.01		0.04			0.14		
v/c Ratio		0.38	0.42	0.01	0.02	1.01	0.12			0.59	1.05	
Uniform Delay, d1		20.2	18.1	14.5	25.5	36.5	26.4			35.5	40.0	
Progression Factor		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	
Incremental Delay, d2		3.8	1.6	0.0	0.1	41.1	0.6			14.0	45.4	
Delay (s)		24.0	19.7	14.5	25.7	77.6	26.9			49.5	85.4	
Level of Service		C	B	B	C	E	C			D	F	
Approach Delay (s)			20.5			70.1					81.3	
Approach LOS			C			E					F	

Intersection Summary			
HCM Average Control Delay	58.8	HCM Level of Service	E
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	78.4%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1014: 103rd Street & Vincennes Avenue

1/14/2013

Movement	SBL	SBT	SBR	SBR2	SEL2	SEL	SER	SER2
Lane Configurations	↰	↑↱				↖	↗↗	
Volume (vph)	49	285	26	31	4	56	110	12
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.5	4.5				4.5	4.5	
Lane Util. Factor	1.00	0.95				1.00	0.88	
Frpb, ped/bikes	1.00	1.00				1.00	1.00	
Flpb, ped/bikes	1.00	1.00				1.00	1.00	
Frt	1.00	0.98				1.00	0.85	
Flt Protected	0.95	1.00				0.95	1.00	
Satd. Flow (prot)	1706	3280				1710	2622	
Flt Permitted	0.16	1.00				0.95	1.00	
Satd. Flow (perm)	293	3280				1710	2622	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	54	317	29	34	4	62	122	13
RTOR Reduction (vph)	0	7	0	0	0	0	7	0
Lane Group Flow (vph)	54	373	0	0	0	66	128	0
Confl. Peds. (#/hr)	6							
Heavy Vehicles (%)	0%	2%	0%	0%	0%	0%	3%	0%
Turn Type	Perm				Split		Perm	
Protected Phases		6			9	9		
Permitted Phases	6						9	
Actuated Green, G (s)	24.5	24.5				17.5	17.5	
Effective Green, g (s)	24.5	24.5				17.5	17.5	
Actuated g/C Ratio	0.23	0.23				0.17	0.17	
Clearance Time (s)	4.5	4.5				4.5	4.5	
Lane Grp Cap (vph)	68	765				285	437	
v/s Ratio Prot		0.11				0.04		
v/s Ratio Perm	0.18						c0.05	
v/c Ratio	0.79	0.49				0.23	0.29	
Uniform Delay, d1	37.9	34.8				37.9	38.3	
Progression Factor	1.00	1.00				1.00	1.00	
Incremental Delay, d2	61.4	2.2				1.9	1.7	
Delay (s)	99.3	37.0				39.8	40.0	
Level of Service	F	D				D	D	
Approach Delay (s)		44.8				40.0		
Approach LOS		D				D		

Intersection Summary

HCM Signalized Intersection Capacity Analysis
1015: 103rd Street & Morgan Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰			↱			✥				
Volume (vph)	23	457	0	0	480	26	115	113	116	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	11	11	11	16	11	12	15	12	12	15	12
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		1.00			0.99			0.95				
Flt Protected		1.00			1.00			0.98				
Satd. Flow (prot)		1653			1929			1770				
Flt Permitted		0.96			1.00			0.98				
Satd. Flow (perm)		1598			1929			1770				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	26	508	0	0	533	29	128	126	129	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	534	0	0	562	0	0	383	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)		31.0			31.0			26.0				
Effective Green, g (s)		31.0			31.0			26.0				
Actuated g/C Ratio		0.48			0.48			0.40				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		762			920			708				
v/s Ratio Prot					0.29							
v/s Ratio Perm		c0.33						0.22				
v/c Ratio		0.70			0.61			0.54				
Uniform Delay, d1		13.4			12.5			14.9				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		5.3			3.0			3.0				
Delay (s)		18.7			15.6			17.9				
Level of Service		B			B			B				
Approach Delay (s)		18.7			15.6			17.9			0.0	
Approach LOS		B			B			B			A	

Intersection Summary				
HCM Average Control Delay	17.3	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.63			
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0	
Intersection Capacity Utilization	72.3%	ICU Level of Service	C	
Analysis Period (min)	15			

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1016: 103rd Street & Halsted Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱	↰	↑↑	↱	↰	↑↑	↱
Volume (vph)	112	358	110	67	268	110	143	1647	129	74	445	93
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	10	10	9	9	10	9
Total Lost time (s)		4.0	4.0		4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		1.00	0.96		1.00	0.96	1.00	1.00	0.97	1.00	1.00	0.96
Flpb, ped/bikes		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.99	1.00		0.99	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1922	1426		1923	1396	1500	3099	1284	1425	2956	1265
Flt Permitted		0.66	1.00		0.60	1.00	0.40	1.00	1.00	0.09	1.00	1.00
Satd. Flow (perm)		1286	1426		1161	1396	627	3099	1284	142	2956	1265
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	118	377	116	71	282	116	151	1734	136	78	468	98
RTOR Reduction (vph)	0	0	68	0	0	68	0	0	31	0	0	59
Lane Group Flow (vph)	0	495	48	0	353	48	151	1734	105	78	468	39
Confl. Peds. (#/hr)	42		39	39		42	20		8	8		20
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	6%	4%	3%	0%	6%	5%	6%	3%	4%	8%	8%	4%
Turn Type	pm+pt		Perm	Perm		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)		43.0	43.0		43.0	43.0	53.0	44.3	44.3	49.0	42.3	42.3
Effective Green, g (s)		43.0	43.0		43.0	43.0	53.0	44.3	44.3	49.0	42.3	42.3
Actuated g/C Ratio		0.41	0.41		0.41	0.41	0.50	0.42	0.42	0.47	0.40	0.40
Clearance Time (s)		4.0	4.0		4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		527	584		475	572	389	1307	542	148	1191	510
v/s Ratio Prot							c0.03	c0.56		c0.03	0.16	
v/s Ratio Perm		c0.38	0.03		0.30	0.03	0.16		0.08	0.21		0.03
v/c Ratio		0.94	0.08		0.74	0.08	0.39	1.33	0.19	0.53	0.39	0.08
Uniform Delay, d1		29.7	18.9		26.3	18.9	14.7	30.4	19.1	23.2	22.2	19.3
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.14	0.78	0.44
Incremental Delay, d2		24.7	0.3		10.1	0.3	0.6	152.4	0.8	3.3	0.9	0.3
Delay (s)		54.4	19.2		36.4	19.2	15.3	182.8	19.9	29.7	18.2	8.8
Level of Service		D	B		D	B	B	F	B	C	B	A
Approach Delay (s)		47.7			32.2			159.3			18.2	
Approach LOS		D			C			F			B	

Intersection Summary			
HCM Average Control Delay	100.9	HCM Level of Service	F
HCM Volume to Capacity ratio	1.09		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	110.9%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1017: 103rd Street & Normal Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣				
Volume (vph)	56	492	56	50	393	48	64	59	62	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	15	12	12	15	12
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		0.99			0.99			0.95				
Flt Protected		1.00			0.99			0.98				
Satd. Flow (prot)		1629			1627			1770				
Flt Permitted		0.92			0.90			0.98				
Satd. Flow (perm)		1503			1468			1770				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	62	547	62	56	437	53	71	66	69	0	0	0
RTOR Reduction (vph)	0	6	0	0	6	0	0	28	0	0	0	0
Lane Group Flow (vph)	0	665	0	0	540	0	0	178	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm			Perm					
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Actuated Green, G (s)		38.0			38.0			19.0				
Effective Green, g (s)		38.0			38.0			19.0				
Actuated g/C Ratio		0.58			0.58			0.29				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		879			858			517				
v/s Ratio Prot												
v/s Ratio Perm		c0.44			0.37			0.10				
v/c Ratio		0.76			0.63			0.35				
Uniform Delay, d1		10.1			8.9			18.1				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		6.0			3.5			1.8				
Delay (s)		16.1			12.4			19.9				
Level of Service		B			B			B				
Approach Delay (s)		16.1			12.4			19.9			0.0	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM Average Control Delay	15.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	61.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1018: 103rd Street & Wentworth Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑	↱		↰↑	↱		↰↑	↱		↰↑↱	
Volume (vph)	22	523	62	33	400	40	45	146	94	56	192	26
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	11	12	12	15	12
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frpb, ped/bikes		1.00	0.97		1.00	0.95		1.00	0.98		0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		0.99	1.00		1.00	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		0.99	
Flt Protected		1.00	1.00		1.00	1.00		0.99	1.00		0.99	
Satd. Flow (prot)		1656	1255		1633	1288		1663	1490		1774	
Flt Permitted		0.98	1.00		0.94	1.00		0.89	1.00		0.90	
Satd. Flow (perm)		1620	1255		1540	1288		1495	1490		1615	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	23	551	65	35	421	42	47	154	99	59	202	27
RTOR Reduction (vph)	0	0	28	0	0	17	0	0	67	0	5	0
Lane Group Flow (vph)	0	574	37	0	456	25	0	201	32	0	283	0
Confl. Peds. (#/hr)	33		15	15		33	68		5	5		68
Confl. Bikes (#/hr)	4					4						
Heavy Vehicles (%)	0%	5%	14%	19%	5%	9%	2%	2%	1%	10%	7%	8%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		43.0	43.0		43.0	43.0		24.0	24.0		24.0	
Effective Green, g (s)		43.0	43.0		43.0	43.0		24.0	24.0		24.0	
Actuated g/C Ratio		0.57	0.57		0.57	0.57		0.32	0.32		0.32	
Clearance Time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	
Lane Grp Cap (vph)		929	720		883	738		478	477		517	
v/s Ratio Prot												
v/s Ratio Perm		c0.35	0.03		0.30	0.02		0.13	0.02		c0.18	
v/c Ratio		0.62	0.05		0.52	0.03		0.42	0.07		0.55	
Uniform Delay, d1		10.6	7.0		9.7	7.0		20.0	17.7		21.0	
Progression Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2		3.1	0.1		2.2	0.1		2.7	0.3		4.1	
Delay (s)		13.6	7.2		11.9	7.0		22.7	18.0		25.2	
Level of Service		B	A		B	A		C	B		C	
Approach Delay (s)		13.0			11.4			21.2			25.2	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM Average Control Delay	16.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	90.4%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1019: 103rd Street & State Street

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑	↱	↰	↑	↱
Volume (vph)	81	480	28	19	290	39	52	302	45	41	92	9
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	11	16	8	10	10	10	10	10	10
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	0.98	1.00	1.00	0.99
Flpb, ped/bikes	0.99	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1463	2993		1459	3530		1534	1647	1301	1517	1541	1156
Flt Permitted	0.53	1.00		0.40	1.00		0.69	1.00	1.00	0.45	1.00	1.00
Satd. Flow (perm)	821	2993		617	3530		1116	1647	1301	722	1541	1156
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	90	533	31	21	322	43	58	336	50	46	102	10
RTOR Reduction (vph)	0	6	0	0	16	0	0	0	26	0	0	6
Lane Group Flow (vph)	90	558	0	21	349	0	58	336	24	46	102	4
Confl. Peds. (#/hr)	16		9	9		16	1		5	5		1
Heavy Vehicles (%)	8%	6%	0%	13%	8%	3%	4%	2%	8%	5%	9%	22%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	31.0	31.0		31.0	31.0		26.0	26.0	26.0	26.0	26.0	26.0
Effective Green, g (s)	31.0	31.0		31.0	31.0		26.0	26.0	26.0	26.0	26.0	26.0
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.40	0.40	0.40	0.40	0.40	0.40
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	392	1427		294	1684		446	659	520	289	616	462
v/s Ratio Prot		c0.19			0.10			c0.20			0.07	
v/s Ratio Perm	0.11			0.03			0.05		0.02	0.06		0.00
v/c Ratio	0.23	0.39		0.07	0.21		0.13	0.51	0.05	0.16	0.17	0.01
Uniform Delay, d1	10.0	10.9		9.2	9.9		12.3	14.7	11.9	12.5	12.5	11.7
Progression Factor	1.00	1.00		1.00	1.00		0.65	0.79	0.39	0.56	0.55	0.31
Incremental Delay, d2	1.4	0.8		0.5	0.3		0.6	2.8	0.2	1.2	0.6	0.0
Delay (s)	11.3	11.7		9.7	10.1		8.6	14.3	4.8	8.1	7.5	3.6
Level of Service	B	B		A	B		A	B	A	A	A	A
Approach Delay (s)		11.7			10.1			12.5			7.4	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM Average Control Delay	11.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	51.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1020: 103rd Street & Michigan Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	167	391	79	43	259	103	62	385	43	65	157	64
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	11	10	11	11	10	11	11	10	11	11
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.98		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	0.96	1.00		0.99	1.00		0.99	1.00		0.97	1.00	
Frt	1.00	0.97		1.00	0.96		1.00	0.98		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1466	3059		1588	2937		1542	3027		1404	2759	
Flt Permitted	0.51	1.00		0.44	1.00		0.61	1.00		0.45	1.00	
Satd. Flow (perm)	792	3059		730	2937		985	3027		665	2759	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	176	412	83	45	273	108	65	405	45	68	165	67
RTOR Reduction (vph)	0	0	0	0	0	0	0	11	0	0	39	0
Lane Group Flow (vph)	176	495	0	45	381	0	65	439	0	68	193	0
Confl. Peds. (#/hr)	98		10	10		98	28		52	52		28
Heavy Vehicles (%)	5%	5%	4%	0%	5%	7%	2%	6%	13%	10%	11%	20%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	36.0	36.0		36.0	36.0		31.0	31.0		31.0	31.0	
Effective Green, g (s)	36.0	36.0		36.0	36.0		31.0	31.0		31.0	31.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.41	0.41		0.41	0.41	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	380	1468		350	1410		407	1251		275	1140	
v/s Ratio Prot		0.16			0.13			c0.14			0.07	
v/s Ratio Perm	c0.22			0.06			0.07			0.10		
v/c Ratio	0.46	0.34		0.13	0.27		0.16	0.35		0.25	0.17	
Uniform Delay, d1	13.0	12.1		10.8	11.7		13.8	15.1		14.4	13.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	4.0	0.6		0.8	0.5		0.8	0.8		2.1	0.3	
Delay (s)	17.1	12.7		11.6	12.1		14.7	15.9		16.5	14.2	
Level of Service	B	B		B	B		B	B		B	B	
Approach Delay (s)		13.9			12.1			15.7			14.7	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	14.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	53.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1021: 103rd Street & Martin Luther King Jr Drive

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱		↰	↑↱		↰	↑↱	
Volume (vph)	107	315	36	23	334	46	65	397	25	41	196	61
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	12	8	16	12	9	10	10	9	10	10
Total Lost time (s)	3.0	7.0		3.0	7.0		3.0	7.0		3.0	7.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.99		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1533	1576		1473	1842		1533	3073		1372	2865	
Flt Permitted	0.44	1.00		0.48	1.00		0.59	1.00		0.43	1.00	
Satd. Flow (perm)	711	1576		737	1842		945	3073		622	2865	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	113	332	38	24	352	48	68	418	26	43	206	64
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	113	370	0	24	400	0	68	444	0	43	270	0
Confl. Peds. (#/hr)	7		23	23		7	10		8	8		10
Confl. Bikes (#/hr)	1		2	2		1	1		1	1		1
Heavy Vehicles (%)	4%	8%	10%	0%	9%	5%	0%	3%	0%	12%	7%	6%
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	47.0	41.8		40.6	38.6		26.8	22.2		23.6	20.6	
Effective Green, g (s)	47.0	39.8		40.6	36.6		26.8	20.2		23.6	18.6	
Actuated g/C Ratio	0.55	0.47		0.48	0.43		0.32	0.24		0.28	0.22	
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	5.0		3.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	443	738		369	793		330	730		199	627	
v/s Ratio Prot	c0.02	c0.23		0.00	0.22		c0.01	c0.14		0.01	0.09	
v/s Ratio Perm	0.13			0.03			0.05			0.05		
v/c Ratio	0.26	0.50		0.07	0.50		0.21	0.61		0.22	0.43	
Uniform Delay, d1	13.6	15.7		14.6	17.6		21.5	28.9		25.7	28.6	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.3	2.4		0.1	2.3		0.3	3.7		0.5	2.2	
Delay (s)	13.9	18.1		14.7	19.9		21.8	32.6		26.2	30.8	
Level of Service	B	B		B	B		C	C		C	C	
Approach Delay (s)		17.2			19.6			31.2			30.2	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM Average Control Delay	24.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	63.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1022: 103rd Street & Cottage Grove Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	68	305	42	63	372	111	56	370	120	55	158	44
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	11	11	11	11	12	12	10	10	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			0.99		1.00	0.99		1.00	0.99	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		0.99	1.00	
Frt		0.98			0.97		1.00	0.96		1.00	0.97	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3492			2913		1614	3156		1580	2900	
Flt Permitted		0.78			0.85		0.61	1.00		0.40	1.00	
Satd. Flow (perm)		2753			2480		1038	3156		658	2900	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	76	339	47	70	413	123	62	411	133	61	176	49
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	462	0	0	606	0	62	544	0	61	225	0
Confl. Peds. (#/hr)	20		16	16		20	5		33	33		5
Confl. Bikes (#/hr)	2					2			2	2		
Heavy Vehicles (%)	9%	9%	0%	24%	7%	6%	2%	4%	2%	0%	5%	9%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		33.0			33.0		32.0	32.0		32.0	32.0	
Effective Green, g (s)		34.0			34.0		33.0	33.0		33.0	33.0	
Actuated g/C Ratio		0.45			0.45		0.44	0.44		0.44	0.44	
Clearance Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)		1248			1124		457	1389		290	1276	
v/s Ratio Prot								c0.17			0.08	
v/s Ratio Perm		0.17			c0.24		0.06			0.09		
v/c Ratio		0.37			0.54		0.14	0.39		0.21	0.18	
Uniform Delay, d1		13.5			14.8		12.5	14.2		13.0	12.7	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.8			1.9		0.6	0.8		1.6	0.3	
Delay (s)		14.3			16.7		13.1	15.0		14.6	13.1	
Level of Service		B			B		B	B		B	B	
Approach Delay (s)		14.3			16.7			14.8			13.4	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	15.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	62.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1023: 103rd Street & Woodlawn Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↑	↱		✣			↰↑↱	
Volume (vph)	138	496	5	14	634	371	68	9	19	112	1	49
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	12	12	12	12	12	12	13	13	13
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00			0.95	
Frt	1.00	1.00		1.00	1.00	0.85		0.97			0.95	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.97			0.97	
Satd. Flow (prot)	1574	3143		1629	3257	1457		1612			3106	
Flt Permitted	0.36	1.00		0.44	1.00	1.00		0.70			0.75	
Satd. Flow (perm)	604	3143		748	3257	1457		1174			2411	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	153	551	6	16	704	412	76	10	21	124	1	54
RTOR Reduction (vph)	0	1	0	0	0	143	0	12	0	0	41	0
Lane Group Flow (vph)	153	556	0	16	704	269	0	95	0	0	138	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	46.0	46.0		46.0	46.0	46.0		16.4			16.4	
Effective Green, g (s)	46.0	46.0		46.0	46.0	46.0		16.4			16.4	
Actuated g/C Ratio	0.65	0.65		0.65	0.65	0.65		0.23			0.23	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		8.0			8.0	
Lane Grp Cap (vph)	395	2054		489	2128	952		273			562	
v/s Ratio Prot		0.18			0.22							
v/s Ratio Perm	c0.25			0.02		0.18		c0.08			0.06	
v/c Ratio	0.39	0.27		0.03	0.33	0.28		0.35			0.24	
Uniform Delay, d1	5.7	5.1		4.3	5.4	5.2		22.5			22.0	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00			1.00	
Incremental Delay, d2	2.9	0.3		0.1	0.4	0.7		3.3			1.0	
Delay (s)	8.5	5.5		4.4	5.8	5.9		25.8			22.9	
Level of Service	A	A		A	A	A		C			C	
Approach Delay (s)		6.1			5.8			25.8			22.9	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM Average Control Delay	8.4	HCM Level of Service	A
HCM Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	70.4	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↑	↱	↰	↑↑	↱
Volume (vph)	111	214	79	63	190	71	128	1887	84	70	494	41
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	9	12	10	10	12	9	10	9	9	10	9
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00	0.96	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.96		1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1548	1496		1547	1584		1493	3069	1271	1452	2983	1301
Flt Permitted	0.37	1.00		0.31	1.00		0.39	1.00	1.00	0.12	1.00	1.00
Satd. Flow (perm)	608	1496		513	1584		617	3069	1271	180	2983	1301
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	117	225	83	66	200	75	135	1986	88	74	520	43
RTOR Reduction (vph)	0	16	0	0	16	0	0	0	18	0	0	25
Lane Group Flow (vph)	117	292	0	66	259	0	135	1986	70	74	520	18
Confl. Peds. (#/hr)	4		9	9		4	6		16	16		6
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	3%	3%	4%	3%	1%	2%	3%	4%	4%	6%	7%	3%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	28.0	21.0		28.0	21.0		42.0	35.0	35.0	42.0	35.0	35.0
Effective Green, g (s)	26.0	22.0		26.0	22.0		40.0	35.0	35.0	40.0	35.0	35.0
Actuated g/C Ratio	0.31	0.26		0.31	0.26		0.47	0.41	0.41	0.47	0.41	0.41
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)	252	387		230	410		352	1264	523	174	1228	536
v/s Ratio Prot	c0.03	c0.20		0.02	0.16		0.03	c0.65		c0.03	0.17	
v/s Ratio Perm	0.11			0.07			0.15		0.06	0.17		0.01
v/c Ratio	0.46	0.76		0.29	0.63		0.38	1.57	0.13	0.43	0.42	0.03
Uniform Delay, d1	22.5	29.0		21.9	27.9		13.3	25.0	15.6	18.1	17.8	14.9
Progression Factor	1.00	1.00		1.00	1.00		0.61	0.70	0.49	1.00	1.00	1.00
Incremental Delay, d2	6.0	12.9		3.1	7.2		2.6	260.3	0.4	7.4	1.1	0.1
Delay (s)	28.6	41.9		25.0	35.2		10.8	277.9	8.0	25.6	18.9	15.0
Level of Service	C	D		C	D		B	F	A	C	B	B
Approach Delay (s)		38.2			33.2			250.8			19.4	
Approach LOS		D			C			F			B	

Intersection Summary			
HCM Average Control Delay	164.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.12		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	94.2%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			✥			✥	
Volume (vph)	26	217	32	15	149	16	22	162	26	32	144	21
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	14	12	12	14	12	12	16	12	12	16	12
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		1.00			1.00			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.98			0.99			0.98			0.99	
Flt Protected		1.00			1.00			0.99			0.99	
Satd. Flow (prot)		1836			1839			1899			1930	
Flt Permitted		0.97			0.97			0.96			0.94	
Satd. Flow (perm)		1782			1792			1839			1823	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	27	224	33	15	154	16	23	167	27	33	148	22
RTOR Reduction (vph)	0	7	0	0	5	0	0	8	0	0	7	0
Lane Group Flow (vph)	0	277	0	0	180	0	0	209	0	0	196	0
Confl. Peds. (#/hr)	5		11	11		5	7		34	34		7
Confl. Bikes (#/hr)			3	3								
Heavy Vehicles (%)	4%	2%	0%	20%	1%	0%	12%	3%	8%	0%	3%	5%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		27.0			27.0			30.0			30.0	
Effective Green, g (s)		27.0			27.0			30.0			30.0	
Actuated g/C Ratio		0.42			0.42			0.46			0.46	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		740			744			849			841	
v/s Ratio Prot												
v/s Ratio Perm		c0.16			0.10			c0.11			0.11	
v/c Ratio		0.37			0.24			0.25			0.23	
Uniform Delay, d1		13.2			12.3			10.6			10.6	
Progression Factor		1.00			0.64			1.12			1.00	
Incremental Delay, d2		1.4			0.8			0.7			0.6	
Delay (s)		14.6			8.7			12.5			11.2	
Level of Service		B			A			B			B	
Approach Delay (s)		14.6			8.7			12.5			11.2	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM Average Control Delay	12.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	45.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1026: 107th Street & State Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	24	181	37	9	162	23	43	364	31	17	86	17
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	0.96	1.00		1.00	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	0.98		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1466	2989		1302	3018		1529	3094		1492	2868	
Flt Permitted	0.62	1.00		0.60	1.00		0.68	1.00		0.50	1.00	
Satd. Flow (perm)	960	2989		825	3018		1093	3094		781	2868	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	27	201	41	10	180	26	48	404	34	19	96	19
RTOR Reduction (vph)	0	26	0	0	18	0	0	10	0	0	8	0
Lane Group Flow (vph)	27	216	0	10	188	0	48	428	0	19	107	0
Confl. Peds. (#/hr)	35		6	6		35	18					18
Confl. Bikes (#/hr)	14		32	32		14	23		7	7		23
Heavy Vehicles (%)	4%	4%	0%	22%	2%	6%	3%	2%	0%	7%	8%	6%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.0	20.0		20.0	20.0		39.0	39.0		39.0	39.0	
Effective Green, g (s)	19.0	19.0		19.0	19.0		38.0	38.0		38.0	38.0	
Actuated g/C Ratio	0.29	0.29		0.29	0.29		0.58	0.58		0.58	0.58	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	281	874		241	882		639	1809		457	1677	
v/s Ratio Prot		c0.07			0.06			c0.14			0.04	
v/s Ratio Perm	0.03			0.01			0.04			0.02		
v/c Ratio	0.10	0.25		0.04	0.21		0.08	0.24		0.04	0.06	
Uniform Delay, d1	16.7	17.5		16.5	17.4		5.9	6.5		5.7	5.8	
Progression Factor	0.72	0.72		0.76	0.74		0.93	0.96		0.51	0.45	
Incremental Delay, d2	0.6	0.6		0.3	0.5		0.2	0.3		0.2	0.1	
Delay (s)	12.7	13.3		12.9	13.4		5.7	6.6		3.1	2.7	
Level of Service	B	B		B	B		A	A		A	A	
Approach Delay (s)		13.2			13.4			6.5			2.8	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	9.0	HCM Level of Service	A
HCM Volume to Capacity ratio	0.24		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	41.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			✥			✥	
Volume (vph)	46	178	34	16	122	39	28	429	24	14	178	15
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	9	9	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00			1.00			1.00	
Flpb, ped/bikes	0.99	1.00		0.98	1.00			1.00			1.00	
Frt	1.00	0.98		1.00	0.96			0.99			0.99	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1556	2952		1515	2866			1878			1807	
Flt Permitted	0.64	1.00		0.60	1.00			0.98			0.96	
Satd. Flow (perm)	1046	2952		965	2866			1838			1742	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	51	198	38	18	136	43	31	477	27	16	198	17
RTOR Reduction (vph)	0	23	0	0	26	0	0	3	0	0	4	0
Lane Group Flow (vph)	51	213	0	18	153	0	0	532	0	0	227	0
Confl. Peds. (#/hr)	10		29	29		10	17		10	10		17
Confl. Bikes (#/hr)									2	2		
Heavy Vehicles (%)	2%	4%	10%	0%	4%	0%	0%	8%	4%	0%	13%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	26.0	26.0		26.0	26.0			31.0			31.0	
Effective Green, g (s)	26.0	26.0		26.0	26.0			31.0			31.0	
Actuated g/C Ratio	0.40	0.40		0.40	0.40			0.48			0.48	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	418	1181		386	1146			877			831	
v/s Ratio Prot		c0.07			0.05							
v/s Ratio Perm	0.05			0.02				c0.29			0.13	
v/c Ratio	0.12	0.18		0.05	0.13			0.61			0.27	
Uniform Delay, d1	12.3	12.6		11.9	12.4			12.5			10.2	
Progression Factor	1.03	0.93		0.88	0.88			0.99			1.00	
Incremental Delay, d2	0.6	0.3		0.2	0.2			3.0			0.8	
Delay (s)	13.2	12.1		10.7	11.1			15.4			11.0	
Level of Service	B	B		B	B			B			B	
Approach Delay (s)		12.3			11.1			15.4			11.0	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	13.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	60.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1028: 107th Street & Martin Luther King Jr Drive

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱			✥			✥	
Volume (vph)	86	121	61	2	80	34	22	272	9	7	175	28
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	16	12	10	16	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00			1.00			1.00	
Flpb, ped/bikes	1.00	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.95		1.00	0.96			1.00			0.98	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1605	1874		1587	1870			1970			1932	
Flt Permitted	0.68	1.00		0.58	1.00			0.97			0.99	
Satd. Flow (perm)	1141	1874		965	1870			1926			1915	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	96	134	68	2	89	38	24	302	10	8	194	31
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	96	202	0	2	127	0	0	336	0	0	233	0
Confl. Peds. (#/hr)			8	8			1		8	8		1
Heavy Vehicles (%)	3%	3%	2%	0%	6%	0%	0%	3%	0%	0%	4%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.0	20.0		20.0	20.0			37.0			37.0	
Effective Green, g (s)	20.0	20.0		20.0	20.0			37.0			37.0	
Actuated g/C Ratio	0.31	0.31		0.31	0.31			0.57			0.57	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	351	577		297	575			1096			1090	
v/s Ratio Prot		c0.11			0.07							
v/s Ratio Perm	0.08			0.00				c0.17			0.12	
v/c Ratio	0.27	0.35		0.01	0.22			0.31			0.21	
Uniform Delay, d1	17.0	17.5		15.6	16.7			7.3			6.9	
Progression Factor	0.91	0.90		0.87	0.92			0.98			1.00	
Incremental Delay, d2	1.9	1.7		0.0	0.9			0.7			0.4	
Delay (s)	17.3	17.3		13.7	16.3			7.9			7.3	
Level of Service	B	B		B	B			A			A	
Approach Delay (s)		17.3			16.2			7.9			7.3	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	11.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	45.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1029: 107th Street & Cottage Grove Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱		↰	↑	↱	↰	↑	↱
Volume (vph)	116	9	52	1	3	12	38	467	6	2	191	48
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	10	10	10	11	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.97		1.00	1.00	0.98	1.00	1.00	0.98
Flpb, ped/bikes	0.98	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.87		1.00	0.88		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1603	1673		1710	1422		1491	1631	1392	1649	1907	1427
Flt Permitted	0.75	1.00		0.71	1.00		0.63	1.00	1.00	0.39	1.00	1.00
Satd. Flow (perm)	1260	1673		1283	1422		981	1631	1392	682	1907	1427
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	129	10	58	1	3	13	42	519	7	2	212	53
RTOR Reduction (vph)	0	42	0	0	9	0	0	0	3	0	0	21
Lane Group Flow (vph)	129	26	0	1	7	0	42	519	4	2	212	32
Confl. Peds. (#/hr)	9					9	1		6	6		1
Heavy Vehicles (%)	5%	14%	5%	0%	67%	12%	7%	3%	0%	0%	7%	5%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	17.0	17.0		17.0	17.0		39.0	39.0	39.0	39.0	39.0	39.0
Effective Green, g (s)	18.0	18.0		18.0	18.0		39.0	39.0	39.0	39.0	39.0	39.0
Actuated g/C Ratio	0.28	0.28		0.28	0.28		0.60	0.60	0.60	0.60	0.60	0.60
Clearance Time (s)	5.0	5.0		5.0	5.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	349	463		355	394		589	979	835	409	1144	856
v/s Ratio Prot		0.02			0.00			c0.32			0.11	
v/s Ratio Perm	c0.10			0.00			0.04		0.00	0.00		0.02
v/c Ratio	0.37	0.06		0.00	0.02		0.07	0.53	0.01	0.00	0.19	0.04
Uniform Delay, d1	18.9	17.3		17.0	17.1		5.4	7.6	5.2	5.2	5.9	5.3
Progression Factor	1.47	2.38		1.00	1.00		1.14	1.07	1.32	1.00	1.00	1.00
Incremental Delay, d2	2.9	0.2		0.0	0.1		0.2	1.6	0.0	0.0	0.4	0.1
Delay (s)	30.7	41.2		17.0	17.1		6.4	9.8	6.9	5.2	6.2	5.4
Level of Service	C	D		B	B		A	A	A	A	A	A
Approach Delay (s)		34.3			17.1			9.5			6.0	
Approach LOS		C			B			A			A	

Intersection Summary			
HCM Average Control Delay	13.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	52.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱		↰	↑↑					↰	↑↱	
Volume (vph)	0	241	76	119	362	0	0	0	0	74	305	361
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	12	12	12	12	12	11	11	12
Total Lost time (s)		4.0		3.0	3.0					5.0	5.0	
Lane Util. Factor		0.95		1.00	0.95					1.00	0.95	
Frpb, ped/bikes		0.99		1.00	1.00					1.00	0.99	
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	
Frt		0.96		1.00	1.00					1.00	0.92	
Flt Protected		1.00		0.95	1.00					0.95	1.00	
Satd. Flow (prot)		2826		1621	3288					1574	2907	
Flt Permitted		1.00		0.50	1.00					0.95	1.00	
Satd. Flow (perm)		2826		846	3288					1574	2907	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	254	80	125	381	0	0	0	0	78	321	380
RTOR Reduction (vph)	0	30	0	0	0	0	0	0	0	0	214	0
Lane Group Flow (vph)	0	304	0	125	381	0	0	0	0	78	487	0
Confl. Peds. (#/hr)	14		32	32		14	14					14
Confl. Bikes (#/hr)			1	1								
Heavy Vehicles (%)	0%	9%	4%	5%	4%	0%	0%	0%	0%	5%	2%	4%
Turn Type				D.P+P						custom		
Protected Phases		8		7	7 8					6	6	
Permitted Phases				8						6		
Actuated Green, G (s)		33.0		56.0	59.0					32.0	32.0	
Effective Green, g (s)		33.0		56.0	59.0					32.0	32.0	
Actuated g/C Ratio		0.33		0.56	0.59					0.32	0.32	
Clearance Time (s)		4.0		3.0						5.0	5.0	
Lane Grp Cap (vph)		933		652	1940					504	930	
v/s Ratio Prot		c0.11		0.04	c0.12					0.05	c0.17	
v/s Ratio Perm				0.06								
v/c Ratio		0.33		0.19	0.20					0.15	0.52	
Uniform Delay, d1		25.1		10.6	9.5					24.3	27.8	
Progression Factor		1.00		1.94	2.04					1.00	1.00	
Incremental Delay, d2		0.9		0.6	0.2					0.7	2.1	
Delay (s)		26.1		21.0	19.6					25.0	29.9	
Level of Service		C		C	B					C	C	
Approach Delay (s)		26.1			20.0			0.0			29.4	
Approach LOS		C			B			A			C	

Intersection Summary			
HCM Average Control Delay	25.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	61.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1031: 111th Street & Ashland Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑			↑↱		↰	↑	↱			
Volume (vph)	129	186	0	0	309	66	171	544	320	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	9	12	13	12	13	12	12	12
Total Lost time (s)	4.0	4.0			4.0		5.0	5.0	5.0			
Lane Util. Factor	1.00	0.95			0.95		1.00	1.00	1.00			
Frpb, ped/bikes	1.00	1.00			0.99		1.00	1.00	0.99			
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.97		1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1673	3054			2832		1750	1782	1514			
Flt Permitted	0.36	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	641	3054			2832		1750	1782	1514			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	136	196	0	0	325	69	180	573	337	0	0	0
RTOR Reduction (vph)	0	0	0	0	18	0	0	0	226	0	0	0
Lane Group Flow (vph)	136	196	0	0	376	0	180	573	111	0	0	0
Confl. Peds. (#/hr)	14		16	16		14			1	1		
Confl. Bikes (#/hr)	1					1			1	1		
Heavy Vehicles (%)	2%	12%	0%	0%	5%	4%	1%	1%	3%	0%	0%	0%
Turn Type	pm+pt						custom		Perm			
Protected Phases	4	1 4			1		2	2				
Permitted Phases	1 4						2		2			
Actuated Green, G (s)	54.0	58.0			21.0		33.0	33.0	33.0			
Effective Green, g (s)	54.0	58.0			21.0		33.0	33.0	33.0			
Actuated g/C Ratio	0.54	0.58			0.21		0.33	0.33	0.33			
Clearance Time (s)	4.0				4.0		5.0	5.0	5.0			
Lane Grp Cap (vph)	687	1771			595		578	588	500			
v/s Ratio Prot	c0.07	0.06			c0.13		0.10	c0.32				
v/s Ratio Perm	0.04								0.07			
v/c Ratio	0.20	0.11			0.63		0.31	0.97	0.22			
Uniform Delay, d1	11.7	9.4			36.0		25.0	33.1	24.2			
Progression Factor	0.24	0.25			1.00		0.74	0.79	1.92			
Incremental Delay, d2	0.6	0.1			5.0		0.9	24.4	0.7			
Delay (s)	3.5	2.5			41.0		19.5	50.4	47.2			
Level of Service	A	A			D		B	D	D			
Approach Delay (s)		2.9			41.0			44.3			0.0	
Approach LOS		A			D			D			A	

Intersection Summary			
HCM Average Control Delay	36.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	61.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1032: 112th Place & Marshield Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱		↰	↑↑					↰	↑↑	↱
Volume (vph)	0	450	362	34	587	0	0	0	0	4	215	195
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	11	12	12	12	12	10	10	12
Total Lost time (s)		4.0		4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.95		1.00	0.95					1.00	0.95	1.00
Frpb, ped/bikes		0.99		1.00	1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Frt		0.93		1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00					0.95	1.00	1.00
Satd. Flow (prot)		3109		1613	3273					1596	3160	1443
Flt Permitted		1.00		0.18	1.00					0.95	1.00	1.00
Satd. Flow (perm)		3109		299	3273					1596	3160	1443
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	0	469	377	35	611	0	0	0	0	4	224	203
RTOR Reduction (vph)	0	146	0	0	0	0	0	0	0	0	0	134
Lane Group Flow (vph)	0	700	0	35	611	0	0	0	0	4	224	69
Confl. Peds. (#/hr)	22		3	3		22						
Confl. Bikes (#/hr)	4					4			32	32		
Heavy Vehicles (%)	0%	2%	2%	6%	1%	0%	0%	0%	0%	0%	1%	6%
Turn Type				pm+pt						Split		Prot
Protected Phases		8		7	7 8					6	6	6
Permitted Phases				7 8								
Actuated Green, G (s)		36.0		54.0	58.0					34.0	34.0	34.0
Effective Green, g (s)		36.0		54.0	58.0					34.0	34.0	34.0
Actuated g/C Ratio		0.36		0.54	0.58					0.34	0.34	0.34
Clearance Time (s)		4.0		4.0						4.0	4.0	4.0
Lane Grp Cap (vph)		1119		398	1898					543	1074	491
v/s Ratio Prot		c0.23		0.02	c0.19					0.00	c0.07	0.05
v/s Ratio Perm				0.03								
v/c Ratio		0.63		0.09	0.32					0.01	0.21	0.14
Uniform Delay, d1		26.4		12.4	10.8					21.8	23.4	22.9
Progression Factor		1.00		0.55	0.68					0.74	0.79	0.94
Incremental Delay, d2		2.6		0.2	0.2					0.0	0.4	0.5
Delay (s)		29.1		6.9	7.6					16.1	19.0	22.0
Level of Service		C		A	A					B	B	C
Approach Delay (s)		29.1			7.5			0.0			20.4	
Approach LOS		C			A			A			C	

Intersection Summary			
HCM Average Control Delay	19.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	87.4%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↰↑			↑↱		↰	↰	↱			
Volume (vph)	395	59	0	0	57	5	564	636	61	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	12	12	12	10	12	11	11	12	12	12	12
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0	4.0			
Lane Util. Factor	0.91	0.91			0.95		0.95	0.95	1.00			
Frpb, ped/bikes	1.00	1.00			0.99		1.00	1.00	1.00			
Flpb, ped/bikes	0.99	0.99			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.99		1.00	1.00	0.85			
Flt Protected	0.95	0.96			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1444	3042			3079		1555	1637	1500			
Flt Permitted	0.71	0.74			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	1084	2339			3079		1555	1637	1500			
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	407	61	0	0	59	5	581	656	63	0	0	0
RTOR Reduction (vph)	0	0	0	0	4	0	0	0	38	0	0	0
Lane Group Flow (vph)	203	265	0	0	60	0	581	656	25	0	0	0
Confl. Peds. (#/hr)	30		2	2		30			4	4		
Confl. Bikes (#/hr)	3					3			2	2		
Heavy Vehicles (%)	3%	2%	0%	0%	2%	0%	1%	1%	2%	0%	0%	0%
Turn Type	pm+pt						custom		custom			
Protected Phases	4	1 4			1		2	2	2			
Permitted Phases	1 4						2		2			
Actuated Green, G (s)	51.0	51.0			15.0		37.0	37.0	37.0			
Effective Green, g (s)	51.0	51.0			15.0		37.0	37.0	37.0			
Actuated g/C Ratio	0.51	0.51			0.15		0.37	0.37	0.37			
Clearance Time (s)	4.0				4.0		4.0	4.0	4.0			
Lane Grp Cap (vph)	682	1446			462		575	606	555			
v/s Ratio Prot	c0.11	0.07			0.02		0.37	c0.40	0.02			
v/s Ratio Perm	c0.04	0.03										
v/c Ratio	0.30	0.18			0.13		1.01	1.08	0.05			
Uniform Delay, d1	14.0	13.2			36.8		31.5	31.5	20.2			
Progression Factor	0.24	0.25			1.00		1.00	1.00	1.00			
Incremental Delay, d2	0.8	0.2			0.6		40.1	60.9	0.2			
Delay (s)	4.2	3.6			37.4		71.6	92.4	20.3			
Level of Service	A	A			D		E	F	C			
Approach Delay (s)		3.8			37.4			79.6			0.0	
Approach LOS		A			D			E			A	

Intersection Summary			
HCM Average Control Delay	58.8	HCM Level of Service	E
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	87.4%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱		↰	↑↑	↱	↰	↑↑	↱
Volume (vph)	155	271	66	58	180	111	41	1100	69	100	476	42
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	9	10	9	9	10	9
Total Lost time (s)		4.0			4.0		4.0	3.5	4.0	4.0	3.5	4.0
Lane Util. Factor		0.95			0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		1.00			0.98		1.00	1.00	0.97	1.00	1.00	0.97
Flpb, ped/bikes		1.00			1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.98			0.95		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.98			0.99		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		2842			2770		1447	3069	1336	1494	2956	1270
Flt Permitted		0.67			0.80		0.39	1.00	1.00	0.12	1.00	1.00
Satd. Flow (perm)		1943			2244		600	3069	1336	197	2956	1270
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	161	282	69	60	188	116	43	1146	72	104	496	44
RTOR Reduction (vph)	0	14	0	0	64	0	0	0	28	0	0	27
Lane Group Flow (vph)	0	498	0	0	300	0	43	1146	44	104	496	17
Confl. Peds. (#/hr)	49		20	20		49	26		8	8		26
Confl. Bikes (#/hr)	2					2						
Heavy Vehicles (%)	10%	7%	4%	9%	7%	5%	6%	4%	0%	3%	8%	5%
Turn Type	pm+pt			Perm			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)		35.0			27.0		38.0	33.0	33.0	38.0	33.0	33.0
Effective Green, g (s)		36.0			28.0		36.0	33.5	33.0	36.0	33.5	33.0
Actuated g/C Ratio		0.42			0.33		0.42	0.39	0.39	0.42	0.39	0.39
Clearance Time (s)		5.0			5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)		886			739		294	1210	519	144	1165	493
v/s Ratio Prot		c0.04					0.01	c0.37		c0.03	0.17	
v/s Ratio Perm		0.20			0.13		0.06		0.03	0.27		0.01
v/c Ratio		0.56			0.41		0.15	0.95	0.08	0.72	0.43	0.03
Uniform Delay, d1		18.5			22.1		14.7	24.9	16.4	18.7	18.7	16.1
Progression Factor		1.00			1.00		1.30	0.85	1.38	1.82	1.63	3.12
Incremental Delay, d2		2.6			1.7		0.6	11.2	0.2	24.7	1.0	0.1
Delay (s)		21.1			23.7		19.8	32.3	22.9	58.6	31.6	50.4
Level of Service		C			C		B	C	C	E	C	D
Approach Delay (s)		21.1			23.7			31.3			37.3	
Approach LOS		C			C			C			D	

Intersection Summary			
HCM Average Control Delay	29.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	11.5
Intersection Capacity Utilization	79.8%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰			↱			✥				
Volume (vph)	42	421	0	0	322	81	27	60	110	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		1.00			0.97			0.92				
Flt Protected		1.00			1.00			0.99				
Satd. Flow (prot)		1706			1668			1575				
Flt Permitted		0.94			1.00			0.99				
Satd. Flow (perm)		1604			1668			1575				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	47	468	0	0	358	90	30	67	122	0	0	0
RTOR Reduction (vph)	0	0	0	0	14	0	0	70	0	0	0	0
Lane Group Flow (vph)	0	515	0	0	434	0	0	149	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)		34.0			34.0			23.0				
Effective Green, g (s)		34.0			34.0			23.0				
Actuated g/C Ratio		0.52			0.52			0.35				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		839			872			557				
v/s Ratio Prot					0.26							
v/s Ratio Perm		c0.32						0.09				
v/c Ratio		0.61			0.50			0.27				
Uniform Delay, d1		10.9			10.0			15.0				
Progression Factor		1.00			0.54			1.00				
Incremental Delay, d2		3.3			1.8			1.2				
Delay (s)		14.2			7.2			16.2				
Level of Service		B			A			B				
Approach Delay (s)		14.2			7.2			16.2			0.0	
Approach LOS		B			A			B			A	

Intersection Summary			
HCM Average Control Delay	11.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	71.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1036: 111th Street & Wentworth Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱			↰↑↑↱			↰↑↑↱	
Volume (vph)	43	438	29	22	338	51	15	167	45	67	105	19
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	12	12	12	12	12
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		1.00			1.00			0.99			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.99			0.98			0.97			0.99	
Flt Protected		1.00			1.00			1.00			0.98	
Satd. Flow (prot)		1889			1831			3160			3148	
Flt Permitted		0.94			0.96			0.93			0.80	
Satd. Flow (perm)		1778			1766			2961			2549	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	48	487	32	24	376	57	17	186	50	74	117	21
RTOR Reduction (vph)	0	3	0	0	8	0	0	29	0	0	12	0
Lane Group Flow (vph)	0	564	0	0	449	0	0	224	0	0	200	0
Confl. Peds. (#/hr)	29		16	16		29	28		14	14		28
Confl. Bikes (#/hr)	1					1	1					1
Heavy Vehicles (%)	3%	7%	4%	12%	8%	13%	0%	4%	4%	4%	4%	6%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		30.0			30.0			27.0			27.0	
Effective Green, g (s)		30.0			30.0			27.0			27.0	
Actuated g/C Ratio		0.46			0.46			0.42			0.42	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		821			815			1230			1059	
v/s Ratio Prot												
v/s Ratio Perm		c0.32			0.25			0.08			c0.08	
v/c Ratio		0.69			0.55			0.18			0.19	
Uniform Delay, d1		13.8			12.6			12.0			12.1	
Progression Factor		0.63			0.51			0.94			0.72	
Incremental Delay, d2		3.9			2.6			0.3			0.4	
Delay (s)		12.6			9.0			11.6			9.1	
Level of Service		B			A			B			A	
Approach Delay (s)		12.6			9.0			11.6			9.1	
Approach LOS		B			A			B			A	

Intersection Summary			
HCM Average Control Delay	10.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	78.3%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1037: 111th Street & State Street

	⤴	→	⤵	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	48	341	19	29	302	64	44	303	88	58	91	19
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	9	10	10	9	10	10	12	10	10	12
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		0.99	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.97		1.00	0.97		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1502	2949		1585	2934		1497	3030		1594	2941	
Flt Permitted	0.47	1.00		0.48	1.00		0.67	1.00		0.49	1.00	
Satd. Flow (perm)	744	2949		795	2934		1063	3030		829	2941	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	53	379	21	32	336	71	49	337	98	64	101	21
RTOR Reduction (vph)	0	6	0	0	28	0	0	42	0	0	10	0
Lane Group Flow (vph)	53	394	0	32	379	0	49	393	0	64	112	0
Confl. Peds. (#/hr)	25		14	14		25	12		4	4		12
Confl. Bikes (#/hr)	1					1			1	1		
Heavy Vehicles (%)	5%	7%	12%	0%	6%	2%	6%	1%	3%	0%	4%	12%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	22.0	22.0		22.0	22.0		35.0	35.0		35.0	35.0	
Effective Green, g (s)	22.0	22.0		22.0	22.0		35.0	35.0		35.0	35.0	
Actuated g/C Ratio	0.34	0.34		0.34	0.34		0.54	0.54		0.54	0.54	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	252	998		269	993		572	1632		446	1584	
v/s Ratio Prot		c0.13			0.13			c0.13			0.04	
v/s Ratio Perm	0.07			0.04			0.05			0.08		
v/c Ratio	0.21	0.39		0.12	0.38		0.09	0.24		0.14	0.07	
Uniform Delay, d1	15.3	16.4		14.8	16.3		7.3	8.0		7.5	7.2	
Progression Factor	0.63	0.63		0.85	0.85		0.72	0.74		1.36	1.36	
Incremental Delay, d2	1.5	1.0		0.9	1.1		0.3	0.3		0.7	0.1	
Delay (s)	11.2	11.3		13.4	14.9		5.5	6.2		10.8	9.9	
Level of Service	B	B		B	B		A	A		B	A	
Approach Delay (s)		11.3			14.8			6.1			10.2	
Approach LOS		B			B			A			B	

Intersection Summary			
HCM Average Control Delay	10.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	46.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1038: 111th Street & Michigan Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			↰↑↱			↰↑↱	
Volume (vph)	79	361	130	100	315	82	37	323	60	41	136	38
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	9	10	9	9	16	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.98			1.00			0.99	
Flpb, ped/bikes	0.97	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.96		1.00	0.97			0.98			0.97	
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.99	
Satd. Flow (prot)	1381	2931		1336	3524			3413			3314	
Flt Permitted	0.50	1.00		0.43	1.00			0.91			0.84	
Satd. Flow (perm)	720	2931		605	3524			3133			2806	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	83	380	137	105	332	86	39	340	63	43	143	40
RTOR Reduction (vph)	0	56	0	0	36	0	0	20	0	0	24	0
Lane Group Flow (vph)	83	461	0	105	382	0	0	422	0	0	202	0
Confl. Peds. (#/hr)	53		34	34		53	67		28	28		67
Heavy Vehicles (%)	8%	5%	0%	14%	6%	1%	0%	9%	20%	5%	15%	5%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	31.0	31.0		31.0	31.0			26.0			26.0	
Effective Green, g (s)	31.0	31.0		31.0	31.0			26.0			26.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48			0.40			0.40	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	343	1398		289	1681			1253			1122	
v/s Ratio Prot		0.16			0.11							
v/s Ratio Perm	0.12			c0.17				c0.13			0.07	
v/c Ratio	0.24	0.33		0.36	0.23			0.34			0.18	
Uniform Delay, d1	10.1	10.6		10.8	10.0			13.5			12.6	
Progression Factor	1.67	1.90		0.76	0.70			0.52			0.64	
Incremental Delay, d2	1.6	0.6		3.1	0.3			0.7			0.3	
Delay (s)	18.4	20.6		11.2	7.3			7.6			8.4	
Level of Service	B	C		B	A			A			A	
Approach Delay (s)		20.3			8.1			7.6			8.4	
Approach LOS		C			A			A			A	

Intersection Summary			
HCM Average Control Delay	12.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	61.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1039: 111th Street & Indiana Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	94	292	94	104	370	104	78	80	84	84	80	78
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	16	12	12	16	12
Total Lost time (s)		5.0	5.0		5.0			5.0			5.0	
Lane Util. Factor		1.00	1.00		0.95			1.00			1.00	
Frt		1.00	0.85		0.97			0.95			0.96	
Flt Protected		0.99	1.00		0.99			0.98			0.98	
Satd. Flow (prot)		1637	1409		3036			1823			1826	
Flt Permitted		0.74	1.00		0.77			0.81			0.79	
Satd. Flow (perm)		1230	1409		2365			1503			1474	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	104	324	104	116	411	116	87	89	93	93	89	87
RTOR Reduction (vph)	0	0	50	0	29	0	0	29	0	0	26	0
Lane Group Flow (vph)	0	428	54	0	614	0	0	240	0	0	243	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm		Perm	Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)		34.0	34.0		34.0			21.0			21.0	
Effective Green, g (s)		34.0	34.0		34.0			21.0			21.0	
Actuated g/C Ratio		0.52	0.52		0.52			0.32			0.32	
Clearance Time (s)		5.0	5.0		5.0			5.0			5.0	
Lane Grp Cap (vph)		643	737		1237			486			476	
v/s Ratio Prot												
v/s Ratio Perm		c0.35	0.04		0.26			0.16			c0.16	
v/c Ratio		0.67	0.07		0.50			0.49			0.51	
Uniform Delay, d1		11.3	7.7		10.0			17.7			17.8	
Progression Factor		1.75	4.51		0.42			1.00			1.00	
Incremental Delay, d2		5.2	0.2		1.3			3.6			3.9	
Delay (s)		25.1	34.8		5.5			21.3			21.7	
Level of Service		C	C		A			C			C	
Approach Delay (s)		27.0			5.5			21.3			21.7	
Approach LOS		C			A			C			C	

Intersection Summary			
HCM Average Control Delay	17.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	71.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			↰↑↱			↰↑↱	
Volume (vph)	71	367	21	15	450	63	40	103	41	41	86	97
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	15	8	16	8	8	16	8
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			1.00			0.99	
Flpb, ped/bikes	0.99	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.98			0.97			0.94	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1475	3017		1572	3003			3457			3397	
Flt Permitted	0.38	1.00		0.48	1.00			0.86			0.88	
Satd. Flow (perm)	597	3017		790	3003			3016			3015	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	79	408	23	17	500	70	44	114	46	46	96	108
RTOR Reduction (vph)	0	6	0	0	17	0	0	25	0	0	60	0
Lane Group Flow (vph)	79	425	0	17	553	0	0	179	0	0	190	0
Confl. Peds. (#/hr)	22		40	40		22	18		3	3		18
Confl. Bikes (#/hr)			2	2			1					1
Heavy Vehicles (%)	7%	5%	0%	0%	4%	2%	0%	3%	22%	0%	3%	8%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	28.0	28.0		28.0	28.0			29.0			29.0	
Effective Green, g (s)	28.0	28.0		28.0	28.0			29.0			29.0	
Actuated g/C Ratio	0.43	0.43		0.43	0.43			0.45			0.45	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	257	1300		340	1294			1346			1345	
v/s Ratio Prot		0.14			c0.18							
v/s Ratio Perm	0.13			0.02				0.06			c0.06	
v/c Ratio	0.31	0.33		0.05	0.43			0.13			0.14	
Uniform Delay, d1	12.1	12.3		10.8	12.9			10.6			10.6	
Progression Factor	0.98	1.00		1.12	0.95			1.04			0.85	
Incremental Delay, d2	2.4	0.5		0.2	0.6			0.2			0.2	
Delay (s)	14.3	12.8		12.2	12.8			11.3			9.3	
Level of Service	B	B		B	B			B			A	
Approach Delay (s)		13.0			12.8			11.3			9.3	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM Average Control Delay	12.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	59.7%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱			↰↑↱			↰↑↱	
Volume (vph)	82	435	70	89	446	270	49	315	87	211	151	50
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			0.95			0.95	
Frt		0.98			0.95			0.97			0.98	
Flt Protected		0.99			0.99			0.99			0.98	
Satd. Flow (prot)		3177			3076			3146			3118	
Flt Permitted		0.65			0.76			0.87			0.63	
Satd. Flow (perm)		2093			2349			2766			2027	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	91	483	78	99	496	300	54	350	97	234	168	56
RTOR Reduction (vph)	0	16	0	0	97	0	0	32	0	0	17	0
Lane Group Flow (vph)	0	636	0	0	798	0	0	469	0	0	441	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm			pm+pt			Perm		
Protected Phases		4			8		5	2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		26.0			26.0			29.0			20.0	
Effective Green, g (s)		26.0			26.0			29.0			20.0	
Actuated g/C Ratio		0.40			0.40			0.45			0.31	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		837			940			1269			624	
v/s Ratio Prot								c0.03				
v/s Ratio Perm		0.30			c0.34			0.13			c0.22	
v/c Ratio		0.76			0.85			0.37			0.89dl	
Uniform Delay, d1		16.8			17.7			11.9			19.9	
Progression Factor		1.75			1.00			1.00			0.89	
Incremental Delay, d2		6.3			9.4			0.8			6.6	
Delay (s)		35.7			27.1			12.8			24.3	
Level of Service		D			C			B			C	
Approach Delay (s)		35.7			27.1			12.8			24.3	
Approach LOS		D			C			B			C	

Intersection Summary			
HCM Average Control Delay	26.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	85.3%	ICU Level of Service	E
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.
c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↑↱			↰↑↑↱			↰↑↱			↰↑↱	
Volume (vph)	0	687	115	43	721	0	135	0	66	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	10	10	12	12	12	12	10	10	10
Total Lost time (s)		5.0			5.0			5.0				
Lane Util. Factor		0.95			0.95			1.00				
Frt		0.98			1.00			0.96				
Flt Protected		1.00			1.00			0.97				
Satd. Flow (prot)		2974			3031			1585				
Flt Permitted		1.00			0.84			0.80				
Satd. Flow (perm)		2974			2566			1307				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	763	128	48	801	0	150	0	73	0	0	0
RTOR Reduction (vph)	0	18	0	0	0	0	0	20	0	0	0	0
Lane Group Flow (vph)	0	873	0	0	849	0	0	203	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	custom			Perm			Perm			Perm		
Protected Phases		4 5 6 11			8			2			2	
Permitted Phases	4 6 11			8			2			2		
Actuated Green, G (s)		65.0			33.0			16.0				
Effective Green, g (s)		58.0			33.0			16.0				
Actuated g/C Ratio		0.64			0.37			0.18				
Clearance Time (s)					5.0			5.0				
Lane Grp Cap (vph)		1917			941			232				
v/s Ratio Prot		c0.29										
v/s Ratio Perm					c0.33			c0.16				
v/c Ratio		0.46			0.90			0.88				
Uniform Delay, d1		8.1			27.0			36.0				
Progression Factor		0.01			1.57			1.00				
Incremental Delay, d2		0.4			12.2			34.1				
Delay (s)		0.5			54.5			70.1				
Level of Service		A			D			E				
Approach Delay (s)		0.5			54.5			70.1			0.0	
Approach LOS		A			D			E			A	

Intersection Summary			
HCM Average Control Delay	31.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	70.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1043: 111th Street & Doty Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↑	↱		✣		↰	↑	↱
Volume (vph)	117	476	177	260	613	174	98	19	176	74	7	73
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	10	12	12	12	12	16	12	12	12	12
Total Lost time (s)	3.0	5.0		3.0	5.0	3.0		5.0		3.0	5.0	3.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00		1.00	1.00	1.00
Frt	1.00	0.96		1.00	1.00	0.85		0.92		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.98		0.95	1.00	1.00
Satd. Flow (prot)	1520	3020		1629	3257	1457		1756		1629	1714	1457
Flt Permitted	0.33	1.00		0.23	1.00	1.00		0.89		0.41	1.00	1.00
Satd. Flow (perm)	529	3020		400	3257	1457		1581		698	1714	1457
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	130	529	197	289	681	193	109	21	196	82	8	81
RTOR Reduction (vph)	0	40	0	0	0	98	0	74	0	0	0	44
Lane Group Flow (vph)	130	686	0	289	681	95	0	252	0	82	8	37
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	pm+pt			pm+pt		pm+ov	pm+pt			pm+pt		pm+ov
Protected Phases	7	4		3	8	1	5	2		1	6	7
Permitted Phases	4			8		8	2			6		6
Actuated Green, G (s)	41.9	32.6		48.2	35.9	44.5		20.2		31.8	31.8	41.1
Effective Green, g (s)	41.9	32.6		48.2	35.9	44.5		20.2		31.8	31.8	41.1
Actuated g/C Ratio	0.47	0.36		0.54	0.40	0.49		0.22		0.35	0.35	0.46
Clearance Time (s)	3.0	5.0		3.0	5.0	3.0		5.0		3.0	5.0	3.0
Vehicle Extension (s)	4.0	3.0		4.0	3.0	3.0		4.0		3.0	4.0	4.0
Lane Grp Cap (vph)	349	1094		386	1299	720		355		336	606	665
v/s Ratio Prot	0.04	0.23		c0.10	0.21	0.01				c0.02	0.00	0.01
v/s Ratio Perm	0.14			c0.30		0.05		c0.16		0.06		0.02
v/c Ratio	0.37	0.63		0.75	0.52	0.13		0.71		0.24	0.01	0.06
Uniform Delay, d1	14.2	23.7		13.6	20.6	12.3		32.2		21.4	18.9	13.6
Progression Factor	1.92	1.62		1.00	1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2	0.8	2.5		8.2	1.5	0.1		7.0		0.4	0.0	0.0
Delay (s)	28.2	40.7		21.9	22.1	12.4		39.2		21.8	18.9	13.7
Level of Service	C	D		C	C	B		D		C	B	B
Approach Delay (s)		38.8			20.4			39.2			17.8	
Approach LOS		D			C			D			B	

Intersection Summary			
HCM Average Control Delay	28.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	71.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
1044: 111th Street & Bishop Ford Freeway EB Ramps

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↑↑					↰		↱
Volume (veh/h)	0	491	234	6	504	0	0	0	0	30	0	543
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	546	260	7	560	0	0	0	0	33	0	603
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		498										
pX, platoon unblocked												
vC, conflicting volume	560			546			839	1119	273	846	1119	280
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	560			546			839	1119	273	846	1119	280
tC, single (s)	4.2			4.2			7.6	6.6	7.0	7.6	6.6	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			100	100	100	87	100	15
cM capacity (veh/h)	987			999			37	200	716	249	200	708

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1	SB 2
Volume Total	273	273	260	193	373	33	603
Volume Left	0	0	0	7	0	33	0
Volume Right	0	0	260	0	0	0	603
cSH	1700	1700	1700	999	1700	249	708
Volume to Capacity	0.16	0.16	0.15	0.01	0.22	0.13	0.85
Queue Length 95th (ft)	0	0	0	1	0	11	246
Control Delay (s)	0.0	0.0	0.0	0.4	0.0	21.7	32.1
Lane LOS				A		C	D
Approach Delay (s)	0.0			0.1		31.5	
Approach LOS						D	

Intersection Summary			
Average Delay	10.0		
Intersection Capacity Utilization	57.0%	ICU Level of Service	B
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
1045: 111th Street & Bishop Ford Freeway WB Ramps

	↗	↘	↖	↑	↓	↙
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰↰		↰			
Sign Control	Stop			Stop	Stop	
Volume (vph)	521	0	510	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	579	0	567	0	0	0

Direction, Lane #	EB 1	EB 2	NB 1
Volume Total (vph)	289	289	567
Volume Left (vph)	289	289	567
Volume Right (vph)	0	0	0
Hadj (s)	0.58	0.58	0.29
Departure Headway (s)	6.8	6.8	5.7
Degree Utilization, x	0.55	0.55	0.90
Capacity (veh/h)	514	505	627
Control Delay (s)	16.7	16.7	38.6
Approach Delay (s)	16.7		38.6
Approach LOS	C		E

Intersection Summary			
Delay	27.5		
HCM Level of Service	D		
Intersection Capacity Utilization	52.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱		↰	↑↑						↰↑↱	
Volume (vph)	0	373	46	130	332	0	0	0	0	72	15	42
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	12	12	12	12	12
Total Lost time (s)		3.0		4.0	4.0						5.0	
Lane Util. Factor		0.95		1.00	0.95						0.95	
Frt		0.98		1.00	1.00						0.95	
Flt Protected		1.00		0.95	1.00						0.97	
Satd. Flow (prot)		3097		1574	3149						3014	
Flt Permitted		1.00		0.43	1.00						0.97	
Satd. Flow (perm)		3097		706	3149						3014	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	414	51	144	369	0	0	0	0	80	17	47
RTOR Reduction (vph)	0	11	0	0	0	0	0	0	0	0	32	0
Lane Group Flow (vph)	0	454	0	144	369	0	0	0	0	0	112	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type				pm+pt						Split		
Protected Phases		4		3	8					6	6	
Permitted Phases				8								
Actuated Green, G (s)		36.0		49.0	49.0						27.0	
Effective Green, g (s)		36.0		49.0	49.0						27.0	
Actuated g/C Ratio		0.42		0.58	0.58						0.32	
Clearance Time (s)		3.0		4.0	4.0						5.0	
Lane Grp Cap (vph)		1312		509	1815						957	
v/s Ratio Prot		c0.15		c0.03	0.12						c0.04	
v/s Ratio Perm				0.13								
v/c Ratio		0.35		0.28	0.20						0.12	
Uniform Delay, d1		16.5		11.9	8.6						20.6	
Progression Factor		1.00		0.28	0.23						1.00	
Incremental Delay, d2		0.7		1.3	0.2						0.2	
Delay (s)		17.3		4.6	2.2						20.8	
Level of Service		B		A	A						C	
Approach Delay (s)		17.3			2.9			0.0			20.8	
Approach LOS		B			A			A			C	

Intersection Summary			
HCM Average Control Delay	11.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.24		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	34.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

1047: 115th Street & Ashland Avenue

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑			↑↱			↰↑↱				
Volume (vph)	68	377	0	0	413	76	49	65	59	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	11	11	12	12	12	12	12	12
Total Lost time (s)	5.0	5.0			3.0			5.0				
Lane Util. Factor	1.00	0.95			0.95			0.91				
Frt	1.00	1.00			0.98			0.95				
Flt Protected	0.95	1.00			1.00			0.99				
Satd. Flow (prot)	1629	3257			3076			4377				
Flt Permitted	0.37	1.00			1.00			0.99				
Satd. Flow (perm)	640	3257			3076			4377				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	76	419	0	0	459	84	54	72	66	0	0	0
RTOR Reduction (vph)	0	0	0	0	18	0	0	45	0	0	0	0
Lane Group Flow (vph)	76	419	0	0	525	0	0	147	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	pm+pt						Split					
Protected Phases	7	4			8		2	2				
Permitted Phases	4											
Actuated Green, G (s)	48.0	48.0			35.0			27.0				
Effective Green, g (s)	48.0	48.0			35.0			27.0				
Actuated g/C Ratio	0.56	0.56			0.41			0.32				
Clearance Time (s)	5.0	5.0			3.0			5.0				
Lane Grp Cap (vph)	478	1839			1267			1390				
v/s Ratio Prot	0.02	c0.13			c0.17			c0.03				
v/s Ratio Perm	0.07											
v/c Ratio	0.16	0.23			0.41			0.11				
Uniform Delay, d1	12.3	9.2			17.7			20.5				
Progression Factor	0.31	0.30			1.00			1.00				
Incremental Delay, d2	0.7	0.3			1.0			0.2				
Delay (s)	4.5	3.1			18.7			20.6				
Level of Service	A	A			B			C				
Approach Delay (s)		3.3			18.7			20.6			0.0	
Approach LOS		A			B			C			A	

Intersection Summary			
HCM Average Control Delay	12.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	34.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1048: 115th Street & Racine Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↑↱			↰↑↑↱			↰↑↱			↰↑↱	
Volume (vph)	39	357	39	40	256	33	118	85	86	64	90	124
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	10	12	12	15	12	12	15	12
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			1.00			1.00	
Frt		0.99			0.98			0.96			0.94	
Flt Protected		1.00			0.99			0.98			0.99	
Satd. Flow (prot)		2986			2976			1773			1752	
Flt Permitted		0.89			0.85			0.77			0.86	
Satd. Flow (perm)		2673			2560			1390			1527	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	43	397	43	44	284	37	131	94	96	71	100	138
RTOR Reduction (vph)	0	11	0	0	13	0	0	24	0	0	45	0
Lane Group Flow (vph)	0	472	0	0	352	0	0	297	0	0	264	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		23.0			23.0			32.0			32.0	
Effective Green, g (s)		23.0			23.0			32.0			32.0	
Actuated g/C Ratio		0.35			0.35			0.49			0.49	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		946			906			684			752	
v/s Ratio Prot												
v/s Ratio Perm		c0.18			0.14			c0.21			0.17	
v/c Ratio		0.50			0.39			0.43			0.35	
Uniform Delay, d1		16.5			15.7			10.7			10.1	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		1.9			1.3			2.0			1.3	
Delay (s)		18.4			17.0			12.7			11.4	
Level of Service		B			B			B			B	
Approach Delay (s)		18.4			17.0			12.7			11.4	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	15.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	65.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1049: 115th Street & Halsted Street

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↑	↱	↰	↑↑	↱
Volume (vph)	169	295	39	59	200	75	68	963	101	124	416	78
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	12	10	16	12	9	10	9	9	10	9
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00	0.98	1.00	1.00	0.96
Flpb, ped/bikes	0.99	1.00		1.00	1.00		0.99	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.98		1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1551	3023		1593	3505		1486	3040	1347	1494	3011	1271
Flt Permitted	0.55	1.00		0.49	1.00		0.44	1.00	1.00	0.12	1.00	1.00
Satd. Flow (perm)	891	3023		819	3505		690	3040	1347	197	3011	1271
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	178	311	41	62	211	79	72	1014	106	131	438	82
RTOR Reduction (vph)	0	12	0	0	45	0	0	0	65	0	0	50
Lane Group Flow (vph)	178	340	0	62	245	0	72	1014	41	131	438	32
Confl. Peds. (#/hr)	31		7	7		31	37		12	12		37
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	2%	4%	0%	0%	6%	2%	3%	5%	0%	3%	6%	4%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	32.0	27.0		32.0	27.0		38.0	33.0	33.0	38.0	33.0	33.0
Effective Green, g (s)	30.0	28.0		30.0	28.0		36.0	33.0	33.0	36.0	33.0	33.0
Actuated g/C Ratio	0.35	0.33		0.35	0.33		0.42	0.39	0.39	0.42	0.39	0.39
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)	346	996		325	1155		330	1180	523	144	1169	493
v/s Ratio Prot	c0.02	0.11		0.01	0.07		0.01	0.33		c0.04	0.15	
v/s Ratio Perm	c0.16			0.06			0.08		0.03	c0.34		0.03
v/c Ratio	0.51	0.34		0.19	0.21		0.22	0.86	0.08	0.91	0.37	0.06
Uniform Delay, d1	20.9	21.5		18.6	20.5		14.9	23.9	16.4	20.5	18.6	16.3
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	2.21	0.62	0.82
Incremental Delay, d2	5.4	0.9		1.3	0.4		1.5	8.2	0.3	51.3	0.8	0.2
Delay (s)	26.3	22.5		19.9	21.0		16.4	32.1	16.7	96.4	12.4	13.5
Level of Service	C	C		B	C		B	C	B	F	B	B
Approach Delay (s)		23.8			20.8			29.8			29.5	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	27.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	71.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1050: 115th Street & Wentworth Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑	↱		↰↑	↱		↰↑	↱		↰↑	↱
Volume (vph)	38	434	18	25	261	21	35	113	68	71	56	41
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	16	12	12	16	12
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frpb, ped/bikes		1.00	0.96		1.00	0.97		1.00	0.99		1.00	0.98
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frt		1.00	0.85		1.00	0.85		1.00	0.85		1.00	0.85
Flt Protected		1.00	1.00		1.00	1.00		0.99	1.00		0.97	1.00
Satd. Flow (prot)		1935	1382		1947	1331		1970	1452		1933	1430
Flt Permitted		0.96	1.00		0.95	1.00		0.92	1.00		0.79	1.00
Satd. Flow (perm)		1860	1382		1848	1331		1839	1452		1579	1430
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	40	457	19	26	275	22	37	119	72	75	59	43
RTOR Reduction (vph)	0	0	10	0	0	12	0	0	42	0	0	25
Lane Group Flow (vph)	0	497	9	0	301	10	0	156	30	0	134	18
Confl. Peds. (#/hr)	5		21	21		5	9		1	1		9
Heavy Vehicles (%)	5%	5%	6%	7%	4%	12%	6%	1%	4%	0%	6%	5%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)		30.0	30.0		30.0	30.0		27.0	27.0		27.0	27.0
Effective Green, g (s)		30.0	30.0		30.0	30.0		27.0	27.0		27.0	27.0
Actuated g/C Ratio		0.46	0.46		0.46	0.46		0.42	0.42		0.42	0.42
Clearance Time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		858	638		853	614		764	603		656	594
v/s Ratio Prot												
v/s Ratio Perm		c0.27	0.01		0.16	0.01		0.08	0.02		c0.08	0.01
v/c Ratio		0.58	0.01		0.35	0.02		0.20	0.05		0.20	0.03
Uniform Delay, d1		12.9	9.5		11.3	9.5		12.1	11.3		12.1	11.2
Progression Factor		1.00	1.00		0.38	0.15		1.18	1.64		0.98	0.82
Incremental Delay, d2		2.8	0.0		1.1	0.0		0.6	0.2		0.7	0.1
Delay (s)		15.7	9.5		5.3	1.5		14.9	18.8		12.5	9.3
Level of Service		B	A		A	A		B	B		B	A
Approach Delay (s)		15.5			5.1			16.1			11.7	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM Average Control Delay	12.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	67.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1051: 115th Street & State Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	66	512	10	17	268	43	12	234	34	81	70	30
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	1.00		1.00	0.98		1.00	0.98		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1520	3031		1520	2977		1520	2982		1520	2904	
Flt Permitted	0.95	1.00		0.43	1.00		0.68	1.00		0.56	1.00	
Satd. Flow (perm)	1520	3031		694	2977		1091	2982		891	2904	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	73	569	11	19	298	48	13	260	38	90	78	33
RTOR Reduction (vph)	0	2	0	0	20	0	0	18	0	0	19	0
Lane Group Flow (vph)	73	578	0	19	326	0	13	280	0	90	92	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Prot			Perm			Perm			Perm		
Protected Phases	7	4			8			2			6	
Permitted Phases				8			2			6		
Actuated Green, G (s)	7.0	32.0		22.0	22.0		27.0	27.0		27.0	27.0	
Effective Green, g (s)	7.0	32.0		22.0	22.0		27.0	27.0		27.0	27.0	
Actuated g/C Ratio	0.11	0.49		0.34	0.34		0.42	0.42		0.42	0.42	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	164	1492		235	1008		453	1239		370	1206	
v/s Ratio Prot	c0.05	c0.19			0.11			0.09			0.03	
v/s Ratio Perm				0.03			0.01			c0.10		
v/c Ratio	0.45	0.39		0.08	0.32		0.03	0.23		0.24	0.08	
Uniform Delay, d1	27.2	10.4		14.6	16.0		11.2	12.3		12.4	11.5	
Progression Factor	1.07	0.60		0.92	0.93		0.55	0.58		1.12	1.10	
Incremental Delay, d2	7.8	0.7		0.7	0.8		0.1	0.4		1.6	0.1	
Delay (s)	36.9	6.9		14.0	15.7		6.2	7.5		15.4	12.8	
Level of Service	D	A		B	B		A	A		B	B	
Approach Delay (s)		10.3			15.6			7.4			14.0	
Approach LOS		B			B			A			B	

Intersection Summary			
HCM Average Control Delay	11.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	44.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Lane Configurations	↰	↑↱		↰	↑↱			↰↑↱			↰↑↱	
Volume (vph)	37	249	348	240	212	42	109	308	56	24	186	24
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	12	12	12	12	12	12
Total Lost time (s)	4.0	4.0		3.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frt	1.00	0.91		1.00	0.98			0.98			0.98	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1520	2774		1520	2964			3163			3190	
Flt Permitted	0.58	1.00		0.95	1.00			0.81			0.89	
Satd. Flow (perm)	925	2774		1520	2964			2584			2839	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	41	277	387	267	236	47	121	342	62	27	207	27
RTOR Reduction (vph)	0	268	0	0	25	0	0	16	0	0	14	0
Lane Group Flow (vph)	41	396	0	267	258	0	0	509	0	0	247	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Prot			Perm			Perm		
Protected Phases		4		3	8			2			6	
Permitted Phases	4						2			6		
Actuated Green, G (s)	20.0	20.0		6.0	29.0			25.0			25.0	
Effective Green, g (s)	20.0	20.0		6.0	29.0			25.0			25.0	
Actuated g/C Ratio	0.31	0.31		0.09	0.45			0.38			0.38	
Clearance Time (s)	4.0	4.0		3.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	285	854		140	1322			994			1092	
v/s Ratio Prot		c0.14		c0.18	0.09							
v/s Ratio Perm	0.04							c0.20			0.09	
v/c Ratio	0.14	0.46		1.91	0.19			0.51			0.23	
Uniform Delay, d1	16.3	18.2		29.5	10.9			15.3			13.5	
Progression Factor	0.63	0.27		1.32	1.10			1.08			0.57	
Incremental Delay, d2	1.0	1.7		426.9	0.2			1.4			0.5	
Delay (s)	11.3	6.6		465.9	12.3			18.0			8.1	
Level of Service	B	A		F	B			B			A	
Approach Delay (s)		6.9			232.5			18.0			8.1	
Approach LOS		A			F			B			A	

Intersection Summary			
HCM Average Control Delay	70.7	HCM Level of Service	E
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	67.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1053: 115th Street & Indiana Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			↰↑↑↱				
Volume (vph)	16	294	14	69	461	69	34	93	160	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	12	14	12	10	15	10
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			0.95				
Frt		0.99			0.98			0.92				
Flt Protected		1.00			0.99			0.99				
Satd. Flow (prot)		1586			1566			3165				
Flt Permitted		0.97			0.92			0.99				
Satd. Flow (perm)		1535			1453			3165				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	18	327	16	77	512	77	38	103	178	0	0	0
RTOR Reduction (vph)	0	2	0	0	6	0	0	137	0	0	0	0
Lane Group Flow (vph)	0	359	0	0	660	0	0	182	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm			Perm					
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Actuated Green, G (s)		41.9			41.9			15.1				
Effective Green, g (s)		41.9			41.9			15.1				
Actuated g/C Ratio		0.64			0.64			0.23				
Clearance Time (s)		4.0			4.0			4.0				
Vehicle Extension (s)		3.0			3.0			8.0				
Lane Grp Cap (vph)		989			937			735				
v/s Ratio Prot												
v/s Ratio Perm		0.23			c0.45			0.06				
v/c Ratio		0.36			0.70			0.25				
Uniform Delay, d1		5.4			7.5			20.3				
Progression Factor		1.89			1.00			1.00				
Incremental Delay, d2		0.9			4.4			0.8				
Delay (s)		11.0			11.9			21.1				
Level of Service		B			B			C				
Approach Delay (s)		11.0			11.9			21.1			0.0	
Approach LOS		B			B			C			A	

Intersection Summary			
HCM Average Control Delay	13.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	71.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
1054: 115th Street & Martin Luther King Jr Drive

1/14/2013

	↗	→	←	↖	↘	↙
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰	↱		↰	↱
Volume (veh/h)	93	361	472	44	64	124
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	98	380	497	46	67	131
Pedestrians		3	5		21	
Lane Width (ft)		16.0	16.0		10.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		0	1		1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		1319	491			
pX, platoon unblocked	0.85				0.85	0.85
vC, conflicting volume	564				1122	544
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	399				1055	375
tC, single (s)	4.2				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.3				3.5	3.3
p0 queue free %	89				64	77
cM capacity (veh/h)	928				186	560

Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total	478	543	67	131
Volume Left	98	0	67	0
Volume Right	0	46	0	131
cSH	928	1700	186	560
Volume to Capacity	0.11	0.32	0.36	0.23
Queue Length 95th (ft)	9	0	39	22
Control Delay (s)	2.9	0.0	34.9	13.4
Lane LOS	A		D	B
Approach Delay (s)	2.9	0.0	20.7	
Approach LOS			C	

Intersection Summary			
Average Delay	4.5		
Intersection Capacity Utilization	69.3%	ICU Level of Service	C
Analysis Period (min)	15		

HCM Signalized Intersection Capacity Analysis
1055: 115th Street & Cottage Grove Avenue

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↱			↰	Y	
Volume (vph)	468	1	26	674	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0			4.0		
Lane Util. Factor	1.00			1.00		
Frt	1.00			1.00		
Flt Protected	1.00			1.00		
Satd. Flow (prot)	1714			1711		
Flt Permitted	1.00			0.97		
Satd. Flow (perm)	1714			1663		
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	520	1	29	749	0	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	521	0	0	778	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%
Turn Type			Perm			
Protected Phases	1 2 4			4	3	
Permitted Phases			4			
Actuated Green, G (s)	63.0			31.0		
Effective Green, g (s)	59.0			31.0		
Actuated g/C Ratio	0.69			0.36		
Clearance Time (s)				4.0		
Lane Grp Cap (vph)	1190			607		
v/s Ratio Prot	c0.30					
v/s Ratio Perm				c0.47		
v/c Ratio	0.44			1.28		
Uniform Delay, d1	5.7			27.0		
Progression Factor	0.06			1.00		
Incremental Delay, d2	0.1			139.1		
Delay (s)	0.4			166.1		
Level of Service	A			F		
Approach Delay (s)	0.4			166.1	0.0	
Approach LOS	A			F	A	

Intersection Summary			
HCM Average Control Delay	99.6	HCM Level of Service	F
HCM Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	63.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
1056: 115th Street & Bishop Ford Fwy

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Lane Configurations		↑↱			↰						↰	↱
Volume (veh/h)	0	185	193	25	559	0	0	0	0	3	0	258
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	206	214	28	621	0	0	0	0	3	0	287
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	621			206			989	989	210	779	882	621
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	621			206			989	989	210	779	882	621
tC, single (s)	4.1			5.5			7.5	6.5	6.9	7.5	6.5	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.9			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			97			100	100	100	99	100	33
cM capacity (veh/h)	969			984			65	242	802	283	279	425

Direction, Lane #	**EB 1**	**EB 2**	**WB 1**	**SB 1**	**SB 2**
Volume Total	137	283	649	3	287
Volume Left	0	0	28	3	0
Volume Right	0	214	0	0	287
cSH	1700	1700	984	283	425
Volume to Capacity	0.08	0.17	0.03	0.01	0.67
Queue Length 95th (ft)	0	0	2	1	121
Control Delay (s)	0.0	0.0	0.7	17.9	29.3
Lane LOS			A	C	D
Approach Delay (s)	0.0		0.7	29.1	
Approach LOS				D	

Intersection Summary			
Average Delay	6.6		
Intersection Capacity Utilization	57.8%	ICU Level of Service	B
Analysis Period (min)	15		

	↗	↘	↖	↑	↓	↙
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰↰		↰			
Sign Control	Stop			Stop	Stop	
Volume (vph)	188	0	584	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	209	0	649	0	0	0

Direction, Lane #	EB 1	EB 2	NB 1
Volume Total (vph)	104	104	649
Volume Left (vph)	104	104	649
Volume Right (vph)	0	0	0
Hadj (s)	0.58	0.58	0.29
Departure Headway (s)	6.8	6.8	4.9
Degree Utilization, x	0.20	0.20	0.88
Capacity (veh/h)	511	512	734
Control Delay (s)	10.3	10.3	31.8
Approach Delay (s)	10.3		31.8
Approach LOS	B		D

Intersection Summary			
Delay	26.5		
HCM Level of Service	D		
Intersection Capacity Utilization	46.5%	ICU Level of Service	A
Analysis Period (min)	15		

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↰↑					↰	↰↑↱	↱
Volume (vph)	0	467	207	156	466	0	0	0	0	131	115	294
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	12	13	12	12	12	12	10	10	11
Total Lost time (s)		6.0	6.0		6.0					6.0	6.0	6.0
Lane Util. Factor		0.95	1.00		0.95					0.86	0.81	0.86
Frpb, ped/bikes		1.00	0.98		1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00					1.00	1.00	1.00
Frt		1.00	0.85		1.00					1.00	0.93	0.85
Flt Protected		1.00	1.00		0.99					0.95	0.99	1.00
Satd. Flow (prot)		2978	1202		3372					1346	3693	1122
Flt Permitted		1.00	1.00		0.99					0.95	0.99	1.00
Satd. Flow (perm)		2978	1202		3372					1346	3693	1122
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	492	218	164	491	0	0	0	0	138	121	309
RTOR Reduction (vph)	0	0	147	0	0	0	0	0	0	0	99	92
Lane Group Flow (vph)	0	492	71	0	655	0	0	0	0	76	239	62
Confl. Peds. (#/hr)	5		3	3		5						
Heavy Vehicles (%)	0%	11%	9%	2%	4%	0%	0%	0%	0%	2%	2%	2%
Parking (#/hr)			0									0
Turn Type			Perm	Split						Split		custom
Protected Phases		2		10 12 14	10 12 14					4	4	
Permitted Phases			2									4 2
Actuated Green, G (s)		39.1	39.1		73.1					19.7	19.7	64.8
Effective Green, g (s)		39.1	39.1		73.1					19.7	19.7	64.8
Actuated g/C Ratio		0.24	0.24		0.46					0.12	0.12	0.40
Clearance Time (s)		6.0	6.0							6.0	6.0	
Vehicle Extension (s)		3.0	3.0							3.0	3.0	
Lane Grp Cap (vph)		728	294		1541					166	455	454
v/s Ratio Prot		c0.17			c0.19					0.06	c0.06	
v/s Ratio Perm			0.06									0.06
v/c Ratio		0.68	0.24		0.43					0.46	0.53	0.14
Uniform Delay, d1		54.7	48.5		29.3					65.2	65.8	30.0
Progression Factor		1.00	1.00		0.02					1.00	1.00	1.00
Incremental Delay, d2		5.0	1.9		0.1					2.0	1.1	0.1
Delay (s)		59.7	50.5		0.7					67.2	66.9	30.1
Level of Service		E	D		A					E	E	C
Approach Delay (s)		56.9			0.7			0.0			56.9	
Approach LOS		E			A			A			E	

Intersection Summary			
HCM Average Control Delay	37.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	30.1
Intersection Capacity Utilization	52.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑			↑↑	↱	↰	↰↑↱				
Volume (vph)	210	388	0	0	394	93	228	144	138	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	13	12	12	11	12	13	13	14	12	12	12
Total Lost time (s)	6.0	6.0			6.0	6.0	6.0	6.0				
Lane Util. Factor	1.00	0.95			0.95	1.00	0.91	0.91				
Frt	1.00	1.00			1.00	0.85	1.00	0.94				
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.99				
Satd. Flow (prot)	1574	3366			3149	1457	1531	3002				
Flt Permitted	0.95	1.00			1.00	1.00	0.95	0.99				
Satd. Flow (perm)	1574	3366			3149	1457	1531	3002				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	233	431	0	0	438	103	253	160	153	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	82	0	62	0	0	0	0
Lane Group Flow (vph)	233	431	0	0	438	21	192	312	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Split					Perm	Split					
Protected Phases	2 4 8	2 4 8			10		12	12				
Permitted Phases						10						
Actuated Green, G (s)	78.9	78.9			32.6	32.6	21.7	21.7				
Effective Green, g (s)	78.9	78.9			32.6	32.6	21.7	21.7				
Actuated g/C Ratio	0.49	0.49			0.20	0.20	0.14	0.14				
Clearance Time (s)					6.0	6.0	6.0	6.0				
Vehicle Extension (s)					3.0	3.0	3.0	3.0				
Lane Grp Cap (vph)	776	1660			642	297	208	407				
v/s Ratio Prot	c0.15	0.13			c0.14		c0.13	0.10				
v/s Ratio Perm						0.01						
v/c Ratio	0.30	0.26			0.68	0.07	0.92	0.77				
Uniform Delay, d1	24.1	23.6			58.9	51.5	68.3	66.7				
Progression Factor	0.07	0.07			1.00	1.00	1.00	1.00				
Incremental Delay, d2	0.2	0.1			3.0	0.1	41.3	8.4				
Delay (s)	1.9	1.8			61.9	51.6	109.6	75.1				
Level of Service	A	A			E	D	F	E				
Approach Delay (s)		1.8			59.9			86.8			0.0	
Approach LOS		A			E			F			A	

Intersection Summary			
HCM Average Control Delay	46.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	28.8
Intersection Capacity Utilization	49.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑↱		↰	↑↑↱		↰	↑↑↱	
Volume (vph)	214	317	73	44	153	54	86	803	94	90	426	99
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	14	12	10	10	12	9	10	12
Total Lost time (s)	4.0	4.0	5.0	4.0	5.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.99	1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	0.99	1.00	1.00	1.00	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.96		1.00	0.98		1.00	0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1538	1556	1328	1595	1713		1524	2965		1509	2869	
Flt Permitted	0.49	1.00	1.00	0.43	1.00		0.35	1.00		0.14	1.00	
Satd. Flow (perm)	794	1556	1328	724	1713		569	2965		230	2869	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	225	334	77	46	161	57	91	845	99	95	448	104
RTOR Reduction (vph)	0	0	50	0	14	0	0	10	0	0	22	0
Lane Group Flow (vph)	225	334	27	46	204	0	91	934	0	95	530	0
Confl. Peds. (#/hr)	33		3	3		33	42		8	8		42
Confl. Bikes (#/hr)							1					1
Heavy Vehicles (%)	3%	8%	6%	0%	7%	5%	4%	5%	11%	2%	6%	9%
Turn Type	pm+pt		Perm	pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)	38.2	31.2	31.2	32.4	28.3		39.6	34.1		39.6	34.1	
Effective Green, g (s)	36.2	32.2	31.2	30.4	28.3		37.6	34.1		37.6	34.1	
Actuated g/C Ratio	0.40	0.36	0.35	0.34	0.31		0.42	0.38		0.42	0.38	
Clearance Time (s)	3.0	5.0	5.0	3.0	5.0		3.0	4.0		3.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	369	557	461	275	539		286	1125		160	1088	
v/s Ratio Prot	c0.04	c0.21		0.01	0.12		0.02	c0.32		c0.03	0.18	
v/s Ratio Perm	0.20		0.02	0.05			0.12			0.22		
v/c Ratio	0.61	0.60	0.06	0.17	0.38		0.32	0.83		0.59	0.49	
Uniform Delay, d1	21.0	23.6	19.6	20.5	24.0		16.5	25.3		18.3	21.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.9	4.7	0.2	0.3	2.0		0.6	7.2		5.8	1.6	
Delay (s)	23.9	28.3	19.8	20.8	26.0		17.1	32.4		24.1	22.8	
Level of Service	C	C	B	C	C		B	C		C	C	
Approach Delay (s)		25.7			25.1			31.1			23.0	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	27.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	89.9	Sum of lost time (s)	16.0
Intersection Capacity Utilization	72.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1061: 119th Street & Wentworth Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱		✥			✥	
Volume (vph)	43	383	16	18	212	32	35	79	67	62	42	38
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	10	10	10	12	15	12	12	16	12
Total Lost time (s)		3.0	3.0		3.0	3.0		3.0			3.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00			1.00	
Frpb, ped/bikes		1.00	0.97		1.00	0.97		0.99			0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00			1.00	
Frt		1.00	0.85		1.00	0.85		0.95			0.96	
Flt Protected		1.00	1.00		1.00	1.00		0.99			0.98	
Satd. Flow (prot)		1909	1482		1599	1198		1840			1812	
Flt Permitted		0.96	1.00		0.96	1.00		0.94			0.83	
Satd. Flow (perm)		1832	1482		1544	1198		1741			1544	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	45	403	17	19	223	34	37	83	71	65	44	40
RTOR Reduction (vph)	0	0	9	0	0	17	0	33	0	0	20	0
Lane Group Flow (vph)	0	448	8	0	242	17	0	158	0	0	129	0
Confl. Peds. (#/hr)	6		11	11		6	4		8	8		4
Confl. Bikes (#/hr)	1		1	1		1			1	1		
Heavy Vehicles (%)	0%	7%	0%	0%	5%	16%	0%	0%	0%	10%	0%	3%
Turn Type	Perm		Perm	Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)		32.0	32.0		32.0	32.0		27.0			27.0	
Effective Green, g (s)		32.0	32.0		32.0	32.0		27.0			27.0	
Actuated g/C Ratio		0.49	0.49		0.49	0.49		0.42			0.42	
Clearance Time (s)		3.0	3.0		3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)		902	730		760	590		723			641	
v/s Ratio Prot												
v/s Ratio Perm		c0.24	0.01		0.16	0.01		c0.09			0.08	
v/c Ratio		0.50	0.01		0.32	0.03		0.22			0.20	
Uniform Delay, d1		11.1	8.4		9.9	8.5		12.2			12.1	
Progression Factor		1.00	1.00		2.06	3.36		1.00			1.42	
Incremental Delay, d2		2.0	0.0		1.0	0.1		0.7			0.7	
Delay (s)		13.0	8.5		21.5	28.6		12.9			17.9	
Level of Service		B	A		C	C		B			B	
Approach Delay (s)		12.9			22.4			12.9			17.9	
Approach LOS		B			C			B			B	

Intersection Summary			
HCM Average Control Delay	16.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	64.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1062: 119th Street & State Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱		↰	↱		✥	
Volume (vph)	71	419	23	19	189	8	39	216	72	18	51	29
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frpb, ped/bikes		1.00	0.96		1.00	0.98		1.00	0.96		0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		0.96	
Flt Protected		0.99	1.00		1.00	1.00		0.99	1.00		0.99	
Satd. Flow (prot)		1658	1392		1584	1497		1754	1390		1656	
Flt Permitted		0.92	1.00		0.85	1.00		0.95	1.00		0.93	
Satd. Flow (perm)		1531	1392		1352	1497		1679	1390		1560	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	75	441	24	20	199	8	41	227	76	19	54	31
RTOR Reduction (vph)	0	0	10	0	0	5	0	0	39	0	16	0
Lane Group Flow (vph)	0	516	14	0	219	3	0	268	37	0	88	0
Confl. Peds. (#/hr)	11		17	17		11	4		17	17		4
Confl. Bikes (#/hr)	1		1	1		1	1					1
Heavy Vehicles (%)	0%	9%	5%	33%	11%	0%	6%	1%	6%	0%	0%	8%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		23.0	23.0		23.0	23.0		32.0	32.0		32.0	
Effective Green, g (s)		23.0	23.0		23.0	23.0		32.0	32.0		32.0	
Actuated g/C Ratio		0.35	0.35		0.35	0.35		0.49	0.49		0.49	
Clearance Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	
Lane Grp Cap (vph)		542	493		478	530		827	684		768	
v/s Ratio Prot												
v/s Ratio Perm		c0.34	0.01		0.16	0.00		c0.16	0.03		0.06	
v/c Ratio		0.95	0.03		0.46	0.01		0.32	0.05		0.11	
Uniform Delay, d1		20.5	13.7		16.2	13.6		10.0	8.6		8.9	
Progression Factor		1.61	2.00		0.94	0.90		0.33	0.34		1.15	
Incremental Delay, d2		26.9	0.1		3.1	0.0		0.8	0.1		0.3	
Delay (s)		60.0	27.5		18.2	12.3		4.1	3.0		10.5	
Level of Service		E	C		B	B		A	A		B	
Approach Delay (s)		58.5			18.0			3.9			10.5	
Approach LOS		E			B			A			B	

Intersection Summary			
HCM Average Control Delay	31.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	75.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		✥			✥			↰	↱
Volume (vph)	439	20	30	9	18	15	26	352	19	8	222	165
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	14	12	12	16	12	12	16	12
Total Lost time (s)		3.0	3.0		3.0			3.0			3.0	3.0
Lane Util. Factor		1.00	1.00		1.00			1.00			1.00	1.00
Frpb, ped/bikes		1.00	0.97		0.98			1.00			1.00	0.95
Flpb, ped/bikes		0.98	1.00		1.00			1.00			1.00	1.00
Frt		1.00	0.85		0.95			0.99			1.00	0.85
Flt Protected		0.95	1.00		0.99			1.00			1.00	1.00
Satd. Flow (prot)		1754	1390		1758			1979			1873	1328
Flt Permitted		0.73	1.00		0.91			0.97			0.99	1.00
Satd. Flow (perm)		1337	1390		1609			1933			1852	1328
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	488	22	33	10	20	17	29	391	21	9	247	183
RTOR Reduction (vph)	0	0	15	0	13	0	0	3	0	0	0	93
Lane Group Flow (vph)	0	510	18	0	34	0	0	438	0	0	256	90
Confl. Peds. (#/hr)	49		22	22		49	34		17	17		34
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	9%	0%	7%	0%	0%	0%	0%	2%	0%	0%	9%	9%
Turn Type	pm+pt		Perm	Perm			Perm			Perm		Perm
Protected Phases	7	4			8			2			6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)		27.0	27.0		17.0			32.0			32.0	32.0
Effective Green, g (s)		27.0	27.0		17.0			32.0			32.0	32.0
Actuated g/C Ratio		0.42	0.42		0.26			0.49			0.49	0.49
Clearance Time (s)		3.0	3.0		3.0			3.0			3.0	3.0
Lane Grp Cap (vph)		607	577		421			952			912	654
v/s Ratio Prot		c0.10										
v/s Ratio Perm		0.25	0.01		0.02			c0.23			0.14	0.07
v/c Ratio		0.84	0.03		0.08			0.46			0.28	0.14
Uniform Delay, d1		17.1	11.3		18.1			10.8			9.7	9.0
Progression Factor		1.03	1.64		1.00			0.58			0.84	1.15
Incremental Delay, d2		8.2	0.1		0.4			1.5			0.3	0.2
Delay (s)		25.7	18.5		18.5			7.8			8.4	10.5
Level of Service		C	B		B			A			A	B
Approach Delay (s)		25.2			18.5			7.8			9.3	
Approach LOS		C			B			A			A	

Intersection Summary			
HCM Average Control Delay	15.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	79.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1064: 127th Street & S Paulina St

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↱		↰	↑↑					↰	↰↱	↱
Volume (vph)	0	883	220	263	1103	0	0	0	0	274	200	374
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	12	11	8	8	8	11	12	14
Total Lost time (s)		6.0		4.5	6.0					6.0	6.0	6.0
Lane Util. Factor		0.91		1.00	0.95					0.91	0.86	0.91
Frpb, ped/bikes		1.00		1.00	1.00					1.00	0.99	0.99
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Frt		0.97		1.00	1.00					1.00	0.94	0.85
Flt Protected		1.00		0.95	1.00					0.95	0.99	1.00
Satd. Flow (prot)		4313		1589	3226					1419	2711	1355
Flt Permitted		1.00		0.17	1.00					0.95	0.99	1.00
Satd. Flow (perm)		4313		277	3226					1419	2711	1355
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	929	232	277	1161	0	0	0	0	288	211	394
RTOR Reduction (vph)	0	35	0	0	0	0	0	0	0	0	65	65
Lane Group Flow (vph)	0	1126	0	277	1161	0	0	0	0	233	386	144
Confl. Peds. (#/hr)	6		4	4		6	2					2
Heavy Vehicles (%)	0%	11%	7%	4%	6%	0%	0%	0%	0%	6%	4%	8%
Turn Type				pm+pt						Perm		Perm
Protected Phases		2		1	6						4	
Permitted Phases				6						4		4
Actuated Green, G (s)		49.9		69.4	69.4					23.6	23.6	23.6
Effective Green, g (s)		49.9		69.4	69.4					23.6	23.6	23.6
Actuated g/C Ratio		0.48		0.66	0.66					0.22	0.22	0.22
Clearance Time (s)		6.0		4.5	6.0					6.0	6.0	6.0
Vehicle Extension (s)		7.0		3.5	7.0					3.5	3.5	3.5
Lane Grp Cap (vph)		2050		371	2132					319	609	305
v/s Ratio Prot		0.26		c0.11	0.36							
v/s Ratio Perm				c0.39						c0.16	0.14	0.11
v/c Ratio		0.55		0.75	0.54					0.73	0.63	0.47
Uniform Delay, d1		19.6		11.3	9.4					37.7	36.8	35.3
Progression Factor		1.00		1.18	1.62					1.00	1.00	1.00
Incremental Delay, d2		1.1		5.0	0.6					8.6	2.3	1.4
Delay (s)		20.6		18.3	15.9					46.3	39.1	36.7
Level of Service		C		B	B					D	D	D
Approach Delay (s)		20.6			16.3			0.0			40.4	
Approach LOS		C			B			A			D	

Intersection Summary			
HCM Average Control Delay	23.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	10.5
Intersection Capacity Utilization	100.0%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1065: 127th Street & Marshfield Ave

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↑			↑↑	↱		↰↑↱				
Volume (vph)	309	848	0	0	844	234	521	346	402	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	12	12	12	11	12	12	12	12	12	12	12
Total Lost time (s)	6.0	6.0			6.0	6.0		6.0				
Lane Util. Factor	0.97	0.95			0.95	1.00		0.91				
Frpb, ped/bikes	1.00	1.00			1.00	0.99		1.00				
Flpb, ped/bikes	1.00	1.00			1.00	1.00		1.00				
Frt	1.00	1.00			1.00	0.85		0.95				
Flt Protected	0.95	1.00			1.00	1.00		0.98				
Satd. Flow (prot)	2915	3138			3119	1449		4408				
Flt Permitted	0.19	1.00			1.00	1.00		0.98				
Satd. Flow (perm)	579	3138			3119	1449		4408				
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	325	893	0	0	888	246	548	364	423	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	106	0	78	0	0	0	0
Lane Group Flow (vph)	325	893	0	0	888	140	0	1257	0	0	0	0
Confl. Peds. (#/hr)	4					4						
Heavy Vehicles (%)	10%	9%	0%	0%	6%	4%	4%	3%	5%	0%	0%	0%
Turn Type	pm+pt					Perm	Perm					
Protected Phases	5	2			6			8				
Permitted Phases	2					6	8					
Actuated Green, G (s)	62.5	62.5			45.1	45.1		30.5				
Effective Green, g (s)	62.5	62.5			45.1	45.1		30.5				
Actuated g/C Ratio	0.60	0.60			0.43	0.43		0.29				
Clearance Time (s)	6.0	6.0			6.0	6.0		6.0				
Vehicle Extension (s)	3.5	7.0			7.0	7.0		5.0				
Lane Grp Cap (vph)	598	1868			1340	622		1280				
v/s Ratio Prot	0.06	c0.28			c0.28							
v/s Ratio Perm	0.26					0.10		0.29				
v/c Ratio	0.54	0.48			0.66	0.22		0.98				
Uniform Delay, d1	12.8	12.0			23.9	18.9		37.0				
Progression Factor	0.72	0.86			0.95	1.43		1.00				
Incremental Delay, d2	0.9	0.7			1.7	0.5		21.0				
Delay (s)	10.2	11.1			24.4	27.6		57.9				
Level of Service	B	B			C	C		E				
Approach Delay (s)		10.8			25.1			57.9			0.0	
Approach LOS		B			C			E			A	

Intersection Summary			
HCM Average Control Delay	32.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	100.0%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	103	571	221	76	769	43	226	178	40	49	111	91
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	12	11	12	12	10	10	13	10	10	10
Total Lost time (s)	3.5	6.0	3.5	3.5	6.0		3.5	6.0		3.5	6.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.97		1.00	0.93	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1565	3061	1291	1602	3232		1446	3007		1544	2782	
Flt Permitted	0.14	1.00	1.00	0.42	1.00		0.53	1.00		0.61	1.00	
Satd. Flow (perm)	234	3061	1291	716	3232		807	3007		990	2782	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	108	601	233	80	809	45	238	187	42	52	117	96
RTOR Reduction (vph)	0	0	95	0	4	0	0	21	0	0	80	0
Lane Group Flow (vph)	108	601	138	80	850	0	238	208	0	52	133	0
Confl. Peds. (#/hr)	3		12	12		3	9		6	6		9
Heavy Vehicles (%)	2%	8%	5%	3%	5%	3%	10%	3%	2%	3%	7%	4%
Parking (#/hr)			0									
Turn Type	pm+pt		pm+ov	pm+pt			pm+pt			pm+pt		
Protected Phases	5	2	3	1	6		3	8		7	4	
Permitted Phases	2		2	6			8			4		
Actuated Green, G (s)	62.5	52.6	62.1	40.1	33.7		29.9	20.4		24.1	17.5	
Effective Green, g (s)	62.5	52.6	62.1	40.1	33.7		29.9	20.4		24.1	17.5	
Actuated g/C Ratio	0.60	0.50	0.59	0.38	0.32		0.28	0.19		0.23	0.17	
Clearance Time (s)	3.5	6.0	3.5	3.5	6.0		3.5	6.0		3.5	6.0	
Vehicle Extension (s)	3.0	7.0	3.0	3.0	7.0		3.0	7.0		3.0	7.0	
Lane Grp Cap (vph)	460	1533	764	327	1037		288	584		262	464	
v/s Ratio Prot	c0.06	c0.20	0.02	0.01	c0.26		c0.07	0.07		0.01	0.05	
v/s Ratio Perm	0.08		0.09	0.08			c0.16			0.03		
v/c Ratio	0.23	0.39	0.18	0.24	0.82		0.83	0.36		0.20	0.29	
Uniform Delay, d1	11.9	16.3	9.8	21.1	32.8		33.7	36.6		32.3	38.3	
Progression Factor	0.89	0.99	1.92	1.00	1.00		0.93	0.88		1.00	1.00	
Incremental Delay, d2	0.9	0.6	0.1	0.4	7.2		16.8	1.3		0.4	1.2	
Delay (s)	11.5	16.7	18.9	21.5	40.1		48.2	33.5		32.6	39.5	
Level of Service	B	B	B	C	D		D	C		C	D	
Approach Delay (s)		16.7			38.5			41.0			38.2	
Approach LOS		B			D			D			D	

Intersection Summary			
HCM Average Control Delay	31.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	22.5
Intersection Capacity Utilization	72.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1067: Vermont St & S Ashland

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	59	222	273	57	184	98	328	380	75	91	258	54
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	11	12	11	12	12	11	13	12	10	11	12
Total Lost time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.92		1.00	0.95		1.00	0.98		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1634	2873		1463	3033		1589	3244		1549	3135	
Flt Permitted	0.55	1.00		0.33	1.00		0.46	1.00		0.48	1.00	
Satd. Flow (perm)	942	2873		515	3033		772	3244		780	3135	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	62	234	287	60	194	103	345	400	79	96	272	57
RTOR Reduction (vph)	0	206	0	0	64	0	0	15	0	0	17	0
Lane Group Flow (vph)	62	315	0	60	233	0	345	464	0	96	312	0
Confl. Peds. (#/hr)	20					20	1		2	2		1
Heavy Vehicles (%)	4%	5%	6%	13%	6%	5%	4%	6%	5%	3%	3%	0%
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	35.7	28.7		35.9	28.8		53.2	41.9		38.6	31.3	
Effective Green, g (s)	35.7	28.7		35.9	28.8		53.2	41.9		38.6	31.3	
Actuated g/C Ratio	0.34	0.27		0.34	0.27		0.51	0.40		0.37	0.30	
Clearance Time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	3.5	7.0		3.5	7.0		3.5	7.0		3.5	7.0	
Lane Grp Cap (vph)	366	785		240	832		530	1295		340	935	
v/s Ratio Prot	0.01	c0.11		c0.02	0.08		c0.11	0.14		0.02	0.10	
v/s Ratio Perm	0.05			0.07			c0.22			0.08		
v/c Ratio	0.17	0.40		0.25	0.28		0.65	0.36		0.28	0.33	
Uniform Delay, d1	23.8	31.1		24.0	30.0		16.6	22.1		22.4	28.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.03	0.91	
Incremental Delay, d2	0.3	1.5		0.6	0.8		3.0	0.8		0.5	0.9	
Delay (s)	24.0	32.7		24.7	30.8		19.6	22.9		23.5	26.9	
Level of Service	C	C		C	C		B	C		C	C	
Approach Delay (s)		31.8			29.8			21.5			26.2	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	26.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	68.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1068: 127th Street & Halsted Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	165	536	79	6	437	123	65	577	7	140	309	100
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	10	12	9	11	12	9	9	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.98			0.97		1.00	1.00		1.00	0.96	
Flt Protected		0.99			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		2912			2885		1436	3185		1450	2788	
Flt Permitted		0.58			0.94		0.43	1.00		0.29	1.00	
Satd. Flow (perm)		1692			2727		654	3185		448	2788	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	183	596	88	7	486	137	72	641	8	156	343	111
RTOR Reduction (vph)	0	13	0	0	39	0	0	1	0	0	48	0
Lane Group Flow (vph)	0	854	0	0	591	0	72	648	0	156	406	0
Confl. Peds. (#/hr)	9		11	11		9	11		14	14		11
Heavy Vehicles (%)	3%	6%	18%	50%	6%	6%	7%	3%	50%	6%	7%	2%
Turn Type	pm+pt			Perm			pm+pt			pm+pt		
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		27.0			19.0		26.0	22.0		26.0	22.0	
Effective Green, g (s)		27.0			19.0		26.0	22.0		26.0	22.0	
Actuated g/C Ratio		0.42			0.29		0.40	0.34		0.40	0.34	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		778			797		310	1078		241	944	
v/s Ratio Prot		c0.07					0.01	0.20		c0.04	0.15	
v/s Ratio Perm		c0.39			0.22		0.08			c0.22		
v/c Ratio		1.10			0.74		0.23	0.60		0.65	0.43	
Uniform Delay, d1		19.0			20.8		12.4	17.9		14.3	16.6	
Progression Factor		1.00			1.54		0.89	0.70		1.00	1.00	
Incremental Delay, d2		62.1			0.6		1.6	2.3		12.7	1.4	
Delay (s)		81.1			32.6		12.6	14.7		27.0	18.1	
Level of Service		F			C		B	B		C	B	
Approach Delay (s)		81.1			32.6			14.5			20.3	
Approach LOS		F			C			B			C	

Intersection Summary			
HCM Average Control Delay	40.2	HCM Level of Service	D
HCM Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	79.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1069: Vermont St & Halsted Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱		↰	↑↱		↰	↑↱	
Volume (vph)	49	219	46	71	154	13	36	632	89	10	359	43
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	12	12	12	12	12
Total Lost time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	0.99		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1666	1899		1615	1942		1658	3202		1138	3197	
Flt Permitted	0.65	1.00		0.53	1.00		0.51	1.00		0.32	1.00	
Satd. Flow (perm)	1137	1899		908	1942		889	3202		379	3197	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	51	226	47	73	159	13	37	652	92	10	370	44
RTOR Reduction (vph)	0	11	0	0	4	0	0	17	0	0	14	0
Lane Group Flow (vph)	51	262	0	73	168	0	37	727	0	10	400	0
Confl. Peds. (#/hr)	10		16	16		10	4		6	6		4
Confl. Bikes (#/hr)			4	4								
Heavy Vehicles (%)	2%	4%	5%	5%	4%	0%	3%	4%	8%	50%	5%	6%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	24.0	24.0		24.0	24.0		31.0	31.0		31.0	31.0	
Effective Green, g (s)	24.0	24.0		24.0	24.0		31.0	31.0		31.0	31.0	
Actuated g/C Ratio	0.37	0.37		0.37	0.37		0.48	0.48		0.48	0.48	
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)	420	701		335	717		424	1527		181	1525	
v/s Ratio Prot		c0.14			0.09			c0.23			0.13	
v/s Ratio Perm	0.04			0.08			0.04			0.03		
v/c Ratio	0.12	0.37		0.22	0.23		0.09	0.48		0.06	0.26	
Uniform Delay, d1	13.5	15.0		14.1	14.2		9.3	11.5		9.1	10.2	
Progression Factor	1.00	1.00		1.73	1.78		1.00	1.00		0.50	0.50	
Incremental Delay, d2	0.6	1.5		0.6	0.3		0.4	1.1		0.5	0.3	
Delay (s)	14.1	16.5		25.0	25.5		9.7	12.6		5.0	5.4	
Level of Service	B	B		C	C		A	B		A	A	
Approach Delay (s)		16.1			25.3			12.4			5.4	
Approach LOS		B			C			B			A	

Intersection Summary			
HCM Average Control Delay	13.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	61.1%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	WBL	WBT	WBR	NBL2	NBL	NBT	NBR	SBL	SBT	SBR	SBR2
Lane Configurations	↰↑↱		↰↑↱				✣			✣		
Volume (vph)	626	190	607	17	3	14	3	46	22	0	2	4
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	12	12	16	12	12	16	12	12
Total Lost time (s)	5.0		5.0				4.0			4.0		
Lane Util. Factor	0.95		0.95				1.00			1.00		
Frpb, ped/bikes	1.00		1.00				1.00			0.99		
Flpb, ped/bikes	1.00		1.00				1.00			1.00		
Frt	1.00		1.00				0.91			0.97		
Flt Protected	1.00		0.99				0.99			0.96		
Satd. Flow (prot)	2956		2955				1732			1897		
Flt Permitted	1.00		0.57				0.94			0.81		
Satd. Flow (perm)	2956		1703				1646			1604		
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	659	200	639	18	3	15	3	48	23	0	2	4
RTOR Reduction (vph)	0	0	2	0	0	0	38	0	0	3	0	0
Lane Group Flow (vph)	659	0	855	0	0	0	31	0	0	26	0	0
Confl. Peds. (#/hr)		7		6		3					3	
Confl. Bikes (#/hr)		1										
Heavy Vehicles (%)	8%	8%	6%	0%	0%	8%	0%	5%	0%	0%	0%	0%
Turn Type		custom				Perm			Perm			
Protected Phases	8	7	4				2			6		
Permitted Phases		4 7				2			6			
Actuated Green, G (s)	18.0		27.0				14.0			14.0		
Effective Green, g (s)	18.0		27.0				14.0			14.0		
Actuated g/C Ratio	0.28		0.42				0.22			0.22		
Clearance Time (s)	5.0		5.0				4.0			4.0		
Lane Grp Cap (vph)	819		823				355			345		
v/s Ratio Prot	0.22		c0.10									
v/s Ratio Perm			c0.34				c0.02			0.02		
v/c Ratio	0.80		1.04				0.09			0.07		
Uniform Delay, d1	21.9		19.0				20.4			20.3		
Progression Factor	1.28		0.77				1.00			1.00		
Incremental Delay, d2	2.0		40.7				0.5			0.4		
Delay (s)	30.0		55.3				20.9			20.8		
Level of Service	C		E				C			C		
Approach Delay (s)	30.0		55.3				20.9			20.8		
Approach LOS	C		E				C			C		

Intersection Summary			
HCM Average Control Delay	91.4	HCM Level of Service	F
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	93.4%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1070: 127th Street & S Wallance St

1/14/2013

Movement	NEL	NER
Lane Configurations		
Volume (vph)	1	333
Ideal Flow (vphpl)	1800	1800
Lane Width	12	12
Total Lost time (s)	5.0	
Lane Util. Factor	1.00	
Frpb, ped/bikes	1.00	
Flpb, ped/bikes	1.00	
Frt	0.87	
Flt Protected	1.00	
Satd. Flow (prot)	1429	
Flt Permitted	1.00	
Satd. Flow (perm)	1429	
Peak-hour factor, PHF	0.95	0.95
Adj. Flow (vph)	1	351
RTOR Reduction (vph)	0	0
Lane Group Flow (vph)	352	0
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		
Heavy Vehicles (%)	0%	9%
Turn Type		
Protected Phases	3	
Permitted Phases		
Actuated Green, G (s)	10.0	
Effective Green, g (s)	10.0	
Actuated g/C Ratio	0.15	
Clearance Time (s)	5.0	
Lane Grp Cap (vph)	220	
v/s Ratio Prot	c0.25	
v/s Ratio Perm		
v/c Ratio	1.60	
Uniform Delay, d1	27.5	
Progression Factor	0.89	
Incremental Delay, d2	289.2	
Delay (s)	313.7	
Level of Service	F	
Approach Delay (s)	313.7	
Approach LOS	F	

Intersection Summary

HCM Signalized Intersection Capacity Analysis
1071: 127th Street & State Street

1/14/2013

	↗	→	←	↖	↘	↙
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰↑	↑↱		↰	↱
Volume (vph)	186	892	659	79	101	156
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		1.00	1.00
Frt		1.00	0.98		1.00	0.85
Flt Protected		0.99	1.00		0.95	1.00
Satd. Flow (prot)		3229	3205		1629	1457
Flt Permitted		0.64	1.00		0.95	1.00
Satd. Flow (perm)		2097	3205		1629	1457
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	207	991	732	88	112	173
RTOR Reduction (vph)	0	0	14	0	0	128
Lane Group Flow (vph)	0	1198	806	0	112	45
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%
Turn Type	Perm					Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)		40.0	40.0		17.0	17.0
Effective Green, g (s)		40.0	40.0		17.0	17.0
Actuated g/C Ratio		0.62	0.62		0.26	0.26
Clearance Time (s)		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		1290	1972		426	381
v/s Ratio Prot			0.25		c0.07	
v/s Ratio Perm		c0.57				0.03
v/c Ratio		0.93	0.41		0.26	0.12
Uniform Delay, d1		11.2	6.4		19.0	18.3
Progression Factor		1.42	1.33		0.93	0.90
Incremental Delay, d2		5.8	0.6		1.5	0.6
Delay (s)		21.8	9.1		19.2	17.2
Level of Service		C	A		B	B
Approach Delay (s)		21.8	9.1		18.0	
Approach LOS		C	A		B	

Intersection Summary			
HCM Average Control Delay	16.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	69.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰↑	↑↱		↰	↱
Volume (vph)	51	921	679	211	170	54
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	12	10	11	12	10	10
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		1.00	1.00
Frpb, ped/bikes		1.00	0.99		1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00
Frt		1.00	0.96		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		2928	2912		1464	1373
Flt Permitted		0.86	1.00		0.95	1.00
Satd. Flow (perm)		2531	2912		1464	1373
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	54	969	715	222	179	57
RTOR Reduction (vph)	0	0	45	0	0	40
Lane Group Flow (vph)	0	1023	892	0	179	17
Confl. Peds. (#/hr)	1			1		
Confl. Bikes (#/hr)	1			1		
Heavy Vehicles (%)	4%	9%	8%	12%	9%	4%
Turn Type	Perm					Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)		38.0	38.0		19.0	19.0
Effective Green, g (s)		38.0	38.0		19.0	19.0
Actuated g/C Ratio		0.58	0.58		0.29	0.29
Clearance Time (s)		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		1480	1702		428	401
v/s Ratio Prot			0.31		c0.12	
v/s Ratio Perm		c0.40				0.01
v/c Ratio		0.69	0.52		0.42	0.04
Uniform Delay, d1		9.4	8.1		18.5	16.5
Progression Factor		0.84	0.59		1.00	1.44
Incremental Delay, d2		1.3	0.7		2.9	0.2
Delay (s)		9.2	5.5		21.6	23.9
Level of Service		A	A		C	C
Approach Delay (s)		9.2	5.5		22.1	
Approach LOS		A	A		C	

Intersection Summary			
HCM Average Control Delay	9.0	HCM Level of Service	A
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	75.3%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1073: 130th Street & Indiana Ave

1/14/2013

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↱		↰	↑	Y	
Volume (vph)	940	153	164	654	401	319
Ideal Flow (vphpl)	2300	1800	1800	2300	1800	1800
Lane Width	15	12	14	16	15	12
Total Lost time (s)	5.0		5.0	5.0	5.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	0.99	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.98		1.00	1.00	0.94	
Flt Protected	1.00		0.95	1.00	0.97	
Satd. Flow (prot)	2240		1770	2436	1761	
Flt Permitted	1.00		0.13	1.00	0.97	
Satd. Flow (perm)	2240		240	2436	1761	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	959	156	167	667	409	326
RTOR Reduction (vph)	9	0	0	0	44	0
Lane Group Flow (vph)	1106	0	167	667	691	0
Confl. Peds. (#/hr)		4	4			8
Heavy Vehicles (%)	11%	7%	3%	7%	2%	2%
Turn Type			Perm			
Protected Phases	4			8	2	
Permitted Phases			8			
Actuated Green, G (s)	31.0		31.0	31.0	24.0	
Effective Green, g (s)	31.0		31.0	31.0	24.0	
Actuated g/C Ratio	0.48		0.48	0.48	0.37	
Clearance Time (s)	5.0		5.0	5.0	5.0	
Lane Grp Cap (vph)	1068		114	1162	650	
v/s Ratio Prot	0.49			0.27	c0.39	
v/s Ratio Perm			c0.69			
v/c Ratio	1.04		1.46	0.57	1.06	
Uniform Delay, d1	17.0		17.0	12.2	20.5	
Progression Factor	1.47		1.00	1.00	1.00	
Incremental Delay, d2	33.7		250.7	2.1	53.2	
Delay (s)	58.7		267.7	14.3	73.7	
Level of Service	E		F	B	E	
Approach Delay (s)	58.7			65.1	73.7	
Approach LOS	E			E	E	

Intersection Summary			
HCM Average Control Delay	64.8	HCM Level of Service	E
HCM Volume to Capacity ratio	1.29		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	115.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑↑	↱		↰↑	↱		✥	
Volume (vph)	1	695	85	251	1150	9	68	0	177	1	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	15	13	11	11	12	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0	4.0	3.0	3.0	4.0		4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85		1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.95	1.00		0.95	
Satd. Flow (prot)	1881	3213	1422	1589	3138	1366		1642	1443		969	
Flt Permitted	0.22	1.00	1.00	0.28	1.00	1.00		0.76	1.00		0.71	
Satd. Flow (perm)	430	3213	1422	472	3138	1366		1309	1443		722	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1	772	94	279	1278	10	76	0	197	1	0	0
RTOR Reduction (vph)	0	0	43	0	0	2	0	0	173	0	0	0
Lane Group Flow (vph)	1	772	51	279	1278	8	0	76	24	0	1	0
Heavy Vehicles (%)	0%	10%	4%	4%	9%	12%	18%	0%	6%	100%	0%	0%
Turn Type	Perm		Perm	custom		custom	Perm		Perm	Perm		
Protected Phases		4		3	3 8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)	45.7	45.7	45.7	66.6	66.6	66.6		10.4	10.4		10.4	
Effective Green, g (s)	45.7	45.7	45.7	66.6	66.6	66.6		10.4	10.4		10.4	
Actuated g/C Ratio	0.54	0.54	0.54	0.78	0.78	0.78		0.12	0.12		0.12	
Clearance Time (s)	4.0	4.0	4.0	3.0		4.0		4.0	4.0		4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0		3.0	3.0		3.0	
Lane Grp Cap (vph)	231	1727	765	605	2459	1070		160	177		88	
v/s Ratio Prot		0.24		0.10	c0.41							
v/s Ratio Perm	0.00		0.04	0.26		0.01		c0.06	0.02		0.00	
v/c Ratio	0.00	0.45	0.07	0.46	0.52	0.01		0.47	0.14		0.01	
Uniform Delay, d1	9.1	12.0	9.4	3.6	3.4	2.0		34.8	33.3		32.8	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2	0.0	0.8	0.2	0.6	0.2	0.0		2.2	0.4		0.1	
Delay (s)	9.1	12.8	9.6	4.2	3.5	2.0		37.0	33.6		32.8	
Level of Service	A	B	A	A	A	A		D	C		C	
Approach Delay (s)		12.4			3.6			34.6			32.8	
Approach LOS		B			A			C			C	

Intersection Summary			
HCM Average Control Delay	9.6	HCM Level of Service	A
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	7.0
Intersection Capacity Utilization	51.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1942: 111th Street & Langley Avenue

1/14/2013

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	12	778	813	43	23	11
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	12	10	10
Total Lost time (s)		5.0	5.0		3.0	
Lane Util. Factor		0.95	0.95		1.00	
Frt		1.00	0.99		0.96	
Flt Protected		1.00	1.00		0.97	
Satd. Flow (prot)		3038	3017		1481	
Flt Permitted		0.93	1.00		0.97	
Satd. Flow (perm)		2842	3017		1481	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	13	864	903	48	26	12
RTOR Reduction (vph)	0	0	4	0	11	0
Lane Group Flow (vph)	0	877	947	0	27	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%
Turn Type	Perm					
Protected Phases		4	8 2 11		5	
Permitted Phases	4					
Actuated Green, G (s)		33.0	64.0		7.0	
Effective Green, g (s)		33.0	64.0		7.0	
Actuated g/C Ratio		0.37	0.71		0.08	
Clearance Time (s)		5.0			3.0	
Lane Grp Cap (vph)		1042	2145		115	
v/s Ratio Prot			c0.31		c0.02	
v/s Ratio Perm		c0.31				
v/c Ratio		0.84	0.44		0.23	
Uniform Delay, d1		26.1	5.5		39.0	
Progression Factor		1.00	0.00		1.00	
Incremental Delay, d2		8.2	0.3		4.7	
Delay (s)		34.3	0.3		43.7	
Level of Service		C	A		D	
Approach Delay (s)		34.3	0.3		43.7	
Approach LOS		C	A		D	

Intersection Summary			
HCM Average Control Delay	17.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	42.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

	↰	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Lane Configurations		✢			↰↑↑↱			✢			↰↑	↱
Volume (vph)	87	427	1	26	570	78	0	0	1	43	3	125
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	12	12	11	12	11
Total Lost time (s)		4.0			4.0			3.0			3.0	3.0
Lane Util. Factor		1.00			0.95			1.00			1.00	1.00
Frpb, ped/bikes		1.00			1.00			0.92			1.00	0.96
Flpb, ped/bikes		1.00			1.00			1.00			0.98	1.00
Frt		1.00			0.98			0.86			1.00	0.85
Flt Protected		0.99			1.00			1.00			0.96	1.00
Satd. Flow (prot)		1727			3232			1432			1610	1282
Flt Permitted		0.77			0.93			1.00			0.94	1.00
Satd. Flow (perm)		1340			3026			1432			1581	1282
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	97	474	1	29	633	87	0	0	1	48	3	139
RTOR Reduction (vph)	0	0	0	0	12	0	0	1	0	0	0	93
Lane Group Flow (vph)	0	572	0	0	737	0	0	0	0	0	51	46
Confl. Peds. (#/hr)	33		13	13		33	29		13	13		29
Confl. Bikes (#/hr)	1		1	1		1						
Heavy Vehicles (%)	4%	3%	0%	0%	4%	0%	0%	0%	0%	5%	0%	11%
Turn Type	Perm			Prot			Perm			pm+pt		Perm
Protected Phases		4		3	3 4			1		2	1 2	
Permitted Phases	4				3		1	1		1 2		1 2
Actuated Green, G (s)		31.0			45.0			9.0			25.0	28.0
Effective Green, g (s)		31.0			45.0			9.0			25.0	28.0
Actuated g/C Ratio		0.36			0.53			0.11			0.29	0.33
Clearance Time (s)		4.0						3.0				
Lane Grp Cap (vph)		489			1636			152			470	422
v/s Ratio Prot					c0.07			0.00			0.02	
v/s Ratio Perm		c0.43			0.16						0.01	c0.04
v/c Ratio		1.17			0.45			0.00			0.11	0.11
Uniform Delay, d1		27.0			12.4			34.0			21.9	19.8
Progression Factor		1.00			1.82			1.00			1.00	1.00
Incremental Delay, d2		96.5			0.1			0.0			0.5	0.5
Delay (s)		123.5			22.6			34.0			22.3	20.3
Level of Service		F			C			C			C	C
Approach Delay (s)		123.5			22.6			34.0			20.9	
Approach LOS		F			C			C			C	

Intersection Summary			
HCM Average Control Delay	60.5	HCM Level of Service	E
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	72.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1001: 95th Street & Wentworth Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑↱		↰	↑↑↱			↰↑↱			↰↓↱	
Volume (vph)	39	598	28	35	997	57	36	29	48	23	24	87
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	16	10	10	16	8	15	8	8	14	8
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			0.99			0.98	
Flpb, ped/bikes	0.98	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.99			0.94			0.91	
Flt Protected	0.95	1.00		0.95	1.00			0.98			0.99	
Satd. Flow (prot)	1556	3022		1587	3021			1808			1703	
Flt Permitted	0.17	1.00		0.36	1.00			0.89			0.95	
Satd. Flow (perm)	286	3022		604	3021			1636			1627	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	41	629	29	37	1049	60	38	31	51	24	25	92
RTOR Reduction (vph)	0	5	0	0	6	0	0	33	0	0	22	0
Lane Group Flow (vph)	41	653	0	37	1103	0	0	87	0	0	119	0
Confl. Peds. (#/hr)	145		16	16		145	17		19	19		17
Confl. Bikes (#/hr)	5					5			2	2		
Heavy Vehicles (%)	0%	5%	0%	0%	4%	2%	0%	0%	0%	0%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	34.0	34.0		34.0	34.0			22.0			22.0	
Effective Green, g (s)	34.0	34.0		34.0	34.0			23.0			23.0	
Actuated g/C Ratio	0.52	0.52		0.52	0.52			0.35			0.35	
Clearance Time (s)	4.0	4.0		4.0	4.0			5.0			5.0	
Lane Grp Cap (vph)	150	1581		316	1580			579			576	
v/s Ratio Prot		0.22			c0.37							
v/s Ratio Perm	0.14			0.06				0.05			c0.07	
v/c Ratio	0.27	0.41		0.12	0.70			0.15			0.21	
Uniform Delay, d1	8.6	9.4		7.9	11.6			14.3			14.6	
Progression Factor	1.00	1.00		0.70	1.38			1.00			1.00	
Incremental Delay, d2	4.5	0.8		0.7	2.3			0.5			0.8	
Delay (s)	13.1	10.2		6.2	18.4			14.9			15.5	
Level of Service	B	B		A	B			B			B	
Approach Delay (s)		10.4			18.0			14.9			15.5	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	15.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1002: 95th Street & Lafayette Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↑	↱				↰↰	↑	↱
Volume (vph)	25	787	5	31	619	55	0	0	0	578	88	375
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	5.0	5.0		3.0	3.0	3.0				5.0	5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00				0.97	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.67				1.00	1.00	0.98
Flpb, ped/bikes	0.92	1.00		1.00	1.00	1.00				1.00	1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85				1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00				0.95	1.00	1.00
Satd. Flow (prot)	790	3379		1710	3226	514				3285	1731	1481
Flt Permitted	0.40	1.00		0.14	1.00	1.00				0.95	1.00	1.00
Satd. Flow (perm)	336	3379		248	3226	514				3285	1731	1481
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	26	828	5	33	652	58	0	0	0	608	93	395
RTOR Reduction (vph)	0	0	0	0	0	25	0	0	0	0	0	168
Lane Group Flow (vph)	26	833	0	33	652	33	0	0	0	608	93	227
Confl. Peds. (#/hr)	350		4	4		350	8		6	6		8
Confl. Bikes (#/hr)	7		1	1		7						
Heavy Vehicles (%)	100%	1%	20%	0%	6%	100%	0%	0%	0%	1%	4%	1%
Turn Type	pm+pt			pm+pt		Perm				Split		Perm
Protected Phases	7	4		3	8					6	6	
Permitted Phases	4			8		8						6
Actuated Green, G (s)	43.0	43.0		73.0	73.0	73.0				30.0	30.0	30.0
Effective Green, g (s)	43.0	43.0		73.0	73.0	73.0				30.0	30.0	30.0
Actuated g/C Ratio	0.33	0.33		0.56	0.56	0.56				0.23	0.23	0.23
Clearance Time (s)	5.0	5.0		3.0	3.0	3.0				5.0	5.0	5.0
Lane Grp Cap (vph)	160	1118		634	1812	289				758	399	342
v/s Ratio Prot	0.02	c0.25		0.02	c0.20					c0.19	0.05	
v/s Ratio Perm	0.04			0.01		0.06						0.15
v/c Ratio	0.16	0.75		0.05	0.36	0.11				0.80	0.23	0.66
Uniform Delay, d1	31.6	38.6		15.2	15.7	13.3				47.2	40.6	45.4
Progression Factor	0.85	0.86		0.33	0.74	1.70				1.00	1.00	1.00
Incremental Delay, d2	2.1	4.4		0.1	0.4	0.5				8.8	1.4	9.8
Delay (s)	28.9	37.4		5.1	12.0	23.1				56.0	42.0	55.2
Level of Service	C	D		A	B	C				E	D	E
Approach Delay (s)		37.2			12.6			0.0			54.5	
Approach LOS		D			B			A			D	

Intersection Summary			
HCM Average Control Delay	37.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	52.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1003: 95th Street & State Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↱		↰	↑↑	↱		↰↑	↱	↰		↱
Volume (vph)	338	809	218	53	575	280	100	247	54	54	0	30
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0	3.0		5.0	5.0	5.0		5.0	5.0	5.0		5.0
Lane Util. Factor	0.97	0.95		1.00	0.95	1.00		0.95	1.00	1.00		1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.67		1.00	0.91	1.00		0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Frt	1.00	0.97		1.00	1.00	0.85		1.00	0.85	1.00		0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.99	1.00	0.95		1.00
Satd. Flow (prot)	3285	3263		1710	3138	1018		3301	1363	855		738
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.99	1.00	0.95		1.00
Satd. Flow (perm)	3285	3263		1710	3138	1018		3301	1363	855		738
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	356	852	229	56	605	295	105	260	57	57	0	32
RTOR Reduction (vph)	0	19	0	0	0	222	0	0	41	0	0	30
Lane Group Flow (vph)	356	1063	0	56	605	73	0	365	16	57	0	2
Confl. Peds. (#/hr)	327		13	13		327	6		60	60		6
Confl. Bikes (#/hr)	6					6						
Heavy Vehicles (%)	1%	1%	0%	0%	9%	1%	0%	3%	2%	100%	0%	100%
Turn Type	Prot			Prot		Perm	Split		Perm	Prot		custom
Protected Phases	7	4		3	8		2	2		6		
Permitted Phases						8			2			6
Actuated Green, G (s)	41.0	65.0		8.0	32.0	32.0		29.0	29.0	10.0		10.0
Effective Green, g (s)	41.0	65.0		8.0	32.0	32.0		29.0	29.0	10.0		10.0
Actuated g/C Ratio	0.32	0.50		0.06	0.25	0.25		0.22	0.22	0.08		0.08
Clearance Time (s)	3.0	3.0		5.0	5.0	5.0		5.0	5.0	5.0		5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0	3.0	3.0		3.0
Lane Grp Cap (vph)	1036	1632		105	772	251		736	304	66		57
v/s Ratio Prot	0.11	c0.33		0.03	c0.19			c0.11		c0.07		
v/s Ratio Perm						0.07			0.01			0.00
v/c Ratio	0.34	0.65		0.53	0.78	0.29		0.50	0.05	0.86		0.04
Uniform Delay, d1	34.2	24.1		59.2	45.8	39.8		44.1	39.7	59.3		55.6
Progression Factor	0.93	0.18		1.00	1.00	1.00		0.95	1.00	1.00		1.00
Incremental Delay, d2	0.6	1.3		18.0	7.8	2.9		2.4	0.3	65.1		0.3
Delay (s)	32.5	5.7		77.2	53.6	42.7		44.2	40.1	124.4		55.9
Level of Service	C	A		E	D	D		D	D	F		E
Approach Delay (s)		12.3			51.6			43.7			99.8	
Approach LOS		B			D			D			F	

Intersection Summary			
HCM Average Control Delay	32.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	68.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1004: 95th Street & Michigan Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱		↰	↑↑		↰		↱	↰	↱	
Volume (vph)	0	885	180	102	813	0	89	0	103	9	18	7
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	11	11	8	12	12	12	14	15	12
Total Lost time (s)		4.0		4.0	4.0		4.0		4.0	4.0	4.0	
Lane Util. Factor		0.95		1.00	0.95		1.00		1.00	1.00	1.00	
Frpb, ped/bikes		0.99		1.00	1.00		1.00		0.98	1.00	0.99	
Flpb, ped/bikes		1.00		1.00	1.00		0.97		1.00	0.99	1.00	
Frt		0.97		1.00	1.00		1.00		0.85	1.00	0.96	
Flt Protected		1.00		0.95	1.00		0.95		1.00	0.95	1.00	
Satd. Flow (prot)		2987		1649	3149		1388		1451	1803	1870	
Flt Permitted		1.00		0.17	1.00		0.74		1.00	0.95	1.00	
Satd. Flow (perm)		2987		296	3149		1079		1451	1803	1870	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	983	200	113	903	0	99	0	114	10	20	8
RTOR Reduction (vph)	0	17	0	0	0	0	0	0	78	0	5	0
Lane Group Flow (vph)	0	1166	0	113	903	0	99	0	36	10	23	0
Confl. Peds. (#/hr)	67		19	19		67	38		12	12		38
Confl. Bikes (#/hr)			1	1								
Heavy Vehicles (%)	0%	2%	11%	0%	5%	0%	19%	0%	3%	0%	0%	0%
Turn Type				Perm			custom		custom	Perm		
Protected Phases		4			8						6	
Permitted Phases				8			2		2	6		
Actuated Green, G (s)		60.0		60.0	60.0		32.0		32.0	32.0	32.0	
Effective Green, g (s)		60.0		60.0	60.0		32.0		32.0	32.0	32.0	
Actuated g/C Ratio		0.60		0.60	0.60		0.32		0.32	0.32	0.32	
Clearance Time (s)		4.0		4.0	4.0		4.0		4.0	4.0	4.0	
Lane Grp Cap (vph)		1792		178	1889		345		464	577	598	
v/s Ratio Prot		c0.39			0.29						0.01	
v/s Ratio Perm				0.38			c0.09		0.03	0.01		
v/c Ratio		0.65		0.63	0.48		0.29		0.08	0.02	0.04	
Uniform Delay, d1		13.1		12.9	11.2		25.5		23.7	23.2	23.4	
Progression Factor		1.00		1.00	1.00		1.00		1.00	1.00	1.00	
Incremental Delay, d2		1.8		16.0	0.9		2.1		0.3	0.1	0.1	
Delay (s)		15.0		28.9	12.1		27.5		24.0	23.3	23.5	
Level of Service		B		C	B		C		C	C	C	
Approach Delay (s)		15.0			14.0			25.7			23.5	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM Average Control Delay	15.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	61.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1005: 98th Place & Halsted Street

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↰	↰↑	↱	↰	↑↑↑			↑↑↱	
Volume (vph)	0	0	0	290	0	1188	210	666	0	0	789	490
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	12	12	10	10	12	12	11	12
Total Lost time (s)				4.0		5.0	3.0	4.0			4.0	
Lane Util. Factor				0.95		1.00	1.00	0.91			0.91	
Frpb, ped/bikes				1.00		1.00	1.00	1.00			0.98	
Flpb, ped/bikes				1.00		1.00	1.00	1.00			1.00	
Frt				1.00		0.85	1.00	1.00			0.94	
Flt Protected				0.95		1.00	0.95	1.00			1.00	
Satd. Flow (prot)				1540		1530	1535	4327			4270	
Flt Permitted				0.95		1.00	0.95	1.00			1.00	
Satd. Flow (perm)				1540		1530	1535	4327			4270	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	0	0	296	0	1212	214	680	0	0	805	500
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	296	0	1212	214	680	0	0	1305	0
Confl. Peds. (#/hr)	2					2	18		3	3		18
Heavy Vehicles (%)	0%	0%	0%	2%	0%	0%	4%	6%	0%	0%	4%	1%
Turn Type				Split		Prot	Prot					
Protected Phases				8	8	8	5	2			6	
Permitted Phases												
Actuated Green, G (s)				30.0		30.0	32.0	66.0			31.0	
Effective Green, g (s)				31.0		30.0	32.0	66.0			31.0	
Actuated g/C Ratio				0.30		0.29	0.30	0.63			0.30	
Clearance Time (s)				5.0		5.0	3.0	4.0			4.0	
Lane Grp Cap (vph)				455		437	468	2720			1261	
v/s Ratio Prot				0.19		c0.79	c0.14	0.16			c0.31	
v/s Ratio Perm												
v/c Ratio				0.65		2.77	0.46	0.25			1.16dr	
Uniform Delay, d1				32.3		37.5	29.5	8.6			37.0	
Progression Factor				1.00		1.00	0.63	2.08			1.00	
Incremental Delay, d2				7.0		804.4	2.7	0.2			34.8	
Delay (s)				39.3		841.9	21.4	18.0			71.8	
Level of Service				D		F	C	B			E	
Approach Delay (s)		0.0			684.4			18.8			71.8	
Approach LOS		A			F			B			E	

Intersection Summary			
HCM Average Control Delay	308.2	HCM Level of Service	F
HCM Volume to Capacity ratio	1.40		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	98.9%	ICU Level of Service	F
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1006: 99th Street & Halsted Street

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↰↑↱						↑↑↑	↱↱	↰	↑↑↑	
Volume (vph)	324	770	145	0	0	0	0	552	401	355	723	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	13	12	12	12	12	12	10	10	8	12	12	12
Total Lost time (s)	5.0	5.0						4.0	4.0	3.0	4.0	
Lane Util. Factor	0.91	0.91						0.91	0.88	1.00	0.91	
Frpb, ped/bikes	1.00	1.00						1.00	1.00	1.00	1.00	
Flpb, ped/bikes	0.99	1.00						1.00	1.00	1.00	1.00	
Frt	1.00	0.98						1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00						1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1509	3157						4368	2244	1598	4680	
Flt Permitted	0.95	1.00						1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1509	3157						4368	2244	1598	4680	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	334	794	149	0	0	0	0	569	413	366	745	0
RTOR Reduction (vph)	0	14	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	301	962	0	0	0	0	0	569	413	366	745	0
Confl. Peds. (#/hr)	6		1	1		6	6					6
Heavy Vehicles (%)	6%	1%	0%	0%	0%	0%	0%	5%	4%	7%	5%	0%
Turn Type	Perm								Perm	Prot		
Protected Phases		4						2		1	6	
Permitted Phases	4								2			
Actuated Green, G (s)	34.0	34.0						28.0	28.0	31.0	62.0	
Effective Green, g (s)	34.0	34.0						28.0	28.0	31.0	62.0	
Actuated g/C Ratio	0.32	0.32						0.27	0.27	0.30	0.59	
Clearance Time (s)	5.0	5.0						4.0	4.0	3.0	4.0	
Lane Grp Cap (vph)	489	1022						1165	598	472	2763	
v/s Ratio Prot								0.13		c0.23	0.16	
v/s Ratio Perm	0.20	0.30							c0.18			
v/c Ratio	0.62	0.94						0.49	0.69	0.78	0.27	
Uniform Delay, d1	30.0	34.5						32.5	34.6	33.8	10.5	
Progression Factor	1.00	1.00						1.14	1.14	0.86	0.21	
Incremental Delay, d2	5.7	17.2						1.3	5.8	4.7	0.1	
Delay (s)	35.7	51.7						38.4	45.3	33.7	2.3	
Level of Service	D	D						D	D	C	A	
Approach Delay (s)		48.0			0.0			41.3			12.6	
Approach LOS		D			A			D			B	

Intersection Summary			
HCM Average Control Delay	34.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	98.9%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1007: 98th Place & Wentworth Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↰	↑↱		↰	↑			↱	
Volume (vph)	0	0	0	287	25	24	11	151	0	0	145	5
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	14	12	12	16	12
Total Lost time (s)				4.0	4.0		4.0	4.0			-3.0	
Lane Util. Factor				1.00	0.95		1.00	1.00			1.00	
Frpb, ped/bikes				1.00	0.99		1.00	1.00			1.00	
Flpb, ped/bikes				1.00	1.00		1.00	1.00			1.00	
Frt				1.00	0.93		1.00	1.00			1.00	
Flt Protected				0.95	1.00		0.95	1.00			1.00	
Satd. Flow (prot)				1688	3132		1710	1846			1955	
Flt Permitted				0.95	1.00		0.55	1.00			1.00	
Satd. Flow (perm)				1688	3132		982	1846			1955	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	319	28	27	12	168	0	0	161	6
RTOR Reduction (vph)	0	0	0	0	18	0	0	0	0	0	1	0
Lane Group Flow (vph)	0	0	0	319	37	0	12	168	0	0	166	0
Confl. Peds. (#/hr)	2		2	2		2			6	6		
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	0%	0%	0%	1%	0%	0%	0%	4%	0%	0%	4%	0%
Turn Type				Perm			pm+pt					
Protected Phases					8		7	2			6	
Permitted Phases				8			2					
Actuated Green, G (s)				27.0	27.0		50.0	50.0			40.0	
Effective Green, g (s)				27.0	27.0		50.0	50.0			46.0	
Actuated g/C Ratio				0.32	0.32		0.59	0.59			0.54	
Clearance Time (s)				4.0	4.0		4.0	4.0			3.0	
Lane Grp Cap (vph)				536	995		638	1086			1058	
v/s Ratio Prot					0.01		0.00	c0.09			c0.08	
v/s Ratio Perm				c0.19			0.01					
v/c Ratio				0.60	0.04		0.02	0.15			0.16	
Uniform Delay, d1				24.4	20.0		10.5	7.9			9.8	
Progression Factor				1.00	1.00		1.05	1.18			1.00	
Incremental Delay, d2				4.8	0.1		0.1	0.3			0.3	
Delay (s)				29.2	20.1		11.1	9.7			10.1	
Level of Service				C	C		B	A			B	
Approach Delay (s)		0.0			27.9			9.7			10.1	
Approach LOS		A			C			A			B	

Intersection Summary			
HCM Average Control Delay	19.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	1.0
Intersection Capacity Utilization	36.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱			✣			↱		↰	↑	
Volume (vph)	12	11	23	5	0	14	0	136	39	46	387	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	16	15	12	8	12	8	12	12	12	10	13	12
Total Lost time (s)	4.0	4.0			4.0			3.0		4.0	4.0	
Lane Util. Factor	1.00	1.00			1.00			1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.97			0.98			0.99		1.00	1.00	
Flpb, ped/bikes	1.00	1.00			1.00			1.00		1.00	1.00	
Frt	1.00	0.90			0.90			0.97		1.00	1.00	
Flt Protected	0.95	1.00			0.99			1.00		0.95	1.00	
Satd. Flow (prot)	1935	1735			1565			1720		1590	1860	
Flt Permitted	0.74	1.00			0.97			1.00		0.61	1.00	
Satd. Flow (perm)	1516	1735			1531			1720		1021	1860	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	13	12	24	5	0	15	0	143	41	48	407	0
RTOR Reduction (vph)	0	16	0	0	10	0	0	12	0	0	0	0
Lane Group Flow (vph)	13	20	0	0	10	0	0	172	0	48	407	0
Confl. Peds. (#/hr)	1		11	11		1	1		10	10		1
Confl. Bikes (#/hr)			2	2			1		2	2		1
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%
Turn Type	Perm			Perm						pm+pt		
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8						6		
Actuated Green, G (s)	27.0	27.0			27.0			40.0		50.0	50.0	
Effective Green, g (s)	27.0	27.0			27.0			40.0		50.0	50.0	
Actuated g/C Ratio	0.32	0.32			0.32			0.47		0.59	0.59	
Clearance Time (s)	4.0	4.0			4.0			3.0		4.0	4.0	
Lane Grp Cap (vph)	482	551			486			809		647	1094	
v/s Ratio Prot		c0.01						0.10		0.01	c0.22	
v/s Ratio Perm	0.01				0.01					0.04		
v/c Ratio	0.03	0.04			0.02			0.21		0.07	0.37	
Uniform Delay, d1	20.0	20.0			19.9			13.2		8.5	9.2	
Progression Factor	1.00	1.00			1.00			1.00		0.96	0.86	
Incremental Delay, d2	0.1	0.1			0.1			0.6		0.2	0.9	
Delay (s)	20.1	20.1			20.0			13.8		8.4	8.8	
Level of Service	C	C			B			B		A	A	
Approach Delay (s)		20.1			20.0			13.8			8.8	
Approach LOS		C			B			B			A	

Intersection Summary			
HCM Average Control Delay	11.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.25		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	41.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1009: 99th St & State Street

1/14/2013

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰↱		↰	↑	↱	
Volume (vph)	46	41	16	183	273	27
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	14	12	13	12	10	12
Total Lost time (s)	4.0		4.0	4.0	4.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.94		1.00	1.00	0.99	
Flt Protected	0.97		0.95	1.00	1.00	
Satd. Flow (prot)	1751		1765	1782	1656	
Flt Permitted	0.97		0.52	1.00	1.00	
Satd. Flow (perm)	1751		966	1782	1656	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	51	46	18	203	303	30
RTOR Reduction (vph)	31	0	0	0	5	0
Lane Group Flow (vph)	66	0	18	203	328	0
Confl. Peds. (#/hr)			2			2
Heavy Vehicles (%)	0%	0%	0%	1%	0%	0%
Turn Type			Perm			
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	21.0		36.0	36.0	36.0	
Effective Green, g (s)	21.0		36.0	36.0	36.0	
Actuated g/C Ratio	0.32		0.55	0.55	0.55	
Clearance Time (s)	4.0		4.0	4.0	4.0	
Lane Grp Cap (vph)	566		535	987	917	
v/s Ratio Prot	c0.04			0.11	c0.20	
v/s Ratio Perm			0.02			
v/c Ratio	0.12		0.03	0.21	0.36	
Uniform Delay, d1	15.5		6.6	7.3	8.1	
Progression Factor	1.00		0.54	0.64	1.41	
Incremental Delay, d2	0.4		0.1	0.5	0.9	
Delay (s)	15.9		3.7	5.1	12.3	
Level of Service	B		A	A	B	
Approach Delay (s)	15.9			5.0	12.3	
Approach LOS	B			A	B	

Intersection Summary			
HCM Average Control Delay	10.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.27		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	28.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1010: 99th St & Michigan Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↰↱		↰	↑			↑	↱
Volume (vph)	0	0	0	31	265	9	257	161	4	0	295	17
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	14	16	12	12	15	12	12	13	10
Total Lost time (s)					4.0		4.0	4.0			3.0	3.0
Lane Util. Factor					0.95		1.00	1.00			1.00	1.00
Frpb, ped/bikes					1.00		1.00	1.00			1.00	1.00
Flpb, ped/bikes					1.00		1.00	1.00			1.00	1.00
Frt					1.00		1.00	1.00			1.00	0.85
Flt Protected					0.99		0.95	1.00			1.00	1.00
Satd. Flow (prot)					3771		1693	1677			1738	1428
Flt Permitted					0.99		0.46	1.00			1.00	1.00
Satd. Flow (perm)					3771		820	1677			1738	1428
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	34	294	10	286	179	4	0	328	19
RTOR Reduction (vph)	0	0	0	0	3	0	0	1	0	0	0	11
Lane Group Flow (vph)	0	0	0	0	335	0	286	182	0	0	328	8
Confl. Peds. (#/hr)	1					1			5	5		
Heavy Vehicles (%)	0%	0%	0%	0%	2%	0%	1%	18%	0%	0%	7%	0%
Turn Type				Split			pm+pt					Perm
Protected Phases				8	8		7	2			6	
Permitted Phases							2					6
Actuated Green, G (s)					26.0		51.0	51.0			38.0	38.0
Effective Green, g (s)					26.0		51.0	51.0			38.0	38.0
Actuated g/C Ratio					0.31		0.60	0.60			0.45	0.45
Clearance Time (s)					4.0		4.0	4.0			3.0	3.0
Lane Grp Cap (vph)					1153		595	1006			777	638
v/s Ratio Prot					c0.09		c0.06	0.11			0.19	
v/s Ratio Perm							c0.23					0.01
v/c Ratio					0.29		0.48	0.18			0.42	0.01
Uniform Delay, d1					22.5		14.2	7.6			16.0	13.1
Progression Factor					1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2					0.6		2.8	0.4			1.7	0.0
Delay (s)					23.1		16.9	8.0			17.7	13.1
Level of Service					C		B	A			B	B
Approach Delay (s)		0.0			23.1			13.5			17.4	
Approach LOS		A			C			B			B	

Intersection Summary			
HCM Average Control Delay	17.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

1011: 99th Street & Martin Luther King Jr Drive

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					✣		↰	↑↱		↰	↑↱	
Volume (vph)	0	0	0	96	94	38	133	217	30	59	704	44
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	15	12	12	12	12	12	13	12
Total Lost time (s)					4.0		3.0	4.0		3.0	4.0	
Lane Util. Factor					1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes					1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes					1.00		1.00	1.00		1.00	1.00	
Frt					0.98		1.00	0.98		1.00	0.99	
Flt Protected					0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)					1896		1710	3290		1707	3467	
Flt Permitted					0.98		0.25	1.00		0.58	1.00	
Satd. Flow (perm)					1896		446	3290		1048	3467	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	107	104	42	148	241	33	66	782	49
RTOR Reduction (vph)	0	0	0	0	10	0	0	14	0	0	6	0
Lane Group Flow (vph)	0	0	0	0	243	0	148	260	0	66	825	0
Confl. Peds. (#/hr)							5		5	5		5
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	1%	0%
Turn Type				Split			pm+pt			pm+pt		
Protected Phases				8	8		5	2		1	6	
Permitted Phases							2			6		
Actuated Green, G (s)					23.0		41.0	34.0		41.0	34.0	
Effective Green, g (s)					23.0		41.0	34.0		41.0	34.0	
Actuated g/C Ratio					0.31		0.55	0.45		0.55	0.45	
Clearance Time (s)					4.0		3.0	4.0		3.0	4.0	
Lane Grp Cap (vph)					581		362	1491		634	1572	
v/s Ratio Prot					c0.13		c0.04	0.08		0.01	c0.24	
v/s Ratio Perm							0.19			0.05		
v/c Ratio					0.42		0.41	0.17		0.10	0.52	
Uniform Delay, d1					20.7		16.4	12.2		8.2	14.7	
Progression Factor					1.00		0.83	0.82		1.00	1.00	
Incremental Delay, d2					2.2		3.4	0.3		0.3	1.3	
Delay (s)					22.9		17.0	10.3		8.6	16.0	
Level of Service					C		B	B		A	B	
Approach Delay (s)		0.0			22.9			12.6			15.4	
Approach LOS		A			C			B			B	

Intersection Summary			
HCM Average Control Delay	15.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	53.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥		↰	↑↱		↰	↑↱	
Volume (vph)	32	49	13	9	63	63	7	285	24	159	591	50
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	16	12	12	10	11	12	12	11	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.98			0.94		1.00	0.99		1.00	0.99	
Flt Protected		0.98			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1964			1655		1595	3174		1704	3231	
Flt Permitted		0.89			0.99		0.36	1.00		0.56	1.00	
Satd. Flow (perm)		1775			1637		598	3174		996	3231	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	34	52	14	9	66	66	7	300	25	167	622	53
RTOR Reduction (vph)	0	8	0	0	42	0	0	8	0	0	8	0
Lane Group Flow (vph)	0	92	0	0	99	0	7	317	0	167	667	0
Confl. Peds. (#/hr)	2					2	1		6	6		1
Confl. Bikes (#/hr)			1	1			3					3
Heavy Vehicles (%)	0%	0%	0%	0%	2%	0%	0%	3%	0%	0%	1%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		25.0			25.0		42.0	42.0		42.0	42.0	
Effective Green, g (s)		25.0			25.0		42.0	42.0		42.0	42.0	
Actuated g/C Ratio		0.33			0.33		0.56	0.56		0.56	0.56	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		592			546		335	1777		558	1809	
v/s Ratio Prot								0.10			c0.21	
v/s Ratio Perm		0.05			c0.06		0.01			0.17		
v/c Ratio		0.16			0.18		0.02	0.18		0.30	0.37	
Uniform Delay, d1		17.6			17.7		7.3	8.1		8.7	9.1	
Progression Factor		1.00			1.00		1.00	1.00		0.27	0.25	
Incremental Delay, d2		0.6			0.7		0.1	0.2		1.2	0.5	
Delay (s)		18.1			18.5		7.5	8.3		3.6	2.8	
Level of Service		B			B		A	A		A	A	
Approach Delay (s)		18.1			18.5			8.3			3.0	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	6.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	48.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis
1013: 100th Street & Cottage Grove Avenue

1/14/2013

	↗	↘	↖	↑	↓	↙
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	Y			↰↑	↑↱	
Sign Control	Stop			Stop	Stop	
Volume (vph)	35	182	64	248	559	77
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	39	202	71	276	621	86

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	241	163	184	414	293
Volume Left (vph)	39	71	0	0	0
Volume Right (vph)	202	0	0	0	86
Hadj (s)	-0.42	0.27	0.05	0.05	-0.15
Departure Headway (s)	5.7	6.4	6.2	5.8	5.6
Degree Utilization, x	0.38	0.29	0.32	0.67	0.45
Capacity (veh/h)	596	538	557	609	630
Control Delay (s)	12.1	10.8	10.9	18.4	11.9
Approach Delay (s)	12.1	10.8		15.7	
Approach LOS	B	B		C	

Intersection Summary			
Delay	13.7		
HCM Level of Service	B		
Intersection Capacity Utilization	52.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR
Lane Configurations		↰	↑	↱	↰	↑	↰			↰	↑↱	
Volume (vph)	32	35	373	18	20	389	69	77	55	68	351	32
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		3.5	4.0	4.0	4.0	4.0	4.0			4.0	4.0	
Lane Util. Factor		1.00	1.00	1.00	1.00	1.00	1.00			1.00	0.95	
Frpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	0.93			1.00	1.00	
Flpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	
Frt		1.00	1.00	0.85	1.00	1.00	0.85			1.00	0.99	
Flt Protected		0.95	1.00	1.00	0.95	1.00	1.00			0.95	1.00	
Satd. Flow (prot)		1612	1731	1530	1710	1731	1421			1710	3250	
Flt Permitted		0.14	1.00	1.00	0.52	1.00	1.00			0.14	1.00	
Satd. Flow (perm)		238	1731	1530	936	1731	1421			257	3250	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	36	39	414	20	22	432	77	86	61	76	390	36
RTOR Reduction (vph)	0	0	0	12	0	0	38	0	0	0	7	0
Lane Group Flow (vph)	0	75	414	8	22	432	125	0	0	137	419	0
Confl. Peds. (#/hr)		25					25					3
Heavy Vehicles (%)	6%	6%	4%	0%	0%	4%	0%	0%	0%	0%	4%	0%
Turn Type	Perm	pm+pt		Perm	Perm		Perm		Perm	Perm		
Protected Phases		7	4			8					2	
Permitted Phases	4	4		4	8		8		2	2		
Actuated Green, G (s)		44.0	44.0	44.0	25.0	25.0	25.0			28.0	28.0	
Effective Green, g (s)		44.0	44.0	44.0	25.0	25.0	25.0			28.0	28.0	
Actuated g/C Ratio		0.42	0.42	0.42	0.24	0.24	0.24			0.27	0.27	
Clearance Time (s)		3.5	4.0	4.0	4.0	4.0	4.0			4.0	4.0	
Lane Grp Cap (vph)		303	725	641	223	412	338			69	867	
v/s Ratio Prot		0.04	c0.24			c0.25					0.13	
v/s Ratio Perm		0.07		0.01	0.02		0.09			c0.53		
v/c Ratio		0.25	0.57	0.01	0.10	1.05	0.37			1.99	0.48	
Uniform Delay, d1		21.6	23.3	17.8	31.2	40.0	33.4			38.5	32.4	
Progression Factor		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	
Incremental Delay, d2		1.9	3.3	0.0	0.9	57.6	3.1			491.0	1.9	
Delay (s)		23.5	26.5	17.9	32.1	97.6	36.5			529.5	34.3	
Level of Service		C	C	B	C	F	D			F	C	
Approach Delay (s)			25.8			79.1					154.8	
Approach LOS			C			E					F	

Intersection Summary			
HCM Average Control Delay	137.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.41		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	101.3%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1014: 103rd Street & Vincennes Avenue

1/14/2013

Movement	SBL	SBT	SBR	SBR2	SEL2	SEL	SER	SER2
Lane Configurations	↰	↑↱				↰	↱↱	
Volume (vph)	105	559	80	101	4	109	587	190
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.5	4.5				4.5	4.5	
Lane Util. Factor	1.00	0.95				1.00	0.88	
Frpb, ped/bikes	1.00	1.00				1.00	1.00	
Flpb, ped/bikes	1.00	1.00				1.00	1.00	
Frt	1.00	0.96				1.00	0.85	
Flt Protected	0.95	1.00				0.95	1.00	
Satd. Flow (prot)	1705	3246				1710	2633	
Flt Permitted	0.38	1.00				0.95	1.00	
Satd. Flow (perm)	675	3246				1710	2633	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	117	621	89	112	4	121	652	211
RTOR Reduction (vph)	0	12	0	0	0	0	26	0
Lane Group Flow (vph)	117	810	0	0	0	125	837	0
Confl. Peds. (#/hr)	3							
Heavy Vehicles (%)	0%	2%	0%	0%	0%	0%	3%	0%
Turn Type	Perm				Split		Perm	
Protected Phases		6			9	9		
Permitted Phases	6						9	
Actuated Green, G (s)	27.5	27.5				20.5	20.5	
Effective Green, g (s)	27.5	27.5				20.5	20.5	
Actuated g/C Ratio	0.26	0.26				0.20	0.20	
Clearance Time (s)	4.5	4.5				4.5	4.5	
Lane Grp Cap (vph)	177	850				334	514	
v/s Ratio Prot		0.25				0.07		
v/s Ratio Perm	0.17						c0.32	
v/c Ratio	0.66	0.95				0.37	1.63	
Uniform Delay, d1	34.6	38.1				36.7	42.2	
Progression Factor	1.00	1.00				1.00	1.00	
Incremental Delay, d2	17.8	21.4				3.2	291.8	
Delay (s)	52.4	59.5				39.9	334.0	
Level of Service	D	E				D	F	
Approach Delay (s)		58.6				296.8		
Approach LOS		E				F		

Intersection Summary

HCM Signalized Intersection Capacity Analysis
1015: 103rd Street & Morgan Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰			↱			✥				
Volume (vph)	64	583	0	0	458	55	83	51	19	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	11	11	11	16	11	12	15	12	12	15	12
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		1.00			0.99			0.98				
Flt Protected		1.00			1.00			0.97				
Satd. Flow (prot)		1681			1952			1840				
Flt Permitted		0.91			1.00			0.97				
Satd. Flow (perm)		1533			1952			1840				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	71	648	0	0	509	61	92	57	21	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	719	0	0	570	0	0	170	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)		40.0			40.0			17.0				
Effective Green, g (s)		40.0			40.0			17.0				
Actuated g/C Ratio		0.62			0.62			0.26				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		943			1201			481				
v/s Ratio Prot					0.29							
v/s Ratio Perm		c0.47						0.09				
v/c Ratio		0.76			0.47			0.35				
Uniform Delay, d1		9.1			6.8			19.5				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		5.8			1.3			2.0				
Delay (s)		14.9			8.1			21.6				
Level of Service		B			A			C				
Approach Delay (s)		14.9			8.1			21.6			0.0	
Approach LOS		B			A			C			A	

Intersection Summary			
HCM Average Control Delay	13.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	84.0%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱	↰	↑↑	↱	↰	↑↑	↱
Volume (vph)	69	327	149	126	323	132	103	625	84	139	751	93
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	10	10	9	9	10	9
Total Lost time (s)		4.0	4.0		4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		1.00	0.96		1.00	0.96	1.00	1.00	0.95	1.00	1.00	0.94
Flpb, ped/bikes		1.00	1.00		0.99	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.99	1.00		0.99	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1982	1434		1944	1444	1546	3040	1296	1505	3069	1252
Flt Permitted		0.39	1.00		0.72	1.00	0.23	1.00	1.00	0.30	1.00	1.00
Satd. Flow (perm)		773	1434		1416	1444	379	3040	1296	468	3069	1252
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	73	344	157	133	340	139	108	658	88	146	791	98
RTOR Reduction (vph)	0	0	93	0	0	99	0	0	53	0	0	49
Lane Group Flow (vph)	0	417	64	0	473	40	108	658	35	146	791	49
Confl. Peds. (#/hr)	24		45	45		24	36		24	24		36
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	2%	2%	2%	2%	3%	2%	3%	5%	1%	2%	4%	3%
Turn Type	pm+pt		Perm	Perm		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)		43.0	43.0		30.0	30.0	50.6	42.3	42.3	51.4	42.7	42.7
Effective Green, g (s)		43.0	43.0		30.0	30.0	50.6	42.3	42.3	51.4	42.7	42.7
Actuated g/C Ratio		0.41	0.41		0.29	0.29	0.48	0.40	0.40	0.49	0.41	0.41
Clearance Time (s)		4.0	4.0		4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		432	587		405	413	275	1225	522	315	1248	509
v/s Ratio Prot		c0.09					0.03	0.22		c0.04	c0.26	
v/s Ratio Perm		0.30	0.04		c0.33	0.03	0.16		0.03	0.19		0.04
v/c Ratio		0.97	0.11		1.17	0.10	0.39	0.54	0.07	0.46	0.63	0.10
Uniform Delay, d1		30.3	19.2		37.5	27.5	16.4	23.9	19.2	15.9	24.9	19.2
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.76	1.56	2.69
Incremental Delay, d2		35.4	0.4		99.1	0.5	0.9	1.7	0.3	1.0	2.4	0.4
Delay (s)		65.7	19.5		136.6	28.0	17.3	25.6	19.5	29.1	41.1	52.2
Level of Service		E	B		F	C	B	C	B	C	D	D
Approach Delay (s)		53.1			112.0			23.9			40.5	
Approach LOS		D			F			C			D	

Intersection Summary			
HCM Average Control Delay	52.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	88.8%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			✥				
Volume (vph)	83	400	83	101	473	90	49	59	70	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	15	12	12	15	12
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		0.98			0.98			0.95				
Flt Protected		0.99			0.99			0.99				
Satd. Flow (prot)		1644			1646			1796				
Flt Permitted		0.83			0.84			0.99				
Satd. Flow (perm)		1378			1397			1796				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	92	444	92	112	526	100	54	66	78	0	0	0
RTOR Reduction (vph)	0	10	0	0	9	0	0	36	0	0	0	0
Lane Group Flow (vph)	0	618	0	0	729	0	0	162	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm			Perm					
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Actuated Green, G (s)		40.0			40.0			17.0				
Effective Green, g (s)		40.0			40.0			17.0				
Actuated g/C Ratio		0.62			0.62			0.26				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		848			860			470				
v/s Ratio Prot												
v/s Ratio Perm		0.45			c0.52			0.09				
v/c Ratio		0.73			0.85			0.34				
Uniform Delay, d1		8.7			10.1			19.5				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		5.5			10.2			2.0				
Delay (s)		14.2			20.2			21.5				
Level of Service		B			C			C				
Approach Delay (s)		14.2			20.2			21.5			0.0	
Approach LOS		B			C			C			A	

Intersection Summary			
HCM Average Control Delay	18.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	68.7%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1018: 103rd Street & Wentworth Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱		↰	↱		✥	
Volume (vph)	21	442	71	82	552	44	37	76	74	55	235	47
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	11	12	12	15	12
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frpb, ped/bikes		1.00	0.96		1.00	0.96		1.00	0.96		0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		0.99	1.00		1.00	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		0.98	
Flt Protected		1.00	1.00		0.99	1.00		0.98	1.00		0.99	
Satd. Flow (prot)		1687	1382		1712	1417		1686	1455		1886	
Flt Permitted		0.96	1.00		0.89	1.00		0.84	1.00		0.93	
Satd. Flow (perm)		1630	1382		1528	1417		1435	1455		1775	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	22	465	75	86	581	46	39	80	78	58	247	49
RTOR Reduction (vph)	0	0	32	0	0	13	0	0	53	0	7	0
Lane Group Flow (vph)	0	487	43	0	667	33	0	119	25	0	347	0
Confl. Peds. (#/hr)	25		19	19		25	36		30	30		36
Confl. Bikes (#/hr)	1		2	2		1	3					3
Heavy Vehicles (%)	0%	3%	3%	0%	1%	0%	0%	1%	1%	0%	1%	0%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		43.0	43.0		43.0	43.0		24.0	24.0		24.0	
Effective Green, g (s)		43.0	43.0		43.0	43.0		24.0	24.0		24.0	
Actuated g/C Ratio		0.57	0.57		0.57	0.57		0.32	0.32		0.32	
Clearance Time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	
Lane Grp Cap (vph)		935	792		876	812		459	466		568	
v/s Ratio Prot												
v/s Ratio Perm		0.30	0.03		c0.44	0.02		0.08	0.02		c0.20	
v/c Ratio		0.52	0.05		0.76	0.04		0.26	0.05		0.61	
Uniform Delay, d1		9.7	7.0		12.1	7.0		18.9	17.6		21.5	
Progression Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2		2.1	0.1		6.2	0.1		1.4	0.2		4.8	
Delay (s)		11.8	7.2		18.3	7.1		20.3	17.9		26.4	
Level of Service		B	A		B	A		C	B		C	
Approach Delay (s)		11.2			17.6			19.3			26.4	
Approach LOS		B			B			B			C	

Intersection Summary			
HCM Average Control Delay	17.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	97.6%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1019: 103rd Street & State Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑	↱	↰	↑	↱
Volume (vph)	57	459	30	52	582	56	44	165	57	118	199	30
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	11	16	8	10	10	10	10	10	10
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00	0.98	1.00	1.00	0.98
Flpb, ped/bikes	0.98	1.00		1.00	1.00		0.99	1.00	1.00	0.99	1.00	1.00
Frt	1.00	0.99		1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1536	3068		1652	3733		1585	1663	1370	1568	1680	1397
Flt Permitted	0.32	1.00		0.41	1.00		0.59	1.00	1.00	0.63	1.00	1.00
Satd. Flow (perm)	520	3068		720	3733		977	1663	1370	1043	1680	1397
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	63	510	33	58	647	62	49	183	63	131	221	33
RTOR Reduction (vph)	0	7	0	0	11	0	0	0	38	0	0	20
Lane Group Flow (vph)	63	536	0	58	698	0	49	183	25	131	221	13
Confl. Peds. (#/hr)	51		3	3		51	13		13	13		13
Heavy Vehicles (%)	2%	3%	3%	0%	2%	0%	0%	1%	2%	1%	0%	0%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	31.0	31.0		31.0	31.0		26.0	26.0	26.0	26.0	26.0	26.0
Effective Green, g (s)	31.0	31.0		31.0	31.0		26.0	26.0	26.0	26.0	26.0	26.0
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.40	0.40	0.40	0.40	0.40	0.40
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	248	1463		343	1780		391	665	548	417	672	559
v/s Ratio Prot		0.17			c0.19			0.11			c0.13	
v/s Ratio Perm	0.12			0.08			0.05		0.02	0.13		0.01
v/c Ratio	0.25	0.37		0.17	0.39		0.13	0.28	0.05	0.31	0.33	0.02
Uniform Delay, d1	10.1	10.8		9.7	10.9		12.3	13.1	11.9	13.4	13.5	11.8
Progression Factor	1.00	1.00		1.00	1.00		0.84	0.91	0.75	0.59	0.59	0.28
Incremental Delay, d2	2.5	0.7		1.1	0.7		0.7	1.0	0.2	1.9	1.3	0.1
Delay (s)	12.6	11.5		10.7	11.6		11.0	13.0	9.1	9.8	9.2	3.4
Level of Service	B	B		B	B		B	B	A	A	A	A
Approach Delay (s)		11.6			11.5			11.8			8.9	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM Average Control Delay	11.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	73	389	71	70	369	74	55	196	64	133	267	160
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	11	10	11	11	10	11	11	10	11	11
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.98		1.00	0.99		1.00	0.98		1.00	0.99	
Flpb, ped/bikes	0.96	1.00		0.95	1.00		0.99	1.00		0.96	1.00	
Frt	1.00	0.98		1.00	0.97		1.00	0.96		1.00	0.94	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1327	3142		1515	3107		1582	2928		1453	2920	
Flt Permitted	0.46	1.00		0.44	1.00		0.45	1.00		0.58	1.00	
Satd. Flow (perm)	636	3142		708	3107		750	2928		893	2920	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	77	409	75	74	388	78	58	206	67	140	281	168
RTOR Reduction (vph)	0	0	0	0	0	0	0	39	0	0	99	0
Lane Group Flow (vph)	77	484	0	74	466	0	58	234	0	140	350	0
Confl. Peds. (#/hr)	112		99	99		112	23		53	53		23
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	16%	1%	0%	0%	1%	9%	0%	8%	2%	5%	5%	7%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	36.0	36.0		36.0	36.0		31.0	31.0		31.0	31.0	
Effective Green, g (s)	36.0	36.0		36.0	36.0		31.0	31.0		31.0	31.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.41	0.41		0.41	0.41	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	305	1508		340	1491		310	1210		369	1207	
v/s Ratio Prot		c0.15			0.15			0.08			0.12	
v/s Ratio Perm	0.12			0.10			0.08			c0.16		
v/c Ratio	0.25	0.32		0.22	0.31		0.19	0.19		0.38	0.29	
Uniform Delay, d1	11.5	12.0		11.3	11.9		14.0	14.0		15.3	14.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.0	0.6		1.5	0.5		1.3	0.4		3.0	0.6	
Delay (s)	13.5	12.5		12.8	12.5		15.3	14.4		18.3	15.3	
Level of Service	B	B		B	B		B	B		B	B	
Approach Delay (s)		12.7			12.5			14.5			16.0	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	13.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	53.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱		↰	↑↱		↰	↑↱	
Volume (vph)	106	442	61	31	504	46	82	194	57	76	473	111
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	12	8	16	12	9	10	10	9	10	10
Total Lost time (s)	3.0	7.0		3.0	7.0		3.0	7.0		3.0	7.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.98		1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.99		1.00	0.97		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1594	1653		1370	1974		1534	2998		1534	3011	
Flt Permitted	0.26	1.00		0.31	1.00		0.28	1.00		0.59	1.00	
Satd. Flow (perm)	439	1653		446	1974		450	2998		951	3011	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	112	465	64	33	531	48	86	204	60	80	498	117
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	112	529	0	33	579	0	86	264	0	80	615	0
Confl. Peds. (#/hr)	21		95	95		21	36		8	8		36
Confl. Bikes (#/hr)	2		3	3		2	2					2
Heavy Vehicles (%)	0%	2%	0%	7%	2%	0%	0%	3%	0%	0%	2%	1%
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	44.0	39.4		40.8	37.8		26.6	21.8		26.6	21.8	
Effective Green, g (s)	44.0	37.4		40.8	35.8		26.6	19.8		26.6	19.8	
Actuated g/C Ratio	0.52	0.44		0.48	0.42		0.31	0.23		0.31	0.23	
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	5.0		3.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	290	727		247	831		202	698		331	701	
v/s Ratio Prot	c0.02	c0.32		0.00	0.29		c0.02	0.09		0.01	c0.20	
v/s Ratio Perm	0.18			0.06			0.11			0.06		
v/c Ratio	0.39	0.73		0.13	0.70		0.43	0.38		0.24	0.88	
Uniform Delay, d1	22.7	19.6		20.1	20.2		29.1	27.4		21.9	31.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.9	6.3		0.2	4.8		1.4	1.6		0.4	14.5	
Delay (s)	23.6	25.9		20.4	25.0		30.5	29.0		22.3	46.0	
Level of Service	C	C		C	C		C	C		C	D	
Approach Delay (s)		25.5			24.7			29.4			43.2	
Approach LOS		C			C			C			D	

Intersection Summary			
HCM Average Control Delay	31.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	78.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1022: 103rd Street & Cottage Grove Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	83	375	63	111	483	112	64	150	55	121	348	79
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	11	11	11	11	12	12	10	10	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		0.99	1.00	
Frt		0.98			0.98		1.00	0.96		1.00	0.97	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3679			3131		1652	3237		1549	3025	
Flt Permitted		0.70			0.74		0.44	1.00		0.61	1.00	
Satd. Flow (perm)		2597			2323		765	3237		994	3025	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	92	417	70	123	537	124	71	167	61	134	387	88
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	579	0	0	784	0	71	228	0	134	475	0
Confl. Peds. (#/hr)	23		30	30		23	1		20	20		1
Confl. Bikes (#/hr)	3					3						
Heavy Vehicles (%)	0%	3%	0%	2%	2%	0%	0%	1%	0%	2%	2%	3%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		33.0			33.0		32.0	32.0		32.0	32.0	
Effective Green, g (s)		34.0			34.0		33.0	33.0		33.0	33.0	
Actuated g/C Ratio		0.45			0.45		0.44	0.44		0.44	0.44	
Clearance Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)		1177			1053		337	1424		437	1331	
v/s Ratio Prot								0.07			c0.16	
v/s Ratio Perm		0.22			c0.34		0.09			0.13		
v/c Ratio		0.49			0.74		0.21	0.16		0.31	0.36	
Uniform Delay, d1		14.4			16.9		13.0	12.7		13.6	14.0	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		1.5			4.8		1.4	0.2		1.8	0.7	
Delay (s)		15.9			21.7		14.4	12.9		15.4	14.7	
Level of Service		B			C		B	B		B	B	
Approach Delay (s)		15.9			21.7			13.2			14.9	
Approach LOS		B			C			B			B	

Intersection Summary			
HCM Average Control Delay	17.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	71.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↑	↱		✢			↰↑↱	
Volume (vph)	93	831	6	19	554	236	1	1	9	202	1	76
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	12	12	12	12	12	12	13	13	13
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00			0.95	
Frt	1.00	1.00		1.00	1.00	0.85		0.89			0.96	
Flt Protected	0.95	1.00		0.95	1.00	1.00		1.00			0.97	
Satd. Flow (prot)	1605	3206		1660	3320	1485		1545			3176	
Flt Permitted	0.40	1.00		0.27	1.00	1.00		0.98			0.77	
Satd. Flow (perm)	679	3206		468	3320	1485		1519			2535	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	103	923	7	21	616	262	1	1	10	224	1	84
RTOR Reduction (vph)	0	0	0	0	0	96	0	7	0	0	53	0
Lane Group Flow (vph)	103	930	0	21	616	166	0	5	0	0	256	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	46.1	46.1		46.1	46.1	46.1		18.6			18.6	
Effective Green, g (s)	46.1	46.1		46.1	46.1	46.1		18.6			18.6	
Actuated g/C Ratio	0.63	0.63		0.63	0.63	0.63		0.26			0.26	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		8.0			8.0	
Lane Grp Cap (vph)	431	2033		297	2105	942		389			649	
v/s Ratio Prot		c0.29			0.19							
v/s Ratio Perm	0.15			0.04		0.11		0.00			c0.10	
v/c Ratio	0.24	0.46		0.07	0.29	0.18		0.01			0.39	
Uniform Delay, d1	5.7	6.9		5.1	6.0	5.5		20.2			22.4	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00			1.00	
Incremental Delay, d2	1.3	0.7		0.5	0.4	0.4		0.1			1.7	
Delay (s)	7.0	7.6		5.6	6.3	5.9		20.2			24.1	
Level of Service	A	A		A	A	A		C			C	
Approach Delay (s)		7.5			6.2			20.2			24.1	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM Average Control Delay	9.3	HCM Level of Service	A
HCM Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	72.7	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Lane Configurations	↰	↱		↰	↱		↰	↑↑	↱	↰	↑↑	↱
Volume (vph)	124	216	119	94	162	57	144	876	87	128	816	99
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	9	12	10	10	12	9	10	9	9	10	9
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00	0.97	1.00	1.00	0.96
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.95		1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1560	1504		1563	1584		1493	3069	1337	1523	3099	1318
Flt Permitted	0.45	1.00		0.24	1.00		0.21	1.00	1.00	0.18	1.00	1.00
Satd. Flow (perm)	743	1504		393	1584		323	3069	1337	285	3099	1318
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	131	227	125	99	171	60	152	922	92	135	859	104
RTOR Reduction (vph)	0	23	0	0	15	0	0	0	40	0	0	49
Lane Group Flow (vph)	131	329	0	99	216	0	152	922	52	135	859	55
Confl. Peds. (#/hr)	10		13	13		10	18		7	7		18
Confl. Bikes (#/hr)	2					2	2		1	1		2
Heavy Vehicles (%)	2%	1%	1%	2%	1%	2%	3%	4%	0%	1%	3%	0%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	28.0	21.0		28.0	21.0		42.0	35.0	35.0	42.0	35.0	35.0
Effective Green, g (s)	26.0	22.0		26.0	22.0		40.0	35.0	35.0	40.0	35.0	35.0
Actuated g/C Ratio	0.31	0.26		0.31	0.26		0.47	0.41	0.41	0.47	0.41	0.41
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)	285	389		203	410		235	1264	551	222	1276	543
v/s Ratio Prot	0.03	c0.22		c0.03	0.14		c0.05	c0.30		0.04	0.28	
v/s Ratio Perm	0.11			0.11			0.26		0.04	0.24		0.04
v/c Ratio	0.46	0.85		0.49	0.53		0.65	0.73	0.09	0.61	0.67	0.10
Uniform Delay, d1	22.5	29.9		22.7	27.0		14.6	21.0	15.3	14.8	20.3	15.3
Progression Factor	1.00	1.00		1.00	1.00		0.67	0.81	0.55	1.00	1.00	1.00
Incremental Delay, d2	5.3	19.8		8.2	4.8		11.9	3.4	0.3	11.8	2.9	0.4
Delay (s)	27.8	49.6		30.9	31.8		21.8	20.5	8.8	26.6	23.2	15.7
Level of Service	C	D		C	C		C	C	A	C	C	B
Approach Delay (s)		43.7			31.5			19.8			22.9	
Approach LOS		D			C			B			C	

Intersection Summary			
HCM Average Control Delay	25.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	72.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1025: 107th Street & Wentworth Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣			✣	
Volume (vph)	22	179	38	20	173	22	42	141	38	45	251	49
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	14	12	12	14	12	12	16	12	12	16	12
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		0.99			1.00			1.00			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.98			0.99			0.98			0.98	
Flt Protected		1.00			1.00			0.99			0.99	
Satd. Flow (prot)		1835			1848			1937			1975	
Flt Permitted		0.97			0.96			0.90			0.94	
Satd. Flow (perm)		1780			1790			1753			1871	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	23	185	39	21	178	23	43	145	39	46	259	51
RTOR Reduction (vph)	0	11	0	0	6	0	0	11	0	0	9	0
Lane Group Flow (vph)	0	236	0	0	216	0	0	216	0	0	347	0
Confl. Peds. (#/hr)	18		34	34		18	16		19	19		16
Confl. Bikes (#/hr)			6	6			1		4	4		1
Heavy Vehicles (%)	0%	1%	0%	5%	1%	0%	0%	2%	0%	0%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		27.0			27.0			30.0			30.0	
Effective Green, g (s)		27.0			27.0			30.0			30.0	
Actuated g/C Ratio		0.42			0.42			0.46			0.46	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		739			744			809			864	
v/s Ratio Prot												
v/s Ratio Perm		c0.13			0.12			0.12			c0.19	
v/c Ratio		0.32			0.29			0.27			0.40	
Uniform Delay, d1		12.8			12.6			10.7			11.6	
Progression Factor		1.00			0.73			1.29			1.00	
Incremental Delay, d2		1.1			1.0			0.8			1.4	
Delay (s)		14.0			10.2			14.6			13.0	
Level of Service		B			B			B			B	
Approach Delay (s)		14.0			10.2			14.6			13.0	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	13.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	49.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1026: 107th Street & State Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	24	190	39	25	180	20	53	199	31	46	206	38
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	0.97	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	0.99		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1496	3056		1576	3116		1518	3119		1550	3075	
Flt Permitted	0.61	1.00		0.59	1.00		0.58	1.00		0.59	1.00	
Satd. Flow (perm)	965	3056		987	3116		935	3119		969	3075	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	27	211	43	28	200	22	59	221	34	51	229	42
RTOR Reduction (vph)	0	26	0	0	13	0	0	14	0	0	17	0
Lane Group Flow (vph)	27	228	0	28	209	0	59	241	0	51	254	0
Confl. Peds. (#/hr)	20		17	17		20	2					2
Confl. Bikes (#/hr)	32		36	36		32	22		25	25		22
Heavy Vehicles (%)	4%	1%	0%	0%	0%	0%	5%	0%	0%	3%	1%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.0	20.0		20.0	20.0		39.0	39.0		39.0	39.0	
Effective Green, g (s)	19.0	19.0		19.0	19.0		38.0	38.0		38.0	38.0	
Actuated g/C Ratio	0.29	0.29		0.29	0.29		0.58	0.58		0.58	0.58	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	282	893		289	911		547	1823		566	1798	
v/s Ratio Prot		c0.07			0.07			0.08			c0.08	
v/s Ratio Perm	0.03			0.03			0.06			0.05		
v/c Ratio	0.10	0.26		0.10	0.23		0.11	0.13		0.09	0.14	
Uniform Delay, d1	16.7	17.6		16.8	17.4		6.0	6.1		5.9	6.1	
Progression Factor	0.93	0.96		0.77	0.77		1.39	1.42		0.41	0.36	
Incremental Delay, d2	0.6	0.7		0.7	0.6		0.4	0.1		0.3	0.2	
Delay (s)	16.3	17.5		13.6	14.1		8.7	8.8		2.7	2.4	
Level of Service	B	B		B	B		A	A		A	A	
Approach Delay (s)		17.4			14.0			8.8			2.4	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	10.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.18		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	46.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			✥			✥	
Volume (vph)	66	165	41	24	153	37	27	260	16	42	336	33
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	9	9	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	
Flpb, ped/bikes	0.99	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.97		1.00	0.97			0.99			0.99	
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.99	
Satd. Flow (prot)	1555	3056		1525	2936			1923			1939	
Flt Permitted	0.62	1.00		0.61	1.00			0.94			0.94	
Satd. Flow (perm)	1014	3056		977	2936			1824			1832	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	73	183	46	27	170	41	30	289	18	47	373	37
RTOR Reduction (vph)	0	28	0	0	25	0	0	3	0	0	5	0
Lane Group Flow (vph)	73	201	0	27	186	0	0	334	0	0	452	0
Confl. Peds. (#/hr)	11		17	17		11	26		7	7		26
Heavy Vehicles (%)	2%	1%	0%	0%	1%	3%	4%	5%	0%	0%	4%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	26.0	26.0		26.0	26.0			31.0			31.0	
Effective Green, g (s)	26.0	26.0		26.0	26.0			31.0			31.0	
Actuated g/C Ratio	0.40	0.40		0.40	0.40			0.48			0.48	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	406	1222		391	1174			870			874	
v/s Ratio Prot		0.07			0.06							
v/s Ratio Perm	c0.07			0.03				0.18			c0.25	
v/c Ratio	0.18	0.16		0.07	0.16			0.38			0.52	
Uniform Delay, d1	12.6	12.5		12.0	12.5			10.9			11.8	
Progression Factor	1.02	0.97		0.77	0.76			1.07			1.00	
Incremental Delay, d2	1.0	0.3		0.3	0.3			1.2			2.2	
Delay (s)	13.9	12.4		9.6	9.8			12.8			14.0	
Level of Service	B	B		A	A			B			B	
Approach Delay (s)		12.8			9.7			12.8			14.0	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM Average Control Delay	12.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	59.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1028: 107th Street & Martin Luther King Jr Drive

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱			✥			✥	
Volume (vph)	47	111	30	19	153	26	44	230	11	33	360	57
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	16	12	10	16	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	
Flpb, ped/bikes	1.00	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.97		1.00	0.98			0.99			0.98	
Flt Protected	0.95	1.00		0.95	1.00			0.99			1.00	
Satd. Flow (prot)	1652	1966		1584	1975			1981			1979	
Flt Permitted	0.58	1.00		0.65	1.00			0.89			0.96	
Satd. Flow (perm)	1013	1966		1082	1975			1777			1911	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	52	123	33	21	170	29	49	256	12	37	400	63
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	52	156	0	21	199	0	0	317	0	0	500	0
Confl. Peds. (#/hr)	1		10	10		1	2		5	5		2
Heavy Vehicles (%)	0%	0%	0%	0%	1%	0%	0%	2%	0%	0%	1%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.0	20.0		20.0	20.0			37.0			37.0	
Effective Green, g (s)	20.0	20.0		20.0	20.0			37.0			37.0	
Actuated g/C Ratio	0.31	0.31		0.31	0.31			0.57			0.57	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	312	605		333	608			1012			1088	
v/s Ratio Prot		0.08			c0.10							
v/s Ratio Perm	0.05			0.02				0.18			c0.26	
v/c Ratio	0.17	0.26		0.06	0.33			0.31			0.46	
Uniform Delay, d1	16.4	16.9		15.9	17.3			7.3			8.2	
Progression Factor	0.83	0.81		0.92	0.93			1.00			1.00	
Incremental Delay, d2	1.1	1.0		0.4	1.4			0.8			1.4	
Delay (s)	14.7	14.6		15.0	17.6			8.2			9.6	
Level of Service	B	B		B	B			A			A	
Approach Delay (s)		14.7			17.3			8.2			9.6	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	11.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	55.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1029: 107th Street & Cottage Grove Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱		↰	↑	↱	↰	↑	↱
Volume (vph)	51	12	92	2	5	10	59	223	5	5	442	72
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	10	10	10	11	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.98		1.00	0.98		1.00	1.00	1.00	1.00	1.00	0.98
Flpb, ped/bikes	0.99	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.87		1.00	0.90		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1695	1726		1702	1808		1594	1647	1428	1653	2000	1496
Flt Permitted	0.75	1.00		0.68	1.00		0.41	1.00	1.00	0.60	1.00	1.00
Satd. Flow (perm)	1332	1726		1224	1808		693	1647	1428	1049	2000	1496
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	57	13	102	2	6	11	66	248	6	6	491	80
RTOR Reduction (vph)	0	74	0	0	8	0	0	0	2	0	0	28
Lane Group Flow (vph)	57	41	0	2	9	0	66	248	4	6	491	52
Confl. Peds. (#/hr)	5		5	5		5	3					3
Heavy Vehicles (%)	0%	0%	1%	0%	0%	0%	0%	2%	0%	0%	2%	0%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	17.0	17.0		17.0	17.0		39.0	39.0	39.0	39.0	39.0	39.0
Effective Green, g (s)	18.0	18.0		18.0	18.0		39.0	39.0	39.0	39.0	39.0	39.0
Actuated g/C Ratio	0.28	0.28		0.28	0.28		0.60	0.60	0.60	0.60	0.60	0.60
Clearance Time (s)	5.0	5.0		5.0	5.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	369	478		339	501		416	988	857	629	1200	898
v/s Ratio Prot		0.02			0.01			0.15			c0.25	
v/s Ratio Perm	c0.04			0.00			0.10		0.00	0.01		0.04
v/c Ratio	0.15	0.09		0.01	0.02		0.16	0.25	0.00	0.01	0.41	0.06
Uniform Delay, d1	17.8	17.4		17.0	17.1		5.7	6.1	5.2	5.2	6.9	5.4
Progression Factor	1.40	2.81		1.00	1.00		0.80	0.75	0.93	1.00	1.00	1.00
Incremental Delay, d2	0.9	0.3		0.0	0.1		0.6	0.5	0.0	0.0	1.0	0.1
Delay (s)	25.8	49.2		17.1	17.1		5.2	5.1	4.9	5.3	7.9	5.5
Level of Service	C	D		B	B		A	A	A	A	A	A
Approach Delay (s)		41.5			17.1			5.1			7.6	
Approach LOS		D			B			A			A	

Intersection Summary			
HCM Average Control Delay	12.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	51.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1030: 111th Street & Marshield Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱		↰	↑↑					↰	↑↱	
Volume (vph)	0	253	163	169	203	0	0	0	0	110	470	377
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	12	12	12	12	12	11	11	12
Total Lost time (s)		4.0		3.0	3.0					5.0	5.0	
Lane Util. Factor		0.95		1.00	0.95					1.00	0.95	
Frpb, ped/bikes		0.99		1.00	1.00					1.00	0.99	
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	
Frt		0.94		1.00	1.00					1.00	0.93	
Flt Protected		1.00		0.95	1.00					0.95	1.00	
Satd. Flow (prot)		2905		1693	3288					1503	3021	
Flt Permitted		1.00		0.41	1.00					0.95	1.00	
Satd. Flow (perm)		2905		722	3288					1503	3021	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	266	172	178	214	0	0	0	0	116	495	397
RTOR Reduction (vph)	0	103	0	0	0	0	0	0	0	0	141	0
Lane Group Flow (vph)	0	335	0	178	214	0	0	0	0	116	751	0
Confl. Peds. (#/hr)	18		3	3		18	1					1
Heavy Vehicles (%)	0%	4%	1%	1%	4%	0%	0%	0%	0%	10%	2%	1%
Turn Type				D.P+P						Split		
Protected Phases		8		7	7 8					6	6	
Permitted Phases				8								
Actuated Green, G (s)		33.0		53.0	56.0					37.0	37.0	
Effective Green, g (s)		33.0		53.0	56.0					37.0	37.0	
Actuated g/C Ratio		0.32		0.52	0.55					0.36	0.36	
Clearance Time (s)		4.0		3.0						5.0	5.0	
Lane Grp Cap (vph)		940		566	1805					545	1096	
v/s Ratio Prot		c0.12		c0.06	0.07					0.08	c0.25	
v/s Ratio Perm				0.10								
v/c Ratio		0.36		0.31	0.12					0.21	0.68	
Uniform Delay, d1		26.4		13.4	11.1					22.4	27.6	
Progression Factor		1.00		2.20	2.14					1.00	1.00	
Incremental Delay, d2		1.1		1.3	0.1					0.9	3.5	
Delay (s)		27.4		30.7	23.8					23.3	31.0	
Level of Service		C		C	C					C	C	
Approach Delay (s)		27.4			27.0			0.0			30.2	
Approach LOS		C			C			A			C	

Intersection Summary			
HCM Average Control Delay	28.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	102.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	60.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1031: 111th Street & Hamlet Avenue

1/14/2013

	↰	→	↴	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑			↑↱		↰	↑	↱			
Volume (vph)	141	222	0	0	299	113	73	511	219	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	9	12	13	12	13	12	12	12
Total Lost time (s)	4.0	4.0			4.0		5.0	5.0	5.0			
Lane Util. Factor	1.00	0.95			0.95		1.00	1.00	1.00			
Frpb, ped/bikes	1.00	1.00			0.99		1.00	1.00	0.99			
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.96		1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1674	3196			2848		1767	1782	1560			
Flt Permitted	0.36	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	642	3196			2848		1767	1782	1560			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	148	234	0	0	315	119	77	538	231	0	0	0
RTOR Reduction (vph)	0	0	0	0	39	0	0	0	163	0	0	0
Lane Group Flow (vph)	148	234	0	0	395	0	77	538	68	0	0	0
Confl. Peds. (#/hr)	9		13	13		9			1	1		
Confl. Bikes (#/hr)	3					3						
Heavy Vehicles (%)	2%	7%	0%	0%	3%	1%	0%	1%	0%	0%	0%	0%
Turn Type	pm+pt						custom		Perm			
Protected Phases	4	1 4			1		2	2				
Permitted Phases	1 4						2		2			
Actuated Green, G (s)	59.0	63.0			26.0		30.0	30.0	30.0			
Effective Green, g (s)	59.0	63.0			26.0		30.0	30.0	30.0			
Actuated g/C Ratio	0.58	0.62			0.25		0.29	0.29	0.29			
Clearance Time (s)	4.0				4.0		5.0	5.0	5.0			
Lane Grp Cap (vph)	705	1974			726		520	524	459			
v/s Ratio Prot	c0.07	0.07			c0.14		0.04	c0.30				
v/s Ratio Perm	0.05								0.04			
v/c Ratio	0.21	0.12			0.54		0.15	1.03	0.15			
Uniform Delay, d1	10.2	8.0			32.9		26.6	36.0	26.6			
Progression Factor	0.42	0.43			1.00		1.00	1.00	1.00			
Incremental Delay, d2	0.6	0.1			2.9		0.6	46.3	0.7			
Delay (s)	4.9	3.6			35.8		27.2	82.3	27.2			
Level of Service	A	A			D		C	F	C			
Approach Delay (s)		4.1			35.8			62.3			0.0	
Approach LOS		A			D			E			A	

Intersection Summary			
HCM Average Control Delay	42.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	102.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	60.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

1032: 112th Place & Marshield Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱		↰	↑↑					↰	↑↑	↱
Volume (vph)	0	486	455	77	507	0	0	0	0	11	434	277
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	11	12	12	12	12	10	10	12
Total Lost time (s)		4.0		4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.95		1.00	0.95					1.00	0.95	1.00
Frpb, ped/bikes		0.99		1.00	1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Frt		0.93		1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00					0.95	1.00	1.00
Satd. Flow (prot)		3097		1710	3306					1596	3192	1530
Flt Permitted		1.00		0.12	1.00					0.95	1.00	1.00
Satd. Flow (perm)		3097		209	3306					1596	3192	1530
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	0	506	474	80	528	0	0	0	0	11	452	289
RTOR Reduction (vph)	0	169	0	0	0	0	0	0	0	0	0	191
Lane Group Flow (vph)	0	811	0	80	528	0	0	0	0	11	452	98
Confl. Peds. (#/hr)	8		8	8		8	3					3
Confl. Bikes (#/hr)	9					9			61	61		
Heavy Vehicles (%)	0%	1%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type				pm+pt						Split		Prot
Protected Phases		8		7	7 8					6	6	6
Permitted Phases				7 8								
Actuated Green, G (s)		36.0		54.0	58.0					34.0	34.0	34.0
Effective Green, g (s)		36.0		54.0	58.0					34.0	34.0	34.0
Actuated g/C Ratio		0.36		0.54	0.58					0.34	0.34	0.34
Clearance Time (s)		4.0		4.0						4.0	4.0	4.0
Lane Grp Cap (vph)		1115		383	1917					543	1085	520
v/s Ratio Prot		c0.26		0.04	c0.16					0.01	c0.14	0.06
v/s Ratio Perm				0.08								
v/c Ratio		0.73		0.21	0.28					0.02	0.42	0.19
Uniform Delay, d1		27.7		13.9	10.5					21.9	25.4	23.3
Progression Factor		1.00		1.01	1.19					1.00	1.00	1.00
Incremental Delay, d2		4.2		0.9	0.3					0.1	1.2	0.8
Delay (s)		31.9		15.0	12.8					22.0	26.6	24.1
Level of Service		C		B	B					C	C	C
Approach Delay (s)		31.9			13.1			0.0			25.5	
Approach LOS		C			B			A			C	

Intersection Summary			
HCM Average Control Delay	25.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	89.0%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↰↑			↑↱		↰	↰	↱			
Volume (vph)	396	101	0	0	142	6	441	456	55	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	12	12	12	10	12	11	11	12	12	12	12
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0	4.0			
Lane Util. Factor	0.91	0.91			0.95		0.95	0.95	1.00			
Frpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.99		1.00	1.00	0.85			
Flt Protected	0.95	0.97			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1469	3110			3168		1555	1653	1530			
Flt Permitted	0.66	0.72			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	1014	2316			3168		1555	1653	1530			
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	408	104	0	0	146	6	455	470	57	0	0	0
RTOR Reduction (vph)	0	0	0	0	3	0	0	0	36	0	0	0
Lane Group Flow (vph)	204	308	0	0	149	0	455	470	21	0	0	0
Confl. Peds. (#/hr)	13		6	6		13			8	8		
Confl. Bikes (#/hr)	1					1			2	2		
Heavy Vehicles (%)	2%	1%	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%
Turn Type	pm+pt						custom		custom			
Protected Phases	4	1 4			1		2	2	2			
Permitted Phases	1 4						2		2			
Actuated Green, G (s)	51.0	51.0			15.0		37.0	37.0	37.0			
Effective Green, g (s)	51.0	51.0			15.0		37.0	37.0	37.0			
Actuated g/C Ratio	0.51	0.51			0.15		0.37	0.37	0.37			
Clearance Time (s)	4.0				4.0		4.0	4.0	4.0			
Lane Grp Cap (vph)	681	1467			475		575	612	566			
v/s Ratio Prot	c0.11	0.08			c0.05		c0.29	0.28	0.01			
v/s Ratio Perm	0.04	0.03										
v/c Ratio	0.30	0.21			0.31		0.79	0.77	0.04			
Uniform Delay, d1	13.9	13.4			37.9		28.1	27.7	20.1			
Progression Factor	0.25	0.26			1.00		1.00	1.00	1.00			
Incremental Delay, d2	0.7	0.2			1.7		10.7	9.0	0.1			
Delay (s)	4.3	3.8			39.6		38.7	36.7	20.2			
Level of Service	A	A			D		D	D	C			
Approach Delay (s)		4.0			39.6			36.7			0.0	
Approach LOS		A			D			D			A	

Intersection Summary			
HCM Average Control Delay	26.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	89.0%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1034: 111th Street & Halsted Street

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱		↰	↑↑	↱	↰	↑↑	↱
Volume (vph)	78	217	102	117	255	121	80	663	75	102	875	64
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	9	10	9	9	10	9
Total Lost time (s)		4.0			4.0		4.0	3.5	4.0	4.0	3.5	4.0
Lane Util. Factor		0.95			0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		0.99			0.99		1.00	1.00	0.97	1.00	1.00	0.96
Flpb, ped/bikes		1.00			1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.96			0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.99			0.99		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		2939			2921		1508	3069	1309	1508	3099	1298
Flt Permitted		0.74			0.75		0.16	1.00	1.00	0.27	1.00	1.00
Satd. Flow (perm)		2205			2207		261	3069	1309	433	3099	1298
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	81	226	106	122	266	126	83	691	78	106	911	67
RTOR Reduction (vph)	0	40	0	0	37	0	0	0	48	0	0	33
Lane Group Flow (vph)	0	373	0	0	477	0	83	691	30	106	911	34
Confl. Peds. (#/hr)	35		30	30		35	34		8	8		34
Confl. Bikes (#/hr)	1					1	1					1
Heavy Vehicles (%)	1%	4%	0%	1%	3%	3%	2%	4%	2%	2%	3%	2%
Turn Type	pm+pt			Perm			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)		35.0			27.0		38.0	33.0	33.0	38.0	33.0	33.0
Effective Green, g (s)		36.0			28.0		36.0	33.5	33.0	36.0	33.5	33.0
Actuated g/C Ratio		0.42			0.33		0.42	0.39	0.39	0.42	0.39	0.39
Clearance Time (s)		5.0			5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)		986			727		169	1210	508	234	1221	504
v/s Ratio Prot		c0.03					c0.02	0.23		0.02	c0.29	
v/s Ratio Perm		0.13			c0.22		0.18		0.02	0.17		0.03
v/c Ratio		0.38			0.66		0.49	0.57	0.06	0.45	0.75	0.07
Uniform Delay, d1		16.8			24.4		16.6	20.1	16.3	15.8	22.1	16.3
Progression Factor		1.00			1.00		1.27	0.69	0.53	1.11	1.17	1.77
Incremental Delay, d2		1.1			4.6		9.1	1.8	0.2	4.6	3.1	0.2
Delay (s)		17.9			29.0		30.0	15.6	8.9	22.1	28.9	29.1
Level of Service		B			C		C	B	A	C	C	C
Approach Delay (s)		17.9			29.0			16.4			28.3	
Approach LOS		B			C			B			C	

Intersection Summary			
HCM Average Control Delay	23.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	72.7%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1035: 111th Street & Normal Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰			↱			✥				
Volume (vph)	76	318	0	0	375	100	52	43	36	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		1.00			0.97			0.96				
Flt Protected		0.99			1.00			0.98				
Satd. Flow (prot)		1731			1698			1650				
Flt Permitted		0.84			1.00			0.98				
Satd. Flow (perm)		1465			1698			1650				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	84	353	0	0	417	111	58	48	40	0	0	0
RTOR Reduction (vph)	0	0	0	0	15	0	0	21	0	0	0	0
Lane Group Flow (vph)	0	437	0	0	513	0	0	125	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)		38.0			38.0			19.0				
Effective Green, g (s)		38.0			38.0			19.0				
Actuated g/C Ratio		0.58			0.58			0.29				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		856			993			482				
v/s Ratio Prot					c0.30							
v/s Ratio Perm		0.30						0.08				
v/c Ratio		0.51			0.52			0.26				
Uniform Delay, d1		8.0			8.0			17.6				
Progression Factor		1.00			0.98			1.00				
Incremental Delay, d2		2.2			1.5			1.3				
Delay (s)		10.2			9.4			18.9				
Level of Service		B			A			B				
Approach Delay (s)		10.2			9.4			18.9			0.0	
Approach LOS		B			A			B			A	

Intersection Summary			
HCM Average Control Delay	10.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	67.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1036: 111th Street & Wentworth Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			↰↑↱			↰↑↱	
Volume (vph)	19	306	27	51	402	68	27	112	40	56	148	42
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	10	12	12	10	12
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		1.00			1.00			0.99			0.98	
Flpb, ped/bikes		1.00			1.00			0.99			1.00	
Frt		0.99			0.98			0.97			0.97	
Flt Protected		1.00			1.00			0.99			0.99	
Satd. Flow (prot)		1957			1933			2960			2983	
Flt Permitted		0.96			0.93			0.89			0.85	
Satd. Flow (perm)		1889			1811			2661			2580	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	21	340	30	57	447	76	30	124	44	62	164	47
RTOR Reduction (vph)	0	5	0	0	9	0	0	26	0	0	27	0
Lane Group Flow (vph)	0	386	0	0	571	0	0	172	0	0	246	0
Confl. Peds. (#/hr)	32		25	25		32	59		24	24		59
Confl. Bikes (#/hr)	3		2	2		3	4		2	2		4
Heavy Vehicles (%)	0%	3%	0%	3%	3%	0%	0%	0%	7%	4%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		30.0			30.0			27.0			27.0	
Effective Green, g (s)		30.0			30.0			27.0			27.0	
Actuated g/C Ratio		0.46			0.46			0.42			0.42	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		872			836			1105			1072	
v/s Ratio Prot												
v/s Ratio Perm		0.20			c0.32			0.06			c0.10	
v/c Ratio		0.44			0.68			0.16			0.23	
Uniform Delay, d1		11.8			13.8			11.9			12.3	
Progression Factor		0.57			0.36			1.29			0.46	
Incremental Delay, d2		1.4			3.7			0.3			0.5	
Delay (s)		8.2			8.7			15.6			6.2	
Level of Service		A			A			B			A	
Approach Delay (s)		8.2			8.7			15.6			6.2	
Approach LOS		A			A			B			A	

Intersection Summary			
HCM Average Control Delay	9.1	HCM Level of Service	A
HCM Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	82.3%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	41	279	39	82	532	96	43	217	98	82	215	59
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	9	10	10	9	10	10	12	10	10	12
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		0.98	1.00		0.99	1.00		0.99	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.95		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1511	3039		1570	3078		1587	2961		1585	3074	
Flt Permitted	0.26	1.00		0.52	1.00		0.57	1.00		0.54	1.00	
Satd. Flow (perm)	418	3039		854	3078		945	2961		904	3074	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	46	310	43	91	591	107	48	241	109	91	239	66
RTOR Reduction (vph)	0	17	0	0	22	0	0	50	0	0	30	0
Lane Group Flow (vph)	46	336	0	91	676	0	48	300	0	91	275	0
Confl. Peds. (#/hr)	20		31	31		20	16		20	20		16
Confl. Bikes (#/hr)							1		3	3		1
Heavy Vehicles (%)	5%	3%	0%	0%	1%	0%	0%	2%	2%	0%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	22.0	22.0		22.0	22.0		35.0	35.0		35.0	35.0	
Effective Green, g (s)	22.0	22.0		22.0	22.0		35.0	35.0		35.0	35.0	
Actuated g/C Ratio	0.34	0.34		0.34	0.34		0.54	0.54		0.54	0.54	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	141	1029		289	1042		509	1594		487	1655	
v/s Ratio Prot		0.11			c0.22			c0.10			0.09	
v/s Ratio Perm	0.11			0.11			0.05			0.10		
v/c Ratio	0.33	0.33		0.31	0.65		0.09	0.19		0.19	0.17	
Uniform Delay, d1	16.0	16.0		15.9	18.2		7.3	7.7		7.7	7.6	
Progression Factor	0.79	0.75		1.12	1.13		1.12	1.26		1.10	1.10	
Incremental Delay, d2	5.7	0.8		2.8	3.0		0.4	0.3		0.8	0.2	
Delay (s)	18.4	12.8		20.7	23.6		8.5	10.0		9.3	8.6	
Level of Service	B	B		C	C		A	A		A	A	
Approach Delay (s)		13.4			23.3			9.8			8.8	
Approach LOS		B			C			A			A	

Intersection Summary			
HCM Average Control Delay	15.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	53.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1038: 111th Street & Michigan Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			↰↑↱			↰↑↱	
Volume (vph)	55	287	96	103	382	48	164	245	130	46	295	64
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	9	10	9	9	16	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99			0.99			0.98	
Flpb, ped/bikes	0.98	1.00		0.99	1.00			0.98			1.00	
Frt	1.00	0.96		1.00	0.98			0.96			0.98	
Flt Protected	0.95	1.00		0.95	1.00			0.98			0.99	
Satd. Flow (prot)	1507	2988		1430	3719			3403			3530	
Flt Permitted	0.47	1.00		0.51	1.00			0.69			0.85	
Satd. Flow (perm)	748	2988		761	3719			2397			3030	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	58	302	101	108	402	51	173	258	137	48	311	67
RTOR Reduction (vph)	0	50	0	0	15	0	0	47	0	0	23	0
Lane Group Flow (vph)	58	353	0	108	438	0	0	521	0	0	403	0
Confl. Peds. (#/hr)	38		17	17		38	125		53	53		125
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	0%	3%	0%	7%	2%	0%	0%	6%	10%	2%	5%	5%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	31.0	31.0		31.0	31.0			26.0			26.0	
Effective Green, g (s)	31.0	31.0		31.0	31.0			26.0			26.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48			0.40			0.40	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	357	1425		363	1774			959			1212	
v/s Ratio Prot		0.12			0.12							
v/s Ratio Perm	0.08			c0.14				c0.22			0.13	
v/c Ratio	0.16	0.25		0.30	0.25			0.54			0.33	
Uniform Delay, d1	9.6	10.1		10.4	10.1			15.0			13.5	
Progression Factor	1.55	1.81		1.10	1.09			1.07			0.76	
Incremental Delay, d2	0.9	0.4		1.9	0.3			1.3			0.7	
Delay (s)	15.9	18.6		13.3	11.3			17.4			10.9	
Level of Service	B	B		B	B			B			B	
Approach Delay (s)		18.3			11.7			17.4			10.9	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	14.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	63.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1039: 111th Street & Indiana Avenue

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰↑↱			✢			✢	
Volume (vph)	86	311	86	88	284	88	115	79	45	45	79	115
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	16	12	12	16	12
Total Lost time (s)		5.0	5.0		5.0			5.0			5.0	
Lane Util. Factor		1.00	1.00		0.95			1.00			1.00	
Frt		1.00	0.85		0.97			0.97			0.94	
Flt Protected		0.99	1.00		0.99			0.98			0.99	
Satd. Flow (prot)		1671	1436		3088			1885			1835	
Flt Permitted		0.80	1.00		0.78			0.68			0.91	
Satd. Flow (perm)		1356	1436		2443			1320			1679	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	96	346	96	98	316	98	128	88	50	50	88	128
RTOR Reduction (vph)	0	0	46	0	32	0	0	13	0	0	51	0
Lane Group Flow (vph)	0	442	50	0	480	0	0	253	0	0	215	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm		Perm	Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)		34.0	34.0		34.0			21.0			21.0	
Effective Green, g (s)		34.0	34.0		34.0			21.0			21.0	
Actuated g/C Ratio		0.52	0.52		0.52			0.32			0.32	
Clearance Time (s)		5.0	5.0		5.0			5.0			5.0	
Lane Grp Cap (vph)		709	751		1278			426			542	
v/s Ratio Prot												
v/s Ratio Perm		c0.33	0.03		0.20			c0.19			0.13	
v/c Ratio		0.62	0.07		0.38			0.59			0.40	
Uniform Delay, d1		11.0	7.7		9.2			18.4			17.1	
Progression Factor		1.41	3.20		0.54			1.00			1.00	
Incremental Delay, d2		3.9	0.2		0.8			6.0			2.2	
Delay (s)		19.4	24.7		5.8			24.4			19.2	
Level of Service		B	C		A			C			B	
Approach Delay (s)		20.4			5.8			24.4			19.2	
Approach LOS		C			A			C			B	

Intersection Summary			
HCM Average Control Delay	16.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	79.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			↰↑↱			↰↑↱	
Volume (vph)	59	291	32	25	316	58	27	130	46	62	145	65
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	15	8	16	8	8	16	8
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			0.99			1.00	
Flpb, ped/bikes	0.99	1.00		0.98	1.00			1.00			1.00	
Frt	1.00	0.98		1.00	0.98			0.97			0.96	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1443	3021		1566	3020			3582			3594	
Flt Permitted	0.49	1.00		0.54	1.00			0.89			0.84	
Satd. Flow (perm)	752	3021		883	3020			3226			3068	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	66	323	36	28	351	64	30	144	51	69	161	72
RTOR Reduction (vph)	0	13	0	0	23	0	0	30	0	0	42	0
Lane Group Flow (vph)	66	346	0	28	392	0	0	195	0	0	260	0
Confl. Peds. (#/hr)	24		47	47		24	9		36	36		9
Confl. Bikes (#/hr)			4	4			1					1
Heavy Vehicles (%)	9%	4%	0%	0%	3%	0%	0%	1%	10%	0%	0%	8%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	30.0	30.0		30.0	30.0			27.0			27.0	
Effective Green, g (s)	30.0	30.0		30.0	30.0			27.0			27.0	
Actuated g/C Ratio	0.46	0.46		0.46	0.46			0.42			0.42	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	347	1394		408	1394			1340			1274	
v/s Ratio Prot		0.11			c0.13							
v/s Ratio Perm	0.09			0.03				0.06			c0.08	
v/c Ratio	0.19	0.25		0.07	0.28			0.15			0.20	
Uniform Delay, d1	10.3	10.6		9.7	10.8			11.8			12.1	
Progression Factor	0.63	0.63		0.83	0.66			0.95			0.41	
Incremental Delay, d2	1.0	0.3		0.2	0.2			0.2			0.3	
Delay (s)	7.5	7.0		8.2	7.4			11.4			5.3	
Level of Service	A	A		A	A			B			A	
Approach Delay (s)		7.1			7.4			11.4			5.3	
Approach LOS		A			A			B			A	

Intersection Summary			
HCM Average Control Delay	7.5	HCM Level of Service	A
HCM Volume to Capacity ratio	0.24		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1041: 111th Street & Cottage Grove Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱			↰↑↱			↰↑↱	
Volume (vph)	47	456	30	83	487	213	24	118	109	323	248	78
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			0.95			0.95	
Frt		0.99			0.96			0.93			0.98	
Flt Protected		1.00			0.99			1.00			0.98	
Satd. Flow (prot)		3278			3168			3089			3181	
Flt Permitted		0.78			0.79			0.90			0.71	
Satd. Flow (perm)		2560			2523			2807			2305	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	52	507	33	92	541	237	27	131	121	359	276	87
RTOR Reduction (vph)	0	7	0	0	60	0	0	65	0	0	16	0
Lane Group Flow (vph)	0	585	0	0	810	0	0	214	0	0	706	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm			pm+pt			Perm		
Protected Phases		4			8		5	2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		25.0			25.0			30.0			17.0	
Effective Green, g (s)		25.0			25.0			30.0			17.0	
Actuated g/C Ratio		0.38			0.38			0.46			0.26	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		985			970			1339			603	
v/s Ratio Prot								c0.02				
v/s Ratio Perm		0.23			c0.32			0.05			c0.31	
v/c Ratio		0.59			0.84			0.16			1.28dl	
Uniform Delay, d1		16.0			18.1			10.2			24.0	
Progression Factor		1.47			1.00			1.00			0.81	
Incremental Delay, d2		2.6			8.5			0.3			93.0	
Delay (s)		26.1			26.6			10.4			112.4	
Level of Service		C			C			B			F	
Approach Delay (s)		26.1			26.6			10.4			112.4	
Approach LOS		C			C			B			F	

Intersection Summary			
HCM Average Control Delay	49.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	84.0%	ICU Level of Service	E
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1042: 111th Street & Ellis Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↑↱			↰↑↑↱			↰↑↱			↰↑↱	
Volume (vph)	0	875	135	46	762	0	79	0	35	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	10	10	12	12	12	12	12	12	12
Total Lost time (s)		5.0			5.0			5.0				
Lane Util. Factor		0.95			0.95			1.00				
Frt		0.98			1.00			0.96				
Flt Protected		1.00			1.00			0.97				
Satd. Flow (prot)		3037			3090			1619				
Flt Permitted		1.00			0.81			0.79				
Satd. Flow (perm)		3037			2504			1329				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	972	150	51	847	0	88	0	39	0	0	0
RTOR Reduction (vph)	0	17	0	0	0	0	0	18	0	0	0	0
Lane Group Flow (vph)	0	1105	0	0	898	0	0	109	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	custom			Perm			Perm			Perm		
Protected Phases		4 5 6 11			8			2			2	
Permitted Phases	4 6 11			8			2			2		
Actuated Green, G (s)		65.0			33.0			16.0				
Effective Green, g (s)		58.0			33.0			16.0				
Actuated g/C Ratio		0.64			0.37			0.18				
Clearance Time (s)					5.0			5.0				
Lane Grp Cap (vph)		1957			918			236				
v/s Ratio Prot		c0.36										
v/s Ratio Perm					c0.36			c0.08				
v/c Ratio		0.56			0.98			0.46				
Uniform Delay, d1		8.9			28.1			33.1				
Progression Factor		0.13			1.42			1.00				
Incremental Delay, d2		0.3			23.9			6.4				
Delay (s)		1.5			63.8			39.5				
Level of Service		A			E			D				
Approach Delay (s)		1.5			63.8			39.5			0.0	
Approach LOS		A			E			D			A	

Intersection Summary			
HCM Average Control Delay	29.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	73.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1043: 111th Street & Doty Road

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↑	↱		✣		↰	↑	↱
Volume (vph)	218	633	24	108	586	178	59	4	103	205	10	206
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	10	12	12	12	12	16	12	12	12	12
Total Lost time (s)	3.0	5.0		3.0	5.0	3.0		5.0		3.0	5.0	3.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	1.00	0.85		0.92		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.98		0.95	1.00	1.00
Satd. Flow (prot)	1550	3192		1660	3320	1485		1783		1660	1748	1485
Flt Permitted	0.31	1.00		0.34	1.00	1.00		0.88		0.44	1.00	1.00
Satd. Flow (perm)	502	3192		593	3320	1485		1591		773	1748	1485
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	242	703	27	120	651	198	66	4	114	228	11	229
RTOR Reduction (vph)	0	2	0	0	0	90	0	89	0	0	0	132
Lane Group Flow (vph)	242	728	0	120	651	108	0	95	0	228	11	97
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	pm+pt			pm+pt		pm+ov	pm+pt			pm+pt		pm+ov
Protected Phases	7	4		3	8	1	5	2		1	6	7
Permitted Phases	4			8		8	2			6		6
Actuated Green, G (s)	55.2	43.0		48.1	38.9	48.9		11.8		24.8	24.8	38.1
Effective Green, g (s)	55.2	43.0		48.1	38.9	48.9		11.8		24.8	24.8	38.1
Actuated g/C Ratio	0.61	0.48		0.53	0.43	0.54		0.13		0.28	0.28	0.42
Clearance Time (s)	3.0	5.0		3.0	5.0	3.0		5.0		3.0	5.0	3.0
Vehicle Extension (s)	4.0	3.0		4.0	3.0	3.0		4.0		3.0	4.0	4.0
Lane Grp Cap (vph)	463	1525		426	1435	807		209		312	482	629
v/s Ratio Prot	c0.08	0.23		0.03	0.20	0.01				c0.08	0.01	0.02
v/s Ratio Perm	c0.24			0.12		0.06		0.06		c0.12		0.04
v/c Ratio	0.52	0.48		0.28	0.45	0.13		0.45		0.73	0.02	0.15
Uniform Delay, d1	8.9	15.9		10.6	18.0	10.1		36.1		28.4	23.8	16.0
Progression Factor	2.60	1.89		1.00	1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2	1.2	0.9		0.5	1.0	0.1		2.1		8.5	0.0	0.2
Delay (s)	24.2	30.9		11.1	19.1	10.2		38.2		36.9	23.8	16.2
Level of Service	C	C		B	B	B		D		D	C	B
Approach Delay (s)		29.2			16.3			38.2			26.4	
Approach LOS		C			B			D			C	

Intersection Summary			
HCM Average Control Delay	24.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	60.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

1044: 111th Street & Bishop Ford Freeway EB Ramps

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↑↑					↰		↱
Volume (veh/h)	0	511	431	2	323	0	0	0	0	18	0	548
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	568	479	2	359	0	0	0	0	20	0	609
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		498										
pX, platoon unblocked												
vC, conflicting volume	359			568			752	931	284	647	931	179
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	359			568			752	931	284	647	931	179
tC, single (s)	4.2			4.2			7.6	6.6	7.0	7.6	6.6	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	100	94	100	27
cM capacity (veh/h)	1189			994			79	263	710	353	263	829

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1	SB 2
Volume Total	284	284	479	122	239	20	609
Volume Left	0	0	0	2	0	20	0
Volume Right	0	0	479	0	0	0	609
cSH	1700	1700	1700	994	1700	353	829
Volume to Capacity	0.17	0.17	0.28	0.00	0.14	0.06	0.73
Queue Length 95th (ft)	0	0	0	0	0	4	167
Control Delay (s)	0.0	0.0	0.0	0.2	0.0	15.8	20.3
Lane LOS				A		C	C
Approach Delay (s)	0.0			0.1		20.2	
Approach LOS						C	

Intersection Summary			
Average Delay	6.2		
Intersection Capacity Utilization	52.0%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
1045: 111th Street & Bishop Ford Freeway WB Ramps

1/14/2013

	↗	↘	↖	↑	↓	↙
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰↰		↰			
Sign Control	Stop			Stop	Stop	
Volume (vph)	529	0	325	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	588	0	361	0	0	0

Direction, Lane #	EB 1	EB 2	NB 1
Volume Total (vph)	294	294	361
Volume Left (vph)	294	294	361
Volume Right (vph)	0	0	0
Hadj (s)	0.55	0.55	0.25
Departure Headway (s)	6.1	6.1	5.6
Degree Utilization, x	0.50	0.50	0.56
Capacity (veh/h)	571	573	620
Control Delay (s)	13.9	13.9	15.3
Approach Delay (s)	13.9		15.3
Approach LOS	B		C

Intersection Summary			
Delay	14.5		
HCM Level of Service	B		
Intersection Capacity Utilization	41.6%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Signalized Intersection Capacity Analysis
1046: 115th Street & Marshield Avenue

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱		↰	↑↑						↰↑↱	
Volume (vph)	0	483	64	208	525	0	0	0	0	101	21	58
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	12	12	12	12	12
Total Lost time (s)		3.0		4.0	4.0						5.0	
Lane Util. Factor		0.95		1.00	0.95						0.95	
Frt		0.98		1.00	1.00						0.95	
Flt Protected		1.00		0.95	1.00						0.97	
Satd. Flow (prot)		3153		1605	3210						3074	
Flt Permitted		1.00		0.34	1.00						0.97	
Satd. Flow (perm)		3153		574	3210						3074	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	537	71	231	583	0	0	0	0	112	23	64
RTOR Reduction (vph)	0	12	0	0	0	0	0	0	0	0	44	0
Lane Group Flow (vph)	0	596	0	231	583	0	0	0	0	0	155	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type				pm+pt						Split		
Protected Phases		4		3	8					6	6	
Permitted Phases				8								
Actuated Green, G (s)		36.0		49.0	49.0						27.0	
Effective Green, g (s)		36.0		49.0	49.0						27.0	
Actuated g/C Ratio		0.42		0.58	0.58						0.32	
Clearance Time (s)		3.0		4.0	4.0						5.0	
Lane Grp Cap (vph)		1335		452	1850						976	
v/s Ratio Prot		0.19		c0.06	0.18						c0.05	
v/s Ratio Perm				c0.23								
v/c Ratio		0.45		0.51	0.32						0.16	
Uniform Delay, d1		17.4		16.5	9.3						20.8	
Progression Factor		1.00		0.37	0.17						1.00	
Incremental Delay, d2		1.1		3.2	0.3						0.3	
Delay (s)		18.5		9.2	2.0						21.2	
Level of Service		B		A	A						C	
Approach Delay (s)		18.5			4.0			0.0			21.2	
Approach LOS		B			A			A			C	

Intersection Summary			
HCM Average Control Delay	11.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	45.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1047: 115th Street & Ashland Ave

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑			↑↱			↰↑↱				
Volume (vph)	95	489	0	0	669	124	64	90	63	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	11	11	12	12	12	12	12	12
Total Lost time (s)	5.0	5.0			3.0			5.0				
Lane Util. Factor	1.00	0.95			0.95			0.91				
Frt	1.00	1.00			0.98			0.96				
Flt Protected	0.95	1.00			1.00			0.99				
Satd. Flow (prot)	1660	3320			3134			4497				
Flt Permitted	0.20	1.00			1.00			0.99				
Satd. Flow (perm)	351	3320			3134			4497				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	106	543	0	0	743	138	71	100	70	0	0	0
RTOR Reduction (vph)	0	0	0	0	18	0	0	48	0	0	0	0
Lane Group Flow (vph)	106	543	0	0	863	0	0	193	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	pm+pt						Split					
Protected Phases	7	4			8		2	2				
Permitted Phases	4											
Actuated Green, G (s)	48.0	48.0			35.0			27.0				
Effective Green, g (s)	48.0	48.0			35.0			27.0				
Actuated g/C Ratio	0.56	0.56			0.41			0.32				
Clearance Time (s)	5.0	5.0			3.0			5.0				
Lane Grp Cap (vph)	352	1875			1290			1428				
v/s Ratio Prot	0.04	c0.16			c0.28			c0.04				
v/s Ratio Perm	0.13											
v/c Ratio	0.30	0.29			0.67			0.14				
Uniform Delay, d1	19.1	9.6			20.3			20.7				
Progression Factor	0.44	0.31			1.00			1.00				
Incremental Delay, d2	2.0	0.4			2.8			0.2				
Delay (s)	10.4	3.3			23.1			20.9				
Level of Service	B	A			C			C				
Approach Delay (s)		4.5			23.1			20.9			0.0	
Approach LOS		A			C			C			A	

Intersection Summary			
HCM Average Control Delay	16.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	45.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1048: 115th Street & Racine Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↑↱			↰↑↑↱			↰↑↱			↰↓↱	
Volume (vph)	114	358	114	119	426	89	129	78	37	31	85	141
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	10	12	12	15	12	12	15	12
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			1.00			1.00	
Frt		0.97			0.98			0.98			0.93	
Flt Protected		0.99			0.99			0.97			0.99	
Satd. Flow (prot)		2979			3005			1835			1769	
Flt Permitted		0.62			0.65			0.73			0.94	
Satd. Flow (perm)		1874			1968			1369			1680	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	127	398	127	132	473	99	143	87	41	34	94	157
RTOR Reduction (vph)	0	32	0	0	20	0	0	10	0	0	68	0
Lane Group Flow (vph)	0	620	0	0	684	0	0	261	0	0	217	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		23.0			23.0			32.0			32.0	
Effective Green, g (s)		23.0			23.0			32.0			32.0	
Actuated g/C Ratio		0.35			0.35			0.49			0.49	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		663			696			674			827	
v/s Ratio Prot												
v/s Ratio Perm		0.33			c0.35			c0.19			0.13	
v/c Ratio		0.93			0.98			0.39			0.26	
Uniform Delay, d1		20.3			20.8			10.4			9.6	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		22.2			30.2			1.7			0.8	
Delay (s)		42.4			51.0			12.0			10.4	
Level of Service		D			D			B			B	
Approach Delay (s)		42.4			51.0			12.0			10.4	
Approach LOS		D			D			B			B	

Intersection Summary			
HCM Average Control Delay	36.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	83.4%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↑	↱	↰	↑↑	↱
Volume (vph)	106	229	88	199	420	125	118	511	74	106	898	140
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	12	10	16	12	9	10	9	9	10	9
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00	0.97	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.96		1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1562	2993		1574	3644		1508	3069	1333	1520	3099	1336
Flt Permitted	0.31	1.00		0.50	1.00		0.14	1.00	1.00	0.36	1.00	1.00
Satd. Flow (perm)	510	2993		836	3644		214	3069	1333	576	3099	1336
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	112	241	93	209	442	132	124	538	78	112	945	147
RTOR Reduction (vph)	0	48	0	0	33	0	0	0	50	0	0	93
Lane Group Flow (vph)	112	286	0	209	541	0	124	538	28	112	945	54
Confl. Peds. (#/hr)	19		16	16		19	22		25	25		22
Heavy Vehicles (%)	2%	2%	0%	1%	2%	2%	2%	4%	0%	1%	3%	0%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	32.0	27.0		32.0	27.0		38.0	31.0	31.0	38.0	31.0	31.0
Effective Green, g (s)	30.0	28.0		30.0	28.0		36.0	31.0	31.0	36.0	31.0	31.0
Actuated g/C Ratio	0.35	0.33		0.35	0.33		0.42	0.36	0.36	0.42	0.36	0.36
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)	230	986		330	1200		182	1119	486	311	1130	487
v/s Ratio Prot	0.02	0.10		c0.03	0.15		c0.05	0.18		0.03	c0.30	
v/s Ratio Perm	0.15			c0.19			0.24		0.02	0.13		0.04
v/c Ratio	0.49	0.29		0.63	0.45		0.68	0.48	0.06	0.36	0.84	0.11
Uniform Delay, d1	19.9	21.1		22.2	22.4		17.6	20.8	17.5	15.5	24.7	17.9
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.41	1.06	2.39
Incremental Delay, d2	7.2	0.7		8.9	1.2		18.7	1.5	0.2	2.4	5.6	0.3
Delay (s)	27.1	21.9		31.2	23.7		36.3	22.3	17.8	24.3	31.7	43.0
Level of Service	C	C		C	C		D	C	B	C	C	D
Approach Delay (s)		23.2			25.7			24.1			32.3	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	27.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	71.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1050: 115th Street & Wentworth Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱		↰	↱		↰	↱
Volume (vph)	48	348	30	83	597	84	31	95	51	51	122	63
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	16	12	12	16	12
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frpb, ped/bikes		1.00	0.96		1.00	0.97		1.00	0.98		1.00	0.99
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frt		1.00	0.85		1.00	0.85		1.00	0.85		1.00	0.85
Flt Protected		0.99	1.00		0.99	1.00		0.99	1.00		0.99	1.00
Satd. Flow (prot)		1965	1466		1990	1480		2015	1506		1995	1511
Flt Permitted		0.61	1.00		0.87	1.00		0.91	1.00		0.89	1.00
Satd. Flow (perm)		1199	1466		1749	1480		1863	1506		1809	1511
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	51	366	32	87	628	88	33	100	54	54	128	66
RTOR Reduction (vph)	0	0	17	0	0	47	0	0	32	0	0	39
Lane Group Flow (vph)	0	417	15	0	715	41	0	133	22	0	182	27
Confl. Peds. (#/hr)	11		20	20		11	1		4	4		1
Confl. Bikes (#/hr)	1		1	1		1			1	1		
Heavy Vehicles (%)	4%	3%	0%	0%	2%	0%	0%	0%	0%	0%	1%	0%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)		30.0	30.0		30.0	30.0		27.0	27.0		27.0	27.0
Effective Green, g (s)		30.0	30.0		30.0	30.0		27.0	27.0		27.0	27.0
Actuated g/C Ratio		0.46	0.46		0.46	0.46		0.42	0.42		0.42	0.42
Clearance Time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		553	677		807	683		774	626		751	628
v/s Ratio Prot												
v/s Ratio Perm		0.35	0.01		c0.41	0.03		0.07	0.01		c0.10	0.02
v/c Ratio		0.75	0.02		0.89	0.06		0.17	0.04		0.24	0.04
Uniform Delay, d1		14.5	9.5		15.9	9.7		12.0	11.3		12.4	11.3
Progression Factor		1.00	1.00		0.45	0.05		1.09	1.29		1.03	0.89
Incremental Delay, d2		9.2	0.1		11.8	0.1		0.5	0.1		0.7	0.1
Delay (s)		23.7	9.6		18.9	0.6		13.5	14.6		13.5	10.2
Level of Service		C	A		B	A		B	B		B	B
Approach Delay (s)		22.7			16.9			13.8			12.6	
Approach LOS		C			B			B			B	

Intersection Summary			
HCM Average Control Delay	17.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	100.1%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1051: 115th Street & State Street

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	75	385	20	51	564	91	10	107	23	119	203	62
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	0.98		1.00	0.97		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1550	3076		1550	3035		1550	3016		1550	2990	
Flt Permitted	0.95	1.00		0.49	1.00		0.56	1.00		0.66	1.00	
Satd. Flow (perm)	1550	3076		802	3035		912	3016		1077	2990	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	83	428	22	57	627	101	11	119	26	132	226	69
RTOR Reduction (vph)	0	6	0	0	20	0	0	15	0	0	40	0
Lane Group Flow (vph)	83	444	0	57	708	0	11	130	0	132	255	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Prot			Perm			Perm			Perm		
Protected Phases	7	4			8			2			6	
Permitted Phases				8			2			6		
Actuated Green, G (s)	7.0	32.0		22.0	22.0		27.0	27.0		27.0	27.0	
Effective Green, g (s)	7.0	32.0		22.0	22.0		27.0	27.0		27.0	27.0	
Actuated g/C Ratio	0.11	0.49		0.34	0.34		0.42	0.42		0.42	0.42	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	167	1514		271	1027		379	1253		447	1242	
v/s Ratio Prot	c0.05	0.14			c0.23			0.04			0.09	
v/s Ratio Perm				0.07			0.01			c0.12		
v/c Ratio	0.50	0.29		0.21	0.69		0.03	0.10		0.30	0.21	
Uniform Delay, d1	27.3	9.8		15.3	18.6		11.2	11.6		12.7	12.1	
Progression Factor	1.16	0.56		0.92	0.97		0.85	0.86		1.12	1.12	
Incremental Delay, d2	8.6	0.4		1.0	2.2		0.1	0.2		1.7	0.4	
Delay (s)	40.5	5.9		15.2	20.2		9.7	10.1		15.9	13.9	
Level of Service	D	A		B	C		A	B		B	B	
Approach Delay (s)		11.3			19.8			10.1			14.5	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	15.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	48.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			↰↱			↰↱	
Volume (vph)	63	263	165	241	320	61	412	300	189	55	295	50
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	12	12	12	12	12	12
Total Lost time (s)	4.0	4.0		3.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frt	1.00	0.94		1.00	0.98			0.97			0.98	
Flt Protected	0.95	1.00		0.95	1.00			0.98			0.99	
Satd. Flow (prot)	1550	2920		1550	3024			3144			3236	
Flt Permitted	0.50	1.00		0.95	1.00			0.64			0.68	
Satd. Flow (perm)	823	2920		1550	3024			2049			2229	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	70	292	183	268	356	68	458	333	210	61	328	56
RTOR Reduction (vph)	0	127	0	0	24	0	0	37	0	0	17	0
Lane Group Flow (vph)	70	348	0	268	400	0	0	964	0	0	428	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Prot			Perm			Perm		
Protected Phases		4		3	8			2			6	
Permitted Phases	4						2			6		
Actuated Green, G (s)	20.0	20.0		6.0	29.0			25.0			25.0	
Effective Green, g (s)	20.0	20.0		6.0	29.0			25.0			25.0	
Actuated g/C Ratio	0.31	0.31		0.09	0.45			0.38			0.38	
Clearance Time (s)	4.0	4.0		3.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	253	898		143	1349			788			857	
v/s Ratio Prot		c0.12		c0.17	0.13							
v/s Ratio Perm	0.09							c0.47			0.19	
v/c Ratio	0.28	0.39		1.87	0.30			1.34dl			0.50	
Uniform Delay, d1	17.0	17.7		29.5	11.5			20.0			15.2	
Progression Factor	0.81	0.68		1.28	1.17			1.03			0.69	
Incremental Delay, d2	2.6	1.2		405.6	0.3			111.6			2.0	
Delay (s)	16.5	13.2		443.3	13.7			132.3			12.6	
Level of Service	B	B		F	B			F			B	
Approach Delay (s)		13.6			180.1			132.3			12.6	
Approach LOS		B			F			F			B	

Intersection Summary			
HCM Average Control Delay	100.6	HCM Level of Service	F
HCM Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	80.4%	ICU Level of Service	D
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1053: 115th Street & Indiana Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			↰↑↑↱				
Volume (vph)	26	454	16	73	629	73	54	108	162	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	12	14	12	10	15	10
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			0.95				
Frt		1.00			0.99			0.93				
Flt Protected		1.00			1.00			0.99				
Satd. Flow (prot)		1620			1603			3249				
Flt Permitted		0.94			0.91			0.99				
Satd. Flow (perm)		1532			1466			3249				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	29	504	18	81	699	81	60	120	180	0	0	0
RTOR Reduction (vph)	0	1	0	0	5	0	0	137	0	0	0	0
Lane Group Flow (vph)	0	550	0	0	856	0	0	223	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm			Perm					
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Actuated Green, G (s)		41.5			41.5			15.5				
Effective Green, g (s)		41.5			41.5			15.5				
Actuated g/C Ratio		0.64			0.64			0.24				
Clearance Time (s)		4.0			4.0			4.0				
Vehicle Extension (s)		3.0			3.0			8.0				
Lane Grp Cap (vph)		978			936			775				
v/s Ratio Prot												
v/s Ratio Perm		0.36			c0.58			0.07				
v/c Ratio		0.56			0.91			0.29				
Uniform Delay, d1		6.6			10.2			20.2				
Progression Factor		1.06			1.00			1.00				
Incremental Delay, d2		1.5			14.9			0.9				
Delay (s)		8.5			25.1			21.1				
Level of Service		A			C			C				
Approach Delay (s)		8.5			25.1			21.1			0.0	
Approach LOS		A			C			C			A	

Intersection Summary			
HCM Average Control Delay	19.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	83.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰	↱		↰	↱
Volume (veh/h)	133	473	596	38	117	172
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	140	498	627	40	123	181
Pedestrians		5	6		17	
Lane Width (ft)		16.0	16.0		10.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		1	1		1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		1319	491			
pX, platoon unblocked	0.83				0.83	0.83
vC, conflicting volume	684				1448	669
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	522				1438	504
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	83				0	61
cM capacity (veh/h)	848				101	469

Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total	638	667	123	181
Volume Left	140	0	123	0
Volume Right	0	40	0	181
cSH	848	1700	101	469
Volume to Capacity	0.17	0.39	1.22	0.39
Queue Length 95th (ft)	15	0	207	45
Control Delay (s)	4.0	0.0	236.8	17.4
Lane LOS	A		F	C
Approach Delay (s)	4.0	0.0	106.2	
Approach LOS			F	

Intersection Summary			
Average Delay	21.7		
Intersection Capacity Utilization	87.5%	ICU Level of Service	E
Analysis Period (min)	15		

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↱			↰	Y	
Volume (vph)	704	0	1	607	3	29
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0			4.0	4.0	
Lane Util. Factor	1.00			1.00	1.00	
Frt	1.00			1.00	0.88	
Flt Protected	1.00			1.00	1.00	
Satd. Flow (prot)	1748			1747	1525	
Flt Permitted	1.00			1.00	1.00	
Satd. Flow (perm)	1748			1746	1525	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	782	0	1	674	3	32
RTOR Reduction (vph)	0	0	0	0	27	0
Lane Group Flow (vph)	782	0	0	675	8	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type			Perm			
Protected Phases	1 2 4			4	3	
Permitted Phases			4			
Actuated Green, G (s)	63.0			31.0	14.0	
Effective Green, g (s)	59.0			31.0	14.0	
Actuated g/C Ratio	0.69			0.36	0.16	
Clearance Time (s)				4.0	4.0	
Lane Grp Cap (vph)	1213			637	251	
v/s Ratio Prot	c0.45				c0.01	
v/s Ratio Perm				c0.39		
v/c Ratio	0.64			1.06	0.03	
Uniform Delay, d1	7.2			27.0	29.8	
Progression Factor	0.12			1.00	1.00	
Incremental Delay, d2	0.2			52.5	0.2	
Delay (s)	1.1			79.5	30.1	
Level of Service	A			E	C	
Approach Delay (s)	1.1			79.5	30.1	
Approach LOS	A			E	C	

Intersection Summary			
HCM Average Control Delay	37.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	49.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
1056: 115th Street & Bishop Ford Fwy

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱			↰						↰	↱
Volume (veh/h)	0	246	604	30	389	0	0	0	0	17	6	246
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	273	671	33	432	0	0	0	0	19	7	273
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	432			273			1111	1108	472	636	772	432
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	432			273			1111	1108	472	636	772	432
tC, single (s)	4.1			4.2			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			97			100	100	100	95	98	52
cM capacity (veh/h)	1138			1272			84	206	544	360	324	571

Direction, Lane #	EB 1	EB 2	WB 1	SB 1	SB 2
Volume Total	182	762	466	26	273
Volume Left	0	0	33	19	0
Volume Right	0	671	0	0	273
cSH	1700	1700	1272	349	571
Volume to Capacity	0.11	0.45	0.03	0.07	0.48
Queue Length 95th (ft)	0	0	2	6	64
Control Delay (s)	0.0	0.0	0.8	16.1	16.9
Lane LOS			A	C	C
Approach Delay (s)	0.0		0.8	16.9	
Approach LOS				C	

Intersection Summary			
Average Delay	3.2		
Intersection Capacity Utilization	57.7%	ICU Level of Service	B
Analysis Period (min)	15		

	⤴	⤵	↰	↑	↓	↙
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰↰		↰			
Sign Control	Stop			Stop	Stop	
Volume (vph)	263	0	420	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	292	0	467	0	0	0

Direction, Lane #	EB 1	EB 2	NB 1
Volume Total (vph)	146	146	467
Volume Left (vph)	146	146	467
Volume Right (vph)	0	0	0
Hadj (s)	0.55	0.55	0.25
Departure Headway (s)	6.3	6.3	5.0
Degree Utilization, x	0.26	0.26	0.65
Capacity (veh/h)	542	543	699
Control Delay (s)	10.3	10.3	16.6
Approach Delay (s)	10.3		16.6
Approach LOS	B		C

Intersection Summary			
Delay	14.2		
HCM Level of Service	B		
Intersection Capacity Utilization	39.1%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Signalized Intersection Capacity Analysis
1058: 119th Street & Marshield Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↰↑					↰	↰↑↱	↱
Volume (vph)	0	493	337	263	637	0	0	0	0	281	269	372
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	12	13	12	12	12	12	10	10	11
Total Lost time (s)		6.0	6.0		6.0					6.0	6.0	6.0
Lane Util. Factor		0.95	1.00		0.95					0.86	0.81	0.86
Frpb, ped/bikes		1.00	0.98		1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00					1.00	1.00	1.00
Frt		1.00	0.85		1.00					1.00	0.95	0.85
Flt Protected		1.00	1.00		0.99					0.95	0.99	1.00
Satd. Flow (prot)		3179	1232		3425					1359	3806	1133
Flt Permitted		1.00	1.00		0.99					0.95	0.99	1.00
Satd. Flow (perm)		3179	1232		3425					1359	3806	1133
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	519	355	277	671	0	0	0	0	296	283	392
RTOR Reduction (vph)	0	0	228	0	0	0	0	0	0	0	53	113
Lane Group Flow (vph)	0	519	127	0	948	0	0	0	0	163	559	83
Confl. Peds. (#/hr)	4		6	6		4						
Heavy Vehicles (%)	0%	4%	6%	1%	2%	0%	0%	0%	0%	1%	1%	1%
Parking (#/hr)			0									0
Turn Type			Perm	Split						Split		custom
Protected Phases		2		10 12 14	10 12 14					4	4	
Permitted Phases			2									4 2
Actuated Green, G (s)		39.0	39.0		68.1					23.0	23.0	68.0
Effective Green, g (s)		39.0	39.0		68.1					23.0	23.0	68.0
Actuated g/C Ratio		0.24	0.24		0.43					0.14	0.14	0.42
Clearance Time (s)		6.0	6.0							6.0	6.0	
Vehicle Extension (s)		3.0	3.0							3.0	3.0	
Lane Grp Cap (vph)		775	300		1458					195	547	482
v/s Ratio Prot		c0.16			c0.28					0.12	c0.15	
v/s Ratio Perm			0.10									0.07
v/c Ratio		0.67	0.42		0.65					0.84	1.02	0.17
Uniform Delay, d1		54.7	51.0		36.5					66.7	68.5	28.5
Progression Factor		1.00	1.00		0.04					1.00	1.00	1.00
Incremental Delay, d2		4.6	4.3		0.1					25.5	44.1	0.2
Delay (s)		59.2	55.3		1.5					92.1	112.6	28.7
Level of Service		E	E		A					F	F	C
Approach Delay (s)		57.6			1.5			0.0			92.2	
Approach LOS		E			A			A			F	

Intersection Summary			
HCM Average Control Delay	50.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	31.9
Intersection Capacity Utilization	75.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

1059: 119th Street & Ashland Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑			↑↑	↱	↰	↰↑↱				
Volume (vph)	290	485	0	0	587	142	313	204	187	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	13	12	12	11	12	13	13	14	12	12	12
Total Lost time (s)	6.0	6.0			6.0	6.0	6.0	6.0				
Lane Util. Factor	1.00	0.95			0.95	1.00	0.91	0.91				
Frt	1.00	1.00			1.00	0.85	1.00	0.94				
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.99				
Satd. Flow (prot)	1605	3431			3210	1485	1561	3064				
Flt Permitted	0.95	1.00			1.00	1.00	0.95	0.99				
Satd. Flow (perm)	1605	3431			3210	1485	1561	3064				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	322	539	0	0	652	158	348	227	208	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	84	0	61	0	0	0	0
Lane Group Flow (vph)	322	539	0	0	652	74	264	458	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Split					Perm	Split					
Protected Phases	2 4 8	2 4 8			10		12	12				
Permitted Phases						10						
Actuated Green, G (s)	83.9	83.9			37.1	37.1	12.0	12.0				
Effective Green, g (s)	83.9	83.9			37.1	37.1	12.0	12.0				
Actuated g/C Ratio	0.52	0.52			0.23	0.23	0.08	0.08				
Clearance Time (s)					6.0	6.0	6.0	6.0				
Vehicle Extension (s)					3.0	3.0	3.0	3.0				
Lane Grp Cap (vph)	842	1799			744	344	117	230				
v/s Ratio Prot	c0.20	0.16			c0.20		c0.17	0.15				
v/s Ratio Perm						0.05						
v/c Ratio	0.38	0.30			0.88	0.22	2.26	1.99				
Uniform Delay, d1	22.6	21.5			59.2	49.7	74.0	74.0				
Progression Factor	0.06	0.06			1.00	1.00	1.00	1.00				
Incremental Delay, d2	0.2	0.1			11.3	0.3	591.8	461.2				
Delay (s)	1.5	1.3			70.5	50.0	665.8	535.2				
Level of Service	A	A			E	D	F	F				
Approach Delay (s)		1.4			66.5			579.2			0.0	
Approach LOS		A			E			F			A	

Intersection Summary			
HCM Average Control Delay	207.3	HCM Level of Service	F
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	29.0
Intersection Capacity Utilization	63.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1060: 119th Street & Halsted Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑↱		↰	↑↑↱		↰	↑↑↱	
Volume (vph)	138	269	134	127	266	106	104	504	78	106	803	120
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	14	12	10	10	12	9	10	12
Total Lost time (s)	4.0	4.0	5.0	4.0	5.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.96		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1576	1600	1372	1594	1766		1578	3009		1537	3001	
Flt Permitted	0.28	1.00	1.00	0.42	1.00		0.14	1.00		0.32	1.00	
Satd. Flow (perm)	470	1600	1372	708	1766		229	3009		516	3001	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	145	283	141	134	280	112	109	531	82	112	845	126
RTOR Reduction (vph)	0	0	98	0	16	0	0	14	0	0	13	0
Lane Group Flow (vph)	145	283	43	134	376	0	109	599	0	112	958	0
Confl. Peds. (#/hr)	28		8	8		28	59		11	11		59
Confl. Bikes (#/hr)	3					3	1		2	2		1
Heavy Vehicles (%)	1%	5%	2%	0%	4%	0%	1%	4%	0%	0%	3%	3%
Turn Type	pm+pt		Perm	pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)	34.1	27.1	27.1	34.1	27.1		39.6	34.1		39.6	34.1	
Effective Green, g (s)	32.1	28.1	27.1	32.1	27.1		37.6	34.1		37.6	34.1	
Actuated g/C Ratio	0.36	0.32	0.31	0.36	0.31		0.42	0.38		0.42	0.38	
Clearance Time (s)	3.0	5.0	5.0	3.0	5.0		3.0	4.0		3.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	245	507	419	316	540		166	1157		271	1154	
v/s Ratio Prot	c0.04	0.18		0.03	c0.21		c0.03	0.20		0.02	c0.32	
v/s Ratio Perm	0.17		0.03	0.12			0.25			0.15		
v/c Ratio	0.59	0.56	0.10	0.42	0.70		0.66	0.52		0.41	0.83	
Uniform Delay, d1	20.9	25.1	22.1	20.1	27.2		18.1	21.0		16.3	24.7	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	3.8	4.4	0.5	0.9	7.3		9.0	1.7		1.0	7.0	
Delay (s)	24.7	29.5	22.6	21.0	34.4		27.1	22.6		17.3	31.7	
Level of Service	C	C	C	C	C		C	C		B	C	
Approach Delay (s)		26.6			31.0			23.3			30.2	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	27.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	88.7	Sum of lost time (s)	17.0
Intersection Capacity Utilization	78.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1061: 119th Street & Wentworth Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱		✣			✣	
Volume (vph)	38	340	59	73	427	81	36	57	34	35	88	67
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	10	10	10	12	15	12	12	16	12
Total Lost time (s)		3.0	3.0		3.0	3.0		3.0			3.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00			1.00	
Frpb, ped/bikes		1.00	0.96		1.00	0.97		0.99			0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00			1.00	
Frt		1.00	0.85		1.00	0.85		0.96			0.95	
Flt Protected		0.99	1.00		0.99	1.00		0.99			0.99	
Satd. Flow (prot)		1970	1467		1624	1381		1866			1876	
Flt Permitted		0.93	1.00		0.90	1.00		0.90			0.94	
Satd. Flow (perm)		1837	1467		1469	1381		1703			1783	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	40	358	62	77	449	85	38	60	36	37	93	71
RTOR Reduction (vph)	0	0	31	0	0	36	0	20	0	0	30	0
Lane Group Flow (vph)	0	398	31	0	526	49	0	114	0	0	171	0
Confl. Peds. (#/hr)	12		20	20		12	8		2	2		8
Confl. Bikes (#/hr)	1		2	2		1			1	1		
Heavy Vehicles (%)	3%	3%	0%	0%	3%	0%	0%	0%	0%	0%	1%	3%
Turn Type	Perm		Perm	Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)		32.0	32.0		32.0	32.0		27.0			27.0	
Effective Green, g (s)		32.0	32.0		32.0	32.0		27.0			27.0	
Actuated g/C Ratio		0.49	0.49		0.49	0.49		0.42			0.42	
Clearance Time (s)		3.0	3.0		3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)		904	722		723	680		707			741	
v/s Ratio Prot												
v/s Ratio Perm		0.22	0.02		c0.36	0.04		0.07			c0.10	
v/c Ratio		0.44	0.04		0.73	0.07		0.16			0.23	
Uniform Delay, d1		10.7	8.6		13.1	8.7		11.9			12.3	
Progression Factor		1.00	1.00		1.92	3.36		1.00			1.45	
Incremental Delay, d2		1.6	0.1		2.7	0.1		0.5			0.7	
Delay (s)		12.3	8.7		27.7	29.3		12.4			18.5	
Level of Service		B	A		C	C		B			B	
Approach Delay (s)		11.8			27.9			12.4			18.5	
Approach LOS		B			C			B			B	

Intersection Summary			
HCM Average Control Delay	19.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	72.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑	↱		↰↑	↱		↰↑	↱		↰↑↱	
Volume (vph)	58	254	40	71	464	20	34	108	33	16	175	66
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frpb, ped/bikes		1.00	0.94		1.00	0.97		1.00	0.97		0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		0.97	
Flt Protected		0.99	1.00		0.99	1.00		0.99	1.00		1.00	
Satd. Flow (prot)		1753	1443		1724	1487		1713	1489		1713	
Flt Permitted		0.49	1.00		0.86	1.00		0.89	1.00		0.98	
Satd. Flow (perm)		863	1443		1486	1487		1551	1489		1687	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	61	267	42	75	488	21	36	114	35	17	184	69
RTOR Reduction (vph)	0	0	27	0	0	8	0	0	18	0	19	0
Lane Group Flow (vph)	0	328	15	0	563	13	0	150	17	0	251	0
Confl. Peds. (#/hr)	19		25	25		19	3		6	6		3
Confl. Bikes (#/hr)	1		2	2		1			1	1		
Heavy Vehicles (%)	0%	2%	0%	0%	4%	0%	0%	5%	0%	0%	0%	2%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		23.0	23.0		23.0	23.0		32.0	32.0		32.0	
Effective Green, g (s)		23.0	23.0		23.0	23.0		32.0	32.0		32.0	
Actuated g/C Ratio		0.35	0.35		0.35	0.35		0.49	0.49		0.49	
Clearance Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	
Lane Grp Cap (vph)		305	511		526	526		764	733		831	
v/s Ratio Prot												
v/s Ratio Perm		c0.38	0.01		0.38	0.01		0.10	0.01		c0.15	
v/c Ratio		1.08	0.03		1.07	0.02		0.20	0.02		0.30	
Uniform Delay, d1		21.0	13.7		21.0	13.7		9.3	8.5		9.8	
Progression Factor		1.74	3.12		0.97	0.87		0.17	0.23		1.12	
Incremental Delay, d2		71.3	0.1		55.1	0.1		0.2	0.0		0.9	
Delay (s)		107.7	42.9		75.5	12.0		1.7	2.0		11.9	
Level of Service		F	D		E	B		A	A		B	
Approach Delay (s)		100.4			73.2			1.8			11.9	
Approach LOS		F			E			A			B	

Intersection Summary			
HCM Average Control Delay	59.2	HCM Level of Service	E
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	81.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1063: 119th Street & Michigan Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		✢			✢			↰	↱
Volume (vph)	229	35	76	8	14	11	38	255	8	30	533	521
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	14	12	12	16	12	12	16	12
Total Lost time (s)		3.0	3.0		3.0			3.0			3.0	3.0
Lane Util. Factor		1.00	1.00		1.00			1.00			1.00	1.00
Frpb, ped/bikes		1.00	0.95		0.98			1.00			1.00	0.94
Flpb, ped/bikes		0.98	1.00		0.99			1.00			1.00	1.00
Frt		1.00	0.85		0.96			1.00			1.00	0.85
Flt Protected		0.96	1.00		0.99			0.99			1.00	1.00
Satd. Flow (prot)		1860	1440		1765			1996			1975	1382
Flt Permitted		0.76	1.00		0.93			0.85			0.97	1.00
Satd. Flow (perm)		1468	1440		1657			1698			1928	1382
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	254	39	84	9	16	12	42	283	9	33	592	579
RTOR Reduction (vph)	0	0	49	0	9	0	0	2	0	0	0	205
Lane Group Flow (vph)	0	293	35	0	28	0	0	332	0	0	625	374
Confl. Peds. (#/hr)	37		53	53		37	39		54	54		39
Confl. Bikes (#/hr)							2					2
Heavy Vehicles (%)	4%	0%	1%	0%	0%	0%	0%	1%	0%	0%	3%	4%
Turn Type	pm+pt		Perm	Perm			Perm			Perm		Perm
Protected Phases	7	4			8			2			6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)		27.0	27.0		17.0			32.0			32.0	32.0
Effective Green, g (s)		27.0	27.0		17.0			32.0			32.0	32.0
Actuated g/C Ratio		0.42	0.42		0.26			0.49			0.49	0.49
Clearance Time (s)		3.0	3.0		3.0			3.0			3.0	3.0
Lane Grp Cap (vph)		658	598		433			836			949	680
v/s Ratio Prot		c0.05										
v/s Ratio Perm		0.13	0.02		0.02			0.20			c0.32	0.27
v/c Ratio		0.45	0.06		0.06			0.40			0.66	0.55
Uniform Delay, d1		13.6	11.4		18.0			10.4			12.4	11.5
Progression Factor		1.13	1.96		1.00			0.51			0.74	0.83
Incremental Delay, d2		1.3	0.1		0.3			1.0			2.8	2.5
Delay (s)		16.8	22.4		18.3			6.4			12.0	12.0
Level of Service		B	C		B			A			B	B
Approach Delay (s)		18.0			18.3			6.4			12.0	
Approach LOS		B			B			A			B	

Intersection Summary			
HCM Average Control Delay	12.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	77.7%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1064: 127th Street & S Paulina St

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↱		↰	↑↑					↰	↰↑↱	↱
Volume (vph)	0	894	289	366	1046	0	0	0	0	513	284	334
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	12	11	8	8	8	11	12	14
Total Lost time (s)		6.0		4.5	6.0					6.0	6.0	6.0
Lane Util. Factor		0.91		1.00	0.95					0.91	0.86	0.91
Frpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Frt		0.96		1.00	1.00					1.00	0.98	0.85
Flt Protected		1.00		0.95	1.00					0.95	0.98	1.00
Satd. Flow (prot)		4573		1621	3320					1489	2913	1442
Flt Permitted		1.00		0.11	1.00					0.95	0.98	1.00
Satd. Flow (perm)		4573		193	3320					1489	2913	1442
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	941	304	385	1101	0	0	0	0	540	299	352
RTOR Reduction (vph)	0	45	0	0	0	0	0	0	0	0	9	81
Lane Group Flow (vph)	0	1200	0	385	1101	0	0	0	0	308	603	190
Confl. Peds. (#/hr)	15		11	11		15						
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	0%	3%	3%	2%	3%	0%	0%	0%	0%	1%	3%	3%
Turn Type				pm+pt						Perm		Perm
Protected Phases		2		1	6						4	
Permitted Phases				6						4		4
Actuated Green, G (s)		44.0		74.9	74.9					28.1	28.1	28.1
Effective Green, g (s)		44.0		74.9	74.9					28.1	28.1	28.1
Actuated g/C Ratio		0.38		0.65	0.65					0.24	0.24	0.24
Clearance Time (s)		6.0		4.5	6.0					6.0	6.0	6.0
Vehicle Extension (s)		7.0		3.5	7.0					3.5	3.5	3.5
Lane Grp Cap (vph)		1750		454	2162					364	712	352
v/s Ratio Prot		0.26		c0.19	0.33							
v/s Ratio Perm				c0.36						0.21	0.21	0.13
v/c Ratio		0.69		0.85	0.51					0.85	0.85	0.54
Uniform Delay, d1		29.7		28.5	10.5					41.4	41.4	37.8
Progression Factor		1.00		0.89	1.67					1.00	1.00	1.00
Incremental Delay, d2		2.2		9.6	0.6					16.7	9.4	1.9
Delay (s)		31.9		35.0	18.0					58.1	50.8	39.7
Level of Service		C		D	B					E	D	D
Approach Delay (s)		31.9			22.4			0.0			50.2	
Approach LOS		C			C			A			D	

Intersection Summary			
HCM Average Control Delay	33.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	10.5
Intersection Capacity Utilization	103.6%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1065: 127th Street & Marshfield Ave

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↑			↑↑	↱		↰↑↱				
Volume (vph)	341	1066	0	0	1005	269	406	333	302	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	12	12	12	11	12	12	12	12	12	12	12
Total Lost time (s)	6.0	6.0			6.0	6.0		6.0				
Lane Util. Factor	0.97	0.95			0.95	1.00		0.91				
Frpb, ped/bikes	1.00	1.00			1.00	0.98		1.00				
Flpb, ped/bikes	1.00	1.00			1.00	1.00		1.00				
Frt	1.00	1.00			1.00	0.85		0.96				
Flt Protected	0.95	1.00			1.00	1.00		0.98				
Satd. Flow (prot)	3144	3353			3241	1489		4521				
Flt Permitted	0.14	1.00			1.00	1.00		0.98				
Satd. Flow (perm)	479	3353			3241	1489		4521				
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	359	1122	0	0	1058	283	427	351	318	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	91	0	62	0	0	0	0
Lane Group Flow (vph)	359	1122	0	0	1058	192	0	1034	0	0	0	0
Confl. Peds. (#/hr)	7		5	5		7						
Confl. Bikes (#/hr)	1		1	1		1						
Heavy Vehicles (%)	2%	2%	0%	0%	2%	1%	2%	1%	3%	0%	0%	0%
Turn Type	pm+pt					Perm	Perm					
Protected Phases	5	2			6			8				
Permitted Phases	2					6	8					
Actuated Green, G (s)	71.5	71.5			53.4	53.4		31.5				
Effective Green, g (s)	71.5	71.5			53.4	53.4		31.5				
Actuated g/C Ratio	0.62	0.62			0.46	0.46		0.27				
Clearance Time (s)	6.0	6.0			6.0	6.0		6.0				
Vehicle Extension (s)	3.5	7.0			7.0	7.0		5.0				
Lane Grp Cap (vph)	578	2085			1505	691		1238				
v/s Ratio Prot	0.07	c0.33			c0.33							
v/s Ratio Perm	0.32					0.13		0.23				
v/c Ratio	0.62	0.54			0.70	0.28		0.83				
Uniform Delay, d1	14.8	12.4			24.5	18.9		39.3				
Progression Factor	1.25	0.17			0.99	1.28		1.00				
Incremental Delay, d2	1.4	0.7			2.0	0.7		5.6				
Delay (s)	19.9	2.7			26.3	25.0		44.9				
Level of Service	B	A			C	C		D				
Approach Delay (s)		6.9			26.1			44.9			0.0	
Approach LOS		A			C			D			A	

Intersection Summary			
HCM Average Control Delay	24.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	103.6%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	132	657	399	102	765	66	227	179	66	77	162	121
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	12	11	12	12	10	10	13	10	10	10
Total Lost time (s)	3.5	6.0	3.5	3.5	6.0		3.5	6.0		3.5	6.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		0.99	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.96		1.00	0.94	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1565	3273	1313	1601	3283		1578	3002		1540	2941	
Flt Permitted	0.11	1.00	1.00	0.39	1.00		0.39	1.00		0.59	1.00	
Satd. Flow (perm)	180	3273	1313	655	3283		652	3002		961	2941	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	139	692	420	107	805	69	239	188	69	81	171	127
RTOR Reduction (vph)	0	0	169	0	6	0	0	38	0	0	107	0
Lane Group Flow (vph)	139	692	251	107	868	0	239	219	0	81	191	0
Confl. Peds. (#/hr)	11		23	23		11	8		12	12		8
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	2%	1%	3%	3%	3%	0%	1%	1%	2%	3%	0%	1%
Parking (#/hr)			0									
Turn Type	pm+pt		pm+ov	pm+pt			pm+pt			pm+pt		
Protected Phases	5	2	3	1	6		3	8		7	4	
Permitted Phases	2		2	6			8			4		
Actuated Green, G (s)	64.9	52.4	68.8	43.4	34.4		38.1	26.6		26.2	18.2	
Effective Green, g (s)	64.9	52.4	68.8	43.4	34.4		38.1	26.6		26.2	18.2	
Actuated g/C Ratio	0.56	0.46	0.60	0.38	0.30		0.33	0.23		0.23	0.16	
Clearance Time (s)	3.5	6.0	3.5	3.5	6.0		3.5	6.0		3.5	6.0	
Vehicle Extension (s)	3.0	7.0	3.0	3.0	7.0		3.0	7.0		3.0	7.0	
Lane Grp Cap (vph)	427	1491	786	321	982		348	694		259	465	
v/s Ratio Prot	c0.08	c0.21	0.05	0.03	c0.26		c0.10	0.07		0.02	0.06	
v/s Ratio Perm	0.11		0.15	0.10			c0.13			0.05		
v/c Ratio	0.33	0.46	0.32	0.33	0.88		0.69	0.32		0.31	0.41	
Uniform Delay, d1	15.7	21.6	11.5	23.9	38.4		30.6	36.7		36.2	43.6	
Progression Factor	0.80	0.80	2.43	1.00	1.00		0.97	1.01		1.00	1.00	
Incremental Delay, d2	1.6	0.8	0.2	0.6	11.5		5.3	0.9		0.7	2.1	
Delay (s)	14.2	18.2	28.0	24.5	49.9		34.9	37.8		36.9	45.7	
Level of Service	B	B	C	C	D		C	D		D	D	
Approach Delay (s)		21.0			47.1			36.4			43.8	
Approach LOS		C			D			D			D	

Intersection Summary			
HCM Average Control Delay	34.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	19.0
Intersection Capacity Utilization	75.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1067: Vermont St & S Ashland

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	46	221	367	82	313	107	362	340	81	206	408	56
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	11	12	11	12	12	11	13	12	10	11	12
Total Lost time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.91		1.00	0.96		1.00	0.97		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1706	2911		1653	3237		1620	3405		1580	3183	
Flt Permitted	0.44	1.00		0.26	1.00		0.32	1.00		0.50	1.00	
Satd. Flow (perm)	784	2911		457	3237		544	3405		824	3183	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	48	233	386	86	329	113	381	358	85	217	429	59
RTOR Reduction (vph)	0	237	0	0	27	0	0	18	0	0	9	0
Lane Group Flow (vph)	48	382	0	86	415	0	381	425	0	217	479	0
Confl. Peds. (#/hr)	12		3	3		12	5					5
Heavy Vehicles (%)	0%	2%	2%	0%	1%	1%	2%	1%	0%	1%	2%	0%
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	41.2	34.5		44.4	36.1		56.2	44.2		40.1	32.1	
Effective Green, g (s)	41.2	34.5		44.4	36.1		56.2	44.2		40.1	32.1	
Actuated g/C Ratio	0.36	0.30		0.39	0.31		0.49	0.38		0.35	0.28	
Clearance Time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	3.5	7.0		3.5	7.0		3.5	7.0		3.5	7.0	
Lane Grp Cap (vph)	335	873		263	1016		454	1309		340	888	
v/s Ratio Prot	0.01	c0.13		c0.02	0.13		c0.15	0.12		0.04	0.15	
v/s Ratio Perm	0.04			0.10			c0.26			0.18		
v/c Ratio	0.14	0.44		0.33	0.41		0.84	0.32		0.64	0.54	
Uniform Delay, d1	24.4	32.4		23.7	31.0		20.8	24.9		28.8	35.2	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		0.99	0.97	
Incremental Delay, d2	0.2	1.6		0.9	1.2		13.1	0.7		3.9	2.2	
Delay (s)	24.7	34.0		24.6	32.3		33.9	25.6		32.2	36.4	
Level of Service	C	C		C	C		C	C		C	D	
Approach Delay (s)		33.3			31.0			29.4			35.1	
Approach LOS		C			C			C			D	

Intersection Summary			
HCM Average Control Delay	32.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	75.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1068: 127th Street & Halsted Street

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	101	619	135	10	543	135	102	281	9	205	578	174
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	10	12	9	11	12	9	9	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.98			0.97		1.00	1.00		1.00	0.97	
Flt Protected		0.99			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3034			3003		1452	3227		1522	2872	
Flt Permitted		0.59			0.94		0.21	1.00		0.55	1.00	
Satd. Flow (perm)		1799			2815		317	3227		883	2872	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	112	688	150	11	603	150	113	312	10	228	642	193
RTOR Reduction (vph)	0	24	0	0	33	0	0	4	0	0	44	0
Lane Group Flow (vph)	0	926	0	0	731	0	113	318	0	228	791	0
Confl. Peds. (#/hr)	4		2	2		4	8		4	4		8
Confl. Bikes (#/hr)							2					2
Heavy Vehicles (%)	1%	2%	2%	0%	2%	6%	6%	2%	0%	1%	3%	3%
Turn Type	pm+pt			Perm			pm+pt			pm+pt		
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		25.0			17.0		28.0	24.0		28.0	24.0	
Effective Green, g (s)		25.0			17.0		28.0	24.0		28.0	24.0	
Actuated g/C Ratio		0.38			0.26		0.43	0.37		0.43	0.37	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		768			736		206	1192		420	1060	
v/s Ratio Prot		c0.07					c0.03	0.10		0.03	c0.28	
v/s Ratio Perm		c0.39			0.26		0.20			0.20		
v/c Ratio		1.21			0.99		0.55	0.27		0.54	0.75	
Uniform Delay, d1		20.0			23.9		12.3	14.3		12.7	17.9	
Progression Factor		1.00			1.46		1.05	0.59		1.00	1.00	
Incremental Delay, d2		104.7			8.4		9.7	0.5		5.0	4.8	
Delay (s)		124.7			43.5		22.6	8.9		17.7	22.7	
Level of Service		F			D		C	A		B	C	
Approach Delay (s)		124.7			43.5			12.5			21.6	
Approach LOS		F			D			B			C	

Intersection Summary			
HCM Average Control Delay	56.1	HCM Level of Service	E
HCM Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	88.7%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1069: Vermont St & Halsted Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Lane Configurations	↰	↱		↰	↱		↰	↑↱		↰	↑↱	
Volume (vph)	67	229	136	117	284	27	70	450	81	33	662	66
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	12	12	12	12	12
Total Lost time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.94		1.00	0.99		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1708	1899		1600	2011		1676	3217		1435	3274	
Flt Permitted	0.47	1.00		0.41	1.00		0.31	1.00		0.43	1.00	
Satd. Flow (perm)	852	1899		686	2011		552	3217		643	3274	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	69	236	140	121	293	28	72	464	84	34	682	68
RTOR Reduction (vph)	0	33	0	0	5	0	0	23	0	0	12	0
Lane Group Flow (vph)	69	343	0	121	316	0	72	525	0	34	738	0
Confl. Peds. (#/hr)	3		20	20		3	2		3	3		2
Confl. Bikes (#/hr)			1	1			2		2	2		2
Heavy Vehicles (%)	0%	0%	1%	6%	0%	0%	2%	3%	6%	19%	3%	2%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	24.0	24.0		24.0	24.0		31.0	31.0		31.0	31.0	
Effective Green, g (s)	24.0	24.0		24.0	24.0		31.0	31.0		31.0	31.0	
Actuated g/C Ratio	0.37	0.37		0.37	0.37		0.48	0.48		0.48	0.48	
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)	315	701		253	743		263	1534		307	1561	
v/s Ratio Prot		c0.18			0.16			0.16			c0.23	
v/s Ratio Perm	0.08			0.18			0.13			0.05		
v/c Ratio	0.22	0.49		0.48	0.43		0.27	0.34		0.11	0.47	
Uniform Delay, d1	14.1	15.8		15.7	15.3		10.2	10.6		9.4	11.5	
Progression Factor	1.00	1.00		1.33	1.34		1.00	1.00		1.14	0.92	
Incremental Delay, d2	1.6	2.4		0.6	0.2		2.6	0.6		0.4	0.5	
Delay (s)	15.7	18.2		21.5	20.7		12.8	11.2		11.1	11.1	
Level of Service	B	B		C	C		B	B		B	B	
Approach Delay (s)		17.8			20.9			11.4			11.1	
Approach LOS		B			C			B			B	

Intersection Summary			
HCM Average Control Delay	14.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	71.4%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1070: 127th Street & S Wallance St

1/14/2013

	↗	→	↙	←	↖	↰	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	WBL	WBT	WBR	NBL2	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱		↰↑↱				✥			✥	
Volume (vph)	2	808	360	770	32	3	10	9	46	12	0	3
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	10	10	10	12	12	16	12	12	16	12
Total Lost time (s)		5.0		5.0				4.0			4.0	
Lane Util. Factor		0.95		0.95				1.00			1.00	
Frpb, ped/bikes		1.00		1.00				0.99			0.99	
Flpb, ped/bikes		1.00		1.00				1.00			1.00	
Frt		1.00		1.00				0.91			0.95	
Flt Protected		1.00		0.98				0.99			0.97	
Satd. Flow (prot)		3160		3083				1811			1846	
Flt Permitted		0.95		0.57				0.96			0.87	
Satd. Flow (perm)		3008		1770				1749			1650	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	2	851	379	811	34	3	11	9	48	13	0	3
RTOR Reduction (vph)	0	0	0	3	0	0	0	38	0	0	4	0
Lane Group Flow (vph)	0	853	0	1221	0	0	0	33	0	0	17	0
Confl. Peds. (#/hr)	7		4		7		7		2	2		7
Confl. Bikes (#/hr)							2		2	2		2
Heavy Vehicles (%)	0%	1%	2%	1%	6%	0%	0%	0%	0%	0%	0%	0%
Turn Type	Perm		custom				Perm			Perm		
Protected Phases		8	7	4				2			6	
Permitted Phases	8		4 7				2			6		
Actuated Green, G (s)		18.0		27.0				14.0			14.0	
Effective Green, g (s)		18.0		27.0				14.0			14.0	
Actuated g/C Ratio		0.28		0.42				0.22			0.22	
Clearance Time (s)		5.0		5.0				4.0			4.0	
Lane Grp Cap (vph)		833		856				377			355	
v/s Ratio Prot				c0.13								
v/s Ratio Perm		0.28		c0.46				c0.02			0.01	
v/c Ratio		1.02		1.80dl				0.09			0.05	
Uniform Delay, d1		23.5		19.0				20.4			20.2	
Progression Factor		1.41		0.68				1.00			1.00	
Incremental Delay, d2		16.3		197.5				0.5			0.3	
Delay (s)		49.5		210.5				20.9			20.5	
Level of Service		D		F				C			C	
Approach Delay (s)		49.5		210.5				20.9			20.5	
Approach LOS		D		F				C			C	

Intersection Summary			
HCM Average Control Delay	140.9	HCM Level of Service	F
HCM Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	105.6%	ICU Level of Service	G
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group

1070: 127th Street & S Wallance St

Movement	SBR2	NEL	NER
Lane Configurations			
Volume (vph)	5	3	276
Ideal Flow (vphpl)	1800	1800	1800
Lane Width	12	12	12
Total Lost time (s)		5.0	
Lane Util. Factor		1.00	
Frpb, ped/bikes		1.00	
Flpb, ped/bikes		1.00	
Frt		0.87	
Flt Protected		1.00	
Satd. Flow (prot)		1559	
Flt Permitted		1.00	
Satd. Flow (perm)		1559	
Peak-hour factor, PHF	0.95	0.95	0.95
Adj. Flow (vph)	5	3	291
RTOR Reduction (vph)	0	0	0
Lane Group Flow (vph)	0	294	0
Confl. Peds. (#/hr)			
Confl. Bikes (#/hr)			
Heavy Vehicles (%)	0%	0%	0%
Turn Type			
Protected Phases		3	
Permitted Phases			
Actuated Green, G (s)		10.0	
Effective Green, g (s)		10.0	
Actuated g/C Ratio		0.15	
Clearance Time (s)		5.0	
Lane Grp Cap (vph)		240	
v/s Ratio Prot		c0.19	
v/s Ratio Perm			
v/c Ratio		1.23	
Uniform Delay, d1		27.5	
Progression Factor		0.85	
Incremental Delay, d2		130.3	
Delay (s)		153.6	
Level of Service		F	
Approach Delay (s)		153.6	
Approach LOS		F	

Intersection Summary

HCM Signalized Intersection Capacity Analysis
1071: 127th Street & State Street

1/14/2013

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰↑	↑↱		↰	↱
Volume (vph)	256	864	946	131	108	222
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		1.00	1.00
Frt		1.00	0.98		1.00	0.85
Flt Protected		0.99	1.00		0.95	1.00
Satd. Flow (prot)		3283	3260		1660	1485
Flt Permitted		0.53	1.00		0.95	1.00
Satd. Flow (perm)		1759	3260		1660	1485
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	284	960	1051	146	120	247
RTOR Reduction (vph)	0	0	17	0	0	84
Lane Group Flow (vph)	0	1244	1180	0	120	163
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type	Perm					Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)		40.0	40.0		17.0	17.0
Effective Green, g (s)		40.0	40.0		17.0	17.0
Actuated g/C Ratio		0.62	0.62		0.26	0.26
Clearance Time (s)		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		1082	2006		434	388
v/s Ratio Prot			0.36		0.07	
v/s Ratio Perm		c0.71				c0.11
v/c Ratio		1.46dl	0.59		0.28	0.42
Uniform Delay, d1		12.5	7.5		19.1	19.9
Progression Factor		1.26	0.71		1.12	1.19
Incremental Delay, d2		70.3	0.9		1.5	3.1
Delay (s)		86.0	6.3		22.9	26.7
Level of Service		F	A		C	C
Approach Delay (s)		86.0	6.3		25.5	
Approach LOS		F	A		C	

Intersection Summary			
HCM Average Control Delay	44.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	81.4%	ICU Level of Service	D
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1072: 127th Street & Michigan Avenue

1/14/2013

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰↑	↑↱		↰	↱
Volume (vph)	79	896	993	191	281	86
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	12	10	11	12	10	10
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		1.00	1.00
Frpb, ped/bikes		1.00	1.00		1.00	0.99
Flpb, ped/bikes		1.00	1.00		1.00	1.00
Frt		1.00	0.98		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		3119	3112		1506	1343
Flt Permitted		0.69	1.00		0.95	1.00
Satd. Flow (perm)		2172	3112		1506	1343
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	83	943	1045	201	296	91
RTOR Reduction (vph)	0	0	24	0	0	48
Lane Group Flow (vph)	0	1026	1222	0	296	43
Confl. Peds. (#/hr)	2			2		1
Heavy Vehicles (%)	1%	2%	2%	10%	6%	5%
Turn Type	Perm					Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)		34.0	34.0		23.0	23.0
Effective Green, g (s)		34.0	34.0		23.0	23.0
Actuated g/C Ratio		0.52	0.52		0.35	0.35
Clearance Time (s)		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		1136	1628		533	475
v/s Ratio Prot			0.39		c0.20	
v/s Ratio Perm		c0.47				0.03
v/c Ratio		0.90	0.75		0.56	0.09
Uniform Delay, d1		14.0	12.2		16.9	14.0
Progression Factor		1.12	1.52		1.73	2.91
Incremental Delay, d2		1.3	1.6		3.4	0.3
Delay (s)		17.0	20.1		32.5	41.1
Level of Service		B	C		C	D
Approach Delay (s)		17.0	20.1		34.5	
Approach LOS		B	C		C	

Intersection Summary			
HCM Average Control Delay	21.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	90.4%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1073: 130th Street & Indiana Ave

1/14/2013

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↱		↰	↑	↰↱	
Volume (vph)	783	251	395	1071	195	124
Ideal Flow (vphpl)	2300	1800	1800	2300	1800	1800
Lane Width	15	12	14	16	15	12
Total Lost time (s)	5.0		5.0	5.0	5.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.97		1.00	1.00	0.95	
Flt Protected	1.00		0.95	1.00	0.97	
Satd. Flow (prot)	2399		1788	2506	1737	
Flt Permitted	1.00		0.13	1.00	0.97	
Satd. Flow (perm)	2399		243	2506	1737	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	799	256	403	1093	199	127
RTOR Reduction (vph)	18	0	0	0	35	0
Lane Group Flow (vph)	1037	0	403	1093	291	0
Confl. Peds. (#/hr)						1
Heavy Vehicles (%)	2%	2%	2%	4%	7%	0%
Turn Type			Perm			
Protected Phases	4			8	2	
Permitted Phases			8			
Actuated Green, G (s)	31.0		31.0	31.0	24.0	
Effective Green, g (s)	31.0		31.0	31.0	24.0	
Actuated g/C Ratio	0.48		0.48	0.48	0.37	
Clearance Time (s)	5.0		5.0	5.0	5.0	
Lane Grp Cap (vph)	1144		116	1195	641	
v/s Ratio Prot	0.43			0.44	c0.17	
v/s Ratio Perm			c1.66			
v/c Ratio	0.91		3.47	0.91	0.45	
Uniform Delay, d1	15.7		17.0	15.8	15.5	
Progression Factor	1.43		1.00	1.00	1.00	
Incremental Delay, d2	7.1		1134.7	12.2	2.3	
Delay (s)	29.5		1151.7	28.0	17.8	
Level of Service	C		F	C	B	
Approach Delay (s)	29.5			330.7	17.8	
Approach LOS	C			F	B	

Intersection Summary			
HCM Average Control Delay	184.8	HCM Level of Service	F
HCM Volume to Capacity ratio	2.16		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	101.7%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1074: 130th Street & Ellis Ave

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑↑	↱		↰	↱		✥	
Volume (vph)	1	1582	37	108	835	1	59	0	149	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	15	13	11	11	12	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0	4.0	3.0	3.0	4.0		4.0	4.0			
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00	1.00			
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85			
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.95	1.00			
Satd. Flow (prot)	1881	3431	1479	1589	3320	1530		1938	1500			
Flt Permitted	0.31	1.00	1.00	0.07	1.00	1.00		0.76	1.00			
Satd. Flow (perm)	610	3431	1479	125	3320	1530		1545	1500			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1	1758	41	120	928	1	66	0	166	0	0	0
RTOR Reduction (vph)	0	0	12	0	0	0	0	0	144	0	0	0
Lane Group Flow (vph)	1	1758	29	120	928	1	0	66	22	0	0	0
Heavy Vehicles (%)	0%	3%	0%	4%	3%	0%	0%	0%	2%	0%	0%	0%
Turn Type	Perm		Perm	custom		custom	Perm		Perm	Perm		
Protected Phases		4		3	3 8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)	50.4	50.4	50.4	67.9	67.9	67.9		9.1	9.1			
Effective Green, g (s)	50.4	50.4	50.4	67.9	67.9	67.9		9.1	9.1			
Actuated g/C Ratio	0.59	0.59	0.59	0.80	0.80	0.80		0.11	0.11			
Clearance Time (s)	4.0	4.0	4.0	3.0		4.0		4.0	4.0			
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0		3.0	3.0			
Lane Grp Cap (vph)	362	2034	877	350	2652	1222		165	161			
v/s Ratio Prot		c0.51		0.06	c0.28							
v/s Ratio Perm	0.00		0.02	0.22		0.00		c0.04	0.01			
v/c Ratio	0.00	0.86	0.03	0.34	0.35	0.00		0.40	0.14			
Uniform Delay, d1	7.1	14.4	7.2	12.8	2.4	1.7		35.4	34.4			
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00			
Incremental Delay, d2	0.0	5.2	0.1	0.6	0.1	0.0		1.6	0.4			
Delay (s)	7.1	19.6	7.3	13.4	2.5	1.7		37.0	34.8			
Level of Service	A	B	A	B	A	A		D	C			
Approach Delay (s)		19.4			3.7			35.4			0.0	
Approach LOS		B			A			D			A	

Intersection Summary			
HCM Average Control Delay	15.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	67.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1942: 111th Street & Langley Avenue

1/14/2013

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰↑	↑↱		↲↳	
Volume (vph)	11	938	813	29	71	14
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10
Total Lost time (s)		5.0	5.0		3.0	
Lane Util. Factor		0.95	0.95		1.00	
Frt		1.00	0.99		0.98	
Flt Protected		1.00	1.00		0.96	
Satd. Flow (prot)		3097	3083		1530	
Flt Permitted		0.94	1.00		0.96	
Satd. Flow (perm)		2913	3083		1530	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	12	1042	903	32	79	16
RTOR Reduction (vph)	0	0	3	0	8	0
Lane Group Flow (vph)	0	1054	932	0	87	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type	Perm					
Protected Phases		4	8 2 11		5	
Permitted Phases	4					
Actuated Green, G (s)		33.0	64.0		7.0	
Effective Green, g (s)		33.0	64.0		7.0	
Actuated g/C Ratio		0.37	0.71		0.08	
Clearance Time (s)		5.0			3.0	
Lane Grp Cap (vph)		1068	2192		119	
v/s Ratio Prot			c0.30		c0.06	
v/s Ratio Perm		c0.36				
v/c Ratio		0.99	0.43		0.73	
Uniform Delay, d1		28.3	5.4		40.6	
Progression Factor		1.00	0.01		1.00	
Incremental Delay, d2		24.6	0.2		32.1	
Delay (s)		52.9	0.3		72.7	
Level of Service		D	A		E	
Approach Delay (s)		52.9	0.3		72.7	
Approach LOS		D	A		E	

Intersection Summary			
HCM Average Control Delay	30.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	48.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

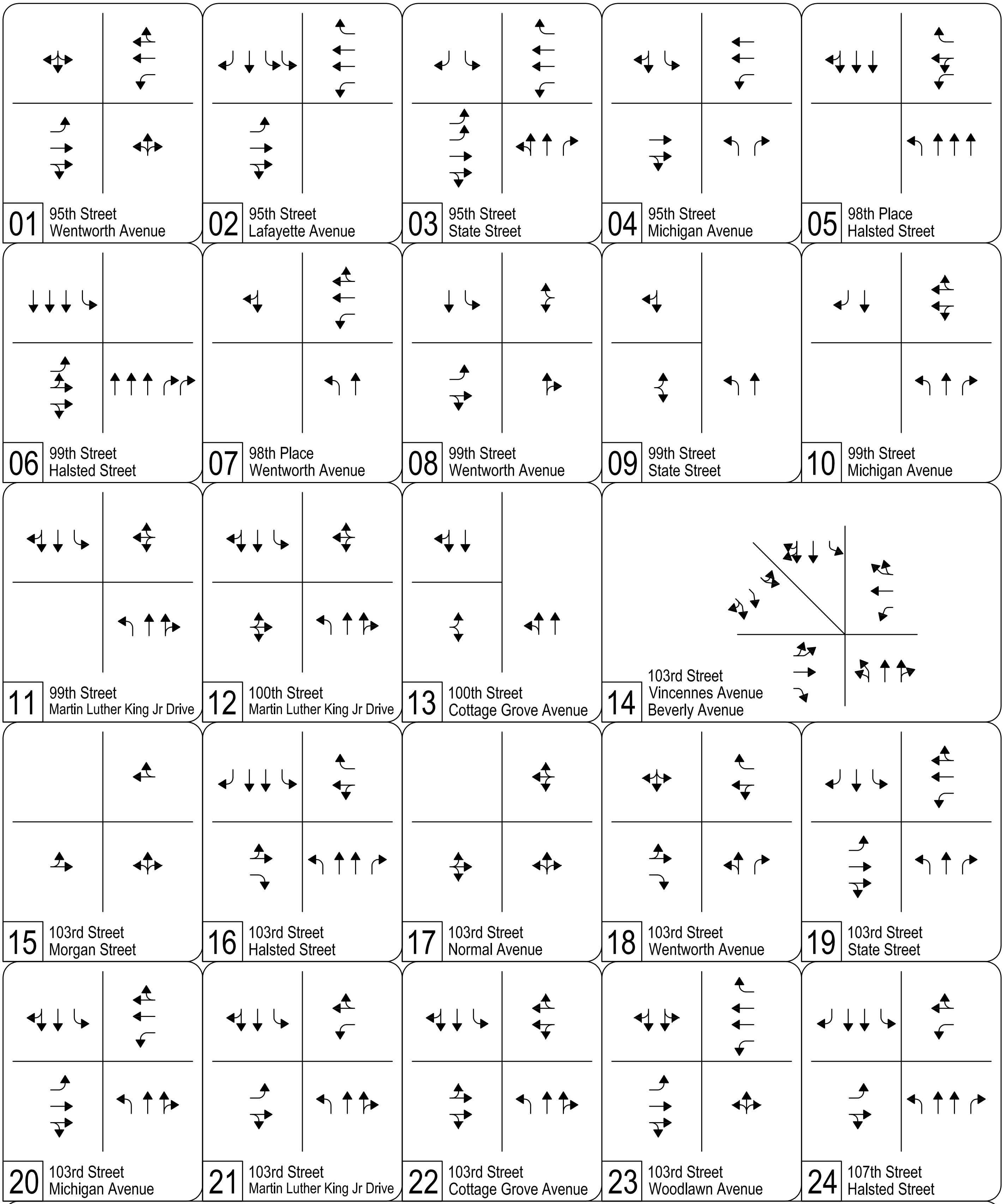
HCM Signalized Intersection Capacity Analysis
1955: 115th Street & Cottage Grove Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			↰↱			✥			↰	↱
Volume (vph)	98	516	0	1	571	38	3	2	28	192	0	141
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	12	12	11	12	11
Total Lost time (s)		4.0			4.0			3.0			3.0	3.0
Lane Util. Factor		1.00			0.95			1.00			1.00	1.00
Frpb, ped/bikes		1.00			1.00			0.94			1.00	0.98
Flpb, ped/bikes		1.00			1.00			1.00			0.99	1.00
Frt		1.00			0.99			0.88			1.00	0.85
Flt Protected		0.99			1.00			1.00			0.95	1.00
Satd. Flow (prot)		1765			3341			1467			1670	1348
Flt Permitted		0.79			0.95			0.93			0.88	1.00
Satd. Flow (perm)		1409			3191			1370			1545	1348
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	109	573	0	1	634	42	3	2	31	213	0	157
RTOR Reduction (vph)	0	0	0	0	6	0	0	28	0	0	0	105
Lane Group Flow (vph)	0	682	0	0	671	0	0	8	0	0	213	52
Confl. Peds. (#/hr)	60		44	44		60	14		10	10		14
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	0%	1%	0%	0%	1%	3%	20%	0%	0%	1%	0%	7%
Turn Type	Perm			Prot			Perm			pm+pt		Perm
Protected Phases		4		3	3 4			1		2	1 2	
Permitted Phases	4				3		1	1		1 2		1 2
Actuated Green, G (s)		31.0			45.0			9.0			25.0	28.0
Effective Green, g (s)		31.0			45.0			9.0			25.0	28.0
Actuated g/C Ratio		0.36			0.53			0.11			0.29	0.33
Clearance Time (s)		4.0						3.0				
Lane Grp Cap (vph)		514			1714			145			478	444
v/s Ratio Prot					c0.06						c0.08	
v/s Ratio Perm		c0.48			0.14			0.01			c0.05	0.04
v/c Ratio		1.33			0.39			0.06			0.45	0.12
Uniform Delay, d1		27.0			11.9			34.2			24.4	19.9
Progression Factor		1.00			1.31			1.00			1.00	1.00
Incremental Delay, d2		160.1			0.1			0.8			3.0	0.5
Delay (s)		187.1			15.6			34.9			27.4	20.4
Level of Service		F			B			C			C	C
Approach Delay (s)		187.1			15.6			34.9			24.4	
Approach LOS		F			B			C			C	

Intersection Summary			
HCM Average Control Delay	84.1	HCM Level of Service	F
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	80.5%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



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02 95th Street Lafayette Avenue

03 95th Street State Street

04 95th Street Michigan Avenue

05 98th Place Halsted Street

06 99th Street Halsted Street

07 98th Place Wentworth Avenue

08 99th Street Wentworth Avenue

09 99th Street State Street

10 99th Street Michigan Avenue

11 99th Street Martin Luther King Jr Drive

12 100th Street Martin Luther King Jr Drive

13 100th Street Cottage Grove Avenue

14 103rd Street Vincennes Avenue Beverly Avenue

15 103rd Street Morgan Street

16 103rd Street Halsted Street

17 103rd Street Normal Avenue

18 103rd Street Wentworth Avenue

19 103rd Street State Street

20 103rd Street Michigan Avenue

21 103rd Street Martin Luther King Jr Drive

22 103rd Street Cottage Grove Avenue

23 103rd Street Woodlawn Avenue

24 107th Street Halsted Street

BRT Alternative (2030) Intersection Lane Geometry

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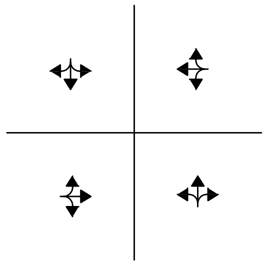
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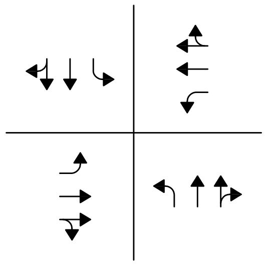
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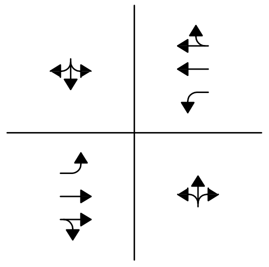
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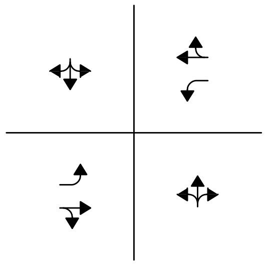
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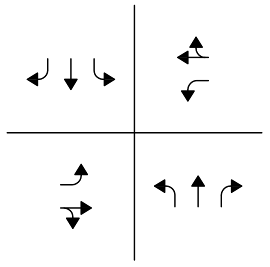
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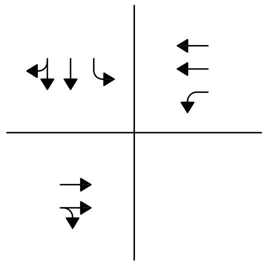
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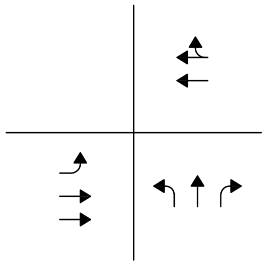
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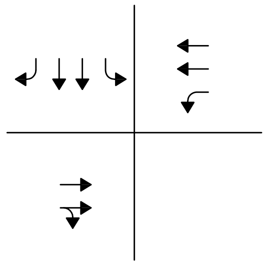
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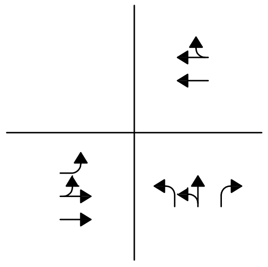
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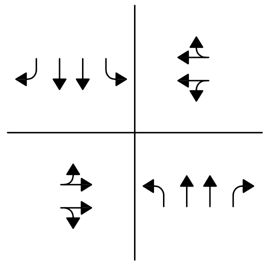
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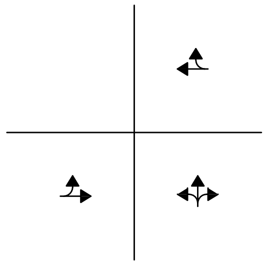
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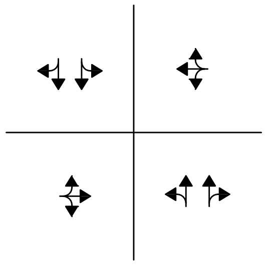
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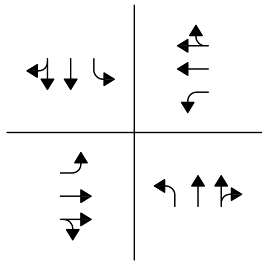
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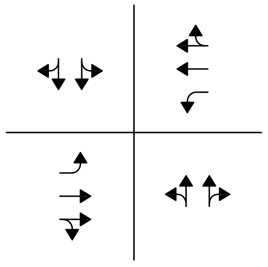
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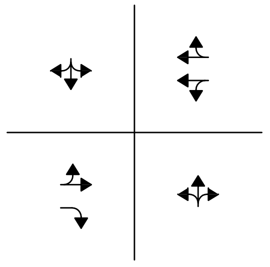
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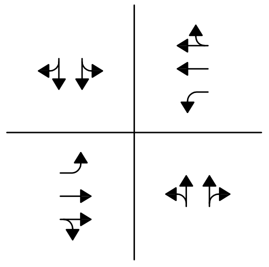
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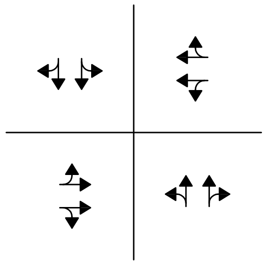
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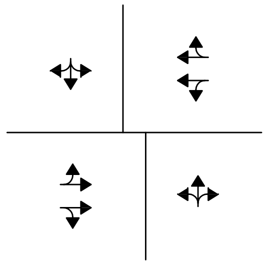
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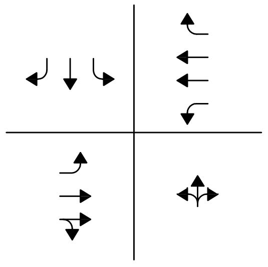
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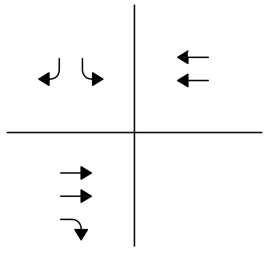
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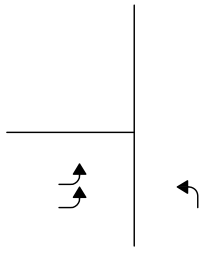
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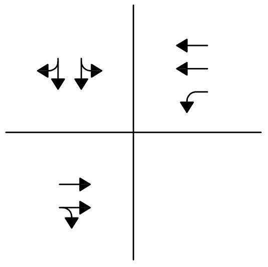
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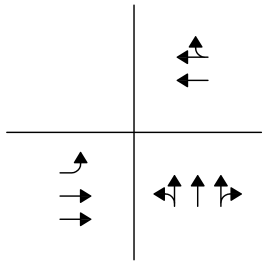
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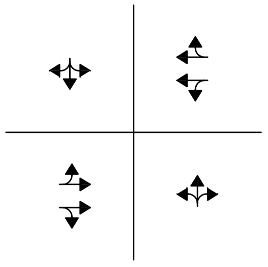
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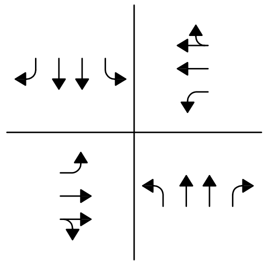
49 115th Street
Halsted Street

BRT Alternative (2030) Intersection Lane Geometry

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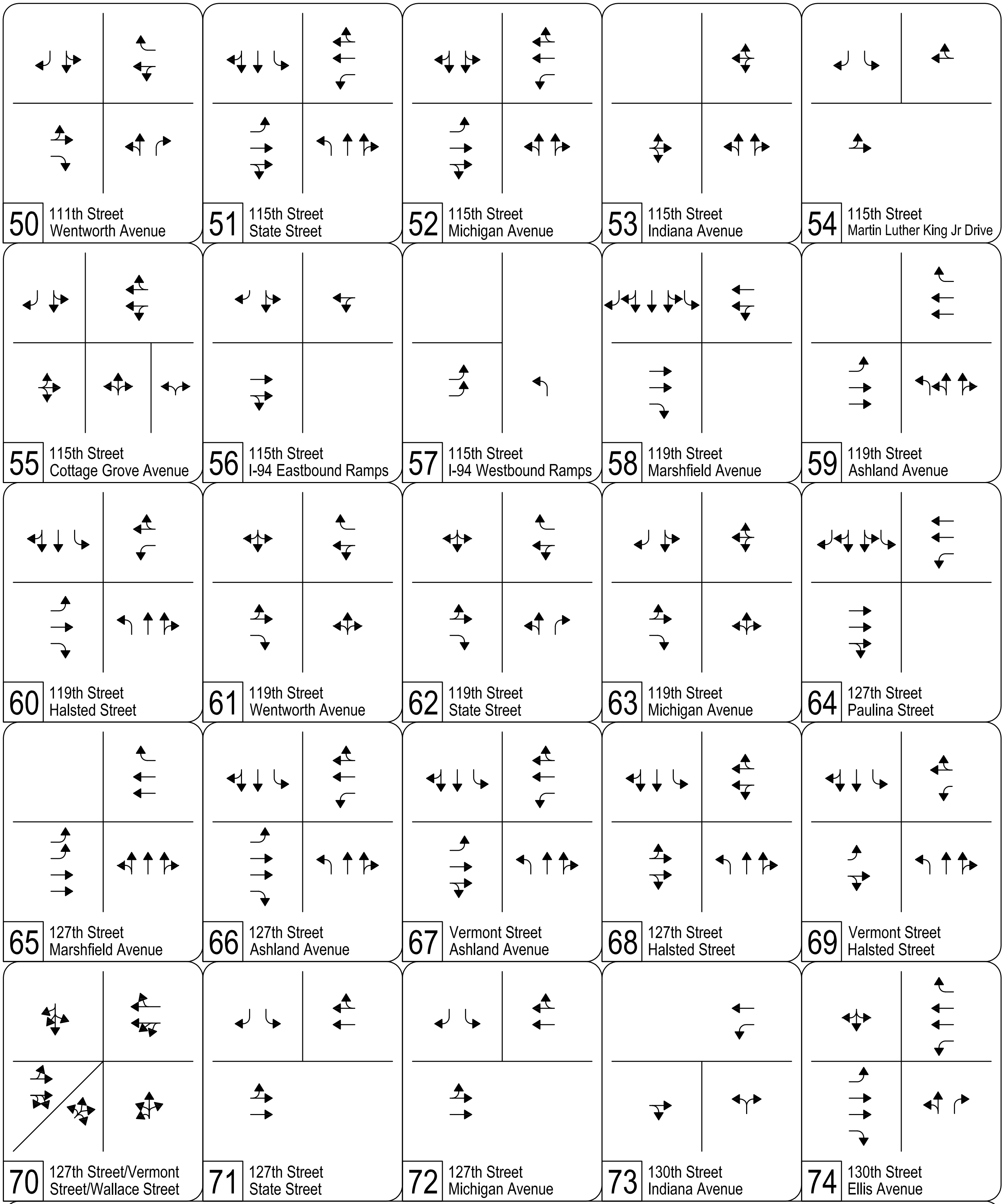

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51 115th Street State Street

52 115th Street Michigan Avenue

53 115th Street Indiana Avenue

54 115th Street Martin Luther King Jr Drive

55 115th Street Cottage Grove Avenue

56 115th Street I-94 Eastbound Ramps

57 115th Street I-94 Westbound Ramps

58 119th Street Marshfield Avenue

59 119th Street Ashland Avenue

60 119th Street Halsted Street

61 119th Street Wentworth Avenue

62 119th Street State Street

63 119th Street Michigan Avenue

64 127th Street Paulina Street

65 127th Street Marshfield Avenue

66 127th Street Ashland Avenue

67 Vermont Street Ashland Avenue

68 127th Street Halsted Street

69 Vermont Street Halsted Street

70 127th Street/Vermont Street/Wallace Street

71 127th Street State Street

72 127th Street Michigan Avenue

73 130th Street Indiana Avenue

74 130th Street Ellis Avenue

BRT Alternative (2030) Intersection Lane Geometry

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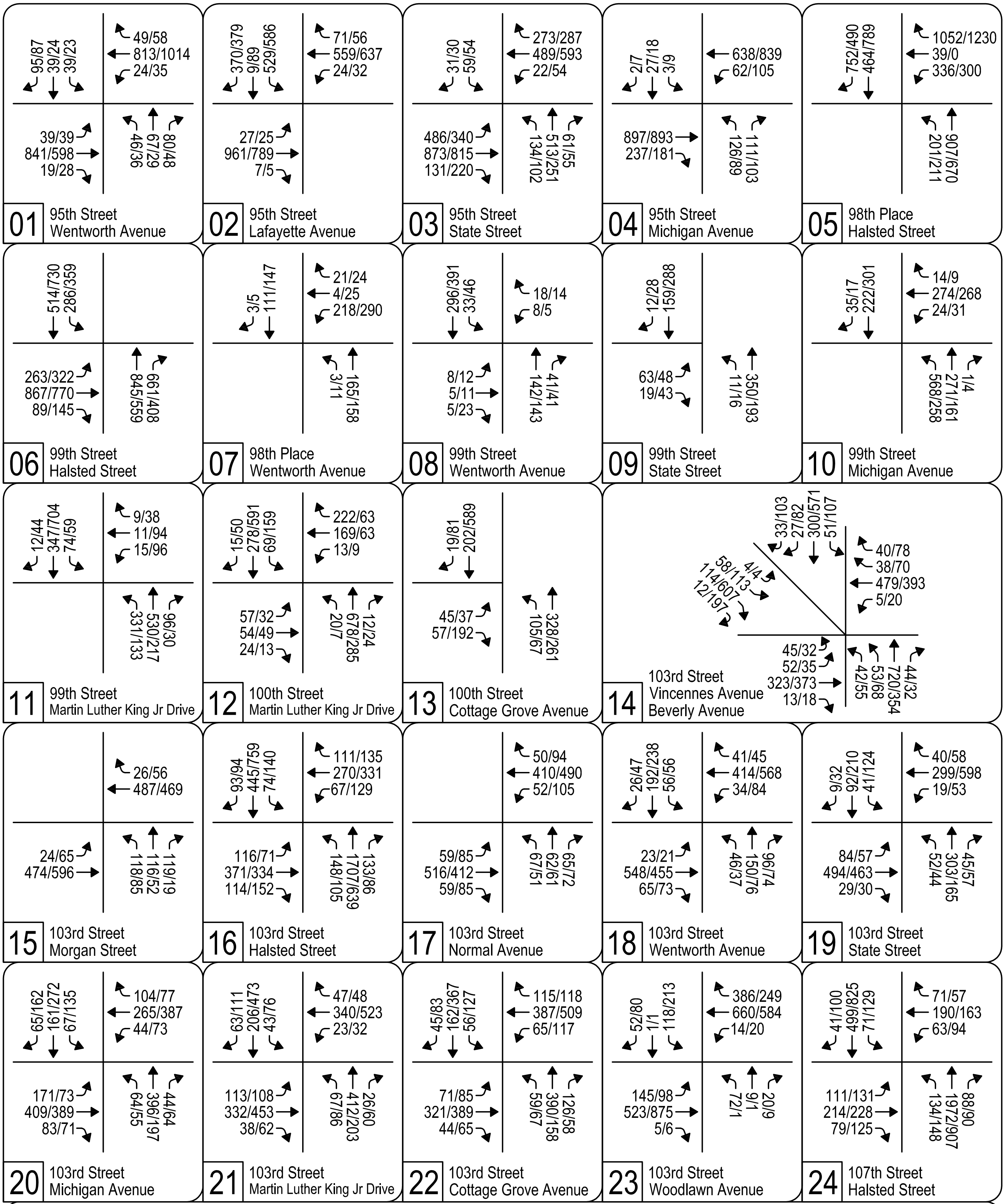
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80/48
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9/89
529/586
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559/637
24/32
27/25
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7/5
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State Street
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59/54
273/287
489/593
22/54
486/340
873/815
131/220
134/102
513/251
61/55
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Michigan Avenue
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27/18
3/9
638/839
62/105
897/893
237/181
126/89
111/103
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Halsted Street
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907/670
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99th Street
Halsted Street
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867/770
89/145
845/559
661/408
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5/23
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41/41
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99th Street
State Street
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11/16
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Michigan Avenue
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14/9
274/268
24/31
568/258
271/161
1/4
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Beverly Avenue
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53/68
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Morgan Street
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Halsted Street
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State Street
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Halsted Street
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BRT Alternative (2030) Intersection Traffic Volumes

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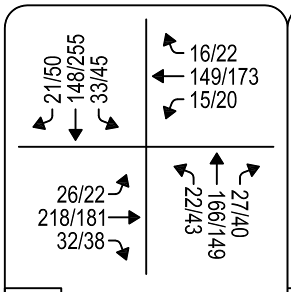
Legend: AM/PM Peak Hour Volumes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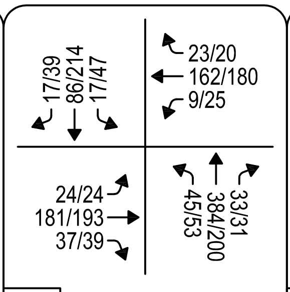
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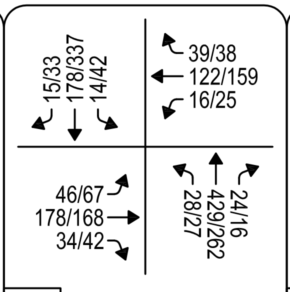
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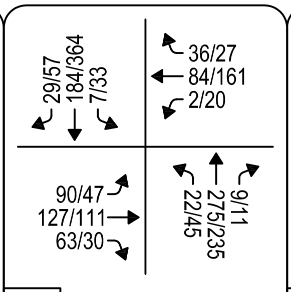
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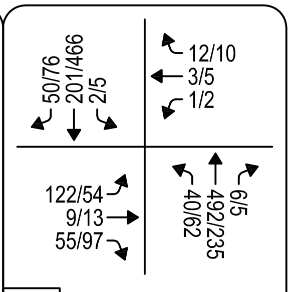
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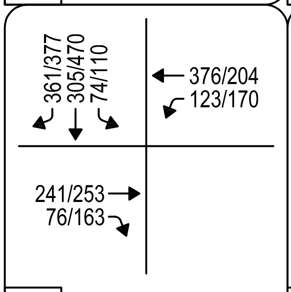
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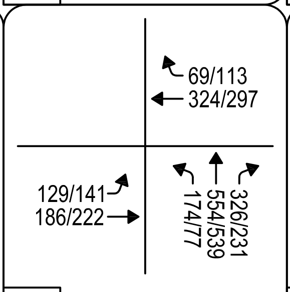
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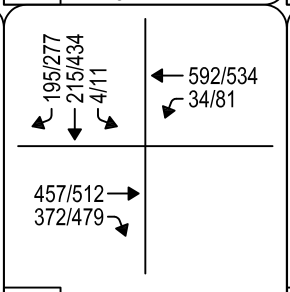
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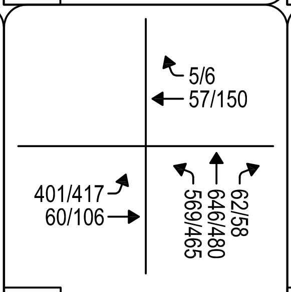
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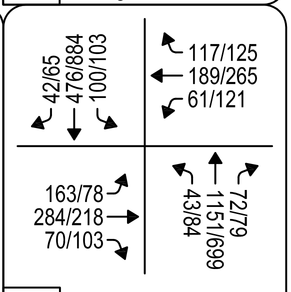
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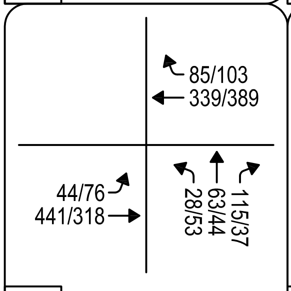
72/79

34 111th Street Halsted Street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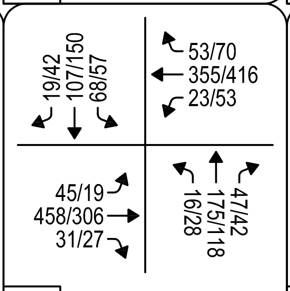
35 111th Street Normal Avenue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458/306
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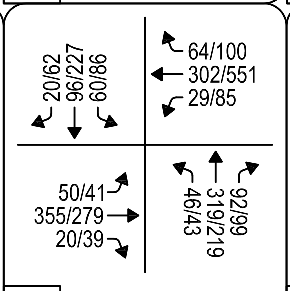
47/42

36 111th Street Wentworth Avenue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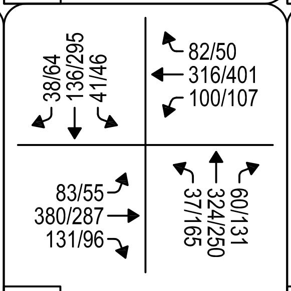
92/99

37 111th Street State Street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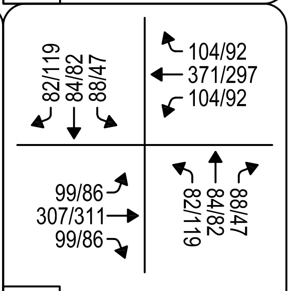
60/131

38 111th Street Michigan Avenue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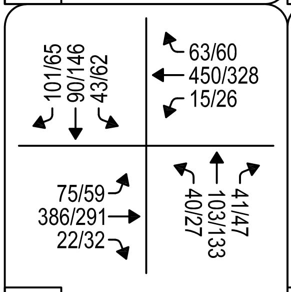
88/47

39 111th Street Indiana Avenue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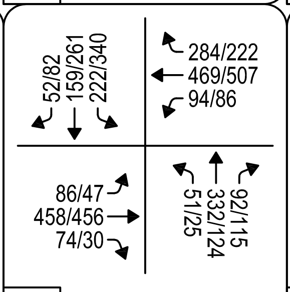
40 111th Street Martin Luther King Jr Drive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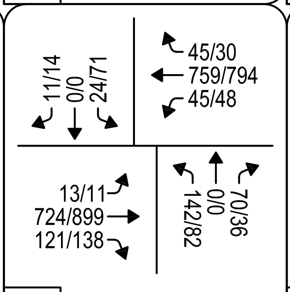
41 111th Street Cottage Grove Avenue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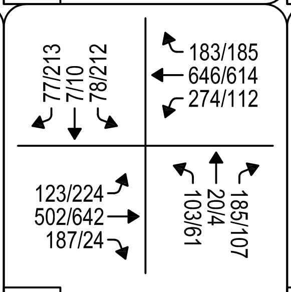
42 111th Street Ellis Avenue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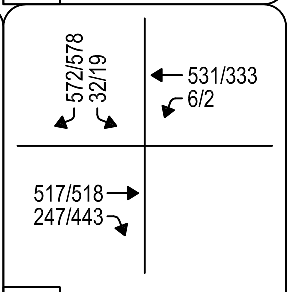
43 111th Street Doty Road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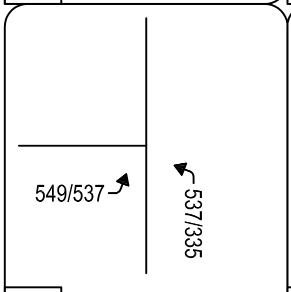
44 111th Street I-94 Eastbound Ramps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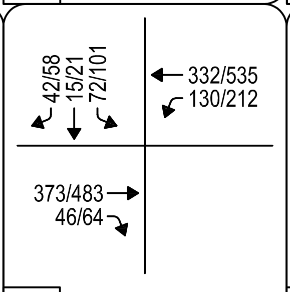
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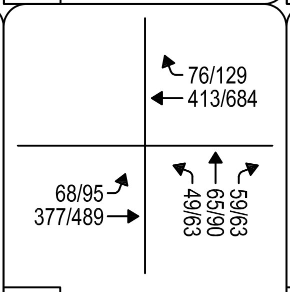
46/64

46 115th Street Marshfield Avenue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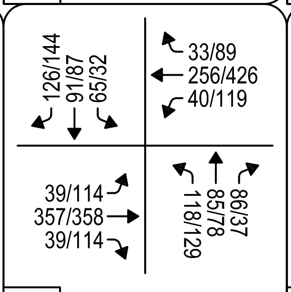
59/63

47 115th Street Ashland Avenue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118/129
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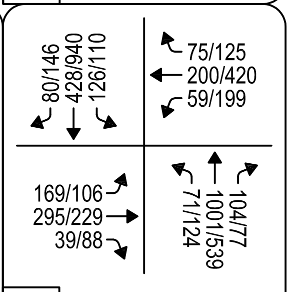
48 115th Street Racine Road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59/199
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295/229
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49 115th Street Halsted Street

BRT Alternative (2030) Intersection Traffic Volumes

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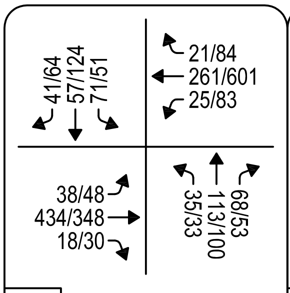
Legend: AM/PM Peak Hour Volumes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50 111th Street
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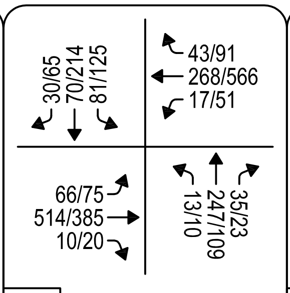
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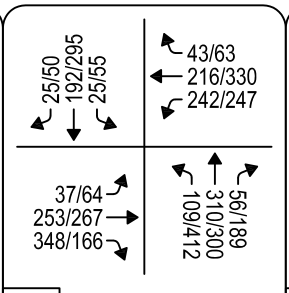
51 115th Street
State Street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52 115th Street
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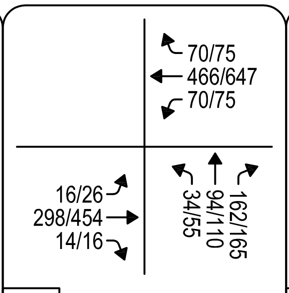
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53 115th Street
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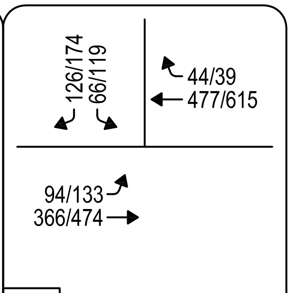
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54 115th Street
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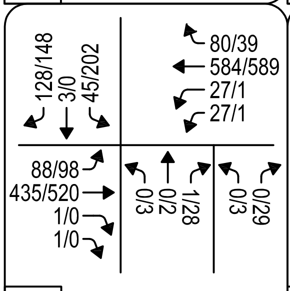
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55 115th Street
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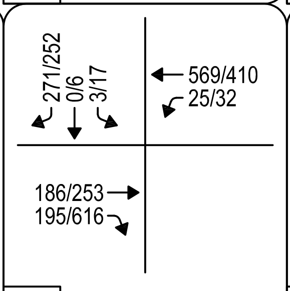
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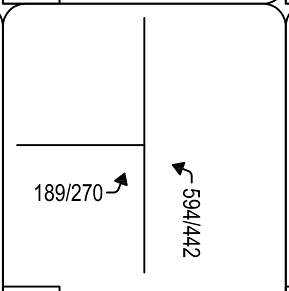
56 115th Street
I-94 Eastbound Ramps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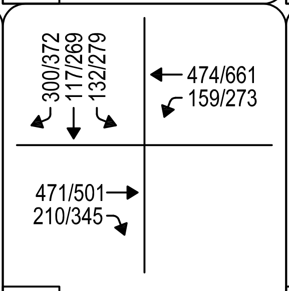
57 115th Street
I-94 Westbound Ramps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58 119th Street
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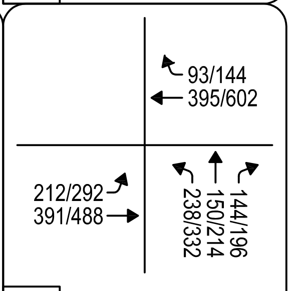
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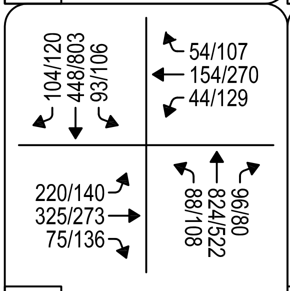
59 119th Street
Ashland Avenue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60 119th Street
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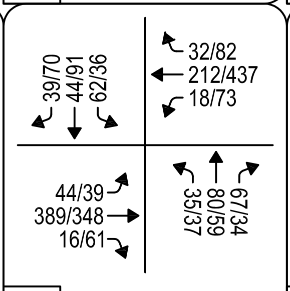
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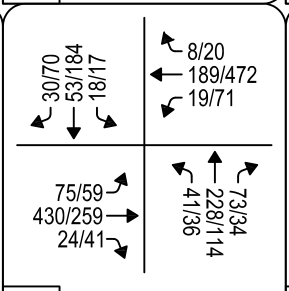
61 119th Street
Wentworth Avenue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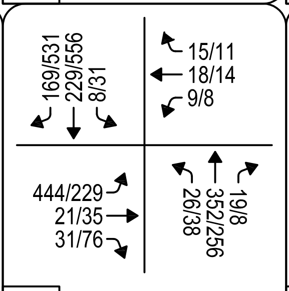
62 119th Street
State Street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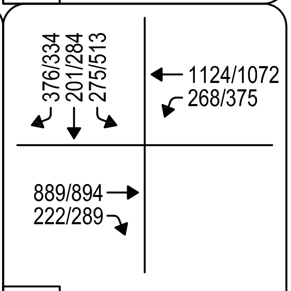
63 119th Street
Michigan Avenue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64 127th Street
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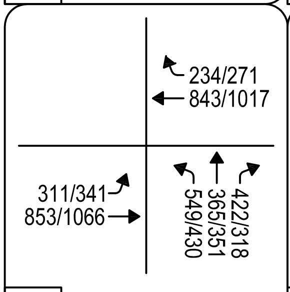
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65 127th Street
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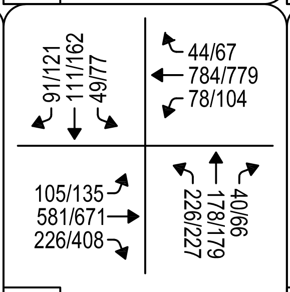
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66 127th Street
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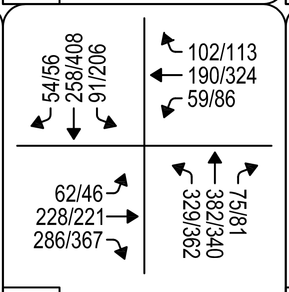
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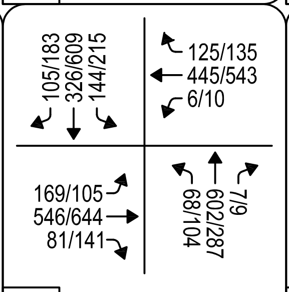
67 Vermont Street
Ashland Avenue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68 127th Street
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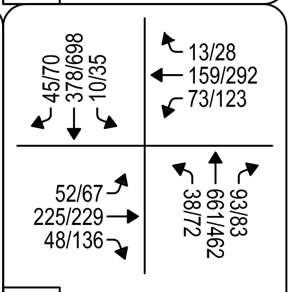
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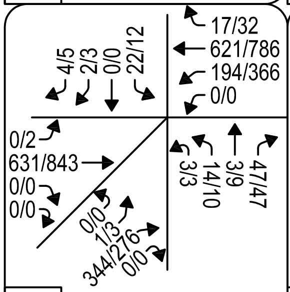
69 Vermont Street
Halsted Street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1/3
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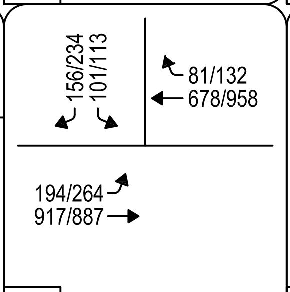
70 127th Street/Vermont
Street/Wallace Street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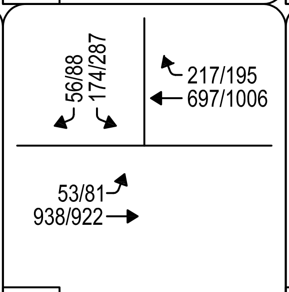
71 127th Street
State Street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72 127th Street
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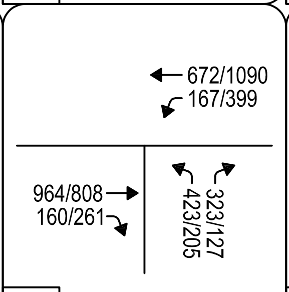
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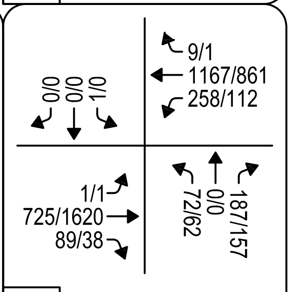
73 130th Street
Indiana Avenue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72/62
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187/157

74 130th Street
Ellis Avenue

BRT Alternative (2030) Intersection Traffic Volumes

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Legend: AM/PM Peak Hour Volumes

HCM Signalized Intersection Capacity Analysis
1001: 95th Street & Wentworth Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			✥			✥	
Volume (vph)	39	841	19	24	813	49	46	67	80	39	39	95
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	16	10	10	16	8	15	8	8	14	8
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			0.99			0.99	
Flpb, ped/bikes	0.99	1.00		1.00	1.00			1.00			1.00	
Frt	1.00	1.00		1.00	0.99			0.94			0.93	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1417	2976		1592	2979			1754			1670	
Flt Permitted	0.25	1.00		0.25	1.00			0.90			0.90	
Satd. Flow (perm)	369	2976		417	2979			1596			1526	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	41	885	20	25	856	52	48	71	84	41	41	100
RTOR Reduction (vph)	0	2	0	0	7	0	0	39	0	0	59	0
Lane Group Flow (vph)	41	903	0	25	901	0	0	164	0	0	123	0
Confl. Peds. (#/hr)	61		11	11		61	3		5	5		3
Confl. Bikes (#/hr)	1		1	1		1						
Heavy Vehicles (%)	11%	7%	0%	0%	6%	2%	2%	7%	4%	5%	7%	3%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	34.0	34.0		34.0	34.0			22.0			22.0	
Effective Green, g (s)	34.0	34.0		34.0	34.0			23.0			23.0	
Actuated g/C Ratio	0.52	0.52		0.52	0.52			0.35			0.35	
Clearance Time (s)	4.0	4.0		4.0	4.0			5.0			5.0	
Lane Grp Cap (vph)	193	1557		218	1558			565			540	
v/s Ratio Prot		c0.30			0.30							
v/s Ratio Perm	0.11			0.06				c0.10			0.08	
v/c Ratio	0.21	0.58		0.11	0.58			0.29			0.23	
Uniform Delay, d1	8.3	10.6		7.9	10.6			15.1			14.8	
Progression Factor	1.00	1.00		0.83	1.16			1.00			1.00	
Incremental Delay, d2	2.5	1.6		0.9	1.4			1.3			1.0	
Delay (s)	10.8	12.2		7.5	13.7			16.4			15.7	
Level of Service	B	B		A	B			B			B	
Approach Delay (s)		12.1			13.5			16.4			15.7	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	13.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	55.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1002: 95th Street & Lafayette Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↑	↱				↰↰	↑	↱
Volume (vph)	27	961	7	24	559	71	0	0	0	529	9	370
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	5.0	5.0		3.0	3.0	3.0				5.0	5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00				0.97	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.67				1.00	1.00	0.96
Flpb, ped/bikes	0.91	1.00		1.00	1.00	1.00				1.00	1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85				1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00				0.95	1.00	1.00
Satd. Flow (prot)	778	3285		1710	3138	512				3100	1440	1399
Flt Permitted	0.43	1.00		0.14	1.00	1.00				0.95	1.00	1.00
Satd. Flow (perm)	352	3285		248	3138	512				3100	1440	1399
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	28	1012	7	25	588	75	0	0	0	557	9	389
RTOR Reduction (vph)	0	1	0	0	0	33	0	0	0	0	0	172
Lane Group Flow (vph)	28	1018	0	25	588	42	0	0	0	557	9	217
Confl. Peds. (#/hr)	354		13	13		354	22		22	22		22
Confl. Bikes (#/hr)	4					4			1	1		
Heavy Vehicles (%)	100%	4%	0%	0%	9%	100%	0%	0%	0%	7%	25%	5%
Turn Type	pm+pt			pm+pt		Perm				Split		Perm
Protected Phases	7	4		3	8					6	6	
Permitted Phases	4			8		8						6
Actuated Green, G (s)	43.0	43.0		73.0	73.0	73.0				30.0	30.0	30.0
Effective Green, g (s)	43.0	43.0		73.0	73.0	73.0				30.0	30.0	30.0
Actuated g/C Ratio	0.33	0.33		0.56	0.56	0.56				0.23	0.23	0.23
Clearance Time (s)	5.0	5.0		3.0	3.0	3.0				5.0	5.0	5.0
Lane Grp Cap (vph)	162	1087		634	1762	288				715	332	323
v/s Ratio Prot	0.02	c0.31		0.01	c0.19					c0.18	0.01	
v/s Ratio Perm	0.04			0.01		0.08						0.16
v/c Ratio	0.17	0.94		0.04	0.33	0.15				0.78	0.03	0.67
Uniform Delay, d1	31.6	42.2		15.1	15.4	13.6				46.9	38.7	45.5
Progression Factor	0.80	0.82		0.29	0.62	1.93				1.00	1.00	1.00
Incremental Delay, d2	2.0	14.1		0.1	0.3	0.7				8.2	0.2	10.7
Delay (s)	27.1	48.9		4.4	9.8	26.9				55.1	38.9	56.2
Level of Service	C	D		A	A	C				E	D	E
Approach Delay (s)		48.3			11.5			0.0			55.4	
Approach LOS		D			B			A			E	

Intersection Summary			
HCM Average Control Delay	41.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	52.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

1003: 95th Street & State Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↱		↰	↑↑	↱		↰↑	↱	↰		↱
Volume (vph)	486	873	131	22	489	273	134	513	61	59	0	31
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0	3.0		5.0	5.0	5.0		5.0	5.0	5.0		5.0
Lane Util. Factor	0.97	0.95		1.00	0.95	1.00		0.95	1.00	1.00		1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.65		1.00	0.95	1.00		0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Frt	1.00	0.98		1.00	1.00	0.85		1.00	0.85	1.00		0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.99	1.00	0.95		1.00
Satd. Flow (prot)	3190	3107		1555	2923	944		3300	1419	855		738
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.99	1.00	0.95		1.00
Satd. Flow (perm)	3190	3107		1555	2923	944		3300	1419	855		738
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	512	919	138	23	515	287	141	540	64	62	0	33
RTOR Reduction (vph)	0	9	0	0	0	158	0	0	25	0	0	30
Lane Group Flow (vph)	512	1048	0	23	515	129	0	681	39	62	0	3
Confl. Peds. (#/hr)	425		21	21		425	6		34	34		6
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	4%	8%	3%	10%	17%	5%	1%	3%	2%	100%	0%	100%
Turn Type	Prot			Prot		Perm	Split		Perm	Prot		custom
Protected Phases	7	4		3	8		2	2		6		
Permitted Phases						8			2			6
Actuated Green, G (s)	40.0	62.0		9.0	31.0	31.0		31.0	31.0	10.0		10.0
Effective Green, g (s)	40.0	62.0		9.0	31.0	31.0		31.0	31.0	10.0		10.0
Actuated g/C Ratio	0.31	0.48		0.07	0.24	0.24		0.24	0.24	0.08		0.08
Clearance Time (s)	3.0	3.0		5.0	5.0	5.0		5.0	5.0	5.0		5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0	3.0	3.0		3.0
Lane Grp Cap (vph)	982	1482		108	697	225		787	338	66		57
v/s Ratio Prot	0.16	c0.34		0.01	c0.18			c0.21		c0.07		
v/s Ratio Perm						0.14			0.03			0.00
v/c Ratio	0.52	0.71		0.21	0.74	0.57		0.87	0.11	0.94		0.04
Uniform Delay, d1	37.1	26.8		57.2	45.8	43.6		47.5	38.8	59.7		55.6
Progression Factor	0.75	0.22		1.00	1.00	1.00		0.94	0.89	1.00		1.00
Incremental Delay, d2	0.9	1.3		4.5	6.9	10.1		12.1	0.7	88.5		0.3
Delay (s)	28.8	7.1		61.6	52.7	53.8		56.9	35.2	148.2		55.9
Level of Service	C	A		E	D	D		E	D	F		E
Approach Delay (s)		14.2			53.3			55.0			116.1	
Approach LOS		B			D			E			F	

Intersection Summary			
HCM Average Control Delay	36.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	72.8%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱		↰	↑↑		↰		↱	↰	↱	
Volume (vph)	0	897	237	62	638	0	126	0	111	3	27	2
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	11	11	8	12	12	12	14	15	12
Total Lost time (s)		4.0		4.0	4.0		4.0		4.0	4.0	4.0	
Lane Util. Factor		0.95		1.00	0.95		1.00		1.00	1.00	1.00	
Frpb, ped/bikes		0.99		1.00	1.00		1.00		0.98	1.00	1.00	
Flpb, ped/bikes		1.00		1.00	1.00		1.00		1.00	0.99	1.00	
Frt		0.97		1.00	1.00		1.00		0.85	1.00	0.99	
Flt Protected		1.00		0.95	1.00		0.95		1.00	0.95	1.00	
Satd. Flow (prot)		2852		1650	3005		1390		1465	1803	1961	
Flt Permitted		1.00		0.15	1.00		0.74		1.00	0.95	1.00	
Satd. Flow (perm)		2852		260	3005		1078		1465	1803	1961	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	997	263	69	709	0	140	0	123	3	30	2
RTOR Reduction (vph)	0	24	0	0	0	0	0	0	77	0	1	0
Lane Group Flow (vph)	0	1236	0	69	709	0	140	0	46	3	31	0
Confl. Peds. (#/hr)	49		15	15		49			12	12		
Heavy Vehicles (%)	0%	6%	14%	0%	10%	0%	23%	0%	2%	0%	0%	0%
Turn Type				Perm			custom		custom	Perm		
Protected Phases		4			8						6	
Permitted Phases				8			2		2	6		
Actuated Green, G (s)		60.0		60.0	60.0		32.0		32.0	32.0	32.0	
Effective Green, g (s)		60.0		60.0	60.0		32.0		32.0	32.0	32.0	
Actuated g/C Ratio		0.60		0.60	0.60		0.32		0.32	0.32	0.32	
Clearance Time (s)		4.0		4.0	4.0		4.0		4.0	4.0	4.0	
Lane Grp Cap (vph)		1711		156	1803		345		469	577	628	
v/s Ratio Prot		c0.43			0.24						0.02	
v/s Ratio Perm				0.27			c0.13		0.03	0.00		
v/c Ratio		0.72		0.44	0.39		0.41		0.10	0.01	0.05	
Uniform Delay, d1		14.1		10.9	10.5		26.6		23.9	23.2	23.5	
Progression Factor		1.00		1.00	1.00		1.00		1.00	1.00	1.00	
Incremental Delay, d2		2.7		8.8	0.6		3.5		0.4	0.0	0.1	
Delay (s)		16.8		19.7	11.1		30.1		24.3	23.2	23.6	
Level of Service		B		B	B		C		C	C	C	
Approach Delay (s)		16.8			11.9			27.4			23.6	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM Average Control Delay	16.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	62.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↖	↰	↗	↖	↑↑↑			↑↑↱	
Volume (vph)	0	0	0	336	39	1052	201	907	0	0	464	752
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	12	12	10	10	12	12	11	12
Total Lost time (s)				4.0	4.0	5.0	3.0	4.0			4.0	
Lane Util. Factor				0.95	0.95	1.00	1.00	0.91			0.91	
Frpb, ped/bikes				1.00	1.00	0.99	1.00	1.00			0.98	
Flpb, ped/bikes				1.00	1.00	1.00	1.00	1.00			1.00	
Frt				1.00	1.00	0.85	1.00	1.00			0.91	
Flt Protected				0.95	1.00	1.00	0.95	1.00			1.00	
Satd. Flow (prot)				1525	1629	1479	1550	4368			3933	
Flt Permitted				0.95	1.00	1.00	0.95	1.00			1.00	
Satd. Flow (perm)				1525	1629	1479	1550	4368			3933	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	0	0	343	40	1073	205	926	0	0	473	767
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	343	40	1073	205	926	0	0	1240	0
Confl. Peds. (#/hr)	2					2	12		8	8		12
Heavy Vehicles (%)	0%	0%	0%	3%	5%	2%	3%	5%	0%	0%	5%	8%
Turn Type				Perm		Perm	Prot					
Protected Phases					8		5	2			6	
Permitted Phases				8		8						
Actuated Green, G (s)				30.0	30.0	30.0	32.0	66.0			31.0	
Effective Green, g (s)				31.0	31.0	30.0	32.0	66.0			31.0	
Actuated g/C Ratio				0.30	0.30	0.29	0.30	0.63			0.30	
Clearance Time (s)				5.0	5.0	5.0	3.0	4.0			4.0	
Lane Grp Cap (vph)				450	481	423	472	2746			1161	
v/s Ratio Prot							c0.13	0.21			c0.32	
v/s Ratio Perm				0.22	0.02	c0.73						
v/c Ratio				0.76	0.08	2.54	0.43	0.34			1.91dr	
Uniform Delay, d1				33.6	26.7	37.5	29.2	9.2			37.0	
Progression Factor				1.00	1.00	1.00	0.66	2.38			1.00	
Incremental Delay, d2				11.6	0.3	698.4	2.0	0.2			46.6	
Delay (s)				45.2	27.1	735.9	21.2	22.1			83.6	
Level of Service				D	C	F	C	C			F	
Approach Delay (s)		0.0			553.8			21.9			83.6	
Approach LOS		A			F			C			F	

Intersection Summary			
HCM Average Control Delay	244.3	HCM Level of Service	F
HCM Volume to Capacity ratio	1.32		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	95.0%	ICU Level of Service	F
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1006: 99th Street & Halsted Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↰↑↑↱						↑↑↑	↱↱	↰	↑↑↑	
Volume (vph)	263	867	89	0	0	0	0	845	661	286	514	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	13	12	12	12	12	12	10	10	8	12	12	12
Total Lost time (s)	5.0	5.0						4.0	4.0	3.0	4.0	
Lane Util. Factor	0.91	0.91						0.91	0.88	1.00	0.91	
Frpb, ped/bikes	1.00	1.00						1.00	0.97	1.00	1.00	
Flpb, ped/bikes	1.00	1.00						1.00	1.00	1.00	1.00	
Frt	1.00	0.99						1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00						1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1497	3185						4368	2187	1583	4636	
Flt Permitted	0.95	1.00						1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1497	3185						4368	2187	1583	4636	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	271	894	92	0	0	0	0	871	681	295	530	0
RTOR Reduction (vph)	0	7	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	244	1006	0	0	0	0	0	871	681	295	530	0
Confl. Peds. (#/hr)	4		14	14		4	4		3	3		4
Heavy Vehicles (%)	7%	1%	0%	0%	0%	0%	0%	5%	4%	8%	6%	0%
Turn Type	Perm								Perm	Prot		
Protected Phases		4						2		1	6	
Permitted Phases	4								2			
Actuated Green, G (s)	34.0	34.0						28.0	28.0	31.0	62.0	
Effective Green, g (s)	34.0	34.0						28.0	28.0	31.0	62.0	
Actuated g/C Ratio	0.32	0.32						0.27	0.27	0.30	0.59	
Clearance Time (s)	5.0	5.0						4.0	4.0	3.0	4.0	
Lane Grp Cap (vph)	485	1031						1165	583	467	2737	
v/s Ratio Prot								0.20		c0.19	0.11	
v/s Ratio Perm	0.16	0.32							c0.31			
v/c Ratio	0.50	0.98						0.75	1.17	0.63	0.19	
Uniform Delay, d1	28.7	35.1						35.3	38.5	32.1	9.9	
Progression Factor	1.00	1.00						0.43	0.46	1.06	0.43	
Incremental Delay, d2	3.7	22.8						0.4	77.5	2.4	0.1	
Delay (s)	32.4	57.9						15.7	95.2	36.4	4.3	
Level of Service	C	E						B	F	D	A	
Approach Delay (s)		52.9			0.0			50.6			15.8	
Approach LOS		D			A			D			B	

Intersection Summary			
HCM Average Control Delay	43.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	95.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1007: 98th Place & Wentworth Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↰	↑↱		↰	↑			↱	
Volume (vph)	0	0	0	218	4	21	3	165	0	0	111	3
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	14	12	12	16	12
Total Lost time (s)				4.0	4.0		4.0	4.0			-3.0	
Lane Util. Factor				1.00	0.95		1.00	1.00			1.00	
Frpb, ped/bikes				1.00	0.98		1.00	1.00			1.00	
Flpb, ped/bikes				1.00	1.00		1.00	1.00			1.00	
Frt				1.00	0.87		1.00	1.00			1.00	
Flt Protected				0.95	1.00		0.95	1.00			1.00	
Satd. Flow (prot)				1578	2709		1285	1882			1960	
Flt Permitted				0.95	1.00		0.58	1.00			1.00	
Satd. Flow (perm)				1578	2709		788	1882			1960	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	242	4	23	3	183	0	0	123	3
RTOR Reduction (vph)	0	0	0	0	18	0	0	0	0	0	1	0
Lane Group Flow (vph)	0	0	0	242	9	0	3	183	0	0	125	0
Confl. Peds. (#/hr)	2		2	2		2	3					3
Heavy Vehicles (%)	0%	0%	0%	8%	25%	5%	33%	2%	0%	0%	3%	33%
Turn Type				Perm			pm+pt					
Protected Phases					8		7	2			6	
Permitted Phases				8			2					
Actuated Green, G (s)				27.0	27.0		50.0	50.0			40.0	
Effective Green, g (s)				27.0	27.0		50.0	50.0			46.0	
Actuated g/C Ratio				0.32	0.32		0.59	0.59			0.54	
Clearance Time (s)				4.0	4.0		4.0	4.0			3.0	
Lane Grp Cap (vph)				501	861		504	1107			1061	
v/s Ratio Prot					0.00		0.00	c0.10			0.06	
v/s Ratio Perm				c0.15			0.00					
v/c Ratio				0.48	0.01		0.01	0.17			0.12	
Uniform Delay, d1				23.4	19.9		9.9	8.0			9.6	
Progression Factor				1.00	1.00		1.06	1.19			1.00	
Incremental Delay, d2				3.3	0.0		0.0	0.3			0.2	
Delay (s)				26.7	19.9		10.5	9.8			9.8	
Level of Service				C	B		B	A			A	
Approach Delay (s)		0.0			26.0			9.8			9.8	
Approach LOS		A			C			A			A	

Intersection Summary			
HCM Average Control Delay	17.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	33.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1008: 99th St & Wentworth Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱			✣			↱		↰	↑	
Volume (vph)	8	5	5	8	0	18	0	142	41	33	296	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	16	15	12	8	12	8	12	12	12	10	13	12
Total Lost time (s)	4.0	4.0			4.0			3.0		4.0	4.0	
Lane Util. Factor	1.00	1.00			1.00			1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.99			1.00			1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00			1.00			1.00		1.00	1.00	
Frt	1.00	0.93			0.91			0.97		1.00	1.00	
Flt Protected	0.95	1.00			0.99			1.00		0.95	1.00	
Satd. Flow (prot)	1938	1809			1603			1686		1595	1755	
Flt Permitted	0.74	1.00			0.96			1.00		0.60	1.00	
Satd. Flow (perm)	1509	1809			1558			1686		1010	1755	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	8	5	5	8	0	19	0	149	43	35	312	0
RTOR Reduction (vph)	0	3	0	0	13	0	0	12	0	0	0	0
Lane Group Flow (vph)	8	7	0	0	14	0	0	180	0	35	312	0
Confl. Peds. (#/hr)			3	3			5		2	2		5
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	3%	3%	0%	6%	0%
Turn Type	Perm			Perm						pm+pt		
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8						6		
Actuated Green, G (s)	27.0	27.0			27.0			40.0		50.0	50.0	
Effective Green, g (s)	27.0	27.0			27.0			40.0		50.0	50.0	
Actuated g/C Ratio	0.32	0.32			0.32			0.47		0.59	0.59	
Clearance Time (s)	4.0	4.0			4.0			3.0		4.0	4.0	
Lane Grp Cap (vph)	479	575			495			793		642	1032	
v/s Ratio Prot		0.00						0.11		0.00	c0.18	
v/s Ratio Perm	0.01				c0.01					0.03		
v/c Ratio	0.02	0.01			0.03			0.23		0.05	0.30	
Uniform Delay, d1	19.9	19.9			20.0			13.3		8.5	8.8	
Progression Factor	1.00	1.00			1.00			1.00		0.99	0.90	
Incremental Delay, d2	0.1	0.0			0.1			0.7		0.2	0.7	
Delay (s)	20.0	19.9			20.1			14.0		8.6	8.6	
Level of Service	B	B			C			B		A	A	
Approach Delay (s)		19.9			20.1			14.0			8.6	
Approach LOS		B			C			B			A	

Intersection Summary			
HCM Average Control Delay	11.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.21		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	40.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1009: 99th St & State Street

1/14/2013

	↗	↘	↖	↑	↓	↙
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	Y		↰	↑	↱	
Volume (vph)	63	19	11	350	159	12
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	14	12	13	12	10	12
Total Lost time (s)	4.0		4.0	4.0	4.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	0.99		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.97		1.00	1.00	0.99	
Flt Protected	0.96		0.95	1.00	1.00	
Satd. Flow (prot)	1782		1767	1765	1634	
Flt Permitted	0.96		0.64	1.00	1.00	
Satd. Flow (perm)	1782		1187	1765	1634	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	70	21	12	389	177	13
RTOR Reduction (vph)	14	0	0	0	4	0
Lane Group Flow (vph)	77	0	12	389	186	0
Confl. Peds. (#/hr)		2				
Heavy Vehicles (%)	0%	0%	0%	2%	2%	0%
Turn Type			Perm			
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	21.0		36.0	36.0	36.0	
Effective Green, g (s)	21.0		36.0	36.0	36.0	
Actuated g/C Ratio	0.32		0.55	0.55	0.55	
Clearance Time (s)	4.0		4.0	4.0	4.0	
Lane Grp Cap (vph)	576		657	978	905	
v/s Ratio Prot	c0.04			c0.22	0.11	
v/s Ratio Perm			0.01			
v/c Ratio	0.13		0.02	0.40	0.21	
Uniform Delay, d1	15.6		6.5	8.3	7.3	
Progression Factor	1.00		0.31	0.51	1.12	
Incremental Delay, d2	0.5		0.0	1.1	0.4	
Delay (s)	16.0		2.1	5.4	8.6	
Level of Service	B		A	A	A	
Approach Delay (s)	16.0			5.3	8.6	
Approach LOS	B			A	A	

Intersection Summary			
HCM Average Control Delay	7.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	39.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1010: 99th St & Michigan Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↰↑↑↱		↰	↑			↑	↱
Volume (vph)	0	0	0	24	274	14	568	271	1	0	222	35
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	14	16	12	12	15	12	12	13	10
Total Lost time (s)					4.0		4.0	4.0			3.0	3.0
Lane Util. Factor					0.95		1.00	1.00			1.00	1.00
Frpb, ped/bikes					1.00		1.00	1.00			1.00	1.00
Flpb, ped/bikes					1.00		1.00	1.00			1.00	1.00
Frt					0.99		1.00	1.00			1.00	0.85
Flt Protected					1.00		0.95	1.00			1.00	1.00
Satd. Flow (prot)					3737		1660	1752			1603	1298
Flt Permitted					1.00		0.54	1.00			1.00	1.00
Satd. Flow (perm)					3737		943	1752			1603	1298
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	27	304	16	631	301	1	0	247	39
RTOR Reduction (vph)	0	0	0	0	4	0	0	0	0	0	0	22
Lane Group Flow (vph)	0	0	0	0	343	0	631	302	0	0	247	17
Confl. Peds. (#/hr)									30	30		
Heavy Vehicles (%)	0%	0%	0%	11%	2%	0%	3%	13%	0%	0%	16%	10%
Turn Type				Split			pm+pt					Perm
Protected Phases				8	8		7	2			6	
Permitted Phases							2					6
Actuated Green, G (s)					26.0		51.0	51.0			38.0	38.0
Effective Green, g (s)					26.0		51.0	51.0			38.0	38.0
Actuated g/C Ratio					0.31		0.60	0.60			0.45	0.45
Clearance Time (s)					4.0		4.0	4.0			3.0	3.0
Lane Grp Cap (vph)					1143		650	1051			717	580
v/s Ratio Prot					c0.09		c0.11	0.17			0.15	
v/s Ratio Perm							c0.47					0.01
v/c Ratio					0.30		0.97	0.29			0.34	0.03
Uniform Delay, d1					22.5		17.9	8.2			15.4	13.2
Progression Factor					1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2					0.7		28.8	0.7			1.3	0.1
Delay (s)					23.2		46.7	8.9			16.7	13.3
Level of Service					C		D	A			B	B
Approach Delay (s)		0.0			23.2			34.5			16.2	
Approach LOS		A			C			C			B	

Intersection Summary			
HCM Average Control Delay	28.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	64.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1011: 99th Street & Martin Luther King Jr Drive

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					✥		↰	↑↱		↰	↑↱	
Volume (vph)	0	0	0	15	11	9	331	530	96	74	347	12
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	15	12	12	12	12	12	13	12
Total Lost time (s)					4.0		3.0	4.0		3.0	4.0	
Lane Util. Factor					1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes					1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes					1.00		1.00	1.00		1.00	1.00	
Frt					0.97		1.00	0.98		1.00	1.00	
Flt Protected					0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)					1803		1692	3237		1707	3353	
Flt Permitted					0.98		0.50	1.00		0.31	1.00	
Satd. Flow (perm)					1803		882	3237		563	3353	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	17	12	10	368	589	107	82	386	13
RTOR Reduction (vph)	0	0	0	0	7	0	0	20	0	0	3	0
Lane Group Flow (vph)	0	0	0	0	32	0	368	676	0	82	396	0
Confl. Peds. (#/hr)	2					2	6		20	20		6
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	0%	0%	0%	0%	11%	0%	1%	3%	0%	0%	5%	0%
Turn Type				Split			pm+pt			pm+pt		
Protected Phases				8	8		5	2		1	6	
Permitted Phases							2			6		
Actuated Green, G (s)					23.0		41.0	34.0		41.0	34.0	
Effective Green, g (s)					23.0		41.0	34.0		41.0	34.0	
Actuated g/C Ratio					0.31		0.55	0.45		0.55	0.45	
Clearance Time (s)					4.0		3.0	4.0		3.0	4.0	
Lane Grp Cap (vph)					553		558	1467		415	1520	
v/s Ratio Prot					c0.02		c0.06	0.21		0.02	0.12	
v/s Ratio Perm							c0.30			0.09		
v/c Ratio					0.06		0.66	0.46		0.20	0.26	
Uniform Delay, d1					18.4		13.9	14.2		12.4	12.7	
Progression Factor					1.00		0.69	0.74		1.00	1.00	
Incremental Delay, d2					0.2		5.5	1.0		1.1	0.4	
Delay (s)					18.6		15.1	11.4		13.4	13.1	
Level of Service					B		B	B		B	B	
Approach Delay (s)		0.0			18.6			12.7			13.2	
Approach LOS		A			B			B			B	

Intersection Summary			
HCM Average Control Delay	13.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	56.0%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣		↰	↑↱		↰	↑↱	
Volume (vph)	57	54	24	13	169	222	20	678	12	69	278	15
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	16	12	12	10	11	12	12	11	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.98			0.93		1.00	1.00		1.00	0.99	
Flt Protected		0.98			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1946			1626		1596	3232		1641	3132	
Flt Permitted		0.68			0.99		0.56	1.00		0.33	1.00	
Satd. Flow (perm)		1354			1613		947	3232		573	3132	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	60	57	25	14	178	234	21	714	13	73	293	16
RTOR Reduction (vph)	0	10	0	0	59	0	0	2	0	0	5	0
Lane Group Flow (vph)	0	132	0	0	367	0	21	725	0	73	304	0
Confl. Peds. (#/hr)									6	6		
Confl. Bikes (#/hr)			1	1								
Heavy Vehicles (%)	0%	0%	0%	12%	2%	2%	0%	2%	0%	4%	5%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		25.0			25.0		42.0	42.0		42.0	42.0	
Effective Green, g (s)		25.0			25.0		42.0	42.0		42.0	42.0	
Actuated g/C Ratio		0.33			0.33		0.56	0.56		0.56	0.56	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		451			538		530	1810		321	1754	
v/s Ratio Prot								c0.22			0.10	
v/s Ratio Perm		0.10			c0.23		0.02			0.13		
v/c Ratio		0.29			0.68		0.04	0.40		0.23	0.17	
Uniform Delay, d1		18.5			21.6		7.4	9.4		8.3	8.0	
Progression Factor		1.00			1.00		1.00	1.00		0.17	0.07	
Incremental Delay, d2		1.6			6.9		0.1	0.7		1.6	0.2	
Delay (s)		20.1			28.4		7.6	10.0		3.0	0.8	
Level of Service		C			C		A	B		A	A	
Approach Delay (s)		20.1			28.4			10.0			1.2	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM Average Control Delay	13.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	69.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis
1013: 100th Street & Cottage Grove Avenue

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰↱			↰↑↑	↑↑↱	
Sign Control	Stop			Stop	Stop	
Volume (vph)	45	57	105	328	202	19
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	50	63	117	364	224	21

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	113	238	243	150	96
Volume Left (vph)	50	117	0	0	0
Volume Right (vph)	63	0	0	0	21
Hadj (s)	-0.16	0.33	0.09	0.09	-0.07
Departure Headway (s)	5.3	5.4	5.2	5.4	5.2
Degree Utilization, x	0.17	0.36	0.35	0.22	0.14
Capacity (veh/h)	624	652	683	641	659
Control Delay (s)	9.3	10.2	9.7	8.8	7.9
Approach Delay (s)	9.3	9.9		8.4	
Approach LOS	A	A		A	

Intersection Summary			
Delay	9.4		
HCM Level of Service	A		
Intersection Capacity Utilization	35.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR
Lane Configurations		↰	↑	↱	↰	↑	↱			↰	↑↱	
Volume (vph)	45	52	323	13	5	479	38	40	42	53	720	44
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		3.5	4.0	4.0	4.0	4.0	4.0			4.0	4.0	
Lane Util. Factor		1.00	1.00	1.00	1.00	1.00	1.00			1.00	0.95	
Frpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	0.97			1.00	1.00	
Flpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	
Frt		1.00	1.00	0.85	1.00	1.00	0.85			1.00	0.99	
Flt Protected		0.95	1.00	1.00	0.95	1.00	1.00			0.95	1.00	
Satd. Flow (prot)		1575	1731	1530	1710	1731	1487			1710	3291	
Flt Permitted		0.11	1.00	1.00	0.55	1.00	1.00			0.39	1.00	
Satd. Flow (perm)		187	1731	1530	984	1731	1487			700	3291	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	50	58	359	14	6	532	42	44	47	59	800	49
RTOR Reduction (vph)	0	0	0	7	0	0	31	0	0	0	5	0
Lane Group Flow (vph)	0	108	359	7	6	532	55	0	0	106	844	0
Confl. Peds. (#/hr)		5					5					6
Heavy Vehicles (%)	8%	9%	4%	0%	0%	4%	0%	0%	0%	0%	3%	0%
Turn Type	Perm	pm+pt		Perm	Perm		Perm		Perm	Perm		
Protected Phases		7	4			8					2	
Permitted Phases	4	4		4	8		8		2	2		
Actuated Green, G (s)		50.0	50.0	50.0	32.0	32.0	32.0			25.0	25.0	
Effective Green, g (s)		50.0	50.0	50.0	32.0	32.0	32.0			25.0	25.0	
Actuated g/C Ratio		0.48	0.48	0.48	0.30	0.30	0.30			0.24	0.24	
Clearance Time (s)		3.5	4.0	4.0	4.0	4.0	4.0			4.0	4.0	
Lane Grp Cap (vph)		281	824	729	300	528	453			167	784	
v/s Ratio Prot		0.05	c0.21			c0.31					c0.26	
v/s Ratio Perm		0.13		0.00	0.01		0.04			0.15		
v/c Ratio		0.38	0.44	0.01	0.02	1.01	0.12			0.63	1.08	
Uniform Delay, d1		20.2	18.2	14.5	25.5	36.5	26.4			35.9	40.0	
Progression Factor		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	
Incremental Delay, d2		3.9	1.7	0.0	0.1	41.1	0.6			17.0	54.9	
Delay (s)		24.1	19.9	14.5	25.7	77.6	26.9			52.9	94.9	
Level of Service		C	B	B	C	E	C			D	F	
Approach Delay (s)			20.7			70.1					90.3	
Approach LOS			C			E					F	

Intersection Summary			
HCM Average Control Delay	62.2	HCM Level of Service	E
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	79.3%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

	↘	↓	↙	↲	↰	↘	↘	↲
Movement	SBL	SBT	SBR	SBR2	SEL2	SEL	SER	SER2
Lane Configurations	↰	↑↱				↰	↱↱	
Volume (vph)	51	300	27	33	4	58	114	12
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.5	4.5				4.5	4.5	
Lane Util. Factor	1.00	0.95				1.00	0.88	
Frpb, ped/bikes	1.00	1.00				1.00	1.00	
Flpb, ped/bikes	1.00	1.00				1.00	1.00	
Frt	1.00	0.97				1.00	0.85	
Flt Protected	0.95	1.00				0.95	1.00	
Satd. Flow (prot)	1706	3279				1710	2621	
Flt Permitted	0.16	1.00				0.95	1.00	
Satd. Flow (perm)	293	3279				1710	2621	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	57	333	30	37	4	64	127	13
RTOR Reduction (vph)	0	8	0	0	0	0	7	0
Lane Group Flow (vph)	57	392	0	0	0	68	133	0
Confl. Peds. (#/hr)	6							
Heavy Vehicles (%)	0%	2%	0%	0%	0%	0%	3%	0%
Turn Type	Perm				Split		Perm	
Protected Phases		6			9	9		
Permitted Phases	6						9	
Actuated Green, G (s)	24.5	24.5				17.5	17.5	
Effective Green, g (s)	24.5	24.5				17.5	17.5	
Actuated g/C Ratio	0.23	0.23				0.17	0.17	
Clearance Time (s)	4.5	4.5				4.5	4.5	
Lane Grp Cap (vph)	68	765				285	437	
v/s Ratio Prot		0.12				0.04		
v/s Ratio Perm	0.19						c0.05	
v/c Ratio	0.84	0.51				0.24	0.31	
Uniform Delay, d1	38.4	35.1				38.0	38.4	
Progression Factor	1.00	1.00				1.00	1.00	
Incremental Delay, d2	69.9	2.4				2.0	1.8	
Delay (s)	108.3	37.5				39.9	40.2	
Level of Service	F	D				D	D	
Approach Delay (s)		46.3				40.1		
Approach LOS		D				D		

Intersection Summary

HCM Signalized Intersection Capacity Analysis
1015: 103rd Street & Morgan Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰			↱			✥				
Volume (vph)	24	474	0	0	487	26	118	116	119	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	11	11	11	16	11	12	15	12	12	15	12
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		1.00			0.99			0.95				
Flt Protected		1.00			1.00			0.98				
Satd. Flow (prot)		1653			1930			1770				
Flt Permitted		0.96			1.00			0.98				
Satd. Flow (perm)		1596			1930			1770				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	27	527	0	0	541	29	131	129	132	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	554	0	0	570	0	0	392	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)		31.0			31.0			26.0				
Effective Green, g (s)		31.0			31.0			26.0				
Actuated g/C Ratio		0.48			0.48			0.40				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		761			920			708				
v/s Ratio Prot					0.30							
v/s Ratio Perm		c0.35						0.22				
v/c Ratio		0.73			0.62			0.55				
Uniform Delay, d1		13.6			12.6			15.0				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		6.0			3.1			3.1				
Delay (s)		19.7			15.8			18.1				
Level of Service		B			B			B				
Approach Delay (s)		19.7			15.8			18.1			0.0	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM Average Control Delay	17.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	74.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1016: 103rd Street & Halsted Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑	↱		↰↑	↱	↰	↑↑	↱	↰	↑↑	↱
Volume (vph)	116	371	114	67	270	111	148	1707	133	74	445	93
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	10	10	9	9	10	9
Total Lost time (s)		4.0	4.0		4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		1.00	0.96		1.00	0.96	1.00	1.00	0.97	1.00	1.00	0.96
Flpb, ped/bikes		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.99	1.00		0.99	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1922	1426		1923	1396	1500	3099	1284	1425	2956	1265
Flt Permitted		0.65	1.00		0.57	1.00	0.40	1.00	1.00	0.09	1.00	1.00
Satd. Flow (perm)		1270	1426		1113	1396	627	3099	1284	142	2956	1265
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	122	391	120	71	284	117	156	1797	140	78	468	98
RTOR Reduction (vph)	0	0	71	0	0	69	0	0	30	0	0	59
Lane Group Flow (vph)	0	513	49	0	355	48	156	1797	110	78	468	39
Confl. Peds. (#/hr)	42		39	39		42	20		8	8		20
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	6%	4%	3%	0%	6%	5%	6%	3%	4%	8%	8%	4%
Turn Type	pm+pt		Perm	Perm		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)		43.0	43.0		43.0	43.0	53.0	44.3	44.3	49.0	42.3	42.3
Effective Green, g (s)		43.0	43.0		43.0	43.0	53.0	44.3	44.3	49.0	42.3	42.3
Actuated g/C Ratio		0.41	0.41		0.41	0.41	0.50	0.42	0.42	0.47	0.40	0.40
Clearance Time (s)		4.0	4.0		4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		520	584		456	572	389	1307	542	148	1191	510
v/s Ratio Prot							c0.03	c0.58		c0.03	0.16	
v/s Ratio Perm		c0.40	0.03		0.32	0.03	0.17		0.09	0.21		0.03
v/c Ratio		0.99	0.08		0.78	0.08	0.40	1.37	0.20	0.53	0.39	0.08
Uniform Delay, d1		30.7	19.0		26.9	19.0	14.7	30.4	19.2	23.2	22.2	19.3
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.15	0.76	0.42
Incremental Delay, d2		35.7	0.3		12.3	0.3	0.7	173.6	0.8	3.3	0.9	0.3
Delay (s)		66.4	19.2		39.2	19.2	15.4	204.0	20.0	29.9	17.9	8.3
Level of Service		E	B		D	B	B	F	C	C	B	A
Approach Delay (s)		57.4			34.3			177.6			17.9	
Approach LOS		E			C			F			B	

Intersection Summary			
HCM Average Control Delay	113.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.13		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	113.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			✥				
Volume (vph)	59	516	59	52	410	50	67	62	65	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	15	12	12	15	12
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		0.99			0.99			0.95				
Flt Protected		1.00			0.99			0.98				
Satd. Flow (prot)		1629			1627			1770				
Flt Permitted		0.91			0.89			0.98				
Satd. Flow (perm)		1494			1459			1770				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	66	573	66	58	456	56	74	69	72	0	0	0
RTOR Reduction (vph)	0	6	0	0	6	0	0	28	0	0	0	0
Lane Group Flow (vph)	0	699	0	0	564	0	0	187	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm			Perm					
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Actuated Green, G (s)		38.0			38.0			19.0				
Effective Green, g (s)		38.0			38.0			19.0				
Actuated g/C Ratio		0.58			0.58			0.29				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		873			853			517				
v/s Ratio Prot												
v/s Ratio Perm		c0.47			0.39			0.11				
v/c Ratio		0.80			0.66			0.36				
Uniform Delay, d1		10.5			9.1			18.2				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		7.6			4.0			2.0				
Delay (s)		18.2			13.1			20.2				
Level of Service		B			B			C				
Approach Delay (s)		18.2			13.1			20.2			0.0	
Approach LOS		B			B			C			A	

Intersection Summary			
HCM Average Control Delay	16.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	64.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1018: 103rd Street & Wentworth Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱		↰	↱		✥	
Volume (vph)	23	548	65	34	414	41	46	150	96	56	192	26
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	11	12	12	15	12
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frpb, ped/bikes		1.00	0.97		1.00	0.95		1.00	0.98		0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		0.99	1.00		1.00	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		0.99	
Flt Protected		1.00	1.00		1.00	1.00		0.99	1.00		0.99	
Satd. Flow (prot)		1656	1255		1634	1288		1663	1490		1775	
Flt Permitted		0.98	1.00		0.94	1.00		0.89	1.00		0.90	
Satd. Flow (perm)		1619	1255		1536	1288		1493	1490		1613	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	24	577	68	36	436	43	48	158	101	59	202	27
RTOR Reduction (vph)	0	0	29	0	0	17	0	0	69	0	5	0
Lane Group Flow (vph)	0	601	39	0	472	26	0	206	32	0	283	0
Confl. Peds. (#/hr)	33		15	15		33	68		5	5		68
Confl. Bikes (#/hr)	4					4						
Heavy Vehicles (%)	0%	5%	14%	19%	5%	9%	2%	2%	1%	10%	7%	8%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		43.0	43.0		43.0	43.0		24.0	24.0		24.0	
Effective Green, g (s)		43.0	43.0		43.0	43.0		24.0	24.0		24.0	
Actuated g/C Ratio		0.57	0.57		0.57	0.57		0.32	0.32		0.32	
Clearance Time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	
Lane Grp Cap (vph)		928	720		881	738		478	477		516	
v/s Ratio Prot												
v/s Ratio Perm		c0.37	0.03		0.31	0.02		0.14	0.02		c0.18	
v/c Ratio		0.65	0.05		0.54	0.03		0.43	0.07		0.55	
Uniform Delay, d1		10.9	7.0		9.9	7.0		20.1	17.7		21.0	
Progression Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2		3.5	0.1		2.3	0.1		2.8	0.3		4.2	
Delay (s)		14.3	7.2		12.2	7.1		22.9	18.0		25.2	
Level of Service		B	A		B	A		C	B		C	
Approach Delay (s)		13.6			11.8			21.3			25.2	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM Average Control Delay	16.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	92.0%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1019: 103rd Street & State Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑	↱	↰	↑	↱
Volume (vph)	84	494	29	19	299	40	52	303	45	41	92	9
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	11	16	8	10	10	10	10	10	10
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	0.98	1.00	1.00	0.99
Flpb, ped/bikes	0.99	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1463	2993		1459	3530		1534	1647	1301	1517	1541	1156
Flt Permitted	0.53	1.00		0.39	1.00		0.69	1.00	1.00	0.45	1.00	1.00
Satd. Flow (perm)	809	2993		602	3530		1116	1647	1301	720	1541	1156
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	93	549	32	21	332	44	58	337	50	46	102	10
RTOR Reduction (vph)	0	6	0	0	16	0	0	0	26	0	0	6
Lane Group Flow (vph)	93	575	0	21	360	0	58	337	24	46	102	4
Confl. Peds. (#/hr)	16		9	9		16	1		5	5		1
Heavy Vehicles (%)	8%	6%	0%	13%	8%	3%	4%	2%	8%	5%	9%	22%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	31.0	31.0		31.0	31.0		26.0	26.0	26.0	26.0	26.0	26.0
Effective Green, g (s)	31.0	31.0		31.0	31.0		26.0	26.0	26.0	26.0	26.0	26.0
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.40	0.40	0.40	0.40	0.40	0.40
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	386	1427		287	1684		446	659	520	288	616	462
v/s Ratio Prot		c0.19			0.10			c0.20			0.07	
v/s Ratio Perm	0.11			0.03			0.05		0.02	0.06		0.00
v/c Ratio	0.24	0.40		0.07	0.21		0.13	0.51	0.05	0.16	0.17	0.01
Uniform Delay, d1	10.0	11.0		9.2	9.9		12.3	14.7	11.9	12.5	12.5	11.7
Progression Factor	1.00	1.00		1.00	1.00		0.63	0.77	0.35	0.55	0.55	0.31
Incremental Delay, d2	1.5	0.8		0.5	0.3		0.6	2.8	0.2	1.2	0.6	0.0
Delay (s)	11.5	11.9		9.7	10.2		8.3	14.0	4.3	8.1	7.5	3.7
Level of Service	B	B		A	B		A	B	A	A	A	A
Approach Delay (s)		11.8			10.2			12.2			7.4	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM Average Control Delay	11.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	52.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1020: 103rd Street & Michigan Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	171	409	83	44	265	104	64	396	44	67	161	65
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	11	10	11	11	10	11	11	10	11	11
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.98		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	0.96	1.00		1.00	1.00		0.99	1.00		0.97	1.00	
Frt	1.00	0.97		1.00	0.96		1.00	0.99		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1466	3059		1588	2939		1542	3028		1405	2760	
Flt Permitted	0.51	1.00		0.42	1.00		0.60	1.00		0.44	1.00	
Satd. Flow (perm)	784	3059		707	2939		981	3028		652	2760	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	180	431	87	46	279	109	67	417	46	71	169	68
RTOR Reduction (vph)	0	0	0	0	0	0	0	11	0	0	40	0
Lane Group Flow (vph)	180	518	0	46	388	0	67	452	0	71	197	0
Confl. Peds. (#/hr)	98		10	10		98	28		52	52		28
Heavy Vehicles (%)	5%	5%	4%	0%	5%	7%	2%	6%	13%	10%	11%	20%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	36.0	36.0		36.0	36.0		31.0	31.0		31.0	31.0	
Effective Green, g (s)	36.0	36.0		36.0	36.0		31.0	31.0		31.0	31.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.41	0.41		0.41	0.41	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	376	1468		339	1411		405	1252		269	1141	
v/s Ratio Prot		0.17			0.13			c0.15			0.07	
v/s Ratio Perm	c0.23			0.07			0.07			0.11		
v/c Ratio	0.48	0.35		0.14	0.27		0.17	0.36		0.26	0.17	
Uniform Delay, d1	13.2	12.2		10.8	11.7		13.9	15.2		14.5	13.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	4.3	0.7		0.8	0.5		0.9	0.8		2.4	0.3	
Delay (s)	17.5	12.9		11.7	12.2		14.7	16.0		16.9	14.2	
Level of Service	B	B		B	B		B	B		B	B	
Approach Delay (s)		14.1			12.1			15.8			14.8	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	14.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1021: 103rd Street & Martin Luther King Jr Drive

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱		↰	↑↱		↰	↑↱	
Volume (vph)	113	332	38	23	340	47	67	412	26	43	206	63
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	12	8	16	12	9	10	10	9	10	10
Total Lost time (s)	3.0	7.0		3.0	7.0		3.0	7.0		3.0	7.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.99		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1533	1576		1474	1842		1534	3073		1372	2867	
Flt Permitted	0.43	1.00		0.46	1.00		0.58	1.00		0.41	1.00	
Satd. Flow (perm)	700	1576		708	1842		933	3073		597	2867	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	119	349	40	24	358	49	71	434	27	45	217	66
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	119	389	0	24	407	0	71	461	0	45	283	0
Confl. Peds. (#/hr)	7		23	23		7	10		8	8		10
Confl. Bikes (#/hr)	1		2	2		1	1		1	1		1
Heavy Vehicles (%)	4%	8%	10%	0%	9%	5%	0%	3%	0%	12%	7%	6%
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	47.0	41.8		40.6	38.6		26.8	22.2		23.6	20.6	
Effective Green, g (s)	47.0	39.8		40.6	36.6		26.8	20.2		23.6	18.6	
Actuated g/C Ratio	0.55	0.47		0.48	0.43		0.32	0.24		0.28	0.22	
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	5.0		3.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	438	738		356	793		327	730		193	627	
v/s Ratio Prot	c0.02	c0.25		0.00	0.22		c0.01	c0.15		0.01	0.10	
v/s Ratio Perm	0.13			0.03			0.06			0.06		
v/c Ratio	0.27	0.53		0.07	0.51		0.22	0.63		0.23	0.45	
Uniform Delay, d1	14.0	16.0		15.1	17.7		21.6	29.1		26.1	28.8	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.3	2.7		0.1	2.4		0.3	4.1		0.6	2.3	
Delay (s)	14.3	18.6		15.1	20.1		21.9	33.2		26.8	31.1	
Level of Service	B	B		B	C		C	C		C	C	
Approach Delay (s)		17.6			19.8			31.7			30.5	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM Average Control Delay	24.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	64.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	71	321	44	65	387	115	59	390	126	56	162	45
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	11	11	11	11	12	12	10	10	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			0.99		1.00	0.99		1.00	0.99	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		0.99	1.00	
Frt		0.98			0.97		1.00	0.96		1.00	0.97	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3492			2914		1614	3156		1581	2901	
Flt Permitted		0.78			0.84		0.61	1.00		0.38	1.00	
Satd. Flow (perm)		2730			2467		1034	3156		628	2901	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	79	357	49	72	430	128	66	433	140	62	180	50
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	485	0	0	630	0	66	573	0	62	230	0
Confl. Peds. (#/hr)	20		16	16		20	5		33	33		5
Confl. Bikes (#/hr)	2					2			2	2		
Heavy Vehicles (%)	9%	9%	0%	24%	7%	6%	2%	4%	2%	0%	5%	9%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		33.0			33.0		32.0	32.0		32.0	32.0	
Effective Green, g (s)		34.0			34.0		33.0	33.0		33.0	33.0	
Actuated g/C Ratio		0.45			0.45		0.44	0.44		0.44	0.44	
Clearance Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)		1238			1118		455	1389		276	1276	
v/s Ratio Prot								c0.18			0.08	
v/s Ratio Perm		0.18			c0.26		0.06			0.10		
v/c Ratio		0.39			0.56		0.15	0.41		0.22	0.18	
Uniform Delay, d1		13.6			15.1		12.6	14.4		13.0	12.8	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.9			2.1		0.7	0.9		1.9	0.3	
Delay (s)		14.6			17.1		13.2	15.3		14.9	13.1	
Level of Service		B			B		B	B		B	B	
Approach Delay (s)		14.6			17.1			15.1			13.5	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	15.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	63.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1023: 103rd Street & Woodlawn Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↑	↱		✥			↰↑↱	
Volume (vph)	145	523	5	14	660	386	72	9	20	118	1	52
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	12	12	12	12	12	12	13	13	13
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00			0.95	
Frt	1.00	1.00		1.00	1.00	0.85		0.97			0.95	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.97			0.97	
Satd. Flow (prot)	1574	3144		1629	3257	1457		1611			3105	
Flt Permitted	0.35	1.00		0.42	1.00	1.00		0.69			0.75	
Satd. Flow (perm)	582	3144		720	3257	1457		1158			2398	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	161	581	6	16	733	429	80	10	22	131	1	58
RTOR Reduction (vph)	0	1	0	0	0	150	0	12	0	0	44	0
Lane Group Flow (vph)	161	586	0	16	733	279	0	100	0	0	146	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	46.0	46.0		46.0	46.0	46.0		16.7			16.7	
Effective Green, g (s)	46.0	46.0		46.0	46.0	46.0		16.7			16.7	
Actuated g/C Ratio	0.65	0.65		0.65	0.65	0.65		0.24			0.24	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		8.0			8.0	
Lane Grp Cap (vph)	379	2046		468	2119	948		274			566	
v/s Ratio Prot		0.19			0.23							
v/s Ratio Perm	c0.28			0.02		0.19		c0.09			0.06	
v/c Ratio	0.42	0.29		0.03	0.35	0.29		0.36			0.26	
Uniform Delay, d1	6.0	5.3		4.4	5.6	5.3		22.6			22.0	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00			1.00	
Incremental Delay, d2	3.5	0.4		0.1	0.4	0.8		3.5			1.0	
Delay (s)	9.4	5.7		4.5	6.0	6.1		26.1			23.0	
Level of Service	A	A		A	A	A		C			C	
Approach Delay (s)		6.5			6.0			26.1			23.0	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM Average Control Delay	8.6	HCM Level of Service	A
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	70.7	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱		↰	↑↑	↱	↰	↑↑	↱
Volume (vph)	111	214	79	63	190	71	134	1972	88	71	499	41
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	9	12	10	10	12	9	10	9	9	10	9
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00	0.96	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.96		1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1548	1496		1547	1584		1493	3069	1271	1452	2983	1301
Flt Permitted	0.37	1.00		0.31	1.00		0.39	1.00	1.00	0.12	1.00	1.00
Satd. Flow (perm)	608	1496		513	1584		612	3069	1271	180	2983	1301
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	117	225	83	66	200	75	141	2076	93	75	525	43
RTOR Reduction (vph)	0	16	0	0	16	0	0	0	18	0	0	25
Lane Group Flow (vph)	117	292	0	66	259	0	141	2076	75	75	525	18
Confl. Peds. (#/hr)	4		9	9		4	6		16	16		6
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	3%	3%	4%	3%	1%	2%	3%	4%	4%	6%	7%	3%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	28.0	21.0		28.0	21.0		42.0	35.0	35.0	42.0	35.0	35.0
Effective Green, g (s)	26.0	22.0		26.0	22.0		40.0	35.0	35.0	40.0	35.0	35.0
Actuated g/C Ratio	0.31	0.26		0.31	0.26		0.47	0.41	0.41	0.47	0.41	0.41
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)	252	387		230	410		350	1264	523	174	1228	536
v/s Ratio Prot	c0.03	c0.20		0.02	0.16		0.03	c0.68		c0.03	0.18	
v/s Ratio Perm	0.11			0.07			0.16		0.06	0.17		0.01
v/c Ratio	0.46	0.76		0.29	0.63		0.40	1.64	0.14	0.43	0.43	0.03
Uniform Delay, d1	22.5	29.0		21.9	27.9		13.3	25.0	15.6	18.1	17.8	14.9
Progression Factor	1.00	1.00		1.00	1.00		0.61	0.70	0.49	1.00	1.00	1.00
Incremental Delay, d2	6.0	12.9		3.1	7.2		2.8	292.0	0.5	7.6	1.1	0.1
Delay (s)	28.6	41.9		25.0	35.2		11.0	309.6	8.1	25.7	18.9	15.0
Level of Service	C	D		C	D		B	F	A	C	B	B
Approach Delay (s)		38.2			33.2			279.3			19.5	
Approach LOS		D			C			F			B	

Intersection Summary			
HCM Average Control Delay	184.2	HCM Level of Service	F
HCM Volume to Capacity ratio	1.15		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	96.8%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1025: 107th Street & Wentworth Avenue

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣			✣	
Volume (vph)	26	218	32	15	149	16	22	166	27	33	148	21
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	14	12	12	14	12	12	16	12	12	16	12
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		1.00			1.00			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.98			0.99			0.98			0.99	
Flt Protected		1.00			1.00			0.99			0.99	
Satd. Flow (prot)		1837			1839			1899			1931	
Flt Permitted		0.97			0.97			0.96			0.94	
Satd. Flow (perm)		1782			1791			1840			1822	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	27	225	33	15	154	16	23	171	28	34	153	22
RTOR Reduction (vph)	0	7	0	0	5	0	0	8	0	0	6	0
Lane Group Flow (vph)	0	278	0	0	180	0	0	214	0	0	203	0
Confl. Peds. (#/hr)	5		11	11		5	7		34	34		7
Confl. Bikes (#/hr)			3	3								
Heavy Vehicles (%)	4%	2%	0%	20%	1%	0%	12%	3%	8%	0%	3%	5%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		27.0			27.0			30.0			30.0	
Effective Green, g (s)		27.0			27.0			30.0			30.0	
Actuated g/C Ratio		0.42			0.42			0.46			0.46	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		740			744			849			841	
v/s Ratio Prot												
v/s Ratio Perm		c0.16			0.10			c0.12			0.11	
v/c Ratio		0.38			0.24			0.25			0.24	
Uniform Delay, d1		13.2			12.3			10.7			10.6	
Progression Factor		1.00			0.66			1.11			1.00	
Incremental Delay, d2		1.5			0.8			0.7			0.7	
Delay (s)		14.6			9.0			12.5			11.3	
Level of Service		B			A			B			B	
Approach Delay (s)		14.6			9.0			12.5			11.3	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM Average Control Delay	12.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	46.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1026: 107th Street & State Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	24	181	37	9	162	23	45	384	33	17	86	17
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	0.96	1.00		1.00	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	0.98		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1466	2989		1302	3018		1529	3093		1492	2868	
Flt Permitted	0.62	1.00		0.60	1.00		0.68	1.00		0.48	1.00	
Satd. Flow (perm)	960	2989		825	3018		1093	3093		757	2868	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	27	201	41	10	180	26	50	427	37	19	96	19
RTOR Reduction (vph)	0	26	0	0	18	0	0	10	0	0	8	0
Lane Group Flow (vph)	27	216	0	10	188	0	50	454	0	19	107	0
Confl. Peds. (#/hr)	35		6	6		35	18					18
Confl. Bikes (#/hr)	14		32	32		14	23		7	7		23
Heavy Vehicles (%)	4%	4%	0%	22%	2%	6%	3%	2%	0%	7%	8%	6%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.0	20.0		20.0	20.0		39.0	39.0		39.0	39.0	
Effective Green, g (s)	19.0	19.0		19.0	19.0		38.0	38.0		38.0	38.0	
Actuated g/C Ratio	0.29	0.29		0.29	0.29		0.58	0.58		0.58	0.58	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	281	874		241	882		639	1808		443	1677	
v/s Ratio Prot		c0.07			0.06			c0.15			0.04	
v/s Ratio Perm	0.03			0.01			0.05			0.03		
v/c Ratio	0.10	0.25		0.04	0.21		0.08	0.25		0.04	0.06	
Uniform Delay, d1	16.7	17.5		16.5	17.4		5.9	6.6		5.8	5.8	
Progression Factor	0.73	0.73		0.76	0.74		0.92	0.95		0.52	0.46	
Incremental Delay, d2	0.6	0.6		0.3	0.5		0.2	0.3		0.2	0.1	
Delay (s)	12.8	13.5		12.8	13.4		5.6	6.6		3.1	2.8	
Level of Service	B	B		B	B		A	A		A	A	
Approach Delay (s)		13.4			13.4			6.5			2.8	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	9.0	HCM Level of Service	A
HCM Volume to Capacity ratio	0.25		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	41.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1027: 107th Street & Michigan Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			✥			✥	
Volume (vph)	46	178	34	16	122	39	28	429	24	14	178	15
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	9	9	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00			1.00			1.00	
Flpb, ped/bikes	0.99	1.00		0.98	1.00			1.00			1.00	
Frt	1.00	0.98		1.00	0.96			0.99			0.99	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1556	2952		1515	2866			1878			1807	
Flt Permitted	0.64	1.00		0.60	1.00			0.98			0.96	
Satd. Flow (perm)	1046	2952		965	2866			1838			1742	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	51	198	38	18	136	43	31	477	27	16	198	17
RTOR Reduction (vph)	0	23	0	0	26	0	0	3	0	0	4	0
Lane Group Flow (vph)	51	213	0	18	153	0	0	532	0	0	227	0
Confl. Peds. (#/hr)	10		29	29		10	17		10	10		17
Confl. Bikes (#/hr)									2	2		
Heavy Vehicles (%)	2%	4%	10%	0%	4%	0%	0%	8%	4%	0%	13%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	26.0	26.0		26.0	26.0			31.0			31.0	
Effective Green, g (s)	26.0	26.0		26.0	26.0			31.0			31.0	
Actuated g/C Ratio	0.40	0.40		0.40	0.40			0.48			0.48	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	418	1181		386	1146			877			831	
v/s Ratio Prot		c0.07			0.05							
v/s Ratio Perm	0.05			0.02				c0.29			0.13	
v/c Ratio	0.12	0.18		0.05	0.13			0.61			0.27	
Uniform Delay, d1	12.3	12.6		11.9	12.4			12.5			10.2	
Progression Factor	1.02	0.93		0.85	0.87			0.98			1.00	
Incremental Delay, d2	0.6	0.3		0.2	0.2			3.0			0.8	
Delay (s)	13.1	12.1		10.4	11.0			15.3			11.0	
Level of Service	B	B		B	B			B			B	
Approach Delay (s)		12.3			11.0			15.3			11.0	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	13.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	60.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1028: 107th Street & Martin Luther King Jr Drive

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱			✥			✥	
Volume (vph)	90	127	63	2	84	36	22	275	9	7	184	29
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	16	12	10	16	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00			1.00			1.00	
Flpb, ped/bikes	1.00	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.95		1.00	0.95			1.00			0.98	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1605	1876		1587	1870			1971			1933	
Flt Permitted	0.67	1.00		0.56	1.00			0.97			0.99	
Satd. Flow (perm)	1135	1876		942	1870			1925			1916	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	100	141	70	2	93	40	24	306	10	8	204	32
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	100	211	0	2	133	0	0	340	0	0	244	0
Confl. Peds. (#/hr)			8	8			1		8	8		1
Heavy Vehicles (%)	3%	3%	2%	0%	6%	0%	0%	3%	0%	0%	4%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.0	20.0		20.0	20.0			37.0			37.0	
Effective Green, g (s)	20.0	20.0		20.0	20.0			37.0			37.0	
Actuated g/C Ratio	0.31	0.31		0.31	0.31			0.57			0.57	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	349	577		290	575			1096			1091	
v/s Ratio Prot		c0.11			0.07							
v/s Ratio Perm	0.09			0.00				c0.18			0.13	
v/c Ratio	0.29	0.37		0.01	0.23			0.31			0.22	
Uniform Delay, d1	17.1	17.6		15.6	16.8			7.3			6.9	
Progression Factor	0.91	0.90		0.89	0.92			0.99			1.00	
Incremental Delay, d2	2.0	1.8		0.0	0.9			0.7			0.5	
Delay (s)	17.6	17.6		14.0	16.4			8.0			7.4	
Level of Service	B	B		B	B			A			A	
Approach Delay (s)		17.6			16.3			8.0			7.4	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	11.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	46.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1029: 107th Street & Cottage Grove Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑	↱	↰	↑	↱
Volume (vph)	122	9	55	1	3	12	40	492	6	2	201	50
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	10	10	10	11	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.97		1.00	1.00	0.98	1.00	1.00	0.98
Flpb, ped/bikes	0.98	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.87		1.00	0.88		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1603	1672		1710	1422		1491	1631	1392	1649	1907	1427
Flt Permitted	0.75	1.00		0.71	1.00		0.62	1.00	1.00	0.37	1.00	1.00
Satd. Flow (perm)	1260	1672		1279	1422		971	1631	1392	648	1907	1427
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	136	10	61	1	3	13	44	547	7	2	223	56
RTOR Reduction (vph)	0	44	0	0	9	0	0	0	3	0	0	22
Lane Group Flow (vph)	136	27	0	1	7	0	44	547	4	2	223	34
Confl. Peds. (#/hr)	9					9	1		6	6		1
Heavy Vehicles (%)	5%	14%	5%	0%	67%	12%	7%	3%	0%	0%	7%	5%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	17.0	17.0		17.0	17.0		39.0	39.0	39.0	39.0	39.0	39.0
Effective Green, g (s)	18.0	18.0		18.0	18.0		39.0	39.0	39.0	39.0	39.0	39.0
Actuated g/C Ratio	0.28	0.28		0.28	0.28		0.60	0.60	0.60	0.60	0.60	0.60
Clearance Time (s)	5.0	5.0		5.0	5.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	349	463		354	394		583	979	835	389	1144	856
v/s Ratio Prot		0.02			0.00			c0.34			0.12	
v/s Ratio Perm	c0.11			0.00			0.05		0.00	0.00		0.02
v/c Ratio	0.39	0.06		0.00	0.02		0.08	0.56	0.01	0.01	0.19	0.04
Uniform Delay, d1	19.0	17.3		17.0	17.1		5.4	7.8	5.2	5.2	5.9	5.3
Progression Factor	1.46	2.41		1.00	1.00		1.17	1.10	1.33	1.00	1.00	1.00
Incremental Delay, d2	3.2	0.2		0.0	0.1		0.2	1.7	0.0	0.0	0.4	0.1
Delay (s)	31.0	41.8		17.0	17.1		6.5	10.3	6.9	5.2	6.3	5.4
Level of Service	C	D		B	B		A	B	A	A	A	A
Approach Delay (s)		34.7			17.1			10.0			6.1	
Approach LOS		C			B			A			A	

Intersection Summary			
HCM Average Control Delay	13.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1030: 111th Street & Marshield Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱		↰	↑↑					↰	↑↱	
Volume (vph)	0	241	76	123	376	0	0	0	0	74	305	361
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	12	12	12	12	12	11	11	12
Total Lost time (s)		4.0		3.0	3.0					5.0	5.0	
Lane Util. Factor		0.95		1.00	0.95					1.00	0.95	
Frpb, ped/bikes		0.99		1.00	1.00					1.00	0.99	
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	
Frt		0.96		1.00	1.00					1.00	0.92	
Flt Protected		1.00		0.95	1.00					0.95	1.00	
Satd. Flow (prot)		2826		1621	3288					1574	2907	
Flt Permitted		1.00		0.50	1.00					0.95	1.00	
Satd. Flow (perm)		2826		846	3288					1574	2907	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	254	80	129	396	0	0	0	0	78	321	380
RTOR Reduction (vph)	0	30	0	0	0	0	0	0	0	0	214	0
Lane Group Flow (vph)	0	304	0	129	396	0	0	0	0	78	487	0
Confl. Peds. (#/hr)	14		32	32		14	14					14
Confl. Bikes (#/hr)			1	1								
Heavy Vehicles (%)	0%	9%	4%	5%	4%	0%	0%	0%	0%	5%	2%	4%
Turn Type				D.P+P						custom		
Protected Phases		8		7	7 8					6	6	
Permitted Phases				8						6		
Actuated Green, G (s)		33.0		56.0	59.0					32.0	32.0	
Effective Green, g (s)		33.0		56.0	59.0					32.0	32.0	
Actuated g/C Ratio		0.33		0.56	0.59					0.32	0.32	
Clearance Time (s)		4.0		3.0						5.0	5.0	
Lane Grp Cap (vph)		933		652	1940					504	930	
v/s Ratio Prot		c0.11		0.05	c0.12					0.05	c0.17	
v/s Ratio Perm				0.07								
v/c Ratio		0.33		0.20	0.20					0.15	0.52	
Uniform Delay, d1		25.1		10.6	9.6					24.3	27.8	
Progression Factor		1.00		1.95	2.06					1.00	1.00	
Incremental Delay, d2		0.9		0.6	0.2					0.7	2.1	
Delay (s)		26.1		21.2	19.8					25.0	29.9	
Level of Service		C		C	B					C	C	
Approach Delay (s)		26.1			20.2			0.0			29.4	
Approach LOS		C			C			A			C	

Intersection Summary			
HCM Average Control Delay	25.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	62.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1031: 111th Street & Ashland Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑			↑↱		↰	↑	↱			
Volume (vph)	129	186	0	0	324	69	174	554	326	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	9	12	13	12	13	12	12	12
Total Lost time (s)	4.0	4.0			4.0		5.0	5.0	5.0			
Lane Util. Factor	1.00	0.95			0.95		1.00	1.00	1.00			
Frpb, ped/bikes	1.00	1.00			0.99		1.00	1.00	0.99			
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.97		1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1673	3054			2831		1750	1782	1514			
Flt Permitted	0.34	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	603	3054			2831		1750	1782	1514			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	136	196	0	0	341	73	183	583	343	0	0	0
RTOR Reduction (vph)	0	0	0	0	18	0	0	0	230	0	0	0
Lane Group Flow (vph)	136	196	0	0	396	0	183	583	113	0	0	0
Confl. Peds. (#/hr)	14		16	16		14			1	1		
Confl. Bikes (#/hr)	1					1			1	1		
Heavy Vehicles (%)	2%	12%	0%	0%	5%	4%	1%	1%	3%	0%	0%	0%
Turn Type	pm+pt						custom		Perm			
Protected Phases	4	1 4			1		2	2				
Permitted Phases	1 4						2		2			
Actuated Green, G (s)	54.0	58.0			21.0		33.0	33.0	33.0			
Effective Green, g (s)	54.0	58.0			21.0		33.0	33.0	33.0			
Actuated g/C Ratio	0.54	0.58			0.21		0.33	0.33	0.33			
Clearance Time (s)	4.0				4.0		5.0	5.0	5.0			
Lane Grp Cap (vph)	679	1771			595		578	588	500			
v/s Ratio Prot	c0.07	0.06			c0.14		0.10	c0.33				
v/s Ratio Perm	0.04								0.07			
v/c Ratio	0.20	0.11			0.67		0.32	0.99	0.23			
Uniform Delay, d1	11.8	9.4			36.3		25.1	33.4	24.3			
Progression Factor	0.24	0.25			1.00		0.75	0.79	1.93			
Incremental Delay, d2	0.6	0.1			5.8		0.9	27.7	0.7			
Delay (s)	3.5	2.5			42.1		19.8	54.1	47.6			
Level of Service	A	A			D		B	D	D			
Approach Delay (s)		2.9			42.1			46.4			0.0	
Approach LOS		A			D			D			A	

Intersection Summary			
HCM Average Control Delay	37.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	62.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1032: 112th Place & Marshield Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱		↰	↑↑					↰	↑↑	↱
Volume (vph)	0	457	372	34	592	0	0	0	0	4	215	195
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	11	12	12	12	12	10	10	12
Total Lost time (s)		4.0		4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.95		1.00	0.95					1.00	0.95	1.00
Frpb, ped/bikes		0.99		1.00	1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Frt		0.93		1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00					0.95	1.00	1.00
Satd. Flow (prot)		3107		1613	3273					1596	3160	1443
Flt Permitted		1.00		0.17	1.00					0.95	1.00	1.00
Satd. Flow (perm)		3107		284	3273					1596	3160	1443
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	0	476	388	35	617	0	0	0	0	4	224	203
RTOR Reduction (vph)	0	147	0	0	0	0	0	0	0	0	0	134
Lane Group Flow (vph)	0	717	0	35	617	0	0	0	0	4	224	69
Confl. Peds. (#/hr)	22		3	3		22						
Confl. Bikes (#/hr)	4					4			32	32		
Heavy Vehicles (%)	0%	2%	2%	6%	1%	0%	0%	0%	0%	0%	1%	6%
Turn Type				pm+pt						Split		Prot
Protected Phases		8		7	7 8					6	6	6
Permitted Phases				7 8								
Actuated Green, G (s)		36.0		54.0	58.0					34.0	34.0	34.0
Effective Green, g (s)		36.0		54.0	58.0					34.0	34.0	34.0
Actuated g/C Ratio		0.36		0.54	0.58					0.34	0.34	0.34
Clearance Time (s)		4.0		4.0						4.0	4.0	4.0
Lane Grp Cap (vph)		1119		393	1898					543	1074	491
v/s Ratio Prot		c0.23		0.02	c0.19					0.00	c0.07	0.05
v/s Ratio Perm				0.03								
v/c Ratio		0.64		0.09	0.33					0.01	0.21	0.14
Uniform Delay, d1		26.6		12.5	10.9					21.8	23.4	22.9
Progression Factor		1.00		0.54	0.68					0.73	0.79	0.92
Incremental Delay, d2		2.8		0.2	0.2					0.0	0.4	0.5
Delay (s)		29.4		6.9	7.6					16.0	18.9	21.5
Level of Service		C		A	A					B	B	C
Approach Delay (s)		29.4			7.5			0.0			20.1	
Approach LOS		C			A			A			C	

Intersection Summary			
HCM Average Control Delay	20.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	88.4%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1033: 112th Place & Ashland Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↰↑			↑↱		↰	↰	↱			
Volume (vph)	401	60	0	0	57	5	569	646	62	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	12	12	12	10	12	11	11	12	12	12	12
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0	4.0			
Lane Util. Factor	0.91	0.91			0.95		0.95	0.95	1.00			
Frpb, ped/bikes	1.00	1.00			0.99		1.00	1.00	1.00			
Flpb, ped/bikes	0.99	0.99			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.99		1.00	1.00	0.85			
Flt Protected	0.95	0.96			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1444	3042			3079		1555	1637	1500			
Flt Permitted	0.71	0.74			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	1084	2339			3079		1555	1637	1500			
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	413	62	0	0	59	5	587	666	64	0	0	0
RTOR Reduction (vph)	0	0	0	0	4	0	0	0	38	0	0	0
Lane Group Flow (vph)	206	269	0	0	60	0	587	666	26	0	0	0
Confl. Peds. (#/hr)	30		2	2		30			4	4		
Confl. Bikes (#/hr)	3					3			2	2		
Heavy Vehicles (%)	3%	2%	0%	0%	2%	0%	1%	1%	2%	0%	0%	0%
Turn Type	pm+pt						custom		custom			
Protected Phases	4	1 4			1		2	2	2			
Permitted Phases	1 4						2		2			
Actuated Green, G (s)	51.0	51.0			15.0		37.0	37.0	37.0			
Effective Green, g (s)	51.0	51.0			15.0		37.0	37.0	37.0			
Actuated g/C Ratio	0.51	0.51			0.15		0.37	0.37	0.37			
Clearance Time (s)	4.0				4.0		4.0	4.0	4.0			
Lane Grp Cap (vph)	682	1446			462		575	606	555			
v/s Ratio Prot	c0.11	0.07			0.02		0.38	c0.41	0.02			
v/s Ratio Perm	c0.05	0.03										
v/c Ratio	0.30	0.19			0.13		1.02	1.10	0.05			
Uniform Delay, d1	14.0	13.3			36.8		31.5	31.5	20.2			
Progression Factor	0.24	0.25			1.00		1.00	1.00	1.00			
Incremental Delay, d2	0.8	0.2			0.6		42.9	66.6	0.2			
Delay (s)	4.1	3.5			37.4		74.4	98.1	20.4			
Level of Service	A	A			D		E	F	C			
Approach Delay (s)		3.8			37.4			83.8			0.0	
Approach LOS		A			D			F			A	

Intersection Summary			
HCM Average Control Delay	61.7	HCM Level of Service	E
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	88.4%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↑↱			↰↑↑↱		↰	↑↑	↱	↰	↑↑	↱
Volume (vph)	163	284	70	61	189	117	43	1151	72	100	476	42
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	9	10	9	9	10	9
Total Lost time (s)		4.0			4.0		4.0	3.5	4.0	4.0	3.5	4.0
Lane Util. Factor		0.95			0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		1.00			0.98		1.00	1.00	0.97	1.00	1.00	0.97
Flpb, ped/bikes		1.00			1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.98			0.95		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.98			0.99		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		2842			2770		1447	3069	1336	1494	2956	1270
Flt Permitted		0.66			0.79		0.39	1.00	1.00	0.12	1.00	1.00
Satd. Flow (perm)		1916			2214		600	3069	1336	197	2956	1270
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	170	296	73	64	197	122	45	1199	75	104	496	44
RTOR Reduction (vph)	0	14	0	0	64	0	0	0	28	0	0	27
Lane Group Flow (vph)	0	525	0	0	319	0	45	1199	47	104	496	17
Confl. Peds. (#/hr)	49		20	20		49	26		8	8		26
Confl. Bikes (#/hr)	2					2						
Heavy Vehicles (%)	10%	7%	4%	9%	7%	5%	6%	4%	0%	3%	8%	5%
Turn Type	pm+pt			Perm			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)		35.0			27.0		38.0	33.0	33.0	38.0	33.0	33.0
Effective Green, g (s)		36.0			28.0		36.0	33.5	33.0	36.0	33.5	33.0
Actuated g/C Ratio		0.42			0.33		0.42	0.39	0.39	0.42	0.39	0.39
Clearance Time (s)		5.0			5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)		877			729		294	1210	519	144	1165	493
v/s Ratio Prot		c0.04					0.01	c0.39		c0.03	0.17	
v/s Ratio Perm		0.21			0.14		0.06		0.04	0.27		0.01
v/c Ratio		0.60			0.44		0.15	0.99	0.09	0.72	0.43	0.03
Uniform Delay, d1		18.9			22.3		14.7	25.6	16.5	19.2	18.7	16.1
Progression Factor		1.00			1.00		1.32	0.86	1.42	1.82	1.63	3.13
Incremental Delay, d2		3.0			1.9		0.6	17.7	0.2	24.6	1.0	0.1
Delay (s)		21.9			24.2		20.2	39.8	23.6	59.5	31.7	50.7
Level of Service		C			C		C	D	C	E	C	D
Approach Delay (s)		21.9			24.2			38.2			37.5	
Approach LOS		C			C			D			D	

Intersection Summary			
HCM Average Control Delay	33.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	11.5
Intersection Capacity Utilization	82.0%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰			↱			✥				
Volume (vph)	44	441	0	0	339	85	28	63	115	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		1.00			0.97			0.92				
Flt Protected		1.00			1.00			0.99				
Satd. Flow (prot)		1707			1668			1574				
Flt Permitted		0.93			1.00			0.99				
Satd. Flow (perm)		1599			1668			1574				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	49	490	0	0	377	94	31	70	128	0	0	0
RTOR Reduction (vph)	0	0	0	0	14	0	0	70	0	0	0	0
Lane Group Flow (vph)	0	539	0	0	457	0	0	159	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)		34.0			34.0			23.0				
Effective Green, g (s)		34.0			34.0			23.0				
Actuated g/C Ratio		0.52			0.52			0.35				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		836			872			557				
v/s Ratio Prot					0.27							
v/s Ratio Perm		c0.34						0.10				
v/c Ratio		0.64			0.52			0.28				
Uniform Delay, d1		11.2			10.2			15.1				
Progression Factor		1.00			0.56			1.00				
Incremental Delay, d2		3.8			2.0			1.3				
Delay (s)		15.0			7.7			16.4				
Level of Service		B			A			B				
Approach Delay (s)		15.0			7.7			16.4			0.0	
Approach LOS		B			A			B			A	

Intersection Summary			
HCM Average Control Delay	12.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	73.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	45	458	31	23	355	53	16	175	47	68	107	19
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	12	12	12	12	12
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		1.00			1.00			0.99			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.99			0.98			0.97			0.99	
Flt Protected		1.00			1.00			1.00			0.98	
Satd. Flow (prot)		1889			1831			3160			3149	
Flt Permitted		0.93			0.96			0.93			0.79	
Satd. Flow (perm)		1773			1759			2958			2534	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	50	509	34	26	394	59	18	194	52	76	119	21
RTOR Reduction (vph)	0	3	0	0	8	0	0	30	0	0	12	0
Lane Group Flow (vph)	0	590	0	0	471	0	0	234	0	0	204	0
Confl. Peds. (#/hr)	29		16	16		29	28		14	14		28
Confl. Bikes (#/hr)	1					1	1					1
Heavy Vehicles (%)	3%	7%	4%	12%	8%	13%	0%	4%	4%	4%	4%	6%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		30.0			30.0			27.0			27.0	
Effective Green, g (s)		30.0			30.0			27.0			27.0	
Actuated g/C Ratio		0.46			0.46			0.42			0.42	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		818			812			1229			1053	
v/s Ratio Prot												
v/s Ratio Perm		c0.33			0.27			0.08			c0.08	
v/c Ratio		0.72			0.58			0.19			0.19	
Uniform Delay, d1		14.1			12.9			12.1			12.1	
Progression Factor		0.65			0.55			0.94			0.70	
Incremental Delay, d2		4.5			2.9			0.3			0.4	
Delay (s)		13.6			10.0			11.7			8.9	
Level of Service		B			A			B			A	
Approach Delay (s)		13.6			10.0			11.7			8.9	
Approach LOS		B			A			B			A	

Intersection Summary			
HCM Average Control Delay	11.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	80.3%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	50	355	20	29	302	64	46	319	92	60	96	20
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	9	10	10	9	10	10	12	10	10	12
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		0.99	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.97		1.00	0.97		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1502	2948		1585	2934		1497	3031		1594	2943	
Flt Permitted	0.47	1.00		0.46	1.00		0.67	1.00		0.48	1.00	
Satd. Flow (perm)	744	2948		773	2934		1056	3031		806	2943	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	56	394	22	32	336	71	51	354	102	67	107	22
RTOR Reduction (vph)	0	6	0	0	28	0	0	41	0	0	10	0
Lane Group Flow (vph)	56	410	0	32	379	0	51	415	0	67	119	0
Confl. Peds. (#/hr)	25		14	14		25	12		4	4		12
Confl. Bikes (#/hr)	1					1			1	1		
Heavy Vehicles (%)	5%	7%	12%	0%	6%	2%	6%	1%	3%	0%	4%	12%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	22.0	22.0		22.0	22.0		35.0	35.0		35.0	35.0	
Effective Green, g (s)	22.0	22.0		22.0	22.0		35.0	35.0		35.0	35.0	
Actuated g/C Ratio	0.34	0.34		0.34	0.34		0.54	0.54		0.54	0.54	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	252	998		262	993		569	1632		434	1585	
v/s Ratio Prot		c0.14			0.13			c0.14			0.04	
v/s Ratio Perm	0.08			0.04			0.05			0.08		
v/c Ratio	0.22	0.41		0.12	0.38		0.09	0.25		0.15	0.07	
Uniform Delay, d1	15.4	16.5		14.8	16.3		7.3	8.0		7.6	7.2	
Progression Factor	0.63	0.62		0.86	0.85		0.71	0.73		1.34	1.35	
Incremental Delay, d2	1.6	1.0		0.9	1.1		0.3	0.4		0.8	0.1	
Delay (s)	11.2	11.3		13.6	15.1		5.5	6.2		10.9	9.8	
Level of Service	B	B		B	B		A	A		B	A	
Approach Delay (s)		11.3			15.0			6.1			10.2	
Approach LOS		B			B			A			B	

Intersection Summary			
HCM Average Control Delay	10.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	46.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			↰↑↱			↰↑↱	
Volume (vph)	83	380	131	100	316	82	37	324	60	41	136	38
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	9	10	9	9	16	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.98			1.00			0.99	
Flpb, ped/bikes	0.97	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.96		1.00	0.97			0.98			0.97	
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.99	
Satd. Flow (prot)	1381	2934		1337	3524			3413			3314	
Flt Permitted	0.49	1.00		0.42	1.00			0.91			0.84	
Satd. Flow (perm)	719	2934		587	3524			3134			2805	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	87	400	138	105	333	86	39	341	63	43	143	40
RTOR Reduction (vph)	0	53	0	0	35	0	0	20	0	0	24	0
Lane Group Flow (vph)	87	485	0	105	384	0	0	423	0	0	202	0
Confl. Peds. (#/hr)	53		34	34		53	67		28	28		67
Heavy Vehicles (%)	8%	5%	0%	14%	6%	1%	0%	9%	20%	5%	15%	5%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	31.0	31.0		31.0	31.0			26.0			26.0	
Effective Green, g (s)	31.0	31.0		31.0	31.0			26.0			26.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48			0.40			0.40	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	343	1399		280	1681			1254			1122	
v/s Ratio Prot		0.17			0.11							
v/s Ratio Perm	0.12			c0.18				c0.13			0.07	
v/c Ratio	0.25	0.35		0.38	0.23			0.34			0.18	
Uniform Delay, d1	10.1	10.7		10.8	10.0			13.5			12.6	
Progression Factor	1.65	1.85		0.77	0.72			0.51			0.64	
Incremental Delay, d2	1.7	0.7		3.3	0.3			0.7			0.3	
Delay (s)	18.4	20.4		11.6	7.4			7.6			8.4	
Level of Service	B	C		B	A			A			A	
Approach Delay (s)		20.1			8.3			7.6			8.4	
Approach LOS		C			A			A			A	

Intersection Summary			
HCM Average Control Delay	12.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	62.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1039: 111th Street & Indiana Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰↱			✥			✥	
Volume (vph)	99	307	99	104	371	104	82	84	88	88	84	82
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	16	12	12	16	12
Total Lost time (s)		5.0	5.0		5.0			5.0			5.0	
Lane Util. Factor		1.00	1.00		0.95			1.00			1.00	
Frt		1.00	0.85		0.97			0.95			0.96	
Flt Protected		0.99	1.00		0.99			0.98			0.98	
Satd. Flow (prot)		1637	1409		3036			1822			1826	
Flt Permitted		0.74	1.00		0.76			0.80			0.78	
Satd. Flow (perm)		1223	1409		2327			1482			1447	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	110	341	110	116	412	116	91	93	98	98	93	91
RTOR Reduction (vph)	0	0	52	0	29	0	0	30	0	0	26	0
Lane Group Flow (vph)	0	451	58	0	615	0	0	252	0	0	256	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm		Perm	Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)		34.0	34.0		34.0			21.0			21.0	
Effective Green, g (s)		34.0	34.0		34.0			21.0			21.0	
Actuated g/C Ratio		0.52	0.52		0.52			0.32			0.32	
Clearance Time (s)		5.0	5.0		5.0			5.0			5.0	
Lane Grp Cap (vph)		640	737		1217			479			467	
v/s Ratio Prot												
v/s Ratio Perm		c0.37	0.04		0.26			0.17			c0.18	
v/c Ratio		0.70	0.08		0.51			0.53			0.55	
Uniform Delay, d1		11.7	7.7		10.1			17.9			18.1	
Progression Factor		1.75	4.62		0.43			1.00			1.00	
Incremental Delay, d2		6.2	0.2		1.4			4.1			4.6	
Delay (s)		26.7	35.8		5.7			22.0			22.6	
Level of Service		C	D		A			C			C	
Approach Delay (s)		28.5			5.7			22.0			22.6	
Approach LOS		C			A			C			C	

Intersection Summary			
HCM Average Control Delay	18.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	73.3%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1040: 111th Street & Martin Luther King Jr Drive

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			↰↑↱			↰↑↱	
Volume (vph)	75	386	22	15	450	63	40	103	41	43	90	101
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	15	8	16	8	8	16	8
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			1.00			0.99	
Flpb, ped/bikes	0.99	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.98			0.97			0.94	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1475	3017		1573	3003			3457			3397	
Flt Permitted	0.38	1.00		0.46	1.00			0.86			0.88	
Satd. Flow (perm)	597	3017		764	3003			3010			3010	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	83	429	24	17	500	70	44	114	46	48	100	112
RTOR Reduction (vph)	0	6	0	0	17	0	0	25	0	0	62	0
Lane Group Flow (vph)	83	447	0	17	553	0	0	179	0	0	198	0
Confl. Peds. (#/hr)	22		40	40		22	18		3	3		18
Confl. Bikes (#/hr)			2	2			1					1
Heavy Vehicles (%)	7%	5%	0%	0%	4%	2%	0%	3%	22%	0%	3%	8%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	28.0	28.0		28.0	28.0			29.0			29.0	
Effective Green, g (s)	28.0	28.0		28.0	28.0			29.0			29.0	
Actuated g/C Ratio	0.43	0.43		0.43	0.43			0.45			0.45	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	257	1300		329	1294			1343			1343	
v/s Ratio Prot		0.15			c0.18							
v/s Ratio Perm	0.14			0.02				0.06			c0.07	
v/c Ratio	0.32	0.34		0.05	0.43			0.13			0.15	
Uniform Delay, d1	12.2	12.4		10.8	12.9			10.6			10.7	
Progression Factor	0.96	0.99		1.14	1.00			1.04			0.83	
Incremental Delay, d2	2.5	0.5		0.1	0.5			0.2			0.2	
Delay (s)	14.3	12.7		12.4	13.3			11.2			9.1	
Level of Service	B	B		B	B			B			A	
Approach Delay (s)		13.0			13.3			11.2			9.1	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM Average Control Delay	12.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	59.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱			↰↑↱			↰↑↱	
Volume (vph)	86	458	74	94	469	284	51	332	92	222	159	52
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			0.95			0.95	
Frt		0.98			0.95			0.97			0.98	
Flt Protected		0.99			0.99			0.99			0.98	
Satd. Flow (prot)		3177			3076			3146			3118	
Flt Permitted		0.63			0.74			0.87			0.63	
Satd. Flow (perm)		2014			2279			2748			2005	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	96	509	82	104	521	316	57	369	102	247	177	58
RTOR Reduction (vph)	0	16	0	0	98	0	0	32	0	0	17	0
Lane Group Flow (vph)	0	671	0	0	843	0	0	496	0	0	465	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm			pm+pt			Perm		
Protected Phases		4			8		5	2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		26.0			26.0			29.0			20.0	
Effective Green, g (s)		26.0			26.0			29.0			20.0	
Actuated g/C Ratio		0.40			0.40			0.45			0.31	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		806			912			1263			617	
v/s Ratio Prot								c0.04				
v/s Ratio Perm		0.33			c0.37			0.14			c0.23	
v/c Ratio		0.83			0.92			0.39			0.96dl	
Uniform Delay, d1		17.5			18.6			12.1			20.3	
Progression Factor		1.73			1.00			1.00			0.89	
Incremental Delay, d2		9.7			16.3			0.9			8.3	
Delay (s)		40.0			34.9			13.0			26.4	
Level of Service		D			C			B			C	
Approach Delay (s)		40.0			34.9			13.0			26.4	
Approach LOS		D			C			B			C	

Intersection Summary			
HCM Average Control Delay	30.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	88.9%	ICU Level of Service	E
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↑↱			↰↑↑↱			↰↑↱			↰↑↱	
Volume (vph)	0	724	121	45	759	0	142	0	70	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	10	10	12	12	12	12	10	10	10
Total Lost time (s)		5.0			5.0			5.0				
Lane Util. Factor		0.95			0.95			1.00				
Frt		0.98			1.00			0.96				
Flt Protected		1.00			1.00			0.97				
Satd. Flow (prot)		2975			3032			1585				
Flt Permitted		1.00			0.84			0.80				
Satd. Flow (perm)		2975			2542			1308				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	804	134	50	843	0	158	0	78	0	0	0
RTOR Reduction (vph)	0	18	0	0	0	0	0	20	0	0	0	0
Lane Group Flow (vph)	0	920	0	0	893	0	0	216	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	custom			Perm			Perm			Perm		
Protected Phases		4 5 6 11			8			2			2	
Permitted Phases	4 6 11			8			2			2		
Actuated Green, G (s)		65.0			33.0			16.0				
Effective Green, g (s)		58.0			33.0			16.0				
Actuated g/C Ratio		0.64			0.37			0.18				
Clearance Time (s)					5.0			5.0				
Lane Grp Cap (vph)		1917			932			233				
v/s Ratio Prot		c0.31										
v/s Ratio Perm					c0.35			c0.17				
v/c Ratio		0.48			0.96			0.93				
Uniform Delay, d1		8.2			27.8			36.4				
Progression Factor		0.04			1.57			1.00				
Incremental Delay, d2		0.4			18.9			42.9				
Delay (s)		0.8			62.5			79.3				
Level of Service		A			E			E				
Approach Delay (s)		0.8			62.5			79.3			0.0	
Approach LOS		A			E			E			A	

Intersection Summary			
HCM Average Control Delay	36.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	74.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1043: 111th Street & Doty Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↑	↱		↰↑↱		↰	↑	↱
Volume (vph)	123	502	187	274	646	183	103	20	185	78	7	77
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	10	12	12	12	12	16	12	12	12	12
Total Lost time (s)	3.0	5.0		3.0	5.0	3.0		5.0		3.0	5.0	3.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00		1.00	1.00	1.00
Frt	1.00	0.96		1.00	1.00	0.85		0.92		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.98		0.95	1.00	1.00
Satd. Flow (prot)	1520	3020		1629	3257	1457		1756		1629	1714	1457
Flt Permitted	0.32	1.00		0.20	1.00	1.00		0.89		0.40	1.00	1.00
Satd. Flow (perm)	508	3020		340	3257	1457		1581		690	1714	1457
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	137	558	208	304	718	203	114	22	206	87	8	86
RTOR Reduction (vph)	0	42	0	0	0	104	0	74	0	0	0	46
Lane Group Flow (vph)	137	724	0	304	718	99	0	268	0	87	8	40
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	pm+pt			pm+pt		pm+ov	pm+pt			pm+pt		pm+ov
Protected Phases	7	4		3	8	1	5	2		1	6	7
Permitted Phases	4			8		8	2			6		6
Actuated Green, G (s)	40.0	30.6		47.6	35.2	43.8		20.8		32.4	32.4	41.8
Effective Green, g (s)	40.0	30.6		47.6	35.2	43.8		20.8		32.4	32.4	41.8
Actuated g/C Ratio	0.44	0.34		0.53	0.39	0.49		0.23		0.36	0.36	0.46
Clearance Time (s)	3.0	5.0		3.0	5.0	3.0		5.0		3.0	5.0	3.0
Vehicle Extension (s)	4.0	3.0		4.0	3.0	3.0		4.0		3.0	4.0	4.0
Lane Grp Cap (vph)	331	1027		380	1274	709		365		338	617	677
v/s Ratio Prot	0.04	0.24		c0.12	0.22	0.01				c0.02	0.00	0.01
v/s Ratio Perm	0.14			c0.30		0.05		c0.17		0.07		0.02
v/c Ratio	0.41	0.71		0.80	0.56	0.14		0.73		0.26	0.01	0.06
Uniform Delay, d1	15.4	25.8		14.8	21.4	12.7		32.0		21.2	18.5	13.3
Progression Factor	1.90	1.58		1.00	1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2	1.0	3.7		12.0	1.8	0.1		8.0		0.4	0.0	0.1
Delay (s)	30.4	44.4		26.8	23.2	12.8		40.0		21.6	18.5	13.3
Level of Service	C	D		C	C	B		D		C	B	B
Approach Delay (s)		42.3			22.4			40.0			17.5	
Approach LOS		D			C			D			B	

Intersection Summary			
HCM Average Control Delay	31.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	74.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
1044: 111th Street & Bishop Ford Freeway EB Ramps

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↑↑					↰		↱
Volume (veh/h)	0	517	247	6	531	0	0	0	0	32	0	572
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	574	274	7	590	0	0	0	0	36	0	636
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		498										
pX, platoon unblocked												
vC, conflicting volume	590			574			883	1178	287	891	1178	295
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	590			574			883	1178	287	891	1178	295
tC, single (s)	4.2			4.2			7.6	6.6	7.0	7.6	6.6	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			100	100	100	85	100	8
cM capacity (veh/h)	961			974			19	184	701	231	184	692

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1	SB 2
Volume Total	287	287	274	203	393	36	636
Volume Left	0	0	0	7	0	36	0
Volume Right	0	0	274	0	0	0	636
cSH	1700	1700	1700	974	1700	231	692
Volume to Capacity	0.17	0.17	0.16	0.01	0.23	0.15	0.92
Queue Length 95th (ft)	0	0	0	1	0	13	307
Control Delay (s)	0.0	0.0	0.0	0.4	0.0	23.4	41.6
Lane LOS				A		C	E
Approach Delay (s)	0.0			0.1		40.6	
Approach LOS						E	

Intersection Summary			
Average Delay	12.9		
Intersection Capacity Utilization	59.7%	ICU Level of Service	B
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
1045: 111th Street & Bishop Ford Freeway WB Ramps

	↗	↘	↖	↑	↓	↙
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰↰		↰			
Sign Control	Stop			Stop	Stop	
Volume (vph)	549	0	537	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	610	0	597	0	0	0

Direction, Lane #	EB 1	EB 2	NB 1
Volume Total (vph)	305	305	597
Volume Left (vph)	305	305	597
Volume Right (vph)	0	0	0
Hadj (s)	0.58	0.58	0.29
Departure Headway (s)	7.0	7.0	5.8
Degree Utilization, x	0.59	0.59	0.95
Capacity (veh/h)	499	499	618
Control Delay (s)	18.2	18.2	49.1
Approach Delay (s)	18.2		49.1
Approach LOS	C		E

Intersection Summary			
Delay	33.5		
HCM Level of Service	D		
Intersection Capacity Utilization	54.6%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Signalized Intersection Capacity Analysis
1046: 115th Street & Marshield Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱		↰	↑↑						↰↱	
Volume (vph)	0	373	46	130	332	0	0	0	0	72	15	42
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	12	12	12	12	12
Total Lost time (s)		3.0		4.0	4.0						5.0	
Lane Util. Factor		0.95		1.00	0.95						0.95	
Frt		0.98		1.00	1.00						0.95	
Flt Protected		1.00		0.95	1.00						0.97	
Satd. Flow (prot)		3097		1574	3149						3014	
Flt Permitted		1.00		0.43	1.00						0.97	
Satd. Flow (perm)		3097		706	3149						3014	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	414	51	144	369	0	0	0	0	80	17	47
RTOR Reduction (vph)	0	11	0	0	0	0	0	0	0	0	32	0
Lane Group Flow (vph)	0	454	0	144	369	0	0	0	0	0	112	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type				pm+pt						Split		
Protected Phases		4		3	8					6	6	
Permitted Phases				8								
Actuated Green, G (s)		36.0		49.0	49.0						27.0	
Effective Green, g (s)		36.0		49.0	49.0						27.0	
Actuated g/C Ratio		0.42		0.58	0.58						0.32	
Clearance Time (s)		3.0		4.0	4.0						5.0	
Lane Grp Cap (vph)		1312		509	1815						957	
v/s Ratio Prot		c0.15		c0.03	0.12						c0.04	
v/s Ratio Perm				0.13								
v/c Ratio		0.35		0.28	0.20						0.12	
Uniform Delay, d1		16.5		11.9	8.6						20.6	
Progression Factor		1.00		0.28	0.23						1.00	
Incremental Delay, d2		0.7		1.3	0.2						0.2	
Delay (s)		17.3		4.6	2.2						20.8	
Level of Service		B		A	A						C	
Approach Delay (s)		17.3			2.9			0.0			20.8	
Approach LOS		B			A			A			C	

Intersection Summary			
HCM Average Control Delay	11.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.24		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	34.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1047: 115th Street & Ashland Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑			↑↱			↰↑↱				
Volume (vph)	68	377	0	0	413	76	49	65	59	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	11	11	12	12	12	12	12	12
Total Lost time (s)	5.0	5.0			3.0			5.0				
Lane Util. Factor	1.00	0.95			0.95			0.91				
Frt	1.00	1.00			0.98			0.95				
Flt Protected	0.95	1.00			1.00			0.99				
Satd. Flow (prot)	1629	3257			3076			4377				
Flt Permitted	0.37	1.00			1.00			0.99				
Satd. Flow (perm)	640	3257			3076			4377				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	76	419	0	0	459	84	54	72	66	0	0	0
RTOR Reduction (vph)	0	0	0	0	18	0	0	45	0	0	0	0
Lane Group Flow (vph)	76	419	0	0	525	0	0	147	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	pm+pt						Split					
Protected Phases	7	4			8		2	2				
Permitted Phases	4											
Actuated Green, G (s)	48.0	48.0			35.0			27.0				
Effective Green, g (s)	48.0	48.0			35.0			27.0				
Actuated g/C Ratio	0.56	0.56			0.41			0.32				
Clearance Time (s)	5.0	5.0			3.0			5.0				
Lane Grp Cap (vph)	478	1839			1267			1390				
v/s Ratio Prot	0.02	c0.13			c0.17			c0.03				
v/s Ratio Perm	0.07											
v/c Ratio	0.16	0.23			0.41			0.11				
Uniform Delay, d1	12.3	9.2			17.7			20.5				
Progression Factor	0.31	0.30			1.00			1.00				
Incremental Delay, d2	0.7	0.3			1.0			0.2				
Delay (s)	4.5	3.1			18.7			20.6				
Level of Service	A	A			B			C				
Approach Delay (s)		3.3			18.7			20.6			0.0	
Approach LOS		A			B			C			A	

Intersection Summary			
HCM Average Control Delay	12.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	34.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1048: 115th Street & Racine Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↑↱			↰↑↑↱			↰↑↱			↰↑↱	
Volume (vph)	39	357	39	40	256	33	118	85	86	65	91	126
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	10	12	12	15	12	12	15	12
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			1.00			1.00	
Frt		0.99			0.98			0.96			0.94	
Flt Protected		1.00			0.99			0.98			0.99	
Satd. Flow (prot)		2986			2976			1773			1752	
Flt Permitted		0.89			0.85			0.77			0.86	
Satd. Flow (perm)		2673			2560			1387			1526	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	43	397	43	44	284	37	131	94	96	72	101	140
RTOR Reduction (vph)	0	11	0	0	13	0	0	24	0	0	45	0
Lane Group Flow (vph)	0	472	0	0	352	0	0	297	0	0	268	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		23.0			23.0			32.0			32.0	
Effective Green, g (s)		23.0			23.0			32.0			32.0	
Actuated g/C Ratio		0.35			0.35			0.49			0.49	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		946			906			683			751	
v/s Ratio Prot												
v/s Ratio Perm		c0.18			0.14			c0.21			0.18	
v/c Ratio		0.50			0.39			0.44			0.36	
Uniform Delay, d1		16.5			15.7			10.7			10.2	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		1.9			1.3			2.0			1.3	
Delay (s)		18.4			17.0			12.7			11.5	
Level of Service		B			B			B			B	
Approach Delay (s)		18.4			17.0			12.7			11.5	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	15.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	65.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1049: 115th Street & Halsted Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↑	↱	↰	↑↑	↱
Volume (vph)	169	295	39	59	200	75	71	1001	104	126	428	80
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	12	10	16	12	9	10	9	9	10	9
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00	0.98	1.00	1.00	0.96
Flpb, ped/bikes	0.99	1.00		1.00	1.00		0.99	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.98		1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1551	3023		1593	3505		1486	3040	1347	1494	3011	1271
Flt Permitted	0.55	1.00		0.49	1.00		0.43	1.00	1.00	0.12	1.00	1.00
Satd. Flow (perm)	891	3023		819	3505		675	3040	1347	197	3011	1271
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	178	311	41	62	211	79	75	1054	109	133	451	84
RTOR Reduction (vph)	0	12	0	0	45	0	0	0	65	0	0	51
Lane Group Flow (vph)	178	340	0	62	245	0	75	1054	44	133	451	33
Confl. Peds. (#/hr)	31		7	7		31	37		12	12		37
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	2%	4%	0%	0%	6%	2%	3%	5%	0%	3%	6%	4%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	32.0	27.0		32.0	27.0		38.0	33.0	33.0	38.0	33.0	33.0
Effective Green, g (s)	30.0	28.0		30.0	28.0		36.0	33.0	33.0	36.0	33.0	33.0
Actuated g/C Ratio	0.35	0.33		0.35	0.33		0.42	0.39	0.39	0.42	0.39	0.39
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)	346	996		325	1155		324	1180	523	144	1169	493
v/s Ratio Prot	c0.02	0.11		0.01	0.07		0.01	c0.35		c0.04	0.15	
v/s Ratio Perm	c0.16			0.06			0.09		0.03	0.35		0.03
v/c Ratio	0.51	0.34		0.19	0.21		0.23	0.89	0.08	0.92	0.39	0.07
Uniform Delay, d1	20.9	21.5		18.6	20.5		15.0	24.3	16.4	21.1	18.7	16.3
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	2.17	0.62	0.80
Incremental Delay, d2	5.4	0.9		1.3	0.4		1.7	10.5	0.3	54.0	0.9	0.2
Delay (s)	26.3	22.5		19.9	21.0		16.6	34.8	16.8	99.7	12.6	13.3
Level of Service	C	C		B	C		B	C	B	F	B	B
Approach Delay (s)		23.8			20.8			32.1			30.0	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	28.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	73.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1050: 115th Street & Wentworth Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱		↰	↱		↰	↱
Volume (vph)	38	434	18	25	261	21	35	113	68	71	57	41
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	16	12	12	16	12
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frpb, ped/bikes		1.00	0.96		1.00	0.97		1.00	0.99		1.00	0.98
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frt		1.00	0.85		1.00	0.85		1.00	0.85		1.00	0.85
Flt Protected		1.00	1.00		1.00	1.00		0.99	1.00		0.97	1.00
Satd. Flow (prot)		1935	1382		1947	1331		1970	1452		1933	1430
Flt Permitted		0.96	1.00		0.95	1.00		0.92	1.00		0.80	1.00
Satd. Flow (perm)		1860	1382		1848	1331		1839	1452		1581	1430
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	40	457	19	26	275	22	37	119	72	75	60	43
RTOR Reduction (vph)	0	0	10	0	0	12	0	0	42	0	0	25
Lane Group Flow (vph)	0	497	9	0	301	10	0	156	30	0	135	18
Confl. Peds. (#/hr)	5		21	21		5	9		1	1		9
Heavy Vehicles (%)	5%	5%	6%	7%	4%	12%	6%	1%	4%	0%	6%	5%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)		30.0	30.0		30.0	30.0		27.0	27.0		27.0	27.0
Effective Green, g (s)		30.0	30.0		30.0	30.0		27.0	27.0		27.0	27.0
Actuated g/C Ratio		0.46	0.46		0.46	0.46		0.42	0.42		0.42	0.42
Clearance Time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		858	638		853	614		764	603		657	594
v/s Ratio Prot												
v/s Ratio Perm		c0.27	0.01		0.16	0.01		0.08	0.02		c0.09	0.01
v/c Ratio		0.58	0.01		0.35	0.02		0.20	0.05		0.21	0.03
Uniform Delay, d1		12.9	9.5		11.3	9.5		12.1	11.3		12.1	11.2
Progression Factor		1.00	1.00		0.38	0.16		1.18	1.66		0.99	0.83
Incremental Delay, d2		2.8	0.0		1.1	0.0		0.6	0.2		0.7	0.1
Delay (s)		15.7	9.5		5.4	1.6		14.9	18.9		12.7	9.4
Level of Service		B	A		A	A		B	B		B	A
Approach Delay (s)		15.5			5.1			16.2			11.9	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM Average Control Delay	12.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	67.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1051: 115th Street & State Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	66	514	10	17	268	43	13	247	35	81	70	30
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	1.00		1.00	0.98		1.00	0.98		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1520	3031		1520	2977		1520	2983		1520	2904	
Flt Permitted	0.95	1.00		0.43	1.00		0.68	1.00		0.54	1.00	
Satd. Flow (perm)	1520	3031		692	2977		1091	2983		871	2904	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	73	571	11	19	298	48	14	274	39	90	78	33
RTOR Reduction (vph)	0	2	0	0	20	0	0	17	0	0	19	0
Lane Group Flow (vph)	73	580	0	19	326	0	14	296	0	90	92	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Prot			Perm			Perm			Perm		
Protected Phases	7	4			8			2			6	
Permitted Phases				8			2			6		
Actuated Green, G (s)	7.0	32.0		22.0	22.0		27.0	27.0		27.0	27.0	
Effective Green, g (s)	7.0	32.0		22.0	22.0		27.0	27.0		27.0	27.0	
Actuated g/C Ratio	0.11	0.49		0.34	0.34		0.42	0.42		0.42	0.42	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	164	1492		234	1008		453	1239		362	1206	
v/s Ratio Prot	c0.05	c0.19			0.11			0.10			0.03	
v/s Ratio Perm				0.03			0.01			c0.10		
v/c Ratio	0.45	0.39		0.08	0.32		0.03	0.24		0.25	0.08	
Uniform Delay, d1	27.2	10.4		14.6	16.0		11.3	12.3		12.4	11.5	
Progression Factor	1.07	0.60		0.91	0.93		0.54	0.57		1.11	1.08	
Incremental Delay, d2	7.8	0.7		0.7	0.8		0.1	0.4		1.6	0.1	
Delay (s)	36.9	6.9		14.0	15.6		6.2	7.4		15.4	12.5	
Level of Service	D	A		B	B		A	A		B	B	
Approach Delay (s)		10.3			15.5			7.4			13.8	
Approach LOS		B			B			A			B	

Intersection Summary			
HCM Average Control Delay	11.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	45.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑↱		↰	↑↑↱			↰↑↱			↰↑↱	
Volume (vph)	37	253	348	242	216	43	109	310	56	25	192	25
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	12	12	12	12	12	12
Total Lost time (s)	4.0	4.0		3.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frt	1.00	0.91		1.00	0.97			0.98			0.98	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1520	2776		1520	2964			3163			3190	
Flt Permitted	0.58	1.00		0.95	1.00			0.81			0.88	
Satd. Flow (perm)	921	2776		1520	2964			2578			2834	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	41	281	387	269	240	48	121	344	62	28	213	28
RTOR Reduction (vph)	0	268	0	0	25	0	0	16	0	0	14	0
Lane Group Flow (vph)	41	400	0	269	263	0	0	511	0	0	255	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Prot			Perm			Perm		
Protected Phases		4		3	8			2			6	
Permitted Phases	4						2			6		
Actuated Green, G (s)	20.0	20.0		6.0	29.0			25.0			25.0	
Effective Green, g (s)	20.0	20.0		6.0	29.0			25.0			25.0	
Actuated g/C Ratio	0.31	0.31		0.09	0.45			0.38			0.38	
Clearance Time (s)	4.0	4.0		3.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	283	854		140	1322			992			1090	
v/s Ratio Prot		c0.14		c0.18	0.09							
v/s Ratio Perm	0.04							c0.20			0.09	
v/c Ratio	0.14	0.47		1.92	0.20			0.52			0.23	
Uniform Delay, d1	16.3	18.2		29.5	10.9			15.3			13.5	
Progression Factor	0.63	0.27		1.32	1.10			1.09			0.56	
Incremental Delay, d2	1.0	1.8		433.0	0.2			1.4			0.5	
Delay (s)	11.3	6.7		472.0	12.3			18.2			8.1	
Level of Service	B	A		F	B			B			A	
Approach Delay (s)		6.9			234.3			18.2			8.1	
Approach LOS		A			F			B			A	

Intersection Summary			
HCM Average Control Delay	71.4	HCM Level of Service	E
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	68.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			↰↑↱				
Volume (vph)	16	298	14	70	466	70	34	94	162	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	12	14	12	10	15	10
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			0.95				
Frt		0.99			0.98			0.92				
Flt Protected		1.00			0.99			0.99				
Satd. Flow (prot)		1587			1566			3164				
Flt Permitted		0.97			0.92			0.99				
Satd. Flow (perm)		1535			1451			3164				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	18	331	16	78	518	78	38	104	180	0	0	0
RTOR Reduction (vph)	0	2	0	0	6	0	0	138	0	0	0	0
Lane Group Flow (vph)	0	363	0	0	668	0	0	184	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm			Perm					
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Actuated Green, G (s)		41.9			41.9			15.1				
Effective Green, g (s)		41.9			41.9			15.1				
Actuated g/C Ratio		0.64			0.64			0.23				
Clearance Time (s)		4.0			4.0			4.0				
Vehicle Extension (s)		3.0			3.0			8.0				
Lane Grp Cap (vph)		989			935			735				
v/s Ratio Prot												
v/s Ratio Perm		0.24			c0.46			0.06				
v/c Ratio		0.37			0.71			0.25				
Uniform Delay, d1		5.4			7.6			20.3				
Progression Factor		1.89			1.00			1.00				
Incremental Delay, d2		0.9			4.6			0.8				
Delay (s)		11.0			12.3			21.1				
Level of Service		B			B			C				
Approach Delay (s)		11.0			12.3			21.1			0.0	
Approach LOS		B			B			C			A	

Intersection Summary			
HCM Average Control Delay	14.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	72.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
1054: 115th Street & Martin Luther King Jr Drive

1/14/2013

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰	↱		↰	↱
Volume (veh/h)	94	366	477	44	66	126
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	99	385	502	46	69	133
Pedestrians		3	5		21	
Lane Width (ft)		16.0	16.0		10.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		0	1		1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		1319	491			
pX, platoon unblocked	0.85				0.85	0.85
vC, conflicting volume	569				1134	549
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	401				1068	377
tC, single (s)	4.2				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.3				3.5	3.3
p0 queue free %	89				62	76
cM capacity (veh/h)	922				182	557

Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total	484	548	69	133
Volume Left	99	0	69	0
Volume Right	0	46	0	133
cSH	922	1700	182	557
Volume to Capacity	0.11	0.32	0.38	0.24
Queue Length 95th (ft)	9	0	42	23
Control Delay (s)	2.9	0.0	36.6	13.5
Lane LOS	A		E	B
Approach Delay (s)	2.9	0.0	21.4	
Approach LOS			C	

Intersection Summary			
Average Delay	4.7		
Intersection Capacity Utilization	70.1%	ICU Level of Service	C
Analysis Period (min)	15		

HCM Signalized Intersection Capacity Analysis
1055: 115th Street & Cottage Grove Avenue

1/14/2013

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↱			↰	Y	
Volume (vph)	477	1	27	691	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0			4.0		
Lane Util. Factor	1.00			1.00		
Frt	1.00			1.00		
Flt Protected	1.00			1.00		
Satd. Flow (prot)	1714			1711		
Flt Permitted	1.00			0.97		
Satd. Flow (perm)	1714			1661		
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	530	1	30	768	0	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	531	0	0	798	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%
Turn Type			Perm			
Protected Phases	1 2 4			4	3	
Permitted Phases			4			
Actuated Green, G (s)	63.0			31.0		
Effective Green, g (s)	59.0			31.0		
Actuated g/C Ratio	0.69			0.36		
Clearance Time (s)				4.0		
Lane Grp Cap (vph)	1190			606		
v/s Ratio Prot	c0.31					
v/s Ratio Perm				c0.48		
v/c Ratio	0.45			1.32		
Uniform Delay, d1	5.8			27.0		
Progression Factor	0.07			1.00		
Incremental Delay, d2	0.1			154.0		
Delay (s)	0.5			181.0		
Level of Service	A			F		
Approach Delay (s)	0.5			181.0	0.0	
Approach LOS	A			F	A	

Intersection Summary			
HCM Average Control Delay	108.9	HCM Level of Service	F
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	64.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
1056: 115th Street & Bishop Ford Fwy

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱			↰						↰	↱
Volume (veh/h)	0	186	195	25	569	0	0	0	0	3	0	271
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	207	217	28	632	0	0	0	0	3	0	301
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	632			207			1003	1003	212	791	894	632
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	632			207			1003	1003	212	791	894	632
tC, single (s)	4.1			5.5			7.5	6.5	6.9	7.5	6.5	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.9			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			97			100	100	100	99	100	28
cM capacity (veh/h)	960			983			55	237	800	278	274	418

Direction, Lane #	EB 1	EB 2	WB 1	SB 1	SB 2
Volume Total	138	286	660	3	301
Volume Left	0	0	28	3	0
Volume Right	0	217	0	0	301
cSH	1700	1700	983	278	418
Volume to Capacity	0.08	0.17	0.03	0.01	0.72
Queue Length 95th (ft)	0	0	2	1	140
Control Delay (s)	0.0	0.0	0.7	18.1	32.8
Lane LOS			A	C	D
Approach Delay (s)	0.0		0.7	32.7	
Approach LOS				D	

Intersection Summary			
Average Delay	7.5		
Intersection Capacity Utilization	58.4%	ICU Level of Service	B
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
1057: 115th Street &

	↗	↘	↖	↑	↓	↙
Movement	**EBL**	**EBR**	**NBL**	**NBT**	**SBT**	**SBR**
Lane Configurations	↰↰		↰			
Sign Control	Stop			Stop	Stop	
Volume (vph)	189	0	594	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	210	0	660	0	0	0

Direction, Lane #	EB 1	EB 2	NB 1
Volume Total (vph)	105	105	660
Volume Left (vph)	105	105	660
Volume Right (vph)	0	0	0
Hadj (s)	0.58	0.58	0.29
Departure Headway (s)	6.8	6.8	4.9
Degree Utilization, x	0.20	0.20	0.89
Capacity (veh/h)	511	512	734
Control Delay (s)	10.3	10.3	33.9
Approach Delay (s)	10.3		33.9
Approach LOS	B		D

Intersection Summary			
Delay	28.2		
HCM Level of Service	D		
Intersection Capacity Utilization	47.1%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Signalized Intersection Capacity Analysis
1058: 119th Street & Marshield Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↰↑					↰	↰↑↱	↱
Volume (vph)	0	471	210	159	474	0	0	0	0	132	117	300
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	12	13	12	12	12	12	10	10	11
Total Lost time (s)		6.0	6.0		6.0					6.0	6.0	6.0
Lane Util. Factor		0.95	1.00		0.95					0.86	0.81	0.86
Frpb, ped/bikes		1.00	0.98		1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00					1.00	1.00	1.00
Frt		1.00	0.85		1.00					1.00	0.93	0.85
Flt Protected		1.00	1.00		0.99					0.95	0.99	1.00
Satd. Flow (prot)		2978	1202		3372					1346	3693	1122
Flt Permitted		1.00	1.00		0.99					0.95	0.99	1.00
Satd. Flow (perm)		2978	1202		3372					1346	3693	1122
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	496	221	167	499	0	0	0	0	139	123	316
RTOR Reduction (vph)	0	0	149	0	0	0	0	0	0	0	98	94
Lane Group Flow (vph)	0	496	72	0	666	0	0	0	0	76	246	64
Confl. Peds. (#/hr)	5		3	3		5						
Heavy Vehicles (%)	0%	11%	9%	2%	4%	0%	0%	0%	0%	2%	2%	2%
Parking (#/hr)			0									0
Turn Type			Perm	Split						Split		custom
Protected Phases		2		10 12 14	10 12 14					4	4	
Permitted Phases			2									4 2
Actuated Green, G (s)		39.1	39.1		72.6					20.2	20.2	65.3
Effective Green, g (s)		39.1	39.1		72.6					20.2	20.2	65.3
Actuated g/C Ratio		0.24	0.24		0.45					0.13	0.13	0.41
Clearance Time (s)		6.0	6.0							6.0	6.0	
Vehicle Extension (s)		3.0	3.0							3.0	3.0	
Lane Grp Cap (vph)		728	294		1530					170	466	458
v/s Ratio Prot		c0.17			c0.20					0.06	c0.07	
v/s Ratio Perm			0.06									0.06
v/c Ratio		0.68	0.25		0.44					0.45	0.53	0.14
Uniform Delay, d1		54.8	48.6		29.7					64.7	65.4	29.7
Progression Factor		1.00	1.00		0.02					1.00	1.00	1.00
Incremental Delay, d2		5.1	2.0		0.1					1.9	1.1	0.1
Delay (s)		59.9	50.6		0.7					66.6	66.5	29.9
Level of Service		E	D		A					E	E	C
Approach Delay (s)		57.0			0.7			0.0			56.5	
Approach LOS		E			A			A			E	

Intersection Summary			
HCM Average Control Delay	37.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	30.1
Intersection Capacity Utilization	53.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑			↑↑	↱	↰	↰↑↱				
Volume (vph)	212	391	0	0	395	93	238	150	144	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	13	12	12	11	12	13	13	14	12	12	12
Total Lost time (s)	6.0	6.0			6.0	6.0	6.0	6.0				
Lane Util. Factor	1.00	0.95			0.95	1.00	0.91	0.91				
Frt	1.00	1.00			1.00	0.85	1.00	0.94				
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.99				
Satd. Flow (prot)	1574	3366			3149	1457	1531	3001				
Flt Permitted	0.95	1.00			1.00	1.00	0.95	0.99				
Satd. Flow (perm)	1574	3366			3149	1457	1531	3001				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	236	434	0	0	439	103	264	167	160	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	82	0	63	0	0	0	0
Lane Group Flow (vph)	236	434	0	0	439	21	201	327	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Split					Perm	Split					
Protected Phases	2 4 8	2 4 8			10		12	12				
Permitted Phases						10						
Actuated Green, G (s)	79.4	79.4			32.7	32.7	21.0	21.0				
Effective Green, g (s)	79.4	79.4			32.7	32.7	21.0	21.0				
Actuated g/C Ratio	0.50	0.50			0.20	0.20	0.13	0.13				
Clearance Time (s)					6.0	6.0	6.0	6.0				
Vehicle Extension (s)					3.0	3.0	3.0	3.0				
Lane Grp Cap (vph)	781	1670			644	298	201	394				
v/s Ratio Prot	c0.15	0.13			c0.14		c0.13	0.11				
v/s Ratio Perm						0.01						
v/c Ratio	0.30	0.26			0.68	0.07	1.00	0.83				
Uniform Delay, d1	23.9	23.3			58.8	51.4	69.5	67.8				
Progression Factor	0.07	0.07			1.00	1.00	1.00	1.00				
Incremental Delay, d2	0.2	0.1			3.0	0.1	63.5	13.8				
Delay (s)	1.8	1.8			61.8	51.5	133.0	81.6				
Level of Service	A	A			E	D	F	F				
Approach Delay (s)		1.8			59.9			99.1			0.0	
Approach LOS		A			E			F			A	

Intersection Summary			
HCM Average Control Delay	51.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	28.9
Intersection Capacity Utilization	50.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1060: 119th Street & Halsted Street

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↱		↰	↑↱		↰	↑↱	
Volume (vph)	220	325	75	44	154	54	88	824	96	93	448	104
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	14	12	10	10	12	9	10	12
Total Lost time (s)	4.0	4.0	5.0	4.0	5.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.99	1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	0.99	1.00	1.00	1.00	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.96		1.00	0.98		1.00	0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1538	1556	1328	1595	1713		1525	2965		1509	2870	
Flt Permitted	0.49	1.00	1.00	0.42	1.00		0.34	1.00		0.13	1.00	
Satd. Flow (perm)	791	1556	1328	706	1713		539	2965		214	2870	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	232	342	79	46	162	57	93	867	101	98	472	109
RTOR Reduction (vph)	0	0	52	0	14	0	0	10	0	0	22	0
Lane Group Flow (vph)	232	342	27	46	205	0	93	958	0	98	559	0
Confl. Peds. (#/hr)	33		3	3		33	42		8	8		42
Confl. Bikes (#/hr)							1					1
Heavy Vehicles (%)	3%	8%	6%	0%	7%	5%	4%	5%	11%	2%	6%	9%
Turn Type	pm+pt		Perm	pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)	38.2	31.2	31.2	32.4	28.3		39.6	34.1		39.6	34.1	
Effective Green, g (s)	36.2	32.2	31.2	30.4	28.3		37.6	34.1		37.6	34.1	
Actuated g/C Ratio	0.40	0.36	0.35	0.34	0.31		0.42	0.38		0.42	0.38	
Clearance Time (s)	3.0	5.0	5.0	3.0	5.0		3.0	4.0		3.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	368	557	461	269	539		275	1125		154	1089	
v/s Ratio Prot	c0.04	c0.22		0.01	0.12		0.02	c0.32		c0.03	0.19	
v/s Ratio Perm	0.21		0.02	0.05			0.12			0.23		
v/c Ratio	0.63	0.61	0.06	0.17	0.38		0.34	0.85		0.64	0.51	
Uniform Delay, d1	21.3	23.7	19.6	20.5	24.0		16.6	25.6		18.6	21.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	3.5	5.0	0.2	0.3	2.0		0.7	8.2		8.3	1.7	
Delay (s)	24.8	28.7	19.8	20.8	26.0		17.3	33.8		26.9	23.2	
Level of Service	C	C	B	C	C		B	C		C	C	
Approach Delay (s)		26.3			25.1			32.3			23.8	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	27.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	89.9	Sum of lost time (s)	16.0
Intersection Capacity Utilization	73.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1061: 119th Street & Wentworth Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱		✥			✥	
Volume (vph)	44	389	16	18	212	32	35	80	67	62	44	39
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	10	10	10	12	15	12	12	16	12
Total Lost time (s)		3.0	3.0		3.0	3.0		3.0			3.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00			1.00	
Frpb, ped/bikes		1.00	0.97		1.00	0.97		0.99			0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00			1.00	
Frt		1.00	0.85		1.00	0.85		0.95			0.96	
Flt Protected		0.99	1.00		1.00	1.00		0.99			0.98	
Satd. Flow (prot)		1909	1482		1599	1198		1841			1814	
Flt Permitted		0.95	1.00		0.96	1.00		0.94			0.84	
Satd. Flow (perm)		1831	1482		1543	1198		1741			1549	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	46	409	17	19	223	34	37	84	71	65	46	41
RTOR Reduction (vph)	0	0	8	0	0	17	0	33	0	0	20	0
Lane Group Flow (vph)	0	455	9	0	242	17	0	159	0	0	132	0
Confl. Peds. (#/hr)	6		11	11		6	4		8	8		4
Confl. Bikes (#/hr)	1		1	1		1			1	1		
Heavy Vehicles (%)	0%	7%	0%	0%	5%	16%	0%	0%	0%	10%	0%	3%
Turn Type	Perm		Perm	Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)		32.0	32.0		32.0	32.0		27.0			27.0	
Effective Green, g (s)		32.0	32.0		32.0	32.0		27.0			27.0	
Actuated g/C Ratio		0.49	0.49		0.49	0.49		0.42			0.42	
Clearance Time (s)		3.0	3.0		3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)		901	730		760	590		723			643	
v/s Ratio Prot												
v/s Ratio Perm		c0.25	0.01		0.16	0.01		c0.09			0.08	
v/c Ratio		0.50	0.01		0.32	0.03		0.22			0.20	
Uniform Delay, d1		11.1	8.4		9.9	8.5		12.2			12.1	
Progression Factor		1.00	1.00		2.04	3.33		1.00			1.42	
Incremental Delay, d2		2.0	0.0		1.0	0.1		0.7			0.7	
Delay (s)		13.2	8.5		21.3	28.4		12.9			17.9	
Level of Service		B	A		C	C		B			B	
Approach Delay (s)		13.0			22.2			12.9			17.9	
Approach LOS		B			C			B			B	

Intersection Summary			
HCM Average Control Delay	16.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	64.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱		↰	↱		✥	
Volume (vph)	75	430	24	19	189	8	41	228	73	18	53	30
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frpb, ped/bikes		1.00	0.96		1.00	0.98		1.00	0.96		0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		0.96	
Flt Protected		0.99	1.00		1.00	1.00		0.99	1.00		0.99	
Satd. Flow (prot)		1658	1392		1584	1497		1755	1390		1656	
Flt Permitted		0.91	1.00		0.82	1.00		0.95	1.00		0.93	
Satd. Flow (perm)		1527	1392		1304	1497		1677	1390		1559	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	79	453	25	20	199	8	43	240	77	19	56	32
RTOR Reduction (vph)	0	0	10	0	0	5	0	0	39	0	16	0
Lane Group Flow (vph)	0	532	15	0	219	3	0	283	38	0	91	0
Confl. Peds. (#/hr)	11		17	17		11	4		17	17		4
Confl. Bikes (#/hr)	1		1	1		1	1					1
Heavy Vehicles (%)	0%	9%	5%	33%	11%	0%	6%	1%	6%	0%	0%	8%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		23.0	23.0		23.0	23.0		32.0	32.0		32.0	
Effective Green, g (s)		23.0	23.0		23.0	23.0		32.0	32.0		32.0	
Actuated g/C Ratio		0.35	0.35		0.35	0.35		0.49	0.49		0.49	
Clearance Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	
Lane Grp Cap (vph)		540	493		461	530		826	684		768	
v/s Ratio Prot												
v/s Ratio Perm		c0.35	0.01		0.17	0.00		c0.17	0.03		0.06	
v/c Ratio		0.99	0.03		0.48	0.01		0.34	0.06		0.12	
Uniform Delay, d1		20.8	13.7		16.3	13.6		10.1	8.6		8.9	
Progression Factor		1.60	1.95		0.93	0.91		0.34	0.33		1.15	
Incremental Delay, d2		33.7	0.1		3.4	0.0		0.8	0.1		0.3	
Delay (s)		67.0	26.8		18.6	12.3		4.2	2.9		10.5	
Level of Service		E	C		B	B		A	A		B	
Approach Delay (s)		65.2			18.4			3.9			10.5	
Approach LOS		E			B			A			B	

Intersection Summary			
HCM Average Control Delay	34.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	76.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1063: 119th Street & Michigan Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		✥			✥			↰	↱
Volume (vph)	444	21	31	9	18	15	26	352	19	8	229	169
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	14	12	12	16	12	12	16	12
Total Lost time (s)		3.0	3.0		3.0			3.0			3.0	3.0
Lane Util. Factor		1.00	1.00		1.00			1.00			1.00	1.00
Frpb, ped/bikes		1.00	0.97		0.98			1.00			1.00	0.95
Flpb, ped/bikes		0.98	1.00		1.00			1.00			1.00	1.00
Frt		1.00	0.85		0.95			0.99			1.00	0.85
Flt Protected		0.95	1.00		0.99			1.00			1.00	1.00
Satd. Flow (prot)		1754	1390		1758			1979			1873	1328
Flt Permitted		0.73	1.00		0.90			0.97			0.99	1.00
Satd. Flow (perm)		1338	1390		1608			1932			1852	1328
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	493	23	34	10	20	17	29	391	21	9	254	188
RTOR Reduction (vph)	0	0	15	0	13	0	0	3	0	0	0	95
Lane Group Flow (vph)	0	516	19	0	34	0	0	438	0	0	263	93
Confl. Peds. (#/hr)	49		22	22		49	34		17	17		34
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	9%	0%	7%	0%	0%	0%	0%	2%	0%	0%	9%	9%
Turn Type	pm+pt		Perm	Perm			Perm			Perm		Perm
Protected Phases	7	4			8			2			6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)		27.0	27.0		17.0			32.0			32.0	32.0
Effective Green, g (s)		27.0	27.0		17.0			32.0			32.0	32.0
Actuated g/C Ratio		0.42	0.42		0.26			0.49			0.49	0.49
Clearance Time (s)		3.0	3.0		3.0			3.0			3.0	3.0
Lane Grp Cap (vph)		607	577		421			951			912	654
v/s Ratio Prot		c0.10										
v/s Ratio Perm		0.25	0.01		0.02			c0.23			0.14	0.07
v/c Ratio		0.85	0.03		0.08			0.46			0.29	0.14
Uniform Delay, d1		17.2	11.3		18.1			10.8			9.8	9.0
Progression Factor		1.05	1.65		1.00			0.57			0.83	1.12
Incremental Delay, d2		7.9	0.1		0.4			1.5			0.3	0.2
Delay (s)		26.0	18.6		18.5			7.7			8.4	10.3
Level of Service		C	B		B			A			A	B
Approach Delay (s)		25.5			18.5			7.7			9.2	
Approach LOS		C			B			A			A	

Intersection Summary			
HCM Average Control Delay	15.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	79.5%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1064: 127th Street & S Paulina St

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↱		↰	↑↑					↰	↰↑↱	↱
Volume (vph)	0	889	222	268	1124	0	0	0	0	275	201	376
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	12	11	8	8	8	11	12	14
Total Lost time (s)		6.0		4.5	6.0					6.0	6.0	6.0
Lane Util. Factor		0.91		1.00	0.95					0.91	0.86	0.91
Frpb, ped/bikes		1.00		1.00	1.00					1.00	0.99	0.99
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Frt		0.97		1.00	1.00					1.00	0.94	0.85
Flt Protected		1.00		0.95	1.00					0.95	0.99	1.00
Satd. Flow (prot)		4313		1589	3226					1419	2711	1355
Flt Permitted		1.00		0.16	1.00					0.95	0.99	1.00
Satd. Flow (perm)		4313		272	3226					1419	2711	1355
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	936	234	282	1183	0	0	0	0	289	212	396
RTOR Reduction (vph)	0	35	0	0	0	0	0	0	0	0	62	62
Lane Group Flow (vph)	0	1135	0	282	1183	0	0	0	0	234	391	148
Confl. Peds. (#/hr)	6		4	4		6	2					2
Heavy Vehicles (%)	0%	11%	7%	4%	6%	0%	0%	0%	0%	6%	4%	8%
Turn Type				pm+pt						Perm		Perm
Protected Phases		2		1	6						4	
Permitted Phases				6						4		4
Actuated Green, G (s)		49.5		69.3	69.3					23.7	23.7	23.7
Effective Green, g (s)		49.5		69.3	69.3					23.7	23.7	23.7
Actuated g/C Ratio		0.47		0.66	0.66					0.23	0.23	0.23
Clearance Time (s)		6.0		4.5	6.0					6.0	6.0	6.0
Vehicle Extension (s)		7.0		3.5	7.0					3.5	3.5	3.5
Lane Grp Cap (vph)		2033		371	2129					320	612	306
v/s Ratio Prot		0.26		c0.11	0.37							
v/s Ratio Perm				c0.39						c0.16	0.14	0.11
v/c Ratio		0.56		0.76	0.56					0.73	0.64	0.48
Uniform Delay, d1		19.9		12.6	9.6					37.7	36.8	35.3
Progression Factor		1.00		1.13	1.61					1.00	1.00	1.00
Incremental Delay, d2		1.1		5.3	0.6					8.6	2.3	1.4
Delay (s)		21.0		19.5	16.0					46.3	39.1	36.8
Level of Service		C		B	B					D	D	D
Approach Delay (s)		21.0			16.7			0.0			40.4	
Approach LOS		C			B			A			D	

Intersection Summary			
HCM Average Control Delay	24.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	10.5
Intersection Capacity Utilization	101.7%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↑			↑↑	↱		↰↑↑↱				
Volume (vph)	311	853	0	0	843	234	549	365	422	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	12	12	12	11	12	12	12	12	12	12	12
Total Lost time (s)	6.0	6.0			6.0	6.0		6.0				
Lane Util. Factor	0.97	0.95			0.95	1.00		0.91				
Frpb, ped/bikes	1.00	1.00			1.00	0.99		1.00				
Flpb, ped/bikes	1.00	1.00			1.00	1.00		1.00				
Frt	1.00	1.00			1.00	0.85		0.95				
Flt Protected	0.95	1.00			1.00	1.00		0.98				
Satd. Flow (prot)	2915	3138			3119	1449		4409				
Flt Permitted	0.19	1.00			1.00	1.00		0.98				
Satd. Flow (perm)	580	3138			3119	1449		4409				
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	327	898	0	0	887	246	578	384	444	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	106	0	78	0	0	0	0
Lane Group Flow (vph)	327	898	0	0	887	140	0	1328	0	0	0	0
Confl. Peds. (#/hr)	4					4						
Heavy Vehicles (%)	10%	9%	0%	0%	6%	4%	4%	3%	5%	0%	0%	0%
Turn Type	pm+pt					Perm	Perm					
Protected Phases	5	2			6			8				
Permitted Phases	2					6	8					
Actuated Green, G (s)	62.5	62.5			45.1	45.1		30.5				
Effective Green, g (s)	62.5	62.5			45.1	45.1		30.5				
Actuated g/C Ratio	0.60	0.60			0.43	0.43		0.29				
Clearance Time (s)	6.0	6.0			6.0	6.0		6.0				
Vehicle Extension (s)	3.5	7.0			7.0	7.0		5.0				
Lane Grp Cap (vph)	599	1868			1340	622		1281				
v/s Ratio Prot	0.06	c0.29			c0.28							
v/s Ratio Perm	0.27					0.10		0.30				
v/c Ratio	0.55	0.48			0.66	0.22		1.04				
Uniform Delay, d1	12.8	12.0			23.9	18.9		37.2				
Progression Factor	0.68	0.82			0.97	1.49		1.00				
Incremental Delay, d2	0.9	0.7			1.6	0.5		35.1				
Delay (s)	9.6	10.6			24.8	28.7		72.4				
Level of Service	A	B			C	C		E				
Approach Delay (s)		10.4			25.7			72.4			0.0	
Approach LOS		B			C			E			A	

Intersection Summary			
HCM Average Control Delay	38.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	101.7%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1066: 127th Street & S Ashland

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	105	581	226	78	784	44	226	178	40	49	111	91
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	12	11	12	12	10	10	13	10	10	10
Total Lost time (s)	3.5	6.0	3.5	3.5	6.0		3.5	6.0		3.5	6.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.97		1.00	0.93	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1565	3061	1291	1602	3232		1446	3007		1544	2782	
Flt Permitted	0.14	1.00	1.00	0.42	1.00		0.53	1.00		0.61	1.00	
Satd. Flow (perm)	224	3061	1291	709	3232		811	3007		990	2782	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	111	612	238	82	825	46	238	187	42	52	117	96
RTOR Reduction (vph)	0	0	97	0	4	0	0	21	0	0	80	0
Lane Group Flow (vph)	111	612	141	82	867	0	238	208	0	52	133	0
Confl. Peds. (#/hr)	3		12	12		3	9		6	6		9
Heavy Vehicles (%)	2%	8%	5%	3%	5%	3%	10%	3%	2%	3%	7%	4%
Parking (#/hr)			0									
Turn Type	pm+pt		pm+ov	pm+pt			pm+pt			pm+pt		
Protected Phases	5	2	3	1	6		3	8		7	4	
Permitted Phases	2		2	6			8			4		
Actuated Green, G (s)	62.6	52.6	62.0	40.4	33.9		29.7	20.3		24.1	17.5	
Effective Green, g (s)	62.6	52.6	62.0	40.4	33.9		29.7	20.3		24.1	17.5	
Actuated g/C Ratio	0.60	0.50	0.59	0.38	0.32		0.28	0.19		0.23	0.17	
Clearance Time (s)	3.5	6.0	3.5	3.5	6.0		3.5	6.0		3.5	6.0	
Vehicle Extension (s)	3.0	7.0	3.0	3.0	7.0		3.0	7.0		3.0	7.0	
Lane Grp Cap (vph)	455	1533	762	328	1043		286	581		262	464	
v/s Ratio Prot	c0.06	c0.20	0.02	0.02	c0.27		c0.07	0.07		0.01	0.05	
v/s Ratio Perm	0.09		0.09	0.08			c0.16			0.03		
v/c Ratio	0.24	0.40	0.18	0.25	0.83		0.83	0.36		0.20	0.29	
Uniform Delay, d1	12.1	16.3	9.9	20.9	32.9		33.9	36.7		32.3	38.3	
Progression Factor	0.91	1.01	2.01	1.00	1.00		0.94	0.88		1.00	1.00	
Incremental Delay, d2	1.0	0.6	0.1	0.4	7.7		17.7	1.3		0.4	1.2	
Delay (s)	11.9	17.1	19.9	21.3	40.6		49.5	33.8		32.6	39.5	
Level of Service	B	B	B	C	D		D	C		C	D	
Approach Delay (s)		17.2			39.0			41.8			38.2	
Approach LOS		B			D			D			D	

Intersection Summary			
HCM Average Control Delay	31.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	22.5
Intersection Capacity Utilization	73.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1067: Vermont St & S Ashland

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	62	228	286	59	190	102	329	382	75	91	258	54
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	11	12	11	12	12	11	13	12	10	11	12
Total Lost time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.92		1.00	0.95		1.00	0.98		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1635	2871		1463	3032		1589	3245		1549	3135	
Flt Permitted	0.54	1.00		0.32	1.00		0.46	1.00		0.48	1.00	
Satd. Flow (perm)	924	2871		490	3032		772	3245		778	3135	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	65	240	301	62	200	107	346	402	79	96	272	57
RTOR Reduction (vph)	0	206	0	0	64	0	0	15	0	0	17	0
Lane Group Flow (vph)	65	335	0	62	243	0	346	466	0	96	312	0
Confl. Peds. (#/hr)	20					20	1		2	2		1
Heavy Vehicles (%)	4%	5%	6%	13%	6%	5%	4%	6%	5%	3%	3%	0%
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	35.7	28.7		35.9	28.8		53.2	41.9		38.6	31.3	
Effective Green, g (s)	35.7	28.7		35.9	28.8		53.2	41.9		38.6	31.3	
Actuated g/C Ratio	0.34	0.27		0.34	0.27		0.51	0.40		0.37	0.30	
Clearance Time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	3.5	7.0		3.5	7.0		3.5	7.0		3.5	7.0	
Lane Grp Cap (vph)	362	785		233	832		530	1295		340	935	
v/s Ratio Prot	0.01	c0.12		c0.02	0.08		c0.11	0.14		0.02	0.10	
v/s Ratio Perm	0.05			0.07			c0.22			0.08		
v/c Ratio	0.18	0.43		0.27	0.29		0.65	0.36		0.28	0.33	
Uniform Delay, d1	23.8	31.4		24.1	30.1		16.6	22.1		22.4	28.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.02	0.90	
Incremental Delay, d2	0.3	1.7		0.7	0.9		3.0	0.8		0.5	0.9	
Delay (s)	24.1	33.1		24.8	30.9		19.6	22.9		23.5	26.8	
Level of Service	C	C		C	C		B	C		C	C	
Approach Delay (s)		32.1			29.9			21.5			26.1	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	26.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	69.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	169	546	81	6	445	125	68	602	7	144	326	105
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	10	12	9	11	12	9	9	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.98			0.97		1.00	1.00		1.00	0.96	
Flt Protected		0.99			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		2912			2885		1436	3186		1451	2788	
Flt Permitted		0.57			0.94		0.41	1.00		0.28	1.00	
Satd. Flow (perm)		1680			2727		624	3186		421	2788	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	188	607	90	7	494	139	76	669	8	160	362	117
RTOR Reduction (vph)	0	13	0	0	39	0	0	1	0	0	48	0
Lane Group Flow (vph)	0	872	0	0	601	0	76	676	0	160	431	0
Confl. Peds. (#/hr)	9		11	11		9	11		14	14		11
Heavy Vehicles (%)	3%	6%	18%	50%	6%	6%	7%	3%	50%	6%	7%	2%
Turn Type	pm+pt			Perm			pm+pt			pm+pt		
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		27.0			19.0		26.0	22.0		26.0	22.0	
Effective Green, g (s)		27.0			19.0		26.0	22.0		26.0	22.0	
Actuated g/C Ratio		0.42			0.29		0.40	0.34		0.40	0.34	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		774			797		300	1078		232	944	
v/s Ratio Prot		c0.07					0.02	0.21		c0.04	0.15	
v/s Ratio Perm		c0.40			0.22		0.09			c0.23		
v/c Ratio		1.13			0.75		0.25	0.63		0.69	0.46	
Uniform Delay, d1		19.0			20.9		12.4	18.1		14.6	16.8	
Progression Factor		1.00			1.54		0.94	0.72		1.00	1.00	
Incremental Delay, d2		72.9			0.6		1.8	2.5		15.5	1.6	
Delay (s)		91.9			32.7		13.5	15.5		30.1	18.4	
Level of Service		F			C		B	B		C	B	
Approach Delay (s)		91.9			32.7			15.3			21.3	
Approach LOS		F			C			B			C	

Intersection Summary			
HCM Average Control Delay	43.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	81.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1069: Vermont St & Halsted Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱		↰	↑↱		↰	↑↱	
Volume (vph)	52	225	48	73	159	13	38	661	93	10	378	45
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	12	12	12	12	12
Total Lost time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	0.99		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1666	1898		1615	1943		1658	3202		1138	3197	
Flt Permitted	0.65	1.00		0.52	1.00		0.50	1.00		0.30	1.00	
Satd. Flow (perm)	1132	1898		891	1943		870	3202		359	3197	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	54	232	49	75	164	13	39	681	96	10	390	46
RTOR Reduction (vph)	0	12	0	0	4	0	0	17	0	0	14	0
Lane Group Flow (vph)	54	269	0	75	173	0	39	760	0	10	422	0
Confl. Peds. (#/hr)	10		16	16		10	4		6	6		4
Confl. Bikes (#/hr)			4	4								
Heavy Vehicles (%)	2%	4%	5%	5%	4%	0%	3%	4%	8%	50%	5%	6%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	24.0	24.0		24.0	24.0		31.0	31.0		31.0	31.0	
Effective Green, g (s)	24.0	24.0		24.0	24.0		31.0	31.0		31.0	31.0	
Actuated g/C Ratio	0.37	0.37		0.37	0.37		0.48	0.48		0.48	0.48	
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)	418	701		329	717		415	1527		171	1525	
v/s Ratio Prot		c0.14			0.09			c0.24			0.13	
v/s Ratio Perm	0.05			0.08			0.04			0.03		
v/c Ratio	0.13	0.38		0.23	0.24		0.09	0.50		0.06	0.28	
Uniform Delay, d1	13.6	15.1		14.1	14.2		9.3	11.7		9.1	10.2	
Progression Factor	1.00	1.00		1.73	1.77		1.00	1.00		0.48	0.48	
Incremental Delay, d2	0.6	1.6		0.7	0.3		0.4	1.2		0.5	0.4	
Delay (s)	14.2	16.7		25.1	25.4		9.8	12.8		4.9	5.3	
Level of Service	B	B		C	C		A	B		A	A	
Approach Delay (s)		16.3			25.3			12.7			5.3	
Approach LOS		B			C			B			A	

Intersection Summary			
HCM Average Control Delay	13.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	62.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1070: 127th Street & S Wallance St

1/14/2013

	→	↙	←	↖	↰	↖	↑	↗	↘	↓	↙	↙
Movement	**EBT**	**WBL**	**WBT**	**WBR**	**NBL2**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**	**SBR2**
Lane Configurations	↰↱		↰↱				✥			✥		
Volume (vph)	631	194	621	17	3	14	3	47	22	0	2	4
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	12	12	16	12	12	16	12	12
Total Lost time (s)	5.0		5.0				4.0			4.0		
Lane Util. Factor	0.95		0.95				1.00			1.00		
Frpb, ped/bikes	1.00		1.00				1.00			0.99		
Flpb, ped/bikes	1.00		1.00				1.00			1.00		
Frt	1.00		1.00				0.91			0.97		
Flt Protected	1.00		0.99				0.99			0.96		
Satd. Flow (prot)	2956		2955				1732			1897		
Flt Permitted	1.00		0.57				0.94			0.81		
Satd. Flow (perm)	2956		1698				1646			1603		
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	664	204	654	18	3	15	3	49	23	0	2	4
RTOR Reduction (vph)	0	0	2	0	0	0	38	0	0	3	0	0
Lane Group Flow (vph)	664	0	874	0	0	0	32	0	0	26	0	0
Confl. Peds. (#/hr)		7		6		3					3	
Confl. Bikes (#/hr)		1										
Heavy Vehicles (%)	8%	8%	6%	0%	0%	8%	0%	5%	0%	0%	0%	0%
Turn Type		custom				Perm			Perm			
Protected Phases	8	7	4				2			6		
Permitted Phases		4 7				2			6			
Actuated Green, G (s)	18.0		27.0				14.0			14.0		
Effective Green, g (s)	18.0		27.0				14.0			14.0		
Actuated g/C Ratio	0.28		0.42				0.22			0.22		
Clearance Time (s)	5.0		5.0				4.0			4.0		
Lane Grp Cap (vph)	819		821				355			345		
v/s Ratio Prot	0.22		c0.10									
v/s Ratio Perm			c0.34				c0.02			0.02		
v/c Ratio	0.81		1.06				0.09			0.07		
Uniform Delay, d1	21.9		19.0				20.4			20.3		
Progression Factor	1.28		0.75				1.00			1.00		
Incremental Delay, d2	0.8		48.8				0.5			0.4		
Delay (s)	28.9		63.1				20.9			20.8		
Level of Service	C		E				C			C		
Approach Delay (s)	28.9		63.1				20.9			20.8		
Approach LOS	C		E				C			C		

Intersection Summary			
HCM Average Control Delay	99.0	HCM Level of Service	F
HCM Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	94.8%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	NEL	NER
Lane Configurations		
Volume (vph)	1	344
Ideal Flow (vphpl)	1800	1800
Lane Width	12	12
Total Lost time (s)	5.0	
Lane Util. Factor	1.00	
Frpb, ped/bikes	1.00	
Flpb, ped/bikes	1.00	
Frt	0.87	
Flt Protected	1.00	
Satd. Flow (prot)	1429	
Flt Permitted	1.00	
Satd. Flow (perm)	1429	
Peak-hour factor, PHF	0.95	0.95
Adj. Flow (vph)	1	362
RTOR Reduction (vph)	0	0
Lane Group Flow (vph)	363	0
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		
Heavy Vehicles (%)	0%	9%
Turn Type		
Protected Phases	3	
Permitted Phases		
Actuated Green, G (s)	10.0	
Effective Green, g (s)	10.0	
Actuated g/C Ratio	0.15	
Clearance Time (s)	5.0	
Lane Grp Cap (vph)	220	
v/s Ratio Prot	c0.25	
v/s Ratio Perm		
v/c Ratio	1.65	
Uniform Delay, d1	27.5	
Progression Factor	0.89	
Incremental Delay, d2	310.9	
Delay (s)	335.3	
Level of Service	F	
Approach Delay (s)	335.3	
Approach LOS	F	

Intersection Summary

HCM Signalized Intersection Capacity Analysis
1071: 127th Street & State Street

1/14/2013

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰↑	↑↱		↰	↱
Volume (vph)	194	917	678	81	101	156
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		1.00	1.00
Frt		1.00	0.98		1.00	0.85
Flt Protected		0.99	1.00		0.95	1.00
Satd. Flow (prot)		3229	3205		1629	1457
Flt Permitted		0.63	1.00		0.95	1.00
Satd. Flow (perm)		2062	3205		1629	1457
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	216	1019	753	90	112	173
RTOR Reduction (vph)	0	0	14	0	0	128
Lane Group Flow (vph)	0	1235	829	0	112	45
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%
Turn Type	Perm					Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)		40.0	40.0		17.0	17.0
Effective Green, g (s)		40.0	40.0		17.0	17.0
Actuated g/C Ratio		0.62	0.62		0.26	0.26
Clearance Time (s)		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		1269	1972		426	381
v/s Ratio Prot			0.26		c0.07	
v/s Ratio Perm		c0.60				0.03
v/c Ratio		0.97	0.42		0.26	0.12
Uniform Delay, d1		12.0	6.5		19.0	18.3
Progression Factor		1.43	1.29		0.93	0.91
Incremental Delay, d2		10.2	0.6		1.5	0.6
Delay (s)		27.3	8.9		19.1	17.3
Level of Service		C	A		B	B
Approach Delay (s)		27.3	8.9		18.0	
Approach LOS		C	A		B	

Intersection Summary			
HCM Average Control Delay	19.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	71.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1072: 127th Street & Michigan Avenue

1/14/2013

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰↑	↑↱		↰	↱
Volume (vph)	53	938	697	217	174	56
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	12	10	11	12	10	10
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		1.00	1.00
Frpb, ped/bikes		1.00	0.99		1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00
Frt		1.00	0.96		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		2928	2912		1464	1373
Flt Permitted		0.86	1.00		0.95	1.00
Satd. Flow (perm)		2514	2912		1464	1373
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	56	987	734	228	183	59
RTOR Reduction (vph)	0	0	45	0	0	42
Lane Group Flow (vph)	0	1043	917	0	183	17
Confl. Peds. (#/hr)	1			1		
Confl. Bikes (#/hr)	1			1		
Heavy Vehicles (%)	4%	9%	8%	12%	9%	4%
Turn Type	Perm					Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)		38.0	38.0		19.0	19.0
Effective Green, g (s)		38.0	38.0		19.0	19.0
Actuated g/C Ratio		0.58	0.58		0.29	0.29
Clearance Time (s)		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		1470	1702		428	401
v/s Ratio Prot			0.31		c0.12	
v/s Ratio Perm		c0.41				0.01
v/c Ratio		0.71	0.54		0.43	0.04
Uniform Delay, d1		9.6	8.2		18.6	16.5
Progression Factor		0.87	0.61		1.01	1.47
Incremental Delay, d2		1.2	0.7		3.0	0.2
Delay (s)		9.6	5.7		21.9	24.5
Level of Service		A	A		C	C
Approach Delay (s)		9.6	5.7		22.5	
Approach LOS		A	A		C	

Intersection Summary			
HCM Average Control Delay	9.3	HCM Level of Service	A
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	76.8%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1073: 130th Street & Indiana Ave

1/14/2013

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↱		↰	↑	↰↱	
Volume (vph)	964	160	167	672	423	323
Ideal Flow (vphpl)	2300	1800	1800	2300	1800	1800
Lane Width	15	12	14	16	15	12
Total Lost time (s)	5.0		5.0	5.0	5.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	0.99	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.98		1.00	1.00	0.94	
Flt Protected	1.00		0.95	1.00	0.97	
Satd. Flow (prot)	2239		1770	2436	1763	
Flt Permitted	1.00		0.13	1.00	0.97	
Satd. Flow (perm)	2239		240	2436	1763	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	984	163	170	686	432	330
RTOR Reduction (vph)	9	0	0	0	42	0
Lane Group Flow (vph)	1138	0	170	686	720	0
Confl. Peds. (#/hr)		4	4			8
Heavy Vehicles (%)	11%	7%	3%	7%	2%	2%
Turn Type			Perm			
Protected Phases	4			8	2	
Permitted Phases			8			
Actuated Green, G (s)	31.0		31.0	31.0	24.0	
Effective Green, g (s)	31.0		31.0	31.0	24.0	
Actuated g/C Ratio	0.48		0.48	0.48	0.37	
Clearance Time (s)	5.0		5.0	5.0	5.0	
Lane Grp Cap (vph)	1068		114	1162	651	
v/s Ratio Prot	0.51			0.28	c0.41	
v/s Ratio Perm			c0.71			
v/c Ratio	1.07		1.49	0.59	1.11	
Uniform Delay, d1	17.0		17.0	12.4	20.5	
Progression Factor	1.48		1.00	1.00	1.00	
Incremental Delay, d2	43.2		261.6	2.2	67.8	
Delay (s)	68.4		278.6	14.6	88.3	
Level of Service	E		F	B	F	
Approach Delay (s)	68.4			67.0	88.3	
Approach LOS	E			E	F	

Intersection Summary			
HCM Average Control Delay	73.4	HCM Level of Service	E
HCM Volume to Capacity ratio	1.32		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	118.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1074: 130th Street & Ellis Ave

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑↑	↱		↰↑	↱		✥	
Volume (vph)	1	725	89	258	1167	9	72	0	187	1	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	15	13	11	11	12	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0	4.0	3.0	3.0	4.0		4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85		1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.95	1.00		0.95	
Satd. Flow (prot)	1881	3213	1422	1589	3138	1366		1642	1443		969	
Flt Permitted	0.21	1.00	1.00	0.27	1.00	1.00		0.76	1.00		0.70	
Satd. Flow (perm)	422	3213	1422	448	3138	1366		1309	1443		719	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1	806	99	287	1297	10	80	0	208	1	0	0
RTOR Reduction (vph)	0	0	46	0	0	2	0	0	182	0	0	0
Lane Group Flow (vph)	1	806	53	287	1297	8	0	80	26	0	1	0
Heavy Vehicles (%)	0%	10%	4%	4%	9%	12%	18%	0%	6%	100%	0%	0%
Turn Type	Perm		Perm	custom		custom	Perm		Perm	Perm		
Protected Phases		4		3	3 8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)	45.6	45.6	45.6	66.4	66.4	66.4		10.6	10.6		10.6	
Effective Green, g (s)	45.6	45.6	45.6	66.4	66.4	66.4		10.6	10.6		10.6	
Actuated g/C Ratio	0.54	0.54	0.54	0.78	0.78	0.78		0.12	0.12		0.12	
Clearance Time (s)	4.0	4.0	4.0	3.0		4.0		4.0	4.0		4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0		3.0	3.0		3.0	
Lane Grp Cap (vph)	226	1724	763	589	2451	1067		163	180		90	
v/s Ratio Prot		0.25		0.10	c0.41							
v/s Ratio Perm	0.00		0.04	0.28		0.01		c0.06	0.02		0.00	
v/c Ratio	0.00	0.47	0.07	0.49	0.53	0.01		0.49	0.14		0.01	
Uniform Delay, d1	9.2	12.2	9.5	3.9	3.5	2.0		34.7	33.2		32.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2	0.0	0.9	0.2	0.6	0.2	0.0		2.3	0.4		0.0	
Delay (s)	9.2	13.1	9.7	4.6	3.7	2.1		37.0	33.5		32.7	
Level of Service	A	B	A	A	A	A		D	C		C	
Approach Delay (s)		12.7			3.8			34.5			32.7	
Approach LOS		B			A			C			C	

Intersection Summary			
HCM Average Control Delay	9.9	HCM Level of Service	A
HCM Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	7.0
Intersection Capacity Utilization	52.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1942: 111th Street & Langley Avenue

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	13	820	856	45	24	11
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	12	10	10
Total Lost time (s)		5.0	5.0		3.0	
Lane Util. Factor		0.95	0.95		1.00	
Frt		1.00	0.99		0.96	
Flt Protected		1.00	1.00		0.97	
Satd. Flow (prot)		3038	3017		1482	
Flt Permitted		0.93	1.00		0.97	
Satd. Flow (perm)		2834	3017		1482	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	14	911	951	50	27	12
RTOR Reduction (vph)	0	0	4	0	11	0
Lane Group Flow (vph)	0	925	997	0	28	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%
Turn Type	Perm					
Protected Phases		4	8 2 11		5	
Permitted Phases	4					
Actuated Green, G (s)		33.0	64.0		7.0	
Effective Green, g (s)		33.0	64.0		7.0	
Actuated g/C Ratio		0.37	0.71		0.08	
Clearance Time (s)		5.0			3.0	
Lane Grp Cap (vph)		1039	2145		115	
v/s Ratio Prot			c0.33		c0.02	
v/s Ratio Perm		c0.33				
v/c Ratio		0.89	0.46		0.24	
Uniform Delay, d1		26.8	5.6		39.0	
Progression Factor		1.00	0.00		1.00	
Incremental Delay, d2		11.4	0.2		4.9	
Delay (s)		38.2	0.2		44.0	
Level of Service		D	A		D	
Approach Delay (s)		38.2	0.2		44.0	
Approach LOS		D	A		D	

Intersection Summary			
HCM Average Control Delay	19.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	44.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1955: 115th Street & Cottage Grove Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↑↱			↰↑↱			↰↑	↱
Volume (vph)	88	435	1	27	584	80	0	0	1	45	3	128
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	12	12	11	12	11
Total Lost time (s)		4.0			4.0			3.0			3.0	3.0
Lane Util. Factor		1.00			0.95			1.00			1.00	1.00
Frpb, ped/bikes		1.00			1.00			0.92			1.00	0.96
Flpb, ped/bikes		1.00			1.00			1.00			0.98	1.00
Frt		1.00			0.98			0.86			1.00	0.85
Flt Protected		0.99			1.00			1.00			0.95	1.00
Satd. Flow (prot)		1727			3232			1432			1610	1282
Flt Permitted		0.77			0.93			1.00			0.93	1.00
Satd. Flow (perm)		1333			3022			1432			1569	1282
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	98	483	1	30	649	89	0	0	1	50	3	142
RTOR Reduction (vph)	0	0	0	0	12	0	0	1	0	0	0	95
Lane Group Flow (vph)	0	582	0	0	756	0	0	0	0	0	53	47
Confl. Peds. (#/hr)	33		13	13		33	29		13	13		29
Confl. Bikes (#/hr)	1		1	1		1						
Heavy Vehicles (%)	4%	3%	0%	0%	4%	0%	0%	0%	0%	5%	0%	11%
Turn Type	Perm			Prot			Perm			pm+pt		Perm
Protected Phases		4		3	3 4			1		2	1 2	
Permitted Phases	4				3		1	1		1 2		1 2
Actuated Green, G (s)		31.0			45.0			9.0			25.0	28.0
Effective Green, g (s)		31.0			45.0			9.0			25.0	28.0
Actuated g/C Ratio		0.36			0.53			0.11			0.29	0.33
Clearance Time (s)		4.0						3.0				
Lane Grp Cap (vph)		486			1634			152			469	422
v/s Ratio Prot					c0.08			0.00			0.02	
v/s Ratio Perm		c0.44			0.17						0.01	c0.04
v/c Ratio		1.20			0.46			0.00			0.11	0.11
Uniform Delay, d1		27.0			12.5			34.0			21.9	19.8
Progression Factor		1.00			1.88			1.00			1.00	1.00
Incremental Delay, d2		107.5			0.1			0.0			0.5	0.5
Delay (s)		134.5			23.5			34.0			22.4	20.4
Level of Service		F			C			C			C	C
Approach Delay (s)		134.5			23.5			34.0			20.9	
Approach LOS		F			C			C			C	

Intersection Summary			
HCM Average Control Delay	64.9	HCM Level of Service	E
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	73.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1001: 95th Street & Wentworth Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			↰↑↱			↰↑↱	
Volume (vph)	39	598	28	35	1014	58	36	29	48	23	24	87
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	16	10	10	16	8	15	8	8	14	8
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			0.99			0.98	
Flpb, ped/bikes	0.98	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.99			0.94			0.91	
Flt Protected	0.95	1.00		0.95	1.00			0.98			0.99	
Satd. Flow (prot)	1557	3022		1587	3021			1808			1703	
Flt Permitted	0.17	1.00		0.36	1.00			0.89			0.95	
Satd. Flow (perm)	277	3022		604	3021			1636			1627	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	41	629	29	37	1067	61	38	31	51	24	25	92
RTOR Reduction (vph)	0	5	0	0	6	0	0	33	0	0	21	0
Lane Group Flow (vph)	41	653	0	37	1122	0	0	87	0	0	120	0
Confl. Peds. (#/hr)	145		16	16		145	17		19	19		17
Confl. Bikes (#/hr)	5					5			2	2		
Heavy Vehicles (%)	0%	5%	0%	0%	4%	2%	0%	0%	0%	0%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	34.0	34.0		34.0	34.0			22.0			22.0	
Effective Green, g (s)	34.0	34.0		34.0	34.0			23.0			23.0	
Actuated g/C Ratio	0.52	0.52		0.52	0.52			0.35			0.35	
Clearance Time (s)	4.0	4.0		4.0	4.0			5.0			5.0	
Lane Grp Cap (vph)	145	1581		316	1580			579			576	
v/s Ratio Prot		0.22			c0.37							
v/s Ratio Perm	0.15			0.06				0.05			c0.07	
v/c Ratio	0.28	0.41		0.12	0.71			0.15			0.21	
Uniform Delay, d1	8.7	9.4		7.9	11.8			14.3			14.6	
Progression Factor	1.00	1.00		0.69	1.41			1.00			1.00	
Incremental Delay, d2	4.8	0.8		0.7	2.4			0.5			0.8	
Delay (s)	13.5	10.2		6.1	19.1			14.9			15.5	
Level of Service	B	B		A	B			B			B	
Approach Delay (s)		10.4			18.7			14.9			15.5	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	15.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1002: 95th Street & Lafayette Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↑	↱				↰↰	↑	↱
Volume (vph)	25	789	5	32	637	56	0	0	0	586	89	379
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	5.0	5.0		3.0	3.0	3.0				5.0	5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00				0.97	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.67				1.00	1.00	0.98
Flpb, ped/bikes	0.93	1.00		1.00	1.00	1.00				1.00	1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85				1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00				0.95	1.00	1.00
Satd. Flow (prot)	793	3379		1710	3226	514				3285	1731	1481
Flt Permitted	0.40	1.00		0.14	1.00	1.00				0.95	1.00	1.00
Satd. Flow (perm)	331	3379		248	3226	514				3285	1731	1481
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	26	831	5	34	671	59	0	0	0	617	94	399
RTOR Reduction (vph)	0	0	0	0	0	26	0	0	0	0	0	166
Lane Group Flow (vph)	26	836	0	34	671	33	0	0	0	617	94	233
Confl. Peds. (#/hr)	350		4	4		350	8		6	6		8
Confl. Bikes (#/hr)	7		1	1		7						
Heavy Vehicles (%)	100%	1%	20%	0%	6%	100%	0%	0%	0%	1%	4%	1%
Turn Type	pm+pt			pm+pt		Perm				Split		Perm
Protected Phases	7	4		3	8					6	6	
Permitted Phases	4			8		8						6
Actuated Green, G (s)	43.0	43.0		73.0	73.0	73.0				30.0	30.0	30.0
Effective Green, g (s)	43.0	43.0		73.0	73.0	73.0				30.0	30.0	30.0
Actuated g/C Ratio	0.33	0.33		0.56	0.56	0.56				0.23	0.23	0.23
Clearance Time (s)	5.0	5.0		3.0	3.0	3.0				5.0	5.0	5.0
Lane Grp Cap (vph)	159	1118		634	1812	289				758	399	342
v/s Ratio Prot	0.02	c0.25		0.02	c0.21					c0.19	0.05	
v/s Ratio Perm	0.04			0.01		0.06						0.16
v/c Ratio	0.16	0.75		0.05	0.37	0.11				0.81	0.24	0.68
Uniform Delay, d1	31.6	38.7		15.2	15.8	13.4				47.4	40.7	45.6
Progression Factor	0.85	0.86		0.32	0.75	1.68				1.00	1.00	1.00
Incremental Delay, d2	2.1	4.4		0.1	0.4	0.5				9.3	1.4	10.5
Delay (s)	28.9	37.5		5.0	12.1	22.9				56.7	42.1	56.1
Level of Service	C	D		A	B	C				E	D	E
Approach Delay (s)		37.3			12.6			0.0			55.2	
Approach LOS		D			B			A			E	

Intersection Summary			
HCM Average Control Delay	37.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	53.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1003: 95th Street & State Street

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↱		↰	↑↑	↱		↰↑	↱	↰		↱
Volume (vph)	340	815	220	54	593	287	102	251	55	54	0	30
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0	3.0		5.0	5.0	5.0		5.0	5.0	5.0		5.0
Lane Util. Factor	0.97	0.95		1.00	0.95	1.00		0.95	1.00	1.00		1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.67		1.00	0.91	1.00		0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Frt	1.00	0.97		1.00	1.00	0.85		1.00	0.85	1.00		0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.99	1.00	0.95		1.00
Satd. Flow (prot)	3285	3262		1710	3138	1018		3301	1363	855		738
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.99	1.00	0.95		1.00
Satd. Flow (perm)	3285	3262		1710	3138	1018		3301	1363	855		738
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	358	858	232	57	624	302	107	264	58	57	0	32
RTOR Reduction (vph)	0	19	0	0	0	228	0	0	41	0	0	30
Lane Group Flow (vph)	358	1071	0	57	624	74	0	371	17	57	0	2
Confl. Peds. (#/hr)	327		13	13		327	6		60	60		6
Confl. Bikes (#/hr)	6					6						
Heavy Vehicles (%)	1%	1%	0%	0%	9%	1%	0%	3%	2%	100%	0%	100%
Turn Type	Prot			Prot		Perm	Split		Perm	Prot		custom
Protected Phases	7	4		3	8		2	2		6		
Permitted Phases						8			2			6
Actuated Green, G (s)	41.0	65.0		8.0	32.0	32.0		29.0	29.0	10.0		10.0
Effective Green, g (s)	41.0	65.0		8.0	32.0	32.0		29.0	29.0	10.0		10.0
Actuated g/C Ratio	0.32	0.50		0.06	0.25	0.25		0.22	0.22	0.08		0.08
Clearance Time (s)	3.0	3.0		5.0	5.0	5.0		5.0	5.0	5.0		5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0	3.0	3.0		3.0
Lane Grp Cap (vph)	1036	1631		105	772	251		736	304	66		57
v/s Ratio Prot	0.11	c0.33		0.03	c0.20			c0.11		c0.07		
v/s Ratio Perm						0.07			0.01			0.00
v/c Ratio	0.35	0.66		0.54	0.81	0.30		0.50	0.06	0.86		0.04
Uniform Delay, d1	34.2	24.2		59.2	46.1	39.8		44.2	39.7	59.3		55.6
Progression Factor	0.94	0.18		1.00	1.00	1.00		0.95	0.99	1.00		1.00
Incremental Delay, d2	0.6	1.3		18.7	8.9	3.0		2.5	0.3	65.1		0.3
Delay (s)	32.7	5.7		77.9	55.0	42.8		44.3	39.7	124.4		55.9
Level of Service	C	A		E	E	D		D	D	F		E
Approach Delay (s)		12.4			52.6			43.7			99.8	
Approach LOS		B			D			D			F	

Intersection Summary			
HCM Average Control Delay	33.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	68.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1004: 95th Street & Michigan Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Lane Configurations		↑↱		↰	↑↑		↰		↱	↰	↱	
Volume (vph)	0	893	181	105	839	0	89	0	103	9	18	7
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	11	11	8	12	12	12	14	15	12
Total Lost time (s)		4.0		4.0	4.0		4.0		4.0	4.0	4.0	
Lane Util. Factor		0.95		1.00	0.95		1.00		1.00	1.00	1.00	
Frpb, ped/bikes		0.99		1.00	1.00		1.00		0.98	1.00	0.99	
Flpb, ped/bikes		1.00		1.00	1.00		0.97		1.00	0.99	1.00	
Frt		0.97		1.00	1.00		1.00		0.85	1.00	0.96	
Flt Protected		1.00		0.95	1.00		0.95		1.00	0.95	1.00	
Satd. Flow (prot)		2987		1649	3149		1388		1451	1803	1870	
Flt Permitted		1.00		0.17	1.00		0.74		1.00	0.95	1.00	
Satd. Flow (perm)		2987		291	3149		1079		1451	1803	1870	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	992	201	117	932	0	99	0	114	10	20	8
RTOR Reduction (vph)	0	17	0	0	0	0	0	0	77	0	5	0
Lane Group Flow (vph)	0	1176	0	117	932	0	99	0	37	10	23	0
Confl. Peds. (#/hr)	67		19	19		67	38		12	12		38
Confl. Bikes (#/hr)			1	1								
Heavy Vehicles (%)	0%	2%	11%	0%	5%	0%	19%	0%	3%	0%	0%	0%
Turn Type				Perm			custom		custom	Perm		
Protected Phases		4			8						6	
Permitted Phases				8			2		2	6		
Actuated Green, G (s)		60.0		60.0	60.0		32.0		32.0	32.0	32.0	
Effective Green, g (s)		60.0		60.0	60.0		32.0		32.0	32.0	32.0	
Actuated g/C Ratio		0.60		0.60	0.60		0.32		0.32	0.32	0.32	
Clearance Time (s)		4.0		4.0	4.0		4.0		4.0	4.0	4.0	
Lane Grp Cap (vph)		1792		175	1889		345		464	577	598	
v/s Ratio Prot		0.39			0.30						0.01	
v/s Ratio Perm				c0.40			c0.09		0.03	0.01		
v/c Ratio		0.66		0.67	0.49		0.29		0.08	0.02	0.04	
Uniform Delay, d1		13.2		13.4	11.4		25.5		23.7	23.2	23.4	
Progression Factor		1.00		1.00	1.00		1.00		1.00	1.00	1.00	
Incremental Delay, d2		1.9		18.5	0.9		2.1		0.3	0.1	0.1	
Delay (s)		15.1		31.8	12.3		27.5		24.1	23.3	23.5	
Level of Service		B		C	B		C		C	C	C	
Approach Delay (s)		15.1			14.5			25.7			23.5	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM Average Control Delay	15.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	61.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1005: 98th Place & Halsted Street

1/14/2013

	⤴	→	⤵	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↖	↰	↗	↖	↑↑↑			↑↑↱	
Volume (vph)	0	0	0	300	0	1230	211	670	0	0	789	490
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	12	12	10	10	12	12	11	12
Total Lost time (s)				4.0		5.0	3.0	4.0			4.0	
Lane Util. Factor				0.95		1.00	1.00	0.91			0.91	
Frpb, ped/bikes				1.00		1.00	1.00	1.00			0.98	
Flpb, ped/bikes				1.00		1.00	1.00	1.00			1.00	
Frt				1.00		0.85	1.00	1.00			0.94	
Flt Protected				0.95		1.00	0.95	1.00			1.00	
Satd. Flow (prot)				1540		1530	1535	4327			4270	
Flt Permitted				0.95		1.00	0.95	1.00			1.00	
Satd. Flow (perm)				1540		1530	1535	4327			4270	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	0	0	306	0	1255	215	684	0	0	805	500
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	306	0	1255	215	684	0	0	1305	0
Confl. Peds. (#/hr)	2					2	18		3	3		18
Heavy Vehicles (%)	0%	0%	0%	2%	0%	0%	4%	6%	0%	0%	4%	1%
Turn Type				Split		Prot	Prot					
Protected Phases				8	8	8	5	2			6	
Permitted Phases												
Actuated Green, G (s)				30.0		30.0	32.0	66.0			31.0	
Effective Green, g (s)				31.0		30.0	32.0	66.0			31.0	
Actuated g/C Ratio				0.30		0.29	0.30	0.63			0.30	
Clearance Time (s)				5.0		5.0	3.0	4.0			4.0	
Lane Grp Cap (vph)				455		437	468	2720			1261	
v/s Ratio Prot				0.20		c0.82	c0.14	0.16			c0.31	
v/s Ratio Perm												
v/c Ratio				0.67		2.87	0.46	0.25			1.16dr	
Uniform Delay, d1				32.5		37.5	29.5	8.6			37.0	
Progression Factor				1.00		1.00	0.64	2.09			1.00	
Incremental Delay, d2				7.7		848.6	2.7	0.2			34.8	
Delay (s)				40.3		886.1	21.5	18.2			71.8	
Level of Service				D		F	C	B			E	
Approach Delay (s)		0.0			720.3			19.0			71.8	
Approach LOS		A			F			B			E	

Intersection Summary			
HCM Average Control Delay	328.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.43		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	101.8%	ICU Level of Service	G
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1006: 99th Street & Halsted Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↰↑↱						↑↑↑	↱↱	↰	↑↑↑	
Volume (vph)	322	770	145	0	0	0	0	559	408	359	730	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	13	12	12	12	12	12	10	10	8	12	12	12
Total Lost time (s)	5.0	5.0						4.0	4.0	3.0	4.0	
Lane Util. Factor	0.91	0.91						0.91	0.88	1.00	0.91	
Frpb, ped/bikes	1.00	1.00						1.00	1.00	1.00	1.00	
Flpb, ped/bikes	0.99	1.00						1.00	1.00	1.00	1.00	
Frt	1.00	0.98						1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00						1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1509	3157						4368	2244	1598	4680	
Flt Permitted	0.95	1.00						1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1509	3157						4368	2244	1598	4680	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	332	794	149	0	0	0	0	576	421	370	753	0
RTOR Reduction (vph)	0	14	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	299	962	0	0	0	0	0	576	421	370	753	0
Confl. Peds. (#/hr)	6		1	1		6	6					6
Heavy Vehicles (%)	6%	1%	0%	0%	0%	0%	0%	5%	4%	7%	5%	0%
Turn Type	Perm								Perm	Prot		
Protected Phases		4						2		1	6	
Permitted Phases	4								2			
Actuated Green, G (s)	34.0	34.0						28.0	28.0	31.0	62.0	
Effective Green, g (s)	34.0	34.0						28.0	28.0	31.0	62.0	
Actuated g/C Ratio	0.32	0.32						0.27	0.27	0.30	0.59	
Clearance Time (s)	5.0	5.0						4.0	4.0	3.0	4.0	
Lane Grp Cap (vph)	489	1022						1165	598	472	2763	
v/s Ratio Prot								0.13		c0.23	0.16	
v/s Ratio Perm	0.20	0.30							c0.19			
v/c Ratio	0.61	0.94						0.49	0.70	0.78	0.27	
Uniform Delay, d1	29.9	34.5						32.5	34.8	33.9	10.5	
Progression Factor	1.00	1.00						1.14	1.14	0.86	0.22	
Incremental Delay, d2	5.6	17.2						1.3	6.1	4.9	0.1	
Delay (s)	35.5	51.7						38.4	45.6	34.1	2.4	
Level of Service	D	D						D	D	C	A	
Approach Delay (s)		47.9			0.0			41.4			12.9	
Approach LOS		D			A			D			B	

Intersection Summary			
HCM Average Control Delay	34.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	101.8%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1007: 98th Place & Wentworth Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↰	↑↱		↰	↑			↱	
Volume (vph)	0	0	0	290	25	24	11	158	0	0	147	5
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	14	12	12	16	12
Total Lost time (s)				4.0	4.0		4.0	4.0			-3.0	
Lane Util. Factor				1.00	0.95		1.00	1.00			1.00	
Frpb, ped/bikes				1.00	0.99		1.00	1.00			1.00	
Flpb, ped/bikes				1.00	1.00		1.00	1.00			1.00	
Frt				1.00	0.93		1.00	1.00			1.00	
Flt Protected				0.95	1.00		0.95	1.00			1.00	
Satd. Flow (prot)				1688	3132		1710	1846			1955	
Flt Permitted				0.95	1.00		0.54	1.00			1.00	
Satd. Flow (perm)				1688	3132		979	1846			1955	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	322	28	27	12	176	0	0	163	6
RTOR Reduction (vph)	0	0	0	0	18	0	0	0	0	0	1	0
Lane Group Flow (vph)	0	0	0	322	37	0	12	176	0	0	168	0
Confl. Peds. (#/hr)	2		2	2		2			6	6		
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	0%	0%	0%	1%	0%	0%	0%	4%	0%	0%	4%	0%
Turn Type				Perm			pm+pt					
Protected Phases					8		7	2			6	
Permitted Phases				8			2					
Actuated Green, G (s)				27.0	27.0		50.0	50.0			40.0	
Effective Green, g (s)				27.0	27.0		50.0	50.0			46.0	
Actuated g/C Ratio				0.32	0.32		0.59	0.59			0.54	
Clearance Time (s)				4.0	4.0		4.0	4.0			3.0	
Lane Grp Cap (vph)				536	995		636	1086			1058	
v/s Ratio Prot					0.01		0.00	c0.10			0.09	
v/s Ratio Perm				c0.19			0.01					
v/c Ratio				0.60	0.04		0.02	0.16			0.16	
Uniform Delay, d1				24.5	20.0		10.5	8.0			9.8	
Progression Factor				1.00	1.00		1.04	1.18			1.00	
Incremental Delay, d2				4.9	0.1		0.1	0.3			0.3	
Delay (s)				29.4	20.1		11.0	9.7			10.1	
Level of Service				C	C		B	A			B	
Approach Delay (s)		0.0			28.0			9.8			10.1	
Approach LOS		A			C			A			B	

Intersection Summary			
HCM Average Control Delay	19.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	37.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1008: 99th St & Wentworth Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱			✥			↱		↰	↑	
Volume (vph)	12	11	23	5	0	14	0	143	41	46	391	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	16	15	12	8	12	8	12	12	12	10	13	12
Total Lost time (s)	4.0	4.0			4.0			3.0		4.0	4.0	
Lane Util. Factor	1.00	1.00			1.00			1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.97			0.98			0.99		1.00	1.00	
Flpb, ped/bikes	1.00	1.00			1.00			1.00		1.00	1.00	
Frt	1.00	0.90			0.90			0.97		1.00	1.00	
Flt Protected	0.95	1.00			0.99			1.00		0.95	1.00	
Satd. Flow (prot)	1935	1735			1565			1720		1590	1860	
Flt Permitted	0.74	1.00			0.97			1.00		0.60	1.00	
Satd. Flow (perm)	1516	1735			1531			1720		1004	1860	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	13	12	24	5	0	15	0	151	43	48	412	0
RTOR Reduction (vph)	0	16	0	0	10	0	0	12	0	0	0	0
Lane Group Flow (vph)	13	20	0	0	10	0	0	182	0	48	412	0
Confl. Peds. (#/hr)	1		11	11		1	1		10	10		1
Confl. Bikes (#/hr)			2	2			1		2	2		1
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%
Turn Type	Perm			Perm						pm+pt		
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8						6		
Actuated Green, G (s)	27.0	27.0			27.0			40.0		50.0	50.0	
Effective Green, g (s)	27.0	27.0			27.0			40.0		50.0	50.0	
Actuated g/C Ratio	0.32	0.32			0.32			0.47		0.59	0.59	
Clearance Time (s)	4.0	4.0			4.0			3.0		4.0	4.0	
Lane Grp Cap (vph)	482	551			486			809		639	1094	
v/s Ratio Prot		c0.01						0.11		0.01	c0.22	
v/s Ratio Perm	0.01				0.01					0.04		
v/c Ratio	0.03	0.04			0.02			0.22		0.08	0.38	
Uniform Delay, d1	20.0	20.0			19.9			13.3		8.6	9.3	
Progression Factor	1.00	1.00			1.00			1.00		0.97	0.86	
Incremental Delay, d2	0.1	0.1			0.1			0.6		0.2	0.9	
Delay (s)	20.1	20.1			20.0			14.0		8.5	8.9	
Level of Service	C	C			B			B		A	A	
Approach Delay (s)		20.1			20.0			14.0			8.8	
Approach LOS		C			B			B			A	

Intersection Summary			
HCM Average Control Delay	11.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	41.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1009: 99th St & State Street

1/14/2013

	↗	↘	↖	↑	↓	↙
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↖↗		↰	↑	↱	
Volume (vph)	48	43	16	193	288	28
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	14	12	13	12	10	12
Total Lost time (s)	4.0		4.0	4.0	4.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.94		1.00	1.00	0.99	
Flt Protected	0.97		0.95	1.00	1.00	
Satd. Flow (prot)	1751		1765	1782	1657	
Flt Permitted	0.97		0.50	1.00	1.00	
Satd. Flow (perm)	1751		937	1782	1657	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	53	48	18	214	320	31
RTOR Reduction (vph)	32	0	0	0	5	0
Lane Group Flow (vph)	69	0	18	214	346	0
Confl. Peds. (#/hr)			2			2
Heavy Vehicles (%)	0%	0%	0%	1%	0%	0%
Turn Type			Perm			
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	21.0		36.0	36.0	36.0	
Effective Green, g (s)	21.0		36.0	36.0	36.0	
Actuated g/C Ratio	0.32		0.55	0.55	0.55	
Clearance Time (s)	4.0		4.0	4.0	4.0	
Lane Grp Cap (vph)	566		519	987	918	
v/s Ratio Prot	c0.04			0.12	c0.21	
v/s Ratio Perm			0.02			
v/c Ratio	0.12		0.03	0.22	0.38	
Uniform Delay, d1	15.5		6.6	7.4	8.2	
Progression Factor	1.00		0.56	0.66	1.40	
Incremental Delay, d2	0.4		0.1	0.5	1.0	
Delay (s)	15.9		3.8	5.4	12.4	
Level of Service	B		A	A	B	
Approach Delay (s)	15.9			5.2	12.4	
Approach LOS	B			A	B	

Intersection Summary			
HCM Average Control Delay	10.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	30.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1010: 99th St & Michigan Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↰↑↱		↰	↑			↑	↱
Volume (vph)	0	0	0	31	268	9	258	161	4	0	301	17
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	14	16	12	12	15	12	12	13	10
Total Lost time (s)					4.0		4.0	4.0			3.0	3.0
Lane Util. Factor					0.95		1.00	1.00			1.00	1.00
Frpb, ped/bikes					1.00		1.00	1.00			1.00	1.00
Flpb, ped/bikes					1.00		1.00	1.00			1.00	1.00
Frt					1.00		1.00	1.00			1.00	0.85
Flt Protected					1.00		0.95	1.00			1.00	1.00
Satd. Flow (prot)					3772		1693	1677			1738	1428
Flt Permitted					1.00		0.45	1.00			1.00	1.00
Satd. Flow (perm)					3772		809	1677			1738	1428
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	34	298	10	287	179	4	0	334	19
RTOR Reduction (vph)	0	0	0	0	3	0	0	1	0	0	0	11
Lane Group Flow (vph)	0	0	0	0	339	0	287	182	0	0	334	8
Confl. Peds. (#/hr)	1					1			5	5		
Heavy Vehicles (%)	0%	0%	0%	0%	2%	0%	1%	18%	0%	0%	7%	0%
Turn Type				Split			pm+pt					Perm
Protected Phases				8	8		7	2			6	
Permitted Phases							2					6
Actuated Green, G (s)					26.0		51.0	51.0			38.0	38.0
Effective Green, g (s)					26.0		51.0	51.0			38.0	38.0
Actuated g/C Ratio					0.31		0.60	0.60			0.45	0.45
Clearance Time (s)					4.0		4.0	4.0			3.0	3.0
Lane Grp Cap (vph)					1154		589	1006			777	638
v/s Ratio Prot					c0.09		c0.06	0.11			0.19	
v/s Ratio Perm							c0.23					0.01
v/c Ratio					0.29		0.49	0.18			0.43	0.01
Uniform Delay, d1					22.5		14.4	7.6			16.1	13.1
Progression Factor					1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2					0.6		2.9	0.4			1.7	0.0
Delay (s)					23.1		17.2	8.0			17.8	13.1
Level of Service					C		B	A			B	B
Approach Delay (s)		0.0			23.1			13.7			17.6	
Approach LOS		A			C			B			B	

Intersection Summary			
HCM Average Control Delay	17.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	55.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1011: 99th Street & Martin Luther King Jr Drive

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					✥		↰	↑↱		↰	↑↱	
Volume (vph)	0	0	0	96	94	38	133	217	30	59	704	44
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	15	12	12	12	12	12	13	12
Total Lost time (s)					4.0		3.0	4.0		3.0	4.0	
Lane Util. Factor					1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes					1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes					1.00		1.00	1.00		1.00	1.00	
Frt					0.98		1.00	0.98		1.00	0.99	
Flt Protected					0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)					1896		1710	3290		1707	3467	
Flt Permitted					0.98		0.25	1.00		0.58	1.00	
Satd. Flow (perm)					1896		446	3290		1048	3467	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	107	104	42	148	241	33	66	782	49
RTOR Reduction (vph)	0	0	0	0	10	0	0	14	0	0	6	0
Lane Group Flow (vph)	0	0	0	0	243	0	148	260	0	66	825	0
Confl. Peds. (#/hr)							5		5	5		5
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	1%	0%
Turn Type				Split			pm+pt			pm+pt		
Protected Phases				8	8		5	2		1	6	
Permitted Phases							2			6		
Actuated Green, G (s)					23.0		41.0	34.0		41.0	34.0	
Effective Green, g (s)					23.0		41.0	34.0		41.0	34.0	
Actuated g/C Ratio					0.31		0.55	0.45		0.55	0.45	
Clearance Time (s)					4.0		3.0	4.0		3.0	4.0	
Lane Grp Cap (vph)					581		362	1491		634	1572	
v/s Ratio Prot					c0.13		c0.04	0.08		0.01	c0.24	
v/s Ratio Perm							0.19			0.05		
v/c Ratio					0.42		0.41	0.17		0.10	0.52	
Uniform Delay, d1					20.7		16.4	12.2		8.2	14.7	
Progression Factor					1.00		0.83	0.82		1.00	1.00	
Incremental Delay, d2					2.2		3.4	0.3		0.3	1.3	
Delay (s)					22.9		17.0	10.3		8.6	16.0	
Level of Service					C		B	B		A	B	
Approach Delay (s)		0.0			22.9			12.6			15.4	
Approach LOS		A			C			B			B	

Intersection Summary			
HCM Average Control Delay	15.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	53.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1012: 100th Street & Martin Luther King Jr Drive

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥		↰	↑↱		↰	↑↱	
Volume (vph)	32	49	13	9	63	63	7	285	24	159	591	50
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	16	12	12	10	11	12	12	11	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.98			0.94		1.00	0.99		1.00	0.99	
Flt Protected		0.98			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1964			1655		1595	3174		1704	3231	
Flt Permitted		0.89			0.99		0.36	1.00		0.56	1.00	
Satd. Flow (perm)		1775			1637		598	3174		996	3231	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	34	52	14	9	66	66	7	300	25	167	622	53
RTOR Reduction (vph)	0	8	0	0	42	0	0	8	0	0	8	0
Lane Group Flow (vph)	0	92	0	0	99	0	7	317	0	167	667	0
Confl. Peds. (#/hr)	2					2	1		6	6		1
Confl. Bikes (#/hr)			1	1			3					3
Heavy Vehicles (%)	0%	0%	0%	0%	2%	0%	0%	3%	0%	0%	1%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		25.0			25.0		42.0	42.0		42.0	42.0	
Effective Green, g (s)		25.0			25.0		42.0	42.0		42.0	42.0	
Actuated g/C Ratio		0.33			0.33		0.56	0.56		0.56	0.56	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		592			546		335	1777		558	1809	
v/s Ratio Prot								0.10			c0.21	
v/s Ratio Perm		0.05			c0.06		0.01			0.17		
v/c Ratio		0.16			0.18		0.02	0.18		0.30	0.37	
Uniform Delay, d1		17.6			17.7		7.3	8.1		8.7	9.1	
Progression Factor		1.00			1.00		1.00	1.00		0.27	0.25	
Incremental Delay, d2		0.6			0.7		0.1	0.2		1.2	0.5	
Delay (s)		18.1			18.5		7.5	8.3		3.6	2.8	
Level of Service		B			B		A	A		A	A	
Approach Delay (s)		18.1			18.5			8.3			3.0	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	6.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	48.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis
1013: 100th Street & Cottage Grove Avenue

1/14/2013

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↖↗			↰↑	↑↱	
Sign Control	Stop			Stop	Stop	
Volume (vph)	37	192	67	261	589	81
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	41	213	74	290	654	90

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	254	171	193	436	308
Volume Left (vph)	41	74	0	0	0
Volume Right (vph)	213	0	0	0	90
Hadj (s)	-0.42	0.27	0.05	0.05	-0.15
Departure Headway (s)	5.8	6.6	6.3	5.9	5.7
Degree Utilization, x	0.41	0.31	0.34	0.71	0.49
Capacity (veh/h)	589	528	546	601	620
Control Delay (s)	12.7	11.3	11.4	21.0	12.8
Approach Delay (s)	12.7	11.3		17.6	
Approach LOS	B	B		C	

Intersection Summary			
Delay	15.0		
HCM Level of Service	C		
Intersection Capacity Utilization	54.3%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Signalized Intersection Capacity Analysis
1014: 103rd Street & Vincennes Avenue

1/14/2013

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR
Lane Configurations		↰	↑	↱	↰	↑	↱			↰	↑↱	
Volume (vph)	32	35	373	18	20	393	70	78	55	68	354	32
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		3.5	4.0	4.0	4.0	4.0	4.0			4.0	4.0	
Lane Util. Factor		1.00	1.00	1.00	1.00	1.00	1.00			1.00	0.95	
Frpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	0.93			1.00	1.00	
Flpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	
Frt		1.00	1.00	0.85	1.00	1.00	0.85			1.00	0.99	
Flt Protected		0.95	1.00	1.00	0.95	1.00	1.00			0.95	1.00	
Satd. Flow (prot)		1612	1731	1530	1710	1731	1421			1710	3251	
Flt Permitted		0.14	1.00	1.00	0.52	1.00	1.00			0.14	1.00	
Satd. Flow (perm)		238	1731	1530	936	1731	1421			257	3251	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	36	39	414	20	22	437	78	87	61	76	393	36
RTOR Reduction (vph)	0	0	0	12	0	0	38	0	0	0	7	0
Lane Group Flow (vph)	0	75	414	8	22	437	127	0	0	137	422	0
Confl. Peds. (#/hr)		25					25					3
Heavy Vehicles (%)	6%	6%	4%	0%	0%	4%	0%	0%	0%	0%	4%	0%
Turn Type	Perm	pm+pt		Perm	Perm		Perm		Perm	Perm		
Protected Phases		7	4			8					2	
Permitted Phases	4	4		4	8		8		2	2		
Actuated Green, G (s)		44.0	44.0	44.0	25.0	25.0	25.0			28.0	28.0	
Effective Green, g (s)		44.0	44.0	44.0	25.0	25.0	25.0			28.0	28.0	
Actuated g/C Ratio		0.42	0.42	0.42	0.24	0.24	0.24			0.27	0.27	
Clearance Time (s)		3.5	4.0	4.0	4.0	4.0	4.0			4.0	4.0	
Lane Grp Cap (vph)		303	725	641	223	412	338			69	867	
v/s Ratio Prot		0.04	c0.24			c0.25					0.13	
v/s Ratio Perm		0.07		0.01	0.02		0.09			c0.53		
v/c Ratio		0.25	0.57	0.01	0.10	1.06	0.38			1.99	0.49	
Uniform Delay, d1		21.6	23.3	17.8	31.2	40.0	33.5			38.5	32.4	
Progression Factor		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	
Incremental Delay, d2		1.9	3.3	0.0	0.9	61.3	3.2			491.0	2.0	
Delay (s)		23.5	26.5	17.9	32.1	101.3	36.6			529.5	34.4	
Level of Service		C	C	B	C	F	D			F	C	
Approach Delay (s)			25.8			81.8					154.2	
Approach LOS			C			F					F	

Intersection Summary			
HCM Average Control Delay	146.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.43		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	103.0%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBL	SBT	SBR	SBR2	SEL2	SEL	SER	SER2
Lane Configurations	↰	↑↱				↰	↱↰	
Volume (vph)	107	571	82	103	4	113	607	197
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.5	4.5				4.5	4.5	
Lane Util. Factor	1.00	0.95				1.00	0.88	
Frpb, ped/bikes	1.00	1.00				1.00	1.00	
Flpb, ped/bikes	1.00	1.00				1.00	1.00	
Frt	1.00	0.96				1.00	0.85	
Flt Protected	0.95	1.00				0.95	1.00	
Satd. Flow (prot)	1705	3246				1710	2633	
Flt Permitted	0.37	1.00				0.95	1.00	
Satd. Flow (perm)	670	3246				1710	2633	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	119	634	91	114	4	126	674	219
RTOR Reduction (vph)	0	12	0	0	0	0	26	0
Lane Group Flow (vph)	119	827	0	0	0	130	867	0
Confl. Peds. (#/hr)	3							
Heavy Vehicles (%)	0%	2%	0%	0%	0%	0%	3%	0%
Turn Type	Perm				Split		Perm	
Protected Phases		6			9	9		
Permitted Phases	6						9	
Actuated Green, G (s)	27.5	27.5				20.5	20.5	
Effective Green, g (s)	27.5	27.5				20.5	20.5	
Actuated g/C Ratio	0.26	0.26				0.20	0.20	
Clearance Time (s)	4.5	4.5				4.5	4.5	
Lane Grp Cap (vph)	175	850				334	514	
v/s Ratio Prot		0.25				0.08		
v/s Ratio Perm	0.18						c0.33	
v/c Ratio	0.68	0.97				0.39	1.69	
Uniform Delay, d1	34.8	38.4				36.8	42.2	
Progression Factor	1.00	1.00				1.00	1.00	
Incremental Delay, d2	19.3	25.0				3.4	317.6	
Delay (s)	54.1	63.4				40.2	359.9	
Level of Service	D	E				D	F	
Approach Delay (s)		62.2				319.3		
Approach LOS		E				F		

Intersection Summary

HCM Signalized Intersection Capacity Analysis
1015: 103rd Street & Morgan Street

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑→			←↑			←↑→				
Volume (vph)	65	596	0	0	469	56	85	52	19	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	11	11	11	16	11	12	15	12	12	15	12
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		1.00			0.99			0.98				
Flt Protected		1.00			1.00			0.97				
Satd. Flow (prot)		1681			1952			1841				
Flt Permitted		0.91			1.00			0.97				
Satd. Flow (perm)		1530			1952			1841				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	72	662	0	0	521	62	94	58	21	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	734	0	0	583	0	0	173	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)		40.0			40.0			17.0				
Effective Green, g (s)		40.0			40.0			17.0				
Actuated g/C Ratio		0.62			0.62			0.26				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		942			1201			481				
v/s Ratio Prot					0.30							
v/s Ratio Perm		c0.48						0.09				
v/c Ratio		0.78			0.49			0.36				
Uniform Delay, d1		9.2			6.9			19.6				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		6.3			1.4			2.1				
Delay (s)		15.6			8.3			21.7				
Level of Service		B			A			C				
Approach Delay (s)		15.6			8.3			21.7			0.0	
Approach LOS		B			A			C			A	

Intersection Summary			
HCM Average Control Delay	13.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	85.6%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1016: 103rd Street & Halsted Street

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑	↱		↰↑	↱	↰	↑↑	↱	↰	↑↑	↱
Volume (vph)	71	334	152	129	331	135	105	639	86	140	759	94
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	10	10	9	9	10	9
Total Lost time (s)		4.0	4.0		4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		1.00	0.96		1.00	0.96	1.00	1.00	0.95	1.00	1.00	0.94
Flpb, ped/bikes		1.00	1.00		0.99	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.99	1.00		0.99	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1982	1434		1945	1444	1546	3040	1296	1506	3069	1252
Flt Permitted		0.36	1.00		0.70	1.00	0.23	1.00	1.00	0.29	1.00	1.00
Satd. Flow (perm)		714	1434		1380	1444	373	3040	1296	455	3069	1252
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	75	352	160	136	348	142	111	673	91	147	799	99
RTOR Reduction (vph)	0	0	94	0	0	101	0	0	54	0	0	49
Lane Group Flow (vph)	0	427	66	0	484	41	111	673	37	147	799	50
Confl. Peds. (#/hr)	24		45	45		24	36		24	24		36
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	2%	2%	2%	2%	3%	2%	3%	5%	1%	2%	4%	3%
Turn Type	pm+pt		Perm	Perm		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)		43.0	43.0		30.0	30.0	50.6	42.3	42.3	51.4	42.7	42.7
Effective Green, g (s)		43.0	43.0		30.0	30.0	50.6	42.3	42.3	51.4	42.7	42.7
Actuated g/C Ratio		0.41	0.41		0.29	0.29	0.48	0.40	0.40	0.49	0.41	0.41
Clearance Time (s)		4.0	4.0		4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		413	587		394	413	272	1225	522	310	1248	509
v/s Ratio Prot		c0.10					0.03	0.22		c0.04	c0.26	
v/s Ratio Perm		0.32	0.05		c0.35	0.03	0.16		0.03	0.19		0.04
v/c Ratio		1.03	0.11		1.23	0.10	0.41	0.55	0.07	0.47	0.64	0.10
Uniform Delay, d1		31.0	19.2		37.5	27.6	16.4	24.0	19.3	16.0	25.0	19.2
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.74	1.54	2.62
Incremental Delay, d2		53.3	0.4		123.3	0.5	1.0	1.8	0.3	1.1	2.4	0.4
Delay (s)		84.3	19.6		160.8	28.0	17.4	25.8	19.5	29.0	41.0	50.9
Level of Service		F	B		F	C	B	C	B	C	D	D
Approach Delay (s)		66.7			130.7			24.1			40.3	
Approach LOS		E			F			C			D	

Intersection Summary			
HCM Average Control Delay	58.8	HCM Level of Service	E
HCM Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	90.2%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1017: 103rd Street & Normal Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣				
Volume (vph)	85	412	85	105	490	94	51	61	72	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	15	12	12	15	12
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		0.98			0.98			0.95				
Flt Protected		0.99			0.99			0.99				
Satd. Flow (prot)		1644			1646			1796				
Flt Permitted		0.83			0.84			0.99				
Satd. Flow (perm)		1375			1390			1796				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	94	458	94	117	544	104	57	68	80	0	0	0
RTOR Reduction (vph)	0	10	0	0	9	0	0	35	0	0	0	0
Lane Group Flow (vph)	0	636	0	0	756	0	0	170	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm			Perm					
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Actuated Green, G (s)		40.0			40.0			17.0				
Effective Green, g (s)		40.0			40.0			17.0				
Actuated g/C Ratio		0.62			0.62			0.26				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		846			855			470				
v/s Ratio Prot												
v/s Ratio Perm		0.46			c0.54			0.09				
v/c Ratio		0.75			0.88			0.36				
Uniform Delay, d1		9.0			10.5			19.6				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		6.1			12.9			2.1				
Delay (s)		15.1			23.5			21.7				
Level of Service		B			C			C				
Approach Delay (s)		15.1			23.5			21.7			0.0	
Approach LOS		B			C			C			A	

Intersection Summary			
HCM Average Control Delay	19.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	71.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1018: 103rd Street & Wentworth Avenue

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱		↰	↱		✥	
Volume (vph)	21	455	73	84	568	45	37	76	74	56	238	47
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	11	12	12	15	12
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frpb, ped/bikes		1.00	0.96		1.00	0.96		1.00	0.96		0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		0.99	1.00		1.00	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		0.98	
Flt Protected		1.00	1.00		0.99	1.00		0.98	1.00		0.99	
Satd. Flow (prot)		1687	1382		1712	1417		1686	1455		1886	
Flt Permitted		0.96	1.00		0.88	1.00		0.83	1.00		0.93	
Satd. Flow (perm)		1630	1382		1519	1417		1430	1455		1775	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	22	479	77	88	598	47	39	80	78	59	251	49
RTOR Reduction (vph)	0	0	33	0	0	13	0	0	53	0	7	0
Lane Group Flow (vph)	0	501	44	0	686	34	0	119	25	0	352	0
Confl. Peds. (#/hr)	25		19	19		25	36		30	30		36
Confl. Bikes (#/hr)	1		2	2		1	3					3
Heavy Vehicles (%)	0%	3%	3%	0%	1%	0%	0%	1%	1%	0%	1%	0%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		43.0	43.0		43.0	43.0		24.0	24.0		24.0	
Effective Green, g (s)		43.0	43.0		43.0	43.0		24.0	24.0		24.0	
Actuated g/C Ratio		0.57	0.57		0.57	0.57		0.32	0.32		0.32	
Clearance Time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	
Lane Grp Cap (vph)		935	792		871	812		458	466		568	
v/s Ratio Prot												
v/s Ratio Perm		0.31	0.03		c0.45	0.02		0.08	0.02		c0.20	
v/c Ratio		0.54	0.06		0.79	0.04		0.26	0.05		0.62	
Uniform Delay, d1		9.9	7.1		12.4	7.0		18.9	17.6		21.6	
Progression Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2		2.2	0.1		7.1	0.1		1.4	0.2		5.0	
Delay (s)		12.1	7.2		19.6	7.1		20.3	17.9		26.6	
Level of Service		B	A		B	A		C	B		C	
Approach Delay (s)		11.4			18.8			19.3			26.6	
Approach LOS		B			B			B			C	

Intersection Summary			
HCM Average Control Delay	18.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	99.6%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1019: 103rd Street & State Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑	↱	↰	↑	↱
Volume (vph)	57	463	30	53	598	58	44	165	57	124	210	32
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	11	16	8	10	10	10	10	10	10
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00	0.98	1.00	1.00	0.98
Flpb, ped/bikes	0.98	1.00		1.00	1.00		0.99	1.00	1.00	0.99	1.00	1.00
Frt	1.00	0.99		1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1537	3068		1652	3732		1585	1663	1370	1568	1680	1397
Flt Permitted	0.31	1.00		0.41	1.00		0.57	1.00	1.00	0.63	1.00	1.00
Satd. Flow (perm)	505	3068		716	3732		953	1663	1370	1043	1680	1397
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	63	514	33	59	664	64	49	183	63	138	233	36
RTOR Reduction (vph)	0	7	0	0	11	0	0	0	38	0	0	22
Lane Group Flow (vph)	63	540	0	59	717	0	49	183	25	138	233	14
Confl. Peds. (#/hr)	51		3	3		51	13		13	13		13
Heavy Vehicles (%)	2%	3%	3%	0%	2%	0%	0%	1%	2%	1%	0%	0%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	31.0	31.0		31.0	31.0		26.0	26.0	26.0	26.0	26.0	26.0
Effective Green, g (s)	31.0	31.0		31.0	31.0		26.0	26.0	26.0	26.0	26.0	26.0
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.40	0.40	0.40	0.40	0.40	0.40
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	241	1463		341	1780		381	665	548	417	672	559
v/s Ratio Prot		0.18			c0.19			0.11			c0.14	
v/s Ratio Perm	0.12			0.08			0.05		0.02	0.13		0.01
v/c Ratio	0.26	0.37		0.17	0.40		0.13	0.28	0.05	0.33	0.35	0.03
Uniform Delay, d1	10.2	10.8		9.7	11.0		12.3	13.1	11.9	13.5	13.6	11.8
Progression Factor	1.00	1.00		1.00	1.00		0.82	0.89	0.71	0.58	0.59	0.26
Incremental Delay, d2	2.6	0.7		1.1	0.7		0.7	1.0	0.2	2.0	1.4	0.1
Delay (s)	12.8	11.5		10.8	11.7		10.9	12.7	8.6	9.9	9.3	3.1
Level of Service	B	B		B	B		B	B	A	A	A	A
Approach Delay (s)		11.6			11.6			11.5			9.0	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM Average Control Delay	11.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	57.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	73	389	71	73	387	77	55	197	64	135	272	162
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	11	10	11	11	10	11	11	10	11	11
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.98		1.00	0.99		1.00	0.98		1.00	0.99	
Flpb, ped/bikes	0.97	1.00		0.95	1.00		0.99	1.00		0.96	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.96		1.00	0.94	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1329	3142		1515	3108		1583	2928		1453	2920	
Flt Permitted	0.44	1.00		0.44	1.00		0.44	1.00		0.58	1.00	
Satd. Flow (perm)	617	3142		708	3108		741	2928		892	2920	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	77	409	75	77	407	81	58	207	67	142	286	171
RTOR Reduction (vph)	0	0	0	0	0	0	0	39	0	0	100	0
Lane Group Flow (vph)	77	484	0	77	488	0	58	235	0	142	357	0
Confl. Peds. (#/hr)	112		99	99		112	23		53	53		23
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	16%	1%	0%	0%	1%	9%	0%	8%	2%	5%	5%	7%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	36.0	36.0		36.0	36.0		31.0	31.0		31.0	31.0	
Effective Green, g (s)	36.0	36.0		36.0	36.0		31.0	31.0		31.0	31.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.41	0.41		0.41	0.41	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	296	1508		340	1492		306	1210		369	1207	
v/s Ratio Prot		0.15			c0.16			0.08			0.12	
v/s Ratio Perm	0.12			0.11			0.08			c0.16		
v/c Ratio	0.26	0.32		0.23	0.33		0.19	0.19		0.38	0.30	
Uniform Delay, d1	11.6	12.0		11.4	12.0		14.0	14.0		15.3	14.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.1	0.6		1.5	0.6		1.4	0.4		3.0	0.6	
Delay (s)	13.7	12.5		12.9	12.6		15.4	14.4		18.4	15.3	
Level of Service	B	B		B	B		B	B		B	B	
Approach Delay (s)		12.7			12.7			14.6			16.0	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	14.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	53.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1021: 103rd Street & Martin Luther King Jr Drive

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱		↰	↑↱		↰	↑↱	
Volume (vph)	108	453	62	32	523	48	86	203	60	76	473	111
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	12	8	16	12	9	10	10	9	10	10
Total Lost time (s)	3.0	7.0		3.0	7.0		3.0	7.0		3.0	7.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.98		1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.99		1.00	0.97		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1595	1653		1371	1973		1534	2998		1535	3011	
Flt Permitted	0.24	1.00		0.30	1.00		0.28	1.00		0.58	1.00	
Satd. Flow (perm)	402	1653		427	1973		450	2998		939	3011	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	114	477	65	34	551	51	91	214	63	80	498	117
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	114	542	0	34	602	0	91	277	0	80	615	0
Confl. Peds. (#/hr)	21		95	95		21	36		8	8		36
Confl. Bikes (#/hr)	2		3	3		2	2					2
Heavy Vehicles (%)	0%	2%	0%	7%	2%	0%	0%	3%	0%	0%	2%	1%
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	43.9	39.3		40.7	37.7		26.7	21.8		26.7	21.8	
Effective Green, g (s)	43.9	37.3		40.7	35.7		26.7	19.8		26.7	19.8	
Actuated g/C Ratio	0.52	0.44		0.48	0.42		0.31	0.23		0.31	0.23	
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	5.0		3.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	272	725		238	829		204	698		329	701	
v/s Ratio Prot	c0.02	c0.33		0.01	0.31		c0.03	0.09		0.01	c0.20	
v/s Ratio Perm	0.19			0.06			0.11			0.06		
v/c Ratio	0.42	0.75		0.14	0.73		0.45	0.40		0.24	0.88	
Uniform Delay, d1	24.1	19.9		20.7	20.6		29.2	27.6		21.9	31.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.0	6.9		0.3	5.5		1.6	1.7		0.4	14.5	
Delay (s)	25.2	26.8		21.0	26.1		30.8	29.2		22.2	46.0	
Level of Service	C	C		C	C		C	C		C	D	
Approach Delay (s)		26.6			25.8			29.6			43.2	
Approach LOS		C			C			C			D	

Intersection Summary			
HCM Average Control Delay	31.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	80.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1022: 103rd Street & Cottage Grove Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↑↱			↰↑↑↱		↰	↑↑↱		↰	↑↑↱	
Volume (vph)	85	389	65	117	509	118	67	158	58	127	367	83
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	11	11	11	11	12	12	10	10	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		0.99	1.00	
Frt		0.98			0.98		1.00	0.96		1.00	0.97	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3680			3131		1652	3237		1549	3026	
Flt Permitted		0.68			0.72		0.42	1.00		0.60	1.00	
Satd. Flow (perm)		2535			2275		736	3237		983	3026	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	94	432	72	130	566	131	74	176	64	141	408	92
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	598	0	0	827	0	74	240	0	141	500	0
Confl. Peds. (#/hr)	23		30	30		23	1		20	20		1
Confl. Bikes (#/hr)	3					3						
Heavy Vehicles (%)	0%	3%	0%	2%	2%	0%	0%	1%	0%	2%	2%	3%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		33.0			33.0		32.0	32.0		32.0	32.0	
Effective Green, g (s)		34.0			34.0		33.0	33.0		33.0	33.0	
Actuated g/C Ratio		0.45			0.45		0.44	0.44		0.44	0.44	
Clearance Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)		1149			1031		324	1424		433	1331	
v/s Ratio Prot								0.07			c0.17	
v/s Ratio Perm		0.24			c0.36		0.10			0.14		
v/c Ratio		0.52			0.80		0.23	0.17		0.33	0.38	
Uniform Delay, d1		14.7			17.6		13.1	12.7		13.7	14.1	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		1.7			6.6		1.6	0.3		2.0	0.8	
Delay (s)		16.4			24.2		14.7	13.0		15.7	14.9	
Level of Service		B			C		B	B		B	B	
Approach Delay (s)		16.4			24.2			13.4			15.1	
Approach LOS		B			C			B			B	

Intersection Summary			
HCM Average Control Delay	18.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	73.3%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1023: 103rd Street & Woodlawn Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑↱		↰	↑↑	↱		✥			↰↑↱	
Volume (vph)	98	875	6	20	584	249	1	1	9	213	1	80
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	12	12	12	12	12	12	13	13	13
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00			0.95	
Frt	1.00	1.00		1.00	1.00	0.85		0.89			0.96	
Flt Protected	0.95	1.00		0.95	1.00	1.00		1.00			0.97	
Satd. Flow (prot)	1605	3206		1660	3320	1485		1545			3176	
Flt Permitted	0.38	1.00		0.25	1.00	1.00		0.98			0.77	
Satd. Flow (perm)	648	3206		433	3320	1485		1519			2533	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	109	972	7	22	649	277	1	1	10	237	1	89
RTOR Reduction (vph)	0	0	0	0	0	103	0	7	0	0	52	0
Lane Group Flow (vph)	109	979	0	22	649	174	0	5	0	0	275	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	46.1	46.1		46.1	46.1	46.1		19.5			19.5	
Effective Green, g (s)	46.1	46.1		46.1	46.1	46.1		19.5			19.5	
Actuated g/C Ratio	0.63	0.63		0.63	0.63	0.63		0.26			0.26	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		8.0			8.0	
Lane Grp Cap (vph)	406	2008		271	2080	930		402			671	
v/s Ratio Prot		c0.31			0.20							
v/s Ratio Perm	0.17			0.05		0.12		0.00			c0.11	
v/c Ratio	0.27	0.49		0.08	0.31	0.19		0.01			0.41	
Uniform Delay, d1	6.2	7.4		5.4	6.4	5.8		19.9			22.3	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00			1.00	
Incremental Delay, d2	1.6	0.8		0.6	0.4	0.4		0.0			1.7	
Delay (s)	7.8	8.2		6.0	6.8	6.3		20.0			24.0	
Level of Service	A	A		A	A	A		B			C	
Approach Delay (s)		8.2			6.6			20.0			24.0	
Approach LOS		A			A			B			C	

Intersection Summary			
HCM Average Control Delay	9.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	73.6	Sum of lost time (s)	8.0
Intersection Capacity Utilization	58.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1024: 107th Street & Halsted Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱		↰	↑↑	↱	↰	↑↑	↱
Volume (vph)	131	228	125	94	163	57	148	907	90	129	825	100
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	9	12	10	10	12	9	10	9	9	10	9
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00	0.97	1.00	1.00	0.96
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.95		1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1560	1504		1563	1584		1493	3069	1337	1523	3099	1318
Flt Permitted	0.45	1.00		0.20	1.00		0.20	1.00	1.00	0.16	1.00	1.00
Satd. Flow (perm)	740	1504		337	1584		317	3069	1337	263	3099	1318
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	138	240	132	99	172	60	156	955	95	136	868	105
RTOR Reduction (vph)	0	23	0	0	15	0	0	0	40	0	0	49
Lane Group Flow (vph)	138	349	0	99	217	0	156	955	55	136	868	56
Confl. Peds. (#/hr)	10		13	13		10	18		7	7		18
Confl. Bikes (#/hr)	2					2	2		1	1		2
Heavy Vehicles (%)	2%	1%	1%	2%	1%	2%	3%	4%	0%	1%	3%	0%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	28.0	21.0		28.0	21.0		42.0	35.0	35.0	42.0	35.0	35.0
Effective Green, g (s)	26.0	22.0		26.0	22.0		40.0	35.0	35.0	40.0	35.0	35.0
Actuated g/C Ratio	0.31	0.26		0.31	0.26		0.47	0.41	0.41	0.47	0.41	0.41
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)	284	389		190	410		232	1264	551	213	1276	543
v/s Ratio Prot	0.03	c0.23		c0.04	0.14		c0.05	c0.31		0.05	0.28	
v/s Ratio Perm	0.11			0.12			0.27		0.04	0.26		0.04
v/c Ratio	0.49	0.90		0.52	0.53		0.67	0.76	0.10	0.64	0.68	0.10
Uniform Delay, d1	22.7	30.4		22.9	27.1		14.7	21.3	15.3	15.0	20.4	15.4
Progression Factor	1.00	1.00		1.00	1.00		0.67	0.82	0.55	1.00	1.00	1.00
Incremental Delay, d2	5.8	25.9		9.9	4.8		13.2	3.8	0.3	13.8	2.9	0.4
Delay (s)	28.5	56.3		32.7	31.9		23.0	21.2	8.7	28.8	23.4	15.7
Level of Service	C	E		C	C		C	C	A	C	C	B
Approach Delay (s)		48.8			32.1			20.5			23.3	
Approach LOS		D			C			C			C	

Intersection Summary			
HCM Average Control Delay	27.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	74.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1025: 107th Street & Wentworth Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			✥			✥	
Volume (vph)	22	181	38	20	173	22	43	149	40	45	255	50
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	14	12	12	14	12	12	16	12	12	16	12
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		0.99			1.00			1.00			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.98			0.99			0.98			0.98	
Flt Protected		1.00			1.00			0.99			0.99	
Satd. Flow (prot)		1835			1848			1937			1975	
Flt Permitted		0.97			0.96			0.90			0.94	
Satd. Flow (perm)		1781			1790			1755			1869	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	23	187	39	21	178	23	44	154	41	46	263	52
RTOR Reduction (vph)	0	11	0	0	6	0	0	11	0	0	9	0
Lane Group Flow (vph)	0	238	0	0	216	0	0	228	0	0	352	0
Confl. Peds. (#/hr)	18		34	34		18	16		19	19		16
Confl. Bikes (#/hr)			6	6			1		4	4		1
Heavy Vehicles (%)	0%	1%	0%	5%	1%	0%	0%	2%	0%	0%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		27.0			27.0			30.0			30.0	
Effective Green, g (s)		27.0			27.0			30.0			30.0	
Actuated g/C Ratio		0.42			0.42			0.46			0.46	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		740			744			810			863	
v/s Ratio Prot												
v/s Ratio Perm		c0.13			0.12			0.13			c0.19	
v/c Ratio		0.32			0.29			0.28			0.41	
Uniform Delay, d1		12.8			12.6			10.8			11.6	
Progression Factor		1.00			0.74			1.28			1.00	
Incremental Delay, d2		1.2			1.0			0.8			1.4	
Delay (s)		14.0			10.3			14.6			13.0	
Level of Service		B			B			B			B	
Approach Delay (s)		14.0			10.3			14.6			13.0	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	13.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	49.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1026: 107th Street & State Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	24	193	39	25	180	20	53	200	31	47	214	39
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	0.97	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	0.99		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1496	3057		1577	3116		1518	3119		1550	3076	
Flt Permitted	0.61	1.00		0.59	1.00		0.58	1.00		0.59	1.00	
Satd. Flow (perm)	965	3057		984	3116		926	3119		968	3076	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	27	214	43	28	200	22	59	222	34	52	238	43
RTOR Reduction (vph)	0	26	0	0	13	0	0	14	0	0	18	0
Lane Group Flow (vph)	27	231	0	28	209	0	59	242	0	52	263	0
Confl. Peds. (#/hr)	20		17	17		20	2					2
Confl. Bikes (#/hr)	32		36	36		32	22		25	25		22
Heavy Vehicles (%)	4%	1%	0%	0%	0%	0%	5%	0%	0%	3%	1%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.0	20.0		20.0	20.0		39.0	39.0		39.0	39.0	
Effective Green, g (s)	19.0	19.0		19.0	19.0		38.0	38.0		38.0	38.0	
Actuated g/C Ratio	0.29	0.29		0.29	0.29		0.58	0.58		0.58	0.58	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	282	894		288	911		541	1823		566	1798	
v/s Ratio Prot		c0.08			0.07			0.08			c0.09	
v/s Ratio Perm	0.03			0.03			0.06			0.05		
v/c Ratio	0.10	0.26		0.10	0.23		0.11	0.13		0.09	0.15	
Uniform Delay, d1	16.7	17.6		16.8	17.4		6.0	6.1		5.9	6.1	
Progression Factor	0.93	0.96		0.75	0.75		1.40	1.44		0.39	0.34	
Incremental Delay, d2	0.6	0.7		0.7	0.6		0.4	0.1		0.3	0.2	
Delay (s)	16.3	17.6		13.2	13.6		8.8	8.9		2.7	2.3	
Level of Service	B	B		B	B		A	A		A	A	
Approach Delay (s)		17.5			13.5			8.9			2.3	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	10.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.18		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	46.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			✣			✣	
Volume (vph)	67	168	42	25	159	38	27	262	16	42	337	33
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	9	9	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	
Flpb, ped/bikes	0.99	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.97		1.00	0.97			0.99			0.99	
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.99	
Satd. Flow (prot)	1555	3056		1525	2937			1923			1939	
Flt Permitted	0.61	1.00		0.61	1.00			0.94			0.94	
Satd. Flow (perm)	1007	3056		973	2937			1825			1832	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	74	187	47	28	177	42	30	291	18	47	374	37
RTOR Reduction (vph)	0	28	0	0	25	0	0	3	0	0	5	0
Lane Group Flow (vph)	74	206	0	28	194	0	0	336	0	0	453	0
Confl. Peds. (#/hr)	11		17	17		11	26		7	7		26
Heavy Vehicles (%)	2%	1%	0%	0%	1%	3%	4%	5%	0%	0%	4%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	26.0	26.0		26.0	26.0			31.0			31.0	
Effective Green, g (s)	26.0	26.0		26.0	26.0			31.0			31.0	
Actuated g/C Ratio	0.40	0.40		0.40	0.40			0.48			0.48	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	403	1222		389	1175			870			874	
v/s Ratio Prot		0.07			0.07							
v/s Ratio Perm	c0.07			0.03				0.18			c0.25	
v/c Ratio	0.18	0.17		0.07	0.16			0.39			0.52	
Uniform Delay, d1	12.6	12.5		12.0	12.5			10.9			11.8	
Progression Factor	1.04	0.98		0.78	0.76			1.08			1.00	
Incremental Delay, d2	1.0	0.3		0.3	0.3			1.2			2.2	
Delay (s)	14.1	12.6		9.7	9.8			12.9			14.0	
Level of Service	B	B		A	A			B			B	
Approach Delay (s)		13.0			9.8			12.9			14.0	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM Average Control Delay	12.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	59.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1028: 107th Street & Martin Luther King Jr Drive

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱			✥			✥	
Volume (vph)	47	111	30	20	161	27	45	235	11	33	364	57
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	16	12	10	16	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	
Flpb, ped/bikes	1.00	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.97		1.00	0.98			0.99			0.98	
Flt Protected	0.95	1.00		0.95	1.00			0.99			1.00	
Satd. Flow (prot)	1652	1966		1584	1975			1981			1979	
Flt Permitted	0.57	1.00		0.65	1.00			0.89			0.96	
Satd. Flow (perm)	986	1966		1082	1975			1774			1911	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	52	123	33	22	179	30	50	261	12	37	404	63
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	52	156	0	22	209	0	0	323	0	0	504	0
Confl. Peds. (#/hr)	1		10	10		1	2		5	5		2
Heavy Vehicles (%)	0%	0%	0%	0%	1%	0%	0%	2%	0%	0%	1%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.0	20.0		20.0	20.0			37.0			37.0	
Effective Green, g (s)	20.0	20.0		20.0	20.0			37.0			37.0	
Actuated g/C Ratio	0.31	0.31		0.31	0.31			0.57			0.57	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	303	605		333	608			1010			1088	
v/s Ratio Prot		0.08			c0.11							
v/s Ratio Perm	0.05			0.02				0.18			c0.26	
v/c Ratio	0.17	0.26		0.07	0.34			0.32			0.46	
Uniform Delay, d1	16.4	16.9		15.9	17.4			7.4			8.2	
Progression Factor	0.84	0.81		0.93	0.93			0.99			1.00	
Incremental Delay, d2	1.2	1.0		0.4	1.5			0.8			1.4	
Delay (s)	15.0	14.8		15.1	17.8			8.1			9.6	
Level of Service	B	B		B	B			A			A	
Approach Delay (s)		14.8			17.5			8.1			9.6	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	11.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑	↱	↰	↑	↱
Volume (vph)	54	13	97	2	5	10	62	235	5	5	466	76
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	10	10	10	11	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.98		1.00	0.98		1.00	1.00	1.00	1.00	1.00	0.98
Flpb, ped/bikes	0.99	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.87		1.00	0.90		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1695	1727		1702	1808		1594	1647	1428	1653	2000	1496
Flt Permitted	0.75	1.00		0.68	1.00		0.39	1.00	1.00	0.59	1.00	1.00
Satd. Flow (perm)	1332	1727		1216	1808		660	1647	1428	1030	2000	1496
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	60	14	108	2	6	11	69	261	6	6	518	84
RTOR Reduction (vph)	0	78	0	0	8	0	0	0	2	0	0	28
Lane Group Flow (vph)	60	44	0	2	9	0	69	261	4	6	518	56
Confl. Peds. (#/hr)	5		5	5		5	3					3
Heavy Vehicles (%)	0%	0%	1%	0%	0%	0%	0%	2%	0%	0%	2%	0%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	17.0	17.0		17.0	17.0		39.0	39.0	39.0	39.0	39.0	39.0
Effective Green, g (s)	18.0	18.0		18.0	18.0		39.0	39.0	39.0	39.0	39.0	39.0
Actuated g/C Ratio	0.28	0.28		0.28	0.28		0.60	0.60	0.60	0.60	0.60	0.60
Clearance Time (s)	5.0	5.0		5.0	5.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	369	478		337	501		396	988	857	618	1200	898
v/s Ratio Prot		0.03			0.01			0.16			c0.26	
v/s Ratio Perm	c0.05			0.00			0.10		0.00	0.01		0.04
v/c Ratio	0.16	0.09		0.01	0.02		0.17	0.26	0.00	0.01	0.43	0.06
Uniform Delay, d1	17.8	17.4		17.0	17.1		5.8	6.2	5.2	5.2	7.0	5.4
Progression Factor	1.38	2.73		1.00	1.00		0.82	0.77	0.97	1.00	1.00	1.00
Incremental Delay, d2	0.9	0.4		0.0	0.1		0.7	0.5	0.0	0.0	1.1	0.1
Delay (s)	25.5	47.9		17.1	17.1		5.5	5.3	5.0	5.3	8.2	5.5
Level of Service	C	D		B	B		A	A	A	A	A	A
Approach Delay (s)		40.5			17.1			5.3			7.8	
Approach LOS		D			B			A			A	

Intersection Summary			
HCM Average Control Delay	12.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	52.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1030: 111th Street & Marshield Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱		↰	↑↑					↰	↑↱	
Volume (vph)	0	253	163	170	204	0	0	0	0	110	470	377
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	12	12	12	12	12	11	11	12
Total Lost time (s)		4.0		3.0	3.0					5.0	5.0	
Lane Util. Factor		0.95		1.00	0.95					1.00	0.95	
Frpb, ped/bikes		0.99		1.00	1.00					1.00	0.99	
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	
Frt		0.94		1.00	1.00					1.00	0.93	
Flt Protected		1.00		0.95	1.00					0.95	1.00	
Satd. Flow (prot)		2905		1693	3288					1503	3021	
Flt Permitted		1.00		0.41	1.00					0.95	1.00	
Satd. Flow (perm)		2905		722	3288					1503	3021	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	266	172	179	215	0	0	0	0	116	495	397
RTOR Reduction (vph)	0	103	0	0	0	0	0	0	0	0	141	0
Lane Group Flow (vph)	0	335	0	179	215	0	0	0	0	116	751	0
Confl. Peds. (#/hr)	18		3	3		18	1					1
Heavy Vehicles (%)	0%	4%	1%	1%	4%	0%	0%	0%	0%	10%	2%	1%
Turn Type				D.P+P						Split		
Protected Phases		8		7	7 8					6	6	
Permitted Phases				8								
Actuated Green, G (s)		33.0		53.0	56.0					37.0	37.0	
Effective Green, g (s)		33.0		53.0	56.0					37.0	37.0	
Actuated g/C Ratio		0.32		0.52	0.55					0.36	0.36	
Clearance Time (s)		4.0		3.0						5.0	5.0	
Lane Grp Cap (vph)		940		566	1805					545	1096	
v/s Ratio Prot		c0.12		c0.06	0.07					0.08	c0.25	
v/s Ratio Perm				0.10								
v/c Ratio		0.36		0.32	0.12					0.21	0.68	
Uniform Delay, d1		26.4		13.4	11.1					22.4	27.6	
Progression Factor		1.00		2.18	2.12					1.00	1.00	
Incremental Delay, d2		1.1		1.3	0.1					0.9	3.5	
Delay (s)		27.4		30.5	23.6					23.3	31.0	
Level of Service		C		C	C					C	C	
Approach Delay (s)		27.4			26.7			0.0			30.2	
Approach LOS		C			C			A			C	

Intersection Summary			
HCM Average Control Delay	28.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	102.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	62.4%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1031: 111th Street & Hamlet Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑			↑↱		↰	↑	↱			
Volume (vph)	141	222	0	0	297	113	77	539	231	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	9	12	13	12	13	12	12	12
Total Lost time (s)	4.0	4.0			4.0		5.0	5.0	5.0			
Lane Util. Factor	1.00	0.95			0.95		1.00	1.00	1.00			
Frpb, ped/bikes	1.00	1.00			0.99		1.00	1.00	0.99			
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.96		1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1674	3196			2847		1767	1782	1560			
Flt Permitted	0.37	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	645	3196			2847		1767	1782	1560			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	148	234	0	0	313	119	81	567	243	0	0	0
RTOR Reduction (vph)	0	0	0	0	39	0	0	0	167	0	0	0
Lane Group Flow (vph)	148	234	0	0	393	0	81	567	76	0	0	0
Confl. Peds. (#/hr)	9		13	13		9			1	1		
Confl. Bikes (#/hr)	3					3						
Heavy Vehicles (%)	2%	7%	0%	0%	3%	1%	0%	1%	0%	0%	0%	0%
Turn Type	pm+pt						custom		Perm			
Protected Phases	4	1 4			1		2	2				
Permitted Phases	1 4						2		2			
Actuated Green, G (s)	59.0	63.0			26.0		30.0	30.0	30.0			
Effective Green, g (s)	59.0	63.0			26.0		30.0	30.0	30.0			
Actuated g/C Ratio	0.58	0.62			0.25		0.29	0.29	0.29			
Clearance Time (s)	4.0				4.0		5.0	5.0	5.0			
Lane Grp Cap (vph)	706	1974			726		520	524	459			
v/s Ratio Prot	c0.07	0.07			c0.14		0.05	c0.32				
v/s Ratio Perm	0.05								0.05			
v/c Ratio	0.21	0.12			0.54		0.16	1.08	0.17			
Uniform Delay, d1	10.2	8.0			32.8		26.6	36.0	26.7			
Progression Factor	0.42	0.43			1.00		1.00	1.00	1.00			
Incremental Delay, d2	0.6	0.1			2.9		0.6	63.3	0.8			
Delay (s)	4.9	3.6			35.7		27.3	99.3	27.5			
Level of Service	A	A			D		C	F	C			
Approach Delay (s)		4.1			35.7			73.2			0.0	
Approach LOS		A			D			E			A	

Intersection Summary			
HCM Average Control Delay	48.2	HCM Level of Service	D
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	102.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	62.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1032: 112th Place & Marshield Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱		↰	↑↑					↰	↑↑	↱
Volume (vph)	0	512	479	81	534	0	0	0	0	11	434	277
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	11	12	12	12	12	10	10	12
Total Lost time (s)		4.0		4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.95		1.00	0.95					1.00	0.95	1.00
Frpb, ped/bikes		0.99		1.00	1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Frt		0.93		1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00					0.95	1.00	1.00
Satd. Flow (prot)		3098		1710	3306					1596	3192	1530
Flt Permitted		1.00		0.11	1.00					0.95	1.00	1.00
Satd. Flow (perm)		3098		200	3306					1596	3192	1530
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	0	533	499	84	556	0	0	0	0	11	452	289
RTOR Reduction (vph)	0	170	0	0	0	0	0	0	0	0	0	191
Lane Group Flow (vph)	0	862	0	84	556	0	0	0	0	11	452	98
Confl. Peds. (#/hr)	8		8	8		8	3					3
Confl. Bikes (#/hr)	9					9			61	61		
Heavy Vehicles (%)	0%	1%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type				pm+pt						Split		Prot
Protected Phases		8		7	7 8					6	6	6
Permitted Phases				7 8								
Actuated Green, G (s)		36.0		54.0	58.0					34.0	34.0	34.0
Effective Green, g (s)		36.0		54.0	58.0					34.0	34.0	34.0
Actuated g/C Ratio		0.36		0.54	0.58					0.34	0.34	0.34
Clearance Time (s)		4.0		4.0						4.0	4.0	4.0
Lane Grp Cap (vph)		1115		380	1917					543	1085	520
v/s Ratio Prot		c0.28		0.04	c0.17					0.01	c0.14	0.06
v/s Ratio Perm				0.08								
v/c Ratio		0.77		0.22	0.29					0.02	0.42	0.19
Uniform Delay, d1		28.4		14.4	10.6					21.9	25.4	23.3
Progression Factor		1.00		1.01	1.19					1.00	1.00	1.00
Incremental Delay, d2		5.2		0.9	0.3					0.1	1.2	0.8
Delay (s)		33.6		15.5	12.9					22.0	26.6	24.1
Level of Service		C		B	B					C	C	C
Approach Delay (s)		33.6			13.2			0.0			25.5	
Approach LOS		C			B			A			C	

Intersection Summary			
HCM Average Control Delay	25.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	91.9%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1033: 112th Place & Hamlet Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↰↑			↑↱		↰	↰	↱			
Volume (vph)	417	106	0	0	150	6	465	480	58	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	12	12	12	10	12	11	11	12	12	12	12
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0	4.0			
Lane Util. Factor	0.91	0.91			0.95		0.95	0.95	1.00			
Frpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.99		1.00	1.00	0.85			
Flt Protected	0.95	0.97			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1469	3110			3170		1555	1653	1530			
Flt Permitted	0.64	0.71			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	992	2291			3170		1555	1653	1530			
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	430	109	0	0	155	6	479	495	60	0	0	0
RTOR Reduction (vph)	0	0	0	0	3	0	0	0	38	0	0	0
Lane Group Flow (vph)	215	324	0	0	158	0	479	495	22	0	0	0
Confl. Peds. (#/hr)	13		6	6		13			8	8		
Confl. Bikes (#/hr)	1					1			2	2		
Heavy Vehicles (%)	2%	1%	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%
Turn Type	pm+pt						custom		custom			
Protected Phases	4	1 4			1		2	2	2			
Permitted Phases	1 4						2		2			
Actuated Green, G (s)	51.0	51.0			15.0		37.0	37.0	37.0			
Effective Green, g (s)	51.0	51.0			15.0		37.0	37.0	37.0			
Actuated g/C Ratio	0.51	0.51			0.15		0.37	0.37	0.37			
Clearance Time (s)	4.0				4.0		4.0	4.0	4.0			
Lane Grp Cap (vph)	678	1463			476		575	612	566			
v/s Ratio Prot	c0.11	0.08			c0.05		c0.31	0.30	0.01			
v/s Ratio Perm	0.05	0.03										
v/c Ratio	0.32	0.22			0.33		0.83	0.81	0.04			
Uniform Delay, d1	14.1	13.5			38.0		28.7	28.3	20.1			
Progression Factor	0.24	0.25			1.00		1.00	1.00	1.00			
Incremental Delay, d2	0.7	0.2			1.9		13.3	11.0	0.1			
Delay (s)	4.2	3.6			39.9		42.0	39.3	20.3			
Level of Service	A	A			D		D	D	C			
Approach Delay (s)		3.8			39.9			39.5			0.0	
Approach LOS		A			D			D			A	

Intersection Summary			
HCM Average Control Delay	28.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	91.9%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱		↰	↑↑	↱	↰	↑↑	↱
Volume (vph)	78	218	103	121	265	125	84	699	79	103	884	65
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	9	10	9	9	10	9
Total Lost time (s)		4.0			4.0		4.0	3.5	4.0	4.0	3.5	4.0
Lane Util. Factor		0.95			0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		0.99			0.99		1.00	1.00	0.97	1.00	1.00	0.96
Flpb, ped/bikes		1.00			1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.96			0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.99			0.99		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		2939			2922		1508	3069	1309	1508	3099	1298
Flt Permitted		0.74			0.75		0.16	1.00	1.00	0.25	1.00	1.00
Satd. Flow (perm)		2182			2204		254	3069	1309	401	3099	1298
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	81	227	107	126	276	130	88	728	82	107	921	68
RTOR Reduction (vph)	0	41	0	0	37	0	0	0	50	0	0	33
Lane Group Flow (vph)	0	374	0	0	495	0	88	728	32	107	921	35
Confl. Peds. (#/hr)	35		30	30		35	34		8	8		34
Confl. Bikes (#/hr)	1					1	1					1
Heavy Vehicles (%)	1%	4%	0%	1%	3%	3%	2%	4%	2%	2%	3%	2%
Turn Type	pm+pt			Perm			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)		35.0			27.0		38.0	33.0	33.0	38.0	33.0	33.0
Effective Green, g (s)		36.0			28.0		36.0	33.5	33.0	36.0	33.5	33.0
Actuated g/C Ratio		0.42			0.33		0.42	0.39	0.39	0.42	0.39	0.39
Clearance Time (s)		5.0			5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)		978			726		167	1210	508	222	1221	504
v/s Ratio Prot		c0.03					c0.02	0.24		0.02	c0.30	
v/s Ratio Perm		0.14			c0.22		0.20		0.02	0.18		0.03
v/c Ratio		0.38			0.68		0.53	0.60	0.06	0.48	0.75	0.07
Uniform Delay, d1		16.9			24.6		16.7	20.5	16.3	16.0	22.2	16.3
Progression Factor		1.00			1.00		1.32	0.69	0.61	1.11	1.16	1.74
Incremental Delay, d2		1.1			5.1		10.4	2.0	0.2	5.3	3.1	0.2
Delay (s)		18.0			29.8		32.4	16.2	10.1	23.0	29.0	28.6
Level of Service		B			C		C	B	B	C	C	C
Approach Delay (s)		18.0			29.8			17.2			28.4	
Approach LOS		B			C			B			C	

Intersection Summary			
HCM Average Control Delay	23.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	73.8%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1035: 111th Street & Normal Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰			↱			↰↱				
Volume (vph)	76	318	0	0	389	103	53	44	37	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		1.00			0.97			0.96				
Flt Protected		0.99			1.00			0.98				
Satd. Flow (prot)		1731			1698			1650				
Flt Permitted		0.83			1.00			0.98				
Satd. Flow (perm)		1458			1698			1650				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	84	353	0	0	432	114	59	49	41	0	0	0
RTOR Reduction (vph)	0	0	0	0	15	0	0	21	0	0	0	0
Lane Group Flow (vph)	0	437	0	0	531	0	0	128	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)		38.0			38.0			19.0				
Effective Green, g (s)		38.0			38.0			19.0				
Actuated g/C Ratio		0.58			0.58			0.29				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		852			993			482				
v/s Ratio Prot					c0.31							
v/s Ratio Perm		0.30						0.08				
v/c Ratio		0.51			0.54			0.27				
Uniform Delay, d1		8.0			8.2			17.6				
Progression Factor		1.00			0.99			1.00				
Incremental Delay, d2		2.2			1.6			1.3				
Delay (s)		10.2			9.7			19.0				
Level of Service		B			A			B				
Approach Delay (s)		10.2			9.7			19.0			0.0	
Approach LOS		B			A			B			A	

Intersection Summary			
HCM Average Control Delay	11.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	68.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	19	306	27	53	416	70	28	118	42	57	150	42
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	10	12	12	10	12
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		1.00			1.00			0.99			0.98	
Flpb, ped/bikes		1.00			1.00			0.99			1.00	
Frt		0.99			0.98			0.97			0.97	
Flt Protected		1.00			1.00			0.99			0.99	
Satd. Flow (prot)		1957			1933			2959			2985	
Flt Permitted		0.96			0.93			0.89			0.85	
Satd. Flow (perm)		1887			1810			2658			2572	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	21	340	30	59	462	78	31	131	47	63	167	47
RTOR Reduction (vph)	0	5	0	0	8	0	0	27	0	0	26	0
Lane Group Flow (vph)	0	386	0	0	591	0	0	182	0	0	251	0
Confl. Peds. (#/hr)	32		25	25		32	59		24	24		59
Confl. Bikes (#/hr)	3		2	2		3	4		2	2		4
Heavy Vehicles (%)	0%	3%	0%	3%	3%	0%	0%	0%	7%	4%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		30.0			30.0			27.0			27.0	
Effective Green, g (s)		30.0			30.0			27.0			27.0	
Actuated g/C Ratio		0.46			0.46			0.42			0.42	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		871			835			1104			1068	
v/s Ratio Prot												
v/s Ratio Perm		0.20			c0.33			0.07			c0.10	
v/c Ratio		0.44			0.71			0.16			0.23	
Uniform Delay, d1		11.8			14.0			11.9			12.3	
Progression Factor		0.57			0.37			1.27			0.46	
Incremental Delay, d2		1.4			4.1			0.3			0.5	
Delay (s)		8.2			9.3			15.4			6.1	
Level of Service		A			A			B			A	
Approach Delay (s)		8.2			9.3			15.4			6.1	
Approach LOS		A			A			B			A	

Intersection Summary			
HCM Average Control Delay	9.3	HCM Level of Service	A
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	83.9%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	41	279	39	85	551	100	43	219	99	86	227	62
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	9	10	10	9	10	10	12	10	10	12
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		0.98	1.00		0.99	1.00		0.99	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.95		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1512	3039		1570	3078		1587	2961		1585	3075	
Flt Permitted	0.25	1.00		0.52	1.00		0.56	1.00		0.54	1.00	
Satd. Flow (perm)	395	3039		854	3078		931	2961		902	3075	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	46	310	43	94	612	111	48	243	110	96	252	69
RTOR Reduction (vph)	0	17	0	0	22	0	0	51	0	0	32	0
Lane Group Flow (vph)	46	336	0	94	701	0	48	302	0	96	289	0
Confl. Peds. (#/hr)	20		31	31		20	16		20	20		16
Confl. Bikes (#/hr)							1		3	3		1
Heavy Vehicles (%)	5%	3%	0%	0%	1%	0%	0%	2%	2%	0%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	22.0	22.0		22.0	22.0		35.0	35.0		35.0	35.0	
Effective Green, g (s)	22.0	22.0		22.0	22.0		35.0	35.0		35.0	35.0	
Actuated g/C Ratio	0.34	0.34		0.34	0.34		0.54	0.54		0.54	0.54	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	134	1029		289	1042		501	1594		486	1656	
v/s Ratio Prot		0.11			c0.23			0.10			0.09	
v/s Ratio Perm	0.12			0.11			0.05			c0.11		
v/c Ratio	0.34	0.33		0.33	0.67		0.10	0.19		0.20	0.17	
Uniform Delay, d1	16.1	16.0		16.0	18.4		7.3	7.7		7.7	7.6	
Progression Factor	0.82	0.76		1.11	1.12		1.11	1.25		1.08	1.08	
Incremental Delay, d2	6.4	0.8		2.9	3.4		0.4	0.3		0.9	0.2	
Delay (s)	19.6	13.0		20.6	23.9		8.5	9.9		9.3	8.5	
Level of Service	B	B		C	C		A	A		A	A	
Approach Delay (s)		13.8			23.5			9.7			8.6	
Approach LOS		B			C			A			A	

Intersection Summary			
HCM Average Control Delay	15.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1038: 111th Street & Michigan Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			↰↑↱			↰↑↱	
Volume (vph)	55	287	96	107	401	50	165	250	131	46	295	64
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	9	10	9	9	16	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99			0.99			0.98	
Flpb, ped/bikes	0.98	1.00		0.99	1.00			0.98			1.00	
Frt	1.00	0.96		1.00	0.98			0.96			0.98	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1508	2988		1430	3720			3405			3530	
Flt Permitted	0.46	1.00		0.51	1.00			0.69			0.85	
Satd. Flow (perm)	726	2988		761	3720			2401			3027	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	58	302	101	113	422	53	174	263	138	48	311	67
RTOR Reduction (vph)	0	50	0	0	15	0	0	46	0	0	23	0
Lane Group Flow (vph)	58	353	0	113	460	0	0	529	0	0	403	0
Confl. Peds. (#/hr)	38		17	17		38	125		53	53		125
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	0%	3%	0%	7%	2%	0%	0%	6%	10%	2%	5%	5%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	31.0	31.0		31.0	31.0			26.0			26.0	
Effective Green, g (s)	31.0	31.0		31.0	31.0			26.0			26.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48			0.40			0.40	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	346	1425		363	1774			960			1211	
v/s Ratio Prot		0.12			0.12							
v/s Ratio Perm	0.08			c0.15				c0.22			0.13	
v/c Ratio	0.17	0.25		0.31	0.26			0.55			0.33	
Uniform Delay, d1	9.7	10.1		10.4	10.1			15.0			13.5	
Progression Factor	1.54	1.77		1.09	1.07			1.07			0.76	
Incremental Delay, d2	1.0	0.4		2.0	0.3			1.4			0.7	
Delay (s)	15.9	18.3		13.3	11.2			17.5			10.9	
Level of Service	B	B		B	B			B			B	
Approach Delay (s)		18.0			11.6			17.5			10.9	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	14.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	64.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1039: 111th Street & Indiana Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑	↱		↰↑↱			✥			✥	
Volume (vph)	86	311	86	92	297	92	119	82	47	47	82	119
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	16	12	12	16	12
Total Lost time (s)		5.0	5.0		5.0			5.0			5.0	
Lane Util. Factor		1.00	1.00		0.95			1.00			1.00	
Frt		1.00	0.85		0.97			0.97			0.94	
Flt Protected		0.99	1.00		0.99			0.98			0.99	
Satd. Flow (prot)		1671	1436		3088			1885			1835	
Flt Permitted		0.80	1.00		0.78			0.68			0.90	
Satd. Flow (perm)		1346	1436		2425			1305			1674	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	96	346	96	102	330	102	132	91	52	52	91	132
RTOR Reduction (vph)	0	0	46	0	31	0	0	13	0	0	51	0
Lane Group Flow (vph)	0	442	50	0	503	0	0	262	0	0	224	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm		Perm	Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)		34.0	34.0		34.0			21.0			21.0	
Effective Green, g (s)		34.0	34.0		34.0			21.0			21.0	
Actuated g/C Ratio		0.52	0.52		0.52			0.32			0.32	
Clearance Time (s)		5.0	5.0		5.0			5.0			5.0	
Lane Grp Cap (vph)		704	751		1268			422			541	
v/s Ratio Prot												
v/s Ratio Perm		c0.33	0.03		0.21			c0.20			0.13	
v/c Ratio		0.63	0.07		0.40			0.62			0.41	
Uniform Delay, d1		11.0	7.7		9.3			18.6			17.2	
Progression Factor		1.41	3.20		0.52			1.00			1.00	
Incremental Delay, d2		4.0	0.2		0.9			6.7			2.3	
Delay (s)		19.6	24.7		5.8			25.4			19.5	
Level of Service		B	C		A			C			B	
Approach Delay (s)		20.5			5.8			25.4			19.5	
Approach LOS		C			A			C			B	

Intersection Summary			
HCM Average Control Delay	16.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	80.7%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1040: 111th Street & Martin Luther King Jr Drive

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			↰↑↱			↰↑↱	
Volume (vph)	59	291	32	26	328	60	27	133	47	62	146	65
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	15	8	16	8	8	16	8
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			0.99			1.00	
Flpb, ped/bikes	0.99	1.00		0.98	1.00			1.00			1.00	
Frt	1.00	0.98		1.00	0.98			0.97			0.96	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1444	3021		1566	3019			3583			3595	
Flt Permitted	0.48	1.00		0.54	1.00			0.90			0.84	
Satd. Flow (perm)	735	3021		883	3019			3230			3066	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	66	323	36	29	364	67	30	148	52	69	162	72
RTOR Reduction (vph)	0	13	0	0	23	0	0	30	0	0	42	0
Lane Group Flow (vph)	66	346	0	29	408	0	0	200	0	0	261	0
Confl. Peds. (#/hr)	24		47	47		24	9		36	36		9
Confl. Bikes (#/hr)			4	4			1					1
Heavy Vehicles (%)	9%	4%	0%	0%	3%	0%	0%	1%	10%	0%	0%	8%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	30.0	30.0		30.0	30.0			27.0			27.0	
Effective Green, g (s)	30.0	30.0		30.0	30.0			27.0			27.0	
Actuated g/C Ratio	0.46	0.46		0.46	0.46			0.42			0.42	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	339	1394		408	1393			1342			1274	
v/s Ratio Prot		0.11			c0.14							
v/s Ratio Perm	0.09			0.03				0.06			c0.09	
v/c Ratio	0.19	0.25		0.07	0.29			0.15			0.20	
Uniform Delay, d1	10.4	10.6		9.7	10.9			11.8			12.1	
Progression Factor	0.65	0.64		0.86	0.70			0.95			0.41	
Incremental Delay, d2	1.0	0.3		0.1	0.2			0.2			0.3	
Delay (s)	7.7	7.2		8.5	7.8			11.5			5.3	
Level of Service	A	A		A	A			B			A	
Approach Delay (s)		7.3			7.8			11.5			5.3	
Approach LOS		A			A			B			A	

Intersection Summary			
HCM Average Control Delay	7.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.25		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1041: 111th Street & Cottage Grove Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱			↰↑↱			↰↑↱	
Volume (vph)	47	456	30	86	507	222	25	124	115	340	261	82
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			0.95			0.95	
Frt		0.99			0.96			0.93			0.98	
Flt Protected		1.00			0.99			1.00			0.98	
Satd. Flow (prot)		3278			3168			3089			3181	
Flt Permitted		0.76			0.79			0.90			0.70	
Satd. Flow (perm)		2512			2502			2796			2288	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	52	507	33	96	563	247	28	138	128	378	290	91
RTOR Reduction (vph)	0	7	0	0	60	0	0	69	0	0	16	0
Lane Group Flow (vph)	0	585	0	0	846	0	0	225	0	0	743	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm			pm+pt			Perm		
Protected Phases		4			8		5	2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		25.0			25.0			30.0			17.0	
Effective Green, g (s)		25.0			25.0			30.0			17.0	
Actuated g/C Ratio		0.38			0.38			0.46			0.26	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		966			962			1336			598	
v/s Ratio Prot								c0.03				
v/s Ratio Perm		0.23			c0.34			0.05			c0.32	
v/c Ratio		0.61			0.88			0.17			1.36dl	
Uniform Delay, d1		16.0			18.6			10.2			24.0	
Progression Factor		1.47			1.00			1.00			0.80	
Incremental Delay, d2		2.8			11.3			0.3			122.2	
Delay (s)		26.4			29.9			10.5			141.4	
Level of Service		C			C			B			F	
Approach Delay (s)		26.4			29.9			10.5			141.4	
Approach LOS		C			C			B			F	

Intersection Summary			
HCM Average Control Delay	60.0	HCM Level of Service	E
HCM Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	86.4%	ICU Level of Service	E
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↑↱			↰↑↑↱			↰↑↱			↰↑↱	
Volume (vph)	0	899	138	48	794	0	82	0	36	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	10	10	12	12	12	12	12	12	12
Total Lost time (s)		5.0			5.0			5.0				
Lane Util. Factor		0.95			0.95			1.00				
Frt		0.98			1.00			0.96				
Flt Protected		1.00			1.00			0.97				
Satd. Flow (prot)		3037			3090			1619				
Flt Permitted		1.00			0.80			0.79				
Satd. Flow (perm)		3037			2483			1328				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	999	153	53	882	0	91	0	40	0	0	0
RTOR Reduction (vph)	0	17	0	0	0	0	0	17	0	0	0	0
Lane Group Flow (vph)	0	1135	0	0	935	0	0	114	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	custom			Perm			Perm			Perm		
Protected Phases		4 5 6 11			8			2			2	
Permitted Phases	4 6 11			8			2			2		
Actuated Green, G (s)		65.0			33.0			16.0				
Effective Green, g (s)		58.0			33.0			16.0				
Actuated g/C Ratio		0.64			0.37			0.18				
Clearance Time (s)					5.0			5.0				
Lane Grp Cap (vph)		1957			910			236				
v/s Ratio Prot		c0.37										
v/s Ratio Perm					c0.38			c0.09				
v/c Ratio		0.58			1.03			0.48				
Uniform Delay, d1		9.1			28.5			33.3				
Progression Factor		0.16			1.43			1.00				
Incremental Delay, d2		0.3			35.8			6.9				
Delay (s)		1.8			76.7			40.2				
Level of Service		A			E			D				
Approach Delay (s)		1.8			76.7			40.2			0.0	
Approach LOS		A			E			D			A	

Intersection Summary			
HCM Average Control Delay	35.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	75.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↑	↱		✥		↰	↑	↱
Volume (vph)	224	642	24	112	614	185	61	4	107	212	10	213
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	10	12	12	12	12	16	12	12	12	12
Total Lost time (s)	3.0	5.0		3.0	5.0	3.0		5.0		3.0	5.0	3.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	1.00	0.85		0.92		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.98		0.95	1.00	1.00
Satd. Flow (prot)	1550	3192		1660	3320	1485		1782		1660	1748	1485
Flt Permitted	0.29	1.00		0.33	1.00	1.00		0.88		0.44	1.00	1.00
Satd. Flow (perm)	471	3192		583	3320	1485		1592		763	1748	1485
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	249	713	27	124	682	206	68	4	119	236	11	237
RTOR Reduction (vph)	0	2	0	0	0	96	0	90	0	0	0	135
Lane Group Flow (vph)	249	738	0	124	682	110	0	101	0	236	11	102
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	pm+pt			pm+pt		pm+ov	pm+pt			pm+pt		pm+ov
Protected Phases	7	4		3	8	1	5	2		1	6	7
Permitted Phases	4			8		8	2			6		6
Actuated Green, G (s)	54.9	42.5		47.6	38.2	48.2		12.1		25.1	25.1	38.8
Effective Green, g (s)	54.9	42.5		47.6	38.2	48.2		12.1		25.1	25.1	38.8
Actuated g/C Ratio	0.61	0.47		0.53	0.42	0.54		0.13		0.28	0.28	0.43
Clearance Time (s)	3.0	5.0		3.0	5.0	3.0		5.0		3.0	5.0	3.0
Vehicle Extension (s)	4.0	3.0		4.0	3.0	3.0		4.0		3.0	4.0	4.0
Lane Grp Cap (vph)	452	1507		421	1409	795		214		312	487	640
v/s Ratio Prot	c0.08	0.23		0.03	0.21	0.02				c0.08	0.01	0.02
v/s Ratio Perm	c0.25			0.13		0.06		0.06		c0.13		0.04
v/c Ratio	0.55	0.49		0.29	0.48	0.14		0.47		0.76	0.02	0.16
Uniform Delay, d1	9.2	16.3		10.9	18.8	10.5		36.0		28.6	23.5	15.6
Progression Factor	2.63	1.86		1.00	1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2	1.5	1.0		0.5	1.2	0.1		2.2		10.0	0.0	0.2
Delay (s)	25.8	31.3		11.4	20.0	10.6		38.2		38.6	23.6	15.8
Level of Service	C	C		B	B	B		D		D	C	B
Approach Delay (s)		29.9			17.0			38.2			27.1	
Approach LOS		C			B			D			C	

Intersection Summary			
HCM Average Control Delay	25.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	61.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
1044: 111th Street & Bishop Ford Freeway EB Ramps

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↑↑					↰		↱
Volume (veh/h)	0	518	443	2	333	0	0	0	0	19	0	578
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	576	492	2	370	0	0	0	0	21	0	642
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		498										
pX, platoon unblocked												
vC, conflicting volume	370			576			765	950	288	662	950	185
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	370			576			765	950	288	662	950	185
tC, single (s)	4.2			4.2			7.6	6.6	7.0	7.6	6.6	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	100	94	100	22
cM capacity (veh/h)	1178			987			64	256	706	345	256	823

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1	SB 2
Volume Total	288	288	492	126	247	21	642
Volume Left	0	0	0	2	0	21	0
Volume Right	0	0	492	0	0	0	642
cSH	1700	1700	1700	987	1700	345	823
Volume to Capacity	0.17	0.17	0.29	0.00	0.15	0.06	0.78
Queue Length 95th (ft)	0	0	0	0	0	5	198
Control Delay (s)	0.0	0.0	0.0	0.2	0.0	16.1	23.1
Lane LOS				A		C	C
Approach Delay (s)	0.0			0.1		22.8	
Approach LOS						C	

Intersection Summary			
Average Delay	7.2		
Intersection Capacity Utilization	54.2%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
1045: 111th Street & Bishop Ford Freeway WB Ramps

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰↰		↰			
Sign Control	Stop			Stop	Stop	
Volume (vph)	537	0	335	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	597	0	372	0	0	0

Direction, Lane #	EB 1	EB 2	NB 1
Volume Total (vph)	298	298	372
Volume Left (vph)	298	298	372
Volume Right (vph)	0	0	0
Hadj (s)	0.55	0.55	0.25
Departure Headway (s)	6.2	6.2	5.6
Degree Utilization, x	0.51	0.51	0.58
Capacity (veh/h)	568	570	619
Control Delay (s)	14.3	14.3	16.0
Approach Delay (s)	14.3		16.0
Approach LOS	B		C

Intersection Summary			
Delay	14.9		
HCM Level of Service	B		
Intersection Capacity Utilization	42.4%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Signalized Intersection Capacity Analysis

1046: 115th Street & Marshield Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱		↰	↑↑						↰↑↱	
Volume (vph)	0	483	64	212	535	0	0	0	0	101	21	58
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	12	12	12	12	12
Total Lost time (s)		3.0		4.0	4.0						5.0	
Lane Util. Factor		0.95		1.00	0.95						0.95	
Frt		0.98		1.00	1.00						0.95	
Flt Protected		1.00		0.95	1.00						0.97	
Satd. Flow (prot)		3153		1605	3210						3074	
Flt Permitted		1.00		0.34	1.00						0.97	
Satd. Flow (perm)		3153		574	3210						3074	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	537	71	236	594	0	0	0	0	112	23	64
RTOR Reduction (vph)	0	12	0	0	0	0	0	0	0	0	44	0
Lane Group Flow (vph)	0	596	0	236	594	0	0	0	0	0	155	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type				pm+pt						Split		
Protected Phases		4		3	8					6	6	
Permitted Phases				8								
Actuated Green, G (s)		36.0		49.0	49.0						27.0	
Effective Green, g (s)		36.0		49.0	49.0						27.0	
Actuated g/C Ratio		0.42		0.58	0.58						0.32	
Clearance Time (s)		3.0		4.0	4.0						5.0	
Lane Grp Cap (vph)		1335		452	1850						976	
v/s Ratio Prot		0.19		c0.06	0.19						c0.05	
v/s Ratio Perm				c0.24								
v/c Ratio		0.45		0.52	0.32						0.16	
Uniform Delay, d1		17.4		16.7	9.4						20.8	
Progression Factor		1.00		0.36	0.17						1.00	
Incremental Delay, d2		1.1		3.3	0.3						0.3	
Delay (s)		18.5		9.3	1.9						21.2	
Level of Service		B		A	A						C	
Approach Delay (s)		18.5			4.0			0.0			21.2	
Approach LOS		B			A			A			C	

Intersection Summary			
HCM Average Control Delay	11.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	46.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑			↑↱			↰↑↱				
Volume (vph)	95	489	0	0	684	129	63	90	63	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	11	11	12	12	12	12	12	12
Total Lost time (s)	5.0	5.0			3.0			5.0				
Lane Util. Factor	1.00	0.95			0.95			0.91				
Frt	1.00	1.00			0.98			0.96				
Flt Protected	0.95	1.00			1.00			0.99				
Satd. Flow (prot)	1660	3320			3133			4497				
Flt Permitted	0.19	1.00			1.00			0.99				
Satd. Flow (perm)	335	3320			3133			4497				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	106	543	0	0	760	143	70	100	70	0	0	0
RTOR Reduction (vph)	0	0	0	0	18	0	0	48	0	0	0	0
Lane Group Flow (vph)	106	543	0	0	885	0	0	192	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	pm+pt						Split					
Protected Phases	7	4			8		2	2				
Permitted Phases	4											
Actuated Green, G (s)	48.0	48.0			35.0			27.0				
Effective Green, g (s)	48.0	48.0			35.0			27.0				
Actuated g/C Ratio	0.56	0.56			0.41			0.32				
Clearance Time (s)	5.0	5.0			3.0			5.0				
Lane Grp Cap (vph)	345	1875			1290			1428				
v/s Ratio Prot	0.04	c0.16			c0.28			c0.04				
v/s Ratio Perm	0.14											
v/c Ratio	0.31	0.29			0.69			0.13				
Uniform Delay, d1	19.6	9.6			20.5			20.7				
Progression Factor	0.46	0.31			1.00			1.00				
Incremental Delay, d2	2.1	0.4			3.0			0.2				
Delay (s)	11.1	3.3			23.5			20.9				
Level of Service	B	A			C			C				
Approach Delay (s)		4.6			23.5			20.9			0.0	
Approach LOS		A			C			C			A	

Intersection Summary			
HCM Average Control Delay	16.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	46.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1048: 115th Street & Racine Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↑↱			↰↑↑↱			↰↑↱			↰↑↱	
Volume (vph)	114	358	114	119	426	89	129	78	37	32	87	144
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	10	12	12	15	12	12	15	12
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			1.00			1.00	
Frt		0.97			0.98			0.98			0.93	
Flt Protected		0.99			0.99			0.97			0.99	
Satd. Flow (prot)		2979			3005			1835			1770	
Flt Permitted		0.62			0.65			0.72			0.94	
Satd. Flow (perm)		1874			1968			1361			1676	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	127	398	127	132	473	99	143	87	41	36	97	160
RTOR Reduction (vph)	0	32	0	0	20	0	0	10	0	0	67	0
Lane Group Flow (vph)	0	620	0	0	684	0	0	261	0	0	226	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		23.0			23.0			32.0			32.0	
Effective Green, g (s)		23.0			23.0			32.0			32.0	
Actuated g/C Ratio		0.35			0.35			0.49			0.49	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		663			696			670			825	
v/s Ratio Prot												
v/s Ratio Perm		0.33			c0.35			c0.19			0.14	
v/c Ratio		0.93			0.98			0.39			0.27	
Uniform Delay, d1		20.3			20.8			10.4			9.7	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		22.2			30.2			1.7			0.8	
Delay (s)		42.4			51.0			12.1			10.5	
Level of Service		D			D			B			B	
Approach Delay (s)		42.4			51.0			12.1			10.5	
Approach LOS		D			D			B			B	

Intersection Summary			
HCM Average Control Delay	36.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	83.8%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1049: 115th Street & Halsted Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↑	↱	↰	↑↑	↱
Volume (vph)	106	229	88	199	420	125	124	539	77	110	940	146
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	12	10	16	12	9	10	9	9	10	9
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00	0.97	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.96		1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1562	2993		1574	3644		1508	3069	1333	1520	3099	1336
Flt Permitted	0.31	1.00		0.50	1.00		0.13	1.00	1.00	0.34	1.00	1.00
Satd. Flow (perm)	510	2993		836	3644		212	3069	1333	545	3099	1336
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	112	241	93	209	442	132	131	567	81	116	989	154
RTOR Reduction (vph)	0	48	0	0	33	0	0	0	51	0	0	98
Lane Group Flow (vph)	112	286	0	209	541	0	131	567	30	116	989	56
Confl. Peds. (#/hr)	19		16	16		19	22		25	25		22
Heavy Vehicles (%)	2%	2%	0%	1%	2%	2%	2%	4%	0%	1%	3%	0%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	32.0	27.0		32.0	27.0		38.0	31.0	31.0	38.0	31.0	31.0
Effective Green, g (s)	30.0	28.0		30.0	28.0		36.0	31.0	31.0	36.0	31.0	31.0
Actuated g/C Ratio	0.35	0.33		0.35	0.33		0.42	0.36	0.36	0.42	0.36	0.36
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)	230	986		330	1200		181	1119	486	300	1130	487
v/s Ratio Prot	0.02	0.10		c0.03	0.15		c0.05	0.18		0.03	c0.32	
v/s Ratio Perm	0.15			c0.19			0.26		0.02	0.14		0.04
v/c Ratio	0.49	0.29		0.63	0.45		0.72	0.51	0.06	0.39	0.88	0.12
Uniform Delay, d1	19.9	21.1		22.2	22.4		18.0	21.0	17.5	15.6	25.2	17.9
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.40	1.05	2.37
Incremental Delay, d2	7.2	0.7		8.9	1.2		22.1	1.6	0.2	2.8	7.4	0.4
Delay (s)	27.1	21.9		31.2	23.7		40.1	22.7	17.8	24.6	33.8	42.7
Level of Service	C	C		C	C		D	C	B	C	C	D
Approach Delay (s)		23.2			25.7			25.1			34.1	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	28.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	73.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑	↱		↰↑	↱		↰↑	↱		↰↑	↱
Volume (vph)	48	348	30	83	601	84	33	100	53	51	124	64
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	16	12	12	16	12
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frpb, ped/bikes		1.00	0.96		1.00	0.97		1.00	0.98		1.00	0.99
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frt		1.00	0.85		1.00	0.85		1.00	0.85		1.00	0.85
Flt Protected		0.99	1.00		0.99	1.00		0.99	1.00		0.99	1.00
Satd. Flow (prot)		1965	1466		1990	1480		2015	1506		1995	1511
Flt Permitted		0.60	1.00		0.87	1.00		0.91	1.00		0.89	1.00
Satd. Flow (perm)		1184	1466		1750	1480		1857	1506		1809	1511
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	51	366	32	87	633	88	35	105	56	54	131	67
RTOR Reduction (vph)	0	0	17	0	0	47	0	0	33	0	0	39
Lane Group Flow (vph)	0	417	15	0	720	41	0	140	23	0	185	28
Confl. Peds. (#/hr)	11		20	20		11	1		4	4		1
Confl. Bikes (#/hr)	1		1	1		1			1	1		
Heavy Vehicles (%)	4%	3%	0%	0%	2%	0%	0%	0%	0%	0%	1%	0%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)		30.0	30.0		30.0	30.0		27.0	27.0		27.0	27.0
Effective Green, g (s)		30.0	30.0		30.0	30.0		27.0	27.0		27.0	27.0
Actuated g/C Ratio		0.46	0.46		0.46	0.46		0.42	0.42		0.42	0.42
Clearance Time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		546	677		808	683		771	626		751	628
v/s Ratio Prot												
v/s Ratio Perm		0.35	0.01		c0.41	0.03		0.08	0.02		c0.10	0.02
v/c Ratio		0.76	0.02		0.89	0.06		0.18	0.04		0.25	0.04
Uniform Delay, d1		14.6	9.5		16.0	9.7		12.0	11.3		12.4	11.3
Progression Factor		1.00	1.00		0.44	0.05		1.09	1.31		1.03	0.89
Incremental Delay, d2		9.8	0.1		12.2	0.1		0.5	0.1		0.7	0.1
Delay (s)		24.3	9.6		19.3	0.7		13.6	14.9		13.5	10.2
Level of Service		C	A		B	A		B	B		B	B
Approach Delay (s)		23.3			17.2			14.0			12.6	
Approach LOS		C			B			B			B	

Intersection Summary			
HCM Average Control Delay	17.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	100.4%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1051: 115th Street & State Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	75	385	20	51	566	91	10	109	23	125	214	65
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	0.98		1.00	0.97		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1550	3076		1550	3035		1550	3017		1550	2991	
Flt Permitted	0.95	1.00		0.49	1.00		0.55	1.00		0.66	1.00	
Satd. Flow (perm)	1550	3076		802	3035		892	3017		1074	2991	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	83	428	22	57	629	101	11	121	26	139	238	72
RTOR Reduction (vph)	0	6	0	0	20	0	0	15	0	0	42	0
Lane Group Flow (vph)	83	444	0	57	710	0	11	132	0	139	268	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Prot			Perm			Perm			Perm		
Protected Phases	7	4			8			2			6	
Permitted Phases				8			2			6		
Actuated Green, G (s)	7.0	32.0		22.0	22.0		27.0	27.0		27.0	27.0	
Effective Green, g (s)	7.0	32.0		22.0	22.0		27.0	27.0		27.0	27.0	
Actuated g/C Ratio	0.11	0.49		0.34	0.34		0.42	0.42		0.42	0.42	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	167	1514		271	1027		371	1253		446	1242	
v/s Ratio Prot	c0.05	0.14			c0.23			0.04			0.09	
v/s Ratio Perm				0.07			0.01			c0.13		
v/c Ratio	0.50	0.29		0.21	0.69		0.03	0.11		0.31	0.22	
Uniform Delay, d1	27.3	9.8		15.3	18.6		11.2	11.6		12.8	12.2	
Progression Factor	1.16	0.56		0.92	0.96		0.83	0.83		1.11	1.10	
Incremental Delay, d2	8.6	0.4		1.0	2.2		0.1	0.2		1.8	0.4	
Delay (s)	40.4	5.9		15.1	20.1		9.5	9.8		15.9	13.8	
Level of Service	D	A		B	C		A	A		B	B	
Approach Delay (s)		11.3			19.7			9.8			14.4	
Approach LOS		B			B			A			B	

Intersection Summary			
HCM Average Control Delay	15.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	49.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			↰↑↱			↰↑↱	
Volume (vph)	64	267	166	247	330	63	412	300	189	55	295	50
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	12	12	12	12	12	12
Total Lost time (s)	4.0	4.0		3.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frt	1.00	0.94		1.00	0.98			0.97			0.98	
Flt Protected	0.95	1.00		0.95	1.00			0.98			0.99	
Satd. Flow (prot)	1550	2921		1550	3025			3144			3236	
Flt Permitted	0.50	1.00		0.95	1.00			0.64			0.68	
Satd. Flow (perm)	813	2921		1550	3025			2049			2229	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	71	297	184	274	367	70	458	333	210	61	328	56
RTOR Reduction (vph)	0	127	0	0	24	0	0	37	0	0	17	0
Lane Group Flow (vph)	71	354	0	274	413	0	0	964	0	0	428	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Prot			Perm			Perm		
Protected Phases		4		3	8			2			6	
Permitted Phases	4						2			6		
Actuated Green, G (s)	20.0	20.0		6.0	29.0			25.0			25.0	
Effective Green, g (s)	20.0	20.0		6.0	29.0			25.0			25.0	
Actuated g/C Ratio	0.31	0.31		0.09	0.45			0.38			0.38	
Clearance Time (s)	4.0	4.0		3.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	250	899		143	1350			788			857	
v/s Ratio Prot		c0.12		c0.18	0.14							
v/s Ratio Perm	0.09							c0.47			0.19	
v/c Ratio	0.28	0.39		1.92	0.31			1.34dl			0.50	
Uniform Delay, d1	17.1	17.7		29.5	11.5			20.0			15.2	
Progression Factor	0.81	0.68		1.27	1.18			1.03			0.69	
Incremental Delay, d2	2.8	1.3		423.2	0.2			111.6			2.0	
Delay (s)	16.6	13.3		460.7	13.8			132.3			12.5	
Level of Service	B	B		F	B			F			B	
Approach Delay (s)		13.7			186.1			132.3			12.5	
Approach LOS		B			F			F			B	

Intersection Summary			
HCM Average Control Delay	102.6	HCM Level of Service	F
HCM Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	80.9%	ICU Level of Service	D
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1053: 115th Street & Indiana Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱			↰↑↑↱				
Volume (vph)	26	454	16	75	647	75	55	110	165	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	12	14	12	10	15	10
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			0.95				
Frt		1.00			0.99			0.93				
Flt Protected		1.00			1.00			0.99				
Satd. Flow (prot)		1620			1603			3249				
Flt Permitted		0.94			0.91			0.99				
Satd. Flow (perm)		1529			1466			3249				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	29	504	18	83	719	83	61	122	183	0	0	0
RTOR Reduction (vph)	0	1	0	0	5	0	0	139	0	0	0	0
Lane Group Flow (vph)	0	550	0	0	880	0	0	227	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm			Perm					
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Actuated Green, G (s)		41.5			41.5			15.5				
Effective Green, g (s)		41.5			41.5			15.5				
Actuated g/C Ratio		0.64			0.64			0.24				
Clearance Time (s)		4.0			4.0			4.0				
Vehicle Extension (s)		3.0			3.0			8.0				
Lane Grp Cap (vph)		976			936			775				
v/s Ratio Prot												
v/s Ratio Perm		0.36			c0.60			0.07				
v/c Ratio		0.56			0.94			0.29				
Uniform Delay, d1		6.6			10.6			20.3				
Progression Factor		1.06			1.00			1.00				
Incremental Delay, d2		1.5			18.1			0.9				
Delay (s)		8.5			28.8			21.2				
Level of Service		A			C			C				
Approach Delay (s)		8.5			28.8			21.2			0.0	
Approach LOS		A			C			C			A	

Intersection Summary			
HCM Average Control Delay	21.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	85.4%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰↑	↑↱		↰	↱
Volume (veh/h)	133	474	615	39	119	174
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	140	499	647	41	125	183
Pedestrians		5	6		17	
Lane Width (ft)		16.0	16.0		10.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		1	1		1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		1319	491			
pX, platoon unblocked	0.83				0.83	0.83
vC, conflicting volume	705				1470	690
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	540				1464	521
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	83				0	60
cM capacity (veh/h)	829				97	455

Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total	639	688	125	183
Volume Left	140	0	125	0
Volume Right	0	41	0	183
cSH	829	1700	97	455
Volume to Capacity	0.17	0.40	1.30	0.40
Queue Length 95th (ft)	15	0	222	48
Control Delay (s)	4.1	0.0	271.4	18.1
Lane LOS	A		F	C
Approach Delay (s)	4.1	0.0	121.0	
Approach LOS			F	

Intersection Summary			
Average Delay	24.4		
Intersection Capacity Utilization	88.8%	ICU Level of Service	E
Analysis Period (min)	15		

HCM Signalized Intersection Capacity Analysis
1055: 115th Street & Cottage Grove Avenue

1/14/2013

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↱			↰	↰↱	
Volume (vph)	710	0	1	626	3	29
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0			4.0	4.0	
Lane Util. Factor	1.00			1.00	1.00	
Frt	1.00			1.00	0.88	
Flt Protected	1.00			1.00	1.00	
Satd. Flow (prot)	1748			1747	1525	
Flt Permitted	1.00			1.00	1.00	
Satd. Flow (perm)	1748			1747	1525	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	789	0	1	696	3	32
RTOR Reduction (vph)	0	0	0	0	27	0
Lane Group Flow (vph)	789	0	0	697	8	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type			Perm			
Protected Phases	1 2 4			4	3	
Permitted Phases			4			
Actuated Green, G (s)	63.0			31.0	14.0	
Effective Green, g (s)	59.0			31.0	14.0	
Actuated g/C Ratio	0.69			0.36	0.16	
Clearance Time (s)				4.0	4.0	
Lane Grp Cap (vph)	1213			637	251	
v/s Ratio Prot	c0.45				c0.01	
v/s Ratio Perm				0.40		
v/c Ratio	0.65			1.09	0.03	
Uniform Delay, d1	7.2			27.0	29.8	
Progression Factor	0.12			1.00	1.00	
Incremental Delay, d2	0.2			64.1	0.2	
Delay (s)	1.1			91.1	30.1	
Level of Service	A			F	C	
Approach Delay (s)	1.1			91.1	30.1	
Approach LOS	A			F	C	

Intersection Summary			
HCM Average Control Delay	43.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	49.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
1056: 115th Street & Bishop Ford Fwy

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱			↰						↰	↱
Volume (veh/h)	0	253	616	32	410	0	0	0	0	17	6	252
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	281	684	36	456	0	0	0	0	19	7	280
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	456			281			1153	1150	483	667	808	456
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	456			281			1153	1150	483	667	808	456
tC, single (s)	4.1			4.2			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			97			100	100	100	94	98	49
cM capacity (veh/h)	1116			1264			73	194	535	341	308	552

Direction, Lane #	EB 1	EB 2	WB 1	SB 1	SB 2
Volume Total	187	778	491	26	280
Volume Left	0	0	36	19	0
Volume Right	0	684	0	0	280
cSH	1700	1700	1264	332	552
Volume to Capacity	0.11	0.46	0.03	0.08	0.51
Queue Length 95th (ft)	0	0	2	6	71
Control Delay (s)	0.0	0.0	0.9	16.8	18.1
Lane LOS			A	C	C
Approach Delay (s)	0.0		0.9	17.9	
Approach LOS				C	

Intersection Summary			
Average Delay	3.4		
Intersection Capacity Utilization	60.6%	ICU Level of Service	B
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
1057: 115th Street &

1/14/2013

	↗	↘	↖	↑	↓	↙
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰↰		↰			
Sign Control	Stop			Stop	Stop	
Volume (vph)	270	0	442	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	300	0	491	0	0	0

Direction, Lane #	EB 1	EB 2	NB 1
Volume Total (vph)	150	150	491
Volume Left (vph)	150	150	491
Volume Right (vph)	0	0	0
Hadj (s)	0.55	0.55	0.25
Departure Headway (s)	6.4	6.4	5.0
Degree Utilization, x	0.27	0.27	0.68
Capacity (veh/h)	536	536	697
Control Delay (s)	10.5	10.5	18.1
Approach Delay (s)	10.5		18.1
Approach LOS	B		C

Intersection Summary			
Delay	15.2		
HCM Level of Service	C		
Intersection Capacity Utilization	40.6%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Signalized Intersection Capacity Analysis
1058: 119th Street & Marshield Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↰↑					↰	↰↑↱	↱
Volume (vph)	0	501	345	273	661	0	0	0	0	279	269	372
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	12	13	12	12	12	12	10	10	11
Total Lost time (s)		6.0	6.0		6.0					6.0	6.0	6.0
Lane Util. Factor		0.95	1.00		0.95					0.86	0.81	0.86
Frpb, ped/bikes		1.00	0.98		1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00					1.00	1.00	1.00
Frt		1.00	0.85		1.00					1.00	0.95	0.85
Flt Protected		1.00	1.00		0.99					0.95	0.99	1.00
Satd. Flow (prot)		3179	1232		3425					1359	3806	1133
Flt Permitted		1.00	1.00		0.99					0.95	0.99	1.00
Satd. Flow (perm)		3179	1232		3425					1359	3806	1133
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	527	363	287	696	0	0	0	0	294	283	392
RTOR Reduction (vph)	0	0	230	0	0	0	0	0	0	0	53	113
Lane Group Flow (vph)	0	527	133	0	983	0	0	0	0	162	558	83
Confl. Peds. (#/hr)	4		6	6		4						
Heavy Vehicles (%)	0%	4%	6%	1%	2%	0%	0%	0%	0%	1%	1%	1%
Parking (#/hr)			0									0
Turn Type			Perm	Split						Split		custom
Protected Phases		2		10 12 14	10 12 14					4	4	
Permitted Phases			2									4 2
Actuated Green, G (s)		39.0	39.0		68.1					23.0	23.0	68.0
Effective Green, g (s)		39.0	39.0		68.1					23.0	23.0	68.0
Actuated g/C Ratio		0.24	0.24		0.43					0.14	0.14	0.42
Clearance Time (s)		6.0	6.0							6.0	6.0	
Vehicle Extension (s)		3.0	3.0							3.0	3.0	
Lane Grp Cap (vph)		775	300		1458					195	547	482
v/s Ratio Prot		c0.17			c0.29					0.12	c0.15	
v/s Ratio Perm			0.11									0.07
v/c Ratio		0.68	0.44		0.67					0.83	1.02	0.17
Uniform Delay, d1		54.8	51.3		37.0					66.6	68.5	28.5
Progression Factor		1.00	1.00		0.06					1.00	1.00	1.00
Incremental Delay, d2		4.8	4.7		0.1					24.9	43.6	0.2
Delay (s)		59.6	56.0		2.3					91.5	112.1	28.7
Level of Service		E	E		A					F	F	C
Approach Delay (s)		58.1			2.3			0.0			91.8	
Approach LOS		E			A			A			F	

Intersection Summary			
HCM Average Control Delay	50.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	31.9
Intersection Capacity Utilization	76.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1059: 119th Street & Ashland Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑			↑↑	↱	↰	↰↑↱				
Volume (vph)	292	488	0	0	602	144	332	214	196	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	13	12	12	11	12	13	13	14	12	12	12
Total Lost time (s)	6.0	6.0			6.0	6.0	6.0	6.0				
Lane Util. Factor	1.00	0.95			0.95	1.00	0.91	0.91				
Frt	1.00	1.00			1.00	0.85	1.00	0.94				
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.99				
Satd. Flow (prot)	1605	3431			3210	1485	1561	3064				
Flt Permitted	0.95	1.00			1.00	1.00	0.95	0.99				
Satd. Flow (perm)	1605	3431			3210	1485	1561	3064				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	324	542	0	0	669	160	369	238	218	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	82	0	60	0	0	0	0
Lane Group Flow (vph)	324	542	0	0	669	78	280	485	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Split					Perm	Split					
Protected Phases	2 4 8	2 4 8			10		12	12				
Permitted Phases						10						
Actuated Green, G (s)	83.9	83.9			37.1	37.1	12.0	12.0				
Effective Green, g (s)	83.9	83.9			37.1	37.1	12.0	12.0				
Actuated g/C Ratio	0.52	0.52			0.23	0.23	0.08	0.08				
Clearance Time (s)					6.0	6.0	6.0	6.0				
Vehicle Extension (s)					3.0	3.0	3.0	3.0				
Lane Grp Cap (vph)	842	1799			744	344	117	230				
v/s Ratio Prot	c0.20	0.16			c0.21		c0.18	0.16				
v/s Ratio Perm						0.05						
v/c Ratio	0.38	0.30			0.90	0.23	2.39	2.11				
Uniform Delay, d1	22.7	21.5			59.6	49.8	74.0	74.0				
Progression Factor	0.06	0.06			1.00	1.00	1.00	1.00				
Incremental Delay, d2	0.2	0.1			13.7	0.3	652.3	513.1				
Delay (s)	1.4	1.3			73.3	50.2	726.3	587.1				
Level of Service	A	A			E	D	F	F				
Approach Delay (s)		1.4			68.8			634.4			0.0	
Approach LOS		A			E			F			A	

Intersection Summary			
HCM Average Control Delay	230.8	HCM Level of Service	F
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	29.0
Intersection Capacity Utilization	65.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑↱		↰	↑ ↑↱		↰	↑ ↑↱	
Volume (vph)	140	273	136	129	270	107	108	522	80	106	803	120
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	14	12	10	10	12	9	10	12
Total Lost time (s)	4.0	4.0	5.0	4.0	5.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.96		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1576	1600	1372	1594	1766		1578	3009		1537	3001	
Flt Permitted	0.26	1.00	1.00	0.41	1.00		0.13	1.00		0.33	1.00	
Satd. Flow (perm)	438	1600	1372	683	1766		216	3009		527	3001	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	147	287	143	136	284	113	114	549	84	112	845	126
RTOR Reduction (vph)	0	0	100	0	16	0	0	13	0	0	13	0
Lane Group Flow (vph)	147	287	43	136	381	0	114	620	0	112	958	0
Confl. Peds. (#/hr)	28		8	8		28	59		11	11		59
Confl. Bikes (#/hr)	3					3	1		2	2		1
Heavy Vehicles (%)	1%	5%	2%	0%	4%	0%	1%	4%	0%	0%	3%	3%
Turn Type	pm+pt		Perm	pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)	34.0	27.0	27.0	34.0	27.0		43.0	36.0		40.2	34.6	
Effective Green, g (s)	32.0	28.0	27.0	32.0	27.0		41.0	36.0		38.2	34.6	
Actuated g/C Ratio	0.35	0.31	0.30	0.35	0.30		0.45	0.40		0.42	0.38	
Clearance Time (s)	3.0	5.0	5.0	3.0	5.0		3.0	4.0		3.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	230	494	409	302	526		188	1196		273	1146	
v/s Ratio Prot	c0.04	0.18		0.03	c0.22		c0.04	0.21		0.02	c0.32	
v/s Ratio Perm	0.18		0.03	0.13			0.23			0.15		
v/c Ratio	0.64	0.58	0.10	0.45	0.72		0.61	0.52		0.41	0.84	
Uniform Delay, d1	22.1	26.4	23.0	21.1	28.5		17.4	20.7		16.7	25.4	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	5.7	4.9	0.5	1.1	8.4		5.4	1.6		1.0	7.3	
Delay (s)	27.8	31.3	23.5	22.2	36.9		22.8	22.3		17.7	32.7	
Level of Service	C	C	C	C	D		C	C		B	C	
Approach Delay (s)		28.5			33.1			22.4			31.2	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	28.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	90.6	Sum of lost time (s)	17.0
Intersection Capacity Utilization	79.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1061: 119th Street & Wentworth Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱		✥			✥	
Volume (vph)	39	348	61	73	437	82	37	59	34	36	91	70
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	10	10	10	12	15	12	12	16	12
Total Lost time (s)		3.0	3.0		3.0	3.0		3.0			3.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00			1.00	
Frpb, ped/bikes		1.00	0.96		1.00	0.97		0.99			0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00			1.00	
Frt		1.00	0.85		1.00	0.85		0.96			0.95	
Flt Protected		0.99	1.00		0.99	1.00		0.99			0.99	
Satd. Flow (prot)		1970	1467		1624	1381		1868			1875	
Flt Permitted		0.93	1.00		0.90	1.00		0.90			0.94	
Satd. Flow (perm)		1833	1467		1470	1381		1700			1781	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	41	366	64	77	460	86	39	62	36	38	96	74
RTOR Reduction (vph)	0	0	32	0	0	36	0	20	0	0	30	0
Lane Group Flow (vph)	0	407	32	0	537	50	0	117	0	0	178	0
Confl. Peds. (#/hr)	12		20	20		12	8		2	2		8
Confl. Bikes (#/hr)	1		2	2		1			1	1		
Heavy Vehicles (%)	3%	3%	0%	0%	3%	0%	0%	0%	0%	0%	1%	3%
Turn Type	Perm		Perm	Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)		32.0	32.0		32.0	32.0		27.0			27.0	
Effective Green, g (s)		32.0	32.0		32.0	32.0		27.0			27.0	
Actuated g/C Ratio		0.49	0.49		0.49	0.49		0.42			0.42	
Clearance Time (s)		3.0	3.0		3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)		902	722		724	680		706			740	
v/s Ratio Prot												
v/s Ratio Perm		0.22	0.02		c0.37	0.04		0.07			c0.10	
v/c Ratio		0.45	0.04		0.74	0.07		0.17			0.24	
Uniform Delay, d1		10.8	8.6		13.2	8.7		11.9			12.3	
Progression Factor		1.00	1.00		1.90	3.28		1.00			1.46	
Incremental Delay, d2		1.6	0.1		2.5	0.1		0.5			0.7	
Delay (s)		12.4	8.7		27.6	28.6		12.4			18.7	
Level of Service		B	A		C	C		B			B	
Approach Delay (s)		11.9			27.8			12.4			18.7	
Approach LOS		B			C			B			B	

Intersection Summary			
HCM Average Control Delay	19.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	74.2%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1062: 119th Street & State Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱		↰	↱		✥	
Volume (vph)	59	259	41	71	472	20	36	114	34	17	184	70
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frpb, ped/bikes		1.00	0.94		1.00	0.97		1.00	0.97		0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		0.97	
Flt Protected		0.99	1.00		0.99	1.00		0.99	1.00		1.00	
Satd. Flow (prot)		1753	1443		1724	1487		1713	1489		1712	
Flt Permitted		0.47	1.00		0.85	1.00		0.89	1.00		0.98	
Satd. Flow (perm)		829	1443		1470	1487		1541	1489		1685	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	62	273	43	75	497	21	38	120	36	18	194	74
RTOR Reduction (vph)	0	0	28	0	0	8	0	0	18	0	19	0
Lane Group Flow (vph)	0	335	15	0	572	13	0	158	18	0	267	0
Confl. Peds. (#/hr)	19		25	25		19	3		6	6		3
Confl. Bikes (#/hr)	1		2	2		1			1	1		
Heavy Vehicles (%)	0%	2%	0%	0%	4%	0%	0%	5%	0%	0%	0%	2%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		23.0	23.0		23.0	23.0		32.0	32.0		32.0	
Effective Green, g (s)		23.0	23.0		23.0	23.0		32.0	32.0		32.0	
Actuated g/C Ratio		0.35	0.35		0.35	0.35		0.49	0.49		0.49	
Clearance Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	
Lane Grp Cap (vph)		293	511		520	526		759	733		830	
v/s Ratio Prot												
v/s Ratio Perm		c0.40	0.01		0.39	0.01		0.10	0.01		c0.16	
v/c Ratio		1.14	0.03		1.10	0.02		0.21	0.02		0.32	
Uniform Delay, d1		21.0	13.7		21.0	13.7		9.3	8.5		10.0	
Progression Factor		1.73	3.11		0.97	0.87		0.17	0.23		1.09	
Incremental Delay, d2		95.3	0.1		65.2	0.1		0.2	0.0		1.0	
Delay (s)		131.6	42.7		85.6	12.0		1.7	2.0		11.9	
Level of Service		F	D		F	B		A	A		B	
Approach Delay (s)		121.5			83.0			1.7			11.9	
Approach LOS		F			F			A			B	

Intersection Summary			
HCM Average Control Delay	68.2	HCM Level of Service	E
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	83.2%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1063: 119th Street & Michigan Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		✥			✥			↰	↱
Volume (vph)	229	35	76	8	14	11	38	256	8	31	556	531
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	14	12	12	16	12	12	16	12
Total Lost time (s)		3.0	3.0		3.0			3.0			3.0	3.0
Lane Util. Factor		1.00	1.00		1.00			1.00			1.00	1.00
Frpb, ped/bikes		1.00	0.95		0.98			1.00			1.00	0.94
Flpb, ped/bikes		0.98	1.00		0.99			1.00			1.00	1.00
Frt		1.00	0.85		0.96			1.00			1.00	0.85
Flt Protected		0.96	1.00		0.99			0.99			1.00	1.00
Satd. Flow (prot)		1860	1440		1765			1996			1975	1382
Flt Permitted		0.76	1.00		0.93			0.81			0.97	1.00
Satd. Flow (perm)		1468	1440		1657			1631			1928	1382
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	254	39	84	9	16	12	42	284	9	34	618	590
RTOR Reduction (vph)	0	0	49	0	9	0	0	2	0	0	0	201
Lane Group Flow (vph)	0	293	35	0	28	0	0	333	0	0	652	389
Confl. Peds. (#/hr)	37		53	53		37	39		54	54		39
Confl. Bikes (#/hr)							2					2
Heavy Vehicles (%)	4%	0%	1%	0%	0%	0%	0%	1%	0%	0%	3%	4%
Turn Type	pm+pt		Perm	Perm			Perm			Perm		Perm
Protected Phases	7	4			8			2			6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)		27.0	27.0		17.0			32.0			32.0	32.0
Effective Green, g (s)		27.0	27.0		17.0			32.0			32.0	32.0
Actuated g/C Ratio		0.42	0.42		0.26			0.49			0.49	0.49
Clearance Time (s)		3.0	3.0		3.0			3.0			3.0	3.0
Lane Grp Cap (vph)		658	598		433			803			949	680
v/s Ratio Prot		c0.05										
v/s Ratio Perm		0.13	0.02		0.02			0.20			c0.34	0.28
v/c Ratio		0.45	0.06		0.06			0.42			0.69	0.57
Uniform Delay, d1		13.6	11.4		18.0			10.5			12.7	11.7
Progression Factor		1.15	1.99		1.00			0.51			0.76	0.84
Incremental Delay, d2		1.1	0.1		0.3			1.1			3.2	2.7
Delay (s)		16.8	22.8		18.3			6.4			12.7	12.5
Level of Service		B	C		B			A			B	B
Approach Delay (s)		18.1			18.3			6.4			12.6	
Approach LOS		B			B			A			B	

Intersection Summary			
HCM Average Control Delay	12.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	78.4%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↱		↰	↑↑					↰	↰↑↱	↱
Volume (vph)	0	894	289	375	1072	0	0	0	0	513	284	334
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	12	11	8	8	8	11	12	14
Total Lost time (s)		6.0		4.5	6.0					6.0	6.0	6.0
Lane Util. Factor		0.91		1.00	0.95					0.91	0.86	0.91
Frpb, ped/bikes		0.99		1.00	1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Frt		0.96		1.00	1.00					1.00	0.98	0.85
Flt Protected		1.00		0.95	1.00					0.95	0.98	1.00
Satd. Flow (prot)		4573		1621	3320					1489	2913	1442
Flt Permitted		1.00		0.11	1.00					0.95	0.98	1.00
Satd. Flow (perm)		4573		190	3320					1489	2913	1442
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	941	304	395	1128	0	0	0	0	540	299	352
RTOR Reduction (vph)	0	45	0	0	0	0	0	0	0	0	9	76
Lane Group Flow (vph)	0	1200	0	395	1128	0	0	0	0	308	603	195
Confl. Peds. (#/hr)	15		11	11		15						
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	0%	3%	3%	2%	3%	0%	0%	0%	0%	1%	3%	3%
Turn Type				pm+pt						Perm		Perm
Protected Phases		2		1	6						4	
Permitted Phases				6						4		4
Actuated Green, G (s)		43.5		74.9	74.9					28.1	28.1	28.1
Effective Green, g (s)		43.5		74.9	74.9					28.1	28.1	28.1
Actuated g/C Ratio		0.38		0.65	0.65					0.24	0.24	0.24
Clearance Time (s)		6.0		4.5	6.0					6.0	6.0	6.0
Vehicle Extension (s)		7.0		3.5	7.0					3.5	3.5	3.5
Lane Grp Cap (vph)		1730		458	2162					364	712	352
v/s Ratio Prot		0.26		c0.20	0.34							
v/s Ratio Perm				c0.36						0.21	0.21	0.14
v/c Ratio		0.69		0.86	0.52					0.85	0.85	0.55
Uniform Delay, d1		30.1		29.1	10.6					41.4	41.4	38.0
Progression Factor		1.00		0.86	1.69					1.00	1.00	1.00
Incremental Delay, d2		2.3		10.4	0.6					16.7	9.4	2.1
Delay (s)		32.4		35.5	18.5					58.1	50.8	40.0
Level of Service		C		D	B					E	D	D
Approach Delay (s)		32.4			22.9			0.0			50.2	
Approach LOS		C			C			A			D	

Intersection Summary			
HCM Average Control Delay	34.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	10.5
Intersection Capacity Utilization	105.3%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↑			↑↑	↱		↰↑↱				
Volume (vph)	341	1066	0	0	1017	271	430	351	318	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	12	12	12	11	12	12	12	12	12	12	12
Total Lost time (s)	6.0	6.0			6.0	6.0		6.0				
Lane Util. Factor	0.97	0.95			0.95	1.00		0.91				
Frpb, ped/bikes	1.00	1.00			1.00	0.98		1.00				
Flpb, ped/bikes	1.00	1.00			1.00	1.00		1.00				
Frt	1.00	1.00			1.00	0.85		0.96				
Flt Protected	0.95	1.00			1.00	1.00		0.98				
Satd. Flow (prot)	3144	3353			3241	1489		4521				
Flt Permitted	0.14	1.00			1.00	1.00		0.98				
Satd. Flow (perm)	460	3353			3241	1489		4521				
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	359	1122	0	0	1071	285	453	369	335	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	85	0	62	0	0	0	0
Lane Group Flow (vph)	359	1122	0	0	1071	200	0	1095	0	0	0	0
Confl. Peds. (#/hr)	7		5	5		7						
Confl. Bikes (#/hr)	1		1	1		1						
Heavy Vehicles (%)	2%	2%	0%	0%	2%	1%	2%	1%	3%	0%	0%	0%
Turn Type	pm+pt					Perm	Perm					
Protected Phases	5	2			6			8				
Permitted Phases	2					6	8					
Actuated Green, G (s)	71.2	71.2			53.0	53.0		31.8				
Effective Green, g (s)	71.2	71.2			53.0	53.0		31.8				
Actuated g/C Ratio	0.62	0.62			0.46	0.46		0.28				
Clearance Time (s)	6.0	6.0			6.0	6.0		6.0				
Vehicle Extension (s)	3.5	7.0			7.0	7.0		5.0				
Lane Grp Cap (vph)	570	2076			1494	686		1250				
v/s Ratio Prot	0.07	c0.33			c0.33							
v/s Ratio Perm	0.32					0.13		0.24				
v/c Ratio	0.63	0.54			0.72	0.29		0.88				
Uniform Delay, d1	15.3	12.5			25.0	19.3		39.7				
Progression Factor	1.32	0.17			0.98	1.25		1.00				
Incremental Delay, d2	1.5	0.7			2.2	0.8		7.7				
Delay (s)	21.6	2.8			26.6	25.0		47.4				
Level of Service	C	A			C	C		D				
Approach Delay (s)		7.4			26.3			47.4			0.0	
Approach LOS		A			C			D			A	

Intersection Summary			
HCM Average Control Delay	25.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	105.3%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1066: 127th Street & S Ashland

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Lane Configurations	↰	↑↑	↱	↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	135	671	408	104	779	67	227	179	66	77	162	121
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	12	11	12	12	10	10	13	10	10	10
Total Lost time (s)	3.5	6.0	3.5	3.5	6.0		3.5	6.0		3.5	6.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		0.99	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.96		1.00	0.94	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1565	3273	1313	1601	3282		1578	3002		1540	2941	
Flt Permitted	0.11	1.00	1.00	0.38	1.00		0.39	1.00		0.59	1.00	
Satd. Flow (perm)	174	3273	1313	646	3282		652	3002		961	2941	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	142	706	429	109	820	71	239	188	69	81	171	127
RTOR Reduction (vph)	0	0	173	0	6	0	0	38	0	0	107	0
Lane Group Flow (vph)	142	706	256	109	885	0	239	219	0	81	191	0
Confl. Peds. (#/hr)	11		23	23		11	8		12	12		8
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	2%	1%	3%	3%	3%	0%	1%	1%	2%	3%	0%	1%
Parking (#/hr)			0									
Turn Type	pm+pt		pm+ov	pm+pt			pm+pt			pm+pt		
Protected Phases	5	2	3	1	6		3	8		7	4	
Permitted Phases	2		2	6			8			4		
Actuated Green, G (s)	64.9	52.3	68.7	43.4	34.3		38.1	26.6		26.2	18.2	
Effective Green, g (s)	64.9	52.3	68.7	43.4	34.3		38.1	26.6		26.2	18.2	
Actuated g/C Ratio	0.56	0.45	0.60	0.38	0.30		0.33	0.23		0.23	0.16	
Clearance Time (s)	3.5	6.0	3.5	3.5	6.0		3.5	6.0		3.5	6.0	
Vehicle Extension (s)	3.0	7.0	3.0	3.0	7.0		3.0	7.0		3.0	7.0	
Lane Grp Cap (vph)	426	1489	784	319	979		348	694		259	465	
v/s Ratio Prot	c0.08	c0.22	0.05	0.03	c0.27		c0.10	0.07		0.02	0.06	
v/s Ratio Perm	0.11		0.15	0.10			c0.13			0.05		
v/c Ratio	0.33	0.47	0.33	0.34	0.90		0.69	0.32		0.31	0.41	
Uniform Delay, d1	15.9	21.8	11.6	23.9	38.8		30.6	36.7		36.2	43.6	
Progression Factor	0.81	0.81	2.26	1.00	1.00		0.98	1.02		1.00	1.00	
Incremental Delay, d2	1.7	0.9	0.2	0.6	13.3		5.3	0.9		0.7	2.1	
Delay (s)	14.5	18.5	26.4	24.6	52.1		35.3	38.2		36.9	45.7	
Level of Service	B	B	C	C	D		D	D		D	D	
Approach Delay (s)		20.7			49.1			36.8			43.8	
Approach LOS		C			D			D			D	

Intersection Summary			
HCM Average Control Delay	35.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	19.0
Intersection Capacity Utilization	75.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	46	221	367	86	324	113	362	340	81	206	408	56
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	11	12	11	12	12	11	13	12	10	11	12
Total Lost time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.91		1.00	0.96		1.00	0.97		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1706	2910		1653	3235		1620	3405		1580	3183	
Flt Permitted	0.44	1.00		0.24	1.00		0.32	1.00		0.50	1.00	
Satd. Flow (perm)	794	2910		417	3235		544	3405		824	3183	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	48	233	386	91	341	119	381	358	85	217	429	59
RTOR Reduction (vph)	0	242	0	0	28	0	0	18	0	0	9	0
Lane Group Flow (vph)	48	377	0	91	432	0	381	425	0	217	479	0
Confl. Peds. (#/hr)	12		3	3		12	5					5
Heavy Vehicles (%)	0%	2%	2%	0%	1%	1%	2%	1%	0%	1%	2%	0%
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	39.6	32.9		46.0	36.1		56.2	44.2		40.1	32.1	
Effective Green, g (s)	39.6	32.9		46.0	36.1		56.2	44.2		40.1	32.1	
Actuated g/C Ratio	0.34	0.29		0.40	0.31		0.49	0.38		0.35	0.28	
Clearance Time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	3.5	7.0		3.5	7.0		3.5	7.0		3.5	7.0	
Lane Grp Cap (vph)	327	833		273	1016		454	1309		340	888	
v/s Ratio Prot	0.01	0.13		c0.03	c0.13		c0.15	0.12		0.04	0.15	
v/s Ratio Perm	0.04			0.10			c0.26			0.18		
v/c Ratio	0.15	0.45		0.33	0.43		0.84	0.32		0.64	0.54	
Uniform Delay, d1	25.5	33.7		23.1	31.2		20.8	24.9		28.8	35.2	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		0.98	0.97	
Incremental Delay, d2	0.2	1.8		0.9	1.3		13.1	0.7		3.8	2.2	
Delay (s)	25.7	35.4		23.9	32.5		33.9	25.6		32.1	36.2	
Level of Service	C	D		C	C		C	C		C	D	
Approach Delay (s)		34.7			31.1			29.4			34.9	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	32.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	75.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	105	644	141	10	543	135	104	287	9	215	609	183
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	10	12	9	11	12	9	9	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.98			0.97		1.00	1.00		1.00	0.97	
Flt Protected		0.99			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3034			3003		1452	3227		1522	2872	
Flt Permitted		0.58			0.94		0.19	1.00		0.54	1.00	
Satd. Flow (perm)		1777			2812		284	3227		873	2872	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	117	716	157	11	603	150	116	319	10	239	677	203
RTOR Reduction (vph)	0	24	0	0	33	0	0	3	0	0	44	0
Lane Group Flow (vph)	0	966	0	0	731	0	116	326	0	239	836	0
Confl. Peds. (#/hr)	4		2	2		4	8		4	4		8
Confl. Bikes (#/hr)							2					2
Heavy Vehicles (%)	1%	2%	2%	0%	2%	6%	6%	2%	0%	1%	3%	3%
Turn Type	pm+pt			Perm			pm+pt			pm+pt		
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		25.0			17.0		28.0	24.0		28.0	24.0	
Effective Green, g (s)		25.0			17.0		28.0	24.0		28.0	24.0	
Actuated g/C Ratio		0.38			0.26		0.43	0.37		0.43	0.37	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		761			735		194	1192		416	1060	
v/s Ratio Prot		c0.08					c0.04	0.10		0.04	c0.29	
v/s Ratio Perm		c0.41			0.26		0.22			0.21		
v/c Ratio		1.27			0.99		0.60	0.27		0.57	0.79	
Uniform Delay, d1		20.0			24.0		12.5	14.4		13.0	18.2	
Progression Factor		1.00			1.46		1.21	0.58		1.00	1.00	
Incremental Delay, d2		131.5			8.7		12.3	0.5		5.7	6.0	
Delay (s)		151.5			43.8		27.4	8.9		18.6	24.2	
Level of Service		F			D		C	A		B	C	
Approach Delay (s)		151.5			43.8			13.7			23.0	
Approach LOS		F			D			B			C	

Intersection Summary			
HCM Average Control Delay	64.9	HCM Level of Service	E
HCM Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	91.1%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1069: Vermont St & Halsted Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱		↰	↑↱		↰	↑↱	
Volume (vph)	67	229	136	123	292	28	72	462	83	35	698	70
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	12	12	12	12	12
Total Lost time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.94		1.00	0.99		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1708	1899		1600	2011		1676	3218		1435	3274	
Flt Permitted	0.46	1.00		0.41	1.00		0.29	1.00		0.42	1.00	
Satd. Flow (perm)	832	1899		686	2011		516	3218		630	3274	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	69	236	140	127	301	29	74	476	86	36	720	72
RTOR Reduction (vph)	0	33	0	0	5	0	0	22	0	0	12	0
Lane Group Flow (vph)	69	343	0	127	325	0	74	540	0	36	780	0
Confl. Peds. (#/hr)	3		20	20		3	2		3	3		2
Confl. Bikes (#/hr)			1	1			2		2	2		2
Heavy Vehicles (%)	0%	0%	1%	6%	0%	0%	2%	3%	6%	19%	3%	2%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	24.0	24.0		24.0	24.0		31.0	31.0		31.0	31.0	
Effective Green, g (s)	24.0	24.0		24.0	24.0		31.0	31.0		31.0	31.0	
Actuated g/C Ratio	0.37	0.37		0.37	0.37		0.48	0.48		0.48	0.48	
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)	307	701		253	743		246	1535		300	1561	
v/s Ratio Prot		0.18			0.16			0.17			c0.24	
v/s Ratio Perm	0.08			c0.19			0.14			0.06		
v/c Ratio	0.22	0.49		0.50	0.44		0.30	0.35		0.12	0.50	
Uniform Delay, d1	14.1	15.8		15.9	15.4		10.4	10.7		9.4	11.7	
Progression Factor	1.00	1.00		1.33	1.33		1.00	1.00		1.18	0.96	
Incremental Delay, d2	1.7	2.4		0.6	0.2		3.1	0.6		0.4	0.5	
Delay (s)	15.8	18.2		21.7	20.7		13.5	11.3		11.5	11.7	
Level of Service	B	B		C	C		B	B		B	B	
Approach Delay (s)		17.8			21.0			11.6			11.7	
Approach LOS		B			C			B			B	

Intersection Summary			
HCM Average Control Delay	14.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	73.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1070: 127th Street & S Wallance St

	↗	→	↙	←	↖	↰	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	WBL	WBT	WBR	NBL2	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱		↰↑↱				✥			✥	
Volume (vph)	2	843	366	786	32	3	10	9	47	12	0	3
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	10	10	10	12	12	16	12	12	16	12
Total Lost time (s)		5.0		5.0				4.0			4.0	
Lane Util. Factor		0.95		0.95				1.00			1.00	
Frpb, ped/bikes		1.00		1.00				0.99			0.99	
Flpb, ped/bikes		1.00		1.00				1.00			1.00	
Frt		1.00		1.00				0.91			0.95	
Flt Protected		1.00		0.98				0.99			0.97	
Satd. Flow (prot)		3160		3083				1810			1846	
Flt Permitted		0.95		0.57				0.96			0.87	
Satd. Flow (perm)		3008		1778				1749			1649	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	2	887	385	827	34	3	11	9	49	13	0	3
RTOR Reduction (vph)	0	0	0	3	0	0	0	38	0	0	4	0
Lane Group Flow (vph)	0	889	0	1243	0	0	0	34	0	0	17	0
Confl. Peds. (#/hr)	7		4		7		7		2	2		7
Confl. Bikes (#/hr)							2		2	2		2
Heavy Vehicles (%)	0%	1%	2%	1%	6%	0%	0%	0%	0%	0%	0%	0%
Turn Type	Perm		custom				Perm			Perm		
Protected Phases		8	7	4				2			6	
Permitted Phases	8		4 7				2			6		
Actuated Green, G (s)		18.0		27.0				14.0			14.0	
Effective Green, g (s)		18.0		27.0				14.0			14.0	
Actuated g/C Ratio		0.28		0.42				0.22			0.22	
Clearance Time (s)		5.0		5.0				4.0			4.0	
Lane Grp Cap (vph)		833		859				377			355	
v/s Ratio Prot				c0.13								
v/s Ratio Perm		0.30		c0.47				c0.02			0.01	
v/c Ratio		1.07		1.83dl				0.09			0.05	
Uniform Delay, d1		23.5		19.0				20.4			20.2	
Progression Factor		1.41		0.69				1.00			1.00	
Incremental Delay, d2		33.1		206.6				0.5			0.3	
Delay (s)		66.2		219.6				20.9			20.5	
Level of Service		E		F				C			C	
Approach Delay (s)		66.2		219.6				20.9			20.5	
Approach LOS		E		F				C			C	

Intersection Summary			
HCM Average Control Delay	150.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	107.3%	ICU Level of Service	G
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group

Movement	SBR2	NEL	NER
Lane Configurations			
Volume (vph)	5	3	276
Ideal Flow (vphpl)	1800	1800	1800
Lane Width	12	12	12
Total Lost time (s)		5.0	
Lane Util. Factor		1.00	
Frpb, ped/bikes		1.00	
Flpb, ped/bikes		1.00	
Frt		0.87	
Flt Protected		1.00	
Satd. Flow (prot)		1559	
Flt Permitted		1.00	
Satd. Flow (perm)		1559	
Peak-hour factor, PHF	0.95	0.95	0.95
Adj. Flow (vph)	5	3	291
RTOR Reduction (vph)	0	0	0
Lane Group Flow (vph)	0	294	0
Confl. Peds. (#/hr)			
Confl. Bikes (#/hr)			
Heavy Vehicles (%)	0%	0%	0%
Turn Type			
Protected Phases		3	
Permitted Phases			
Actuated Green, G (s)		10.0	
Effective Green, g (s)		10.0	
Actuated g/C Ratio		0.15	
Clearance Time (s)		5.0	
Lane Grp Cap (vph)		240	
v/s Ratio Prot		c0.19	
v/s Ratio Perm			
v/c Ratio		1.23	
Uniform Delay, d1		27.5	
Progression Factor		0.85	
Incremental Delay, d2		130.3	
Delay (s)		153.7	
Level of Service		F	
Approach Delay (s)		153.7	
Approach LOS		F	

Intersection Summary

HCM Signalized Intersection Capacity Analysis
1071: 127th Street & State Street

1/14/2013

	↗	→	←	↖	↘	↙
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰↑	↑↱		↰	↱
Volume (vph)	264	887	958	132	113	234
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		1.00	1.00
Frt		1.00	0.98		1.00	0.85
Flt Protected		0.99	1.00		0.95	1.00
Satd. Flow (prot)		3283	3260		1660	1485
Flt Permitted		0.53	1.00		0.95	1.00
Satd. Flow (perm)		1751	3260		1660	1485
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	293	986	1064	147	126	260
RTOR Reduction (vph)	0	0	17	0	0	82
Lane Group Flow (vph)	0	1279	1194	0	126	178
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type	Perm					Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)		40.0	40.0		17.0	17.0
Effective Green, g (s)		40.0	40.0		17.0	17.0
Actuated g/C Ratio		0.62	0.62		0.26	0.26
Clearance Time (s)		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		1078	2006		434	388
v/s Ratio Prot			0.37		0.08	
v/s Ratio Perm		c0.73				c0.12
v/c Ratio		1.54dl	0.60		0.29	0.46
Uniform Delay, d1		12.5	7.6		19.2	20.1
Progression Factor		1.24	0.69		1.14	1.21
Incremental Delay, d2		84.9	0.9		1.6	3.6
Delay (s)		100.3	6.2		23.4	28.0
Level of Service		F	A		C	C
Approach Delay (s)		100.3	6.2		26.5	
Approach LOS		F	A		C	

Intersection Summary			
HCM Average Control Delay	50.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	83.0%	ICU Level of Service	E
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1072: 127th Street & Michigan Avenue

1/14/2013

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰↑	↑↱		↰	↱
Volume (vph)	81	922	1006	195	287	88
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	12	10	11	12	10	10
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		1.00	1.00
Frpb, ped/bikes		1.00	1.00		1.00	0.99
Flpb, ped/bikes		1.00	1.00		1.00	1.00
Frt		1.00	0.98		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		3119	3112		1506	1343
Flt Permitted		0.68	1.00		0.95	1.00
Satd. Flow (perm)		2145	3112		1506	1343
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	85	971	1059	205	302	93
RTOR Reduction (vph)	0	0	25	0	0	47
Lane Group Flow (vph)	0	1056	1239	0	302	46
Confl. Peds. (#/hr)	2			2		1
Heavy Vehicles (%)	1%	2%	2%	10%	6%	5%
Turn Type	Perm					Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)		34.0	34.0		23.0	23.0
Effective Green, g (s)		34.0	34.0		23.0	23.0
Actuated g/C Ratio		0.52	0.52		0.35	0.35
Clearance Time (s)		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		1122	1628		533	475
v/s Ratio Prot			0.40		c0.20	
v/s Ratio Perm		c0.49				0.03
v/c Ratio		0.94	0.76		0.57	0.10
Uniform Delay, d1		14.6	12.3		17.0	14.0
Progression Factor		1.12	1.51		1.73	2.83
Incremental Delay, d2		2.1	1.7		3.4	0.3
Delay (s)		18.4	20.2		32.8	40.1
Level of Service		B	C		C	D
Approach Delay (s)		18.4	20.2		34.5	
Approach LOS		B	C		C	

Intersection Summary			
HCM Average Control Delay	21.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	92.1%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1073: 130th Street & Indiana Ave

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↱		↰	↑	↰↱	
Volume (vph)	808	261	399	1090	205	127
Ideal Flow (vphpl)	2300	1800	1800	2300	1800	1800
Lane Width	15	12	14	16	15	12
Total Lost time (s)	5.0		5.0	5.0	5.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.97		1.00	1.00	0.95	
Flt Protected	1.00		0.95	1.00	0.97	
Satd. Flow (prot)	2399		1788	2506	1737	
Flt Permitted	1.00		0.13	1.00	0.97	
Satd. Flow (perm)	2399		243	2506	1737	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	824	266	407	1112	209	130
RTOR Reduction (vph)	18	0	0	0	35	0
Lane Group Flow (vph)	1072	0	407	1112	304	0
Confl. Peds. (#/hr)						1
Heavy Vehicles (%)	2%	2%	2%	4%	7%	0%
Turn Type			Perm			
Protected Phases	4			8	2	
Permitted Phases			8			
Actuated Green, G (s)	31.0		31.0	31.0	24.0	
Effective Green, g (s)	31.0		31.0	31.0	24.0	
Actuated g/C Ratio	0.48		0.48	0.48	0.37	
Clearance Time (s)	5.0		5.0	5.0	5.0	
Lane Grp Cap (vph)	1144		116	1195	641	
v/s Ratio Prot	0.45			0.44	c0.18	
v/s Ratio Perm			c1.68			
v/c Ratio	0.94		3.51	0.93	0.47	
Uniform Delay, d1	16.1		17.0	16.0	15.7	
Progression Factor	1.43		1.00	1.00	1.00	
Incremental Delay, d2	8.8		1150.2	14.0	2.5	
Delay (s)	31.8		1167.2	29.9	18.2	
Level of Service	C		F	C	B	
Approach Delay (s)	31.8			334.7	18.2	
Approach LOS	C			F	B	

Intersection Summary			
HCM Average Control Delay	186.3	HCM Level of Service	F
HCM Volume to Capacity ratio	2.19		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	104.3%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1074: 130th Street & Ellis Ave

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Lane Configurations	↰	↑↑	↱	↰	↑↑	↱		↰	↱		✥	
Volume (vph)	1	1620	38	112	861	1	62	0	157	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	15	13	11	11	12	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0	4.0	3.0	3.0	4.0		4.0	4.0			
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00	1.00			
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85			
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.95	1.00			
Satd. Flow (prot)	1881	3431	1479	1589	3320	1530		1938	1500			
Flt Permitted	0.30	1.00	1.00	0.08	1.00	1.00		0.76	1.00			
Satd. Flow (perm)	592	3431	1479	126	3320	1530		1545	1500			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1	1800	42	124	957	1	69	0	174	0	0	0
RTOR Reduction (vph)	0	0	12	0	0	0	0	0	142	0	0	0
Lane Group Flow (vph)	1	1800	30	124	957	1	0	69	32	0	0	0
Heavy Vehicles (%)	0%	3%	0%	4%	3%	0%	0%	0%	2%	0%	0%	0%
Turn Type	Perm		Perm	custom		custom	Perm		Perm	Perm		
Protected Phases		4		3	3 8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)	50.1	50.1	50.1	67.7	67.7	67.7		9.3	9.3			
Effective Green, g (s)	50.1	50.1	50.1	67.7	67.7	67.7		9.3	9.3			
Actuated g/C Ratio	0.59	0.59	0.59	0.80	0.80	0.80		0.11	0.11			
Clearance Time (s)	4.0	4.0	4.0	3.0		4.0		4.0	4.0			
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0		3.0	3.0			
Lane Grp Cap (vph)	349	2022	872	352	2644	1219		169	164			
v/s Ratio Prot		c0.52		0.06	c0.29							
v/s Ratio Perm	0.00		0.02	0.22		0.00		c0.04	0.02			
v/c Ratio	0.00	0.89	0.03	0.35	0.36	0.00		0.41	0.19			
Uniform Delay, d1	7.2	15.1	7.3	13.6	2.5	1.8		35.3	34.4			
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00			
Incremental Delay, d2	0.0	6.4	0.1	0.6	0.1	0.0		1.6	0.6			
Delay (s)	7.2	21.5	7.4	14.2	2.6	1.8		36.9	35.0			
Level of Service	A	C	A	B	A	A		D	D			
Approach Delay (s)		21.1			3.9			35.5			0.0	
Approach LOS		C			A			D			A	

Intersection Summary			
HCM Average Control Delay	16.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	68.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1942: 111th Street & Langley Avenue

1/14/2013

	↗	→	←	↖	↘	↙
Movement	**EBL**	**EBT**	**WBT**	**WBR**	**SBL**	**SBR**
Lane Configurations		↰↑	↑↱		↲↳	
Volume (vph)	11	966	846	30	71	14
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10
Total Lost time (s)		5.0	5.0		3.0	
Lane Util. Factor		0.95	0.95		1.00	
Frt		1.00	0.99		0.98	
Flt Protected		1.00	1.00		0.96	
Satd. Flow (prot)		3097	3083		1530	
Flt Permitted		0.94	1.00		0.96	
Satd. Flow (perm)		2912	3083		1530	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	12	1073	940	33	79	16
RTOR Reduction (vph)	0	0	3	0	8	0
Lane Group Flow (vph)	0	1085	970	0	87	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type	Perm					
Protected Phases		4	8 2 11		5	
Permitted Phases	4					
Actuated Green, G (s)		33.0	64.0		7.0	
Effective Green, g (s)		33.0	64.0		7.0	
Actuated g/C Ratio		0.37	0.71		0.08	
Clearance Time (s)		5.0			3.0	
Lane Grp Cap (vph)		1068	2192		119	
v/s Ratio Prot			c0.31		c0.06	
v/s Ratio Perm		c0.37				
v/c Ratio		1.02	0.44		0.73	
Uniform Delay, d1		28.5	5.5		40.6	
Progression Factor		1.00	0.01		1.00	
Incremental Delay, d2		31.6	0.2		32.1	
Delay (s)		60.1	0.2		72.7	
Level of Service		E	A		E	
Approach Delay (s)		60.1	0.2		72.7	
Approach LOS		E	A		E	

Intersection Summary			
HCM Average Control Delay	33.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	48.9%	ICU Level of Service	A
Analysis Period (min)	15		

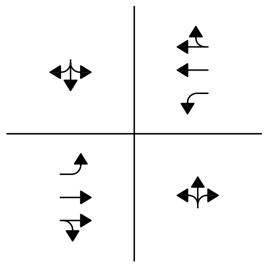
c Critical Lane Group

1955: 115th Street & Cottage Grove Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↑↱			↰↑↱			↰↑	↱
Volume (vph)	98	520	0	1	589	39	3	2	28	202	0	148
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	12	12	11	12	11
Total Lost time (s)		4.0			4.0			3.0			3.0	3.0
Lane Util. Factor		1.00			0.95			1.00			1.00	1.00
Frpb, ped/bikes		1.00			1.00			0.94			1.00	0.98
Flpb, ped/bikes		1.00			1.00			1.00			0.99	1.00
Frt		1.00			0.99			0.88			1.00	0.85
Flt Protected		0.99			1.00			1.00			0.95	1.00
Satd. Flow (prot)		1766			3341			1467			1670	1348
Flt Permitted		0.79			0.95			0.88			0.88	1.00
Satd. Flow (perm)		1402			3191			1296			1545	1348
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	109	578	0	1	654	43	3	2	31	224	0	164
RTOR Reduction (vph)	0	0	0	0	6	0	0	28	0	0	0	110
Lane Group Flow (vph)	0	687	0	0	692	0	0	8	0	0	224	54
Confl. Peds. (#/hr)	60		44	44		60	14		10	10		14
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	0%	1%	0%	0%	1%	3%	20%	0%	0%	1%	0%	7%
Turn Type	Perm			Prot			Perm			pm+pt		Perm
Protected Phases		4		3	3 4			1		2	1 2	
Permitted Phases	4				3		1	1		1 2		1 2
Actuated Green, G (s)		31.0			45.0			9.0			25.0	28.0
Effective Green, g (s)		31.0			45.0			9.0			25.0	28.0
Actuated g/C Ratio		0.36			0.53			0.11			0.29	0.33
Clearance Time (s)		4.0						3.0				
Lane Grp Cap (vph)		511			1714			137			478	444
v/s Ratio Prot					c0.07						c0.09	
v/s Ratio Perm		c0.49			0.15			0.01			c0.05	0.04
v/c Ratio		1.34			0.40			0.06			0.47	0.12
Uniform Delay, d1		27.0			12.0			34.2			24.6	19.9
Progression Factor		1.00			1.40			1.00			1.00	1.00
Incremental Delay, d2		167.7			0.1			0.8			3.3	0.6
Delay (s)		194.7			16.8			35.0			27.8	20.5
Level of Service		F			B			D			C	C
Approach Delay (s)		194.7			16.8			35.0			24.7	
Approach LOS		F			B			D			C	

Intersection Summary			
HCM Average Control Delay	86.4	HCM Level of Service	F
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	81.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group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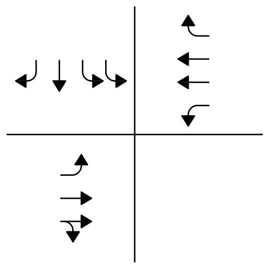
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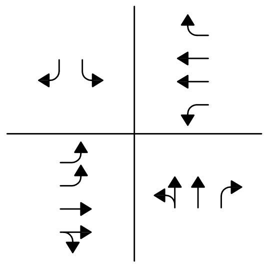
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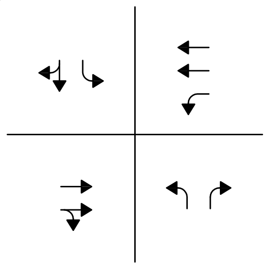
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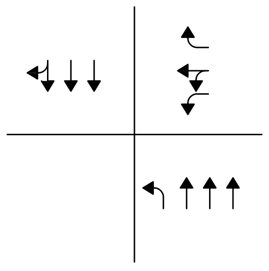
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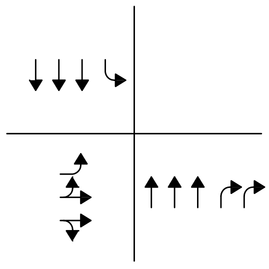
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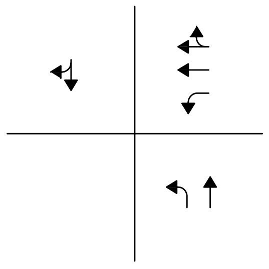
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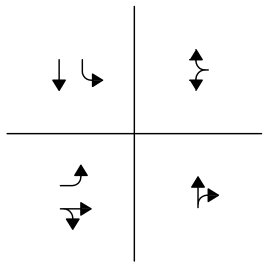
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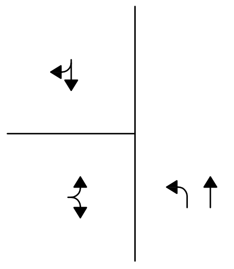
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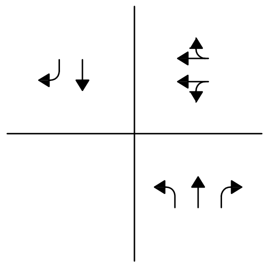
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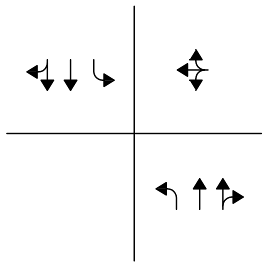
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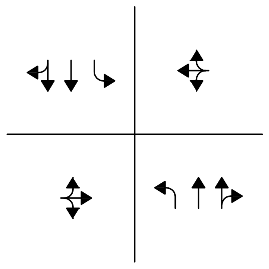
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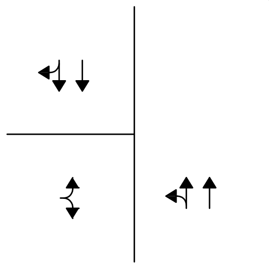
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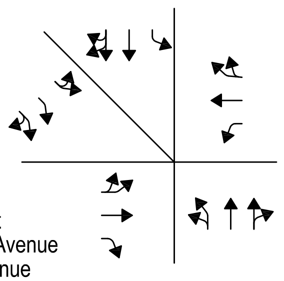
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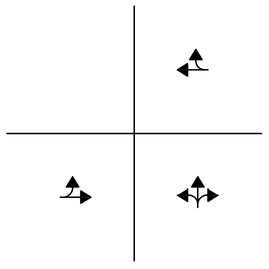
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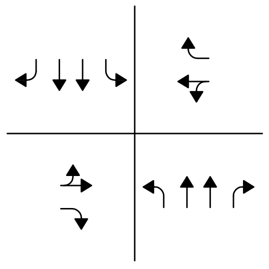
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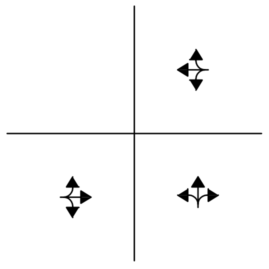
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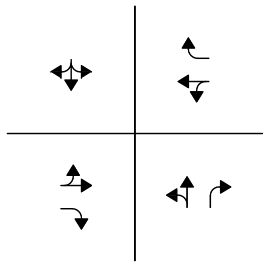
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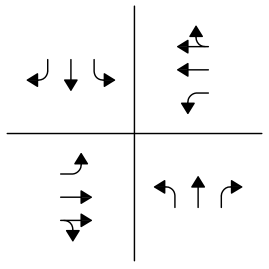
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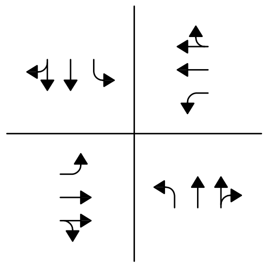
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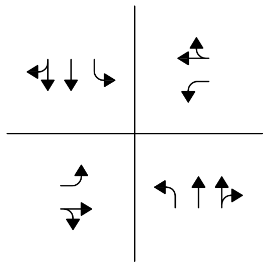
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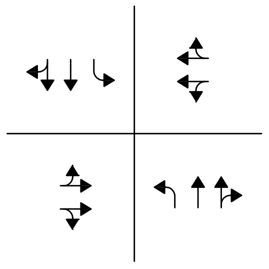
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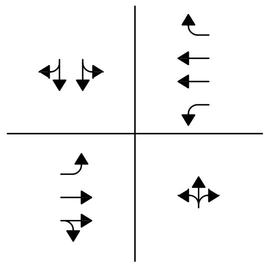
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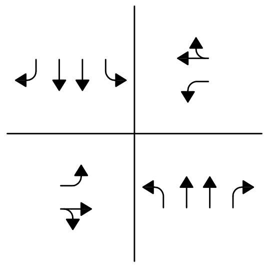
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BRT Alternative Mitigated (2030) Intersection Lane Geometry

Page 1 of 3

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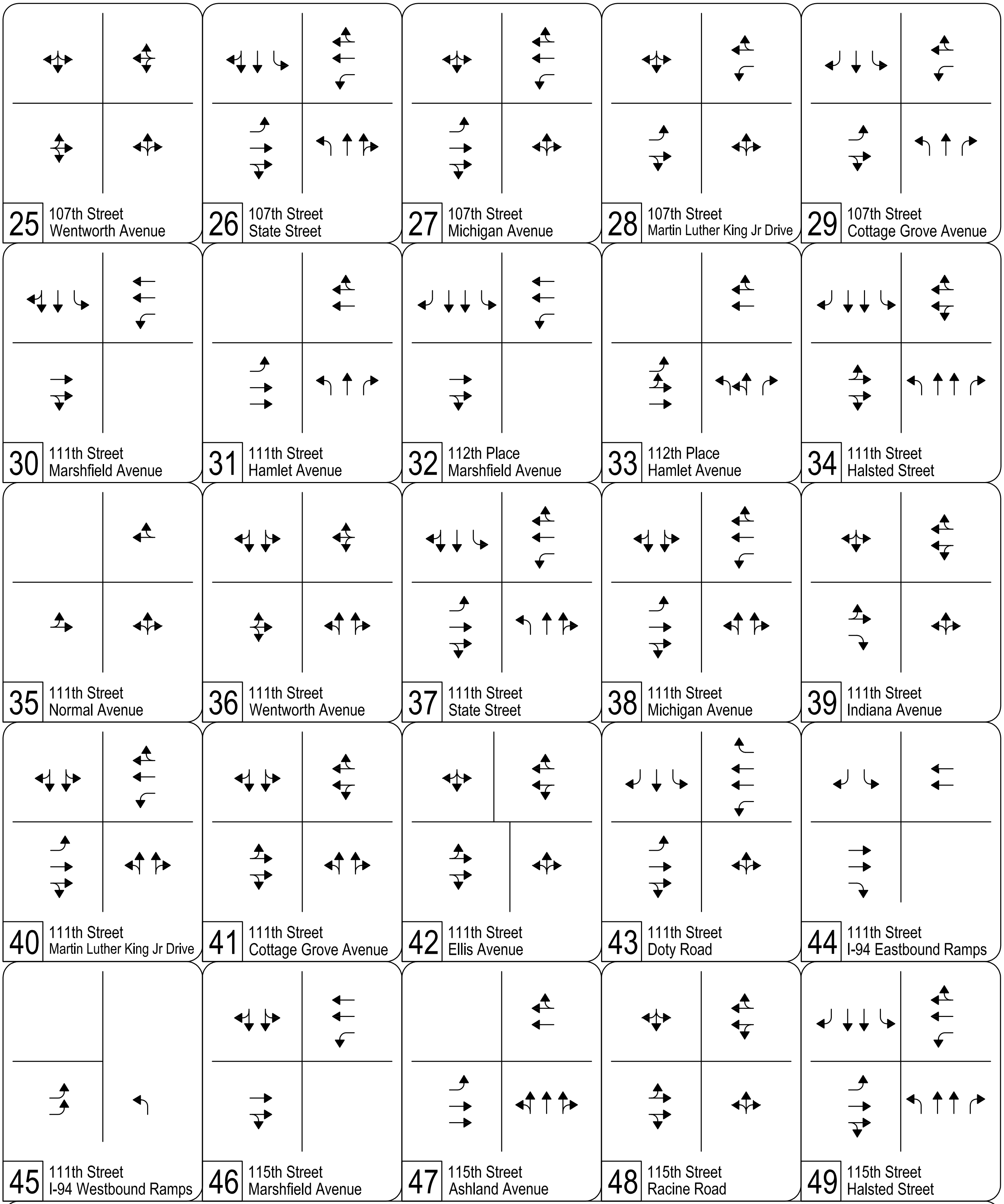

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26 107th Street State Street

27 107th Street Michigan Avenue

28 107th Street Martin Luther King Jr Drive

29 107th Street Cottage Grove Avenue

30 111th Street Marshfield Avenue

31 111th Street Hamlet Avenue

32 112th Place Marshfield Avenue

33 112th Place Hamlet Avenue

34 111th Street Halsted Street

35 111th Street Normal Avenue

36 111th Street Wentworth Avenue

37 111th Street State Street

38 111th Street Michigan Avenue

39 111th Street Indiana Avenue

40 111th Street Martin Luther King Jr Drive

41 111th Street Cottage Grove Avenue

42 111th Street Ellis Avenue

43 111th Street Doty Road

44 111th Street I-94 Eastbound Ramps

45 111th Street I-94 Westbound Ramps

46 115th Street Marshfield Avenue

47 115th Street Ashland Avenue

48 115th Street Racine Road

49 115th Street Halsted Street

BRT Alternative Mitigated (2030) Intersection Lane Geometry

Page 2 of 3

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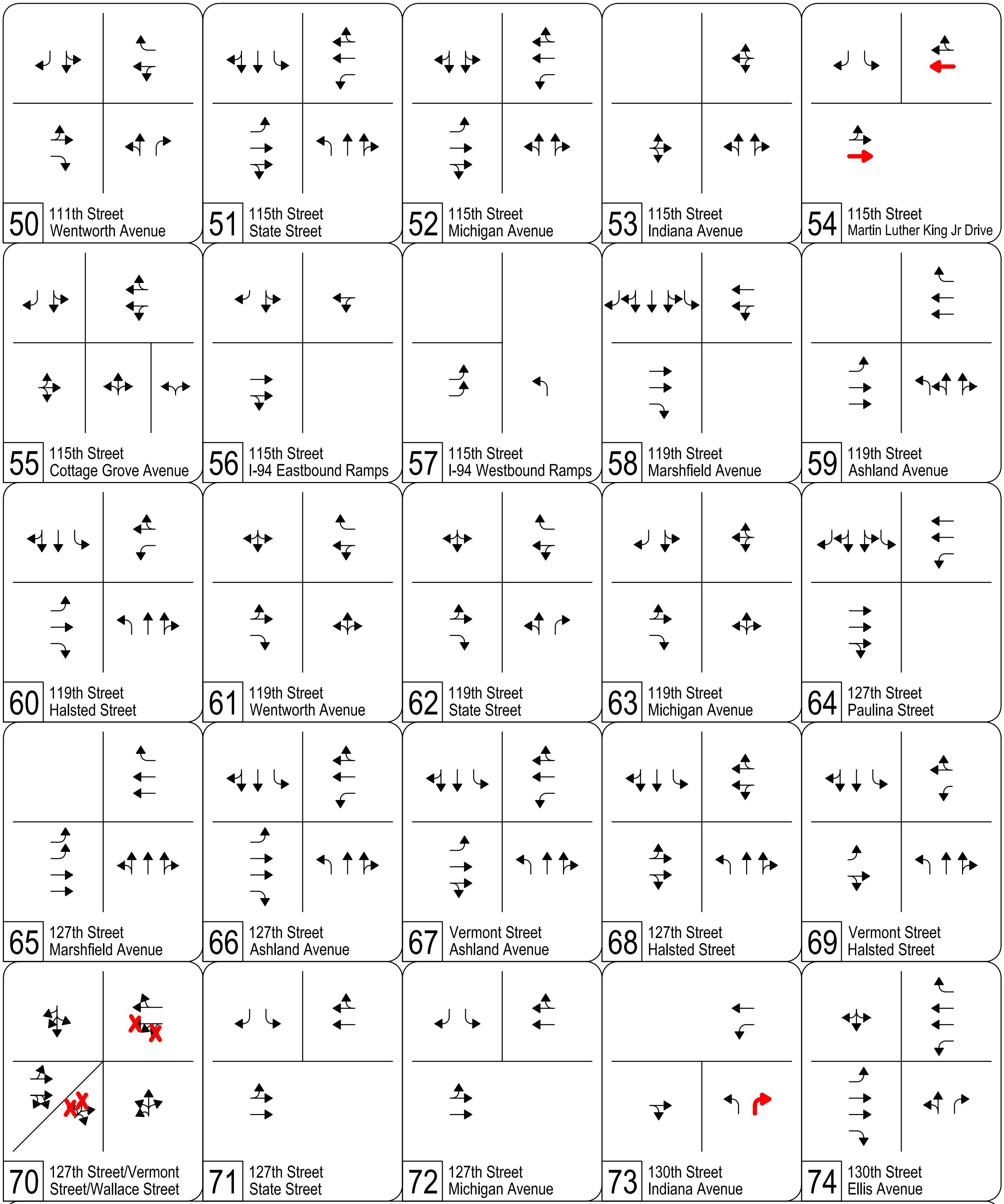
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57 115th Street I-94 Westbound Ramps
58 119th Street Marshfield Avenue
59 119th Street Ashland Avenue
60 119th Street Halsted Street
61 119th Street Wentworth Avenue
62 119th Street State Street
63 119th Street Michigan Avenue
64 127th Street Paulina Street
65 127th Street Marshfield Avenue
66 127th Street Ashland Avenue
67 Vermont Street Ashland Avenue
68 127th Street Halsted Street
69 Vermont Street Halsted Street
70 127th Street/Vermont Street/Wallace Street
71 127th Street State Street
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74 130th Street Ellis Avenue

BRT Alternative Mitigated (2030) Intersection Lane Geometry

Page 3 of 3

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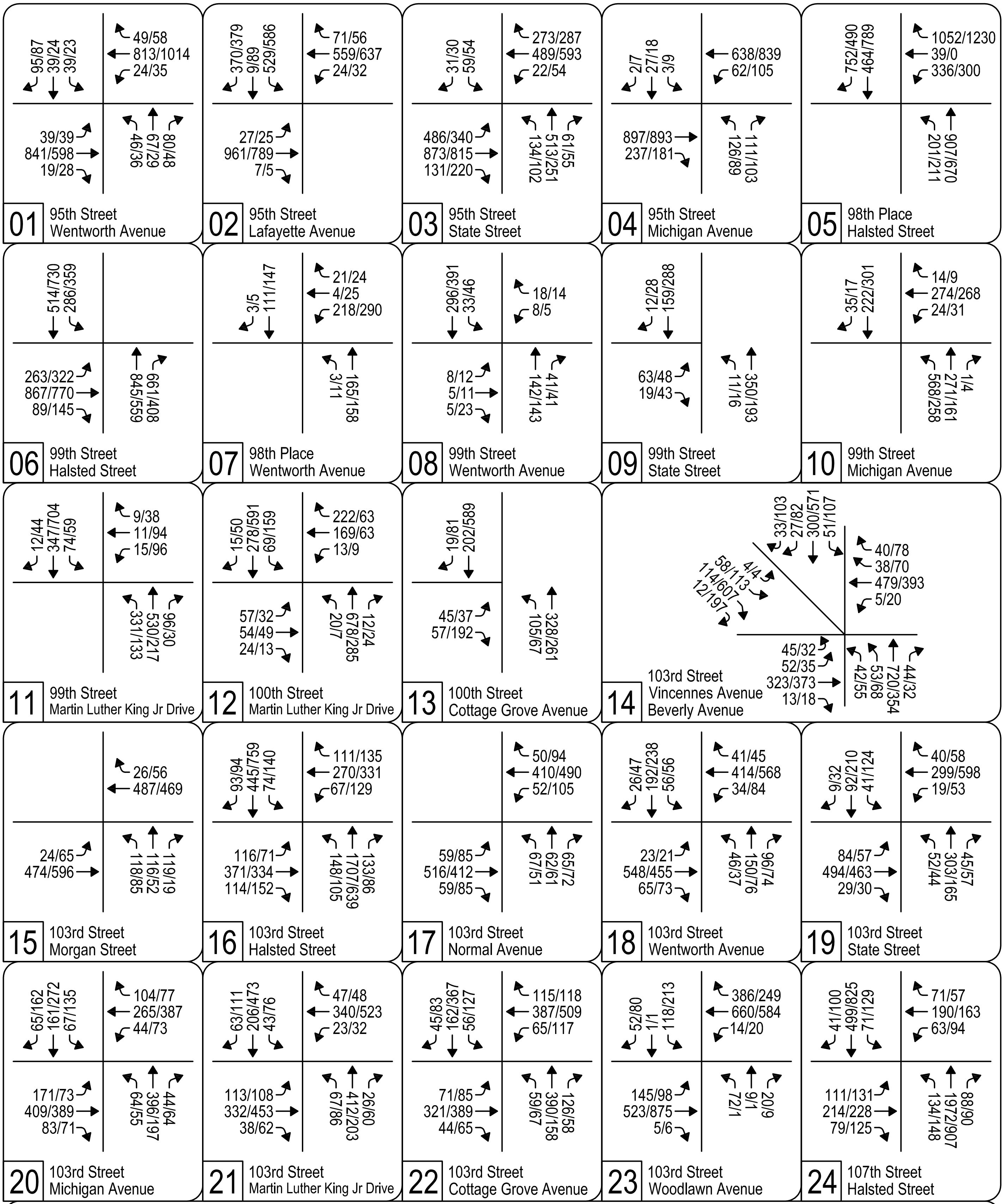

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39/23
49/58
813/1014
24/35
39/39
841/598
19/28
46/36
67/29
80/48
01
95th Street
Wentworth Avenue
370/379
9/89
529/586
71/56
559/637
24/32
27/25
961/789
7/5
02
95th Street
Lafayette Avenue
31/30
59/54
273/287
489/593
22/54
486/340
873/815
131/220
134/102
513/251
61/55
03
95th Street
State Street
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27/18
3/9
638/839
62/105
897/893
237/181
126/89
111/103
04
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Michigan Avenue
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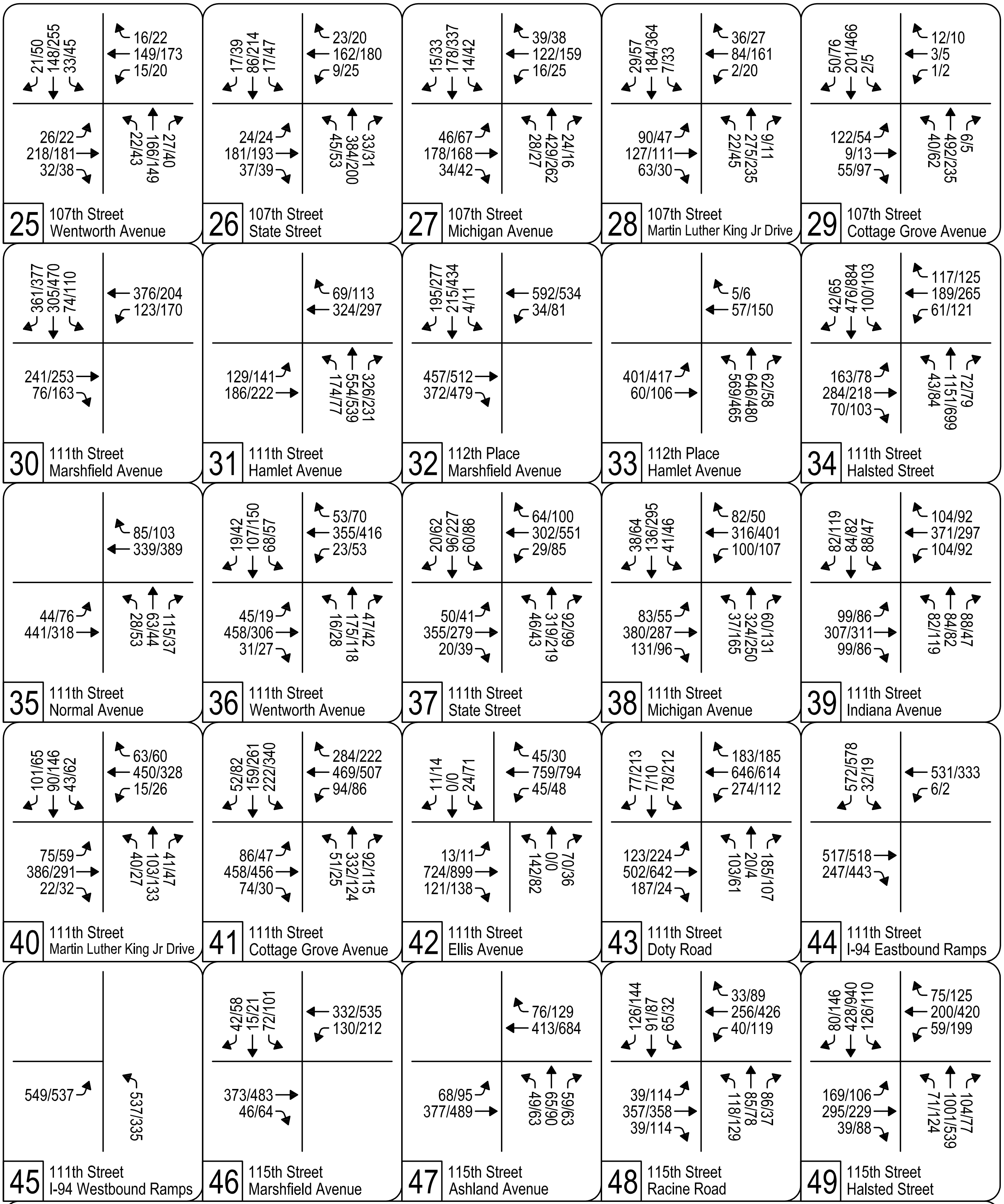
BRT Alternative Mitigated (2030) Intersection Traffic Volumes

Page 1 of 3

Legend: AM/PM Peak Hour Volumes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22/43
166/149
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Wentworth Avenue
17/39
86/214
17/47
23/20
162/180
9/25
24/24
181/193
37/39
45/53
384/200
33/31
26
107th Street
State Street
15/33
178/337
14/42
39/38
122/159
16/25
46/67
178/168
34/42
28/27
429/262
24/16
27
107th Street
Michigan Avenue
29/57
184/364
7/33
36/27
84/161
2/20
90/47
127/111
63/30
22/45
275/235
9/11
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107th Street
Martin Luther King Jr Drive
50/76
201/466
2/5
12/10
3/5
1/2
122/54
9/13
55/97
40/62
492/235
6/5
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107th Street
Cottage Grove Avenue
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305/470
74/110
376/204
123/170
241/253
76/163
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111th Street
Marshfield Avenue
69/113
324/297
129/141
186/222
174/77
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326/231
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111th Street
Hamlet Avenue
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34/81
457/512
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Marshfield Avenue
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57/150
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569/465
646/480
62/58
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112th Place
Hamlet Avenue
42/65
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117/125
189/265
61/121
163/78
284/218
70/103
43/84
1151/699
72/79
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Halsted Street
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339/389
44/76
441/318
28/53
63/44
115/37
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111th Street
Normal Avenue
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107/150
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53/70
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92/99
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111th Street
State Street
38/64
136/295
41/46
82/50
316/401
100/107
83/55
380/287
131/96
37/165
324/250
60/131
38
111th Street
Michigan Avenue
82/119
84/82
88/47
104/92
371/297
104/92
99/86
307/311
99/86
82/119
84/82
88/47
39
111th Street
Indiana Avenue
101/65
90/146
43/62
63/60
450/328
15/26
75/59
386/291
22/32
40/27
103/133
41/47
40
111th Street
Martin Luther King Jr Drive
52/82
159/261
222/340
284/222
469/507
94/86
86/47
458/456
74/30
51/25
332/124
92/115
41
111th Street
Cottage Grove Avenue
11/14
0/0
24/71
45/30
759/794
45/48
13/11
724/899
121/138
142/82
0/0
70/36
42
111th Street
Ellis Avenue
77/213
7/10
78/212
183/185
646/614
274/112
123/224
502/642
187/24
103/61
20/4
185/107
43
111th Street
Doty Road
572/578
32/19
531/333
6/2
517/518
247/443
44
111th Street
I-94 Eastbound Ramps
549/537
537/335
45
111th Street
I-94 Westbound Ramps
42/58
15/21
72/101
332/535
130/212
373/483
46/64
46
115th Street
Marshfield Avenue
76/129
413/684
68/95
377/489
49/63
65/90
59/63
47
115th Street
Ashland Avenue
126/144
91/87
65/32
33/89
256/426
40/119
39/114
357/358
39/114
118/129
85/78
86/37
48
115th Street
Racine Road
80/146
428/940
126/110
75/125
200/420
59/199
169/106
295/229
39/88
71/124
1001/539
104/77
49
115th Street
Halsted Street

BRT Alternative Mitigated (2030) Intersection Traffic Volumes

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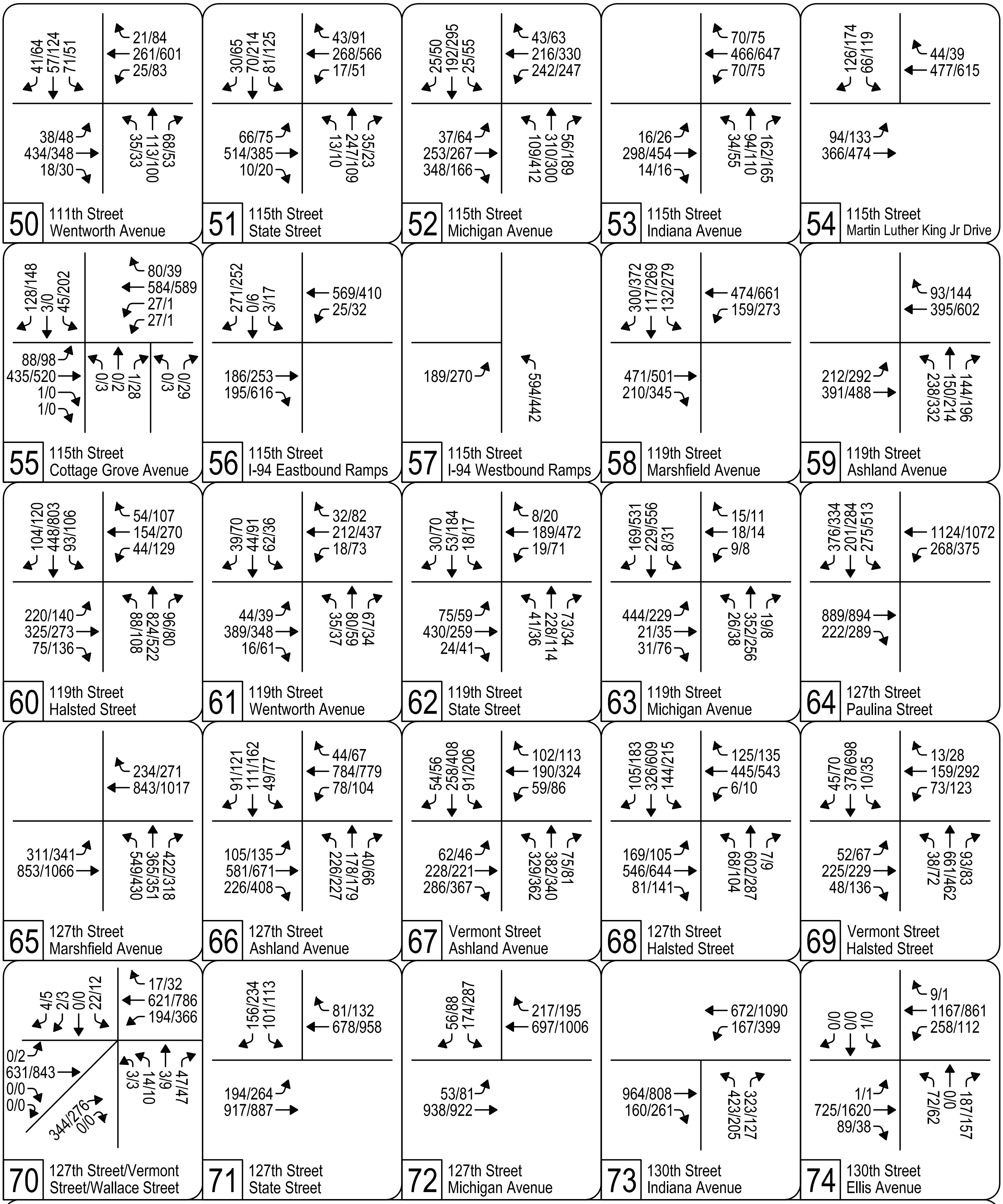
Legend: AM/PM Peak Hour Volumes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57/124
71/51
21/84
261/601
25/83
38/48
434/348
18/30
35/33
113/100
68/53
50
111th Street
Wentworth Avenue
30/65
70/214
81/125
43/91
268/566
17/51
66/75
514/385
10/20
13/10
247/109
35/23
51
115th Street
State Street
25/50
192/295
25/55
43/63
216/330
242/247
37/64
253/267
348/166
109/412
310/300
56/189
52
115th Street
Michigan Avenue
70/75
466/647
70/75
16/26
298/454
14/16
34/55
94/110
162/165
53
115th Street
Indiana Avenue
126/174
66/119
44/39
477/615
94/133
366/474
54
115th Street
Martin Luther King Jr Drive
128/148
3/0
45/202
80/39
584/589
27/1
27/1
88/98
435/520
1/0
1/0
0/3
0/2
1/28
0/3
0/29
55
115th Street
Cottage Grove Avenue
271/252
0/6
3/17
569/410
25/32
186/253
195/616
56
115th Street
I-94 Eastbound Ramps
189/270
594/442
57
115th Street
I-94 Westbound Ramps
300/372
117/269
132/279
474/661
159/273
471/501
210/345
58
119th Street
Marshfield Avenue
93/144
395/602
212/292
391/488
238/332
150/214
144/196
59
119th Street
Ashland Avenue
104/120
448/803
93/106
54/107
154/270
44/129
220/140
325/273
75/136
88/108
824/522
96/80
60
119th Street
Halsted Street
39/70
44/91
62/36
32/82
212/437
18/73
44/39
389/348
16/61
35/37
80/59
67/34
61
119th Street
Wentworth Avenue
30/70
53/184
18/17
8/20
189/472
19/71
75/59
430/259
24/41
41/36
228/114
73/34
62
119th Street
State Street
169/531
229/556
8/31
15/11
18/14
9/8
444/229
21/35
31/76
26/38
352/256
19/8
63
119th Street
Michigan Avenue
376/334
201/284
275/513
1124/1072
268/375
889/894
222/289
64
127th Street
Paulina Street
234/271
843/1017
311/341
853/1066
549/430
365/351
422/318
65
127th Street
Marshfield Avenue
91/121
111/162
49/77
44/67
784/779
78/104
105/135
581/671
226/408
226/227
178/179
40/66
66
127th Street
Ashland Avenue
54/56
258/408
91/206
102/113
190/324
59/86
62/46
228/221
286/367
329/362
382/340
75/81
67
Vermont Street
Ashland Avenue
105/183
326/609
144/215
125/135
445/543
6/10
169/105
546/644
81/141
68/104
602/287
7/9
68
127th Street
Halsted Street
45/70
378/698
10/35
13/28
159/292
73/123
52/67
225/229
48/136
38/72
661/462
93/83
69
Vermont Street
Halsted Street
4/5
2/3
0/0
22/12
17/32
621/786
194/366
0/2
631/843
0/0
0/0
344/276
0/0
3/3
14/10
3/9
47/47
70
127th Street/Vermont
Street/Wallace Street
156/234
101/113
81/132
678/958
194/264
917/887
71
127th Street
State Street
56/88
174/287
217/195
697/1006
53/81
938/922
72
127th Street
Michigan Avenue
672/1090
167/399
964/808
160/261
423/205
323/127
73
130th Street
Indiana Avenue
9/1
1167/861
258/112
0/0
0/0
1/0
1/1
725/1620
89/38
72/62
0/0
187/157
74
130th Street
Ellis Avenue

BRT Alternative Mitigated (2030) Intersection Traffic Volumes

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Legend: AM/PM Peak Hour Volumes

HCM Signalized Intersection Capacity Analysis
1001: 95th Street & Wentworth Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			✥			✥	
Volume (vph)	39	841	19	24	813	49	46	67	80	39	39	95
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	16	10	10	16	8	15	8	8	14	8
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			0.99			0.99	
Flpb, ped/bikes	0.99	1.00		1.00	1.00			1.00			1.00	
Frt	1.00	1.00		1.00	0.99			0.94			0.93	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1417	2976		1592	2979			1754			1670	
Flt Permitted	0.25	1.00		0.25	1.00			0.90			0.90	
Satd. Flow (perm)	369	2976		417	2979			1596			1526	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	41	885	20	25	856	52	48	71	84	41	41	100
RTOR Reduction (vph)	0	2	0	0	7	0	0	39	0	0	59	0
Lane Group Flow (vph)	41	903	0	25	901	0	0	164	0	0	123	0
Confl. Peds. (#/hr)	61		11	11		61	3		5	5		3
Confl. Bikes (#/hr)	1		1	1		1						
Heavy Vehicles (%)	11%	7%	0%	0%	6%	2%	2%	7%	4%	5%	7%	3%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	34.0	34.0		34.0	34.0			22.0			22.0	
Effective Green, g (s)	34.0	34.0		34.0	34.0			23.0			23.0	
Actuated g/C Ratio	0.52	0.52		0.52	0.52			0.35			0.35	
Clearance Time (s)	4.0	4.0		4.0	4.0			5.0			5.0	
Lane Grp Cap (vph)	193	1557		218	1558			565			540	
v/s Ratio Prot		c0.30			0.30							
v/s Ratio Perm	0.11			0.06				c0.10			0.08	
v/c Ratio	0.21	0.58		0.11	0.58			0.29			0.23	
Uniform Delay, d1	8.3	10.6		7.9	10.6			15.1			14.8	
Progression Factor	1.00	1.00		0.83	1.16			1.00			1.00	
Incremental Delay, d2	2.5	1.6		0.9	1.4			1.3			1.0	
Delay (s)	10.8	12.2		7.5	13.7			16.4			15.7	
Level of Service	B	B		A	B			B			B	
Approach Delay (s)		12.1			13.5			16.4			15.7	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	13.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	55.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1002: 95th Street & Lafayette Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↑	↱				↰↰	↑	↱
Volume (vph)	27	961	7	24	559	71	0	0	0	529	9	370
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	5.0	5.0		3.0	3.0	3.0				5.0	5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00				0.97	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.67				1.00	1.00	0.96
Flpb, ped/bikes	0.91	1.00		1.00	1.00	1.00				1.00	1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85				1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00				0.95	1.00	1.00
Satd. Flow (prot)	778	3285		1710	3138	512				3100	1440	1399
Flt Permitted	0.43	1.00		0.14	1.00	1.00				0.95	1.00	1.00
Satd. Flow (perm)	352	3285		248	3138	512				3100	1440	1399
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	28	1012	7	25	588	75	0	0	0	557	9	389
RTOR Reduction (vph)	0	1	0	0	0	33	0	0	0	0	0	172
Lane Group Flow (vph)	28	1018	0	25	588	42	0	0	0	557	9	217
Confl. Peds. (#/hr)	354		13	13		354	22		22	22		22
Confl. Bikes (#/hr)	4					4			1	1		
Heavy Vehicles (%)	100%	4%	0%	0%	9%	100%	0%	0%	0%	7%	25%	5%
Turn Type	pm+pt			pm+pt		Perm				Split		Perm
Protected Phases	7	4		3	8					6	6	
Permitted Phases	4			8		8						6
Actuated Green, G (s)	43.0	43.0		73.0	73.0	73.0				30.0	30.0	30.0
Effective Green, g (s)	43.0	43.0		73.0	73.0	73.0				30.0	30.0	30.0
Actuated g/C Ratio	0.33	0.33		0.56	0.56	0.56				0.23	0.23	0.23
Clearance Time (s)	5.0	5.0		3.0	3.0	3.0				5.0	5.0	5.0
Lane Grp Cap (vph)	162	1087		634	1762	288				715	332	323
v/s Ratio Prot	0.02	c0.31		0.01	c0.19					c0.18	0.01	
v/s Ratio Perm	0.04			0.01		0.08						0.16
v/c Ratio	0.17	0.94		0.04	0.33	0.15				0.78	0.03	0.67
Uniform Delay, d1	31.6	42.2		15.1	15.4	13.6				46.9	38.7	45.5
Progression Factor	0.80	0.82		0.29	0.62	1.93				1.00	1.00	1.00
Incremental Delay, d2	2.0	14.1		0.1	0.3	0.7				8.2	0.2	10.7
Delay (s)	27.1	48.9		4.4	9.8	26.9				55.1	38.9	56.2
Level of Service	C	D		A	A	C				E	D	E
Approach Delay (s)		48.3			11.5			0.0			55.4	
Approach LOS		D			B			A			E	

Intersection Summary			
HCM Average Control Delay	41.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	52.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1003: 95th Street & State Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↱		↰	↑↑	↱		↰↑	↱	↰		↱
Volume (vph)	486	873	131	22	489	273	134	513	61	59	0	31
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0	3.0		5.0	5.0	5.0		5.0	5.0	5.0		5.0
Lane Util. Factor	0.97	0.95		1.00	0.95	1.00		0.95	1.00	1.00		1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.65		1.00	0.95	1.00		0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Frt	1.00	0.98		1.00	1.00	0.85		1.00	0.85	1.00		0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.99	1.00	0.95		1.00
Satd. Flow (prot)	3190	3107		1555	2923	944		3300	1419	855		738
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.99	1.00	0.95		1.00
Satd. Flow (perm)	3190	3107		1555	2923	944		3300	1419	855		738
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	512	919	138	23	515	287	141	540	64	62	0	33
RTOR Reduction (vph)	0	9	0	0	0	158	0	0	25	0	0	30
Lane Group Flow (vph)	512	1048	0	23	515	129	0	681	39	62	0	3
Confl. Peds. (#/hr)	425		21	21		425	6		34	34		6
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	4%	8%	3%	10%	17%	5%	1%	3%	2%	100%	0%	100%
Turn Type	Prot			Prot		Perm	Split		Perm	Prot		custom
Protected Phases	7	4		3	8		2	2		6		
Permitted Phases						8			2			6
Actuated Green, G (s)	40.0	62.0		9.0	31.0	31.0		31.0	31.0	10.0		10.0
Effective Green, g (s)	40.0	62.0		9.0	31.0	31.0		31.0	31.0	10.0		10.0
Actuated g/C Ratio	0.31	0.48		0.07	0.24	0.24		0.24	0.24	0.08		0.08
Clearance Time (s)	3.0	3.0		5.0	5.0	5.0		5.0	5.0	5.0		5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0	3.0	3.0		3.0
Lane Grp Cap (vph)	982	1482		108	697	225		787	338	66		57
v/s Ratio Prot	0.16	c0.34		0.01	c0.18			c0.21		c0.07		
v/s Ratio Perm						0.14			0.03			0.00
v/c Ratio	0.52	0.71		0.21	0.74	0.57		0.87	0.11	0.94		0.04
Uniform Delay, d1	37.1	26.8		57.2	45.8	43.6		47.5	38.8	59.7		55.6
Progression Factor	0.75	0.22		1.00	1.00	1.00		0.94	0.89	1.00		1.00
Incremental Delay, d2	0.9	1.3		4.5	6.9	10.1		12.1	0.7	88.5		0.3
Delay (s)	28.8	7.1		61.6	52.7	53.8		56.9	35.2	148.2		55.9
Level of Service	C	A		E	D	D		E	D	F		E
Approach Delay (s)		14.2			53.3			55.0			116.1	
Approach LOS		B			D			E			F	

Intersection Summary			
HCM Average Control Delay	36.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	72.8%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1004: 95th Street & Michigan Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱		↰	↑↑		↰		↱	↰	↱	
Volume (vph)	0	897	237	62	638	0	126	0	111	3	27	2
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	11	11	8	12	12	12	14	15	12
Total Lost time (s)		4.0		4.0	4.0		4.0		4.0	4.0	4.0	
Lane Util. Factor		0.95		1.00	0.95		1.00		1.00	1.00	1.00	
Frpb, ped/bikes		0.99		1.00	1.00		1.00		0.98	1.00	1.00	
Flpb, ped/bikes		1.00		1.00	1.00		1.00		1.00	0.99	1.00	
Frt		0.97		1.00	1.00		1.00		0.85	1.00	0.99	
Flt Protected		1.00		0.95	1.00		0.95		1.00	0.95	1.00	
Satd. Flow (prot)		2852		1650	3005		1390		1465	1803	1961	
Flt Permitted		1.00		0.15	1.00		0.74		1.00	0.95	1.00	
Satd. Flow (perm)		2852		260	3005		1078		1465	1803	1961	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	997	263	69	709	0	140	0	123	3	30	2
RTOR Reduction (vph)	0	24	0	0	0	0	0	0	77	0	1	0
Lane Group Flow (vph)	0	1236	0	69	709	0	140	0	46	3	31	0
Confl. Peds. (#/hr)	49		15	15		49			12	12		
Heavy Vehicles (%)	0%	6%	14%	0%	10%	0%	23%	0%	2%	0%	0%	0%
Turn Type				Perm			custom		custom	Perm		
Protected Phases		4			8						6	
Permitted Phases				8			2		2	6		
Actuated Green, G (s)		60.0		60.0	60.0		32.0		32.0	32.0	32.0	
Effective Green, g (s)		60.0		60.0	60.0		32.0		32.0	32.0	32.0	
Actuated g/C Ratio		0.60		0.60	0.60		0.32		0.32	0.32	0.32	
Clearance Time (s)		4.0		4.0	4.0		4.0		4.0	4.0	4.0	
Lane Grp Cap (vph)		1711		156	1803		345		469	577	628	
v/s Ratio Prot		c0.43			0.24						0.02	
v/s Ratio Perm				0.27			c0.13		0.03	0.00		
v/c Ratio		0.72		0.44	0.39		0.41		0.10	0.01	0.05	
Uniform Delay, d1		14.1		10.9	10.5		26.6		23.9	23.2	23.5	
Progression Factor		1.00		1.00	1.00		1.00		1.00	1.00	1.00	
Incremental Delay, d2		2.7		8.8	0.6		3.5		0.4	0.0	0.1	
Delay (s)		16.8		19.7	11.1		30.1		24.3	23.2	23.6	
Level of Service		B		B	B		C		C	C	C	
Approach Delay (s)		16.8			11.9			27.4			23.6	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM Average Control Delay	16.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	62.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1005: 98th Place & Halsted Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↰	↰	↱	↰	↑↑↑			↑↑↱	
Volume (vph)	0	0	0	336	39	1052	201	907	0	0	464	752
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	12	12	10	10	12	12	11	12
Total Lost time (s)				4.0	4.0	5.0	3.0	4.0			4.0	
Lane Util. Factor				0.95	0.95	1.00	1.00	0.91			0.91	
Frpb, ped/bikes				1.00	1.00	0.99	1.00	1.00			0.98	
Flpb, ped/bikes				1.00	1.00	1.00	1.00	1.00			1.00	
Frt				1.00	1.00	0.85	1.00	1.00			0.91	
Flt Protected				0.95	1.00	1.00	0.95	1.00			1.00	
Satd. Flow (prot)				1525	1629	1479	1550	4368			3933	
Flt Permitted				0.95	1.00	1.00	0.95	1.00			1.00	
Satd. Flow (perm)				1525	1629	1479	1550	4368			3933	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	0	0	343	40	1073	205	926	0	0	473	767
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	343	40	1073	205	926	0	0	1240	0
Confl. Peds. (#/hr)	2					2	12		8	8		12
Heavy Vehicles (%)	0%	0%	0%	3%	5%	2%	3%	5%	0%	0%	5%	8%
Turn Type				Perm		Perm	Prot					
Protected Phases					8		5	2			6	
Permitted Phases				8		8						
Actuated Green, G (s)				30.0	30.0	30.0	32.0	66.0			31.0	
Effective Green, g (s)				31.0	31.0	30.0	32.0	66.0			31.0	
Actuated g/C Ratio				0.30	0.30	0.29	0.30	0.63			0.30	
Clearance Time (s)				5.0	5.0	5.0	3.0	4.0			4.0	
Lane Grp Cap (vph)				450	481	423	472	2746			1161	
v/s Ratio Prot							c0.13	0.21			c0.32	
v/s Ratio Perm				0.22	0.02	c0.73						
v/c Ratio				0.76	0.08	2.54	0.43	0.34			1.91dr	
Uniform Delay, d1				33.6	26.7	37.5	29.2	9.2			37.0	
Progression Factor				1.00	1.00	1.00	0.66	2.38			1.00	
Incremental Delay, d2				11.6	0.3	698.4	2.0	0.2			46.6	
Delay (s)				45.2	27.1	735.9	21.2	22.1			83.6	
Level of Service				D	C	F	C	C			F	
Approach Delay (s)		0.0			553.8			21.9			83.6	
Approach LOS		A			F			C			F	

Intersection Summary			
HCM Average Control Delay	244.3	HCM Level of Service	F
HCM Volume to Capacity ratio	1.32		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	95.0%	ICU Level of Service	F
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1006: 99th Street & Halsted Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↰↑↱						↑↑↑	↱↱	↰	↑↑↑	
Volume (vph)	263	867	89	0	0	0	0	845	661	286	514	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	13	12	12	12	12	12	10	10	8	12	12	12
Total Lost time (s)	5.0	5.0						4.0	4.0	3.0	4.0	
Lane Util. Factor	0.91	0.91						0.91	0.88	1.00	0.91	
Frpb, ped/bikes	1.00	1.00						1.00	0.97	1.00	1.00	
Flpb, ped/bikes	1.00	1.00						1.00	1.00	1.00	1.00	
Frt	1.00	0.99						1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00						1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1497	3185						4368	2187	1583	4636	
Flt Permitted	0.95	1.00						1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1497	3185						4368	2187	1583	4636	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	271	894	92	0	0	0	0	871	681	295	530	0
RTOR Reduction (vph)	0	7	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	244	1006	0	0	0	0	0	871	681	295	530	0
Confl. Peds. (#/hr)	4		14	14		4	4		3	3		4
Heavy Vehicles (%)	7%	1%	0%	0%	0%	0%	0%	5%	4%	8%	6%	0%
Turn Type	Perm								Perm	Prot		
Protected Phases		4						2		1	6	
Permitted Phases	4								2			
Actuated Green, G (s)	34.0	34.0						28.0	28.0	31.0	62.0	
Effective Green, g (s)	34.0	34.0						28.0	28.0	31.0	62.0	
Actuated g/C Ratio	0.32	0.32						0.27	0.27	0.30	0.59	
Clearance Time (s)	5.0	5.0						4.0	4.0	3.0	4.0	
Lane Grp Cap (vph)	485	1031						1165	583	467	2737	
v/s Ratio Prot								0.20		c0.19	0.11	
v/s Ratio Perm	0.16	0.32							c0.31			
v/c Ratio	0.50	0.98						0.75	1.17	0.63	0.19	
Uniform Delay, d1	28.7	35.1						35.3	38.5	32.1	9.9	
Progression Factor	1.00	1.00						0.43	0.46	1.06	0.43	
Incremental Delay, d2	3.7	22.8						0.4	77.5	2.4	0.1	
Delay (s)	32.4	57.9						15.7	95.2	36.4	4.3	
Level of Service	C	E						B	F	D	A	
Approach Delay (s)		52.9			0.0			50.6			15.8	
Approach LOS		D			A			D			B	

Intersection Summary			
HCM Average Control Delay	43.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	95.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1007: 98th Place & Wentworth Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↰	↑↱		↰	↑			↱	
Volume (vph)	0	0	0	218	4	21	3	165	0	0	111	3
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	14	12	12	16	12
Total Lost time (s)				4.0	4.0		4.0	4.0			-3.0	
Lane Util. Factor				1.00	0.95		1.00	1.00			1.00	
Frpb, ped/bikes				1.00	0.98		1.00	1.00			1.00	
Flpb, ped/bikes				1.00	1.00		1.00	1.00			1.00	
Frt				1.00	0.87		1.00	1.00			1.00	
Flt Protected				0.95	1.00		0.95	1.00			1.00	
Satd. Flow (prot)				1578	2709		1285	1882			1960	
Flt Permitted				0.95	1.00		0.58	1.00			1.00	
Satd. Flow (perm)				1578	2709		788	1882			1960	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	242	4	23	3	183	0	0	123	3
RTOR Reduction (vph)	0	0	0	0	18	0	0	0	0	0	1	0
Lane Group Flow (vph)	0	0	0	242	9	0	3	183	0	0	125	0
Confl. Peds. (#/hr)	2		2	2		2	3					3
Heavy Vehicles (%)	0%	0%	0%	8%	25%	5%	33%	2%	0%	0%	3%	33%
Turn Type				Perm			pm+pt					
Protected Phases					8		7	2			6	
Permitted Phases				8			2					
Actuated Green, G (s)				27.0	27.0		50.0	50.0			40.0	
Effective Green, g (s)				27.0	27.0		50.0	50.0			46.0	
Actuated g/C Ratio				0.32	0.32		0.59	0.59			0.54	
Clearance Time (s)				4.0	4.0		4.0	4.0			3.0	
Lane Grp Cap (vph)				501	861		504	1107			1061	
v/s Ratio Prot					0.00		0.00	c0.10			0.06	
v/s Ratio Perm				c0.15			0.00					
v/c Ratio				0.48	0.01		0.01	0.17			0.12	
Uniform Delay, d1				23.4	19.9		9.9	8.0			9.6	
Progression Factor				1.00	1.00		1.06	1.19			1.00	
Incremental Delay, d2				3.3	0.0		0.0	0.3			0.2	
Delay (s)				26.7	19.9		10.5	9.8			9.8	
Level of Service				C	B		B	A			A	
Approach Delay (s)		0.0			26.0			9.8			9.8	
Approach LOS		A			C			A			A	

Intersection Summary

HCM Average Control Delay	17.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	33.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1008: 99th St & Wentworth Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱			✥			↱		↰	↑	
Volume (vph)	8	5	5	8	0	18	0	142	41	33	296	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	16	15	12	8	12	8	12	12	12	10	13	12
Total Lost time (s)	4.0	4.0			4.0			3.0		4.0	4.0	
Lane Util. Factor	1.00	1.00			1.00			1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.99			1.00			1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00			1.00			1.00		1.00	1.00	
Frt	1.00	0.93			0.91			0.97		1.00	1.00	
Flt Protected	0.95	1.00			0.99			1.00		0.95	1.00	
Satd. Flow (prot)	1938	1809			1603			1686		1595	1755	
Flt Permitted	0.74	1.00			0.96			1.00		0.60	1.00	
Satd. Flow (perm)	1509	1809			1558			1686		1010	1755	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	8	5	5	8	0	19	0	149	43	35	312	0
RTOR Reduction (vph)	0	3	0	0	13	0	0	12	0	0	0	0
Lane Group Flow (vph)	8	7	0	0	14	0	0	180	0	35	312	0
Confl. Peds. (#/hr)			3	3			5		2	2		5
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	3%	3%	0%	6%	0%
Turn Type	Perm			Perm						pm+pt		
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8						6		
Actuated Green, G (s)	27.0	27.0			27.0			40.0		50.0	50.0	
Effective Green, g (s)	27.0	27.0			27.0			40.0		50.0	50.0	
Actuated g/C Ratio	0.32	0.32			0.32			0.47		0.59	0.59	
Clearance Time (s)	4.0	4.0			4.0			3.0		4.0	4.0	
Lane Grp Cap (vph)	479	575			495			793		642	1032	
v/s Ratio Prot		0.00						0.11		0.00	c0.18	
v/s Ratio Perm	0.01				c0.01					0.03		
v/c Ratio	0.02	0.01			0.03			0.23		0.05	0.30	
Uniform Delay, d1	19.9	19.9			20.0			13.3		8.5	8.8	
Progression Factor	1.00	1.00			1.00			1.00		0.99	0.90	
Incremental Delay, d2	0.1	0.0			0.1			0.7		0.2	0.7	
Delay (s)	20.0	19.9			20.1			14.0		8.6	8.6	
Level of Service	B	B			C			B		A	A	
Approach Delay (s)		19.9			20.1			14.0			8.6	
Approach LOS		B			C			B			A	

Intersection Summary			
HCM Average Control Delay	11.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.21		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	40.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1009: 99th St & State Street

1/14/2013

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰↱		↰	↑	↱	
Volume (vph)	63	19	11	350	159	12
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	14	12	13	12	10	12
Total Lost time (s)	4.0		4.0	4.0	4.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	0.99		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.97		1.00	1.00	0.99	
Flt Protected	0.96		0.95	1.00	1.00	
Satd. Flow (prot)	1782		1767	1765	1634	
Flt Permitted	0.96		0.64	1.00	1.00	
Satd. Flow (perm)	1782		1187	1765	1634	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	70	21	12	389	177	13
RTOR Reduction (vph)	14	0	0	0	4	0
Lane Group Flow (vph)	77	0	12	389	186	0
Confl. Peds. (#/hr)		2				
Heavy Vehicles (%)	0%	0%	0%	2%	2%	0%
Turn Type			Perm			
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	21.0		36.0	36.0	36.0	
Effective Green, g (s)	21.0		36.0	36.0	36.0	
Actuated g/C Ratio	0.32		0.55	0.55	0.55	
Clearance Time (s)	4.0		4.0	4.0	4.0	
Lane Grp Cap (vph)	576		657	978	905	
v/s Ratio Prot	c0.04			c0.22	0.11	
v/s Ratio Perm			0.01			
v/c Ratio	0.13		0.02	0.40	0.21	
Uniform Delay, d1	15.6		6.5	8.3	7.3	
Progression Factor	1.00		0.31	0.51	1.12	
Incremental Delay, d2	0.5		0.0	1.1	0.4	
Delay (s)	16.0		2.1	5.4	8.6	
Level of Service	B		A	A	A	
Approach Delay (s)	16.0			5.3	8.6	
Approach LOS	B			A	A	

Intersection Summary			
HCM Average Control Delay	7.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	39.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1010: 99th St & Michigan Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↰↑↱		↰	↑			↑	↱
Volume (vph)	0	0	0	24	274	14	568	271	1	0	222	35
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	14	16	12	12	15	12	12	13	10
Total Lost time (s)					4.0		4.0	4.0			3.0	3.0
Lane Util. Factor					0.95		1.00	1.00			1.00	1.00
Frpb, ped/bikes					1.00		1.00	1.00			1.00	1.00
Flpb, ped/bikes					1.00		1.00	1.00			1.00	1.00
Frt					0.99		1.00	1.00			1.00	0.85
Flt Protected					1.00		0.95	1.00			1.00	1.00
Satd. Flow (prot)					3737		1660	1752			1603	1298
Flt Permitted					1.00		0.54	1.00			1.00	1.00
Satd. Flow (perm)					3737		943	1752			1603	1298
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	27	304	16	631	301	1	0	247	39
RTOR Reduction (vph)	0	0	0	0	4	0	0	0	0	0	0	22
Lane Group Flow (vph)	0	0	0	0	343	0	631	302	0	0	247	17
Confl. Peds. (#/hr)									30	30		
Heavy Vehicles (%)	0%	0%	0%	11%	2%	0%	3%	13%	0%	0%	16%	10%
Turn Type				Split			pm+pt					Perm
Protected Phases				8	8		7	2			6	
Permitted Phases							2					6
Actuated Green, G (s)					26.0		51.0	51.0			38.0	38.0
Effective Green, g (s)					26.0		51.0	51.0			38.0	38.0
Actuated g/C Ratio					0.31		0.60	0.60			0.45	0.45
Clearance Time (s)					4.0		4.0	4.0			3.0	3.0
Lane Grp Cap (vph)					1143		650	1051			717	580
v/s Ratio Prot					c0.09		c0.11	0.17			0.15	
v/s Ratio Perm							c0.47					0.01
v/c Ratio					0.30		0.97	0.29			0.34	0.03
Uniform Delay, d1					22.5		17.9	8.2			15.4	13.2
Progression Factor					1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2					0.7		28.8	0.7			1.3	0.1
Delay (s)					23.2		46.7	8.9			16.7	13.3
Level of Service					C		D	A			B	B
Approach Delay (s)		0.0			23.2			34.5			16.2	
Approach LOS		A			C			C			B	

Intersection Summary			
HCM Average Control Delay	28.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	64.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1011: 99th Street & Martin Luther King Jr Drive

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Lane Configurations					✣		↰	↑↱		↰	↑↱	
Volume (vph)	0	0	0	15	11	9	331	530	96	74	347	12
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	15	12	12	12	12	12	13	12
Total Lost time (s)					4.0		3.0	4.0		3.0	4.0	
Lane Util. Factor					1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes					1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes					1.00		1.00	1.00		1.00	1.00	
Frt					0.97		1.00	0.98		1.00	1.00	
Flt Protected					0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)					1803		1692	3237		1707	3353	
Flt Permitted					0.98		0.50	1.00		0.31	1.00	
Satd. Flow (perm)					1803		882	3237		563	3353	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	17	12	10	368	589	107	82	386	13
RTOR Reduction (vph)	0	0	0	0	7	0	0	20	0	0	3	0
Lane Group Flow (vph)	0	0	0	0	32	0	368	676	0	82	396	0
Confl. Peds. (#/hr)	2					2	6		20	20		6
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	0%	0%	0%	0%	11%	0%	1%	3%	0%	0%	5%	0%
Turn Type				Split			pm+pt			pm+pt		
Protected Phases				8	8		5	2		1	6	
Permitted Phases							2			6		
Actuated Green, G (s)					23.0		41.0	34.0		41.0	34.0	
Effective Green, g (s)					23.0		41.0	34.0		41.0	34.0	
Actuated g/C Ratio					0.31		0.55	0.45		0.55	0.45	
Clearance Time (s)					4.0		3.0	4.0		3.0	4.0	
Lane Grp Cap (vph)					553		558	1467		415	1520	
v/s Ratio Prot					c0.02		c0.06	0.21		0.02	0.12	
v/s Ratio Perm							c0.30			0.09		
v/c Ratio					0.06		0.66	0.46		0.20	0.26	
Uniform Delay, d1					18.4		13.9	14.2		12.4	12.7	
Progression Factor					1.00		0.69	0.74		1.00	1.00	
Incremental Delay, d2					0.2		5.5	1.0		1.1	0.4	
Delay (s)					18.6		15.1	11.4		13.4	13.1	
Level of Service					B		B	B		B	B	
Approach Delay (s)		0.0			18.6			12.7			13.2	
Approach LOS		A			B			B			B	

Intersection Summary			
HCM Average Control Delay	13.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	56.0%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1012: 100th Street & Martin Luther King Jr Drive

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥		↰	↑↱		↰	↑↱	
Volume (vph)	57	54	24	13	169	222	20	678	12	69	278	15
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	16	12	12	10	11	12	12	11	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.98			0.93		1.00	1.00		1.00	0.99	
Flt Protected		0.98			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1946			1626		1596	3232		1641	3132	
Flt Permitted		0.68			0.99		0.56	1.00		0.33	1.00	
Satd. Flow (perm)		1354			1613		947	3232		573	3132	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	60	57	25	14	178	234	21	714	13	73	293	16
RTOR Reduction (vph)	0	10	0	0	59	0	0	2	0	0	5	0
Lane Group Flow (vph)	0	132	0	0	367	0	21	725	0	73	304	0
Confl. Peds. (#/hr)									6	6		
Confl. Bikes (#/hr)			1	1								
Heavy Vehicles (%)	0%	0%	0%	12%	2%	2%	0%	2%	0%	4%	5%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		25.0			25.0		42.0	42.0		42.0	42.0	
Effective Green, g (s)		25.0			25.0		42.0	42.0		42.0	42.0	
Actuated g/C Ratio		0.33			0.33		0.56	0.56		0.56	0.56	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		451			538		530	1810		321	1754	
v/s Ratio Prot								c0.22			0.10	
v/s Ratio Perm		0.10			c0.23		0.02			0.13		
v/c Ratio		0.29			0.68		0.04	0.40		0.23	0.17	
Uniform Delay, d1		18.5			21.6		7.4	9.4		8.3	8.0	
Progression Factor		1.00			1.00		1.00	1.00		0.17	0.07	
Incremental Delay, d2		1.6			6.9		0.1	0.7		1.6	0.2	
Delay (s)		20.1			28.4		7.6	10.0		3.0	0.8	
Level of Service		C			C		A	B		A	A	
Approach Delay (s)		20.1			28.4			10.0			1.2	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM Average Control Delay	13.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	69.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰↱			↰↑	↑↱	
Sign Control	Stop			Stop	Stop	
Volume (vph)	45	57	105	328	202	19
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	50	63	117	364	224	21

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	113	238	243	150	96
Volume Left (vph)	50	117	0	0	0
Volume Right (vph)	63	0	0	0	21
Hadj (s)	-0.16	0.33	0.09	0.09	-0.07
Departure Headway (s)	5.3	5.4	5.2	5.4	5.2
Degree Utilization, x	0.17	0.36	0.35	0.22	0.14
Capacity (veh/h)	624	652	683	641	659
Control Delay (s)	9.3	10.2	9.7	8.8	7.9
Approach Delay (s)	9.3	9.9		8.4	
Approach LOS	A	A		A	

Intersection Summary			
Delay	9.4		
HCM Level of Service	A		
Intersection Capacity Utilization	35.6%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Signalized Intersection Capacity Analysis
1014: 103rd Street & Vincennes Avenue

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR
Lane Configurations		↰	↑	↱	↰	↑	↱			↰	↑↱	
Volume (vph)	45	52	323	13	5	479	38	40	42	53	720	44
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		3.5	4.0	4.0	4.0	4.0	4.0			4.0	4.0	
Lane Util. Factor		1.00	1.00	1.00	1.00	1.00	1.00			1.00	0.95	
Frpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	0.97			1.00	1.00	
Flpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	
Frt		1.00	1.00	0.85	1.00	1.00	0.85			1.00	0.99	
Flt Protected		0.95	1.00	1.00	0.95	1.00	1.00			0.95	1.00	
Satd. Flow (prot)		1575	1731	1530	1710	1731	1487			1710	3291	
Flt Permitted		0.11	1.00	1.00	0.55	1.00	1.00			0.39	1.00	
Satd. Flow (perm)		187	1731	1530	984	1731	1487			700	3291	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	50	58	359	14	6	532	42	44	47	59	800	49
RTOR Reduction (vph)	0	0	0	7	0	0	31	0	0	0	5	0
Lane Group Flow (vph)	0	108	359	7	6	532	55	0	0	106	844	0
Confl. Peds. (#/hr)		5					5					6
Heavy Vehicles (%)	8%	9%	4%	0%	0%	4%	0%	0%	0%	0%	3%	0%
Turn Type	Perm	pm+pt		Perm	Perm		Perm		Perm	Perm		
Protected Phases		7	4			8					2	
Permitted Phases	4	4		4	8		8		2	2		
Actuated Green, G (s)		50.0	50.0	50.0	32.0	32.0	32.0			25.0	25.0	
Effective Green, g (s)		50.0	50.0	50.0	32.0	32.0	32.0			25.0	25.0	
Actuated g/C Ratio		0.48	0.48	0.48	0.30	0.30	0.30			0.24	0.24	
Clearance Time (s)		3.5	4.0	4.0	4.0	4.0	4.0			4.0	4.0	
Lane Grp Cap (vph)		281	824	729	300	528	453			167	784	
v/s Ratio Prot		0.05	c0.21			c0.31					c0.26	
v/s Ratio Perm		0.13		0.00	0.01		0.04			0.15		
v/c Ratio		0.38	0.44	0.01	0.02	1.01	0.12			0.63	1.08	
Uniform Delay, d1		20.2	18.2	14.5	25.5	36.5	26.4			35.9	40.0	
Progression Factor		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	
Incremental Delay, d2		3.9	1.7	0.0	0.1	41.1	0.6			17.0	54.9	
Delay (s)		24.1	19.9	14.5	25.7	77.6	26.9			52.9	94.9	
Level of Service		C	B	B	C	E	C			D	F	
Approach Delay (s)			20.7			70.1					90.3	
Approach LOS			C			E					F	

Intersection Summary			
HCM Average Control Delay	62.2	HCM Level of Service	E
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	79.3%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1014: 103rd Street & Vincennes Avenue

1/14/2013

Movement	SBL	SBT	SBR	SBR2	SEL2	SEL	SER	SER2
Lane Configurations	↰	↑↱				↰	↱↰	
Volume (vph)	51	300	27	33	4	58	114	12
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.5	4.5				4.5	4.5	
Lane Util. Factor	1.00	0.95				1.00	0.88	
Frpb, ped/bikes	1.00	1.00				1.00	1.00	
Flpb, ped/bikes	1.00	1.00				1.00	1.00	
Frt	1.00	0.97				1.00	0.85	
Flt Protected	0.95	1.00				0.95	1.00	
Satd. Flow (prot)	1706	3279				1710	2621	
Flt Permitted	0.16	1.00				0.95	1.00	
Satd. Flow (perm)	293	3279				1710	2621	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	57	333	30	37	4	64	127	13
RTOR Reduction (vph)	0	8	0	0	0	0	7	0
Lane Group Flow (vph)	57	392	0	0	0	68	133	0
Confl. Peds. (#/hr)	6							
Heavy Vehicles (%)	0%	2%	0%	0%	0%	0%	3%	0%
Turn Type	Perm				Split		Perm	
Protected Phases		6			9	9		
Permitted Phases	6						9	
Actuated Green, G (s)	24.5	24.5				17.5	17.5	
Effective Green, g (s)	24.5	24.5				17.5	17.5	
Actuated g/C Ratio	0.23	0.23				0.17	0.17	
Clearance Time (s)	4.5	4.5				4.5	4.5	
Lane Grp Cap (vph)	68	765				285	437	
v/s Ratio Prot		0.12				0.04		
v/s Ratio Perm	0.19						c0.05	
v/c Ratio	0.84	0.51				0.24	0.31	
Uniform Delay, d1	38.4	35.1				38.0	38.4	
Progression Factor	1.00	1.00				1.00	1.00	
Incremental Delay, d2	69.9	2.4				2.0	1.8	
Delay (s)	108.3	37.5				39.9	40.2	
Level of Service	F	D				D	D	
Approach Delay (s)		46.3				40.1		
Approach LOS		D				D		

Intersection Summary

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰			↱			✥				
Volume (vph)	24	474	0	0	487	26	118	116	119	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	11	11	11	16	11	12	15	12	12	15	12
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		1.00			0.99			0.95				
Flt Protected		1.00			1.00			0.98				
Satd. Flow (prot)		1653			1930			1770				
Flt Permitted		0.96			1.00			0.98				
Satd. Flow (perm)		1596			1930			1770				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	27	527	0	0	541	29	131	129	132	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	554	0	0	570	0	0	392	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)		31.0			31.0			26.0				
Effective Green, g (s)		31.0			31.0			26.0				
Actuated g/C Ratio		0.48			0.48			0.40				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		761			920			708				
v/s Ratio Prot					0.30							
v/s Ratio Perm		c0.35						0.22				
v/c Ratio		0.73			0.62			0.55				
Uniform Delay, d1		13.6			12.6			15.0				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		6.0			3.1			3.1				
Delay (s)		19.7			15.8			18.1				
Level of Service		B			B			B				
Approach Delay (s)		19.7			15.8			18.1			0.0	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM Average Control Delay	17.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	74.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1016: 103rd Street & Halsted Street

1/14/2013

	⤴	→	⤵	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑	↱		↰↑	↱	↰	↑↑	↱	↰	↑↑	↱
Volume (vph)	116	371	114	67	270	111	148	1707	133	74	445	93
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	10	10	9	9	10	9
Total Lost time (s)		4.0	4.0		4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		1.00	0.96		1.00	0.96	1.00	1.00	0.97	1.00	1.00	0.96
Flpb, ped/bikes		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.99	1.00		0.99	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1922	1426		1923	1396	1500	3099	1284	1425	2956	1265
Flt Permitted		0.65	1.00		0.57	1.00	0.40	1.00	1.00	0.09	1.00	1.00
Satd. Flow (perm)		1270	1426		1113	1396	627	3099	1284	142	2956	1265
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	122	391	120	71	284	117	156	1797	140	78	468	98
RTOR Reduction (vph)	0	0	71	0	0	69	0	0	30	0	0	59
Lane Group Flow (vph)	0	513	49	0	355	48	156	1797	110	78	468	39
Confl. Peds. (#/hr)	42		39	39		42	20		8	8		20
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	6%	4%	3%	0%	6%	5%	6%	3%	4%	8%	8%	4%
Turn Type	pm+pt		Perm	Perm		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)		43.0	43.0		43.0	43.0	53.0	44.3	44.3	49.0	42.3	42.3
Effective Green, g (s)		43.0	43.0		43.0	43.0	53.0	44.3	44.3	49.0	42.3	42.3
Actuated g/C Ratio		0.41	0.41		0.41	0.41	0.50	0.42	0.42	0.47	0.40	0.40
Clearance Time (s)		4.0	4.0		4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		520	584		456	572	389	1307	542	148	1191	510
v/s Ratio Prot							c0.03	c0.58		c0.03	0.16	
v/s Ratio Perm		c0.40	0.03		0.32	0.03	0.17		0.09	0.21		0.03
v/c Ratio		0.99	0.08		0.78	0.08	0.40	1.37	0.20	0.53	0.39	0.08
Uniform Delay, d1		30.7	19.0		26.9	19.0	14.7	30.4	19.2	23.2	22.2	19.3
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.15	0.76	0.42
Incremental Delay, d2		35.7	0.3		12.3	0.3	0.7	173.6	0.8	3.3	0.9	0.3
Delay (s)		66.4	19.2		39.2	19.2	15.4	204.0	20.0	29.9	17.9	8.3
Level of Service		E	B		D	B	B	F	C	C	B	A
Approach Delay (s)		57.4			34.3			177.6			17.9	
Approach LOS		E			C			F			B	

Intersection Summary			
HCM Average Control Delay	113.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.13		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	113.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣				
Volume (vph)	59	516	59	52	410	50	67	62	65	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	15	12	12	15	12
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		0.99			0.99			0.95				
Flt Protected		1.00			0.99			0.98				
Satd. Flow (prot)		1629			1627			1770				
Flt Permitted		0.91			0.89			0.98				
Satd. Flow (perm)		1494			1459			1770				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	66	573	66	58	456	56	74	69	72	0	0	0
RTOR Reduction (vph)	0	6	0	0	6	0	0	28	0	0	0	0
Lane Group Flow (vph)	0	699	0	0	564	0	0	187	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm			Perm					
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Actuated Green, G (s)		38.0			38.0			19.0				
Effective Green, g (s)		38.0			38.0			19.0				
Actuated g/C Ratio		0.58			0.58			0.29				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		873			853			517				
v/s Ratio Prot												
v/s Ratio Perm		c0.47			0.39			0.11				
v/c Ratio		0.80			0.66			0.36				
Uniform Delay, d1		10.5			9.1			18.2				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		7.6			4.0			2.0				
Delay (s)		18.2			13.1			20.2				
Level of Service		B			B			C				
Approach Delay (s)		18.2			13.1			20.2			0.0	
Approach LOS		B			B			C			A	

Intersection Summary			
HCM Average Control Delay	16.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	64.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1018: 103rd Street & Wentworth Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Lane Configurations		↰	↱		↰	↱		↰	↱		✥	
Volume (vph)	23	548	65	34	414	41	46	150	96	56	192	26
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	11	12	12	15	12
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frpb, ped/bikes		1.00	0.97		1.00	0.95		1.00	0.98		0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		0.99	1.00		1.00	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		0.99	
Flt Protected		1.00	1.00		1.00	1.00		0.99	1.00		0.99	
Satd. Flow (prot)		1656	1255		1634	1288		1663	1490		1775	
Flt Permitted		0.98	1.00		0.94	1.00		0.89	1.00		0.90	
Satd. Flow (perm)		1619	1255		1536	1288		1493	1490		1613	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	24	577	68	36	436	43	48	158	101	59	202	27
RTOR Reduction (vph)	0	0	29	0	0	17	0	0	69	0	5	0
Lane Group Flow (vph)	0	601	39	0	472	26	0	206	32	0	283	0
Confl. Peds. (#/hr)	33		15	15		33	68		5	5		68
Confl. Bikes (#/hr)	4					4						
Heavy Vehicles (%)	0%	5%	14%	19%	5%	9%	2%	2%	1%	10%	7%	8%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		43.0	43.0		43.0	43.0		24.0	24.0		24.0	
Effective Green, g (s)		43.0	43.0		43.0	43.0		24.0	24.0		24.0	
Actuated g/C Ratio		0.57	0.57		0.57	0.57		0.32	0.32		0.32	
Clearance Time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	
Lane Grp Cap (vph)		928	720		881	738		478	477		516	
v/s Ratio Prot												
v/s Ratio Perm		c0.37	0.03		0.31	0.02		0.14	0.02		c0.18	
v/c Ratio		0.65	0.05		0.54	0.03		0.43	0.07		0.55	
Uniform Delay, d1		10.9	7.0		9.9	7.0		20.1	17.7		21.0	
Progression Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2		3.5	0.1		2.3	0.1		2.8	0.3		4.2	
Delay (s)		14.3	7.2		12.2	7.1		22.9	18.0		25.2	
Level of Service		B	A		B	A		C	B		C	
Approach Delay (s)		13.6			11.8			21.3			25.2	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM Average Control Delay	16.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	92.0%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1019: 103rd Street & State Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑	↱	↰	↑	↱
Volume (vph)	84	494	29	19	299	40	52	303	45	41	92	9
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	11	16	8	10	10	10	10	10	10
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	0.98	1.00	1.00	0.99
Flpb, ped/bikes	0.99	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1463	2993		1459	3530		1534	1647	1301	1517	1541	1156
Flt Permitted	0.53	1.00		0.39	1.00		0.69	1.00	1.00	0.45	1.00	1.00
Satd. Flow (perm)	809	2993		602	3530		1116	1647	1301	720	1541	1156
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	93	549	32	21	332	44	58	337	50	46	102	10
RTOR Reduction (vph)	0	6	0	0	16	0	0	0	26	0	0	6
Lane Group Flow (vph)	93	575	0	21	360	0	58	337	24	46	102	4
Confl. Peds. (#/hr)	16		9	9		16	1		5	5		1
Heavy Vehicles (%)	8%	6%	0%	13%	8%	3%	4%	2%	8%	5%	9%	22%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	31.0	31.0		31.0	31.0		26.0	26.0	26.0	26.0	26.0	26.0
Effective Green, g (s)	31.0	31.0		31.0	31.0		26.0	26.0	26.0	26.0	26.0	26.0
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.40	0.40	0.40	0.40	0.40	0.40
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	386	1427		287	1684		446	659	520	288	616	462
v/s Ratio Prot		c0.19			0.10			c0.20			0.07	
v/s Ratio Perm	0.11			0.03			0.05		0.02	0.06		0.00
v/c Ratio	0.24	0.40		0.07	0.21		0.13	0.51	0.05	0.16	0.17	0.01
Uniform Delay, d1	10.0	11.0		9.2	9.9		12.3	14.7	11.9	12.5	12.5	11.7
Progression Factor	1.00	1.00		1.00	1.00		0.63	0.77	0.35	0.55	0.55	0.31
Incremental Delay, d2	1.5	0.8		0.5	0.3		0.6	2.8	0.2	1.2	0.6	0.0
Delay (s)	11.5	11.9		9.7	10.2		8.3	14.0	4.3	8.1	7.5	3.7
Level of Service	B	B		A	B		A	B	A	A	A	A
Approach Delay (s)		11.8			10.2			12.2			7.4	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM Average Control Delay	11.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	52.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1020: 103rd Street & Michigan Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	171	409	83	44	265	104	64	396	44	67	161	65
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	11	10	11	11	10	11	11	10	11	11
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.98		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	0.96	1.00		1.00	1.00		0.99	1.00		0.97	1.00	
Frt	1.00	0.97		1.00	0.96		1.00	0.99		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1466	3059		1588	2939		1542	3028		1405	2760	
Flt Permitted	0.51	1.00		0.42	1.00		0.60	1.00		0.44	1.00	
Satd. Flow (perm)	784	3059		707	2939		981	3028		652	2760	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	180	431	87	46	279	109	67	417	46	71	169	68
RTOR Reduction (vph)	0	0	0	0	0	0	0	11	0	0	40	0
Lane Group Flow (vph)	180	518	0	46	388	0	67	452	0	71	197	0
Confl. Peds. (#/hr)	98		10	10		98	28		52	52		28
Heavy Vehicles (%)	5%	5%	4%	0%	5%	7%	2%	6%	13%	10%	11%	20%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	36.0	36.0		36.0	36.0		31.0	31.0		31.0	31.0	
Effective Green, g (s)	36.0	36.0		36.0	36.0		31.0	31.0		31.0	31.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.41	0.41		0.41	0.41	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	376	1468		339	1411		405	1252		269	1141	
v/s Ratio Prot		0.17			0.13			c0.15			0.07	
v/s Ratio Perm	c0.23			0.07			0.07			0.11		
v/c Ratio	0.48	0.35		0.14	0.27		0.17	0.36		0.26	0.17	
Uniform Delay, d1	13.2	12.2		10.8	11.7		13.9	15.2		14.5	13.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	4.3	0.7		0.8	0.5		0.9	0.8		2.4	0.3	
Delay (s)	17.5	12.9		11.7	12.2		14.7	16.0		16.9	14.2	
Level of Service	B	B		B	B		B	B		B	B	
Approach Delay (s)		14.1			12.1			15.8			14.8	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	14.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱		↰	↑↱		↰	↑↱	
Volume (vph)	113	332	38	23	340	47	67	412	26	43	206	63
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	12	8	16	12	9	10	10	9	10	10
Total Lost time (s)	3.0	7.0		3.0	7.0		3.0	7.0		3.0	7.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.99		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1533	1576		1474	1842		1534	3073		1372	2867	
Flt Permitted	0.43	1.00		0.46	1.00		0.58	1.00		0.41	1.00	
Satd. Flow (perm)	700	1576		708	1842		933	3073		597	2867	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	119	349	40	24	358	49	71	434	27	45	217	66
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	119	389	0	24	407	0	71	461	0	45	283	0
Confl. Peds. (#/hr)	7		23	23		7	10		8	8		10
Confl. Bikes (#/hr)	1		2	2		1	1		1	1		1
Heavy Vehicles (%)	4%	8%	10%	0%	9%	5%	0%	3%	0%	12%	7%	6%
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	47.0	41.8		40.6	38.6		26.8	22.2		23.6	20.6	
Effective Green, g (s)	47.0	39.8		40.6	36.6		26.8	20.2		23.6	18.6	
Actuated g/C Ratio	0.55	0.47		0.48	0.43		0.32	0.24		0.28	0.22	
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	5.0		3.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	438	738		356	793		327	730		193	627	
v/s Ratio Prot	c0.02	c0.25		0.00	0.22		c0.01	c0.15		0.01	0.10	
v/s Ratio Perm	0.13			0.03			0.06			0.06		
v/c Ratio	0.27	0.53		0.07	0.51		0.22	0.63		0.23	0.45	
Uniform Delay, d1	14.0	16.0		15.1	17.7		21.6	29.1		26.1	28.8	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.3	2.7		0.1	2.4		0.3	4.1		0.6	2.3	
Delay (s)	14.3	18.6		15.1	20.1		21.9	33.2		26.8	31.1	
Level of Service	B	B		B	C		C	C		C	C	
Approach Delay (s)		17.6			19.8			31.7			30.5	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM Average Control Delay	24.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	64.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1022: 103rd Street & Cottage Grove Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	71	321	44	65	387	115	59	390	126	56	162	45
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	11	11	11	11	12	12	10	10	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			0.99		1.00	0.99		1.00	0.99	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		0.99	1.00	
Frt		0.98			0.97		1.00	0.96		1.00	0.97	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3492			2914		1614	3156		1581	2901	
Flt Permitted		0.78			0.84		0.61	1.00		0.38	1.00	
Satd. Flow (perm)		2730			2467		1034	3156		628	2901	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	79	357	49	72	430	128	66	433	140	62	180	50
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	485	0	0	630	0	66	573	0	62	230	0
Confl. Peds. (#/hr)	20		16	16		20	5		33	33		5
Confl. Bikes (#/hr)	2					2			2	2		
Heavy Vehicles (%)	9%	9%	0%	24%	7%	6%	2%	4%	2%	0%	5%	9%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		33.0			33.0		32.0	32.0		32.0	32.0	
Effective Green, g (s)		34.0			34.0		33.0	33.0		33.0	33.0	
Actuated g/C Ratio		0.45			0.45		0.44	0.44		0.44	0.44	
Clearance Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)		1238			1118		455	1389		276	1276	
v/s Ratio Prot								c0.18			0.08	
v/s Ratio Perm		0.18			c0.26		0.06			0.10		
v/c Ratio		0.39			0.56		0.15	0.41		0.22	0.18	
Uniform Delay, d1		13.6			15.1		12.6	14.4		13.0	12.8	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.9			2.1		0.7	0.9		1.9	0.3	
Delay (s)		14.6			17.1		13.2	15.3		14.9	13.1	
Level of Service		B			B		B	B		B	B	
Approach Delay (s)		14.6			17.1			15.1			13.5	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	15.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	63.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1023: 103rd Street & Woodlawn Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↑	↱		✥			↰↑↱	
Volume (vph)	145	523	5	14	660	386	72	9	20	118	1	52
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	12	12	12	12	12	12	13	13	13
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00			0.95	
Frt	1.00	1.00		1.00	1.00	0.85		0.97			0.95	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.97			0.97	
Satd. Flow (prot)	1574	3144		1629	3257	1457		1611			3105	
Flt Permitted	0.35	1.00		0.42	1.00	1.00		0.69			0.75	
Satd. Flow (perm)	582	3144		720	3257	1457		1158			2398	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	161	581	6	16	733	429	80	10	22	131	1	58
RTOR Reduction (vph)	0	1	0	0	0	150	0	12	0	0	44	0
Lane Group Flow (vph)	161	586	0	16	733	279	0	100	0	0	146	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	46.0	46.0		46.0	46.0	46.0		16.7			16.7	
Effective Green, g (s)	46.0	46.0		46.0	46.0	46.0		16.7			16.7	
Actuated g/C Ratio	0.65	0.65		0.65	0.65	0.65		0.24			0.24	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		8.0			8.0	
Lane Grp Cap (vph)	379	2046		468	2119	948		274			566	
v/s Ratio Prot		0.19			0.23							
v/s Ratio Perm	c0.28			0.02		0.19		c0.09			0.06	
v/c Ratio	0.42	0.29		0.03	0.35	0.29		0.36			0.26	
Uniform Delay, d1	6.0	5.3		4.4	5.6	5.3		22.6			22.0	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00			1.00	
Incremental Delay, d2	3.5	0.4		0.1	0.4	0.8		3.5			1.0	
Delay (s)	9.4	5.7		4.5	6.0	6.1		26.1			23.0	
Level of Service	A	A		A	A	A		C			C	
Approach Delay (s)		6.5			6.0			26.1			23.0	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM Average Control Delay	8.6	HCM Level of Service	A
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	70.7	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1024: 107th Street & Halsted Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↑	↱	↰	↑↑	↱
Volume (vph)	111	214	79	63	190	71	134	1972	88	71	499	41
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	9	12	10	10	12	9	10	9	9	10	9
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00	0.96	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.96		1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1548	1496		1547	1584		1493	3069	1271	1452	2983	1301
Flt Permitted	0.37	1.00		0.31	1.00		0.39	1.00	1.00	0.12	1.00	1.00
Satd. Flow (perm)	608	1496		513	1584		612	3069	1271	180	2983	1301
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	117	225	83	66	200	75	141	2076	93	75	525	43
RTOR Reduction (vph)	0	16	0	0	16	0	0	0	18	0	0	25
Lane Group Flow (vph)	117	292	0	66	259	0	141	2076	75	75	525	18
Confl. Peds. (#/hr)	4		9	9		4	6		16	16		6
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	3%	3%	4%	3%	1%	2%	3%	4%	4%	6%	7%	3%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	28.0	21.0		28.0	21.0		42.0	35.0	35.0	42.0	35.0	35.0
Effective Green, g (s)	26.0	22.0		26.0	22.0		40.0	35.0	35.0	40.0	35.0	35.0
Actuated g/C Ratio	0.31	0.26		0.31	0.26		0.47	0.41	0.41	0.47	0.41	0.41
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)	252	387		230	410		350	1264	523	174	1228	536
v/s Ratio Prot	c0.03	c0.20		0.02	0.16		0.03	c0.68		c0.03	0.18	
v/s Ratio Perm	0.11			0.07			0.16		0.06	0.17		0.01
v/c Ratio	0.46	0.76		0.29	0.63		0.40	1.64	0.14	0.43	0.43	0.03
Uniform Delay, d1	22.5	29.0		21.9	27.9		13.3	25.0	15.6	18.1	17.8	14.9
Progression Factor	1.00	1.00		1.00	1.00		0.61	0.70	0.49	1.00	1.00	1.00
Incremental Delay, d2	6.0	12.9		3.1	7.2		2.8	292.0	0.5	7.6	1.1	0.1
Delay (s)	28.6	41.9		25.0	35.2		11.0	309.6	8.1	25.7	18.9	15.0
Level of Service	C	D		C	D		B	F	A	C	B	B
Approach Delay (s)		38.2			33.2			279.3			19.5	
Approach LOS		D			C			F			B	

Intersection Summary			
HCM Average Control Delay	184.2	HCM Level of Service	F
HCM Volume to Capacity ratio	1.15		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	96.8%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1025: 107th Street & Wentworth Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣			✣	
Volume (vph)	26	218	32	15	149	16	22	166	27	33	148	21
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	14	12	12	14	12	12	16	12	12	16	12
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		1.00			1.00			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.98			0.99			0.98			0.99	
Flt Protected		1.00			1.00			0.99			0.99	
Satd. Flow (prot)		1837			1839			1899			1931	
Flt Permitted		0.97			0.97			0.96			0.94	
Satd. Flow (perm)		1782			1791			1840			1822	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	27	225	33	15	154	16	23	171	28	34	153	22
RTOR Reduction (vph)	0	7	0	0	5	0	0	8	0	0	6	0
Lane Group Flow (vph)	0	278	0	0	180	0	0	214	0	0	203	0
Confl. Peds. (#/hr)	5		11	11		5	7		34	34		7
Confl. Bikes (#/hr)			3	3								
Heavy Vehicles (%)	4%	2%	0%	20%	1%	0%	12%	3%	8%	0%	3%	5%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		27.0			27.0			30.0			30.0	
Effective Green, g (s)		27.0			27.0			30.0			30.0	
Actuated g/C Ratio		0.42			0.42			0.46			0.46	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		740			744			849			841	
v/s Ratio Prot												
v/s Ratio Perm		c0.16			0.10			c0.12			0.11	
v/c Ratio		0.38			0.24			0.25			0.24	
Uniform Delay, d1		13.2			12.3			10.7			10.6	
Progression Factor		1.00			0.66			1.11			1.00	
Incremental Delay, d2		1.5			0.8			0.7			0.7	
Delay (s)		14.6			9.0			12.5			11.3	
Level of Service		B			A			B			B	
Approach Delay (s)		14.6			9.0			12.5			11.3	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM Average Control Delay	12.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	46.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

1026: 107th Street & State Street

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	24	181	37	9	162	23	45	384	33	17	86	17
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	0.96	1.00		1.00	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	0.98		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1466	2989		1302	3018		1529	3093		1492	2868	
Flt Permitted	0.62	1.00		0.60	1.00		0.68	1.00		0.48	1.00	
Satd. Flow (perm)	960	2989		825	3018		1093	3093		757	2868	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	27	201	41	10	180	26	50	427	37	19	96	19
RTOR Reduction (vph)	0	26	0	0	18	0	0	10	0	0	8	0
Lane Group Flow (vph)	27	216	0	10	188	0	50	454	0	19	107	0
Confl. Peds. (#/hr)	35		6	6		35	18					18
Confl. Bikes (#/hr)	14		32	32		14	23		7	7		23
Heavy Vehicles (%)	4%	4%	0%	22%	2%	6%	3%	2%	0%	7%	8%	6%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.0	20.0		20.0	20.0		39.0	39.0		39.0	39.0	
Effective Green, g (s)	19.0	19.0		19.0	19.0		38.0	38.0		38.0	38.0	
Actuated g/C Ratio	0.29	0.29		0.29	0.29		0.58	0.58		0.58	0.58	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	281	874		241	882		639	1808		443	1677	
v/s Ratio Prot		c0.07			0.06			c0.15			0.04	
v/s Ratio Perm	0.03			0.01			0.05			0.03		
v/c Ratio	0.10	0.25		0.04	0.21		0.08	0.25		0.04	0.06	
Uniform Delay, d1	16.7	17.5		16.5	17.4		5.9	6.6		5.8	5.8	
Progression Factor	0.73	0.73		0.76	0.74		0.91	0.95		0.52	0.46	
Incremental Delay, d2	0.6	0.6		0.3	0.5		0.2	0.3		0.2	0.1	
Delay (s)	12.8	13.5		12.8	13.4		5.6	6.6		3.1	2.8	
Level of Service	B	B		B	B		A	A		A	A	
Approach Delay (s)		13.4			13.4			6.5			2.8	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	9.0	HCM Level of Service	A
HCM Volume to Capacity ratio	0.25		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	41.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1027: 107th Street & Michigan Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑↱		↰	↑↑↱			✥			✥	
Volume (vph)	46	178	34	16	122	39	28	429	24	14	178	15
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	9	9	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00			1.00			1.00	
Flpb, ped/bikes	0.99	1.00		0.98	1.00			1.00			1.00	
Frt	1.00	0.98		1.00	0.96			0.99			0.99	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1556	2952		1515	2866			1878			1807	
Flt Permitted	0.64	1.00		0.60	1.00			0.98			0.96	
Satd. Flow (perm)	1046	2952		965	2866			1838			1742	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	51	198	38	18	136	43	31	477	27	16	198	17
RTOR Reduction (vph)	0	23	0	0	26	0	0	3	0	0	4	0
Lane Group Flow (vph)	51	213	0	18	153	0	0	532	0	0	227	0
Confl. Peds. (#/hr)	10		29	29		10	17		10	10		17
Confl. Bikes (#/hr)									2	2		
Heavy Vehicles (%)	2%	4%	10%	0%	4%	0%	0%	8%	4%	0%	13%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	26.0	26.0		26.0	26.0			31.0			31.0	
Effective Green, g (s)	26.0	26.0		26.0	26.0			31.0			31.0	
Actuated g/C Ratio	0.40	0.40		0.40	0.40			0.48			0.48	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	418	1181		386	1146			877			831	
v/s Ratio Prot		c0.07			0.05							
v/s Ratio Perm	0.05			0.02				c0.29			0.13	
v/c Ratio	0.12	0.18		0.05	0.13			0.61			0.27	
Uniform Delay, d1	12.3	12.6		11.9	12.4			12.5			10.2	
Progression Factor	1.02	0.93		0.85	0.87			1.26			1.00	
Incremental Delay, d2	0.6	0.3		0.2	0.2			3.0			0.8	
Delay (s)	13.1	12.1		10.3	11.0			18.8			11.0	
Level of Service	B	B		B	B			B			B	
Approach Delay (s)		12.3			10.9			18.8			11.0	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	14.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	60.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1028: 107th Street & Martin Luther King Jr Drive

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱			✣			✣	
Volume (vph)	90	127	63	2	84	36	22	275	9	7	184	29
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	16	12	10	16	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00			1.00			1.00	
Flpb, ped/bikes	1.00	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.95		1.00	0.95			1.00			0.98	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1605	1876		1587	1870			1971			1933	
Flt Permitted	0.67	1.00		0.56	1.00			0.97			0.99	
Satd. Flow (perm)	1135	1876		942	1870			1925			1916	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	100	141	70	2	93	40	24	306	10	8	204	32
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	100	211	0	2	133	0	0	340	0	0	244	0
Confl. Peds. (#/hr)			8	8			1		8	8		1
Heavy Vehicles (%)	3%	3%	2%	0%	6%	0%	0%	3%	0%	0%	4%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.0	20.0		20.0	20.0			37.0			37.0	
Effective Green, g (s)	20.0	20.0		20.0	20.0			37.0			37.0	
Actuated g/C Ratio	0.31	0.31		0.31	0.31			0.57			0.57	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	349	577		290	575			1096			1091	
v/s Ratio Prot		c0.11			0.07							
v/s Ratio Perm	0.09			0.00				c0.18			0.13	
v/c Ratio	0.29	0.37		0.01	0.23			0.31			0.22	
Uniform Delay, d1	17.1	17.6		15.6	16.8			7.3			6.9	
Progression Factor	0.91	0.90		0.89	0.92			0.98			1.00	
Incremental Delay, d2	2.0	1.8		0.0	0.9			0.7			0.5	
Delay (s)	17.6	17.6		14.0	16.4			7.9			7.4	
Level of Service	B	B		B	B			A			A	
Approach Delay (s)		17.6			16.3			7.9			7.4	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	11.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	46.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1029: 107th Street & Cottage Grove Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱		↰	↑	↱	↰	↑	↱
Volume (vph)	122	9	55	1	3	12	40	492	6	2	201	50
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	10	10	10	11	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.97		1.00	1.00	0.98	1.00	1.00	0.98
Flpb, ped/bikes	0.98	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.87		1.00	0.88		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1603	1672		1710	1422		1491	1631	1392	1649	1907	1427
Flt Permitted	0.75	1.00		0.71	1.00		0.62	1.00	1.00	0.37	1.00	1.00
Satd. Flow (perm)	1260	1672		1279	1422		971	1631	1392	648	1907	1427
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	136	10	61	1	3	13	44	547	7	2	223	56
RTOR Reduction (vph)	0	44	0	0	9	0	0	0	3	0	0	22
Lane Group Flow (vph)	136	27	0	1	7	0	44	547	4	2	223	34
Confl. Peds. (#/hr)	9					9	1		6	6		1
Heavy Vehicles (%)	5%	14%	5%	0%	67%	12%	7%	3%	0%	0%	7%	5%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	17.0	17.0		17.0	17.0		39.0	39.0	39.0	39.0	39.0	39.0
Effective Green, g (s)	18.0	18.0		18.0	18.0		39.0	39.0	39.0	39.0	39.0	39.0
Actuated g/C Ratio	0.28	0.28		0.28	0.28		0.60	0.60	0.60	0.60	0.60	0.60
Clearance Time (s)	5.0	5.0		5.0	5.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	349	463		354	394		583	979	835	389	1144	856
v/s Ratio Prot		0.02			0.00			c0.34			0.12	
v/s Ratio Perm	c0.11			0.00			0.05		0.00	0.00		0.02
v/c Ratio	0.39	0.06		0.00	0.02		0.08	0.56	0.01	0.01	0.19	0.04
Uniform Delay, d1	19.0	17.3		17.0	17.1		5.4	7.8	5.2	5.2	5.9	5.3
Progression Factor	1.46	2.40		1.00	1.00		1.17	1.10	1.33	1.00	1.00	1.00
Incremental Delay, d2	3.2	0.2		0.0	0.1		0.2	1.7	0.0	0.0	0.4	0.1
Delay (s)	31.0	41.8		17.0	17.1		6.5	10.3	6.9	5.2	6.3	5.4
Level of Service	C	D		B	B		A	B	A	A	A	A
Approach Delay (s)		34.7			17.1			10.0			6.1	
Approach LOS		C			B			A			A	

Intersection Summary			
HCM Average Control Delay	13.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱		↰	↑↑					↰	↑↱	
Volume (vph)	0	241	76	123	376	0	0	0	0	74	305	361
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	12	12	12	12	12	11	11	12
Total Lost time (s)		4.0		3.0	3.0					5.0	5.0	
Lane Util. Factor		0.95		1.00	0.95					1.00	0.95	
Frpb, ped/bikes		0.99		1.00	1.00					1.00	0.99	
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	
Frt		0.96		1.00	1.00					1.00	0.92	
Flt Protected		1.00		0.95	1.00					0.95	1.00	
Satd. Flow (prot)		2826		1621	3288					1574	2907	
Flt Permitted		1.00		0.50	1.00					0.95	1.00	
Satd. Flow (perm)		2826		846	3288					1574	2907	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	254	80	129	396	0	0	0	0	78	321	380
RTOR Reduction (vph)	0	30	0	0	0	0	0	0	0	0	214	0
Lane Group Flow (vph)	0	304	0	129	396	0	0	0	0	78	487	0
Confl. Peds. (#/hr)	14		32	32		14	14					14
Confl. Bikes (#/hr)			1	1								
Heavy Vehicles (%)	0%	9%	4%	5%	4%	0%	0%	0%	0%	5%	2%	4%
Turn Type				D.P+P						custom		
Protected Phases		8		7	7 8					6	6	
Permitted Phases				8						6		
Actuated Green, G (s)		33.0		56.0	59.0					32.0	32.0	
Effective Green, g (s)		33.0		56.0	59.0					32.0	32.0	
Actuated g/C Ratio		0.33		0.56	0.59					0.32	0.32	
Clearance Time (s)		4.0		3.0						5.0	5.0	
Lane Grp Cap (vph)		933		652	1940					504	930	
v/s Ratio Prot		c0.11		0.05	c0.12					0.05	c0.17	
v/s Ratio Perm				0.07								
v/c Ratio		0.33		0.20	0.20					0.15	0.52	
Uniform Delay, d1		25.1		10.6	9.6					24.3	27.8	
Progression Factor		1.00		1.95	2.06					1.00	1.00	
Incremental Delay, d2		0.9		0.6	0.2					0.7	2.1	
Delay (s)		26.1		21.2	19.8					25.0	29.9	
Level of Service		C		C	B					C	C	
Approach Delay (s)		26.1			20.2			0.0			29.4	
Approach LOS		C			C			A			C	

Intersection Summary			
HCM Average Control Delay	25.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	62.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1031: 111th Street & Ashland Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑			↑↱		↰	↑	↱			
Volume (vph)	129	186	0	0	324	69	174	554	326	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	9	12	13	12	13	12	12	12
Total Lost time (s)	4.0	4.0			4.0		5.0	5.0	5.0			
Lane Util. Factor	1.00	0.95			0.95		1.00	1.00	1.00			
Frpb, ped/bikes	1.00	1.00			0.99		1.00	1.00	0.99			
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.97		1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1673	3054			2831		1750	1782	1514			
Flt Permitted	0.34	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	603	3054			2831		1750	1782	1514			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	136	196	0	0	341	73	183	583	343	0	0	0
RTOR Reduction (vph)	0	0	0	0	18	0	0	0	230	0	0	0
Lane Group Flow (vph)	136	196	0	0	396	0	183	583	113	0	0	0
Confl. Peds. (#/hr)	14		16	16		14			1	1		
Confl. Bikes (#/hr)	1					1			1	1		
Heavy Vehicles (%)	2%	12%	0%	0%	5%	4%	1%	1%	3%	0%	0%	0%
Turn Type	pm+pt						custom		Perm			
Protected Phases	4	1 4			1		2	2				
Permitted Phases	1 4						2		2			
Actuated Green, G (s)	54.0	58.0			21.0		33.0	33.0	33.0			
Effective Green, g (s)	54.0	58.0			21.0		33.0	33.0	33.0			
Actuated g/C Ratio	0.54	0.58			0.21		0.33	0.33	0.33			
Clearance Time (s)	4.0				4.0		5.0	5.0	5.0			
Lane Grp Cap (vph)	679	1771			595		578	588	500			
v/s Ratio Prot	c0.07	0.06			c0.14		0.10	c0.33				
v/s Ratio Perm	0.04								0.07			
v/c Ratio	0.20	0.11			0.67		0.32	0.99	0.23			
Uniform Delay, d1	11.8	9.4			36.3		25.1	33.4	24.3			
Progression Factor	0.24	0.25			1.00		0.75	0.79	1.93			
Incremental Delay, d2	0.6	0.1			5.8		0.9	27.7	0.7			
Delay (s)	3.5	2.5			42.1		19.8	54.1	47.6			
Level of Service	A	A			D		B	D	D			
Approach Delay (s)		2.9			42.1			46.4			0.0	
Approach LOS		A			D			D			A	

Intersection Summary			
HCM Average Control Delay	37.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	62.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1032: 112th Place & Marshield Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱		↰	↑↑					↰	↑↑	↱
Volume (vph)	0	457	372	34	592	0	0	0	0	4	215	195
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	11	12	12	12	12	10	10	12
Total Lost time (s)		4.0		4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.95		1.00	0.95					1.00	0.95	1.00
Frpb, ped/bikes		0.99		1.00	1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Frt		0.93		1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00					0.95	1.00	1.00
Satd. Flow (prot)		3107		1613	3273					1596	3160	1443
Flt Permitted		1.00		0.17	1.00					0.95	1.00	1.00
Satd. Flow (perm)		3107		284	3273					1596	3160	1443
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	0	476	388	35	617	0	0	0	0	4	224	203
RTOR Reduction (vph)	0	147	0	0	0	0	0	0	0	0	0	134
Lane Group Flow (vph)	0	717	0	35	617	0	0	0	0	4	224	69
Confl. Peds. (#/hr)	22		3	3		22						
Confl. Bikes (#/hr)	4					4			32	32		
Heavy Vehicles (%)	0%	2%	2%	6%	1%	0%	0%	0%	0%	0%	1%	6%
Turn Type				pm+pt						Split		Prot
Protected Phases		8		7	7 8					6	6	6
Permitted Phases				7 8								
Actuated Green, G (s)		36.0		54.0	58.0					34.0	34.0	34.0
Effective Green, g (s)		36.0		54.0	58.0					34.0	34.0	34.0
Actuated g/C Ratio		0.36		0.54	0.58					0.34	0.34	0.34
Clearance Time (s)		4.0		4.0						4.0	4.0	4.0
Lane Grp Cap (vph)		1119		393	1898					543	1074	491
v/s Ratio Prot		c0.23		0.02	c0.19					0.00	c0.07	0.05
v/s Ratio Perm				0.03								
v/c Ratio		0.64		0.09	0.33					0.01	0.21	0.14
Uniform Delay, d1		26.6		12.5	10.9					21.8	23.4	22.9
Progression Factor		1.00		0.54	0.68					0.73	0.79	0.92
Incremental Delay, d2		2.8		0.2	0.2					0.0	0.4	0.5
Delay (s)		29.4		6.9	7.6					16.0	18.9	21.5
Level of Service		C		A	A					B	B	C
Approach Delay (s)		29.4			7.5			0.0			20.1	
Approach LOS		C			A			A			C	

Intersection Summary			
HCM Average Control Delay	20.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	88.4%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1033: 112th Place & Ashland Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↰↑			↑↱		↰	↰	↱			
Volume (vph)	401	60	0	0	57	5	569	646	62	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	12	12	12	10	12	11	11	12	12	12	12
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0	4.0			
Lane Util. Factor	0.91	0.91			0.95		0.95	0.95	1.00			
Frpb, ped/bikes	1.00	1.00			0.99		1.00	1.00	1.00			
Flpb, ped/bikes	0.99	0.99			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.99		1.00	1.00	0.85			
Flt Protected	0.95	0.96			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1444	3042			3079		1555	1637	1500			
Flt Permitted	0.71	0.74			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	1084	2339			3079		1555	1637	1500			
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	413	62	0	0	59	5	587	666	64	0	0	0
RTOR Reduction (vph)	0	0	0	0	4	0	0	0	38	0	0	0
Lane Group Flow (vph)	206	269	0	0	60	0	587	666	26	0	0	0
Confl. Peds. (#/hr)	30		2	2		30			4	4		
Confl. Bikes (#/hr)	3					3			2	2		
Heavy Vehicles (%)	3%	2%	0%	0%	2%	0%	1%	1%	2%	0%	0%	0%
Turn Type	pm+pt						custom		custom			
Protected Phases	4	1 4			1		2	2	2			
Permitted Phases	1 4						2		2			
Actuated Green, G (s)	51.0	51.0			15.0		37.0	37.0	37.0			
Effective Green, g (s)	51.0	51.0			15.0		37.0	37.0	37.0			
Actuated g/C Ratio	0.51	0.51			0.15		0.37	0.37	0.37			
Clearance Time (s)	4.0				4.0		4.0	4.0	4.0			
Lane Grp Cap (vph)	682	1446			462		575	606	555			
v/s Ratio Prot	c0.11	0.07			0.02		0.38	c0.41	0.02			
v/s Ratio Perm	c0.05	0.03										
v/c Ratio	0.30	0.19			0.13		1.02	1.10	0.05			
Uniform Delay, d1	14.0	13.3			36.8		31.5	31.5	20.2			
Progression Factor	0.24	0.25			1.00		1.00	1.00	1.00			
Incremental Delay, d2	0.8	0.2			0.6		42.9	66.6	0.2			
Delay (s)	4.1	3.5			37.4		74.4	98.1	20.4			
Level of Service	A	A			D		E	F	C			
Approach Delay (s)		3.8			37.4			83.8			0.0	
Approach LOS		A			D			F			A	

Intersection Summary			
HCM Average Control Delay	61.7	HCM Level of Service	E
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	88.4%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1034: 111th Street & Halsted Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱		↰	↑↑	↱	↰	↑↑	↱
Volume (vph)	163	284	70	61	189	117	43	1151	72	100	476	42
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	9	10	9	9	10	9
Total Lost time (s)		4.0			4.0		4.0	3.5	4.0	4.0	3.5	4.0
Lane Util. Factor		0.95			0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		1.00			0.98		1.00	1.00	0.97	1.00	1.00	0.97
Flpb, ped/bikes		1.00			1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.98			0.95		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.98			0.99		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		2842			2770		1447	3069	1336	1494	2956	1270
Flt Permitted		0.66			0.79		0.39	1.00	1.00	0.12	1.00	1.00
Satd. Flow (perm)		1916			2214		600	3069	1336	197	2956	1270
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	170	296	73	64	197	122	45	1199	75	104	496	44
RTOR Reduction (vph)	0	14	0	0	64	0	0	0	28	0	0	27
Lane Group Flow (vph)	0	525	0	0	319	0	45	1199	47	104	496	17
Confl. Peds. (#/hr)	49		20	20		49	26		8	8		26
Confl. Bikes (#/hr)	2					2						
Heavy Vehicles (%)	10%	7%	4%	9%	7%	5%	6%	4%	0%	3%	8%	5%
Turn Type	pm+pt			Perm			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)		35.0			27.0		38.0	33.0	33.0	38.0	33.0	33.0
Effective Green, g (s)		36.0			28.0		36.0	33.5	33.0	36.0	33.5	33.0
Actuated g/C Ratio		0.42			0.33		0.42	0.39	0.39	0.42	0.39	0.39
Clearance Time (s)		5.0			5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)		877			729		294	1210	519	144	1165	493
v/s Ratio Prot		c0.04					0.01	c0.39		c0.03	0.17	
v/s Ratio Perm		0.21			0.14		0.06		0.04	0.27		0.01
v/c Ratio		0.60			0.44		0.15	0.99	0.09	0.72	0.43	0.03
Uniform Delay, d1		18.9			22.3		14.7	25.6	16.5	19.2	18.7	16.1
Progression Factor		1.00			1.00		1.32	0.86	1.42	1.82	1.63	3.13
Incremental Delay, d2		3.0			1.9		0.6	17.7	0.2	24.6	1.0	0.1
Delay (s)		21.9			24.2		20.2	39.8	23.6	59.5	31.7	50.7
Level of Service		C			C		C	D	C	E	C	D
Approach Delay (s)		21.9			24.2			38.2			37.5	
Approach LOS		C			C			D			D	

Intersection Summary			
HCM Average Control Delay	33.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	11.5
Intersection Capacity Utilization	82.0%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1035: 111th Street & Normal Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰			↱			✥				
Volume (vph)	44	441	0	0	339	85	28	63	115	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		1.00			0.97			0.92				
Flt Protected		1.00			1.00			0.99				
Satd. Flow (prot)		1707			1668			1574				
Flt Permitted		0.93			1.00			0.99				
Satd. Flow (perm)		1599			1668			1574				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	49	490	0	0	377	94	31	70	128	0	0	0
RTOR Reduction (vph)	0	0	0	0	14	0	0	70	0	0	0	0
Lane Group Flow (vph)	0	539	0	0	457	0	0	159	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)		34.0			34.0			23.0				
Effective Green, g (s)		34.0			34.0			23.0				
Actuated g/C Ratio		0.52			0.52			0.35				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		836			872			557				
v/s Ratio Prot					0.27							
v/s Ratio Perm		c0.34						0.10				
v/c Ratio		0.64			0.52			0.28				
Uniform Delay, d1		11.2			10.2			15.1				
Progression Factor		1.00			0.56			1.00				
Incremental Delay, d2		3.8			2.0			1.3				
Delay (s)		15.0			7.7			16.4				
Level of Service		B			A			B				
Approach Delay (s)		15.0			7.7			16.4			0.0	
Approach LOS		B			A			B			A	

Intersection Summary			
HCM Average Control Delay	12.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	73.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱			↰↑↑↱			↰↑↑↱	
Volume (vph)	45	458	31	23	355	53	16	175	47	68	107	19
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	12	12	12	12	12
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		1.00			1.00			0.99			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.99			0.98			0.97			0.99	
Flt Protected		1.00			1.00			1.00			0.98	
Satd. Flow (prot)		1889			1831			3160			3149	
Flt Permitted		0.93			0.96			0.93			0.79	
Satd. Flow (perm)		1773			1759			2958			2534	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	50	509	34	26	394	59	18	194	52	76	119	21
RTOR Reduction (vph)	0	3	0	0	8	0	0	30	0	0	12	0
Lane Group Flow (vph)	0	590	0	0	471	0	0	234	0	0	204	0
Confl. Peds. (#/hr)	29		16	16		29	28		14	14		28
Confl. Bikes (#/hr)	1					1	1					1
Heavy Vehicles (%)	3%	7%	4%	12%	8%	13%	0%	4%	4%	4%	4%	6%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		30.0			30.0			27.0			27.0	
Effective Green, g (s)		30.0			30.0			27.0			27.0	
Actuated g/C Ratio		0.46			0.46			0.42			0.42	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		818			812			1229			1053	
v/s Ratio Prot												
v/s Ratio Perm		c0.33			0.27			0.08			c0.08	
v/c Ratio		0.72			0.58			0.19			0.19	
Uniform Delay, d1		14.1			12.9			12.1			12.1	
Progression Factor		0.65			0.55			0.95			0.70	
Incremental Delay, d2		4.5			2.9			0.3			0.4	
Delay (s)		13.6			10.0			11.8			8.9	
Level of Service		B			A			B			A	
Approach Delay (s)		13.6			10.0			11.8			8.9	
Approach LOS		B			A			B			A	

Intersection Summary			
HCM Average Control Delay	11.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	80.3%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

1037: 111th Street & State Street

	⤴	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	50	355	20	29	302	64	46	319	92	60	96	20
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	9	10	10	9	10	10	12	10	10	12
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		0.99	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.97		1.00	0.97		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1502	2948		1585	2934		1497	3031		1594	2943	
Flt Permitted	0.47	1.00		0.46	1.00		0.67	1.00		0.48	1.00	
Satd. Flow (perm)	744	2948		773	2934		1056	3031		806	2943	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	56	394	22	32	336	71	51	354	102	67	107	22
RTOR Reduction (vph)	0	6	0	0	28	0	0	41	0	0	10	0
Lane Group Flow (vph)	56	410	0	32	379	0	51	415	0	67	119	0
Confl. Peds. (#/hr)	25		14	14		25	12		4	4		12
Confl. Bikes (#/hr)	1					1			1	1		
Heavy Vehicles (%)	5%	7%	12%	0%	6%	2%	6%	1%	3%	0%	4%	12%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	22.0	22.0		22.0	22.0		35.0	35.0		35.0	35.0	
Effective Green, g (s)	22.0	22.0		22.0	22.0		35.0	35.0		35.0	35.0	
Actuated g/C Ratio	0.34	0.34		0.34	0.34		0.54	0.54		0.54	0.54	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	252	998		262	993		569	1632		434	1585	
v/s Ratio Prot		c0.14			0.13			c0.14			0.04	
v/s Ratio Perm	0.08			0.04			0.05			0.08		
v/c Ratio	0.22	0.41		0.12	0.38		0.09	0.25		0.15	0.07	
Uniform Delay, d1	15.4	16.5		14.8	16.3		7.3	8.0		7.6	7.2	
Progression Factor	0.63	0.62		0.88	0.89		0.71	0.73		1.34	1.35	
Incremental Delay, d2	1.6	1.0		0.9	1.1		0.3	0.4		0.8	0.1	
Delay (s)	11.2	11.3		14.1	15.6		5.5	6.2		10.9	9.8	
Level of Service	B	B		B	B		A	A		B	A	
Approach Delay (s)		11.3			15.5			6.2			10.2	
Approach LOS		B			B			A			B	

Intersection Summary			
HCM Average Control Delay	10.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	46.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1038: 111th Street & Michigan Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			↰↑↱			↰↑↱	
Volume (vph)	83	380	131	100	316	82	37	324	60	41	136	38
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	9	10	9	9	16	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.98			1.00			0.99	
Flpb, ped/bikes	0.97	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.96		1.00	0.97			0.98			0.97	
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.99	
Satd. Flow (prot)	1381	2934		1337	3524			3413			3314	
Flt Permitted	0.49	1.00		0.42	1.00			0.91			0.84	
Satd. Flow (perm)	719	2934		587	3524			3134			2805	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	87	400	138	105	333	86	39	341	63	43	143	40
RTOR Reduction (vph)	0	53	0	0	35	0	0	20	0	0	24	0
Lane Group Flow (vph)	87	485	0	105	384	0	0	423	0	0	202	0
Confl. Peds. (#/hr)	53		34	34		53	67		28	28		67
Heavy Vehicles (%)	8%	5%	0%	14%	6%	1%	0%	9%	20%	5%	15%	5%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	31.0	31.0		31.0	31.0			26.0			26.0	
Effective Green, g (s)	31.0	31.0		31.0	31.0			26.0			26.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48			0.40			0.40	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	343	1399		280	1681			1254			1122	
v/s Ratio Prot		0.17			0.11							
v/s Ratio Perm	0.12			c0.18				c0.13			0.07	
v/c Ratio	0.25	0.35		0.38	0.23			0.34			0.18	
Uniform Delay, d1	10.1	10.7		10.8	10.0			13.5			12.6	
Progression Factor	1.65	1.85		0.77	0.72			1.00			0.64	
Incremental Delay, d2	1.7	0.7		3.3	0.3			0.7			0.3	
Delay (s)	18.4	20.4		11.6	7.4			14.3			8.4	
Level of Service	B	C		B	A			B			A	
Approach Delay (s)		20.1			8.3			14.3			8.4	
Approach LOS		C			A			B			A	

Intersection Summary			
HCM Average Control Delay	13.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	62.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1039: 111th Street & Indiana Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰↱			✥			✥	
Volume (vph)	99	307	99	104	371	104	82	84	88	88	84	82
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	16	12	12	16	12
Total Lost time (s)		5.0	5.0		5.0			5.0			5.0	
Lane Util. Factor		1.00	1.00		0.95			1.00			1.00	
Frt		1.00	0.85		0.97			0.95			0.96	
Flt Protected		0.99	1.00		0.99			0.98			0.98	
Satd. Flow (prot)		1637	1409		3036			1822			1826	
Flt Permitted		0.74	1.00		0.76			0.80			0.78	
Satd. Flow (perm)		1223	1409		2327			1482			1447	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	110	341	110	116	412	116	91	93	98	98	93	91
RTOR Reduction (vph)	0	0	52	0	29	0	0	30	0	0	26	0
Lane Group Flow (vph)	0	451	58	0	615	0	0	252	0	0	256	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm		Perm	Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)		34.0	34.0		34.0			21.0			21.0	
Effective Green, g (s)		34.0	34.0		34.0			21.0			21.0	
Actuated g/C Ratio		0.52	0.52		0.52			0.32			0.32	
Clearance Time (s)		5.0	5.0		5.0			5.0			5.0	
Lane Grp Cap (vph)		640	737		1217			479			467	
v/s Ratio Prot												
v/s Ratio Perm		c0.37	0.04		0.26			0.17			c0.18	
v/c Ratio		0.70	0.08		0.51			0.53			0.55	
Uniform Delay, d1		11.7	7.7		10.1			17.9			18.1	
Progression Factor		1.78	4.62		0.43			1.00			1.00	
Incremental Delay, d2		6.2	0.2		1.4			4.1			4.6	
Delay (s)		27.1	35.8		5.7			22.0			22.6	
Level of Service		C	D		A			C			C	
Approach Delay (s)		28.8			5.7			22.0			22.6	
Approach LOS		C			A			C			C	

Intersection Summary			
HCM Average Control Delay	18.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	73.3%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1040: 111th Street & Martin Luther King Jr Drive

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			↰↑↱			↰↑↱	
Volume (vph)	75	386	22	15	450	63	40	103	41	43	90	101
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	15	8	16	8	8	16	8
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			1.00			0.99	
Flpb, ped/bikes	0.99	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.98			0.97			0.94	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1475	3017		1573	3003			3457			3397	
Flt Permitted	0.38	1.00		0.46	1.00			0.86			0.88	
Satd. Flow (perm)	597	3017		764	3003			3010			3010	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	83	429	24	17	500	70	44	114	46	48	100	112
RTOR Reduction (vph)	0	6	0	0	17	0	0	25	0	0	62	0
Lane Group Flow (vph)	83	447	0	17	553	0	0	179	0	0	198	0
Confl. Peds. (#/hr)	22		40	40		22	18		3	3		18
Confl. Bikes (#/hr)			2	2			1					1
Heavy Vehicles (%)	7%	5%	0%	0%	4%	2%	0%	3%	22%	0%	3%	8%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	28.0	28.0		28.0	28.0			29.0			29.0	
Effective Green, g (s)	28.0	28.0		28.0	28.0			29.0			29.0	
Actuated g/C Ratio	0.43	0.43		0.43	0.43			0.45			0.45	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	257	1300		329	1294			1343			1343	
v/s Ratio Prot		0.15			c0.18							
v/s Ratio Perm	0.14			0.02				0.06			c0.07	
v/c Ratio	0.32	0.34		0.05	0.43			0.13			0.15	
Uniform Delay, d1	12.2	12.4		10.8	12.9			10.6			10.7	
Progression Factor	0.96	0.99		1.14	1.00			0.98			0.83	
Incremental Delay, d2	2.5	0.5		0.1	0.5			0.2			0.2	
Delay (s)	14.3	12.8		12.4	13.3			10.6			9.1	
Level of Service	B	B		B	B			B			A	
Approach Delay (s)		13.0			13.3			10.6			9.1	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM Average Control Delay	12.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	59.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1041: 111th Street & Cottage Grove Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱			↰↑↱			↰↑↱	
Volume (vph)	86	458	74	94	469	284	51	332	92	222	159	52
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			0.95			0.95	
Frt		0.98			0.95			0.97			0.98	
Flt Protected		0.99			0.99			0.99			0.98	
Satd. Flow (prot)		3177			3076			3146			3118	
Flt Permitted		0.63			0.74			0.87			0.63	
Satd. Flow (perm)		2014			2279			2748			2005	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	96	509	82	104	521	316	57	369	102	247	177	58
RTOR Reduction (vph)	0	16	0	0	98	0	0	32	0	0	17	0
Lane Group Flow (vph)	0	671	0	0	843	0	0	496	0	0	465	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm			pm+pt			Perm		
Protected Phases		4			8		5	2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		26.0			26.0			29.0			20.0	
Effective Green, g (s)		26.0			26.0			29.0			20.0	
Actuated g/C Ratio		0.40			0.40			0.45			0.31	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		806			912			1263			617	
v/s Ratio Prot								c0.04				
v/s Ratio Perm		0.33			c0.37			0.14			c0.23	
v/c Ratio		0.83			0.92			0.39			0.96dl	
Uniform Delay, d1		17.5			18.6			12.1			20.3	
Progression Factor		1.73			1.00			1.00			0.89	
Incremental Delay, d2		9.7			16.3			0.9			8.3	
Delay (s)		40.0			34.9			13.0			26.4	
Level of Service		D			C			B			C	
Approach Delay (s)		40.0			34.9			13.0			26.4	
Approach LOS		D			C			B			C	

Intersection Summary			
HCM Average Control Delay	30.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	88.9%	ICU Level of Service	E
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↑↱			↰↑↑↱			↰↑↱			↰↑↱	
Volume (vph)	0	724	121	45	759	0	142	0	70	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	10	10	12	12	12	12	10	10	10
Total Lost time (s)		5.0			5.0			5.0				
Lane Util. Factor		0.95			0.95			1.00				
Frt		0.98			1.00			0.96				
Flt Protected		1.00			1.00			0.97				
Satd. Flow (prot)		2975			3032			1585				
Flt Permitted		1.00			0.84			0.80				
Satd. Flow (perm)		2975			2542			1308				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	804	134	50	843	0	158	0	78	0	0	0
RTOR Reduction (vph)	0	18	0	0	0	0	0	20	0	0	0	0
Lane Group Flow (vph)	0	920	0	0	893	0	0	216	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	custom			Perm			Perm			Perm		
Protected Phases		4 5 6 11			8			2			2	
Permitted Phases	4 6 11			8			2			2		
Actuated Green, G (s)		63.0			33.0			18.0				
Effective Green, g (s)		56.0			33.0			18.0				
Actuated g/C Ratio		0.62			0.37			0.20				
Clearance Time (s)					5.0			5.0				
Lane Grp Cap (vph)		1851			932			262				
v/s Ratio Prot		c0.31										
v/s Ratio Perm					c0.35			c0.17				
v/c Ratio		0.50			0.96			0.82				
Uniform Delay, d1		9.3			27.8			34.5				
Progression Factor		0.04			1.57			1.00				
Incremental Delay, d2		0.4			18.9			24.6				
Delay (s)		0.8			62.5			59.1				
Level of Service		A			E			E				
Approach Delay (s)		0.8			62.5			59.1			0.0	
Approach LOS		A			E			E			A	

Intersection Summary			
HCM Average Control Delay	34.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	74.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1043: 111th Street & Doty Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↑	↱		✥		↰	↑	↱
Volume (vph)	123	502	187	274	646	183	103	20	185	78	7	77
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	10	12	12	12	12	16	12	12	12	12
Total Lost time (s)	3.0	5.0		3.0	5.0	3.0		5.0		3.0	5.0	3.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00		1.00	1.00	1.00
Frt	1.00	0.96		1.00	1.00	0.85		0.92		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.98		0.95	1.00	1.00
Satd. Flow (prot)	1520	3020		1629	3257	1457		1756		1629	1714	1457
Flt Permitted	0.32	1.00		0.20	1.00	1.00		0.89		0.40	1.00	1.00
Satd. Flow (perm)	508	3020		340	3257	1457		1581		690	1714	1457
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	137	558	208	304	718	203	114	22	206	87	8	86
RTOR Reduction (vph)	0	42	0	0	0	104	0	74	0	0	0	46
Lane Group Flow (vph)	137	724	0	304	718	99	0	268	0	87	8	40
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	pm+pt			pm+pt		pm+ov	pm+pt			pm+pt		pm+ov
Protected Phases	7	4		3	8	1	5	2		1	6	7
Permitted Phases	4			8		8	2			6		6
Actuated Green, G (s)	40.0	30.6		47.6	35.2	43.8		20.8		32.4	32.4	41.8
Effective Green, g (s)	40.0	30.6		47.6	35.2	43.8		20.8		32.4	32.4	41.8
Actuated g/C Ratio	0.44	0.34		0.53	0.39	0.49		0.23		0.36	0.36	0.46
Clearance Time (s)	3.0	5.0		3.0	5.0	3.0		5.0		3.0	5.0	3.0
Vehicle Extension (s)	4.0	3.0		4.0	3.0	3.0		4.0		3.0	4.0	4.0
Lane Grp Cap (vph)	331	1027		380	1274	709		365		338	617	677
v/s Ratio Prot	0.04	0.24		c0.12	0.22	0.01				c0.02	0.00	0.01
v/s Ratio Perm	0.14			c0.30		0.05		c0.17		0.07		0.02
v/c Ratio	0.41	0.71		0.80	0.56	0.14		0.73		0.26	0.01	0.06
Uniform Delay, d1	15.4	25.8		14.8	21.4	12.7		32.0		21.2	18.5	13.3
Progression Factor	1.91	1.58		1.00	1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2	1.0	3.6		12.0	1.8	0.1		8.0		0.4	0.0	0.1
Delay (s)	30.5	44.5		26.8	23.2	12.8		40.0		21.6	18.5	13.3
Level of Service	C	D		C	C	B		D		C	B	B
Approach Delay (s)		42.4			22.4			40.0			17.5	
Approach LOS		D			C			D			B	

Intersection Summary			
HCM Average Control Delay	31.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	74.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
1044: 111th Street & Bishop Ford Freeway EB Ramps

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↑↑					↰		↱
Volume (veh/h)	0	517	247	6	531	0	0	0	0	32	0	572
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	574	274	7	590	0	0	0	0	36	0	636
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		498										
pX, platoon unblocked												
vC, conflicting volume	590			574			883	1178	287	891	1178	295
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	590			574			883	1178	287	891	1178	295
tC, single (s)	4.2			4.2			7.6	6.6	7.0	7.6	6.6	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			100	100	100	85	100	8
cM capacity (veh/h)	961			974			19	184	701	231	184	692

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1	SB 2
Volume Total	287	287	274	203	393	36	636
Volume Left	0	0	0	7	0	36	0
Volume Right	0	0	274	0	0	0	636
cSH	1700	1700	1700	974	1700	231	692
Volume to Capacity	0.17	0.17	0.16	0.01	0.23	0.15	0.92
Queue Length 95th (ft)	0	0	0	1	0	13	307
Control Delay (s)	0.0	0.0	0.0	0.4	0.0	23.4	41.6
Lane LOS				A		C	E
Approach Delay (s)	0.0			0.1		40.6	
Approach LOS						E	

Intersection Summary			
Average Delay	12.9		
Intersection Capacity Utilization	59.7%	ICU Level of Service	B
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
1045: 111th Street & Bishop Ford Freeway WB Ramps

1/14/2013

	↗	↘	↖	↑	↓	↙
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰↰		↰			
Sign Control	Stop			Stop	Stop	
Volume (vph)	549	0	537	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	610	0	597	0	0	0

Direction, Lane #	EB 1	EB 2	NB 1
Volume Total (vph)	305	305	597
Volume Left (vph)	305	305	597
Volume Right (vph)	0	0	0
Hadj (s)	0.58	0.58	0.29
Departure Headway (s)	7.0	7.0	5.8
Degree Utilization, x	0.59	0.59	0.95
Capacity (veh/h)	499	499	618
Control Delay (s)	18.2	18.2	49.1
Approach Delay (s)	18.2		49.1
Approach LOS	C		E

Intersection Summary			
Delay	33.5		
HCM Level of Service	D		
Intersection Capacity Utilization	54.6%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Signalized Intersection Capacity Analysis
1046: 115th Street & Marshield Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱		↰	↑↑						↰↱	
Volume (vph)	0	373	46	130	332	0	0	0	0	72	15	42
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	12	12	12	12	12
Total Lost time (s)		3.0		4.0	4.0						5.0	
Lane Util. Factor		0.95		1.00	0.95						0.95	
Frt		0.98		1.00	1.00						0.95	
Flt Protected		1.00		0.95	1.00						0.97	
Satd. Flow (prot)		3097		1574	3149						3014	
Flt Permitted		1.00		0.43	1.00						0.97	
Satd. Flow (perm)		3097		706	3149						3014	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	414	51	144	369	0	0	0	0	80	17	47
RTOR Reduction (vph)	0	11	0	0	0	0	0	0	0	0	32	0
Lane Group Flow (vph)	0	454	0	144	369	0	0	0	0	0	112	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type				pm+pt						Split		
Protected Phases		4		3	8					6	6	
Permitted Phases				8								
Actuated Green, G (s)		36.0		49.0	49.0						27.0	
Effective Green, g (s)		36.0		49.0	49.0						27.0	
Actuated g/C Ratio		0.42		0.58	0.58						0.32	
Clearance Time (s)		3.0		4.0	4.0						5.0	
Lane Grp Cap (vph)		1312		509	1815						957	
v/s Ratio Prot		c0.15		c0.03	0.12						c0.04	
v/s Ratio Perm				0.13								
v/c Ratio		0.35		0.28	0.20						0.12	
Uniform Delay, d1		16.5		11.9	8.6						20.6	
Progression Factor		1.00		0.28	0.23						1.00	
Incremental Delay, d2		0.7		1.3	0.2						0.2	
Delay (s)		17.3		4.6	2.2						20.8	
Level of Service		B		A	A						C	
Approach Delay (s)		17.3			2.9			0.0			20.8	
Approach LOS		B			A			A			C	

Intersection Summary			
HCM Average Control Delay	11.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.24		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	34.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

1047: 115th Street & Ashland Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑			↑↱			↰↑↱				
Volume (vph)	68	377	0	0	413	76	49	65	59	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	11	11	12	12	12	12	12	12
Total Lost time (s)	5.0	5.0			3.0			5.0				
Lane Util. Factor	1.00	0.95			0.95			0.91				
Frt	1.00	1.00			0.98			0.95				
Flt Protected	0.95	1.00			1.00			0.99				
Satd. Flow (prot)	1629	3257			3076			4377				
Flt Permitted	0.37	1.00			1.00			0.99				
Satd. Flow (perm)	640	3257			3076			4377				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	76	419	0	0	459	84	54	72	66	0	0	0
RTOR Reduction (vph)	0	0	0	0	18	0	0	45	0	0	0	0
Lane Group Flow (vph)	76	419	0	0	525	0	0	147	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	pm+pt						Split					
Protected Phases	7	4			8		2	2				
Permitted Phases	4											
Actuated Green, G (s)	48.0	48.0			35.0			27.0				
Effective Green, g (s)	48.0	48.0			35.0			27.0				
Actuated g/C Ratio	0.56	0.56			0.41			0.32				
Clearance Time (s)	5.0	5.0			3.0			5.0				
Lane Grp Cap (vph)	478	1839			1267			1390				
v/s Ratio Prot	0.02	c0.13			c0.17			c0.03				
v/s Ratio Perm	0.07											
v/c Ratio	0.16	0.23			0.41			0.11				
Uniform Delay, d1	12.3	9.2			17.7			20.5				
Progression Factor	0.31	0.30			1.00			1.00				
Incremental Delay, d2	0.7	0.3			1.0			0.2				
Delay (s)	4.5	3.1			18.7			20.6				
Level of Service	A	A			B			C				
Approach Delay (s)		3.3			18.7			20.6			0.0	
Approach LOS		A			B			C			A	

Intersection Summary			
HCM Average Control Delay	12.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	34.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1048: 115th Street & Racine Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	39	357	39	40	256	33	118	85	86	65	91	126
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	10	12	12	15	12	12	15	12
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			1.00			1.00	
Frt		0.99			0.98			0.96			0.94	
Flt Protected		1.00			0.99			0.98			0.99	
Satd. Flow (prot)		2986			2976			1773			1752	
Flt Permitted		0.89			0.85			0.77			0.86	
Satd. Flow (perm)		2673			2560			1387			1526	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	43	397	43	44	284	37	131	94	96	72	101	140
RTOR Reduction (vph)	0	11	0	0	13	0	0	24	0	0	45	0
Lane Group Flow (vph)	0	472	0	0	352	0	0	297	0	0	268	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		23.0			23.0			32.0			32.0	
Effective Green, g (s)		23.0			23.0			32.0			32.0	
Actuated g/C Ratio		0.35			0.35			0.49			0.49	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		946			906			683			751	
v/s Ratio Prot												
v/s Ratio Perm		c0.18			0.14			c0.21			0.18	
v/c Ratio		0.50			0.39			0.44			0.36	
Uniform Delay, d1		16.5			15.7			10.7			10.2	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		1.9			1.3			2.0			1.3	
Delay (s)		18.4			17.0			12.7			11.5	
Level of Service		B			B			B			B	
Approach Delay (s)		18.4			17.0			12.7			11.5	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	15.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	65.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1049: 115th Street & Halsted Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↑	↱	↰	↑↑	↱
Volume (vph)	169	295	39	59	200	75	71	1001	104	126	428	80
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	12	10	16	12	9	10	9	9	10	9
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00	0.98	1.00	1.00	0.96
Flpb, ped/bikes	0.99	1.00		1.00	1.00		0.99	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.98		1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1551	3023		1593	3505		1486	3040	1347	1494	3011	1271
Flt Permitted	0.55	1.00		0.49	1.00		0.43	1.00	1.00	0.12	1.00	1.00
Satd. Flow (perm)	891	3023		819	3505		675	3040	1347	197	3011	1271
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	178	311	41	62	211	79	75	1054	109	133	451	84
RTOR Reduction (vph)	0	12	0	0	45	0	0	0	65	0	0	51
Lane Group Flow (vph)	178	340	0	62	245	0	75	1054	44	133	451	33
Confl. Peds. (#/hr)	31		7	7		31	37		12	12		37
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	2%	4%	0%	0%	6%	2%	3%	5%	0%	3%	6%	4%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	32.0	27.0		32.0	27.0		38.0	33.0	33.0	38.0	33.0	33.0
Effective Green, g (s)	30.0	28.0		30.0	28.0		36.0	33.0	33.0	36.0	33.0	33.0
Actuated g/C Ratio	0.35	0.33		0.35	0.33		0.42	0.39	0.39	0.42	0.39	0.39
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)	346	996		325	1155		324	1180	523	144	1169	493
v/s Ratio Prot	c0.02	0.11		0.01	0.07		0.01	c0.35		c0.04	0.15	
v/s Ratio Perm	c0.16			0.06			0.09		0.03	0.35		0.03
v/c Ratio	0.51	0.34		0.19	0.21		0.23	0.89	0.08	0.92	0.39	0.07
Uniform Delay, d1	20.9	21.5		18.6	20.5		15.0	24.3	16.4	21.1	18.7	16.3
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	2.17	0.62	0.80
Incremental Delay, d2	5.4	0.9		1.3	0.4		1.7	10.5	0.3	54.0	0.9	0.2
Delay (s)	26.3	22.5		19.9	21.0		16.6	34.8	16.8	99.7	12.6	13.3
Level of Service	C	C		B	C		B	C	B	F	B	B
Approach Delay (s)		23.8			20.8			32.1			30.0	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	28.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	73.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1050: 115th Street & Wentworth Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱		↰	↱		↰	↱
Volume (vph)	38	434	18	25	261	21	35	113	68	71	57	41
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	16	12	12	16	12
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frpb, ped/bikes		1.00	0.96		1.00	0.97		1.00	0.99		1.00	0.98
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frt		1.00	0.85		1.00	0.85		1.00	0.85		1.00	0.85
Flt Protected		1.00	1.00		1.00	1.00		0.99	1.00		0.97	1.00
Satd. Flow (prot)		1935	1382		1947	1331		1970	1452		1933	1430
Flt Permitted		0.96	1.00		0.95	1.00		0.92	1.00		0.80	1.00
Satd. Flow (perm)		1860	1382		1848	1331		1839	1452		1581	1430
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	40	457	19	26	275	22	37	119	72	75	60	43
RTOR Reduction (vph)	0	0	10	0	0	12	0	0	42	0	0	25
Lane Group Flow (vph)	0	497	9	0	301	10	0	156	30	0	135	18
Confl. Peds. (#/hr)	5		21	21		5	9		1	1		9
Heavy Vehicles (%)	5%	5%	6%	7%	4%	12%	6%	1%	4%	0%	6%	5%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)		30.0	30.0		30.0	30.0		27.0	27.0		27.0	27.0
Effective Green, g (s)		30.0	30.0		30.0	30.0		27.0	27.0		27.0	27.0
Actuated g/C Ratio		0.46	0.46		0.46	0.46		0.42	0.42		0.42	0.42
Clearance Time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		858	638		853	614		764	603		657	594
v/s Ratio Prot												
v/s Ratio Perm		c0.27	0.01		0.16	0.01		0.08	0.02		c0.09	0.01
v/c Ratio		0.58	0.01		0.35	0.02		0.20	0.05		0.21	0.03
Uniform Delay, d1		12.9	9.5		11.3	9.5		12.1	11.3		12.1	11.2
Progression Factor		1.00	1.00		0.38	0.16		1.18	1.66		0.99	0.83
Incremental Delay, d2		2.8	0.0		1.1	0.0		0.6	0.2		0.7	0.1
Delay (s)		15.7	9.5		5.3	1.6		14.9	18.9		12.7	9.4
Level of Service		B	A		A	A		B	B		B	A
Approach Delay (s)		15.5			5.1			16.2			11.9	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM Average Control Delay	12.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	67.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1051: 115th Street & State Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	66	514	10	17	268	43	13	247	35	81	70	30
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	1.00		1.00	0.98		1.00	0.98		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1520	3031		1520	2977		1520	2983		1520	2904	
Flt Permitted	0.95	1.00		0.43	1.00		0.68	1.00		0.54	1.00	
Satd. Flow (perm)	1520	3031		692	2977		1091	2983		871	2904	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	73	571	11	19	298	48	14	274	39	90	78	33
RTOR Reduction (vph)	0	2	0	0	20	0	0	17	0	0	19	0
Lane Group Flow (vph)	73	580	0	19	326	0	14	296	0	90	92	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Prot			Perm			Perm			Perm		
Protected Phases	7	4			8			2			6	
Permitted Phases				8			2			6		
Actuated Green, G (s)	7.0	32.0		22.0	22.0		27.0	27.0		27.0	27.0	
Effective Green, g (s)	7.0	32.0		22.0	22.0		27.0	27.0		27.0	27.0	
Actuated g/C Ratio	0.11	0.49		0.34	0.34		0.42	0.42		0.42	0.42	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	164	1492		234	1008		453	1239		362	1206	
v/s Ratio Prot	c0.05	c0.19			0.11			0.10			0.03	
v/s Ratio Perm				0.03			0.01			c0.10		
v/c Ratio	0.45	0.39		0.08	0.32		0.03	0.24		0.25	0.08	
Uniform Delay, d1	27.2	10.4		14.6	16.0		11.3	12.3		12.4	11.5	
Progression Factor	1.07	0.60		1.00	1.00		0.54	0.56		1.12	1.08	
Incremental Delay, d2	7.8	0.7		0.7	0.9		0.1	0.4		1.6	0.1	
Delay (s)	36.9	6.9		15.3	16.8		6.2	7.3		15.5	12.5	
Level of Service	D	A		B	B		A	A		B	B	
Approach Delay (s)		10.3			16.7			7.3			13.8	
Approach LOS		B			B			A			B	

Intersection Summary			
HCM Average Control Delay	11.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	45.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1052: 115th Street & Michigan Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			↰↑↱			↰↑↱	
Volume (vph)	37	253	348	242	216	43	109	310	56	25	192	25
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	12	12	12	12	12	12
Total Lost time (s)	4.0	4.0		3.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frt	1.00	0.91		1.00	0.97			0.98			0.98	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1520	2776		1520	2964			3163			3190	
Flt Permitted	0.58	1.00		0.95	1.00			0.80			0.88	
Satd. Flow (perm)	921	2776		1520	2964			2565			2816	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	41	281	387	269	240	48	121	344	62	28	213	28
RTOR Reduction (vph)	0	270	0	0	22	0	0	17	0	0	15	0
Lane Group Flow (vph)	41	398	0	269	266	0	0	510	0	0	254	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Prot			Perm			Perm		
Protected Phases		4		3	8			2			6	
Permitted Phases	4						2			6		
Actuated Green, G (s)	15.0	15.0		14.0	32.0			17.0			17.0	
Effective Green, g (s)	15.0	15.0		14.0	32.0			17.0			17.0	
Actuated g/C Ratio	0.25	0.25		0.23	0.53			0.28			0.28	
Clearance Time (s)	4.0	4.0		3.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	230	694		355	1581			727			798	
v/s Ratio Prot		c0.14		c0.18	0.09							
v/s Ratio Perm	0.04							c0.20			0.09	
v/c Ratio	0.18	0.57		0.76	0.17			0.70			0.32	
Uniform Delay, d1	17.7	19.7		21.4	7.2			19.2			16.9	
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2	1.7	3.4		14.0	0.2			5.6			1.0	
Delay (s)	19.4	23.1		35.5	7.4			24.8			18.0	
Level of Service	B	C		D	A			C			B	
Approach Delay (s)		22.9			21.0			24.8			18.0	
Approach LOS		C			C			C			B	

Intersection Summary			
HCM Average Control Delay	22.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	68.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1053: 115th Street & Indiana Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱			↰↑↑↱				
Volume (vph)	16	298	14	70	466	70	34	94	162	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	12	14	12	10	15	10
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			0.95				
Frt		0.99			0.98			0.92				
Flt Protected		1.00			0.99			0.99				
Satd. Flow (prot)		1587			1566			3164				
Flt Permitted		0.97			0.92			0.99				
Satd. Flow (perm)		1535			1451			3164				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	18	331	16	78	518	78	38	104	180	0	0	0
RTOR Reduction (vph)	0	2	0	0	6	0	0	138	0	0	0	0
Lane Group Flow (vph)	0	363	0	0	668	0	0	184	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm			Perm					
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Actuated Green, G (s)		41.9			41.9			15.1				
Effective Green, g (s)		41.9			41.9			15.1				
Actuated g/C Ratio		0.64			0.64			0.23				
Clearance Time (s)		4.0			4.0			4.0				
Vehicle Extension (s)		3.0			3.0			8.0				
Lane Grp Cap (vph)		989			935			735				
v/s Ratio Prot												
v/s Ratio Perm		0.24			c0.46			0.06				
v/c Ratio		0.37			0.71			0.25				
Uniform Delay, d1		5.4			7.6			20.3				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		1.1			4.6			0.8				
Delay (s)		6.4			12.3			21.1				
Level of Service		A			B			C				
Approach Delay (s)		6.4			12.3			21.1			0.0	
Approach LOS		A			B			C			A	

Intersection Summary			
HCM Average Control Delay	12.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	72.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
1054: 115th Street & Martin Luther King Jr Drive

1/14/2013

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰↑	↑↱		↰	↱
Volume (veh/h)	94	366	477	44	66	126
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	99	385	502	46	69	133
Pedestrians		3	5		21	
Lane Width (ft)		16.0	16.0		10.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		0	1		1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		1319	491			
pX, platoon unblocked						
vC, conflicting volume	569				942	298
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	569				942	298
tC, single (s)	4.3				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.3				3.5	3.3
p0 queue free %	89				70	81
cM capacity (veh/h)	920				229	686

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	SB 2
Volume Total	227	257	335	214	69	133
Volume Left	99	0	0	0	69	0
Volume Right	0	0	0	46	0	133
cSH	920	1700	1700	1700	229	686
Volume to Capacity	0.11	0.15	0.20	0.13	0.30	0.19
Queue Length 95th (ft)	9	0	0	0	31	18
Control Delay (s)	4.7	0.0	0.0	0.0	27.5	11.5
Lane LOS	A				D	B
Approach Delay (s)	2.2		0.0		17.0	
Approach LOS					C	

Intersection Summary			
Average Delay	3.6		
Intersection Capacity Utilization	43.9%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Signalized Intersection Capacity Analysis
1055: 115th Street & Cottage Grove Avenue

1/14/2013

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↱			↰	Y	
Volume (vph)	477	1	27	691	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0			4.0		
Lane Util. Factor	1.00			1.00		
Frt	1.00			1.00		
Flt Protected	1.00			1.00		
Satd. Flow (prot)	1714			1711		
Flt Permitted	1.00			0.97		
Satd. Flow (perm)	1714			1664		
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	530	1	30	768	0	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	531	0	0	798	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%
Turn Type			Perm			
Protected Phases	1 2 4			4	3	
Permitted Phases			4			
Actuated Green, G (s)	74.0			44.0		
Effective Green, g (s)	70.0			44.0		
Actuated g/C Ratio	0.78			0.49		
Clearance Time (s)				4.0		
Lane Grp Cap (vph)	1333			814		
v/s Ratio Prot	c0.31					
v/s Ratio Perm				c0.48		
v/c Ratio	0.40			0.98		
Uniform Delay, d1	3.2			22.6		
Progression Factor	0.03			1.00		
Incremental Delay, d2	0.5			27.1		
Delay (s)	0.6			49.7		
Level of Service	A			D		
Approach Delay (s)	0.6			49.7	0.0	
Approach LOS	A			D	A	

Intersection Summary			
HCM Average Control Delay	30.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	19.0
Intersection Capacity Utilization	64.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
1056: 115th Street & Bishop Ford Fwy

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱			↰						↰	↱
Volume (veh/h)	0	186	195	25	569	0	0	0	0	3	0	271
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	207	217	28	632	0	0	0	0	3	0	301
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	632			207			1003	1003	212	791	894	632
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	632			207			1003	1003	212	791	894	632
tC, single (s)	4.1			5.5			7.5	6.5	6.9	7.5	6.5	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.9			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			97			100	100	100	99	100	28
cM capacity (veh/h)	960			983			55	237	800	278	274	418

Direction, Lane #	EB 1	EB 2	WB 1	SB 1	SB 2
Volume Total	138	286	660	3	301
Volume Left	0	0	28	3	0
Volume Right	0	217	0	0	301
cSH	1700	1700	983	278	418
Volume to Capacity	0.08	0.17	0.03	0.01	0.72
Queue Length 95th (ft)	0	0	2	1	140
Control Delay (s)	0.0	0.0	0.7	18.1	32.8
Lane LOS			A	C	D
Approach Delay (s)	0.0		0.7	32.7	
Approach LOS				D	

Intersection Summary			
Average Delay	7.5		
Intersection Capacity Utilization	58.4%	ICU Level of Service	B
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
1057: 115th Street &

1/14/2013

	↗	↘	↖	↑	↓	↙
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰↰		↰			
Sign Control	Stop			Stop	Stop	
Volume (vph)	189	0	594	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	210	0	660	0	0	0

Direction, Lane #	EB 1	EB 2	NB 1
Volume Total (vph)	105	105	660
Volume Left (vph)	105	105	660
Volume Right (vph)	0	0	0
Hadj (s)	0.58	0.58	0.29
Departure Headway (s)	6.8	6.8	4.9
Degree Utilization, x	0.20	0.20	0.89
Capacity (veh/h)	511	512	734
Control Delay (s)	10.3	10.3	33.9
Approach Delay (s)	10.3		33.9
Approach LOS	B		D

Intersection Summary			
Delay	28.2		
HCM Level of Service	D		
Intersection Capacity Utilization	47.1%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Signalized Intersection Capacity Analysis
1058: 119th Street & Marshield Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↰↑					↰	↰↑↱	↱
Volume (vph)	0	471	210	159	474	0	0	0	0	132	117	300
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	12	13	12	12	12	12	10	10	11
Total Lost time (s)		6.0	6.0		6.0					6.0	6.0	6.0
Lane Util. Factor		0.95	1.00		0.95					0.86	0.81	0.86
Frpb, ped/bikes		1.00	0.98		1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00					1.00	1.00	1.00
Frt		1.00	0.85		1.00					1.00	0.93	0.85
Flt Protected		1.00	1.00		0.99					0.95	0.99	1.00
Satd. Flow (prot)		2978	1202		3372					1346	3693	1122
Flt Permitted		1.00	1.00		0.99					0.95	0.99	1.00
Satd. Flow (perm)		2978	1202		3372					1346	3693	1122
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	496	221	167	499	0	0	0	0	139	123	316
RTOR Reduction (vph)	0	0	149	0	0	0	0	0	0	0	98	94
Lane Group Flow (vph)	0	496	72	0	666	0	0	0	0	76	246	64
Confl. Peds. (#/hr)	5		3	3		5						
Heavy Vehicles (%)	0%	11%	9%	2%	4%	0%	0%	0%	0%	2%	2%	2%
Parking (#/hr)			0									0
Turn Type			Perm	Split						Split		custom
Protected Phases		2		10 12 14	10 12 14					4	4	
Permitted Phases			2									4 2
Actuated Green, G (s)		39.1	39.1		72.6					20.2	20.2	65.3
Effective Green, g (s)		39.1	39.1		72.6					20.2	20.2	65.3
Actuated g/C Ratio		0.24	0.24		0.45					0.13	0.13	0.41
Clearance Time (s)		6.0	6.0							6.0	6.0	
Vehicle Extension (s)		3.0	3.0							3.0	3.0	
Lane Grp Cap (vph)		728	294		1530					170	466	458
v/s Ratio Prot		c0.17			c0.20					0.06	c0.07	
v/s Ratio Perm			0.06									0.06
v/c Ratio		0.68	0.25		0.44					0.45	0.53	0.14
Uniform Delay, d1		54.8	48.6		29.7					64.7	65.4	29.7
Progression Factor		1.00	1.00		0.02					1.00	1.00	1.00
Incremental Delay, d2		5.1	2.0		0.1					1.9	1.1	0.1
Delay (s)		59.9	50.6		0.7					66.6	66.5	29.9
Level of Service		E	D		A					E	E	C
Approach Delay (s)		57.0			0.7			0.0			56.5	
Approach LOS		E			A			A			E	

Intersection Summary			
HCM Average Control Delay	37.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	30.1
Intersection Capacity Utilization	53.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑			↑↑	↱	↰	↰↑↱				
Volume (vph)	212	391	0	0	395	93	238	150	144	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	13	12	12	11	12	13	13	14	12	12	12
Total Lost time (s)	6.0	6.0			6.0	6.0	6.0	6.0				
Lane Util. Factor	1.00	0.95			0.95	1.00	0.91	0.91				
Frt	1.00	1.00			1.00	0.85	1.00	0.94				
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.99				
Satd. Flow (prot)	1574	3366			3149	1457	1531	3001				
Flt Permitted	0.95	1.00			1.00	1.00	0.95	0.99				
Satd. Flow (perm)	1574	3366			3149	1457	1531	3001				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	236	434	0	0	439	103	264	167	160	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	82	0	63	0	0	0	0
Lane Group Flow (vph)	236	434	0	0	439	21	201	327	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Split					Perm	Split					
Protected Phases	2 4 8	2 4 8			10		12	12				
Permitted Phases						10						
Actuated Green, G (s)	79.4	79.4			32.7	32.7	21.0	21.0				
Effective Green, g (s)	79.4	79.4			32.7	32.7	21.0	21.0				
Actuated g/C Ratio	0.50	0.50			0.20	0.20	0.13	0.13				
Clearance Time (s)					6.0	6.0	6.0	6.0				
Vehicle Extension (s)					3.0	3.0	3.0	3.0				
Lane Grp Cap (vph)	781	1670			644	298	201	394				
v/s Ratio Prot	c0.15	0.13			c0.14		c0.13	0.11				
v/s Ratio Perm						0.01						
v/c Ratio	0.30	0.26			0.68	0.07	1.00	0.83				
Uniform Delay, d1	23.9	23.3			58.8	51.4	69.5	67.8				
Progression Factor	0.07	0.07			1.00	1.00	1.00	1.00				
Incremental Delay, d2	0.2	0.1			3.0	0.1	63.5	13.8				
Delay (s)	1.8	1.8			61.8	51.5	133.0	81.6				
Level of Service	A	A			E	D	F	F				
Approach Delay (s)		1.8			59.9			99.1			0.0	
Approach LOS		A			E			F			A	

Intersection Summary			
HCM Average Control Delay	51.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	28.9
Intersection Capacity Utilization	50.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1060: 119th Street & Halsted Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑↱		↰	↑ ↑↱		↰	↑ ↑↱	
Volume (vph)	220	325	75	44	154	54	88	824	96	93	448	104
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	14	12	10	10	12	9	10	12
Total Lost time (s)	4.0	4.0	5.0	4.0	5.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.99	1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	0.99	1.00	1.00	1.00	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.96		1.00	0.98		1.00	0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1538	1556	1328	1595	1713		1525	2965		1509	2870	
Flt Permitted	0.49	1.00	1.00	0.42	1.00		0.34	1.00		0.13	1.00	
Satd. Flow (perm)	791	1556	1328	706	1713		539	2965		214	2870	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	232	342	79	46	162	57	93	867	101	98	472	109
RTOR Reduction (vph)	0	0	52	0	14	0	0	10	0	0	22	0
Lane Group Flow (vph)	232	342	27	46	205	0	93	958	0	98	559	0
Confl. Peds. (#/hr)	33		3	3		33	42		8	8		42
Confl. Bikes (#/hr)							1					1
Heavy Vehicles (%)	3%	8%	6%	0%	7%	5%	4%	5%	11%	2%	6%	9%
Turn Type	pm+pt		Perm	pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)	38.2	31.2	31.2	32.4	28.3		39.6	34.1		39.6	34.1	
Effective Green, g (s)	36.2	32.2	31.2	30.4	28.3		37.6	34.1		37.6	34.1	
Actuated g/C Ratio	0.40	0.36	0.35	0.34	0.31		0.42	0.38		0.42	0.38	
Clearance Time (s)	3.0	5.0	5.0	3.0	5.0		3.0	4.0		3.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	368	557	461	269	539		275	1125		154	1089	
v/s Ratio Prot	c0.04	c0.22		0.01	0.12		0.02	c0.32		c0.03	0.19	
v/s Ratio Perm	0.21		0.02	0.05			0.12			0.23		
v/c Ratio	0.63	0.61	0.06	0.17	0.38		0.34	0.85		0.64	0.51	
Uniform Delay, d1	21.3	23.7	19.6	20.5	24.0		16.6	25.6		18.6	21.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	3.5	5.0	0.2	0.3	2.0		0.7	8.2		8.3	1.7	
Delay (s)	24.8	28.7	19.8	20.8	26.0		17.3	33.8		26.9	23.2	
Level of Service	C	C	B	C	C		B	C		C	C	
Approach Delay (s)		26.3			25.1			32.3			23.8	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	27.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	89.9	Sum of lost time (s)	16.0
Intersection Capacity Utilization	73.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1061: 119th Street & Wentworth Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱		✥			✥	
Volume (vph)	44	389	16	18	212	32	35	80	67	62	44	39
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	10	10	10	12	15	12	12	16	12
Total Lost time (s)		3.0	3.0		3.0	3.0		3.0			3.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00			1.00	
Frpb, ped/bikes		1.00	0.97		1.00	0.97		0.99			0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00			1.00	
Frt		1.00	0.85		1.00	0.85		0.95			0.96	
Flt Protected		0.99	1.00		1.00	1.00		0.99			0.98	
Satd. Flow (prot)		1909	1482		1599	1198		1841			1814	
Flt Permitted		0.95	1.00		0.96	1.00		0.94			0.84	
Satd. Flow (perm)		1831	1482		1543	1198		1741			1549	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	46	409	17	19	223	34	37	84	71	65	46	41
RTOR Reduction (vph)	0	0	8	0	0	17	0	33	0	0	20	0
Lane Group Flow (vph)	0	455	9	0	242	17	0	159	0	0	132	0
Confl. Peds. (#/hr)	6		11	11		6	4		8	8		4
Confl. Bikes (#/hr)	1		1	1		1			1	1		
Heavy Vehicles (%)	0%	7%	0%	0%	5%	16%	0%	0%	0%	10%	0%	3%
Turn Type	Perm		Perm	Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)		32.0	32.0		32.0	32.0		27.0			27.0	
Effective Green, g (s)		32.0	32.0		32.0	32.0		27.0			27.0	
Actuated g/C Ratio		0.49	0.49		0.49	0.49		0.42			0.42	
Clearance Time (s)		3.0	3.0		3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)		901	730		760	590		723			643	
v/s Ratio Prot												
v/s Ratio Perm		c0.25	0.01		0.16	0.01		c0.09			0.08	
v/c Ratio		0.50	0.01		0.32	0.03		0.22			0.20	
Uniform Delay, d1		11.1	8.4		9.9	8.5		12.2			12.1	
Progression Factor		1.00	1.00		2.04	3.30		1.00			1.42	
Incremental Delay, d2		2.0	0.0		1.0	0.1		0.7			0.7	
Delay (s)		13.2	8.5		21.3	28.1		12.9			17.9	
Level of Service		B	A		C	C		B			B	
Approach Delay (s)		13.0			22.1			12.9			17.9	
Approach LOS		B			C			B			B	

Intersection Summary			
HCM Average Control Delay	16.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	64.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1062: 119th Street & State Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱		↰	↱		✥	
Volume (vph)	75	430	24	19	189	8	41	228	73	18	53	30
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frpb, ped/bikes		1.00	0.96		1.00	0.98		1.00	0.96		0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		0.96	
Flt Protected		0.99	1.00		1.00	1.00		0.99	1.00		0.99	
Satd. Flow (prot)		1658	1392		1584	1497		1755	1390		1656	
Flt Permitted		0.91	1.00		0.82	1.00		0.95	1.00		0.93	
Satd. Flow (perm)		1527	1392		1304	1497		1677	1390		1559	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	79	453	25	20	199	8	43	240	77	19	56	32
RTOR Reduction (vph)	0	0	10	0	0	5	0	0	39	0	16	0
Lane Group Flow (vph)	0	532	15	0	219	3	0	283	38	0	91	0
Confl. Peds. (#/hr)	11		17	17		11	4		17	17		4
Confl. Bikes (#/hr)	1		1	1		1	1					1
Heavy Vehicles (%)	0%	9%	5%	33%	11%	0%	6%	1%	6%	0%	0%	8%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		23.0	23.0		23.0	23.0		32.0	32.0		32.0	
Effective Green, g (s)		23.0	23.0		23.0	23.0		32.0	32.0		32.0	
Actuated g/C Ratio		0.35	0.35		0.35	0.35		0.49	0.49		0.49	
Clearance Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	
Lane Grp Cap (vph)		540	493		461	530		826	684		768	
v/s Ratio Prot												
v/s Ratio Perm		c0.35	0.01		0.17	0.00		c0.17	0.03		0.06	
v/c Ratio		0.99	0.03		0.48	0.01		0.34	0.06		0.12	
Uniform Delay, d1		20.8	13.7		16.3	13.6		10.1	8.6		8.9	
Progression Factor		1.60	1.95		1.05	1.10		0.30	0.27		1.17	
Incremental Delay, d2		33.7	0.1		3.4	0.0		0.8	0.1		0.3	
Delay (s)		67.0	26.8		20.6	15.0		3.9	2.5		10.7	
Level of Service		E	C		C	B		A	A		B	
Approach Delay (s)		65.2			20.4			3.6			10.7	
Approach LOS		E			C			A			B	

Intersection Summary			
HCM Average Control Delay	34.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	76.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1063: 119th Street & Michigan Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		✣			✣			↰	↱
Volume (vph)	444	21	31	9	18	15	26	352	19	8	229	169
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	14	12	12	16	12	12	16	12
Total Lost time (s)		3.0	3.0		3.0			3.0			3.0	3.0
Lane Util. Factor		1.00	1.00		1.00			1.00			1.00	1.00
Frpb, ped/bikes		1.00	0.97		0.98			1.00			1.00	0.95
Flpb, ped/bikes		0.98	1.00		1.00			1.00			1.00	1.00
Frt		1.00	0.85		0.95			0.99			1.00	0.85
Flt Protected		0.95	1.00		0.99			1.00			1.00	1.00
Satd. Flow (prot)		1754	1390		1758			1979			1873	1328
Flt Permitted		0.73	1.00		0.90			0.97			0.99	1.00
Satd. Flow (perm)		1338	1390		1608			1932			1852	1328
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	493	23	34	10	20	17	29	391	21	9	254	188
RTOR Reduction (vph)	0	0	15	0	13	0	0	3	0	0	0	95
Lane Group Flow (vph)	0	516	19	0	34	0	0	438	0	0	263	93
Confl. Peds. (#/hr)	49		22	22		49	34		17	17		34
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	9%	0%	7%	0%	0%	0%	0%	2%	0%	0%	9%	9%
Turn Type	pm+pt		Perm	Perm			Perm			Perm		Perm
Protected Phases	7	4			8			2			6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)		27.0	27.0		17.0			32.0			32.0	32.0
Effective Green, g (s)		27.0	27.0		17.0			32.0			32.0	32.0
Actuated g/C Ratio		0.42	0.42		0.26			0.49			0.49	0.49
Clearance Time (s)		3.0	3.0		3.0			3.0			3.0	3.0
Lane Grp Cap (vph)		607	577		421			951			912	654
v/s Ratio Prot		c0.10										
v/s Ratio Perm		0.25	0.01		0.02			c0.23			0.14	0.07
v/c Ratio		0.85	0.03		0.08			0.46			0.29	0.14
Uniform Delay, d1		17.2	11.3		18.1			10.8			9.8	9.0
Progression Factor		1.05	1.62		1.00			0.62			1.00	1.00
Incremental Delay, d2		7.9	0.1		0.4			1.5			0.8	0.5
Delay (s)		25.9	18.3		18.5			8.2			10.6	9.5
Level of Service		C	B		B			A			B	A
Approach Delay (s)		25.4			18.5			8.2			10.1	
Approach LOS		C			B			A			B	

Intersection Summary			
HCM Average Control Delay	15.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	79.5%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis

1064: 127th Street & S Paulina St

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↱		↰	↑↑					↰	↰↑↱	↱
Volume (vph)	0	889	222	268	1124	0	0	0	0	275	201	376
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	12	11	8	8	8	11	12	14
Total Lost time (s)		6.0		4.5	6.0					6.0	6.0	6.0
Lane Util. Factor		0.91		1.00	0.95					0.91	0.86	0.91
Frpb, ped/bikes		1.00		1.00	1.00					1.00	0.99	0.99
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Frt		0.97		1.00	1.00					1.00	0.94	0.85
Flt Protected		1.00		0.95	1.00					0.95	0.99	1.00
Satd. Flow (prot)		4313		1589	3226					1419	2711	1355
Flt Permitted		1.00		0.18	1.00					0.95	0.99	1.00
Satd. Flow (perm)		4313		309	3226					1419	2711	1355
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	936	234	282	1183	0	0	0	0	289	212	396
RTOR Reduction (vph)	0	42	0	0	0	0	0	0	0	0	56	56
Lane Group Flow (vph)	0	1128	0	282	1183	0	0	0	0	234	397	154
Confl. Peds. (#/hr)	6		4	4		6	2					2
Heavy Vehicles (%)	0%	11%	7%	4%	6%	0%	0%	0%	0%	6%	4%	8%
Turn Type				pm+pt						Perm		Perm
Protected Phases		2		1	6						4	
Permitted Phases				6						4		4
Actuated Green, G (s)		41.2		58.9	57.4					20.6	20.6	20.6
Effective Green, g (s)		41.2		58.9	57.4					20.6	20.6	20.6
Actuated g/C Ratio		0.46		0.65	0.64					0.23	0.23	0.23
Clearance Time (s)		6.0		4.5	6.0					6.0	6.0	6.0
Vehicle Extension (s)		7.0		3.5	7.0					3.5	3.5	3.5
Lane Grp Cap (vph)		1974		369	2057					325	621	310
v/s Ratio Prot		0.26		c0.10	0.37							
v/s Ratio Perm				c0.40						c0.16	0.15	0.11
v/c Ratio		0.57		0.76	0.58					0.72	0.64	0.50
Uniform Delay, d1		17.9		18.6	9.3					32.0	31.3	30.2
Progression Factor		1.00		0.71	0.66					1.00	1.00	1.00
Incremental Delay, d2		1.2		5.6	0.7					7.7	2.3	1.5
Delay (s)		19.1		18.7	6.9					39.7	33.6	31.7
Level of Service		B		B	A					D	C	C
Approach Delay (s)		19.1			9.2			0.0			34.8	
Approach LOS		B			A			A			C	

Intersection Summary			
HCM Average Control Delay	19.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	10.5
Intersection Capacity Utilization	101.7%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1065: 127th Street & Marshfield Ave

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↑			↑↑	↱		↰↑↱				
Volume (vph)	311	853	0	0	843	234	549	365	422	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	12	12	12	11	12	12	12	12	12	12	12
Total Lost time (s)	6.0	6.0			6.0	6.0		6.0				
Lane Util. Factor	0.97	0.95			0.95	1.00		0.91				
Frpb, ped/bikes	1.00	1.00			1.00	0.98		1.00				
Flpb, ped/bikes	1.00	1.00			1.00	1.00		1.00				
Frt	1.00	1.00			1.00	0.85		0.95				
Flt Protected	0.95	1.00			1.00	1.00		0.98				
Satd. Flow (prot)	2915	3138			3119	1449		4409				
Flt Permitted	0.16	1.00			1.00	1.00		0.98				
Satd. Flow (perm)	489	3138			3119	1449		4409				
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	327	898	0	0	887	246	578	384	444	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	138	0	73	0	0	0	0
Lane Group Flow (vph)	327	898	0	0	887	108	0	1333	0	0	0	0
Confl. Peds. (#/hr)	4					4						
Heavy Vehicles (%)	10%	9%	0%	0%	6%	4%	4%	3%	5%	0%	0%	0%
Turn Type	pm+pt					Perm	Perm					
Protected Phases	5	2			6			8				
Permitted Phases	2					6	8					
Actuated Green, G (s)	46.4	46.4			33.4	33.4		31.6				
Effective Green, g (s)	46.4	46.4			33.4	33.4		31.6				
Actuated g/C Ratio	0.52	0.52			0.37	0.37		0.35				
Clearance Time (s)	6.0	6.0			6.0	6.0		6.0				
Vehicle Extension (s)	3.5	7.0			7.0	7.0		5.0				
Lane Grp Cap (vph)	441	1618			1157	538		1548				
v/s Ratio Prot	0.06	c0.29			0.28							
v/s Ratio Perm	c0.32					0.07		0.30				
v/c Ratio	0.74	0.56			0.77	0.20		0.89dl				
Uniform Delay, d1	15.2	14.8			24.9	19.2		27.2				
Progression Factor	1.35	0.59			0.47	0.23		1.00				
Incremental Delay, d2	5.6	1.1			3.8	0.6		5.6				
Delay (s)	26.2	9.9			15.4	5.0		32.8				
Level of Service	C	A			B	A		C				
Approach Delay (s)		14.2			13.2			32.8			0.0	
Approach LOS		B			B			C			A	

Intersection Summary			
HCM Average Control Delay	20.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	101.7%	ICU Level of Service	G
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1066: 127th Street & S Ashland

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	105	581	226	78	784	44	226	178	40	49	111	91
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	12	11	12	12	10	10	13	10	10	10
Total Lost time (s)	3.5	6.0	3.5	3.5	6.0		3.5	6.0		3.5	6.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.97		1.00	0.93	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1565	3061	1293	1603	3232		1447	3009		1544	2784	
Flt Permitted	0.20	1.00	1.00	0.34	1.00		0.51	1.00		0.61	1.00	
Satd. Flow (perm)	328	3061	1293	579	3232		780	3009		990	2784	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	111	612	238	82	825	46	238	187	42	52	117	96
RTOR Reduction (vph)	0	0	114	0	4	0	0	22	0	0	78	0
Lane Group Flow (vph)	111	612	124	82	867	0	238	207	0	52	135	0
Confl. Peds. (#/hr)	3		12	12		3	9		6	6		9
Heavy Vehicles (%)	2%	8%	5%	3%	5%	3%	10%	3%	2%	3%	7%	4%
Parking (#/hr)			0									
Turn Type	pm+pt		pm+ov	pm+pt			pm+pt			pm+pt		
Protected Phases	5	2	3	1	6		3	8		7	4	
Permitted Phases	2		2	6			8			4		
Actuated Green, G (s)	43.7	34.7	46.8	40.3	33.0		32.5	26.3		19.6	16.9	
Effective Green, g (s)	43.7	34.7	46.8	40.3	33.0		32.5	26.3		19.6	16.9	
Actuated g/C Ratio	0.49	0.39	0.52	0.45	0.37		0.36	0.29		0.22	0.19	
Clearance Time (s)	3.5	6.0	3.5	3.5	6.0		3.5	6.0		3.5	6.0	
Vehicle Extension (s)	3.0	7.0	3.0	3.0	7.0		3.0	7.0		3.0	7.0	
Lane Grp Cap (vph)	283	1180	672	342	1185		371	879		232	523	
v/s Ratio Prot	c0.04	0.20	0.02	0.02	c0.27		c0.09	0.07		0.01	0.05	
v/s Ratio Perm	0.15		0.07	0.09			c0.15			0.04		
v/c Ratio	0.39	0.52	0.18	0.24	0.73		0.64	0.24		0.22	0.26	
Uniform Delay, d1	25.0	21.2	11.5	19.5	24.7		22.1	24.2		28.5	31.2	
Progression Factor	0.89	0.54	0.43	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	3.1	1.2	0.1	0.4	4.0		3.8	0.5		0.5	0.9	
Delay (s)	25.2	12.7	5.0	19.9	28.7		25.8	24.7		29.0	32.1	
Level of Service	C	B	A	B	C		C	C		C	C	
Approach Delay (s)		12.2			27.9			25.3			31.5	
Approach LOS		B			C			C			C	

Intersection Summary			
HCM Average Control Delay	22.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.5
Intersection Capacity Utilization	73.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1067: Vermont St & S Ashland

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	62	228	286	59	190	102	329	382	75	91	258	54
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	11	12	11	12	12	11	13	12	10	11	12
Total Lost time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.92		1.00	0.95		1.00	0.98		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1635	2871		1463	3032		1589	3245		1549	3135	
Flt Permitted	0.54	1.00		0.32	1.00		0.46	1.00		0.48	1.00	
Satd. Flow (perm)	924	2871		490	3032		772	3245		778	3135	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	65	240	301	62	200	107	346	402	79	96	272	57
RTOR Reduction (vph)	0	206	0	0	64	0	0	15	0	0	17	0
Lane Group Flow (vph)	65	335	0	62	243	0	346	466	0	96	312	0
Confl. Peds. (#/hr)	20					20	1		2	2		1
Heavy Vehicles (%)	4%	5%	6%	13%	6%	5%	4%	6%	5%	3%	3%	0%
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	35.7	28.7		35.9	28.8		53.2	41.9		38.6	31.3	
Effective Green, g (s)	35.7	28.7		35.9	28.8		53.2	41.9		38.6	31.3	
Actuated g/C Ratio	0.34	0.27		0.34	0.27		0.51	0.40		0.37	0.30	
Clearance Time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	3.5	7.0		3.5	7.0		3.5	7.0		3.5	7.0	
Lane Grp Cap (vph)	362	785		233	832		530	1295		340	935	
v/s Ratio Prot	0.01	c0.12		c0.02	0.08		c0.11	0.14		0.02	0.10	
v/s Ratio Perm	0.05			0.07			c0.22			0.08		
v/c Ratio	0.18	0.43		0.27	0.29		0.65	0.36		0.28	0.33	
Uniform Delay, d1	23.8	31.4		24.1	30.1		16.6	22.1		22.4	28.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.3	1.7		0.7	0.9		3.0	0.8		0.5	1.0	
Delay (s)	24.1	33.1		24.8	30.9		19.6	22.9		22.9	29.7	
Level of Service	C	C		C	C		B	C		C	C	
Approach Delay (s)		32.1			29.9			21.5			28.2	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	27.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	69.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1068: 127th Street & Halsted Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	169	546	81	6	445	125	68	602	7	144	326	105
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	10	12	9	11	12	9	9	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.98			0.97		1.00	1.00		1.00	0.96	
Flt Protected		0.99			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		2912			2887		1437	3186		1451	2787	
Flt Permitted		0.60			0.95		0.33	1.00		0.25	1.00	
Satd. Flow (perm)		1766			2732		495	3186		389	2787	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	188	607	90	7	494	139	76	669	8	160	362	117
RTOR Reduction (vph)	0	12	0	0	34	0	0	1	0	0	42	0
Lane Group Flow (vph)	0	873	0	0	606	0	76	676	0	160	437	0
Confl. Peds. (#/hr)	9		11	11		9	11		14	14		11
Heavy Vehicles (%)	3%	6%	18%	50%	6%	6%	7%	3%	50%	6%	7%	2%
Turn Type	pm+pt			Perm			pm+pt			pm+pt		
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		37.0			29.0		28.0	22.0		24.0	20.0	
Effective Green, g (s)		37.0			29.0		28.0	22.0		24.0	20.0	
Actuated g/C Ratio		0.49			0.39		0.37	0.29		0.32	0.27	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		932			1056		260	935		181	743	
v/s Ratio Prot		c0.05					c0.02	0.21		c0.05	0.16	
v/s Ratio Perm		c0.41			0.22		0.09			c0.24		
v/c Ratio		0.94			0.57		0.29	0.72		0.88	0.59	
Uniform Delay, d1		17.9			18.1		15.9	23.8		22.9	23.9	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		17.7			2.3		2.8	4.8		42.0	3.4	
Delay (s)		35.6			20.4		18.7	28.6		64.9	27.3	
Level of Service		D			C		B	C		E	C	
Approach Delay (s)		35.6			20.4			27.6			36.7	
Approach LOS		D			C			C			D	

Intersection Summary			
HCM Average Control Delay	30.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	81.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1069: Vermont St & Halsted Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱		↰	↑↱		↰	↑↱	
Volume (vph)	52	225	48	73	159	13	38	661	93	10	378	45
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	12	12	12	12	12
Total Lost time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	0.99		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1666	1898		1615	1943		1658	3202		1138	3197	
Flt Permitted	0.65	1.00		0.52	1.00		0.50	1.00		0.30	1.00	
Satd. Flow (perm)	1132	1898		891	1943		870	3202		359	3197	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	54	232	49	75	164	13	39	681	96	10	390	46
RTOR Reduction (vph)	0	12	0	0	4	0	0	17	0	0	14	0
Lane Group Flow (vph)	54	269	0	75	173	0	39	760	0	10	422	0
Confl. Peds. (#/hr)	10		16	16		10	4		6	6		4
Confl. Bikes (#/hr)			4	4								
Heavy Vehicles (%)	2%	4%	5%	5%	4%	0%	3%	4%	8%	50%	5%	6%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	24.0	24.0		24.0	24.0		31.0	31.0		31.0	31.0	
Effective Green, g (s)	24.0	24.0		24.0	24.0		31.0	31.0		31.0	31.0	
Actuated g/C Ratio	0.37	0.37		0.37	0.37		0.48	0.48		0.48	0.48	
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)	418	701		329	717		415	1527		171	1525	
v/s Ratio Prot		c0.14			0.09			c0.24			0.13	
v/s Ratio Perm	0.05			0.08			0.04			0.03		
v/c Ratio	0.13	0.38		0.23	0.24		0.09	0.50		0.06	0.28	
Uniform Delay, d1	13.6	15.1		14.1	14.2		9.3	11.7		9.1	10.2	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.6	1.6		1.6	0.8		0.4	1.2		0.7	0.5	
Delay (s)	14.2	16.7		15.7	15.0		9.8	12.8		9.8	10.7	
Level of Service	B	B		B	B		A	B		A	B	
Approach Delay (s)		16.3			15.2			12.7			10.7	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	13.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	62.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

1070: 127th Street & S Wallance St

Movement	EBT	WBL	WBT	WBR	NBL2	NBL	NBT	NBR	SBL	SBT	SBR	SBR2
Lane Configurations	↰↱	↰	↱				✥			✥		
Volume (vph)	631	194	621	17	3	14	3	47	22	0	2	4
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	12	12	16	12	12	16	12	12
Total Lost time (s)	5.0	4.0	5.0				4.0			4.0		
Lane Util. Factor	0.95	1.00	1.00				1.00			1.00		
Frpb, ped/bikes	1.00	1.00	1.00				1.00			0.99		
Flpb, ped/bikes	1.00	1.00	1.00				1.00			1.00		
Frt	1.00	1.00	1.00				0.91			0.97		
Flt Protected	1.00	0.95	1.00				0.99			0.96		
Satd. Flow (prot)	2956	1477	1580				1732			1897		
Flt Permitted	1.00	0.21	1.00				0.94			0.82		
Satd. Flow (perm)	2956	327	1580				1652			1622		
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	664	204	654	18	3	15	3	49	23	0	2	4
RTOR Reduction (vph)	0	0	2	0	0	0	37	0	0	3	0	0
Lane Group Flow (vph)	664	204	670	0	0	0	33	0	0	26	0	0
Confl. Peds. (#/hr)		7		6		3					3	
Confl. Bikes (#/hr)		1										
Heavy Vehicles (%)	8%	8%	6%	0%	0%	8%	0%	5%	0%	0%	0%	0%
Turn Type		pm+pt			Perm	Perm			Perm			
Protected Phases	8	7	4				2			6		
Permitted Phases		4			2	2			6			
Actuated Green, G (s)	15.0	36.0	36.0				15.0			15.0		
Effective Green, g (s)	15.0	36.0	36.0				15.0			15.0		
Actuated g/C Ratio	0.25	0.60	0.60				0.25			0.25		
Clearance Time (s)	5.0	4.0	5.0				4.0			4.0		
Lane Grp Cap (vph)	739	522	948				413			406		
v/s Ratio Prot	c0.22	0.11	0.42									
v/s Ratio Perm		0.12					c0.02			0.02		
v/c Ratio	0.90	0.39	0.71				0.08			0.06		
Uniform Delay, d1	21.8	6.7	8.3				17.2			17.1		
Progression Factor	1.00	1.00	1.00				1.00			1.00		
Incremental Delay, d2	16.0	2.2	4.4				0.4			0.3		
Delay (s)	37.7	8.9	12.8				17.6			17.5		
Level of Service	D	A	B				B			B		
Approach Delay (s)	37.7		11.9				17.6			17.5		
Approach LOS	D		B				B			B		

Intersection Summary			
HCM Average Control Delay	26.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	79.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

	↗
Movement	NER
Lane Configurations	↗
Volume (vph)	344
Ideal Flow (vphpl)	1800
Lane Width	12
Total Lost time (s)	4.0
Lane Util. Factor	1.00
Frpb, ped/bikes	1.00
Flpb, ped/bikes	1.00
Frt	0.86
Flt Protected	1.00
Satd. Flow (prot)	1428
Flt Permitted	1.00
Satd. Flow (perm)	1428
Peak-hour factor, PHF	0.95
Adj. Flow (vph)	362
RTOR Reduction (vph)	0
Lane Group Flow (vph)	362
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Heavy Vehicles (%)	9%
Turn Type	Over
Protected Phases	7
Permitted Phases	
Actuated Green, G (s)	17.0
Effective Green, g (s)	17.0
Actuated g/C Ratio	0.28
Clearance Time (s)	4.0
Lane Grp Cap (vph)	405
v/s Ratio Prot	c0.25
v/s Ratio Perm	
v/c Ratio	0.89
Uniform Delay, d1	20.6
Progression Factor	1.00
Incremental Delay, d2	24.7
Delay (s)	45.3
Level of Service	D
Approach Delay (s)	
Approach LOS	

Intersection Summary

HCM Signalized Intersection Capacity Analysis
1071: 127th Street & State Street

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰↑	↑↱		↰	↱
Volume (vph)	194	917	678	81	101	156
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		1.00	1.00
Frt		1.00	0.98		1.00	0.85
Flt Protected		0.99	1.00		0.95	1.00
Satd. Flow (prot)		3229	3205		1629	1457
Flt Permitted		0.63	1.00		0.95	1.00
Satd. Flow (perm)		2062	3205		1629	1457
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	216	1019	753	90	112	173
RTOR Reduction (vph)	0	0	14	0	0	128
Lane Group Flow (vph)	0	1235	829	0	112	45
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%
Turn Type	Perm					Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)		40.0	40.0		17.0	17.0
Effective Green, g (s)		40.0	40.0		17.0	17.0
Actuated g/C Ratio		0.62	0.62		0.26	0.26
Clearance Time (s)		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		1269	1972		426	381
v/s Ratio Prot			0.26		c0.07	
v/s Ratio Perm		c0.60				0.03
v/c Ratio		0.97	0.42		0.26	0.12
Uniform Delay, d1		12.0	6.5		19.0	18.3
Progression Factor		1.00	0.66		0.92	0.91
Incremental Delay, d2		19.6	0.6		1.5	0.6
Delay (s)		31.6	4.9		19.1	17.3
Level of Service		C	A		B	B
Approach Delay (s)		31.6	4.9		18.0	
Approach LOS		C	A		B	

Intersection Summary			
HCM Average Control Delay	20.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	71.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1072: 127th Street & Michigan Avenue

1/14/2013

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰↑	↑↱		↰	↱
Volume (vph)	53	938	697	217	174	56
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	12	10	11	12	10	10
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		1.00	1.00
Frpb, ped/bikes		1.00	0.99		1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00
Frt		1.00	0.96		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		2928	2912		1464	1373
Flt Permitted		0.86	1.00		0.95	1.00
Satd. Flow (perm)		2514	2912		1464	1373
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	56	987	734	228	183	59
RTOR Reduction (vph)	0	0	45	0	0	42
Lane Group Flow (vph)	0	1043	917	0	183	17
Confl. Peds. (#/hr)	1			1		
Confl. Bikes (#/hr)	1			1		
Heavy Vehicles (%)	4%	9%	8%	12%	9%	4%
Turn Type	Perm					Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)		38.0	38.0		19.0	19.0
Effective Green, g (s)		38.0	38.0		19.0	19.0
Actuated g/C Ratio		0.58	0.58		0.29	0.29
Clearance Time (s)		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		1470	1702		428	401
v/s Ratio Prot			0.31		c0.12	
v/s Ratio Perm		c0.41				0.01
v/c Ratio		0.71	0.54		0.43	0.04
Uniform Delay, d1		9.6	8.2		18.6	16.5
Progression Factor		0.89	1.00		1.12	1.82
Incremental Delay, d2		1.2	1.2		3.0	0.2
Delay (s)		9.7	9.4		23.9	30.2
Level of Service		A	A		C	C
Approach Delay (s)		9.7	9.4		25.4	
Approach LOS		A	A		C	

Intersection Summary			
HCM Average Control Delay	11.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	76.8%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1073: 130th Street & Indiana Ave

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↱		↰	↑	↰	↱
Volume (vph)	964	160	167	672	423	323
Ideal Flow (vphpl)	2300	1800	1800	2300	1800	1800
Lane Width	15	12	14	16	15	12
Total Lost time (s)	5.0		3.0	5.0	5.0	5.0
Lane Util. Factor	1.00		1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00		1.00	1.00	1.00	0.98
Flpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Frt	0.98		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	2239		1771	2436	1844	1469
Flt Permitted	1.00		0.08	1.00	0.95	1.00
Satd. Flow (perm)	2239		149	2436	1844	1469
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	984	163	170	686	432	330
RTOR Reduction (vph)	7	0	0	0	0	147
Lane Group Flow (vph)	1140	0	170	686	432	183
Confl. Peds. (#/hr)		4	4			8
Heavy Vehicles (%)	11%	7%	3%	7%	2%	2%
Turn Type			pm+pt			Perm
Protected Phases	4		3	8	2	
Permitted Phases			8			2
Actuated Green, G (s)	47.0		56.0	56.0	24.0	24.0
Effective Green, g (s)	47.0		56.0	56.0	24.0	24.0
Actuated g/C Ratio	0.52		0.62	0.62	0.27	0.27
Clearance Time (s)	5.0		3.0	5.0	5.0	5.0
Lane Grp Cap (vph)	1169		201	1516	492	392
v/s Ratio Prot	c0.51		c0.06	0.28	c0.23	
v/s Ratio Perm			0.47			0.12
v/c Ratio	0.98		0.85	0.45	0.88	0.47
Uniform Delay, d1	20.9		22.6	8.9	31.6	27.6
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	21.1		33.2	1.0	19.4	3.9
Delay (s)	42.0		55.8	9.9	51.0	31.6
Level of Service	D		E	A	D	C
Approach Delay (s)	42.0			19.0	42.6	
Approach LOS	D			B	D	

Intersection Summary			
HCM Average Control Delay	35.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	96.2%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1074: 130th Street & Ellis Ave

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑↑	↱		↰	↱		✣	
Volume (vph)	1	725	89	258	1167	9	72	0	187	1	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	15	13	11	11	12	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0	4.0	3.0	3.0	4.0		4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85		1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.95	1.00		0.95	
Satd. Flow (prot)	1881	3213	1422	1589	3138	1366		1642	1443		969	
Flt Permitted	0.21	1.00	1.00	0.27	1.00	1.00		0.76	1.00		0.70	
Satd. Flow (perm)	422	3213	1422	448	3138	1366		1309	1443		719	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1	806	99	287	1297	10	80	0	208	1	0	0
RTOR Reduction (vph)	0	0	46	0	0	2	0	0	182	0	0	0
Lane Group Flow (vph)	1	806	53	287	1297	8	0	80	26	0	1	0
Heavy Vehicles (%)	0%	10%	4%	4%	9%	12%	18%	0%	6%	100%	0%	0%
Turn Type	Perm		Perm	custom		custom	Perm		Perm	Perm		
Protected Phases		4		3	3 8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)	45.6	45.6	45.6	66.4	66.4	66.4		10.6	10.6		10.6	
Effective Green, g (s)	45.6	45.6	45.6	66.4	66.4	66.4		10.6	10.6		10.6	
Actuated g/C Ratio	0.54	0.54	0.54	0.78	0.78	0.78		0.12	0.12		0.12	
Clearance Time (s)	4.0	4.0	4.0	3.0		4.0		4.0	4.0		4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0		3.0	3.0		3.0	
Lane Grp Cap (vph)	226	1724	763	589	2451	1067		163	180		90	
v/s Ratio Prot		0.25		0.10	c0.41							
v/s Ratio Perm	0.00		0.04	0.28		0.01		c0.06	0.02		0.00	
v/c Ratio	0.00	0.47	0.07	0.49	0.53	0.01		0.49	0.14		0.01	
Uniform Delay, d1	9.2	12.2	9.5	3.9	3.5	2.0		34.7	33.2		32.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2	0.0	0.9	0.2	0.6	0.2	0.0		2.3	0.4		0.0	
Delay (s)	9.2	13.1	9.7	4.6	3.7	2.1		37.0	33.5		32.7	
Level of Service	A	B	A	A	A	A		D	C		C	
Approach Delay (s)		12.7			3.8			34.5			32.7	
Approach LOS		B			A			C			C	

Intersection Summary			
HCM Average Control Delay	9.9	HCM Level of Service	A
HCM Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	7.0
Intersection Capacity Utilization	52.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1942: 111th Street & Langley Avenue

1/14/2013

Movement	EBL	EBT	WBT	WBR	SBL	SBR
	↗	→	←	↖	↘	↙
Lane Configurations		↰↑	↑↱		↲↳	
Volume (vph)	13	820	856	45	24	11
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	12	10	10
Total Lost time (s)		5.0	5.0		3.0	
Lane Util. Factor		0.95	0.95		1.00	
Frt		1.00	0.99		0.96	
Flt Protected		1.00	1.00		0.97	
Satd. Flow (prot)		3038	3017		1482	
Flt Permitted		0.93	1.00		0.97	
Satd. Flow (perm)		2834	3017		1482	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	14	911	951	50	27	12
RTOR Reduction (vph)	0	0	4	0	11	0
Lane Group Flow (vph)	0	925	997	0	28	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%
Turn Type	Perm					
Protected Phases		4	8 2 11		5	
Permitted Phases	4					
Actuated Green, G (s)		33.0	66.0		7.0	
Effective Green, g (s)		33.0	66.0		7.0	
Actuated g/C Ratio		0.37	0.73		0.08	
Clearance Time (s)		5.0			3.0	
Lane Grp Cap (vph)		1039	2212		115	
v/s Ratio Prot			c0.33		c0.02	
v/s Ratio Perm		c0.33				
v/c Ratio		0.89	0.45		0.24	
Uniform Delay, d1		26.8	4.8		39.0	
Progression Factor		1.00	0.00		1.00	
Incremental Delay, d2		11.4	0.2		4.9	
Delay (s)		38.2	0.2		44.0	
Level of Service		D	A		D	
Approach Delay (s)		38.2	0.2		44.0	
Approach LOS		D	A		D	

Intersection Summary			
HCM Average Control Delay	19.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	23.0
Intersection Capacity Utilization	44.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1955: 115th Street & Cottage Grove Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑ ↑↱			↰↑↱			↰↑	↱
Volume (vph)	88	435	1	27	584	80	0	0	1	45	3	128
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	12	12	11	12	11
Total Lost time (s)		4.0			4.0			3.0			3.0	3.0
Lane Util. Factor		1.00			0.95			1.00			1.00	1.00
Frpb, ped/bikes		1.00			1.00			0.92			1.00	0.96
Flpb, ped/bikes		1.00			1.00			1.00			0.98	1.00
Frt		1.00			0.98			0.86			1.00	0.85
Flt Protected		0.99			1.00			1.00			0.95	1.00
Satd. Flow (prot)		1728			3233			1427			1606	1277
Flt Permitted		0.77			0.92			1.00			0.90	1.00
Satd. Flow (perm)		1345			2996			1427			1513	1277
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	98	483	1	30	649	89	0	0	1	50	3	142
RTOR Reduction (vph)	0	0	0	0	11	0	0	1	0	0	0	101
Lane Group Flow (vph)	0	582	0	0	757	0	0	0	0	0	53	41
Confl. Peds. (#/hr)	33		13	13		33	29		13	13		29
Confl. Bikes (#/hr)	1		1	1		1						
Heavy Vehicles (%)	4%	3%	0%	0%	4%	0%	0%	0%	0%	5%	0%	11%
Turn Type	Perm			Prot			Perm			pm+pt		Perm
Protected Phases		4		3	3 4			1		2	1 2	
Permitted Phases	4				3		1	1		1 2		1 2
Actuated Green, G (s)		44.0			52.0			9.0			23.0	26.0
Effective Green, g (s)		44.0			52.0			9.0			23.0	26.0
Actuated g/C Ratio		0.49			0.58			0.10			0.26	0.29
Clearance Time (s)		4.0						3.0				
Lane Grp Cap (vph)		658			1752			143			401	369
v/s Ratio Prot					c0.04			0.00			c0.02	
v/s Ratio Perm		c0.43			0.21						c0.01	0.03
v/c Ratio		0.88			0.43			0.00			0.13	0.11
Uniform Delay, d1		20.7			10.7			36.5			25.8	23.5
Progression Factor		1.00			0.92			1.00			1.00	1.00
Incremental Delay, d2		16.0			0.2			0.0			0.7	0.6
Delay (s)		36.7			10.1			36.5			26.5	24.1
Level of Service		D			B			D			C	C
Approach Delay (s)		36.7			10.1			36.5			24.8	
Approach LOS		D			B			D			C	

Intersection Summary			
HCM Average Control Delay	22.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	73.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑↱		↰	↑↑↱			✥			✥	
Volume (vph)	39	598	28	35	1014	58	36	29	48	23	24	87
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	16	10	10	16	8	15	8	8	14	8
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			0.99			0.98	
Flpb, ped/bikes	0.98	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.99			0.94			0.91	
Flt Protected	0.95	1.00		0.95	1.00			0.98			0.99	
Satd. Flow (prot)	1557	3022		1587	3021			1808			1703	
Flt Permitted	0.17	1.00		0.36	1.00			0.89			0.95	
Satd. Flow (perm)	277	3022		604	3021			1636			1627	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	41	629	29	37	1067	61	38	31	51	24	25	92
RTOR Reduction (vph)	0	5	0	0	6	0	0	33	0	0	21	0
Lane Group Flow (vph)	41	653	0	37	1122	0	0	87	0	0	120	0
Confl. Peds. (#/hr)	145		16	16		145	17		19	19		17
Confl. Bikes (#/hr)	5					5			2	2		
Heavy Vehicles (%)	0%	5%	0%	0%	4%	2%	0%	0%	0%	0%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	34.0	34.0		34.0	34.0			22.0			22.0	
Effective Green, g (s)	34.0	34.0		34.0	34.0			23.0			23.0	
Actuated g/C Ratio	0.52	0.52		0.52	0.52			0.35			0.35	
Clearance Time (s)	4.0	4.0		4.0	4.0			5.0			5.0	
Lane Grp Cap (vph)	145	1581		316	1580			579			576	
v/s Ratio Prot		0.22			c0.37							
v/s Ratio Perm	0.15			0.06				0.05			c0.07	
v/c Ratio	0.28	0.41		0.12	0.71			0.15			0.21	
Uniform Delay, d1	8.7	9.4		7.9	11.8			14.3			14.6	
Progression Factor	1.00	1.00		0.69	1.41			1.00			1.00	
Incremental Delay, d2	4.8	0.8		0.7	2.4			0.5			0.8	
Delay (s)	13.5	10.2		6.1	19.1			14.9			15.5	
Level of Service	B	B		A	B			B			B	
Approach Delay (s)		10.4			18.7			14.9			15.5	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	15.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1002: 95th Street & Lafayette Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↑	↱				↰↰	↑	↱
Volume (vph)	25	789	5	32	637	56	0	0	0	586	89	379
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	5.0	5.0		3.0	3.0	3.0				5.0	5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00				0.97	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.67				1.00	1.00	0.98
Flpb, ped/bikes	0.93	1.00		1.00	1.00	1.00				1.00	1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85				1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00				0.95	1.00	1.00
Satd. Flow (prot)	793	3379		1710	3226	514				3285	1731	1481
Flt Permitted	0.40	1.00		0.14	1.00	1.00				0.95	1.00	1.00
Satd. Flow (perm)	331	3379		248	3226	514				3285	1731	1481
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	26	831	5	34	671	59	0	0	0	617	94	399
RTOR Reduction (vph)	0	0	0	0	0	26	0	0	0	0	0	166
Lane Group Flow (vph)	26	836	0	34	671	33	0	0	0	617	94	233
Confl. Peds. (#/hr)	350		4	4		350	8		6	6		8
Confl. Bikes (#/hr)	7		1	1		7						
Heavy Vehicles (%)	100%	1%	20%	0%	6%	100%	0%	0%	0%	1%	4%	1%
Turn Type	pm+pt			pm+pt		Perm				Split		Perm
Protected Phases	7	4		3	8					6	6	
Permitted Phases	4			8		8						6
Actuated Green, G (s)	43.0	43.0		73.0	73.0	73.0				30.0	30.0	30.0
Effective Green, g (s)	43.0	43.0		73.0	73.0	73.0				30.0	30.0	30.0
Actuated g/C Ratio	0.33	0.33		0.56	0.56	0.56				0.23	0.23	0.23
Clearance Time (s)	5.0	5.0		3.0	3.0	3.0				5.0	5.0	5.0
Lane Grp Cap (vph)	159	1118		634	1812	289				758	399	342
v/s Ratio Prot	0.02	c0.25		0.02	c0.21					c0.19	0.05	
v/s Ratio Perm	0.04			0.01		0.06						0.16
v/c Ratio	0.16	0.75		0.05	0.37	0.11				0.81	0.24	0.68
Uniform Delay, d1	31.6	38.7		15.2	15.8	13.4				47.4	40.7	45.6
Progression Factor	0.85	0.86		0.32	0.75	1.68				1.00	1.00	1.00
Incremental Delay, d2	2.1	4.4		0.1	0.4	0.5				9.3	1.4	10.5
Delay (s)	28.9	37.5		5.0	12.1	22.9				56.7	42.1	56.1
Level of Service	C	D		A	B	C				E	D	E
Approach Delay (s)		37.3			12.6			0.0			55.2	
Approach LOS		D			B			A			E	

Intersection Summary			
HCM Average Control Delay	37.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	53.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1003: 95th Street & State Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↑↱		↰	↑↑	↱		↰↑	↱	↰		↱
Volume (vph)	340	815	220	54	593	287	102	251	55	54	0	30
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0	3.0		5.0	5.0	5.0		5.0	5.0	5.0		5.0
Lane Util. Factor	0.97	0.95		1.00	0.95	1.00		0.95	1.00	1.00		1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.67		1.00	0.91	1.00		0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Frt	1.00	0.97		1.00	1.00	0.85		1.00	0.85	1.00		0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.99	1.00	0.95		1.00
Satd. Flow (prot)	3285	3262		1710	3138	1018		3301	1363	855		738
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.99	1.00	0.95		1.00
Satd. Flow (perm)	3285	3262		1710	3138	1018		3301	1363	855		738
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	358	858	232	57	624	302	107	264	58	57	0	32
RTOR Reduction (vph)	0	19	0	0	0	228	0	0	41	0	0	30
Lane Group Flow (vph)	358	1071	0	57	624	74	0	371	17	57	0	2
Confl. Peds. (#/hr)	327		13	13		327	6		60	60		6
Confl. Bikes (#/hr)	6					6						
Heavy Vehicles (%)	1%	1%	0%	0%	9%	1%	0%	3%	2%	100%	0%	100%
Turn Type	Prot			Prot		Perm	Split		Perm	Prot		custom
Protected Phases	7	4		3	8		2	2		6		
Permitted Phases						8			2			6
Actuated Green, G (s)	41.0	65.0		8.0	32.0	32.0		29.0	29.0	10.0		10.0
Effective Green, g (s)	41.0	65.0		8.0	32.0	32.0		29.0	29.0	10.0		10.0
Actuated g/C Ratio	0.32	0.50		0.06	0.25	0.25		0.22	0.22	0.08		0.08
Clearance Time (s)	3.0	3.0		5.0	5.0	5.0		5.0	5.0	5.0		5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0	3.0	3.0		3.0
Lane Grp Cap (vph)	1036	1631		105	772	251		736	304	66		57
v/s Ratio Prot	0.11	c0.33		0.03	c0.20			c0.11		c0.07		
v/s Ratio Perm						0.07			0.01			0.00
v/c Ratio	0.35	0.66		0.54	0.81	0.30		0.50	0.06	0.86		0.04
Uniform Delay, d1	34.2	24.2		59.2	46.1	39.8		44.2	39.7	59.3		55.6
Progression Factor	0.94	0.18		1.00	1.00	1.00		0.95	0.99	1.00		1.00
Incremental Delay, d2	0.6	1.3		18.7	8.9	3.0		2.5	0.3	65.1		0.3
Delay (s)	32.7	5.7		77.9	55.0	42.8		44.3	39.7	124.4		55.9
Level of Service	C	A		E	E	D		D	D	F		E
Approach Delay (s)		12.4			52.6			43.7			99.8	
Approach LOS		B			D			D			F	

Intersection Summary			
HCM Average Control Delay	33.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	68.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1004: 95th Street & Michigan Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱		↰	↑↑		↰		↱	↰	↱	
Volume (vph)	0	893	181	105	839	0	89	0	103	9	18	7
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	11	11	8	12	12	12	14	15	12
Total Lost time (s)		4.0		4.0	4.0		4.0		4.0	4.0	4.0	
Lane Util. Factor		0.95		1.00	0.95		1.00		1.00	1.00	1.00	
Frpb, ped/bikes		0.99		1.00	1.00		1.00		0.98	1.00	0.99	
Flpb, ped/bikes		1.00		1.00	1.00		0.97		1.00	0.99	1.00	
Frt		0.97		1.00	1.00		1.00		0.85	1.00	0.96	
Flt Protected		1.00		0.95	1.00		0.95		1.00	0.95	1.00	
Satd. Flow (prot)		2987		1649	3149		1388		1451	1803	1870	
Flt Permitted		1.00		0.17	1.00		0.74		1.00	0.95	1.00	
Satd. Flow (perm)		2987		291	3149		1079		1451	1803	1870	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	992	201	117	932	0	99	0	114	10	20	8
RTOR Reduction (vph)	0	17	0	0	0	0	0	0	77	0	5	0
Lane Group Flow (vph)	0	1176	0	117	932	0	99	0	37	10	23	0
Confl. Peds. (#/hr)	67		19	19		67	38		12	12		38
Confl. Bikes (#/hr)			1	1								
Heavy Vehicles (%)	0%	2%	11%	0%	5%	0%	19%	0%	3%	0%	0%	0%
Turn Type				Perm			custom		custom	Perm		
Protected Phases		4			8						6	
Permitted Phases				8			2		2	6		
Actuated Green, G (s)		60.0		60.0	60.0		32.0		32.0	32.0	32.0	
Effective Green, g (s)		60.0		60.0	60.0		32.0		32.0	32.0	32.0	
Actuated g/C Ratio		0.60		0.60	0.60		0.32		0.32	0.32	0.32	
Clearance Time (s)		4.0		4.0	4.0		4.0		4.0	4.0	4.0	
Lane Grp Cap (vph)		1792		175	1889		345		464	577	598	
v/s Ratio Prot		0.39			0.30						0.01	
v/s Ratio Perm				c0.40			c0.09		0.03	0.01		
v/c Ratio		0.66		0.67	0.49		0.29		0.08	0.02	0.04	
Uniform Delay, d1		13.2		13.4	11.4		25.5		23.7	23.2	23.4	
Progression Factor		1.00		1.00	1.00		1.00		1.00	1.00	1.00	
Incremental Delay, d2		1.9		18.5	0.9		2.1		0.3	0.1	0.1	
Delay (s)		15.1		31.8	12.3		27.5		24.1	23.3	23.5	
Level of Service		B		C	B		C		C	C	C	
Approach Delay (s)		15.1			14.5			25.7			23.5	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM Average Control Delay	15.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	61.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↰	↰	↱	↰	↑↑↑			↑↑↑↱	
Volume (vph)	0	0	0	300	0	1230	211	670	0	0	789	490
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	12	12	10	10	12	12	11	12
Total Lost time (s)				4.0		5.0	3.0	4.0			4.0	
Lane Util. Factor				0.95		1.00	1.00	0.91			0.91	
Frpb, ped/bikes				1.00		1.00	1.00	1.00			0.98	
Flpb, ped/bikes				1.00		1.00	1.00	1.00			1.00	
Frt				1.00		0.85	1.00	1.00			0.94	
Flt Protected				0.95		1.00	0.95	1.00			1.00	
Satd. Flow (prot)				1540		1530	1535	4327			4270	
Flt Permitted				0.95		1.00	0.95	1.00			1.00	
Satd. Flow (perm)				1540		1530	1535	4327			4270	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	0	0	306	0	1255	215	684	0	0	805	500
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	306	0	1255	215	684	0	0	1305	0
Confl. Peds. (#/hr)	2					2	18		3	3		18
Heavy Vehicles (%)	0%	0%	0%	2%	0%	0%	4%	6%	0%	0%	4%	1%
Turn Type				Split		Prot	Prot					
Protected Phases				8	8	8	5	2			6	
Permitted Phases												
Actuated Green, G (s)				30.0		30.0	32.0	66.0			31.0	
Effective Green, g (s)				31.0		30.0	32.0	66.0			31.0	
Actuated g/C Ratio				0.30		0.29	0.30	0.63			0.30	
Clearance Time (s)				5.0		5.0	3.0	4.0			4.0	
Lane Grp Cap (vph)				455		437	468	2720			1261	
v/s Ratio Prot				0.20		c0.82	c0.14	0.16			c0.31	
v/s Ratio Perm												
v/c Ratio				0.67		2.87	0.46	0.25			1.16dr	
Uniform Delay, d1				32.5		37.5	29.5	8.6			37.0	
Progression Factor				1.00		1.00	0.64	2.09			1.00	
Incremental Delay, d2				7.7		848.6	2.7	0.2			34.8	
Delay (s)				40.3		886.1	21.6	18.2			71.8	
Level of Service				D		F	C	B			E	
Approach Delay (s)		0.0			720.3			19.0			71.8	
Approach LOS		A			F			B			E	

Intersection Summary			
HCM Average Control Delay	328.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.43		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	101.8%	ICU Level of Service	G
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1006: 99th Street & Halsted Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↰↑↱						↑↑↑	↱↱	↰	↑↑↑	
Volume (vph)	322	770	145	0	0	0	0	559	408	359	730	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	13	12	12	12	12	12	10	10	8	12	12	12
Total Lost time (s)	5.0	5.0						4.0	4.0	3.0	4.0	
Lane Util. Factor	0.91	0.91						0.91	0.88	1.00	0.91	
Frpb, ped/bikes	1.00	1.00						1.00	1.00	1.00	1.00	
Flpb, ped/bikes	0.99	1.00						1.00	1.00	1.00	1.00	
Frt	1.00	0.98						1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00						1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1509	3157						4368	2244	1598	4680	
Flt Permitted	0.95	1.00						1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1509	3157						4368	2244	1598	4680	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	332	794	149	0	0	0	0	576	421	370	753	0
RTOR Reduction (vph)	0	14	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	299	962	0	0	0	0	0	576	421	370	753	0
Confl. Peds. (#/hr)	6		1	1		6	6					6
Heavy Vehicles (%)	6%	1%	0%	0%	0%	0%	0%	5%	4%	7%	5%	0%
Turn Type	Perm								Perm	Prot		
Protected Phases		4						2		1	6	
Permitted Phases	4								2			
Actuated Green, G (s)	34.0	34.0						28.0	28.0	31.0	62.0	
Effective Green, g (s)	34.0	34.0						28.0	28.0	31.0	62.0	
Actuated g/C Ratio	0.32	0.32						0.27	0.27	0.30	0.59	
Clearance Time (s)	5.0	5.0						4.0	4.0	3.0	4.0	
Lane Grp Cap (vph)	489	1022						1165	598	472	2763	
v/s Ratio Prot								0.13		c0.23	0.16	
v/s Ratio Perm	0.20	0.30							c0.19			
v/c Ratio	0.61	0.94						0.49	0.70	0.78	0.27	
Uniform Delay, d1	29.9	34.5						32.5	34.8	33.9	10.5	
Progression Factor	1.00	1.00						1.17	1.17	0.86	0.22	
Incremental Delay, d2	5.6	17.2						1.3	5.8	4.9	0.1	
Delay (s)	35.5	51.7						39.4	46.4	34.1	2.4	
Level of Service	D	D						D	D	C	A	
Approach Delay (s)		47.9			0.0			42.3			12.9	
Approach LOS		D			A			D			B	

Intersection Summary			
HCM Average Control Delay	34.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	101.8%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1007: 98th Place & Wentworth Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↰	↑↱		↰	↑			↱	
Volume (vph)	0	0	0	290	25	24	11	158	0	0	147	5
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	14	12	12	16	12
Total Lost time (s)				4.0	4.0		4.0	4.0			-3.0	
Lane Util. Factor				1.00	0.95		1.00	1.00			1.00	
Frpb, ped/bikes				1.00	0.99		1.00	1.00			1.00	
Flpb, ped/bikes				1.00	1.00		1.00	1.00			1.00	
Frt				1.00	0.93		1.00	1.00			1.00	
Flt Protected				0.95	1.00		0.95	1.00			1.00	
Satd. Flow (prot)				1688	3132		1710	1846			1955	
Flt Permitted				0.95	1.00		0.54	1.00			1.00	
Satd. Flow (perm)				1688	3132		979	1846			1955	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	322	28	27	12	176	0	0	163	6
RTOR Reduction (vph)	0	0	0	0	18	0	0	0	0	0	1	0
Lane Group Flow (vph)	0	0	0	322	37	0	12	176	0	0	168	0
Confl. Peds. (#/hr)	2		2	2		2			6	6		
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	0%	0%	0%	1%	0%	0%	0%	4%	0%	0%	4%	0%
Turn Type				Perm			pm+pt					
Protected Phases					8		7	2			6	
Permitted Phases				8			2					
Actuated Green, G (s)				27.0	27.0		50.0	50.0			40.0	
Effective Green, g (s)				27.0	27.0		50.0	50.0			46.0	
Actuated g/C Ratio				0.32	0.32		0.59	0.59			0.54	
Clearance Time (s)				4.0	4.0		4.0	4.0			3.0	
Lane Grp Cap (vph)				536	995		636	1086			1058	
v/s Ratio Prot					0.01		0.00	c0.10			0.09	
v/s Ratio Perm				c0.19			0.01					
v/c Ratio				0.60	0.04		0.02	0.16			0.16	
Uniform Delay, d1				24.5	20.0		10.5	8.0			9.8	
Progression Factor				1.00	1.00		1.04	1.18			1.00	
Incremental Delay, d2				4.9	0.1		0.1	0.3			0.3	
Delay (s)				29.4	20.1		11.0	9.7			10.1	
Level of Service				C	C		B	A			B	
Approach Delay (s)		0.0			28.0			9.8			10.1	
Approach LOS		A			C			A			B	

Intersection Summary			
HCM Average Control Delay	19.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	37.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1008: 99th Street & Wentworth Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱			✥			↱		↰	↑	
Volume (vph)	12	11	23	5	0	14	0	143	41	46	391	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	16	15	12	8	12	8	12	12	12	10	13	12
Total Lost time (s)	4.0	4.0			4.0			3.0		4.0	4.0	
Lane Util. Factor	1.00	1.00			1.00			1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.97			0.98			0.99		1.00	1.00	
Flpb, ped/bikes	1.00	1.00			1.00			1.00		1.00	1.00	
Frt	1.00	0.90			0.90			0.97		1.00	1.00	
Flt Protected	0.95	1.00			0.99			1.00		0.95	1.00	
Satd. Flow (prot)	1935	1735			1565			1720		1590	1860	
Flt Permitted	0.74	1.00			0.97			1.00		0.60	1.00	
Satd. Flow (perm)	1516	1735			1531			1720		1004	1860	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	13	12	24	5	0	15	0	151	43	48	412	0
RTOR Reduction (vph)	0	16	0	0	10	0	0	12	0	0	0	0
Lane Group Flow (vph)	13	20	0	0	10	0	0	182	0	48	412	0
Confl. Peds. (#/hr)	1		11	11		1	1		10	10		1
Confl. Bikes (#/hr)			2	2			1		2	2		1
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%
Turn Type	Perm			Perm						pm+pt		
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8						6		
Actuated Green, G (s)	27.0	27.0			27.0			40.0		50.0	50.0	
Effective Green, g (s)	27.0	27.0			27.0			40.0		50.0	50.0	
Actuated g/C Ratio	0.32	0.32			0.32			0.47		0.59	0.59	
Clearance Time (s)	4.0	4.0			4.0			3.0		4.0	4.0	
Lane Grp Cap (vph)	482	551			486			809		639	1094	
v/s Ratio Prot		c0.01						0.11		0.01	c0.22	
v/s Ratio Perm	0.01				0.01					0.04		
v/c Ratio	0.03	0.04			0.02			0.22		0.08	0.38	
Uniform Delay, d1	20.0	20.0			19.9			13.3		8.6	9.3	
Progression Factor	1.00	1.00			1.00			1.00		0.97	0.86	
Incremental Delay, d2	0.1	0.1			0.1			0.6		0.2	0.9	
Delay (s)	20.1	20.1			20.0			14.0		8.5	8.9	
Level of Service	C	C			B			B		A	A	
Approach Delay (s)		20.1			20.0			14.0			8.8	
Approach LOS		C			B			B			A	

Intersection Summary			
HCM Average Control Delay	11.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	41.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1009: 99th Street & State Street

1/14/2013

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	Y		↰	↑	↱	
Volume (vph)	48	43	16	193	288	28
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	14	12	13	12	10	12
Total Lost time (s)	4.0		4.0	4.0	4.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.94		1.00	1.00	0.99	
Flt Protected	0.97		0.95	1.00	1.00	
Satd. Flow (prot)	1751		1765	1782	1657	
Flt Permitted	0.97		0.50	1.00	1.00	
Satd. Flow (perm)	1751		937	1782	1657	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	53	48	18	214	320	31
RTOR Reduction (vph)	32	0	0	0	5	0
Lane Group Flow (vph)	69	0	18	214	346	0
Confl. Peds. (#/hr)			2			2
Heavy Vehicles (%)	0%	0%	0%	1%	0%	0%
Turn Type			Perm			
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	21.0		36.0	36.0	36.0	
Effective Green, g (s)	21.0		36.0	36.0	36.0	
Actuated g/C Ratio	0.32		0.55	0.55	0.55	
Clearance Time (s)	4.0		4.0	4.0	4.0	
Lane Grp Cap (vph)	566		519	987	918	
v/s Ratio Prot	c0.04			0.12	c0.21	
v/s Ratio Perm			0.02			
v/c Ratio	0.12		0.03	0.22	0.38	
Uniform Delay, d1	15.5		6.6	7.4	8.2	
Progression Factor	1.00		0.56	0.66	1.40	
Incremental Delay, d2	0.4		0.1	0.5	1.0	
Delay (s)	15.9		3.8	5.4	12.4	
Level of Service	B		A	A	B	
Approach Delay (s)	15.9			5.2	12.4	
Approach LOS	B			A	B	

Intersection Summary			
HCM Average Control Delay	10.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	30.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↰↑↱		↰	↑			↑	↱
Volume (vph)	0	0	0	31	268	9	258	161	4	0	301	17
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	14	16	12	12	15	12	12	13	10
Total Lost time (s)					4.0		4.0	4.0			3.0	3.0
Lane Util. Factor					0.95		1.00	1.00			1.00	1.00
Frpb, ped/bikes					1.00		1.00	1.00			1.00	1.00
Flpb, ped/bikes					1.00		1.00	1.00			1.00	1.00
Frt					1.00		1.00	1.00			1.00	0.85
Flt Protected					1.00		0.95	1.00			1.00	1.00
Satd. Flow (prot)					3772		1693	1677			1738	1428
Flt Permitted					1.00		0.45	1.00			1.00	1.00
Satd. Flow (perm)					3772		809	1677			1738	1428
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	34	298	10	287	179	4	0	334	19
RTOR Reduction (vph)	0	0	0	0	3	0	0	1	0	0	0	11
Lane Group Flow (vph)	0	0	0	0	339	0	287	182	0	0	334	8
Confl. Peds. (#/hr)	1					1			5	5		
Heavy Vehicles (%)	0%	0%	0%	0%	2%	0%	1%	18%	0%	0%	7%	0%
Turn Type				Split			pm+pt					Perm
Protected Phases				8	8		7	2			6	
Permitted Phases							2					6
Actuated Green, G (s)					26.0		51.0	51.0			38.0	38.0
Effective Green, g (s)					26.0		51.0	51.0			38.0	38.0
Actuated g/C Ratio					0.31		0.60	0.60			0.45	0.45
Clearance Time (s)					4.0		4.0	4.0			3.0	3.0
Lane Grp Cap (vph)					1154		589	1006			777	638
v/s Ratio Prot					c0.09		c0.06	0.11			0.19	
v/s Ratio Perm							c0.23					0.01
v/c Ratio					0.29		0.49	0.18			0.43	0.01
Uniform Delay, d1					22.5		14.4	7.6			16.1	13.1
Progression Factor					1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2					0.6		2.9	0.4			1.7	0.0
Delay (s)					23.1		17.2	8.0			17.8	13.1
Level of Service					C		B	A			B	B
Approach Delay (s)		0.0			23.1			13.7			17.6	
Approach LOS		A			C			B			B	

Intersection Summary			
HCM Average Control Delay	17.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	55.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1011: 99th Street & Martin Luther King Jr Drive

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					✥		↰	↑↱		↰	↑↱	
Volume (vph)	0	0	0	96	94	38	133	217	30	59	704	44
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	15	12	12	12	12	12	13	12
Total Lost time (s)					4.0		3.0	4.0		3.0	4.0	
Lane Util. Factor					1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes					1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes					1.00		1.00	1.00		1.00	1.00	
Frt					0.98		1.00	0.98		1.00	0.99	
Flt Protected					0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)					1896		1710	3290		1707	3467	
Flt Permitted					0.98		0.25	1.00		0.58	1.00	
Satd. Flow (perm)					1896		446	3290		1048	3467	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	107	104	42	148	241	33	66	782	49
RTOR Reduction (vph)	0	0	0	0	10	0	0	14	0	0	6	0
Lane Group Flow (vph)	0	0	0	0	243	0	148	260	0	66	825	0
Confl. Peds. (#/hr)							5		5	5		5
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	1%	0%
Turn Type				Split			pm+pt			pm+pt		
Protected Phases				8	8		5	2		1	6	
Permitted Phases							2			6		
Actuated Green, G (s)					23.0		41.0	34.0		41.0	34.0	
Effective Green, g (s)					23.0		41.0	34.0		41.0	34.0	
Actuated g/C Ratio					0.31		0.55	0.45		0.55	0.45	
Clearance Time (s)					4.0		3.0	4.0		3.0	4.0	
Lane Grp Cap (vph)					581		362	1491		634	1572	
v/s Ratio Prot					c0.13		c0.04	0.08		0.01	c0.24	
v/s Ratio Perm							0.19			0.05		
v/c Ratio					0.42		0.41	0.17		0.10	0.52	
Uniform Delay, d1					20.7		16.4	12.2		8.2	14.7	
Progression Factor					1.00		0.83	0.82		1.00	1.00	
Incremental Delay, d2					2.2		3.4	0.3		0.3	1.3	
Delay (s)					22.9		17.0	10.3		8.6	16.0	
Level of Service					C		B	B		A	B	
Approach Delay (s)		0.0			22.9			12.6			15.4	
Approach LOS		A			C			B			B	

Intersection Summary			
HCM Average Control Delay	15.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	53.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1012: 100th Street & Martin Luther King Jr Drive

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥		↰	↑↱		↰	↑↱	
Volume (vph)	32	49	13	9	63	63	7	285	24	159	591	50
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	16	12	12	10	11	12	12	11	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.98			0.94		1.00	0.99		1.00	0.99	
Flt Protected		0.98			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1964			1655		1595	3174		1704	3231	
Flt Permitted		0.89			0.99		0.36	1.00		0.56	1.00	
Satd. Flow (perm)		1775			1637		598	3174		996	3231	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	34	52	14	9	66	66	7	300	25	167	622	53
RTOR Reduction (vph)	0	8	0	0	42	0	0	8	0	0	8	0
Lane Group Flow (vph)	0	92	0	0	99	0	7	317	0	167	667	0
Confl. Peds. (#/hr)	2					2	1		6	6		1
Confl. Bikes (#/hr)			1	1			3					3
Heavy Vehicles (%)	0%	0%	0%	0%	2%	0%	0%	3%	0%	0%	1%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		25.0			25.0		42.0	42.0		42.0	42.0	
Effective Green, g (s)		25.0			25.0		42.0	42.0		42.0	42.0	
Actuated g/C Ratio		0.33			0.33		0.56	0.56		0.56	0.56	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		592			546		335	1777		558	1809	
v/s Ratio Prot								0.10			c0.21	
v/s Ratio Perm		0.05			c0.06		0.01			0.17		
v/c Ratio		0.16			0.18		0.02	0.18		0.30	0.37	
Uniform Delay, d1		17.6			17.7		7.3	8.1		8.7	9.1	
Progression Factor		1.00			1.00		1.00	1.00		0.27	0.25	
Incremental Delay, d2		0.6			0.7		0.1	0.2		1.2	0.5	
Delay (s)		18.1			18.5		7.5	8.3		3.6	2.8	
Level of Service		B			B		A	A		A	A	
Approach Delay (s)		18.1			18.5			8.3			3.0	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	6.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	48.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis
1013: 100th Street & Cottage Grove Avenue

1/14/2013

	↗	↘	↖	↑	↓	↙
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	Y			↰↑	↑↱	
Sign Control	Stop			Stop	Stop	
Volume (vph)	37	192	67	261	589	81
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	41	213	74	290	654	90

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	254	171	193	436	308
Volume Left (vph)	41	74	0	0	0
Volume Right (vph)	213	0	0	0	90
Hadj (s)	-0.42	0.27	0.05	0.05	-0.15
Departure Headway (s)	5.8	6.6	6.3	5.9	5.7
Degree Utilization, x	0.41	0.31	0.34	0.71	0.49
Capacity (veh/h)	589	528	546	601	620
Control Delay (s)	12.7	11.3	11.4	21.0	12.8
Approach Delay (s)	12.7	11.3		17.6	
Approach LOS	B	B		C	

Intersection Summary			
Delay	15.0		
HCM Level of Service	C		
Intersection Capacity Utilization	54.3%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Signalized Intersection Capacity Analysis
1014: 103rd Street & Vincennes Avenue

1/14/2013

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR
Lane Configurations		↰	↑	↱	↰	↑	↱			↰	↑↱	
Volume (vph)	32	35	373	18	20	393	70	78	55	68	354	32
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		3.5	4.0	4.0	4.0	4.0	4.0			4.0	4.0	
Lane Util. Factor		1.00	1.00	1.00	1.00	1.00	1.00			1.00	0.95	
Frpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	0.93			1.00	1.00	
Flpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	
Frt		1.00	1.00	0.85	1.00	1.00	0.85			1.00	0.99	
Flt Protected		0.95	1.00	1.00	0.95	1.00	1.00			0.95	1.00	
Satd. Flow (prot)		1611	1731	1530	1710	1731	1421			1710	3251	
Flt Permitted		0.14	1.00	1.00	0.52	1.00	1.00			0.14	1.00	
Satd. Flow (perm)		238	1731	1530	936	1731	1421			257	3251	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	36	39	414	20	22	437	78	87	61	76	393	36
RTOR Reduction (vph)	0	0	0	12	0	0	38	0	0	0	7	0
Lane Group Flow (vph)	0	75	414	8	22	437	127	0	0	137	422	0
Confl. Peds. (#/hr)		25					25					3
Heavy Vehicles (%)	6%	6%	4%	0%	0%	4%	0%	0%	0%	0%	4%	0%
Turn Type	Perm	pm+pt		Perm	Perm		Perm		Perm	Perm		
Protected Phases		7	4			8					2	
Permitted Phases	4	4		4	8		8		2	2		
Actuated Green, G (s)		44.0	44.0	44.0	25.0	25.0	25.0			28.0	28.0	
Effective Green, g (s)		44.0	44.0	44.0	25.0	25.0	25.0			28.0	28.0	
Actuated g/C Ratio		0.42	0.42	0.42	0.24	0.24	0.24			0.27	0.27	
Clearance Time (s)		3.5	4.0	4.0	4.0	4.0	4.0			4.0	4.0	
Lane Grp Cap (vph)		302	725	641	223	412	338			69	867	
v/s Ratio Prot		0.04	c0.24			c0.25					0.13	
v/s Ratio Perm		0.07		0.01	0.02		0.09			c0.53		
v/c Ratio		0.25	0.57	0.01	0.10	1.06	0.38			1.99	0.49	
Uniform Delay, d1		21.6	23.3	17.8	31.2	40.0	33.5			38.5	32.4	
Progression Factor		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	
Incremental Delay, d2		2.0	3.3	0.0	0.9	61.3	3.2			491.0	2.0	
Delay (s)		23.5	26.5	17.9	32.1	101.3	36.6			529.5	34.4	
Level of Service		C	C	B	C	F	D			F	C	
Approach Delay (s)			25.8			81.8					154.2	
Approach LOS			C			F					F	

Intersection Summary			
HCM Average Control Delay	146.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.43		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	103.0%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1014: 103rd Street & Vincennes Avenue

1/14/2013

Movement	SBL	SBT	SBR	SBR2	SEL2	SEL	SER	SER2
Lane Configurations	↰	↑↱				↰	↱↱	
Volume (vph)	107	571	82	103	4	113	607	197
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.5	4.5				4.5	4.5	
Lane Util. Factor	1.00	0.95				1.00	0.88	
Frpb, ped/bikes	1.00	1.00				1.00	1.00	
Flpb, ped/bikes	1.00	1.00				1.00	1.00	
Frt	1.00	0.96				1.00	0.85	
Flt Protected	0.95	1.00				0.95	1.00	
Satd. Flow (prot)	1705	3246				1710	2633	
Flt Permitted	0.37	1.00				0.95	1.00	
Satd. Flow (perm)	670	3246				1710	2633	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	119	634	91	114	4	126	674	219
RTOR Reduction (vph)	0	12	0	0	0	0	26	0
Lane Group Flow (vph)	119	827	0	0	0	130	867	0
Confl. Peds. (#/hr)	3							
Heavy Vehicles (%)	0%	2%	0%	0%	0%	0%	3%	0%
Turn Type	Perm				Split		Perm	
Protected Phases		6			9	9		
Permitted Phases	6						9	
Actuated Green, G (s)	27.5	27.5				20.5	20.5	
Effective Green, g (s)	27.5	27.5				20.5	20.5	
Actuated g/C Ratio	0.26	0.26				0.20	0.20	
Clearance Time (s)	4.5	4.5				4.5	4.5	
Lane Grp Cap (vph)	175	850				334	514	
v/s Ratio Prot		0.25				0.08		
v/s Ratio Perm	0.18						c0.33	
v/c Ratio	0.68	0.97				0.39	1.69	
Uniform Delay, d1	34.8	38.4				36.8	42.2	
Progression Factor	1.00	1.00				1.00	1.00	
Incremental Delay, d2	19.3	25.0				3.4	317.6	
Delay (s)	54.1	63.4				40.2	359.9	
Level of Service	D	E				D	F	
Approach Delay (s)		62.2				319.3		
Approach LOS		E				F		

Intersection Summary

HCM Signalized Intersection Capacity Analysis
1015: 103rd Street & Morgan Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰			↱			✥				
Volume (vph)	65	596	0	0	469	56	85	52	19	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	11	11	11	16	11	12	15	12	12	15	12
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		1.00			0.99			0.98				
Flt Protected		1.00			1.00			0.97				
Satd. Flow (prot)		1681			1952			1841				
Flt Permitted		0.91			1.00			0.97				
Satd. Flow (perm)		1530			1952			1841				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	72	662	0	0	521	62	94	58	21	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	734	0	0	583	0	0	173	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)		40.0			40.0			17.0				
Effective Green, g (s)		40.0			40.0			17.0				
Actuated g/C Ratio		0.62			0.62			0.26				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		942			1201			481				
v/s Ratio Prot					0.30							
v/s Ratio Perm		c0.48						0.09				
v/c Ratio		0.78			0.49			0.36				
Uniform Delay, d1		9.2			6.9			19.6				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		6.3			1.4			2.1				
Delay (s)		15.6			8.3			21.7				
Level of Service		B			A			C				
Approach Delay (s)		15.6			8.3			21.7			0.0	
Approach LOS		B			A			C			A	

Intersection Summary			
HCM Average Control Delay	13.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	85.6%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1016: 103rd Street & Halsted Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱	↰	↑↑	↱	↰	↑↑	↱
Volume (vph)	71	334	152	129	331	135	105	639	86	140	759	94
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	10	10	9	9	10	9
Total Lost time (s)		4.0	4.0		4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		1.00	0.96		1.00	0.97	1.00	1.00	0.94	1.00	1.00	0.93
Flpb, ped/bikes		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.99	1.00		0.99	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1981	1443		1949	1457	1547	3040	1285	1506	3069	1239
Flt Permitted		0.65	1.00		0.73	1.00	0.19	1.00	1.00	0.22	1.00	1.00
Satd. Flow (perm)		1292	1443		1439	1457	305	3040	1285	347	3069	1239
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	75	352	160	136	348	142	111	673	91	147	799	99
RTOR Reduction (vph)	0	0	79	0	0	81	0	0	55	0	0	50
Lane Group Flow (vph)	0	427	81	0	484	61	111	673	36	147	799	49
Confl. Peds. (#/hr)	24		45	45		24	36		24	24		36
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	2%	2%	2%	2%	3%	2%	3%	5%	1%	2%	4%	3%
Turn Type	pm+pt		Perm	Perm		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)		53.0	53.0		45.0	45.0	39.0	33.0	33.0	43.0	35.0	35.0
Effective Green, g (s)		53.0	53.0		45.0	45.0	39.0	33.0	33.0	43.0	35.0	35.0
Actuated g/C Ratio		0.50	0.50		0.43	0.43	0.37	0.31	0.31	0.41	0.33	0.33
Clearance Time (s)		4.0	4.0		4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		685	728		617	624	184	955	404	230	1023	413
v/s Ratio Prot		c0.03					0.03	0.22		c0.05	c0.26	
v/s Ratio Perm		0.29	0.06		c0.34	0.04	0.19		0.03	0.21		0.04
v/c Ratio		0.62	0.11		0.78	0.10	0.60	0.70	0.09	0.64	0.78	0.12
Uniform Delay, d1		18.8	13.6		25.8	17.9	23.7	31.7	25.4	21.8	31.5	24.3
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.51	1.35	2.10
Incremental Delay, d2		4.2	0.3		9.7	0.3	5.5	4.4	0.4	5.5	5.7	0.6
Delay (s)		23.0	13.9		35.5	18.2	29.2	36.1	25.8	38.5	48.2	51.5
Level of Service		C	B		D	B	C	D	C	D	D	D
Approach Delay (s)		20.6			31.6			34.1			47.1	
Approach LOS		C			C			C			D	

Intersection Summary			
HCM Average Control Delay	35.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	90.2%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1017: 103rd Street & Normal Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣				
Volume (vph)	85	412	85	105	490	94	51	61	72	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	15	12	12	15	12
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		0.98			0.98			0.95				
Flt Protected		0.99			0.99			0.99				
Satd. Flow (prot)		1644			1646			1796				
Flt Permitted		0.83			0.84			0.99				
Satd. Flow (perm)		1375			1390			1796				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	94	458	94	117	544	104	57	68	80	0	0	0
RTOR Reduction (vph)	0	10	0	0	9	0	0	35	0	0	0	0
Lane Group Flow (vph)	0	636	0	0	756	0	0	170	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm			Perm					
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Actuated Green, G (s)		40.0			40.0			17.0				
Effective Green, g (s)		40.0			40.0			17.0				
Actuated g/C Ratio		0.62			0.62			0.26				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		846			855			470				
v/s Ratio Prot												
v/s Ratio Perm		0.46			c0.54			0.09				
v/c Ratio		0.75			0.88			0.36				
Uniform Delay, d1		9.0			10.5			19.6				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		6.1			12.9			2.1				
Delay (s)		15.1			23.5			21.7				
Level of Service		B			C			C				
Approach Delay (s)		15.1			23.5			21.7			0.0	
Approach LOS		B			C			C			A	

Intersection Summary			
HCM Average Control Delay	19.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	71.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑	↱		↰↑	↱		↰↑	↱		↰↑↱	
Volume (vph)	21	455	73	84	568	45	37	76	74	56	238	47
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	11	12	12	15	12
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frpb, ped/bikes		1.00	0.96		1.00	0.96		1.00	0.96		0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		0.99	1.00		1.00	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		0.98	
Flt Protected		1.00	1.00		0.99	1.00		0.98	1.00		0.99	
Satd. Flow (prot)		1687	1382		1712	1417		1686	1455		1886	
Flt Permitted		0.96	1.00		0.88	1.00		0.83	1.00		0.93	
Satd. Flow (perm)		1630	1382		1519	1417		1430	1455		1775	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	22	479	77	88	598	47	39	80	78	59	251	49
RTOR Reduction (vph)	0	0	33	0	0	13	0	0	53	0	7	0
Lane Group Flow (vph)	0	501	44	0	686	34	0	119	25	0	352	0
Confl. Peds. (#/hr)	25		19	19		25	36		30	30		36
Confl. Bikes (#/hr)	1		2	2		1	3					3
Heavy Vehicles (%)	0%	3%	3%	0%	1%	0%	0%	1%	1%	0%	1%	0%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		43.0	43.0		43.0	43.0		24.0	24.0		24.0	
Effective Green, g (s)		43.0	43.0		43.0	43.0		24.0	24.0		24.0	
Actuated g/C Ratio		0.57	0.57		0.57	0.57		0.32	0.32		0.32	
Clearance Time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	
Lane Grp Cap (vph)		935	792		871	812		458	466		568	
v/s Ratio Prot												
v/s Ratio Perm		0.31	0.03		c0.45	0.02		0.08	0.02		c0.20	
v/c Ratio		0.54	0.06		0.79	0.04		0.26	0.05		0.62	
Uniform Delay, d1		9.9	7.1		12.4	7.0		18.9	17.6		21.6	
Progression Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2		2.2	0.1		7.1	0.1		1.4	0.2		5.0	
Delay (s)		12.1	7.2		19.6	7.1		20.3	17.9		26.6	
Level of Service		B	A		B	A		C	B		C	
Approach Delay (s)		11.4			18.8			19.3			26.6	
Approach LOS		B			B			B			C	

Intersection Summary			
HCM Average Control Delay	18.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	99.6%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1019: 103rd Street & State Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑	↱	↰	↑	↱
Volume (vph)	57	463	30	53	598	58	44	165	57	124	210	32
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	11	16	8	10	10	10	10	10	10
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00	0.98	1.00	1.00	0.98
Flpb, ped/bikes	0.98	1.00		1.00	1.00		0.99	1.00	1.00	0.99	1.00	1.00
Frt	1.00	0.99		1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1537	3068		1652	3732		1585	1663	1370	1568	1680	1397
Flt Permitted	0.31	1.00		0.41	1.00		0.57	1.00	1.00	0.63	1.00	1.00
Satd. Flow (perm)	505	3068		716	3732		953	1663	1370	1043	1680	1397
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	63	514	33	59	664	64	49	183	63	138	233	36
RTOR Reduction (vph)	0	7	0	0	11	0	0	0	38	0	0	22
Lane Group Flow (vph)	63	540	0	59	717	0	49	183	25	138	233	14
Confl. Peds. (#/hr)	51		3	3		51	13		13	13		13
Heavy Vehicles (%)	2%	3%	3%	0%	2%	0%	0%	1%	2%	1%	0%	0%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	31.0	31.0		31.0	31.0		26.0	26.0	26.0	26.0	26.0	26.0
Effective Green, g (s)	31.0	31.0		31.0	31.0		26.0	26.0	26.0	26.0	26.0	26.0
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.40	0.40	0.40	0.40	0.40	0.40
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	241	1463		341	1780		381	665	548	417	672	559
v/s Ratio Prot		0.18			c0.19			0.11			c0.14	
v/s Ratio Perm	0.12			0.08			0.05		0.02	0.13		0.01
v/c Ratio	0.26	0.37		0.17	0.40		0.13	0.28	0.05	0.33	0.35	0.03
Uniform Delay, d1	10.2	10.8		9.7	11.0		12.3	13.1	11.9	13.5	13.6	11.8
Progression Factor	1.00	1.00		1.00	1.00		0.82	0.89	0.70	0.58	0.59	0.26
Incremental Delay, d2	2.6	0.7		1.1	0.7		0.7	1.0	0.2	2.0	1.4	0.1
Delay (s)	12.8	11.5		10.8	11.7		10.8	12.7	8.6	9.9	9.3	3.1
Level of Service	B	B		B	B		B	B	A	A	A	A
Approach Delay (s)		11.6			11.6			11.5			9.0	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM Average Control Delay	11.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	57.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1020: 103rd Street & Michigan Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	73	389	71	73	387	77	55	197	64	135	272	162
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	11	10	11	11	10	11	11	10	11	11
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.98		1.00	0.99		1.00	0.98		1.00	0.99	
Flpb, ped/bikes	0.97	1.00		0.95	1.00		0.99	1.00		0.96	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.96		1.00	0.94	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1329	3142		1515	3108		1583	2928		1453	2920	
Flt Permitted	0.44	1.00		0.44	1.00		0.44	1.00		0.58	1.00	
Satd. Flow (perm)	617	3142		708	3108		741	2928		892	2920	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	77	409	75	77	407	81	58	207	67	142	286	171
RTOR Reduction (vph)	0	0	0	0	0	0	0	39	0	0	100	0
Lane Group Flow (vph)	77	484	0	77	488	0	58	235	0	142	357	0
Confl. Peds. (#/hr)	112		99	99		112	23		53	53		23
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	16%	1%	0%	0%	1%	9%	0%	8%	2%	5%	5%	7%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	36.0	36.0		36.0	36.0		31.0	31.0		31.0	31.0	
Effective Green, g (s)	36.0	36.0		36.0	36.0		31.0	31.0		31.0	31.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.41	0.41		0.41	0.41	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	296	1508		340	1492		306	1210		369	1207	
v/s Ratio Prot		0.15			c0.16			0.08			0.12	
v/s Ratio Perm	0.12			0.11			0.08			c0.16		
v/c Ratio	0.26	0.32		0.23	0.33		0.19	0.19		0.38	0.30	
Uniform Delay, d1	11.6	12.0		11.4	12.0		14.0	14.0		15.3	14.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.1	0.6		1.5	0.6		1.4	0.4		3.0	0.6	
Delay (s)	13.7	12.5		12.9	12.6		15.4	14.4		18.4	15.3	
Level of Service	B	B		B	B		B	B		B	B	
Approach Delay (s)		12.7			12.7			14.6			16.0	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	14.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	53.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1021: 103rd Street & Martin Luther King Jr Drive

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱		↰	↑↱		↰	↑↱	
Volume (vph)	108	453	62	32	523	48	86	203	60	76	473	111
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	12	8	16	12	9	10	10	9	10	10
Total Lost time (s)	3.0	7.0		3.0	7.0		3.0	7.0		3.0	7.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.98		1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.99		1.00	0.97		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1595	1653		1371	1973		1534	2998		1535	3011	
Flt Permitted	0.24	1.00		0.30	1.00		0.28	1.00		0.58	1.00	
Satd. Flow (perm)	402	1653		427	1973		450	2998		939	3011	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	114	477	65	34	551	51	91	214	63	80	498	117
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	114	542	0	34	602	0	91	277	0	80	615	0
Confl. Peds. (#/hr)	21		95	95		21	36		8	8		36
Confl. Bikes (#/hr)	2		3	3		2	2					2
Heavy Vehicles (%)	0%	2%	0%	7%	2%	0%	0%	3%	0%	0%	2%	1%
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	43.9	39.3		40.7	37.7		26.7	21.8		26.7	21.8	
Effective Green, g (s)	43.9	37.3		40.7	35.7		26.7	19.8		26.7	19.8	
Actuated g/C Ratio	0.52	0.44		0.48	0.42		0.31	0.23		0.31	0.23	
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	5.0		3.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	272	725		238	829		204	698		329	701	
v/s Ratio Prot	c0.02	c0.33		0.01	0.31		c0.03	0.09		0.01	c0.20	
v/s Ratio Perm	0.19			0.06			0.11			0.06		
v/c Ratio	0.42	0.75		0.14	0.73		0.45	0.40		0.24	0.88	
Uniform Delay, d1	24.1	19.9		20.7	20.6		29.2	27.6		21.9	31.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.0	6.9		0.3	5.5		1.6	1.7		0.4	14.5	
Delay (s)	25.2	26.8		21.0	26.1		30.8	29.2		22.2	46.0	
Level of Service	C	C		C	C		C	C		C	D	
Approach Delay (s)		26.6			25.8			29.6			43.2	
Approach LOS		C			C			C			D	

Intersection Summary			
HCM Average Control Delay	31.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	80.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	85	389	65	117	509	118	67	158	58	127	367	83
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	11	11	11	11	12	12	10	10	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		0.99	1.00	
Frt		0.98			0.98		1.00	0.96		1.00	0.97	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3680			3131		1652	3237		1549	3026	
Flt Permitted		0.68			0.72		0.42	1.00		0.60	1.00	
Satd. Flow (perm)		2535			2275		736	3237		983	3026	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	94	432	72	130	566	131	74	176	64	141	408	92
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	598	0	0	827	0	74	240	0	141	500	0
Confl. Peds. (#/hr)	23		30	30		23	1		20	20		1
Confl. Bikes (#/hr)	3					3						
Heavy Vehicles (%)	0%	3%	0%	2%	2%	0%	0%	1%	0%	2%	2%	3%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		33.0			33.0		32.0	32.0		32.0	32.0	
Effective Green, g (s)		34.0			34.0		33.0	33.0		33.0	33.0	
Actuated g/C Ratio		0.45			0.45		0.44	0.44		0.44	0.44	
Clearance Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)		1149			1031		324	1424		433	1331	
v/s Ratio Prot								0.07			c0.17	
v/s Ratio Perm		0.24			c0.36		0.10			0.14		
v/c Ratio		0.52			0.80		0.23	0.17		0.33	0.38	
Uniform Delay, d1		14.7			17.6		13.1	12.7		13.7	14.1	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		1.7			6.6		1.6	0.3		2.0	0.8	
Delay (s)		16.4			24.2		14.7	13.0		15.7	14.9	
Level of Service		B			C		B	B		B	B	
Approach Delay (s)		16.4			24.2			13.4			15.1	
Approach LOS		B			C			B			B	

Intersection Summary			
HCM Average Control Delay	18.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	73.3%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1023: 103rd Street & Woodlawn Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑↱		↰	↑↑	↱		✥			↰↑↱	
Volume (vph)	98	875	6	20	584	249	1	1	9	213	1	80
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	12	12	12	12	12	12	13	13	13
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00			0.95	
Frt	1.00	1.00		1.00	1.00	0.85		0.89			0.96	
Flt Protected	0.95	1.00		0.95	1.00	1.00		1.00			0.97	
Satd. Flow (prot)	1605	3206		1660	3320	1485		1545			3176	
Flt Permitted	0.38	1.00		0.25	1.00	1.00		0.98			0.77	
Satd. Flow (perm)	648	3206		433	3320	1485		1519			2533	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	109	972	7	22	649	277	1	1	10	237	1	89
RTOR Reduction (vph)	0	0	0	0	0	103	0	7	0	0	52	0
Lane Group Flow (vph)	109	979	0	22	649	174	0	5	0	0	275	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	46.1	46.1		46.1	46.1	46.1		19.5			19.5	
Effective Green, g (s)	46.1	46.1		46.1	46.1	46.1		19.5			19.5	
Actuated g/C Ratio	0.63	0.63		0.63	0.63	0.63		0.26			0.26	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		8.0			8.0	
Lane Grp Cap (vph)	406	2008		271	2080	930		402			671	
v/s Ratio Prot		c0.31			0.20							
v/s Ratio Perm	0.17			0.05		0.12		0.00			c0.11	
v/c Ratio	0.27	0.49		0.08	0.31	0.19		0.01			0.41	
Uniform Delay, d1	6.2	7.4		5.4	6.4	5.8		19.9			22.3	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00			1.00	
Incremental Delay, d2	1.6	0.8		0.6	0.4	0.4		0.0			1.7	
Delay (s)	7.8	8.2		6.0	6.8	6.3		20.0			24.0	
Level of Service	A	A		A	A	A		B			C	
Approach Delay (s)		8.2			6.6			20.0			24.0	
Approach LOS		A			A			B			C	

Intersection Summary			
HCM Average Control Delay	9.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	73.6	Sum of lost time (s)	8.0
Intersection Capacity Utilization	58.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1024: 107th Street & Halsted Street

1/14/2013

	⤴	→	⤵	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱		↰	↑↑	↱	↰	↑↑	↱
Volume (vph)	131	228	125	94	163	57	148	907	90	129	825	100
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	9	12	10	10	12	9	10	9	9	10	9
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00	0.97	1.00	1.00	0.96
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.95		1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1560	1504		1563	1584		1493	3069	1337	1523	3099	1318
Flt Permitted	0.45	1.00		0.20	1.00		0.20	1.00	1.00	0.16	1.00	1.00
Satd. Flow (perm)	740	1504		337	1584		317	3069	1337	263	3099	1318
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	138	240	132	99	172	60	156	955	95	136	868	105
RTOR Reduction (vph)	0	23	0	0	15	0	0	0	40	0	0	49
Lane Group Flow (vph)	138	349	0	99	217	0	156	955	55	136	868	56
Confl. Peds. (#/hr)	10		13	13		10	18		7	7		18
Confl. Bikes (#/hr)	2					2	2		1	1		2
Heavy Vehicles (%)	2%	1%	1%	2%	1%	2%	3%	4%	0%	1%	3%	0%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	28.0	21.0		28.0	21.0		42.0	35.0	35.0	42.0	35.0	35.0
Effective Green, g (s)	26.0	22.0		26.0	22.0		40.0	35.0	35.0	40.0	35.0	35.0
Actuated g/C Ratio	0.31	0.26		0.31	0.26		0.47	0.41	0.41	0.47	0.41	0.41
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)	284	389		190	410		232	1264	551	213	1276	543
v/s Ratio Prot	0.03	c0.23		c0.04	0.14		c0.05	c0.31		0.05	0.28	
v/s Ratio Perm	0.11			0.12			0.27		0.04	0.26		0.04
v/c Ratio	0.49	0.90		0.52	0.53		0.67	0.76	0.10	0.64	0.68	0.10
Uniform Delay, d1	22.7	30.4		22.9	27.1		14.7	21.3	15.3	15.0	20.4	15.4
Progression Factor	1.00	1.00		1.00	1.00		0.67	0.82	0.55	1.00	1.00	1.00
Incremental Delay, d2	5.8	25.9		9.9	4.8		13.2	3.8	0.3	13.8	2.9	0.4
Delay (s)	28.5	56.3		32.7	31.9		23.0	21.2	8.7	28.8	23.4	15.7
Level of Service	C	E		C	C		C	C	A	C	C	B
Approach Delay (s)		48.8			32.1			20.5			23.3	
Approach LOS		D			C			C			C	

Intersection Summary			
HCM Average Control Delay	27.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	74.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1025: 107th Street & Wentworth Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			✥			✥	
Volume (vph)	22	181	38	20	173	22	43	149	40	45	255	50
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	14	12	12	14	12	12	16	12	12	16	12
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		0.99			1.00			1.00			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.98			0.99			0.98			0.98	
Flt Protected		1.00			1.00			0.99			0.99	
Satd. Flow (prot)		1835			1848			1937			1975	
Flt Permitted		0.97			0.96			0.90			0.94	
Satd. Flow (perm)		1781			1790			1755			1869	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	23	187	39	21	178	23	44	154	41	46	263	52
RTOR Reduction (vph)	0	11	0	0	6	0	0	11	0	0	9	0
Lane Group Flow (vph)	0	238	0	0	216	0	0	228	0	0	352	0
Confl. Peds. (#/hr)	18		34	34		18	16		19	19		16
Confl. Bikes (#/hr)			6	6			1		4	4		1
Heavy Vehicles (%)	0%	1%	0%	5%	1%	0%	0%	2%	0%	0%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		27.0			27.0			30.0			30.0	
Effective Green, g (s)		27.0			27.0			30.0			30.0	
Actuated g/C Ratio		0.42			0.42			0.46			0.46	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		740			744			810			863	
v/s Ratio Prot												
v/s Ratio Perm		c0.13			0.12			0.13			c0.19	
v/c Ratio		0.32			0.29			0.28			0.41	
Uniform Delay, d1		12.8			12.6			10.8			11.6	
Progression Factor		1.00			0.73			1.27			1.00	
Incremental Delay, d2		1.2			1.0			0.8			1.4	
Delay (s)		14.0			10.2			14.5			13.0	
Level of Service		B			B			B			B	
Approach Delay (s)		14.0			10.2			14.5			13.0	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	13.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	49.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1026: 107th Street & State Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	24	193	39	25	180	20	53	200	31	47	214	39
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	0.97	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	0.99		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1496	3057		1577	3116		1518	3119		1550	3076	
Flt Permitted	0.61	1.00		0.59	1.00		0.58	1.00		0.59	1.00	
Satd. Flow (perm)	965	3057		984	3116		926	3119		968	3076	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	27	214	43	28	200	22	59	222	34	52	238	43
RTOR Reduction (vph)	0	26	0	0	13	0	0	14	0	0	18	0
Lane Group Flow (vph)	27	231	0	28	209	0	59	242	0	52	263	0
Confl. Peds. (#/hr)	20		17	17		20	2					2
Confl. Bikes (#/hr)	32		36	36		32	22		25	25		22
Heavy Vehicles (%)	4%	1%	0%	0%	0%	0%	5%	0%	0%	3%	1%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.0	20.0		20.0	20.0		39.0	39.0		39.0	39.0	
Effective Green, g (s)	19.0	19.0		19.0	19.0		38.0	38.0		38.0	38.0	
Actuated g/C Ratio	0.29	0.29		0.29	0.29		0.58	0.58		0.58	0.58	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	282	894		288	911		541	1823		566	1798	
v/s Ratio Prot		c0.08			0.07			0.08			c0.09	
v/s Ratio Perm	0.03			0.03			0.06			0.05		
v/c Ratio	0.10	0.26		0.10	0.23		0.11	0.13		0.09	0.15	
Uniform Delay, d1	16.7	17.6		16.8	17.4		6.0	6.1		5.9	6.1	
Progression Factor	0.93	0.96		0.74	0.73		1.40	1.44		0.39	0.34	
Incremental Delay, d2	0.6	0.7		0.7	0.6		0.4	0.1		0.3	0.2	
Delay (s)	16.3	17.6		13.0	13.3		8.8	8.9		2.7	2.3	
Level of Service	B	B		B	B		A	A		A	A	
Approach Delay (s)		17.5			13.3			8.9			2.3	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	10.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.18		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	46.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1027: 107th Street & Michigan Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			✣			✣	
Volume (vph)	67	168	42	25	159	38	27	262	16	42	337	33
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	9	9	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	
Flpb, ped/bikes	0.99	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.97		1.00	0.97			0.99			0.99	
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.99	
Satd. Flow (prot)	1555	3056		1525	2937			1923			1939	
Flt Permitted	0.61	1.00		0.61	1.00			0.94			0.94	
Satd. Flow (perm)	1007	3056		973	2937			1825			1832	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	74	187	47	28	177	42	30	291	18	47	374	37
RTOR Reduction (vph)	0	28	0	0	25	0	0	3	0	0	5	0
Lane Group Flow (vph)	74	206	0	28	194	0	0	336	0	0	453	0
Confl. Peds. (#/hr)	11		17	17		11	26		7	7		26
Heavy Vehicles (%)	2%	1%	0%	0%	1%	3%	4%	5%	0%	0%	4%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	26.0	26.0		26.0	26.0			31.0			31.0	
Effective Green, g (s)	26.0	26.0		26.0	26.0			31.0			31.0	
Actuated g/C Ratio	0.40	0.40		0.40	0.40			0.48			0.48	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	403	1222		389	1175			870			874	
v/s Ratio Prot		0.07			0.07							
v/s Ratio Perm	c0.07			0.03				0.18			c0.25	
v/c Ratio	0.18	0.17		0.07	0.16			0.39			0.52	
Uniform Delay, d1	12.6	12.5		12.0	12.5			10.9			11.8	
Progression Factor	1.03	0.98		0.80	0.80			1.12			1.00	
Incremental Delay, d2	1.0	0.3		0.3	0.3			1.2			2.2	
Delay (s)	14.1	12.6		10.0	10.3			13.3			14.0	
Level of Service	B	B		B	B			B			B	
Approach Delay (s)		13.0			10.3			13.3			14.0	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	12.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	59.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1028: 107th Street & Martin Luther King Jr Drive

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱			✥			✥	
Volume (vph)	47	111	30	20	161	27	45	235	11	33	364	57
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	16	12	10	16	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	
Flpb, ped/bikes	1.00	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.97		1.00	0.98			0.99			0.98	
Flt Protected	0.95	1.00		0.95	1.00			0.99			1.00	
Satd. Flow (prot)	1652	1966		1584	1975			1981			1979	
Flt Permitted	0.57	1.00		0.65	1.00			0.89			0.96	
Satd. Flow (perm)	986	1966		1082	1975			1774			1911	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	52	123	33	22	179	30	50	261	12	37	404	63
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	52	156	0	22	209	0	0	323	0	0	504	0
Confl. Peds. (#/hr)	1		10	10		1	2		5	5		2
Heavy Vehicles (%)	0%	0%	0%	0%	1%	0%	0%	2%	0%	0%	1%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.0	20.0		20.0	20.0			37.0			37.0	
Effective Green, g (s)	20.0	20.0		20.0	20.0			37.0			37.0	
Actuated g/C Ratio	0.31	0.31		0.31	0.31			0.57			0.57	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	303	605		333	608			1010			1088	
v/s Ratio Prot		0.08			c0.11							
v/s Ratio Perm	0.05			0.02				0.18			c0.26	
v/c Ratio	0.17	0.26		0.07	0.34			0.32			0.46	
Uniform Delay, d1	16.4	16.9		15.9	17.4			7.4			8.2	
Progression Factor	0.84	0.81		0.84	0.88			0.80			1.00	
Incremental Delay, d2	1.2	1.0		0.4	1.5			0.8			1.4	
Delay (s)	15.0	14.8		13.8	16.8			6.7			9.6	
Level of Service	B	B		B	B			A			A	
Approach Delay (s)		14.8			16.5			6.7			9.6	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	11.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1029: 107th Street & Cottage Grove Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑	↱	↰	↑	↱
Volume (vph)	54	13	97	2	5	10	62	235	5	5	466	76
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	10	10	10	11	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.98		1.00	0.98		1.00	1.00	1.00	1.00	1.00	0.98
Flpb, ped/bikes	0.99	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.87		1.00	0.90		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1695	1727		1702	1808		1594	1647	1428	1653	2000	1496
Flt Permitted	0.75	1.00		0.68	1.00		0.39	1.00	1.00	0.59	1.00	1.00
Satd. Flow (perm)	1332	1727		1216	1808		660	1647	1428	1030	2000	1496
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	60	14	108	2	6	11	69	261	6	6	518	84
RTOR Reduction (vph)	0	78	0	0	8	0	0	0	2	0	0	28
Lane Group Flow (vph)	60	44	0	2	9	0	69	261	4	6	518	56
Confl. Peds. (#/hr)	5		5	5		5	3					3
Heavy Vehicles (%)	0%	0%	1%	0%	0%	0%	0%	2%	0%	0%	2%	0%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	17.0	17.0		17.0	17.0		39.0	39.0	39.0	39.0	39.0	39.0
Effective Green, g (s)	18.0	18.0		18.0	18.0		39.0	39.0	39.0	39.0	39.0	39.0
Actuated g/C Ratio	0.28	0.28		0.28	0.28		0.60	0.60	0.60	0.60	0.60	0.60
Clearance Time (s)	5.0	5.0		5.0	5.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	369	478		337	501		396	988	857	618	1200	898
v/s Ratio Prot		0.03			0.01			0.16			c0.26	
v/s Ratio Perm	c0.05			0.00			0.10		0.00	0.01		0.04
v/c Ratio	0.16	0.09		0.01	0.02		0.17	0.26	0.00	0.01	0.43	0.06
Uniform Delay, d1	17.8	17.4		17.0	17.1		5.8	6.2	5.2	5.2	7.0	5.4
Progression Factor	1.39	2.72		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.9	0.4		0.0	0.1		1.0	0.7	0.0	0.0	1.1	0.1
Delay (s)	25.7	47.8		17.1	17.1		6.8	6.8	5.2	5.3	8.2	5.5
Level of Service	C	D		B	B		A	A	A	A	A	A
Approach Delay (s)		40.5			17.1			6.8			7.8	
Approach LOS		D			B			A			A	

Intersection Summary			
HCM Average Control Delay	12.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	52.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1030: 111th Street & Marshield Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱		↰	↑↑					↰	↑↱	
Volume (vph)	0	253	163	170	204	0	0	0	0	110	470	377
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	12	12	12	12	12	11	11	12
Total Lost time (s)		4.0		3.0	3.0					5.0	5.0	
Lane Util. Factor		0.95		1.00	0.95					1.00	0.95	
Frpb, ped/bikes		0.99		1.00	1.00					1.00	0.99	
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	
Frt		0.94		1.00	1.00					1.00	0.93	
Flt Protected		1.00		0.95	1.00					0.95	1.00	
Satd. Flow (prot)		2905		1693	3288					1503	3021	
Flt Permitted		1.00		0.41	1.00					0.95	1.00	
Satd. Flow (perm)		2905		722	3288					1503	3021	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	266	172	179	215	0	0	0	0	116	495	397
RTOR Reduction (vph)	0	103	0	0	0	0	0	0	0	0	141	0
Lane Group Flow (vph)	0	335	0	179	215	0	0	0	0	116	751	0
Confl. Peds. (#/hr)	18		3	3		18	1					1
Heavy Vehicles (%)	0%	4%	1%	1%	4%	0%	0%	0%	0%	10%	2%	1%
Turn Type				D.P+P						Split		
Protected Phases		8		7	7 8					6	6	
Permitted Phases				8								
Actuated Green, G (s)		33.0		53.0	56.0					37.0	37.0	
Effective Green, g (s)		33.0		53.0	56.0					37.0	37.0	
Actuated g/C Ratio		0.32		0.52	0.55					0.36	0.36	
Clearance Time (s)		4.0		3.0						5.0	5.0	
Lane Grp Cap (vph)		940		566	1805					545	1096	
v/s Ratio Prot		c0.12		c0.06	0.07					0.08	c0.25	
v/s Ratio Perm				0.10								
v/c Ratio		0.36		0.32	0.12					0.21	0.68	
Uniform Delay, d1		26.4		13.4	11.1					22.4	27.6	
Progression Factor		1.00		2.18	2.12					1.00	1.00	
Incremental Delay, d2		1.1		1.3	0.1					0.9	3.5	
Delay (s)		27.4		30.5	23.6					23.3	31.0	
Level of Service		C		C	C					C	C	
Approach Delay (s)		27.4			26.7			0.0			30.2	
Approach LOS		C			C			A			C	

Intersection Summary			
HCM Average Control Delay	28.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	102.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	62.4%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1031: 111th Street & Hamlet Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑			↑↱		↰	↑	↱			
Volume (vph)	141	222	0	0	297	113	77	539	231	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	9	12	13	12	13	12	12	12
Total Lost time (s)	4.0	4.0			4.0		5.0	5.0	5.0			
Lane Util. Factor	1.00	0.95			0.95		1.00	1.00	1.00			
Frpb, ped/bikes	1.00	1.00			0.99		1.00	1.00	0.99			
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.96		1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1674	3196			2847		1767	1782	1560			
Flt Permitted	0.37	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	645	3196			2847		1767	1782	1560			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	148	234	0	0	313	119	81	567	243	0	0	0
RTOR Reduction (vph)	0	0	0	0	39	0	0	0	167	0	0	0
Lane Group Flow (vph)	148	234	0	0	393	0	81	567	76	0	0	0
Confl. Peds. (#/hr)	9		13	13		9			1	1		
Confl. Bikes (#/hr)	3					3						
Heavy Vehicles (%)	2%	7%	0%	0%	3%	1%	0%	1%	0%	0%	0%	0%
Turn Type	pm+pt						custom		Perm			
Protected Phases	4	1 4			1		2	2				
Permitted Phases	1 4						2		2			
Actuated Green, G (s)	59.0	63.0			26.0		30.0	30.0	30.0			
Effective Green, g (s)	59.0	63.0			26.0		30.0	30.0	30.0			
Actuated g/C Ratio	0.58	0.62			0.25		0.29	0.29	0.29			
Clearance Time (s)	4.0				4.0		5.0	5.0	5.0			
Lane Grp Cap (vph)	706	1974			726		520	524	459			
v/s Ratio Prot	c0.07	0.07			c0.14		0.05	c0.32				
v/s Ratio Perm	0.05								0.05			
v/c Ratio	0.21	0.12			0.54		0.16	1.08	0.17			
Uniform Delay, d1	10.2	8.0			32.8		26.6	36.0	26.7			
Progression Factor	0.42	0.43			1.00		1.00	1.00	1.00			
Incremental Delay, d2	0.6	0.1			2.9		0.6	63.3	0.8			
Delay (s)	4.9	3.6			35.7		27.3	99.3	27.5			
Level of Service	A	A			D		C	F	C			
Approach Delay (s)		4.1			35.7			73.2			0.0	
Approach LOS		A			D			E			A	

Intersection Summary			
HCM Average Control Delay	48.2	HCM Level of Service	D
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	102.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	62.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1032: 112th Place & Marshield Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱		↰	↑↑					↰	↑↑	↱
Volume (vph)	0	512	479	81	534	0	0	0	0	11	434	277
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	11	12	12	12	12	10	10	12
Total Lost time (s)		4.0		4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.95		1.00	0.95					1.00	0.95	1.00
Frpb, ped/bikes		0.99		1.00	1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Frt		0.93		1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00					0.95	1.00	1.00
Satd. Flow (prot)		3098		1710	3306					1596	3192	1530
Flt Permitted		1.00		0.11	1.00					0.95	1.00	1.00
Satd. Flow (perm)		3098		200	3306					1596	3192	1530
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	0	533	499	84	556	0	0	0	0	11	452	289
RTOR Reduction (vph)	0	170	0	0	0	0	0	0	0	0	0	191
Lane Group Flow (vph)	0	862	0	84	556	0	0	0	0	11	452	98
Confl. Peds. (#/hr)	8		8	8		8	3					3
Confl. Bikes (#/hr)	9					9			61	61		
Heavy Vehicles (%)	0%	1%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type				pm+pt						Split		Prot
Protected Phases		8		7	7 8					6	6	6
Permitted Phases				7 8								
Actuated Green, G (s)		36.0		54.0	58.0					34.0	34.0	34.0
Effective Green, g (s)		36.0		54.0	58.0					34.0	34.0	34.0
Actuated g/C Ratio		0.36		0.54	0.58					0.34	0.34	0.34
Clearance Time (s)		4.0		4.0						4.0	4.0	4.0
Lane Grp Cap (vph)		1115		380	1917					543	1085	520
v/s Ratio Prot		c0.28		0.04	c0.17					0.01	c0.14	0.06
v/s Ratio Perm				0.08								
v/c Ratio		0.77		0.22	0.29					0.02	0.42	0.19
Uniform Delay, d1		28.4		14.4	10.6					21.9	25.4	23.3
Progression Factor		1.00		1.01	1.19					1.00	1.00	1.00
Incremental Delay, d2		5.2		0.9	0.3					0.1	1.2	0.8
Delay (s)		33.6		15.5	12.9					22.0	26.6	24.1
Level of Service		C		B	B					C	C	C
Approach Delay (s)		33.6			13.2			0.0			25.5	
Approach LOS		C			B			A			C	

Intersection Summary			
HCM Average Control Delay	25.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	91.9%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↰↑			↑↱		↰	↰	↱			
Volume (vph)	417	106	0	0	150	6	465	480	58	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	12	12	12	10	12	11	11	12	12	12	12
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0	4.0			
Lane Util. Factor	0.91	0.91			0.95		0.95	0.95	1.00			
Frpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.99		1.00	1.00	0.85			
Flt Protected	0.95	0.97			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1469	3110			3170		1555	1653	1530			
Flt Permitted	0.64	0.71			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	992	2291			3170		1555	1653	1530			
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	430	109	0	0	155	6	479	495	60	0	0	0
RTOR Reduction (vph)	0	0	0	0	3	0	0	0	38	0	0	0
Lane Group Flow (vph)	215	324	0	0	158	0	479	495	22	0	0	0
Confl. Peds. (#/hr)	13		6	6		13			8	8		
Confl. Bikes (#/hr)	1					1			2	2		
Heavy Vehicles (%)	2%	1%	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%
Turn Type	pm+pt						custom		custom			
Protected Phases	4	1 4			1		2	2	2			
Permitted Phases	1 4						2		2			
Actuated Green, G (s)	51.0	51.0			15.0		37.0	37.0	37.0			
Effective Green, g (s)	51.0	51.0			15.0		37.0	37.0	37.0			
Actuated g/C Ratio	0.51	0.51			0.15		0.37	0.37	0.37			
Clearance Time (s)	4.0				4.0		4.0	4.0	4.0			
Lane Grp Cap (vph)	678	1463			476		575	612	566			
v/s Ratio Prot	c0.11	0.08			c0.05		c0.31	0.30	0.01			
v/s Ratio Perm	0.05	0.03										
v/c Ratio	0.32	0.22			0.33		0.83	0.81	0.04			
Uniform Delay, d1	14.1	13.5			38.0		28.7	28.3	20.1			
Progression Factor	0.24	0.25			1.00		1.00	1.00	1.00			
Incremental Delay, d2	0.7	0.2			1.9		13.3	11.0	0.1			
Delay (s)	4.2	3.6			39.9		42.0	39.3	20.3			
Level of Service	A	A			D		D	D	C			
Approach Delay (s)		3.8			39.9			39.5			0.0	
Approach LOS		A			D			D			A	

Intersection Summary			
HCM Average Control Delay	28.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	91.9%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱		↰	↑↑	↱	↰	↑↑	↱
Volume (vph)	78	218	103	121	265	125	84	699	79	103	884	65
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	9	10	9	9	10	9
Total Lost time (s)		4.0			4.0		4.0	3.5	4.0	4.0	3.5	4.0
Lane Util. Factor		0.95			0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		0.99			0.99		1.00	1.00	0.97	1.00	1.00	0.96
Flpb, ped/bikes		1.00			1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.96			0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.99			0.99		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		2939			2922		1508	3069	1309	1508	3099	1298
Flt Permitted		0.74			0.75		0.16	1.00	1.00	0.25	1.00	1.00
Satd. Flow (perm)		2182			2204		254	3069	1309	401	3099	1298
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	81	227	107	126	276	130	88	728	82	107	921	68
RTOR Reduction (vph)	0	41	0	0	37	0	0	0	50	0	0	33
Lane Group Flow (vph)	0	374	0	0	495	0	88	728	32	107	921	35
Confl. Peds. (#/hr)	35		30	30		35	34		8	8		34
Confl. Bikes (#/hr)	1					1	1					1
Heavy Vehicles (%)	1%	4%	0%	1%	3%	3%	2%	4%	2%	2%	3%	2%
Turn Type	pm+pt			Perm			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)		35.0			27.0		38.0	33.0	33.0	38.0	33.0	33.0
Effective Green, g (s)		36.0			28.0		36.0	33.5	33.0	36.0	33.5	33.0
Actuated g/C Ratio		0.42			0.33		0.42	0.39	0.39	0.42	0.39	0.39
Clearance Time (s)		5.0			5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)		978			726		167	1210	508	222	1221	504
v/s Ratio Prot		c0.03					c0.02	0.24		0.02	c0.30	
v/s Ratio Perm		0.14			c0.22		0.20		0.02	0.18		0.03
v/c Ratio		0.38			0.68		0.53	0.60	0.06	0.48	0.75	0.07
Uniform Delay, d1		16.9			24.6		16.7	20.5	16.3	16.0	22.2	16.3
Progression Factor		1.00			1.00		1.32	0.69	0.61	1.11	1.16	1.74
Incremental Delay, d2		1.1			5.1		10.4	2.0	0.2	5.3	3.1	0.2
Delay (s)		18.0			29.8		32.4	16.2	10.1	23.0	29.0	28.6
Level of Service		B			C		C	B	B	C	C	C
Approach Delay (s)		18.0			29.8			17.2			28.4	
Approach LOS		B			C			B			C	

Intersection Summary			
HCM Average Control Delay	23.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	73.8%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1035: 111th Street & Normal Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰			↱			✥				
Volume (vph)	76	318	0	0	389	103	53	44	37	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		1.00			0.97			0.96				
Flt Protected		0.99			1.00			0.98				
Satd. Flow (prot)		1731			1698			1650				
Flt Permitted		0.83			1.00			0.98				
Satd. Flow (perm)		1458			1698			1650				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	84	353	0	0	432	114	59	49	41	0	0	0
RTOR Reduction (vph)	0	0	0	0	15	0	0	21	0	0	0	0
Lane Group Flow (vph)	0	437	0	0	531	0	0	128	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)		38.0			38.0			19.0				
Effective Green, g (s)		38.0			38.0			19.0				
Actuated g/C Ratio		0.58			0.58			0.29				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		852			993			482				
v/s Ratio Prot					c0.31							
v/s Ratio Perm		0.30						0.08				
v/c Ratio		0.51			0.54			0.27				
Uniform Delay, d1		8.0			8.2			17.6				
Progression Factor		1.00			0.99			1.00				
Incremental Delay, d2		2.2			1.6			1.3				
Delay (s)		10.2			9.7			19.0				
Level of Service		B			A			B				
Approach Delay (s)		10.2			9.7			19.0			0.0	
Approach LOS		B			A			B			A	

Intersection Summary			
HCM Average Control Delay	11.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	68.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			↰↑↱			↰↑↱	
Volume (vph)	19	306	27	53	416	70	28	118	42	57	150	42
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	10	12	12	10	12
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		1.00			1.00			0.99			0.98	
Flpb, ped/bikes		1.00			1.00			0.99			1.00	
Frt		0.99			0.98			0.97			0.97	
Flt Protected		1.00			1.00			0.99			0.99	
Satd. Flow (prot)		1957			1933			2959			2985	
Flt Permitted		0.96			0.93			0.89			0.85	
Satd. Flow (perm)		1887			1810			2658			2572	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	21	340	30	59	462	78	31	131	47	63	167	47
RTOR Reduction (vph)	0	5	0	0	8	0	0	27	0	0	26	0
Lane Group Flow (vph)	0	386	0	0	591	0	0	182	0	0	251	0
Confl. Peds. (#/hr)	32		25	25		32	59		24	24		59
Confl. Bikes (#/hr)	3		2	2		3	4		2	2		4
Heavy Vehicles (%)	0%	3%	0%	3%	3%	0%	0%	0%	7%	4%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		30.0			30.0			27.0			27.0	
Effective Green, g (s)		30.0			30.0			27.0			27.0	
Actuated g/C Ratio		0.46			0.46			0.42			0.42	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		871			835			1104			1068	
v/s Ratio Prot												
v/s Ratio Perm		0.20			c0.33			0.07			c0.10	
v/c Ratio		0.44			0.71			0.16			0.23	
Uniform Delay, d1		11.8			14.0			11.9			12.3	
Progression Factor		0.57			0.37			1.24			0.46	
Incremental Delay, d2		1.4			4.1			0.3			0.5	
Delay (s)		8.2			9.3			15.1			6.1	
Level of Service		A			A			B			A	
Approach Delay (s)		8.2			9.3			15.1			6.1	
Approach LOS		A			A			B			A	

Intersection Summary			
HCM Average Control Delay	9.2	HCM Level of Service	A
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	83.9%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1037: 111th Street & State Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	41	279	39	85	551	100	43	219	99	86	227	62
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	9	10	10	9	10	10	12	10	10	12
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		0.98	1.00		0.99	1.00		0.99	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.95		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1512	3039		1570	3078		1587	2961		1585	3075	
Flt Permitted	0.25	1.00		0.52	1.00		0.56	1.00		0.54	1.00	
Satd. Flow (perm)	395	3039		854	3078		931	2961		902	3075	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	46	310	43	94	612	111	48	243	110	96	252	69
RTOR Reduction (vph)	0	17	0	0	22	0	0	51	0	0	32	0
Lane Group Flow (vph)	46	336	0	94	701	0	48	302	0	96	289	0
Confl. Peds. (#/hr)	20		31	31		20	16		20	20		16
Confl. Bikes (#/hr)							1		3	3		1
Heavy Vehicles (%)	5%	3%	0%	0%	1%	0%	0%	2%	2%	0%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	22.0	22.0		22.0	22.0		35.0	35.0		35.0	35.0	
Effective Green, g (s)	22.0	22.0		22.0	22.0		35.0	35.0		35.0	35.0	
Actuated g/C Ratio	0.34	0.34		0.34	0.34		0.54	0.54		0.54	0.54	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	134	1029		289	1042		501	1594		486	1656	
v/s Ratio Prot		0.11			c0.23			0.10			0.09	
v/s Ratio Perm	0.12			0.11			0.05			c0.11		
v/c Ratio	0.34	0.33		0.33	0.67		0.10	0.19		0.20	0.17	
Uniform Delay, d1	16.1	16.0		16.0	18.4		7.3	7.7		7.7	7.6	
Progression Factor	0.81	0.76		1.16	1.18		1.11	1.24		1.08	1.08	
Incremental Delay, d2	6.4	0.8		2.9	3.4		0.4	0.3		0.9	0.2	
Delay (s)	19.5	13.0		21.4	25.1		8.5	9.8		9.3	8.5	
Level of Service	B	B		C	C		A	A		A	A	
Approach Delay (s)		13.7			24.6			9.7			8.6	
Approach LOS		B			C			A			A	

Intersection Summary			
HCM Average Control Delay	16.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1038: 111th Street & Michigan Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			↰↑↱			↰↑↱	
Volume (vph)	55	287	96	107	401	50	165	250	131	46	295	64
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	9	10	9	9	16	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99			0.99			0.98	
Flpb, ped/bikes	0.98	1.00		0.99	1.00			0.98			1.00	
Frt	1.00	0.96		1.00	0.98			0.96			0.98	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1508	2988		1430	3720			3405			3530	
Flt Permitted	0.46	1.00		0.51	1.00			0.69			0.85	
Satd. Flow (perm)	726	2988		761	3720			2401			3027	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	58	302	101	113	422	53	174	263	138	48	311	67
RTOR Reduction (vph)	0	50	0	0	15	0	0	46	0	0	23	0
Lane Group Flow (vph)	58	353	0	113	460	0	0	529	0	0	403	0
Confl. Peds. (#/hr)	38		17	17		38	125		53	53		125
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	0%	3%	0%	7%	2%	0%	0%	6%	10%	2%	5%	5%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	31.0	31.0		31.0	31.0			26.0			26.0	
Effective Green, g (s)	31.0	31.0		31.0	31.0			26.0			26.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48			0.40			0.40	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	346	1425		363	1774			960			1211	
v/s Ratio Prot		0.12			0.12							
v/s Ratio Perm	0.08			c0.15				c0.22			0.13	
v/c Ratio	0.17	0.25		0.31	0.26			0.55			0.33	
Uniform Delay, d1	9.7	10.1		10.4	10.1			15.0			13.5	
Progression Factor	1.54	1.77		1.09	1.06			1.00			0.76	
Incremental Delay, d2	1.0	0.4		2.0	0.3			2.3			0.7	
Delay (s)	15.9	18.3		13.4	11.1			17.3			10.9	
Level of Service	B	B		B	B			B			B	
Approach Delay (s)		18.0			11.5			17.3			10.9	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	14.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	64.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1039: 111th Street & Indiana Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰↑↑↱			✥			✥	
Volume (vph)	86	311	86	92	297	92	119	82	47	47	82	119
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	16	12	12	16	12
Total Lost time (s)		5.0	5.0		5.0			5.0			5.0	
Lane Util. Factor		1.00	1.00		0.95			1.00			1.00	
Frt		1.00	0.85		0.97			0.97			0.94	
Flt Protected		0.99	1.00		0.99			0.98			0.99	
Satd. Flow (prot)		1671	1436		3088			1885			1835	
Flt Permitted		0.80	1.00		0.78			0.68			0.90	
Satd. Flow (perm)		1346	1436		2425			1305			1674	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	96	346	96	102	330	102	132	91	52	52	91	132
RTOR Reduction (vph)	0	0	46	0	31	0	0	13	0	0	51	0
Lane Group Flow (vph)	0	442	50	0	503	0	0	262	0	0	224	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm		Perm	Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)		34.0	34.0		34.0			21.0			21.0	
Effective Green, g (s)		34.0	34.0		34.0			21.0			21.0	
Actuated g/C Ratio		0.52	0.52		0.52			0.32			0.32	
Clearance Time (s)		5.0	5.0		5.0			5.0			5.0	
Lane Grp Cap (vph)		704	751		1268			422			541	
v/s Ratio Prot												
v/s Ratio Perm		c0.33	0.03		0.21			c0.20			0.13	
v/c Ratio		0.63	0.07		0.40			0.62			0.41	
Uniform Delay, d1		11.0	7.7		9.3			18.6			17.2	
Progression Factor		1.41	3.19		0.53			1.00			1.00	
Incremental Delay, d2		4.0	0.2		0.9			6.7			2.3	
Delay (s)		19.6	24.6		5.9			25.4			19.5	
Level of Service		B	C		A			C			B	
Approach Delay (s)		20.5			5.9			25.4			19.5	
Approach LOS		C			A			C			B	

Intersection Summary			
HCM Average Control Delay	16.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	80.7%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1040: 111th Street & Martin Luther King Jr Drive

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			↰↑↱			↰↑↱	
Volume (vph)	59	291	32	26	328	60	27	133	47	62	146	65
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	15	8	16	8	8	16	8
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			0.99			1.00	
Flpb, ped/bikes	0.99	1.00		0.98	1.00			1.00			1.00	
Frt	1.00	0.98		1.00	0.98			0.97			0.96	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1444	3021		1566	3019			3583			3595	
Flt Permitted	0.48	1.00		0.54	1.00			0.90			0.84	
Satd. Flow (perm)	735	3021		883	3019			3230			3066	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	66	323	36	29	364	67	30	148	52	69	162	72
RTOR Reduction (vph)	0	13	0	0	23	0	0	30	0	0	42	0
Lane Group Flow (vph)	66	346	0	29	408	0	0	200	0	0	261	0
Confl. Peds. (#/hr)	24		47	47		24	9		36	36		9
Confl. Bikes (#/hr)			4	4			1					1
Heavy Vehicles (%)	9%	4%	0%	0%	3%	0%	0%	1%	10%	0%	0%	8%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	30.0	30.0		30.0	30.0			27.0			27.0	
Effective Green, g (s)	30.0	30.0		30.0	30.0			27.0			27.0	
Actuated g/C Ratio	0.46	0.46		0.46	0.46			0.42			0.42	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	339	1394		408	1393			1342			1274	
v/s Ratio Prot		0.11			c0.14							
v/s Ratio Perm	0.09			0.03				0.06			c0.09	
v/c Ratio	0.19	0.25		0.07	0.29			0.15			0.20	
Uniform Delay, d1	10.4	10.6		9.7	10.9			11.8			12.1	
Progression Factor	0.65	0.64		1.00	1.00			0.93			0.41	
Incremental Delay, d2	1.0	0.3		0.3	0.5			0.2			0.3	
Delay (s)	7.7	7.2		10.1	11.4			11.3			5.3	
Level of Service	A	A		B	B			B			A	
Approach Delay (s)		7.3			11.3			11.3			5.3	
Approach LOS		A			B			B			A	

Intersection Summary			
HCM Average Control Delay	8.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.25		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1041: 111th Street & Cottage Grove Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱			↰↑↱			↰↑↱	
Volume (vph)	47	456	30	86	507	222	25	124	115	340	261	82
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			0.95			0.95	
Frt		0.99			0.96			0.93			0.98	
Flt Protected		1.00			0.99			1.00			0.98	
Satd. Flow (prot)		3278			3168			3089			3181	
Flt Permitted		0.75			0.77			0.87			0.69	
Satd. Flow (perm)		2472			2447			2703			2253	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	52	507	33	96	563	247	28	138	128	378	290	91
RTOR Reduction (vph)	0	5	0	0	49	0	0	67	0	0	13	0
Lane Group Flow (vph)	0	587	0	0	857	0	0	227	0	0	746	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm			pm+pt			Perm		
Protected Phases		4			8		5	2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		32.0			32.0			38.0			30.0	
Effective Green, g (s)		32.0			32.0			38.0			30.0	
Actuated g/C Ratio		0.40			0.40			0.48			0.38	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		989			979			1308			845	
v/s Ratio Prot								c0.01				
v/s Ratio Perm		0.24			c0.35			0.07			c0.33	
v/c Ratio		0.59			0.88			0.17			0.97dl	
Uniform Delay, d1		18.9			22.2			12.0			23.4	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		2.6			10.9			0.3			12.9	
Delay (s)		21.5			33.0			12.3			36.2	
Level of Service		C			C			B			D	
Approach Delay (s)		21.5			33.0			12.3			36.2	
Approach LOS		C			C			B			D	

Intersection Summary			
HCM Average Control Delay	28.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	86.4%	ICU Level of Service	E
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1042: 111th Street & Ellis Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↑↱			↰↑↑↱			↰↑↱			↰↑↱	
Volume (vph)	0	899	138	48	794	0	82	0	36	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	10	10	12	12	12	12	12	12	12
Total Lost time (s)		5.0			5.0			5.0				
Lane Util. Factor		0.95			0.95			1.00				
Frt		0.98			1.00			0.96				
Flt Protected		1.00			1.00			0.97				
Satd. Flow (prot)		3037			3090			1619				
Flt Permitted		1.00			0.80			0.79				
Satd. Flow (perm)		3037			2483			1328				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	999	153	53	882	0	91	0	40	0	0	0
RTOR Reduction (vph)	0	17	0	0	0	0	0	18	0	0	0	0
Lane Group Flow (vph)	0	1135	0	0	935	0	0	113	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	custom			Perm			Perm			Perm		
Protected Phases		4 5 6 11			8			2			2	
Permitted Phases	4 6 11			8			2			2		
Actuated Green, G (s)		67.0			33.0			14.0				
Effective Green, g (s)		60.0			33.0			14.0				
Actuated g/C Ratio		0.67			0.37			0.16				
Clearance Time (s)					5.0			5.0				
Lane Grp Cap (vph)		2025			910			207				
v/s Ratio Prot		c0.37										
v/s Ratio Perm					c0.38			c0.09				
v/c Ratio		0.56			1.03			0.55				
Uniform Delay, d1		8.0			28.5			35.1				
Progression Factor		0.20			1.35			1.00				
Incremental Delay, d2		0.1			35.8			10.0				
Delay (s)		1.7			74.3			45.1				
Level of Service		A			E			D				
Approach Delay (s)		1.7			74.3			45.1			0.0	
Approach LOS		A			E			D			A	

Intersection Summary			
HCM Average Control Delay	34.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	75.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↑	↱		✥		↰	↑	↱
Volume (vph)	224	642	24	112	614	185	61	4	107	212	10	213
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	10	12	12	12	12	16	12	12	12	12
Total Lost time (s)	3.0	5.0		3.0	5.0	3.0		5.0		3.0	5.0	3.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	1.00	0.85		0.92		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.98		0.95	1.00	1.00
Satd. Flow (prot)	1550	3192		1660	3320	1485		1782		1660	1748	1485
Flt Permitted	0.29	1.00		0.33	1.00	1.00		0.88		0.44	1.00	1.00
Satd. Flow (perm)	471	3192		583	3320	1485		1592		763	1748	1485
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	249	713	27	124	682	206	68	4	119	236	11	237
RTOR Reduction (vph)	0	2	0	0	0	96	0	90	0	0	0	135
Lane Group Flow (vph)	249	738	0	124	682	110	0	101	0	236	11	102
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	pm+pt			pm+pt		pm+ov	pm+pt			pm+pt		pm+ov
Protected Phases	7	4		3	8	1	5	2		1	6	7
Permitted Phases	4			8		8	2			6		6
Actuated Green, G (s)	54.9	42.5		47.6	38.2	48.2		12.1		25.1	25.1	38.8
Effective Green, g (s)	54.9	42.5		47.6	38.2	48.2		12.1		25.1	25.1	38.8
Actuated g/C Ratio	0.61	0.47		0.53	0.42	0.54		0.13		0.28	0.28	0.43
Clearance Time (s)	3.0	5.0		3.0	5.0	3.0		5.0		3.0	5.0	3.0
Vehicle Extension (s)	4.0	3.0		4.0	3.0	3.0		4.0		3.0	4.0	4.0
Lane Grp Cap (vph)	452	1507		421	1409	795		214		312	487	640
v/s Ratio Prot	c0.08	0.23		0.03	0.21	0.02				c0.08	0.01	0.02
v/s Ratio Perm	c0.25			0.13		0.06		0.06		c0.13		0.04
v/c Ratio	0.55	0.49		0.29	0.48	0.14		0.47		0.76	0.02	0.16
Uniform Delay, d1	9.2	16.3		10.9	18.8	10.5		36.0		28.6	23.5	15.6
Progression Factor	2.70	2.08		1.00	1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2	1.6	1.0		0.5	1.2	0.1		2.2		10.0	0.0	0.2
Delay (s)	26.5	34.8		11.4	20.0	10.6		38.2		38.6	23.6	15.8
Level of Service	C	C		B	B	B		D		D	C	B
Approach Delay (s)		32.7			17.0			38.2			27.1	
Approach LOS		C			B			D			C	

Intersection Summary			
HCM Average Control Delay	26.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	61.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
1044: 111th Street & Bishop Ford Freeway EB Ramps

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↑↑					↰		↱
Volume (veh/h)	0	518	443	2	333	0	0	0	0	19	0	578
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	576	492	2	370	0	0	0	0	21	0	642
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		498										
pX, platoon unblocked												
vC, conflicting volume	370			576			765	950	288	662	950	185
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	370			576			765	950	288	662	950	185
tC, single (s)	4.2			4.2			7.6	6.6	7.0	7.6	6.6	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	100	94	100	22
cM capacity (veh/h)	1178			987			64	256	706	345	256	823

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1	SB 2
Volume Total	288	288	492	126	247	21	642
Volume Left	0	0	0	2	0	21	0
Volume Right	0	0	492	0	0	0	642
cSH	1700	1700	1700	987	1700	345	823
Volume to Capacity	0.17	0.17	0.29	0.00	0.15	0.06	0.78
Queue Length 95th (ft)	0	0	0	0	0	5	198
Control Delay (s)	0.0	0.0	0.0	0.2	0.0	16.1	23.1
Lane LOS				A		C	C
Approach Delay (s)	0.0			0.1		22.8	
Approach LOS						C	

Intersection Summary			
Average Delay	7.2		
Intersection Capacity Utilization	54.2%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
1045: 111th Street & Bishop Ford Freeway WB Ramps

1/14/2013

	↗	↘	↖	↑	↓	↙
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰↰		↰			
Sign Control	Stop			Stop	Stop	
Volume (vph)	537	0	335	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	597	0	372	0	0	0

Direction, Lane #	EB 1	EB 2	NB 1
Volume Total (vph)	298	298	372
Volume Left (vph)	298	298	372
Volume Right (vph)	0	0	0
Hadj (s)	0.55	0.55	0.25
Departure Headway (s)	6.2	6.2	5.6
Degree Utilization, x	0.51	0.51	0.58
Capacity (veh/h)	568	570	619
Control Delay (s)	14.3	14.3	16.0
Approach Delay (s)	14.3		16.0
Approach LOS	B		C

Intersection Summary			
Delay	14.9		
HCM Level of Service	B		
Intersection Capacity Utilization	42.4%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Signalized Intersection Capacity Analysis
1046: 115th Street & Marshield Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱		↰	↑↑						↰↑↱	
Volume (vph)	0	483	64	212	535	0	0	0	0	101	21	58
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	12	12	12	12	12
Total Lost time (s)		3.0		4.0	4.0						5.0	
Lane Util. Factor		0.95		1.00	0.95						0.95	
Frt		0.98		1.00	1.00						0.95	
Flt Protected		1.00		0.95	1.00						0.97	
Satd. Flow (prot)		3153		1605	3210						3074	
Flt Permitted		1.00		0.34	1.00						0.97	
Satd. Flow (perm)		3153		574	3210						3074	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	537	71	236	594	0	0	0	0	112	23	64
RTOR Reduction (vph)	0	12	0	0	0	0	0	0	0	0	44	0
Lane Group Flow (vph)	0	596	0	236	594	0	0	0	0	0	155	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type				pm+pt						Split		
Protected Phases		4		3	8					6	6	
Permitted Phases				8								
Actuated Green, G (s)		36.0		49.0	49.0						27.0	
Effective Green, g (s)		36.0		49.0	49.0						27.0	
Actuated g/C Ratio		0.42		0.58	0.58						0.32	
Clearance Time (s)		3.0		4.0	4.0						5.0	
Lane Grp Cap (vph)		1335		452	1850						976	
v/s Ratio Prot		0.19		c0.06	0.19						c0.05	
v/s Ratio Perm				c0.24								
v/c Ratio		0.45		0.52	0.32						0.16	
Uniform Delay, d1		17.4		16.7	9.4						20.8	
Progression Factor		1.00		0.36	0.17						1.00	
Incremental Delay, d2		1.1		3.3	0.3						0.3	
Delay (s)		18.5		9.3	1.9						21.2	
Level of Service		B		A	A						C	
Approach Delay (s)		18.5			4.0			0.0			21.2	
Approach LOS		B			A			A			C	

Intersection Summary			
HCM Average Control Delay	11.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	46.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1047: 115th Street & Ashland Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑			↑↱			↰↑↱				
Volume (vph)	95	489	0	0	684	129	63	90	63	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	11	11	12	12	12	12	12	12
Total Lost time (s)	5.0	5.0			3.0			5.0				
Lane Util. Factor	1.00	0.95			0.95			0.91				
Frt	1.00	1.00			0.98			0.96				
Flt Protected	0.95	1.00			1.00			0.99				
Satd. Flow (prot)	1660	3320			3133			4497				
Flt Permitted	0.19	1.00			1.00			0.99				
Satd. Flow (perm)	335	3320			3133			4497				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	106	543	0	0	760	143	70	100	70	0	0	0
RTOR Reduction (vph)	0	0	0	0	18	0	0	48	0	0	0	0
Lane Group Flow (vph)	106	543	0	0	885	0	0	192	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	pm+pt						Split					
Protected Phases	7	4			8		2	2				
Permitted Phases	4											
Actuated Green, G (s)	48.0	48.0			35.0			27.0				
Effective Green, g (s)	48.0	48.0			35.0			27.0				
Actuated g/C Ratio	0.56	0.56			0.41			0.32				
Clearance Time (s)	5.0	5.0			3.0			5.0				
Lane Grp Cap (vph)	345	1875			1290			1428				
v/s Ratio Prot	0.04	c0.16			c0.28			c0.04				
v/s Ratio Perm	0.14											
v/c Ratio	0.31	0.29			0.69			0.13				
Uniform Delay, d1	19.6	9.6			20.5			20.7				
Progression Factor	0.46	0.31			1.00			1.00				
Incremental Delay, d2	2.1	0.4			3.0			0.2				
Delay (s)	11.1	3.3			23.5			20.9				
Level of Service	B	A			C			C				
Approach Delay (s)		4.6			23.5			20.9			0.0	
Approach LOS		A			C			C			A	

Intersection Summary			
HCM Average Control Delay	16.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	46.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↑↱			↰↑↑↱			↰↑↱			↰↑↱	
Volume (vph)	114	358	114	119	426	89	129	78	37	32	87	144
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	10	12	12	15	12	12	15	12
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			1.00			1.00	
Frt		0.97			0.98			0.98			0.93	
Flt Protected		0.99			0.99			0.97			0.99	
Satd. Flow (prot)		2979			3005			1835			1770	
Flt Permitted		0.62			0.65			0.72			0.94	
Satd. Flow (perm)		1874			1968			1361			1676	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	127	398	127	132	473	99	143	87	41	36	97	160
RTOR Reduction (vph)	0	32	0	0	20	0	0	10	0	0	67	0
Lane Group Flow (vph)	0	620	0	0	684	0	0	261	0	0	226	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		23.0			23.0			32.0			32.0	
Effective Green, g (s)		23.0			23.0			32.0			32.0	
Actuated g/C Ratio		0.35			0.35			0.49			0.49	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		663			696			670			825	
v/s Ratio Prot												
v/s Ratio Perm		0.33			c0.35			c0.19			0.14	
v/c Ratio		0.93			0.98			0.39			0.27	
Uniform Delay, d1		20.3			20.8			10.4			9.7	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		22.2			30.2			1.7			0.8	
Delay (s)		42.4			51.0			12.1			10.5	
Level of Service		D			D			B			B	
Approach Delay (s)		42.4			51.0			12.1			10.5	
Approach LOS		D			D			B			B	

Intersection Summary			
HCM Average Control Delay	36.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	83.8%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1049: 115th Street & Halsted Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↑	↱	↰	↑↑	↱
Volume (vph)	106	229	88	199	420	125	124	539	77	110	940	146
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	12	10	16	12	9	10	9	9	10	9
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00	0.97	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.96		1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1562	2993		1574	3644		1508	3069	1333	1520	3099	1336
Flt Permitted	0.31	1.00		0.50	1.00		0.13	1.00	1.00	0.34	1.00	1.00
Satd. Flow (perm)	510	2993		836	3644		212	3069	1333	545	3099	1336
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	112	241	93	209	442	132	131	567	81	116	989	154
RTOR Reduction (vph)	0	48	0	0	33	0	0	0	51	0	0	98
Lane Group Flow (vph)	112	286	0	209	541	0	131	567	30	116	989	56
Confl. Peds. (#/hr)	19		16	16		19	22		25	25		22
Heavy Vehicles (%)	2%	2%	0%	1%	2%	2%	2%	4%	0%	1%	3%	0%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	32.0	27.0		32.0	27.0		38.0	31.0	31.0	38.0	31.0	31.0
Effective Green, g (s)	30.0	28.0		30.0	28.0		36.0	31.0	31.0	36.0	31.0	31.0
Actuated g/C Ratio	0.35	0.33		0.35	0.33		0.42	0.36	0.36	0.42	0.36	0.36
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)	230	986		330	1200		181	1119	486	300	1130	487
v/s Ratio Prot	0.02	0.10		c0.03	0.15		c0.05	0.18		0.03	c0.32	
v/s Ratio Perm	0.15			c0.19			0.26		0.02	0.14		0.04
v/c Ratio	0.49	0.29		0.63	0.45		0.72	0.51	0.06	0.39	0.88	0.12
Uniform Delay, d1	19.9	21.1		22.2	22.4		18.0	21.0	17.5	15.6	25.2	17.9
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.40	1.05	2.37
Incremental Delay, d2	7.2	0.7		8.9	1.2		22.1	1.6	0.2	2.8	7.4	0.4
Delay (s)	27.1	21.9		31.2	23.7		40.1	22.7	17.8	24.6	33.8	42.7
Level of Service	C	C		C	C		D	C	B	C	C	D
Approach Delay (s)		23.2			25.7			25.1			34.1	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	28.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	73.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1050: 115th Street & Wentworth Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱		↰	↱		↰	↱
Volume (vph)	48	348	30	83	601	84	33	100	53	51	124	64
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	16	12	12	16	12
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frpb, ped/bikes		1.00	0.96		1.00	0.97		1.00	0.98		1.00	0.99
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frt		1.00	0.85		1.00	0.85		1.00	0.85		1.00	0.85
Flt Protected		0.99	1.00		0.99	1.00		0.99	1.00		0.99	1.00
Satd. Flow (prot)		1965	1466		1990	1480		2015	1506		1995	1511
Flt Permitted		0.60	1.00		0.87	1.00		0.91	1.00		0.89	1.00
Satd. Flow (perm)		1184	1466		1750	1480		1857	1506		1809	1511
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	51	366	32	87	633	88	35	105	56	54	131	67
RTOR Reduction (vph)	0	0	17	0	0	47	0	0	33	0	0	39
Lane Group Flow (vph)	0	417	15	0	720	41	0	140	23	0	185	28
Confl. Peds. (#/hr)	11		20	20		11	1		4	4		1
Confl. Bikes (#/hr)	1		1	1		1			1	1		
Heavy Vehicles (%)	4%	3%	0%	0%	2%	0%	0%	0%	0%	0%	1%	0%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)		30.0	30.0		30.0	30.0		27.0	27.0		27.0	27.0
Effective Green, g (s)		30.0	30.0		30.0	30.0		27.0	27.0		27.0	27.0
Actuated g/C Ratio		0.46	0.46		0.46	0.46		0.42	0.42		0.42	0.42
Clearance Time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		546	677		808	683		771	626		751	628
v/s Ratio Prot												
v/s Ratio Perm		0.35	0.01		c0.41	0.03		0.08	0.02		c0.10	0.02
v/c Ratio		0.76	0.02		0.89	0.06		0.18	0.04		0.25	0.04
Uniform Delay, d1		14.6	9.5		16.0	9.7		12.0	11.3		12.4	11.3
Progression Factor		1.00	1.00		0.44	0.05		1.05	1.21		1.03	0.89
Incremental Delay, d2		9.8	0.1		12.2	0.1		0.5	0.1		0.7	0.1
Delay (s)		24.3	9.6		19.2	0.7		13.1	13.7		13.5	10.2
Level of Service		C	A		B	A		B	B		B	B
Approach Delay (s)		23.3			17.2			13.3			12.6	
Approach LOS		C			B			B			B	

Intersection Summary			
HCM Average Control Delay	17.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	100.4%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1051: 115th Street & State Street

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	75	385	20	51	566	91	10	109	23	125	214	65
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	0.98		1.00	0.97		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1550	3076		1550	3035		1550	3017		1550	2991	
Flt Permitted	0.95	1.00		0.49	1.00		0.55	1.00		0.66	1.00	
Satd. Flow (perm)	1550	3076		802	3035		892	3017		1074	2991	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	83	428	22	57	629	101	11	121	26	139	238	72
RTOR Reduction (vph)	0	6	0	0	20	0	0	15	0	0	42	0
Lane Group Flow (vph)	83	444	0	57	710	0	11	132	0	139	268	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Prot			Perm			Perm			Perm		
Protected Phases	7	4			8			2			6	
Permitted Phases				8			2			6		
Actuated Green, G (s)	7.0	32.0		22.0	22.0		27.0	27.0		27.0	27.0	
Effective Green, g (s)	7.0	32.0		22.0	22.0		27.0	27.0		27.0	27.0	
Actuated g/C Ratio	0.11	0.49		0.34	0.34		0.42	0.42		0.42	0.42	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	167	1514		271	1027		371	1253		446	1242	
v/s Ratio Prot	c0.05	0.14			c0.23			0.04			0.09	
v/s Ratio Perm				0.07			0.01			c0.13		
v/c Ratio	0.50	0.29		0.21	0.69		0.03	0.11		0.31	0.22	
Uniform Delay, d1	27.3	9.8		15.3	18.6		11.2	11.6		12.8	12.2	
Progression Factor	1.16	0.56		1.00	1.00		1.00	1.00		1.11	1.10	
Incremental Delay, d2	8.6	0.4		1.8	3.8		0.1	0.2		1.8	0.4	
Delay (s)	40.3	5.9		17.1	22.4		11.4	11.8		15.9	13.8	
Level of Service	D	A		B	C		B	B		B	B	
Approach Delay (s)		11.2			22.0			11.8			14.4	
Approach LOS		B			C			B			B	

Intersection Summary			
HCM Average Control Delay	16.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	49.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1052: 115th Street & Michigan Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			↰↑↱			↰↑↱	
Volume (vph)	64	267	166	247	330	63	412	300	189	55	295	50
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	12	12	12	12	12	12
Total Lost time (s)	4.0	4.0		3.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frt	1.00	0.94		1.00	0.98			0.97			0.98	
Flt Protected	0.95	1.00		0.95	1.00			0.98			0.99	
Satd. Flow (prot)	1550	2921		1550	3025			3144			3236	
Flt Permitted	0.50	1.00		0.95	1.00			0.63			0.71	
Satd. Flow (perm)	813	2921		1550	3025			2030			2306	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	71	297	184	274	367	70	458	333	210	61	328	56
RTOR Reduction (vph)	0	107	0	0	18	0	0	27	0	0	13	0
Lane Group Flow (vph)	71	374	0	274	419	0	0	974	0	0	432	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Prot			Perm			Perm		
Protected Phases		4		3	8			2			6	
Permitted Phases	4						2			6		
Actuated Green, G (s)	15.0	15.0		17.0	35.0			44.0			44.0	
Effective Green, g (s)	15.0	15.0		17.0	35.0			44.0			44.0	
Actuated g/C Ratio	0.17	0.17		0.19	0.39			0.49			0.49	
Clearance Time (s)	4.0	4.0		3.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	136	487		293	1176			992			1127	
v/s Ratio Prot		c0.13		c0.18	0.14							
v/s Ratio Perm	0.09							c0.48			0.19	
v/c Ratio	0.52	0.77		0.94	0.36			1.09dl			0.38	
Uniform Delay, d1	34.2	35.8		36.0	19.5			22.6			14.5	
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2	13.6	11.1		38.3	0.8			24.6			1.0	
Delay (s)	47.8	46.9		74.3	20.4			47.2			15.5	
Level of Service	D	D		E	C			D			B	
Approach Delay (s)		47.1			41.1			47.2			15.5	
Approach LOS		D			D			D			B	

Intersection Summary			
HCM Average Control Delay	40.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	80.9%	ICU Level of Service	D
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			↰↑↑↱				
Volume (vph)	26	454	16	75	647	75	55	110	165	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	12	14	12	10	15	10
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			0.95				
Frt		1.00			0.99			0.93				
Flt Protected		1.00			1.00			0.99				
Satd. Flow (prot)		1620			1603			3249				
Flt Permitted		0.94			0.91			0.99				
Satd. Flow (perm)		1529			1466			3249				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	29	504	18	83	719	83	61	122	183	0	0	0
RTOR Reduction (vph)	0	1	0	0	5	0	0	139	0	0	0	0
Lane Group Flow (vph)	0	550	0	0	880	0	0	227	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm			Perm					
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Actuated Green, G (s)		41.5			41.5			15.5				
Effective Green, g (s)		41.5			41.5			15.5				
Actuated g/C Ratio		0.64			0.64			0.24				
Clearance Time (s)		4.0			4.0			4.0				
Vehicle Extension (s)		3.0			3.0			8.0				
Lane Grp Cap (vph)		976			936			775				
v/s Ratio Prot												
v/s Ratio Perm		0.36			c0.60			0.07				
v/c Ratio		0.56			0.94			0.29				
Uniform Delay, d1		6.6			10.6			20.3				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		2.3			18.1			0.9				
Delay (s)		9.0			28.8			21.2				
Level of Service		A			C			C				
Approach Delay (s)		9.0			28.8			21.2			0.0	
Approach LOS		A			C			C			A	

Intersection Summary			
HCM Average Control Delay	21.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	85.4%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
1054: 115th Street & Martin Luther King Jr Drive

1/14/2013

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰↑	↑↱		↰	↱
Volume (veh/h)	133	474	615	39	119	174
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	140	499	647	41	125	183
Pedestrians		5	6		17	
Lane Width (ft)		16.0	16.0		10.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		1	1		1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		1319	491			
pX, platoon unblocked	0.94				0.94	0.94
vC, conflicting volume	705				1220	366
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	571				1116	212
tC, single (s)	4.2				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	85				22	75
cM capacity (veh/h)	912				161	742

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	SB 2
Volume Total	306	333	432	257	125	183
Volume Left	140	0	0	0	125	0
Volume Right	0	0	0	41	0	183
cSH	912	1700	1700	1700	161	742
Volume to Capacity	0.15	0.20	0.25	0.15	0.78	0.25
Queue Length 95th (ft)	14	0	0	0	125	24
Control Delay (s)	5.3	0.0	0.0	0.0	79.4	11.4
Lane LOS	A				F	B
Approach Delay (s)	2.5		0.0		39.1	
Approach LOS					E	

Intersection Summary			
Average Delay	8.4		
Intersection Capacity Utilization	55.2%	ICU Level of Service	B
Analysis Period (min)	15		

HCM Signalized Intersection Capacity Analysis
1055: 115th Street & Cottage Grove Avenue

1/14/2013

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↱			↰	↰↱	
Volume (vph)	710	0	1	626	3	29
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0			4.0	4.0	
Lane Util. Factor	1.00			1.00	1.00	
Frt	1.00			1.00	0.88	
Flt Protected	1.00			1.00	1.00	
Satd. Flow (prot)	1748			1747	1525	
Flt Permitted	1.00			1.00	1.00	
Satd. Flow (perm)	1748			1747	1525	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	789	0	1	696	3	32
RTOR Reduction (vph)	0	0	0	0	28	0
Lane Group Flow (vph)	789	0	0	697	7	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type			Perm			
Protected Phases	1 2 4			4	3	
Permitted Phases			4			
Actuated Green, G (s)	70.0			40.0	12.0	
Effective Green, g (s)	66.0			40.0	12.0	
Actuated g/C Ratio	0.73			0.44	0.13	
Clearance Time (s)				4.0	4.0	
Lane Grp Cap (vph)	1282			776	203	
v/s Ratio Prot	c0.45				c0.00	
v/s Ratio Perm				0.40		
v/c Ratio	0.62			0.90	0.04	
Uniform Delay, d1	5.8			23.1	34.0	
Progression Factor	0.05			1.00	1.00	
Incremental Delay, d2	0.9			15.3	0.3	
Delay (s)	1.2			38.5	34.3	
Level of Service	A			D	C	
Approach Delay (s)	1.2			38.5	34.3	
Approach LOS	A			D	C	

Intersection Summary			
HCM Average Control Delay	19.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	49.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
1056: 115th Street & Bishop Ford Fwy

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱			↰						↰	↱
Volume (veh/h)	0	253	616	32	410	0	0	0	0	17	6	252
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	281	684	36	456	0	0	0	0	19	7	280
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	456			281			1153	1150	483	667	808	456
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	456			281			1153	1150	483	667	808	456
tC, single (s)	4.1			4.2			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			97			100	100	100	94	98	49
cM capacity (veh/h)	1116			1264			73	194	535	341	308	552

Direction, Lane #	EB 1	EB 2	WB 1	SB 1	SB 2
Volume Total	187	778	491	26	280
Volume Left	0	0	36	19	0
Volume Right	0	684	0	0	280
cSH	1700	1700	1264	332	552
Volume to Capacity	0.11	0.46	0.03	0.08	0.51
Queue Length 95th (ft)	0	0	2	6	71
Control Delay (s)	0.0	0.0	0.9	16.8	18.1
Lane LOS			A	C	C
Approach Delay (s)	0.0		0.9	17.9	
Approach LOS				C	

Intersection Summary			
Average Delay	3.4		
Intersection Capacity Utilization	60.6%	ICU Level of Service	B
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
1057: 115th Street &

1/14/2013

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰↰		↰			
Sign Control	Stop			Stop	Stop	
Volume (vph)	270	0	442	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	300	0	491	0	0	0

Direction, Lane #	EB 1	EB 2	NB 1
Volume Total (vph)	150	150	491
Volume Left (vph)	150	150	491
Volume Right (vph)	0	0	0
Hadj (s)	0.55	0.55	0.25
Departure Headway (s)	6.4	6.4	5.0
Degree Utilization, x	0.27	0.27	0.68
Capacity (veh/h)	536	536	697
Control Delay (s)	10.5	10.5	18.1
Approach Delay (s)	10.5		18.1
Approach LOS	B		C

Intersection Summary			
Delay	15.2		
HCM Level of Service	C		
Intersection Capacity Utilization	40.6%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Signalized Intersection Capacity Analysis
1058: 119th Street & Marshield Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↰↑					↰	↰↑↱	↱
Volume (vph)	0	501	345	273	661	0	0	0	0	279	269	372
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	12	13	12	12	12	12	10	10	11
Total Lost time (s)		6.0	6.0		6.0					6.0	6.0	6.0
Lane Util. Factor		0.95	1.00		0.95					0.86	0.81	0.86
Frpb, ped/bikes		1.00	0.98		1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00					1.00	1.00	1.00
Frt		1.00	0.85		1.00					1.00	0.95	0.85
Flt Protected		1.00	1.00		0.99					0.95	0.99	1.00
Satd. Flow (prot)		3179	1232		3425					1359	3806	1133
Flt Permitted		1.00	1.00		0.99					0.95	0.99	1.00
Satd. Flow (perm)		3179	1232		3425					1359	3806	1133
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	527	363	287	696	0	0	0	0	294	283	392
RTOR Reduction (vph)	0	0	230	0	0	0	0	0	0	0	53	113
Lane Group Flow (vph)	0	527	133	0	983	0	0	0	0	162	558	83
Confl. Peds. (#/hr)	4		6	6		4						
Heavy Vehicles (%)	0%	4%	6%	1%	2%	0%	0%	0%	0%	1%	1%	1%
Parking (#/hr)			0									0
Turn Type			Perm	Split						Split		custom
Protected Phases		2		10 12 14	10 12 14					4	4	
Permitted Phases			2									4 2
Actuated Green, G (s)		39.0	39.0		68.1					23.0	23.0	68.0
Effective Green, g (s)		39.0	39.0		68.1					23.0	23.0	68.0
Actuated g/C Ratio		0.24	0.24		0.43					0.14	0.14	0.42
Clearance Time (s)		6.0	6.0							6.0	6.0	
Vehicle Extension (s)		3.0	3.0							3.0	3.0	
Lane Grp Cap (vph)		775	300		1458					195	547	482
v/s Ratio Prot		c0.17			c0.29					0.12	c0.15	
v/s Ratio Perm			0.11									0.07
v/c Ratio		0.68	0.44		0.67					0.83	1.02	0.17
Uniform Delay, d1		54.8	51.3		37.0					66.6	68.5	28.5
Progression Factor		1.00	1.00		0.06					1.00	1.00	1.00
Incremental Delay, d2		4.8	4.7		0.1					24.9	43.6	0.2
Delay (s)		59.6	56.0		2.3					91.5	112.1	28.7
Level of Service		E	E		A					F	F	C
Approach Delay (s)		58.1			2.3			0.0			91.8	
Approach LOS		E			A			A			F	

Intersection Summary			
HCM Average Control Delay	50.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	31.9
Intersection Capacity Utilization	76.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1059: 119th Street & Ashland Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑			↑↑	↱	↰	↰↑↱				
Volume (vph)	292	488	0	0	602	144	332	214	196	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	13	12	12	11	12	13	13	14	12	12	12
Total Lost time (s)	6.0	6.0			6.0	6.0	6.0	6.0				
Lane Util. Factor	1.00	0.95			0.95	1.00	0.91	0.91				
Frt	1.00	1.00			1.00	0.85	1.00	0.94				
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.99				
Satd. Flow (prot)	1605	3431			3210	1485	1561	3064				
Flt Permitted	0.95	1.00			1.00	1.00	0.95	0.99				
Satd. Flow (perm)	1605	3431			3210	1485	1561	3064				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	324	542	0	0	669	160	369	238	218	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	82	0	60	0	0	0	0
Lane Group Flow (vph)	324	542	0	0	669	78	280	485	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Split					Perm	Split					
Protected Phases	2 4 8	2 4 8			10		12	12				
Permitted Phases						10						
Actuated Green, G (s)	83.9	83.9			37.1	37.1	12.0	12.0				
Effective Green, g (s)	83.9	83.9			37.1	37.1	12.0	12.0				
Actuated g/C Ratio	0.52	0.52			0.23	0.23	0.08	0.08				
Clearance Time (s)					6.0	6.0	6.0	6.0				
Vehicle Extension (s)					3.0	3.0	3.0	3.0				
Lane Grp Cap (vph)	842	1799			744	344	117	230				
v/s Ratio Prot	c0.20	0.16			c0.21		c0.18	0.16				
v/s Ratio Perm						0.05						
v/c Ratio	0.38	0.30			0.90	0.23	2.39	2.11				
Uniform Delay, d1	22.7	21.5			59.6	49.8	74.0	74.0				
Progression Factor	0.06	0.06			1.00	1.00	1.00	1.00				
Incremental Delay, d2	0.2	0.1			13.7	0.3	652.3	513.1				
Delay (s)	1.4	1.3			73.3	50.2	726.3	587.1				
Level of Service	A	A			E	D	F	F				
Approach Delay (s)		1.4			68.8			634.4			0.0	
Approach LOS		A			E			F			A	

Intersection Summary			
HCM Average Control Delay	230.8	HCM Level of Service	F
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	29.0
Intersection Capacity Utilization	65.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1060: 119th Street & Halsted Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑↱		↰	↑ ↑↱		↰	↑ ↑↱	
Volume (vph)	140	273	136	129	270	107	108	522	80	106	803	120
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	14	12	10	10	12	9	10	12
Total Lost time (s)	4.0	4.0	5.0	4.0	5.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.96		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1576	1600	1372	1594	1766		1578	3009		1537	3001	
Flt Permitted	0.26	1.00	1.00	0.41	1.00		0.13	1.00		0.33	1.00	
Satd. Flow (perm)	438	1600	1372	683	1766		216	3009		527	3001	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	147	287	143	136	284	113	114	549	84	112	845	126
RTOR Reduction (vph)	0	0	100	0	16	0	0	13	0	0	13	0
Lane Group Flow (vph)	147	287	43	136	381	0	114	620	0	112	958	0
Confl. Peds. (#/hr)	28		8	8		28	59		11	11		59
Confl. Bikes (#/hr)	3					3	1		2	2		1
Heavy Vehicles (%)	1%	5%	2%	0%	4%	0%	1%	4%	0%	0%	3%	3%
Turn Type	pm+pt		Perm	pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)	34.0	27.0	27.0	34.0	27.0		43.0	36.0		40.2	34.6	
Effective Green, g (s)	32.0	28.0	27.0	32.0	27.0		41.0	36.0		38.2	34.6	
Actuated g/C Ratio	0.35	0.31	0.30	0.35	0.30		0.45	0.40		0.42	0.38	
Clearance Time (s)	3.0	5.0	5.0	3.0	5.0		3.0	4.0		3.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	230	494	409	302	526		188	1196		273	1146	
v/s Ratio Prot	c0.04	0.18		0.03	c0.22		c0.04	0.21		0.02	c0.32	
v/s Ratio Perm	0.18		0.03	0.13			0.23			0.15		
v/c Ratio	0.64	0.58	0.10	0.45	0.72		0.61	0.52		0.41	0.84	
Uniform Delay, d1	22.1	26.4	23.0	21.1	28.5		17.4	20.7		16.7	25.4	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	5.7	4.9	0.5	1.1	8.4		5.4	1.6		1.0	7.3	
Delay (s)	27.8	31.3	23.5	22.2	36.9		22.8	22.3		17.7	32.7	
Level of Service	C	C	C	C	D		C	C		B	C	
Approach Delay (s)		28.5			33.1			22.4			31.2	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	28.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	90.6	Sum of lost time (s)	17.0
Intersection Capacity Utilization	79.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1061: 119th Street & Wentworth Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱		✥			✥	
Volume (vph)	39	348	61	73	437	82	37	59	34	36	91	70
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	10	10	10	12	15	12	12	16	12
Total Lost time (s)		3.0	3.0		3.0	3.0		3.0			3.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00			1.00	
Frpb, ped/bikes		1.00	0.96		1.00	0.97		0.99			0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00			1.00	
Frt		1.00	0.85		1.00	0.85		0.96			0.95	
Flt Protected		0.99	1.00		0.99	1.00		0.99			0.99	
Satd. Flow (prot)		1970	1467		1624	1381		1868			1875	
Flt Permitted		0.93	1.00		0.90	1.00		0.90			0.94	
Satd. Flow (perm)		1833	1467		1470	1381		1700			1781	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	41	366	64	77	460	86	39	62	36	38	96	74
RTOR Reduction (vph)	0	0	32	0	0	36	0	20	0	0	30	0
Lane Group Flow (vph)	0	407	32	0	537	50	0	117	0	0	178	0
Confl. Peds. (#/hr)	12		20	20		12	8		2	2		8
Confl. Bikes (#/hr)	1		2	2		1			1	1		
Heavy Vehicles (%)	3%	3%	0%	0%	3%	0%	0%	0%	0%	0%	1%	3%
Turn Type	Perm		Perm	Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)		32.0	32.0		32.0	32.0		27.0			27.0	
Effective Green, g (s)		32.0	32.0		32.0	32.0		27.0			27.0	
Actuated g/C Ratio		0.49	0.49		0.49	0.49		0.42			0.42	
Clearance Time (s)		3.0	3.0		3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)		902	722		724	680		706			740	
v/s Ratio Prot												
v/s Ratio Perm		0.22	0.02		c0.37	0.04		0.07			c0.10	
v/c Ratio		0.45	0.04		0.74	0.07		0.17			0.24	
Uniform Delay, d1		10.8	8.6		13.2	8.7		11.9			12.3	
Progression Factor		1.00	1.00		1.00	1.00		1.00			1.46	
Incremental Delay, d2		1.6	0.1		6.7	0.2		0.5			0.7	
Delay (s)		12.4	8.7		19.9	8.9		12.4			18.7	
Level of Service		B	A		B	A		B			B	
Approach Delay (s)		11.9			18.4			12.4			18.7	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	15.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	74.2%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1062: 119th Street & State Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑	↱		↰↑	↱		↰↑	↱		↰↑↱	
Volume (vph)	59	259	41	71	472	20	36	114	34	17	184	70
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frpb, ped/bikes		1.00	0.95		1.00	0.98		1.00	0.97		0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		0.97	
Flt Protected		0.99	1.00		0.99	1.00		0.99	1.00		1.00	
Satd. Flow (prot)		1753	1459		1725	1493		1712	1482		1711	
Flt Permitted		0.84	1.00		0.91	1.00		0.89	1.00		0.97	
Satd. Flow (perm)		1479	1459		1584	1493		1543	1482		1672	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	62	273	43	75	497	21	38	120	36	18	194	74
RTOR Reduction (vph)	0	0	22	0	0	11	0	0	26	0	28	0
Lane Group Flow (vph)	0	335	21	0	572	10	0	158	10	0	258	0
Confl. Peds. (#/hr)	19		25	25		19	3		6	6		3
Confl. Bikes (#/hr)	1		2	2		1			1	1		
Heavy Vehicles (%)	0%	2%	0%	0%	4%	0%	0%	5%	0%	0%	0%	2%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		22.0	22.0		22.0	22.0		13.0	13.0		13.0	
Effective Green, g (s)		22.0	22.0		22.0	22.0		13.0	13.0		13.0	
Actuated g/C Ratio		0.49	0.49		0.49	0.49		0.29	0.29		0.29	
Clearance Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	
Lane Grp Cap (vph)		723	713		774	730		446	428		483	
v/s Ratio Prot												
v/s Ratio Perm		0.23	0.01		c0.36	0.01		0.10	0.01		c0.15	
v/c Ratio		0.46	0.03		0.74	0.01		0.35	0.02		0.53	
Uniform Delay, d1		7.6	6.0		9.2	5.9		12.7	11.5		13.5	
Progression Factor		1.00	1.00		1.00	1.00		1.14	1.46		1.00	
Incremental Delay, d2		2.1	0.1		6.3	0.0		1.2	0.1		4.2	
Delay (s)		9.7	6.0		15.5	6.0		15.7	16.8		17.7	
Level of Service		A	A		B	A		B	B		B	
Approach Delay (s)		9.3			15.1			15.9			17.7	
Approach LOS		A			B			B			B	

Intersection Summary			
HCM Average Control Delay	14.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	83.2%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		✣			✣			↰	↱
Volume (vph)	229	35	76	8	14	11	38	256	8	31	556	531
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	14	12	12	16	12	12	16	12
Total Lost time (s)		3.0	3.0		3.0			3.0			3.0	3.0
Lane Util. Factor		1.00	1.00		1.00			1.00			1.00	1.00
Frpb, ped/bikes		1.00	0.95		0.98			1.00			1.00	0.94
Flpb, ped/bikes		0.98	1.00		0.99			1.00			1.00	1.00
Frt		1.00	0.85		0.96			1.00			1.00	0.85
Flt Protected		0.96	1.00		0.99			0.99			1.00	1.00
Satd. Flow (prot)		1860	1440		1765			1996			1975	1382
Flt Permitted		0.76	1.00		0.93			0.81			0.97	1.00
Satd. Flow (perm)		1468	1440		1657			1631			1928	1382
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	254	39	84	9	16	12	42	284	9	34	618	590
RTOR Reduction (vph)	0	0	49	0	9	0	0	2	0	0	0	201
Lane Group Flow (vph)	0	293	35	0	28	0	0	333	0	0	652	389
Confl. Peds. (#/hr)	37		53	53		37	39		54	54		39
Confl. Bikes (#/hr)							2					2
Heavy Vehicles (%)	4%	0%	1%	0%	0%	0%	0%	1%	0%	0%	3%	4%
Turn Type	pm+pt		Perm	Perm			Perm			Perm		Perm
Protected Phases	7	4			8			2			6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)		27.0	27.0		17.0			32.0			32.0	32.0
Effective Green, g (s)		27.0	27.0		17.0			32.0			32.0	32.0
Actuated g/C Ratio		0.42	0.42		0.26			0.49			0.49	0.49
Clearance Time (s)		3.0	3.0		3.0			3.0			3.0	3.0
Lane Grp Cap (vph)		658	598		433			803			949	680
v/s Ratio Prot		c0.05										
v/s Ratio Perm		0.13	0.02		0.02			0.20			c0.34	0.28
v/c Ratio		0.45	0.06		0.06			0.42			0.69	0.57
Uniform Delay, d1		13.6	11.4		18.0			10.5			12.7	11.7
Progression Factor		1.00	1.00		1.00			0.51			1.00	1.00
Incremental Delay, d2		2.2	0.2		0.3			1.1			4.0	3.5
Delay (s)		15.8	11.6		18.3			6.5			16.7	15.2
Level of Service		B	B		B			A			B	B
Approach Delay (s)		14.9			18.3			6.5			16.0	
Approach LOS		B			B			A			B	

Intersection Summary			
HCM Average Control Delay	14.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	78.4%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↱		↰	↑↑					↰	↰↑↱	↱
Volume (vph)	0	894	289	375	1072	0	0	0	0	513	284	334
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	12	11	8	8	8	11	12	14
Total Lost time (s)		6.0		4.5	6.0					6.0	6.0	6.0
Lane Util. Factor		0.91		1.00	0.95					0.91	0.86	0.91
Frpb, ped/bikes		0.99		1.00	1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Frt		0.96		1.00	1.00					1.00	0.98	0.85
Flt Protected		1.00		0.95	1.00					0.95	0.98	1.00
Satd. Flow (prot)		4573		1621	3320					1489	2913	1442
Flt Permitted		1.00		0.11	1.00					0.95	0.98	1.00
Satd. Flow (perm)		4573		190	3320					1489	2913	1442
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	941	304	395	1128	0	0	0	0	540	299	352
RTOR Reduction (vph)	0	45	0	0	0	0	0	0	0	0	9	76
Lane Group Flow (vph)	0	1200	0	395	1128	0	0	0	0	308	603	195
Confl. Peds. (#/hr)	15		11	11		15						
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	0%	3%	3%	2%	3%	0%	0%	0%	0%	1%	3%	3%
Turn Type				pm+pt						Perm		Perm
Protected Phases		2		1	6						4	
Permitted Phases				6						4		4
Actuated Green, G (s)		43.5		74.9	74.9					28.1	28.1	28.1
Effective Green, g (s)		43.5		74.9	74.9					28.1	28.1	28.1
Actuated g/C Ratio		0.38		0.65	0.65					0.24	0.24	0.24
Clearance Time (s)		6.0		4.5	6.0					6.0	6.0	6.0
Vehicle Extension (s)		7.0		3.5	7.0					3.5	3.5	3.5
Lane Grp Cap (vph)		1730		458	2162					364	712	352
v/s Ratio Prot		0.26		c0.20	0.34							
v/s Ratio Perm				c0.36						0.21	0.21	0.14
v/c Ratio		0.69		0.86	0.52					0.85	0.85	0.55
Uniform Delay, d1		30.1		29.1	10.6					41.4	41.4	38.0
Progression Factor		1.00		0.86	1.69					1.00	1.00	1.00
Incremental Delay, d2		2.3		10.4	0.6					16.7	9.4	2.1
Delay (s)		32.4		35.5	18.5					58.1	50.8	40.0
Level of Service		C		D	B					E	D	D
Approach Delay (s)		32.4			22.9			0.0			50.2	
Approach LOS		C			C			A			D	

Intersection Summary			
HCM Average Control Delay	34.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	10.5
Intersection Capacity Utilization	105.3%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↑			↑↑	↱		↰↑↱				
Volume (vph)	341	1066	0	0	1017	271	430	351	318	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	12	12	12	11	12	12	12	12	12	12	12
Total Lost time (s)	6.0	6.0			6.0	6.0		6.0				
Lane Util. Factor	0.97	0.95			0.95	1.00		0.91				
Frpb, ped/bikes	1.00	1.00			1.00	0.98		1.00				
Flpb, ped/bikes	1.00	1.00			1.00	1.00		1.00				
Frt	1.00	1.00			1.00	0.85		0.96				
Flt Protected	0.95	1.00			1.00	1.00		0.98				
Satd. Flow (prot)	3144	3353			3241	1489		4521				
Flt Permitted	0.14	1.00			1.00	1.00		0.98				
Satd. Flow (perm)	460	3353			3241	1489		4521				
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	359	1122	0	0	1071	285	453	369	335	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	85	0	62	0	0	0	0
Lane Group Flow (vph)	359	1122	0	0	1071	200	0	1095	0	0	0	0
Confl. Peds. (#/hr)	7		5	5		7						
Confl. Bikes (#/hr)	1		1	1		1						
Heavy Vehicles (%)	2%	2%	0%	0%	2%	1%	2%	1%	3%	0%	0%	0%
Turn Type	pm+pt					Perm	Perm					
Protected Phases	5	2			6			8				
Permitted Phases	2					6	8					
Actuated Green, G (s)	71.2	71.2			53.0	53.0		31.8				
Effective Green, g (s)	71.2	71.2			53.0	53.0		31.8				
Actuated g/C Ratio	0.62	0.62			0.46	0.46		0.28				
Clearance Time (s)	6.0	6.0			6.0	6.0		6.0				
Vehicle Extension (s)	3.5	7.0			7.0	7.0		5.0				
Lane Grp Cap (vph)	570	2076			1494	686		1250				
v/s Ratio Prot	0.07	c0.33			c0.33							
v/s Ratio Perm	0.32					0.13		0.24				
v/c Ratio	0.63	0.54			0.72	0.29		0.88				
Uniform Delay, d1	15.3	12.5			25.0	19.3		39.7				
Progression Factor	1.32	0.17			0.98	1.25		1.00				
Incremental Delay, d2	1.5	0.7			2.2	0.8		7.7				
Delay (s)	21.6	2.8			26.6	25.0		47.4				
Level of Service	C	A			C	C		D				
Approach Delay (s)		7.4			26.3			47.4			0.0	
Approach LOS		A			C			D			A	

Intersection Summary			
HCM Average Control Delay	25.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	105.3%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1066: 127th Street & Ashland Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Lane Configurations	↰	↑↑	↱	↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	135	671	408	104	779	67	227	179	66	77	162	121
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	12	11	12	12	10	10	13	10	10	10
Total Lost time (s)	3.5	6.0	3.5	3.5	6.0		3.5	6.0		3.5	6.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		0.99	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.96		1.00	0.94	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1565	3273	1313	1601	3282		1578	3002		1540	2941	
Flt Permitted	0.11	1.00	1.00	0.38	1.00		0.39	1.00		0.59	1.00	
Satd. Flow (perm)	174	3273	1313	646	3282		652	3002		961	2941	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	142	706	429	109	820	71	239	188	69	81	171	127
RTOR Reduction (vph)	0	0	173	0	6	0	0	38	0	0	107	0
Lane Group Flow (vph)	142	706	256	109	885	0	239	219	0	81	191	0
Confl. Peds. (#/hr)	11		23	23		11	8		12	12		8
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	2%	1%	3%	3%	3%	0%	1%	1%	2%	3%	0%	1%
Parking (#/hr)			0									
Turn Type	pm+pt		pm+ov	pm+pt			pm+pt			pm+pt		
Protected Phases	5	2	3	1	6		3	8		7	4	
Permitted Phases	2		2	6			8			4		
Actuated Green, G (s)	64.9	52.3	68.7	43.4	34.3		38.1	26.6		26.2	18.2	
Effective Green, g (s)	64.9	52.3	68.7	43.4	34.3		38.1	26.6		26.2	18.2	
Actuated g/C Ratio	0.56	0.45	0.60	0.38	0.30		0.33	0.23		0.23	0.16	
Clearance Time (s)	3.5	6.0	3.5	3.5	6.0		3.5	6.0		3.5	6.0	
Vehicle Extension (s)	3.0	7.0	3.0	3.0	7.0		3.0	7.0		3.0	7.0	
Lane Grp Cap (vph)	426	1489	784	319	979		348	694		259	465	
v/s Ratio Prot	c0.08	c0.22	0.05	0.03	c0.27		c0.10	0.07		0.02	0.06	
v/s Ratio Perm	0.11		0.15	0.10			c0.13			0.05		
v/c Ratio	0.33	0.47	0.33	0.34	0.90		0.69	0.32		0.31	0.41	
Uniform Delay, d1	15.9	21.8	11.6	23.9	38.8		30.6	36.7		36.2	43.6	
Progression Factor	0.81	0.81	2.26	1.00	1.00		0.98	1.02		1.00	1.00	
Incremental Delay, d2	1.7	0.9	0.2	0.6	13.3		5.3	0.9		0.7	2.1	
Delay (s)	14.5	18.5	26.4	24.6	52.1		35.3	38.2		36.9	45.7	
Level of Service	B	B	C	C	D		D	D		D	D	
Approach Delay (s)		20.7			49.1			36.8			43.8	
Approach LOS		C			D			D			D	

Intersection Summary			
HCM Average Control Delay	35.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	19.0
Intersection Capacity Utilization	75.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1067: Vermont St & Ashland Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	46	221	367	86	324	113	362	340	81	206	408	56
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	11	12	11	12	12	11	13	12	10	11	12
Total Lost time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.91		1.00	0.96		1.00	0.97		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1706	2910		1653	3235		1620	3405		1580	3183	
Flt Permitted	0.44	1.00		0.24	1.00		0.32	1.00		0.50	1.00	
Satd. Flow (perm)	794	2910		417	3235		544	3405		824	3183	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	48	233	386	91	341	119	381	358	85	217	429	59
RTOR Reduction (vph)	0	242	0	0	28	0	0	18	0	0	9	0
Lane Group Flow (vph)	48	377	0	91	432	0	381	425	0	217	479	0
Confl. Peds. (#/hr)	12		3	3		12	5					5
Heavy Vehicles (%)	0%	2%	2%	0%	1%	1%	2%	1%	0%	1%	2%	0%
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	39.6	32.9		46.0	36.1		56.2	44.2		40.1	32.1	
Effective Green, g (s)	39.6	32.9		46.0	36.1		56.2	44.2		40.1	32.1	
Actuated g/C Ratio	0.34	0.29		0.40	0.31		0.49	0.38		0.35	0.28	
Clearance Time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	3.5	7.0		3.5	7.0		3.5	7.0		3.5	7.0	
Lane Grp Cap (vph)	327	833		273	1016		454	1309		340	888	
v/s Ratio Prot	0.01	0.13		c0.03	c0.13		c0.15	0.12		0.04	0.15	
v/s Ratio Perm	0.04			0.10			c0.26			0.18		
v/c Ratio	0.15	0.45		0.33	0.43		0.84	0.32		0.64	0.54	
Uniform Delay, d1	25.5	33.7		23.1	31.2		20.8	24.9		28.8	35.2	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		0.98	0.97	
Incremental Delay, d2	0.2	1.8		0.9	1.3		13.1	0.7		3.8	2.2	
Delay (s)	25.7	35.4		23.9	32.5		33.9	25.6		32.1	36.2	
Level of Service	C	D		C	C		C	C		C	D	
Approach Delay (s)		34.7			31.1			29.4			34.9	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	32.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	75.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1068: 127th Street & Halsted Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	105	644	141	10	543	135	104	287	9	215	609	183
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	10	12	9	11	12	9	9	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.98			0.97		1.00	1.00		1.00	0.97	
Flt Protected		0.99			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3034			3004		1452	3227		1523	2871	
Flt Permitted		0.65			0.94		0.17	1.00		0.47	1.00	
Satd. Flow (perm)		1996			2820		255	3227		751	2871	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	117	716	157	11	603	150	116	319	10	239	677	203
RTOR Reduction (vph)	0	19	0	0	27	0	0	3	0	0	35	0
Lane Group Flow (vph)	0	971	0	0	737	0	116	326	0	239	845	0
Confl. Peds. (#/hr)	4		2	2		4	8		4	4		8
Confl. Bikes (#/hr)							2					2
Heavy Vehicles (%)	1%	2%	2%	0%	2%	6%	6%	2%	0%	1%	3%	3%
Turn Type	pm+pt			Perm			pm+pt			pm+pt		
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		39.0			31.0		27.0	24.0		31.0	26.0	
Effective Green, g (s)		39.0			31.0		27.0	24.0		31.0	26.0	
Actuated g/C Ratio		0.49			0.39		0.34	0.30		0.39	0.32	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		1025			1093		131	968		339	933	
v/s Ratio Prot		c0.05					0.03	0.10		c0.04	c0.29	
v/s Ratio Perm		c0.41			0.26		0.27			0.23		
v/c Ratio		0.95			0.67		0.89	0.34		0.71	0.91	
Uniform Delay, d1		19.5			20.3		24.5	21.8		20.0	25.8	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		17.9			3.3		52.6	0.9		11.7	13.9	
Delay (s)		37.4			23.6		77.1	22.7		31.7	39.8	
Level of Service		D			C		E	C		C	D	
Approach Delay (s)		37.4			23.6			36.9			38.0	
Approach LOS		D			C			D			D	

Intersection Summary			
HCM Average Control Delay	34.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	91.1%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1069: Vermont St & Halsted Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱		↰	↑↱		↰	↑↱	
Volume (vph)	67	229	136	123	292	28	72	462	83	35	698	70
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	12	12	12	12	12
Total Lost time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.94		1.00	0.99		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1708	1899		1600	2011		1676	3218		1435	3274	
Flt Permitted	0.46	1.00		0.41	1.00		0.29	1.00		0.42	1.00	
Satd. Flow (perm)	832	1899		686	2011		516	3218		630	3274	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	69	236	140	127	301	29	74	476	86	36	720	72
RTOR Reduction (vph)	0	33	0	0	5	0	0	22	0	0	12	0
Lane Group Flow (vph)	69	343	0	127	325	0	74	540	0	36	780	0
Confl. Peds. (#/hr)	3		20	20		3	2		3	3		2
Confl. Bikes (#/hr)			1	1			2		2	2		2
Heavy Vehicles (%)	0%	0%	1%	6%	0%	0%	2%	3%	6%	19%	3%	2%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	24.0	24.0		24.0	24.0		31.0	31.0		31.0	31.0	
Effective Green, g (s)	24.0	24.0		24.0	24.0		31.0	31.0		31.0	31.0	
Actuated g/C Ratio	0.37	0.37		0.37	0.37		0.48	0.48		0.48	0.48	
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)	307	701		253	743		246	1535		300	1561	
v/s Ratio Prot		0.18			0.16			0.17			c0.24	
v/s Ratio Perm	0.08			c0.19			0.14			0.06		
v/c Ratio	0.22	0.49		0.50	0.44		0.30	0.35		0.12	0.50	
Uniform Delay, d1	14.1	15.8		15.9	15.4		10.4	10.7		9.4	11.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.7	2.4		7.0	1.9		3.1	0.6		0.8	1.1	
Delay (s)	15.8	18.2		22.8	17.3		13.5	11.3		10.2	12.8	
Level of Service	B	B		C	B		B	B		B	B	
Approach Delay (s)		17.8			18.8			11.6			12.7	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	14.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	73.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBL	WBT	WBR	NBL2	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱	↰	↑↱				↰↑↱			↰↑↱	
Volume (vph)	2	843	366	786	32	3	10	9	47	12	0	3
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	10	10	10	12	12	16	12	12	16	12
Total Lost time (s)		5.0	4.0	5.0				4.0			4.0	
Lane Util. Factor		0.95	1.00	1.00				1.00			1.00	
Frpb, ped/bikes		1.00	1.00	1.00				0.99			0.99	
Flpb, ped/bikes		1.00	1.00	1.00				1.00			1.00	
Frt		1.00	1.00	0.99				0.91			0.95	
Flt Protected		1.00	0.95	1.00				0.99			0.97	
Satd. Flow (prot)		3160	1565	1649				1811			1847	
Flt Permitted		0.95	0.17	1.00				0.96			0.87	
Satd. Flow (perm)		3013	274	1649				1751			1656	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	2	887	385	827	34	3	11	9	49	13	0	3
RTOR Reduction (vph)	0	0	0	2	0	0	0	38	0	0	4	0
Lane Group Flow (vph)	0	889	385	859	0	0	0	34	0	0	17	0
Confl. Peds. (#/hr)	7		4		7		7		2	2		7
Confl. Bikes (#/hr)							2		2	2		2
Heavy Vehicles (%)	0%	1%	2%	1%	6%	0%	0%	0%	0%	0%	0%	0%
Turn Type	Perm		pm+pt			Perm	Perm			Perm		
Protected Phases		8	7	4				2			6	
Permitted Phases	8		4			2	2			6		
Actuated Green, G (s)		20.0	37.0	37.0				14.0			14.0	
Effective Green, g (s)		20.0	37.0	37.0				14.0			14.0	
Actuated g/C Ratio		0.33	0.62	0.62				0.23			0.23	
Clearance Time (s)		5.0	4.0	5.0				4.0			4.0	
Lane Grp Cap (vph)		1004	449	1017				409			386	
v/s Ratio Prot			0.19	c0.52								
v/s Ratio Perm		0.30	c0.34					c0.02			0.01	
v/c Ratio		0.89	0.86	0.84				0.08			0.04	
Uniform Delay, d1		18.9	12.7	9.2				18.0			17.8	
Progression Factor		1.00	1.00	1.00				1.00			1.00	
Incremental Delay, d2		11.4	18.7	8.6				0.4			0.2	
Delay (s)		30.3	31.4	17.8				18.4			18.0	
Level of Service		C	C	B				B			B	
Approach Delay (s)		30.3		22.0				18.4			18.0	
Approach LOS		C		C				B			B	

Intersection Summary			
HCM Average Control Delay	27.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	95.4%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1070: 127th Street & Wallace Street

1/14/2013

	↙	↗
Movement	SBR2	NER
Lane Configurations		↱
Volume (vph)	5	276
Ideal Flow (vphpl)	1800	1800
Lane Width	12	12
Total Lost time (s)		4.0
Lane Util. Factor		1.00
Frpb, ped/bikes		1.00
Flpb, ped/bikes		1.00
Frt		0.86
Flt Protected		1.00
Satd. Flow (prot)		1557
Flt Permitted		1.00
Satd. Flow (perm)		1557
Peak-hour factor, PHF	0.95	0.95
Adj. Flow (vph)	5	291
RTOR Reduction (vph)	0	0
Lane Group Flow (vph)	0	291
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		
Heavy Vehicles (%)	0%	0%
Turn Type		Over
Protected Phases		7
Permitted Phases		
Actuated Green, G (s)		13.0
Effective Green, g (s)		13.0
Actuated g/C Ratio		0.22
Clearance Time (s)		4.0
Lane Grp Cap (vph)		337
v/s Ratio Prot		0.19
v/s Ratio Perm		
v/c Ratio		0.86
Uniform Delay, d1		22.6
Progression Factor		1.00
Incremental Delay, d2		24.2
Delay (s)		46.9
Level of Service		D
Approach Delay (s)		
Approach LOS		

Intersection Summary

HCM Signalized Intersection Capacity Analysis
1071: 127th Street & State Street

	↗	→	←	↖	↘	↙
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰↑	↑↱		↰	↱
Volume (vph)	264	887	958	132	113	234
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		1.00	1.00
Frt		1.00	0.98		1.00	0.85
Flt Protected		0.99	1.00		0.95	1.00
Satd. Flow (prot)		3283	3260		1660	1485
Flt Permitted		0.53	1.00		0.95	1.00
Satd. Flow (perm)		1774	3260		1660	1485
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	293	986	1064	147	126	260
RTOR Reduction (vph)	0	0	12	0	0	139
Lane Group Flow (vph)	0	1279	1199	0	126	121
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type	Perm					Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)		67.0	67.0		15.0	15.0
Effective Green, g (s)		67.0	67.0		15.0	15.0
Actuated g/C Ratio		0.74	0.74		0.17	0.17
Clearance Time (s)		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		1321	2427		277	248
v/s Ratio Prot			0.37		0.08	
v/s Ratio Perm		c0.72				c0.08
v/c Ratio		1.11dl	0.49		0.45	0.49
Uniform Delay, d1		10.5	4.6		33.8	34.0
Progression Factor		1.00	1.00		0.99	1.05
Incremental Delay, d2		18.2	0.7		4.9	6.2
Delay (s)		28.8	5.4		38.4	41.9
Level of Service		C	A		D	D
Approach Delay (s)		28.8	5.4		40.8	
Approach LOS		C	A		D	

Intersection Summary			
HCM Average Control Delay	20.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	83.0%	ICU Level of Service	E
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1072: 127th Street & Michigan Avenue

	↗	→	←	↖	↘	↙
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰↑	↑↱		↰	↱
Volume (vph)	81	922	1006	195	287	88
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	12	10	11	12	10	10
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		1.00	1.00
Frpb, ped/bikes		1.00	1.00		1.00	0.99
Flpb, ped/bikes		1.00	1.00		1.00	1.00
Frt		1.00	0.98		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		3119	3112		1506	1343
Flt Permitted		0.68	1.00		0.95	1.00
Satd. Flow (perm)		2145	3112		1506	1343
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	85	971	1059	205	302	93
RTOR Reduction (vph)	0	0	25	0	0	47
Lane Group Flow (vph)	0	1056	1239	0	302	46
Confl. Peds. (#/hr)	2			2		1
Heavy Vehicles (%)	1%	2%	2%	10%	6%	5%
Turn Type	Perm					Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)		34.0	34.0		23.0	23.0
Effective Green, g (s)		34.0	34.0		23.0	23.0
Actuated g/C Ratio		0.52	0.52		0.35	0.35
Clearance Time (s)		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		1122	1628		533	475
v/s Ratio Prot			0.40		c0.20	
v/s Ratio Perm		c0.49				0.03
v/c Ratio		0.94	0.76		0.57	0.10
Uniform Delay, d1		14.6	12.3		17.0	14.0
Progression Factor		1.00	1.00		1.81	3.00
Incremental Delay, d2		16.0	3.4		3.4	0.3
Delay (s)		30.6	15.7		34.1	42.4
Level of Service		C	B		C	D
Approach Delay (s)		30.6	15.7		36.0	
Approach LOS		C	B		D	

Intersection Summary			
HCM Average Control Delay	24.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	92.1%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1073: 130th Street & Indiana Avenue

1/14/2013

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↱		↰	↑	↰	↱
Volume (vph)	808	261	399	1090	205	127
Ideal Flow (vphpl)	2300	1800	1800	2300	1800	1800
Lane Width	15	12	14	16	15	12
Total Lost time (s)	5.0		3.0	5.0	5.0	5.0
Lane Util. Factor	1.00		1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00		1.00	1.00	1.00	0.99
Flpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Frt	0.97		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	2399		1788	2506	1758	1509
Flt Permitted	1.00		0.09	1.00	0.95	1.00
Satd. Flow (perm)	2399		163	2506	1758	1509
Peak-hour factor, PHF	0.98	0.98	0.90	0.90	0.98	0.98
Adj. Flow (vph)	824	266	443	1211	209	130
RTOR Reduction (vph)	11	0	0	0	0	107
Lane Group Flow (vph)	1079	0	443	1211	209	23
Confl. Peds. (#/hr)						1
Heavy Vehicles (%)	2%	2%	2%	4%	7%	0%
Turn Type			pm+pt			Perm
Protected Phases	4		3	8	2	
Permitted Phases			8			2
Actuated Green, G (s)	43.1		66.1	66.1	16.1	16.1
Effective Green, g (s)	43.1		66.1	66.1	16.1	16.1
Actuated g/C Ratio	0.47		0.72	0.72	0.17	0.17
Clearance Time (s)	5.0		3.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1121		469	1797	307	264
v/s Ratio Prot	0.45		c0.20	0.48	c0.12	
v/s Ratio Perm			c0.47			0.02
v/c Ratio	0.96		0.94	0.67	0.68	0.09
Uniform Delay, d1	23.8		28.5	7.1	35.6	31.9
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	18.5		27.9	1.0	6.1	0.1
Delay (s)	42.3		56.4	8.2	41.7	32.0
Level of Service	D		E	A	D	C
Approach Delay (s)	42.3			21.1	38.0	
Approach LOS	D			C	D	

Intersection Summary			
HCM Average Control Delay	30.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	92.2	Sum of lost time (s)	8.0
Intersection Capacity Utilization	95.3%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑↑	↱		↰↑	↱		✥	
Volume (vph)	1	1620	38	112	861	1	62	0	157	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	15	13	11	11	12	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0	4.0	3.0	3.0	4.0		4.0	4.0			
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00	1.00			
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85			
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.95	1.00			
Satd. Flow (prot)	1881	3431	1479	1589	3320	1530		1938	1500			
Flt Permitted	0.30	1.00	1.00	0.08	1.00	1.00		0.76	1.00			
Satd. Flow (perm)	592	3431	1479	126	3320	1530		1545	1500			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1	1800	42	124	957	1	69	0	174	0	0	0
RTOR Reduction (vph)	0	0	12	0	0	0	0	0	142	0	0	0
Lane Group Flow (vph)	1	1800	30	124	957	1	0	69	32	0	0	0
Heavy Vehicles (%)	0%	3%	0%	4%	3%	0%	0%	0%	2%	0%	0%	0%
Turn Type	Perm		Perm	custom		custom	Perm		Perm	Perm		
Protected Phases		4		3	3 8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)	50.1	50.1	50.1	67.7	67.7	67.7		9.3	9.3			
Effective Green, g (s)	50.1	50.1	50.1	67.7	67.7	67.7		9.3	9.3			
Actuated g/C Ratio	0.59	0.59	0.59	0.80	0.80	0.80		0.11	0.11			
Clearance Time (s)	4.0	4.0	4.0	3.0		4.0		4.0	4.0			
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0		3.0	3.0			
Lane Grp Cap (vph)	349	2022	872	352	2644	1219		169	164			
v/s Ratio Prot		c0.52		0.06	c0.29							
v/s Ratio Perm	0.00		0.02	0.22		0.00		c0.04	0.02			
v/c Ratio	0.00	0.89	0.03	0.35	0.36	0.00		0.41	0.19			
Uniform Delay, d1	7.2	15.1	7.3	13.6	2.5	1.8		35.3	34.4			
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00			
Incremental Delay, d2	0.0	6.4	0.1	0.6	0.1	0.0		1.6	0.6			
Delay (s)	7.2	21.5	7.4	14.2	2.6	1.8		36.9	35.0			
Level of Service	A	C	A	B	A	A		D	D			
Approach Delay (s)		21.1			3.9			35.5			0.0	
Approach LOS		C			A			D			A	

Intersection Summary			
HCM Average Control Delay	16.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	68.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1942: 111th Street & Langley Avenue

1/14/2013

	↗	→	←	↖	↘	↙
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰↑	↑↱		↲↳	
Volume (vph)	11	966	846	30	71	14
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10
Total Lost time (s)		5.0	5.0		3.0	
Lane Util. Factor		0.95	0.95		1.00	
Frt		1.00	0.99		0.98	
Flt Protected		1.00	1.00		0.96	
Satd. Flow (prot)		3097	3083		1530	
Flt Permitted		0.94	1.00		0.96	
Satd. Flow (perm)		2912	3083		1530	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	12	1073	940	33	79	16
RTOR Reduction (vph)	0	0	3	0	8	0
Lane Group Flow (vph)	0	1085	970	0	87	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type	Perm					
Protected Phases		4	8 2 11		5	
Permitted Phases	4					
Actuated Green, G (s)		33.0	61.0		4.0	
Effective Green, g (s)		33.0	61.0		4.0	
Actuated g/C Ratio		0.37	0.68		0.04	
Clearance Time (s)		5.0			3.0	
Lane Grp Cap (vph)		1068	2090		68	
v/s Ratio Prot			c0.31		c0.06	
v/s Ratio Perm		c0.37				
v/c Ratio		1.02	0.46		1.28	
Uniform Delay, d1		28.5	6.8		43.0	
Progression Factor		1.00	0.01		1.00	
Incremental Delay, d2		31.6	0.2		203.3	
Delay (s)		60.1	0.2		246.3	
Level of Service		E	A		F	
Approach Delay (s)		60.1	0.2		246.3	
Approach LOS		E	A		F	

Intersection Summary			
HCM Average Control Delay	41.2	HCM Level of Service	D
HCM Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	31.0
Intersection Capacity Utilization	48.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1955: 115th Street & Cottage Grove Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑ ↑↱			↰↑↱			↰↑	↱
Volume (vph)	98	520	0	1	589	39	3	2	28	202	0	148
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	12	12	11	12	11
Total Lost time (s)		4.0			4.0			3.0			3.0	3.0
Lane Util. Factor		1.00			0.95			1.00			1.00	1.00
Frpb, ped/bikes		1.00			1.00			0.94			1.00	0.97
Flpb, ped/bikes		1.00			1.00			1.00			0.98	1.00
Frt		1.00			0.99			0.88			1.00	0.85
Flt Protected		0.99			1.00			1.00			0.95	1.00
Satd. Flow (prot)		1767			3342			1463			1667	1346
Flt Permitted		0.79			0.95			0.77			0.86	1.00
Satd. Flow (perm)		1410			3192			1132			1515	1346
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	109	578	0	1	654	43	3	2	31	224	0	164
RTOR Reduction (vph)	0	0	0	0	5	0	0	28	0	0	0	117
Lane Group Flow (vph)	0	687	0	0	693	0	0	8	0	0	224	47
Confl. Peds. (#/hr)	60		44	44		60	14		10	10		14
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	0%	1%	0%	0%	1%	3%	20%	0%	0%	1%	0%	7%
Turn Type	Perm			Prot			Perm			pm+pt		Perm
Protected Phases		4		3	3 4			1		2	1 2	
Permitted Phases	4				3		1	1		1 2		1 2
Actuated Green, G (s)		40.0			52.0			9.0			23.0	26.0
Effective Green, g (s)		40.0			52.0			9.0			23.0	26.0
Actuated g/C Ratio		0.44			0.58			0.10			0.26	0.29
Clearance Time (s)		4.0						3.0				
Lane Grp Cap (vph)		627			1864			113			411	389
v/s Ratio Prot					c0.05						c0.08	
v/s Ratio Perm		c0.49			0.17			0.01			c0.05	0.04
v/c Ratio		1.10			0.37			0.07			0.55	0.12
Uniform Delay, d1		25.0			10.2			36.7			29.0	23.6
Progression Factor		1.00			0.89			1.00			1.00	1.00
Incremental Delay, d2		64.9			0.2			1.2			5.1	0.6
Delay (s)		89.9			9.4			37.9			34.1	24.2
Level of Service		F			A			D			C	C
Approach Delay (s)		89.9			9.4			37.9			29.9	
Approach LOS		F			A			D			C	

Intersection Summary			
HCM Average Control Delay	44.9	HCM Level of Service	D
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	81.9%	ICU Level of Service	D
Analysis Period (min)	15		

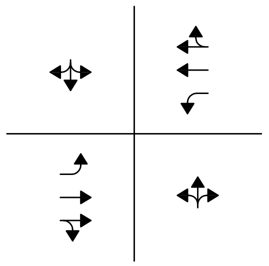
c Critical Lane Group

Appendix D
Union Pacific Railroad (UPRR) Rail Alternative - Right-of-Way Option

UPRR Right-of-Way Option Alternative Project Traffic Estimates

ITE Land Use	Unit	Trip Generation Rate			Peak Hour Direction			
		Daily	AM Peak Hour	PM Peak Hour	AM In	AM Out	PM In	PM Out
Light Rail with Park and Ride	Parking Spaces	2.51	1.07	1.24	80%	20%	20%	80%

UPRR ROW Alternative Park and Ride Facilities		Estimated Project Traffic						
Location	Parking Spaces	Daily	AM In	AM Out	AM Total	PM In	PM Out	PM Total
103rd Street	200	502	171	43	214	50	198	248
111th Street	200	502	171	43	214	50	198	248
Michigan Avenue	1,000	2,510	856	214	1,070	248	992	1,240
130th Street	2,300	5,773	1,969	492	2,461	570	2,282	2,852
Total	**3,700**	**9,287**	**3,167**	**792**	**3,959**	**918**	**3,670**	**4,588**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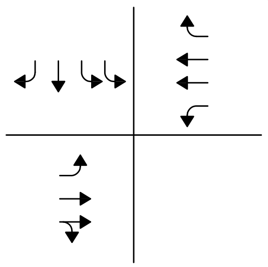
Wentworth Avenue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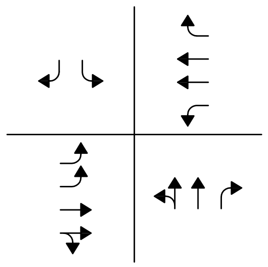
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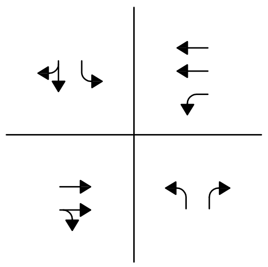
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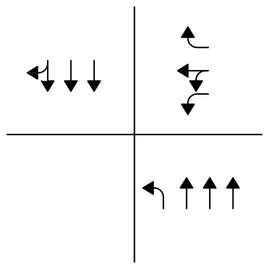
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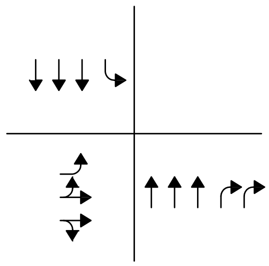
Halsted Street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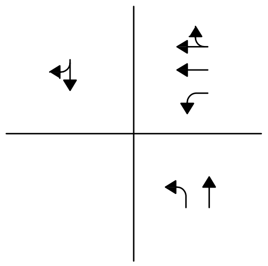
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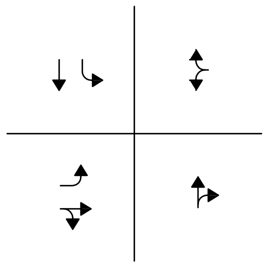
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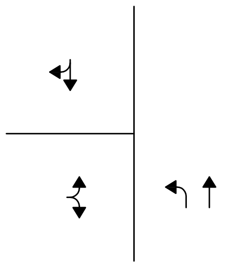
Wentworth Avenue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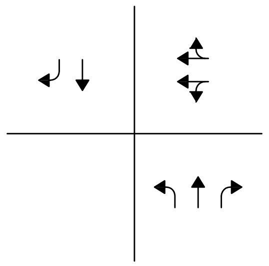
State Street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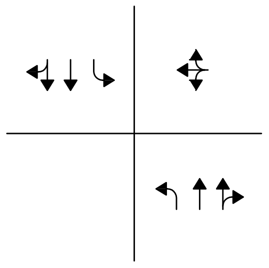
Michigan Avenue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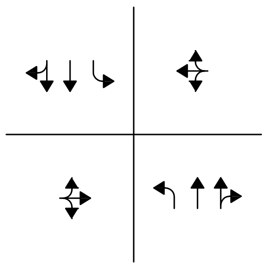
Martin Luther King Jr Drive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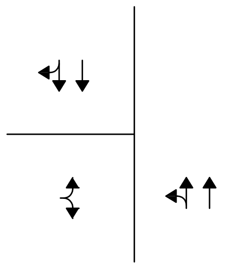
Martin Luther King Jr Drive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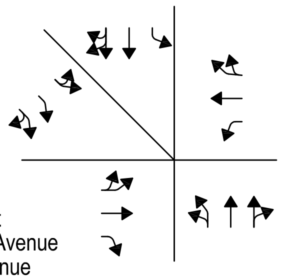
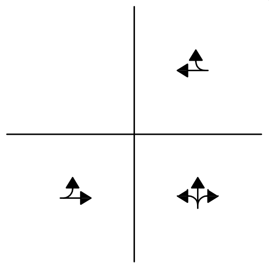
Cottage Grove Avenue


14 103rd Street
Vincennes Avenue
Beverly Avenue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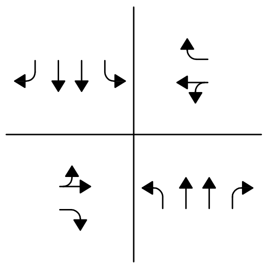
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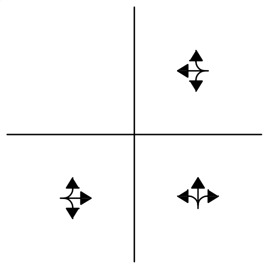
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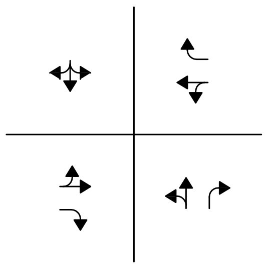
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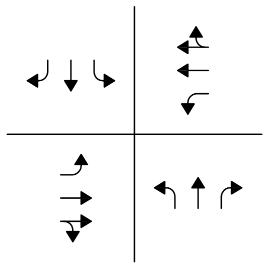
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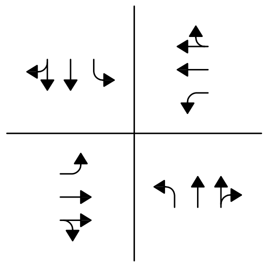
State Street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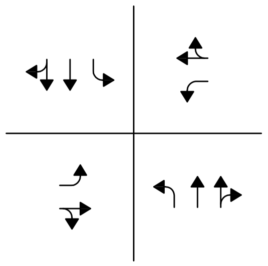
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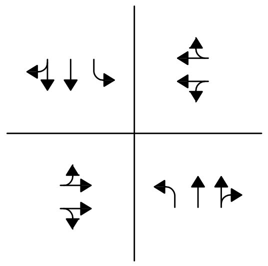
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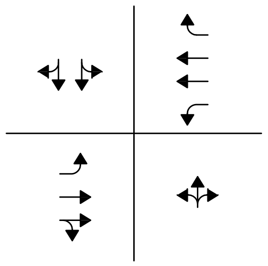
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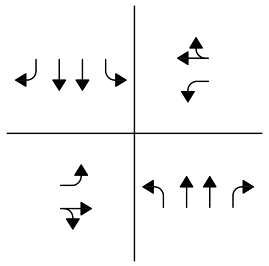
24 107th Street
Halsted Street

UPRR ROW Option Alternative (2026) Intersection Lane Geometry

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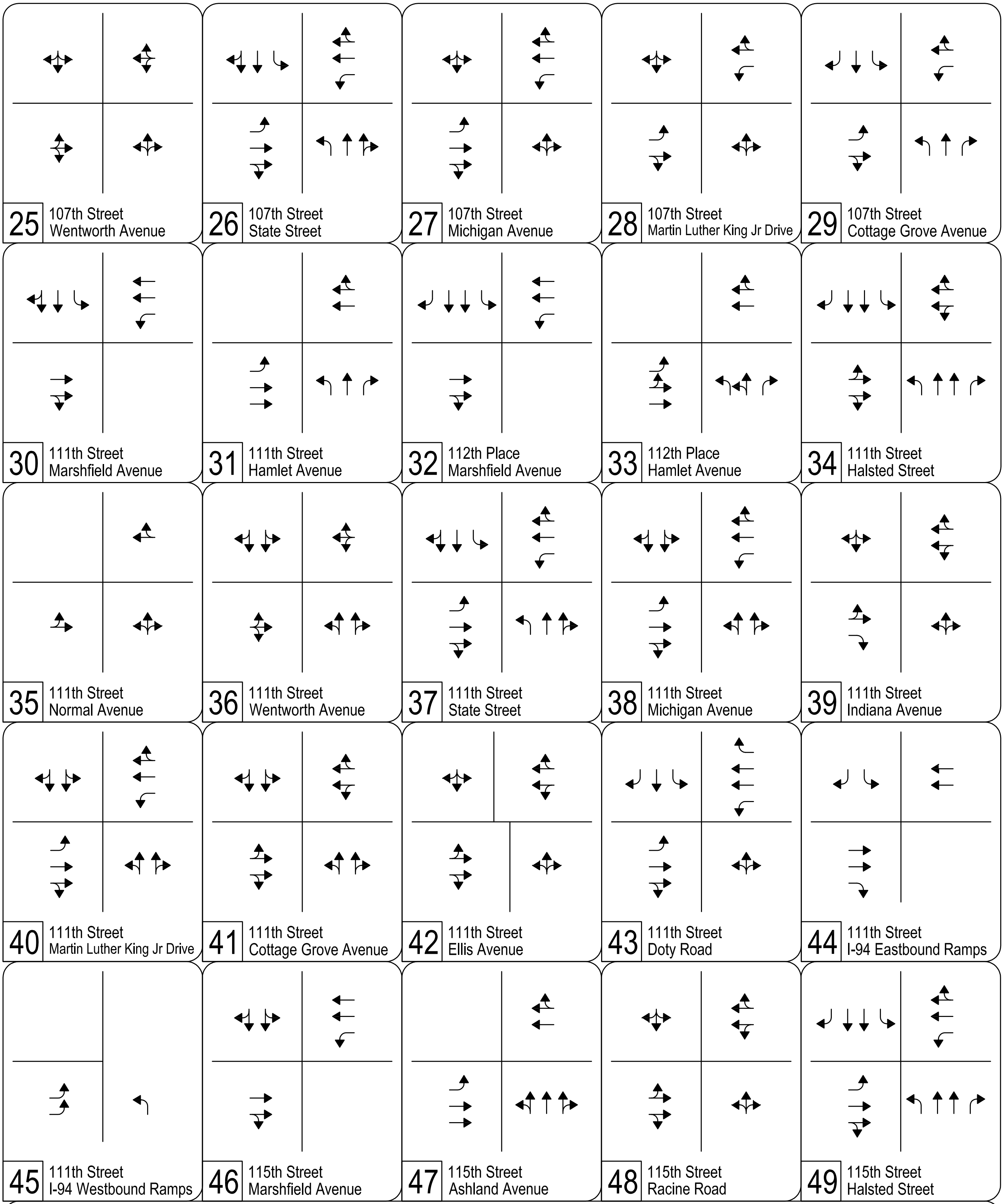
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27 107th Street Michigan Avenue
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29 107th Street Cottage Grove Avenue
30 111th Street Marshfield Avenue
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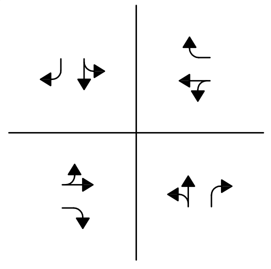
32 112th Place Marshfield Avenue
33 112th Place Hamlet Avenue
34 111th Street Halsted Street
35 111th Street Normal Avenue
36 111th Street Wentworth Avenue
37 111th Street State Street
38 111th Street Michigan Avenue
39 111th Street Indiana Avenue
40 111th Street Martin Luther King Jr Drive
41 111th Street Cottage Grove Avenue
42 111th Street Ellis Avenue
43 111th Street Doty Road
44 111th Street I-94 Eastbound Ramps
45 111th Street I-94 Westbound Ramps
46 115th Street Marshfield Avenue
47 115th Street Ashland Avenue
48 115th Street Racine Road
49 115th Street Halsted Street

UPRR ROW Option Alternative (2026) Intersection Lane Geometry

Page 2 of 3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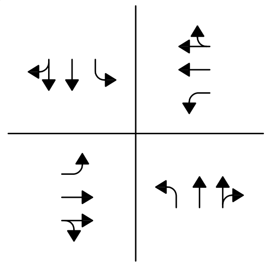
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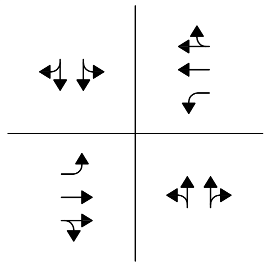
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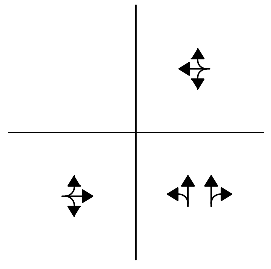
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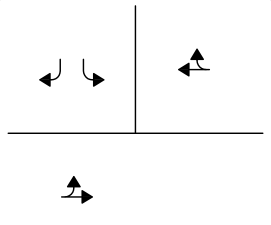
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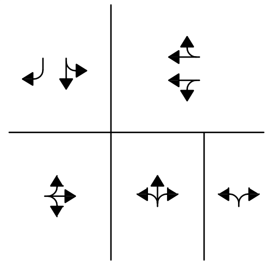
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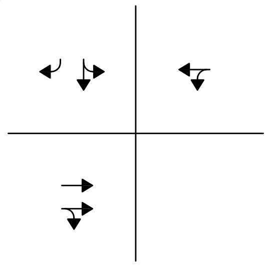
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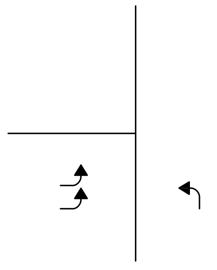
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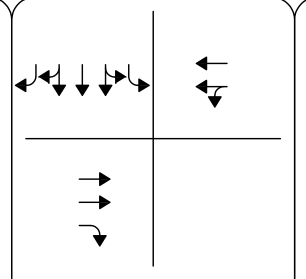
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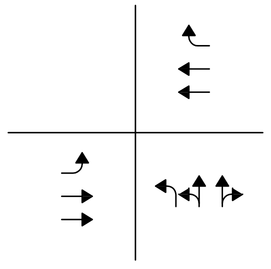
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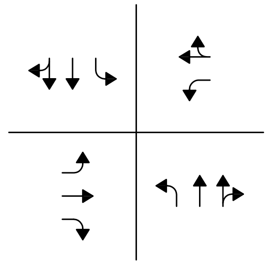
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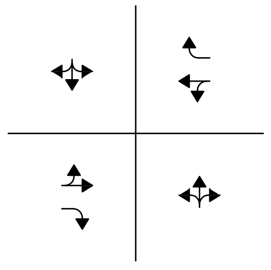
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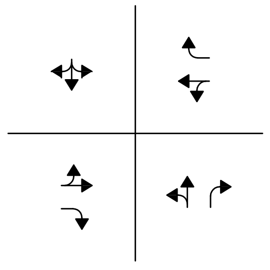
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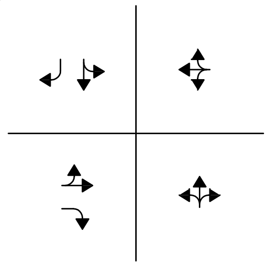
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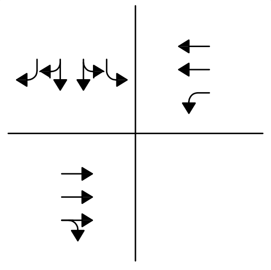
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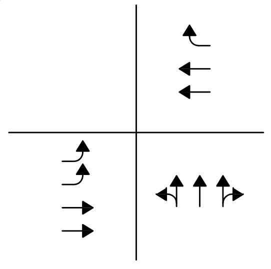
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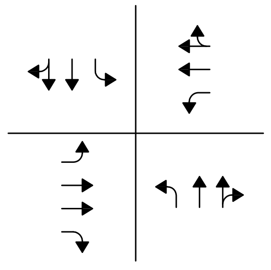
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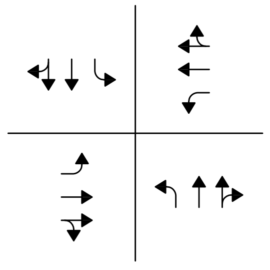
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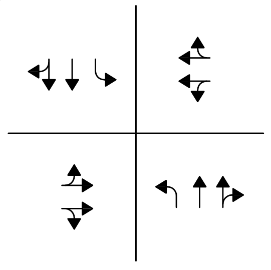
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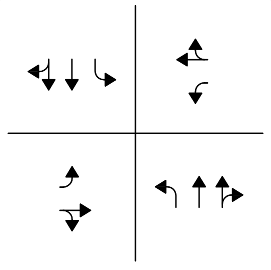
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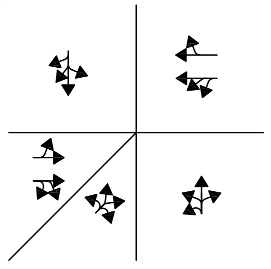
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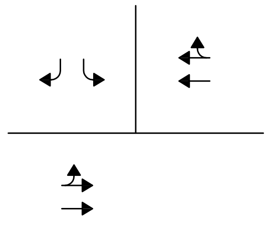
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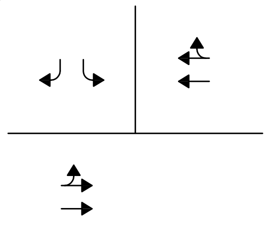
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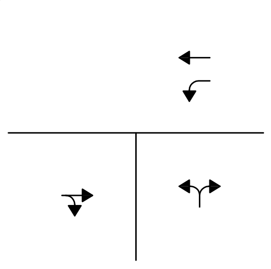
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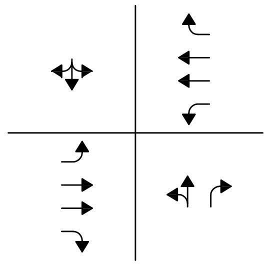
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UPRR ROW Option Alternative (2026) Intersection Lane Geometry

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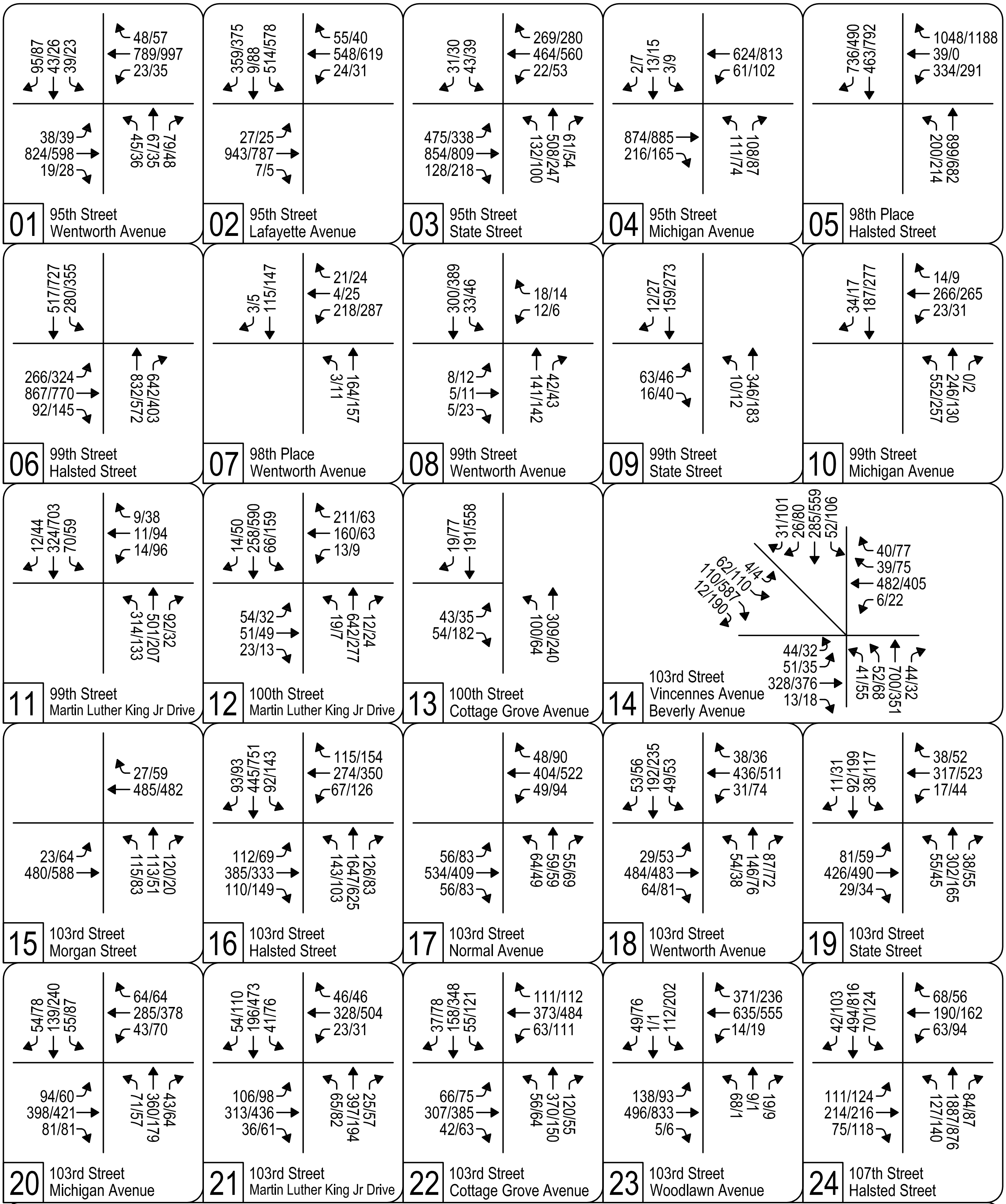
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514/578
55/40
548/619
24/31
27/25
943/787
7/5
02
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Lafayette Avenue
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43/39
269/280
464/560
22/53
475/338
854/809
128/218
132/100
508/247
61/54
03
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State Street
2/7
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3/9
624/813
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874/885
216/165
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108/87
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Michigan Avenue
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463/792
1048/1188
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98th Place
Halsted Street
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Halsted Street
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Wentworth Avenue
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State Street
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Martin Luther King Jr Drive
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Martin Luther King Jr Drive
19/77
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Cottage Grove Avenue
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4/4
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103rd Street
Vincennes Avenue
Beverly Avenue
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480/588
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103rd Street
Morgan Street
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115/154
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385/333
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143/103
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Normal Avenue
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State Street
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103rd Street
Cottage Grove Avenue
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1/1
112/202
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635/555
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138/93
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68/1
9/1
19/9
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103rd Street
Woodlawn Avenue
42/103
494/816
70/124
68/56
190/162
63/94
111/124
214/216
75/118
127/140
1887/876
84/87
24
107th Street
Halsted Street

UPRR ROW Option Alternative (2026) Intersection Traffic Volumes

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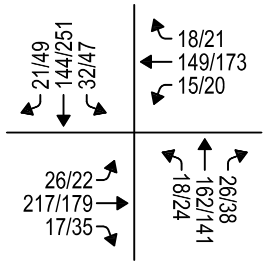
Legend: AM/PM Peak Hour Volumes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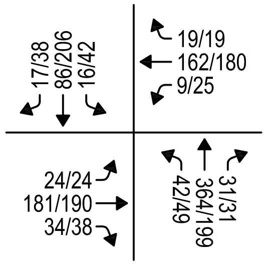
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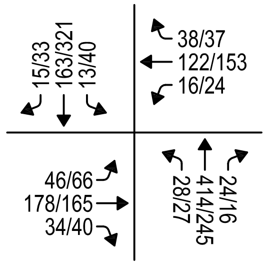
26 107th Street
State Street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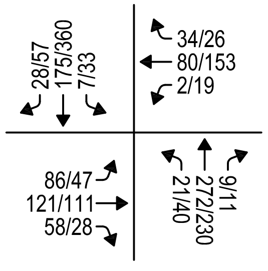
27 107th Street
Michigan Avenue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28 107th Street
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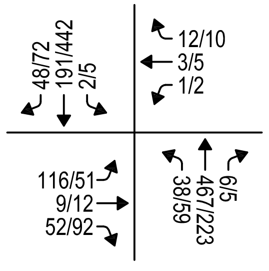
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29 107th Street
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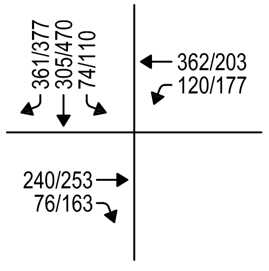
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30 111th Street
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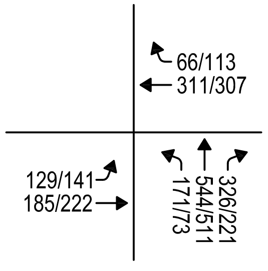
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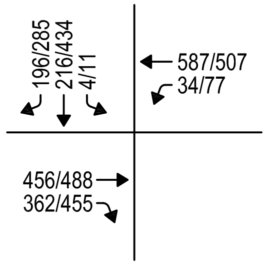
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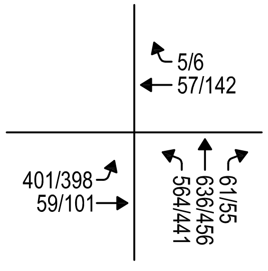
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33 112th Place
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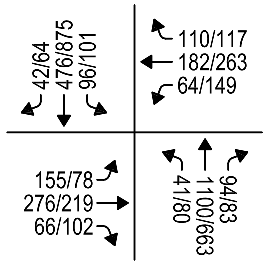
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34 111th Street
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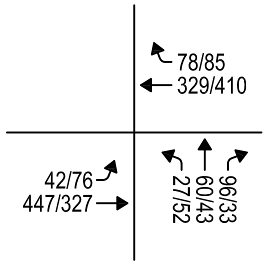
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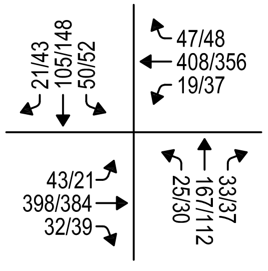
35 111th Street
Normal Avenue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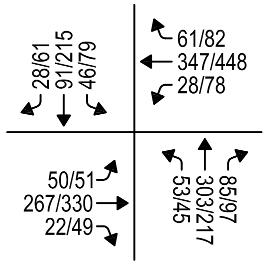
36 111th Street
Wentworth Avenue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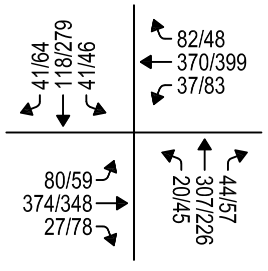
37 111th Street
State Street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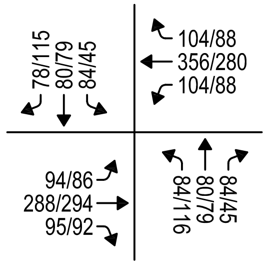
38 111th Street
Michigan Avenue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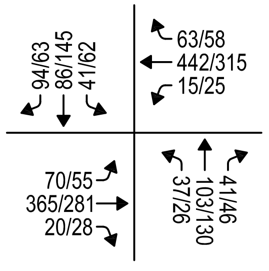
39 111th Street
Indiana Avenue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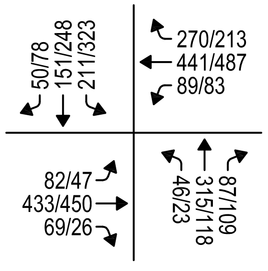
40 111th Street
Martin Luther King Jr Drive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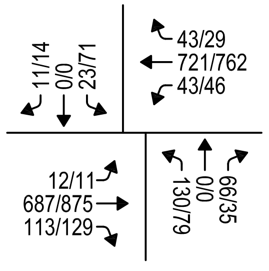
41 111th Street
Cottage Grove Avenue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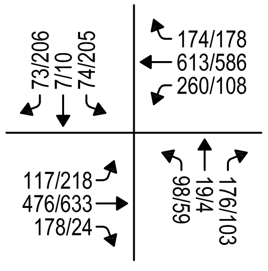
42 111th Street
Ellis Avenue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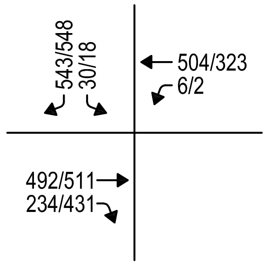
43 111th Street
Doty Road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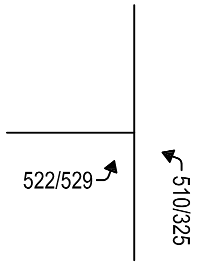
I-94 Eastbound Ramps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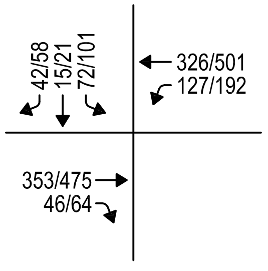
I-94 Westbound Ramps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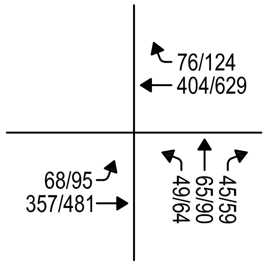
46 115th Street
Marshfield Avenue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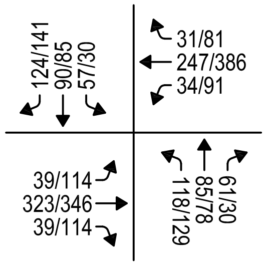
47 115th Street
Ashland Avenue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118/129
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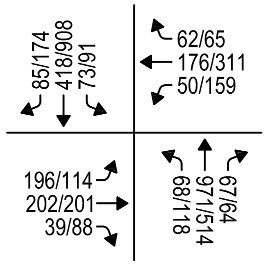
61/30

48 115th Street
Racine Road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50/159
196/114
202/201
39/88
68/118
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49 115th Street
Halsted Street

UPRR ROW Option Alternative (2026) Intersection Traffic Volumes

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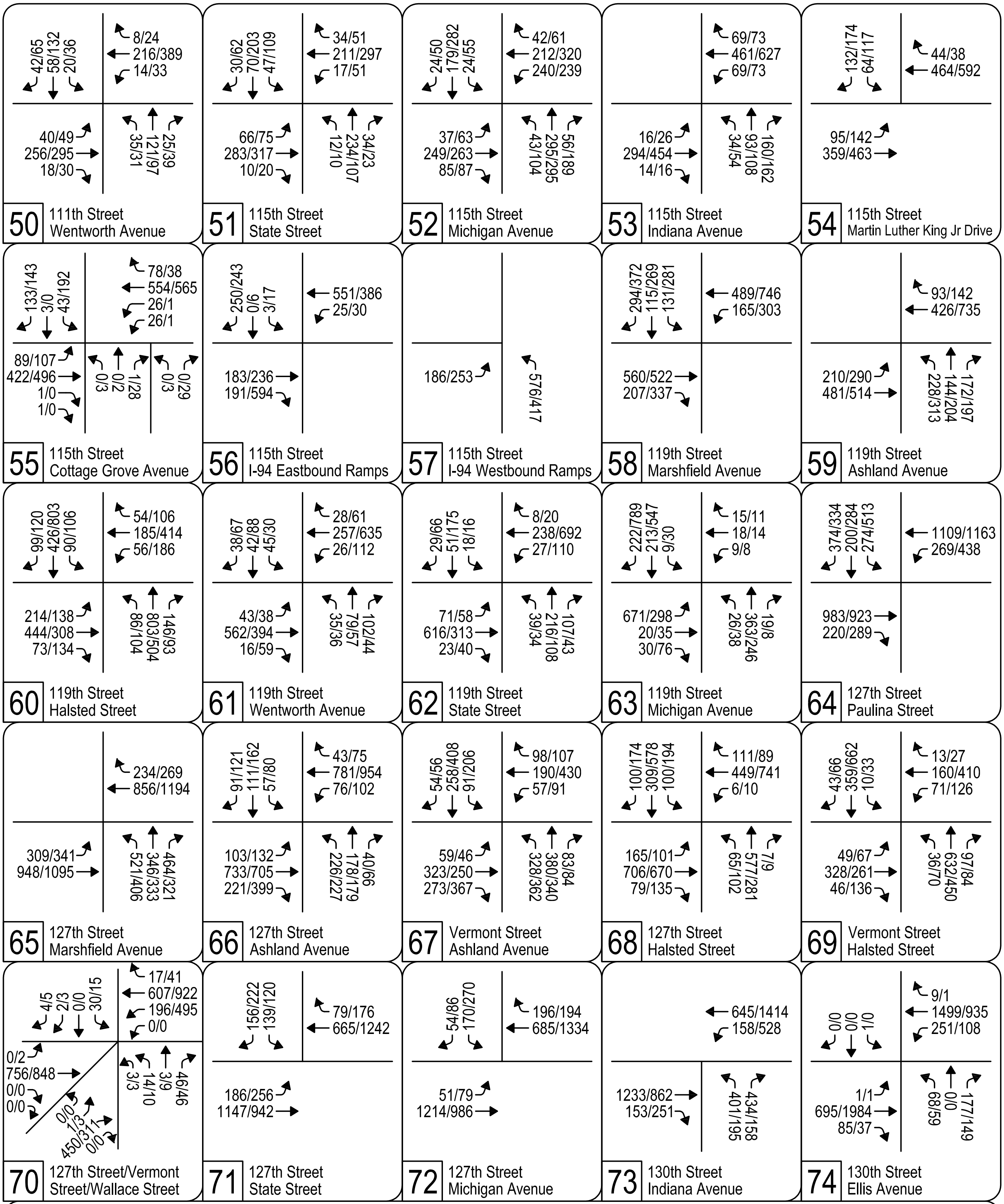
Legend: AM/PM Peak Hour Volumes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Wentworth Avenue
30/62
70/203
47/109
34/51
211/297
17/51
66/75
283/317
10/20
12/10
234/107
34/23
51
115th Street
State Street
24/50
179/282
24/55
42/61
212/320
240/239
37/63
249/263
85/87
43/104
295/295
56/189
52
115th Street
Michigan Avenue
69/73
461/627
69/73
16/26
294/454
14/16
34/54
93/108
160/162
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115th Street
Indiana Avenue
132/174
64/117
44/38
464/592
95/142
359/463
54
115th Street
Martin Luther King Jr Drive
133/143
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43/192
78/38
554/565
26/1
26/1
89/107
422/496
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1/0
0/3
0/2
1/28
0/3
0/29
55
115th Street
Cottage Grove Avenue
250/243
0/6
3/17
551/386
25/30
183/236
191/594
56
115th Street
I-94 Eastbound Ramps
186/253
576/417
57
115th Street
I-94 Westbound Ramps
294/372
115/269
131/281
489/746
165/303
560/522
207/337
58
119th Street
Marshfield Avenue
93/142
426/735
210/290
481/514
228/313
144/204
172/197
59
119th Street
Ashland Avenue
99/120
426/803
90/106
54/106
185/414
56/186
214/138
444/308
73/134
86/104
803/504
146/93
60
119th Street
Halsted Street
38/67
42/88
45/30
28/61
257/635
26/112
43/38
562/394
16/59
35/36
79/57
102/44
61
119th Street
Wentworth Avenue
29/66
51/175
18/16
8/20
238/692
27/110
71/58
616/313
23/40
39/34
216/108
107/43
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State Street
222/789
213/547
9/30
15/11
18/14
9/8
671/298
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30/76
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363/246
19/8
63
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Michigan Avenue
374/334
200/284
274/513
1109/1163
269/438
983/923
220/289
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127th Street
Paulina Street
234/269
856/1194
309/341
948/1095
521/406
346/333
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91/121
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43/75
781/954
76/102
103/132
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226/227
178/179
40/66
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Ashland Avenue
54/56
258/408
91/206
98/107
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57/91
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273/367
328/362
380/340
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100/174
309/578
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6/10
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Vermont Street
Halsted Street
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Street/Wallace Street
156/222
139/120
79/176
665/1242
186/256
1147/942
71
127th Street
State Street
54/86
170/270
196/194
685/1334
51/79
1214/986
72
127th Street
Michigan Avenue
645/1414
158/528
1233/862
153/251
401/195
434/158
73
130th Street
Indiana Avenue
0/0
0/0
1/0
9/1
1499/935
251/108
1/1
695/1984
85/37
68/59
0/0
177/149
74
130th Street
Ellis Avenue

UPRR ROW Option Alternative (2026) Intersection Traffic Volumes

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Legend: AM/PM Peak Hour Volumes

HCM Signalized Intersection Capacity Analysis
1001: 95th Street & Wentworth Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			✥			✥	
Volume (vph)	38	824	19	23	789	48	45	67	79	39	43	95
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	16	10	10	16	8	15	8	8	14	8
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			0.99			0.99	
Flpb, ped/bikes	0.98	1.00		1.00	1.00			1.00			1.00	
Frt	1.00	1.00		1.00	0.99			0.94			0.93	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1416	2975		1592	2978			1754			1673	
Flt Permitted	0.26	1.00		0.26	1.00			0.90			0.91	
Satd. Flow (perm)	384	2975		429	2978			1598			1532	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	40	867	20	24	831	51	47	71	83	41	45	100
RTOR Reduction (vph)	0	2	0	0	7	0	0	39	0	0	63	0
Lane Group Flow (vph)	40	885	0	24	875	0	0	162	0	0	123	0
Confl. Peds. (#/hr)	61		11	11		61	3		5	5		3
Confl. Bikes (#/hr)	1		1	1		1						
Heavy Vehicles (%)	11%	7%	0%	0%	6%	2%	2%	7%	4%	5%	7%	3%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	34.0	34.0		34.0	34.0			22.0			22.0	
Effective Green, g (s)	34.0	34.0		34.0	34.0			23.0			23.0	
Actuated g/C Ratio	0.52	0.52		0.52	0.52			0.35			0.35	
Clearance Time (s)	4.0	4.0		4.0	4.0			5.0			5.0	
Lane Grp Cap (vph)	201	1556		224	1558			565			542	
v/s Ratio Prot		c0.30			0.29							
v/s Ratio Perm	0.10			0.06				c0.10			0.08	
v/c Ratio	0.20	0.57		0.11	0.56			0.29			0.23	
Uniform Delay, d1	8.3	10.5		7.8	10.5			15.1			14.8	
Progression Factor	1.00	1.00		0.82	1.13			1.00			1.00	
Incremental Delay, d2	2.2	1.5		0.8	1.3			1.3			1.0	
Delay (s)	10.5	12.0		7.2	13.1			16.4			15.7	
Level of Service	B	B		A	B			B			B	
Approach Delay (s)		12.0			12.9			16.4			15.7	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	13.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↑	↱				↰↰	↑	↱
Volume (vph)	27	943	7	24	548	55	0	0	0	514	9	359
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	5.0	5.0		3.0	3.0	3.0				5.0	5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00				0.97	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.67				1.00	1.00	0.96
Flpb, ped/bikes	0.91	1.00		1.00	1.00	1.00				1.00	1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85				1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00				0.95	1.00	1.00
Satd. Flow (prot)	776	3285		1710	3138	512				3100	1440	1399
Flt Permitted	0.43	1.00		0.14	1.00	1.00				0.95	1.00	1.00
Satd. Flow (perm)	355	3285		248	3138	512				3100	1440	1399
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	28	993	7	25	577	58	0	0	0	541	9	378
RTOR Reduction (vph)	0	1	0	0	0	25	0	0	0	0	0	172
Lane Group Flow (vph)	28	999	0	25	577	33	0	0	0	541	9	206
Confl. Peds. (#/hr)	354		13	13		354	22		22	22		22
Confl. Bikes (#/hr)	4					4			1	1		
Heavy Vehicles (%)	100%	4%	0%	0%	9%	100%	0%	0%	0%	7%	25%	5%
Turn Type	pm+pt			pm+pt		Perm				Split		Perm
Protected Phases	7	4		3	8					6	6	
Permitted Phases	4			8		8						6
Actuated Green, G (s)	43.0	43.0		73.0	73.0	73.0				30.0	30.0	30.0
Effective Green, g (s)	43.0	43.0		73.0	73.0	73.0				30.0	30.0	30.0
Actuated g/C Ratio	0.33	0.33		0.56	0.56	0.56				0.23	0.23	0.23
Clearance Time (s)	5.0	5.0		3.0	3.0	3.0				5.0	5.0	5.0
Lane Grp Cap (vph)	163	1087		634	1762	288				715	332	323
v/s Ratio Prot	0.02	c0.30		0.01	c0.18					c0.17	0.01	
v/s Ratio Perm	0.04			0.01		0.06						0.15
v/c Ratio	0.17	0.92		0.04	0.33	0.11				0.76	0.03	0.64
Uniform Delay, d1	31.6	41.8		15.1	15.3	13.3				46.6	38.7	45.1
Progression Factor	0.80	0.83		0.30	0.63	1.55				1.00	1.00	1.00
Incremental Delay, d2	2.0	12.2		0.1	0.3	0.5				7.3	0.2	9.2
Delay (s)	27.2	46.8		4.6	10.0	21.2				53.9	38.9	54.3
Level of Service	C	D		A	A	C				D	D	D
Approach Delay (s)		46.2			10.8			0.0			54.0	
Approach LOS		D			B			A			D	

Intersection Summary			
HCM Average Control Delay	40.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	51.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1003: 95th Street & State Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↱		↰	↑↑	↱		↰↑	↱	↰		↱
Volume (vph)	475	854	128	22	464	269	132	508	61	43	0	31
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0	3.0		5.0	5.0	5.0		5.0	5.0	5.0		5.0
Lane Util. Factor	0.97	0.95		1.00	0.95	1.00		0.95	1.00	1.00		1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.65		1.00	0.94	1.00		0.96
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Frt	1.00	0.98		1.00	1.00	0.85		1.00	0.85	1.00		0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.99	1.00	0.95		1.00
Satd. Flow (prot)	3190	3107		1555	2923	944		3300	1417	855		734
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.99	1.00	0.95		1.00
Satd. Flow (perm)	3190	3107		1555	2923	944		3300	1417	855		734
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	500	899	135	23	488	283	139	535	64	45	0	33
RTOR Reduction (vph)	0	9	0	0	0	161	0	0	25	0	0	31
Lane Group Flow (vph)	500	1026	0	23	488	122	0	674	39	45	0	2
Confl. Peds. (#/hr)	425		21	21		425	6		34	34		6
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	4%	8%	3%	10%	17%	5%	1%	3%	2%	100%	0%	100%
Turn Type	Prot			Prot		Perm	Split		Perm	Prot		custom
Protected Phases	7	4		3	8		2	2		6		
Permitted Phases						8			2			6
Actuated Green, G (s)	43.0	65.0		9.0	31.0	31.0		30.0	30.0	8.0		8.0
Effective Green, g (s)	43.0	65.0		9.0	31.0	31.0		30.0	30.0	8.0		8.0
Actuated g/C Ratio	0.33	0.50		0.07	0.24	0.24		0.23	0.23	0.06		0.06
Clearance Time (s)	3.0	3.0		5.0	5.0	5.0		5.0	5.0	5.0		5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0	3.0	3.0		3.0
Lane Grp Cap (vph)	1055	1554		108	697	225		762	327	53		45
v/s Ratio Prot	0.16	c0.33		0.01	c0.17			c0.20		c0.05		
v/s Ratio Perm						0.13			0.03			0.00
v/c Ratio	0.47	0.66		0.21	0.70	0.54		0.88	0.12	0.85		0.05
Uniform Delay, d1	34.5	24.3		57.2	45.3	43.3		48.3	39.5	60.4		57.4
Progression Factor	0.75	0.19		1.00	1.00	1.00		0.95	0.90	1.00		1.00
Incremental Delay, d2	0.7	1.1		4.5	5.8	9.0		14.1	0.7	70.0		0.4
Delay (s)	26.6	5.7		61.6	51.0	52.3		59.8	36.3	130.4		57.8
Level of Service	C	A		E	D	D		E	D	F		E
Approach Delay (s)		12.5			51.8			57.7			99.7	
Approach LOS		B			D			E			F	

Intersection Summary			
HCM Average Control Delay	35.2	HCM Level of Service	D
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	71.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1004: 95th Street & Michigan Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱		↰	↑↑		↰		↱	↰	↱	
Volume (vph)	0	874	216	61	624	0	111	0	108	3	13	2
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	11	11	8	12	12	12	14	15	12
Total Lost time (s)		4.0		4.0	4.0		4.0		4.0	4.0	4.0	
Lane Util. Factor		0.95		1.00	0.95		1.00		1.00	1.00	1.00	
Frpb, ped/bikes		0.99		1.00	1.00		1.00		0.98	1.00	1.00	
Flpb, ped/bikes		1.00		1.00	1.00		1.00		1.00	0.99	1.00	
Frt		0.97		1.00	1.00		1.00		0.85	1.00	0.98	
Flt Protected		1.00		0.95	1.00		0.95		1.00	0.95	1.00	
Satd. Flow (prot)		2860		1650	3005		1390		1465	1803	1943	
Flt Permitted		1.00		0.16	1.00		0.75		1.00	0.95	1.00	
Satd. Flow (perm)		2860		283	3005		1093		1465	1803	1943	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	971	240	68	693	0	123	0	120	3	14	2
RTOR Reduction (vph)	0	22	0	0	0	0	0	0	82	0	1	0
Lane Group Flow (vph)	0	1189	0	68	693	0	123	0	38	3	15	0
Confl. Peds. (#/hr)	49		15	15		49			12	12		
Heavy Vehicles (%)	0%	6%	14%	0%	10%	0%	23%	0%	2%	0%	0%	0%
Turn Type				Perm			custom		custom	Perm		
Protected Phases		4			8						6	
Permitted Phases				8			2		2	6		
Actuated Green, G (s)		60.0		60.0	60.0		32.0		32.0	32.0	32.0	
Effective Green, g (s)		60.0		60.0	60.0		32.0		32.0	32.0	32.0	
Actuated g/C Ratio		0.60		0.60	0.60		0.32		0.32	0.32	0.32	
Clearance Time (s)		4.0		4.0	4.0		4.0		4.0	4.0	4.0	
Lane Grp Cap (vph)		1716		170	1803		350		469	577	622	
v/s Ratio Prot		c0.42			0.23						0.01	
v/s Ratio Perm				0.24			c0.11		0.03	0.00		
v/c Ratio		0.69		0.40	0.38		0.35		0.08	0.01	0.02	
Uniform Delay, d1		13.7		10.5	10.4		26.0		23.7	23.2	23.3	
Progression Factor		1.00		1.00	1.00		1.00		1.00	1.00	1.00	
Incremental Delay, d2		2.3		6.9	0.6		2.8		0.3	0.0	0.1	
Delay (s)		16.0		17.4	11.0		28.8		24.1	23.2	23.4	
Level of Service		B		B	B		C		C	C	C	
Approach Delay (s)		16.0			11.6			26.5			23.3	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM Average Control Delay	15.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	59.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1005: 98th Place & Halsted Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↰	⬑	↱	↰	↑↑↑			↑↑↱	
Volume (vph)	0	0	0	334	39	1048	200	899	0	0	463	736
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	12	12	10	10	12	12	11	12
Total Lost time (s)				4.0	4.0	5.0	3.0	4.0			4.0	
Lane Util. Factor				0.95	0.95	1.00	1.00	0.91			0.91	
Frpb, ped/bikes				1.00	1.00	0.99	1.00	1.00			0.98	
Flpb, ped/bikes				1.00	1.00	1.00	1.00	1.00			1.00	
Frt				1.00	1.00	0.85	1.00	1.00			0.91	
Flt Protected				0.95	1.00	1.00	0.95	1.00			1.00	
Satd. Flow (prot)				1525	1629	1479	1550	4368			3938	
Flt Permitted				0.95	1.00	1.00	0.95	1.00			1.00	
Satd. Flow (perm)				1525	1629	1479	1550	4368			3938	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	0	0	341	40	1069	204	917	0	0	472	751
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	341	40	1069	204	917	0	0	1223	0
Confl. Peds. (#/hr)	2					2	12		8	8		12
Heavy Vehicles (%)	0%	0%	0%	3%	5%	2%	3%	5%	0%	0%	5%	8%
Turn Type				Perm		Perm	Prot					
Protected Phases					8		5	2			6	
Permitted Phases				8		8						
Actuated Green, G (s)				30.0	30.0	30.0	32.0	66.0			31.0	
Effective Green, g (s)				31.0	31.0	30.0	32.0	66.0			31.0	
Actuated g/C Ratio				0.30	0.30	0.29	0.30	0.63			0.30	
Clearance Time (s)				5.0	5.0	5.0	3.0	4.0			4.0	
Lane Grp Cap (vph)				450	481	423	472	2746			1163	
v/s Ratio Prot							c0.13	0.21			c0.31	
v/s Ratio Perm				0.22	0.02	c0.72						
v/c Ratio				0.76	0.08	2.53	0.43	0.33			1.87dr	
Uniform Delay, d1				33.6	26.7	37.5	29.2	9.2			37.0	
Progression Factor				1.00	1.00	1.00	0.66	2.37			1.00	
Incremental Delay, d2				11.3	0.3	694.2	2.0	0.2			41.1	
Delay (s)				44.9	27.1	731.7	21.2	21.9			78.1	
Level of Service				D	C	F	C	C			E	
Approach Delay (s)		0.0			550.8			21.8			78.1	
Approach LOS		A			F			C			E	

Intersection Summary			
HCM Average Control Delay	242.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.32		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	94.6%	ICU Level of Service	F
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1006: 99th Street & Halsted Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↰↑↱						↑↑↑	↱↱	↰	↑↑↑	
Volume (vph)	266	867	92	0	0	0	0	832	642	280	517	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	13	12	12	12	12	12	10	10	8	12	12	12
Total Lost time (s)	5.0	5.0						4.0	4.0	3.0	4.0	
Lane Util. Factor	0.91	0.91						0.91	0.88	1.00	0.91	
Frpb, ped/bikes	1.00	1.00						1.00	0.97	1.00	1.00	
Flpb, ped/bikes	1.00	1.00						1.00	1.00	1.00	1.00	
Frt	1.00	0.99						1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00						1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1497	3184						4368	2187	1583	4636	
Flt Permitted	0.95	1.00						1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1497	3184						4368	2187	1583	4636	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	274	894	95	0	0	0	0	858	662	289	533	0
RTOR Reduction (vph)	0	7	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	247	1009	0	0	0	0	0	858	662	289	533	0
Confl. Peds. (#/hr)	4		14	14		4	4		3	3		4
Heavy Vehicles (%)	7%	1%	0%	0%	0%	0%	0%	5%	4%	8%	6%	0%
Turn Type	Perm								Perm	Prot		
Protected Phases		4						2		1	6	
Permitted Phases	4								2			
Actuated Green, G (s)	34.0	34.0						28.0	28.0	31.0	62.0	
Effective Green, g (s)	34.0	34.0						28.0	28.0	31.0	62.0	
Actuated g/C Ratio	0.32	0.32						0.27	0.27	0.30	0.59	
Clearance Time (s)	5.0	5.0						4.0	4.0	3.0	4.0	
Lane Grp Cap (vph)	485	1031						1165	583	467	2737	
v/s Ratio Prot								0.20		c0.18	0.11	
v/s Ratio Perm	0.16	0.32							c0.30			
v/c Ratio	0.51	0.98						0.74	1.14	0.62	0.19	
Uniform Delay, d1	28.7	35.1						35.1	38.5	31.9	9.9	
Progression Factor	1.00	1.00						0.44	0.46	1.06	0.43	
Incremental Delay, d2	3.8	23.4						0.4	63.2	2.4	0.1	
Delay (s)	32.5	58.5						15.7	81.1	36.1	4.3	
Level of Service	C	E						B	F	D	A	
Approach Delay (s)		53.4			0.0			44.2			15.5	
Approach LOS		D			A			D			B	

Intersection Summary			
HCM Average Control Delay	40.9	HCM Level of Service	D
HCM Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	94.6%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1007: 98th Place & Wentworth Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↰	↑↱		↰	↑			↱	
Volume (vph)	0	0	0	218	4	21	3	164	0	0	115	3
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	14	12	12	16	12
Total Lost time (s)				4.0	4.0		4.0	4.0			-3.0	
Lane Util. Factor				1.00	0.95		1.00	1.00			1.00	
Frpb, ped/bikes				1.00	0.98		1.00	1.00			1.00	
Flpb, ped/bikes				1.00	1.00		1.00	1.00			1.00	
Frt				1.00	0.87		1.00	1.00			1.00	
Flt Protected				0.95	1.00		0.95	1.00			1.00	
Satd. Flow (prot)				1578	2709		1285	1882			1961	
Flt Permitted				0.95	1.00		0.58	1.00			1.00	
Satd. Flow (perm)				1578	2709		782	1882			1961	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	242	4	23	3	182	0	0	128	3
RTOR Reduction (vph)	0	0	0	0	18	0	0	0	0	0	1	0
Lane Group Flow (vph)	0	0	0	242	9	0	3	182	0	0	130	0
Confl. Peds. (#/hr)	2		2	2		2	3					3
Heavy Vehicles (%)	0%	0%	0%	8%	25%	5%	33%	2%	0%	0%	3%	33%
Turn Type				Perm			pm+pt					
Protected Phases					8		7	2			6	
Permitted Phases				8			2					
Actuated Green, G (s)				27.0	27.0		50.0	50.0			40.0	
Effective Green, g (s)				27.0	27.0		50.0	50.0			46.0	
Actuated g/C Ratio				0.32	0.32		0.59	0.59			0.54	
Clearance Time (s)				4.0	4.0		4.0	4.0			3.0	
Lane Grp Cap (vph)				501	861		501	1107			1061	
v/s Ratio Prot					0.00		0.00	c0.10			0.07	
v/s Ratio Perm				c0.15			0.00					
v/c Ratio				0.48	0.01		0.01	0.16			0.12	
Uniform Delay, d1				23.4	19.9		10.0	8.0			9.6	
Progression Factor				1.00	1.00		1.05	1.18			1.00	
Incremental Delay, d2				3.3	0.0		0.0	0.3			0.2	
Delay (s)				26.7	19.9		10.5	9.7			9.8	
Level of Service				C	B		B	A			A	
Approach Delay (s)		0.0			26.0			9.7			9.8	
Approach LOS		A			C			A			A	

Intersection Summary			
HCM Average Control Delay	17.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	33.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱			✣			↱		↰	↑	
Volume (vph)	8	5	5	12	0	18	0	141	42	33	300	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	16	15	12	8	12	8	12	12	12	10	13	12
Total Lost time (s)	4.0	4.0			4.0			3.0		4.0	4.0	
Lane Util. Factor	1.00	1.00			1.00			1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.99			1.00			0.99		1.00	1.00	
Flpb, ped/bikes	1.00	1.00			1.00			1.00		1.00	1.00	
Frt	1.00	0.93			0.92			0.97		1.00	1.00	
Flt Protected	0.95	1.00			0.98			1.00		0.95	1.00	
Satd. Flow (prot)	1938	1809			1620			1685		1595	1755	
Flt Permitted	0.74	1.00			0.93			1.00		0.60	1.00	
Satd. Flow (perm)	1502	1809			1543			1685		1010	1755	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	8	5	5	13	0	19	0	148	44	35	316	0
RTOR Reduction (vph)	0	3	0	0	13	0	0	13	0	0	0	0
Lane Group Flow (vph)	8	7	0	0	19	0	0	179	0	35	316	0
Confl. Peds. (#/hr)			3	3			5		2	2		5
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	3%	3%	0%	6%	0%
Turn Type	Perm			Perm						pm+pt		
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8						6		
Actuated Green, G (s)	27.0	27.0			27.0			40.0		50.0	50.0	
Effective Green, g (s)	27.0	27.0			27.0			40.0		50.0	50.0	
Actuated g/C Ratio	0.32	0.32			0.32			0.47		0.59	0.59	
Clearance Time (s)	4.0	4.0			4.0			3.0		4.0	4.0	
Lane Grp Cap (vph)	477	575			490			793		642	1032	
v/s Ratio Prot		0.00						0.11		0.00	c0.18	
v/s Ratio Perm	0.01				c0.01					0.03		
v/c Ratio	0.02	0.01			0.04			0.23		0.05	0.31	
Uniform Delay, d1	19.9	19.9			20.0			13.3		8.5	8.8	
Progression Factor	1.00	1.00			1.00			1.00		1.01	0.92	
Incremental Delay, d2	0.1	0.0			0.1			0.7		0.2	0.7	
Delay (s)	20.0	19.9			20.2			14.0		8.7	8.9	
Level of Service	B	B			C			B		A	A	
Approach Delay (s)		19.9			20.2			14.0			8.8	
Approach LOS		B			C			B			A	

Intersection Summary			
HCM Average Control Delay	11.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.21		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	40.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1009: 99th St & State Street

1/14/2013

	↗	↘	↖	↑	↓	↙
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰↱		↰	↑	↱	
Volume (vph)	63	16	10	346	159	12
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	14	12	13	12	10	12
Total Lost time (s)	4.0		4.0	4.0	4.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.97		1.00	1.00	0.99	
Flt Protected	0.96		0.95	1.00	1.00	
Satd. Flow (prot)	1787		1767	1765	1634	
Flt Permitted	0.96		0.64	1.00	1.00	
Satd. Flow (perm)	1787		1187	1765	1634	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	70	18	11	384	177	13
RTOR Reduction (vph)	12	0	0	0	4	0
Lane Group Flow (vph)	76	0	11	384	186	0
Confl. Peds. (#/hr)		2				
Heavy Vehicles (%)	0%	0%	0%	2%	2%	0%
Turn Type			Perm			
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	21.0		36.0	36.0	36.0	
Effective Green, g (s)	21.0		36.0	36.0	36.0	
Actuated g/C Ratio	0.32		0.55	0.55	0.55	
Clearance Time (s)	4.0		4.0	4.0	4.0	
Lane Grp Cap (vph)	577		657	978	905	
v/s Ratio Prot	c0.04			c0.22	0.11	
v/s Ratio Perm			0.01			
v/c Ratio	0.13		0.02	0.39	0.21	
Uniform Delay, d1	15.6		6.5	8.3	7.3	
Progression Factor	1.00		0.32	0.51	1.17	
Incremental Delay, d2	0.5		0.0	1.1	0.5	
Delay (s)	16.0		2.1	5.3	9.0	
Level of Service	B		A	A	A	
Approach Delay (s)	16.0			5.2	9.0	
Approach LOS	B			A	A	

Intersection Summary			
HCM Average Control Delay	7.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	39.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↰↑↱		↰	↑			↑	↱
Volume (vph)	0	0	0	23	266	14	552	246	0	0	187	34
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	14	16	12	12	15	12	12	13	10
Total Lost time (s)					4.0		4.0	4.0			3.0	3.0
Lane Util. Factor					0.95		1.00	1.00			1.00	1.00
Frpb, ped/bikes					1.00		1.00	1.00			1.00	1.00
Flpb, ped/bikes					1.00		1.00	1.00			1.00	1.00
Frt					0.99		1.00	1.00			1.00	0.85
Flt Protected					1.00		0.95	1.00			1.00	1.00
Satd. Flow (prot)					3737		1660	1752			1603	1298
Flt Permitted					1.00		0.58	1.00			1.00	1.00
Satd. Flow (perm)					3737		1013	1752			1603	1298
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	26	296	16	613	273	0	0	208	38
RTOR Reduction (vph)	0	0	0	0	4	0	0	0	0	0	0	21
Lane Group Flow (vph)	0	0	0	0	334	0	613	273	0	0	208	17
Confl. Peds. (#/hr)									30	30		
Heavy Vehicles (%)	0%	0%	0%	11%	2%	0%	3%	13%	0%	0%	16%	10%
Turn Type				Split			pm+pt					Perm
Protected Phases				8	8		7	2			6	
Permitted Phases							2					6
Actuated Green, G (s)					26.0		51.0	51.0			38.0	38.0
Effective Green, g (s)					26.0		51.0	51.0			38.0	38.0
Actuated g/C Ratio					0.31		0.60	0.60			0.45	0.45
Clearance Time (s)					4.0		4.0	4.0			3.0	3.0
Lane Grp Cap (vph)					1143		684	1051			717	580
v/s Ratio Prot					c0.09		c0.11	0.16			0.13	
v/s Ratio Perm							c0.43					0.01
v/c Ratio					0.29		0.90	0.26			0.29	0.03
Uniform Delay, d1					22.5		16.8	8.1			14.9	13.2
Progression Factor					1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2					0.6		16.7	0.6			1.0	0.1
Delay (s)					23.1		33.5	8.7			16.0	13.3
Level of Service					C		C	A			B	B
Approach Delay (s)		0.0			23.1			25.9			15.5	
Approach LOS		A			C			C			B	

Intersection Summary			
HCM Average Control Delay	23.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	61.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1011: 99th Street & Martin Luther King Jr Drive

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					✥		↰	↑↱		↰	↑↱	
Volume (vph)	0	0	0	14	11	9	314	501	92	70	324	12
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	15	12	12	12	12	12	13	12
Total Lost time (s)					4.0		3.0	4.0		3.0	4.0	
Lane Util. Factor					1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes					1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes					1.00		1.00	1.00		1.00	1.00	
Frt					0.96		1.00	0.98		1.00	0.99	
Flt Protected					0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)					1801		1691	3237		1707	3352	
Flt Permitted					0.98		0.51	1.00		0.33	1.00	
Satd. Flow (perm)					1801		915	3237		598	3352	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	16	12	10	349	557	102	78	360	13
RTOR Reduction (vph)	0	0	0	0	7	0	0	20	0	0	3	0
Lane Group Flow (vph)	0	0	0	0	31	0	349	639	0	78	370	0
Confl. Peds. (#/hr)	2					2	6		20	20		6
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	0%	0%	0%	0%	11%	0%	1%	3%	0%	0%	5%	0%
Turn Type				Split			pm+pt			pm+pt		
Protected Phases				8	8		5	2		1	6	
Permitted Phases							2			6		
Actuated Green, G (s)					23.0		41.0	34.0		41.0	34.0	
Effective Green, g (s)					23.0		41.0	34.0		41.0	34.0	
Actuated g/C Ratio					0.31		0.55	0.45		0.55	0.45	
Clearance Time (s)					4.0		3.0	4.0		3.0	4.0	
Lane Grp Cap (vph)					552		573	1467		430	1520	
v/s Ratio Prot					c0.02		c0.06	0.20		0.02	0.11	
v/s Ratio Perm							c0.28			0.08		
v/c Ratio					0.06		0.61	0.44		0.18	0.24	
Uniform Delay, d1					18.3		13.0	14.0		11.8	12.6	
Progression Factor					1.00		0.71	0.73		1.00	1.00	
Incremental Delay, d2					0.2		4.4	0.9		0.9	0.4	
Delay (s)					18.5		13.6	11.1		12.8	13.0	
Level of Service					B		B	B		B	B	
Approach Delay (s)		0.0			18.5			11.9			12.9	
Approach LOS		A			B			B			B	

Intersection Summary			
HCM Average Control Delay	12.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	55.0%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥		↰	↑↱		↰	↑↱	
Volume (vph)	54	51	23	13	160	211	19	642	12	66	258	14
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	16	12	12	10	11	12	12	11	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.98			0.93		1.00	1.00		1.00	0.99	
Flt Protected		0.98			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1945			1625		1596	3232		1641	3132	
Flt Permitted		0.71			0.99		0.58	1.00		0.35	1.00	
Satd. Flow (perm)		1411			1612		968	3232		604	3132	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	57	54	24	14	168	222	20	676	13	69	272	15
RTOR Reduction (vph)	0	11	0	0	59	0	0	2	0	0	5	0
Lane Group Flow (vph)	0	124	0	0	345	0	20	687	0	69	282	0
Confl. Peds. (#/hr)									6	6		
Confl. Bikes (#/hr)			1	1								
Heavy Vehicles (%)	0%	0%	0%	12%	2%	2%	0%	2%	0%	4%	5%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		25.0			25.0		42.0	42.0		42.0	42.0	
Effective Green, g (s)		25.0			25.0		42.0	42.0		42.0	42.0	
Actuated g/C Ratio		0.33			0.33		0.56	0.56		0.56	0.56	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		470			537		542	1810		338	1754	
v/s Ratio Prot								c0.21			0.09	
v/s Ratio Perm		0.09			c0.21		0.02			0.11		
v/c Ratio		0.26			0.64		0.04	0.38		0.20	0.16	
Uniform Delay, d1		18.3			21.2		7.4	9.2		8.2	8.0	
Progression Factor		1.00			1.00		1.00	1.00		0.16	0.07	
Incremental Delay, d2		1.4			5.8		0.1	0.6		1.3	0.2	
Delay (s)		19.7			27.0		7.5	9.8		2.7	0.8	
Level of Service		B			C		A	A		A	A	
Approach Delay (s)		19.7			27.0			9.8			1.1	
Approach LOS		B			C			A			A	

Intersection Summary			
HCM Average Control Delay	13.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	67.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis
1013: 100th Street & Cottage Grove Avenue

	↗	↘	↖	↑	↓	↙
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰↱			↰↑	↑↱	
Sign Control	Stop			Stop	Stop	
Volume (vph)	43	54	100	309	191	19
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	48	60	111	343	212	21

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	108	226	229	141	92
Volume Left (vph)	48	111	0	0	0
Volume Right (vph)	60	0	0	0	21
Hadj (s)	-0.16	0.33	0.09	0.08	-0.08
Departure Headway (s)	5.2	5.4	5.1	5.3	5.2
Degree Utilization, x	0.16	0.34	0.33	0.21	0.13
Capacity (veh/h)	634	657	687	648	667
Control Delay (s)	9.2	9.9	9.4	8.6	7.8
Approach Delay (s)	9.2	9.6		8.3	
Approach LOS	A	A		A	

Intersection Summary			
Delay	9.2		
HCM Level of Service	A		
Intersection Capacity Utilization	34.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR
Lane Configurations		↰↰	↑	↱	↰	↑	↱↱			↰↰	↑↱	
Volume (vph)	44	51	328	13	6	482	39	40	41	52	700	44
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		3.5	4.0	4.0	4.0	4.0	4.0			4.0	4.0	
Lane Util. Factor		1.00	1.00	1.00	1.00	1.00	1.00			1.00	0.95	
Frpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	0.97			1.00	1.00	
Flpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	
Frt		1.00	1.00	0.85	1.00	1.00	0.85			1.00	0.99	
Flt Protected		0.95	1.00	1.00	0.95	1.00	1.00			0.95	1.00	
Satd. Flow (prot)		1575	1731	1530	1710	1731	1487			1710	3290	
Flt Permitted		0.11	1.00	1.00	0.54	1.00	1.00			0.41	1.00	
Satd. Flow (perm)		187	1731	1530	980	1731	1487			737	3290	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	49	57	364	14	7	536	43	44	46	58	778	49
RTOR Reduction (vph)	0	0	0	7	0	0	31	0	0	0	5	0
Lane Group Flow (vph)	0	106	364	7	7	536	56	0	0	104	822	0
Confl. Peds. (#/hr)		5					5					6
Heavy Vehicles (%)	8%	9%	4%	0%	0%	4%	0%	0%	0%	0%	3%	0%
Turn Type	Perm	pm+pt		Perm	Perm		Perm		Perm	Perm		
Protected Phases		7	4			8					2	
Permitted Phases	4	4		4	8		8		2	2		
Actuated Green, G (s)		50.0	50.0	50.0	32.0	32.0	32.0			25.0	25.0	
Effective Green, g (s)		50.0	50.0	50.0	32.0	32.0	32.0			25.0	25.0	
Actuated g/C Ratio		0.48	0.48	0.48	0.30	0.30	0.30			0.24	0.24	
Clearance Time (s)		3.5	4.0	4.0	4.0	4.0	4.0			4.0	4.0	
Lane Grp Cap (vph)		281	824	729	299	528	453			175	783	
v/s Ratio Prot		0.05	c0.21			c0.31					c0.25	
v/s Ratio Perm		0.13		0.00	0.01		0.04			0.14		
v/c Ratio		0.38	0.44	0.01	0.02	1.02	0.12			0.59	1.05	
Uniform Delay, d1		20.2	18.2	14.5	25.6	36.5	26.4			35.5	40.0	
Progression Factor		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	
Incremental Delay, d2		3.8	1.7	0.0	0.1	43.0	0.6			14.0	46.2	
Delay (s)		24.1	20.0	14.5	25.7	79.5	26.9			49.5	86.2	
Level of Service		C	B	B	C	E	C			D	F	
Approach Delay (s)			20.7			71.7					82.1	
Approach LOS			C			E					F	

Intersection Summary			
HCM Average Control Delay	59.6	HCM Level of Service	E
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	79.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1014: 103rd Street & Vincennes Avenue

1/14/2013

Movement	SBL	SBT	SBR	SBR2	SEL2	SEL	SER	SER2
Lane Configurations								
Volume (vph)	52	285	26	31	4	62	110	12
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.5	4.5				4.5	4.5	
Lane Util. Factor	1.00	0.95				1.00	0.88	
Frpb, ped/bikes	1.00	1.00				1.00	1.00	
Flpb, ped/bikes	1.00	1.00				1.00	1.00	
Frt	1.00	0.98				1.00	0.85	
Flt Protected	0.95	1.00				0.95	1.00	
Satd. Flow (prot)	1706	3280				1710	2622	
Flt Permitted	0.16	1.00				0.95	1.00	
Satd. Flow (perm)	293	3280				1710	2622	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	58	317	29	34	4	69	122	13
RTOR Reduction (vph)	0	7	0	0	0	0	7	0
Lane Group Flow (vph)	58	373	0	0	0	73	128	0
Confl. Peds. (#/hr)	6							
Heavy Vehicles (%)	0%	2%	0%	0%	0%	0%	3%	0%
Turn Type	Perm				Split		Perm	
Protected Phases		6			9	9		
Permitted Phases	6						9	
Actuated Green, G (s)	24.5	24.5				17.5	17.5	
Effective Green, g (s)	24.5	24.5				17.5	17.5	
Actuated g/C Ratio	0.23	0.23				0.17	0.17	
Clearance Time (s)	4.5	4.5				4.5	4.5	
Lane Grp Cap (vph)	68	765				285	437	
v/s Ratio Prot		0.11				0.04		
v/s Ratio Perm	0.20						c0.05	
v/c Ratio	0.85	0.49				0.26	0.29	
Uniform Delay, d1	38.5	34.8				38.1	38.3	
Progression Factor	1.00	1.00				1.00	1.00	
Incremental Delay, d2	73.0	2.2				2.2	1.7	
Delay (s)	111.5	37.0				40.2	40.0	
Level of Service	F	D				D	D	
Approach Delay (s)		46.9				40.1		
Approach LOS		D				D		

Intersection Summary

HCM Signalized Intersection Capacity Analysis
1015: 103rd Street & Morgan Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰			↱			✥				
Volume (vph)	23	480	0	0	485	27	115	113	120	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	11	11	11	16	11	12	15	12	12	15	12
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		1.00			0.99			0.95				
Flt Protected		1.00			1.00			0.98				
Satd. Flow (prot)		1653			1929			1769				
Flt Permitted		0.97			1.00			0.98				
Satd. Flow (perm)		1600			1929			1769				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	26	533	0	0	539	30	128	126	133	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	559	0	0	569	0	0	387	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)		31.0			31.0			26.0				
Effective Green, g (s)		31.0			31.0			26.0				
Actuated g/C Ratio		0.48			0.48			0.40				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		763			920			708				
v/s Ratio Prot					0.29							
v/s Ratio Perm		c0.35						0.22				
v/c Ratio		0.73			0.62			0.55				
Uniform Delay, d1		13.7			12.6			15.0				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		6.2			3.1			3.0				
Delay (s)		19.8			15.7			18.0				
Level of Service		B			B			B				
Approach Delay (s)		19.8			15.7			18.0			0.0	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM Average Control Delay	17.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	73.8%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1016: 103rd Street & Halsted Street

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑	↱		↰↑	↱	↰	↑↑	↱	↰	↑↑	↱
Volume (vph)	112	385	110	67	274	115	143	1647	126	92	445	93
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	10	10	9	9	10	9
Total Lost time (s)		4.0	4.0		4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		1.00	0.96		1.00	0.96	1.00	1.00	0.97	1.00	1.00	0.96
Flpb, ped/bikes		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.99	1.00		0.99	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1924	1426		1923	1396	1500	3099	1284	1425	2956	1265
Flt Permitted		0.66	1.00		0.56	1.00	0.40	1.00	1.00	0.09	1.00	1.00
Satd. Flow (perm)		1284	1426		1088	1396	631	3099	1284	142	2956	1265
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	118	405	116	71	288	121	151	1734	133	97	468	98
RTOR Reduction (vph)	0	0	68	0	0	71	0	0	30	0	0	59
Lane Group Flow (vph)	0	523	48	0	359	50	151	1734	103	97	468	39
Confl. Peds. (#/hr)	42		39	39		42	20		8	8		20
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	6%	4%	3%	0%	6%	5%	6%	3%	4%	8%	8%	4%
Turn Type	pm+pt		Perm	Perm		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)		43.0	43.0		43.0	43.0	52.7	44.0	44.0	49.3	42.3	42.3
Effective Green, g (s)		43.0	43.0		43.0	43.0	52.7	44.0	44.0	49.3	42.3	42.3
Actuated g/C Ratio		0.41	0.41		0.41	0.41	0.50	0.42	0.42	0.47	0.40	0.40
Clearance Time (s)		4.0	4.0		4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		526	584		446	572	389	1299	538	152	1191	510
v/s Ratio Prot							c0.03	c0.56		c0.04	0.16	
v/s Ratio Perm		c0.41	0.03		0.33	0.04	0.16		0.08	0.26		0.03
v/c Ratio		0.99	0.08		0.80	0.09	0.39	1.33	0.19	0.64	0.39	0.08
Uniform Delay, d1		30.9	18.9		27.3	19.0	14.8	30.5	19.3	23.3	22.2	19.3
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.23	0.77	0.42
Incremental Delay, d2		37.6	0.3		14.3	0.3	0.6	156.0	0.8	8.3	0.9	0.3
Delay (s)		68.4	19.2		41.6	19.3	15.5	186.5	20.0	36.9	18.0	8.4
Level of Service		E	B		D	B	B	F	C	D	B	A
Approach Delay (s)		59.5			36.0			162.8			19.4	
Approach LOS		E			D			F			B	

Intersection Summary			
HCM Average Control Delay	104.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.12		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	113.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1017: 103rd Street & Normal Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			✥				
Volume (vph)	56	534	56	49	404	48	64	59	55	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	15	12	12	15	12
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		0.99			0.99			0.96				
Flt Protected		1.00			1.00			0.98				
Satd. Flow (prot)		1631			1628			1775				
Flt Permitted		0.92			0.90			0.98				
Satd. Flow (perm)		1510			1468			1775				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	62	593	62	54	449	53	71	66	61	0	0	0
RTOR Reduction (vph)	0	5	0	0	6	0	0	25	0	0	0	0
Lane Group Flow (vph)	0	712	0	0	550	0	0	173	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm			Perm					
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Actuated Green, G (s)		38.0			38.0			19.0				
Effective Green, g (s)		38.0			38.0			19.0				
Actuated g/C Ratio		0.58			0.58			0.29				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		883			858			519				
v/s Ratio Prot												
v/s Ratio Perm		c0.47			0.37			0.10				
v/c Ratio		0.81			0.64			0.33				
Uniform Delay, d1		10.6			9.0			18.0				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		7.8			3.7			1.7				
Delay (s)		18.4			12.6			19.8				
Level of Service		B			B			B				
Approach Delay (s)		18.4			12.6			19.8			0.0	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM Average Control Delay	16.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	64.0%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱		↰	↱		✣	
Volume (vph)	29	484	64	31	436	38	54	146	87	49	192	53
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	11	12	12	15	12
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frpb, ped/bikes		1.00	0.97		1.00	0.95		1.00	0.98		0.98	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		0.99	1.00		1.00	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		0.98	
Flt Protected		1.00	1.00		1.00	1.00		0.99	1.00		0.99	
Satd. Flow (prot)		1656	1255		1636	1288		1658	1490		1738	
Flt Permitted		0.96	1.00		0.95	1.00		0.84	1.00		0.92	
Satd. Flow (perm)		1595	1255		1560	1288		1419	1490		1609	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	31	509	67	33	459	40	57	154	92	52	202	56
RTOR Reduction (vph)	0	0	29	0	0	16	0	0	63	0	11	0
Lane Group Flow (vph)	0	540	38	0	492	24	0	211	29	0	299	0
Confl. Peds. (#/hr)	33		15	15		33	68		5	5		68
Confl. Bikes (#/hr)	4					4						
Heavy Vehicles (%)	0%	5%	14%	19%	5%	9%	2%	2%	1%	10%	7%	8%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		43.0	43.0		43.0	43.0		24.0	24.0		24.0	
Effective Green, g (s)		43.0	43.0		43.0	43.0		24.0	24.0		24.0	
Actuated g/C Ratio		0.57	0.57		0.57	0.57		0.32	0.32		0.32	
Clearance Time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	
Lane Grp Cap (vph)		914	720		894	738		454	477		515	
v/s Ratio Prot												
v/s Ratio Perm		c0.34	0.03		0.32	0.02		0.15	0.02		c0.19	
v/c Ratio		0.59	0.05		0.55	0.03		0.46	0.06		0.58	
Uniform Delay, d1		10.3	7.0		10.0	7.0		20.4	17.7		21.3	
Progression Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2		2.8	0.1		2.4	0.1		3.4	0.2		4.7	
Delay (s)		13.1	7.2		12.4	7.0		23.8	17.9		26.0	
Level of Service		B	A		B	A		C	B		C	
Approach Delay (s)		12.5			12.0			22.0			26.0	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM Average Control Delay	16.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	93.1%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1019: 103rd Street & State Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑	↱	↰	↑	↱
Volume (vph)	81	426	29	17	317	38	55	302	38	38	92	11
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	11	16	8	10	10	10	10	10	10
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	0.98	1.00	1.00	0.99
Flpb, ped/bikes	0.99	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1464	2990		1459	3535		1534	1647	1301	1517	1541	1156
Flt Permitted	0.51	1.00		0.44	1.00		0.69	1.00	1.00	0.45	1.00	1.00
Satd. Flow (perm)	789	2990		673	3535		1116	1647	1301	722	1541	1156
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	90	473	32	19	352	42	61	336	42	42	102	12
RTOR Reduction (vph)	0	7	0	0	14	0	0	0	22	0	0	7
Lane Group Flow (vph)	90	498	0	19	380	0	61	336	20	42	102	5
Confl. Peds. (#/hr)	16		9	9		16	1		5	5		1
Heavy Vehicles (%)	8%	6%	0%	13%	8%	3%	4%	2%	8%	5%	9%	22%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	31.0	31.0		31.0	31.0		26.0	26.0	26.0	26.0	26.0	26.0
Effective Green, g (s)	31.0	31.0		31.0	31.0		26.0	26.0	26.0	26.0	26.0	26.0
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.40	0.40	0.40	0.40	0.40	0.40
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	376	1426		321	1686		446	659	520	289	616	462
v/s Ratio Prot		c0.17			0.11			c0.20			0.07	
v/s Ratio Perm	0.11			0.03			0.05		0.02	0.06		0.00
v/c Ratio	0.24	0.35		0.06	0.23		0.14	0.51	0.04	0.15	0.17	0.01
Uniform Delay, d1	10.0	10.7		9.2	10.0		12.4	14.7	11.9	12.4	12.5	11.7
Progression Factor	1.00	1.00		1.00	1.00		0.62	0.76	0.33	0.53	0.54	0.28
Incremental Delay, d2	1.5	0.7		0.4	0.3		0.6	2.8	0.1	1.0	0.6	0.0
Delay (s)	11.5	11.3		9.5	10.3		8.3	13.9	4.1	7.7	7.3	3.4
Level of Service	B	B		A	B		A	B	A	A	A	A
Approach Delay (s)		11.4			10.2			12.2			7.1	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM Average Control Delay	10.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	51.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1020: 103rd Street & Michigan Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	94	398	81	43	285	64	71	360	43	55	139	54
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	11	10	11	11	10	11	11	10	11	11
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	0.96	1.00		1.00	1.00		0.98	1.00		0.97	1.00	
Frt	1.00	0.97		1.00	0.97		1.00	0.98		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1465	3058		1588	3012		1541	3021		1402	2764	
Flt Permitted	0.52	1.00		0.43	1.00		0.62	1.00		0.47	1.00	
Satd. Flow (perm)	806	3058		721	3012		1013	3021		691	2764	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	99	419	85	45	300	67	75	379	45	58	146	57
RTOR Reduction (vph)	0	0	0	0	0	0	0	12	0	0	33	0
Lane Group Flow (vph)	99	504	0	45	367	0	75	412	0	58	170	0
Confl. Peds. (#/hr)	98		10	10		98	28		52	52		28
Heavy Vehicles (%)	5%	5%	4%	0%	5%	7%	2%	6%	13%	10%	11%	20%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	36.0	36.0		36.0	36.0		31.0	31.0		31.0	31.0	
Effective Green, g (s)	36.0	36.0		36.0	36.0		31.0	31.0		31.0	31.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.41	0.41		0.41	0.41	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	387	1468		346	1446		419	1249		286	1142	
v/s Ratio Prot		c0.16			0.12			c0.14			0.06	
v/s Ratio Perm	0.12			0.06			0.07			0.08		
v/c Ratio	0.26	0.34		0.13	0.25		0.18	0.33		0.20	0.15	
Uniform Delay, d1	11.6	12.1		10.8	11.5		13.9	14.9		14.1	13.8	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.6	0.6		0.8	0.4		0.9	0.7		1.6	0.3	
Delay (s)	13.2	12.8		11.6	12.0		14.9	15.6		15.7	14.0	
Level of Service	B	B		B	B		B	B		B	B	
Approach Delay (s)		12.8			11.9			15.5			14.4	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	13.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	49.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1021: 103rd Street & Martin Luther King Jr Drive

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱		↰	↑↱		↰	↑↱	
Volume (vph)	106	313	36	23	328	46	65	397	25	41	196	54
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	12	8	16	12	9	10	10	9	10	10
Total Lost time (s)	3.0	7.0		3.0	7.0		3.0	7.0		3.0	7.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.99		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1533	1576		1473	1842		1533	3073		1372	2875	
Flt Permitted	0.45	1.00		0.48	1.00		0.59	1.00		0.43	1.00	
Satd. Flow (perm)	722	1576		742	1842		951	3073		622	2875	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	112	329	38	24	345	48	68	418	26	43	206	57
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	112	367	0	24	393	0	68	444	0	43	263	0
Confl. Peds. (#/hr)	7		23	23		7	10		8	8		10
Confl. Bikes (#/hr)	1		2	2		1	1		1	1		1
Heavy Vehicles (%)	4%	8%	10%	0%	9%	5%	0%	3%	0%	12%	7%	6%
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	47.0	41.8		40.6	38.6		26.8	22.2		23.6	20.6	
Effective Green, g (s)	47.0	39.8		40.6	36.6		26.8	20.2		23.6	18.6	
Actuated g/C Ratio	0.55	0.47		0.48	0.43		0.32	0.24		0.28	0.22	
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	5.0		3.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	449	738		372	793		331	730		199	629	
v/s Ratio Prot	c0.02	c0.23		0.00	0.21		c0.01	c0.14		0.01	0.09	
v/s Ratio Perm	0.12			0.03			0.05			0.05		
v/c Ratio	0.25	0.50		0.06	0.50		0.21	0.61		0.22	0.42	
Uniform Delay, d1	13.4	15.7		14.5	17.5		21.5	28.9		25.7	28.5	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.3	2.4		0.1	2.2		0.3	3.7		0.5	2.0	
Delay (s)	13.7	18.1		14.6	19.7		21.8	32.6		26.2	30.6	
Level of Service	B	B		B	B		C	C		C	C	
Approach Delay (s)		17.0			19.4			31.2			30.0	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM Average Control Delay	24.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	62.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	66	307	42	63	373	111	56	370	120	55	158	37
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	11	11	11	11	12	12	10	10	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			0.99		1.00	0.99		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		0.99	1.00	
Frt		0.98			0.97		1.00	0.96		1.00	0.97	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3493			2913		1614	3156		1580	2919	
Flt Permitted		0.79			0.85		0.62	1.00		0.40	1.00	
Satd. Flow (perm)		2775			2481		1046	3156		658	2919	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	73	341	47	70	414	123	62	411	133	61	176	41
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	461	0	0	607	0	62	544	0	61	217	0
Confl. Peds. (#/hr)	20		16	16		20	5		33	33		5
Confl. Bikes (#/hr)	2					2			2	2		
Heavy Vehicles (%)	9%	9%	0%	24%	7%	6%	2%	4%	2%	0%	5%	9%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		33.0			33.0		32.0	32.0		32.0	32.0	
Effective Green, g (s)		34.0			34.0		33.0	33.0		33.0	33.0	
Actuated g/C Ratio		0.45			0.45		0.44	0.44		0.44	0.44	
Clearance Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)		1258			1125		460	1389		290	1284	
v/s Ratio Prot								c0.17			0.07	
v/s Ratio Perm		0.17			c0.24		0.06			0.09		
v/c Ratio		0.37			0.54		0.13	0.39		0.21	0.17	
Uniform Delay, d1		13.4			14.8		12.5	14.2		13.0	12.7	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.8			1.9		0.6	0.8		1.6	0.3	
Delay (s)		14.3			16.7		13.1	15.0		14.6	13.0	
Level of Service		B			B		B	B		B	B	
Approach Delay (s)		14.3			16.7			14.8			13.3	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	15.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	62.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↑	↱		✣			↰↑↱	
Volume (vph)	138	496	5	14	635	371	68	9	19	112	1	49
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	12	12	12	12	12	12	13	13	13
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00			0.95	
Frt	1.00	1.00		1.00	1.00	0.85		0.97			0.95	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.97			0.97	
Satd. Flow (prot)	1574	3143		1629	3257	1457		1612			3106	
Flt Permitted	0.36	1.00		0.44	1.00	1.00		0.70			0.75	
Satd. Flow (perm)	603	3143		748	3257	1457		1174			2411	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	153	551	6	16	706	412	76	10	21	124	1	54
RTOR Reduction (vph)	0	1	0	0	0	143	0	12	0	0	41	0
Lane Group Flow (vph)	153	556	0	16	706	269	0	95	0	0	138	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	46.0	46.0		46.0	46.0	46.0		16.4			16.4	
Effective Green, g (s)	46.0	46.0		46.0	46.0	46.0		16.4			16.4	
Actuated g/C Ratio	0.65	0.65		0.65	0.65	0.65		0.23			0.23	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		8.0			8.0	
Lane Grp Cap (vph)	394	2054		489	2128	952		273			562	
v/s Ratio Prot		0.18			0.22							
v/s Ratio Perm	c0.25			0.02		0.18		c0.08			0.06	
v/c Ratio	0.39	0.27		0.03	0.33	0.28		0.35			0.24	
Uniform Delay, d1	5.7	5.1		4.3	5.4	5.2		22.5			22.0	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00			1.00	
Incremental Delay, d2	2.9	0.3		0.1	0.4	0.7		3.3			1.0	
Delay (s)	8.5	5.5		4.4	5.8	5.9		25.8			22.9	
Level of Service	A	A		A	A	A		C			C	
Approach Delay (s)		6.1			5.8			25.8			22.9	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM Average Control Delay	8.4	HCM Level of Service	A
HCM Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	70.4	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱		↰	↑↑	↱	↰	↑↑	↱
Volume (vph)	111	214	75	63	190	68	127	1887	84	70	494	42
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	9	12	10	10	12	9	10	9	9	10	9
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00	0.96	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.96		1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1548	1499		1547	1586		1493	3069	1271	1452	2983	1301
Flt Permitted	0.38	1.00		0.32	1.00		0.39	1.00	1.00	0.12	1.00	1.00
Satd. Flow (perm)	617	1499		524	1586		617	3069	1271	180	2983	1301
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	117	225	79	66	200	72	134	1986	88	74	520	44
RTOR Reduction (vph)	0	15	0	0	16	0	0	0	18	0	0	26
Lane Group Flow (vph)	117	289	0	66	256	0	134	1986	70	74	520	18
Confl. Peds. (#/hr)	4		9	9		4	6		16	16		6
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	3%	3%	4%	3%	1%	2%	3%	4%	4%	6%	7%	3%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	28.0	21.0		28.0	21.0		42.0	35.0	35.0	42.0	35.0	35.0
Effective Green, g (s)	26.0	22.0		26.0	22.0		40.0	35.0	35.0	40.0	35.0	35.0
Actuated g/C Ratio	0.31	0.26		0.31	0.26		0.47	0.41	0.41	0.47	0.41	0.41
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)	254	388		232	410		352	1264	523	174	1228	536
v/s Ratio Prot	c0.03	c0.19		0.02	0.16		0.03	c0.65		c0.03	0.17	
v/s Ratio Perm	0.11			0.07			0.15		0.06	0.17		0.01
v/c Ratio	0.46	0.75		0.28	0.63		0.38	1.57	0.13	0.43	0.42	0.03
Uniform Delay, d1	22.5	28.9		21.9	27.9		13.3	25.0	15.6	18.1	17.8	14.9
Progression Factor	1.00	1.00		1.00	1.00		0.62	0.71	0.49	1.00	1.00	1.00
Incremental Delay, d2	5.9	12.3		3.1	7.0		2.6	260.3	0.4	7.4	1.1	0.1
Delay (s)	28.4	41.2		24.9	34.9		10.8	277.9	8.0	25.6	18.9	15.0
Level of Service	C	D		C	C		B	F	A	C	B	B
Approach Delay (s)		37.6			32.9			250.9			19.4	
Approach LOS		D			C			F			B	

Intersection Summary			
HCM Average Control Delay	164.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.11		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	94.0%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣			✣	
Volume (vph)	26	217	17	15	149	18	18	162	26	32	144	21
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	14	12	12	14	12	12	16	12	12	16	12
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		1.00			1.00			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.99			0.99			0.98			0.99	
Flt Protected		1.00			1.00			1.00			0.99	
Satd. Flow (prot)		1850			1836			1902			1930	
Flt Permitted		0.96			0.97			0.97			0.94	
Satd. Flow (perm)		1791			1791			1856			1824	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	27	224	18	15	154	19	19	167	27	33	148	22
RTOR Reduction (vph)	0	4	0	0	6	0	0	8	0	0	7	0
Lane Group Flow (vph)	0	265	0	0	182	0	0	205	0	0	196	0
Confl. Peds. (#/hr)	5		11	11		5	7		34	34		7
Confl. Bikes (#/hr)			3	3								
Heavy Vehicles (%)	4%	2%	0%	20%	1%	0%	12%	3%	8%	0%	3%	5%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		27.0			27.0			30.0			30.0	
Effective Green, g (s)		27.0			27.0			30.0			30.0	
Actuated g/C Ratio		0.42			0.42			0.46			0.46	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		744			744			857			842	
v/s Ratio Prot												
v/s Ratio Perm		c0.15			0.10			c0.11			0.11	
v/c Ratio		0.36			0.24			0.24			0.23	
Uniform Delay, d1		13.0			12.4			10.6			10.6	
Progression Factor		1.00			0.62			1.05			1.00	
Incremental Delay, d2		1.3			0.8			0.6			0.6	
Delay (s)		14.4			8.5			11.8			11.2	
Level of Service		B			A			B			B	
Approach Delay (s)		14.4			8.5			11.8			11.2	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM Average Control Delay	11.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.29		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	45.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑↱		↰	↑↑↱		↰	↑↑↱		↰	↑↑↱	
Volume (vph)	24	181	34	9	162	19	42	364	31	16	86	17
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	0.95	1.00		1.00	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1465	2994		1302	3037		1529	3094		1492	2868	
Flt Permitted	0.63	1.00		0.60	1.00		0.68	1.00		0.50	1.00	
Satd. Flow (perm)	965	2994		827	3037		1093	3094		781	2868	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	27	201	38	10	180	21	47	404	34	18	96	19
RTOR Reduction (vph)	0	24	0	0	13	0	0	10	0	0	8	0
Lane Group Flow (vph)	27	215	0	10	188	0	47	428	0	18	107	0
Confl. Peds. (#/hr)	35		6	6		35	18					18
Confl. Bikes (#/hr)	14		32	32		14	23		7	7		23
Heavy Vehicles (%)	4%	4%	0%	22%	2%	6%	3%	2%	0%	7%	8%	6%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.0	20.0		20.0	20.0		39.0	39.0		39.0	39.0	
Effective Green, g (s)	19.0	19.0		19.0	19.0		38.0	38.0		38.0	38.0	
Actuated g/C Ratio	0.29	0.29		0.29	0.29		0.58	0.58		0.58	0.58	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	282	875		242	888		639	1809		457	1677	
v/s Ratio Prot		c0.07			0.06			c0.14			0.04	
v/s Ratio Perm	0.03			0.01			0.04			0.02		
v/c Ratio	0.10	0.25		0.04	0.21		0.07	0.24		0.04	0.06	
Uniform Delay, d1	16.7	17.5		16.5	17.3		5.9	6.5		5.7	5.8	
Progression Factor	0.72	0.72		0.75	0.74		0.96	0.99		0.49	0.44	
Incremental Delay, d2	0.6	0.6		0.3	0.5		0.2	0.3		0.2	0.1	
Delay (s)	12.7	13.3		12.7	13.4		5.8	6.7		3.0	2.6	
Level of Service	B	B		B	B		A	A		A	A	
Approach Delay (s)		13.3			13.4			6.6			2.7	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	9.1	HCM Level of Service	A
HCM Volume to Capacity ratio	0.24		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	40.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			✥			✥	
Volume (vph)	46	178	34	16	122	38	28	414	24	13	163	15
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	9	9	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00			1.00			1.00	
Flpb, ped/bikes	0.99	1.00		0.98	1.00			1.00			1.00	
Frt	1.00	0.98		1.00	0.96			0.99			0.99	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1556	2952		1515	2868			1878			1807	
Flt Permitted	0.64	1.00		0.60	1.00			0.98			0.96	
Satd. Flow (perm)	1047	2952		965	2868			1839			1749	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	51	198	38	18	136	42	31	460	27	14	181	17
RTOR Reduction (vph)	0	23	0	0	25	0	0	3	0	0	5	0
Lane Group Flow (vph)	51	213	0	18	153	0	0	515	0	0	207	0
Confl. Peds. (#/hr)	10		29	29		10	17		10	10		17
Confl. Bikes (#/hr)									2	2		
Heavy Vehicles (%)	2%	4%	10%	0%	4%	0%	0%	8%	4%	0%	13%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	26.0	26.0		26.0	26.0			31.0			31.0	
Effective Green, g (s)	26.0	26.0		26.0	26.0			31.0			31.0	
Actuated g/C Ratio	0.40	0.40		0.40	0.40			0.48			0.48	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	419	1181		386	1147			877			834	
v/s Ratio Prot		c0.07			0.05							
v/s Ratio Perm	0.05			0.02				c0.28			0.12	
v/c Ratio	0.12	0.18		0.05	0.13			0.59			0.25	
Uniform Delay, d1	12.3	12.6		11.9	12.4			12.4			10.1	
Progression Factor	1.01	0.92		0.88	0.88			0.96			1.00	
Incremental Delay, d2	0.6	0.3		0.2	0.2			2.8			0.7	
Delay (s)	13.0	11.9		10.7	11.1			14.7			10.8	
Level of Service	B	B		B	B			B			B	
Approach Delay (s)		12.1			11.1			14.7			10.8	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	12.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	59.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1028: 107th Street & Martin Luther King Jr Drive

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Lane Configurations	↰	↱		↰	↱			✣			✣	
Volume (vph)	86	121	58	2	80	34	21	272	9	7	175	28
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	16	12	10	16	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00			1.00			1.00	
Flpb, ped/bikes	1.00	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.95		1.00	0.96			1.00			0.98	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1605	1878		1587	1870			1971			1932	
Flt Permitted	0.68	1.00		0.58	1.00			0.98			0.99	
Satd. Flow (perm)	1141	1878		975	1870			1929			1915	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	96	134	64	2	89	38	23	302	10	8	194	31
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	96	198	0	2	127	0	0	335	0	0	233	0
Confl. Peds. (#/hr)			8	8			1		8	8		1
Heavy Vehicles (%)	3%	3%	2%	0%	6%	0%	0%	3%	0%	0%	4%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.0	20.0		20.0	20.0			37.0			37.0	
Effective Green, g (s)	20.0	20.0		20.0	20.0			37.0			37.0	
Actuated g/C Ratio	0.31	0.31		0.31	0.31			0.57			0.57	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	351	578		300	575			1098			1090	
v/s Ratio Prot		c0.11			0.07							
v/s Ratio Perm	0.08			0.00				c0.17			0.12	
v/c Ratio	0.27	0.34		0.01	0.22			0.31			0.21	
Uniform Delay, d1	17.0	17.4		15.6	16.7			7.3			6.9	
Progression Factor	0.90	0.89		0.87	0.92			0.95			1.00	
Incremental Delay, d2	1.9	1.6		0.0	0.9			0.7			0.4	
Delay (s)	17.2	17.1		13.7	16.2			7.7			7.3	
Level of Service	B	B		B	B			A			A	
Approach Delay (s)		17.1			16.2			7.7			7.3	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	11.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	45.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1029: 107th Street & Cottage Grove Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱		↰	↑	↱	↰	↑	↱
Volume (vph)	116	9	52	1	3	12	38	467	6	2	191	48
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	10	10	10	11	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.97		1.00	1.00	0.98	1.00	1.00	0.98
Flpb, ped/bikes	0.98	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.87		1.00	0.88		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1603	1673		1710	1422		1491	1631	1392	1649	1907	1427
Flt Permitted	0.75	1.00		0.71	1.00		0.63	1.00	1.00	0.39	1.00	1.00
Satd. Flow (perm)	1260	1673		1283	1422		981	1631	1392	682	1907	1427
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	129	10	58	1	3	13	42	519	7	2	212	53
RTOR Reduction (vph)	0	42	0	0	9	0	0	0	3	0	0	21
Lane Group Flow (vph)	129	26	0	1	7	0	42	519	4	2	212	32
Confl. Peds. (#/hr)	9					9	1		6	6		1
Heavy Vehicles (%)	5%	14%	5%	0%	67%	12%	7%	3%	0%	0%	7%	5%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	17.0	17.0		17.0	17.0		39.0	39.0	39.0	39.0	39.0	39.0
Effective Green, g (s)	18.0	18.0		18.0	18.0		39.0	39.0	39.0	39.0	39.0	39.0
Actuated g/C Ratio	0.28	0.28		0.28	0.28		0.60	0.60	0.60	0.60	0.60	0.60
Clearance Time (s)	5.0	5.0		5.0	5.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	349	463		355	394		589	979	835	409	1144	856
v/s Ratio Prot		0.02			0.00			c0.32			0.11	
v/s Ratio Perm	c0.10			0.00			0.04		0.00	0.00		0.02
v/c Ratio	0.37	0.06		0.00	0.02		0.07	0.53	0.01	0.00	0.19	0.04
Uniform Delay, d1	18.9	17.3		17.0	17.1		5.4	7.6	5.2	5.2	5.9	5.3
Progression Factor	1.47	2.38		1.00	1.00		1.13	1.07	1.31	1.00	1.00	1.00
Incremental Delay, d2	2.9	0.2		0.0	0.1		0.2	1.6	0.0	0.0	0.4	0.1
Delay (s)	30.8	41.3		17.0	17.1		6.3	9.8	6.8	5.2	6.2	5.4
Level of Service	C	D		B	B		A	A	A	A	A	A
Approach Delay (s)		34.4			17.1			9.5			6.0	
Approach LOS		C			B			A			A	

Intersection Summary			
HCM Average Control Delay	13.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	52.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1030: 111th Street & Marshield Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱		↰	↑↑					↰	↑↱	
Volume (vph)	0	240	76	120	362	0	0	0	0	74	305	361
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	12	12	12	12	12	11	11	12
Total Lost time (s)		4.0		3.0	3.0					5.0	5.0	
Lane Util. Factor		0.95		1.00	0.95					1.00	0.95	
Frpb, ped/bikes		0.99		1.00	1.00					1.00	0.99	
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	
Frt		0.96		1.00	1.00					1.00	0.92	
Flt Protected		1.00		0.95	1.00					0.95	1.00	
Satd. Flow (prot)		2826		1621	3288					1574	2907	
Flt Permitted		1.00		0.50	1.00					0.95	1.00	
Satd. Flow (perm)		2826		848	3288					1574	2907	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	253	80	126	381	0	0	0	0	78	321	380
RTOR Reduction (vph)	0	30	0	0	0	0	0	0	0	0	214	0
Lane Group Flow (vph)	0	303	0	126	381	0	0	0	0	78	487	0
Confl. Peds. (#/hr)	14		32	32		14	14					14
Confl. Bikes (#/hr)			1	1								
Heavy Vehicles (%)	0%	9%	4%	5%	4%	0%	0%	0%	0%	5%	2%	4%
Turn Type				D.P+P						custom		
Protected Phases		8		7	7 8					6	6	
Permitted Phases				8						6		
Actuated Green, G (s)		33.0		56.0	59.0					32.0	32.0	
Effective Green, g (s)		33.0		56.0	59.0					32.0	32.0	
Actuated g/C Ratio		0.33		0.56	0.59					0.32	0.32	
Clearance Time (s)		4.0		3.0						5.0	5.0	
Lane Grp Cap (vph)		933		653	1940					504	930	
v/s Ratio Prot		c0.11		0.04	c0.12					0.05	c0.17	
v/s Ratio Perm				0.06								
v/c Ratio		0.32		0.19	0.20					0.15	0.52	
Uniform Delay, d1		25.1		10.6	9.5					24.3	27.8	
Progression Factor		1.00		1.95	2.05					1.00	1.00	
Incremental Delay, d2		0.9		0.6	0.2					0.7	2.1	
Delay (s)		26.1		21.1	19.7					25.0	29.9	
Level of Service		C		C	B					C	C	
Approach Delay (s)		26.1			20.0			0.0			29.4	
Approach LOS		C			C			A			C	

Intersection Summary			
HCM Average Control Delay	25.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	61.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑			↑↱		↰	↑	↱			
Volume (vph)	129	185	0	0	311	66	171	544	326	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	9	12	13	12	13	12	12	12
Total Lost time (s)	4.0	4.0			4.0		5.0	5.0	5.0			
Lane Util. Factor	1.00	0.95			0.95		1.00	1.00	1.00			
Frpb, ped/bikes	1.00	1.00			0.99		1.00	1.00	0.99			
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.97		1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1673	3054			2832		1750	1782	1514			
Flt Permitted	0.36	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	637	3054			2832		1750	1782	1514			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	136	195	0	0	327	69	180	573	343	0	0	0
RTOR Reduction (vph)	0	0	0	0	18	0	0	0	230	0	0	0
Lane Group Flow (vph)	136	195	0	0	378	0	180	573	113	0	0	0
Confl. Peds. (#/hr)	14		16	16		14			1	1		
Confl. Bikes (#/hr)	1					1			1	1		
Heavy Vehicles (%)	2%	12%	0%	0%	5%	4%	1%	1%	3%	0%	0%	0%
Turn Type	pm+pt						custom		Perm			
Protected Phases	4	1 4			1		2	2				
Permitted Phases	1 4						2		2			
Actuated Green, G (s)	54.0	58.0			21.0		33.0	33.0	33.0			
Effective Green, g (s)	54.0	58.0			21.0		33.0	33.0	33.0			
Actuated g/C Ratio	0.54	0.58			0.21		0.33	0.33	0.33			
Clearance Time (s)	4.0				4.0		5.0	5.0	5.0			
Lane Grp Cap (vph)	686	1771			595		578	588	500			
v/s Ratio Prot	c0.07	0.06			c0.13		0.10	c0.32				
v/s Ratio Perm	0.04								0.07			
v/c Ratio	0.20	0.11			0.64		0.31	0.97	0.23			
Uniform Delay, d1	11.8	9.4			36.0		25.0	33.1	24.3			
Progression Factor	0.24	0.25			1.00		0.75	0.78	1.92			
Incremental Delay, d2	0.6	0.1			5.1		0.9	24.5	0.7			
Delay (s)	3.5	2.5			41.1		19.6	50.4	47.4			
Level of Service	A	A			D		B	D	D			
Approach Delay (s)		2.9			41.1			44.4			0.0	
Approach LOS		A			D			D			A	

Intersection Summary			
HCM Average Control Delay	36.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	61.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1032: 112th Place & Marshield Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱		↰	↑↑					↰	↑↑	↱
Volume (vph)	0	456	362	34	587	0	0	0	0	4	216	196
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	11	12	12	12	12	10	10	12
Total Lost time (s)		4.0		4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.95		1.00	0.95					1.00	0.95	1.00
Frpb, ped/bikes		0.99		1.00	1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Frt		0.93		1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00					0.95	1.00	1.00
Satd. Flow (prot)		3110		1613	3273					1596	3160	1443
Flt Permitted		1.00		0.17	1.00					0.95	1.00	1.00
Satd. Flow (perm)		3110		294	3273					1596	3160	1443
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	0	475	377	35	611	0	0	0	0	4	225	204
RTOR Reduction (vph)	0	143	0	0	0	0	0	0	0	0	0	135
Lane Group Flow (vph)	0	709	0	35	611	0	0	0	0	4	225	69
Confl. Peds. (#/hr)	22		3	3		22						
Confl. Bikes (#/hr)	4					4			32	32		
Heavy Vehicles (%)	0%	2%	2%	6%	1%	0%	0%	0%	0%	0%	1%	6%
Turn Type				pm+pt						Split		Prot
Protected Phases		8		7	7 8					6	6	6
Permitted Phases				7 8								
Actuated Green, G (s)		36.0		54.0	58.0					34.0	34.0	34.0
Effective Green, g (s)		36.0		54.0	58.0					34.0	34.0	34.0
Actuated g/C Ratio		0.36		0.54	0.58					0.34	0.34	0.34
Clearance Time (s)		4.0		4.0						4.0	4.0	4.0
Lane Grp Cap (vph)		1120		396	1898					543	1074	491
v/s Ratio Prot		c0.23		0.02	c0.19					0.00	c0.07	0.05
v/s Ratio Perm				0.03								
v/c Ratio		0.63		0.09	0.32					0.01	0.21	0.14
Uniform Delay, d1		26.5		12.4	10.8					21.8	23.5	22.9
Progression Factor		1.00		0.55	0.68					0.74	0.79	0.94
Incremental Delay, d2		2.7		0.2	0.2					0.0	0.4	0.5
Delay (s)		29.3		7.0	7.6					16.1	19.0	22.0
Level of Service		C		A	A					B	B	C
Approach Delay (s)		29.3			7.5			0.0			20.4	
Approach LOS		C			A			A			C	

Intersection Summary			
HCM Average Control Delay	20.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	87.7%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1033: 112th Place & Ashland Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↰↑			↑↱		↰	↰	↱			
Volume (vph)	401	59	0	0	57	5	564	636	61	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	12	12	12	10	12	11	11	12	12	12	12
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0	4.0			
Lane Util. Factor	0.91	0.91			0.95		0.95	0.95	1.00			
Frpb, ped/bikes	1.00	1.00			0.99		1.00	1.00	1.00			
Flpb, ped/bikes	0.99	0.99			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.99		1.00	1.00	0.85			
Flt Protected	0.95	0.96			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1444	3041			3079		1555	1637	1500			
Flt Permitted	0.71	0.74			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	1084	2338			3079		1555	1637	1500			
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	413	61	0	0	59	5	581	656	63	0	0	0
RTOR Reduction (vph)	0	0	0	0	4	0	0	0	38	0	0	0
Lane Group Flow (vph)	206	268	0	0	60	0	581	656	25	0	0	0
Confl. Peds. (#/hr)	30		2	2		30			4	4		
Confl. Bikes (#/hr)	3					3			2	2		
Heavy Vehicles (%)	3%	2%	0%	0%	2%	0%	1%	1%	2%	0%	0%	0%
Turn Type	pm+pt						custom		custom			
Protected Phases	4	1 4			1		2	2	2			
Permitted Phases	1 4						2		2			
Actuated Green, G (s)	51.0	51.0			15.0		37.0	37.0	37.0			
Effective Green, g (s)	51.0	51.0			15.0		37.0	37.0	37.0			
Actuated g/C Ratio	0.51	0.51			0.15		0.37	0.37	0.37			
Clearance Time (s)	4.0				4.0		4.0	4.0	4.0			
Lane Grp Cap (vph)	682	1445			462		575	606	555			
v/s Ratio Prot	c0.11	0.07			0.02		0.37	c0.40	0.02			
v/s Ratio Perm	c0.05	0.03										
v/c Ratio	0.30	0.19			0.13		1.01	1.08	0.05			
Uniform Delay, d1	14.0	13.3			36.8		31.5	31.5	20.2			
Progression Factor	0.23	0.25			1.00		1.00	1.00	1.00			
Incremental Delay, d2	0.8	0.2			0.6		40.1	60.9	0.2			
Delay (s)	4.1	3.5			37.4		71.6	92.4	20.3			
Level of Service	A	A			D		E	F	C			
Approach Delay (s)		3.7			37.4			79.6			0.0	
Approach LOS		A			D			E			A	

Intersection Summary			
HCM Average Control Delay	58.6	HCM Level of Service	E
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	87.7%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1034: 111th Street & Halsted Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱		↰	↑↑	↱	↰	↑↑	↱
Volume (vph)	155	276	66	64	182	110	41	1100	94	96	476	42
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	9	10	9	9	10	9
Total Lost time (s)		4.0			4.0		4.0	3.5	4.0	4.0	3.5	4.0
Lane Util. Factor		0.95			0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		1.00			0.98		1.00	1.00	0.97	1.00	1.00	0.97
Flpb, ped/bikes		1.00			1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.98			0.95		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.98			0.99		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		2844			2772		1447	3069	1336	1494	2956	1270
Flt Permitted		0.67			0.79		0.39	1.00	1.00	0.12	1.00	1.00
Satd. Flow (perm)		1936			2201		600	3069	1336	197	2956	1270
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	161	288	69	67	190	115	43	1146	98	100	496	44
RTOR Reduction (vph)	0	14	0	0	60	0	0	0	39	0	0	27
Lane Group Flow (vph)	0	504	0	0	312	0	43	1146	59	100	496	17
Confl. Peds. (#/hr)	49		20	20		49	26		8	8		26
Confl. Bikes (#/hr)	2					2						
Heavy Vehicles (%)	10%	7%	4%	9%	7%	5%	6%	4%	0%	3%	8%	5%
Turn Type	pm+pt			Perm			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)		35.0			27.0		38.0	33.0	33.0	38.0	33.0	33.0
Effective Green, g (s)		36.0			28.0		36.0	33.5	33.0	36.0	33.5	33.0
Actuated g/C Ratio		0.42			0.33		0.42	0.39	0.39	0.42	0.39	0.39
Clearance Time (s)		5.0			5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)		884			725		294	1210	519	144	1165	493
v/s Ratio Prot		c0.04					0.01	c0.37		c0.03	0.17	
v/s Ratio Perm		0.20			c0.14		0.06		0.04	0.26		0.01
v/c Ratio		0.57			0.43		0.15	0.95	0.11	0.69	0.43	0.03
Uniform Delay, d1		18.6			22.3		14.7	24.9	16.6	18.6	18.7	16.1
Progression Factor		1.00			1.00		1.30	0.86	1.39	1.83	1.64	3.16
Incremental Delay, d2		2.7			1.9		0.6	11.0	0.3	22.3	1.0	0.1
Delay (s)		21.3			24.1		19.7	32.3	23.4	56.4	31.8	51.0
Level of Service		C			C		B	C	C	E	C	D
Approach Delay (s)		21.3			24.1			31.2			37.0	
Approach LOS		C			C			C			D	

Intersection Summary			
HCM Average Control Delay	29.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	79.7%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰			↱			✥				
Volume (vph)	42	447	0	0	329	78	27	60	96	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		1.00			0.97			0.93				
Flt Protected		1.00			1.00			0.99				
Satd. Flow (prot)		1707			1670			1581				
Flt Permitted		0.94			1.00			0.99				
Satd. Flow (perm)		1609			1670			1581				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	47	497	0	0	366	87	30	67	107	0	0	0
RTOR Reduction (vph)	0	0	0	0	13	0	0	61	0	0	0	0
Lane Group Flow (vph)	0	544	0	0	440	0	0	143	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)		34.0			34.0			23.0				
Effective Green, g (s)		34.0			34.0			23.0				
Actuated g/C Ratio		0.52			0.52			0.35				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		842			874			559				
v/s Ratio Prot					0.26							
v/s Ratio Perm		c0.34						0.09				
v/c Ratio		0.65			0.50			0.26				
Uniform Delay, d1		11.2			10.0			14.9				
Progression Factor		1.00			0.64			1.00				
Incremental Delay, d2		3.8			1.7			1.1				
Delay (s)		15.0			8.1			16.0				
Level of Service		B			A			B				
Approach Delay (s)		15.0			8.1			16.0			0.0	
Approach LOS		B			A			B			A	

Intersection Summary			
HCM Average Control Delay	12.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	71.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1036: 111th Street & Wentworth Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			↰↑↑↱			↰↑↑↱	
Volume (vph)	43	398	32	19	408	47	25	167	33	50	105	21
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	12	12	12	12	12
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		1.00			1.00			0.99			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.99			0.99			0.98			0.98	
Flt Protected		1.00			1.00			0.99			0.99	
Satd. Flow (prot)		1886			1843			3185			3147	
Flt Permitted		0.93			0.97			0.91			0.83	
Satd. Flow (perm)		1760			1798			2931			2649	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	48	442	36	21	453	52	28	186	37	56	117	23
RTOR Reduction (vph)	0	4	0	0	6	0	0	22	0	0	13	0
Lane Group Flow (vph)	0	522	0	0	520	0	0	229	0	0	183	0
Confl. Peds. (#/hr)	29		16	16		29	28		14	14		28
Confl. Bikes (#/hr)	1					1	1					1
Heavy Vehicles (%)	3%	7%	4%	12%	8%	13%	0%	4%	4%	4%	4%	6%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		30.0			30.0			27.0			27.0	
Effective Green, g (s)		30.0			30.0			27.0			27.0	
Actuated g/C Ratio		0.46			0.46			0.42			0.42	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		812			830			1217			1100	
v/s Ratio Prot												
v/s Ratio Perm		c0.30			0.29			c0.08			0.07	
v/c Ratio		0.64			0.63			0.19			0.17	
Uniform Delay, d1		13.4			13.3			12.1			11.9	
Progression Factor		0.65			0.52			0.86			0.57	
Incremental Delay, d2		3.2			3.4			0.3			0.3	
Delay (s)		11.8			10.3			10.7			7.1	
Level of Service		B			B			B			A	
Approach Delay (s)		11.8			10.3			10.7			7.1	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM Average Control Delay	10.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	79.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1037: 111th Street & State Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	50	267	22	28	347	61	53	303	85	46	91	28
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	9	10	10	9	10	10	12	10	10	12
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		0.99	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.98		1.00	0.97		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1503	2934		1583	2945		1497	3034		1594	2896	
Flt Permitted	0.43	1.00		0.55	1.00		0.67	1.00		0.50	1.00	
Satd. Flow (perm)	684	2934		910	2945		1053	3034		833	2896	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	56	297	24	31	386	68	59	337	94	51	101	31
RTOR Reduction (vph)	0	9	0	0	22	0	0	39	0	0	14	0
Lane Group Flow (vph)	56	312	0	31	432	0	59	392	0	51	118	0
Confl. Peds. (#/hr)	25		14	14		25	12		4	4		12
Confl. Bikes (#/hr)	1					1			1	1		
Heavy Vehicles (%)	5%	7%	12%	0%	6%	2%	6%	1%	3%	0%	4%	12%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	22.0	22.0		22.0	22.0		35.0	35.0		35.0	35.0	
Effective Green, g (s)	22.0	22.0		22.0	22.0		35.0	35.0		35.0	35.0	
Actuated g/C Ratio	0.34	0.34		0.34	0.34		0.54	0.54		0.54	0.54	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	232	993		308	997		567	1634		449	1559	
v/s Ratio Prot		0.11			c0.15			c0.13			0.04	
v/s Ratio Perm	0.08			0.03			0.06			0.06		
v/c Ratio	0.24	0.31		0.10	0.43		0.10	0.24		0.11	0.08	
Uniform Delay, d1	15.5	15.9		14.7	16.7		7.3	7.9		7.4	7.2	
Progression Factor	0.59	0.56		0.77	0.78		0.68	0.68		1.32	1.37	
Incremental Delay, d2	2.0	0.7		0.6	1.3		0.4	0.3		0.5	0.1	
Delay (s)	11.1	9.6		11.9	14.4		5.4	5.7		10.3	10.0	
Level of Service	B	A		B	B		A	A		B	A	
Approach Delay (s)		9.8			14.2			5.7			10.1	
Approach LOS		A			B			A			B	

Intersection Summary			
HCM Average Control Delay	9.9	HCM Level of Service	A
HCM Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	46.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1038: 111th Street & Michigan Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			↰↑↱			↰↑↱	
Volume (vph)	80	374	27	37	370	82	20	307	44	41	118	41
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	9	10	9	9	16	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			1.00			0.99	
Flpb, ped/bikes	0.97	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.97			0.98			0.97	
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.99	
Satd. Flow (prot)	1385	3013		1334	3540			3438			3303	
Flt Permitted	0.46	1.00		0.49	1.00			0.94			0.84	
Satd. Flow (perm)	667	3013		692	3540			3226			2809	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	84	394	28	39	389	86	21	323	46	43	124	43
RTOR Reduction (vph)	0	8	0	0	29	0	0	16	0	0	26	0
Lane Group Flow (vph)	84	414	0	39	446	0	0	374	0	0	184	0
Confl. Peds. (#/hr)	53		34	34		53	67		28	28		67
Heavy Vehicles (%)	8%	5%	0%	14%	6%	1%	0%	9%	20%	5%	15%	5%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	31.0	31.0		31.0	31.0			26.0			26.0	
Effective Green, g (s)	31.0	31.0		31.0	31.0			26.0			26.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48			0.40			0.40	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	318	1437		330	1688			1290			1124	
v/s Ratio Prot		c0.14			0.13							
v/s Ratio Perm	0.13			0.06				c0.12			0.07	
v/c Ratio	0.26	0.29		0.12	0.26			0.29			0.16	
Uniform Delay, d1	10.2	10.3		9.4	10.2			13.2			12.5	
Progression Factor	1.60	1.64		0.77	0.75			0.36			0.64	
Incremental Delay, d2	2.0	0.5		0.6	0.3			0.5			0.3	
Delay (s)	18.3	17.4		7.9	8.0			5.3			8.3	
Level of Service	B	B		A	A			A			A	
Approach Delay (s)		17.6			8.0			5.3			8.3	
Approach LOS		B			A			A			A	

Intersection Summary			
HCM Average Control Delay	10.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.29		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	59.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1039: 111th Street & Indiana Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰↱			✥			✥	
Volume (vph)	94	288	95	104	356	104	84	80	84	84	80	78
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	16	12	12	16	12
Total Lost time (s)		5.0	5.0		5.0			5.0			5.0	
Lane Util. Factor		1.00	1.00		0.95			1.00			1.00	
Frt		1.00	0.85		0.97			0.95			0.96	
Flt Protected		0.99	1.00		0.99			0.98			0.98	
Satd. Flow (prot)		1637	1409		3033			1823			1826	
Flt Permitted		0.75	1.00		0.77			0.80			0.79	
Satd. Flow (perm)		1235	1409		2363			1480			1469	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	104	320	106	116	396	116	93	89	93	93	89	87
RTOR Reduction (vph)	0	0	51	0	30	0	0	28	0	0	26	0
Lane Group Flow (vph)	0	424	55	0	598	0	0	247	0	0	243	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm		Perm	Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)		34.0	34.0		34.0			21.0			21.0	
Effective Green, g (s)		34.0	34.0		34.0			21.0			21.0	
Actuated g/C Ratio		0.52	0.52		0.52			0.32			0.32	
Clearance Time (s)		5.0	5.0		5.0			5.0			5.0	
Lane Grp Cap (vph)		646	737		1236			478			475	
v/s Ratio Prot												
v/s Ratio Perm		c0.34	0.04		0.25			c0.17			0.17	
v/c Ratio		0.66	0.08		0.48			0.52			0.51	
Uniform Delay, d1		11.3	7.7		9.9			17.9			17.8	
Progression Factor		2.03	5.66		0.40			1.00			1.00	
Incremental Delay, d2		5.0	0.2		1.3			3.9			3.9	
Delay (s)		27.9	43.8		5.3			21.8			21.7	
Level of Service		C	D		A			C			C	
Approach Delay (s)		31.1			5.3			21.8			21.7	
Approach LOS		C			A			C			C	

Intersection Summary			
HCM Average Control Delay	18.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	70.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1040: 111th Street & Martin Luther King Jr Drive

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			↰↑↱			↰↑↱	
Volume (vph)	70	365	20	15	442	63	37	103	41	41	86	94
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	15	8	16	8	8	16	8
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			1.00			0.99	
Flpb, ped/bikes	0.99	1.00		0.98	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.98			0.97			0.94	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1475	3018		1572	3002			3454			3404	
Flt Permitted	0.39	1.00		0.48	1.00			0.87			0.88	
Satd. Flow (perm)	606	3018		793	3002			3037			3020	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	78	406	22	17	491	70	41	114	46	46	96	104
RTOR Reduction (vph)	0	6	0	0	17	0	0	25	0	0	58	0
Lane Group Flow (vph)	78	422	0	17	544	0	0	176	0	0	188	0
Confl. Peds. (#/hr)	22		40	40		22	18		3	3		18
Confl. Bikes (#/hr)			2	2			1					1
Heavy Vehicles (%)	7%	5%	0%	0%	4%	2%	0%	3%	22%	0%	3%	8%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	28.0	28.0		28.0	28.0			29.0			29.0	
Effective Green, g (s)	28.0	28.0		28.0	28.0			29.0			29.0	
Actuated g/C Ratio	0.43	0.43		0.43	0.43			0.45			0.45	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	261	1300		342	1293			1355			1347	
v/s Ratio Prot		0.14			c0.18							
v/s Ratio Perm	0.13			0.02				0.06			c0.06	
v/c Ratio	0.30	0.32		0.05	0.42			0.13			0.14	
Uniform Delay, d1	12.1	12.2		10.8	12.9			10.6			10.6	
Progression Factor	0.99	1.01		1.12	0.94			0.99			0.81	
Incremental Delay, d2	2.3	0.5		0.2	0.6			0.2			0.2	
Delay (s)	14.2	12.9		12.2	12.7			10.7			8.9	
Level of Service	B	B		B	B			B			A	
Approach Delay (s)		13.1			12.6			10.7			8.9	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM Average Control Delay	11.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	59.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱			↰↑↱			↰↑↱	
Volume (vph)	82	433	69	89	441	270	46	315	87	211	151	50
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			0.95			0.95	
Frt		0.98			0.95			0.97			0.98	
Flt Protected		0.99			0.99			0.99			0.98	
Satd. Flow (prot)		3177			3075			3146			3118	
Flt Permitted		0.66			0.76			0.88			0.63	
Satd. Flow (perm)		2099			2351			2784			2030	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	91	481	77	99	490	300	51	350	97	234	168	56
RTOR Reduction (vph)	0	16	0	0	99	0	0	33	0	0	17	0
Lane Group Flow (vph)	0	633	0	0	790	0	0	465	0	0	441	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm			pm+pt			Perm		
Protected Phases		4			8		5	2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		26.0			26.0			29.0			20.0	
Effective Green, g (s)		26.0			26.0			29.0			20.0	
Actuated g/C Ratio		0.40			0.40			0.45			0.31	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		840			940			1276			625	
v/s Ratio Prot								c0.03				
v/s Ratio Perm		0.30			c0.34			0.13			c0.22	
v/c Ratio		0.75			0.84			0.36			0.88dl	
Uniform Delay, d1		16.7			17.6			11.9			19.9	
Progression Factor		1.76			1.00			1.00			0.89	
Incremental Delay, d2		6.1			9.0			0.8			6.6	
Delay (s)		35.5			26.6			12.7			24.3	
Level of Service		D			C			B			C	
Approach Delay (s)		35.5			26.6			12.7			24.3	
Approach LOS		D			C			B			C	

Intersection Summary			
HCM Average Control Delay	25.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	85.0%	ICU Level of Service	E
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1042: 111th Street & Ellis Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↑↱			↰↑↑↱			↰↑↱			↰↑↱	
Volume (vph)	0	687	113	43	721	0	130	0	66	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	10	10	12	12	12	12	10	10	10
Total Lost time (s)		5.0			5.0			5.0				
Lane Util. Factor		0.95			0.95			1.00				
Frt		0.98			1.00			0.95				
Flt Protected		1.00			1.00			0.97				
Satd. Flow (prot)		2975			3031			1584				
Flt Permitted		1.00			0.84			0.80				
Satd. Flow (perm)		2975			2567			1309				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	763	126	48	801	0	144	0	73	0	0	0
RTOR Reduction (vph)	0	18	0	0	0	0	0	21	0	0	0	0
Lane Group Flow (vph)	0	871	0	0	849	0	0	196	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	custom			Perm			Perm			Perm		
Protected Phases		4 5 6 11			8			2			2	
Permitted Phases	4 6 11			8			2			2		
Actuated Green, G (s)		65.0			33.0			16.0				
Effective Green, g (s)		58.0			33.0			16.0				
Actuated g/C Ratio		0.64			0.37			0.18				
Clearance Time (s)					5.0			5.0				
Lane Grp Cap (vph)		1917			941			233				
v/s Ratio Prot		c0.29										
v/s Ratio Perm					c0.33			c0.15				
v/c Ratio		0.45			0.90			0.84				
Uniform Delay, d1		8.0			27.0			35.8				
Progression Factor		0.01			1.57			1.00				
Incremental Delay, d2		0.4			12.2			29.3				
Delay (s)		0.5			54.5			65.1				
Level of Service		A			D			E				
Approach Delay (s)		0.5			54.5			65.1			0.0	
Approach LOS		A			D			E			A	

Intersection Summary			
HCM Average Control Delay	31.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	70.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1043: 111th Street & Doty Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↑	↱		✥		↰	↑	↱
Volume (vph)	117	476	178	260	613	174	98	19	176	74	7	73
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	10	12	12	12	12	16	12	12	12	12
Total Lost time (s)	3.0	5.0		3.0	5.0	3.0		5.0		3.0	5.0	3.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00		1.00	1.00	1.00
Frt	1.00	0.96		1.00	1.00	0.85		0.92		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.98		0.95	1.00	1.00
Satd. Flow (prot)	1520	3020		1629	3257	1457		1756		1629	1714	1457
Flt Permitted	0.33	1.00		0.23	1.00	1.00		0.89		0.41	1.00	1.00
Satd. Flow (perm)	529	3020		400	3257	1457		1581		698	1714	1457
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	130	529	198	289	681	193	109	21	196	82	8	81
RTOR Reduction (vph)	0	40	0	0	0	98	0	74	0	0	0	44
Lane Group Flow (vph)	130	687	0	289	681	95	0	252	0	82	8	37
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	pm+pt			pm+pt		pm+ov	pm+pt			pm+pt		pm+ov
Protected Phases	7	4		3	8	1	5	2		1	6	7
Permitted Phases	4			8		8	2			6		6
Actuated Green, G (s)	41.9	32.6		48.2	35.9	44.5		20.2		31.8	31.8	41.1
Effective Green, g (s)	41.9	32.6		48.2	35.9	44.5		20.2		31.8	31.8	41.1
Actuated g/C Ratio	0.47	0.36		0.54	0.40	0.49		0.22		0.35	0.35	0.46
Clearance Time (s)	3.0	5.0		3.0	5.0	3.0		5.0		3.0	5.0	3.0
Vehicle Extension (s)	4.0	3.0		4.0	3.0	3.0		4.0		3.0	4.0	4.0
Lane Grp Cap (vph)	349	1094		386	1299	720		355		336	606	665
v/s Ratio Prot	0.04	0.23		c0.10	0.21	0.01				c0.02	0.00	0.01
v/s Ratio Perm	0.14			c0.30		0.05		c0.16		0.06		0.02
v/c Ratio	0.37	0.63		0.75	0.52	0.13		0.71		0.24	0.01	0.06
Uniform Delay, d1	14.2	23.7		13.6	20.6	12.3		32.2		21.4	18.9	13.6
Progression Factor	1.92	1.62		1.00	1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2	0.8	2.5		8.2	1.5	0.1		7.0		0.4	0.0	0.0
Delay (s)	28.1	40.8		21.9	22.1	12.4		39.2		21.8	18.9	13.7
Level of Service	C	D		C	C	B		D		C	B	B
Approach Delay (s)		38.9			20.4			39.2			17.8	
Approach LOS		D			C			D			B	

Intersection Summary			
HCM Average Control Delay	29.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	71.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
1044: 111th Street & Bishop Ford Freeway EB Ramps

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↑↑					↰		↱
Volume (veh/h)	0	492	234	6	504	0	0	0	0	30	0	543
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	547	260	7	560	0	0	0	0	33	0	603
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		498										
pX, platoon unblocked												
vC, conflicting volume	560			547			840	1120	273	847	1120	280
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	560			547			840	1120	273	847	1120	280
tC, single (s)	4.2			4.2			7.6	6.6	7.0	7.6	6.6	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			100	100	100	87	100	15
cM capacity (veh/h)	987			998			37	199	715	249	199	708

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1	SB 2
Volume Total	273	273	260	193	373	33	603
Volume Left	0	0	0	7	0	33	0
Volume Right	0	0	260	0	0	0	603
cSH	1700	1700	1700	998	1700	249	708
Volume to Capacity	0.16	0.16	0.15	0.01	0.22	0.13	0.85
Queue Length 95th (ft)	0	0	0	1	0	11	246
Control Delay (s)	0.0	0.0	0.0	0.4	0.0	21.7	32.1
Lane LOS				A		C	D
Approach Delay (s)	0.0			0.1		31.5	
Approach LOS						D	

Intersection Summary			
Average Delay	10.0		
Intersection Capacity Utilization	57.0%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰↰		↰			
Sign Control	Stop			Stop	Stop	
Volume (vph)	522	0	510	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	580	0	567	0	0	0

Direction, Lane #	EB 1	EB 2	NB 1
Volume Total (vph)	290	290	567
Volume Left (vph)	290	290	567
Volume Right (vph)	0	0	0
Hadj (s)	0.58	0.58	0.29
Departure Headway (s)	6.8	6.8	5.7
Degree Utilization, x	0.55	0.55	0.90
Capacity (veh/h)	514	505	627
Control Delay (s)	16.7	16.7	38.6
Approach Delay (s)	16.7		38.6
Approach LOS	C		E

Intersection Summary			
Delay	27.5		
HCM Level of Service	D		
Intersection Capacity Utilization	52.2%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Signalized Intersection Capacity Analysis
1046: 115th Street & Marshield Avenue

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱		↰	↑↑						↰↑↱	
Volume (vph)	0	353	46	127	326	0	0	0	0	72	15	42
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	12	12	12	12	12
Total Lost time (s)		3.0		4.0	4.0						5.0	
Lane Util. Factor		0.95		1.00	0.95						0.95	
Frt		0.98		1.00	1.00						0.95	
Flt Protected		1.00		0.95	1.00						0.97	
Satd. Flow (prot)		3094		1574	3149						3014	
Flt Permitted		1.00		0.44	1.00						0.97	
Satd. Flow (perm)		3094		730	3149						3014	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	392	51	141	362	0	0	0	0	80	17	47
RTOR Reduction (vph)	0	12	0	0	0	0	0	0	0	0	32	0
Lane Group Flow (vph)	0	431	0	141	362	0	0	0	0	0	112	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type				pm+pt						Split		
Protected Phases		4		3	8					6	6	
Permitted Phases				8								
Actuated Green, G (s)		36.0		49.0	49.0						27.0	
Effective Green, g (s)		36.0		49.0	49.0						27.0	
Actuated g/C Ratio		0.42		0.58	0.58						0.32	
Clearance Time (s)		3.0		4.0	4.0						5.0	
Lane Grp Cap (vph)		1310		520	1815						957	
v/s Ratio Prot		c0.14		c0.03	0.11						c0.04	
v/s Ratio Perm				0.12								
v/c Ratio		0.33		0.27	0.20						0.12	
Uniform Delay, d1		16.4		11.5	8.6						20.6	
Progression Factor		1.00		0.27	0.24						1.00	
Incremental Delay, d2		0.7		1.2	0.2						0.2	
Delay (s)		17.1		4.4	2.3						20.8	
Level of Service		B		A	A						C	
Approach Delay (s)		17.1			2.9			0.0			20.8	
Approach LOS		B			A			A			C	

Intersection Summary			
HCM Average Control Delay	11.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.23		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	34.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑			↑↱			↰↑↱				
Volume (vph)	68	357	0	0	404	76	49	65	45	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	11	11	12	12	12	12	12	12
Total Lost time (s)	5.0	5.0			3.0			5.0				
Lane Util. Factor	1.00	0.95			0.95			0.91				
Frt	1.00	1.00			0.98			0.96				
Flt Protected	0.95	1.00			1.00			0.98				
Satd. Flow (prot)	1629	3257			3074			4413				
Flt Permitted	0.38	1.00			1.00			0.98				
Satd. Flow (perm)	650	3257			3074			4413				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	76	397	0	0	449	84	54	72	50	0	0	0
RTOR Reduction (vph)	0	0	0	0	18	0	0	34	0	0	0	0
Lane Group Flow (vph)	76	397	0	0	515	0	0	142	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	pm+pt						Split					
Protected Phases	7	4			8		2	2				
Permitted Phases	4											
Actuated Green, G (s)	48.0	48.0			35.0			27.0				
Effective Green, g (s)	48.0	48.0			35.0			27.0				
Actuated g/C Ratio	0.56	0.56			0.41			0.32				
Clearance Time (s)	5.0	5.0			3.0			5.0				
Lane Grp Cap (vph)	482	1839			1266			1402				
v/s Ratio Prot	0.02	c0.12			c0.17			c0.03				
v/s Ratio Perm	0.07											
v/c Ratio	0.16	0.22			0.41			0.10				
Uniform Delay, d1	12.2	9.2			17.7			20.4				
Progression Factor	0.33	0.32			1.00			1.00				
Incremental Delay, d2	0.7	0.3			1.0			0.1				
Delay (s)	4.6	3.2			18.6			20.6				
Level of Service	A	A			B			C				
Approach Delay (s)		3.5			18.6			20.6			0.0	
Approach LOS		A			B			C			A	

Intersection Summary			
HCM Average Control Delay	12.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	34.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1048: 115th Street & Racine Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↑↱			↰↑↑↱			↰↑↱			↰↑↱	
Volume (vph)	39	323	39	34	247	31	118	85	61	57	90	124
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	10	12	12	15	12	12	15	12
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			1.00			1.00	
Frt		0.99			0.99			0.97			0.94	
Flt Protected		1.00			0.99			0.98			0.99	
Satd. Flow (prot)		2982			2979			1787			1751	
Flt Permitted		0.89			0.87			0.76			0.88	
Satd. Flow (perm)		2664			2613			1380			1562	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	43	359	43	38	274	34	131	94	68	63	100	138
RTOR Reduction (vph)	0	12	0	0	13	0	0	17	0	0	47	0
Lane Group Flow (vph)	0	433	0	0	333	0	0	276	0	0	254	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		23.0			23.0			32.0			32.0	
Effective Green, g (s)		23.0			23.0			32.0			32.0	
Actuated g/C Ratio		0.35			0.35			0.49			0.49	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		943			925			679			769	
v/s Ratio Prot												
v/s Ratio Perm		c0.16			0.13			c0.20			0.16	
v/c Ratio		0.46			0.36			0.41			0.33	
Uniform Delay, d1		16.2			15.6			10.5			10.0	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		1.6			1.1			1.8			1.2	
Delay (s)		17.8			16.6			12.3			11.2	
Level of Service		B			B			B			B	
Approach Delay (s)		17.8			16.6			12.3			11.2	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	14.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	63.7%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1049: 115th Street & Halsted Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↑	↱	↰	↑↑	↱
Volume (vph)	196	202	39	50	176	62	68	971	67	73	418	85
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	12	10	16	12	9	10	9	9	10	9
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00	0.98	1.00	1.00	0.96
Flpb, ped/bikes	0.99	1.00		1.00	1.00		0.99	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.98		1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1548	3005		1592	3512		1486	3040	1347	1494	3011	1271
Flt Permitted	0.59	1.00		0.58	1.00		0.44	1.00	1.00	0.12	1.00	1.00
Satd. Flow (perm)	954	3005		975	3512		688	3040	1347	197	3011	1271
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	206	213	41	53	185	65	72	1022	71	77	440	89
RTOR Reduction (vph)	0	19	0	0	41	0	0	0	43	0	0	54
Lane Group Flow (vph)	206	235	0	53	209	0	72	1022	28	77	440	35
Confl. Peds. (#/hr)	31		7	7		31	37		12	12		37
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	2%	4%	0%	0%	6%	2%	3%	5%	0%	3%	6%	4%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	32.0	27.0		32.0	27.0		38.0	33.0	33.0	38.0	33.0	33.0
Effective Green, g (s)	30.0	28.0		30.0	28.0		36.0	33.0	33.0	36.0	33.0	33.0
Actuated g/C Ratio	0.35	0.33		0.35	0.33		0.42	0.39	0.39	0.42	0.39	0.39
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)	365	990		373	1157		329	1180	523	144	1169	493
v/s Ratio Prot	c0.03	0.08		0.01	0.06		0.01	c0.34		c0.03	0.15	
v/s Ratio Perm	c0.17			0.04			0.08		0.02	0.20		0.03
v/c Ratio	0.56	0.24		0.14	0.18		0.22	0.87	0.05	0.53	0.38	0.07
Uniform Delay, d1	21.3	20.7		18.4	20.3		14.9	24.0	16.2	17.2	18.6	16.4
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	2.00	0.61	0.82
Incremental Delay, d2	6.2	0.6		0.8	0.3		1.5	8.6	0.2	12.3	0.8	0.3
Delay (s)	27.5	21.3		19.2	20.7		16.5	32.6	16.4	46.8	12.2	13.7
Level of Service	C	C		B	C		B	C	B	D	B	B
Approach Delay (s)		24.1			20.4			30.6			16.8	
Approach LOS		C			C			C			B	

Intersection Summary			
HCM Average Control Delay	24.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	70.7%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱		↰	↱		↰	↱
Volume (vph)	40	256	18	14	216	8	35	121	25	20	58	42
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	16	12	12	16	12
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frpb, ped/bikes		1.00	0.96		1.00	0.97		1.00	0.99		1.00	0.98
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frt		1.00	0.85		1.00	0.85		1.00	0.85		1.00	0.85
Flt Protected		0.99	1.00		1.00	1.00		0.99	1.00		0.99	1.00
Satd. Flow (prot)		1929	1382		1950	1331		1973	1452		1928	1430
Flt Permitted		0.94	1.00		0.98	1.00		0.94	1.00		0.93	1.00
Satd. Flow (perm)		1823	1382		1910	1331		1866	1452		1810	1430
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	42	269	19	15	227	8	37	127	26	21	61	44
RTOR Reduction (vph)	0	0	10	0	0	4	0	0	15	0	0	26
Lane Group Flow (vph)	0	311	9	0	242	4	0	164	11	0	82	18
Confl. Peds. (#/hr)	5		21	21		5	9		1	1		9
Heavy Vehicles (%)	5%	5%	6%	7%	4%	12%	6%	1%	4%	0%	6%	5%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)		30.0	30.0		30.0	30.0		27.0	27.0		27.0	27.0
Effective Green, g (s)		30.0	30.0		30.0	30.0		27.0	27.0		27.0	27.0
Actuated g/C Ratio		0.46	0.46		0.46	0.46		0.42	0.42		0.42	0.42
Clearance Time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		841	638		882	614		775	603		752	594
v/s Ratio Prot												
v/s Ratio Perm		c0.17	0.01		0.13	0.00		c0.09	0.01		0.05	0.01
v/c Ratio		0.37	0.01		0.27	0.01		0.21	0.02		0.11	0.03
Uniform Delay, d1		11.4	9.5		10.8	9.4		12.2	11.2		11.6	11.3
Progression Factor		1.00	1.00		0.46	0.35		1.17	1.42		0.94	0.84
Incremental Delay, d2		1.3	0.0		0.8	0.0		0.6	0.1		0.3	0.1
Delay (s)		12.6	9.5		5.7	3.4		14.8	16.0		11.2	9.5
Level of Service		B	A		A	A		B	B		B	A
Approach Delay (s)		12.4			5.6			15.0			10.6	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM Average Control Delay	10.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.29		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	61.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1051: 115th Street & State Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	66	283	10	17	211	34	12	234	34	47	70	30
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	0.98		1.00	0.98		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1520	3025		1520	2976		1520	2982		1520	2904	
Flt Permitted	0.95	1.00		0.56	1.00		0.68	1.00		0.56	1.00	
Satd. Flow (perm)	1520	3025		888	2976		1091	2982		891	2904	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	73	314	11	19	234	38	13	260	38	52	78	33
RTOR Reduction (vph)	0	4	0	0	20	0	0	18	0	0	19	0
Lane Group Flow (vph)	73	321	0	19	252	0	13	280	0	52	92	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Prot			Perm			Perm			Perm		
Protected Phases	7	4			8			2			6	
Permitted Phases				8			2			6		
Actuated Green, G (s)	7.0	32.0		22.0	22.0		27.0	27.0		27.0	27.0	
Effective Green, g (s)	7.0	32.0		22.0	22.0		27.0	27.0		27.0	27.0	
Actuated g/C Ratio	0.11	0.49		0.34	0.34		0.42	0.42		0.42	0.42	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	164	1489		301	1007		453	1239		370	1206	
v/s Ratio Prot	c0.05	0.11			c0.08			c0.09			0.03	
v/s Ratio Perm				0.02			0.01			0.06		
v/c Ratio	0.45	0.22		0.06	0.25		0.03	0.23		0.14	0.08	
Uniform Delay, d1	27.2	9.4		14.5	15.5		11.2	12.3		11.8	11.5	
Progression Factor	0.85	0.48		0.86	0.83		0.54	0.56		1.16	1.17	
Incremental Delay, d2	8.3	0.3		0.4	0.6		0.1	0.4		0.8	0.1	
Delay (s)	31.6	4.8		12.8	13.5		6.2	7.2		14.4	13.6	
Level of Service	C	A		B	B		A	A		B	B	
Approach Delay (s)		9.7			13.4			7.2			13.8	
Approach LOS		A			B			A			B	

Intersection Summary			
HCM Average Control Delay	10.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	36.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1052: 115th Street & Michigan Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Lane Configurations	↰	↑↱		↰	↑↱			↰↑↱			↰↑↱	
Volume (vph)	37	249	85	240	212	42	43	295	56	24	179	24
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	12	12	12	12	12	12
Total Lost time (s)	4.0	4.0		3.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frt	1.00	0.96		1.00	0.98			0.98			0.98	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1520	2924		1520	2964			3171			3188	
Flt Permitted	0.58	1.00		0.95	1.00			0.90			0.89	
Satd. Flow (perm)	925	2924		1520	2964			2860			2861	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	41	277	94	267	236	47	48	328	62	27	199	27
RTOR Reduction (vph)	0	51	0	0	25	0	0	20	0	0	14	0
Lane Group Flow (vph)	41	320	0	267	258	0	0	418	0	0	239	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Prot			Perm			Perm		
Protected Phases		4		3	8			2			6	
Permitted Phases	4						2			6		
Actuated Green, G (s)	20.0	20.0		6.0	29.0			25.0			25.0	
Effective Green, g (s)	20.0	20.0		6.0	29.0			25.0			25.0	
Actuated g/C Ratio	0.31	0.31		0.09	0.45			0.38			0.38	
Clearance Time (s)	4.0	4.0		3.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	285	900		140	1322			1100			1100	
v/s Ratio Prot		c0.11		c0.18	0.09							
v/s Ratio Perm	0.04							c0.15			0.08	
v/c Ratio	0.14	0.36		1.91	0.19			0.38			0.22	
Uniform Delay, d1	16.3	17.5		29.5	10.9			14.4			13.4	
Progression Factor	0.64	0.55		1.32	1.10			1.26			0.81	
Incremental Delay, d2	1.0	1.1		426.9	0.2			0.2			0.5	
Delay (s)	11.5	10.7		465.9	12.3			18.4			11.4	
Level of Service	B	B		F	B			B			B	
Approach Delay (s)		10.8			232.5			18.4			11.4	
Approach LOS		B			F			B			B	

Intersection Summary			
HCM Average Control Delay	86.7	HCM Level of Service	F
HCM Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	56.1%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1053: 115th Street & Indiana Avenue

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			↰↑↱				
Volume (vph)	16	294	14	69	461	69	34	93	160	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	12	14	12	10	15	10
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			0.95				
Frt		0.99			0.98			0.92				
Flt Protected		1.00			0.99			0.99				
Satd. Flow (prot)		1586			1566			3165				
Flt Permitted		0.97			0.92			0.99				
Satd. Flow (perm)		1535			1453			3165				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	18	327	16	77	512	77	38	103	178	0	0	0
RTOR Reduction (vph)	0	2	0	0	6	0	0	137	0	0	0	0
Lane Group Flow (vph)	0	359	0	0	660	0	0	182	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm			Perm					
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Actuated Green, G (s)		41.9			41.9			15.1				
Effective Green, g (s)		41.9			41.9			15.1				
Actuated g/C Ratio		0.64			0.64			0.23				
Clearance Time (s)		4.0			4.0			4.0				
Vehicle Extension (s)		3.0			3.0			8.0				
Lane Grp Cap (vph)		989			937			735				
v/s Ratio Prot												
v/s Ratio Perm		0.23			c0.45			0.06				
v/c Ratio		0.36			0.70			0.25				
Uniform Delay, d1		5.4			7.5			20.3				
Progression Factor		1.68			1.00			1.00				
Incremental Delay, d2		1.0			4.4			0.8				
Delay (s)		10.0			11.9			21.1				
Level of Service		A			B			C				
Approach Delay (s)		10.0			11.9			21.1			0.0	
Approach LOS		A			B			C			A	

Intersection Summary			
HCM Average Control Delay	13.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	71.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
1054: 115th Street & Martin Luther King Jr Drive

1/14/2013

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰	↱		↰	↱
Volume (veh/h)	95	359	464	44	64	132
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	100	378	488	46	67	139
Pedestrians		3	5		21	
Lane Width (ft)		16.0	16.0		10.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		0	1		1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		1319	491			
pX, platoon unblocked	0.86				0.86	0.86
vC, conflicting volume	556				1115	536
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	398				1051	374
tC, single (s)	4.2				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.3				3.5	3.3
p0 queue free %	89				64	75
cM capacity (veh/h)	936				188	565

Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total	478	535	67	139
Volume Left	100	0	67	0
Volume Right	0	46	0	139
cSH	936	1700	188	565
Volume to Capacity	0.11	0.31	0.36	0.25
Queue Length 95th (ft)	9	0	38	24
Control Delay (s)	3.0	0.0	34.4	13.4
Lane LOS	A		D	B
Approach Delay (s)	3.0	0.0	20.3	
Approach LOS			C	

Intersection Summary			
Average Delay	4.6		
Intersection Capacity Utilization	68.9%	ICU Level of Service	C
Analysis Period (min)	15		

HCM Signalized Intersection Capacity Analysis
1055: 115th Street & Cottage Grove Avenue

1/14/2013

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↱			↰	↰↱	
Volume (vph)	463	1	26	658	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0			4.0		
Lane Util. Factor	1.00			1.00		
Frt	1.00			1.00		
Flt Protected	1.00			1.00		
Satd. Flow (prot)	1714			1711		
Flt Permitted	1.00			0.97		
Satd. Flow (perm)	1714			1663		
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	514	1	29	731	0	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	515	0	0	760	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%
Turn Type			Perm			
Protected Phases	1 2 4			4	3	
Permitted Phases			4			
Actuated Green, G (s)	63.0			31.0		
Effective Green, g (s)	59.0			31.0		
Actuated g/C Ratio	0.69			0.36		
Clearance Time (s)				4.0		
Lane Grp Cap (vph)	1190			607		
v/s Ratio Prot	c0.30					
v/s Ratio Perm				c0.46		
v/c Ratio	0.43			1.25		
Uniform Delay, d1	5.7			27.0		
Progression Factor	0.05			1.00		
Incremental Delay, d2	0.1			126.6		
Delay (s)	0.4			153.6		
Level of Service	A			F		
Approach Delay (s)	0.4			153.6	0.0	
Approach LOS	A			F	A	

Intersection Summary			
HCM Average Control Delay	91.7	HCM Level of Service	F
HCM Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	62.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
1056: 115th Street & Bishop Ford Fwy

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱			↰						↰	↱
Volume (veh/h)	0	183	191	25	551	0	0	0	0	3	0	250
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	203	212	28	612	0	0	0	0	3	0	278
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	612			203			977	977	208	769	871	612
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	612			203			977	977	208	769	871	612
tC, single (s)	4.1			5.5			7.5	6.5	6.9	7.5	6.5	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.9			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			97			100	100	100	99	100	36
cM capacity (veh/h)	977			986			72	246	805	288	283	431

Direction, Lane #	EB 1	EB 2	WB 1	SB 1	SB 2
Volume Total	136	280	640	3	278
Volume Left	0	0	28	3	0
Volume Right	0	212	0	0	278
cSH	1700	1700	986	288	431
Volume to Capacity	0.08	0.16	0.03	0.01	0.64
Queue Length 95th (ft)	0	0	2	1	110
Control Delay (s)	0.0	0.0	0.7	17.7	27.3
Lane LOS			A	C	D
Approach Delay (s)	0.0		0.7	27.2	
Approach LOS				D	

Intersection Summary			
Average Delay	6.1		
Intersection Capacity Utilization	57.2%	ICU Level of Service	B
Analysis Period (min)	15		

	↗	↘	↖	↑	↓	↙
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰↰		↰			
Sign Control	Stop			Stop	Stop	
Volume (vph)	186	0	576	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	207	0	640	0	0	0

Direction, Lane #	EB 1	EB 2	NB 1
Volume Total (vph)	103	103	640
Volume Left (vph)	103	103	640
Volume Right (vph)	0	0	0
Hadj (s)	0.58	0.58	0.29
Departure Headway (s)	6.8	6.8	4.8
Degree Utilization, x	0.19	0.19	0.86
Capacity (veh/h)	511	512	734
Control Delay (s)	10.2	10.2	29.9
Approach Delay (s)	10.2		29.9
Approach LOS	B		D

Intersection Summary			
Delay	25.1		
HCM Level of Service	D		
Intersection Capacity Utilization	46.0%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Signalized Intersection Capacity Analysis
1058: 119th Street & Marshield Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↰↑					↰	↰↑↱	↱
Volume (vph)	0	560	207	165	489	0	0	0	0	131	115	294
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	12	13	12	12	12	12	10	10	11
Total Lost time (s)		6.0	6.0		6.0					6.0	6.0	6.0
Lane Util. Factor		0.95	1.00		0.95					0.86	0.81	0.86
Frpb, ped/bikes		1.00	0.98		1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00					1.00	1.00	1.00
Frt		1.00	0.85		1.00					1.00	0.93	0.85
Flt Protected		1.00	1.00		0.99					0.95	0.99	1.00
Satd. Flow (prot)		2978	1202		3372					1346	3693	1122
Flt Permitted		1.00	1.00		0.99					0.95	0.99	1.00
Satd. Flow (perm)		2978	1202		3372					1346	3693	1122
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	589	218	174	515	0	0	0	0	138	121	309
RTOR Reduction (vph)	0	0	123	0	0	0	0	0	0	0	99	91
Lane Group Flow (vph)	0	589	95	0	689	0	0	0	0	76	239	63
Confl. Peds. (#/hr)	5		3	3		5						
Heavy Vehicles (%)	0%	11%	9%	2%	4%	0%	0%	0%	0%	2%	2%	2%
Parking (#/hr)			0									0
Turn Type			Perm	Split						Split		custom
Protected Phases		2		10 12 14	10 12 14					4	4	
Permitted Phases			2									4 2
Actuated Green, G (s)		39.0	39.0		71.5					20.3	20.3	65.3
Effective Green, g (s)		39.0	39.0		71.5					20.3	20.3	65.3
Actuated g/C Ratio		0.24	0.24		0.45					0.13	0.13	0.41
Clearance Time (s)		6.0	6.0							6.0	6.0	
Vehicle Extension (s)		3.0	3.0							3.0	3.0	
Lane Grp Cap (vph)		726	293		1507					171	469	458
v/s Ratio Prot		c0.20			c0.20					0.06	c0.06	
v/s Ratio Perm			0.08									0.06
v/c Ratio		0.81	0.32		0.46					0.44	0.51	0.14
Uniform Delay, d1		57.0	49.7		30.8					64.6	65.2	29.7
Progression Factor		1.00	1.00		0.02					1.00	1.00	1.00
Incremental Delay, d2		9.6	2.9		0.1					1.8	0.9	0.1
Delay (s)		66.6	52.6		0.7					66.5	66.1	29.8
Level of Service		E	D		A					E	E	C
Approach Delay (s)		62.8			0.7			0.0			56.3	
Approach LOS		E			A			A			E	

Intersection Summary			
HCM Average Control Delay	40.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	31.2
Intersection Capacity Utilization	56.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1059: 119th Street & Ashland Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑			↑↑	↱	↰	↰↑↱				
Volume (vph)	210	481	0	0	426	93	228	144	172	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	13	12	12	11	12	13	13	14	12	12	12
Total Lost time (s)	6.0	6.0			6.0	6.0	6.0	6.0				
Lane Util. Factor	1.00	0.95			0.95	1.00	0.91	0.91				
Frt	1.00	1.00			1.00	0.85	1.00	0.93				
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.99				
Satd. Flow (prot)	1574	3366			3149	1457	1531	2974				
Flt Permitted	0.95	1.00			1.00	1.00	0.95	0.99				
Satd. Flow (perm)	1574	3366			3149	1457	1531	2974				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	233	534	0	0	473	103	253	160	191	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	77	0	100	0	0	0	0
Lane Group Flow (vph)	233	534	0	0	473	26	207	297	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Split					Perm	Split					
Protected Phases	2 4 8	2 4 8			10		12	12				
Permitted Phases						10						
Actuated Green, G (s)	80.5	80.5			33.5	33.5	19.1	19.1				
Effective Green, g (s)	80.5	80.5			33.5	33.5	19.1	19.1				
Actuated g/C Ratio	0.50	0.50			0.21	0.21	0.12	0.12				
Clearance Time (s)					6.0	6.0	6.0	6.0				
Vehicle Extension (s)					3.0	3.0	3.0	3.0				
Lane Grp Cap (vph)	792	1694			659	305	183	355				
v/s Ratio Prot	0.15	c0.16			c0.15		c0.14	0.10				
v/s Ratio Perm						0.02						
v/c Ratio	0.29	0.32			0.72	0.08	1.13	0.84				
Uniform Delay, d1	23.2	23.5			58.9	50.9	70.5	68.9				
Progression Factor	0.07	0.07			1.00	1.00	1.00	1.00				
Incremental Delay, d2	0.1	0.1			3.7	0.1	106.2	15.7				
Delay (s)	1.7	1.7			62.6	51.0	176.6	84.6				
Level of Service	A	A			E	D	F	F				
Approach Delay (s)		1.7			60.5			116.2			0.0	
Approach LOS		A			E			F			A	

Intersection Summary			
HCM Average Control Delay	54.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	28.9
Intersection Capacity Utilization	51.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1060: 119th Street & Halsted Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑↱		↰	↑↑↱		↰	↑↑↱	
Volume (vph)	214	444	73	56	185	54	86	803	146	90	426	99
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	14	12	10	10	12	9	10	12
Total Lost time (s)	4.0	4.0	5.0	4.0	5.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.99	1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	0.99	1.00	1.00	1.00	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.97		1.00	0.98		1.00	0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1538	1556	1327	1596	1724		1524	2930		1509	2870	
Flt Permitted	0.46	1.00	1.00	0.21	1.00		0.36	1.00		0.12	1.00	
Satd. Flow (perm)	751	1556	1327	360	1724		571	2930		197	2870	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	225	467	77	59	195	57	91	845	154	95	448	104
RTOR Reduction (vph)	0	0	52	0	12	0	0	17	0	0	22	0
Lane Group Flow (vph)	225	467	25	59	240	0	91	982	0	95	530	0
Confl. Peds. (#/hr)	33		3	3		33	42		8	8		42
Confl. Bikes (#/hr)							1					1
Heavy Vehicles (%)	3%	8%	6%	0%	7%	5%	4%	5%	11%	2%	6%	9%
Turn Type	pm+pt		Perm	pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)	36.3	29.3	29.3	33.3	27.8		39.6	34.1		39.6	34.1	
Effective Green, g (s)	34.3	30.3	29.3	31.3	27.8		37.6	34.1		37.6	34.1	
Actuated g/C Ratio	0.38	0.34	0.33	0.35	0.31		0.42	0.38		0.42	0.38	
Clearance Time (s)	3.0	5.0	5.0	3.0	5.0		3.0	4.0		3.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	341	527	435	188	536		288	1118		149	1095	
v/s Ratio Prot	c0.04	c0.30		0.02	0.14		0.02	c0.34		c0.03	0.18	
v/s Ratio Perm	0.21		0.02	0.09			0.12			0.24		
v/c Ratio	0.66	0.89	0.06	0.31	0.45		0.32	0.88		0.64	0.48	
Uniform Delay, d1	22.4	27.9	20.6	21.0	24.7		16.2	25.7		18.5	21.0	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	4.6	19.3	0.3	1.0	2.7		0.6	9.9		8.6	1.5	
Delay (s)	27.0	47.2	20.8	22.0	27.4		16.9	35.6		27.2	22.5	
Level of Service	C	D	C	C	C		B	D		C	C	
Approach Delay (s)		38.7			26.3			34.0			23.2	
Approach LOS		D			C			C			C	

Intersection Summary			
HCM Average Control Delay	32.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	89.4	Sum of lost time (s)	12.0
Intersection Capacity Utilization	78.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱		✣			✣	
Volume (vph)	43	562	16	26	257	28	35	79	102	45	42	38
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	10	10	10	12	15	12	12	16	12
Total Lost time (s)		3.0	3.0		3.0	3.0		3.0			3.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00			1.00	
Frpb, ped/bikes		1.00	0.97		1.00	0.97		0.99			0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00			1.00	
Frt		1.00	0.85		1.00	0.85		0.94			0.96	
Flt Protected		1.00	1.00		1.00	1.00		0.99			0.98	
Satd. Flow (prot)		1908	1482		1599	1198		1812			1821	
Flt Permitted		0.96	1.00		0.93	1.00		0.95			0.86	
Satd. Flow (perm)		1845	1482		1500	1198		1732			1599	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	45	592	17	27	271	29	37	83	107	47	44	40
RTOR Reduction (vph)	0	0	6	0	0	15	0	49	0	0	23	0
Lane Group Flow (vph)	0	637	11	0	298	14	0	178	0	0	108	0
Confl. Peds. (#/hr)	6		11	11		6	4		8	8		4
Confl. Bikes (#/hr)	1		1	1		1			1	1		
Heavy Vehicles (%)	0%	7%	0%	0%	5%	16%	0%	0%	0%	10%	0%	3%
Turn Type	Perm		Perm	Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)		32.0	32.0		32.0	32.0		27.0			27.0	
Effective Green, g (s)		32.0	32.0		32.0	32.0		27.0			27.0	
Actuated g/C Ratio		0.49	0.49		0.49	0.49		0.42			0.42	
Clearance Time (s)		3.0	3.0		3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)		908	730		738	590		719			664	
v/s Ratio Prot												
v/s Ratio Perm		c0.35	0.01		0.20	0.01		c0.10			0.07	
v/c Ratio		0.70	0.01		0.40	0.02		0.25			0.16	
Uniform Delay, d1		12.8	8.4		10.5	8.5		12.4			11.9	
Progression Factor		1.00	1.00		1.91	2.84		1.00			1.35	
Incremental Delay, d2		4.5	0.0		0.1	0.0		0.8			0.5	
Delay (s)		17.3	8.5		20.1	24.1		13.2			16.6	
Level of Service		B	A		C	C		B			B	
Approach Delay (s)		17.1			20.5			13.2			16.6	
Approach LOS		B			C			B			B	

Intersection Summary			
HCM Average Control Delay	17.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	74.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱		↰	↱		✥	
Volume (vph)	71	616	23	27	238	8	39	216	107	18	51	29
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frpb, ped/bikes		1.00	0.96		1.00	0.98		1.00	0.96		0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		0.96	
Flt Protected		0.99	1.00		1.00	1.00		0.99	1.00		0.99	
Satd. Flow (prot)		1656	1392		1581	1497		1754	1390		1656	
Flt Permitted		0.93	1.00		0.35	1.00		0.95	1.00		0.93	
Satd. Flow (perm)		1549	1392		562	1497		1679	1390		1560	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	75	648	24	28	251	8	41	227	113	19	54	31
RTOR Reduction (vph)	0	0	7	0	0	5	0	0	43	0	16	0
Lane Group Flow (vph)	0	723	17	0	279	3	0	268	70	0	88	0
Confl. Peds. (#/hr)	11		17	17		11	4		17	17		4
Confl. Bikes (#/hr)	1		1	1		1	1					1
Heavy Vehicles (%)	0%	9%	5%	33%	11%	0%	6%	1%	6%	0%	0%	8%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		23.0	23.0		23.0	23.0		32.0	32.0		32.0	
Effective Green, g (s)		23.0	23.0		23.0	23.0		32.0	32.0		32.0	
Actuated g/C Ratio		0.35	0.35		0.35	0.35		0.49	0.49		0.49	
Clearance Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	
Lane Grp Cap (vph)		548	493		199	530		827	684		768	
v/s Ratio Prot												
v/s Ratio Perm		0.47	0.01		c0.50	0.00		c0.16	0.05		0.06	
v/c Ratio		1.32	0.03		1.40	0.01		0.32	0.10		0.11	
Uniform Delay, d1		21.0	13.7		21.0	13.6		10.0	8.8		8.9	
Progression Factor		1.60	1.78		0.80	0.79		0.39	0.26		1.09	
Incremental Delay, d2		153.8	0.1		207.4	0.0		0.7	0.2		0.3	
Delay (s)		187.4	24.6		224.1	10.8		4.6	2.5		9.9	
Level of Service		F	C		F	B		A	A		A	
Approach Delay (s)		182.2			218.2			4.0			9.9	
Approach LOS		F			F			A			A	

Intersection Summary			
HCM Average Control Delay	132.5	HCM Level of Service	F
HCM Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	87.5%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		✥			✥			↰	↱
Volume (vph)	671	20	30	9	18	15	26	363	19	9	213	222
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	14	12	12	16	12	12	16	12
Total Lost time (s)		3.0	3.0		3.0			3.0			3.0	3.0
Lane Util. Factor		1.00	1.00		1.00			1.00			1.00	1.00
Frpb, ped/bikes		1.00	0.97		0.98			1.00			1.00	0.95
Flpb, ped/bikes		0.98	1.00		1.00			1.00			1.00	1.00
Frt		1.00	0.85		0.95			0.99			1.00	0.85
Flt Protected		0.95	1.00		0.99			1.00			1.00	1.00
Satd. Flow (prot)		1750	1390		1761			1979			1873	1328
Flt Permitted		0.72	1.00		0.64			0.97			0.98	1.00
Satd. Flow (perm)		1330	1390		1140			1935			1847	1328
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	746	22	33	10	20	17	29	403	21	10	237	247
RTOR Reduction (vph)	0	0	9	0	13	0	0	3	0	0	0	125
Lane Group Flow (vph)	0	768	24	0	34	0	0	450	0	0	247	122
Confl. Peds. (#/hr)	49		22	22		49	34		17	17		34
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	9%	0%	7%	0%	0%	0%	0%	2%	0%	0%	9%	9%
Turn Type	pm+pt		Perm	Perm			Perm			Perm		Perm
Protected Phases	7	4			8			2			6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)		27.0	27.0		17.0			32.0			32.0	32.0
Effective Green, g (s)		27.0	27.0		17.0			32.0			32.0	32.0
Actuated g/C Ratio		0.42	0.42		0.26			0.49			0.49	0.49
Clearance Time (s)		3.0	3.0		3.0			3.0			3.0	3.0
Lane Grp Cap (vph)		604	577		298			953			909	654
v/s Ratio Prot		c0.16										
v/s Ratio Perm		0.37	0.02		0.03			c0.23			0.13	0.09
v/c Ratio		1.27	0.04		0.12			0.47			0.27	0.19
Uniform Delay, d1		19.0	11.3		18.3			10.9			9.7	9.2
Progression Factor		1.13	1.50		1.00			0.60			0.52	1.01
Incremental Delay, d2		123.4	0.0		0.8			1.6			0.1	0.1
Delay (s)		144.9	17.0		19.1			8.2			5.1	9.4
Level of Service		F	B		B			A			A	A
Approach Delay (s)		139.7			19.1			8.2			7.3	
Approach LOS		F			B			A			A	

Intersection Summary			
HCM Average Control Delay	66.9	HCM Level of Service	E
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	93.3%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↱		↰	↑↑					↰	↰↱	↱
Volume (vph)	0	983	220	269	1109	0	0	0	0	274	200	374
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	12	11	8	8	8	11	12	14
Total Lost time (s)		6.0		4.5	6.0					6.0	6.0	6.0
Lane Util. Factor		0.91		1.00	0.95					0.91	0.86	0.91
Frpb, ped/bikes		1.00		1.00	1.00					1.00	0.99	0.99
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Frt		0.97		1.00	1.00					1.00	0.94	0.85
Flt Protected		1.00		0.95	1.00					0.95	0.99	1.00
Satd. Flow (prot)		4322		1589	3226					1419	2711	1355
Flt Permitted		1.00		0.14	1.00					0.95	0.99	1.00
Satd. Flow (perm)		4322		228	3226					1419	2711	1355
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	1035	232	283	1167	0	0	0	0	288	211	394
RTOR Reduction (vph)	0	30	0	0	0	0	0	0	0	0	64	64
Lane Group Flow (vph)	0	1237	0	283	1167	0	0	0	0	233	387	145
Confl. Peds. (#/hr)	6		4	4		6	2					2
Heavy Vehicles (%)	0%	11%	7%	4%	6%	0%	0%	0%	0%	6%	4%	8%
Turn Type				pm+pt						Perm		Perm
Protected Phases		2		1	6						4	
Permitted Phases				6						4		4
Actuated Green, G (s)		48.4		69.4	69.4					23.6	23.6	23.6
Effective Green, g (s)		48.4		69.4	69.4					23.6	23.6	23.6
Actuated g/C Ratio		0.46		0.66	0.66					0.22	0.22	0.22
Clearance Time (s)		6.0		4.5	6.0					6.0	6.0	6.0
Vehicle Extension (s)		7.0		3.5	7.0					3.5	3.5	3.5
Lane Grp Cap (vph)		1992		365	2132					319	609	305
v/s Ratio Prot		0.29		c0.12	0.36							
v/s Ratio Perm				c0.39						c0.16	0.14	0.11
v/c Ratio		0.62		0.78	0.55					0.73	0.63	0.47
Uniform Delay, d1		21.4		18.0	9.5					37.7	36.8	35.3
Progression Factor		1.00		0.97	1.65					1.00	1.00	1.00
Incremental Delay, d2		1.5		6.0	0.6					8.6	2.3	1.4
Delay (s)		22.8		23.5	16.1					46.3	39.1	36.7
Level of Service		C		C	B					D	D	D
Approach Delay (s)		22.8			17.6			0.0			40.4	
Approach LOS		C			B			A			D	

Intersection Summary			
HCM Average Control Delay	25.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	10.5
Intersection Capacity Utilization	103.8%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↑			↑↑	↱		↰↑↱				
Volume (vph)	309	948	0	0	856	234	521	346	464	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	12	12	12	11	12	12	12	12	12	12	12
Total Lost time (s)	6.0	6.0			6.0	6.0		6.0				
Lane Util. Factor	0.97	0.95			0.95	1.00		0.91				
Frpb, ped/bikes	1.00	1.00			1.00	0.99		1.00				
Flpb, ped/bikes	1.00	1.00			1.00	1.00		1.00				
Frt	1.00	1.00			1.00	0.85		0.95				
Flt Protected	0.95	1.00			1.00	1.00		0.98				
Satd. Flow (prot)	2915	3138			3119	1449		4388				
Flt Permitted	0.19	1.00			1.00	1.00		0.98				
Satd. Flow (perm)	568	3138			3119	1449		4388				
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	325	998	0	0	901	246	548	364	488	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	104	0	90	0	0	0	0
Lane Group Flow (vph)	325	998	0	0	901	142	0	1310	0	0	0	0
Confl. Peds. (#/hr)	4					4						
Heavy Vehicles (%)	10%	9%	0%	0%	6%	4%	4%	3%	5%	0%	0%	0%
Turn Type	pm+pt					Perm	Perm					
Protected Phases	5	2			6			8				
Permitted Phases	2					6	8					
Actuated Green, G (s)	62.8	62.8			45.4	45.4		30.2				
Effective Green, g (s)	62.8	62.8			45.4	45.4		30.2				
Actuated g/C Ratio	0.60	0.60			0.43	0.43		0.29				
Clearance Time (s)	6.0	6.0			6.0	6.0		6.0				
Vehicle Extension (s)	3.5	7.0			7.0	7.0		5.0				
Lane Grp Cap (vph)	595	1877			1349	627		1262				
v/s Ratio Prot	0.06	c0.32			c0.29							
v/s Ratio Perm	0.27					0.10		0.30				
v/c Ratio	0.55	0.53			0.67	0.23		1.04				
Uniform Delay, d1	12.8	12.4			23.8	18.7		37.4				
Progression Factor	0.66	0.83			0.95	1.45		1.00				
Incremental Delay, d2	0.9	0.9			1.7	0.5		35.8				
Delay (s)	9.4	11.1			24.3	27.7		73.2				
Level of Service	A	B			C	C		E				
Approach Delay (s)		10.7			25.0			73.2			0.0	
Approach LOS		B			C			E			A	

Intersection Summary			
HCM Average Control Delay	37.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	103.8%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	103	733	221	76	781	43	226	178	40	57	111	91
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	12	11	12	12	10	10	13	10	10	10
Total Lost time (s)	3.5	6.0	3.5	3.5	6.0		3.5	6.0		3.5	6.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.97		1.00	0.93	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1565	3061	1291	1603	3233		1446	3007		1544	2782	
Flt Permitted	0.14	1.00	1.00	0.36	1.00		0.53	1.00		0.61	1.00	
Satd. Flow (perm)	227	3061	1291	606	3233		811	3007		990	2782	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	108	772	233	80	822	45	238	187	42	60	117	96
RTOR Reduction (vph)	0	0	95	0	4	0	0	21	0	0	80	0
Lane Group Flow (vph)	108	772	138	80	863	0	238	208	0	60	133	0
Confl. Peds. (#/hr)	3		12	12		3	9		6	6		9
Heavy Vehicles (%)	2%	8%	5%	3%	5%	3%	10%	3%	2%	3%	7%	4%
Parking (#/hr)			0									
Turn Type	pm+pt		pm+ov	pm+pt			pm+pt			pm+pt		
Protected Phases	5	2	3	1	6		3	8		7	4	
Permitted Phases	2		2	6			8			4		
Actuated Green, G (s)	62.5	52.6	62.1	40.3	33.9		29.8	20.3		24.2	17.5	
Effective Green, g (s)	62.5	52.6	62.1	40.3	33.9		29.8	20.3		24.2	17.5	
Actuated g/C Ratio	0.60	0.50	0.59	0.38	0.32		0.28	0.19		0.23	0.17	
Clearance Time (s)	3.5	6.0	3.5	3.5	6.0		3.5	6.0		3.5	6.0	
Vehicle Extension (s)	3.0	7.0	3.0	3.0	7.0		3.0	7.0		3.0	7.0	
Lane Grp Cap (vph)	455	1533	764	293	1044		288	581		264	464	
v/s Ratio Prot	c0.06	c0.25	0.02	0.02	c0.27		c0.07	0.07		0.01	0.05	
v/s Ratio Perm	0.08		0.09	0.09			c0.16			0.04		
v/c Ratio	0.24	0.50	0.18	0.27	0.83		0.83	0.36		0.23	0.29	
Uniform Delay, d1	12.0	17.5	9.8	21.0	32.8		33.7	36.7		32.3	38.3	
Progression Factor	0.90	1.00	1.68	1.00	1.00		0.94	0.89		1.00	1.00	
Incremental Delay, d2	0.9	0.8	0.1	0.5	7.5		16.7	1.3		0.4	1.2	
Delay (s)	11.7	18.4	16.6	21.5	40.3		48.5	33.8		32.8	39.5	
Level of Service	B	B	B	C	D		D	C		C	D	
Approach Delay (s)		17.4			38.7			41.3			38.0	
Approach LOS		B			D			D			D	

Intersection Summary			
HCM Average Control Delay	30.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	22.5
Intersection Capacity Utilization	72.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	59	323	273	57	190	98	328	380	83	91	258	54
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	11	12	11	12	12	11	13	12	10	11	12
Total Lost time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.93		1.00	0.95		1.00	0.97		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1635	2920		1463	3037		1589	3237		1549	3135	
Flt Permitted	0.54	1.00		0.25	1.00		0.46	1.00		0.47	1.00	
Satd. Flow (perm)	931	2920		389	3037		772	3237		774	3135	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	62	340	287	60	200	103	345	400	87	96	272	57
RTOR Reduction (vph)	0	139	0	0	60	0	0	17	0	0	17	0
Lane Group Flow (vph)	62	488	0	60	243	0	345	470	0	96	312	0
Confl. Peds. (#/hr)	20					20	1		2	2		1
Heavy Vehicles (%)	4%	5%	6%	13%	6%	5%	4%	6%	5%	3%	3%	0%
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	35.7	28.7		35.9	28.8		53.2	41.9		38.6	31.3	
Effective Green, g (s)	35.7	28.7		35.9	28.8		53.2	41.9		38.6	31.3	
Actuated g/C Ratio	0.34	0.27		0.34	0.27		0.51	0.40		0.37	0.30	
Clearance Time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	3.5	7.0		3.5	7.0		3.5	7.0		3.5	7.0	
Lane Grp Cap (vph)	363	798		206	833		530	1292		338	935	
v/s Ratio Prot	0.01	c0.17		c0.02	0.08		c0.11	0.15		0.02	0.10	
v/s Ratio Perm	0.05			0.08			c0.22			0.08		
v/c Ratio	0.17	0.61		0.29	0.29		0.65	0.36		0.28	0.33	
Uniform Delay, d1	23.8	33.3		24.4	30.1		16.6	22.2		22.4	28.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.06	0.94	
Incremental Delay, d2	0.3	3.5		0.9	0.9		3.0	0.8		0.5	0.9	
Delay (s)	24.0	36.8		25.3	30.9		19.6	23.0		24.2	27.8	
Level of Service	C	D		C	C		B	C		C	C	
Approach Delay (s)		35.6			30.0			21.6			27.0	
Approach LOS		D			C			C			C	

Intersection Summary			
HCM Average Control Delay	28.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	71.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1068: 127th Street & Halsted Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	165	706	79	6	449	111	65	577	7	100	309	100
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	10	12	9	11	12	9	9	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.99			0.97		1.00	1.00		1.00	0.96	
Flt Protected		0.99			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		2929			2896		1436	3185		1450	2788	
Flt Permitted		0.59			0.94		0.43	1.00		0.29	1.00	
Satd. Flow (perm)		1740			2729		654	3185		448	2788	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	183	784	88	7	499	123	72	641	8	111	343	111
RTOR Reduction (vph)	0	11	0	0	33	0	0	1	0	0	48	0
Lane Group Flow (vph)	0	1044	0	0	596	0	72	648	0	111	406	0
Confl. Peds. (#/hr)	9		11	11		9	11		14	14		11
Heavy Vehicles (%)	3%	6%	18%	50%	6%	6%	7%	3%	50%	6%	7%	2%
Turn Type	pm+pt			Perm			pm+pt			pm+pt		
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		27.0			19.0		26.0	22.0		26.0	22.0	
Effective Green, g (s)		27.0			19.0		26.0	22.0		26.0	22.0	
Actuated g/C Ratio		0.42			0.29		0.40	0.34		0.40	0.34	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		796			798		310	1078		241	944	
v/s Ratio Prot		c0.08					0.01	c0.20		c0.03	0.15	
v/s Ratio Perm		c0.46			0.22		0.08			0.16		
v/c Ratio		1.31			0.75		0.23	0.60		0.46	0.43	
Uniform Delay, d1		19.0			20.8		12.4	17.9		13.0	16.6	
Progression Factor		1.00			1.52		0.90	0.71		1.00	1.00	
Incremental Delay, d2		149.4			0.6		1.6	2.3		6.2	1.4	
Delay (s)		168.4			32.3		12.8	14.9		19.2	18.1	
Level of Service		F			C		B	B		B	B	
Approach Delay (s)		168.4			32.3			14.6			18.3	
Approach LOS		F			C			B			B	

Intersection Summary			
HCM Average Control Delay	73.7	HCM Level of Service	E
HCM Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	81.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1069: Vermont St & Halsted Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱		↰	↑↱		↰	↑↱	
Volume (vph)	49	328	46	71	160	13	36	632	97	10	359	43
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	12	12	12	12	12
Total Lost time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.99		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1666	1917		1618	1943		1658	3195		1138	3197	
Flt Permitted	0.64	1.00		0.40	1.00		0.51	1.00		0.31	1.00	
Satd. Flow (perm)	1131	1917		676	1943		889	3195		374	3197	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	51	338	47	73	165	13	37	652	100	10	370	44
RTOR Reduction (vph)	0	8	0	0	4	0	0	19	0	0	14	0
Lane Group Flow (vph)	51	377	0	73	174	0	37	733	0	10	400	0
Confl. Peds. (#/hr)	10		16	16		10	4		6	6		4
Confl. Bikes (#/hr)			4	4								
Heavy Vehicles (%)	2%	4%	5%	5%	4%	0%	3%	4%	8%	50%	5%	6%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	24.0	24.0		24.0	24.0		31.0	31.0		31.0	31.0	
Effective Green, g (s)	24.0	24.0		24.0	24.0		31.0	31.0		31.0	31.0	
Actuated g/C Ratio	0.37	0.37		0.37	0.37		0.48	0.48		0.48	0.48	
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)	418	708		250	717		424	1524		178	1525	
v/s Ratio Prot		c0.20			0.09			c0.23			0.13	
v/s Ratio Perm	0.05			0.11			0.04			0.03		
v/c Ratio	0.12	0.53		0.29	0.24		0.09	0.48		0.06	0.26	
Uniform Delay, d1	13.5	16.1		14.5	14.2		9.3	11.5		9.1	10.2	
Progression Factor	1.00	1.00		1.73	1.78		1.00	1.00		0.50	0.49	
Incremental Delay, d2	0.6	2.9		1.1	0.3		0.4	1.1		0.5	0.3	
Delay (s)	14.1	19.0		26.2	25.6		9.7	12.6		5.0	5.3	
Level of Service	B	B		C	C		A	B		A	A	
Approach Delay (s)		18.4			25.8			12.5			5.3	
Approach LOS		B			C			B			A	

Intersection Summary			
HCM Average Control Delay	14.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	67.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1070: 127th Street & S Wallance St

1/14/2013

Movement	EBT	WBL	WBT	WBR	NBL2	NBL	NBT	NBR	SBL	SBT	SBR	SBR2
Lane Configurations	↰↑↱		↰↑↱				✥			✥		
Volume (vph)	756	196	607	17	3	14	3	46	30	0	2	4
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	12	12	16	12	12	16	12	12
Total Lost time (s)	5.0		5.0				4.0			4.0		
Lane Util. Factor	0.95		0.95				1.00			1.00		
Frpb, ped/bikes	1.00		1.00				1.00			1.00		
Flpb, ped/bikes	1.00		1.00				1.00			1.00		
Frt	1.00		1.00				0.91			0.98		
Flt Protected	1.00		0.99				0.99			0.96		
Satd. Flow (prot)	2956		2954				1732			1908		
Flt Permitted	1.00		0.55				0.94			0.79		
Satd. Flow (perm)	2956		1639				1643			1563		
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	796	206	639	18	3	15	3	48	32	0	2	4
RTOR Reduction (vph)	0	0	2	0	0	0	38	0	0	3	0	0
Lane Group Flow (vph)	796	0	861	0	0	0	31	0	0	35	0	0
Confl. Peds. (#/hr)		7		6		3					3	
Confl. Bikes (#/hr)		1										
Heavy Vehicles (%)	8%	8%	6%	0%	0%	8%	0%	5%	0%	0%	0%	0%
Turn Type		custom				Perm			Perm			
Protected Phases	8	7	4				2			6		
Permitted Phases		4 7				2			6			
Actuated Green, G (s)	18.0		27.0				14.0			14.0		
Effective Green, g (s)	18.0		27.0				14.0			14.0		
Actuated g/C Ratio	0.28		0.42				0.22			0.22		
Clearance Time (s)	5.0		5.0				4.0			4.0		
Lane Grp Cap (vph)	819		802				354			337		
v/s Ratio Prot	0.27		c0.10									
v/s Ratio Perm			c0.35				0.02			c0.02		
v/c Ratio	0.97		1.07				0.09			0.10		
Uniform Delay, d1	23.2		19.0				20.4			20.5		
Progression Factor	1.35		0.76				1.00			1.00		
Incremental Delay, d2	4.9		52.3				0.5			0.6		
Delay (s)	36.2		66.7				20.9			21.1		
Level of Service	D		E				C			C		
Approach Delay (s)	36.2		66.7				20.9			21.1		
Approach LOS	D		E				C			C		

Intersection Summary			
HCM Average Control Delay	157.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	105.0%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Movement	NEL	NER
Lane Configurations		
Volume (vph)	1	450
Ideal Flow (vphpl)	1800	1800
Lane Width	12	12
Total Lost time (s)	5.0	
Lane Util. Factor	1.00	
Frpb, ped/bikes	1.00	
Flpb, ped/bikes	1.00	
Frt	0.87	
Flt Protected	1.00	
Satd. Flow (prot)	1429	
Flt Permitted	1.00	
Satd. Flow (perm)	1429	
Peak-hour factor, PHF	0.95	0.95
Adj. Flow (vph)	1	474
RTOR Reduction (vph)	0	0
Lane Group Flow (vph)	475	0
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		
Heavy Vehicles (%)	0%	9%
Turn Type		
Protected Phases	3	
Permitted Phases		
Actuated Green, G (s)	10.0	
Effective Green, g (s)	10.0	
Actuated g/C Ratio	0.15	
Clearance Time (s)	5.0	
Lane Grp Cap (vph)	220	
v/s Ratio Prot	c0.33	
v/s Ratio Perm		
v/c Ratio	2.16	
Uniform Delay, d1	27.5	
Progression Factor	0.78	
Incremental Delay, d2	534.8	
Delay (s)	556.2	
Level of Service	F	
Approach Delay (s)	556.2	
Approach LOS	F	

Intersection Summary

HCM Signalized Intersection Capacity Analysis
1071: 127th Street & State Street

	↗	→	←	↖	↘	↙
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰↑	↑↱		↰	↱
Volume (vph)	186	1147	665	79	139	156
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		1.00	1.00
Frt		1.00	0.98		1.00	0.85
Flt Protected		0.99	1.00		0.95	1.00
Satd. Flow (prot)		3235	3205		1629	1457
Flt Permitted		0.67	1.00		0.95	1.00
Satd. Flow (perm)		2166	3205		1629	1457
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	207	1274	739	88	154	173
RTOR Reduction (vph)	0	0	14	0	0	128
Lane Group Flow (vph)	0	1481	813	0	154	45
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%
Turn Type	Perm					Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)		40.0	40.0		17.0	17.0
Effective Green, g (s)		40.0	40.0		17.0	17.0
Actuated g/C Ratio		0.62	0.62		0.26	0.26
Clearance Time (s)		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		1333	1972		426	381
v/s Ratio Prot			0.25		c0.09	
v/s Ratio Perm		c0.68				0.03
v/c Ratio		1.11	0.41		0.36	0.12
Uniform Delay, d1		12.5	6.4		19.6	18.3
Progression Factor		1.45	1.31		0.90	0.81
Incremental Delay, d2		51.2	0.6		2.4	0.6
Delay (s)		69.3	9.0		20.1	15.5
Level of Service		E	A		C	B
Approach Delay (s)		69.3	9.0		17.7	
Approach LOS		E	A		B	

Intersection Summary			
HCM Average Control Delay	43.9	HCM Level of Service	D
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	79.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1072: 127th Street & Michigan Avenue

1/14/2013

Movement	EBL	EBT	WBT	WBR	SBL	SBR
	↗	→	←	↖	↘	↙
Lane Configurations		↰↑	↑↱		↰	↱
Volume (vph)	51	1214	685	196	170	54
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	12	10	11	12	10	10
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		1.00	1.00
Frpb, ped/bikes		1.00	1.00		1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00
Frt		1.00	0.97		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		2928	2921		1464	1373
Flt Permitted		0.88	1.00		0.95	1.00
Satd. Flow (perm)		2581	2921		1464	1373
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	54	1278	721	206	179	57
RTOR Reduction (vph)	0	0	40	0	0	40
Lane Group Flow (vph)	0	1332	887	0	179	17
Confl. Peds. (#/hr)	1			1		
Confl. Bikes (#/hr)	1			1		
Heavy Vehicles (%)	4%	9%	8%	12%	9%	4%
Turn Type	Perm					Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)		38.0	38.0		19.0	19.0
Effective Green, g (s)		38.0	38.0		19.0	19.0
Actuated g/C Ratio		0.58	0.58		0.29	0.29
Clearance Time (s)		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		1509	1708		428	401
v/s Ratio Prot			0.30		c0.12	
v/s Ratio Perm		c0.52				0.01
v/c Ratio		0.88	0.52		0.42	0.04
Uniform Delay, d1		11.6	8.1		18.5	16.5
Progression Factor		0.89	0.56		0.94	1.37
Incremental Delay, d2		0.8	0.6		2.9	0.2
Delay (s)		11.1	5.1		20.4	22.7
Level of Service		B	A		C	C
Approach Delay (s)		11.1	5.1		20.9	
Approach LOS		B	A		C	

Intersection Summary			
HCM Average Control Delay	9.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	83.5%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1073: 130th Street & Indiana Ave

Movement	EBT	EBR	WBL	WBT	NBL	NBR
	→	↘	↙	←	↖	↗
Lane Configurations	↱		↰	↑	↰↱	
Volume (vph)	1233	153	158	645	401	434
Ideal Flow (vphpl)	2300	1800	1800	2300	1800	1800
Lane Width	15	12	14	16	15	12
Total Lost time (s)	5.0		5.0	5.0	5.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	0.99	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.99		1.00	1.00	0.93	
Flt Protected	1.00		0.95	1.00	0.98	
Satd. Flow (prot)	2248		1770	2436	1746	
Flt Permitted	1.00		0.13	1.00	0.98	
Satd. Flow (perm)	2248		240	2436	1746	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	1258	156	161	658	409	443
RTOR Reduction (vph)	7	0	0	0	19	0
Lane Group Flow (vph)	1407	0	161	658	833	0
Confl. Peds. (#/hr)		4	4			8
Heavy Vehicles (%)	11%	7%	3%	7%	2%	2%
Turn Type			Perm			
Protected Phases	4			8	2	
Permitted Phases			8			
Actuated Green, G (s)	31.0		31.0	31.0	24.0	
Effective Green, g (s)	31.0		31.0	31.0	24.0	
Actuated g/C Ratio	0.48		0.48	0.48	0.37	
Clearance Time (s)	5.0		5.0	5.0	5.0	
Lane Grp Cap (vph)	1072		114	1162	645	
v/s Ratio Prot	0.63			0.27	c0.48	
v/s Ratio Perm			c0.67			
v/c Ratio	1.31		1.41	0.57	1.29	
Uniform Delay, d1	17.0		17.0	12.2	20.5	
Progression Factor	1.56		1.00	1.00	1.00	
Incremental Delay, d2	144.4		229.3	2.0	142.6	
Delay (s)	170.8		246.3	14.2	163.1	
Level of Service	F		F	B	F	
Approach Delay (s)	170.8			59.8	163.1	
Approach LOS	F			E	F	

Intersection Summary			
HCM Average Control Delay	139.2	HCM Level of Service	F
HCM Volume to Capacity ratio	1.36		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	135.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1074: 130th Street & Ellis Ave

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Lane Configurations	↰	↑↑	↱	↰	↑↑	↱		↰↑	↱		✥	
Volume (vph)	1	695	85	251	1499	9	68	0	177	1	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	15	13	11	11	12	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0	4.0	3.0	3.0	4.0		4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85		1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.95	1.00		0.95	
Satd. Flow (prot)	1881	3213	1422	1589	3138	1366		1642	1443		969	
Flt Permitted	0.15	1.00	1.00	0.27	1.00	1.00		0.76	1.00		0.71	
Satd. Flow (perm)	290	3213	1422	459	3138	1366		1309	1443		722	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1	772	94	279	1666	10	76	0	197	1	0	0
RTOR Reduction (vph)	0	0	46	0	0	2	0	0	173	0	0	0
Lane Group Flow (vph)	1	772	48	279	1666	8	0	76	24	0	1	0
Heavy Vehicles (%)	0%	10%	4%	4%	9%	12%	18%	0%	6%	100%	0%	0%
Turn Type	Perm		Perm	custom		custom	Perm		Perm	Perm		
Protected Phases		4		3	3 8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)	43.7	43.7	43.7	66.6	66.6	66.6		10.4	10.4		10.4	
Effective Green, g (s)	43.7	43.7	43.7	66.6	66.6	66.6		10.4	10.4		10.4	
Actuated g/C Ratio	0.51	0.51	0.51	0.78	0.78	0.78		0.12	0.12		0.12	
Clearance Time (s)	4.0	4.0	4.0	3.0		4.0		4.0	4.0		4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0		3.0	3.0		3.0	
Lane Grp Cap (vph)	149	1652	731	624	2459	1070		160	177		88	
v/s Ratio Prot		0.24		0.10	c0.53							
v/s Ratio Perm	0.00		0.03	0.25		0.01		c0.06	0.02		0.00	
v/c Ratio	0.01	0.47	0.07	0.45	0.68	0.01		0.47	0.14		0.01	
Uniform Delay, d1	10.1	13.2	10.4	3.8	4.2	2.0		34.8	33.3		32.8	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2	0.1	1.0	0.2	0.5	0.8	0.0		2.2	0.4		0.1	
Delay (s)	10.1	14.2	10.6	4.3	5.0	2.0		37.0	33.6		32.8	
Level of Service	B	B	B	A	A	A		D	C		C	
Approach Delay (s)		13.8			4.9			34.6			32.8	
Approach LOS		B			A			C			C	

Intersection Summary			
HCM Average Control Delay	10.0	HCM Level of Service	A
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	7.0
Intersection Capacity Utilization	62.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	12	777	808	43	23	11
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	12	10	10
Total Lost time (s)		5.0	5.0		3.0	
Lane Util. Factor		0.95	0.95		1.00	
Frt		1.00	0.99		0.96	
Flt Protected		1.00	1.00		0.97	
Satd. Flow (prot)		3038	3017		1481	
Flt Permitted		0.93	1.00		0.97	
Satd. Flow (perm)		2842	3017		1481	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	13	863	898	48	26	12
RTOR Reduction (vph)	0	0	4	0	11	0
Lane Group Flow (vph)	0	876	942	0	27	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%
Turn Type	Perm					
Protected Phases		4	8 2 11		5	
Permitted Phases	4					
Actuated Green, G (s)		33.0	64.0		7.0	
Effective Green, g (s)		33.0	64.0		7.0	
Actuated g/C Ratio		0.37	0.71		0.08	
Clearance Time (s)		5.0			3.0	
Lane Grp Cap (vph)		1042	2145		115	
v/s Ratio Prot			c0.31		c0.02	
v/s Ratio Perm		c0.31				
v/c Ratio		0.84	0.44		0.23	
Uniform Delay, d1		26.1	5.5		39.0	
Progression Factor		1.00	0.00		1.00	
Incremental Delay, d2		8.2	0.3		4.7	
Delay (s)		34.3	0.3		43.7	
Level of Service		C	A		D	
Approach Delay (s)		34.3	0.3		43.7	
Approach LOS		C	A		D	

Intersection Summary			
HCM Average Control Delay	17.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	42.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			↰↑↑↱			✥			↰↑	↱
Volume (vph)	89	422	1	26	554	78	0	0	1	43	3	133
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	12	12	11	12	11
Total Lost time (s)		4.0			4.0			3.0			3.0	3.0
Lane Util. Factor		1.00			0.95			1.00			1.00	1.00
Frpb, ped/bikes		1.00			1.00			0.92			1.00	0.96
Flpb, ped/bikes		1.00			1.00			1.00			0.98	1.00
Frt		1.00			0.98			0.86			1.00	0.85
Flt Protected		0.99			1.00			1.00			0.96	1.00
Satd. Flow (prot)		1726			3231			1432			1610	1282
Flt Permitted		0.77			0.93			1.00			0.94	1.00
Satd. Flow (perm)		1338			3023			1432			1581	1282
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	99	469	1	29	616	87	0	0	1	48	3	148
RTOR Reduction (vph)	0	0	0	0	12	0	0	1	0	0	0	99
Lane Group Flow (vph)	0	569	0	0	720	0	0	0	0	0	51	49
Confl. Peds. (#/hr)	33		13	13		33	29		13	13		29
Confl. Bikes (#/hr)	1		1	1		1						
Heavy Vehicles (%)	4%	3%	0%	0%	4%	0%	0%	0%	0%	5%	0%	11%
Turn Type	Perm			Prot			Perm			pm+pt		Perm
Protected Phases		4		3	3 4			1		2	1 2	
Permitted Phases	4				3		1	1		1 2		1 2
Actuated Green, G (s)		31.0			45.0			9.0			25.0	28.0
Effective Green, g (s)		31.0			45.0			9.0			25.0	28.0
Actuated g/C Ratio		0.36			0.53			0.11			0.29	0.33
Clearance Time (s)		4.0						3.0				
Lane Grp Cap (vph)		488			1635			152			470	422
v/s Ratio Prot					c0.07			0.00			0.02	
v/s Ratio Perm		c0.43			0.16						0.01	c0.04
v/c Ratio		1.17			0.44			0.00			0.11	0.12
Uniform Delay, d1		27.0			12.3			34.0			21.9	19.9
Progression Factor		1.00			1.76			1.00			1.00	1.00
Incremental Delay, d2		95.1			0.1			0.0			0.5	0.6
Delay (s)		122.1			21.7			34.0			22.3	20.4
Level of Service		F			C			C			C	C
Approach Delay (s)		122.1			21.7			34.0			20.9	
Approach LOS		F			C			C			C	

Intersection Summary			
HCM Average Control Delay	59.6	HCM Level of Service	E
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	72.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1001: 95th Street & Wentworth Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			✥			✥	
Volume (vph)	39	598	28	35	997	57	36	35	48	23	26	87
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	16	10	10	16	8	15	8	8	14	8
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			0.99			0.98	
Flpb, ped/bikes	0.98	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.99			0.95			0.91	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1556	3022		1587	3021			1816			1706	
Flt Permitted	0.17	1.00		0.36	1.00			0.89			0.95	
Satd. Flow (perm)	286	3022		604	3021			1649			1630	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	41	629	29	37	1049	60	38	37	51	24	27	92
RTOR Reduction (vph)	0	5	0	0	6	0	0	33	0	0	22	0
Lane Group Flow (vph)	41	653	0	37	1103	0	0	93	0	0	121	0
Confl. Peds. (#/hr)	145		16	16		145	17		19	19		17
Confl. Bikes (#/hr)	5					5			2	2		
Heavy Vehicles (%)	0%	5%	0%	0%	4%	2%	0%	0%	0%	0%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	34.0	34.0		34.0	34.0			22.0			22.0	
Effective Green, g (s)	34.0	34.0		34.0	34.0			23.0			23.0	
Actuated g/C Ratio	0.52	0.52		0.52	0.52			0.35			0.35	
Clearance Time (s)	4.0	4.0		4.0	4.0			5.0			5.0	
Lane Grp Cap (vph)	150	1581		316	1580			583			577	
v/s Ratio Prot		0.22			c0.37							
v/s Ratio Perm	0.14			0.06				0.06			c0.07	
v/c Ratio	0.27	0.41		0.12	0.70			0.16			0.21	
Uniform Delay, d1	8.6	9.4		7.9	11.6			14.4			14.7	
Progression Factor	1.00	1.00		0.70	1.38			1.00			1.00	
Incremental Delay, d2	4.5	0.8		0.7	2.3			0.6			0.8	
Delay (s)	13.1	10.2		6.2	18.4			15.0			15.5	
Level of Service	B	B		A	B			B			B	
Approach Delay (s)		10.4			18.0			15.0			15.5	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	15.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1002: 95th Street & Lafayette Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↑	↱				↰↰	↑	↱
Volume (vph)	25	787	5	31	619	40	0	0	0	578	88	375
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	5.0	5.0		3.0	3.0	3.0				5.0	5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00				0.97	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.67				1.00	1.00	0.98
Flpb, ped/bikes	0.92	1.00		1.00	1.00	1.00				1.00	1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85				1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00				0.95	1.00	1.00
Satd. Flow (prot)	790	3379		1710	3226	514				3285	1731	1481
Flt Permitted	0.40	1.00		0.14	1.00	1.00				0.95	1.00	1.00
Satd. Flow (perm)	336	3379		248	3226	514				3285	1731	1481
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	26	828	5	33	652	42	0	0	0	608	93	395
RTOR Reduction (vph)	0	0	0	0	0	18	0	0	0	0	0	168
Lane Group Flow (vph)	26	833	0	33	652	24	0	0	0	608	93	227
Confl. Peds. (#/hr)	350		4	4		350	8		6	6		8
Confl. Bikes (#/hr)	7		1	1		7						
Heavy Vehicles (%)	100%	1%	20%	0%	6%	100%	0%	0%	0%	1%	4%	1%
Turn Type	pm+pt			pm+pt		Perm				Split		Perm
Protected Phases	7	4		3	8					6	6	
Permitted Phases	4			8		8						6
Actuated Green, G (s)	43.0	43.0		73.0	73.0	73.0				30.0	30.0	30.0
Effective Green, g (s)	43.0	43.0		73.0	73.0	73.0				30.0	30.0	30.0
Actuated g/C Ratio	0.33	0.33		0.56	0.56	0.56				0.23	0.23	0.23
Clearance Time (s)	5.0	5.0		3.0	3.0	3.0				5.0	5.0	5.0
Lane Grp Cap (vph)	160	1118		634	1812	289				758	399	342
v/s Ratio Prot	0.02	c0.25		0.02	c0.20					c0.19	0.05	
v/s Ratio Perm	0.04			0.01		0.05						0.15
v/c Ratio	0.16	0.75		0.05	0.36	0.08				0.80	0.23	0.66
Uniform Delay, d1	31.6	38.6		15.2	15.7	13.1				47.2	40.6	45.4
Progression Factor	0.85	0.86		0.34	0.75	1.27				1.00	1.00	1.00
Incremental Delay, d2	2.1	4.4		0.1	0.4	0.4				8.8	1.4	9.8
Delay (s)	28.9	37.4		5.2	12.2	17.0				56.0	42.0	55.2
Level of Service	C	D		A	B	B				E	D	E
Approach Delay (s)		37.2			12.1			0.0			54.5	
Approach LOS		D			B			A			D	

Intersection Summary			
HCM Average Control Delay	37.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	52.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1003: 95th Street & State Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↱		↰	↑↑	↱		↰↑	↱	↰		↱
Volume (vph)	338	809	218	53	560	280	100	247	54	39	0	30
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0	3.0		5.0	5.0	5.0		5.0	5.0	5.0		5.0
Lane Util. Factor	0.97	0.95		1.00	0.95	1.00		0.95	1.00	1.00		1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.67		1.00	0.91	1.00		0.96
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Frt	1.00	0.97		1.00	1.00	0.85		1.00	0.85	1.00		0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.99	1.00	0.95		1.00
Satd. Flow (prot)	3285	3263		1710	3138	1018		3301	1359	855		734
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.99	1.00	0.95		1.00
Satd. Flow (perm)	3285	3263		1710	3138	1018		3301	1359	855		734
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	356	852	229	56	589	295	105	260	57	41	0	32
RTOR Reduction (vph)	0	18	0	0	0	222	0	0	42	0	0	30
Lane Group Flow (vph)	356	1063	0	56	589	73	0	365	15	41	0	2
Confl. Peds. (#/hr)	327		13	13		327	6		60	60		6
Confl. Bikes (#/hr)	6					6						
Heavy Vehicles (%)	1%	1%	0%	0%	9%	1%	0%	3%	2%	100%	0%	100%
Turn Type	Prot			Prot		Perm	Split		Perm	Prot		custom
Protected Phases	7	4		3	8		2	2		6		
Permitted Phases						8			2			6
Actuated Green, G (s)	44.0	68.0		8.0	32.0	32.0		28.0	28.0	8.0		8.0
Effective Green, g (s)	44.0	68.0		8.0	32.0	32.0		28.0	28.0	8.0		8.0
Actuated g/C Ratio	0.34	0.52		0.06	0.25	0.25		0.22	0.22	0.06		0.06
Clearance Time (s)	3.0	3.0		5.0	5.0	5.0		5.0	5.0	5.0		5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0	3.0	3.0		3.0
Lane Grp Cap (vph)	1112	1707		105	772	251		711	293	53		45
v/s Ratio Prot	0.11	c0.33		0.03	c0.19			c0.11		c0.05		
v/s Ratio Perm						0.07			0.01			0.00
v/c Ratio	0.32	0.62		0.53	0.76	0.29		0.51	0.05	0.77		0.04
Uniform Delay, d1	31.9	21.9		59.2	45.5	39.8		45.0	40.5	60.1		57.4
Progression Factor	0.94	0.17		1.00	1.00	1.00		0.95	1.00	1.00		1.00
Incremental Delay, d2	0.5	1.1		18.0	7.0	2.9		2.6	0.3	49.7		0.4
Delay (s)	30.5	4.7		77.2	52.5	42.7		45.3	41.0	109.9		57.8
Level of Service	C	A		E	D	D		D	D	F		E
Approach Delay (s)		11.1			50.9			44.7			87.0	
Approach LOS		B			D			D			F	

Intersection Summary			
HCM Average Control Delay	31.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	68.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1004: 95th Street & Michigan Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱		↰	↑↑		↰		↱	↰	↱	
Volume (vph)	0	885	165	102	813	0	74	0	87	9	15	7
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	11	11	8	12	12	12	14	15	12
Total Lost time (s)		4.0		4.0	4.0		4.0		4.0	4.0	4.0	
Lane Util. Factor		0.95		1.00	0.95		1.00		1.00	1.00	1.00	
Frpb, ped/bikes		0.99		1.00	1.00		1.00		0.98	1.00	0.98	
Flpb, ped/bikes		1.00		1.00	1.00		0.97		1.00	0.99	1.00	
Frt		0.98		1.00	1.00		1.00		0.85	1.00	0.95	
Flt Protected		1.00		0.95	1.00		0.95		1.00	0.95	1.00	
Satd. Flow (prot)		2997		1649	3149		1388		1451	1803	1857	
Flt Permitted		1.00		0.18	1.00		0.74		1.00	0.95	1.00	
Satd. Flow (perm)		2997		304	3149		1082		1451	1803	1857	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	983	183	113	903	0	82	0	97	10	17	8
RTOR Reduction (vph)	0	15	0	0	0	0	0	0	66	0	5	0
Lane Group Flow (vph)	0	1151	0	113	903	0	82	0	31	10	20	0
Confl. Peds. (#/hr)	67		19	19		67	38		12	12		38
Confl. Bikes (#/hr)			1	1								
Heavy Vehicles (%)	0%	2%	11%	0%	5%	0%	19%	0%	3%	0%	0%	0%
Turn Type				Perm			custom		custom	Perm		
Protected Phases		4			8						6	
Permitted Phases				8			2		2	6		
Actuated Green, G (s)		60.0		60.0	60.0		32.0		32.0	32.0	32.0	
Effective Green, g (s)		60.0		60.0	60.0		32.0		32.0	32.0	32.0	
Actuated g/C Ratio		0.60		0.60	0.60		0.32		0.32	0.32	0.32	
Clearance Time (s)		4.0		4.0	4.0		4.0		4.0	4.0	4.0	
Lane Grp Cap (vph)		1798		182	1889		346		464	577	594	
v/s Ratio Prot		c0.38			0.29						0.01	
v/s Ratio Perm				0.37			c0.08		0.02	0.01		
v/c Ratio		0.64		0.62	0.48		0.24		0.07	0.02	0.03	
Uniform Delay, d1		13.0		12.7	11.2		25.0		23.6	23.2	23.4	
Progression Factor		1.00		1.00	1.00		1.00		1.00	1.00	1.00	
Incremental Delay, d2		1.8		14.9	0.9		1.6		0.3	0.1	0.1	
Delay (s)		14.7		27.6	12.1		26.6		23.9	23.3	23.5	
Level of Service		B		C	B		C		C	C	C	
Approach Delay (s)		14.7			13.8			25.2			23.4	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM Average Control Delay	15.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	61.0%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1005: 98th Place & Halsted Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↰	↰	↱	↰	↑↑↑			↑↑↱	
Volume (vph)	0	0	0	291	0	1188	214	682	0	0	792	490
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	12	12	10	10	12	12	11	12
Total Lost time (s)				4.0		5.0	3.0	4.0			4.0	
Lane Util. Factor				0.95		1.00	1.00	0.91			0.91	
Frpb, ped/bikes				1.00		1.00	1.00	1.00			0.98	
Flpb, ped/bikes				1.00		1.00	1.00	1.00			1.00	
Frt				1.00		0.85	1.00	1.00			0.94	
Flt Protected				0.95		1.00	0.95	1.00			1.00	
Satd. Flow (prot)				1540		1530	1535	4327			4271	
Flt Permitted				0.95		1.00	0.95	1.00			1.00	
Satd. Flow (perm)				1540		1530	1535	4327			4271	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	0	0	297	0	1212	218	696	0	0	808	500
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	297	0	1212	218	696	0	0	1308	0
Confl. Peds. (#/hr)	2					2	18		3	3		18
Heavy Vehicles (%)	0%	0%	0%	2%	0%	0%	4%	6%	0%	0%	4%	1%
Turn Type				Split		Prot	Prot					
Protected Phases				8	8	8	5	2			6	
Permitted Phases												
Actuated Green, G (s)				30.0		30.0	32.0	66.0			31.0	
Effective Green, g (s)				31.0		30.0	32.0	66.0			31.0	
Actuated g/C Ratio				0.30		0.29	0.30	0.63			0.30	
Clearance Time (s)				5.0		5.0	3.0	4.0			4.0	
Lane Grp Cap (vph)				455		437	468	2720			1261	
v/s Ratio Prot				0.19		c0.79	c0.14	0.16			c0.31	
v/s Ratio Perm												
v/c Ratio				0.65		2.77	0.47	0.26			1.16dr	
Uniform Delay, d1				32.3		37.5	29.6	8.6			37.0	
Progression Factor				1.00		1.00	0.64	2.10			1.00	
Incremental Delay, d2				7.1		804.4	2.8	0.2			35.5	
Delay (s)				39.4		841.9	21.7	18.3			72.5	
Level of Service				D		F	C	B			E	
Approach Delay (s)		0.0			684.0			19.1			72.5	
Approach LOS		A			F			B			E	

Intersection Summary			
HCM Average Control Delay	306.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.40		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	99.3%	ICU Level of Service	F
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1006: 99th Street & Halsted Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↰↑↱						↑↑↑	↱↱	↰	↑↑↑	
Volume (vph)	324	770	145	0	0	0	0	572	403	355	727	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	13	12	12	12	12	12	10	10	8	12	12	12
Total Lost time (s)	5.0	5.0						4.0	4.0	3.0	4.0	
Lane Util. Factor	0.91	0.91						0.91	0.88	1.00	0.91	
Frpb, ped/bikes	1.00	1.00						1.00	1.00	1.00	1.00	
Flpb, ped/bikes	0.99	1.00						1.00	1.00	1.00	1.00	
Frt	1.00	0.98						1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00						1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1509	3157						4368	2244	1598	4680	
Flt Permitted	0.95	1.00						1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1509	3157						4368	2244	1598	4680	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	334	794	149	0	0	0	0	590	415	366	749	0
RTOR Reduction (vph)	0	14	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	301	962	0	0	0	0	0	590	415	366	749	0
Confl. Peds. (#/hr)	6		1	1		6	6					6
Heavy Vehicles (%)	6%	1%	0%	0%	0%	0%	0%	5%	4%	7%	5%	0%
Turn Type	Perm								Perm	Prot		
Protected Phases		4						2		1	6	
Permitted Phases	4								2			
Actuated Green, G (s)	34.0	34.0						28.0	28.0	31.0	62.0	
Effective Green, g (s)	34.0	34.0						28.0	28.0	31.0	62.0	
Actuated g/C Ratio	0.32	0.32						0.27	0.27	0.30	0.59	
Clearance Time (s)	5.0	5.0						4.0	4.0	3.0	4.0	
Lane Grp Cap (vph)	489	1022						1165	598	472	2763	
v/s Ratio Prot								0.14		c0.23	0.16	
v/s Ratio Perm	0.20	0.30							c0.18			
v/c Ratio	0.62	0.94						0.51	0.69	0.78	0.27	
Uniform Delay, d1	30.0	34.5						32.6	34.6	33.8	10.5	
Progression Factor	1.00	1.00						1.14	1.14	0.86	0.21	
Incremental Delay, d2	5.7	17.2						1.4	5.8	4.6	0.1	
Delay (s)	35.7	51.7						38.5	45.2	33.7	2.3	
Level of Service	D	D						D	D	C	A	
Approach Delay (s)		48.0			0.0			41.3			12.6	
Approach LOS		D			A			D			B	

Intersection Summary			
HCM Average Control Delay	34.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	99.3%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1007: 98th Place & Wentworth Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↰	↑↱		↰	↑			↱	
Volume (vph)	0	0	0	287	25	24	11	157	0	0	147	5
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	14	12	12	16	12
Total Lost time (s)				4.0	4.0		4.0	4.0			-3.0	
Lane Util. Factor				1.00	0.95		1.00	1.00			1.00	
Frpb, ped/bikes				1.00	0.99		1.00	1.00			1.00	
Flpb, ped/bikes				1.00	1.00		1.00	1.00			1.00	
Frt				1.00	0.93		1.00	1.00			1.00	
Flt Protected				0.95	1.00		0.95	1.00			1.00	
Satd. Flow (prot)				1688	3132		1710	1846			1955	
Flt Permitted				0.95	1.00		0.54	1.00			1.00	
Satd. Flow (perm)				1688	3132		979	1846			1955	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	319	28	27	12	174	0	0	163	6
RTOR Reduction (vph)	0	0	0	0	18	0	0	0	0	0	1	0
Lane Group Flow (vph)	0	0	0	319	37	0	12	174	0	0	168	0
Confl. Peds. (#/hr)	2		2	2		2			6	6		
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	0%	0%	0%	1%	0%	0%	0%	4%	0%	0%	4%	0%
Turn Type				Perm			pm+pt					
Protected Phases					8		7	2			6	
Permitted Phases				8			2					
Actuated Green, G (s)				27.0	27.0		50.0	50.0			40.0	
Effective Green, g (s)				27.0	27.0		50.0	50.0			46.0	
Actuated g/C Ratio				0.32	0.32		0.59	0.59			0.54	
Clearance Time (s)				4.0	4.0		4.0	4.0			3.0	
Lane Grp Cap (vph)				536	995		636	1086			1058	
v/s Ratio Prot					0.01		0.00	c0.09			0.09	
v/s Ratio Perm				c0.19			0.01					
v/c Ratio				0.60	0.04		0.02	0.16			0.16	
Uniform Delay, d1				24.4	20.0		10.5	8.0			9.8	
Progression Factor				1.00	1.00		1.05	1.17			1.00	
Incremental Delay, d2				4.8	0.1		0.1	0.3			0.3	
Delay (s)				29.2	20.1		11.1	9.6			10.1	
Level of Service				C	C		B	A			B	
Approach Delay (s)		0.0			27.9			9.7			10.1	
Approach LOS		A			C			A			B	

Intersection Summary			
HCM Average Control Delay	19.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	36.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1008: 99th St & Wentworth Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱			✣			↱		↰	↑	
Volume (vph)	12	11	23	6	0	14	0	142	43	46	389	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	16	15	12	8	12	8	12	12	12	10	13	12
Total Lost time (s)	4.0	4.0			4.0			3.0		4.0	4.0	
Lane Util. Factor	1.00	1.00			1.00			1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.97			0.98			0.99		1.00	1.00	
Flpb, ped/bikes	1.00	1.00			1.00			1.00		1.00	1.00	
Frt	1.00	0.90			0.90			0.97		1.00	1.00	
Flt Protected	0.95	1.00			0.99			1.00		0.95	1.00	
Satd. Flow (prot)	1935	1735			1571			1718		1590	1860	
Flt Permitted	0.74	1.00			0.96			1.00		0.60	1.00	
Satd. Flow (perm)	1515	1735			1529			1718		1004	1860	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	13	12	24	6	0	15	0	149	45	48	409	0
RTOR Reduction (vph)	0	16	0	0	10	0	0	13	0	0	0	0
Lane Group Flow (vph)	13	20	0	0	11	0	0	181	0	48	409	0
Confl. Peds. (#/hr)	1		11	11		1	1		10	10		1
Confl. Bikes (#/hr)			2	2			1		2	2		1
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%
Turn Type	Perm			Perm						pm+pt		
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8						6		
Actuated Green, G (s)	27.0	27.0			27.0			40.0		50.0	50.0	
Effective Green, g (s)	27.0	27.0			27.0			40.0		50.0	50.0	
Actuated g/C Ratio	0.32	0.32			0.32			0.47		0.59	0.59	
Clearance Time (s)	4.0	4.0			4.0			3.0		4.0	4.0	
Lane Grp Cap (vph)	481	551			486			808		639	1094	
v/s Ratio Prot		c0.01						0.11		0.01	c0.22	
v/s Ratio Perm	0.01				0.01					0.04		
v/c Ratio	0.03	0.04			0.02			0.22		0.08	0.37	
Uniform Delay, d1	20.0	20.0			19.9			13.3		8.6	9.2	
Progression Factor	1.00	1.00			1.00			1.00		0.97	0.87	
Incremental Delay, d2	0.1	0.1			0.1			0.6		0.2	0.9	
Delay (s)	20.1	20.1			20.0			14.0		8.6	8.9	
Level of Service	C	C			C			B		A	A	
Approach Delay (s)		20.1			20.0			14.0			8.9	
Approach LOS		C			C			B			A	

Intersection Summary			
HCM Average Control Delay	11.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	41.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1009: 99th St & State Street

1/14/2013

	↗	↘	↖	↑	↓	↙
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰↱		↰	↑	↓↱	
Volume (vph)	46	40	12	183	273	27
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	14	12	13	12	10	12
Total Lost time (s)	4.0		4.0	4.0	4.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.94		1.00	1.00	0.99	
Flt Protected	0.97		0.95	1.00	1.00	
Satd. Flow (prot)	1753		1765	1782	1656	
Flt Permitted	0.97		0.52	1.00	1.00	
Satd. Flow (perm)	1753		966	1782	1656	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	51	44	13	203	303	30
RTOR Reduction (vph)	30	0	0	0	5	0
Lane Group Flow (vph)	65	0	13	203	328	0
Confl. Peds. (#/hr)			2			2
Heavy Vehicles (%)	0%	0%	0%	1%	0%	0%
Turn Type			Perm			
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	21.0		36.0	36.0	36.0	
Effective Green, g (s)	21.0		36.0	36.0	36.0	
Actuated g/C Ratio	0.32		0.55	0.55	0.55	
Clearance Time (s)	4.0		4.0	4.0	4.0	
Lane Grp Cap (vph)	566		535	987	917	
v/s Ratio Prot	c0.04			0.11	c0.20	
v/s Ratio Perm			0.01			
v/c Ratio	0.12		0.02	0.21	0.36	
Uniform Delay, d1	15.5		6.6	7.3	8.1	
Progression Factor	1.00		0.49	0.61	1.44	
Incremental Delay, d2	0.4		0.1	0.5	0.9	
Delay (s)	15.9		3.3	4.9	12.6	
Level of Service	B		A	A	B	
Approach Delay (s)	15.9			4.8	12.6	
Approach LOS	B			A	B	

Intersection Summary			
HCM Average Control Delay	10.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.27		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	28.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1010: 99th St & Michigan Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↰↑↱		↰	↑			↑	↱
Volume (vph)	0	0	0	31	265	9	257	130	2	0	277	17
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	14	16	12	12	15	12	12	13	10
Total Lost time (s)					4.0		4.0	4.0			3.0	3.0
Lane Util. Factor					0.95		1.00	1.00			1.00	1.00
Frpb, ped/bikes					1.00		1.00	1.00			1.00	1.00
Flpb, ped/bikes					1.00		1.00	1.00			1.00	1.00
Frt					1.00		1.00	1.00			1.00	0.85
Flt Protected					0.99		0.95	1.00			1.00	1.00
Satd. Flow (prot)					3771		1693	1677			1738	1428
Flt Permitted					0.99		0.48	1.00			1.00	1.00
Satd. Flow (perm)					3771		854	1677			1738	1428
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	34	294	10	286	144	2	0	308	19
RTOR Reduction (vph)	0	0	0	0	3	0	0	0	0	0	0	11
Lane Group Flow (vph)	0	0	0	0	335	0	286	146	0	0	308	8
Confl. Peds. (#/hr)	1					1			5	5		
Heavy Vehicles (%)	0%	0%	0%	0%	2%	0%	1%	18%	0%	0%	7%	0%
Turn Type				Split			pm+pt					Perm
Protected Phases				8	8		7	2			6	
Permitted Phases							2					6
Actuated Green, G (s)					26.0		51.0	51.0			38.0	38.0
Effective Green, g (s)					26.0		51.0	51.0			38.0	38.0
Actuated g/C Ratio					0.31		0.60	0.60			0.45	0.45
Clearance Time (s)					4.0		4.0	4.0			3.0	3.0
Lane Grp Cap (vph)					1153		611	1006			777	638
v/s Ratio Prot					c0.09		c0.06	0.09			0.18	
v/s Ratio Perm							c0.23					0.01
v/c Ratio					0.29		0.47	0.14			0.40	0.01
Uniform Delay, d1					22.5		13.5	7.4			15.8	13.1
Progression Factor					1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2					0.6		2.6	0.3			1.5	0.0
Delay (s)					23.1		16.1	7.7			17.3	13.1
Level of Service					C		B	A			B	B
Approach Delay (s)		0.0			23.1			13.3			17.1	
Approach LOS		A			C			B			B	

Intersection Summary			
HCM Average Control Delay	17.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	53.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1011: 99th Street & Martin Luther King Jr Drive

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					✥		↰	↑↱		↰	↑↱	
Volume (vph)	0	0	0	96	94	38	133	207	32	59	703	44
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	15	12	12	12	12	12	13	12
Total Lost time (s)					4.0		3.0	4.0		3.0	4.0	
Lane Util. Factor					1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes					1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes					1.00		1.00	1.00		1.00	1.00	
Frt					0.98		1.00	0.98		1.00	0.99	
Flt Protected					0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)					1896		1710	3282		1707	3467	
Flt Permitted					0.98		0.25	1.00		0.59	1.00	
Satd. Flow (perm)					1896		446	3282		1056	3467	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	107	104	42	148	230	36	66	781	49
RTOR Reduction (vph)	0	0	0	0	10	0	0	16	0	0	6	0
Lane Group Flow (vph)	0	0	0	0	243	0	148	250	0	66	824	0
Confl. Peds. (#/hr)							5		5	5		5
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	1%	0%
Turn Type				Split			pm+pt			pm+pt		
Protected Phases				8	8		5	2		1	6	
Permitted Phases							2			6		
Actuated Green, G (s)					23.0		41.0	34.0		41.0	34.0	
Effective Green, g (s)					23.0		41.0	34.0		41.0	34.0	
Actuated g/C Ratio					0.31		0.55	0.45		0.55	0.45	
Clearance Time (s)					4.0		3.0	4.0		3.0	4.0	
Lane Grp Cap (vph)					581		362	1488		638	1572	
v/s Ratio Prot					c0.13		c0.04	0.08		0.01	c0.24	
v/s Ratio Perm							0.19			0.05		
v/c Ratio					0.42		0.41	0.17		0.10	0.52	
Uniform Delay, d1					20.7		16.4	12.1		8.2	14.7	
Progression Factor					1.00		0.83	0.82		1.00	1.00	
Incremental Delay, d2					2.2		3.4	0.2		0.3	1.3	
Delay (s)					22.9		17.0	10.2		8.5	16.0	
Level of Service					C		B	B		A	B	
Approach Delay (s)		0.0			22.9			12.7			15.4	
Approach LOS		A			C			B			B	

Intersection Summary			
HCM Average Control Delay	15.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	53.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥		↰	↑↱		↰	↑↱	
Volume (vph)	32	49	13	9	63	63	7	277	24	159	590	50
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	16	12	12	10	11	12	12	11	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.98			0.94		1.00	0.99		1.00	0.99	
Flt Protected		0.98			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1964			1655		1595	3173		1704	3231	
Flt Permitted		0.89			0.99		0.36	1.00		0.56	1.00	
Satd. Flow (perm)		1775			1637		599	3173		1004	3231	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	34	52	14	9	66	66	7	292	25	167	621	53
RTOR Reduction (vph)	0	8	0	0	42	0	0	8	0	0	8	0
Lane Group Flow (vph)	0	92	0	0	99	0	7	309	0	167	666	0
Confl. Peds. (#/hr)	2					2	1		6	6		1
Confl. Bikes (#/hr)			1	1			3					3
Heavy Vehicles (%)	0%	0%	0%	0%	2%	0%	0%	3%	0%	0%	1%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		25.0			25.0		42.0	42.0		42.0	42.0	
Effective Green, g (s)		25.0			25.0		42.0	42.0		42.0	42.0	
Actuated g/C Ratio		0.33			0.33		0.56	0.56		0.56	0.56	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		592			546		335	1777		562	1809	
v/s Ratio Prot								0.10			c0.21	
v/s Ratio Perm		0.05			c0.06		0.01			0.17		
v/c Ratio		0.16			0.18		0.02	0.17		0.30	0.37	
Uniform Delay, d1		17.6			17.7		7.3	8.0		8.7	9.1	
Progression Factor		1.00			1.00		1.00	1.00		0.27	0.25	
Incremental Delay, d2		0.6			0.7		0.1	0.2		1.2	0.5	
Delay (s)		18.1			18.5		7.5	8.3		3.5	2.8	
Level of Service		B			B		A	A		A	A	
Approach Delay (s)		18.1			18.5			8.2			3.0	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	6.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	48.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis
1013: 100th Street & Cottage Grove Avenue

1/14/2013

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰↱			↰↑	↑↱	
Sign Control	Stop			Stop	Stop	
Volume (vph)	35	182	64	240	558	77
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	39	202	71	267	620	86

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	241	160	178	413	292
Volume Left (vph)	39	71	0	0	0
Volume Right (vph)	202	0	0	0	86
Hadj (s)	-0.42	0.27	0.05	0.05	-0.15
Departure Headway (s)	5.7	6.4	6.2	5.8	5.6
Degree Utilization, x	0.38	0.29	0.31	0.66	0.45
Capacity (veh/h)	598	538	557	611	632
Control Delay (s)	12.1	10.8	10.7	18.2	11.9
Approach Delay (s)	12.1	10.7		15.6	
Approach LOS	B	B		C	

Intersection Summary			
Delay	13.7		
HCM Level of Service	B		
Intersection Capacity Utilization	51.7%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Signalized Intersection Capacity Analysis
1014: 103rd Street & Vincennes Avenue

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR
Lane Configurations		↰	↑	↱	↰	↑	↱			↰	↑↱	
Volume (vph)	32	35	376	18	22	405	75	77	55	68	351	32
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		3.5	4.0	4.0	4.0	4.0	4.0			4.0	4.0	
Lane Util. Factor		1.00	1.00	1.00	1.00	1.00	1.00			1.00	0.95	
Frpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	0.93			1.00	1.00	
Flpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	
Frt		1.00	1.00	0.85	1.00	1.00	0.85			1.00	0.99	
Flt Protected		0.95	1.00	1.00	0.95	1.00	1.00			0.95	1.00	
Satd. Flow (prot)		1612	1731	1530	1710	1731	1421			1710	3250	
Flt Permitted		0.14	1.00	1.00	0.52	1.00	1.00			0.14	1.00	
Satd. Flow (perm)		238	1731	1530	932	1731	1421			257	3250	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	36	39	418	20	24	450	83	86	61	76	390	36
RTOR Reduction (vph)	0	0	0	12	0	0	36	0	0	0	7	0
Lane Group Flow (vph)	0	75	418	8	24	450	133	0	0	137	419	0
Confl. Peds. (#/hr)		25					25					3
Heavy Vehicles (%)	6%	6%	4%	0%	0%	4%	0%	0%	0%	0%	4%	0%
Turn Type	Perm	pm+pt		Perm	Perm		Perm		Perm	Perm		
Protected Phases		7	4			8					2	
Permitted Phases	4	4		4	8		8		2	2		
Actuated Green, G (s)		44.0	44.0	44.0	25.0	25.0	25.0			28.0	28.0	
Effective Green, g (s)		44.0	44.0	44.0	25.0	25.0	25.0			28.0	28.0	
Actuated g/C Ratio		0.42	0.42	0.42	0.24	0.24	0.24			0.27	0.27	
Clearance Time (s)		3.5	4.0	4.0	4.0	4.0	4.0			4.0	4.0	
Lane Grp Cap (vph)		303	725	641	222	412	338			69	867	
v/s Ratio Prot		0.04	c0.24			c0.26					0.13	
v/s Ratio Perm		0.07		0.01	0.03		0.09			c0.53		
v/c Ratio		0.25	0.58	0.01	0.11	1.09	0.39			1.99	0.48	
Uniform Delay, d1		21.6	23.4	17.8	31.3	40.0	33.6			38.5	32.4	
Progression Factor		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	
Incremental Delay, d2		1.9	3.3	0.0	1.0	71.5	3.4			491.0	1.9	
Delay (s)		23.5	26.7	17.9	32.3	111.5	37.1			529.5	34.3	
Level of Service		C	C	B	C	F	D			F	C	
Approach Delay (s)			25.9			89.0					154.8	
Approach LOS			C			F					F	

Intersection Summary			
HCM Average Control Delay	138.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.43		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	102.2%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBL	SBT	SBR	SBR2	SEL2	SEL	SER	SER2
Lane Configurations	↰	↑↱				↰	↱↱	
Volume (vph)	106	559	80	101	4	110	587	190
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.5	4.5				4.5	4.5	
Lane Util. Factor	1.00	0.95				1.00	0.88	
Frpb, ped/bikes	1.00	1.00				1.00	1.00	
Flpb, ped/bikes	1.00	1.00				1.00	1.00	
Frt	1.00	0.96				1.00	0.85	
Flt Protected	0.95	1.00				0.95	1.00	
Satd. Flow (prot)	1705	3246				1710	2633	
Flt Permitted	0.38	1.00				0.95	1.00	
Satd. Flow (perm)	675	3246				1710	2633	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	118	621	89	112	4	122	652	211
RTOR Reduction (vph)	0	12	0	0	0	0	26	0
Lane Group Flow (vph)	118	810	0	0	0	126	837	0
Confl. Peds. (#/hr)	3							
Heavy Vehicles (%)	0%	2%	0%	0%	0%	0%	3%	0%
Turn Type	Perm				Split		Perm	
Protected Phases		6			9	9		
Permitted Phases	6						9	
Actuated Green, G (s)	27.5	27.5				20.5	20.5	
Effective Green, g (s)	27.5	27.5				20.5	20.5	
Actuated g/C Ratio	0.26	0.26				0.20	0.20	
Clearance Time (s)	4.5	4.5				4.5	4.5	
Lane Grp Cap (vph)	177	850				334	514	
v/s Ratio Prot		0.25				0.07		
v/s Ratio Perm	0.17						c0.32	
v/c Ratio	0.67	0.95				0.38	1.63	
Uniform Delay, d1	34.7	38.1				36.7	42.2	
Progression Factor	1.00	1.00				1.00	1.00	
Incremental Delay, d2	18.1	21.4				3.2	291.8	
Delay (s)	52.8	59.5				39.9	334.0	
Level of Service	D	E				D	F	
Approach Delay (s)		58.7				296.6		
Approach LOS		E				F		

Intersection Summary

HCM Signalized Intersection Capacity Analysis

1015: 103rd Street & Morgan Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰			↱			✥				
Volume (vph)	64	588	0	0	482	59	83	51	20	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	11	11	11	16	11	12	15	12	12	15	12
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		1.00			0.99			0.98				
Flt Protected		1.00			1.00			0.97				
Satd. Flow (prot)		1681			1951			1839				
Flt Permitted		0.90			1.00			0.97				
Satd. Flow (perm)		1526			1951			1839				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	71	653	0	0	536	66	92	57	22	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	724	0	0	602	0	0	171	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)		40.0			40.0			17.0				
Effective Green, g (s)		40.0			40.0			17.0				
Actuated g/C Ratio		0.62			0.62			0.26				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		939			1201			481				
v/s Ratio Prot					0.31							
v/s Ratio Perm		c0.47						0.09				
v/c Ratio		0.77			0.50			0.36				
Uniform Delay, d1		9.1			7.0			19.5				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		6.1			1.5			2.0				
Delay (s)		15.2			8.4			21.6				
Level of Service		B			A			C				
Approach Delay (s)		15.2			8.4			21.6			0.0	
Approach LOS		B			A			C			A	

Intersection Summary			
HCM Average Control Delay	13.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	85.9%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1016: 103rd Street & Halsted Street

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱	↖	↑↑	↱	↖	↑↑	↱
Volume (vph)	69	333	149	126	350	154	103	625	83	143	751	93
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	10	10	9	9	10	9
Total Lost time (s)		4.0	4.0		4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		1.00	0.96		1.00	0.96	1.00	1.00	0.95	1.00	1.00	0.94
Flpb, ped/bikes		1.00	1.00		0.99	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.99	1.00		0.99	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1982	1434		1947	1444	1546	3040	1296	1505	3069	1252
Flt Permitted		0.33	1.00		0.71	1.00	0.23	1.00	1.00	0.30	1.00	1.00
Satd. Flow (perm)		662	1434		1410	1444	379	3040	1296	468	3069	1252
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	73	351	157	133	368	162	108	658	87	151	791	98
RTOR Reduction (vph)	0	0	93	0	0	116	0	0	52	0	0	49
Lane Group Flow (vph)	0	424	64	0	501	46	108	658	35	151	791	49
Confl. Peds. (#/hr)	24		45	45		24	36		24	24		36
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	2%	2%	2%	2%	3%	2%	3%	5%	1%	2%	4%	3%
Turn Type	pm+pt		Perm	Perm		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)		43.0	43.0		30.0	30.0	50.6	42.3	42.3	51.4	42.7	42.7
Effective Green, g (s)		43.0	43.0		30.0	30.0	50.6	42.3	42.3	51.4	42.7	42.7
Actuated g/C Ratio		0.41	0.41		0.29	0.29	0.48	0.40	0.40	0.49	0.41	0.41
Clearance Time (s)		4.0	4.0		4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		397	587		403	413	275	1225	522	315	1248	509
v/s Ratio Prot		c0.10					0.03	0.22		c0.04	c0.26	
v/s Ratio Perm		0.34	0.04		c0.36	0.03	0.16		0.03	0.20		0.04
v/c Ratio		1.07	0.11		1.24	0.11	0.39	0.54	0.07	0.48	0.63	0.10
Uniform Delay, d1		31.0	19.2		37.5	27.7	16.4	23.9	19.2	16.0	24.9	19.2
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.77	1.56	2.70
Incremental Delay, d2		64.4	0.4		128.8	0.5	0.9	1.7	0.2	1.1	2.4	0.4
Delay (s)		95.4	19.5		166.3	28.2	17.3	25.6	19.5	29.4	41.1	52.3
Level of Service		F	B		F	C	B	C	B	C	D	D
Approach Delay (s)		74.9			132.6			23.9			40.5	
Approach LOS		E			F			C			D	

Intersection Summary			
HCM Average Control Delay	61.8	HCM Level of Service	E
HCM Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	90.6%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1017: 103rd Street & Normal Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			✥				
Volume (vph)	83	409	83	94	522	90	49	59	69	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	15	12	12	15	12
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		0.98			0.98			0.95				
Flt Protected		0.99			0.99			0.99				
Satd. Flow (prot)		1645			1649			1796				
Flt Permitted		0.83			0.86			0.99				
Satd. Flow (perm)		1373			1422			1796				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	92	454	92	104	580	100	54	66	77	0	0	0
RTOR Reduction (vph)	0	9	0	0	8	0	0	35	0	0	0	0
Lane Group Flow (vph)	0	629	0	0	776	0	0	162	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm			Perm					
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Actuated Green, G (s)		40.0			40.0			17.0				
Effective Green, g (s)		40.0			40.0			17.0				
Actuated g/C Ratio		0.62			0.62			0.26				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		845			875			470				
v/s Ratio Prot												
v/s Ratio Perm		0.46			c0.55			0.09				
v/c Ratio		0.74			0.89			0.34				
Uniform Delay, d1		8.9			10.6			19.5				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		5.9			12.9			2.0				
Delay (s)		14.8			23.4			21.5				
Level of Service		B			C			C				
Approach Delay (s)		14.8			23.4			21.5			0.0	
Approach LOS		B			C			C			A	

Intersection Summary			
HCM Average Control Delay	19.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	69.8%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1018: 103rd Street & Wentworth Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱		↰	↱		✥	
Volume (vph)	53	483	81	74	511	36	38	76	72	53	235	56
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	11	12	12	15	12
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frpb, ped/bikes		1.00	0.96		1.00	0.96		1.00	0.96		0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		0.99	1.00		1.00	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		0.98	
Flt Protected		1.00	1.00		0.99	1.00		0.98	1.00		0.99	
Satd. Flow (prot)		1685	1382		1713	1417		1685	1455		1877	
Flt Permitted		0.90	1.00		0.85	1.00		0.83	1.00		0.94	
Satd. Flow (perm)		1531	1382		1473	1417		1417	1455		1774	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	56	508	85	78	538	38	40	80	76	56	247	59
RTOR Reduction (vph)	0	0	36	0	0	12	0	0	52	0	10	0
Lane Group Flow (vph)	0	564	49	0	616	26	0	120	24	0	352	0
Confl. Peds. (#/hr)	25		19	19		25	36		30	30		36
Confl. Bikes (#/hr)	1		2	2		1	3					3
Heavy Vehicles (%)	0%	3%	3%	0%	1%	0%	0%	1%	1%	0%	1%	0%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		43.0	43.0		43.0	43.0		24.0	24.0		24.0	
Effective Green, g (s)		43.0	43.0		43.0	43.0		24.0	24.0		24.0	
Actuated g/C Ratio		0.57	0.57		0.57	0.57		0.32	0.32		0.32	
Clearance Time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	
Lane Grp Cap (vph)		878	792		845	812		453	466		568	
v/s Ratio Prot												
v/s Ratio Perm		0.37	0.04		c0.42	0.02		0.08	0.02		c0.20	
v/c Ratio		0.64	0.06		0.73	0.03		0.26	0.05		0.62	
Uniform Delay, d1		10.8	7.1		11.7	7.0		18.9	17.6		21.6	
Progression Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2		3.6	0.1		5.5	0.1		1.4	0.2		5.0	
Delay (s)		14.4	7.2		17.2	7.0		20.4	17.8		26.7	
Level of Service		B	A		B	A		C	B		C	
Approach Delay (s)		13.5			16.6			19.4			26.7	
Approach LOS		B			B			B			C	

Intersection Summary			
HCM Average Control Delay	17.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	99.5%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1019: 103rd Street & State Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑	↱	↰	↑	↱
Volume (vph)	59	490	34	44	523	52	45	165	55	117	199	31
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	11	16	8	10	10	10	10	10	10
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00	0.98	1.00	1.00	0.98
Flpb, ped/bikes	0.98	1.00		1.00	1.00		0.99	1.00	1.00	0.99	1.00	1.00
Frt	1.00	0.99		1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1532	3066		1652	3730		1585	1663	1370	1568	1680	1397
Flt Permitted	0.36	1.00		0.39	1.00		0.59	1.00	1.00	0.63	1.00	1.00
Satd. Flow (perm)	579	3066		680	3730		977	1663	1370	1043	1680	1397
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	66	544	38	49	581	58	50	183	61	130	221	34
RTOR Reduction (vph)	0	8	0	0	12	0	0	0	37	0	0	20
Lane Group Flow (vph)	66	574	0	49	627	0	50	183	24	130	221	14
Confl. Peds. (#/hr)	51		3	3		51	13		13	13		13
Heavy Vehicles (%)	2%	3%	3%	0%	2%	0%	0%	1%	2%	1%	0%	0%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	31.0	31.0		31.0	31.0		26.0	26.0	26.0	26.0	26.0	26.0
Effective Green, g (s)	31.0	31.0		31.0	31.0		26.0	26.0	26.0	26.0	26.0	26.0
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.40	0.40	0.40	0.40	0.40	0.40
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	276	1462		324	1779		391	665	548	417	672	559
v/s Ratio Prot		c0.19			0.17			0.11			c0.13	
v/s Ratio Perm	0.11			0.07			0.05		0.02	0.12		0.01
v/c Ratio	0.24	0.39		0.15	0.35		0.13	0.28	0.04	0.31	0.33	0.02
Uniform Delay, d1	10.0	10.9		9.6	10.7		12.3	13.1	11.9	13.4	13.5	11.8
Progression Factor	1.00	1.00		1.00	1.00		0.86	0.91	0.79	0.59	0.59	0.27
Incremental Delay, d2	2.0	0.8		1.0	0.6		0.7	1.0	0.2	1.9	1.3	0.1
Delay (s)	12.1	11.7		10.6	11.2		11.2	13.0	9.6	9.8	9.3	3.3
Level of Service	B	B		B	B		B	B	A	A	A	A
Approach Delay (s)		11.8			11.2			12.0			8.9	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM Average Control Delay	11.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1020: 103rd Street & Michigan Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	60	421	81	70	378	64	57	179	64	87	240	78
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	11	10	11	11	10	11	11	10	11	11
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.98		1.00	0.99		1.00	0.98		1.00	0.99	
Flpb, ped/bikes	0.96	1.00		0.95	1.00		0.99	1.00		0.96	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.96		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1327	3137		1520	3130		1579	2918		1452	2998	
Flt Permitted	0.46	1.00		0.42	1.00		0.54	1.00		0.59	1.00	
Satd. Flow (perm)	637	3137		667	3130		891	2918		908	2998	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	63	443	85	74	398	67	60	188	67	92	253	82
RTOR Reduction (vph)	0	0	0	0	0	0	0	39	0	0	42	0
Lane Group Flow (vph)	63	528	0	74	465	0	60	216	0	92	293	0
Confl. Peds. (#/hr)	112		99	99		112	23		53	53		23
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	16%	1%	0%	0%	1%	9%	0%	8%	2%	5%	5%	7%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	36.0	36.0		36.0	36.0		31.0	31.0		31.0	31.0	
Effective Green, g (s)	36.0	36.0		36.0	36.0		31.0	31.0		31.0	31.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.41	0.41		0.41	0.41	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	306	1506		320	1502		368	1206		375	1239	
v/s Ratio Prot		c0.17			0.15			0.07			0.10	
v/s Ratio Perm	0.10			0.11			0.07			c0.10		
v/c Ratio	0.21	0.35		0.23	0.31		0.16	0.18		0.25	0.24	
Uniform Delay, d1	11.3	12.2		11.4	11.9		13.8	13.9		14.4	14.3	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.5	0.6		1.7	0.5		1.0	0.3		1.6	0.5	
Delay (s)	12.8	12.8		13.1	12.4		14.8	14.3		15.9	14.8	
Level of Service	B	B		B	B		B	B		B	B	
Approach Delay (s)		12.8			12.5			14.4			15.0	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	13.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	51.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1021: 103rd Street & Martin Luther King Jr Drive

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱		↰	↑↱		↰	↑↱	
Volume (vph)	98	436	61	31	504	46	82	194	57	76	473	110
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	12	8	16	12	9	10	10	9	10	10
Total Lost time (s)	3.0	7.0		3.0	7.0		3.0	7.0		3.0	7.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.98		1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.99		1.00	0.97		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1594	1652		1369	1974		1534	2998		1534	3012	
Flt Permitted	0.26	1.00		0.31	1.00		0.28	1.00		0.59	1.00	
Satd. Flow (perm)	439	1652		454	1974		451	2998		951	3012	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	103	459	64	33	531	48	86	204	60	80	498	116
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	103	523	0	33	579	0	86	264	0	80	614	0
Confl. Peds. (#/hr)	21		95	95		21	36		8	8		36
Confl. Bikes (#/hr)	2		3	3		2	2					2
Heavy Vehicles (%)	0%	2%	0%	7%	2%	0%	0%	3%	0%	0%	2%	1%
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	44.0	39.4		40.8	37.8		26.6	21.8		26.6	21.8	
Effective Green, g (s)	44.0	37.4		40.8	35.8		26.6	19.8		26.6	19.8	
Actuated g/C Ratio	0.52	0.44		0.48	0.42		0.31	0.23		0.31	0.23	
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	5.0		3.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	290	727		250	831		202	698		331	702	
v/s Ratio Prot	c0.02	c0.32		0.00	0.29		c0.02	0.09		0.01	c0.20	
v/s Ratio Perm	0.16			0.06			0.11			0.06		
v/c Ratio	0.36	0.72		0.13	0.70		0.43	0.38		0.24	0.87	
Uniform Delay, d1	22.4	19.5		19.9	20.2		29.1	27.4		21.9	31.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.8	6.1		0.2	4.8		1.4	1.6		0.4	14.3	
Delay (s)	23.2	25.6		20.1	25.0		30.5	29.0		22.3	45.7	
Level of Service	C	C		C	C		C	C		C	D	
Approach Delay (s)		25.2			24.7			29.4			43.0	
Approach LOS		C			C			C			D	

Intersection Summary			
HCM Average Control Delay	31.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	78.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	75	385	63	111	484	112	64	150	55	121	348	78
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	11	11	11	11	12	12	10	10	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		0.99	1.00	
Frt		0.98			0.98		1.00	0.96		1.00	0.97	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3681			3131		1652	3237		1549	3026	
Flt Permitted		0.73			0.74		0.44	1.00		0.61	1.00	
Satd. Flow (perm)		2691			2321		766	3237		994	3026	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	83	428	70	123	538	124	71	167	61	134	387	87
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	581	0	0	785	0	71	228	0	134	474	0
Confl. Peds. (#/hr)	23		30	30		23	1		20	20		1
Confl. Bikes (#/hr)	3					3						
Heavy Vehicles (%)	0%	3%	0%	2%	2%	0%	0%	1%	0%	2%	2%	3%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		33.0			33.0		32.0	32.0		32.0	32.0	
Effective Green, g (s)		34.0			34.0		33.0	33.0		33.0	33.0	
Actuated g/C Ratio		0.45			0.45		0.44	0.44		0.44	0.44	
Clearance Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)		1220			1052		337	1424		437	1331	
v/s Ratio Prot								0.07			c0.16	
v/s Ratio Perm		0.22			c0.34		0.09			0.13		
v/c Ratio		0.48			0.75		0.21	0.16		0.31	0.36	
Uniform Delay, d1		14.3			16.9		13.0	12.7		13.6	13.9	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		1.3			4.8		1.4	0.2		1.8	0.7	
Delay (s)		15.6			21.8		14.4	12.9		15.4	14.7	
Level of Service		B			C		B	B		B	B	
Approach Delay (s)		15.6			21.8			13.2			14.8	
Approach LOS		B			C			B			B	

Intersection Summary			
HCM Average Control Delay	17.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	71.4%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1023: 103rd Street & Woodlawn Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↑	↱		↰↑↱			↰↑↱	
Volume (vph)	93	833	6	19	555	236	1	1	9	202	1	76
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	12	12	12	12	12	12	13	13	13
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00			0.95	
Frt	1.00	1.00		1.00	1.00	0.85		0.89			0.96	
Flt Protected	0.95	1.00		0.95	1.00	1.00		1.00			0.97	
Satd. Flow (prot)	1605	3206		1660	3320	1485		1545			3176	
Flt Permitted	0.40	1.00		0.27	1.00	1.00		0.98			0.77	
Satd. Flow (perm)	678	3206		466	3320	1485		1519			2535	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	103	926	7	21	617	262	1	1	10	224	1	84
RTOR Reduction (vph)	0	0	0	0	0	96	0	7	0	0	53	0
Lane Group Flow (vph)	103	933	0	21	617	166	0	5	0	0	256	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	46.1	46.1		46.1	46.1	46.1		18.6			18.6	
Effective Green, g (s)	46.1	46.1		46.1	46.1	46.1		18.6			18.6	
Actuated g/C Ratio	0.63	0.63		0.63	0.63	0.63		0.26			0.26	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		8.0			8.0	
Lane Grp Cap (vph)	430	2033		295	2105	942		389			649	
v/s Ratio Prot		c0.29			0.19							
v/s Ratio Perm	0.15			0.05		0.11		0.00			c0.10	
v/c Ratio	0.24	0.46		0.07	0.29	0.18		0.01			0.39	
Uniform Delay, d1	5.7	6.9		5.1	6.0	5.5		20.2			22.4	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00			1.00	
Incremental Delay, d2	1.3	0.7		0.5	0.4	0.4		0.1			1.7	
Delay (s)	7.1	7.6		5.6	6.3	5.9		20.2			24.1	
Level of Service	A	A		A	A	A		C			C	
Approach Delay (s)		7.6			6.2			20.2			24.1	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM Average Control Delay	9.3	HCM Level of Service	A
HCM Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	72.7	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱		↰	↑↑	↱	↰	↑↑	↱
Volume (vph)	124	216	118	94	162	56	140	876	87	124	816	103
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	9	12	10	10	12	9	10	9	9	10	9
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00	0.97	1.00	1.00	0.96
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.95		1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1560	1505		1563	1585		1493	3069	1337	1523	3099	1318
Flt Permitted	0.45	1.00		0.24	1.00		0.21	1.00	1.00	0.18	1.00	1.00
Satd. Flow (perm)	746	1505		396	1585		323	3069	1337	285	3099	1318
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	131	227	124	99	171	59	147	922	92	131	859	108
RTOR Reduction (vph)	0	23	0	0	15	0	0	0	40	0	0	51
Lane Group Flow (vph)	131	328	0	99	215	0	147	922	52	131	859	57
Confl. Peds. (#/hr)	10		13	13		10	18		7	7		18
Confl. Bikes (#/hr)	2					2	2		1	1		2
Heavy Vehicles (%)	2%	1%	1%	2%	1%	2%	3%	4%	0%	1%	3%	0%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	28.0	21.0		28.0	21.0		42.0	35.0	35.0	42.0	35.0	35.0
Effective Green, g (s)	26.0	22.0		26.0	22.0		40.0	35.0	35.0	40.0	35.0	35.0
Actuated g/C Ratio	0.31	0.26		0.31	0.26		0.47	0.41	0.41	0.47	0.41	0.41
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)	286	390		204	410		235	1264	551	222	1276	543
v/s Ratio Prot	0.03	c0.22		c0.03	0.14		c0.04	c0.30		0.04	0.28	
v/s Ratio Perm	0.11			0.11			0.25		0.04	0.24		0.04
v/c Ratio	0.46	0.84		0.49	0.52		0.63	0.73	0.09	0.59	0.67	0.11
Uniform Delay, d1	22.5	29.8		22.7	27.0		14.6	21.0	15.3	14.7	20.3	15.4
Progression Factor	1.00	1.00		1.00	1.00		0.67	0.82	0.55	1.00	1.00	1.00
Incremental Delay, d2	5.2	19.2		8.0	4.7		10.9	3.4	0.3	11.0	2.9	0.4
Delay (s)	27.7	49.1		30.7	31.8		20.7	20.6	8.7	25.7	23.2	15.8
Level of Service	C	D		C	C		C	C	A	C	C	B
Approach Delay (s)		43.3			31.5			19.7			22.8	
Approach LOS		D			C			B			C	

Intersection Summary			
HCM Average Control Delay	25.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	71.7%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1025: 107th Street & Wentworth Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣			✣	
Volume (vph)	22	179	35	20	173	21	24	141	38	47	251	49
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	14	12	12	14	12	12	16	12	12	16	12
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		0.99			1.00			1.00			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.98			0.99			0.97			0.98	
Flt Protected		1.00			1.00			0.99			0.99	
Satd. Flow (prot)		1838			1849			1938			1974	
Flt Permitted		0.97			0.96			0.94			0.94	
Satd. Flow (perm)		1783			1791			1838			1870	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	23	185	36	21	178	22	25	145	39	48	259	51
RTOR Reduction (vph)	0	9	0	0	6	0	0	13	0	0	9	0
Lane Group Flow (vph)	0	235	0	0	215	0	0	196	0	0	349	0
Confl. Peds. (#/hr)	18		34	34		18	16		19	19		16
Confl. Bikes (#/hr)			6	6			1		4	4		1
Heavy Vehicles (%)	0%	1%	0%	5%	1%	0%	0%	2%	0%	0%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		27.0			27.0			30.0			30.0	
Effective Green, g (s)		27.0			27.0			30.0			30.0	
Actuated g/C Ratio		0.42			0.42			0.46			0.46	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		741			744			848			863	
v/s Ratio Prot												
v/s Ratio Perm		c0.13			0.12			0.11			c0.19	
v/c Ratio		0.32			0.29			0.23			0.40	
Uniform Delay, d1		12.8			12.6			10.5			11.6	
Progression Factor		1.00			0.69			1.18			1.00	
Incremental Delay, d2		1.1			1.0			0.6			1.4	
Delay (s)		13.9			9.7			13.1			13.0	
Level of Service		B			A			B			B	
Approach Delay (s)		13.9			9.7			13.1			13.0	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM Average Control Delay	12.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	52.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

1026: 107th Street & State Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	24	190	38	25	180	19	49	199	31	42	206	38
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	0.97	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.99		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1496	3058		1576	3119		1518	3119		1550	3075	
Flt Permitted	0.61	1.00		0.60	1.00		0.58	1.00		0.59	1.00	
Satd. Flow (perm)	966	3058		987	3119		935	3119		969	3075	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	27	211	42	28	200	21	54	221	34	47	229	42
RTOR Reduction (vph)	0	25	0	0	12	0	0	14	0	0	17	0
Lane Group Flow (vph)	27	228	0	28	209	0	54	241	0	47	254	0
Confl. Peds. (#/hr)	20		17	17		20	2					2
Confl. Bikes (#/hr)	32		36	36		32	22		25	25		22
Heavy Vehicles (%)	4%	1%	0%	0%	0%	0%	5%	0%	0%	3%	1%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.0	20.0		20.0	20.0		39.0	39.0		39.0	39.0	
Effective Green, g (s)	19.0	19.0		19.0	19.0		38.0	38.0		38.0	38.0	
Actuated g/C Ratio	0.29	0.29		0.29	0.29		0.58	0.58		0.58	0.58	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	282	894		289	912		547	1823		566	1798	
v/s Ratio Prot		c0.07			0.07			0.08			c0.08	
v/s Ratio Perm	0.03			0.03			0.06			0.05		
v/c Ratio	0.10	0.25		0.10	0.23		0.10	0.13		0.08	0.14	
Uniform Delay, d1	16.7	17.6		16.8	17.4		6.0	6.1		5.9	6.1	
Progression Factor	0.93	0.96		0.76	0.76		1.32	1.33		0.40	0.36	
Incremental Delay, d2	0.7	0.7		0.7	0.6		0.3	0.1		0.3	0.2	
Delay (s)	16.3	17.6		13.4	13.8		8.2	8.2		2.6	2.3	
Level of Service	B	B		B	B		A	A		A	A	
Approach Delay (s)		17.4			13.8			8.2			2.4	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	10.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.18		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	46.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1027: 107th Street & Michigan Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			↰↑↱			↰↑↱	
Volume (vph)	66	165	40	24	153	37	27	245	16	40	321	33
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	9	9	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	
Flpb, ped/bikes	0.99	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.97		1.00	0.97			0.99			0.99	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1555	3060		1525	2936			1922			1938	
Flt Permitted	0.62	1.00		0.61	1.00			0.94			0.94	
Satd. Flow (perm)	1014	3060		979	2936			1822			1840	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	73	183	44	27	170	41	30	272	18	44	357	37
RTOR Reduction (vph)	0	26	0	0	25	0	0	3	0	0	5	0
Lane Group Flow (vph)	73	201	0	27	186	0	0	317	0	0	433	0
Confl. Peds. (#/hr)	11		17	17		11	26		7	7		26
Heavy Vehicles (%)	2%	1%	0%	0%	1%	3%	4%	5%	0%	0%	4%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	26.0	26.0		26.0	26.0			31.0			31.0	
Effective Green, g (s)	26.0	26.0		26.0	26.0			31.0			31.0	
Actuated g/C Ratio	0.40	0.40		0.40	0.40			0.48			0.48	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	406	1224		392	1174			869			878	
v/s Ratio Prot		0.07			0.06							
v/s Ratio Perm	c0.07			0.03				0.17			c0.24	
v/c Ratio	0.18	0.16		0.07	0.16			0.36			0.49	
Uniform Delay, d1	12.6	12.5		12.0	12.5			10.8			11.6	
Progression Factor	1.05	0.99		0.77	0.76			0.98			1.00	
Incremental Delay, d2	1.0	0.3		0.3	0.3			1.2			2.0	
Delay (s)	14.2	12.7		9.6	9.8			11.8			13.6	
Level of Service	B	B		A	A			B			B	
Approach Delay (s)		13.0			9.8			11.8			13.6	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM Average Control Delay	12.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	57.4%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1028: 107th Street & Martin Luther King Jr Drive

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Lane Configurations	↰	↱		↰	↱			✥			✥	
Volume (vph)	47	111	28	19	153	26	40	230	11	33	360	57
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	16	12	10	16	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	
Flpb, ped/bikes	1.00	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.97		1.00	0.98			0.99			0.98	
Flt Protected	0.95	1.00		0.95	1.00			0.99			1.00	
Satd. Flow (prot)	1652	1970		1584	1975			1981			1979	
Flt Permitted	0.58	1.00		0.65	1.00			0.90			0.96	
Satd. Flow (perm)	1013	1970		1087	1975			1800			1912	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	52	123	31	21	170	29	44	256	12	37	400	63
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	52	154	0	21	199	0	0	312	0	0	500	0
Confl. Peds. (#/hr)	1		10	10		1	2		5	5		2
Heavy Vehicles (%)	0%	0%	0%	0%	1%	0%	0%	2%	0%	0%	1%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.0	20.0		20.0	20.0			37.0			37.0	
Effective Green, g (s)	20.0	20.0		20.0	20.0			37.0			37.0	
Actuated g/C Ratio	0.31	0.31		0.31	0.31			0.57			0.57	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	312	606		334	608			1025			1088	
v/s Ratio Prot		0.08			c0.10							
v/s Ratio Perm	0.05			0.02				0.17			c0.26	
v/c Ratio	0.17	0.25		0.06	0.33			0.30			0.46	
Uniform Delay, d1	16.4	16.9		15.9	17.3			7.3			8.2	
Progression Factor	0.82	0.81		0.93	0.93			0.98			1.00	
Incremental Delay, d2	1.1	1.0		0.4	1.4			0.8			1.4	
Delay (s)	14.7	14.6		15.1	17.5			7.9			9.6	
Level of Service	B	B		B	B			A			A	
Approach Delay (s)		14.6			17.3			7.9			9.6	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	11.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

1029: 107th Street & Cottage Grove Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱		↰	↑	↱	↰	↑	↱
Volume (vph)	51	12	92	2	5	10	59	223	5	5	442	72
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	10	10	10	11	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.98		1.00	0.98		1.00	1.00	1.00	1.00	1.00	0.98
Flpb, ped/bikes	0.99	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.87		1.00	0.90		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1695	1726		1702	1808		1594	1647	1428	1653	2000	1496
Flt Permitted	0.75	1.00		0.68	1.00		0.41	1.00	1.00	0.60	1.00	1.00
Satd. Flow (perm)	1332	1726		1224	1808		693	1647	1428	1049	2000	1496
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	57	13	102	2	6	11	66	248	6	6	491	80
RTOR Reduction (vph)	0	74	0	0	8	0	0	0	2	0	0	28
Lane Group Flow (vph)	57	41	0	2	9	0	66	248	4	6	491	52
Confl. Peds. (#/hr)	5		5	5		5	3					3
Heavy Vehicles (%)	0%	0%	1%	0%	0%	0%	0%	2%	0%	0%	2%	0%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	17.0	17.0		17.0	17.0		39.0	39.0	39.0	39.0	39.0	39.0
Effective Green, g (s)	18.0	18.0		18.0	18.0		39.0	39.0	39.0	39.0	39.0	39.0
Actuated g/C Ratio	0.28	0.28		0.28	0.28		0.60	0.60	0.60	0.60	0.60	0.60
Clearance Time (s)	5.0	5.0		5.0	5.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	369	478		339	501		416	988	857	629	1200	898
v/s Ratio Prot		0.02			0.01			0.15			c0.25	
v/s Ratio Perm	c0.04			0.00			0.10		0.00	0.01		0.04
v/c Ratio	0.15	0.09		0.01	0.02		0.16	0.25	0.00	0.01	0.41	0.06
Uniform Delay, d1	17.8	17.4		17.0	17.1		5.7	6.1	5.2	5.2	6.9	5.4
Progression Factor	1.41	2.82		1.00	1.00		0.80	0.75	0.92	1.00	1.00	1.00
Incremental Delay, d2	0.9	0.3		0.0	0.1		0.6	0.5	0.0	0.0	1.0	0.1
Delay (s)	25.9	49.5		17.1	17.1		5.2	5.1	4.8	5.3	7.9	5.5
Level of Service	C	D		B	B		A	A	A	A	A	A
Approach Delay (s)		41.7			17.1			5.1			7.6	
Approach LOS		D			B			A			A	

Intersection Summary			
HCM Average Control Delay	12.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	51.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1030: 111th Street & Marshield Avenue

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Lane Configurations		↑↱		↰	↑↑					↰	↑↱	
Volume (vph)	0	253	163	177	203	0	0	0	0	110	470	377
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	12	12	12	12	12	11	11	12
Total Lost time (s)		4.0		3.0	3.0					5.0	5.0	
Lane Util. Factor		0.95		1.00	0.95					1.00	0.95	
Frpb, ped/bikes		0.99		1.00	1.00					1.00	0.99	
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	
Frt		0.94		1.00	1.00					1.00	0.93	
Flt Protected		1.00		0.95	1.00					0.95	1.00	
Satd. Flow (prot)		2905		1693	3288					1503	3021	
Flt Permitted		1.00		0.41	1.00					0.95	1.00	
Satd. Flow (perm)		2905		722	3288					1503	3021	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	266	172	186	214	0	0	0	0	116	495	397
RTOR Reduction (vph)	0	103	0	0	0	0	0	0	0	0	141	0
Lane Group Flow (vph)	0	335	0	186	214	0	0	0	0	116	751	0
Confl. Peds. (#/hr)	18		3	3		18	1					1
Heavy Vehicles (%)	0%	4%	1%	1%	4%	0%	0%	0%	0%	10%	2%	1%
Turn Type				D.P+P						Split		
Protected Phases		8		7	7 8					6	6	
Permitted Phases				8								
Actuated Green, G (s)		33.0		53.0	56.0					37.0	37.0	
Effective Green, g (s)		33.0		53.0	56.0					37.0	37.0	
Actuated g/C Ratio		0.32		0.52	0.55					0.36	0.36	
Clearance Time (s)		4.0		3.0						5.0	5.0	
Lane Grp Cap (vph)		940		566	1805					545	1096	
v/s Ratio Prot		c0.12		c0.06	0.07					0.08	c0.25	
v/s Ratio Perm				0.11								
v/c Ratio		0.36		0.33	0.12					0.21	0.68	
Uniform Delay, d1		26.4		13.5	11.1					22.4	27.6	
Progression Factor		1.00		2.22	2.15					1.00	1.00	
Incremental Delay, d2		1.1		1.4	0.1					0.9	3.5	
Delay (s)		27.4		31.2	23.9					23.3	31.0	
Level of Service		C		C	C					C	C	
Approach Delay (s)		27.4			27.3			0.0			30.2	
Approach LOS		C			C			A			C	

Intersection Summary			
HCM Average Control Delay	28.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	102.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	61.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1031: 111th Street & Hamlet Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑			↑↱		↰	↑	↱			
Volume (vph)	141	222	0	0	307	113	73	511	221	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	9	12	13	12	13	12	12	12
Total Lost time (s)	4.0	4.0			4.0		5.0	5.0	5.0			
Lane Util. Factor	1.00	0.95			0.95		1.00	1.00	1.00			
Frpb, ped/bikes	1.00	1.00			0.99		1.00	1.00	0.99			
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.96		1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1674	3196			2850		1767	1782	1560			
Flt Permitted	0.36	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	629	3196			2850		1767	1782	1560			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	148	234	0	0	323	119	77	538	233	0	0	0
RTOR Reduction (vph)	0	0	0	0	37	0	0	0	164	0	0	0
Lane Group Flow (vph)	148	234	0	0	405	0	77	538	69	0	0	0
Confl. Peds. (#/hr)	9		13	13		9			1	1		
Confl. Bikes (#/hr)	3					3						
Heavy Vehicles (%)	2%	7%	0%	0%	3%	1%	0%	1%	0%	0%	0%	0%
Turn Type	pm+pt						custom		Perm			
Protected Phases	4	1 4			1		2	2				
Permitted Phases	1 4						2		2			
Actuated Green, G (s)	59.0	63.0			26.0		30.0	30.0	30.0			
Effective Green, g (s)	59.0	63.0			26.0		30.0	30.0	30.0			
Actuated g/C Ratio	0.58	0.62			0.25		0.29	0.29	0.29			
Clearance Time (s)	4.0				4.0		5.0	5.0	5.0			
Lane Grp Cap (vph)	702	1974			726		520	524	459			
v/s Ratio Prot	c0.07	0.07			c0.14		0.04	c0.30				
v/s Ratio Perm	0.05								0.04			
v/c Ratio	0.21	0.12			0.56		0.15	1.03	0.15			
Uniform Delay, d1	10.3	8.0			33.0		26.6	36.0	26.6			
Progression Factor	0.42	0.43			1.00		1.00	1.00	1.00			
Incremental Delay, d2	0.7	0.1			3.1		0.6	46.3	0.7			
Delay (s)	4.9	3.6			36.1		27.2	82.3	27.3			
Level of Service	A	A			D		C	F	C			
Approach Delay (s)		4.1			36.1			62.2			0.0	
Approach LOS		A			D			E			A	

Intersection Summary			
HCM Average Control Delay	42.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	102.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	61.0%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1032: 112th Place & Marshield Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱		↰	↑↑					↰	↑↑	↱
Volume (vph)	0	488	455	77	507	0	0	0	0	11	434	285
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	11	12	12	12	12	10	10	12
Total Lost time (s)		4.0		4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.95		1.00	0.95					1.00	0.95	1.00
Frpb, ped/bikes		0.99		1.00	1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Frt		0.93		1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00					0.95	1.00	1.00
Satd. Flow (prot)		3098		1710	3306					1596	3192	1530
Flt Permitted		1.00		0.12	1.00					0.95	1.00	1.00
Satd. Flow (perm)		3098		207	3306					1596	3192	1530
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	0	508	474	80	528	0	0	0	0	11	452	297
RTOR Reduction (vph)	0	169	0	0	0	0	0	0	0	0	0	196
Lane Group Flow (vph)	0	813	0	80	528	0	0	0	0	11	452	101
Confl. Peds. (#/hr)	8		8	8		8	3					3
Confl. Bikes (#/hr)	9					9			61	61		
Heavy Vehicles (%)	0%	1%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type				pm+pt						Split		Prot
Protected Phases		8		7	7 8					6	6	6
Permitted Phases				7 8								
Actuated Green, G (s)		36.0		54.0	58.0					34.0	34.0	34.0
Effective Green, g (s)		36.0		54.0	58.0					34.0	34.0	34.0
Actuated g/C Ratio		0.36		0.54	0.58					0.34	0.34	0.34
Clearance Time (s)		4.0		4.0						4.0	4.0	4.0
Lane Grp Cap (vph)		1115		382	1917					543	1085	520
v/s Ratio Prot		c0.26		0.04	c0.16					0.01	c0.14	0.07
v/s Ratio Perm				0.08								
v/c Ratio		0.73		0.21	0.28					0.02	0.42	0.19
Uniform Delay, d1		27.8		13.9	10.5					21.9	25.4	23.3
Progression Factor		1.00		1.01	1.19					1.00	1.00	1.00
Incremental Delay, d2		4.2		0.9	0.3					0.1	1.2	0.8
Delay (s)		32.0		15.0	12.8					22.0	26.6	24.2
Level of Service		C		B	B					C	C	C
Approach Delay (s)		32.0			13.1			0.0			25.5	
Approach LOS		C			B			A			C	

Intersection Summary			
HCM Average Control Delay	25.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	89.6%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1033: 112th Place & Hamlet Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↰↑			↑↱		↰	↰	↱			
Volume (vph)	398	101	0	0	142	6	441	456	55	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	12	12	12	10	12	11	11	12	12	12	12
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0	4.0			
Lane Util. Factor	0.91	0.91			0.95		0.95	0.95	1.00			
Frpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.99		1.00	1.00	0.85			
Flt Protected	0.95	0.97			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1469	3110			3168		1555	1653	1530			
Flt Permitted	0.66	0.72			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	1014	2315			3168		1555	1653	1530			
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	410	104	0	0	146	6	455	470	57	0	0	0
RTOR Reduction (vph)	0	0	0	0	3	0	0	0	36	0	0	0
Lane Group Flow (vph)	205	309	0	0	149	0	455	470	21	0	0	0
Confl. Peds. (#/hr)	13		6	6		13			8	8		
Confl. Bikes (#/hr)	1					1			2	2		
Heavy Vehicles (%)	2%	1%	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%
Turn Type	pm+pt						custom		custom			
Protected Phases	4	1 4			1		2	2	2			
Permitted Phases	1 4						2		2			
Actuated Green, G (s)	51.0	51.0			15.0		37.0	37.0	37.0			
Effective Green, g (s)	51.0	51.0			15.0		37.0	37.0	37.0			
Actuated g/C Ratio	0.51	0.51			0.15		0.37	0.37	0.37			
Clearance Time (s)	4.0				4.0		4.0	4.0	4.0			
Lane Grp Cap (vph)	681	1467			475		575	612	566			
v/s Ratio Prot	c0.11	0.08			c0.05		c0.29	0.28	0.01			
v/s Ratio Perm	0.05	0.03										
v/c Ratio	0.30	0.21			0.31		0.79	0.77	0.04			
Uniform Delay, d1	14.0	13.4			37.9		28.1	27.7	20.1			
Progression Factor	0.25	0.26			1.00		1.00	1.00	1.00			
Incremental Delay, d2	0.7	0.2			1.7		10.7	9.0	0.1			
Delay (s)	4.3	3.8			39.6		38.7	36.7	20.2			
Level of Service	A	A			D		D	D	C			
Approach Delay (s)		4.0			39.6			36.7			0.0	
Approach LOS		A			D			D			A	

Intersection Summary			
HCM Average Control Delay	26.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	89.6%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1034: 111th Street & Halsted Street

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱		↰	↑↑	↱	↰	↑↑	↱
Volume (vph)	78	219	102	149	263	117	80	663	83	101	875	64
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	9	10	9	9	10	9
Total Lost time (s)		4.0			4.0		4.0	3.5	4.0	4.0	3.5	4.0
Lane Util. Factor		0.95			0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		0.99			0.99		1.00	1.00	0.97	1.00	1.00	0.96
Flpb, ped/bikes		1.00			1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.96			0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.99			0.99		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		2940			2929		1508	3069	1309	1508	3099	1298
Flt Permitted		0.73			0.72		0.16	1.00	1.00	0.27	1.00	1.00
Satd. Flow (perm)		2159			2151		261	3069	1309	433	3099	1298
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	81	228	106	155	274	122	83	691	86	105	911	67
RTOR Reduction (vph)	0	40	0	0	31	0	0	0	53	0	0	33
Lane Group Flow (vph)	0	375	0	0	520	0	83	691	33	105	911	34
Confl. Peds. (#/hr)	35		30	30		35	34		8	8		34
Confl. Bikes (#/hr)	1					1	1					1
Heavy Vehicles (%)	1%	4%	0%	1%	3%	3%	2%	4%	2%	2%	3%	2%
Turn Type	pm+pt			Perm			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)		35.0			27.0		38.0	33.0	33.0	38.0	33.0	33.0
Effective Green, g (s)		36.0			28.0		36.0	33.5	33.0	36.0	33.5	33.0
Actuated g/C Ratio		0.42			0.33		0.42	0.39	0.39	0.42	0.39	0.39
Clearance Time (s)		5.0			5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)		970			709		169	1210	508	234	1221	504
v/s Ratio Prot		c0.03					c0.02	0.23		0.02	c0.29	
v/s Ratio Perm		0.14			c0.24		0.18		0.03	0.17		0.03
v/c Ratio		0.39			0.73		0.49	0.57	0.07	0.45	0.75	0.07
Uniform Delay, d1		16.9			25.2		16.6	20.1	16.3	15.8	22.1	16.3
Progression Factor		1.00			1.00		1.31	0.68	0.54	1.11	1.17	1.77
Incremental Delay, d2		1.2			6.6		9.3	1.8	0.2	4.5	3.1	0.2
Delay (s)		18.0			31.8		30.9	15.6	9.1	22.0	28.9	29.2
Level of Service		B			C		C	B	A	C	C	C
Approach Delay (s)		18.0			31.8			16.5			28.3	
Approach LOS		B			C			B			C	

Intersection Summary			
HCM Average Control Delay	24.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	73.7%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1035: 111th Street & Normal Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰			↱			✥				
Volume (vph)	76	327	0	0	410	85	52	43	33	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		1.00			0.98			0.97				
Flt Protected		0.99			1.00			0.98				
Satd. Flow (prot)		1731			1707			1653				
Flt Permitted		0.84			1.00			0.98				
Satd. Flow (perm)		1462			1707			1653				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	84	363	0	0	456	94	58	48	37	0	0	0
RTOR Reduction (vph)	0	0	0	0	11	0	0	19	0	0	0	0
Lane Group Flow (vph)	0	447	0	0	539	0	0	124	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)		38.0			38.0			19.0				
Effective Green, g (s)		38.0			38.0			19.0				
Actuated g/C Ratio		0.58			0.58			0.29				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		855			998			483				
v/s Ratio Prot					c0.32							
v/s Ratio Perm		0.31						0.07				
v/c Ratio		0.52			0.54			0.26				
Uniform Delay, d1		8.1			8.2			17.6				
Progression Factor		1.00			0.72			1.00				
Incremental Delay, d2		2.3			1.9			1.3				
Delay (s)		10.4			7.8			18.9				
Level of Service		B			A			B				
Approach Delay (s)		10.4			7.8			18.9			0.0	
Approach LOS		B			A			B			A	

Intersection Summary			
HCM Average Control Delay	10.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	68.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1036: 111th Street & Wentworth Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			↰↑↑↱			↰↑↑↱	
Volume (vph)	21	384	39	37	356	48	30	112	37	52	148	43
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	10	12	12	10	12
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		1.00			1.00			0.99			0.98	
Flpb, ped/bikes		1.00			1.00			0.99			1.00	
Frt		0.99			0.99			0.97			0.97	
Flt Protected		1.00			1.00			0.99			0.99	
Satd. Flow (prot)		1955			1941			2968			2983	
Flt Permitted		0.97			0.94			0.88			0.86	
Satd. Flow (perm)		1901			1828			2648			2598	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	23	427	43	41	396	53	33	124	41	58	164	48
RTOR Reduction (vph)	0	5	0	0	6	0	0	24	0	0	28	0
Lane Group Flow (vph)	0	488	0	0	484	0	0	174	0	0	242	0
Confl. Peds. (#/hr)	32		25	25		32	59		24	24		59
Confl. Bikes (#/hr)	3		2	2		3	4		2	2		4
Heavy Vehicles (%)	0%	3%	0%	3%	3%	0%	0%	0%	7%	4%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		30.0			30.0			27.0			27.0	
Effective Green, g (s)		30.0			30.0			27.0			27.0	
Actuated g/C Ratio		0.46			0.46			0.42			0.42	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		877			844			1100			1079	
v/s Ratio Prot												
v/s Ratio Perm		0.26			c0.26			0.07			c0.09	
v/c Ratio		0.56			0.57			0.16			0.22	
Uniform Delay, d1		12.7			12.8			11.9			12.2	
Progression Factor		0.61			0.41			1.11			0.44	
Incremental Delay, d2		2.4			2.5			0.3			0.5	
Delay (s)		10.1			7.8			13.5			5.8	
Level of Service		B			A			B			A	
Approach Delay (s)		10.1			7.8			13.5			5.8	
Approach LOS		B			A			B			A	

Intersection Summary			
HCM Average Control Delay	9.0	HCM Level of Service	A
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	74.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1037: 111th Street & State Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑↱		↰	↑↑↱		↰	↑↑↱		↰	↑↑↱	
Volume (vph)	51	330	49	78	448	82	45	217	97	79	215	61
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	9	10	10	9	10	10	12	10	10	12
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		0.99	1.00		0.99	1.00		0.99	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.95		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1509	3036		1573	3078		1587	2962		1585	3071	
Flt Permitted	0.33	1.00		0.46	1.00		0.56	1.00		0.54	1.00	
Satd. Flow (perm)	529	3036		760	3078		944	2962		905	3071	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	57	367	54	87	498	91	50	241	108	88	239	68
RTOR Reduction (vph)	0	18	0	0	23	0	0	50	0	0	31	0
Lane Group Flow (vph)	57	403	0	87	566	0	50	299	0	88	276	0
Confl. Peds. (#/hr)	20		31	31		20	16		20	20		16
Confl. Bikes (#/hr)							1		3	3		1
Heavy Vehicles (%)	5%	3%	0%	0%	1%	0%	0%	2%	2%	0%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	22.0	22.0		22.0	22.0		35.0	35.0		35.0	35.0	
Effective Green, g (s)	22.0	22.0		22.0	22.0		35.0	35.0		35.0	35.0	
Actuated g/C Ratio	0.34	0.34		0.34	0.34		0.54	0.54		0.54	0.54	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	179	1028		257	1042		508	1595		487	1654	
v/s Ratio Prot		0.13			c0.18			c0.10			0.09	
v/s Ratio Perm	0.11			0.11			0.05			0.10		
v/c Ratio	0.32	0.39		0.34	0.54		0.10	0.19		0.18	0.17	
Uniform Delay, d1	15.9	16.4		16.1	17.4		7.3	7.7		7.7	7.6	
Progression Factor	0.69	0.67		0.94	0.93		0.95	0.98		1.10	1.10	
Incremental Delay, d2	4.1	1.0		3.5	2.0		0.4	0.3		0.8	0.2	
Delay (s)	15.1	11.9		18.5	18.2		7.3	7.8		9.3	8.6	
Level of Service	B	B		B	B		A	A		A	A	
Approach Delay (s)		12.3			18.3			7.7			8.7	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	12.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	50.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			↰↑↱			↰↑↱	
Volume (vph)	59	348	78	83	399	48	45	226	57	46	279	64
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	9	10	9	9	16	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			0.99			0.98	
Flpb, ped/bikes	0.98	1.00		0.99	1.00			0.99			1.00	
Frt	1.00	0.97		1.00	0.98			0.97			0.98	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1508	3018		1430	3722			3485			3521	
Flt Permitted	0.46	1.00		0.48	1.00			0.86			0.88	
Satd. Flow (perm)	730	3018		715	3722			3031			3122	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	62	366	82	87	420	51	47	238	60	48	294	67
RTOR Reduction (vph)	0	29	0	0	14	0	0	27	0	0	25	0
Lane Group Flow (vph)	62	419	0	87	457	0	0	318	0	0	384	0
Confl. Peds. (#/hr)	38		17	17		38	125		53	53		125
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	0%	3%	0%	7%	2%	0%	0%	6%	10%	2%	5%	5%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	31.0	31.0		31.0	31.0			26.0			26.0	
Effective Green, g (s)	31.0	31.0		31.0	31.0			26.0			26.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48			0.40			0.40	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	348	1439		341	1775			1212			1249	
v/s Ratio Prot		c0.14			0.12							
v/s Ratio Perm	0.08			0.12				0.10			c0.12	
v/c Ratio	0.18	0.29		0.26	0.26			0.26			0.31	
Uniform Delay, d1	9.7	10.3		10.1	10.1			13.1			13.3	
Progression Factor	1.62	1.77		1.11	1.10			0.69			0.73	
Incremental Delay, d2	1.1	0.5		1.6	0.3			0.5			0.6	
Delay (s)	16.8	18.8		12.9	11.5			9.4			10.3	
Level of Service	B	B		B	B			A			B	
Approach Delay (s)		18.5			11.7			9.4			10.3	
Approach LOS		B			B			A			B	

Intersection Summary			
HCM Average Control Delay	12.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	58.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑	↱		↰↑↑↱			↰↑↱			↰↑↱	
Volume (vph)	86	294	92	88	280	88	116	79	45	45	79	115
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	16	12	12	16	12
Total Lost time (s)		5.0	5.0		5.0			5.0			5.0	
Lane Util. Factor		1.00	1.00		0.95			1.00			1.00	
Frt		1.00	0.85		0.97			0.97			0.94	
Flt Protected		0.99	1.00		0.99			0.98			0.99	
Satd. Flow (prot)		1670	1436		3087			1885			1835	
Flt Permitted		0.80	1.00		0.79			0.68			0.91	
Satd. Flow (perm)		1347	1436		2471			1319			1679	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	96	327	102	98	311	98	129	88	50	50	88	128
RTOR Reduction (vph)	0	0	49	0	32	0	0	13	0	0	51	0
Lane Group Flow (vph)	0	423	53	0	475	0	0	254	0	0	215	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm		Perm	Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)		34.0	34.0		34.0			21.0			21.0	
Effective Green, g (s)		34.0	34.0		34.0			21.0			21.0	
Actuated g/C Ratio		0.52	0.52		0.52			0.32			0.32	
Clearance Time (s)		5.0	5.0		5.0			5.0			5.0	
Lane Grp Cap (vph)		705	751		1293			426			542	
v/s Ratio Prot												
v/s Ratio Perm		c0.31	0.04		0.19			c0.19			0.13	
v/c Ratio		0.60	0.07		0.37			0.60			0.40	
Uniform Delay, d1		10.8	7.7		9.2			18.4			17.1	
Progression Factor		1.87	4.77		0.52			1.00			1.00	
Incremental Delay, d2		3.7	0.2		0.8			6.0			2.2	
Delay (s)		23.8	36.8		5.6			24.5			19.2	
Level of Service		C	D		A			C			B	
Approach Delay (s)		26.3			5.6			24.5			19.2	
Approach LOS		C			A			C			B	

Intersection Summary			
HCM Average Control Delay	18.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	78.3%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			↰↑↱			↰↑↱	
Volume (vph)	55	281	28	25	315	58	26	130	46	62	145	63
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	15	8	16	8	8	16	8
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			0.99			1.00	
Flpb, ped/bikes	0.99	1.00		0.98	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.98			0.97			0.96	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1443	3026		1566	3019			3581			3598	
Flt Permitted	0.50	1.00		0.55	1.00			0.90			0.84	
Satd. Flow (perm)	753	3026		899	3019			3234			3071	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	61	312	31	28	350	64	29	144	51	69	161	70
RTOR Reduction (vph)	0	11	0	0	23	0	0	30	0	0	41	0
Lane Group Flow (vph)	61	332	0	28	391	0	0	194	0	0	259	0
Confl. Peds. (#/hr)	24		47	47		24	9		36	36		9
Confl. Bikes (#/hr)			4	4			1					1
Heavy Vehicles (%)	9%	4%	0%	0%	3%	0%	0%	1%	10%	0%	0%	8%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	30.0	30.0		30.0	30.0			27.0			27.0	
Effective Green, g (s)	30.0	30.0		30.0	30.0			27.0			27.0	
Actuated g/C Ratio	0.46	0.46		0.46	0.46			0.42			0.42	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	348	1397		415	1393			1343			1276	
v/s Ratio Prot		0.11			c0.13							
v/s Ratio Perm	0.08			0.03				0.06			c0.08	
v/c Ratio	0.18	0.24		0.07	0.28			0.14			0.20	
Uniform Delay, d1	10.3	10.6		9.7	10.8			11.8			12.1	
Progression Factor	0.66	0.66		0.82	0.65			0.95			0.41	
Incremental Delay, d2	0.9	0.3		0.2	0.2			0.2			0.3	
Delay (s)	7.7	7.3		8.1	7.3			11.4			5.2	
Level of Service	A	A		A	A			B			A	
Approach Delay (s)		7.4			7.4			11.4			5.2	
Approach LOS		A			A			B			A	

Intersection Summary			
HCM Average Control Delay	7.6	HCM Level of Service	A
HCM Volume to Capacity ratio	0.24		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.7%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1041: 111th Street & Cottage Grove Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱			↰↑↱			↰↑↱	
Volume (vph)	47	450	26	83	487	213	23	118	109	323	248	78
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			0.95			0.95	
Frt		0.99			0.96			0.93			0.98	
Flt Protected		1.00			0.99			1.00			0.98	
Satd. Flow (prot)		3281			3168			3089			3181	
Flt Permitted		0.78			0.80			0.91			0.71	
Satd. Flow (perm)		2557			2539			2816			2306	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	52	500	29	92	541	237	26	131	121	359	276	87
RTOR Reduction (vph)	0	6	0	0	60	0	0	65	0	0	16	0
Lane Group Flow (vph)	0	575	0	0	810	0	0	213	0	0	706	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm			pm+pt			Perm		
Protected Phases		4			8		5	2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		25.0			25.0			30.0			17.0	
Effective Green, g (s)		25.0			25.0			30.0			17.0	
Actuated g/C Ratio		0.38			0.38			0.46			0.26	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		983			977			1342			603	
v/s Ratio Prot								c0.02				
v/s Ratio Perm		0.23			c0.32			0.05			c0.31	
v/c Ratio		0.59			0.83			0.16			1.27dl	
Uniform Delay, d1		15.9			18.1			10.2			24.0	
Progression Factor		1.48			1.00			1.00			0.81	
Incremental Delay, d2		2.5			8.1			0.3			93.0	
Delay (s)		26.1			26.2			10.4			112.4	
Level of Service		C			C			B			F	
Approach Delay (s)		26.1			26.2			10.4			112.4	
Approach LOS		C			C			B			F	

Intersection Summary			
HCM Average Control Delay	49.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	83.7%	ICU Level of Service	E
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↑↱			↰↑↑↱			↰↑↱			↰↑↱	
Volume (vph)	0	875	129	46	762	0	79	0	35	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	10	10	12	12	12	12	12	12	12
Total Lost time (s)		5.0			5.0			5.0				
Lane Util. Factor		0.95			0.95			1.00				
Frt		0.98			1.00			0.96				
Flt Protected		1.00			1.00			0.97				
Satd. Flow (prot)		3039			3090			1619				
Flt Permitted		1.00			0.81			0.79				
Satd. Flow (perm)		3039			2507			1329				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	972	143	51	847	0	88	0	39	0	0	0
RTOR Reduction (vph)	0	16	0	0	0	0	0	18	0	0	0	0
Lane Group Flow (vph)	0	1099	0	0	898	0	0	109	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	custom			Perm			Perm			Perm		
Protected Phases		4 5 6 11			8			2			2	
Permitted Phases	4 6 11			8			2			2		
Actuated Green, G (s)		65.0			33.0			16.0				
Effective Green, g (s)		58.0			33.0			16.0				
Actuated g/C Ratio		0.64			0.37			0.18				
Clearance Time (s)					5.0			5.0				
Lane Grp Cap (vph)		1958			919			236				
v/s Ratio Prot		c0.36										
v/s Ratio Perm					c0.36			c0.08				
v/c Ratio		0.56			0.98			0.46				
Uniform Delay, d1		8.9			28.1			33.1				
Progression Factor		0.12			1.42			1.00				
Incremental Delay, d2		0.3			23.6			6.4				
Delay (s)		1.4			63.5			39.5				
Level of Service		A			E			D				
Approach Delay (s)		1.4			63.5			39.5			0.0	
Approach LOS		A			E			D			A	

Intersection Summary			
HCM Average Control Delay	29.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	72.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1043: 111th Street & Doty Road

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↑	↱		✥		↰	↑	↱
Volume (vph)	218	633	24	108	586	178	59	4	103	205	10	206
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	10	12	12	12	12	16	12	12	12	12
Total Lost time (s)	3.0	5.0		3.0	5.0	3.0		5.0		3.0	5.0	3.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	1.00	0.85		0.92		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.98		0.95	1.00	1.00
Satd. Flow (prot)	1550	3192		1660	3320	1485		1783		1660	1748	1485
Flt Permitted	0.31	1.00		0.34	1.00	1.00		0.88		0.44	1.00	1.00
Satd. Flow (perm)	502	3192		593	3320	1485		1591		773	1748	1485
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	242	703	27	120	651	198	66	4	114	228	11	229
RTOR Reduction (vph)	0	2	0	0	0	90	0	89	0	0	0	132
Lane Group Flow (vph)	242	728	0	120	651	108	0	95	0	228	11	97
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	pm+pt			pm+pt		pm+ov	pm+pt			pm+pt		pm+ov
Protected Phases	7	4		3	8	1	5	2		1	6	7
Permitted Phases	4			8		8	2			6		6
Actuated Green, G (s)	55.2	43.0		48.1	38.9	48.9		11.8		24.8	24.8	38.1
Effective Green, g (s)	55.2	43.0		48.1	38.9	48.9		11.8		24.8	24.8	38.1
Actuated g/C Ratio	0.61	0.48		0.53	0.43	0.54		0.13		0.28	0.28	0.42
Clearance Time (s)	3.0	5.0		3.0	5.0	3.0		5.0		3.0	5.0	3.0
Vehicle Extension (s)	4.0	3.0		4.0	3.0	3.0		4.0		3.0	4.0	4.0
Lane Grp Cap (vph)	463	1525		426	1435	807		209		312	482	629
v/s Ratio Prot	c0.08	0.23		0.03	0.20	0.01				c0.08	0.01	0.02
v/s Ratio Perm	c0.24			0.12		0.06		0.06		c0.12		0.04
v/c Ratio	0.52	0.48		0.28	0.45	0.13		0.45		0.73	0.02	0.15
Uniform Delay, d1	8.9	15.9		10.6	18.0	10.1		36.1		28.4	23.8	16.0
Progression Factor	2.61	1.89		1.00	1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2	1.2	0.9		0.5	1.0	0.1		2.1		8.5	0.0	0.2
Delay (s)	24.3	30.9		11.1	19.1	10.2		38.2		36.9	23.8	16.2
Level of Service	C	C		B	B	B		D		D	C	B
Approach Delay (s)		29.3			16.3			38.2			26.4	
Approach LOS		C			B			D			C	

Intersection Summary			
HCM Average Control Delay	24.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	60.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
1044: 111th Street & Bishop Ford Freeway EB Ramps

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↑↑					↰		↱
Volume (veh/h)	0	511	431	2	323	0	0	0	0	18	0	548
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	568	479	2	359	0	0	0	0	20	0	609
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		498										
pX, platoon unblocked												
vC, conflicting volume	359			568			752	931	284	647	931	179
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	359			568			752	931	284	647	931	179
tC, single (s)	4.2			4.2			7.6	6.6	7.0	7.6	6.6	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	100	94	100	27
cM capacity (veh/h)	1189			994			79	263	710	353	263	829

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1	SB 2
Volume Total	284	284	479	122	239	20	609
Volume Left	0	0	0	2	0	20	0
Volume Right	0	0	479	0	0	0	609
cSH	1700	1700	1700	994	1700	353	829
Volume to Capacity	0.17	0.17	0.28	0.00	0.14	0.06	0.73
Queue Length 95th (ft)	0	0	0	0	0	4	167
Control Delay (s)	0.0	0.0	0.0	0.2	0.0	15.8	20.3
Lane LOS				A		C	C
Approach Delay (s)	0.0			0.1		20.2	
Approach LOS						C	

Intersection Summary			
Average Delay	6.2		
Intersection Capacity Utilization	52.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰↰		↰			
Sign Control	Stop			Stop	Stop	
Volume (vph)	529	0	325	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	588	0	361	0	0	0

Direction, Lane #	EB 1	EB 2	NB 1
Volume Total (vph)	294	294	361
Volume Left (vph)	294	294	361
Volume Right (vph)	0	0	0
Hadj (s)	0.55	0.55	0.25
Departure Headway (s)	6.1	6.1	5.6
Degree Utilization, x	0.50	0.50	0.56
Capacity (veh/h)	571	573	620
Control Delay (s)	13.9	13.9	15.3
Approach Delay (s)	13.9		15.3
Approach LOS	B		C

Intersection Summary			
Delay	14.5		
HCM Level of Service	B		
Intersection Capacity Utilization	41.6%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Signalized Intersection Capacity Analysis
1046: 115th Street & Marshield Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱		↰	↑↑						↰↑↱	
Volume (vph)	0	475	64	192	501	0	0	0	0	101	21	58
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	12	12	12	12	12
Total Lost time (s)		3.0		4.0	4.0						5.0	
Lane Util. Factor		0.95		1.00	0.95						0.95	
Frt		0.98		1.00	1.00						0.95	
Flt Protected		1.00		0.95	1.00						0.97	
Satd. Flow (prot)		3153		1605	3210						3074	
Flt Permitted		1.00		0.34	1.00						0.97	
Satd. Flow (perm)		3153		582	3210						3074	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	528	71	213	557	0	0	0	0	112	23	64
RTOR Reduction (vph)	0	12	0	0	0	0	0	0	0	0	44	0
Lane Group Flow (vph)	0	587	0	213	557	0	0	0	0	0	155	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type				pm+pt						Split		
Protected Phases		4		3	8					6	6	
Permitted Phases				8								
Actuated Green, G (s)		36.0		49.0	49.0						27.0	
Effective Green, g (s)		36.0		49.0	49.0						27.0	
Actuated g/C Ratio		0.42		0.58	0.58						0.32	
Clearance Time (s)		3.0		4.0	4.0						5.0	
Lane Grp Cap (vph)		1335		456	1850						976	
v/s Ratio Prot		0.19		c0.05	0.17						c0.05	
v/s Ratio Perm				c0.21								
v/c Ratio		0.44		0.47	0.30						0.16	
Uniform Delay, d1		17.4		15.7	9.2						20.8	
Progression Factor		1.00		0.35	0.19						1.00	
Incremental Delay, d2		1.1		2.8	0.3						0.3	
Delay (s)		18.4		8.3	2.1						21.2	
Level of Service		B		A	A						C	
Approach Delay (s)		18.4			3.8			0.0			21.2	
Approach LOS		B			A			A			C	

Intersection Summary			
HCM Average Control Delay	11.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	44.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑			↑↱			↰↑↱				
Volume (vph)	95	481	0	0	629	124	64	90	59	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	11	11	12	12	12	12	12	12
Total Lost time (s)	5.0	5.0			3.0			5.0				
Lane Util. Factor	1.00	0.95			0.95			0.91				
Frt	1.00	1.00			0.98			0.96				
Flt Protected	0.95	1.00			1.00			0.99				
Satd. Flow (prot)	1660	3320			3130			4504				
Flt Permitted	0.22	1.00			1.00			0.99				
Satd. Flow (perm)	384	3320			3130			4504				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	106	534	0	0	699	138	71	100	66	0	0	0
RTOR Reduction (vph)	0	0	0	0	19	0	0	45	0	0	0	0
Lane Group Flow (vph)	106	534	0	0	818	0	0	192	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	pm+pt						Split					
Protected Phases	7	4			8		2	2				
Permitted Phases	4											
Actuated Green, G (s)	48.0	48.0			35.0			27.0				
Effective Green, g (s)	48.0	48.0			35.0			27.0				
Actuated g/C Ratio	0.56	0.56			0.41			0.32				
Clearance Time (s)	5.0	5.0			3.0			5.0				
Lane Grp Cap (vph)	367	1875			1289			1431				
v/s Ratio Prot	0.03	c0.16			c0.26			c0.04				
v/s Ratio Perm	0.13											
v/c Ratio	0.29	0.28			0.63			0.13				
Uniform Delay, d1	18.1	9.6			19.9			20.7				
Progression Factor	0.42	0.31			1.00			1.00				
Incremental Delay, d2	1.8	0.4			2.4			0.2				
Delay (s)	9.4	3.4			22.3			20.9				
Level of Service	A	A			C			C				
Approach Delay (s)		4.4			22.3			20.9			0.0	
Approach LOS		A			C			C			A	

Intersection Summary			
HCM Average Control Delay	15.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	44.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1048: 115th Street & Racine Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↑↱			↰↑↑↱			↰↑↱			↰↑↱	
Volume (vph)	114	346	114	91	386	81	129	78	30	30	85	141
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	10	12	12	15	12	12	15	12
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			1.00			1.00	
Frt		0.97			0.98			0.98			0.93	
Flt Protected		0.99			0.99			0.97			0.99	
Satd. Flow (prot)		2977			3007			1840			1769	
Flt Permitted		0.66			0.69			0.72			0.95	
Satd. Flow (perm)		1975			2105			1364			1684	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	127	384	127	101	429	90	143	87	33	33	94	157
RTOR Reduction (vph)	0	34	0	0	21	0	0	8	0	0	69	0
Lane Group Flow (vph)	0	604	0	0	599	0	0	255	0	0	215	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		23.0			23.0			32.0			32.0	
Effective Green, g (s)		23.0			23.0			32.0			32.0	
Actuated g/C Ratio		0.35			0.35			0.49			0.49	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		699			745			672			829	
v/s Ratio Prot												
v/s Ratio Perm		c0.31			0.28			c0.19			0.13	
v/c Ratio		0.86			0.80			0.38			0.26	
Uniform Delay, d1		19.6			19.0			10.3			9.6	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		13.5			9.0			1.6			0.8	
Delay (s)		33.0			27.9			11.9			10.4	
Level of Service		C			C			B			B	
Approach Delay (s)		33.0			27.9			11.9			10.4	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM Average Control Delay	24.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	80.3%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1049: 115th Street & Halsted Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↑	↱	↰	↑↑	↱
Volume (vph)	114	201	88	159	311	65	118	514	64	91	908	174
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	12	10	16	12	9	10	9	9	10	9
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00	0.97	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.95		1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1559	2980		1573	3683		1508	3069	1333	1520	3099	1336
Flt Permitted	0.45	1.00		0.53	1.00		0.13	1.00	1.00	0.36	1.00	1.00
Satd. Flow (perm)	739	2980		880	3683		212	3069	1333	573	3099	1336
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	120	212	93	167	327	68	124	541	67	96	956	183
RTOR Reduction (vph)	0	58	0	0	21	0	0	0	43	0	0	116
Lane Group Flow (vph)	120	247	0	167	374	0	124	541	24	96	956	67
Confl. Peds. (#/hr)	19		16	16		19	22		25	25		22
Heavy Vehicles (%)	2%	2%	0%	1%	2%	2%	2%	4%	0%	1%	3%	0%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	32.0	27.0		32.0	27.0		38.0	31.0	31.0	38.0	31.0	31.0
Effective Green, g (s)	30.0	28.0		30.0	28.0		36.0	31.0	31.0	36.0	31.0	31.0
Actuated g/C Ratio	0.35	0.33		0.35	0.33		0.42	0.36	0.36	0.42	0.36	0.36
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)	299	982		343	1213		181	1119	486	310	1130	487
v/s Ratio Prot	0.02	0.08		c0.02	0.10		c0.05	0.18		0.02	c0.31	
v/s Ratio Perm	0.12			c0.15			0.24		0.02	0.11		0.05
v/c Ratio	0.40	0.25		0.49	0.31		0.69	0.48	0.05	0.31	0.85	0.14
Uniform Delay, d1	19.7	20.8		20.7	21.3		17.7	20.8	17.5	15.3	24.8	18.1
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.39	1.05	2.38
Incremental Delay, d2	4.0	0.6		4.9	0.7		19.1	1.5	0.2	1.9	5.8	0.4
Delay (s)	23.7	21.5		25.5	21.9		36.7	22.3	17.7	23.2	31.8	43.4
Level of Service	C	C		C	C		D	C	B	C	C	D
Approach Delay (s)		22.1			23.0			24.3			32.9	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	27.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	69.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1050: 115th Street & Wentworth Avenue

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱		↰	↱		↰	↱
Volume (vph)	49	295	30	33	389	24	31	97	39	36	132	65
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	16	12	12	16	12
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frpb, ped/bikes		1.00	0.96		1.00	0.97		1.00	0.98		1.00	0.99
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frt		1.00	0.85		1.00	0.85		1.00	0.85		1.00	0.85
Flt Protected		0.99	1.00		1.00	1.00		0.99	1.00		0.99	1.00
Satd. Flow (prot)		1962	1466		1993	1480		2015	1506		2002	1511
Flt Permitted		0.90	1.00		0.96	1.00		0.92	1.00		0.93	1.00
Satd. Flow (perm)		1778	1466		1912	1480		1867	1506		1878	1511
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	52	311	32	35	409	25	33	102	41	38	139	68
RTOR Reduction (vph)	0	0	17	0	0	13	0	0	24	0	0	40
Lane Group Flow (vph)	0	363	15	0	444	12	0	135	17	0	177	28
Confl. Peds. (#/hr)	11		20	20		11	1		4	4		1
Confl. Bikes (#/hr)	1		1	1		1			1	1		
Heavy Vehicles (%)	4%	3%	0%	0%	2%	0%	0%	0%	0%	0%	1%	0%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)		30.0	30.0		30.0	30.0		27.0	27.0		27.0	27.0
Effective Green, g (s)		30.0	30.0		30.0	30.0		27.0	27.0		27.0	27.0
Actuated g/C Ratio		0.46	0.46		0.46	0.46		0.42	0.42		0.42	0.42
Clearance Time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		821	677		882	683		776	626		780	628
v/s Ratio Prot												
v/s Ratio Perm		0.20	0.01		c0.23	0.01		0.07	0.01		c0.09	0.02
v/c Ratio		0.44	0.02		0.50	0.02		0.17	0.03		0.23	0.04
Uniform Delay, d1		11.8	9.5		12.3	9.5		12.0	11.2		12.3	11.3
Progression Factor		1.00	1.00		0.54	0.40		1.04	1.19		1.05	0.97
Incremental Delay, d2		1.7	0.1		2.0	0.0		0.5	0.1		0.6	0.1
Delay (s)		13.6	9.6		8.6	3.9		12.9	13.5		13.5	11.1
Level of Service		B	A		A	A		B	B		B	B
Approach Delay (s)		13.2			8.4			13.0			12.8	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM Average Control Delay	11.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	82.8%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1051: 115th Street & State Street

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	75	317	20	51	297	51	10	107	23	109	203	62
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	0.98		1.00	0.97		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1550	3072		1550	3031		1550	3016		1550	2990	
Flt Permitted	0.95	1.00		0.53	1.00		0.56	1.00		0.66	1.00	
Satd. Flow (perm)	1550	3072		864	3031		912	3016		1077	2990	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	83	352	22	57	330	57	11	119	26	121	226	69
RTOR Reduction (vph)	0	7	0	0	21	0	0	15	0	0	40	0
Lane Group Flow (vph)	83	367	0	57	366	0	11	130	0	121	255	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Prot			Perm			Perm			Perm		
Protected Phases	7	4			8			2			6	
Permitted Phases				8			2			6		
Actuated Green, G (s)	7.0	32.0		22.0	22.0		27.0	27.0		27.0	27.0	
Effective Green, g (s)	7.0	32.0		22.0	22.0		27.0	27.0		27.0	27.0	
Actuated g/C Ratio	0.11	0.49		0.34	0.34		0.42	0.42		0.42	0.42	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	167	1512		292	1026		379	1253		447	1242	
v/s Ratio Prot	c0.05	0.12			c0.12			0.04			0.09	
v/s Ratio Perm				0.07			0.01			c0.11		
v/c Ratio	0.50	0.24		0.20	0.36		0.03	0.10		0.27	0.21	
Uniform Delay, d1	27.3	9.5		15.2	16.2		11.2	11.6		12.5	12.1	
Progression Factor	0.93	0.55		0.83	0.83		0.87	0.86		1.14	1.14	
Incremental Delay, d2	9.8	0.4		1.4	0.9		0.0	0.0		1.5	0.4	
Delay (s)	35.2	5.6		14.0	14.4		9.8	10.0		15.7	14.2	
Level of Service	D	A		B	B		A	A		B	B	
Approach Delay (s)		11.0			14.3			10.0			14.6	
Approach LOS		B			B			A			B	

Intersection Summary			
HCM Average Control Delay	12.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	39.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1052: 115th Street & Michigan Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			↰↱			↰↱	
Volume (vph)	63	263	87	239	320	61	104	295	189	55	282	50
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	12	12	12	12	12	12
Total Lost time (s)	4.0	4.0		3.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frt	1.00	0.96		1.00	0.98			0.95			0.98	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1550	2983		1550	3024			3133			3233	
Flt Permitted	0.50	1.00		0.95	1.00			0.79			0.81	
Satd. Flow (perm)	823	2983		1550	3024			2496			2628	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	70	292	97	266	356	68	116	328	210	61	313	56
RTOR Reduction (vph)	0	50	0	0	24	0	0	87	0	0	18	0
Lane Group Flow (vph)	70	339	0	266	400	0	0	567	0	0	412	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Prot			Perm			Perm		
Protected Phases		4		3	8			2			6	
Permitted Phases	4						2			6		
Actuated Green, G (s)	20.0	20.0		6.0	29.0			25.0			25.0	
Effective Green, g (s)	20.0	20.0		6.0	29.0			25.0			25.0	
Actuated g/C Ratio	0.31	0.31		0.09	0.45			0.38			0.38	
Clearance Time (s)	4.0	4.0		3.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	253	918		143	1349			960			1011	
v/s Ratio Prot		c0.11		c0.17	0.13							
v/s Ratio Perm	0.09							c0.23			0.16	
v/c Ratio	0.28	0.37		1.86	0.30			0.59			0.41	
Uniform Delay, d1	17.0	17.6		29.5	11.5			15.9			14.6	
Progression Factor	0.65	0.59		1.28	1.17			1.23			0.70	
Incremental Delay, d2	2.7	1.1		399.5	0.3			2.4			1.2	
Delay (s)	13.7	11.6		437.2	13.7			21.9			11.5	
Level of Service	B	B		F	B			C			B	
Approach Delay (s)		11.9			176.9			21.9			11.5	
Approach LOS		B			F			C			B	

Intersection Summary			
HCM Average Control Delay	65.8	HCM Level of Service	E
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	67.7%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			↰↑↱				
Volume (vph)	26	454	16	73	627	73	54	108	162	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	12	14	12	10	15	10
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			0.95				
Frt		1.00			0.99			0.93				
Flt Protected		1.00			1.00			0.99				
Satd. Flow (prot)		1620			1603			3249				
Flt Permitted		0.94			0.91			0.99				
Satd. Flow (perm)		1532			1466			3249				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	29	504	18	81	697	81	60	120	180	0	0	0
RTOR Reduction (vph)	0	1	0	0	5	0	0	137	0	0	0	0
Lane Group Flow (vph)	0	550	0	0	854	0	0	223	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm			Perm					
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Actuated Green, G (s)		41.5			41.5			15.5				
Effective Green, g (s)		41.5			41.5			15.5				
Actuated g/C Ratio		0.64			0.64			0.24				
Clearance Time (s)		4.0			4.0			4.0				
Vehicle Extension (s)		3.0			3.0			8.0				
Lane Grp Cap (vph)		978			936			775				
v/s Ratio Prot												
v/s Ratio Perm		0.36			c0.58			0.07				
v/c Ratio		0.56			0.91			0.29				
Uniform Delay, d1		6.6			10.2			20.2				
Progression Factor		1.29			1.00			1.00				
Incremental Delay, d2		2.1			14.6			0.9				
Delay (s)		10.6			24.8			21.1				
Level of Service		B			C			C				
Approach Delay (s)		10.6			24.8			21.1			0.0	
Approach LOS		B			C			C			A	

Intersection Summary			
HCM Average Control Delay	19.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	83.2%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰	↱		↰	↱
Volume (veh/h)	142	463	592	38	117	174
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	149	487	623	40	123	183
Pedestrians		5	6		17	
Lane Width (ft)		16.0	16.0		10.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		1	1		1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		1319	491			
pX, platoon unblocked	0.84				0.84	0.84
vC, conflicting volume	680				1452	665
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	520				1443	502
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	82				0	61
cM capacity (veh/h)	852				100	471

Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total	637	663	123	183
Volume Left	149	0	123	0
Volume Right	0	40	0	183
cSH	852	1700	100	471
Volume to Capacity	0.18	0.39	1.24	0.39
Queue Length 95th (ft)	16	0	211	45
Control Delay (s)	4.3	0.0	246.0	17.4
Lane LOS	A		F	C
Approach Delay (s)	4.3	0.0	109.3	
Approach LOS			F	

Intersection Summary			
Average Delay	22.5		
Intersection Capacity Utilization	87.3%	ICU Level of Service	E
Analysis Period (min)	15		

HCM Signalized Intersection Capacity Analysis
1055: 115th Street & Cottage Grove Avenue

1/14/2013

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↱			↰	Y	
Volume (vph)	684	0	1	601	3	29
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0			4.0	4.0	
Lane Util. Factor	1.00			1.00	1.00	
Frt	1.00			1.00	0.88	
Flt Protected	1.00			1.00	1.00	
Satd. Flow (prot)	1748			1747	1525	
Flt Permitted	1.00			1.00	1.00	
Satd. Flow (perm)	1748			1747	1525	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	760	0	1	668	3	32
RTOR Reduction (vph)	0	0	0	0	27	0
Lane Group Flow (vph)	760	0	0	669	8	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type			Perm			
Protected Phases	1 2 4			4	3	
Permitted Phases			4			
Actuated Green, G (s)	63.0			31.0	14.0	
Effective Green, g (s)	59.0			31.0	14.0	
Actuated g/C Ratio	0.69			0.36	0.16	
Clearance Time (s)				4.0	4.0	
Lane Grp Cap (vph)	1213			637	251	
v/s Ratio Prot	c0.43				c0.01	
v/s Ratio Perm				0.38		
v/c Ratio	0.63			1.05	0.03	
Uniform Delay, d1	7.0			27.0	29.8	
Progression Factor	0.10			1.00	1.00	
Incremental Delay, d2	0.2			49.6	0.2	
Delay (s)	0.9			76.6	30.1	
Level of Service	A			E	C	
Approach Delay (s)	0.9			76.6	30.1	
Approach LOS	A			E	C	

Intersection Summary			
HCM Average Control Delay	36.2	HCM Level of Service	D
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	48.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
1056: 115th Street & Bishop Ford Fwy

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Lane Configurations		↑↱			↰↑						↰↑	↱
Volume (veh/h)	0	236	594	30	386	0	0	0	0	17	6	243
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	262	660	33	429	0	0	0	0	19	7	270
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	429			262			1091	1088	461	627	758	429
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	429			262			1091	1088	461	627	758	429
tC, single (s)	4.1			4.2			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			97			100	100	100	95	98	53
cM capacity (veh/h)	1141			1285			88	212	553	365	330	574

Direction, Lane #	EB 1	EB 2	WB 1	SB 1	SB 2
Volume Total	175	747	462	26	270
Volume Left	0	0	33	19	0
Volume Right	0	660	0	0	270
cSH	1700	1700	1285	355	574
Volume to Capacity	0.10	0.44	0.03	0.07	0.47
Queue Length 95th (ft)	0	0	2	6	62
Control Delay (s)	0.0	0.0	0.8	15.9	16.7
Lane LOS			A	C	C
Approach Delay (s)	0.0		0.8	16.6	
Approach LOS				C	

Intersection Summary			
Average Delay	3.2		
Intersection Capacity Utilization	57.6%	ICU Level of Service	B
Analysis Period (min)	15		

	↗	↘	↖	↑	↓	↙
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰↰		↰			
Sign Control	Stop			Stop	Stop	
Volume (vph)	253	0	417	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	281	0	463	0	0	0

Direction, Lane #	EB 1	EB 2	NB 1
Volume Total (vph)	141	141	463
Volume Left (vph)	141	141	463
Volume Right (vph)	0	0	0
Hadj (s)	0.55	0.55	0.25
Departure Headway (s)	6.3	6.3	5.0
Degree Utilization, x	0.25	0.25	0.64
Capacity (veh/h)	543	544	702
Control Delay (s)	10.1	10.1	16.3
Approach Delay (s)	10.1		16.3
Approach LOS	B		C

Intersection Summary			
Delay	14.0		
HCM Level of Service	B		
Intersection Capacity Utilization	38.7%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Signalized Intersection Capacity Analysis
1058: 119th Street & Marshield Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↰↑					↰	↰↑↱	↱
Volume (vph)	0	522	337	303	746	0	0	0	0	281	269	372
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	12	13	12	12	12	12	10	10	11
Total Lost time (s)		6.0	6.0		6.0					6.0	6.0	6.0
Lane Util. Factor		0.95	1.00		0.95					0.86	0.81	0.86
Frpb, ped/bikes		1.00	0.98		1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00					1.00	1.00	1.00
Frt		1.00	0.85		1.00					1.00	0.95	0.85
Flt Protected		1.00	1.00		0.99					0.95	0.99	1.00
Satd. Flow (prot)		3179	1232		3425					1359	3806	1133
Flt Permitted		1.00	1.00		0.99					0.95	0.99	1.00
Satd. Flow (perm)		3179	1232		3425					1359	3806	1133
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	549	355	319	785	0	0	0	0	296	283	392
RTOR Reduction (vph)	0	0	216	0	0	0	0	0	0	0	53	113
Lane Group Flow (vph)	0	549	139	0	1104	0	0	0	0	163	559	83
Confl. Peds. (#/hr)	4		6	6		4						
Heavy Vehicles (%)	0%	4%	6%	1%	2%	0%	0%	0%	0%	1%	1%	1%
Parking (#/hr)			0									0
Turn Type			Perm	Split						Split		custom
Protected Phases		2		10 12 14	10 12 14					4	4	
Permitted Phases			2									4 2
Actuated Green, G (s)		39.0	39.0		67.6					23.0	23.0	68.0
Effective Green, g (s)		39.0	39.0		67.6					23.0	23.0	68.0
Actuated g/C Ratio		0.24	0.24		0.42					0.14	0.14	0.42
Clearance Time (s)		6.0	6.0							6.0	6.0	
Vehicle Extension (s)		3.0	3.0							3.0	3.0	
Lane Grp Cap (vph)		775	300		1447					195	547	482
v/s Ratio Prot		c0.17			c0.32					0.12	c0.15	
v/s Ratio Perm			0.11									0.07
v/c Ratio		0.71	0.46		0.76					0.84	1.02	0.17
Uniform Delay, d1		55.3	51.6		39.4					66.7	68.5	28.5
Progression Factor		1.00	1.00		0.07					1.00	1.00	1.00
Incremental Delay, d2		5.4	5.1		0.2					25.5	44.1	0.2
Delay (s)		60.7	56.7		3.1					92.1	112.6	28.7
Level of Service		E	E		A					F	F	C
Approach Delay (s)		59.1			3.1			0.0			92.2	
Approach LOS		E			A			A			F	

Intersection Summary			
HCM Average Control Delay	49.2	HCM Level of Service	D
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	32.4
Intersection Capacity Utilization	79.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1059: 119th Street & Ashland Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑			↑↑	↱	↰	↰↑↱				
Volume (vph)	290	514	0	0	735	142	313	204	197	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	13	12	12	11	12	13	13	14	12	12	12
Total Lost time (s)	6.0	6.0			6.0	6.0	6.0	6.0				
Lane Util. Factor	1.00	0.95			0.95	1.00	0.91	0.91				
Frt	1.00	1.00			1.00	0.85	1.00	0.94				
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.99				
Satd. Flow (prot)	1605	3431			3210	1485	1561	3058				
Flt Permitted	0.95	1.00			1.00	1.00	0.95	0.99				
Satd. Flow (perm)	1605	3431			3210	1485	1561	3058				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	322	571	0	0	817	158	348	227	219	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	67	0	72	0	0	0	0
Lane Group Flow (vph)	322	571	0	0	817	91	271	451	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Split					Perm	Split					
Protected Phases	2 4 8	2 4 8			10		12	12				
Permitted Phases						10						
Actuated Green, G (s)	84.4	84.4			36.6	36.6	12.0	12.0				
Effective Green, g (s)	84.4	84.4			36.6	36.6	12.0	12.0				
Actuated g/C Ratio	0.53	0.53			0.23	0.23	0.08	0.08				
Clearance Time (s)					6.0	6.0	6.0	6.0				
Vehicle Extension (s)					3.0	3.0	3.0	3.0				
Lane Grp Cap (vph)	847	1810			734	340	117	229				
v/s Ratio Prot	c0.20	0.17			c0.25		c0.17	0.15				
v/s Ratio Perm						0.06						
v/c Ratio	0.38	0.32			1.11	0.27	2.32	1.97				
Uniform Delay, d1	22.3	21.4			61.7	50.7	74.0	74.0				
Progression Factor	0.06	0.06			1.00	1.00	1.00	1.00				
Incremental Delay, d2	0.2	0.1			68.8	0.4	618.2	451.4				
Delay (s)	1.4	1.3			130.5	51.1	692.2	525.4				
Level of Service	A	A			F	D	F	F				
Approach Delay (s)		1.4			117.6			582.3			0.0	
Approach LOS		A			F			F			A	

Intersection Summary			
HCM Average Control Delay	217.2	HCM Level of Service	F
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	29.0
Intersection Capacity Utilization	68.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1060: 119th Street & Halsted Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑↱		↰	↑↑↱		↰	↑↑↱	
Volume (vph)	138	308	134	186	414	106	104	504	93	106	803	120
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	14	12	10	10	12	9	10	12
Total Lost time (s)	4.0	4.0	5.0	4.0	5.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	0.99		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.97		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1579	1600	1372	1594	1789		1578	2999		1537	3001	
Flt Permitted	0.15	1.00	1.00	0.36	1.00		0.14	1.00		0.31	1.00	
Satd. Flow (perm)	255	1600	1372	610	1789		229	2999		501	3001	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	145	324	141	196	436	112	109	531	98	112	845	126
RTOR Reduction (vph)	0	0	98	0	10	0	0	17	0	0	13	0
Lane Group Flow (vph)	145	324	43	196	538	0	109	612	0	112	958	0
Confl. Peds. (#/hr)	28		8	8		28	59		11	11		59
Confl. Bikes (#/hr)	3					3	1		2	2		1
Heavy Vehicles (%)	1%	5%	2%	0%	4%	0%	1%	4%	0%	0%	3%	3%
Turn Type	pm+pt		Perm	pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)	34.1	27.1	27.1	34.1	27.1		39.6	34.1		39.6	34.1	
Effective Green, g (s)	32.1	28.1	27.1	32.1	27.1		37.6	34.1		37.6	34.1	
Actuated g/C Ratio	0.36	0.32	0.31	0.36	0.31		0.42	0.38		0.42	0.38	
Clearance Time (s)	3.0	5.0	5.0	3.0	5.0		3.0	4.0		3.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	182	507	419	287	547		166	1153		265	1154	
v/s Ratio Prot	c0.05	0.20		0.05	c0.30		c0.03	0.20		0.02	c0.32	
v/s Ratio Perm	0.23		0.03	0.20			0.25			0.16		
v/c Ratio	0.80	0.64	0.10	0.68	0.98		0.66	0.53		0.42	0.83	
Uniform Delay, d1	22.9	26.0	22.1	23.2	30.6		18.1	21.1		16.3	24.7	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	21.0	6.1	0.5	6.6	34.5		9.0	1.8		1.1	7.0	
Delay (s)	43.9	32.0	22.6	29.7	65.0		27.1	22.9		17.4	31.7	
Level of Service	D	C	C	C	E		C	C		B	C	
Approach Delay (s)		32.7			55.7			23.5			30.2	
Approach LOS		C			E			C			C	

Intersection Summary			
HCM Average Control Delay	35.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	88.7	Sum of lost time (s)	17.0
Intersection Capacity Utilization	86.7%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱		✥			✥	
Volume (vph)	38	394	59	112	635	61	36	57	44	30	88	67
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	10	10	10	12	15	12	12	16	12
Total Lost time (s)		3.0	3.0		3.0	3.0		3.0			3.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00			1.00	
Frpb, ped/bikes		1.00	0.96		1.00	0.97		0.99			0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00			1.00	
Frt		1.00	0.85		1.00	0.85		0.96			0.95	
Flt Protected		1.00	1.00		0.99	1.00		0.99			0.99	
Satd. Flow (prot)		1971	1467		1624	1381		1853			1874	
Flt Permitted		0.65	1.00		0.79	1.00		0.91			0.95	
Satd. Flow (perm)		1291	1467		1289	1381		1702			1794	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	40	415	62	118	668	64	38	60	46	32	93	71
RTOR Reduction (vph)	0	0	30	0	0	18	0	26	0	0	32	0
Lane Group Flow (vph)	0	455	32	0	786	46	0	118	0	0	164	0
Confl. Peds. (#/hr)	12		20	20		12	8		2	2		8
Confl. Bikes (#/hr)	1		2	2		1			1	1		
Heavy Vehicles (%)	3%	3%	0%	0%	3%	0%	0%	0%	0%	0%	1%	3%
Turn Type	Perm		Perm	Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)		32.0	32.0		32.0	32.0		27.0			27.0	
Effective Green, g (s)		32.0	32.0		32.0	32.0		27.0			27.0	
Actuated g/C Ratio		0.49	0.49		0.49	0.49		0.42			0.42	
Clearance Time (s)		3.0	3.0		3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)		636	722		635	680		707			745	
v/s Ratio Prot												
v/s Ratio Perm		0.35	0.02		c0.61	0.03		0.07			c0.09	
v/c Ratio		0.72	0.04		1.24	0.07		0.17			0.22	
Uniform Delay, d1		12.9	8.6		16.5	8.7		11.9			12.2	
Progression Factor		1.00	1.00		1.89	2.78		1.00			1.96	
Incremental Delay, d2		6.8	0.1		108.3	0.0		0.5			0.7	
Delay (s)		19.7	8.7		139.5	24.1		12.4			24.6	
Level of Service		B	A		F	C		B			C	
Approach Delay (s)		18.4			130.8			12.4			24.6	
Approach LOS		B			F			B			C	

Intersection Summary			
HCM Average Control Delay	74.6	HCM Level of Service	E
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	89.3%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1062: 119th Street & State Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱		↰	↱		✥	
Volume (vph)	58	313	40	110	692	20	34	108	43	16	175	66
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frpb, ped/bikes		1.00	0.94		1.00	0.97		1.00	0.97		0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		0.97	
Flt Protected		0.99	1.00		0.99	1.00		0.99	1.00		1.00	
Satd. Flow (prot)		1756	1443		1724	1487		1713	1489		1713	
Flt Permitted		0.18	1.00		0.66	1.00		0.89	1.00		0.98	
Satd. Flow (perm)		325	1443		1143	1487		1551	1489		1687	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	61	329	42	116	728	21	36	114	45	17	184	69
RTOR Reduction (vph)	0	0	24	0	0	6	0	0	23	0	19	0
Lane Group Flow (vph)	0	390	18	0	844	15	0	150	22	0	251	0
Confl. Peds. (#/hr)	19		25	25		19	3		6	6		3
Confl. Bikes (#/hr)	1		2	2		1			1	1		
Heavy Vehicles (%)	0%	2%	0%	0%	4%	0%	0%	5%	0%	0%	0%	2%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		23.0	23.0		23.0	23.0		32.0	32.0		32.0	
Effective Green, g (s)		23.0	23.0		23.0	23.0		32.0	32.0		32.0	
Actuated g/C Ratio		0.35	0.35		0.35	0.35		0.49	0.49		0.49	
Clearance Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	
Lane Grp Cap (vph)		115	511		404	526		764	733		831	
v/s Ratio Prot												
v/s Ratio Perm		c1.20	0.01		0.74	0.01		0.10	0.01		c0.15	
v/c Ratio		3.39	0.04		2.09	0.03		0.20	0.03		0.30	
Uniform Delay, d1		21.0	13.7		21.0	13.7		9.3	8.5		9.8	
Progression Factor		1.65	2.43		0.98	0.85		0.16	0.22		1.09	
Incremental Delay, d2		1092.9	0.1		494.2	0.0		0.1	0.0		0.9	
Delay (s)		1127.5	33.4		514.8	11.7		1.5	1.9		11.6	
Level of Service		F	C		F	B		A	A		B	
Approach Delay (s)		1021.1			502.6			1.6			11.6	
Approach LOS		F			F			A			B	

Intersection Summary			
HCM Average Control Delay	499.0	HCM Level of Service	F
HCM Volume to Capacity ratio	1.59		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	99.8%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		✥			✥			↰	↱
Volume (vph)	298	35	76	8	14	11	38	246	8	30	547	789
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	14	12	12	16	12	12	16	12
Total Lost time (s)		3.0	3.0		3.0			3.0			3.0	3.0
Lane Util. Factor		1.00	1.00		1.00			1.00			1.00	1.00
Frpb, ped/bikes		1.00	0.95		0.98			1.00			1.00	0.94
Flpb, ped/bikes		0.98	1.00		0.99			1.00			1.00	1.00
Frt		1.00	0.85		0.96			1.00			1.00	0.85
Flt Protected		0.96	1.00		0.99			0.99			1.00	1.00
Satd. Flow (prot)		1855	1440		1767			1995			1975	1382
Flt Permitted		0.75	1.00		0.92			0.82			0.97	1.00
Satd. Flow (perm)		1455	1440		1640			1653			1930	1382
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	331	39	84	9	16	12	42	273	9	33	608	877
RTOR Reduction (vph)	0	0	49	0	9	0	0	2	0	0	0	303
Lane Group Flow (vph)	0	370	35	0	28	0	0	322	0	0	641	574
Confl. Peds. (#/hr)	37		53	53		37	39		54	54		39
Confl. Bikes (#/hr)							2					2
Heavy Vehicles (%)	4%	0%	1%	0%	0%	0%	0%	1%	0%	0%	3%	4%
Turn Type	pm+pt		Perm	Perm			Perm			Perm		Perm
Protected Phases	7	4			8			2			6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)		27.0	27.0		17.0			32.0			32.0	32.0
Effective Green, g (s)		27.0	27.0		17.0			32.0			32.0	32.0
Actuated g/C Ratio		0.42	0.42		0.26			0.49			0.49	0.49
Clearance Time (s)		3.0	3.0		3.0			3.0			3.0	3.0
Lane Grp Cap (vph)		654	598		429			814			950	680
v/s Ratio Prot		c0.07										
v/s Ratio Perm		0.17	0.02		0.02			0.20			0.33	c0.42
v/c Ratio		0.57	0.06		0.07			0.40			0.67	0.84
Uniform Delay, d1		14.5	11.4		18.0			10.4			12.5	14.3
Progression Factor		1.18	1.96		1.00			0.41			0.76	1.13
Incremental Delay, d2		0.3	0.0		0.3			0.6			3.5	11.3
Delay (s)		17.4	22.3		18.3			4.9			13.0	27.5
Level of Service		B	C		B			A			B	C
Approach Delay (s)		18.3			18.3			4.9			21.4	
Approach LOS		B			B			A			C	

Intersection Summary			
HCM Average Control Delay	18.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	94.7%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↱		↰	↑↑					↰	↰↑↱	↱
Volume (vph)	0	923	289	438	1163	0	0	0	0	513	284	334
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	12	11	8	8	8	11	12	14
Total Lost time (s)		6.0		4.5	6.0					6.0	6.0	6.0
Lane Util. Factor		0.91		1.00	0.95					0.91	0.86	0.91
Frpb, ped/bikes		0.99		1.00	1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Frt		0.96		1.00	1.00					1.00	0.98	0.85
Flt Protected		1.00		0.95	1.00					0.95	0.98	1.00
Satd. Flow (prot)		4577		1621	3320					1489	2913	1442
Flt Permitted		1.00		0.09	1.00					0.95	0.98	1.00
Satd. Flow (perm)		4577		155	3320					1489	2913	1442
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	972	304	461	1224	0	0	0	0	540	299	352
RTOR Reduction (vph)	0	47	0	0	0	0	0	0	0	0	9	62
Lane Group Flow (vph)	0	1229	0	461	1224	0	0	0	0	308	603	209
Confl. Peds. (#/hr)	15		11	11		15						
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	0%	3%	3%	2%	3%	0%	0%	0%	0%	1%	3%	3%
Turn Type				pm+pt						Perm		Perm
Protected Phases		2		1	6						4	
Permitted Phases				6						4		4
Actuated Green, G (s)		39.5		74.9	74.9					28.1	28.1	28.1
Effective Green, g (s)		39.5		74.9	74.9					28.1	28.1	28.1
Actuated g/C Ratio		0.34		0.65	0.65					0.24	0.24	0.24
Clearance Time (s)		6.0		4.5	6.0					6.0	6.0	6.0
Vehicle Extension (s)		7.0		3.5	7.0					3.5	3.5	3.5
Lane Grp Cap (vph)		1572		495	2162					364	712	352
v/s Ratio Prot		0.27		c0.25	0.37							
v/s Ratio Perm				c0.36						0.21	0.21	0.14
v/c Ratio		0.78		0.93	0.57					0.85	0.85	0.59
Uniform Delay, d1		33.9		32.7	11.1					41.4	41.4	38.4
Progression Factor		1.00		0.78	2.03					1.00	1.00	1.00
Incremental Delay, d2		3.9		14.8	0.5					16.7	9.4	2.8
Delay (s)		37.8		40.3	23.0					58.1	50.8	41.2
Level of Service		D		D	C					E	D	D
Approach Delay (s)		37.8			27.7			0.0			50.5	
Approach LOS		D			C			A			D	

Intersection Summary			
HCM Average Control Delay	37.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	10.5
Intersection Capacity Utilization	110.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1065: 127th Street & Marshfield Ave

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↑			↑↑	↱		↰↑↱				
Volume (vph)	341	1095	0	0	1194	269	406	333	321	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	12	12	12	11	12	12	12	12	12	12	12
Total Lost time (s)	6.0	6.0			6.0	6.0		6.0				
Lane Util. Factor	0.97	0.95			0.95	1.00		0.91				
Frpb, ped/bikes	1.00	1.00			1.00	0.98		1.00				
Flpb, ped/bikes	1.00	1.00			1.00	1.00		1.00				
Frt	1.00	1.00			1.00	0.85		0.95				
Flt Protected	0.95	1.00			1.00	1.00		0.98				
Satd. Flow (prot)	3144	3353			3241	1489		4513				
Flt Permitted	0.09	1.00			1.00	1.00		0.98				
Satd. Flow (perm)	289	3353			3241	1489		4513				
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	359	1153	0	0	1257	283	427	351	338	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	82	0	67	0	0	0	0
Lane Group Flow (vph)	359	1153	0	0	1257	201	0	1049	0	0	0	0
Confl. Peds. (#/hr)	7		5	5		7						
Confl. Bikes (#/hr)	1		1	1		1						
Heavy Vehicles (%)	2%	2%	0%	0%	2%	1%	2%	1%	3%	0%	0%	0%
Turn Type	pm+pt					Perm	Perm					
Protected Phases	5	2			6			8				
Permitted Phases	2					6	8					
Actuated Green, G (s)	73.2	73.2			53.2	53.2		29.8				
Effective Green, g (s)	73.2	73.2			53.2	53.2		29.8				
Actuated g/C Ratio	0.64	0.64			0.46	0.46		0.26				
Clearance Time (s)	6.0	6.0			6.0	6.0		6.0				
Vehicle Extension (s)	3.5	7.0			7.0	7.0		5.0				
Lane Grp Cap (vph)	532	2134			1499	689		1169				
v/s Ratio Prot	c0.08	0.34			c0.39							
v/s Ratio Perm	0.35					0.13		0.23				
v/c Ratio	0.67	0.54			0.84	0.29		0.90				
Uniform Delay, d1	23.8	11.6			27.1	19.2		41.1				
Progression Factor	1.51	0.14			0.87	1.15		1.00				
Incremental Delay, d2	2.0	0.6			3.2	0.6		9.8				
Delay (s)	38.0	2.1			26.9	22.6		50.9				
Level of Service	D	A			C	C		D				
Approach Delay (s)		10.7			26.1			50.9			0.0	
Approach LOS		B			C			D			A	

Intersection Summary			
HCM Average Control Delay	27.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	110.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1066: 127th Street & S Ashland

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	132	705	399	102	954	75	227	179	66	80	162	121
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	12	11	12	12	10	10	13	10	10	10
Total Lost time (s)	3.5	6.0	3.5	3.5	6.0		3.5	6.0		3.5	6.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		0.99	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.96		1.00	0.94	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1565	3273	1313	1601	3286		1578	3002		1540	2941	
Flt Permitted	0.11	1.00	1.00	0.37	1.00		0.39	1.00		0.59	1.00	
Satd. Flow (perm)	174	3273	1313	623	3286		652	3002		961	2941	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	139	742	420	107	1004	79	239	188	69	84	171	127
RTOR Reduction (vph)	0	0	169	0	5	0	0	38	0	0	107	0
Lane Group Flow (vph)	139	742	251	107	1078	0	239	219	0	84	191	0
Confl. Peds. (#/hr)	11		23	23		11	8		12	12		8
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	2%	1%	3%	3%	3%	0%	1%	1%	2%	3%	0%	1%
Parking (#/hr)			0									
Turn Type	pm+pt		pm+ov	pm+pt			pm+pt			pm+pt		
Protected Phases	5	2	3	1	6		3	8		7	4	
Permitted Phases	2		2	6			8			4		
Actuated Green, G (s)	64.9	52.4	68.8	43.4	34.4		38.1	26.5		26.3	18.2	
Effective Green, g (s)	64.9	52.4	68.8	43.4	34.4		38.1	26.5		26.3	18.2	
Actuated g/C Ratio	0.56	0.46	0.60	0.38	0.30		0.33	0.23		0.23	0.16	
Clearance Time (s)	3.5	6.0	3.5	3.5	6.0		3.5	6.0		3.5	6.0	
Vehicle Extension (s)	3.0	7.0	3.0	3.0	7.0		3.0	7.0		3.0	7.0	
Lane Grp Cap (vph)	425	1491	786	312	983		348	692		261	465	
v/s Ratio Prot	c0.08	c0.23	0.05	0.03	c0.33		c0.10	0.07		0.02	0.06	
v/s Ratio Perm	0.11		0.15	0.10			c0.13			0.05		
v/c Ratio	0.33	0.50	0.32	0.34	1.10		0.69	0.32		0.32	0.41	
Uniform Delay, d1	17.4	22.0	11.5	23.9	40.3		30.6	36.7		36.2	43.6	
Progression Factor	0.77	0.74	1.65	1.00	1.00		1.02	1.04		1.00	1.00	
Incremental Delay, d2	1.6	0.9	0.2	0.7	58.9		5.3	0.9		0.7	2.1	
Delay (s)	15.1	17.3	19.1	24.5	99.2		36.5	39.2		36.9	45.7	
Level of Service	B	B	B	C	F		D	D		D	D	
Approach Delay (s)		17.7			92.5			37.9			43.7	
Approach LOS		B			F			D			D	

Intersection Summary			
HCM Average Control Delay	50.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	19.0
Intersection Capacity Utilization	80.8%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1067: Vermont St & S Ashland

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	46	250	367	91	430	107	362	340	84	206	408	56
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	11	12	11	12	12	11	13	12	10	11	12
Total Lost time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.91		1.00	0.97		1.00	0.97		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1708	2926		1653	3269		1620	3402		1580	3183	
Flt Permitted	0.36	1.00		0.22	1.00		0.32	1.00		0.49	1.00	
Satd. Flow (perm)	639	2926		379	3269		544	3402		822	3183	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	48	263	386	96	453	113	381	358	88	217	429	59
RTOR Reduction (vph)	0	215	0	0	18	0	0	19	0	0	9	0
Lane Group Flow (vph)	48	434	0	96	548	0	381	427	0	217	479	0
Confl. Peds. (#/hr)	12		3	3		12	5					5
Heavy Vehicles (%)	0%	2%	2%	0%	1%	1%	2%	1%	0%	1%	2%	0%
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	39.4	32.7		46.2	36.1		56.2	44.2		40.1	32.1	
Effective Green, g (s)	39.4	32.7		46.2	36.1		56.2	44.2		40.1	32.1	
Actuated g/C Ratio	0.34	0.28		0.40	0.31		0.49	0.38		0.35	0.28	
Clearance Time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	3.5	7.0		3.5	7.0		3.5	7.0		3.5	7.0	
Lane Grp Cap (vph)	281	832		264	1026		454	1308		339	888	
v/s Ratio Prot	0.01	0.15		c0.03	c0.17		c0.15	0.13		0.04	0.15	
v/s Ratio Perm	0.05			0.11			c0.26			0.18		
v/c Ratio	0.17	0.52		0.36	0.53		0.84	0.33		0.64	0.54	
Uniform Delay, d1	25.7	34.6		23.2	32.5		20.8	24.9		28.8	35.2	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	0.96	
Incremental Delay, d2	0.3	2.3		1.0	2.0		13.1	0.7		4.0	2.2	
Delay (s)	26.1	36.9		24.3	34.5		33.9	25.6		32.7	36.1	
Level of Service	C	D		C	C		C	C		C	D	
Approach Delay (s)		36.2			33.0			29.4			35.1	
Approach LOS		D			C			C			D	

Intersection Summary			
HCM Average Control Delay	33.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	77.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	101	670	135	10	741	89	102	281	9	194	578	174
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	10	12	9	11	12	9	9	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.98			0.98		1.00	1.00		1.00	0.97	
Flt Protected		0.99			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3040			3060		1452	3227		1522	2872	
Flt Permitted		0.53			0.94		0.21	1.00		0.55	1.00	
Satd. Flow (perm)		1620			2874		317	3227		883	2872	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	112	744	150	11	823	99	113	312	10	216	642	193
RTOR Reduction (vph)	0	22	0	0	14	0	0	4	0	0	44	0
Lane Group Flow (vph)	0	984	0	0	919	0	113	318	0	216	791	0
Confl. Peds. (#/hr)	4		2	2		4	8		4	4		8
Confl. Bikes (#/hr)							2					2
Heavy Vehicles (%)	1%	2%	2%	0%	2%	6%	6%	2%	0%	1%	3%	3%
Turn Type	pm+pt			Perm			pm+pt			pm+pt		
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		25.0			17.0		28.0	24.0		28.0	24.0	
Effective Green, g (s)		25.0			17.0		28.0	24.0		28.0	24.0	
Actuated g/C Ratio		0.38			0.26		0.43	0.37		0.43	0.37	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		710			752		206	1192		420	1060	
v/s Ratio Prot		c0.09					c0.03	0.10		0.03	c0.28	
v/s Ratio Perm		c0.45			0.32		0.20			0.19		
v/c Ratio		1.39			1.22		0.55	0.27		0.51	0.75	
Uniform Delay, d1		20.0			24.0		12.3	14.3		12.5	17.9	
Progression Factor		1.00			1.42		1.03	0.57		1.00	1.00	
Incremental Delay, d2		182.2			101.1		9.6	0.5		4.4	4.8	
Delay (s)		202.2			135.3		22.2	8.7		17.0	22.7	
Level of Service		F			F		C	A		B	C	
Approach Delay (s)		202.2			135.3			12.2			21.5	
Approach LOS		F			F			B			C	

Intersection Summary			
HCM Average Control Delay	104.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	94.4%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1069: Vermont St & Halsted Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱		↰	↑↱		↰	↑↱	
Volume (vph)	67	261	136	126	410	27	70	450	84	33	662	66
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	12	12	12	12	12
Total Lost time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.95		1.00	0.99		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1708	1910		1601	2019		1676	3214		1435	3274	
Flt Permitted	0.32	1.00		0.37	1.00		0.31	1.00		0.42	1.00	
Satd. Flow (perm)	576	1910		621	2019		552	3214		640	3274	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	69	269	140	130	423	28	72	464	87	34	682	68
RTOR Reduction (vph)	0	29	0	0	4	0	0	24	0	0	12	0
Lane Group Flow (vph)	69	380	0	130	447	0	72	527	0	34	738	0
Confl. Peds. (#/hr)	3		20	20		3	2		3	3		2
Confl. Bikes (#/hr)			1	1			2		2	2		2
Heavy Vehicles (%)	0%	0%	1%	6%	0%	0%	2%	3%	6%	19%	3%	2%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	24.0	24.0		24.0	24.0		31.0	31.0		31.0	31.0	
Effective Green, g (s)	24.0	24.0		24.0	24.0		31.0	31.0		31.0	31.0	
Actuated g/C Ratio	0.37	0.37		0.37	0.37		0.48	0.48		0.48	0.48	
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)	213	705		229	745		263	1533		305	1561	
v/s Ratio Prot		0.20			c0.22			0.16			c0.23	
v/s Ratio Perm	0.12			0.21			0.13			0.05		
v/c Ratio	0.32	0.54		0.57	0.60		0.27	0.34		0.11	0.47	
Uniform Delay, d1	14.7	16.1		16.4	16.6		10.2	10.6		9.4	11.5	
Progression Factor	1.00	1.00		1.34	1.36		1.00	1.00		1.14	0.92	
Incremental Delay, d2	4.0	2.9		0.9	0.3		2.6	0.6		0.3	0.5	
Delay (s)	18.7	19.1		22.9	22.9		12.8	11.3		11.1	11.0	
Level of Service	B	B		C	C		B	B		B	B	
Approach Delay (s)		19.0			22.9			11.4			11.0	
Approach LOS		B			C			B			B	

Intersection Summary			
HCM Average Control Delay	15.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	73.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

1070: 127th Street & S Wallance St

1/14/2013

	↗	→	↙	←	↖	↰	↖	↑	↗	↘	↓	↙
Movement	**EBL**	**EBT**	**WBL**	**WBT**	**WBR**	**NBL2**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Lane Configurations		↰↑↑↱		↰↑↑↱				✣			✣	
Volume (vph)	2	848	495	922	41	3	10	9	46	15	0	3
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	10	10	10	12	12	16	12	12	16	12
Total Lost time (s)		5.0		5.0				4.0			4.0	
Lane Util. Factor		0.95		0.95				1.00			1.00	
Frpb, ped/bikes		1.00		1.00				0.99			0.99	
Flpb, ped/bikes		1.00		1.00				1.00			1.00	
Frt		1.00		1.00				0.91			0.95	
Flt Protected		1.00		0.98				0.99			0.97	
Satd. Flow (prot)		3160		3077				1812			1858	
Flt Permitted		0.81		0.58				0.96			0.85	
Satd. Flow (perm)		2546		1799				1749			1633	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	2	893	521	971	43	3	11	9	48	16	0	3
RTOR Reduction (vph)	0	0	0	3	0	0	0	38	0	0	4	0
Lane Group Flow (vph)	0	895	0	1532	0	0	0	33	0	0	20	0
Confl. Peds. (#/hr)	7		4		7		7		2	2		7
Confl. Bikes (#/hr)							2		2	2		2
Heavy Vehicles (%)	0%	1%	2%	1%	6%	0%	0%	0%	0%	0%	0%	0%
Turn Type	Perm		custom				Perm			Perm		
Protected Phases		8	7	4				2			6	
Permitted Phases	8		4 7				2			6		
Actuated Green, G (s)		18.0		27.0				14.0			14.0	
Effective Green, g (s)		18.0		27.0				14.0			14.0	
Actuated g/C Ratio		0.28		0.42				0.22			0.22	
Clearance Time (s)		5.0		5.0				4.0			4.0	
Lane Grp Cap (vph)		705		865				377			352	
v/s Ratio Prot				c0.16								
v/s Ratio Perm		0.35		c0.57				c0.02			0.01	
v/c Ratio		1.27		2.48dl				0.09			0.06	
Uniform Delay, d1		23.5		19.0				20.4			20.3	
Progression Factor		1.42		0.61				1.00			1.00	
Incremental Delay, d2		122.3		350.1				0.5			0.3	
Delay (s)		155.7		361.7				20.9			20.6	
Level of Service		F		F				C			C	
Approach Delay (s)		155.7		361.7				20.9			20.6	
Approach LOS		F		F				C			C	

Intersection Summary			
HCM Average Control Delay	268.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.22		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	118.0%	ICU Level of Service	H
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group

Movement	SBR2	NEL	NER
Lane Configurations			
Volume (vph)	5	3	311
Ideal Flow (vphpl)	1800	1800	1800
Lane Width	12	12	12
Total Lost time (s)		5.0	
Lane Util. Factor		1.00	
Frpb, ped/bikes		1.00	
Flpb, ped/bikes		1.00	
Frt		0.87	
Flt Protected		1.00	
Satd. Flow (prot)		1559	
Flt Permitted		1.00	
Satd. Flow (perm)		1559	
Peak-hour factor, PHF	0.95	0.95	0.95
Adj. Flow (vph)	5	3	327
RTOR Reduction (vph)	0	0	0
Lane Group Flow (vph)	0	330	0
Confl. Peds. (#/hr)			
Confl. Bikes (#/hr)			
Heavy Vehicles (%)	0%	0%	0%
Turn Type			
Protected Phases		3	
Permitted Phases			
Actuated Green, G (s)		10.0	
Effective Green, g (s)		10.0	
Actuated g/C Ratio		0.15	
Clearance Time (s)		5.0	
Lane Grp Cap (vph)		240	
v/s Ratio Prot		c0.21	
v/s Ratio Perm			
v/c Ratio		1.38	
Uniform Delay, d1		27.5	
Progression Factor		0.83	
Incremental Delay, d2		190.6	
Delay (s)		213.5	
Level of Service		F	
Approach Delay (s)		213.5	
Approach LOS		F	

Intersection Summary

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰↑	↑↱		↰	↱
Volume (vph)	256	942	1242	176	120	222
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		1.00	1.00
Frt		1.00	0.98		1.00	0.85
Flt Protected		0.99	1.00		0.95	1.00
Satd. Flow (prot)		3285	3258		1660	1485
Flt Permitted		0.51	1.00		0.95	1.00
Satd. Flow (perm)		1706	3258		1660	1485
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	284	1047	1380	196	133	247
RTOR Reduction (vph)	0	0	17	0	0	40
Lane Group Flow (vph)	0	1331	1559	0	133	207
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type	Perm					Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)		40.0	40.0		17.0	17.0
Effective Green, g (s)		40.0	40.0		17.0	17.0
Actuated g/C Ratio		0.62	0.62		0.26	0.26
Clearance Time (s)		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		1050	2005		434	388
v/s Ratio Prot			0.48		0.08	
v/s Ratio Perm		c0.78				c0.14
v/c Ratio		2.63dl	0.78		0.31	0.53
Uniform Delay, d1		12.5	9.2		19.3	20.6
Progression Factor		1.27	0.61		1.03	1.01
Incremental Delay, d2		121.2	1.4		1.0	3.0
Delay (s)		137.0	7.0		21.0	23.7
Level of Service		F	A		C	C
Approach Delay (s)		137.0	7.0		22.8	
Approach LOS		F	A		C	

Intersection Summary			
HCM Average Control Delay	61.5	HCM Level of Service	E
HCM Volume to Capacity ratio	1.05		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	94.5%	ICU Level of Service	F
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.
c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1072: 127th Street & Michigan Avenue

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰↑	↑↱		↰	↱
Volume (vph)	79	986	1334	194	270	86
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	12	10	11	12	10	10
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		1.00	1.00
Frpb, ped/bikes		1.00	1.00		1.00	0.99
Flpb, ped/bikes		1.00	1.00		1.00	1.00
Frt		1.00	0.98		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		3120	3139		1506	1343
Flt Permitted		0.61	1.00		0.95	1.00
Satd. Flow (perm)		1899	3139		1506	1343
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	83	1038	1404	204	284	91
RTOR Reduction (vph)	0	0	18	0	0	18
Lane Group Flow (vph)	0	1121	1590	0	284	73
Confl. Peds. (#/hr)	2			2		1
Heavy Vehicles (%)	1%	2%	2%	10%	6%	5%
Turn Type	Perm					Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)		34.0	34.0		23.0	23.0
Effective Green, g (s)		34.0	34.0		23.0	23.0
Actuated g/C Ratio		0.52	0.52		0.35	0.35
Clearance Time (s)		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		993	1642		533	475
v/s Ratio Prot			0.51		c0.19	
v/s Ratio Perm		c0.59				0.05
v/c Ratio		1.13	0.97		0.53	0.15
Uniform Delay, d1		15.5	15.0		16.7	14.3
Progression Factor		1.10	1.48		1.75	2.06
Incremental Delay, d2		59.4	2.6		3.0	0.5
Delay (s)		76.5	24.7		32.3	30.1
Level of Service		E	C		C	C
Approach Delay (s)		76.5	24.7		31.8	
Approach LOS		E	C		C	

Intersection Summary			
HCM Average Control Delay	44.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	102.5%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1073: 130th Street & Indiana Ave

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↱		↰	↑	Y	
Volume (vph)	862	251	528	1414	195	158
Ideal Flow (vphpl)	2300	1800	1800	2300	1800	1800
Lane Width	15	12	14	16	15	12
Total Lost time (s)	5.0		5.0	5.0	5.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	0.99	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.97		1.00	1.00	0.94	
Flt Protected	1.00		0.95	1.00	0.97	
Satd. Flow (prot)	2405		1788	2506	1733	
Flt Permitted	1.00		0.13	1.00	0.97	
Satd. Flow (perm)	2405		243	2506	1733	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	880	256	539	1443	199	161
RTOR Reduction (vph)	16	0	0	0	45	0
Lane Group Flow (vph)	1120	0	539	1443	315	0
Confl. Peds. (#/hr)						1
Heavy Vehicles (%)	2%	2%	2%	4%	7%	0%
Turn Type			Perm			
Protected Phases	4			8	2	
Permitted Phases			8			
Actuated Green, G (s)	31.0		31.0	31.0	24.0	
Effective Green, g (s)	31.0		31.0	31.0	24.0	
Actuated g/C Ratio	0.48		0.48	0.48	0.37	
Clearance Time (s)	5.0		5.0	5.0	5.0	
Lane Grp Cap (vph)	1147		116	1195	640	
v/s Ratio Prot	0.47			0.58	c0.18	
v/s Ratio Perm			c2.22			
v/c Ratio	0.98		4.65	1.21	0.49	
Uniform Delay, d1	16.6		17.0	17.0	15.8	
Progression Factor	1.46		1.00	1.00	1.00	
Incremental Delay, d2	4.2		1660.5	101.5	2.7	
Delay (s)	28.5		1677.5	118.5	18.5	
Level of Service	C		F	F	B	
Approach Delay (s)	28.5			542.4	18.5	
Approach LOS	C			F	B	

Intersection Summary			
HCM Average Control Delay	320.3	HCM Level of Service	F
HCM Volume to Capacity ratio	2.84		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	115.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑↑	↱		⬑	↱		✣	
Volume (vph)	1	1984	37	108	935	1	59	0	149	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	15	13	11	11	12	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0	4.0	3.0	3.0	4.0		4.0	4.0			
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00	1.00			
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85			
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.95	1.00			
Satd. Flow (prot)	1881	3431	1479	1589	3320	1530		1938	1500			
Flt Permitted	0.28	1.00	1.00	0.08	1.00	1.00		0.76	1.00			
Satd. Flow (perm)	546	3431	1479	127	3320	1530		1545	1500			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1	2204	41	120	1039	1	66	0	166	0	0	0
RTOR Reduction (vph)	0	0	10	0	0	0	0	0	138	0	0	0
Lane Group Flow (vph)	1	2204	31	120	1039	1	0	66	28	0	0	0
Heavy Vehicles (%)	0%	3%	0%	4%	3%	0%	0%	0%	2%	0%	0%	0%
Turn Type	Perm		Perm	custom		custom	Perm		Perm	Perm		
Protected Phases		4		3	3 8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)	49.7	49.7	49.7	67.9	67.9	67.9		9.1	9.1			
Effective Green, g (s)	49.7	49.7	49.7	67.9	67.9	67.9		9.1	9.1			
Actuated g/C Ratio	0.58	0.58	0.58	0.80	0.80	0.80		0.11	0.11			
Clearance Time (s)	4.0	4.0	4.0	3.0		4.0		4.0	4.0			
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0		3.0	3.0			
Lane Grp Cap (vph)	319	2006	865	363	2652	1222		165	161			
v/s Ratio Prot		c0.64		0.06	c0.31							
v/s Ratio Perm	0.00		0.02	0.21		0.00		c0.04	0.02			
v/c Ratio	0.00	1.10	0.04	0.33	0.39	0.00		0.40	0.17			
Uniform Delay, d1	7.3	17.6	7.5	16.9	2.5	1.7		35.4	34.5			
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00			
Incremental Delay, d2	0.0	52.8	0.1	0.5	0.1	0.0		1.6	0.5			
Delay (s)	7.4	70.5	7.6	17.4	2.6	1.7		37.0	35.0			
Level of Service	A	E	A	B	A	A		D	D			
Approach Delay (s)		69.3			4.1			35.6			0.0	
Approach LOS		E			A			D			A	

Intersection Summary			
HCM Average Control Delay	46.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	79.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1942: 111th Street & Langley Avenue

1/14/2013

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰↑	↑↱		↰↱	
Volume (vph)	11	932	813	29	71	14
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10
Total Lost time (s)		5.0	5.0		3.0	
Lane Util. Factor		0.95	0.95		1.00	
Frt		1.00	0.99		0.98	
Flt Protected		1.00	1.00		0.96	
Satd. Flow (prot)		3097	3083		1530	
Flt Permitted		0.94	1.00		0.96	
Satd. Flow (perm)		2913	3083		1530	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	12	1036	903	32	79	16
RTOR Reduction (vph)	0	0	3	0	8	0
Lane Group Flow (vph)	0	1048	932	0	87	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type	Perm					
Protected Phases		4	8 2 11		5	
Permitted Phases	4					
Actuated Green, G (s)		33.0	64.0		7.0	
Effective Green, g (s)		33.0	64.0		7.0	
Actuated g/C Ratio		0.37	0.71		0.08	
Clearance Time (s)		5.0			3.0	
Lane Grp Cap (vph)		1068	2192		119	
v/s Ratio Prot			c0.30		c0.06	
v/s Ratio Perm		c0.36				
v/c Ratio		0.98	0.43		0.73	
Uniform Delay, d1		28.2	5.4		40.6	
Progression Factor		1.00	0.01		1.00	
Incremental Delay, d2		23.4	0.2		32.1	
Delay (s)		51.6	0.3		72.7	
Level of Service		D	A		E	
Approach Delay (s)		51.6	0.3		72.7	
Approach LOS		D	A		E	

Intersection Summary			
HCM Average Control Delay	29.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	47.9%	ICU Level of Service	A
Analysis Period (min)	15		

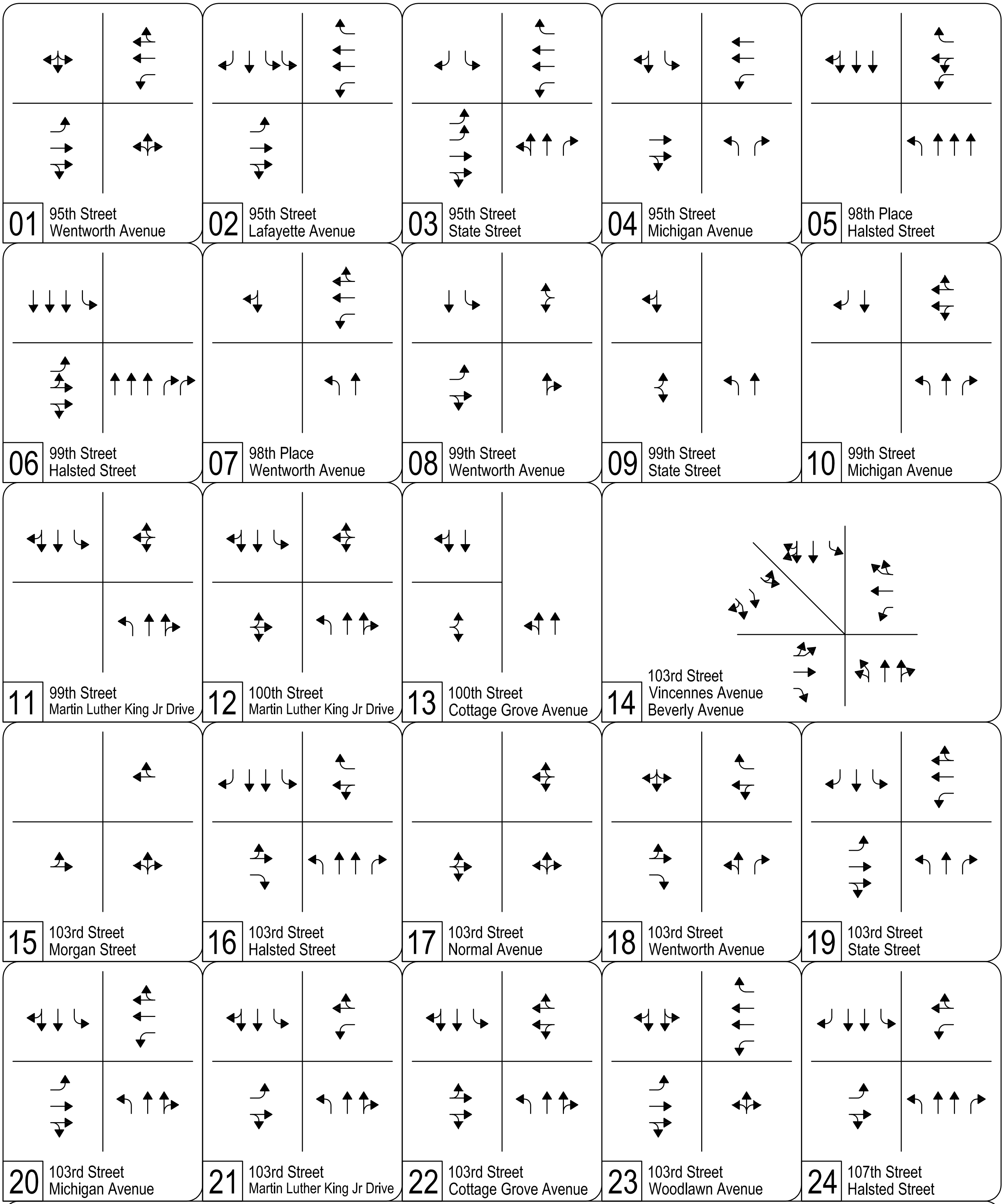
c Critical Lane Group

1955: 115th Street & Cottage Grove Avenue

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↑↱			↰↑↱			↰↑	↱
Volume (vph)	107	496	0	1	565	38	3	2	28	192	0	143
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	12	12	11	12	11
Total Lost time (s)		4.0			4.0			3.0			3.0	3.0
Lane Util. Factor		1.00			0.95			1.00			1.00	1.00
Frpb, ped/bikes		1.00			1.00			0.94			1.00	0.98
Flpb, ped/bikes		1.00			1.00			1.00			0.99	1.00
Frt		1.00			0.99			0.88			1.00	0.85
Flt Protected		0.99			1.00			1.00			0.95	1.00
Satd. Flow (prot)		1763			3340			1467			1670	1348
Flt Permitted		0.77			0.95			0.93			0.88	1.00
Satd. Flow (perm)		1373			3190			1370			1545	1348
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	119	551	0	1	628	42	3	2	31	213	0	159
RTOR Reduction (vph)	0	0	0	0	6	0	0	28	0	0	0	107
Lane Group Flow (vph)	0	670	0	0	665	0	0	8	0	0	213	52
Confl. Peds. (#/hr)	60		44	44		60	14		10	10		14
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	0%	1%	0%	0%	1%	3%	20%	0%	0%	1%	0%	7%
Turn Type	Perm			Prot			Perm			pm+pt		Perm
Protected Phases		4		3	3 4			1		2	1 2	
Permitted Phases	4				3		1	1		1 2		1 2
Actuated Green, G (s)		31.0			45.0			9.0			25.0	28.0
Effective Green, g (s)		31.0			45.0			9.0			25.0	28.0
Actuated g/C Ratio		0.36			0.53			0.11			0.29	0.33
Clearance Time (s)		4.0						3.0				
Lane Grp Cap (vph)		501			1714			145			478	444
v/s Ratio Prot					c0.06						c0.08	
v/s Ratio Perm		c0.49			0.14			0.01			c0.05	0.04
v/c Ratio		1.34			0.39			0.06			0.45	0.12
Uniform Delay, d1		27.0			11.8			34.2			24.4	19.9
Progression Factor		1.00			1.28			1.00			1.00	1.00
Incremental Delay, d2		164.9			0.1			0.8			3.0	0.5
Delay (s)		191.9			15.3			34.9			27.4	20.4
Level of Service		F			B			C			C	C
Approach Delay (s)		191.9			15.3			34.9			24.4	
Approach LOS		F			B			C			C	

Intersection Summary			
HCM Average Control Delay	85.3	HCM Level of Service	F
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	79.8%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



01 95th Street Wentworth Avenue

02 95th Street Lafayette Avenue

03 95th Street State Street

04 95th Street Michigan Avenue

05 98th Place Halsted Street

06 99th Street Halsted Street

07 98th Place Wentworth Avenue

08 99th Street Wentworth Avenue

09 99th Street State Street

10 99th Street Michigan Avenue

11 99th Street Martin Luther King Jr Drive

12 100th Street Martin Luther King Jr Drive

13 100th Street Cottage Grove Avenue

14 103rd Street Vincennes Avenue Beverly Avenue

15 103rd Street Morgan Street

16 103rd Street Halsted Street

17 103rd Street Normal Avenue

18 103rd Street Wentworth Avenue

19 103rd Street State Street

20 103rd Street Michigan Avenue

21 103rd Street Martin Luther King Jr Drive

22 103rd Street Cottage Grove Avenue

23 103rd Street Woodlawn Avenue

24 107th Street Halsted Street

UPRR ROW Option Alternative (2030) Intersection Lane Geometry

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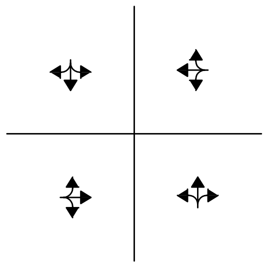
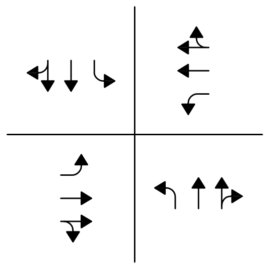
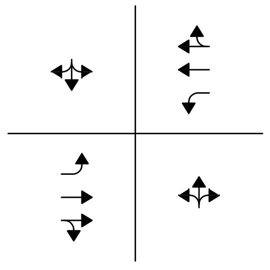


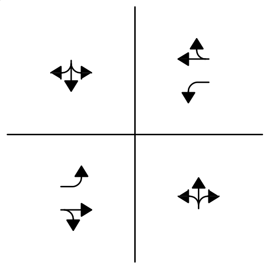
25 107th Street
Wentworth Avenue



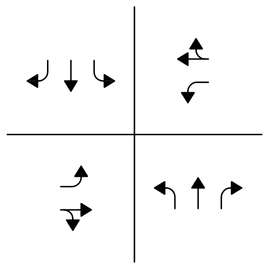
26 107th Street
State Street



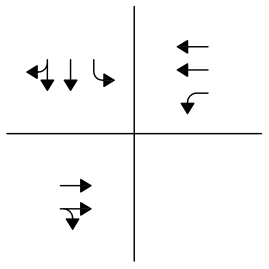
27 107th Street
Michigan Avenue



28 107th Street
Martin Luther King Jr Drive



29 107th Street
Cottage Grove Avenue



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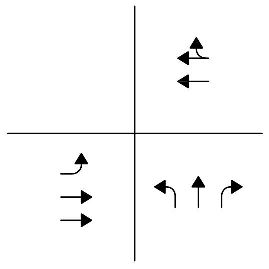
Marshfield Avenue



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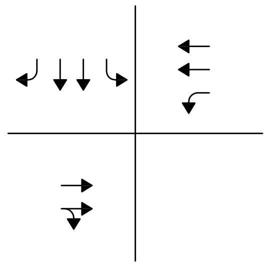
Hamlet Avenue



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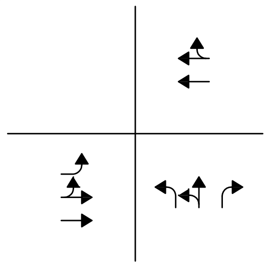

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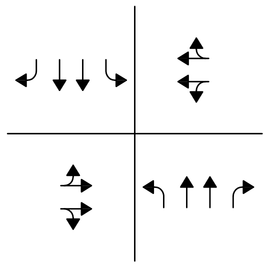

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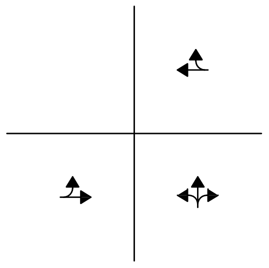

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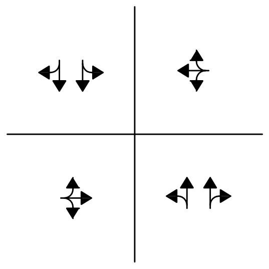
Normal Avenue



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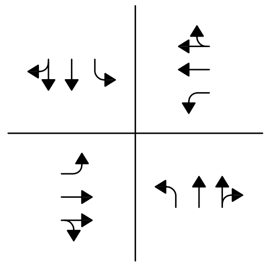
Wentworth Avenue



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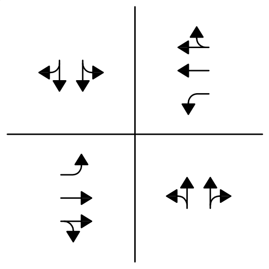
State Street



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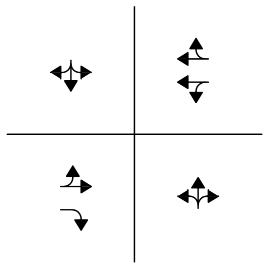
Michigan Avenue



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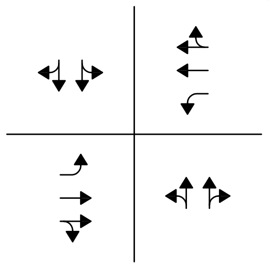
Indiana Avenue



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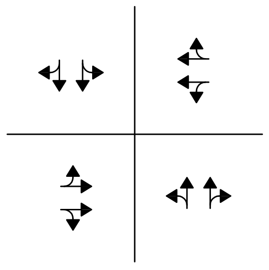
Martin Luther King Jr Drive



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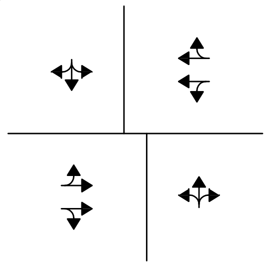
Cottage Grove Avenue



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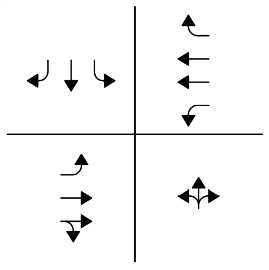
Ellis Avenue



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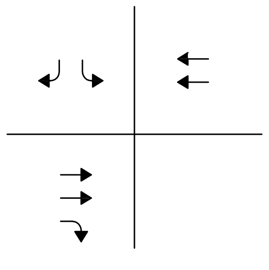
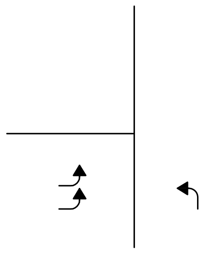
Doty Road



44 111th Street
I-94 Eastbound Ramps



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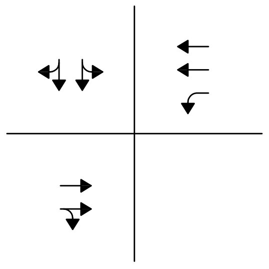
I-94 Westbound Ramps



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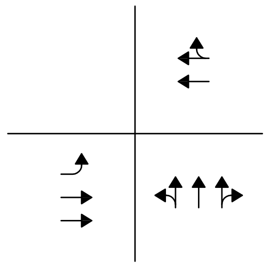
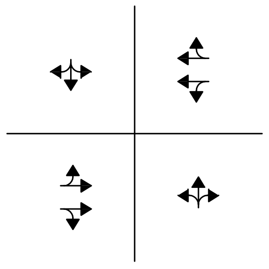
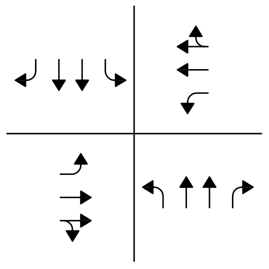
Marshfield Avenue



47 115th Street
Ashland Avenue



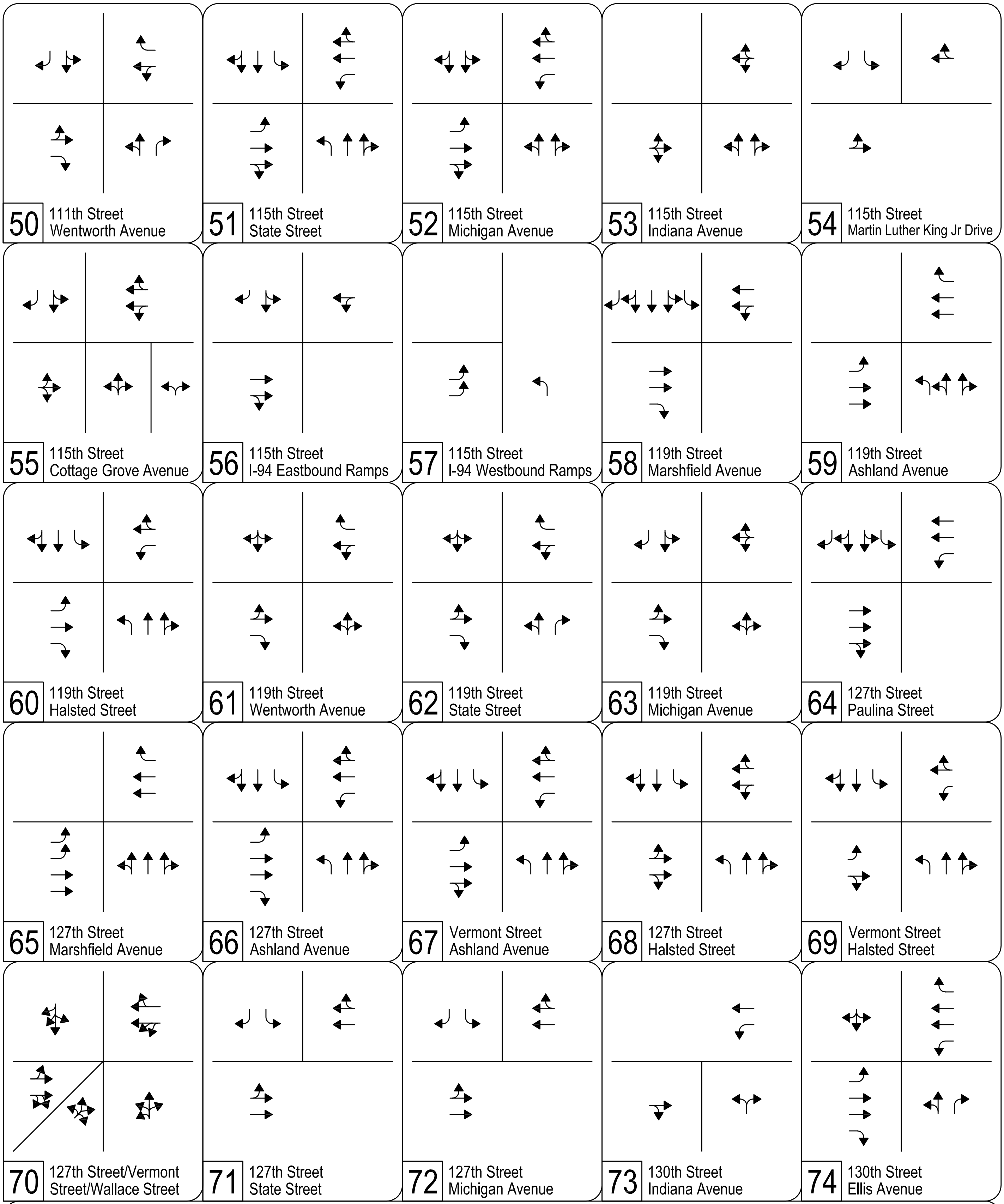
48 115th Street
Racine Road



49 115th Street
Halsted Street

UPRR ROW Option Alternative (2030) Intersection Lane Geometry

Page 2 of 3



50 111th Street Wentworth Avenue

51 115th Street State Street

52 115th Street Michigan Avenue

53 115th Street Indiana Avenue

54 115th Street Martin Luther King Jr Drive

55 115th Street Cottage Grove Avenue

56 115th Street I-94 Eastbound Ramps

57 115th Street I-94 Westbound Ramps

58 119th Street Marshfield Avenue

59 119th Street Ashland Avenue

60 119th Street Halsted Street

61 119th Street Wentworth Avenue

62 119th Street State Street

63 119th Street Michigan Avenue

64 127th Street Paulina Street

65 127th Street Marshfield Avenue

66 127th Street Ashland Avenue

67 Vermont Street Ashland Avenue

68 127th Street Halsted Street

69 Vermont Street Halsted Street

70 127th Street/Vermont Street/Wallace Street

71 127th Street State Street

72 127th Street Michigan Avenue

73 130th Street Indiana Avenue

74 130th Street Ellis Avenue

UPRR ROW Option Alternative (2030) Intersection Lane Geometry

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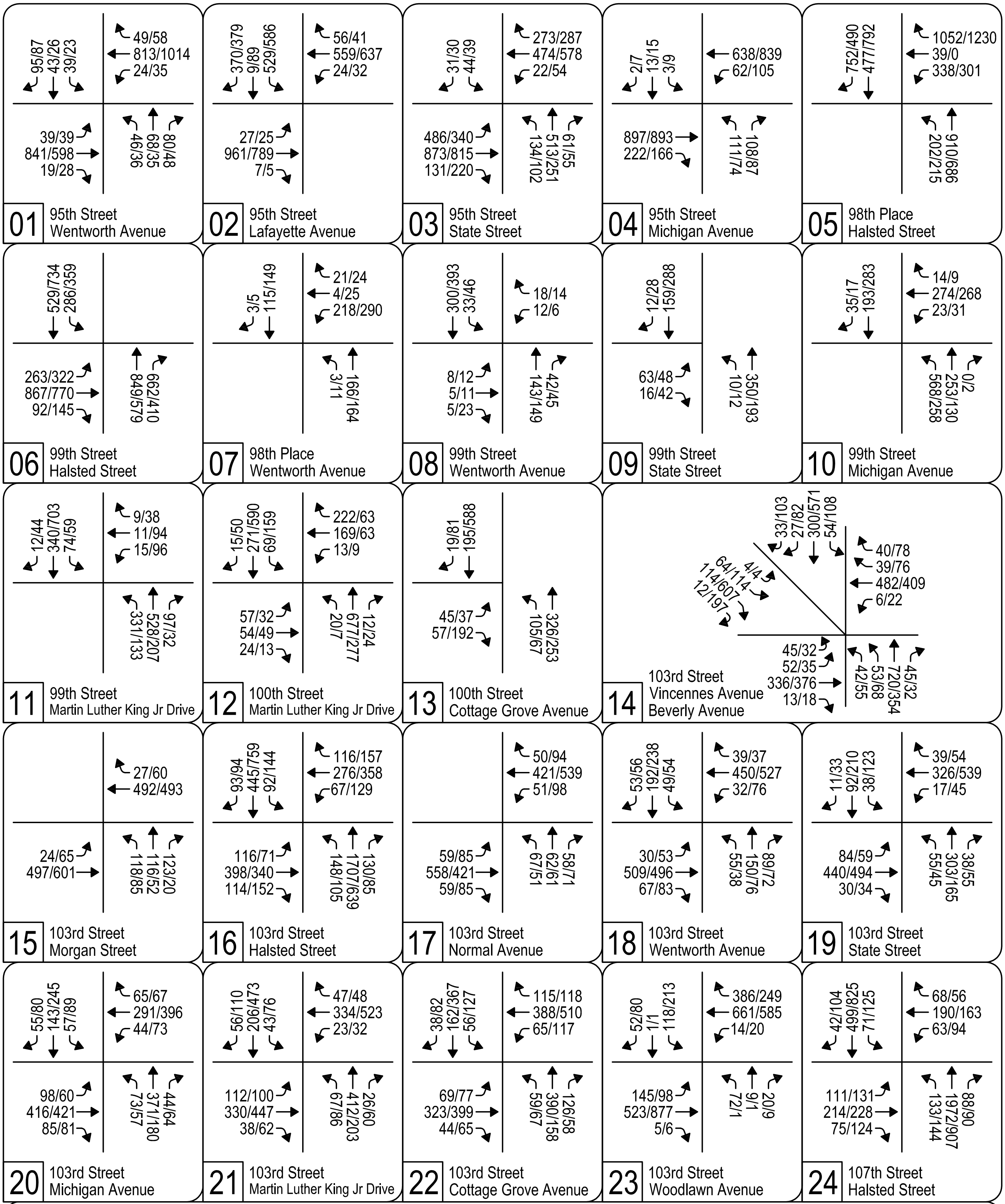
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49/58
813/1014
24/35
39/39
841/598
19/28
46/36
68/35
80/48
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95th Street
Wentworth Avenue
370/379
9/89
529/586
56/41
559/637
24/32
27/25
961/789
7/5
02
95th Street
Lafayette Avenue
31/30
44/39
273/287
474/578
22/54
486/340
873/815
131/220
134/102
513/251
61/55
03
95th Street
State Street
2/7
13/15
3/9
638/839
62/105
897/893
222/166
111/74
108/87
04
95th Street
Michigan Avenue
752/490
477/792
1052/1230
39/0
338/301
202/215
910/686
05
98th Place
Halsted Street
529/734
286/359
263/322
867/770
92/145
849/579
662/410
06
99th Street
Halsted Street
3/5
115/149
21/24
4/25
218/290
3/11
166/164
07
98th Place
Wentworth Avenue
300/393
33/46
18/14
12/6
8/12
5/11
5/23
143/149
42/45
08
99th Street
Wentworth Avenue
12/28
159/288
63/48
16/42
10/12
350/193
09
99th Street
State Street
35/17
193/283
14/9
274/268
23/31
568/258
253/130
0/2
10
99th Street
Michigan Avenue
12/44
340/703
74/59
9/38
11/94
15/96
331/133
528/207
97/32
11
99th Street
Martin Luther King Jr Drive
15/50
271/590
69/159
222/63
169/63
13/9
57/32
54/49
24/13
20/7
677/277
12/24
12
100th Street
Martin Luther King Jr Drive
19/81
195/588
45/37
57/192
105/67
326/253
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33/103
27/82
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54/108
40/78
39/76
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6/22
4/4
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45/32
52/35
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13/18
42/55
53/68
720/354
45/32
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103rd Street
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Beverly Avenue
27/60
492/493
24/65
497/601
118/85
116/52
123/20
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103rd Street
Morgan Street
93/94
445/759
92/144
116/157
276/358
67/129
116/71
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114/152
148/105
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130/85
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Halsted Street
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Normal Avenue
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State Street
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73/57
371/180
44/64
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Michigan Avenue
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206/473
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47/48
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23/32
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38/62
67/86
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26/60
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Martin Luther King Jr Drive
38/82
162/367
56/127
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388/510
65/117
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323/399
44/65
59/67
390/158
126/58
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103rd Street
Cottage Grove Avenue
52/80
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386/249
661/585
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5/6
72/1
9/1
20/9
23
103rd Street
Woodlawn Avenue
42/104
499/825
71/125
68/56
190/163
63/94
111/131
214/228
75/124
133/144
1972/907
88/90
24
107th Street
Halsted Street

UPRR ROW Option Alternative (2030) Intersection Traffic Volumes

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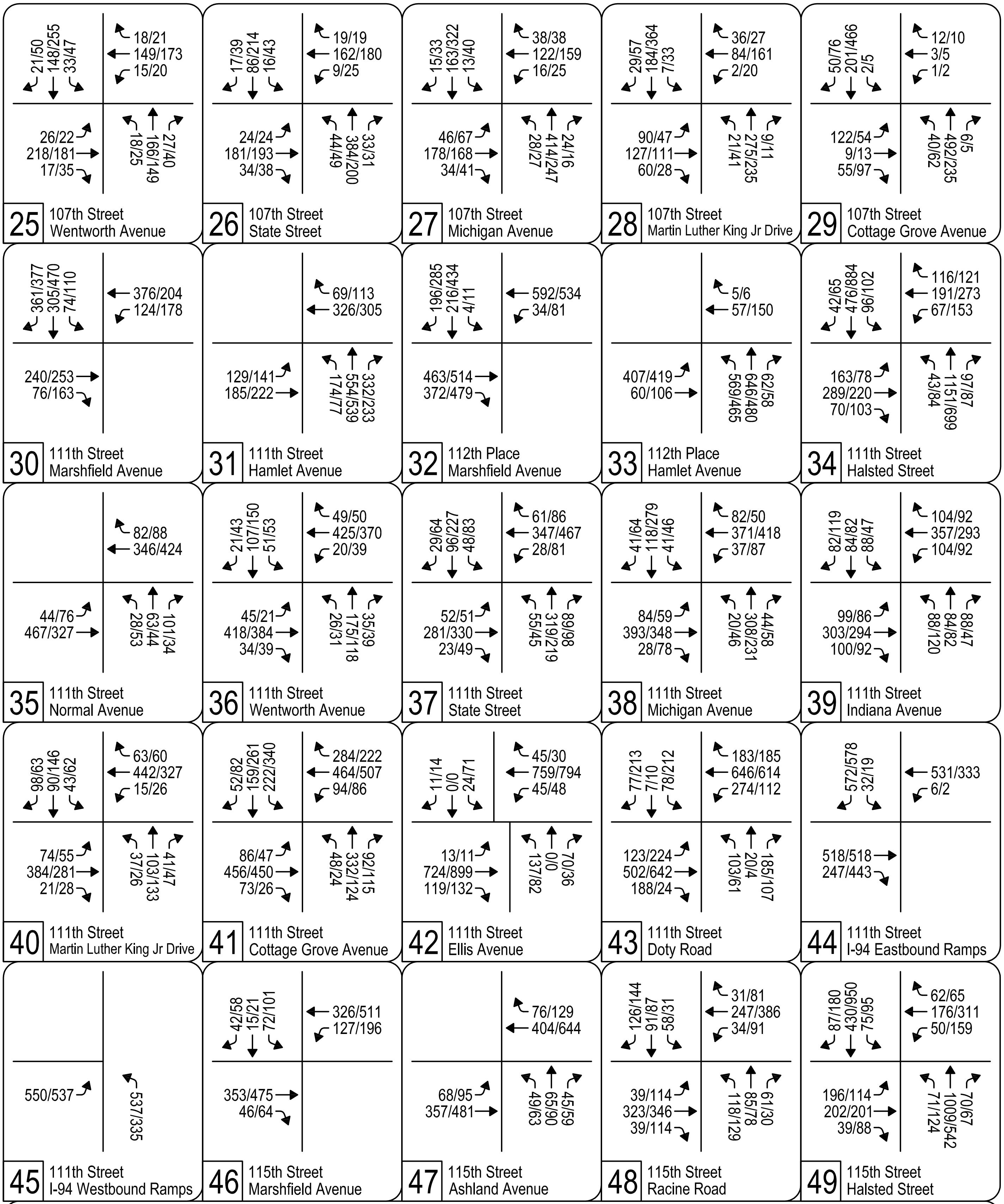
Legend: AM/PM Peak Hour Volumes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218/181
17/35
18/25
166/149
27/40
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Wentworth Avenue
17/39
86/214
16/43
19/19
162/180
9/25
24/24
181/193
34/38
44/49
384/200
33/31
26
107th Street
State Street
15/33
163/322
13/40
38/38
122/159
16/25
46/67
178/168
34/41
28/27
414/247
24/16
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107th Street
Michigan Avenue
29/57
184/364
7/33
36/27
84/161
2/20
90/47
127/111
60/28
21/41
275/235
9/11
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107th Street
Martin Luther King Jr Drive
50/76
201/466
2/5
12/10
3/5
1/2
122/54
9/13
55/97
40/62
492/235
6/5
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107th Street
Cottage Grove Avenue
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74/110
376/204
124/178
240/253
76/163
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Marshfield Avenue
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326/305
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174/77
554/539
332/233
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Hamlet Avenue
196/285
216/434
4/11
592/534
34/81
463/514
372/479
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112th Place
Marshfield Avenue
5/6
57/150
407/419
60/106
569/465
646/480
62/58
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112th Place
Hamlet Avenue
42/65
476/884
96/102
116/121
191/273
67/153
163/78
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43/84
1151/699
97/87
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Halsted Street
82/88
346/424
44/76
467/327
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63/44
101/34
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Normal Avenue
21/43
107/150
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49/50
425/370
20/39
45/21
418/384
34/39
26/31
175/118
35/39
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111th Street
Wentworth Avenue
29/64
96/227
48/83
61/86
347/467
28/81
52/51
281/330
23/49
55/45
319/219
89/98
37
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State Street
41/64
118/279
41/46
82/50
371/418
37/87
84/59
393/348
28/78
20/46
308/231
44/58
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Michigan Avenue
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357/293
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99/86
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Indiana Avenue
98/63
90/146
43/62
63/60
442/327
15/26
74/55
384/281
21/28
37/26
103/133
41/47
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Martin Luther King Jr Drive
52/82
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94/86
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48/24
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77/213
7/10
78/212
183/185
646/614
274/112
123/224
502/642
188/24
103/61
20/4
185/107
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111th Street
Doty Road
572/578
32/19
531/333
6/2
518/518
247/443
44
111th Street
I-94 Eastbound Ramps
550/537
537/335
45
111th Street
I-94 Westbound Ramps
42/58
15/21
72/101
326/511
127/196
353/475
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115th Street
Marshfield Avenue
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68/95
357/481
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Ashland Avenue
126/144
91/87
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31/81
247/386
34/91
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85/78
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115th Street
Racine Road
87/180
430/950
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176/311
50/159
196/114
202/201
39/88
71/124
1009/542
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115th Street
Halsted Street

UPRR ROW Option Alternative (2030) Intersection Traffic Volumes

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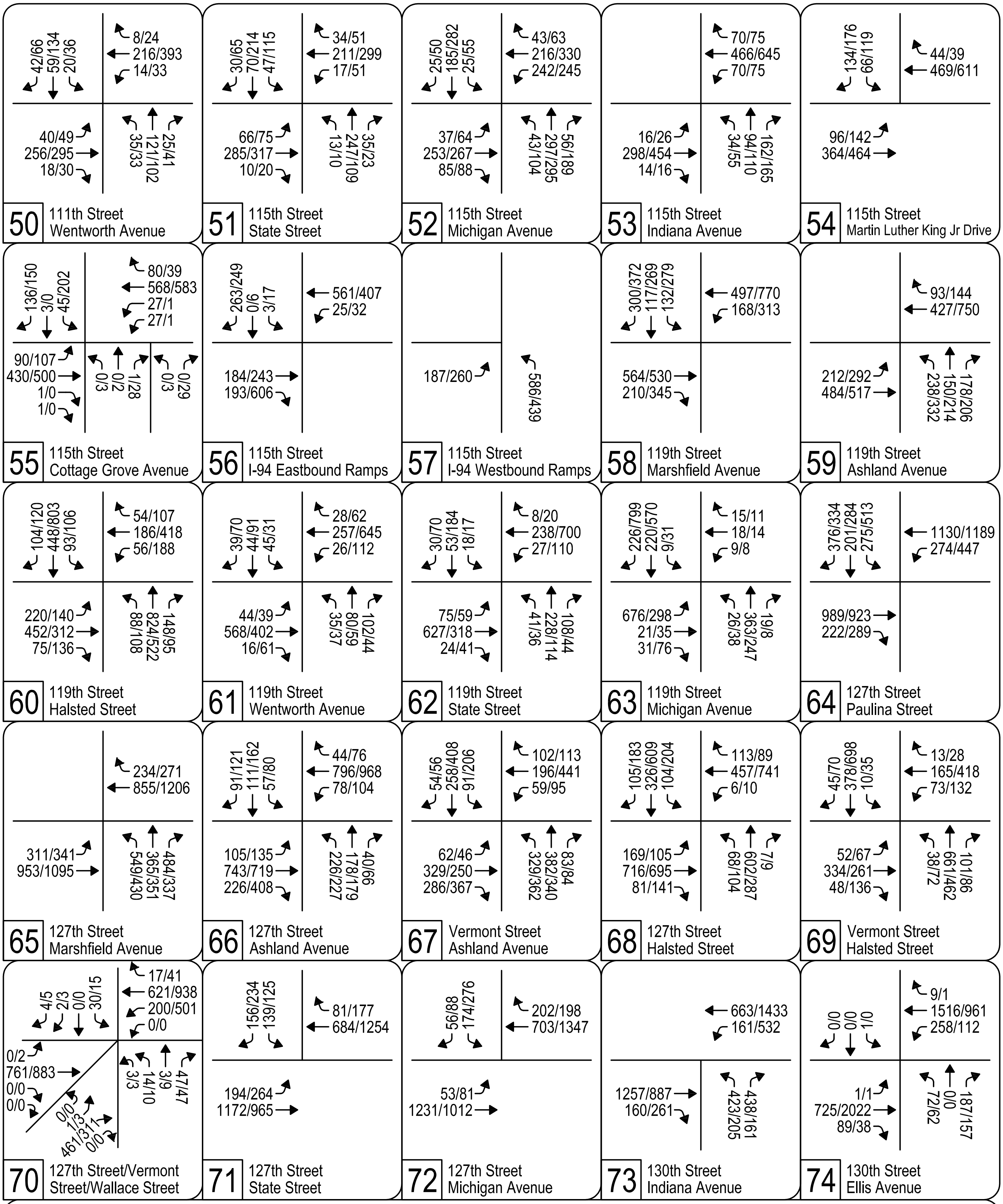
Legend: AM/PM Peak Hour Volumes



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Wentworth Avenue
30/65
70/214
47/115
34/51
211/299
17/51
66/75
285/317
10/20
13/10
247/109
35/23
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115th Street
State Street
25/50
185/282
25/55
43/63
216/330
242/245
37/64
253/267
85/88
43/104
297/295
56/189
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115th Street
Michigan Avenue
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466/645
70/75
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298/454
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94/110
162/165
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115th Street
Indiana Avenue
134/176
66/119
44/39
469/611
96/142
364/464
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115th Street
Martin Luther King Jr Drive
136/150
3/0
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90/107
430/500
1/0
1/0
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0/2
1/28
0/3
0/29
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115th Street
Cottage Grove Avenue
263/249
0/6
3/17
561/407
25/32
184/243
193/606
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115th Street
I-94 Eastbound Ramps
187/260
586/439
57
115th Street
I-94 Westbound Ramps
300/372
117/269
132/279
497/770
168/313
564/530
210/345
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119th Street
Marshfield Avenue
93/144
427/750
212/292
484/517
238/332
150/214
178/206
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119th Street
Ashland Avenue
104/120
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54/107
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56/188
220/140
452/312
75/136
88/108
824/522
148/95
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Halsted Street
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28/62
257/645
26/112
44/39
568/402
16/61
35/37
80/59
102/44
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Wentworth Avenue
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53/184
18/17
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State Street
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363/247
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47/47
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127th Street/Vermont
Street/Wallace Street
156/234
139/125
81/177
684/1254
194/264
1172/965
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127th Street
State Street
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174/276
202/198
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1231/1012
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127th Street
Michigan Avenue
663/1433
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423/205
438/161
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130th Street
Indiana Avenue
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1/0
9/1
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258/112
1/1
725/2022
89/38
72/62
0/0
187/157
74
130th Street
Ellis Avenue

UPRR ROW Option Alternative (2030) Intersection Traffic Volumes

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Legend: AM/PM Peak Hour Volumes

HCM Signalized Intersection Capacity Analysis
1001: 95th Street & Wentworth Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			✥			✥	
Volume (vph)	39	841	19	24	813	49	46	68	80	39	43	95
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	16	10	10	16	8	15	8	8	14	8
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			0.99			0.99	
Flpb, ped/bikes	0.99	1.00		1.00	1.00			1.00			1.00	
Frt	1.00	1.00		1.00	0.99			0.94			0.93	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1417	2976		1592	2979			1755			1673	
Flt Permitted	0.25	1.00		0.25	1.00			0.90			0.91	
Satd. Flow (perm)	369	2976		417	2979			1596			1531	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	41	885	20	25	856	52	48	72	84	41	45	100
RTOR Reduction (vph)	0	2	0	0	7	0	0	39	0	0	59	0
Lane Group Flow (vph)	41	903	0	25	901	0	0	165	0	0	127	0
Confl. Peds. (#/hr)	61		11	11		61	3		5	5		3
Confl. Bikes (#/hr)	1		1	1		1						
Heavy Vehicles (%)	11%	7%	0%	0%	6%	2%	2%	7%	4%	5%	7%	3%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	34.0	34.0		34.0	34.0			22.0			22.0	
Effective Green, g (s)	34.0	34.0		34.0	34.0			23.0			23.0	
Actuated g/C Ratio	0.52	0.52		0.52	0.52			0.35			0.35	
Clearance Time (s)	4.0	4.0		4.0	4.0			5.0			5.0	
Lane Grp Cap (vph)	193	1557		218	1558			565			542	
v/s Ratio Prot		c0.30			0.30							
v/s Ratio Perm	0.11			0.06				c0.10			0.08	
v/c Ratio	0.21	0.58		0.11	0.58			0.29			0.23	
Uniform Delay, d1	8.3	10.6		7.9	10.6			15.1			14.8	
Progression Factor	1.00	1.00		0.83	1.16			1.00			1.00	
Incremental Delay, d2	2.5	1.6		0.9	1.4			1.3			1.0	
Delay (s)	10.8	12.2		7.5	13.6			16.4			15.8	
Level of Service	B	B		A	B			B			B	
Approach Delay (s)		12.1			13.5			16.4			15.8	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	13.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	55.1%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↑	↱				↰↰	↑	↱
Volume (vph)	27	961	7	24	559	56	0	0	0	529	9	370
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	5.0	5.0		3.0	3.0	3.0				5.0	5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00				0.97	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.67				1.00	1.00	0.96
Flpb, ped/bikes	0.91	1.00		1.00	1.00	1.00				1.00	1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85				1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00				0.95	1.00	1.00
Satd. Flow (prot)	778	3285		1710	3138	512				3100	1440	1399
Flt Permitted	0.43	1.00		0.14	1.00	1.00				0.95	1.00	1.00
Satd. Flow (perm)	352	3285		248	3138	512				3100	1440	1399
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	28	1012	7	25	588	59	0	0	0	557	9	389
RTOR Reduction (vph)	0	1	0	0	0	26	0	0	0	0	0	172
Lane Group Flow (vph)	28	1018	0	25	588	33	0	0	0	557	9	217
Confl. Peds. (#/hr)	354		13	13		354	22		22	22		22
Confl. Bikes (#/hr)	4					4			1	1		
Heavy Vehicles (%)	100%	4%	0%	0%	9%	100%	0%	0%	0%	7%	25%	5%
Turn Type	pm+pt			pm+pt		Perm				Split		Perm
Protected Phases	7	4		3	8					6	6	
Permitted Phases	4			8		8						6
Actuated Green, G (s)	43.0	43.0		73.0	73.0	73.0				30.0	30.0	30.0
Effective Green, g (s)	43.0	43.0		73.0	73.0	73.0				30.0	30.0	30.0
Actuated g/C Ratio	0.33	0.33		0.56	0.56	0.56				0.23	0.23	0.23
Clearance Time (s)	5.0	5.0		3.0	3.0	3.0				5.0	5.0	5.0
Lane Grp Cap (vph)	162	1087		634	1762	288				715	332	323
v/s Ratio Prot	0.02	c0.31		0.01	c0.19					c0.18	0.01	
v/s Ratio Perm	0.04			0.01		0.06						0.16
v/c Ratio	0.17	0.94		0.04	0.33	0.12				0.78	0.03	0.67
Uniform Delay, d1	31.6	42.2		15.1	15.4	13.4				46.9	38.7	45.5
Progression Factor	0.80	0.82		0.29	0.63	1.53				1.00	1.00	1.00
Incremental Delay, d2	2.0	14.1		0.1	0.3	0.5				8.2	0.2	10.7
Delay (s)	27.2	48.9		4.5	10.0	20.9				55.1	38.9	56.2
Level of Service	C	D		A	A	C				E	D	E
Approach Delay (s)		48.3			10.7			0.0			55.4	
Approach LOS		D			B			A			E	

Intersection Summary			
HCM Average Control Delay	41.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	52.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1003: 95th Street & State Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↱		↰	↑↑	↱		↰↑	↱	↰		↱
Volume (vph)	486	873	131	22	474	273	134	513	61	44	0	31
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0	3.0		5.0	5.0	5.0		5.0	5.0	5.0		5.0
Lane Util. Factor	0.97	0.95		1.00	0.95	1.00		0.95	1.00	1.00		1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.65		1.00	0.94	1.00		0.96
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Frt	1.00	0.98		1.00	1.00	0.85		1.00	0.85	1.00		0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.99	1.00	0.95		1.00
Satd. Flow (prot)	3190	3107		1555	2923	944		3300	1417	855		734
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.99	1.00	0.95		1.00
Satd. Flow (perm)	3190	3107		1555	2923	944		3300	1417	855		734
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	512	919	138	23	499	287	141	540	64	46	0	33
RTOR Reduction (vph)	0	9	0	0	0	158	0	0	25	0	0	31
Lane Group Flow (vph)	512	1049	0	23	499	129	0	681	39	46	0	2
Confl. Peds. (#/hr)	425		21	21		425	6		34	34		6
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	4%	8%	3%	10%	17%	5%	1%	3%	2%	100%	0%	100%
Turn Type	Prot			Prot		Perm	Split		Perm	Prot		custom
Protected Phases	7	4		3	8		2	2		6		
Permitted Phases						8			2			6
Actuated Green, G (s)	43.0	65.0		9.0	31.0	31.0		30.0	30.0	8.0		8.0
Effective Green, g (s)	43.0	65.0		9.0	31.0	31.0		30.0	30.0	8.0		8.0
Actuated g/C Ratio	0.33	0.50		0.07	0.24	0.24		0.23	0.23	0.06		0.06
Clearance Time (s)	3.0	3.0		5.0	5.0	5.0		5.0	5.0	5.0		5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0	3.0	3.0		3.0
Lane Grp Cap (vph)	1055	1554		108	697	225		762	327	53		45
v/s Ratio Prot	0.16	c0.34		0.01	c0.17			c0.21		c0.05		
v/s Ratio Perm						0.14			0.03			0.00
v/c Ratio	0.49	0.67		0.21	0.72	0.57		0.89	0.12	0.87		0.05
Uniform Delay, d1	34.7	24.5		57.2	45.5	43.6		48.5	39.5	60.5		57.4
Progression Factor	0.75	0.20		1.00	1.00	1.00		0.95	0.90	1.00		1.00
Incremental Delay, d2	0.7	1.1		4.5	6.2	10.1		14.9	0.7	76.0		0.4
Delay (s)	26.9	6.0		61.6	51.7	53.8		60.7	36.2	136.5		57.8
Level of Service	C	A		E	D	D		E	D	F		E
Approach Delay (s)		12.8			52.7			58.6			103.6	
Approach LOS		B			D			E			F	

Intersection Summary			
HCM Average Control Delay	35.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	72.7%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1004: 95th Street & Michigan Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱		↰	↑↑		↰		↱	↰	↱	
Volume (vph)	0	897	222	62	638	0	111	0	108	3	13	2
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	11	11	8	12	12	12	14	15	12
Total Lost time (s)		4.0		4.0	4.0		4.0		4.0	4.0	4.0	
Lane Util. Factor		0.95		1.00	0.95		1.00		1.00	1.00	1.00	
Frpb, ped/bikes		0.99		1.00	1.00		1.00		0.98	1.00	1.00	
Flpb, ped/bikes		1.00		1.00	1.00		1.00		1.00	0.99	1.00	
Frt		0.97		1.00	1.00		1.00		0.85	1.00	0.98	
Flt Protected		1.00		0.95	1.00		0.95		1.00	0.95	1.00	
Satd. Flow (prot)		2860		1650	3005		1390		1465	1803	1943	
Flt Permitted		1.00		0.15	1.00		0.75		1.00	0.95	1.00	
Satd. Flow (perm)		2860		267	3005		1093		1465	1803	1943	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	997	247	69	709	0	123	0	120	3	14	2
RTOR Reduction (vph)	0	22	0	0	0	0	0	0	77	0	1	0
Lane Group Flow (vph)	0	1222	0	69	709	0	123	0	43	3	15	0
Confl. Peds. (#/hr)	49		15	15		49			12	12		
Heavy Vehicles (%)	0%	6%	14%	0%	10%	0%	23%	0%	2%	0%	0%	0%
Turn Type				Perm			custom		custom	Perm		
Protected Phases		4			8						6	
Permitted Phases				8			2		2	6		
Actuated Green, G (s)		60.0		60.0	60.0		32.0		32.0	32.0	32.0	
Effective Green, g (s)		60.0		60.0	60.0		32.0		32.0	32.0	32.0	
Actuated g/C Ratio		0.60		0.60	0.60		0.32		0.32	0.32	0.32	
Clearance Time (s)		4.0		4.0	4.0		4.0		4.0	4.0	4.0	
Lane Grp Cap (vph)		1716		160	1803		350		469	577	622	
v/s Ratio Prot		c0.43			0.24						0.01	
v/s Ratio Perm				0.26			c0.11		0.03	0.00		
v/c Ratio		0.71		0.43	0.39		0.35		0.09	0.01	0.02	
Uniform Delay, d1		14.0		10.8	10.5		26.0		23.8	23.2	23.3	
Progression Factor		1.00		1.00	1.00		1.00		1.00	1.00	1.00	
Incremental Delay, d2		2.5		8.3	0.6		2.8		0.4	0.0	0.1	
Delay (s)		16.5		19.1	11.1		28.8		24.2	23.2	23.4	
Level of Service		B		B	B		C		C	C	C	
Approach Delay (s)		16.5			11.8			26.5			23.3	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM Average Control Delay	16.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	60.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1005: 98th Place & Halsted Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↰	↰↑	↱	↰	↑↑↑			↑↑↑↱	
Volume (vph)	0	0	0	338	39	1052	202	910	0	0	477	752
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	12	12	10	10	12	12	11	12
Total Lost time (s)				4.0	4.0	5.0	3.0	4.0			4.0	
Lane Util. Factor				0.95	0.95	1.00	1.00	0.91			0.91	
Frpb, ped/bikes				1.00	1.00	0.99	1.00	1.00			0.98	
Flpb, ped/bikes				1.00	1.00	1.00	1.00	1.00			1.00	
Frt				1.00	1.00	0.85	1.00	1.00			0.91	
Flt Protected				0.95	1.00	1.00	0.95	1.00			1.00	
Satd. Flow (prot)				1525	1629	1479	1550	4368			3940	
Flt Permitted				0.95	1.00	1.00	0.95	1.00			1.00	
Satd. Flow (perm)				1525	1629	1479	1550	4368			3940	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	0	0	345	40	1073	206	929	0	0	487	767
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	345	40	1073	206	929	0	0	1254	0
Confl. Peds. (#/hr)	2					2	12		8	8		12
Heavy Vehicles (%)	0%	0%	0%	3%	5%	2%	3%	5%	0%	0%	5%	8%
Turn Type				Perm		Perm	Prot					
Protected Phases					8		5	2			6	
Permitted Phases				8		8						
Actuated Green, G (s)				30.0	30.0	30.0	32.0	66.0			31.0	
Effective Green, g (s)				31.0	31.0	30.0	32.0	66.0			31.0	
Actuated g/C Ratio				0.30	0.30	0.29	0.30	0.63			0.30	
Clearance Time (s)				5.0	5.0	5.0	3.0	4.0			4.0	
Lane Grp Cap (vph)				450	481	423	472	2746			1163	
v/s Ratio Prot							c0.13	0.21			c0.32	
v/s Ratio Perm				0.23	0.02	c0.73						
v/c Ratio				0.77	0.08	2.54	0.44	0.34			1.91dr	
Uniform Delay, d1				33.7	26.7	37.5	29.3	9.2			37.0	
Progression Factor				1.00	1.00	1.00	0.66	2.38			1.00	
Incremental Delay, d2				11.8	0.3	698.4	2.0	0.2			50.2	
Delay (s)				45.5	27.1	735.9	21.3	22.1			87.2	
Level of Service				D	C	F	C	C			F	
Approach Delay (s)		0.0			553.1			22.0			87.2	
Approach LOS		A			F			C			F	

Intersection Summary			
HCM Average Control Delay	244.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.33		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	95.0%	ICU Level of Service	F
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1006: 99th Street & Halsted Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↰↑↱						↑↑↑	↱↱	↰	↑↑↑	
Volume (vph)	263	867	92	0	0	0	0	849	662	286	529	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	13	12	12	12	12	12	10	10	8	12	12	12
Total Lost time (s)	5.0	5.0						4.0	4.0	3.0	4.0	
Lane Util. Factor	0.91	0.91						0.91	0.88	1.00	0.91	
Frpb, ped/bikes	1.00	1.00						1.00	0.97	1.00	1.00	
Flpb, ped/bikes	1.00	1.00						1.00	1.00	1.00	1.00	
Frt	1.00	0.99						1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00						1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1497	3184						4368	2187	1583	4636	
Flt Permitted	0.95	1.00						1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1497	3184						4368	2187	1583	4636	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	271	894	95	0	0	0	0	875	682	295	545	0
RTOR Reduction (vph)	0	7	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	244	1009	0	0	0	0	0	875	682	295	545	0
Confl. Peds. (#/hr)	4		14	14		4	4		3	3		4
Heavy Vehicles (%)	7%	1%	0%	0%	0%	0%	0%	5%	4%	8%	6%	0%
Turn Type	Perm								Perm	Prot		
Protected Phases		4						2		1	6	
Permitted Phases	4								2			
Actuated Green, G (s)	34.0	34.0						28.0	28.0	31.0	62.0	
Effective Green, g (s)	34.0	34.0						28.0	28.0	31.0	62.0	
Actuated g/C Ratio	0.32	0.32						0.27	0.27	0.30	0.59	
Clearance Time (s)	5.0	5.0						4.0	4.0	3.0	4.0	
Lane Grp Cap (vph)	485	1031						1165	583	467	2737	
v/s Ratio Prot								0.20		c0.19	0.12	
v/s Ratio Perm	0.16	0.32							c0.31			
v/c Ratio	0.50	0.98						0.75	1.17	0.63	0.20	
Uniform Delay, d1	28.7	35.1						35.3	38.5	32.1	10.0	
Progression Factor	1.00	1.00						0.43	0.46	1.06	0.42	
Incremental Delay, d2	3.7	23.4						0.4	78.3	2.2	0.1	
Delay (s)	32.4	58.5						15.7	96.0	36.1	4.3	
Level of Service	C	E						B	F	D	A	
Approach Delay (s)		53.5			0.0			50.9			15.5	
Approach LOS		D			A			D			B	

Intersection Summary			
HCM Average Control Delay	43.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	95.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1007: 98th Place & Wentworth Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↰	↑↱		↰	↑			↱	
Volume (vph)	0	0	0	218	4	21	3	166	0	0	115	3
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	14	12	12	16	12
Total Lost time (s)				4.0	4.0		4.0	4.0			-3.0	
Lane Util. Factor				1.00	0.95		1.00	1.00			1.00	
Frpb, ped/bikes				1.00	0.98		1.00	1.00			1.00	
Flpb, ped/bikes				1.00	1.00		1.00	1.00			1.00	
Frt				1.00	0.87		1.00	1.00			1.00	
Flt Protected				0.95	1.00		0.95	1.00			1.00	
Satd. Flow (prot)				1578	2709		1285	1882			1961	
Flt Permitted				0.95	1.00		0.58	1.00			1.00	
Satd. Flow (perm)				1578	2709		782	1882			1961	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	242	4	23	3	184	0	0	128	3
RTOR Reduction (vph)	0	0	0	0	18	0	0	0	0	0	1	0
Lane Group Flow (vph)	0	0	0	242	9	0	3	184	0	0	130	0
Confl. Peds. (#/hr)	2		2	2		2	3					3
Heavy Vehicles (%)	0%	0%	0%	8%	25%	5%	33%	2%	0%	0%	3%	33%
Turn Type				Perm			pm+pt					
Protected Phases					8		7	2			6	
Permitted Phases				8			2					
Actuated Green, G (s)				27.0	27.0		50.0	50.0			40.0	
Effective Green, g (s)				27.0	27.0		50.0	50.0			46.0	
Actuated g/C Ratio				0.32	0.32		0.59	0.59			0.54	
Clearance Time (s)				4.0	4.0		4.0	4.0			3.0	
Lane Grp Cap (vph)				501	861		501	1107			1061	
v/s Ratio Prot					0.00		0.00	c0.10			0.07	
v/s Ratio Perm				c0.15			0.00					
v/c Ratio				0.48	0.01		0.01	0.17			0.12	
Uniform Delay, d1				23.4	19.9		10.0	8.0			9.6	
Progression Factor				1.00	1.00		1.06	1.18			1.00	
Incremental Delay, d2				3.3	0.0		0.0	0.3			0.2	
Delay (s)				26.7	19.9		10.6	9.8			9.8	
Level of Service				C	B		B	A			A	
Approach Delay (s)		0.0			26.0			9.8			9.8	
Approach LOS		A			C			A			A	

Intersection Summary			
HCM Average Control Delay	17.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	33.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱			✥			↱		↰	↑	
Volume (vph)	8	5	5	12	0	18	0	143	42	33	300	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	16	15	12	8	12	8	12	12	12	10	13	12
Total Lost time (s)	4.0	4.0			4.0			3.0		4.0	4.0	
Lane Util. Factor	1.00	1.00			1.00			1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.99			1.00			1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00			1.00			1.00		1.00	1.00	
Frt	1.00	0.93			0.92			0.97		1.00	1.00	
Flt Protected	0.95	1.00			0.98			1.00		0.95	1.00	
Satd. Flow (prot)	1938	1809			1620			1686		1595	1755	
Flt Permitted	0.74	1.00			0.93			1.00		0.60	1.00	
Satd. Flow (perm)	1502	1809			1543			1686		1005	1755	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	8	5	5	13	0	19	0	151	44	35	316	0
RTOR Reduction (vph)	0	3	0	0	13	0	0	12	0	0	0	0
Lane Group Flow (vph)	8	7	0	0	19	0	0	183	0	35	316	0
Confl. Peds. (#/hr)			3	3			5		2	2		5
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	3%	3%	0%	6%	0%
Turn Type	Perm			Perm						pm+pt		
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8						6		
Actuated Green, G (s)	27.0	27.0			27.0			40.0		50.0	50.0	
Effective Green, g (s)	27.0	27.0			27.0			40.0		50.0	50.0	
Actuated g/C Ratio	0.32	0.32			0.32			0.47		0.59	0.59	
Clearance Time (s)	4.0	4.0			4.0			3.0		4.0	4.0	
Lane Grp Cap (vph)	477	575			490			793		640	1032	
v/s Ratio Prot		0.00						0.11		0.00	c0.18	
v/s Ratio Perm	0.01				c0.01					0.03		
v/c Ratio	0.02	0.01			0.04			0.23		0.05	0.31	
Uniform Delay, d1	19.9	19.9			20.0			13.4		8.5	8.8	
Progression Factor	1.00	1.00			1.00			1.00		1.01	0.92	
Incremental Delay, d2	0.1	0.0			0.1			0.7		0.2	0.7	
Delay (s)	20.0	19.9			20.2			14.0		8.8	8.9	
Level of Service	B	B			C			B		A	A	
Approach Delay (s)		19.9			20.2			14.0			8.9	
Approach LOS		B			C			B			A	

Intersection Summary			
HCM Average Control Delay	11.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.21		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	40.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1009: 99th St & State Street

1/14/2013

	↗	↘	↖	↑	↓	↙
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰↱		↰	↑	↱	
Volume (vph)	63	16	10	350	159	12
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	14	12	13	12	10	12
Total Lost time (s)	4.0		4.0	4.0	4.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.97		1.00	1.00	0.99	
Flt Protected	0.96		0.95	1.00	1.00	
Satd. Flow (prot)	1787		1767	1765	1634	
Flt Permitted	0.96		0.64	1.00	1.00	
Satd. Flow (perm)	1787		1187	1765	1634	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	70	18	11	389	177	13
RTOR Reduction (vph)	12	0	0	0	4	0
Lane Group Flow (vph)	76	0	11	389	186	0
Confl. Peds. (#/hr)		2				
Heavy Vehicles (%)	0%	0%	0%	2%	2%	0%
Turn Type			Perm			
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	21.0		36.0	36.0	36.0	
Effective Green, g (s)	21.0		36.0	36.0	36.0	
Actuated g/C Ratio	0.32		0.55	0.55	0.55	
Clearance Time (s)	4.0		4.0	4.0	4.0	
Lane Grp Cap (vph)	577		657	978	905	
v/s Ratio Prot	c0.04			c0.22	0.11	
v/s Ratio Perm			0.01			
v/c Ratio	0.13		0.02	0.40	0.21	
Uniform Delay, d1	15.6		6.5	8.3	7.3	
Progression Factor	1.00		0.32	0.52	1.16	
Incremental Delay, d2	0.5		0.0	1.1	0.4	
Delay (s)	16.0		2.2	5.4	8.9	
Level of Service	B		A	A	A	
Approach Delay (s)	16.0			5.3	8.9	
Approach LOS	B			A	A	

Intersection Summary			
HCM Average Control Delay	7.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	39.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1010: 99th St & Michigan Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↰↑↱		↰	↑			↑	↱
Volume (vph)	0	0	0	23	274	14	568	253	0	0	193	35
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	14	16	12	12	15	12	12	13	10
Total Lost time (s)					4.0		4.0	4.0			3.0	3.0
Lane Util. Factor					0.95		1.00	1.00			1.00	1.00
Frpb, ped/bikes					1.00		1.00	1.00			1.00	1.00
Flpb, ped/bikes					1.00		1.00	1.00			1.00	1.00
Frt					0.99		1.00	1.00			1.00	0.85
Flt Protected					1.00		0.95	1.00			1.00	1.00
Satd. Flow (prot)					3738		1660	1752			1603	1298
Flt Permitted					1.00		0.57	1.00			1.00	1.00
Satd. Flow (perm)					3738		1002	1752			1603	1298
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	26	304	16	631	281	0	0	214	39
RTOR Reduction (vph)	0	0	0	0	4	0	0	0	0	0	0	22
Lane Group Flow (vph)	0	0	0	0	342	0	631	281	0	0	214	17
Confl. Peds. (#/hr)									30	30		
Heavy Vehicles (%)	0%	0%	0%	11%	2%	0%	3%	13%	0%	0%	16%	10%
Turn Type				Split			pm+pt					Perm
Protected Phases				8	8		7	2			6	
Permitted Phases							2					6
Actuated Green, G (s)					26.0		51.0	51.0			38.0	38.0
Effective Green, g (s)					26.0		51.0	51.0			38.0	38.0
Actuated g/C Ratio					0.31		0.60	0.60			0.45	0.45
Clearance Time (s)					4.0		4.0	4.0			3.0	3.0
Lane Grp Cap (vph)					1143		679	1051			717	580
v/s Ratio Prot					c0.09		c0.11	0.16			0.13	
v/s Ratio Perm							c0.45					0.01
v/c Ratio					0.30		0.93	0.27			0.30	0.03
Uniform Delay, d1					22.5		17.0	8.1			15.0	13.2
Progression Factor					1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2					0.7		21.0	0.6			1.1	0.1
Delay (s)					23.2		38.0	8.7			16.1	13.3
Level of Service					C		D	A			B	B
Approach Delay (s)		0.0			23.2			29.0			15.6	
Approach LOS		A			C			C			B	

Intersection Summary			
HCM Average Control Delay	25.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	63.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1011: 99th Street & Martin Luther King Jr Drive

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↰↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	0	0	0	15	11	9	331	528	97	74	340	12
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	15	12	12	12	12	12	13	12
Total Lost time (s)					4.0		3.0	4.0		3.0	4.0	
Lane Util. Factor					1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes					1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes					1.00		1.00	1.00		1.00	1.00	
Frt					0.97		1.00	0.98		1.00	1.00	
Flt Protected					0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)					1803		1692	3236		1707	3352	
Flt Permitted					0.98		0.50	1.00		0.31	1.00	
Satd. Flow (perm)					1803		892	3236		564	3352	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	17	12	10	368	587	108	82	378	13
RTOR Reduction (vph)	0	0	0	0	7	0	0	20	0	0	3	0
Lane Group Flow (vph)	0	0	0	0	32	0	368	675	0	82	388	0
Confl. Peds. (#/hr)	2					2	6		20	20		6
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	0%	0%	0%	0%	11%	0%	1%	3%	0%	0%	5%	0%
Turn Type				Split			pm+pt			pm+pt		
Protected Phases				8	8		5	2		1	6	
Permitted Phases							2			6		
Actuated Green, G (s)					23.0		41.0	34.0		41.0	34.0	
Effective Green, g (s)					23.0		41.0	34.0		41.0	34.0	
Actuated g/C Ratio					0.31		0.55	0.45		0.55	0.45	
Clearance Time (s)					4.0		3.0	4.0		3.0	4.0	
Lane Grp Cap (vph)					553		562	1467		415	1520	
v/s Ratio Prot					c0.02		c0.06	0.21		0.02	0.12	
v/s Ratio Perm							c0.30			0.09		
v/c Ratio					0.06		0.65	0.46		0.20	0.26	
Uniform Delay, d1					18.4		13.8	14.2		12.4	12.7	
Progression Factor					1.00		0.69	0.74		1.00	1.00	
Incremental Delay, d2					0.2		5.4	0.9		1.1	0.4	
Delay (s)					18.6		14.9	11.4		13.4	13.1	
Level of Service					B		B	B		B	B	
Approach Delay (s)		0.0			18.6			12.6			13.1	
Approach LOS		A			B			B			B	

Intersection Summary			
HCM Average Control Delay	12.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	56.0%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1012: 100th Street & Martin Luther King Jr Drive

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣		↰	↑↱		↰	↑↱	
Volume (vph)	57	54	24	13	169	222	20	677	12	69	271	15
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	16	12	12	10	11	12	12	11	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.98			0.93		1.00	1.00		1.00	0.99	
Flt Protected		0.98			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1946			1626		1596	3232		1641	3131	
Flt Permitted		0.68			0.99		0.57	1.00		0.33	1.00	
Satd. Flow (perm)		1354			1613		955	3232		574	3131	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	60	57	25	14	178	234	21	713	13	73	285	16
RTOR Reduction (vph)	0	10	0	0	59	0	0	2	0	0	5	0
Lane Group Flow (vph)	0	132	0	0	367	0	21	724	0	73	296	0
Confl. Peds. (#/hr)									6	6		
Confl. Bikes (#/hr)			1	1								
Heavy Vehicles (%)	0%	0%	0%	12%	2%	2%	0%	2%	0%	4%	5%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		25.0			25.0		42.0	42.0		42.0	42.0	
Effective Green, g (s)		25.0			25.0		42.0	42.0		42.0	42.0	
Actuated g/C Ratio		0.33			0.33		0.56	0.56		0.56	0.56	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		451			538		535	1810		321	1753	
v/s Ratio Prot								c0.22			0.09	
v/s Ratio Perm		0.10			c0.23		0.02			0.13		
v/c Ratio		0.29			0.68		0.04	0.40		0.23	0.17	
Uniform Delay, d1		18.5			21.6		7.4	9.4		8.3	8.0	
Progression Factor		1.00			1.00		1.00	1.00		0.18	0.07	
Incremental Delay, d2		1.6			6.9		0.1	0.7		1.6	0.2	
Delay (s)		20.1			28.4		7.6	10.0		3.1	0.8	
Level of Service		C			C		A	B		A	A	
Approach Delay (s)		20.1			28.4			9.9			1.2	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM Average Control Delay	13.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	69.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

1013: 100th Street & Cottage Grove Avenue

	↗	↘	↖	↑	↓	↙
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰↱			↰↑ ↑	↑ ↑↱	
Sign Control	Stop			Stop	Stop	
Volume (vph)	45	57	105	326	195	19
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	50	63	117	362	217	21

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	113	237	241	144	93
Volume Left (vph)	50	117	0	0	0
Volume Right (vph)	63	0	0	0	21
Hadj (s)	-0.16	0.33	0.08	0.09	-0.07
Departure Headway (s)	5.3	5.4	5.1	5.4	5.2
Degree Utilization, x	0.17	0.36	0.35	0.22	0.14
Capacity (veh/h)	628	653	684	641	660
Control Delay (s)	9.3	10.1	9.6	8.7	7.9
Approach Delay (s)	9.3	9.9		8.4	
Approach LOS	A	A		A	

Intersection Summary			
Delay	9.4		
HCM Level of Service	A		
Intersection Capacity Utilization	35.4%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Signalized Intersection Capacity Analysis
1014: 103rd Street & Vincennes Avenue

1/14/2013

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR
Lane Configurations		↰	↑	↱	↰	↑	↱			↰	↑↱	
Volume (vph)	45	52	336	13	6	482	39	40	42	53	720	45
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		3.5	4.0	4.0	4.0	4.0	4.0			4.0	4.0	
Lane Util. Factor		1.00	1.00	1.00	1.00	1.00	1.00			1.00	0.95	
Frpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	0.97			1.00	1.00	
Flpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	
Frt		1.00	1.00	0.85	1.00	1.00	0.85			1.00	0.99	
Flt Protected		0.95	1.00	1.00	0.95	1.00	1.00			0.95	1.00	
Satd. Flow (prot)		1575	1731	1530	1710	1731	1487			1710	3290	
Flt Permitted		0.11	1.00	1.00	0.54	1.00	1.00			0.39	1.00	
Satd. Flow (perm)		187	1731	1530	971	1731	1487			700	3290	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	50	58	373	14	7	536	43	44	47	59	800	50
RTOR Reduction (vph)	0	0	0	7	0	0	31	0	0	0	5	0
Lane Group Flow (vph)	0	108	373	7	7	536	56	0	0	106	845	0
Confl. Peds. (#/hr)		5					5					6
Heavy Vehicles (%)	8%	9%	4%	0%	0%	4%	0%	0%	0%	0%	3%	0%
Turn Type	Perm	pm+pt		Perm	Perm		Perm		Perm	Perm		
Protected Phases		7	4			8					2	
Permitted Phases	4	4		4	8		8		2	2		
Actuated Green, G (s)		50.0	50.0	50.0	32.0	32.0	32.0			25.0	25.0	
Effective Green, g (s)		50.0	50.0	50.0	32.0	32.0	32.0			25.0	25.0	
Actuated g/C Ratio		0.48	0.48	0.48	0.30	0.30	0.30			0.24	0.24	
Clearance Time (s)		3.5	4.0	4.0	4.0	4.0	4.0			4.0	4.0	
Lane Grp Cap (vph)		281	824	729	296	528	453			167	783	
v/s Ratio Prot		0.05	c0.22			c0.31					c0.26	
v/s Ratio Perm		0.13		0.00	0.01		0.04			0.15		
v/c Ratio		0.38	0.45	0.01	0.02	1.02	0.12			0.63	1.08	
Uniform Delay, d1		20.3	18.4	14.5	25.6	36.5	26.4			35.9	40.0	
Progression Factor		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	
Incremental Delay, d2		3.9	1.8	0.0	0.1	43.0	0.6			17.0	55.9	
Delay (s)		24.2	20.2	14.5	25.7	79.5	26.9			52.9	95.9	
Level of Service		C	C	B	C	E	C			D	F	
Approach Delay (s)			20.9			71.7					91.1	
Approach LOS			C			E					F	

Intersection Summary			
HCM Average Control Delay	62.9	HCM Level of Service	E
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	79.8%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1014: 103rd Street & Vincennes Avenue

1/14/2013

Movement	SBL	SBT	SBR	SBR2	SEL2	SEL	SER	SER2
Lane Configurations	↰	↑↱				↰	↱↱	
Volume (vph)	54	300	27	33	4	64	114	12
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.5	4.5				4.5	4.5	
Lane Util. Factor	1.00	0.95				1.00	0.88	
Frpb, ped/bikes	1.00	1.00				1.00	1.00	
Flpb, ped/bikes	1.00	1.00				1.00	1.00	
Frt	1.00	0.97				1.00	0.85	
Flt Protected	0.95	1.00				0.95	1.00	
Satd. Flow (prot)	1706	3279				1710	2621	
Flt Permitted	0.16	1.00				0.95	1.00	
Satd. Flow (perm)	293	3279				1710	2621	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	60	333	30	37	4	71	127	13
RTOR Reduction (vph)	0	8	0	0	0	0	7	0
Lane Group Flow (vph)	60	392	0	0	0	75	133	0
Confl. Peds. (#/hr)	6							
Heavy Vehicles (%)	0%	2%	0%	0%	0%	0%	3%	0%
Turn Type	Perm				Split		Perm	
Protected Phases		6			9	9		
Permitted Phases	6						9	
Actuated Green, G (s)	24.5	24.5				17.5	17.5	
Effective Green, g (s)	24.5	24.5				17.5	17.5	
Actuated g/C Ratio	0.23	0.23				0.17	0.17	
Clearance Time (s)	4.5	4.5				4.5	4.5	
Lane Grp Cap (vph)	68	765				285	437	
v/s Ratio Prot		0.12				0.04		
v/s Ratio Perm	0.20						c0.05	
v/c Ratio	0.88	0.51				0.26	0.31	
Uniform Delay, d1	38.9	35.1				38.1	38.4	
Progression Factor	1.00	1.00				1.00	1.00	
Incremental Delay, d2	79.4	2.4				2.2	1.8	
Delay (s)	118.3	37.5				40.4	40.2	
Level of Service	F	D				D	D	
Approach Delay (s)		48.0				40.3		
Approach LOS		D				D		

Intersection Summary

HCM Signalized Intersection Capacity Analysis
1015: 103rd Street & Morgan Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰			↱			✥				
Volume (vph)	24	497	0	0	492	27	118	116	123	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	11	11	11	16	11	12	15	12	12	15	12
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		1.00			0.99			0.95				
Flt Protected		1.00			1.00			0.98				
Satd. Flow (prot)		1653			1929			1769				
Flt Permitted		0.96			1.00			0.98				
Satd. Flow (perm)		1598			1929			1769				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	27	552	0	0	547	30	131	129	137	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	579	0	0	577	0	0	397	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)		31.0			31.0			26.0				
Effective Green, g (s)		31.0			31.0			26.0				
Actuated g/C Ratio		0.48			0.48			0.40				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		762			920			708				
v/s Ratio Prot					0.30							
v/s Ratio Perm		c0.36						0.22				
v/c Ratio		0.76			0.63			0.56				
Uniform Delay, d1		13.9			12.7			15.1				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		7.0			3.2			3.2				
Delay (s)		21.0			15.9			18.3				
Level of Service		C			B			B				
Approach Delay (s)		21.0			15.9			18.3			0.0	
Approach LOS		C			B			B			A	

Intersection Summary			
HCM Average Control Delay	18.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	76.2%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1016: 103rd Street & Halsted Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱	↰	↑↑	↱	↰	↑↑	↱
Volume (vph)	116	398	114	67	276	116	148	1707	130	92	445	93
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	10	10	9	9	10	9
Total Lost time (s)		4.0	4.0		4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		1.00	0.96		1.00	0.96	1.00	1.00	0.97	1.00	1.00	0.96
Flpb, ped/bikes		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.99	1.00		0.99	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1924	1426		1923	1396	1500	3099	1284	1425	2956	1265
Flt Permitted		0.65	1.00		0.54	1.00	0.40	1.00	1.00	0.09	1.00	1.00
Satd. Flow (perm)		1265	1426		1040	1396	631	3099	1284	142	2956	1265
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	122	419	120	71	291	122	156	1797	137	97	468	98
RTOR Reduction (vph)	0	0	71	0	0	72	0	0	30	0	0	59
Lane Group Flow (vph)	0	541	49	0	362	50	156	1797	107	97	468	39
Confl. Peds. (#/hr)	42		39	39		42	20		8	8		20
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	6%	4%	3%	0%	6%	5%	6%	3%	4%	8%	8%	4%
Turn Type	pm+pt		Perm	Perm		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)		43.0	43.0		43.0	43.0	52.7	44.0	44.0	49.3	42.3	42.3
Effective Green, g (s)		43.0	43.0		43.0	43.0	52.7	44.0	44.0	49.3	42.3	42.3
Actuated g/C Ratio		0.41	0.41		0.41	0.41	0.50	0.42	0.42	0.47	0.40	0.40
Clearance Time (s)		4.0	4.0		4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		518	584		426	572	389	1299	538	152	1191	510
v/s Ratio Prot							c0.03	c0.58		c0.04	0.16	
v/s Ratio Perm		c0.43	0.03		0.35	0.04	0.17		0.08	0.26		0.03
v/c Ratio		1.04	0.08		0.85	0.09	0.40	1.38	0.20	0.64	0.39	0.08
Uniform Delay, d1		31.0	19.0		28.1	19.0	14.9	30.5	19.3	23.3	22.2	19.3
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.25	0.75	0.39
Incremental Delay, d2		51.6	0.3		18.7	0.3	0.7	177.4	0.8	8.2	0.9	0.3
Delay (s)		82.6	19.2		46.8	19.3	15.6	207.9	20.2	37.4	17.7	7.9
Level of Service		F	B		D	B	B	F	C	D	B	A
Approach Delay (s)		71.1			39.9			181.2			19.2	
Approach LOS		E			D			F			B	

Intersection Summary			
HCM Average Control Delay	117.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.17		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	116.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1017: 103rd Street & Normal Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣				
Volume (vph)	59	558	59	51	421	50	67	62	58	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	15	12	12	15	12
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		0.99			0.99			0.96				
Flt Protected		1.00			1.00			0.98				
Satd. Flow (prot)		1630			1628			1775				
Flt Permitted		0.92			0.89			0.98				
Satd. Flow (perm)		1501			1455			1775				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	66	620	66	57	468	56	74	69	64	0	0	0
RTOR Reduction (vph)	0	5	0	0	6	0	0	25	0	0	0	0
Lane Group Flow (vph)	0	747	0	0	575	0	0	182	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm			Perm					
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Actuated Green, G (s)		38.0			38.0			19.0				
Effective Green, g (s)		38.0			38.0			19.0				
Actuated g/C Ratio		0.58			0.58			0.29				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		878			851			519				
v/s Ratio Prot												
v/s Ratio Perm		c0.50			0.40			0.10				
v/c Ratio		0.85			0.68			0.35				
Uniform Delay, d1		11.2			9.3			18.1				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		10.1			4.3			1.9				
Delay (s)		21.3			13.6			20.0				
Level of Service		C			B			C				
Approach Delay (s)		21.3			13.6			20.0			0.0	
Approach LOS		C			B			C			A	

Intersection Summary			
HCM Average Control Delay	18.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	66.8%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	30	509	67	32	450	39	55	150	89	49	192	53
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	11	12	12	15	12
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frpb, ped/bikes		1.00	0.97		1.00	0.95		1.00	0.98		0.98	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		0.99	1.00		1.00	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		0.98	
Flt Protected		1.00	1.00		1.00	1.00		0.99	1.00		0.99	
Satd. Flow (prot)		1656	1255		1636	1288		1658	1490		1738	
Flt Permitted		0.96	1.00		0.95	1.00		0.84	1.00		0.92	
Satd. Flow (perm)		1594	1255		1555	1288		1417	1490		1608	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	32	536	71	34	474	41	58	158	94	52	202	56
RTOR Reduction (vph)	0	0	30	0	0	15	0	0	64	0	11	0
Lane Group Flow (vph)	0	568	41	0	508	26	0	216	30	0	299	0
Confl. Peds. (#/hr)	33		15	15		33	68		5	5		68
Confl. Bikes (#/hr)	4					4						
Heavy Vehicles (%)	0%	5%	14%	19%	5%	9%	2%	2%	1%	10%	7%	8%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		43.0	43.0		43.0	43.0		24.0	24.0		24.0	
Effective Green, g (s)		43.0	43.0		43.0	43.0		24.0	24.0		24.0	
Actuated g/C Ratio		0.57	0.57		0.57	0.57		0.32	0.32		0.32	
Clearance Time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	
Lane Grp Cap (vph)		914	720		892	738		453	477		515	
v/s Ratio Prot												
v/s Ratio Perm		c0.36	0.03		0.33	0.02		0.15	0.02		c0.19	
v/c Ratio		0.62	0.06		0.57	0.03		0.48	0.06		0.58	
Uniform Delay, d1		10.6	7.1		10.1	7.0		20.5	17.7		21.3	
Progression Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2		3.2	0.1		2.6	0.1		3.6	0.3		4.7	
Delay (s)		13.8	7.2		12.8	7.1		24.0	18.0		26.0	
Level of Service		B	A		B	A		C	B		C	
Approach Delay (s)		13.0			12.3			22.2			26.0	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM Average Control Delay	16.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	95.3%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1019: 103rd Street & State Street

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑	↱	↰	↑	↱
Volume (vph)	84	440	30	17	326	39	55	303	38	38	92	11
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	11	16	8	10	10	10	10	10	10
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	0.98	1.00	1.00	0.99
Flpb, ped/bikes	0.99	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1464	2990		1459	3535		1534	1647	1301	1517	1541	1156
Flt Permitted	0.50	1.00		0.43	1.00		0.69	1.00	1.00	0.45	1.00	1.00
Satd. Flow (perm)	777	2990		656	3535		1116	1647	1301	720	1541	1156
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	93	489	33	19	362	43	61	337	42	42	102	12
RTOR Reduction (vph)	0	7	0	0	14	0	0	0	22	0	0	7
Lane Group Flow (vph)	93	515	0	19	391	0	61	337	20	42	102	5
Confl. Peds. (#/hr)	16		9	9		16	1		5	5		1
Heavy Vehicles (%)	8%	6%	0%	13%	8%	3%	4%	2%	8%	5%	9%	22%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	31.0	31.0		31.0	31.0		26.0	26.0	26.0	26.0	26.0	26.0
Effective Green, g (s)	31.0	31.0		31.0	31.0		26.0	26.0	26.0	26.0	26.0	26.0
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.40	0.40	0.40	0.40	0.40	0.40
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	371	1426		313	1686		446	659	520	288	616	462
v/s Ratio Prot		c0.17			0.11			c0.20			0.07	
v/s Ratio Perm	0.12			0.03			0.05		0.02	0.06		0.00
v/c Ratio	0.25	0.36		0.06	0.23		0.14	0.51	0.04	0.15	0.17	0.01
Uniform Delay, d1	10.1	10.7		9.2	10.0		12.4	14.7	11.9	12.4	12.5	11.7
Progression Factor	1.00	1.00		1.00	1.00		0.60	0.74	0.30	0.53	0.54	0.28
Incremental Delay, d2	1.6	0.7		0.4	0.3		0.6	2.8	0.1	1.1	0.6	0.0
Delay (s)	11.7	11.5		9.5	10.3		8.0	13.7	3.7	7.7	7.3	3.4
Level of Service	B	B		A	B		A	B	A	A	A	A
Approach Delay (s)		11.5			10.3			11.9			7.1	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM Average Control Delay	10.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	51.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1020: 103rd Street & Michigan Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	98	416	85	44	291	65	73	371	44	57	143	55
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	11	10	11	11	10	11	11	10	11	11
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	0.96	1.00		1.00	1.00		0.98	1.00		0.97	1.00	
Frt	1.00	0.97		1.00	0.97		1.00	0.98		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1465	3058		1588	3012		1541	3022		1403	2767	
Flt Permitted	0.52	1.00		0.42	1.00		0.62	1.00		0.46	1.00	
Satd. Flow (perm)	799	3058		697	3012		1007	3022		678	2767	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	103	438	89	46	306	68	77	391	46	60	151	58
RTOR Reduction (vph)	0	0	0	0	0	0	0	12	0	0	34	0
Lane Group Flow (vph)	103	527	0	46	374	0	77	425	0	60	175	0
Confl. Peds. (#/hr)	98		10	10		98	28		52	52		28
Heavy Vehicles (%)	5%	5%	4%	0%	5%	7%	2%	6%	13%	10%	11%	20%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	36.0	36.0		36.0	36.0		31.0	31.0		31.0	31.0	
Effective Green, g (s)	36.0	36.0		36.0	36.0		31.0	31.0		31.0	31.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.41	0.41		0.41	0.41	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	384	1468		335	1446		416	1249		280	1144	
v/s Ratio Prot		c0.17			0.12			c0.14			0.06	
v/s Ratio Perm	0.13			0.07			0.08			0.09		
v/c Ratio	0.27	0.36		0.14	0.26		0.19	0.34		0.21	0.15	
Uniform Delay, d1	11.6	12.3		10.9	11.6		14.0	15.0		14.2	13.8	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.7	0.7		0.9	0.4		1.0	0.7		1.7	0.3	
Delay (s)	13.3	12.9		11.7	12.0		15.0	15.8		15.9	14.1	
Level of Service	B	B		B	B		B	B		B	B	
Approach Delay (s)		13.0			12.0			15.6			14.5	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	13.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	50.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1021: 103rd Street & Martin Luther King Jr Drive

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱		↰	↑↱		↰	↑↱	
Volume (vph)	112	330	38	23	334	47	67	412	26	43	206	56
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	12	8	16	12	9	10	10	9	10	10
Total Lost time (s)	3.0	7.0		3.0	7.0		3.0	7.0		3.0	7.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.99		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1533	1576		1474	1842		1533	3073		1372	2877	
Flt Permitted	0.44	1.00		0.46	1.00		0.58	1.00		0.41	1.00	
Satd. Flow (perm)	709	1576		711	1842		940	3073		597	2877	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	118	347	40	24	352	49	71	434	27	45	217	59
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	118	387	0	24	401	0	71	461	0	45	276	0
Confl. Peds. (#/hr)	7		23	23		7	10		8	8		10
Confl. Bikes (#/hr)	1		2	2		1	1		1	1		1
Heavy Vehicles (%)	4%	8%	10%	0%	9%	5%	0%	3%	0%	12%	7%	6%
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	47.0	41.8		40.6	38.6		26.8	22.2		23.6	20.6	
Effective Green, g (s)	47.0	39.8		40.6	36.6		26.8	20.2		23.6	18.6	
Actuated g/C Ratio	0.55	0.47		0.48	0.43		0.32	0.24		0.28	0.22	
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	5.0		3.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	442	738		358	793		328	730		193	630	
v/s Ratio Prot	c0.02	c0.25		0.00	0.22		c0.01	c0.15		0.01	0.10	
v/s Ratio Perm	0.13			0.03			0.06			0.06		
v/c Ratio	0.27	0.52		0.07	0.51		0.22	0.63		0.23	0.44	
Uniform Delay, d1	13.8	15.9		15.0	17.6		21.6	29.1		26.1	28.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.3	2.7		0.1	2.3		0.3	4.1		0.6	2.2	
Delay (s)	14.1	18.6		15.1	19.9		21.9	33.2		26.8	30.9	
Level of Service	B	B		B	B		C	C		C	C	
Approach Delay (s)		17.5			19.6			31.7			30.3	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM Average Control Delay	24.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	63.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1022: 103rd Street & Cottage Grove Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	69	323	44	65	388	115	59	390	126	56	162	38
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	11	11	11	11	12	12	10	10	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			0.99		1.00	0.99		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		0.99	1.00	
Frt		0.98			0.97		1.00	0.96		1.00	0.97	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3493			2914		1614	3156		1581	2918	
Flt Permitted		0.78			0.84		0.61	1.00		0.38	1.00	
Satd. Flow (perm)		2745			2468		1041	3156		628	2918	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	77	359	49	72	431	128	66	433	140	62	180	42
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	485	0	0	631	0	66	573	0	62	222	0
Confl. Peds. (#/hr)	20		16	16		20	5		33	33		5
Confl. Bikes (#/hr)	2					2			2	2		
Heavy Vehicles (%)	9%	9%	0%	24%	7%	6%	2%	4%	2%	0%	5%	9%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		33.0			33.0		32.0	32.0		32.0	32.0	
Effective Green, g (s)		34.0			34.0		33.0	33.0		33.0	33.0	
Actuated g/C Ratio		0.45			0.45		0.44	0.44		0.44	0.44	
Clearance Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)		1244			1119		458	1389		276	1284	
v/s Ratio Prot								c0.18			0.08	
v/s Ratio Perm		0.18			c0.26		0.06			0.10		
v/c Ratio		0.39			0.56		0.14	0.41		0.22	0.17	
Uniform Delay, d1		13.6			15.1		12.6	14.4		13.0	12.7	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.9			2.1		0.7	0.9		1.9	0.3	
Delay (s)		14.5			17.1		13.2	15.3		14.9	13.0	
Level of Service		B			B		B	B		B	B	
Approach Delay (s)		14.5			17.1			15.1			13.4	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	15.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	63.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↑	↱		✥			↰↑↱	
Volume (vph)	145	523	5	14	661	386	72	9	20	118	1	52
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	12	12	12	12	12	12	13	13	13
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00			0.95	
Frt	1.00	1.00		1.00	1.00	0.85		0.97			0.95	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.97			0.97	
Satd. Flow (prot)	1574	3144		1629	3257	1457		1611			3105	
Flt Permitted	0.35	1.00		0.42	1.00	1.00		0.69			0.75	
Satd. Flow (perm)	581	3144		720	3257	1457		1158			2398	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	161	581	6	16	734	429	80	10	22	131	1	58
RTOR Reduction (vph)	0	1	0	0	0	150	0	12	0	0	44	0
Lane Group Flow (vph)	161	586	0	16	734	279	0	100	0	0	146	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	46.0	46.0		46.0	46.0	46.0		16.7			16.7	
Effective Green, g (s)	46.0	46.0		46.0	46.0	46.0		16.7			16.7	
Actuated g/C Ratio	0.65	0.65		0.65	0.65	0.65		0.24			0.24	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		8.0			8.0	
Lane Grp Cap (vph)	378	2046		468	2119	948		274			566	
v/s Ratio Prot		0.19			0.23							
v/s Ratio Perm	c0.28			0.02		0.19		c0.09			0.06	
v/c Ratio	0.43	0.29		0.03	0.35	0.29		0.36			0.26	
Uniform Delay, d1	6.0	5.3		4.4	5.6	5.3		22.6			22.0	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00			1.00	
Incremental Delay, d2	3.5	0.4		0.1	0.4	0.8		3.5			1.0	
Delay (s)	9.5	5.7		4.5	6.0	6.1		26.1			23.0	
Level of Service	A	A		A	A	A		C			C	
Approach Delay (s)		6.5			6.0			26.1			23.0	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM Average Control Delay	8.6	HCM Level of Service	A
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	70.7	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1024: 107th Street & Halsted Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↑	↱	↰	↑↑	↱
Volume (vph)	111	214	75	63	190	68	133	1972	88	71	499	42
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	9	12	10	10	12	9	10	9	9	10	9
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00	0.96	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.96		1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1548	1499		1547	1586		1493	3069	1271	1452	2983	1301
Flt Permitted	0.38	1.00		0.32	1.00		0.39	1.00	1.00	0.12	1.00	1.00
Satd. Flow (perm)	617	1499		524	1586		612	3069	1271	180	2983	1301
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	117	225	79	66	200	72	140	2076	93	75	525	44
RTOR Reduction (vph)	0	15	0	0	16	0	0	0	18	0	0	26
Lane Group Flow (vph)	117	289	0	66	256	0	140	2076	75	75	525	18
Confl. Peds. (#/hr)	4		9	9		4	6		16	16		6
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	3%	3%	4%	3%	1%	2%	3%	4%	4%	6%	7%	3%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	28.0	21.0		28.0	21.0		42.0	35.0	35.0	42.0	35.0	35.0
Effective Green, g (s)	26.0	22.0		26.0	22.0		40.0	35.0	35.0	40.0	35.0	35.0
Actuated g/C Ratio	0.31	0.26		0.31	0.26		0.47	0.41	0.41	0.47	0.41	0.41
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)	254	388		232	410		350	1264	523	174	1228	536
v/s Ratio Prot	c0.03	c0.19		0.02	0.16		0.03	c0.68		c0.03	0.18	
v/s Ratio Perm	0.11			0.07			0.16		0.06	0.17		0.01
v/c Ratio	0.46	0.75		0.28	0.63		0.40	1.64	0.14	0.43	0.43	0.03
Uniform Delay, d1	22.5	28.9		21.9	27.9		13.3	25.0	15.6	18.1	17.8	14.9
Progression Factor	1.00	1.00		1.00	1.00		0.61	0.71	0.49	1.00	1.00	1.00
Incremental Delay, d2	5.9	12.3		3.1	7.0		2.8	292.0	0.5	7.6	1.1	0.1
Delay (s)	28.4	41.2		24.9	34.9		10.9	309.7	8.1	25.7	18.9	15.0
Level of Service	C	D		C	C		B	F	A	C	B	B
Approach Delay (s)		37.6			32.9			279.4			19.5	
Approach LOS		D			C			F			B	

Intersection Summary			
HCM Average Control Delay	184.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.15		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	96.6%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

1025: 107th Street & Wentworth Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣			✣	
Volume (vph)	26	218	17	15	149	18	18	166	27	33	148	21
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	14	12	12	14	12	12	16	12	12	16	12
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		1.00			1.00			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.99			0.99			0.98			0.99	
Flt Protected		1.00			1.00			1.00			0.99	
Satd. Flow (prot)		1850			1836			1902			1931	
Flt Permitted		0.96			0.97			0.97			0.94	
Satd. Flow (perm)		1792			1790			1856			1823	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	27	225	18	15	154	19	19	171	28	34	153	22
RTOR Reduction (vph)	0	4	0	0	6	0	0	8	0	0	6	0
Lane Group Flow (vph)	0	266	0	0	182	0	0	210	0	0	203	0
Confl. Peds. (#/hr)	5		11	11		5	7		34	34		7
Confl. Bikes (#/hr)			3	3								
Heavy Vehicles (%)	4%	2%	0%	20%	1%	0%	12%	3%	8%	0%	3%	5%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		27.0			27.0			30.0			30.0	
Effective Green, g (s)		27.0			27.0			30.0			30.0	
Actuated g/C Ratio		0.42			0.42			0.46			0.46	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		744			744			857			841	
v/s Ratio Prot												
v/s Ratio Perm		c0.15			0.10			c0.11			0.11	
v/c Ratio		0.36			0.24			0.24			0.24	
Uniform Delay, d1		13.0			12.4			10.6			10.6	
Progression Factor		1.00			0.64			1.05			1.00	
Incremental Delay, d2		1.3			0.8			0.6			0.7	
Delay (s)		14.4			8.7			11.8			11.3	
Level of Service		B			A			B			B	
Approach Delay (s)		14.4			8.7			11.8			11.3	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM Average Control Delay	11.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	46.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1026: 107th Street & State Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	24	181	34	9	162	19	44	384	33	16	86	17
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	0.95	1.00		1.00	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1465	2994		1302	3037		1529	3093		1492	2868	
Flt Permitted	0.63	1.00		0.60	1.00		0.68	1.00		0.48	1.00	
Satd. Flow (perm)	965	2994		827	3037		1093	3093		757	2868	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	27	201	38	10	180	21	49	427	37	18	96	19
RTOR Reduction (vph)	0	24	0	0	13	0	0	10	0	0	8	0
Lane Group Flow (vph)	27	215	0	10	188	0	49	454	0	18	107	0
Confl. Peds. (#/hr)	35		6	6		35	18					18
Confl. Bikes (#/hr)	14		32	32		14	23		7	7		23
Heavy Vehicles (%)	4%	4%	0%	22%	2%	6%	3%	2%	0%	7%	8%	6%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.0	20.0		20.0	20.0		39.0	39.0		39.0	39.0	
Effective Green, g (s)	19.0	19.0		19.0	19.0		38.0	38.0		38.0	38.0	
Actuated g/C Ratio	0.29	0.29		0.29	0.29		0.58	0.58		0.58	0.58	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	282	875		242	888		639	1808		443	1677	
v/s Ratio Prot		c0.07			0.06			c0.15			0.04	
v/s Ratio Perm	0.03			0.01			0.04			0.02		
v/c Ratio	0.10	0.25		0.04	0.21		0.08	0.25		0.04	0.06	
Uniform Delay, d1	16.7	17.5		16.5	17.3		5.9	6.6		5.7	5.8	
Progression Factor	0.73	0.73		0.75	0.74		0.94	0.97		0.49	0.44	
Incremental Delay, d2	0.6	0.6		0.3	0.5		0.2	0.3		0.2	0.1	
Delay (s)	12.9	13.5		12.6	13.4		5.7	6.7		3.0	2.6	
Level of Service	B	B		B	B		A	A		A	A	
Approach Delay (s)		13.4			13.3			6.6			2.7	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	9.0	HCM Level of Service	A
HCM Volume to Capacity ratio	0.25		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	40.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			✥			✥	
Volume (vph)	46	178	34	16	122	38	28	414	24	13	163	15
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	9	9	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00			1.00			1.00	
Flpb, ped/bikes	0.99	1.00		0.98	1.00			1.00			1.00	
Frt	1.00	0.98		1.00	0.96			0.99			0.99	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1556	2952		1515	2868			1878			1807	
Flt Permitted	0.64	1.00		0.60	1.00			0.98			0.96	
Satd. Flow (perm)	1047	2952		965	2868			1839			1749	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	51	198	38	18	136	42	31	460	27	14	181	17
RTOR Reduction (vph)	0	23	0	0	25	0	0	3	0	0	5	0
Lane Group Flow (vph)	51	213	0	18	153	0	0	515	0	0	207	0
Confl. Peds. (#/hr)	10		29	29		10	17		10	10		17
Confl. Bikes (#/hr)									2	2		
Heavy Vehicles (%)	2%	4%	10%	0%	4%	0%	0%	8%	4%	0%	13%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	26.0	26.0		26.0	26.0			31.0			31.0	
Effective Green, g (s)	26.0	26.0		26.0	26.0			31.0			31.0	
Actuated g/C Ratio	0.40	0.40		0.40	0.40			0.48			0.48	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	419	1181		386	1147			877			834	
v/s Ratio Prot		c0.07			0.05							
v/s Ratio Perm	0.05			0.02				c0.28			0.12	
v/c Ratio	0.12	0.18		0.05	0.13			0.59			0.25	
Uniform Delay, d1	12.3	12.6		11.9	12.4			12.4			10.1	
Progression Factor	1.02	0.92		0.86	0.88			0.95			1.00	
Incremental Delay, d2	0.6	0.3		0.2	0.2			2.8			0.7	
Delay (s)	13.1	12.0		10.5	11.1			14.5			10.8	
Level of Service	B	B		B	B			B			B	
Approach Delay (s)		12.2			11.0			14.5			10.8	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	12.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	59.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1028: 107th Street & Martin Luther King Jr Drive

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱			✣			✣	
Volume (vph)	90	127	60	2	84	36	21	275	9	7	184	29
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	16	12	10	16	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00			1.00			1.00	
Flpb, ped/bikes	1.00	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.95		1.00	0.95			1.00			0.98	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1605	1879		1587	1870			1971			1933	
Flt Permitted	0.67	1.00		0.57	1.00			0.98			0.99	
Satd. Flow (perm)	1135	1879		950	1870			1928			1916	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	100	141	67	2	93	40	23	306	10	8	204	32
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	100	208	0	2	133	0	0	339	0	0	244	0
Confl. Peds. (#/hr)			8	8			1		8	8		1
Heavy Vehicles (%)	3%	3%	2%	0%	6%	0%	0%	3%	0%	0%	4%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.0	20.0		20.0	20.0			37.0			37.0	
Effective Green, g (s)	20.0	20.0		20.0	20.0			37.0			37.0	
Actuated g/C Ratio	0.31	0.31		0.31	0.31			0.57			0.57	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	349	578		292	575			1097			1091	
v/s Ratio Prot		c0.11			0.07							
v/s Ratio Perm	0.09			0.00				c0.18			0.13	
v/c Ratio	0.29	0.36		0.01	0.23			0.31			0.22	
Uniform Delay, d1	17.1	17.5		15.6	16.8			7.3			6.9	
Progression Factor	0.91	0.90		0.89	0.92			0.96			1.00	
Incremental Delay, d2	2.0	1.7		0.0	0.9			0.7			0.5	
Delay (s)	17.5	17.5		14.0	16.4			7.7			7.4	
Level of Service	B	B		B	B			A			A	
Approach Delay (s)		17.5			16.3			7.7			7.4	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	11.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	45.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1029: 107th Street & Cottage Grove Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑	↱	↰	↑	↱
Volume (vph)	122	9	55	1	3	12	40	492	6	2	201	50
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	10	10	10	11	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.97		1.00	1.00	0.98	1.00	1.00	0.98
Flpb, ped/bikes	0.98	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.87		1.00	0.88		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1603	1672		1710	1422		1491	1631	1392	1649	1907	1427
Flt Permitted	0.75	1.00		0.71	1.00		0.62	1.00	1.00	0.37	1.00	1.00
Satd. Flow (perm)	1260	1672		1279	1422		971	1631	1392	648	1907	1427
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	136	10	61	1	3	13	44	547	7	2	223	56
RTOR Reduction (vph)	0	44	0	0	9	0	0	0	3	0	0	22
Lane Group Flow (vph)	136	27	0	1	7	0	44	547	4	2	223	34
Confl. Peds. (#/hr)	9					9	1		6	6		1
Heavy Vehicles (%)	5%	14%	5%	0%	67%	12%	7%	3%	0%	0%	7%	5%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	17.0	17.0		17.0	17.0		39.0	39.0	39.0	39.0	39.0	39.0
Effective Green, g (s)	18.0	18.0		18.0	18.0		39.0	39.0	39.0	39.0	39.0	39.0
Actuated g/C Ratio	0.28	0.28		0.28	0.28		0.60	0.60	0.60	0.60	0.60	0.60
Clearance Time (s)	5.0	5.0		5.0	5.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	349	463		354	394		583	979	835	389	1144	856
v/s Ratio Prot		0.02			0.00			c0.34			0.12	
v/s Ratio Perm	c0.11			0.00			0.05		0.00	0.00		0.02
v/c Ratio	0.39	0.06		0.00	0.02		0.08	0.56	0.01	0.01	0.19	0.04
Uniform Delay, d1	19.0	17.3		17.0	17.1		5.4	7.8	5.2	5.2	5.9	5.3
Progression Factor	1.47	2.42		1.00	1.00		1.17	1.10	1.32	1.00	1.00	1.00
Incremental Delay, d2	3.2	0.2		0.0	0.1		0.2	1.7	0.0	0.0	0.4	0.1
Delay (s)	31.1	42.0		17.0	17.1		6.5	10.3	6.9	5.2	6.3	5.4
Level of Service	C	D		B	B		A	B	A	A	A	A
Approach Delay (s)		34.8			17.1			10.0			6.1	
Approach LOS		C			B			A			A	

Intersection Summary			
HCM Average Control Delay	13.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1030: 111th Street & Marshield Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱		↰	↑↑					↰	↑↱	
Volume (vph)	0	240	76	124	376	0	0	0	0	74	305	361
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	12	12	12	12	12	11	11	12
Total Lost time (s)		4.0		3.0	3.0					5.0	5.0	
Lane Util. Factor		0.95		1.00	0.95					1.00	0.95	
Frpb, ped/bikes		0.99		1.00	1.00					1.00	0.99	
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	
Frt		0.96		1.00	1.00					1.00	0.92	
Flt Protected		1.00		0.95	1.00					0.95	1.00	
Satd. Flow (prot)		2826		1621	3288					1574	2907	
Flt Permitted		1.00		0.50	1.00					0.95	1.00	
Satd. Flow (perm)		2826		848	3288					1574	2907	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	253	80	131	396	0	0	0	0	78	321	380
RTOR Reduction (vph)	0	30	0	0	0	0	0	0	0	0	214	0
Lane Group Flow (vph)	0	303	0	131	396	0	0	0	0	78	487	0
Confl. Peds. (#/hr)	14		32	32		14	14					14
Confl. Bikes (#/hr)			1	1								
Heavy Vehicles (%)	0%	9%	4%	5%	4%	0%	0%	0%	0%	5%	2%	4%
Turn Type				D.P+P						custom		
Protected Phases		8		7	7 8					6	6	
Permitted Phases				8						6		
Actuated Green, G (s)		33.0		56.0	59.0					32.0	32.0	
Effective Green, g (s)		33.0		56.0	59.0					32.0	32.0	
Actuated g/C Ratio		0.33		0.56	0.59					0.32	0.32	
Clearance Time (s)		4.0		3.0						5.0	5.0	
Lane Grp Cap (vph)		933		653	1940					504	930	
v/s Ratio Prot		c0.11		0.05	c0.12					0.05	c0.17	
v/s Ratio Perm				0.07								
v/c Ratio		0.32		0.20	0.20					0.15	0.52	
Uniform Delay, d1		25.1		10.6	9.6					24.3	27.8	
Progression Factor		1.00		1.95	2.06					1.00	1.00	
Incremental Delay, d2		0.9		0.6	0.2					0.7	2.1	
Delay (s)		26.1		21.2	19.8					25.0	29.9	
Level of Service		C		C	B					C	C	
Approach Delay (s)		26.1			20.2			0.0			29.4	
Approach LOS		C			C			A			C	

Intersection Summary			
HCM Average Control Delay	25.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	62.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1031: 111th Street & Ashland Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑			↑↱		↰	↑	↱			
Volume (vph)	129	185	0	0	326	69	174	554	332	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	9	12	13	12	13	12	12	12
Total Lost time (s)	4.0	4.0			4.0		5.0	5.0	5.0			
Lane Util. Factor	1.00	0.95			0.95		1.00	1.00	1.00			
Frpb, ped/bikes	1.00	1.00			0.99		1.00	1.00	0.99			
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.97		1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1673	3054			2832		1750	1782	1514			
Flt Permitted	0.34	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	599	3054			2832		1750	1782	1514			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	136	195	0	0	343	73	183	583	349	0	0	0
RTOR Reduction (vph)	0	0	0	0	18	0	0	0	234	0	0	0
Lane Group Flow (vph)	136	195	0	0	398	0	183	583	115	0	0	0
Confl. Peds. (#/hr)	14		16	16		14			1	1		
Confl. Bikes (#/hr)	1					1			1	1		
Heavy Vehicles (%)	2%	12%	0%	0%	5%	4%	1%	1%	3%	0%	0%	0%
Turn Type	pm+pt						custom		Perm			
Protected Phases	4	1 4			1		2	2				
Permitted Phases	1 4						2		2			
Actuated Green, G (s)	54.0	58.0			21.0		33.0	33.0	33.0			
Effective Green, g (s)	54.0	58.0			21.0		33.0	33.0	33.0			
Actuated g/C Ratio	0.54	0.58			0.21		0.33	0.33	0.33			
Clearance Time (s)	4.0				4.0		5.0	5.0	5.0			
Lane Grp Cap (vph)	678	1771			595		578	588	500			
v/s Ratio Prot	c0.07	0.06			c0.14		0.10	c0.33				
v/s Ratio Perm	0.04								0.08			
v/c Ratio	0.20	0.11			0.67		0.32	0.99	0.23			
Uniform Delay, d1	11.8	9.4			36.3		25.1	33.4	24.3			
Progression Factor	0.25	0.25			1.00		0.75	0.79	1.91			
Incremental Delay, d2	0.6	0.1			5.9		0.9	27.8	0.7			
Delay (s)	3.5	2.5			42.2		19.8	54.1	47.1			
Level of Service	A	A			D		B	D	D			
Approach Delay (s)		2.9			42.2			46.3			0.0	
Approach LOS		A			D			D			A	

Intersection Summary			
HCM Average Control Delay	37.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	62.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱		↰	↑↑					↰	↑↑	↱
Volume (vph)	0	463	372	34	592	0	0	0	0	4	216	196
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	11	12	12	12	12	10	10	12
Total Lost time (s)		4.0		4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.95		1.00	0.95					1.00	0.95	1.00
Frpb, ped/bikes		0.99		1.00	1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Frt		0.93		1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00					0.95	1.00	1.00
Satd. Flow (prot)		3108		1613	3273					1596	3160	1443
Flt Permitted		1.00		0.16	1.00					0.95	1.00	1.00
Satd. Flow (perm)		3108		279	3273					1596	3160	1443
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	0	482	388	35	617	0	0	0	0	4	225	204
RTOR Reduction (vph)	0	145	0	0	0	0	0	0	0	0	0	135
Lane Group Flow (vph)	0	725	0	35	617	0	0	0	0	4	225	69
Confl. Peds. (#/hr)	22		3	3		22						
Confl. Bikes (#/hr)	4					4			32	32		
Heavy Vehicles (%)	0%	2%	2%	6%	1%	0%	0%	0%	0%	0%	1%	6%
Turn Type				pm+pt						Split		Prot
Protected Phases		8		7	7 8					6	6	6
Permitted Phases				7 8								
Actuated Green, G (s)		36.0		54.0	58.0					34.0	34.0	34.0
Effective Green, g (s)		36.0		54.0	58.0					34.0	34.0	34.0
Actuated g/C Ratio		0.36		0.54	0.58					0.34	0.34	0.34
Clearance Time (s)		4.0		4.0						4.0	4.0	4.0
Lane Grp Cap (vph)		1119		391	1898					543	1074	491
v/s Ratio Prot		c0.23		0.02	c0.19					0.00	c0.07	0.05
v/s Ratio Perm				0.03								
v/c Ratio		0.65		0.09	0.33					0.01	0.21	0.14
Uniform Delay, d1		26.7		12.5	10.9					21.8	23.5	22.9
Progression Factor		1.00		0.54	0.68					0.73	0.79	0.92
Incremental Delay, d2		2.9		0.2	0.2					0.0	0.4	0.5
Delay (s)		29.6		7.0	7.6					16.0	18.8	21.5
Level of Service		C		A	A					B	B	C
Approach Delay (s)		29.6			7.6			0.0			20.1	
Approach LOS		C			A			A			C	

Intersection Summary			
HCM Average Control Delay	20.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	88.6%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1033: 112th Place & Ashland Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↰↑			↑↱		↰	↰	↱			
Volume (vph)	407	60	0	0	57	5	569	646	62	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	12	12	12	10	12	11	11	12	12	12	12
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0	4.0			
Lane Util. Factor	0.91	0.91			0.95		0.95	0.95	1.00			
Frpb, ped/bikes	1.00	1.00			0.99		1.00	1.00	1.00			
Flpb, ped/bikes	0.99	0.99			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.99		1.00	1.00	0.85			
Flt Protected	0.95	0.96			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1444	3041			3079		1555	1637	1500			
Flt Permitted	0.71	0.74			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	1084	2338			3079		1555	1637	1500			
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	420	62	0	0	59	5	587	666	64	0	0	0
RTOR Reduction (vph)	0	0	0	0	4	0	0	0	38	0	0	0
Lane Group Flow (vph)	210	272	0	0	60	0	587	666	26	0	0	0
Confl. Peds. (#/hr)	30		2	2		30			4	4		
Confl. Bikes (#/hr)	3					3			2	2		
Heavy Vehicles (%)	3%	2%	0%	0%	2%	0%	1%	1%	2%	0%	0%	0%
Turn Type	pm+pt						custom		custom			
Protected Phases	4	1 4			1		2	2	2			
Permitted Phases	1 4						2		2			
Actuated Green, G (s)	51.0	51.0			15.0		37.0	37.0	37.0			
Effective Green, g (s)	51.0	51.0			15.0		37.0	37.0	37.0			
Actuated g/C Ratio	0.51	0.51			0.15		0.37	0.37	0.37			
Clearance Time (s)	4.0				4.0		4.0	4.0	4.0			
Lane Grp Cap (vph)	682	1445			462		575	606	555			
v/s Ratio Prot	c0.11	0.07			0.02		0.38	c0.41	0.02			
v/s Ratio Perm	c0.05	0.03										
v/c Ratio	0.31	0.19			0.13		1.02	1.10	0.05			
Uniform Delay, d1	14.0	13.3			36.8		31.5	31.5	20.2			
Progression Factor	0.23	0.25			1.00		1.00	1.00	1.00			
Incremental Delay, d2	0.8	0.2			0.6		42.9	66.6	0.2			
Delay (s)	4.1	3.5			37.4		74.4	98.1	20.4			
Level of Service	A	A			D		E	F	C			
Approach Delay (s)		3.8			37.4			83.8			0.0	
Approach LOS		A			D			F			A	

Intersection Summary			
HCM Average Control Delay	61.5	HCM Level of Service	E
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	88.6%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱		↰	↑↑	↱	↰	↑↑	↱
Volume (vph)	163	289	70	67	191	116	43	1151	97	96	476	42
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	9	10	9	9	10	9
Total Lost time (s)		4.0			4.0		4.0	3.5	4.0	4.0	3.5	4.0
Lane Util. Factor		0.95			0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		1.00			0.98		1.00	1.00	0.97	1.00	1.00	0.97
Flpb, ped/bikes		1.00			1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.98			0.95		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.98			0.99		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		2843			2772		1447	3069	1336	1494	2956	1270
Flt Permitted		0.66			0.78		0.39	1.00	1.00	0.12	1.00	1.00
Satd. Flow (perm)		1909			2178		600	3069	1336	197	2956	1270
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	170	301	73	70	199	121	45	1199	101	100	496	44
RTOR Reduction (vph)	0	14	0	0	61	0	0	0	38	0	0	27
Lane Group Flow (vph)	0	530	0	0	329	0	45	1199	63	100	496	17
Confl. Peds. (#/hr)	49		20	20		49	26		8	8		26
Confl. Bikes (#/hr)	2					2						
Heavy Vehicles (%)	10%	7%	4%	9%	7%	5%	6%	4%	0%	3%	8%	5%
Turn Type	pm+pt			Perm			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)		35.0			27.0		38.0	33.0	33.0	38.0	33.0	33.0
Effective Green, g (s)		36.0			28.0		36.0	33.5	33.0	36.0	33.5	33.0
Actuated g/C Ratio		0.42			0.33		0.42	0.39	0.39	0.42	0.39	0.39
Clearance Time (s)		5.0			5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)		874			717		294	1210	519	144	1165	493
v/s Ratio Prot		c0.04					0.01	c0.39		c0.03	0.17	
v/s Ratio Perm		0.21			c0.15		0.06		0.05	0.26		0.01
v/c Ratio		0.61			0.46		0.15	0.99	0.12	0.69	0.43	0.03
Uniform Delay, d1		19.0			22.5		14.7	25.6	16.7	19.1	18.7	16.1
Progression Factor		1.00			1.00		1.32	0.87	1.41	1.83	1.64	3.16
Incremental Delay, d2		3.1			2.1		0.6	17.5	0.3	22.2	1.0	0.1
Delay (s)		22.1			24.6		20.1	39.9	23.8	57.2	31.8	51.1
Level of Service		C			C		C	D	C	E	C	D
Approach Delay (s)		22.1			24.6			38.0			37.1	
Approach LOS		C			C			D			D	

Intersection Summary			
HCM Average Control Delay	33.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	81.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1035: 111th Street & Normal Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰			↱			✥				
Volume (vph)	44	467	0	0	346	82	28	63	101	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		1.00			0.97			0.93				
Flt Protected		1.00			1.00			0.99				
Satd. Flow (prot)		1707			1670			1581				
Flt Permitted		0.94			1.00			0.99				
Satd. Flow (perm)		1604			1670			1581				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	49	519	0	0	384	91	31	70	112	0	0	0
RTOR Reduction (vph)	0	0	0	0	13	0	0	61	0	0	0	0
Lane Group Flow (vph)	0	568	0	0	462	0	0	152	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)		34.0			34.0			23.0				
Effective Green, g (s)		34.0			34.0			23.0				
Actuated g/C Ratio		0.52			0.52			0.35				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		839			874			559				
v/s Ratio Prot					0.28							
v/s Ratio Perm		c0.35						0.10				
v/c Ratio		0.68			0.53			0.27				
Uniform Delay, d1		11.4			10.2			15.0				
Progression Factor		1.00			0.66			1.00				
Incremental Delay, d2		4.4			1.8			1.2				
Delay (s)		15.8			8.5			16.2				
Level of Service		B			A			B				
Approach Delay (s)		15.8			8.5			16.2			0.0	
Approach LOS		B			A			B			A	

Intersection Summary			
HCM Average Control Delay	13.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	74.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			↰↑↑↱			↰↑↑↱	
Volume (vph)	45	418	34	20	425	49	26	175	35	51	107	21
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	12	12	12	12	12
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		1.00			1.00			0.99			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.99			0.99			0.98			0.98	
Flt Protected		1.00			1.00			0.99			0.99	
Satd. Flow (prot)		1886			1843			3185			3148	
Flt Permitted		0.93			0.97			0.91			0.83	
Satd. Flow (perm)		1759			1795			2928			2639	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	50	464	38	22	472	54	29	194	39	57	119	23
RTOR Reduction (vph)	0	4	0	0	6	0	0	22	0	0	13	0
Lane Group Flow (vph)	0	548	0	0	542	0	0	240	0	0	186	0
Confl. Peds. (#/hr)	29		16	16		29	28		14	14		28
Confl. Bikes (#/hr)	1					1	1					1
Heavy Vehicles (%)	3%	7%	4%	12%	8%	13%	0%	4%	4%	4%	4%	6%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		30.0			30.0			27.0			27.0	
Effective Green, g (s)		30.0			30.0			27.0			27.0	
Actuated g/C Ratio		0.46			0.46			0.42			0.42	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		812			828			1216			1096	
v/s Ratio Prot												
v/s Ratio Perm		c0.31			0.30			c0.08			0.07	
v/c Ratio		0.67			0.65			0.20			0.17	
Uniform Delay, d1		13.7			13.5			12.1			11.9	
Progression Factor		0.67			0.55			0.87			0.55	
Incremental Delay, d2		3.5			3.9			0.4			0.3	
Delay (s)		12.7			11.3			10.9			6.9	
Level of Service		B			B			B			A	
Approach Delay (s)		12.7			11.3			10.9			6.9	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM Average Control Delay	11.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	81.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	52	281	23	28	347	61	55	319	89	48	96	29
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	9	10	10	9	10	10	12	10	10	12
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		0.99	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.98		1.00	0.97		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1503	2933		1584	2945		1497	3034		1594	2899	
Flt Permitted	0.43	1.00		0.53	1.00		0.66	1.00		0.48	1.00	
Satd. Flow (perm)	684	2933		884	2945		1046	3034		809	2899	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	58	312	26	31	386	68	61	354	99	53	107	32
RTOR Reduction (vph)	0	9	0	0	22	0	0	39	0	0	15	0
Lane Group Flow (vph)	58	329	0	31	432	0	61	414	0	53	124	0
Confl. Peds. (#/hr)	25		14	14		25	12		4	4		12
Confl. Bikes (#/hr)	1					1			1	1		
Heavy Vehicles (%)	5%	7%	12%	0%	6%	2%	6%	1%	3%	0%	4%	12%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	22.0	22.0		22.0	22.0		35.0	35.0		35.0	35.0	
Effective Green, g (s)	22.0	22.0		22.0	22.0		35.0	35.0		35.0	35.0	
Actuated g/C Ratio	0.34	0.34		0.34	0.34		0.54	0.54		0.54	0.54	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	232	993		299	997		563	1634		436	1561	
v/s Ratio Prot		0.11			c0.15			c0.14			0.04	
v/s Ratio Perm	0.08			0.04			0.06			0.07		
v/c Ratio	0.25	0.33		0.10	0.43		0.11	0.25		0.12	0.08	
Uniform Delay, d1	15.5	16.0		14.7	16.7		7.4	8.0		7.4	7.2	
Progression Factor	0.58	0.55		0.76	0.79		0.68	0.68		1.30	1.35	
Incremental Delay, d2	2.1	0.7		0.7	1.3		0.4	0.4		0.6	0.1	
Delay (s)	11.1	9.6		11.9	14.5		5.4	5.8		10.2	9.8	
Level of Service	B	A		B	B		A	A		B	A	
Approach Delay (s)		9.8			14.3			5.7			9.9	
Approach LOS		A			B			A			A	

Intersection Summary			
HCM Average Control Delay	9.9	HCM Level of Service	A
HCM Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	46.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1038: 111th Street & Michigan Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			↰↑↱			↰↑↱	
Volume (vph)	84	393	28	37	371	82	20	308	44	41	118	41
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	9	10	9	9	16	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			1.00			0.99	
Flpb, ped/bikes	0.97	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.97			0.98			0.97	
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.99	
Satd. Flow (prot)	1385	3013		1335	3540			3438			3303	
Flt Permitted	0.46	1.00		0.48	1.00			0.94			0.84	
Satd. Flow (perm)	665	3013		672	3540			3226			2808	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	88	414	29	39	391	86	21	324	46	43	124	43
RTOR Reduction (vph)	0	8	0	0	29	0	0	16	0	0	26	0
Lane Group Flow (vph)	88	435	0	39	448	0	0	375	0	0	184	0
Confl. Peds. (#/hr)	53		34	34		53	67		28	28		67
Heavy Vehicles (%)	8%	5%	0%	14%	6%	1%	0%	9%	20%	5%	15%	5%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	31.0	31.0		31.0	31.0			26.0			26.0	
Effective Green, g (s)	31.0	31.0		31.0	31.0			26.0			26.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48			0.40			0.40	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	317	1437		320	1688			1290			1123	
v/s Ratio Prot		c0.14			0.13							
v/s Ratio Perm	0.13			0.06				c0.12			0.07	
v/c Ratio	0.28	0.30		0.12	0.27			0.29			0.16	
Uniform Delay, d1	10.2	10.4		9.4	10.2			13.2			12.5	
Progression Factor	1.59	1.63		0.78	0.77			0.36			0.64	
Incremental Delay, d2	2.1	0.5		0.7	0.3			0.5			0.3	
Delay (s)	18.4	17.5		8.1	8.1			5.3			8.3	
Level of Service	B	B		A	A			A			A	
Approach Delay (s)		17.7			8.1			5.3			8.3	
Approach LOS		B			A			A			A	

Intersection Summary			
HCM Average Control Delay	10.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	59.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1039: 111th Street & Indiana Avenue

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑	↱		↰↑↑↱			✥			✥	
Volume (vph)	99	303	100	104	357	104	88	84	88	88	84	82
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	16	12	12	16	12
Total Lost time (s)		5.0	5.0		5.0			5.0			5.0	
Lane Util. Factor		1.00	1.00		0.95			1.00			1.00	
Frt		1.00	0.85		0.97			0.95			0.96	
Flt Protected		0.99	1.00		0.99			0.98			0.98	
Satd. Flow (prot)		1637	1409		3034			1823			1826	
Flt Permitted		0.74	1.00		0.76			0.79			0.78	
Satd. Flow (perm)		1227	1409		2325			1456			1442	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	110	337	111	116	397	116	98	93	98	98	93	91
RTOR Reduction (vph)	0	0	53	0	30	0	0	28	0	0	26	0
Lane Group Flow (vph)	0	447	58	0	599	0	0	261	0	0	256	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm		Perm	Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)		34.0	34.0		34.0			21.0			21.0	
Effective Green, g (s)		34.0	34.0		34.0			21.0			21.0	
Actuated g/C Ratio		0.52	0.52		0.52			0.32			0.32	
Clearance Time (s)		5.0	5.0		5.0			5.0			5.0	
Lane Grp Cap (vph)		642	737		1216			470			466	
v/s Ratio Prot												
v/s Ratio Perm		c0.36	0.04		0.26			c0.18			0.18	
v/c Ratio		0.70	0.08		0.49			0.55			0.55	
Uniform Delay, d1		11.6	7.7		10.0			18.1			18.1	
Progression Factor		2.01	5.71		0.41			1.00			1.00	
Incremental Delay, d2		6.0	0.2		1.4			4.7			4.6	
Delay (s)		29.3	44.2		5.5			22.8			22.7	
Level of Service		C	D		A			C			C	
Approach Delay (s)		32.3			5.5			22.8			22.7	
Approach LOS		C			A			C			C	

Intersection Summary			
HCM Average Control Delay	19.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	72.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1040: 111th Street & Martin Luther King Jr Drive

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			↰↑↱			↰↑↱	
Volume (vph)	74	384	21	15	442	63	37	103	41	43	90	98
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	15	8	16	8	8	16	8
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			1.00			0.99	
Flpb, ped/bikes	0.99	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.98			0.97			0.94	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1475	3018		1573	3002			3454			3403	
Flt Permitted	0.39	1.00		0.46	1.00			0.87			0.88	
Satd. Flow (perm)	606	3018		768	3002			3030			3014	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	82	427	23	17	491	70	41	114	46	48	100	109
RTOR Reduction (vph)	0	6	0	0	17	0	0	25	0	0	60	0
Lane Group Flow (vph)	82	444	0	17	544	0	0	176	0	0	197	0
Confl. Peds. (#/hr)	22		40	40		22	18		3	3		18
Confl. Bikes (#/hr)			2	2			1					1
Heavy Vehicles (%)	7%	5%	0%	0%	4%	2%	0%	3%	22%	0%	3%	8%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	28.0	28.0		28.0	28.0			29.0			29.0	
Effective Green, g (s)	28.0	28.0		28.0	28.0			29.0			29.0	
Actuated g/C Ratio	0.43	0.43		0.43	0.43			0.45			0.45	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	261	1300		331	1293			1352			1345	
v/s Ratio Prot		0.15			c0.18							
v/s Ratio Perm	0.14			0.02				0.06			c0.07	
v/c Ratio	0.31	0.34		0.05	0.42			0.13			0.15	
Uniform Delay, d1	12.2	12.3		10.8	12.9			10.6			10.7	
Progression Factor	0.97	1.00		1.15	0.99			0.99			0.80	
Incremental Delay, d2	2.4	0.5		0.1	0.5			0.2			0.2	
Delay (s)	14.2	12.8		12.5	13.2			10.7			8.8	
Level of Service	B	B		B	B			B			A	
Approach Delay (s)		13.0			13.2			10.7			8.8	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM Average Control Delay	12.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	59.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

1041: 111th Street & Cottage Grove Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱			↰↑↱			↰↑↱	
Volume (vph)	86	456	73	94	464	284	48	332	92	222	159	52
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			0.95			0.95	
Frt		0.98			0.95			0.97			0.98	
Flt Protected		0.99			0.99			0.99			0.98	
Satd. Flow (prot)		3177			3075			3146			3118	
Flt Permitted		0.63			0.74			0.88			0.63	
Satd. Flow (perm)		2018			2281			2771			2008	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	96	507	81	104	516	316	53	369	102	247	177	58
RTOR Reduction (vph)	0	16	0	0	99	0	0	33	0	0	17	0
Lane Group Flow (vph)	0	668	0	0	837	0	0	491	0	0	465	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm			pm+pt			Perm		
Protected Phases		4			8		5	2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		26.0			26.0			29.0			20.0	
Effective Green, g (s)		26.0			26.0			29.0			20.0	
Actuated g/C Ratio		0.40			0.40			0.45			0.31	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		807			912			1271			618	
v/s Ratio Prot								c0.04				
v/s Ratio Perm		0.33			c0.37			0.14			c0.23	
v/c Ratio		0.83			0.92			0.39			0.96dl	
Uniform Delay, d1		17.5			18.5			12.0			20.3	
Progression Factor		1.74			1.00			1.00			0.89	
Incremental Delay, d2		9.4			15.5			0.9			8.3	
Delay (s)		39.7			34.0			12.9			26.3	
Level of Service		D			C			B			C	
Approach Delay (s)		39.7			34.0			12.9			26.3	
Approach LOS		D			C			B			C	

Intersection Summary			
HCM Average Control Delay	29.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	88.6%	ICU Level of Service	E
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1042: 111th Street & Ellis Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱			✥			✥	
Volume (vph)	0	724	119	45	759	0	137	0	70	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	10	10	12	12	12	12	10	10	10
Total Lost time (s)		5.0			5.0			5.0				
Lane Util. Factor		0.95			0.95			1.00				
Frt		0.98			1.00			0.95				
Flt Protected		1.00			1.00			0.97				
Satd. Flow (prot)		2976			3032			1583				
Flt Permitted		1.00			0.84			0.80				
Satd. Flow (perm)		2976			2543			1310				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	804	132	50	843	0	152	0	78	0	0	0
RTOR Reduction (vph)	0	18	0	0	0	0	0	21	0	0	0	0
Lane Group Flow (vph)	0	918	0	0	893	0	0	209	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	custom			Perm			Perm			Perm		
Protected Phases		4 5 6 11			8			2			2	
Permitted Phases	4 6 11			8			2			2		
Actuated Green, G (s)		65.0			33.0			16.0				
Effective Green, g (s)		58.0			33.0			16.0				
Actuated g/C Ratio		0.64			0.37			0.18				
Clearance Time (s)					5.0			5.0				
Lane Grp Cap (vph)		1918			932			233				
v/s Ratio Prot		c0.31										
v/s Ratio Perm					c0.35			c0.16				
v/c Ratio		0.48			0.96			0.90				
Uniform Delay, d1		8.2			27.8			36.2				
Progression Factor		0.04			1.57			1.00				
Incremental Delay, d2		0.4			18.9			37.6				
Delay (s)		0.7			62.5			73.8				
Level of Service		A			E			E				
Approach Delay (s)		0.7			62.5			73.8			0.0	
Approach LOS		A			E			E			A	

Intersection Summary			
HCM Average Control Delay	35.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	73.7%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1043: 111th Street & Doty Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↑	↱		✥		↰	↑	↱
Volume (vph)	123	502	188	274	646	183	103	20	185	78	7	77
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	10	12	12	12	12	16	12	12	12	12
Total Lost time (s)	3.0	5.0		3.0	5.0	3.0		5.0		3.0	5.0	3.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00		1.00	1.00	1.00
Frt	1.00	0.96		1.00	1.00	0.85		0.92		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.98		0.95	1.00	1.00
Satd. Flow (prot)	1520	3020		1629	3257	1457		1756		1629	1714	1457
Flt Permitted	0.32	1.00		0.20	1.00	1.00		0.89		0.40	1.00	1.00
Satd. Flow (perm)	508	3020		339	3257	1457		1581		690	1714	1457
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	137	558	209	304	718	203	114	22	206	87	8	86
RTOR Reduction (vph)	0	42	0	0	0	104	0	74	0	0	0	46
Lane Group Flow (vph)	137	725	0	304	718	99	0	268	0	87	8	40
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	pm+pt			pm+pt		pm+ov	pm+pt			pm+pt		pm+ov
Protected Phases	7	4		3	8	1	5	2		1	6	7
Permitted Phases	4			8		8	2			6		6
Actuated Green, G (s)	40.0	30.6		47.6	35.2	43.8		20.8		32.4	32.4	41.8
Effective Green, g (s)	40.0	30.6		47.6	35.2	43.8		20.8		32.4	32.4	41.8
Actuated g/C Ratio	0.44	0.34		0.53	0.39	0.49		0.23		0.36	0.36	0.46
Clearance Time (s)	3.0	5.0		3.0	5.0	3.0		5.0		3.0	5.0	3.0
Vehicle Extension (s)	4.0	3.0		4.0	3.0	3.0		4.0		3.0	4.0	4.0
Lane Grp Cap (vph)	331	1027		380	1274	709		365		338	617	677
v/s Ratio Prot	0.04	0.24		c0.12	0.22	0.01				c0.02	0.00	0.01
v/s Ratio Perm	0.14			c0.30		0.05		c0.17		0.07		0.02
v/c Ratio	0.41	0.71		0.80	0.56	0.14		0.73		0.26	0.01	0.06
Uniform Delay, d1	15.4	25.8		14.8	21.4	12.7		32.0		21.2	18.5	13.3
Progression Factor	1.91	1.58		1.00	1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2	1.0	3.7		12.0	1.8	0.1		8.0		0.4	0.0	0.1
Delay (s)	30.5	44.5		26.8	23.2	12.8		40.0		21.6	18.5	13.3
Level of Service	C	D		C	C	B		D		C	B	B
Approach Delay (s)		42.3			22.4			40.0			17.5	
Approach LOS		D			C			D			B	

Intersection Summary			
HCM Average Control Delay	31.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	74.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
1044: 111th Street & Bishop Ford Freeway EB Ramps

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↑↑					↰		↱
Volume (veh/h)	0	518	247	6	531	0	0	0	0	32	0	572
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	576	274	7	590	0	0	0	0	36	0	636
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		498										
pX, platoon unblocked												
vC, conflicting volume	590			576			884	1179	288	891	1179	295
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	590			576			884	1179	288	891	1179	295
tC, single (s)	4.2			4.2			7.6	6.6	7.0	7.6	6.6	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			100	100	100	85	100	8
cM capacity (veh/h)	961			973			19	184	700	231	184	692

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1	SB 2
Volume Total	288	288	274	203	393	36	636
Volume Left	0	0	0	7	0	36	0
Volume Right	0	0	274	0	0	0	636
cSH	1700	1700	1700	973	1700	231	692
Volume to Capacity	0.17	0.17	0.16	0.01	0.23	0.15	0.92
Queue Length 95th (ft)	0	0	0	1	0	13	307
Control Delay (s)	0.0	0.0	0.0	0.4	0.0	23.4	41.6
Lane LOS				A		C	E
Approach Delay (s)	0.0			0.1		40.6	
Approach LOS						E	

Intersection Summary			
Average Delay	12.9		
Intersection Capacity Utilization	59.7%	ICU Level of Service	B
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
1045: 111th Street & Bishop Ford Freeway WB Ramps

	↗	↘	↖	↑	↓	↙
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰↰		↰			
Sign Control	Stop			Stop	Stop	
Volume (vph)	550	0	537	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	611	0	597	0	0	0

Direction, Lane #	EB 1	EB 2	NB 1
Volume Total (vph)	306	306	597
Volume Left (vph)	306	306	597
Volume Right (vph)	0	0	0
Hadj (s)	0.58	0.58	0.29
Departure Headway (s)	7.0	7.0	5.8
Degree Utilization, x	0.59	0.59	0.95
Capacity (veh/h)	513	513	618
Control Delay (s)	18.3	18.3	49.2
Approach Delay (s)	18.3		49.2
Approach LOS	C		E

Intersection Summary			
Delay	33.5		
HCM Level of Service	D		
Intersection Capacity Utilization	54.6%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Signalized Intersection Capacity Analysis
1046: 115th Street & Marshield Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱		↰	↑↑						↰↑↱	
Volume (vph)	0	353	46	127	326	0	0	0	0	72	15	42
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	12	12	12	12	12
Total Lost time (s)		3.0		4.0	4.0						5.0	
Lane Util. Factor		0.95		1.00	0.95						0.95	
Frt		0.98		1.00	1.00						0.95	
Flt Protected		1.00		0.95	1.00						0.97	
Satd. Flow (prot)		3094		1574	3149						3014	
Flt Permitted		1.00		0.44	1.00						0.97	
Satd. Flow (perm)		3094		730	3149						3014	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	392	51	141	362	0	0	0	0	80	17	47
RTOR Reduction (vph)	0	12	0	0	0	0	0	0	0	0	32	0
Lane Group Flow (vph)	0	431	0	141	362	0	0	0	0	0	112	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type				pm+pt						Split		
Protected Phases		4		3	8					6	6	
Permitted Phases				8								
Actuated Green, G (s)		36.0		49.0	49.0						27.0	
Effective Green, g (s)		36.0		49.0	49.0						27.0	
Actuated g/C Ratio		0.42		0.58	0.58						0.32	
Clearance Time (s)		3.0		4.0	4.0						5.0	
Lane Grp Cap (vph)		1310		520	1815						957	
v/s Ratio Prot		c0.14		c0.03	0.11						c0.04	
v/s Ratio Perm				0.12								
v/c Ratio		0.33		0.27	0.20						0.12	
Uniform Delay, d1		16.4		11.5	8.6						20.6	
Progression Factor		1.00		0.27	0.24						1.00	
Incremental Delay, d2		0.7		1.2	0.2						0.2	
Delay (s)		17.1		4.4	2.3						20.8	
Level of Service		B		A	A						C	
Approach Delay (s)		17.1			2.9			0.0			20.8	
Approach LOS		B			A			A			C	

Intersection Summary			
HCM Average Control Delay	11.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.23		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	34.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1047: 115th Street & Ashland Avenue

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Lane Configurations	↰	↑↑			↑↱			↰↑↱				
Volume (vph)	68	357	0	0	404	76	49	65	45	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	11	11	12	12	12	12	12	12
Total Lost time (s)	5.0	5.0			3.0			5.0				
Lane Util. Factor	1.00	0.95			0.95			0.91				
Frt	1.00	1.00			0.98			0.96				
Flt Protected	0.95	1.00			1.00			0.98				
Satd. Flow (prot)	1629	3257			3074			4413				
Flt Permitted	0.38	1.00			1.00			0.98				
Satd. Flow (perm)	650	3257			3074			4413				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	76	397	0	0	449	84	54	72	50	0	0	0
RTOR Reduction (vph)	0	0	0	0	18	0	0	34	0	0	0	0
Lane Group Flow (vph)	76	397	0	0	515	0	0	142	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	pm+pt						Split					
Protected Phases	7	4			8		2	2				
Permitted Phases	4											
Actuated Green, G (s)	48.0	48.0			35.0			27.0				
Effective Green, g (s)	48.0	48.0			35.0			27.0				
Actuated g/C Ratio	0.56	0.56			0.41			0.32				
Clearance Time (s)	5.0	5.0			3.0			5.0				
Lane Grp Cap (vph)	482	1839			1266			1402				
v/s Ratio Prot	0.02	c0.12			c0.17			c0.03				
v/s Ratio Perm	0.07											
v/c Ratio	0.16	0.22			0.41			0.10				
Uniform Delay, d1	12.2	9.2			17.7			20.4				
Progression Factor	0.33	0.32			1.00			1.00				
Incremental Delay, d2	0.7	0.3			1.0			0.1				
Delay (s)	4.6	3.2			18.6			20.6				
Level of Service	A	A			B			C				
Approach Delay (s)		3.5			18.6			20.6			0.0	
Approach LOS		A			B			C			A	

Intersection Summary			
HCM Average Control Delay	12.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	34.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1048: 115th Street & Racine Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↑↱			↰↑↑↱			✣			✣	
Volume (vph)	39	323	39	34	247	31	118	85	61	58	91	126
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	10	12	12	15	12	12	15	12
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			1.00			1.00	
Frt		0.99			0.99			0.97			0.94	
Flt Protected		1.00			0.99			0.98			0.99	
Satd. Flow (prot)		2982			2979			1787			1750	
Flt Permitted		0.89			0.87			0.75			0.88	
Satd. Flow (perm)		2664			2613			1378			1560	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	43	359	43	38	274	34	131	94	68	64	101	140
RTOR Reduction (vph)	0	12	0	0	13	0	0	17	0	0	47	0
Lane Group Flow (vph)	0	433	0	0	333	0	0	276	0	0	258	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		23.0			23.0			32.0			32.0	
Effective Green, g (s)		23.0			23.0			32.0			32.0	
Actuated g/C Ratio		0.35			0.35			0.49			0.49	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		943			925			678			768	
v/s Ratio Prot												
v/s Ratio Perm		c0.16			0.13			c0.20			0.17	
v/c Ratio		0.46			0.36			0.41			0.34	
Uniform Delay, d1		16.2			15.6			10.5			10.0	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		1.6			1.1			1.8			1.2	
Delay (s)		17.8			16.6			12.3			11.2	
Level of Service		B			B			B			B	
Approach Delay (s)		17.8			16.6			12.3			11.2	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	14.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	63.7%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1049: 115th Street & Halsted Street

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↑	↱	↰	↑↑	↱
Volume (vph)	196	202	39	50	176	62	71	1009	70	75	430	87
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	12	10	16	12	9	10	9	9	10	9
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00	0.98	1.00	1.00	0.96
Flpb, ped/bikes	0.99	1.00		1.00	1.00		0.99	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.98		1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1548	3005		1592	3512		1486	3040	1347	1494	3011	1271
Flt Permitted	0.59	1.00		0.58	1.00		0.43	1.00	1.00	0.12	1.00	1.00
Satd. Flow (perm)	954	3005		975	3512		673	3040	1347	197	3011	1271
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	206	213	41	53	185	65	75	1062	74	79	453	92
RTOR Reduction (vph)	0	19	0	0	41	0	0	0	43	0	0	56
Lane Group Flow (vph)	206	235	0	53	209	0	75	1062	31	79	453	36
Confl. Peds. (#/hr)	31		7	7		31	37		12	12		37
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	2%	4%	0%	0%	6%	2%	3%	5%	0%	3%	6%	4%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	32.0	27.0		32.0	27.0		38.0	33.0	33.0	38.0	33.0	33.0
Effective Green, g (s)	30.0	28.0		30.0	28.0		36.0	33.0	33.0	36.0	33.0	33.0
Actuated g/C Ratio	0.35	0.33		0.35	0.33		0.42	0.39	0.39	0.42	0.39	0.39
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)	365	990		373	1157		323	1180	523	144	1169	493
v/s Ratio Prot	c0.03	0.08		0.01	0.06		0.01	c0.35		c0.03	0.15	
v/s Ratio Perm	c0.17			0.04			0.09		0.02	c0.21		0.03
v/c Ratio	0.56	0.24		0.14	0.18		0.23	0.90	0.06	0.55	0.39	0.07
Uniform Delay, d1	21.3	20.7		18.4	20.3		15.0	24.4	16.3	17.5	18.7	16.4
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	2.00	0.61	0.80
Incremental Delay, d2	6.2	0.6		0.8	0.3		1.7	11.0	0.2	12.9	0.9	0.3
Delay (s)	27.5	21.3		19.2	20.7		16.7	35.5	16.5	47.9	12.3	13.4
Level of Service	C	C		B	C		B	D	B	D	B	B
Approach Delay (s)		24.1			20.4			33.1			16.9	
Approach LOS		C			C			C			B	

Intersection Summary			
HCM Average Control Delay	26.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	72.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1050: 115th Street & Wentworth Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱		↰	↱		↰	↱
Volume (vph)	40	256	18	14	216	8	35	121	25	20	59	42
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	16	12	12	16	12
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frpb, ped/bikes		1.00	0.96		1.00	0.97		1.00	0.99		1.00	0.98
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frt		1.00	0.85		1.00	0.85		1.00	0.85		1.00	0.85
Flt Protected		0.99	1.00		1.00	1.00		0.99	1.00		0.99	1.00
Satd. Flow (prot)		1929	1382		1950	1331		1973	1452		1928	1430
Flt Permitted		0.94	1.00		0.98	1.00		0.94	1.00		0.93	1.00
Satd. Flow (perm)		1823	1382		1910	1331		1866	1452		1811	1430
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	42	269	19	15	227	8	37	127	26	21	62	44
RTOR Reduction (vph)	0	0	10	0	0	4	0	0	15	0	0	26
Lane Group Flow (vph)	0	311	9	0	242	4	0	164	11	0	83	18
Confl. Peds. (#/hr)	5		21	21		5	9		1	1		9
Heavy Vehicles (%)	5%	5%	6%	7%	4%	12%	6%	1%	4%	0%	6%	5%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)		30.0	30.0		30.0	30.0		27.0	27.0		27.0	27.0
Effective Green, g (s)		30.0	30.0		30.0	30.0		27.0	27.0		27.0	27.0
Actuated g/C Ratio		0.46	0.46		0.46	0.46		0.42	0.42		0.42	0.42
Clearance Time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		841	638		882	614		775	603		752	594
v/s Ratio Prot												
v/s Ratio Perm		c0.17	0.01		0.13	0.00		c0.09	0.01		0.05	0.01
v/c Ratio		0.37	0.01		0.27	0.01		0.21	0.02		0.11	0.03
Uniform Delay, d1		11.4	9.5		10.8	9.4		12.2	11.2		11.6	11.3
Progression Factor		1.00	1.00		0.46	0.37		1.16	1.42		0.95	0.86
Incremental Delay, d2		1.3	0.0		0.8	0.0		0.6	0.1		0.3	0.1
Delay (s)		12.6	9.5		5.8	3.5		14.8	15.9		11.3	9.8
Level of Service		B	A		A	A		B	B		B	A
Approach Delay (s)		12.4			5.7			14.9			10.8	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM Average Control Delay	10.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.29		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	61.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1051: 115th Street & State Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	66	285	10	17	211	34	13	247	35	47	70	30
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	0.98		1.00	0.98		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1520	3025		1520	2976		1520	2983		1520	2904	
Flt Permitted	0.95	1.00		0.55	1.00		0.68	1.00		0.54	1.00	
Satd. Flow (perm)	1520	3025		886	2976		1091	2983		871	2904	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	73	317	11	19	234	38	14	274	39	52	78	33
RTOR Reduction (vph)	0	4	0	0	20	0	0	17	0	0	19	0
Lane Group Flow (vph)	73	324	0	19	252	0	14	296	0	52	92	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Prot			Perm			Perm			Perm		
Protected Phases	7	4			8			2			6	
Permitted Phases				8			2			6		
Actuated Green, G (s)	7.0	32.0		22.0	22.0		27.0	27.0		27.0	27.0	
Effective Green, g (s)	7.0	32.0		22.0	22.0		27.0	27.0		27.0	27.0	
Actuated g/C Ratio	0.11	0.49		0.34	0.34		0.42	0.42		0.42	0.42	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	164	1489		300	1007		453	1239		362	1206	
v/s Ratio Prot	c0.05	0.11			c0.08			c0.10			0.03	
v/s Ratio Perm				0.02			0.01			0.06		
v/c Ratio	0.45	0.22		0.06	0.25		0.03	0.24		0.14	0.08	
Uniform Delay, d1	27.2	9.4		14.5	15.5		11.3	12.3		11.8	11.5	
Progression Factor	0.85	0.49		0.85	0.82		0.54	0.55		1.15	1.16	
Incremental Delay, d2	8.3	0.3		0.4	0.6		0.1	0.4		0.8	0.1	
Delay (s)	31.5	4.9		12.8	13.4		6.2	7.2		14.4	13.4	
Level of Service	C	A		B	B		A	A		B	B	
Approach Delay (s)		9.8			13.4			7.2			13.7	
Approach LOS		A			B			A			B	

Intersection Summary			
HCM Average Control Delay	10.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.27		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	37.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1052: 115th Street & Michigan Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			↰↑↱			↰↑↱	
Volume (vph)	37	253	85	242	216	43	43	297	56	25	185	25
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	12	12	12	12	12	12
Total Lost time (s)	4.0	4.0		3.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frt	1.00	0.96		1.00	0.97			0.98			0.98	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1520	2926		1520	2964			3171			3188	
Flt Permitted	0.58	1.00		0.95	1.00			0.90			0.89	
Satd. Flow (perm)	921	2926		1520	2964			2857			2857	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	41	281	94	269	240	48	48	330	62	28	206	28
RTOR Reduction (vph)	0	51	0	0	25	0	0	20	0	0	14	0
Lane Group Flow (vph)	41	324	0	269	263	0	0	420	0	0	248	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Prot			Perm			Perm		
Protected Phases		4		3	8			2			6	
Permitted Phases	4						2			6		
Actuated Green, G (s)	20.0	20.0		6.0	29.0			25.0			25.0	
Effective Green, g (s)	20.0	20.0		6.0	29.0			25.0			25.0	
Actuated g/C Ratio	0.31	0.31		0.09	0.45			0.38			0.38	
Clearance Time (s)	4.0	4.0		3.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	283	900		140	1322			1099			1099	
v/s Ratio Prot		c0.11		c0.18	0.09							
v/s Ratio Perm	0.04							c0.15			0.09	
v/c Ratio	0.14	0.36		1.92	0.20			0.38			0.23	
Uniform Delay, d1	16.3	17.5		29.5	10.9			14.4			13.5	
Progression Factor	0.64	0.55		1.32	1.10			1.26			0.81	
Incremental Delay, d2	1.1	1.1		433.0	0.2			0.2			0.5	
Delay (s)	11.5	10.7		472.0	12.3			18.4			11.4	
Level of Service	B	B		F	B			B			B	
Approach Delay (s)		10.8			234.3			18.4			11.4	
Approach LOS		B			F			B			B	

Intersection Summary			
HCM Average Control Delay	87.2	HCM Level of Service	F
HCM Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	56.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1053: 115th Street & Indiana Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			↰↑↑↱				
Volume (vph)	16	298	14	70	466	70	34	94	162	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	12	14	12	10	15	10
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			0.95				
Frt		0.99			0.98			0.92				
Flt Protected		1.00			0.99			0.99				
Satd. Flow (prot)		1587			1566			3164				
Flt Permitted		0.97			0.92			0.99				
Satd. Flow (perm)		1535			1451			3164				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	18	331	16	78	518	78	38	104	180	0	0	0
RTOR Reduction (vph)	0	2	0	0	6	0	0	138	0	0	0	0
Lane Group Flow (vph)	0	363	0	0	668	0	0	184	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm			Perm					
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Actuated Green, G (s)		41.9			41.9			15.1				
Effective Green, g (s)		41.9			41.9			15.1				
Actuated g/C Ratio		0.64			0.64			0.23				
Clearance Time (s)		4.0			4.0			4.0				
Vehicle Extension (s)		3.0			3.0			8.0				
Lane Grp Cap (vph)		989			935			735				
v/s Ratio Prot												
v/s Ratio Perm		0.24			c0.46			0.06				
v/c Ratio		0.37			0.71			0.25				
Uniform Delay, d1		5.4			7.6			20.3				
Progression Factor		1.70			1.00			1.00				
Incremental Delay, d2		1.0			4.6			0.8				
Delay (s)		10.1			12.3			21.1				
Level of Service		B			B			C				
Approach Delay (s)		10.1			12.3			21.1			0.0	
Approach LOS		B			B			C			A	

Intersection Summary			
HCM Average Control Delay	13.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	72.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
1054: 115th Street & Martin Luther King Jr Drive

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰	↱		↖	↗
Volume (veh/h)	96	364	469	44	66	134
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	101	383	494	46	69	141
Pedestrians		3	5		21	
Lane Width (ft)		16.0	16.0		10.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		0	1		1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		1319	491			
pX, platoon unblocked	0.87				0.87	0.87
vC, conflicting volume	561				1128	541
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	419				1072	396
tC, single (s)	4.2				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.3				3.5	3.3
p0 queue free %	89				63	75
cM capacity (veh/h)	932				185	557

Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total	484	540	69	141
Volume Left	101	0	69	0
Volume Right	0	46	0	141
cSH	932	1700	185	557
Volume to Capacity	0.11	0.32	0.37	0.25
Queue Length 95th (ft)	9	0	40	25
Control Delay (s)	3.0	0.0	35.6	13.6
Lane LOS	A		E	B
Approach Delay (s)	3.0	0.0	20.9	
Approach LOS			C	

Intersection Summary			
Average Delay	4.7		
Intersection Capacity Utilization	69.6%	ICU Level of Service	C
Analysis Period (min)	15		

HCM Signalized Intersection Capacity Analysis
1055: 115th Street & Cottage Grove Avenue

1/14/2013

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↱			↰	⋎	
Volume (vph)	472	1	27	675	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0			4.0		
Lane Util. Factor	1.00			1.00		
Frt	1.00			1.00		
Flt Protected	1.00			1.00		
Satd. Flow (prot)	1714			1711		
Flt Permitted	1.00			0.97		
Satd. Flow (perm)	1714			1661		
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	524	1	30	750	0	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	525	0	0	780	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%
Turn Type			Perm			
Protected Phases	1 2 4			4	3	
Permitted Phases			4			
Actuated Green, G (s)	63.0			31.0		
Effective Green, g (s)	59.0			31.0		
Actuated g/C Ratio	0.69			0.36		
Clearance Time (s)				4.0		
Lane Grp Cap (vph)	1190			606		
v/s Ratio Prot	c0.31					
v/s Ratio Perm				c0.47		
v/c Ratio	0.44			1.29		
Uniform Delay, d1	5.7			27.0		
Progression Factor	0.06			1.00		
Incremental Delay, d2	0.1			141.4		
Delay (s)	0.4			168.4		
Level of Service	A			F		
Approach Delay (s)	0.4			168.4	0.0	
Approach LOS	A			F	A	

Intersection Summary			
HCM Average Control Delay	100.8	HCM Level of Service	F
HCM Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	63.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
1056: 115th Street & Bishop Ford Fwy

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱			↰						↰	↱
Volume (veh/h)	0	184	193	25	561	0	0	0	0	3	0	263
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	204	214	28	623	0	0	0	0	3	0	292
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	623			204			991	991	209	781	883	623
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	623			204			991	991	209	781	883	623
tC, single (s)	4.1			5.5			7.5	6.5	6.9	7.5	6.5	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.9			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			97			100	100	100	99	100	31
cM capacity (veh/h)	968			985			62	241	803	282	279	424

Direction, Lane #	EB 1	EB 2	WB 1	SB 1	SB 2
Volume Total	136	283	651	3	292
Volume Left	0	0	28	3	0
Volume Right	0	214	0	0	292
cSH	1700	1700	985	282	424
Volume to Capacity	0.08	0.17	0.03	0.01	0.69
Queue Length 95th (ft)	0	0	2	1	127
Control Delay (s)	0.0	0.0	0.7	17.9	30.3
Lane LOS			A	C	D
Approach Delay (s)	0.0		0.7	30.2	
Approach LOS				D	

Intersection Summary			
Average Delay	6.9		
Intersection Capacity Utilization	57.9%	ICU Level of Service	B
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
1057: 115th Street &

	↗	↘	↖	↑	↓	↙
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰↰		↰			
Sign Control	Stop			Stop	Stop	
Volume (vph)	187	0	586	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	208	0	651	0	0	0

Direction, Lane #	EB 1	EB 2	NB 1
Volume Total (vph)	104	104	651
Volume Left (vph)	104	104	651
Volume Right (vph)	0	0	0
Hadj (s)	0.58	0.58	0.29
Departure Headway (s)	6.8	6.8	4.9
Degree Utilization, x	0.20	0.20	0.88
Capacity (veh/h)	511	512	734
Control Delay (s)	10.3	10.3	32.1
Approach Delay (s)	10.3		32.1
Approach LOS	B		D

Intersection Summary			
Delay	26.8		
HCM Level of Service	D		
Intersection Capacity Utilization	46.6%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Signalized Intersection Capacity Analysis
1058: 119th Street & Marshield Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↰↑					↰	↰↑↱	↱
Volume (vph)	0	564	210	168	497	0	0	0	0	132	117	300
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	12	13	12	12	12	12	10	10	11
Total Lost time (s)		6.0	6.0		6.0					6.0	6.0	6.0
Lane Util. Factor		0.95	1.00		0.95					0.86	0.81	0.86
Frpb, ped/bikes		1.00	0.98		1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00					1.00	1.00	1.00
Frt		1.00	0.85		1.00					1.00	0.93	0.85
Flt Protected		1.00	1.00		0.99					0.95	0.99	1.00
Satd. Flow (prot)		2978	1202		3372					1346	3693	1122
Flt Permitted		1.00	1.00		0.99					0.95	0.99	1.00
Satd. Flow (perm)		2978	1202		3372					1346	3693	1122
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	594	221	177	523	0	0	0	0	139	123	316
RTOR Reduction (vph)	0	0	124	0	0	0	0	0	0	0	98	93
Lane Group Flow (vph)	0	594	97	0	700	0	0	0	0	76	246	65
Confl. Peds. (#/hr)	5		3	3		5						
Heavy Vehicles (%)	0%	11%	9%	2%	4%	0%	0%	0%	0%	2%	2%	2%
Parking (#/hr)			0									0
Turn Type			Perm	Split						Split		custom
Protected Phases		2		10 12 14	10 12 14					4	4	
Permitted Phases			2									4 2
Actuated Green, G (s)		39.1	39.1		71.1					20.4	20.4	65.5
Effective Green, g (s)		39.1	39.1		71.1					20.4	20.4	65.5
Actuated g/C Ratio		0.24	0.24		0.44					0.13	0.13	0.41
Clearance Time (s)		6.0	6.0							6.0	6.0	
Vehicle Extension (s)		3.0	3.0							3.0	3.0	
Lane Grp Cap (vph)		728	294		1498					172	471	459
v/s Ratio Prot		c0.20			c0.21					0.06	c0.07	
v/s Ratio Perm			0.08									0.06
v/c Ratio		0.82	0.33		0.47					0.44	0.52	0.14
Uniform Delay, d1		57.1	49.7		31.2					64.5	65.3	29.6
Progression Factor		1.00	1.00		0.02					1.00	1.00	1.00
Incremental Delay, d2		9.8	3.0		0.1					1.8	1.1	0.1
Delay (s)		66.9	52.7		0.7					66.3	66.3	29.8
Level of Service		E	D		A					E	E	C
Approach Delay (s)		63.0			0.7			0.0			56.3	
Approach LOS		E			A			A			E	

Intersection Summary			
HCM Average Control Delay	40.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	31.4
Intersection Capacity Utilization	56.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1059: 119th Street & Ashland Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑			↑↑	↱	↰	↰↑↱				
Volume (vph)	212	484	0	0	427	93	238	150	178	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	13	12	12	11	12	13	13	14	12	12	12
Total Lost time (s)	6.0	6.0			6.0	6.0	6.0	6.0				
Lane Util. Factor	1.00	0.95			0.95	1.00	0.91	0.91				
Frt	1.00	1.00			1.00	0.85	1.00	0.93				
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.99				
Satd. Flow (prot)	1574	3366			3149	1457	1531	2975				
Flt Permitted	0.95	1.00			1.00	1.00	0.95	0.99				
Satd. Flow (perm)	1574	3366			3149	1457	1531	2975				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	236	538	0	0	474	103	264	167	198	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	77	0	99	0	0	0	0
Lane Group Flow (vph)	236	538	0	0	474	26	216	314	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Split					Perm	Split					
Protected Phases	2 4 8	2 4 8			10		12	12				
Permitted Phases						10						
Actuated Green, G (s)	80.9	80.9			33.6	33.6	18.6	18.6				
Effective Green, g (s)	80.9	80.9			33.6	33.6	18.6	18.6				
Actuated g/C Ratio	0.51	0.51			0.21	0.21	0.12	0.12				
Clearance Time (s)					6.0	6.0	6.0	6.0				
Vehicle Extension (s)					3.0	3.0	3.0	3.0				
Lane Grp Cap (vph)	796	1702			661	306	178	346				
v/s Ratio Prot	0.15	c0.16			c0.15		c0.14	0.11				
v/s Ratio Perm						0.02						
v/c Ratio	0.30	0.32			0.72	0.08	1.21	0.91				
Uniform Delay, d1	23.0	23.3			58.8	50.8	70.7	69.9				
Progression Factor	0.07	0.07			1.00	1.00	1.00	1.00				
Incremental Delay, d2	0.1	0.1			3.7	0.1	136.5	26.3				
Delay (s)	1.7	1.7			62.5	50.9	207.2	96.1				
Level of Service	A	A			E	D	F	F				
Approach Delay (s)		1.7			60.4			134.3			0.0	
Approach LOS		A			E			F			A	

Intersection Summary			
HCM Average Control Delay	60.9	HCM Level of Service	E
HCM Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	28.9
Intersection Capacity Utilization	51.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1060: 119th Street & Halsted Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑↱		↰	↑↑↱		↰	↑↑↱	
Volume (vph)	220	452	75	56	186	54	88	824	148	93	448	104
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	14	12	10	10	12	9	10	12
Total Lost time (s)	4.0	4.0	5.0	4.0	5.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.99	1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	0.99	1.00	1.00	1.00	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.97		1.00	0.98		1.00	0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1538	1556	1327	1596	1724		1525	2931		1509	2870	
Flt Permitted	0.46	1.00	1.00	0.20	1.00		0.34	1.00		0.12	1.00	
Satd. Flow (perm)	749	1556	1327	340	1724		542	2931		192	2870	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	232	476	79	59	196	57	93	867	156	98	472	109
RTOR Reduction (vph)	0	0	53	0	12	0	0	16	0	0	22	0
Lane Group Flow (vph)	232	476	26	59	241	0	93	1007	0	98	559	0
Confl. Peds. (#/hr)	33		3	3		33	42		8	8		42
Confl. Bikes (#/hr)							1					1
Heavy Vehicles (%)	3%	8%	6%	0%	7%	5%	4%	5%	11%	2%	6%	9%
Turn Type	pm+pt		Perm	pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)	36.3	29.3	29.3	33.3	27.8		39.6	34.1		39.6	34.1	
Effective Green, g (s)	34.3	30.3	29.3	31.3	27.8		37.6	34.1		37.6	34.1	
Actuated g/C Ratio	0.38	0.34	0.33	0.35	0.31		0.42	0.38		0.42	0.38	
Clearance Time (s)	3.0	5.0	5.0	3.0	5.0		3.0	4.0		3.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	340	527	435	182	536		277	1118		147	1095	
v/s Ratio Prot	c0.05	c0.31		0.02	0.14		0.02	c0.34		c0.03	0.19	
v/s Ratio Perm	0.22		0.02	0.10			0.12			0.25		
v/c Ratio	0.68	0.90	0.06	0.32	0.45		0.34	0.90		0.67	0.51	
Uniform Delay, d1	22.7	28.2	20.6	21.1	24.7		16.3	26.1		18.8	21.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	5.6	21.4	0.3	1.0	2.7		0.7	11.6		10.9	1.7	
Delay (s)	28.3	49.5	20.9	22.1	27.4		17.0	37.6		29.6	22.9	
Level of Service	C	D	C	C	C		B	D		C	C	
Approach Delay (s)		40.4			26.4			35.9			23.9	
Approach LOS		D			C			D			C	

Intersection Summary			
HCM Average Control Delay	33.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	89.4	Sum of lost time (s)	12.0
Intersection Capacity Utilization	79.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1061: 119th Street & Wentworth Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱		✥			✥	
Volume (vph)	44	568	16	26	257	28	35	80	102	45	44	39
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	10	10	10	12	15	12	12	16	12
Total Lost time (s)		3.0	3.0		3.0	3.0		3.0			3.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00			1.00	
Frpb, ped/bikes		1.00	0.97		1.00	0.97		0.99			0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00			1.00	
Frt		1.00	0.85		1.00	0.85		0.94			0.96	
Flt Protected		1.00	1.00		1.00	1.00		0.99			0.98	
Satd. Flow (prot)		1908	1482		1599	1198		1812			1823	
Flt Permitted		0.96	1.00		0.93	1.00		0.95			0.86	
Satd. Flow (perm)		1844	1482		1499	1198		1732			1604	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	46	598	17	27	271	29	37	84	107	47	46	41
RTOR Reduction (vph)	0	0	6	0	0	15	0	49	0	0	24	0
Lane Group Flow (vph)	0	644	11	0	298	14	0	179	0	0	110	0
Confl. Peds. (#/hr)	6		11	11		6	4		8	8		4
Confl. Bikes (#/hr)	1		1	1		1			1	1		
Heavy Vehicles (%)	0%	7%	0%	0%	5%	16%	0%	0%	0%	10%	0%	3%
Turn Type	Perm		Perm	Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)		32.0	32.0		32.0	32.0		27.0			27.0	
Effective Green, g (s)		32.0	32.0		32.0	32.0		27.0			27.0	
Actuated g/C Ratio		0.49	0.49		0.49	0.49		0.42			0.42	
Clearance Time (s)		3.0	3.0		3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)		908	730		738	590		719			666	
v/s Ratio Prot												
v/s Ratio Perm		c0.35	0.01		0.20	0.01		c0.10			0.07	
v/c Ratio		0.71	0.01		0.40	0.02		0.25			0.17	
Uniform Delay, d1		12.9	8.4		10.5	8.5		12.4			11.9	
Progression Factor		1.00	1.00		1.90	2.84		1.00			1.37	
Incremental Delay, d2		4.7	0.0		0.1	0.0		0.8			0.5	
Delay (s)		17.5	8.5		20.0	24.1		13.2			16.8	
Level of Service		B	A		C	C		B			B	
Approach Delay (s)		17.3			20.4			13.2			16.8	
Approach LOS		B			C			B			B	

Intersection Summary			
HCM Average Control Delay	17.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	74.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱		↰	↱		✥	
Volume (vph)	75	627	24	27	238	8	41	228	108	18	53	30
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frpb, ped/bikes		1.00	0.96		1.00	0.98		1.00	0.96		0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		0.96	
Flt Protected		0.99	1.00		1.00	1.00		0.99	1.00		0.99	
Satd. Flow (prot)		1656	1392		1581	1497		1755	1390		1656	
Flt Permitted		0.93	1.00		0.35	1.00		0.95	1.00		0.93	
Satd. Flow (perm)		1545	1392		562	1497		1677	1390		1559	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	79	660	25	28	251	8	43	240	114	19	56	32
RTOR Reduction (vph)	0	0	8	0	0	5	0	0	41	0	16	0
Lane Group Flow (vph)	0	739	17	0	279	3	0	283	73	0	91	0
Confl. Peds. (#/hr)	11		17	17		11	4		17	17		4
Confl. Bikes (#/hr)	1		1	1		1	1					1
Heavy Vehicles (%)	0%	9%	5%	33%	11%	0%	6%	1%	6%	0%	0%	8%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		23.0	23.0		23.0	23.0		32.0	32.0		32.0	
Effective Green, g (s)		23.0	23.0		23.0	23.0		32.0	32.0		32.0	
Actuated g/C Ratio		0.35	0.35		0.35	0.35		0.49	0.49		0.49	
Clearance Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	
Lane Grp Cap (vph)		547	493		199	530		826	684		768	
v/s Ratio Prot												
v/s Ratio Perm		0.48	0.01		c0.50	0.00		c0.17	0.05		0.06	
v/c Ratio		1.35	0.03		1.40	0.01		0.34	0.11		0.12	
Uniform Delay, d1		21.0	13.7		21.0	13.6		10.1	8.8		8.9	
Progression Factor		1.59	1.78		0.80	0.80		0.39	0.25		1.09	
Incremental Delay, d2		167.4	0.1		207.4	0.0		0.8	0.2		0.3	
Delay (s)		200.8	24.6		224.1	10.9		4.7	2.4		10.0	
Level of Service		F	C		F	B		A	A		A	
Approach Delay (s)		195.1			218.2			4.0			10.0	
Approach LOS		F			F			A			A	

Intersection Summary			
HCM Average Control Delay	137.8	HCM Level of Service	F
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	88.5%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑	↱		✥			✥			↰↑	↱
Volume (vph)	676	21	31	9	18	15	26	363	19	9	220	226
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	14	12	12	16	12	12	16	12
Total Lost time (s)		3.0	3.0		3.0			3.0			3.0	3.0
Lane Util. Factor		1.00	1.00		1.00			1.00			1.00	1.00
Frpb, ped/bikes		1.00	0.97		0.98			1.00			1.00	0.95
Flpb, ped/bikes		0.98	1.00		1.00			1.00			1.00	1.00
Frt		1.00	0.85		0.95			0.99			1.00	0.85
Flt Protected		0.95	1.00		0.99			1.00			1.00	1.00
Satd. Flow (prot)		1750	1390		1761			1979			1873	1328
Flt Permitted		0.72	1.00		0.62			0.97			0.98	1.00
Satd. Flow (perm)		1330	1390		1111			1934			1848	1328
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	751	23	34	10	20	17	29	403	21	10	244	251
RTOR Reduction (vph)	0	0	10	0	13	0	0	3	0	0	0	127
Lane Group Flow (vph)	0	774	24	0	34	0	0	450	0	0	254	124
Confl. Peds. (#/hr)	49		22	22		49	34		17	17		34
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	9%	0%	7%	0%	0%	0%	0%	2%	0%	0%	9%	9%
Turn Type	pm+pt		Perm	Perm			Perm			Perm		Perm
Protected Phases	7	4			8			2			6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)		27.0	27.0		17.0			32.0			32.0	32.0
Effective Green, g (s)		27.0	27.0		17.0			32.0			32.0	32.0
Actuated g/C Ratio		0.42	0.42		0.26			0.49			0.49	0.49
Clearance Time (s)		3.0	3.0		3.0			3.0			3.0	3.0
Lane Grp Cap (vph)		604	577		291			952			910	654
v/s Ratio Prot		c0.16										
v/s Ratio Perm		0.37	0.02		0.03			c0.23			0.14	0.09
v/c Ratio		1.28	0.04		0.12			0.47			0.28	0.19
Uniform Delay, d1		19.0	11.3		18.3			10.9			9.7	9.2
Progression Factor		1.14	1.51		1.00			0.59			0.51	1.01
Incremental Delay, d2		127.9	0.0		0.8			1.6			0.1	0.1
Delay (s)		149.5	17.1		19.1			8.0			5.1	9.4
Level of Service		F	B		B			A			A	A
Approach Delay (s)		143.9			19.1			8.0			7.2	
Approach LOS		F			B			A			A	

Intersection Summary			
HCM Average Control Delay	68.7	HCM Level of Service	E
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	93.7%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1064: 127th Street & S Paulina St

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↱		↰	↑↑					↰	↰↱	↱
Volume (vph)	0	989	222	274	1130	0	0	0	0	275	201	376
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	12	11	8	8	8	11	12	14
Total Lost time (s)		6.0		4.5	6.0					6.0	6.0	6.0
Lane Util. Factor		0.91		1.00	0.95					0.91	0.86	0.91
Frpb, ped/bikes		1.00		1.00	1.00					1.00	0.99	0.99
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Frt		0.97		1.00	1.00					1.00	0.94	0.85
Flt Protected		1.00		0.95	1.00					0.95	0.99	1.00
Satd. Flow (prot)		4322		1589	3226					1419	2711	1355
Flt Permitted		1.00		0.13	1.00					0.95	0.99	1.00
Satd. Flow (perm)		4322		224	3226					1419	2711	1355
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	1041	234	288	1189	0	0	0	0	289	212	396
RTOR Reduction (vph)	0	30	0	0	0	0	0	0	0	0	61	61
Lane Group Flow (vph)	0	1245	0	288	1189	0	0	0	0	234	392	149
Confl. Peds. (#/hr)	6		4	4		6	2					2
Heavy Vehicles (%)	0%	11%	7%	4%	6%	0%	0%	0%	0%	6%	4%	8%
Turn Type				pm+pt						Perm		Perm
Protected Phases		2		1	6						4	
Permitted Phases				6						4		4
Actuated Green, G (s)		48.1		69.3	69.3					23.7	23.7	23.7
Effective Green, g (s)		48.1		69.3	69.3					23.7	23.7	23.7
Actuated g/C Ratio		0.46		0.66	0.66					0.23	0.23	0.23
Clearance Time (s)		6.0		4.5	6.0					6.0	6.0	6.0
Vehicle Extension (s)		7.0		3.5	7.0					3.5	3.5	3.5
Lane Grp Cap (vph)		1980		365	2129					320	612	306
v/s Ratio Prot		0.29		c0.13	0.37							
v/s Ratio Perm				c0.40						c0.16	0.14	0.11
v/c Ratio		0.63		0.79	0.56					0.73	0.64	0.49
Uniform Delay, d1		21.7		19.0	9.6					37.7	36.8	35.4
Progression Factor		1.00		0.96	1.64					1.00	1.00	1.00
Incremental Delay, d2		1.5		6.1	0.6					8.6	2.4	1.4
Delay (s)		23.2		24.4	16.4					46.3	39.2	36.8
Level of Service		C		C	B					D	D	D
Approach Delay (s)		23.2			17.9			0.0			40.5	
Approach LOS		C			B			A			D	

Intersection Summary			
HCM Average Control Delay	25.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	10.5
Intersection Capacity Utilization	105.5%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1065: 127th Street & Marshfield Ave

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↑			↑↑	↱		↰↑↱				
Volume (vph)	311	953	0	0	855	234	549	365	484	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	12	12	12	11	12	12	12	12	12	12	12
Total Lost time (s)	6.0	6.0			6.0	6.0		6.0				
Lane Util. Factor	0.97	0.95			0.95	1.00		0.91				
Frpb, ped/bikes	1.00	1.00			1.00	0.99		1.00				
Flpb, ped/bikes	1.00	1.00			1.00	1.00		1.00				
Frt	1.00	1.00			1.00	0.85		0.95				
Flt Protected	0.95	1.00			1.00	1.00		0.98				
Satd. Flow (prot)	2915	3138			3119	1449		4390				
Flt Permitted	0.18	1.00			1.00	1.00		0.98				
Satd. Flow (perm)	568	3138			3119	1449		4390				
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	327	1003	0	0	900	246	578	384	509	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	105	0	88	0	0	0	0
Lane Group Flow (vph)	327	1003	0	0	900	141	0	1383	0	0	0	0
Confl. Peds. (#/hr)	4					4						
Heavy Vehicles (%)	10%	9%	0%	0%	6%	4%	4%	3%	5%	0%	0%	0%
Turn Type	pm+pt					Perm	Perm					
Protected Phases	5	2			6			8				
Permitted Phases	2					6	8					
Actuated Green, G (s)	62.8	62.8			45.3	45.3		30.2				
Effective Green, g (s)	62.8	62.8			45.3	45.3		30.2				
Actuated g/C Ratio	0.60	0.60			0.43	0.43		0.29				
Clearance Time (s)	6.0	6.0			6.0	6.0		6.0				
Vehicle Extension (s)	3.5	7.0			7.0	7.0		5.0				
Lane Grp Cap (vph)	597	1877			1346	625		1263				
v/s Ratio Prot	0.06	c0.32			c0.29							
v/s Ratio Perm	0.27					0.10		0.31				
v/c Ratio	0.55	0.53			0.67	0.23		1.09				
Uniform Delay, d1	12.8	12.5			23.9	18.8		37.4				
Progression Factor	0.61	0.77			0.97	1.49		1.00				
Incremental Delay, d2	0.9	0.9			1.6	0.5		55.3				
Delay (s)	8.7	10.5			24.7	28.5		92.7				
Level of Service	A	B			C	C		F				
Approach Delay (s)		10.1			25.5			92.7			0.0	
Approach LOS		B			C			F			A	

Intersection Summary			
HCM Average Control Delay	45.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	105.5%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	105	743	226	78	796	44	226	178	40	57	111	91
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	12	11	12	12	10	10	13	10	10	10
Total Lost time (s)	3.5	6.0	3.5	3.5	6.0		3.5	6.0		3.5	6.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.97		1.00	0.93	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1565	3061	1291	1603	3232		1446	3007		1544	2782	
Flt Permitted	0.13	1.00	1.00	0.36	1.00		0.54	1.00		0.61	1.00	
Satd. Flow (perm)	217	3061	1291	600	3232		819	3007		990	2782	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	111	782	238	82	838	46	238	187	42	60	117	96
RTOR Reduction (vph)	0	0	97	0	4	0	0	21	0	0	80	0
Lane Group Flow (vph)	111	782	141	82	880	0	238	208	0	60	133	0
Confl. Peds. (#/hr)	3		12	12		3	9		6	6		9
Heavy Vehicles (%)	2%	8%	5%	3%	5%	3%	10%	3%	2%	3%	7%	4%
Parking (#/hr)			0									
Turn Type	pm+pt		pm+ov	pm+pt			pm+pt			pm+pt		
Protected Phases	5	2	3	1	6		3	8		7	4	
Permitted Phases	2		2	6			8			4		
Actuated Green, G (s)	62.7	52.7	62.0	40.6	34.1		29.4	20.1		24.2	17.5	
Effective Green, g (s)	62.7	52.7	62.0	40.6	34.1		29.4	20.1		24.2	17.5	
Actuated g/C Ratio	0.60	0.50	0.59	0.39	0.32		0.28	0.19		0.23	0.17	
Clearance Time (s)	3.5	6.0	3.5	3.5	6.0		3.5	6.0		3.5	6.0	
Vehicle Extension (s)	3.0	7.0	3.0	3.0	7.0		3.0	7.0		3.0	7.0	
Lane Grp Cap (vph)	452	1536	762	294	1050		285	576		264	464	
v/s Ratio Prot	c0.06	c0.26	0.02	0.02	c0.27		c0.07	0.07		0.01	0.05	
v/s Ratio Perm	0.09		0.09	0.09			c0.16			0.04		
v/c Ratio	0.25	0.51	0.18	0.28	0.84		0.84	0.36		0.23	0.29	
Uniform Delay, d1	12.1	17.5	9.9	20.8	32.9		34.1	36.9		32.3	38.3	
Progression Factor	0.92	1.02	1.77	1.00	1.00		0.94	0.89		1.00	1.00	
Incremental Delay, d2	0.9	0.8	0.1	0.5	8.0		18.0	1.3		0.4	1.2	
Delay (s)	12.0	18.7	17.5	21.3	40.9		50.2	34.1		32.8	39.5	
Level of Service	B	B	B	C	D		D	C		C	D	
Approach Delay (s)		17.8			39.2			42.3			38.0	
Approach LOS		B			D			D			D	

Intersection Summary			
HCM Average Control Delay	31.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	22.5
Intersection Capacity Utilization	73.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1067: Vermont St & S Ashland

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	62	329	286	59	196	102	329	382	83	91	258	54
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	11	12	11	12	12	11	13	12	10	11	12
Total Lost time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.93		1.00	0.95		1.00	0.97		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1635	2916		1463	3036		1589	3237		1549	3135	
Flt Permitted	0.53	1.00		0.24	1.00		0.46	1.00		0.47	1.00	
Satd. Flow (perm)	914	2916		367	3036		772	3237		772	3135	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	65	346	301	62	206	107	346	402	87	96	272	57
RTOR Reduction (vph)	0	144	0	0	61	0	0	17	0	0	17	0
Lane Group Flow (vph)	65	503	0	62	252	0	346	472	0	96	312	0
Confl. Peds. (#/hr)	20					20	1		2	2		1
Heavy Vehicles (%)	4%	5%	6%	13%	6%	5%	4%	6%	5%	3%	3%	0%
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	35.7	28.7		35.9	28.8		53.2	41.9		38.6	31.3	
Effective Green, g (s)	35.7	28.7		35.9	28.8		53.2	41.9		38.6	31.3	
Actuated g/C Ratio	0.34	0.27		0.34	0.27		0.51	0.40		0.37	0.30	
Clearance Time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	3.5	7.0		3.5	7.0		3.5	7.0		3.5	7.0	
Lane Grp Cap (vph)	359	797		200	833		530	1292		338	935	
v/s Ratio Prot	0.01	c0.17		c0.02	0.08		c0.11	0.15		0.02	0.10	
v/s Ratio Perm	0.05			0.09			c0.22			0.08		
v/c Ratio	0.18	0.63		0.31	0.30		0.65	0.36		0.28	0.33	
Uniform Delay, d1	23.8	33.5		24.5	30.2		16.6	22.2		22.4	28.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.06	0.93	
Incremental Delay, d2	0.3	3.8		1.0	0.9		3.0	0.8		0.5	0.9	
Delay (s)	24.1	37.3		25.5	31.1		19.6	23.0		24.2	27.8	
Level of Service	C	D		C	C		B	C		C	C	
Approach Delay (s)		36.1			30.2			21.6			27.0	
Approach LOS		D			C			C			C	

Intersection Summary			
HCM Average Control Delay	28.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	72.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1068: 127th Street & Halsted Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	169	716	81	6	457	113	68	602	7	104	326	105
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	10	12	9	11	12	9	9	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.99			0.97		1.00	1.00		1.00	0.96	
Flt Protected		0.99			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		2929			2896		1436	3186		1451	2788	
Flt Permitted		0.58			0.94		0.41	1.00		0.28	1.00	
Satd. Flow (perm)		1724			2728		624	3186		421	2788	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	188	796	90	7	508	126	76	669	8	116	362	117
RTOR Reduction (vph)	0	11	0	0	33	0	0	1	0	0	48	0
Lane Group Flow (vph)	0	1063	0	0	608	0	76	676	0	116	431	0
Confl. Peds. (#/hr)	9		11	11		9	11		14	14		11
Heavy Vehicles (%)	3%	6%	18%	50%	6%	6%	7%	3%	50%	6%	7%	2%
Turn Type	pm+pt			Perm			pm+pt			pm+pt		
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		27.0			19.0		26.0	22.0		26.0	22.0	
Effective Green, g (s)		27.0			19.0		26.0	22.0		26.0	22.0	
Actuated g/C Ratio		0.42			0.29		0.40	0.34		0.40	0.34	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		790			797		300	1078		232	944	
v/s Ratio Prot		c0.08					0.02	c0.21		c0.03	0.15	
v/s Ratio Perm		c0.48			0.22		0.09			0.17		
v/c Ratio		1.35			0.76		0.25	0.63		0.50	0.46	
Uniform Delay, d1		19.0			20.9		12.4	18.1		13.1	16.8	
Progression Factor		1.00			1.52		0.95	0.73		1.00	1.00	
Incremental Delay, d2		164.2			0.6		1.8	2.5		7.5	1.6	
Delay (s)		183.2			32.5		13.6	15.6		20.6	18.4	
Level of Service		F			C		B	B		C	B	
Approach Delay (s)		183.2			32.5			15.4			18.8	
Approach LOS		F			C			B			B	

Intersection Summary			
HCM Average Control Delay	78.5	HCM Level of Service	E
HCM Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	83.6%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

	↱	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱		↰	↑↱		↰	↑↱	
Volume (vph)	52	334	48	73	165	13	38	661	101	10	378	45
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	12	12	12	12	12
Total Lost time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.99		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1666	1916		1618	1943		1658	3196		1138	3197	
Flt Permitted	0.64	1.00		0.39	1.00		0.50	1.00		0.30	1.00	
Satd. Flow (perm)	1126	1916		660	1943		870	3196		354	3197	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	54	344	49	75	170	13	39	681	104	10	390	46
RTOR Reduction (vph)	0	8	0	0	4	0	0	19	0	0	14	0
Lane Group Flow (vph)	54	385	0	75	179	0	39	766	0	10	422	0
Confl. Peds. (#/hr)	10		16	16		10	4		6	6		4
Confl. Bikes (#/hr)			4	4								
Heavy Vehicles (%)	2%	4%	5%	5%	4%	0%	3%	4%	8%	50%	5%	6%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	24.0	24.0		24.0	24.0		31.0	31.0		31.0	31.0	
Effective Green, g (s)	24.0	24.0		24.0	24.0		31.0	31.0		31.0	31.0	
Actuated g/C Ratio	0.37	0.37		0.37	0.37		0.48	0.48		0.48	0.48	
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)	416	707		244	717		415	1524		169	1525	
v/s Ratio Prot		c0.20			0.09			c0.24			0.13	
v/s Ratio Perm	0.05			0.11			0.04			0.03		
v/c Ratio	0.13	0.54		0.31	0.25		0.09	0.50		0.06	0.28	
Uniform Delay, d1	13.6	16.2		14.6	14.2		9.3	11.7		9.2	10.2	
Progression Factor	1.00	1.00		1.74	1.78		1.00	1.00		0.48	0.47	
Incremental Delay, d2	0.6	3.0		1.1	0.3		0.4	1.2		0.5	0.3	
Delay (s)	14.2	19.2		26.4	25.6		9.8	12.9		4.9	5.2	
Level of Service	B	B		C	C		A	B		A	A	
Approach Delay (s)		18.6			25.8			12.7			5.2	
Approach LOS		B			C			B			A	

Intersection Summary			
HCM Average Control Delay	14.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	68.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

	→	↙	←	↖	↰	↖	↑	↗	↘	↓	↙	↙
Movement	**EBT**	**WBL**	**WBT**	**WBR**	**NBL2**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**	**SBR2**
Lane Configurations	↰↱		↰↱				✥			✥		
Volume (vph)	761	200	621	17	3	14	3	47	30	0	2	4
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	12	12	16	12	12	16	12	12
Total Lost time (s)	5.0		5.0				4.0			4.0		
Lane Util. Factor	0.95		0.95				1.00			1.00		
Frpb, ped/bikes	1.00		1.00				1.00			1.00		
Flpb, ped/bikes	1.00		1.00				1.00			1.00		
Frt	1.00		1.00				0.91			0.98		
Flt Protected	1.00		0.99				0.99			0.96		
Satd. Flow (prot)	2956		2954				1732			1908		
Flt Permitted	1.00		0.55				0.94			0.79		
Satd. Flow (perm)	2956		1640				1643			1562		
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	801	211	654	18	3	15	3	49	32	0	2	4
RTOR Reduction (vph)	0	0	2	0	0	0	38	0	0	3	0	0
Lane Group Flow (vph)	801	0	881	0	0	0	32	0	0	35	0	0
Confl. Peds. (#/hr)		7		6		3					3	
Confl. Bikes (#/hr)		1										
Heavy Vehicles (%)	8%	8%	6%	0%	0%	8%	0%	5%	0%	0%	0%	0%
Turn Type		custom				Perm			Perm			
Protected Phases	8	7	4				2			6		
Permitted Phases		4 7				2			6			
Actuated Green, G (s)	18.0		27.0				14.0			14.0		
Effective Green, g (s)	18.0		27.0				14.0			14.0		
Actuated g/C Ratio	0.28		0.42				0.22			0.22		
Clearance Time (s)	5.0		5.0				4.0			4.0		
Lane Grp Cap (vph)	819		803				354			336		
v/s Ratio Prot	0.27		c0.10									
v/s Ratio Perm			c0.35				0.02			c0.02		
v/c Ratio	0.98		1.10				0.09			0.10		
Uniform Delay, d1	23.3		19.0				20.4			20.5		
Progression Factor	1.34		0.74				1.00			1.00		
Incremental Delay, d2	5.6		60.5				0.5			0.6		
Delay (s)	36.9		74.6				20.9			21.1		
Level of Service	D		E				C			C		
Approach Delay (s)	36.9		74.6				20.9			21.1		
Approach LOS	D		E				C			C		

Intersection Summary			
HCM Average Control Delay	166.3	HCM Level of Service	F
HCM Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	106.4%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

1070: 127th Street & S Wallance St

Movement	NEL	NER
Lane Configurations	↗	
Volume (vph)	1	461
Ideal Flow (vphpl)	1800	1800
Lane Width	12	12
Total Lost time (s)	5.0	
Lane Util. Factor	1.00	
Frpb, ped/bikes	1.00	
Flpb, ped/bikes	1.00	
Frt	0.87	
Flt Protected	1.00	
Satd. Flow (prot)	1429	
Flt Permitted	1.00	
Satd. Flow (perm)	1429	
Peak-hour factor, PHF	0.95	0.95
Adj. Flow (vph)	1	485
RTOR Reduction (vph)	0	0
Lane Group Flow (vph)	486	0
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		
Heavy Vehicles (%)	0%	9%
Turn Type		
Protected Phases	3	
Permitted Phases		
Actuated Green, G (s)	10.0	
Effective Green, g (s)	10.0	
Actuated g/C Ratio	0.15	
Clearance Time (s)	5.0	
Lane Grp Cap (vph)	220	
v/s Ratio Prot	c0.34	
v/s Ratio Perm		
v/c Ratio	2.21	
Uniform Delay, d1	27.5	
Progression Factor	0.78	
Incremental Delay, d2	556.9	
Delay (s)	578.4	
Level of Service	F	
Approach Delay (s)	578.4	
Approach LOS	F	

Intersection Summary

HCM Signalized Intersection Capacity Analysis
1071: 127th Street & State Street

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰↑	↑↱		↰	↱
Volume (vph)	194	1172	684	81	139	156
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		1.00	1.00
Frt		1.00	0.98		1.00	0.85
Flt Protected		0.99	1.00		0.95	1.00
Satd. Flow (prot)		3234	3205		1629	1457
Flt Permitted		0.65	1.00		0.95	1.00
Satd. Flow (perm)		2129	3205		1629	1457
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	216	1302	760	90	154	173
RTOR Reduction (vph)	0	0	14	0	0	128
Lane Group Flow (vph)	0	1518	836	0	154	45
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%
Turn Type	Perm					Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)		40.0	40.0		17.0	17.0
Effective Green, g (s)		40.0	40.0		17.0	17.0
Actuated g/C Ratio		0.62	0.62		0.26	0.26
Clearance Time (s)		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		1310	1972		426	381
v/s Ratio Prot			0.26		c0.09	
v/s Ratio Perm		c0.71				0.03
v/c Ratio		1.16	0.42		0.36	0.12
Uniform Delay, d1		12.5	6.5		19.6	18.3
Progression Factor		1.45	1.27		0.91	0.85
Incremental Delay, d2		72.3	0.6		2.4	0.6
Delay (s)		90.5	8.9		20.1	16.1
Level of Service		F	A		C	B
Approach Delay (s)		90.5	8.9		18.0	
Approach LOS		F	A		B	

Intersection Summary			
HCM Average Control Delay	56.0	HCM Level of Service	E
HCM Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	81.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1072: 127th Street & Michigan Avenue

1/14/2013

	↗	→	←	↖	↘	↙
Movement	**EBL**	**EBT**	**WBT**	**WBR**	**SBL**	**SBR**
Lane Configurations		↰↑	↑↱		↰	↱
Volume (vph)	53	1231	703	202	174	56
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	12	10	11	12	10	10
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		1.00	1.00
Frpb, ped/bikes		1.00	1.00		1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00
Frt		1.00	0.97		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		2928	2920		1464	1373
Flt Permitted		0.87	1.00		0.95	1.00
Satd. Flow (perm)		2566	2920		1464	1373
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	56	1296	740	213	183	59
RTOR Reduction (vph)	0	0	41	0	0	42
Lane Group Flow (vph)	0	1352	912	0	183	17
Confl. Peds. (#/hr)	1			1		
Confl. Bikes (#/hr)	1			1		
Heavy Vehicles (%)	4%	9%	8%	12%	9%	4%
Turn Type	Perm					Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)		38.0	38.0		19.0	19.0
Effective Green, g (s)		38.0	38.0		19.0	19.0
Actuated g/C Ratio		0.58	0.58		0.29	0.29
Clearance Time (s)		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		1500	1707		428	401
v/s Ratio Prot			0.31		c0.12	
v/s Ratio Perm		c0.53				0.01
v/c Ratio		0.90	0.53		0.43	0.04
Uniform Delay, d1		11.9	8.2		18.6	16.5
Progression Factor		0.89	0.58		0.95	1.39
Incremental Delay, d2		1.0	0.6		3.0	0.2
Delay (s)		11.5	5.3		20.8	23.1
Level of Service		B	A		C	C
Approach Delay (s)		11.5	5.3		21.4	
Approach LOS		B	A		C	

Intersection Summary			
HCM Average Control Delay	10.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	85.1%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↱		↰	↑	↰↱	
Volume (vph)	1257	160	161	663	423	438
Ideal Flow (vphpl)	2300	1800	1800	2300	1800	1800
Lane Width	15	12	14	16	15	12
Total Lost time (s)	5.0		5.0	5.0	5.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	0.99	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.98		1.00	1.00	0.93	
Flt Protected	1.00		0.95	1.00	0.98	
Satd. Flow (prot)	2248		1770	2436	1748	
Flt Permitted	1.00		0.13	1.00	0.98	
Satd. Flow (perm)	2248		240	2436	1748	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	1283	163	164	677	432	447
RTOR Reduction (vph)	7	0	0	0	18	0
Lane Group Flow (vph)	1439	0	164	677	861	0
Confl. Peds. (#/hr)		4	4			8
Heavy Vehicles (%)	11%	7%	3%	7%	2%	2%
Turn Type			Perm			
Protected Phases	4			8	2	
Permitted Phases			8			
Actuated Green, G (s)	31.0		31.0	31.0	24.0	
Effective Green, g (s)	31.0		31.0	31.0	24.0	
Actuated g/C Ratio	0.48		0.48	0.48	0.37	
Clearance Time (s)	5.0		5.0	5.0	5.0	
Lane Grp Cap (vph)	1072		114	1162	645	
v/s Ratio Prot	0.64			0.28	c0.49	
v/s Ratio Perm			c0.68			
v/c Ratio	1.34		1.44	0.58	1.34	
Uniform Delay, d1	17.0		17.0	12.3	20.5	
Progression Factor	1.55		1.00	1.00	1.00	
Incremental Delay, d2	157.4		240.0	2.1	161.3	
Delay (s)	183.8		257.0	14.5	181.8	
Level of Service	F		F	B	F	
Approach Delay (s)	183.8			61.7	181.8	
Approach LOS	F			E	F	

Intersection Summary			
HCM Average Control Delay	150.8	HCM Level of Service	F
HCM Volume to Capacity ratio	1.39		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	138.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1074: 130th Street & Ellis Ave

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑↑	↱		↰↑	↱		✥	
Volume (vph)	1	725	89	258	1516	9	72	0	187	1	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	15	13	11	11	12	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0	4.0	3.0	3.0	4.0		4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85		1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.95	1.00		0.95	
Satd. Flow (prot)	1881	3213	1422	1589	3138	1366		1642	1443		969	
Flt Permitted	0.14	1.00	1.00	0.26	1.00	1.00		0.76	1.00		0.70	
Satd. Flow (perm)	285	3213	1422	435	3138	1366		1309	1443		719	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1	806	99	287	1684	10	80	0	208	1	0	0
RTOR Reduction (vph)	0	0	48	0	0	2	0	0	182	0	0	0
Lane Group Flow (vph)	1	806	51	287	1684	8	0	80	26	0	1	0
Heavy Vehicles (%)	0%	10%	4%	4%	9%	12%	18%	0%	6%	100%	0%	0%
Turn Type	Perm		Perm	custom		custom	Perm		Perm	Perm		
Protected Phases		4		3	3 8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)	43.7	43.7	43.7	66.4	66.4	66.4		10.6	10.6		10.6	
Effective Green, g (s)	43.7	43.7	43.7	66.4	66.4	66.4		10.6	10.6		10.6	
Actuated g/C Ratio	0.51	0.51	0.51	0.78	0.78	0.78		0.12	0.12		0.12	
Clearance Time (s)	4.0	4.0	4.0	3.0		4.0		4.0	4.0		4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0		3.0	3.0		3.0	
Lane Grp Cap (vph)	147	1652	731	607	2451	1067		163	180		90	
v/s Ratio Prot		0.25		0.11	c0.54							
v/s Ratio Perm	0.00		0.04	0.26		0.01		c0.06	0.02		0.00	
v/c Ratio	0.01	0.49	0.07	0.47	0.69	0.01		0.49	0.14		0.01	
Uniform Delay, d1	10.1	13.4	10.4	4.1	4.4	2.0		34.7	33.2		32.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2	0.1	1.0	0.2	0.6	0.8	0.0		2.3	0.4		0.0	
Delay (s)	10.2	14.4	10.6	4.7	5.2	2.1		37.0	33.5		32.7	
Level of Service	B	B	B	A	A	A		D	C		C	
Approach Delay (s)		14.0			5.1			34.5			32.7	
Approach LOS		B			A			C			C	

Intersection Summary			
HCM Average Control Delay	10.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	7.0
Intersection Capacity Utilization	62.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1942: 111th Street & Langley Avenue

1/14/2013

	↗	→	←	↖	↘	↙
Movement	**EBL**	**EBT**	**WBT**	**WBR**	**SBL**	**SBR**
Lane Configurations		↰↑	↑↱		↲↳	
Volume (vph)	13	819	851	45	24	11
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	12	10	10
Total Lost time (s)		5.0	5.0		3.0	
Lane Util. Factor		0.95	0.95		1.00	
Frt		1.00	0.99		0.96	
Flt Protected		1.00	1.00		0.97	
Satd. Flow (prot)		3038	3017		1482	
Flt Permitted		0.93	1.00		0.97	
Satd. Flow (perm)		2834	3017		1482	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	14	910	946	50	27	12
RTOR Reduction (vph)	0	0	4	0	11	0
Lane Group Flow (vph)	0	924	992	0	28	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%
Turn Type	Perm					
Protected Phases		4	8 2 11		5	
Permitted Phases	4					
Actuated Green, G (s)		33.0	64.0		7.0	
Effective Green, g (s)		33.0	64.0		7.0	
Actuated g/C Ratio		0.37	0.71		0.08	
Clearance Time (s)		5.0			3.0	
Lane Grp Cap (vph)		1039	2145		115	
v/s Ratio Prot			c0.33		c0.02	
v/s Ratio Perm		c0.33				
v/c Ratio		0.89	0.46		0.24	
Uniform Delay, d1		26.8	5.6		39.0	
Progression Factor		1.00	0.00		1.00	
Incremental Delay, d2		11.3	0.2		4.9	
Delay (s)		38.1	0.3		44.0	
Level of Service		D	A		D	
Approach Delay (s)		38.1	0.3		44.0	
Approach LOS		D	A		D	

Intersection Summary			
HCM Average Control Delay	19.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	44.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1955: 115th Street & Cottage Grove Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↑↱			↰↑↱			↰↑	↱
Volume (vph)	90	430	1	27	568	80	0	0	1	45	3	136
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	12	12	11	12	11
Total Lost time (s)		4.0			4.0			3.0			3.0	3.0
Lane Util. Factor		1.00			0.95			1.00			1.00	1.00
Frpb, ped/bikes		1.00			1.00			0.92			1.00	0.96
Flpb, ped/bikes		1.00			1.00			1.00			0.98	1.00
Frt		1.00			0.98			0.86			1.00	0.85
Flt Protected		0.99			1.00			1.00			0.95	1.00
Satd. Flow (prot)		1726			3232			1432			1610	1282
Flt Permitted		0.76			0.89			1.00			0.93	1.00
Satd. Flow (perm)		1331			2895			1432			1569	1282
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	100	478	1	30	631	89	0	0	1	50	3	151
RTOR Reduction (vph)	0	0	0	0	12	0	0	1	0	0	0	101
Lane Group Flow (vph)	0	579	0	0	738	0	0	0	0	0	53	50
Confl. Peds. (#/hr)	33		13	13		33	29		13	13		29
Confl. Bikes (#/hr)	1		1	1		1						
Heavy Vehicles (%)	4%	3%	0%	0%	4%	0%	0%	0%	0%	5%	0%	11%
Turn Type	Perm			custom			Perm			pm+pt		Perm
Protected Phases		4			3 4			1		2	1 2	
Permitted Phases	4			3	3		1	1		1 2		1 2
Actuated Green, G (s)		31.0			49.0			9.0			25.0	28.0
Effective Green, g (s)		31.0			49.0			9.0			25.0	28.0
Actuated g/C Ratio		0.36			0.58			0.11			0.29	0.33
Clearance Time (s)		4.0						3.0				
Lane Grp Cap (vph)		485			1669			152			469	422
v/s Ratio Prot								0.00			0.02	
v/s Ratio Perm		c0.43			c0.25						0.01	c0.04
v/c Ratio		1.19			0.44			0.00			0.11	0.12
Uniform Delay, d1		27.0			10.2			34.0			21.9	19.9
Progression Factor		1.00			0.22			1.00			1.00	1.00
Incremental Delay, d2		106.0			0.1			0.0			0.5	0.6
Delay (s)		133.0			2.3			34.0			22.4	20.5
Level of Service		F			A			C			C	C
Approach Delay (s)		133.0			2.3			34.0			21.0	
Approach LOS		F			A			C			C	

Intersection Summary			
HCM Average Control Delay	54.2	HCM Level of Service	D
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	73.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑↱		↰	↑↑↱			✥			✥	
Volume (vph)	39	598	28	35	1014	58	36	35	48	23	26	87
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	16	10	10	16	8	15	8	8	14	8
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			0.99			0.98	
Flpb, ped/bikes	0.98	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.99			0.95			0.91	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1557	3022		1587	3021			1816			1706	
Flt Permitted	0.17	1.00		0.36	1.00			0.89			0.95	
Satd. Flow (perm)	277	3022		604	3021			1649			1630	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	41	629	29	37	1067	61	38	37	51	24	27	92
RTOR Reduction (vph)	0	5	0	0	6	0	0	33	0	0	21	0
Lane Group Flow (vph)	41	653	0	37	1122	0	0	93	0	0	122	0
Confl. Peds. (#/hr)	145		16	16		145	17		19	19		17
Confl. Bikes (#/hr)	5					5			2	2		
Heavy Vehicles (%)	0%	5%	0%	0%	4%	2%	0%	0%	0%	0%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	34.0	34.0		34.0	34.0			22.0			22.0	
Effective Green, g (s)	34.0	34.0		34.0	34.0			23.0			23.0	
Actuated g/C Ratio	0.52	0.52		0.52	0.52			0.35			0.35	
Clearance Time (s)	4.0	4.0		4.0	4.0			5.0			5.0	
Lane Grp Cap (vph)	145	1581		316	1580			583			577	
v/s Ratio Prot		0.22			c0.37							
v/s Ratio Perm	0.15			0.06				0.06			c0.07	
v/c Ratio	0.28	0.41		0.12	0.71			0.16			0.21	
Uniform Delay, d1	8.7	9.4		7.9	11.8			14.4			14.7	
Progression Factor	1.00	1.00		0.70	1.41			1.00			1.00	
Incremental Delay, d2	4.8	0.8		0.7	2.4			0.6			0.8	
Delay (s)	13.5	10.2		6.2	19.1			15.0			15.5	
Level of Service	B	B		A	B			B			B	
Approach Delay (s)		10.4			18.6			15.0			15.5	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	15.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1002: 95th Street & Lafayette Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↑	↱				↰↰	↑	↱
Volume (vph)	25	789	5	32	637	41	0	0	0	586	89	379
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	5.0	5.0		3.0	3.0	3.0				5.0	5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00				0.97	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.67				1.00	1.00	0.98
Flpb, ped/bikes	0.93	1.00		1.00	1.00	1.00				1.00	1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85				1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00				0.95	1.00	1.00
Satd. Flow (prot)	793	3379		1710	3226	514				3285	1731	1481
Flt Permitted	0.40	1.00		0.14	1.00	1.00				0.95	1.00	1.00
Satd. Flow (perm)	331	3379		248	3226	514				3285	1731	1481
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	26	831	5	34	671	43	0	0	0	617	94	399
RTOR Reduction (vph)	0	0	0	0	0	19	0	0	0	0	0	166
Lane Group Flow (vph)	26	836	0	34	671	24	0	0	0	617	94	233
Confl. Peds. (#/hr)	350		4	4		350	8		6	6		8
Confl. Bikes (#/hr)	7		1	1		7						
Heavy Vehicles (%)	100%	1%	20%	0%	6%	100%	0%	0%	0%	1%	4%	1%
Turn Type	pm+pt			pm+pt		Perm				Split		Perm
Protected Phases	7	4		3	8					6	6	
Permitted Phases	4			8		8						6
Actuated Green, G (s)	43.0	43.0		73.0	73.0	73.0				30.0	30.0	30.0
Effective Green, g (s)	43.0	43.0		73.0	73.0	73.0				30.0	30.0	30.0
Actuated g/C Ratio	0.33	0.33		0.56	0.56	0.56				0.23	0.23	0.23
Clearance Time (s)	5.0	5.0		3.0	3.0	3.0				5.0	5.0	5.0
Lane Grp Cap (vph)	159	1118		634	1812	289				758	399	342
v/s Ratio Prot	0.02	c0.25		0.02	c0.21					c0.19	0.05	
v/s Ratio Perm	0.04			0.01		0.05						0.16
v/c Ratio	0.16	0.75		0.05	0.37	0.08				0.81	0.24	0.68
Uniform Delay, d1	31.6	38.7		15.2	15.8	13.1				47.4	40.7	45.6
Progression Factor	0.85	0.86		0.33	0.75	1.24				1.00	1.00	1.00
Incremental Delay, d2	2.1	4.4		0.1	0.4	0.4				9.3	1.4	10.5
Delay (s)	28.9	37.6		5.1	12.2	16.6				56.7	42.1	56.1
Level of Service	C	D		A	B	B				E	D	E
Approach Delay (s)		37.3			12.2			0.0			55.2	
Approach LOS		D			B			A			E	

Intersection Summary			
HCM Average Control Delay	37.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	53.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1003: 95th Street & State Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↱		↰	↑↑	↱		↰↑	↱	↰		↱
Volume (vph)	340	815	220	54	578	287	102	251	55	39	0	30
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0	3.0		5.0	5.0	5.0		5.0	5.0	5.0		5.0
Lane Util. Factor	0.97	0.95		1.00	0.95	1.00		0.95	1.00	1.00		1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.67		1.00	0.91	1.00		0.96
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Frt	1.00	0.97		1.00	1.00	0.85		1.00	0.85	1.00		0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.99	1.00	0.95		1.00
Satd. Flow (prot)	3285	3262		1710	3138	1018		3301	1359	855		734
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.99	1.00	0.95		1.00
Satd. Flow (perm)	3285	3262		1710	3138	1018		3301	1359	855		734
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	358	858	232	57	608	302	107	264	58	41	0	32
RTOR Reduction (vph)	0	18	0	0	0	228	0	0	42	0	0	30
Lane Group Flow (vph)	358	1072	0	57	608	74	0	371	16	41	0	2
Confl. Peds. (#/hr)	327		13	13		327	6		60	60		6
Confl. Bikes (#/hr)	6					6						
Heavy Vehicles (%)	1%	1%	0%	0%	9%	1%	0%	3%	2%	100%	0%	100%
Turn Type	Prot			Prot		Perm	Split		Perm	Prot		custom
Protected Phases	7	4		3	8		2	2		6		
Permitted Phases						8			2			6
Actuated Green, G (s)	44.0	68.0		8.0	32.0	32.0		28.0	28.0	8.0		8.0
Effective Green, g (s)	44.0	68.0		8.0	32.0	32.0		28.0	28.0	8.0		8.0
Actuated g/C Ratio	0.34	0.52		0.06	0.25	0.25		0.22	0.22	0.06		0.06
Clearance Time (s)	3.0	3.0		5.0	5.0	5.0		5.0	5.0	5.0		5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0	3.0	3.0		3.0
Lane Grp Cap (vph)	1112	1706		105	772	251		711	293	53		45
v/s Ratio Prot	0.11	c0.33		0.03	c0.19			c0.11		c0.05		
v/s Ratio Perm						0.07			0.01			0.00
v/c Ratio	0.32	0.63		0.54	0.79	0.30		0.52	0.06	0.77		0.04
Uniform Delay, d1	31.9	22.0		59.2	45.8	39.8		45.1	40.5	60.1		57.4
Progression Factor	0.95	0.16		1.00	1.00	1.00		0.94	0.99	1.00		1.00
Incremental Delay, d2	0.5	1.1		18.7	8.0	3.0		2.7	0.4	49.7		0.4
Delay (s)	30.7	4.7		77.9	53.8	42.8		45.3	40.6	109.9		57.8
Level of Service	C	A		E	D	D		D	D	F		E
Approach Delay (s)		11.1			51.8			44.7			87.0	
Approach LOS		B			D			D			F	

Intersection Summary			
HCM Average Control Delay	31.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	68.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱		↰	↑↑		↰		↱	↰	↱	
Volume (vph)	0	893	166	105	839	0	74	0	87	9	15	7
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	11	11	8	12	12	12	14	15	12
Total Lost time (s)		4.0		4.0	4.0		4.0		4.0	4.0	4.0	
Lane Util. Factor		0.95		1.00	0.95		1.00		1.00	1.00	1.00	
Frpb, ped/bikes		0.99		1.00	1.00		1.00		0.98	1.00	0.98	
Flpb, ped/bikes		1.00		1.00	1.00		0.97		1.00	0.99	1.00	
Frt		0.98		1.00	1.00		1.00		0.85	1.00	0.95	
Flt Protected		1.00		0.95	1.00		0.95		1.00	0.95	1.00	
Satd. Flow (prot)		2997		1649	3149		1388		1451	1803	1857	
Flt Permitted		1.00		0.17	1.00		0.74		1.00	0.95	1.00	
Satd. Flow (perm)		2997		299	3149		1082		1451	1803	1857	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	992	184	117	932	0	82	0	97	10	17	8
RTOR Reduction (vph)	0	15	0	0	0	0	0	0	66	0	5	0
Lane Group Flow (vph)	0	1161	0	117	932	0	82	0	31	10	20	0
Confl. Peds. (#/hr)	67		19	19		67	38		12	12		38
Confl. Bikes (#/hr)			1	1								
Heavy Vehicles (%)	0%	2%	11%	0%	5%	0%	19%	0%	3%	0%	0%	0%
Turn Type				Perm			custom		custom	Perm		
Protected Phases		4			8						6	
Permitted Phases				8			2		2	6		
Actuated Green, G (s)		60.0		60.0	60.0		32.0		32.0	32.0	32.0	
Effective Green, g (s)		60.0		60.0	60.0		32.0		32.0	32.0	32.0	
Actuated g/C Ratio		0.60		0.60	0.60		0.32		0.32	0.32	0.32	
Clearance Time (s)		4.0		4.0	4.0		4.0		4.0	4.0	4.0	
Lane Grp Cap (vph)		1798		179	1889		346		464	577	594	
v/s Ratio Prot		0.39			0.30						0.01	
v/s Ratio Perm				c0.39			c0.08		0.02	0.01		
v/c Ratio		0.65		0.65	0.49		0.24		0.07	0.02	0.03	
Uniform Delay, d1		13.1		13.2	11.4		25.0		23.6	23.2	23.4	
Progression Factor		1.00		1.00	1.00		1.00		1.00	1.00	1.00	
Incremental Delay, d2		1.8		17.1	0.9		1.6		0.3	0.1	0.1	
Delay (s)		14.9		30.3	12.3		26.6		23.9	23.3	23.5	
Level of Service		B		C	B		C		C	C	C	
Approach Delay (s)		14.9			14.3			25.2			23.4	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM Average Control Delay	15.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	61.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1005: 98th Place & Halsted Street

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↖	↰	↗	↖	↑↑↑			↑↑↱	
Volume (vph)	0	0	0	301	0	1230	215	686	0	0	792	490
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	12	12	10	10	12	12	11	12
Total Lost time (s)				4.0		5.0	3.0	4.0			4.0	
Lane Util. Factor				0.95		1.00	1.00	0.91			0.91	
Frpb, ped/bikes				1.00		1.00	1.00	1.00			0.98	
Flpb, ped/bikes				1.00		1.00	1.00	1.00			1.00	
Frt				1.00		0.85	1.00	1.00			0.94	
Flt Protected				0.95		1.00	0.95	1.00			1.00	
Satd. Flow (prot)				1540		1530	1535	4327			4271	
Flt Permitted				0.95		1.00	0.95	1.00			1.00	
Satd. Flow (perm)				1540		1530	1535	4327			4271	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	0	0	307	0	1255	219	700	0	0	808	500
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	307	0	1255	219	700	0	0	1308	0
Confl. Peds. (#/hr)	2					2	18		3	3		18
Heavy Vehicles (%)	0%	0%	0%	2%	0%	0%	4%	6%	0%	0%	4%	1%
Turn Type				Split		Prot	Prot					
Protected Phases				8	8	8	5	2			6	
Permitted Phases												
Actuated Green, G (s)				30.0		30.0	32.0	66.0			31.0	
Effective Green, g (s)				31.0		30.0	32.0	66.0			31.0	
Actuated g/C Ratio				0.30		0.29	0.30	0.63			0.30	
Clearance Time (s)				5.0		5.0	3.0	4.0			4.0	
Lane Grp Cap (vph)				455		437	468	2720			1261	
v/s Ratio Prot				0.20		c0.82	c0.14	0.16			c0.31	
v/s Ratio Perm												
v/c Ratio				0.67		2.87	0.47	0.26			1.16dr	
Uniform Delay, d1				32.6		37.5	29.6	8.6			37.0	
Progression Factor				1.00		1.00	0.64	2.11			1.00	
Incremental Delay, d2				7.8		848.6	2.8	0.2			35.5	
Delay (s)				40.4		886.1	21.8	18.4			72.5	
Level of Service				D		F	C	B			E	
Approach Delay (s)		0.0			719.9			19.2			72.5	
Approach LOS		A			F			B			E	

Intersection Summary			
HCM Average Control Delay	326.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.43		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	102.1%	ICU Level of Service	G
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↰↑↑↱						↑↑↑	↱↱	↰	↑↑↑	
Volume (vph)	322	770	145	0	0	0	0	579	410	359	734	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	13	12	12	12	12	12	10	10	8	12	12	12
Total Lost time (s)	5.0	5.0						4.0	4.0	3.0	4.0	
Lane Util. Factor	0.91	0.91						0.91	0.88	1.00	0.91	
Frpb, ped/bikes	1.00	1.00						1.00	1.00	1.00	1.00	
Flpb, ped/bikes	0.99	1.00						1.00	1.00	1.00	1.00	
Frt	1.00	0.98						1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00						1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1509	3157						4368	2244	1598	4680	
Flt Permitted	0.95	1.00						1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1509	3157						4368	2244	1598	4680	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	332	794	149	0	0	0	0	597	423	370	757	0
RTOR Reduction (vph)	0	14	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	299	962	0	0	0	0	0	597	423	370	757	0
Confl. Peds. (#/hr)	6		1	1		6	6					6
Heavy Vehicles (%)	6%	1%	0%	0%	0%	0%	0%	5%	4%	7%	5%	0%
Turn Type	Perm								Perm	Prot		
Protected Phases		4						2		1	6	
Permitted Phases	4								2			
Actuated Green, G (s)	34.0	34.0						28.0	28.0	31.0	62.0	
Effective Green, g (s)	34.0	34.0						28.0	28.0	31.0	62.0	
Actuated g/C Ratio	0.32	0.32						0.27	0.27	0.30	0.59	
Clearance Time (s)	5.0	5.0						4.0	4.0	3.0	4.0	
Lane Grp Cap (vph)	489	1022						1165	598	472	2763	
v/s Ratio Prot								0.14		c0.23	0.16	
v/s Ratio Perm	0.20	0.30							c0.19			
v/c Ratio	0.61	0.94						0.51	0.71	0.78	0.27	
Uniform Delay, d1	29.9	34.5						32.7	34.8	33.9	10.5	
Progression Factor	1.00	1.00						1.14	1.14	0.86	0.22	
Incremental Delay, d2	5.6	17.2						1.4	6.1	4.8	0.1	
Delay (s)	35.5	51.7						38.5	45.6	34.1	2.4	
Level of Service	D	D						D	D	C	A	
Approach Delay (s)		47.9			0.0			41.5			12.8	
Approach LOS		D			A			D			B	

Intersection Summary			
HCM Average Control Delay	34.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	102.1%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1007: 98th Place & Wentworth Avenue

1/14/2013

	⤴	→	⤵	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Lane Configurations				↰	↑↱		↰	↑			↱	
Volume (vph)	0	0	0	290	25	24	11	164	0	0	149	5
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	14	12	12	16	12
Total Lost time (s)				4.0	4.0		4.0	4.0			-3.0	
Lane Util. Factor				1.00	0.95		1.00	1.00			1.00	
Frpb, ped/bikes				1.00	0.99		1.00	1.00			1.00	
Flpb, ped/bikes				1.00	1.00		1.00	1.00			1.00	
Frt				1.00	0.93		1.00	1.00			1.00	
Flt Protected				0.95	1.00		0.95	1.00			1.00	
Satd. Flow (prot)				1688	3132		1710	1846			1955	
Flt Permitted				0.95	1.00		0.54	1.00			1.00	
Satd. Flow (perm)				1688	3132		974	1846			1955	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	322	28	27	12	182	0	0	166	6
RTOR Reduction (vph)	0	0	0	0	18	0	0	0	0	0	1	0
Lane Group Flow (vph)	0	0	0	322	37	0	12	182	0	0	171	0
Confl. Peds. (#/hr)	2		2	2		2			6	6		
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	0%	0%	0%	1%	0%	0%	0%	4%	0%	0%	4%	0%
Turn Type				Perm			pm+pt					
Protected Phases					8		7	2			6	
Permitted Phases				8			2					
Actuated Green, G (s)				27.0	27.0		50.0	50.0			40.0	
Effective Green, g (s)				27.0	27.0		50.0	50.0			46.0	
Actuated g/C Ratio				0.32	0.32		0.59	0.59			0.54	
Clearance Time (s)				4.0	4.0		4.0	4.0			3.0	
Lane Grp Cap (vph)				536	995		634	1086			1058	
v/s Ratio Prot					0.01		0.00	c0.10			0.09	
v/s Ratio Perm				c0.19			0.01					
v/c Ratio				0.60	0.04		0.02	0.17			0.16	
Uniform Delay, d1				24.5	20.0		10.5	8.0			9.8	
Progression Factor				1.00	1.00		1.04	1.18			1.00	
Incremental Delay, d2				4.9	0.1		0.1	0.3			0.3	
Delay (s)				29.4	20.1		11.0	9.7			10.1	
Level of Service				C	C		B	A			B	
Approach Delay (s)		0.0			28.0			9.8			10.1	
Approach LOS		A			C			A			B	

Intersection Summary			
HCM Average Control Delay	19.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	37.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1008: 99th St & Wentworth Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱			✥			↱		↰	↑	
Volume (vph)	12	11	23	6	0	14	0	149	45	46	393	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	16	15	12	8	12	8	12	12	12	10	13	12
Total Lost time (s)	4.0	4.0			4.0			3.0		4.0	4.0	
Lane Util. Factor	1.00	1.00			1.00			1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.97			0.98			0.99		1.00	1.00	
Flpb, ped/bikes	1.00	1.00			1.00			1.00		1.00	1.00	
Frt	1.00	0.90			0.90			0.97		1.00	1.00	
Flt Protected	0.95	1.00			0.99			1.00		0.95	1.00	
Satd. Flow (prot)	1935	1735			1571			1718		1590	1860	
Flt Permitted	0.74	1.00			0.96			1.00		0.59	1.00	
Satd. Flow (perm)	1515	1735			1529			1718		987	1860	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	13	12	24	6	0	15	0	157	47	48	414	0
RTOR Reduction (vph)	0	16	0	0	10	0	0	13	0	0	0	0
Lane Group Flow (vph)	13	20	0	0	11	0	0	191	0	48	414	0
Confl. Peds. (#/hr)	1		11	11		1	1		10	10		1
Confl. Bikes (#/hr)			2	2			1		2	2		1
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%
Turn Type	Perm			Perm						pm+pt		
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8						6		
Actuated Green, G (s)	27.0	27.0			27.0			40.0		50.0	50.0	
Effective Green, g (s)	27.0	27.0			27.0			40.0		50.0	50.0	
Actuated g/C Ratio	0.32	0.32			0.32			0.47		0.59	0.59	
Clearance Time (s)	4.0	4.0			4.0			3.0		4.0	4.0	
Lane Grp Cap (vph)	481	551			486			808		630	1094	
v/s Ratio Prot		c0.01						0.11		0.01	c0.22	
v/s Ratio Perm	0.01				0.01					0.04		
v/c Ratio	0.03	0.04			0.02			0.24		0.08	0.38	
Uniform Delay, d1	20.0	20.0			19.9			13.4		8.8	9.3	
Progression Factor	1.00	1.00			1.00			1.00		0.98	0.87	
Incremental Delay, d2	0.1	0.1			0.1			0.7		0.2	0.9	
Delay (s)	20.1	20.1			20.0			14.1		8.8	9.0	
Level of Service	C	C			C			B		A	A	
Approach Delay (s)		20.1			20.0			14.1			9.0	
Approach LOS		C			C			B			A	

Intersection Summary			
HCM Average Control Delay	11.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	41.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

1009: 99th St & State Street

	↗	↘	↖	↑	↓	↙
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	Y		↰	↑	↱	
Volume (vph)	48	42	12	193	288	28
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	14	12	13	12	10	12
Total Lost time (s)	4.0		4.0	4.0	4.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.94		1.00	1.00	0.99	
Flt Protected	0.97		0.95	1.00	1.00	
Satd. Flow (prot)	1752		1765	1782	1657	
Flt Permitted	0.97		0.50	1.00	1.00	
Satd. Flow (perm)	1752		937	1782	1657	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	53	47	13	214	320	31
RTOR Reduction (vph)	32	0	0	0	5	0
Lane Group Flow (vph)	68	0	13	214	346	0
Confl. Peds. (#/hr)			2			2
Heavy Vehicles (%)	0%	0%	0%	1%	0%	0%
Turn Type			Perm			
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	21.0		36.0	36.0	36.0	
Effective Green, g (s)	21.0		36.0	36.0	36.0	
Actuated g/C Ratio	0.32		0.55	0.55	0.55	
Clearance Time (s)	4.0		4.0	4.0	4.0	
Lane Grp Cap (vph)	566		519	987	918	
v/s Ratio Prot	c0.04			0.12	c0.21	
v/s Ratio Perm			0.01			
v/c Ratio	0.12		0.03	0.22	0.38	
Uniform Delay, d1	15.5		6.6	7.4	8.2	
Progression Factor	1.00		0.51	0.63	1.43	
Incremental Delay, d2	0.4		0.1	0.5	1.0	
Delay (s)	15.9		3.4	5.1	12.7	
Level of Service	B		A	A	B	
Approach Delay (s)	15.9			5.0	12.7	
Approach LOS	B			A	B	

Intersection Summary			
HCM Average Control Delay	10.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	30.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1010: 99th St & Michigan Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↰↑↱		↰	↑			↑	↱
Volume (vph)	0	0	0	31	268	9	258	130	2	0	283	17
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	14	16	12	12	15	12	12	13	10
Total Lost time (s)					4.0		4.0	4.0			3.0	3.0
Lane Util. Factor					0.95		1.00	1.00			1.00	1.00
Frpb, ped/bikes					1.00		1.00	1.00			1.00	1.00
Flpb, ped/bikes					1.00		1.00	1.00			1.00	1.00
Frt					1.00		1.00	1.00			1.00	0.85
Flt Protected					1.00		0.95	1.00			1.00	1.00
Satd. Flow (prot)					3772		1693	1677			1738	1428
Flt Permitted					1.00		0.47	1.00			1.00	1.00
Satd. Flow (perm)					3772		844	1677			1738	1428
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	34	298	10	287	144	2	0	314	19
RTOR Reduction (vph)	0	0	0	0	3	0	0	0	0	0	0	11
Lane Group Flow (vph)	0	0	0	0	339	0	287	146	0	0	314	8
Confl. Peds. (#/hr)	1					1			5	5		
Heavy Vehicles (%)	0%	0%	0%	0%	2%	0%	1%	18%	0%	0%	7%	0%
Turn Type				Split			pm+pt					Perm
Protected Phases				8	8		7	2			6	
Permitted Phases							2					6
Actuated Green, G (s)					26.0		51.0	51.0			38.0	38.0
Effective Green, g (s)					26.0		51.0	51.0			38.0	38.0
Actuated g/C Ratio					0.31		0.60	0.60			0.45	0.45
Clearance Time (s)					4.0		4.0	4.0			3.0	3.0
Lane Grp Cap (vph)					1154		606	1006			777	638
v/s Ratio Prot					c0.09		c0.06	0.09			0.18	
v/s Ratio Perm							c0.23					0.01
v/c Ratio					0.29		0.47	0.14			0.40	0.01
Uniform Delay, d1					22.5		13.7	7.4			15.9	13.1
Progression Factor					1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2					0.6		2.6	0.3			1.6	0.0
Delay (s)					23.1		16.4	7.7			17.4	13.1
Level of Service					C		B	A			B	B
Approach Delay (s)		0.0			23.1			13.5			17.2	
Approach LOS		A			C			B			B	

Intersection Summary			
HCM Average Control Delay	17.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					✥		↰	↑↱		↰	↑↱	
Volume (vph)	0	0	0	96	94	38	133	207	32	59	703	44
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	15	12	12	12	12	12	13	12
Total Lost time (s)					4.0		3.0	4.0		3.0	4.0	
Lane Util. Factor					1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes					1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes					1.00		1.00	1.00		1.00	1.00	
Frt					0.98		1.00	0.98		1.00	0.99	
Flt Protected					0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)					1896		1710	3282		1707	3467	
Flt Permitted					0.98		0.25	1.00		0.59	1.00	
Satd. Flow (perm)					1896		446	3282		1056	3467	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	107	104	42	148	230	36	66	781	49
RTOR Reduction (vph)	0	0	0	0	10	0	0	16	0	0	6	0
Lane Group Flow (vph)	0	0	0	0	243	0	148	250	0	66	824	0
Confl. Peds. (#/hr)							5		5	5		5
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	1%	0%
Turn Type				Split			pm+pt			pm+pt		
Protected Phases				8	8		5	2		1	6	
Permitted Phases							2			6		
Actuated Green, G (s)					23.0		41.0	34.0		41.0	34.0	
Effective Green, g (s)					23.0		41.0	34.0		41.0	34.0	
Actuated g/C Ratio					0.31		0.55	0.45		0.55	0.45	
Clearance Time (s)					4.0		3.0	4.0		3.0	4.0	
Lane Grp Cap (vph)					581		362	1488		638	1572	
v/s Ratio Prot					c0.13		c0.04	0.08		0.01	c0.24	
v/s Ratio Perm							0.19			0.05		
v/c Ratio					0.42		0.41	0.17		0.10	0.52	
Uniform Delay, d1					20.7		16.4	12.1		8.2	14.7	
Progression Factor					1.00		0.83	0.82		1.00	1.00	
Incremental Delay, d2					2.2		3.4	0.2		0.3	1.3	
Delay (s)					22.9		17.0	10.2		8.5	16.0	
Level of Service					C		B	B		A	B	
Approach Delay (s)		0.0			22.9			12.7			15.4	
Approach LOS		A			C			B			B	

Intersection Summary			
HCM Average Control Delay	15.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	53.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1012: 100th Street & Martin Luther King Jr Drive

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	32	49	13	9	63	63	7	277	24	159	590	50
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	16	12	12	10	11	12	12	11	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.98			0.94		1.00	0.99		1.00	0.99	
Flt Protected		0.98			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1964			1655		1595	3173		1704	3231	
Flt Permitted		0.89			0.99		0.36	1.00		0.56	1.00	
Satd. Flow (perm)		1775			1637		599	3173		1004	3231	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	34	52	14	9	66	66	7	292	25	167	621	53
RTOR Reduction (vph)	0	8	0	0	42	0	0	8	0	0	8	0
Lane Group Flow (vph)	0	92	0	0	99	0	7	309	0	167	666	0
Confl. Peds. (#/hr)	2					2	1		6	6		1
Confl. Bikes (#/hr)			1	1			3					3
Heavy Vehicles (%)	0%	0%	0%	0%	2%	0%	0%	3%	0%	0%	1%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		25.0			25.0		42.0	42.0		42.0	42.0	
Effective Green, g (s)		25.0			25.0		42.0	42.0		42.0	42.0	
Actuated g/C Ratio		0.33			0.33		0.56	0.56		0.56	0.56	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		592			546		335	1777		562	1809	
v/s Ratio Prot								0.10			c0.21	
v/s Ratio Perm		0.05			c0.06		0.01			0.17		
v/c Ratio		0.16			0.18		0.02	0.17		0.30	0.37	
Uniform Delay, d1		17.6			17.7		7.3	8.0		8.7	9.1	
Progression Factor		1.00			1.00		1.00	1.00		0.27	0.25	
Incremental Delay, d2		0.6			0.7		0.1	0.2		1.2	0.5	
Delay (s)		18.1			18.5		7.5	8.3		3.5	2.8	
Level of Service		B			B		A	A		A	A	
Approach Delay (s)		18.1			18.5			8.2			3.0	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	6.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	48.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis
1013: 100th Street & Cottage Grove Avenue

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	Y			↰↑	↑↱	
Sign Control	Stop			Stop	Stop	
Volume (vph)	37	192	67	253	588	81
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	41	213	74	281	653	90

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	254	168	187	436	308
Volume Left (vph)	41	74	0	0	0
Volume Right (vph)	213	0	0	0	90
Hadj (s)	-0.42	0.27	0.05	0.05	-0.15
Departure Headway (s)	5.8	6.6	6.3	5.9	5.7
Degree Utilization, x	0.41	0.31	0.33	0.71	0.48
Capacity (veh/h)	591	528	546	602	622
Control Delay (s)	12.6	11.2	11.2	20.8	12.7
Approach Delay (s)	12.6	11.2		17.4	
Approach LOS	B	B		C	

Intersection Summary			
Delay	14.9		
HCM Level of Service	B		
Intersection Capacity Utilization	54.0%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Signalized Intersection Capacity Analysis
1014: 103rd Street & Vincennes Avenue

1/14/2013

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR
Lane Configurations		↰↰	↑	↱	↰	↑	↱↱			↰↰	↑↑↱	
Volume (vph)	32	35	376	18	22	409	76	78	55	68	354	32
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		3.5	4.0	4.0	4.0	4.0	4.0			4.0	4.0	
Lane Util. Factor		1.00	1.00	1.00	1.00	1.00	1.00			1.00	0.95	
Frpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	0.93			1.00	1.00	
Flpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	
Frt		1.00	1.00	0.85	1.00	1.00	0.85			1.00	0.99	
Flt Protected		0.95	1.00	1.00	0.95	1.00	1.00			0.95	1.00	
Satd. Flow (prot)		1612	1731	1530	1710	1731	1421			1710	3251	
Flt Permitted		0.14	1.00	1.00	0.52	1.00	1.00			0.14	1.00	
Satd. Flow (perm)		238	1731	1530	932	1731	1421			257	3251	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	36	39	418	20	24	454	84	87	61	76	393	36
RTOR Reduction (vph)	0	0	0	12	0	0	36	0	0	0	7	0
Lane Group Flow (vph)	0	75	418	8	24	454	135	0	0	137	422	0
Confl. Peds. (#/hr)		25					25					3
Heavy Vehicles (%)	6%	6%	4%	0%	0%	4%	0%	0%	0%	0%	4%	0%
Turn Type	Perm	pm+pt		Perm	Perm		Perm		Perm	Perm		
Protected Phases		7	4			8					2	
Permitted Phases	4	4		4	8		8		2	2		
Actuated Green, G (s)		44.0	44.0	44.0	25.0	25.0	25.0			28.0	28.0	
Effective Green, g (s)		44.0	44.0	44.0	25.0	25.0	25.0			28.0	28.0	
Actuated g/C Ratio		0.42	0.42	0.42	0.24	0.24	0.24			0.27	0.27	
Clearance Time (s)		3.5	4.0	4.0	4.0	4.0	4.0			4.0	4.0	
Lane Grp Cap (vph)		303	725	641	222	412	338			69	867	
v/s Ratio Prot		0.04	c0.24			c0.26					0.13	
v/s Ratio Perm		0.07		0.01	0.03		0.10			c0.53		
v/c Ratio		0.25	0.58	0.01	0.11	1.10	0.40			1.99	0.49	
Uniform Delay, d1		21.6	23.4	17.8	31.3	40.0	33.7			38.5	32.4	
Progression Factor		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	
Incremental Delay, d2		1.9	3.3	0.0	1.0	74.8	3.5			491.0	2.0	
Delay (s)		23.5	26.7	17.9	32.3	114.8	37.2			529.5	34.4	
Level of Service		C	C	B	C	F	D			F	C	
Approach Delay (s)			25.9			91.3					154.2	
Approach LOS			C			F					F	

Intersection Summary			
HCM Average Control Delay	147.2	HCM Level of Service	F
HCM Volume to Capacity ratio	1.44		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	103.9%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBL	SBT	SBR	SBR2	SEL2	SEL	SER	SER2
Lane Configurations	↰	↑↱				↰	↱↱	
Volume (vph)	108	571	82	103	4	114	607	197
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.5	4.5				4.5	4.5	
Lane Util. Factor	1.00	0.95				1.00	0.88	
Frpb, ped/bikes	1.00	1.00				1.00	1.00	
Flpb, ped/bikes	1.00	1.00				1.00	1.00	
Frt	1.00	0.96				1.00	0.85	
Flt Protected	0.95	1.00				0.95	1.00	
Satd. Flow (prot)	1705	3246				1710	2633	
Flt Permitted	0.37	1.00				0.95	1.00	
Satd. Flow (perm)	670	3246				1710	2633	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	120	634	91	114	4	127	674	219
RTOR Reduction (vph)	0	12	0	0	0	0	26	0
Lane Group Flow (vph)	120	827	0	0	0	131	867	0
Confl. Peds. (#/hr)	3							
Heavy Vehicles (%)	0%	2%	0%	0%	0%	0%	3%	0%
Turn Type	Perm				Split		Perm	
Protected Phases		6			9	9		
Permitted Phases	6						9	
Actuated Green, G (s)	27.5	27.5				20.5	20.5	
Effective Green, g (s)	27.5	27.5				20.5	20.5	
Actuated g/C Ratio	0.26	0.26				0.20	0.20	
Clearance Time (s)	4.5	4.5				4.5	4.5	
Lane Grp Cap (vph)	175	850				334	514	
v/s Ratio Prot		0.25				0.08		
v/s Ratio Perm	0.18						c0.33	
v/c Ratio	0.69	0.97				0.39	1.69	
Uniform Delay, d1	34.9	38.4				36.8	42.2	
Progression Factor	1.00	1.00				1.00	1.00	
Incremental Delay, d2	19.7	25.0				3.4	317.6	
Delay (s)	54.6	63.4				40.3	359.9	
Level of Service	D	E				D	F	
Approach Delay (s)		62.3				319.0		
Approach LOS		E				F		

Intersection Summary

HCM Signalized Intersection Capacity Analysis
1015: 103rd Street & Morgan Street

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰			↱			✥				
Volume (vph)	65	601	0	0	493	60	85	52	20	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	11	11	11	16	11	12	15	12	12	15	12
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		1.00			0.99			0.98				
Flt Protected		1.00			1.00			0.97				
Satd. Flow (prot)		1681			1951			1840				
Flt Permitted		0.90			1.00			0.97				
Satd. Flow (perm)		1524			1951			1840				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	72	668	0	0	548	67	94	58	22	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	740	0	0	615	0	0	174	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)		40.0			40.0			17.0				
Effective Green, g (s)		40.0			40.0			17.0				
Actuated g/C Ratio		0.62			0.62			0.26				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		938			1201			481				
v/s Ratio Prot					0.32							
v/s Ratio Perm		c0.49						0.09				
v/c Ratio		0.79			0.51			0.36				
Uniform Delay, d1		9.3			7.0			19.6				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		6.7			1.6			2.1				
Delay (s)		16.0			8.6			21.7				
Level of Service		B			A			C				
Approach Delay (s)		16.0			8.6			21.7			0.0	
Approach LOS		B			A			C			A	

Intersection Summary			
HCM Average Control Delay	13.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	87.6%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑	↱		↰↑	↱	↰	↑↑	↱	↰	↑↑	↱
Volume (vph)	71	340	152	129	358	157	105	639	85	144	759	94
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	10	10	9	9	10	9
Total Lost time (s)		4.0	4.0		4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		1.00	0.96		1.00	0.96	1.00	1.00	0.95	1.00	1.00	0.94
Flpb, ped/bikes		1.00	1.00		0.99	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.99	1.00		0.99	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1982	1434		1947	1444	1546	3040	1296	1506	3069	1252
Flt Permitted		0.30	1.00		0.70	1.00	0.23	1.00	1.00	0.29	1.00	1.00
Satd. Flow (perm)		598	1434		1378	1444	373	3040	1296	455	3069	1252
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	75	358	160	136	377	165	111	673	89	152	799	99
RTOR Reduction (vph)	0	0	94	0	0	118	0	0	53	0	0	49
Lane Group Flow (vph)	0	433	66	0	513	47	111	673	36	152	799	50
Confl. Peds. (#/hr)	24		45	45		24	36		24	24		36
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	2%	2%	2%	2%	3%	2%	3%	5%	1%	2%	4%	3%
Turn Type	pm+pt		Perm	Perm		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)		43.0	43.0		30.0	30.0	50.6	42.3	42.3	51.4	42.7	42.7
Effective Green, g (s)		43.0	43.0		30.0	30.0	50.6	42.3	42.3	51.4	42.7	42.7
Actuated g/C Ratio		0.41	0.41		0.29	0.29	0.48	0.40	0.40	0.49	0.41	0.41
Clearance Time (s)		4.0	4.0		4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		377	587		394	413	272	1225	522	310	1248	509
v/s Ratio Prot		c0.11					0.03	0.22		c0.04	c0.26	
v/s Ratio Perm		0.36	0.05		c0.37	0.03	0.16		0.03	0.20		0.04
v/c Ratio		1.15	0.11		1.30	0.11	0.41	0.55	0.07	0.49	0.64	0.10
Uniform Delay, d1		31.0	19.2		37.5	27.7	16.4	24.0	19.3	16.1	25.0	19.2
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.75	1.55	2.62
Incremental Delay, d2		93.3	0.4		153.4	0.6	1.0	1.8	0.3	1.2	2.4	0.4
Delay (s)		124.3	19.6		190.9	28.2	17.4	25.8	19.5	29.4	41.1	50.9
Level of Service		F	B		F	C	B	C	B	C	D	D
Approach Delay (s)		96.0			151.3			24.1			40.3	
Approach LOS		F			F			C			D	

Intersection Summary			
HCM Average Control Delay	69.8	HCM Level of Service	E
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	92.1%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1017: 103rd Street & Normal Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			✥				
Volume (vph)	85	421	85	98	539	94	51	61	71	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	15	12	12	15	12
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		0.98			0.98			0.95				
Flt Protected		0.99			0.99			0.99				
Satd. Flow (prot)		1645			1649			1797				
Flt Permitted		0.83			0.85			0.99				
Satd. Flow (perm)		1367			1417			1797				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	94	468	94	109	599	104	57	68	79	0	0	0
RTOR Reduction (vph)	0	9	0	0	8	0	0	35	0	0	0	0
Lane Group Flow (vph)	0	647	0	0	804	0	0	169	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm			Perm					
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Actuated Green, G (s)		40.0			40.0			17.0				
Effective Green, g (s)		40.0			40.0			17.0				
Actuated g/C Ratio		0.62			0.62			0.26				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		841			872			470				
v/s Ratio Prot												
v/s Ratio Perm		0.47			c0.57			0.09				
v/c Ratio		0.77			0.92			0.36				
Uniform Delay, d1		9.1			11.1			19.6				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		6.7			16.6			2.1				
Delay (s)		15.8			27.7			21.7				
Level of Service		B			C			C				
Approach Delay (s)		15.8			27.7			21.7			0.0	
Approach LOS		B			C			C			A	

Intersection Summary			
HCM Average Control Delay	22.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	72.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1018: 103rd Street & Wentworth Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱		↰	↱		✥	
Volume (vph)	53	496	83	76	527	37	38	76	72	54	238	56
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	11	12	12	15	12
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frpb, ped/bikes		1.00	0.96		1.00	0.96		1.00	0.96		0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		0.99	1.00		1.00	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		0.98	
Flt Protected		1.00	1.00		0.99	1.00		0.98	1.00		0.99	
Satd. Flow (prot)		1685	1382		1713	1417		1686	1455		1878	
Flt Permitted		0.89	1.00		0.84	1.00		0.82	1.00		0.94	
Satd. Flow (perm)		1504	1382		1442	1417		1412	1455		1774	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	56	522	87	80	555	39	40	80	76	57	251	59
RTOR Reduction (vph)	0	0	37	0	0	12	0	0	52	0	10	0
Lane Group Flow (vph)	0	578	50	0	635	27	0	120	24	0	357	0
Confl. Peds. (#/hr)	25		19	19		25	36		30	30		36
Confl. Bikes (#/hr)	1		2	2		1	3					3
Heavy Vehicles (%)	0%	3%	3%	0%	1%	0%	0%	1%	1%	0%	1%	0%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		43.0	43.0		43.0	43.0		24.0	24.0		24.0	
Effective Green, g (s)		43.0	43.0		43.0	43.0		24.0	24.0		24.0	
Actuated g/C Ratio		0.57	0.57		0.57	0.57		0.32	0.32		0.32	
Clearance Time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	
Lane Grp Cap (vph)		862	792		827	812		452	466		568	
v/s Ratio Prot												
v/s Ratio Perm		0.38	0.04		c0.44	0.02		0.08	0.02		c0.20	
v/c Ratio		0.67	0.06		0.77	0.03		0.27	0.05		0.63	
Uniform Delay, d1		11.1	7.1		12.2	7.0		18.9	17.6		21.7	
Progression Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2		4.1	0.2		6.8	0.1		1.4	0.2		5.2	
Delay (s)		15.2	7.2		19.0	7.0		20.4	17.8		26.9	
Level of Service		B	A		B	A		C	B		C	
Approach Delay (s)		14.2			18.3			19.4			26.9	
Approach LOS		B			B			B			C	

Intersection Summary			
HCM Average Control Delay	18.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	101.5%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑	↱	↰	↑	↱
Volume (vph)	59	494	34	45	539	54	45	165	55	123	210	33
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	11	16	8	10	10	10	10	10	10
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00	0.98	1.00	1.00	0.98
Flpb, ped/bikes	0.98	1.00		1.00	1.00		0.99	1.00	1.00	0.99	1.00	1.00
Frt	1.00	0.99		1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1533	3066		1652	3730		1585	1663	1370	1568	1680	1397
Flt Permitted	0.35	1.00		0.39	1.00		0.57	1.00	1.00	0.63	1.00	1.00
Satd. Flow (perm)	562	3066		675	3730		953	1663	1370	1043	1680	1397
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	66	549	38	50	599	60	50	183	61	137	233	37
RTOR Reduction (vph)	0	8	0	0	12	0	0	0	37	0	0	22
Lane Group Flow (vph)	66	579	0	50	647	0	50	183	24	137	233	15
Confl. Peds. (#/hr)	51		3	3		51	13		13	13		13
Heavy Vehicles (%)	2%	3%	3%	0%	2%	0%	0%	1%	2%	1%	0%	0%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	31.0	31.0		31.0	31.0		26.0	26.0	26.0	26.0	26.0	26.0
Effective Green, g (s)	31.0	31.0		31.0	31.0		26.0	26.0	26.0	26.0	26.0	26.0
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.40	0.40	0.40	0.40	0.40	0.40
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	268	1462		322	1779		381	665	548	417	672	559
v/s Ratio Prot		c0.19			0.17			0.11			c0.14	
v/s Ratio Perm	0.12			0.07			0.05		0.02	0.13		0.01
v/c Ratio	0.25	0.40		0.16	0.36		0.13	0.28	0.04	0.33	0.35	0.03
Uniform Delay, d1	10.1	11.0		9.6	10.8		12.3	13.1	11.9	13.5	13.6	11.8
Progression Factor	1.00	1.00		1.00	1.00		0.85	0.90	0.76	0.59	0.59	0.26
Incremental Delay, d2	2.2	0.8		1.0	0.6		0.7	1.0	0.2	2.0	1.4	0.1
Delay (s)	12.3	11.8		10.6	11.3		11.2	12.9	9.2	9.9	9.4	3.1
Level of Service	B	B		B	B		B	B	A	A	A	A
Approach Delay (s)		11.8			11.3			11.8			9.0	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM Average Control Delay	11.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	55.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	60	421	81	73	396	67	57	180	64	89	245	80
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	11	10	11	11	10	11	11	10	11	11
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.98		1.00	0.99		1.00	0.98		1.00	0.99	
Flpb, ped/bikes	0.97	1.00		0.95	1.00		0.99	1.00		0.96	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.96		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1329	3137		1520	3128		1580	2919		1452	2997	
Flt Permitted	0.44	1.00		0.42	1.00		0.53	1.00		0.59	1.00	
Satd. Flow (perm)	617	3137		667	3128		882	2919		907	2997	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	63	443	85	77	417	71	60	189	67	94	258	84
RTOR Reduction (vph)	0	0	0	0	0	0	0	39	0	0	42	0
Lane Group Flow (vph)	63	528	0	77	488	0	60	217	0	94	300	0
Confl. Peds. (#/hr)	112		99	99		112	23		53	53		23
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	16%	1%	0%	0%	1%	9%	0%	8%	2%	5%	5%	7%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	36.0	36.0		36.0	36.0		31.0	31.0		31.0	31.0	
Effective Green, g (s)	36.0	36.0		36.0	36.0		31.0	31.0		31.0	31.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.41	0.41		0.41	0.41	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	296	1506		320	1501		365	1207		375	1239	
v/s Ratio Prot		c0.17			0.16			0.07			0.10	
v/s Ratio Perm	0.10			0.12			0.07			c0.10		
v/c Ratio	0.21	0.35		0.24	0.33		0.16	0.18		0.25	0.24	
Uniform Delay, d1	11.3	12.2		11.5	12.0		13.8	13.9		14.4	14.3	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.6	0.6		1.8	0.6		1.0	0.3		1.6	0.5	
Delay (s)	12.9	12.8		13.2	12.6		14.8	14.3		16.0	14.8	
Level of Service	B	B		B	B		B	B		B	B	
Approach Delay (s)		12.8			12.7			14.4			15.1	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	13.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	52.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1021: 103rd Street & Martin Luther King Jr Drive

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱		↰	↑↱		↰	↑↱	
Volume (vph)	100	447	62	32	523	48	86	203	60	76	473	110
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	12	8	16	12	9	10	10	9	10	10
Total Lost time (s)	3.0	7.0		3.0	7.0		3.0	7.0		3.0	7.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.98		1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.99		1.00	0.97		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1595	1653		1371	1973		1534	2998		1535	3012	
Flt Permitted	0.24	1.00		0.30	1.00		0.28	1.00		0.58	1.00	
Satd. Flow (perm)	402	1653		435	1973		451	2998		939	3012	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	105	471	65	34	551	51	91	214	63	80	498	116
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	105	536	0	34	602	0	91	277	0	80	614	0
Confl. Peds. (#/hr)	21		95	95		21	36		8	8		36
Confl. Bikes (#/hr)	2		3	3		2	2					2
Heavy Vehicles (%)	0%	2%	0%	7%	2%	0%	0%	3%	0%	0%	2%	1%
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	43.9	39.3		40.7	37.7		26.7	21.8		26.7	21.8	
Effective Green, g (s)	43.9	37.3		40.7	35.7		26.7	19.8		26.7	19.8	
Actuated g/C Ratio	0.52	0.44		0.48	0.42		0.31	0.23		0.31	0.23	
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	5.0		3.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	272	725		241	829		204	698		329	702	
v/s Ratio Prot	c0.02	c0.32		0.00	0.31		c0.03	0.09		0.01	c0.20	
v/s Ratio Perm	0.18			0.06			0.11			0.06		
v/c Ratio	0.39	0.74		0.14	0.73		0.45	0.40		0.24	0.87	
Uniform Delay, d1	23.8	19.8		20.5	20.6		29.2	27.6		21.9	31.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.9	6.7		0.3	5.5		1.6	1.7		0.4	14.3	
Delay (s)	24.7	26.5		20.8	26.1		30.8	29.2		22.2	45.7	
Level of Service	C	C		C	C		C	C		C	D	
Approach Delay (s)		26.2			25.8			29.6			43.0	
Approach LOS		C			C			C			D	

Intersection Summary			
HCM Average Control Delay	31.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	79.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1022: 103rd Street & Cottage Grove Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	77	399	65	117	510	118	67	158	58	127	367	82
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	11	11	11	11	12	12	10	10	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		0.99	1.00	
Frt		0.98			0.98		1.00	0.96		1.00	0.97	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3681			3131		1652	3237		1549	3027	
Flt Permitted		0.71			0.72		0.42	1.00		0.60	1.00	
Satd. Flow (perm)		2616			2271		737	3237		983	3027	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	86	443	72	130	567	131	74	176	64	141	408	91
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	601	0	0	828	0	74	240	0	141	499	0
Confl. Peds. (#/hr)	23		30	30		23	1		20	20		1
Confl. Bikes (#/hr)	3					3						
Heavy Vehicles (%)	0%	3%	0%	2%	2%	0%	0%	1%	0%	2%	2%	3%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		33.0			33.0		32.0	32.0		32.0	32.0	
Effective Green, g (s)		34.0			34.0		33.0	33.0		33.0	33.0	
Actuated g/C Ratio		0.45			0.45		0.44	0.44		0.44	0.44	
Clearance Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)		1186			1030		324	1424		433	1332	
v/s Ratio Prot								0.07			c0.16	
v/s Ratio Perm		0.23			c0.36		0.10			0.14		
v/c Ratio		0.51			0.80		0.23	0.17		0.33	0.37	
Uniform Delay, d1		14.5			17.6		13.1	12.7		13.7	14.1	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		1.5			6.7		1.6	0.3		2.0	0.8	
Delay (s)		16.1			24.3		14.7	13.0		15.7	14.9	
Level of Service		B			C		B	B		B	B	
Approach Delay (s)		16.1			24.3			13.4			15.1	
Approach LOS		B			C			B			B	

Intersection Summary			
HCM Average Control Delay	18.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	73.4%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1023: 103rd Street & Woodlawn Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↑	↱		✣			↰↱	
Volume (vph)	98	877	6	20	585	249	1	1	9	213	1	80
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	12	12	12	12	12	12	13	13	13
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00			0.95	
Frt	1.00	1.00		1.00	1.00	0.85		0.89			0.96	
Flt Protected	0.95	1.00		0.95	1.00	1.00		1.00			0.97	
Satd. Flow (prot)	1605	3206		1660	3320	1485		1545			3176	
Flt Permitted	0.38	1.00		0.25	1.00	1.00		0.98			0.77	
Satd. Flow (perm)	647	3206		432	3320	1485		1519			2533	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	109	974	7	22	650	277	1	1	10	237	1	89
RTOR Reduction (vph)	0	0	0	0	0	103	0	7	0	0	52	0
Lane Group Flow (vph)	109	981	0	22	650	174	0	5	0	0	275	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	46.1	46.1		46.1	46.1	46.1		19.5			19.5	
Effective Green, g (s)	46.1	46.1		46.1	46.1	46.1		19.5			19.5	
Actuated g/C Ratio	0.63	0.63		0.63	0.63	0.63		0.26			0.26	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		8.0			8.0	
Lane Grp Cap (vph)	405	2008		271	2080	930		402			671	
v/s Ratio Prot		c0.31			0.20							
v/s Ratio Perm	0.17			0.05		0.12		0.00			c0.11	
v/c Ratio	0.27	0.49		0.08	0.31	0.19		0.01			0.41	
Uniform Delay, d1	6.2	7.4		5.4	6.4	5.8		19.9			22.3	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00			1.00	
Incremental Delay, d2	1.6	0.9		0.6	0.4	0.4		0.0			1.7	
Delay (s)	7.8	8.3		6.0	6.8	6.3		20.0			24.0	
Level of Service	A	A		A	A	A		B			C	
Approach Delay (s)		8.2			6.6			20.0			24.0	
Approach LOS		A			A			B			C	

Intersection Summary			
HCM Average Control Delay	9.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	73.6	Sum of lost time (s)	8.0
Intersection Capacity Utilization	58.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱		↰	↑↑	↱	↰	↑↑	↱
Volume (vph)	131	228	124	94	163	56	144	907	90	125	825	104
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	9	12	10	10	12	9	10	9	9	10	9
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00	0.97	1.00	1.00	0.96
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.95		1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1560	1505		1563	1585		1493	3069	1337	1523	3099	1318
Flt Permitted	0.45	1.00		0.21	1.00		0.20	1.00	1.00	0.16	1.00	1.00
Satd. Flow (perm)	743	1505		340	1585		317	3069	1337	263	3099	1318
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	138	240	131	99	172	59	152	955	95	132	868	109
RTOR Reduction (vph)	0	23	0	0	15	0	0	0	40	0	0	51
Lane Group Flow (vph)	138	348	0	99	216	0	152	955	55	132	868	58
Confl. Peds. (#/hr)	10		13	13		10	18		7	7		18
Confl. Bikes (#/hr)	2					2	2		1	1		2
Heavy Vehicles (%)	2%	1%	1%	2%	1%	2%	3%	4%	0%	1%	3%	0%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	28.0	21.0		28.0	21.0		42.0	35.0	35.0	42.0	35.0	35.0
Effective Green, g (s)	26.0	22.0		26.0	22.0		40.0	35.0	35.0	40.0	35.0	35.0
Actuated g/C Ratio	0.31	0.26		0.31	0.26		0.47	0.41	0.41	0.47	0.41	0.41
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)	285	390		190	410		232	1264	551	213	1276	543
v/s Ratio Prot	0.03	c0.23		c0.04	0.14		c0.05	c0.31		0.04	0.28	
v/s Ratio Perm	0.11			0.12			0.26		0.04	0.25		0.04
v/c Ratio	0.48	0.89		0.52	0.53		0.66	0.76	0.10	0.62	0.68	0.11
Uniform Delay, d1	22.7	30.4		22.9	27.0		14.7	21.3	15.3	15.0	20.4	15.4
Progression Factor	1.00	1.00		1.00	1.00		0.67	0.82	0.53	1.00	1.00	1.00
Incremental Delay, d2	5.8	25.2		9.9	4.8		12.2	3.8	0.3	12.8	2.9	0.4
Delay (s)	28.4	55.5		32.7	31.8		22.0	21.3	8.5	27.8	23.4	15.8
Level of Service	C	E		C	C		C	C	A	C	C	B
Approach Delay (s)		48.2			32.1			20.4			23.1	
Approach LOS		D			C			C			C	

Intersection Summary			
HCM Average Control Delay	27.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	73.7%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1025: 107th Street & Wentworth Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			✥			✥	
Volume (vph)	22	181	35	20	173	21	25	149	40	47	255	50
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	14	12	12	14	12	12	16	12	12	16	12
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		0.99			1.00			1.00			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.98			0.99			0.97			0.98	
Flt Protected		1.00			1.00			0.99			0.99	
Satd. Flow (prot)		1839			1849			1939			1974	
Flt Permitted		0.97			0.96			0.94			0.94	
Satd. Flow (perm)		1783			1791			1837			1868	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	23	187	36	21	178	22	26	154	41	48	263	52
RTOR Reduction (vph)	0	9	0	0	6	0	0	12	0	0	9	0
Lane Group Flow (vph)	0	237	0	0	215	0	0	209	0	0	354	0
Confl. Peds. (#/hr)	18		34	34		18	16		19	19		16
Confl. Bikes (#/hr)			6	6			1		4	4		1
Heavy Vehicles (%)	0%	1%	0%	5%	1%	0%	0%	2%	0%	0%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		27.0			27.0			30.0			30.0	
Effective Green, g (s)		27.0			27.0			30.0			30.0	
Actuated g/C Ratio		0.42			0.42			0.46			0.46	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		741			744			848			862	
v/s Ratio Prot												
v/s Ratio Perm		c0.13			0.12			0.11			c0.19	
v/c Ratio		0.32			0.29			0.25			0.41	
Uniform Delay, d1		12.8			12.6			10.6			11.6	
Progression Factor		1.00			0.70			1.18			1.00	
Incremental Delay, d2		1.1			1.0			0.7			1.4	
Delay (s)		13.9			9.8			13.2			13.1	
Level of Service		B			A			B			B	
Approach Delay (s)		13.9			9.8			13.2			13.1	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM Average Control Delay	12.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	53.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1026: 107th Street & State Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	24	193	38	25	180	19	49	200	31	43	214	39
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	0.97	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.99		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1496	3059		1576	3119		1518	3119		1550	3076	
Flt Permitted	0.61	1.00		0.59	1.00		0.58	1.00		0.59	1.00	
Satd. Flow (perm)	966	3059		985	3119		926	3119		968	3076	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	27	214	42	28	200	21	54	222	34	48	238	43
RTOR Reduction (vph)	0	25	0	0	12	0	0	14	0	0	18	0
Lane Group Flow (vph)	27	231	0	28	209	0	54	242	0	48	263	0
Confl. Peds. (#/hr)	20		17	17		20	2					2
Confl. Bikes (#/hr)	32		36	36		32	22		25	25		22
Heavy Vehicles (%)	4%	1%	0%	0%	0%	0%	5%	0%	0%	3%	1%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.0	20.0		20.0	20.0		39.0	39.0		39.0	39.0	
Effective Green, g (s)	19.0	19.0		19.0	19.0		38.0	38.0		38.0	38.0	
Actuated g/C Ratio	0.29	0.29		0.29	0.29		0.58	0.58		0.58	0.58	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	282	894		288	912		541	1823		566	1798	
v/s Ratio Prot		c0.08			0.07			0.08			c0.09	
v/s Ratio Perm	0.03			0.03			0.06			0.05		
v/c Ratio	0.10	0.26		0.10	0.23		0.10	0.13		0.08	0.15	
Uniform Delay, d1	16.7	17.6		16.8	17.4		6.0	6.1		5.9	6.1	
Progression Factor	0.95	0.97		0.75	0.74		1.36	1.36		0.38	0.34	
Incremental Delay, d2	0.6	0.7		0.7	0.6		0.4	0.1		0.3	0.2	
Delay (s)	16.5	17.7		13.2	13.5		8.4	8.4		2.5	2.3	
Level of Service	B	B		B	B		A	A		A	A	
Approach Delay (s)		17.6			13.5			8.4			2.3	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	10.0	HCM Level of Service	A
HCM Volume to Capacity ratio	0.18		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	46.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1027: 107th Street & Michigan Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			✥			✥	
Volume (vph)	67	168	41	25	159	38	27	247	16	40	322	33
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	9	9	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	
Flpb, ped/bikes	0.99	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.97		1.00	0.97			0.99			0.99	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1555	3058		1525	2937			1922			1938	
Flt Permitted	0.61	1.00		0.61	1.00			0.94			0.94	
Satd. Flow (perm)	1007	3058		974	2937			1823			1840	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	74	187	46	28	177	42	30	274	18	44	358	37
RTOR Reduction (vph)	0	28	0	0	25	0	0	3	0	0	5	0
Lane Group Flow (vph)	74	205	0	28	194	0	0	319	0	0	434	0
Confl. Peds. (#/hr)	11		17	17		11	26		7	7		26
Heavy Vehicles (%)	2%	1%	0%	0%	1%	3%	4%	5%	0%	0%	4%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	26.0	26.0		26.0	26.0			31.0			31.0	
Effective Green, g (s)	26.0	26.0		26.0	26.0			31.0			31.0	
Actuated g/C Ratio	0.40	0.40		0.40	0.40			0.48			0.48	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	403	1223		390	1175			869			878	
v/s Ratio Prot		0.07			0.07							
v/s Ratio Perm	c0.07			0.03				0.17			c0.24	
v/c Ratio	0.18	0.17		0.07	0.16			0.37			0.49	
Uniform Delay, d1	12.6	12.5		12.0	12.5			10.8			11.6	
Progression Factor	1.05	1.00		0.77	0.76			1.00			1.00	
Incremental Delay, d2	1.0	0.3		0.3	0.3			1.2			2.0	
Delay (s)	14.3	12.8		9.6	9.8			11.9			13.6	
Level of Service	B	B		A	A			B			B	
Approach Delay (s)		13.2			9.8			11.9			13.6	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM Average Control Delay	12.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	57.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1028: 107th Street & Martin Luther King Jr Drive

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱			✥			✥	
Volume (vph)	47	111	28	20	161	27	41	235	11	33	364	57
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	16	12	10	16	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	
Flpb, ped/bikes	1.00	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.97		1.00	0.98			0.99			0.98	
Flt Protected	0.95	1.00		0.95	1.00			0.99			1.00	
Satd. Flow (prot)	1652	1970		1584	1975			1981			1979	
Flt Permitted	0.57	1.00		0.65	1.00			0.90			0.96	
Satd. Flow (perm)	986	1970		1087	1975			1792			1912	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	52	123	31	22	179	30	46	261	12	37	404	63
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	52	154	0	22	209	0	0	319	0	0	504	0
Confl. Peds. (#/hr)	1		10	10		1	2		5	5		2
Heavy Vehicles (%)	0%	0%	0%	0%	1%	0%	0%	2%	0%	0%	1%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.0	20.0		20.0	20.0			37.0			37.0	
Effective Green, g (s)	20.0	20.0		20.0	20.0			37.0			37.0	
Actuated g/C Ratio	0.31	0.31		0.31	0.31			0.57			0.57	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	303	606		334	608			1020			1088	
v/s Ratio Prot		0.08			c0.11							
v/s Ratio Perm	0.05			0.02				0.18			c0.26	
v/c Ratio	0.17	0.25		0.07	0.34			0.31			0.46	
Uniform Delay, d1	16.4	16.9		15.9	17.4			7.3			8.2	
Progression Factor	0.83	0.81		0.92	0.93			0.97			1.00	
Incremental Delay, d2	1.2	1.0		0.4	1.5			0.8			1.4	
Delay (s)	14.8	14.6		15.1	17.7			7.9			9.6	
Level of Service	B	B		B	B			A			A	
Approach Delay (s)		14.7			17.5			7.9			9.6	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	11.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1029: 107th Street & Cottage Grove Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑	↱	↰	↑	↱
Volume (vph)	54	13	97	2	5	10	62	235	5	5	466	76
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	10	10	10	11	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.98		1.00	0.98		1.00	1.00	1.00	1.00	1.00	0.98
Flpb, ped/bikes	0.99	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.87		1.00	0.90		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1695	1727		1702	1808		1594	1647	1428	1653	2000	1496
Flt Permitted	0.75	1.00		0.68	1.00		0.39	1.00	1.00	0.59	1.00	1.00
Satd. Flow (perm)	1332	1727		1216	1808		660	1647	1428	1030	2000	1496
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	60	14	108	2	6	11	69	261	6	6	518	84
RTOR Reduction (vph)	0	78	0	0	8	0	0	0	2	0	0	28
Lane Group Flow (vph)	60	44	0	2	9	0	69	261	4	6	518	56
Confl. Peds. (#/hr)	5		5	5		5	3					3
Heavy Vehicles (%)	0%	0%	1%	0%	0%	0%	0%	2%	0%	0%	2%	0%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	17.0	17.0		17.0	17.0		39.0	39.0	39.0	39.0	39.0	39.0
Effective Green, g (s)	18.0	18.0		18.0	18.0		39.0	39.0	39.0	39.0	39.0	39.0
Actuated g/C Ratio	0.28	0.28		0.28	0.28		0.60	0.60	0.60	0.60	0.60	0.60
Clearance Time (s)	5.0	5.0		5.0	5.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	369	478		337	501		396	988	857	618	1200	898
v/s Ratio Prot		0.03			0.01			0.16			c0.26	
v/s Ratio Perm	c0.05			0.00			0.10		0.00	0.01		0.04
v/c Ratio	0.16	0.09		0.01	0.02		0.17	0.26	0.00	0.01	0.43	0.06
Uniform Delay, d1	17.8	17.4		17.0	17.1		5.8	6.2	5.2	5.2	7.0	5.4
Progression Factor	1.39	2.73		1.00	1.00		0.82	0.77	0.97	1.00	1.00	1.00
Incremental Delay, d2	0.9	0.4		0.0	0.1		0.7	0.5	0.0	0.0	1.1	0.1
Delay (s)	25.6	48.1		17.1	17.1		5.5	5.3	5.1	5.3	8.2	5.5
Level of Service	C	D		B	B		A	A	A	A	A	A
Approach Delay (s)		40.7			17.1			5.3			7.8	
Approach LOS		D			B			A			A	

Intersection Summary			
HCM Average Control Delay	12.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	52.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1030: 111th Street & Marshield Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱		↰	↑↑					↰	↑↱	
Volume (vph)	0	253	163	178	204	0	0	0	0	110	470	377
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	12	12	12	12	12	11	11	12
Total Lost time (s)		4.0		3.0	3.0					5.0	5.0	
Lane Util. Factor		0.95		1.00	0.95					1.00	0.95	
Frpb, ped/bikes		0.99		1.00	1.00					1.00	0.99	
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	
Frt		0.94		1.00	1.00					1.00	0.93	
Flt Protected		1.00		0.95	1.00					0.95	1.00	
Satd. Flow (prot)		2905		1693	3288					1503	3021	
Flt Permitted		1.00		0.41	1.00					0.95	1.00	
Satd. Flow (perm)		2905		722	3288					1503	3021	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	266	172	187	215	0	0	0	0	116	495	397
RTOR Reduction (vph)	0	103	0	0	0	0	0	0	0	0	141	0
Lane Group Flow (vph)	0	335	0	187	215	0	0	0	0	116	751	0
Confl. Peds. (#/hr)	18		3	3		18	1					1
Heavy Vehicles (%)	0%	4%	1%	1%	4%	0%	0%	0%	0%	10%	2%	1%
Turn Type				D.P+P						Split		
Protected Phases		8		7	7 8					6	6	
Permitted Phases				8								
Actuated Green, G (s)		33.0		53.0	56.0					37.0	37.0	
Effective Green, g (s)		33.0		53.0	56.0					37.0	37.0	
Actuated g/C Ratio		0.32		0.52	0.55					0.36	0.36	
Clearance Time (s)		4.0		3.0						5.0	5.0	
Lane Grp Cap (vph)		940		566	1805					545	1096	
v/s Ratio Prot		c0.12		c0.06	0.07					0.08	c0.25	
v/s Ratio Perm				0.11								
v/c Ratio		0.36		0.33	0.12					0.21	0.68	
Uniform Delay, d1		26.4		13.5	11.1					22.4	27.6	
Progression Factor		1.00		2.20	2.13					1.00	1.00	
Incremental Delay, d2		1.1		1.4	0.1					0.9	3.5	
Delay (s)		27.4		31.0	23.8					23.3	31.0	
Level of Service		C		C	C					C	C	
Approach Delay (s)		27.4			27.1			0.0			30.2	
Approach LOS		C			C			A			C	

Intersection Summary			
HCM Average Control Delay	28.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	102.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	62.4%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1031: 111th Street & Hamlet Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑			↑↱		↰	↑	↱			
Volume (vph)	141	222	0	0	305	113	77	539	233	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	9	12	13	12	13	12	12	12
Total Lost time (s)	4.0	4.0			4.0		5.0	5.0	5.0			
Lane Util. Factor	1.00	0.95			0.95		1.00	1.00	1.00			
Frpb, ped/bikes	1.00	1.00			0.99		1.00	1.00	0.99			
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.96		1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1674	3196			2850		1767	1782	1560			
Flt Permitted	0.36	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	632	3196			2850		1767	1782	1560			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	148	234	0	0	321	119	81	567	245	0	0	0
RTOR Reduction (vph)	0	0	0	0	37	0	0	0	168	0	0	0
Lane Group Flow (vph)	148	234	0	0	403	0	81	567	77	0	0	0
Confl. Peds. (#/hr)	9		13	13		9			1	1		
Confl. Bikes (#/hr)	3					3						
Heavy Vehicles (%)	2%	7%	0%	0%	3%	1%	0%	1%	0%	0%	0%	0%
Turn Type	pm+pt						custom		Perm			
Protected Phases	4	1 4			1		2	2				
Permitted Phases	1 4						2		2			
Actuated Green, G (s)	59.0	63.0			26.0		30.0	30.0	30.0			
Effective Green, g (s)	59.0	63.0			26.0		30.0	30.0	30.0			
Actuated g/C Ratio	0.58	0.62			0.25		0.29	0.29	0.29			
Clearance Time (s)	4.0				4.0		5.0	5.0	5.0			
Lane Grp Cap (vph)	703	1974			726		520	524	459			
v/s Ratio Prot	c0.07	0.07			c0.14		0.05	c0.32				
v/s Ratio Perm	0.05								0.05			
v/c Ratio	0.21	0.12			0.55		0.16	1.08	0.17			
Uniform Delay, d1	10.3	8.0			33.0		26.6	36.0	26.7			
Progression Factor	0.42	0.43			1.00		1.00	1.00	1.00			
Incremental Delay, d2	0.6	0.1			3.0		0.6	63.3	0.8			
Delay (s)	4.9	3.6			36.0		27.3	99.3	27.5			
Level of Service	A	A			D		C	F	C			
Approach Delay (s)		4.1			36.0			73.1			0.0	
Approach LOS		A			D			E			A	

Intersection Summary			
HCM Average Control Delay	48.2	HCM Level of Service	D
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	102.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	62.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1032: 112th Place & Marshield Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱		↰	↑↑					↰	↑↑	↱
Volume (vph)	0	514	479	81	534	0	0	0	0	11	434	285
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	11	12	12	12	12	10	10	12
Total Lost time (s)		4.0		4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.95		1.00	0.95					1.00	0.95	1.00
Frpb, ped/bikes		0.99		1.00	1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Frt		0.93		1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00					0.95	1.00	1.00
Satd. Flow (prot)		3098		1710	3306					1596	3192	1530
Flt Permitted		1.00		0.11	1.00					0.95	1.00	1.00
Satd. Flow (perm)		3098		200	3306					1596	3192	1530
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	0	535	499	84	556	0	0	0	0	11	452	297
RTOR Reduction (vph)	0	168	0	0	0	0	0	0	0	0	0	196
Lane Group Flow (vph)	0	866	0	84	556	0	0	0	0	11	452	101
Confl. Peds. (#/hr)	8		8	8		8	3					3
Confl. Bikes (#/hr)	9					9			61	61		
Heavy Vehicles (%)	0%	1%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type				pm+pt						Split		Prot
Protected Phases		8		7	7 8					6	6	6
Permitted Phases				7 8								
Actuated Green, G (s)		36.0		54.0	58.0					34.0	34.0	34.0
Effective Green, g (s)		36.0		54.0	58.0					34.0	34.0	34.0
Actuated g/C Ratio		0.36		0.54	0.58					0.34	0.34	0.34
Clearance Time (s)		4.0		4.0						4.0	4.0	4.0
Lane Grp Cap (vph)		1115		380	1917					543	1085	520
v/s Ratio Prot		c0.28		0.04	c0.17					0.01	c0.14	0.07
v/s Ratio Perm				0.08								
v/c Ratio		0.78		0.22	0.29					0.02	0.42	0.19
Uniform Delay, d1		28.4		14.4	10.6					21.9	25.4	23.3
Progression Factor		1.00		1.01	1.19					1.00	1.00	1.00
Incremental Delay, d2		5.3		0.9	0.3					0.1	1.2	0.8
Delay (s)		33.8		15.5	12.9					22.0	26.6	24.2
Level of Service		C		B	B					C	C	C
Approach Delay (s)		33.8			13.2			0.0			25.5	
Approach LOS		C			B			A			C	

Intersection Summary			
HCM Average Control Delay	25.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	92.5%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↰↑			↑↱		↖	↰	↗			
Volume (vph)	419	106	0	0	150	6	465	480	58	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	12	12	12	10	12	11	11	12	12	12	12
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0	4.0			
Lane Util. Factor	0.91	0.91			0.95		0.95	0.95	1.00			
Frpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.99		1.00	1.00	0.85			
Flt Protected	0.95	0.97			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1469	3110			3170		1555	1653	1530			
Flt Permitted	0.64	0.71			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	992	2290			3170		1555	1653	1530			
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	432	109	0	0	155	6	479	495	60	0	0	0
RTOR Reduction (vph)	0	0	0	0	3	0	0	0	38	0	0	0
Lane Group Flow (vph)	216	325	0	0	158	0	479	495	22	0	0	0
Confl. Peds. (#/hr)	13		6	6		13			8	8		
Confl. Bikes (#/hr)	1					1			2	2		
Heavy Vehicles (%)	2%	1%	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%
Turn Type	pm+pt						custom		custom			
Protected Phases	4	1 4			1		2	2	2			
Permitted Phases	1 4						2		2			
Actuated Green, G (s)	51.0	51.0			15.0		37.0	37.0	37.0			
Effective Green, g (s)	51.0	51.0			15.0		37.0	37.0	37.0			
Actuated g/C Ratio	0.51	0.51			0.15		0.37	0.37	0.37			
Clearance Time (s)	4.0				4.0		4.0	4.0	4.0			
Lane Grp Cap (vph)	678	1463			476		575	612	566			
v/s Ratio Prot	c0.11	0.08			c0.05		c0.31	0.30	0.01			
v/s Ratio Perm	0.05	0.03										
v/c Ratio	0.32	0.22			0.33		0.83	0.81	0.04			
Uniform Delay, d1	14.1	13.5			38.0		28.7	28.3	20.1			
Progression Factor	0.24	0.25			1.00		1.00	1.00	1.00			
Incremental Delay, d2	0.7	0.2			1.9		13.3	11.0	0.1			
Delay (s)	4.1	3.6			39.9		42.0	39.3	20.3			
Level of Service	A	A			D		D	D	C			
Approach Delay (s)		3.8			39.9			39.5			0.0	
Approach LOS		A			D			D			A	

Intersection Summary			
HCM Average Control Delay	28.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	92.5%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1034: 111th Street & Halsted Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱		↰	↑↑	↱	↰	↑↑	↱
Volume (vph)	78	220	103	153	273	121	84	699	87	102	884	65
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	9	10	9	9	10	9
Total Lost time (s)		4.0			4.0		4.0	3.5	4.0	4.0	3.5	4.0
Lane Util. Factor		0.95			0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		0.99			0.99		1.00	1.00	0.97	1.00	1.00	0.96
Flpb, ped/bikes		1.00			1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.96			0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.99			0.99		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		2940			2929		1508	3069	1309	1508	3099	1298
Flt Permitted		0.72			0.72		0.16	1.00	1.00	0.25	1.00	1.00
Satd. Flow (perm)		2137			2152		254	3069	1309	401	3099	1298
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	81	229	107	159	284	126	88	728	91	106	921	68
RTOR Reduction (vph)	0	40	0	0	31	0	0	0	56	0	0	33
Lane Group Flow (vph)	0	377	0	0	538	0	88	728	35	106	921	35
Confl. Peds. (#/hr)	35		30	30		35	34		8	8		34
Confl. Bikes (#/hr)	1					1	1					1
Heavy Vehicles (%)	1%	4%	0%	1%	3%	3%	2%	4%	2%	2%	3%	2%
Turn Type	pm+pt			Perm			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)		35.0			27.0		38.0	33.0	33.0	38.0	33.0	33.0
Effective Green, g (s)		36.0			28.0		36.0	33.5	33.0	36.0	33.5	33.0
Actuated g/C Ratio		0.42			0.33		0.42	0.39	0.39	0.42	0.39	0.39
Clearance Time (s)		5.0			5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)		962			709		167	1210	508	222	1221	504
v/s Ratio Prot		c0.03					c0.02	0.24		0.02	c0.30	
v/s Ratio Perm		0.14			c0.25		0.20		0.03	0.18		0.03
v/c Ratio		0.39			0.76		0.53	0.60	0.07	0.48	0.75	0.07
Uniform Delay, d1		16.9			25.5		16.7	20.5	16.3	16.0	22.2	16.3
Progression Factor		1.00			1.00		1.36	0.69	0.62	1.11	1.16	1.74
Incremental Delay, d2		1.2			7.5		10.7	2.1	0.2	5.2	3.1	0.2
Delay (s)		18.1			33.0		33.5	16.2	10.4	22.9	29.0	28.6
Level of Service		B			C		C	B	B	C	C	C
Approach Delay (s)		18.1			33.0			17.3			28.4	
Approach LOS		B			C			B			C	

Intersection Summary			
HCM Average Control Delay	24.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	74.8%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1035: 111th Street & Normal Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰			↱			✣				
Volume (vph)	76	327	0	0	424	88	53	44	34	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		1.00			0.98			0.96				
Flt Protected		0.99			1.00			0.98				
Satd. Flow (prot)		1731			1707			1653				
Flt Permitted		0.83			1.00			0.98				
Satd. Flow (perm)		1453			1707			1653				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	84	363	0	0	471	98	59	49	38	0	0	0
RTOR Reduction (vph)	0	0	0	0	12	0	0	20	0	0	0	0
Lane Group Flow (vph)	0	447	0	0	557	0	0	126	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)		38.0			38.0			19.0				
Effective Green, g (s)		38.0			38.0			19.0				
Actuated g/C Ratio		0.58			0.58			0.29				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		849			998			483				
v/s Ratio Prot					c0.33							
v/s Ratio Perm		0.31						0.08				
v/c Ratio		0.53			0.56			0.26				
Uniform Delay, d1		8.1			8.3			17.6				
Progression Factor		1.00			0.76			1.00				
Incremental Delay, d2		2.3			2.0			1.3				
Delay (s)		10.4			8.3			18.9				
Level of Service		B			A			B				
Approach Delay (s)		10.4			8.3			18.9			0.0	
Approach LOS		B			A			B			A	

Intersection Summary			
HCM Average Control Delay	10.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	69.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱			↰↑↑↱			↰↑↑↱	
Volume (vph)	21	384	39	39	370	50	31	118	39	53	150	43
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	10	12	12	10	12
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		1.00			1.00			0.99			0.98	
Flpb, ped/bikes		1.00			1.00			0.99			1.00	
Frt		0.99			0.99			0.97			0.97	
Flt Protected		1.00			1.00			0.99			0.99	
Satd. Flow (prot)		1955			1941			2969			2985	
Flt Permitted		0.97			0.94			0.88			0.86	
Satd. Flow (perm)		1900			1825			2647			2591	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	23	427	43	43	411	56	34	131	43	59	167	48
RTOR Reduction (vph)	0	5	0	0	7	0	0	25	0	0	27	0
Lane Group Flow (vph)	0	488	0	0	503	0	0	183	0	0	247	0
Confl. Peds. (#/hr)	32		25	25		32	59		24	24		59
Confl. Bikes (#/hr)	3		2	2		3	4		2	2		4
Heavy Vehicles (%)	0%	3%	0%	3%	3%	0%	0%	0%	7%	4%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		30.0			30.0			27.0			27.0	
Effective Green, g (s)		30.0			30.0			27.0			27.0	
Actuated g/C Ratio		0.46			0.46			0.42			0.42	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		877			842			1100			1076	
v/s Ratio Prot												
v/s Ratio Perm		0.26			c0.28			0.07			c0.10	
v/c Ratio		0.56			0.60			0.17			0.23	
Uniform Delay, d1		12.7			13.0			11.9			12.3	
Progression Factor		0.61			0.40			1.08			0.43	
Incremental Delay, d2		2.4			2.8			0.3			0.5	
Delay (s)		10.1			8.0			13.2			5.8	
Level of Service		B			A			B			A	
Approach Delay (s)		10.1			8.0			13.2			5.8	
Approach LOS		B			A			B			A	

Intersection Summary			
HCM Average Control Delay	9.0	HCM Level of Service	A
HCM Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	75.8%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	51	330	49	81	467	86	45	219	98	83	227	64
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	9	10	10	9	10	10	12	10	10	12
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		0.99	1.00		0.99	1.00		0.99	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.95		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1510	3036		1573	3077		1587	2962		1585	3072	
Flt Permitted	0.32	1.00		0.46	1.00		0.56	1.00		0.54	1.00	
Satd. Flow (perm)	502	3036		760	3077		929	2962		903	3072	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	57	367	54	90	519	96	50	243	109	92	252	71
RTOR Reduction (vph)	0	18	0	0	23	0	0	50	0	0	33	0
Lane Group Flow (vph)	57	403	0	90	592	0	50	302	0	92	290	0
Confl. Peds. (#/hr)	20		31	31		20	16		20	20		16
Confl. Bikes (#/hr)							1		3	3		1
Heavy Vehicles (%)	5%	3%	0%	0%	1%	0%	0%	2%	2%	0%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	22.0	22.0		22.0	22.0		35.0	35.0		35.0	35.0	
Effective Green, g (s)	22.0	22.0		22.0	22.0		35.0	35.0		35.0	35.0	
Actuated g/C Ratio	0.34	0.34		0.34	0.34		0.54	0.54		0.54	0.54	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	170	1028		257	1041		500	1595		486	1654	
v/s Ratio Prot		0.13			c0.19			0.10			0.09	
v/s Ratio Perm	0.11			0.12			0.05			c0.10		
v/c Ratio	0.34	0.39		0.35	0.57		0.10	0.19		0.19	0.18	
Uniform Delay, d1	16.0	16.4		16.1	17.6		7.3	7.7		7.7	7.6	
Progression Factor	0.70	0.67		0.93	0.93		0.95	0.97		1.08	1.08	
Incremental Delay, d2	4.6	1.0		3.7	2.2		0.4	0.3		0.9	0.2	
Delay (s)	15.9	12.0		18.7	18.5		7.3	7.7		9.2	8.5	
Level of Service	B	B		B	B		A	A		A	A	
Approach Delay (s)		12.5			18.5			7.7			8.6	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	12.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	51.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1038: 111th Street & Michigan Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			↰↑↱			↰↑↱	
Volume (vph)	59	348	78	87	418	50	46	231	58	46	279	64
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	9	10	9	9	16	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			0.99			0.98	
Flpb, ped/bikes	0.98	1.00		0.99	1.00			0.99			1.00	
Frt	1.00	0.97		1.00	0.98			0.97			0.98	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1509	3018		1430	3723			3485			3521	
Flt Permitted	0.45	1.00		0.48	1.00			0.86			0.88	
Satd. Flow (perm)	708	3018		715	3723			3028			3119	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	62	366	82	92	440	53	48	243	61	48	294	67
RTOR Reduction (vph)	0	29	0	0	14	0	0	27	0	0	25	0
Lane Group Flow (vph)	62	419	0	92	479	0	0	325	0	0	384	0
Confl. Peds. (#/hr)	38		17	17		38	125		53	53		125
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	0%	3%	0%	7%	2%	0%	0%	6%	10%	2%	5%	5%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	31.0	31.0		31.0	31.0			26.0			26.0	
Effective Green, g (s)	31.0	31.0		31.0	31.0			26.0			26.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48			0.40			0.40	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	338	1439		341	1776			1211			1248	
v/s Ratio Prot		c0.14			0.13							
v/s Ratio Perm	0.09			0.13				0.11			c0.12	
v/c Ratio	0.18	0.29		0.27	0.27			0.27			0.31	
Uniform Delay, d1	9.7	10.3		10.2	10.2			13.1			13.3	
Progression Factor	1.61	1.75		1.09	1.09			0.69			0.73	
Incremental Delay, d2	1.1	0.5		1.7	0.3			0.5			0.6	
Delay (s)	16.8	18.6		12.9	11.4			9.5			10.4	
Level of Service	B	B		B	B			A			B	
Approach Delay (s)		18.4			11.6			9.5			10.4	
Approach LOS		B			B			A			B	

Intersection Summary			
HCM Average Control Delay	12.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	58.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1039: 111th Street & Indiana Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰↱			✥			✥	
Volume (vph)	86	294	92	92	293	92	120	82	47	47	82	119
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	16	12	12	16	12
Total Lost time (s)		5.0	5.0		5.0			5.0			5.0	
Lane Util. Factor		1.00	1.00		0.95			1.00			1.00	
Frt		1.00	0.85		0.97			0.97			0.94	
Flt Protected		0.99	1.00		0.99			0.98			0.99	
Satd. Flow (prot)		1670	1436		3087			1885			1835	
Flt Permitted		0.79	1.00		0.79			0.68			0.90	
Satd. Flow (perm)		1336	1436		2454			1303			1674	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	96	327	102	102	326	102	133	91	52	52	91	132
RTOR Reduction (vph)	0	0	49	0	32	0	0	13	0	0	51	0
Lane Group Flow (vph)	0	423	53	0	498	0	0	263	0	0	224	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm		Perm	Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)		34.0	34.0		34.0			21.0			21.0	
Effective Green, g (s)		34.0	34.0		34.0			21.0			21.0	
Actuated g/C Ratio		0.52	0.52		0.52			0.32			0.32	
Clearance Time (s)		5.0	5.0		5.0			5.0			5.0	
Lane Grp Cap (vph)		699	751		1284			421			541	
v/s Ratio Prot												
v/s Ratio Perm		c0.32	0.04		0.20			c0.20			0.13	
v/c Ratio		0.61	0.07		0.39			0.63			0.41	
Uniform Delay, d1		10.8	7.7		9.3			18.7			17.2	
Progression Factor		1.86	4.76		0.51			1.00			1.00	
Incremental Delay, d2		3.8	0.2		0.9			6.8			2.3	
Delay (s)		23.9	36.7		5.6			25.5			19.5	
Level of Service		C	D		A			C			B	
Approach Delay (s)		26.4			5.6			25.5			19.5	
Approach LOS		C			A			C			B	

Intersection Summary			
HCM Average Control Delay	18.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	79.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			↰↑↱			↰↑↱	
Volume (vph)	55	281	28	26	327	60	26	133	47	62	146	63
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	15	8	16	8	8	16	8
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			0.99			1.00	
Flpb, ped/bikes	0.99	1.00		0.98	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.98			0.97			0.97	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1444	3026		1566	3019			3582			3599	
Flt Permitted	0.48	1.00		0.55	1.00			0.90			0.84	
Satd. Flow (perm)	736	3026		899	3019			3238			3069	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	61	312	31	29	363	67	29	148	52	69	162	70
RTOR Reduction (vph)	0	11	0	0	23	0	0	30	0	0	41	0
Lane Group Flow (vph)	61	332	0	29	407	0	0	199	0	0	260	0
Confl. Peds. (#/hr)	24		47	47		24	9		36	36		9
Confl. Bikes (#/hr)			4	4			1					1
Heavy Vehicles (%)	9%	4%	0%	0%	3%	0%	0%	1%	10%	0%	0%	8%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	30.0	30.0		30.0	30.0			27.0			27.0	
Effective Green, g (s)	30.0	30.0		30.0	30.0			27.0			27.0	
Actuated g/C Ratio	0.46	0.46		0.46	0.46			0.42			0.42	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	340	1397		415	1393			1345			1275	
v/s Ratio Prot		0.11			c0.13							
v/s Ratio Perm	0.08			0.03				0.06			c0.08	
v/c Ratio	0.18	0.24		0.07	0.29			0.15			0.20	
Uniform Delay, d1	10.3	10.6		9.7	10.9			11.8			12.1	
Progression Factor	0.67	0.68		0.86	0.69			0.95			0.41	
Incremental Delay, d2	0.9	0.3		0.1	0.2			0.2			0.3	
Delay (s)	7.8	7.5		8.5	7.8			11.4			5.3	
Level of Service	A	A		A	A			B			A	
Approach Delay (s)		7.5			7.8			11.4			5.3	
Approach LOS		A			A			B			A	

Intersection Summary			
HCM Average Control Delay	7.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.25		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.7%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1041: 111th Street & Cottage Grove Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱			↰↑↱			↰↑↱	
Volume (vph)	47	450	26	86	507	222	24	124	115	340	261	82
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			0.95			0.95	
Frt		0.99			0.96			0.93			0.98	
Flt Protected		1.00			0.99			1.00			0.98	
Satd. Flow (prot)		3281			3168			3089			3181	
Flt Permitted		0.76			0.79			0.90			0.70	
Satd. Flow (perm)		2509			2518			2805			2289	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	52	500	29	96	563	247	27	138	128	378	290	91
RTOR Reduction (vph)	0	6	0	0	60	0	0	69	0	0	16	0
Lane Group Flow (vph)	0	575	0	0	846	0	0	224	0	0	743	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm			pm+pt			Perm		
Protected Phases		4			8		5	2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		25.0			25.0			30.0			17.0	
Effective Green, g (s)		25.0			25.0			30.0			17.0	
Actuated g/C Ratio		0.38			0.38			0.46			0.26	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		965			968			1338			599	
v/s Ratio Prot								c0.03				
v/s Ratio Perm		0.23			c0.34			0.05			c0.32	
v/c Ratio		0.60			0.87			0.17			1.36dl	
Uniform Delay, d1		16.0			18.5			10.2			24.0	
Progression Factor		1.48			1.00			1.00			0.80	
Incremental Delay, d2		2.7			10.9			0.3			121.3	
Delay (s)		26.4			29.4			10.5			140.5	
Level of Service		C			C			B			F	
Approach Delay (s)		26.4			29.4			10.5			140.5	
Approach LOS		C			C			B			F	

Intersection Summary			
HCM Average Control Delay	59.7	HCM Level of Service	E
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	86.1%	ICU Level of Service	E
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1042: 111th Street & Ellis Avenue

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↑↱			↰↑↑↱			↰↑↱			↰↑↱	
Volume (vph)	0	899	132	48	794	0	82	0	36	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	10	10	12	12	12	12	12	12	12
Total Lost time (s)		5.0			5.0			5.0				
Lane Util. Factor		0.95			0.95			1.00				
Frt		0.98			1.00			0.96				
Flt Protected		1.00			1.00			0.97				
Satd. Flow (prot)		3039			3090			1619				
Flt Permitted		1.00			0.80			0.79				
Satd. Flow (perm)		3039			2485			1328				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	999	147	53	882	0	91	0	40	0	0	0
RTOR Reduction (vph)	0	16	0	0	0	0	0	17	0	0	0	0
Lane Group Flow (vph)	0	1130	0	0	935	0	0	114	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	custom			Perm			Perm			Perm		
Protected Phases		4 5 6 11			8			2			2	
Permitted Phases	4 6 11			8			2			2		
Actuated Green, G (s)		65.0			33.0			16.0				
Effective Green, g (s)		58.0			33.0			16.0				
Actuated g/C Ratio		0.64			0.37			0.18				
Clearance Time (s)					5.0			5.0				
Lane Grp Cap (vph)		1958			911			236				
v/s Ratio Prot		c0.37										
v/s Ratio Perm					c0.38			c0.09				
v/c Ratio		0.58			1.03			0.48				
Uniform Delay, d1		9.1			28.5			33.3				
Progression Factor		0.16			1.43			1.00				
Incremental Delay, d2		0.3			35.5			6.9				
Delay (s)		1.7			76.4			40.2				
Level of Service		A			E			D				
Approach Delay (s)		1.7			76.4			40.2			0.0	
Approach LOS		A			E			D			A	

Intersection Summary			
HCM Average Control Delay	35.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	74.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1043: 111th Street & Doty Road

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↑	↱		✣		↰	↑	↱
Volume (vph)	224	642	24	112	614	185	61	4	107	212	10	213
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	10	12	12	12	12	16	12	12	12	12
Total Lost time (s)	3.0	5.0		3.0	5.0	3.0		5.0		3.0	5.0	3.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	1.00	0.85		0.92		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.98		0.95	1.00	1.00
Satd. Flow (prot)	1550	3192		1660	3320	1485		1782		1660	1748	1485
Flt Permitted	0.29	1.00		0.33	1.00	1.00		0.88		0.44	1.00	1.00
Satd. Flow (perm)	471	3192		583	3320	1485		1592		763	1748	1485
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	249	713	27	124	682	206	68	4	119	236	11	237
RTOR Reduction (vph)	0	2	0	0	0	96	0	90	0	0	0	135
Lane Group Flow (vph)	249	738	0	124	682	110	0	101	0	236	11	102
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	pm+pt			pm+pt		pm+ov	pm+pt			pm+pt		pm+ov
Protected Phases	7	4		3	8	1	5	2		1	6	7
Permitted Phases	4			8		8	2			6		6
Actuated Green, G (s)	54.9	42.5		47.6	38.2	48.2		12.1		25.1	25.1	38.8
Effective Green, g (s)	54.9	42.5		47.6	38.2	48.2		12.1		25.1	25.1	38.8
Actuated g/C Ratio	0.61	0.47		0.53	0.42	0.54		0.13		0.28	0.28	0.43
Clearance Time (s)	3.0	5.0		3.0	5.0	3.0		5.0		3.0	5.0	3.0
Vehicle Extension (s)	4.0	3.0		4.0	3.0	3.0		4.0		3.0	4.0	4.0
Lane Grp Cap (vph)	452	1507		421	1409	795		214		312	487	640
v/s Ratio Prot	c0.08	0.23		0.03	0.21	0.02				c0.08	0.01	0.02
v/s Ratio Perm	c0.25			0.13		0.06		0.06		c0.13		0.04
v/c Ratio	0.55	0.49		0.29	0.48	0.14		0.47		0.76	0.02	0.16
Uniform Delay, d1	9.2	16.3		10.9	18.8	10.5		36.0		28.6	23.5	15.6
Progression Factor	2.63	1.86		1.00	1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2	1.5	1.0		0.5	1.2	0.1		2.2		10.0	0.0	0.2
Delay (s)	25.9	31.3		11.4	20.0	10.6		38.2		38.6	23.6	15.8
Level of Service	C	C		B	B	B		D		D	C	B
Approach Delay (s)		30.0			17.0			38.2			27.1	
Approach LOS		C			B			D			C	

Intersection Summary			
HCM Average Control Delay	25.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	61.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
1044: 111th Street & Bishop Ford Freeway EB Ramps

1/14/2013

	↰	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↑↑					↰		↱
Volume (veh/h)	0	518	443	2	333	0	0	0	0	19	0	578
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	576	492	2	370	0	0	0	0	21	0	642
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		498										
pX, platoon unblocked												
vC, conflicting volume	370			576			765	950	288	662	950	185
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	370			576			765	950	288	662	950	185
tC, single (s)	4.2			4.2			7.6	6.6	7.0	7.6	6.6	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	100	94	100	22
cM capacity (veh/h)	1178			987			64	256	706	345	256	823

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1	SB 2
Volume Total	288	288	492	126	247	21	642
Volume Left	0	0	0	2	0	21	0
Volume Right	0	0	492	0	0	0	642
cSH	1700	1700	1700	987	1700	345	823
Volume to Capacity	0.17	0.17	0.29	0.00	0.15	0.06	0.78
Queue Length 95th (ft)	0	0	0	0	0	5	198
Control Delay (s)	0.0	0.0	0.0	0.2	0.0	16.1	23.1
Lane LOS				A		C	C
Approach Delay (s)	0.0			0.1		22.8	
Approach LOS						C	

Intersection Summary			
Average Delay	7.2		
Intersection Capacity Utilization	54.2%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
1045: 111th Street & Bishop Ford Freeway WB Ramps

1/14/2013

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰↰		↰			
Sign Control	Stop			Stop	Stop	
Volume (vph)	537	0	335	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	597	0	372	0	0	0

Direction, Lane #	EB 1	EB 2	NB 1
Volume Total (vph)	298	298	372
Volume Left (vph)	298	298	372
Volume Right (vph)	0	0	0
Hadj (s)	0.55	0.55	0.25
Departure Headway (s)	6.2	6.2	5.6
Degree Utilization, x	0.51	0.51	0.58
Capacity (veh/h)	568	570	619
Control Delay (s)	14.3	14.3	16.0
Approach Delay (s)	14.3		16.0
Approach LOS	B		C

Intersection Summary			
Delay	14.9		
HCM Level of Service	B		
Intersection Capacity Utilization	42.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱		↰	↑↑						↰↑↱	
Volume (vph)	0	475	64	196	511	0	0	0	0	101	21	58
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	12	12	12	12	12
Total Lost time (s)		3.0		4.0	4.0						5.0	
Lane Util. Factor		0.95		1.00	0.95						0.95	
Frt		0.98		1.00	1.00						0.95	
Flt Protected		1.00		0.95	1.00						0.97	
Satd. Flow (prot)		3153		1605	3210						3074	
Flt Permitted		1.00		0.34	1.00						0.97	
Satd. Flow (perm)		3153		582	3210						3074	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	528	71	218	568	0	0	0	0	112	23	64
RTOR Reduction (vph)	0	12	0	0	0	0	0	0	0	0	44	0
Lane Group Flow (vph)	0	587	0	218	568	0	0	0	0	0	155	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type				pm+pt						Split		
Protected Phases		4		3	8					6	6	
Permitted Phases				8								
Actuated Green, G (s)		36.0		49.0	49.0						27.0	
Effective Green, g (s)		36.0		49.0	49.0						27.0	
Actuated g/C Ratio		0.42		0.58	0.58						0.32	
Clearance Time (s)		3.0		4.0	4.0						5.0	
Lane Grp Cap (vph)		1335		456	1850						976	
v/s Ratio Prot		0.19		c0.06	0.18						c0.05	
v/s Ratio Perm				c0.22								
v/c Ratio		0.44		0.48	0.31						0.16	
Uniform Delay, d1		17.4		15.9	9.3						20.8	
Progression Factor		1.00		0.35	0.18						1.00	
Incremental Delay, d2		1.1		2.8	0.3						0.3	
Delay (s)		18.4		8.4	2.0						21.2	
Level of Service		B		A	A						C	
Approach Delay (s)		18.4			3.8			0.0			21.2	
Approach LOS		B			A			A			C	

Intersection Summary			
HCM Average Control Delay	11.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	44.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑			↑↱			↰↑↱				
Volume (vph)	95	481	0	0	644	129	63	90	59	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	11	11	12	12	12	12	12	12
Total Lost time (s)	5.0	5.0			3.0			5.0				
Lane Util. Factor	1.00	0.95			0.95			0.91				
Frt	1.00	1.00			0.98			0.96				
Flt Protected	0.95	1.00			1.00			0.99				
Satd. Flow (prot)	1660	3320			3130			4504				
Flt Permitted	0.21	1.00			1.00			0.99				
Satd. Flow (perm)	367	3320			3130			4504				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	106	534	0	0	716	143	70	100	66	0	0	0
RTOR Reduction (vph)	0	0	0	0	19	0	0	45	0	0	0	0
Lane Group Flow (vph)	106	534	0	0	840	0	0	191	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	pm+pt						Split					
Protected Phases	7	4			8		2	2				
Permitted Phases	4											
Actuated Green, G (s)	48.0	48.0			35.0			27.0				
Effective Green, g (s)	48.0	48.0			35.0			27.0				
Actuated g/C Ratio	0.56	0.56			0.41			0.32				
Clearance Time (s)	5.0	5.0			3.0			5.0				
Lane Grp Cap (vph)	359	1875			1289			1431				
v/s Ratio Prot	0.03	c0.16			c0.27			c0.04				
v/s Ratio Perm	0.13											
v/c Ratio	0.30	0.28			0.65			0.13				
Uniform Delay, d1	18.6	9.6			20.1			20.7				
Progression Factor	0.43	0.31			1.00			1.00				
Incremental Delay, d2	1.9	0.4			2.6			0.2				
Delay (s)	9.9	3.4			22.7			20.9				
Level of Service	A	A			C			C				
Approach Delay (s)		4.4			22.7			20.9			0.0	
Approach LOS		A			C			C			A	

Intersection Summary			
HCM Average Control Delay	15.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	44.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱			✥			✥	
Volume (vph)	114	346	114	91	386	81	129	78	30	31	87	144
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	10	12	12	15	12	12	15	12
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			1.00			1.00	
Frt		0.97			0.98			0.98			0.93	
Flt Protected		0.99			0.99			0.97			0.99	
Satd. Flow (prot)		2977			3007			1840			1769	
Flt Permitted		0.66			0.69			0.72			0.95	
Satd. Flow (perm)		1975			2105			1358			1683	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	127	384	127	101	429	90	143	87	33	34	97	160
RTOR Reduction (vph)	0	34	0	0	21	0	0	8	0	0	68	0
Lane Group Flow (vph)	0	604	0	0	599	0	0	255	0	0	223	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		23.0			23.0			32.0			32.0	
Effective Green, g (s)		23.0			23.0			32.0			32.0	
Actuated g/C Ratio		0.35			0.35			0.49			0.49	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		699			745			669			829	
v/s Ratio Prot												
v/s Ratio Perm		c0.31			0.28			c0.19			0.13	
v/c Ratio		0.86			0.80			0.38			0.27	
Uniform Delay, d1		19.6			19.0			10.3			9.7	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		13.5			9.0			1.6			0.8	
Delay (s)		33.0			27.9			12.0			10.5	
Level of Service		C			C			B			B	
Approach Delay (s)		33.0			27.9			12.0			10.5	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM Average Control Delay	24.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	80.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↑	↱	↰	↑↑	↱
Volume (vph)	114	201	88	159	311	65	124	542	67	95	950	180
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	12	10	16	12	9	10	9	9	10	9
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00	0.97	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.95		1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1559	2980		1573	3683		1508	3069	1333	1520	3099	1336
Flt Permitted	0.45	1.00		0.53	1.00		0.13	1.00	1.00	0.34	1.00	1.00
Satd. Flow (perm)	739	2980		880	3683		212	3069	1333	541	3099	1336
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	120	212	93	167	327	68	131	571	71	100	1000	189
RTOR Reduction (vph)	0	58	0	0	21	0	0	0	45	0	0	120
Lane Group Flow (vph)	120	247	0	167	374	0	131	571	26	100	1000	69
Confl. Peds. (#/hr)	19		16	16		19	22		25	25		22
Heavy Vehicles (%)	2%	2%	0%	1%	2%	2%	2%	4%	0%	1%	3%	0%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	32.0	27.0		32.0	27.0		38.0	31.0	31.0	38.0	31.0	31.0
Effective Green, g (s)	30.0	28.0		30.0	28.0		36.0	31.0	31.0	36.0	31.0	31.0
Actuated g/C Ratio	0.35	0.33		0.35	0.33		0.42	0.36	0.36	0.42	0.36	0.36
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)	299	982		343	1213		181	1119	486	298	1130	487
v/s Ratio Prot	0.02	0.08		c0.02	0.10		c0.05	0.19		0.02	c0.32	
v/s Ratio Perm	0.12			c0.15			0.26		0.02	0.12		0.05
v/c Ratio	0.40	0.25		0.49	0.31		0.72	0.51	0.05	0.34	0.88	0.14
Uniform Delay, d1	19.7	20.8		20.7	21.3		18.1	21.1	17.5	15.4	25.3	18.1
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.39	1.04	2.36
Incremental Delay, d2	4.0	0.6		4.9	0.7		22.1	1.7	0.2	2.2	7.8	0.4
Delay (s)	23.7	21.5		25.5	21.9		40.2	22.7	17.7	23.7	34.2	43.2
Level of Service	C	C		C	C		D	C	B	C	C	D
Approach Delay (s)		22.1			23.0			25.2			34.7	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	28.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	70.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1050: 115th Street & Wentworth Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱		↰	↱		↰	↱
Volume (vph)	49	295	30	33	393	24	33	102	41	36	134	66
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	16	12	12	16	12
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frpb, ped/bikes		1.00	0.96		1.00	0.97		1.00	0.98		1.00	0.99
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frt		1.00	0.85		1.00	0.85		1.00	0.85		1.00	0.85
Flt Protected		0.99	1.00		1.00	1.00		0.99	1.00		0.99	1.00
Satd. Flow (prot)		1962	1466		1993	1480		2015	1506		2002	1511
Flt Permitted		0.90	1.00		0.96	1.00		0.91	1.00		0.93	1.00
Satd. Flow (perm)		1777	1466		1913	1480		1861	1506		1877	1511
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	52	311	32	35	414	25	35	107	43	38	141	69
RTOR Reduction (vph)	0	0	17	0	0	13	0	0	25	0	0	40
Lane Group Flow (vph)	0	363	15	0	449	12	0	142	18	0	179	29
Confl. Peds. (#/hr)	11		20	20		11	1		4	4		1
Confl. Bikes (#/hr)	1		1	1		1			1	1		
Heavy Vehicles (%)	4%	3%	0%	0%	2%	0%	0%	0%	0%	0%	1%	0%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)		30.0	30.0		30.0	30.0		27.0	27.0		27.0	27.0
Effective Green, g (s)		30.0	30.0		30.0	30.0		27.0	27.0		27.0	27.0
Actuated g/C Ratio		0.46	0.46		0.46	0.46		0.42	0.42		0.42	0.42
Clearance Time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		820	677		883	683		773	626		780	628
v/s Ratio Prot												
v/s Ratio Perm		0.20	0.01		c0.23	0.01		0.08	0.01		c0.10	0.02
v/c Ratio		0.44	0.02		0.51	0.02		0.18	0.03		0.23	0.05
Uniform Delay, d1		11.8	9.5		12.3	9.5		12.0	11.2		12.3	11.3
Progression Factor		1.00	1.00		0.55	0.41		1.04	1.19		1.04	0.94
Incremental Delay, d2		1.7	0.1		2.0	0.0		0.5	0.1		0.7	0.1
Delay (s)		13.6	9.6		8.8	3.9		13.1	13.4		13.4	10.8
Level of Service		B	A		A	A		B	B		B	B
Approach Delay (s)		13.3			8.5			13.2			12.7	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM Average Control Delay	11.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	83.0%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1051: 115th Street & State Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	75	317	20	51	299	51	10	109	23	115	214	65
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	0.98		1.00	0.97		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1550	3072		1550	3031		1550	3017		1550	2991	
Flt Permitted	0.95	1.00		0.53	1.00		0.55	1.00		0.66	1.00	
Satd. Flow (perm)	1550	3072		864	3031		892	3017		1074	2991	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	83	352	22	57	332	57	11	121	26	128	238	72
RTOR Reduction (vph)	0	7	0	0	21	0	0	15	0	0	42	0
Lane Group Flow (vph)	83	367	0	57	368	0	11	132	0	128	268	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Prot			Perm			Perm			Perm		
Protected Phases	7	4			8			2			6	
Permitted Phases				8			2			6		
Actuated Green, G (s)	7.0	32.0		22.0	22.0		27.0	27.0		27.0	27.0	
Effective Green, g (s)	7.0	32.0		22.0	22.0		27.0	27.0		27.0	27.0	
Actuated g/C Ratio	0.11	0.49		0.34	0.34		0.42	0.42		0.42	0.42	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	167	1512		292	1026		371	1253		446	1242	
v/s Ratio Prot	c0.05	0.12			c0.12			0.04			0.09	
v/s Ratio Perm				0.07			0.01			c0.12		
v/c Ratio	0.50	0.24		0.20	0.36		0.03	0.11		0.29	0.22	
Uniform Delay, d1	27.3	9.5		15.2	16.2		11.2	11.6		12.6	12.2	
Progression Factor	0.93	0.56		0.82	0.82		0.86	0.85		1.12	1.12	
Incremental Delay, d2	9.8	0.4		1.4	0.9		0.0	0.0		1.6	0.4	
Delay (s)	35.3	5.6		13.9	14.2		9.7	9.8		15.7	14.0	
Level of Service	D	A		B	B		A	A		B	B	
Approach Delay (s)		11.0			14.2			9.8			14.5	
Approach LOS		B			B			A			B	

Intersection Summary			
HCM Average Control Delay	12.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	39.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1052: 115th Street & Michigan Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			↰↑↱			↰↑↱	
Volume (vph)	64	267	88	245	330	63	104	295	189	55	282	50
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	12	12	12	12	12	12
Total Lost time (s)	4.0	4.0		3.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frt	1.00	0.96		1.00	0.98			0.95			0.98	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1550	2984		1550	3025			3133			3233	
Flt Permitted	0.50	1.00		0.95	1.00			0.79			0.81	
Satd. Flow (perm)	813	2984		1550	3025			2496			2628	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	71	297	98	272	367	70	116	328	210	61	313	56
RTOR Reduction (vph)	0	49	0	0	24	0	0	87	0	0	18	0
Lane Group Flow (vph)	71	346	0	272	413	0	0	567	0	0	412	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Prot			Perm			Perm		
Protected Phases		4		3	8			2			6	
Permitted Phases	4						2			6		
Actuated Green, G (s)	20.0	20.0		6.0	29.0			25.0			25.0	
Effective Green, g (s)	20.0	20.0		6.0	29.0			25.0			25.0	
Actuated g/C Ratio	0.31	0.31		0.09	0.45			0.38			0.38	
Clearance Time (s)	4.0	4.0		3.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	250	918		143	1350			960			1011	
v/s Ratio Prot		c0.12		c0.18	0.14							
v/s Ratio Perm	0.09							c0.23			0.16	
v/c Ratio	0.28	0.38		1.90	0.31			0.59			0.41	
Uniform Delay, d1	17.1	17.6		29.5	11.5			15.9			14.6	
Progression Factor	0.65	0.60		1.27	1.18			1.22			0.70	
Incremental Delay, d2	2.8	1.2		417.0	0.3			2.4			1.2	
Delay (s)	13.9	11.7		454.6	13.8			21.8			11.4	
Level of Service	B	B		F	B			C			B	
Approach Delay (s)		12.1			182.9			21.8			11.4	
Approach LOS		B			F			C			B	

Intersection Summary			
HCM Average Control Delay	68.4	HCM Level of Service	E
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	68.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1053: 115th Street & Indiana Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱			↰↑↑↱				
Volume (vph)	26	454	16	75	645	75	55	110	165	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	12	14	12	10	15	10
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			0.95				
Frt		1.00			0.99			0.93				
Flt Protected		1.00			1.00			0.99				
Satd. Flow (prot)		1620			1603			3249				
Flt Permitted		0.94			0.91			0.99				
Satd. Flow (perm)		1529			1465			3249				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	29	504	18	83	717	83	61	122	183	0	0	0
RTOR Reduction (vph)	0	1	0	0	5	0	0	139	0	0	0	0
Lane Group Flow (vph)	0	550	0	0	878	0	0	227	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm			Perm					
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Actuated Green, G (s)		41.5			41.5			15.5				
Effective Green, g (s)		41.5			41.5			15.5				
Actuated g/C Ratio		0.64			0.64			0.24				
Clearance Time (s)		4.0			4.0			4.0				
Vehicle Extension (s)		3.0			3.0			8.0				
Lane Grp Cap (vph)		976			935			775				
v/s Ratio Prot												
v/s Ratio Perm		0.36			c0.60			0.07				
v/c Ratio		0.56			0.94			0.29				
Uniform Delay, d1		6.6			10.6			20.3				
Progression Factor		1.30			1.00			1.00				
Incremental Delay, d2		2.1			18.0			0.9				
Delay (s)		10.7			28.6			21.2				
Level of Service		B			C			C				
Approach Delay (s)		10.7			28.6			21.2			0.0	
Approach LOS		B			C			C			A	

Intersection Summary			
HCM Average Control Delay	21.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	85.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
1054: 115th Street & Martin Luther King Jr Drive

1/14/2013

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰	↱		↰	↱
Volume (veh/h)	142	464	611	39	119	176
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	149	488	643	41	125	185
Pedestrians		5	6		17	
Lane Width (ft)		16.0	16.0		10.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		1	1		1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		1319	491			
pX, platoon unblocked	0.83				0.83	0.83
vC, conflicting volume	701				1474	686
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	538				1469	519
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	82				0	60
cM capacity (veh/h)	833				95	458

Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total	638	684	125	185
Volume Left	149	0	125	0
Volume Right	0	41	0	185
cSH	833	1700	95	458
Volume to Capacity	0.18	0.40	1.32	0.40
Queue Length 95th (ft)	16	0	225	48
Control Delay (s)	4.4	0.0	281.6	18.1
Lane LOS	A		F	C
Approach Delay (s)	4.4	0.0	124.4	
Approach LOS			F	

Intersection Summary			
Average Delay	25.4		
Intersection Capacity Utilization	88.5%	ICU Level of Service	E
Analysis Period (min)	15		

HCM Signalized Intersection Capacity Analysis
1055: 115th Street & Cottage Grove Avenue

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↱			↰	Y	
Volume (vph)	690	0	1	620	3	29
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0			4.0	4.0	
Lane Util. Factor	1.00			1.00	1.00	
Frt	1.00			1.00	0.88	
Flt Protected	1.00			1.00	1.00	
Satd. Flow (prot)	1748			1747	1525	
Flt Permitted	1.00			1.00	1.00	
Satd. Flow (perm)	1748			1747	1525	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	767	0	1	689	3	32
RTOR Reduction (vph)	0	0	0	0	27	0
Lane Group Flow (vph)	767	0	0	690	8	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type			Perm			
Protected Phases	1 2 4			4	3	
Permitted Phases			4			
Actuated Green, G (s)	63.0			31.0	14.0	
Effective Green, g (s)	59.0			31.0	14.0	
Actuated g/C Ratio	0.69			0.36	0.16	
Clearance Time (s)				4.0	4.0	
Lane Grp Cap (vph)	1213			637	251	
v/s Ratio Prot	c0.44				c0.01	
v/s Ratio Perm				0.40		
v/c Ratio	0.63			1.08	0.03	
Uniform Delay, d1	7.1			27.0	29.8	
Progression Factor	0.10			1.00	1.00	
Incremental Delay, d2	0.2			60.3	0.2	
Delay (s)	0.9			87.3	30.1	
Level of Service	A			F	C	
Approach Delay (s)	0.9			87.3	30.1	
Approach LOS	A			F	C	

Intersection Summary			
HCM Average Control Delay	41.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	48.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
1056: 115th Street & Bishop Ford Fwy

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱			↰						↰	↱
Volume (veh/h)	0	243	606	32	407	0	0	0	0	17	6	249
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	270	673	36	452	0	0	0	0	19	7	277
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	452			270			1133	1130	472	658	793	452
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	452			270			1133	1130	472	658	793	452
tC, single (s)	4.1			4.2			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			97			100	100	100	95	98	50
cM capacity (veh/h)	1119			1276			77	200	544	346	314	555

Direction, Lane #	EB 1	EB 2	WB 1	SB 1	SB 2
Volume Total	180	763	488	26	277
Volume Left	0	0	36	19	0
Volume Right	0	673	0	0	277
cSH	1700	1700	1276	337	555
Volume to Capacity	0.11	0.45	0.03	0.08	0.50
Queue Length 95th (ft)	0	0	2	6	69
Control Delay (s)	0.0	0.0	0.9	16.6	17.8
Lane LOS			A	C	C
Approach Delay (s)	0.0		0.9	17.7	
Approach LOS				C	

Intersection Summary			
Average Delay	3.3		
Intersection Capacity Utilization	60.5%	ICU Level of Service	B
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
1057: 115th Street &

1/14/2013

	↗	↘	↖	↑	↓	↙
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰↰		↰			
Sign Control	Stop			Stop	Stop	
Volume (vph)	260	0	439	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	289	0	488	0	0	0

Direction, Lane #	EB 1	EB 2	NB 1
Volume Total (vph)	144	144	488
Volume Left (vph)	144	144	488
Volume Right (vph)	0	0	0
Hadj (s)	0.55	0.55	0.25
Departure Headway (s)	6.4	6.4	5.0
Degree Utilization, x	0.26	0.26	0.68
Capacity (veh/h)	536	537	701
Control Delay (s)	10.3	10.3	17.7
Approach Delay (s)	10.3		17.7
Approach LOS	B		C

Intersection Summary			
Delay	15.0		
HCM Level of Service	B		
Intersection Capacity Utilization	40.2%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Signalized Intersection Capacity Analysis
1058: 119th Street & Marshield Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↰↑					↰	↰↑↱	↱
Volume (vph)	0	530	345	313	770	0	0	0	0	279	269	372
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	12	13	12	12	12	12	10	10	11
Total Lost time (s)		6.0	6.0		6.0					6.0	6.0	6.0
Lane Util. Factor		0.95	1.00		0.95					0.86	0.81	0.86
Frpb, ped/bikes		1.00	0.98		1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00					1.00	1.00	1.00
Frt		1.00	0.85		1.00					1.00	0.95	0.85
Flt Protected		1.00	1.00		0.99					0.95	0.99	1.00
Satd. Flow (prot)		3179	1232		3425					1359	3806	1133
Flt Permitted		1.00	1.00		0.99					0.95	0.99	1.00
Satd. Flow (perm)		3179	1232		3425					1359	3806	1133
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	558	363	329	811	0	0	0	0	294	283	392
RTOR Reduction (vph)	0	0	217	0	0	0	0	0	0	0	53	113
Lane Group Flow (vph)	0	558	146	0	1140	0	0	0	0	162	558	83
Confl. Peds. (#/hr)	4		6	6		4						
Heavy Vehicles (%)	0%	4%	6%	1%	2%	0%	0%	0%	0%	1%	1%	1%
Parking (#/hr)			0									0
Turn Type			Perm	Split						Split		custom
Protected Phases		2		10 12 14	10 12 14					4	4	
Permitted Phases			2									4 2
Actuated Green, G (s)		39.0	39.0		67.4					23.0	23.0	68.0
Effective Green, g (s)		39.0	39.0		67.4					23.0	23.0	68.0
Actuated g/C Ratio		0.24	0.24		0.42					0.14	0.14	0.42
Clearance Time (s)		6.0	6.0							6.0	6.0	
Vehicle Extension (s)		3.0	3.0							3.0	3.0	
Lane Grp Cap (vph)		775	300		1443					195	547	482
v/s Ratio Prot		c0.18			c0.33					0.12	c0.15	
v/s Ratio Perm			0.12									0.07
v/c Ratio		0.72	0.49		0.79					0.83	1.02	0.17
Uniform Delay, d1		55.5	51.9		40.2					66.6	68.5	28.5
Progression Factor		1.00	1.00		0.10					1.00	1.00	1.00
Incremental Delay, d2		5.7	5.6		0.3					24.9	43.6	0.2
Delay (s)		61.2	57.5		4.3					91.5	112.1	28.7
Level of Service		E	E		A					F	F	C
Approach Delay (s)		59.7			4.3			0.0			91.8	
Approach LOS		E			A			A			F	

Intersection Summary			
HCM Average Control Delay	49.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	32.6
Intersection Capacity Utilization	81.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

1059: 119th Street & Ashland Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	292	517	0	0	750	144	332	214	206	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	13	12	12	11	12	13	13	14	12	12	12
Total Lost time (s)	6.0	6.0			6.0	6.0	6.0	6.0				
Lane Util. Factor	1.00	0.95			0.95	1.00	0.91	0.91				
Frt	1.00	1.00			1.00	0.85	1.00	0.94				
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.99				
Satd. Flow (prot)	1605	3431			3210	1485	1561	3059				
Flt Permitted	0.95	1.00			1.00	1.00	0.95	0.99				
Satd. Flow (perm)	1605	3431			3210	1485	1561	3059				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	324	574	0	0	833	160	369	238	229	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	66	0	69	0	0	0	0
Lane Group Flow (vph)	324	574	0	0	833	94	284	483	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Split					Perm	Split					
Protected Phases	2 4 8	2 4 8			10		12	12				
Permitted Phases						10						
Actuated Green, G (s)	84.6	84.6			36.4	36.4	12.0	12.0				
Effective Green, g (s)	84.6	84.6			36.4	36.4	12.0	12.0				
Actuated g/C Ratio	0.53	0.53			0.23	0.23	0.08	0.08				
Clearance Time (s)					6.0	6.0	6.0	6.0				
Vehicle Extension (s)					3.0	3.0	3.0	3.0				
Lane Grp Cap (vph)	849	1814			730	338	117	229				
v/s Ratio Prot	c0.20	0.17			c0.26		c0.18	0.16				
v/s Ratio Perm						0.06						
v/c Ratio	0.38	0.32			1.14	0.28	2.43	2.11				
Uniform Delay, d1	22.3	21.3			61.8	50.9	74.0	74.0				
Progression Factor	0.05	0.06			1.00	1.00	1.00	1.00				
Incremental Delay, d2	0.2	0.1			79.4	0.4	667.5	512.9				
Delay (s)	1.4	1.3			141.2	51.4	741.5	586.9				
Level of Service	A	A			F	D	F	F				
Approach Delay (s)		1.3			126.8			639.4			0.0	
Approach LOS		A			F			F			A	

Intersection Summary			
HCM Average Control Delay	242.6	HCM Level of Service	F
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	29.0
Intersection Capacity Utilization	69.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1060: 119th Street & Halsted Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↱		↰	↑↱		↰	↑↱	
Volume (vph)	140	312	136	188	418	107	108	522	95	106	803	120
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	14	12	10	10	12	9	10	12
Total Lost time (s)	4.0	4.0	5.0	4.0	5.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	0.99		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.97		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1579	1600	1372	1594	1788		1578	3000		1537	3001	
Flt Permitted	0.15	1.00	1.00	0.35	1.00		0.13	1.00		0.32	1.00	
Satd. Flow (perm)	256	1600	1372	583	1788		216	3000		511	3001	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	147	328	143	198	440	113	114	549	100	112	845	126
RTOR Reduction (vph)	0	0	100	0	11	0	0	16	0	0	13	0
Lane Group Flow (vph)	147	328	43	198	542	0	114	633	0	112	958	0
Confl. Peds. (#/hr)	28		8	8		28	59		11	11		59
Confl. Bikes (#/hr)	3					3	1		2	2		1
Heavy Vehicles (%)	1%	5%	2%	0%	4%	0%	1%	4%	0%	0%	3%	3%
Turn Type	pm+pt		Perm	pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)	34.0	27.0	27.0	34.0	27.0		43.0	36.0		40.2	34.6	
Effective Green, g (s)	32.0	28.0	27.0	32.0	27.0		41.0	36.0		38.2	34.6	
Actuated g/C Ratio	0.35	0.31	0.30	0.35	0.30		0.45	0.40		0.42	0.38	
Clearance Time (s)	3.0	5.0	5.0	3.0	5.0		3.0	4.0		3.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	178	494	409	273	533		188	1192		268	1146	
v/s Ratio Prot	c0.05	0.20		0.05	c0.30		c0.04	0.21		0.02	c0.32	
v/s Ratio Perm	0.24		0.03	0.21			0.23			0.16		
v/c Ratio	0.83	0.66	0.10	0.73	1.02		0.61	0.53		0.42	0.84	
Uniform Delay, d1	23.9	27.2	23.0	24.8	31.8		17.4	20.8		16.7	25.4	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	25.7	6.9	0.5	9.2	43.5		5.4	1.7		1.1	7.3	
Delay (s)	49.6	34.1	23.5	34.0	75.3		22.8	22.5		17.8	32.7	
Level of Service	D	C	C	C	E		C	C		B	C	
Approach Delay (s)		35.3			64.4			22.6			31.2	
Approach LOS		D			E			C			C	

Intersection Summary			
HCM Average Control Delay	37.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	90.6	Sum of lost time (s)	17.0
Intersection Capacity Utilization	87.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1061: 119th Street & Wentworth Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱		✥			✥	
Volume (vph)	39	402	61	112	645	62	37	59	44	31	91	70
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	10	10	10	12	15	12	12	16	12
Total Lost time (s)		3.0	3.0		3.0	3.0		3.0			3.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00			1.00	
Frpb, ped/bikes		1.00	0.96		1.00	0.97		0.99			0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00			1.00	
Frt		1.00	0.85		1.00	0.85		0.96			0.95	
Flt Protected		1.00	1.00		0.99	1.00		0.99			0.99	
Satd. Flow (prot)		1971	1467		1624	1381		1855			1873	
Flt Permitted		0.63	1.00		0.78	1.00		0.90			0.95	
Satd. Flow (perm)		1245	1467		1276	1381		1699			1791	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	41	423	64	118	679	65	39	62	46	33	96	74
RTOR Reduction (vph)	0	0	30	0	0	18	0	25	0	0	32	0
Lane Group Flow (vph)	0	464	34	0	797	47	0	122	0	0	171	0
Confl. Peds. (#/hr)	12		20	20		12	8		2	2		8
Confl. Bikes (#/hr)	1		2	2		1			1	1		
Heavy Vehicles (%)	3%	3%	0%	0%	3%	0%	0%	0%	0%	0%	1%	3%
Turn Type	Perm		Perm	Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)		32.0	32.0		32.0	32.0		27.0			27.0	
Effective Green, g (s)		32.0	32.0		32.0	32.0		27.0			27.0	
Actuated g/C Ratio		0.49	0.49		0.49	0.49		0.42			0.42	
Clearance Time (s)		3.0	3.0		3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)		613	722		628	680		706			744	
v/s Ratio Prot												
v/s Ratio Perm		0.37	0.02		c0.62	0.03		0.07			c0.10	
v/c Ratio		0.76	0.05		1.27	0.07		0.17			0.23	
Uniform Delay, d1		13.4	8.6		16.5	8.7		12.0			12.3	
Progression Factor		1.00	1.00		1.88	2.75		1.00			1.95	
Incremental Delay, d2		8.5	0.1		122.3	0.0		0.5			0.7	
Delay (s)		21.8	8.7		153.4	23.8		12.5			24.6	
Level of Service		C	A		F	C		B			C	
Approach Delay (s)		20.2			143.6			12.5			24.6	
Approach LOS		C			F			B			C	

Intersection Summary			
HCM Average Control Delay	81.2	HCM Level of Service	F
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	90.6%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1062: 119th Street & State Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱		↰	↱		✥	
Volume (vph)	59	318	41	110	700	20	36	114	44	17	184	70
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frpb, ped/bikes		1.00	0.94		1.00	0.97		1.00	0.97		0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		0.97	
Flt Protected		0.99	1.00		0.99	1.00		0.99	1.00		1.00	
Satd. Flow (prot)		1756	1443		1724	1487		1713	1489		1712	
Flt Permitted		0.18	1.00		0.65	1.00		0.89	1.00		0.98	
Satd. Flow (perm)		318	1443		1125	1487		1541	1489		1685	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	62	335	43	116	737	21	38	120	46	18	194	74
RTOR Reduction (vph)	0	0	24	0	0	5	0	0	23	0	19	0
Lane Group Flow (vph)	0	397	19	0	853	16	0	158	23	0	267	0
Confl. Peds. (#/hr)	19		25	25		19	3		6	6		3
Confl. Bikes (#/hr)	1		2	2		1			1	1		
Heavy Vehicles (%)	0%	2%	0%	0%	4%	0%	0%	5%	0%	0%	0%	2%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		23.0	23.0		23.0	23.0		32.0	32.0		32.0	
Effective Green, g (s)		23.0	23.0		23.0	23.0		32.0	32.0		32.0	
Actuated g/C Ratio		0.35	0.35		0.35	0.35		0.49	0.49		0.49	
Clearance Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	
Lane Grp Cap (vph)		113	511		398	526		759	733		830	
v/s Ratio Prot												
v/s Ratio Perm		c1.25	0.01		0.76	0.01		0.10	0.02		c0.16	
v/c Ratio		3.51	0.04		2.14	0.03		0.21	0.03		0.32	
Uniform Delay, d1		21.0	13.8		21.0	13.7		9.3	8.5		10.0	
Progression Factor		1.63	2.35		0.98	0.86		0.16	0.22		1.07	
Incremental Delay, d2		1147.0	0.1		518.3	0.0		0.1	0.0		1.0	
Delay (s)		1181.3	32.5		538.8	11.8		1.5	1.9		11.6	
Level of Service		F	C		F	B		A	A		B	
Approach Delay (s)		1069.0			526.2			1.6			11.6	
Approach LOS		F			F			A			B	

Intersection Summary			
HCM Average Control Delay	517.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.66		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	101.4%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1063: 119th Street & Michigan Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		✥			✥			↰	↱
Volume (vph)	298	35	76	8	14	11	38	247	8	31	570	799
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	14	12	12	16	12	12	16	12
Total Lost time (s)		3.0	3.0		3.0			3.0			3.0	3.0
Lane Util. Factor		1.00	1.00		1.00			1.00			1.00	1.00
Frpb, ped/bikes		1.00	0.95		0.98			1.00			1.00	0.94
Flpb, ped/bikes		0.98	1.00		0.99			1.00			1.00	1.00
Frt		1.00	0.85		0.96			1.00			1.00	0.85
Flt Protected		0.96	1.00		0.99			0.99			1.00	1.00
Satd. Flow (prot)		1855	1440		1767			1995			1975	1382
Flt Permitted		0.75	1.00		0.92			0.79			0.97	1.00
Satd. Flow (perm)		1455	1440		1640			1587			1930	1382
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	331	39	84	9	16	12	42	274	9	34	633	888
RTOR Reduction (vph)	0	0	49	0	9	0	0	2	0	0	0	295
Lane Group Flow (vph)	0	370	35	0	28	0	0	323	0	0	667	593
Confl. Peds. (#/hr)	37		53	53		37	39		54	54		39
Confl. Bikes (#/hr)							2					2
Heavy Vehicles (%)	4%	0%	1%	0%	0%	0%	0%	1%	0%	0%	3%	4%
Turn Type	pm+pt		Perm	Perm			Perm			Perm		Perm
Protected Phases	7	4			8			2			6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)		27.0	27.0		17.0			32.0			32.0	32.0
Effective Green, g (s)		27.0	27.0		17.0			32.0			32.0	32.0
Actuated g/C Ratio		0.42	0.42		0.26			0.49			0.49	0.49
Clearance Time (s)		3.0	3.0		3.0			3.0			3.0	3.0
Lane Grp Cap (vph)		654	598		429			781			950	680
v/s Ratio Prot		c0.07										
v/s Ratio Perm		0.17	0.02		0.02			0.20			0.35	c0.43
v/c Ratio		0.57	0.06		0.07			0.41			0.70	0.87
Uniform Delay, d1		14.5	11.4		18.0			10.5			12.8	14.7
Progression Factor		1.18	1.99		1.00			0.41			0.76	1.11
Incremental Delay, d2		0.3	0.0		0.3			0.6			4.0	13.4
Delay (s)		17.5	22.7		18.3			4.9			13.7	29.7
Level of Service		B	C		B			A			B	C
Approach Delay (s)		18.5			18.3			4.9			22.9	
Approach LOS		B			B			A			C	

Intersection Summary			
HCM Average Control Delay	19.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	95.4%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1064: 127th Street & S Paulina St

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↱		↰	↑↑					↰	↰↑↱	↱
Volume (vph)	0	923	289	447	1189	0	0	0	0	513	284	334
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	12	11	8	8	8	11	12	14
Total Lost time (s)		6.0		4.5	6.0					6.0	6.0	6.0
Lane Util. Factor		0.91		1.00	0.95					0.91	0.86	0.91
Frpb, ped/bikes		0.99		1.00	1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Frt		0.96		1.00	1.00					1.00	0.98	0.85
Flt Protected		1.00		0.95	1.00					0.95	0.98	1.00
Satd. Flow (prot)		4577		1621	3320					1489	2913	1442
Flt Permitted		1.00		0.09	1.00					0.95	0.98	1.00
Satd. Flow (perm)		4577		157	3320					1489	2913	1442
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	972	304	471	1252	0	0	0	0	540	299	352
RTOR Reduction (vph)	0	47	0	0	0	0	0	0	0	0	9	58
Lane Group Flow (vph)	0	1229	0	471	1252	0	0	0	0	308	603	213
Confl. Peds. (#/hr)	15		11	11		15						
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	0%	3%	3%	2%	3%	0%	0%	0%	0%	1%	3%	3%
Turn Type				pm+pt						Perm		Perm
Protected Phases		2		1	6						4	
Permitted Phases				6						4		4
Actuated Green, G (s)		39.0		74.9	74.9					28.1	28.1	28.1
Effective Green, g (s)		39.0		74.9	74.9					28.1	28.1	28.1
Actuated g/C Ratio		0.34		0.65	0.65					0.24	0.24	0.24
Clearance Time (s)		6.0		4.5	6.0					6.0	6.0	6.0
Vehicle Extension (s)		7.0		3.5	7.0					3.5	3.5	3.5
Lane Grp Cap (vph)		1552		502	2162					364	712	352
v/s Ratio Prot		0.27		c0.26	0.38							
v/s Ratio Perm				c0.36						0.21	0.21	0.15
v/c Ratio		0.79		0.94	0.58					0.85	0.85	0.60
Uniform Delay, d1		34.3		32.7	11.2					41.4	41.4	38.5
Progression Factor		1.00		0.77	2.00					1.00	1.00	1.00
Incremental Delay, d2		4.2		14.8	0.5					16.7	9.4	3.1
Delay (s)		38.6		40.1	22.9					58.1	50.8	41.6
Level of Service		D		D	C					E	D	D
Approach Delay (s)		38.6			27.6			0.0			50.6	
Approach LOS		D			C			A			D	

Intersection Summary			
HCM Average Control Delay	37.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	10.5
Intersection Capacity Utilization	111.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1065: 127th Street & Marshfield Ave

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↑			↑↑	↱		↰↑↱				
Volume (vph)	341	1095	0	0	1206	271	430	351	337	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	12	12	12	11	12	12	12	12	12	12	12
Total Lost time (s)	6.0	6.0			6.0	6.0		6.0				
Lane Util. Factor	0.97	0.95			0.95	1.00		0.91				
Frpb, ped/bikes	1.00	1.00			1.00	0.98		1.00				
Flpb, ped/bikes	1.00	1.00			1.00	1.00		1.00				
Frt	1.00	1.00			1.00	0.85		0.95				
Flt Protected	0.95	1.00			1.00	1.00		0.98				
Satd. Flow (prot)	3144	3353			3241	1489		4513				
Flt Permitted	0.08	1.00			1.00	1.00		0.98				
Satd. Flow (perm)	280	3353			3241	1489		4513				
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	359	1153	0	0	1269	285	453	369	355	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	77	0	67	0	0	0	0
Lane Group Flow (vph)	359	1153	0	0	1269	208	0	1110	0	0	0	0
Confl. Peds. (#/hr)	7		5	5		7						
Confl. Bikes (#/hr)	1		1	1		1						
Heavy Vehicles (%)	2%	2%	0%	0%	2%	1%	2%	1%	3%	0%	0%	0%
Turn Type	pm+pt					Perm	Perm					
Protected Phases	5	2			6			8				
Permitted Phases	2					6	8					
Actuated Green, G (s)	73.3	73.3			53.3	53.3		29.7				
Effective Green, g (s)	73.3	73.3			53.3	53.3		29.7				
Actuated g/C Ratio	0.64	0.64			0.46	0.46		0.26				
Clearance Time (s)	6.0	6.0			6.0	6.0		6.0				
Vehicle Extension (s)	3.5	7.0			7.0	7.0		5.0				
Lane Grp Cap (vph)	527	2137			1502	690		1166				
v/s Ratio Prot	c0.08	0.34			c0.39							
v/s Ratio Perm	0.35					0.14		0.25				
v/c Ratio	0.68	0.54			0.84	0.30		0.95				
Uniform Delay, d1	24.7	11.5			27.2	19.2		41.9				
Progression Factor	1.52	0.13			0.87	1.12		1.00				
Incremental Delay, d2	2.1	0.6			3.2	0.6		16.4				
Delay (s)	39.5	2.0			26.8	22.2		58.4				
Level of Service	D	A			C	C		E				
Approach Delay (s)		10.9			26.0			58.4			0.0	
Approach LOS		B			C			E			A	

Intersection Summary			
HCM Average Control Delay	29.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	111.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	135	719	408	104	968	76	227	179	66	80	162	121
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	12	11	12	12	10	10	13	10	10	10
Total Lost time (s)	3.5	6.0	3.5	3.5	6.0		3.5	6.0		3.5	6.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		0.99	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.96		1.00	0.94	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1565	3273	1313	1601	3286		1578	3002		1540	2941	
Flt Permitted	0.11	1.00	1.00	0.36	1.00		0.39	1.00		0.59	1.00	
Satd. Flow (perm)	174	3273	1313	614	3286		652	3002		961	2941	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	142	757	429	109	1019	80	239	188	69	84	171	127
RTOR Reduction (vph)	0	0	173	0	5	0	0	38	0	0	107	0
Lane Group Flow (vph)	142	757	256	109	1094	0	239	219	0	84	191	0
Confl. Peds. (#/hr)	11		23	23		11	8		12	12		8
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	2%	1%	3%	3%	3%	0%	1%	1%	2%	3%	0%	1%
Parking (#/hr)			0									
Turn Type	pm+pt		pm+ov	pm+pt			pm+pt			pm+pt		
Protected Phases	5	2	3	1	6		3	8		7	4	
Permitted Phases	2		2	6			8			4		
Actuated Green, G (s)	64.9	52.3	68.7	43.5	34.4		38.1	26.5		26.3	18.2	
Effective Green, g (s)	64.9	52.3	68.7	43.5	34.4		38.1	26.5		26.3	18.2	
Actuated g/C Ratio	0.56	0.45	0.60	0.38	0.30		0.33	0.23		0.23	0.16	
Clearance Time (s)	3.5	6.0	3.5	3.5	6.0		3.5	6.0		3.5	6.0	
Vehicle Extension (s)	3.0	7.0	3.0	3.0	7.0		3.0	7.0		3.0	7.0	
Lane Grp Cap (vph)	425	1489	784	310	983		348	692		261	465	
v/s Ratio Prot	c0.08	c0.23	0.05	0.03	c0.33		c0.10	0.07		0.02	0.06	
v/s Ratio Perm	0.11		0.15	0.10			c0.13			0.05		
v/c Ratio	0.33	0.51	0.33	0.35	1.11		0.69	0.32		0.32	0.41	
Uniform Delay, d1	17.5	22.2	11.6	23.9	40.3		30.6	36.7		36.2	43.6	
Progression Factor	0.77	0.75	1.59	1.00	1.00		1.03	1.05		1.00	1.00	
Incremental Delay, d2	1.6	1.0	0.2	0.7	65.0		5.3	0.9		0.7	2.1	
Delay (s)	15.1	17.7	18.7	24.5	105.3		36.8	39.6		36.9	45.7	
Level of Service	B	B	B	C	F		D	D		D	D	
Approach Delay (s)		17.7			98.0			38.2			43.7	
Approach LOS		B			F			D			D	

Intersection Summary			
HCM Average Control Delay	52.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	19.0
Intersection Capacity Utilization	81.4%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1067: Vermont St & S Ashland

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	46	250	367	95	441	113	362	340	84	206	408	56
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	11	12	11	12	12	11	13	12	10	11	12
Total Lost time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.91		1.00	0.97		1.00	0.97		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1708	2925		1653	3267		1620	3402		1580	3183	
Flt Permitted	0.34	1.00		0.22	1.00		0.32	1.00		0.49	1.00	
Satd. Flow (perm)	619	2925		375	3267		544	3402		822	3183	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	48	263	386	100	464	119	381	358	88	217	429	59
RTOR Reduction (vph)	0	215	0	0	19	0	0	19	0	0	9	0
Lane Group Flow (vph)	48	434	0	100	564	0	381	427	0	217	479	0
Confl. Peds. (#/hr)	12		3	3		12	5					5
Heavy Vehicles (%)	0%	2%	2%	0%	1%	1%	2%	1%	0%	1%	2%	0%
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	39.2	32.5		46.4	36.1		56.2	44.2		40.1	32.1	
Effective Green, g (s)	39.2	32.5		46.4	36.1		56.2	44.2		40.1	32.1	
Actuated g/C Ratio	0.34	0.28		0.40	0.31		0.49	0.38		0.35	0.28	
Clearance Time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	3.5	7.0		3.5	7.0		3.5	7.0		3.5	7.0	
Lane Grp Cap (vph)	274	827		266	1026		454	1308		339	888	
v/s Ratio Prot	0.01	0.15		c0.03	c0.17		c0.15	0.13		0.04	0.15	
v/s Ratio Perm	0.05			0.12			c0.26			0.18		
v/c Ratio	0.18	0.52		0.38	0.55		0.84	0.33		0.64	0.54	
Uniform Delay, d1	25.9	34.7		23.2	32.7		20.8	24.9		28.8	35.2	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	0.97	
Incremental Delay, d2	0.4	2.4		1.1	2.1		13.1	0.7		4.0	2.2	
Delay (s)	26.3	37.1		24.3	34.8		33.9	25.6		32.8	36.1	
Level of Service	C	D		C	C		C	C		C	D	
Approach Delay (s)		36.4			33.3			29.4			35.1	
Approach LOS		D			C			C			D	

Intersection Summary			
HCM Average Control Delay	33.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	77.2%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	105	695	141	10	741	89	104	287	9	204	609	183
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	10	12	9	11	12	9	9	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.98			0.98		1.00	1.00		1.00	0.97	
Flt Protected		0.99			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3039			3060		1452	3227		1522	2872	
Flt Permitted		0.52			0.94		0.19	1.00		0.54	1.00	
Satd. Flow (perm)		1604			2872		284	3227		873	2872	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	117	772	157	11	823	99	116	319	10	227	677	203
RTOR Reduction (vph)	0	22	0	0	14	0	0	3	0	0	44	0
Lane Group Flow (vph)	0	1024	0	0	919	0	116	326	0	227	836	0
Confl. Peds. (#/hr)	4		2	2		4	8		4	4		8
Confl. Bikes (#/hr)							2					2
Heavy Vehicles (%)	1%	2%	2%	0%	2%	6%	6%	2%	0%	1%	3%	3%
Turn Type	pm+pt			Perm			pm+pt			pm+pt		
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		25.0			17.0		28.0	24.0		28.0	24.0	
Effective Green, g (s)		25.0			17.0		28.0	24.0		28.0	24.0	
Actuated g/C Ratio		0.38			0.26		0.43	0.37		0.43	0.37	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		705			751		194	1192		416	1060	
v/s Ratio Prot		c0.09					c0.04	0.10		0.03	c0.29	
v/s Ratio Perm		c0.47			0.32		0.22			0.20		
v/c Ratio		1.45			1.22		0.60	0.27		0.55	0.79	
Uniform Delay, d1		20.0			24.0		12.5	14.4		12.7	18.2	
Progression Factor		1.00			1.42		1.18	0.57		1.00	1.00	
Incremental Delay, d2		211.4			101.8		12.2	0.5		5.1	6.0	
Delay (s)		231.4			136.0		27.0	8.7		17.8	24.2	
Level of Service		F			F		C	A		B	C	
Approach Delay (s)		231.4			136.0			13.5			22.9	
Approach LOS		F			F			B			C	

Intersection Summary			
HCM Average Control Delay	113.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.07		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	96.8%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1069: Vermont St & Halsted Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱		↰	↑↱		↰	↑↱	
Volume (vph)	67	261	136	132	418	28	72	462	86	35	698	70
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	12	12	12	12	12
Total Lost time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.95		1.00	0.99		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1708	1910		1601	2019		1676	3215		1435	3274	
Flt Permitted	0.31	1.00		0.37	1.00		0.29	1.00		0.42	1.00	
Satd. Flow (perm)	557	1910		621	2019		516	3215		627	3274	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	69	269	140	136	431	29	74	476	89	36	720	72
RTOR Reduction (vph)	0	29	0	0	4	0	0	24	0	0	12	0
Lane Group Flow (vph)	69	380	0	136	456	0	74	541	0	36	780	0
Confl. Peds. (#/hr)	3		20	20		3	2		3	3		2
Confl. Bikes (#/hr)			1	1			2		2	2		2
Heavy Vehicles (%)	0%	0%	1%	6%	0%	0%	2%	3%	6%	19%	3%	2%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	24.0	24.0		24.0	24.0		31.0	31.0		31.0	31.0	
Effective Green, g (s)	24.0	24.0		24.0	24.0		31.0	31.0		31.0	31.0	
Actuated g/C Ratio	0.37	0.37		0.37	0.37		0.48	0.48		0.48	0.48	
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)	206	705		229	745		246	1533		299	1561	
v/s Ratio Prot		0.20			c0.23			0.17			c0.24	
v/s Ratio Perm	0.12			0.22			0.14			0.06		
v/c Ratio	0.33	0.54		0.59	0.61		0.30	0.35		0.12	0.50	
Uniform Delay, d1	14.8	16.1		16.6	16.7		10.4	10.7		9.4	11.7	
Progression Factor	1.00	1.00		1.34	1.35		1.00	1.00		1.18	0.96	
Incremental Delay, d2	4.3	2.9		1.0	0.3		3.1	0.6		0.3	0.4	
Delay (s)	19.1	19.1		23.2	22.9		13.5	11.3		11.5	11.6	
Level of Service	B	B		C	C		B	B		B	B	
Approach Delay (s)		19.1			23.0			11.6			11.6	
Approach LOS		B			C			B			B	

Intersection Summary			
HCM Average Control Delay	15.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	75.2%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

1070: 127th Street & S Wallance St

Movement	EBL	EBT	WBL	WBT	WBR	NBL2	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣		✣				✣			✣	
Volume (vph)	2	883	501	938	41	3	10	9	47	15	0	3
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	10	10	10	12	12	16	12	12	16	12
Total Lost time (s)		5.0		5.0				4.0			4.0	
Lane Util. Factor		0.95		0.95				1.00			1.00	
Frpb, ped/bikes		1.00		1.00				0.99			0.99	
Flpb, ped/bikes		1.00		1.00				1.00			1.00	
Frt		1.00		1.00				0.91			0.95	
Flt Protected		1.00		0.98				0.99			0.97	
Satd. Flow (prot)		3160		3077				1810			1858	
Flt Permitted		0.78		0.58				0.96			0.85	
Satd. Flow (perm)		2476		1809				1748			1633	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	2	929	527	987	43	3	11	9	49	16	0	3
RTOR Reduction (vph)	0	0	0	3	0	0	0	38	0	0	4	0
Lane Group Flow (vph)	0	931	0	1554	0	0	0	34	0	0	20	0
Confl. Peds. (#/hr)	7		4		7		7		2	2		7
Confl. Bikes (#/hr)							2		2	2		2
Heavy Vehicles (%)	0%	1%	2%	1%	6%	0%	0%	0%	0%	0%	0%	0%
Turn Type	Perm		custom				Perm			Perm		
Protected Phases		8	7	4				2			6	
Permitted Phases	8		4 7				2			6		
Actuated Green, G (s)		18.0		27.0				14.0			14.0	
Effective Green, g (s)		18.0		27.0				14.0			14.0	
Actuated g/C Ratio		0.28		0.42				0.22			0.22	
Clearance Time (s)		5.0		5.0				4.0			4.0	
Lane Grp Cap (vph)		686		868				376			352	
v/s Ratio Prot				c0.17								
v/s Ratio Perm		0.38		c0.58				c0.02			0.01	
v/c Ratio		1.36		2.51dl				0.09			0.06	
Uniform Delay, d1		23.5		19.0				20.4			20.3	
Progression Factor		1.42		0.62				1.00			1.00	
Incremental Delay, d2		161.6		358.6				0.5			0.3	
Delay (s)		194.9		370.4				20.9			20.6	
Level of Service		F		F				C			C	
Approach Delay (s)		194.9		370.4				20.9			20.6	
Approach LOS		F		F				C			C	

Intersection Summary			
HCM Average Control Delay	285.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.23		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	119.6%	ICU Level of Service	H
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1070: 127th Street & S Wallance St

Movement	SBR2	NEL	NER
Lane Configurations			
Volume (vph)	5	3	311
Ideal Flow (vphpl)	1800	1800	1800
Lane Width	12	12	12
Total Lost time (s)		5.0	
Lane Util. Factor		1.00	
Frpb, ped/bikes		1.00	
Flpb, ped/bikes		1.00	
Frt		0.87	
Flt Protected		1.00	
Satd. Flow (prot)		1559	
Flt Permitted		1.00	
Satd. Flow (perm)		1559	
Peak-hour factor, PHF	0.95	0.95	0.95
Adj. Flow (vph)	5	3	327
RTOR Reduction (vph)	0	0	0
Lane Group Flow (vph)	0	330	0
Confl. Peds. (#/hr)			
Confl. Bikes (#/hr)			
Heavy Vehicles (%)	0%	0%	0%
Turn Type			
Protected Phases		3	
Permitted Phases			
Actuated Green, G (s)		10.0	
Effective Green, g (s)		10.0	
Actuated g/C Ratio		0.15	
Clearance Time (s)		5.0	
Lane Grp Cap (vph)		240	
v/s Ratio Prot		c0.21	
v/s Ratio Perm			
v/c Ratio		1.38	
Uniform Delay, d1		27.5	
Progression Factor		0.84	
Incremental Delay, d2		190.6	
Delay (s)		213.6	
Level of Service		F	
Approach Delay (s)		213.6	
Approach LOS		F	

Intersection Summary

HCM Signalized Intersection Capacity Analysis
1071: 127th Street & State Street

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰↑	↑↱		↰	↱
Volume (vph)	264	965	1254	177	125	234
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		1.00	1.00
Frt		1.00	0.98		1.00	0.85
Flt Protected		0.99	1.00		0.95	1.00
Satd. Flow (prot)		3285	3259		1660	1485
Flt Permitted		0.51	1.00		0.95	1.00
Satd. Flow (perm)		1708	3259		1660	1485
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	293	1072	1393	197	139	260
RTOR Reduction (vph)	0	0	17	0	0	38
Lane Group Flow (vph)	0	1365	1573	0	139	222
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type	Perm					Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)		40.0	40.0		17.0	17.0
Effective Green, g (s)		40.0	40.0		17.0	17.0
Actuated g/C Ratio		0.62	0.62		0.26	0.26
Clearance Time (s)		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		1051	2006		434	388
v/s Ratio Prot			0.48		0.08	
v/s Ratio Perm		c0.80				c0.15
v/c Ratio		2.71dl	0.78		0.32	0.57
Uniform Delay, d1		12.5	9.3		19.3	20.8
Progression Factor		1.24	0.60		1.06	1.03
Incremental Delay, d2		135.1	1.4		1.1	3.5
Delay (s)		150.7	7.0		21.5	25.0
Level of Service		F	A		C	C
Approach Delay (s)		150.7	7.0		23.8	
Approach LOS		F	A		C	

Intersection Summary			
HCM Average Control Delay	67.5	HCM Level of Service	E
HCM Volume to Capacity ratio	1.08		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	96.1%	ICU Level of Service	F
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1072: 127th Street & Michigan Avenue

1/14/2013

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰↑	↑↱		↰	↱
Volume (vph)	81	1012	1347	198	276	88
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	12	10	11	12	10	10
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		1.00	1.00
Frpb, ped/bikes		1.00	1.00		1.00	0.99
Flpb, ped/bikes		1.00	1.00		1.00	1.00
Frt		1.00	0.98		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		3120	3139		1506	1343
Flt Permitted		0.60	1.00		0.95	1.00
Satd. Flow (perm)		1875	3139		1506	1343
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	85	1065	1418	208	291	93
RTOR Reduction (vph)	0	0	18	0	0	17
Lane Group Flow (vph)	0	1150	1608	0	291	76
Confl. Peds. (#/hr)	2			2		1
Heavy Vehicles (%)	1%	2%	2%	10%	6%	5%
Turn Type	Perm					Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)		34.0	34.0		23.0	23.0
Effective Green, g (s)		34.0	34.0		23.0	23.0
Actuated g/C Ratio		0.52	0.52		0.35	0.35
Clearance Time (s)		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		981	1642		533	475
v/s Ratio Prot			0.51		c0.19	
v/s Ratio Perm		c0.61				0.06
v/c Ratio		1.17	0.98		0.55	0.16
Uniform Delay, d1		15.5	15.2		16.8	14.4
Progression Factor		1.10	1.47		1.75	2.04
Incremental Delay, d2		78.6	3.4		3.1	0.6
Delay (s)		95.7	25.7		32.5	29.9
Level of Service		F	C		C	C
Approach Delay (s)		95.7	25.7		31.9	
Approach LOS		F	C		C	

Intersection Summary			
HCM Average Control Delay	51.9	HCM Level of Service	D
HCM Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	104.1%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1073: 130th Street & Indiana Ave

1/14/2013

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↱		↰	↑	↰↱	
Volume (vph)	887	261	532	1433	205	161
Ideal Flow (vphpl)	2300	1800	1800	2300	1800	1800
Lane Width	15	12	14	16	15	12
Total Lost time (s)	5.0		5.0	5.0	5.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	0.99	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.97		1.00	1.00	0.94	
Flt Protected	1.00		0.95	1.00	0.97	
Satd. Flow (prot)	2404		1788	2506	1734	
Flt Permitted	1.00		0.13	1.00	0.97	
Satd. Flow (perm)	2404		243	2506	1734	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	905	266	543	1462	209	164
RTOR Reduction (vph)	16	0	0	0	44	0
Lane Group Flow (vph)	1155	0	543	1462	329	0
Confl. Peds. (#/hr)						1
Heavy Vehicles (%)	2%	2%	2%	4%	7%	0%
Turn Type			Perm			
Protected Phases	4			8	2	
Permitted Phases			8			
Actuated Green, G (s)	31.0		31.0	31.0	24.0	
Effective Green, g (s)	31.0		31.0	31.0	24.0	
Actuated g/C Ratio	0.48		0.48	0.48	0.37	
Clearance Time (s)	5.0		5.0	5.0	5.0	
Lane Grp Cap (vph)	1147		116	1195	640	
v/s Ratio Prot	0.48			0.58	c0.19	
v/s Ratio Perm			c2.24			
v/c Ratio	1.01		4.68	1.22	0.51	
Uniform Delay, d1	17.0		17.0	17.0	16.0	
Progression Factor	1.46		1.00	1.00	1.00	
Incremental Delay, d2	9.7		1676.0	108.2	2.9	
Delay (s)	34.5		1693.0	125.2	18.9	
Level of Service	C		F	F	B	
Approach Delay (s)	34.5			549.8	18.9	
Approach LOS	C			F	B	

Intersection Summary			
HCM Average Control Delay	324.0	HCM Level of Service	F
HCM Volume to Capacity ratio	2.87		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	117.7%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1074: 130th Street & Ellis Ave

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑↑	↱		↰↑	↱		✥	
Volume (vph)	1	2022	38	112	961	1	62	0	157	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	15	13	11	11	12	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0	4.0	3.0	3.0	4.0		4.0	4.0			
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00	1.00			
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85			
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.95	1.00			
Satd. Flow (prot)	1881	3431	1479	1589	3320	1530		1938	1500			
Flt Permitted	0.27	1.00	1.00	0.08	1.00	1.00		0.76	1.00			
Satd. Flow (perm)	530	3431	1479	130	3320	1530		1545	1500			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1	2247	42	124	1068	1	69	0	174	0	0	0
RTOR Reduction (vph)	0	0	10	0	0	0	0	0	138	0	0	0
Lane Group Flow (vph)	1	2247	32	124	1068	1	0	69	36	0	0	0
Heavy Vehicles (%)	0%	3%	0%	4%	3%	0%	0%	0%	2%	0%	0%	0%
Turn Type	Perm		Perm	custom		custom	Perm		Perm	Perm		
Protected Phases		4		3	3 8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)	48.6	48.6	48.6	67.6	67.6	67.6		9.4	9.4			
Effective Green, g (s)	48.6	48.6	48.6	67.6	67.6	67.6		9.4	9.4			
Actuated g/C Ratio	0.57	0.57	0.57	0.80	0.80	0.80		0.11	0.11			
Clearance Time (s)	4.0	4.0	4.0	3.0		4.0		4.0	4.0			
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0		3.0	3.0			
Lane Grp Cap (vph)	303	1962	846	378	2640	1217		171	166			
v/s Ratio Prot		c0.65		0.06	c0.32							
v/s Ratio Perm	0.00		0.02	0.20		0.00		c0.04	0.02			
v/c Ratio	0.00	1.15	0.04	0.33	0.40	0.00		0.40	0.22			
Uniform Delay, d1	7.8	18.2	8.0	16.3	2.6	1.8		35.2	34.4			
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00			
Incremental Delay, d2	0.0	71.9	0.1	0.5	0.1	0.0		1.6	0.7			
Delay (s)	7.8	90.1	8.0	16.8	2.7	1.8		36.7	35.1			
Level of Service	A	F	A	B	A	A		D	D			
Approach Delay (s)		88.6			4.2			35.6			0.0	
Approach LOS		F			A			D			A	

Intersection Summary			
HCM Average Control Delay	58.1	HCM Level of Service	E
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	80.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1942: 111th Street & Langley Avenue

1/14/2013

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰↑	↑↱		↲↳	
Volume (vph)	11	960	846	30	71	14
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10
Total Lost time (s)		5.0	5.0		3.0	
Lane Util. Factor		0.95	0.95		1.00	
Frt		1.00	0.99		0.98	
Flt Protected		1.00	1.00		0.96	
Satd. Flow (prot)		3097	3083		1530	
Flt Permitted		0.94	1.00		0.96	
Satd. Flow (perm)		2912	3083		1530	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	12	1067	940	33	79	16
RTOR Reduction (vph)	0	0	3	0	8	0
Lane Group Flow (vph)	0	1079	970	0	87	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type	Perm					
Protected Phases		4	8 2 11		5	
Permitted Phases	4					
Actuated Green, G (s)		33.0	64.0		7.0	
Effective Green, g (s)		33.0	64.0		7.0	
Actuated g/C Ratio		0.37	0.71		0.08	
Clearance Time (s)		5.0			3.0	
Lane Grp Cap (vph)		1068	2192		119	
v/s Ratio Prot			c0.31		c0.06	
v/s Ratio Perm		c0.37				
v/c Ratio		1.01	0.44		0.73	
Uniform Delay, d1		28.5	5.5		40.6	
Progression Factor		1.00	0.01		1.00	
Incremental Delay, d2		30.1	0.2		32.1	
Delay (s)		58.6	0.2		72.7	
Level of Service		E	A		E	
Approach Delay (s)		58.6	0.2		72.7	
Approach LOS		E	A		E	

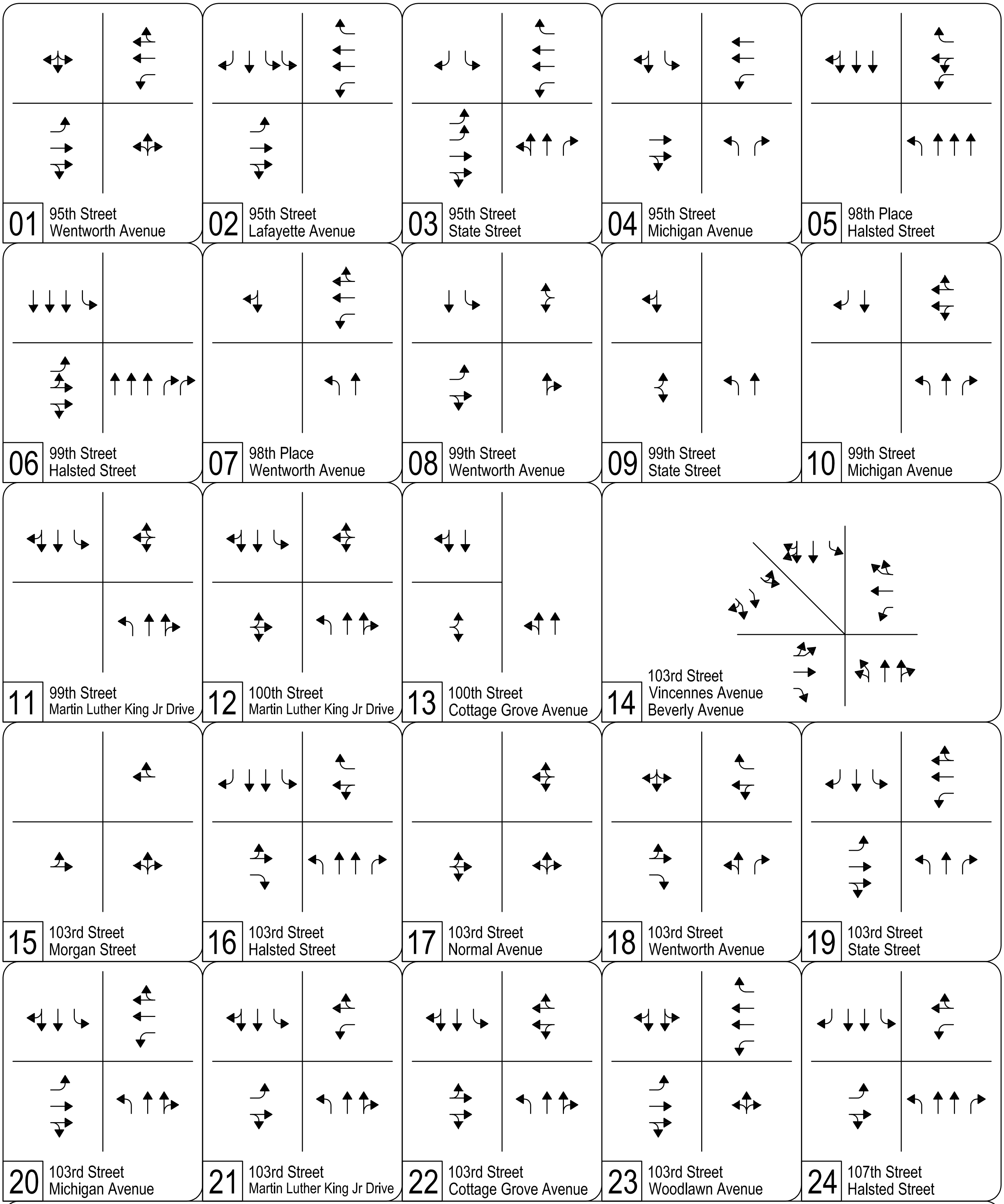
Intersection Summary			
HCM Average Control Delay	32.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	48.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↑↱			↰↑↱			↰↑	↱
Volume (vph)	107	500	0	1	583	39	3	2	28	202	0	150
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	12	12	11	12	11
Total Lost time (s)		4.0			4.0			3.0			3.0	3.0
Lane Util. Factor		1.00			0.95			1.00			1.00	1.00
Frpb, ped/bikes		1.00			1.00			0.94			1.00	0.98
Flpb, ped/bikes		1.00			1.00			1.00			0.99	1.00
Frt		1.00			0.99			0.88			1.00	0.85
Flt Protected		0.99			1.00			1.00			0.95	1.00
Satd. Flow (prot)		1764			3341			1467			1670	1348
Flt Permitted		0.77			0.95			0.88			0.88	1.00
Satd. Flow (perm)		1365			3191			1296			1545	1348
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	119	556	0	1	648	43	3	2	31	224	0	167
RTOR Reduction (vph)	0	0	0	0	6	0	0	28	0	0	0	112
Lane Group Flow (vph)	0	675	0	0	686	0	0	8	0	0	224	55
Confl. Peds. (#/hr)	60		44	44		60	14		10	10		14
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	0%	1%	0%	0%	1%	3%	20%	0%	0%	1%	0%	7%
Turn Type	Perm			Prot			Perm			pm+pt		Perm
Protected Phases		4		3	3 4			1		2	1 2	
Permitted Phases	4				3		1	1		1 2		1 2
Actuated Green, G (s)		31.0			45.0			9.0			25.0	28.0
Effective Green, g (s)		31.0			45.0			9.0			25.0	28.0
Actuated g/C Ratio		0.36			0.53			0.11			0.29	0.33
Clearance Time (s)		4.0						3.0				
Lane Grp Cap (vph)		498			1714			137			478	444
v/s Ratio Prot					c0.07						c0.09	
v/s Ratio Perm		c0.49			0.15			0.01			c0.05	0.04
v/c Ratio		1.36			0.40			0.06			0.47	0.12
Uniform Delay, d1		27.0			11.9			34.2			24.6	19.9
Progression Factor		1.00			1.37			1.00			1.00	1.00
Incremental Delay, d2		172.7			0.1			0.8			3.3	0.6
Delay (s)		199.7			16.5			35.0			27.8	20.5
Level of Service		F			B			D			C	C
Approach Delay (s)		199.7			16.5			35.0			24.7	
Approach LOS		F			B			D			C	

Intersection Summary			
HCM Average Control Delay	87.6	HCM Level of Service	F
HCM Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	81.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group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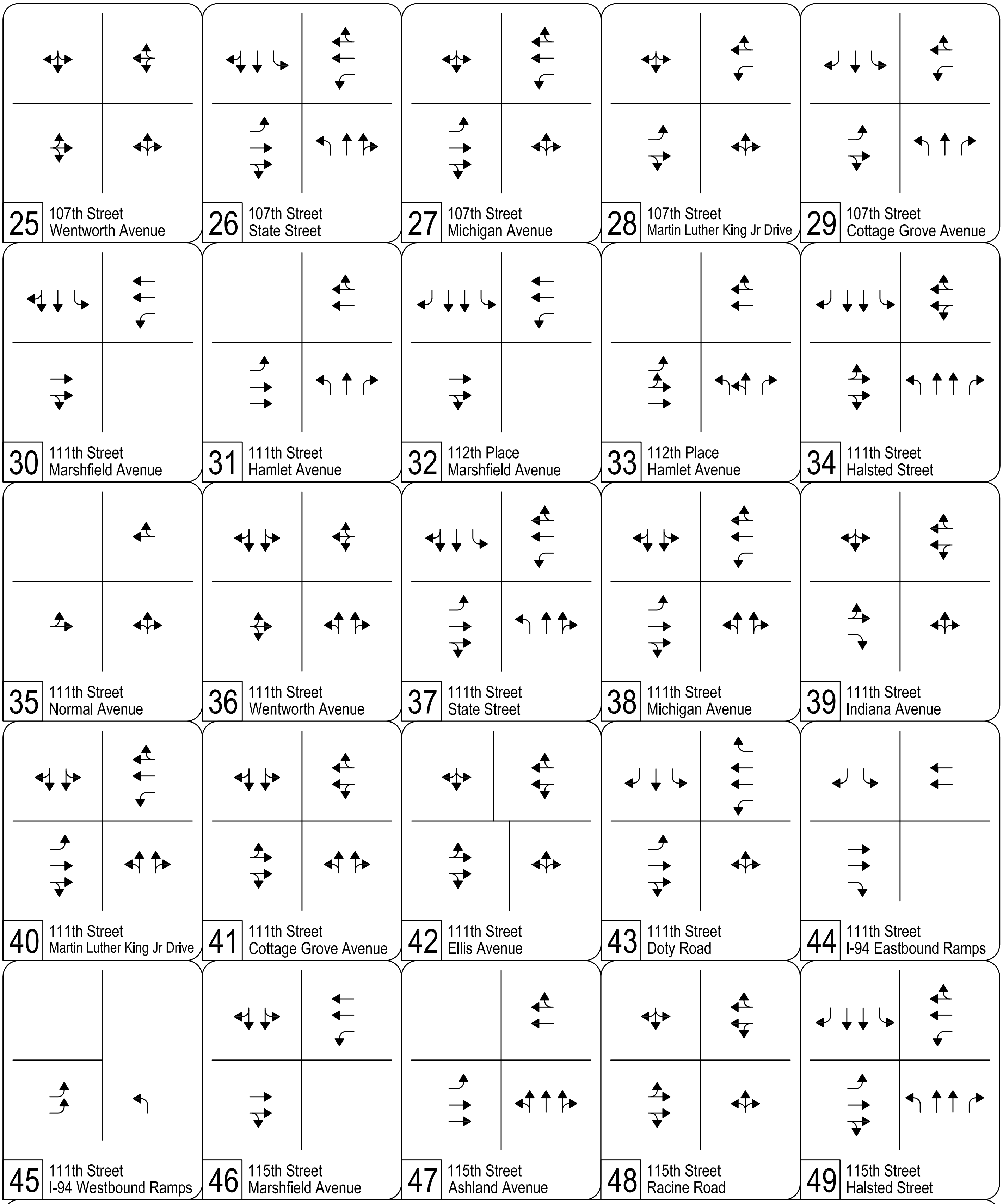
02 95th Street Lafayette Avenue
03 95th Street State Street
04 95th Street Michigan Avenue
05 98th Place Halsted Street
06 99th Street Halsted Street
07 98th Place Wentworth Avenue
08 99th Street Wentworth Avenue
09 99th Street State Street
10 99th Street Michigan Avenue
11 99th Street Martin Luther King Jr Drive
12 100th Street Martin Luther King Jr Drive
13 100th Street Cottage Grove Avenue
14 103rd Street Vincennes Avenue Beverly Avenue
15 103rd Street Morgan Street
16 103rd Street Halsted Street
17 103rd Street Normal Avenue
18 103rd Street Wentworth Avenue
19 103rd Street State Street
20 103rd Street Michigan Avenue
21 103rd Street Martin Luther King Jr Drive
22 103rd Street Cottage Grove Avenue
23 103rd Street Woodlawn Avenue
24 107th Street Halsted Street

UPRR ROW Option Alternative Mitigated (2030) Intersection Lane Geometry

Page 1 of 3

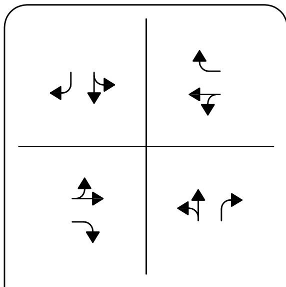
Legend: ↑ Existing ↑ Added ✗ Removed


25 107th Street Wentworth Avenue
26 107th Street State Street
27 107th Street Michigan Avenue
28 107th Street Martin Luther King Jr Drive
29 107th Street Cottage Grove Avenue
30 111th Street Marshfield Avenue
31 111th Street Hamlet Avenue
32 112th Place Marshfield Avenue
33 112th Place Hamlet Avenue
34 111th Street Halsted Street
35 111th Street Normal Avenue
36 111th Street Wentworth Avenue
37 111th Street State Street
38 111th Street Michigan Avenue
39 111th Street Indiana Avenue
40 111th Street Martin Luther King Jr Drive
41 111th Street Cottage Grove Avenue
42 111th Street Ellis Avenue
43 111th Street Doty Road
44 111th Street I-94 Eastbound Ramps
45 111th Street I-94 Westbound Ramps
46 115th Street Marshfield Avenue
47 115th Street Ashland Avenue
48 115th Street Racine Road
49 115th Street Halsted Street

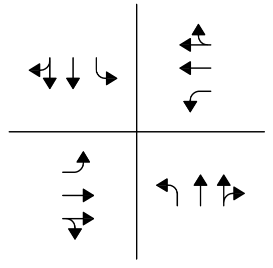
UPRR ROW Option Alternative Mitigated (2030) Intersection Lane Geometry

Page 2 of 3

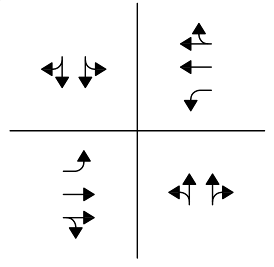
Legend: ↑ Existing ↑ Added ✗ Removed



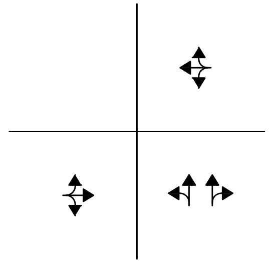
50 111th Street
Wentworth Avenue



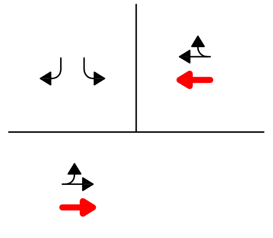
51 115th Street
State Street



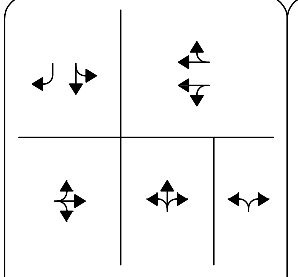
52 115th Street
Michigan Avenue



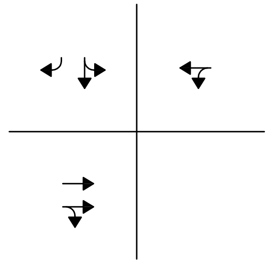
53 115th Street
Indiana Avenue



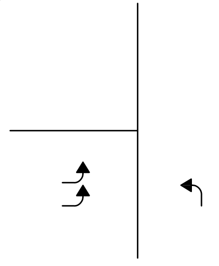
54 115th Street
Martin Luther King Jr Drive



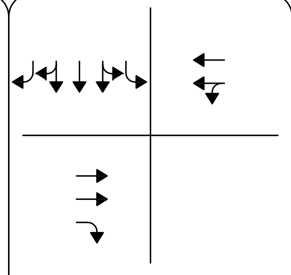
55 115th Street
Cottage Grove Avenue



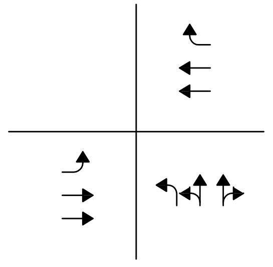
56 115th Street
I-94 Eastbound Ramps



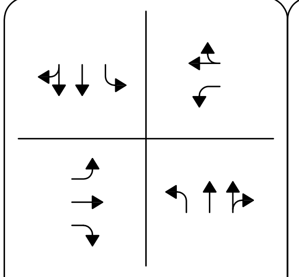
57 115th Street
I-94 Westbound Ramps



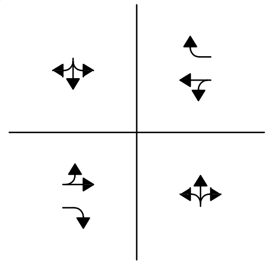
58 119th Street
Marshfield Avenue



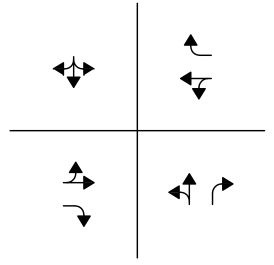
59 119th Street
Ashland Avenue



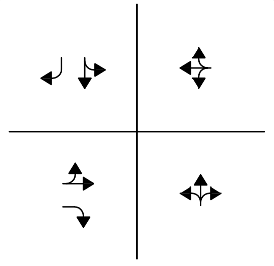
60 119th Street
Halsted Street



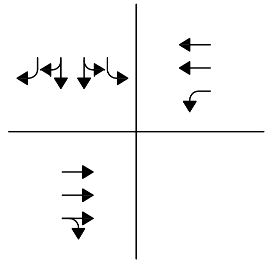
61 119th Street
Wentworth Avenue



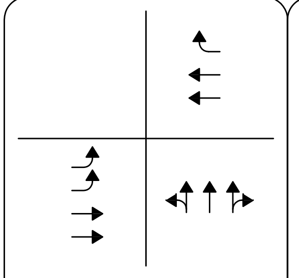
62 119th Street
State Street



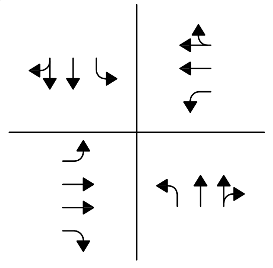
63 119th Street
Michigan Avenue



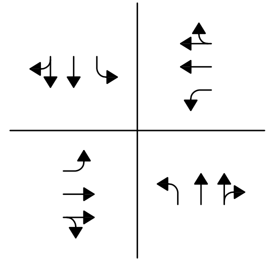
64 127th Street
Paulina Street



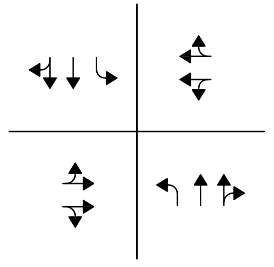
65 127th Street
Marshfield Avenue



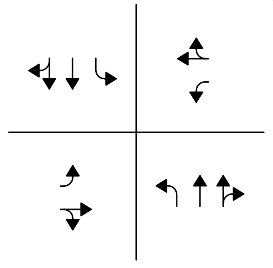
66 127th Street
Ashland Avenue



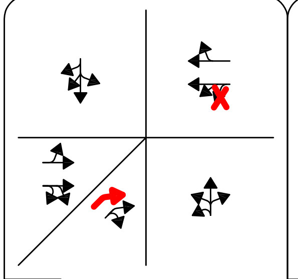
67 Vermont Street
Ashland Avenue



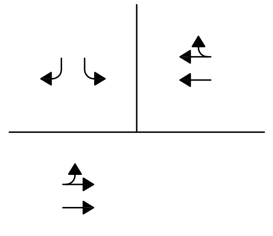
68 127th Street
Halsted Street



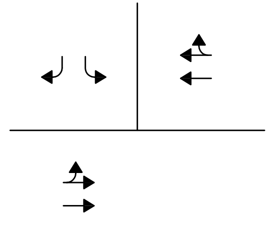
69 Vermont Street
Halsted Street



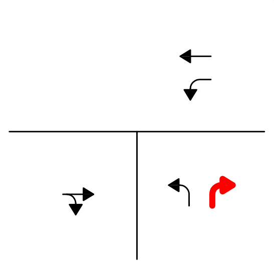
70 127th Street/Vermont
Street/Wallace Street



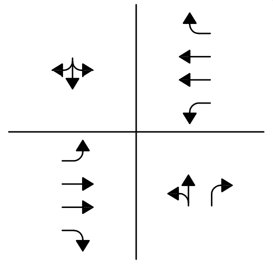
71 127th Street
State Street



72 127th Street
Michigan Avenue



73 130th Street
Indiana Avenue



74 130th Street
Ellis Avenue

UPRR ROW Option Alternative Mitigated (2030) Intersection Lane Geometry

Page 3 of 3

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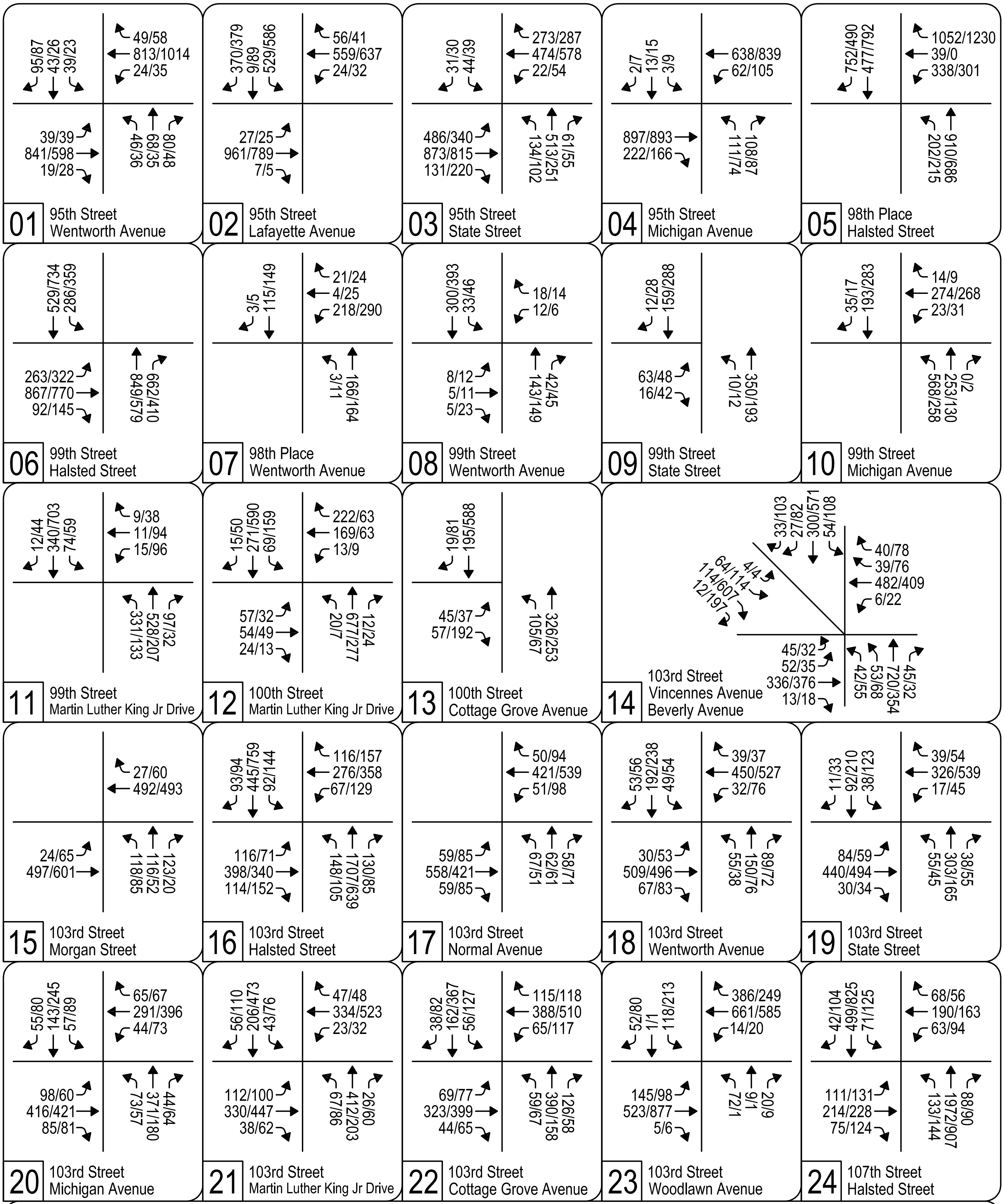
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39/23
49/58
813/1014
24/35
39/39
841/598
19/28
46/36
68/35
80/48
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95th Street
Wentworth Avenue
370/379
9/89
529/586
56/41
559/637
24/32
27/25
961/789
7/5
02
95th Street
Lafayette Avenue
31/30
44/39
273/287
474/578
22/54
486/340
873/815
131/220
134/102
513/251
61/55
03
95th Street
State Street
2/7
13/15
3/9
638/839
62/105
897/893
222/166
111/74
108/87
04
95th Street
Michigan Avenue
752/490
477/792
1052/1230
39/0
338/301
202/215
910/686
05
98th Place
Halsted Street
529/734
286/359
263/322
867/770
92/145
849/579
662/410
06
99th Street
Halsted Street
3/5
115/149
21/24
4/25
218/290
3/11
166/164
07
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Wentworth Avenue
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12/6
8/12
5/11
5/23
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10/12
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09
99th Street
State Street
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Martin Luther King Jr Drive
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100th Street
Cottage Grove Avenue
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53/68
720/354
45/32
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103rd Street
Vincennes Avenue
Beverly Avenue
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24/65
497/601
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116/52
123/20
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103rd Street
Morgan Street
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445/759
92/144
116/157
276/358
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116/71
398/340
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1707/639
130/85
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103rd Street
Halsted Street
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59/85
558/421
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62/61
58/71
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103rd Street
Normal Avenue
53/56
192/238
49/54
39/37
450/527
32/76
30/53
509/496
67/83
55/38
150/76
89/72
18
103rd Street
Wentworth Avenue
11/33
92/210
38/123
39/54
326/539
17/45
84/59
440/494
30/34
55/45
303/165
38/55
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103rd Street
State Street
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57/89
65/67
291/396
44/73
98/60
416/421
85/81
73/57
371/180
44/64
20
103rd Street
Michigan Avenue
56/110
206/473
43/76
47/48
334/523
23/32
112/100
330/447
38/62
67/86
412/203
26/60
21
103rd Street
Martin Luther King Jr Drive
38/82
162/367
56/127
115/118
388/510
65/117
69/77
323/399
44/65
59/67
390/158
126/58
22
103rd Street
Cottage Grove Avenue
52/80
1/1
118/213
386/249
661/585
14/20
145/98
523/877
5/6
72/1
9/1
20/9
23
103rd Street
Woodlawn Avenue
42/104
499/825
71/125
68/56
190/163
63/94
111/131
214/228
75/124
133/144
1972/907
88/90
24
107th Street
Halsted Street

UPRR ROW Option Alternative Mitigated (2030) Intersection Traffic Volumes

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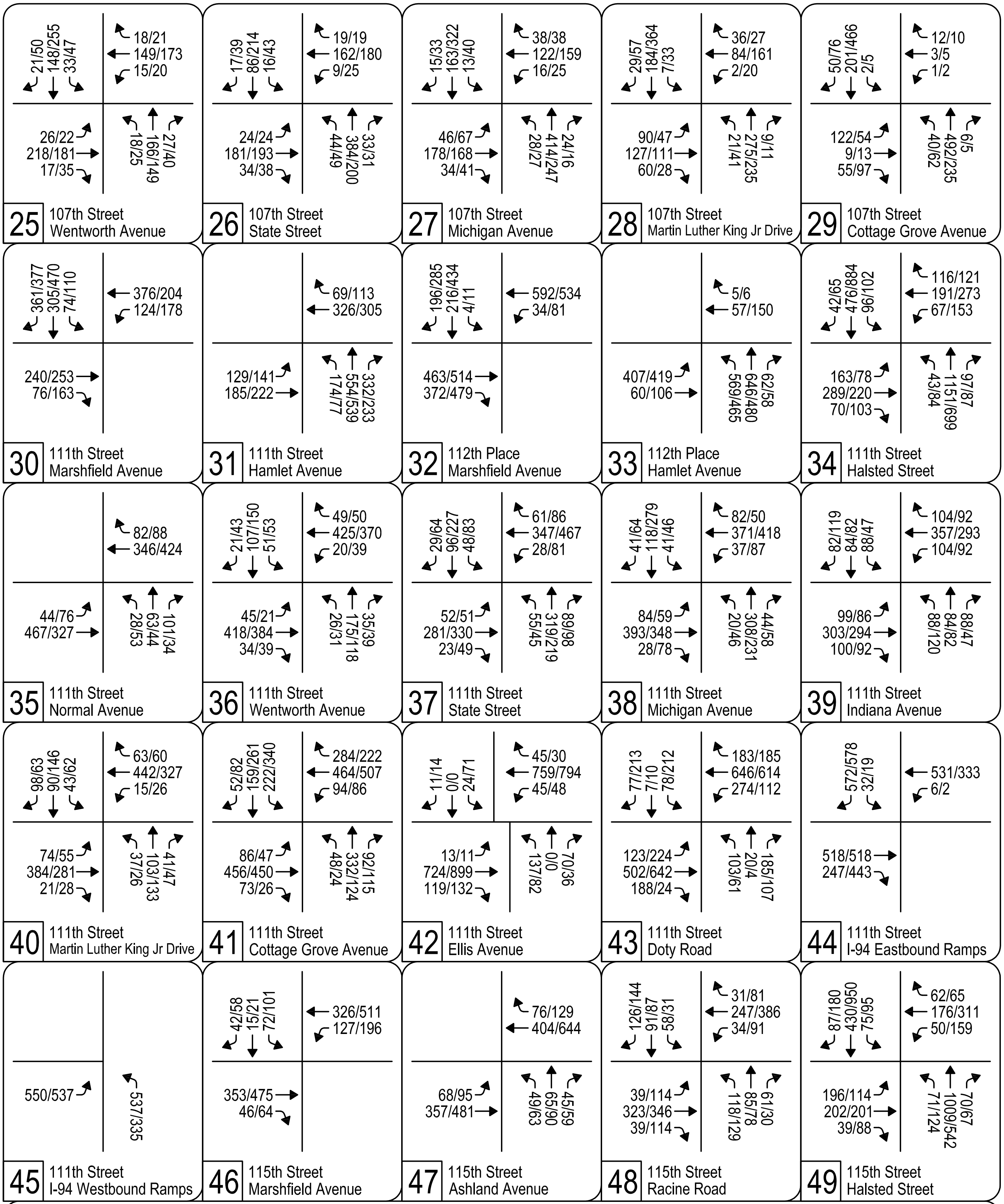
Legend: AM/PM Peak Hour Volumes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26/22 218/181 17/35
18/25 166/149 27/40
25 107th Street Wentworth Avenue
17/39 86/214 16/43
19/19 162/180 9/25
24/24 181/193 34/38
44/49 384/200 33/31
26 107th Street State Street
15/33 163/322 13/40
38/38 122/159 16/25
46/67 178/168 34/41
28/27 414/247 24/16
27 107th Street Michigan Avenue
29/57 184/364 7/33
36/27 84/161 2/20
90/47 127/111 60/28
21/41 275/235 9/11
28 107th Street Martin Luther King Jr Drive
50/76 201/466 2/5
12/10 3/5 1/2
122/54 9/13 55/97
40/62 492/235 6/5
29 107th Street Cottage Grove Avenue
361/377 305/470 74/110
376/204 124/178
240/253 76/163
30 111th Street Marshfield Avenue
69/113 326/305
129/141 185/222
174/77 554/539 332/233
31 111th Street Hamlet Avenue
196/285 216/434 4/11
592/534 34/81
463/514 372/479
32 112th Place Marshfield Avenue
5/6 57/150
407/419 60/106
569/465 646/480 62/58
33 112th Place Hamlet Avenue
42/65 476/884 96/102
116/121 191/273 67/153
163/78 289/220 70/103
43/84 1151/699 97/87
34 111th Street Halsted Street
82/88 346/424
44/76 467/327
28/53 63/44 101/34
35 111th Street Normal Avenue
21/43 107/150 51/53
49/50 425/370 20/39
45/21 418/384 34/39
26/31 175/118 35/39
36 111th Street Wentworth Avenue
29/64 96/227 48/83
61/86 347/467 28/81
52/51 281/330 23/49
55/45 319/219 89/98
37 111th Street State Street
41/64 118/279 41/46
82/50 371/418 37/87
84/59 393/348 28/78
20/46 308/231 44/58
38 111th Street Michigan Avenue
82/119 84/82 88/47
104/92 357/293 104/92
99/86 303/294 100/92
88/120 84/82 88/47
39 111th Street Indiana Avenue
98/63 90/146 43/62
63/60 442/327 15/26
74/55 384/281 21/28
37/26 103/133 41/47
40 111th Street Martin Luther King Jr Drive
52/82 159/261 222/340
284/222 464/507 94/86
86/47 456/450 73/26
48/24 332/124 92/115
41 111th Street Cottage Grove Avenue
11/14 0/0 24/71
45/30 759/794 45/48
13/11 724/899 119/132
137/82 0/0 70/36
42 111th Street Ellis Avenue
77/213 7/10 78/212
183/185 646/614 274/112
123/224 502/642 188/24
103/61 20/4 185/107
43 111th Street Doty Road
572/578 32/19
531/333 6/2
518/518 247/443
44 111th Street I-94 Eastbound Ramps
550/537
537/335
45 111th Street I-94 Westbound Ramps
42/58 15/21 72/101
326/511 127/196
353/475 46/64
46 115th Street Marshfield Avenue
76/129 404/644
68/95 357/481
49/63 65/90 45/59
47 115th Street Ashland Avenue
126/144 91/87 58/31
31/81 247/386 34/91
39/114 323/346 39/114
118/129 85/78 61/30
48 115th Street Racine Road
87/180 430/950 75/95
62/65 176/311 50/159
196/114 202/201 39/88
71/124 1009/542 70/67
49 115th Street Halsted Street

UPRR ROW Option Alternative Mitigated (2030) Intersection Traffic Volumes

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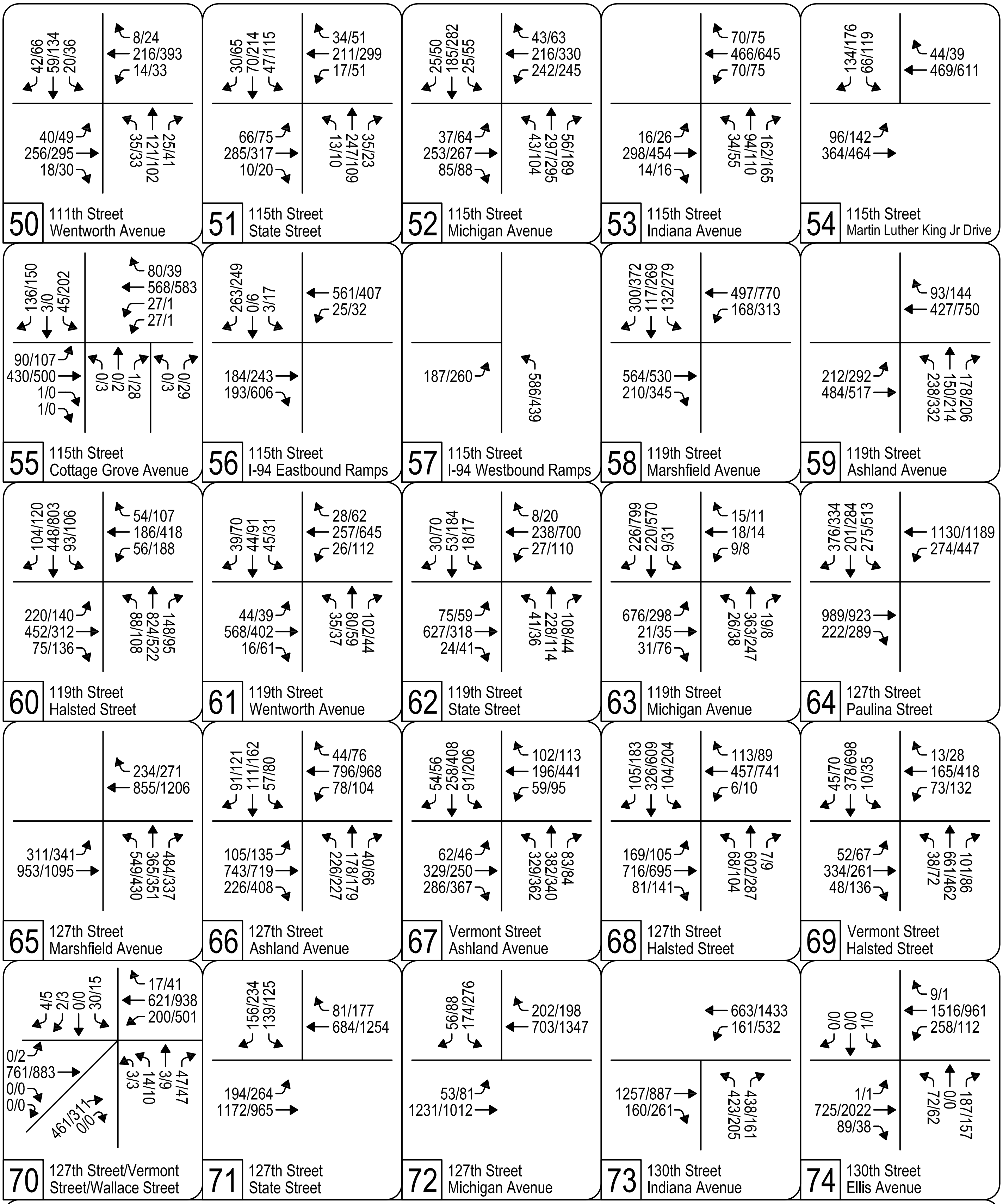
Legend: AM/PM Peak Hour Volumes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35/33
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111th Street
Wentworth Avenue
30/65
70/214
47/115
34/51
211/299
17/51
66/75
285/317
10/20
13/10
247/109
35/23
51
115th Street
State Street
25/50
185/282
25/55
43/63
216/330
242/245
37/64
253/267
85/88
43/104
297/295
56/189
52
115th Street
Michigan Avenue
70/75
466/645
70/75
16/26
298/454
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34/55
94/110
162/165
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115th Street
Indiana Avenue
134/176
66/119
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469/611
96/142
364/464
54
115th Street
Martin Luther King Jr Drive
136/150
3/0
45/202
80/39
568/583
27/1
27/1
90/107
430/500
1/0
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55
115th Street
Cottage Grove Avenue
263/249
0/6
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561/407
25/32
184/243
193/606
56
115th Street
I-94 Eastbound Ramps
187/260
586/439
57
115th Street
I-94 Westbound Ramps
300/372
117/269
132/279
497/770
168/313
564/530
210/345
58
119th Street
Marshfield Avenue
93/144
427/750
212/292
484/517
238/332
150/214
178/206
59
119th Street
Ashland Avenue
104/120
448/803
93/106
54/107
186/418
56/188
220/140
452/312
75/136
88/108
824/522
148/95
60
119th Street
Halsted Street
39/70
44/91
45/31
28/62
257/645
26/112
44/39
568/402
16/61
35/37
80/59
102/44
61
119th Street
Wentworth Avenue
30/70
53/184
18/17
8/20
238/700
27/110
75/59
627/318
24/41
41/36
228/114
108/44
62
119th Street
State Street
226/799
220/570
9/31
15/11
18/14
9/8
676/298
21/35
31/76
26/38
363/247
19/8
63
119th Street
Michigan Avenue
376/334
201/284
275/513
1130/1189
274/447
989/923
222/289
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127th Street
Paulina Street
234/271
855/1206
311/341
953/1095
549/430
365/351
484/337
65
127th Street
Marshfield Avenue
91/121
111/162
57/80
44/76
796/968
78/104
105/135
743/719
226/408
226/227
178/179
40/66
66
127th Street
Ashland Avenue
54/56
258/408
91/206
102/113
196/441
59/95
62/46
329/250
286/367
329/362
382/340
83/84
67
Vermont Street
Ashland Avenue
105/183
326/609
104/204
113/89
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6/10
169/105
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81/141
68/104
602/287
7/9
68
127th Street
Halsted Street
45/70
378/698
10/35
13/28
165/418
73/132
52/67
334/261
48/136
38/72
661/462
101/86
69
Vermont Street
Halsted Street
4/5
2/3
0/0
30/15
17/41
621/938
200/501
0/2
761/883
0/0
0/0
461/311
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3/3
14/10
3/9
47/47
70
127th Street/Vermont
Street/Wallace Street
156/234
139/125
81/177
684/1254
194/264
1172/965
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127th Street
State Street
56/88
174/276
202/198
703/1347
53/81
1231/1012
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127th Street
Michigan Avenue
663/1433
161/532
1257/887
160/261
423/205
438/161
73
130th Street
Indiana Avenue
0/0
0/0
1/0
9/1
1516/961
258/112
1/1
725/2022
89/38
72/62
0/0
187/157
74
130th Street
Ellis Avenue

UPRR ROW Option Alternative Mitigated (2030) Intersection Traffic Volumes

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Legend: AM/PM Peak Hour Volumes

HCM Signalized Intersection Capacity Analysis
1001: 95th Street & Wentworth Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			✥			✥	
Volume (vph)	39	841	19	24	813	49	46	68	80	39	43	95
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	16	10	10	16	8	15	8	8	14	8
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			0.99			0.99	
Flpb, ped/bikes	0.99	1.00		1.00	1.00			1.00			1.00	
Frt	1.00	1.00		1.00	0.99			0.94			0.93	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1417	2976		1592	2979			1755			1673	
Flt Permitted	0.25	1.00		0.25	1.00			0.90			0.91	
Satd. Flow (perm)	369	2976		417	2979			1596			1531	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	41	885	20	25	856	52	48	72	84	41	45	100
RTOR Reduction (vph)	0	2	0	0	7	0	0	39	0	0	59	0
Lane Group Flow (vph)	41	903	0	25	901	0	0	165	0	0	127	0
Confl. Peds. (#/hr)	61		11	11		61	3		5	5		3
Confl. Bikes (#/hr)	1		1	1		1						
Heavy Vehicles (%)	11%	7%	0%	0%	6%	2%	2%	7%	4%	5%	7%	3%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	34.0	34.0		34.0	34.0			22.0			22.0	
Effective Green, g (s)	34.0	34.0		34.0	34.0			23.0			23.0	
Actuated g/C Ratio	0.52	0.52		0.52	0.52			0.35			0.35	
Clearance Time (s)	4.0	4.0		4.0	4.0			5.0			5.0	
Lane Grp Cap (vph)	193	1557		218	1558			565			542	
v/s Ratio Prot		c0.30			0.30							
v/s Ratio Perm	0.11			0.06				c0.10			0.08	
v/c Ratio	0.21	0.58		0.11	0.58			0.29			0.23	
Uniform Delay, d1	8.3	10.6		7.9	10.6			15.1			14.8	
Progression Factor	1.00	1.00		0.83	1.16			1.00			1.00	
Incremental Delay, d2	2.5	1.6		0.9	1.4			1.3			1.0	
Delay (s)	10.8	12.2		7.5	13.6			16.4			15.8	
Level of Service	B	B		A	B			B			B	
Approach Delay (s)		12.1			13.5			16.4			15.8	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	13.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	55.1%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1002: 95th Street & Lafayette Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↑	↱				↰↰	↑	↱
Volume (vph)	27	961	7	24	559	56	0	0	0	529	9	370
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	5.0	5.0		3.0	3.0	3.0				5.0	5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00				0.97	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.67				1.00	1.00	0.96
Flpb, ped/bikes	0.91	1.00		1.00	1.00	1.00				1.00	1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85				1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00				0.95	1.00	1.00
Satd. Flow (prot)	778	3285		1710	3138	512				3100	1440	1399
Flt Permitted	0.43	1.00		0.14	1.00	1.00				0.95	1.00	1.00
Satd. Flow (perm)	352	3285		248	3138	512				3100	1440	1399
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	28	1012	7	25	588	59	0	0	0	557	9	389
RTOR Reduction (vph)	0	1	0	0	0	26	0	0	0	0	0	172
Lane Group Flow (vph)	28	1018	0	25	588	33	0	0	0	557	9	217
Confl. Peds. (#/hr)	354		13	13		354	22		22	22		22
Confl. Bikes (#/hr)	4					4			1	1		
Heavy Vehicles (%)	100%	4%	0%	0%	9%	100%	0%	0%	0%	7%	25%	5%
Turn Type	pm+pt			pm+pt		Perm				Split		Perm
Protected Phases	7	4		3	8					6	6	
Permitted Phases	4			8		8						6
Actuated Green, G (s)	43.0	43.0		73.0	73.0	73.0				30.0	30.0	30.0
Effective Green, g (s)	43.0	43.0		73.0	73.0	73.0				30.0	30.0	30.0
Actuated g/C Ratio	0.33	0.33		0.56	0.56	0.56				0.23	0.23	0.23
Clearance Time (s)	5.0	5.0		3.0	3.0	3.0				5.0	5.0	5.0
Lane Grp Cap (vph)	162	1087		634	1762	288				715	332	323
v/s Ratio Prot	0.02	c0.31		0.01	c0.19					c0.18	0.01	
v/s Ratio Perm	0.04			0.01		0.06						0.16
v/c Ratio	0.17	0.94		0.04	0.33	0.12				0.78	0.03	0.67
Uniform Delay, d1	31.6	42.2		15.1	15.4	13.4				46.9	38.7	45.5
Progression Factor	0.80	0.82		0.29	0.63	1.53				1.00	1.00	1.00
Incremental Delay, d2	2.0	14.1		0.1	0.3	0.5				8.2	0.2	10.7
Delay (s)	27.2	48.9		4.5	10.0	20.9				55.1	38.9	56.2
Level of Service	C	D		A	A	C				E	D	E
Approach Delay (s)		48.3			10.7			0.0			55.4	
Approach LOS		D			B			A			E	

Intersection Summary			
HCM Average Control Delay	41.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	52.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1003: 95th Street & State Street

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↱		↰	↑↑	↱		↰↑	↱	↰		↱
Volume (vph)	486	873	131	22	474	273	134	513	61	44	0	31
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0	3.0		5.0	5.0	5.0		5.0	5.0	5.0		5.0
Lane Util. Factor	0.97	0.95		1.00	0.95	1.00		0.95	1.00	1.00		1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.65		1.00	0.94	1.00		0.96
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Frt	1.00	0.98		1.00	1.00	0.85		1.00	0.85	1.00		0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.99	1.00	0.95		1.00
Satd. Flow (prot)	3190	3107		1555	2923	944		3300	1417	855		734
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.99	1.00	0.95		1.00
Satd. Flow (perm)	3190	3107		1555	2923	944		3300	1417	855		734
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	512	919	138	23	499	287	141	540	64	46	0	33
RTOR Reduction (vph)	0	9	0	0	0	158	0	0	25	0	0	31
Lane Group Flow (vph)	512	1049	0	23	499	129	0	681	39	46	0	2
Confl. Peds. (#/hr)	425		21	21		425	6		34	34		6
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	4%	8%	3%	10%	17%	5%	1%	3%	2%	100%	0%	100%
Turn Type	Prot			Prot		Perm	Split		Perm	Prot		custom
Protected Phases	7	4		3	8		2	2		6		
Permitted Phases						8			2			6
Actuated Green, G (s)	43.0	65.0		9.0	31.0	31.0		30.0	30.0	8.0		8.0
Effective Green, g (s)	43.0	65.0		9.0	31.0	31.0		30.0	30.0	8.0		8.0
Actuated g/C Ratio	0.33	0.50		0.07	0.24	0.24		0.23	0.23	0.06		0.06
Clearance Time (s)	3.0	3.0		5.0	5.0	5.0		5.0	5.0	5.0		5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0	3.0	3.0		3.0
Lane Grp Cap (vph)	1055	1554		108	697	225		762	327	53		45
v/s Ratio Prot	0.16	c0.34		0.01	c0.17			c0.21		c0.05		
v/s Ratio Perm						0.14			0.03			0.00
v/c Ratio	0.49	0.67		0.21	0.72	0.57		0.89	0.12	0.87		0.05
Uniform Delay, d1	34.7	24.5		57.2	45.5	43.6		48.5	39.5	60.5		57.4
Progression Factor	0.75	0.20		1.00	1.00	1.00		0.95	0.90	1.00		1.00
Incremental Delay, d2	0.7	1.1		4.5	6.2	10.1		14.9	0.7	76.0		0.4
Delay (s)	26.9	6.0		61.6	51.7	53.8		60.7	36.2	136.5		57.8
Level of Service	C	A		E	D	D		E	D	F		E
Approach Delay (s)		12.8			52.7			58.6			103.6	
Approach LOS		B			D			E			F	

Intersection Summary			
HCM Average Control Delay	35.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	72.7%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1004: 95th Street & Michigan Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱		↰	↑↑		↰		↱	↰	↱	
Volume (vph)	0	897	222	62	638	0	111	0	108	3	13	2
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	11	11	8	12	12	12	14	15	12
Total Lost time (s)		4.0		4.0	4.0		4.0		4.0	4.0	4.0	
Lane Util. Factor		0.95		1.00	0.95		1.00		1.00	1.00	1.00	
Frpb, ped/bikes		0.99		1.00	1.00		1.00		0.98	1.00	1.00	
Flpb, ped/bikes		1.00		1.00	1.00		1.00		1.00	0.99	1.00	
Frt		0.97		1.00	1.00		1.00		0.85	1.00	0.98	
Flt Protected		1.00		0.95	1.00		0.95		1.00	0.95	1.00	
Satd. Flow (prot)		2860		1650	3005		1390		1465	1803	1943	
Flt Permitted		1.00		0.15	1.00		0.75		1.00	0.95	1.00	
Satd. Flow (perm)		2860		267	3005		1093		1465	1803	1943	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	997	247	69	709	0	123	0	120	3	14	2
RTOR Reduction (vph)	0	22	0	0	0	0	0	0	77	0	1	0
Lane Group Flow (vph)	0	1222	0	69	709	0	123	0	43	3	15	0
Confl. Peds. (#/hr)	49		15	15		49			12	12		
Heavy Vehicles (%)	0%	6%	14%	0%	10%	0%	23%	0%	2%	0%	0%	0%
Turn Type				Perm			custom		custom	Perm		
Protected Phases		4			8						6	
Permitted Phases				8			2		2	6		
Actuated Green, G (s)		60.0		60.0	60.0		32.0		32.0	32.0	32.0	
Effective Green, g (s)		60.0		60.0	60.0		32.0		32.0	32.0	32.0	
Actuated g/C Ratio		0.60		0.60	0.60		0.32		0.32	0.32	0.32	
Clearance Time (s)		4.0		4.0	4.0		4.0		4.0	4.0	4.0	
Lane Grp Cap (vph)		1716		160	1803		350		469	577	622	
v/s Ratio Prot		c0.43			0.24						0.01	
v/s Ratio Perm				0.26			c0.11		0.03	0.00		
v/c Ratio		0.71		0.43	0.39		0.35		0.09	0.01	0.02	
Uniform Delay, d1		14.0		10.8	10.5		26.0		23.8	23.2	23.3	
Progression Factor		1.00		1.00	1.00		1.00		1.00	1.00	1.00	
Incremental Delay, d2		2.5		8.3	0.6		2.8		0.4	0.0	0.1	
Delay (s)		16.5		19.1	11.1		28.8		24.2	23.2	23.4	
Level of Service		B		B	B		C		C	C	C	
Approach Delay (s)		16.5			11.8			26.5			23.3	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM Average Control Delay	16.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	60.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1005: 98th Place & Halsted Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↰	↰↑	↱	↰	↑↑↑			↑↑↱	
Volume (vph)	0	0	0	338	39	1052	202	910	0	0	477	752
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	12	12	10	10	12	12	11	12
Total Lost time (s)				4.0	4.0	5.0	3.0	4.0			4.0	
Lane Util. Factor				0.95	0.95	1.00	1.00	0.91			0.91	
Frpb, ped/bikes				1.00	1.00	0.99	1.00	1.00			0.98	
Flpb, ped/bikes				1.00	1.00	1.00	1.00	1.00			1.00	
Frt				1.00	1.00	0.85	1.00	1.00			0.91	
Flt Protected				0.95	1.00	1.00	0.95	1.00			1.00	
Satd. Flow (prot)				1525	1629	1479	1550	4368			3940	
Flt Permitted				0.95	1.00	1.00	0.95	1.00			1.00	
Satd. Flow (perm)				1525	1629	1479	1550	4368			3940	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	0	0	345	40	1073	206	929	0	0	487	767
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	345	40	1073	206	929	0	0	1254	0
Confl. Peds. (#/hr)	2					2	12		8	8		12
Heavy Vehicles (%)	0%	0%	0%	3%	5%	2%	3%	5%	0%	0%	5%	8%
Turn Type				Perm		Perm	Prot					
Protected Phases					8		5	2			6	
Permitted Phases				8		8						
Actuated Green, G (s)				30.0	30.0	30.0	32.0	66.0			31.0	
Effective Green, g (s)				31.0	31.0	30.0	32.0	66.0			31.0	
Actuated g/C Ratio				0.30	0.30	0.29	0.30	0.63			0.30	
Clearance Time (s)				5.0	5.0	5.0	3.0	4.0			4.0	
Lane Grp Cap (vph)				450	481	423	472	2746			1163	
v/s Ratio Prot							c0.13	0.21			c0.32	
v/s Ratio Perm				0.23	0.02	c0.73						
v/c Ratio				0.77	0.08	2.54	0.44	0.34			1.91dr	
Uniform Delay, d1				33.7	26.7	37.5	29.3	9.2			37.0	
Progression Factor				1.00	1.00	1.00	0.66	2.38			1.00	
Incremental Delay, d2				11.8	0.3	698.4	2.0	0.2			50.2	
Delay (s)				45.5	27.1	735.9	21.3	22.1			87.2	
Level of Service				D	C	F	C	C			F	
Approach Delay (s)		0.0			553.1			22.0			87.2	
Approach LOS		A			F			C			F	

Intersection Summary			
HCM Average Control Delay	244.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.33		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	95.0%	ICU Level of Service	F
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1006: 99th Street & Halsted Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↰↑↱						↑↑↑	↱↱	↰	↑↑↑	
Volume (vph)	263	867	92	0	0	0	0	849	662	286	529	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	13	12	12	12	12	12	10	10	8	12	12	12
Total Lost time (s)	5.0	5.0						4.0	4.0	3.0	4.0	
Lane Util. Factor	0.91	0.91						0.91	0.88	1.00	0.91	
Frpb, ped/bikes	1.00	1.00						1.00	0.97	1.00	1.00	
Flpb, ped/bikes	1.00	1.00						1.00	1.00	1.00	1.00	
Frt	1.00	0.99						1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00						1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1497	3184						4368	2187	1583	4636	
Flt Permitted	0.95	1.00						1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1497	3184						4368	2187	1583	4636	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	271	894	95	0	0	0	0	875	682	295	545	0
RTOR Reduction (vph)	0	7	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	244	1009	0	0	0	0	0	875	682	295	545	0
Confl. Peds. (#/hr)	4		14	14		4	4		3	3		4
Heavy Vehicles (%)	7%	1%	0%	0%	0%	0%	0%	5%	4%	8%	6%	0%
Turn Type	Perm								Perm	Prot		
Protected Phases		4						2		1	6	
Permitted Phases	4								2			
Actuated Green, G (s)	34.0	34.0						28.0	28.0	31.0	62.0	
Effective Green, g (s)	34.0	34.0						28.0	28.0	31.0	62.0	
Actuated g/C Ratio	0.32	0.32						0.27	0.27	0.30	0.59	
Clearance Time (s)	5.0	5.0						4.0	4.0	3.0	4.0	
Lane Grp Cap (vph)	485	1031						1165	583	467	2737	
v/s Ratio Prot								0.20		c0.19	0.12	
v/s Ratio Perm	0.16	0.32							c0.31			
v/c Ratio	0.50	0.98						0.75	1.17	0.63	0.20	
Uniform Delay, d1	28.7	35.1						35.3	38.5	32.1	10.0	
Progression Factor	1.00	1.00						0.43	0.46	1.06	0.42	
Incremental Delay, d2	3.7	23.4						0.4	78.3	2.2	0.1	
Delay (s)	32.4	58.5						15.7	96.0	36.1	4.3	
Level of Service	C	E						B	F	D	A	
Approach Delay (s)		53.5			0.0			50.9			15.5	
Approach LOS		D			A			D			B	

Intersection Summary			
HCM Average Control Delay	43.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	95.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1007: 98th Place & Wentworth Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↰	↑↱		↰	↑			↱	
Volume (vph)	0	0	0	218	4	21	3	166	0	0	115	3
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	14	12	12	16	12
Total Lost time (s)				4.0	4.0		4.0	4.0			-3.0	
Lane Util. Factor				1.00	0.95		1.00	1.00			1.00	
Frpb, ped/bikes				1.00	0.98		1.00	1.00			1.00	
Flpb, ped/bikes				1.00	1.00		1.00	1.00			1.00	
Frt				1.00	0.87		1.00	1.00			1.00	
Flt Protected				0.95	1.00		0.95	1.00			1.00	
Satd. Flow (prot)				1578	2709		1285	1882			1961	
Flt Permitted				0.95	1.00		0.58	1.00			1.00	
Satd. Flow (perm)				1578	2709		782	1882			1961	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	242	4	23	3	184	0	0	128	3
RTOR Reduction (vph)	0	0	0	0	18	0	0	0	0	0	1	0
Lane Group Flow (vph)	0	0	0	242	9	0	3	184	0	0	130	0
Confl. Peds. (#/hr)	2		2	2		2	3					3
Heavy Vehicles (%)	0%	0%	0%	8%	25%	5%	33%	2%	0%	0%	3%	33%
Turn Type				Perm			pm+pt					
Protected Phases					8		7	2			6	
Permitted Phases				8			2					
Actuated Green, G (s)				27.0	27.0		50.0	50.0			40.0	
Effective Green, g (s)				27.0	27.0		50.0	50.0			46.0	
Actuated g/C Ratio				0.32	0.32		0.59	0.59			0.54	
Clearance Time (s)				4.0	4.0		4.0	4.0			3.0	
Lane Grp Cap (vph)				501	861		501	1107			1061	
v/s Ratio Prot					0.00		0.00	c0.10			0.07	
v/s Ratio Perm				c0.15			0.00					
v/c Ratio				0.48	0.01		0.01	0.17			0.12	
Uniform Delay, d1				23.4	19.9		10.0	8.0			9.6	
Progression Factor				1.00	1.00		1.06	1.18			1.00	
Incremental Delay, d2				3.3	0.0		0.0	0.3			0.2	
Delay (s)				26.7	19.9		10.6	9.8			9.8	
Level of Service				C	B		B	A			A	
Approach Delay (s)		0.0			26.0			9.8			9.8	
Approach LOS		A			C			A			A	

Intersection Summary			
HCM Average Control Delay	17.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	33.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1008: 99th Street & Wentworth Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱			✥			↱		↰	↑	
Volume (vph)	8	5	5	12	0	18	0	143	42	33	300	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	16	15	12	8	12	8	12	12	12	10	13	12
Total Lost time (s)	4.0	4.0			4.0			3.0		4.0	4.0	
Lane Util. Factor	1.00	1.00			1.00			1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.99			1.00			1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00			1.00			1.00		1.00	1.00	
Frt	1.00	0.93			0.92			0.97		1.00	1.00	
Flt Protected	0.95	1.00			0.98			1.00		0.95	1.00	
Satd. Flow (prot)	1938	1809			1620			1686		1595	1755	
Flt Permitted	0.74	1.00			0.93			1.00		0.60	1.00	
Satd. Flow (perm)	1502	1809			1543			1686		1005	1755	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	8	5	5	13	0	19	0	151	44	35	316	0
RTOR Reduction (vph)	0	3	0	0	13	0	0	12	0	0	0	0
Lane Group Flow (vph)	8	7	0	0	19	0	0	183	0	35	316	0
Confl. Peds. (#/hr)			3	3			5		2	2		5
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	3%	3%	0%	6%	0%
Turn Type	Perm			Perm						pm+pt		
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8						6		
Actuated Green, G (s)	27.0	27.0			27.0			40.0		50.0	50.0	
Effective Green, g (s)	27.0	27.0			27.0			40.0		50.0	50.0	
Actuated g/C Ratio	0.32	0.32			0.32			0.47		0.59	0.59	
Clearance Time (s)	4.0	4.0			4.0			3.0		4.0	4.0	
Lane Grp Cap (vph)	477	575			490			793		640	1032	
v/s Ratio Prot		0.00						0.11		0.00	c0.18	
v/s Ratio Perm	0.01				c0.01					0.03		
v/c Ratio	0.02	0.01			0.04			0.23		0.05	0.31	
Uniform Delay, d1	19.9	19.9			20.0			13.4		8.5	8.8	
Progression Factor	1.00	1.00			1.00			1.00		1.01	0.92	
Incremental Delay, d2	0.1	0.0			0.1			0.7		0.2	0.7	
Delay (s)	20.0	19.9			20.2			14.0		8.8	8.9	
Level of Service	B	B			C			B		A	A	
Approach Delay (s)		19.9			20.2			14.0			8.9	
Approach LOS		B			C			B			A	

Intersection Summary			
HCM Average Control Delay	11.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.21		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	40.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

	↗	↘	↖	↑	↓	↙
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰↱		↰	↑	↱	
Volume (vph)	63	16	10	350	159	12
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	14	12	13	12	10	12
Total Lost time (s)	4.0		4.0	4.0	4.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.97		1.00	1.00	0.99	
Flt Protected	0.96		0.95	1.00	1.00	
Satd. Flow (prot)	1787		1767	1765	1634	
Flt Permitted	0.96		0.64	1.00	1.00	
Satd. Flow (perm)	1787		1187	1765	1634	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	70	18	11	389	177	13
RTOR Reduction (vph)	12	0	0	0	4	0
Lane Group Flow (vph)	76	0	11	389	186	0
Confl. Peds. (#/hr)		2				
Heavy Vehicles (%)	0%	0%	0%	2%	2%	0%
Turn Type			Perm			
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	21.0		36.0	36.0	36.0	
Effective Green, g (s)	21.0		36.0	36.0	36.0	
Actuated g/C Ratio	0.32		0.55	0.55	0.55	
Clearance Time (s)	4.0		4.0	4.0	4.0	
Lane Grp Cap (vph)	577		657	978	905	
v/s Ratio Prot	c0.04			c0.22	0.11	
v/s Ratio Perm			0.01			
v/c Ratio	0.13		0.02	0.40	0.21	
Uniform Delay, d1	15.6		6.5	8.3	7.3	
Progression Factor	1.00		0.32	0.52	1.16	
Incremental Delay, d2	0.5		0.0	1.1	0.4	
Delay (s)	16.0		2.2	5.4	8.9	
Level of Service	B		A	A	A	
Approach Delay (s)	16.0			5.3	8.9	
Approach LOS	B			A	A	

Intersection Summary			
HCM Average Control Delay	7.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	39.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1010: 99th Street & Michigan Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↰↑↱		↰	↑			↑	↱
Volume (vph)	0	0	0	23	274	14	568	253	0	0	193	35
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	14	16	12	12	15	12	12	13	10
Total Lost time (s)					4.0		4.0	4.0			3.0	3.0
Lane Util. Factor					0.95		1.00	1.00			1.00	1.00
Frpb, ped/bikes					1.00		1.00	1.00			1.00	1.00
Flpb, ped/bikes					1.00		1.00	1.00			1.00	1.00
Frt					0.99		1.00	1.00			1.00	0.85
Flt Protected					1.00		0.95	1.00			1.00	1.00
Satd. Flow (prot)					3738		1660	1752			1603	1298
Flt Permitted					1.00		0.57	1.00			1.00	1.00
Satd. Flow (perm)					3738		1002	1752			1603	1298
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	26	304	16	631	281	0	0	214	39
RTOR Reduction (vph)	0	0	0	0	4	0	0	0	0	0	0	22
Lane Group Flow (vph)	0	0	0	0	342	0	631	281	0	0	214	17
Confl. Peds. (#/hr)									30	30		
Heavy Vehicles (%)	0%	0%	0%	11%	2%	0%	3%	13%	0%	0%	16%	10%
Turn Type				Split			pm+pt					Perm
Protected Phases				8	8		7	2			6	
Permitted Phases							2					6
Actuated Green, G (s)					26.0		51.0	51.0			38.0	38.0
Effective Green, g (s)					26.0		51.0	51.0			38.0	38.0
Actuated g/C Ratio					0.31		0.60	0.60			0.45	0.45
Clearance Time (s)					4.0		4.0	4.0			3.0	3.0
Lane Grp Cap (vph)					1143		679	1051			717	580
v/s Ratio Prot					c0.09		c0.11	0.16			0.13	
v/s Ratio Perm							c0.45					0.01
v/c Ratio					0.30		0.93	0.27			0.30	0.03
Uniform Delay, d1					22.5		17.0	8.1			15.0	13.2
Progression Factor					1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2					0.7		21.0	0.6			1.1	0.1
Delay (s)					23.2		38.0	8.7			16.1	13.3
Level of Service					C		D	A			B	B
Approach Delay (s)		0.0			23.2			29.0			15.6	
Approach LOS		A			C			C			B	

Intersection Summary			
HCM Average Control Delay	25.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	63.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1011: 99th Street & Martin Luther King Jr Drive

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					✥		↰	↑↱		↰	↑↱	
Volume (vph)	0	0	0	15	11	9	331	528	97	74	340	12
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	15	12	12	12	12	12	13	12
Total Lost time (s)					4.0		3.0	4.0		3.0	4.0	
Lane Util. Factor					1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes					1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes					1.00		1.00	1.00		1.00	1.00	
Frt					0.97		1.00	0.98		1.00	1.00	
Flt Protected					0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)					1803		1692	3236		1707	3352	
Flt Permitted					0.98		0.50	1.00		0.31	1.00	
Satd. Flow (perm)					1803		892	3236		564	3352	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	17	12	10	368	587	108	82	378	13
RTOR Reduction (vph)	0	0	0	0	7	0	0	20	0	0	3	0
Lane Group Flow (vph)	0	0	0	0	32	0	368	675	0	82	388	0
Confl. Peds. (#/hr)	2					2	6		20	20		6
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	0%	0%	0%	0%	11%	0%	1%	3%	0%	0%	5%	0%
Turn Type				Split			pm+pt			pm+pt		
Protected Phases				8	8		5	2		1	6	
Permitted Phases							2			6		
Actuated Green, G (s)					23.0		41.0	34.0		41.0	34.0	
Effective Green, g (s)					23.0		41.0	34.0		41.0	34.0	
Actuated g/C Ratio					0.31		0.55	0.45		0.55	0.45	
Clearance Time (s)					4.0		3.0	4.0		3.0	4.0	
Lane Grp Cap (vph)					553		562	1467		415	1520	
v/s Ratio Prot					c0.02		c0.06	0.21		0.02	0.12	
v/s Ratio Perm							c0.30			0.09		
v/c Ratio					0.06		0.65	0.46		0.20	0.26	
Uniform Delay, d1					18.4		13.8	14.2		12.4	12.7	
Progression Factor					1.00		0.69	0.74		1.00	1.00	
Incremental Delay, d2					0.2		5.4	0.9		1.1	0.4	
Delay (s)					18.6		14.9	11.4		13.4	13.1	
Level of Service					B		B	B		B	B	
Approach Delay (s)		0.0			18.6			12.6			13.1	
Approach LOS		A			B			B			B	

Intersection Summary			
HCM Average Control Delay	12.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	56.0%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1012: 100th Street & Martin Luther King Jr Drive

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣		↰	↑↱		↰	↑↱	
Volume (vph)	57	54	24	13	169	222	20	677	12	69	271	15
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	16	12	12	10	11	12	12	11	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.98			0.93		1.00	1.00		1.00	0.99	
Flt Protected		0.98			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1946			1626		1596	3232		1641	3131	
Flt Permitted		0.68			0.99		0.57	1.00		0.33	1.00	
Satd. Flow (perm)		1354			1613		955	3232		574	3131	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	60	57	25	14	178	234	21	713	13	73	285	16
RTOR Reduction (vph)	0	10	0	0	59	0	0	2	0	0	5	0
Lane Group Flow (vph)	0	132	0	0	367	0	21	724	0	73	296	0
Confl. Peds. (#/hr)									6	6		
Confl. Bikes (#/hr)			1	1								
Heavy Vehicles (%)	0%	0%	0%	12%	2%	2%	0%	2%	0%	4%	5%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		25.0			25.0		42.0	42.0		42.0	42.0	
Effective Green, g (s)		25.0			25.0		42.0	42.0		42.0	42.0	
Actuated g/C Ratio		0.33			0.33		0.56	0.56		0.56	0.56	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		451			538		535	1810		321	1753	
v/s Ratio Prot								c0.22			0.09	
v/s Ratio Perm		0.10			c0.23		0.02			0.13		
v/c Ratio		0.29			0.68		0.04	0.40		0.23	0.17	
Uniform Delay, d1		18.5			21.6		7.4	9.4		8.3	8.0	
Progression Factor		1.00			1.00		1.00	1.00		0.18	0.07	
Incremental Delay, d2		1.6			6.9		0.1	0.7		1.6	0.2	
Delay (s)		20.1			28.4		7.6	10.0		3.1	0.8	
Level of Service		C			C		A	B		A	A	
Approach Delay (s)		20.1			28.4			9.9			1.2	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM Average Control Delay	13.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	69.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis
1013: 100th Street & Cottage Grove Avenue

	↗	↘	↖	↑	↓	↙
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰↱			↰↑↑	↑↑↱	
Sign Control	Stop			Stop	Stop	
Volume (vph)	45	57	105	326	195	19
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	50	63	117	362	217	21

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	113	237	241	144	93
Volume Left (vph)	50	117	0	0	0
Volume Right (vph)	63	0	0	0	21
Hadj (s)	-0.16	0.33	0.08	0.09	-0.07
Departure Headway (s)	5.3	5.4	5.1	5.4	5.2
Degree Utilization, x	0.17	0.36	0.35	0.22	0.14
Capacity (veh/h)	628	653	684	641	660
Control Delay (s)	9.3	10.1	9.6	8.7	7.9
Approach Delay (s)	9.3	9.9		8.4	
Approach LOS	A	A		A	

Intersection Summary			
Delay	9.4		
HCM Level of Service	A		
Intersection Capacity Utilization	35.4%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Signalized Intersection Capacity Analysis
1014: 103rd Street & Vincennes Avenue

1/14/2013

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR
Lane Configurations		↰	↑	↱	↰	↑	↱			↰	↑↱	
Volume (vph)	45	52	336	13	6	482	39	40	42	53	720	45
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		3.5	4.0	4.0	4.0	4.0	4.0			4.0	4.0	
Lane Util. Factor		1.00	1.00	1.00	1.00	1.00	1.00			1.00	0.95	
Frpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	0.97			1.00	1.00	
Flpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	
Frt		1.00	1.00	0.85	1.00	1.00	0.85			1.00	0.99	
Flt Protected		0.95	1.00	1.00	0.95	1.00	1.00			0.95	1.00	
Satd. Flow (prot)		1575	1731	1530	1710	1731	1487			1710	3290	
Flt Permitted		0.11	1.00	1.00	0.54	1.00	1.00			0.39	1.00	
Satd. Flow (perm)		187	1731	1530	971	1731	1487			700	3290	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	50	58	373	14	7	536	43	44	47	59	800	50
RTOR Reduction (vph)	0	0	0	7	0	0	31	0	0	0	5	0
Lane Group Flow (vph)	0	108	373	7	7	536	56	0	0	106	845	0
Confl. Peds. (#/hr)		5					5					6
Heavy Vehicles (%)	8%	9%	4%	0%	0%	4%	0%	0%	0%	0%	3%	0%
Turn Type	Perm	pm+pt		Perm	Perm		Perm		Perm	Perm		
Protected Phases		7	4			8					2	
Permitted Phases	4	4		4	8		8		2	2		
Actuated Green, G (s)		50.0	50.0	50.0	32.0	32.0	32.0			25.0	25.0	
Effective Green, g (s)		50.0	50.0	50.0	32.0	32.0	32.0			25.0	25.0	
Actuated g/C Ratio		0.48	0.48	0.48	0.30	0.30	0.30			0.24	0.24	
Clearance Time (s)		3.5	4.0	4.0	4.0	4.0	4.0			4.0	4.0	
Lane Grp Cap (vph)		281	824	729	296	528	453			167	783	
v/s Ratio Prot		0.05	c0.22			c0.31					c0.26	
v/s Ratio Perm		0.13		0.00	0.01		0.04			0.15		
v/c Ratio		0.38	0.45	0.01	0.02	1.02	0.12			0.63	1.08	
Uniform Delay, d1		20.3	18.4	14.5	25.6	36.5	26.4			35.9	40.0	
Progression Factor		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	
Incremental Delay, d2		3.9	1.8	0.0	0.1	43.0	0.6			17.0	55.9	
Delay (s)		24.2	20.2	14.5	25.7	79.5	26.9			52.9	95.9	
Level of Service		C	C	B	C	E	C			D	F	
Approach Delay (s)			20.9			71.7					91.1	
Approach LOS			C			E					F	

Intersection Summary			
HCM Average Control Delay	62.9	HCM Level of Service	E
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	79.8%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1014: 103rd Street & Vincennes Avenue

1/14/2013

Movement	SBL	SBT	SBR	SBR2	SEL2	SEL	SER	SER2
Lane Configurations	↰	↑↱				↰	↱↱	
Volume (vph)	54	300	27	33	4	64	114	12
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.5	4.5				4.5	4.5	
Lane Util. Factor	1.00	0.95				1.00	0.88	
Frpb, ped/bikes	1.00	1.00				1.00	1.00	
Flpb, ped/bikes	1.00	1.00				1.00	1.00	
Frt	1.00	0.97				1.00	0.85	
Flt Protected	0.95	1.00				0.95	1.00	
Satd. Flow (prot)	1706	3279				1710	2621	
Flt Permitted	0.16	1.00				0.95	1.00	
Satd. Flow (perm)	293	3279				1710	2621	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	60	333	30	37	4	71	127	13
RTOR Reduction (vph)	0	8	0	0	0	0	7	0
Lane Group Flow (vph)	60	392	0	0	0	75	133	0
Confl. Peds. (#/hr)	6							
Heavy Vehicles (%)	0%	2%	0%	0%	0%	0%	3%	0%
Turn Type	Perm				Split		Perm	
Protected Phases		6			9	9		
Permitted Phases	6						9	
Actuated Green, G (s)	24.5	24.5				17.5	17.5	
Effective Green, g (s)	24.5	24.5				17.5	17.5	
Actuated g/C Ratio	0.23	0.23				0.17	0.17	
Clearance Time (s)	4.5	4.5				4.5	4.5	
Lane Grp Cap (vph)	68	765				285	437	
v/s Ratio Prot		0.12				0.04		
v/s Ratio Perm	0.20						c0.05	
v/c Ratio	0.88	0.51				0.26	0.31	
Uniform Delay, d1	38.9	35.1				38.1	38.4	
Progression Factor	1.00	1.00				1.00	1.00	
Incremental Delay, d2	79.4	2.4				2.2	1.8	
Delay (s)	118.3	37.5				40.4	40.2	
Level of Service	F	D				D	D	
Approach Delay (s)		48.0				40.3		
Approach LOS		D				D		

Intersection Summary

HCM Signalized Intersection Capacity Analysis
1015: 103rd Street & Morgan Street

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑			↑↱			↰↑↱				
Volume (vph)	24	497	0	0	492	27	118	116	123	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	11	11	11	16	11	12	15	12	12	15	12
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		1.00			0.99			0.95				
Flt Protected		1.00			1.00			0.98				
Satd. Flow (prot)		1653			1929			1769				
Flt Permitted		0.96			1.00			0.98				
Satd. Flow (perm)		1598			1929			1769				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	27	552	0	0	547	30	131	129	137	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	579	0	0	577	0	0	397	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)		31.0			31.0			26.0				
Effective Green, g (s)		31.0			31.0			26.0				
Actuated g/C Ratio		0.48			0.48			0.40				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		762			920			708				
v/s Ratio Prot					0.30							
v/s Ratio Perm		c0.36						0.22				
v/c Ratio		0.76			0.63			0.56				
Uniform Delay, d1		13.9			12.7			15.1				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		7.0			3.2			3.2				
Delay (s)		21.0			15.9			18.3				
Level of Service		C			B			B				
Approach Delay (s)		21.0			15.9			18.3			0.0	
Approach LOS		C			B			B			A	

Intersection Summary			
HCM Average Control Delay	18.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	76.2%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1016: 103rd Street & Halsted Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱	↰	↑↑	↱	↰	↑↑	↱
Volume (vph)	116	398	114	67	276	116	148	1707	130	92	445	93
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	10	10	9	9	10	9
Total Lost time (s)		4.0	4.0		4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		1.00	0.96		1.00	0.96	1.00	1.00	0.97	1.00	1.00	0.96
Flpb, ped/bikes		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.99	1.00		0.99	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1924	1426		1923	1396	1500	3099	1284	1425	2956	1265
Flt Permitted		0.65	1.00		0.54	1.00	0.40	1.00	1.00	0.09	1.00	1.00
Satd. Flow (perm)		1265	1426		1040	1396	631	3099	1284	142	2956	1265
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	122	419	120	71	291	122	156	1797	137	97	468	98
RTOR Reduction (vph)	0	0	71	0	0	72	0	0	30	0	0	59
Lane Group Flow (vph)	0	541	49	0	362	50	156	1797	107	97	468	39
Confl. Peds. (#/hr)	42		39	39		42	20		8	8		20
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	6%	4%	3%	0%	6%	5%	6%	3%	4%	8%	8%	4%
Turn Type	pm+pt		Perm	Perm		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)		43.0	43.0		43.0	43.0	52.7	44.0	44.0	49.3	42.3	42.3
Effective Green, g (s)		43.0	43.0		43.0	43.0	52.7	44.0	44.0	49.3	42.3	42.3
Actuated g/C Ratio		0.41	0.41		0.41	0.41	0.50	0.42	0.42	0.47	0.40	0.40
Clearance Time (s)		4.0	4.0		4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		518	584		426	572	389	1299	538	152	1191	510
v/s Ratio Prot							c0.03	c0.58		c0.04	0.16	
v/s Ratio Perm		c0.43	0.03		0.35	0.04	0.17		0.08	0.26		0.03
v/c Ratio		1.04	0.08		0.85	0.09	0.40	1.38	0.20	0.64	0.39	0.08
Uniform Delay, d1		31.0	19.0		28.1	19.0	14.9	30.5	19.3	23.3	22.2	19.3
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.25	0.75	0.39
Incremental Delay, d2		51.6	0.3		18.7	0.3	0.7	177.4	0.8	8.2	0.9	0.3
Delay (s)		82.6	19.2		46.8	19.3	15.6	207.9	20.2	37.4	17.7	7.9
Level of Service		F	B		D	B	B	F	C	D	B	A
Approach Delay (s)		71.1			39.9			181.2			19.2	
Approach LOS		E			D			F			B	

Intersection Summary			
HCM Average Control Delay	117.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.17		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	116.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1017: 103rd Street & Normal Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣				
Volume (vph)	59	558	59	51	421	50	67	62	58	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	15	12	12	15	12
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		0.99			0.99			0.96				
Flt Protected		1.00			1.00			0.98				
Satd. Flow (prot)		1630			1628			1775				
Flt Permitted		0.92			0.89			0.98				
Satd. Flow (perm)		1501			1455			1775				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	66	620	66	57	468	56	74	69	64	0	0	0
RTOR Reduction (vph)	0	5	0	0	6	0	0	25	0	0	0	0
Lane Group Flow (vph)	0	747	0	0	575	0	0	182	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm			Perm					
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Actuated Green, G (s)		38.0			38.0			19.0				
Effective Green, g (s)		38.0			38.0			19.0				
Actuated g/C Ratio		0.58			0.58			0.29				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		878			851			519				
v/s Ratio Prot												
v/s Ratio Perm		c0.50			0.40			0.10				
v/c Ratio		0.85			0.68			0.35				
Uniform Delay, d1		11.2			9.3			18.1				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		10.1			4.3			1.9				
Delay (s)		21.3			13.6			20.0				
Level of Service		C			B			C				
Approach Delay (s)		21.3			13.6			20.0			0.0	
Approach LOS		C			B			C			A	

Intersection Summary			
HCM Average Control Delay	18.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	66.8%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1018: 103rd Street & Wentworth Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱		↰	↱		✥	
Volume (vph)	30	509	67	32	450	39	55	150	89	49	192	53
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	11	12	12	15	12
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frpb, ped/bikes		1.00	0.97		1.00	0.95		1.00	0.98		0.98	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		0.99	1.00		1.00	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		0.98	
Flt Protected		1.00	1.00		1.00	1.00		0.99	1.00		0.99	
Satd. Flow (prot)		1656	1255		1636	1288		1658	1490		1738	
Flt Permitted		0.96	1.00		0.95	1.00		0.84	1.00		0.92	
Satd. Flow (perm)		1594	1255		1555	1288		1417	1490		1608	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	32	536	71	34	474	41	58	158	94	52	202	56
RTOR Reduction (vph)	0	0	30	0	0	15	0	0	64	0	11	0
Lane Group Flow (vph)	0	568	41	0	508	26	0	216	30	0	299	0
Confl. Peds. (#/hr)	33		15	15		33	68		5	5		68
Confl. Bikes (#/hr)	4					4						
Heavy Vehicles (%)	0%	5%	14%	19%	5%	9%	2%	2%	1%	10%	7%	8%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		43.0	43.0		43.0	43.0		24.0	24.0		24.0	
Effective Green, g (s)		43.0	43.0		43.0	43.0		24.0	24.0		24.0	
Actuated g/C Ratio		0.57	0.57		0.57	0.57		0.32	0.32		0.32	
Clearance Time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	
Lane Grp Cap (vph)		914	720		892	738		453	477		515	
v/s Ratio Prot												
v/s Ratio Perm		c0.36	0.03		0.33	0.02		0.15	0.02		c0.19	
v/c Ratio		0.62	0.06		0.57	0.03		0.48	0.06		0.58	
Uniform Delay, d1		10.6	7.1		10.1	7.0		20.5	17.7		21.3	
Progression Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2		3.2	0.1		2.6	0.1		3.6	0.3		4.7	
Delay (s)		13.8	7.2		12.8	7.1		24.0	18.0		26.0	
Level of Service		B	A		B	A		C	B		C	
Approach Delay (s)		13.0			12.3			22.2			26.0	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM Average Control Delay	16.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	95.3%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1019: 103rd Street & State Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑	↱	↰	↑	↱
Volume (vph)	84	440	30	17	326	39	55	303	38	38	92	11
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	11	16	8	10	10	10	10	10	10
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	0.98	1.00	1.00	0.99
Flpb, ped/bikes	0.99	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1464	2990		1459	3535		1534	1647	1301	1517	1541	1156
Flt Permitted	0.50	1.00		0.43	1.00		0.69	1.00	1.00	0.45	1.00	1.00
Satd. Flow (perm)	777	2990		656	3535		1116	1647	1301	720	1541	1156
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	93	489	33	19	362	43	61	337	42	42	102	12
RTOR Reduction (vph)	0	7	0	0	14	0	0	0	22	0	0	7
Lane Group Flow (vph)	93	515	0	19	391	0	61	337	20	42	102	5
Confl. Peds. (#/hr)	16		9	9		16	1		5	5		1
Heavy Vehicles (%)	8%	6%	0%	13%	8%	3%	4%	2%	8%	5%	9%	22%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	31.0	31.0		31.0	31.0		26.0	26.0	26.0	26.0	26.0	26.0
Effective Green, g (s)	31.0	31.0		31.0	31.0		26.0	26.0	26.0	26.0	26.0	26.0
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.40	0.40	0.40	0.40	0.40	0.40
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	371	1426		313	1686		446	659	520	288	616	462
v/s Ratio Prot		c0.17			0.11			c0.20			0.07	
v/s Ratio Perm	0.12			0.03			0.05		0.02	0.06		0.00
v/c Ratio	0.25	0.36		0.06	0.23		0.14	0.51	0.04	0.15	0.17	0.01
Uniform Delay, d1	10.1	10.7		9.2	10.0		12.4	14.7	11.9	12.4	12.5	11.7
Progression Factor	1.00	1.00		1.00	1.00		0.60	0.75	0.30	0.53	0.54	0.28
Incremental Delay, d2	1.6	0.7		0.4	0.3		0.6	2.8	0.1	1.1	0.6	0.0
Delay (s)	11.7	11.5		9.5	10.3		8.0	13.7	3.7	7.7	7.3	3.4
Level of Service	B	B		A	B		A	B	A	A	A	A
Approach Delay (s)		11.5			10.3			12.0			7.1	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM Average Control Delay	10.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	51.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1020: 103rd Street & Michigan Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	98	416	85	44	291	65	73	371	44	57	143	55
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	11	10	11	11	10	11	11	10	11	11
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	0.96	1.00		1.00	1.00		0.98	1.00		0.97	1.00	
Frt	1.00	0.97		1.00	0.97		1.00	0.98		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1465	3058		1588	3012		1541	3022		1403	2767	
Flt Permitted	0.52	1.00		0.42	1.00		0.62	1.00		0.46	1.00	
Satd. Flow (perm)	799	3058		697	3012		1007	3022		678	2767	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	103	438	89	46	306	68	77	391	46	60	151	58
RTOR Reduction (vph)	0	0	0	0	0	0	0	12	0	0	34	0
Lane Group Flow (vph)	103	527	0	46	374	0	77	425	0	60	175	0
Confl. Peds. (#/hr)	98		10	10		98	28		52	52		28
Heavy Vehicles (%)	5%	5%	4%	0%	5%	7%	2%	6%	13%	10%	11%	20%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	36.0	36.0		36.0	36.0		31.0	31.0		31.0	31.0	
Effective Green, g (s)	36.0	36.0		36.0	36.0		31.0	31.0		31.0	31.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.41	0.41		0.41	0.41	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	384	1468		335	1446		416	1249		280	1144	
v/s Ratio Prot		c0.17			0.12			c0.14			0.06	
v/s Ratio Perm	0.13			0.07			0.08			0.09		
v/c Ratio	0.27	0.36		0.14	0.26		0.19	0.34		0.21	0.15	
Uniform Delay, d1	11.6	12.3		10.9	11.6		14.0	15.0		14.2	13.8	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.7	0.7		0.9	0.4		1.0	0.7		1.7	0.3	
Delay (s)	13.3	12.9		11.7	12.0		15.0	15.8		15.9	14.1	
Level of Service	B	B		B	B		B	B		B	B	
Approach Delay (s)		13.0			12.0			15.6			14.5	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	13.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	50.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1021: 103rd Street & Martin Luther King Jr Drive

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱		↰	↑↱		↰	↑↱	
Volume (vph)	112	330	38	23	334	47	67	412	26	43	206	56
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	12	8	16	12	9	10	10	9	10	10
Total Lost time (s)	3.0	7.0		3.0	7.0		3.0	7.0		3.0	7.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.99		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1533	1576		1474	1842		1533	3073		1372	2877	
Flt Permitted	0.44	1.00		0.46	1.00		0.58	1.00		0.41	1.00	
Satd. Flow (perm)	709	1576		711	1842		940	3073		597	2877	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	118	347	40	24	352	49	71	434	27	45	217	59
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	118	387	0	24	401	0	71	461	0	45	276	0
Confl. Peds. (#/hr)	7		23	23		7	10		8	8		10
Confl. Bikes (#/hr)	1		2	2		1	1		1	1		1
Heavy Vehicles (%)	4%	8%	10%	0%	9%	5%	0%	3%	0%	12%	7%	6%
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	47.0	41.8		40.6	38.6		26.8	22.2		23.6	20.6	
Effective Green, g (s)	47.0	39.8		40.6	36.6		26.8	20.2		23.6	18.6	
Actuated g/C Ratio	0.55	0.47		0.48	0.43		0.32	0.24		0.28	0.22	
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	5.0		3.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	442	738		358	793		328	730		193	630	
v/s Ratio Prot	c0.02	c0.25		0.00	0.22		c0.01	c0.15		0.01	0.10	
v/s Ratio Perm	0.13			0.03			0.06			0.06		
v/c Ratio	0.27	0.52		0.07	0.51		0.22	0.63		0.23	0.44	
Uniform Delay, d1	13.8	15.9		15.0	17.6		21.6	29.1		26.1	28.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.3	2.7		0.1	2.3		0.3	4.1		0.6	2.2	
Delay (s)	14.1	18.6		15.1	19.9		21.9	33.2		26.8	30.9	
Level of Service	B	B		B	B		C	C		C	C	
Approach Delay (s)		17.5			19.6			31.7			30.3	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM Average Control Delay	24.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	63.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1022: 103rd Street & Cottage Grove Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	69	323	44	65	388	115	59	390	126	56	162	38
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	11	11	11	11	12	12	10	10	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			0.99		1.00	0.99		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		0.99	1.00	
Frt		0.98			0.97		1.00	0.96		1.00	0.97	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3493			2914		1614	3156		1581	2918	
Flt Permitted		0.78			0.84		0.61	1.00		0.38	1.00	
Satd. Flow (perm)		2745			2468		1041	3156		628	2918	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	77	359	49	72	431	128	66	433	140	62	180	42
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	485	0	0	631	0	66	573	0	62	222	0
Confl. Peds. (#/hr)	20		16	16		20	5		33	33		5
Confl. Bikes (#/hr)	2					2			2	2		
Heavy Vehicles (%)	9%	9%	0%	24%	7%	6%	2%	4%	2%	0%	5%	9%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		33.0			33.0		32.0	32.0		32.0	32.0	
Effective Green, g (s)		34.0			34.0		33.0	33.0		33.0	33.0	
Actuated g/C Ratio		0.45			0.45		0.44	0.44		0.44	0.44	
Clearance Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)		1244			1119		458	1389		276	1284	
v/s Ratio Prot								c0.18			0.08	
v/s Ratio Perm		0.18			c0.26		0.06			0.10		
v/c Ratio		0.39			0.56		0.14	0.41		0.22	0.17	
Uniform Delay, d1		13.6			15.1		12.6	14.4		13.0	12.7	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.9			2.1		0.7	0.9		1.9	0.3	
Delay (s)		14.5			17.1		13.2	15.3		14.9	13.0	
Level of Service		B			B		B	B		B	B	
Approach Delay (s)		14.5			17.1			15.1			13.4	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	15.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	63.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1023: 103rd Street & Woodlawn Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↑	↱		↰↑↱			↰↑↱	
Volume (vph)	145	523	5	14	661	386	72	9	20	118	1	52
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	12	12	12	12	12	12	13	13	13
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00			0.95	
Frt	1.00	1.00		1.00	1.00	0.85		0.97			0.95	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.97			0.97	
Satd. Flow (prot)	1574	3144		1629	3257	1457		1611			3105	
Flt Permitted	0.35	1.00		0.42	1.00	1.00		0.69			0.75	
Satd. Flow (perm)	581	3144		720	3257	1457		1158			2398	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	161	581	6	16	734	429	80	10	22	131	1	58
RTOR Reduction (vph)	0	1	0	0	0	150	0	12	0	0	44	0
Lane Group Flow (vph)	161	586	0	16	734	279	0	100	0	0	146	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	46.0	46.0		46.0	46.0	46.0		16.7			16.7	
Effective Green, g (s)	46.0	46.0		46.0	46.0	46.0		16.7			16.7	
Actuated g/C Ratio	0.65	0.65		0.65	0.65	0.65		0.24			0.24	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		8.0			8.0	
Lane Grp Cap (vph)	378	2046		468	2119	948		274			566	
v/s Ratio Prot		0.19			0.23							
v/s Ratio Perm	c0.28			0.02		0.19		c0.09			0.06	
v/c Ratio	0.43	0.29		0.03	0.35	0.29		0.36			0.26	
Uniform Delay, d1	6.0	5.3		4.4	5.6	5.3		22.6			22.0	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00			1.00	
Incremental Delay, d2	3.5	0.4		0.1	0.4	0.8		3.5			1.0	
Delay (s)	9.5	5.7		4.5	6.0	6.1		26.1			23.0	
Level of Service	A	A		A	A	A		C			C	
Approach Delay (s)		6.5			6.0			26.1			23.0	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM Average Control Delay	8.6	HCM Level of Service	A
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	70.7	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱		↰	↑↑	↱	↰	↑↑	↱
Volume (vph)	111	214	75	63	190	68	133	1972	88	71	499	42
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	9	12	10	10	12	9	10	9	9	10	9
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00	0.96	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.96		1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1548	1499		1547	1586		1493	3069	1271	1452	2983	1301
Flt Permitted	0.38	1.00		0.32	1.00		0.39	1.00	1.00	0.12	1.00	1.00
Satd. Flow (perm)	617	1499		524	1586		612	3069	1271	180	2983	1301
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	117	225	79	66	200	72	140	2076	93	75	525	44
RTOR Reduction (vph)	0	15	0	0	16	0	0	0	18	0	0	26
Lane Group Flow (vph)	117	289	0	66	256	0	140	2076	75	75	525	18
Confl. Peds. (#/hr)	4		9	9		4	6		16	16		6
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	3%	3%	4%	3%	1%	2%	3%	4%	4%	6%	7%	3%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	28.0	21.0		28.0	21.0		42.0	35.0	35.0	42.0	35.0	35.0
Effective Green, g (s)	26.0	22.0		26.0	22.0		40.0	35.0	35.0	40.0	35.0	35.0
Actuated g/C Ratio	0.31	0.26		0.31	0.26		0.47	0.41	0.41	0.47	0.41	0.41
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)	254	388		232	410		350	1264	523	174	1228	536
v/s Ratio Prot	c0.03	c0.19		0.02	0.16		0.03	c0.68		c0.03	0.18	
v/s Ratio Perm	0.11			0.07			0.16		0.06	0.17		0.01
v/c Ratio	0.46	0.75		0.28	0.63		0.40	1.64	0.14	0.43	0.43	0.03
Uniform Delay, d1	22.5	28.9		21.9	27.9		13.3	25.0	15.6	18.1	17.8	14.9
Progression Factor	1.00	1.00		1.00	1.00		0.61	0.71	0.49	1.00	1.00	1.00
Incremental Delay, d2	5.9	12.3		3.1	7.0		2.8	292.0	0.5	7.6	1.1	0.1
Delay (s)	28.4	41.2		24.9	34.9		10.9	309.7	8.1	25.7	18.9	15.0
Level of Service	C	D		C	C		B	F	A	C	B	B
Approach Delay (s)		37.6			32.9			279.4			19.5	
Approach LOS		D			C			F			B	

Intersection Summary			
HCM Average Control Delay	184.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.15		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	96.6%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1025: 107th Street & Wentworth Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣			✣	
Volume (vph)	26	218	17	15	149	18	18	166	27	33	148	21
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	14	12	12	14	12	12	16	12	12	16	12
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		1.00			1.00			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.99			0.99			0.98			0.99	
Flt Protected		1.00			1.00			1.00			0.99	
Satd. Flow (prot)		1850			1836			1902			1931	
Flt Permitted		0.96			0.97			0.97			0.94	
Satd. Flow (perm)		1792			1790			1856			1823	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	27	225	18	15	154	19	19	171	28	34	153	22
RTOR Reduction (vph)	0	4	0	0	6	0	0	8	0	0	6	0
Lane Group Flow (vph)	0	266	0	0	182	0	0	210	0	0	203	0
Confl. Peds. (#/hr)	5		11	11		5	7		34	34		7
Confl. Bikes (#/hr)			3	3								
Heavy Vehicles (%)	4%	2%	0%	20%	1%	0%	12%	3%	8%	0%	3%	5%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		27.0			27.0			30.0			30.0	
Effective Green, g (s)		27.0			27.0			30.0			30.0	
Actuated g/C Ratio		0.42			0.42			0.46			0.46	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		744			744			857			841	
v/s Ratio Prot												
v/s Ratio Perm		c0.15			0.10			c0.11			0.11	
v/c Ratio		0.36			0.24			0.24			0.24	
Uniform Delay, d1		13.0			12.4			10.6			10.6	
Progression Factor		1.00			0.64			1.04			1.00	
Incremental Delay, d2		1.3			0.8			0.6			0.7	
Delay (s)		14.4			8.7			11.7			11.3	
Level of Service		B			A			B			B	
Approach Delay (s)		14.4			8.7			11.7			11.3	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM Average Control Delay	11.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	46.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1026: 107th Street & State Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	24	181	34	9	162	19	44	384	33	16	86	17
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	0.95	1.00		1.00	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1465	2994		1302	3037		1529	3093		1492	2868	
Flt Permitted	0.63	1.00		0.60	1.00		0.68	1.00		0.48	1.00	
Satd. Flow (perm)	965	2994		827	3037		1093	3093		757	2868	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	27	201	38	10	180	21	49	427	37	18	96	19
RTOR Reduction (vph)	0	24	0	0	13	0	0	10	0	0	8	0
Lane Group Flow (vph)	27	215	0	10	188	0	49	454	0	18	107	0
Confl. Peds. (#/hr)	35		6	6		35	18					18
Confl. Bikes (#/hr)	14		32	32		14	23		7	7		23
Heavy Vehicles (%)	4%	4%	0%	22%	2%	6%	3%	2%	0%	7%	8%	6%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.0	20.0		20.0	20.0		39.0	39.0		39.0	39.0	
Effective Green, g (s)	19.0	19.0		19.0	19.0		38.0	38.0		38.0	38.0	
Actuated g/C Ratio	0.29	0.29		0.29	0.29		0.58	0.58		0.58	0.58	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	282	875		242	888		639	1808		443	1677	
v/s Ratio Prot		c0.07			0.06			c0.15			0.04	
v/s Ratio Perm	0.03			0.01			0.04			0.02		
v/c Ratio	0.10	0.25		0.04	0.21		0.08	0.25		0.04	0.06	
Uniform Delay, d1	16.7	17.5		16.5	17.3		5.9	6.6		5.7	5.8	
Progression Factor	0.73	0.73		0.75	0.74		0.94	1.00		0.49	0.44	
Incremental Delay, d2	0.6	0.6		0.3	0.5		0.2	0.3		0.2	0.1	
Delay (s)	12.9	13.5		12.6	13.4		5.7	6.9		3.0	2.6	
Level of Service	B	B		B	B		A	A		A	A	
Approach Delay (s)		13.4			13.3			6.8			2.7	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	9.1	HCM Level of Service	A
HCM Volume to Capacity ratio	0.25		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	40.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1027: 107th Street & Michigan Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			✥			✥	
Volume (vph)	46	178	34	16	122	38	28	414	24	13	163	15
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	9	9	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00			1.00			1.00	
Flpb, ped/bikes	0.99	1.00		0.98	1.00			1.00			1.00	
Frt	1.00	0.98		1.00	0.96			0.99			0.99	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1556	2952		1515	2868			1878			1807	
Flt Permitted	0.64	1.00		0.60	1.00			0.98			0.96	
Satd. Flow (perm)	1047	2952		965	2868			1839			1749	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	51	198	38	18	136	42	31	460	27	14	181	17
RTOR Reduction (vph)	0	23	0	0	25	0	0	3	0	0	5	0
Lane Group Flow (vph)	51	213	0	18	153	0	0	515	0	0	207	0
Confl. Peds. (#/hr)	10		29	29		10	17		10	10		17
Confl. Bikes (#/hr)									2	2		
Heavy Vehicles (%)	2%	4%	10%	0%	4%	0%	0%	8%	4%	0%	13%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	26.0	26.0		26.0	26.0			31.0			31.0	
Effective Green, g (s)	26.0	26.0		26.0	26.0			31.0			31.0	
Actuated g/C Ratio	0.40	0.40		0.40	0.40			0.48			0.48	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	419	1181		386	1147			877			834	
v/s Ratio Prot		c0.07			0.05							
v/s Ratio Perm	0.05			0.02				c0.28			0.12	
v/c Ratio	0.12	0.18		0.05	0.13			0.59			0.25	
Uniform Delay, d1	12.3	12.6		11.9	12.4			12.4			10.1	
Progression Factor	1.02	0.93		0.86	0.87			0.92			1.00	
Incremental Delay, d2	0.6	0.3		0.2	0.2			2.8			0.7	
Delay (s)	13.1	12.0		10.5	11.0			14.1			10.8	
Level of Service	B	B		B	B			B			B	
Approach Delay (s)		12.2			11.0			14.1			10.8	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	12.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	59.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1028: 107th Street & Martin Luther King Jr Drive

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱			✥			✥	
Volume (vph)	90	127	60	2	84	36	21	275	9	7	184	29
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	16	12	10	16	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00			1.00			1.00	
Flpb, ped/bikes	1.00	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.95		1.00	0.95			1.00			0.98	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1605	1879		1587	1870			1971			1933	
Flt Permitted	0.67	1.00		0.57	1.00			0.98			0.99	
Satd. Flow (perm)	1135	1879		950	1870			1928			1916	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	100	141	67	2	93	40	23	306	10	8	204	32
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	100	208	0	2	133	0	0	339	0	0	244	0
Confl. Peds. (#/hr)			8	8			1		8	8		1
Heavy Vehicles (%)	3%	3%	2%	0%	6%	0%	0%	3%	0%	0%	4%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.0	20.0		20.0	20.0			37.0			37.0	
Effective Green, g (s)	20.0	20.0		20.0	20.0			37.0			37.0	
Actuated g/C Ratio	0.31	0.31		0.31	0.31			0.57			0.57	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	349	578		292	575			1097			1091	
v/s Ratio Prot		c0.11			0.07							
v/s Ratio Perm	0.09			0.00				c0.18			0.13	
v/c Ratio	0.29	0.36		0.01	0.23			0.31			0.22	
Uniform Delay, d1	17.1	17.5		15.6	16.8			7.3			6.9	
Progression Factor	0.91	0.90		0.89	0.92			0.99			1.00	
Incremental Delay, d2	2.0	1.7		0.0	0.9			0.7			0.5	
Delay (s)	17.5	17.5		14.0	16.4			7.9			7.4	
Level of Service	B	B		B	B			A			A	
Approach Delay (s)		17.5			16.3			7.9			7.4	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	11.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	45.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱		↰	↑	↱	↰	↑	↱
Volume (vph)	122	9	55	1	3	12	40	492	6	2	201	50
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	10	10	10	11	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.97		1.00	1.00	0.98	1.00	1.00	0.98
Flpb, ped/bikes	0.98	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.87		1.00	0.88		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1603	1672		1710	1422		1491	1631	1392	1649	1907	1427
Flt Permitted	0.75	1.00		0.71	1.00		0.62	1.00	1.00	0.37	1.00	1.00
Satd. Flow (perm)	1260	1672		1279	1422		971	1631	1392	648	1907	1427
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	136	10	61	1	3	13	44	547	7	2	223	56
RTOR Reduction (vph)	0	44	0	0	9	0	0	0	3	0	0	22
Lane Group Flow (vph)	136	27	0	1	7	0	44	547	4	2	223	34
Confl. Peds. (#/hr)	9					9	1		6	6		1
Heavy Vehicles (%)	5%	14%	5%	0%	67%	12%	7%	3%	0%	0%	7%	5%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	17.0	17.0		17.0	17.0		39.0	39.0	39.0	39.0	39.0	39.0
Effective Green, g (s)	18.0	18.0		18.0	18.0		39.0	39.0	39.0	39.0	39.0	39.0
Actuated g/C Ratio	0.28	0.28		0.28	0.28		0.60	0.60	0.60	0.60	0.60	0.60
Clearance Time (s)	5.0	5.0		5.0	5.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	349	463		354	394		583	979	835	389	1144	856
v/s Ratio Prot		0.02			0.00			c0.34			0.12	
v/s Ratio Perm	c0.11			0.00			0.05		0.00	0.00		0.02
v/c Ratio	0.39	0.06		0.00	0.02		0.08	0.56	0.01	0.01	0.19	0.04
Uniform Delay, d1	19.0	17.3		17.0	17.1		5.4	7.8	5.2	5.2	5.9	5.3
Progression Factor	1.46	2.42		1.00	1.00		1.17	1.10	1.32	1.00	1.00	1.00
Incremental Delay, d2	3.2	0.2		0.0	0.1		0.2	1.7	0.0	0.0	0.4	0.1
Delay (s)	31.1	42.0		17.0	17.1		6.5	10.3	6.9	5.2	6.3	5.4
Level of Service	C	D		B	B		A	B	A	A	A	A
Approach Delay (s)		34.8			17.1			10.0			6.1	
Approach LOS		C			B			A			A	

Intersection Summary			
HCM Average Control Delay	13.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1030: 111th Street & Marshield Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱		↰	↑↑					↰	↑↱	
Volume (vph)	0	240	76	124	376	0	0	0	0	74	305	361
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	12	12	12	12	12	11	11	12
Total Lost time (s)		4.0		3.0	3.0					5.0	5.0	
Lane Util. Factor		0.95		1.00	0.95					1.00	0.95	
Frpb, ped/bikes		0.99		1.00	1.00					1.00	0.99	
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	
Frt		0.96		1.00	1.00					1.00	0.92	
Flt Protected		1.00		0.95	1.00					0.95	1.00	
Satd. Flow (prot)		2826		1621	3288					1574	2907	
Flt Permitted		1.00		0.50	1.00					0.95	1.00	
Satd. Flow (perm)		2826		848	3288					1574	2907	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	253	80	131	396	0	0	0	0	78	321	380
RTOR Reduction (vph)	0	30	0	0	0	0	0	0	0	0	214	0
Lane Group Flow (vph)	0	303	0	131	396	0	0	0	0	78	487	0
Confl. Peds. (#/hr)	14		32	32		14	14					14
Confl. Bikes (#/hr)			1	1								
Heavy Vehicles (%)	0%	9%	4%	5%	4%	0%	0%	0%	0%	5%	2%	4%
Turn Type				D.P+P						custom		
Protected Phases		8		7	7 8					6	6	
Permitted Phases				8						6		
Actuated Green, G (s)		33.0		56.0	59.0					32.0	32.0	
Effective Green, g (s)		33.0		56.0	59.0					32.0	32.0	
Actuated g/C Ratio		0.33		0.56	0.59					0.32	0.32	
Clearance Time (s)		4.0		3.0						5.0	5.0	
Lane Grp Cap (vph)		933		653	1940					504	930	
v/s Ratio Prot		c0.11		0.05	c0.12					0.05	c0.17	
v/s Ratio Perm				0.07								
v/c Ratio		0.32		0.20	0.20					0.15	0.52	
Uniform Delay, d1		25.1		10.6	9.6					24.3	27.8	
Progression Factor		1.00		1.95	2.06					1.00	1.00	
Incremental Delay, d2		0.9		0.6	0.2					0.7	2.1	
Delay (s)		26.1		21.2	19.8					25.0	29.9	
Level of Service		C		C	B					C	C	
Approach Delay (s)		26.1			20.2			0.0			29.4	
Approach LOS		C			C			A			C	

Intersection Summary			
HCM Average Control Delay	25.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	62.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1031: 111th Street & Hamlet Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑			↑↱		↰	↑	↱			
Volume (vph)	129	185	0	0	326	69	174	554	332	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	9	12	13	12	13	12	12	12
Total Lost time (s)	4.0	4.0			4.0		5.0	5.0	5.0			
Lane Util. Factor	1.00	0.95			0.95		1.00	1.00	1.00			
Frpb, ped/bikes	1.00	1.00			0.99		1.00	1.00	0.99			
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.97		1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1673	3054			2832		1750	1782	1514			
Flt Permitted	0.34	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	599	3054			2832		1750	1782	1514			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	136	195	0	0	343	73	183	583	349	0	0	0
RTOR Reduction (vph)	0	0	0	0	18	0	0	0	234	0	0	0
Lane Group Flow (vph)	136	195	0	0	398	0	183	583	115	0	0	0
Confl. Peds. (#/hr)	14		16	16		14			1	1		
Confl. Bikes (#/hr)	1					1			1	1		
Heavy Vehicles (%)	2%	12%	0%	0%	5%	4%	1%	1%	3%	0%	0%	0%
Turn Type	pm+pt						custom		Perm			
Protected Phases	4	1 4			1		2	2				
Permitted Phases	1 4						2		2			
Actuated Green, G (s)	54.0	58.0			21.0		33.0	33.0	33.0			
Effective Green, g (s)	54.0	58.0			21.0		33.0	33.0	33.0			
Actuated g/C Ratio	0.54	0.58			0.21		0.33	0.33	0.33			
Clearance Time (s)	4.0				4.0		5.0	5.0	5.0			
Lane Grp Cap (vph)	678	1771			595		578	588	500			
v/s Ratio Prot	c0.07	0.06			c0.14		0.10	c0.33				
v/s Ratio Perm	0.04								0.08			
v/c Ratio	0.20	0.11			0.67		0.32	0.99	0.23			
Uniform Delay, d1	11.8	9.4			36.3		25.1	33.4	24.3			
Progression Factor	0.25	0.25			1.00		0.75	0.79	1.91			
Incremental Delay, d2	0.6	0.1			5.9		0.9	27.8	0.7			
Delay (s)	3.5	2.5			42.2		19.8	54.1	47.1			
Level of Service	A	A			D		B	D	D			
Approach Delay (s)		2.9			42.2			46.3			0.0	
Approach LOS		A			D			D			A	

Intersection Summary			
HCM Average Control Delay	37.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	62.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1032: 112th Place & Marshield Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱		↰	↑↑					↰	↑↑	↱
Volume (vph)	0	463	372	34	592	0	0	0	0	4	216	196
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	11	12	12	12	12	10	10	12
Total Lost time (s)		4.0		4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.95		1.00	0.95					1.00	0.95	1.00
Frpb, ped/bikes		0.99		1.00	1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Frt		0.93		1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00					0.95	1.00	1.00
Satd. Flow (prot)		3108		1613	3273					1596	3160	1443
Flt Permitted		1.00		0.16	1.00					0.95	1.00	1.00
Satd. Flow (perm)		3108		279	3273					1596	3160	1443
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	0	482	388	35	617	0	0	0	0	4	225	204
RTOR Reduction (vph)	0	145	0	0	0	0	0	0	0	0	0	135
Lane Group Flow (vph)	0	725	0	35	617	0	0	0	0	4	225	69
Confl. Peds. (#/hr)	22		3	3		22						
Confl. Bikes (#/hr)	4					4			32	32		
Heavy Vehicles (%)	0%	2%	2%	6%	1%	0%	0%	0%	0%	0%	1%	6%
Turn Type				pm+pt						Split		Prot
Protected Phases		8		7	7 8					6	6	6
Permitted Phases				7 8								
Actuated Green, G (s)		36.0		54.0	58.0					34.0	34.0	34.0
Effective Green, g (s)		36.0		54.0	58.0					34.0	34.0	34.0
Actuated g/C Ratio		0.36		0.54	0.58					0.34	0.34	0.34
Clearance Time (s)		4.0		4.0						4.0	4.0	4.0
Lane Grp Cap (vph)		1119		391	1898					543	1074	491
v/s Ratio Prot		c0.23		0.02	c0.19					0.00	c0.07	0.05
v/s Ratio Perm				0.03								
v/c Ratio		0.65		0.09	0.33					0.01	0.21	0.14
Uniform Delay, d1		26.7		12.5	10.9					21.8	23.5	22.9
Progression Factor		1.00		0.54	0.68					0.73	0.79	0.92
Incremental Delay, d2		2.9		0.2	0.2					0.0	0.4	0.5
Delay (s)		29.6		7.0	7.6					16.0	18.8	21.5
Level of Service		C		A	A					B	B	C
Approach Delay (s)		29.6			7.6			0.0			20.1	
Approach LOS		C			A			A			C	

Intersection Summary			
HCM Average Control Delay	20.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	88.6%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1033: 112th Place & Hamlet Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↰↑			↑↱		↰	↰	↱			
Volume (vph)	407	60	0	0	57	5	569	646	62	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	12	12	12	10	12	11	11	12	12	12	12
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0	4.0			
Lane Util. Factor	0.91	0.91			0.95		0.95	0.95	1.00			
Frpb, ped/bikes	1.00	1.00			0.99		1.00	1.00	1.00			
Flpb, ped/bikes	0.99	0.99			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.99		1.00	1.00	0.85			
Flt Protected	0.95	0.96			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1444	3041			3079		1555	1637	1500			
Flt Permitted	0.71	0.74			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	1084	2338			3079		1555	1637	1500			
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	420	62	0	0	59	5	587	666	64	0	0	0
RTOR Reduction (vph)	0	0	0	0	4	0	0	0	38	0	0	0
Lane Group Flow (vph)	210	272	0	0	60	0	587	666	26	0	0	0
Confl. Peds. (#/hr)	30		2	2		30			4	4		
Confl. Bikes (#/hr)	3					3			2	2		
Heavy Vehicles (%)	3%	2%	0%	0%	2%	0%	1%	1%	2%	0%	0%	0%
Turn Type	pm+pt						custom		custom			
Protected Phases	4	1 4			1		2	2	2			
Permitted Phases	1 4						2		2			
Actuated Green, G (s)	51.0	51.0			15.0		37.0	37.0	37.0			
Effective Green, g (s)	51.0	51.0			15.0		37.0	37.0	37.0			
Actuated g/C Ratio	0.51	0.51			0.15		0.37	0.37	0.37			
Clearance Time (s)	4.0				4.0		4.0	4.0	4.0			
Lane Grp Cap (vph)	682	1445			462		575	606	555			
v/s Ratio Prot	c0.11	0.07			0.02		0.38	c0.41	0.02			
v/s Ratio Perm	c0.05	0.03										
v/c Ratio	0.31	0.19			0.13		1.02	1.10	0.05			
Uniform Delay, d1	14.0	13.3			36.8		31.5	31.5	20.2			
Progression Factor	0.23	0.25			1.00		1.00	1.00	1.00			
Incremental Delay, d2	0.8	0.2			0.6		42.9	66.6	0.2			
Delay (s)	4.1	3.5			37.4		74.4	98.1	20.4			
Level of Service	A	A			D		E	F	C			
Approach Delay (s)		3.8			37.4			83.8			0.0	
Approach LOS		A			D			F			A	

Intersection Summary			
HCM Average Control Delay	61.5	HCM Level of Service	E
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	88.6%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱		↰	↑↑	↱	↰	↑↑	↱
Volume (vph)	163	289	70	67	191	116	43	1151	97	96	476	42
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	9	10	9	9	10	9
Total Lost time (s)		4.0			4.0		4.0	3.5	4.0	4.0	3.5	4.0
Lane Util. Factor		0.95			0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		1.00			0.98		1.00	1.00	0.97	1.00	1.00	0.97
Flpb, ped/bikes		1.00			1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.98			0.95		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.98			0.99		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		2843			2772		1447	3069	1336	1494	2956	1270
Flt Permitted		0.66			0.78		0.39	1.00	1.00	0.12	1.00	1.00
Satd. Flow (perm)		1909			2178		600	3069	1336	197	2956	1270
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	170	301	73	70	199	121	45	1199	101	100	496	44
RTOR Reduction (vph)	0	14	0	0	61	0	0	0	38	0	0	27
Lane Group Flow (vph)	0	530	0	0	329	0	45	1199	63	100	496	17
Confl. Peds. (#/hr)	49		20	20		49	26		8	8		26
Confl. Bikes (#/hr)	2					2						
Heavy Vehicles (%)	10%	7%	4%	9%	7%	5%	6%	4%	0%	3%	8%	5%
Turn Type	pm+pt			Perm			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)		35.0			27.0		38.0	33.0	33.0	38.0	33.0	33.0
Effective Green, g (s)		36.0			28.0		36.0	33.5	33.0	36.0	33.5	33.0
Actuated g/C Ratio		0.42			0.33		0.42	0.39	0.39	0.42	0.39	0.39
Clearance Time (s)		5.0			5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)		874			717		294	1210	519	144	1165	493
v/s Ratio Prot		c0.04					0.01	c0.39		c0.03	0.17	
v/s Ratio Perm		0.21			c0.15		0.06		0.05	0.26		0.01
v/c Ratio		0.61			0.46		0.15	0.99	0.12	0.69	0.43	0.03
Uniform Delay, d1		19.0			22.5		14.7	25.6	16.7	19.1	18.7	16.1
Progression Factor		1.00			1.00		1.32	0.87	1.41	1.83	1.64	3.16
Incremental Delay, d2		3.1			2.1		0.6	17.5	0.3	22.2	1.0	0.1
Delay (s)		22.1			24.6		20.1	39.9	23.8	57.2	31.8	51.1
Level of Service		C			C		C	D	C	E	C	D
Approach Delay (s)		22.1			24.6			38.0			37.1	
Approach LOS		C			C			D			D	

Intersection Summary			
HCM Average Control Delay	33.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	81.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1035: 111th Street & Normal Avenue

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Lane Configurations		↰			↱			✥				
Volume (vph)	44	467	0	0	346	82	28	63	101	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		1.00			0.97			0.93				
Flt Protected		1.00			1.00			0.99				
Satd. Flow (prot)		1707			1670			1581				
Flt Permitted		0.94			1.00			0.99				
Satd. Flow (perm)		1604			1670			1581				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	49	519	0	0	384	91	31	70	112	0	0	0
RTOR Reduction (vph)	0	0	0	0	13	0	0	61	0	0	0	0
Lane Group Flow (vph)	0	568	0	0	462	0	0	152	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)		34.0			34.0			23.0				
Effective Green, g (s)		34.0			34.0			23.0				
Actuated g/C Ratio		0.52			0.52			0.35				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		839			874			559				
v/s Ratio Prot					0.28							
v/s Ratio Perm		c0.35						0.10				
v/c Ratio		0.68			0.53			0.27				
Uniform Delay, d1		11.4			10.2			15.0				
Progression Factor		1.00			0.66			1.00				
Incremental Delay, d2		4.4			1.8			1.2				
Delay (s)		15.8			8.5			16.2				
Level of Service		B			A			B				
Approach Delay (s)		15.8			8.5			16.2			0.0	
Approach LOS		B			A			B			A	

Intersection Summary			
HCM Average Control Delay	13.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	74.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1036: 111th Street & Wentworth Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱			↰↑↑↱			↰↑↑↱	
Volume (vph)	45	418	34	20	425	49	26	175	35	51	107	21
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	12	12	12	12	12
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		1.00			1.00			0.99			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.99			0.99			0.98			0.98	
Flt Protected		1.00			1.00			0.99			0.99	
Satd. Flow (prot)		1886			1843			3185			3148	
Flt Permitted		0.93			0.97			0.91			0.83	
Satd. Flow (perm)		1759			1795			2928			2639	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	50	464	38	22	472	54	29	194	39	57	119	23
RTOR Reduction (vph)	0	4	0	0	6	0	0	22	0	0	13	0
Lane Group Flow (vph)	0	548	0	0	542	0	0	240	0	0	186	0
Confl. Peds. (#/hr)	29		16	16		29	28		14	14		28
Confl. Bikes (#/hr)	1					1	1					1
Heavy Vehicles (%)	3%	7%	4%	12%	8%	13%	0%	4%	4%	4%	4%	6%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		30.0			30.0			27.0			27.0	
Effective Green, g (s)		30.0			30.0			27.0			27.0	
Actuated g/C Ratio		0.46			0.46			0.42			0.42	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		812			828			1216			1096	
v/s Ratio Prot												
v/s Ratio Perm		c0.31			0.30			c0.08			0.07	
v/c Ratio		0.67			0.65			0.20			0.17	
Uniform Delay, d1		13.7			13.5			12.1			11.9	
Progression Factor		0.67			0.55			0.86			0.55	
Incremental Delay, d2		3.5			3.9			0.4			0.3	
Delay (s)		12.7			11.3			10.8			6.9	
Level of Service		B			B			B			A	
Approach Delay (s)		12.7			11.3			10.8			6.9	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM Average Control Delay	11.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	81.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1037: 111th Street & State Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	52	281	23	28	347	61	55	319	89	48	96	29
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	9	10	10	9	10	10	12	10	10	12
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		0.99	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.98		1.00	0.97		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1503	2933		1584	2945		1497	3034		1594	2899	
Flt Permitted	0.43	1.00		0.53	1.00		0.66	1.00		0.48	1.00	
Satd. Flow (perm)	684	2933		884	2945		1046	3034		809	2899	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	58	312	26	31	386	68	61	354	99	53	107	32
RTOR Reduction (vph)	0	9	0	0	22	0	0	39	0	0	15	0
Lane Group Flow (vph)	58	329	0	31	432	0	61	414	0	53	124	0
Confl. Peds. (#/hr)	25		14	14		25	12		4	4		12
Confl. Bikes (#/hr)	1					1			1	1		
Heavy Vehicles (%)	5%	7%	12%	0%	6%	2%	6%	1%	3%	0%	4%	12%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	22.0	22.0		22.0	22.0		35.0	35.0		35.0	35.0	
Effective Green, g (s)	22.0	22.0		22.0	22.0		35.0	35.0		35.0	35.0	
Actuated g/C Ratio	0.34	0.34		0.34	0.34		0.54	0.54		0.54	0.54	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	232	993		299	997		563	1634		436	1561	
v/s Ratio Prot		0.11			c0.15			c0.14			0.04	
v/s Ratio Perm	0.08			0.04			0.06			0.07		
v/c Ratio	0.25	0.33		0.10	0.43		0.11	0.25		0.12	0.08	
Uniform Delay, d1	15.5	16.0		14.7	16.7		7.4	8.0		7.4	7.2	
Progression Factor	0.58	0.55		0.76	0.79		0.70	0.75		1.30	1.35	
Incremental Delay, d2	2.1	0.7		0.7	1.3		0.4	0.4		0.6	0.1	
Delay (s)	11.0	9.6		11.9	14.4		5.5	6.3		10.2	9.8	
Level of Service	B	A		B	B		A	A		B	A	
Approach Delay (s)		9.8			14.3			6.2			9.9	
Approach LOS		A			B			A			A	

Intersection Summary			
HCM Average Control Delay	10.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	46.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1038: 111th Street & Michigan Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			↰↑↱			↰↑↱	
Volume (vph)	84	393	28	37	371	82	20	308	44	41	118	41
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	9	10	9	9	16	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			1.00			0.99	
Flpb, ped/bikes	0.97	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.97			0.98			0.97	
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.99	
Satd. Flow (prot)	1385	3013		1335	3540			3438			3303	
Flt Permitted	0.46	1.00		0.48	1.00			0.94			0.84	
Satd. Flow (perm)	665	3013		672	3540			3226			2808	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	88	414	29	39	391	86	21	324	46	43	124	43
RTOR Reduction (vph)	0	8	0	0	29	0	0	16	0	0	26	0
Lane Group Flow (vph)	88	435	0	39	448	0	0	375	0	0	184	0
Confl. Peds. (#/hr)	53		34	34		53	67		28	28		67
Heavy Vehicles (%)	8%	5%	0%	14%	6%	1%	0%	9%	20%	5%	15%	5%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	31.0	31.0		31.0	31.0			26.0			26.0	
Effective Green, g (s)	31.0	31.0		31.0	31.0			26.0			26.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48			0.40			0.40	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	317	1437		320	1688			1290			1123	
v/s Ratio Prot		c0.14			0.13							
v/s Ratio Perm	0.13			0.06				c0.12			0.07	
v/c Ratio	0.28	0.30		0.12	0.27			0.29			0.16	
Uniform Delay, d1	10.2	10.4		9.4	10.2			13.2			12.5	
Progression Factor	1.59	1.64		0.78	0.77			0.23			0.64	
Incremental Delay, d2	2.1	0.5		0.7	0.3			0.5			0.3	
Delay (s)	18.5	17.6		8.1	8.1			3.6			8.3	
Level of Service	B	B		A	A			A			A	
Approach Delay (s)		17.7			8.1			3.6			8.3	
Approach LOS		B			A			A			A	

Intersection Summary			
HCM Average Control Delay	10.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	59.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1039: 111th Street & Indiana Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰↱			✥			✥	
Volume (vph)	99	303	100	104	357	104	88	84	88	88	84	82
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	16	12	12	16	12
Total Lost time (s)		5.0	5.0		5.0			5.0			5.0	
Lane Util. Factor		1.00	1.00		0.95			1.00			1.00	
Frt		1.00	0.85		0.97			0.95			0.96	
Flt Protected		0.99	1.00		0.99			0.98			0.98	
Satd. Flow (prot)		1637	1409		3034			1823			1826	
Flt Permitted		0.74	1.00		0.76			0.79			0.78	
Satd. Flow (perm)		1227	1409		2325			1456			1442	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	110	337	111	116	397	116	98	93	98	98	93	91
RTOR Reduction (vph)	0	0	53	0	30	0	0	28	0	0	26	0
Lane Group Flow (vph)	0	447	58	0	599	0	0	261	0	0	256	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm		Perm	Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)		34.0	34.0		34.0			21.0			21.0	
Effective Green, g (s)		34.0	34.0		34.0			21.0			21.0	
Actuated g/C Ratio		0.52	0.52		0.52			0.32			0.32	
Clearance Time (s)		5.0	5.0		5.0			5.0			5.0	
Lane Grp Cap (vph)		642	737		1216			470			466	
v/s Ratio Prot												
v/s Ratio Perm		c0.36	0.04		0.26			c0.18			0.18	
v/c Ratio		0.70	0.08		0.49			0.55			0.55	
Uniform Delay, d1		11.6	7.7		10.0			18.1			18.1	
Progression Factor		2.00	5.72		0.42			1.00			1.00	
Incremental Delay, d2		6.0	0.2		1.4			4.7			4.6	
Delay (s)		29.3	44.3		5.6			22.8			22.7	
Level of Service		C	D		A			C			C	
Approach Delay (s)		32.3			5.6			22.8			22.7	
Approach LOS		C			A			C			C	

Intersection Summary			
HCM Average Control Delay	19.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	72.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1040: 111th Street & Martin Luther King Jr Drive

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			↰↑↱			↰↑↱	
Volume (vph)	74	384	21	15	442	63	37	103	41	43	90	98
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	15	8	16	8	8	16	8
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			1.00			0.99	
Flpb, ped/bikes	0.99	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.98			0.97			0.94	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1475	3018		1573	3002			3454			3403	
Flt Permitted	0.39	1.00		0.46	1.00			0.87			0.88	
Satd. Flow (perm)	606	3018		768	3002			3030			3014	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	82	427	23	17	491	70	41	114	46	48	100	109
RTOR Reduction (vph)	0	6	0	0	17	0	0	25	0	0	60	0
Lane Group Flow (vph)	82	444	0	17	544	0	0	176	0	0	197	0
Confl. Peds. (#/hr)	22		40	40		22	18		3	3		18
Confl. Bikes (#/hr)			2	2			1					1
Heavy Vehicles (%)	7%	5%	0%	0%	4%	2%	0%	3%	22%	0%	3%	8%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	28.0	28.0		28.0	28.0			29.0			29.0	
Effective Green, g (s)	28.0	28.0		28.0	28.0			29.0			29.0	
Actuated g/C Ratio	0.43	0.43		0.43	0.43			0.45			0.45	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	261	1300		331	1293			1352			1345	
v/s Ratio Prot		0.15			c0.18							
v/s Ratio Perm	0.14			0.02				0.06			c0.07	
v/c Ratio	0.31	0.34		0.05	0.42			0.13			0.15	
Uniform Delay, d1	12.2	12.3		10.8	12.9			10.6			10.7	
Progression Factor	0.97	1.00		1.15	0.99			1.05			0.80	
Incremental Delay, d2	2.4	0.5		0.1	0.5			0.2			0.2	
Delay (s)	14.1	12.9		12.5	13.2			11.3			8.8	
Level of Service	B	B		B	B			B			A	
Approach Delay (s)		13.0			13.2			11.3			8.8	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM Average Control Delay	12.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	59.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1041: 111th Street & Cottage Grove Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↑↱			↰↑↑↱			↰↑↑↱			↰↑↑↱	
Volume (vph)	86	456	73	94	464	284	48	332	92	222	159	52
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			0.95			0.95	
Frt		0.98			0.95			0.97			0.98	
Flt Protected		0.99			0.99			0.99			0.98	
Satd. Flow (prot)		3177			3075			3146			3118	
Flt Permitted		0.63			0.74			0.88			0.63	
Satd. Flow (perm)		2018			2281			2771			2008	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	96	507	81	104	516	316	53	369	102	247	177	58
RTOR Reduction (vph)	0	16	0	0	99	0	0	33	0	0	17	0
Lane Group Flow (vph)	0	668	0	0	837	0	0	491	0	0	465	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm			pm+pt			Perm		
Protected Phases		4			8		5	2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		26.0			26.0			29.0			20.0	
Effective Green, g (s)		26.0			26.0			29.0			20.0	
Actuated g/C Ratio		0.40			0.40			0.45			0.31	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		807			912			1271			618	
v/s Ratio Prot								c0.04				
v/s Ratio Perm		0.33			c0.37			0.14			c0.23	
v/c Ratio		0.83			0.92			0.39			0.96dl	
Uniform Delay, d1		17.5			18.5			12.0			20.3	
Progression Factor		1.74			1.00			1.00			0.89	
Incremental Delay, d2		9.4			15.5			0.9			8.3	
Delay (s)		39.8			34.0			12.9			26.3	
Level of Service		D			C			B			C	
Approach Delay (s)		39.8			34.0			12.9			26.3	
Approach LOS		D			C			B			C	

Intersection Summary			
HCM Average Control Delay	29.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	88.6%	ICU Level of Service	E
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1042: 111th Street & Ellis Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↑↱			↰↑↑↱			↰↑↱			↰↑↱	
Volume (vph)	0	724	119	45	759	0	137	0	70	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	10	10	12	12	12	12	10	10	10
Total Lost time (s)		5.0			5.0			5.0				
Lane Util. Factor		0.95			0.95			1.00				
Frt		0.98			1.00			0.95				
Flt Protected		1.00			1.00			0.97				
Satd. Flow (prot)		2976			3032			1583				
Flt Permitted		1.00			0.84			0.80				
Satd. Flow (perm)		2976			2543			1310				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	804	132	50	843	0	152	0	78	0	0	0
RTOR Reduction (vph)	0	18	0	0	0	0	0	21	0	0	0	0
Lane Group Flow (vph)	0	918	0	0	893	0	0	209	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	custom			Perm			Perm			Perm		
Protected Phases		4 5 6 11			8			2			2	
Permitted Phases	4 6 11			8			2			2		
Actuated Green, G (s)		65.0			33.0			16.0				
Effective Green, g (s)		58.0			33.0			16.0				
Actuated g/C Ratio		0.64			0.37			0.18				
Clearance Time (s)					5.0			5.0				
Lane Grp Cap (vph)		1918			932			233				
v/s Ratio Prot		c0.31										
v/s Ratio Perm					c0.35			c0.16				
v/c Ratio		0.48			0.96			0.90				
Uniform Delay, d1		8.2			27.8			36.2				
Progression Factor		0.04			1.57			1.00				
Incremental Delay, d2		0.4			18.9			37.6				
Delay (s)		0.7			62.5			73.8				
Level of Service		A			E			E				
Approach Delay (s)		0.7			62.5			73.8			0.0	
Approach LOS		A			E			E			A	

Intersection Summary			
HCM Average Control Delay	35.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	73.7%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1043: 111th Street & Doty Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↑	↱		✥		↰	↑	↱
Volume (vph)	123	502	188	274	646	183	103	20	185	78	7	77
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	10	12	12	12	12	16	12	12	12	12
Total Lost time (s)	3.0	5.0		3.0	5.0	3.0		5.0		3.0	5.0	3.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00		1.00	1.00	1.00
Frt	1.00	0.96		1.00	1.00	0.85		0.92		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.98		0.95	1.00	1.00
Satd. Flow (prot)	1520	3020		1629	3257	1457		1756		1629	1714	1457
Flt Permitted	0.32	1.00		0.20	1.00	1.00		0.89		0.40	1.00	1.00
Satd. Flow (perm)	508	3020		339	3257	1457		1581		690	1714	1457
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	137	558	209	304	718	203	114	22	206	87	8	86
RTOR Reduction (vph)	0	42	0	0	0	104	0	74	0	0	0	46
Lane Group Flow (vph)	137	725	0	304	718	99	0	268	0	87	8	40
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	pm+pt			pm+pt		pm+ov	pm+pt			pm+pt		pm+ov
Protected Phases	7	4		3	8	1	5	2		1	6	7
Permitted Phases	4			8		8	2			6		6
Actuated Green, G (s)	40.0	30.6		47.6	35.2	43.8		20.8		32.4	32.4	41.8
Effective Green, g (s)	40.0	30.6		47.6	35.2	43.8		20.8		32.4	32.4	41.8
Actuated g/C Ratio	0.44	0.34		0.53	0.39	0.49		0.23		0.36	0.36	0.46
Clearance Time (s)	3.0	5.0		3.0	5.0	3.0		5.0		3.0	5.0	3.0
Vehicle Extension (s)	4.0	3.0		4.0	3.0	3.0		4.0		3.0	4.0	4.0
Lane Grp Cap (vph)	331	1027		380	1274	709		365		338	617	677
v/s Ratio Prot	0.04	0.24		c0.12	0.22	0.01				c0.02	0.00	0.01
v/s Ratio Perm	0.14			c0.30		0.05		c0.17		0.07		0.02
v/c Ratio	0.41	0.71		0.80	0.56	0.14		0.73		0.26	0.01	0.06
Uniform Delay, d1	15.4	25.8		14.8	21.4	12.7		32.0		21.2	18.5	13.3
Progression Factor	1.91	1.58		1.00	1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2	1.0	3.7		12.0	1.8	0.1		8.0		0.4	0.0	0.1
Delay (s)	30.5	44.5		26.8	23.2	12.8		40.0		21.6	18.5	13.3
Level of Service	C	D		C	C	B		D		C	B	B
Approach Delay (s)		42.3			22.4			40.0			17.5	
Approach LOS		D			C			D			B	

Intersection Summary			
HCM Average Control Delay	31.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	74.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
1044: 111th Street & Bishop Ford Freeway EB Ramps

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↑↑					↰		↱
Volume (veh/h)	0	518	247	6	531	0	0	0	0	32	0	572
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	576	274	7	590	0	0	0	0	36	0	636
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		498										
pX, platoon unblocked												
vC, conflicting volume	590			576			884	1179	288	891	1179	295
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	590			576			884	1179	288	891	1179	295
tC, single (s)	4.2			4.2			7.6	6.6	7.0	7.6	6.6	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			100	100	100	85	100	8
cM capacity (veh/h)	961			973			19	184	700	231	184	692

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1	SB 2
Volume Total	288	288	274	203	393	36	636
Volume Left	0	0	0	7	0	36	0
Volume Right	0	0	274	0	0	0	636
cSH	1700	1700	1700	973	1700	231	692
Volume to Capacity	0.17	0.17	0.16	0.01	0.23	0.15	0.92
Queue Length 95th (ft)	0	0	0	1	0	13	307
Control Delay (s)	0.0	0.0	0.0	0.4	0.0	23.4	41.6
Lane LOS				A		C	E
Approach Delay (s)	0.0			0.1		40.6	
Approach LOS						E	

Intersection Summary			
Average Delay	12.9		
Intersection Capacity Utilization	59.7%	ICU Level of Service	B
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
1045: 111th Street & Bishop Ford Freeway WB Ramps

1/14/2013

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰↰		↰			
Sign Control	Stop			Stop	Stop	
Volume (vph)	550	0	537	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	611	0	597	0	0	0

Direction, Lane #	EB 1	EB 2	NB 1
Volume Total (vph)	306	306	597
Volume Left (vph)	306	306	597
Volume Right (vph)	0	0	0
Hadj (s)	0.58	0.58	0.29
Departure Headway (s)	7.0	7.0	5.8
Degree Utilization, x	0.59	0.59	0.95
Capacity (veh/h)	513	513	618
Control Delay (s)	18.3	18.3	49.2
Approach Delay (s)	18.3		49.2
Approach LOS	C		E

Intersection Summary			
Delay	33.5		
HCM Level of Service	D		
Intersection Capacity Utilization	54.6%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Signalized Intersection Capacity Analysis
1046: 115th Street & Marshield Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱		↰	↑↑						↰↑↱	
Volume (vph)	0	353	46	127	326	0	0	0	0	72	15	42
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	12	12	12	12	12
Total Lost time (s)		3.0		4.0	4.0						5.0	
Lane Util. Factor		0.95		1.00	0.95						0.95	
Frt		0.98		1.00	1.00						0.95	
Flt Protected		1.00		0.95	1.00						0.97	
Satd. Flow (prot)		3094		1574	3149						3014	
Flt Permitted		1.00		0.44	1.00						0.97	
Satd. Flow (perm)		3094		730	3149						3014	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	392	51	141	362	0	0	0	0	80	17	47
RTOR Reduction (vph)	0	12	0	0	0	0	0	0	0	0	32	0
Lane Group Flow (vph)	0	431	0	141	362	0	0	0	0	0	112	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type				pm+pt						Split		
Protected Phases		4		3	8					6	6	
Permitted Phases				8								
Actuated Green, G (s)		36.0		49.0	49.0						27.0	
Effective Green, g (s)		36.0		49.0	49.0						27.0	
Actuated g/C Ratio		0.42		0.58	0.58						0.32	
Clearance Time (s)		3.0		4.0	4.0						5.0	
Lane Grp Cap (vph)		1310		520	1815						957	
v/s Ratio Prot		c0.14		c0.03	0.11						c0.04	
v/s Ratio Perm				0.12								
v/c Ratio		0.33		0.27	0.20						0.12	
Uniform Delay, d1		16.4		11.5	8.6						20.6	
Progression Factor		1.00		0.27	0.24						1.00	
Incremental Delay, d2		0.7		1.2	0.2						0.2	
Delay (s)		17.1		4.4	2.3						20.8	
Level of Service		B		A	A						C	
Approach Delay (s)		17.1			2.9			0.0			20.8	
Approach LOS		B			A			A			C	

Intersection Summary			
HCM Average Control Delay	11.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.23		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	34.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑			↑↱			↰↑↱				
Volume (vph)	68	357	0	0	404	76	49	65	45	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	11	11	12	12	12	12	12	12
Total Lost time (s)	5.0	5.0			3.0			5.0				
Lane Util. Factor	1.00	0.95			0.95			0.91				
Frt	1.00	1.00			0.98			0.96				
Flt Protected	0.95	1.00			1.00			0.98				
Satd. Flow (prot)	1629	3257			3074			4413				
Flt Permitted	0.38	1.00			1.00			0.98				
Satd. Flow (perm)	650	3257			3074			4413				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	76	397	0	0	449	84	54	72	50	0	0	0
RTOR Reduction (vph)	0	0	0	0	18	0	0	34	0	0	0	0
Lane Group Flow (vph)	76	397	0	0	515	0	0	142	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	pm+pt						Split					
Protected Phases	7	4			8		2	2				
Permitted Phases	4											
Actuated Green, G (s)	48.0	48.0			35.0			27.0				
Effective Green, g (s)	48.0	48.0			35.0			27.0				
Actuated g/C Ratio	0.56	0.56			0.41			0.32				
Clearance Time (s)	5.0	5.0			3.0			5.0				
Lane Grp Cap (vph)	482	1839			1266			1402				
v/s Ratio Prot	0.02	c0.12			c0.17			c0.03				
v/s Ratio Perm	0.07											
v/c Ratio	0.16	0.22			0.41			0.10				
Uniform Delay, d1	12.2	9.2			17.7			20.4				
Progression Factor	0.33	0.32			1.00			1.00				
Incremental Delay, d2	0.7	0.3			1.0			0.1				
Delay (s)	4.6	3.2			18.6			20.6				
Level of Service	A	A			B			C				
Approach Delay (s)		3.5			18.6			20.6			0.0	
Approach LOS		A			B			C			A	

Intersection Summary			
HCM Average Control Delay	12.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	34.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1048: 115th Street & Racine Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↑↱			↰↑↑↱			↰↑↱			↰↑↱	
Volume (vph)	39	323	39	34	247	31	118	85	61	58	91	126
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	10	12	12	15	12	12	15	12
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			1.00			1.00	
Frt		0.99			0.99			0.97			0.94	
Flt Protected		1.00			0.99			0.98			0.99	
Satd. Flow (prot)		2982			2979			1787			1750	
Flt Permitted		0.89			0.87			0.75			0.88	
Satd. Flow (perm)		2664			2613			1378			1560	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	43	359	43	38	274	34	131	94	68	64	101	140
RTOR Reduction (vph)	0	12	0	0	13	0	0	17	0	0	47	0
Lane Group Flow (vph)	0	433	0	0	333	0	0	276	0	0	258	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		23.0			23.0			32.0			32.0	
Effective Green, g (s)		23.0			23.0			32.0			32.0	
Actuated g/C Ratio		0.35			0.35			0.49			0.49	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		943			925			678			768	
v/s Ratio Prot												
v/s Ratio Perm		c0.16			0.13			c0.20			0.17	
v/c Ratio		0.46			0.36			0.41			0.34	
Uniform Delay, d1		16.2			15.6			10.5			10.0	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		1.6			1.1			1.8			1.2	
Delay (s)		17.8			16.6			12.3			11.2	
Level of Service		B			B			B			B	
Approach Delay (s)		17.8			16.6			12.3			11.2	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	14.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	63.7%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1049: 115th Street & Halsted Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↑	↱	↰	↑↑	↱
Volume (vph)	196	202	39	50	176	62	71	1009	70	75	430	87
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	12	10	16	12	9	10	9	9	10	9
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00	0.98	1.00	1.00	0.96
Flpb, ped/bikes	0.99	1.00		1.00	1.00		0.99	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.98		1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1548	3005		1592	3512		1486	3040	1347	1494	3011	1271
Flt Permitted	0.59	1.00		0.58	1.00		0.43	1.00	1.00	0.12	1.00	1.00
Satd. Flow (perm)	954	3005		975	3512		673	3040	1347	197	3011	1271
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	206	213	41	53	185	65	75	1062	74	79	453	92
RTOR Reduction (vph)	0	19	0	0	41	0	0	0	43	0	0	56
Lane Group Flow (vph)	206	235	0	53	209	0	75	1062	31	79	453	36
Confl. Peds. (#/hr)	31		7	7		31	37		12	12		37
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	2%	4%	0%	0%	6%	2%	3%	5%	0%	3%	6%	4%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	32.0	27.0		32.0	27.0		38.0	33.0	33.0	38.0	33.0	33.0
Effective Green, g (s)	30.0	28.0		30.0	28.0		36.0	33.0	33.0	36.0	33.0	33.0
Actuated g/C Ratio	0.35	0.33		0.35	0.33		0.42	0.39	0.39	0.42	0.39	0.39
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)	365	990		373	1157		323	1180	523	144	1169	493
v/s Ratio Prot	c0.03	0.08		0.01	0.06		0.01	c0.35		c0.03	0.15	
v/s Ratio Perm	c0.17			0.04			0.09		0.02	c0.21		0.03
v/c Ratio	0.56	0.24		0.14	0.18		0.23	0.90	0.06	0.55	0.39	0.07
Uniform Delay, d1	21.3	20.7		18.4	20.3		15.0	24.4	16.3	17.5	18.7	16.4
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	2.00	0.61	0.80
Incremental Delay, d2	6.2	0.6		0.8	0.3		1.7	11.0	0.2	12.9	0.9	0.3
Delay (s)	27.5	21.3		19.2	20.7		16.7	35.5	16.5	47.9	12.3	13.4
Level of Service	C	C		B	C		B	D	B	D	B	B
Approach Delay (s)		24.1			20.4			33.1			16.9	
Approach LOS		C			C			C			B	

Intersection Summary			
HCM Average Control Delay	26.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	72.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1050: 115th Street & Wentworth Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱		↰	↱		↰	↱
Volume (vph)	40	256	18	14	216	8	35	121	25	20	59	42
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	16	12	12	16	12
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frpb, ped/bikes		1.00	0.96		1.00	0.97		1.00	0.99		1.00	0.98
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frt		1.00	0.85		1.00	0.85		1.00	0.85		1.00	0.85
Flt Protected		0.99	1.00		1.00	1.00		0.99	1.00		0.99	1.00
Satd. Flow (prot)		1929	1382		1950	1331		1973	1452		1928	1430
Flt Permitted		0.94	1.00		0.98	1.00		0.94	1.00		0.93	1.00
Satd. Flow (perm)		1823	1382		1910	1331		1866	1452		1811	1430
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	42	269	19	15	227	8	37	127	26	21	62	44
RTOR Reduction (vph)	0	0	10	0	0	4	0	0	15	0	0	26
Lane Group Flow (vph)	0	311	9	0	242	4	0	164	11	0	83	18
Confl. Peds. (#/hr)	5		21	21		5	9		1	1		9
Heavy Vehicles (%)	5%	5%	6%	7%	4%	12%	6%	1%	4%	0%	6%	5%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)		30.0	30.0		30.0	30.0		27.0	27.0		27.0	27.0
Effective Green, g (s)		30.0	30.0		30.0	30.0		27.0	27.0		27.0	27.0
Actuated g/C Ratio		0.46	0.46		0.46	0.46		0.42	0.42		0.42	0.42
Clearance Time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		841	638		882	614		775	603		752	594
v/s Ratio Prot												
v/s Ratio Perm		c0.17	0.01		0.13	0.00		c0.09	0.01		0.05	0.01
v/c Ratio		0.37	0.01		0.27	0.01		0.21	0.02		0.11	0.03
Uniform Delay, d1		11.4	9.5		10.8	9.4		12.2	11.2		11.6	11.3
Progression Factor		1.00	1.00		0.47	0.37		1.12	1.39		0.95	0.86
Incremental Delay, d2		1.3	0.0		0.8	0.0		0.6	0.1		0.3	0.1
Delay (s)		12.6	9.5		5.8	3.5		14.2	15.6		11.3	9.8
Level of Service		B	A		A	A		B	B		B	A
Approach Delay (s)		12.4			5.7			14.4			10.8	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM Average Control Delay	10.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.29		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	61.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	66	285	10	17	211	34	13	247	35	47	70	30
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	0.98		1.00	0.98		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1520	3025		1520	2976		1520	2983		1520	2904	
Flt Permitted	0.95	1.00		0.55	1.00		0.68	1.00		0.54	1.00	
Satd. Flow (perm)	1520	3025		886	2976		1091	2983		871	2904	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	73	317	11	19	234	38	14	274	39	52	78	33
RTOR Reduction (vph)	0	4	0	0	20	0	0	17	0	0	19	0
Lane Group Flow (vph)	73	324	0	19	252	0	14	296	0	52	92	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Prot			Perm			Perm			Perm		
Protected Phases	7	4			8			2			6	
Permitted Phases				8			2			6		
Actuated Green, G (s)	7.0	32.0		22.0	22.0		27.0	27.0		27.0	27.0	
Effective Green, g (s)	7.0	32.0		22.0	22.0		27.0	27.0		27.0	27.0	
Actuated g/C Ratio	0.11	0.49		0.34	0.34		0.42	0.42		0.42	0.42	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	164	1489		300	1007		453	1239		362	1206	
v/s Ratio Prot	c0.05	0.11			c0.08			c0.10			0.03	
v/s Ratio Perm				0.02			0.01			0.06		
v/c Ratio	0.45	0.22		0.06	0.25		0.03	0.24		0.14	0.08	
Uniform Delay, d1	27.2	9.4		14.5	15.5		11.3	12.3		11.8	11.5	
Progression Factor	0.85	0.48		1.01	1.00		0.45	0.45		1.15	1.16	
Incremental Delay, d2	8.3	0.3		0.4	0.6		0.1	0.3		0.8	0.1	
Delay (s)	31.5	4.9		15.1	16.2		5.1	5.8		14.4	13.4	
Level of Service	C	A		B	B		A	A		B	B	
Approach Delay (s)		9.7			16.1			5.8			13.7	
Approach LOS		A			B			A			B	

Intersection Summary			
HCM Average Control Delay	10.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.27		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	37.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1052: 115th Street & Michigan Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			↰↑↱			↰↑↱	
Volume (vph)	37	253	85	242	216	43	43	297	56	25	185	25
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	12	12	12	12	12	12
Total Lost time (s)	4.0	4.0		3.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frt	1.00	0.96		1.00	0.97			0.98			0.98	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1520	2926		1520	2964			3171			3188	
Flt Permitted	0.58	1.00		0.95	1.00			0.89			0.88	
Satd. Flow (perm)	921	2926		1520	2964			2842			2834	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	41	281	94	269	240	48	48	330	62	28	206	28
RTOR Reduction (vph)	0	51	0	0	21	0	0	20	0	0	14	0
Lane Group Flow (vph)	41	324	0	269	267	0	0	420	0	0	248	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Prot			Perm			Perm		
Protected Phases		4		3	8			2			6	
Permitted Phases	4						2			6		
Actuated Green, G (s)	15.0	15.0		19.0	37.0			17.0			17.0	
Effective Green, g (s)	15.0	15.0		19.0	37.0			17.0			17.0	
Actuated g/C Ratio	0.23	0.23		0.29	0.57			0.26			0.26	
Clearance Time (s)	4.0	4.0		3.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	213	675		444	1687			743			741	
v/s Ratio Prot		c0.11		c0.18	0.09							
v/s Ratio Perm	0.04							c0.15			0.09	
v/c Ratio	0.19	0.48		0.61	0.16			0.57			0.33	
Uniform Delay, d1	20.1	21.6		19.8	6.6			20.8			19.4	
Progression Factor	0.64	0.60		1.47	1.29			1.03			0.76	
Incremental Delay, d2	2.0	2.4		4.4	0.1			1.5			1.2	
Delay (s)	14.8	15.3		33.4	8.7			23.0			16.0	
Level of Service	B	B		C	A			C			B	
Approach Delay (s)		15.2			20.6			23.0			16.0	
Approach LOS		B			C			C			B	

Intersection Summary			
HCM Average Control Delay	19.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	56.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1053: 115th Street & Indiana Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			↰↑↑↱				
Volume (vph)	16	298	14	70	466	70	34	94	162	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	12	14	12	10	15	10
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			0.95				
Frt		0.99			0.98			0.92				
Flt Protected		1.00			0.99			0.99				
Satd. Flow (prot)		1587			1566			3164				
Flt Permitted		0.97			0.92			0.99				
Satd. Flow (perm)		1535			1451			3164				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	18	331	16	78	518	78	38	104	180	0	0	0
RTOR Reduction (vph)	0	2	0	0	6	0	0	138	0	0	0	0
Lane Group Flow (vph)	0	363	0	0	668	0	0	184	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm			Perm					
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Actuated Green, G (s)		41.9			41.9			15.1				
Effective Green, g (s)		41.9			41.9			15.1				
Actuated g/C Ratio		0.64			0.64			0.23				
Clearance Time (s)		4.0			4.0			4.0				
Vehicle Extension (s)		3.0			3.0			8.0				
Lane Grp Cap (vph)		989			935			735				
v/s Ratio Prot												
v/s Ratio Perm		0.24			c0.46			0.06				
v/c Ratio		0.37			0.71			0.25				
Uniform Delay, d1		5.4			7.6			20.3				
Progression Factor		2.77			1.00			1.00				
Incremental Delay, d2		0.9			4.6			0.8				
Delay (s)		15.8			12.3			21.1				
Level of Service		B			B			C				
Approach Delay (s)		15.8			12.3			21.1			0.0	
Approach LOS		B			B			C			A	

Intersection Summary			
HCM Average Control Delay	15.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	72.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰↑	↑↱		↰	↱
Volume (veh/h)	96	364	469	44	66	134
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	101	383	494	46	69	141
Pedestrians		3	5		21	
Lane Width (ft)		16.0	16.0		10.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		0	1		1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		1319	491			
pX, platoon unblocked						
vC, conflicting volume	561				937	294
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	561				937	294
tC, single (s)	4.3				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.3				3.5	3.3
p0 queue free %	89				70	80
cM capacity (veh/h)	927				230	690

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	SB 2
Volume Total	229	255	329	211	69	141
Volume Left	101	0	0	0	69	0
Volume Right	0	0	0	46	0	141
cSH	927	1700	1700	1700	230	690
Volume to Capacity	0.11	0.15	0.19	0.12	0.30	0.20
Queue Length 95th (ft)	9	0	0	0	31	19
Control Delay (s)	4.8	0.0	0.0	0.0	27.3	11.6
Lane LOS	A				D	B
Approach Delay (s)	2.2		0.0		16.7	
Approach LOS					C	

Intersection Summary			
Average Delay	3.7		
Intersection Capacity Utilization	43.7%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Signalized Intersection Capacity Analysis
1055: 115th Street & Cottage Grove Avenue

1/14/2013

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	→↘			↙←	↖↗	
Volume (vph)	472	1	27	675	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0			4.0		
Lane Util. Factor	1.00			1.00		
Frt	1.00			1.00		
Flt Protected	1.00			1.00		
Satd. Flow (prot)	1714			1711		
Flt Permitted	1.00			0.97		
Satd. Flow (perm)	1714			1663		
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	524	1	30	750	0	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	525	0	0	780	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%
Turn Type			Perm			
Protected Phases	1 2 4			4	3	
Permitted Phases			4			
Actuated Green, G (s)	73.0			43.0		
Effective Green, g (s)	69.0			43.0		
Actuated g/C Ratio	0.77			0.48		
Clearance Time (s)				4.0		
Lane Grp Cap (vph)	1314			795		
v/s Ratio Prot	c0.31					
v/s Ratio Perm				c0.47		
v/c Ratio	0.40			0.98		
Uniform Delay, d1	3.5			23.1		
Progression Factor	0.03			1.00		
Incremental Delay, d2	0.5			27.7		
Delay (s)	0.6			50.8		
Level of Service	A			D		
Approach Delay (s)	0.6			50.8	0.0	
Approach LOS	A			D	A	

Intersection Summary			
HCM Average Control Delay	30.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	63.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
1056: 115th Street & Bishop Ford Fwy

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱			↰						↰	↱
Volume (veh/h)	0	184	193	25	561	0	0	0	0	3	0	263
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	204	214	28	623	0	0	0	0	3	0	292
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	623			204			991	991	209	781	883	623
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	623			204			991	991	209	781	883	623
tC, single (s)	4.1			5.5			7.5	6.5	6.9	7.5	6.5	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.9			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			97			100	100	100	99	100	31
cM capacity (veh/h)	968			985			62	241	803	282	279	424

Direction, Lane #	EB 1	EB 2	WB 1	SB 1	SB 2
Volume Total	136	283	651	3	292
Volume Left	0	0	28	3	0
Volume Right	0	214	0	0	292
cSH	1700	1700	985	282	424
Volume to Capacity	0.08	0.17	0.03	0.01	0.69
Queue Length 95th (ft)	0	0	2	1	127
Control Delay (s)	0.0	0.0	0.7	17.9	30.3
Lane LOS			A	C	D
Approach Delay (s)	0.0		0.7	30.2	
Approach LOS				D	

Intersection Summary			
Average Delay	6.9		
Intersection Capacity Utilization	57.9%	ICU Level of Service	B
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
1057: 115th Street &

1/14/2013

	↗	↘	↖	↑	↓	↙
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰↰		↰			
Sign Control	Stop			Stop	Stop	
Volume (vph)	187	0	586	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	208	0	651	0	0	0

Direction, Lane #	EB 1	EB 2	NB 1
Volume Total (vph)	104	104	651
Volume Left (vph)	104	104	651
Volume Right (vph)	0	0	0
Hadj (s)	0.58	0.58	0.29
Departure Headway (s)	6.8	6.8	4.9
Degree Utilization, x	0.20	0.20	0.88
Capacity (veh/h)	511	512	734
Control Delay (s)	10.3	10.3	32.1
Approach Delay (s)	10.3		32.1
Approach LOS	B		D

Intersection Summary			
Delay	26.8		
HCM Level of Service	D		
Intersection Capacity Utilization	46.6%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Signalized Intersection Capacity Analysis
1058: 119th Street & Marshield Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↰↑					↰	↰↑↱	↱
Volume (vph)	0	564	210	168	497	0	0	0	0	132	117	300
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	12	13	12	12	12	12	10	10	11
Total Lost time (s)		6.0	6.0		6.0					6.0	6.0	6.0
Lane Util. Factor		0.95	1.00		0.95					0.86	0.81	0.86
Frpb, ped/bikes		1.00	0.98		1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00					1.00	1.00	1.00
Frt		1.00	0.85		1.00					1.00	0.93	0.85
Flt Protected		1.00	1.00		0.99					0.95	0.99	1.00
Satd. Flow (prot)		2978	1202		3372					1346	3693	1122
Flt Permitted		1.00	1.00		0.99					0.95	0.99	1.00
Satd. Flow (perm)		2978	1202		3372					1346	3693	1122
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	594	221	177	523	0	0	0	0	139	123	316
RTOR Reduction (vph)	0	0	142	0	0	0	0	0	0	0	113	94
Lane Group Flow (vph)	0	594	79	0	700	0	0	0	0	76	231	64
Confl. Peds. (#/hr)	5		3	3		5						
Heavy Vehicles (%)	0%	11%	9%	2%	4%	0%	0%	0%	0%	2%	2%	2%
Parking (#/hr)			0									0
Turn Type			Perm	Split						Split		custom
Protected Phases		2		10 12 14	10 12 14					4	4	
Permitted Phases			2									4 2
Actuated Green, G (s)		31.0	31.0		62.6					19.5	19.5	56.5
Effective Green, g (s)		31.0	31.0		62.6					19.5	19.5	56.5
Actuated g/C Ratio		0.22	0.22		0.45					0.14	0.14	0.40
Clearance Time (s)		6.0	6.0							6.0	6.0	
Vehicle Extension (s)		3.0	3.0							3.0	3.0	
Lane Grp Cap (vph)		659	266		1508					187	514	453
v/s Ratio Prot		c0.20			c0.21					0.06	c0.06	
v/s Ratio Perm			0.07									0.06
v/c Ratio		0.90	0.30		0.46					0.41	0.45	0.14
Uniform Delay, d1		53.0	45.4		27.0					55.0	55.3	26.4
Progression Factor		1.00	1.00		0.02					1.00	1.00	1.00
Incremental Delay, d2		17.8	2.8		0.1					1.4	0.6	0.1
Delay (s)		70.8	48.3		0.6					56.4	56.0	26.5
Level of Service		E	D		A					E	E	C
Approach Delay (s)		64.7			0.6			0.0			48.0	
Approach LOS		E			A			A			D	

Intersection Summary			
HCM Average Control Delay	38.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	28.9
Intersection Capacity Utilization	56.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1059: 119th Street & Ashland Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑			↑↑	↱	↰	↰↑↱				
Volume (vph)	212	484	0	0	427	93	238	150	178	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	13	12	12	11	12	13	13	14	12	12	12
Total Lost time (s)	6.0	6.0			6.0	6.0	6.0	6.0				
Lane Util. Factor	1.00	0.95			0.95	1.00	0.91	0.91				
Frt	1.00	1.00			1.00	0.85	1.00	0.93				
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.99				
Satd. Flow (prot)	1574	3366			3149	1457	1531	2975				
Flt Permitted	0.95	1.00			1.00	1.00	0.95	0.99				
Satd. Flow (perm)	1574	3366			3149	1457	1531	2975				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	236	538	0	0	474	103	264	167	198	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	85	0	117	0	0	0	0
Lane Group Flow (vph)	236	538	0	0	474	18	216	296	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Split					Perm	Split					
Protected Phases	2 4 8	2 4 8			10		12	12				
Permitted Phases						10						
Actuated Green, G (s)	69.4	69.4			24.7	24.7	19.9	19.9				
Effective Green, g (s)	69.4	69.4			24.7	24.7	19.9	19.9				
Actuated g/C Ratio	0.50	0.50			0.18	0.18	0.14	0.14				
Clearance Time (s)					6.0	6.0	6.0	6.0				
Vehicle Extension (s)					3.0	3.0	3.0	3.0				
Lane Grp Cap (vph)	780	1669			556	257	218	423				
v/s Ratio Prot	0.15	c0.16			c0.15		c0.14	0.10				
v/s Ratio Perm						0.01						
v/c Ratio	0.30	0.32			0.85	0.07	0.99	0.70				
Uniform Delay, d1	20.9	21.2			55.9	48.1	60.0	57.2				
Progression Factor	0.07	0.07			1.00	1.00	1.00	1.00				
Incremental Delay, d2	0.1	0.1			12.0	0.1	58.2	5.2				
Delay (s)	1.7	1.6			67.9	48.2	118.1	62.4				
Level of Service	A	A			E	D	F	E				
Approach Delay (s)		1.6			64.4			81.5			0.0	
Approach LOS		A			E			F			A	

Intersection Summary			
HCM Average Control Delay	45.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	28.0
Intersection Capacity Utilization	51.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1060: 119th Street & Halsted Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↱		↰	↑↱		↰	↑↱	
Volume (vph)	220	452	75	56	186	54	88	824	148	93	448	104
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	14	12	10	10	12	9	10	12
Total Lost time (s)	4.0	4.0	5.0	4.0	5.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.99	1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	0.99	1.00	1.00	1.00	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.97		1.00	0.98		1.00	0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1538	1556	1327	1596	1724		1525	2931		1509	2870	
Flt Permitted	0.46	1.00	1.00	0.20	1.00		0.34	1.00		0.12	1.00	
Satd. Flow (perm)	749	1556	1327	340	1724		542	2931		192	2870	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	232	476	79	59	196	57	93	867	156	98	472	109
RTOR Reduction (vph)	0	0	53	0	12	0	0	16	0	0	22	0
Lane Group Flow (vph)	232	476	26	59	241	0	93	1007	0	98	559	0
Confl. Peds. (#/hr)	33		3	3		33	42		8	8		42
Confl. Bikes (#/hr)							1					1
Heavy Vehicles (%)	3%	8%	6%	0%	7%	5%	4%	5%	11%	2%	6%	9%
Turn Type	pm+pt		Perm	pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)	36.3	29.3	29.3	33.3	27.8		39.6	34.1		39.6	34.1	
Effective Green, g (s)	34.3	30.3	29.3	31.3	27.8		37.6	34.1		37.6	34.1	
Actuated g/C Ratio	0.38	0.34	0.33	0.35	0.31		0.42	0.38		0.42	0.38	
Clearance Time (s)	3.0	5.0	5.0	3.0	5.0		3.0	4.0		3.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	340	527	435	182	536		277	1118		147	1095	
v/s Ratio Prot	c0.05	c0.31		0.02	0.14		0.02	c0.34		c0.03	0.19	
v/s Ratio Perm	0.22		0.02	0.10			0.12			0.25		
v/c Ratio	0.68	0.90	0.06	0.32	0.45		0.34	0.90		0.67	0.51	
Uniform Delay, d1	22.7	28.2	20.6	21.1	24.7		16.3	26.1		18.8	21.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	5.6	21.4	0.3	1.0	2.7		0.7	11.6		10.9	1.7	
Delay (s)	28.3	49.5	20.9	22.1	27.4		17.0	37.6		29.6	22.9	
Level of Service	C	D	C	C	C		B	D		C	C	
Approach Delay (s)		40.4			26.4			35.9			23.9	
Approach LOS		D			C			D			C	

Intersection Summary			
HCM Average Control Delay	33.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	89.4	Sum of lost time (s)	12.0
Intersection Capacity Utilization	79.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1061: 119th Street & Wentworth Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱		✣			✣	
Volume (vph)	44	568	16	26	257	28	35	80	102	45	44	39
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	10	10	10	12	15	12	12	16	12
Total Lost time (s)		3.0	3.0		3.0	3.0		3.0			3.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00			1.00	
Frpb, ped/bikes		1.00	0.97		1.00	0.97		0.99			0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00			1.00	
Frt		1.00	0.85		1.00	0.85		0.94			0.96	
Flt Protected		1.00	1.00		1.00	1.00		0.99			0.98	
Satd. Flow (prot)		1908	1482		1599	1198		1812			1823	
Flt Permitted		0.96	1.00		0.93	1.00		0.95			0.86	
Satd. Flow (perm)		1844	1482		1499	1198		1732			1604	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	46	598	17	27	271	29	37	84	107	47	46	41
RTOR Reduction (vph)	0	0	6	0	0	15	0	49	0	0	24	0
Lane Group Flow (vph)	0	644	11	0	298	14	0	179	0	0	110	0
Confl. Peds. (#/hr)	6		11	11		6	4		8	8		4
Confl. Bikes (#/hr)	1		1	1		1			1	1		
Heavy Vehicles (%)	0%	7%	0%	0%	5%	16%	0%	0%	0%	10%	0%	3%
Turn Type	Perm		Perm	Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)		32.0	32.0		32.0	32.0		27.0			27.0	
Effective Green, g (s)		32.0	32.0		32.0	32.0		27.0			27.0	
Actuated g/C Ratio		0.49	0.49		0.49	0.49		0.42			0.42	
Clearance Time (s)		3.0	3.0		3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)		908	730		738	590		719			666	
v/s Ratio Prot												
v/s Ratio Perm		c0.35	0.01		0.20	0.01		c0.10			0.07	
v/c Ratio		0.71	0.01		0.40	0.02		0.25			0.17	
Uniform Delay, d1		12.9	8.4		10.5	8.5		12.4			11.9	
Progression Factor		1.00	1.00		0.67	0.46		1.00			1.37	
Incremental Delay, d2		4.7	0.0		1.6	0.1		0.8			0.5	
Delay (s)		17.5	8.5		8.5	4.0		13.2			16.8	
Level of Service		B	A		A	A		B			B	
Approach Delay (s)		17.3			8.1			13.2			16.8	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM Average Control Delay	14.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	74.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1062: 119th Street & State Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱		↰	↱		✥	
Volume (vph)	75	627	24	27	238	8	41	228	108	18	53	30
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frpb, ped/bikes		1.00	0.97		1.00	0.98		1.00	0.95		0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		0.96	
Flt Protected		0.99	1.00		1.00	1.00		0.99	1.00		0.99	
Satd. Flow (prot)		1657	1407		1581	1503		1754	1366		1651	
Flt Permitted		0.94	1.00		0.91	1.00		0.94	1.00		0.91	
Satd. Flow (perm)		1557	1407		1447	1503		1655	1366		1520	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	79	660	25	28	251	8	43	240	114	19	56	32
RTOR Reduction (vph)	0	0	8	0	0	3	0	0	67	0	23	0
Lane Group Flow (vph)	0	739	17	0	279	5	0	283	47	0	84	0
Confl. Peds. (#/hr)	11		17	17		11	4		17	17		4
Confl. Bikes (#/hr)	1		1	1		1	1					1
Heavy Vehicles (%)	0%	9%	5%	33%	11%	0%	6%	1%	6%	0%	0%	8%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		39.0	39.0		39.0	39.0		16.0	16.0		16.0	
Effective Green, g (s)		39.0	39.0		39.0	39.0		16.0	16.0		16.0	
Actuated g/C Ratio		0.60	0.60		0.60	0.60		0.25	0.25		0.25	
Clearance Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	
Lane Grp Cap (vph)		934	844		868	902		407	336		374	
v/s Ratio Prot												
v/s Ratio Perm		c0.47	0.01		0.19	0.00		c0.17	0.03		0.06	
v/c Ratio		0.79	0.02		0.32	0.01		0.70	0.14		0.22	
Uniform Delay, d1		9.9	5.3		6.4	5.2		22.3	19.1		19.5	
Progression Factor		2.05	2.13		0.96	0.82		1.00	1.00		0.68	
Incremental Delay, d2		5.5	0.0		0.9	0.0		9.4	0.9		1.4	
Delay (s)		25.7	11.2		7.0	4.3		31.7	20.0		14.6	
Level of Service		C	B		A	A		C	B		B	
Approach Delay (s)		25.3			7.0			28.4			14.6	
Approach LOS		C			A			C			B	

Intersection Summary			
HCM Average Control Delay	21.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	88.5%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1063: 119th Street & Michigan Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		✥			✥			↰	↱
Volume (vph)	676	21	31	9	18	15	26	363	19	9	220	226
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	14	12	12	16	12	12	16	12
Total Lost time (s)		3.0	3.0		3.0			3.0			3.0	3.0
Lane Util. Factor		1.00	1.00		1.00			1.00			1.00	1.00
Frpb, ped/bikes		1.00	0.98		0.98			1.00			1.00	0.92
Flpb, ped/bikes		0.99	1.00		1.00			1.00			1.00	1.00
Frt		1.00	0.85		0.95			0.99			1.00	0.85
Flt Protected		0.95	1.00		0.99			1.00			1.00	1.00
Satd. Flow (prot)		1763	1398		1778			1976			1873	1296
Flt Permitted		0.72	1.00		0.90			0.97			0.99	1.00
Satd. Flow (perm)		1323	1398		1610			1926			1851	1296
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	751	23	34	10	20	17	29	403	21	10	244	251
RTOR Reduction (vph)	0	0	10	0	9	0	0	3	0	0	0	178
Lane Group Flow (vph)	0	774	24	0	38	0	0	450	0	0	254	73
Confl. Peds. (#/hr)	49		22	22		49	34		17	17		34
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	9%	0%	7%	0%	0%	0%	0%	2%	0%	0%	9%	9%
Turn Type	pm+pt		Perm	Perm			Perm			Perm		Perm
Protected Phases	7	4			8			2			6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)		40.0	40.0		32.0			19.0			19.0	19.0
Effective Green, g (s)		40.0	40.0		32.0			19.0			19.0	19.0
Actuated g/C Ratio		0.62	0.62		0.49			0.29			0.29	0.29
Clearance Time (s)		3.0	3.0		3.0			3.0			3.0	3.0
Lane Grp Cap (vph)		855	860		793			563			541	379
v/s Ratio Prot		c0.08										
v/s Ratio Perm		0.47	0.02		0.02			c0.23			0.14	0.06
v/c Ratio		0.91	0.03		0.05			0.80			0.47	0.19
Uniform Delay, d1		10.9	4.9		8.6			21.2			18.9	17.3
Progression Factor		0.59	1.03		1.00			1.00			1.19	2.16
Incremental Delay, d2		11.3	0.0		0.1			11.3			2.6	1.0
Delay (s)		17.7	5.1		8.7			32.6			25.0	38.2
Level of Service		B	A		A			C			C	D
Approach Delay (s)		17.2			8.7			32.6			31.6	
Approach LOS		B			A			C			C	

Intersection Summary			
HCM Average Control Delay	24.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	93.7%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1064: 127th Street & S Paulina St

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↱		↰	↑↑					↰	↰↱	↱
Volume (vph)	0	989	222	274	1130	0	0	0	0	275	201	376
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	12	11	8	8	8	11	12	14
Total Lost time (s)		6.0		4.5	6.0					6.0	6.0	6.0
Lane Util. Factor		0.91		1.00	0.95					0.91	0.86	0.91
Frpb, ped/bikes		1.00		1.00	1.00					1.00	0.99	0.99
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Frt		0.97		1.00	1.00					1.00	0.94	0.85
Flt Protected		1.00		0.95	1.00					0.95	0.99	1.00
Satd. Flow (prot)		4322		1589	3226					1419	2711	1355
Flt Permitted		1.00		0.13	1.00					0.95	0.99	1.00
Satd. Flow (perm)		4322		214	3226					1419	2711	1355
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	1041	234	288	1189	0	0	0	0	289	212	396
RTOR Reduction (vph)	0	37	0	0	0	0	0	0	0	0	56	56
Lane Group Flow (vph)	0	1238	0	288	1189	0	0	0	0	234	397	154
Confl. Peds. (#/hr)	6		4	4		6	2					2
Heavy Vehicles (%)	0%	11%	7%	4%	6%	0%	0%	0%	0%	6%	4%	8%
Turn Type				pm+pt						Perm		Perm
Protected Phases		2		1	6						4	
Permitted Phases				6						4		4
Actuated Green, G (s)		38.9		57.4	57.4					20.6	20.6	20.6
Effective Green, g (s)		38.9		57.4	57.4					20.6	20.6	20.6
Actuated g/C Ratio		0.43		0.64	0.64					0.23	0.23	0.23
Clearance Time (s)		6.0		4.5	6.0					6.0	6.0	6.0
Vehicle Extension (s)		7.0		3.5	7.0					3.5	3.5	3.5
Lane Grp Cap (vph)		1868		350	2057					325	621	310
v/s Ratio Prot		0.29		c0.13	0.37							
v/s Ratio Perm				c0.40						c0.16	0.15	0.11
v/c Ratio		0.66		0.82	0.58					0.72	0.64	0.50
Uniform Delay, d1		20.3		17.9	9.4					32.0	31.4	30.2
Progression Factor		1.00		1.50	0.23					1.00	1.00	1.00
Incremental Delay, d2		1.9		8.0	0.6					7.7	2.4	1.5
Delay (s)		22.2		35.0	2.8					39.7	33.7	31.7
Level of Service		C		C	A					D	C	C
Approach Delay (s)		22.2			9.1			0.0			34.8	
Approach LOS		C			A			A			C	

Intersection Summary			
HCM Average Control Delay	20.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	10.5
Intersection Capacity Utilization	105.5%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1065: 127th Street & Marshfield Ave

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↑			↑↑	↱		↰↑↱				
Volume (vph)	311	953	0	0	855	234	549	365	484	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	12	12	12	11	12	12	12	12	12	12	12
Total Lost time (s)	6.0	6.0			6.0	6.0		6.0				
Lane Util. Factor	0.97	0.95			0.95	1.00		0.91				
Frpb, ped/bikes	1.00	1.00			1.00	0.98		1.00				
Flpb, ped/bikes	1.00	1.00			1.00	1.00		1.00				
Frt	1.00	1.00			1.00	0.85		0.95				
Flt Protected	0.95	1.00			1.00	1.00		0.98				
Satd. Flow (prot)	2915	3138			3119	1449		4390				
Flt Permitted	0.19	1.00			1.00	1.00		0.98				
Satd. Flow (perm)	595	3138			3119	1449		4390				
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	327	1003	0	0	900	246	578	384	509	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	139	0	51	0	0	0	0
Lane Group Flow (vph)	327	1003	0	0	900	107	0	1420	0	0	0	0
Confl. Peds. (#/hr)	4					4						
Heavy Vehicles (%)	10%	9%	0%	0%	6%	4%	4%	3%	5%	0%	0%	0%
Turn Type	pm+pt					Perm	Perm					
Protected Phases	5	2			6			8				
Permitted Phases	2					6	8					
Actuated Green, G (s)	45.5	45.5			32.0	32.0		32.5				
Effective Green, g (s)	45.5	45.5			32.0	32.0		32.5				
Actuated g/C Ratio	0.51	0.51			0.36	0.36		0.36				
Clearance Time (s)	6.0	6.0			6.0	6.0		6.0				
Vehicle Extension (s)	3.5	7.0			7.0	7.0		5.0				
Lane Grp Cap (vph)	494	1586			1109	515		1585				
v/s Ratio Prot	0.06	c0.32			c0.29							
v/s Ratio Perm	0.28					0.07		0.32				
v/c Ratio	0.66	0.63			0.81	0.21		0.90				
Uniform Delay, d1	27.4	16.2			26.3	20.2		27.2				
Progression Factor	0.59	0.53			0.47	0.28		1.00				
Incremental Delay, d2	2.6	1.5			5.0	0.7		7.5				
Delay (s)	18.7	10.1			17.3	6.3		34.6				
Level of Service	B	B			B	A		C				
Approach Delay (s)		12.2			14.9			34.6			0.0	
Approach LOS		B			B			C			A	

Intersection Summary			
HCM Average Control Delay	21.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	105.5%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1066: 127th Street & Ashland Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	105	743	226	78	796	44	226	178	40	57	111	91
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	12	11	12	12	10	10	13	10	10	10
Total Lost time (s)	3.5	6.0	3.5	3.5	6.0		3.5	6.0		3.5	6.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.97		1.00	0.93	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1564	3061	1293	1604	3233		1447	3009		1544	2783	
Flt Permitted	0.28	1.00	1.00	0.18	1.00		0.51	1.00		0.61	1.00	
Satd. Flow (perm)	463	3061	1293	309	3233		775	3009		990	2783	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	111	782	238	82	838	46	238	187	42	60	117	96
RTOR Reduction (vph)	0	0	110	0	4	0	0	22	0	0	79	0
Lane Group Flow (vph)	111	782	128	82	880	0	238	207	0	60	134	0
Confl. Peds. (#/hr)	3		12	12		3	9		6	6		9
Heavy Vehicles (%)	2%	8%	5%	3%	5%	3%	10%	3%	2%	3%	7%	4%
Parking (#/hr)			0									
Turn Type	pm+pt		pm+ov	pm+pt			pm+pt			pm+pt		
Protected Phases	5	2	3	1	6		3	8		7	4	
Permitted Phases	2		2	6			8			4		
Actuated Green, G (s)	38.9	36.4	48.5	33.9	33.9		31.8	24.7		19.8	16.2	
Effective Green, g (s)	38.9	36.4	48.5	33.9	33.9		31.8	24.7		19.8	16.2	
Actuated g/C Ratio	0.43	0.40	0.54	0.38	0.38		0.35	0.27		0.22	0.18	
Clearance Time (s)	3.5	6.0	3.5	3.5	6.0		3.5	6.0		3.5	6.0	
Vehicle Extension (s)	3.0	7.0	3.0	3.0	7.0		3.0	7.0		3.0	7.0	
Lane Grp Cap (vph)	308	1238	697	207	1218		364	826		240	501	
v/s Ratio Prot	0.04	c0.26	0.02	0.03	c0.27		c0.09	0.07		0.01	0.05	
v/s Ratio Perm	0.12		0.07	0.12			c0.14			0.05		
v/c Ratio	0.36	0.63	0.18	0.40	0.72		0.65	0.25		0.25	0.27	
Uniform Delay, d1	21.2	21.4	10.6	19.6	24.0		22.6	25.4		28.5	31.8	
Progression Factor	0.67	0.67	0.56	0.87	0.94		1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.2	1.7	0.1	1.2	3.5		4.2	0.6		0.5	1.0	
Delay (s)	16.5	16.0	6.0	18.2	26.2		26.8	26.0		29.0	32.8	
Level of Service	B	B	A	B	C		C	C		C	C	
Approach Delay (s)		14.0			25.6			26.4			32.0	
Approach LOS		B			C			C			C	

Intersection Summary			
HCM Average Control Delay	21.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.5
Intersection Capacity Utilization	73.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1067: Vermont St & Ashland Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	62	329	286	59	196	102	329	382	83	91	258	54
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	11	12	11	12	12	11	13	12	10	11	12
Total Lost time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.93		1.00	0.95		1.00	0.97		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1635	2916		1463	3036		1589	3237		1549	3135	
Flt Permitted	0.53	1.00		0.24	1.00		0.46	1.00		0.47	1.00	
Satd. Flow (perm)	914	2916		367	3036		772	3237		772	3135	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	65	346	301	62	206	107	346	402	87	96	272	57
RTOR Reduction (vph)	0	144	0	0	61	0	0	17	0	0	17	0
Lane Group Flow (vph)	65	503	0	62	252	0	346	472	0	96	312	0
Confl. Peds. (#/hr)	20					20	1		2	2		1
Heavy Vehicles (%)	4%	5%	6%	13%	6%	5%	4%	6%	5%	3%	3%	0%
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	35.7	28.7		35.9	28.8		53.2	41.9		38.6	31.3	
Effective Green, g (s)	35.7	28.7		35.9	28.8		53.2	41.9		38.6	31.3	
Actuated g/C Ratio	0.34	0.27		0.34	0.27		0.51	0.40		0.37	0.30	
Clearance Time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	3.5	7.0		3.5	7.0		3.5	7.0		3.5	7.0	
Lane Grp Cap (vph)	359	797		200	833		530	1292		338	935	
v/s Ratio Prot	0.01	c0.17		c0.02	0.08		c0.11	0.15		0.02	0.10	
v/s Ratio Perm	0.05			0.09			c0.22			0.08		
v/c Ratio	0.18	0.63		0.31	0.30		0.65	0.36		0.28	0.33	
Uniform Delay, d1	23.8	33.5		24.5	30.2		16.6	22.2		22.4	28.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.3	3.8		1.0	0.9		3.0	0.8		0.5	1.0	
Delay (s)	24.1	37.3		25.5	31.1		19.6	23.0		22.9	29.7	
Level of Service	C	D		C	C		B	C		C	C	
Approach Delay (s)		36.1			30.2			21.6			28.2	
Approach LOS		D			C			C			C	

Intersection Summary			
HCM Average Control Delay	28.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	72.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis

1068: 127th Street & Halsted Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	169	716	81	6	457	113	68	602	7	104	326	105
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	10	12	9	11	12	9	9	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.99			0.97		1.00	1.00		1.00	0.96	
Flt Protected		0.99			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		2929			2898		1436	3186		1451	2786	
Flt Permitted		0.64			0.94		0.33	1.00		0.18	1.00	
Satd. Flow (perm)		1882			2736		506	3186		274	2786	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	188	796	90	7	508	126	76	669	8	116	362	117
RTOR Reduction (vph)	0	7	0	0	24	0	0	1	0	0	35	0
Lane Group Flow (vph)	0	1067	0	0	617	0	76	676	0	116	444	0
Confl. Peds. (#/hr)	9		11	11		9	11		14	14		11
Heavy Vehicles (%)	3%	6%	18%	50%	6%	6%	7%	3%	50%	6%	7%	2%
Turn Type	pm+pt			Perm			pm+pt			pm+pt		
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		51.0			43.0		27.0	23.0		27.0	23.0	
Effective Green, g (s)		51.0			43.0		27.0	23.0		27.0	23.0	
Actuated g/C Ratio		0.57			0.48		0.30	0.26		0.30	0.26	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		1113			1307		193	814		135	712	
v/s Ratio Prot		c0.04					0.02	0.21		c0.04	0.16	
v/s Ratio Perm		c0.50			0.23		0.10			c0.22		
v/c Ratio		0.96			0.47		0.39	0.83		0.86	0.62	
Uniform Delay, d1		18.5			15.8		23.6	31.7		28.2	29.7	
Progression Factor		0.55			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		17.4			1.2		5.9	9.6		46.8	4.1	
Delay (s)		27.6			17.1		29.5	41.3		75.0	33.8	
Level of Service		C			B		C	D		E	C	
Approach Delay (s)		27.6			17.1			40.1			41.8	
Approach LOS		C			B			D			D	

Intersection Summary			
HCM Average Control Delay	31.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	83.6%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1069: Vermont St & Halsted Street

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Lane Configurations	↰	↱		↰	↱		↰	↑↱		↰	↑↱	
Volume (vph)	52	334	48	73	165	13	38	661	101	10	378	45
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	12	12	12	12	12
Total Lost time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.99		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1666	1916		1618	1943		1658	3200		1139	3197	
Flt Permitted	0.64	1.00		0.39	1.00		0.50	1.00		0.30	1.00	
Satd. Flow (perm)	1126	1916		660	1943		870	3200		355	3197	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	54	344	49	75	170	13	39	681	104	10	390	46
RTOR Reduction (vph)	0	8	0	0	4	0	0	19	0	0	14	0
Lane Group Flow (vph)	54	385	0	75	179	0	39	766	0	10	422	0
Confl. Peds. (#/hr)	10		16	16		10	4		6	6		4
Confl. Bikes (#/hr)			4	4								
Heavy Vehicles (%)	2%	4%	5%	5%	4%	0%	3%	4%	8%	50%	5%	6%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	24.0	24.0		24.0	24.0		31.0	31.0		31.0	31.0	
Effective Green, g (s)	24.0	24.0		24.0	24.0		31.0	31.0		31.0	31.0	
Actuated g/C Ratio	0.37	0.37		0.37	0.37		0.48	0.48		0.48	0.48	
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)	416	707		244	717		415	1526		169	1525	
v/s Ratio Prot		c0.20			0.09			c0.24			0.13	
v/s Ratio Perm	0.05			0.11			0.04			0.03		
v/c Ratio	0.13	0.54		0.31	0.25		0.09	0.50		0.06	0.28	
Uniform Delay, d1	13.6	16.2		14.6	14.2		9.3	11.7		9.2	10.2	
Progression Factor	1.00	1.00		1.33	1.36		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.6	3.0		2.2	0.6		0.4	1.2		0.7	0.5	
Delay (s)	14.2	19.2		21.5	19.9		9.8	12.9		9.8	10.7	
Level of Service	B	B		C	B		A	B		A	B	
Approach Delay (s)		18.6			20.4			12.7			10.7	
Approach LOS		B			C			B			B	

Intersection Summary			
HCM Average Control Delay	14.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	68.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1070: 127th Street & Wallace Street

	→	↙	←	↖	↰	↖	↑	↗	↘	↓	↙	↙
Movement	EBT	WBL	WBT	WBR	NBL2	NBL	NBT	NBR	SBL	SBT	SBR	SBR2
Lane Configurations	↰↱		↰↱				✥			✥		
Volume (vph)	761	200	621	17	3	14	3	47	30	0	2	4
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	12	12	16	12	12	16	12	12
Total Lost time (s)	5.0		5.0				4.0			4.0		
Lane Util. Factor	0.95		0.95				1.00			1.00		
Frpb, ped/bikes	1.00		1.00				1.00			1.00		
Flpb, ped/bikes	1.00		1.00				1.00			1.00		
Frt	1.00		1.00				0.91			0.98		
Flt Protected	1.00		0.99				0.99			0.96		
Satd. Flow (prot)	2956		2954				1732			1908		
Flt Permitted	1.00		0.51				0.94			0.79		
Satd. Flow (perm)	2956		1535				1643			1562		
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	801	211	654	18	3	15	3	49	32	0	2	4
RTOR Reduction (vph)	0	0	2	0	0	0	38	0	0	3	0	0
Lane Group Flow (vph)	801	0	881	0	0	0	32	0	0	35	0	0
Confl. Peds. (#/hr)		7		6		3					3	
Confl. Bikes (#/hr)		1										
Heavy Vehicles (%)	8%	8%	6%	0%	0%	8%	0%	5%	0%	0%	0%	0%
Turn Type		Perm			Perm	Perm			Perm			
Protected Phases	8		4				2			6		
Permitted Phases		4			2	2			6			
Actuated Green, G (s)	21.3		42.0				14.0			14.0		
Effective Green, g (s)	21.3		42.0				14.0			14.0		
Actuated g/C Ratio	0.33		0.65				0.22			0.22		
Clearance Time (s)	5.0		5.0				4.0			4.0		
Lane Grp Cap (vph)	969		992				354			336		
v/s Ratio Prot	0.27											
v/s Ratio Perm			c0.57				0.02			c0.02		
v/c Ratio	0.83		1.94dl				0.09			0.10		
Uniform Delay, d1	20.1		9.5				20.4			20.5		
Progression Factor	1.00		1.00				1.00			1.00		
Incremental Delay, d2	8.0		11.7				0.5			0.6		
Delay (s)	28.2		21.2				20.9			21.1		
Level of Service	C		C				C			C		
Approach Delay (s)	28.2		21.2				20.9			21.1		
Approach LOS	C		C				C			C		

Intersection Summary			
HCM Average Control Delay	25.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	72.0%	ICU Level of Service	C
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group

Movement	NER
Lane Configurations	
Volume (vph)	461
Ideal Flow (vphpl)	1800
Lane Width	12
Total Lost time (s)	5.0
Lane Util. Factor	0.88
Frpb, ped/bikes	1.00
Flpb, ped/bikes	1.00
Frt	0.85
Flt Protected	1.00
Satd. Flow (prot)	2470
Flt Permitted	1.00
Satd. Flow (perm)	2470
Peak-hour factor, PHF	0.95
Adj. Flow (vph)	485
RTOR Reduction (vph)	0
Lane Group Flow (vph)	485
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Heavy Vehicles (%)	9%
Turn Type	custom
Protected Phases	7
Permitted Phases	
Actuated Green, G (s)	15.7
Effective Green, g (s)	15.7
Actuated g/C Ratio	0.24
Clearance Time (s)	5.0
Lane Grp Cap (vph)	597
v/s Ratio Prot	0.20
v/s Ratio Perm	
v/c Ratio	0.81
Uniform Delay, d1	23.3
Progression Factor	0.85
Incremental Delay, d2	10.2
Delay (s)	30.1
Level of Service	C
Approach Delay (s)	
Approach LOS	

Intersection Summary

HCM Signalized Intersection Capacity Analysis
1071: 127th Street & State Street

1/14/2013

	↗	→	←	↖	↘	↙
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰↑	↑↱		↰	↱
Volume (vph)	194	1172	684	81	139	156
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		1.00	1.00
Frt		1.00	0.98		1.00	0.85
Flt Protected		0.99	1.00		0.95	1.00
Satd. Flow (prot)		3234	3205		1629	1457
Flt Permitted		0.66	1.00		0.95	1.00
Satd. Flow (perm)		2146	3205		1629	1457
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	216	1302	760	90	154	173
RTOR Reduction (vph)	0	0	10	0	0	144
Lane Group Flow (vph)	0	1518	840	0	154	29
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%
Turn Type	Perm					Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)		67.0	67.0		15.0	15.0
Effective Green, g (s)		67.0	67.0		15.0	15.0
Actuated g/C Ratio		0.74	0.74		0.17	0.17
Clearance Time (s)		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		1598	2386		272	243
v/s Ratio Prot			0.26		c0.09	
v/s Ratio Perm		c0.71				0.02
v/c Ratio		0.95	0.35		0.57	0.12
Uniform Delay, d1		10.0	4.0		34.5	31.9
Progression Factor		1.00	1.00		1.00	1.00
Incremental Delay, d2		13.4	0.4		8.3	1.0
Delay (s)		23.4	4.4		42.8	32.9
Level of Service		C	A		D	C
Approach Delay (s)		23.4	4.4		37.5	
Approach LOS		C	A		D	

Intersection Summary			
HCM Average Control Delay	19.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	81.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1072: 127th Street & Michigan Avenue

1/14/2013

	↗	→	←	↖	↘	↙
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰↑	↑↱		↰	↱
Volume (vph)	53	1231	703	202	174	56
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	12	10	11	12	10	10
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		1.00	1.00
Frpb, ped/bikes		1.00	1.00		1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00
Frt		1.00	0.97		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		2928	2920		1464	1373
Flt Permitted		0.88	1.00		0.95	1.00
Satd. Flow (perm)		2576	2920		1464	1373
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	56	1296	740	213	183	59
RTOR Reduction (vph)	0	0	44	0	0	45
Lane Group Flow (vph)	0	1352	909	0	183	14
Confl. Peds. (#/hr)	1			1		
Confl. Bikes (#/hr)	1			1		
Heavy Vehicles (%)	4%	9%	8%	12%	9%	4%
Turn Type	Perm					Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)		38.0	38.0		14.0	14.0
Effective Green, g (s)		38.0	38.0		14.0	14.0
Actuated g/C Ratio		0.63	0.63		0.23	0.23
Clearance Time (s)		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		1631	1849		342	320
v/s Ratio Prot			0.31		c0.12	
v/s Ratio Perm		c0.52				0.01
v/c Ratio		0.83	0.49		0.54	0.04
Uniform Delay, d1		8.5	5.9		20.1	17.8
Progression Factor		1.00	1.31		1.00	1.00
Incremental Delay, d2		5.0	0.7		5.9	0.3
Delay (s)		13.5	8.4		26.0	18.1
Level of Service		B	A		C	B
Approach Delay (s)		13.5	8.4		24.1	
Approach LOS		B	A		C	

Intersection Summary			
HCM Average Control Delay	12.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	85.1%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1073: 130th Street & Indiana Avenue

1/14/2013

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↱		↰	↑	↰	↱
Volume (vph)	1257	160	161	663	423	438
Ideal Flow (vphpl)	2300	1800	1800	2300	1800	1800
Lane Width	15	12	14	16	15	12
Total Lost time (s)	5.0		3.0	5.0	5.0	5.0
Lane Util. Factor	1.00		1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Frt	0.98		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	2248		1771	2436	1844	1500
Flt Permitted	1.00		0.05	1.00	0.95	1.00
Satd. Flow (perm)	2248		98	2436	1844	1500
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	1283	163	164	677	432	447
RTOR Reduction (vph)	4	0	0	0	0	43
Lane Group Flow (vph)	1442	0	164	677	432	404
Confl. Peds. (#/hr)		4	4			8
Heavy Vehicles (%)	11%	7%	3%	7%	2%	2%
Turn Type			pm+pt			pt+ov
Protected Phases	4		3	8	2	2 3
Permitted Phases			8			
Actuated Green, G (s)	73.0		83.0	83.0	27.0	39.0
Effective Green, g (s)	73.0		83.0	83.0	27.0	39.0
Actuated g/C Ratio	0.61		0.69	0.69	0.22	0.32
Clearance Time (s)	5.0		3.0	5.0	5.0	
Lane Grp Cap (vph)	1368		165	1685	415	488
v/s Ratio Prot	c0.64		0.06	0.28	c0.23	c0.27
v/s Ratio Perm			0.63			
v/c Ratio	1.05		0.99	0.40	1.04	0.83
Uniform Delay, d1	23.5		40.4	7.9	46.5	37.4
Progression Factor	0.80		1.00	1.00	1.00	1.00
Incremental Delay, d2	34.8		68.5	0.7	55.2	14.8
Delay (s)	53.7		108.9	8.6	101.7	52.2
Level of Service	D		F	A	F	D
Approach Delay (s)	53.7			28.2	76.6	
Approach LOS	D			C	E	

Intersection Summary			
HCM Average Control Delay	53.3	HCM Level of Service	D
HCM Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	108.5%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1074: 130th Street & Ellis Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑↑	↱		↰	↱		✥	
Volume (vph)	1	725	89	258	1516	9	72	0	187	1	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	15	13	11	11	12	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0	4.0	3.0	3.0	4.0		4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85		1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.95	1.00		0.95	
Satd. Flow (prot)	1881	3213	1422	1589	3138	1366		1642	1443		969	
Flt Permitted	0.14	1.00	1.00	0.26	1.00	1.00		0.76	1.00		0.70	
Satd. Flow (perm)	285	3213	1422	435	3138	1366		1309	1443		719	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1	806	99	287	1684	10	80	0	208	1	0	0
RTOR Reduction (vph)	0	0	48	0	0	2	0	0	182	0	0	0
Lane Group Flow (vph)	1	806	51	287	1684	8	0	80	26	0	1	0
Heavy Vehicles (%)	0%	10%	4%	4%	9%	12%	18%	0%	6%	100%	0%	0%
Turn Type	Perm		Perm	custom		custom	Perm		Perm	Perm		
Protected Phases		4		3	3 8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)	43.7	43.7	43.7	66.4	66.4	66.4		10.6	10.6		10.6	
Effective Green, g (s)	43.7	43.7	43.7	66.4	66.4	66.4		10.6	10.6		10.6	
Actuated g/C Ratio	0.51	0.51	0.51	0.78	0.78	0.78		0.12	0.12		0.12	
Clearance Time (s)	4.0	4.0	4.0	3.0		4.0		4.0	4.0		4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0		3.0	3.0		3.0	
Lane Grp Cap (vph)	147	1652	731	607	2451	1067		163	180		90	
v/s Ratio Prot		0.25		0.11	c0.54							
v/s Ratio Perm	0.00		0.04	0.26		0.01		c0.06	0.02		0.00	
v/c Ratio	0.01	0.49	0.07	0.47	0.69	0.01		0.49	0.14		0.01	
Uniform Delay, d1	10.1	13.4	10.4	4.1	4.4	2.0		34.7	33.2		32.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2	0.1	1.0	0.2	0.6	0.8	0.0		2.3	0.4		0.0	
Delay (s)	10.2	14.4	10.6	4.7	5.2	2.1		37.0	33.5		32.7	
Level of Service	B	B	B	A	A	A		D	C		C	
Approach Delay (s)		14.0			5.1			34.5			32.7	
Approach LOS		B			A			C			C	

Intersection Summary			
HCM Average Control Delay	10.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	7.0
Intersection Capacity Utilization	62.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1942: 111th Street & Langley Avenue

1/14/2013

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰↑	↑↱		↰↱	
Volume (vph)	13	819	851	45	24	11
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	12	10	10
Total Lost time (s)		5.0	5.0		3.0	
Lane Util. Factor		0.95	0.95		1.00	
Frt		1.00	0.99		0.96	
Flt Protected		1.00	1.00		0.97	
Satd. Flow (prot)		3038	3017		1482	
Flt Permitted		0.93	1.00		0.97	
Satd. Flow (perm)		2834	3017		1482	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	14	910	946	50	27	12
RTOR Reduction (vph)	0	0	4	0	11	0
Lane Group Flow (vph)	0	924	992	0	28	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%
Turn Type	Perm					
Protected Phases		4	8 2 11		5	
Permitted Phases	4					
Actuated Green, G (s)		33.0	64.0		7.0	
Effective Green, g (s)		33.0	64.0		7.0	
Actuated g/C Ratio		0.37	0.71		0.08	
Clearance Time (s)		5.0			3.0	
Lane Grp Cap (vph)		1039	2145		115	
v/s Ratio Prot			c0.33		c0.02	
v/s Ratio Perm		c0.33				
v/c Ratio		0.89	0.46		0.24	
Uniform Delay, d1		26.8	5.6		39.0	
Progression Factor		1.00	0.00		1.00	
Incremental Delay, d2		11.3	0.2		4.9	
Delay (s)		38.1	0.3		44.0	
Level of Service		D	A		D	
Approach Delay (s)		38.1	0.3		44.0	
Approach LOS		D	A		D	

Intersection Summary			
HCM Average Control Delay	19.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	44.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1955: 115th Street & Cottage Grove Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↑↱			↰↑↱			↰↑	↱
Volume (vph)	90	430	1	27	568	80	0	0	1	45	3	136
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	12	12	11	12	11
Total Lost time (s)		4.0			4.0			3.0			3.0	3.0
Lane Util. Factor		1.00			0.95			1.00			1.00	1.00
Frpb, ped/bikes		1.00			1.00			0.92			1.00	0.96
Flpb, ped/bikes		1.00			1.00			1.00			0.98	1.00
Frt		1.00			0.98			0.86			1.00	0.85
Flt Protected		0.99			1.00			1.00			0.95	1.00
Satd. Flow (prot)		1727			3232			1427			1606	1277
Flt Permitted		0.77			0.92			1.00			0.90	1.00
Satd. Flow (perm)		1343			2977			1427			1513	1277
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	100	478	1	30	631	89	0	0	1	50	3	151
RTOR Reduction (vph)	0	0	0	0	12	0	0	1	0	0	0	107
Lane Group Flow (vph)	0	579	0	0	738	0	0	0	0	0	53	44
Confl. Peds. (#/hr)	33		13	13		33	29		13	13		29
Confl. Bikes (#/hr)	1		1	1		1						
Heavy Vehicles (%)	4%	3%	0%	0%	4%	0%	0%	0%	0%	5%	0%	11%
Turn Type	Perm			custom			Perm			pm+pt		Perm
Protected Phases		4			3 4			1		2	1 2	
Permitted Phases	4			3	3		1	1		1 2		1 2
Actuated Green, G (s)		43.0			56.0			9.0			23.0	26.0
Effective Green, g (s)		43.0			56.0			9.0			23.0	26.0
Actuated g/C Ratio		0.48			0.62			0.10			0.26	0.29
Clearance Time (s)		4.0						3.0				
Lane Grp Cap (vph)		642			1852			143			401	369
v/s Ratio Prot								0.00			0.02	
v/s Ratio Perm		c0.43			c0.25						c0.01	c0.03
v/c Ratio		0.90			0.40			0.00			0.13	0.12
Uniform Delay, d1		21.6			8.5			36.5			25.8	23.6
Progression Factor		1.00			0.14			1.00			1.00	1.00
Incremental Delay, d2		18.2			0.2			0.0			0.7	0.7
Delay (s)		39.8			1.4			36.5			26.5	24.2
Level of Service		D			A			D			C	C
Approach Delay (s)		39.8			1.4			36.5			24.8	
Approach LOS		D			A			D			C	

Intersection Summary			
HCM Average Control Delay	19.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	73.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1001: 95th Street & Wentworth Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			✥			✥	
Volume (vph)	39	598	28	35	1014	58	36	35	48	23	26	87
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	16	10	10	16	8	15	8	8	14	8
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			0.99			0.98	
Flpb, ped/bikes	0.98	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.99			0.95			0.91	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1557	3022		1587	3021			1816			1706	
Flt Permitted	0.17	1.00		0.36	1.00			0.89			0.95	
Satd. Flow (perm)	277	3022		604	3021			1649			1630	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	41	629	29	37	1067	61	38	37	51	24	27	92
RTOR Reduction (vph)	0	5	0	0	6	0	0	33	0	0	21	0
Lane Group Flow (vph)	41	653	0	37	1122	0	0	93	0	0	122	0
Confl. Peds. (#/hr)	145		16	16		145	17		19	19		17
Confl. Bikes (#/hr)	5					5			2	2		
Heavy Vehicles (%)	0%	5%	0%	0%	4%	2%	0%	0%	0%	0%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	34.0	34.0		34.0	34.0			22.0			22.0	
Effective Green, g (s)	34.0	34.0		34.0	34.0			23.0			23.0	
Actuated g/C Ratio	0.52	0.52		0.52	0.52			0.35			0.35	
Clearance Time (s)	4.0	4.0		4.0	4.0			5.0			5.0	
Lane Grp Cap (vph)	145	1581		316	1580			583			577	
v/s Ratio Prot		0.22			c0.37							
v/s Ratio Perm	0.15			0.06				0.06			c0.07	
v/c Ratio	0.28	0.41		0.12	0.71			0.16			0.21	
Uniform Delay, d1	8.7	9.4		7.9	11.8			14.4			14.7	
Progression Factor	1.00	1.00		0.70	1.41			1.00			1.00	
Incremental Delay, d2	4.8	0.8		0.7	2.4			0.6			0.8	
Delay (s)	13.5	10.2		6.2	19.1			15.0			15.5	
Level of Service	B	B		A	B			B			B	
Approach Delay (s)		10.4			18.6			15.0			15.5	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	15.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1002: 95th Street & Lafayette Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↑	↱				↰↰	↑	↱
Volume (vph)	25	789	5	32	637	41	0	0	0	586	89	379
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	5.0	5.0		3.0	3.0	3.0				5.0	5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00				0.97	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.67				1.00	1.00	0.98
Flpb, ped/bikes	0.93	1.00		1.00	1.00	1.00				1.00	1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85				1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00				0.95	1.00	1.00
Satd. Flow (prot)	793	3379		1710	3226	514				3285	1731	1481
Flt Permitted	0.40	1.00		0.14	1.00	1.00				0.95	1.00	1.00
Satd. Flow (perm)	331	3379		248	3226	514				3285	1731	1481
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	26	831	5	34	671	43	0	0	0	617	94	399
RTOR Reduction (vph)	0	0	0	0	0	19	0	0	0	0	0	166
Lane Group Flow (vph)	26	836	0	34	671	24	0	0	0	617	94	233
Confl. Peds. (#/hr)	350		4	4		350	8		6	6		8
Confl. Bikes (#/hr)	7		1	1		7						
Heavy Vehicles (%)	100%	1%	20%	0%	6%	100%	0%	0%	0%	1%	4%	1%
Turn Type	pm+pt			pm+pt		Perm				Split		Perm
Protected Phases	7	4		3	8					6	6	
Permitted Phases	4			8		8						6
Actuated Green, G (s)	43.0	43.0		73.0	73.0	73.0				30.0	30.0	30.0
Effective Green, g (s)	43.0	43.0		73.0	73.0	73.0				30.0	30.0	30.0
Actuated g/C Ratio	0.33	0.33		0.56	0.56	0.56				0.23	0.23	0.23
Clearance Time (s)	5.0	5.0		3.0	3.0	3.0				5.0	5.0	5.0
Lane Grp Cap (vph)	159	1118		634	1812	289				758	399	342
v/s Ratio Prot	0.02	c0.25		0.02	c0.21					c0.19	0.05	
v/s Ratio Perm	0.04			0.01		0.05						0.16
v/c Ratio	0.16	0.75		0.05	0.37	0.08				0.81	0.24	0.68
Uniform Delay, d1	31.6	38.7		15.2	15.8	13.1				47.4	40.7	45.6
Progression Factor	0.85	0.86		0.33	0.75	1.24				1.00	1.00	1.00
Incremental Delay, d2	2.1	4.4		0.1	0.4	0.4				9.3	1.4	10.5
Delay (s)	28.9	37.6		5.1	12.2	16.6				56.7	42.1	56.1
Level of Service	C	D		A	B	B				E	D	E
Approach Delay (s)		37.3			12.2			0.0			55.2	
Approach LOS		D			B			A			E	

Intersection Summary			
HCM Average Control Delay	37.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	53.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1003: 95th Street & State Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↱		↰	↑↑	↱		↰↑	↱	↰		↱
Volume (vph)	340	815	220	54	578	287	102	251	55	39	0	30
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0	3.0		5.0	5.0	5.0		5.0	5.0	5.0		5.0
Lane Util. Factor	0.97	0.95		1.00	0.95	1.00		0.95	1.00	1.00		1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.67		1.00	0.91	1.00		0.96
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Frt	1.00	0.97		1.00	1.00	0.85		1.00	0.85	1.00		0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.99	1.00	0.95		1.00
Satd. Flow (prot)	3285	3262		1710	3138	1018		3301	1359	855		734
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.99	1.00	0.95		1.00
Satd. Flow (perm)	3285	3262		1710	3138	1018		3301	1359	855		734
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	358	858	232	57	608	302	107	264	58	41	0	32
RTOR Reduction (vph)	0	18	0	0	0	228	0	0	42	0	0	30
Lane Group Flow (vph)	358	1072	0	57	608	74	0	371	16	41	0	2
Confl. Peds. (#/hr)	327		13	13		327	6		60	60		6
Confl. Bikes (#/hr)	6					6						
Heavy Vehicles (%)	1%	1%	0%	0%	9%	1%	0%	3%	2%	100%	0%	100%
Turn Type	Prot			Prot		Perm	Split		Perm	Prot		custom
Protected Phases	7	4		3	8		2	2		6		
Permitted Phases						8			2			6
Actuated Green, G (s)	44.0	68.0		8.0	32.0	32.0		28.0	28.0	8.0		8.0
Effective Green, g (s)	44.0	68.0		8.0	32.0	32.0		28.0	28.0	8.0		8.0
Actuated g/C Ratio	0.34	0.52		0.06	0.25	0.25		0.22	0.22	0.06		0.06
Clearance Time (s)	3.0	3.0		5.0	5.0	5.0		5.0	5.0	5.0		5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0	3.0	3.0		3.0
Lane Grp Cap (vph)	1112	1706		105	772	251		711	293	53		45
v/s Ratio Prot	0.11	c0.33		0.03	c0.19			c0.11		c0.05		
v/s Ratio Perm						0.07			0.01			0.00
v/c Ratio	0.32	0.63		0.54	0.79	0.30		0.52	0.06	0.77		0.04
Uniform Delay, d1	31.9	22.0		59.2	45.8	39.8		45.1	40.5	60.1		57.4
Progression Factor	0.95	0.16		1.00	1.00	1.00		0.94	0.99	1.00		1.00
Incremental Delay, d2	0.5	1.1		18.7	8.0	3.0		2.7	0.4	49.7		0.4
Delay (s)	30.7	4.7		77.9	53.8	42.8		45.3	40.6	109.9		57.8
Level of Service	C	A		E	D	D		D	D	F		E
Approach Delay (s)		11.1			51.8			44.7			87.0	
Approach LOS		B			D			D			F	

Intersection Summary			
HCM Average Control Delay	31.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	68.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1004: 95th Street & Michigan Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱		↰	↑↑		↰		↱	↰	↱	
Volume (vph)	0	893	166	105	839	0	74	0	87	9	15	7
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	11	11	8	12	12	12	14	15	12
Total Lost time (s)		4.0		4.0	4.0		4.0		4.0	4.0	4.0	
Lane Util. Factor		0.95		1.00	0.95		1.00		1.00	1.00	1.00	
Frpb, ped/bikes		0.99		1.00	1.00		1.00		0.98	1.00	0.98	
Flpb, ped/bikes		1.00		1.00	1.00		0.97		1.00	0.99	1.00	
Frt		0.98		1.00	1.00		1.00		0.85	1.00	0.95	
Flt Protected		1.00		0.95	1.00		0.95		1.00	0.95	1.00	
Satd. Flow (prot)		2997		1649	3149		1388		1451	1803	1857	
Flt Permitted		1.00		0.17	1.00		0.74		1.00	0.95	1.00	
Satd. Flow (perm)		2997		299	3149		1082		1451	1803	1857	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	992	184	117	932	0	82	0	97	10	17	8
RTOR Reduction (vph)	0	15	0	0	0	0	0	0	66	0	5	0
Lane Group Flow (vph)	0	1161	0	117	932	0	82	0	31	10	20	0
Confl. Peds. (#/hr)	67		19	19		67	38		12	12		38
Confl. Bikes (#/hr)			1	1								
Heavy Vehicles (%)	0%	2%	11%	0%	5%	0%	19%	0%	3%	0%	0%	0%
Turn Type				Perm			custom		custom	Perm		
Protected Phases		4			8						6	
Permitted Phases				8			2		2	6		
Actuated Green, G (s)		60.0		60.0	60.0		32.0		32.0	32.0	32.0	
Effective Green, g (s)		60.0		60.0	60.0		32.0		32.0	32.0	32.0	
Actuated g/C Ratio		0.60		0.60	0.60		0.32		0.32	0.32	0.32	
Clearance Time (s)		4.0		4.0	4.0		4.0		4.0	4.0	4.0	
Lane Grp Cap (vph)		1798		179	1889		346		464	577	594	
v/s Ratio Prot		0.39			0.30						0.01	
v/s Ratio Perm				c0.39			c0.08		0.02	0.01		
v/c Ratio		0.65		0.65	0.49		0.24		0.07	0.02	0.03	
Uniform Delay, d1		13.1		13.2	11.4		25.0		23.6	23.2	23.4	
Progression Factor		1.00		1.00	1.00		1.00		1.00	1.00	1.00	
Incremental Delay, d2		1.8		17.1	0.9		1.6		0.3	0.1	0.1	
Delay (s)		14.9		30.3	12.3		26.6		23.9	23.3	23.5	
Level of Service		B		C	B		C		C	C	C	
Approach Delay (s)		14.9			14.3			25.2			23.4	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM Average Control Delay	15.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	61.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1005: 98th Place & Halsted Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↰	↰	↱	↰	↑↑↑			↑↑↱	
Volume (vph)	0	0	0	301	0	1230	215	686	0	0	792	490
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	12	12	10	10	12	12	11	12
Total Lost time (s)				4.0		5.0	3.0	4.0			4.0	
Lane Util. Factor				0.95		1.00	1.00	0.91			0.91	
Frpb, ped/bikes				1.00		1.00	1.00	1.00			0.98	
Flpb, ped/bikes				1.00		1.00	1.00	1.00			1.00	
Frt				1.00		0.85	1.00	1.00			0.94	
Flt Protected				0.95		1.00	0.95	1.00			1.00	
Satd. Flow (prot)				1540		1530	1535	4327			4271	
Flt Permitted				0.95		1.00	0.95	1.00			1.00	
Satd. Flow (perm)				1540		1530	1535	4327			4271	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	0	0	307	0	1255	219	700	0	0	808	500
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	307	0	1255	219	700	0	0	1308	0
Confl. Peds. (#/hr)	2					2	18		3	3		18
Heavy Vehicles (%)	0%	0%	0%	2%	0%	0%	4%	6%	0%	0%	4%	1%
Turn Type				Split		Prot	Prot					
Protected Phases				8	8	8	5	2			6	
Permitted Phases												
Actuated Green, G (s)				30.0		30.0	32.0	66.0			31.0	
Effective Green, g (s)				31.0		30.0	32.0	66.0			31.0	
Actuated g/C Ratio				0.30		0.29	0.30	0.63			0.30	
Clearance Time (s)				5.0		5.0	3.0	4.0			4.0	
Lane Grp Cap (vph)				455		437	468	2720			1261	
v/s Ratio Prot				0.20		c0.82	c0.14	0.16			c0.31	
v/s Ratio Perm												
v/c Ratio				0.67		2.87	0.47	0.26			1.16dr	
Uniform Delay, d1				32.6		37.5	29.6	8.6			37.0	
Progression Factor				1.00		1.00	0.63	2.06			1.00	
Incremental Delay, d2				7.8		848.6	2.8	0.2			35.5	
Delay (s)				40.4		886.1	21.4	18.0			72.5	
Level of Service				D		F	C	B			E	
Approach Delay (s)		0.0			719.9			18.8			72.5	
Approach LOS		A			F			B			E	

Intersection Summary			
HCM Average Control Delay	326.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.43		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	102.1%	ICU Level of Service	G
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1006: 99th Street & Halsted Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↰↑↱						↑↑↑	↱↱	↰	↑↑↑	
Volume (vph)	322	770	145	0	0	0	0	579	410	359	734	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	13	12	12	12	12	12	10	10	8	12	12	12
Total Lost time (s)	5.0	5.0						4.0	4.0	3.0	4.0	
Lane Util. Factor	0.91	0.91						0.91	0.88	1.00	0.91	
Frpb, ped/bikes	1.00	1.00						1.00	1.00	1.00	1.00	
Flpb, ped/bikes	0.99	1.00						1.00	1.00	1.00	1.00	
Frt	1.00	0.98						1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00						1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1509	3157						4368	2244	1598	4680	
Flt Permitted	0.95	1.00						1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1509	3157						4368	2244	1598	4680	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	332	794	149	0	0	0	0	597	423	370	757	0
RTOR Reduction (vph)	0	14	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	299	962	0	0	0	0	0	597	423	370	757	0
Confl. Peds. (#/hr)	6		1	1		6	6					6
Heavy Vehicles (%)	6%	1%	0%	0%	0%	0%	0%	5%	4%	7%	5%	0%
Turn Type	Perm								Perm	Prot		
Protected Phases		4						2		1	6	
Permitted Phases	4								2			
Actuated Green, G (s)	34.0	34.0						28.0	28.0	31.0	62.0	
Effective Green, g (s)	34.0	34.0						28.0	28.0	31.0	62.0	
Actuated g/C Ratio	0.32	0.32						0.27	0.27	0.30	0.59	
Clearance Time (s)	5.0	5.0						4.0	4.0	3.0	4.0	
Lane Grp Cap (vph)	489	1022						1165	598	472	2763	
v/s Ratio Prot								0.14		c0.23	0.16	
v/s Ratio Perm	0.20	0.30							c0.19			
v/c Ratio	0.61	0.94						0.51	0.71	0.78	0.27	
Uniform Delay, d1	29.9	34.5						32.7	34.8	33.9	10.5	
Progression Factor	1.00	1.00						1.00	1.00	0.86	0.22	
Incremental Delay, d2	5.6	17.2						1.6	6.9	4.8	0.1	
Delay (s)	35.5	51.7						34.3	41.7	34.1	2.4	
Level of Service	D	D						C	D	C	A	
Approach Delay (s)		47.9			0.0			37.4			12.8	
Approach LOS		D			A			D			B	

Intersection Summary			
HCM Average Control Delay	33.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	102.1%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↰	↑↱		↰	↑			↱	
Volume (vph)	0	0	0	290	25	24	11	164	0	0	149	5
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	14	12	12	16	12
Total Lost time (s)				4.0	4.0		4.0	4.0			-3.0	
Lane Util. Factor				1.00	0.95		1.00	1.00			1.00	
Frpb, ped/bikes				1.00	0.99		1.00	1.00			1.00	
Flpb, ped/bikes				1.00	1.00		1.00	1.00			1.00	
Frt				1.00	0.93		1.00	1.00			1.00	
Flt Protected				0.95	1.00		0.95	1.00			1.00	
Satd. Flow (prot)				1688	3132		1710	1846			1955	
Flt Permitted				0.95	1.00		0.54	1.00			1.00	
Satd. Flow (perm)				1688	3132		974	1846			1955	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	322	28	27	12	182	0	0	166	6
RTOR Reduction (vph)	0	0	0	0	18	0	0	0	0	0	1	0
Lane Group Flow (vph)	0	0	0	322	37	0	12	182	0	0	171	0
Confl. Peds. (#/hr)	2		2	2		2			6	6		
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	0%	0%	0%	1%	0%	0%	0%	4%	0%	0%	4%	0%
Turn Type				Perm			pm+pt					
Protected Phases					8		7	2			6	
Permitted Phases				8			2					
Actuated Green, G (s)				27.0	27.0		50.0	50.0			40.0	
Effective Green, g (s)				27.0	27.0		50.0	50.0			46.0	
Actuated g/C Ratio				0.32	0.32		0.59	0.59			0.54	
Clearance Time (s)				4.0	4.0		4.0	4.0			3.0	
Lane Grp Cap (vph)				536	995		634	1086			1058	
v/s Ratio Prot					0.01		0.00	c0.10			0.09	
v/s Ratio Perm				c0.19			0.01					
v/c Ratio				0.60	0.04		0.02	0.17			0.16	
Uniform Delay, d1				24.5	20.0		10.5	8.0			9.8	
Progression Factor				1.00	1.00		1.04	1.18			1.00	
Incremental Delay, d2				4.9	0.1		0.1	0.3			0.3	
Delay (s)				29.4	20.1		11.0	9.7			10.1	
Level of Service				C	C		B	A			B	
Approach Delay (s)		0.0			28.0			9.8			10.1	
Approach LOS		A			C			A			B	

Intersection Summary			
HCM Average Control Delay	19.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	37.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1008: 99th Street & Wentworth Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱			✥			↱		↰	↑	
Volume (vph)	12	11	23	6	0	14	0	149	45	46	393	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	16	15	12	8	12	8	12	12	12	10	13	12
Total Lost time (s)	4.0	4.0			4.0			3.0		4.0	4.0	
Lane Util. Factor	1.00	1.00			1.00			1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.97			0.98			0.99		1.00	1.00	
Flpb, ped/bikes	1.00	1.00			1.00			1.00		1.00	1.00	
Frt	1.00	0.90			0.90			0.97		1.00	1.00	
Flt Protected	0.95	1.00			0.99			1.00		0.95	1.00	
Satd. Flow (prot)	1935	1735			1571			1718		1590	1860	
Flt Permitted	0.74	1.00			0.96			1.00		0.59	1.00	
Satd. Flow (perm)	1515	1735			1529			1718		987	1860	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	13	12	24	6	0	15	0	157	47	48	414	0
RTOR Reduction (vph)	0	16	0	0	10	0	0	13	0	0	0	0
Lane Group Flow (vph)	13	20	0	0	11	0	0	191	0	48	414	0
Confl. Peds. (#/hr)	1		11	11		1	1		10	10		1
Confl. Bikes (#/hr)			2	2			1		2	2		1
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%
Turn Type	Perm			Perm						pm+pt		
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8						6		
Actuated Green, G (s)	27.0	27.0			27.0			40.0		50.0	50.0	
Effective Green, g (s)	27.0	27.0			27.0			40.0		50.0	50.0	
Actuated g/C Ratio	0.32	0.32			0.32			0.47		0.59	0.59	
Clearance Time (s)	4.0	4.0			4.0			3.0		4.0	4.0	
Lane Grp Cap (vph)	481	551			486			808		630	1094	
v/s Ratio Prot		c0.01						0.11		0.01	c0.22	
v/s Ratio Perm	0.01				0.01					0.04		
v/c Ratio	0.03	0.04			0.02			0.24		0.08	0.38	
Uniform Delay, d1	20.0	20.0			19.9			13.4		8.8	9.3	
Progression Factor	1.00	1.00			1.00			1.00		0.98	0.87	
Incremental Delay, d2	0.1	0.1			0.1			0.7		0.2	0.9	
Delay (s)	20.1	20.1			20.0			14.1		8.8	9.0	
Level of Service	C	C			C			B		A	A	
Approach Delay (s)		20.1			20.0			14.1			9.0	
Approach LOS		C			C			B			A	

Intersection Summary			
HCM Average Control Delay	11.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	41.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1009: 99th Street & State Street

1/14/2013

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰↱		↰	↑	↱	
Volume (vph)	48	42	12	193	288	28
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	14	12	13	12	10	12
Total Lost time (s)	4.0		4.0	4.0	4.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.94		1.00	1.00	0.99	
Flt Protected	0.97		0.95	1.00	1.00	
Satd. Flow (prot)	1752		1765	1782	1657	
Flt Permitted	0.97		0.50	1.00	1.00	
Satd. Flow (perm)	1752		937	1782	1657	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	53	47	13	214	320	31
RTOR Reduction (vph)	32	0	0	0	5	0
Lane Group Flow (vph)	68	0	13	214	346	0
Confl. Peds. (#/hr)			2			2
Heavy Vehicles (%)	0%	0%	0%	1%	0%	0%
Turn Type			Perm			
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	21.0		36.0	36.0	36.0	
Effective Green, g (s)	21.0		36.0	36.0	36.0	
Actuated g/C Ratio	0.32		0.55	0.55	0.55	
Clearance Time (s)	4.0		4.0	4.0	4.0	
Lane Grp Cap (vph)	566		519	987	918	
v/s Ratio Prot	c0.04			0.12	c0.21	
v/s Ratio Perm			0.01			
v/c Ratio	0.12		0.03	0.22	0.38	
Uniform Delay, d1	15.5		6.6	7.4	8.2	
Progression Factor	1.00		0.51	0.63	1.43	
Incremental Delay, d2	0.4		0.1	0.5	1.0	
Delay (s)	15.9		3.4	5.1	12.7	
Level of Service	B		A	A	B	
Approach Delay (s)	15.9			5.0	12.7	
Approach LOS	B			A	B	

Intersection Summary			
HCM Average Control Delay	10.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	30.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↰↱		↰	↑			↑	↱
Volume (vph)	0	0	0	31	268	9	258	130	2	0	283	17
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	14	16	12	12	15	12	12	13	10
Total Lost time (s)					4.0		4.0	4.0			3.0	3.0
Lane Util. Factor					0.95		1.00	1.00			1.00	1.00
Frpb, ped/bikes					1.00		1.00	1.00			1.00	1.00
Flpb, ped/bikes					1.00		1.00	1.00			1.00	1.00
Frt					1.00		1.00	1.00			1.00	0.85
Flt Protected					1.00		0.95	1.00			1.00	1.00
Satd. Flow (prot)					3772		1693	1677			1738	1428
Flt Permitted					1.00		0.47	1.00			1.00	1.00
Satd. Flow (perm)					3772		844	1677			1738	1428
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	34	298	10	287	144	2	0	314	19
RTOR Reduction (vph)	0	0	0	0	3	0	0	0	0	0	0	11
Lane Group Flow (vph)	0	0	0	0	339	0	287	146	0	0	314	8
Confl. Peds. (#/hr)	1					1			5	5		
Heavy Vehicles (%)	0%	0%	0%	0%	2%	0%	1%	18%	0%	0%	7%	0%
Turn Type				Split			pm+pt					Perm
Protected Phases				8	8		7	2			6	
Permitted Phases							2					6
Actuated Green, G (s)					26.0		51.0	51.0			38.0	38.0
Effective Green, g (s)					26.0		51.0	51.0			38.0	38.0
Actuated g/C Ratio					0.31		0.60	0.60			0.45	0.45
Clearance Time (s)					4.0		4.0	4.0			3.0	3.0
Lane Grp Cap (vph)					1154		606	1006			777	638
v/s Ratio Prot					c0.09		c0.06	0.09			0.18	
v/s Ratio Perm							c0.23					0.01
v/c Ratio					0.29		0.47	0.14			0.40	0.01
Uniform Delay, d1					22.5		13.7	7.4			15.9	13.1
Progression Factor					1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2					0.6		2.6	0.3			1.6	0.0
Delay (s)					23.1		16.4	7.7			17.4	13.1
Level of Service					C		B	A			B	B
Approach Delay (s)		0.0			23.1			13.5			17.2	
Approach LOS		A			C			B			B	

Intersection Summary			
HCM Average Control Delay	17.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					✥		↰	↑↱		↰	↑↱	
Volume (vph)	0	0	0	96	94	38	133	207	32	59	703	44
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	15	12	12	12	12	12	13	12
Total Lost time (s)					4.0		3.0	4.0		3.0	4.0	
Lane Util. Factor					1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes					1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes					1.00		1.00	1.00		1.00	1.00	
Frt					0.98		1.00	0.98		1.00	0.99	
Flt Protected					0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)					1896		1710	3282		1707	3467	
Flt Permitted					0.98		0.25	1.00		0.59	1.00	
Satd. Flow (perm)					1896		446	3282		1056	3467	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	107	104	42	148	230	36	66	781	49
RTOR Reduction (vph)	0	0	0	0	10	0	0	16	0	0	6	0
Lane Group Flow (vph)	0	0	0	0	243	0	148	250	0	66	824	0
Confl. Peds. (#/hr)							5		5	5		5
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	1%	0%
Turn Type				Split			pm+pt			pm+pt		
Protected Phases				8	8		5	2		1	6	
Permitted Phases							2			6		
Actuated Green, G (s)					23.0		41.0	34.0		41.0	34.0	
Effective Green, g (s)					23.0		41.0	34.0		41.0	34.0	
Actuated g/C Ratio					0.31		0.55	0.45		0.55	0.45	
Clearance Time (s)					4.0		3.0	4.0		3.0	4.0	
Lane Grp Cap (vph)					581		362	1488		638	1572	
v/s Ratio Prot					c0.13		c0.04	0.08		0.01	c0.24	
v/s Ratio Perm							0.19			0.05		
v/c Ratio					0.42		0.41	0.17		0.10	0.52	
Uniform Delay, d1					20.7		16.4	12.1		8.2	14.7	
Progression Factor					1.00		0.83	0.82		1.00	1.00	
Incremental Delay, d2					2.2		3.4	0.2		0.3	1.3	
Delay (s)					22.9		17.0	10.2		8.5	16.0	
Level of Service					C		B	B		A	B	
Approach Delay (s)		0.0			22.9			12.7			15.4	
Approach LOS		A			C			B			B	

Intersection Summary			
HCM Average Control Delay	15.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	53.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1012: 100th Street & Martin Luther King Jr Drive

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	32	49	13	9	63	63	7	277	24	159	590	50
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	16	12	12	10	11	12	12	11	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.98			0.94		1.00	0.99		1.00	0.99	
Flt Protected		0.98			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1964			1655		1595	3173		1704	3231	
Flt Permitted		0.89			0.99		0.36	1.00		0.56	1.00	
Satd. Flow (perm)		1775			1637		599	3173		1004	3231	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	34	52	14	9	66	66	7	292	25	167	621	53
RTOR Reduction (vph)	0	8	0	0	42	0	0	8	0	0	8	0
Lane Group Flow (vph)	0	92	0	0	99	0	7	309	0	167	666	0
Confl. Peds. (#/hr)	2					2	1		6	6		1
Confl. Bikes (#/hr)			1	1			3					3
Heavy Vehicles (%)	0%	0%	0%	0%	2%	0%	0%	3%	0%	0%	1%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		25.0			25.0		42.0	42.0		42.0	42.0	
Effective Green, g (s)		25.0			25.0		42.0	42.0		42.0	42.0	
Actuated g/C Ratio		0.33			0.33		0.56	0.56		0.56	0.56	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		592			546		335	1777		562	1809	
v/s Ratio Prot								0.10			c0.21	
v/s Ratio Perm		0.05			c0.06		0.01			0.17		
v/c Ratio		0.16			0.18		0.02	0.17		0.30	0.37	
Uniform Delay, d1		17.6			17.7		7.3	8.0		8.7	9.1	
Progression Factor		1.00			1.00		1.00	1.00		0.27	0.25	
Incremental Delay, d2		0.6			0.7		0.1	0.2		1.2	0.5	
Delay (s)		18.1			18.5		7.5	8.3		3.5	2.8	
Level of Service		B			B		A	A		A	A	
Approach Delay (s)		18.1			18.5			8.2			3.0	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	6.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	48.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis
1013: 100th Street & Cottage Grove Avenue

	↗	↘	↖	↑	↓	↙
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	Y			↰↑	↑↱	
Sign Control	Stop			Stop	Stop	
Volume (vph)	37	192	67	253	588	81
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	41	213	74	281	653	90

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	254	168	187	436	308
Volume Left (vph)	41	74	0	0	0
Volume Right (vph)	213	0	0	0	90
Hadj (s)	-0.42	0.27	0.05	0.05	-0.15
Departure Headway (s)	5.8	6.6	6.3	5.9	5.7
Degree Utilization, x	0.41	0.31	0.33	0.71	0.48
Capacity (veh/h)	591	528	546	602	622
Control Delay (s)	12.6	11.2	11.2	20.8	12.7
Approach Delay (s)	12.6	11.2		17.4	
Approach LOS	B	B		C	

Intersection Summary			
Delay	14.9		
HCM Level of Service	B		
Intersection Capacity Utilization	54.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR
Lane Configurations		↰	↑	↱	↰	↑	↱			↰	↑↱	
Volume (vph)	32	35	376	18	22	409	76	78	55	68	354	32
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		3.5	4.0	4.0	4.0	4.0	4.0			4.0	4.0	
Lane Util. Factor		1.00	1.00	1.00	1.00	1.00	1.00			1.00	0.95	
Frpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	0.92			1.00	1.00	
Flpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	
Frt		1.00	1.00	0.85	1.00	1.00	0.85			1.00	0.99	
Flt Protected		0.95	1.00	1.00	0.95	1.00	1.00			0.95	1.00	
Satd. Flow (prot)		1612	1731	1530	1710	1731	1412			1710	3251	
Flt Permitted		0.11	1.00	1.00	0.38	1.00	1.00			0.16	1.00	
Satd. Flow (perm)		191	1731	1530	692	1731	1412			295	3251	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	36	39	418	20	24	454	84	87	61	76	393	36
RTOR Reduction (vph)	0	0	0	13	0	0	25	0	0	0	5	0
Lane Group Flow (vph)	0	75	418	7	24	454	146	0	0	137	424	0
Confl. Peds. (#/hr)		25					25					3
Heavy Vehicles (%)	6%	6%	4%	0%	0%	4%	0%	0%	0%	0%	4%	0%
Turn Type	Perm	pm+pt		Perm	Perm		Perm		Perm	Perm		
Protected Phases		7	4			8					2	
Permitted Phases	4	4		4	8		8		2	2		
Actuated Green, G (s)		50.0	50.0	50.0	32.0	32.0	32.0			53.0	53.0	
Effective Green, g (s)		50.0	50.0	50.0	32.0	32.0	32.0			53.0	53.0	
Actuated g/C Ratio		0.33	0.33	0.33	0.21	0.21	0.21			0.35	0.35	
Clearance Time (s)		3.5	4.0	4.0	4.0	4.0	4.0			4.0	4.0	
Lane Grp Cap (vph)		201	577	510	148	369	301			104	1149	
v/s Ratio Prot		0.04	c0.24			c0.26					0.13	
v/s Ratio Perm		0.09		0.00	0.03		0.10			c0.46		
v/c Ratio		0.37	0.72	0.01	0.16	1.23	0.48			1.32	0.37	
Uniform Delay, d1		38.4	43.9	33.5	48.1	59.0	51.8			48.5	36.1	
Progression Factor		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	
Incremental Delay, d2		5.2	7.7	0.1	2.3	125.2	5.5			195.3	0.9	
Delay (s)		43.7	51.7	33.5	50.4	184.2	57.3			243.8	37.0	
Level of Service		D	D	C	D	F	E			F	D	
Approach Delay (s)			49.8			145.8					87.0	
Approach LOS			D			F					F	

Intersection Summary			
HCM Average Control Delay	123.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.27		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	103.9%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1014: 103rd Street & Vincennes Avenue

1/14/2013

Movement	SBL	SBT	SBR	SBR2	SEL2	SEL	SER	SER2
Lane Configurations								
Volume (vph)	108	571	82	103	4	114	607	197
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.5	4.5				4.5	4.5	
Lane Util. Factor	1.00	0.95				1.00	0.88	
Frpb, ped/bikes	1.00	1.00				1.00	1.00	
Flpb, ped/bikes	1.00	1.00				1.00	1.00	
Frt	1.00	0.96				1.00	0.85	
Flt Protected	0.95	1.00				0.95	1.00	
Satd. Flow (prot)	1706	3246				1710	2633	
Flt Permitted	0.41	1.00				0.95	1.00	
Satd. Flow (perm)	732	3246				1710	2633	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	120	634	91	114	4	127	674	219
RTOR Reduction (vph)	0	8	0	0	0	0	18	0
Lane Group Flow (vph)	120	831	0	0	0	131	875	0
Confl. Peds. (#/hr)	3							
Heavy Vehicles (%)	0%	2%	0%	0%	0%	0%	3%	0%
Turn Type	Perm				Split		Perm	
Protected Phases		6			9	9		
Permitted Phases	6						9	
Actuated Green, G (s)	52.5	52.5				34.5	34.5	
Effective Green, g (s)	52.5	52.5				34.5	34.5	
Actuated g/C Ratio	0.35	0.35				0.23	0.23	
Clearance Time (s)	4.5	4.5				4.5	4.5	
Lane Grp Cap (vph)	256	1136				393	606	
v/s Ratio Prot		0.26				0.08		
v/s Ratio Perm	0.16						c0.33	
v/c Ratio	0.47	0.73				0.33	1.44	
Uniform Delay, d1	37.9	42.6				48.2	57.8	
Progression Factor	1.00	1.00				1.00	1.00	
Incremental Delay, d2	6.1	4.2				2.3	208.6	
Delay (s)	44.0	46.7				50.4	266.4	
Level of Service	D	D				D	F	
Approach Delay (s)		46.4				238.8		
Approach LOS		D				F		

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰			↱			✣				
Volume (vph)	65	601	0	0	493	60	85	52	20	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	11	11	11	16	11	12	15	12	12	15	12
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		1.00			0.99			0.98				
Flt Protected		1.00			1.00			0.97				
Satd. Flow (prot)		1681			1951			1840				
Flt Permitted		0.90			1.00			0.97				
Satd. Flow (perm)		1524			1951			1840				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	72	668	0	0	548	67	94	58	22	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	740	0	0	615	0	0	174	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)		40.0			40.0			17.0				
Effective Green, g (s)		40.0			40.0			17.0				
Actuated g/C Ratio		0.62			0.62			0.26				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		938			1201			481				
v/s Ratio Prot					0.32							
v/s Ratio Perm		c0.49						0.09				
v/c Ratio		0.79			0.51			0.36				
Uniform Delay, d1		9.3			7.0			19.6				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		6.7			1.6			2.1				
Delay (s)		16.0			8.6			21.7				
Level of Service		B			A			C				
Approach Delay (s)		16.0			8.6			21.7			0.0	
Approach LOS		B			A			C			A	

Intersection Summary			
HCM Average Control Delay	13.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	87.6%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑	↱		↰↑	↱	↰	↑↑	↱	↰	↑↑	↱
Volume (vph)	71	340	152	129	358	157	105	639	85	144	759	94
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	10	10	9	9	10	9
Total Lost time (s)		4.0	4.0		4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		1.00	0.96		1.00	0.97	1.00	1.00	0.94	1.00	1.00	0.92
Flpb, ped/bikes		1.00	1.00		0.99	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.99	1.00		0.99	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1982	1441		1949	1453	1546	3040	1280	1506	3069	1232
Flt Permitted		0.61	1.00		0.78	1.00	0.20	1.00	1.00	0.22	1.00	1.00
Satd. Flow (perm)		1210	1441		1537	1453	326	3040	1280	351	3069	1232
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	75	358	160	136	377	165	111	673	89	152	799	99
RTOR Reduction (vph)	0	0	82	0	0	104	0	0	64	0	0	69
Lane Group Flow (vph)	0	433	78	0	513	61	111	673	25	152	799	30
Confl. Peds. (#/hr)	24		45	45		24	36		24	24		36
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	2%	2%	2%	2%	3%	2%	3%	5%	1%	2%	4%	3%
Turn Type	pm+pt		Perm	Perm		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)		34.0	34.0		26.0	26.0	24.0	20.0	20.0	26.0	21.0	21.0
Effective Green, g (s)		34.0	34.0		26.0	26.0	24.0	20.0	20.0	26.0	21.0	21.0
Actuated g/C Ratio		0.49	0.49		0.37	0.37	0.34	0.29	0.29	0.37	0.30	0.30
Clearance Time (s)		4.0	4.0		4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		643	700		571	540	181	869	366	213	921	370
v/s Ratio Prot		c0.05					0.03	0.22		c0.05	c0.26	
v/s Ratio Perm		0.28	0.05		c0.33	0.04	0.18		0.02	0.21		0.02
v/c Ratio		0.67	0.11		0.90	0.11	0.61	0.77	0.07	0.71	0.87	0.08
Uniform Delay, d1		13.8	9.8		20.8	14.4	17.1	22.9	18.2	16.2	23.2	17.6
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		5.6	0.3		19.5	0.4	6.0	6.7	0.4	10.8	10.8	0.4
Delay (s)		19.3	10.1		40.3	14.9	23.2	29.6	18.6	27.0	34.0	18.0
Level of Service		B	B		D	B	C	C	B	C	C	B
Approach Delay (s)		16.8			34.1			27.7			31.5	
Approach LOS		B			C			C			C	

Intersection Summary			
HCM Average Control Delay	28.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	92.1%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1017: 103rd Street & Normal Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Lane Configurations		✣			✣			✣				
Volume (vph)	85	421	85	98	539	94	51	61	71	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	15	12	12	15	12
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		0.98			0.98			0.95				
Flt Protected		0.99			0.99			0.99				
Satd. Flow (prot)		1645			1649			1797				
Flt Permitted		0.83			0.85			0.99				
Satd. Flow (perm)		1367			1417			1797				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	94	468	94	109	599	104	57	68	79	0	0	0
RTOR Reduction (vph)	0	9	0	0	8	0	0	35	0	0	0	0
Lane Group Flow (vph)	0	647	0	0	804	0	0	169	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm			Perm					
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Actuated Green, G (s)		40.0			40.0			17.0				
Effective Green, g (s)		40.0			40.0			17.0				
Actuated g/C Ratio		0.62			0.62			0.26				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		841			872			470				
v/s Ratio Prot												
v/s Ratio Perm		0.47			c0.57			0.09				
v/c Ratio		0.77			0.92			0.36				
Uniform Delay, d1		9.1			11.1			19.6				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		6.7			16.6			2.1				
Delay (s)		15.8			27.7			21.7				
Level of Service		B			C			C				
Approach Delay (s)		15.8			27.7			21.7			0.0	
Approach LOS		B			C			C			A	

Intersection Summary			
HCM Average Control Delay	22.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	72.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1018: 103rd Street & Wentworth Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱		↰	↱		✥	
Volume (vph)	53	496	83	76	527	37	38	76	72	54	238	56
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	11	12	12	15	12
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frpb, ped/bikes		1.00	0.96		1.00	0.96		1.00	0.96		0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		0.99	1.00		1.00	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		0.98	
Flt Protected		1.00	1.00		0.99	1.00		0.98	1.00		0.99	
Satd. Flow (prot)		1685	1382		1713	1417		1686	1455		1878	
Flt Permitted		0.89	1.00		0.84	1.00		0.82	1.00		0.94	
Satd. Flow (perm)		1504	1382		1442	1417		1412	1455		1774	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	56	522	87	80	555	39	40	80	76	57	251	59
RTOR Reduction (vph)	0	0	37	0	0	12	0	0	52	0	10	0
Lane Group Flow (vph)	0	578	50	0	635	27	0	120	24	0	357	0
Confl. Peds. (#/hr)	25		19	19		25	36		30	30		36
Confl. Bikes (#/hr)	1		2	2		1	3					3
Heavy Vehicles (%)	0%	3%	3%	0%	1%	0%	0%	1%	1%	0%	1%	0%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		43.0	43.0		43.0	43.0		24.0	24.0		24.0	
Effective Green, g (s)		43.0	43.0		43.0	43.0		24.0	24.0		24.0	
Actuated g/C Ratio		0.57	0.57		0.57	0.57		0.32	0.32		0.32	
Clearance Time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	
Lane Grp Cap (vph)		862	792		827	812		452	466		568	
v/s Ratio Prot												
v/s Ratio Perm		0.38	0.04		c0.44	0.02		0.08	0.02		c0.20	
v/c Ratio		0.67	0.06		0.77	0.03		0.27	0.05		0.63	
Uniform Delay, d1		11.1	7.1		12.2	7.0		18.9	17.6		21.7	
Progression Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2		4.1	0.2		6.8	0.1		1.4	0.2		5.2	
Delay (s)		15.2	7.2		19.0	7.0		20.4	17.8		26.9	
Level of Service		B	A		B	A		C	B		C	
Approach Delay (s)		14.2			18.3			19.4			26.9	
Approach LOS		B			B			B			C	

Intersection Summary			
HCM Average Control Delay	18.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	101.5%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1019: 103rd Street & State Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑	↱	↰	↑	↱
Volume (vph)	59	494	34	45	539	54	45	165	55	123	210	33
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	11	16	8	10	10	10	10	10	10
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00	0.98	1.00	1.00	0.98
Flpb, ped/bikes	0.98	1.00		1.00	1.00		0.99	1.00	1.00	0.99	1.00	1.00
Frt	1.00	0.99		1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1533	3066		1652	3730		1585	1663	1370	1568	1680	1397
Flt Permitted	0.35	1.00		0.39	1.00		0.57	1.00	1.00	0.63	1.00	1.00
Satd. Flow (perm)	562	3066		675	3730		953	1663	1370	1043	1680	1397
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	66	549	38	50	599	60	50	183	61	137	233	37
RTOR Reduction (vph)	0	8	0	0	12	0	0	0	37	0	0	22
Lane Group Flow (vph)	66	579	0	50	647	0	50	183	24	137	233	15
Confl. Peds. (#/hr)	51		3	3		51	13		13	13		13
Heavy Vehicles (%)	2%	3%	3%	0%	2%	0%	0%	1%	2%	1%	0%	0%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	31.0	31.0		31.0	31.0		26.0	26.0	26.0	26.0	26.0	26.0
Effective Green, g (s)	31.0	31.0		31.0	31.0		26.0	26.0	26.0	26.0	26.0	26.0
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.40	0.40	0.40	0.40	0.40	0.40
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	268	1462		322	1779		381	665	548	417	672	559
v/s Ratio Prot		c0.19			0.17			0.11			c0.14	
v/s Ratio Perm	0.12			0.07			0.05		0.02	0.13		0.01
v/c Ratio	0.25	0.40		0.16	0.36		0.13	0.28	0.04	0.33	0.35	0.03
Uniform Delay, d1	10.1	11.0		9.6	10.8		12.3	13.1	11.9	13.5	13.6	11.8
Progression Factor	1.00	1.00		1.00	1.00		0.85	0.90	0.75	0.59	0.59	0.26
Incremental Delay, d2	2.2	0.8		1.0	0.6		0.7	1.0	0.2	2.0	1.4	0.1
Delay (s)	12.3	11.8		10.6	11.3		11.1	12.9	9.1	9.9	9.4	3.1
Level of Service	B	B		B	B		B	B	A	A	A	A
Approach Delay (s)		11.8			11.3			11.8			9.0	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM Average Control Delay	11.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	55.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1020: 103rd Street & Michigan Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	60	421	81	73	396	67	57	180	64	89	245	80
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	11	10	11	11	10	11	11	10	11	11
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.98		1.00	0.99		1.00	0.98		1.00	0.99	
Flpb, ped/bikes	0.97	1.00		0.95	1.00		0.99	1.00		0.96	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.96		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1329	3137		1520	3128		1580	2919		1452	2997	
Flt Permitted	0.44	1.00		0.42	1.00		0.53	1.00		0.59	1.00	
Satd. Flow (perm)	617	3137		667	3128		882	2919		907	2997	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	63	443	85	77	417	71	60	189	67	94	258	84
RTOR Reduction (vph)	0	0	0	0	0	0	0	39	0	0	42	0
Lane Group Flow (vph)	63	528	0	77	488	0	60	217	0	94	300	0
Confl. Peds. (#/hr)	112		99	99		112	23		53	53		23
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	16%	1%	0%	0%	1%	9%	0%	8%	2%	5%	5%	7%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	36.0	36.0		36.0	36.0		31.0	31.0		31.0	31.0	
Effective Green, g (s)	36.0	36.0		36.0	36.0		31.0	31.0		31.0	31.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.41	0.41		0.41	0.41	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	296	1506		320	1501		365	1207		375	1239	
v/s Ratio Prot		c0.17			0.16			0.07			0.10	
v/s Ratio Perm	0.10			0.12			0.07			c0.10		
v/c Ratio	0.21	0.35		0.24	0.33		0.16	0.18		0.25	0.24	
Uniform Delay, d1	11.3	12.2		11.5	12.0		13.8	13.9		14.4	14.3	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.6	0.6		1.8	0.6		1.0	0.3		1.6	0.5	
Delay (s)	12.9	12.8		13.2	12.6		14.8	14.3		16.0	14.8	
Level of Service	B	B		B	B		B	B		B	B	
Approach Delay (s)		12.8			12.7			14.4			15.1	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	13.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	52.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱		↰	↑↱		↰	↑↱	
Volume (vph)	100	447	62	32	523	48	86	203	60	76	473	110
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	12	8	16	12	9	10	10	9	10	10
Total Lost time (s)	3.0	7.0		3.0	7.0		3.0	7.0		3.0	7.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.98		1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.99		1.00	0.97		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1595	1653		1371	1973		1534	2998		1535	3012	
Flt Permitted	0.24	1.00		0.30	1.00		0.28	1.00		0.58	1.00	
Satd. Flow (perm)	402	1653		435	1973		451	2998		939	3012	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	105	471	65	34	551	51	91	214	63	80	498	116
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	105	536	0	34	602	0	91	277	0	80	614	0
Confl. Peds. (#/hr)	21		95	95		21	36		8	8		36
Confl. Bikes (#/hr)	2		3	3		2	2					2
Heavy Vehicles (%)	0%	2%	0%	7%	2%	0%	0%	3%	0%	0%	2%	1%
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	43.9	39.3		40.7	37.7		26.7	21.8		26.7	21.8	
Effective Green, g (s)	43.9	37.3		40.7	35.7		26.7	19.8		26.7	19.8	
Actuated g/C Ratio	0.52	0.44		0.48	0.42		0.31	0.23		0.31	0.23	
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	5.0		3.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	272	725		241	829		204	698		329	702	
v/s Ratio Prot	c0.02	c0.32		0.00	0.31		c0.03	0.09		0.01	c0.20	
v/s Ratio Perm	0.18			0.06			0.11			0.06		
v/c Ratio	0.39	0.74		0.14	0.73		0.45	0.40		0.24	0.87	
Uniform Delay, d1	23.8	19.8		20.5	20.6		29.2	27.6		21.9	31.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.9	6.7		0.3	5.5		1.6	1.7		0.4	14.3	
Delay (s)	24.7	26.5		20.8	26.1		30.8	29.2		22.2	45.7	
Level of Service	C	C		C	C		C	C		C	D	
Approach Delay (s)		26.2			25.8			29.6			43.0	
Approach LOS		C			C			C			D	

Intersection Summary			
HCM Average Control Delay	31.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	79.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1022: 103rd Street & Cottage Grove Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	77	399	65	117	510	118	67	158	58	127	367	82
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	11	11	11	11	12	12	10	10	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		0.99	1.00	
Frt		0.98			0.98		1.00	0.96		1.00	0.97	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3681			3131		1652	3237		1549	3027	
Flt Permitted		0.71			0.72		0.42	1.00		0.60	1.00	
Satd. Flow (perm)		2616			2271		737	3237		983	3027	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	86	443	72	130	567	131	74	176	64	141	408	91
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	601	0	0	828	0	74	240	0	141	499	0
Confl. Peds. (#/hr)	23		30	30		23	1		20	20		1
Confl. Bikes (#/hr)	3					3						
Heavy Vehicles (%)	0%	3%	0%	2%	2%	0%	0%	1%	0%	2%	2%	3%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		33.0			33.0		32.0	32.0		32.0	32.0	
Effective Green, g (s)		34.0			34.0		33.0	33.0		33.0	33.0	
Actuated g/C Ratio		0.45			0.45		0.44	0.44		0.44	0.44	
Clearance Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)		1186			1030		324	1424		433	1332	
v/s Ratio Prot								0.07			c0.16	
v/s Ratio Perm		0.23			c0.36		0.10			0.14		
v/c Ratio		0.51			0.80		0.23	0.17		0.33	0.37	
Uniform Delay, d1		14.5			17.6		13.1	12.7		13.7	14.1	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		1.5			6.7		1.6	0.3		2.0	0.8	
Delay (s)		16.1			24.3		14.7	13.0		15.7	14.9	
Level of Service		B			C		B	B		B	B	
Approach Delay (s)		16.1			24.3			13.4			15.1	
Approach LOS		B			C			B			B	

Intersection Summary			
HCM Average Control Delay	18.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	73.4%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1023: 103rd Street & Woodlawn Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↑	↱		✣			↰↱	
Volume (vph)	98	877	6	20	585	249	1	1	9	213	1	80
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	12	12	12	12	12	12	13	13	13
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00			0.95	
Frt	1.00	1.00		1.00	1.00	0.85		0.89			0.96	
Flt Protected	0.95	1.00		0.95	1.00	1.00		1.00			0.97	
Satd. Flow (prot)	1605	3206		1660	3320	1485		1545			3176	
Flt Permitted	0.38	1.00		0.25	1.00	1.00		0.98			0.77	
Satd. Flow (perm)	647	3206		432	3320	1485		1519			2533	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	109	974	7	22	650	277	1	1	10	237	1	89
RTOR Reduction (vph)	0	0	0	0	0	103	0	7	0	0	52	0
Lane Group Flow (vph)	109	981	0	22	650	174	0	5	0	0	275	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	46.1	46.1		46.1	46.1	46.1		19.5			19.5	
Effective Green, g (s)	46.1	46.1		46.1	46.1	46.1		19.5			19.5	
Actuated g/C Ratio	0.63	0.63		0.63	0.63	0.63		0.26			0.26	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		8.0			8.0	
Lane Grp Cap (vph)	405	2008		271	2080	930		402			671	
v/s Ratio Prot		c0.31			0.20							
v/s Ratio Perm	0.17			0.05		0.12		0.00			c0.11	
v/c Ratio	0.27	0.49		0.08	0.31	0.19		0.01			0.41	
Uniform Delay, d1	6.2	7.4		5.4	6.4	5.8		19.9			22.3	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00			1.00	
Incremental Delay, d2	1.6	0.9		0.6	0.4	0.4		0.0			1.7	
Delay (s)	7.8	8.3		6.0	6.8	6.3		20.0			24.0	
Level of Service	A	A		A	A	A		B			C	
Approach Delay (s)		8.2			6.6			20.0			24.0	
Approach LOS		A			A			B			C	

Intersection Summary			
HCM Average Control Delay	9.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	73.6	Sum of lost time (s)	8.0
Intersection Capacity Utilization	58.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1024: 107th Street & Halsted Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↑	↱	↰	↑↑	↱
Volume (vph)	131	228	124	94	163	56	144	907	90	125	825	104
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	9	12	10	10	12	9	10	9	9	10	9
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00	0.97	1.00	1.00	0.96
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.95		1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1560	1505		1563	1585		1493	3069	1337	1523	3099	1318
Flt Permitted	0.45	1.00		0.21	1.00		0.20	1.00	1.00	0.16	1.00	1.00
Satd. Flow (perm)	743	1505		340	1585		317	3069	1337	263	3099	1318
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	138	240	131	99	172	59	152	955	95	132	868	109
RTOR Reduction (vph)	0	23	0	0	15	0	0	0	40	0	0	51
Lane Group Flow (vph)	138	348	0	99	216	0	152	955	55	132	868	58
Confl. Peds. (#/hr)	10		13	13		10	18		7	7		18
Confl. Bikes (#/hr)	2					2	2		1	1		2
Heavy Vehicles (%)	2%	1%	1%	2%	1%	2%	3%	4%	0%	1%	3%	0%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	28.0	21.0		28.0	21.0		42.0	35.0	35.0	42.0	35.0	35.0
Effective Green, g (s)	26.0	22.0		26.0	22.0		40.0	35.0	35.0	40.0	35.0	35.0
Actuated g/C Ratio	0.31	0.26		0.31	0.26		0.47	0.41	0.41	0.47	0.41	0.41
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)	285	390		190	410		232	1264	551	213	1276	543
v/s Ratio Prot	0.03	c0.23		c0.04	0.14		c0.05	c0.31		0.04	0.28	
v/s Ratio Perm	0.11			0.12			0.26		0.04	0.25		0.04
v/c Ratio	0.48	0.89		0.52	0.53		0.66	0.76	0.10	0.62	0.68	0.11
Uniform Delay, d1	22.7	30.4		22.9	27.0		14.7	21.3	15.3	15.0	20.4	15.4
Progression Factor	1.00	1.00		1.00	1.00		0.67	0.82	0.53	1.00	1.00	1.00
Incremental Delay, d2	5.8	25.2		9.9	4.8		12.2	3.8	0.3	12.8	2.9	0.4
Delay (s)	28.4	55.5		32.7	31.8		22.0	21.3	8.5	27.8	23.4	15.8
Level of Service	C	E		C	C		C	C	A	C	C	B
Approach Delay (s)		48.2			32.1			20.4			23.1	
Approach LOS		D			C			C			C	

Intersection Summary			
HCM Average Control Delay	27.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	73.7%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1025: 107th Street & Wentworth Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			✥			✥	
Volume (vph)	22	181	35	20	173	21	25	149	40	47	255	50
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	14	12	12	14	12	12	16	12	12	16	12
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		0.99			1.00			1.00			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.98			0.99			0.97			0.98	
Flt Protected		1.00			1.00			0.99			0.99	
Satd. Flow (prot)		1839			1849			1939			1974	
Flt Permitted		0.97			0.96			0.94			0.94	
Satd. Flow (perm)		1783			1791			1837			1868	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	23	187	36	21	178	22	26	154	41	48	263	52
RTOR Reduction (vph)	0	9	0	0	6	0	0	12	0	0	9	0
Lane Group Flow (vph)	0	237	0	0	215	0	0	209	0	0	354	0
Confl. Peds. (#/hr)	18		34	34		18	16		19	19		16
Confl. Bikes (#/hr)			6	6			1		4	4		1
Heavy Vehicles (%)	0%	1%	0%	5%	1%	0%	0%	2%	0%	0%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		27.0			27.0			30.0			30.0	
Effective Green, g (s)		27.0			27.0			30.0			30.0	
Actuated g/C Ratio		0.42			0.42			0.46			0.46	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		741			744			848			862	
v/s Ratio Prot												
v/s Ratio Perm		c0.13			0.12			0.11			c0.19	
v/c Ratio		0.32			0.29			0.25			0.41	
Uniform Delay, d1		12.8			12.6			10.6			11.6	
Progression Factor		1.00			0.69			1.17			1.00	
Incremental Delay, d2		1.1			1.0			0.7			1.4	
Delay (s)		13.9			9.7			13.1			13.1	
Level of Service		B			A			B			B	
Approach Delay (s)		13.9			9.7			13.1			13.1	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM Average Control Delay	12.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	53.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	24	193	38	25	180	19	49	200	31	43	214	39
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	0.97	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.99		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1496	3059		1576	3119		1518	3119		1550	3076	
Flt Permitted	0.61	1.00		0.59	1.00		0.58	1.00		0.59	1.00	
Satd. Flow (perm)	966	3059		985	3119		926	3119		968	3076	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	27	214	42	28	200	21	54	222	34	48	238	43
RTOR Reduction (vph)	0	25	0	0	12	0	0	14	0	0	18	0
Lane Group Flow (vph)	27	231	0	28	209	0	54	242	0	48	263	0
Confl. Peds. (#/hr)	20		17	17		20	2					2
Confl. Bikes (#/hr)	32		36	36		32	22		25	25		22
Heavy Vehicles (%)	4%	1%	0%	0%	0%	0%	5%	0%	0%	3%	1%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.0	20.0		20.0	20.0		39.0	39.0		39.0	39.0	
Effective Green, g (s)	19.0	19.0		19.0	19.0		38.0	38.0		38.0	38.0	
Actuated g/C Ratio	0.29	0.29		0.29	0.29		0.58	0.58		0.58	0.58	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	282	894		288	912		541	1823		566	1798	
v/s Ratio Prot		c0.08			0.07			0.08			c0.09	
v/s Ratio Perm	0.03			0.03			0.06			0.05		
v/c Ratio	0.10	0.26		0.10	0.23		0.10	0.13		0.08	0.15	
Uniform Delay, d1	16.7	17.6		16.8	17.4		6.0	6.1		5.9	6.1	
Progression Factor	0.94	0.97		0.73	0.73		1.36	1.37		0.38	0.34	
Incremental Delay, d2	0.6	0.7		0.7	0.6		0.4	0.1		0.3	0.2	
Delay (s)	16.4	17.7		12.9	13.3		8.4	8.5		2.5	2.3	
Level of Service	B	B		B	B		A	A		A	A	
Approach Delay (s)		17.6			13.3			8.4			2.3	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	10.0	HCM Level of Service	A
HCM Volume to Capacity ratio	0.18		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	46.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1027: 107th Street & Michigan Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			✣			✣	
Volume (vph)	67	168	41	25	159	38	27	247	16	40	322	33
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	9	9	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	
Flpb, ped/bikes	0.99	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.97		1.00	0.97			0.99			0.99	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1555	3058		1525	2937			1922			1938	
Flt Permitted	0.61	1.00		0.61	1.00			0.94			0.94	
Satd. Flow (perm)	1007	3058		974	2937			1823			1840	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	74	187	46	28	177	42	30	274	18	44	358	37
RTOR Reduction (vph)	0	28	0	0	25	0	0	3	0	0	5	0
Lane Group Flow (vph)	74	205	0	28	194	0	0	319	0	0	434	0
Confl. Peds. (#/hr)	11		17	17		11	26		7	7		26
Heavy Vehicles (%)	2%	1%	0%	0%	1%	3%	4%	5%	0%	0%	4%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	26.0	26.0		26.0	26.0			31.0			31.0	
Effective Green, g (s)	26.0	26.0		26.0	26.0			31.0			31.0	
Actuated g/C Ratio	0.40	0.40		0.40	0.40			0.48			0.48	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	403	1223		390	1175			869			878	
v/s Ratio Prot		0.07			0.07							
v/s Ratio Perm	c0.07			0.03				0.17			c0.24	
v/c Ratio	0.18	0.17		0.07	0.16			0.37			0.49	
Uniform Delay, d1	12.6	12.5		12.0	12.5			10.8			11.6	
Progression Factor	1.05	1.00		0.79	0.79			1.23			1.00	
Incremental Delay, d2	1.0	0.3		0.3	0.3			1.2			2.0	
Delay (s)	14.2	12.8		9.9	10.2			14.4			13.6	
Level of Service	B	B		A	B			B			B	
Approach Delay (s)		13.2			10.1			14.4			13.6	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	13.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	57.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1028: 107th Street & Martin Luther King Jr Drive

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱			✣			✣	
Volume (vph)	47	111	28	20	161	27	41	235	11	33	364	57
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	16	12	10	16	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	
Flpb, ped/bikes	1.00	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.97		1.00	0.98			0.99			0.98	
Flt Protected	0.95	1.00		0.95	1.00			0.99			1.00	
Satd. Flow (prot)	1652	1970		1584	1975			1981			1979	
Flt Permitted	0.57	1.00		0.65	1.00			0.90			0.96	
Satd. Flow (perm)	986	1970		1087	1975			1792			1912	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	52	123	31	22	179	30	46	261	12	37	404	63
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	52	154	0	22	209	0	0	319	0	0	504	0
Confl. Peds. (#/hr)	1		10	10		1	2		5	5		2
Heavy Vehicles (%)	0%	0%	0%	0%	1%	0%	0%	2%	0%	0%	1%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.0	20.0		20.0	20.0			37.0			37.0	
Effective Green, g (s)	20.0	20.0		20.0	20.0			37.0			37.0	
Actuated g/C Ratio	0.31	0.31		0.31	0.31			0.57			0.57	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	303	606		334	608			1020			1088	
v/s Ratio Prot		0.08			c0.11							
v/s Ratio Perm	0.05			0.02				0.18			c0.26	
v/c Ratio	0.17	0.25		0.07	0.34			0.31			0.46	
Uniform Delay, d1	16.4	16.9		15.9	17.4			7.3			8.2	
Progression Factor	0.83	0.81		0.96	0.99			0.84			1.00	
Incremental Delay, d2	1.2	1.0		0.4	1.5			0.8			1.4	
Delay (s)	14.8	14.6		15.6	18.7			6.9			9.6	
Level of Service	B	B		B	B			A			A	
Approach Delay (s)		14.7			18.4			6.9			9.6	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	11.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱		↰	↑	↱	↰	↑	↱
Volume (vph)	54	13	97	2	5	10	62	235	5	5	466	76
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	10	10	10	11	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.98		1.00	0.98		1.00	1.00	1.00	1.00	1.00	0.98
Flpb, ped/bikes	0.99	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.87		1.00	0.90		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1695	1727		1702	1808		1594	1647	1428	1653	2000	1496
Flt Permitted	0.75	1.00		0.68	1.00		0.39	1.00	1.00	0.59	1.00	1.00
Satd. Flow (perm)	1332	1727		1216	1808		660	1647	1428	1030	2000	1496
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	60	14	108	2	6	11	69	261	6	6	518	84
RTOR Reduction (vph)	0	78	0	0	8	0	0	0	2	0	0	28
Lane Group Flow (vph)	60	44	0	2	9	0	69	261	4	6	518	56
Confl. Peds. (#/hr)	5		5	5		5	3					3
Heavy Vehicles (%)	0%	0%	1%	0%	0%	0%	0%	2%	0%	0%	2%	0%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	17.0	17.0		17.0	17.0		39.0	39.0	39.0	39.0	39.0	39.0
Effective Green, g (s)	18.0	18.0		18.0	18.0		39.0	39.0	39.0	39.0	39.0	39.0
Actuated g/C Ratio	0.28	0.28		0.28	0.28		0.60	0.60	0.60	0.60	0.60	0.60
Clearance Time (s)	5.0	5.0		5.0	5.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	369	478		337	501		396	988	857	618	1200	898
v/s Ratio Prot		0.03			0.01			0.16			c0.26	
v/s Ratio Perm	c0.05			0.00			0.10		0.00	0.01		0.04
v/c Ratio	0.16	0.09		0.01	0.02		0.17	0.26	0.00	0.01	0.43	0.06
Uniform Delay, d1	17.8	17.4		17.0	17.1		5.8	6.2	5.2	5.2	7.0	5.4
Progression Factor	1.39	2.73		1.00	1.00		1.20	1.12	1.49	1.00	1.00	1.00
Incremental Delay, d2	0.9	0.4		0.0	0.1		0.7	0.5	0.0	0.0	1.1	0.1
Delay (s)	25.7	48.0		17.1	17.1		7.7	7.4	7.8	5.3	8.2	5.5
Level of Service	C	D		B	B		A	A	A	A	A	A
Approach Delay (s)		40.7			17.1			7.4			7.8	
Approach LOS		D			B			A			A	

Intersection Summary			
HCM Average Control Delay	13.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	52.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

1030: 111th Street & Marshield Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱		↰	↑↑					↰	↑↱	
Volume (vph)	0	253	163	178	204	0	0	0	0	110	470	377
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	12	12	12	12	12	11	11	12
Total Lost time (s)		4.0		3.0	3.0					5.0	5.0	
Lane Util. Factor		0.95		1.00	0.95					1.00	0.95	
Frpb, ped/bikes		0.99		1.00	1.00					1.00	0.99	
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	
Frt		0.94		1.00	1.00					1.00	0.93	
Flt Protected		1.00		0.95	1.00					0.95	1.00	
Satd. Flow (prot)		2905		1693	3288					1503	3021	
Flt Permitted		1.00		0.41	1.00					0.95	1.00	
Satd. Flow (perm)		2905		722	3288					1503	3021	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	266	172	187	215	0	0	0	0	116	495	397
RTOR Reduction (vph)	0	103	0	0	0	0	0	0	0	0	141	0
Lane Group Flow (vph)	0	335	0	187	215	0	0	0	0	116	751	0
Confl. Peds. (#/hr)	18		3	3		18	1					1
Heavy Vehicles (%)	0%	4%	1%	1%	4%	0%	0%	0%	0%	10%	2%	1%
Turn Type				D.P+P						Split		
Protected Phases		8		7	7 8					6	6	
Permitted Phases				8								
Actuated Green, G (s)		33.0		53.0	56.0					37.0	37.0	
Effective Green, g (s)		33.0		53.0	56.0					37.0	37.0	
Actuated g/C Ratio		0.32		0.52	0.55					0.36	0.36	
Clearance Time (s)		4.0		3.0						5.0	5.0	
Lane Grp Cap (vph)		940		566	1805					545	1096	
v/s Ratio Prot		c0.12		c0.06	0.07					0.08	c0.25	
v/s Ratio Perm				0.11								
v/c Ratio		0.36		0.33	0.12					0.21	0.68	
Uniform Delay, d1		26.4		13.5	11.1					22.4	27.6	
Progression Factor		1.00		2.20	2.13					1.00	1.00	
Incremental Delay, d2		1.1		1.4	0.1					0.9	3.5	
Delay (s)		27.4		31.0	23.8					23.3	31.0	
Level of Service		C		C	C					C	C	
Approach Delay (s)		27.4			27.1			0.0			30.2	
Approach LOS		C			C			A			C	

Intersection Summary			
HCM Average Control Delay	28.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	102.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	62.4%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑			↑↱		↰	↑	↱			
Volume (vph)	141	222	0	0	305	113	77	539	233	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	9	12	13	12	13	12	12	12
Total Lost time (s)	4.0	4.0			4.0		5.0	5.0	5.0			
Lane Util. Factor	1.00	0.95			0.95		1.00	1.00	1.00			
Frpb, ped/bikes	1.00	1.00			0.99		1.00	1.00	0.99			
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.96		1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1674	3196			2850		1767	1782	1560			
Flt Permitted	0.36	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	632	3196			2850		1767	1782	1560			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	148	234	0	0	321	119	81	567	245	0	0	0
RTOR Reduction (vph)	0	0	0	0	37	0	0	0	168	0	0	0
Lane Group Flow (vph)	148	234	0	0	403	0	81	567	77	0	0	0
Confl. Peds. (#/hr)	9		13	13		9			1	1		
Confl. Bikes (#/hr)	3					3						
Heavy Vehicles (%)	2%	7%	0%	0%	3%	1%	0%	1%	0%	0%	0%	0%
Turn Type	pm+pt						custom		Perm			
Protected Phases	4	1 4			1		2	2				
Permitted Phases	1 4						2		2			
Actuated Green, G (s)	59.0	63.0			26.0		30.0	30.0	30.0			
Effective Green, g (s)	59.0	63.0			26.0		30.0	30.0	30.0			
Actuated g/C Ratio	0.58	0.62			0.25		0.29	0.29	0.29			
Clearance Time (s)	4.0				4.0		5.0	5.0	5.0			
Lane Grp Cap (vph)	703	1974			726		520	524	459			
v/s Ratio Prot	c0.07	0.07			c0.14		0.05	c0.32				
v/s Ratio Perm	0.05								0.05			
v/c Ratio	0.21	0.12			0.55		0.16	1.08	0.17			
Uniform Delay, d1	10.3	8.0			33.0		26.6	36.0	26.7			
Progression Factor	0.42	0.43			1.00		1.00	1.00	1.00			
Incremental Delay, d2	0.6	0.1			3.0		0.6	63.3	0.8			
Delay (s)	4.9	3.6			36.0		27.3	99.3	27.5			
Level of Service	A	A			D		C	F	C			
Approach Delay (s)		4.1			36.0			73.1			0.0	
Approach LOS		A			D			E			A	

Intersection Summary			
HCM Average Control Delay	48.2	HCM Level of Service	D
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	102.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	62.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1032: 112th Place & Marshield Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱		↰	↑↑					↰	↑↑	↱
Volume (vph)	0	514	479	81	534	0	0	0	0	11	434	285
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	11	12	12	12	12	10	10	12
Total Lost time (s)		4.0		4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.95		1.00	0.95					1.00	0.95	1.00
Frpb, ped/bikes		0.99		1.00	1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Frt		0.93		1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00					0.95	1.00	1.00
Satd. Flow (prot)		3098		1710	3306					1596	3192	1530
Flt Permitted		1.00		0.11	1.00					0.95	1.00	1.00
Satd. Flow (perm)		3098		200	3306					1596	3192	1530
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	0	535	499	84	556	0	0	0	0	11	452	297
RTOR Reduction (vph)	0	168	0	0	0	0	0	0	0	0	0	196
Lane Group Flow (vph)	0	866	0	84	556	0	0	0	0	11	452	101
Confl. Peds. (#/hr)	8		8	8		8	3					3
Confl. Bikes (#/hr)	9					9			61	61		
Heavy Vehicles (%)	0%	1%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type				pm+pt						Split		Prot
Protected Phases		8		7	7 8					6	6	6
Permitted Phases				7 8								
Actuated Green, G (s)		36.0		54.0	58.0					34.0	34.0	34.0
Effective Green, g (s)		36.0		54.0	58.0					34.0	34.0	34.0
Actuated g/C Ratio		0.36		0.54	0.58					0.34	0.34	0.34
Clearance Time (s)		4.0		4.0						4.0	4.0	4.0
Lane Grp Cap (vph)		1115		380	1917					543	1085	520
v/s Ratio Prot		c0.28		0.04	c0.17					0.01	c0.14	0.07
v/s Ratio Perm				0.08								
v/c Ratio		0.78		0.22	0.29					0.02	0.42	0.19
Uniform Delay, d1		28.4		14.4	10.6					21.9	25.4	23.3
Progression Factor		1.00		1.01	1.19					1.00	1.00	1.00
Incremental Delay, d2		5.3		0.9	0.3					0.1	1.2	0.8
Delay (s)		33.8		15.5	12.9					22.0	26.6	24.2
Level of Service		C		B	B					C	C	C
Approach Delay (s)		33.8			13.2			0.0			25.5	
Approach LOS		C			B			A			C	

Intersection Summary			
HCM Average Control Delay	25.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	92.5%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1033: 112th Place & Hamlet Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↰↑			↑↱		↰	↰	↱			
Volume (vph)	419	106	0	0	150	6	465	480	58	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	12	12	12	10	12	11	11	12	12	12	12
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0	4.0			
Lane Util. Factor	0.91	0.91			0.95		0.95	0.95	1.00			
Frpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.99		1.00	1.00	0.85			
Flt Protected	0.95	0.97			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1469	3110			3170		1555	1653	1530			
Flt Permitted	0.64	0.71			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	992	2290			3170		1555	1653	1530			
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	432	109	0	0	155	6	479	495	60	0	0	0
RTOR Reduction (vph)	0	0	0	0	3	0	0	0	38	0	0	0
Lane Group Flow (vph)	216	325	0	0	158	0	479	495	22	0	0	0
Confl. Peds. (#/hr)	13		6	6		13			8	8		
Confl. Bikes (#/hr)	1					1			2	2		
Heavy Vehicles (%)	2%	1%	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%
Turn Type	pm+pt						custom		custom			
Protected Phases	4	1 4			1		2	2	2			
Permitted Phases	1 4						2		2			
Actuated Green, G (s)	51.0	51.0			15.0		37.0	37.0	37.0			
Effective Green, g (s)	51.0	51.0			15.0		37.0	37.0	37.0			
Actuated g/C Ratio	0.51	0.51			0.15		0.37	0.37	0.37			
Clearance Time (s)	4.0				4.0		4.0	4.0	4.0			
Lane Grp Cap (vph)	678	1463			476		575	612	566			
v/s Ratio Prot	c0.11	0.08			c0.05		c0.31	0.30	0.01			
v/s Ratio Perm	0.05	0.03										
v/c Ratio	0.32	0.22			0.33		0.83	0.81	0.04			
Uniform Delay, d1	14.1	13.5			38.0		28.7	28.3	20.1			
Progression Factor	0.24	0.25			1.00		1.00	1.00	1.00			
Incremental Delay, d2	0.7	0.2			1.9		13.3	11.0	0.1			
Delay (s)	4.1	3.6			39.9		42.0	39.3	20.3			
Level of Service	A	A			D		D	D	C			
Approach Delay (s)		3.8			39.9			39.5			0.0	
Approach LOS		A			D			D			A	

Intersection Summary			
HCM Average Control Delay	28.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	92.5%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱		↰	↑↑	↱	↰	↑↑	↱
Volume (vph)	78	220	103	153	273	121	84	699	87	102	884	65
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	9	10	9	9	10	9
Total Lost time (s)		4.0			4.0		4.0	3.5	4.0	4.0	3.5	4.0
Lane Util. Factor		0.95			0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		0.99			0.99		1.00	1.00	0.97	1.00	1.00	0.96
Flpb, ped/bikes		1.00			1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.96			0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.99			0.99		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		2940			2929		1508	3069	1309	1508	3099	1298
Flt Permitted		0.72			0.72		0.16	1.00	1.00	0.25	1.00	1.00
Satd. Flow (perm)		2137			2152		254	3069	1309	401	3099	1298
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	81	229	107	159	284	126	88	728	91	106	921	68
RTOR Reduction (vph)	0	40	0	0	31	0	0	0	56	0	0	33
Lane Group Flow (vph)	0	377	0	0	538	0	88	728	35	106	921	35
Confl. Peds. (#/hr)	35		30	30		35	34		8	8		34
Confl. Bikes (#/hr)	1					1	1					1
Heavy Vehicles (%)	1%	4%	0%	1%	3%	3%	2%	4%	2%	2%	3%	2%
Turn Type	pm+pt			Perm			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)		35.0			27.0		38.0	33.0	33.0	38.0	33.0	33.0
Effective Green, g (s)		36.0			28.0		36.0	33.5	33.0	36.0	33.5	33.0
Actuated g/C Ratio		0.42			0.33		0.42	0.39	0.39	0.42	0.39	0.39
Clearance Time (s)		5.0			5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)		962			709		167	1210	508	222	1221	504
v/s Ratio Prot		c0.03					c0.02	0.24		0.02	c0.30	
v/s Ratio Perm		0.14			c0.25		0.20		0.03	0.18		0.03
v/c Ratio		0.39			0.76		0.53	0.60	0.07	0.48	0.75	0.07
Uniform Delay, d1		16.9			25.5		16.7	20.5	16.3	16.0	22.2	16.3
Progression Factor		1.00			1.00		1.36	0.69	0.62	1.11	1.16	1.74
Incremental Delay, d2		1.2			7.5		10.7	2.1	0.2	5.2	3.1	0.2
Delay (s)		18.1			33.0		33.5	16.2	10.4	22.9	29.0	28.6
Level of Service		B			C		C	B	B	C	C	C
Approach Delay (s)		18.1			33.0			17.3			28.4	
Approach LOS		B			C			B			C	

Intersection Summary			
HCM Average Control Delay	24.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	74.8%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1035: 111th Street & Normal Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑			↑↱			✥				
Volume (vph)	76	327	0	0	424	88	53	44	34	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		1.00			0.98			0.96				
Flt Protected		0.99			1.00			0.98				
Satd. Flow (prot)		1731			1707			1653				
Flt Permitted		0.83			1.00			0.98				
Satd. Flow (perm)		1453			1707			1653				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	84	363	0	0	471	98	59	49	38	0	0	0
RTOR Reduction (vph)	0	0	0	0	12	0	0	20	0	0	0	0
Lane Group Flow (vph)	0	447	0	0	557	0	0	126	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)		38.0			38.0			19.0				
Effective Green, g (s)		38.0			38.0			19.0				
Actuated g/C Ratio		0.58			0.58			0.29				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		849			998			483				
v/s Ratio Prot					c0.33							
v/s Ratio Perm		0.31						0.08				
v/c Ratio		0.53			0.56			0.26				
Uniform Delay, d1		8.1			8.3			17.6				
Progression Factor		1.00			0.76			1.00				
Incremental Delay, d2		2.3			2.0			1.3				
Delay (s)		10.4			8.3			18.9				
Level of Service		B			A			B				
Approach Delay (s)		10.4			8.3			18.9			0.0	
Approach LOS		B			A			B			A	

Intersection Summary			
HCM Average Control Delay	10.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	69.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1036: 111th Street & Wentworth Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Lane Configurations		↰↑↱			↰↑↱			↰↑↑↱			↰↑↑↱	
Volume (vph)	21	384	39	39	370	50	31	118	39	53	150	43
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	10	12	12	10	12
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		1.00			1.00			0.99			0.98	
Flpb, ped/bikes		1.00			1.00			0.99			1.00	
Frt		0.99			0.99			0.97			0.97	
Flt Protected		1.00			1.00			0.99			0.99	
Satd. Flow (prot)		1955			1941			2969			2985	
Flt Permitted		0.97			0.94			0.88			0.86	
Satd. Flow (perm)		1900			1825			2647			2591	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	23	427	43	43	411	56	34	131	43	59	167	48
RTOR Reduction (vph)	0	5	0	0	7	0	0	25	0	0	27	0
Lane Group Flow (vph)	0	488	0	0	503	0	0	183	0	0	247	0
Confl. Peds. (#/hr)	32		25	25		32	59		24	24		59
Confl. Bikes (#/hr)	3		2	2		3	4		2	2		4
Heavy Vehicles (%)	0%	3%	0%	3%	3%	0%	0%	0%	7%	4%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		30.0			30.0			27.0			27.0	
Effective Green, g (s)		30.0			30.0			27.0			27.0	
Actuated g/C Ratio		0.46			0.46			0.42			0.42	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		877			842			1100			1076	
v/s Ratio Prot												
v/s Ratio Perm		0.26			c0.28			0.07			c0.10	
v/c Ratio		0.56			0.60			0.17			0.23	
Uniform Delay, d1		12.7			13.0			11.9			12.3	
Progression Factor		0.61			0.40			1.07			0.43	
Incremental Delay, d2		2.4			2.8			0.3			0.5	
Delay (s)		10.1			8.0			13.1			5.8	
Level of Service		B			A			B			A	
Approach Delay (s)		10.1			8.0			13.1			5.8	
Approach LOS		B			A			B			A	

Intersection Summary			
HCM Average Control Delay	9.0	HCM Level of Service	A
HCM Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	75.8%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1037: 111th Street & State Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	51	330	49	81	467	86	45	219	98	83	227	64
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	9	10	10	9	10	10	12	10	10	12
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		0.99	1.00		0.99	1.00		0.99	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.95		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1510	3036		1573	3077		1587	2962		1585	3072	
Flt Permitted	0.32	1.00		0.46	1.00		0.56	1.00		0.54	1.00	
Satd. Flow (perm)	502	3036		760	3077		929	2962		903	3072	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	57	367	54	90	519	96	50	243	109	92	252	71
RTOR Reduction (vph)	0	18	0	0	23	0	0	50	0	0	33	0
Lane Group Flow (vph)	57	403	0	90	592	0	50	302	0	92	290	0
Confl. Peds. (#/hr)	20		31	31		20	16		20	20		16
Confl. Bikes (#/hr)							1		3	3		1
Heavy Vehicles (%)	5%	3%	0%	0%	1%	0%	0%	2%	2%	0%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	22.0	22.0		22.0	22.0		35.0	35.0		35.0	35.0	
Effective Green, g (s)	22.0	22.0		22.0	22.0		35.0	35.0		35.0	35.0	
Actuated g/C Ratio	0.34	0.34		0.34	0.34		0.54	0.54		0.54	0.54	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	170	1028		257	1041		500	1595		486	1654	
v/s Ratio Prot		0.13			c0.19			0.10			0.09	
v/s Ratio Perm	0.11			0.12			0.05			c0.10		
v/c Ratio	0.34	0.39		0.35	0.57		0.10	0.19		0.19	0.18	
Uniform Delay, d1	16.0	16.4		16.1	17.6		7.3	7.7		7.7	7.6	
Progression Factor	0.71	0.67		0.97	0.97		0.95	0.98		1.08	1.08	
Incremental Delay, d2	4.6	1.0		3.7	2.2		0.4	0.3		0.9	0.2	
Delay (s)	16.0	12.0		19.3	19.2		7.3	7.8		9.2	8.5	
Level of Service	B	B		B	B		A	A		A	A	
Approach Delay (s)		12.5			19.2			7.7			8.6	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	13.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	51.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1038: 111th Street & Michigan Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			↰↑↱			↰↑↱	
Volume (vph)	59	348	78	87	418	50	46	231	58	46	279	64
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	9	10	9	9	16	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			0.99			0.98	
Flpb, ped/bikes	0.98	1.00		0.99	1.00			0.99			1.00	
Frt	1.00	0.97		1.00	0.98			0.97			0.98	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1509	3018		1430	3723			3485			3521	
Flt Permitted	0.45	1.00		0.48	1.00			0.86			0.88	
Satd. Flow (perm)	708	3018		715	3723			3028			3119	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	62	366	82	92	440	53	48	243	61	48	294	67
RTOR Reduction (vph)	0	29	0	0	14	0	0	27	0	0	25	0
Lane Group Flow (vph)	62	419	0	92	479	0	0	325	0	0	384	0
Confl. Peds. (#/hr)	38		17	17		38	125		53	53		125
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	0%	3%	0%	7%	2%	0%	0%	6%	10%	2%	5%	5%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	31.0	31.0		31.0	31.0			26.0			26.0	
Effective Green, g (s)	31.0	31.0		31.0	31.0			26.0			26.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48			0.40			0.40	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	338	1439		341	1776			1211			1248	
v/s Ratio Prot		c0.14			0.13							
v/s Ratio Perm	0.09			0.13				0.11			c0.12	
v/c Ratio	0.18	0.29		0.27	0.27			0.27			0.31	
Uniform Delay, d1	9.7	10.3		10.2	10.2			13.1			13.3	
Progression Factor	1.61	1.76		1.11	1.10			1.00			0.74	
Incremental Delay, d2	1.1	0.5		1.7	0.3			0.5			0.6	
Delay (s)	16.8	18.6		13.0	11.5			13.7			10.4	
Level of Service	B	B		B	B			B			B	
Approach Delay (s)		18.4			11.8			13.7			10.4	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	13.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	58.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰↱			✣			✣	
Volume (vph)	86	294	92	92	293	92	120	82	47	47	82	119
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	16	12	12	16	12
Total Lost time (s)		5.0	5.0		5.0			5.0			5.0	
Lane Util. Factor		1.00	1.00		0.95			1.00			1.00	
Frt		1.00	0.85		0.97			0.97			0.94	
Flt Protected		0.99	1.00		0.99			0.98			0.99	
Satd. Flow (prot)		1670	1436		3087			1885			1835	
Flt Permitted		0.79	1.00		0.79			0.68			0.90	
Satd. Flow (perm)		1336	1436		2454			1303			1674	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	96	327	102	102	326	102	133	91	52	52	91	132
RTOR Reduction (vph)	0	0	49	0	32	0	0	13	0	0	51	0
Lane Group Flow (vph)	0	423	53	0	498	0	0	263	0	0	224	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm		Perm	Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)		34.0	34.0		34.0			21.0			21.0	
Effective Green, g (s)		34.0	34.0		34.0			21.0			21.0	
Actuated g/C Ratio		0.52	0.52		0.52			0.32			0.32	
Clearance Time (s)		5.0	5.0		5.0			5.0			5.0	
Lane Grp Cap (vph)		699	751		1284			421			541	
v/s Ratio Prot												
v/s Ratio Perm		c0.32	0.04		0.20			c0.20			0.13	
v/c Ratio		0.61	0.07		0.39			0.63			0.41	
Uniform Delay, d1		10.8	7.7		9.3			18.7			17.2	
Progression Factor		1.87	4.74		0.53			1.00			1.00	
Incremental Delay, d2		3.8	0.2		0.9			6.8			2.3	
Delay (s)		24.0	36.6		5.8			25.5			19.5	
Level of Service		C	D		A			C			B	
Approach Delay (s)		26.5			5.8			25.5			19.5	
Approach LOS		C			A			C			B	

Intersection Summary			
HCM Average Control Delay	18.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	79.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

1040: 111th Street & Martin Luther King Jr Drive

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			↰↑↱			↰↑↱	
Volume (vph)	55	281	28	26	327	60	26	133	47	62	146	63
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	15	8	16	8	8	16	8
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			0.99			1.00	
Flpb, ped/bikes	0.99	1.00		0.98	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.98			0.97			0.97	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1444	3026		1566	3019			3582			3599	
Flt Permitted	0.48	1.00		0.55	1.00			0.90			0.84	
Satd. Flow (perm)	736	3026		899	3019			3238			3069	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	61	312	31	29	363	67	29	148	52	69	162	70
RTOR Reduction (vph)	0	11	0	0	23	0	0	30	0	0	41	0
Lane Group Flow (vph)	61	332	0	29	407	0	0	199	0	0	260	0
Confl. Peds. (#/hr)	24		47	47		24	9		36	36		9
Confl. Bikes (#/hr)			4	4			1					1
Heavy Vehicles (%)	9%	4%	0%	0%	3%	0%	0%	1%	10%	0%	0%	8%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	30.0	30.0		30.0	30.0			27.0			27.0	
Effective Green, g (s)	30.0	30.0		30.0	30.0			27.0			27.0	
Actuated g/C Ratio	0.46	0.46		0.46	0.46			0.42			0.42	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	340	1397		415	1393			1345			1275	
v/s Ratio Prot		0.11			c0.13							
v/s Ratio Perm	0.08			0.03				0.06			c0.08	
v/c Ratio	0.18	0.24		0.07	0.29			0.15			0.20	
Uniform Delay, d1	10.3	10.6		9.7	10.9			11.8			12.1	
Progression Factor	0.67	0.68		1.31	1.20			0.93			0.41	
Incremental Delay, d2	0.9	0.3		0.1	0.2			0.2			0.3	
Delay (s)	7.8	7.5		12.9	13.3			11.2			5.4	
Level of Service	A	A		B	B			B			A	
Approach Delay (s)		7.5			13.3			11.2			5.4	
Approach LOS		A			B			B			A	

Intersection Summary			
HCM Average Control Delay	9.6	HCM Level of Service	A
HCM Volume to Capacity ratio	0.25		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.7%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1041: 111th Street & Cottage Grove Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱			↰↑↱			↰↑↱	
Volume (vph)	47	450	26	86	507	222	24	124	115	340	261	82
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			0.95			0.95	
Frt		0.99			0.96			0.93			0.98	
Flt Protected		1.00			0.99			1.00			0.98	
Satd. Flow (prot)		3281			3168			3089			3181	
Flt Permitted		0.75			0.78			0.88			0.70	
Satd. Flow (perm)		2462			2487			2739			2269	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	52	500	29	96	563	247	27	138	128	378	290	91
RTOR Reduction (vph)	0	6	0	0	59	0	0	67	0	0	16	0
Lane Group Flow (vph)	0	575	0	0	847	0	0	226	0	0	743	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm			pm+pt			Perm		
Protected Phases		4			8		5	2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		24.0			24.0			31.0			23.0	
Effective Green, g (s)		24.0			24.0			31.0			23.0	
Actuated g/C Ratio		0.37			0.37			0.48			0.35	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		909			918			1333			803	
v/s Ratio Prot								c0.01				
v/s Ratio Perm		0.23			c0.34			0.07			c0.33	
v/c Ratio		0.63			0.92			0.17			1.02dl	
Uniform Delay, d1		16.9			19.6			9.7			20.2	
Progression Factor		1.65			1.00			1.00			0.77	
Incremental Delay, d2		3.3			16.0			0.3			17.5	
Delay (s)		31.1			35.6			10.0			33.1	
Level of Service		C			D			A			C	
Approach Delay (s)		31.1			35.6			10.0			33.1	
Approach LOS		C			D			A			C	

Intersection Summary			
HCM Average Control Delay	30.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	86.1%	ICU Level of Service	E
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1042: 111th Street & Ellis Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↑↱			↰↑↑↱			↰↑↱			↰↑↱	
Volume (vph)	0	899	132	48	794	0	82	0	36	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	10	10	12	12	12	12	12	12	12
Total Lost time (s)		5.0			5.0			5.0				
Lane Util. Factor		0.95			0.95			1.00				
Frt		0.98			1.00			0.96				
Flt Protected		1.00			1.00			0.97				
Satd. Flow (prot)		3039			3090			1619				
Flt Permitted		1.00			0.80			0.79				
Satd. Flow (perm)		3039			2485			1328				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	999	147	53	882	0	91	0	40	0	0	0
RTOR Reduction (vph)	0	16	0	0	0	0	0	17	0	0	0	0
Lane Group Flow (vph)	0	1130	0	0	935	0	0	114	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	custom			Perm			Perm			Perm		
Protected Phases		4 5 6 11			8			2			2	
Permitted Phases	4 6 11			8			2			2		
Actuated Green, G (s)		65.0			33.0			16.0				
Effective Green, g (s)		58.0			33.0			16.0				
Actuated g/C Ratio		0.64			0.37			0.18				
Clearance Time (s)					5.0			5.0				
Lane Grp Cap (vph)		1958			911			236				
v/s Ratio Prot		c0.37										
v/s Ratio Perm					c0.38			c0.09				
v/c Ratio		0.58			1.03			0.48				
Uniform Delay, d1		9.1			28.5			33.3				
Progression Factor		0.16			1.43			1.00				
Incremental Delay, d2		0.3			35.5			6.9				
Delay (s)		1.7			76.4			40.2				
Level of Service		A			E			D				
Approach Delay (s)		1.7			76.4			40.2			0.0	
Approach LOS		A			E			D			A	

Intersection Summary			
HCM Average Control Delay	35.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	74.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↑	↱		✥		↰	↑	↱
Volume (vph)	224	642	24	112	614	185	61	4	107	212	10	213
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	10	12	12	12	12	16	12	12	12	12
Total Lost time (s)	3.0	5.0		3.0	5.0	3.0		5.0		3.0	5.0	3.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	1.00	0.85		0.92		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.98		0.95	1.00	1.00
Satd. Flow (prot)	1550	3192		1660	3320	1485		1782		1660	1748	1485
Flt Permitted	0.29	1.00		0.33	1.00	1.00		0.88		0.44	1.00	1.00
Satd. Flow (perm)	471	3192		583	3320	1485		1592		763	1748	1485
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	249	713	27	124	682	206	68	4	119	236	11	237
RTOR Reduction (vph)	0	2	0	0	0	96	0	90	0	0	0	135
Lane Group Flow (vph)	249	738	0	124	682	110	0	101	0	236	11	102
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	pm+pt			pm+pt		pm+ov	pm+pt			pm+pt		pm+ov
Protected Phases	7	4		3	8	1	5	2		1	6	7
Permitted Phases	4			8		8	2			6		6
Actuated Green, G (s)	54.9	42.5		47.6	38.2	48.2		12.1		25.1	25.1	38.8
Effective Green, g (s)	54.9	42.5		47.6	38.2	48.2		12.1		25.1	25.1	38.8
Actuated g/C Ratio	0.61	0.47		0.53	0.42	0.54		0.13		0.28	0.28	0.43
Clearance Time (s)	3.0	5.0		3.0	5.0	3.0		5.0		3.0	5.0	3.0
Vehicle Extension (s)	4.0	3.0		4.0	3.0	3.0		4.0		3.0	4.0	4.0
Lane Grp Cap (vph)	452	1507		421	1409	795		214		312	487	640
v/s Ratio Prot	c0.08	0.23		0.03	0.21	0.02				c0.08	0.01	0.02
v/s Ratio Perm	c0.25			0.13		0.06		0.06		c0.13		0.04
v/c Ratio	0.55	0.49		0.29	0.48	0.14		0.47		0.76	0.02	0.16
Uniform Delay, d1	9.2	16.3		10.9	18.8	10.5		36.0		28.6	23.5	15.6
Progression Factor	2.63	1.86		1.00	1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2	1.5	1.0		0.5	1.2	0.1		2.2		10.0	0.0	0.2
Delay (s)	25.9	31.3		11.4	20.0	10.6		38.2		38.6	23.6	15.8
Level of Service	C	C		B	B	B		D		D	C	B
Approach Delay (s)		30.0			17.0			38.2			27.1	
Approach LOS		C			B			D			C	

Intersection Summary			
HCM Average Control Delay	25.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	61.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
1044: 111th Street & Bishop Ford Freeway EB Ramps

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↑↑					↰		↱
Volume (veh/h)	0	518	443	2	333	0	0	0	0	19	0	578
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	576	492	2	370	0	0	0	0	21	0	642
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		498										
pX, platoon unblocked												
vC, conflicting volume	370			576			765	950	288	662	950	185
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	370			576			765	950	288	662	950	185
tC, single (s)	4.2			4.2			7.6	6.6	7.0	7.6	6.6	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	100	94	100	22
cM capacity (veh/h)	1178			987			64	256	706	345	256	823

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1	SB 2
Volume Total	288	288	492	126	247	21	642
Volume Left	0	0	0	2	0	21	0
Volume Right	0	0	492	0	0	0	642
cSH	1700	1700	1700	987	1700	345	823
Volume to Capacity	0.17	0.17	0.29	0.00	0.15	0.06	0.78
Queue Length 95th (ft)	0	0	0	0	0	5	198
Control Delay (s)	0.0	0.0	0.0	0.2	0.0	16.1	23.1
Lane LOS				A		C	C
Approach Delay (s)	0.0			0.1		22.8	
Approach LOS						C	

Intersection Summary			
Average Delay	7.2		
Intersection Capacity Utilization	54.2%	ICU Level of Service	A
Analysis Period (min)	15		

1045: 111th Street & Bishop Ford Freeway WB Ramps

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰↰		↰			
Sign Control	Stop			Stop	Stop	
Volume (vph)	537	0	335	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	597	0	372	0	0	0

Direction, Lane #	EB 1	EB 2	NB 1
Volume Total (vph)	298	298	372
Volume Left (vph)	298	298	372
Volume Right (vph)	0	0	0
Hadj (s)	0.55	0.55	0.25
Departure Headway (s)	6.2	6.2	5.6
Degree Utilization, x	0.51	0.51	0.58
Capacity (veh/h)	568	570	619
Control Delay (s)	14.3	14.3	16.0
Approach Delay (s)	14.3		16.0
Approach LOS	B		C

Intersection Summary			
Delay	14.9		
HCM Level of Service	B		
Intersection Capacity Utilization	42.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱		↰	↑↑						↰↑↱	
Volume (vph)	0	475	64	196	511	0	0	0	0	101	21	58
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	12	12	12	12	12
Total Lost time (s)		3.0		4.0	4.0						5.0	
Lane Util. Factor		0.95		1.00	0.95						0.95	
Frt		0.98		1.00	1.00						0.95	
Flt Protected		1.00		0.95	1.00						0.97	
Satd. Flow (prot)		3153		1605	3210						3074	
Flt Permitted		1.00		0.34	1.00						0.97	
Satd. Flow (perm)		3153		582	3210						3074	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	528	71	218	568	0	0	0	0	112	23	64
RTOR Reduction (vph)	0	12	0	0	0	0	0	0	0	0	44	0
Lane Group Flow (vph)	0	587	0	218	568	0	0	0	0	0	155	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type				pm+pt						Split		
Protected Phases		4		3	8					6	6	
Permitted Phases				8								
Actuated Green, G (s)		36.0		49.0	49.0						27.0	
Effective Green, g (s)		36.0		49.0	49.0						27.0	
Actuated g/C Ratio		0.42		0.58	0.58						0.32	
Clearance Time (s)		3.0		4.0	4.0						5.0	
Lane Grp Cap (vph)		1335		456	1850						976	
v/s Ratio Prot		0.19		c0.06	0.18						c0.05	
v/s Ratio Perm				c0.22								
v/c Ratio		0.44		0.48	0.31						0.16	
Uniform Delay, d1		17.4		15.9	9.3						20.8	
Progression Factor		1.00		0.35	0.18						1.00	
Incremental Delay, d2		1.1		2.8	0.3						0.3	
Delay (s)		18.4		8.4	2.0						21.2	
Level of Service		B		A	A						C	
Approach Delay (s)		18.4			3.8			0.0			21.2	
Approach LOS		B			A			A			C	

Intersection Summary			
HCM Average Control Delay	11.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	44.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑			↑↱			↰↑↱				
Volume (vph)	95	481	0	0	644	129	63	90	59	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	11	11	12	12	12	12	12	12
Total Lost time (s)	5.0	5.0			3.0			5.0				
Lane Util. Factor	1.00	0.95			0.95			0.91				
Frt	1.00	1.00			0.98			0.96				
Flt Protected	0.95	1.00			1.00			0.99				
Satd. Flow (prot)	1660	3320			3130			4504				
Flt Permitted	0.21	1.00			1.00			0.99				
Satd. Flow (perm)	367	3320			3130			4504				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	106	534	0	0	716	143	70	100	66	0	0	0
RTOR Reduction (vph)	0	0	0	0	19	0	0	45	0	0	0	0
Lane Group Flow (vph)	106	534	0	0	840	0	0	191	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	pm+pt						Split					
Protected Phases	7	4			8		2	2				
Permitted Phases	4											
Actuated Green, G (s)	48.0	48.0			35.0			27.0				
Effective Green, g (s)	48.0	48.0			35.0			27.0				
Actuated g/C Ratio	0.56	0.56			0.41			0.32				
Clearance Time (s)	5.0	5.0			3.0			5.0				
Lane Grp Cap (vph)	359	1875			1289			1431				
v/s Ratio Prot	0.03	c0.16			c0.27			c0.04				
v/s Ratio Perm	0.13											
v/c Ratio	0.30	0.28			0.65			0.13				
Uniform Delay, d1	18.6	9.6			20.1			20.7				
Progression Factor	0.43	0.31			1.00			1.00				
Incremental Delay, d2	1.9	0.4			2.6			0.2				
Delay (s)	9.9	3.4			22.7			20.9				
Level of Service	A	A			C			C				
Approach Delay (s)		4.4			22.7			20.9			0.0	
Approach LOS		A			C			C			A	

Intersection Summary			
HCM Average Control Delay	15.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	44.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱			✥			✥	
Volume (vph)	114	346	114	91	386	81	129	78	30	31	87	144
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	10	12	12	15	12	12	15	12
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			1.00			1.00	
Frt		0.97			0.98			0.98			0.93	
Flt Protected		0.99			0.99			0.97			0.99	
Satd. Flow (prot)		2977			3007			1840			1769	
Flt Permitted		0.66			0.69			0.72			0.95	
Satd. Flow (perm)		1975			2105			1358			1683	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	127	384	127	101	429	90	143	87	33	34	97	160
RTOR Reduction (vph)	0	34	0	0	21	0	0	8	0	0	68	0
Lane Group Flow (vph)	0	604	0	0	599	0	0	255	0	0	223	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		23.0			23.0			32.0			32.0	
Effective Green, g (s)		23.0			23.0			32.0			32.0	
Actuated g/C Ratio		0.35			0.35			0.49			0.49	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		699			745			669			829	
v/s Ratio Prot												
v/s Ratio Perm		c0.31			0.28			c0.19			0.13	
v/c Ratio		0.86			0.80			0.38			0.27	
Uniform Delay, d1		19.6			19.0			10.3			9.7	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		13.5			9.0			1.6			0.8	
Delay (s)		33.0			27.9			12.0			10.5	
Level of Service		C			C			B			B	
Approach Delay (s)		33.0			27.9			12.0			10.5	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM Average Control Delay	24.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	80.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1049: 115th Street & Halsted Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↑	↱	↰	↑↑	↱
Volume (vph)	114	201	88	159	311	65	124	542	67	95	950	180
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	12	10	16	12	9	10	9	9	10	9
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00	0.97	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.95		1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1559	2980		1573	3683		1508	3069	1333	1520	3099	1336
Flt Permitted	0.45	1.00		0.53	1.00		0.13	1.00	1.00	0.34	1.00	1.00
Satd. Flow (perm)	739	2980		880	3683		212	3069	1333	541	3099	1336
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	120	212	93	167	327	68	131	571	71	100	1000	189
RTOR Reduction (vph)	0	58	0	0	21	0	0	0	45	0	0	120
Lane Group Flow (vph)	120	247	0	167	374	0	131	571	26	100	1000	69
Confl. Peds. (#/hr)	19		16	16		19	22		25	25		22
Heavy Vehicles (%)	2%	2%	0%	1%	2%	2%	2%	4%	0%	1%	3%	0%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	32.0	27.0		32.0	27.0		38.0	31.0	31.0	38.0	31.0	31.0
Effective Green, g (s)	30.0	28.0		30.0	28.0		36.0	31.0	31.0	36.0	31.0	31.0
Actuated g/C Ratio	0.35	0.33		0.35	0.33		0.42	0.36	0.36	0.42	0.36	0.36
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)	299	982		343	1213		181	1119	486	298	1130	487
v/s Ratio Prot	0.02	0.08		c0.02	0.10		c0.05	0.19		0.02	c0.32	
v/s Ratio Perm	0.12			c0.15			0.26		0.02	0.12		0.05
v/c Ratio	0.40	0.25		0.49	0.31		0.72	0.51	0.05	0.34	0.88	0.14
Uniform Delay, d1	19.7	20.8		20.7	21.3		18.1	21.1	17.5	15.4	25.3	18.1
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.39	1.04	2.36
Incremental Delay, d2	4.0	0.6		4.9	0.7		22.1	1.7	0.2	2.2	7.8	0.4
Delay (s)	23.7	21.5		25.5	21.9		40.2	22.7	17.7	23.7	34.2	43.2
Level of Service	C	C		C	C		D	C	B	C	C	D
Approach Delay (s)		22.1			23.0			25.2			34.7	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	28.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	70.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱		↰	↱		↰	↱
Volume (vph)	49	295	30	33	393	24	33	102	41	36	134	66
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	16	12	12	16	12
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frpb, ped/bikes		1.00	0.96		1.00	0.97		1.00	0.98		1.00	0.99
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frt		1.00	0.85		1.00	0.85		1.00	0.85		1.00	0.85
Flt Protected		0.99	1.00		1.00	1.00		0.99	1.00		0.99	1.00
Satd. Flow (prot)		1962	1466		1993	1480		2015	1506		2002	1511
Flt Permitted		0.90	1.00		0.96	1.00		0.91	1.00		0.93	1.00
Satd. Flow (perm)		1777	1466		1913	1480		1861	1506		1877	1511
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	52	311	32	35	414	25	35	107	43	38	141	69
RTOR Reduction (vph)	0	0	17	0	0	13	0	0	25	0	0	40
Lane Group Flow (vph)	0	363	15	0	449	12	0	142	18	0	179	29
Confl. Peds. (#/hr)	11		20	20		11	1		4	4		1
Confl. Bikes (#/hr)	1		1	1		1			1	1		
Heavy Vehicles (%)	4%	3%	0%	0%	2%	0%	0%	0%	0%	0%	1%	0%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)		30.0	30.0		30.0	30.0		27.0	27.0		27.0	27.0
Effective Green, g (s)		30.0	30.0		30.0	30.0		27.0	27.0		27.0	27.0
Actuated g/C Ratio		0.46	0.46		0.46	0.46		0.42	0.42		0.42	0.42
Clearance Time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		820	677		883	683		773	626		780	628
v/s Ratio Prot												
v/s Ratio Perm		0.20	0.01		c0.23	0.01		0.08	0.01		c0.10	0.02
v/c Ratio		0.44	0.02		0.51	0.02		0.18	0.03		0.23	0.05
Uniform Delay, d1		11.8	9.5		12.3	9.5		12.0	11.2		12.3	11.3
Progression Factor		1.00	1.00		0.55	0.41		1.13	1.31		1.04	0.94
Incremental Delay, d2		1.7	0.1		2.0	0.0		0.5	0.1		0.7	0.1
Delay (s)		13.6	9.6		8.7	4.0		14.1	14.9		13.4	10.8
Level of Service		B	A		A	A		B	B		B	B
Approach Delay (s)		13.3			8.5			14.3			12.7	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM Average Control Delay	11.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	83.0%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1051: 115th Street & State Street

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	75	317	20	51	299	51	10	109	23	115	214	65
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	0.98		1.00	0.97		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1550	3072		1550	3031		1550	3017		1550	2991	
Flt Permitted	0.95	1.00		0.53	1.00		0.55	1.00		0.66	1.00	
Satd. Flow (perm)	1550	3072		864	3031		892	3017		1074	2991	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	83	352	22	57	332	57	11	121	26	128	238	72
RTOR Reduction (vph)	0	7	0	0	21	0	0	15	0	0	42	0
Lane Group Flow (vph)	83	367	0	57	368	0	11	132	0	128	268	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Prot			Perm			Perm			Perm		
Protected Phases	7	4			8			2			6	
Permitted Phases				8			2			6		
Actuated Green, G (s)	7.0	32.0		22.0	22.0		27.0	27.0		27.0	27.0	
Effective Green, g (s)	7.0	32.0		22.0	22.0		27.0	27.0		27.0	27.0	
Actuated g/C Ratio	0.11	0.49		0.34	0.34		0.42	0.42		0.42	0.42	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	167	1512		292	1026		371	1253		446	1242	
v/s Ratio Prot	c0.05	0.12			c0.12			0.04			0.09	
v/s Ratio Perm				0.07			0.01			c0.12		
v/c Ratio	0.50	0.24		0.20	0.36		0.03	0.11		0.29	0.22	
Uniform Delay, d1	27.3	9.5		15.2	16.2		11.2	11.6		12.6	12.2	
Progression Factor	0.93	0.55		1.00	1.00		0.51	0.39		1.12	1.12	
Incremental Delay, d2	9.8	0.4		1.5	1.0		0.1	0.1		1.6	0.4	
Delay (s)	35.2	5.6		16.7	17.2		5.9	4.7		15.8	14.0	
Level of Service	D	A		B	B		A	A		B	B	
Approach Delay (s)		11.0			17.1			4.8			14.5	
Approach LOS		B			B			A			B	

Intersection Summary			
HCM Average Control Delay	13.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	39.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1052: 115th Street & Michigan Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			↰↑↱			↰↑↱	
Volume (vph)	64	267	88	245	330	63	104	295	189	55	282	50
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	12	12	12	12	12	12
Total Lost time (s)	4.0	4.0		3.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frt	1.00	0.96		1.00	0.98			0.95			0.98	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1550	2984		1550	3025			3133			3233	
Flt Permitted	0.50	1.00		0.95	1.00			0.74			0.74	
Satd. Flow (perm)	813	2984		1550	3025			2347			2400	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	71	297	98	272	367	70	116	328	210	61	313	56
RTOR Reduction (vph)	0	53	0	0	26	0	0	94	0	0	20	0
Lane Group Flow (vph)	71	342	0	272	411	0	0	560	0	0	410	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Prot			Perm			Perm		
Protected Phases		4		3	8			2			6	
Permitted Phases	4						2			6		
Actuated Green, G (s)	15.0	15.0		14.0	32.0			17.0			17.0	
Effective Green, g (s)	15.0	15.0		14.0	32.0			17.0			17.0	
Actuated g/C Ratio	0.25	0.25		0.23	0.53			0.28			0.28	
Clearance Time (s)	4.0	4.0		3.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	203	746		362	1613			665			680	
v/s Ratio Prot		c0.11		c0.18	0.14							
v/s Ratio Perm	0.09							c0.24			0.17	
v/c Ratio	0.35	0.46		0.75	0.25			0.84			0.60	
Uniform Delay, d1	18.5	19.1		21.4	7.6			20.2			18.6	
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2	4.7	2.0		13.4	0.4			12.3			3.9	
Delay (s)	23.2	21.1		34.8	7.9			32.6			22.5	
Level of Service	C	C		C	A			C			C	
Approach Delay (s)		21.4			18.2			32.6			22.5	
Approach LOS		C			B			C			C	

Intersection Summary			
HCM Average Control Delay	23.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	68.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1053: 115th Street & Indiana Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			↰↑↱				
Volume (vph)	26	454	16	75	645	75	55	110	165	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	12	14	12	10	15	10
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			0.95				
Frt		1.00			0.99			0.93				
Flt Protected		1.00			1.00			0.99				
Satd. Flow (prot)		1620			1603			3249				
Flt Permitted		0.94			0.91			0.99				
Satd. Flow (perm)		1529			1465			3249				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	29	504	18	83	717	83	61	122	183	0	0	0
RTOR Reduction (vph)	0	1	0	0	5	0	0	139	0	0	0	0
Lane Group Flow (vph)	0	550	0	0	878	0	0	227	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm			Perm					
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Actuated Green, G (s)		41.5			41.5			15.5				
Effective Green, g (s)		41.5			41.5			15.5				
Actuated g/C Ratio		0.64			0.64			0.24				
Clearance Time (s)		4.0			4.0			4.0				
Vehicle Extension (s)		3.0			3.0			8.0				
Lane Grp Cap (vph)		976			935			775				
v/s Ratio Prot												
v/s Ratio Perm		0.36			c0.60			0.07				
v/c Ratio		0.56			0.94			0.29				
Uniform Delay, d1		6.6			10.6			20.3				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		2.3			18.0			0.9				
Delay (s)		9.0			28.6			21.2				
Level of Service		A			C			C				
Approach Delay (s)		9.0			28.6			21.2			0.0	
Approach LOS		A			C			C			A	

Intersection Summary			
HCM Average Control Delay	21.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	85.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
1054: 115th Street & Martin Luther King Jr Drive

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰↑	↑↱		↰	↱
Volume (veh/h)	142	464	611	39	119	176
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	149	488	643	41	125	185
Pedestrians		5	6		17	
Lane Width (ft)		16.0	16.0		10.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		1	1		1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		1319	491			
pX, platoon unblocked	0.95				0.95	0.95
vC, conflicting volume	701				1230	364
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	586				1141	232
tC, single (s)	4.2				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	84				19	75
cM capacity (veh/h)	908				154	727

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	SB 2
Volume Total	312	326	429	255	125	185
Volume Left	149	0	0	0	125	0
Volume Right	0	0	0	41	0	185
cSH	908	1700	1700	1700	154	727
Volume to Capacity	0.16	0.19	0.25	0.15	0.81	0.25
Queue Length 95th (ft)	15	0	0	0	132	25
Control Delay (s)	5.6	0.0	0.0	0.0	87.9	11.6
Lane LOS	A				F	B
Approach Delay (s)	2.7		0.0		42.4	
Approach LOS					E	

Intersection Summary			
Average Delay	9.1		
Intersection Capacity Utilization	55.1%	ICU Level of Service	B
Analysis Period (min)	15		

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↱			↰	Y	
Volume (vph)	690	0	1	620	3	29
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0			4.0	4.0	
Lane Util. Factor	1.00			1.00	1.00	
Frt	1.00			1.00	0.88	
Flt Protected	1.00			1.00	1.00	
Satd. Flow (prot)	1748			1747	1525	
Flt Permitted	1.00			1.00	1.00	
Satd. Flow (perm)	1748			1747	1525	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	767	0	1	689	3	32
RTOR Reduction (vph)	0	0	0	0	28	0
Lane Group Flow (vph)	767	0	0	690	7	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type			Perm			
Protected Phases	1 2 4			4	3	
Permitted Phases			4			
Actuated Green, G (s)	78.0			48.0	14.0	
Effective Green, g (s)	74.0			48.0	14.0	
Actuated g/C Ratio	0.74			0.48	0.14	
Clearance Time (s)				4.0	4.0	
Lane Grp Cap (vph)	1294			839	214	
v/s Ratio Prot	c0.44				c0.00	
v/s Ratio Perm				0.40		
v/c Ratio	0.59			0.82	0.03	
Uniform Delay, d1	6.0			22.3	37.2	
Progression Factor	0.05			1.00	1.00	
Incremental Delay, d2	0.9			8.9	0.3	
Delay (s)	1.2			31.3	37.5	
Level of Service	A			C	D	
Approach Delay (s)	1.2			31.3	37.5	
Approach LOS	A			C	D	

Intersection Summary			
HCM Average Control Delay	16.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	48.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
1056: 115th Street & Bishop Ford Fwy

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱			↰						↰	↱
Volume (veh/h)	0	243	606	32	407	0	0	0	0	17	6	249
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	270	673	36	452	0	0	0	0	19	7	277
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	452			270			1133	1130	472	658	793	452
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	452			270			1133	1130	472	658	793	452
tC, single (s)	4.1			4.2			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			97			100	100	100	95	98	50
cM capacity (veh/h)	1119			1276			77	200	544	346	314	555

Direction, Lane #	EB 1	EB 2	WB 1	SB 1	SB 2
Volume Total	180	763	488	26	277
Volume Left	0	0	36	19	0
Volume Right	0	673	0	0	277
cSH	1700	1700	1276	337	555
Volume to Capacity	0.11	0.45	0.03	0.08	0.50
Queue Length 95th (ft)	0	0	2	6	69
Control Delay (s)	0.0	0.0	0.9	16.6	17.8
Lane LOS			A	C	C
Approach Delay (s)	0.0		0.9	17.7	
Approach LOS				C	

Intersection Summary			
Average Delay	3.3		
Intersection Capacity Utilization	60.5%	ICU Level of Service	B
Analysis Period (min)	15		

	↗	↘	↖	↑	↓	↙
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰↰		↰			
Sign Control	Stop			Stop	Stop	
Volume (vph)	260	0	439	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	289	0	488	0	0	0

Direction, Lane #	EB 1	EB 2	NB 1
Volume Total (vph)	144	144	488
Volume Left (vph)	144	144	488
Volume Right (vph)	0	0	0
Hadj (s)	0.55	0.55	0.25
Departure Headway (s)	6.4	6.4	5.0
Degree Utilization, x	0.26	0.26	0.68
Capacity (veh/h)	536	537	701
Control Delay (s)	10.3	10.3	17.7
Approach Delay (s)	10.3		17.7
Approach LOS	B		C

Intersection Summary			
Delay	15.0		
HCM Level of Service	B		
Intersection Capacity Utilization	40.2%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Signalized Intersection Capacity Analysis
1058: 119th Street & Marshield Avenue

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↰↑					↰	↰↑↱	↱
Volume (vph)	0	530	345	313	770	0	0	0	0	279	269	372
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	12	13	12	12	12	12	10	10	11
Total Lost time (s)		6.0	6.0		6.0					6.0	6.0	6.0
Lane Util. Factor		0.95	1.00		0.95					0.86	0.81	0.86
Frpb, ped/bikes		1.00	0.98		1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00					1.00	1.00	1.00
Frt		1.00	0.85		1.00					1.00	0.95	0.85
Flt Protected		1.00	1.00		0.99					0.95	0.99	1.00
Satd. Flow (prot)		3179	1228		3425					1359	3806	1133
Flt Permitted		1.00	1.00		0.99					0.95	0.99	1.00
Satd. Flow (perm)		3179	1228		3425					1359	3806	1133
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	558	363	329	811	0	0	0	0	294	283	392
RTOR Reduction (vph)	0	0	217	0	0	0	0	0	0	0	53	112
Lane Group Flow (vph)	0	558	146	0	1140	0	0	0	0	162	558	84
Confl. Peds. (#/hr)	4		6	6		4						
Heavy Vehicles (%)	0%	4%	6%	1%	2%	0%	0%	0%	0%	1%	1%	1%
Parking (#/hr)			0									0
Turn Type			Perm	Split						Split		custom
Protected Phases		2		10 12 14	10 12 14					4	4	
Permitted Phases			2									4 2
Actuated Green, G (s)		27.0	27.0		75.1					31.4	31.4	64.4
Effective Green, g (s)		27.0	27.0		75.1					31.4	31.4	64.4
Actuated g/C Ratio		0.17	0.17		0.47					0.20	0.20	0.40
Clearance Time (s)		6.0	6.0							6.0	6.0	
Vehicle Extension (s)		3.0	3.0							3.0	3.0	
Lane Grp Cap (vph)		536	207		1608					267	747	456
v/s Ratio Prot		c0.18			c0.33					0.12	c0.15	
v/s Ratio Perm			0.12									0.07
v/c Ratio		1.04	0.71		0.71					0.61	0.75	0.18
Uniform Delay, d1		66.5	62.7		33.8					58.7	60.6	30.9
Progression Factor		1.00	1.00		0.04					1.00	1.00	1.00
Incremental Delay, d2		50.0	18.3		0.1					3.9	4.1	0.2
Delay (s)		116.5	81.1		1.6					62.5	64.6	31.1
Level of Service		F	F		A					E	E	C
Approach Delay (s)		102.5			1.6			0.0			57.5	
Approach LOS		F			A			A			E	

Intersection Summary			
HCM Average Control Delay	50.2	HCM Level of Service	D
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	28.5
Intersection Capacity Utilization	81.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1059: 119th Street & Ashland Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑			↑↑	↱	↰	↰↑↱				
Volume (vph)	292	517	0	0	750	144	332	214	206	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	13	12	12	11	12	13	13	14	12	12	12
Total Lost time (s)	6.0	6.0			6.0	6.0	6.0	6.0				
Lane Util. Factor	1.00	0.95			0.95	1.00	0.91	0.91				
Frt	1.00	1.00			1.00	0.85	1.00	0.94				
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.99				
Satd. Flow (prot)	1605	3431			3210	1485	1561	3059				
Flt Permitted	0.95	1.00			1.00	1.00	0.95	0.99				
Satd. Flow (perm)	1605	3431			3210	1485	1561	3059				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	324	574	0	0	833	160	369	238	229	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	67	0	70	0	0	0	0
Lane Group Flow (vph)	324	574	0	0	833	93	284	482	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Split					Perm	Split					
Protected Phases	2 4 8	2 4 8			10		12	12				
Permitted Phases						10						
Actuated Green, G (s)	76.9	76.9			35.1	35.1	22.0	22.0				
Effective Green, g (s)	76.9	76.9			35.1	35.1	22.0	22.0				
Actuated g/C Ratio	0.48	0.48			0.22	0.22	0.14	0.14				
Clearance Time (s)					6.0	6.0	6.0	6.0				
Vehicle Extension (s)					3.0	3.0	3.0	3.0				
Lane Grp Cap (vph)	771	1649			704	326	215	421				
v/s Ratio Prot	c0.20	0.17			c0.26		c0.18	0.16				
v/s Ratio Perm						0.06						
v/c Ratio	0.42	0.35			1.18	0.28	1.32	1.15				
Uniform Delay, d1	27.0	25.9			62.5	52.0	69.0	69.0				
Progression Factor	0.05	0.06			1.00	1.00	1.00	1.00				
Incremental Delay, d2	0.2	0.1			96.6	0.5	173.2	89.9				
Delay (s)	1.7	1.5			159.0	52.5	242.2	158.9				
Level of Service	A	A			F	D	F	F				
Approach Delay (s)		1.6			141.8			187.2			0.0	
Approach LOS		A			F			F			A	

Intersection Summary			
HCM Average Control Delay	109.5	HCM Level of Service	F
HCM Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	28.0
Intersection Capacity Utilization	69.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1060: 119th Street & Halsted Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↱		↰	↑↱		↰	↑↱	
Volume (vph)	140	312	136	188	418	107	108	522	95	106	803	120
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	14	12	10	10	12	9	10	12
Total Lost time (s)	4.0	4.0	5.0	4.0	5.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	0.99		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.97		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1579	1600	1372	1594	1788		1578	3000		1537	3001	
Flt Permitted	0.15	1.00	1.00	0.35	1.00		0.13	1.00		0.32	1.00	
Satd. Flow (perm)	256	1600	1372	583	1788		216	3000		511	3001	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	147	328	143	198	440	113	114	549	100	112	845	126
RTOR Reduction (vph)	0	0	100	0	11	0	0	16	0	0	13	0
Lane Group Flow (vph)	147	328	43	198	542	0	114	633	0	112	958	0
Confl. Peds. (#/hr)	28		8	8		28	59		11	11		59
Confl. Bikes (#/hr)	3					3	1		2	2		1
Heavy Vehicles (%)	1%	5%	2%	0%	4%	0%	1%	4%	0%	0%	3%	3%
Turn Type	pm+pt		Perm	pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)	34.0	27.0	27.0	34.0	27.0		43.0	36.0		40.2	34.6	
Effective Green, g (s)	32.0	28.0	27.0	32.0	27.0		41.0	36.0		38.2	34.6	
Actuated g/C Ratio	0.35	0.31	0.30	0.35	0.30		0.45	0.40		0.42	0.38	
Clearance Time (s)	3.0	5.0	5.0	3.0	5.0		3.0	4.0		3.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	178	494	409	273	533		188	1192		268	1146	
v/s Ratio Prot	c0.05	0.20		0.05	c0.30		c0.04	0.21		0.02	c0.32	
v/s Ratio Perm	0.24		0.03	0.21			0.23			0.16		
v/c Ratio	0.83	0.66	0.10	0.73	1.02		0.61	0.53		0.42	0.84	
Uniform Delay, d1	23.9	27.2	23.0	24.8	31.8		17.4	20.8		16.7	25.4	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	25.7	6.9	0.5	9.2	43.5		5.4	1.7		1.1	7.3	
Delay (s)	49.6	34.1	23.5	34.0	75.3		22.8	22.5		17.8	32.7	
Level of Service	D	C	C	C	E		C	C		B	C	
Approach Delay (s)		35.3			64.4			22.6			31.2	
Approach LOS		D			E			C			C	

Intersection Summary			
HCM Average Control Delay	37.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	90.6	Sum of lost time (s)	17.0
Intersection Capacity Utilization	87.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1061: 119th Street & Wentworth Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱		✥			✥	
Volume (vph)	39	402	61	112	645	62	37	59	44	31	91	70
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	10	10	10	12	15	12	12	16	12
Total Lost time (s)		3.0	3.0		3.0	3.0		3.0			3.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00			1.00	
Frpb, ped/bikes		1.00	0.96		1.00	0.97		0.99			0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00			1.00	
Frt		1.00	0.85		1.00	0.85		0.96			0.95	
Flt Protected		1.00	1.00		0.99	1.00		0.99			0.99	
Satd. Flow (prot)		1971	1476		1624	1387		1851			1867	
Flt Permitted		0.91	1.00		0.88	1.00		0.90			0.95	
Satd. Flow (perm)		1804	1476		1432	1387		1679			1783	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	41	423	64	118	679	65	39	62	46	33	96	74
RTOR Reduction (vph)	0	0	20	0	0	18	0	25	0	0	31	0
Lane Group Flow (vph)	0	464	44	0	797	47	0	122	0	0	172	0
Confl. Peds. (#/hr)	12		20	20		12	8		2	2		8
Confl. Bikes (#/hr)	1		2	2		1			1	1		
Heavy Vehicles (%)	3%	3%	0%	0%	3%	0%	0%	0%	0%	0%	1%	3%
Turn Type	Perm		Perm	Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)		45.0	45.0		45.0	45.0		14.0			14.0	
Effective Green, g (s)		45.0	45.0		45.0	45.0		14.0			14.0	
Actuated g/C Ratio		0.69	0.69		0.69	0.69		0.22			0.22	
Clearance Time (s)		3.0	3.0		3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)		1249	1022		991	960		362			384	
v/s Ratio Prot												
v/s Ratio Perm		0.26	0.03		c0.56	0.03		0.07			c0.10	
v/c Ratio		0.37	0.04		0.80	0.05		0.34			0.45	
Uniform Delay, d1		4.1	3.2		6.9	3.2		21.6			22.1	
Progression Factor		1.00	1.00		0.65	1.36		1.00			1.49	
Incremental Delay, d2		0.8	0.1		3.8	0.1		2.5			3.7	
Delay (s)		5.0	3.3		8.4	4.4		24.1			36.7	
Level of Service		A	A		A	A		C			D	
Approach Delay (s)		4.8			8.1			24.1			36.7	
Approach LOS		A			A			C			D	

Intersection Summary			
HCM Average Control Delay	11.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	90.6%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1062: 119th Street & State Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱		↰	↱		✥	
Volume (vph)	59	318	41	110	700	20	36	114	44	17	184	70
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frpb, ped/bikes		1.00	0.96		1.00	0.98		1.00	0.96		0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		0.97	
Flt Protected		0.99	1.00		0.99	1.00		0.99	1.00		1.00	
Satd. Flow (prot)		1756	1469		1726	1498		1712	1474		1709	
Flt Permitted		0.74	1.00		0.89	1.00		0.75	1.00		0.97	
Satd. Flow (perm)		1312	1469		1546	1498		1304	1474		1667	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	62	335	43	116	737	21	38	120	46	18	194	74
RTOR Reduction (vph)	0	0	15	0	0	5	0	0	37	0	19	0
Lane Group Flow (vph)	0	397	28	0	853	16	0	158	9	0	267	0
Confl. Peds. (#/hr)	19		25	25		19	3		6	6		3
Confl. Bikes (#/hr)	1		2	2		1			1	1		
Heavy Vehicles (%)	0%	2%	0%	0%	4%	0%	0%	5%	0%	0%	0%	2%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		42.0	42.0		42.0	42.0		13.0	13.0		13.0	
Effective Green, g (s)		42.0	42.0		42.0	42.0		13.0	13.0		13.0	
Actuated g/C Ratio		0.65	0.65		0.65	0.65		0.20	0.20		0.20	
Clearance Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	
Lane Grp Cap (vph)		848	949		999	968		261	295		333	
v/s Ratio Prot												
v/s Ratio Perm		0.30	0.02		c0.55	0.01		0.12	0.01		c0.16	
v/c Ratio		0.47	0.03		0.85	0.02		0.61	0.03		0.80	
Uniform Delay, d1		5.8	4.1		9.1	4.1		23.7	20.9		24.8	
Progression Factor		1.91	3.08		0.98	0.40		1.00	1.00		0.68	
Incremental Delay, d2		1.7	0.1		4.5	0.0		10.0	0.2		17.9	
Delay (s)		12.9	12.8		13.4	1.7		33.7	21.1		34.8	
Level of Service		B	B		B	A		C	C		C	
Approach Delay (s)		12.9			13.1			30.8			34.8	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM Average Control Delay	18.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	101.4%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1063: 119th Street & Michigan Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		✥			✥			↰	↱
Volume (vph)	298	35	76	8	14	11	38	247	8	31	570	799
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	14	12	12	16	12	12	16	12
Total Lost time (s)		3.0	3.0		3.0			3.0			3.0	3.0
Lane Util. Factor		1.00	1.00		1.00			1.00			1.00	1.00
Frpb, ped/bikes		1.00	0.95		0.98			1.00			1.00	0.94
Flpb, ped/bikes		0.98	1.00		0.99			1.00			1.00	1.00
Frt		1.00	0.85		0.96			1.00			1.00	0.85
Flt Protected		0.96	1.00		0.99			0.99			1.00	1.00
Satd. Flow (prot)		1855	1440		1767			1995			1975	1382
Flt Permitted		0.75	1.00		0.92			0.79			0.97	1.00
Satd. Flow (perm)		1455	1440		1640			1587			1930	1382
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	331	39	84	9	16	12	42	274	9	34	633	888
RTOR Reduction (vph)	0	0	49	0	9	0	0	2	0	0	0	295
Lane Group Flow (vph)	0	370	35	0	28	0	0	323	0	0	667	593
Confl. Peds. (#/hr)	37		53	53		37	39		54	54		39
Confl. Bikes (#/hr)							2					2
Heavy Vehicles (%)	4%	0%	1%	0%	0%	0%	0%	1%	0%	0%	3%	4%
Turn Type	pm+pt		Perm	Perm			Perm			Perm		Perm
Protected Phases	7	4			8			2			6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)		27.0	27.0		17.0			32.0			32.0	32.0
Effective Green, g (s)		27.0	27.0		17.0			32.0			32.0	32.0
Actuated g/C Ratio		0.42	0.42		0.26			0.49			0.49	0.49
Clearance Time (s)		3.0	3.0		3.0			3.0			3.0	3.0
Lane Grp Cap (vph)		654	598		429			781			950	680
v/s Ratio Prot		c0.07										
v/s Ratio Perm		0.17	0.02		0.02			0.20			0.35	c0.43
v/c Ratio		0.57	0.06		0.07			0.41			0.70	0.87
Uniform Delay, d1		14.5	11.4		18.0			10.5			12.8	14.7
Progression Factor		0.51	0.15		1.00			0.74			1.00	1.00
Incremental Delay, d2		3.3	0.2		0.3			1.0			4.3	14.4
Delay (s)		10.6	1.9		18.3			8.9			17.1	29.1
Level of Service		B	A		B			A			B	C
Approach Delay (s)		9.0			18.3			8.9			24.0	
Approach LOS		A			B			A			C	

Intersection Summary

HCM Average Control Delay	19.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	95.4%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↱		↰	↑↑					↰	↰↱	↱
Volume (vph)	0	923	289	447	1189	0	0	0	0	513	284	334
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	12	11	8	8	8	11	12	14
Total Lost time (s)		6.0		4.5	6.0					6.0	6.0	6.0
Lane Util. Factor		0.91		1.00	0.95					0.91	0.86	0.91
Frpb, ped/bikes		0.99		1.00	1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Frt		0.96		1.00	1.00					1.00	0.98	0.85
Flt Protected		1.00		0.95	1.00					0.95	0.98	1.00
Satd. Flow (prot)		4576		1621	3320					1489	2913	1442
Flt Permitted		1.00		0.12	1.00					0.95	0.98	1.00
Satd. Flow (perm)		4576		198	3320					1489	2913	1442
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	972	304	471	1252	0	0	0	0	540	299	352
RTOR Reduction (vph)	0	62	0	0	0	0	0	0	0	0	12	44
Lane Group Flow (vph)	0	1215	0	471	1252	0	0	0	0	308	600	227
Confl. Peds. (#/hr)	15		11	11		15						
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	0%	3%	3%	2%	3%	0%	0%	0%	0%	1%	3%	3%
Turn Type				pm+pt						Perm		Perm
Protected Phases		2		1	6						4	
Permitted Phases				6						4		4
Actuated Green, G (s)		28.5		56.0	54.5					23.5	23.5	23.5
Effective Green, g (s)		28.5		56.0	54.5					23.5	23.5	23.5
Actuated g/C Ratio		0.32		0.62	0.61					0.26	0.26	0.26
Clearance Time (s)		6.0		4.5	6.0					6.0	6.0	6.0
Vehicle Extension (s)		7.0		3.5	7.0					3.5	3.5	3.5
Lane Grp Cap (vph)		1449		463	2010					389	761	377
v/s Ratio Prot		0.27		c0.24	0.38							
v/s Ratio Perm				c0.39						c0.21	0.21	0.16
v/c Ratio		0.84		1.02	0.62					0.79	0.79	0.60
Uniform Delay, d1		28.6		25.4	11.2					31.0	30.9	29.2
Progression Factor		1.00		0.64	0.53					1.00	1.00	1.00
Incremental Delay, d2		5.9		32.3	0.7					10.8	5.6	2.9
Delay (s)		34.6		48.5	6.6					41.8	36.5	32.0
Level of Service		C		D	A					D	D	C
Approach Delay (s)		34.6			18.1			0.0			36.9	
Approach LOS		C			B			A			D	

Intersection Summary			
HCM Average Control Delay	28.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	10.5
Intersection Capacity Utilization	111.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↑			↑↑	↱		↰↑↱				
Volume (vph)	341	1095	0	0	1206	271	430	351	337	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	12	12	12	11	12	12	12	12	12	12	12
Total Lost time (s)	6.0	6.0			6.0	6.0		6.0				
Lane Util. Factor	0.97	0.95			0.95	1.00		0.91				
Frpb, ped/bikes	1.00	1.00			1.00	0.98		1.00				
Flpb, ped/bikes	1.00	1.00			1.00	1.00		1.00				
Frt	1.00	1.00			1.00	0.85		0.95				
Flt Protected	0.95	1.00			1.00	1.00		0.98				
Satd. Flow (prot)	3144	3353			3241	1489		4513				
Flt Permitted	0.09	1.00			1.00	1.00		0.98				
Satd. Flow (perm)	290	3353			3241	1489		4513				
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	359	1153	0	0	1269	285	453	369	355	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	86	0	57	0	0	0	0
Lane Group Flow (vph)	359	1153	0	0	1269	199	0	1120	0	0	0	0
Confl. Peds. (#/hr)	7		5	5		7						
Confl. Bikes (#/hr)	1		1	1		1						
Heavy Vehicles (%)	2%	2%	0%	0%	2%	1%	2%	1%	3%	0%	0%	0%
Turn Type	pm+pt					Perm	Perm					
Protected Phases	5	2			6			8				
Permitted Phases	2					6	8					
Actuated Green, G (s)	52.7	52.7			39.7	39.7		25.3				
Effective Green, g (s)	52.7	52.7			39.7	39.7		25.3				
Actuated g/C Ratio	0.59	0.59			0.44	0.44		0.28				
Clearance Time (s)	6.0	6.0			6.0	6.0		6.0				
Vehicle Extension (s)	3.5	7.0			7.0	7.0		5.0				
Lane Grp Cap (vph)	392	1963			1430	657		1269				
v/s Ratio Prot	c0.07	0.34			0.39							
v/s Ratio Perm	c0.47					0.13		0.25				
v/c Ratio	0.92	0.59			0.89	0.30		0.88				
Uniform Delay, d1	21.2	11.8			23.1	16.2		30.9				
Progression Factor	1.60	0.50			0.53	0.38		1.00				
Incremental Delay, d2	16.9	0.7			6.2	0.8		8.1				
Delay (s)	50.9	6.6			18.4	7.0		39.0				
Level of Service	D	A			B	A		D				
Approach Delay (s)		17.2			16.3			39.0			0.0	
Approach LOS		B			B			D			A	

Intersection Summary

HCM Average Control Delay	22.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	111.8%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	135	719	408	104	968	76	227	179	66	80	162	121
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	12	11	12	12	10	10	13	10	10	10
Total Lost time (s)	3.5	6.0	3.5	3.5	6.0		3.5	6.0		3.5	6.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		0.99	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.96		1.00	0.94	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1565	3273	1310	1603	3286		1577	3003		1540	2944	
Flt Permitted	0.11	1.00	1.00	0.31	1.00		0.45	1.00		0.59	1.00	
Satd. Flow (perm)	174	3273	1310	524	3286		741	3003		961	2944	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	142	757	429	109	1019	80	239	188	69	84	171	127
RTOR Reduction (vph)	0	0	197	0	7	0	0	43	0	0	103	0
Lane Group Flow (vph)	142	757	232	109	1092	0	239	214	0	84	195	0
Confl. Peds. (#/hr)	11		23	23		11	8		12	12		8
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	2%	1%	3%	3%	3%	0%	1%	1%	2%	3%	0%	1%
Parking (#/hr)			0									
Turn Type	pm+pt		pm+ov	pm+pt			pm+pt			pm+pt		
Protected Phases	5	2	3	1	6		3	8		7	4	
Permitted Phases	2		2	6			8			4		
Actuated Green, G (s)	47.9	38.0	47.5	40.7	34.3		30.1	22.2		21.5	17.1	
Effective Green, g (s)	47.9	38.0	47.5	40.7	34.3		30.1	22.2		21.5	17.1	
Actuated g/C Ratio	0.53	0.42	0.53	0.45	0.38		0.33	0.25		0.24	0.19	
Clearance Time (s)	3.5	6.0	3.5	3.5	6.0		3.5	6.0		3.5	6.0	
Vehicle Extension (s)	3.0	7.0	3.0	3.0	7.0		3.0	7.0		3.0	7.0	
Lane Grp Cap (vph)	249	1382	691	314	1252		336	741		258	559	
v/s Ratio Prot	c0.06	0.23	0.04	0.02	c0.33		c0.08	0.07		0.02	0.07	
v/s Ratio Perm	0.24		0.14	0.13			c0.16			0.06		
v/c Ratio	0.57	0.55	0.34	0.35	0.87		0.71	0.29		0.33	0.35	
Uniform Delay, d1	15.4	19.5	12.2	14.7	25.8		24.1	27.5		27.6	31.6	
Progression Factor	1.66	0.37	0.33	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	6.9	1.2	0.2	0.7	8.6		6.9	0.8		0.7	1.3	
Delay (s)	32.4	8.4	4.2	15.3	34.4		31.1	28.3		28.3	33.0	
Level of Service	C	A	A	B	C		C	C		C	C	
Approach Delay (s)		9.6			32.7			29.6			31.9	
Approach LOS		A			C			C			C	

Intersection Summary			
HCM Average Control Delay	23.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	81.4%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1067: Vermont Street & Ashland Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	46	250	367	95	441	113	362	340	84	206	408	56
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	11	12	11	12	12	11	13	12	10	11	12
Total Lost time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.91		1.00	0.97		1.00	0.97		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1708	2925		1653	3267		1620	3402		1580	3183	
Flt Permitted	0.34	1.00		0.22	1.00		0.32	1.00		0.49	1.00	
Satd. Flow (perm)	619	2925		375	3267		544	3402		822	3183	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	48	263	386	100	464	119	381	358	88	217	429	59
RTOR Reduction (vph)	0	215	0	0	19	0	0	19	0	0	9	0
Lane Group Flow (vph)	48	434	0	100	564	0	381	427	0	217	479	0
Confl. Peds. (#/hr)	12		3	3		12	5					5
Heavy Vehicles (%)	0%	2%	2%	0%	1%	1%	2%	1%	0%	1%	2%	0%
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	39.2	32.5		46.4	36.1		56.2	44.2		40.1	32.1	
Effective Green, g (s)	39.2	32.5		46.4	36.1		56.2	44.2		40.1	32.1	
Actuated g/C Ratio	0.34	0.28		0.40	0.31		0.49	0.38		0.35	0.28	
Clearance Time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	3.5	7.0		3.5	7.0		3.5	7.0		3.5	7.0	
Lane Grp Cap (vph)	274	827		266	1026		454	1308		339	888	
v/s Ratio Prot	0.01	0.15		c0.03	c0.17		c0.15	0.13		0.04	0.15	
v/s Ratio Perm	0.05			0.12			c0.26			0.18		
v/c Ratio	0.18	0.52		0.38	0.55		0.84	0.33		0.64	0.54	
Uniform Delay, d1	25.9	34.7		23.2	32.7		20.8	24.9		28.8	35.2	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.4	2.4		1.1	2.1		13.1	0.7		4.3	2.3	
Delay (s)	26.3	37.1		24.3	34.8		33.9	25.6		33.1	37.5	
Level of Service	C	D		C	C		C	C		C	D	
Approach Delay (s)		36.4			33.3			29.4			36.1	
Approach LOS		D			C			C			D	

Intersection Summary			
HCM Average Control Delay	33.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	77.2%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1068: 127th Street & Halsted Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	105	695	141	10	741	89	104	287	9	204	609	183
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	10	12	9	11	12	9	9	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.98			0.98		1.00	1.00		1.00	0.97	
Flt Protected		0.99			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3039			3061		1452	3227		1522	2871	
Flt Permitted		0.62			0.94		0.18	1.00		0.50	1.00	
Satd. Flow (perm)		1888			2880		278	3227		802	2871	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	117	772	157	11	823	99	116	319	10	227	677	203
RTOR Reduction (vph)	0	18	0	0	11	0	0	3	0	0	35	0
Lane Group Flow (vph)	0	1028	0	0	922	0	116	326	0	227	845	0
Confl. Peds. (#/hr)	4		2	2		4	8		4	4		8
Confl. Bikes (#/hr)							2					2
Heavy Vehicles (%)	1%	2%	2%	0%	2%	6%	6%	2%	0%	1%	3%	3%
Turn Type	pm+pt			Perm			pm+pt			pm+pt		
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		41.0			33.0		26.0	22.0		28.0	23.0	
Effective Green, g (s)		41.0			33.0		26.0	22.0		28.0	23.0	
Actuated g/C Ratio		0.51			0.41		0.32	0.28		0.35	0.29	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		1025			1188		149	887		326	825	
v/s Ratio Prot		c0.05					0.04	0.10		c0.04	c0.29	
v/s Ratio Perm		c0.46			0.32		0.21			0.20		
v/c Ratio		1.00			0.78		0.78	0.37		0.70	1.02	
Uniform Delay, d1		19.5			20.3		33.5	23.4		24.7	28.5	
Progression Factor		1.00			1.00		0.62	0.64		1.00	1.00	
Incremental Delay, d2		28.8			5.0		30.6	1.1		11.7	37.7	
Delay (s)		48.3			25.3		51.4	16.0		36.3	66.2	
Level of Service		D			C		D	B		D	E	
Approach Delay (s)		48.3			25.3			25.2			60.0	
Approach LOS		D			C			C			E	

Intersection Summary			
HCM Average Control Delay	43.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	96.8%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1069: Vermont Street & Halsted Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱		↰	↑↱		↰	↑↱	
Volume (vph)	67	261	136	132	418	28	72	462	86	35	698	70
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	12	12	12	12	12
Total Lost time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.95		1.00	0.99		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1708	1912		1602	2019		1676	3219		1436	3274	
Flt Permitted	0.35	1.00		0.40	1.00		0.27	1.00		0.39	1.00	
Satd. Flow (perm)	628	1912		673	2019		469	3219		591	3274	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	69	269	140	136	431	29	74	476	89	36	720	72
RTOR Reduction (vph)	0	24	0	0	3	0	0	19	0	0	10	0
Lane Group Flow (vph)	69	385	0	136	457	0	74	546	0	36	782	0
Confl. Peds. (#/hr)	3		20	20		3	2		3	3		2
Confl. Bikes (#/hr)			1	1			2		2	2		2
Heavy Vehicles (%)	0%	0%	1%	6%	0%	0%	2%	3%	6%	19%	3%	2%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	35.0	35.0		35.0	35.0		35.0	35.0		35.0	35.0	
Effective Green, g (s)	35.0	35.0		35.0	35.0		35.0	35.0		35.0	35.0	
Actuated g/C Ratio	0.44	0.44		0.44	0.44		0.44	0.44		0.44	0.44	
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)	275	837		294	883		205	1408		259	1432	
v/s Ratio Prot		0.20			c0.23			0.17			c0.24	
v/s Ratio Perm	0.11			0.20			0.16			0.06		
v/c Ratio	0.25	0.46		0.46	0.52		0.36	0.39		0.14	0.55	
Uniform Delay, d1	14.2	15.8		15.9	16.4		15.0	15.2		13.5	16.6	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		0.27	0.23	
Incremental Delay, d2	2.2	1.8		5.2	2.2		4.9	0.8		0.1	0.1	
Delay (s)	16.4	17.7		21.0	18.5		19.9	16.0		3.8	4.0	
Level of Service	B	B		C	B		B	B		A	A	
Approach Delay (s)		17.5			19.1			16.5			4.0	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM Average Control Delay	13.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	75.2%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBL	WBT	WBR	NBL2	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↑↱		↰↑↑↱				✥			✥	
Volume (vph)	2	883	501	938	41	3	10	9	47	15	0	3
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	10	10	10	12	12	16	12	12	16	12
Total Lost time (s)		5.0		5.0				4.0			4.0	
Lane Util. Factor		0.95		0.95				1.00			1.00	
Frpb, ped/bikes		1.00		1.00				0.98			0.97	
Flpb, ped/bikes		1.00		1.00				0.99			1.00	
Frt		1.00		1.00				0.91			0.95	
Flt Protected		1.00		0.98				0.99			0.97	
Satd. Flow (prot)		3160		3078				1785			1819	
Flt Permitted		0.95		0.52				0.93			0.56	
Satd. Flow (perm)		3011		1617				1680			1060	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	2	929	527	987	43	3	11	9	49	16	0	3
RTOR Reduction (vph)	0	0	0	1	0	0	0	46	0	0	5	0
Lane Group Flow (vph)	0	931	0	1556	0	0	0	26	0	0	19	0
Confl. Peds. (#/hr)	7		4		7		7		2	2		7
Confl. Bikes (#/hr)							2		2	2		2
Heavy Vehicles (%)	0%	1%	2%	1%	6%	0%	0%	0%	0%	0%	0%	0%
Turn Type	Perm		Perm			Perm	Perm			Perm		
Protected Phases		8		4				2			6	
Permitted Phases	8		4			2	2			6		
Actuated Green, G (s)		101.2		126.0				8.0			8.0	
Effective Green, g (s)		101.2		126.0				8.0			8.0	
Actuated g/C Ratio		0.71		0.88				0.06			0.06	
Clearance Time (s)		5.0		5.0				4.0			4.0	
Vehicle Extension (s)		3.0		3.0				3.0			3.0	
Lane Grp Cap (vph)		2131		1425				94			59	
v/s Ratio Prot												
v/s Ratio Perm		0.31		c0.96				0.02			c0.02	
v/c Ratio		0.44		1.64dl				0.27			0.33	
Uniform Delay, d1		8.8		8.5				64.7			64.9	
Progression Factor		1.00		1.00				1.00			1.00	
Incremental Delay, d2		0.1		53.1				1.6			3.2	
Delay (s)		9.0		61.6				66.3			68.1	
Level of Service		A		E				E			E	
Approach Delay (s)		9.0		61.6				66.3			68.1	
Approach LOS		A		E				E			E	

Intersection Summary			
HCM Average Control Delay	45.7	HCM Level of Service	D
HCM Volume to Capacity ratio	1.05		
Actuated Cycle Length (s)	143.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	87.6%	ICU Level of Service	E
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.
c Critical Lane Group

Movement	SBR2	NER
Lane Configurations		
Volume (vph)	5	311
Ideal Flow (vphpl)	1800	1800
Lane Width	12	12
Total Lost time (s)		3.0
Lane Util. Factor		0.88
Frpb, ped/bikes		1.00
Flpb, ped/bikes		1.00
Frt		0.85
Flt Protected		1.00
Satd. Flow (prot)		2693
Flt Permitted		1.00
Satd. Flow (perm)		2693
Peak-hour factor, PHF	0.95	0.95
Adj. Flow (vph)	5	327
RTOR Reduction (vph)	0	0
Lane Group Flow (vph)	0	327
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		
Heavy Vehicles (%)	0%	0%
Turn Type		custom
Protected Phases		7
Permitted Phases		
Actuated Green, G (s)		21.8
Effective Green, g (s)		21.8
Actuated g/C Ratio		0.15
Clearance Time (s)		3.0
Vehicle Extension (s)		3.0
Lane Grp Cap (vph)		411
v/s Ratio Prot		0.12
v/s Ratio Perm		
v/c Ratio		0.80
Uniform Delay, d1		58.5
Progression Factor		1.00
Incremental Delay, d2		10.2
Delay (s)		68.7
Level of Service		E
Approach Delay (s)		
Approach LOS		

Intersection Summary

HCM Signalized Intersection Capacity Analysis
1071: 127th Street & State Street

1/14/2013

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰↑	↑↱		↰	↱
Volume (vph)	264	965	1254	177	125	234
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		1.00	1.00
Frt		1.00	0.98		1.00	0.85
Flt Protected		0.99	1.00		0.95	1.00
Satd. Flow (prot)		3285	3259		1660	1485
Flt Permitted		0.49	1.00		0.95	1.00
Satd. Flow (perm)		1618	3259		1660	1485
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	293	1072	1393	197	139	260
RTOR Reduction (vph)	0	0	10	0	0	113
Lane Group Flow (vph)	0	1365	1580	0	139	147
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type	pm+pt					Perm
Protected Phases	7	4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)		87.0	79.0		15.0	15.0
Effective Green, g (s)		87.0	79.0		15.0	15.0
Actuated g/C Ratio		0.79	0.72		0.14	0.14
Clearance Time (s)		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		1340	2341		226	203
v/s Ratio Prot		c0.04	0.48		0.08	
v/s Ratio Perm		c0.77				c0.10
v/c Ratio		1.46dl	0.67		0.62	0.72
Uniform Delay, d1		11.5	8.5		44.8	45.5
Progression Factor		1.00	1.00		1.00	1.00
Incremental Delay, d2		29.4	1.6		11.9	20.0
Delay (s)		40.9	10.1		56.7	65.5
Level of Service		D	B		E	E
Approach Delay (s)		40.9	10.1		62.4	
Approach LOS		D	B		E	

Intersection Summary			
HCM Average Control Delay	28.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	96.1%	ICU Level of Service	F
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰↑	↑↱		↰	↱
Volume (vph)	81	1012	1347	198	276	88
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	12	10	11	12	10	10
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		1.00	1.00
Frpb, ped/bikes		1.00	1.00		1.00	0.99
Flpb, ped/bikes		1.00	1.00		1.00	1.00
Frt		1.00	0.98		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		3120	3139		1506	1342
Flt Permitted		0.66	1.00		0.95	1.00
Satd. Flow (perm)		2075	3139		1506	1342
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	85	1065	1418	208	291	93
RTOR Reduction (vph)	0	0	18	0	0	40
Lane Group Flow (vph)	0	1150	1608	0	291	53
Confl. Peds. (#/hr)	2			2		1
Heavy Vehicles (%)	1%	2%	2%	10%	6%	5%
Turn Type	Perm					Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)		41.0	41.0		16.0	16.0
Effective Green, g (s)		41.0	41.0		16.0	16.0
Actuated g/C Ratio		0.63	0.63		0.25	0.25
Clearance Time (s)		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		1309	1980		371	330
v/s Ratio Prot			0.51		c0.19	
v/s Ratio Perm		c0.55				0.04
v/c Ratio		0.88	0.81		0.78	0.16
Uniform Delay, d1		9.9	9.1		22.9	19.2
Progression Factor		1.00	1.61		1.47	2.02
Incremental Delay, d2		8.6	2.3		12.2	0.8
Delay (s)		18.5	16.9		45.9	39.6
Level of Service		B	B		D	D
Approach Delay (s)		18.5	16.9		44.4	
Approach LOS		B	B		D	

Intersection Summary			
HCM Average Control Delay	20.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	104.1%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1073: 130th Street & Indiana Avenue

1/14/2013

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↱		↰	↑	↰	↱
Volume (vph)	887	261	532	1433	205	161
Ideal Flow (vphpl)	2300	1800	1800	2300	1800	1800
Lane Width	15	12	14	16	15	12
Total Lost time (s)	5.0		3.0	5.0	5.0	5.0
Lane Util. Factor	1.00		1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Frt	0.97		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	2404		1788	2506	1758	1530
Flt Permitted	1.00		0.06	1.00	0.95	1.00
Satd. Flow (perm)	2404		111	2506	1758	1530
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	905	266	543	1462	209	164
RTOR Reduction (vph)	8	0	0	0	0	56
Lane Group Flow (vph)	1163	0	543	1462	209	108
Confl. Peds. (#/hr)						1
Heavy Vehicles (%)	2%	2%	2%	4%	7%	0%
Turn Type			pm+pt			pt+ov
Protected Phases	4		3	8	2	2 3
Permitted Phases			8			
Actuated Green, G (s)	65.0		96.0	96.0	24.0	57.0
Effective Green, g (s)	65.0		96.0	96.0	24.0	57.0
Actuated g/C Ratio	0.50		0.74	0.74	0.18	0.44
Clearance Time (s)	5.0		3.0	5.0	5.0	
Lane Grp Cap (vph)	1202		443	1851	325	671
v/s Ratio Prot	0.48		c0.26	0.58	c0.12	0.07
v/s Ratio Perm			c0.64			
v/c Ratio	0.97		1.23	0.79	0.64	0.16
Uniform Delay, d1	31.5		44.5	10.7	49.0	22.1
Progression Factor	1.06		1.00	1.00	1.00	1.00
Incremental Delay, d2	11.9		120.2	3.5	9.4	0.5
Delay (s)	45.1		164.7	14.2	58.5	22.6
Level of Service	D		F	B	E	C
Approach Delay (s)	45.1			54.9	42.7	
Approach LOS	D			D	D	

Intersection Summary			
HCM Average Control Delay	50.4	HCM Level of Service	D
HCM Volume to Capacity ratio	1.09		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	107.8%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1074: 130th Street & Ellis Ave

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑↑	↱		↰↑	↱		✥	
Volume (vph)	1	2022	38	112	961	1	62	0	157	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	15	13	11	11	12	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0	4.0	3.0	3.0	4.0		4.0	4.0			
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00	1.00			
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85			
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.95	1.00			
Satd. Flow (prot)	1881	3431	1479	1589	3320	1530		1938	1500			
Flt Permitted	0.27	1.00	1.00	0.06	1.00	1.00		0.76	1.00			
Satd. Flow (perm)	530	3431	1479	105	3320	1530		1545	1500			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1	2247	42	124	1068	1	69	0	174	0	0	0
RTOR Reduction (vph)	0	0	12	0	0	0	0	0	117	0	0	0
Lane Group Flow (vph)	1	2247	30	124	1068	1	0	69	57	0	0	0
Heavy Vehicles (%)	0%	3%	0%	4%	3%	0%	0%	0%	2%	0%	0%	0%
Turn Type	Perm		Perm	custom		custom	Perm		Perm	Perm		
Protected Phases		4		3	3 8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)	61.0	61.0	61.0	71.0	71.0	71.0		6.0	6.0			
Effective Green, g (s)	61.0	61.0	61.0	71.0	71.0	71.0		6.0	6.0			
Actuated g/C Ratio	0.72	0.72	0.72	0.84	0.84	0.84		0.07	0.07			
Clearance Time (s)	4.0	4.0	4.0	3.0		4.0		4.0	4.0			
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0		3.0	3.0			
Lane Grp Cap (vph)	380	2462	1061	210	2773	1278		109	106			
v/s Ratio Prot		c0.65		c0.05	0.32							
v/s Ratio Perm	0.00		0.02	0.45		0.00		c0.04	0.04			
v/c Ratio	0.00	0.91	0.03	0.59	0.39	0.00		0.63	0.54			
Uniform Delay, d1	3.4	9.8	3.5	21.1	1.7	1.2		38.4	38.2			
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00			
Incremental Delay, d2	0.0	6.5	0.0	4.4	0.1	0.0		11.4	5.1			
Delay (s)	3.4	16.4	3.5	25.5	1.8	1.2		49.8	43.3			
Level of Service	A	B	A	C	A	A		D	D			
Approach Delay (s)		16.1			4.3			45.2			0.0	
Approach LOS		B			A			D			A	

Intersection Summary			
HCM Average Control Delay	14.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	80.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

	↰	→	←	↖	↘	↙
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰↑	↑↱		↰↱	
Volume (vph)	11	960	846	30	71	14
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10
Total Lost time (s)		5.0	5.0		3.0	
Lane Util. Factor		0.95	0.95		1.00	
Frt		1.00	0.99		0.98	
Flt Protected		1.00	1.00		0.96	
Satd. Flow (prot)		3097	3083		1530	
Flt Permitted		0.94	1.00		0.96	
Satd. Flow (perm)		2912	3083		1530	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	12	1067	940	33	79	16
RTOR Reduction (vph)	0	0	3	0	8	0
Lane Group Flow (vph)	0	1079	970	0	87	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type	Perm					
Protected Phases		4	8 2 11		5	
Permitted Phases	4					
Actuated Green, G (s)		33.0	64.0		7.0	
Effective Green, g (s)		33.0	64.0		7.0	
Actuated g/C Ratio		0.37	0.71		0.08	
Clearance Time (s)		5.0			3.0	
Lane Grp Cap (vph)		1068	2192		119	
v/s Ratio Prot			c0.31		c0.06	
v/s Ratio Perm		c0.37				
v/c Ratio		1.01	0.44		0.73	
Uniform Delay, d1		28.5	5.5		40.6	
Progression Factor		1.00	0.01		1.00	
Incremental Delay, d2		30.1	0.2		32.1	
Delay (s)		58.6	0.2		72.7	
Level of Service		E	A		E	
Approach Delay (s)		58.6	0.2		72.7	
Approach LOS		E	A		E	

Intersection Summary			
HCM Average Control Delay	32.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	48.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1955: 115th Street & Cottage Grove Avenue

1/14/2013

	↰	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑ ↑↱			↰↑↱			↰↑	↱
Volume (vph)	107	500	0	1	583	39	3	2	28	202	0	150
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	12	12	11	12	11
Total Lost time (s)		4.0			4.0			3.0			3.0	3.0
Lane Util. Factor		1.00			0.95			1.00			1.00	1.00
Frpb, ped/bikes		1.00			1.00			0.94			1.00	0.97
Flpb, ped/bikes		1.00			1.00			1.00			0.98	1.00
Frt		1.00			0.99			0.88			1.00	0.85
Flt Protected		0.99			1.00			1.00			0.95	1.00
Satd. Flow (prot)		1765			3342			1456			1665	1344
Flt Permitted		0.77			0.95			0.61			0.83	1.00
Satd. Flow (perm)		1373			3192			895			1461	1344
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	119	556	0	1	648	43	3	2	31	224	0	167
RTOR Reduction (vph)	0	0	0	0	5	0	0	28	0	0	0	124
Lane Group Flow (vph)	0	675	0	0	687	0	0	8	0	0	224	43
Confl. Peds. (#/hr)	60		44	44		60	14		10	10		14
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	0%	1%	0%	0%	1%	3%	20%	0%	0%	1%	0%	7%
Turn Type	Perm			pm+pt			Perm			pm+pt		Perm
Protected Phases		4		3	3 4			1		2	1 2	
Permitted Phases	4			3 4	3		1	1		1 2		1 2
Actuated Green, G (s)		48.0			62.0			9.0			23.0	26.0
Effective Green, g (s)		48.0			62.0			9.0			23.0	26.0
Actuated g/C Ratio		0.48			0.62			0.09			0.23	0.26
Clearance Time (s)		4.0						3.0				
Lane Grp Cap (vph)		659			2000			81			365	349
v/s Ratio Prot					c0.05						c0.09	
v/s Ratio Perm		c0.49			0.16			0.01			c0.06	0.03
v/c Ratio		1.02			0.34			0.10			0.61	0.12
Uniform Delay, d1		26.0			9.2			41.8			34.5	28.3
Progression Factor		1.00			0.13			1.00			1.00	1.00
Incremental Delay, d2		41.4			0.3			2.4			7.5	0.7
Delay (s)		67.4			1.4			44.1			42.0	29.0
Level of Service		E			A			D			D	C
Approach Delay (s)		67.4			1.4			44.1			36.5	
Approach LOS		E			A			D			D	

Intersection Summary			
HCM Average Control Delay	34.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	81.1%	ICU Level of Service	D
Analysis Period (min)	15		

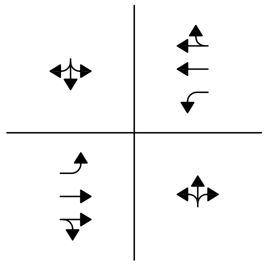
c Critical Lane Group

Appendix E
Halsted Rail Alternative

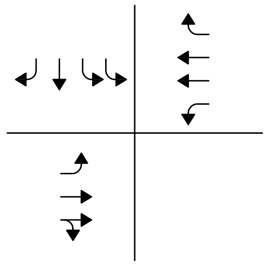
Halsted Rail Alternative Project Traffic Estimates

ITE Land Use	Unit	Trip Generation Rate			Peak Hour Direction			
		Daily	AM Peak Hour	PM Peak Hour	AM In	AM Out	PM In	PM Out
Light Rail with Park and Ride	Parking Spaces	2.51	1.07	1.24	80%	20%	20%	80%

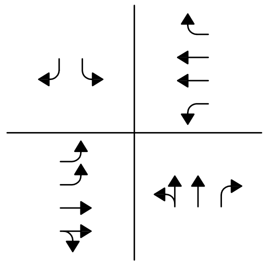
Halsted Rail Alternative Park and Ride Facilities		Estimated Project Traffic						
Location	Parking Spaces	Daily	AM In	AM Out	AM Total	PM In	PM Out	PM Total
103rd Street	200	502	171	43	214	50	198	248
111th Street	200	502	171	43	214	50	198	248
119th Street	1,000	2,510	856	214	1,070	248	992	1,240
Vermont Avenue	2,300	5,773	1,969	492	2,461	570	2,282	2,852
Total	**3,700**	**9,287**	**3,167**	**792**	**3,959**	**918**	**3,670**	**4,588**



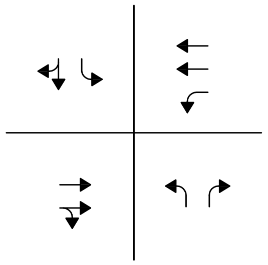
01 95th Street
Wentworth Avenue



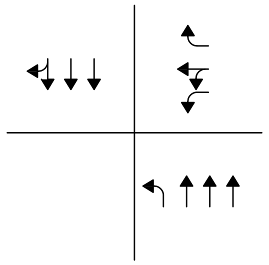
02 95th Street
Lafayette Avenue



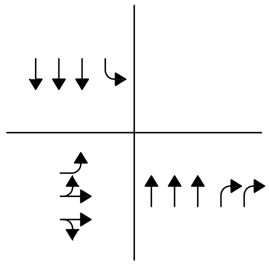
03 95th Street
State Street



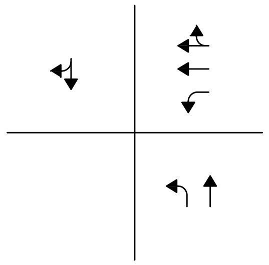
04 95th Street
Michigan Avenue



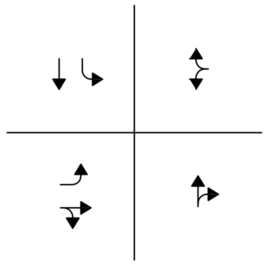
05 98th Place
Halsted Street



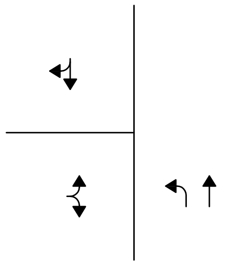
06 99th Street
Halsted Street



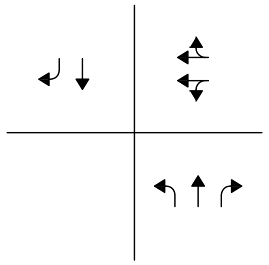
07 98th Place
Wentworth Avenue



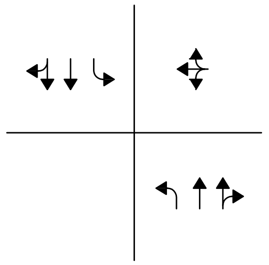
08 99th Street
Wentworth Avenue



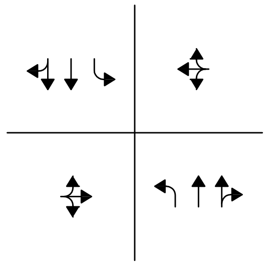
09 99th Street
State Street



10 99th Street
Michigan Avenue



11 99th Street
Martin Luther King Jr Drive



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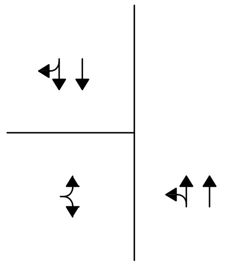
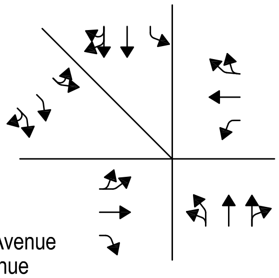


13 100th Street
Cottage Grove Avenue



14 103rd Street
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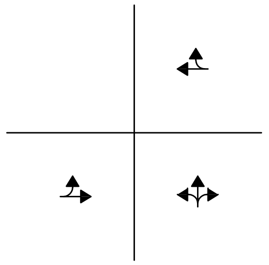
Beverly Avenue



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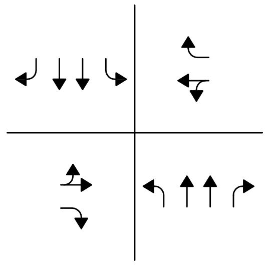

16 103rd Street
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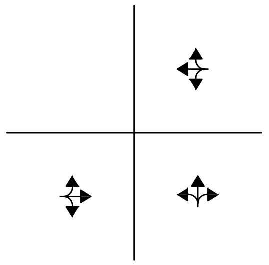

17 103rd Street
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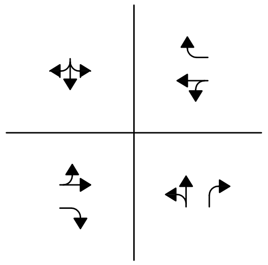

18 103rd Street
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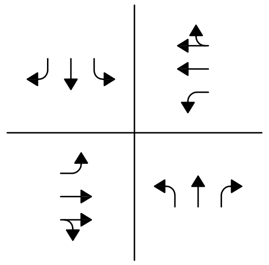

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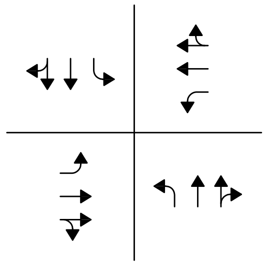
State Street



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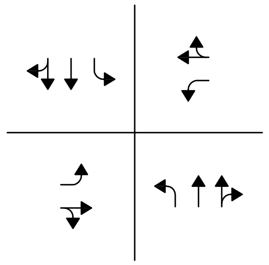

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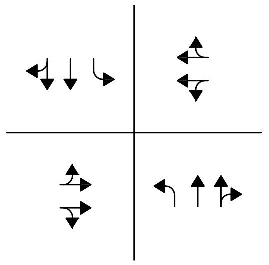
Martin Luther King Jr Drive



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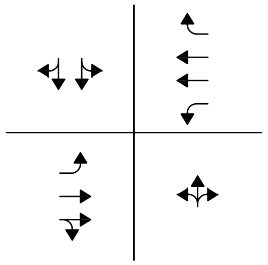
Cottage Grove Avenue



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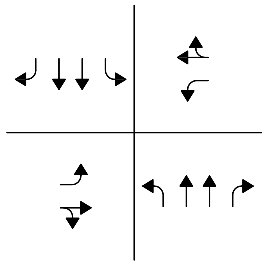

24 107th Street
Halsted Street

Halsted Rail Alternative (2026) Intersection Lane Geometry

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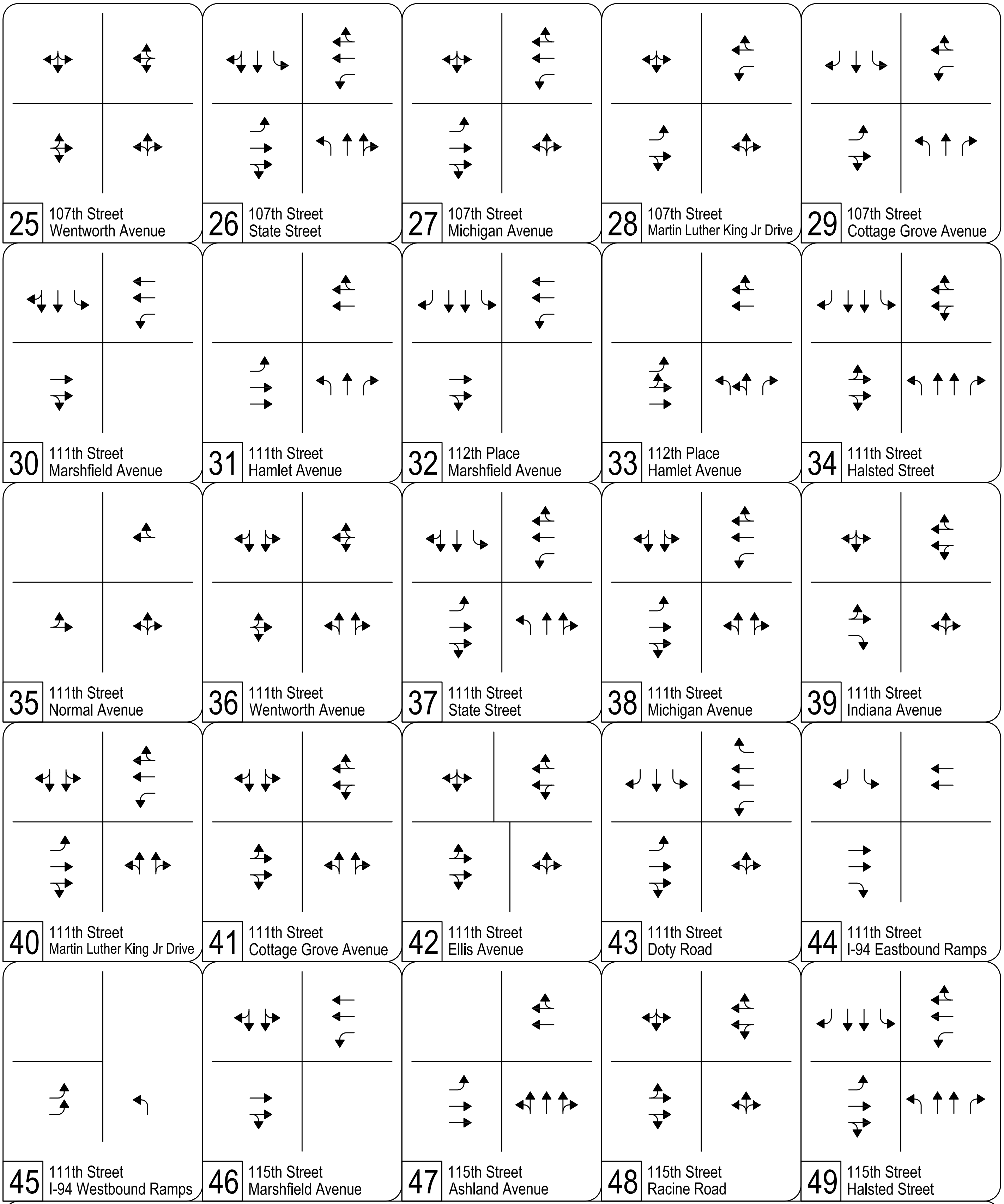

25 107th Street Wentworth Avenue

26 107th Street State Street

27 107th Street Michigan Avenue

28 107th Street Martin Luther King Jr Drive

29 107th Street Cottage Grove Avenue

30 111th Street Marshfield Avenue

31 111th Street Hamlet Avenue

32 112th Place Marshfield Avenue

33 112th Place Hamlet Avenue

34 111th Street Halsted Street

35 111th Street Normal Avenue

36 111th Street Wentworth Avenue

37 111th Street State Street

38 111th Street Michigan Avenue

39 111th Street Indiana Avenue

40 111th Street Martin Luther King Jr Drive

41 111th Street Cottage Grove Avenue

42 111th Street Ellis Avenue

43 111th Street Doty Road

44 111th Street I-94 Eastbound Ramps

45 111th Street I-94 Westbound Ramps

46 115th Street Marshfield Avenue

47 115th Street Ashland Avenue

48 115th Street Racine Road

49 115th Street Halsted Street

Halsted Rail Alternative (2026) Intersection Lane Geometry

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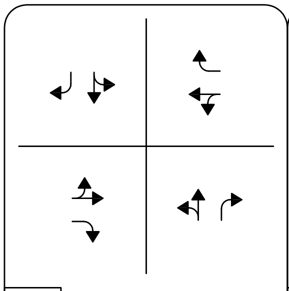
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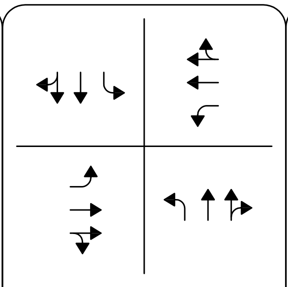
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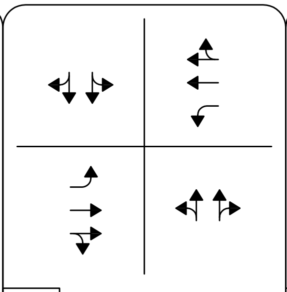
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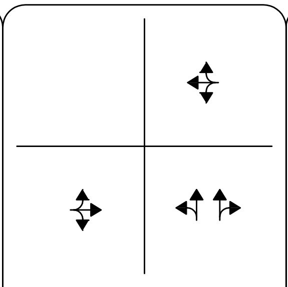
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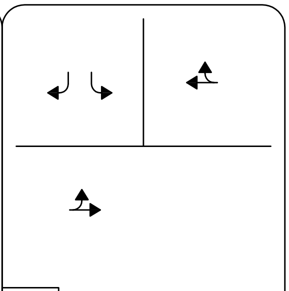
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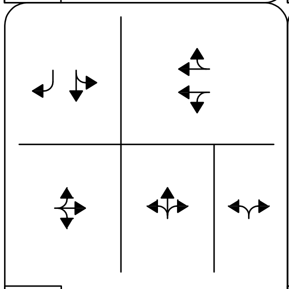
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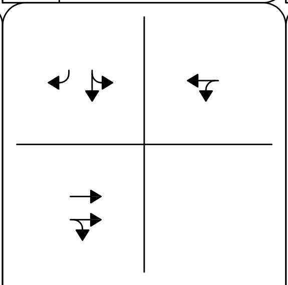
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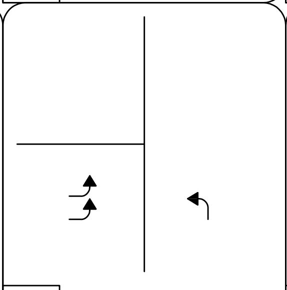
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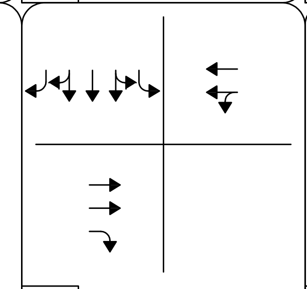
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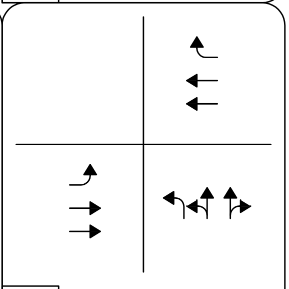
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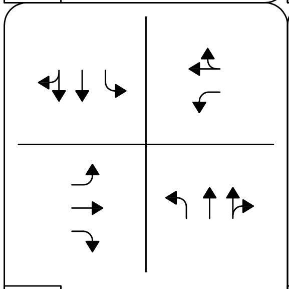
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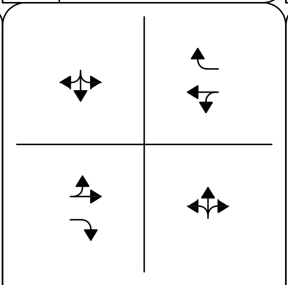
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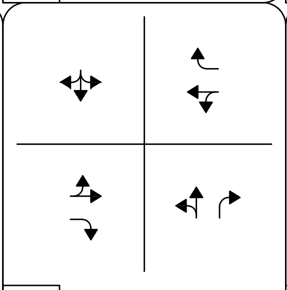
Wentworth Avenue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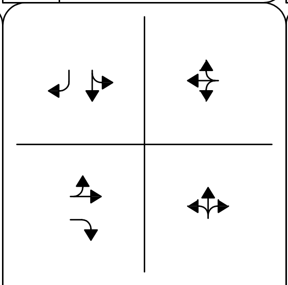
State Street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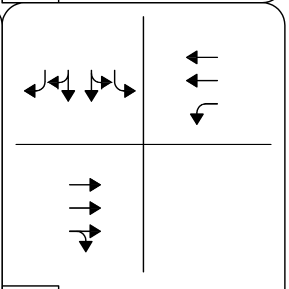
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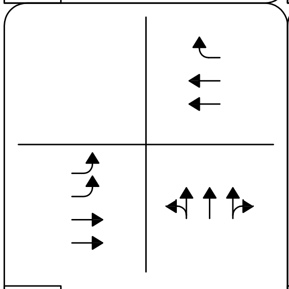
Paulina Street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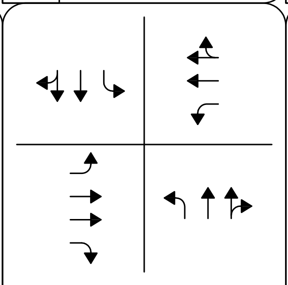
Marshfield Avenue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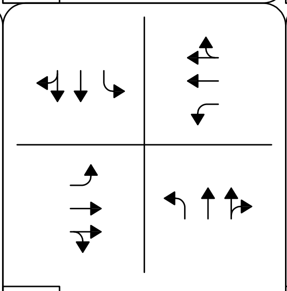
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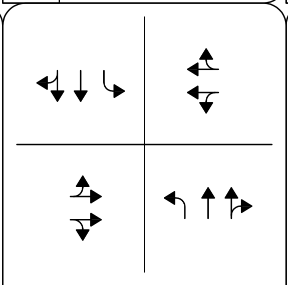
Ashland Avenue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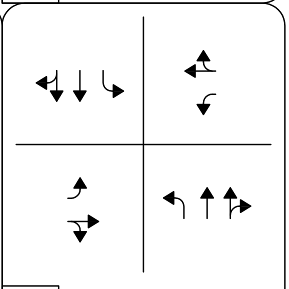
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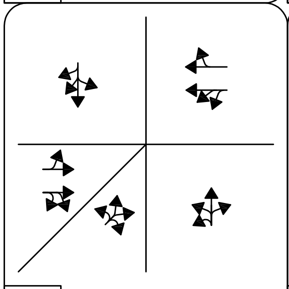
Halsted Street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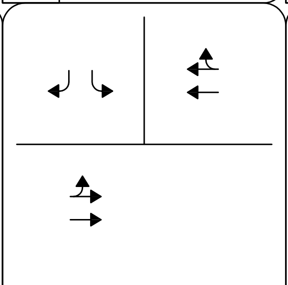
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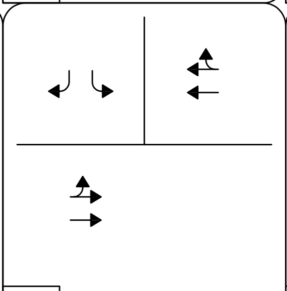
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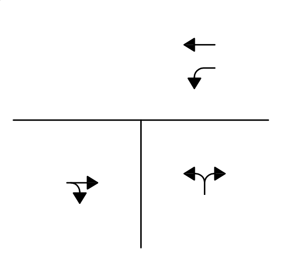
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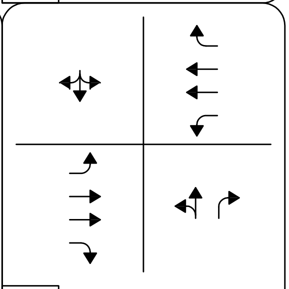
74
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Ellis Avenue

Halsted Rail Alternative (2026) Intersection Lane Geometry

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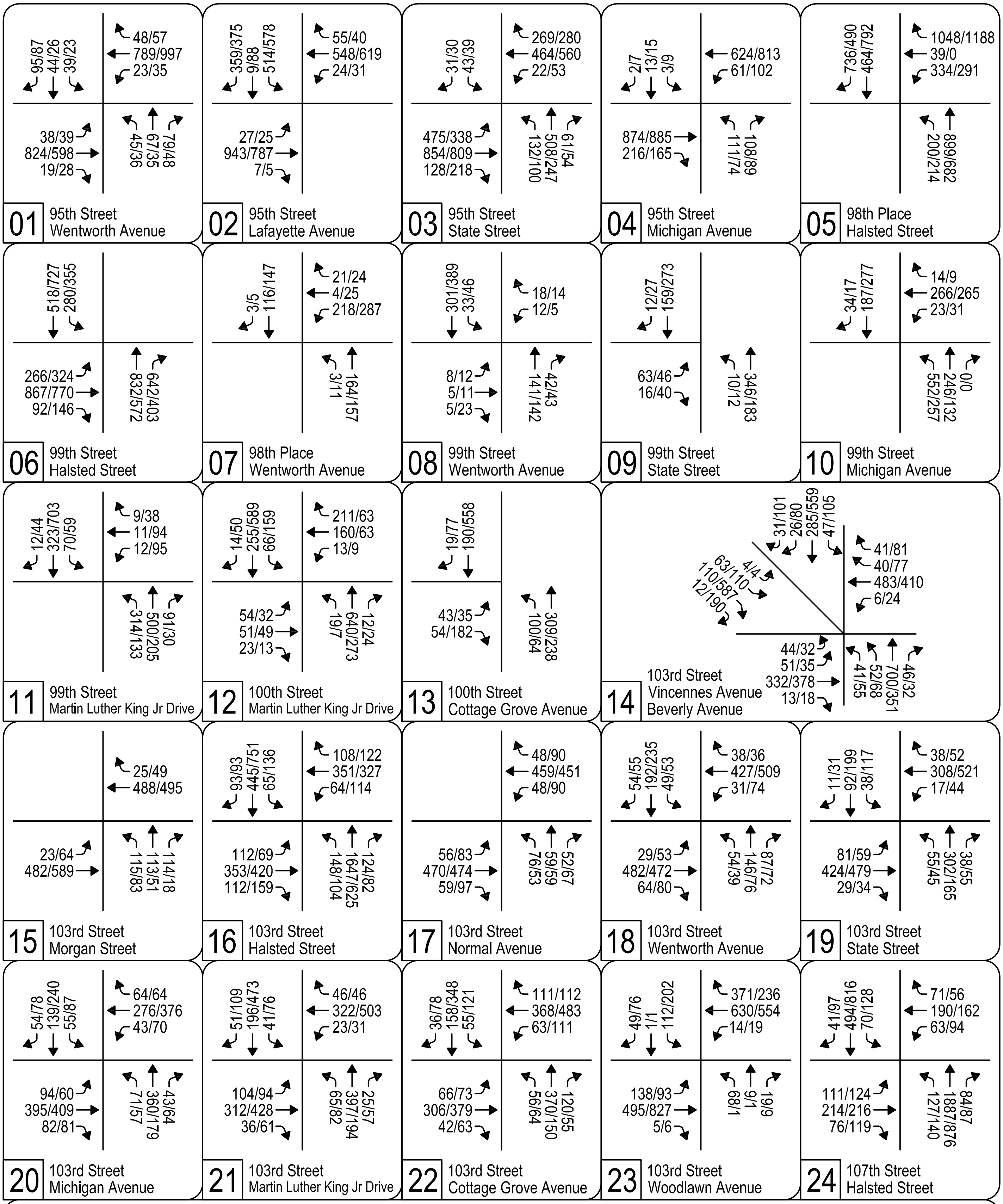
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95th Street
Wentworth Avenue
359/375
9/88
514/578
55/40
548/619
24/31
27/25
943/787
7/5
02
95th Street
Lafayette Avenue
31/30
43/39
269/280
464/560
22/53
475/338
854/809
128/218
132/100
508/247
61/54
03
95th Street
State Street
2/7
13/15
3/9
624/813
61/102
874/885
216/165
111/74
108/89
04
95th Street
Michigan Avenue
736/490
464/792
1048/1188
39/0
334/291
200/214
899/682
05
98th Place
Halsted Street
518/727
280/355
266/324
867/770
92/146
832/572
642/403
06
99th Street
Halsted Street
3/5
116/147
21/24
4/25
218/287
3/11
164/157
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Wentworth Avenue
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Wentworth Avenue
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State Street
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Michigan Avenue
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99th Street
Martin Luther King Jr Drive
14/50
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160/63
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19/7
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100th Street
Martin Luther King Jr Drive
19/77
190/558
43/35
54/182
100/64
309/238
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100th Street
Cottage Grove Avenue
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40/77
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4/4
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51/35
332/378
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41/55
52/68
700/351
46/32
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103rd Street
Vincennes Avenue
Beverly Avenue
25/49
488/495
23/64
482/589
115/83
113/51
114/18
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103rd Street
Morgan Street
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Normal Avenue
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427/509
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54/39
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Wentworth Avenue
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308/521
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81/59
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38/55
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103rd Street
State Street
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103rd Street
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Martin Luther King Jr Drive
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103rd Street
Cottage Grove Avenue
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1/1
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371/236
630/554
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495/827
5/6
68/1
9/1
19/9
23
103rd Street
Woodlawn Avenue
41/97
494/816
70/128
71/56
190/162
63/94
111/124
214/216
76/119
127/140
1887/876
84/87
24
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Halsted Street

Halsted Rail Alternative (2026) Intersection Traffic Volumes

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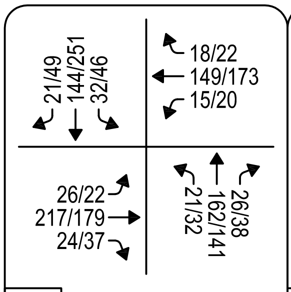
Legend: AM/PM Peak Hour Volumes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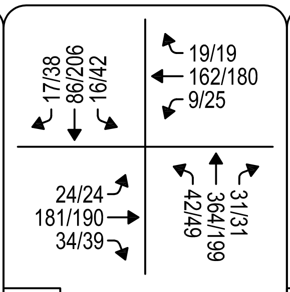
162/141
26/38

25 107th Street
Wentworth Avenue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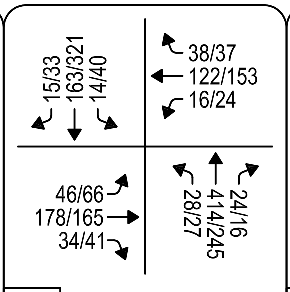
31/31

26 107th Street
State Street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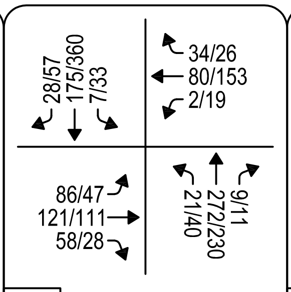
414/245
24/16

27 107th Street
Michigan Avenue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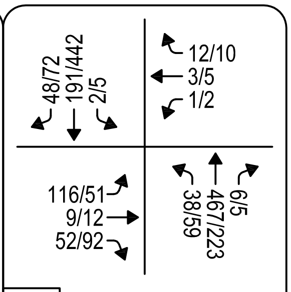
28 107th Street
Martin Luther King Jr Drive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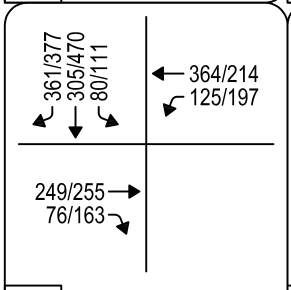
29 107th Street
Cottage Grove Avenue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30 111th Street
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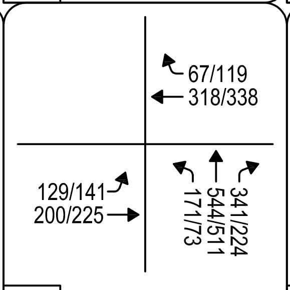
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31 111th Street
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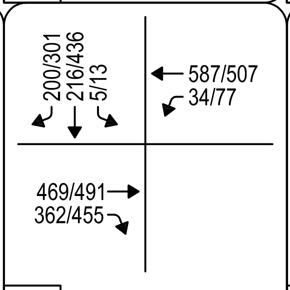
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587/507
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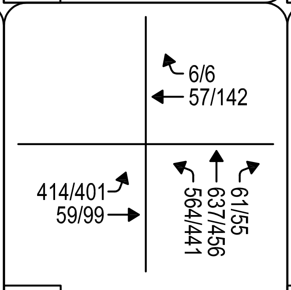
32 112th Place
Marshfield Avenue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564/441
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61/55

33 112th Place
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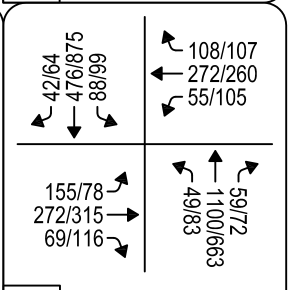
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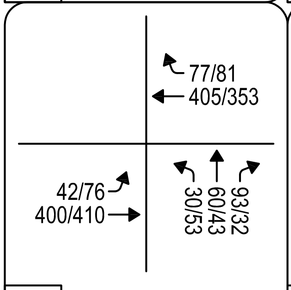
34 111th Street
Halsted Street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93/32

35 111th Street
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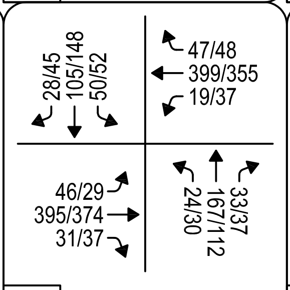
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46/29
395/374
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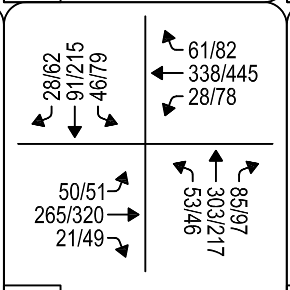
24/30
167/112
33/37

36 111th Street
Wentworth Avenue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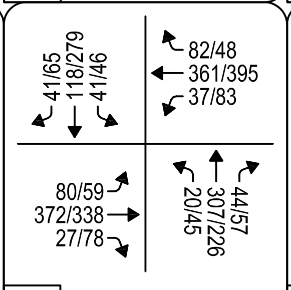
37 111th Street
State Street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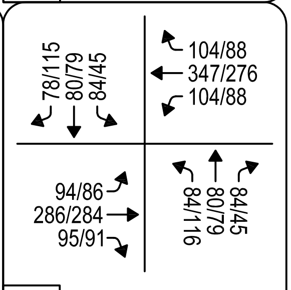
38 111th Street
Michigan Avenue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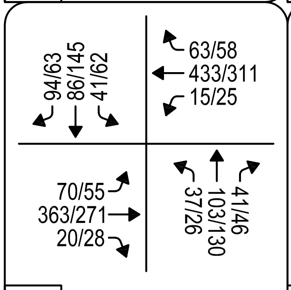
39 111th Street
Indiana Avenue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37/26
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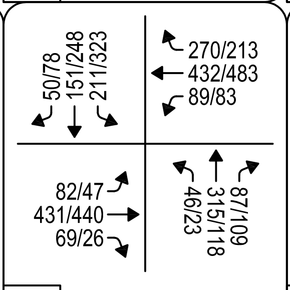
41/46

40 111th Street
Martin Luther King Jr Drive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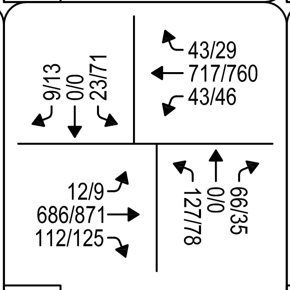
87/109

41 111th Street
Cottage Grove Avenue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686/871
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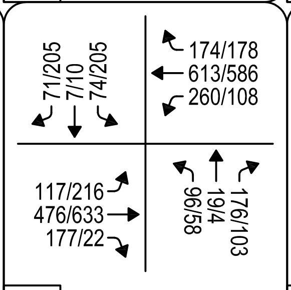
66/35

42 111th Street
Ellis Avenue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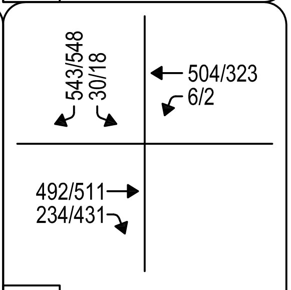
476/633
177/22
96/58
19/4
176/103

43 111th Street
Doty Road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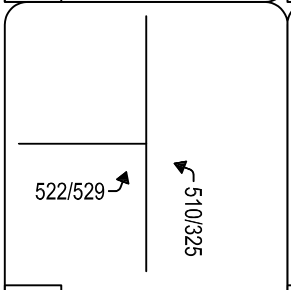
44 111th Street
I-94 Eastbound Ramps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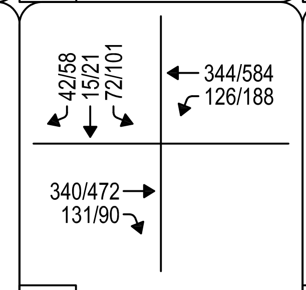
I-94 Westbound Ramps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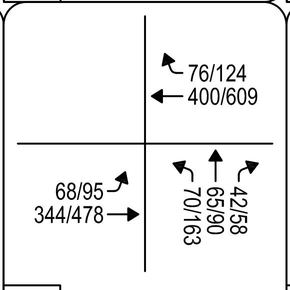
46 115th Street
Marshfield Avenue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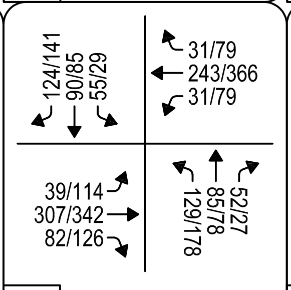
47 115th Street
Ashland Avenue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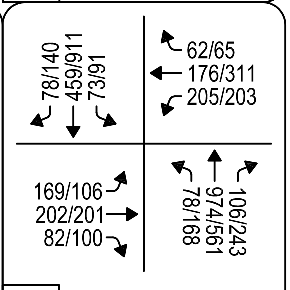
307/342
82/126
129/178
85/78
52/27

48 115th Street
Racine Road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73/91
62/65
176/311
205/203
169/106
202/201
82/100
78/168
974/561
106/243

49 115th Street
Halsted Street

Halsted Rail Alternative (2026) Intersection Traffic Volumes

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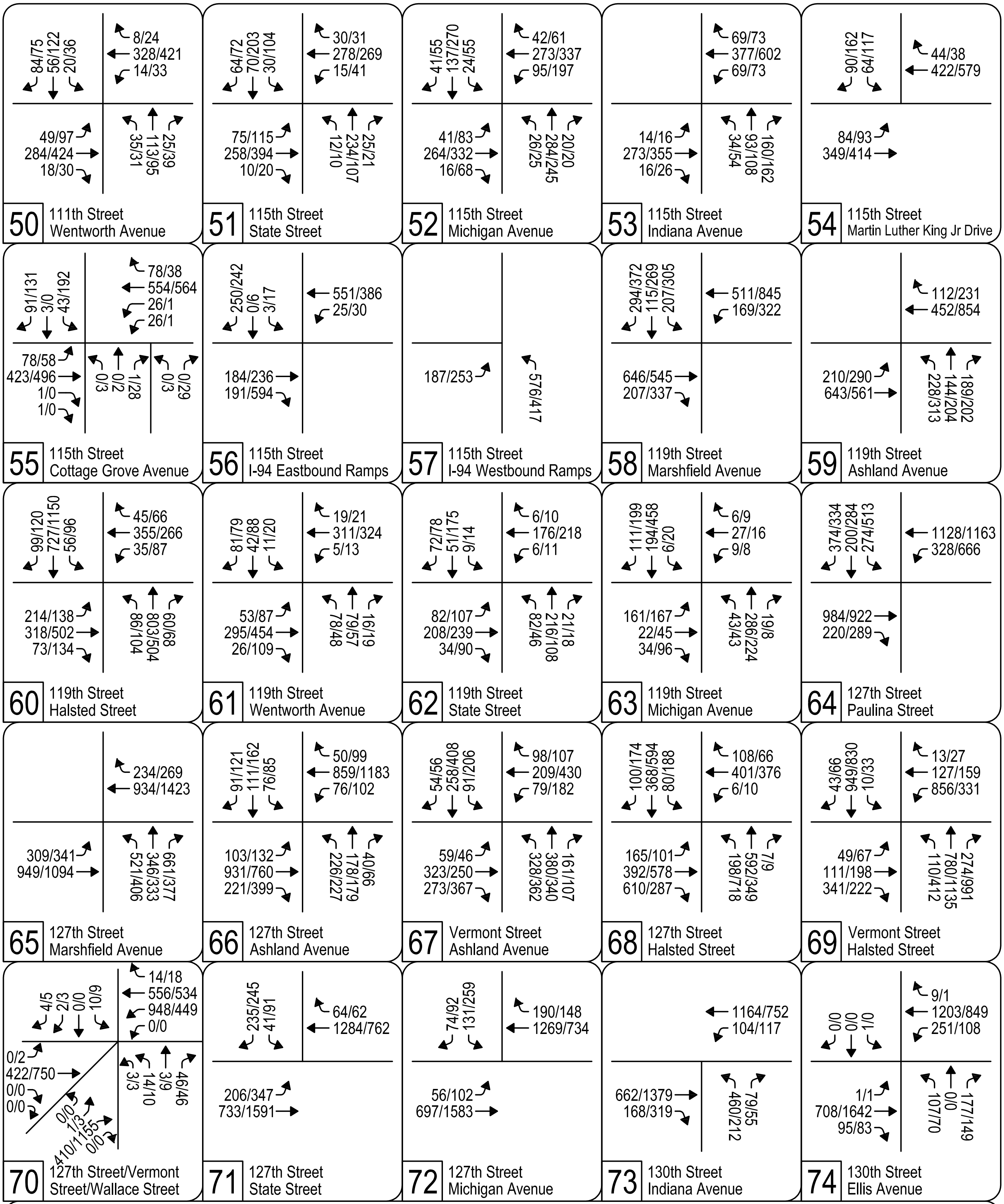
Legend: AM/PM Peak Hour Volumes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35/31
113/95
25/39
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Wentworth Avenue
64/72
70/203
30/104
30/31
278/269
15/41
75/115
258/394
10/20
12/10
234/107
25/21
51
115th Street
State Street
41/55
137/270
24/55
42/61
273/337
95/197
41/83
264/332
16/68
26/25
284/245
20/20
52
115th Street
Michigan Avenue
69/73
377/602
69/73
14/16
273/355
16/26
34/54
93/108
160/162
53
115th Street
Indiana Avenue
90/162
64/117
44/38
422/579
84/93
349/414
54
115th Street
Martin Luther King Jr Drive
91/131
3/0
43/192
78/38
554/564
26/1
26/1
78/58
423/496
1/0
1/0
0/3
0/2
1/28
0/3
0/29
55
115th Street
Cottage Grove Avenue
250/242
0/6
3/17
551/386
25/30
184/236
191/594
56
115th Street
I-94 Eastbound Ramps
187/253
576/417
57
115th Street
I-94 Westbound Ramps
294/372
115/269
207/305
511/845
169/322
646/545
207/337
58
119th Street
Marshfield Avenue
112/231
452/854
210/290
643/561
228/313
144/204
189/202
59
119th Street
Ashland Avenue
99/120
727/1150
56/96
45/66
355/266
35/87
214/138
318/502
73/134
86/104
803/504
60/68
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119th Street
Halsted Street
81/79
42/88
11/20
19/21
311/324
5/13
53/87
295/454
26/109
78/48
79/57
16/19
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Wentworth Avenue
72/78
51/175
9/14
6/10
176/218
6/11
82/107
208/239
34/90
82/46
216/108
21/18
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State Street
111/199
194/458
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6/9
27/16
9/8
161/167
22/45
34/96
43/43
286/224
19/8
63
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Michigan Avenue
374/334
200/284
274/513
1128/1163
328/666
984/922
220/289
64
127th Street
Paulina Street
234/269
934/1423
309/341
949/1094
521/406
346/333
661/377
65
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Marshfield Avenue
91/121
111/162
76/85
50/99
859/1183
76/102
103/132
931/760
221/399
226/227
178/179
40/66
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127th Street
Ashland Avenue
54/56
258/408
91/206
98/107
209/430
79/182
59/46
323/250
273/367
328/362
380/340
161/107
67
Vermont Street
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100/174
368/594
80/188
108/66
401/376
6/10
165/101
392/578
610/287
198/718
592/349
7/9
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Halsted Street
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13/27
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341/222
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Vermont Street
Halsted Street
4/5
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422/750
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3/3
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3/9
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1/3
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0/0
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127th Street/Vermont
Street/Wallace Street
235/245
41/91
64/62
1284/762
206/347
733/1591
71
127th Street
State Street
74/92
131/259
190/148
1269/734
56/102
697/1583
72
127th Street
Michigan Avenue
1164/752
104/117
662/1379
168/319
460/212
79/55
73
130th Street
Indiana Avenue
0/0
0/0
1/0
9/1
1203/849
251/108
1/1
708/1642
95/83
107/70
0/0
177/149
74
130th Street
Ellis Avenue

Halsted Rail Alternative (2026) Intersection Traffic Volumes

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Legend: AM/PM Peak Hour Volumes

HCM Signalized Intersection Capacity Analysis
1001: 95th Street & Wentworth Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			✣			✣	
Volume (vph)	38	824	19	23	789	48	45	67	79	39	44	95
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	16	10	10	16	8	15	8	8	14	8
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			0.99			0.99	
Flpb, ped/bikes	0.98	1.00		1.00	1.00			1.00			1.00	
Frt	1.00	1.00		1.00	0.99			0.94			0.93	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1416	2975		1592	2978			1754			1673	
Flt Permitted	0.26	1.00		0.26	1.00			0.90			0.91	
Satd. Flow (perm)	384	2975		429	2978			1597			1533	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	40	867	20	24	831	51	47	71	83	41	46	100
RTOR Reduction (vph)	0	2	0	0	7	0	0	39	0	0	63	0
Lane Group Flow (vph)	40	885	0	24	875	0	0	162	0	0	124	0
Confl. Peds. (#/hr)	61		11	11		61	3		5	5		3
Confl. Bikes (#/hr)	1		1	1		1						
Heavy Vehicles (%)	11%	7%	0%	0%	6%	2%	2%	7%	4%	5%	7%	3%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	34.0	34.0		34.0	34.0			22.0			22.0	
Effective Green, g (s)	34.0	34.0		34.0	34.0			23.0			23.0	
Actuated g/C Ratio	0.52	0.52		0.52	0.52			0.35			0.35	
Clearance Time (s)	4.0	4.0		4.0	4.0			5.0			5.0	
Lane Grp Cap (vph)	201	1556		224	1558			565			542	
v/s Ratio Prot		c0.30			0.29							
v/s Ratio Perm	0.10			0.06				c0.10			0.08	
v/c Ratio	0.20	0.57		0.11	0.56			0.29			0.23	
Uniform Delay, d1	8.3	10.5		7.8	10.5			15.1			14.8	
Progression Factor	1.00	1.00		0.82	1.13			1.00			1.00	
Incremental Delay, d2	2.2	1.5		0.8	1.3			1.3			1.0	
Delay (s)	10.5	12.0		7.2	13.1			16.4			15.8	
Level of Service	B	B		A	B			B			B	
Approach Delay (s)		12.0			12.9			16.4			15.8	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	13.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis

1002: 95th Street & Lafayette Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↑	↱				↰↰	↑	↱
Volume (vph)	27	943	7	24	548	55	0	0	0	514	9	359
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	5.0	5.0		3.0	3.0	3.0				5.0	5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00				0.97	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.67				1.00	1.00	0.96
Flpb, ped/bikes	0.91	1.00		1.00	1.00	1.00				1.00	1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85				1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00				0.95	1.00	1.00
Satd. Flow (prot)	776	3285		1710	3138	512				3100	1440	1399
Flt Permitted	0.43	1.00		0.14	1.00	1.00				0.95	1.00	1.00
Satd. Flow (perm)	355	3285		248	3138	512				3100	1440	1399
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	28	993	7	25	577	58	0	0	0	541	9	378
RTOR Reduction (vph)	0	1	0	0	0	25	0	0	0	0	0	172
Lane Group Flow (vph)	28	999	0	25	577	33	0	0	0	541	9	206
Confl. Peds. (#/hr)	354		13	13		354	22		22	22		22
Confl. Bikes (#/hr)	4					4			1	1		
Heavy Vehicles (%)	100%	4%	0%	0%	9%	100%	0%	0%	0%	7%	25%	5%
Turn Type	pm+pt			pm+pt		Perm				Split		Perm
Protected Phases	7	4		3	8					6	6	
Permitted Phases	4			8		8						6
Actuated Green, G (s)	43.0	43.0		73.0	73.0	73.0				30.0	30.0	30.0
Effective Green, g (s)	43.0	43.0		73.0	73.0	73.0				30.0	30.0	30.0
Actuated g/C Ratio	0.33	0.33		0.56	0.56	0.56				0.23	0.23	0.23
Clearance Time (s)	5.0	5.0		3.0	3.0	3.0				5.0	5.0	5.0
Lane Grp Cap (vph)	163	1087		634	1762	288				715	332	323
v/s Ratio Prot	0.02	c0.30		0.01	c0.18					c0.17	0.01	
v/s Ratio Perm	0.04			0.01		0.06						0.15
v/c Ratio	0.17	0.92		0.04	0.33	0.11				0.76	0.03	0.64
Uniform Delay, d1	31.6	41.8		15.1	15.3	13.3				46.6	38.7	45.1
Progression Factor	0.80	0.83		0.30	0.63	1.55				1.00	1.00	1.00
Incremental Delay, d2	2.0	12.2		0.1	0.3	0.5				7.3	0.2	9.2
Delay (s)	27.2	46.8		4.6	10.0	21.2				53.9	38.9	54.3
Level of Service	C	D		A	A	C				D	D	D
Approach Delay (s)		46.2			10.8			0.0			54.0	
Approach LOS		D			B			A			D	

Intersection Summary			
HCM Average Control Delay	40.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	51.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1003: 95th Street & State Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↱		↰	↑↑	↱		↰↑	↱	↰		↱
Volume (vph)	475	854	128	22	464	269	132	508	61	43	0	31
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0	3.0		5.0	5.0	5.0		5.0	5.0	5.0		5.0
Lane Util. Factor	0.97	0.95		1.00	0.95	1.00		0.95	1.00	1.00		1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.65		1.00	0.94	1.00		0.96
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Frt	1.00	0.98		1.00	1.00	0.85		1.00	0.85	1.00		0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.99	1.00	0.95		1.00
Satd. Flow (prot)	3190	3107		1555	2923	944		3300	1417	855		734
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.99	1.00	0.95		1.00
Satd. Flow (perm)	3190	3107		1555	2923	944		3300	1417	855		734
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	500	899	135	23	488	283	139	535	64	45	0	33
RTOR Reduction (vph)	0	9	0	0	0	161	0	0	25	0	0	31
Lane Group Flow (vph)	500	1026	0	23	488	122	0	674	39	45	0	2
Confl. Peds. (#/hr)	425		21	21		425	6		34	34		6
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	4%	8%	3%	10%	17%	5%	1%	3%	2%	100%	0%	100%
Turn Type	Prot			Prot		Perm	Split		Perm	Prot		custom
Protected Phases	7	4		3	8		2	2		6		
Permitted Phases						8			2			6
Actuated Green, G (s)	43.0	65.0		9.0	31.0	31.0		30.0	30.0	8.0		8.0
Effective Green, g (s)	43.0	65.0		9.0	31.0	31.0		30.0	30.0	8.0		8.0
Actuated g/C Ratio	0.33	0.50		0.07	0.24	0.24		0.23	0.23	0.06		0.06
Clearance Time (s)	3.0	3.0		5.0	5.0	5.0		5.0	5.0	5.0		5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0	3.0	3.0		3.0
Lane Grp Cap (vph)	1055	1554		108	697	225		762	327	53		45
v/s Ratio Prot	0.16	c0.33		0.01	c0.17			c0.20		c0.05		
v/s Ratio Perm						0.13			0.03			0.00
v/c Ratio	0.47	0.66		0.21	0.70	0.54		0.88	0.12	0.85		0.05
Uniform Delay, d1	34.5	24.3		57.2	45.3	43.3		48.3	39.5	60.4		57.4
Progression Factor	0.75	0.19		1.00	1.00	1.00		0.95	0.90	1.00		1.00
Incremental Delay, d2	0.7	1.1		4.5	5.8	9.0		14.1	0.7	70.0		0.4
Delay (s)	26.6	5.7		61.6	51.0	52.3		59.8	36.2	130.4		57.8
Level of Service	C	A		E	D	D		E	D	F		E
Approach Delay (s)		12.5			51.8			57.7			99.7	
Approach LOS		B			D			E			F	

Intersection Summary			
HCM Average Control Delay	35.2	HCM Level of Service	D
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	71.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1004: 95th Street & Michigan Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱		↰	↑↑		↰		↱	↰	↱	
Volume (vph)	0	874	216	61	624	0	111	0	108	3	13	2
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	11	11	8	12	12	12	14	15	12
Total Lost time (s)		4.0		4.0	4.0		4.0		4.0	4.0	4.0	
Lane Util. Factor		0.95		1.00	0.95		1.00		1.00	1.00	1.00	
Frpb, ped/bikes		0.99		1.00	1.00		1.00		0.98	1.00	1.00	
Flpb, ped/bikes		1.00		1.00	1.00		1.00		1.00	0.99	1.00	
Frt		0.97		1.00	1.00		1.00		0.85	1.00	0.98	
Flt Protected		1.00		0.95	1.00		0.95		1.00	0.95	1.00	
Satd. Flow (prot)		2860		1650	3005		1390		1465	1803	1943	
Flt Permitted		1.00		0.16	1.00		0.75		1.00	0.95	1.00	
Satd. Flow (perm)		2860		283	3005		1093		1465	1803	1943	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	971	240	68	693	0	123	0	120	3	14	2
RTOR Reduction (vph)	0	22	0	0	0	0	0	0	82	0	1	0
Lane Group Flow (vph)	0	1189	0	68	693	0	123	0	38	3	15	0
Confl. Peds. (#/hr)	49		15	15		49			12	12		
Heavy Vehicles (%)	0%	6%	14%	0%	10%	0%	23%	0%	2%	0%	0%	0%
Turn Type				Perm			custom		custom	Perm		
Protected Phases		4			8						6	
Permitted Phases				8			2		2	6		
Actuated Green, G (s)		60.0		60.0	60.0		32.0		32.0	32.0	32.0	
Effective Green, g (s)		60.0		60.0	60.0		32.0		32.0	32.0	32.0	
Actuated g/C Ratio		0.60		0.60	0.60		0.32		0.32	0.32	0.32	
Clearance Time (s)		4.0		4.0	4.0		4.0		4.0	4.0	4.0	
Lane Grp Cap (vph)		1716		170	1803		350		469	577	622	
v/s Ratio Prot		c0.42			0.23						0.01	
v/s Ratio Perm				0.24			c0.11		0.03	0.00		
v/c Ratio		0.69		0.40	0.38		0.35		0.08	0.01	0.02	
Uniform Delay, d1		13.7		10.5	10.4		26.0		23.7	23.2	23.3	
Progression Factor		1.00		1.00	1.00		1.00		1.00	1.00	1.00	
Incremental Delay, d2		2.3		6.9	0.6		2.8		0.3	0.0	0.1	
Delay (s)		16.0		17.4	11.0		28.8		24.1	23.2	23.4	
Level of Service		B		B	B		C		C	C	C	
Approach Delay (s)		16.0			11.6			26.5			23.3	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM Average Control Delay	15.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	59.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1005: 98th Place & Halsted Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↰	↰↑	↱	↰	↑↑↑			↑↑↱	
Volume (vph)	0	0	0	334	39	1048	200	899	0	0	464	736
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	12	12	10	10	12	12	11	12
Total Lost time (s)				4.0	4.0	5.0	3.0	4.0			4.0	
Lane Util. Factor				0.95	0.95	1.00	1.00	0.91			0.91	
Frpb, ped/bikes				1.00	1.00	0.99	1.00	1.00			0.98	
Flpb, ped/bikes				1.00	1.00	1.00	1.00	1.00			1.00	
Frt				1.00	1.00	0.85	1.00	1.00			0.91	
Flt Protected				0.95	1.00	1.00	0.95	1.00			1.00	
Satd. Flow (prot)				1525	1629	1479	1550	4368			3938	
Flt Permitted				0.95	1.00	1.00	0.95	1.00			1.00	
Satd. Flow (perm)				1525	1629	1479	1550	4368			3938	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	0	0	341	40	1069	204	917	0	0	473	751
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	341	40	1069	204	917	0	0	1224	0
Confl. Peds. (#/hr)	2					2	12		8	8		12
Heavy Vehicles (%)	0%	0%	0%	3%	5%	2%	3%	5%	0%	0%	5%	8%
Turn Type				Perm		Perm	Prot					
Protected Phases					8		5	2			6	
Permitted Phases				8		8						
Actuated Green, G (s)				30.0	30.0	30.0	32.0	66.0			31.0	
Effective Green, g (s)				31.0	31.0	30.0	32.0	66.0			31.0	
Actuated g/C Ratio				0.30	0.30	0.29	0.30	0.63			0.30	
Clearance Time (s)				5.0	5.0	5.0	3.0	4.0			4.0	
Lane Grp Cap (vph)				450	481	423	472	2746			1163	
v/s Ratio Prot							c0.13	0.21			c0.31	
v/s Ratio Perm				0.22	0.02	c0.72						
v/c Ratio				0.76	0.08	2.53	0.43	0.33			1.87dr	
Uniform Delay, d1				33.6	26.7	37.5	29.2	9.2			37.0	
Progression Factor				1.00	1.00	1.00	0.66	2.37			1.00	
Incremental Delay, d2				11.3	0.3	694.2	2.0	0.2			41.3	
Delay (s)				44.9	27.1	731.7	21.2	22.0			78.3	
Level of Service				D	C	F	C	C			E	
Approach Delay (s)		0.0			550.8			21.8			78.3	
Approach LOS		A			F			C			E	

Intersection Summary			
HCM Average Control Delay	242.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.32		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	94.6%	ICU Level of Service	F
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.
c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1006: 99th Street & Halsted Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↰↑↱						↑↑↑	↱↱	↰	↑↑↑	
Volume (vph)	266	867	92	0	0	0	0	832	642	280	518	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	13	12	12	12	12	12	10	10	8	12	12	12
Total Lost time (s)	5.0	5.0						4.0	4.0	3.0	4.0	
Lane Util. Factor	0.91	0.91						0.91	0.88	1.00	0.91	
Frpb, ped/bikes	1.00	1.00						1.00	0.97	1.00	1.00	
Flpb, ped/bikes	1.00	1.00						1.00	1.00	1.00	1.00	
Frt	1.00	0.99						1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00						1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1497	3184						4368	2187	1583	4636	
Flt Permitted	0.95	1.00						1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1497	3184						4368	2187	1583	4636	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	274	894	95	0	0	0	0	858	662	289	534	0
RTOR Reduction (vph)	0	7	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	247	1009	0	0	0	0	0	858	662	289	534	0
Confl. Peds. (#/hr)	4		14	14		4	4		3	3		4
Heavy Vehicles (%)	7%	1%	0%	0%	0%	0%	0%	5%	4%	8%	6%	0%
Turn Type	Perm								Perm	Prot		
Protected Phases		4						2		1	6	
Permitted Phases	4								2			
Actuated Green, G (s)	34.0	34.0						28.0	28.0	31.0	62.0	
Effective Green, g (s)	34.0	34.0						28.0	28.0	31.0	62.0	
Actuated g/C Ratio	0.32	0.32						0.27	0.27	0.30	0.59	
Clearance Time (s)	5.0	5.0						4.0	4.0	3.0	4.0	
Lane Grp Cap (vph)	485	1031						1165	583	467	2737	
v/s Ratio Prot								0.20		c0.18	0.12	
v/s Ratio Perm	0.16	0.32							c0.30			
v/c Ratio	0.51	0.98						0.74	1.14	0.62	0.20	
Uniform Delay, d1	28.7	35.1						35.1	38.5	31.9	10.0	
Progression Factor	1.00	1.00						0.44	0.46	1.06	0.43	
Incremental Delay, d2	3.8	23.4						0.4	63.2	2.4	0.1	
Delay (s)	32.5	58.5						15.7	81.0	36.1	4.3	
Level of Service	C	E						B	F	D	A	
Approach Delay (s)		53.4			0.0			44.1			15.5	
Approach LOS		D			A			D			B	

Intersection Summary			
HCM Average Control Delay	40.9	HCM Level of Service	D
HCM Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	94.6%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1007: 98th Place & Wentworth Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↰	↑↱		↰	↑			↱	
Volume (vph)	0	0	0	218	4	21	3	164	0	0	116	3
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	14	12	12	16	12
Total Lost time (s)				4.0	4.0		4.0	4.0			-3.0	
Lane Util. Factor				1.00	0.95		1.00	1.00			1.00	
Frpb, ped/bikes				1.00	0.98		1.00	1.00			1.00	
Flpb, ped/bikes				1.00	1.00		1.00	1.00			1.00	
Frt				1.00	0.87		1.00	1.00			1.00	
Flt Protected				0.95	1.00		0.95	1.00			1.00	
Satd. Flow (prot)				1578	2709		1285	1882			1961	
Flt Permitted				0.95	1.00		0.58	1.00			1.00	
Satd. Flow (perm)				1578	2709		781	1882			1961	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	242	4	23	3	182	0	0	129	3
RTOR Reduction (vph)	0	0	0	0	18	0	0	0	0	0	1	0
Lane Group Flow (vph)	0	0	0	242	9	0	3	182	0	0	131	0
Confl. Peds. (#/hr)	2		2	2		2	3					3
Heavy Vehicles (%)	0%	0%	0%	8%	25%	5%	33%	2%	0%	0%	3%	33%
Turn Type				Perm			pm+pt					
Protected Phases					8		7	2			6	
Permitted Phases				8			2					
Actuated Green, G (s)				27.0	27.0		50.0	50.0			40.0	
Effective Green, g (s)				27.0	27.0		50.0	50.0			46.0	
Actuated g/C Ratio				0.32	0.32		0.59	0.59			0.54	
Clearance Time (s)				4.0	4.0		4.0	4.0			3.0	
Lane Grp Cap (vph)				501	861		501	1107			1061	
v/s Ratio Prot					0.00		0.00	c0.10			0.07	
v/s Ratio Perm				c0.15			0.00					
v/c Ratio				0.48	0.01		0.01	0.16			0.12	
Uniform Delay, d1				23.4	19.9		10.0	8.0			9.6	
Progression Factor				1.00	1.00		1.05	1.18			1.00	
Incremental Delay, d2				3.3	0.0		0.0	0.3			0.2	
Delay (s)				26.7	19.9		10.5	9.7			9.8	
Level of Service				C	B		B	A			A	
Approach Delay (s)		0.0			26.0			9.7			9.8	
Approach LOS		A			C			A			A	

Intersection Summary			
HCM Average Control Delay	17.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	33.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1008: 99th St & Wentworth Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱			✣			↱		↰	↑	
Volume (vph)	8	5	5	12	0	18	0	141	42	33	301	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	16	15	12	8	12	8	12	12	12	10	13	12
Total Lost time (s)	4.0	4.0			4.0			3.0		4.0	4.0	
Lane Util. Factor	1.00	1.00			1.00			1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.99			1.00			0.99		1.00	1.00	
Flpb, ped/bikes	1.00	1.00			1.00			1.00		1.00	1.00	
Frt	1.00	0.93			0.92			0.97		1.00	1.00	
Flt Protected	0.95	1.00			0.98			1.00		0.95	1.00	
Satd. Flow (prot)	1938	1809			1620			1685		1595	1755	
Flt Permitted	0.74	1.00			0.93			1.00		0.60	1.00	
Satd. Flow (perm)	1502	1809			1543			1685		1010	1755	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	8	5	5	13	0	19	0	148	44	35	317	0
RTOR Reduction (vph)	0	3	0	0	13	0	0	13	0	0	0	0
Lane Group Flow (vph)	8	7	0	0	19	0	0	179	0	35	317	0
Confl. Peds. (#/hr)			3	3			5		2	2		5
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	3%	3%	0%	6%	0%
Turn Type	Perm			Perm						pm+pt		
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8						6		
Actuated Green, G (s)	27.0	27.0			27.0			40.0		50.0	50.0	
Effective Green, g (s)	27.0	27.0			27.0			40.0		50.0	50.0	
Actuated g/C Ratio	0.32	0.32			0.32			0.47		0.59	0.59	
Clearance Time (s)	4.0	4.0			4.0			3.0		4.0	4.0	
Lane Grp Cap (vph)	477	575			490			793		642	1032	
v/s Ratio Prot		0.00						0.11		0.00	c0.18	
v/s Ratio Perm	0.01				c0.01					0.03		
v/c Ratio	0.02	0.01			0.04			0.23		0.05	0.31	
Uniform Delay, d1	19.9	19.9			20.0			13.3		8.5	8.8	
Progression Factor	1.00	1.00			1.00			1.00		1.01	0.93	
Incremental Delay, d2	0.1	0.0			0.1			0.7		0.2	0.7	
Delay (s)	20.0	19.9			20.2			14.0		8.8	8.9	
Level of Service	B	B			C			B		A	A	
Approach Delay (s)		19.9			20.2			14.0			8.9	
Approach LOS		B			C			B			A	

Intersection Summary			
HCM Average Control Delay	11.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.21		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	40.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1009: 99th St & State Street

1/14/2013

	↗	↘	↖	↑	↓	↙
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	Y		↰	↑	↱	
Volume (vph)	63	16	10	346	159	12
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	14	12	13	12	10	12
Total Lost time (s)	4.0		4.0	4.0	4.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.97		1.00	1.00	0.99	
Flt Protected	0.96		0.95	1.00	1.00	
Satd. Flow (prot)	1787		1767	1765	1634	
Flt Permitted	0.96		0.64	1.00	1.00	
Satd. Flow (perm)	1787		1187	1765	1634	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	70	18	11	384	177	13
RTOR Reduction (vph)	12	0	0	0	4	0
Lane Group Flow (vph)	76	0	11	384	186	0
Confl. Peds. (#/hr)		2				
Heavy Vehicles (%)	0%	0%	0%	2%	2%	0%
Turn Type			Perm			
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	21.0		36.0	36.0	36.0	
Effective Green, g (s)	21.0		36.0	36.0	36.0	
Actuated g/C Ratio	0.32		0.55	0.55	0.55	
Clearance Time (s)	4.0		4.0	4.0	4.0	
Lane Grp Cap (vph)	577		657	978	905	
v/s Ratio Prot	c0.04			c0.22	0.11	
v/s Ratio Perm			0.01			
v/c Ratio	0.13		0.02	0.39	0.21	
Uniform Delay, d1	15.6		6.5	8.3	7.3	
Progression Factor	1.00		0.32	0.51	1.17	
Incremental Delay, d2	0.5		0.0	1.1	0.5	
Delay (s)	16.0		2.1	5.3	9.0	
Level of Service	B		A	A	A	
Approach Delay (s)	16.0			5.2	9.0	
Approach LOS	B			A	A	

Intersection Summary			
HCM Average Control Delay	7.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	39.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1010: 99th St & Michigan Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↰↑↱		↰	↑			↑	↱
Volume (vph)	0	0	0	23	266	14	552	246	0	0	187	34
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	14	16	12	12	15	12	12	13	10
Total Lost time (s)					4.0		4.0	4.0			3.0	3.0
Lane Util. Factor					0.95		1.00	1.00			1.00	1.00
Frpb, ped/bikes					1.00		1.00	1.00			1.00	1.00
Flpb, ped/bikes					1.00		1.00	1.00			1.00	1.00
Frt					0.99		1.00	1.00			1.00	0.85
Flt Protected					1.00		0.95	1.00			1.00	1.00
Satd. Flow (prot)					3737		1660	1752			1603	1298
Flt Permitted					1.00		0.58	1.00			1.00	1.00
Satd. Flow (perm)					3737		1013	1752			1603	1298
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	26	296	16	613	273	0	0	208	38
RTOR Reduction (vph)	0	0	0	0	4	0	0	0	0	0	0	21
Lane Group Flow (vph)	0	0	0	0	334	0	613	273	0	0	208	17
Confl. Peds. (#/hr)									30	30		
Heavy Vehicles (%)	0%	0%	0%	11%	2%	0%	3%	13%	0%	0%	16%	10%
Turn Type				Split			pm+pt					Perm
Protected Phases				8	8		7	2			6	
Permitted Phases							2					6
Actuated Green, G (s)					26.0		51.0	51.0			38.0	38.0
Effective Green, g (s)					26.0		51.0	51.0			38.0	38.0
Actuated g/C Ratio					0.31		0.60	0.60			0.45	0.45
Clearance Time (s)					4.0		4.0	4.0			3.0	3.0
Lane Grp Cap (vph)					1143		684	1051			717	580
v/s Ratio Prot					c0.09		c0.11	0.16			0.13	
v/s Ratio Perm							c0.43					0.01
v/c Ratio					0.29		0.90	0.26			0.29	0.03
Uniform Delay, d1					22.5		16.8	8.1			14.9	13.2
Progression Factor					1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2					0.6		16.7	0.6			1.0	0.1
Delay (s)					23.1		33.5	8.7			16.0	13.3
Level of Service					C		C	A			B	B
Approach Delay (s)		0.0			23.1			25.9			15.5	
Approach LOS		A			C			C			B	

Intersection Summary			
HCM Average Control Delay	23.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	61.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					✥		↰	↑↱		↰	↑↱	
Volume (vph)	0	0	0	12	11	9	314	500	91	70	323	12
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	15	12	12	12	12	12	13	12
Total Lost time (s)					4.0		3.0	4.0		3.0	4.0	
Lane Util. Factor					1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes					1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes					1.00		1.00	1.00		1.00	1.00	
Frt					0.96		1.00	0.98		1.00	0.99	
Flt Protected					0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)					1794		1691	3237		1707	3352	
Flt Permitted					0.98		0.51	1.00		0.33	1.00	
Satd. Flow (perm)					1794		917	3237		600	3352	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	13	12	10	349	556	101	78	359	13
RTOR Reduction (vph)	0	0	0	0	7	0	0	20	0	0	3	0
Lane Group Flow (vph)	0	0	0	0	28	0	349	637	0	78	369	0
Confl. Peds. (#/hr)	2					2	6		20	20		6
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	0%	0%	0%	0%	11%	0%	1%	3%	0%	0%	5%	0%
Turn Type				Split			pm+pt			pm+pt		
Protected Phases				8	8		5	2		1	6	
Permitted Phases							2			6		
Actuated Green, G (s)					23.0		41.0	34.0		41.0	34.0	
Effective Green, g (s)					23.0		41.0	34.0		41.0	34.0	
Actuated g/C Ratio					0.31		0.55	0.45		0.55	0.45	
Clearance Time (s)					4.0		3.0	4.0		3.0	4.0	
Lane Grp Cap (vph)					550		574	1467		431	1520	
v/s Ratio Prot					c0.02		c0.06	0.20		0.02	0.11	
v/s Ratio Perm							c0.28			0.08		
v/c Ratio					0.05		0.61	0.43		0.18	0.24	
Uniform Delay, d1					18.3		13.0	14.0		11.8	12.6	
Progression Factor					1.00		0.71	0.73		1.00	1.00	
Incremental Delay, d2					0.2		4.4	0.9		0.9	0.4	
Delay (s)					18.5		13.6	11.0		12.7	13.0	
Level of Service					B		B	B		B	B	
Approach Delay (s)		0.0			18.5			11.9			12.9	
Approach LOS		A			B			B			B	

Intersection Summary			
HCM Average Control Delay	12.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	55.0%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1012: 100th Street & Martin Luther King Jr Drive

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥		↰	↑↱		↰	↑↱	
Volume (vph)	54	51	23	13	160	211	19	640	12	66	255	14
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	16	12	12	10	11	12	12	11	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.98			0.93		1.00	1.00		1.00	0.99	
Flt Protected		0.98			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1945			1625		1596	3232		1641	3131	
Flt Permitted		0.71			0.99		0.58	1.00		0.35	1.00	
Satd. Flow (perm)		1411			1612		971	3232		605	3131	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	57	54	24	14	168	222	20	674	13	69	268	15
RTOR Reduction (vph)	0	11	0	0	59	0	0	2	0	0	5	0
Lane Group Flow (vph)	0	124	0	0	345	0	20	685	0	69	278	0
Confl. Peds. (#/hr)									6	6		
Confl. Bikes (#/hr)			1	1								
Heavy Vehicles (%)	0%	0%	0%	12%	2%	2%	0%	2%	0%	4%	5%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		25.0			25.0		42.0	42.0		42.0	42.0	
Effective Green, g (s)		25.0			25.0		42.0	42.0		42.0	42.0	
Actuated g/C Ratio		0.33			0.33		0.56	0.56		0.56	0.56	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		470			537		544	1810		339	1753	
v/s Ratio Prot								c0.21			0.09	
v/s Ratio Perm		0.09			c0.21		0.02			0.11		
v/c Ratio		0.26			0.64		0.04	0.38		0.20	0.16	
Uniform Delay, d1		18.3			21.2		7.4	9.2		8.2	8.0	
Progression Factor		1.00			1.00		1.00	1.00		0.15	0.05	
Incremental Delay, d2		1.4			5.8		0.1	0.6		1.3	0.2	
Delay (s)		19.7			27.0		7.5	9.8		2.5	0.6	
Level of Service		B			C		A	A		A	A	
Approach Delay (s)		19.7			27.0			9.8			1.0	
Approach LOS		B			C			A			A	

Intersection Summary			
HCM Average Control Delay	13.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	67.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis
1013: 100th Street & Cottage Grove Avenue

	↗	↘	↖	↑	↓	↙
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰↱			↰↑	↑↱	
Sign Control	Stop			Stop	Stop	
Volume (vph)	43	54	100	309	190	19
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	48	60	111	343	211	21

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	108	226	229	141	91
Volume Left (vph)	48	111	0	0	0
Volume Right (vph)	60	0	0	0	21
Hadj (s)	-0.16	0.33	0.09	0.08	-0.08
Departure Headway (s)	5.2	5.4	5.1	5.3	5.2
Degree Utilization, x	0.16	0.34	0.33	0.21	0.13
Capacity (veh/h)	634	657	688	648	667
Control Delay (s)	9.2	9.9	9.4	8.6	7.8
Approach Delay (s)	9.2	9.6		8.2	
Approach LOS	A	A		A	

Intersection Summary			
Delay	9.1		
HCM Level of Service	A		
Intersection Capacity Utilization	34.3%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Signalized Intersection Capacity Analysis
1014: 103rd Street & Vincennes Avenue

1/14/2013

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR
Lane Configurations		↰	↑	↱	↰	↑	↱			↰	↑↱	
Volume (vph)	44	51	332	13	6	483	40	41	41	52	700	46
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		3.5	4.0	4.0	4.0	4.0	4.0			4.0	4.0	
Lane Util. Factor		1.00	1.00	1.00	1.00	1.00	1.00			1.00	0.95	
Frpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	0.97			1.00	1.00	
Flpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	
Frt		1.00	1.00	0.85	1.00	1.00	0.85			1.00	0.99	
Flt Protected		0.95	1.00	1.00	0.95	1.00	1.00			0.95	1.00	
Satd. Flow (prot)		1575	1731	1530	1710	1731	1487			1710	3289	
Flt Permitted		0.11	1.00	1.00	0.54	1.00	1.00			0.41	1.00	
Satd. Flow (perm)		187	1731	1530	975	1731	1487			737	3289	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	49	57	369	14	7	537	44	46	46	58	778	51
RTOR Reduction (vph)	0	0	0	7	0	0	32	0	0	0	5	0
Lane Group Flow (vph)	0	106	369	7	7	537	58	0	0	104	824	0
Confl. Peds. (#/hr)		5					5					6
Heavy Vehicles (%)	8%	9%	4%	0%	0%	4%	0%	0%	0%	0%	3%	0%
Turn Type	Perm	pm+pt		Perm	Perm		Perm		Perm	Perm		
Protected Phases		7	4			8					2	
Permitted Phases	4	4		4	8		8		2	2		
Actuated Green, G (s)		50.0	50.0	50.0	32.0	32.0	32.0			25.0	25.0	
Effective Green, g (s)		50.0	50.0	50.0	32.0	32.0	32.0			25.0	25.0	
Actuated g/C Ratio		0.48	0.48	0.48	0.30	0.30	0.30			0.24	0.24	
Clearance Time (s)		3.5	4.0	4.0	4.0	4.0	4.0			4.0	4.0	
Lane Grp Cap (vph)		281	824	729	297	528	453			175	783	
v/s Ratio Prot		0.05	c0.21			c0.31					c0.25	
v/s Ratio Perm		0.13		0.00	0.01		0.04			0.14		
v/c Ratio		0.38	0.45	0.01	0.02	1.02	0.13			0.59	1.05	
Uniform Delay, d1		20.3	18.3	14.5	25.6	36.5	26.4			35.5	40.0	
Progression Factor		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	
Incremental Delay, d2		3.8	1.8	0.0	0.1	43.5	0.6			14.0	47.0	
Delay (s)		24.1	20.1	14.5	25.7	80.0	27.0			49.5	87.0	
Level of Service		C	C	B	C	F	C			D	F	
Approach Delay (s)			20.8			71.9					82.8	
Approach LOS			C			E					F	

Intersection Summary			
HCM Average Control Delay	59.5	HCM Level of Service	E
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	79.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1014: 103rd Street & Vincennes Avenue

1/14/2013

Movement	SBL	SBT	SBR	SBR2	SEL2	SEL	SER	SER2
Lane Configurations	↖	↑↱				↘	↗↗	
Volume (vph)	47	285	26	31	4	63	110	12
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.5	4.5				4.5	4.5	
Lane Util. Factor	1.00	0.95				1.00	0.88	
Frpb, ped/bikes	1.00	1.00				1.00	1.00	
Flpb, ped/bikes	1.00	1.00				1.00	1.00	
Frt	1.00	0.98				1.00	0.85	
Flt Protected	0.95	1.00				0.95	1.00	
Satd. Flow (prot)	1706	3280				1710	2622	
Flt Permitted	0.16	1.00				0.95	1.00	
Satd. Flow (perm)	293	3280				1710	2622	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	52	317	29	34	4	70	122	13
RTOR Reduction (vph)	0	7	0	0	0	0	7	0
Lane Group Flow (vph)	52	373	0	0	0	74	128	0
Confl. Peds. (#/hr)	6							
Heavy Vehicles (%)	0%	2%	0%	0%	0%	0%	3%	0%
Turn Type	Perm				Split		Perm	
Protected Phases		6			9	9		
Permitted Phases	6						9	
Actuated Green, G (s)	24.5	24.5				17.5	17.5	
Effective Green, g (s)	24.5	24.5				17.5	17.5	
Actuated g/C Ratio	0.23	0.23				0.17	0.17	
Clearance Time (s)	4.5	4.5				4.5	4.5	
Lane Grp Cap (vph)	68	765				285	437	
v/s Ratio Prot		0.11				0.04		
v/s Ratio Perm	0.18						c0.05	
v/c Ratio	0.76	0.49				0.26	0.29	
Uniform Delay, d1	37.6	34.8				38.1	38.3	
Progression Factor	1.00	1.00				1.00	1.00	
Incremental Delay, d2	56.2	2.2				2.2	1.7	
Delay (s)	93.8	37.0				40.3	40.0	
Level of Service	F	D				D	D	
Approach Delay (s)		43.9				40.1		
Approach LOS		D				D		

Intersection Summary

HCM Signalized Intersection Capacity Analysis
1015: 103rd Street & Morgan Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		←↑			↑→			←↑→				
Volume (vph)	23	482	0	0	488	25	115	113	114	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	11	11	11	16	11	12	15	12	12	15	12
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		1.00			0.99			0.95				
Flt Protected		1.00			1.00			0.98				
Satd. Flow (prot)		1653			1930			1771				
Flt Permitted		0.97			1.00			0.98				
Satd. Flow (perm)		1600			1930			1771				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	26	536	0	0	542	28	128	126	127	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	562	0	0	570	0	0	381	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)		31.0			31.0			26.0				
Effective Green, g (s)		31.0			31.0			26.0				
Actuated g/C Ratio		0.48			0.48			0.40				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		763			920			708				
v/s Ratio Prot					0.30							
v/s Ratio Perm		c0.35						0.22				
v/c Ratio		0.74			0.62			0.54				
Uniform Delay, d1		13.7			12.6			14.9				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		6.3			3.1			2.9				
Delay (s)		20.0			15.8			17.8				
Level of Service		B			B			B				
Approach Delay (s)		20.0			15.8			17.8			0.0	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM Average Control Delay	17.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	73.5%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1016: 103rd Street & Halsted Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱	↰	↑↑	↱	↰	↑↑	↱
Volume (vph)	112	353	112	64	351	108	148	1647	124	65	445	93
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	10	10	9	9	10	9
Total Lost time (s)		4.0	4.0		4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		1.00	0.96		1.00	0.96	1.00	1.00	0.97	1.00	1.00	0.96
Flpb, ped/bikes		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.99	1.00		0.99	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1923	1426		1923	1396	1500	3099	1284	1425	2956	1265
Flt Permitted		0.56	1.00		0.64	1.00	0.40	1.00	1.00	0.09	1.00	1.00
Satd. Flow (perm)		1081	1426		1239	1396	625	3099	1284	142	2956	1265
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	118	372	118	67	369	114	156	1734	131	68	468	98
RTOR Reduction (vph)	0	0	70	0	0	67	0	0	29	0	0	59
Lane Group Flow (vph)	0	490	48	0	436	47	156	1734	102	68	468	39
Confl. Peds. (#/hr)	42		39	39		42	20		8	8		20
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	6%	4%	3%	0%	6%	5%	6%	3%	4%	8%	8%	4%
Turn Type	pm+pt		Perm	Perm		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)		43.0	43.0		43.0	43.0	53.1	44.4	44.4	48.9	42.3	42.3
Effective Green, g (s)		43.0	43.0		43.0	43.0	53.1	44.4	44.4	48.9	42.3	42.3
Actuated g/C Ratio		0.41	0.41		0.41	0.41	0.51	0.42	0.42	0.47	0.40	0.40
Clearance Time (s)		4.0	4.0		4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		443	584		507	572	389	1310	543	147	1191	510
v/s Ratio Prot							c0.03	c0.56		c0.03	0.16	
v/s Ratio Perm		c0.45	0.03		0.35	0.03	0.17		0.08	0.19		0.03
v/c Ratio		1.11	0.08		0.86	0.08	0.40	1.32	0.19	0.46	0.39	0.08
Uniform Delay, d1		31.0	18.9		28.3	18.9	14.7	30.3	19.0	23.1	22.2	19.3
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.10	0.76	0.40
Incremental Delay, d2		74.8	0.3		17.1	0.3	0.7	151.1	0.8	2.2	0.9	0.3
Delay (s)		105.8	19.2		45.4	19.2	15.4	181.4	19.8	27.7	17.8	8.1
Level of Service		F	B		D	B	B	F	B	C	B	A
Approach Delay (s)		89.0			40.0			158.1			17.3	
Approach LOS		F			D			F			B	

Intersection Summary			
HCM Average Control Delay	106.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.16		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	114.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1017: 103rd Street & Normal Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			✥				
Volume (vph)	56	470	59	48	459	48	76	59	52	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	15	12	12	15	12
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		0.99			0.99			0.96				
Flt Protected		1.00			1.00			0.98				
Satd. Flow (prot)		1627			1631			1779				
Flt Permitted		0.91			0.92			0.98				
Satd. Flow (perm)		1483			1500			1779				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	62	522	66	53	510	53	84	66	58	0	0	0
RTOR Reduction (vph)	0	6	0	0	5	0	0	21	0	0	0	0
Lane Group Flow (vph)	0	644	0	0	611	0	0	187	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm			Perm					
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Actuated Green, G (s)		38.0			38.0			19.0				
Effective Green, g (s)		38.0			38.0			19.0				
Actuated g/C Ratio		0.58			0.58			0.29				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		867			877			520				
v/s Ratio Prot												
v/s Ratio Perm		c0.43			0.41			0.10				
v/c Ratio		0.74			0.70			0.36				
Uniform Delay, d1		9.9			9.5			18.2				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		5.7			4.6			1.9				
Delay (s)		15.6			14.0			20.1				
Level of Service		B			B			C				
Approach Delay (s)		15.6			14.0			20.1			0.0	
Approach LOS		B			B			C			A	

Intersection Summary			
HCM Average Control Delay	15.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	62.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1018: 103rd Street & Wentworth Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑	↱		↰↑	↱		↰↑	↱		↰↑↱	
Volume (vph)	29	482	64	31	427	38	54	146	87	49	192	54
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	11	12	12	15	12
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frpb, ped/bikes		1.00	0.97		1.00	0.95		1.00	0.98		0.98	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		0.99	1.00		1.00	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		0.98	
Flt Protected		1.00	1.00		1.00	1.00		0.99	1.00		0.99	
Satd. Flow (prot)		1656	1255		1636	1288		1658	1490		1737	
Flt Permitted		0.96	1.00		0.95	1.00		0.84	1.00		0.92	
Satd. Flow (perm)		1596	1255		1558	1288		1418	1490		1608	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	31	507	67	33	449	40	57	154	92	52	202	57
RTOR Reduction (vph)	0	0	29	0	0	16	0	0	63	0	11	0
Lane Group Flow (vph)	0	538	38	0	482	24	0	211	29	0	300	0
Confl. Peds. (#/hr)	33		15	15		33	68		5	5		68
Confl. Bikes (#/hr)	4					4						
Heavy Vehicles (%)	0%	5%	14%	19%	5%	9%	2%	2%	1%	10%	7%	8%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		43.0	43.0		43.0	43.0		24.0	24.0		24.0	
Effective Green, g (s)		43.0	43.0		43.0	43.0		24.0	24.0		24.0	
Actuated g/C Ratio		0.57	0.57		0.57	0.57		0.32	0.32		0.32	
Clearance Time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	
Lane Grp Cap (vph)		915	720		893	738		454	477		515	
v/s Ratio Prot												
v/s Ratio Perm		c0.34	0.03		0.31	0.02		0.15	0.02		c0.19	
v/c Ratio		0.59	0.05		0.54	0.03		0.46	0.06		0.58	
Uniform Delay, d1		10.3	7.0		9.9	7.0		20.4	17.7		21.3	
Progression Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2		2.8	0.1		2.3	0.1		3.4	0.2		4.8	
Delay (s)		13.1	7.2		12.2	7.0		23.8	17.9		26.1	
Level of Service		B	A		B	A		C	B		C	
Approach Delay (s)		12.4			11.8			22.0			26.1	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM Average Control Delay	16.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	93.0%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1019: 103rd Street & State Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑	↱	↰	↑	↱
Volume (vph)	81	424	29	17	308	38	55	302	38	38	92	11
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	11	16	8	10	10	10	10	10	10
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	0.98	1.00	1.00	0.99
Flpb, ped/bikes	0.99	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1463	2990		1459	3534		1534	1647	1301	1517	1541	1156
Flt Permitted	0.52	1.00		0.44	1.00		0.69	1.00	1.00	0.45	1.00	1.00
Satd. Flow (perm)	800	2990		674	3534		1116	1647	1301	722	1541	1156
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	90	471	32	19	342	42	61	336	42	42	102	12
RTOR Reduction (vph)	0	8	0	0	15	0	0	0	22	0	0	7
Lane Group Flow (vph)	90	495	0	19	369	0	61	336	20	42	102	5
Confl. Peds. (#/hr)	16		9	9		16	1		5	5		1
Heavy Vehicles (%)	8%	6%	0%	13%	8%	3%	4%	2%	8%	5%	9%	22%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	31.0	31.0		31.0	31.0		26.0	26.0	26.0	26.0	26.0	26.0
Effective Green, g (s)	31.0	31.0		31.0	31.0		26.0	26.0	26.0	26.0	26.0	26.0
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.40	0.40	0.40	0.40	0.40	0.40
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	382	1426		321	1685		446	659	520	289	616	462
v/s Ratio Prot		c0.17			0.10			c0.20			0.07	
v/s Ratio Perm	0.11			0.03			0.05		0.02	0.06		0.00
v/c Ratio	0.24	0.35		0.06	0.22		0.14	0.51	0.04	0.15	0.17	0.01
Uniform Delay, d1	10.0	10.7		9.2	9.9		12.4	14.7	11.9	12.4	12.5	11.7
Progression Factor	1.00	1.00		1.00	1.00		0.62	0.76	0.34	0.53	0.54	0.28
Incremental Delay, d2	1.4	0.7		0.4	0.3		0.6	2.8	0.1	1.0	0.6	0.0
Delay (s)	11.5	11.3		9.5	10.2		8.3	13.9	4.2	7.7	7.3	3.4
Level of Service	B	B		A	B		A	B	A	A	A	A
Approach Delay (s)		11.3			10.2			12.2			7.1	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM Average Control Delay	10.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	51.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	94	395	82	43	276	64	71	360	43	55	139	54
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	11	10	11	11	10	11	11	10	11	11
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	0.96	1.00		1.00	1.00		0.98	1.00		0.97	1.00	
Frt	1.00	0.97		1.00	0.97		1.00	0.98		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1464	3057		1588	3008		1541	3021		1402	2764	
Flt Permitted	0.53	1.00		0.43	1.00		0.62	1.00		0.47	1.00	
Satd. Flow (perm)	816	3057		723	3008		1013	3021		691	2764	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	99	416	86	45	291	67	75	379	45	58	146	57
RTOR Reduction (vph)	0	0	0	0	0	0	0	12	0	0	33	0
Lane Group Flow (vph)	99	502	0	45	358	0	75	412	0	58	170	0
Confl. Peds. (#/hr)	98		10	10		98	28		52	52		28
Heavy Vehicles (%)	5%	5%	4%	0%	5%	7%	2%	6%	13%	10%	11%	20%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	36.0	36.0		36.0	36.0		31.0	31.0		31.0	31.0	
Effective Green, g (s)	36.0	36.0		36.0	36.0		31.0	31.0		31.0	31.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.41	0.41		0.41	0.41	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	392	1467		347	1444		419	1249		286	1142	
v/s Ratio Prot		c0.16			0.12			c0.14			0.06	
v/s Ratio Perm	0.12			0.06			0.07			0.08		
v/c Ratio	0.25	0.34		0.13	0.25		0.18	0.33		0.20	0.15	
Uniform Delay, d1	11.5	12.1		10.8	11.5		13.9	14.9		14.1	13.8	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.5	0.6		0.8	0.4		0.9	0.7		1.6	0.3	
Delay (s)	13.1	12.8		11.6	11.9		14.9	15.6		15.7	14.0	
Level of Service	B	B		B	B		B	B		B	B	
Approach Delay (s)		12.8			11.9			15.5			14.4	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	13.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	49.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1021: 103rd Street & Martin Luther King Jr Drive

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱		↰	↑↱		↰	↑↱	
Volume (vph)	104	312	36	23	322	46	65	397	25	41	196	51
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	12	8	16	12	9	10	10	9	10	10
Total Lost time (s)	3.0	7.0		3.0	7.0		3.0	7.0		3.0	7.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.99		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1533	1575		1473	1841		1533	3073		1372	2880	
Flt Permitted	0.45	1.00		0.48	1.00		0.59	1.00		0.43	1.00	
Satd. Flow (perm)	731	1575		743	1841		954	3073		622	2880	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	109	328	38	24	339	48	68	418	26	43	206	54
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	109	366	0	24	387	0	68	444	0	43	260	0
Confl. Peds. (#/hr)	7		23	23		7	10		8	8		10
Confl. Bikes (#/hr)	1		2	2		1	1		1	1		1
Heavy Vehicles (%)	4%	8%	10%	0%	9%	5%	0%	3%	0%	12%	7%	6%
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	47.0	41.8		40.6	38.6		26.8	22.2		23.6	20.6	
Effective Green, g (s)	47.0	39.8		40.6	36.6		26.8	20.2		23.6	18.6	
Actuated g/C Ratio	0.55	0.47		0.48	0.43		0.32	0.24		0.28	0.22	
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	5.0		3.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	453	737		372	793		332	730		199	630	
v/s Ratio Prot	c0.01	c0.23		0.00	0.21		c0.01	c0.14		0.01	0.09	
v/s Ratio Perm	0.12			0.03			0.05			0.05		
v/c Ratio	0.24	0.50		0.06	0.49		0.20	0.61		0.22	0.41	
Uniform Delay, d1	13.2	15.7		14.5	17.4		21.5	28.9		25.7	28.5	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.3	2.4		0.1	2.1		0.3	3.7		0.5	2.0	
Delay (s)	13.5	18.0		14.6	19.6		21.8	32.6		26.2	30.5	
Level of Service	B	B		B	B		C	C		C	C	
Approach Delay (s)		17.0			19.3			31.2			29.9	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM Average Control Delay	24.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	62.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	66	306	42	63	368	111	56	370	120	55	158	36
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	11	11	11	11	12	12	10	10	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			0.99		1.00	0.99		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		0.99	1.00	
Frt		0.98			0.97		1.00	0.96		1.00	0.97	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3492			2912		1614	3156		1580	2921	
Flt Permitted		0.79			0.85		0.62	1.00		0.40	1.00	
Satd. Flow (perm)		2778			2478		1047	3156		658	2921	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	73	340	47	70	409	123	62	411	133	61	176	40
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	460	0	0	602	0	62	544	0	61	216	0
Confl. Peds. (#/hr)	20		16	16		20	5		33	33		5
Confl. Bikes (#/hr)	2					2			2	2		
Heavy Vehicles (%)	9%	9%	0%	24%	7%	6%	2%	4%	2%	0%	5%	9%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		33.0			33.0		32.0	32.0		32.0	32.0	
Effective Green, g (s)		34.0			34.0		33.0	33.0		33.0	33.0	
Actuated g/C Ratio		0.45			0.45		0.44	0.44		0.44	0.44	
Clearance Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)		1259			1123		461	1389		290	1285	
v/s Ratio Prot								c0.17			0.07	
v/s Ratio Perm		0.17			c0.24		0.06			0.09		
v/c Ratio		0.37			0.54		0.13	0.39		0.21	0.17	
Uniform Delay, d1		13.4			14.8		12.5	14.2		13.0	12.7	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.8			1.8		0.6	0.8		1.6	0.3	
Delay (s)		14.3			16.6		13.1	15.0		14.6	13.0	
Level of Service		B			B		B	B		B	B	
Approach Delay (s)		14.3			16.6			14.8			13.3	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	15.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	62.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1023: 103rd Street & Woodlawn Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↑	↱		↰↑↱			↰↑↱	
Volume (vph)	138	495	5	14	630	371	68	9	19	112	1	49
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	12	12	12	12	12	12	13	13	13
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00			0.95	
Frt	1.00	1.00		1.00	1.00	0.85		0.97			0.95	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.97			0.97	
Satd. Flow (prot)	1574	3143		1629	3257	1457		1612			3106	
Flt Permitted	0.37	1.00		0.44	1.00	1.00		0.70			0.75	
Satd. Flow (perm)	607	3143		749	3257	1457		1174			2411	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	153	550	6	16	700	412	76	10	21	124	1	54
RTOR Reduction (vph)	0	1	0	0	0	143	0	12	0	0	41	0
Lane Group Flow (vph)	153	555	0	16	700	269	0	95	0	0	138	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	46.0	46.0		46.0	46.0	46.0		16.4			16.4	
Effective Green, g (s)	46.0	46.0		46.0	46.0	46.0		16.4			16.4	
Actuated g/C Ratio	0.65	0.65		0.65	0.65	0.65		0.23			0.23	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		8.0			8.0	
Lane Grp Cap (vph)	397	2054		489	2128	952		273			562	
v/s Ratio Prot		0.18			0.21							
v/s Ratio Perm	c0.25			0.02		0.18		c0.08			0.06	
v/c Ratio	0.39	0.27		0.03	0.33	0.28		0.35			0.24	
Uniform Delay, d1	5.7	5.1		4.3	5.4	5.2		22.5			22.0	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00			1.00	
Incremental Delay, d2	2.8	0.3		0.1	0.4	0.7		3.3			1.0	
Delay (s)	8.5	5.5		4.4	5.8	5.9		25.8			22.9	
Level of Service	A	A		A	A	A		C			C	
Approach Delay (s)		6.1			5.8			25.8			22.9	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM Average Control Delay	8.4	HCM Level of Service	A
HCM Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	70.4	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1024: 107th Street & Halsted Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱		↰	↑↑	↱	↰	↑↑	↱
Volume (vph)	111	214	76	63	190	71	127	1887	84	70	494	41
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	9	12	10	10	12	9	10	9	9	10	9
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00	0.96	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.96		1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1548	1498		1547	1584		1493	3069	1271	1452	2983	1301
Flt Permitted	0.37	1.00		0.32	1.00		0.39	1.00	1.00	0.12	1.00	1.00
Satd. Flow (perm)	608	1498		521	1584		617	3069	1271	180	2983	1301
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	117	225	80	66	200	75	134	1986	88	74	520	43
RTOR Reduction (vph)	0	15	0	0	16	0	0	0	18	0	0	25
Lane Group Flow (vph)	117	290	0	66	259	0	134	1986	70	74	520	18
Confl. Peds. (#/hr)	4		9	9		4	6		16	16		6
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	3%	3%	4%	3%	1%	2%	3%	4%	4%	6%	7%	3%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	28.0	21.0		28.0	21.0		42.0	35.0	35.0	42.0	35.0	35.0
Effective Green, g (s)	26.0	22.0		26.0	22.0		40.0	35.0	35.0	40.0	35.0	35.0
Actuated g/C Ratio	0.31	0.26		0.31	0.26		0.47	0.41	0.41	0.47	0.41	0.41
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)	252	388		232	410		352	1264	523	174	1228	536
v/s Ratio Prot	c0.03	c0.19		0.02	0.16		0.03	c0.65		c0.03	0.17	
v/s Ratio Perm	0.11			0.07			0.15		0.06	0.17		0.01
v/c Ratio	0.46	0.75		0.28	0.63		0.38	1.57	0.13	0.43	0.42	0.03
Uniform Delay, d1	22.5	29.0		21.9	27.9		13.3	25.0	15.6	18.1	17.8	14.9
Progression Factor	1.00	1.00		1.00	1.00		0.62	0.71	0.49	1.00	1.00	1.00
Incremental Delay, d2	6.0	12.4		3.1	7.2		2.6	260.3	0.4	7.4	1.1	0.1
Delay (s)	28.6	41.4		24.9	35.2		10.8	278.0	8.0	25.6	18.9	15.0
Level of Service	C	D		C	D		B	F	A	C	B	B
Approach Delay (s)		37.8			33.2			251.0			19.4	
Approach LOS		D			C			F			B	

Intersection Summary			
HCM Average Control Delay	164.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.11		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	94.2%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

	⤴	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			✥			✥	
Volume (vph)	26	217	24	15	149	18	21	162	26	32	144	21
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	14	12	12	14	12	12	16	12	12	16	12
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		1.00			1.00			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.99			0.99			0.98			0.99	
Flt Protected		1.00			1.00			0.99			0.99	
Satd. Flow (prot)		1843			1836			1900			1930	
Flt Permitted		0.96			0.97			0.97			0.94	
Satd. Flow (perm)		1787			1790			1844			1824	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	27	224	25	15	154	19	22	167	27	33	148	22
RTOR Reduction (vph)	0	5	0	0	6	0	0	8	0	0	7	0
Lane Group Flow (vph)	0	271	0	0	182	0	0	208	0	0	196	0
Confl. Peds. (#/hr)	5		11	11		5	7		34	34		7
Confl. Bikes (#/hr)			3	3								
Heavy Vehicles (%)	4%	2%	0%	20%	1%	0%	12%	3%	8%	0%	3%	5%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		27.0			27.0			30.0			30.0	
Effective Green, g (s)		27.0			27.0			30.0			30.0	
Actuated g/C Ratio		0.42			0.42			0.46			0.46	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		742			744			851			842	
v/s Ratio Prot												
v/s Ratio Perm		c0.15			0.10			c0.11			0.11	
v/c Ratio		0.36			0.24			0.24			0.23	
Uniform Delay, d1		13.1			12.4			10.6			10.6	
Progression Factor		1.00			0.62			1.09			1.00	
Incremental Delay, d2		1.4			0.8			0.6			0.6	
Delay (s)		14.5			8.5			12.2			11.2	
Level of Service		B			A			B			B	
Approach Delay (s)		14.5			8.5			12.2			11.2	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM Average Control Delay	11.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	45.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1026: 107th Street & State Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	24	181	34	9	162	19	42	364	31	16	86	17
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	0.95	1.00		1.00	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1465	2994		1302	3037		1529	3094		1492	2868	
Flt Permitted	0.63	1.00		0.60	1.00		0.68	1.00		0.50	1.00	
Satd. Flow (perm)	965	2994		827	3037		1093	3094		781	2868	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	27	201	38	10	180	21	47	404	34	18	96	19
RTOR Reduction (vph)	0	24	0	0	13	0	0	10	0	0	8	0
Lane Group Flow (vph)	27	215	0	10	188	0	47	428	0	18	107	0
Confl. Peds. (#/hr)	35		6	6		35	18					18
Confl. Bikes (#/hr)	14		32	32		14	23		7	7		23
Heavy Vehicles (%)	4%	4%	0%	22%	2%	6%	3%	2%	0%	7%	8%	6%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.0	20.0		20.0	20.0		39.0	39.0		39.0	39.0	
Effective Green, g (s)	19.0	19.0		19.0	19.0		38.0	38.0		38.0	38.0	
Actuated g/C Ratio	0.29	0.29		0.29	0.29		0.58	0.58		0.58	0.58	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	282	875		242	888		639	1809		457	1677	
v/s Ratio Prot		c0.07			0.06			c0.14			0.04	
v/s Ratio Perm	0.03			0.01			0.04			0.02		
v/c Ratio	0.10	0.25		0.04	0.21		0.07	0.24		0.04	0.06	
Uniform Delay, d1	16.7	17.5		16.5	17.3		5.9	6.5		5.7	5.8	
Progression Factor	0.72	0.72		0.75	0.74		0.94	0.97		0.49	0.44	
Incremental Delay, d2	0.6	0.6		0.3	0.5		0.2	0.3		0.2	0.1	
Delay (s)	12.8	13.3		12.6	13.4		5.7	6.6		3.0	2.6	
Level of Service	B	B		B	B		A	A		A	A	
Approach Delay (s)		13.3			13.4			6.5			2.7	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	9.0	HCM Level of Service	A
HCM Volume to Capacity ratio	0.24		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	40.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1027: 107th Street & Michigan Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			✣			✣	
Volume (vph)	46	178	34	16	122	38	28	414	24	14	163	15
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	9	9	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00			1.00			1.00	
Flpb, ped/bikes	0.99	1.00		0.98	1.00			1.00			1.00	
Frt	1.00	0.98		1.00	0.96			0.99			0.99	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1556	2952		1515	2868			1878			1808	
Flt Permitted	0.64	1.00		0.60	1.00			0.98			0.96	
Satd. Flow (perm)	1047	2952		965	2868			1838			1739	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	51	198	38	18	136	42	31	460	27	16	181	17
RTOR Reduction (vph)	0	23	0	0	25	0	0	3	0	0	5	0
Lane Group Flow (vph)	51	213	0	18	153	0	0	515	0	0	209	0
Confl. Peds. (#/hr)	10		29	29		10	17		10	10		17
Confl. Bikes (#/hr)									2	2		
Heavy Vehicles (%)	2%	4%	10%	0%	4%	0%	0%	8%	4%	0%	13%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	26.0	26.0		26.0	26.0			31.0			31.0	
Effective Green, g (s)	26.0	26.0		26.0	26.0			31.0			31.0	
Actuated g/C Ratio	0.40	0.40		0.40	0.40			0.48			0.48	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	419	1181		386	1147			877			829	
v/s Ratio Prot		c0.07			0.05							
v/s Ratio Perm	0.05			0.02				c0.28			0.12	
v/c Ratio	0.12	0.18		0.05	0.13			0.59			0.25	
Uniform Delay, d1	12.3	12.6		11.9	12.4			12.4			10.1	
Progression Factor	1.01	0.92		0.88	0.88			1.04			1.00	
Incremental Delay, d2	0.6	0.3		0.2	0.2			2.8			0.7	
Delay (s)	13.0	11.9		10.7	11.1			15.6			10.8	
Level of Service	B	B		B	B			B			B	
Approach Delay (s)		12.1			11.1			15.6			10.8	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	13.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	59.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1028: 107th Street & Martin Luther King Jr Drive

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱			✥			✥	
Volume (vph)	86	121	58	2	80	34	21	272	9	7	175	28
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	16	12	10	16	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00			1.00			1.00	
Flpb, ped/bikes	1.00	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.95		1.00	0.96			1.00			0.98	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1605	1878		1587	1870			1971			1932	
Flt Permitted	0.68	1.00		0.58	1.00			0.98			0.99	
Satd. Flow (perm)	1141	1878		975	1870			1929			1915	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	96	134	64	2	89	38	23	302	10	8	194	31
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	96	198	0	2	127	0	0	335	0	0	233	0
Confl. Peds. (#/hr)			8	8			1		8	8		1
Heavy Vehicles (%)	3%	3%	2%	0%	6%	0%	0%	3%	0%	0%	4%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.0	20.0		20.0	20.0			37.0			37.0	
Effective Green, g (s)	20.0	20.0		20.0	20.0			37.0			37.0	
Actuated g/C Ratio	0.31	0.31		0.31	0.31			0.57			0.57	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	351	578		300	575			1098			1090	
v/s Ratio Prot		c0.11			0.07							
v/s Ratio Perm	0.08			0.00				c0.17			0.12	
v/c Ratio	0.27	0.34		0.01	0.22			0.31			0.21	
Uniform Delay, d1	17.0	17.4		15.6	16.7			7.3			6.9	
Progression Factor	0.90	0.89		0.89	0.92			0.94			1.00	
Incremental Delay, d2	1.9	1.6		0.0	0.9			0.7			0.4	
Delay (s)	17.1	17.0		13.9	16.3			7.6			7.3	
Level of Service	B	B		B	B			A			A	
Approach Delay (s)		17.1			16.2			7.6			7.3	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	11.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	45.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1029: 107th Street & Cottage Grove Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱		↰	↑	↱	↰	↑	↱
Volume (vph)	116	9	52	1	3	12	38	467	6	2	191	48
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	10	10	10	11	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.97		1.00	1.00	0.98	1.00	1.00	0.98
Flpb, ped/bikes	0.98	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.87		1.00	0.88		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1603	1673		1710	1422		1491	1631	1392	1649	1907	1427
Flt Permitted	0.75	1.00		0.71	1.00		0.63	1.00	1.00	0.39	1.00	1.00
Satd. Flow (perm)	1260	1673		1283	1422		981	1631	1392	682	1907	1427
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	129	10	58	1	3	13	42	519	7	2	212	53
RTOR Reduction (vph)	0	42	0	0	9	0	0	0	3	0	0	21
Lane Group Flow (vph)	129	26	0	1	7	0	42	519	4	2	212	32
Confl. Peds. (#/hr)	9					9	1		6	6		1
Heavy Vehicles (%)	5%	14%	5%	0%	67%	12%	7%	3%	0%	0%	7%	5%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	17.0	17.0		17.0	17.0		39.0	39.0	39.0	39.0	39.0	39.0
Effective Green, g (s)	18.0	18.0		18.0	18.0		39.0	39.0	39.0	39.0	39.0	39.0
Actuated g/C Ratio	0.28	0.28		0.28	0.28		0.60	0.60	0.60	0.60	0.60	0.60
Clearance Time (s)	5.0	5.0		5.0	5.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	349	463		355	394		589	979	835	409	1144	856
v/s Ratio Prot		0.02			0.00			c0.32			0.11	
v/s Ratio Perm	c0.10			0.00			0.04		0.00	0.00		0.02
v/c Ratio	0.37	0.06		0.00	0.02		0.07	0.53	0.01	0.00	0.19	0.04
Uniform Delay, d1	18.9	17.3		17.0	17.1		5.4	7.6	5.2	5.2	5.9	5.3
Progression Factor	1.47	2.39		1.00	1.00		1.13	1.06	1.30	1.00	1.00	1.00
Incremental Delay, d2	2.9	0.2		0.0	0.1		0.2	1.6	0.0	0.0	0.4	0.1
Delay (s)	30.8	41.5		17.0	17.1		6.3	9.7	6.8	5.2	6.2	5.4
Level of Service	C	D		B	B		A	A	A	A	A	A
Approach Delay (s)		34.5			17.1			9.4			6.0	
Approach LOS		C			B			A			A	

Intersection Summary			
HCM Average Control Delay	13.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	52.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1030: 111th Street & Marshield Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱		↰	↑↑					↰	↑↱	
Volume (vph)	0	249	76	125	364	0	0	0	0	80	305	361
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	12	12	12	12	12	11	11	12
Total Lost time (s)		4.0		3.0	3.0					5.0	5.0	
Lane Util. Factor		0.95		1.00	0.95					1.00	0.95	
Frpb, ped/bikes		0.99		1.00	1.00					1.00	0.99	
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	
Frt		0.96		1.00	1.00					1.00	0.92	
Flt Protected		1.00		0.95	1.00					0.95	1.00	
Satd. Flow (prot)		2829		1621	3288					1574	2907	
Flt Permitted		1.00		0.49	1.00					0.95	1.00	
Satd. Flow (perm)		2829		835	3288					1574	2907	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	262	80	132	383	0	0	0	0	84	321	380
RTOR Reduction (vph)	0	29	0	0	0	0	0	0	0	0	214	0
Lane Group Flow (vph)	0	313	0	132	383	0	0	0	0	84	487	0
Confl. Peds. (#/hr)	14		32	32		14	14					14
Confl. Bikes (#/hr)			1	1								
Heavy Vehicles (%)	0%	9%	4%	5%	4%	0%	0%	0%	0%	5%	2%	4%
Turn Type				D.P+P						custom		
Protected Phases		8		7	7 8					6	6	
Permitted Phases				8						6		
Actuated Green, G (s)		33.0		56.0	59.0					32.0	32.0	
Effective Green, g (s)		33.0		56.0	59.0					32.0	32.0	
Actuated g/C Ratio		0.33		0.56	0.59					0.32	0.32	
Clearance Time (s)		4.0		3.0						5.0	5.0	
Lane Grp Cap (vph)		934		648	1940					504	930	
v/s Ratio Prot		c0.11		c0.05	0.12					0.05	c0.17	
v/s Ratio Perm				0.07								
v/c Ratio		0.34		0.20	0.20					0.17	0.52	
Uniform Delay, d1		25.2		10.6	9.5					24.4	27.8	
Progression Factor		1.00		1.96	2.05					1.00	1.00	
Incremental Delay, d2		1.0		0.6	0.2					0.7	2.1	
Delay (s)		26.2		21.4	19.7					25.1	29.9	
Level of Service		C		C	B					C	C	
Approach Delay (s)		26.2			20.2			0.0			29.4	
Approach LOS		C			C			A			C	

Intersection Summary			
HCM Average Control Delay	25.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	61.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑			↑↱		↰	↑	↱			
Volume (vph)	129	200	0	0	318	67	171	544	341	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	9	12	13	12	13	12	12	12
Total Lost time (s)	4.0	4.0			4.0		5.0	5.0	5.0			
Lane Util. Factor	1.00	0.95			0.95		1.00	1.00	1.00			
Frpb, ped/bikes	1.00	1.00			0.99		1.00	1.00	0.99			
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.97		1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1673	3054			2832		1750	1782	1514			
Flt Permitted	0.35	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	618	3054			2832		1750	1782	1514			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	136	211	0	0	335	71	180	573	359	0	0	0
RTOR Reduction (vph)	0	0	0	0	18	0	0	0	241	0	0	0
Lane Group Flow (vph)	136	211	0	0	388	0	180	573	118	0	0	0
Confl. Peds. (#/hr)	14		16	16		14			1	1		
Confl. Bikes (#/hr)	1					1			1	1		
Heavy Vehicles (%)	2%	12%	0%	0%	5%	4%	1%	1%	3%	0%	0%	0%
Turn Type	pm+pt						custom		Perm			
Protected Phases	4	1 4			1		2	2				
Permitted Phases	1 4						2		2			
Actuated Green, G (s)	54.0	58.0			21.0		33.0	33.0	33.0			
Effective Green, g (s)	54.0	58.0			21.0		33.0	33.0	33.0			
Actuated g/C Ratio	0.54	0.58			0.21		0.33	0.33	0.33			
Clearance Time (s)	4.0				4.0		5.0	5.0	5.0			
Lane Grp Cap (vph)	682	1771			595		578	588	500			
v/s Ratio Prot	c0.07	0.07			c0.14		0.10	c0.32				
v/s Ratio Perm	0.04								0.08			
v/c Ratio	0.20	0.12			0.65		0.31	0.97	0.24			
Uniform Delay, d1	11.8	9.5			36.2		25.0	33.1	24.3			
Progression Factor	0.24	0.25			1.00		0.75	0.79	1.90			
Incremental Delay, d2	0.6	0.1			5.5		0.9	24.5	0.7			
Delay (s)	3.5	2.5			41.6		19.8	50.5	47.0			
Level of Service	A	A			D		B	D	D			
Approach Delay (s)		2.9			41.6			44.4			0.0	
Approach LOS		A			D			D			A	

Intersection Summary			
HCM Average Control Delay	36.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	61.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1032: 112th Place & Marshield Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱		↰	↑↑					↰	↑↑	↱
Volume (vph)	0	469	362	34	587	0	0	0	0	5	216	200
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	11	12	12	12	12	10	10	12
Total Lost time (s)		4.0		4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.95		1.00	0.95					1.00	0.95	1.00
Frpb, ped/bikes		0.99		1.00	1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Frt		0.93		1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00					0.95	1.00	1.00
Satd. Flow (prot)		3114		1613	3273					1596	3160	1443
Flt Permitted		1.00		0.17	1.00					0.95	1.00	1.00
Satd. Flow (perm)		3114		283	3273					1596	3160	1443
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	0	489	377	35	611	0	0	0	0	5	225	208
RTOR Reduction (vph)	0	140	0	0	0	0	0	0	0	0	0	137
Lane Group Flow (vph)	0	726	0	35	611	0	0	0	0	5	225	71
Confl. Peds. (#/hr)	22		3	3		22						
Confl. Bikes (#/hr)	4					4			32	32		
Heavy Vehicles (%)	0%	2%	2%	6%	1%	0%	0%	0%	0%	0%	1%	6%
Turn Type				pm+pt						Split		Prot
Protected Phases		8		7	7 8					6	6	6
Permitted Phases				7 8								
Actuated Green, G (s)		36.0		54.0	58.0					34.0	34.0	34.0
Effective Green, g (s)		36.0		54.0	58.0					34.0	34.0	34.0
Actuated g/C Ratio		0.36		0.54	0.58					0.34	0.34	0.34
Clearance Time (s)		4.0		4.0						4.0	4.0	4.0
Lane Grp Cap (vph)		1121		392	1898					543	1074	491
v/s Ratio Prot		c0.23		0.02	c0.19					0.00	c0.07	0.05
v/s Ratio Perm				0.03								
v/c Ratio		0.65		0.09	0.32					0.01	0.21	0.14
Uniform Delay, d1		26.7		12.5	10.8					21.8	23.5	22.9
Progression Factor		1.00		0.55	0.68					0.74	0.79	0.92
Incremental Delay, d2		2.9		0.2	0.2					0.0	0.4	0.6
Delay (s)		29.6		7.0	7.5					16.1	18.8	21.6
Level of Service		C		A	A					B	B	C
Approach Delay (s)		29.6			7.5			0.0			20.1	
Approach LOS		C			A			A			C	

Intersection Summary			
HCM Average Control Delay	20.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	88.3%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↰↑			↑↱		↰	↰	↱			
Volume (vph)	414	59	0	0	57	6	564	637	61	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	12	12	12	10	12	11	11	12	12	12	12
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0	4.0			
Lane Util. Factor	0.91	0.91			0.95		0.95	0.95	1.00			
Frpb, ped/bikes	1.00	1.00			0.99		1.00	1.00	1.00			
Flpb, ped/bikes	0.99	0.99			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.99		1.00	1.00	0.85			
Flt Protected	0.95	0.96			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1444	3040			3070		1555	1637	1500			
Flt Permitted	0.71	0.74			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	1083	2333			3070		1555	1637	1500			
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	427	61	0	0	59	6	581	657	63	0	0	0
RTOR Reduction (vph)	0	0	0	0	5	0	0	0	38	0	0	0
Lane Group Flow (vph)	213	275	0	0	60	0	581	657	25	0	0	0
Confl. Peds. (#/hr)	30		2	2		30			4	4		
Confl. Bikes (#/hr)	3					3			2	2		
Heavy Vehicles (%)	3%	2%	0%	0%	2%	0%	1%	1%	2%	0%	0%	0%
Turn Type	pm+pt						custom		custom			
Protected Phases	4	1 4			1		2	2	2			
Permitted Phases	1 4						2		2			
Actuated Green, G (s)	51.0	51.0			15.0		37.0	37.0	37.0			
Effective Green, g (s)	51.0	51.0			15.0		37.0	37.0	37.0			
Actuated g/C Ratio	0.51	0.51			0.15		0.37	0.37	0.37			
Clearance Time (s)	4.0				4.0		4.0	4.0	4.0			
Lane Grp Cap (vph)	682	1444			461		575	606	555			
v/s Ratio Prot	c0.11	0.07			0.02		0.37	c0.40	0.02			
v/s Ratio Perm	c0.05	0.03										
v/c Ratio	0.31	0.19			0.13		1.01	1.08	0.05			
Uniform Delay, d1	14.1	13.3			36.8		31.5	31.5	20.2			
Progression Factor	0.23	0.24			1.00		1.00	1.00	1.00			
Incremental Delay, d2	0.9	0.2			0.6		40.1	61.5	0.2			
Delay (s)	4.1	3.4			37.4		71.6	93.0	20.3			
Level of Service	A	A			D		E	F	C			
Approach Delay (s)		3.7			37.4			79.9			0.0	
Approach LOS		A			D			E			A	

Intersection Summary			
HCM Average Control Delay	58.4	HCM Level of Service	E
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	88.3%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱		↰	↑↑	↱	↰	↑↑	↱
Volume (vph)	155	272	69	55	272	108	49	1100	59	88	476	42
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	9	10	9	9	10	9
Total Lost time (s)		4.0			4.0		4.0	3.5	4.0	4.0	3.5	4.0
Lane Util. Factor		0.95			0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		1.00			0.99		1.00	1.00	0.97	1.00	1.00	0.97
Flpb, ped/bikes		1.00			1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.98			0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.98			0.99		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		2843			2817		1447	3069	1336	1494	2956	1270
Flt Permitted		0.63			0.83		0.39	1.00	1.00	0.12	1.00	1.00
Satd. Flow (perm)		1827			2354		600	3069	1336	197	2956	1270
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	161	283	72	57	283	112	51	1146	61	92	496	44
RTOR Reduction (vph)	0	15	0	0	38	0	0	0	24	0	0	27
Lane Group Flow (vph)	0	501	0	0	414	0	51	1146	37	92	496	17
Confl. Peds. (#/hr)	49		20	20		49	26		8	8		26
Confl. Bikes (#/hr)	2					2						
Heavy Vehicles (%)	10%	7%	4%	9%	7%	5%	6%	4%	0%	3%	8%	5%
Turn Type	pm+pt			Perm			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)		35.0			27.0		38.0	33.0	33.0	38.0	33.0	33.0
Effective Green, g (s)		36.0			28.0		36.0	33.5	33.0	36.0	33.5	33.0
Actuated g/C Ratio		0.42			0.33		0.42	0.39	0.39	0.42	0.39	0.39
Clearance Time (s)		5.0			5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)		846			775		294	1210	519	144	1165	493
v/s Ratio Prot		c0.04					0.01	c0.37		c0.03	0.17	
v/s Ratio Perm		0.21			c0.18		0.07		0.03	0.24		0.01
v/c Ratio		0.59			0.53		0.17	0.95	0.07	0.64	0.43	0.03
Uniform Delay, d1		18.9			23.2		14.8	24.9	16.4	18.5	18.7	16.1
Progression Factor		1.00			1.00		1.31	0.85	1.40	1.82	1.64	3.16
Incremental Delay, d2		3.0			2.6		0.8	11.0	0.2	18.1	1.0	0.1
Delay (s)		21.9			25.8		20.2	32.2	23.1	51.7	31.8	51.0
Level of Service		C			C		C	C	C	D	C	D
Approach Delay (s)		21.9			25.8			31.3			36.0	
Approach LOS		C			C			C			D	

Intersection Summary			
HCM Average Control Delay	29.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	80.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰			↱			✥				
Volume (vph)	42	400	0	0	405	77	30	60	93	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		1.00			0.98			0.93				
Flt Protected		1.00			1.00			0.99				
Satd. Flow (prot)		1706			1677			1584				
Flt Permitted		0.92			1.00			0.99				
Satd. Flow (perm)		1583			1677			1584				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	47	444	0	0	450	86	33	67	103	0	0	0
RTOR Reduction (vph)	0	0	0	0	10	0	0	57	0	0	0	0
Lane Group Flow (vph)	0	491	0	0	526	0	0	146	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)		34.0			34.0			23.0				
Effective Green, g (s)		34.0			34.0			23.0				
Actuated g/C Ratio		0.52			0.52			0.35				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		828			877			560				
v/s Ratio Prot					c0.31							
v/s Ratio Perm		0.31						0.09				
v/c Ratio		0.59			0.60			0.26				
Uniform Delay, d1		10.7			10.8			14.9				
Progression Factor		1.00			0.61			1.00				
Incremental Delay, d2		3.1			2.6			1.1				
Delay (s)		13.8			9.1			16.1				
Level of Service		B			A			B				
Approach Delay (s)		13.8			9.1			16.1			0.0	
Approach LOS		B			A			B			A	

Intersection Summary			
HCM Average Control Delay	12.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	73.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			↰↑↑↱			↰↑↑↱	
Volume (vph)	46	395	31	19	399	47	24	167	33	50	105	28
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	12	12	12	12	12
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		1.00			1.00			0.99			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.99			0.99			0.98			0.98	
Flt Protected		1.00			1.00			0.99			0.99	
Satd. Flow (prot)		1887			1842			3185			3125	
Flt Permitted		0.93			0.97			0.92			0.83	
Satd. Flow (perm)		1754			1797			2933			2640	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	51	439	34	21	443	52	27	186	37	56	117	31
RTOR Reduction (vph)	0	4	0	0	6	0	0	22	0	0	18	0
Lane Group Flow (vph)	0	520	0	0	510	0	0	228	0	0	186	0
Confl. Peds. (#/hr)	29		16	16		29	28		14	14		28
Confl. Bikes (#/hr)	1					1	1					1
Heavy Vehicles (%)	3%	7%	4%	12%	8%	13%	0%	4%	4%	4%	4%	6%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		30.0			30.0			27.0			27.0	
Effective Green, g (s)		30.0			30.0			27.0			27.0	
Actuated g/C Ratio		0.46			0.46			0.42			0.42	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		810			829			1218			1097	
v/s Ratio Prot												
v/s Ratio Perm		c0.30			0.28			c0.08			0.07	
v/c Ratio		0.64			0.61			0.19			0.17	
Uniform Delay, d1		13.4			13.2			12.0			11.9	
Progression Factor		0.62			0.53			0.97			0.63	
Incremental Delay, d2		3.3			3.3			0.3			0.3	
Delay (s)		11.6			10.2			12.1			7.8	
Level of Service		B			B			B			A	
Approach Delay (s)		11.6			10.2			12.1			7.8	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM Average Control Delay	10.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	80.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1037: 111th Street & State Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	50	265	21	28	338	61	53	303	85	46	91	28
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	9	10	10	9	10	10	12	10	10	12
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		0.99	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.98		1.00	0.97		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1503	2936		1583	2944		1497	3034		1594	2896	
Flt Permitted	0.44	1.00		0.55	1.00		0.67	1.00		0.50	1.00	
Satd. Flow (perm)	697	2936		916	2944		1053	3034		833	2896	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	56	294	23	31	376	68	59	337	94	51	101	31
RTOR Reduction (vph)	0	9	0	0	22	0	0	39	0	0	14	0
Lane Group Flow (vph)	56	308	0	31	422	0	59	392	0	51	118	0
Confl. Peds. (#/hr)	25		14	14		25	12		4	4		12
Confl. Bikes (#/hr)	1					1			1	1		
Heavy Vehicles (%)	5%	7%	12%	0%	6%	2%	6%	1%	3%	0%	4%	12%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	22.0	22.0		22.0	22.0		35.0	35.0		35.0	35.0	
Effective Green, g (s)	22.0	22.0		22.0	22.0		35.0	35.0		35.0	35.0	
Actuated g/C Ratio	0.34	0.34		0.34	0.34		0.54	0.54		0.54	0.54	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	236	994		310	996		567	1634		449	1559	
v/s Ratio Prot		0.11			c0.14			c0.13			0.04	
v/s Ratio Perm	0.08			0.03			0.06			0.06		
v/c Ratio	0.24	0.31		0.10	0.42		0.10	0.24		0.11	0.08	
Uniform Delay, d1	15.5	15.9		14.7	16.6		7.3	7.9		7.4	7.2	
Progression Factor	0.59	0.56		0.77	0.79		0.64	0.62		1.33	1.37	
Incremental Delay, d2	2.0	0.7		0.6	1.3		0.4	0.3		0.5	0.1	
Delay (s)	11.0	9.6		12.0	14.4		5.0	5.3		10.3	10.0	
Level of Service	B	A		B	B		A	A		B	A	
Approach Delay (s)		9.8			14.3			5.2			10.1	
Approach LOS		A			B			A			B	

Intersection Summary			
HCM Average Control Delay	9.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	46.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			↰↑↱			↰↑↱	
Volume (vph)	80	372	27	37	361	82	20	307	44	41	118	41
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	9	10	9	9	16	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			1.00			0.99	
Flpb, ped/bikes	0.97	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.97			0.98			0.97	
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.99	
Satd. Flow (prot)	1384	3013		1334	3537			3438			3303	
Flt Permitted	0.46	1.00		0.49	1.00			0.94			0.84	
Satd. Flow (perm)	675	3013		694	3537			3226			2809	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	84	392	28	39	380	86	21	323	46	43	124	43
RTOR Reduction (vph)	0	8	0	0	30	0	0	16	0	0	26	0
Lane Group Flow (vph)	84	412	0	39	436	0	0	374	0	0	184	0
Confl. Peds. (#/hr)	53		34	34		53	67		28	28		67
Heavy Vehicles (%)	8%	5%	0%	14%	6%	1%	0%	9%	20%	5%	15%	5%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	31.0	31.0		31.0	31.0			26.0			26.0	
Effective Green, g (s)	31.0	31.0		31.0	31.0			26.0			26.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48			0.40			0.40	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	322	1437		331	1687			1290			1124	
v/s Ratio Prot		c0.14			0.12							
v/s Ratio Perm	0.12			0.06				c0.12			0.07	
v/c Ratio	0.26	0.29		0.12	0.26			0.29			0.16	
Uniform Delay, d1	10.2	10.3		9.4	10.1			13.2			12.5	
Progression Factor	1.61	1.65		0.79	0.77			0.51			0.64	
Incremental Delay, d2	1.9	0.5		0.6	0.3			0.6			0.3	
Delay (s)	18.3	17.5		8.0	8.1			7.3			8.3	
Level of Service	B	B		A	A			A			A	
Approach Delay (s)		17.6			8.1			7.3			8.3	
Approach LOS		B			A			A			A	

Intersection Summary			
HCM Average Control Delay	10.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.29		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	58.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰↱			✥			✥	
Volume (vph)	94	286	95	104	347	104	84	80	84	84	80	78
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	16	12	12	16	12
Total Lost time (s)		5.0	5.0		5.0			5.0			5.0	
Lane Util. Factor		1.00	1.00		0.95			1.00			1.00	
Frt		1.00	0.85		0.97			0.95			0.96	
Flt Protected		0.99	1.00		0.99			0.98			0.98	
Satd. Flow (prot)		1637	1409		3031			1823			1826	
Flt Permitted		0.75	1.00		0.77			0.80			0.79	
Satd. Flow (perm)		1238	1409		2361			1480			1469	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	104	318	106	116	386	116	93	89	93	93	89	87
RTOR Reduction (vph)	0	0	51	0	31	0	0	28	0	0	26	0
Lane Group Flow (vph)	0	422	55	0	587	0	0	247	0	0	243	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm		Perm	Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)		34.0	34.0		34.0			21.0			21.0	
Effective Green, g (s)		34.0	34.0		34.0			21.0			21.0	
Actuated g/C Ratio		0.52	0.52		0.52			0.32			0.32	
Clearance Time (s)		5.0	5.0		5.0			5.0			5.0	
Lane Grp Cap (vph)		648	737		1235			478			475	
v/s Ratio Prot												
v/s Ratio Perm		c0.34	0.04		0.25			c0.17			0.17	
v/c Ratio		0.65	0.08		0.48			0.52			0.51	
Uniform Delay, d1		11.2	7.7		9.8			17.9			17.8	
Progression Factor		2.03	5.63		0.41			1.00			1.00	
Incremental Delay, d2		4.9	0.2		1.2			3.9			3.9	
Delay (s)		27.7	43.5		5.3			21.8			21.7	
Level of Service		C	D		A			C			C	
Approach Delay (s)		30.9			5.3			21.8			21.7	
Approach LOS		C			A			C			C	

Intersection Summary			
HCM Average Control Delay	18.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	69.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1040: 111th Street & Martin Luther King Jr Drive

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			↰↑↱			↰↑↱	
Volume (vph)	70	363	20	15	433	63	37	103	41	41	86	94
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	15	8	16	8	8	16	8
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			1.00			0.99	
Flpb, ped/bikes	0.99	1.00		0.98	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.98			0.97			0.94	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1475	3018		1572	3001			3454			3404	
Flt Permitted	0.40	1.00		0.48	1.00			0.87			0.88	
Satd. Flow (perm)	616	3018		797	3001			3037			3020	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	78	403	22	17	481	70	41	114	46	46	96	104
RTOR Reduction (vph)	0	6	0	0	18	0	0	25	0	0	58	0
Lane Group Flow (vph)	78	419	0	17	533	0	0	176	0	0	188	0
Confl. Peds. (#/hr)	22		40	40		22	18		3	3		18
Confl. Bikes (#/hr)			2	2			1					1
Heavy Vehicles (%)	7%	5%	0%	0%	4%	2%	0%	3%	22%	0%	3%	8%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	28.0	28.0		28.0	28.0			29.0			29.0	
Effective Green, g (s)	28.0	28.0		28.0	28.0			29.0			29.0	
Actuated g/C Ratio	0.43	0.43		0.43	0.43			0.45			0.45	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	265	1300		343	1293			1355			1347	
v/s Ratio Prot		0.14			c0.18							
v/s Ratio Perm	0.13			0.02				0.06			c0.06	
v/c Ratio	0.29	0.32		0.05	0.41			0.13			0.14	
Uniform Delay, d1	12.1	12.2		10.8	12.8			10.6			10.6	
Progression Factor	0.99	1.02		1.12	0.93			0.99			0.81	
Incremental Delay, d2	2.2	0.5		0.2	0.6			0.2			0.2	
Delay (s)	14.2	12.9		12.2	12.5			10.7			8.8	
Level of Service	B	B		B	B			B			A	
Approach Delay (s)		13.1			12.4			10.7			8.8	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM Average Control Delay	11.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.27		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	59.1%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1041: 111th Street & Cottage Grove Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↑↱			↰↑↑↱			↰↑↑↱			↰↑↑↱	
Volume (vph)	82	431	69	89	432	270	46	315	87	211	151	50
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			0.95			0.95	
Frt		0.98			0.95			0.97			0.98	
Flt Protected		0.99			0.99			0.99			0.98	
Satd. Flow (prot)		3177			3073			3146			3118	
Flt Permitted		0.66			0.76			0.88			0.63	
Satd. Flow (perm)		2109			2348			2784			2030	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	91	479	77	99	480	300	51	350	97	234	168	56
RTOR Reduction (vph)	0	16	0	0	102	0	0	33	0	0	17	0
Lane Group Flow (vph)	0	631	0	0	777	0	0	465	0	0	441	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm			pm+pt			Perm		
Protected Phases		4			8		5	2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		26.0			26.0			29.0			20.0	
Effective Green, g (s)		26.0			26.0			29.0			20.0	
Actuated g/C Ratio		0.40			0.40			0.45			0.31	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		844			939			1276			625	
v/s Ratio Prot								c0.03				
v/s Ratio Perm		0.30			c0.33			0.13			c0.22	
v/c Ratio		0.75			0.83			0.36			0.88dl	
Uniform Delay, d1		16.7			17.5			11.9			19.9	
Progression Factor		1.75			1.00			1.00			0.89	
Incremental Delay, d2		5.9			8.3			0.8			6.6	
Delay (s)		35.2			25.8			12.7			24.3	
Level of Service		D			C			B			C	
Approach Delay (s)		35.2			25.8			12.7			24.3	
Approach LOS		D			C			B			C	

Intersection Summary			
HCM Average Control Delay	25.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	84.6%	ICU Level of Service	E
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1042: 111th Street & Ellis Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↑↱			↰↑↑↱			↰↑↱			↰↑↱	
Volume (vph)	0	686	112	43	717	0	127	0	66	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	10	10	12	12	12	12	10	10	10
Total Lost time (s)		5.0			5.0			5.0				
Lane Util. Factor		0.95			0.95			1.00				
Frt		0.98			1.00			0.95				
Flt Protected		1.00			1.00			0.97				
Satd. Flow (prot)		2976			3031			1583				
Flt Permitted		1.00			0.84			0.80				
Satd. Flow (perm)		2976			2567			1310				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	762	124	48	797	0	141	0	73	0	0	0
RTOR Reduction (vph)	0	18	0	0	0	0	0	21	0	0	0	0
Lane Group Flow (vph)	0	868	0	0	845	0	0	193	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	custom			Perm			Perm			Perm		
Protected Phases		4 5 6 11			8			2			2	
Permitted Phases	4 6 11			8			2			2		
Actuated Green, G (s)		65.0			33.0			16.0				
Effective Green, g (s)		58.0			33.0			16.0				
Actuated g/C Ratio		0.64			0.37			0.18				
Clearance Time (s)					5.0			5.0				
Lane Grp Cap (vph)		1918			941			233				
v/s Ratio Prot		c0.29										
v/s Ratio Perm					c0.33			c0.15				
v/c Ratio		0.45			0.90			0.83				
Uniform Delay, d1		8.0			26.9			35.7				
Progression Factor		0.00			1.57			1.00				
Incremental Delay, d2		0.4			11.8			27.7				
Delay (s)		0.5			54.1			63.4				
Level of Service		A			D			E				
Approach Delay (s)		0.5			54.1			63.4			0.0	
Approach LOS		A			D			E			A	

Intersection Summary			
HCM Average Control Delay	30.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	70.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1043: 111th Street & Doty Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑↱		↰	↑↑	↱		↰↑↱		↰	↑	↱
Volume (vph)	117	476	177	260	613	174	96	19	176	74	7	71
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	10	12	12	12	12	16	12	12	12	12
Total Lost time (s)	3.0	5.0		3.0	5.0	3.0		5.0		3.0	5.0	3.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00		1.00	1.00	1.00
Frt	1.00	0.96		1.00	1.00	0.85		0.92		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.98		0.95	1.00	1.00
Satd. Flow (prot)	1520	3020		1629	3257	1457		1755		1629	1714	1457
Flt Permitted	0.33	1.00		0.23	1.00	1.00		0.89		0.40	1.00	1.00
Satd. Flow (perm)	532	3020		402	3257	1457		1582		692	1714	1457
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	130	529	197	289	681	193	107	21	196	82	8	79
RTOR Reduction (vph)	0	40	0	0	0	97	0	75	0	0	0	43
Lane Group Flow (vph)	130	686	0	289	681	96	0	249	0	82	8	36
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	pm+pt			pm+pt		pm+ov	pm+pt			pm+pt		pm+ov
Protected Phases	7	4		3	8	1	5	2		1	6	7
Permitted Phases	4			8		8	2			6		6
Actuated Green, G (s)	42.0	32.7		48.4	36.1	44.7		20.0		31.6	31.6	40.9
Effective Green, g (s)	42.0	32.7		48.4	36.1	44.7		20.0		31.6	31.6	40.9
Actuated g/C Ratio	0.47	0.36		0.54	0.40	0.50		0.22		0.35	0.35	0.45
Clearance Time (s)	3.0	5.0		3.0	5.0	3.0		5.0		3.0	5.0	3.0
Vehicle Extension (s)	4.0	3.0		4.0	3.0	3.0		4.0		3.0	4.0	4.0
Lane Grp Cap (vph)	350	1097		389	1306	724		352		333	602	662
v/s Ratio Prot	0.04	0.23		c0.10	0.21	0.01				c0.02	0.00	0.01
v/s Ratio Perm	0.13			c0.29		0.05		c0.16		0.06		0.02
v/c Ratio	0.37	0.63		0.74	0.52	0.13		0.71		0.25	0.01	0.05
Uniform Delay, d1	14.2	23.6		13.5	20.4	12.2		32.3		21.5	19.0	13.7
Progression Factor	1.92	1.62		1.00	1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2	0.8	2.5		8.0	1.5	0.1		6.8		0.4	0.0	0.0
Delay (s)	28.0	40.7		21.5	21.9	12.3		39.1		21.9	19.0	13.8
Level of Service	C	D		C	C	B		D		C	B	B
Approach Delay (s)		38.8			20.2			39.1			18.0	
Approach LOS		D			C			D			B	

Intersection Summary			
HCM Average Control Delay	28.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	71.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
1044: 111th Street & Bishop Ford Freeway EB Ramps

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↑↑					↰		↱
Volume (veh/h)	0	492	234	6	504	0	0	0	0	30	0	543
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	547	260	7	560	0	0	0	0	33	0	603
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		498										
pX, platoon unblocked												
vC, conflicting volume	560			547			840	1120	273	847	1120	280
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	560			547			840	1120	273	847	1120	280
tC, single (s)	4.2			4.2			7.6	6.6	7.0	7.6	6.6	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			100	100	100	87	100	15
cM capacity (veh/h)	987			998			37	199	715	249	199	708

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1	SB 2
Volume Total	273	273	260	193	373	33	603
Volume Left	0	0	0	7	0	33	0
Volume Right	0	0	260	0	0	0	603
cSH	1700	1700	1700	998	1700	249	708
Volume to Capacity	0.16	0.16	0.15	0.01	0.22	0.13	0.85
Queue Length 95th (ft)	0	0	0	1	0	11	246
Control Delay (s)	0.0	0.0	0.0	0.4	0.0	21.7	32.1
Lane LOS				A		C	D
Approach Delay (s)	0.0			0.1		31.5	
Approach LOS						D	

Intersection Summary			
Average Delay	10.0		
Intersection Capacity Utilization	57.0%	ICU Level of Service	B
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
1045: 111th Street & Bishop Ford Freeway WB Ramps

	↗	↘	↖	↑	↓	↙
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰↰		↰			
Sign Control	Stop			Stop	Stop	
Volume (vph)	522	0	510	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	580	0	567	0	0	0

Direction, Lane #	EB 1	EB 2	NB 1
Volume Total (vph)	290	290	567
Volume Left (vph)	290	290	567
Volume Right (vph)	0	0	0
Hadj (s)	0.58	0.58	0.29
Departure Headway (s)	6.8	6.8	5.7
Degree Utilization, x	0.55	0.55	0.90
Capacity (veh/h)	514	505	627
Control Delay (s)	16.7	16.7	38.6
Approach Delay (s)	16.7		38.6
Approach LOS	C		E

Intersection Summary			
Delay	27.5		
HCM Level of Service	D		
Intersection Capacity Utilization	52.2%	ICU Level of Service	A
Analysis Period (min)	15		

1046: 115th Street & Marshield Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱		↰	↑↑						↰↑↱	
Volume (vph)	0	340	131	126	344	0	0	0	0	72	15	42
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	12	12	12	12	12
Total Lost time (s)		3.0		4.0	4.0						5.0	
Lane Util. Factor		0.95		1.00	0.95						0.95	
Frt		0.96		1.00	1.00						0.95	
Flt Protected		1.00		0.95	1.00						0.97	
Satd. Flow (prot)		3017		1574	3149						3014	
Flt Permitted		1.00		0.39	1.00						0.97	
Satd. Flow (perm)		3017		645	3149						3014	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	378	146	140	382	0	0	0	0	80	17	47
RTOR Reduction (vph)	0	48	0	0	0	0	0	0	0	0	32	0
Lane Group Flow (vph)	0	476	0	140	382	0	0	0	0	0	112	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type				pm+pt						Split		
Protected Phases		4		3	8					6	6	
Permitted Phases				8								
Actuated Green, G (s)		36.0		49.0	49.0						27.0	
Effective Green, g (s)		36.0		49.0	49.0						27.0	
Actuated g/C Ratio		0.42		0.58	0.58						0.32	
Clearance Time (s)		3.0		4.0	4.0						5.0	
Lane Grp Cap (vph)		1278		481	1815						957	
v/s Ratio Prot		c0.16		c0.03	0.12						c0.04	
v/s Ratio Perm				0.13								
v/c Ratio		0.37		0.29	0.21						0.12	
Uniform Delay, d1		16.8		12.6	8.7						20.6	
Progression Factor		1.00		0.37	0.33						1.00	
Incremental Delay, d2		0.8		1.4	0.2						0.2	
Delay (s)		17.6		6.2	3.1						20.8	
Level of Service		B		A	A						C	
Approach Delay (s)		17.6			3.9			0.0			20.8	
Approach LOS		B			A			A			C	

Intersection Summary			
HCM Average Control Delay	12.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	36.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑			↑↱			↰↑↱				
Volume (vph)	68	344	0	0	400	76	70	65	42	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	11	11	12	12	12	12	12	12
Total Lost time (s)	5.0	5.0			3.0			5.0				
Lane Util. Factor	1.00	0.95			0.95			0.91				
Frt	1.00	1.00			0.98			0.96				
Flt Protected	0.95	1.00			1.00			0.98				
Satd. Flow (prot)	1629	3257			3073			4425				
Flt Permitted	0.38	1.00			1.00			0.98				
Satd. Flow (perm)	656	3257			3073			4425				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	76	382	0	0	444	84	78	72	47	0	0	0
RTOR Reduction (vph)	0	0	0	0	18	0	0	32	0	0	0	0
Lane Group Flow (vph)	76	382	0	0	510	0	0	165	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	pm+pt						Split					
Protected Phases	7	4			8		2	2				
Permitted Phases	4											
Actuated Green, G (s)	48.0	48.0			35.0			27.0				
Effective Green, g (s)	48.0	48.0			35.0			27.0				
Actuated g/C Ratio	0.56	0.56			0.41			0.32				
Clearance Time (s)	5.0	5.0			3.0			5.0				
Lane Grp Cap (vph)	485	1839			1265			1406				
v/s Ratio Prot	0.02	c0.12			c0.17			c0.04				
v/s Ratio Perm	0.07											
v/c Ratio	0.16	0.21			0.40			0.12				
Uniform Delay, d1	12.1	9.1			17.6			20.6				
Progression Factor	0.41	0.42			1.00			1.00				
Incremental Delay, d2	0.7	0.2			1.0			0.2				
Delay (s)	5.7	4.1			18.6			20.7				
Level of Service	A	A			B			C				
Approach Delay (s)		4.3			18.6			20.7			0.0	
Approach LOS		A			B			C			A	

Intersection Summary			
HCM Average Control Delay	13.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	36.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1048: 115th Street & Racine Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↑↱			↰↑↑↱			↰↑↱			↰↑↱	
Volume (vph)	39	307	82	31	243	31	129	85	52	55	90	124
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	10	12	12	15	12	12	15	12
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			1.00			1.00	
Frt		0.97			0.98			0.97			0.94	
Flt Protected		1.00			0.99			0.98			0.99	
Satd. Flow (prot)		2939			2979			1792			1750	
Flt Permitted		0.89			0.88			0.74			0.89	
Satd. Flow (perm)		2639			2628			1351			1567	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	43	341	91	34	270	34	143	94	58	61	100	138
RTOR Reduction (vph)	0	32	0	0	13	0	0	14	0	0	48	0
Lane Group Flow (vph)	0	443	0	0	325	0	0	281	0	0	251	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		23.0			23.0			32.0			32.0	
Effective Green, g (s)		23.0			23.0			32.0			32.0	
Actuated g/C Ratio		0.35			0.35			0.49			0.49	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		934			930			665			771	
v/s Ratio Prot												
v/s Ratio Perm		c0.17			0.12			c0.21			0.16	
v/c Ratio		0.47			0.35			0.42			0.33	
Uniform Delay, d1		16.3			15.5			10.6			10.0	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		1.7			1.0			2.0			1.1	
Delay (s)		18.0			16.5			12.5			11.1	
Level of Service		B			B			B			B	
Approach Delay (s)		18.0			16.5			12.5			11.1	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	15.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	66.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1049: 115th Street & Halsted Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↑	↱	↰	↑↑	↱
Volume (vph)	169	202	82	205	176	62	78	974	106	73	459	78
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	12	10	16	12	9	10	9	9	10	9
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00	0.98	1.00	1.00	0.96
Flpb, ped/bikes	0.99	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.96		1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1548	2954		1593	3512		1487	3040	1347	1494	3011	1271
Flt Permitted	0.59	1.00		0.54	1.00		0.41	1.00	1.00	0.12	1.00	1.00
Satd. Flow (perm)	954	2954		901	3512		640	3040	1347	197	3011	1271
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	178	213	86	216	185	65	82	1025	112	77	483	82
RTOR Reduction (vph)	0	52	0	0	41	0	0	0	69	0	0	50
Lane Group Flow (vph)	178	247	0	216	209	0	82	1025	43	77	483	32
Confl. Peds. (#/hr)	31		7	7		31	37		12	12		37
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	2%	4%	0%	0%	6%	2%	3%	5%	0%	3%	6%	4%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	32.0	27.0		32.0	27.0		38.0	33.0	33.0	38.0	33.0	33.0
Effective Green, g (s)	30.0	28.0		30.0	28.0		36.0	33.0	33.0	36.0	33.0	33.0
Actuated g/C Ratio	0.35	0.33		0.35	0.33		0.42	0.39	0.39	0.42	0.39	0.39
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)	365	973		351	1157		311	1180	523	144	1169	493
v/s Ratio Prot	0.02	0.08		c0.03	0.06		0.01	c0.34		c0.03	0.16	
v/s Ratio Perm	0.15			c0.19			0.10		0.03	0.20		0.03
v/c Ratio	0.49	0.25		0.62	0.18		0.26	0.87	0.08	0.53	0.41	0.06
Uniform Delay, d1	20.6	20.9		22.0	20.3		15.1	24.0	16.4	17.2	18.9	16.3
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.97	0.61	0.80
Incremental Delay, d2	4.6	0.6		7.8	0.3		2.1	8.8	0.3	12.3	1.0	0.2
Delay (s)	25.2	21.5		29.8	20.7		17.1	32.8	16.7	46.3	12.4	13.3
Level of Service	C	C		C	C		B	C	B	D	B	B
Approach Delay (s)		22.9			24.9			30.3			16.6	
Approach LOS		C			C			C			B	

Intersection Summary			
HCM Average Control Delay	25.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	71.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1050: 115th Street & Wentworth Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱		↰	↱		↰	↱
Volume (vph)	49	284	18	14	328	8	35	113	25	20	56	84
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	16	12	12	16	12
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frpb, ped/bikes		1.00	0.96		1.00	0.97		1.00	0.99		1.00	0.98
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frt		1.00	0.85		1.00	0.85		1.00	0.85		1.00	0.85
Flt Protected		0.99	1.00		1.00	1.00		0.99	1.00		0.99	1.00
Satd. Flow (prot)		1928	1382		1954	1331		1970	1452		1928	1430
Flt Permitted		0.91	1.00		0.98	1.00		0.93	1.00		0.93	1.00
Satd. Flow (perm)		1768	1382		1924	1331		1860	1452		1810	1430
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	52	299	19	15	345	8	37	119	26	21	59	88
RTOR Reduction (vph)	0	0	10	0	0	4	0	0	15	0	0	51
Lane Group Flow (vph)	0	351	9	0	360	4	0	156	11	0	80	37
Confl. Peds. (#/hr)	5		21	21		5	9		1	1		9
Heavy Vehicles (%)	5%	5%	6%	7%	4%	12%	6%	1%	4%	0%	6%	5%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)		30.0	30.0		30.0	30.0		27.0	27.0		27.0	27.0
Effective Green, g (s)		30.0	30.0		30.0	30.0		27.0	27.0		27.0	27.0
Actuated g/C Ratio		0.46	0.46		0.46	0.46		0.42	0.42		0.42	0.42
Clearance Time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		816	638		888	614		773	603		752	594
v/s Ratio Prot												
v/s Ratio Perm		c0.20	0.01		0.19	0.00		c0.08	0.01		0.04	0.03
v/c Ratio		0.43	0.01		0.41	0.01		0.20	0.02		0.11	0.06
Uniform Delay, d1		11.8	9.5		11.6	9.4		12.1	11.2		11.6	11.4
Progression Factor		1.00	1.00		0.46	0.44		1.33	1.73		0.95	0.90
Incremental Delay, d2		1.7	0.0		1.3	0.0		0.6	0.1		0.3	0.2
Delay (s)		13.4	9.5		6.7	4.2		16.7	19.4		11.3	10.5
Level of Service		B	A		A	A		B	B		B	B
Approach Delay (s)		13.2			6.7			17.1			10.9	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM Average Control Delay	11.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	62.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1051: 115th Street & State Street

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	75	258	10	15	278	30	12	234	25	30	70	64
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	0.99		1.00	0.99		1.00	0.93	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1520	3023		1520	2996		1520	2996		1520	2823	
Flt Permitted	0.95	1.00		0.57	1.00		0.66	1.00		0.56	1.00	
Satd. Flow (perm)	1520	3023		912	2996		1052	2996		904	2823	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	83	287	11	17	309	33	13	260	28	33	78	71
RTOR Reduction (vph)	0	4	0	0	13	0	0	12	0	0	42	0
Lane Group Flow (vph)	83	294	0	17	329	0	13	276	0	33	107	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Prot			Perm			Perm			Perm		
Protected Phases	7	4			8			2			6	
Permitted Phases				8			2			6		
Actuated Green, G (s)	7.0	32.0		22.0	22.0		27.0	27.0		27.0	27.0	
Effective Green, g (s)	7.0	32.0		22.0	22.0		27.0	27.0		27.0	27.0	
Actuated g/C Ratio	0.11	0.49		0.34	0.34		0.42	0.42		0.42	0.42	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	164	1488		309	1014		437	1244		376	1173	
v/s Ratio Prot	c0.05	0.10			c0.11			c0.09			0.04	
v/s Ratio Perm				0.02			0.01			0.04		
v/c Ratio	0.51	0.20		0.06	0.32		0.03	0.22		0.09	0.09	
Uniform Delay, d1	27.4	9.3		14.5	16.0		11.2	12.2		11.5	11.5	
Progression Factor	0.90	0.37		0.81	0.74		0.63	0.66		1.10	1.22	
Incremental Delay, d2	10.3	0.3		0.3	0.8		0.1	0.4		0.5	0.2	
Delay (s)	34.9	3.7		12.1	12.7		7.2	8.5		13.2	14.2	
Level of Service	C	A		B	B		A	A		B	B	
Approach Delay (s)		10.5			12.6			8.4			14.0	
Approach LOS		B			B			A			B	

Intersection Summary			
HCM Average Control Delay	11.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	37.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1052: 115th Street & Michigan Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			↰↑↱			↰↑↱	
Volume (vph)	41	264	16	95	273	42	26	284	20	24	137	41
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	12	12	12	12	12	12
Total Lost time (s)	4.0	4.0		3.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frt	1.00	0.99		1.00	0.98			0.99			0.97	
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.99	
Satd. Flow (prot)	1520	3014		1520	2979			3215			3138	
Flt Permitted	0.54	1.00		0.95	1.00			0.92			0.89	
Satd. Flow (perm)	867	3014		1520	2979			2977			2824	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	46	293	18	106	303	47	29	316	22	27	152	46
RTOR Reduction (vph)	0	7	0	0	19	0	0	7	0	0	28	0
Lane Group Flow (vph)	46	304	0	106	331	0	0	360	0	0	197	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Prot			Perm			Perm		
Protected Phases		4		3	8			2			6	
Permitted Phases	4						2			6		
Actuated Green, G (s)	20.0	20.0		6.0	29.0			25.0			25.0	
Effective Green, g (s)	20.0	20.0		6.0	29.0			25.0			25.0	
Actuated g/C Ratio	0.31	0.31		0.09	0.45			0.38			0.38	
Clearance Time (s)	4.0	4.0		3.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	267	927		140	1329			1145			1086	
v/s Ratio Prot		c0.10		c0.07	0.11							
v/s Ratio Perm	0.05							c0.12			0.07	
v/c Ratio	0.17	0.33		0.76	0.25			0.31			0.18	
Uniform Delay, d1	16.4	17.3		28.8	11.2			14.0			13.2	
Progression Factor	0.59	0.58		1.32	1.01			0.71			0.75	
Incremental Delay, d2	1.4	0.9		26.3	0.4			0.7			0.4	
Delay (s)	11.0	10.9		64.2	11.7			10.6			10.3	
Level of Service	B	B		E	B			B			B	
Approach Delay (s)		10.9			23.9			10.6			10.3	
Approach LOS		B			C			B			B	

Intersection Summary			
HCM Average Control Delay	15.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	43.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1053: 115th Street & Indiana Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			↰↑↑↱				
Volume (vph)	14	273	16	69	377	69	34	93	160	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	12	14	12	10	15	10
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			0.95				
Frt		0.99			0.98			0.92				
Flt Protected		1.00			0.99			0.99				
Satd. Flow (prot)		1585			1560			3165				
Flt Permitted		0.97			0.92			0.99				
Satd. Flow (perm)		1545			1437			3165				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	16	303	18	77	419	77	38	103	178	0	0	0
RTOR Reduction (vph)	0	2	0	0	7	0	0	137	0	0	0	0
Lane Group Flow (vph)	0	335	0	0	566	0	0	182	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm			Perm					
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Actuated Green, G (s)		41.9			41.9			15.1				
Effective Green, g (s)		41.9			41.9			15.1				
Actuated g/C Ratio		0.64			0.64			0.23				
Clearance Time (s)		4.0			4.0			4.0				
Vehicle Extension (s)		3.0			3.0			8.0				
Lane Grp Cap (vph)		996			926			735				
v/s Ratio Prot												
v/s Ratio Perm		0.22			c0.39			0.06				
v/c Ratio		0.34			0.61			0.25				
Uniform Delay, d1		5.2			6.8			20.3				
Progression Factor		2.07			1.00			1.00				
Incremental Delay, d2		0.9			3.0			0.8				
Delay (s)		11.7			9.8			21.1				
Level of Service		B			A			C				
Approach Delay (s)		11.7			9.8			21.1			0.0	
Approach LOS		B			A			C			A	

Intersection Summary			
HCM Average Control Delay	13.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	65.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
1054: 115th Street & Martin Luther King Jr Drive

1/14/2013

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰↑	↑↱		↰	↱
Volume (veh/h)	84	349	422	44	64	90
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	88	367	444	46	67	95
Pedestrians		3	5		21	
Lane Width (ft)		16.0	16.0		10.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		0	1		1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		1319	491			
pX, platoon unblocked	0.86				0.86	0.86
vC, conflicting volume	512				1038	491
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	351				962	327
tC, single (s)	4.2				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.3				3.5	3.3
p0 queue free %	91				69	84
cM capacity (veh/h)	979				218	603

Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total	456	491	67	95
Volume Left	88	0	67	0
Volume Right	0	46	0	95
cSH	979	1700	218	603
Volume to Capacity	0.09	0.29	0.31	0.16
Queue Length 95th (ft)	7	0	32	14
Control Delay (s)	2.6	0.0	28.8	12.1
Lane LOS	A		D	B
Approach Delay (s)	2.6	0.0	19.0	
Approach LOS			C	

Intersection Summary			
Average Delay	3.8		
Intersection Capacity Utilization	65.4%	ICU Level of Service	C
Analysis Period (min)	15		

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↱			↰	Y	
Volume (vph)	464	1	26	658	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0			4.0		
Lane Util. Factor	1.00			1.00		
Frt	1.00			1.00		
Flt Protected	1.00			1.00		
Satd. Flow (prot)	1714			1711		
Flt Permitted	1.00			0.97		
Satd. Flow (perm)	1714			1663		
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	516	1	29	731	0	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	517	0	0	760	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%
Turn Type			Perm			
Protected Phases	1 2 4			4	3	
Permitted Phases			4			
Actuated Green, G (s)	63.0			31.0		
Effective Green, g (s)	59.0			31.0		
Actuated g/C Ratio	0.69			0.36		
Clearance Time (s)				4.0		
Lane Grp Cap (vph)	1190			607		
v/s Ratio Prot	c0.30					
v/s Ratio Perm				c0.46		
v/c Ratio	0.43			1.25		
Uniform Delay, d1	5.7			27.0		
Progression Factor	0.05			1.00		
Incremental Delay, d2	0.1			126.6		
Delay (s)	0.4			153.6		
Level of Service	A			F		
Approach Delay (s)	0.4			153.6	0.0	
Approach LOS	A			F	A	

Intersection Summary			
HCM Average Control Delay	91.6	HCM Level of Service	F
HCM Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	62.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

1056: 115th Street & Bishop Ford Fwy

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱			↰						↰	↱
Volume (veh/h)	0	184	191	25	551	0	0	0	0	3	0	250
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	204	212	28	612	0	0	0	0	3	0	278
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	612			204			978	978	208	770	872	612
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	612			204			978	978	208	770	872	612
tC, single (s)	4.1			5.5			7.5	6.5	6.9	7.5	6.5	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.9			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			97			100	100	100	99	100	36
cM capacity (veh/h)	977			985			72	245	804	287	283	431

Direction, Lane #	EB 1	EB 2	WB 1	SB 1	SB 2
Volume Total	136	280	640	3	278
Volume Left	0	0	28	3	0
Volume Right	0	212	0	0	278
cSH	1700	1700	985	287	431
Volume to Capacity	0.08	0.16	0.03	0.01	0.64
Queue Length 95th (ft)	0	0	2	1	110
Control Delay (s)	0.0	0.0	0.7	17.7	27.3
Lane LOS			A	C	D
Approach Delay (s)	0.0		0.7	27.2	
Approach LOS				D	

Intersection Summary			
Average Delay	6.1		
Intersection Capacity Utilization	57.2%	ICU Level of Service	B
Analysis Period (min)	15		

	↗	↘	↖	↑	↓	↙
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰↰		↰			
Sign Control	Stop			Stop	Stop	
Volume (vph)	187	0	576	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	208	0	640	0	0	0

Direction, Lane #	EB 1	EB 2	NB 1
Volume Total (vph)	104	104	640
Volume Left (vph)	104	104	640
Volume Right (vph)	0	0	0
Hadj (s)	0.58	0.58	0.29
Departure Headway (s)	6.8	6.8	4.8
Degree Utilization, x	0.20	0.20	0.86
Capacity (veh/h)	511	512	734
Control Delay (s)	10.2	10.2	30.0
Approach Delay (s)	10.2		30.0
Approach LOS	B		D

Intersection Summary			
Delay	25.1		
HCM Level of Service	D		
Intersection Capacity Utilization	46.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↰↑					↰	↰↑↱	↱
Volume (vph)	0	646	207	169	511	0	0	0	0	207	115	294
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	12	13	12	12	12	12	10	10	11
Total Lost time (s)		6.0	6.0		6.0					6.0	6.0	6.0
Lane Util. Factor		0.95	1.00		0.95					0.86	0.81	0.86
Frpb, ped/bikes		1.00	0.98		1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00					1.00	1.00	1.00
Frt		1.00	0.85		1.00					1.00	0.94	0.85
Flt Protected		1.00	1.00		0.99					0.95	0.99	1.00
Satd. Flow (prot)		2978	1202		3372					1346	3705	1122
Flt Permitted		1.00	1.00		0.99					0.95	0.99	1.00
Satd. Flow (perm)		2978	1202		3372					1346	3705	1122
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	680	218	178	538	0	0	0	0	218	121	309
RTOR Reduction (vph)	0	0	106	0	0	0	0	0	0	0	82	90
Lane Group Flow (vph)	0	680	112	0	716	0	0	0	0	120	292	64
Confl. Peds. (#/hr)	5		3	3		5						
Heavy Vehicles (%)	0%	11%	9%	2%	4%	0%	0%	0%	0%	2%	2%	2%
Parking (#/hr)			0									0
Turn Type			Perm	Split						Split		custom
Protected Phases		2		10 12 14	10 12 14					4	4	
Permitted Phases			2									4 2
Actuated Green, G (s)		39.2	39.2		68.3					21.8	21.8	67.0
Effective Green, g (s)		39.2	39.2		68.3					21.8	21.8	67.0
Actuated g/C Ratio		0.25	0.25		0.43					0.14	0.14	0.42
Clearance Time (s)		6.0	6.0							6.0	6.0	
Vehicle Extension (s)		3.0	3.0							3.0	3.0	
Lane Grp Cap (vph)		730	294		1439					183	505	470
v/s Ratio Prot		c0.23			c0.21					c0.09	0.08	
v/s Ratio Perm			0.09									0.06
v/c Ratio		0.93	0.38		0.50					0.66	0.58	0.14
Uniform Delay, d1		59.1	50.3		33.4					65.5	64.8	28.7
Progression Factor		1.00	1.00		0.02					1.00	1.00	1.00
Incremental Delay, d2		20.2	3.7		0.1					8.2	1.6	0.1
Delay (s)		79.3	54.0		0.7					73.7	66.4	28.8
Level of Service		E	D		A					E	E	C
Approach Delay (s)		73.2			0.7			0.0			58.8	
Approach LOS		E			A			A			E	

Intersection Summary			
HCM Average Control Delay	46.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	32.7
Intersection Capacity Utilization	60.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1059: 119th Street & Ashland Avenue

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑			↑↑	↱	↰	↰↑↱				
Volume (vph)	210	643	0	0	452	112	228	144	189	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	13	12	12	11	12	13	13	14	12	12	12
Total Lost time (s)	6.0	6.0			6.0	6.0	6.0	6.0				
Lane Util. Factor	1.00	0.95			0.95	1.00	0.91	0.91				
Frt	1.00	1.00			1.00	0.85	1.00	0.92				
Flt Protected	0.95	1.00			1.00	1.00	0.95	1.00				
Satd. Flow (prot)	1574	3366			3149	1457	1531	2961				
Flt Permitted	0.95	1.00			1.00	1.00	0.95	1.00				
Satd. Flow (perm)	1574	3366			3149	1457	1531	2961				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	233	714	0	0	502	124	253	160	210	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	88	0	118	0	0	0	0
Lane Group Flow (vph)	233	714	0	0	502	36	215	290	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Split					Perm	Split					
Protected Phases	2 4 8	2 4 8			10		12	12				
Permitted Phases						10						
Actuated Green, G (s)	83.7	83.7			33.6	33.6	15.8	15.8				
Effective Green, g (s)	83.7	83.7			33.6	33.6	15.8	15.8				
Actuated g/C Ratio	0.52	0.52			0.21	0.21	0.10	0.10				
Clearance Time (s)					6.0	6.0	6.0	6.0				
Vehicle Extension (s)					3.0	3.0	3.0	3.0				
Lane Grp Cap (vph)	823	1761			661	306	151	292				
v/s Ratio Prot	0.15	c0.21			c0.16		c0.14	0.10				
v/s Ratio Perm						0.02						
v/c Ratio	0.28	0.41			0.76	0.12	1.42	0.99				
Uniform Delay, d1	21.4	23.1			59.4	51.2	72.1	72.0				
Progression Factor	0.07	0.06			1.00	1.00	1.00	1.00				
Incremental Delay, d2	0.1	0.1			5.0	0.2	224.7	50.5				
Delay (s)	1.5	1.5			64.4	51.4	296.8	122.5				
Level of Service	A	A			E	D	F	F				
Approach Delay (s)		1.5			61.8			182.7			0.0	
Approach LOS		A			E			F			A	

Intersection Summary			
HCM Average Control Delay	70.1	HCM Level of Service	E
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	28.9
Intersection Capacity Utilization	52.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1060: 119th Street & Halsted Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↱		↰	↑↱		↰	↑↱	
Volume (vph)	214	318	73	35	355	45	86	803	60	56	727	99
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	14	12	10	10	12	9	10	12
Total Lost time (s)	4.0	4.0	5.0	4.0	5.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.98		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1546	1556	1328	1595	1760		1532	2990		1508	2921	
Flt Permitted	0.23	1.00	1.00	0.43	1.00		0.18	1.00		0.16	1.00	
Satd. Flow (perm)	376	1556	1328	722	1760		288	2990		255	2921	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	225	335	77	37	374	47	91	845	63	59	765	104
RTOR Reduction (vph)	0	0	50	0	5	0	0	6	0	0	12	0
Lane Group Flow (vph)	225	335	27	37	416	0	91	902	0	59	857	0
Confl. Peds. (#/hr)	33		3	3		33	42		8	8		42
Confl. Bikes (#/hr)							1					1
Heavy Vehicles (%)	3%	8%	6%	0%	7%	5%	4%	5%	11%	2%	6%	9%
Turn Type	pm+pt		Perm	pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)	38.2	31.2	31.2	32.4	28.3		39.6	34.1		39.6	34.1	
Effective Green, g (s)	36.2	32.2	31.2	30.4	28.3		37.6	34.1		37.6	34.1	
Actuated g/C Ratio	0.40	0.36	0.35	0.34	0.31		0.42	0.38		0.42	0.38	
Clearance Time (s)	3.0	5.0	5.0	3.0	5.0		3.0	4.0		3.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	229	557	461	274	554		183	1134		169	1108	
v/s Ratio Prot	c0.07	0.22		0.00	0.24		c0.02	c0.30		0.02	0.29	
v/s Ratio Perm	c0.33		0.02	0.04			0.18			0.13		
v/c Ratio	0.98	0.60	0.06	0.14	0.75		0.50	0.80		0.35	0.77	
Uniform Delay, d1	25.9	23.6	19.6	20.4	27.6		17.7	24.8		17.5	24.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	54.2	4.8	0.2	0.2	9.1		2.1	5.8		1.3	5.3	
Delay (s)	80.1	28.4	19.8	20.6	36.7		19.8	30.6		18.7	29.8	
Level of Service	F	C	B	C	D		B	C		B	C	
Approach Delay (s)		45.6			35.4			29.6			29.1	
Approach LOS		D			D			C			C	

Intersection Summary			
HCM Average Control Delay	33.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	89.9	Sum of lost time (s)	16.0
Intersection Capacity Utilization	81.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1061: 119th Street & Wentworth Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱		✥			✥	
Volume (vph)	53	295	26	5	311	19	78	79	16	11	42	81
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	10	10	10	12	15	12	12	16	12
Total Lost time (s)		3.0	3.0		3.0	3.0		3.0			3.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00			1.00	
Frpb, ped/bikes		1.00	0.97		1.00	0.97		1.00			0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00			1.00	
Frt		1.00	0.85		1.00	0.85		0.99			0.92	
Flt Protected		0.99	1.00		1.00	1.00		0.98			1.00	
Satd. Flow (prot)		1910	1482		1600	1198		1903			1790	
Flt Permitted		0.92	1.00		1.00	1.00		0.83			0.98	
Satd. Flow (perm)		1762	1482		1595	1198		1625			1759	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	56	311	27	5	327	20	82	83	17	12	44	85
RTOR Reduction (vph)	0	0	14	0	0	10	0	6	0	0	50	0
Lane Group Flow (vph)	0	367	13	0	332	10	0	176	0	0	91	0
Confl. Peds. (#/hr)	6		11	11		6	4		8	8		4
Confl. Bikes (#/hr)	1		1	1		1			1	1		
Heavy Vehicles (%)	0%	7%	0%	0%	5%	16%	0%	0%	0%	10%	0%	3%
Turn Type	Perm		Perm	Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)		32.0	32.0		32.0	32.0		27.0			27.0	
Effective Green, g (s)		32.0	32.0		32.0	32.0		27.0			27.0	
Actuated g/C Ratio		0.49	0.49		0.49	0.49		0.42			0.42	
Clearance Time (s)		3.0	3.0		3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)		867	730		785	590		675			731	
v/s Ratio Prot												
v/s Ratio Perm		c0.21	0.01		0.21	0.01		c0.11			0.05	
v/c Ratio		0.42	0.02		0.42	0.02		0.26			0.12	
Uniform Delay, d1		10.6	8.5		10.6	8.4		12.5			11.7	
Progression Factor		1.00	1.00		1.68	2.24		1.00			1.48	
Incremental Delay, d2		1.5	0.0		1.6	0.0		0.9			0.4	
Delay (s)		12.1	8.5		19.3	18.9		13.4			17.7	
Level of Service		B	A		B	B		B			B	
Approach Delay (s)		11.9			19.3			13.4			17.7	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	15.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	77.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1062: 119th Street & State Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱		↰	↱		✥	
Volume (vph)	82	208	34	6	176	6	82	216	21	9	51	72
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frpb, ped/bikes		1.00	0.96		1.00	0.98		1.00	0.96		0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		0.93	
Flt Protected		0.99	1.00		1.00	1.00		0.99	1.00		1.00	
Satd. Flow (prot)		1664	1392		1608	1497		1733	1390		1569	
Flt Permitted		0.86	1.00		0.99	1.00		0.88	1.00		0.98	
Satd. Flow (perm)		1443	1392		1593	1497		1551	1390		1540	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	86	219	36	6	185	6	86	227	22	9	54	76
RTOR Reduction (vph)	0	0	23	0	0	4	0	0	11	0	39	0
Lane Group Flow (vph)	0	305	13	0	191	2	0	313	11	0	100	0
Confl. Peds. (#/hr)	11		17	17		11	4		17	17		4
Confl. Bikes (#/hr)	1		1	1		1	1					1
Heavy Vehicles (%)	0%	9%	5%	33%	11%	0%	6%	1%	6%	0%	0%	8%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		23.0	23.0		23.0	23.0		32.0	32.0		32.0	
Effective Green, g (s)		23.0	23.0		23.0	23.0		32.0	32.0		32.0	
Actuated g/C Ratio		0.35	0.35		0.35	0.35		0.49	0.49		0.49	
Clearance Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	
Lane Grp Cap (vph)		511	493		564	530		764	684		758	
v/s Ratio Prot												
v/s Ratio Perm		c0.21	0.01		0.12	0.00		c0.20	0.01		0.07	
v/c Ratio		0.60	0.03		0.34	0.00		0.41	0.02		0.13	
Uniform Delay, d1		17.2	13.7		15.4	13.6		10.5	8.4		9.0	
Progression Factor		1.92	3.40		0.95	0.98		0.27	0.18		1.15	
Incremental Delay, d2		4.7	0.1		1.6	0.0		0.8	0.0		0.4	
Delay (s)		37.7	46.7		16.2	13.3		3.6	1.6		10.6	
Level of Service		D	D		B	B		A	A		B	
Approach Delay (s)		38.6			16.1			3.5			10.6	
Approach LOS		D			B			A			B	

Intersection Summary			
HCM Average Control Delay	18.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	76.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1063: 119th Street & Michigan Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		✣			✣			↰	↱
Volume (vph)	161	22	34	9	27	6	43	286	19	6	194	111
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	14	12	12	16	12	12	16	12
Total Lost time (s)		3.0	3.0		3.0			3.0			3.0	3.0
Lane Util. Factor		1.00	1.00		1.00			1.00			1.00	1.00
Frpb, ped/bikes		1.00	0.97		0.99			1.00			1.00	0.95
Flpb, ped/bikes		0.98	1.00		1.00			1.00			1.00	1.00
Frt		1.00	0.85		0.98			0.99			1.00	0.85
Flt Protected		0.96	1.00		0.99			0.99			1.00	1.00
Satd. Flow (prot)		1770	1390		1835			1970			1873	1328
Flt Permitted		0.79	1.00		0.94			0.95			0.99	1.00
Satd. Flow (perm)		1469	1390		1751			1876			1858	1328
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	179	24	38	10	30	7	48	318	21	7	216	123
RTOR Reduction (vph)	0	0	22	0	5	0	0	3	0	0	0	62
Lane Group Flow (vph)	0	203	16	0	42	0	0	384	0	0	223	61
Confl. Peds. (#/hr)	49		22	22		49	34		17	17		34
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	9%	0%	7%	0%	0%	0%	0%	2%	0%	0%	9%	9%
Turn Type	pm+pt		Perm	Perm			Perm			Perm		Perm
Protected Phases	7	4			8			2			6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)		27.0	27.0		17.0			32.0			32.0	32.0
Effective Green, g (s)		27.0	27.0		17.0			32.0			32.0	32.0
Actuated g/C Ratio		0.42	0.42		0.26			0.49			0.49	0.49
Clearance Time (s)		3.0	3.0		3.0			3.0			3.0	3.0
Lane Grp Cap (vph)		647	577		458			924			915	654
v/s Ratio Prot		c0.04										
v/s Ratio Perm		0.09	0.01		0.02			c0.20			0.12	0.05
v/c Ratio		0.31	0.03		0.09			0.42			0.24	0.09
Uniform Delay, d1		12.8	11.2		18.2			10.5			9.5	8.8
Progression Factor		0.80	1.38		1.00			0.45			0.53	0.31
Incremental Delay, d2		1.1	0.1		0.4			1.2			0.6	0.3
Delay (s)		11.3	15.6		18.6			5.9			5.7	3.0
Level of Service		B	B		B			A			A	A
Approach Delay (s)		12.0			18.6			5.9			4.7	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	7.5	HCM Level of Service	A
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	60.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1064: 127th Street & S Paulina St

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↱		↰	↑↑					↰	↰↑↱	↱
Volume (vph)	0	984	220	328	1128	0	0	0	0	274	200	374
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	12	11	8	8	8	11	12	14
Total Lost time (s)		6.0		4.5	6.0					6.0	6.0	6.0
Lane Util. Factor		0.91		1.00	0.95					0.91	0.86	0.91
Frpb, ped/bikes		1.00		1.00	1.00					1.00	0.99	0.99
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Frt		0.97		1.00	1.00					1.00	0.94	0.85
Flt Protected		1.00		0.95	1.00					0.95	0.99	1.00
Satd. Flow (prot)		4322		1589	3226					1419	2711	1355
Flt Permitted		1.00		0.13	1.00					0.95	0.99	1.00
Satd. Flow (perm)		4322		210	3226					1419	2711	1355
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	1036	232	345	1187	0	0	0	0	288	211	394
RTOR Reduction (vph)	0	32	0	0	0	0	0	0	0	0	61	61
Lane Group Flow (vph)	0	1236	0	345	1187	0	0	0	0	233	390	148
Confl. Peds. (#/hr)	6		4	4		6	2					2
Heavy Vehicles (%)	0%	11%	7%	4%	6%	0%	0%	0%	0%	6%	4%	8%
Turn Type				pm+pt						Perm		Perm
Protected Phases		2		1	6						4	
Permitted Phases				6						4		4
Actuated Green, G (s)		44.8		69.4	69.4					23.6	23.6	23.6
Effective Green, g (s)		44.8		69.4	69.4					23.6	23.6	23.6
Actuated g/C Ratio		0.43		0.66	0.66					0.22	0.22	0.22
Clearance Time (s)		6.0		4.5	6.0					6.0	6.0	6.0
Vehicle Extension (s)		7.0		3.5	7.0					3.5	3.5	3.5
Lane Grp Cap (vph)		1844		403	2132					319	609	305
v/s Ratio Prot		0.29		c0.16	0.37							
v/s Ratio Perm				c0.40						c0.16	0.14	0.11
v/c Ratio		0.67		0.86	0.56					0.73	0.64	0.48
Uniform Delay, d1		24.2		23.9	9.5					37.7	36.9	35.4
Progression Factor		1.00		0.88	1.68					1.00	1.00	1.00
Incremental Delay, d2		2.0		9.0	0.5					8.6	2.3	1.4
Delay (s)		26.1		30.0	16.5					46.3	39.2	36.8
Level of Service		C		C	B					D	D	D
Approach Delay (s)		26.1			19.6			0.0			40.5	
Approach LOS		C			B			A			D	

Intersection Summary			
HCM Average Control Delay	26.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	10.5
Intersection Capacity Utilization	108.2%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1065: 127th Street & Marshfield Ave

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↑			↑↑↱			↰↑↱				
Volume (vph)	309	949	0	0	934	234	521	346	661	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	12	12	12	11	12	12	12	12	12	12	12
Total Lost time (s)	6.0	6.0			6.0			6.0				
Lane Util. Factor	0.97	0.95			0.91			0.91				
Frpb, ped/bikes	1.00	1.00			1.00			1.00				
Flpb, ped/bikes	1.00	1.00			1.00			1.00				
Frt	1.00	1.00			0.97			0.94				
Flt Protected	0.95	1.00			1.00			0.98				
Satd. Flow (prot)	2915	3138			4350			4336				
Flt Permitted	0.13	1.00			1.00			0.98				
Satd. Flow (perm)	407	3138			4350			4336				
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	325	999	0	0	983	246	548	364	696	0	0	0
RTOR Reduction (vph)	0	0	0	0	36	0	0	90	0	0	0	0
Lane Group Flow (vph)	325	999	0	0	1193	0	0	1518	0	0	0	0
Confl. Peds. (#/hr)	4					4						
Heavy Vehicles (%)	10%	9%	0%	0%	6%	4%	4%	3%	5%	0%	0%	0%
Turn Type	pm+pt						Perm					
Protected Phases	5	2			6			8				
Permitted Phases	2						8					
Actuated Green, G (s)	63.6	63.6			45.5			29.4				
Effective Green, g (s)	63.6	63.6			45.5			29.4				
Actuated g/C Ratio	0.61	0.61			0.43			0.28				
Clearance Time (s)	6.0	6.0			6.0			6.0				
Vehicle Extension (s)	3.5	7.0			7.0			5.0				
Lane Grp Cap (vph)	536	1901			1885			1214				
v/s Ratio Prot	0.07	c0.32			0.27							
v/s Ratio Perm	c0.30							0.35				
v/c Ratio	0.61	0.53			0.63			1.38dr				
Uniform Delay, d1	12.9	12.0			23.2			37.8				
Progression Factor	0.64	0.65			1.01			1.00				
Incremental Delay, d2	1.5	0.8			0.9			119.7				
Delay (s)	9.7	8.6			24.3			157.5				
Level of Service	A	A			C			F				
Approach Delay (s)		8.8			24.3			157.5			0.0	
Approach LOS		A			C			F			A	

Intersection Summary			
HCM Average Control Delay	70.8	HCM Level of Service	E
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	108.2%	ICU Level of Service	G
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1066: 127th Street & S Ashland

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	103	931	221	76	859	50	226	178	40	76	111	91
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	12	11	12	12	10	10	13	10	10	10
Total Lost time (s)	3.5	6.0	3.5	3.5	6.0		3.5	6.0		3.5	6.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.97		1.00	0.93	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1565	3061	1291	1604	3231		1445	3007		1544	2782	
Flt Permitted	0.11	1.00	1.00	0.29	1.00		0.56	1.00		0.61	1.00	
Satd. Flow (perm)	174	3061	1291	494	3231		845	3007		990	2782	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	108	980	233	80	904	53	238	187	42	80	117	96
RTOR Reduction (vph)	0	0	96	0	4	0	0	21	0	0	80	0
Lane Group Flow (vph)	108	980	137	80	953	0	238	208	0	80	133	0
Confl. Peds. (#/hr)	3		12	12		3	9		6	6		9
Heavy Vehicles (%)	2%	8%	5%	3%	5%	3%	10%	3%	2%	3%	7%	4%
Parking (#/hr)			0									
Turn Type	pm+pt		pm+ov	pm+pt			pm+pt			pm+pt		
Protected Phases	5	2	3	1	6		3	8		7	4	
Permitted Phases	2		2	6			8			4		
Actuated Green, G (s)	62.8	52.8	61.8	40.8	34.3		28.7	19.7		24.7	17.7	
Effective Green, g (s)	62.8	52.8	61.8	40.8	34.3		28.7	19.7		24.7	17.7	
Actuated g/C Ratio	0.60	0.50	0.59	0.39	0.33		0.27	0.19		0.24	0.17	
Clearance Time (s)	3.5	6.0	3.5	3.5	6.0		3.5	6.0		3.5	6.0	
Vehicle Extension (s)	3.0	7.0	3.0	3.0	7.0		3.0	7.0		3.0	7.0	
Lane Grp Cap (vph)	435	1539	760	261	1055		282	564		270	469	
v/s Ratio Prot	0.06	c0.32	0.02	c0.02	c0.29		c0.07	0.07		0.02	0.05	
v/s Ratio Perm	0.09		0.09	0.10			c0.16			0.05		
v/c Ratio	0.25	0.64	0.18	0.31	0.90		0.84	0.37		0.30	0.28	
Uniform Delay, d1	12.9	19.1	9.9	20.7	33.8		34.6	37.2		32.4	38.1	
Progression Factor	1.05	1.19	2.47	1.00	1.00		0.95	0.90		1.00	1.00	
Incremental Delay, d2	0.8	1.1	0.1	0.7	12.4		19.0	1.4		0.6	1.2	
Delay (s)	14.2	23.8	24.6	21.3	46.2		52.1	34.9		33.0	39.3	
Level of Service	B	C	C	C	D		D	C		C	D	
Approach Delay (s)		23.2			44.3			43.7			37.6	
Approach LOS		C			D			D			D	

Intersection Summary			
HCM Average Control Delay	34.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	22.5
Intersection Capacity Utilization	75.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1067: Vermont St & S Ashland

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	59	323	273	79	209	98	328	380	161	91	258	54
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	11	12	11	12	12	11	13	12	10	11	12
Total Lost time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.93		1.00	0.95		1.00	0.96		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1635	2920		1463	3049		1589	3173		1549	3135	
Flt Permitted	0.53	1.00		0.25	1.00		0.46	1.00		0.44	1.00	
Satd. Flow (perm)	905	2920		381	3049		772	3173		714	3135	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	62	340	287	83	220	103	345	400	169	96	272	57
RTOR Reduction (vph)	0	139	0	0	51	0	0	44	0	0	17	0
Lane Group Flow (vph)	62	488	0	83	272	0	345	525	0	96	312	0
Confl. Peds. (#/hr)	20					20	1		2	2		1
Heavy Vehicles (%)	4%	5%	6%	13%	6%	5%	4%	6%	5%	3%	3%	0%
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	35.4	28.4		36.2	28.8		53.2	41.9		38.6	31.3	
Effective Green, g (s)	35.4	28.4		36.2	28.8		53.2	41.9		38.6	31.3	
Actuated g/C Ratio	0.34	0.27		0.34	0.27		0.51	0.40		0.37	0.30	
Clearance Time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	3.5	7.0		3.5	7.0		3.5	7.0		3.5	7.0	
Lane Grp Cap (vph)	354	790		208	836		530	1266		321	935	
v/s Ratio Prot	0.01	c0.17		c0.03	0.09		c0.11	0.17		0.02	0.10	
v/s Ratio Perm	0.05			0.11			c0.22			0.09		
v/c Ratio	0.18	0.62		0.40	0.33		0.65	0.41		0.30	0.33	
Uniform Delay, d1	24.0	33.5		24.6	30.4		16.6	22.7		22.4	28.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.03	0.90	
Incremental Delay, d2	0.3	3.6		1.5	1.0		3.0	1.0		0.6	0.9	
Delay (s)	24.3	37.1		26.1	31.4		19.6	23.7		23.6	26.8	
Level of Service	C	D		C	C		B	C		C	C	
Approach Delay (s)		36.0			30.3			22.2			26.1	
Approach LOS		D			C			C			C	

Intersection Summary			
HCM Average Control Delay	28.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	72.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	165	392	610	6	401	108	198	592	7	80	368	100
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	10	12	9	11	12	9	9	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		0.99			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.92			0.97		1.00	1.00		1.00	0.97	
Flt Protected		0.99			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		2584			2887		1436	3186		1451	2800	
Flt Permitted		0.63			0.94		0.38	1.00		0.28	1.00	
Satd. Flow (perm)		1631			2703		578	3186		432	2800	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	183	436	678	7	446	120	220	658	8	89	409	111
RTOR Reduction (vph)	0	200	0	0	37	0	0	1	0	0	38	0
Lane Group Flow (vph)	0	1097	0	0	536	0	220	665	0	89	482	0
Confl. Peds. (#/hr)	9		11	11		9	11		14	14		11
Heavy Vehicles (%)	3%	6%	18%	50%	6%	6%	7%	3%	50%	6%	7%	2%
Turn Type	pm+pt			Perm			pm+pt			pm+pt		
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		27.0			19.0		26.0	22.0		26.0	22.0	
Effective Green, g (s)		27.0			19.0		26.0	22.0		26.0	22.0	
Actuated g/C Ratio		0.42			0.29		0.40	0.34		0.40	0.34	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		736			790		284	1078		236	948	
v/s Ratio Prot		c0.09					c0.05	0.21		0.02	0.17	
v/s Ratio Perm		c0.53			0.20		c0.26			0.13		
v/c Ratio		1.49			0.68		0.77	0.62		0.38	0.51	
Uniform Delay, d1		19.0			20.3		16.0	18.0		12.8	17.2	
Progression Factor		1.00			1.51		1.10	0.99		1.00	1.00	
Incremental Delay, d2		228.0			0.4		14.4	2.0		4.5	1.9	
Delay (s)		247.0			31.2		32.0	19.8		17.4	19.1	
Level of Service		F			C		C	B		B	B	
Approach Delay (s)		247.0			31.2			22.8			18.9	
Approach LOS		F			C			C			B	

Intersection Summary			
HCM Average Control Delay	109.9	HCM Level of Service	F
HCM Volume to Capacity ratio	1.12		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	92.8%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱		↰	↑↱		↰	↑↱	
Volume (vph)	49	111	341	856	127	13	110	780	274	10	949	43
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	12	12	12	12	12
Total Lost time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.98		1.00	1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.89		1.00	0.99		1.00	0.96		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1665	1691		1620	1938		1659	3108		1139	3233	
Flt Permitted	0.67	1.00		0.30	1.00		0.19	1.00		0.17	1.00	
Satd. Flow (perm)	1166	1691		517	1938		340	3108		205	3233	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	51	114	352	882	131	13	113	804	282	10	978	44
RTOR Reduction (vph)	0	44	0	0	6	0	0	54	0	0	5	0
Lane Group Flow (vph)	51	422	0	882	138	0	113	1032	0	10	1017	0
Confl. Peds. (#/hr)	10		16	16		10	4		6	6		4
Confl. Bikes (#/hr)			4	4								
Heavy Vehicles (%)	2%	4%	5%	5%	4%	0%	3%	4%	8%	50%	5%	6%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	24.0	24.0		24.0	24.0		31.0	31.0		31.0	31.0	
Effective Green, g (s)	24.0	24.0		24.0	24.0		31.0	31.0		31.0	31.0	
Actuated g/C Ratio	0.37	0.37		0.37	0.37		0.48	0.48		0.48	0.48	
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)	431	624		191	716		162	1482		98	1542	
v/s Ratio Prot		0.25			0.07			0.33			0.31	
v/s Ratio Perm	0.04			c1.71			c0.33			0.05		
v/c Ratio	0.12	0.68		4.62	0.19		0.70	0.70		0.10	0.66	
Uniform Delay, d1	13.5	17.2		20.5	13.9		13.3	13.3		9.3	13.0	
Progression Factor	1.00	1.00		1.74	1.94		1.00	1.00		0.99	0.97	
Incremental Delay, d2	0.6	5.8		1629.1	0.1		22.1	2.7		0.2	0.2	
Delay (s)	14.1	23.1		1664.7	27.0		35.4	16.0		9.4	12.8	
Level of Service	B	C		F	C		D	B		A	B	
Approach Delay (s)		22.2			1434.9			17.9			12.8	
Approach LOS		C			F			B			B	

Intersection Summary			
HCM Average Control Delay	402.3	HCM Level of Service	F
HCM Volume to Capacity ratio	2.41		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	131.8%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1070: 127th Street & S Wallance St

Movement	EBT	WBL	WBT	WBR	NBL2	NBL	NBT	NBR	SBL	SBT	SBR	SBR2
Lane Configurations	↰↑↑↱		↰↑↑↱				✢			✢		
Volume (vph)	422	948	556	14	3	14	3	46	10	0	2	4
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	12	12	16	12	12	16	12	12
Total Lost time (s)	5.0		5.0				4.0			4.0		
Lane Util. Factor	0.95		0.95				1.00			1.00		
Frpb, ped/bikes	1.00		1.00				1.00			0.99		
Flpb, ped/bikes	1.00		1.00				1.00			1.00		
Frt	1.00		1.00				0.91			0.95		
Flt Protected	1.00		0.97				0.99			0.97		
Satd. Flow (prot)	2956		2879				1732			1864		
Flt Permitted	1.00		0.59				0.94			0.87		
Satd. Flow (perm)	2956		1743				1650			1672		
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	444	998	585	15	3	15	3	48	11	0	2	4
RTOR Reduction (vph)	0	0	1	0	0	0	38	0	0	3	0	0
Lane Group Flow (vph)	444	0	1597	0	0	0	31	0	0	14	0	0
Confl. Peds. (#/hr)		7		6		3					3	
Confl. Bikes (#/hr)		1										
Heavy Vehicles (%)	8%	8%	6%	0%	0%	8%	0%	5%	0%	0%	0%	0%
Turn Type		custom				Perm			Perm			
Protected Phases	8	7	4				2			6		
Permitted Phases		4 7				2			6			
Actuated Green, G (s)	18.0		27.0				14.0			14.0		
Effective Green, g (s)	18.0		27.0				14.0			14.0		
Actuated g/C Ratio	0.28		0.42				0.22			0.22		
Clearance Time (s)	5.0		5.0				4.0			4.0		
Lane Grp Cap (vph)	819		829				355			360		
v/s Ratio Prot	0.15		c0.18									
v/s Ratio Perm			c0.62				c0.02			0.01		
v/c Ratio	0.54		3.34dl				0.09			0.04		
Uniform Delay, d1	20.0		19.0				20.4			20.2		
Progression Factor	1.23		0.67				1.00			1.00		
Incremental Delay, d2	0.2		419.8				0.5			0.2		
Delay (s)	24.7		432.5				20.9			20.4		
Level of Service	C		F				C			C		
Approach Delay (s)	24.7		432.5				20.9			20.4		
Approach LOS	C		F				C			C		

Intersection Summary			
HCM Average Control Delay	356.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.42		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	124.8%	ICU Level of Service	H
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1070: 127th Street & S Wallance St

1/14/2013

Movement	NEL	NER
Lane Configurations		
Volume (vph)	1	410
Ideal Flow (vphpl)	1800	1800
Lane Width	12	12
Total Lost time (s)	5.0	
Lane Util. Factor	1.00	
Frpb, ped/bikes	1.00	
Flpb, ped/bikes	1.00	
Frt	0.87	
Flt Protected	1.00	
Satd. Flow (prot)	1429	
Flt Permitted	1.00	
Satd. Flow (perm)	1429	
Peak-hour factor, PHF	0.95	0.95
Adj. Flow (vph)	1	432
RTOR Reduction (vph)	0	0
Lane Group Flow (vph)	433	0
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		
Heavy Vehicles (%)	0%	9%
Turn Type		
Protected Phases	3	
Permitted Phases		
Actuated Green, G (s)	10.0	
Effective Green, g (s)	10.0	
Actuated g/C Ratio	0.15	
Clearance Time (s)	5.0	
Lane Grp Cap (vph)	220	
v/s Ratio Prot	c0.30	
v/s Ratio Perm		
v/c Ratio	1.97	
Uniform Delay, d1	27.5	
Progression Factor	1.25	
Incremental Delay, d2	448.0	
Delay (s)	482.3	
Level of Service	F	
Approach Delay (s)	482.3	
Approach LOS	F	

Intersection Summary

HCM Signalized Intersection Capacity Analysis
1071: 127th Street & State Street

1/14/2013

	↗	→	←	↖	↘	↙
Movement	**EBL**	**EBT**	**WBT**	**WBR**	**SBL**	**SBR**
Lane Configurations		↰↑	↑↱		↰	↱
Volume (vph)	206	733	1284	64	41	235
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		1.00	1.00
Frt		1.00	0.99		1.00	0.85
Flt Protected		0.99	1.00		0.95	1.00
Satd. Flow (prot)		3222	3234		1629	1457
Flt Permitted		0.51	1.00		0.95	1.00
Satd. Flow (perm)		1670	3234		1629	1457
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	229	814	1427	71	46	261
RTOR Reduction (vph)	0	0	5	0	0	36
Lane Group Flow (vph)	0	1043	1493	0	46	225
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%
Turn Type	Perm					Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)		40.0	40.0		17.0	17.0
Effective Green, g (s)		40.0	40.0		17.0	17.0
Actuated g/C Ratio		0.62	0.62		0.26	0.26
Clearance Time (s)		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		1028	1990		426	381
v/s Ratio Prot			0.46		0.03	
v/s Ratio Perm		c0.62				c0.15
v/c Ratio		2.04dl	0.75		0.11	0.59
Uniform Delay, d1		12.5	8.9		18.2	21.0
Progression Factor		1.78	0.89		0.99	0.97
Incremental Delay, d2		12.4	1.6		0.5	6.6
Delay (s)		34.6	9.5		18.6	26.8
Level of Service		C	A		B	C
Approach Delay (s)		34.6	9.5		25.6	
Approach LOS		C	A		C	

Intersection Summary			
HCM Average Control Delay	20.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	80.7%	ICU Level of Service	D
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1072: 127th Street & Michigan Avenue

1/14/2013

	↗	→	←	↖	↘	↙
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰↑	↑↱		↰	↱
Volume (vph)	56	697	1269	190	131	74
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	12	10	11	12	10	10
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		1.00	1.00
Frpb, ped/bikes		1.00	1.00		1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00
Frt		1.00	0.98		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		2928	2979		1464	1373
Flt Permitted		0.72	1.00		0.95	1.00
Satd. Flow (perm)		2102	2979		1464	1373
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	59	734	1336	200	138	78
RTOR Reduction (vph)	0	0	18	0	0	36
Lane Group Flow (vph)	0	793	1518	0	138	42
Confl. Peds. (#/hr)	1			1		
Confl. Bikes (#/hr)	1			1		
Heavy Vehicles (%)	4%	9%	8%	12%	9%	4%
Turn Type	Perm					Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)		38.0	38.0		19.0	19.0
Effective Green, g (s)		38.0	38.0		19.0	19.0
Actuated g/C Ratio		0.58	0.58		0.29	0.29
Clearance Time (s)		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		1229	1742		428	401
v/s Ratio Prot			c0.51		c0.09	
v/s Ratio Perm		0.38				0.03
v/c Ratio		0.65	0.87		0.32	0.10
Uniform Delay, d1		9.0	11.4		18.0	16.8
Progression Factor		0.92	1.03		0.94	1.01
Incremental Delay, d2		0.8	2.0		2.0	0.5
Delay (s)		9.0	13.8		18.9	17.5
Level of Service		A	B		B	B
Approach Delay (s)		9.0	13.8		18.4	
Approach LOS		A	B		B	

Intersection Summary			
HCM Average Control Delay	12.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	79.8%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↱		↰	↑	↰↱	
Volume (vph)	662	168	104	1164	460	79
Ideal Flow (vphpl)	2300	1800	1800	2300	1800	1800
Lane Width	15	12	14	16	15	12
Total Lost time (s)	5.0		5.0	5.0	5.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.97		1.00	1.00	0.98	
Flt Protected	1.00		0.95	1.00	0.96	
Satd. Flow (prot)	2223		1770	2436	1820	
Flt Permitted	1.00		0.13	1.00	0.96	
Satd. Flow (perm)	2223		240	2436	1820	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	676	171	106	1188	469	81
RTOR Reduction (vph)	14	0	0	0	9	0
Lane Group Flow (vph)	833	0	106	1188	541	0
Confl. Peds. (#/hr)		4	4			8
Heavy Vehicles (%)	11%	7%	3%	7%	2%	2%
Turn Type			Perm			
Protected Phases	4			8	2	
Permitted Phases			8			
Actuated Green, G (s)	31.0		31.0	31.0	24.0	
Effective Green, g (s)	31.0		31.0	31.0	24.0	
Actuated g/C Ratio	0.48		0.48	0.48	0.37	
Clearance Time (s)	5.0		5.0	5.0	5.0	
Lane Grp Cap (vph)	1060		114	1162	672	
v/s Ratio Prot	0.37			c0.49	c0.30	
v/s Ratio Perm			0.44			
v/c Ratio	0.79		0.93	1.02	0.80	
Uniform Delay, d1	14.2		16.0	17.0	18.4	
Progression Factor	1.51		1.00	1.00	1.00	
Incremental Delay, d2	4.8		67.0	32.2	9.9	
Delay (s)	26.2		83.0	49.2	28.3	
Level of Service	C		F	D	C	
Approach Delay (s)	26.2			52.0	28.3	
Approach LOS	C			D	C	

Intersection Summary			
HCM Average Control Delay	39.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	91.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1074: 130th Street & Ellis Ave

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑↑	↱		↰	↱		✥	
Volume (vph)	1	708	95	251	1203	9	107	0	177	1	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	15	13	11	11	12	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0	4.0	3.0	3.0	4.0		4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85		1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.95	1.00		0.95	
Satd. Flow (prot)	1881	3213	1422	1589	3138	1366		1642	1443		969	
Flt Permitted	0.20	1.00	1.00	0.27	1.00	1.00		0.76	1.00		0.62	
Satd. Flow (perm)	405	3213	1422	455	3138	1366		1309	1443		636	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1	787	106	279	1337	10	119	0	197	1	0	0
RTOR Reduction (vph)	0	0	50	0	0	2	0	0	167	0	0	0
Lane Group Flow (vph)	1	787	56	279	1337	8	0	119	30	0	1	0
Heavy Vehicles (%)	0%	10%	4%	4%	9%	12%	18%	0%	6%	100%	0%	0%
Turn Type	Perm		Perm	custom		custom	Perm		Perm	Perm		
Protected Phases		4		3	3 8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)	44.7	44.7	44.7	64.0	64.0	64.0		13.0	13.0		13.0	
Effective Green, g (s)	44.7	44.7	44.7	64.0	64.0	64.0		13.0	13.0		13.0	
Actuated g/C Ratio	0.53	0.53	0.53	0.75	0.75	0.75		0.15	0.15		0.15	
Clearance Time (s)	4.0	4.0	4.0	3.0		4.0		4.0	4.0		4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0		3.0	3.0		3.0	
Lane Grp Cap (vph)	213	1690	748	560	2363	1029		200	221		97	
v/s Ratio Prot		0.24		0.10	c0.43							
v/s Ratio Perm	0.00		0.04	0.28		0.01		c0.09	0.02		0.00	
v/c Ratio	0.00	0.47	0.07	0.50	0.57	0.01		0.59	0.14		0.01	
Uniform Delay, d1	9.6	12.7	9.9	4.5	4.5	2.6		33.5	31.1		30.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2	0.0	0.9	0.2	0.7	0.3	0.0		4.7	0.3		0.0	
Delay (s)	9.6	13.6	10.1	5.2	4.8	2.6		38.2	31.4		30.6	
Level of Service	A	B	B	A	A	A		D	C		C	
Approach Delay (s)		13.2			4.9			34.0			30.6	
Approach LOS		B			A			C			C	

Intersection Summary			
HCM Average Control Delay	10.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	7.0
Intersection Capacity Utilization	54.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰↑	↑↱		↰↱	
Volume (vph)	12	775	801	43	23	9
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	12	10	10
Total Lost time (s)		5.0	5.0		3.0	
Lane Util. Factor		0.95	0.95		1.00	
Frt		1.00	0.99		0.96	
Flt Protected		1.00	1.00		0.97	
Satd. Flow (prot)		3038	3017		1486	
Flt Permitted		0.94	1.00		0.97	
Satd. Flow (perm)		2843	3017		1486	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	13	861	890	48	26	10
RTOR Reduction (vph)	0	0	4	0	9	0
Lane Group Flow (vph)	0	874	934	0	27	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%
Turn Type	Perm					
Protected Phases		4	8 2 11		5	
Permitted Phases	4					
Actuated Green, G (s)		33.0	64.0		7.0	
Effective Green, g (s)		33.0	64.0		7.0	
Actuated g/C Ratio		0.37	0.71		0.08	
Clearance Time (s)		5.0			3.0	
Lane Grp Cap (vph)		1042	2145		116	
v/s Ratio Prot			c0.31		c0.02	
v/s Ratio Perm		c0.31				
v/c Ratio		0.84	0.44		0.23	
Uniform Delay, d1		26.1	5.4		39.0	
Progression Factor		1.00	0.00		1.00	
Incremental Delay, d2		8.1	0.3		4.6	
Delay (s)		34.2	0.3		43.6	
Level of Service		C	A		D	
Approach Delay (s)		34.2	0.3		43.6	
Approach LOS		C	A		D	

Intersection Summary			
HCM Average Control Delay	17.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	42.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1955: 115th Street & Cottage Grove Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑ ↑↱			↰↑↱			↰↑	↱
Volume (vph)	78	423	1	26	554	78	0	0	1	43	3	91
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	12	12	11	12	11
Total Lost time (s)		4.0			4.0			3.0			3.0	3.0
Lane Util. Factor		1.00			0.95			1.00			1.00	1.00
Frpb, ped/bikes		1.00			1.00			0.92			1.00	0.96
Flpb, ped/bikes		1.00			1.00			1.00			0.98	1.00
Frt		1.00			0.98			0.86			1.00	0.85
Flt Protected		0.99			1.00			1.00			0.96	1.00
Satd. Flow (prot)		1728			3231			1432			1610	1282
Flt Permitted		0.79			0.93			1.00			0.94	1.00
Satd. Flow (perm)		1382			3025			1432			1581	1282
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	87	470	1	29	616	87	0	0	1	48	3	101
RTOR Reduction (vph)	0	0	0	0	12	0	0	1	0	0	0	68
Lane Group Flow (vph)	0	558	0	0	720	0	0	0	0	0	51	33
Confl. Peds. (#/hr)	33		13	13		33	29		13	13		29
Confl. Bikes (#/hr)	1		1	1		1						
Heavy Vehicles (%)	4%	3%	0%	0%	4%	0%	0%	0%	0%	5%	0%	11%
Turn Type	Perm			Prot			Perm			pm+pt		Perm
Protected Phases		4		3	3 4			1		2	1 2	
Permitted Phases	4				3		1	1		1 2		1 2
Actuated Green, G (s)		31.0			45.0			9.0			25.0	28.0
Effective Green, g (s)		31.0			45.0			9.0			25.0	28.0
Actuated g/C Ratio		0.36			0.53			0.11			0.29	0.33
Clearance Time (s)		4.0						3.0				
Lane Grp Cap (vph)		504			1635			152			470	422
v/s Ratio Prot					c0.07			0.00			c0.02	
v/s Ratio Perm		c0.40			0.16						c0.01	0.03
v/c Ratio		1.11			0.44			0.00			0.11	0.08
Uniform Delay, d1		27.0			12.3			34.0			21.9	19.6
Progression Factor		1.00			1.76			1.00			1.00	1.00
Incremental Delay, d2		72.7			0.1			0.0			0.5	0.4
Delay (s)		99.7			21.7			34.0			22.3	20.0
Level of Service		F			C			C			C	B
Approach Delay (s)		99.7			21.7			34.0			20.8	
Approach LOS		F			C			C			C	

Intersection Summary			
HCM Average Control Delay	51.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	71.4%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1001: 95th Street & Wentworth Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			✥			✥	
Volume (vph)	39	598	28	35	997	57	36	35	48	23	26	87
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	16	10	10	16	8	15	8	8	14	8
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			0.99			0.98	
Flpb, ped/bikes	0.98	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.99			0.95			0.91	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1556	3022		1587	3021			1816			1706	
Flt Permitted	0.17	1.00		0.36	1.00			0.89			0.95	
Satd. Flow (perm)	286	3022		604	3021			1649			1630	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	41	629	29	37	1049	60	38	37	51	24	27	92
RTOR Reduction (vph)	0	5	0	0	6	0	0	33	0	0	22	0
Lane Group Flow (vph)	41	653	0	37	1103	0	0	93	0	0	121	0
Confl. Peds. (#/hr)	145		16	16		145	17		19	19		17
Confl. Bikes (#/hr)	5					5			2	2		
Heavy Vehicles (%)	0%	5%	0%	0%	4%	2%	0%	0%	0%	0%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	34.0	34.0		34.0	34.0			22.0			22.0	
Effective Green, g (s)	34.0	34.0		34.0	34.0			23.0			23.0	
Actuated g/C Ratio	0.52	0.52		0.52	0.52			0.35			0.35	
Clearance Time (s)	4.0	4.0		4.0	4.0			5.0			5.0	
Lane Grp Cap (vph)	150	1581		316	1580			583			577	
v/s Ratio Prot		0.22			c0.37							
v/s Ratio Perm	0.14			0.06				0.06			c0.07	
v/c Ratio	0.27	0.41		0.12	0.70			0.16			0.21	
Uniform Delay, d1	8.6	9.4		7.9	11.6			14.4			14.7	
Progression Factor	1.00	1.00		0.70	1.38			1.00			1.00	
Incremental Delay, d2	4.5	0.8		0.7	2.3			0.6			0.8	
Delay (s)	13.1	10.2		6.2	18.4			15.0			15.5	
Level of Service	B	B		A	B			B			B	
Approach Delay (s)		10.4			18.0			15.0			15.5	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	15.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1002: 95th Street & Lafayette Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↑	↱				↰↰	↑	↱
Volume (vph)	25	787	5	31	619	40	0	0	0	578	88	375
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	5.0	5.0		3.0	3.0	3.0				5.0	5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00				0.97	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.67				1.00	1.00	0.98
Flpb, ped/bikes	0.92	1.00		1.00	1.00	1.00				1.00	1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85				1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00				0.95	1.00	1.00
Satd. Flow (prot)	790	3379		1710	3226	514				3285	1731	1481
Flt Permitted	0.40	1.00		0.14	1.00	1.00				0.95	1.00	1.00
Satd. Flow (perm)	336	3379		248	3226	514				3285	1731	1481
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	26	828	5	33	652	42	0	0	0	608	93	395
RTOR Reduction (vph)	0	0	0	0	0	18	0	0	0	0	0	168
Lane Group Flow (vph)	26	833	0	33	652	24	0	0	0	608	93	227
Confl. Peds. (#/hr)	350		4	4		350	8		6	6		8
Confl. Bikes (#/hr)	7		1	1		7						
Heavy Vehicles (%)	100%	1%	20%	0%	6%	100%	0%	0%	0%	1%	4%	1%
Turn Type	pm+pt			pm+pt		Perm				Split		Perm
Protected Phases	7	4		3	8					6	6	
Permitted Phases	4			8		8						6
Actuated Green, G (s)	43.0	43.0		73.0	73.0	73.0				30.0	30.0	30.0
Effective Green, g (s)	43.0	43.0		73.0	73.0	73.0				30.0	30.0	30.0
Actuated g/C Ratio	0.33	0.33		0.56	0.56	0.56				0.23	0.23	0.23
Clearance Time (s)	5.0	5.0		3.0	3.0	3.0				5.0	5.0	5.0
Lane Grp Cap (vph)	160	1118		634	1812	289				758	399	342
v/s Ratio Prot	0.02	c0.25		0.02	c0.20					c0.19	0.05	
v/s Ratio Perm	0.04			0.01		0.05						0.15
v/c Ratio	0.16	0.75		0.05	0.36	0.08				0.80	0.23	0.66
Uniform Delay, d1	31.6	38.6		15.2	15.7	13.1				47.2	40.6	45.4
Progression Factor	0.85	0.86		0.34	0.75	1.27				1.00	1.00	1.00
Incremental Delay, d2	2.1	4.4		0.1	0.4	0.4				8.8	1.4	9.8
Delay (s)	28.9	37.4		5.2	12.2	17.0				56.0	42.0	55.2
Level of Service	C	D		A	B	B				E	D	E
Approach Delay (s)		37.2			12.1			0.0			54.5	
Approach LOS		D			B			A			D	

Intersection Summary			
HCM Average Control Delay	37.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	52.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1003: 95th Street & State Street

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↱		↰	↑↑	↱		↰↑	↱	↰		↱
Volume (vph)	338	809	218	53	560	280	100	247	54	39	0	30
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0	3.0		5.0	5.0	5.0		5.0	5.0	5.0		5.0
Lane Util. Factor	0.97	0.95		1.00	0.95	1.00		0.95	1.00	1.00		1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.67		1.00	0.91	1.00		0.96
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Frt	1.00	0.97		1.00	1.00	0.85		1.00	0.85	1.00		0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.99	1.00	0.95		1.00
Satd. Flow (prot)	3285	3263		1710	3138	1018		3301	1359	855		734
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.99	1.00	0.95		1.00
Satd. Flow (perm)	3285	3263		1710	3138	1018		3301	1359	855		734
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	356	852	229	56	589	295	105	260	57	41	0	32
RTOR Reduction (vph)	0	18	0	0	0	222	0	0	42	0	0	30
Lane Group Flow (vph)	356	1063	0	56	589	73	0	365	15	41	0	2
Confl. Peds. (#/hr)	327		13	13		327	6		60	60		6
Confl. Bikes (#/hr)	6					6						
Heavy Vehicles (%)	1%	1%	0%	0%	9%	1%	0%	3%	2%	100%	0%	100%
Turn Type	Prot			Prot		Perm	Split		Perm	Prot		custom
Protected Phases	7	4		3	8		2	2		6		
Permitted Phases						8			2			6
Actuated Green, G (s)	44.0	68.0		8.0	32.0	32.0		28.0	28.0	8.0		8.0
Effective Green, g (s)	44.0	68.0		8.0	32.0	32.0		28.0	28.0	8.0		8.0
Actuated g/C Ratio	0.34	0.52		0.06	0.25	0.25		0.22	0.22	0.06		0.06
Clearance Time (s)	3.0	3.0		5.0	5.0	5.0		5.0	5.0	5.0		5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0	3.0	3.0		3.0
Lane Grp Cap (vph)	1112	1707		105	772	251		711	293	53		45
v/s Ratio Prot	0.11	c0.33		0.03	c0.19			c0.11		c0.05		
v/s Ratio Perm						0.07			0.01			0.00
v/c Ratio	0.32	0.62		0.53	0.76	0.29		0.51	0.05	0.77		0.04
Uniform Delay, d1	31.9	21.9		59.2	45.5	39.8		45.0	40.5	60.1		57.4
Progression Factor	0.94	0.17		1.00	1.00	1.00		0.95	1.00	1.00		1.00
Incremental Delay, d2	0.5	1.1		18.0	7.0	2.9		2.6	0.3	49.7		0.4
Delay (s)	30.5	4.7		77.2	52.5	42.7		45.2	40.9	109.9		57.8
Level of Service	C	A		E	D	D		D	D	F		E
Approach Delay (s)		11.1			50.9			44.7			87.0	
Approach LOS		B			D			D			F	

Intersection Summary			
HCM Average Control Delay	31.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	68.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1004: 95th Street & Michigan Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱		↰	↑↑		↰		↱	↰	↱	
Volume (vph)	0	885	165	102	813	0	74	0	89	9	15	7
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	11	11	8	12	12	12	14	15	12
Total Lost time (s)		4.0		4.0	4.0		4.0		4.0	4.0	4.0	
Lane Util. Factor		0.95		1.00	0.95		1.00		1.00	1.00	1.00	
Frpb, ped/bikes		0.99		1.00	1.00		1.00		0.98	1.00	0.98	
Flpb, ped/bikes		1.00		1.00	1.00		0.97		1.00	0.99	1.00	
Frt		0.98		1.00	1.00		1.00		0.85	1.00	0.95	
Flt Protected		1.00		0.95	1.00		0.95		1.00	0.95	1.00	
Satd. Flow (prot)		2997		1649	3149		1388		1451	1803	1857	
Flt Permitted		1.00		0.18	1.00		0.74		1.00	0.95	1.00	
Satd. Flow (perm)		2997		304	3149		1082		1451	1803	1857	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	983	183	113	903	0	82	0	99	10	17	8
RTOR Reduction (vph)	0	15	0	0	0	0	0	0	67	0	5	0
Lane Group Flow (vph)	0	1151	0	113	903	0	82	0	32	10	20	0
Confl. Peds. (#/hr)	67		19	19		67	38		12	12		38
Confl. Bikes (#/hr)			1	1								
Heavy Vehicles (%)	0%	2%	11%	0%	5%	0%	19%	0%	3%	0%	0%	0%
Turn Type				Perm			custom		custom	Perm		
Protected Phases		4			8						6	
Permitted Phases				8			2		2	6		
Actuated Green, G (s)		60.0		60.0	60.0		32.0		32.0	32.0	32.0	
Effective Green, g (s)		60.0		60.0	60.0		32.0		32.0	32.0	32.0	
Actuated g/C Ratio		0.60		0.60	0.60		0.32		0.32	0.32	0.32	
Clearance Time (s)		4.0		4.0	4.0		4.0		4.0	4.0	4.0	
Lane Grp Cap (vph)		1798		182	1889		346		464	577	594	
v/s Ratio Prot		c0.38			0.29						0.01	
v/s Ratio Perm				0.37			c0.08		0.02	0.01		
v/c Ratio		0.64		0.62	0.48		0.24		0.07	0.02	0.03	
Uniform Delay, d1		13.0		12.7	11.2		25.0		23.6	23.2	23.4	
Progression Factor		1.00		1.00	1.00		1.00		1.00	1.00	1.00	
Incremental Delay, d2		1.8		14.9	0.9		1.6		0.3	0.1	0.1	
Delay (s)		14.7		27.6	12.1		26.6		23.9	23.3	23.5	
Level of Service		B		C	B		C		C	C	C	
Approach Delay (s)		14.7			13.8			25.1			23.4	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM Average Control Delay	15.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	61.0%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↰	↰	↱	↰	↑↑↑			↑↑↑↱	
Volume (vph)	0	0	0	291	0	1188	214	682	0	0	792	490
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	12	12	10	10	12	12	11	12
Total Lost time (s)				4.0		5.0	3.0	4.0			4.0	
Lane Util. Factor				0.95		1.00	1.00	0.91			0.91	
Frpb, ped/bikes				1.00		1.00	1.00	1.00			0.98	
Flpb, ped/bikes				1.00		1.00	1.00	1.00			1.00	
Frt				1.00		0.85	1.00	1.00			0.94	
Flt Protected				0.95		1.00	0.95	1.00			1.00	
Satd. Flow (prot)				1540		1530	1535	4327			4271	
Flt Permitted				0.95		1.00	0.95	1.00			1.00	
Satd. Flow (perm)				1540		1530	1535	4327			4271	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	0	0	297	0	1212	218	696	0	0	808	500
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	297	0	1212	218	696	0	0	1308	0
Confl. Peds. (#/hr)	2					2	18		3	3		18
Heavy Vehicles (%)	0%	0%	0%	2%	0%	0%	4%	6%	0%	0%	4%	1%
Turn Type				Split		Prot	Prot					
Protected Phases				8	8	8	5	2			6	
Permitted Phases												
Actuated Green, G (s)				30.0		30.0	32.0	66.0			31.0	
Effective Green, g (s)				31.0		30.0	32.0	66.0			31.0	
Actuated g/C Ratio				0.30		0.29	0.30	0.63			0.30	
Clearance Time (s)				5.0		5.0	3.0	4.0			4.0	
Lane Grp Cap (vph)				455		437	468	2720			1261	
v/s Ratio Prot				0.19		c0.79	c0.14	0.16			c0.31	
v/s Ratio Perm												
v/c Ratio				0.65		2.77	0.47	0.26			1.16dr	
Uniform Delay, d1				32.3		37.5	29.6	8.6			37.0	
Progression Factor				1.00		1.00	0.64	2.10			1.00	
Incremental Delay, d2				7.1		804.4	2.8	0.2			35.5	
Delay (s)				39.4		841.9	21.6	18.3			72.5	
Level of Service				D		F	C	B			E	
Approach Delay (s)		0.0			684.0			19.1			72.5	
Approach LOS		A			F			B			E	

Intersection Summary			
HCM Average Control Delay	306.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.40		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	99.3%	ICU Level of Service	F
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.
c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1006: 99th Street & Halsted Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↰↑↱						↑↑↑	↱↱	↰	↑↑↑	
Volume (vph)	324	770	146	0	0	0	0	572	403	355	727	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	13	12	12	12	12	12	10	10	8	12	12	12
Total Lost time (s)	5.0	5.0						4.0	4.0	3.0	4.0	
Lane Util. Factor	0.91	0.91						0.91	0.88	1.00	0.91	
Frpb, ped/bikes	1.00	1.00						1.00	1.00	1.00	1.00	
Flpb, ped/bikes	0.99	1.00						1.00	1.00	1.00	1.00	
Frt	1.00	0.98						1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00						1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1509	3156						4368	2244	1598	4680	
Flt Permitted	0.95	1.00						1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1509	3156						4368	2244	1598	4680	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	334	794	151	0	0	0	0	590	415	366	749	0
RTOR Reduction (vph)	0	14	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	301	964	0	0	0	0	0	590	415	366	749	0
Confl. Peds. (#/hr)	6		1	1		6	6					6
Heavy Vehicles (%)	6%	1%	0%	0%	0%	0%	0%	5%	4%	7%	5%	0%
Turn Type	Perm								Perm	Prot		
Protected Phases		4						2		1	6	
Permitted Phases	4								2			
Actuated Green, G (s)	34.0	34.0						28.0	28.0	31.0	62.0	
Effective Green, g (s)	34.0	34.0						28.0	28.0	31.0	62.0	
Actuated g/C Ratio	0.32	0.32						0.27	0.27	0.30	0.59	
Clearance Time (s)	5.0	5.0						4.0	4.0	3.0	4.0	
Lane Grp Cap (vph)	489	1022						1165	598	472	2763	
v/s Ratio Prot								0.14		c0.23	0.16	
v/s Ratio Perm	0.20	0.31							c0.18			
v/c Ratio	0.62	0.94						0.51	0.69	0.78	0.27	
Uniform Delay, d1	30.0	34.6						32.6	34.6	33.8	10.5	
Progression Factor	1.00	1.00						1.14	1.14	0.86	0.21	
Incremental Delay, d2	5.7	17.5						1.4	5.9	4.6	0.1	
Delay (s)	35.7	52.0						38.7	45.4	33.7	2.3	
Level of Service	D	D						D	D	C	A	
Approach Delay (s)		48.2			0.0			41.5			12.6	
Approach LOS		D			A			D			B	

Intersection Summary			
HCM Average Control Delay	34.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	99.3%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1007: 98th Place & Wentworth Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↰	↑↱		↰	↑			↱	
Volume (vph)	0	0	0	287	25	24	11	157	0	0	147	5
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	14	12	12	16	12
Total Lost time (s)				4.0	4.0		4.0	4.0			-3.0	
Lane Util. Factor				1.00	0.95		1.00	1.00			1.00	
Frpb, ped/bikes				1.00	0.99		1.00	1.00			1.00	
Flpb, ped/bikes				1.00	1.00		1.00	1.00			1.00	
Frt				1.00	0.93		1.00	1.00			1.00	
Flt Protected				0.95	1.00		0.95	1.00			1.00	
Satd. Flow (prot)				1688	3132		1710	1846			1955	
Flt Permitted				0.95	1.00		0.54	1.00			1.00	
Satd. Flow (perm)				1688	3132		979	1846			1955	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	319	28	27	12	174	0	0	163	6
RTOR Reduction (vph)	0	0	0	0	18	0	0	0	0	0	1	0
Lane Group Flow (vph)	0	0	0	319	37	0	12	174	0	0	168	0
Confl. Peds. (#/hr)	2		2	2		2			6	6		
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	0%	0%	0%	1%	0%	0%	0%	4%	0%	0%	4%	0%
Turn Type				Perm			pm+pt					
Protected Phases					8		7	2			6	
Permitted Phases				8			2					
Actuated Green, G (s)				27.0	27.0		50.0	50.0			40.0	
Effective Green, g (s)				27.0	27.0		50.0	50.0			46.0	
Actuated g/C Ratio				0.32	0.32		0.59	0.59			0.54	
Clearance Time (s)				4.0	4.0		4.0	4.0			3.0	
Lane Grp Cap (vph)				536	995		636	1086			1058	
v/s Ratio Prot					0.01		0.00	c0.09			0.09	
v/s Ratio Perm				c0.19			0.01					
v/c Ratio				0.60	0.04		0.02	0.16			0.16	
Uniform Delay, d1				24.4	20.0		10.5	8.0			9.8	
Progression Factor				1.00	1.00		1.05	1.17			1.00	
Incremental Delay, d2				4.8	0.1		0.1	0.3			0.3	
Delay (s)				29.2	20.1		11.1	9.7			10.1	
Level of Service				C	C		B	A			B	
Approach Delay (s)		0.0			27.9			9.8			10.1	
Approach LOS		A			C			A			B	

Intersection Summary			
HCM Average Control Delay	19.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	36.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1008: 99th St & Wentworth Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱			✥			↱		↰	↑	
Volume (vph)	12	11	23	5	0	14	0	142	43	46	389	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	16	15	12	8	12	8	12	12	12	10	13	12
Total Lost time (s)	4.0	4.0			4.0			3.0		4.0	4.0	
Lane Util. Factor	1.00	1.00			1.00			1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.97			0.98			0.99		1.00	1.00	
Flpb, ped/bikes	1.00	1.00			1.00			1.00		1.00	1.00	
Frt	1.00	0.90			0.90			0.97		1.00	1.00	
Flt Protected	0.95	1.00			0.99			1.00		0.95	1.00	
Satd. Flow (prot)	1935	1735			1565			1718		1590	1860	
Flt Permitted	0.74	1.00			0.97			1.00		0.60	1.00	
Satd. Flow (perm)	1516	1735			1531			1718		1004	1860	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	13	12	24	5	0	15	0	149	45	48	409	0
RTOR Reduction (vph)	0	16	0	0	10	0	0	13	0	0	0	0
Lane Group Flow (vph)	13	20	0	0	10	0	0	181	0	48	409	0
Confl. Peds. (#/hr)	1		11	11		1	1		10	10		1
Confl. Bikes (#/hr)			2	2			1		2	2		1
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%
Turn Type	Perm			Perm						pm+pt		
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8						6		
Actuated Green, G (s)	27.0	27.0			27.0			40.0		50.0	50.0	
Effective Green, g (s)	27.0	27.0			27.0			40.0		50.0	50.0	
Actuated g/C Ratio	0.32	0.32			0.32			0.47		0.59	0.59	
Clearance Time (s)	4.0	4.0			4.0			3.0		4.0	4.0	
Lane Grp Cap (vph)	482	551			486			808		639	1094	
v/s Ratio Prot		c0.01						0.11		0.01	c0.22	
v/s Ratio Perm	0.01				0.01					0.04		
v/c Ratio	0.03	0.04			0.02			0.22		0.08	0.37	
Uniform Delay, d1	20.0	20.0			19.9			13.3		8.6	9.2	
Progression Factor	1.00	1.00			1.00			1.00		0.97	0.87	
Incremental Delay, d2	0.1	0.1			0.1			0.6		0.2	0.9	
Delay (s)	20.1	20.1			20.0			14.0		8.6	8.9	
Level of Service	C	C			B			B		A	A	
Approach Delay (s)		20.1			20.0			14.0			8.9	
Approach LOS		C			B			B			A	

Intersection Summary			
HCM Average Control Delay	11.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	41.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1009: 99th St & State Street

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰↱		↰	↑	↱	
Volume (vph)	46	40	12	183	273	27
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	14	12	13	12	10	12
Total Lost time (s)	4.0		4.0	4.0	4.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.94		1.00	1.00	0.99	
Flt Protected	0.97		0.95	1.00	1.00	
Satd. Flow (prot)	1753		1765	1782	1656	
Flt Permitted	0.97		0.52	1.00	1.00	
Satd. Flow (perm)	1753		966	1782	1656	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	51	44	13	203	303	30
RTOR Reduction (vph)	30	0	0	0	5	0
Lane Group Flow (vph)	65	0	13	203	328	0
Confl. Peds. (#/hr)			2			2
Heavy Vehicles (%)	0%	0%	0%	1%	0%	0%
Turn Type			Perm			
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	21.0		36.0	36.0	36.0	
Effective Green, g (s)	21.0		36.0	36.0	36.0	
Actuated g/C Ratio	0.32		0.55	0.55	0.55	
Clearance Time (s)	4.0		4.0	4.0	4.0	
Lane Grp Cap (vph)	566		535	987	917	
v/s Ratio Prot	c0.04			0.11	c0.20	
v/s Ratio Perm			0.01			
v/c Ratio	0.12		0.02	0.21	0.36	
Uniform Delay, d1	15.5		6.6	7.3	8.1	
Progression Factor	1.00		0.49	0.60	1.44	
Incremental Delay, d2	0.4		0.1	0.5	0.9	
Delay (s)	15.9		3.3	4.8	12.6	
Level of Service	B		A	A	B	
Approach Delay (s)	15.9			4.7	12.6	
Approach LOS	B			A	B	

Intersection Summary			
HCM Average Control Delay	10.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.27		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	28.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↰↑↑↱		↰	↑			↑	↱
Volume (vph)	0	0	0	31	265	9	257	132	0	0	277	17
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	14	16	12	12	15	12	12	13	10
Total Lost time (s)					4.0		4.0	4.0			3.0	3.0
Lane Util. Factor					0.95		1.00	1.00			1.00	1.00
Frpb, ped/bikes					1.00		1.00	1.00			1.00	1.00
Flpb, ped/bikes					1.00		1.00	1.00			1.00	1.00
Frt					1.00		1.00	1.00			1.00	0.85
Flt Protected					0.99		0.95	1.00			1.00	1.00
Satd. Flow (prot)					3771		1693	1678			1738	1428
Flt Permitted					0.99		0.48	1.00			1.00	1.00
Satd. Flow (perm)					3771		854	1678			1738	1428
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	34	294	10	286	147	0	0	308	19
RTOR Reduction (vph)	0	0	0	0	3	0	0	0	0	0	0	11
Lane Group Flow (vph)	0	0	0	0	335	0	286	147	0	0	308	8
Confl. Peds. (#/hr)	1					1			5	5		
Heavy Vehicles (%)	0%	0%	0%	0%	2%	0%	1%	18%	0%	0%	7%	0%
Turn Type				Split			pm+pt					Perm
Protected Phases				8	8		7	2			6	
Permitted Phases							2					6
Actuated Green, G (s)					26.0		51.0	51.0			38.0	38.0
Effective Green, g (s)					26.0		51.0	51.0			38.0	38.0
Actuated g/C Ratio					0.31		0.60	0.60			0.45	0.45
Clearance Time (s)					4.0		4.0	4.0			3.0	3.0
Lane Grp Cap (vph)					1153		611	1007			777	638
v/s Ratio Prot					c0.09		c0.06	0.09			0.18	
v/s Ratio Perm							c0.23					0.01
v/c Ratio					0.29		0.47	0.15			0.40	0.01
Uniform Delay, d1					22.5		13.5	7.5			15.8	13.1
Progression Factor					1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2					0.6		2.6	0.3			1.5	0.0
Delay (s)					23.1		16.1	7.8			17.3	13.1
Level of Service					C		B	A			B	B
Approach Delay (s)		0.0			23.1			13.3			17.1	
Approach LOS		A			C			B			B	

Intersection Summary			
HCM Average Control Delay	17.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	53.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1011: 99th Street & Martin Luther King Jr Drive

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					✥		↰	↑↱		↰	↑↱	
Volume (vph)	0	0	0	95	94	38	133	205	30	59	703	44
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	15	12	12	12	12	12	13	12
Total Lost time (s)					4.0		3.0	4.0		3.0	4.0	
Lane Util. Factor					1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes					1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes					1.00		1.00	1.00		1.00	1.00	
Frt					0.98		1.00	0.98		1.00	0.99	
Flt Protected					0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)					1896		1710	3287		1707	3467	
Flt Permitted					0.98		0.25	1.00		0.59	1.00	
Satd. Flow (perm)					1896		446	3287		1061	3467	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	106	104	42	148	228	33	66	781	49
RTOR Reduction (vph)	0	0	0	0	10	0	0	15	0	0	6	0
Lane Group Flow (vph)	0	0	0	0	242	0	148	246	0	66	824	0
Confl. Peds. (#/hr)							5		5	5		5
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	1%	0%
Turn Type				Split			pm+pt			pm+pt		
Protected Phases				8	8		5	2		1	6	
Permitted Phases							2			6		
Actuated Green, G (s)					23.0		41.0	34.0		41.0	34.0	
Effective Green, g (s)					23.0		41.0	34.0		41.0	34.0	
Actuated g/C Ratio					0.31		0.55	0.45		0.55	0.45	
Clearance Time (s)					4.0		3.0	4.0		3.0	4.0	
Lane Grp Cap (vph)					581		362	1490		640	1572	
v/s Ratio Prot					c0.13		c0.04	0.07		0.01	c0.24	
v/s Ratio Perm							0.19			0.05		
v/c Ratio					0.42		0.41	0.16		0.10	0.52	
Uniform Delay, d1					20.7		16.4	12.1		8.2	14.7	
Progression Factor					1.00		0.84	0.82		1.00	1.00	
Incremental Delay, d2					2.2		3.4	0.2		0.3	1.3	
Delay (s)					22.9		17.1	10.2		8.5	16.0	
Level of Service					C		B	B		A	B	
Approach Delay (s)		0.0			22.9			12.7			15.4	
Approach LOS		A			C			B			B	

Intersection Summary			
HCM Average Control Delay	15.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	53.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1012: 100th Street & Martin Luther King Jr Drive

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥		↰	↑↱		↰	↑↱	
Volume (vph)	32	49	13	9	63	63	7	273	24	159	589	50
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	16	12	12	10	11	12	12	11	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.98			0.94		1.00	0.99		1.00	0.99	
Flt Protected		0.98			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1964			1655		1595	3172		1704	3231	
Flt Permitted		0.89			0.99		0.36	1.00		0.56	1.00	
Satd. Flow (perm)		1775			1637		600	3172		1008	3231	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	34	52	14	9	66	66	7	287	25	167	620	53
RTOR Reduction (vph)	0	8	0	0	42	0	0	9	0	0	8	0
Lane Group Flow (vph)	0	92	0	0	99	0	7	303	0	167	665	0
Confl. Peds. (#/hr)	2					2	1		6	6		1
Confl. Bikes (#/hr)			1	1			3					3
Heavy Vehicles (%)	0%	0%	0%	0%	2%	0%	0%	3%	0%	0%	1%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		25.0			25.0		42.0	42.0		42.0	42.0	
Effective Green, g (s)		25.0			25.0		42.0	42.0		42.0	42.0	
Actuated g/C Ratio		0.33			0.33		0.56	0.56		0.56	0.56	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		592			546		336	1776		564	1809	
v/s Ratio Prot								0.10			c0.21	
v/s Ratio Perm		0.05			c0.06		0.01			0.17		
v/c Ratio		0.16			0.18		0.02	0.17		0.30	0.37	
Uniform Delay, d1		17.6			17.7		7.3	8.0		8.7	9.1	
Progression Factor		1.00			1.00		1.00	1.00		0.27	0.25	
Incremental Delay, d2		0.6			0.7		0.1	0.2		1.2	0.5	
Delay (s)		18.1			18.5		7.5	8.2		3.5	2.8	
Level of Service		B			B		A	A		A	A	
Approach Delay (s)		18.1			18.5			8.2			2.9	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	6.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	48.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis
1013: 100th Street & Cottage Grove Avenue

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰↱			↰↑ ↑	↑ ↑↱	
Sign Control	Stop			Stop	Stop	
Volume (vph)	35	182	64	238	558	77
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	39	202	71	264	620	86

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	241	159	176	413	292
Volume Left (vph)	39	71	0	0	0
Volume Right (vph)	202	0	0	0	86
Hadj (s)	-0.42	0.27	0.05	0.05	-0.15
Departure Headway (s)	5.7	6.4	6.2	5.8	5.6
Degree Utilization, x	0.38	0.28	0.30	0.66	0.45
Capacity (veh/h)	599	538	557	611	632
Control Delay (s)	12.1	10.8	10.7	18.2	11.9
Approach Delay (s)	12.1	10.7		15.6	
Approach LOS	B	B		C	

Intersection Summary			
Delay	13.6		
HCM Level of Service	B		
Intersection Capacity Utilization	51.7%	ICU Level of Service	A
Analysis Period (min)	15		

	↘	↗	→	↘	↙	←	↖	↖	↖	↑	↑	↗
Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR
Lane Configurations		↰	↑	↱	↰	↑	↱			↰	↑↱	
Volume (vph)	32	35	378	18	24	410	77	81	55	68	351	32
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		3.5	4.0	4.0	4.0	4.0	4.0			4.0	4.0	
Lane Util. Factor		1.00	1.00	1.00	1.00	1.00	1.00			1.00	0.95	
Frpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	0.93			1.00	1.00	
Flpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	
Frt		1.00	1.00	0.85	1.00	1.00	0.85			1.00	0.99	
Flt Protected		0.95	1.00	1.00	0.95	1.00	1.00			0.95	1.00	
Satd. Flow (prot)		1612	1731	1530	1710	1731	1421			1710	3250	
Flt Permitted		0.14	1.00	1.00	0.52	1.00	1.00			0.14	1.00	
Satd. Flow (perm)		238	1731	1530	930	1731	1421			257	3250	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	36	39	420	20	27	456	86	90	61	76	390	36
RTOR Reduction (vph)	0	0	0	12	0	0	36	0	0	0	7	0
Lane Group Flow (vph)	0	75	420	8	27	456	140	0	0	137	419	0
Confl. Peds. (#/hr)		25					25					3
Heavy Vehicles (%)	6%	6%	4%	0%	0%	4%	0%	0%	0%	0%	4%	0%
Turn Type	Perm	pm+pt		Perm	Perm		Perm		Perm	Perm		
Protected Phases		7	4			8					2	
Permitted Phases	4	4		4	8		8		2	2		
Actuated Green, G (s)		44.0	44.0	44.0	25.0	25.0	25.0			28.0	28.0	
Effective Green, g (s)		44.0	44.0	44.0	25.0	25.0	25.0			28.0	28.0	
Actuated g/C Ratio		0.42	0.42	0.42	0.24	0.24	0.24			0.27	0.27	
Clearance Time (s)		3.5	4.0	4.0	4.0	4.0	4.0			4.0	4.0	
Lane Grp Cap (vph)		303	725	641	221	412	338			69	867	
v/s Ratio Prot		0.04	c0.24			c0.26					0.13	
v/s Ratio Perm		0.07		0.01	0.03		0.10			c0.53		
v/c Ratio		0.25	0.58	0.01	0.12	1.11	0.41			1.99	0.48	
Uniform Delay, d1		21.6	23.4	17.8	31.4	40.0	33.8			38.5	32.4	
Progression Factor		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	
Incremental Delay, d2		1.9	3.4	0.0	1.1	76.5	3.7			491.0	1.9	
Delay (s)		23.5	26.8	17.9	32.5	116.5	37.5			529.5	34.3	
Level of Service		C	C	B	C	F	D			F	C	
Approach Delay (s)			25.9			92.0					154.8	
Approach LOS			C			F					F	

Intersection Summary			
HCM Average Control Delay	139.0	HCM Level of Service	F
HCM Volume to Capacity ratio	1.43		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	102.5%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBL	SBT	SBR	SBR2	SEL2	SEL	SER	SER2
Lane Configurations	↰	↑↱				↰	↱↱	
Volume (vph)	105	559	80	101	4	110	587	190
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.5	4.5				4.5	4.5	
Lane Util. Factor	1.00	0.95				1.00	0.88	
Frpb, ped/bikes	1.00	1.00				1.00	1.00	
Flpb, ped/bikes	1.00	1.00				1.00	1.00	
Frt	1.00	0.96				1.00	0.85	
Flt Protected	0.95	1.00				0.95	1.00	
Satd. Flow (prot)	1705	3246				1710	2633	
Flt Permitted	0.38	1.00				0.95	1.00	
Satd. Flow (perm)	675	3246				1710	2633	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	117	621	89	112	4	122	652	211
RTOR Reduction (vph)	0	12	0	0	0	0	26	0
Lane Group Flow (vph)	117	810	0	0	0	126	837	0
Confl. Peds. (#/hr)	3							
Heavy Vehicles (%)	0%	2%	0%	0%	0%	0%	3%	0%
Turn Type	Perm				Split		Perm	
Protected Phases		6			9	9		
Permitted Phases	6						9	
Actuated Green, G (s)	27.5	27.5				20.5	20.5	
Effective Green, g (s)	27.5	27.5				20.5	20.5	
Actuated g/C Ratio	0.26	0.26				0.20	0.20	
Clearance Time (s)	4.5	4.5				4.5	4.5	
Lane Grp Cap (vph)	177	850				334	514	
v/s Ratio Prot		0.25				0.07		
v/s Ratio Perm	0.17						c0.32	
v/c Ratio	0.66	0.95				0.38	1.63	
Uniform Delay, d1	34.6	38.1				36.7	42.2	
Progression Factor	1.00	1.00				1.00	1.00	
Incremental Delay, d2	17.8	21.4				3.2	291.8	
Delay (s)	52.4	59.5				39.9	334.0	
Level of Service	D	E				D	F	
Approach Delay (s)		58.6				296.6		
Approach LOS		E				F		

Intersection Summary

HCM Signalized Intersection Capacity Analysis
1015: 103rd Street & Morgan Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰			↱			✥				
Volume (vph)	64	589	0	0	495	49	83	51	18	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	11	11	11	16	11	12	15	12	12	15	12
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		1.00			0.99			0.98				
Flt Protected		1.00			1.00			0.97				
Satd. Flow (prot)		1681			1957			1841				
Flt Permitted		0.90			1.00			0.97				
Satd. Flow (perm)		1526			1957			1841				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	71	654	0	0	550	54	92	57	20	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	725	0	0	604	0	0	169	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)		40.0			40.0			17.0				
Effective Green, g (s)		40.0			40.0			17.0				
Actuated g/C Ratio		0.62			0.62			0.26				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		939			1204			481				
v/s Ratio Prot					0.31							
v/s Ratio Perm		c0.48						0.09				
v/c Ratio		0.77			0.50			0.35				
Uniform Delay, d1		9.2			7.0			19.5				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		6.1			1.5			2.0				
Delay (s)		15.3			8.4			21.5				
Level of Service		B			A			C				
Approach Delay (s)		15.3			8.4			21.5			0.0	
Approach LOS		B			A			C			A	

Intersection Summary			
HCM Average Control Delay	13.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	85.9%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1016: 103rd Street & Halsted Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑	↱		↰↑	↱	↰	↑↑	↱	↰	↑↑	↱
Volume (vph)	69	420	159	114	327	122	104	625	82	136	751	93
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	10	10	9	9	10	9
Total Lost time (s)		4.0	4.0		4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		1.00	0.96		1.00	0.96	1.00	1.00	0.95	1.00	1.00	0.94
Flpb, ped/bikes		1.00	1.00		0.99	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.99	1.00		0.99	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1985	1434		1950	1444	1546	3040	1296	1505	3069	1252
Flt Permitted		0.41	1.00		0.57	1.00	0.23	1.00	1.00	0.30	1.00	1.00
Satd. Flow (perm)		822	1434		1119	1444	379	3040	1296	468	3069	1252
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	73	442	167	120	344	128	109	658	86	143	791	98
RTOR Reduction (vph)	0	0	99	0	0	91	0	0	51	0	0	49
Lane Group Flow (vph)	0	515	68	0	464	37	109	658	35	143	791	49
Confl. Peds. (#/hr)	24		45	45		24	36		24	24		36
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	2%	2%	2%	2%	3%	2%	3%	5%	1%	2%	4%	3%
Turn Type	pm+pt		Perm	Perm		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)		43.0	43.0		30.0	30.0	50.6	42.3	42.3	51.4	42.7	42.7
Effective Green, g (s)		43.0	43.0		30.0	30.0	50.6	42.3	42.3	51.4	42.7	42.7
Actuated g/C Ratio		0.41	0.41		0.29	0.29	0.48	0.40	0.40	0.49	0.41	0.41
Clearance Time (s)		4.0	4.0		4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		447	587		320	413	275	1225	522	315	1248	509
v/s Ratio Prot		c0.11					0.03	0.22		c0.04	c0.26	
v/s Ratio Perm		0.36	0.05		c0.41	0.03	0.16		0.03	0.18		0.04
v/c Ratio		1.15	0.12		1.45	0.09	0.40	0.54	0.07	0.45	0.63	0.10
Uniform Delay, d1		31.0	19.2		37.5	27.5	16.4	23.9	19.2	15.9	24.9	19.2
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.76	1.56	2.71
Incremental Delay, d2		91.3	0.4		219.2	0.4	0.9	1.7	0.2	1.0	2.4	0.4
Delay (s)		122.3	19.6		256.7	27.9	17.3	25.6	19.5	29.0	41.2	52.4
Level of Service		F	B		F	C	B	C	B	C	D	D
Approach Delay (s)		97.2			207.3			23.9			40.6	
Approach LOS		F			F			C			D	

Intersection Summary			
HCM Average Control Delay	79.5	HCM Level of Service	E
HCM Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	93.5%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1017: 103rd Street & Normal Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			✥				
Volume (vph)	83	474	97	90	451	90	53	59	67	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	15	12	12	15	12
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		0.98			0.98			0.95				
Flt Protected		0.99			0.99			0.99				
Satd. Flow (prot)		1645			1645			1799				
Flt Permitted		0.85			0.84			0.99				
Satd. Flow (perm)		1414			1387			1799				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	92	527	108	100	501	100	59	66	74	0	0	0
RTOR Reduction (vph)	0	10	0	0	9	0	0	32	0	0	0	0
Lane Group Flow (vph)	0	717	0	0	692	0	0	167	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm			Perm					
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Actuated Green, G (s)		40.0			40.0			17.0				
Effective Green, g (s)		40.0			40.0			17.0				
Actuated g/C Ratio		0.62			0.62			0.26				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		870			854			471				
v/s Ratio Prot												
v/s Ratio Perm		c0.51			0.50			0.09				
v/c Ratio		0.82			0.81			0.35				
Uniform Delay, d1		9.8			9.6			19.5				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		8.8			8.2			2.1				
Delay (s)		18.5			17.8			21.6				
Level of Service		B			B			C				
Approach Delay (s)		18.5			17.8			21.6			0.0	
Approach LOS		B			B			C			A	

Intersection Summary			
HCM Average Control Delay	18.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	67.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1018: 103rd Street & Wentworth Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱		↰	↱		✥	
Volume (vph)	53	472	80	74	509	36	39	76	72	53	235	55
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	11	12	12	15	12
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frpb, ped/bikes		1.00	0.96		1.00	0.96		1.00	0.96		0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		0.99	1.00		1.00	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		0.98	
Flt Protected		0.99	1.00		0.99	1.00		0.98	1.00		0.99	
Satd. Flow (prot)		1684	1382		1713	1417		1685	1455		1878	
Flt Permitted		0.90	1.00		0.86	1.00		0.82	1.00		0.94	
Satd. Flow (perm)		1529	1382		1490	1417		1409	1455		1774	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	56	497	84	78	536	38	41	80	76	56	247	58
RTOR Reduction (vph)	0	0	36	0	0	12	0	0	52	0	10	0
Lane Group Flow (vph)	0	553	48	0	614	26	0	121	24	0	351	0
Confl. Peds. (#/hr)	25		19	19		25	36		30	30		36
Confl. Bikes (#/hr)	1		2	2		1	3					3
Heavy Vehicles (%)	0%	3%	3%	0%	1%	0%	0%	1%	1%	0%	1%	0%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		43.0	43.0		43.0	43.0		24.0	24.0		24.0	
Effective Green, g (s)		43.0	43.0		43.0	43.0		24.0	24.0		24.0	
Actuated g/C Ratio		0.57	0.57		0.57	0.57		0.32	0.32		0.32	
Clearance Time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	
Lane Grp Cap (vph)		877	792		854	812		451	466		568	
v/s Ratio Prot												
v/s Ratio Perm		0.36	0.03		c0.41	0.02		0.09	0.02		c0.20	
v/c Ratio		0.63	0.06		0.72	0.03		0.27	0.05		0.62	
Uniform Delay, d1		10.7	7.1		11.6	7.0		19.0	17.6		21.6	
Progression Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2		3.4	0.1		5.2	0.1		1.5	0.2		5.0	
Delay (s)		14.1	7.2		16.8	7.0		20.4	17.8		26.6	
Level of Service		B	A		B	A		C	B		C	
Approach Delay (s)		13.2			16.2			19.4			26.6	
Approach LOS		B			B			B			C	

Intersection Summary			
HCM Average Control Delay	17.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	98.8%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1019: 103rd Street & State Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑	↱	↰	↑	↱
Volume (vph)	59	479	34	44	521	52	45	165	55	117	199	31
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	11	16	8	10	10	10	10	10	10
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00	0.98	1.00	1.00	0.98
Flpb, ped/bikes	0.98	1.00		1.00	1.00		0.99	1.00	1.00	0.99	1.00	1.00
Frt	1.00	0.99		1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1532	3065		1652	3730		1585	1663	1370	1568	1680	1397
Flt Permitted	0.36	1.00		0.40	1.00		0.59	1.00	1.00	0.63	1.00	1.00
Satd. Flow (perm)	581	3065		692	3730		977	1663	1370	1043	1680	1397
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	66	532	38	49	579	58	50	183	61	130	221	34
RTOR Reduction (vph)	0	8	0	0	12	0	0	0	37	0	0	20
Lane Group Flow (vph)	66	562	0	49	625	0	50	183	24	130	221	14
Confl. Peds. (#/hr)	51		3	3		51	13		13	13		13
Heavy Vehicles (%)	2%	3%	3%	0%	2%	0%	0%	1%	2%	1%	0%	0%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	31.0	31.0		31.0	31.0		26.0	26.0	26.0	26.0	26.0	26.0
Effective Green, g (s)	31.0	31.0		31.0	31.0		26.0	26.0	26.0	26.0	26.0	26.0
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.40	0.40	0.40	0.40	0.40	0.40
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	277	1462		330	1779		391	665	548	417	672	559
v/s Ratio Prot		c0.18			0.17			0.11			c0.13	
v/s Ratio Perm	0.11			0.07			0.05		0.02	0.12		0.01
v/c Ratio	0.24	0.38		0.15	0.35		0.13	0.28	0.04	0.31	0.33	0.02
Uniform Delay, d1	10.0	10.9		9.6	10.7		12.3	13.1	11.9	13.4	13.5	11.8
Progression Factor	1.00	1.00		1.00	1.00		0.84	0.89	0.76	0.59	0.59	0.27
Incremental Delay, d2	2.0	0.8		0.9	0.5		0.7	1.0	0.2	1.9	1.3	0.1
Delay (s)	12.1	11.7		10.5	11.2		11.0	12.7	9.2	9.8	9.3	3.3
Level of Service	B	B		B	B		B	B	A	A	A	A
Approach Delay (s)		11.7			11.2			11.7			8.9	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM Average Control Delay	11.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1020: 103rd Street & Michigan Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	60	409	81	70	376	64	57	179	64	87	240	78
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	11	10	11	11	10	11	11	10	11	11
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.98		1.00	0.99		1.00	0.98		1.00	0.99	
Flpb, ped/bikes	0.96	1.00		0.95	1.00		0.99	1.00		0.96	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.96		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1327	3134		1519	3129		1579	2918		1452	2998	
Flt Permitted	0.46	1.00		0.42	1.00		0.54	1.00		0.59	1.00	
Satd. Flow (perm)	639	3134		678	3129		891	2918		908	2998	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	63	431	85	74	396	67	60	188	67	92	253	82
RTOR Reduction (vph)	0	0	0	0	0	0	0	39	0	0	42	0
Lane Group Flow (vph)	63	516	0	74	463	0	60	216	0	92	293	0
Confl. Peds. (#/hr)	112		99	99		112	23		53	53		23
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	16%	1%	0%	0%	1%	9%	0%	8%	2%	5%	5%	7%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	36.0	36.0		36.0	36.0		31.0	31.0		31.0	31.0	
Effective Green, g (s)	36.0	36.0		36.0	36.0		31.0	31.0		31.0	31.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.41	0.41		0.41	0.41	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	307	1504		325	1502		368	1206		375	1239	
v/s Ratio Prot		c0.16			0.15			0.07			0.10	
v/s Ratio Perm	0.10			0.11			0.07			c0.10		
v/c Ratio	0.21	0.34		0.23	0.31		0.16	0.18		0.25	0.24	
Uniform Delay, d1	11.2	12.1		11.4	11.9		13.8	13.9		14.4	14.3	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.5	0.6		1.6	0.5		1.0	0.3		1.6	0.5	
Delay (s)	12.8	12.8		13.0	12.4		14.8	14.3		15.9	14.8	
Level of Service	B	B		B	B		B	B		B	B	
Approach Delay (s)		12.8			12.5			14.4			15.0	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	13.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	51.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1021: 103rd Street & Martin Luther King Jr Drive

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱		↰	↑↱		↰	↑↱	
Volume (vph)	94	428	61	31	503	46	82	194	57	76	473	109
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	12	8	16	12	9	10	10	9	10	10
Total Lost time (s)	3.0	7.0		3.0	7.0		3.0	7.0		3.0	7.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.98		1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.99		1.00	0.97		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1594	1651		1369	1974		1534	2998		1534	3013	
Flt Permitted	0.26	1.00		0.32	1.00		0.28	1.00		0.59	1.00	
Satd. Flow (perm)	442	1651		464	1974		453	2998		951	3013	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	99	451	64	33	529	48	86	204	60	80	498	115
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	99	515	0	33	577	0	86	264	0	80	613	0
Confl. Peds. (#/hr)	21		95	95		21	36		8	8		36
Confl. Bikes (#/hr)	2		3	3		2	2					2
Heavy Vehicles (%)	0%	2%	0%	7%	2%	0%	0%	3%	0%	0%	2%	1%
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	44.0	39.4		40.8	37.8		26.6	21.8		26.6	21.8	
Effective Green, g (s)	44.0	37.4		40.8	35.8		26.6	19.8		26.6	19.8	
Actuated g/C Ratio	0.52	0.44		0.48	0.42		0.31	0.23		0.31	0.23	
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	5.0		3.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	291	726		255	831		203	698		331	702	
v/s Ratio Prot	c0.02	c0.31		0.00	0.29		c0.02	0.09		0.01	c0.20	
v/s Ratio Perm	0.16			0.06			0.11			0.06		
v/c Ratio	0.34	0.71		0.13	0.69		0.42	0.38		0.24	0.87	
Uniform Delay, d1	22.2	19.4		19.6	20.1		29.0	27.4		21.9	31.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.7	5.8		0.2	4.8		1.4	1.6		0.4	14.2	
Delay (s)	22.9	25.2		19.8	24.9		30.5	29.0		22.3	45.5	
Level of Service	C	C		B	C		C	C		C	D	
Approach Delay (s)		24.8			24.6			29.3			42.9	
Approach LOS		C			C			C			D	

Intersection Summary			
HCM Average Control Delay	31.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	77.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1022: 103rd Street & Cottage Grove Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	73	379	63	111	483	112	64	150	55	121	348	78
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	11	11	11	11	12	12	10	10	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		0.99	1.00	
Frt		0.98			0.98		1.00	0.96		1.00	0.97	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3680			3131		1652	3237		1549	3026	
Flt Permitted		0.73			0.74		0.44	1.00		0.61	1.00	
Satd. Flow (perm)		2708			2332		766	3237		994	3026	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	81	421	70	123	537	124	71	167	61	134	387	87
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	572	0	0	784	0	71	228	0	134	474	0
Confl. Peds. (#/hr)	23		30	30		23	1		20	20		1
Confl. Bikes (#/hr)	3					3						
Heavy Vehicles (%)	0%	3%	0%	2%	2%	0%	0%	1%	0%	2%	2%	3%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		33.0			33.0		32.0	32.0		32.0	32.0	
Effective Green, g (s)		34.0			34.0		33.0	33.0		33.0	33.0	
Actuated g/C Ratio		0.45			0.45		0.44	0.44		0.44	0.44	
Clearance Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)		1228			1057		337	1424		437	1331	
v/s Ratio Prot								0.07			c0.16	
v/s Ratio Perm		0.21			c0.34		0.09			0.13		
v/c Ratio		0.47			0.74		0.21	0.16		0.31	0.36	
Uniform Delay, d1		14.2			16.9		13.0	12.7		13.6	13.9	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		1.3			4.7		1.4	0.2		1.8	0.7	
Delay (s)		15.5			21.6		14.4	12.9		15.4	14.7	
Level of Service		B			C		B	B		B	B	
Approach Delay (s)		15.5			21.6			13.2			14.8	
Approach LOS		B			C			B			B	

Intersection Summary			
HCM Average Control Delay	17.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	71.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↑	↱		↰↑↱			↰↑↑↱	
Volume (vph)	93	827	6	19	554	236	1	1	9	202	1	76
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	12	12	12	12	12	12	13	13	13
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00			0.95	
Frt	1.00	1.00		1.00	1.00	0.85		0.89			0.96	
Flt Protected	0.95	1.00		0.95	1.00	1.00		1.00			0.97	
Satd. Flow (prot)	1605	3206		1660	3320	1485		1545			3176	
Flt Permitted	0.40	1.00		0.27	1.00	1.00		0.98			0.77	
Satd. Flow (perm)	679	3206		470	3320	1485		1519			2535	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	103	919	7	21	616	262	1	1	10	224	1	84
RTOR Reduction (vph)	0	0	0	0	0	96	0	7	0	0	53	0
Lane Group Flow (vph)	103	926	0	21	616	166	0	5	0	0	256	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	46.1	46.1		46.1	46.1	46.1		18.6			18.6	
Effective Green, g (s)	46.1	46.1		46.1	46.1	46.1		18.6			18.6	
Actuated g/C Ratio	0.63	0.63		0.63	0.63	0.63		0.26			0.26	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		8.0			8.0	
Lane Grp Cap (vph)	431	2033		298	2105	942		389			649	
v/s Ratio Prot		c0.29			0.19							
v/s Ratio Perm	0.15			0.04		0.11		0.00			c0.10	
v/c Ratio	0.24	0.46		0.07	0.29	0.18		0.01			0.39	
Uniform Delay, d1	5.7	6.8		5.1	6.0	5.5		20.2			22.4	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00			1.00	
Incremental Delay, d2	1.3	0.7		0.5	0.4	0.4		0.1			1.7	
Delay (s)	7.0	7.6		5.6	6.3	5.9		20.2			24.1	
Level of Service	A	A		A	A	A		C			C	
Approach Delay (s)		7.5			6.2			20.2			24.1	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM Average Control Delay	9.3	HCM Level of Service	A
HCM Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	72.7	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1024: 107th Street & Halsted Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↑	↱	↰	↑↑	↱
Volume (vph)	124	216	119	94	162	56	140	876	87	128	816	97
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	9	12	10	10	12	9	10	9	9	10	9
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00	0.97	1.00	1.00	0.96
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.95		1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1560	1504		1563	1585		1493	3069	1337	1523	3099	1318
Flt Permitted	0.45	1.00		0.24	1.00		0.21	1.00	1.00	0.18	1.00	1.00
Satd. Flow (perm)	746	1504		393	1585		323	3069	1337	285	3099	1318
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	131	227	125	99	171	59	147	922	92	135	859	102
RTOR Reduction (vph)	0	23	0	0	15	0	0	0	40	0	0	48
Lane Group Flow (vph)	131	329	0	99	215	0	147	922	52	135	859	54
Confl. Peds. (#/hr)	10		13	13		10	18		7	7		18
Confl. Bikes (#/hr)	2					2	2		1	1		2
Heavy Vehicles (%)	2%	1%	1%	2%	1%	2%	3%	4%	0%	1%	3%	0%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	28.0	21.0		28.0	21.0		42.0	35.0	35.0	42.0	35.0	35.0
Effective Green, g (s)	26.0	22.0		26.0	22.0		40.0	35.0	35.0	40.0	35.0	35.0
Actuated g/C Ratio	0.31	0.26		0.31	0.26		0.47	0.41	0.41	0.47	0.41	0.41
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)	286	389		203	410		235	1264	551	222	1276	543
v/s Ratio Prot	0.03	c0.22		c0.03	0.14		c0.04	c0.30		0.04	0.28	
v/s Ratio Perm	0.11			0.11			0.25		0.04	0.24		0.04
v/c Ratio	0.46	0.85		0.49	0.52		0.63	0.73	0.09	0.61	0.67	0.10
Uniform Delay, d1	22.5	29.9		22.7	27.0		14.6	21.0	15.3	14.8	20.3	15.3
Progression Factor	1.00	1.00		1.00	1.00		0.67	0.79	0.53	1.00	1.00	1.00
Incremental Delay, d2	5.2	19.8		8.2	4.7		11.0	3.4	0.3	11.8	2.9	0.4
Delay (s)	27.7	49.6		30.9	31.8		20.7	19.9	8.5	26.6	23.2	15.7
Level of Service	C	D		C	C		C	B	A	C	C	B
Approach Delay (s)		43.7			31.5			19.1			22.9	
Approach LOS		D			C			B			C	

Intersection Summary			
HCM Average Control Delay	25.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	72.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣			✣	
Volume (vph)	22	179	37	20	173	22	32	141	38	46	251	49
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	14	12	12	14	12	12	16	12	12	16	12
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		0.99			1.00			1.00			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.98			0.99			0.98			0.98	
Flt Protected		1.00			1.00			0.99			0.99	
Satd. Flow (prot)		1836			1848			1938			1975	
Flt Permitted		0.97			0.96			0.92			0.94	
Satd. Flow (perm)		1781			1790			1800			1871	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	23	185	38	21	178	23	33	145	39	47	259	51
RTOR Reduction (vph)	0	10	0	0	6	0	0	12	0	0	9	0
Lane Group Flow (vph)	0	236	0	0	216	0	0	205	0	0	348	0
Confl. Peds. (#/hr)	18		34	34		18	16		19	19		16
Confl. Bikes (#/hr)			6	6			1		4	4		1
Heavy Vehicles (%)	0%	1%	0%	5%	1%	0%	0%	2%	0%	0%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		27.0			27.0			30.0			30.0	
Effective Green, g (s)		27.0			27.0			30.0			30.0	
Actuated g/C Ratio		0.42			0.42			0.46			0.46	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		740			744			831			864	
v/s Ratio Prot												
v/s Ratio Perm		c0.13			0.12			0.11			c0.19	
v/c Ratio		0.32			0.29			0.25			0.40	
Uniform Delay, d1		12.8			12.6			10.6			11.6	
Progression Factor		1.00			0.69			1.23			1.00	
Incremental Delay, d2		1.1			1.0			0.7			1.4	
Delay (s)		13.9			9.7			13.8			13.0	
Level of Service		B			A			B			B	
Approach Delay (s)		13.9			9.7			13.8			13.0	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM Average Control Delay	12.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	50.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	24	190	39	25	180	19	49	199	31	42	206	38
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	0.97	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	0.99		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1496	3056		1576	3119		1518	3119		1550	3075	
Flt Permitted	0.61	1.00		0.59	1.00		0.58	1.00		0.59	1.00	
Satd. Flow (perm)	966	3056		987	3119		935	3119		969	3075	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	27	211	43	28	200	21	54	221	34	47	229	42
RTOR Reduction (vph)	0	26	0	0	12	0	0	14	0	0	17	0
Lane Group Flow (vph)	27	228	0	28	209	0	54	241	0	47	254	0
Confl. Peds. (#/hr)	20		17	17		20	2					2
Confl. Bikes (#/hr)	32		36	36		32	22		25	25		22
Heavy Vehicles (%)	4%	1%	0%	0%	0%	0%	5%	0%	0%	3%	1%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.0	20.0		20.0	20.0		39.0	39.0		39.0	39.0	
Effective Green, g (s)	19.0	19.0		19.0	19.0		38.0	38.0		38.0	38.0	
Actuated g/C Ratio	0.29	0.29		0.29	0.29		0.58	0.58		0.58	0.58	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	282	893		289	912		547	1823		566	1798	
v/s Ratio Prot		c0.07			0.07			0.08			c0.08	
v/s Ratio Perm	0.03			0.03			0.06			0.05		
v/c Ratio	0.10	0.26		0.10	0.23		0.10	0.13		0.08	0.14	
Uniform Delay, d1	16.7	17.6		16.8	17.4		6.0	6.1		5.9	6.1	
Progression Factor	0.93	0.96		0.77	0.76		1.29	1.29		0.40	0.36	
Incremental Delay, d2	0.6	0.7		0.7	0.6		0.3	0.1		0.3	0.2	
Delay (s)	16.3	17.5		13.5	13.8		8.0	8.0		2.6	2.3	
Level of Service	B	B		B	B		A	A		A	A	
Approach Delay (s)		17.4			13.8			8.0			2.4	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	10.0	HCM Level of Service	A
HCM Volume to Capacity ratio	0.18		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	46.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1027: 107th Street & Michigan Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			↰↑↱			↰↑↱	
Volume (vph)	66	165	41	24	153	37	27	245	16	40	321	33
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	9	9	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	
Flpb, ped/bikes	0.99	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.97		1.00	0.97			0.99			0.99	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1555	3056		1525	2936			1922			1938	
Flt Permitted	0.62	1.00		0.61	1.00			0.94			0.94	
Satd. Flow (perm)	1014	3056		977	2936			1822			1840	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	73	183	46	27	170	41	30	272	18	44	357	37
RTOR Reduction (vph)	0	28	0	0	25	0	0	3	0	0	5	0
Lane Group Flow (vph)	73	201	0	27	186	0	0	317	0	0	433	0
Confl. Peds. (#/hr)	11		17	17		11	26		7	7		26
Heavy Vehicles (%)	2%	1%	0%	0%	1%	3%	4%	5%	0%	0%	4%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	26.0	26.0		26.0	26.0			31.0			31.0	
Effective Green, g (s)	26.0	26.0		26.0	26.0			31.0			31.0	
Actuated g/C Ratio	0.40	0.40		0.40	0.40			0.48			0.48	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	406	1222		391	1174			869			878	
v/s Ratio Prot		0.07			0.06							
v/s Ratio Perm	c0.07			0.03				0.17			c0.24	
v/c Ratio	0.18	0.16		0.07	0.16			0.36			0.49	
Uniform Delay, d1	12.6	12.5		12.0	12.5			10.8			11.6	
Progression Factor	1.03	0.98		0.78	0.76			1.00			1.00	
Incremental Delay, d2	1.0	0.3		0.3	0.3			1.2			2.0	
Delay (s)	14.0	12.5		9.7	9.8			11.9			13.6	
Level of Service	B	B		A	A			B			B	
Approach Delay (s)		12.9			9.8			11.9			13.6	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM Average Control Delay	12.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	57.4%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1028: 107th Street & Martin Luther King Jr Drive

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱			✥			✥	
Volume (vph)	47	111	28	19	153	26	40	230	11	33	360	57
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	16	12	10	16	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	
Flpb, ped/bikes	1.00	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.97		1.00	0.98			0.99			0.98	
Flt Protected	0.95	1.00		0.95	1.00			0.99			1.00	
Satd. Flow (prot)	1652	1970		1584	1975			1981			1979	
Flt Permitted	0.58	1.00		0.65	1.00			0.90			0.96	
Satd. Flow (perm)	1013	1970		1087	1975			1800			1912	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	52	123	31	21	170	29	44	256	12	37	400	63
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	52	154	0	21	199	0	0	312	0	0	500	0
Confl. Peds. (#/hr)	1		10	10		1	2		5	5		2
Heavy Vehicles (%)	0%	0%	0%	0%	1%	0%	0%	2%	0%	0%	1%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.0	20.0		20.0	20.0			37.0			37.0	
Effective Green, g (s)	20.0	20.0		20.0	20.0			37.0			37.0	
Actuated g/C Ratio	0.31	0.31		0.31	0.31			0.57			0.57	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	312	606		334	608			1025			1088	
v/s Ratio Prot		0.08			c0.10							
v/s Ratio Perm	0.05			0.02				0.17			c0.26	
v/c Ratio	0.17	0.25		0.06	0.33			0.30			0.46	
Uniform Delay, d1	16.4	16.9		15.9	17.3			7.3			8.2	
Progression Factor	0.82	0.80		0.93	0.93			0.97			1.00	
Incremental Delay, d2	1.1	1.0		0.4	1.4			0.8			1.4	
Delay (s)	14.6	14.5		15.1	17.5			7.8			9.6	
Level of Service	B	B		B	B			A			A	
Approach Delay (s)		14.5			17.3			7.8			9.6	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	11.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1029: 107th Street & Cottage Grove Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱		↰	↑	↱	↰	↑	↱
Volume (vph)	51	12	92	2	5	10	59	223	5	5	442	72
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	10	10	10	11	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.98		1.00	0.98		1.00	1.00	1.00	1.00	1.00	0.98
Flpb, ped/bikes	0.99	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.87		1.00	0.90		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1695	1726		1702	1808		1594	1647	1428	1653	2000	1496
Flt Permitted	0.75	1.00		0.68	1.00		0.41	1.00	1.00	0.60	1.00	1.00
Satd. Flow (perm)	1332	1726		1224	1808		693	1647	1428	1049	2000	1496
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	57	13	102	2	6	11	66	248	6	6	491	80
RTOR Reduction (vph)	0	74	0	0	8	0	0	0	2	0	0	28
Lane Group Flow (vph)	57	41	0	2	9	0	66	248	4	6	491	52
Confl. Peds. (#/hr)	5		5	5		5	3					3
Heavy Vehicles (%)	0%	0%	1%	0%	0%	0%	0%	2%	0%	0%	2%	0%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	17.0	17.0		17.0	17.0		39.0	39.0	39.0	39.0	39.0	39.0
Effective Green, g (s)	18.0	18.0		18.0	18.0		39.0	39.0	39.0	39.0	39.0	39.0
Actuated g/C Ratio	0.28	0.28		0.28	0.28		0.60	0.60	0.60	0.60	0.60	0.60
Clearance Time (s)	5.0	5.0		5.0	5.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	369	478		339	501		416	988	857	629	1200	898
v/s Ratio Prot		0.02			0.01			0.15			c0.25	
v/s Ratio Perm	c0.04			0.00			0.10		0.00	0.01		0.04
v/c Ratio	0.15	0.09		0.01	0.02		0.16	0.25	0.00	0.01	0.41	0.06
Uniform Delay, d1	17.8	17.4		17.0	17.1		5.7	6.1	5.2	5.2	6.9	5.4
Progression Factor	1.41	2.83		1.00	1.00		0.79	0.74	0.91	1.00	1.00	1.00
Incremental Delay, d2	0.9	0.3		0.0	0.1		0.7	0.5	0.0	0.0	1.0	0.1
Delay (s)	25.8	49.5		17.1	17.1		5.2	5.0	4.8	5.3	7.9	5.5
Level of Service	C	D		B	B		A	A	A	A	A	A
Approach Delay (s)		41.7			17.1			5.1			7.6	
Approach LOS		D			B			A			A	

Intersection Summary			
HCM Average Control Delay	12.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	51.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱		↰	↑↑					↰	↑↱	
Volume (vph)	0	255	163	197	214	0	0	0	0	111	470	377
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	12	12	12	12	12	11	11	12
Total Lost time (s)		4.0		3.0	3.0					5.0	5.0	
Lane Util. Factor		0.95		1.00	0.95					1.00	0.95	
Frpb, ped/bikes		0.99		1.00	1.00					1.00	0.99	
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	
Frt		0.94		1.00	1.00					1.00	0.93	
Flt Protected		1.00		0.95	1.00					0.95	1.00	
Satd. Flow (prot)		2905		1693	3288					1503	3021	
Flt Permitted		1.00		0.40	1.00					0.95	1.00	
Satd. Flow (perm)		2905		719	3288					1503	3021	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	268	172	207	225	0	0	0	0	117	495	397
RTOR Reduction (vph)	0	101	0	0	0	0	0	0	0	0	141	0
Lane Group Flow (vph)	0	339	0	207	225	0	0	0	0	117	751	0
Confl. Peds. (#/hr)	18		3	3		18	1					1
Heavy Vehicles (%)	0%	4%	1%	1%	4%	0%	0%	0%	0%	10%	2%	1%
Turn Type				D.P+P						Split		
Protected Phases		8		7	7 8					6	6	
Permitted Phases				8								
Actuated Green, G (s)		33.0		53.0	56.0					37.0	37.0	
Effective Green, g (s)		33.0		53.0	56.0					37.0	37.0	
Actuated g/C Ratio		0.32		0.52	0.55					0.36	0.36	
Clearance Time (s)		4.0		3.0						5.0	5.0	
Lane Grp Cap (vph)		940		565	1805					545	1096	
v/s Ratio Prot		0.12		c0.07	0.07					0.08	c0.25	
v/s Ratio Perm				c0.12								
v/c Ratio		0.36		0.37	0.12					0.21	0.68	
Uniform Delay, d1		26.4		13.7	11.1					22.5	27.6	
Progression Factor		1.00		2.25	2.17					1.00	1.00	
Incremental Delay, d2		1.1		1.6	0.1					0.9	3.5	
Delay (s)		27.5		32.3	24.3					23.4	31.0	
Level of Service		C		C	C					C	C	
Approach Delay (s)		27.5			28.1			0.0			30.1	
Approach LOS		C			C			A			C	

Intersection Summary			
HCM Average Control Delay	29.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	102.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	62.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1031: 111th Street & Hamlet Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑			↑↱		↰	↑	↱			
Volume (vph)	141	225	0	0	338	119	73	511	224	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	9	12	13	12	13	12	12	12
Total Lost time (s)	4.0	4.0			4.0		5.0	5.0	5.0			
Lane Util. Factor	1.00	0.95			0.95		1.00	1.00	1.00			
Frpb, ped/bikes	1.00	1.00			0.99		1.00	1.00	0.99			
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.96		1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1675	3196			2855		1767	1782	1560			
Flt Permitted	0.32	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	568	3196			2855		1767	1782	1560			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	148	237	0	0	356	125	77	538	236	0	0	0
RTOR Reduction (vph)	0	0	0	0	34	0	0	0	167	0	0	0
Lane Group Flow (vph)	148	237	0	0	447	0	77	538	69	0	0	0
Confl. Peds. (#/hr)	9		13	13		9			1	1		
Confl. Bikes (#/hr)	3					3						
Heavy Vehicles (%)	2%	7%	0%	0%	3%	1%	0%	1%	0%	0%	0%	0%
Turn Type	pm+pt						custom		Perm			
Protected Phases	4	1 4			1		2	2				
Permitted Phases	1 4						2		2			
Actuated Green, G (s)	59.0	63.0			26.0		30.0	30.0	30.0			
Effective Green, g (s)	59.0	63.0			26.0		30.0	30.0	30.0			
Actuated g/C Ratio	0.58	0.62			0.25		0.29	0.29	0.29			
Clearance Time (s)	4.0				4.0		5.0	5.0	5.0			
Lane Grp Cap (vph)	687	1974			728		520	524	459			
v/s Ratio Prot	c0.07	0.07			c0.16		0.04	c0.30				
v/s Ratio Perm	0.05								0.04			
v/c Ratio	0.22	0.12			0.61		0.15	1.03	0.15			
Uniform Delay, d1	10.4	8.1			33.6		26.6	36.0	26.6			
Progression Factor	0.42	0.43			1.00		1.00	1.00	1.00			
Incremental Delay, d2	0.7	0.1			3.8		0.6	46.3	0.7			
Delay (s)	5.0	3.6			37.4		27.2	82.3	27.3			
Level of Service	A	A			D		C	F	C			
Approach Delay (s)		4.1			37.4			62.1			0.0	
Approach LOS		A			D			E			A	

Intersection Summary			
HCM Average Control Delay	42.2	HCM Level of Service	D
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	102.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	62.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1032: 112th Place & Marshield Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱		↰	↑↑					↰	↑↑	↱
Volume (vph)	0	491	455	77	507	0	0	0	0	13	436	301
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	11	12	12	12	12	10	10	12
Total Lost time (s)		4.0		4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.95		1.00	0.95					1.00	0.95	1.00
Frpb, ped/bikes		0.99		1.00	1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Frt		0.93		1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00					0.95	1.00	1.00
Satd. Flow (prot)		3099		1710	3306					1596	3192	1530
Flt Permitted		1.00		0.11	1.00					0.95	1.00	1.00
Satd. Flow (perm)		3099		205	3306					1596	3192	1530
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	0	511	474	80	528	0	0	0	0	14	454	314
RTOR Reduction (vph)	0	167	0	0	0	0	0	0	0	0	0	207
Lane Group Flow (vph)	0	818	0	80	528	0	0	0	0	14	454	107
Confl. Peds. (#/hr)	8		8	8		8	3					3
Confl. Bikes (#/hr)	9					9			61	61		
Heavy Vehicles (%)	0%	1%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type				pm+pt						Split		Prot
Protected Phases		8		7	7 8					6	6	6
Permitted Phases				7 8								
Actuated Green, G (s)		36.0		54.0	58.0					34.0	34.0	34.0
Effective Green, g (s)		36.0		54.0	58.0					34.0	34.0	34.0
Actuated g/C Ratio		0.36		0.54	0.58					0.34	0.34	0.34
Clearance Time (s)		4.0		4.0						4.0	4.0	4.0
Lane Grp Cap (vph)		1116		382	1917					543	1085	520
v/s Ratio Prot		c0.26		0.04	c0.16					0.01	c0.14	0.07
v/s Ratio Perm				0.08								
v/c Ratio		0.73		0.21	0.28					0.03	0.42	0.21
Uniform Delay, d1		27.8		13.9	10.5					22.0	25.4	23.4
Progression Factor		1.00		1.01	1.19					1.00	1.00	1.00
Incremental Delay, d2		4.3		0.9	0.3					0.1	1.2	0.9
Delay (s)		32.1		15.0	12.8					22.1	26.6	24.3
Level of Service		C		B	B					C	C	C
Approach Delay (s)		32.1			13.1			0.0			25.6	
Approach LOS		C			B			A			C	

Intersection Summary			
HCM Average Control Delay	25.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	90.7%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1033: 112th Place & Hamlet Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↰↑			↑↱		↰	↰	↱			
Volume (vph)	401	99	0	0	142	6	441	456	55	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	12	12	12	10	12	11	11	12	12	12	12
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0	4.0			
Lane Util. Factor	0.91	0.91			0.95		0.95	0.95	1.00			
Frpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.99		1.00	1.00	0.85			
Flt Protected	0.95	0.97			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1469	3109			3168		1555	1653	1530			
Flt Permitted	0.66	0.72			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	1014	2311			3168		1555	1653	1530			
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	413	102	0	0	146	6	455	470	57	0	0	0
RTOR Reduction (vph)	0	0	0	0	3	0	0	0	36	0	0	0
Lane Group Flow (vph)	206	309	0	0	149	0	455	470	21	0	0	0
Confl. Peds. (#/hr)	13		6	6		13			8	8		
Confl. Bikes (#/hr)	1					1			2	2		
Heavy Vehicles (%)	2%	1%	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%
Turn Type	pm+pt						custom		custom			
Protected Phases	4	1 4			1		2	2	2			
Permitted Phases	1 4						2		2			
Actuated Green, G (s)	51.0	51.0			15.0		37.0	37.0	37.0			
Effective Green, g (s)	51.0	51.0			15.0		37.0	37.0	37.0			
Actuated g/C Ratio	0.51	0.51			0.15		0.37	0.37	0.37			
Clearance Time (s)	4.0				4.0		4.0	4.0	4.0			
Lane Grp Cap (vph)	681	1466			475		575	612	566			
v/s Ratio Prot	c0.11	0.08			c0.05		c0.29	0.28	0.01			
v/s Ratio Perm	0.05	0.03										
v/c Ratio	0.30	0.21			0.31		0.79	0.77	0.04			
Uniform Delay, d1	14.0	13.5			37.9		28.1	27.7	20.1			
Progression Factor	0.25	0.27			1.00		1.00	1.00	1.00			
Incremental Delay, d2	0.7	0.2			1.7		10.7	9.0	0.1			
Delay (s)	4.3	3.8			39.6		38.7	36.7	20.2			
Level of Service	A	A			D		D	D	C			
Approach Delay (s)		4.0			39.6			36.7			0.0	
Approach LOS		A			D			D			A	

Intersection Summary			
HCM Average Control Delay	26.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	90.7%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱		↰	↑↑	↱	↰	↑↑	↱
Volume (vph)	78	315	116	105	260	107	83	663	72	99	875	64
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	9	10	9	9	10	9
Total Lost time (s)		4.0			4.0		4.0	3.5	4.0	4.0	3.5	4.0
Lane Util. Factor		0.95			0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		0.99			0.99		1.00	1.00	0.97	1.00	1.00	0.96
Flpb, ped/bikes		1.00			1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.97			0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.99			0.99		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		2955			2936		1508	3069	1309	1508	3099	1298
Flt Permitted		0.77			0.73		0.16	1.00	1.00	0.27	1.00	1.00
Satd. Flow (perm)		2307			2163		261	3069	1309	433	3099	1298
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	81	328	121	109	271	111	86	691	75	103	911	67
RTOR Reduction (vph)	0	32	0	0	32	0	0	0	46	0	0	33
Lane Group Flow (vph)	0	498	0	0	459	0	86	691	29	103	911	34
Confl. Peds. (#/hr)	35		30	30		35	34		8	8		34
Confl. Bikes (#/hr)	1					1	1					1
Heavy Vehicles (%)	1%	4%	0%	1%	3%	3%	2%	4%	2%	2%	3%	2%
Turn Type	pm+pt			Perm			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)		35.0			27.0		38.0	33.0	33.0	38.0	33.0	33.0
Effective Green, g (s)		36.0			28.0		36.0	33.5	33.0	36.0	33.5	33.0
Actuated g/C Ratio		0.42			0.33		0.42	0.39	0.39	0.42	0.39	0.39
Clearance Time (s)		5.0			5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)		1023			713		169	1210	508	234	1221	504
v/s Ratio Prot		c0.03					c0.02	0.23		0.02	c0.29	
v/s Ratio Perm		0.17			c0.21		0.19		0.02	0.17		0.03
v/c Ratio		0.49			0.64		0.51	0.57	0.06	0.44	0.75	0.07
Uniform Delay, d1		17.8			24.3		16.6	20.1	16.3	15.8	22.1	16.3
Progression Factor		1.00			1.00		1.43	0.68	0.67	1.10	1.17	1.77
Incremental Delay, d2		1.7			4.4		9.7	1.8	0.2	4.3	3.1	0.2
Delay (s)		19.4			28.7		33.4	15.4	11.1	21.8	28.9	29.2
Level of Service		B			C		C	B	B	C	C	C
Approach Delay (s)		19.4			28.7			16.9			28.2	
Approach LOS		B			C			B			C	

Intersection Summary			
HCM Average Control Delay	23.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	74.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1035: 111th Street & Normal Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰			↱			✥				
Volume (vph)	76	410	0	0	353	81	53	43	32	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		1.00			0.97			0.97				
Flt Protected		0.99			1.00			0.98				
Satd. Flow (prot)		1734			1704			1654				
Flt Permitted		0.87			1.00			0.98				
Satd. Flow (perm)		1525			1704			1654				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	84	456	0	0	392	90	59	48	36	0	0	0
RTOR Reduction (vph)	0	0	0	0	13	0	0	18	0	0	0	0
Lane Group Flow (vph)	0	540	0	0	469	0	0	125	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)		38.0			38.0			19.0				
Effective Green, g (s)		38.0			38.0			19.0				
Actuated g/C Ratio		0.58			0.58			0.29				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		892			996			483				
v/s Ratio Prot					0.28							
v/s Ratio Perm		c0.35						0.08				
v/c Ratio		0.61			0.47			0.26				
Uniform Delay, d1		8.7			7.7			17.6				
Progression Factor		1.00			0.71			1.00				
Incremental Delay, d2		3.0			1.4			1.3				
Delay (s)		11.7			6.9			18.9				
Level of Service		B			A			B				
Approach Delay (s)		11.7			6.9			18.9			0.0	
Approach LOS		B			A			B			A	

Intersection Summary			
HCM Average Control Delay	10.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	69.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1036: 111th Street & Wentworth Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			↰↑↱			↰↑↱	
Volume (vph)	29	374	37	37	355	48	30	112	37	52	148	45
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	10	12	12	10	12
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		1.00			1.00			0.99			0.98	
Flpb, ped/bikes		1.00			1.00			0.99			1.00	
Frt		0.99			0.99			0.97			0.97	
Flt Protected		1.00			1.00			0.99			0.99	
Satd. Flow (prot)		1954			1941			2968			2979	
Flt Permitted		0.95			0.94			0.88			0.86	
Satd. Flow (perm)		1872			1828			2647			2596	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	32	416	41	41	394	53	33	124	41	58	164	50
RTOR Reduction (vph)	0	5	0	0	7	0	0	24	0	0	29	0
Lane Group Flow (vph)	0	484	0	0	481	0	0	174	0	0	243	0
Confl. Peds. (#/hr)	32		25	25		32	59		24	24		59
Confl. Bikes (#/hr)	3		2	2		3	4		2	2		4
Heavy Vehicles (%)	0%	3%	0%	3%	3%	0%	0%	0%	7%	4%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		30.0			30.0			27.0			27.0	
Effective Green, g (s)		30.0			30.0			27.0			27.0	
Actuated g/C Ratio		0.46			0.46			0.42			0.42	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		864			844			1100			1078	
v/s Ratio Prot												
v/s Ratio Perm		0.26			c0.26			0.07			c0.09	
v/c Ratio		0.56			0.57			0.16			0.23	
Uniform Delay, d1		12.7			12.8			11.9			12.3	
Progression Factor		0.55			0.40			1.34			0.45	
Incremental Delay, d2		2.1			2.5			0.3			0.5	
Delay (s)		9.2			7.7			16.2			5.9	
Level of Service		A			A			B			A	
Approach Delay (s)		9.2			7.7			16.2			5.9	
Approach LOS		A			A			B			A	

Intersection Summary			
HCM Average Control Delay	9.0	HCM Level of Service	A
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	71.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	51	320	49	78	445	82	46	217	97	79	215	62
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	9	10	10	9	10	10	12	10	10	12
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		0.99	1.00		0.99	1.00		0.99	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.95		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1509	3034		1572	3077		1587	2962		1585	3070	
Flt Permitted	0.34	1.00		0.47	1.00		0.56	1.00		0.54	1.00	
Satd. Flow (perm)	534	3034		775	3077		943	2962		905	3070	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	57	356	54	87	494	91	51	241	108	88	239	69
RTOR Reduction (vph)	0	19	0	0	23	0	0	50	0	0	32	0
Lane Group Flow (vph)	57	391	0	87	562	0	51	299	0	88	276	0
Confl. Peds. (#/hr)	20		31	31		20	16		20	20		16
Confl. Bikes (#/hr)							1		3	3		1
Heavy Vehicles (%)	5%	3%	0%	0%	1%	0%	0%	2%	2%	0%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	22.0	22.0		22.0	22.0		35.0	35.0		35.0	35.0	
Effective Green, g (s)	22.0	22.0		22.0	22.0		35.0	35.0		35.0	35.0	
Actuated g/C Ratio	0.34	0.34		0.34	0.34		0.54	0.54		0.54	0.54	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	181	1027		262	1041		508	1595		487	1653	
v/s Ratio Prot		0.13			c0.18			c0.10			0.09	
v/s Ratio Perm	0.11			0.11			0.05			0.10		
v/c Ratio	0.31	0.38		0.33	0.54		0.10	0.19		0.18	0.17	
Uniform Delay, d1	15.9	16.3		16.0	17.4		7.3	7.7		7.7	7.6	
Progression Factor	0.66	0.63		0.94	0.94		0.72	0.62		1.10	1.11	
Incremental Delay, d2	4.0	0.9		3.3	2.0		0.4	0.3		0.8	0.2	
Delay (s)	14.5	11.2		18.4	18.3		5.6	5.0		9.2	8.6	
Level of Service	B	B		B	B		A	A		A	A	
Approach Delay (s)		11.6			18.3			5.1			8.8	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	12.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	50.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1038: 111th Street & Michigan Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			↰↑↱			↰↑↱	
Volume (vph)	59	338	78	83	395	48	45	226	57	46	279	65
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	9	10	9	9	16	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			0.99			0.98	
Flpb, ped/bikes	0.98	1.00		0.99	1.00			0.99			1.00	
Frt	1.00	0.97		1.00	0.98			0.97			0.98	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1508	3016		1430	3722			3485			3519	
Flt Permitted	0.46	1.00		0.48	1.00			0.86			0.88	
Satd. Flow (perm)	734	3016		725	3722			3031			3121	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	62	356	82	87	416	51	47	238	60	48	294	68
RTOR Reduction (vph)	0	30	0	0	15	0	0	27	0	0	25	0
Lane Group Flow (vph)	62	408	0	87	452	0	0	318	0	0	385	0
Confl. Peds. (#/hr)	38		17	17		38	125		53	53		125
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	0%	3%	0%	7%	2%	0%	0%	6%	10%	2%	5%	5%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	31.0	31.0		31.0	31.0			26.0			26.0	
Effective Green, g (s)	31.0	31.0		31.0	31.0			26.0			26.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48			0.40			0.40	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	350	1438		346	1775			1212			1248	
v/s Ratio Prot		c0.14			0.12							
v/s Ratio Perm	0.08			0.12				0.10			c0.12	
v/c Ratio	0.18	0.28		0.25	0.25			0.26			0.31	
Uniform Delay, d1	9.7	10.3		10.1	10.1			13.1			13.3	
Progression Factor	1.60	1.75		1.12	1.11			0.44			0.73	
Incremental Delay, d2	1.1	0.5		1.6	0.3			0.5			0.6	
Delay (s)	16.6	18.5		12.9	11.6			6.3			10.3	
Level of Service	B	B		B	B			A			B	
Approach Delay (s)		18.2			11.8			6.3			10.3	
Approach LOS		B			B			A			B	

Intersection Summary			
HCM Average Control Delay	12.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.29		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	58.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰↱			✥			✥	
Volume (vph)	86	284	91	88	276	88	116	79	45	45	79	115
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	16	12	12	16	12
Total Lost time (s)		5.0	5.0		5.0			5.0			5.0	
Lane Util. Factor		1.00	1.00		0.95			1.00			1.00	
Frt		1.00	0.85		0.97			0.97			0.94	
Flt Protected		0.99	1.00		0.99			0.98			0.99	
Satd. Flow (prot)		1670	1436		3086			1885			1835	
Flt Permitted		0.79	1.00		0.80			0.68			0.91	
Satd. Flow (perm)		1342	1436		2487			1319			1679	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	96	316	101	98	307	98	129	88	50	50	88	128
RTOR Reduction (vph)	0	0	48	0	32	0	0	13	0	0	51	0
Lane Group Flow (vph)	0	412	53	0	471	0	0	254	0	0	215	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm		Perm	Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)		34.0	34.0		34.0			21.0			21.0	
Effective Green, g (s)		34.0	34.0		34.0			21.0			21.0	
Actuated g/C Ratio		0.52	0.52		0.52			0.32			0.32	
Clearance Time (s)		5.0	5.0		5.0			5.0			5.0	
Lane Grp Cap (vph)		702	751		1301			426			542	
v/s Ratio Prot												
v/s Ratio Perm		c0.31	0.04		0.19			c0.19			0.13	
v/c Ratio		0.59	0.07		0.36			0.60			0.40	
Uniform Delay, d1		10.7	7.7		9.1			18.4			17.1	
Progression Factor		1.82	4.59		0.53			1.00			1.00	
Incremental Delay, d2		3.5	0.2		0.8			6.0			2.2	
Delay (s)		22.9	35.4		5.6			24.5			19.2	
Level of Service		C	D		A			C			B	
Approach Delay (s)		25.4			5.6			24.5			19.2	
Approach LOS		C			A			C			B	

Intersection Summary			
HCM Average Control Delay	17.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	77.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1040: 111th Street & Martin Luther King Jr Drive

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			↰↑↱			↰↑↱	
Volume (vph)	55	271	28	25	311	58	26	130	46	62	145	63
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	15	8	16	8	8	16	8
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			0.99			1.00	
Flpb, ped/bikes	0.99	1.00		0.98	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.98			0.97			0.96	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1443	3025		1565	3019			3581			3598	
Flt Permitted	0.50	1.00		0.55	1.00			0.90			0.84	
Satd. Flow (perm)	757	3025		909	3019			3234			3071	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	61	301	31	28	346	64	29	144	51	69	161	70
RTOR Reduction (vph)	0	12	0	0	23	0	0	30	0	0	41	0
Lane Group Flow (vph)	61	320	0	28	387	0	0	194	0	0	259	0
Confl. Peds. (#/hr)	24		47	47		24	9		36	36		9
Confl. Bikes (#/hr)			4	4			1					1
Heavy Vehicles (%)	9%	4%	0%	0%	3%	0%	0%	1%	10%	0%	0%	8%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	30.0	30.0		30.0	30.0			27.0			27.0	
Effective Green, g (s)	30.0	30.0		30.0	30.0			27.0			27.0	
Actuated g/C Ratio	0.46	0.46		0.46	0.46			0.42			0.42	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	349	1396		420	1393			1343			1276	
v/s Ratio Prot		0.11			c0.13							
v/s Ratio Perm	0.08			0.03				0.06			c0.08	
v/c Ratio	0.17	0.23		0.07	0.28			0.14			0.20	
Uniform Delay, d1	10.2	10.5		9.7	10.8			11.8			12.1	
Progression Factor	0.68	0.68		0.81	0.64			1.03			0.41	
Incremental Delay, d2	0.9	0.3		0.2	0.2			0.2			0.3	
Delay (s)	7.8	7.5		8.0	7.2			12.3			5.2	
Level of Service	A	A		A	A			B			A	
Approach Delay (s)		7.5			7.3			12.3			5.2	
Approach LOS		A			A			B			A	

Intersection Summary			
HCM Average Control Delay	7.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.24		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.7%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1041: 111th Street & Cottage Grove Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱			↰↑↱			↰↑↱	
Volume (vph)	47	440	26	83	483	213	23	118	109	323	248	78
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			0.95			0.95	
Frt		0.99			0.96			0.93			0.98	
Flt Protected		1.00			0.99			1.00			0.98	
Satd. Flow (prot)		3280			3167			3089			3181	
Flt Permitted		0.78			0.80			0.91			0.71	
Satd. Flow (perm)		2557			2553			2816			2306	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	52	489	29	92	537	237	26	131	121	359	276	87
RTOR Reduction (vph)	0	6	0	0	60	0	0	65	0	0	16	0
Lane Group Flow (vph)	0	564	0	0	806	0	0	213	0	0	706	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm			pm+pt			Perm		
Protected Phases		4			8		5	2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		25.0			25.0			30.0			17.0	
Effective Green, g (s)		25.0			25.0			30.0			17.0	
Actuated g/C Ratio		0.38			0.38			0.46			0.26	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		983			982			1342			603	
v/s Ratio Prot								c0.02				
v/s Ratio Perm		0.22			c0.32			0.05			c0.31	
v/c Ratio		0.57			0.82			0.16			1.27dl	
Uniform Delay, d1		15.8			18.0			10.2			24.0	
Progression Factor		1.48			1.00			1.00			0.81	
Incremental Delay, d2		2.4			7.7			0.3			93.0	
Delay (s)		25.8			25.7			10.4			112.4	
Level of Service		C			C			B			F	
Approach Delay (s)		25.8			25.7			10.4			112.4	
Approach LOS		C			C			B			F	

Intersection Summary			
HCM Average Control Delay	49.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	83.3%	ICU Level of Service	E
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1042: 111th Street & Ellis Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↑↱			↰↑↑↱			↰↑↱			↰↑↱	
Volume (vph)	0	871	125	46	760	0	78	0	35	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	10	10	12	12	12	12	12	12	12
Total Lost time (s)		5.0			5.0			5.0				
Lane Util. Factor		0.95			0.95			1.00				
Frt		0.98			1.00			0.96				
Flt Protected		1.00			1.00			0.97				
Satd. Flow (prot)		3041			3090			1619				
Flt Permitted		1.00			0.81			0.79				
Satd. Flow (perm)		3041			2510			1329				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	968	139	51	844	0	87	0	39	0	0	0
RTOR Reduction (vph)	0	15	0	0	0	0	0	18	0	0	0	0
Lane Group Flow (vph)	0	1092	0	0	895	0	0	108	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	custom			Perm			Perm			Perm		
Protected Phases		4 5 6 11			8			2			2	
Permitted Phases	4 6 11			8			2			2		
Actuated Green, G (s)		65.0			33.0			16.0				
Effective Green, g (s)		58.0			33.0			16.0				
Actuated g/C Ratio		0.64			0.37			0.18				
Clearance Time (s)					5.0			5.0				
Lane Grp Cap (vph)		1960			920			236				
v/s Ratio Prot		c0.36										
v/s Ratio Perm					c0.36			c0.08				
v/c Ratio		0.56			0.97			0.46				
Uniform Delay, d1		8.9			28.1			33.1				
Progression Factor		0.11			1.41			1.00				
Incremental Delay, d2		0.4			22.8			6.3				
Delay (s)		1.4			62.4			39.4				
Level of Service		A			E			D				
Approach Delay (s)		1.4			62.4			39.4			0.0	
Approach LOS		A			E			D			A	

Intersection Summary			
HCM Average Control Delay	29.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	72.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1043: 111th Street & Doty Road

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↑	↱		✥		↰	↑	↱
Volume (vph)	216	633	22	108	586	178	58	4	103	205	10	205
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	10	12	12	12	12	16	12	12	12	12
Total Lost time (s)	3.0	5.0		3.0	5.0	3.0		5.0		3.0	5.0	3.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00		1.00	1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85		0.92		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.98		0.95	1.00	1.00
Satd. Flow (prot)	1550	3194		1660	3320	1485		1782		1660	1748	1485
Flt Permitted	0.31	1.00		0.34	1.00	1.00		0.88		0.44	1.00	1.00
Satd. Flow (perm)	504	3194		597	3320	1485		1594		761	1748	1485
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	240	703	24	120	651	198	64	4	114	228	11	228
RTOR Reduction (vph)	0	2	0	0	0	90	0	92	0	0	0	132
Lane Group Flow (vph)	240	725	0	120	651	108	0	90	0	228	11	96
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	pm+pt			pm+pt		pm+ov	pm+pt			pm+pt		pm+ov
Protected Phases	7	4		3	8	1	5	2		1	6	7
Permitted Phases	4			8		8	2			6		6
Actuated Green, G (s)	55.5	43.3		48.4	39.2	49.2		11.5		24.5	24.5	37.8
Effective Green, g (s)	55.5	43.3		48.4	39.2	49.2		11.5		24.5	24.5	37.8
Actuated g/C Ratio	0.62	0.48		0.54	0.44	0.55		0.13		0.27	0.27	0.42
Clearance Time (s)	3.0	5.0		3.0	5.0	3.0		5.0		3.0	5.0	3.0
Vehicle Extension (s)	4.0	3.0		4.0	3.0	3.0		4.0		3.0	4.0	4.0
Lane Grp Cap (vph)	465	1537		430	1446	812		204		307	476	624
v/s Ratio Prot	c0.08	0.23		0.03	0.20	0.01				c0.08	0.01	0.02
v/s Ratio Perm	c0.24			0.12		0.06		0.06		c0.12		0.04
v/c Ratio	0.52	0.47		0.28	0.45	0.13		0.44		0.74	0.02	0.15
Uniform Delay, d1	8.7	15.7		10.4	17.8	10.0		36.3		28.6	24.0	16.2
Progression Factor	2.62	1.90		1.00	1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2	1.1	0.9		0.5	1.0	0.1		2.1		9.3	0.0	0.2
Delay (s)	23.9	30.7		10.9	18.8	10.0		38.3		38.0	24.0	16.3
Level of Service	C	C		B	B	B		D		D	C	B
Approach Delay (s)		29.0			16.1			38.3			27.1	
Approach LOS		C			B			D			C	

Intersection Summary			
HCM Average Control Delay	24.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	60.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↑↑					↰		↱
Volume (veh/h)	0	511	431	2	323	0	0	0	0	18	0	548
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	568	479	2	359	0	0	0	0	20	0	609
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		498										
pX, platoon unblocked												
vC, conflicting volume	359			568			752	931	284	647	931	179
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	359			568			752	931	284	647	931	179
tC, single (s)	4.2			4.2			7.6	6.6	7.0	7.6	6.6	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	100	94	100	27
cM capacity (veh/h)	1189			994			79	263	710	353	263	829

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1	SB 2
Volume Total	284	284	479	122	239	20	609
Volume Left	0	0	0	2	0	20	0
Volume Right	0	0	479	0	0	0	609
cSH	1700	1700	1700	994	1700	353	829
Volume to Capacity	0.17	0.17	0.28	0.00	0.14	0.06	0.73
Queue Length 95th (ft)	0	0	0	0	0	4	167
Control Delay (s)	0.0	0.0	0.0	0.2	0.0	15.8	20.3
Lane LOS				A		C	C
Approach Delay (s)	0.0			0.1		20.2	
Approach LOS						C	

Intersection Summary			
Average Delay	6.2		
Intersection Capacity Utilization	52.0%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
1045: 111th Street & Bishop Ford Freeway WB Ramps

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰↰		↰			
Sign Control	Stop			Stop	Stop	
Volume (vph)	529	0	325	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	588	0	361	0	0	0

Direction, Lane #	EB 1	EB 2	NB 1
Volume Total (vph)	294	294	361
Volume Left (vph)	294	294	361
Volume Right (vph)	0	0	0
Hadj (s)	0.55	0.55	0.25
Departure Headway (s)	6.1	6.1	5.6
Degree Utilization, x	0.50	0.50	0.56
Capacity (veh/h)	571	573	620
Control Delay (s)	13.9	13.9	15.3
Approach Delay (s)	13.9		15.3
Approach LOS	B		C

Intersection Summary			
Delay	14.5		
HCM Level of Service	B		
Intersection Capacity Utilization	41.6%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Signalized Intersection Capacity Analysis
1046: 115th Street & Marshield Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱		↰	↑↑						↰↑↱	
Volume (vph)	0	472	90	188	584	0	0	0	0	101	21	58
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	12	12	12	12	12
Total Lost time (s)		3.0		4.0	4.0						5.0	
Lane Util. Factor		0.95		1.00	0.95						0.95	
Frt		0.98		1.00	1.00						0.95	
Flt Protected		1.00		0.95	1.00						0.97	
Satd. Flow (prot)		3133		1605	3210						3074	
Flt Permitted		1.00		0.33	1.00						0.97	
Satd. Flow (perm)		3133		559	3210						3074	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	524	100	209	649	0	0	0	0	112	23	64
RTOR Reduction (vph)	0	18	0	0	0	0	0	0	0	0	44	0
Lane Group Flow (vph)	0	606	0	209	649	0	0	0	0	0	155	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type				pm+pt						Split		
Protected Phases		4		3	8					6	6	
Permitted Phases				8								
Actuated Green, G (s)		36.0		49.0	49.0						27.0	
Effective Green, g (s)		36.0		49.0	49.0						27.0	
Actuated g/C Ratio		0.42		0.58	0.58						0.32	
Clearance Time (s)		3.0		4.0	4.0						5.0	
Lane Grp Cap (vph)		1327		445	1850						976	
v/s Ratio Prot		0.19		c0.06	0.20						c0.05	
v/s Ratio Perm				c0.22								
v/c Ratio		0.46		0.47	0.35						0.16	
Uniform Delay, d1		17.5		16.2	9.6						20.8	
Progression Factor		1.00		0.50	0.42						1.00	
Incremental Delay, d2		1.1		3.0	0.4						0.3	
Delay (s)		18.6		11.0	4.5						21.2	
Level of Service		B		B	A						C	
Approach Delay (s)		18.6			6.1			0.0			21.2	
Approach LOS		B			A			A			C	

Intersection Summary			
HCM Average Control Delay	12.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	45.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑			↑↱			↰↑↱				
Volume (vph)	95	478	0	0	609	124	163	90	58	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	11	11	12	12	12	12	12	12
Total Lost time (s)	5.0	5.0			3.0			5.0				
Lane Util. Factor	1.00	0.95			0.95			0.91				
Frt	1.00	1.00			0.97			0.97				
Flt Protected	0.95	1.00			1.00			0.97				
Satd. Flow (prot)	1660	3320			3128			4520				
Flt Permitted	0.23	1.00			1.00			0.97				
Satd. Flow (perm)	401	3320			3128			4520				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	106	531	0	0	677	138	181	100	64	0	0	0
RTOR Reduction (vph)	0	0	0	0	20	0	0	44	0	0	0	0
Lane Group Flow (vph)	106	531	0	0	795	0	0	301	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	pm+pt						Split					
Protected Phases	7	4			8		2	2				
Permitted Phases	4											
Actuated Green, G (s)	48.0	48.0			35.0			27.0				
Effective Green, g (s)	48.0	48.0			35.0			27.0				
Actuated g/C Ratio	0.56	0.56			0.41			0.32				
Clearance Time (s)	5.0	5.0			3.0			5.0				
Lane Grp Cap (vph)	375	1875			1288			1436				
v/s Ratio Prot	0.03	c0.16			c0.25			c0.07				
v/s Ratio Perm	0.13											
v/c Ratio	0.28	0.28			0.62			0.21				
Uniform Delay, d1	17.6	9.6			19.7			21.2				
Progression Factor	0.40	0.33			1.00			1.00				
Incremental Delay, d2	1.7	0.4			2.2			0.3				
Delay (s)	8.7	3.5			21.9			21.5				
Level of Service	A	A			C			C				
Approach Delay (s)		4.4			21.9			21.5			0.0	
Approach LOS		A			C			C			A	

Intersection Summary			
HCM Average Control Delay	15.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	45.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1048: 115th Street & Racine Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↑↱			↰↑↑↱			↰↑↱			↰↓↱	
Volume (vph)	114	342	126	79	366	79	178	78	27	29	85	141
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	10	12	12	15	12	12	15	12
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			1.00			1.00	
Frt		0.97			0.98			0.99			0.93	
Flt Protected		0.99			0.99			0.97			0.99	
Satd. Flow (prot)		2969			3006			1840			1768	
Flt Permitted		0.68			0.72			0.66			0.94	
Satd. Flow (perm)		2025			2179			1251			1677	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	127	380	140	88	407	88	198	87	30	32	94	157
RTOR Reduction (vph)	0	39	0	0	22	0	0	6	0	0	69	0
Lane Group Flow (vph)	0	608	0	0	561	0	0	309	0	0	214	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		23.0			23.0			32.0			32.0	
Effective Green, g (s)		23.0			23.0			32.0			32.0	
Actuated g/C Ratio		0.35			0.35			0.49			0.49	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		717			771			616			826	
v/s Ratio Prot												
v/s Ratio Perm		c0.30			0.26			c0.25			0.13	
v/c Ratio		0.85			0.73			0.50			0.26	
Uniform Delay, d1		19.4			18.3			11.1			9.6	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		11.9			5.9			2.9			0.8	
Delay (s)		31.3			24.2			14.0			10.4	
Level of Service		C			C			B			B	
Approach Delay (s)		31.3			24.2			14.0			10.4	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM Average Control Delay	22.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	82.2%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1049: 115th Street & Halsted Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↑	↱	↰	↑↑	↱
Volume (vph)	106	201	100	203	311	65	168	561	243	91	911	140
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	12	10	16	12	9	10	9	9	10	9
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00	0.97	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.95		1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1559	2967		1574	3683		1508	3069	1333	1521	3099	1336
Flt Permitted	0.45	1.00		0.52	1.00		0.13	1.00	1.00	0.32	1.00	1.00
Satd. Flow (perm)	739	2967		862	3683		212	3069	1333	520	3099	1336
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	112	212	105	214	327	68	177	591	256	96	959	147
RTOR Reduction (vph)	0	70	0	0	21	0	0	0	163	0	0	93
Lane Group Flow (vph)	112	247	0	214	374	0	177	591	93	96	959	54
Confl. Peds. (#/hr)	19		16	16		19	22		25	25		22
Heavy Vehicles (%)	2%	2%	0%	1%	2%	2%	2%	4%	0%	1%	3%	0%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	32.0	27.0		32.0	27.0		38.0	31.0	31.0	38.0	31.0	31.0
Effective Green, g (s)	30.0	28.0		30.0	28.0		36.0	31.0	31.0	36.0	31.0	31.0
Actuated g/C Ratio	0.35	0.33		0.35	0.33		0.42	0.36	0.36	0.42	0.36	0.36
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)	299	977		338	1213		181	1119	486	291	1130	487
v/s Ratio Prot	0.02	0.08		c0.03	0.10		c0.07	0.19		0.02	0.31	
v/s Ratio Perm	0.11			c0.19			c0.35		0.07	0.12		0.04
v/c Ratio	0.37	0.25		0.63	0.31		0.98	0.53	0.19	0.33	0.85	0.11
Uniform Delay, d1	19.4	20.8		22.2	21.3		19.9	21.2	18.4	15.4	24.8	17.9
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.42	1.06	2.39
Incremental Delay, d2	3.6	0.6		8.7	0.7		61.4	1.8	0.9	2.2	6.0	0.3
Delay (s)	23.0	21.5		30.9	21.9		81.3	23.0	19.3	24.2	32.2	43.0
Level of Service	C	C		C	C		F	C	B	C	C	D
Approach Delay (s)		21.9			25.1			32.2			32.9	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	29.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	74.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1050: 115th Street & Wentworth Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱		↰	↱		↰	↱
Volume (vph)	97	424	30	33	421	24	31	95	39	36	122	75
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	16	12	12	16	12
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frpb, ped/bikes		1.00	0.96		1.00	0.97		1.00	0.98		1.00	0.99
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frt		1.00	0.85		1.00	0.85		1.00	0.85		1.00	0.85
Flt Protected		0.99	1.00		1.00	1.00		0.99	1.00		0.99	1.00
Satd. Flow (prot)		1957	1466		1994	1480		2015	1506		2000	1511
Flt Permitted		0.73	1.00		0.94	1.00		0.92	1.00		0.92	1.00
Satd. Flow (perm)		1435	1466		1888	1480		1869	1506		1870	1511
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	102	446	32	35	443	25	33	100	41	38	128	79
RTOR Reduction (vph)	0	0	17	0	0	13	0	0	24	0	0	46
Lane Group Flow (vph)	0	548	15	0	478	12	0	133	17	0	166	33
Confl. Peds. (#/hr)	11		20	20		11	1		4	4		1
Confl. Bikes (#/hr)	1		1	1		1			1	1		
Heavy Vehicles (%)	4%	3%	0%	0%	2%	0%	0%	0%	0%	0%	1%	0%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)		30.0	30.0		30.0	30.0		27.0	27.0		27.0	27.0
Effective Green, g (s)		30.0	30.0		30.0	30.0		27.0	27.0		27.0	27.0
Actuated g/C Ratio		0.46	0.46		0.46	0.46		0.42	0.42		0.42	0.42
Clearance Time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		662	677		871	683		776	626		777	628
v/s Ratio Prot												
v/s Ratio Perm		c0.38	0.01		0.25	0.01		0.07	0.01		c0.09	0.02
v/c Ratio		0.83	0.02		0.55	0.02		0.17	0.03		0.21	0.05
Uniform Delay, d1		15.2	9.5		12.6	9.5		12.0	11.2		12.2	11.4
Progression Factor		1.00	1.00		0.62	0.55		0.92	1.00		1.03	0.93
Incremental Delay, d2		11.4	0.1		2.4	0.0		0.4	0.1		0.6	0.2
Delay (s)		26.6	9.6		10.2	5.2		11.4	11.3		13.1	10.7
Level of Service		C	A		B	A		B	B		B	B
Approach Delay (s)		25.7			10.0			11.4			12.3	
Approach LOS		C			A			B			B	

Intersection Summary			
HCM Average Control Delay	16.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	94.5%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1051: 115th Street & State Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	115	394	20	41	269	31	10	107	21	104	203	72
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	0.98		1.00	0.98		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1550	3077		1550	3052		1550	3024		1550	2977	
Flt Permitted	0.95	1.00		0.49	1.00		0.55	1.00		0.66	1.00	
Satd. Flow (perm)	1550	3077		795	3052		897	3024		1080	2977	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	128	438	22	46	299	34	11	119	23	116	226	80
RTOR Reduction (vph)	0	6	0	0	13	0	0	13	0	0	47	0
Lane Group Flow (vph)	128	454	0	46	320	0	11	129	0	116	259	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Prot			Perm			Perm			Perm		
Protected Phases	7	4			8			2			6	
Permitted Phases				8			2			6		
Actuated Green, G (s)	7.0	32.0		22.0	22.0		27.0	27.0		27.0	27.0	
Effective Green, g (s)	7.0	32.0		22.0	22.0		27.0	27.0		27.0	27.0	
Actuated g/C Ratio	0.11	0.49		0.34	0.34		0.42	0.42		0.42	0.42	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	167	1515		269	1033		373	1256		449	1237	
v/s Ratio Prot	c0.08	c0.15			0.10			0.04			0.09	
v/s Ratio Perm				0.06			0.01			c0.11		
v/c Ratio	0.77	0.30		0.17	0.31		0.03	0.10		0.26	0.21	
Uniform Delay, d1	28.2	9.8		15.1	15.9		11.2	11.6		12.4	12.2	
Progression Factor	1.17	0.39		0.75	0.73		1.05	1.15		1.13	1.14	
Incremental Delay, d2	22.2	0.4		1.3	0.7		0.1	0.1		1.4	0.4	
Delay (s)	55.1	4.2		12.7	12.4		12.0	13.5		15.4	14.3	
Level of Service	E	A		B	B		B	B		B	B	
Approach Delay (s)		15.3			12.4			13.4			14.6	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	14.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	40.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1052: 115th Street & Michigan Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			↰↑↱			↰↑↱	
Volume (vph)	83	332	68	197	337	61	25	245	20	55	270	55
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	12	12	12	12	12	12
Total Lost time (s)	4.0	4.0		3.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frt	1.00	0.97		1.00	0.98			0.99			0.98	
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.99	
Satd. Flow (prot)	1550	3020		1550	3028			3272			3225	
Flt Permitted	0.50	1.00		0.95	1.00			0.90			0.86	
Satd. Flow (perm)	809	3020		1550	3028			2966			2803	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	92	369	76	219	374	68	28	272	22	61	300	61
RTOR Reduction (vph)	0	26	0	0	23	0	0	8	0	0	21	0
Lane Group Flow (vph)	92	419	0	219	419	0	0	314	0	0	401	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Prot			Perm			Perm		
Protected Phases		4		3	8			2			6	
Permitted Phases	4						2			6		
Actuated Green, G (s)	20.0	20.0		6.0	29.0			25.0			25.0	
Effective Green, g (s)	20.0	20.0		6.0	29.0			25.0			25.0	
Actuated g/C Ratio	0.31	0.31		0.09	0.45			0.38			0.38	
Clearance Time (s)	4.0	4.0		3.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	249	929		143	1351			1141			1078	
v/s Ratio Prot		c0.14		c0.14	0.14							
v/s Ratio Perm	0.11							0.11			c0.14	
v/c Ratio	0.37	0.45		1.53	0.31			0.28			0.37	
Uniform Delay, d1	17.6	18.1		29.5	11.6			13.8			14.4	
Progression Factor	0.86	0.80		1.28	1.15			0.87			0.71	
Incremental Delay, d2	4.1	1.5		257.2	0.3			0.6			1.0	
Delay (s)	19.1	16.0		294.9	13.6			12.6			11.2	
Level of Service	B	B		F	B			B			B	
Approach Delay (s)		16.5			106.8			12.6			11.2	
Approach LOS		B			F			B			B	

Intersection Summary			
HCM Average Control Delay	45.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	56.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1053: 115th Street & Indiana Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			↰↑↑↱				
Volume (vph)	16	355	26	73	602	73	54	108	162	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	12	14	12	10	15	10
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			0.95				
Frt		0.99			0.99			0.93				
Flt Protected		1.00			1.00			0.99				
Satd. Flow (prot)		1613			1602			3249				
Flt Permitted		0.96			0.92			0.99				
Satd. Flow (perm)		1558			1484			3249				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	18	394	29	81	669	81	60	120	180	0	0	0
RTOR Reduction (vph)	0	3	0	0	5	0	0	137	0	0	0	0
Lane Group Flow (vph)	0	438	0	0	826	0	0	223	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm			Perm					
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Actuated Green, G (s)		41.5			41.5			15.5				
Effective Green, g (s)		41.5			41.5			15.5				
Actuated g/C Ratio		0.64			0.64			0.24				
Clearance Time (s)		4.0			4.0			4.0				
Vehicle Extension (s)		3.0			3.0			8.0				
Lane Grp Cap (vph)		995			947			775				
v/s Ratio Prot												
v/s Ratio Perm		0.28			c0.56			0.07				
v/c Ratio		0.44			0.87			0.29				
Uniform Delay, d1		5.9			9.6			20.2				
Progression Factor		2.02			1.00			1.00				
Incremental Delay, d2		1.3			10.9			0.9				
Delay (s)		13.2			20.5			21.1				
Level of Service		B			C			C				
Approach Delay (s)		13.2			20.5			21.1			0.0	
Approach LOS		B			C			C			A	

Intersection Summary			
HCM Average Control Delay	18.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	85.0%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰	↱		↰	↱
Volume (veh/h)	93	414	579	38	117	162
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	98	436	609	40	123	171
Pedestrians		5	6		17	
Lane Width (ft)		16.0	16.0		10.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		1	1		1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		1319	491			
pX, platoon unblocked	0.84				0.84	0.84
vC, conflicting volume	666				1284	651
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	504				1242	486
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	89				13	65
cM capacity (veh/h)	864				142	481

Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total	534	649	123	171
Volume Left	98	0	123	0
Volume Right	0	40	0	171
cSH	864	1700	142	481
Volume to Capacity	0.11	0.38	0.87	0.35
Queue Length 95th (ft)	10	0	143	40
Control Delay (s)	3.0	0.0	104.6	16.5
Lane LOS	A		F	C
Approach Delay (s)	3.0	0.0	53.4	
Approach LOS			F	

Intersection Summary			
Average Delay	11.7		
Intersection Capacity Utilization	81.0%	ICU Level of Service	D
Analysis Period (min)	15		

HCM Signalized Intersection Capacity Analysis
1055: 115th Street & Cottage Grove Avenue

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↱			↰	Y	
Volume (vph)	684	0	1	600	3	29
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0			4.0	4.0	
Lane Util. Factor	1.00			1.00	1.00	
Frt	1.00			1.00	0.88	
Flt Protected	1.00			1.00	1.00	
Satd. Flow (prot)	1748			1747	1525	
Flt Permitted	1.00			1.00	1.00	
Satd. Flow (perm)	1748			1747	1525	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	760	0	1	667	3	32
RTOR Reduction (vph)	0	0	0	0	27	0
Lane Group Flow (vph)	760	0	0	668	8	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type			Perm			
Protected Phases	1 2 4			4	3	
Permitted Phases			4			
Actuated Green, G (s)	63.0			31.0	14.0	
Effective Green, g (s)	59.0			31.0	14.0	
Actuated g/C Ratio	0.69			0.36	0.16	
Clearance Time (s)				4.0	4.0	
Lane Grp Cap (vph)	1213			637	251	
v/s Ratio Prot	c0.43				c0.01	
v/s Ratio Perm				0.38		
v/c Ratio	0.63			1.05	0.03	
Uniform Delay, d1	7.0			27.0	29.8	
Progression Factor	0.10			1.00	1.00	
Incremental Delay, d2	1.1			49.1	0.2	
Delay (s)	1.8			76.1	30.1	
Level of Service	A			E	C	
Approach Delay (s)	1.8			76.1	30.1	
Approach LOS	A			E	C	

Intersection Summary			
HCM Average Control Delay	36.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	48.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
1056: 115th Street & Bishop Ford Fwy

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱			↰↑						↰↑	↱
Volume (veh/h)	0	236	594	30	386	0	0	0	0	17	6	242
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	262	660	33	429	0	0	0	0	19	7	269
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	429			262			1091	1088	461	627	758	429
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	429			262			1091	1088	461	627	758	429
tC, single (s)	4.1			4.2			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			97			100	100	100	95	98	53
cM capacity (veh/h)	1141			1285			88	212	553	365	330	574

Direction, Lane #	EB 1	EB 2	WB 1	SB 1	SB 2
Volume Total	175	747	462	26	269
Volume Left	0	0	33	19	0
Volume Right	0	660	0	0	269
cSH	1700	1700	1285	355	574
Volume to Capacity	0.10	0.44	0.03	0.07	0.47
Queue Length 95th (ft)	0	0	2	6	62
Control Delay (s)	0.0	0.0	0.8	15.9	16.7
Lane LOS			A	C	C
Approach Delay (s)	0.0		0.8	16.6	
Approach LOS				C	

Intersection Summary			
Average Delay	3.1		
Intersection Capacity Utilization	57.6%	ICU Level of Service	B
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
1057: 115th Street &

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰↰		↰			
Sign Control	Stop			Stop	Stop	
Volume (vph)	253	0	417	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	281	0	463	0	0	0

Direction, Lane #	EB 1	EB 2	NB 1
Volume Total (vph)	141	141	463
Volume Left (vph)	141	141	463
Volume Right (vph)	0	0	0
Hadj (s)	0.55	0.55	0.25
Departure Headway (s)	6.3	6.3	5.0
Degree Utilization, x	0.25	0.25	0.64
Capacity (veh/h)	543	544	702
Control Delay (s)	10.1	10.1	16.3
Approach Delay (s)	10.1		16.3
Approach LOS	B		C

Intersection Summary			
Delay	14.0		
HCM Level of Service	B		
Intersection Capacity Utilization	38.7%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Signalized Intersection Capacity Analysis
1058: 119th Street & Marshield Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↰↑					↰	↰↑↱	↱
Volume (vph)	0	545	337	322	845	0	0	0	0	305	269	372
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	12	13	12	12	12	12	10	10	11
Total Lost time (s)		6.0	6.0		6.0					6.0	6.0	6.0
Lane Util. Factor		0.95	1.00		0.95					0.86	0.81	0.86
Frpb, ped/bikes		1.00	0.98		1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00					1.00	1.00	1.00
Frt		1.00	0.85		1.00					1.00	0.95	0.85
Flt Protected		1.00	1.00		0.99					0.95	0.99	1.00
Satd. Flow (prot)		3179	1232		3427					1359	3807	1133
Flt Permitted		1.00	1.00		0.99					0.95	0.99	1.00
Satd. Flow (perm)		3179	1232		3427					1359	3807	1133
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	574	355	339	889	0	0	0	0	321	283	392
RTOR Reduction (vph)	0	0	206	0	0	0	0	0	0	0	52	113
Lane Group Flow (vph)	0	574	149	0	1228	0	0	0	0	177	571	83
Confl. Peds. (#/hr)	4		6	6		4						
Heavy Vehicles (%)	0%	4%	6%	1%	2%	0%	0%	0%	0%	1%	1%	1%
Parking (#/hr)			0									0
Turn Type			Perm	Split						Split		custom
Protected Phases		2		10 12 14	10 12 14					4	4	
Permitted Phases			2									4 2
Actuated Green, G (s)		39.0	39.0		67.4					23.0	23.0	68.0
Effective Green, g (s)		39.0	39.0		67.4					23.0	23.0	68.0
Actuated g/C Ratio		0.24	0.24		0.42					0.14	0.14	0.42
Clearance Time (s)		6.0	6.0							6.0	6.0	
Vehicle Extension (s)		3.0	3.0							3.0	3.0	
Lane Grp Cap (vph)		775	300		1444					195	547	482
v/s Ratio Prot		c0.18			c0.36					0.13	c0.15	
v/s Ratio Perm			0.12									0.07
v/c Ratio		0.74	0.50		0.85					0.91	1.04	0.17
Uniform Delay, d1		55.8	52.0		41.8					67.5	68.5	28.5
Progression Factor		1.00	1.00		0.16					1.00	1.00	1.00
Incremental Delay, d2		6.3	5.7		0.5					39.2	50.3	0.2
Delay (s)		62.1	57.8		7.1					106.7	118.8	28.7
Level of Service		E	E		A					F	F	C
Approach Delay (s)		60.5			7.1			0.0			98.9	
Approach LOS		E			A			A			F	

Intersection Summary			
HCM Average Control Delay	51.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	32.6
Intersection Capacity Utilization	83.4%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1059: 119th Street & Ashland Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Lane Configurations	↰	↑↑			↑↑	↱	↰	↰↑↱				
Volume (vph)	290	561	0	0	854	231	313	204	202	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	13	12	12	11	12	13	13	14	12	12	12
Total Lost time (s)	6.0	6.0			6.0	6.0	6.0	6.0				
Lane Util. Factor	1.00	0.95			0.95	1.00	0.91	0.91				
Frt	1.00	1.00			1.00	0.85	1.00	0.94				
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.99				
Satd. Flow (prot)	1605	3431			3210	1485	1561	3055				
Flt Permitted	0.95	1.00			1.00	1.00	0.95	0.99				
Satd. Flow (perm)	1605	3431			3210	1485	1561	3055				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	322	623	0	0	949	257	348	227	224	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	94	0	77	0	0	0	0
Lane Group Flow (vph)	322	623	0	0	949	163	271	451	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Split					Perm	Split					
Protected Phases	2 4 8	2 4 8			10		12	12				
Permitted Phases						10						
Actuated Green, G (s)	84.6	84.6			36.4	36.4	12.0	12.0				
Effective Green, g (s)	84.6	84.6			36.4	36.4	12.0	12.0				
Actuated g/C Ratio	0.53	0.53			0.23	0.23	0.08	0.08				
Clearance Time (s)					6.0	6.0	6.0	6.0				
Vehicle Extension (s)					3.0	3.0	3.0	3.0				
Lane Grp Cap (vph)	849	1814			730	338	117	229				
v/s Ratio Prot	c0.20	0.18			c0.30		c0.17	0.15				
v/s Ratio Perm						0.11						
v/c Ratio	0.38	0.34			1.30	0.48	2.32	1.97				
Uniform Delay, d1	22.2	21.7			61.8	53.6	74.0	74.0				
Progression Factor	0.06	0.06			1.00	1.00	1.00	1.00				
Incremental Delay, d2	0.2	0.1			145.0	1.1	618.2	452.1				
Delay (s)	1.4	1.3			206.8	54.7	692.2	526.1				
Level of Service	A	A			F	D	F	F				
Approach Delay (s)		1.3			174.3			582.5			0.0	
Approach LOS		A			F			F			A	

Intersection Summary			
HCM Average Control Delay	229.5	HCM Level of Service	F
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	29.0
Intersection Capacity Utilization	71.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1060: 119th Street & Halsted Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↱		↰	↑↱		↰	↑↱	
Volume (vph)	138	502	134	87	266	66	104	504	68	96	1150	120
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	14	12	10	10	12	9	10	12
Total Lost time (s)	4.0	4.0	5.0	4.0	5.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.97		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1575	1600	1373	1596	1791		1579	3015		1537	3027	
Flt Permitted	0.33	1.00	1.00	0.15	1.00		0.12	1.00		0.32	1.00	
Satd. Flow (perm)	549	1600	1373	251	1791		201	3015		523	3027	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	145	528	141	92	280	69	109	531	72	101	1211	126
RTOR Reduction (vph)	0	0	95	0	10	0	0	12	0	0	9	0
Lane Group Flow (vph)	145	528	46	92	339	0	109	591	0	101	1328	0
Confl. Peds. (#/hr)	28		8	8		28	59		11	11		59
Confl. Bikes (#/hr)	3					3	1		2	2		1
Heavy Vehicles (%)	1%	5%	2%	0%	4%	0%	1%	4%	0%	0%	3%	3%
Turn Type	pm+pt		Perm	pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)	36.3	29.3	29.3	33.3	27.8		39.6	34.1		39.6	34.1	
Effective Green, g (s)	34.3	30.3	29.3	31.3	27.8		37.6	34.1		37.6	34.1	
Actuated g/C Ratio	0.38	0.34	0.33	0.35	0.31		0.42	0.38		0.42	0.38	
Clearance Time (s)	3.0	5.0	5.0	3.0	5.0		3.0	4.0		3.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	279	542	450	156	557		154	1150		271	1155	
v/s Ratio Prot	c0.03	c0.33		0.03	0.19		c0.04	0.20		0.02	c0.44	
v/s Ratio Perm	0.16		0.03	0.18			0.26			0.14		
v/c Ratio	0.52	0.97	0.10	0.59	0.61		0.71	0.51		0.37	1.15	
Uniform Delay, d1	19.6	29.2	20.9	22.3	26.2		21.2	21.3		16.5	27.7	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.6	32.8	0.5	5.6	4.9		13.8	1.6		0.9	77.9	
Delay (s)	21.2	61.9	21.4	27.9	31.1		35.0	22.9		17.3	105.5	
Level of Service	C	E	C	C	C		D	C		B	F	
Approach Delay (s)		47.7			30.4			24.8			99.3	
Approach LOS		D			C			C			F	

Intersection Summary			
HCM Average Control Delay	62.5	HCM Level of Service	E
HCM Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	89.4	Sum of lost time (s)	12.0
Intersection Capacity Utilization	91.1%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1061: 119th Street & Wentworth Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱		✣			✣	
Volume (vph)	87	454	109	13	324	21	48	57	19	20	88	79
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	10	10	10	12	15	12	12	16	12
Total Lost time (s)		3.0	3.0		3.0	3.0		3.0			3.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00			1.00	
Frpb, ped/bikes		1.00	0.96		1.00	0.97		1.00			0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00			1.00	
Frt		1.00	0.85		1.00	0.85		0.98			0.94	
Flt Protected		0.99	1.00		1.00	1.00		0.98			0.99	
Satd. Flow (prot)		1963	1467		1629	1381		1890			1857	
Flt Permitted		0.89	1.00		0.98	1.00		0.86			0.97	
Satd. Flow (perm)		1764	1467		1597	1381		1653			1815	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	92	478	115	14	341	22	51	60	20	21	93	83
RTOR Reduction (vph)	0	0	45	0	0	11	0	10	0	0	40	0
Lane Group Flow (vph)	0	570	70	0	355	11	0	121	0	0	157	0
Confl. Peds. (#/hr)	12		20	20		12	8		2	2		8
Confl. Bikes (#/hr)	1		2	2		1			1	1		
Heavy Vehicles (%)	3%	3%	0%	0%	3%	0%	0%	0%	0%	0%	1%	3%
Turn Type	Perm		Perm	Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)		32.0	32.0		32.0	32.0		27.0			27.0	
Effective Green, g (s)		32.0	32.0		32.0	32.0		27.0			27.0	
Actuated g/C Ratio		0.49	0.49		0.49	0.49		0.42			0.42	
Clearance Time (s)		3.0	3.0		3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)		868	722		786	680		687			754	
v/s Ratio Prot												
v/s Ratio Perm		c0.32	0.05		0.22	0.01		0.07			c0.09	
v/c Ratio		0.66	0.10		0.45	0.02		0.18			0.21	
Uniform Delay, d1		12.4	8.8		10.8	8.4		12.0			12.2	
Progression Factor		1.00	1.00		1.85	2.62		1.00			1.99	
Incremental Delay, d2		3.9	0.3		1.8	0.0		0.6			0.6	
Delay (s)		16.2	9.1		21.7	22.2		12.5			24.8	
Level of Service		B	A		C	C		B			C	
Approach Delay (s)		15.0			21.8			12.5			24.8	
Approach LOS		B			C			B			C	

Intersection Summary			
HCM Average Control Delay	18.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	77.4%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1062: 119th Street & State Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱		↰	↱		✥	
Volume (vph)	107	239	90	11	218	10	46	108	18	14	175	78
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frpb, ped/bikes		1.00	0.94		1.00	0.97		1.00	0.97		0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		0.96	
Flt Protected		0.98	1.00		1.00	1.00		0.99	1.00		1.00	
Satd. Flow (prot)		1742	1443		1728	1487		1712	1489		1703	
Flt Permitted		0.80	1.00		0.98	1.00		0.86	1.00		0.98	
Satd. Flow (perm)		1411	1443		1691	1487		1494	1489		1681	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	113	252	95	12	229	11	48	114	19	15	184	82
RTOR Reduction (vph)	0	0	58	0	0	7	0	0	10	0	23	0
Lane Group Flow (vph)	0	365	37	0	241	4	0	162	9	0	258	0
Confl. Peds. (#/hr)	19		25	25		19	3		6	6		3
Confl. Bikes (#/hr)	1		2	2		1			1	1		
Heavy Vehicles (%)	0%	2%	0%	0%	4%	0%	0%	5%	0%	0%	0%	2%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		23.0	23.0		23.0	23.0		32.0	32.0		32.0	
Effective Green, g (s)		23.0	23.0		23.0	23.0		32.0	32.0		32.0	
Actuated g/C Ratio		0.35	0.35		0.35	0.35		0.49	0.49		0.49	
Clearance Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	
Lane Grp Cap (vph)		499	511		598	526		736	733		828	
v/s Ratio Prot												
v/s Ratio Perm		c0.26	0.03		0.14	0.00		0.11	0.01		c0.15	
v/c Ratio		0.73	0.07		0.40	0.01		0.22	0.01		0.31	
Uniform Delay, d1		18.3	13.9		15.8	13.6		9.4	8.4		9.9	
Progression Factor		1.80	3.68		0.96	0.98		0.16	0.20		1.07	
Incremental Delay, d2		7.3	0.2		2.0	0.0		0.1	0.0		1.0	
Delay (s)		40.2	51.5		17.1	13.3		1.6	1.7		11.6	
Level of Service		D	D		B	B		A	A		B	
Approach Delay (s)		42.5			17.0			1.6			11.6	
Approach LOS		D			B			A			B	

Intersection Summary			
HCM Average Control Delay	23.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	70.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1063: 119th Street & Michigan Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		✥			✥			↰	↱
Volume (vph)	167	45	96	8	16	9	43	224	8	20	458	199
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	14	12	12	16	12	12	16	12
Total Lost time (s)		3.0	3.0		3.0			3.0			3.0	3.0
Lane Util. Factor		1.00	1.00		1.00			1.00			1.00	1.00
Frpb, ped/bikes		1.00	0.95		0.99			1.00			1.00	0.94
Flpb, ped/bikes		0.98	1.00		0.99			1.00			1.00	1.00
Frt		1.00	0.85		0.96			1.00			1.00	0.85
Flt Protected		0.96	1.00		0.99			0.99			1.00	1.00
Satd. Flow (prot)		1873	1440		1782			1991			1976	1382
Flt Permitted		0.81	1.00		0.93			0.89			0.98	1.00
Satd. Flow (perm)		1573	1440		1686			1780			1947	1382
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	186	50	107	9	18	10	48	249	9	22	509	221
RTOR Reduction (vph)	0	0	63	0	7	0	0	2	0	0	0	92
Lane Group Flow (vph)	0	236	44	0	30	0	0	304	0	0	531	129
Confl. Peds. (#/hr)	37		53	53		37	39		54	54		39
Confl. Bikes (#/hr)							2					2
Heavy Vehicles (%)	4%	0%	1%	0%	0%	0%	0%	1%	0%	0%	3%	4%
Turn Type	pm+pt		Perm	Perm			Perm			Perm		Perm
Protected Phases	7	4			8			2			6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)		27.0	27.0		17.0			32.0			32.0	32.0
Effective Green, g (s)		27.0	27.0		17.0			32.0			32.0	32.0
Actuated g/C Ratio		0.42	0.42		0.26			0.49			0.49	0.49
Clearance Time (s)		3.0	3.0		3.0			3.0			3.0	3.0
Lane Grp Cap (vph)		690	598		441			876			959	680
v/s Ratio Prot		c0.04										
v/s Ratio Perm		0.10	0.03		0.02			0.17			c0.27	0.09
v/c Ratio		0.34	0.07		0.07			0.35			0.55	0.19
Uniform Delay, d1		12.9	11.5		18.0			10.1			11.5	9.2
Progression Factor		1.00	1.79		1.00			0.53			0.64	0.22
Incremental Delay, d2		1.1	0.2		0.3			0.7			1.8	0.5
Delay (s)		14.0	20.7		18.3			6.0			9.1	2.5
Level of Service		B	C		B			A			A	A
Approach Delay (s)		16.1			18.3			6.0			7.1	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	9.3	HCM Level of Service	A
HCM Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	71.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1064: 127th Street & S Paulina St

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↱		↰	↑↑					↰	↲↱	↱
Volume (vph)	0	922	289	666	1163	0	0	0	0	513	284	334
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	12	11	8	8	8	11	12	14
Total Lost time (s)		6.0		4.5	6.0					6.0	6.0	6.0
Lane Util. Factor		0.91		1.00	0.95					0.91	0.86	0.91
Frpb, ped/bikes		0.99		1.00	1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Frt		0.96		1.00	1.00					1.00	0.98	0.85
Flt Protected		1.00		0.95	1.00					0.95	0.98	1.00
Satd. Flow (prot)		4575		1621	3320					1489	2913	1442
Flt Permitted		1.00		0.10	1.00					0.95	0.98	1.00
Satd. Flow (perm)		4575		173	3320					1489	2913	1442
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	971	304	701	1224	0	0	0	0	540	299	352
RTOR Reduction (vph)	0	49	0	0	0	0	0	0	0	0	9	62
Lane Group Flow (vph)	0	1226	0	701	1224	0	0	0	0	308	603	209
Confl. Peds. (#/hr)	15		11	11		15						
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	0%	3%	3%	2%	3%	0%	0%	0%	0%	1%	3%	3%
Turn Type				pm+pt						Perm		Perm
Protected Phases		2		1	6						4	
Permitted Phases				6						4		4
Actuated Green, G (s)		35.0		74.9	74.9					28.1	28.1	28.1
Effective Green, g (s)		35.0		74.9	74.9					28.1	28.1	28.1
Actuated g/C Ratio		0.30		0.65	0.65					0.24	0.24	0.24
Clearance Time (s)		6.0		4.5	6.0					6.0	6.0	6.0
Vehicle Extension (s)		7.0		3.5	7.0					3.5	3.5	3.5
Lane Grp Cap (vph)		1392		558	2162					364	712	352
v/s Ratio Prot		0.27		c0.39	0.37							
v/s Ratio Perm				c0.43						0.21	0.21	0.14
v/c Ratio		0.88		1.26	0.57					0.85	0.85	0.59
Uniform Delay, d1		38.0		33.0	11.1					41.4	41.4	38.4
Progression Factor		1.00		0.86	2.10					1.00	1.00	1.00
Incremental Delay, d2		8.3		119.4	0.3					16.7	9.4	2.8
Delay (s)		46.3		147.7	23.6					58.1	50.8	41.2
Level of Service		D		F	C					E	D	D
Approach Delay (s)		46.3			68.8			0.0			50.5	
Approach LOS		D			E			A			D	

Intersection Summary			
HCM Average Control Delay	57.3	HCM Level of Service	E
HCM Volume to Capacity ratio	1.11		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	10.5
Intersection Capacity Utilization	118.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1065: 127th Street & Marshfield Ave

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↑			↑↑	↱		↰↑↱				
Volume (vph)	341	1094	0	0	1423	269	406	333	377	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	12	12	12	11	12	12	12	12	12	12	12
Total Lost time (s)	6.0	6.0			6.0	6.0		6.0				
Lane Util. Factor	0.97	0.95			0.95	1.00		0.91				
Frpb, ped/bikes	1.00	1.00			1.00	0.98		1.00				
Flpb, ped/bikes	1.00	1.00			1.00	1.00		1.00				
Frt	1.00	1.00			1.00	0.85		0.95				
Flt Protected	0.95	1.00			1.00	1.00		0.98				
Satd. Flow (prot)	3144	3353			3241	1489		4490				
Flt Permitted	0.07	1.00			1.00	1.00		0.98				
Satd. Flow (perm)	220	3353			3241	1489		4490				
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	359	1152	0	0	1498	283	427	351	397	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	68	0	75	0	0	0	0
Lane Group Flow (vph)	359	1152	0	0	1498	215	0	1100	0	0	0	0
Confl. Peds. (#/hr)	7		5	5		7						
Confl. Bikes (#/hr)	1		1	1		1						
Heavy Vehicles (%)	2%	2%	0%	0%	2%	1%	2%	1%	3%	0%	0%	0%
Turn Type	pm+pt					Perm	Perm					
Protected Phases	5	2			6			8				
Permitted Phases	2					6	8					
Actuated Green, G (s)	74.0	74.0			54.1	54.1		29.0				
Effective Green, g (s)	74.0	74.0			54.1	54.1		29.0				
Actuated g/C Ratio	0.64	0.64			0.47	0.47		0.25				
Clearance Time (s)	6.0	6.0			6.0	6.0		6.0				
Vehicle Extension (s)	3.5	7.0			7.0	7.0		5.0				
Lane Grp Cap (vph)	495	2158			1525	700		1132				
v/s Ratio Prot	c0.09	0.34			c0.46							
v/s Ratio Perm	0.38					0.14		0.25				
v/c Ratio	0.73	0.53			0.98	0.31		0.97				
Uniform Delay, d1	31.6	11.1			30.0	18.8		42.6				
Progression Factor	1.55	0.03			0.90	1.06		1.00				
Incremental Delay, d2	2.6	0.5			3.9	0.1		20.4				
Delay (s)	51.7	0.7			31.0	20.1		63.0				
Level of Service	D	A			C	C		E				
Approach Delay (s)		12.8			29.3			63.0			0.0	
Approach LOS		B			C			E			A	

Intersection Summary			
HCM Average Control Delay	32.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	118.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1066: 127th Street & S Ashland

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	132	760	399	102	1183	99	227	179	66	85	162	121
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	12	11	12	12	10	10	13	10	10	10
Total Lost time (s)	3.5	6.0	3.5	3.5	6.0		3.5	6.0		3.5	6.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		0.99	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.96		1.00	0.94	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1565	3273	1313	1602	3284		1578	3002		1540	2941	
Flt Permitted	0.11	1.00	1.00	0.35	1.00		0.39	1.00		0.59	1.00	
Satd. Flow (perm)	174	3273	1313	589	3284		654	3002		961	2941	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	139	800	420	107	1245	104	239	188	69	89	171	127
RTOR Reduction (vph)	0	0	169	0	6	0	0	38	0	0	107	0
Lane Group Flow (vph)	139	800	251	107	1343	0	239	219	0	89	191	0
Confl. Peds. (#/hr)	11		23	23		11	8		12	12		8
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	2%	1%	3%	3%	3%	0%	1%	1%	2%	3%	0%	1%
Parking (#/hr)			0									
Turn Type	pm+pt		pm+ov	pm+pt			pm+pt			pm+pt		
Protected Phases	5	2	3	1	6		3	8		7	4	
Permitted Phases	2		2	6			8			4		
Actuated Green, G (s)	64.8	52.3	68.7	43.3	34.3		38.2	26.4		26.6	18.3	
Effective Green, g (s)	64.8	52.3	68.7	43.3	34.3		38.2	26.4		26.6	18.3	
Actuated g/C Ratio	0.56	0.45	0.60	0.38	0.30		0.33	0.23		0.23	0.16	
Clearance Time (s)	3.5	6.0	3.5	3.5	6.0		3.5	6.0		3.5	6.0	
Vehicle Extension (s)	3.0	7.0	3.0	3.0	7.0		3.0	7.0		3.0	7.0	
Lane Grp Cap (vph)	425	1489	784	301	979		349	689		264	468	
v/s Ratio Prot	c0.08	c0.24	0.05	0.03	c0.41		c0.10	0.07		0.02	0.07	
v/s Ratio Perm	0.11		0.15	0.11			c0.13			0.05		
v/c Ratio	0.33	0.54	0.32	0.36	1.37		0.68	0.32		0.34	0.41	
Uniform Delay, d1	17.4	22.6	11.5	24.0	40.4		30.5	36.8		36.1	43.5	
Progression Factor	0.78	0.77	1.36	1.00	1.00		1.03	1.05		1.00	1.00	
Incremental Delay, d2	1.6	1.1	0.2	0.7	174.0		5.2	0.9		0.8	2.1	
Delay (s)	15.2	18.4	15.9	24.7	214.4		36.7	39.5		36.8	45.5	
Level of Service	B	B	B	C	F		D	D		D	D	
Approach Delay (s)		17.3			200.4			38.1			43.5	
Approach LOS		B			F			D			D	

Intersection Summary			
HCM Average Control Delay	94.9	HCM Level of Service	F
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	19.0
Intersection Capacity Utilization	88.3%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1067: Vermont St & S Ashland

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	46	250	367	182	430	107	362	340	107	206	408	56
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	11	12	11	12	12	11	13	12	10	11	12
Total Lost time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.91		1.00	0.97		1.00	0.96		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1707	2925		1653	3269		1620	3381		1580	3183	
Flt Permitted	0.40	1.00		0.18	1.00		0.32	1.00		0.48	1.00	
Satd. Flow (perm)	723	2925		316	3269		544	3381		802	3183	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	48	263	386	192	453	113	381	358	113	217	429	59
RTOR Reduction (vph)	0	225	0	0	18	0	0	26	0	0	9	0
Lane Group Flow (vph)	48	424	0	192	548	0	381	445	0	217	479	0
Confl. Peds. (#/hr)	12		3	3		12	5					5
Heavy Vehicles (%)	0%	2%	2%	0%	1%	1%	2%	1%	0%	1%	2%	0%
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	35.6	28.9		46.8	36.1		56.2	44.2		40.1	32.1	
Effective Green, g (s)	35.6	28.9		46.8	36.1		56.2	44.2		40.1	32.1	
Actuated g/C Ratio	0.31	0.25		0.41	0.31		0.49	0.38		0.35	0.28	
Clearance Time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	3.5	7.0		3.5	7.0		3.5	7.0		3.5	7.0	
Lane Grp Cap (vph)	281	735		290	1026		454	1299		334	888	
v/s Ratio Prot	0.01	0.15		c0.08	0.17		c0.15	0.13		0.05	0.15	
v/s Ratio Perm	0.04			c0.19			c0.26			0.18		
v/c Ratio	0.17	0.58		0.66	0.53		0.84	0.34		0.65	0.54	
Uniform Delay, d1	28.2	37.7		24.9	32.5		20.8	25.1		28.8	35.2	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	0.98	
Incremental Delay, d2	0.3	3.3		5.8	2.0		13.1	0.7		4.2	2.2	
Delay (s)	28.6	41.0		30.7	34.5		33.9	25.8		33.0	36.5	
Level of Service	C	D		C	C		C	C		C	D	
Approach Delay (s)		40.1			33.5			29.4			35.5	
Approach LOS		D			C			C			D	

Intersection Summary			
HCM Average Control Delay	34.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	82.3%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1068: 127th Street & Halsted Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	101	578	287	10	376	66	718	349	9	188	594	174
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	10	12	9	11	12	9	9	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.96			0.98		1.00	1.00		1.00	0.97	
Flt Protected		0.99			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		2965			3034		1452	3229		1523	2874	
Flt Permitted		0.71			0.92		0.20	1.00		0.49	1.00	
Satd. Flow (perm)		2128			2806		303	3229		781	2874	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	112	642	319	11	418	73	798	388	10	209	660	193
RTOR Reduction (vph)	0	72	0	0	21	0	0	3	0	0	42	0
Lane Group Flow (vph)	0	1001	0	0	481	0	798	395	0	209	811	0
Confl. Peds. (#/hr)	4		2	2		4	8		4	4		8
Confl. Bikes (#/hr)							2					2
Heavy Vehicles (%)	1%	2%	2%	0%	2%	6%	6%	2%	0%	1%	3%	3%
Turn Type	pm+pt			Perm			pm+pt			pm+pt		
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		25.0			17.0		28.0	24.0		28.0	24.0	
Effective Green, g (s)		25.0			17.0		28.0	24.0		28.0	24.0	
Actuated g/C Ratio		0.38			0.26		0.43	0.37		0.43	0.37	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		870			734		201	1192		382	1061	
v/s Ratio Prot		c0.07					c0.24	0.12		0.03	0.28	
v/s Ratio Perm		c0.37			0.17		c1.46			0.20		
v/c Ratio		1.15			0.65		3.97	0.33		0.55	0.76	
Uniform Delay, d1		20.0			21.4		16.9	14.7		12.8	18.0	
Progression Factor		1.00			1.47		0.98	0.87		1.00	1.00	
Incremental Delay, d2		81.0			0.4		1337.6	0.1		5.5	5.3	
Delay (s)		101.0			31.9		1354.3	12.9		18.3	23.3	
Level of Service		F			C		F	B		B	C	
Approach Delay (s)		101.0			31.9			907.9			22.3	
Approach LOS		F			C			F			C	

Intersection Summary			
HCM Average Control Delay	321.9	HCM Level of Service	F
HCM Volume to Capacity ratio	2.63		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	122.0%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1069: Vermont St & Halsted Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱		↰	↑↱		↰	↑↱	
Volume (vph)	67	198	222	331	159	27	412	1135	991	33	830	66
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	12	12	12	12	12
Total Lost time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.98		1.00	1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.92		1.00	0.98		1.00	0.93		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1707	1840		1601	1991		1676	3012		1437	3283	
Flt Permitted	0.64	1.00		0.34	1.00		0.23	1.00		0.13	1.00	
Satd. Flow (perm)	1144	1840		574	1991		412	3012		195	3283	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	69	204	229	341	164	28	425	1170	1022	34	856	68
RTOR Reduction (vph)	0	62	0	0	9	0	0	242	0	0	9	0
Lane Group Flow (vph)	69	371	0	341	183	0	425	1950	0	34	915	0
Confl. Peds. (#/hr)	3		20	20		3	2		3	3		2
Confl. Bikes (#/hr)			1	1			2		2	2		2
Heavy Vehicles (%)	0%	0%	1%	6%	0%	0%	2%	3%	6%	19%	3%	2%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	24.0	24.0		24.0	24.0		31.0	31.0		31.0	31.0	
Effective Green, g (s)	24.0	24.0		24.0	24.0		31.0	31.0		31.0	31.0	
Actuated g/C Ratio	0.37	0.37		0.37	0.37		0.48	0.48		0.48	0.48	
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)	422	679		212	735		196	1436		93	1566	
v/s Ratio Prot		0.20			0.09			0.65			0.28	
v/s Ratio Perm	0.06			c0.59			c1.03			0.17		
v/c Ratio	0.16	0.55		1.61	0.25		2.17	1.36		0.37	0.58	
Uniform Delay, d1	13.8	16.2		20.5	14.2		17.0	17.0		10.8	12.3	
Progression Factor	1.00	1.00		1.34	1.34		1.00	1.00		1.01	0.93	
Incremental Delay, d2	0.8	3.1		275.8	0.1		542.3	165.8		4.7	0.7	
Delay (s)	14.6	19.3		303.3	19.2		559.3	182.8		15.7	12.2	
Level of Service	B	B		F	B		F	F		B	B	
Approach Delay (s)		18.7			201.0			243.9			12.3	
Approach LOS		B			F			F			B	

Intersection Summary			
HCM Average Control Delay	166.3	HCM Level of Service	F
HCM Volume to Capacity ratio	1.92		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	132.6%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1070: 127th Street & S Wallance St

1/14/2013

Movement	EBL	EBT	WBL	WBT	WBR	NBL2	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↑↱		↰↑↑↱				↰↑↱			↰↑↱	
Volume (vph)	2	750	449	534	18	3	10	9	46	9	0	3
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	10	10	10	12	12	16	12	12	16	12
Total Lost time (s)		5.0		5.0				4.0			4.0	
Lane Util. Factor		0.95		0.95				1.00			1.00	
Frpb, ped/bikes		1.00		1.00				0.99			0.98	
Flpb, ped/bikes		1.00		1.00				1.00			1.00	
Frt		1.00		1.00				0.91			0.94	
Flt Protected		1.00		0.98				0.99			0.97	
Satd. Flow (prot)		3160		3064				1811			1824	
Flt Permitted		0.95		0.59				0.96			0.89	
Satd. Flow (perm)		3009		1841				1750			1672	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	2	789	473	562	19	3	11	9	48	9	0	3
RTOR Reduction (vph)	0	0	0	2	0	0	0	38	0	0	4	0
Lane Group Flow (vph)	0	791	0	1052	0	0	0	33	0	0	13	0
Confl. Peds. (#/hr)	7		4		7		7		2	2		7
Confl. Bikes (#/hr)							2		2	2		2
Heavy Vehicles (%)	0%	1%	2%	1%	6%	0%	0%	0%	0%	0%	0%	0%
Turn Type	Perm		custom				Perm			Perm		
Protected Phases		8	7	4				2			6	
Permitted Phases	8		4 7				2			6		
Actuated Green, G (s)		18.0		27.0				14.0			14.0	
Effective Green, g (s)		18.0		27.0				14.0			14.0	
Actuated g/C Ratio		0.28		0.42				0.22			0.22	
Clearance Time (s)		5.0		5.0				4.0			4.0	
Lane Grp Cap (vph)		833		878				377			360	
v/s Ratio Prot				c0.11								
v/s Ratio Perm		0.26		c0.39				c0.02			0.01	
v/c Ratio		0.95		2.26dl				0.09			0.04	
Uniform Delay, d1		23.1		19.0				20.4			20.2	
Progression Factor		1.40		0.82				1.00			1.00	
Incremental Delay, d2		7.7		99.3				0.5			0.2	
Delay (s)		39.9		115.0				20.9			20.4	
Level of Service		D		F				C			C	
Approach Delay (s)		39.9		115.0				20.9			20.4	
Approach LOS		D		F				C			C	

Intersection Summary			
HCM Average Control Delay	772.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.65		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	156.7%	ICU Level of Service	H
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group

Movement	SBR2	NEL	NER
Lane Configurations			
Volume (vph)	5	3	1155
Ideal Flow (vphpl)	1800	1800	1800
Lane Width	12	12	12
Total Lost time (s)		5.0	
Lane Util. Factor		1.00	
Frpb, ped/bikes		1.00	
Flpb, ped/bikes		1.00	
Frt		0.87	
Flt Protected		1.00	
Satd. Flow (prot)		1557	
Flt Permitted		1.00	
Satd. Flow (perm)		1557	
Peak-hour factor, PHF	0.95	0.95	0.95
Adj. Flow (vph)	5	3	1216
RTOR Reduction (vph)	0	0	0
Lane Group Flow (vph)	0	1219	0
Confl. Peds. (#/hr)			
Confl. Bikes (#/hr)			
Heavy Vehicles (%)	0%	0%	0%
Turn Type			
Protected Phases		3	
Permitted Phases			
Actuated Green, G (s)		10.0	
Effective Green, g (s)		10.0	
Actuated g/C Ratio		0.15	
Clearance Time (s)		5.0	
Lane Grp Cap (vph)		240	
v/s Ratio Prot		c0.78	
v/s Ratio Perm			
v/c Ratio		5.08	
Uniform Delay, d1		27.5	
Progression Factor		1.23	
Incremental Delay, d2		1836.5	
Delay (s)		1870.3	
Level of Service		F	
Approach Delay (s)		1870.3	
Approach LOS		F	

Intersection Summary

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰↑	↑↱		↰	↱
Volume (vph)	347	1591	762	62	91	245
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		1.00	1.00
Frt		1.00	0.99		1.00	0.85
Flt Protected		0.99	1.00		0.95	1.00
Satd. Flow (prot)		3291	3283		1660	1485
Flt Permitted		0.61	1.00		0.95	1.00
Satd. Flow (perm)		2025	3283		1660	1485
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	386	1768	847	69	101	272
RTOR Reduction (vph)	0	0	9	0	0	133
Lane Group Flow (vph)	0	2154	907	0	101	139
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type	Perm					Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)		40.0	40.0		17.0	17.0
Effective Green, g (s)		40.0	40.0		17.0	17.0
Actuated g/C Ratio		0.62	0.62		0.26	0.26
Clearance Time (s)		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		1246	2020		434	388
v/s Ratio Prot			0.28		0.06	
v/s Ratio Perm		c1.06				c0.09
v/c Ratio		1.73	0.45		0.23	0.36
Uniform Delay, d1		12.5	6.6		18.9	19.6
Progression Factor		2.00	0.97		1.26	1.58
Incremental Delay, d2		328.2	0.6		1.2	2.5
Delay (s)		353.2	7.1		25.0	33.4
Level of Service		F	A		C	C
Approach Delay (s)		353.2	7.1		31.2	
Approach LOS		F	A		C	

Intersection Summary			
HCM Average Control Delay	226.2	HCM Level of Service	F
HCM Volume to Capacity ratio	1.32		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	96.7%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1072: 127th Street & Michigan Avenue

1/14/2013

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰↑	↑↱		↰	↱
Volume (vph)	102	1583	734	148	259	92
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	12	10	11	12	10	10
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		1.00	1.00
Frpb, ped/bikes		1.00	1.00		1.00	0.99
Flpb, ped/bikes		1.00	1.00		1.00	1.00
Frt		1.00	0.97		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		3122	3107		1506	1343
Flt Permitted		0.78	1.00		0.95	1.00
Satd. Flow (perm)		2429	3107		1506	1343
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	107	1666	773	156	273	97
RTOR Reduction (vph)	0	0	26	0	0	63
Lane Group Flow (vph)	0	1773	903	0	273	34
Confl. Peds. (#/hr)	2			2		1
Heavy Vehicles (%)	1%	2%	2%	10%	6%	5%
Turn Type	Perm					Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)		34.0	34.0		23.0	23.0
Effective Green, g (s)		34.0	34.0		23.0	23.0
Actuated g/C Ratio		0.52	0.52		0.35	0.35
Clearance Time (s)		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		1271	1625		533	475
v/s Ratio Prot			0.29		c0.18	
v/s Ratio Perm		c0.73				0.03
v/c Ratio		1.39	0.56		0.51	0.07
Uniform Delay, d1		15.5	10.4		16.6	13.9
Progression Factor		1.10	1.31		1.63	3.36
Incremental Delay, d2		178.2	1.1		3.1	0.3
Delay (s)		195.3	14.8		30.1	47.0
Level of Service		F	B		C	D
Approach Delay (s)		195.3	14.8		34.6	
Approach LOS		F	B		C	

Intersection Summary			
HCM Average Control Delay	121.3	HCM Level of Service	F
HCM Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	100.9%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↱		↰	↑	↰↱	
Volume (vph)	1379	319	117	752	212	55
Ideal Flow (vphpl)	2300	1800	1800	2300	1800	1800
Lane Width	15	12	14	16	15	12
Total Lost time (s)	5.0		5.0	5.0	5.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.97		1.00	1.00	0.97	
Flt Protected	1.00		0.95	1.00	0.96	
Satd. Flow (prot)	2417		1788	2506	1749	
Flt Permitted	1.00		0.13	1.00	0.96	
Satd. Flow (perm)	2417		243	2506	1749	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	1407	326	119	767	216	56
RTOR Reduction (vph)	13	0	0	0	13	0
Lane Group Flow (vph)	1720	0	119	767	259	0
Confl. Peds. (#/hr)						1
Heavy Vehicles (%)	2%	2%	2%	4%	7%	0%
Turn Type			Perm			
Protected Phases	4			8	2	
Permitted Phases			8			
Actuated Green, G (s)	31.0		31.0	31.0	24.0	
Effective Green, g (s)	31.0		31.0	31.0	24.0	
Actuated g/C Ratio	0.48		0.48	0.48	0.37	
Clearance Time (s)	5.0		5.0	5.0	5.0	
Lane Grp Cap (vph)	1153		116	1195	646	
v/s Ratio Prot	c0.71			0.31	c0.15	
v/s Ratio Perm			0.49			
v/c Ratio	1.49		1.03	0.64	0.40	
Uniform Delay, d1	17.0		17.0	12.8	15.2	
Progression Factor	1.52		1.00	1.00	1.00	
Incremental Delay, d2	221.7		90.7	2.7	1.9	
Delay (s)	247.5		107.7	15.5	17.0	
Level of Service	F		F	B	B	
Approach Delay (s)	247.5			27.9	17.0	
Approach LOS	F			C	B	

Intersection Summary			
HCM Average Control Delay	158.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	111.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1074: 130th Street & Ellis Ave

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑↑	↱		↰↑	↱		✥	
Volume (vph)	1	1642	83	108	849	1	70	0	149	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	15	13	11	11	12	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0	4.0	3.0	3.0	4.0		4.0	4.0			
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00	1.00			
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85			
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.95	1.00			
Satd. Flow (prot)	1881	3431	1479	1589	3320	1530		1938	1500			
Flt Permitted	0.30	1.00	1.00	0.08	1.00	1.00		0.76	1.00			
Satd. Flow (perm)	601	3431	1479	127	3320	1530		1545	1500			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1	1824	92	120	943	1	78	0	166	0	0	0
RTOR Reduction (vph)	0	0	27	0	0	0	0	0	141	0	0	0
Lane Group Flow (vph)	1	1824	65	120	943	1	0	78	25	0	0	0
Heavy Vehicles (%)	0%	3%	0%	4%	3%	0%	0%	0%	2%	0%	0%	0%
Turn Type	Perm		Perm	custom		custom	Perm		Perm	Perm		
Protected Phases		4		3	3 8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)	49.8	49.8	49.8	67.3	67.3	67.3		9.7	9.7			
Effective Green, g (s)	49.8	49.8	49.8	67.3	67.3	67.3		9.7	9.7			
Actuated g/C Ratio	0.59	0.59	0.59	0.79	0.79	0.79		0.11	0.11			
Clearance Time (s)	4.0	4.0	4.0	3.0		4.0		4.0	4.0			
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0		3.0	3.0			
Lane Grp Cap (vph)	352	2010	867	350	2629	1211		176	171			
v/s Ratio Prot		c0.53		0.06	c0.28							
v/s Ratio Perm	0.00		0.04	0.21		0.00		c0.05	0.02			
v/c Ratio	0.00	0.91	0.07	0.34	0.36	0.00		0.44	0.15			
Uniform Delay, d1	7.3	15.6	7.6	14.0	2.6	1.8		35.1	33.9			
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00			
Incremental Delay, d2	0.0	7.4	0.2	0.6	0.1	0.0		1.8	0.4			
Delay (s)	7.3	23.0	7.8	14.5	2.7	1.8		36.9	34.3			
Level of Service	A	C	A	B	A	A		D	C			
Approach Delay (s)		22.3			4.0			35.1			0.0	
Approach LOS		C			A			D			A	

Intersection Summary			
HCM Average Control Delay	17.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	69.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1942: 111th Street & Langley Avenue

1/14/2013

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰↑	↑↱		↰↱	
Volume (vph)	9	924	810	29	71	13
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10
Total Lost time (s)		5.0	5.0		3.0	
Lane Util. Factor		0.95	0.95		1.00	
Frt		1.00	0.99		0.98	
Flt Protected		1.00	1.00		0.96	
Satd. Flow (prot)		3098	3083		1533	
Flt Permitted		0.94	1.00		0.96	
Satd. Flow (perm)		2924	3083		1533	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	10	1027	900	32	79	14
RTOR Reduction (vph)	0	0	3	0	7	0
Lane Group Flow (vph)	0	1037	929	0	86	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type	Perm					
Protected Phases		4	8 2 11		5	
Permitted Phases	4					
Actuated Green, G (s)		33.0	64.0		7.0	
Effective Green, g (s)		33.0	64.0		7.0	
Actuated g/C Ratio		0.37	0.71		0.08	
Clearance Time (s)		5.0			3.0	
Lane Grp Cap (vph)		1072	2192		119	
v/s Ratio Prot			c0.30		c0.06	
v/s Ratio Perm		c0.35				
v/c Ratio		0.97	0.42		0.72	
Uniform Delay, d1		28.0	5.4		40.5	
Progression Factor		1.00	0.01		1.00	
Incremental Delay, d2		20.7	0.2		31.1	
Delay (s)		48.6	0.3		71.7	
Level of Service		D	A		E	
Approach Delay (s)		48.6	0.3		71.7	
Approach LOS		D	A		E	

Intersection Summary			
HCM Average Control Delay	27.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	46.1%	ICU Level of Service	A
Analysis Period (min)	15		

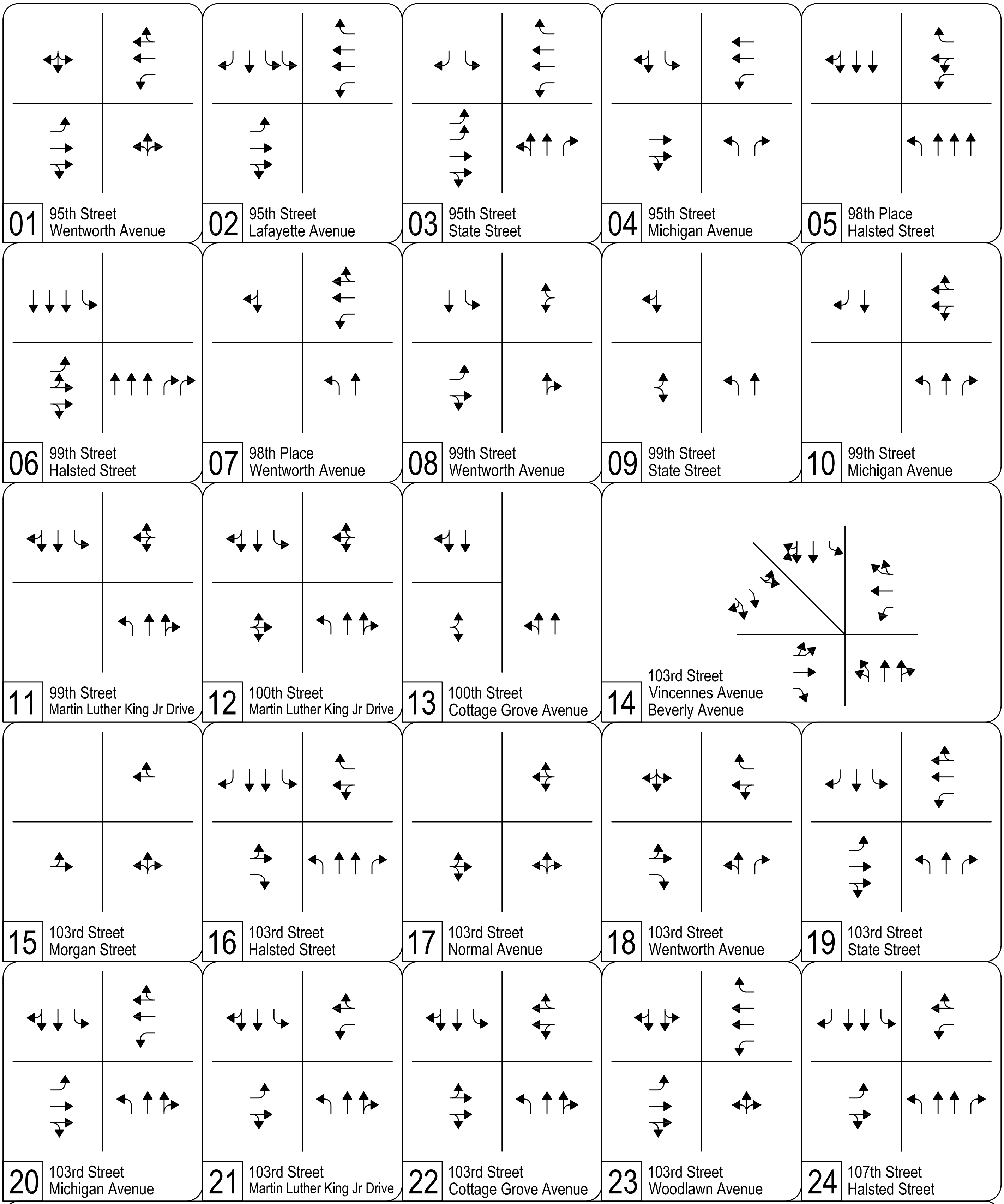
c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1955: 115th Street & Cottage Grove Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↑↱			↰↑↱			↰↑	↱
Volume (vph)	58	496	0	1	564	38	3	2	28	192	0	131
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	12	12	11	12	11
Total Lost time (s)		4.0			4.0			3.0			3.0	3.0
Lane Util. Factor		1.00			0.95			1.00			1.00	1.00
Frpb, ped/bikes		1.00			1.00			0.94			1.00	0.98
Flpb, ped/bikes		1.00			1.00			1.00			0.99	1.00
Frt		1.00			0.99			0.88			1.00	0.85
Flt Protected		0.99			1.00			1.00			0.95	1.00
Satd. Flow (prot)		1771			3340			1467			1670	1348
Flt Permitted		0.87			0.95			0.93			0.88	1.00
Satd. Flow (perm)		1554			3190			1370			1545	1348
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	64	551	0	1	627	42	3	2	31	213	0	146
RTOR Reduction (vph)	0	0	0	0	6	0	0	28	0	0	0	98
Lane Group Flow (vph)	0	615	0	0	664	0	0	8	0	0	213	48
Confl. Peds. (#/hr)	60		44	44		60	14		10	10		14
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	0%	1%	0%	0%	1%	3%	20%	0%	0%	1%	0%	7%
Turn Type	Perm			Prot			Perm			pm+pt		Perm
Protected Phases		4		3	3 4			1		2	1 2	
Permitted Phases	4				3		1	1		1 2		1 2
Actuated Green, G (s)		31.0			45.0			9.0			25.0	28.0
Effective Green, g (s)		31.0			45.0			9.0			25.0	28.0
Actuated g/C Ratio		0.36			0.53			0.11			0.29	0.33
Clearance Time (s)		4.0						3.0				
Lane Grp Cap (vph)		567			1714			145			478	444
v/s Ratio Prot					c0.06						c0.08	
v/s Ratio Perm		c0.40			0.14			0.01			c0.05	0.04
v/c Ratio		1.08			0.39			0.06			0.45	0.11
Uniform Delay, d1		27.0			11.8			34.2			24.4	19.8
Progression Factor		1.00			1.28			1.00			1.00	1.00
Incremental Delay, d2		62.8			0.1			0.8			3.0	0.5
Delay (s)		89.8			15.2			34.9			27.4	20.3
Level of Service		F			B			C			C	C
Approach Delay (s)		89.8			15.2			34.9			24.5	
Approach LOS		F			B			C			C	

Intersection Summary			
HCM Average Control Delay	44.9	HCM Level of Service	D
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	76.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



01 95th Street Wentworth Avenue

02 95th Street Lafayette Avenue

03 95th Street State Street

04 95th Street Michigan Avenue

05 98th Place Halsted Street

06 99th Street Halsted Street

07 98th Place Wentworth Avenue

08 99th Street Wentworth Avenue

09 99th Street State Street

10 99th Street Michigan Avenue

11 99th Street Martin Luther King Jr Drive

12 100th Street Martin Luther King Jr Drive

13 100th Street Cottage Grove Avenue

14 103rd Street Vincennes Avenue Beverly Avenue

15 103rd Street Morgan Street

16 103rd Street Halsted Street

17 103rd Street Normal Avenue

18 103rd Street Wentworth Avenue

19 103rd Street State Street

20 103rd Street Michigan Avenue

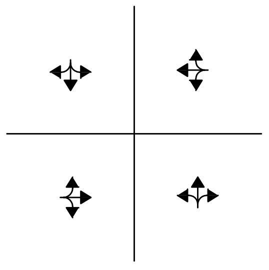
21 103rd Street Martin Luther King Jr Drive

22 103rd Street Cottage Grove Avenue

23 103rd Street Woodlawn Avenue

24 107th Street Halsted Street

Halsted Rail Alternative (2030) Intersection Lane Geometry
Page 1 of 3



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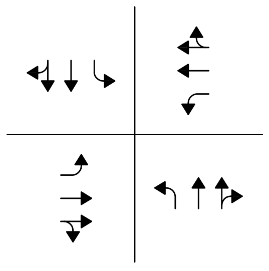

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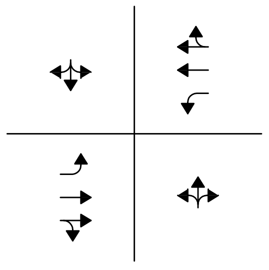

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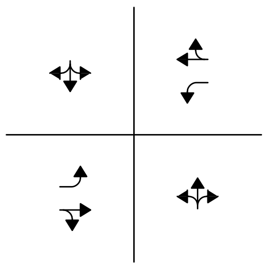

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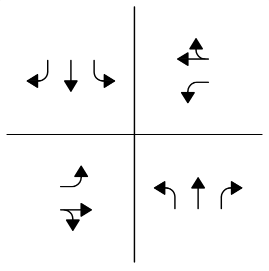

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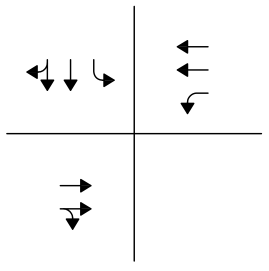

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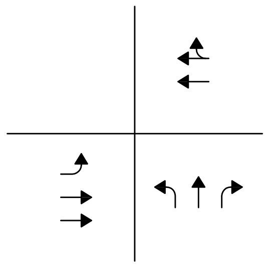

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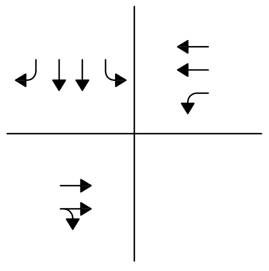

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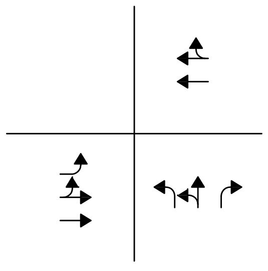

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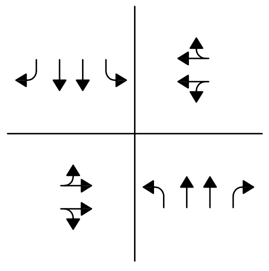

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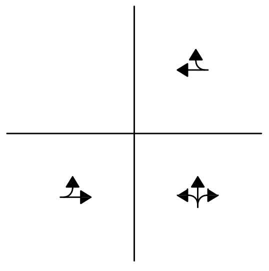

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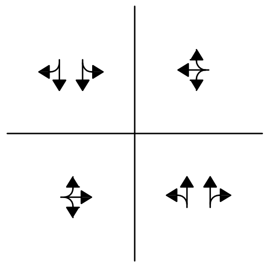

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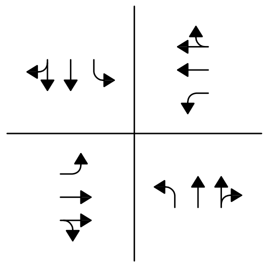

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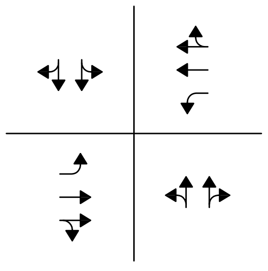

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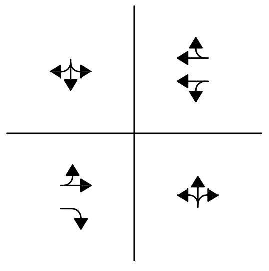

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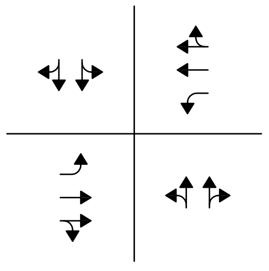

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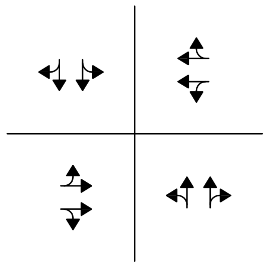

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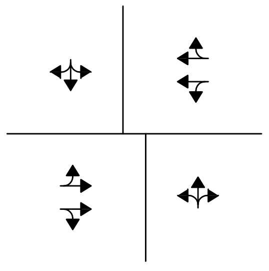

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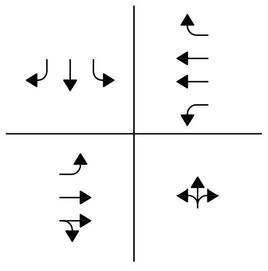

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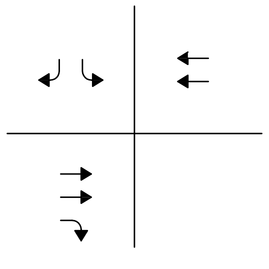

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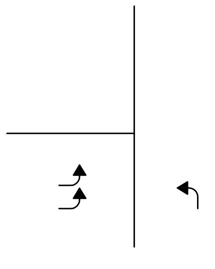

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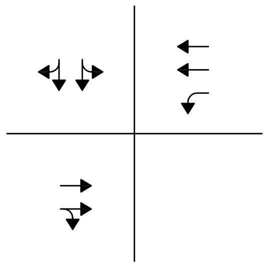

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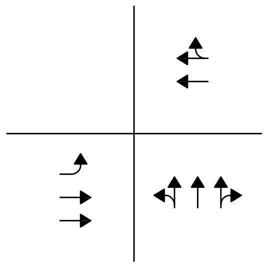

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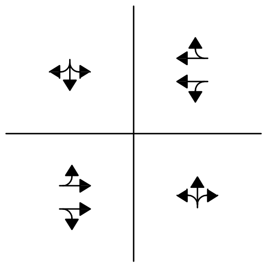

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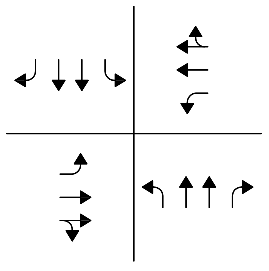

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Halsted Rail Alternative (2030) Intersection Lane Geometry

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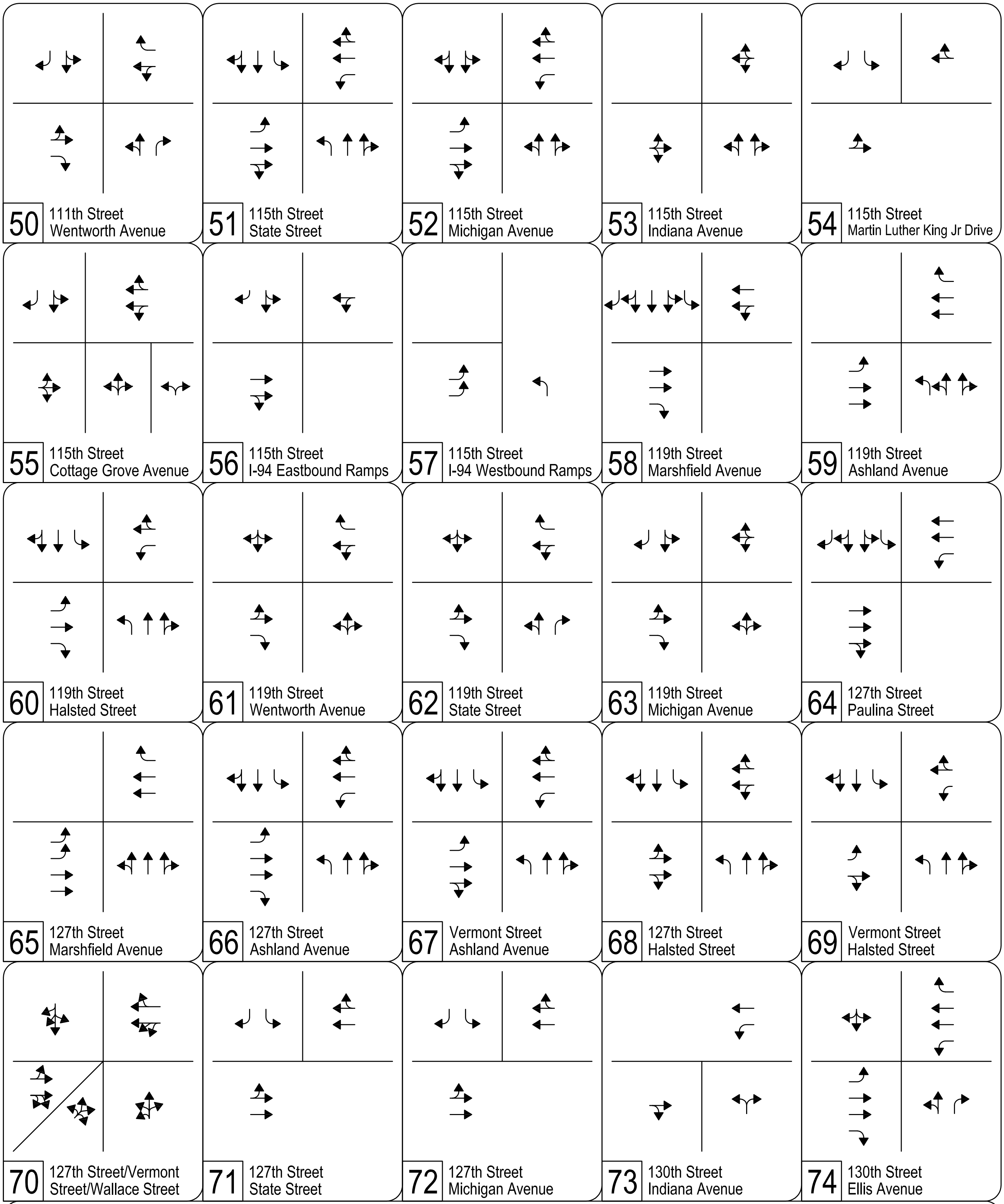
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57 115th Street I-94 Westbound Ramps
58 119th Street Marshfield Avenue
59 119th Street Ashland Avenue
60 119th Street Halsted Street
61 119th Street Wentworth Avenue
62 119th Street State Street
63 119th Street Michigan Avenue
64 127th Street Paulina Street
65 127th Street Marshfield Avenue
66 127th Street Ashland Avenue
67 Vermont Street Ashland Avenue
68 127th Street Halsted Street
69 Vermont Street Halsted Street
70 127th Street/Vermont Street/Wallace Street
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72 127th Street Michigan Avenue
73 130th Street Indiana Avenue
74 130th Street Ellis Avenue

Halsted Rail Alternative (2030) Intersection Lane Geometry

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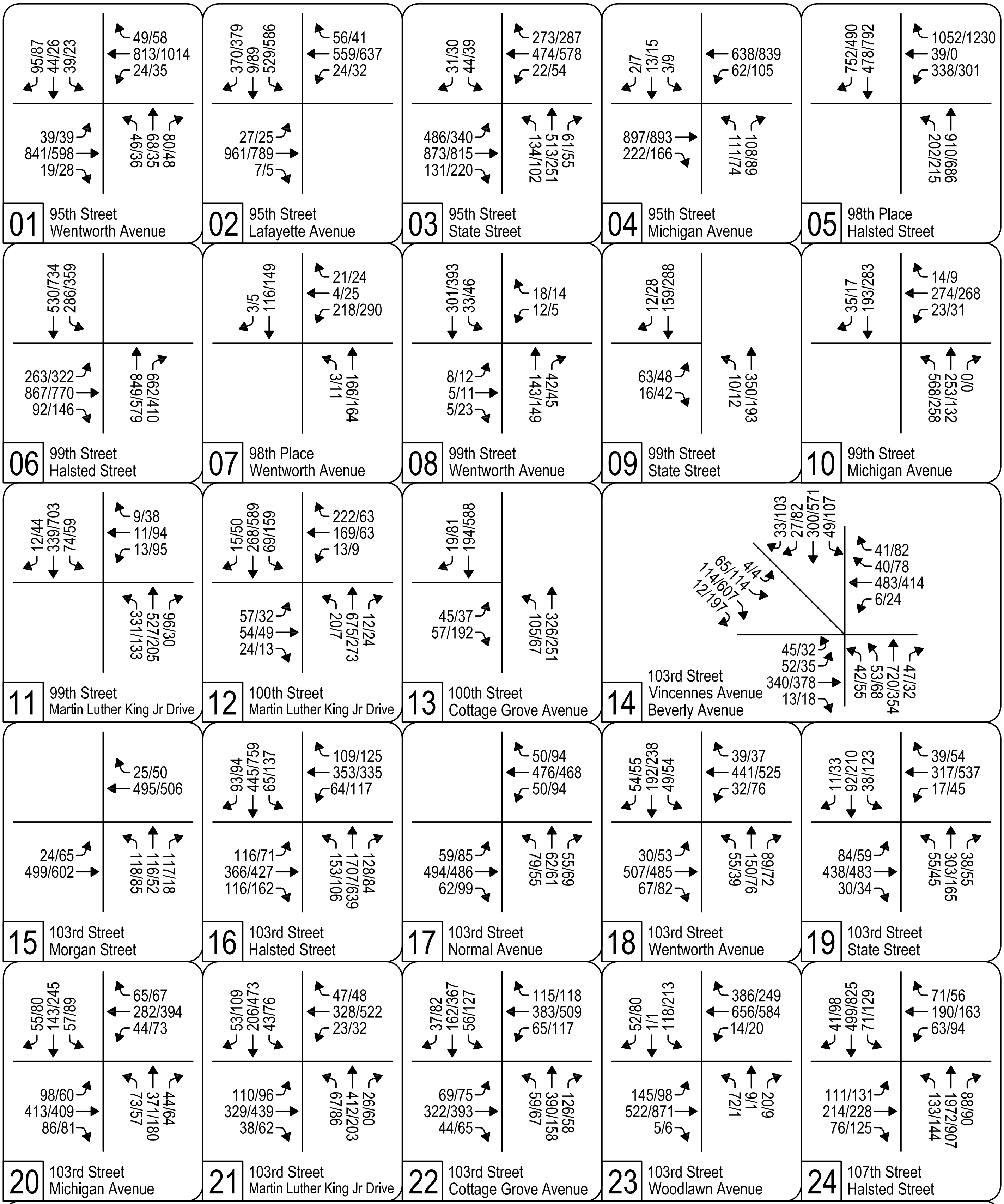
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39/39
841/598
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80/48
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Wentworth Avenue
370/379
9/89
529/586
56/41
559/637
24/32
27/25
961/789
7/5
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95th Street
Lafayette Avenue
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44/39
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474/578
22/54
486/340
873/815
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134/102
513/251
61/55
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95th Street
State Street
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13/15
3/9
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62/105
897/893
222/166
111/74
108/89
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Michigan Avenue
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478/792
1052/1230
39/0
338/301
202/215
910/686
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98th Place
Halsted Street
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286/359
263/322
867/770
92/146
849/579
662/410
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99th Street
Halsted Street
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116/149
21/24
4/25
218/290
3/11
166/164
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98th Place
Wentworth Avenue
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8/12
5/11
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42/45
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99th Street
Wentworth Avenue
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16/42
10/12
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09
99th Street
State Street
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14/9
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23/31
568/258
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Michigan Avenue
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331/133
527/205
96/30
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Martin Luther King Jr Drive
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222/63
169/63
13/9
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675/273
12/24
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45/37
57/192
105/67
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Cottage Grove Avenue
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41/82
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Vincennes Avenue
Beverly Avenue
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Halsted Street
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67/86
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26/60
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103rd Street
Martin Luther King Jr Drive
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162/367
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115/118
383/509
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69/75
322/393
44/65
59/67
390/158
126/58
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103rd Street
Cottage Grove Avenue
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1/1
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5/6
72/1
9/1
20/9
23
103rd Street
Woodlawn Avenue
41/98
499/825
71/129
71/56
190/163
63/94
111/131
214/228
76/125
133/144
1972/907
88/90
24
107th Street
Halsted Street

Halsted Rail Alternative (2030) Intersection Traffic Volumes

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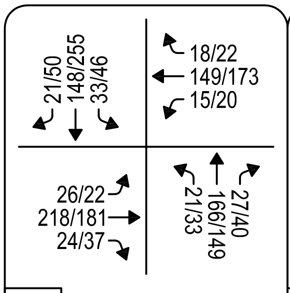
Legend: AM/PM Peak Hour Volumes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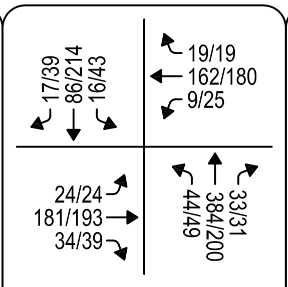
27/40

25 107th Street
Wentworth Avenue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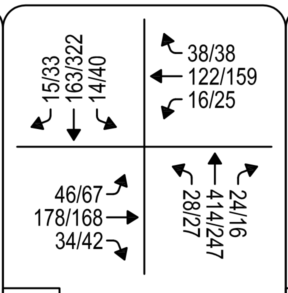
26 107th Street
State Street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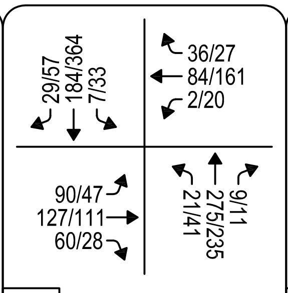
27 107th Street
Michigan Avenue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28 107th Street
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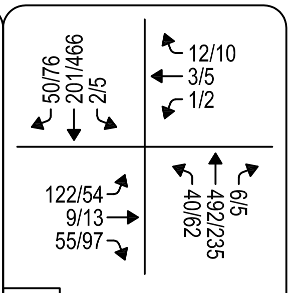
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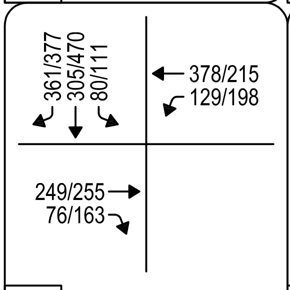
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30 111th Street
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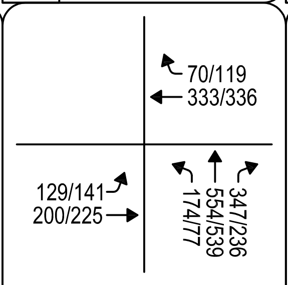
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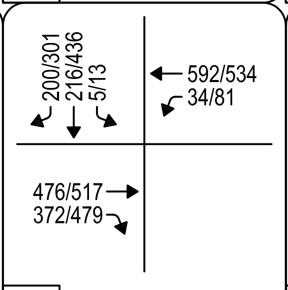
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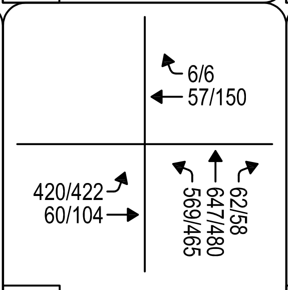
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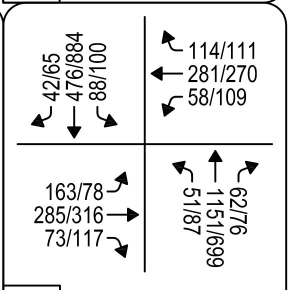
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34 111th Street
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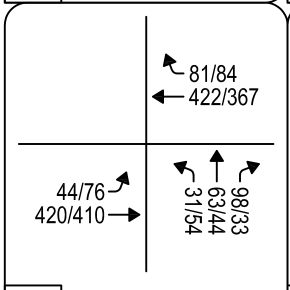
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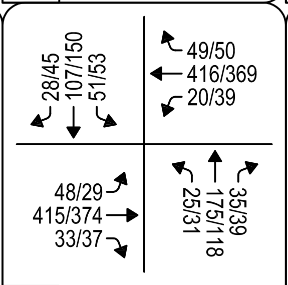
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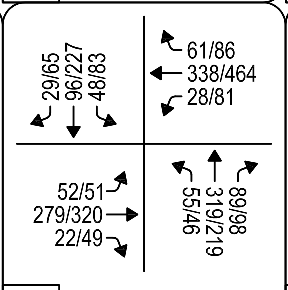
36 111th Street
Wentworth Avenue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37 111th Street
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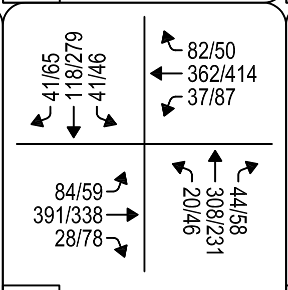
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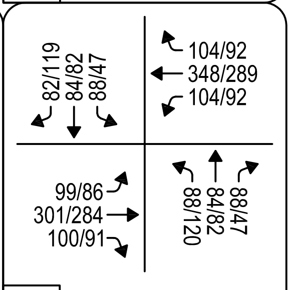
38 111th Street
Michigan Avenue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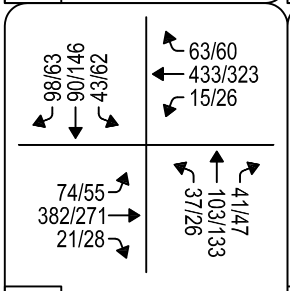
Indiana Avenue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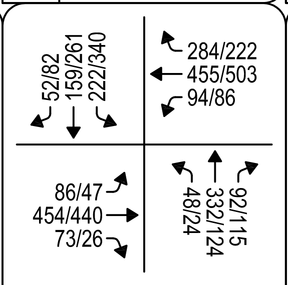
40 111th Street
Martin Luther King Jr Drive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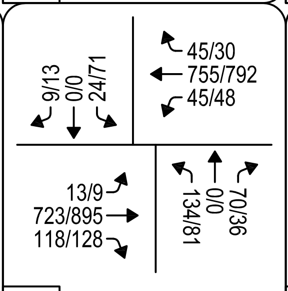
41 111th Street
Cottage Grove Avenue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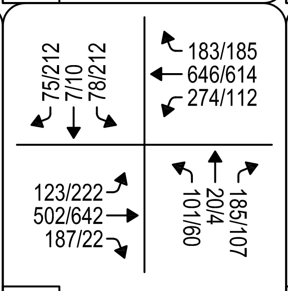
42 111th Street
Ellis Avenue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7/10
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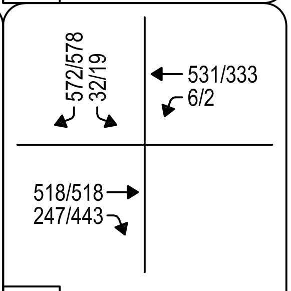
274/112
123/222
502/642
187/22
101/60
20/4
185/107

43 111th Street
Doty Road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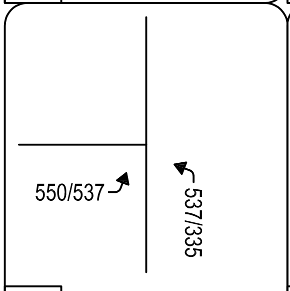
44 111th Street
I-94 Eastbound Ramps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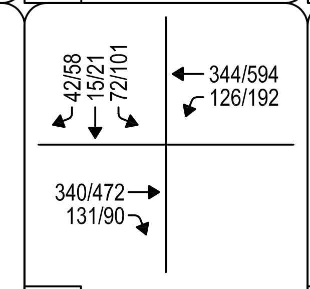
45 111th Street
I-94 Westbound Ramps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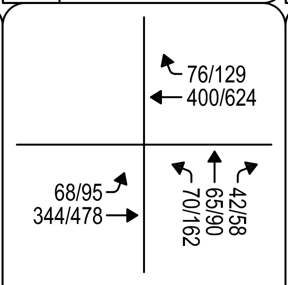
131/90

46 115th Street
Marshfield Avenue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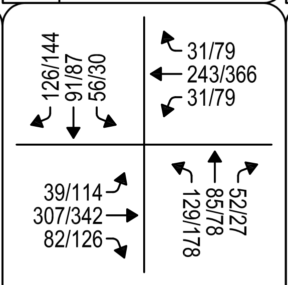
47 115th Street
Ashland Avenue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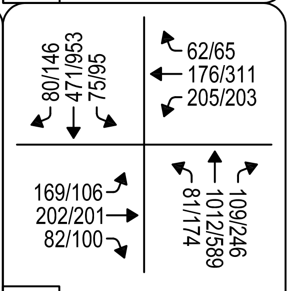
52/27

48 115th Street
Racine Road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202/201
82/100
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109/246

49 115th Street
Halsted Street

Halsted Rail Alternative (2030) Intersection Traffic Volumes

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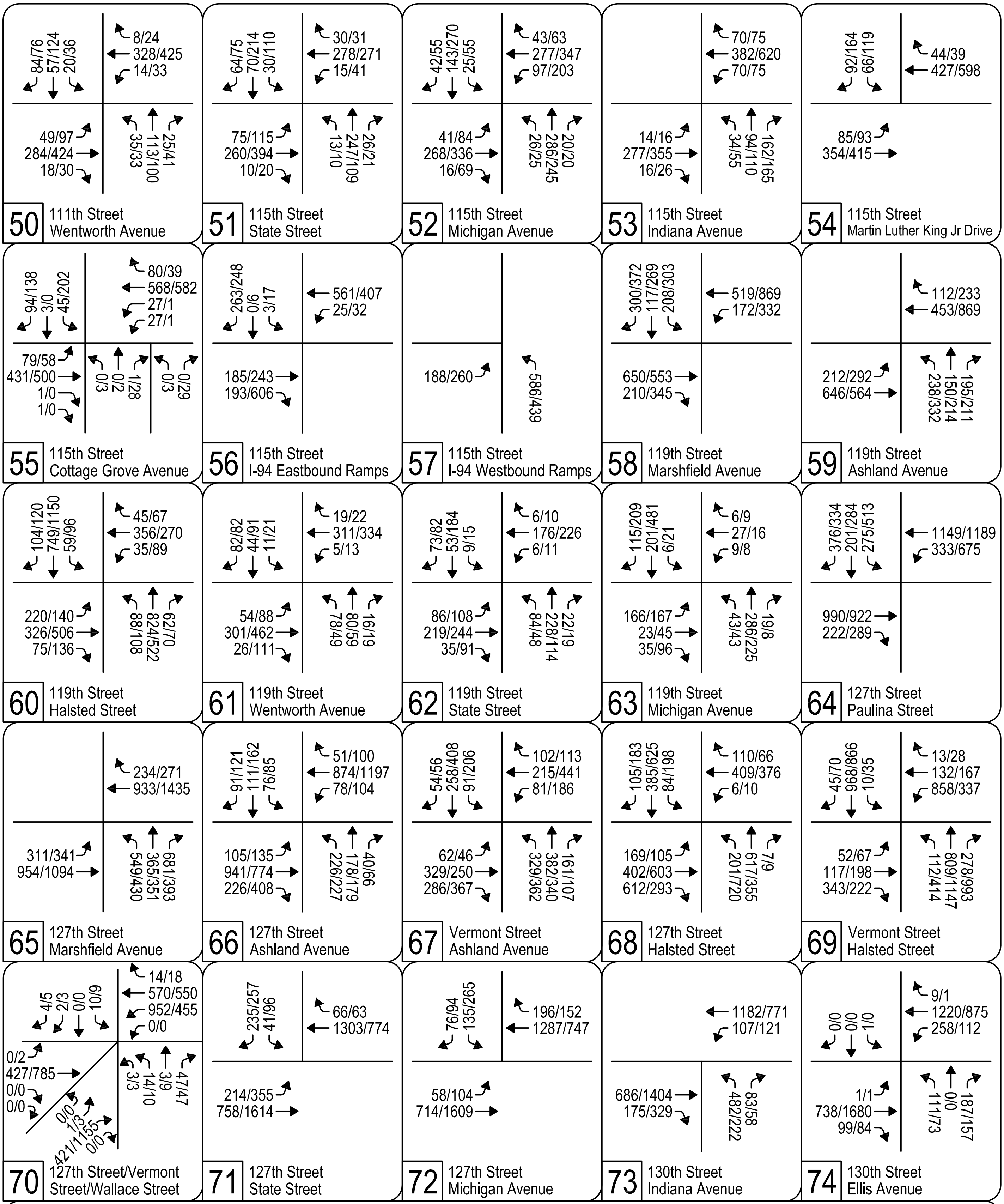
Legend: AM/PM Peak Hour Volumes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35/33
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111th Street
Wentworth Avenue
64/75
70/214
30/110
30/31
278/271
15/41
75/115
260/394
10/20
13/10
247/109
26/21
51
115th Street
State Street
42/55
143/270
25/55
43/63
277/347
97/203
41/84
268/336
16/69
26/25
286/245
20/20
52
115th Street
Michigan Avenue
70/75
382/620
70/75
14/16
277/355
16/26
34/55
94/110
162/165
53
115th Street
Indiana Avenue
92/164
66/119
44/39
427/598
85/93
354/415
54
115th Street
Martin Luther King Jr Drive
94/138
3/0
45/202
80/39
568/582
27/1
27/1
79/58
431/500
1/0
1/0
0/3
0/2
1/28
0/3
0/29
55
115th Street
Cottage Grove Avenue
263/248
0/6
3/17
561/407
25/32
185/243
193/606
56
115th Street
I-94 Eastbound Ramps
188/260
586/439
57
115th Street
I-94 Westbound Ramps
300/372
117/269
208/303
519/869
172/332
650/553
210/345
58
119th Street
Marshfield Avenue
112/233
453/869
212/292
646/564
238/332
150/214
195/211
59
119th Street
Ashland Avenue
104/120
749/1150
59/96
45/67
356/270
35/89
220/140
326/506
75/136
88/108
824/522
62/70
60
119th Street
Halsted Street
82/82
44/91
11/21
19/22
311/334
5/13
54/88
301/462
26/111
78/49
80/59
16/19
61
119th Street
Wentworth Avenue
73/82
53/184
9/15
6/10
176/226
6/11
86/108
219/244
35/91
84/48
228/114
22/19
62
119th Street
State Street
115/209
201/481
6/21
6/9
27/16
9/8
166/167
23/45
35/96
43/43
286/225
19/8
63
119th Street
Michigan Avenue
376/334
201/284
275/513
1149/1189
333/675
990/922
222/289
64
127th Street
Paulina Street
234/271
933/1435
311/341
954/1094
549/430
365/351
681/393
65
127th Street
Marshfield Avenue
91/121
111/162
76/85
51/100
874/1197
78/104
105/135
941/774
226/408
226/227
178/179
40/66
66
127th Street
Ashland Avenue
54/56
258/408
91/206
102/113
215/441
81/186
62/46
329/250
286/367
329/362
382/340
161/107
67
Vermont Street
Ashland Avenue
105/183
385/625
84/198
110/66
409/376
6/10
169/105
402/603
612/293
201/720
617/355
7/9
68
127th Street
Halsted Street
45/70
968/866
10/35
13/28
132/167
858/337
52/67
117/198
343/222
112/414
809/1147
278/993
69
Vermont Street
Halsted Street
4/5
2/3
0/0
10/9
14/18
570/550
952/455
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0/2
427/785
0/0
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0/0
1/3
421/1155
0/0
3/3
14/10
3/9
47/47
70
127th Street/Vermont
Street/Wallace Street
235/257
41/96
66/63
1303/774
214/355
758/1614
71
127th Street
State Street
76/94
135/265
196/152
1287/747
58/104
714/1609
72
127th Street
Michigan Avenue
1182/771
107/121
686/1404
175/329
482/222
83/58
73
130th Street
Indiana Avenue
0/0
0/0
1/0
9/1
1220/875
258/112
1/1
738/1680
99/84
111/73
0/0
187/157
74
130th Street
Ellis Avenue

Halsted Rail Alternative (2030) Intersection Traffic Volumes

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Legend: AM/PM Peak Hour Volumes

HCM Signalized Intersection Capacity Analysis
1001: 95th Street & Wentworth Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			✥			✥	
Volume (vph)	39	841	19	24	813	49	46	68	80	39	44	95
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	16	10	10	16	8	15	8	8	14	8
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			0.99			0.99	
Flpb, ped/bikes	0.99	1.00		1.00	1.00			1.00			1.00	
Frt	1.00	1.00		1.00	0.99			0.94			0.93	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1417	2976		1592	2979			1755			1673	
Flt Permitted	0.25	1.00		0.25	1.00			0.90			0.91	
Satd. Flow (perm)	369	2976		417	2979			1596			1532	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	41	885	20	25	856	52	48	72	84	41	46	100
RTOR Reduction (vph)	0	2	0	0	7	0	0	39	0	0	59	0
Lane Group Flow (vph)	41	903	0	25	901	0	0	165	0	0	128	0
Confl. Peds. (#/hr)	61		11	11		61	3		5	5		3
Confl. Bikes (#/hr)	1		1	1		1						
Heavy Vehicles (%)	11%	7%	0%	0%	6%	2%	2%	7%	4%	5%	7%	3%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	34.0	34.0		34.0	34.0			22.0			22.0	
Effective Green, g (s)	34.0	34.0		34.0	34.0			23.0			23.0	
Actuated g/C Ratio	0.52	0.52		0.52	0.52			0.35			0.35	
Clearance Time (s)	4.0	4.0		4.0	4.0			5.0			5.0	
Lane Grp Cap (vph)	193	1557		218	1558			565			542	
v/s Ratio Prot		c0.30			0.30							
v/s Ratio Perm	0.11			0.06				c0.10			0.08	
v/c Ratio	0.21	0.58		0.11	0.58			0.29			0.24	
Uniform Delay, d1	8.3	10.6		7.9	10.6			15.1			14.8	
Progression Factor	1.00	1.00		0.83	1.16			1.00			1.00	
Incremental Delay, d2	2.5	1.6		0.9	1.4			1.3			1.0	
Delay (s)	10.8	12.2		7.5	13.6			16.4			15.8	
Level of Service	B	B		A	B			B			B	
Approach Delay (s)		12.1			13.5			16.4			15.8	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	13.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	55.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1002: 95th Street & Lafayette Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↑	↱				↰↰	↑	↱
Volume (vph)	27	961	7	24	559	56	0	0	0	529	9	370
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	5.0	5.0		3.0	3.0	3.0				5.0	5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00				0.97	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.67				1.00	1.00	0.96
Flpb, ped/bikes	0.91	1.00		1.00	1.00	1.00				1.00	1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85				1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00				0.95	1.00	1.00
Satd. Flow (prot)	778	3285		1710	3138	512				3100	1440	1399
Flt Permitted	0.43	1.00		0.14	1.00	1.00				0.95	1.00	1.00
Satd. Flow (perm)	352	3285		248	3138	512				3100	1440	1399
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	28	1012	7	25	588	59	0	0	0	557	9	389
RTOR Reduction (vph)	0	1	0	0	0	26	0	0	0	0	0	172
Lane Group Flow (vph)	28	1018	0	25	588	33	0	0	0	557	9	217
Confl. Peds. (#/hr)	354		13	13		354	22		22	22		22
Confl. Bikes (#/hr)	4					4			1	1		
Heavy Vehicles (%)	100%	4%	0%	0%	9%	100%	0%	0%	0%	7%	25%	5%
Turn Type	pm+pt			pm+pt		Perm				Split		Perm
Protected Phases	7	4		3	8					6	6	
Permitted Phases	4			8		8						6
Actuated Green, G (s)	43.0	43.0		73.0	73.0	73.0				30.0	30.0	30.0
Effective Green, g (s)	43.0	43.0		73.0	73.0	73.0				30.0	30.0	30.0
Actuated g/C Ratio	0.33	0.33		0.56	0.56	0.56				0.23	0.23	0.23
Clearance Time (s)	5.0	5.0		3.0	3.0	3.0				5.0	5.0	5.0
Lane Grp Cap (vph)	162	1087		634	1762	288				715	332	323
v/s Ratio Prot	0.02	c0.31		0.01	c0.19					c0.18	0.01	
v/s Ratio Perm	0.04			0.01		0.06						0.16
v/c Ratio	0.17	0.94		0.04	0.33	0.12				0.78	0.03	0.67
Uniform Delay, d1	31.6	42.2		15.1	15.4	13.4				46.9	38.7	45.5
Progression Factor	0.80	0.82		0.29	0.63	1.53				1.00	1.00	1.00
Incremental Delay, d2	2.0	14.1		0.1	0.3	0.5				8.2	0.2	10.7
Delay (s)	27.2	48.9		4.5	10.0	20.9				55.1	38.9	56.2
Level of Service	C	D		A	A	C				E	D	E
Approach Delay (s)		48.3			10.7			0.0			55.4	
Approach LOS		D			B			A			E	

Intersection Summary			
HCM Average Control Delay	41.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	52.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1003: 95th Street & State Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↱		↰	↑↑	↱		↰↑	↱	↰		↱
Volume (vph)	486	873	131	22	474	273	134	513	61	44	0	31
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0	3.0		5.0	5.0	5.0		5.0	5.0	5.0		5.0
Lane Util. Factor	0.97	0.95		1.00	0.95	1.00		0.95	1.00	1.00		1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.65		1.00	0.94	1.00		0.96
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Frt	1.00	0.98		1.00	1.00	0.85		1.00	0.85	1.00		0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.99	1.00	0.95		1.00
Satd. Flow (prot)	3190	3107		1555	2923	944		3300	1417	855		734
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.99	1.00	0.95		1.00
Satd. Flow (perm)	3190	3107		1555	2923	944		3300	1417	855		734
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	512	919	138	23	499	287	141	540	64	46	0	33
RTOR Reduction (vph)	0	9	0	0	0	158	0	0	25	0	0	31
Lane Group Flow (vph)	512	1049	0	23	499	129	0	681	39	46	0	2
Confl. Peds. (#/hr)	425		21	21		425	6		34	34		6
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	4%	8%	3%	10%	17%	5%	1%	3%	2%	100%	0%	100%
Turn Type	Prot			Prot		Perm	Split		Perm	Prot		custom
Protected Phases	7	4		3	8		2	2		6		
Permitted Phases						8			2			6
Actuated Green, G (s)	43.0	65.0		9.0	31.0	31.0		30.0	30.0	8.0		8.0
Effective Green, g (s)	43.0	65.0		9.0	31.0	31.0		30.0	30.0	8.0		8.0
Actuated g/C Ratio	0.33	0.50		0.07	0.24	0.24		0.23	0.23	0.06		0.06
Clearance Time (s)	3.0	3.0		5.0	5.0	5.0		5.0	5.0	5.0		5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0	3.0	3.0		3.0
Lane Grp Cap (vph)	1055	1554		108	697	225		762	327	53		45
v/s Ratio Prot	0.16	c0.34		0.01	c0.17			c0.21		c0.05		
v/s Ratio Perm						0.14			0.03			0.00
v/c Ratio	0.49	0.67		0.21	0.72	0.57		0.89	0.12	0.87		0.05
Uniform Delay, d1	34.7	24.5		57.2	45.5	43.6		48.5	39.5	60.5		57.4
Progression Factor	0.75	0.20		1.00	1.00	1.00		0.94	0.90	1.00		1.00
Incremental Delay, d2	0.7	1.1		4.5	6.2	10.1		14.9	0.7	76.0		0.4
Delay (s)	26.9	6.0		61.6	51.7	53.8		60.7	36.2	136.5		57.8
Level of Service	C	A		E	D	D		E	D	F		E
Approach Delay (s)		12.8			52.7			58.6			103.6	
Approach LOS		B			D			E			F	

Intersection Summary			
HCM Average Control Delay	35.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	72.7%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1004: 95th Street & Michigan Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↱		↰	↑↑		↰		↱	↰	↑↱	
Volume (vph)	0	897	222	62	638	0	111	0	108	3	13	2
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	11	11	8	12	12	12	14	15	12
Total Lost time (s)		4.0		4.0	4.0		4.0		4.0	4.0	4.0	
Lane Util. Factor		0.95		1.00	0.95		1.00		1.00	1.00	1.00	
Frpb, ped/bikes		0.99		1.00	1.00		1.00		0.98	1.00	1.00	
Flpb, ped/bikes		1.00		1.00	1.00		1.00		1.00	0.99	1.00	
Frt		0.97		1.00	1.00		1.00		0.85	1.00	0.98	
Flt Protected		1.00		0.95	1.00		0.95		1.00	0.95	1.00	
Satd. Flow (prot)		2860		1650	3005		1390		1465	1803	1943	
Flt Permitted		1.00		0.15	1.00		0.75		1.00	0.95	1.00	
Satd. Flow (perm)		2860		267	3005		1093		1465	1803	1943	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	997	247	69	709	0	123	0	120	3	14	2
RTOR Reduction (vph)	0	22	0	0	0	0	0	0	77	0	1	0
Lane Group Flow (vph)	0	1222	0	69	709	0	123	0	43	3	15	0
Confl. Peds. (#/hr)	49		15	15		49			12	12		
Heavy Vehicles (%)	0%	6%	14%	0%	10%	0%	23%	0%	2%	0%	0%	0%
Turn Type				Perm			custom		custom	Perm		
Protected Phases		4			8						6	
Permitted Phases				8			2		2	6		
Actuated Green, G (s)		60.0		60.0	60.0		32.0		32.0	32.0	32.0	
Effective Green, g (s)		60.0		60.0	60.0		32.0		32.0	32.0	32.0	
Actuated g/C Ratio		0.60		0.60	0.60		0.32		0.32	0.32	0.32	
Clearance Time (s)		4.0		4.0	4.0		4.0		4.0	4.0	4.0	
Lane Grp Cap (vph)		1716		160	1803		350		469	577	622	
v/s Ratio Prot		c0.43			0.24						0.01	
v/s Ratio Perm				0.26			c0.11		0.03	0.00		
v/c Ratio		0.71		0.43	0.39		0.35		0.09	0.01	0.02	
Uniform Delay, d1		14.0		10.8	10.5		26.0		23.8	23.2	23.3	
Progression Factor		1.00		1.00	1.00		1.00		1.00	1.00	1.00	
Incremental Delay, d2		2.5		8.3	0.6		2.8		0.4	0.0	0.1	
Delay (s)		16.5		19.1	11.1		28.8		24.2	23.2	23.4	
Level of Service		B		B	B		C		C	C	C	
Approach Delay (s)		16.5			11.8			26.5			23.3	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM Average Control Delay	16.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	60.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1005: 98th Place & Halsted Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↰	↰↑	↱	↰	↑↑↑			↑↑↱	
Volume (vph)	0	0	0	338	39	1052	202	910	0	0	478	752
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	12	12	10	10	12	12	11	12
Total Lost time (s)				4.0	4.0	5.0	3.0	4.0			4.0	
Lane Util. Factor				0.95	0.95	1.00	1.00	0.91			0.91	
Frpb, ped/bikes				1.00	1.00	0.99	1.00	1.00			0.98	
Flpb, ped/bikes				1.00	1.00	1.00	1.00	1.00			1.00	
Frt				1.00	1.00	0.85	1.00	1.00			0.91	
Flt Protected				0.95	1.00	1.00	0.95	1.00			1.00	
Satd. Flow (prot)				1525	1629	1479	1550	4368			3940	
Flt Permitted				0.95	1.00	1.00	0.95	1.00			1.00	
Satd. Flow (perm)				1525	1629	1479	1550	4368			3940	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	0	0	345	40	1073	206	929	0	0	488	767
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	345	40	1073	206	929	0	0	1255	0
Confl. Peds. (#/hr)	2					2	12		8	8		12
Heavy Vehicles (%)	0%	0%	0%	3%	5%	2%	3%	5%	0%	0%	5%	8%
Turn Type				Perm		Perm	Prot					
Protected Phases					8		5	2			6	
Permitted Phases				8		8						
Actuated Green, G (s)				30.0	30.0	30.0	32.0	66.0			31.0	
Effective Green, g (s)				31.0	31.0	30.0	32.0	66.0			31.0	
Actuated g/C Ratio				0.30	0.30	0.29	0.30	0.63			0.30	
Clearance Time (s)				5.0	5.0	5.0	3.0	4.0			4.0	
Lane Grp Cap (vph)				450	481	423	472	2746			1163	
v/s Ratio Prot							c0.13	0.21			c0.32	
v/s Ratio Perm				0.23	0.02	c0.73						
v/c Ratio				0.77	0.08	2.54	0.44	0.34			1.91dr	
Uniform Delay, d1				33.7	26.7	37.5	29.3	9.2			37.0	
Progression Factor				1.00	1.00	1.00	0.66	2.38			1.00	
Incremental Delay, d2				11.8	0.3	698.4	2.0	0.2			50.5	
Delay (s)				45.5	27.1	735.9	21.3	22.1			87.5	
Level of Service				D	C	F	C	C			F	
Approach Delay (s)		0.0			553.1			22.0			87.5	
Approach LOS		A			F			C			F	

Intersection Summary			
HCM Average Control Delay	244.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.33		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	95.0%	ICU Level of Service	F
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1006: 99th Street & Halsted Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↰↑↱						↑↑↑	↱↱	↰	↑↑↑	
Volume (vph)	263	867	92	0	0	0	0	849	662	286	530	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	13	12	12	12	12	12	10	10	8	12	12	12
Total Lost time (s)	5.0	5.0						4.0	4.0	3.0	4.0	
Lane Util. Factor	0.91	0.91						0.91	0.88	1.00	0.91	
Frpb, ped/bikes	1.00	1.00						1.00	0.97	1.00	1.00	
Flpb, ped/bikes	1.00	1.00						1.00	1.00	1.00	1.00	
Frt	1.00	0.99						1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00						1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1497	3184						4368	2187	1583	4636	
Flt Permitted	0.95	1.00						1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1497	3184						4368	2187	1583	4636	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	271	894	95	0	0	0	0	875	682	295	546	0
RTOR Reduction (vph)	0	7	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	244	1009	0	0	0	0	0	875	682	295	546	0
Confl. Peds. (#/hr)	4		14	14		4	4		3	3		4
Heavy Vehicles (%)	7%	1%	0%	0%	0%	0%	0%	5%	4%	8%	6%	0%
Turn Type	Perm								Perm	Prot		
Protected Phases		4						2		1	6	
Permitted Phases	4								2			
Actuated Green, G (s)	34.0	34.0						28.0	28.0	31.0	62.0	
Effective Green, g (s)	34.0	34.0						28.0	28.0	31.0	62.0	
Actuated g/C Ratio	0.32	0.32						0.27	0.27	0.30	0.59	
Clearance Time (s)	5.0	5.0						4.0	4.0	3.0	4.0	
Lane Grp Cap (vph)	485	1031						1165	583	467	2737	
v/s Ratio Prot								0.20		c0.19	0.12	
v/s Ratio Perm	0.16	0.32							c0.31			
v/c Ratio	0.50	0.98						0.75	1.17	0.63	0.20	
Uniform Delay, d1	28.7	35.1						35.3	38.5	32.1	10.0	
Progression Factor	1.00	1.00						0.43	0.46	1.06	0.42	
Incremental Delay, d2	3.7	23.4						0.4	78.3	2.2	0.1	
Delay (s)	32.4	58.5						15.7	95.9	36.1	4.3	
Level of Service	C	E						B	F	D	A	
Approach Delay (s)		53.5			0.0			50.8			15.4	
Approach LOS		D			A			D			B	

Intersection Summary			
HCM Average Control Delay	43.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	95.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1007: 98th Place & Wentworth Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↰	↑↱		↰	↑			↱	
Volume (vph)	0	0	0	218	4	21	3	166	0	0	116	3
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	14	12	12	16	12
Total Lost time (s)				4.0	4.0		4.0	4.0			-3.0	
Lane Util. Factor				1.00	0.95		1.00	1.00			1.00	
Frpb, ped/bikes				1.00	0.98		1.00	1.00			1.00	
Flpb, ped/bikes				1.00	1.00		1.00	1.00			1.00	
Frt				1.00	0.87		1.00	1.00			1.00	
Flt Protected				0.95	1.00		0.95	1.00			1.00	
Satd. Flow (prot)				1578	2709		1285	1882			1961	
Flt Permitted				0.95	1.00		0.58	1.00			1.00	
Satd. Flow (perm)				1578	2709		781	1882			1961	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	242	4	23	3	184	0	0	129	3
RTOR Reduction (vph)	0	0	0	0	18	0	0	0	0	0	1	0
Lane Group Flow (vph)	0	0	0	242	9	0	3	184	0	0	131	0
Confl. Peds. (#/hr)	2		2	2		2	3					3
Heavy Vehicles (%)	0%	0%	0%	8%	25%	5%	33%	2%	0%	0%	3%	33%
Turn Type				Perm			pm+pt					
Protected Phases					8		7	2			6	
Permitted Phases				8			2					
Actuated Green, G (s)				27.0	27.0		50.0	50.0			40.0	
Effective Green, g (s)				27.0	27.0		50.0	50.0			46.0	
Actuated g/C Ratio				0.32	0.32		0.59	0.59			0.54	
Clearance Time (s)				4.0	4.0		4.0	4.0			3.0	
Lane Grp Cap (vph)				501	861		501	1107			1061	
v/s Ratio Prot					0.00		0.00	c0.10			0.07	
v/s Ratio Perm				c0.15			0.00					
v/c Ratio				0.48	0.01		0.01	0.17			0.12	
Uniform Delay, d1				23.4	19.9		10.0	8.0			9.6	
Progression Factor				1.00	1.00		1.06	1.18			1.00	
Incremental Delay, d2				3.3	0.0		0.0	0.3			0.2	
Delay (s)				26.7	19.9		10.6	9.8			9.8	
Level of Service				C	B		B	A			A	
Approach Delay (s)		0.0			26.0			9.8			9.8	
Approach LOS		A			C			A			A	

Intersection Summary			
HCM Average Control Delay	17.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	33.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1008: 99th St & Wentworth Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱			✥			↱		↰	↑	
Volume (vph)	8	5	5	12	0	18	0	143	42	33	301	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	16	15	12	8	12	8	12	12	12	10	13	12
Total Lost time (s)	4.0	4.0			4.0			3.0		4.0	4.0	
Lane Util. Factor	1.00	1.00			1.00			1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.99			1.00			1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00			1.00			1.00		1.00	1.00	
Frt	1.00	0.93			0.92			0.97		1.00	1.00	
Flt Protected	0.95	1.00			0.98			1.00		0.95	1.00	
Satd. Flow (prot)	1938	1809			1620			1686		1595	1755	
Flt Permitted	0.74	1.00			0.93			1.00		0.60	1.00	
Satd. Flow (perm)	1502	1809			1543			1686		1005	1755	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	8	5	5	13	0	19	0	151	44	35	317	0
RTOR Reduction (vph)	0	3	0	0	13	0	0	12	0	0	0	0
Lane Group Flow (vph)	8	7	0	0	19	0	0	183	0	35	317	0
Confl. Peds. (#/hr)			3	3			5		2	2		5
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	3%	3%	0%	6%	0%
Turn Type	Perm			Perm						pm+pt		
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8						6		
Actuated Green, G (s)	27.0	27.0			27.0			40.0		50.0	50.0	
Effective Green, g (s)	27.0	27.0			27.0			40.0		50.0	50.0	
Actuated g/C Ratio	0.32	0.32			0.32			0.47		0.59	0.59	
Clearance Time (s)	4.0	4.0			4.0			3.0		4.0	4.0	
Lane Grp Cap (vph)	477	575			490			793		640	1032	
v/s Ratio Prot		0.00						0.11		0.00	c0.18	
v/s Ratio Perm	0.01				c0.01					0.03		
v/c Ratio	0.02	0.01			0.04			0.23		0.05	0.31	
Uniform Delay, d1	19.9	19.9			20.0			13.4		8.5	8.8	
Progression Factor	1.00	1.00			1.00			1.00		1.01	0.93	
Incremental Delay, d2	0.1	0.0			0.1			0.7		0.2	0.7	
Delay (s)	20.0	19.9			20.2			14.0		8.8	8.9	
Level of Service	B	B			C			B		A	A	
Approach Delay (s)		19.9			20.2			14.0			8.9	
Approach LOS		B			C			B			A	

Intersection Summary			
HCM Average Control Delay	11.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.21		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	40.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
	↗	↘	↖	↑	↓	↙
Lane Configurations	↖↗		↰	↑	↱	
Volume (vph)	63	16	10	350	159	12
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	14	12	13	12	10	12
Total Lost time (s)	4.0		4.0	4.0	4.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.97		1.00	1.00	0.99	
Flt Protected	0.96		0.95	1.00	1.00	
Satd. Flow (prot)	1787		1767	1765	1634	
Flt Permitted	0.96		0.64	1.00	1.00	
Satd. Flow (perm)	1787		1187	1765	1634	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	70	18	11	389	177	13
RTOR Reduction (vph)	12	0	0	0	4	0
Lane Group Flow (vph)	76	0	11	389	186	0
Confl. Peds. (#/hr)		2				
Heavy Vehicles (%)	0%	0%	0%	2%	2%	0%
Turn Type			Perm			
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	21.0		36.0	36.0	36.0	
Effective Green, g (s)	21.0		36.0	36.0	36.0	
Actuated g/C Ratio	0.32		0.55	0.55	0.55	
Clearance Time (s)	4.0		4.0	4.0	4.0	
Lane Grp Cap (vph)	577		657	978	905	
v/s Ratio Prot	c0.04			c0.22	0.11	
v/s Ratio Perm			0.01			
v/c Ratio	0.13		0.02	0.40	0.21	
Uniform Delay, d1	15.6		6.5	8.3	7.3	
Progression Factor	1.00		0.32	0.51	1.16	
Incremental Delay, d2	0.5		0.0	1.1	0.4	
Delay (s)	16.0		2.1	5.4	8.9	
Level of Service	B		A	A	A	
Approach Delay (s)	16.0			5.3	8.9	
Approach LOS	B			A	A	

Intersection Summary			
HCM Average Control Delay	7.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	39.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1010: 99th St & Michigan Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↰↑↱		↰	↑			↑	↱
Volume (vph)	0	0	0	23	274	14	568	253	0	0	193	35
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	14	16	12	12	15	12	12	13	10
Total Lost time (s)					4.0		4.0	4.0			3.0	3.0
Lane Util. Factor					0.95		1.00	1.00			1.00	1.00
Frpb, ped/bikes					1.00		1.00	1.00			1.00	1.00
Flpb, ped/bikes					1.00		1.00	1.00			1.00	1.00
Frt					0.99		1.00	1.00			1.00	0.85
Flt Protected					1.00		0.95	1.00			1.00	1.00
Satd. Flow (prot)					3738		1660	1752			1603	1298
Flt Permitted					1.00		0.57	1.00			1.00	1.00
Satd. Flow (perm)					3738		1002	1752			1603	1298
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	26	304	16	631	281	0	0	214	39
RTOR Reduction (vph)	0	0	0	0	4	0	0	0	0	0	0	22
Lane Group Flow (vph)	0	0	0	0	342	0	631	281	0	0	214	17
Confl. Peds. (#/hr)									30	30		
Heavy Vehicles (%)	0%	0%	0%	11%	2%	0%	3%	13%	0%	0%	16%	10%
Turn Type				Split			pm+pt					Perm
Protected Phases				8	8		7	2			6	
Permitted Phases							2					6
Actuated Green, G (s)					26.0		51.0	51.0			38.0	38.0
Effective Green, g (s)					26.0		51.0	51.0			38.0	38.0
Actuated g/C Ratio					0.31		0.60	0.60			0.45	0.45
Clearance Time (s)					4.0		4.0	4.0			3.0	3.0
Lane Grp Cap (vph)					1143		679	1051			717	580
v/s Ratio Prot					c0.09		c0.11	0.16			0.13	
v/s Ratio Perm							c0.45					0.01
v/c Ratio					0.30		0.93	0.27			0.30	0.03
Uniform Delay, d1					22.5		17.0	8.1			15.0	13.2
Progression Factor					1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2					0.7		21.0	0.6			1.1	0.1
Delay (s)					23.2		38.0	8.7			16.1	13.3
Level of Service					C		D	A			B	B
Approach Delay (s)		0.0			23.2			29.0			15.6	
Approach LOS		A			C			C			B	

Intersection Summary			
HCM Average Control Delay	25.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	63.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1011: 99th Street & Martin Luther King Jr Drive

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					✥		↰	↑↱		↰	↑↱	
Volume (vph)	0	0	0	13	11	9	331	527	96	74	339	12
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	15	12	12	12	12	12	13	12
Total Lost time (s)					4.0		3.0	4.0		3.0	4.0	
Lane Util. Factor					1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes					1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes					1.00		1.00	1.00		1.00	1.00	
Frt					0.96		1.00	0.98		1.00	0.99	
Flt Protected					0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)					1796		1692	3237		1707	3352	
Flt Permitted					0.98		0.50	1.00		0.31	1.00	
Satd. Flow (perm)					1796		894	3237		566	3352	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	14	12	10	368	586	107	82	377	13
RTOR Reduction (vph)	0	0	0	0	7	0	0	20	0	0	3	0
Lane Group Flow (vph)	0	0	0	0	29	0	368	673	0	82	387	0
Confl. Peds. (#/hr)	2					2	6		20	20		6
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	0%	0%	0%	0%	11%	0%	1%	3%	0%	0%	5%	0%
Turn Type				Split			pm+pt			pm+pt		
Protected Phases				8	8		5	2		1	6	
Permitted Phases							2			6		
Actuated Green, G (s)					23.0		41.0	34.0		41.0	34.0	
Effective Green, g (s)					23.0		41.0	34.0		41.0	34.0	
Actuated g/C Ratio					0.31		0.55	0.45		0.55	0.45	
Clearance Time (s)					4.0		3.0	4.0		3.0	4.0	
Lane Grp Cap (vph)					551		563	1467		416	1520	
v/s Ratio Prot					c0.02		c0.06	0.21		0.02	0.12	
v/s Ratio Perm							c0.30			0.09		
v/c Ratio					0.05		0.65	0.46		0.20	0.25	
Uniform Delay, d1					18.3		13.7	14.2		12.3	12.7	
Progression Factor					1.00		0.69	0.74		1.00	1.00	
Incremental Delay, d2					0.2		5.3	0.9		1.1	0.4	
Delay (s)					18.5		14.8	11.4		13.4	13.1	
Level of Service					B		B	B		B	B	
Approach Delay (s)		0.0			18.5			12.6			13.1	
Approach LOS		A			B			B			B	

Intersection Summary			
HCM Average Control Delay	12.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	56.0%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1012: 100th Street & Martin Luther King Jr Drive

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Lane Configurations		✥			✥		↰	↑↱		↰	↑↱	
Volume (vph)	57	54	24	13	169	222	20	675	12	69	268	15
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	16	12	12	10	11	12	12	11	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.98			0.93		1.00	1.00		1.00	0.99	
Flt Protected		0.98			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1946			1626		1596	3232		1641	3131	
Flt Permitted		0.68			0.99		0.57	1.00		0.33	1.00	
Satd. Flow (perm)		1354			1613		957	3232		575	3131	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	60	57	25	14	178	234	21	711	13	73	282	16
RTOR Reduction (vph)	0	10	0	0	59	0	0	2	0	0	5	0
Lane Group Flow (vph)	0	132	0	0	367	0	21	722	0	73	293	0
Confl. Peds. (#/hr)									6	6		
Confl. Bikes (#/hr)			1	1								
Heavy Vehicles (%)	0%	0%	0%	12%	2%	2%	0%	2%	0%	4%	5%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		25.0			25.0		42.0	42.0		42.0	42.0	
Effective Green, g (s)		25.0			25.0		42.0	42.0		42.0	42.0	
Actuated g/C Ratio		0.33			0.33		0.56	0.56		0.56	0.56	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		451			538		536	1810		322	1753	
v/s Ratio Prot								c0.22			0.09	
v/s Ratio Perm		0.10			c0.23		0.02			0.13		
v/c Ratio		0.29			0.68		0.04	0.40		0.23	0.17	
Uniform Delay, d1		18.5			21.6		7.4	9.3		8.3	8.0	
Progression Factor		1.00			1.00		1.00	1.00		0.17	0.06	
Incremental Delay, d2		1.6			6.9		0.1	0.7		1.6	0.2	
Delay (s)		20.1			28.4		7.6	10.0		3.0	0.7	
Level of Service		C			C		A	B		A	A	
Approach Delay (s)		20.1			28.4			9.9			1.1	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM Average Control Delay	13.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	69.8%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis
1013: 100th Street & Cottage Grove Avenue

1/14/2013

	↗	↘	↖	↑	↓	↙
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰↱			↰↑	↑↱	
Sign Control	Stop			Stop	Stop	
Volume (vph)	45	57	105	326	194	19
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	50	63	117	362	216	21

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	113	237	241	144	93
Volume Left (vph)	50	117	0	0	0
Volume Right (vph)	63	0	0	0	21
Hadj (s)	-0.16	0.33	0.08	0.09	-0.07
Departure Headway (s)	5.3	5.4	5.1	5.4	5.2
Degree Utilization, x	0.17	0.36	0.35	0.22	0.14
Capacity (veh/h)	628	654	684	641	660
Control Delay (s)	9.3	10.1	9.6	8.7	7.9
Approach Delay (s)	9.3	9.9		8.4	
Approach LOS	A	A		A	

Intersection Summary			
Delay	9.4		
HCM Level of Service	A		
Intersection Capacity Utilization	35.4%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Signalized Intersection Capacity Analysis
1014: 103rd Street & Vincennes Avenue

1/14/2013

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR
Lane Configurations		↰↰	↑	↱	↰	↑	↰↰			↰↰	↑↱	
Volume (vph)	45	52	340	13	6	483	40	41	42	53	720	47
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		3.5	4.0	4.0	4.0	4.0	4.0			4.0	4.0	
Lane Util. Factor		1.00	1.00	1.00	1.00	1.00	1.00			1.00	0.95	
Frpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	0.97			1.00	1.00	
Flpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	
Frt		1.00	1.00	0.85	1.00	1.00	0.85			1.00	0.99	
Flt Protected		0.95	1.00	1.00	0.95	1.00	1.00			0.95	1.00	
Satd. Flow (prot)		1575	1731	1530	1710	1731	1487			1710	3289	
Flt Permitted		0.11	1.00	1.00	0.54	1.00	1.00			0.39	1.00	
Satd. Flow (perm)		187	1731	1530	967	1731	1487			700	3289	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	50	58	378	14	7	537	44	46	47	59	800	52
RTOR Reduction (vph)	0	0	0	7	0	0	32	0	0	0	5	0
Lane Group Flow (vph)	0	108	378	7	7	537	58	0	0	106	847	0
Confl. Peds. (#/hr)		5					5					6
Heavy Vehicles (%)	8%	9%	4%	0%	0%	4%	0%	0%	0%	0%	3%	0%
Turn Type	Perm	pm+pt		Perm	Perm		Perm		Perm	Perm		
Protected Phases		7	4			8					2	
Permitted Phases	4	4		4	8		8		2	2		
Actuated Green, G (s)		50.0	50.0	50.0	32.0	32.0	32.0			25.0	25.0	
Effective Green, g (s)		50.0	50.0	50.0	32.0	32.0	32.0			25.0	25.0	
Actuated g/C Ratio		0.48	0.48	0.48	0.30	0.30	0.30			0.24	0.24	
Clearance Time (s)		3.5	4.0	4.0	4.0	4.0	4.0			4.0	4.0	
Lane Grp Cap (vph)		281	824	729	295	528	453			167	783	
v/s Ratio Prot		0.05	c0.22			c0.31					c0.26	
v/s Ratio Perm		0.13		0.00	0.01		0.04			0.15		
v/c Ratio		0.38	0.46	0.01	0.02	1.02	0.13			0.63	1.08	
Uniform Delay, d1		20.3	18.4	14.5	25.6	36.5	26.4			35.9	40.0	
Progression Factor		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	
Incremental Delay, d2		3.9	1.8	0.0	0.1	43.5	0.6			17.0	56.8	
Delay (s)		24.2	20.3	14.5	25.7	80.0	27.0			52.9	96.8	
Level of Service		C	C	B	C	F	C			D	F	
Approach Delay (s)			21.0			71.9					91.9	
Approach LOS			C			E					F	

Intersection Summary			
HCM Average Control Delay	62.7	HCM Level of Service	E
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	80.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBL	SBT	SBR	SBR2	SEL2	SEL	SER	SER2
Lane Configurations								
Volume (vph)	49	300	27	33	4	65	114	12
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.5	4.5				4.5	4.5	
Lane Util. Factor	1.00	0.95				1.00	0.88	
Frpb, ped/bikes	1.00	1.00				1.00	1.00	
Flpb, ped/bikes	1.00	1.00				1.00	1.00	
Frt	1.00	0.97				1.00	0.85	
Flt Protected	0.95	1.00				0.95	1.00	
Satd. Flow (prot)	1706	3279				1710	2621	
Flt Permitted	0.16	1.00				0.95	1.00	
Satd. Flow (perm)	293	3279				1710	2621	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	54	333	30	37	4	72	127	13
RTOR Reduction (vph)	0	8	0	0	0	0	7	0
Lane Group Flow (vph)	54	392	0	0	0	76	133	0
Confl. Peds. (#/hr)	6							
Heavy Vehicles (%)	0%	2%	0%	0%	0%	0%	3%	0%
Turn Type	Perm				Split		Perm	
Protected Phases		6			9	9		
Permitted Phases	6						9	
Actuated Green, G (s)	24.5	24.5				17.5	17.5	
Effective Green, g (s)	24.5	24.5				17.5	17.5	
Actuated g/C Ratio	0.23	0.23				0.17	0.17	
Clearance Time (s)	4.5	4.5				4.5	4.5	
Lane Grp Cap (vph)	68	765				285	437	
v/s Ratio Prot		0.12				0.04		
v/s Ratio Perm	0.18						c0.05	
v/c Ratio	0.79	0.51				0.27	0.31	
Uniform Delay, d1	37.9	35.1				38.2	38.4	
Progression Factor	1.00	1.00				1.00	1.00	
Incremental Delay, d2	61.4	2.4				2.3	1.8	
Delay (s)	99.3	37.5				40.4	40.2	
Level of Service	F	D				D	D	
Approach Delay (s)		44.9				40.3		
Approach LOS		D				D		

Intersection Summary

HCM Signalized Intersection Capacity Analysis
1015: 103rd Street & Morgan Street

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰			↱			✥				
Volume (vph)	24	499	0	0	495	25	118	116	117	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	11	11	11	16	11	12	15	12	12	15	12
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		1.00			0.99			0.95				
Flt Protected		1.00			1.00			0.98				
Satd. Flow (prot)		1653			1930			1771				
Flt Permitted		0.96			1.00			0.98				
Satd. Flow (perm)		1598			1930			1771				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	27	554	0	0	550	28	131	129	130	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	581	0	0	578	0	0	390	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)		31.0			31.0			26.0				
Effective Green, g (s)		31.0			31.0			26.0				
Actuated g/C Ratio		0.48			0.48			0.40				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		762			920			708				
v/s Ratio Prot					0.30							
v/s Ratio Perm		c0.36						0.22				
v/c Ratio		0.76			0.63			0.55				
Uniform Delay, d1		14.0			12.7			15.0				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		7.1			3.2			3.1				
Delay (s)		21.1			15.9			18.1				
Level of Service		C			B			B				
Approach Delay (s)		21.1			15.9			18.1			0.0	
Approach LOS		C			B			B			A	

Intersection Summary			
HCM Average Control Delay	18.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	75.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1016: 103rd Street & Halsted Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱	↰	↑↑	↱	↰	↑↑	↱
Volume (vph)	116	366	116	64	353	109	153	1707	128	65	445	93
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	10	10	9	9	10	9
Total Lost time (s)		4.0	4.0		4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		1.00	0.96		1.00	0.96	1.00	1.00	0.97	1.00	1.00	0.96
Flpb, ped/bikes		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.99	1.00		0.99	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1923	1426		1923	1396	1500	3099	1284	1425	2956	1265
Flt Permitted		0.55	1.00		0.62	1.00	0.40	1.00	1.00	0.09	1.00	1.00
Satd. Flow (perm)		1062	1426		1194	1396	625	3099	1284	142	2956	1265
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	122	385	122	67	372	115	161	1797	135	68	468	98
RTOR Reduction (vph)	0	0	72	0	0	68	0	0	29	0	0	59
Lane Group Flow (vph)	0	507	50	0	439	47	161	1797	106	68	468	39
Confl. Peds. (#/hr)	42		39	39		42	20		8	8		20
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	6%	4%	3%	0%	6%	5%	6%	3%	4%	8%	8%	4%
Turn Type	pm+pt		Perm	Perm		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)		43.0	43.0		43.0	43.0	53.1	44.4	44.4	48.9	42.3	42.3
Effective Green, g (s)		43.0	43.0		43.0	43.0	53.1	44.4	44.4	48.9	42.3	42.3
Actuated g/C Ratio		0.41	0.41		0.41	0.41	0.51	0.42	0.42	0.47	0.40	0.40
Clearance Time (s)		4.0	4.0		4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		435	584		489	572	389	1310	543	147	1191	510
v/s Ratio Prot							c0.03	c0.58		c0.03	0.16	
v/s Ratio Perm		c0.48	0.04		0.37	0.03	0.18		0.08	0.19		0.03
v/c Ratio		1.17	0.09		0.90	0.08	0.41	1.37	0.19	0.46	0.39	0.08
Uniform Delay, d1		31.0	19.0		28.9	18.9	14.8	30.3	19.1	23.1	22.2	19.3
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.11	0.75	0.39
Incremental Delay, d2		96.9	0.3		21.9	0.3	0.7	172.2	0.8	2.2	0.9	0.3
Delay (s)		127.9	19.3		50.8	19.2	15.5	202.5	19.9	27.9	17.5	7.7
Level of Service		F	B		D	B	B	F	B	C	B	A
Approach Delay (s)		106.8			44.3			176.3			17.1	
Approach LOS		F			D			F			B	

Intersection Summary			
HCM Average Control Delay	120.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.21		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	117.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1017: 103rd Street & Normal Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			✥				
Volume (vph)	59	494	62	50	476	50	79	62	55	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	15	12	12	15	12
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		0.99			0.99			0.96				
Flt Protected		1.00			1.00			0.98				
Satd. Flow (prot)		1627			1630			1779				
Flt Permitted		0.90			0.91			0.98				
Satd. Flow (perm)		1473			1489			1779				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	66	549	69	56	529	56	88	69	61	0	0	0
RTOR Reduction (vph)	0	6	0	0	5	0	0	21	0	0	0	0
Lane Group Flow (vph)	0	678	0	0	636	0	0	197	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm			Perm					
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Actuated Green, G (s)		38.0			38.0			19.0				
Effective Green, g (s)		38.0			38.0			19.0				
Actuated g/C Ratio		0.58			0.58			0.29				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		861			870			520				
v/s Ratio Prot												
v/s Ratio Perm		c0.46			0.43			0.11				
v/c Ratio		0.79			0.73			0.38				
Uniform Delay, d1		10.4			9.8			18.3				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		7.2			5.4			2.1				
Delay (s)		17.6			15.2			20.4				
Level of Service		B			B			C				
Approach Delay (s)		17.6			15.2			20.4			0.0	
Approach LOS		B			B			C			A	

Intersection Summary			
HCM Average Control Delay	17.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	65.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1018: 103rd Street & Wentworth Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱		↰	↱		✥	
Volume (vph)	30	507	67	32	441	39	55	150	89	49	192	54
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	11	12	12	15	12
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frpb, ped/bikes		1.00	0.97		1.00	0.95		1.00	0.98		0.98	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		0.99	1.00		1.00	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		0.98	
Flt Protected		1.00	1.00		1.00	1.00		0.99	1.00		0.99	
Satd. Flow (prot)		1656	1255		1636	1288		1658	1490		1737	
Flt Permitted		0.96	1.00		0.95	1.00		0.84	1.00		0.92	
Satd. Flow (perm)		1595	1255		1554	1288		1416	1490		1607	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	32	534	71	34	464	41	58	158	94	52	202	57
RTOR Reduction (vph)	0	0	30	0	0	16	0	0	64	0	11	0
Lane Group Flow (vph)	0	566	41	0	498	25	0	216	30	0	300	0
Confl. Peds. (#/hr)	33		15	15		33	68		5	5		68
Confl. Bikes (#/hr)	4					4						
Heavy Vehicles (%)	0%	5%	14%	19%	5%	9%	2%	2%	1%	10%	7%	8%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		43.0	43.0		43.0	43.0		24.0	24.0		24.0	
Effective Green, g (s)		43.0	43.0		43.0	43.0		24.0	24.0		24.0	
Actuated g/C Ratio		0.57	0.57		0.57	0.57		0.32	0.32		0.32	
Clearance Time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	
Lane Grp Cap (vph)		914	720		891	738		453	477		514	
v/s Ratio Prot												
v/s Ratio Perm		c0.35	0.03		0.32	0.02		0.15	0.02		c0.19	
v/c Ratio		0.62	0.06		0.56	0.03		0.48	0.06		0.58	
Uniform Delay, d1		10.6	7.1		10.0	7.0		20.5	17.7		21.3	
Progression Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2		3.1	0.1		2.5	0.1		3.6	0.3		4.8	
Delay (s)		13.7	7.2		12.6	7.0		24.0	18.0		26.1	
Level of Service		B	A		B	A		C	B		C	
Approach Delay (s)		13.0			12.2			22.2			26.1	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM Average Control Delay	16.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	95.3%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1019: 103rd Street & State Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑	↱	↰	↑	↱
Volume (vph)	84	438	30	17	317	39	55	303	38	38	92	11
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	11	16	8	10	10	10	10	10	10
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	0.98	1.00	1.00	0.99
Flpb, ped/bikes	0.99	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1464	2990		1459	3534		1534	1647	1301	1517	1541	1156
Flt Permitted	0.51	1.00		0.43	1.00		0.69	1.00	1.00	0.45	1.00	1.00
Satd. Flow (perm)	788	2990		658	3534		1116	1647	1301	720	1541	1156
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	93	487	33	19	352	43	61	337	42	42	102	12
RTOR Reduction (vph)	0	7	0	0	15	0	0	0	22	0	0	7
Lane Group Flow (vph)	93	513	0	19	380	0	61	337	20	42	102	5
Confl. Peds. (#/hr)	16		9	9		16	1		5	5		1
Heavy Vehicles (%)	8%	6%	0%	13%	8%	3%	4%	2%	8%	5%	9%	22%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	31.0	31.0		31.0	31.0		26.0	26.0	26.0	26.0	26.0	26.0
Effective Green, g (s)	31.0	31.0		31.0	31.0		26.0	26.0	26.0	26.0	26.0	26.0
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.40	0.40	0.40	0.40	0.40	0.40
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	376	1426		314	1685		446	659	520	288	616	462
v/s Ratio Prot		c0.17			0.11			c0.20			0.07	
v/s Ratio Perm	0.12			0.03			0.05		0.02	0.06		0.00
v/c Ratio	0.25	0.36		0.06	0.23		0.14	0.51	0.04	0.15	0.17	0.01
Uniform Delay, d1	10.1	10.7		9.2	10.0		12.4	14.7	11.9	12.4	12.5	11.7
Progression Factor	1.00	1.00		1.00	1.00		0.60	0.74	0.31	0.53	0.54	0.28
Incremental Delay, d2	1.6	0.7		0.4	0.3		0.6	2.8	0.1	1.1	0.6	0.0
Delay (s)	11.6	11.4		9.5	10.3		8.0	13.6	3.8	7.7	7.3	3.4
Level of Service	B	B		A	B		A	B	A	A	A	A
Approach Delay (s)		11.5			10.2			11.9			7.1	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM Average Control Delay	10.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	51.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1020: 103rd Street & Michigan Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	98	413	86	44	282	65	73	371	44	57	143	55
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	11	10	11	11	10	11	11	10	11	11
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	0.96	1.00		1.00	1.00		0.98	1.00		0.97	1.00	
Frt	1.00	0.97		1.00	0.97		1.00	0.98		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1464	3056		1588	3009		1541	3022		1403	2767	
Flt Permitted	0.52	1.00		0.42	1.00		0.62	1.00		0.46	1.00	
Satd. Flow (perm)	808	3056		698	3009		1007	3022		678	2767	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	103	435	91	46	297	68	77	391	46	60	151	58
RTOR Reduction (vph)	0	0	0	0	0	0	0	12	0	0	34	0
Lane Group Flow (vph)	103	526	0	46	365	0	77	425	0	60	175	0
Confl. Peds. (#/hr)	98		10	10		98	28		52	52		28
Heavy Vehicles (%)	5%	5%	4%	0%	5%	7%	2%	6%	13%	10%	11%	20%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	36.0	36.0		36.0	36.0		31.0	31.0		31.0	31.0	
Effective Green, g (s)	36.0	36.0		36.0	36.0		31.0	31.0		31.0	31.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.41	0.41		0.41	0.41	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	388	1467		335	1444		416	1249		280	1144	
v/s Ratio Prot		c0.17			0.12			c0.14			0.06	
v/s Ratio Perm	0.13			0.07			0.08			0.09		
v/c Ratio	0.27	0.36		0.14	0.25		0.19	0.34		0.21	0.15	
Uniform Delay, d1	11.6	12.2		10.9	11.5		14.0	15.0		14.2	13.8	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.7	0.7		0.9	0.4		1.0	0.7		1.7	0.3	
Delay (s)	13.3	12.9		11.7	12.0		15.0	15.8		15.9	14.1	
Level of Service	B	B		B	B		B	B		B	B	
Approach Delay (s)		13.0			11.9			15.6			14.5	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	13.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	50.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1021: 103rd Street & Martin Luther King Jr Drive

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱		↰	↑↱		↰	↑↱	
Volume (vph)	110	329	38	23	328	47	67	412	26	43	206	53
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	12	8	16	12	9	10	10	9	10	10
Total Lost time (s)	3.0	7.0		3.0	7.0		3.0	7.0		3.0	7.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.99		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1533	1576		1474	1841		1533	3073		1372	2881	
Flt Permitted	0.45	1.00		0.46	1.00		0.58	1.00		0.41	1.00	
Satd. Flow (perm)	720	1576		713	1841		942	3073		597	2881	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	116	346	40	24	345	49	71	434	27	45	217	56
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	116	386	0	24	394	0	71	461	0	45	273	0
Confl. Peds. (#/hr)	7		23	23		7	10		8	8		10
Confl. Bikes (#/hr)	1		2	2		1	1		1	1		1
Heavy Vehicles (%)	4%	8%	10%	0%	9%	5%	0%	3%	0%	12%	7%	6%
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	47.0	41.8		40.6	38.6		26.8	22.2		23.6	20.6	
Effective Green, g (s)	47.0	39.8		40.6	36.6		26.8	20.2		23.6	18.6	
Actuated g/C Ratio	0.55	0.47		0.48	0.43		0.32	0.24		0.28	0.22	
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	5.0		3.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	448	738		358	793		329	730		193	630	
v/s Ratio Prot	c0.02	c0.24		0.00	0.21		c0.01	c0.15		0.01	0.09	
v/s Ratio Perm	0.13			0.03			0.06			0.06		
v/c Ratio	0.26	0.52		0.07	0.50		0.22	0.63		0.23	0.43	
Uniform Delay, d1	13.5	15.9		15.0	17.5		21.5	29.1		26.1	28.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.3	2.6		0.1	2.2		0.3	4.1		0.6	2.2	
Delay (s)	13.8	18.6		15.1	19.7		21.9	33.2		26.8	30.8	
Level of Service	B	B		B	B		C	C		C	C	
Approach Delay (s)		17.5			19.5			31.7			30.2	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM Average Control Delay	24.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	63.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	69	322	44	65	383	115	59	390	126	56	162	37
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	11	11	11	11	12	12	10	10	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			0.99		1.00	0.99		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		0.99	1.00	
Frt		0.98			0.97		1.00	0.96		1.00	0.97	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3493			2913		1614	3156		1581	2921	
Flt Permitted		0.78			0.84		0.61	1.00		0.38	1.00	
Satd. Flow (perm)		2748			2465		1042	3156		628	2921	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	77	358	49	72	426	128	66	433	140	62	180	41
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	484	0	0	626	0	66	573	0	62	221	0
Confl. Peds. (#/hr)	20		16	16		20	5		33	33		5
Confl. Bikes (#/hr)	2					2			2	2		
Heavy Vehicles (%)	9%	9%	0%	24%	7%	6%	2%	4%	2%	0%	5%	9%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		33.0			33.0		32.0	32.0		32.0	32.0	
Effective Green, g (s)		34.0			34.0		33.0	33.0		33.0	33.0	
Actuated g/C Ratio		0.45			0.45		0.44	0.44		0.44	0.44	
Clearance Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)		1246			1117		458	1389		276	1285	
v/s Ratio Prot								c0.18			0.08	
v/s Ratio Perm		0.18			c0.25		0.06			0.10		
v/c Ratio		0.39			0.56		0.14	0.41		0.22	0.17	
Uniform Delay, d1		13.6			15.0		12.6	14.4		13.0	12.7	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.9			2.0		0.7	0.9		1.9	0.3	
Delay (s)		14.5			17.1		13.2	15.3		14.9	13.0	
Level of Service		B			B		B	B		B	B	
Approach Delay (s)		14.5			17.1			15.1			13.4	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	15.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	63.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1023: 103rd Street & Woodlawn Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑↱		↰	↑↑	↱		↰↑↱			↰↑↑↱	
Volume (vph)	145	522	5	14	656	386	72	9	20	118	1	52
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	12	12	12	12	12	12	13	13	13
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00			0.95	
Frt	1.00	1.00		1.00	1.00	0.85		0.97			0.95	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.97			0.97	
Satd. Flow (prot)	1574	3144		1629	3257	1457		1611			3105	
Flt Permitted	0.35	1.00		0.42	1.00	1.00		0.69			0.75	
Satd. Flow (perm)	585	3144		721	3257	1457		1158			2398	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	161	580	6	16	729	429	80	10	22	131	1	58
RTOR Reduction (vph)	0	1	0	0	0	150	0	12	0	0	44	0
Lane Group Flow (vph)	161	585	0	16	729	279	0	100	0	0	146	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	46.0	46.0		46.0	46.0	46.0		16.7			16.7	
Effective Green, g (s)	46.0	46.0		46.0	46.0	46.0		16.7			16.7	
Actuated g/C Ratio	0.65	0.65		0.65	0.65	0.65		0.24			0.24	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		8.0			8.0	
Lane Grp Cap (vph)	381	2046		469	2119	948		274			566	
v/s Ratio Prot		0.19			0.22							
v/s Ratio Perm	c0.28			0.02		0.19		c0.09			0.06	
v/c Ratio	0.42	0.29		0.03	0.34	0.29		0.36			0.26	
Uniform Delay, d1	6.0	5.3		4.4	5.6	5.3		22.6			22.0	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00			1.00	
Incremental Delay, d2	3.4	0.4		0.1	0.4	0.8		3.5			1.0	
Delay (s)	9.4	5.7		4.5	6.0	6.1		26.1			23.0	
Level of Service	A	A		A	A	A		C			C	
Approach Delay (s)		6.5			6.0			26.1			23.0	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM Average Control Delay	8.6	HCM Level of Service	A
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	70.7	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1024: 107th Street & Halsted Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↑	↱	↰	↑↑	↱
Volume (vph)	111	214	76	63	190	71	133	1972	88	71	499	41
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	9	12	10	10	12	9	10	9	9	10	9
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00	0.96	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.96		1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1548	1498		1547	1584		1493	3069	1271	1452	2983	1301
Flt Permitted	0.37	1.00		0.32	1.00		0.39	1.00	1.00	0.12	1.00	1.00
Satd. Flow (perm)	608	1498		521	1584		612	3069	1271	180	2983	1301
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	117	225	80	66	200	75	140	2076	93	75	525	43
RTOR Reduction (vph)	0	15	0	0	16	0	0	0	18	0	0	25
Lane Group Flow (vph)	117	290	0	66	259	0	140	2076	75	75	525	18
Confl. Peds. (#/hr)	4		9	9		4	6		16	16		6
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	3%	3%	4%	3%	1%	2%	3%	4%	4%	6%	7%	3%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	28.0	21.0		28.0	21.0		42.0	35.0	35.0	42.0	35.0	35.0
Effective Green, g (s)	26.0	22.0		26.0	22.0		40.0	35.0	35.0	40.0	35.0	35.0
Actuated g/C Ratio	0.31	0.26		0.31	0.26		0.47	0.41	0.41	0.47	0.41	0.41
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)	252	388		232	410		350	1264	523	174	1228	536
v/s Ratio Prot	c0.03	c0.19		0.02	0.16		0.03	c0.68		c0.03	0.18	
v/s Ratio Perm	0.11			0.07			0.16		0.06	0.17		0.01
v/c Ratio	0.46	0.75		0.28	0.63		0.40	1.64	0.14	0.43	0.43	0.03
Uniform Delay, d1	22.5	29.0		21.9	27.9		13.3	25.0	15.6	18.1	17.8	14.9
Progression Factor	1.00	1.00		1.00	1.00		0.62	0.71	0.50	1.00	1.00	1.00
Incremental Delay, d2	6.0	12.4		3.1	7.2		2.7	292.0	0.5	7.6	1.1	0.1
Delay (s)	28.6	41.4		24.9	35.2		11.0	309.8	8.2	25.7	18.9	15.0
Level of Service	C	D		C	D		B	F	A	C	B	B
Approach Delay (s)		37.8			33.2			279.5			19.5	
Approach LOS		D			C			F			B	

Intersection Summary			
HCM Average Control Delay	184.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.15		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	96.8%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1025: 107th Street & Wentworth Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			✥			✥	
Volume (vph)	26	218	24	15	149	18	21	166	27	33	148	21
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	14	12	12	14	12	12	16	12	12	16	12
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		1.00			1.00			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.99			0.99			0.98			0.99	
Flt Protected		1.00			1.00			1.00			0.99	
Satd. Flow (prot)		1843			1836			1900			1931	
Flt Permitted		0.96			0.97			0.97			0.94	
Satd. Flow (perm)		1787			1790			1844			1822	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	27	225	25	15	154	19	22	171	28	34	153	22
RTOR Reduction (vph)	0	5	0	0	6	0	0	8	0	0	6	0
Lane Group Flow (vph)	0	272	0	0	182	0	0	213	0	0	203	0
Confl. Peds. (#/hr)	5		11	11		5	7		34	34		7
Confl. Bikes (#/hr)			3	3								
Heavy Vehicles (%)	4%	2%	0%	20%	1%	0%	12%	3%	8%	0%	3%	5%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		27.0			27.0			30.0			30.0	
Effective Green, g (s)		27.0			27.0			30.0			30.0	
Actuated g/C Ratio		0.42			0.42			0.46			0.46	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		742			744			851			841	
v/s Ratio Prot												
v/s Ratio Perm		c0.15			0.10			c0.12			0.11	
v/c Ratio		0.37			0.24			0.25			0.24	
Uniform Delay, d1		13.1			12.4			10.7			10.6	
Progression Factor		1.00			0.64			1.08			1.00	
Incremental Delay, d2		1.4			0.8			0.7			0.7	
Delay (s)		14.5			8.6			12.2			11.3	
Level of Service		B			A			B			B	
Approach Delay (s)		14.5			8.6			12.2			11.3	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM Average Control Delay	11.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	45.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1026: 107th Street & State Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	24	181	34	9	162	19	44	384	33	16	86	17
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	0.95	1.00		1.00	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1465	2994		1302	3037		1529	3093		1492	2868	
Flt Permitted	0.63	1.00		0.60	1.00		0.68	1.00		0.48	1.00	
Satd. Flow (perm)	965	2994		827	3037		1093	3093		757	2868	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	27	201	38	10	180	21	49	427	37	18	96	19
RTOR Reduction (vph)	0	24	0	0	13	0	0	10	0	0	8	0
Lane Group Flow (vph)	27	215	0	10	188	0	49	454	0	18	107	0
Confl. Peds. (#/hr)	35		6	6		35	18					18
Confl. Bikes (#/hr)	14		32	32		14	23		7	7		23
Heavy Vehicles (%)	4%	4%	0%	22%	2%	6%	3%	2%	0%	7%	8%	6%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.0	20.0		20.0	20.0		39.0	39.0		39.0	39.0	
Effective Green, g (s)	19.0	19.0		19.0	19.0		38.0	38.0		38.0	38.0	
Actuated g/C Ratio	0.29	0.29		0.29	0.29		0.58	0.58		0.58	0.58	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	282	875		242	888		639	1808		443	1677	
v/s Ratio Prot		c0.07			0.06			c0.15			0.04	
v/s Ratio Perm	0.03			0.01			0.04			0.02		
v/c Ratio	0.10	0.25		0.04	0.21		0.08	0.25		0.04	0.06	
Uniform Delay, d1	16.7	17.5		16.5	17.3		5.9	6.6		5.7	5.8	
Progression Factor	0.73	0.73		0.76	0.74		0.93	0.96		0.49	0.44	
Incremental Delay, d2	0.6	0.6		0.3	0.5		0.2	0.3		0.2	0.1	
Delay (s)	12.9	13.5		12.8	13.4		5.7	6.6		3.0	2.6	
Level of Service	B	B		B	B		A	A		A	A	
Approach Delay (s)		13.5			13.3			6.5			2.7	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	9.0	HCM Level of Service	A
HCM Volume to Capacity ratio	0.25		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	40.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1027: 107th Street & Michigan Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			✥			✥	
Volume (vph)	46	178	34	16	122	38	28	414	24	14	163	15
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	9	9	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00			1.00			1.00	
Flpb, ped/bikes	0.99	1.00		0.98	1.00			1.00			1.00	
Frt	1.00	0.98		1.00	0.96			0.99			0.99	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1556	2952		1515	2868			1878			1808	
Flt Permitted	0.64	1.00		0.60	1.00			0.98			0.96	
Satd. Flow (perm)	1047	2952		965	2868			1838			1739	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	51	198	38	18	136	42	31	460	27	16	181	17
RTOR Reduction (vph)	0	23	0	0	25	0	0	3	0	0	5	0
Lane Group Flow (vph)	51	213	0	18	153	0	0	515	0	0	209	0
Confl. Peds. (#/hr)	10		29	29		10	17		10	10		17
Confl. Bikes (#/hr)									2	2		
Heavy Vehicles (%)	2%	4%	10%	0%	4%	0%	0%	8%	4%	0%	13%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	26.0	26.0		26.0	26.0			31.0			31.0	
Effective Green, g (s)	26.0	26.0		26.0	26.0			31.0			31.0	
Actuated g/C Ratio	0.40	0.40		0.40	0.40			0.48			0.48	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	419	1181		386	1147			877			829	
v/s Ratio Prot		c0.07			0.05							
v/s Ratio Perm	0.05			0.02				c0.28			0.12	
v/c Ratio	0.12	0.18		0.05	0.13			0.59			0.25	
Uniform Delay, d1	12.3	12.6		11.9	12.4			12.4			10.1	
Progression Factor	1.01	0.92		0.86	0.88			1.02			1.00	
Incremental Delay, d2	0.6	0.3		0.2	0.2			2.8			0.7	
Delay (s)	13.1	12.0		10.5	11.1			15.4			10.8	
Level of Service	B	B		B	B			B			B	
Approach Delay (s)		12.2			11.0			15.4			10.8	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	13.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	59.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1028: 107th Street & Martin Luther King Jr Drive

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱			✥			✥	
Volume (vph)	90	127	60	2	84	36	21	275	9	7	184	29
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	16	12	10	16	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00			1.00			1.00	
Flpb, ped/bikes	1.00	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.95		1.00	0.95			1.00			0.98	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1605	1879		1587	1870			1971			1933	
Flt Permitted	0.67	1.00		0.57	1.00			0.98			0.99	
Satd. Flow (perm)	1135	1879		950	1870			1928			1916	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	100	141	67	2	93	40	23	306	10	8	204	32
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	100	208	0	2	133	0	0	339	0	0	244	0
Confl. Peds. (#/hr)			8	8			1		8	8		1
Heavy Vehicles (%)	3%	3%	2%	0%	6%	0%	0%	3%	0%	0%	4%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.0	20.0		20.0	20.0			37.0			37.0	
Effective Green, g (s)	20.0	20.0		20.0	20.0			37.0			37.0	
Actuated g/C Ratio	0.31	0.31		0.31	0.31			0.57			0.57	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	349	578		292	575			1097			1091	
v/s Ratio Prot		c0.11			0.07							
v/s Ratio Perm	0.09			0.00				c0.18			0.13	
v/c Ratio	0.29	0.36		0.01	0.23			0.31			0.22	
Uniform Delay, d1	17.1	17.5		15.6	16.8			7.3			6.9	
Progression Factor	0.90	0.89		0.89	0.92			0.94			1.00	
Incremental Delay, d2	2.0	1.7		0.0	0.9			0.7			0.5	
Delay (s)	17.5	17.4		14.0	16.3			7.6			7.4	
Level of Service	B	B		B	B			A			A	
Approach Delay (s)		17.4			16.3			7.6			7.4	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	11.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	45.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱		↰	↑	↱	↰	↑	↱
Volume (vph)	122	9	55	1	3	12	40	492	6	2	201	50
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	10	10	10	11	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.97		1.00	1.00	0.98	1.00	1.00	0.98
Flpb, ped/bikes	0.98	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.87		1.00	0.88		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1603	1672		1710	1422		1491	1631	1392	1649	1907	1427
Flt Permitted	0.75	1.00		0.71	1.00		0.62	1.00	1.00	0.37	1.00	1.00
Satd. Flow (perm)	1260	1672		1279	1422		971	1631	1392	648	1907	1427
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	136	10	61	1	3	13	44	547	7	2	223	56
RTOR Reduction (vph)	0	44	0	0	9	0	0	0	3	0	0	22
Lane Group Flow (vph)	136	27	0	1	7	0	44	547	4	2	223	34
Confl. Peds. (#/hr)	9					9	1		6	6		1
Heavy Vehicles (%)	5%	14%	5%	0%	67%	12%	7%	3%	0%	0%	7%	5%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	17.0	17.0		17.0	17.0		39.0	39.0	39.0	39.0	39.0	39.0
Effective Green, g (s)	18.0	18.0		18.0	18.0		39.0	39.0	39.0	39.0	39.0	39.0
Actuated g/C Ratio	0.28	0.28		0.28	0.28		0.60	0.60	0.60	0.60	0.60	0.60
Clearance Time (s)	5.0	5.0		5.0	5.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	349	463		354	394		583	979	835	389	1144	856
v/s Ratio Prot		0.02			0.00			c0.34			0.12	
v/s Ratio Perm	c0.11			0.00			0.05		0.00	0.00		0.02
v/c Ratio	0.39	0.06		0.00	0.02		0.08	0.56	0.01	0.01	0.19	0.04
Uniform Delay, d1	19.0	17.3		17.0	17.1		5.4	7.8	5.2	5.2	5.9	5.3
Progression Factor	1.47	2.41		1.00	1.00		1.17	1.10	1.32	1.00	1.00	1.00
Incremental Delay, d2	3.2	0.2		0.0	0.1		0.2	1.7	0.0	0.0	0.4	0.1
Delay (s)	31.1	41.9		17.0	17.1		6.5	10.3	6.9	5.2	6.3	5.4
Level of Service	C	D		B	B		A	B	A	A	A	A
Approach Delay (s)		34.8			17.1			10.0			6.1	
Approach LOS		C			B			A			A	

Intersection Summary			
HCM Average Control Delay	13.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1030: 111th Street & Marshield Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱		↰	↑↑					↰	↑↱	
Volume (vph)	0	249	76	129	378	0	0	0	0	80	305	361
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	12	12	12	12	12	11	11	12
Total Lost time (s)		4.0		3.0	3.0					5.0	5.0	
Lane Util. Factor		0.95		1.00	0.95					1.00	0.95	
Frpb, ped/bikes		0.99		1.00	1.00					1.00	0.99	
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	
Frt		0.96		1.00	1.00					1.00	0.92	
Flt Protected		1.00		0.95	1.00					0.95	1.00	
Satd. Flow (prot)		2829		1621	3288					1574	2907	
Flt Permitted		1.00		0.49	1.00					0.95	1.00	
Satd. Flow (perm)		2829		835	3288					1574	2907	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	262	80	136	398	0	0	0	0	84	321	380
RTOR Reduction (vph)	0	29	0	0	0	0	0	0	0	0	214	0
Lane Group Flow (vph)	0	313	0	136	398	0	0	0	0	84	487	0
Confl. Peds. (#/hr)	14		32	32		14	14					14
Confl. Bikes (#/hr)			1	1								
Heavy Vehicles (%)	0%	9%	4%	5%	4%	0%	0%	0%	0%	5%	2%	4%
Turn Type				D.P+P						custom		
Protected Phases		8		7	7 8					6	6	
Permitted Phases				8						6		
Actuated Green, G (s)		33.0		56.0	59.0					32.0	32.0	
Effective Green, g (s)		33.0		56.0	59.0					32.0	32.0	
Actuated g/C Ratio		0.33		0.56	0.59					0.32	0.32	
Clearance Time (s)		4.0		3.0						5.0	5.0	
Lane Grp Cap (vph)		934		648	1940					504	930	
v/s Ratio Prot		c0.11		c0.05	0.12					0.05	c0.17	
v/s Ratio Perm				0.07								
v/c Ratio		0.34		0.21	0.21					0.17	0.52	
Uniform Delay, d1		25.2		10.6	9.6					24.4	27.8	
Progression Factor		1.00		1.97	2.07					1.00	1.00	
Incremental Delay, d2		1.0		0.6	0.2					0.7	2.1	
Delay (s)		26.2		21.5	19.9					25.1	29.9	
Level of Service		C		C	B					C	C	
Approach Delay (s)		26.2			20.4			0.0			29.4	
Approach LOS		C			C			A			C	

Intersection Summary			
HCM Average Control Delay	25.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	62.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑			↑↱		↰	↑	↱			
Volume (vph)	129	200	0	0	333	70	174	554	347	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	9	12	13	12	13	12	12	12
Total Lost time (s)	4.0	4.0			4.0		5.0	5.0	5.0			
Lane Util. Factor	1.00	0.95			0.95		1.00	1.00	1.00			
Frpb, ped/bikes	1.00	1.00			0.99		1.00	1.00	0.99			
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.97		1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1673	3054			2833		1750	1782	1514			
Flt Permitted	0.33	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	583	3054			2833		1750	1782	1514			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	136	211	0	0	351	74	183	583	365	0	0	0
RTOR Reduction (vph)	0	0	0	0	17	0	0	0	245	0	0	0
Lane Group Flow (vph)	136	211	0	0	408	0	183	583	120	0	0	0
Confl. Peds. (#/hr)	14		16	16		14			1	1		
Confl. Bikes (#/hr)	1					1			1	1		
Heavy Vehicles (%)	2%	12%	0%	0%	5%	4%	1%	1%	3%	0%	0%	0%
Turn Type	pm+pt						custom		Perm			
Protected Phases	4	1 4			1		2	2				
Permitted Phases	1 4						2		2			
Actuated Green, G (s)	54.0	58.0			21.0		33.0	33.0	33.0			
Effective Green, g (s)	54.0	58.0			21.0		33.0	33.0	33.0			
Actuated g/C Ratio	0.54	0.58			0.21		0.33	0.33	0.33			
Clearance Time (s)	4.0				4.0		5.0	5.0	5.0			
Lane Grp Cap (vph)	675	1771			595		578	588	500			
v/s Ratio Prot	c0.07	0.07			c0.14		0.10	c0.33				
v/s Ratio Perm	0.04								0.08			
v/c Ratio	0.20	0.12			0.69		0.32	0.99	0.24			
Uniform Delay, d1	11.8	9.5			36.4		25.1	33.4	24.4			
Progression Factor	0.24	0.25			1.00		0.76	0.79	1.91			
Incremental Delay, d2	0.6	0.1			6.3		0.9	27.9	0.7			
Delay (s)	3.5	2.5			42.7		19.9	54.1	47.3			
Level of Service	A	A			D		B	D	D			
Approach Delay (s)		2.9			42.7			46.4			0.0	
Approach LOS		A			D			D			A	

Intersection Summary			
HCM Average Control Delay	37.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	62.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1032: 112th Place & Marshield Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱		↰	↑↑					↰	↑↑	↱
Volume (vph)	0	476	372	34	592	0	0	0	0	5	216	200
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	11	12	12	12	12	10	10	12
Total Lost time (s)		4.0		4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.95		1.00	0.95					1.00	0.95	1.00
Frpb, ped/bikes		0.99		1.00	1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Frt		0.93		1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00					0.95	1.00	1.00
Satd. Flow (prot)		3112		1613	3273					1596	3160	1443
Flt Permitted		1.00		0.16	1.00					0.95	1.00	1.00
Satd. Flow (perm)		3112		268	3273					1596	3160	1443
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	0	496	388	35	617	0	0	0	0	5	225	208
RTOR Reduction (vph)	0	141	0	0	0	0	0	0	0	0	0	137
Lane Group Flow (vph)	0	743	0	35	617	0	0	0	0	5	225	71
Confl. Peds. (#/hr)	22		3	3		22						
Confl. Bikes (#/hr)	4					4			32	32		
Heavy Vehicles (%)	0%	2%	2%	6%	1%	0%	0%	0%	0%	0%	1%	6%
Turn Type				pm+pt						Split		Prot
Protected Phases		8		7	7 8					6	6	6
Permitted Phases				7 8								
Actuated Green, G (s)		36.0		54.0	58.0					34.0	34.0	34.0
Effective Green, g (s)		36.0		54.0	58.0					34.0	34.0	34.0
Actuated g/C Ratio		0.36		0.54	0.58					0.34	0.34	0.34
Clearance Time (s)		4.0		4.0						4.0	4.0	4.0
Lane Grp Cap (vph)		1120		387	1898					543	1074	491
v/s Ratio Prot		c0.24		0.02	c0.19					0.00	c0.07	0.05
v/s Ratio Perm				0.03								
v/c Ratio		0.66		0.09	0.33					0.01	0.21	0.14
Uniform Delay, d1		26.9		12.6	10.9					21.8	23.5	22.9
Progression Factor		1.00		0.54	0.68					0.73	0.78	0.90
Incremental Delay, d2		3.1		0.2	0.2					0.0	0.4	0.6
Delay (s)		30.0		7.0	7.6					16.0	18.7	21.3
Level of Service		C		A	A					B	B	C
Approach Delay (s)		30.0			7.5			0.0			19.9	
Approach LOS		C			A			A			B	

Intersection Summary			
HCM Average Control Delay	20.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	89.3%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1033: 112th Place & Ashland Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↰↑			↑↱		↰	↰	↱			
Volume (vph)	420	60	0	0	57	6	569	647	62	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	12	12	12	10	12	11	11	12	12	12	12
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0	4.0			
Lane Util. Factor	0.91	0.91			0.95		0.95	0.95	1.00			
Frpb, ped/bikes	1.00	1.00			0.99		1.00	1.00	1.00			
Flpb, ped/bikes	0.99	0.99			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.99		1.00	1.00	0.85			
Flt Protected	0.95	0.96			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1444	3040			3070		1555	1637	1500			
Flt Permitted	0.71	0.74			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	1083	2333			3070		1555	1637	1500			
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	433	62	0	0	59	6	587	667	64	0	0	0
RTOR Reduction (vph)	0	0	0	0	5	0	0	0	38	0	0	0
Lane Group Flow (vph)	216	279	0	0	60	0	587	667	26	0	0	0
Confl. Peds. (#/hr)	30		2	2		30			4	4		
Confl. Bikes (#/hr)	3					3			2	2		
Heavy Vehicles (%)	3%	2%	0%	0%	2%	0%	1%	1%	2%	0%	0%	0%
Turn Type	pm+pt						custom		custom			
Protected Phases	4	1 4			1		2	2	2			
Permitted Phases	1 4						2		2			
Actuated Green, G (s)	51.0	51.0			15.0		37.0	37.0	37.0			
Effective Green, g (s)	51.0	51.0			15.0		37.0	37.0	37.0			
Actuated g/C Ratio	0.51	0.51			0.15		0.37	0.37	0.37			
Clearance Time (s)	4.0				4.0		4.0	4.0	4.0			
Lane Grp Cap (vph)	682	1444			461		575	606	555			
v/s Ratio Prot	c0.11	0.07			0.02		0.38	c0.41	0.02			
v/s Ratio Perm	c0.05	0.03										
v/c Ratio	0.32	0.19			0.13		1.02	1.10	0.05			
Uniform Delay, d1	14.1	13.3			36.8		31.5	31.5	20.2			
Progression Factor	0.22	0.24			1.00		1.00	1.00	1.00			
Incremental Delay, d2	0.9	0.2			0.6		42.9	67.2	0.2			
Delay (s)	4.0	3.4			37.4		74.4	98.7	20.4			
Level of Service	A	A			D		E	F	C			
Approach Delay (s)		3.6			37.4			84.1			0.0	
Approach LOS		A			D			F			A	

Intersection Summary			
HCM Average Control Delay	61.3	HCM Level of Service	E
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	89.3%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↑↱			↰↑↑↱		↰	↑↑	↱	↰	↑↑	↱
Volume (vph)	163	285	73	58	281	114	51	1151	62	88	476	42
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	9	10	9	9	10	9
Total Lost time (s)		4.0			4.0		4.0	3.5	4.0	4.0	3.5	4.0
Lane Util. Factor		0.95			0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		1.00			0.99		1.00	1.00	0.97	1.00	1.00	0.97
Flpb, ped/bikes		1.00			1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.98			0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.98			0.99		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		2843			2815		1447	3069	1336	1494	2956	1270
Flt Permitted		0.62			0.82		0.39	1.00	1.00	0.12	1.00	1.00
Satd. Flow (perm)		1801			2328		600	3069	1336	197	2956	1270
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	170	297	76	60	293	119	53	1199	65	92	496	44
RTOR Reduction (vph)	0	16	0	0	39	0	0	0	24	0	0	27
Lane Group Flow (vph)	0	527	0	0	433	0	53	1199	41	92	496	17
Confl. Peds. (#/hr)	49		20	20		49	26		8	8		26
Confl. Bikes (#/hr)	2					2						
Heavy Vehicles (%)	10%	7%	4%	9%	7%	5%	6%	4%	0%	3%	8%	5%
Turn Type	pm+pt			Perm			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)		35.0			27.0		38.0	33.0	33.0	38.0	33.0	33.0
Effective Green, g (s)		36.0			28.0		36.0	33.5	33.0	36.0	33.5	33.0
Actuated g/C Ratio		0.42			0.33		0.42	0.39	0.39	0.42	0.39	0.39
Clearance Time (s)		5.0			5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)		836			767		294	1210	519	144	1165	493
v/s Ratio Prot		c0.04					0.01	c0.39		c0.03	0.17	
v/s Ratio Perm		0.22			c0.19		0.07		0.03	0.24		0.01
v/c Ratio		0.63			0.56		0.18	0.99	0.08	0.64	0.43	0.03
Uniform Delay, d1		19.3			23.5		14.8	25.6	16.4	19.0	18.7	16.1
Progression Factor		1.00			1.00		1.34	0.87	1.43	1.82	1.64	3.14
Incremental Delay, d2		3.6			3.0		0.8	17.5	0.2	18.1	1.0	0.1
Delay (s)		22.9			26.5		20.6	39.8	23.6	52.5	31.8	50.8
Level of Service		C			C		C	D	C	D	C	D
Approach Delay (s)		22.9			26.5			38.2			36.1	
Approach LOS		C			C			D			D	

Intersection Summary			
HCM Average Control Delay	33.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	82.9%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1035: 111th Street & Normal Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰			↱			✥				
Volume (vph)	44	420	0	0	422	81	31	63	98	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		1.00			0.98			0.93				
Flt Protected		1.00			1.00			0.99				
Satd. Flow (prot)		1706			1677			1583				
Flt Permitted		0.92			1.00			0.99				
Satd. Flow (perm)		1577			1677			1583				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	49	467	0	0	469	90	34	70	109	0	0	0
RTOR Reduction (vph)	0	0	0	0	10	0	0	58	0	0	0	0
Lane Group Flow (vph)	0	516	0	0	549	0	0	155	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)		34.0			34.0			23.0				
Effective Green, g (s)		34.0			34.0			23.0				
Actuated g/C Ratio		0.52			0.52			0.35				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		825			877			560				
v/s Ratio Prot					0.33							
v/s Ratio Perm		c0.33						0.10				
v/c Ratio		0.63			0.63			0.28				
Uniform Delay, d1		11.0			11.0			15.0				
Progression Factor		1.00			0.63			1.00				
Incremental Delay, d2		3.6			2.8			1.2				
Delay (s)		14.6			9.7			16.3				
Level of Service		B			A			B				
Approach Delay (s)		14.6			9.7			16.3			0.0	
Approach LOS		B			A			B			A	

Intersection Summary			
HCM Average Control Delay	12.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	76.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱			↰↑↑↱			↰↑↑↱	
Volume (vph)	48	415	33	20	416	49	25	175	35	51	107	28
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	12	12	12	12	12
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		1.00			1.00			0.99			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.99			0.99			0.98			0.98	
Flt Protected		1.00			1.00			0.99			0.99	
Satd. Flow (prot)		1886			1842			3185			3126	
Flt Permitted		0.92			0.97			0.92			0.83	
Satd. Flow (perm)		1753			1794			2930			2630	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	53	461	37	22	462	54	28	194	39	57	119	31
RTOR Reduction (vph)	0	4	0	0	6	0	0	22	0	0	18	0
Lane Group Flow (vph)	0	547	0	0	532	0	0	239	0	0	189	0
Confl. Peds. (#/hr)	29		16	16		29	28		14	14		28
Confl. Bikes (#/hr)	1					1	1					1
Heavy Vehicles (%)	3%	7%	4%	12%	8%	13%	0%	4%	4%	4%	4%	6%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		30.0			30.0			27.0			27.0	
Effective Green, g (s)		30.0			30.0			27.0			27.0	
Actuated g/C Ratio		0.46			0.46			0.42			0.42	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		809			828			1217			1092	
v/s Ratio Prot												
v/s Ratio Perm		c0.31			0.30			c0.08			0.07	
v/c Ratio		0.68			0.64			0.20			0.17	
Uniform Delay, d1		13.7			13.4			12.1			12.0	
Progression Factor		0.63			0.56			0.98			0.61	
Incremental Delay, d2		3.7			3.7			0.4			0.3	
Delay (s)		12.4			11.1			12.2			7.6	
Level of Service		B			B			B			A	
Approach Delay (s)		12.4			11.1			12.2			7.6	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM Average Control Delay	11.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	82.0%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1037: 111th Street & State Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	52	279	22	28	338	61	55	319	89	48	96	29
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	9	10	10	9	10	10	12	10	10	12
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		0.99	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.98		1.00	0.97		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1503	2936		1584	2944		1497	3034		1594	2899	
Flt Permitted	0.44	1.00		0.53	1.00		0.66	1.00		0.48	1.00	
Satd. Flow (perm)	697	2936		890	2944		1046	3034		809	2899	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	58	310	24	31	376	68	61	354	99	53	107	32
RTOR Reduction (vph)	0	9	0	0	22	0	0	39	0	0	15	0
Lane Group Flow (vph)	58	325	0	31	422	0	61	414	0	53	124	0
Confl. Peds. (#/hr)	25		14	14		25	12		4	4		12
Confl. Bikes (#/hr)	1					1			1	1		
Heavy Vehicles (%)	5%	7%	12%	0%	6%	2%	6%	1%	3%	0%	4%	12%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	22.0	22.0		22.0	22.0		35.0	35.0		35.0	35.0	
Effective Green, g (s)	22.0	22.0		22.0	22.0		35.0	35.0		35.0	35.0	
Actuated g/C Ratio	0.34	0.34		0.34	0.34		0.54	0.54		0.54	0.54	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	236	994		301	996		563	1634		436	1561	
v/s Ratio Prot		0.11			c0.14			c0.14			0.04	
v/s Ratio Perm	0.08			0.03			0.06			0.07		
v/c Ratio	0.25	0.33		0.10	0.42		0.11	0.25		0.12	0.08	
Uniform Delay, d1	15.5	16.0		14.7	16.6		7.4	8.0		7.4	7.2	
Progression Factor	0.57	0.55		0.78	0.80		0.63	0.62		1.30	1.35	
Incremental Delay, d2	2.0	0.7		0.7	1.3		0.4	0.4		0.6	0.1	
Delay (s)	10.9	9.6		12.1	14.6		5.0	5.4		10.2	9.8	
Level of Service	B	A		B	B		A	A		B	A	
Approach Delay (s)		9.8			14.4			5.3			9.9	
Approach LOS		A			B			A			A	

Intersection Summary			
HCM Average Control Delay	9.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	46.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1038: 111th Street & Michigan Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			↰↑↱			↰↑↱	
Volume (vph)	84	391	28	37	362	82	20	308	44	41	118	41
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	9	10	9	9	16	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			1.00			0.99	
Flpb, ped/bikes	0.97	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.97			0.98			0.97	
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.99	
Satd. Flow (prot)	1385	3013		1335	3538			3438			3303	
Flt Permitted	0.46	1.00		0.48	1.00			0.94			0.84	
Satd. Flow (perm)	674	3013		674	3538			3226			2808	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	88	412	29	39	381	86	21	324	46	43	124	43
RTOR Reduction (vph)	0	8	0	0	30	0	0	16	0	0	26	0
Lane Group Flow (vph)	88	433	0	39	437	0	0	375	0	0	184	0
Confl. Peds. (#/hr)	53		34	34		53	67		28	28		67
Heavy Vehicles (%)	8%	5%	0%	14%	6%	1%	0%	9%	20%	5%	15%	5%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	31.0	31.0		31.0	31.0			26.0			26.0	
Effective Green, g (s)	31.0	31.0		31.0	31.0			26.0			26.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48			0.40			0.40	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	321	1437		321	1687			1290			1123	
v/s Ratio Prot		c0.14			0.12							
v/s Ratio Perm	0.13			0.06				c0.12			0.07	
v/c Ratio	0.27	0.30		0.12	0.26			0.29			0.16	
Uniform Delay, d1	10.2	10.4		9.4	10.1			13.2			12.5	
Progression Factor	1.60	1.64		0.79	0.78			0.51			0.64	
Incremental Delay, d2	2.1	0.5		0.7	0.3			0.6			0.3	
Delay (s)	18.4	17.6		8.2	8.2			7.3			8.3	
Level of Service	B	B		A	A			A			A	
Approach Delay (s)		17.7			8.2			7.3			8.3	
Approach LOS		B			A			A			A	

Intersection Summary			
HCM Average Control Delay	11.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	59.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰↱			✥			✥	
Volume (vph)	99	301	100	104	348	104	88	84	88	88	84	82
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	16	12	12	16	12
Total Lost time (s)		5.0	5.0		5.0			5.0			5.0	
Lane Util. Factor		1.00	1.00		0.95			1.00			1.00	
Frt		1.00	0.85		0.97			0.95			0.96	
Flt Protected		0.99	1.00		0.99			0.98			0.98	
Satd. Flow (prot)		1637	1409		3032			1823			1826	
Flt Permitted		0.74	1.00		0.76			0.79			0.78	
Satd. Flow (perm)		1230	1409		2324			1456			1442	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	110	334	111	116	387	116	98	93	98	98	93	91
RTOR Reduction (vph)	0	0	53	0	31	0	0	28	0	0	26	0
Lane Group Flow (vph)	0	444	58	0	588	0	0	261	0	0	256	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm		Perm	Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)		34.0	34.0		34.0			21.0			21.0	
Effective Green, g (s)		34.0	34.0		34.0			21.0			21.0	
Actuated g/C Ratio		0.52	0.52		0.52			0.32			0.32	
Clearance Time (s)		5.0	5.0		5.0			5.0			5.0	
Lane Grp Cap (vph)		643	737		1216			470			466	
v/s Ratio Prot												
v/s Ratio Perm		c0.36	0.04		0.25			c0.18			0.18	
v/c Ratio		0.69	0.08		0.48			0.55			0.55	
Uniform Delay, d1		11.6	7.7		9.9			18.1			18.1	
Progression Factor		2.01	5.68		0.42			1.00			1.00	
Incremental Delay, d2		5.9	0.2		1.3			4.7			4.6	
Delay (s)		29.1	44.0		5.5			22.8			22.7	
Level of Service		C	D		A			C			C	
Approach Delay (s)		32.1			5.5			22.8			22.7	
Approach LOS		C			A			C			C	

Intersection Summary			
HCM Average Control Delay	19.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	72.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			↰↑↱			↰↑↱	
Volume (vph)	74	382	21	15	433	63	37	103	41	43	90	98
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	15	8	16	8	8	16	8
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			1.00			0.99	
Flpb, ped/bikes	0.99	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.98			0.97			0.94	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1475	3018		1573	3001			3454			3403	
Flt Permitted	0.40	1.00		0.47	1.00			0.87			0.88	
Satd. Flow (perm)	616	3018		771	3001			3030			3014	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	82	424	23	17	481	70	41	114	46	48	100	109
RTOR Reduction (vph)	0	6	0	0	18	0	0	25	0	0	60	0
Lane Group Flow (vph)	82	441	0	17	533	0	0	176	0	0	197	0
Confl. Peds. (#/hr)	22		40	40		22	18		3	3		18
Confl. Bikes (#/hr)			2	2			1					1
Heavy Vehicles (%)	7%	5%	0%	0%	4%	2%	0%	3%	22%	0%	3%	8%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	28.0	28.0		28.0	28.0			29.0			29.0	
Effective Green, g (s)	28.0	28.0		28.0	28.0			29.0			29.0	
Actuated g/C Ratio	0.43	0.43		0.43	0.43			0.45			0.45	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	265	1300		332	1293			1352			1345	
v/s Ratio Prot		0.15			c0.18							
v/s Ratio Perm	0.13			0.02				0.06			c0.07	
v/c Ratio	0.31	0.34		0.05	0.41			0.13			0.15	
Uniform Delay, d1	12.2	12.3		10.8	12.8			10.6			10.7	
Progression Factor	0.98	1.00		1.14	0.99			0.99			0.80	
Incremental Delay, d2	2.3	0.5		0.1	0.5			0.2			0.2	
Delay (s)	14.1	12.9		12.4	13.1			10.7			8.8	
Level of Service	B	B		B	B			B			A	
Approach Delay (s)		13.1			13.1			10.7			8.8	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM Average Control Delay	12.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	59.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1041: 111th Street & Cottage Grove Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱			↰↑↱			↰↑↱	
Volume (vph)	86	454	73	94	455	284	48	332	92	222	159	52
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			0.95			0.95	
Frt		0.98			0.95			0.97			0.98	
Flt Protected		0.99			0.99			0.99			0.98	
Satd. Flow (prot)		3177			3073			3146			3118	
Flt Permitted		0.63			0.74			0.88			0.63	
Satd. Flow (perm)		2028			2280			2771			2008	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	96	504	81	104	506	316	53	369	102	247	177	58
RTOR Reduction (vph)	0	16	0	0	103	0	0	33	0	0	17	0
Lane Group Flow (vph)	0	665	0	0	823	0	0	491	0	0	465	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm			pm+pt			Perm		
Protected Phases		4			8		5	2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		26.0			26.0			29.0			20.0	
Effective Green, g (s)		26.0			26.0			29.0			20.0	
Actuated g/C Ratio		0.40			0.40			0.45			0.31	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		811			912			1271			618	
v/s Ratio Prot								c0.04				
v/s Ratio Perm		0.33			c0.36			0.14			c0.23	
v/c Ratio		0.82			0.90			0.39			0.96dl	
Uniform Delay, d1		17.4			18.3			12.0			20.3	
Progression Factor		1.73			1.00			1.00			0.89	
Incremental Delay, d2		8.9			13.9			0.9			8.3	
Delay (s)		39.1			32.2			12.9			26.3	
Level of Service		D			C			B			C	
Approach Delay (s)		39.1			32.2			12.9			26.3	
Approach LOS		D			C			B			C	

Intersection Summary			
HCM Average Control Delay	29.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	88.2%	ICU Level of Service	E
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1042: 111th Street & Ellis Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱			✥			✥	
Volume (vph)	0	723	118	45	755	0	134	0	70	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	10	10	12	12	12	12	10	10	10
Total Lost time (s)		5.0			5.0			5.0				
Lane Util. Factor		0.95			0.95			1.00				
Frt		0.98			1.00			0.95				
Flt Protected		1.00			1.00			0.97				
Satd. Flow (prot)		2976			3031			1583				
Flt Permitted		1.00			0.84			0.80				
Satd. Flow (perm)		2976			2543			1311				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	803	131	50	839	0	149	0	78	0	0	0
RTOR Reduction (vph)	0	18	0	0	0	0	0	21	0	0	0	0
Lane Group Flow (vph)	0	916	0	0	889	0	0	206	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	custom			Perm			Perm			Perm		
Protected Phases		4 5 6 11			8			2			2	
Permitted Phases	4 6 11			8			2			2		
Actuated Green, G (s)		65.0			33.0			16.0				
Effective Green, g (s)		58.0			33.0			16.0				
Actuated g/C Ratio		0.64			0.37			0.18				
Clearance Time (s)					5.0			5.0				
Lane Grp Cap (vph)		1918			932			233				
v/s Ratio Prot		c0.31										
v/s Ratio Perm					c0.35			c0.16				
v/c Ratio		0.48			0.95			0.89				
Uniform Delay, d1		8.2			27.8			36.1				
Progression Factor		0.04			1.57			1.00				
Incremental Delay, d2		0.4			18.2			35.5				
Delay (s)		0.7			61.8			71.6				
Level of Service		A			E			E				
Approach Delay (s)		0.7			61.8			71.6			0.0	
Approach LOS		A			E			E			A	

Intersection Summary			
HCM Average Control Delay	35.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	73.3%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1043: 111th Street & Doty Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↑	↱		✣		↰	↑	↱
Volume (vph)	123	502	187	274	646	183	101	20	185	78	7	75
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	10	12	12	12	12	16	12	12	12	12
Total Lost time (s)	3.0	5.0		3.0	5.0	3.0		5.0		3.0	5.0	3.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00		1.00	1.00	1.00
Frt	1.00	0.96		1.00	1.00	0.85		0.92		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.98		0.95	1.00	1.00
Satd. Flow (prot)	1520	3020		1629	3257	1457		1755		1629	1714	1457
Flt Permitted	0.32	1.00		0.20	1.00	1.00		0.89		0.40	1.00	1.00
Satd. Flow (perm)	511	3020		342	3257	1457		1582		685	1714	1457
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	137	558	208	304	718	203	112	22	206	87	8	83
RTOR Reduction (vph)	0	42	0	0	0	104	0	75	0	0	0	45
Lane Group Flow (vph)	137	724	0	304	718	99	0	265	0	87	8	38
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	pm+pt			pm+pt		pm+ov	pm+pt			pm+pt		pm+ov
Protected Phases	7	4		3	8	1	5	2		1	6	7
Permitted Phases	4			8		8	2			6		6
Actuated Green, G (s)	40.1	30.7		47.8	35.4	44.0		20.6		32.2	32.2	41.6
Effective Green, g (s)	40.1	30.7		47.8	35.4	44.0		20.6		32.2	32.2	41.6
Actuated g/C Ratio	0.45	0.34		0.53	0.39	0.49		0.23		0.36	0.36	0.46
Clearance Time (s)	3.0	5.0		3.0	5.0	3.0		5.0		3.0	5.0	3.0
Vehicle Extension (s)	4.0	3.0		4.0	3.0	3.0		4.0		3.0	4.0	4.0
Lane Grp Cap (vph)	333	1030		383	1281	712		362		335	613	673
v/s Ratio Prot	0.04	0.24		c0.12	0.22	0.01				c0.02	0.00	0.01
v/s Ratio Perm	0.14			c0.30		0.05		c0.17		0.07		0.02
v/c Ratio	0.41	0.70		0.79	0.56	0.14		0.73		0.26	0.01	0.06
Uniform Delay, d1	15.4	25.7		14.7	21.2	12.6		32.1		21.3	18.6	13.4
Progression Factor	1.90	1.58		1.00	1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2	1.0	3.6		11.4	1.8	0.1		7.9		0.4	0.0	0.0
Delay (s)	30.2	44.3		26.0	23.0	12.7		40.1		21.7	18.7	13.4
Level of Service	C	D		C	C	B		D		C	B	B
Approach Delay (s)		42.1			22.1			40.1			17.7	
Approach LOS		D			C			D			B	

Intersection Summary			
HCM Average Control Delay	30.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	74.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
1044: 111th Street & Bishop Ford Freeway EB Ramps

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Lane Configurations		↑↑	↱		↑↑					↰		↱
Volume (veh/h)	0	518	247	6	531	0	0	0	0	32	0	572
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	576	274	7	590	0	0	0	0	36	0	636
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		498										
pX, platoon unblocked												
vC, conflicting volume	590			576			884	1179	288	891	1179	295
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	590			576			884	1179	288	891	1179	295
tC, single (s)	4.2			4.2			7.6	6.6	7.0	7.6	6.6	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			100	100	100	85	100	8
cM capacity (veh/h)	961			973			19	184	700	231	184	692

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1	SB 2
Volume Total	288	288	274	203	393	36	636
Volume Left	0	0	0	7	0	36	0
Volume Right	0	0	274	0	0	0	636
cSH	1700	1700	1700	973	1700	231	692
Volume to Capacity	0.17	0.17	0.16	0.01	0.23	0.15	0.92
Queue Length 95th (ft)	0	0	0	1	0	13	307
Control Delay (s)	0.0	0.0	0.0	0.4	0.0	23.4	41.6
Lane LOS				A		C	E
Approach Delay (s)	0.0			0.1		40.6	
Approach LOS						E	

Intersection Summary			
Average Delay	12.9		
Intersection Capacity Utilization	59.7%	ICU Level of Service	B
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
1045: 111th Street & Bishop Ford Freeway WB Ramps

	↗	↘	↖	↑	↓	↙
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰↰		↰			
Sign Control	Stop			Stop	Stop	
Volume (vph)	550	0	537	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	611	0	597	0	0	0

Direction, Lane #	EB 1	EB 2	NB 1
Volume Total (vph)	306	306	597
Volume Left (vph)	306	306	597
Volume Right (vph)	0	0	0
Hadj (s)	0.58	0.58	0.29
Departure Headway (s)	7.0	7.0	5.8
Degree Utilization, x	0.59	0.59	0.95
Capacity (veh/h)	513	513	618
Control Delay (s)	18.3	18.3	49.2
Approach Delay (s)	18.3		49.2
Approach LOS	C		E

Intersection Summary			
Delay	33.5		
HCM Level of Service	D		
Intersection Capacity Utilization	54.6%	ICU Level of Service	A
Analysis Period (min)	15		

1046: 115th Street & Marshield Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱		↰	↑↑						↰↑↱	
Volume (vph)	0	340	131	126	344	0	0	0	0	72	15	42
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	12	12	12	12	12
Total Lost time (s)		3.0		4.0	4.0						5.0	
Lane Util. Factor		0.95		1.00	0.95						0.95	
Frt		0.96		1.00	1.00						0.95	
Flt Protected		1.00		0.95	1.00						0.97	
Satd. Flow (prot)		3017		1574	3149						3014	
Flt Permitted		1.00		0.39	1.00						0.97	
Satd. Flow (perm)		3017		645	3149						3014	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	378	146	140	382	0	0	0	0	80	17	47
RTOR Reduction (vph)	0	48	0	0	0	0	0	0	0	0	32	0
Lane Group Flow (vph)	0	476	0	140	382	0	0	0	0	0	112	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type				pm+pt						Split		
Protected Phases		4		3	8					6	6	
Permitted Phases				8								
Actuated Green, G (s)		36.0		49.0	49.0						27.0	
Effective Green, g (s)		36.0		49.0	49.0						27.0	
Actuated g/C Ratio		0.42		0.58	0.58						0.32	
Clearance Time (s)		3.0		4.0	4.0						5.0	
Lane Grp Cap (vph)		1278		481	1815						957	
v/s Ratio Prot		c0.16		c0.03	0.12						c0.04	
v/s Ratio Perm				0.13								
v/c Ratio		0.37		0.29	0.21						0.12	
Uniform Delay, d1		16.8		12.6	8.7						20.6	
Progression Factor		1.00		0.37	0.33						1.00	
Incremental Delay, d2		0.8		1.4	0.2						0.2	
Delay (s)		17.6		6.2	3.1						20.8	
Level of Service		B		A	A						C	
Approach Delay (s)		17.6			3.9			0.0			20.8	
Approach LOS		B			A			A			C	

Intersection Summary			
HCM Average Control Delay	12.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	36.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1047: 115th Street & Ashland Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑			↑↱			↰↑↱				
Volume (vph)	68	344	0	0	400	76	70	65	42	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	11	11	12	12	12	12	12	12
Total Lost time (s)	5.0	5.0			3.0			5.0				
Lane Util. Factor	1.00	0.95			0.95			0.91				
Frt	1.00	1.00			0.98			0.96				
Flt Protected	0.95	1.00			1.00			0.98				
Satd. Flow (prot)	1629	3257			3073			4425				
Flt Permitted	0.38	1.00			1.00			0.98				
Satd. Flow (perm)	656	3257			3073			4425				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	76	382	0	0	444	84	78	72	47	0	0	0
RTOR Reduction (vph)	0	0	0	0	18	0	0	32	0	0	0	0
Lane Group Flow (vph)	76	382	0	0	510	0	0	165	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	pm+pt						Split					
Protected Phases	7	4			8		2	2				
Permitted Phases	4											
Actuated Green, G (s)	48.0	48.0			35.0			27.0				
Effective Green, g (s)	48.0	48.0			35.0			27.0				
Actuated g/C Ratio	0.56	0.56			0.41			0.32				
Clearance Time (s)	5.0	5.0			3.0			5.0				
Lane Grp Cap (vph)	485	1839			1265			1406				
v/s Ratio Prot	0.02	c0.12			c0.17			c0.04				
v/s Ratio Perm	0.07											
v/c Ratio	0.16	0.21			0.40			0.12				
Uniform Delay, d1	12.1	9.1			17.6			20.6				
Progression Factor	0.41	0.42			1.00			1.00				
Incremental Delay, d2	0.7	0.2			1.0			0.2				
Delay (s)	5.7	4.1			18.6			20.7				
Level of Service	A	A			B			C				
Approach Delay (s)		4.3			18.6			20.7			0.0	
Approach LOS		A			B			C			A	

Intersection Summary			
HCM Average Control Delay	13.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	36.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1048: 115th Street & Racine Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↑↱			↰↑↑↱			↰↑↱			↰↑↱	
Volume (vph)	39	307	82	31	243	31	129	85	52	56	91	126
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	10	12	12	15	12	12	15	12
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			1.00			1.00	
Frt		0.97			0.98			0.97			0.94	
Flt Protected		1.00			0.99			0.98			0.99	
Satd. Flow (prot)		2939			2979			1792			1750	
Flt Permitted		0.89			0.88			0.73			0.89	
Satd. Flow (perm)		2639			2628			1347			1565	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	43	341	91	34	270	34	143	94	58	62	101	140
RTOR Reduction (vph)	0	32	0	0	13	0	0	14	0	0	48	0
Lane Group Flow (vph)	0	443	0	0	325	0	0	281	0	0	255	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		23.0			23.0			32.0			32.0	
Effective Green, g (s)		23.0			23.0			32.0			32.0	
Actuated g/C Ratio		0.35			0.35			0.49			0.49	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		934			930			663			770	
v/s Ratio Prot												
v/s Ratio Perm		c0.17			0.12			c0.21			0.16	
v/c Ratio		0.47			0.35			0.42			0.33	
Uniform Delay, d1		16.3			15.5			10.6			10.0	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		1.7			1.0			2.0			1.2	
Delay (s)		18.0			16.5			12.6			11.2	
Level of Service		B			B			B			B	
Approach Delay (s)		18.0			16.5			12.6			11.2	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	15.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	66.8%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1049: 115th Street & Halsted Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↑	↱	↰	↑↑	↱
Volume (vph)	169	202	82	205	176	62	81	1012	109	75	471	80
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	12	10	16	12	9	10	9	9	10	9
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00	0.98	1.00	1.00	0.96
Flpb, ped/bikes	0.99	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.96		1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1548	2954		1593	3512		1487	3040	1347	1494	3011	1271
Flt Permitted	0.59	1.00		0.54	1.00		0.40	1.00	1.00	0.12	1.00	1.00
Satd. Flow (perm)	954	2954		901	3512		626	3040	1347	197	3011	1271
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	178	213	86	216	185	65	85	1065	115	79	496	84
RTOR Reduction (vph)	0	52	0	0	41	0	0	0	68	0	0	51
Lane Group Flow (vph)	178	247	0	216	209	0	85	1065	47	79	496	33
Confl. Peds. (#/hr)	31		7	7		31	37		12	12		37
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	2%	4%	0%	0%	6%	2%	3%	5%	0%	3%	6%	4%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	32.0	27.0		32.0	27.0		38.0	33.0	33.0	38.0	33.0	33.0
Effective Green, g (s)	30.0	28.0		30.0	28.0		36.0	33.0	33.0	36.0	33.0	33.0
Actuated g/C Ratio	0.35	0.33		0.35	0.33		0.42	0.39	0.39	0.42	0.39	0.39
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)	365	973		351	1157		306	1180	523	144	1169	493
v/s Ratio Prot	0.02	0.08		c0.03	0.06		0.01	c0.35		c0.03	0.16	
v/s Ratio Perm	0.15			c0.19			0.10		0.03	0.21		0.03
v/c Ratio	0.49	0.25		0.62	0.18		0.28	0.90	0.09	0.55	0.42	0.07
Uniform Delay, d1	20.6	20.9		22.0	20.3		15.1	24.5	16.5	17.6	19.0	16.3
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.94	0.61	0.78
Incremental Delay, d2	4.6	0.6		7.8	0.3		2.2	11.2	0.3	13.0	1.0	0.2
Delay (s)	25.2	21.5		29.8	20.7		17.4	35.7	16.8	47.0	12.6	13.0
Level of Service	C	C		C	C		B	D	B	D	B	B
Approach Delay (s)		22.9			24.9			32.8			16.8	
Approach LOS		C			C			C			B	

Intersection Summary			
HCM Average Control Delay	26.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	72.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1050: 115th Street & Wentworth Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱		↰	↱		↰	↱
Volume (vph)	49	284	18	14	328	8	35	113	25	20	57	84
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	16	12	12	16	12
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frpb, ped/bikes		1.00	0.96		1.00	0.97		1.00	0.99		1.00	0.98
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frt		1.00	0.85		1.00	0.85		1.00	0.85		1.00	0.85
Flt Protected		0.99	1.00		1.00	1.00		0.99	1.00		0.99	1.00
Satd. Flow (prot)		1928	1382		1954	1331		1970	1452		1928	1430
Flt Permitted		0.91	1.00		0.98	1.00		0.93	1.00		0.93	1.00
Satd. Flow (perm)		1768	1382		1924	1331		1860	1452		1811	1430
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	52	299	19	15	345	8	37	119	26	21	60	88
RTOR Reduction (vph)	0	0	10	0	0	4	0	0	15	0	0	51
Lane Group Flow (vph)	0	351	9	0	360	4	0	156	11	0	81	37
Confl. Peds. (#/hr)	5		21	21		5	9		1	1		9
Heavy Vehicles (%)	5%	5%	6%	7%	4%	12%	6%	1%	4%	0%	6%	5%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)		30.0	30.0		30.0	30.0		27.0	27.0		27.0	27.0
Effective Green, g (s)		30.0	30.0		30.0	30.0		27.0	27.0		27.0	27.0
Actuated g/C Ratio		0.46	0.46		0.46	0.46		0.42	0.42		0.42	0.42
Clearance Time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		816	638		888	614		773	603		752	594
v/s Ratio Prot												
v/s Ratio Perm		c0.20	0.01		0.19	0.00		c0.08	0.01		0.04	0.03
v/c Ratio		0.43	0.01		0.41	0.01		0.20	0.02		0.11	0.06
Uniform Delay, d1		11.8	9.5		11.6	9.4		12.1	11.2		11.6	11.4
Progression Factor		1.00	1.00		0.47	0.45		1.33	1.73		0.96	0.93
Incremental Delay, d2		1.7	0.0		1.3	0.0		0.6	0.1		0.3	0.2
Delay (s)		13.4	9.5		6.7	4.2		16.7	19.4		11.4	10.8
Level of Service		B	A		A	A		B	B		B	B
Approach Delay (s)		13.2			6.7			17.1			11.1	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM Average Control Delay	11.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	62.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1051: 115th Street & State Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	75	260	10	15	278	30	13	247	26	30	70	64
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	0.99		1.00	0.99		1.00	0.93	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1520	3023		1520	2996		1520	2996		1520	2823	
Flt Permitted	0.95	1.00		0.57	1.00		0.66	1.00		0.55	1.00	
Satd. Flow (perm)	1520	3023		910	2996		1052	2996		884	2823	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	83	289	11	17	309	33	14	274	29	33	78	71
RTOR Reduction (vph)	0	4	0	0	13	0	0	12	0	0	42	0
Lane Group Flow (vph)	83	296	0	17	329	0	14	291	0	33	107	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Prot			Perm			Perm			Perm		
Protected Phases	7	4			8			2			6	
Permitted Phases				8			2			6		
Actuated Green, G (s)	7.0	32.0		22.0	22.0		27.0	27.0		27.0	27.0	
Effective Green, g (s)	7.0	32.0		22.0	22.0		27.0	27.0		27.0	27.0	
Actuated g/C Ratio	0.11	0.49		0.34	0.34		0.42	0.42		0.42	0.42	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	164	1488		308	1014		437	1244		367	1173	
v/s Ratio Prot	c0.05	0.10			c0.11			c0.10			0.04	
v/s Ratio Perm				0.02			0.01			0.04		
v/c Ratio	0.51	0.20		0.06	0.32		0.03	0.23		0.09	0.09	
Uniform Delay, d1	27.4	9.3		14.5	16.0		11.3	12.3		11.5	11.5	
Progression Factor	0.90	0.38		0.81	0.74		0.61	0.65		1.10	1.20	
Incremental Delay, d2	10.3	0.3		0.3	0.8		0.1	0.4		0.5	0.2	
Delay (s)	34.9	3.8		12.1	12.7		6.9	8.4		13.2	14.0	
Level of Service	C	A		B	B		A	A		B	B	
Approach Delay (s)		10.5			12.6			8.3			13.8	
Approach LOS		B			B			A			B	

Intersection Summary			
HCM Average Control Delay	11.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	38.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1052: 115th Street & Michigan Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			↰↑↱			↰↑↱	
Volume (vph)	41	268	16	97	277	43	26	286	20	25	143	42
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	12	12	12	12	12	12
Total Lost time (s)	4.0	4.0		3.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frt	1.00	0.99		1.00	0.98			0.99			0.97	
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.99	
Satd. Flow (prot)	1520	3014		1520	2979			3215			3140	
Flt Permitted	0.54	1.00		0.95	1.00			0.92			0.89	
Satd. Flow (perm)	862	3014		1520	2979			2975			2822	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	46	298	18	108	308	48	29	318	22	28	159	47
RTOR Reduction (vph)	0	7	0	0	19	0	0	7	0	0	29	0
Lane Group Flow (vph)	46	309	0	108	337	0	0	362	0	0	205	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Prot			Perm			Perm		
Protected Phases		4		3	8			2			6	
Permitted Phases	4						2			6		
Actuated Green, G (s)	20.0	20.0		6.0	29.0			25.0			25.0	
Effective Green, g (s)	20.0	20.0		6.0	29.0			25.0			25.0	
Actuated g/C Ratio	0.31	0.31		0.09	0.45			0.38			0.38	
Clearance Time (s)	4.0	4.0		3.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	265	927		140	1329			1144			1085	
v/s Ratio Prot		c0.10		c0.07	0.11							
v/s Ratio Perm	0.05							c0.12			0.07	
v/c Ratio	0.17	0.33		0.77	0.25			0.32			0.19	
Uniform Delay, d1	16.5	17.4		28.8	11.2			14.0			13.3	
Progression Factor	0.59	0.58		1.31	1.02			0.72			0.75	
Incremental Delay, d2	1.4	1.0		27.7	0.4			0.7			0.4	
Delay (s)	11.1	11.0		65.5	11.8			10.8			10.3	
Level of Service	B	B		E	B			B			B	
Approach Delay (s)		11.0			24.3			10.8			10.3	
Approach LOS		B			C			B			B	

Intersection Summary			
HCM Average Control Delay	15.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	43.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱			↰↑↑↱				
Volume (vph)	14	277	16	70	382	70	34	94	162	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	12	14	12	10	15	10
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			0.95				
Frt		0.99			0.98			0.92				
Flt Protected		1.00			0.99			0.99				
Satd. Flow (prot)		1585			1560			3164				
Flt Permitted		0.97			0.91			0.99				
Satd. Flow (perm)		1545			1436			3164				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	16	308	18	78	424	78	38	104	180	0	0	0
RTOR Reduction (vph)	0	2	0	0	7	0	0	138	0	0	0	0
Lane Group Flow (vph)	0	340	0	0	573	0	0	184	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm			Perm					
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Actuated Green, G (s)		41.9			41.9			15.1				
Effective Green, g (s)		41.9			41.9			15.1				
Actuated g/C Ratio		0.64			0.64			0.23				
Clearance Time (s)		4.0			4.0			4.0				
Vehicle Extension (s)		3.0			3.0			8.0				
Lane Grp Cap (vph)		996			926			735				
v/s Ratio Prot												
v/s Ratio Perm		0.22			c0.40			0.06				
v/c Ratio		0.34			0.62			0.25				
Uniform Delay, d1		5.3			6.8			20.3				
Progression Factor		2.02			1.00			1.00				
Incremental Delay, d2		0.9			3.1			0.8				
Delay (s)		11.5			9.9			21.1				
Level of Service		B			A			C				
Approach Delay (s)		11.5			9.9			21.1			0.0	
Approach LOS		B			A			C			A	

Intersection Summary			
HCM Average Control Delay	13.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	66.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

1054: 115th Street & Martin Luther King Jr Drive

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰↑	↑↱		↰	↱
Volume (veh/h)	85	354	427	44	66	92
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	89	373	449	46	69	97
Pedestrians		3	5		21	
Lane Width (ft)		16.0	16.0		10.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		0	1		1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		1319	491			
pX, platoon unblocked	0.86				0.86	0.86
vC, conflicting volume	517				1050	497
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	353				975	329
tC, single (s)	4.2				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.3				3.5	3.3
p0 queue free %	91				67	84
cM capacity (veh/h)	973				213	599

Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total	462	496	69	97
Volume Left	89	0	69	0
Volume Right	0	46	0	97
cSH	973	1700	213	599
Volume to Capacity	0.09	0.29	0.33	0.16
Queue Length 95th (ft)	8	0	34	14
Control Delay (s)	2.6	0.0	29.9	12.2
Lane LOS	A		D	B
Approach Delay (s)	2.6	0.0	19.6	
Approach LOS			C	

Intersection Summary			
Average Delay	4.0		
Intersection Capacity Utilization	66.1%	ICU Level of Service	C
Analysis Period (min)	15		

HCM Signalized Intersection Capacity Analysis
1055: 115th Street & Cottage Grove Avenue

1/14/2013

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↱			↰	Y	
Volume (vph)	473	1	27	675	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0			4.0		
Lane Util. Factor	1.00			1.00		
Frt	1.00			1.00		
Flt Protected	1.00			1.00		
Satd. Flow (prot)	1714			1711		
Flt Permitted	1.00			0.97		
Satd. Flow (perm)	1714			1661		
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	526	1	30	750	0	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	527	0	0	780	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%
Turn Type			Perm			
Protected Phases	1 2 4			4	3	
Permitted Phases			4			
Actuated Green, G (s)	63.0			31.0		
Effective Green, g (s)	59.0			31.0		
Actuated g/C Ratio	0.69			0.36		
Clearance Time (s)				4.0		
Lane Grp Cap (vph)	1190			606		
v/s Ratio Prot	c0.31					
v/s Ratio Perm				c0.47		
v/c Ratio	0.44			1.29		
Uniform Delay, d1	5.7			27.0		
Progression Factor	0.06			1.00		
Incremental Delay, d2	0.1			141.4		
Delay (s)	0.5			168.4		
Level of Service	A			F		
Approach Delay (s)	0.5			168.4	0.0	
Approach LOS	A			F	A	

Intersection Summary			
HCM Average Control Delay	100.7	HCM Level of Service	F
HCM Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	63.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱			↰						↰	↱
Volume (veh/h)	0	185	193	25	561	0	0	0	0	3	0	263
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	206	214	28	623	0	0	0	0	3	0	292
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	623			206			992	992	210	782	884	623
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	623			206			992	992	210	782	884	623
tC, single (s)	4.1			5.5			7.5	6.5	6.9	7.5	6.5	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.9			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			97			100	100	100	99	100	31
cM capacity (veh/h)	968			984			62	241	802	282	278	424

Direction, Lane #	EB 1	EB 2	WB 1	SB 1	SB 2
Volume Total	137	283	651	3	292
Volume Left	0	0	28	3	0
Volume Right	0	214	0	0	292
cSH	1700	1700	984	282	424
Volume to Capacity	0.08	0.17	0.03	0.01	0.69
Queue Length 95th (ft)	0	0	2	1	127
Control Delay (s)	0.0	0.0	0.7	17.9	30.3
Lane LOS			A	C	D
Approach Delay (s)	0.0		0.7	30.2	
Approach LOS				D	

Intersection Summary			
Average Delay	6.9		
Intersection Capacity Utilization	57.9%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
	↗	↘	↖	↑	↓	↙
Lane Configurations	↰↰		↰			
Sign Control	Stop			Stop	Stop	
Volume (vph)	188	0	586	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	209	0	651	0	0	0

Direction, Lane #	EB 1	EB 2	NB 1
Volume Total (vph)	104	104	651
Volume Left (vph)	104	104	651
Volume Right (vph)	0	0	0
Hadj (s)	0.58	0.58	0.29
Departure Headway (s)	6.8	6.8	4.9
Degree Utilization, x	0.20	0.20	0.88
Capacity (veh/h)	511	512	734
Control Delay (s)	10.3	10.3	32.2
Approach Delay (s)	10.3		32.2
Approach LOS	B		D

Intersection Summary			
Delay	26.9		
HCM Level of Service	D		
Intersection Capacity Utilization	46.6%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Signalized Intersection Capacity Analysis
1058: 119th Street & Marshield Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↰↑					↰	↰↑↱	↱
Volume (vph)	0	650	210	172	519	0	0	0	0	208	117	300
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	12	13	12	12	12	12	10	10	11
Total Lost time (s)		6.0	6.0		6.0					6.0	6.0	6.0
Lane Util. Factor		0.95	1.00		0.95					0.86	0.81	0.86
Frpb, ped/bikes		1.00	0.98		1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00					1.00	1.00	1.00
Frt		1.00	0.85		1.00					1.00	0.94	0.85
Flt Protected		1.00	1.00		0.99					0.95	0.99	1.00
Satd. Flow (prot)		2978	1202		3372					1346	3704	1122
Flt Permitted		1.00	1.00		0.99					0.95	0.99	1.00
Satd. Flow (perm)		2978	1202		3372					1346	3704	1122
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	684	221	181	546	0	0	0	0	219	123	316
RTOR Reduction (vph)	0	0	107	0	0	0	0	0	0	0	81	92
Lane Group Flow (vph)	0	684	114	0	727	0	0	0	0	120	299	66
Confl. Peds. (#/hr)	5		3	3		5						
Heavy Vehicles (%)	0%	11%	9%	2%	4%	0%	0%	0%	0%	2%	2%	2%
Parking (#/hr)			0									0
Turn Type			Perm	Split						Split		custom
Protected Phases		2		10 12 14	10 12 14					4	4	
Permitted Phases			2									4 2
Actuated Green, G (s)		39.1	39.1		68.1					22.1	22.1	67.2
Effective Green, g (s)		39.1	39.1		68.1					22.1	22.1	67.2
Actuated g/C Ratio		0.24	0.24		0.43					0.14	0.14	0.42
Clearance Time (s)		6.0	6.0							6.0	6.0	
Vehicle Extension (s)		3.0	3.0							3.0	3.0	
Lane Grp Cap (vph)		728	294		1435					186	512	471
v/s Ratio Prot		c0.23			c0.22					c0.09	0.08	
v/s Ratio Perm			0.09									0.06
v/c Ratio		0.94	0.39		0.51					0.65	0.58	0.14
Uniform Delay, d1		59.3	50.4		33.6					65.2	64.6	28.6
Progression Factor		1.00	1.00		0.02					1.00	1.00	1.00
Incremental Delay, d2		21.5	3.8		0.1					7.5	1.7	0.1
Delay (s)		80.8	54.3		0.7					72.7	66.3	28.7
Level of Service		F	D		A					E	E	C
Approach Delay (s)		74.3			0.7			0.0			58.5	
Approach LOS		E			A			A			E	

Intersection Summary			
HCM Average Control Delay	46.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	32.7
Intersection Capacity Utilization	61.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1059: 119th Street & Ashland Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑			↑↑	↱	↰	←↑↑→				
Volume (vph)	212	646	0	0	453	112	238	150	195	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	13	12	12	11	12	13	13	14	12	12	12
Total Lost time (s)	6.0	6.0			6.0	6.0	6.0	6.0				
Lane Util. Factor	1.00	0.95			0.95	1.00	0.91	0.91				
Frt	1.00	1.00			1.00	0.85	1.00	0.92				
Flt Protected	0.95	1.00			1.00	1.00	0.95	1.00				
Satd. Flow (prot)	1574	3366			3149	1457	1531	2963				
Flt Permitted	0.95	1.00			1.00	1.00	0.95	1.00				
Satd. Flow (perm)	1574	3366			3149	1457	1531	2963				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	236	718	0	0	503	124	264	167	217	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	88	0	117	0	0	0	0
Lane Group Flow (vph)	236	718	0	0	503	36	222	309	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Split					Perm	Split					
Protected Phases	2 4 8	2 4 8			10		12	12				
Permitted Phases						10						
Actuated Green, G (s)	83.9	83.9			33.7	33.7	15.5	15.5				
Effective Green, g (s)	83.9	83.9			33.7	33.7	15.5	15.5				
Actuated g/C Ratio	0.52	0.52			0.21	0.21	0.10	0.10				
Clearance Time (s)					6.0	6.0	6.0	6.0				
Vehicle Extension (s)					3.0	3.0	3.0	3.0				
Lane Grp Cap (vph)	825	1765			663	307	148	287				
v/s Ratio Prot	0.15	c0.21			c0.16		c0.14	0.10				
v/s Ratio Perm						0.02						
v/c Ratio	0.29	0.41			0.76	0.12	1.50	1.08				
Uniform Delay, d1	21.3	23.0			59.3	51.1	72.2	72.2				
Progression Factor	0.07	0.06			1.00	1.00	1.00	1.00				
Incremental Delay, d2	0.1	0.1			5.0	0.2	256.9	75.6				
Delay (s)	1.6	1.5			64.3	51.3	329.2	147.8				
Level of Service	A	A			E	D	F	F				
Approach Delay (s)		1.5			61.7			209.9			0.0	
Approach LOS		A			E			F			A	

Intersection Summary			
HCM Average Control Delay	79.1	HCM Level of Service	E
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	28.9
Intersection Capacity Utilization	52.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1060: 119th Street & Halsted Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑↱		↰	↑↑↱		↰	↑↑↱	
Volume (vph)	220	326	75	35	356	45	88	824	62	59	749	104
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	14	12	10	10	12	9	10	12
Total Lost time (s)	4.0	4.0	5.0	4.0	5.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.98		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1546	1556	1328	1595	1760		1532	2990		1509	2919	
Flt Permitted	0.23	1.00	1.00	0.42	1.00		0.17	1.00		0.15	1.00	
Satd. Flow (perm)	374	1556	1328	703	1760		267	2990		238	2919	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	232	343	79	37	375	47	93	867	65	62	788	109
RTOR Reduction (vph)	0	0	52	0	5	0	0	6	0	0	12	0
Lane Group Flow (vph)	232	343	27	37	417	0	93	926	0	62	885	0
Confl. Peds. (#/hr)	33		3	3		33	42		8	8		42
Confl. Bikes (#/hr)							1					1
Heavy Vehicles (%)	3%	8%	6%	0%	7%	5%	4%	5%	11%	2%	6%	9%
Turn Type	pm+pt		Perm	pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)	38.2	31.2	31.2	32.4	28.3		39.6	34.1		39.6	34.1	
Effective Green, g (s)	36.2	32.2	31.2	30.4	28.3		37.6	34.1		37.6	34.1	
Actuated g/C Ratio	0.40	0.36	0.35	0.34	0.31		0.42	0.38		0.42	0.38	
Clearance Time (s)	3.0	5.0	5.0	3.0	5.0		3.0	4.0		3.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	229	557	461	268	554		175	1134		163	1107	
v/s Ratio Prot	c0.07	0.22		0.00	0.24		c0.03	c0.31		0.02	0.30	
v/s Ratio Perm	c0.34		0.02	0.04			0.20			0.14		
v/c Ratio	1.01	0.62	0.06	0.14	0.75		0.53	0.82		0.38	0.80	
Uniform Delay, d1	26.3	23.8	19.6	20.4	27.7		17.9	25.1		17.7	24.9	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	62.9	5.0	0.2	0.2	9.2		3.1	6.5		1.5	6.1	
Delay (s)	89.2	28.8	19.8	20.7	36.8		21.0	31.6		19.2	30.9	
Level of Service	F	C	B	C	D		C	C		B	C	
Approach Delay (s)		49.1			35.5			30.7			30.2	
Approach LOS		D			D			C			C	

Intersection Summary			
HCM Average Control Delay	35.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	89.9	Sum of lost time (s)	16.0
Intersection Capacity Utilization	82.0%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

1061: 119th Street & Wentworth Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱		✥			✥	
Volume (vph)	54	301	26	5	311	19	78	80	16	11	44	82
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	10	10	10	12	15	12	12	16	12
Total Lost time (s)		3.0	3.0		3.0	3.0		3.0			3.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00			1.00	
Frpb, ped/bikes		1.00	0.97		1.00	0.97		1.00			0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00			1.00	
Frt		1.00	0.85		1.00	0.85		0.99			0.92	
Flt Protected		0.99	1.00		1.00	1.00		0.98			1.00	
Satd. Flow (prot)		1910	1482		1600	1198		1904			1792	
Flt Permitted		0.91	1.00		1.00	1.00		0.83			0.98	
Satd. Flow (perm)		1761	1482		1595	1198		1624			1762	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	57	317	27	5	327	20	82	84	17	12	46	86
RTOR Reduction (vph)	0	0	14	0	0	10	0	6	0	0	50	0
Lane Group Flow (vph)	0	374	13	0	332	10	0	177	0	0	94	0
Confl. Peds. (#/hr)	6		11	11		6	4		8	8		4
Confl. Bikes (#/hr)	1		1	1		1			1	1		
Heavy Vehicles (%)	0%	7%	0%	0%	5%	16%	0%	0%	0%	10%	0%	3%
Turn Type	Perm		Perm	Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)		32.0	32.0		32.0	32.0		27.0			27.0	
Effective Green, g (s)		32.0	32.0		32.0	32.0		27.0			27.0	
Actuated g/C Ratio		0.49	0.49		0.49	0.49		0.42			0.42	
Clearance Time (s)		3.0	3.0		3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)		867	730		785	590		675			732	
v/s Ratio Prot												
v/s Ratio Perm		c0.21	0.01		0.21	0.01		c0.11			0.05	
v/c Ratio		0.43	0.02		0.42	0.02		0.26			0.13	
Uniform Delay, d1		10.6	8.5		10.6	8.4		12.5			11.7	
Progression Factor		1.00	1.00		1.67	2.20		1.00			1.51	
Incremental Delay, d2		1.6	0.0		1.6	0.0		0.9			0.4	
Delay (s)		12.2	8.5		19.2	18.6		13.4			18.1	
Level of Service		B	A		B	B		B			B	
Approach Delay (s)		12.0			19.2			13.4			18.1	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	15.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	77.4%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1062: 119th Street & State Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱		↰	↱		✣	
Volume (vph)	86	219	35	6	176	6	84	228	22	9	53	73
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frpb, ped/bikes		1.00	0.96		1.00	0.98		1.00	0.96		0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		0.93	
Flt Protected		0.99	1.00		1.00	1.00		0.99	1.00		1.00	
Satd. Flow (prot)		1664	1392		1608	1497		1734	1390		1571	
Flt Permitted		0.85	1.00		0.99	1.00		0.88	1.00		0.98	
Satd. Flow (perm)		1439	1392		1592	1497		1553	1390		1541	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	91	231	37	6	185	6	88	240	23	9	56	77
RTOR Reduction (vph)	0	0	24	0	0	4	0	0	12	0	39	0
Lane Group Flow (vph)	0	322	13	0	191	2	0	328	11	0	103	0
Confl. Peds. (#/hr)	11		17	17		11	4		17	17		4
Confl. Bikes (#/hr)	1		1	1		1	1					1
Heavy Vehicles (%)	0%	9%	5%	33%	11%	0%	6%	1%	6%	0%	0%	8%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		23.0	23.0		23.0	23.0		32.0	32.0		32.0	
Effective Green, g (s)		23.0	23.0		23.0	23.0		32.0	32.0		32.0	
Actuated g/C Ratio		0.35	0.35		0.35	0.35		0.49	0.49		0.49	
Clearance Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	
Lane Grp Cap (vph)		509	493		563	530		765	684		759	
v/s Ratio Prot												
v/s Ratio Perm		c0.22	0.01		0.12	0.00		c0.21	0.01		0.07	
v/c Ratio		0.63	0.03		0.34	0.00		0.43	0.02		0.14	
Uniform Delay, d1		17.5	13.7		15.4	13.6		10.6	8.4		9.0	
Progression Factor		1.87	3.33		0.95	0.97		0.27	0.18		1.14	
Incremental Delay, d2		5.5	0.1		1.6	0.0		0.8	0.0		0.4	
Delay (s)		38.3	45.7		16.3	13.2		3.7	1.6		10.6	
Level of Service		D	D		B	B		A	A		B	
Approach Delay (s)		39.0			16.2			3.6			10.6	
Approach LOS		D			B			A			B	

Intersection Summary			
HCM Average Control Delay	19.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	78.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1063: 119th Street & Michigan Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		✥			✥			↰	↱
Volume (vph)	166	23	35	9	27	6	43	286	19	6	201	115
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	14	12	12	16	12	12	16	12
Total Lost time (s)		3.0	3.0		3.0			3.0			3.0	3.0
Lane Util. Factor		1.00	1.00		1.00			1.00			1.00	1.00
Frpb, ped/bikes		1.00	0.97		0.99			1.00			1.00	0.95
Flpb, ped/bikes		0.98	1.00		1.00			1.00			1.00	1.00
Frt		1.00	0.85		0.98			0.99			1.00	0.85
Flt Protected		0.96	1.00		0.99			0.99			1.00	1.00
Satd. Flow (prot)		1772	1390		1835			1970			1873	1328
Flt Permitted		0.79	1.00		0.94			0.95			0.99	1.00
Satd. Flow (perm)		1466	1390		1749			1874			1858	1328
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	184	26	39	10	30	7	48	318	21	7	223	128
RTOR Reduction (vph)	0	0	23	0	5	0	0	3	0	0	0	65
Lane Group Flow (vph)	0	210	16	0	42	0	0	384	0	0	230	63
Confl. Peds. (#/hr)	49		22	22		49	34		17	17		34
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	9%	0%	7%	0%	0%	0%	0%	2%	0%	0%	9%	9%
Turn Type	pm+pt		Perm	Perm			Perm			Perm		Perm
Protected Phases	7	4			8			2			6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)		27.0	27.0		17.0			32.0			32.0	32.0
Effective Green, g (s)		27.0	27.0		17.0			32.0			32.0	32.0
Actuated g/C Ratio		0.42	0.42		0.26			0.49			0.49	0.49
Clearance Time (s)		3.0	3.0		3.0			3.0			3.0	3.0
Lane Grp Cap (vph)		647	577		457			923			915	654
v/s Ratio Prot		c0.04										
v/s Ratio Perm		0.09	0.01		0.02			c0.20			0.12	0.05
v/c Ratio		0.32	0.03		0.09			0.42			0.25	0.10
Uniform Delay, d1		12.8	11.2		18.2			10.5			9.6	8.8
Progression Factor		0.85	1.52		1.00			0.43			0.53	0.31
Incremental Delay, d2		1.1	0.1		0.4			1.1			0.6	0.3
Delay (s)		12.1	17.1		18.6			5.6			5.7	3.0
Level of Service		B	B		B			A			A	A
Approach Delay (s)		12.9			18.6			5.6			4.7	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	7.6	HCM Level of Service	A
HCM Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	60.7%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1064: 127th Street & S Paulina St

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↱		↰	↑↑					↰	↰↑↱	↱
Volume (vph)	0	990	222	333	1149	0	0	0	0	275	201	376
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	12	11	8	8	8	11	12	14
Total Lost time (s)		6.0		4.5	6.0					6.0	6.0	6.0
Lane Util. Factor		0.91		1.00	0.95					0.91	0.86	0.91
Frpb, ped/bikes		1.00		1.00	1.00					1.00	0.99	0.99
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Frt		0.97		1.00	1.00					1.00	0.94	0.85
Flt Protected		1.00		0.95	1.00					0.95	0.99	1.00
Satd. Flow (prot)		4322		1589	3226					1419	2711	1355
Flt Permitted		1.00		0.12	1.00					0.95	0.99	1.00
Satd. Flow (perm)		4322		204	3226					1419	2711	1355
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	1042	234	351	1209	0	0	0	0	289	212	396
RTOR Reduction (vph)	0	32	0	0	0	0	0	0	0	0	59	59
Lane Group Flow (vph)	0	1244	0	351	1209	0	0	0	0	234	394	151
Confl. Peds. (#/hr)	6		4	4		6	2					2
Heavy Vehicles (%)	0%	11%	7%	4%	6%	0%	0%	0%	0%	6%	4%	8%
Turn Type				pm+pt						Perm		Perm
Protected Phases		2		1	6						4	
Permitted Phases				6						4		4
Actuated Green, G (s)		44.3		69.3	69.3					23.7	23.7	23.7
Effective Green, g (s)		44.3		69.3	69.3					23.7	23.7	23.7
Actuated g/C Ratio		0.42		0.66	0.66					0.23	0.23	0.23
Clearance Time (s)		6.0		4.5	6.0					6.0	6.0	6.0
Vehicle Extension (s)		7.0		3.5	7.0					3.5	3.5	3.5
Lane Grp Cap (vph)		1823		405	2129					320	612	306
v/s Ratio Prot		0.29		c0.17	0.37							
v/s Ratio Perm				c0.40						c0.16	0.15	0.11
v/c Ratio		0.68		0.87	0.57					0.73	0.64	0.49
Uniform Delay, d1		24.6		24.7	9.7					37.7	36.8	35.4
Progression Factor		1.00		0.90	1.67					1.00	1.00	1.00
Incremental Delay, d2		2.1		9.0	0.5					8.6	2.4	1.5
Delay (s)		26.7		31.1	16.7					46.3	39.3	36.9
Level of Service		C		C	B					D	D	D
Approach Delay (s)		26.7			19.9			0.0			40.5	
Approach LOS		C			B			A			D	

Intersection Summary			
HCM Average Control Delay	27.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	10.5
Intersection Capacity Utilization	109.9%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1065: 127th Street & Marshfield Ave

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↑			↑↑↱			↰↑↱				
Volume (vph)	311	954	0	0	933	234	549	365	681	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	12	12	12	11	12	12	12	12	12	12	12
Total Lost time (s)	6.0	6.0			6.0			6.0				
Lane Util. Factor	0.97	0.95			0.91			0.91				
Frpb, ped/bikes	1.00	1.00			1.00			1.00				
Flpb, ped/bikes	1.00	1.00			1.00			1.00				
Frt	1.00	1.00			0.97			0.94				
Flt Protected	0.95	1.00			1.00			0.98				
Satd. Flow (prot)	2915	3138			4350			4339				
Flt Permitted	0.13	1.00			1.00			0.98				
Satd. Flow (perm)	407	3138			4350			4339				
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	327	1004	0	0	982	246	578	384	717	0	0	0
RTOR Reduction (vph)	0	0	0	0	36	0	0	89	0	0	0	0
Lane Group Flow (vph)	327	1004	0	0	1192	0	0	1590	0	0	0	0
Confl. Peds. (#/hr)	4					4						
Heavy Vehicles (%)	10%	9%	0%	0%	6%	4%	4%	3%	5%	0%	0%	0%
Turn Type	pm+pt						Perm					
Protected Phases	5	2			6			8				
Permitted Phases	2						8					
Actuated Green, G (s)	63.6	63.6			45.4			29.4				
Effective Green, g (s)	63.6	63.6			45.4			29.4				
Actuated g/C Ratio	0.61	0.61			0.43			0.28				
Clearance Time (s)	6.0	6.0			6.0			6.0				
Vehicle Extension (s)	3.5	7.0			7.0			5.0				
Lane Grp Cap (vph)	538	1901			1881			1215				
v/s Ratio Prot	0.07	c0.32			0.27							
v/s Ratio Perm	c0.30							0.37				
v/c Ratio	0.61	0.53			0.63			1.42dr				
Uniform Delay, d1	12.9	12.0			23.3			37.8				
Progression Factor	0.60	0.60			1.02			1.00				
Incremental Delay, d2	1.5	0.8			0.9			144.8				
Delay (s)	9.3	8.0			24.6			182.6				
Level of Service	A	A			C			F				
Approach Delay (s)		8.3			24.6			182.6			0.0	
Approach LOS		A			C			F			A	

Intersection Summary			
HCM Average Control Delay	82.1	HCM Level of Service	F
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	109.9%	ICU Level of Service	H
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1066: 127th Street & S Ashland

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	105	941	226	78	874	51	226	178	40	76	111	91
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	12	11	12	12	10	10	13	10	10	10
Total Lost time (s)	3.5	6.0	3.5	3.5	6.0		3.5	6.0		3.5	6.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.97		1.00	0.93	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1565	3061	1291	1604	3231		1446	3007		1544	2782	
Flt Permitted	0.11	1.00	1.00	0.29	1.00		0.55	1.00		0.61	1.00	
Satd. Flow (perm)	175	3061	1291	488	3231		841	3007		990	2782	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	111	991	238	82	920	54	238	187	42	80	117	96
RTOR Reduction (vph)	0	0	98	0	4	0	0	21	0	0	80	0
Lane Group Flow (vph)	111	991	140	82	970	0	238	208	0	80	133	0
Confl. Peds. (#/hr)	3		12	12		3	9		6	6		9
Heavy Vehicles (%)	2%	8%	5%	3%	5%	3%	10%	3%	2%	3%	7%	4%
Parking (#/hr)			0									
Turn Type	pm+pt		pm+ov	pm+pt			pm+pt			pm+pt		
Protected Phases	5	2	3	1	6		3	8		7	4	
Permitted Phases	2		2	6			8			4		
Actuated Green, G (s)	62.7	52.6	61.7	40.8	34.2		28.9	19.8		24.7	17.7	
Effective Green, g (s)	62.7	52.6	61.7	40.8	34.2		28.9	19.8		24.7	17.7	
Actuated g/C Ratio	0.60	0.50	0.59	0.39	0.33		0.28	0.19		0.24	0.17	
Clearance Time (s)	3.5	6.0	3.5	3.5	6.0		3.5	6.0		3.5	6.0	
Vehicle Extension (s)	3.0	7.0	3.0	3.0	7.0		3.0	7.0		3.0	7.0	
Lane Grp Cap (vph)	435	1533	759	260	1052		284	567		270	469	
v/s Ratio Prot	0.06	c0.32	0.02	c0.02	c0.30		c0.07	0.07		0.02	0.05	
v/s Ratio Perm	0.09		0.09	0.10			c0.16			0.05		
v/c Ratio	0.26	0.65	0.18	0.32	0.92		0.84	0.37		0.30	0.28	
Uniform Delay, d1	13.1	19.3	10.0	20.7	34.1		34.4	37.1		32.4	38.1	
Progression Factor	1.04	1.20	2.56	1.00	1.00		0.96	0.90		1.00	1.00	
Incremental Delay, d2	0.7	1.1	0.1	0.7	14.4		18.0	1.3		0.6	1.2	
Delay (s)	14.3	24.2	25.7	21.4	48.5		51.0	34.9		33.0	39.3	
Level of Service	B	C	C	C	D		D	C		C	D	
Approach Delay (s)		23.6			46.4			43.1			37.6	
Approach LOS		C			D			D			D	

Intersection Summary			
HCM Average Control Delay	35.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	22.5
Intersection Capacity Utilization	76.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1067: Vermont St & S Ashland

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	62	329	286	81	215	102	329	382	161	91	258	54
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	11	12	11	12	12	11	13	12	10	11	12
Total Lost time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.93		1.00	0.95		1.00	0.96		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1635	2916		1463	3047		1589	3174		1549	3135	
Flt Permitted	0.52	1.00		0.23	1.00		0.46	1.00		0.44	1.00	
Satd. Flow (perm)	888	2916		359	3047		772	3174		713	3135	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	65	346	301	85	226	107	346	402	169	96	272	57
RTOR Reduction (vph)	0	144	0	0	52	0	0	43	0	0	17	0
Lane Group Flow (vph)	65	503	0	85	281	0	346	528	0	96	312	0
Confl. Peds. (#/hr)	20					20	1		2	2		1
Heavy Vehicles (%)	4%	5%	6%	13%	6%	5%	4%	6%	5%	3%	3%	0%
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	35.4	28.4		36.2	28.8		53.2	41.9		38.6	31.3	
Effective Green, g (s)	35.4	28.4		36.2	28.8		53.2	41.9		38.6	31.3	
Actuated g/C Ratio	0.34	0.27		0.34	0.27		0.51	0.40		0.37	0.30	
Clearance Time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	3.5	7.0		3.5	7.0		3.5	7.0		3.5	7.0	
Lane Grp Cap (vph)	349	789		202	836		530	1267		320	935	
v/s Ratio Prot	0.01	c0.17		c0.03	0.09		c0.11	0.17		0.02	0.10	
v/s Ratio Perm	0.05			0.12			c0.22			0.09		
v/c Ratio	0.19	0.64		0.42	0.34		0.65	0.42		0.30	0.33	
Uniform Delay, d1	24.0	33.8		24.8	30.5		16.6	22.7		22.4	28.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.04	0.90	
Incremental Delay, d2	0.3	3.9		1.7	1.1		3.0	1.0		0.6	0.9	
Delay (s)	24.3	37.7		26.4	31.6		19.6	23.8		23.8	26.8	
Level of Service	C	D		C	C		B	C		C	C	
Approach Delay (s)		36.4			30.5			22.2			26.2	
Approach LOS		D			C			C			C	

Intersection Summary			
HCM Average Control Delay	28.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	73.3%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1068: 127th Street & Halsted Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	169	402	612	6	409	110	201	617	7	84	385	105
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	10	12	9	11	12	9	9	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		0.99			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.92			0.97		1.00	1.00		1.00	0.97	
Flt Protected		0.99			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		2588			2888		1437	3187		1451	2799	
Flt Permitted		0.62			0.93		0.36	1.00		0.27	1.00	
Satd. Flow (perm)		1620			2690		550	3187		405	2799	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	188	447	680	7	454	122	223	686	8	93	428	117
RTOR Reduction (vph)	0	193	0	0	37	0	0	1	0	0	38	0
Lane Group Flow (vph)	0	1122	0	0	546	0	223	693	0	93	507	0
Confl. Peds. (#/hr)	9		11	11		9	11		14	14		11
Heavy Vehicles (%)	3%	6%	18%	50%	6%	6%	7%	3%	50%	6%	7%	2%
Turn Type	pm+pt			Perm			pm+pt			pm+pt		
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		27.0			19.0		26.0	22.0		26.0	22.0	
Effective Green, g (s)		27.0			19.0		26.0	22.0		26.0	22.0	
Actuated g/C Ratio		0.42			0.29		0.40	0.34		0.40	0.34	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		732			786		275	1079		226	947	
v/s Ratio Prot		c0.09					c0.05	0.22		0.03	0.18	
v/s Ratio Perm		c0.54			0.20		c0.27			0.14		
v/c Ratio		1.53			0.69		0.81	0.64		0.41	0.53	
Uniform Delay, d1		19.0			20.4		16.4	18.2		12.9	17.4	
Progression Factor		1.00			1.51		1.14	1.01		1.00	1.00	
Incremental Delay, d2		246.7			0.5		17.1	2.2		5.5	2.2	
Delay (s)		265.7			31.3		35.7	20.5		18.4	19.5	
Level of Service		F			C		D	C		B	B	
Approach Delay (s)		265.7			31.3			24.2			19.4	
Approach LOS		F			C			C			B	

Intersection Summary			
HCM Average Control Delay	116.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.16		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	94.4%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1069: Vermont St & Halsted Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱		↰	↑↱		↰	↑↱	
Volume (vph)	52	117	343	858	132	13	112	809	278	10	968	45
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	12	12	12	12	12
Total Lost time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.98		1.00	1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.89		1.00	0.99		1.00	0.96		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1665	1695		1620	1939		1659	3110		1139	3232	
Flt Permitted	0.66	1.00		0.29	1.00		0.19	1.00		0.16	1.00	
Satd. Flow (perm)	1161	1695		499	1939		326	3110		191	3232	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	54	121	354	885	136	13	115	834	287	10	998	46
RTOR Reduction (vph)	0	41	0	0	5	0	0	52	0	0	5	0
Lane Group Flow (vph)	54	434	0	885	144	0	115	1069	0	10	1039	0
Confl. Peds. (#/hr)	10		16	16		10	4		6	6		4
Confl. Bikes (#/hr)			4	4								
Heavy Vehicles (%)	2%	4%	5%	5%	4%	0%	3%	4%	8%	50%	5%	6%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	24.0	24.0		24.0	24.0		31.0	31.0		31.0	31.0	
Effective Green, g (s)	24.0	24.0		24.0	24.0		31.0	31.0		31.0	31.0	
Actuated g/C Ratio	0.37	0.37		0.37	0.37		0.48	0.48		0.48	0.48	
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)	429	626		184	716		155	1483		91	1541	
v/s Ratio Prot		0.26			0.07			0.34			0.32	
v/s Ratio Perm	0.05			c1.77			c0.35			0.05		
v/c Ratio	0.13	0.69		4.81	0.20		0.74	0.72		0.11	0.67	
Uniform Delay, d1	13.6	17.4		20.5	14.0		13.8	13.5		9.4	13.1	
Progression Factor	1.00	1.00		1.73	1.92		1.00	1.00		0.98	0.96	
Incremental Delay, d2	0.6	6.2		1715.5	0.1		27.1	3.1		0.2	0.2	
Delay (s)	14.2	23.6		1751.0	26.8		40.8	16.6		9.5	12.8	
Level of Service	B	C		F	C		D	B		A	B	
Approach Delay (s)		22.6			1502.5			18.9			12.7	
Approach LOS		C			F			B			B	

Intersection Summary			
HCM Average Control Delay	415.9	HCM Level of Service	F
HCM Volume to Capacity ratio	2.51		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	133.3%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1070: 127th Street & S Wallance St

	→	↙	←	↖	↰	↖	↑	↗	↘	↓	↙	↙
Movement	EBT	WBL	WBT	WBR	NBL2	NBL	NBT	NBR	SBL	SBT	SBR	SBR2
Lane Configurations	↰↑↑↱		↰↑↑↱				↰↑↱			↰↓↱		
Volume (vph)	427	952	570	14	3	14	3	47	10	0	2	4
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	12	12	16	12	12	16	12	12
Total Lost time (s)	5.0		5.0				4.0			4.0		
Lane Util. Factor	0.95		0.95				1.00			1.00		
Frpb, ped/bikes	1.00		1.00				1.00			0.99		
Flpb, ped/bikes	1.00		1.00				1.00			1.00		
Frt	1.00		1.00				0.91			0.95		
Flt Protected	1.00		0.97				0.99			0.97		
Satd. Flow (prot)	2956		2880				1732			1864		
Flt Permitted	1.00		0.59				0.94			0.87		
Satd. Flow (perm)	2956		1742				1650			1671		
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	449	1002	600	15	3	15	3	49	11	0	2	4
RTOR Reduction (vph)	0	0	1	0	0	0	38	0	0	3	0	0
Lane Group Flow (vph)	449	0	1616	0	0	0	32	0	0	14	0	0
Confl. Peds. (#/hr)		7		6		3					3	
Confl. Bikes (#/hr)		1										
Heavy Vehicles (%)	8%	8%	6%	0%	0%	8%	0%	5%	0%	0%	0%	0%
Turn Type		custom				Perm			Perm			
Protected Phases	8	7	4				2			6		
Permitted Phases		4 7				2			6			
Actuated Green, G (s)	18.0		27.0				14.0			14.0		
Effective Green, g (s)	18.0		27.0				14.0			14.0		
Actuated g/C Ratio	0.28		0.42				0.22			0.22		
Clearance Time (s)	5.0		5.0				4.0			4.0		
Lane Grp Cap (vph)	819		829				355			360		
v/s Ratio Prot	0.15		c0.18									
v/s Ratio Perm			c0.63				c0.02			0.01		
v/c Ratio	0.55		3.37dl				0.09			0.04		
Uniform Delay, d1	20.0		19.0				20.4			20.2		
Progression Factor	1.22		0.66				1.00			1.00		
Incremental Delay, d2	0.2		430.0				0.5			0.2		
Delay (s)	24.8		442.6				20.9			20.4		
Level of Service	C		F				C			C		
Approach Delay (s)	24.8		442.6				20.9			20.4		
Approach LOS	C		F				C			C		

Intersection Summary			
HCM Average Control Delay	366.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.45		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	125.7%	ICU Level of Service	H
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group

Movement	NEL	NER
Lane Configurations		
Volume (vph)	1	421
Ideal Flow (vphpl)	1800	1800
Lane Width	12	12
Total Lost time (s)	5.0	
Lane Util. Factor	1.00	
Frpb, ped/bikes	1.00	
Flpb, ped/bikes	1.00	
Frt	0.87	
Flt Protected	1.00	
Satd. Flow (prot)	1429	
Flt Permitted	1.00	
Satd. Flow (perm)	1429	
Peak-hour factor, PHF	0.95	0.95
Adj. Flow (vph)	1	443
RTOR Reduction (vph)	0	0
Lane Group Flow (vph)	444	0
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		
Heavy Vehicles (%)	0%	9%
Turn Type		
Protected Phases	3	
Permitted Phases		
Actuated Green, G (s)	10.0	
Effective Green, g (s)	10.0	
Actuated g/C Ratio	0.15	
Clearance Time (s)	5.0	
Lane Grp Cap (vph)	220	
v/s Ratio Prot	c0.31	
v/s Ratio Perm		
v/c Ratio	2.02	
Uniform Delay, d1	27.5	
Progression Factor	1.24	
Incremental Delay, d2	469.8	
Delay (s)	503.8	
Level of Service	F	
Approach Delay (s)	503.8	
Approach LOS	F	

Intersection Summary

HCM Signalized Intersection Capacity Analysis
1071: 127th Street & State Street

1/14/2013

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰↑	↑↱		↰	↱
Volume (vph)	214	758	1303	66	41	235
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		1.00	1.00
Frt		1.00	0.99		1.00	0.85
Flt Protected		0.99	1.00		0.95	1.00
Satd. Flow (prot)		3222	3234		1629	1457
Flt Permitted		0.51	1.00		0.95	1.00
Satd. Flow (perm)		1673	3234		1629	1457
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	238	842	1448	73	46	261
RTOR Reduction (vph)	0	0	5	0	0	34
Lane Group Flow (vph)	0	1080	1516	0	46	227
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%
Turn Type	Perm					Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)		40.0	40.0		17.0	17.0
Effective Green, g (s)		40.0	40.0		17.0	17.0
Actuated g/C Ratio		0.62	0.62		0.26	0.26
Clearance Time (s)		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		1030	1990		426	381
v/s Ratio Prot			0.47		0.03	
v/s Ratio Perm		c0.65				c0.16
v/c Ratio		2.20dl	0.76		0.11	0.60
Uniform Delay, d1		12.5	9.0		18.2	21.0
Progression Factor		1.77	0.87		0.99	0.97
Incremental Delay, d2		24.8	1.6		0.5	6.7
Delay (s)		46.9	9.5		18.6	27.1
Level of Service		D	A		B	C
Approach Delay (s)		46.9	9.5		25.8	
Approach LOS		D	A		C	

Intersection Summary			
HCM Average Control Delay	25.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	82.2%	ICU Level of Service	E
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1072: 127th Street & Michigan Avenue

1/14/2013

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰↑	↑↱		↰	↱
Volume (vph)	58	714	1287	196	135	76
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	12	10	11	12	10	10
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		1.00	1.00
Frpb, ped/bikes		1.00	1.00		1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00
Frt		1.00	0.98		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		2928	2977		1464	1373
Flt Permitted		0.70	1.00		0.95	1.00
Satd. Flow (perm)		2068	2977		1464	1373
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	61	752	1355	206	142	80
RTOR Reduction (vph)	0	0	19	0	0	34
Lane Group Flow (vph)	0	813	1542	0	142	46
Confl. Peds. (#/hr)	1			1		
Confl. Bikes (#/hr)	1			1		
Heavy Vehicles (%)	4%	9%	8%	12%	9%	4%
Turn Type	Perm					Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)		38.0	38.0		19.0	19.0
Effective Green, g (s)		38.0	38.0		19.0	19.0
Actuated g/C Ratio		0.58	0.58		0.29	0.29
Clearance Time (s)		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		1209	1740		428	401
v/s Ratio Prot			c0.52		c0.10	
v/s Ratio Perm		0.39				0.03
v/c Ratio		0.67	0.89		0.33	0.11
Uniform Delay, d1		9.2	11.6		18.0	16.8
Progression Factor		0.92	1.02		0.96	1.05
Incremental Delay, d2		0.3	2.0		2.0	0.6
Delay (s)		8.7	13.9		19.3	18.2
Level of Service		A	B		B	B
Approach Delay (s)		8.7	13.9		18.9	
Approach LOS		A	B		B	

Intersection Summary			
HCM Average Control Delay	12.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	82.2%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1073: 130th Street & Indiana Ave

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↱		↰	↑	⋎	
Volume (vph)	686	175	107	1182	482	83
Ideal Flow (vphpl)	2300	1800	1800	2300	1800	1800
Lane Width	15	12	14	16	15	12
Total Lost time (s)	5.0		5.0	5.0	5.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.97		1.00	1.00	0.98	
Flt Protected	1.00		0.95	1.00	0.96	
Satd. Flow (prot)	2222		1770	2436	1820	
Flt Permitted	1.00		0.13	1.00	0.96	
Satd. Flow (perm)	2222		240	2436	1820	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	700	179	109	1206	492	85
RTOR Reduction (vph)	14	0	0	0	9	0
Lane Group Flow (vph)	865	0	109	1206	568	0
Confl. Peds. (#/hr)		4	4			8
Heavy Vehicles (%)	11%	7%	3%	7%	2%	2%
Turn Type			Perm			
Protected Phases	4			8	2	
Permitted Phases			8			
Actuated Green, G (s)	31.0		31.0	31.0	24.0	
Effective Green, g (s)	31.0		31.0	31.0	24.0	
Actuated g/C Ratio	0.48		0.48	0.48	0.37	
Clearance Time (s)	5.0		5.0	5.0	5.0	
Lane Grp Cap (vph)	1060		114	1162	672	
v/s Ratio Prot	0.39			c0.50	c0.31	
v/s Ratio Perm			0.45			
v/c Ratio	0.82		0.96	1.04	0.84	
Uniform Delay, d1	14.6		16.3	17.0	18.8	
Progression Factor	1.51		1.00	1.00	1.00	
Incremental Delay, d2	5.5		73.1	36.7	12.4	
Delay (s)	27.6		89.5	53.7	31.2	
Level of Service	C		F	D	C	
Approach Delay (s)	27.6			56.7	31.2	
Approach LOS	C			E	C	

Intersection Summary			
HCM Average Control Delay	42.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	93.4%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1074: 130th Street & Ellis Ave

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑↑	↱		↰↑	↱		↰↑↱	
Volume (vph)	1	738	99	258	1220	9	111	0	187	1	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	15	13	11	11	12	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0	4.0	3.0	3.0	4.0		4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85		1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.95	1.00		0.95	
Satd. Flow (prot)	1881	3213	1422	1589	3138	1366		1642	1443		969	
Flt Permitted	0.20	1.00	1.00	0.26	1.00	1.00		0.76	1.00		0.61	
Satd. Flow (perm)	397	3213	1422	430	3138	1366		1309	1443		626	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1	820	110	287	1356	10	123	0	208	1	0	0
RTOR Reduction (vph)	0	0	53	0	0	3	0	0	175	0	0	0
Lane Group Flow (vph)	1	820	57	287	1356	7	0	123	33	0	1	0
Heavy Vehicles (%)	0%	10%	4%	4%	9%	12%	18%	0%	6%	100%	0%	0%
Turn Type	Perm		Perm	custom		custom	Perm		Perm	Perm		
Protected Phases		4		3	3 8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)	44.4	44.4	44.4	63.7	63.7	63.7		13.3	13.3		13.3	
Effective Green, g (s)	44.4	44.4	44.4	63.7	63.7	63.7		13.3	13.3		13.3	
Actuated g/C Ratio	0.52	0.52	0.52	0.75	0.75	0.75		0.16	0.16		0.16	
Clearance Time (s)	4.0	4.0	4.0	3.0		4.0		4.0	4.0		4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0		3.0	3.0		3.0	
Lane Grp Cap (vph)	207	1678	743	545	2352	1024		205	226		98	
v/s Ratio Prot		0.26		0.10	c0.43							
v/s Ratio Perm	0.00		0.04	0.29		0.01		c0.09	0.02		0.00	
v/c Ratio	0.00	0.49	0.08	0.53	0.58	0.01		0.60	0.14		0.01	
Uniform Delay, d1	9.7	13.0	10.1	4.9	4.7	2.7		33.4	30.9		30.3	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2	0.0	1.0	0.2	0.9	0.3	0.0		4.7	0.3		0.0	
Delay (s)	9.8	14.0	10.3	5.8	5.0	2.7		38.0	31.2		30.3	
Level of Service	A	B	B	A	A	A		D	C		C	
Approach Delay (s)		13.6			5.2			33.8			30.3	
Approach LOS		B			A			C			C	

Intersection Summary			
HCM Average Control Delay	11.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	7.0
Intersection Capacity Utilization	55.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1942: 111th Street & Langley Avenue

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰↑	↑↱		↲↳	
Volume (vph)	13	817	844	45	24	9
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	12	10	10
Total Lost time (s)		5.0	5.0		3.0	
Lane Util. Factor		0.95	0.95		1.00	
Frt		1.00	0.99		0.96	
Flt Protected		1.00	1.00		0.96	
Satd. Flow (prot)		3038	3017		1487	
Flt Permitted		0.93	1.00		0.96	
Satd. Flow (perm)		2835	3017		1487	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	14	908	938	50	27	10
RTOR Reduction (vph)	0	0	4	0	9	0
Lane Group Flow (vph)	0	922	984	0	28	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%
Turn Type	Perm					
Protected Phases		4	8 2 11		5	
Permitted Phases	4					
Actuated Green, G (s)		33.0	64.0		7.0	
Effective Green, g (s)		33.0	64.0		7.0	
Actuated g/C Ratio		0.37	0.71		0.08	
Clearance Time (s)		5.0			3.0	
Lane Grp Cap (vph)		1040	2145		116	
v/s Ratio Prot			c0.33		c0.02	
v/s Ratio Perm		c0.33				
v/c Ratio		0.89	0.46		0.24	
Uniform Delay, d1		26.7	5.6		39.0	
Progression Factor		1.00	0.00		1.00	
Incremental Delay, d2		11.1	0.2		4.8	
Delay (s)		37.9	0.3		43.8	
Level of Service		D	A		D	
Approach Delay (s)		37.9	0.3		43.8	
Approach LOS		D	A		D	

Intersection Summary			
HCM Average Control Delay	18.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	44.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			↰↱			✥			↰	↱
Volume (vph)	79	431	1	27	568	80	0	0	1	45	3	94
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	12	12	11	12	11
Total Lost time (s)		4.0			4.0			3.0			3.0	3.0
Lane Util. Factor		1.00			0.95			1.00			1.00	1.00
Frpb, ped/bikes		1.00			1.00			0.92			1.00	0.96
Flpb, ped/bikes		1.00			1.00			1.00			0.98	1.00
Frt		1.00			0.98			0.86			1.00	0.85
Flt Protected		0.99			1.00			1.00			0.95	1.00
Satd. Flow (prot)		1729			3231			1432			1610	1282
Flt Permitted		0.79			0.93			1.00			0.93	1.00
Satd. Flow (perm)		1375			3021			1432			1569	1282
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	88	479	1	30	631	89	0	0	1	50	3	104
RTOR Reduction (vph)	0	0	0	0	12	0	0	1	0	0	0	70
Lane Group Flow (vph)	0	568	0	0	738	0	0	0	0	0	53	34
Confl. Peds. (#/hr)	33		13	13		33	29		13	13		29
Confl. Bikes (#/hr)	1		1	1		1						
Heavy Vehicles (%)	4%	3%	0%	0%	4%	0%	0%	0%	0%	5%	0%	11%
Turn Type	Perm			Prot			Perm			pm+pt		Perm
Protected Phases		4		3	3 4			1		2	1 2	
Permitted Phases	4				3		1	1		1 2		1 2
Actuated Green, G (s)		31.0			45.0			9.0			25.0	28.0
Effective Green, g (s)		31.0			45.0			9.0			25.0	28.0
Actuated g/C Ratio		0.36			0.53			0.11			0.29	0.33
Clearance Time (s)		4.0						3.0				
Lane Grp Cap (vph)		501			1634			152			469	422
v/s Ratio Prot					c0.07			0.00			c0.02	
v/s Ratio Perm		c0.41			0.16						c0.01	0.03
v/c Ratio		1.13			0.45			0.00			0.11	0.08
Uniform Delay, d1		27.0			12.4			34.0			21.9	19.6
Progression Factor		1.00			1.83			1.00			1.00	1.00
Incremental Delay, d2		82.4			0.1			0.0			0.5	0.4
Delay (s)		109.4			22.7			34.0			22.4	20.0
Level of Service		F			C			C			C	C
Approach Delay (s)		109.4			22.7			34.0			20.8	
Approach LOS		F			C			C			C	

Intersection Summary			
HCM Average Control Delay	55.9	HCM Level of Service	E
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	72.4%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1001: 95th Street & Wentworth Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			✥			✥	
Volume (vph)	39	598	28	35	1014	58	36	35	48	23	26	87
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	16	10	10	16	8	15	8	8	14	8
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			0.99			0.98	
Flpb, ped/bikes	0.98	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.99			0.95			0.91	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1557	3022		1587	3021			1816			1706	
Flt Permitted	0.17	1.00		0.36	1.00			0.89			0.95	
Satd. Flow (perm)	277	3022		604	3021			1649			1630	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	41	629	29	37	1067	61	38	37	51	24	27	92
RTOR Reduction (vph)	0	5	0	0	6	0	0	33	0	0	21	0
Lane Group Flow (vph)	41	653	0	37	1122	0	0	93	0	0	122	0
Confl. Peds. (#/hr)	145		16	16		145	17		19	19		17
Confl. Bikes (#/hr)	5					5			2	2		
Heavy Vehicles (%)	0%	5%	0%	0%	4%	2%	0%	0%	0%	0%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	34.0	34.0		34.0	34.0			22.0			22.0	
Effective Green, g (s)	34.0	34.0		34.0	34.0			23.0			23.0	
Actuated g/C Ratio	0.52	0.52		0.52	0.52			0.35			0.35	
Clearance Time (s)	4.0	4.0		4.0	4.0			5.0			5.0	
Lane Grp Cap (vph)	145	1581		316	1580			583			577	
v/s Ratio Prot		0.22			c0.37							
v/s Ratio Perm	0.15			0.06				0.06			c0.07	
v/c Ratio	0.28	0.41		0.12	0.71			0.16			0.21	
Uniform Delay, d1	8.7	9.4		7.9	11.8			14.4			14.7	
Progression Factor	1.00	1.00		0.70	1.41			1.00			1.00	
Incremental Delay, d2	4.8	0.8		0.7	2.4			0.6			0.8	
Delay (s)	13.5	10.2		6.2	19.1			15.0			15.5	
Level of Service	B	B		A	B			B			B	
Approach Delay (s)		10.4			18.6			15.0			15.5	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	15.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1002: 95th Street & Lafayette Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↑	↱				↰↰	↑	↱
Volume (vph)	25	789	5	32	637	41	0	0	0	586	89	379
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	5.0	5.0		3.0	3.0	3.0				5.0	5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00				0.97	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.67				1.00	1.00	0.98
Flpb, ped/bikes	0.93	1.00		1.00	1.00	1.00				1.00	1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85				1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00				0.95	1.00	1.00
Satd. Flow (prot)	793	3379		1710	3226	514				3285	1731	1481
Flt Permitted	0.40	1.00		0.14	1.00	1.00				0.95	1.00	1.00
Satd. Flow (perm)	331	3379		248	3226	514				3285	1731	1481
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	26	831	5	34	671	43	0	0	0	617	94	399
RTOR Reduction (vph)	0	0	0	0	0	19	0	0	0	0	0	166
Lane Group Flow (vph)	26	836	0	34	671	24	0	0	0	617	94	233
Confl. Peds. (#/hr)	350		4	4		350	8		6	6		8
Confl. Bikes (#/hr)	7		1	1		7						
Heavy Vehicles (%)	100%	1%	20%	0%	6%	100%	0%	0%	0%	1%	4%	1%
Turn Type	pm+pt			pm+pt		Perm				Split		Perm
Protected Phases	7	4		3	8					6	6	
Permitted Phases	4			8		8						6
Actuated Green, G (s)	43.0	43.0		73.0	73.0	73.0				30.0	30.0	30.0
Effective Green, g (s)	43.0	43.0		73.0	73.0	73.0				30.0	30.0	30.0
Actuated g/C Ratio	0.33	0.33		0.56	0.56	0.56				0.23	0.23	0.23
Clearance Time (s)	5.0	5.0		3.0	3.0	3.0				5.0	5.0	5.0
Lane Grp Cap (vph)	159	1118		634	1812	289				758	399	342
v/s Ratio Prot	0.02	c0.25		0.02	c0.21					c0.19	0.05	
v/s Ratio Perm	0.04			0.01		0.05						0.16
v/c Ratio	0.16	0.75		0.05	0.37	0.08				0.81	0.24	0.68
Uniform Delay, d1	31.6	38.7		15.2	15.8	13.1				47.4	40.7	45.6
Progression Factor	0.85	0.86		0.33	0.75	1.24				1.00	1.00	1.00
Incremental Delay, d2	2.1	4.4		0.1	0.4	0.4				9.3	1.4	10.5
Delay (s)	28.9	37.6		5.1	12.2	16.6				56.7	42.1	56.1
Level of Service	C	D		A	B	B				E	D	E
Approach Delay (s)		37.3			12.2			0.0			55.2	
Approach LOS		D			B			A			E	

Intersection Summary			
HCM Average Control Delay	37.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	53.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↱		↰	↑↑	↱		↰↑	↱	↰		↱
Volume (vph)	340	815	220	54	578	287	102	251	55	39	0	30
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0	3.0		5.0	5.0	5.0		5.0	5.0	5.0		5.0
Lane Util. Factor	0.97	0.95		1.00	0.95	1.00		0.95	1.00	1.00		1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.67		1.00	0.91	1.00		0.96
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Frt	1.00	0.97		1.00	1.00	0.85		1.00	0.85	1.00		0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.99	1.00	0.95		1.00
Satd. Flow (prot)	3285	3262		1710	3138	1018		3301	1359	855		734
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.99	1.00	0.95		1.00
Satd. Flow (perm)	3285	3262		1710	3138	1018		3301	1359	855		734
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	358	858	232	57	608	302	107	264	58	41	0	32
RTOR Reduction (vph)	0	18	0	0	0	228	0	0	42	0	0	30
Lane Group Flow (vph)	358	1072	0	57	608	74	0	371	16	41	0	2
Confl. Peds. (#/hr)	327		13	13		327	6		60	60		6
Confl. Bikes (#/hr)	6					6						
Heavy Vehicles (%)	1%	1%	0%	0%	9%	1%	0%	3%	2%	100%	0%	100%
Turn Type	Prot			Prot		Perm	Split		Perm	Prot		custom
Protected Phases	7	4		3	8		2	2		6		
Permitted Phases						8			2			6
Actuated Green, G (s)	44.0	68.0		8.0	32.0	32.0		28.0	28.0	8.0		8.0
Effective Green, g (s)	44.0	68.0		8.0	32.0	32.0		28.0	28.0	8.0		8.0
Actuated g/C Ratio	0.34	0.52		0.06	0.25	0.25		0.22	0.22	0.06		0.06
Clearance Time (s)	3.0	3.0		5.0	5.0	5.0		5.0	5.0	5.0		5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0	3.0	3.0		3.0
Lane Grp Cap (vph)	1112	1706		105	772	251		711	293	53		45
v/s Ratio Prot	0.11	c0.33		0.03	c0.19			c0.11		c0.05		
v/s Ratio Perm						0.07			0.01			0.00
v/c Ratio	0.32	0.63		0.54	0.79	0.30		0.52	0.06	0.77		0.04
Uniform Delay, d1	31.9	22.0		59.2	45.8	39.8		45.1	40.5	60.1		57.4
Progression Factor	0.95	0.16		1.00	1.00	1.00		0.94	0.99	1.00		1.00
Incremental Delay, d2	0.5	1.1		18.7	8.0	3.0		2.7	0.4	49.7		0.4
Delay (s)	30.7	4.7		77.9	53.8	42.8		45.3	40.6	109.9		57.8
Level of Service	C	A		E	D	D		D	D	F		E
Approach Delay (s)		11.1			51.8			44.7			87.0	
Approach LOS		B			D			D			F	

Intersection Summary			
HCM Average Control Delay	31.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	68.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1004: 95th Street & Michigan Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱		↰	↑↑		↰		↱	↰	↱	
Volume (vph)	0	893	166	105	839	0	74	0	89	9	15	7
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	11	11	8	12	12	12	14	15	12
Total Lost time (s)		4.0		4.0	4.0		4.0		4.0	4.0	4.0	
Lane Util. Factor		0.95		1.00	0.95		1.00		1.00	1.00	1.00	
Frpb, ped/bikes		0.99		1.00	1.00		1.00		0.98	1.00	0.98	
Flpb, ped/bikes		1.00		1.00	1.00		0.97		1.00	0.99	1.00	
Frt		0.98		1.00	1.00		1.00		0.85	1.00	0.95	
Flt Protected		1.00		0.95	1.00		0.95		1.00	0.95	1.00	
Satd. Flow (prot)		2997		1649	3149		1388		1451	1803	1857	
Flt Permitted		1.00		0.17	1.00		0.74		1.00	0.95	1.00	
Satd. Flow (perm)		2997		299	3149		1082		1451	1803	1857	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	992	184	117	932	0	82	0	99	10	17	8
RTOR Reduction (vph)	0	15	0	0	0	0	0	0	67	0	5	0
Lane Group Flow (vph)	0	1161	0	117	932	0	82	0	32	10	20	0
Confl. Peds. (#/hr)	67		19	19		67	38		12	12		38
Confl. Bikes (#/hr)			1	1								
Heavy Vehicles (%)	0%	2%	11%	0%	5%	0%	19%	0%	3%	0%	0%	0%
Turn Type				Perm			custom		custom	Perm		
Protected Phases		4			8						6	
Permitted Phases				8			2		2	6		
Actuated Green, G (s)		60.0		60.0	60.0		32.0		32.0	32.0	32.0	
Effective Green, g (s)		60.0		60.0	60.0		32.0		32.0	32.0	32.0	
Actuated g/C Ratio		0.60		0.60	0.60		0.32		0.32	0.32	0.32	
Clearance Time (s)		4.0		4.0	4.0		4.0		4.0	4.0	4.0	
Lane Grp Cap (vph)		1798		179	1889		346		464	577	594	
v/s Ratio Prot		0.39			0.30						0.01	
v/s Ratio Perm				c0.39			c0.08		0.02	0.01		
v/c Ratio		0.65		0.65	0.49		0.24		0.07	0.02	0.03	
Uniform Delay, d1		13.1		13.2	11.4		25.0		23.6	23.2	23.4	
Progression Factor		1.00		1.00	1.00		1.00		1.00	1.00	1.00	
Incremental Delay, d2		1.8		17.1	0.9		1.6		0.3	0.1	0.1	
Delay (s)		14.9		30.3	12.3		26.6		23.9	23.3	23.5	
Level of Service		B		C	B		C		C	C	C	
Approach Delay (s)		14.9			14.3			25.1			23.4	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM Average Control Delay	15.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	61.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1005: 98th Place & Halsted Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↰	↰	↱	↰	↑↑↑			↑↑↱	
Volume (vph)	0	0	0	301	0	1230	215	686	0	0	792	490
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	12	12	10	10	12	12	11	12
Total Lost time (s)				4.0		5.0	3.0	4.0			4.0	
Lane Util. Factor				0.95		1.00	1.00	0.91			0.91	
Frpb, ped/bikes				1.00		1.00	1.00	1.00			0.98	
Flpb, ped/bikes				1.00		1.00	1.00	1.00			1.00	
Frt				1.00		0.85	1.00	1.00			0.94	
Flt Protected				0.95		1.00	0.95	1.00			1.00	
Satd. Flow (prot)				1540		1530	1535	4327			4271	
Flt Permitted				0.95		1.00	0.95	1.00			1.00	
Satd. Flow (perm)				1540		1530	1535	4327			4271	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	0	0	307	0	1255	219	700	0	0	808	500
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	307	0	1255	219	700	0	0	1308	0
Confl. Peds. (#/hr)	2					2	18		3	3		18
Heavy Vehicles (%)	0%	0%	0%	2%	0%	0%	4%	6%	0%	0%	4%	1%
Turn Type				Split		Prot	Prot					
Protected Phases				8	8	8	5	2			6	
Permitted Phases												
Actuated Green, G (s)				30.0		30.0	32.0	66.0			31.0	
Effective Green, g (s)				31.0		30.0	32.0	66.0			31.0	
Actuated g/C Ratio				0.30		0.29	0.30	0.63			0.30	
Clearance Time (s)				5.0		5.0	3.0	4.0			4.0	
Lane Grp Cap (vph)				455		437	468	2720			1261	
v/s Ratio Prot				0.20		c0.82	c0.14	0.16			c0.31	
v/s Ratio Perm												
v/c Ratio				0.67		2.87	0.47	0.26			1.16dr	
Uniform Delay, d1				32.6		37.5	29.6	8.6			37.0	
Progression Factor				1.00		1.00	0.64	2.11			1.00	
Incremental Delay, d2				7.8		848.6	2.8	0.2			35.5	
Delay (s)				40.4		886.1	21.8	18.4			72.5	
Level of Service				D		F	C	B			E	
Approach Delay (s)		0.0			719.9			19.2			72.5	
Approach LOS		A			F			B			E	

Intersection Summary			
HCM Average Control Delay	326.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.43		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	102.1%	ICU Level of Service	G
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1006: 99th Street & Halsted Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↰↑↱						↑↑↑	↱↱	↰	↑↑↑	
Volume (vph)	322	770	146	0	0	0	0	579	410	359	734	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	13	12	12	12	12	12	10	10	8	12	12	12
Total Lost time (s)	5.0	5.0						4.0	4.0	3.0	4.0	
Lane Util. Factor	0.91	0.91						0.91	0.88	1.00	0.91	
Frpb, ped/bikes	1.00	1.00						1.00	1.00	1.00	1.00	
Flpb, ped/bikes	0.99	1.00						1.00	1.00	1.00	1.00	
Frt	1.00	0.98						1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00						1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1509	3156						4368	2244	1598	4680	
Flt Permitted	0.95	1.00						1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1509	3156						4368	2244	1598	4680	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	332	794	151	0	0	0	0	597	423	370	757	0
RTOR Reduction (vph)	0	14	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	299	964	0	0	0	0	0	597	423	370	757	0
Confl. Peds. (#/hr)	6		1	1		6	6					6
Heavy Vehicles (%)	6%	1%	0%	0%	0%	0%	0%	5%	4%	7%	5%	0%
Turn Type	Perm								Perm	Prot		
Protected Phases		4						2		1	6	
Permitted Phases	4								2			
Actuated Green, G (s)	34.0	34.0						28.0	28.0	31.0	62.0	
Effective Green, g (s)	34.0	34.0						28.0	28.0	31.0	62.0	
Actuated g/C Ratio	0.32	0.32						0.27	0.27	0.30	0.59	
Clearance Time (s)	5.0	5.0						4.0	4.0	3.0	4.0	
Lane Grp Cap (vph)	489	1022						1165	598	472	2763	
v/s Ratio Prot								0.14		c0.23	0.16	
v/s Ratio Perm	0.20	0.31							c0.19			
v/c Ratio	0.61	0.94						0.51	0.71	0.78	0.27	
Uniform Delay, d1	29.9	34.6						32.7	34.8	33.9	10.5	
Progression Factor	1.00	1.00						1.14	1.14	0.86	0.22	
Incremental Delay, d2	5.6	17.5						1.4	6.2	4.8	0.1	
Delay (s)	35.5	52.0						38.7	45.8	34.1	2.4	
Level of Service	D	D						D	D	C	A	
Approach Delay (s)		48.2			0.0			41.6			12.8	
Approach LOS		D			A			D			B	

Intersection Summary			
HCM Average Control Delay	34.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	102.1%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1007: 98th Place & Wentworth Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↰	↑↱		↰	↑			↱	
Volume (vph)	0	0	0	290	25	24	11	164	0	0	149	5
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	14	12	12	16	12
Total Lost time (s)				4.0	4.0		4.0	4.0			-3.0	
Lane Util. Factor				1.00	0.95		1.00	1.00			1.00	
Frpb, ped/bikes				1.00	0.99		1.00	1.00			1.00	
Flpb, ped/bikes				1.00	1.00		1.00	1.00			1.00	
Frt				1.00	0.93		1.00	1.00			1.00	
Flt Protected				0.95	1.00		0.95	1.00			1.00	
Satd. Flow (prot)				1688	3132		1710	1846			1955	
Flt Permitted				0.95	1.00		0.54	1.00			1.00	
Satd. Flow (perm)				1688	3132		974	1846			1955	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	322	28	27	12	182	0	0	166	6
RTOR Reduction (vph)	0	0	0	0	18	0	0	0	0	0	1	0
Lane Group Flow (vph)	0	0	0	322	37	0	12	182	0	0	171	0
Confl. Peds. (#/hr)	2		2	2		2			6	6		
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	0%	0%	0%	1%	0%	0%	0%	4%	0%	0%	4%	0%
Turn Type				Perm			pm+pt					
Protected Phases					8		7	2			6	
Permitted Phases				8			2					
Actuated Green, G (s)				27.0	27.0		50.0	50.0			40.0	
Effective Green, g (s)				27.0	27.0		50.0	50.0			46.0	
Actuated g/C Ratio				0.32	0.32		0.59	0.59			0.54	
Clearance Time (s)				4.0	4.0		4.0	4.0			3.0	
Lane Grp Cap (vph)				536	995		634	1086			1058	
v/s Ratio Prot					0.01		0.00	c0.10			0.09	
v/s Ratio Perm				c0.19			0.01					
v/c Ratio				0.60	0.04		0.02	0.17			0.16	
Uniform Delay, d1				24.5	20.0		10.5	8.0			9.8	
Progression Factor				1.00	1.00		1.04	1.18			1.00	
Incremental Delay, d2				4.9	0.1		0.1	0.3			0.3	
Delay (s)				29.4	20.1		11.0	9.8			10.1	
Level of Service				C	C		B	A			B	
Approach Delay (s)		0.0			28.0			9.8			10.1	
Approach LOS		A			C			A			B	

Intersection Summary			
HCM Average Control Delay	19.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	37.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱			✥			↱		↰	↑	
Volume (vph)	12	11	23	5	0	14	0	149	45	46	393	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	16	15	12	8	12	8	12	12	12	10	13	12
Total Lost time (s)	4.0	4.0			4.0			3.0		4.0	4.0	
Lane Util. Factor	1.00	1.00			1.00			1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.97			0.98			0.99		1.00	1.00	
Flpb, ped/bikes	1.00	1.00			1.00			1.00		1.00	1.00	
Frt	1.00	0.90			0.90			0.97		1.00	1.00	
Flt Protected	0.95	1.00			0.99			1.00		0.95	1.00	
Satd. Flow (prot)	1935	1735			1565			1718		1590	1860	
Flt Permitted	0.74	1.00			0.97			1.00		0.59	1.00	
Satd. Flow (perm)	1516	1735			1531			1718		987	1860	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	13	12	24	5	0	15	0	157	47	48	414	0
RTOR Reduction (vph)	0	16	0	0	10	0	0	13	0	0	0	0
Lane Group Flow (vph)	13	20	0	0	10	0	0	191	0	48	414	0
Confl. Peds. (#/hr)	1		11	11		1	1		10	10		1
Confl. Bikes (#/hr)			2	2			1		2	2		1
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%
Turn Type	Perm			Perm						pm+pt		
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8						6		
Actuated Green, G (s)	27.0	27.0			27.0			40.0		50.0	50.0	
Effective Green, g (s)	27.0	27.0			27.0			40.0		50.0	50.0	
Actuated g/C Ratio	0.32	0.32			0.32			0.47		0.59	0.59	
Clearance Time (s)	4.0	4.0			4.0			3.0		4.0	4.0	
Lane Grp Cap (vph)	482	551			486			808		630	1094	
v/s Ratio Prot		c0.01						0.11		0.01	c0.22	
v/s Ratio Perm	0.01				0.01					0.04		
v/c Ratio	0.03	0.04			0.02			0.24		0.08	0.38	
Uniform Delay, d1	20.0	20.0			19.9			13.4		8.8	9.3	
Progression Factor	1.00	1.00			1.00			1.00		0.98	0.87	
Incremental Delay, d2	0.1	0.1			0.1			0.7		0.2	0.9	
Delay (s)	20.1	20.1			20.0			14.1		8.8	9.0	
Level of Service	C	C			B			B		A	A	
Approach Delay (s)		20.1			20.0			14.1			9.0	
Approach LOS		C			B			B			A	

Intersection Summary			
HCM Average Control Delay	11.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	41.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1009: 99th St & State Street

1/14/2013

	↗	↘	↖	↑	↓	↙
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	⋎		↰	↑	↱	
Volume (vph)	48	42	12	193	288	28
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	14	12	13	12	10	12
Total Lost time (s)	4.0		4.0	4.0	4.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.94		1.00	1.00	0.99	
Flt Protected	0.97		0.95	1.00	1.00	
Satd. Flow (prot)	1752		1765	1782	1657	
Flt Permitted	0.97		0.50	1.00	1.00	
Satd. Flow (perm)	1752		937	1782	1657	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	53	47	13	214	320	31
RTOR Reduction (vph)	32	0	0	0	5	0
Lane Group Flow (vph)	68	0	13	214	346	0
Confl. Peds. (#/hr)			2			2
Heavy Vehicles (%)	0%	0%	0%	1%	0%	0%
Turn Type			Perm			
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	21.0		36.0	36.0	36.0	
Effective Green, g (s)	21.0		36.0	36.0	36.0	
Actuated g/C Ratio	0.32		0.55	0.55	0.55	
Clearance Time (s)	4.0		4.0	4.0	4.0	
Lane Grp Cap (vph)	566		519	987	918	
v/s Ratio Prot	c0.04			0.12	c0.21	
v/s Ratio Perm			0.01			
v/c Ratio	0.12		0.03	0.22	0.38	
Uniform Delay, d1	15.5		6.6	7.4	8.2	
Progression Factor	1.00		0.51	0.61	1.43	
Incremental Delay, d2	0.4		0.1	0.5	1.0	
Delay (s)	15.9		3.4	5.0	12.7	
Level of Service	B		A	A	B	
Approach Delay (s)	15.9			4.9	12.7	
Approach LOS	B			A	B	

Intersection Summary			
HCM Average Control Delay	10.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	30.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1010: 99th St & Michigan Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↰↑↱		↰	↑			↑	↱
Volume (vph)	0	0	0	31	268	9	258	132	0	0	283	17
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	14	16	12	12	15	12	12	13	10
Total Lost time (s)					4.0		4.0	4.0			3.0	3.0
Lane Util. Factor					0.95		1.00	1.00			1.00	1.00
Frpb, ped/bikes					1.00		1.00	1.00			1.00	1.00
Flpb, ped/bikes					1.00		1.00	1.00			1.00	1.00
Frt					1.00		1.00	1.00			1.00	0.85
Flt Protected					1.00		0.95	1.00			1.00	1.00
Satd. Flow (prot)					3772		1693	1678			1738	1428
Flt Permitted					1.00		0.47	1.00			1.00	1.00
Satd. Flow (perm)					3772		844	1678			1738	1428
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	34	298	10	287	147	0	0	314	19
RTOR Reduction (vph)	0	0	0	0	3	0	0	0	0	0	0	11
Lane Group Flow (vph)	0	0	0	0	339	0	287	147	0	0	314	8
Confl. Peds. (#/hr)	1					1			5	5		
Heavy Vehicles (%)	0%	0%	0%	0%	2%	0%	1%	18%	0%	0%	7%	0%
Turn Type				Split			pm+pt					Perm
Protected Phases				8	8		7	2			6	
Permitted Phases							2					6
Actuated Green, G (s)					26.0		51.0	51.0			38.0	38.0
Effective Green, g (s)					26.0		51.0	51.0			38.0	38.0
Actuated g/C Ratio					0.31		0.60	0.60			0.45	0.45
Clearance Time (s)					4.0		4.0	4.0			3.0	3.0
Lane Grp Cap (vph)					1154		606	1007			777	638
v/s Ratio Prot					c0.09		c0.06	0.09			0.18	
v/s Ratio Perm							c0.23					0.01
v/c Ratio					0.29		0.47	0.15			0.40	0.01
Uniform Delay, d1					22.5		13.7	7.5			15.9	13.1
Progression Factor					1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2					0.6		2.6	0.3			1.6	0.0
Delay (s)					23.1		16.4	7.8			17.4	13.1
Level of Service					C		B	A			B	B
Approach Delay (s)		0.0			23.1			13.5			17.2	
Approach LOS		A			C			B			B	

Intersection Summary			
HCM Average Control Delay	17.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					✥		↰	↑↱		↰	↑↱	
Volume (vph)	0	0	0	95	94	38	133	205	30	59	703	44
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	15	12	12	12	12	12	13	12
Total Lost time (s)					4.0		3.0	4.0		3.0	4.0	
Lane Util. Factor					1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes					1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes					1.00		1.00	1.00		1.00	1.00	
Frt					0.98		1.00	0.98		1.00	0.99	
Flt Protected					0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)					1896		1710	3287		1707	3467	
Flt Permitted					0.98		0.25	1.00		0.59	1.00	
Satd. Flow (perm)					1896		446	3287		1061	3467	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	106	104	42	148	228	33	66	781	49
RTOR Reduction (vph)	0	0	0	0	10	0	0	15	0	0	6	0
Lane Group Flow (vph)	0	0	0	0	242	0	148	246	0	66	824	0
Confl. Peds. (#/hr)							5		5	5		5
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	1%	0%
Turn Type				Split			pm+pt			pm+pt		
Protected Phases				8	8		5	2		1	6	
Permitted Phases							2			6		
Actuated Green, G (s)					23.0		41.0	34.0		41.0	34.0	
Effective Green, g (s)					23.0		41.0	34.0		41.0	34.0	
Actuated g/C Ratio					0.31		0.55	0.45		0.55	0.45	
Clearance Time (s)					4.0		3.0	4.0		3.0	4.0	
Lane Grp Cap (vph)					581		362	1490		640	1572	
v/s Ratio Prot					c0.13		c0.04	0.07		0.01	c0.24	
v/s Ratio Perm							0.19			0.05		
v/c Ratio					0.42		0.41	0.16		0.10	0.52	
Uniform Delay, d1					20.7		16.4	12.1		8.2	14.7	
Progression Factor					1.00		0.84	0.82		1.00	1.00	
Incremental Delay, d2					2.2		3.4	0.2		0.3	1.3	
Delay (s)					22.9		17.1	10.2		8.5	16.0	
Level of Service					C		B	B		A	B	
Approach Delay (s)		0.0			22.9			12.7			15.4	
Approach LOS		A			C			B			B	

Intersection Summary			
HCM Average Control Delay	15.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	53.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1012: 100th Street & Martin Luther King Jr Drive

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥		↰	↑↱		↰	↑↱	
Volume (vph)	32	49	13	9	63	63	7	273	24	159	589	50
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	16	12	12	10	11	12	12	11	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.98			0.94		1.00	0.99		1.00	0.99	
Flt Protected		0.98			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1964			1655		1595	3172		1704	3231	
Flt Permitted		0.89			0.99		0.36	1.00		0.56	1.00	
Satd. Flow (perm)		1775			1637		600	3172		1008	3231	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	34	52	14	9	66	66	7	287	25	167	620	53
RTOR Reduction (vph)	0	8	0	0	42	0	0	9	0	0	8	0
Lane Group Flow (vph)	0	92	0	0	99	0	7	303	0	167	665	0
Confl. Peds. (#/hr)	2					2	1		6	6		1
Confl. Bikes (#/hr)			1	1			3					3
Heavy Vehicles (%)	0%	0%	0%	0%	2%	0%	0%	3%	0%	0%	1%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		25.0			25.0		42.0	42.0		42.0	42.0	
Effective Green, g (s)		25.0			25.0		42.0	42.0		42.0	42.0	
Actuated g/C Ratio		0.33			0.33		0.56	0.56		0.56	0.56	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		592			546		336	1776		564	1809	
v/s Ratio Prot								0.10			c0.21	
v/s Ratio Perm		0.05			c0.06		0.01			0.17		
v/c Ratio		0.16			0.18		0.02	0.17		0.30	0.37	
Uniform Delay, d1		17.6			17.7		7.3	8.0		8.7	9.1	
Progression Factor		1.00			1.00		1.00	1.00		0.27	0.25	
Incremental Delay, d2		0.6			0.7		0.1	0.2		1.2	0.5	
Delay (s)		18.1			18.5		7.5	8.2		3.5	2.8	
Level of Service		B			B		A	A		A	A	
Approach Delay (s)		18.1			18.5			8.2			2.9	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	6.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	48.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis
1013: 100th Street & Cottage Grove Avenue

1/14/2013

	↗	↘	↖	↑	↓	↙
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰↱			↰↑	↑↱	
Sign Control	Stop			Stop	Stop	
Volume (vph)	37	192	67	251	588	81
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	41	213	74	279	653	90

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	254	167	186	436	308
Volume Left (vph)	41	74	0	0	0
Volume Right (vph)	213	0	0	0	90
Hadj (s)	-0.42	0.27	0.05	0.05	-0.15
Departure Headway (s)	5.7	6.6	6.3	5.9	5.7
Degree Utilization, x	0.41	0.30	0.33	0.71	0.48
Capacity (veh/h)	592	528	546	602	622
Control Delay (s)	12.6	11.2	11.2	20.8	12.7
Approach Delay (s)	12.6	11.2		17.4	
Approach LOS	B	B		C	

Intersection Summary			
Delay	14.9		
HCM Level of Service	B		
Intersection Capacity Utilization	53.9%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Signalized Intersection Capacity Analysis
1014: 103rd Street & Vincennes Avenue

1/14/2013

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR
Lane Configurations		↰	↑	↱	↰	↑	↱			↰	↑↱	
Volume (vph)	32	35	378	18	24	414	78	82	55	68	354	32
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		3.5	4.0	4.0	4.0	4.0	4.0			4.0	4.0	
Lane Util. Factor		1.00	1.00	1.00	1.00	1.00	1.00			1.00	0.95	
Frpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	0.93			1.00	1.00	
Flpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	
Frt		1.00	1.00	0.85	1.00	1.00	0.85			1.00	0.99	
Flt Protected		0.95	1.00	1.00	0.95	1.00	1.00			0.95	1.00	
Satd. Flow (prot)		1612	1731	1530	1710	1731	1421			1710	3251	
Flt Permitted		0.14	1.00	1.00	0.52	1.00	1.00			0.14	1.00	
Satd. Flow (perm)		238	1731	1530	930	1731	1421			257	3251	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	36	39	420	20	27	460	87	91	61	76	393	36
RTOR Reduction (vph)	0	0	0	12	0	0	36	0	0	0	7	0
Lane Group Flow (vph)	0	75	420	8	27	460	142	0	0	137	422	0
Confl. Peds. (#/hr)		25					25					3
Heavy Vehicles (%)	6%	6%	4%	0%	0%	4%	0%	0%	0%	0%	4%	0%
Turn Type	Perm	pm+pt		Perm	Perm		Perm		Perm	Perm		
Protected Phases		7	4			8					2	
Permitted Phases	4	4		4	8		8		2	2		
Actuated Green, G (s)		44.0	44.0	44.0	25.0	25.0	25.0			28.0	28.0	
Effective Green, g (s)		44.0	44.0	44.0	25.0	25.0	25.0			28.0	28.0	
Actuated g/C Ratio		0.42	0.42	0.42	0.24	0.24	0.24			0.27	0.27	
Clearance Time (s)		3.5	4.0	4.0	4.0	4.0	4.0			4.0	4.0	
Lane Grp Cap (vph)		303	725	641	221	412	338			69	867	
v/s Ratio Prot		0.04	c0.24			c0.27					0.13	
v/s Ratio Perm		0.07		0.01	0.03		0.10			c0.53		
v/c Ratio		0.25	0.58	0.01	0.12	1.12	0.42			1.99	0.49	
Uniform Delay, d1		21.6	23.4	17.8	31.4	40.0	33.9			38.5	32.4	
Progression Factor		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	
Incremental Delay, d2		1.9	3.4	0.0	1.1	79.9	3.8			491.0	2.0	
Delay (s)		23.5	26.8	17.9	32.5	119.9	37.7			529.5	34.4	
Level of Service		C	C	B	C	F	D			F	C	
Approach Delay (s)			25.9			94.3					154.2	
Approach LOS			C			F					F	

Intersection Summary			
HCM Average Control Delay	147.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.45		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	104.2%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1014: 103rd Street & Vincennes Avenue

1/14/2013

Movement	SBL	SBT	SBR	SBR2	SEL2	SEL	SER	SER2
Lane Configurations	↰	↑↱				↰	↗↰	
Volume (vph)	107	571	82	103	4	114	607	197
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.5	4.5				4.5	4.5	
Lane Util. Factor	1.00	0.95				1.00	0.88	
Frpb, ped/bikes	1.00	1.00				1.00	1.00	
Flpb, ped/bikes	1.00	1.00				1.00	1.00	
Frt	1.00	0.96				1.00	0.85	
Flt Protected	0.95	1.00				0.95	1.00	
Satd. Flow (prot)	1705	3246				1710	2633	
Flt Permitted	0.37	1.00				0.95	1.00	
Satd. Flow (perm)	670	3246				1710	2633	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	119	634	91	114	4	127	674	219
RTOR Reduction (vph)	0	12	0	0	0	0	26	0
Lane Group Flow (vph)	119	827	0	0	0	131	867	0
Confl. Peds. (#/hr)	3							
Heavy Vehicles (%)	0%	2%	0%	0%	0%	0%	3%	0%
Turn Type	Perm				Split		Perm	
Protected Phases		6			9	9		
Permitted Phases	6						9	
Actuated Green, G (s)	27.5	27.5				20.5	20.5	
Effective Green, g (s)	27.5	27.5				20.5	20.5	
Actuated g/C Ratio	0.26	0.26				0.20	0.20	
Clearance Time (s)	4.5	4.5				4.5	4.5	
Lane Grp Cap (vph)	175	850				334	514	
v/s Ratio Prot		0.25				0.08		
v/s Ratio Perm	0.18						c0.33	
v/c Ratio	0.68	0.97				0.39	1.69	
Uniform Delay, d1	34.8	38.4				36.8	42.2	
Progression Factor	1.00	1.00				1.00	1.00	
Incremental Delay, d2	19.3	25.0				3.4	317.6	
Delay (s)	54.1	63.4				40.3	359.9	
Level of Service	D	E				D	F	
Approach Delay (s)		62.2				319.0		
Approach LOS		E				F		

Intersection Summary

HCM Signalized Intersection Capacity Analysis
1015: 103rd Street & Morgan Street

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰			↱			✥				
Volume (vph)	65	602	0	0	506	50	85	52	18	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	11	11	11	16	11	12	15	12	12	15	12
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		1.00			0.99			0.98				
Flt Protected		1.00			1.00			0.97				
Satd. Flow (prot)		1681			1956			1842				
Flt Permitted		0.90			1.00			0.97				
Satd. Flow (perm)		1523			1956			1842				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	72	669	0	0	562	56	94	58	20	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	741	0	0	618	0	0	172	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)		40.0			40.0			17.0				
Effective Green, g (s)		40.0			40.0			17.0				
Actuated g/C Ratio		0.62			0.62			0.26				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		937			1204			482				
v/s Ratio Prot					0.32							
v/s Ratio Perm		c0.49						0.09				
v/c Ratio		0.79			0.51			0.36				
Uniform Delay, d1		9.4			7.0			19.5				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		6.8			1.6			2.1				
Delay (s)		16.1			8.6			21.6				
Level of Service		B			A			C				
Approach Delay (s)		16.1			8.6			21.6			0.0	
Approach LOS		B			A			C			A	

Intersection Summary			
HCM Average Control Delay	13.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	87.6%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Lane Configurations		↰↑	↱		↰↑	↱	↰	↑↑	↱	↰	↑↑	↱
Volume (vph)	71	427	162	117	335	125	106	639	84	137	759	94
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	10	10	9	9	10	9
Total Lost time (s)		4.0	4.0		4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		1.00	0.96		1.00	0.96	1.00	1.00	0.95	1.00	1.00	0.94
Flpb, ped/bikes		1.00	1.00		0.99	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.99	1.00		0.99	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1985	1434		1950	1444	1546	3040	1296	1506	3069	1252
Flt Permitted		0.38	1.00		0.54	1.00	0.23	1.00	1.00	0.29	1.00	1.00
Satd. Flow (perm)		757	1434		1077	1444	373	3040	1296	455	3069	1252
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	75	449	171	123	353	132	112	673	88	144	799	99
RTOR Reduction (vph)	0	0	101	0	0	94	0	0	53	0	0	49
Lane Group Flow (vph)	0	524	70	0	476	38	112	673	35	144	799	50
Confl. Peds. (#/hr)	24		45	45		24	36		24	24		36
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	2%	2%	2%	2%	3%	2%	3%	5%	1%	2%	4%	3%
Turn Type	pm+pt		Perm	Perm		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)		43.0	43.0		30.0	30.0	50.6	42.3	42.3	51.4	42.7	42.7
Effective Green, g (s)		43.0	43.0		30.0	30.0	50.6	42.3	42.3	51.4	42.7	42.7
Actuated g/C Ratio		0.41	0.41		0.29	0.29	0.48	0.40	0.40	0.49	0.41	0.41
Clearance Time (s)		4.0	4.0		4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		427	587		308	413	272	1225	522	310	1248	509
v/s Ratio Prot		c0.12					0.03	0.22		c0.04	c0.26	
v/s Ratio Perm		0.39	0.05		c0.44	0.03	0.17		0.03	0.19		0.04
v/c Ratio		1.23	0.12		1.55	0.09	0.41	0.55	0.07	0.46	0.64	0.10
Uniform Delay, d1		31.0	19.2		37.5	27.5	16.5	24.0	19.2	16.0	25.0	19.2
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.75	1.55	2.63
Incremental Delay, d2		121.4	0.4		261.0	0.4	1.0	1.8	0.3	1.1	2.4	0.4
Delay (s)		152.4	19.7		298.5	27.9	17.5	25.8	19.5	29.0	41.1	51.0
Level of Service		F	B		F	C	B	C	B	C	D	D
Approach Delay (s)		119.7			239.8			24.1			40.4	
Approach LOS		F			F			C			D	

Intersection Summary			
HCM Average Control Delay	90.8	HCM Level of Service	F
HCM Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	95.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣				
Volume (vph)	85	486	99	94	468	94	55	61	69	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	15	12	12	15	12
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		0.98			0.98			0.95				
Flt Protected		0.99			0.99			0.99				
Satd. Flow (prot)		1645			1645			1799				
Flt Permitted		0.85			0.83			0.99				
Satd. Flow (perm)		1411			1381			1799				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	94	540	110	104	520	104	61	68	77	0	0	0
RTOR Reduction (vph)	0	10	0	0	9	0	0	33	0	0	0	0
Lane Group Flow (vph)	0	734	0	0	719	0	0	173	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm			Perm					
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Actuated Green, G (s)		40.0			40.0			17.0				
Effective Green, g (s)		40.0			40.0			17.0				
Actuated g/C Ratio		0.62			0.62			0.26				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		868			850			471				
v/s Ratio Prot												
v/s Ratio Perm		c0.52			0.52			0.10				
v/c Ratio		0.85			0.85			0.37				
Uniform Delay, d1		10.0			10.0			19.6				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		10.0			10.1			2.2				
Delay (s)		20.0			20.1			21.8				
Level of Service		B			C			C				
Approach Delay (s)		20.0			20.1			21.8			0.0	
Approach LOS		B			C			C			A	

Intersection Summary			
HCM Average Control Delay	20.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	69.7%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1018: 103rd Street & Wentworth Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱		↰	↱		✥	
Volume (vph)	53	485	82	76	525	37	39	76	72	54	238	55
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	11	12	12	15	12
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frpb, ped/bikes		1.00	0.96		1.00	0.96		1.00	0.96		0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		0.99	1.00		1.00	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		0.98	
Flt Protected		1.00	1.00		0.99	1.00		0.98	1.00		0.99	
Satd. Flow (prot)		1685	1382		1713	1417		1685	1455		1879	
Flt Permitted		0.89	1.00		0.85	1.00		0.82	1.00		0.94	
Satd. Flow (perm)		1505	1382		1459	1417		1404	1455		1774	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	56	511	86	80	553	39	41	80	76	57	251	58
RTOR Reduction (vph)	0	0	37	0	0	12	0	0	52	0	9	0
Lane Group Flow (vph)	0	567	49	0	633	27	0	121	24	0	357	0
Confl. Peds. (#/hr)	25		19	19		25	36		30	30		36
Confl. Bikes (#/hr)	1		2	2		1	3					3
Heavy Vehicles (%)	0%	3%	3%	0%	1%	0%	0%	1%	1%	0%	1%	0%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		43.0	43.0		43.0	43.0		24.0	24.0		24.0	
Effective Green, g (s)		43.0	43.0		43.0	43.0		24.0	24.0		24.0	
Actuated g/C Ratio		0.57	0.57		0.57	0.57		0.32	0.32		0.32	
Clearance Time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	
Lane Grp Cap (vph)		863	792		836	812		449	466		568	
v/s Ratio Prot												
v/s Ratio Perm		0.38	0.04		c0.43	0.02		0.09	0.02		c0.20	
v/c Ratio		0.66	0.06		0.76	0.03		0.27	0.05		0.63	
Uniform Delay, d1		11.0	7.1		12.1	7.0		19.0	17.6		21.7	
Progression Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2		3.9	0.2		6.3	0.1		1.5	0.2		5.2	
Delay (s)		14.8	7.2		18.4	7.0		20.4	17.8		26.9	
Level of Service		B	A		B	A		C	B		C	
Approach Delay (s)		13.8			17.7			19.4			26.9	
Approach LOS		B			B			B			C	

Intersection Summary			
HCM Average Control Delay	18.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	100.7%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1019: 103rd Street & State Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑	↱	↰	↑	↱
Volume (vph)	59	483	34	45	537	54	45	165	55	123	210	33
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	11	16	8	10	10	10	10	10	10
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00	0.98	1.00	1.00	0.98
Flpb, ped/bikes	0.98	1.00		1.00	1.00		0.99	1.00	1.00	0.99	1.00	1.00
Frt	1.00	0.99		1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1533	3066		1652	3730		1585	1663	1370	1568	1680	1397
Flt Permitted	0.35	1.00		0.40	1.00		0.57	1.00	1.00	0.63	1.00	1.00
Satd. Flow (perm)	563	3066		687	3730		953	1663	1370	1043	1680	1397
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	66	537	38	50	597	60	50	183	61	137	233	37
RTOR Reduction (vph)	0	8	0	0	12	0	0	0	37	0	0	22
Lane Group Flow (vph)	66	567	0	50	645	0	50	183	24	137	233	15
Confl. Peds. (#/hr)	51		3	3		51	13		13	13		13
Heavy Vehicles (%)	2%	3%	3%	0%	2%	0%	0%	1%	2%	1%	0%	0%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	31.0	31.0		31.0	31.0		26.0	26.0	26.0	26.0	26.0	26.0
Effective Green, g (s)	31.0	31.0		31.0	31.0		26.0	26.0	26.0	26.0	26.0	26.0
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.40	0.40	0.40	0.40	0.40	0.40
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	269	1462		328	1779		381	665	548	417	672	559
v/s Ratio Prot		c0.19			0.17			0.11			c0.14	
v/s Ratio Perm	0.12			0.07			0.05		0.02	0.13		0.01
v/c Ratio	0.25	0.39		0.15	0.36		0.13	0.28	0.04	0.33	0.35	0.03
Uniform Delay, d1	10.1	10.9		9.6	10.8		12.3	13.1	11.9	13.5	13.6	11.8
Progression Factor	1.00	1.00		1.00	1.00		0.83	0.89	0.73	0.59	0.59	0.26
Incremental Delay, d2	2.2	0.8		1.0	0.6		0.7	1.0	0.2	2.0	1.4	0.1
Delay (s)	12.2	11.7		10.6	11.3		11.0	12.7	8.8	9.9	9.4	3.1
Level of Service	B	B		B	B		B	B	A	A	A	A
Approach Delay (s)		11.7			11.3			11.6			9.0	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM Average Control Delay	11.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	55.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	60	409	81	73	394	67	57	180	64	89	245	80
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	11	10	11	11	10	11	11	10	11	11
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.98		1.00	0.99		1.00	0.98		1.00	0.99	
Flpb, ped/bikes	0.97	1.00		0.95	1.00		0.99	1.00		0.96	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.96		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1329	3134		1519	3128		1580	2919		1452	2997	
Flt Permitted	0.44	1.00		0.42	1.00		0.53	1.00		0.59	1.00	
Satd. Flow (perm)	619	3134		678	3128		882	2919		907	2997	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	63	431	85	77	415	71	60	189	67	94	258	84
RTOR Reduction (vph)	0	0	0	0	0	0	0	39	0	0	42	0
Lane Group Flow (vph)	63	516	0	77	486	0	60	217	0	94	300	0
Confl. Peds. (#/hr)	112		99	99		112	23		53	53		23
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	16%	1%	0%	0%	1%	9%	0%	8%	2%	5%	5%	7%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	36.0	36.0		36.0	36.0		31.0	31.0		31.0	31.0	
Effective Green, g (s)	36.0	36.0		36.0	36.0		31.0	31.0		31.0	31.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.41	0.41		0.41	0.41	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	297	1504		325	1501		365	1207		375	1239	
v/s Ratio Prot		c0.16			0.16			0.07			0.10	
v/s Ratio Perm	0.10			0.11			0.07			c0.10		
v/c Ratio	0.21	0.34		0.24	0.32		0.16	0.18		0.25	0.24	
Uniform Delay, d1	11.3	12.1		11.4	12.0		13.8	13.9		14.4	14.3	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.6	0.6		1.7	0.6		1.0	0.3		1.6	0.5	
Delay (s)	12.9	12.8		13.2	12.6		14.8	14.3		16.0	14.8	
Level of Service	B	B		B	B		B	B		B	B	
Approach Delay (s)		12.8			12.7			14.4			15.1	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	13.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	51.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1021: 103rd Street & Martin Luther King Jr Drive

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱		↰	↑↱		↰	↑↱	
Volume (vph)	96	439	62	32	522	48	86	203	60	76	473	109
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	12	8	16	12	9	10	10	9	10	10
Total Lost time (s)	3.0	7.0		3.0	7.0		3.0	7.0		3.0	7.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.98		1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.99		1.00	0.97		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1595	1652		1370	1973		1534	2998		1535	3013	
Flt Permitted	0.24	1.00		0.31	1.00		0.28	1.00		0.58	1.00	
Satd. Flow (perm)	405	1652		447	1973		453	2998		939	3013	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	101	462	65	34	549	51	91	214	63	80	498	115
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	101	527	0	34	600	0	91	277	0	80	613	0
Confl. Peds. (#/hr)	21		95	95		21	36		8	8		36
Confl. Bikes (#/hr)	2		3	3		2	2					2
Heavy Vehicles (%)	0%	2%	0%	7%	2%	0%	0%	3%	0%	0%	2%	1%
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	43.9	39.3		40.7	37.7		26.7	21.8		26.7	21.8	
Effective Green, g (s)	43.9	37.3		40.7	35.7		26.7	19.8		26.7	19.8	
Actuated g/C Ratio	0.52	0.44		0.48	0.42		0.31	0.23		0.31	0.23	
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	5.0		3.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	274	725		247	829		205	698		329	702	
v/s Ratio Prot	c0.02	c0.32		0.00	0.30		c0.03	0.09		0.01	c0.20	
v/s Ratio Perm	0.17			0.06			0.11			0.06		
v/c Ratio	0.37	0.73		0.14	0.72		0.44	0.40		0.24	0.87	
Uniform Delay, d1	23.5	19.7		20.2	20.5		29.2	27.6		21.9	31.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.8	6.3		0.3	5.5		1.5	1.7		0.4	14.2	
Delay (s)	24.4	25.9		20.4	26.0		30.7	29.2		22.2	45.5	
Level of Service	C	C		C	C		C	C		C	D	
Approach Delay (s)		25.7			25.7			29.6			42.9	
Approach LOS		C			C			C			D	

Intersection Summary			
HCM Average Control Delay	31.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	79.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1022: 103rd Street & Cottage Grove Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	75	393	65	117	509	118	67	158	58	127	367	82
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	11	11	11	11	12	12	10	10	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		0.99	1.00	
Frt		0.98			0.98		1.00	0.96		1.00	0.97	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3681			3131		1652	3237		1549	3027	
Flt Permitted		0.71			0.72		0.42	1.00		0.60	1.00	
Satd. Flow (perm)		2643			2282		737	3237		983	3027	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	83	437	72	130	566	131	74	176	64	141	408	91
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	592	0	0	827	0	74	240	0	141	499	0
Confl. Peds. (#/hr)	23		30	30		23	1		20	20		1
Confl. Bikes (#/hr)	3					3						
Heavy Vehicles (%)	0%	3%	0%	2%	2%	0%	0%	1%	0%	2%	2%	3%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		33.0			33.0		32.0	32.0		32.0	32.0	
Effective Green, g (s)		34.0			34.0		33.0	33.0		33.0	33.0	
Actuated g/C Ratio		0.45			0.45		0.44	0.44		0.44	0.44	
Clearance Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)		1198			1035		324	1424		433	1332	
v/s Ratio Prot								0.07			c0.16	
v/s Ratio Perm		0.22			c0.36		0.10			0.14		
v/c Ratio		0.49			0.80		0.23	0.17		0.33	0.37	
Uniform Delay, d1		14.4			17.6		13.1	12.7		13.7	14.1	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		1.5			6.5		1.6	0.3		2.0	0.8	
Delay (s)		15.9			24.0		14.7	13.0		15.7	14.9	
Level of Service		B			C		B	B		B	B	
Approach Delay (s)		15.9			24.0			13.4			15.1	
Approach LOS		B			C			B			B	

Intersection Summary			
HCM Average Control Delay	18.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	73.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

1023: 103rd Street & Woodlawn Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↑	↱		✥			↰↑↱	
Volume (vph)	98	871	6	20	584	249	1	1	9	213	1	80
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	12	12	12	12	12	12	13	13	13
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00			0.95	
Frt	1.00	1.00		1.00	1.00	0.85		0.89			0.96	
Flt Protected	0.95	1.00		0.95	1.00	1.00		1.00			0.97	
Satd. Flow (prot)	1605	3206		1660	3320	1485		1545			3176	
Flt Permitted	0.38	1.00		0.25	1.00	1.00		0.98			0.77	
Satd. Flow (perm)	648	3206		436	3320	1485		1519			2533	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	109	968	7	22	649	277	1	1	10	237	1	89
RTOR Reduction (vph)	0	0	0	0	0	103	0	7	0	0	52	0
Lane Group Flow (vph)	109	975	0	22	649	174	0	5	0	0	275	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	46.1	46.1		46.1	46.1	46.1		19.5			19.5	
Effective Green, g (s)	46.1	46.1		46.1	46.1	46.1		19.5			19.5	
Actuated g/C Ratio	0.63	0.63		0.63	0.63	0.63		0.26			0.26	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		8.0			8.0	
Lane Grp Cap (vph)	406	2008		273	2080	930		402			671	
v/s Ratio Prot		c0.30			0.20							
v/s Ratio Perm	0.17			0.05		0.12		0.00			c0.11	
v/c Ratio	0.27	0.49		0.08	0.31	0.19		0.01			0.41	
Uniform Delay, d1	6.2	7.4		5.4	6.4	5.8		19.9			22.3	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00			1.00	
Incremental Delay, d2	1.6	0.8		0.6	0.4	0.4		0.0			1.7	
Delay (s)	7.8	8.2		6.0	6.8	6.3		20.0			24.0	
Level of Service	A	A		A	A	A		B			C	
Approach Delay (s)		8.2			6.6			20.0			24.0	
Approach LOS		A			A			B			C	

Intersection Summary			
HCM Average Control Delay	9.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	73.6	Sum of lost time (s)	8.0
Intersection Capacity Utilization	58.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱		↰	↑↑	↱	↰	↑↑	↱
Volume (vph)	131	228	125	94	163	56	144	907	90	129	825	98
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	9	12	10	10	12	9	10	9	9	10	9
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00	0.97	1.00	1.00	0.96
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.95		1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1560	1504		1563	1585		1493	3069	1337	1523	3099	1318
Flt Permitted	0.45	1.00		0.20	1.00		0.20	1.00	1.00	0.16	1.00	1.00
Satd. Flow (perm)	743	1504		337	1585		317	3069	1337	263	3099	1318
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	138	240	132	99	172	59	152	955	95	136	868	103
RTOR Reduction (vph)	0	23	0	0	15	0	0	0	40	0	0	48
Lane Group Flow (vph)	138	349	0	99	216	0	152	955	55	136	868	55
Confl. Peds. (#/hr)	10		13	13		10	18		7	7		18
Confl. Bikes (#/hr)	2					2	2		1	1		2
Heavy Vehicles (%)	2%	1%	1%	2%	1%	2%	3%	4%	0%	1%	3%	0%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	28.0	21.0		28.0	21.0		42.0	35.0	35.0	42.0	35.0	35.0
Effective Green, g (s)	26.0	22.0		26.0	22.0		40.0	35.0	35.0	40.0	35.0	35.0
Actuated g/C Ratio	0.31	0.26		0.31	0.26		0.47	0.41	0.41	0.47	0.41	0.41
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)	285	389		190	410		232	1264	551	213	1276	543
v/s Ratio Prot	0.03	c0.23		c0.04	0.14		c0.05	c0.31		0.05	0.28	
v/s Ratio Perm	0.11			0.12			0.26		0.04	0.26		0.04
v/c Ratio	0.48	0.90		0.52	0.53		0.66	0.76	0.10	0.64	0.68	0.10
Uniform Delay, d1	22.7	30.4		22.9	27.0		14.7	21.3	15.3	15.0	20.4	15.4
Progression Factor	1.00	1.00		1.00	1.00		0.67	0.79	0.53	1.00	1.00	1.00
Incremental Delay, d2	5.8	25.9		9.9	4.8		12.3	3.8	0.3	13.8	2.9	0.4
Delay (s)	28.4	56.3		32.7	31.8		22.1	20.7	8.5	28.8	23.4	15.7
Level of Service	C	E		C	C		C	C	A	C	C	B
Approach Delay (s)		48.8			32.1			19.9			23.3	
Approach LOS		D			C			B			C	

Intersection Summary			
HCM Average Control Delay	27.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	74.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1025: 107th Street & Wentworth Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			✥			✥	
Volume (vph)	22	181	37	20	173	22	33	149	40	46	255	50
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	14	12	12	14	12	12	16	12	12	16	12
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		0.99			1.00			1.00			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.98			0.99			0.98			0.98	
Flt Protected		1.00			1.00			0.99			0.99	
Satd. Flow (prot)		1837			1848			1938			1975	
Flt Permitted		0.97			0.96			0.92			0.94	
Satd. Flow (perm)		1781			1790			1800			1869	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	23	187	38	21	178	23	34	154	41	47	263	52
RTOR Reduction (vph)	0	10	0	0	6	0	0	12	0	0	9	0
Lane Group Flow (vph)	0	238	0	0	216	0	0	217	0	0	353	0
Confl. Peds. (#/hr)	18		34	34		18	16		19	19		16
Confl. Bikes (#/hr)			6	6			1		4	4		1
Heavy Vehicles (%)	0%	1%	0%	5%	1%	0%	0%	2%	0%	0%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		27.0			27.0			30.0			30.0	
Effective Green, g (s)		27.0			27.0			30.0			30.0	
Actuated g/C Ratio		0.42			0.42			0.46			0.46	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		740			744			831			863	
v/s Ratio Prot												
v/s Ratio Perm		c0.13			0.12			0.12			c0.19	
v/c Ratio		0.32			0.29			0.26			0.41	
Uniform Delay, d1		12.8			12.6			10.7			11.6	
Progression Factor		1.00			0.70			1.22			1.00	
Incremental Delay, d2		1.1			1.0			0.7			1.4	
Delay (s)		14.0			9.8			13.8			13.0	
Level of Service		B			A			B			B	
Approach Delay (s)		14.0			9.8			13.8			13.0	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM Average Control Delay	12.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	51.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1026: 107th Street & State Street

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	24	193	39	25	180	19	49	200	31	43	214	39
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	0.97	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	0.99		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1496	3057		1577	3119		1518	3119		1550	3076	
Flt Permitted	0.61	1.00		0.59	1.00		0.58	1.00		0.59	1.00	
Satd. Flow (perm)	966	3057		984	3119		926	3119		968	3076	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	27	214	43	28	200	21	54	222	34	48	238	43
RTOR Reduction (vph)	0	26	0	0	12	0	0	14	0	0	18	0
Lane Group Flow (vph)	27	231	0	28	209	0	54	242	0	48	263	0
Confl. Peds. (#/hr)	20		17	17		20	2					2
Confl. Bikes (#/hr)	32		36	36		32	22		25	25		22
Heavy Vehicles (%)	4%	1%	0%	0%	0%	0%	5%	0%	0%	3%	1%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.0	20.0		20.0	20.0		39.0	39.0		39.0	39.0	
Effective Green, g (s)	19.0	19.0		19.0	19.0		38.0	38.0		38.0	38.0	
Actuated g/C Ratio	0.29	0.29		0.29	0.29		0.58	0.58		0.58	0.58	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	282	894		288	912		541	1823		566	1798	
v/s Ratio Prot		c0.08			0.07			0.08			c0.09	
v/s Ratio Perm	0.03			0.03			0.06			0.05		
v/c Ratio	0.10	0.26		0.10	0.23		0.10	0.13		0.08	0.15	
Uniform Delay, d1	16.7	17.6		16.8	17.4		6.0	6.1		5.9	6.1	
Progression Factor	0.93	0.97		0.74	0.73		1.31	1.31		0.38	0.34	
Incremental Delay, d2	0.6	0.7		0.7	0.6		0.4	0.1		0.3	0.2	
Delay (s)	16.2	17.7		13.1	13.4		8.2	8.1		2.5	2.3	
Level of Service	B	B		B	B		A	A		A	A	
Approach Delay (s)		17.5			13.4			8.1			2.3	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	9.9	HCM Level of Service	A
HCM Volume to Capacity ratio	0.18		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	46.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1027: 107th Street & Michigan Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			✥			✥	
Volume (vph)	67	168	42	25	159	38	27	247	16	40	322	33
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	9	9	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	
Flpb, ped/bikes	0.99	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.97		1.00	0.97			0.99			0.99	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1555	3056		1525	2937			1922			1938	
Flt Permitted	0.61	1.00		0.61	1.00			0.94			0.94	
Satd. Flow (perm)	1007	3056		973	2937			1823			1840	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	74	187	47	28	177	42	30	274	18	44	358	37
RTOR Reduction (vph)	0	28	0	0	25	0	0	3	0	0	5	0
Lane Group Flow (vph)	74	206	0	28	194	0	0	319	0	0	434	0
Confl. Peds. (#/hr)	11		17	17		11	26		7	7		26
Heavy Vehicles (%)	2%	1%	0%	0%	1%	3%	4%	5%	0%	0%	4%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	26.0	26.0		26.0	26.0			31.0			31.0	
Effective Green, g (s)	26.0	26.0		26.0	26.0			31.0			31.0	
Actuated g/C Ratio	0.40	0.40		0.40	0.40			0.48			0.48	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	403	1222		389	1175			869			878	
v/s Ratio Prot		0.07			0.07							
v/s Ratio Perm	c0.07			0.03				0.17			c0.24	
v/c Ratio	0.18	0.17		0.07	0.16			0.37			0.49	
Uniform Delay, d1	12.6	12.5		12.0	12.5			10.8			11.6	
Progression Factor	1.04	0.99		0.78	0.76			1.01			1.00	
Incremental Delay, d2	1.0	0.3		0.3	0.3			1.2			2.0	
Delay (s)	14.1	12.7		9.7	9.9			12.1			13.6	
Level of Service	B	B		A	A			B			B	
Approach Delay (s)		13.0			9.8			12.1			13.6	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM Average Control Delay	12.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	57.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1028: 107th Street & Martin Luther King Jr Drive

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱			✥			✥	
Volume (vph)	47	111	28	20	161	27	41	235	11	33	364	57
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	16	12	10	16	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	
Flpb, ped/bikes	1.00	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.97		1.00	0.98			0.99			0.98	
Flt Protected	0.95	1.00		0.95	1.00			0.99			1.00	
Satd. Flow (prot)	1652	1970		1584	1975			1981			1979	
Flt Permitted	0.57	1.00		0.65	1.00			0.90			0.96	
Satd. Flow (perm)	986	1970		1087	1975			1792			1912	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	52	123	31	22	179	30	46	261	12	37	404	63
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	52	154	0	22	209	0	0	319	0	0	504	0
Confl. Peds. (#/hr)	1		10	10		1	2		5	5		2
Heavy Vehicles (%)	0%	0%	0%	0%	1%	0%	0%	2%	0%	0%	1%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.0	20.0		20.0	20.0			37.0			37.0	
Effective Green, g (s)	20.0	20.0		20.0	20.0			37.0			37.0	
Actuated g/C Ratio	0.31	0.31		0.31	0.31			0.57			0.57	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	303	606		334	608			1020			1088	
v/s Ratio Prot		0.08			c0.11							
v/s Ratio Perm	0.05			0.02				0.18			c0.26	
v/c Ratio	0.17	0.25		0.07	0.34			0.31			0.46	
Uniform Delay, d1	16.4	16.9		15.9	17.4			7.3			8.2	
Progression Factor	0.83	0.81		0.92	0.93			0.96			1.00	
Incremental Delay, d2	1.2	1.0		0.4	1.5			0.8			1.4	
Delay (s)	14.8	14.6		15.0	17.7			7.9			9.6	
Level of Service	B	B		B	B			A			A	
Approach Delay (s)		14.7			17.5			7.9			9.6	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	11.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1029: 107th Street & Cottage Grove Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱		↰	↑	↱	↰	↑	↱
Volume (vph)	54	13	97	2	5	10	62	235	5	5	466	76
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	10	10	10	11	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.98		1.00	0.98		1.00	1.00	1.00	1.00	1.00	0.98
Flpb, ped/bikes	0.99	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.87		1.00	0.90		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1695	1727		1702	1808		1594	1647	1428	1653	2000	1496
Flt Permitted	0.75	1.00		0.68	1.00		0.39	1.00	1.00	0.59	1.00	1.00
Satd. Flow (perm)	1332	1727		1216	1808		660	1647	1428	1030	2000	1496
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	60	14	108	2	6	11	69	261	6	6	518	84
RTOR Reduction (vph)	0	78	0	0	8	0	0	0	2	0	0	28
Lane Group Flow (vph)	60	44	0	2	9	0	69	261	4	6	518	56
Confl. Peds. (#/hr)	5		5	5		5	3					3
Heavy Vehicles (%)	0%	0%	1%	0%	0%	0%	0%	2%	0%	0%	2%	0%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	17.0	17.0		17.0	17.0		39.0	39.0	39.0	39.0	39.0	39.0
Effective Green, g (s)	18.0	18.0		18.0	18.0		39.0	39.0	39.0	39.0	39.0	39.0
Actuated g/C Ratio	0.28	0.28		0.28	0.28		0.60	0.60	0.60	0.60	0.60	0.60
Clearance Time (s)	5.0	5.0		5.0	5.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	369	478		337	501		396	988	857	618	1200	898
v/s Ratio Prot		0.03			0.01			0.16			c0.26	
v/s Ratio Perm	c0.05			0.00			0.10		0.00	0.01		0.04
v/c Ratio	0.16	0.09		0.01	0.02		0.17	0.26	0.00	0.01	0.43	0.06
Uniform Delay, d1	17.8	17.4		17.0	17.1		5.8	6.2	5.2	5.2	7.0	5.4
Progression Factor	1.39	2.74		1.00	1.00		0.82	0.76	0.98	1.00	1.00	1.00
Incremental Delay, d2	0.9	0.4		0.0	0.1		0.7	0.5	0.0	0.0	1.1	0.1
Delay (s)	25.6	48.1		17.1	17.1		5.5	5.2	5.1	5.3	8.2	5.5
Level of Service	C	D		B	B		A	A	A	A	A	A
Approach Delay (s)		40.7			17.1			5.3			7.8	
Approach LOS		D			B			A			A	

Intersection Summary			
HCM Average Control Delay	12.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	52.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1030: 111th Street & Marshield Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱		↰	↑↑					↰	↑↱	
Volume (vph)	0	255	163	198	215	0	0	0	0	111	470	377
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	12	12	12	12	12	11	11	12
Total Lost time (s)		4.0		3.0	3.0					5.0	5.0	
Lane Util. Factor		0.95		1.00	0.95					1.00	0.95	
Frpb, ped/bikes		0.99		1.00	1.00					1.00	0.99	
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	
Frt		0.94		1.00	1.00					1.00	0.93	
Flt Protected		1.00		0.95	1.00					0.95	1.00	
Satd. Flow (prot)		2905		1693	3288					1503	3021	
Flt Permitted		1.00		0.40	1.00					0.95	1.00	
Satd. Flow (perm)		2905		719	3288					1503	3021	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	268	172	208	226	0	0	0	0	117	495	397
RTOR Reduction (vph)	0	101	0	0	0	0	0	0	0	0	141	0
Lane Group Flow (vph)	0	339	0	208	226	0	0	0	0	117	751	0
Confl. Peds. (#/hr)	18		3	3		18	1					1
Heavy Vehicles (%)	0%	4%	1%	1%	4%	0%	0%	0%	0%	10%	2%	1%
Turn Type				D.P+P						Split		
Protected Phases		8		7	7 8					6	6	
Permitted Phases				8								
Actuated Green, G (s)		33.0		53.0	56.0					37.0	37.0	
Effective Green, g (s)		33.0		53.0	56.0					37.0	37.0	
Actuated g/C Ratio		0.32		0.52	0.55					0.36	0.36	
Clearance Time (s)		4.0		3.0						5.0	5.0	
Lane Grp Cap (vph)		940		565	1805					545	1096	
v/s Ratio Prot		0.12		c0.07	0.07					0.08	c0.25	
v/s Ratio Perm				c0.12								
v/c Ratio		0.36		0.37	0.13					0.21	0.68	
Uniform Delay, d1		26.4		13.7	11.1					22.5	27.6	
Progression Factor		1.00		2.23	2.15					1.00	1.00	
Incremental Delay, d2		1.1		1.6	0.1					0.9	3.5	
Delay (s)		27.5		32.0	24.0					23.4	31.0	
Level of Service		C		C	C					C	C	
Approach Delay (s)		27.5			27.9			0.0			30.1	
Approach LOS		C			C			A			C	

Intersection Summary			
HCM Average Control Delay	29.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	102.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	63.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1031: 111th Street & Hamlet Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑			↑↱		↰	↑	↱			
Volume (vph)	141	225	0	0	336	119	77	539	236	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	9	12	13	12	13	12	12	12
Total Lost time (s)	4.0	4.0			4.0		5.0	5.0	5.0			
Lane Util. Factor	1.00	0.95			0.95		1.00	1.00	1.00			
Frpb, ped/bikes	1.00	1.00			0.99		1.00	1.00	0.99			
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.96		1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1675	3196			2855		1767	1782	1560			
Flt Permitted	0.32	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	571	3196			2855		1767	1782	1560			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	148	237	0	0	354	125	81	567	248	0	0	0
RTOR Reduction (vph)	0	0	0	0	35	0	0	0	170	0	0	0
Lane Group Flow (vph)	148	237	0	0	444	0	81	567	78	0	0	0
Confl. Peds. (#/hr)	9		13	13		9			1	1		
Confl. Bikes (#/hr)	3					3						
Heavy Vehicles (%)	2%	7%	0%	0%	3%	1%	0%	1%	0%	0%	0%	0%
Turn Type	pm+pt						custom		Perm			
Protected Phases	4	1 4			1		2	2				
Permitted Phases	1 4						2		2			
Actuated Green, G (s)	59.0	63.0			26.0		30.0	30.0	30.0			
Effective Green, g (s)	59.0	63.0			26.0		30.0	30.0	30.0			
Actuated g/C Ratio	0.58	0.62			0.25		0.29	0.29	0.29			
Clearance Time (s)	4.0				4.0		5.0	5.0	5.0			
Lane Grp Cap (vph)	687	1974			728		520	524	459			
v/s Ratio Prot	c0.07	0.07			c0.16		0.05	c0.32				
v/s Ratio Perm	0.05								0.05			
v/c Ratio	0.22	0.12			0.61		0.16	1.08	0.17			
Uniform Delay, d1	10.4	8.1			33.5		26.6	36.0	26.7			
Progression Factor	0.42	0.43			1.00		1.00	1.00	1.00			
Incremental Delay, d2	0.7	0.1			3.8		0.6	63.3	0.8			
Delay (s)	5.0	3.6			37.3		27.3	99.3	27.5			
Level of Service	A	A			D		C	F	C			
Approach Delay (s)		4.1			37.3			73.0			0.0	
Approach LOS		A			D			E			A	

Intersection Summary			
HCM Average Control Delay	48.2	HCM Level of Service	D
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	102.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	63.1%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1032: 112th Place & Marshfield Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱		↰	↑↑					↰	↑↑	↱
Volume (vph)	0	517	479	81	534	0	0	0	0	13	436	301
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	11	12	12	12	12	10	10	12
Total Lost time (s)		4.0		4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.95		1.00	0.95					1.00	0.95	1.00
Frpb, ped/bikes		0.99		1.00	1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Frt		0.93		1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00					0.95	1.00	1.00
Satd. Flow (prot)		3099		1710	3306					1596	3192	1530
Flt Permitted		1.00		0.11	1.00					0.95	1.00	1.00
Satd. Flow (perm)		3099		200	3306					1596	3192	1530
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	0	539	499	84	556	0	0	0	0	14	454	314
RTOR Reduction (vph)	0	168	0	0	0	0	0	0	0	0	0	200
Lane Group Flow (vph)	0	870	0	84	556	0	0	0	0	14	454	114
Confl. Peds. (#/hr)	8		8	8		8	3					3
Confl. Bikes (#/hr)	9					9			61	61		
Heavy Vehicles (%)	0%	1%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type				pm+pt						Split		Prot
Protected Phases		8		7	7 8					6	6	6
Permitted Phases				7 8								
Actuated Green, G (s)		36.0		54.0	58.0					34.0	34.0	34.0
Effective Green, g (s)		36.0		54.0	58.0					34.0	34.0	34.0
Actuated g/C Ratio		0.36		0.54	0.58					0.34	0.34	0.34
Clearance Time (s)		4.0		4.0						4.0	4.0	4.0
Lane Grp Cap (vph)		1116		380	1917					543	1085	520
v/s Ratio Prot		c0.28		0.04	c0.17					0.01	c0.14	0.07
v/s Ratio Perm				0.08								
v/c Ratio		0.78		0.22	0.29					0.03	0.42	0.22
Uniform Delay, d1		28.5		14.4	10.6					22.0	25.4	23.5
Progression Factor		1.00		1.01	1.19					1.00	1.00	1.00
Incremental Delay, d2		5.4		0.9	0.3					0.1	1.2	1.0
Delay (s)		33.9		15.5	12.9					22.1	26.6	24.5
Level of Service		C		B	B					C	C	C
Approach Delay (s)		33.9			13.2			0.0			25.7	
Approach LOS		C			B			A			C	

Intersection Summary			
HCM Average Control Delay	25.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	93.6%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↰↑			↑↱		↰	↰	↱			
Volume (vph)	422	104	0	0	150	6	465	480	58	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	12	12	12	10	12	11	11	12	12	12	12
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0	4.0			
Lane Util. Factor	0.91	0.91			0.95		0.95	0.95	1.00			
Frpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.99		1.00	1.00	0.85			
Flt Protected	0.95	0.97			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1469	3109			3170		1555	1653	1530			
Flt Permitted	0.64	0.71			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	992	2286			3170		1555	1653	1530			
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	435	107	0	0	155	6	479	495	60	0	0	0
RTOR Reduction (vph)	0	0	0	0	3	0	0	0	38	0	0	0
Lane Group Flow (vph)	217	325	0	0	158	0	479	495	22	0	0	0
Confl. Peds. (#/hr)	13		6	6		13			8	8		
Confl. Bikes (#/hr)	1					1			2	2		
Heavy Vehicles (%)	2%	1%	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%
Turn Type	pm+pt						custom		custom			
Protected Phases	4	1 4			1		2	2	2			
Permitted Phases	1 4						2		2			
Actuated Green, G (s)	51.0	51.0			15.0		37.0	37.0	37.0			
Effective Green, g (s)	51.0	51.0			15.0		37.0	37.0	37.0			
Actuated g/C Ratio	0.51	0.51			0.15		0.37	0.37	0.37			
Clearance Time (s)	4.0				4.0		4.0	4.0	4.0			
Lane Grp Cap (vph)	678	1462			476		575	612	566			
v/s Ratio Prot	c0.12	0.08			c0.05		c0.31	0.30	0.01			
v/s Ratio Perm	0.05	0.03										
v/c Ratio	0.32	0.22			0.33		0.83	0.81	0.04			
Uniform Delay, d1	14.1	13.5			38.0		28.7	28.3	20.1			
Progression Factor	0.25	0.26			1.00		1.00	1.00	1.00			
Incremental Delay, d2	0.7	0.2			1.9		13.3	11.0	0.1			
Delay (s)	4.2	3.7			39.9		42.0	39.3	20.3			
Level of Service	A	A			D		D	D	C			
Approach Delay (s)		3.9			39.9			39.5			0.0	
Approach LOS		A			D			D			A	

Intersection Summary			
HCM Average Control Delay	28.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	93.6%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1034: 111th Street & Halsted Street

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱		↰	↑↑	↱	↰	↑↑	↱
Volume (vph)	78	316	117	109	270	111	87	699	76	100	884	65
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	9	10	9	9	10	9
Total Lost time (s)		4.0			4.0		4.0	3.5	4.0	4.0	3.5	4.0
Lane Util. Factor		0.95			0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		0.99			0.99		1.00	1.00	0.97	1.00	1.00	0.96
Flpb, ped/bikes		1.00			1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.97			0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.99			0.99		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		2955			2935		1508	3069	1309	1508	3099	1298
Flt Permitted		0.77			0.72		0.16	1.00	1.00	0.25	1.00	1.00
Satd. Flow (perm)		2281			2151		254	3069	1309	401	3099	1298
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	81	329	122	114	281	116	91	728	79	104	921	68
RTOR Reduction (vph)	0	33	0	0	32	0	0	0	48	0	0	33
Lane Group Flow (vph)	0	499	0	0	479	0	91	728	31	104	921	35
Confl. Peds. (#/hr)	35		30	30		35	34		8	8		34
Confl. Bikes (#/hr)	1					1	1					1
Heavy Vehicles (%)	1%	4%	0%	1%	3%	3%	2%	4%	2%	2%	3%	2%
Turn Type	pm+pt			Perm			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)		35.0			27.0		38.0	33.0	33.0	38.0	33.0	33.0
Effective Green, g (s)		36.0			28.0		36.0	33.5	33.0	36.0	33.5	33.0
Actuated g/C Ratio		0.42			0.33		0.42	0.39	0.39	0.42	0.39	0.39
Clearance Time (s)		5.0			5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)		1014			709		167	1210	508	222	1221	504
v/s Ratio Prot		c0.03					c0.03	0.24		0.02	c0.30	
v/s Ratio Perm		0.17			c0.22		0.21		0.02	0.18		0.03
v/c Ratio		0.49			0.68		0.54	0.60	0.06	0.47	0.75	0.07
Uniform Delay, d1		17.8			24.6		16.8	20.5	16.3	15.9	22.2	16.3
Progression Factor		1.00			1.00		1.48	0.68	0.77	1.11	1.16	1.74
Incremental Delay, d2		1.7			5.1		11.1	2.0	0.2	5.0	3.1	0.2
Delay (s)		19.6			29.7		36.0	16.0	12.8	22.6	29.0	28.6
Level of Service		B			C		D	B	B	C	C	C
Approach Delay (s)		19.6			29.7			17.8			28.3	
Approach LOS		B			C			B			C	

Intersection Summary			
HCM Average Control Delay	23.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	76.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰			↱			✣				
Volume (vph)	76	410	0	0	367	84	54	44	33	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		1.00			0.97			0.97				
Flt Protected		0.99			1.00			0.98				
Satd. Flow (prot)		1734			1704			1654				
Flt Permitted		0.87			1.00			0.98				
Satd. Flow (perm)		1519			1704			1654				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	84	456	0	0	408	93	60	49	37	0	0	0
RTOR Reduction (vph)	0	0	0	0	12	0	0	19	0	0	0	0
Lane Group Flow (vph)	0	540	0	0	489	0	0	127	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)		38.0			38.0			19.0				
Effective Green, g (s)		38.0			38.0			19.0				
Actuated g/C Ratio		0.58			0.58			0.29				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		888			996			483				
v/s Ratio Prot					0.29							
v/s Ratio Perm		c0.36						0.08				
v/c Ratio		0.61			0.49			0.26				
Uniform Delay, d1		8.7			7.9			17.6				
Progression Factor		1.00			0.76			1.00				
Incremental Delay, d2		3.1			1.5			1.3				
Delay (s)		11.8			7.5			19.0				
Level of Service		B			A			B				
Approach Delay (s)		11.8			7.5			19.0			0.0	
Approach LOS		B			A			B			A	

Intersection Summary			
HCM Average Control Delay	10.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	70.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱			↰↑↑↱			↰↑↑↱	
Volume (vph)	29	374	37	39	369	50	31	118	39	53	150	45
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	10	12	12	10	12
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		1.00			1.00			0.99			0.98	
Flpb, ped/bikes		1.00			1.00			0.99			1.00	
Frt		0.99			0.99			0.97			0.97	
Flt Protected		1.00			1.00			0.99			0.99	
Satd. Flow (prot)		1954			1941			2969			2981	
Flt Permitted		0.95			0.94			0.88			0.86	
Satd. Flow (perm)		1869			1825			2646			2589	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	32	416	41	43	410	56	34	131	43	59	167	50
RTOR Reduction (vph)	0	5	0	0	7	0	0	25	0	0	29	0
Lane Group Flow (vph)	0	484	0	0	502	0	0	183	0	0	247	0
Confl. Peds. (#/hr)	32		25	25		32	59		24	24		59
Confl. Bikes (#/hr)	3		2	2		3	4		2	2		4
Heavy Vehicles (%)	0%	3%	0%	3%	3%	0%	0%	0%	7%	4%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		30.0			30.0			27.0			27.0	
Effective Green, g (s)		30.0			30.0			27.0			27.0	
Actuated g/C Ratio		0.46			0.46			0.42			0.42	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		863			842			1099			1075	
v/s Ratio Prot												
v/s Ratio Perm		0.26			c0.28			0.07			c0.10	
v/c Ratio		0.56			0.60			0.17			0.23	
Uniform Delay, d1		12.7			13.0			11.9			12.3	
Progression Factor		0.56			0.40			1.30			0.44	
Incremental Delay, d2		2.2			2.7			0.3			0.5	
Delay (s)		9.2			7.9			15.9			5.9	
Level of Service		A			A			B			A	
Approach Delay (s)		9.2			7.9			15.9			5.9	
Approach LOS		A			A			B			A	

Intersection Summary			
HCM Average Control Delay	9.1	HCM Level of Service	A
HCM Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	73.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1037: 111th Street & State Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	51	320	49	81	464	86	46	219	98	83	227	65
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	9	10	10	9	10	10	12	10	10	12
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		0.99	1.00		0.99	1.00		0.99	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.95		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1510	3034		1572	3077		1587	2962		1585	3071	
Flt Permitted	0.32	1.00		0.47	1.00		0.56	1.00		0.54	1.00	
Satd. Flow (perm)	505	3034		775	3077		928	2962		903	3071	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	57	356	54	90	516	96	51	243	109	92	252	72
RTOR Reduction (vph)	0	19	0	0	24	0	0	50	0	0	33	0
Lane Group Flow (vph)	57	391	0	90	588	0	51	302	0	92	291	0
Confl. Peds. (#/hr)	20		31	31		20	16		20	20		16
Confl. Bikes (#/hr)							1		3	3		1
Heavy Vehicles (%)	5%	3%	0%	0%	1%	0%	0%	2%	2%	0%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	22.0	22.0		22.0	22.0		35.0	35.0		35.0	35.0	
Effective Green, g (s)	22.0	22.0		22.0	22.0		35.0	35.0		35.0	35.0	
Actuated g/C Ratio	0.34	0.34		0.34	0.34		0.54	0.54		0.54	0.54	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	171	1027		262	1041		500	1595		486	1654	
v/s Ratio Prot		0.13			c0.19			0.10			0.09	
v/s Ratio Perm	0.11			0.12			0.05			c0.10		
v/c Ratio	0.33	0.38		0.34	0.57		0.10	0.19		0.19	0.18	
Uniform Delay, d1	16.0	16.3		16.1	17.6		7.3	7.7		7.7	7.6	
Progression Factor	0.67	0.64		0.93	0.93		0.72	0.61		1.09	1.08	
Incremental Delay, d2	4.6	0.9		3.5	2.2		0.4	0.3		0.9	0.2	
Delay (s)	15.3	11.4		18.5	18.6		5.6	5.0		9.3	8.5	
Level of Service	B	B		B	B		A	A		A	A	
Approach Delay (s)		11.9			18.6			5.1			8.7	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	12.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	51.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1038: 111th Street & Michigan Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			↰↑↱			↰↑↱	
Volume (vph)	59	338	78	87	414	50	46	231	58	46	279	65
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	9	10	9	9	16	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			0.99			0.98	
Flpb, ped/bikes	0.98	1.00		0.99	1.00			0.99			1.00	
Frt	1.00	0.97		1.00	0.98			0.97			0.98	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1509	3016		1430	3722			3485			3519	
Flt Permitted	0.45	1.00		0.48	1.00			0.86			0.88	
Satd. Flow (perm)	712	3016		725	3722			3028			3118	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	62	356	82	92	436	53	48	243	61	48	294	68
RTOR Reduction (vph)	0	30	0	0	15	0	0	27	0	0	25	0
Lane Group Flow (vph)	62	408	0	92	474	0	0	325	0	0	385	0
Confl. Peds. (#/hr)	38		17	17		38	125		53	53		125
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	0%	3%	0%	7%	2%	0%	0%	6%	10%	2%	5%	5%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	31.0	31.0		31.0	31.0			26.0			26.0	
Effective Green, g (s)	31.0	31.0		31.0	31.0			26.0			26.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48			0.40			0.40	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	340	1438		346	1775			1211			1247	
v/s Ratio Prot		c0.14			0.13							
v/s Ratio Perm	0.09			0.13				0.11			c0.12	
v/c Ratio	0.18	0.28		0.27	0.27			0.27			0.31	
Uniform Delay, d1	9.7	10.3		10.2	10.2			13.1			13.3	
Progression Factor	1.59	1.73		1.10	1.10			0.43			0.73	
Incremental Delay, d2	1.1	0.5		1.7	0.3			0.5			0.6	
Delay (s)	16.6	18.3		12.9	11.5			6.2			10.4	
Level of Service	B	B		B	B			A			B	
Approach Delay (s)		18.1			11.7			6.2			10.4	
Approach LOS		B			B			A			B	

Intersection Summary			
HCM Average Control Delay	12.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.29		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	58.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1039: 111th Street & Indiana Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰↱			✥			✥	
Volume (vph)	86	284	91	92	289	92	120	82	47	47	82	119
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	16	12	12	16	12
Total Lost time (s)		5.0	5.0		5.0			5.0			5.0	
Lane Util. Factor		1.00	1.00		0.95			1.00			1.00	
Frt		1.00	0.85		0.97			0.97			0.94	
Flt Protected		0.99	1.00		0.99			0.98			0.99	
Satd. Flow (prot)		1670	1436		3086			1885			1835	
Flt Permitted		0.79	1.00		0.79			0.68			0.90	
Satd. Flow (perm)		1332	1436		2469			1303			1674	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	96	316	101	102	321	102	133	91	52	52	91	132
RTOR Reduction (vph)	0	0	48	0	32	0	0	13	0	0	51	0
Lane Group Flow (vph)	0	412	53	0	493	0	0	263	0	0	224	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm		Perm	Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)		34.0	34.0		34.0			21.0			21.0	
Effective Green, g (s)		34.0	34.0		34.0			21.0			21.0	
Actuated g/C Ratio		0.52	0.52		0.52			0.32			0.32	
Clearance Time (s)		5.0	5.0		5.0			5.0			5.0	
Lane Grp Cap (vph)		697	751		1291			421			541	
v/s Ratio Prot												
v/s Ratio Perm		c0.31	0.04		0.20			c0.20			0.13	
v/c Ratio		0.59	0.07		0.38			0.63			0.41	
Uniform Delay, d1		10.7	7.7		9.2			18.7			17.2	
Progression Factor		1.82	4.59		0.52			1.00			1.00	
Incremental Delay, d2		3.6	0.2		0.8			6.8			2.3	
Delay (s)		23.0	35.4		5.6			25.5			19.5	
Level of Service		C	D		A			C			B	
Approach Delay (s)		25.5			5.6			25.5			19.5	
Approach LOS		C			A			C			B	

Intersection Summary			
HCM Average Control Delay	17.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	79.2%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			↰↑↱			↰↑↱	
Volume (vph)	55	271	28	26	323	60	26	133	47	62	146	63
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	15	8	16	8	8	16	8
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			0.99			1.00	
Flpb, ped/bikes	0.99	1.00		0.98	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.98			0.97			0.97	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1443	3025		1565	3018			3582			3599	
Flt Permitted	0.49	1.00		0.55	1.00			0.90			0.84	
Satd. Flow (perm)	740	3025		909	3018			3238			3069	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	61	301	31	29	359	67	29	148	52	69	162	70
RTOR Reduction (vph)	0	12	0	0	24	0	0	30	0	0	41	0
Lane Group Flow (vph)	61	320	0	29	402	0	0	199	0	0	260	0
Confl. Peds. (#/hr)	24		47	47		24	9		36	36		9
Confl. Bikes (#/hr)			4	4			1					1
Heavy Vehicles (%)	9%	4%	0%	0%	3%	0%	0%	1%	10%	0%	0%	8%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	30.0	30.0		30.0	30.0			27.0			27.0	
Effective Green, g (s)	30.0	30.0		30.0	30.0			27.0			27.0	
Actuated g/C Ratio	0.46	0.46		0.46	0.46			0.42			0.42	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	342	1396		420	1393			1345			1275	
v/s Ratio Prot		0.11			c0.13							
v/s Ratio Perm	0.08			0.03				0.06			c0.08	
v/c Ratio	0.18	0.23		0.07	0.29			0.15			0.20	
Uniform Delay, d1	10.3	10.5		9.7	10.9			11.8			12.1	
Progression Factor	0.69	0.69		0.85	0.68			1.02			0.41	
Incremental Delay, d2	0.9	0.3		0.1	0.2			0.2			0.3	
Delay (s)	8.0	7.6		8.4	7.7			12.4			5.3	
Level of Service	A	A		A	A			B			A	
Approach Delay (s)		7.7			7.7			12.4			5.3	
Approach LOS		A			A			B			A	

Intersection Summary			
HCM Average Control Delay	7.9	HCM Level of Service	A
HCM Volume to Capacity ratio	0.25		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.7%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1041: 111th Street & Cottage Grove Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱			↰↑↱			↰↑↱	
Volume (vph)	47	440	26	86	503	222	24	124	115	340	261	82
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			0.95			0.95	
Frt		0.99			0.96			0.93			0.98	
Flt Protected		1.00			0.99			1.00			0.98	
Satd. Flow (prot)		3280			3167			3089			3181	
Flt Permitted		0.76			0.80			0.90			0.70	
Satd. Flow (perm)		2509			2532			2805			2289	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	52	489	29	96	559	247	27	138	128	378	290	91
RTOR Reduction (vph)	0	6	0	0	60	0	0	69	0	0	16	0
Lane Group Flow (vph)	0	564	0	0	842	0	0	224	0	0	743	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm			pm+pt			Perm		
Protected Phases		4			8		5	2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		25.0			25.0			30.0			17.0	
Effective Green, g (s)		25.0			25.0			30.0			17.0	
Actuated g/C Ratio		0.38			0.38			0.46			0.26	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		965			974			1338			599	
v/s Ratio Prot								c0.03				
v/s Ratio Perm		0.22			c0.33			0.05			c0.32	
v/c Ratio		0.58			0.86			0.17			1.36dl	
Uniform Delay, d1		15.9			18.4			10.2			24.0	
Progression Factor		1.48			1.00			1.00			0.80	
Incremental Delay, d2		2.6			10.1			0.3			121.3	
Delay (s)		26.0			28.5			10.5			140.5	
Level of Service		C			C			B			F	
Approach Delay (s)		26.0			28.5			10.5			140.5	
Approach LOS		C			C			B			F	

Intersection Summary			
HCM Average Control Delay	59.5	HCM Level of Service	E
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	85.7%	ICU Level of Service	E
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱			✥			✥	
Volume (vph)	0	895	128	48	792	0	81	0	36	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	10	10	12	12	12	12	12	12	12
Total Lost time (s)		5.0			5.0			5.0				
Lane Util. Factor		0.95			0.95			1.00				
Frt		0.98			1.00			0.96				
Flt Protected		1.00			1.00			0.97				
Satd. Flow (prot)		3041			3090			1619				
Flt Permitted		1.00			0.80			0.79				
Satd. Flow (perm)		3041			2489			1329				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	994	142	53	880	0	90	0	40	0	0	0
RTOR Reduction (vph)	0	15	0	0	0	0	0	18	0	0	0	0
Lane Group Flow (vph)	0	1121	0	0	933	0	0	112	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	custom			Perm			Perm			Perm		
Protected Phases		4 5 6 11			8			2			2	
Permitted Phases	4 6 11			8			2			2		
Actuated Green, G (s)		65.0			33.0			16.0				
Effective Green, g (s)		58.0			33.0			16.0				
Actuated g/C Ratio		0.64			0.37			0.18				
Clearance Time (s)					5.0			5.0				
Lane Grp Cap (vph)		1960			913			236				
v/s Ratio Prot		c0.37										
v/s Ratio Perm					c0.37			c0.08				
v/c Ratio		0.57			1.02			0.47				
Uniform Delay, d1		9.0			28.5			33.2				
Progression Factor		0.14			1.42			1.00				
Incremental Delay, d2		0.3			34.2			6.7				
Delay (s)		1.6			74.8			39.9				
Level of Service		A			E			D				
Approach Delay (s)		1.6			74.8			39.9			0.0	
Approach LOS		A			E			D			A	

Intersection Summary			
HCM Average Control Delay	35.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	74.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1043: 111th Street & Doty Road

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↑	↱		✥		↰	↑	↱
Volume (vph)	222	642	22	112	614	185	60	4	107	212	10	212
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	10	12	12	12	12	16	12	12	12	12
Total Lost time (s)	3.0	5.0		3.0	5.0	3.0		5.0		3.0	5.0	3.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00		1.00	1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85		0.92		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.98		0.95	1.00	1.00
Satd. Flow (prot)	1550	3194		1660	3320	1485		1782		1660	1748	1485
Flt Permitted	0.29	1.00		0.33	1.00	1.00		0.88		0.43	1.00	1.00
Satd. Flow (perm)	472	3194		585	3320	1485		1593		758	1748	1485
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	247	713	24	124	682	206	67	4	119	236	11	236
RTOR Reduction (vph)	0	2	0	0	0	95	0	92	0	0	0	135
Lane Group Flow (vph)	247	735	0	124	682	111	0	98	0	236	11	101
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	pm+pt			pm+pt		pm+ov	pm+pt			pm+pt		pm+ov
Protected Phases	7	4		3	8	1	5	2		1	6	7
Permitted Phases	4			8		8	2			6		6
Actuated Green, G (s)	55.0	42.6		47.8	38.4	48.4		12.0		25.0	25.0	38.6
Effective Green, g (s)	55.0	42.6		47.8	38.4	48.4		12.0		25.0	25.0	38.6
Actuated g/C Ratio	0.61	0.47		0.53	0.43	0.54		0.13		0.28	0.28	0.43
Clearance Time (s)	3.0	5.0		3.0	5.0	3.0		5.0		3.0	5.0	3.0
Vehicle Extension (s)	4.0	3.0		4.0	3.0	3.0		4.0		3.0	4.0	4.0
Lane Grp Cap (vph)	451	1512		423	1417	799		212		311	486	637
v/s Ratio Prot	c0.08	0.23		0.03	0.21	0.02				c0.08	0.01	0.02
v/s Ratio Perm	c0.25			0.13		0.06		0.06		c0.13		0.04
v/c Ratio	0.55	0.49		0.29	0.48	0.14		0.46		0.76	0.02	0.16
Uniform Delay, d1	9.2	16.2		10.8	18.6	10.4		36.0		28.7	23.6	15.8
Progression Factor	2.65	1.87		1.00	1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2	1.5	1.0		0.5	1.2	0.1		2.2		10.2	0.0	0.2
Delay (s)	25.7	31.3		11.3	19.8	10.5		38.2		38.9	23.6	15.9
Level of Service	C	C		B	B	B		D		D	C	B
Approach Delay (s)		29.9			16.9			38.2			27.3	
Approach LOS		C			B			D			C	

Intersection Summary			
HCM Average Control Delay	25.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	61.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

1044: 111th Street & Bishop Ford Freeway EB Ramps

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↑↑					↰		↱
Volume (veh/h)	0	518	443	2	333	0	0	0	0	19	0	578
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	576	492	2	370	0	0	0	0	21	0	642
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		498										
pX, platoon unblocked												
vC, conflicting volume	370			576			765	950	288	662	950	185
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	370			576			765	950	288	662	950	185
tC, single (s)	4.2			4.2			7.6	6.6	7.0	7.6	6.6	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	100	94	100	22
cM capacity (veh/h)	1178			987			64	256	706	345	256	823

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1	SB 2
Volume Total	288	288	492	126	247	21	642
Volume Left	0	0	0	2	0	21	0
Volume Right	0	0	492	0	0	0	642
cSH	1700	1700	1700	987	1700	345	823
Volume to Capacity	0.17	0.17	0.29	0.00	0.15	0.06	0.78
Queue Length 95th (ft)	0	0	0	0	0	5	198
Control Delay (s)	0.0	0.0	0.0	0.2	0.0	16.1	23.1
Lane LOS				A		C	C
Approach Delay (s)	0.0			0.1		22.8	
Approach LOS						C	

Intersection Summary			
Average Delay	7.2		
Intersection Capacity Utilization	54.2%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
1045: 111th Street & Bishop Ford Freeway WB Ramps

1/14/2013

	↗	↘	↖	↑	↓	↙
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰↰		↰			
Sign Control	Stop			Stop	Stop	
Volume (vph)	537	0	335	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	597	0	372	0	0	0

Direction, Lane #	EB 1	EB 2	NB 1
Volume Total (vph)	298	298	372
Volume Left (vph)	298	298	372
Volume Right (vph)	0	0	0
Hadj (s)	0.55	0.55	0.25
Departure Headway (s)	6.2	6.2	5.6
Degree Utilization, x	0.51	0.51	0.58
Capacity (veh/h)	568	570	619
Control Delay (s)	14.3	14.3	16.0
Approach Delay (s)	14.3		16.0
Approach LOS	B		C

Intersection Summary			
Delay	14.9		
HCM Level of Service	B		
Intersection Capacity Utilization	42.4%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Signalized Intersection Capacity Analysis
1046: 115th Street & Marshield Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱		↰	↑↑						↰↑↱	
Volume (vph)	0	472	90	192	594	0	0	0	0	101	21	58
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	12	12	12	12	12
Total Lost time (s)		3.0		4.0	4.0						5.0	
Lane Util. Factor		0.95		1.00	0.95						0.95	
Frt		0.98		1.00	1.00						0.95	
Flt Protected		1.00		0.95	1.00						0.97	
Satd. Flow (prot)		3133		1605	3210						3074	
Flt Permitted		1.00		0.33	1.00						0.97	
Satd. Flow (perm)		3133		559	3210						3074	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	524	100	213	660	0	0	0	0	112	23	64
RTOR Reduction (vph)	0	18	0	0	0	0	0	0	0	0	44	0
Lane Group Flow (vph)	0	606	0	213	660	0	0	0	0	0	155	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type				pm+pt						Split		
Protected Phases		4		3	8					6	6	
Permitted Phases				8								
Actuated Green, G (s)		36.0		49.0	49.0						27.0	
Effective Green, g (s)		36.0		49.0	49.0						27.0	
Actuated g/C Ratio		0.42		0.58	0.58						0.32	
Clearance Time (s)		3.0		4.0	4.0						5.0	
Lane Grp Cap (vph)		1327		445	1850						976	
v/s Ratio Prot		0.19		c0.06	0.21						c0.05	
v/s Ratio Perm				c0.22								
v/c Ratio		0.46		0.48	0.36						0.16	
Uniform Delay, d1		17.5		16.3	9.6						20.8	
Progression Factor		1.00		0.49	0.41						1.00	
Incremental Delay, d2		1.1		3.1	0.5						0.3	
Delay (s)		18.6		11.0	4.4						21.2	
Level of Service		B		B	A						C	
Approach Delay (s)		18.6			6.0			0.0			21.2	
Approach LOS		B			A			A			C	

Intersection Summary			
HCM Average Control Delay	12.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	46.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1047: 115th Street & Ashland Ave

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑			↑↱			↰↑↱				
Volume (vph)	95	478	0	0	624	129	162	90	58	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	11	11	12	12	12	12	12	12
Total Lost time (s)	5.0	5.0			3.0			5.0				
Lane Util. Factor	1.00	0.95			0.95			0.91				
Frt	1.00	1.00			0.97			0.97				
Flt Protected	0.95	1.00			1.00			0.97				
Satd. Flow (prot)	1660	3320			3127			4519				
Flt Permitted	0.22	1.00			1.00			0.97				
Satd. Flow (perm)	385	3320			3127			4519				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	106	531	0	0	693	143	180	100	64	0	0	0
RTOR Reduction (vph)	0	0	0	0	21	0	0	44	0	0	0	0
Lane Group Flow (vph)	106	531	0	0	815	0	0	300	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	pm+pt						Split					
Protected Phases	7	4			8		2	2				
Permitted Phases	4											
Actuated Green, G (s)	48.0	48.0			35.0			27.0				
Effective Green, g (s)	48.0	48.0			35.0			27.0				
Actuated g/C Ratio	0.56	0.56			0.41			0.32				
Clearance Time (s)	5.0	5.0			3.0			5.0				
Lane Grp Cap (vph)	367	1875			1288			1435				
v/s Ratio Prot	0.03	c0.16			c0.26			c0.07				
v/s Ratio Perm	0.13											
v/c Ratio	0.29	0.28			0.63			0.21				
Uniform Delay, d1	18.1	9.6			19.9			21.2				
Progression Factor	0.41	0.33			1.00			1.00				
Incremental Delay, d2	1.8	0.4			2.4			0.3				
Delay (s)	9.3	3.5			22.3			21.5				
Level of Service	A	A			C			C				
Approach Delay (s)		4.4			22.3			21.5			0.0	
Approach LOS		A			C			C			A	

Intersection Summary			
HCM Average Control Delay	15.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	46.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1048: 115th Street & Racine Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↑↱			↰↑↑↱			↰↑↱			↰↑↱	
Volume (vph)	114	342	126	79	366	79	178	78	27	30	87	144
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	10	12	12	15	12	12	15	12
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			1.00			1.00	
Frt		0.97			0.98			0.99			0.93	
Flt Protected		0.99			0.99			0.97			0.99	
Satd. Flow (prot)		2969			3006			1840			1769	
Flt Permitted		0.68			0.72			0.65			0.94	
Satd. Flow (perm)		2025			2179			1242			1676	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	127	380	140	88	407	88	198	87	30	33	97	160
RTOR Reduction (vph)	0	39	0	0	22	0	0	6	0	0	68	0
Lane Group Flow (vph)	0	608	0	0	561	0	0	309	0	0	222	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		23.0			23.0			32.0			32.0	
Effective Green, g (s)		23.0			23.0			32.0			32.0	
Actuated g/C Ratio		0.35			0.35			0.49			0.49	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		717			771			611			825	
v/s Ratio Prot												
v/s Ratio Perm		c0.30			0.26			c0.25			0.13	
v/c Ratio		0.85			0.73			0.51			0.27	
Uniform Delay, d1		19.4			18.3			11.2			9.7	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		11.9			5.9			3.0			0.8	
Delay (s)		31.3			24.2			14.1			10.5	
Level of Service		C			C			B			B	
Approach Delay (s)		31.3			24.2			14.1			10.5	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM Average Control Delay	22.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	82.5%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↑	↱	↰	↑↑	↱
Volume (vph)	106	201	100	203	311	65	174	589	246	95	953	146
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	12	10	16	12	9	10	9	9	10	9
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00	0.97	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.95		1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1559	2967		1574	3683		1508	3069	1333	1521	3099	1336
Flt Permitted	0.45	1.00		0.52	1.00		0.13	1.00	1.00	0.31	1.00	1.00
Satd. Flow (perm)	739	2967		862	3683		212	3069	1333	490	3099	1336
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	112	212	105	214	327	68	183	620	259	100	1003	154
RTOR Reduction (vph)	0	70	0	0	21	0	0	0	165	0	0	98
Lane Group Flow (vph)	112	247	0	214	374	0	183	620	94	100	1003	56
Confl. Peds. (#/hr)	19		16	16		19	22		25	25		22
Heavy Vehicles (%)	2%	2%	0%	1%	2%	2%	2%	4%	0%	1%	3%	0%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	32.0	27.0		32.0	27.0		38.0	31.0	31.0	38.0	31.0	31.0
Effective Green, g (s)	30.0	28.0		30.0	28.0		36.0	31.0	31.0	36.0	31.0	31.0
Actuated g/C Ratio	0.35	0.33		0.35	0.33		0.42	0.36	0.36	0.42	0.36	0.36
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)	299	977		338	1213		181	1119	486	280	1130	487
v/s Ratio Prot	0.02	0.08		c0.03	0.10		c0.07	0.20		0.03	0.32	
v/s Ratio Perm	0.11			c0.19			c0.36		0.07	0.13		0.04
v/c Ratio	0.37	0.25		0.63	0.31		1.01	0.55	0.19	0.36	0.89	0.12
Uniform Delay, d1	19.4	20.8		22.2	21.3		20.7	21.5	18.5	15.6	25.4	17.9
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.41	1.05	2.36
Incremental Delay, d2	3.6	0.6		8.7	0.7		69.8	2.0	0.9	2.6	8.0	0.4
Delay (s)	23.0	21.5		30.9	21.9		90.5	23.5	19.4	24.6	34.6	42.7
Level of Service	C	C		C	C		F	C	B	C	C	D
Approach Delay (s)		21.9			25.1			34.0			34.8	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	31.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	76.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1050: 115th Street & Wentworth Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱		↰	↱		↰	↱
Volume (vph)	97	424	30	33	425	24	33	100	41	36	124	76
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	16	12	12	16	12
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frpb, ped/bikes		1.00	0.96		1.00	0.97		1.00	0.98		1.00	0.99
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frt		1.00	0.85		1.00	0.85		1.00	0.85		1.00	0.85
Flt Protected		0.99	1.00		1.00	1.00		0.99	1.00		0.99	1.00
Satd. Flow (prot)		1957	1466		1994	1480		2015	1506		2001	1511
Flt Permitted		0.72	1.00		0.94	1.00		0.91	1.00		0.92	1.00
Satd. Flow (perm)		1426	1466		1888	1480		1863	1506		1870	1511
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	102	446	32	35	447	25	35	105	43	38	131	80
RTOR Reduction (vph)	0	0	17	0	0	13	0	0	25	0	0	47
Lane Group Flow (vph)	0	548	15	0	482	12	0	140	18	0	169	33
Confl. Peds. (#/hr)	11		20	20		11	1		4	4		1
Confl. Bikes (#/hr)	1		1	1		1			1	1		
Heavy Vehicles (%)	4%	3%	0%	0%	2%	0%	0%	0%	0%	0%	1%	0%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)		30.0	30.0		30.0	30.0		27.0	27.0		27.0	27.0
Effective Green, g (s)		30.0	30.0		30.0	30.0		27.0	27.0		27.0	27.0
Actuated g/C Ratio		0.46	0.46		0.46	0.46		0.42	0.42		0.42	0.42
Clearance Time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		658	677		871	683		774	626		777	628
v/s Ratio Prot												
v/s Ratio Perm		c0.38	0.01		0.26	0.01		0.08	0.01		c0.09	0.02
v/c Ratio		0.83	0.02		0.55	0.02		0.18	0.03		0.22	0.05
Uniform Delay, d1		15.3	9.5		12.7	9.5		12.0	11.2		12.2	11.4
Progression Factor		1.00	1.00		0.62	0.56		0.93	1.03		1.02	0.92
Incremental Delay, d2		11.8	0.1		2.5	0.0		0.5	0.1		0.6	0.2
Delay (s)		27.1	9.6		10.4	5.4		11.6	11.7		13.1	10.6
Level of Service		C	A		B	A		B	B		B	B
Approach Delay (s)		26.1			10.1			11.6			12.3	
Approach LOS		C			B			B			B	

Intersection Summary			
HCM Average Control Delay	16.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	94.8%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1051: 115th Street & State Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	115	394	20	41	271	31	10	109	21	110	214	75
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	0.98		1.00	0.98		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1550	3077		1550	3052		1550	3025		1550	2979	
Flt Permitted	0.95	1.00		0.49	1.00		0.54	1.00		0.66	1.00	
Satd. Flow (perm)	1550	3077		795	3052		878	3025		1078	2979	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	128	438	22	46	301	34	11	121	23	122	238	83
RTOR Reduction (vph)	0	6	0	0	13	0	0	13	0	0	49	0
Lane Group Flow (vph)	128	454	0	46	322	0	11	131	0	122	272	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Prot			Perm			Perm			Perm		
Protected Phases	7	4			8			2			6	
Permitted Phases				8			2			6		
Actuated Green, G (s)	7.0	32.0		22.0	22.0		27.0	27.0		27.0	27.0	
Effective Green, g (s)	7.0	32.0		22.0	22.0		27.0	27.0		27.0	27.0	
Actuated g/C Ratio	0.11	0.49		0.34	0.34		0.42	0.42		0.42	0.42	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	167	1515		269	1033		365	1257		448	1237	
v/s Ratio Prot	c0.08	c0.15			0.11			0.04			0.09	
v/s Ratio Perm				0.06			0.01			c0.11		
v/c Ratio	0.77	0.30		0.17	0.31		0.03	0.10		0.27	0.22	
Uniform Delay, d1	28.2	9.8		15.1	15.9		11.2	11.6		12.5	12.2	
Progression Factor	1.17	0.39		0.75	0.73		1.03	1.12		1.12	1.13	
Incremental Delay, d2	22.1	0.4		1.3	0.8		0.1	0.1		1.5	0.4	
Delay (s)	55.0	4.2		12.6	12.3		11.7	13.1		15.5	14.2	
Level of Service	D	A		B	B		B	B		B	B	
Approach Delay (s)		15.3			12.3			13.0			14.5	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	14.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	41.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1052: 115th Street & Michigan Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			↰↑↱			↰↑↱	
Volume (vph)	84	336	69	203	347	63	25	245	20	55	270	55
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	12	12	12	12	12	12
Total Lost time (s)	4.0	4.0		3.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frt	1.00	0.97		1.00	0.98			0.99			0.98	
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.99	
Satd. Flow (prot)	1550	3019		1550	3028			3272			3225	
Flt Permitted	0.49	1.00		0.95	1.00			0.90			0.86	
Satd. Flow (perm)	798	3019		1550	3028			2966			2803	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	93	373	77	226	386	70	28	272	22	61	300	61
RTOR Reduction (vph)	0	26	0	0	23	0	0	8	0	0	21	0
Lane Group Flow (vph)	93	424	0	226	433	0	0	314	0	0	401	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Prot			Perm			Perm		
Protected Phases		4		3	8			2			6	
Permitted Phases	4						2			6		
Actuated Green, G (s)	20.0	20.0		6.0	29.0			25.0			25.0	
Effective Green, g (s)	20.0	20.0		6.0	29.0			25.0			25.0	
Actuated g/C Ratio	0.31	0.31		0.09	0.45			0.38			0.38	
Clearance Time (s)	4.0	4.0		3.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	246	929		143	1351			1141			1078	
v/s Ratio Prot		c0.14		c0.15	0.14							
v/s Ratio Perm	0.12							0.11			c0.14	
v/c Ratio	0.38	0.46		1.58	0.32			0.28			0.37	
Uniform Delay, d1	17.6	18.1		29.5	11.6			13.8			14.4	
Progression Factor	0.86	0.81		1.28	1.15			0.87			0.70	
Incremental Delay, d2	4.3	1.6		277.2	0.3			0.6			1.0	
Delay (s)	19.4	16.2		314.9	13.7			12.5			11.1	
Level of Service	B	B		F	B			B			B	
Approach Delay (s)		16.7			113.5			12.5			11.1	
Approach LOS		B			F			B			B	

Intersection Summary			
HCM Average Control Delay	48.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	57.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			↰↑↑↱				
Volume (vph)	16	355	26	75	620	75	55	110	165	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	12	14	12	10	15	10
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			0.95				
Frt		0.99			0.99			0.93				
Flt Protected		1.00			1.00			0.99				
Satd. Flow (prot)		1613			1602			3249				
Flt Permitted		0.96			0.92			0.99				
Satd. Flow (perm)		1557			1484			3249				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	18	394	29	83	689	83	61	122	183	0	0	0
RTOR Reduction (vph)	0	3	0	0	5	0	0	139	0	0	0	0
Lane Group Flow (vph)	0	438	0	0	850	0	0	227	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm			Perm					
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Actuated Green, G (s)		41.5			41.5			15.5				
Effective Green, g (s)		41.5			41.5			15.5				
Actuated g/C Ratio		0.64			0.64			0.24				
Clearance Time (s)		4.0			4.0			4.0				
Vehicle Extension (s)		3.0			3.0			8.0				
Lane Grp Cap (vph)		994			947			775				
v/s Ratio Prot												
v/s Ratio Perm		0.28			c0.57			0.07				
v/c Ratio		0.44			0.90			0.29				
Uniform Delay, d1		5.9			9.9			20.3				
Progression Factor		2.01			1.00			1.00				
Incremental Delay, d2		1.3			13.0			0.9				
Delay (s)		13.2			22.9			21.2				
Level of Service		B			C			C				
Approach Delay (s)		13.2			22.9			21.2			0.0	
Approach LOS		B			C			C			A	

Intersection Summary			
HCM Average Control Delay	20.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	86.4%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

	↗	→	←	↖	↘	↙
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰	↱		↰	↱
Volume (veh/h)	93	415	598	39	119	164
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	98	437	629	41	125	173
Pedestrians		5	6		17	
Lane Width (ft)		16.0	16.0		10.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		1	1		1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		1319	491			
pX, platoon unblocked	0.83				0.83	0.83
vC, conflicting volume	688				1306	672
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	522				1266	503
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	88				8	63
cM capacity (veh/h)	845				136	467

Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total	535	671	125	173
Volume Left	98	0	125	0
Volume Right	0	41	0	173
cSH	845	1700	136	467
Volume to Capacity	0.12	0.39	0.92	0.37
Queue Length 95th (ft)	10	0	156	42
Control Delay (s)	3.0	0.0	120.4	17.1
Lane LOS	A		F	C
Approach Delay (s)	3.0	0.0	60.6	
Approach LOS			F	

Intersection Summary			
Average Delay	13.1		
Intersection Capacity Utilization	82.2%	ICU Level of Service	E
Analysis Period (min)	15		

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↱			↰	↰↱	
Volume (vph)	690	0	1	619	3	29
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0			4.0	4.0	
Lane Util. Factor	1.00			1.00	1.00	
Frt	1.00			1.00	0.88	
Flt Protected	1.00			1.00	1.00	
Satd. Flow (prot)	1748			1747	1525	
Flt Permitted	1.00			1.00	1.00	
Satd. Flow (perm)	1748			1747	1525	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	767	0	1	688	3	32
RTOR Reduction (vph)	0	0	0	0	27	0
Lane Group Flow (vph)	767	0	0	689	8	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type			Perm			
Protected Phases	1 2 4			4	3	
Permitted Phases			4			
Actuated Green, G (s)	63.0			31.0	14.0	
Effective Green, g (s)	59.0			31.0	14.0	
Actuated g/C Ratio	0.69			0.36	0.16	
Clearance Time (s)				4.0	4.0	
Lane Grp Cap (vph)	1213			637	251	
v/s Ratio Prot	c0.44				c0.01	
v/s Ratio Perm				0.39		
v/c Ratio	0.63			1.08	0.03	
Uniform Delay, d1	7.1			27.0	29.8	
Progression Factor	0.10			1.00	1.00	
Incremental Delay, d2	1.1			59.8	0.2	
Delay (s)	1.8			86.8	30.1	
Level of Service	A			F	C	
Approach Delay (s)	1.8			86.8	30.1	
Approach LOS	A			F	C	

Intersection Summary			
HCM Average Control Delay	41.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	48.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱			↰						↰	↱
Volume (veh/h)	0	243	606	32	407	0	0	0	0	17	6	248
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	270	673	36	452	0	0	0	0	19	7	276
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	452			270			1133	1130	472	658	793	452
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	452			270			1133	1130	472	658	793	452
tC, single (s)	4.1			4.2			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			97			100	100	100	95	98	50
cM capacity (veh/h)	1119			1276			78	200	544	346	314	555

Direction, Lane #	EB 1	EB 2	WB 1	SB 1	SB 2
Volume Total	180	763	488	26	276
Volume Left	0	0	36	19	0
Volume Right	0	673	0	0	276
cSH	1700	1700	1276	337	555
Volume to Capacity	0.11	0.45	0.03	0.08	0.50
Queue Length 95th (ft)	0	0	2	6	69
Control Delay (s)	0.0	0.0	0.9	16.6	17.7
Lane LOS			A	C	C
Approach Delay (s)	0.0		0.9	17.6	
Approach LOS				C	

Intersection Summary			
Average Delay	3.3		
Intersection Capacity Utilization	60.5%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰↰		↰			
Sign Control	Stop			Stop	Stop	
Volume (vph)	260	0	439	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	289	0	488	0	0	0

Direction, Lane #	EB 1	EB 2	NB 1
Volume Total (vph)	144	144	488
Volume Left (vph)	144	144	488
Volume Right (vph)	0	0	0
Hadj (s)	0.55	0.55	0.25
Departure Headway (s)	6.4	6.4	5.0
Degree Utilization, x	0.26	0.26	0.68
Capacity (veh/h)	536	537	701
Control Delay (s)	10.3	10.3	17.7
Approach Delay (s)	10.3		17.7
Approach LOS	B		C

Intersection Summary			
Delay	15.0		
HCM Level of Service	B		
Intersection Capacity Utilization	40.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↰↑					↰	↰↑↱	↱
Volume (vph)	0	553	345	332	869	0	0	0	0	303	269	372
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	12	13	12	12	12	12	10	10	11
Total Lost time (s)		6.0	6.0		6.0					6.0	6.0	6.0
Lane Util. Factor		0.95	1.00		0.95					0.86	0.81	0.86
Frpb, ped/bikes		1.00	0.98		1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00					1.00	1.00	1.00
Frt		1.00	0.85		1.00					1.00	0.95	0.85
Flt Protected		1.00	1.00		0.99					0.95	0.99	1.00
Satd. Flow (prot)		3179	1232		3427					1359	3807	1133
Flt Permitted		1.00	1.00		0.99					0.95	0.99	1.00
Satd. Flow (perm)		3179	1232		3427					1359	3807	1133
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	582	363	349	915	0	0	0	0	319	283	392
RTOR Reduction (vph)	0	0	208	0	0	0	0	0	0	0	52	113
Lane Group Flow (vph)	0	582	155	0	1264	0	0	0	0	175	571	83
Confl. Peds. (#/hr)	4		6	6		4						
Heavy Vehicles (%)	0%	4%	6%	1%	2%	0%	0%	0%	0%	1%	1%	1%
Parking (#/hr)			0									0
Turn Type			Perm	Split						Split		custom
Protected Phases		2		10 12 14	10 12 14					4	4	
Permitted Phases			2									4 2
Actuated Green, G (s)		39.0	39.0		67.4					23.0	23.0	68.0
Effective Green, g (s)		39.0	39.0		67.4					23.0	23.0	68.0
Actuated g/C Ratio		0.24	0.24		0.42					0.14	0.14	0.42
Clearance Time (s)		6.0	6.0							6.0	6.0	
Vehicle Extension (s)		3.0	3.0							3.0	3.0	
Lane Grp Cap (vph)		775	300		1444					195	547	482
v/s Ratio Prot		c0.18			c0.37					0.13	c0.15	
v/s Ratio Perm			0.13									0.07
v/c Ratio		0.75	0.52		0.88					0.90	1.04	0.17
Uniform Delay, d1		56.0	52.3		42.4					67.3	68.5	28.5
Progression Factor		1.00	1.00		0.17					1.00	1.00	1.00
Incremental Delay, d2		6.6	6.2		0.6					37.0	50.3	0.2
Delay (s)		62.6	58.6		8.0					104.3	118.8	28.7
Level of Service		E	E		A					F	F	C
Approach Delay (s)		61.1			8.0			0.0			98.5	
Approach LOS		E			A			A			F	

Intersection Summary			
HCM Average Control Delay	51.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	32.6
Intersection Capacity Utilization	84.9%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1059: 119th Street & Ashland Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑			↑↑	↱	↰	↰↑↱				
Volume (vph)	292	564	0	0	869	233	332	214	211	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	13	12	12	11	12	13	13	14	12	12	12
Total Lost time (s)	6.0	6.0			6.0	6.0	6.0	6.0				
Lane Util. Factor	1.00	0.95			0.95	1.00	0.91	0.91				
Frt	1.00	1.00			1.00	0.85	1.00	0.94				
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.99				
Satd. Flow (prot)	1605	3431			3210	1485	1561	3056				
Flt Permitted	0.95	1.00			1.00	1.00	0.95	0.99				
Satd. Flow (perm)	1605	3431			3210	1485	1561	3056				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	324	627	0	0	966	259	369	238	234	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	93	0	75	0	0	0	0
Lane Group Flow (vph)	324	627	0	0	966	166	288	478	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Split					Perm	Split					
Protected Phases	2 4 8	2 4 8			10		12	12				
Permitted Phases						10						
Actuated Green, G (s)	84.6	84.6			36.4	36.4	12.0	12.0				
Effective Green, g (s)	84.6	84.6			36.4	36.4	12.0	12.0				
Actuated g/C Ratio	0.53	0.53			0.23	0.23	0.08	0.08				
Clearance Time (s)					6.0	6.0	6.0	6.0				
Vehicle Extension (s)					3.0	3.0	3.0	3.0				
Lane Grp Cap (vph)	849	1814			730	338	117	229				
v/s Ratio Prot	c0.20	0.18			c0.30		c0.18	0.16				
v/s Ratio Perm						0.11						
v/c Ratio	0.38	0.35			1.32	0.49	2.46	2.09				
Uniform Delay, d1	22.3	21.7			61.8	53.8	74.0	74.0				
Progression Factor	0.06	0.06			1.00	1.00	1.00	1.00				
Incremental Delay, d2	0.2	0.1			155.0	1.1	682.7	504.1				
Delay (s)	1.4	1.3			216.8	54.9	756.7	578.1				
Level of Service	A	A			F	D	F	F				
Approach Delay (s)		1.3			182.5			639.2			0.0	
Approach LOS		A			F			F			A	

Intersection Summary			
HCM Average Control Delay	252.7	HCM Level of Service	F
HCM Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	29.0
Intersection Capacity Utilization	73.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↱		↰	↑↱		↰	↑↱	
Volume (vph)	140	506	136	89	270	67	108	522	70	96	1150	120
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	14	12	10	10	12	9	10	12
Total Lost time (s)	4.0	4.0	5.0	4.0	5.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.97		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1575	1600	1373	1596	1790		1580	3016		1537	3027	
Flt Permitted	0.31	1.00	1.00	0.15	1.00		0.11	1.00		0.33	1.00	
Satd. Flow (perm)	519	1600	1373	253	1790		190	3016		534	3027	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	147	533	143	94	284	71	114	549	74	101	1211	126
RTOR Reduction (vph)	0	0	98	0	10	0	0	12	0	0	9	0
Lane Group Flow (vph)	147	533	45	94	345	0	114	612	0	101	1328	0
Confl. Peds. (#/hr)	28		8	8		28	59		11	11		59
Confl. Bikes (#/hr)	3					3	1		2	2		1
Heavy Vehicles (%)	1%	5%	2%	0%	4%	0%	1%	4%	0%	0%	3%	3%
Turn Type	pm+pt		Perm	pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)	36.0	29.0	29.0	33.2	27.6		43.0	36.0		40.2	34.6	
Effective Green, g (s)	34.0	30.0	29.0	31.2	27.6		41.0	36.0		38.2	34.6	
Actuated g/C Ratio	0.37	0.33	0.32	0.34	0.30		0.45	0.39		0.42	0.38	
Clearance Time (s)	3.0	5.0	5.0	3.0	5.0		3.0	4.0		3.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	263	526	437	154	542		177	1191		274	1148	
v/s Ratio Prot	c0.04	c0.33		0.03	0.19		c0.04	0.20		0.02	c0.44	
v/s Ratio Perm	0.17		0.03	0.18			0.25			0.14		
v/c Ratio	0.56	1.01	0.10	0.61	0.64		0.64	0.51		0.37	1.16	
Uniform Delay, d1	20.7	30.6	21.9	23.5	27.5		20.5	21.0		16.8	28.3	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.6	42.6	0.5	7.0	5.6		7.8	1.6		0.8	80.8	
Delay (s)	23.3	73.2	22.4	30.4	33.1		28.3	22.5		17.6	109.1	
Level of Service	C	E	C	C	C		C	C		B	F	
Approach Delay (s)		55.5			32.5			23.4			102.7	
Approach LOS		E			C			C			F	

Intersection Summary			
HCM Average Control Delay	65.3	HCM Level of Service	E
HCM Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	91.2	Sum of lost time (s)	12.0
Intersection Capacity Utilization	91.6%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1061: 119th Street & Wentworth Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑	↱		↰↑	↱		↰↑↱			↰↑↱	
Volume (vph)	88	462	111	13	334	22	49	59	19	21	91	82
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	10	10	10	12	15	12	12	16	12
Total Lost time (s)		3.0	3.0		3.0	3.0		3.0			3.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00			1.00	
Frpb, ped/bikes		1.00	0.96		1.00	0.97		1.00			0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00			1.00	
Frt		1.00	0.85		1.00	0.85		0.98			0.94	
Flt Protected		0.99	1.00		1.00	1.00		0.98			0.99	
Satd. Flow (prot)		1963	1467		1629	1381		1892			1857	
Flt Permitted		0.89	1.00		0.98	1.00		0.86			0.97	
Satd. Flow (perm)		1760	1467		1598	1381		1649			1813	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	93	486	117	14	352	23	52	62	20	22	96	86
RTOR Reduction (vph)	0	0	45	0	0	12	0	10	0	0	40	0
Lane Group Flow (vph)	0	579	72	0	366	11	0	124	0	0	164	0
Confl. Peds. (#/hr)	12		20	20		12	8		2	2		8
Confl. Bikes (#/hr)	1		2	2		1			1	1		
Heavy Vehicles (%)	3%	3%	0%	0%	3%	0%	0%	0%	0%	0%	1%	3%
Turn Type	Perm		Perm	Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)		32.0	32.0		32.0	32.0		27.0			27.0	
Effective Green, g (s)		32.0	32.0		32.0	32.0		27.0			27.0	
Actuated g/C Ratio		0.49	0.49		0.49	0.49		0.42			0.42	
Clearance Time (s)		3.0	3.0		3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)		866	722		787	680		685			753	
v/s Ratio Prot												
v/s Ratio Perm		c0.33	0.05		0.23	0.01		0.08			c0.09	
v/c Ratio		0.67	0.10		0.47	0.02		0.18			0.22	
Uniform Delay, d1		12.5	8.8		10.9	8.4		12.0			12.2	
Progression Factor		1.00	1.00		1.84	2.64		1.00			1.98	
Incremental Delay, d2		4.1	0.3		1.9	0.0		0.6			0.7	
Delay (s)		16.6	9.1		21.9	22.3		12.6			24.8	
Level of Service		B	A		C	C		B			C	
Approach Delay (s)		15.3			21.9			12.6			24.8	
Approach LOS		B			C			B			C	

Intersection Summary			
HCM Average Control Delay	18.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	78.7%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1062: 119th Street & State Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑	↱		↰↑	↱		↰↑	↱		↰↑↱	
Volume (vph)	108	244	91	11	226	10	48	114	19	15	184	82
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frpb, ped/bikes		1.00	0.94		1.00	0.97		1.00	0.97		0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		0.96	
Flt Protected		0.98	1.00		1.00	1.00		0.99	1.00		1.00	
Satd. Flow (prot)		1743	1443		1728	1487		1712	1489		1703	
Flt Permitted		0.78	1.00		0.98	1.00		0.85	1.00		0.98	
Satd. Flow (perm)		1387	1443		1692	1487		1481	1489		1680	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	114	257	96	12	238	11	51	120	20	16	194	86
RTOR Reduction (vph)	0	0	58	0	0	7	0	0	10	0	23	0
Lane Group Flow (vph)	0	371	38	0	250	4	0	171	10	0	273	0
Confl. Peds. (#/hr)	19		25	25		19	3		6	6		3
Confl. Bikes (#/hr)	1		2	2		1			1	1		
Heavy Vehicles (%)	0%	2%	0%	0%	4%	0%	0%	5%	0%	0%	0%	2%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		23.0	23.0		23.0	23.0		32.0	32.0		32.0	
Effective Green, g (s)		23.0	23.0		23.0	23.0		32.0	32.0		32.0	
Actuated g/C Ratio		0.35	0.35		0.35	0.35		0.49	0.49		0.49	
Clearance Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	
Lane Grp Cap (vph)		491	511		599	526		729	733		827	
v/s Ratio Prot												
v/s Ratio Perm		c0.27	0.03		0.15	0.00		0.12	0.01		c0.16	
v/c Ratio		0.76	0.08		0.42	0.01		0.23	0.01		0.33	
Uniform Delay, d1		18.5	13.9		15.9	13.6		9.5	8.4		10.0	
Progression Factor		1.79	3.63		0.96	0.95		0.16	0.21		1.06	
Incremental Delay, d2		8.1	0.2		2.1	0.0		0.1	0.0		1.1	
Delay (s)		41.3	50.8		17.4	13.0		1.6	1.7		11.6	
Level of Service		D	D		B	B		A	A		B	
Approach Delay (s)		43.2			17.2			1.6			11.6	
Approach LOS		D			B			A			B	

Intersection Summary			
HCM Average Control Delay	23.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	72.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1063: 119th Street & Michigan Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Lane Configurations		↰	↱		✥			✥			↰	↱
Volume (vph)	167	45	96	8	16	9	43	225	8	21	481	209
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	14	12	12	16	12	12	16	12
Total Lost time (s)		3.0	3.0		3.0			3.0			3.0	3.0
Lane Util. Factor		1.00	1.00		1.00			1.00			1.00	1.00
Frpb, ped/bikes		1.00	0.95		0.99			1.00			1.00	0.94
Flpb, ped/bikes		0.98	1.00		0.99			1.00			1.00	1.00
Frt		1.00	0.85		0.96			1.00			1.00	0.85
Flt Protected		0.96	1.00		0.99			0.99			1.00	1.00
Satd. Flow (prot)		1873	1440		1782			1991			1976	1382
Flt Permitted		0.81	1.00		0.93			0.88			0.98	1.00
Satd. Flow (perm)		1573	1440		1686			1762			1946	1382
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	186	50	107	9	18	10	48	250	9	23	534	232
RTOR Reduction (vph)	0	0	63	0	7	0	0	2	0	0	0	92
Lane Group Flow (vph)	0	236	44	0	30	0	0	305	0	0	557	140
Confl. Peds. (#/hr)	37		53	53		37	39		54	54		39
Confl. Bikes (#/hr)							2					2
Heavy Vehicles (%)	4%	0%	1%	0%	0%	0%	0%	1%	0%	0%	3%	4%
Turn Type	pm+pt		Perm	Perm			Perm			Perm		Perm
Protected Phases	7	4			8			2			6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)		27.0	27.0		17.0			32.0			32.0	32.0
Effective Green, g (s)		27.0	27.0		17.0			32.0			32.0	32.0
Actuated g/C Ratio		0.42	0.42		0.26			0.49			0.49	0.49
Clearance Time (s)		3.0	3.0		3.0			3.0			3.0	3.0
Lane Grp Cap (vph)		690	598		441			867			958	680
v/s Ratio Prot		c0.04										
v/s Ratio Perm		0.10	0.03		0.02			0.17			c0.29	0.10
v/c Ratio		0.34	0.07		0.07			0.35			0.58	0.21
Uniform Delay, d1		12.9	11.5		18.0			10.1			11.7	9.3
Progression Factor		1.02	1.85		1.00			0.52			0.66	0.22
Incremental Delay, d2		1.1	0.2		0.3			0.6			2.0	0.5
Delay (s)		14.3	21.4		18.3			5.9			9.7	2.6
Level of Service		B	C		B			A			A	A
Approach Delay (s)		16.5			18.3			5.9			7.6	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	9.6	HCM Level of Service	A
HCM Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	72.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1064: 127th Street & S Paulina St

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑↱		↰	↑↑					↰	↰↑↱	↱
Volume (vph)	0	922	289	675	1189	0	0	0	0	513	284	334
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	12	11	8	8	8	11	12	14
Total Lost time (s)		6.0		4.5	6.0					6.0	6.0	6.0
Lane Util. Factor		0.91		1.00	0.95					0.91	0.86	0.91
Frpb, ped/bikes		0.99		1.00	1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Frt		0.96		1.00	1.00					1.00	0.98	0.85
Flt Protected		1.00		0.95	1.00					0.95	0.98	1.00
Satd. Flow (prot)		4575		1621	3320					1489	2913	1442
Flt Permitted		1.00		0.10	1.00					0.95	0.98	1.00
Satd. Flow (perm)		4575		173	3320					1489	2913	1442
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	971	304	711	1252	0	0	0	0	540	299	352
RTOR Reduction (vph)	0	49	0	0	0	0	0	0	0	0	9	58
Lane Group Flow (vph)	0	1226	0	711	1252	0	0	0	0	308	603	213
Confl. Peds. (#/hr)	15		11	11		15						
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	0%	3%	3%	2%	3%	0%	0%	0%	0%	1%	3%	3%
Turn Type				pm+pt						Perm		Perm
Protected Phases		2		1	6						4	
Permitted Phases				6						4		4
Actuated Green, G (s)		35.0		74.9	74.9					28.1	28.1	28.1
Effective Green, g (s)		35.0		74.9	74.9					28.1	28.1	28.1
Actuated g/C Ratio		0.30		0.65	0.65					0.24	0.24	0.24
Clearance Time (s)		6.0		4.5	6.0					6.0	6.0	6.0
Vehicle Extension (s)		7.0		3.5	7.0					3.5	3.5	3.5
Lane Grp Cap (vph)		1392		558	2162					364	712	352
v/s Ratio Prot		0.27		c0.39	0.38							
v/s Ratio Perm				c0.44						0.21	0.21	0.15
v/c Ratio		0.88		1.27	0.58					0.85	0.85	0.60
Uniform Delay, d1		38.0		33.0	11.2					41.4	41.4	38.5
Progression Factor		1.00		0.85	2.08					1.00	1.00	1.00
Incremental Delay, d2		8.3		126.7	0.3					16.7	9.4	3.1
Delay (s)		46.3		154.6	23.6					58.1	50.8	41.6
Level of Service		D		F	C					E	D	D
Approach Delay (s)		46.3			71.0			0.0			50.6	
Approach LOS		D			E			A			D	

Intersection Summary			
HCM Average Control Delay	58.4	HCM Level of Service	E
HCM Volume to Capacity ratio	1.12		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	10.5
Intersection Capacity Utilization	119.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1065: 127th Street & Marshfield Ave

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↑			↑↑	↱		↰↑↱				
Volume (vph)	341	1094	0	0	1435	271	430	351	393	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	12	12	12	11	12	12	12	12	12	12	12
Total Lost time (s)	6.0	6.0			6.0	6.0		6.0				
Lane Util. Factor	0.97	0.95			0.95	1.00		0.91				
Frpb, ped/bikes	1.00	1.00			1.00	0.98		1.00				
Flpb, ped/bikes	1.00	1.00			1.00	1.00		1.00				
Frt	1.00	1.00			1.00	0.85		0.95				
Flt Protected	0.95	1.00			1.00	1.00		0.98				
Satd. Flow (prot)	3144	3353			3241	1489		4492				
Flt Permitted	0.07	1.00			1.00	1.00		0.98				
Satd. Flow (perm)	220	3353			3241	1489		4492				
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	359	1152	0	0	1511	285	453	369	414	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	68	0	75	0	0	0	0
Lane Group Flow (vph)	359	1152	0	0	1511	217	0	1161	0	0	0	0
Confl. Peds. (#/hr)	7		5	5		7						
Confl. Bikes (#/hr)	1		1	1		1						
Heavy Vehicles (%)	2%	2%	0%	0%	2%	1%	2%	1%	3%	0%	0%	0%
Turn Type	pm+pt					Perm	Perm					
Protected Phases	5	2			6			8				
Permitted Phases	2					6	8					
Actuated Green, G (s)	74.0	74.0			54.1	54.1		29.0				
Effective Green, g (s)	74.0	74.0			54.1	54.1		29.0				
Actuated g/C Ratio	0.64	0.64			0.47	0.47		0.25				
Clearance Time (s)	6.0	6.0			6.0	6.0		6.0				
Vehicle Extension (s)	3.5	7.0			7.0	7.0		5.0				
Lane Grp Cap (vph)	495	2158			1525	700		1133				
v/s Ratio Prot	c0.09	0.34			c0.47							
v/s Ratio Perm	0.38					0.15		0.26				
v/c Ratio	0.73	0.53			0.99	0.31		1.02				
Uniform Delay, d1	31.7	11.1			30.2	18.9		43.0				
Progression Factor	1.55	0.03			0.91	1.06		1.00				
Incremental Delay, d2	2.6	0.5			5.1	0.1		33.2				
Delay (s)	51.9	0.7			32.6	20.1		76.2				
Level of Service	D	A			C	C		E				
Approach Delay (s)		12.9			30.6			76.2			0.0	
Approach LOS		B			C			E			A	

Intersection Summary			
HCM Average Control Delay	37.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	119.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1066: 127th Street & S Ashland

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	135	774	408	104	1197	100	227	179	66	85	162	121
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	12	11	12	12	10	10	13	10	10	10
Total Lost time (s)	3.5	6.0	3.5	3.5	6.0		3.5	6.0		3.5	6.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		0.99	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.96		1.00	0.94	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1565	3273	1313	1602	3284		1578	3002		1540	2941	
Flt Permitted	0.11	1.00	1.00	0.34	1.00		0.39	1.00		0.59	1.00	
Satd. Flow (perm)	174	3273	1313	580	3284		654	3002		961	2941	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	142	815	429	109	1260	105	239	188	69	89	171	127
RTOR Reduction (vph)	0	0	173	0	6	0	0	38	0	0	107	0
Lane Group Flow (vph)	142	815	256	109	1359	0	239	219	0	89	191	0
Confl. Peds. (#/hr)	11		23	23		11	8		12	12		8
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	2%	1%	3%	3%	3%	0%	1%	1%	2%	3%	0%	1%
Parking (#/hr)			0									
Turn Type	pm+pt		pm+ov	pm+pt			pm+pt			pm+pt		
Protected Phases	5	2	3	1	6		3	8		7	4	
Permitted Phases	2		2	6			8			4		
Actuated Green, G (s)	64.8	52.2	68.6	43.4	34.3		38.2	26.4		26.6	18.3	
Effective Green, g (s)	64.8	52.2	68.6	43.4	34.3		38.2	26.4		26.6	18.3	
Actuated g/C Ratio	0.56	0.45	0.60	0.38	0.30		0.33	0.23		0.23	0.16	
Clearance Time (s)	3.5	6.0	3.5	3.5	6.0		3.5	6.0		3.5	6.0	
Vehicle Extension (s)	3.0	7.0	3.0	3.0	7.0		3.0	7.0		3.0	7.0	
Lane Grp Cap (vph)	425	1486	783	300	979		349	689		264	468	
v/s Ratio Prot	c0.08	c0.25	0.05	0.03	c0.41		c0.10	0.07		0.02	0.07	
v/s Ratio Perm	0.11		0.15	0.11			c0.13			0.05		
v/c Ratio	0.33	0.55	0.33	0.36	1.39		0.68	0.32		0.34	0.41	
Uniform Delay, d1	17.5	22.8	11.6	23.9	40.4		30.5	36.8		36.1	43.5	
Progression Factor	0.78	0.78	1.37	1.00	1.00		1.04	1.06		1.00	1.00	
Incremental Delay, d2	1.6	1.1	0.2	0.8	181.2		5.2	0.9		0.8	2.1	
Delay (s)	15.3	18.9	16.1	24.7	221.5		37.0	39.9		36.8	45.5	
Level of Service	B	B	B	C	F		D	D		D	D	
Approach Delay (s)		17.7			207.0			38.5			43.5	
Approach LOS		B			F			D			D	

Intersection Summary			
HCM Average Control Delay	97.6	HCM Level of Service	F
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	19.0
Intersection Capacity Utilization	88.9%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1067: Vermont St & S Ashland

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	46	250	367	186	441	113	362	340	107	206	408	56
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	11	12	11	12	12	11	13	12	10	11	12
Total Lost time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.91		1.00	0.97		1.00	0.96		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1707	2925		1653	3267		1620	3381		1580	3183	
Flt Permitted	0.39	1.00		0.18	1.00		0.32	1.00		0.48	1.00	
Satd. Flow (perm)	698	2925		314	3267		544	3381		802	3183	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	48	263	386	196	464	119	381	358	113	217	429	59
RTOR Reduction (vph)	0	225	0	0	19	0	0	26	0	0	9	0
Lane Group Flow (vph)	48	424	0	196	564	0	381	445	0	217	479	0
Confl. Peds. (#/hr)	12		3	3		12	5					5
Heavy Vehicles (%)	0%	2%	2%	0%	1%	1%	2%	1%	0%	1%	2%	0%
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	35.5	28.8		46.8	36.1		56.2	44.2		40.1	32.1	
Effective Green, g (s)	35.5	28.8		46.8	36.1		56.2	44.2		40.1	32.1	
Actuated g/C Ratio	0.31	0.25		0.41	0.31		0.49	0.38		0.35	0.28	
Clearance Time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	3.5	7.0		3.5	7.0		3.5	7.0		3.5	7.0	
Lane Grp Cap (vph)	274	733		291	1026		454	1299		334	888	
v/s Ratio Prot	0.01	0.15		c0.08	0.17		c0.15	0.13		0.05	0.15	
v/s Ratio Perm	0.04			c0.19			c0.26			0.18		
v/c Ratio	0.18	0.58		0.67	0.55		0.84	0.34		0.65	0.54	
Uniform Delay, d1	28.3	37.8		24.9	32.7		20.8	25.1		28.8	35.2	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		0.99	0.97	
Incremental Delay, d2	0.4	3.3		6.3	2.1		13.1	0.7		4.2	2.2	
Delay (s)	28.7	41.1		31.2	34.8		33.9	25.8		32.9	36.4	
Level of Service	C	D		C	C		C	C		C	D	
Approach Delay (s)		40.2			33.9			29.4			35.3	
Approach LOS		D			C			C			D	

Intersection Summary			
HCM Average Control Delay	34.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	82.5%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1068: 127th Street & Halsted Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	105	603	293	10	376	66	720	355	9	198	625	183
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	10	12	9	11	12	9	9	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.96			0.98		1.00	1.00		1.00	0.97	
Flt Protected		0.99			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		2967			3034		1452	3229		1523	2874	
Flt Permitted		0.71			0.92		0.18	1.00		0.48	1.00	
Satd. Flow (perm)		2106			2802		271	3229		773	2874	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	117	670	326	11	418	73	800	394	10	220	694	203
RTOR Reduction (vph)	0	70	0	0	21	0	0	3	0	0	42	0
Lane Group Flow (vph)	0	1043	0	0	481	0	800	401	0	220	855	0
Confl. Peds. (#/hr)	4		2	2		4	8		4	4		8
Confl. Bikes (#/hr)							2					2
Heavy Vehicles (%)	1%	2%	2%	0%	2%	6%	6%	2%	0%	1%	3%	3%
Turn Type	pm+pt			Perm			pm+pt			pm+pt		
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		25.0			17.0		28.0	24.0		28.0	24.0	
Effective Green, g (s)		25.0			17.0		28.0	24.0		28.0	24.0	
Actuated g/C Ratio		0.38			0.26		0.43	0.37		0.43	0.37	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		863			733		189	1192		379	1061	
v/s Ratio Prot		c0.07					c0.26	0.12		0.04	0.30	
v/s Ratio Perm		c0.39			0.17		c1.56			0.21		
v/c Ratio		1.21			0.66		4.23	0.34		0.58	0.81	
Uniform Delay, d1		20.0			21.4		16.7	14.8		13.0	18.4	
Progression Factor		1.00			1.47		1.11	0.87		1.00	1.00	
Incremental Delay, d2		104.9			0.4		1455.9	0.1		6.4	6.6	
Delay (s)		124.9			31.9		1474.4	12.9		19.4	25.0	
Level of Service		F			C		F	B		B	C	
Approach Delay (s)		124.9			31.9			984.0			23.9	
Approach LOS		F			C			F			C	

Intersection Summary			
HCM Average Control Delay	347.2	HCM Level of Service	F
HCM Volume to Capacity ratio	2.79		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	124.4%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1069: Vermont St & Halsted Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱		↰	↑↱		↰	↑↱	
Volume (vph)	67	198	222	337	167	28	414	1147	993	35	866	70
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	12	12	12	12	12
Total Lost time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.98		1.00	1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.92		1.00	0.98		1.00	0.93		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1707	1840		1601	1992		1676	3013		1437	3282	
Flt Permitted	0.63	1.00		0.34	1.00		0.22	1.00		0.13	1.00	
Satd. Flow (perm)	1128	1840		574	1992		382	3013		195	3282	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	69	204	229	347	172	29	427	1182	1024	36	893	72
RTOR Reduction (vph)	0	57	0	0	9	0	0	240	0	0	9	0
Lane Group Flow (vph)	69	376	0	347	192	0	427	1966	0	36	956	0
Confl. Peds. (#/hr)	3		20	20		3	2		3	3		2
Confl. Bikes (#/hr)			1	1			2		2	2		2
Heavy Vehicles (%)	0%	0%	1%	6%	0%	0%	2%	3%	6%	19%	3%	2%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	24.0	24.0		24.0	24.0		31.0	31.0		31.0	31.0	
Effective Green, g (s)	24.0	24.0		24.0	24.0		31.0	31.0		31.0	31.0	
Actuated g/C Ratio	0.37	0.37		0.37	0.37		0.48	0.48		0.48	0.48	
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)	416	679		212	736		182	1437		93	1565	
v/s Ratio Prot		0.20			0.10			0.65			0.29	
v/s Ratio Perm	0.06			c0.60			c1.12			0.18		
v/c Ratio	0.17	0.55		1.64	0.26		2.35	1.37		0.39	0.61	
Uniform Delay, d1	13.8	16.3		20.5	14.3		17.0	17.0		10.9	12.5	
Progression Factor	1.00	1.00		1.33	1.34		1.00	1.00		1.04	0.96	
Incremental Delay, d2	0.9	3.2		288.5	0.1		622.5	170.2		4.3	0.6	
Delay (s)	14.6	19.5		315.9	19.2		639.5	187.2		15.6	12.7	
Level of Service	B	B		F	B		F	F		B	B	
Approach Delay (s)		18.8			207.1			260.5			12.8	
Approach LOS		B			F			F			B	

Intersection Summary			
HCM Average Control Delay	175.4	HCM Level of Service	F
HCM Volume to Capacity ratio	2.04		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	133.3%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1070: 127th Street & S Wallance St

Movement	EBL	EBT	WBL	WBT	WBR	NBL2	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↑↱		↰↑↑↱				↰↑↱			↰↑↱	
Volume (vph)	2	785	455	550	18	3	10	9	47	9	0	3
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	10	10	10	12	12	16	12	12	16	12
Total Lost time (s)		5.0		5.0				4.0			4.0	
Lane Util. Factor		0.95		0.95				1.00			1.00	
Frpb, ped/bikes		1.00		1.00				0.99			0.98	
Flpb, ped/bikes		1.00		1.00				1.00			1.00	
Frt		1.00		1.00				0.91			0.94	
Flt Protected		1.00		0.98				0.99			0.97	
Satd. Flow (prot)		3160		3065				1810			1824	
Flt Permitted		0.95		0.59				0.96			0.89	
Satd. Flow (perm)		3009		1850				1750			1671	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	2	826	479	579	19	3	11	9	49	9	0	3
RTOR Reduction (vph)	0	0	0	2	0	0	0	38	0	0	4	0
Lane Group Flow (vph)	0	828	0	1075	0	0	0	34	0	0	13	0
Confl. Peds. (#/hr)	7		4		7		7		2	2		7
Confl. Bikes (#/hr)							2		2	2		2
Heavy Vehicles (%)	0%	1%	2%	1%	6%	0%	0%	0%	0%	0%	0%	0%
Turn Type	Perm		custom				Perm			Perm		
Protected Phases		8	7	4				2			6	
Permitted Phases	8		4 7				2			6		
Actuated Green, G (s)		18.0		27.0				14.0			14.0	
Effective Green, g (s)		18.0		27.0				14.0			14.0	
Actuated g/C Ratio		0.28		0.42				0.22			0.22	
Clearance Time (s)		5.0		5.0				4.0			4.0	
Lane Grp Cap (vph)		833		881				377			360	
v/s Ratio Prot				c0.11								
v/s Ratio Perm		0.28		c0.39				c0.02			0.01	
v/c Ratio		0.99		2.29dl				0.09			0.04	
Uniform Delay, d1		23.4		19.0				20.4			20.2	
Progression Factor		1.39		0.83				1.00			1.00	
Incremental Delay, d2		8.1		108.4				0.5			0.2	
Delay (s)		40.7		124.2				20.9			20.4	
Level of Service		D		F				C			C	
Approach Delay (s)		40.7		124.2				20.9			20.4	
Approach LOS		D		F				C			C	

Intersection Summary			
HCM Average Control Delay	762.3	HCM Level of Service	F
HCM Volume to Capacity ratio	1.66		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	158.4%	ICU Level of Service	H
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1070: 127th Street & S Wallance St

1/14/2013

Movement	SBR2	NEL	NER
Lane Configurations			
Volume (vph)	5	3	1155
Ideal Flow (vphpl)	1800	1800	1800
Lane Width	12	12	12
Total Lost time (s)		5.0	
Lane Util. Factor		1.00	
Frpb, ped/bikes		1.00	
Flpb, ped/bikes		1.00	
Frt		0.87	
Flt Protected		1.00	
Satd. Flow (prot)		1557	
Flt Permitted		1.00	
Satd. Flow (perm)		1557	
Peak-hour factor, PHF	0.95	0.95	0.95
Adj. Flow (vph)	5	3	1216
RTOR Reduction (vph)	0	0	0
Lane Group Flow (vph)	0	1219	0
Confl. Peds. (#/hr)			
Confl. Bikes (#/hr)			
Heavy Vehicles (%)	0%	0%	0%
Turn Type			
Protected Phases		3	
Permitted Phases			
Actuated Green, G (s)		10.0	
Effective Green, g (s)		10.0	
Actuated g/C Ratio		0.15	
Clearance Time (s)		5.0	
Lane Grp Cap (vph)		240	
v/s Ratio Prot		c0.78	
v/s Ratio Perm			
v/c Ratio		5.08	
Uniform Delay, d1		27.5	
Progression Factor		1.23	
Incremental Delay, d2		1836.5	
Delay (s)		1870.3	
Level of Service		F	
Approach Delay (s)		1870.3	
Approach LOS		F	

Intersection Summary

HCM Signalized Intersection Capacity Analysis
1071: 127th Street & State Street

	↗	→	←	↖	↘	↙
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰↑	↑↱		↰	↱
Volume (vph)	355	1614	774	63	96	257
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		1.00	1.00
Frt		1.00	0.99		1.00	0.85
Flt Protected		0.99	1.00		0.95	1.00
Satd. Flow (prot)		3291	3283		1660	1485
Flt Permitted		0.61	1.00		0.95	1.00
Satd. Flow (perm)		2011	3283		1660	1485
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	394	1793	860	70	107	286
RTOR Reduction (vph)	0	0	9	0	0	128
Lane Group Flow (vph)	0	2187	921	0	107	158
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type	Perm					Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)		40.0	40.0		17.0	17.0
Effective Green, g (s)		40.0	40.0		17.0	17.0
Actuated g/C Ratio		0.62	0.62		0.26	0.26
Clearance Time (s)		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		1238	2020		434	388
v/s Ratio Prot			0.28		0.06	
v/s Ratio Perm		c1.09				c0.11
v/c Ratio		1.77	0.46		0.25	0.41
Uniform Delay, d1		12.5	6.7		18.9	19.8
Progression Factor		1.98	0.93		1.27	1.54
Incremental Delay, d2		345.3	0.7		1.3	3.1
Delay (s)		370.0	6.9		25.4	33.7
Level of Service		F	A		C	C
Approach Delay (s)		370.0	6.9		31.4	
Approach LOS		F	A		C	

Intersection Summary			
HCM Average Control Delay	235.9	HCM Level of Service	F
HCM Volume to Capacity ratio	1.36		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	98.3%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1072: 127th Street & Michigan Avenue

1/14/2013

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰↑	↑↱		↰	↱
Volume (vph)	104	1609	747	152	265	94
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	12	10	11	12	10	10
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		1.00	1.00
Frpb, ped/bikes		1.00	1.00		1.00	0.99
Flpb, ped/bikes		1.00	1.00		1.00	1.00
Frt		1.00	0.97		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		3122	3106		1506	1343
Flt Permitted		0.77	1.00		0.95	1.00
Satd. Flow (perm)		2402	3106		1506	1343
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	109	1694	786	160	279	99
RTOR Reduction (vph)	0	0	26	0	0	64
Lane Group Flow (vph)	0	1803	920	0	279	35
Confl. Peds. (#/hr)	2			2		1
Heavy Vehicles (%)	1%	2%	2%	10%	6%	5%
Turn Type	Perm					Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)		34.0	34.0		23.0	23.0
Effective Green, g (s)		34.0	34.0		23.0	23.0
Actuated g/C Ratio		0.52	0.52		0.35	0.35
Clearance Time (s)		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		1256	1625		533	475
v/s Ratio Prot			0.30		c0.19	
v/s Ratio Perm		c0.75				0.03
v/c Ratio		1.44	0.57		0.52	0.07
Uniform Delay, d1		15.5	10.5		16.7	13.9
Progression Factor		1.10	1.32		1.64	3.39
Incremental Delay, d2		196.4	1.1		3.2	0.3
Delay (s)		213.5	15.0		30.5	47.4
Level of Service		F	B		C	D
Approach Delay (s)		213.5	15.0		35.0	
Approach LOS		F	B		C	

Intersection Summary			
HCM Average Control Delay	131.9	HCM Level of Service	F
HCM Volume to Capacity ratio	1.07		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	102.6%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1073: 130th Street & Indiana Ave

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↱		↰	↑	⋎	
Volume (vph)	1404	329	121	771	222	58
Ideal Flow (vphpl)	2300	1800	1800	2300	1800	1800
Lane Width	15	12	14	16	15	12
Total Lost time (s)	5.0		5.0	5.0	5.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.97		1.00	1.00	0.97	
Flt Protected	1.00		0.95	1.00	0.96	
Satd. Flow (prot)	2417		1788	2506	1749	
Flt Permitted	1.00		0.13	1.00	0.96	
Satd. Flow (perm)	2417		243	2506	1749	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	1433	336	123	787	227	59
RTOR Reduction (vph)	13	0	0	0	11	0
Lane Group Flow (vph)	1756	0	123	787	275	0
Confl. Peds. (#/hr)						1
Heavy Vehicles (%)	2%	2%	2%	4%	7%	0%
Turn Type			Perm			
Protected Phases	4			8	2	
Permitted Phases			8			
Actuated Green, G (s)	31.0		31.0	31.0	24.0	
Effective Green, g (s)	31.0		31.0	31.0	24.0	
Actuated g/C Ratio	0.48		0.48	0.48	0.37	
Clearance Time (s)	5.0		5.0	5.0	5.0	
Lane Grp Cap (vph)	1153		116	1195	646	
v/s Ratio Prot	c0.73			0.31	c0.16	
v/s Ratio Perm			0.51			
v/c Ratio	1.52		1.06	0.66	0.43	
Uniform Delay, d1	17.0		17.0	13.0	15.3	
Progression Factor	1.52		1.00	1.00	1.00	
Incremental Delay, d2	235.7		100.7	2.9	2.0	
Delay (s)	261.5		117.7	15.8	17.4	
Level of Service	F		F	B	B	
Approach Delay (s)	261.5			29.6	17.4	
Approach LOS	F			C	B	

Intersection Summary			
HCM Average Control Delay	166.8	HCM Level of Service	F
HCM Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	113.9%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1074: 130th Street & Ellis Ave

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑↑	↱		↰	↱		✥	
Volume (vph)	1	1680	84	112	875	1	73	0	157	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	15	13	11	11	12	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0	4.0	3.0	3.0	4.0		4.0	4.0			
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00	1.00			
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85			
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.95	1.00			
Satd. Flow (prot)	1881	3431	1479	1589	3320	1530		1938	1500			
Flt Permitted	0.29	1.00	1.00	0.08	1.00	1.00		0.76	1.00			
Satd. Flow (perm)	583	3431	1479	128	3320	1530		1545	1500			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1	1867	93	124	972	1	81	0	174	0	0	0
RTOR Reduction (vph)	0	0	27	0	0	0	0	0	140	0	0	0
Lane Group Flow (vph)	1	1867	66	124	972	1	0	81	34	0	0	0
Heavy Vehicles (%)	0%	3%	0%	4%	3%	0%	0%	0%	2%	0%	0%	0%
Turn Type	Perm		Perm	custom		custom	Perm		Perm	Perm		
Protected Phases		4		3	3 8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)	49.4	49.4	49.4	67.1	67.1	67.1		9.9	9.9			
Effective Green, g (s)	49.4	49.4	49.4	67.1	67.1	67.1		9.9	9.9			
Actuated g/C Ratio	0.58	0.58	0.58	0.79	0.79	0.79		0.12	0.12			
Clearance Time (s)	4.0	4.0	4.0	3.0		4.0		4.0	4.0			
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0		3.0	3.0			
Lane Grp Cap (vph)	339	1994	860	354	2621	1208		180	175			
v/s Ratio Prot		c0.54		0.06	c0.29							
v/s Ratio Perm	0.00		0.04	0.22		0.00		c0.05	0.02			
v/c Ratio	0.00	0.94	0.08	0.35	0.37	0.00		0.45	0.20			
Uniform Delay, d1	7.5	16.4	7.8	14.8	2.7	1.9		35.0	34.0			
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00			
Incremental Delay, d2	0.0	9.9	0.2	0.6	0.1	0.0		1.8	0.6			
Delay (s)	7.5	26.2	8.0	15.4	2.8	1.9		36.8	34.5			
Level of Service	A	C	A	B	A	A		D	C			
Approach Delay (s)		25.4			4.2			35.2			0.0	
Approach LOS		C			A			D			A	

Intersection Summary			
HCM Average Control Delay	19.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	70.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰↑	↑↱		↲↳	
Volume (vph)	9	952	843	30	71	13
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10
Total Lost time (s)		5.0	5.0		3.0	
Lane Util. Factor		0.95	0.95		1.00	
Frt		1.00	0.99		0.98	
Flt Protected		1.00	1.00		0.96	
Satd. Flow (prot)		3098	3083		1533	
Flt Permitted		0.94	1.00		0.96	
Satd. Flow (perm)		2923	3083		1533	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	10	1058	937	33	79	14
RTOR Reduction (vph)	0	0	3	0	7	0
Lane Group Flow (vph)	0	1068	967	0	86	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type	Perm					
Protected Phases		4	8 2 11		5	
Permitted Phases	4					
Actuated Green, G (s)		33.0	64.0		7.0	
Effective Green, g (s)		33.0	64.0		7.0	
Actuated g/C Ratio		0.37	0.71		0.08	
Clearance Time (s)		5.0			3.0	
Lane Grp Cap (vph)		1072	2192		119	
v/s Ratio Prot			c0.31		c0.06	
v/s Ratio Perm		c0.37				
v/c Ratio		1.00	0.44		0.72	
Uniform Delay, d1		28.4	5.5		40.5	
Progression Factor		1.00	0.01		1.00	
Incremental Delay, d2		26.6	0.2		31.1	
Delay (s)		55.0	0.2		71.7	
Level of Service		E	A		E	
Approach Delay (s)		55.0	0.2		71.7	
Approach LOS		E	A		E	

Intersection Summary			
HCM Average Control Delay	30.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	46.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

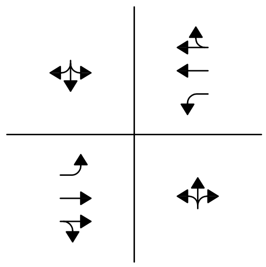
HCM Signalized Intersection Capacity Analysis
1955: 115th Street & Cottage Grove Avenue

1/14/2013

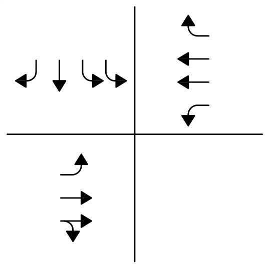
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↑↱			↰↑↱			↰↑	↱
Volume (vph)	58	500	0	1	582	39	3	2	28	202	0	138
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	12	12	11	12	11
Total Lost time (s)		4.0			4.0			3.0			3.0	3.0
Lane Util. Factor		1.00			0.95			1.00			1.00	1.00
Frpb, ped/bikes		1.00			1.00			0.94			1.00	0.98
Flpb, ped/bikes		1.00			1.00			1.00			0.99	1.00
Frt		1.00			0.99			0.88			1.00	0.85
Flt Protected		0.99			1.00			1.00			0.95	1.00
Satd. Flow (prot)		1771			3341			1467			1670	1348
Flt Permitted		0.87			0.95			0.88			0.88	1.00
Satd. Flow (perm)		1550			3191			1296			1545	1348
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	64	556	0	1	647	43	3	2	31	224	0	153
RTOR Reduction (vph)	0	0	0	0	6	0	0	28	0	0	0	103
Lane Group Flow (vph)	0	620	0	0	685	0	0	8	0	0	224	50
Confl. Peds. (#/hr)	60		44	44		60	14		10	10		14
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	0%	1%	0%	0%	1%	3%	20%	0%	0%	1%	0%	7%
Turn Type	Perm			Prot			Perm			pm+pt		Perm
Protected Phases		4		3	3 4			1		2	1 2	
Permitted Phases	4				3		1	1		1 2		1 2
Actuated Green, G (s)		31.0			45.0			9.0			25.0	28.0
Effective Green, g (s)		31.0			45.0			9.0			25.0	28.0
Actuated g/C Ratio		0.36			0.53			0.11			0.29	0.33
Clearance Time (s)		4.0						3.0				
Lane Grp Cap (vph)		565			1714			137			478	444
v/s Ratio Prot					c0.07						c0.09	
v/s Ratio Perm		c0.40			0.15			0.01			c0.05	0.04
v/c Ratio		1.10			0.40			0.06			0.47	0.11
Uniform Delay, d1		27.0			11.9			34.2			24.6	19.9
Progression Factor		1.00			1.37			1.00			1.00	1.00
Incremental Delay, d2		67.2			0.1			0.8			3.3	0.5
Delay (s)		94.2			16.4			35.0			27.8	20.4
Level of Service		F			B			D			C	C
Approach Delay (s)		94.2			16.4			35.0			24.8	
Approach LOS		F			B			D			C	

Intersection Summary			
HCM Average Control Delay	46.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	78.2%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



01 95th Street
Wentworth Avenue



02 95th Street
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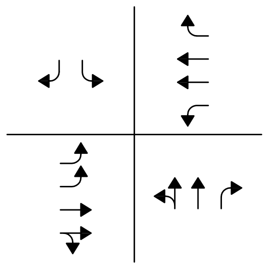
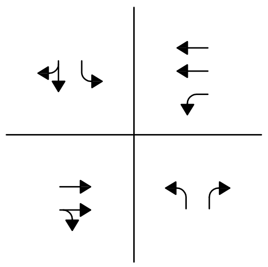
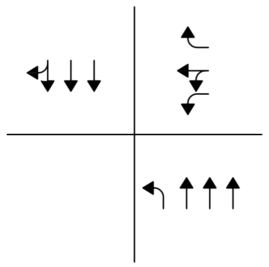


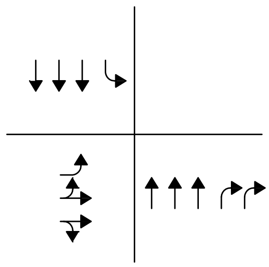
03 95th Street
State Street



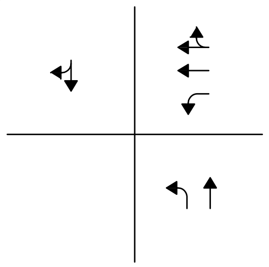
04 95th Street
Michigan Avenue



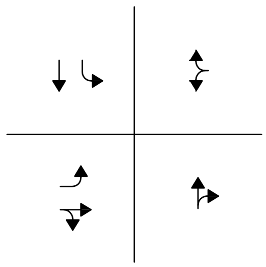
05 98th Place
Halsted Street



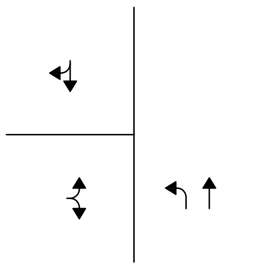
06 99th Street
Halsted Street



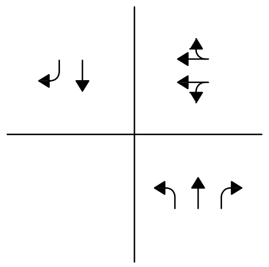
07 98th Place
Wentworth Avenue



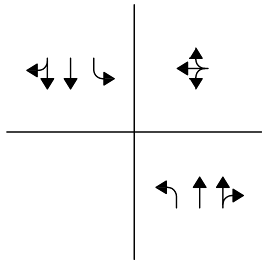
08 99th Street
Wentworth Avenue



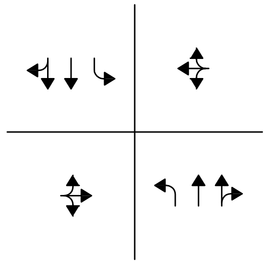
09 99th Street
State Street



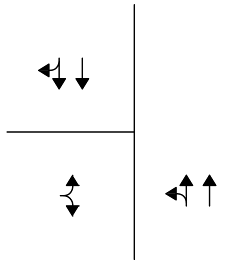
10 99th Street
Michigan Avenue



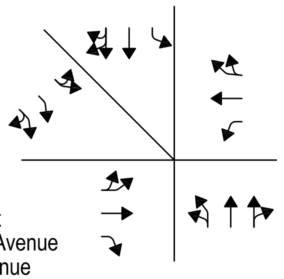
11 99th Street
Martin Luther King Jr Drive



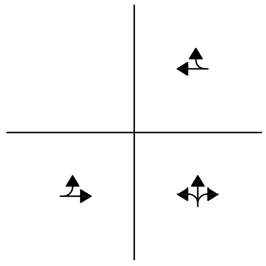
12 100th Street
Martin Luther King Jr Drive



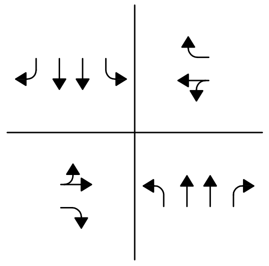
13 100th Street
Cottage Grove Avenue



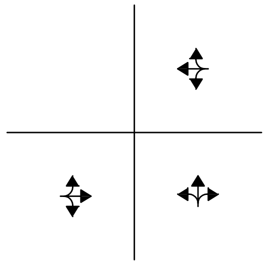
14 103rd Street
Vincennes Avenue
Beverly Avenue



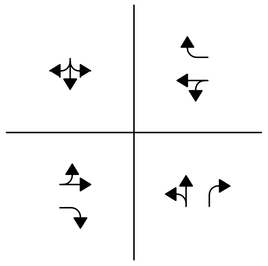
15 103rd Street
Morgan Street



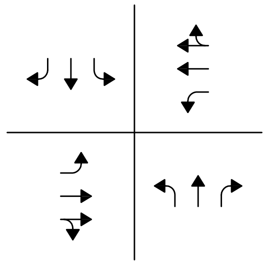
16 103rd Street
Halsted Street



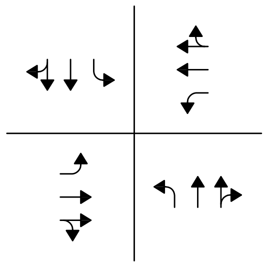
17 103rd Street
Normal Avenue



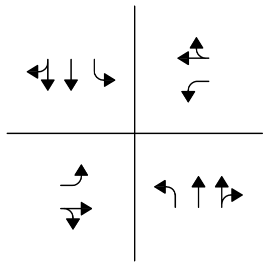
18 103rd Street
Wentworth Avenue



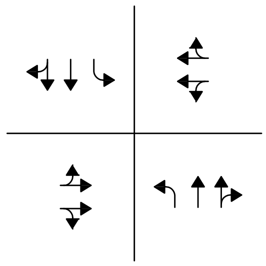
19 103rd Street
State Street



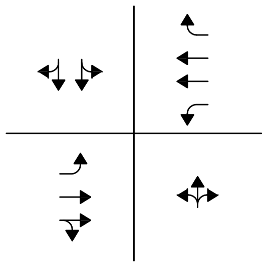
20 103rd Street
Michigan Avenue



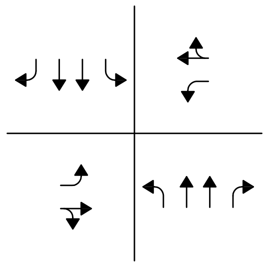
21 103rd Street
Martin Luther King Jr Drive



22 103rd Street
Cottage Grove Avenue



23 103rd Street
Woodlawn Avenue

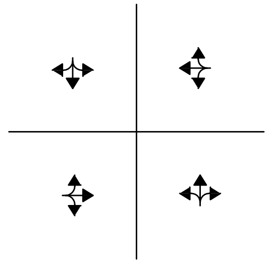


24 107th Street
Halsted Street

Halsted Rail Alternative Mitigated (2030) Intersection Lane Geometry

Page 1 of 3

Legend: ↑ Existing ↑ Added ✗ Removed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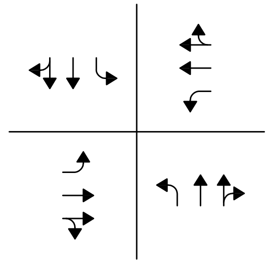
Wentworth Avenue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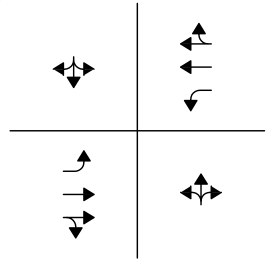
State Street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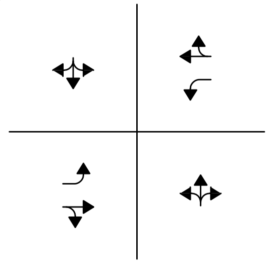
Michigan Avenue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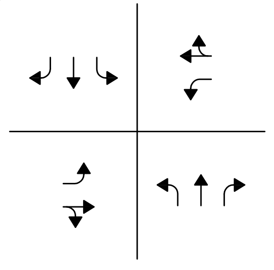
Martin Luther King Jr Drive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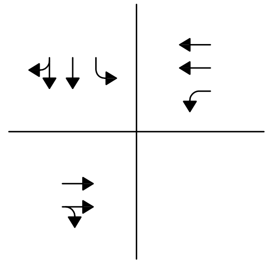
Cottage Grove Avenue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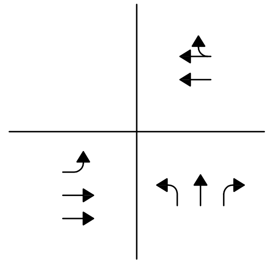
Marshfield Avenue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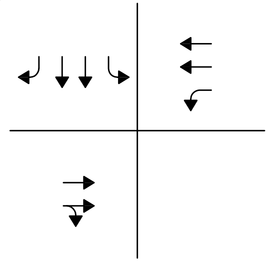
Hamlet Avenue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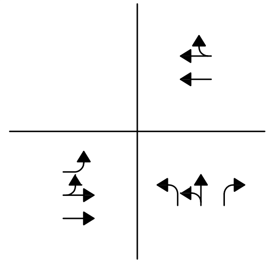
112th Place
Marshfield Avenue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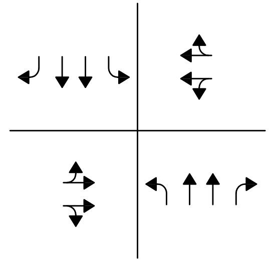
112th Place
Hamlet Avenue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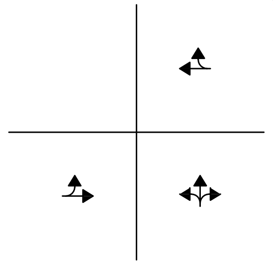
Halsted Street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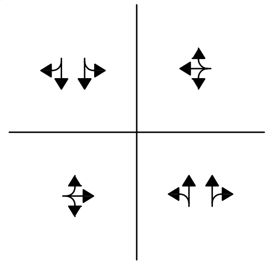
Normal Avenue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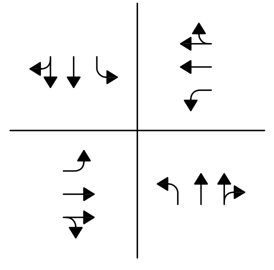
Wentworth Avenue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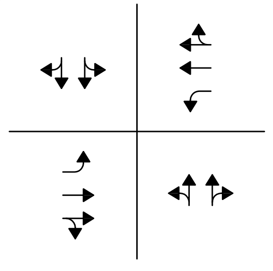
State Street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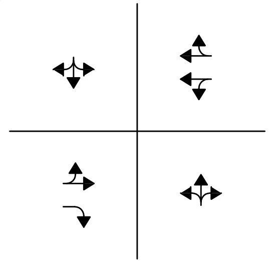
Michigan Avenue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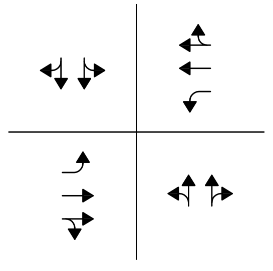
Indiana Avenue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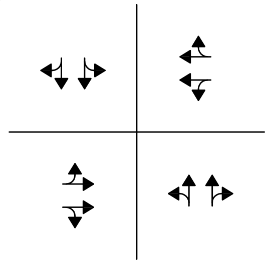
Martin Luther King Jr Drive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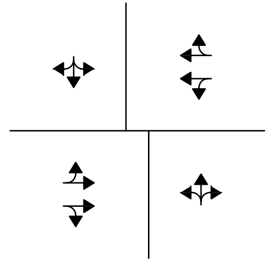
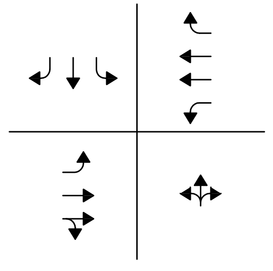
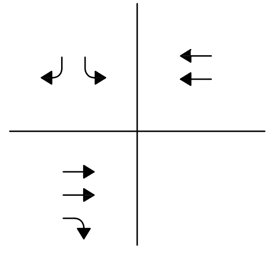
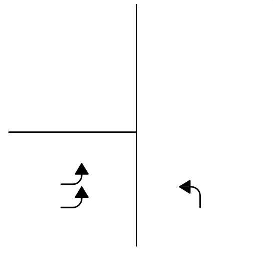
111th Street
Cottage Grove Avenue


42
111th Street
Ellis Avenue


43
111th Street
Doty Road


44
111th Street
I-94 Eastbound Ramps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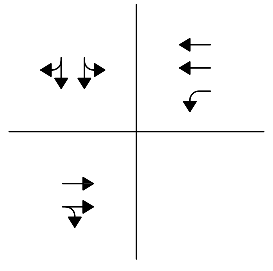
111th Street
I-94 Westbound Ramps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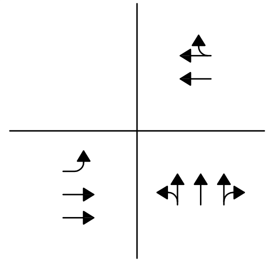
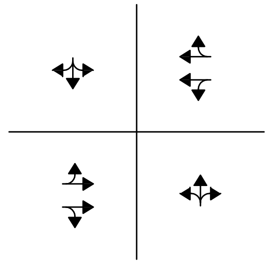
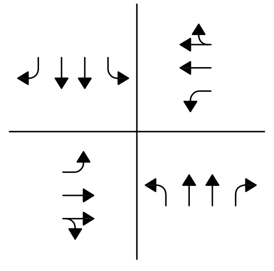
115th Street
Marshfield Avenue


47
115th Street
Ashland Avenue

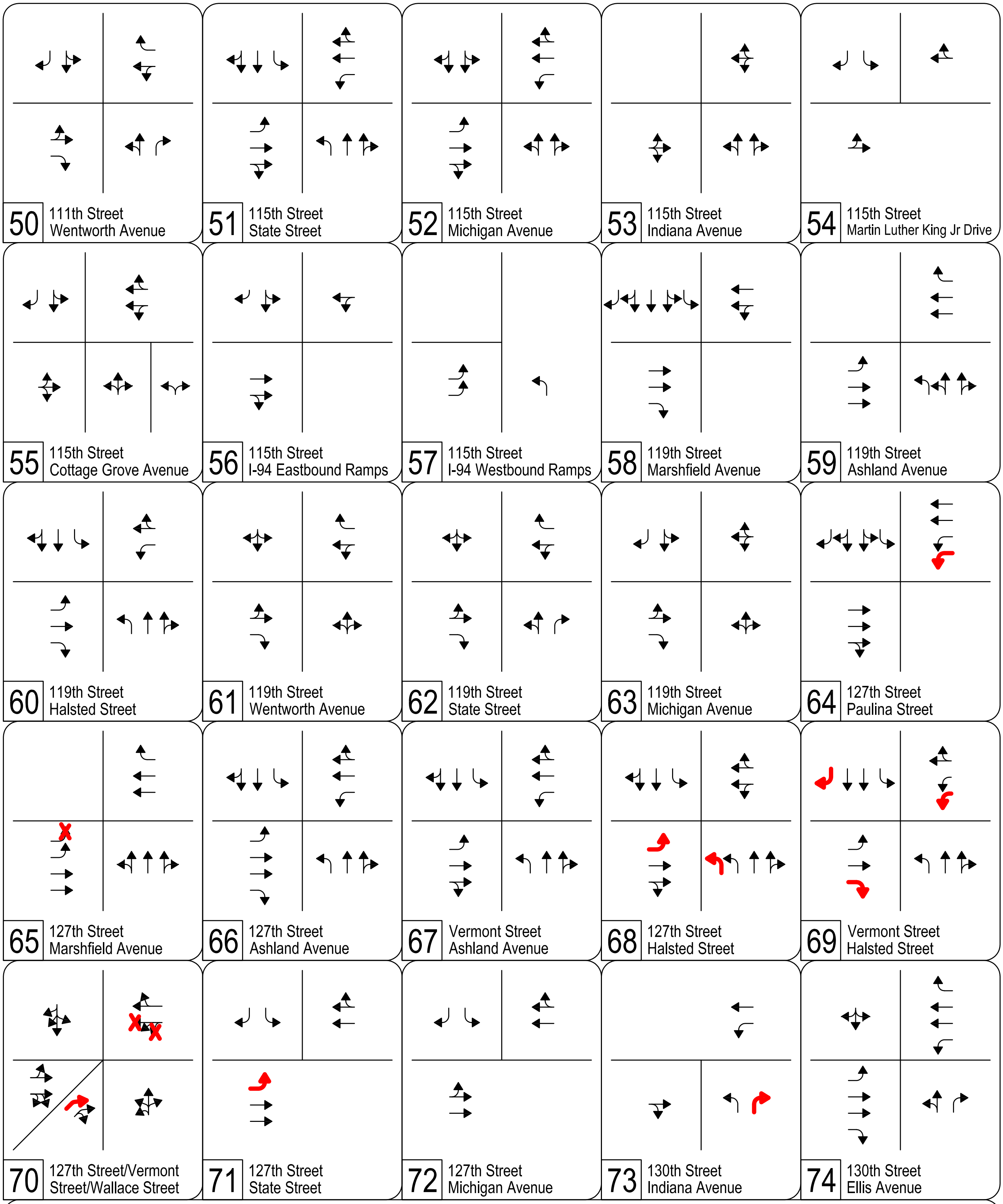

48
115th Street
Racine Road


49
115th Street
Halsted Street

Halsted Rail Alternative Mitigated (2030) Intersection Lane Geometry

Page 2 of 3

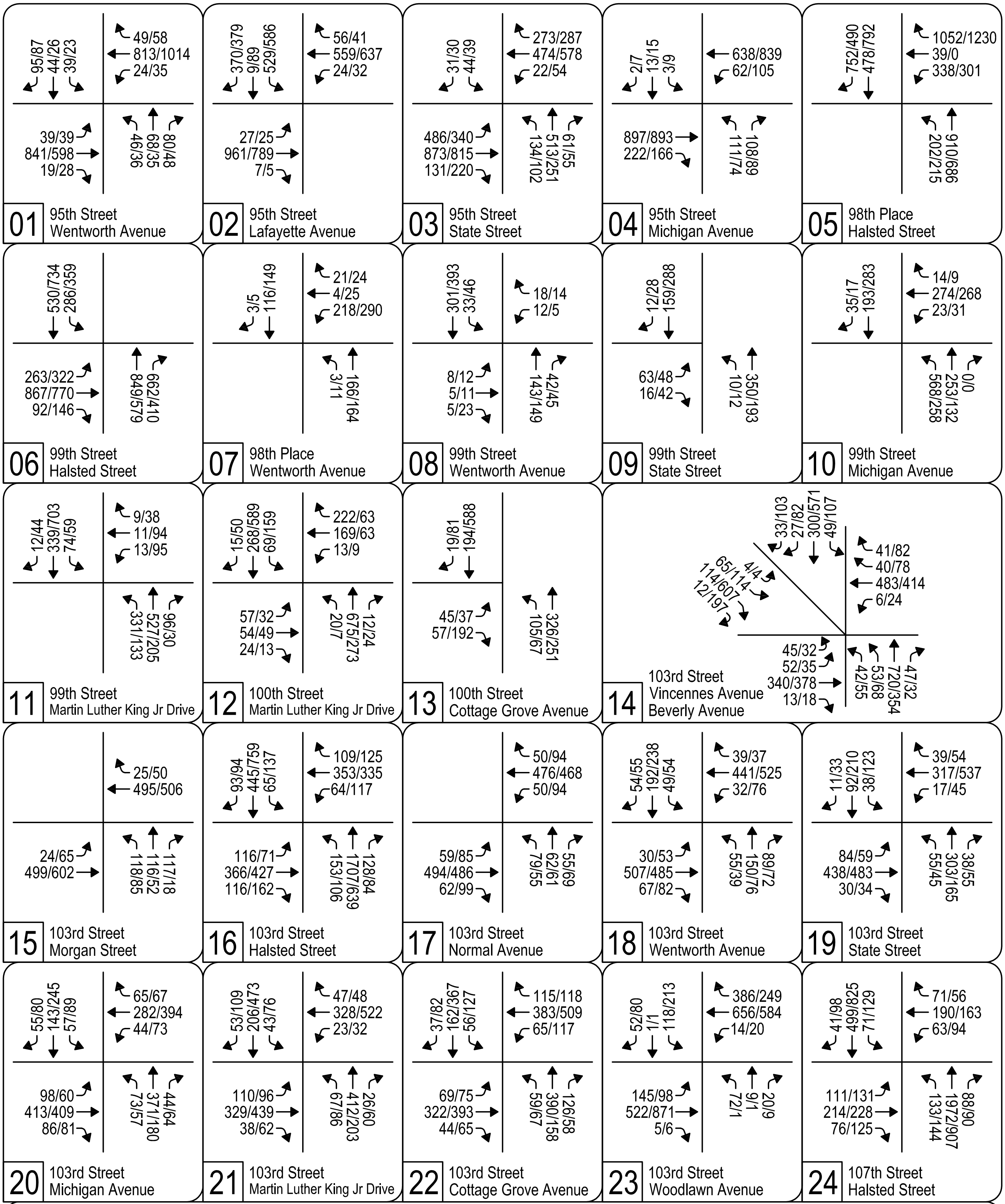
Legend: ↑ Existing ↑ Added ✗ Removed


50 111th Street Wentworth Avenue
51 115th Street State Street
52 115th Street Michigan Avenue
53 115th Street Indiana Avenue
54 115th Street Martin Luther King Jr Drive
55 115th Street Cottage Grove Avenue
56 115th Street I-94 Eastbound Ramps
57 115th Street I-94 Westbound Ramps
58 119th Street Marshfield Avenue
59 119th Street Ashland Avenue
60 119th Street Halsted Street
61 119th Street Wentworth Avenue
62 119th Street State Street
63 119th Street Michigan Avenue
64 127th Street Paulina Street
65 127th Street Marshfield Avenue
66 127th Street Ashland Avenue
67 Vermont Street Ashland Avenue
68 127th Street Halsted Street
69 Vermont Street Halsted Street
70 127th Street/Vermont Street/Wallace Street
71 127th Street State Street
72 127th Street Michigan Avenue
73 130th Street Indiana Avenue
74 130th Street Ellis Avenue

Halsted Rail Alternative Mitigated (2030) Intersection Lane Geometry

Page 3 of 3

Legend: ↑ Existing ↑ Added ✗ Removed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95th Street
Wentworth Avenue
95/87
44/26
39/23
49/58
813/1014
24/35
39/39
841/598
19/28
46/36
68/35
80/48
02
95th Street
Lafayette Avenue
370/379
9/89
529/586
56/41
559/637
24/32
27/25
961/789
7/5
03
95th Street
State Street
31/30
44/39
273/287
474/578
22/54
486/340
873/815
131/220
134/102
513/251
61/55
04
95th Street
Michigan Avenue
2/7
13/15
3/9
638/839
62/105
897/893
222/166
111/74
108/89
05
98th Place
Halsted Street
752/490
478/792
1052/1230
39/0
338/301
202/215
910/686
06
99th Street
Halsted Street
530/734
286/359
263/322
867/770
92/146
849/579
662/410
07
98th Place
Wentworth Avenue
3/5
116/149
21/24
4/25
218/290
3/11
166/164
08
99th Street
Wentworth Avenue
301/393
33/46
18/14
12/5
8/12
5/11
5/23
143/149
42/45
09
99th Street
State Street
12/28
159/288
63/48
16/42
10/12
350/193
10
99th Street
Michigan Avenue
35/17
193/283
14/9
274/268
23/31
568/258
253/132
0/0
11
99th Street
Martin Luther King Jr Drive
12/44
339/703
74/59
9/38
11/94
13/95
331/133
527/205
96/30
12
100th Street
Martin Luther King Jr Drive
15/50
268/589
69/159
222/63
169/63
13/9
57/32
54/49
24/13
20/7
675/273
12/24
13
100th Street
Cottage Grove Avenue
19/81
194/588
45/37
57/192
105/67
326/251
14
103rd Street
Vincennes Avenue
Beverly Avenue
33/103
27/82
300/571
49/107
41/82
40/78
483/414
6/24
65/114
4/4
114/607
12/197
45/32
52/35
340/378
13/18
42/55
53/68
720/354
47/32
15
103rd Street
Morgan Street
25/50
495/506
24/65
499/602
118/85
116/52
117/18
16
103rd Street
Halsted Street
93/94
445/759
65/137
109/125
353/335
64/117
116/71
366/427
116/162
153/106
1707/639
128/84
17
103rd Street
Normal Avenue
50/94
476/468
50/94
59/85
494/486
62/99
79/55
62/61
55/69
18
103rd Street
Wentworth Avenue
54/55
192/238
49/54
39/37
441/525
32/76
30/53
507/485
67/82
55/39
150/76
89/72
19
103rd Street
State Street
11/33
92/210
38/123
39/54
317/537
17/45
84/59
438/483
30/34
55/45
303/165
38/55
20
103rd Street
Michigan Avenue
55/80
143/245
57/89
65/67
282/394
44/73
98/60
413/409
86/81
73/57
371/180
44/64
21
103rd Street
Martin Luther King Jr Drive
53/109
206/473
43/76
47/48
328/522
23/32
110/96
329/439
38/62
67/86
412/203
26/60
22
103rd Street
Cottage Grove Avenue
37/82
162/367
56/127
115/118
383/509
65/117
69/75
322/393
44/65
59/67
390/158
126/58
23
103rd Street
Woodlawn Avenue
52/80
1/1
118/213
386/249
656/584
14/20
145/98
522/871
5/6
72/1
9/1
20/9
24
107th Street
Halsted Street
41/98
499/825
71/129
71/56
190/163
63/94
111/131
214/228
76/125
133/144
1972/907
88/90

Halsted Rail Alternative Mitigated (2030) Intersection Traffic Volumes

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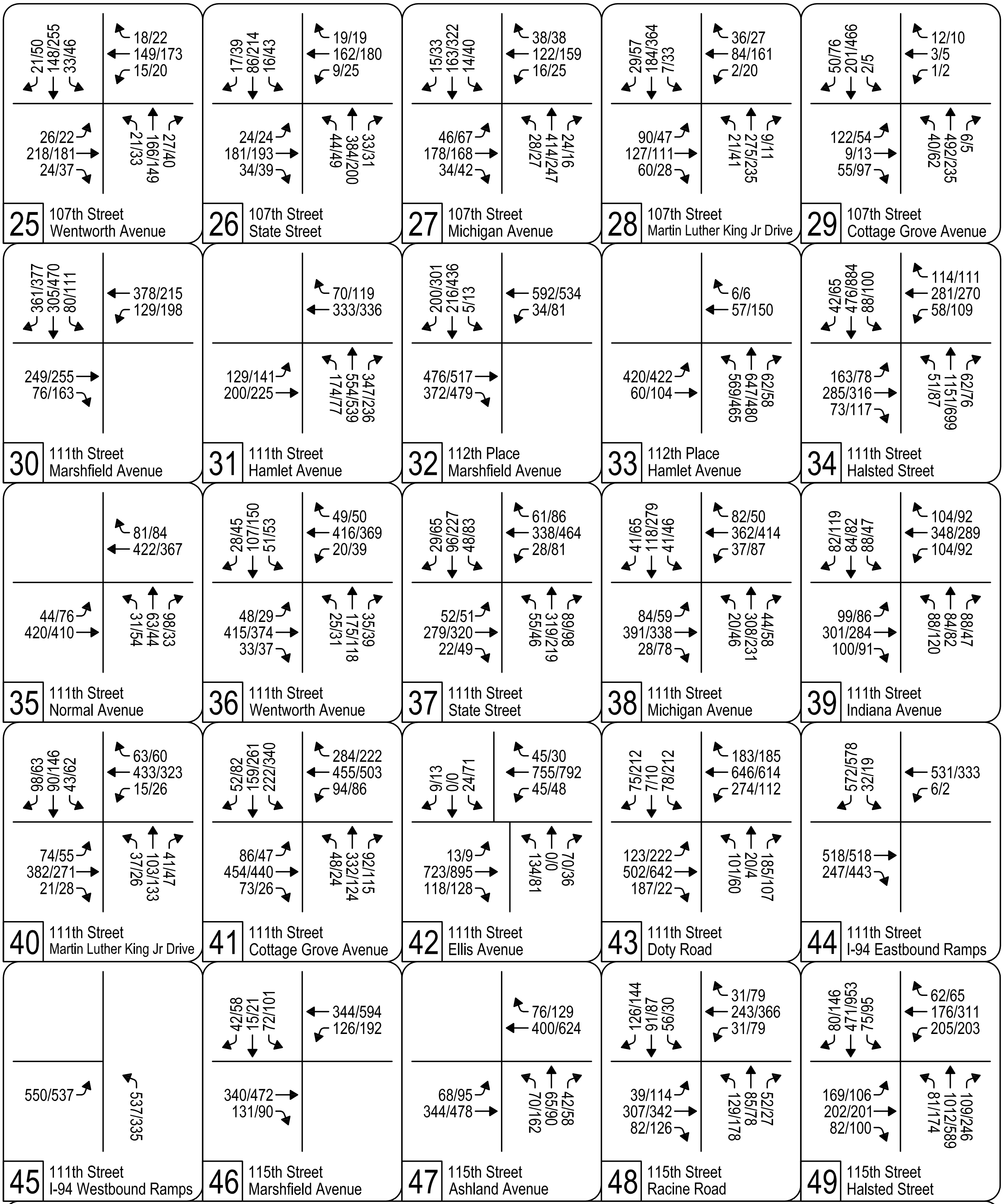
Legend: AM/PM Peak Hour Volumes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148/255
33/46
18/22
149/173
15/20
26/22
218/181
24/37
21/33
166/149
27/40
25
107th Street
Wentworth Avenue
17/39
86/214
16/43
19/19
162/180
9/25
24/24
181/193
34/39
44/49
384/200
33/31
26
107th Street
State Street
15/33
163/322
14/40
38/38
122/159
16/25
46/67
178/168
34/42
28/27
414/247
24/16
27
107th Street
Michigan Avenue
29/57
184/364
7/33
36/27
84/161
2/20
90/47
127/111
60/28
21/41
275/235
9/11
28
107th Street
Martin Luther King Jr Drive
50/76
201/466
2/5
12/10
3/5
1/2
122/54
9/13
55/97
40/62
492/235
6/5
29
107th Street
Cottage Grove Avenue
361/377
305/470
80/111
378/215
129/198
249/255
76/163
30
111th Street
Marshfield Avenue
70/119
333/336
129/141
200/225
174/77
554/539
347/236
31
111th Street
Hamlet Avenue
200/301
216/436
5/13
592/534
34/81
476/517
372/479
32
112th Place
Marshfield Avenue
6/6
57/150
420/422
60/104
569/465
647/480
62/58
33
112th Place
Hamlet Avenue
42/65
476/884
88/100
114/111
281/270
58/109
163/78
285/316
73/117
51/87
1151/699
62/76
34
111th Street
Halsted Street
81/84
422/367
44/76
420/410
31/54
63/44
98/33
35
111th Street
Normal Avenue
28/45
107/150
51/53
49/50
416/369
20/39
48/29
415/374
33/37
25/31
175/118
35/39
36
111th Street
Wentworth Avenue
29/65
96/227
48/83
61/86
338/464
28/81
52/51
279/320
22/49
55/46
319/219
89/98
37
111th Street
State Street
41/65
118/279
41/46
82/50
362/414
37/87
84/59
391/338
28/78
20/46
308/231
44/58
38
111th Street
Michigan Avenue
82/119
84/82
88/47
104/92
348/289
104/92
99/86
301/284
100/91
88/120
84/82
88/47
39
111th Street
Indiana Avenue
98/63
90/146
43/62
63/60
433/323
15/26
74/55
382/271
21/28
37/26
103/133
41/47
40
111th Street
Martin Luther King Jr Drive
52/82
159/261
222/340
284/222
455/503
94/86
86/47
454/440
73/26
48/24
332/124
92/115
41
111th Street
Cottage Grove Avenue
9/13
0/0
24/71
45/30
755/792
45/48
13/9
723/895
118/128
134/81
0/0
70/36
42
111th Street
Ellis Avenue
75/212
7/10
78/212
183/185
646/614
274/112
123/222
502/642
187/22
101/60
20/4
185/107
43
111th Street
Doty Road
572/578
32/19
531/333
6/2
518/518
247/443
44
111th Street
I-94 Eastbound Ramps
550/537
537/335
45
111th Street
I-94 Westbound Ramps
42/58
15/21
72/101
344/594
126/192
340/472
131/90
46
115th Street
Marshfield Avenue
76/129
400/624
68/95
344/478
70/162
65/90
42/58
47
115th Street
Ashland Avenue
126/144
91/87
56/30
31/79
243/366
31/79
39/114
307/342
82/126
129/178
85/78
52/27
48
115th Street
Racine Road
80/146
471/953
75/95
62/65
176/311
205/203
169/106
202/201
82/100
81/174
1012/589
109/246
49
115th Street
Halsted Street

Halsted Rail Alternative Mitigated (2030) Intersection Traffic Volumes

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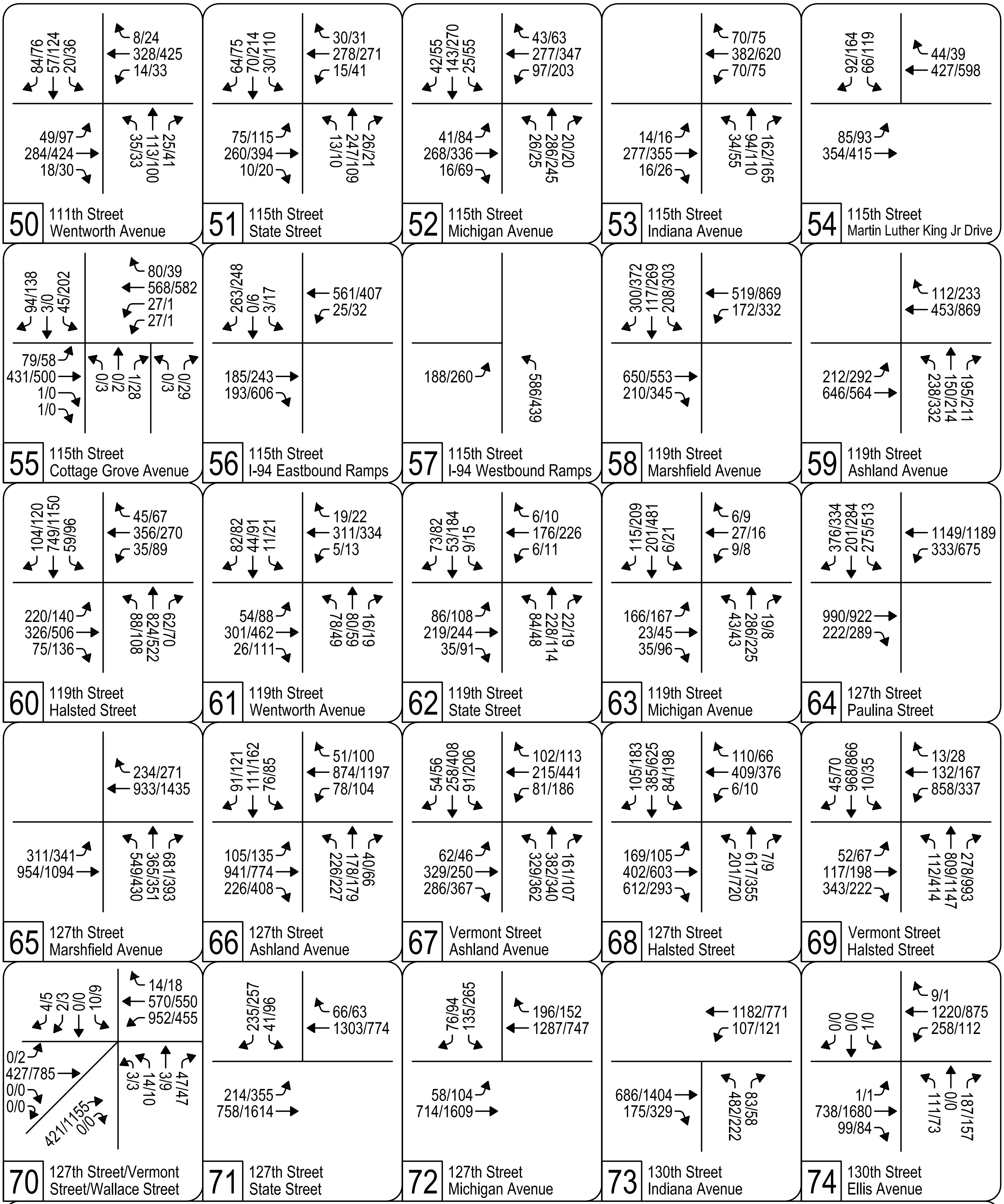
Legend: AM/PM Peak Hour Volumes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111th Street
Wentworth Avenue
84/76
57/124
20/36
8/24
328/425
14/33
49/97
284/424
18/30
35/33
113/100
25/41
51
115th Street
State Street
64/75
70/214
30/110
30/31
278/271
15/41
75/115
260/394
10/20
13/10
247/109
26/21
52
115th Street
Michigan Avenue
42/55
143/270
25/55
43/63
277/347
97/203
41/84
268/336
16/69
26/25
286/245
20/20
53
115th Street
Indiana Avenue
70/75
382/620
70/75
14/16
277/355
16/26
34/55
94/110
162/165
54
115th Street
Martin Luther King Jr Drive
92/164
66/119
44/39
427/598
85/93
354/415
55
115th Street
Cottage Grove Avenue
94/138
3/0
45/202
80/39
568/582
27/1
27/1
79/58
431/500
1/0
1/0
0/3
0/2
1/28
0/3
0/29
56
115th Street
I-94 Eastbound Ramps
263/248
0/6
3/17
561/407
25/32
185/243
193/606
57
115th Street
I-94 Westbound Ramps
188/260
586/439
58
119th Street
Marshfield Avenue
300/372
117/269
208/303
519/869
172/332
650/553
210/345
59
119th Street
Ashland Avenue
112/233
453/869
212/292
646/564
238/332
150/214
195/211
60
119th Street
Halsted Street
104/120
749/1150
59/96
45/67
356/270
35/89
220/140
326/506
75/136
88/108
824/522
62/70
61
119th Street
Wentworth Avenue
82/82
44/91
11/21
19/22
311/334
5/13
54/88
301/462
26/111
78/49
80/59
16/19
62
119th Street
State Street
73/82
53/184
9/15
6/10
176/226
6/11
86/108
219/244
35/91
84/48
228/114
22/19
63
119th Street
Michigan Avenue
115/209
201/481
6/21
6/9
27/16
9/8
166/167
23/45
35/96
43/43
286/225
19/8
64
127th Street
Paulina Street
376/334
201/284
275/513
1149/1189
333/675
990/922
222/289
65
127th Street
Marshfield Avenue
234/271
933/1435
311/341
954/1094
549/430
365/351
681/393
66
127th Street
Ashland Avenue
91/121
111/162
76/85
51/100
874/1197
78/104
105/135
941/774
226/408
226/227
178/179
40/66
67
Vermont Street
Ashland Avenue
54/56
258/408
91/206
102/113
215/441
81/186
62/46
329/250
286/367
329/362
382/340
161/107
68
127th Street
Halsted Street
105/183
385/625
84/198
110/66
409/376
6/10
169/105
402/603
612/293
201/720
617/355
7/9
69
Vermont Street
Halsted Street
45/70
968/866
10/35
13/28
132/167
858/337
52/67
117/198
343/222
112/414
809/1147
278/993
70
127th Street/Vermont
Street/Wallace Street
4/5
2/3
0/0
10/9
14/18
570/550
952/455
0/2
427/785
0/0
0/0
421/1155
0/0
3/3
14/10
3/9
47/47
71
127th Street
State Street
235/257
41/96
66/63
1303/774
214/355
758/1614
72
127th Street
Michigan Avenue
76/94
135/265
196/152
1287/747
58/104
714/1609
73
130th Street
Indiana Avenue
1182/771
107/121
686/1404
175/329
482/222
83/58
74
130th Street
Ellis Avenue
0/0
0/0
1/0
9/1
1220/875
258/112
1/1
738/1680
99/84
111/73
0/0
187/157

Halsted Rail Alternative Mitigated (2030) Intersection Traffic Volumes

Page 3 of 3

Legend: AM/PM Peak Hour Volumes

HCM Signalized Intersection Capacity Analysis
1001: 95th Street & Wentworth Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			✣			✣	
Volume (vph)	39	841	19	24	813	49	46	68	80	39	44	95
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	16	10	10	16	8	15	8	8	14	8
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			0.99			0.99	
Flpb, ped/bikes	0.99	1.00		1.00	1.00			1.00			1.00	
Frt	1.00	1.00		1.00	0.99			0.94			0.93	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1417	2976		1592	2979			1755			1673	
Flt Permitted	0.25	1.00		0.25	1.00			0.90			0.91	
Satd. Flow (perm)	369	2976		417	2979			1596			1532	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	41	885	20	25	856	52	48	72	84	41	46	100
RTOR Reduction (vph)	0	2	0	0	7	0	0	39	0	0	59	0
Lane Group Flow (vph)	41	903	0	25	901	0	0	165	0	0	128	0
Confl. Peds. (#/hr)	61		11	11		61	3		5	5		3
Confl. Bikes (#/hr)	1		1	1		1						
Heavy Vehicles (%)	11%	7%	0%	0%	6%	2%	2%	7%	4%	5%	7%	3%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	34.0	34.0		34.0	34.0			22.0			22.0	
Effective Green, g (s)	34.0	34.0		34.0	34.0			23.0			23.0	
Actuated g/C Ratio	0.52	0.52		0.52	0.52			0.35			0.35	
Clearance Time (s)	4.0	4.0		4.0	4.0			5.0			5.0	
Lane Grp Cap (vph)	193	1557		218	1558			565			542	
v/s Ratio Prot		c0.30			0.30							
v/s Ratio Perm	0.11			0.06				c0.10			0.08	
v/c Ratio	0.21	0.58		0.11	0.58			0.29			0.24	
Uniform Delay, d1	8.3	10.6		7.9	10.6			15.1			14.8	
Progression Factor	1.00	1.00		0.83	1.16			1.00			1.00	
Incremental Delay, d2	2.5	1.6		0.9	1.4			1.3			1.0	
Delay (s)	10.8	12.2		7.5	13.6			16.4			15.8	
Level of Service	B	B		A	B			B			B	
Approach Delay (s)		12.1			13.5			16.4			15.8	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	13.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	55.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↑	↱				↰↰	↑	↱
Volume (vph)	27	961	7	24	559	56	0	0	0	529	9	370
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	5.0	5.0		3.0	3.0	3.0				5.0	5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00				0.97	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.67				1.00	1.00	0.96
Flpb, ped/bikes	0.91	1.00		1.00	1.00	1.00				1.00	1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85				1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00				0.95	1.00	1.00
Satd. Flow (prot)	778	3285		1710	3138	512				3100	1440	1399
Flt Permitted	0.43	1.00		0.14	1.00	1.00				0.95	1.00	1.00
Satd. Flow (perm)	352	3285		248	3138	512				3100	1440	1399
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	28	1012	7	25	588	59	0	0	0	557	9	389
RTOR Reduction (vph)	0	1	0	0	0	26	0	0	0	0	0	172
Lane Group Flow (vph)	28	1018	0	25	588	33	0	0	0	557	9	217
Confl. Peds. (#/hr)	354		13	13		354	22		22	22		22
Confl. Bikes (#/hr)	4					4			1	1		
Heavy Vehicles (%)	100%	4%	0%	0%	9%	100%	0%	0%	0%	7%	25%	5%
Turn Type	pm+pt			pm+pt		Perm				Split		Perm
Protected Phases	7	4		3	8					6	6	
Permitted Phases	4			8		8						6
Actuated Green, G (s)	43.0	43.0		73.0	73.0	73.0				30.0	30.0	30.0
Effective Green, g (s)	43.0	43.0		73.0	73.0	73.0				30.0	30.0	30.0
Actuated g/C Ratio	0.33	0.33		0.56	0.56	0.56				0.23	0.23	0.23
Clearance Time (s)	5.0	5.0		3.0	3.0	3.0				5.0	5.0	5.0
Lane Grp Cap (vph)	162	1087		634	1762	288				715	332	323
v/s Ratio Prot	0.02	c0.31		0.01	c0.19					c0.18	0.01	
v/s Ratio Perm	0.04			0.01		0.06						0.16
v/c Ratio	0.17	0.94		0.04	0.33	0.12				0.78	0.03	0.67
Uniform Delay, d1	31.6	42.2		15.1	15.4	13.4				46.9	38.7	45.5
Progression Factor	0.80	0.82		0.29	0.63	1.53				1.00	1.00	1.00
Incremental Delay, d2	2.0	14.1		0.1	0.3	0.5				8.2	0.2	10.7
Delay (s)	27.2	48.9		4.5	10.0	20.9				55.1	38.9	56.2
Level of Service	C	D		A	A	C				E	D	E
Approach Delay (s)		48.3			10.7			0.0			55.4	
Approach LOS		D			B			A			E	

Intersection Summary			
HCM Average Control Delay	41.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	52.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1003: 95th Street & State Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↱		↰	↑↑	↱		↰↑	↱	↰		↱
Volume (vph)	486	873	131	22	474	273	134	513	61	44	0	31
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0	3.0		5.0	5.0	5.0		5.0	5.0	5.0		5.0
Lane Util. Factor	0.97	0.95		1.00	0.95	1.00		0.95	1.00	1.00		1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.65		1.00	0.94	1.00		0.96
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Frt	1.00	0.98		1.00	1.00	0.85		1.00	0.85	1.00		0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.99	1.00	0.95		1.00
Satd. Flow (prot)	3190	3107		1555	2923	944		3300	1417	855		734
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.99	1.00	0.95		1.00
Satd. Flow (perm)	3190	3107		1555	2923	944		3300	1417	855		734
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	512	919	138	23	499	287	141	540	64	46	0	33
RTOR Reduction (vph)	0	9	0	0	0	158	0	0	25	0	0	31
Lane Group Flow (vph)	512	1049	0	23	499	129	0	681	39	46	0	2
Confl. Peds. (#/hr)	425		21	21		425	6		34	34		6
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	4%	8%	3%	10%	17%	5%	1%	3%	2%	100%	0%	100%
Turn Type	Prot			Prot		Perm	Split		Perm	Prot		custom
Protected Phases	7	4		3	8		2	2		6		
Permitted Phases						8			2			6
Actuated Green, G (s)	43.0	65.0		9.0	31.0	31.0		30.0	30.0	8.0		8.0
Effective Green, g (s)	43.0	65.0		9.0	31.0	31.0		30.0	30.0	8.0		8.0
Actuated g/C Ratio	0.33	0.50		0.07	0.24	0.24		0.23	0.23	0.06		0.06
Clearance Time (s)	3.0	3.0		5.0	5.0	5.0		5.0	5.0	5.0		5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0	3.0	3.0		3.0
Lane Grp Cap (vph)	1055	1554		108	697	225		762	327	53		45
v/s Ratio Prot	0.16	c0.34		0.01	c0.17			c0.21		c0.05		
v/s Ratio Perm						0.14			0.03			0.00
v/c Ratio	0.49	0.67		0.21	0.72	0.57		0.89	0.12	0.87		0.05
Uniform Delay, d1	34.7	24.5		57.2	45.5	43.6		48.5	39.5	60.5		57.4
Progression Factor	0.75	0.20		1.00	1.00	1.00		0.94	0.90	1.00		1.00
Incremental Delay, d2	0.7	1.1		4.5	6.2	10.1		14.9	0.7	76.0		0.4
Delay (s)	26.9	6.0		61.6	51.7	53.8		60.7	36.2	136.5		57.8
Level of Service	C	A		E	D	D		E	D	F		E
Approach Delay (s)		12.8			52.7			58.6			103.6	
Approach LOS		B			D			E			F	

Intersection Summary			
HCM Average Control Delay	35.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	72.7%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1004: 95th Street & Michigan Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱		↰	↑↑		↰		↱	↰	↱	
Volume (vph)	0	897	222	62	638	0	111	0	108	3	13	2
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	11	11	8	12	12	12	14	15	12
Total Lost time (s)		4.0		4.0	4.0		4.0		4.0	4.0	4.0	
Lane Util. Factor		0.95		1.00	0.95		1.00		1.00	1.00	1.00	
Frpb, ped/bikes		0.99		1.00	1.00		1.00		0.98	1.00	1.00	
Flpb, ped/bikes		1.00		1.00	1.00		1.00		1.00	0.99	1.00	
Frt		0.97		1.00	1.00		1.00		0.85	1.00	0.98	
Flt Protected		1.00		0.95	1.00		0.95		1.00	0.95	1.00	
Satd. Flow (prot)		2860		1650	3005		1390		1465	1803	1943	
Flt Permitted		1.00		0.15	1.00		0.75		1.00	0.95	1.00	
Satd. Flow (perm)		2860		267	3005		1093		1465	1803	1943	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	997	247	69	709	0	123	0	120	3	14	2
RTOR Reduction (vph)	0	22	0	0	0	0	0	0	77	0	1	0
Lane Group Flow (vph)	0	1222	0	69	709	0	123	0	43	3	15	0
Confl. Peds. (#/hr)	49		15	15		49			12	12		
Heavy Vehicles (%)	0%	6%	14%	0%	10%	0%	23%	0%	2%	0%	0%	0%
Turn Type				Perm			custom		custom	Perm		
Protected Phases		4			8						6	
Permitted Phases				8			2		2	6		
Actuated Green, G (s)		60.0		60.0	60.0		32.0		32.0	32.0	32.0	
Effective Green, g (s)		60.0		60.0	60.0		32.0		32.0	32.0	32.0	
Actuated g/C Ratio		0.60		0.60	0.60		0.32		0.32	0.32	0.32	
Clearance Time (s)		4.0		4.0	4.0		4.0		4.0	4.0	4.0	
Lane Grp Cap (vph)		1716		160	1803		350		469	577	622	
v/s Ratio Prot		c0.43			0.24						0.01	
v/s Ratio Perm				0.26			c0.11		0.03	0.00		
v/c Ratio		0.71		0.43	0.39		0.35		0.09	0.01	0.02	
Uniform Delay, d1		14.0		10.8	10.5		26.0		23.8	23.2	23.3	
Progression Factor		1.00		1.00	1.00		1.00		1.00	1.00	1.00	
Incremental Delay, d2		2.5		8.3	0.6		2.8		0.4	0.0	0.1	
Delay (s)		16.5		19.1	11.1		28.8		24.2	23.2	23.4	
Level of Service		B		B	B		C		C	C	C	
Approach Delay (s)		16.5			11.8			26.5			23.3	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM Average Control Delay	16.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	60.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1005: 98th Place & Halsted Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↰	↰↑	↱	↰	↑↑↑			↑↑↱	
Volume (vph)	0	0	0	338	39	1052	202	910	0	0	478	752
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	12	12	10	10	12	12	11	12
Total Lost time (s)				4.0	4.0	5.0	3.0	4.0			4.0	
Lane Util. Factor				0.95	0.95	1.00	1.00	0.91			0.91	
Frpb, ped/bikes				1.00	1.00	0.99	1.00	1.00			0.98	
Flpb, ped/bikes				1.00	1.00	1.00	1.00	1.00			1.00	
Frt				1.00	1.00	0.85	1.00	1.00			0.91	
Flt Protected				0.95	1.00	1.00	0.95	1.00			1.00	
Satd. Flow (prot)				1525	1629	1479	1550	4368			3940	
Flt Permitted				0.95	1.00	1.00	0.95	1.00			1.00	
Satd. Flow (perm)				1525	1629	1479	1550	4368			3940	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	0	0	345	40	1073	206	929	0	0	488	767
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	345	40	1073	206	929	0	0	1255	0
Confl. Peds. (#/hr)	2					2	12		8	8		12
Heavy Vehicles (%)	0%	0%	0%	3%	5%	2%	3%	5%	0%	0%	5%	8%
Turn Type				Perm		Perm	Prot					
Protected Phases					8		5	2			6	
Permitted Phases				8		8						
Actuated Green, G (s)				30.0	30.0	30.0	32.0	66.0			31.0	
Effective Green, g (s)				31.0	31.0	30.0	32.0	66.0			31.0	
Actuated g/C Ratio				0.30	0.30	0.29	0.30	0.63			0.30	
Clearance Time (s)				5.0	5.0	5.0	3.0	4.0			4.0	
Lane Grp Cap (vph)				450	481	423	472	2746			1163	
v/s Ratio Prot							c0.13	0.21			c0.32	
v/s Ratio Perm				0.23	0.02	c0.73						
v/c Ratio				0.77	0.08	2.54	0.44	0.34			1.91dr	
Uniform Delay, d1				33.7	26.7	37.5	29.3	9.2			37.0	
Progression Factor				1.00	1.00	1.00	0.66	2.39			1.00	
Incremental Delay, d2				11.8	0.3	698.4	2.0	0.2			50.5	
Delay (s)				45.5	27.1	735.9	21.3	22.2			87.5	
Level of Service				D	C	F	C	C			F	
Approach Delay (s)		0.0			553.1			22.0			87.5	
Approach LOS		A			F			C			F	

Intersection Summary			
HCM Average Control Delay	244.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.33		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	95.0%	ICU Level of Service	F
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1006: 99th Street & Halsted Street

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↰↑↱						↑↑↑	↱↱	↰	↑↑↑	
Volume (vph)	263	867	92	0	0	0	0	849	662	286	530	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	13	12	12	12	12	12	10	10	8	12	12	12
Total Lost time (s)	5.0	5.0						4.0	4.0	3.0	4.0	
Lane Util. Factor	0.91	0.91						0.91	0.88	1.00	0.91	
Frpb, ped/bikes	1.00	1.00						1.00	0.97	1.00	1.00	
Flpb, ped/bikes	1.00	1.00						1.00	1.00	1.00	1.00	
Frt	1.00	0.99						1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00						1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1497	3184						4368	2187	1583	4636	
Flt Permitted	0.95	1.00						1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1497	3184						4368	2187	1583	4636	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	271	894	95	0	0	0	0	875	682	295	546	0
RTOR Reduction (vph)	0	7	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	244	1009	0	0	0	0	0	875	682	295	546	0
Confl. Peds. (#/hr)	4		14	14		4	4		3	3		4
Heavy Vehicles (%)	7%	1%	0%	0%	0%	0%	0%	5%	4%	8%	6%	0%
Turn Type	Perm								Perm	Prot		
Protected Phases		4						2		1	6	
Permitted Phases	4								2			
Actuated Green, G (s)	34.0	34.0						28.0	28.0	31.0	62.0	
Effective Green, g (s)	34.0	34.0						28.0	28.0	31.0	62.0	
Actuated g/C Ratio	0.32	0.32						0.27	0.27	0.30	0.59	
Clearance Time (s)	5.0	5.0						4.0	4.0	3.0	4.0	
Lane Grp Cap (vph)	485	1031						1165	583	467	2737	
v/s Ratio Prot								0.20		c0.19	0.12	
v/s Ratio Perm	0.16	0.32							c0.31			
v/c Ratio	0.50	0.98						0.75	1.17	0.63	0.20	
Uniform Delay, d1	28.7	35.1						35.3	38.5	32.1	10.0	
Progression Factor	1.00	1.00						0.43	0.45	1.06	0.42	
Incremental Delay, d2	3.7	23.4						0.4	78.3	2.2	0.1	
Delay (s)	32.4	58.5						15.5	95.8	36.1	4.3	
Level of Service	C	E						B	F	D	A	
Approach Delay (s)		53.5			0.0			50.7			15.4	
Approach LOS		D			A			D			B	

Intersection Summary			
HCM Average Control Delay	43.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	95.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1007: 98th Place & Wentworth Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↰	↑↱		↰	↑			↱	
Volume (vph)	0	0	0	218	4	21	3	166	0	0	116	3
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	14	12	12	16	12
Total Lost time (s)				4.0	4.0		4.0	4.0			-3.0	
Lane Util. Factor				1.00	0.95		1.00	1.00			1.00	
Frpb, ped/bikes				1.00	0.98		1.00	1.00			1.00	
Flpb, ped/bikes				1.00	1.00		1.00	1.00			1.00	
Frt				1.00	0.87		1.00	1.00			1.00	
Flt Protected				0.95	1.00		0.95	1.00			1.00	
Satd. Flow (prot)				1578	2709		1285	1882			1961	
Flt Permitted				0.95	1.00		0.58	1.00			1.00	
Satd. Flow (perm)				1578	2709		781	1882			1961	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	242	4	23	3	184	0	0	129	3
RTOR Reduction (vph)	0	0	0	0	18	0	0	0	0	0	1	0
Lane Group Flow (vph)	0	0	0	242	9	0	3	184	0	0	131	0
Confl. Peds. (#/hr)	2		2	2		2	3					3
Heavy Vehicles (%)	0%	0%	0%	8%	25%	5%	33%	2%	0%	0%	3%	33%
Turn Type				Perm			pm+pt					
Protected Phases					8		7	2			6	
Permitted Phases				8			2					
Actuated Green, G (s)				27.0	27.0		50.0	50.0			40.0	
Effective Green, g (s)				27.0	27.0		50.0	50.0			46.0	
Actuated g/C Ratio				0.32	0.32		0.59	0.59			0.54	
Clearance Time (s)				4.0	4.0		4.0	4.0			3.0	
Lane Grp Cap (vph)				501	861		501	1107			1061	
v/s Ratio Prot					0.00		0.00	c0.10			0.07	
v/s Ratio Perm				c0.15			0.00					
v/c Ratio				0.48	0.01		0.01	0.17			0.12	
Uniform Delay, d1				23.4	19.9		10.0	8.0			9.6	
Progression Factor				1.00	1.00		1.06	1.18			1.00	
Incremental Delay, d2				3.3	0.0		0.0	0.3			0.2	
Delay (s)				26.7	19.9		10.6	9.8			9.8	
Level of Service				C	B		B	A			A	
Approach Delay (s)		0.0			26.0			9.8			9.8	
Approach LOS		A			C			A			A	

Intersection Summary			
HCM Average Control Delay	17.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	33.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱			✥			↱		↰	↑	
Volume (vph)	8	5	5	12	0	18	0	143	42	33	301	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	16	15	12	8	12	8	12	12	12	10	13	12
Total Lost time (s)	4.0	4.0			4.0			3.0		4.0	4.0	
Lane Util. Factor	1.00	1.00			1.00			1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.99			1.00			1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00			1.00			1.00		1.00	1.00	
Frt	1.00	0.93			0.92			0.97		1.00	1.00	
Flt Protected	0.95	1.00			0.98			1.00		0.95	1.00	
Satd. Flow (prot)	1938	1809			1620			1686		1595	1755	
Flt Permitted	0.74	1.00			0.93			1.00		0.60	1.00	
Satd. Flow (perm)	1502	1809			1543			1686		1005	1755	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	8	5	5	13	0	19	0	151	44	35	317	0
RTOR Reduction (vph)	0	3	0	0	13	0	0	12	0	0	0	0
Lane Group Flow (vph)	8	7	0	0	19	0	0	183	0	35	317	0
Confl. Peds. (#/hr)			3	3			5		2	2		5
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	3%	3%	0%	6%	0%
Turn Type	Perm			Perm						pm+pt		
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8						6		
Actuated Green, G (s)	27.0	27.0			27.0			40.0		50.0	50.0	
Effective Green, g (s)	27.0	27.0			27.0			40.0		50.0	50.0	
Actuated g/C Ratio	0.32	0.32			0.32			0.47		0.59	0.59	
Clearance Time (s)	4.0	4.0			4.0			3.0		4.0	4.0	
Lane Grp Cap (vph)	477	575			490			793		640	1032	
v/s Ratio Prot		0.00						0.11		0.00	c0.18	
v/s Ratio Perm	0.01				c0.01					0.03		
v/c Ratio	0.02	0.01			0.04			0.23		0.05	0.31	
Uniform Delay, d1	19.9	19.9			20.0			13.4		8.5	8.8	
Progression Factor	1.00	1.00			1.00			1.00		1.01	0.93	
Incremental Delay, d2	0.1	0.0			0.1			0.7		0.2	0.7	
Delay (s)	20.0	19.9			20.2			14.0		8.8	8.9	
Level of Service	B	B			C			B		A	A	
Approach Delay (s)		19.9			20.2			14.0			8.9	
Approach LOS		B			C			B			A	

Intersection Summary			
HCM Average Control Delay	11.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.21		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	40.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1009: 99th Street & State Street

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰↱		↰	↑	↳	
Volume (vph)	63	16	10	350	159	12
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	14	12	13	12	10	12
Total Lost time (s)	4.0		4.0	4.0	4.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.97		1.00	1.00	0.99	
Flt Protected	0.96		0.95	1.00	1.00	
Satd. Flow (prot)	1787		1767	1765	1634	
Flt Permitted	0.96		0.64	1.00	1.00	
Satd. Flow (perm)	1787		1187	1765	1634	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	70	18	11	389	177	13
RTOR Reduction (vph)	12	0	0	0	4	0
Lane Group Flow (vph)	76	0	11	389	186	0
Confl. Peds. (#/hr)		2				
Heavy Vehicles (%)	0%	0%	0%	2%	2%	0%
Turn Type			Perm			
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	21.0		36.0	36.0	36.0	
Effective Green, g (s)	21.0		36.0	36.0	36.0	
Actuated g/C Ratio	0.32		0.55	0.55	0.55	
Clearance Time (s)	4.0		4.0	4.0	4.0	
Lane Grp Cap (vph)	577		657	978	905	
v/s Ratio Prot	c0.04			c0.22	0.11	
v/s Ratio Perm			0.01			
v/c Ratio	0.13		0.02	0.40	0.21	
Uniform Delay, d1	15.6		6.5	8.3	7.3	
Progression Factor	1.00		0.32	0.51	1.16	
Incremental Delay, d2	0.5		0.0	1.1	0.4	
Delay (s)	16.0		2.1	5.4	8.9	
Level of Service	B		A	A	A	
Approach Delay (s)	16.0			5.3	8.9	
Approach LOS	B			A	A	

Intersection Summary			
HCM Average Control Delay	7.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	39.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1010: 99th Street & Michigan Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↰↑↱		↰	↑			↑	↱
Volume (vph)	0	0	0	23	274	14	568	253	0	0	193	35
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	14	16	12	12	15	12	12	13	10
Total Lost time (s)					4.0		4.0	4.0			3.0	3.0
Lane Util. Factor					0.95		1.00	1.00			1.00	1.00
Frpb, ped/bikes					1.00		1.00	1.00			1.00	1.00
Flpb, ped/bikes					1.00		1.00	1.00			1.00	1.00
Frt					0.99		1.00	1.00			1.00	0.85
Flt Protected					1.00		0.95	1.00			1.00	1.00
Satd. Flow (prot)					3738		1660	1752			1603	1298
Flt Permitted					1.00		0.57	1.00			1.00	1.00
Satd. Flow (perm)					3738		1002	1752			1603	1298
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	26	304	16	631	281	0	0	214	39
RTOR Reduction (vph)	0	0	0	0	4	0	0	0	0	0	0	22
Lane Group Flow (vph)	0	0	0	0	342	0	631	281	0	0	214	17
Confl. Peds. (#/hr)									30	30		
Heavy Vehicles (%)	0%	0%	0%	11%	2%	0%	3%	13%	0%	0%	16%	10%
Turn Type				Split			pm+pt					Perm
Protected Phases				8	8		7	2			6	
Permitted Phases							2					6
Actuated Green, G (s)					26.0		51.0	51.0			38.0	38.0
Effective Green, g (s)					26.0		51.0	51.0			38.0	38.0
Actuated g/C Ratio					0.31		0.60	0.60			0.45	0.45
Clearance Time (s)					4.0		4.0	4.0			3.0	3.0
Lane Grp Cap (vph)					1143		679	1051			717	580
v/s Ratio Prot					c0.09		c0.11	0.16			0.13	
v/s Ratio Perm							c0.45					0.01
v/c Ratio					0.30		0.93	0.27			0.30	0.03
Uniform Delay, d1					22.5		17.0	8.1			15.0	13.2
Progression Factor					1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2					0.7		21.0	0.6			1.1	0.1
Delay (s)					23.2		38.0	8.7			16.1	13.3
Level of Service					C		D	A			B	B
Approach Delay (s)		0.0			23.2			29.0			15.6	
Approach LOS		A			C			C			B	

Intersection Summary			
HCM Average Control Delay	25.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	63.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1011: 99th Street & Martin Luther King Jr Drive

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					✥		↰	↑↱		↰	↑↱	
Volume (vph)	0	0	0	13	11	9	331	527	96	74	339	12
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	15	12	12	12	12	12	13	12
Total Lost time (s)					4.0		3.0	4.0		3.0	4.0	
Lane Util. Factor					1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes					1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes					1.00		1.00	1.00		1.00	1.00	
Frt					0.96		1.00	0.98		1.00	0.99	
Flt Protected					0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)					1796		1692	3237		1707	3352	
Flt Permitted					0.98		0.50	1.00		0.31	1.00	
Satd. Flow (perm)					1796		894	3237		566	3352	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	14	12	10	368	586	107	82	377	13
RTOR Reduction (vph)	0	0	0	0	7	0	0	20	0	0	3	0
Lane Group Flow (vph)	0	0	0	0	29	0	368	673	0	82	387	0
Confl. Peds. (#/hr)	2					2	6		20	20		6
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	0%	0%	0%	0%	11%	0%	1%	3%	0%	0%	5%	0%
Turn Type				Split			pm+pt			pm+pt		
Protected Phases				8	8		5	2		1	6	
Permitted Phases							2			6		
Actuated Green, G (s)					23.0		41.0	34.0		41.0	34.0	
Effective Green, g (s)					23.0		41.0	34.0		41.0	34.0	
Actuated g/C Ratio					0.31		0.55	0.45		0.55	0.45	
Clearance Time (s)					4.0		3.0	4.0		3.0	4.0	
Lane Grp Cap (vph)					551		563	1467		416	1520	
v/s Ratio Prot					c0.02		c0.06	0.21		0.02	0.12	
v/s Ratio Perm							c0.30			0.09		
v/c Ratio					0.05		0.65	0.46		0.20	0.25	
Uniform Delay, d1					18.3		13.7	14.2		12.3	12.7	
Progression Factor					1.00		0.69	0.74		1.00	1.00	
Incremental Delay, d2					0.2		5.3	0.9		1.1	0.4	
Delay (s)					18.5		14.8	11.4		13.4	13.1	
Level of Service					B		B	B		B	B	
Approach Delay (s)		0.0			18.5			12.6			13.1	
Approach LOS		A			B			B			B	

Intersection Summary			
HCM Average Control Delay	12.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	56.0%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Lane Configurations		✣			✣		↰	↑↱		↰	↑↱	
Volume (vph)	57	54	24	13	169	222	20	675	12	69	268	15
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	16	12	12	10	11	12	12	11	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.98			0.93		1.00	1.00		1.00	0.99	
Flt Protected		0.98			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1946			1626		1596	3232		1641	3131	
Flt Permitted		0.68			0.99		0.57	1.00		0.33	1.00	
Satd. Flow (perm)		1354			1613		957	3232		575	3131	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	60	57	25	14	178	234	21	711	13	73	282	16
RTOR Reduction (vph)	0	10	0	0	59	0	0	2	0	0	5	0
Lane Group Flow (vph)	0	132	0	0	367	0	21	722	0	73	293	0
Confl. Peds. (#/hr)									6	6		
Confl. Bikes (#/hr)			1	1								
Heavy Vehicles (%)	0%	0%	0%	12%	2%	2%	0%	2%	0%	4%	5%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		25.0			25.0		42.0	42.0		42.0	42.0	
Effective Green, g (s)		25.0			25.0		42.0	42.0		42.0	42.0	
Actuated g/C Ratio		0.33			0.33		0.56	0.56		0.56	0.56	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		451			538		536	1810		322	1753	
v/s Ratio Prot								c0.22			0.09	
v/s Ratio Perm		0.10			c0.23		0.02			0.13		
v/c Ratio		0.29			0.68		0.04	0.40		0.23	0.17	
Uniform Delay, d1		18.5			21.6		7.4	9.3		8.3	8.0	
Progression Factor		1.00			1.00		1.00	1.00		0.17	0.06	
Incremental Delay, d2		1.6			6.9		0.1	0.7		1.6	0.2	
Delay (s)		20.1			28.4		7.6	10.0		3.0	0.7	
Level of Service		C			C		A	B		A	A	
Approach Delay (s)		20.1			28.4			9.9			1.1	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM Average Control Delay	13.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	69.8%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

	↗	↘	↖	↑	↓	↙
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰↱			↰↑ ↑	↑ ↑↱	
Sign Control	Stop			Stop	Stop	
Volume (vph)	45	57	105	326	194	19
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	50	63	117	362	216	21

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	113	237	241	144	93
Volume Left (vph)	50	117	0	0	0
Volume Right (vph)	63	0	0	0	21
Hadj (s)	-0.16	0.33	0.08	0.09	-0.07
Departure Headway (s)	5.3	5.4	5.1	5.4	5.2
Degree Utilization, x	0.17	0.36	0.35	0.22	0.14
Capacity (veh/h)	628	654	684	641	660
Control Delay (s)	9.3	10.1	9.6	8.7	7.9
Approach Delay (s)	9.3	9.9		8.4	
Approach LOS	A	A		A	

Intersection Summary			
Delay	9.4		
HCM Level of Service	A		
Intersection Capacity Utilization	35.4%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Signalized Intersection Capacity Analysis
1014: 103rd Street & Vincennes Avenue

1/14/2013

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR
Lane Configurations		↰	↑	↱	↰	↑	↱			↰	↑↱	
Volume (vph)	45	52	340	13	6	483	40	41	42	53	720	47
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		3.5	4.0	4.0	4.0	4.0	4.0			4.0	4.0	
Lane Util. Factor		1.00	1.00	1.00	1.00	1.00	1.00			1.00	0.95	
Frpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	0.97			1.00	1.00	
Flpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	
Frt		1.00	1.00	0.85	1.00	1.00	0.85			1.00	0.99	
Flt Protected		0.95	1.00	1.00	0.95	1.00	1.00			0.95	1.00	
Satd. Flow (prot)		1575	1731	1530	1710	1731	1487			1710	3289	
Flt Permitted		0.11	1.00	1.00	0.54	1.00	1.00			0.39	1.00	
Satd. Flow (perm)		187	1731	1530	967	1731	1487			700	3289	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	50	58	378	14	7	537	44	46	47	59	800	52
RTOR Reduction (vph)	0	0	0	7	0	0	32	0	0	0	5	0
Lane Group Flow (vph)	0	108	378	7	7	537	58	0	0	106	847	0
Confl. Peds. (#/hr)		5					5					6
Heavy Vehicles (%)	8%	9%	4%	0%	0%	4%	0%	0%	0%	0%	3%	0%
Turn Type	Perm	pm+pt		Perm	Perm		Perm		Perm	Perm		
Protected Phases		7	4			8					2	
Permitted Phases	4	4		4	8		8		2	2		
Actuated Green, G (s)		50.0	50.0	50.0	32.0	32.0	32.0			25.0	25.0	
Effective Green, g (s)		50.0	50.0	50.0	32.0	32.0	32.0			25.0	25.0	
Actuated g/C Ratio		0.48	0.48	0.48	0.30	0.30	0.30			0.24	0.24	
Clearance Time (s)		3.5	4.0	4.0	4.0	4.0	4.0			4.0	4.0	
Lane Grp Cap (vph)		281	824	729	295	528	453			167	783	
v/s Ratio Prot		0.05	c0.22			c0.31					c0.26	
v/s Ratio Perm		0.13		0.00	0.01		0.04			0.15		
v/c Ratio		0.38	0.46	0.01	0.02	1.02	0.13			0.63	1.08	
Uniform Delay, d1		20.3	18.4	14.5	25.6	36.5	26.4			35.9	40.0	
Progression Factor		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	
Incremental Delay, d2		3.9	1.8	0.0	0.1	43.5	0.6			17.0	56.8	
Delay (s)		24.2	20.3	14.5	25.7	80.0	27.0			52.9	96.8	
Level of Service		C	C	B	C	F	C			D	F	
Approach Delay (s)			21.0			71.9					91.9	
Approach LOS			C			E					F	

Intersection Summary			
HCM Average Control Delay	62.7	HCM Level of Service	E
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	80.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1014: 103rd Street & Vincennes Avenue

Movement	SBL	SBT	SBR	SBR2	SEL2	SEL	SER	SER2
Lane Configurations	↰	↑↱				↰	↱↱	
Volume (vph)	49	300	27	33	4	65	114	12
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.5	4.5				4.5	4.5	
Lane Util. Factor	1.00	0.95				1.00	0.88	
Frpb, ped/bikes	1.00	1.00				1.00	1.00	
Flpb, ped/bikes	1.00	1.00				1.00	1.00	
Frt	1.00	0.97				1.00	0.85	
Flt Protected	0.95	1.00				0.95	1.00	
Satd. Flow (prot)	1706	3279				1710	2621	
Flt Permitted	0.16	1.00				0.95	1.00	
Satd. Flow (perm)	293	3279				1710	2621	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	54	333	30	37	4	72	127	13
RTOR Reduction (vph)	0	8	0	0	0	0	7	0
Lane Group Flow (vph)	54	392	0	0	0	76	133	0
Confl. Peds. (#/hr)	6							
Heavy Vehicles (%)	0%	2%	0%	0%	0%	0%	3%	0%
Turn Type	Perm				Split		Perm	
Protected Phases		6			9	9		
Permitted Phases	6						9	
Actuated Green, G (s)	24.5	24.5				17.5	17.5	
Effective Green, g (s)	24.5	24.5				17.5	17.5	
Actuated g/C Ratio	0.23	0.23				0.17	0.17	
Clearance Time (s)	4.5	4.5				4.5	4.5	
Lane Grp Cap (vph)	68	765				285	437	
v/s Ratio Prot		0.12				0.04		
v/s Ratio Perm	0.18						c0.05	
v/c Ratio	0.79	0.51				0.27	0.31	
Uniform Delay, d1	37.9	35.1				38.2	38.4	
Progression Factor	1.00	1.00				1.00	1.00	
Incremental Delay, d2	61.4	2.4				2.3	1.8	
Delay (s)	99.3	37.5				40.4	40.2	
Level of Service	F	D				D	D	
Approach Delay (s)		44.9				40.3		
Approach LOS		D				D		

Intersection Summary

HCM Signalized Intersection Capacity Analysis
1015: 103rd Street & Morgan Street

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰			↱			✥				
Volume (vph)	24	499	0	0	495	25	118	116	117	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	11	11	11	16	11	12	15	12	12	15	12
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		1.00			0.99			0.95				
Flt Protected		1.00			1.00			0.98				
Satd. Flow (prot)		1653			1930			1771				
Flt Permitted		0.96			1.00			0.98				
Satd. Flow (perm)		1598			1930			1771				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	27	554	0	0	550	28	131	129	130	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	581	0	0	578	0	0	390	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)		31.0			31.0			26.0				
Effective Green, g (s)		31.0			31.0			26.0				
Actuated g/C Ratio		0.48			0.48			0.40				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		762			920			708				
v/s Ratio Prot					0.30							
v/s Ratio Perm		c0.36						0.22				
v/c Ratio		0.76			0.63			0.55				
Uniform Delay, d1		14.0			12.7			15.0				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		7.1			3.2			3.1				
Delay (s)		21.1			15.9			18.1				
Level of Service		C			B			B				
Approach Delay (s)		21.1			15.9			18.1			0.0	
Approach LOS		C			B			B			A	

Intersection Summary			
HCM Average Control Delay	18.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	75.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1016: 103rd Street & Halsted Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱	↰	↑↑	↱	↰	↑↑	↱
Volume (vph)	116	366	116	64	353	109	153	1707	128	65	445	93
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	10	10	9	9	10	9
Total Lost time (s)		4.0	4.0		4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		1.00	0.96		1.00	0.96	1.00	1.00	0.97	1.00	1.00	0.96
Flpb, ped/bikes		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.99	1.00		0.99	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1923	1426		1923	1396	1501	3099	1285	1425	2956	1265
Flt Permitted		0.55	1.00		0.62	1.00	0.38	1.00	1.00	0.10	1.00	1.00
Satd. Flow (perm)		1062	1426		1194	1396	608	3099	1285	145	2956	1265
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	122	385	122	67	372	115	161	1797	135	68	468	98
RTOR Reduction (vph)	0	0	72	0	0	68	0	0	30	0	0	59
Lane Group Flow (vph)	0	507	50	0	439	47	161	1797	105	68	468	39
Confl. Peds. (#/hr)	42		39	39		42	20		8	8		20
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	6%	4%	3%	0%	6%	5%	6%	3%	4%	8%	8%	4%
Turn Type	pm+pt		Perm	Perm		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)		43.0	43.0		43.0	43.0	54.0	47.0	47.0	45.5	41.5	41.5
Effective Green, g (s)		43.0	43.0		43.0	43.0	54.0	47.0	47.0	45.5	41.5	41.5
Actuated g/C Ratio		0.41	0.41		0.41	0.41	0.51	0.45	0.45	0.43	0.40	0.40
Clearance Time (s)		4.0	4.0		4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		435	584		489	572	393	1387	575	112	1168	500
v/s Ratio Prot							0.04	c0.58		c0.02	0.16	
v/s Ratio Perm		c0.48	0.04		0.37	0.03	0.17		0.08	0.24		0.03
v/c Ratio		1.17	0.09		0.90	0.08	0.41	1.30	0.18	0.61	0.40	0.08
Uniform Delay, d1		31.0	19.0		28.9	18.9	14.4	29.0	17.4	24.7	22.8	19.8
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.50	0.77	0.42
Incremental Delay, d2		96.9	0.3		21.9	0.3	0.7	138.5	0.7	8.7	1.0	0.3
Delay (s)		127.9	19.3		50.8	19.2	15.1	167.5	18.1	45.8	18.6	8.6
Level of Service		F	B		D	B	B	F	B	D	B	A
Approach Delay (s)		106.8			44.3			146.1			20.0	
Approach LOS		F			D			F			B	

Intersection Summary			
HCM Average Control Delay	104.9	HCM Level of Service	F
HCM Volume to Capacity ratio	1.21		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	117.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1017: 103rd Street & Normal Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣				
Volume (vph)	59	494	62	50	476	50	79	62	55	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	15	12	12	15	12
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		0.99			0.99			0.96				
Flt Protected		1.00			1.00			0.98				
Satd. Flow (prot)		1627			1630			1779				
Flt Permitted		0.90			0.91			0.98				
Satd. Flow (perm)		1473			1489			1779				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	66	549	69	56	529	56	88	69	61	0	0	0
RTOR Reduction (vph)	0	6	0	0	5	0	0	21	0	0	0	0
Lane Group Flow (vph)	0	678	0	0	636	0	0	197	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm			Perm					
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Actuated Green, G (s)		38.0			38.0			19.0				
Effective Green, g (s)		38.0			38.0			19.0				
Actuated g/C Ratio		0.58			0.58			0.29				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		861			870			520				
v/s Ratio Prot												
v/s Ratio Perm		c0.46			0.43			0.11				
v/c Ratio		0.79			0.73			0.38				
Uniform Delay, d1		10.4			9.8			18.3				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		7.2			5.4			2.1				
Delay (s)		17.6			15.2			20.4				
Level of Service		B			B			C				
Approach Delay (s)		17.6			15.2			20.4			0.0	
Approach LOS		B			B			C			A	

Intersection Summary			
HCM Average Control Delay	17.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	65.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1018: 103rd Street & Wentworth Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑	↱		↰↑	↱		↰↑	↱		↰↑↱	
Volume (vph)	30	507	67	32	441	39	55	150	89	49	192	54
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	11	12	12	15	12
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frpb, ped/bikes		1.00	0.97		1.00	0.95		1.00	0.98		0.98	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		0.99	1.00		1.00	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		0.98	
Flt Protected		1.00	1.00		1.00	1.00		0.99	1.00		0.99	
Satd. Flow (prot)		1656	1255		1636	1288		1658	1490		1737	
Flt Permitted		0.96	1.00		0.95	1.00		0.84	1.00		0.92	
Satd. Flow (perm)		1595	1255		1554	1288		1416	1490		1607	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	32	534	71	34	464	41	58	158	94	52	202	57
RTOR Reduction (vph)	0	0	30	0	0	16	0	0	64	0	11	0
Lane Group Flow (vph)	0	566	41	0	498	25	0	216	30	0	300	0
Confl. Peds. (#/hr)	33		15	15		33	68		5	5		68
Confl. Bikes (#/hr)	4					4						
Heavy Vehicles (%)	0%	5%	14%	19%	5%	9%	2%	2%	1%	10%	7%	8%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		43.0	43.0		43.0	43.0		24.0	24.0		24.0	
Effective Green, g (s)		43.0	43.0		43.0	43.0		24.0	24.0		24.0	
Actuated g/C Ratio		0.57	0.57		0.57	0.57		0.32	0.32		0.32	
Clearance Time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	
Lane Grp Cap (vph)		914	720		891	738		453	477		514	
v/s Ratio Prot												
v/s Ratio Perm		c0.35	0.03		0.32	0.02		0.15	0.02		c0.19	
v/c Ratio		0.62	0.06		0.56	0.03		0.48	0.06		0.58	
Uniform Delay, d1		10.6	7.1		10.0	7.0		20.5	17.7		21.3	
Progression Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2		3.1	0.1		2.5	0.1		3.6	0.3		4.8	
Delay (s)		13.7	7.2		12.6	7.0		24.0	18.0		26.1	
Level of Service		B	A		B	A		C	B		C	
Approach Delay (s)		13.0			12.2			22.2			26.1	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM Average Control Delay	16.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	95.3%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1019: 103rd Street & State Street

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑	↱	↰	↑	↱
Volume (vph)	84	438	30	17	317	39	55	303	38	38	92	11
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	11	16	8	10	10	10	10	10	10
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	0.98	1.00	1.00	0.99
Flpb, ped/bikes	0.99	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1464	2990		1459	3534		1534	1647	1301	1517	1541	1156
Flt Permitted	0.51	1.00		0.43	1.00		0.69	1.00	1.00	0.45	1.00	1.00
Satd. Flow (perm)	788	2990		658	3534		1116	1647	1301	720	1541	1156
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	93	487	33	19	352	43	61	337	42	42	102	12
RTOR Reduction (vph)	0	7	0	0	15	0	0	0	22	0	0	7
Lane Group Flow (vph)	93	513	0	19	380	0	61	337	20	42	102	5
Confl. Peds. (#/hr)	16		9	9		16	1		5	5		1
Heavy Vehicles (%)	8%	6%	0%	13%	8%	3%	4%	2%	8%	5%	9%	22%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	31.0	31.0		31.0	31.0		26.0	26.0	26.0	26.0	26.0	26.0
Effective Green, g (s)	31.0	31.0		31.0	31.0		26.0	26.0	26.0	26.0	26.0	26.0
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.40	0.40	0.40	0.40	0.40	0.40
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	376	1426		314	1685		446	659	520	288	616	462
v/s Ratio Prot		c0.17			0.11			c0.20			0.07	
v/s Ratio Perm	0.12			0.03			0.05		0.02	0.06		0.00
v/c Ratio	0.25	0.36		0.06	0.23		0.14	0.51	0.04	0.15	0.17	0.01
Uniform Delay, d1	10.1	10.7		9.2	10.0		12.4	14.7	11.9	12.4	12.5	11.7
Progression Factor	1.00	1.00		1.00	1.00		0.60	0.74	0.31	0.53	0.54	0.28
Incremental Delay, d2	1.6	0.7		0.4	0.3		0.6	2.8	0.1	1.1	0.6	0.0
Delay (s)	11.6	11.4		9.5	10.3		8.0	13.6	3.8	7.7	7.3	3.4
Level of Service	B	B		A	B		A	B	A	A	A	A
Approach Delay (s)		11.5			10.2			11.9			7.1	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM Average Control Delay	10.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	51.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1020: 103rd Street & Michigan Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	98	413	86	44	282	65	73	371	44	57	143	55
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	11	10	11	11	10	11	11	10	11	11
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	0.96	1.00		1.00	1.00		0.98	1.00		0.97	1.00	
Frt	1.00	0.97		1.00	0.97		1.00	0.98		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1464	3056		1588	3009		1541	3022		1403	2767	
Flt Permitted	0.52	1.00		0.42	1.00		0.62	1.00		0.46	1.00	
Satd. Flow (perm)	808	3056		698	3009		1007	3022		678	2767	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	103	435	91	46	297	68	77	391	46	60	151	58
RTOR Reduction (vph)	0	0	0	0	0	0	0	12	0	0	34	0
Lane Group Flow (vph)	103	526	0	46	365	0	77	425	0	60	175	0
Confl. Peds. (#/hr)	98		10	10		98	28		52	52		28
Heavy Vehicles (%)	5%	5%	4%	0%	5%	7%	2%	6%	13%	10%	11%	20%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	36.0	36.0		36.0	36.0		31.0	31.0		31.0	31.0	
Effective Green, g (s)	36.0	36.0		36.0	36.0		31.0	31.0		31.0	31.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.41	0.41		0.41	0.41	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	388	1467		335	1444		416	1249		280	1144	
v/s Ratio Prot		c0.17			0.12			c0.14			0.06	
v/s Ratio Perm	0.13			0.07			0.08			0.09		
v/c Ratio	0.27	0.36		0.14	0.25		0.19	0.34		0.21	0.15	
Uniform Delay, d1	11.6	12.2		10.9	11.5		14.0	15.0		14.2	13.8	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.7	0.7		0.9	0.4		1.0	0.7		1.7	0.3	
Delay (s)	13.3	12.9		11.7	12.0		15.0	15.8		15.9	14.1	
Level of Service	B	B		B	B		B	B		B	B	
Approach Delay (s)		13.0			11.9			15.6			14.5	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	13.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	50.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1021: 103rd Street & Martin Luther King Jr Drive

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱		↰	↑↱		↰	↑↱	
Volume (vph)	110	329	38	23	328	47	67	412	26	43	206	53
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	12	8	16	12	9	10	10	9	10	10
Total Lost time (s)	3.0	7.0		3.0	7.0		3.0	7.0		3.0	7.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.99		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1533	1576		1474	1841		1533	3073		1372	2881	
Flt Permitted	0.45	1.00		0.46	1.00		0.58	1.00		0.41	1.00	
Satd. Flow (perm)	720	1576		713	1841		942	3073		597	2881	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	116	346	40	24	345	49	71	434	27	45	217	56
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	116	386	0	24	394	0	71	461	0	45	273	0
Confl. Peds. (#/hr)	7		23	23		7	10		8	8		10
Confl. Bikes (#/hr)	1		2	2		1	1		1	1		1
Heavy Vehicles (%)	4%	8%	10%	0%	9%	5%	0%	3%	0%	12%	7%	6%
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	47.0	41.8		40.6	38.6		26.8	22.2		23.6	20.6	
Effective Green, g (s)	47.0	39.8		40.6	36.6		26.8	20.2		23.6	18.6	
Actuated g/C Ratio	0.55	0.47		0.48	0.43		0.32	0.24		0.28	0.22	
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	5.0		3.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	448	738		358	793		329	730		193	630	
v/s Ratio Prot	c0.02	c0.24		0.00	0.21		c0.01	c0.15		0.01	0.09	
v/s Ratio Perm	0.13			0.03			0.06			0.06		
v/c Ratio	0.26	0.52		0.07	0.50		0.22	0.63		0.23	0.43	
Uniform Delay, d1	13.5	15.9		15.0	17.5		21.5	29.1		26.1	28.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.3	2.6		0.1	2.2		0.3	4.1		0.6	2.2	
Delay (s)	13.8	18.6		15.1	19.7		21.9	33.2		26.8	30.8	
Level of Service	B	B		B	B		C	C		C	C	
Approach Delay (s)		17.5			19.5			31.7			30.2	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM Average Control Delay	24.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	63.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	69	322	44	65	383	115	59	390	126	56	162	37
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	11	11	11	11	12	12	10	10	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			0.99		1.00	0.99		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		0.99	1.00	
Frt		0.98			0.97		1.00	0.96		1.00	0.97	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3493			2913		1614	3156		1581	2921	
Flt Permitted		0.78			0.84		0.61	1.00		0.38	1.00	
Satd. Flow (perm)		2748			2465		1042	3156		628	2921	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	77	358	49	72	426	128	66	433	140	62	180	41
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	484	0	0	626	0	66	573	0	62	221	0
Confl. Peds. (#/hr)	20		16	16		20	5		33	33		5
Confl. Bikes (#/hr)	2					2			2	2		
Heavy Vehicles (%)	9%	9%	0%	24%	7%	6%	2%	4%	2%	0%	5%	9%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		33.0			33.0		32.0	32.0		32.0	32.0	
Effective Green, g (s)		34.0			34.0		33.0	33.0		33.0	33.0	
Actuated g/C Ratio		0.45			0.45		0.44	0.44		0.44	0.44	
Clearance Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)		1246			1117		458	1389		276	1285	
v/s Ratio Prot								c0.18			0.08	
v/s Ratio Perm		0.18			c0.25		0.06			0.10		
v/c Ratio		0.39			0.56		0.14	0.41		0.22	0.17	
Uniform Delay, d1		13.6			15.0		12.6	14.4		13.0	12.7	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.9			2.0		0.7	0.9		1.9	0.3	
Delay (s)		14.5			17.1		13.2	15.3		14.9	13.0	
Level of Service		B			B		B	B		B	B	
Approach Delay (s)		14.5			17.1			15.1			13.4	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	15.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	63.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1023: 103rd Street & Woodlawn Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↑	↱		✥			↰↑↱	
Volume (vph)	145	522	5	14	656	386	72	9	20	118	1	52
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	12	12	12	12	12	12	13	13	13
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00			0.95	
Frt	1.00	1.00		1.00	1.00	0.85		0.97			0.95	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.97			0.97	
Satd. Flow (prot)	1574	3144		1629	3257	1457		1611			3105	
Flt Permitted	0.35	1.00		0.42	1.00	1.00		0.69			0.75	
Satd. Flow (perm)	585	3144		721	3257	1457		1158			2398	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	161	580	6	16	729	429	80	10	22	131	1	58
RTOR Reduction (vph)	0	1	0	0	0	150	0	12	0	0	44	0
Lane Group Flow (vph)	161	585	0	16	729	279	0	100	0	0	146	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	46.0	46.0		46.0	46.0	46.0		16.7			16.7	
Effective Green, g (s)	46.0	46.0		46.0	46.0	46.0		16.7			16.7	
Actuated g/C Ratio	0.65	0.65		0.65	0.65	0.65		0.24			0.24	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		8.0			8.0	
Lane Grp Cap (vph)	381	2046		469	2119	948		274			566	
v/s Ratio Prot		0.19			0.22							
v/s Ratio Perm	c0.28			0.02		0.19		c0.09			0.06	
v/c Ratio	0.42	0.29		0.03	0.34	0.29		0.36			0.26	
Uniform Delay, d1	6.0	5.3		4.4	5.6	5.3		22.6			22.0	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00			1.00	
Incremental Delay, d2	3.4	0.4		0.1	0.4	0.8		3.5			1.0	
Delay (s)	9.4	5.7		4.5	6.0	6.1		26.1			23.0	
Level of Service	A	A		A	A	A		C			C	
Approach Delay (s)		6.5			6.0			26.1			23.0	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM Average Control Delay	8.6	HCM Level of Service	A
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	70.7	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1024: 107th Street & Halsted Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱		↰	↑↑	↱	↰	↑↑	↱
Volume (vph)	111	214	76	63	190	71	133	1972	88	71	499	41
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	9	12	10	10	12	9	10	9	9	10	9
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00	0.96	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.96		1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1548	1498		1547	1584		1493	3069	1271	1452	2983	1301
Flt Permitted	0.37	1.00		0.32	1.00		0.39	1.00	1.00	0.12	1.00	1.00
Satd. Flow (perm)	608	1498		521	1584		612	3069	1271	180	2983	1301
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	117	225	80	66	200	75	140	2076	93	75	525	43
RTOR Reduction (vph)	0	15	0	0	16	0	0	0	18	0	0	25
Lane Group Flow (vph)	117	290	0	66	259	0	140	2076	75	75	525	18
Confl. Peds. (#/hr)	4		9	9		4	6		16	16		6
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	3%	3%	4%	3%	1%	2%	3%	4%	4%	6%	7%	3%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	28.0	21.0		28.0	21.0		42.0	35.0	35.0	42.0	35.0	35.0
Effective Green, g (s)	26.0	22.0		26.0	22.0		40.0	35.0	35.0	40.0	35.0	35.0
Actuated g/C Ratio	0.31	0.26		0.31	0.26		0.47	0.41	0.41	0.47	0.41	0.41
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)	252	388		232	410		350	1264	523	174	1228	536
v/s Ratio Prot	c0.03	c0.19		0.02	0.16		0.03	c0.68		c0.03	0.18	
v/s Ratio Perm	0.11			0.07			0.16		0.06	0.17		0.01
v/c Ratio	0.46	0.75		0.28	0.63		0.40	1.64	0.14	0.43	0.43	0.03
Uniform Delay, d1	22.5	29.0		21.9	27.9		13.3	25.0	15.6	18.1	17.8	14.9
Progression Factor	1.00	1.00		1.00	1.00		0.62	0.71	0.50	1.00	1.00	1.00
Incremental Delay, d2	6.0	12.4		3.1	7.2		2.7	292.0	0.5	7.6	1.1	0.1
Delay (s)	28.6	41.4		24.9	35.2		11.0	309.8	8.2	25.7	18.9	15.0
Level of Service	C	D		C	D		B	F	A	C	B	B
Approach Delay (s)		37.8			33.2			279.5			19.5	
Approach LOS		D			C			F			B	

Intersection Summary			
HCM Average Control Delay	184.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.15		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	96.8%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1025: 107th Street & Wentworth Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			✥			✥	
Volume (vph)	26	218	24	15	149	18	21	166	27	33	148	21
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	14	12	12	14	12	12	16	12	12	16	12
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		1.00			1.00			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.99			0.99			0.98			0.99	
Flt Protected		1.00			1.00			1.00			0.99	
Satd. Flow (prot)		1843			1836			1900			1931	
Flt Permitted		0.96			0.97			0.97			0.94	
Satd. Flow (perm)		1787			1790			1844			1822	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	27	225	25	15	154	19	22	171	28	34	153	22
RTOR Reduction (vph)	0	5	0	0	6	0	0	8	0	0	6	0
Lane Group Flow (vph)	0	272	0	0	182	0	0	213	0	0	203	0
Confl. Peds. (#/hr)	5		11	11		5	7		34	34		7
Confl. Bikes (#/hr)			3	3								
Heavy Vehicles (%)	4%	2%	0%	20%	1%	0%	12%	3%	8%	0%	3%	5%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		27.0			27.0			30.0			30.0	
Effective Green, g (s)		27.0			27.0			30.0			30.0	
Actuated g/C Ratio		0.42			0.42			0.46			0.46	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		742			744			851			841	
v/s Ratio Prot												
v/s Ratio Perm		c0.15			0.10			c0.12			0.11	
v/c Ratio		0.37			0.24			0.25			0.24	
Uniform Delay, d1		13.1			12.4			10.7			10.6	
Progression Factor		1.00			0.64			1.08			1.00	
Incremental Delay, d2		1.4			0.8			0.7			0.7	
Delay (s)		14.5			8.6			12.2			11.3	
Level of Service		B			A			B			B	
Approach Delay (s)		14.5			8.6			12.2			11.3	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM Average Control Delay	11.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	45.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	24	181	34	9	162	19	44	384	33	16	86	17
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	0.95	1.00		1.00	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1465	2994		1302	3037		1529	3093		1492	2868	
Flt Permitted	0.63	1.00		0.60	1.00		0.68	1.00		0.48	1.00	
Satd. Flow (perm)	965	2994		827	3037		1093	3093		757	2868	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	27	201	38	10	180	21	49	427	37	18	96	19
RTOR Reduction (vph)	0	24	0	0	13	0	0	10	0	0	8	0
Lane Group Flow (vph)	27	215	0	10	188	0	49	454	0	18	107	0
Confl. Peds. (#/hr)	35		6	6		35	18					18
Confl. Bikes (#/hr)	14		32	32		14	23		7	7		23
Heavy Vehicles (%)	4%	4%	0%	22%	2%	6%	3%	2%	0%	7%	8%	6%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.0	20.0		20.0	20.0		39.0	39.0		39.0	39.0	
Effective Green, g (s)	19.0	19.0		19.0	19.0		38.0	38.0		38.0	38.0	
Actuated g/C Ratio	0.29	0.29		0.29	0.29		0.58	0.58		0.58	0.58	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	282	875		242	888		639	1808		443	1677	
v/s Ratio Prot		c0.07			0.06			c0.15			0.04	
v/s Ratio Perm	0.03			0.01			0.04			0.02		
v/c Ratio	0.10	0.25		0.04	0.21		0.08	0.25		0.04	0.06	
Uniform Delay, d1	16.7	17.5		16.5	17.3		5.9	6.6		5.7	5.8	
Progression Factor	0.73	0.73		0.76	0.74		0.93	0.96		0.49	0.44	
Incremental Delay, d2	0.6	0.6		0.3	0.5		0.2	0.3		0.2	0.1	
Delay (s)	12.9	13.5		12.8	13.4		5.7	6.6		3.0	2.6	
Level of Service	B	B		B	B		A	A		A	A	
Approach Delay (s)		13.5			13.3			6.5			2.7	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	9.0	HCM Level of Service	A
HCM Volume to Capacity ratio	0.25		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	40.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1027: 107th Street & Michigan Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			↰↑↱			↰↑↱	
Volume (vph)	46	178	34	16	122	38	28	414	24	14	163	15
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	9	9	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00			1.00			1.00	
Flpb, ped/bikes	0.99	1.00		0.98	1.00			1.00			1.00	
Frt	1.00	0.98		1.00	0.96			0.99			0.99	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1556	2952		1515	2868			1878			1808	
Flt Permitted	0.64	1.00		0.60	1.00			0.98			0.96	
Satd. Flow (perm)	1047	2952		965	2868			1838			1739	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	51	198	38	18	136	42	31	460	27	16	181	17
RTOR Reduction (vph)	0	23	0	0	25	0	0	3	0	0	5	0
Lane Group Flow (vph)	51	213	0	18	153	0	0	515	0	0	209	0
Confl. Peds. (#/hr)	10		29	29		10	17		10	10		17
Confl. Bikes (#/hr)									2	2		
Heavy Vehicles (%)	2%	4%	10%	0%	4%	0%	0%	8%	4%	0%	13%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	26.0	26.0		26.0	26.0			31.0			31.0	
Effective Green, g (s)	26.0	26.0		26.0	26.0			31.0			31.0	
Actuated g/C Ratio	0.40	0.40		0.40	0.40			0.48			0.48	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	419	1181		386	1147			877			829	
v/s Ratio Prot		c0.07			0.05							
v/s Ratio Perm	0.05			0.02				c0.28			0.12	
v/c Ratio	0.12	0.18		0.05	0.13			0.59			0.25	
Uniform Delay, d1	12.3	12.6		11.9	12.4			12.4			10.1	
Progression Factor	1.01	0.92		0.86	0.88			1.02			1.00	
Incremental Delay, d2	0.6	0.3		0.2	0.2			2.8			0.7	
Delay (s)	13.1	12.0		10.5	11.1			15.4			10.8	
Level of Service	B	B		B	B			B			B	
Approach Delay (s)		12.2			11.0			15.4			10.8	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	13.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	59.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1028: 107th Street & Martin Luther King Jr Drive

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱			✥			✥	
Volume (vph)	90	127	60	2	84	36	21	275	9	7	184	29
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	16	12	10	16	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00			1.00			1.00	
Flpb, ped/bikes	1.00	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.95		1.00	0.95			1.00			0.98	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1605	1879		1587	1870			1971			1933	
Flt Permitted	0.67	1.00		0.57	1.00			0.98			0.99	
Satd. Flow (perm)	1135	1879		950	1870			1928			1916	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	100	141	67	2	93	40	23	306	10	8	204	32
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	100	208	0	2	133	0	0	339	0	0	244	0
Confl. Peds. (#/hr)			8	8			1		8	8		1
Heavy Vehicles (%)	3%	3%	2%	0%	6%	0%	0%	3%	0%	0%	4%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.0	20.0		20.0	20.0			37.0			37.0	
Effective Green, g (s)	20.0	20.0		20.0	20.0			37.0			37.0	
Actuated g/C Ratio	0.31	0.31		0.31	0.31			0.57			0.57	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	349	578		292	575			1097			1091	
v/s Ratio Prot		c0.11			0.07							
v/s Ratio Perm	0.09			0.00				c0.18			0.13	
v/c Ratio	0.29	0.36		0.01	0.23			0.31			0.22	
Uniform Delay, d1	17.1	17.5		15.6	16.8			7.3			6.9	
Progression Factor	0.90	0.89		0.89	0.92			0.94			1.00	
Incremental Delay, d2	2.0	1.7		0.0	0.9			0.7			0.5	
Delay (s)	17.5	17.4		14.0	16.3			7.6			7.4	
Level of Service	B	B		B	B			A			A	
Approach Delay (s)		17.4			16.3			7.6			7.4	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	11.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	45.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱		↰	↑	↱	↰	↑	↱
Volume (vph)	122	9	55	1	3	12	40	492	6	2	201	50
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	10	10	10	11	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.97		1.00	1.00	0.98	1.00	1.00	0.98
Flpb, ped/bikes	0.98	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.87		1.00	0.88		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1603	1672		1710	1422		1491	1631	1392	1649	1907	1427
Flt Permitted	0.75	1.00		0.71	1.00		0.62	1.00	1.00	0.37	1.00	1.00
Satd. Flow (perm)	1260	1672		1279	1422		971	1631	1392	648	1907	1427
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	136	10	61	1	3	13	44	547	7	2	223	56
RTOR Reduction (vph)	0	44	0	0	9	0	0	0	3	0	0	22
Lane Group Flow (vph)	136	27	0	1	7	0	44	547	4	2	223	34
Confl. Peds. (#/hr)	9					9	1		6	6		1
Heavy Vehicles (%)	5%	14%	5%	0%	67%	12%	7%	3%	0%	0%	7%	5%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	17.0	17.0		17.0	17.0		39.0	39.0	39.0	39.0	39.0	39.0
Effective Green, g (s)	18.0	18.0		18.0	18.0		39.0	39.0	39.0	39.0	39.0	39.0
Actuated g/C Ratio	0.28	0.28		0.28	0.28		0.60	0.60	0.60	0.60	0.60	0.60
Clearance Time (s)	5.0	5.0		5.0	5.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	349	463		354	394		583	979	835	389	1144	856
v/s Ratio Prot		0.02			0.00			c0.34			0.12	
v/s Ratio Perm	c0.11			0.00			0.05		0.00	0.00		0.02
v/c Ratio	0.39	0.06		0.00	0.02		0.08	0.56	0.01	0.01	0.19	0.04
Uniform Delay, d1	19.0	17.3		17.0	17.1		5.4	7.8	5.2	5.2	5.9	5.3
Progression Factor	1.47	2.41		1.00	1.00		1.17	1.10	1.32	1.00	1.00	1.00
Incremental Delay, d2	3.2	0.2		0.0	0.1		0.2	1.7	0.0	0.0	0.4	0.1
Delay (s)	31.1	41.9		17.0	17.1		6.5	10.3	6.9	5.2	6.3	5.4
Level of Service	C	D		B	B		A	B	A	A	A	A
Approach Delay (s)		34.8			17.1			10.0			6.1	
Approach LOS		C			B			A			A	

Intersection Summary			
HCM Average Control Delay	13.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1030: 111th Street & Marshield Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱		↰	↑↑					↰	↑↱	
Volume (vph)	0	249	76	129	378	0	0	0	0	80	305	361
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	12	12	12	12	12	11	11	12
Total Lost time (s)		4.0		3.0	3.0					5.0	5.0	
Lane Util. Factor		0.95		1.00	0.95					1.00	0.95	
Frpb, ped/bikes		0.99		1.00	1.00					1.00	0.99	
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	
Frt		0.96		1.00	1.00					1.00	0.92	
Flt Protected		1.00		0.95	1.00					0.95	1.00	
Satd. Flow (prot)		2829		1621	3288					1574	2907	
Flt Permitted		1.00		0.49	1.00					0.95	1.00	
Satd. Flow (perm)		2829		835	3288					1574	2907	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	262	80	136	398	0	0	0	0	84	321	380
RTOR Reduction (vph)	0	29	0	0	0	0	0	0	0	0	214	0
Lane Group Flow (vph)	0	313	0	136	398	0	0	0	0	84	487	0
Confl. Peds. (#/hr)	14		32	32		14	14					14
Confl. Bikes (#/hr)			1	1								
Heavy Vehicles (%)	0%	9%	4%	5%	4%	0%	0%	0%	0%	5%	2%	4%
Turn Type				D.P+P						custom		
Protected Phases		8		7	7 8					6	6	
Permitted Phases				8						6		
Actuated Green, G (s)		33.0		56.0	59.0					32.0	32.0	
Effective Green, g (s)		33.0		56.0	59.0					32.0	32.0	
Actuated g/C Ratio		0.33		0.56	0.59					0.32	0.32	
Clearance Time (s)		4.0		3.0						5.0	5.0	
Lane Grp Cap (vph)		934		648	1940					504	930	
v/s Ratio Prot		c0.11		c0.05	0.12					0.05	c0.17	
v/s Ratio Perm				0.07								
v/c Ratio		0.34		0.21	0.21					0.17	0.52	
Uniform Delay, d1		25.2		10.6	9.6					24.4	27.8	
Progression Factor		1.00		1.97	2.07					1.00	1.00	
Incremental Delay, d2		1.0		0.6	0.2					0.7	2.1	
Delay (s)		26.2		21.5	19.9					25.1	29.9	
Level of Service		C		C	B					C	C	
Approach Delay (s)		26.2			20.4			0.0			29.4	
Approach LOS		C			C			A			C	

Intersection Summary			
HCM Average Control Delay	25.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	62.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1031: 111th Street & Hamlet Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑			↑↱		↰	↑	↱			
Volume (vph)	129	200	0	0	333	70	174	554	347	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	9	12	13	12	13	12	12	12
Total Lost time (s)	4.0	4.0			4.0		5.0	5.0	5.0			
Lane Util. Factor	1.00	0.95			0.95		1.00	1.00	1.00			
Frpb, ped/bikes	1.00	1.00			0.99		1.00	1.00	0.99			
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.97		1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1673	3054			2833		1750	1782	1514			
Flt Permitted	0.33	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	583	3054			2833		1750	1782	1514			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	136	211	0	0	351	74	183	583	365	0	0	0
RTOR Reduction (vph)	0	0	0	0	17	0	0	0	245	0	0	0
Lane Group Flow (vph)	136	211	0	0	408	0	183	583	120	0	0	0
Confl. Peds. (#/hr)	14		16	16		14			1	1		
Confl. Bikes (#/hr)	1					1			1	1		
Heavy Vehicles (%)	2%	12%	0%	0%	5%	4%	1%	1%	3%	0%	0%	0%
Turn Type	pm+pt						custom		Perm			
Protected Phases	4	1 4			1		2	2				
Permitted Phases	1 4						2		2			
Actuated Green, G (s)	54.0	58.0			21.0		33.0	33.0	33.0			
Effective Green, g (s)	54.0	58.0			21.0		33.0	33.0	33.0			
Actuated g/C Ratio	0.54	0.58			0.21		0.33	0.33	0.33			
Clearance Time (s)	4.0				4.0		5.0	5.0	5.0			
Lane Grp Cap (vph)	675	1771			595		578	588	500			
v/s Ratio Prot	c0.07	0.07			c0.14		0.10	c0.33				
v/s Ratio Perm	0.04								0.08			
v/c Ratio	0.20	0.12			0.69		0.32	0.99	0.24			
Uniform Delay, d1	11.8	9.5			36.4		25.1	33.4	24.4			
Progression Factor	0.24	0.25			1.00		0.76	0.79	1.91			
Incremental Delay, d2	0.6	0.1			6.3		0.9	27.9	0.7			
Delay (s)	3.5	2.5			42.7		19.9	54.1	47.3			
Level of Service	A	A			D		B	D	D			
Approach Delay (s)		2.9			42.7			46.4			0.0	
Approach LOS		A			D			D			A	

Intersection Summary			
HCM Average Control Delay	37.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	62.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1032: 112th Place & Marshfield Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↱		↰	↑↑					↰	↑↑	↱
Volume (vph)	0	476	372	34	592	0	0	0	0	5	216	200
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	11	12	12	12	12	10	10	12
Total Lost time (s)		4.0		4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.95		1.00	0.95					1.00	0.95	1.00
Frpb, ped/bikes		0.99		1.00	1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Frt		0.93		1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00					0.95	1.00	1.00
Satd. Flow (prot)		3112		1613	3273					1596	3160	1443
Flt Permitted		1.00		0.16	1.00					0.95	1.00	1.00
Satd. Flow (perm)		3112		268	3273					1596	3160	1443
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	0	496	388	35	617	0	0	0	0	5	225	208
RTOR Reduction (vph)	0	141	0	0	0	0	0	0	0	0	0	137
Lane Group Flow (vph)	0	743	0	35	617	0	0	0	0	5	225	71
Confl. Peds. (#/hr)	22		3	3		22						
Confl. Bikes (#/hr)	4					4			32	32		
Heavy Vehicles (%)	0%	2%	2%	6%	1%	0%	0%	0%	0%	0%	1%	6%
Turn Type				pm+pt						Split		Prot
Protected Phases		8		7	7 8					6	6	6
Permitted Phases				7 8								
Actuated Green, G (s)		36.0		54.0	58.0					34.0	34.0	34.0
Effective Green, g (s)		36.0		54.0	58.0					34.0	34.0	34.0
Actuated g/C Ratio		0.36		0.54	0.58					0.34	0.34	0.34
Clearance Time (s)		4.0		4.0						4.0	4.0	4.0
Lane Grp Cap (vph)		1120		387	1898					543	1074	491
v/s Ratio Prot		c0.24		0.02	c0.19					0.00	c0.07	0.05
v/s Ratio Perm				0.03								
v/c Ratio		0.66		0.09	0.33					0.01	0.21	0.14
Uniform Delay, d1		26.9		12.6	10.9					21.8	23.5	22.9
Progression Factor		1.00		0.54	0.68					0.73	0.78	0.90
Incremental Delay, d2		3.1		0.2	0.2					0.0	0.4	0.6
Delay (s)		30.0		7.0	7.6					16.0	18.7	21.3
Level of Service		C		A	A					B	B	C
Approach Delay (s)		30.0			7.5			0.0			19.9	
Approach LOS		C			A			A			B	

Intersection Summary			
HCM Average Control Delay	20.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	89.3%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1033: 112th Place & Hamlet Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↰↑			↑↱		↰	↰	↱			
Volume (vph)	420	60	0	0	57	6	569	647	62	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	12	12	12	10	12	11	11	12	12	12	12
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0	4.0			
Lane Util. Factor	0.91	0.91			0.95		0.95	0.95	1.00			
Frpb, ped/bikes	1.00	1.00			0.99		1.00	1.00	1.00			
Flpb, ped/bikes	0.99	0.99			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.99		1.00	1.00	0.85			
Flt Protected	0.95	0.96			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1444	3040			3070		1555	1637	1500			
Flt Permitted	0.71	0.74			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	1083	2333			3070		1555	1637	1500			
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	433	62	0	0	59	6	587	667	64	0	0	0
RTOR Reduction (vph)	0	0	0	0	5	0	0	0	38	0	0	0
Lane Group Flow (vph)	216	279	0	0	60	0	587	667	26	0	0	0
Confl. Peds. (#/hr)	30		2	2		30			4	4		
Confl. Bikes (#/hr)	3					3			2	2		
Heavy Vehicles (%)	3%	2%	0%	0%	2%	0%	1%	1%	2%	0%	0%	0%
Turn Type	pm+pt						custom		custom			
Protected Phases	4	1 4			1		2	2	2			
Permitted Phases	1 4						2		2			
Actuated Green, G (s)	51.0	51.0			15.0		37.0	37.0	37.0			
Effective Green, g (s)	51.0	51.0			15.0		37.0	37.0	37.0			
Actuated g/C Ratio	0.51	0.51			0.15		0.37	0.37	0.37			
Clearance Time (s)	4.0				4.0		4.0	4.0	4.0			
Lane Grp Cap (vph)	682	1444			461		575	606	555			
v/s Ratio Prot	c0.11	0.07			0.02		0.38	c0.41	0.02			
v/s Ratio Perm	c0.05	0.03										
v/c Ratio	0.32	0.19			0.13		1.02	1.10	0.05			
Uniform Delay, d1	14.1	13.3			36.8		31.5	31.5	20.2			
Progression Factor	0.22	0.24			1.00		1.00	1.00	1.00			
Incremental Delay, d2	0.9	0.2			0.6		42.9	67.2	0.2			
Delay (s)	4.0	3.4			37.4		74.4	98.7	20.4			
Level of Service	A	A			D		E	F	C			
Approach Delay (s)		3.6			37.4			84.1			0.0	
Approach LOS		A			D			F			A	

Intersection Summary			
HCM Average Control Delay	61.3	HCM Level of Service	E
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	89.3%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1034: 111th Street & Halsted Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱		↰	↑↑	↱	↰	↑↑	↱
Volume (vph)	163	285	73	58	281	114	51	1151	62	88	476	42
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	9	10	9	9	10	9
Total Lost time (s)		4.0			4.0		4.0	3.5	4.0	4.0	3.5	4.0
Lane Util. Factor		0.95			0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		1.00			0.99		1.00	1.00	0.97	1.00	1.00	0.97
Flpb, ped/bikes		1.00			1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.98			0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.98			0.99		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		2843			2815		1447	3069	1336	1494	2956	1270
Flt Permitted		0.62			0.82		0.39	1.00	1.00	0.12	1.00	1.00
Satd. Flow (perm)		1801			2328		600	3069	1336	197	2956	1270
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	170	297	76	60	293	119	53	1199	65	92	496	44
RTOR Reduction (vph)	0	16	0	0	39	0	0	0	24	0	0	27
Lane Group Flow (vph)	0	527	0	0	433	0	53	1199	41	92	496	17
Confl. Peds. (#/hr)	49		20	20		49	26		8	8		26
Confl. Bikes (#/hr)	2					2						
Heavy Vehicles (%)	10%	7%	4%	9%	7%	5%	6%	4%	0%	3%	8%	5%
Turn Type	pm+pt			Perm			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)		35.0			27.0		38.0	33.0	33.0	38.0	33.0	33.0
Effective Green, g (s)		36.0			28.0		36.0	33.5	33.0	36.0	33.5	33.0
Actuated g/C Ratio		0.42			0.33		0.42	0.39	0.39	0.42	0.39	0.39
Clearance Time (s)		5.0			5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)		836			767		294	1210	519	144	1165	493
v/s Ratio Prot		c0.04					0.01	c0.39		c0.03	0.17	
v/s Ratio Perm		0.22			c0.19		0.07		0.03	0.24		0.01
v/c Ratio		0.63			0.56		0.18	0.99	0.08	0.64	0.43	0.03
Uniform Delay, d1		19.3			23.5		14.8	25.6	16.4	19.0	18.7	16.1
Progression Factor		1.00			1.00		1.34	0.87	1.43	1.82	1.64	3.14
Incremental Delay, d2		3.6			3.0		0.8	17.5	0.2	18.1	1.0	0.1
Delay (s)		22.9			26.5		20.6	39.8	23.6	52.5	31.8	50.8
Level of Service		C			C		C	D	C	D	C	D
Approach Delay (s)		22.9			26.5			38.2			36.1	
Approach LOS		C			C			D			D	

Intersection Summary			
HCM Average Control Delay	33.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	82.9%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰			↱			✥				
Volume (vph)	44	420	0	0	422	81	31	63	98	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		1.00			0.98			0.93				
Flt Protected		1.00			1.00			0.99				
Satd. Flow (prot)		1706			1677			1583				
Flt Permitted		0.92			1.00			0.99				
Satd. Flow (perm)		1577			1677			1583				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	49	467	0	0	469	90	34	70	109	0	0	0
RTOR Reduction (vph)	0	0	0	0	10	0	0	58	0	0	0	0
Lane Group Flow (vph)	0	516	0	0	549	0	0	155	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)		34.0			34.0			23.0				
Effective Green, g (s)		34.0			34.0			23.0				
Actuated g/C Ratio		0.52			0.52			0.35				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		825			877			560				
v/s Ratio Prot					0.33							
v/s Ratio Perm		c0.33						0.10				
v/c Ratio		0.63			0.63			0.28				
Uniform Delay, d1		11.0			11.0			15.0				
Progression Factor		1.00			0.63			1.00				
Incremental Delay, d2		3.6			2.8			1.2				
Delay (s)		14.6			9.7			16.3				
Level of Service		B			A			B				
Approach Delay (s)		14.6			9.7			16.3			0.0	
Approach LOS		B			A			B			A	

Intersection Summary			
HCM Average Control Delay	12.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	76.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			↰↑↱			↰↑↱	
Volume (vph)	48	415	33	20	416	49	25	175	35	51	107	28
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	12	12	12	12	12
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		1.00			1.00			0.99			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.99			0.99			0.98			0.98	
Flt Protected		1.00			1.00			0.99			0.99	
Satd. Flow (prot)		1886			1842			3185			3126	
Flt Permitted		0.92			0.97			0.92			0.83	
Satd. Flow (perm)		1753			1794			2930			2630	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	53	461	37	22	462	54	28	194	39	57	119	31
RTOR Reduction (vph)	0	4	0	0	6	0	0	22	0	0	18	0
Lane Group Flow (vph)	0	547	0	0	532	0	0	239	0	0	189	0
Confl. Peds. (#/hr)	29		16	16		29	28		14	14		28
Confl. Bikes (#/hr)	1					1	1					1
Heavy Vehicles (%)	3%	7%	4%	12%	8%	13%	0%	4%	4%	4%	4%	6%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		30.0			30.0			27.0			27.0	
Effective Green, g (s)		30.0			30.0			27.0			27.0	
Actuated g/C Ratio		0.46			0.46			0.42			0.42	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		809			828			1217			1092	
v/s Ratio Prot												
v/s Ratio Perm		c0.31			0.30			c0.08			0.07	
v/c Ratio		0.68			0.64			0.20			0.17	
Uniform Delay, d1		13.7			13.4			12.1			12.0	
Progression Factor		0.63			0.56			0.98			0.61	
Incremental Delay, d2		3.7			3.7			0.4			0.3	
Delay (s)		12.4			11.1			12.2			7.6	
Level of Service		B			B			B			A	
Approach Delay (s)		12.4			11.1			12.2			7.6	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM Average Control Delay	11.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	82.0%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1037: 111th Street & State Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	52	279	22	28	338	61	55	319	89	48	96	29
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	9	10	10	9	10	10	12	10	10	12
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		0.99	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.98		1.00	0.97		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1503	2936		1584	2944		1497	3034		1594	2899	
Flt Permitted	0.44	1.00		0.53	1.00		0.66	1.00		0.48	1.00	
Satd. Flow (perm)	697	2936		890	2944		1046	3034		809	2899	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	58	310	24	31	376	68	61	354	99	53	107	32
RTOR Reduction (vph)	0	9	0	0	22	0	0	39	0	0	15	0
Lane Group Flow (vph)	58	325	0	31	422	0	61	414	0	53	124	0
Confl. Peds. (#/hr)	25		14	14		25	12		4	4		12
Confl. Bikes (#/hr)	1					1			1	1		
Heavy Vehicles (%)	5%	7%	12%	0%	6%	2%	6%	1%	3%	0%	4%	12%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	22.0	22.0		22.0	22.0		35.0	35.0		35.0	35.0	
Effective Green, g (s)	22.0	22.0		22.0	22.0		35.0	35.0		35.0	35.0	
Actuated g/C Ratio	0.34	0.34		0.34	0.34		0.54	0.54		0.54	0.54	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	236	994		301	996		563	1634		436	1561	
v/s Ratio Prot		0.11			c0.14			c0.14			0.04	
v/s Ratio Perm	0.08			0.03			0.06			0.07		
v/c Ratio	0.25	0.33		0.10	0.42		0.11	0.25		0.12	0.08	
Uniform Delay, d1	15.5	16.0		14.7	16.6		7.4	8.0		7.4	7.2	
Progression Factor	0.57	0.55		0.78	0.80		0.63	0.63		1.30	1.35	
Incremental Delay, d2	2.0	0.7		0.7	1.3		0.4	0.4		0.6	0.1	
Delay (s)	10.9	9.6		12.1	14.6		5.0	5.4		10.2	9.8	
Level of Service	B	A		B	B		A	A		B	A	
Approach Delay (s)		9.8			14.4			5.3			9.9	
Approach LOS		A			B			A			A	

Intersection Summary			
HCM Average Control Delay	9.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	46.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1038: 111th Street & Michigan Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			↰↑↱			↰↑↱	
Volume (vph)	84	391	28	37	362	82	20	308	44	41	118	41
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	9	10	9	9	16	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			1.00			0.99	
Flpb, ped/bikes	0.97	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.97			0.98			0.97	
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.99	
Satd. Flow (prot)	1385	3013		1335	3538			3438			3303	
Flt Permitted	0.46	1.00		0.48	1.00			0.94			0.84	
Satd. Flow (perm)	674	3013		674	3538			3226			2808	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	88	412	29	39	381	86	21	324	46	43	124	43
RTOR Reduction (vph)	0	8	0	0	30	0	0	16	0	0	26	0
Lane Group Flow (vph)	88	433	0	39	437	0	0	375	0	0	184	0
Confl. Peds. (#/hr)	53		34	34		53	67		28	28		67
Heavy Vehicles (%)	8%	5%	0%	14%	6%	1%	0%	9%	20%	5%	15%	5%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	31.0	31.0		31.0	31.0			26.0			26.0	
Effective Green, g (s)	31.0	31.0		31.0	31.0			26.0			26.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48			0.40			0.40	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	321	1437		321	1687			1290			1123	
v/s Ratio Prot		c0.14			0.12							
v/s Ratio Perm	0.13			0.06				c0.12			0.07	
v/c Ratio	0.27	0.30		0.12	0.26			0.29			0.16	
Uniform Delay, d1	10.2	10.4		9.4	10.1			13.2			12.5	
Progression Factor	1.60	1.65		0.79	0.78			0.46			0.64	
Incremental Delay, d2	2.1	0.5		0.7	0.3			0.6			0.3	
Delay (s)	18.4	17.6		8.2	8.2			6.7			8.3	
Level of Service	B	B		A	A			A			A	
Approach Delay (s)		17.7			8.2			6.7			8.3	
Approach LOS		B			A			A			A	

Intersection Summary			
HCM Average Control Delay	11.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	59.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1039: 111th Street & Indiana Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑	↱		↰↑ ↑↱			↰↑↱			↰↑↱	
Volume (vph)	99	301	100	104	348	104	88	84	88	88	84	82
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	16	12	12	16	12
Total Lost time (s)		5.0	5.0		5.0			5.0			5.0	
Lane Util. Factor		1.00	1.00		0.95			1.00			1.00	
Frt		1.00	0.85		0.97			0.95			0.96	
Flt Protected		0.99	1.00		0.99			0.98			0.98	
Satd. Flow (prot)		1637	1409		3032			1823			1826	
Flt Permitted		0.74	1.00		0.76			0.79			0.78	
Satd. Flow (perm)		1230	1409		2324			1456			1442	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	110	334	111	116	387	116	98	93	98	98	93	91
RTOR Reduction (vph)	0	0	53	0	31	0	0	28	0	0	26	0
Lane Group Flow (vph)	0	444	58	0	588	0	0	261	0	0	256	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm		Perm	Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)		34.0	34.0		34.0			21.0			21.0	
Effective Green, g (s)		34.0	34.0		34.0			21.0			21.0	
Actuated g/C Ratio		0.52	0.52		0.52			0.32			0.32	
Clearance Time (s)		5.0	5.0		5.0			5.0			5.0	
Lane Grp Cap (vph)		643	737		1216			470			466	
v/s Ratio Prot												
v/s Ratio Perm		c0.36	0.04		0.25			c0.18			0.18	
v/c Ratio		0.69	0.08		0.48			0.55			0.55	
Uniform Delay, d1		11.6	7.7		9.9			18.1			18.1	
Progression Factor		2.01	5.68		0.42			1.00			1.00	
Incremental Delay, d2		5.9	0.2		1.3			4.7			4.6	
Delay (s)		29.1	44.0		5.5			22.8			22.7	
Level of Service		C	D		A			C			C	
Approach Delay (s)		32.1			5.5			22.8			22.7	
Approach LOS		C			A			C			C	

Intersection Summary			
HCM Average Control Delay	19.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	72.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1040: 111th Street & Martin Luther King Jr Drive

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			↰↑↱			↰↑↱	
Volume (vph)	74	382	21	15	433	63	37	103	41	43	90	98
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	15	8	16	8	8	16	8
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			1.00			0.99	
Flpb, ped/bikes	0.99	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.98			0.97			0.94	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1475	3018		1573	3001			3454			3403	
Flt Permitted	0.40	1.00		0.47	1.00			0.87			0.88	
Satd. Flow (perm)	616	3018		771	3001			3030			3014	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	82	424	23	17	481	70	41	114	46	48	100	109
RTOR Reduction (vph)	0	6	0	0	18	0	0	25	0	0	60	0
Lane Group Flow (vph)	82	441	0	17	533	0	0	176	0	0	197	0
Confl. Peds. (#/hr)	22		40	40		22	18		3	3		18
Confl. Bikes (#/hr)			2	2			1					1
Heavy Vehicles (%)	7%	5%	0%	0%	4%	2%	0%	3%	22%	0%	3%	8%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	28.0	28.0		28.0	28.0			29.0			29.0	
Effective Green, g (s)	28.0	28.0		28.0	28.0			29.0			29.0	
Actuated g/C Ratio	0.43	0.43		0.43	0.43			0.45			0.45	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	265	1300		332	1293			1352			1345	
v/s Ratio Prot		0.15			c0.18							
v/s Ratio Perm	0.13			0.02				0.06			c0.07	
v/c Ratio	0.31	0.34		0.05	0.41			0.13			0.15	
Uniform Delay, d1	12.2	12.3		10.8	12.8			10.6			10.7	
Progression Factor	0.98	1.00		1.14	0.99			0.99			0.80	
Incremental Delay, d2	2.3	0.5		0.1	0.5			0.2			0.2	
Delay (s)	14.1	12.9		12.4	13.1			10.7			8.8	
Level of Service	B	B		B	B			B			A	
Approach Delay (s)		13.1			13.1			10.7			8.8	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM Average Control Delay	12.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	59.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1041: 111th Street & Cottage Grove Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱			↰↑↱			↰↑↱	
Volume (vph)	86	454	73	94	455	284	48	332	92	222	159	52
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			0.95			0.95	
Frt		0.98			0.95			0.97			0.98	
Flt Protected		0.99			0.99			0.99			0.98	
Satd. Flow (prot)		3177			3073			3146			3118	
Flt Permitted		0.63			0.74			0.88			0.63	
Satd. Flow (perm)		2028			2280			2771			2008	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	96	504	81	104	506	316	53	369	102	247	177	58
RTOR Reduction (vph)	0	16	0	0	103	0	0	33	0	0	17	0
Lane Group Flow (vph)	0	665	0	0	823	0	0	491	0	0	465	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm			pm+pt			Perm		
Protected Phases		4			8		5	2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		26.0			26.0			29.0			20.0	
Effective Green, g (s)		26.0			26.0			29.0			20.0	
Actuated g/C Ratio		0.40			0.40			0.45			0.31	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		811			912			1271			618	
v/s Ratio Prot								c0.04				
v/s Ratio Perm		0.33			c0.36			0.14			c0.23	
v/c Ratio		0.82			0.90			0.39			0.96dl	
Uniform Delay, d1		17.4			18.3			12.0			20.3	
Progression Factor		1.73			1.00			1.00			0.89	
Incremental Delay, d2		8.9			13.9			0.9			8.3	
Delay (s)		39.1			32.2			12.9			26.3	
Level of Service		D			C			B			C	
Approach Delay (s)		39.1			32.2			12.9			26.3	
Approach LOS		D			C			B			C	

Intersection Summary			
HCM Average Control Delay	29.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	88.2%	ICU Level of Service	E
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1042: 111th Street & Ellis Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↑↱			↰↑↑↱			↰↑↱			↰↑↱	
Volume (vph)	0	723	118	45	755	0	134	0	70	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	10	10	12	12	12	12	10	10	10
Total Lost time (s)		5.0			5.0			5.0				
Lane Util. Factor		0.95			0.95			1.00				
Frt		0.98			1.00			0.95				
Flt Protected		1.00			1.00			0.97				
Satd. Flow (prot)		2976			3031			1583				
Flt Permitted		1.00			0.84			0.80				
Satd. Flow (perm)		2976			2543			1311				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	803	131	50	839	0	149	0	78	0	0	0
RTOR Reduction (vph)	0	18	0	0	0	0	0	21	0	0	0	0
Lane Group Flow (vph)	0	916	0	0	889	0	0	206	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	custom			Perm			Perm			Perm		
Protected Phases		4 5 6 11			8			2			2	
Permitted Phases	4 6 11			8			2			2		
Actuated Green, G (s)		65.0			33.0			16.0				
Effective Green, g (s)		58.0			33.0			16.0				
Actuated g/C Ratio		0.64			0.37			0.18				
Clearance Time (s)					5.0			5.0				
Lane Grp Cap (vph)		1918			932			233				
v/s Ratio Prot		c0.31										
v/s Ratio Perm					c0.35			c0.16				
v/c Ratio		0.48			0.95			0.89				
Uniform Delay, d1		8.2			27.8			36.1				
Progression Factor		0.04			1.57			1.00				
Incremental Delay, d2		0.4			18.2			35.5				
Delay (s)		0.7			61.8			71.6				
Level of Service		A			E			E				
Approach Delay (s)		0.7			61.8			71.6			0.0	
Approach LOS		A			E			E			A	

Intersection Summary			
HCM Average Control Delay	35.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	73.3%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↑	↱		✥		↰	↑	↱
Volume (vph)	123	502	187	274	646	183	101	20	185	78	7	75
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	10	12	12	12	12	16	12	12	12	12
Total Lost time (s)	3.0	5.0		3.0	5.0	3.0		5.0		3.0	5.0	3.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00		1.00	1.00	1.00
Frt	1.00	0.96		1.00	1.00	0.85		0.92		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.98		0.95	1.00	1.00
Satd. Flow (prot)	1520	3020		1629	3257	1457		1755		1629	1714	1457
Flt Permitted	0.32	1.00		0.20	1.00	1.00		0.89		0.40	1.00	1.00
Satd. Flow (perm)	511	3020		342	3257	1457		1582		685	1714	1457
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	137	558	208	304	718	203	112	22	206	87	8	83
RTOR Reduction (vph)	0	42	0	0	0	104	0	75	0	0	0	45
Lane Group Flow (vph)	137	724	0	304	718	99	0	265	0	87	8	38
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	pm+pt			pm+pt		pm+ov	pm+pt			pm+pt		pm+ov
Protected Phases	7	4		3	8	1	5	2		1	6	7
Permitted Phases	4			8		8	2			6		6
Actuated Green, G (s)	40.1	30.7		47.8	35.4	44.0		20.6		32.2	32.2	41.6
Effective Green, g (s)	40.1	30.7		47.8	35.4	44.0		20.6		32.2	32.2	41.6
Actuated g/C Ratio	0.45	0.34		0.53	0.39	0.49		0.23		0.36	0.36	0.46
Clearance Time (s)	3.0	5.0		3.0	5.0	3.0		5.0		3.0	5.0	3.0
Vehicle Extension (s)	4.0	3.0		4.0	3.0	3.0		4.0		3.0	4.0	4.0
Lane Grp Cap (vph)	333	1030		383	1281	712		362		335	613	673
v/s Ratio Prot	0.04	0.24		c0.12	0.22	0.01				c0.02	0.00	0.01
v/s Ratio Perm	0.14			c0.30		0.05		c0.17		0.07		0.02
v/c Ratio	0.41	0.70		0.79	0.56	0.14		0.73		0.26	0.01	0.06
Uniform Delay, d1	15.4	25.7		14.7	21.2	12.6		32.1		21.3	18.6	13.4
Progression Factor	1.90	1.58		1.00	1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2	1.0	3.6		11.4	1.8	0.1		7.9		0.4	0.0	0.0
Delay (s)	30.2	44.3		26.0	23.0	12.7		40.1		21.7	18.7	13.4
Level of Service	C	D		C	C	B		D		C	B	B
Approach Delay (s)		42.1			22.1			40.1			17.7	
Approach LOS		D			C			D			B	

Intersection Summary			
HCM Average Control Delay	30.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	74.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
1044: 111th Street & Bishop Ford Freeway EB Ramps

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↑↑					↰		↱
Volume (veh/h)	0	518	247	6	531	0	0	0	0	32	0	572
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	576	274	7	590	0	0	0	0	36	0	636
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		498										
pX, platoon unblocked												
vC, conflicting volume	590			576			884	1179	288	891	1179	295
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	590			576			884	1179	288	891	1179	295
tC, single (s)	4.2			4.2			7.6	6.6	7.0	7.6	6.6	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			100	100	100	85	100	8
cM capacity (veh/h)	961			973			19	184	700	231	184	692

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1	SB 2
Volume Total	288	288	274	203	393	36	636
Volume Left	0	0	0	7	0	36	0
Volume Right	0	0	274	0	0	0	636
cSH	1700	1700	1700	973	1700	231	692
Volume to Capacity	0.17	0.17	0.16	0.01	0.23	0.15	0.92
Queue Length 95th (ft)	0	0	0	1	0	13	307
Control Delay (s)	0.0	0.0	0.0	0.4	0.0	23.4	41.6
Lane LOS				A		C	E
Approach Delay (s)	0.0			0.1		40.6	
Approach LOS						E	

Intersection Summary			
Average Delay	12.9		
Intersection Capacity Utilization	59.7%	ICU Level of Service	B
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
1045: 111th Street & Bishop Ford Freeway WB Ramps

1/14/2013

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰↰		↰			
Sign Control	Stop			Stop	Stop	
Volume (vph)	550	0	537	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	611	0	597	0	0	0

Direction, Lane #	EB 1	EB 2	NB 1
Volume Total (vph)	306	306	597
Volume Left (vph)	306	306	597
Volume Right (vph)	0	0	0
Hadj (s)	0.58	0.58	0.29
Departure Headway (s)	7.0	7.0	5.8
Degree Utilization, x	0.59	0.59	0.95
Capacity (veh/h)	513	513	618
Control Delay (s)	18.3	18.3	49.2
Approach Delay (s)	18.3		49.2
Approach LOS	C		E

Intersection Summary			
Delay	33.5		
HCM Level of Service	D		
Intersection Capacity Utilization	54.6%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Signalized Intersection Capacity Analysis
1046: 115th Street & Marshield Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱		↰	↑↑						↰↑↱	
Volume (vph)	0	340	131	126	344	0	0	0	0	72	15	42
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	12	12	12	12	12
Total Lost time (s)		3.0		4.0	4.0						5.0	
Lane Util. Factor		0.95		1.00	0.95						0.95	
Frt		0.96		1.00	1.00						0.95	
Flt Protected		1.00		0.95	1.00						0.97	
Satd. Flow (prot)		3017		1574	3149						3014	
Flt Permitted		1.00		0.39	1.00						0.97	
Satd. Flow (perm)		3017		645	3149						3014	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	378	146	140	382	0	0	0	0	80	17	47
RTOR Reduction (vph)	0	48	0	0	0	0	0	0	0	0	32	0
Lane Group Flow (vph)	0	476	0	140	382	0	0	0	0	0	112	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type				pm+pt						Split		
Protected Phases		4		3	8					6	6	
Permitted Phases				8								
Actuated Green, G (s)		36.0		49.0	49.0						27.0	
Effective Green, g (s)		36.0		49.0	49.0						27.0	
Actuated g/C Ratio		0.42		0.58	0.58						0.32	
Clearance Time (s)		3.0		4.0	4.0						5.0	
Lane Grp Cap (vph)		1278		481	1815						957	
v/s Ratio Prot		c0.16		c0.03	0.12						c0.04	
v/s Ratio Perm				0.13								
v/c Ratio		0.37		0.29	0.21						0.12	
Uniform Delay, d1		16.8		12.6	8.7						20.6	
Progression Factor		1.00		0.37	0.33						1.00	
Incremental Delay, d2		0.8		1.4	0.2						0.2	
Delay (s)		17.6		6.2	3.1						20.8	
Level of Service		B		A	A						C	
Approach Delay (s)		17.6			3.9			0.0			20.8	
Approach LOS		B			A			A			C	

Intersection Summary			
HCM Average Control Delay	12.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	36.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1047: 115th Street & Ashland Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑			↑↱			↰↑↱				
Volume (vph)	68	344	0	0	400	76	70	65	42	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	11	11	12	12	12	12	12	12
Total Lost time (s)	5.0	5.0			3.0			5.0				
Lane Util. Factor	1.00	0.95			0.95			0.91				
Frt	1.00	1.00			0.98			0.96				
Flt Protected	0.95	1.00			1.00			0.98				
Satd. Flow (prot)	1629	3257			3073			4425				
Flt Permitted	0.38	1.00			1.00			0.98				
Satd. Flow (perm)	656	3257			3073			4425				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	76	382	0	0	444	84	78	72	47	0	0	0
RTOR Reduction (vph)	0	0	0	0	18	0	0	32	0	0	0	0
Lane Group Flow (vph)	76	382	0	0	510	0	0	165	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	pm+pt						Split					
Protected Phases	7	4			8		2	2				
Permitted Phases	4											
Actuated Green, G (s)	48.0	48.0			35.0			27.0				
Effective Green, g (s)	48.0	48.0			35.0			27.0				
Actuated g/C Ratio	0.56	0.56			0.41			0.32				
Clearance Time (s)	5.0	5.0			3.0			5.0				
Lane Grp Cap (vph)	485	1839			1265			1406				
v/s Ratio Prot	0.02	c0.12			c0.17			c0.04				
v/s Ratio Perm	0.07											
v/c Ratio	0.16	0.21			0.40			0.12				
Uniform Delay, d1	12.1	9.1			17.6			20.6				
Progression Factor	0.41	0.42			1.00			1.00				
Incremental Delay, d2	0.7	0.2			1.0			0.2				
Delay (s)	5.7	4.1			18.6			20.7				
Level of Service	A	A			B			C				
Approach Delay (s)		4.3			18.6			20.7			0.0	
Approach LOS		A			B			C			A	

Intersection Summary			
HCM Average Control Delay	13.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	36.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1048: 115th Street & Racine Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↑↱			↰↑↑↱			↰↑↱			↰↑↱	
Volume (vph)	39	307	82	31	243	31	129	85	52	56	91	126
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	10	12	12	15	12	12	15	12
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			1.00			1.00	
Frt		0.97			0.98			0.97			0.94	
Flt Protected		1.00			0.99			0.98			0.99	
Satd. Flow (prot)		2939			2979			1792			1750	
Flt Permitted		0.89			0.88			0.73			0.89	
Satd. Flow (perm)		2639			2628			1347			1565	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	43	341	91	34	270	34	143	94	58	62	101	140
RTOR Reduction (vph)	0	32	0	0	13	0	0	14	0	0	48	0
Lane Group Flow (vph)	0	443	0	0	325	0	0	281	0	0	255	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		23.0			23.0			32.0			32.0	
Effective Green, g (s)		23.0			23.0			32.0			32.0	
Actuated g/C Ratio		0.35			0.35			0.49			0.49	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		934			930			663			770	
v/s Ratio Prot												
v/s Ratio Perm		c0.17			0.12			c0.21			0.16	
v/c Ratio		0.47			0.35			0.42			0.33	
Uniform Delay, d1		16.3			15.5			10.6			10.0	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		1.7			1.0			2.0			1.2	
Delay (s)		18.0			16.5			12.6			11.2	
Level of Service		B			B			B			B	
Approach Delay (s)		18.0			16.5			12.6			11.2	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	15.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	66.8%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1049: 115th Street & Halsted Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↑	↱	↰	↑↑	↱
Volume (vph)	169	202	82	205	176	62	81	1012	109	75	471	80
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	12	10	16	12	9	10	9	9	10	9
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00	0.98	1.00	1.00	0.96
Flpb, ped/bikes	0.99	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.96		1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1548	2954		1593	3512		1487	3040	1347	1494	3011	1271
Flt Permitted	0.59	1.00		0.54	1.00		0.40	1.00	1.00	0.12	1.00	1.00
Satd. Flow (perm)	954	2954		901	3512		626	3040	1347	197	3011	1271
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	178	213	86	216	185	65	85	1065	115	79	496	84
RTOR Reduction (vph)	0	52	0	0	41	0	0	0	68	0	0	51
Lane Group Flow (vph)	178	247	0	216	209	0	85	1065	47	79	496	33
Confl. Peds. (#/hr)	31		7	7		31	37		12	12		37
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	2%	4%	0%	0%	6%	2%	3%	5%	0%	3%	6%	4%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	32.0	27.0		32.0	27.0		38.0	33.0	33.0	38.0	33.0	33.0
Effective Green, g (s)	30.0	28.0		30.0	28.0		36.0	33.0	33.0	36.0	33.0	33.0
Actuated g/C Ratio	0.35	0.33		0.35	0.33		0.42	0.39	0.39	0.42	0.39	0.39
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)	365	973		351	1157		306	1180	523	144	1169	493
v/s Ratio Prot	0.02	0.08		c0.03	0.06		0.01	c0.35		c0.03	0.16	
v/s Ratio Perm	0.15			c0.19			0.10		0.03	0.21		0.03
v/c Ratio	0.49	0.25		0.62	0.18		0.28	0.90	0.09	0.55	0.42	0.07
Uniform Delay, d1	20.6	20.9		22.0	20.3		15.1	24.5	16.5	17.6	19.0	16.3
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.94	0.61	0.78
Incremental Delay, d2	4.6	0.6		7.8	0.3		2.2	11.2	0.3	13.0	1.0	0.2
Delay (s)	25.2	21.5		29.8	20.7		17.4	35.7	16.8	47.0	12.6	13.0
Level of Service	C	C		C	C		B	D	B	D	B	B
Approach Delay (s)		22.9			24.9			32.8			16.8	
Approach LOS		C			C			C			B	

Intersection Summary			
HCM Average Control Delay	26.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	72.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1050: 115th Street & Wentworth Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱		↰	↱		↰	↱
Volume (vph)	49	284	18	14	328	8	35	113	25	20	57	84
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	16	12	12	16	12
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frpb, ped/bikes		1.00	0.96		1.00	0.97		1.00	0.99		1.00	0.98
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frt		1.00	0.85		1.00	0.85		1.00	0.85		1.00	0.85
Flt Protected		0.99	1.00		1.00	1.00		0.99	1.00		0.99	1.00
Satd. Flow (prot)		1928	1382		1954	1331		1970	1452		1928	1430
Flt Permitted		0.91	1.00		0.98	1.00		0.93	1.00		0.93	1.00
Satd. Flow (perm)		1768	1382		1924	1331		1860	1452		1811	1430
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	52	299	19	15	345	8	37	119	26	21	60	88
RTOR Reduction (vph)	0	0	10	0	0	4	0	0	15	0	0	51
Lane Group Flow (vph)	0	351	9	0	360	4	0	156	11	0	81	37
Confl. Peds. (#/hr)	5		21	21		5	9		1	1		9
Heavy Vehicles (%)	5%	5%	6%	7%	4%	12%	6%	1%	4%	0%	6%	5%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)		30.0	30.0		30.0	30.0		27.0	27.0		27.0	27.0
Effective Green, g (s)		30.0	30.0		30.0	30.0		27.0	27.0		27.0	27.0
Actuated g/C Ratio		0.46	0.46		0.46	0.46		0.42	0.42		0.42	0.42
Clearance Time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		816	638		888	614		773	603		752	594
v/s Ratio Prot												
v/s Ratio Perm		c0.20	0.01		0.19	0.00		c0.08	0.01		0.04	0.03
v/c Ratio		0.43	0.01		0.41	0.01		0.20	0.02		0.11	0.06
Uniform Delay, d1		11.8	9.5		11.6	9.4		12.1	11.2		11.6	11.4
Progression Factor		1.00	1.00		0.47	0.45		1.33	1.73		0.96	0.93
Incremental Delay, d2		1.7	0.0		1.3	0.0		0.6	0.1		0.3	0.2
Delay (s)		13.4	9.5		6.7	4.3		16.7	19.4		11.4	10.8
Level of Service		B	A		A	A		B	B		B	B
Approach Delay (s)		13.2			6.7			17.1			11.1	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM Average Control Delay	11.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	62.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1051: 115th Street & State Street

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	75	260	10	15	278	30	13	247	26	30	70	64
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	0.99		1.00	0.99		1.00	0.93	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1520	3023		1520	2996		1520	2996		1520	2823	
Flt Permitted	0.95	1.00		0.57	1.00		0.66	1.00		0.55	1.00	
Satd. Flow (perm)	1520	3023		910	2996		1052	2996		884	2823	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	83	289	11	17	309	33	14	274	29	33	78	71
RTOR Reduction (vph)	0	4	0	0	13	0	0	12	0	0	42	0
Lane Group Flow (vph)	83	296	0	17	329	0	14	291	0	33	107	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Prot			Perm			Perm			Perm		
Protected Phases	7	4			8			2			6	
Permitted Phases				8			2			6		
Actuated Green, G (s)	7.0	32.0		22.0	22.0		27.0	27.0		27.0	27.0	
Effective Green, g (s)	7.0	32.0		22.0	22.0		27.0	27.0		27.0	27.0	
Actuated g/C Ratio	0.11	0.49		0.34	0.34		0.42	0.42		0.42	0.42	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	164	1488		308	1014		437	1244		367	1173	
v/s Ratio Prot	c0.05	0.10			c0.11			c0.10			0.04	
v/s Ratio Perm				0.02			0.01			0.04		
v/c Ratio	0.51	0.20		0.06	0.32		0.03	0.23		0.09	0.09	
Uniform Delay, d1	27.4	9.3		14.5	16.0		11.3	12.3		11.5	11.5	
Progression Factor	0.90	0.38		0.81	0.74		0.61	0.65		1.10	1.20	
Incremental Delay, d2	10.3	0.3		0.3	0.8		0.1	0.4		0.5	0.2	
Delay (s)	34.9	3.8		12.1	12.7		7.0	8.4		13.2	14.0	
Level of Service	C	A		B	B		A	A		B	B	
Approach Delay (s)		10.5			12.7			8.3			13.8	
Approach LOS		B			B			A			B	

Intersection Summary			
HCM Average Control Delay	11.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	38.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1052: 115th Street & Michigan Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			↰↑↱			↰↑↱	
Volume (vph)	41	268	16	97	277	43	26	286	20	25	143	42
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	12	12	12	12	12	12
Total Lost time (s)	4.0	4.0		3.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frt	1.00	0.99		1.00	0.98			0.99			0.97	
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.99	
Satd. Flow (prot)	1520	3014		1520	2979			3215			3140	
Flt Permitted	0.54	1.00		0.95	1.00			0.92			0.89	
Satd. Flow (perm)	862	3014		1520	2979			2975			2822	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	46	298	18	108	308	48	29	318	22	28	159	47
RTOR Reduction (vph)	0	7	0	0	19	0	0	7	0	0	29	0
Lane Group Flow (vph)	46	309	0	108	337	0	0	362	0	0	205	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Prot			Perm			Perm		
Protected Phases		4		3	8			2			6	
Permitted Phases	4						2			6		
Actuated Green, G (s)	20.0	20.0		6.0	29.0			25.0			25.0	
Effective Green, g (s)	20.0	20.0		6.0	29.0			25.0			25.0	
Actuated g/C Ratio	0.31	0.31		0.09	0.45			0.38			0.38	
Clearance Time (s)	4.0	4.0		3.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	265	927		140	1329			1144			1085	
v/s Ratio Prot		c0.10		c0.07	0.11							
v/s Ratio Perm	0.05							c0.12			0.07	
v/c Ratio	0.17	0.33		0.77	0.25			0.32			0.19	
Uniform Delay, d1	16.5	17.4		28.8	11.2			14.0			13.3	
Progression Factor	0.59	0.58		1.31	1.02			0.72			0.75	
Incremental Delay, d2	1.4	1.0		27.7	0.4			0.7			0.4	
Delay (s)	11.1	11.0		65.5	11.8			10.8			10.3	
Level of Service	B	B		E	B			B			B	
Approach Delay (s)		11.0			24.3			10.8			10.3	
Approach LOS		B			C			B			B	

Intersection Summary			
HCM Average Control Delay	15.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	43.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1053: 115th Street & Indiana Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			↰↑↑↱				
Volume (vph)	14	277	16	70	382	70	34	94	162	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	12	14	12	10	15	10
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			0.95				
Frt		0.99			0.98			0.92				
Flt Protected		1.00			0.99			0.99				
Satd. Flow (prot)		1585			1560			3164				
Flt Permitted		0.97			0.91			0.99				
Satd. Flow (perm)		1545			1436			3164				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	16	308	18	78	424	78	38	104	180	0	0	0
RTOR Reduction (vph)	0	2	0	0	7	0	0	138	0	0	0	0
Lane Group Flow (vph)	0	340	0	0	573	0	0	184	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm			Perm					
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Actuated Green, G (s)		41.9			41.9			15.1				
Effective Green, g (s)		41.9			41.9			15.1				
Actuated g/C Ratio		0.64			0.64			0.23				
Clearance Time (s)		4.0			4.0			4.0				
Vehicle Extension (s)		3.0			3.0			8.0				
Lane Grp Cap (vph)		996			926			735				
v/s Ratio Prot												
v/s Ratio Perm		0.22			c0.40			0.06				
v/c Ratio		0.34			0.62			0.25				
Uniform Delay, d1		5.3			6.8			20.3				
Progression Factor		2.08			1.00			1.00				
Incremental Delay, d2		0.9			3.1			0.8				
Delay (s)		11.8			9.9			21.1				
Level of Service		B			A			C				
Approach Delay (s)		11.8			9.9			21.1			0.0	
Approach LOS		B			A			C			A	

Intersection Summary				
HCM Average Control Delay	13.3	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.52			
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0	
Intersection Capacity Utilization	66.3%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

HCM Unsignalized Intersection Capacity Analysis
1054: 115th Street & Martin Luther King Jr Drive

1/14/2013

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰↑	↑↱		↰	↱
Volume (veh/h)	85	354	427	44	66	92
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	89	373	449	46	69	97
Pedestrians		3	5		21	
Lane Width (ft)		16.0	16.0		10.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		0	1		1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		1319	491			
pX, platoon unblocked	0.87				0.87	0.87
vC, conflicting volume	517				1050	497
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	373				984	350
tC, single (s)	4.2				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.3				3.5	3.3
p0 queue free %	91				67	84
cM capacity (veh/h)	974				214	594

Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total	462	496	69	97
Volume Left	89	0	69	0
Volume Right	0	46	0	97
cSH	974	1700	214	594
Volume to Capacity	0.09	0.29	0.33	0.16
Queue Length 95th (ft)	8	0	34	14
Control Delay (s)	2.6	0.0	29.7	12.2
Lane LOS	A		D	B
Approach Delay (s)	2.6	0.0	19.5	
Approach LOS			C	

Intersection Summary			
Average Delay	4.0		
Intersection Capacity Utilization	66.1%	ICU Level of Service	C
Analysis Period (min)	15		

HCM Signalized Intersection Capacity Analysis
1055: 115th Street & Cottage Grove Avenue

1/14/2013

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↱			↰↑	Y	
Volume (vph)	473	1	27	675	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0			4.0		
Lane Util. Factor	1.00			0.95		
Frt	1.00			1.00		
Flt Protected	1.00			1.00		
Satd. Flow (prot)	1714			3251		
Flt Permitted	1.00			0.92		
Satd. Flow (perm)	1714			3002		
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	526	1	30	750	0	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	527	0	0	780	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%
Turn Type			Perm			
Protected Phases	1 2 4			4	3	
Permitted Phases			4			
Actuated Green, G (s)	68.0			38.0		
Effective Green, g (s)	64.0			38.0		
Actuated g/C Ratio	0.71			0.42		
Clearance Time (s)				4.0		
Lane Grp Cap (vph)	1219			1268		
v/s Ratio Prot	c0.31					
v/s Ratio Perm				c0.26		
v/c Ratio	0.43			0.62		
Uniform Delay, d1	5.4			20.3		
Progression Factor	0.02			1.00		
Incremental Delay, d2	0.5			2.2		
Delay (s)	0.6			22.5		
Level of Service	A			C		
Approach Delay (s)	0.6			22.5	0.0	
Approach LOS	A			C	A	

Intersection Summary			
HCM Average Control Delay	13.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	43.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱			↰						↰	↱
Volume (veh/h)	0	185	193	25	561	0	0	0	0	3	0	263
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	206	214	28	623	0	0	0	0	3	0	292
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	623			206			992	992	210	782	884	623
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	623			206			992	992	210	782	884	623
tC, single (s)	4.1			5.5			7.5	6.5	6.9	7.5	6.5	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.9			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			97			100	100	100	99	100	31
cM capacity (veh/h)	968			984			62	241	802	282	278	424

Direction, Lane #	EB 1	EB 2	WB 1	SB 1	SB 2
Volume Total	137	283	651	3	292
Volume Left	0	0	28	3	0
Volume Right	0	214	0	0	292
cSH	1700	1700	984	282	424
Volume to Capacity	0.08	0.17	0.03	0.01	0.69
Queue Length 95th (ft)	0	0	2	1	127
Control Delay (s)	0.0	0.0	0.7	17.9	30.3
Lane LOS			A	C	D
Approach Delay (s)	0.0		0.7	30.2	
Approach LOS				D	

Intersection Summary			
Average Delay	6.9		
Intersection Capacity Utilization	57.9%	ICU Level of Service	B
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
1057: 115th Street &

1/14/2013

	↗	↘	↖	↑	↓	↙
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰↰		↰			
Sign Control	Stop			Stop	Stop	
Volume (vph)	188	0	586	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	209	0	651	0	0	0

Direction, Lane #	EB 1	EB 2	NB 1
Volume Total (vph)	104	104	651
Volume Left (vph)	104	104	651
Volume Right (vph)	0	0	0
Hadj (s)	0.58	0.58	0.29
Departure Headway (s)	6.8	6.8	4.9
Degree Utilization, x	0.20	0.20	0.88
Capacity (veh/h)	511	512	734
Control Delay (s)	10.3	10.3	32.2
Approach Delay (s)	10.3		32.2
Approach LOS	B		D

Intersection Summary			
Delay	26.9		
HCM Level of Service	D		
Intersection Capacity Utilization	46.6%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Signalized Intersection Capacity Analysis
1058: 119th Street & Marshield Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↰↑					↰	↰↑↱	↱
Volume (vph)	0	650	210	172	519	0	0	0	0	208	117	300
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	12	13	12	12	12	12	10	10	11
Total Lost time (s)		6.0	6.0		6.0					6.0	6.0	6.0
Lane Util. Factor		0.95	1.00		0.95					0.86	0.81	0.86
Frpb, ped/bikes		1.00	0.98		1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00					1.00	1.00	1.00
Frt		1.00	0.85		1.00					1.00	0.94	0.85
Flt Protected		1.00	1.00		0.99					0.95	0.99	1.00
Satd. Flow (prot)		2978	1202		3372					1346	3704	1122
Flt Permitted		1.00	1.00		0.99					0.95	0.99	1.00
Satd. Flow (perm)		2978	1202		3372					1346	3704	1122
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	684	221	181	546	0	0	0	0	219	123	316
RTOR Reduction (vph)	0	0	123	0	0	0	0	0	0	0	93	92
Lane Group Flow (vph)	0	684	98	0	727	0	0	0	0	120	287	66
Confl. Peds. (#/hr)	5		3	3		5						
Heavy Vehicles (%)	0%	11%	9%	2%	4%	0%	0%	0%	0%	2%	2%	2%
Parking (#/hr)			0									0
Turn Type			Perm	Split						Split		custom
Protected Phases		2		10 12 14	10 12 14					4	4	
Permitted Phases			2									4 2
Actuated Green, G (s)		31.1	31.1		60.9					21.5	21.5	58.6
Effective Green, g (s)		31.1	31.1		60.9					21.5	21.5	58.6
Actuated g/C Ratio		0.22	0.22		0.43					0.15	0.15	0.42
Clearance Time (s)		6.0	6.0							6.0	6.0	
Vehicle Extension (s)		3.0	3.0							3.0	3.0	
Lane Grp Cap (vph)		662	267		1467					207	569	470
v/s Ratio Prot		c0.23			c0.22					c0.09	0.08	
v/s Ratio Perm			0.08									0.06
v/c Ratio		1.03	0.37		0.50					0.58	0.50	0.14
Uniform Delay, d1		54.5	46.1		28.5					55.1	54.4	25.1
Progression Factor		1.00	1.00		0.02					1.00	1.00	1.00
Incremental Delay, d2		43.8	3.9		0.1					3.9	0.7	0.1
Delay (s)		98.3	50.0		0.6					59.0	55.1	25.3
Level of Service		F	D		A					E	E	C
Approach Delay (s)		86.5			0.6			0.0			48.6	
Approach LOS		F			A			A			D	

Intersection Summary			
HCM Average Control Delay	48.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	28.5
Intersection Capacity Utilization	61.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1059: 119th Street & Ashland Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑			↑↑	↱	↰	↰↑↱				
Volume (vph)	212	646	0	0	453	112	238	150	195	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	13	12	12	11	12	13	13	14	12	12	12
Total Lost time (s)	6.0	6.0			6.0	6.0	6.0	6.0				
Lane Util. Factor	1.00	0.95			0.95	1.00	0.91	0.91				
Frt	1.00	1.00			1.00	0.85	1.00	0.92				
Flt Protected	0.95	1.00			1.00	1.00	0.95	1.00				
Satd. Flow (prot)	1574	3366			3149	1457	1531	2963				
Flt Permitted	0.95	1.00			1.00	1.00	0.95	1.00				
Satd. Flow (perm)	1574	3366			3149	1457	1531	2963				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	236	718	0	0	503	124	264	167	217	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	98	0	135	0	0	0	0
Lane Group Flow (vph)	236	718	0	0	503	26	222	291	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Split					Perm	Split					
Protected Phases	2 4 8	2 4 8			10		12	12				
Permitted Phases						10						
Actuated Green, G (s)	71.1	71.1			24.5	24.5	18.4	18.4				
Effective Green, g (s)	71.1	71.1			24.5	24.5	18.4	18.4				
Actuated g/C Ratio	0.51	0.51			0.18	0.18	0.13	0.13				
Clearance Time (s)					6.0	6.0	6.0	6.0				
Vehicle Extension (s)					3.0	3.0	3.0	3.0				
Lane Grp Cap (vph)	799	1709			551	255	201	389				
v/s Ratio Prot	0.15	c0.21			c0.16		c0.14	0.10				
v/s Ratio Perm						0.02						
v/c Ratio	0.30	0.42			0.91	0.10	1.10	0.75				
Uniform Delay, d1	19.9	21.6			56.7	48.5	60.8	58.6				
Progression Factor	0.07	0.07			1.00	1.00	1.00	1.00				
Incremental Delay, d2	0.1	0.1			19.6	0.2	94.2	7.6				
Delay (s)	1.5	1.5			76.3	48.7	155.0	66.2				
Level of Service	A	A			E	D	F	E				
Approach Delay (s)		1.5			70.8			96.6			0.0	
Approach LOS		A			E			F			A	

Intersection Summary			
HCM Average Control Delay	48.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	28.0
Intersection Capacity Utilization	52.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1060: 119th Street & Halsted Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑↱		↰	↑↑↱		↰	↑↑↱	
Volume (vph)	220	326	75	35	356	45	88	824	62	59	749	104
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	14	12	10	10	12	9	10	12
Total Lost time (s)	4.0	4.0	5.0	4.0	5.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.98		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1546	1556	1328	1595	1760		1532	2990		1509	2919	
Flt Permitted	0.23	1.00	1.00	0.42	1.00		0.17	1.00		0.15	1.00	
Satd. Flow (perm)	374	1556	1328	703	1760		267	2990		238	2919	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	232	343	79	37	375	47	93	867	65	62	788	109
RTOR Reduction (vph)	0	0	52	0	5	0	0	6	0	0	12	0
Lane Group Flow (vph)	232	343	27	37	417	0	93	926	0	62	885	0
Confl. Peds. (#/hr)	33		3	3		33	42		8	8		42
Confl. Bikes (#/hr)							1					1
Heavy Vehicles (%)	3%	8%	6%	0%	7%	5%	4%	5%	11%	2%	6%	9%
Turn Type	pm+pt		Perm	pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)	38.2	31.2	31.2	32.4	28.3		39.6	34.1		39.6	34.1	
Effective Green, g (s)	36.2	32.2	31.2	30.4	28.3		37.6	34.1		37.6	34.1	
Actuated g/C Ratio	0.40	0.36	0.35	0.34	0.31		0.42	0.38		0.42	0.38	
Clearance Time (s)	3.0	5.0	5.0	3.0	5.0		3.0	4.0		3.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	229	557	461	268	554		175	1134		163	1107	
v/s Ratio Prot	c0.07	0.22		0.00	0.24		c0.03	c0.31		0.02	0.30	
v/s Ratio Perm	c0.34		0.02	0.04			0.20			0.14		
v/c Ratio	1.01	0.62	0.06	0.14	0.75		0.53	0.82		0.38	0.80	
Uniform Delay, d1	26.3	23.8	19.6	20.4	27.7		17.9	25.1		17.7	24.9	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	62.9	5.0	0.2	0.2	9.2		3.1	6.5		1.5	6.1	
Delay (s)	89.2	28.8	19.8	20.7	36.8		21.0	31.6		19.2	30.9	
Level of Service	F	C	B	C	D		C	C		B	C	
Approach Delay (s)		49.1			35.5			30.7			30.2	
Approach LOS		D			D			C			C	

Intersection Summary			
HCM Average Control Delay	35.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	89.9	Sum of lost time (s)	16.0
Intersection Capacity Utilization	82.0%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1061: 119th Street & Wentworth Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱		✥			✥	
Volume (vph)	54	301	26	5	311	19	78	80	16	11	44	82
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	10	10	10	12	15	12	12	16	12
Total Lost time (s)		3.0	3.0		3.0	3.0		3.0			3.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00			1.00	
Frpb, ped/bikes		1.00	0.97		1.00	0.97		1.00			0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00			1.00	
Frt		1.00	0.85		1.00	0.85		0.99			0.92	
Flt Protected		0.99	1.00		1.00	1.00		0.98			1.00	
Satd. Flow (prot)		1910	1482		1600	1198		1904			1792	
Flt Permitted		0.91	1.00		1.00	1.00		0.83			0.98	
Satd. Flow (perm)		1761	1482		1595	1198		1624			1762	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	57	317	27	5	327	20	82	84	17	12	46	86
RTOR Reduction (vph)	0	0	14	0	0	10	0	6	0	0	50	0
Lane Group Flow (vph)	0	374	13	0	332	10	0	177	0	0	94	0
Confl. Peds. (#/hr)	6		11	11		6	4		8	8		4
Confl. Bikes (#/hr)	1		1	1		1			1	1		
Heavy Vehicles (%)	0%	7%	0%	0%	5%	16%	0%	0%	0%	10%	0%	3%
Turn Type	Perm		Perm	Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)		32.0	32.0		32.0	32.0		27.0			27.0	
Effective Green, g (s)		32.0	32.0		32.0	32.0		27.0			27.0	
Actuated g/C Ratio		0.49	0.49		0.49	0.49		0.42			0.42	
Clearance Time (s)		3.0	3.0		3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)		867	730		785	590		675			732	
v/s Ratio Prot												
v/s Ratio Perm		c0.21	0.01		0.21	0.01		c0.11			0.05	
v/c Ratio		0.43	0.02		0.42	0.02		0.26			0.13	
Uniform Delay, d1		10.6	8.5		10.6	8.4		12.5			11.7	
Progression Factor		1.00	1.00		1.67	2.20		1.00			1.51	
Incremental Delay, d2		1.6	0.0		1.6	0.0		0.9			0.4	
Delay (s)		12.2	8.5		19.3	18.6		13.4			18.1	
Level of Service		B	A		B	B		B			B	
Approach Delay (s)		12.0			19.2			13.4			18.1	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	15.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	77.4%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1062: 119th Street & State Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑	↱		↰↑	↱		↰↑	↱		↰↑↱	
Volume (vph)	86	219	35	6	176	6	84	228	22	9	53	73
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frpb, ped/bikes		1.00	0.96		1.00	0.98		1.00	0.96		0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		0.93	
Flt Protected		0.99	1.00		1.00	1.00		0.99	1.00		1.00	
Satd. Flow (prot)		1664	1392		1608	1497		1734	1390		1571	
Flt Permitted		0.85	1.00		0.99	1.00		0.88	1.00		0.98	
Satd. Flow (perm)		1439	1392		1592	1497		1553	1390		1541	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	91	231	37	6	185	6	88	240	23	9	56	77
RTOR Reduction (vph)	0	0	24	0	0	4	0	0	12	0	39	0
Lane Group Flow (vph)	0	322	13	0	191	2	0	328	11	0	103	0
Confl. Peds. (#/hr)	11		17	17		11	4		17	17		4
Confl. Bikes (#/hr)	1		1	1		1	1					1
Heavy Vehicles (%)	0%	9%	5%	33%	11%	0%	6%	1%	6%	0%	0%	8%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		23.0	23.0		23.0	23.0		32.0	32.0		32.0	
Effective Green, g (s)		23.0	23.0		23.0	23.0		32.0	32.0		32.0	
Actuated g/C Ratio		0.35	0.35		0.35	0.35		0.49	0.49		0.49	
Clearance Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	
Lane Grp Cap (vph)		509	493		563	530		765	684		759	
v/s Ratio Prot												
v/s Ratio Perm		c0.22	0.01		0.12	0.00		c0.21	0.01		0.07	
v/c Ratio		0.63	0.03		0.34	0.00		0.43	0.02		0.14	
Uniform Delay, d1		17.5	13.7		15.4	13.6		10.6	8.4		9.0	
Progression Factor		1.87	3.33		0.96	0.96		0.32	0.25		1.14	
Incremental Delay, d2		5.5	0.1		1.6	0.0		0.2	0.0		0.4	
Delay (s)		38.3	45.7		16.4	13.1		3.6	2.1		10.6	
Level of Service		D	D		B	B		A	A		B	
Approach Delay (s)		39.0			16.3			3.5			10.6	
Approach LOS		D			B			A			B	

Intersection Summary			
HCM Average Control Delay	19.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	78.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		✥			✥			↰	↱
Volume (vph)	166	23	35	9	27	6	43	286	19	6	201	115
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	14	12	12	16	12	12	16	12
Total Lost time (s)		3.0	3.0		3.0			3.0			3.0	3.0
Lane Util. Factor		1.00	1.00		1.00			1.00			1.00	1.00
Frpb, ped/bikes		1.00	0.97		0.99			1.00			1.00	0.95
Flpb, ped/bikes		0.98	1.00		1.00			1.00			1.00	1.00
Frt		1.00	0.85		0.98			0.99			1.00	0.85
Flt Protected		0.96	1.00		0.99			0.99			1.00	1.00
Satd. Flow (prot)		1772	1390		1835			1970			1873	1328
Flt Permitted		0.79	1.00		0.94			0.95			0.99	1.00
Satd. Flow (perm)		1466	1390		1749			1874			1858	1328
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	184	26	39	10	30	7	48	318	21	7	223	128
RTOR Reduction (vph)	0	0	23	0	5	0	0	3	0	0	0	65
Lane Group Flow (vph)	0	210	16	0	42	0	0	384	0	0	230	63
Confl. Peds. (#/hr)	49		22	22		49	34		17	17		34
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	9%	0%	7%	0%	0%	0%	0%	2%	0%	0%	9%	9%
Turn Type	pm+pt		Perm	Perm			Perm			Perm		Perm
Protected Phases	7	4			8			2			6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)		27.0	27.0		17.0			32.0			32.0	32.0
Effective Green, g (s)		27.0	27.0		17.0			32.0			32.0	32.0
Actuated g/C Ratio		0.42	0.42		0.26			0.49			0.49	0.49
Clearance Time (s)		3.0	3.0		3.0			3.0			3.0	3.0
Lane Grp Cap (vph)		647	577		457			923			915	654
v/s Ratio Prot		c0.04										
v/s Ratio Perm		0.09	0.01		0.02			c0.20			0.12	0.05
v/c Ratio		0.32	0.03		0.09			0.42			0.25	0.10
Uniform Delay, d1		12.8	11.2		18.2			10.5			9.6	8.8
Progression Factor		0.85	1.52		1.00			0.42			0.53	0.31
Incremental Delay, d2		1.1	0.1		0.4			1.1			0.6	0.3
Delay (s)		12.1	17.2		18.6			5.6			5.7	3.0
Level of Service		B	B		B			A			A	A
Approach Delay (s)		12.9			18.6			5.6			4.7	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	7.6	HCM Level of Service	A
HCM Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	60.7%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↱		↰↰	↑↑					↰	↰↱	↱
Volume (vph)	0	990	222	333	1149	0	0	0	0	275	201	376
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	12	11	8	8	8	11	12	14
Total Lost time (s)		6.0		4.5	6.0					6.0	6.0	6.0
Lane Util. Factor		0.91		0.97	0.95					0.91	0.86	0.91
Frpb, ped/bikes		1.00		1.00	1.00					1.00	0.99	0.99
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Frt		0.97		1.00	1.00					1.00	0.94	0.85
Flt Protected		1.00		0.95	1.00					0.95	0.99	1.00
Satd. Flow (prot)		4322		3083	3226					1419	2711	1355
Flt Permitted		1.00		0.16	1.00					0.95	0.99	1.00
Satd. Flow (perm)		4322		526	3226					1419	2711	1355
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	1042	234	351	1209	0	0	0	0	289	212	396
RTOR Reduction (vph)	0	34	0	0	0	0	0	0	0	0	46	46
Lane Group Flow (vph)	0	1242	0	351	1209	0	0	0	0	234	407	164
Confl. Peds. (#/hr)	6		4	4		6	2					2
Heavy Vehicles (%)	0%	11%	7%	4%	6%	0%	0%	0%	0%	6%	4%	8%
Turn Type				pm+pt						Perm		Perm
Protected Phases		2		1	6						4	
Permitted Phases				6						4		4
Actuated Green, G (s)		43.2		58.1	56.6					21.4	21.4	21.4
Effective Green, g (s)		43.2		58.1	56.6					21.4	21.4	21.4
Actuated g/C Ratio		0.48		0.65	0.63					0.24	0.24	0.24
Clearance Time (s)		6.0		4.5	6.0					6.0	6.0	6.0
Vehicle Extension (s)		7.0		3.5	7.0					3.5	3.5	3.5
Lane Grp Cap (vph)		2075		592	2029					337	645	322
v/s Ratio Prot		0.29		0.06	c0.37							
v/s Ratio Perm				0.32						c0.16	0.15	0.12
v/c Ratio		0.60		0.59	0.60					0.69	0.63	0.51
Uniform Delay, d1		17.1		19.3	9.9					31.3	30.8	29.7
Progression Factor		1.00		0.65	0.61					1.00	1.00	1.00
Incremental Delay, d2		1.3		0.7	0.5					6.3	2.1	1.5
Delay (s)		18.4		13.3	6.6					37.6	32.9	31.2
Level of Service		B		B	A					D	C	C
Approach Delay (s)		18.4			8.1			0.0			33.7	
Approach LOS		B			A			A			C	

Intersection Summary			
HCM Average Control Delay	17.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	109.9%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1065: 127th Street & Marshfield Ave

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑			↑↑↱			↰↑↱				
Volume (vph)	311	954	0	0	933	234	549	365	681	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	12	12	12	11	12	12	12	12	12	12	12
Total Lost time (s)	6.0	6.0			6.0			6.0				
Lane Util. Factor	1.00	0.95			0.91			0.91				
Frpb, ped/bikes	1.00	1.00			1.00			1.00				
Flpb, ped/bikes	1.00	1.00			1.00			1.00				
Frt	1.00	1.00			0.97			0.94				
Flt Protected	0.95	1.00			1.00			0.98				
Satd. Flow (prot)	1503	3138			4349			4339				
Flt Permitted	0.12	1.00			1.00			0.98				
Satd. Flow (perm)	192	3138			4349			4339				
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	327	1004	0	0	982	246	578	384	717	0	0	0
RTOR Reduction (vph)	0	0	0	0	48	0	0	31	0	0	0	0
Lane Group Flow (vph)	327	1004	0	0	1180	0	0	1648	0	0	0	0
Confl. Peds. (#/hr)	4					4						
Heavy Vehicles (%)	10%	9%	0%	0%	6%	4%	4%	3%	5%	0%	0%	0%
Turn Type	pm+pt						Perm					
Protected Phases	5	2			6			8				
Permitted Phases	2						8					
Actuated Green, G (s)	40.0	40.0			27.0			38.0				
Effective Green, g (s)	40.0	40.0			27.0			38.0				
Actuated g/C Ratio	0.44	0.44			0.30			0.42				
Clearance Time (s)	6.0	6.0			6.0			6.0				
Vehicle Extension (s)	3.5	7.0			7.0			5.0				
Lane Grp Cap (vph)	187	1395			1305			1832				
v/s Ratio Prot	c0.14	0.32			0.27							
v/s Ratio Perm	c0.64							0.38				
v/c Ratio	1.75	0.72			0.90			1.09dr				
Uniform Delay, d1	19.9	20.4			30.3			24.2				
Progression Factor	1.31	0.49			0.63			1.00				
Incremental Delay, d2	354.2	2.6			8.2			6.8				
Delay (s)	380.2	12.6			27.3			31.0				
Level of Service	F	B			C			C				
Approach Delay (s)		102.9			27.3			31.0			0.0	
Approach LOS		F			C			C			A	

Intersection Summary			
HCM Average Control Delay	52.5	HCM Level of Service	D
HCM Volume to Capacity ratio	1.27		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	109.9%	ICU Level of Service	H
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	105	941	226	78	874	51	226	178	40	76	111	91
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	12	11	12	12	10	10	13	10	10	10
Total Lost time (s)	3.5	6.0	3.5	3.5	6.0		3.5	6.0		3.5	6.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.97		1.00	0.93	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1565	3061	1291	1604	3231		1446	3008		1544	2784	
Flt Permitted	0.20	1.00	1.00	0.20	1.00		0.55	1.00		0.61	1.00	
Satd. Flow (perm)	331	3061	1291	331	3231		835	3008		990	2784	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	111	991	238	82	920	54	238	187	42	80	117	96
RTOR Reduction (vph)	0	0	105	0	4	0	0	22	0	0	78	0
Lane Group Flow (vph)	111	991	133	82	970	0	238	207	0	80	135	0
Confl. Peds. (#/hr)	3		12	12		3	9		6	6		9
Heavy Vehicles (%)	2%	8%	5%	3%	5%	3%	10%	3%	2%	3%	7%	4%
Parking (#/hr)			0									
Turn Type	pm+pt		pm+ov	pm+pt			pm+pt			pm+pt		
Protected Phases	5	2	3	1	6		3	8		7	4	
Permitted Phases	2		2	6			8			4		
Actuated Green, G (s)	51.6	43.7	50.2	44.4	40.1		25.1	18.6		20.9	16.5	
Effective Green, g (s)	51.6	43.7	50.2	44.4	40.1		25.1	18.6		20.9	16.5	
Actuated g/C Ratio	0.57	0.49	0.56	0.49	0.45		0.28	0.21		0.23	0.18	
Clearance Time (s)	3.5	6.0	3.5	3.5	6.0		3.5	6.0		3.5	6.0	
Vehicle Extension (s)	3.0	7.0	3.0	3.0	7.0		3.0	7.0		3.0	7.0	
Lane Grp Cap (vph)	298	1486	720	224	1440		277	622		257	510	
v/s Ratio Prot	c0.03	c0.32	0.01	0.02	0.30		c0.06	0.07		0.02	0.05	
v/s Ratio Perm	0.18		0.09	0.16			c0.18			0.06		
v/c Ratio	0.37	0.67	0.18	0.37	0.67		0.86	0.33		0.31	0.26	
Uniform Delay, d1	19.7	17.6	9.8	22.8	19.8		29.8	30.4		28.0	31.5	
Progression Factor	0.80	0.66	0.89	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.1	1.4	0.1	1.0	2.5		22.3	1.1		0.7	1.0	
Delay (s)	17.7	13.1	8.8	23.9	22.3		52.1	31.5		28.7	32.5	
Level of Service	B	B	A	C	C		D	C		C	C	
Approach Delay (s)		12.7			22.4			42.0			31.5	
Approach LOS		B			C			D			C	

Intersection Summary			
HCM Average Control Delay	22.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	76.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1067: Vermont Street & Ashland Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	62	329	286	81	215	102	329	382	161	91	258	54
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	11	12	11	12	12	11	13	12	10	11	12
Total Lost time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.93		1.00	0.95		1.00	0.96		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1635	2916		1463	3047		1589	3182		1549	3135	
Flt Permitted	0.52	1.00		0.23	1.00		0.46	1.00		0.44	1.00	
Satd. Flow (perm)	888	2916		359	3047		772	3182		713	3135	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	65	346	301	85	226	107	346	402	169	96	272	57
RTOR Reduction (vph)	0	144	0	0	52	0	0	43	0	0	17	0
Lane Group Flow (vph)	65	503	0	85	281	0	346	528	0	96	312	0
Confl. Peds. (#/hr)	20					20	1		2	2		1
Heavy Vehicles (%)	4%	5%	6%	13%	6%	5%	4%	6%	5%	3%	3%	0%
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	35.4	28.4		36.2	28.8		53.2	41.9		38.6	31.3	
Effective Green, g (s)	35.4	28.4		36.2	28.8		53.2	41.9		38.6	31.3	
Actuated g/C Ratio	0.34	0.27		0.34	0.27		0.51	0.40		0.37	0.30	
Clearance Time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	3.5	7.0		3.5	7.0		3.5	7.0		3.5	7.0	
Lane Grp Cap (vph)	349	789		202	836		530	1270		320	935	
v/s Ratio Prot	0.01	c0.17		c0.03	0.09		c0.11	0.17		0.02	0.10	
v/s Ratio Perm	0.05			0.12			c0.22			0.09		
v/c Ratio	0.19	0.64		0.42	0.34		0.65	0.42		0.30	0.33	
Uniform Delay, d1	24.0	33.8		24.8	30.5		16.6	22.7		22.4	28.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.3	3.9		1.7	1.1		3.0	1.0		0.6	1.0	
Delay (s)	24.3	37.7		26.4	31.6		19.6	23.7		23.0	29.7	
Level of Service	C	D		C	C		B	C		C	C	
Approach Delay (s)		36.4			30.5			22.2			28.2	
Approach LOS		D			C			C			C	

Intersection Summary			
HCM Average Control Delay	28.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	73.3%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1068: 127th Street & Halsted Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱			↰↑↱		↰↰	↑↱		↰	↑↱	
Volume (vph)	169	402	612	6	409	110	201	617	7	84	385	105
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	10	12	9	11	12	9	9	12
Total Lost time (s)	3.0	4.0			4.0		3.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95			0.95		0.97	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.91			0.97		1.00	1.00		1.00	0.97	
Flt Protected	0.95	1.00			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1659	2533			2888		2786	3187		1451	2800	
Flt Permitted	0.25	1.00			0.94		0.35	1.00		0.28	1.00	
Satd. Flow (perm)	440	2533			2714		1032	3187		421	2800	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	188	447	680	7	454	122	223	686	8	93	428	117
RTOR Reduction (vph)	0	200	0	0	24	0	0	1	0	0	20	0
Lane Group Flow (vph)	188	927	0	0	559	0	223	693	0	93	525	0
Confl. Peds. (#/hr)	9		11	11		9	11		14	14		11
Heavy Vehicles (%)	3%	6%	18%	50%	6%	6%	7%	3%	50%	6%	7%	2%
Turn Type	pm+pt			Perm			pm+pt			pm+pt		
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	47.2	47.2			32.7		52.4	43.4		50.2	42.8	
Effective Green, g (s)	47.2	47.2			32.7		52.4	43.4		50.2	42.8	
Actuated g/C Ratio	0.43	0.43			0.30		0.48	0.39		0.46	0.39	
Clearance Time (s)	3.0	4.0			4.0		3.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	316	1087			807		635	1257		261	1089	
v/s Ratio Prot	0.06	c0.37					c0.03	c0.22		0.02	0.19	
v/s Ratio Perm	0.19				0.21		0.14			0.14		
v/c Ratio	0.59	0.95dr			0.69		0.35	0.55		0.36	0.48	
Uniform Delay, d1	21.6	28.3			34.2		16.9	25.8		18.2	25.3	
Progression Factor	1.00	1.00			1.00		0.92	0.72		1.00	1.00	
Incremental Delay, d2	3.0	6.6			2.6		0.3	1.5		0.8	1.5	
Delay (s)	24.6	34.9			36.8		15.8	20.0		19.0	26.8	
Level of Service	C	C			D		B	C		B	C	
Approach Delay (s)		33.4			36.8			19.0			25.7	
Approach LOS		C			D			B			C	

Intersection Summary			
HCM Average Control Delay	28.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	85.7%	ICU Level of Service	E
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰↰	↑↱		↰	↑↑	↱	↰	↑↑	↱
Volume (vph)	52	117	343	858	132	13	112	809	278	10	968	45
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	12	12	12	12	12
Total Lost time (s)	4.0	5.0	4.0	4.0	5.0		4.0	5.0	4.0	4.0	5.0	4.0
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00		1.00	1.00	0.98	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1676	1962	1435	3159	1939		1660	3288	1395	1139	3257	1425
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.10	1.00	1.00	0.33	1.00	1.00
Satd. Flow (perm)	1676	1962	1435	3159	1939		183	3288	1395	401	3257	1425
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	54	121	354	885	136	13	115	834	287	10	998	46
RTOR Reduction (vph)	0	0	9	0	3	0	0	0	84	0	0	29
Lane Group Flow (vph)	54	121	345	885	146	0	115	834	203	10	998	17
Confl. Peds. (#/hr)	10		16	16		10	4		6	6		4
Confl. Bikes (#/hr)			4	4								
Heavy Vehicles (%)	2%	4%	5%	5%	4%	0%	3%	4%	8%	50%	5%	6%
Turn Type	Prot		pm+ov	Prot			pm+pt		pm+ov	pm+pt		pm+ov
Protected Phases	7	4	5	3	8		5	2	3	1	6	7
Permitted Phases			4				2		2	6		6
Actuated Green, G (s)	6.9	12.9	28.7	29.0	35.0		54.1	48.7	77.7	35.7	34.3	41.2
Effective Green, g (s)	6.9	12.9	28.7	29.0	35.0		54.1	48.7	77.7	35.7	34.3	41.2
Actuated g/C Ratio	0.06	0.12	0.26	0.26	0.32		0.49	0.44	0.71	0.32	0.31	0.37
Clearance Time (s)	4.0	5.0	4.0	4.0	5.0		4.0	5.0	4.0	4.0	5.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	105	230	374	833	617		302	1456	985	140	1016	534
v/s Ratio Prot	0.03	0.06	c0.13	c0.28	0.08		0.05	0.25	0.05	0.00	c0.31	0.00
v/s Ratio Perm			0.11				0.13		0.09	0.02		0.01
v/c Ratio	0.51	0.53	0.92	1.06	0.24		0.38	0.57	0.21	0.07	0.98	0.03
Uniform Delay, d1	49.9	45.7	39.6	40.5	27.6		20.0	22.9	5.5	25.3	37.5	21.8
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.13	1.12	1.12
Incremental Delay, d2	4.2	2.2	27.8	49.1	0.2		0.8	1.6	0.1	0.2	20.5	0.0
Delay (s)	54.1	47.8	67.4	89.6	27.8		20.8	24.5	5.7	28.8	62.6	24.5
Level of Service	D	D	E	F	C		C	C	A	C	E	C
Approach Delay (s)		61.6			80.7			19.8			60.6	
Approach LOS		E			F			B			E	

Intersection Summary			
HCM Average Control Delay	53.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	88.9%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1070: 127th Street & S Wallance St

1/14/2013

	→	↙	←	↖	↶	↖	↑	↗	↘	↓	↙	↙
Movement	EBT	WBL	WBT	WBR	NBL2	NBL	NBT	NBR	SBL	SBT	SBR	SBR2
Lane Configurations	↰↱	↰	↱				✥			✥		
Volume (vph)	427	952	570	14	3	14	3	47	10	0	2	4
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	12	12	16	12	12	16	12	12
Total Lost time (s)	5.5	4.0	5.0				4.5			4.5		
Lane Util. Factor	0.95	1.00	1.00				1.00			1.00		
Frpb, ped/bikes	1.00	1.00	1.00				1.00			0.98		
Flpb, ped/bikes	1.00	1.00	1.00				1.00			1.00		
Frt	1.00	1.00	1.00				0.91			0.95		
Flt Protected	1.00	0.95	1.00				0.99			0.97		
Satd. Flow (prot)	2956	1477	1580				1727			1852		
Flt Permitted	1.00	0.23	1.00				0.91			0.76		
Satd. Flow (perm)	2956	350	1580				1586			1449		
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	449	1002	600	15	3	15	3	49	11	0	2	4
RTOR Reduction (vph)	0	0	1	0	0	0	46	0	0	4	0	0
Lane Group Flow (vph)	449	1002	614	0	0	0	24	0	0	13	0	0
Confl. Peds. (#/hr)		7		6		3					3	
Confl. Bikes (#/hr)		1										
Heavy Vehicles (%)	8%	8%	6%	0%	0%	8%	0%	5%	0%	0%	0%	0%
Turn Type		pm+pt			Perm	Perm			Perm			
Protected Phases	8	7	4				2			6		
Permitted Phases		4			2	2			6			
Actuated Green, G (s)	16.5	86.2	86.2				6.1			6.1		
Effective Green, g (s)	16.5	86.2	86.2				6.1			6.1		
Actuated g/C Ratio	0.16	0.85	0.85				0.06			0.06		
Clearance Time (s)	5.5	4.0	5.0				4.5			4.5		
Vehicle Extension (s)	3.0	3.0	3.0				3.0			3.0		
Lane Grp Cap (vph)	479	1018	1338				95			87		
v/s Ratio Prot	0.15	c0.63	0.39									
v/s Ratio Perm		c0.20					c0.02			0.01		
v/c Ratio	0.94	0.98	0.46				0.25			0.15		
Uniform Delay, d1	42.1	14.0	2.0				45.7			45.4		
Progression Factor	1.00	1.00	1.00				1.00			1.00		
Incremental Delay, d2	28.1	24.2	1.1				1.4			0.8		
Delay (s)	70.3	38.2	3.1				47.1			46.2		
Level of Service	E	D	A				D			D		
Approach Delay (s)	70.3		24.8				47.1			46.2		
Approach LOS	E		C				D			D		

Intersection Summary			
HCM Average Control Delay	30.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	101.8	Sum of lost time (s)	8.5
Intersection Capacity Utilization	85.8%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1070: 127th Street & S Wallance St

1/14/2013

	↗
Movement	NER
Lane Configurations	↱↱
Volume (vph)	421
Ideal Flow (vphpl)	1800
Lane Width	12
Total Lost time (s)	4.0
Lane Util. Factor	0.88
Frpb, ped/bikes	1.00
Flpb, ped/bikes	1.00
Frt	0.85
Flt Protected	1.00
Satd. Flow (prot)	2470
Flt Permitted	1.00
Satd. Flow (perm)	2470
Peak-hour factor, PHF	0.95
Adj. Flow (vph)	443
RTOR Reduction (vph)	0
Lane Group Flow (vph)	443
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Heavy Vehicles (%)	9%
Turn Type	Over
Protected Phases	7
Permitted Phases	
Actuated Green, G (s)	65.2
Effective Green, g (s)	65.2
Actuated g/C Ratio	0.64
Clearance Time (s)	4.0
Vehicle Extension (s)	3.0
Lane Grp Cap (vph)	1582
v/s Ratio Prot	0.18
v/s Ratio Perm	
v/c Ratio	0.28
Uniform Delay, d1	8.0
Progression Factor	1.00
Incremental Delay, d2	0.1
Delay (s)	8.1
Level of Service	A
Approach Delay (s)	
Approach LOS	
Intersection Summary	

HCM Signalized Intersection Capacity Analysis
1071: 127th Street & State Street

1/14/2013

	↗	→	←	↖	↘	↙
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↰	↑↑	↑↱		↰	↱
Volume (vph)	214	758	1303	66	41	235
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frt	1.00	1.00	0.99		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1629	3257	3234		1629	1457
Flt Permitted	0.11	1.00	1.00		0.95	1.00
Satd. Flow (perm)	191	3257	3234		1629	1457
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	238	842	1448	73	46	261
RTOR Reduction (vph)	0	0	6	0	0	42
Lane Group Flow (vph)	238	842	1515	0	46	219
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%
Turn Type	Perm					Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)	42.0	42.0	42.0		15.0	15.0
Effective Green, g (s)	42.0	42.0	42.0		15.0	15.0
Actuated g/C Ratio	0.65	0.65	0.65		0.23	0.23
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Lane Grp Cap (vph)	123	2105	2090		376	336
v/s Ratio Prot		0.26	0.47		0.03	
v/s Ratio Perm	c1.25					c0.15
v/c Ratio	1.93	0.40	0.73		0.12	0.65
Uniform Delay, d1	11.5	5.5	7.7		19.8	22.6
Progression Factor	1.00	1.00	0.77		1.07	1.05
Incremental Delay, d2	449.1	0.6	1.3		0.7	9.5
Delay (s)	460.6	6.1	7.2		21.8	33.4
Level of Service	F	A	A		C	C
Approach Delay (s)		106.2	7.2		31.6	
Approach LOS		F	A		C	

Intersection Summary			
HCM Average Control Delay	46.6	HCM Level of Service	D
HCM Volume to Capacity ratio	1.59		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	66.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1072: 127th Street & Michigan Avenue

1/14/2013

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰↑	↑↱		↰	↱
Volume (vph)	58	714	1287	196	135	76
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	12	10	11	12	10	10
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		1.00	1.00
Frpb, ped/bikes		1.00	1.00		1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00
Frt		1.00	0.98		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		2928	2977		1464	1373
Flt Permitted		0.70	1.00		0.95	1.00
Satd. Flow (perm)		2068	2977		1464	1373
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	61	752	1355	206	142	80
RTOR Reduction (vph)	0	0	19	0	0	34
Lane Group Flow (vph)	0	813	1542	0	142	46
Confl. Peds. (#/hr)	1			1		
Confl. Bikes (#/hr)	1			1		
Heavy Vehicles (%)	4%	9%	8%	12%	9%	4%
Turn Type	Perm					Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)		38.0	38.0		19.0	19.0
Effective Green, g (s)		38.0	38.0		19.0	19.0
Actuated g/C Ratio		0.58	0.58		0.29	0.29
Clearance Time (s)		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		1209	1740		428	401
v/s Ratio Prot			c0.52		c0.10	
v/s Ratio Perm		0.39				0.03
v/c Ratio		0.67	0.89		0.33	0.11
Uniform Delay, d1		9.2	11.6		18.0	16.8
Progression Factor		0.69	1.00		0.96	1.05
Incremental Delay, d2		2.8	7.1		2.0	0.6
Delay (s)		9.2	18.7		19.3	18.2
Level of Service		A	B		B	B
Approach Delay (s)		9.2	18.7		18.9	
Approach LOS		A	B		B	

Intersection Summary			
HCM Average Control Delay	15.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	82.2%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1073: 130th Street & Indiana Avenue

1/14/2013

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↱		↰	↑	↰	↱
Volume (vph)	686	175	107	1182	482	83
Ideal Flow (vphpl)	2300	1800	1800	2300	1800	1800
Lane Width	15	12	14	16	15	12
Total Lost time (s)	5.0		5.0	5.0	5.0	5.0
Lane Util. Factor	1.00		1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00		1.00	1.00	1.00	0.98
Flpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Frt	0.97		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	2222		1770	2436	1844	1471
Flt Permitted	1.00		0.12	1.00	0.95	1.00
Satd. Flow (perm)	2222		233	2436	1844	1471
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	700	179	109	1206	492	85
RTOR Reduction (vph)	12	0	0	0	0	59
Lane Group Flow (vph)	867	0	109	1206	492	26
Confl. Peds. (#/hr)		4	4			8
Heavy Vehicles (%)	11%	7%	3%	7%	2%	2%
Turn Type			Perm			Perm
Protected Phases	4			8	2	
Permitted Phases			8			2
Actuated Green, G (s)	44.2		44.2	44.2	24.4	24.4
Effective Green, g (s)	44.2		44.2	44.2	24.4	24.4
Actuated g/C Ratio	0.56		0.56	0.56	0.31	0.31
Clearance Time (s)	5.0		5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1250		131	1370	572	457
v/s Ratio Prot	0.39			c0.50	c0.27	
v/s Ratio Perm			0.47			0.02
v/c Ratio	0.69		0.83	0.88	0.86	0.06
Uniform Delay, d1	12.3		14.1	14.9	25.5	19.0
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	1.7		34.1	6.9	15.5	0.2
Delay (s)	14.0		48.3	21.8	41.0	19.3
Level of Service	B		D	C	D	B
Approach Delay (s)	14.0			24.0	37.8	
Approach LOS	B			C	D	

Intersection Summary			
HCM Average Control Delay	23.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	78.6	Sum of lost time (s)	10.0
Intersection Capacity Utilization	87.9%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1074: 130th Street & Ellis Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑↑	↱		↰↑	↱		✥	
Volume (vph)	1	738	99	258	1220	9	111	0	187	1	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	15	13	11	11	12	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0	4.0	3.0	3.0	4.0		4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85		1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.95	1.00		0.95	
Satd. Flow (prot)	1881	3213	1422	1589	3138	1366		1642	1443		969	
Flt Permitted	0.20	1.00	1.00	0.26	1.00	1.00		0.76	1.00		0.61	
Satd. Flow (perm)	397	3213	1422	430	3138	1366		1309	1443		626	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1	820	110	287	1356	10	123	0	208	1	0	0
RTOR Reduction (vph)	0	0	53	0	0	3	0	0	175	0	0	0
Lane Group Flow (vph)	1	820	57	287	1356	7	0	123	33	0	1	0
Heavy Vehicles (%)	0%	10%	4%	4%	9%	12%	18%	0%	6%	100%	0%	0%
Turn Type	Perm		Perm	custom		custom	Perm		Perm	Perm		
Protected Phases		4		3	3 8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)	44.4	44.4	44.4	63.7	63.7	63.7		13.3	13.3		13.3	
Effective Green, g (s)	44.4	44.4	44.4	63.7	63.7	63.7		13.3	13.3		13.3	
Actuated g/C Ratio	0.52	0.52	0.52	0.75	0.75	0.75		0.16	0.16		0.16	
Clearance Time (s)	4.0	4.0	4.0	3.0		4.0		4.0	4.0		4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0		3.0	3.0		3.0	
Lane Grp Cap (vph)	207	1678	743	545	2352	1024		205	226		98	
v/s Ratio Prot		0.26		0.10	c0.43							
v/s Ratio Perm	0.00		0.04	0.29		0.01		c0.09	0.02		0.00	
v/c Ratio	0.00	0.49	0.08	0.53	0.58	0.01		0.60	0.14		0.01	
Uniform Delay, d1	9.7	13.0	10.1	4.9	4.7	2.7		33.4	30.9		30.3	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2	0.0	1.0	0.2	0.9	0.3	0.0		4.7	0.3		0.0	
Delay (s)	9.8	14.0	10.3	5.8	5.0	2.7		38.0	31.2		30.3	
Level of Service	A	B	B	A	A	A		D	C		C	
Approach Delay (s)		13.6			5.2			33.8			30.3	
Approach LOS		B			A			C			C	

Intersection Summary			
HCM Average Control Delay	11.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	7.0
Intersection Capacity Utilization	55.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1942: 111th Street & Langley Avenue

1/14/2013

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰↑	↑↱		↶↷	
Volume (vph)	13	817	844	45	24	9
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	12	10	10
Total Lost time (s)		5.0	5.0		3.0	
Lane Util. Factor		0.95	0.95		1.00	
Frt		1.00	0.99		0.96	
Flt Protected		1.00	1.00		0.96	
Satd. Flow (prot)		3038	3017		1487	
Flt Permitted		0.93	1.00		0.96	
Satd. Flow (perm)		2835	3017		1487	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	14	908	938	50	27	10
RTOR Reduction (vph)	0	0	4	0	9	0
Lane Group Flow (vph)	0	922	984	0	28	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%
Turn Type	Perm					
Protected Phases		4	8 2 11		5	
Permitted Phases	4					
Actuated Green, G (s)		33.0	64.0		7.0	
Effective Green, g (s)		33.0	64.0		7.0	
Actuated g/C Ratio		0.37	0.71		0.08	
Clearance Time (s)		5.0			3.0	
Lane Grp Cap (vph)		1040	2145		116	
v/s Ratio Prot			c0.33		c0.02	
v/s Ratio Perm		c0.33				
v/c Ratio		0.89	0.46		0.24	
Uniform Delay, d1		26.7	5.6		39.0	
Progression Factor		1.00	0.00		1.00	
Incremental Delay, d2		11.1	0.2		4.8	
Delay (s)		37.9	0.3		43.8	
Level of Service		D	A		D	
Approach Delay (s)		37.9	0.3		43.8	
Approach LOS		D	A		D	

Intersection Summary			
HCM Average Control Delay	18.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	44.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1955: 115th Street & Cottage Grove Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			↰↱			✥			↰	↱
Volume (vph)	79	431	1	27	568	80	0	0	1	45	3	94
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	12	12	11	12	11
Total Lost time (s)		4.0			4.0			3.0			3.0	3.0
Lane Util. Factor		1.00			0.95			1.00			1.00	1.00
Frpb, ped/bikes		1.00			1.00			0.92			1.00	0.96
Flpb, ped/bikes		1.00			1.00			1.00			0.98	1.00
Frt		1.00			0.98			0.86			1.00	0.85
Flt Protected		0.99			1.00			1.00			0.95	1.00
Satd. Flow (prot)		1729			3232			1427			1606	1277
Flt Permitted		0.79			0.93			1.00			0.90	1.00
Satd. Flow (perm)		1380			3013			1427			1513	1277
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	88	479	1	30	631	89	0	0	1	50	3	104
RTOR Reduction (vph)	0	0	0	0	12	0	0	1	0	0	0	74
Lane Group Flow (vph)	0	568	0	0	738	0	0	0	0	0	53	30
Confl. Peds. (#/hr)	33		13	13		33	29		13	13		29
Confl. Bikes (#/hr)	1		1	1		1						
Heavy Vehicles (%)	4%	3%	0%	0%	4%	0%	0%	0%	0%	5%	0%	11%
Turn Type	Perm			Prot			Perm			pm+pt		Perm
Protected Phases		4		3	3 4			1		2	1 2	
Permitted Phases	4				3		1	1		1 2		1 2
Actuated Green, G (s)		38.0			52.0			9.0			23.0	26.0
Effective Green, g (s)		38.0			52.0			9.0			23.0	26.0
Actuated g/C Ratio		0.42			0.58			0.10			0.26	0.29
Clearance Time (s)		4.0						3.0				
Lane Grp Cap (vph)		583			1775			143			401	369
v/s Ratio Prot					c0.06			0.00			c0.02	
v/s Ratio Perm		c0.41			0.18						c0.01	0.02
v/c Ratio		0.97			0.42			0.00			0.13	0.08
Uniform Delay, d1		25.5			10.6			36.5			25.8	23.3
Progression Factor		1.00			2.17			1.00			1.00	1.00
Incremental Delay, d2		31.5			0.6			0.0			0.7	0.4
Delay (s)		57.0			23.5			36.5			26.5	23.7
Level of Service		E			C			D			C	C
Approach Delay (s)		57.0			23.5			36.5			24.7	
Approach LOS		E			C			D			C	

Intersection Summary			
HCM Average Control Delay	36.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	72.4%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1001: 95th Street & Wentworth Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			✥			✥	
Volume (vph)	39	598	28	35	1014	58	36	35	48	23	26	87
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	16	10	10	16	8	15	8	8	14	8
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			0.99			0.98	
Flpb, ped/bikes	0.98	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.99			0.95			0.91	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1557	3022		1587	3021			1816			1706	
Flt Permitted	0.17	1.00		0.36	1.00			0.89			0.95	
Satd. Flow (perm)	277	3022		604	3021			1649			1630	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	41	629	29	37	1067	61	38	37	51	24	27	92
RTOR Reduction (vph)	0	5	0	0	6	0	0	33	0	0	21	0
Lane Group Flow (vph)	41	653	0	37	1122	0	0	93	0	0	122	0
Confl. Peds. (#/hr)	145		16	16		145	17		19	19		17
Confl. Bikes (#/hr)	5					5			2	2		
Heavy Vehicles (%)	0%	5%	0%	0%	4%	2%	0%	0%	0%	0%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	34.0	34.0		34.0	34.0			22.0			22.0	
Effective Green, g (s)	34.0	34.0		34.0	34.0			23.0			23.0	
Actuated g/C Ratio	0.52	0.52		0.52	0.52			0.35			0.35	
Clearance Time (s)	4.0	4.0		4.0	4.0			5.0			5.0	
Lane Grp Cap (vph)	145	1581		316	1580			583			577	
v/s Ratio Prot		0.22			c0.37							
v/s Ratio Perm	0.15			0.06				0.06			c0.07	
v/c Ratio	0.28	0.41		0.12	0.71			0.16			0.21	
Uniform Delay, d1	8.7	9.4		7.9	11.8			14.4			14.7	
Progression Factor	1.00	1.00		0.70	1.41			1.00			1.00	
Incremental Delay, d2	4.8	0.8		0.7	2.4			0.6			0.8	
Delay (s)	13.5	10.2		6.2	19.1			15.0			15.5	
Level of Service	B	B		A	B			B			B	
Approach Delay (s)		10.4			18.6			15.0			15.5	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	15.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1002: 95th Street & Lafayette Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↑	↱				↰↰	↑	↱
Volume (vph)	25	789	5	32	637	41	0	0	0	586	89	379
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	5.0	5.0		3.0	3.0	3.0				5.0	5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00				0.97	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.67				1.00	1.00	0.98
Flpb, ped/bikes	0.93	1.00		1.00	1.00	1.00				1.00	1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85				1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00				0.95	1.00	1.00
Satd. Flow (prot)	793	3379		1710	3226	514				3285	1731	1481
Flt Permitted	0.40	1.00		0.14	1.00	1.00				0.95	1.00	1.00
Satd. Flow (perm)	331	3379		248	3226	514				3285	1731	1481
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	26	831	5	34	671	43	0	0	0	617	94	399
RTOR Reduction (vph)	0	0	0	0	0	19	0	0	0	0	0	166
Lane Group Flow (vph)	26	836	0	34	671	24	0	0	0	617	94	233
Confl. Peds. (#/hr)	350		4	4		350	8		6	6		8
Confl. Bikes (#/hr)	7		1	1		7						
Heavy Vehicles (%)	100%	1%	20%	0%	6%	100%	0%	0%	0%	1%	4%	1%
Turn Type	pm+pt			pm+pt		Perm				Split		Perm
Protected Phases	7	4		3	8					6	6	
Permitted Phases	4			8		8						6
Actuated Green, G (s)	43.0	43.0		73.0	73.0	73.0				30.0	30.0	30.0
Effective Green, g (s)	43.0	43.0		73.0	73.0	73.0				30.0	30.0	30.0
Actuated g/C Ratio	0.33	0.33		0.56	0.56	0.56				0.23	0.23	0.23
Clearance Time (s)	5.0	5.0		3.0	3.0	3.0				5.0	5.0	5.0
Lane Grp Cap (vph)	159	1118		634	1812	289				758	399	342
v/s Ratio Prot	0.02	c0.25		0.02	c0.21					c0.19	0.05	
v/s Ratio Perm	0.04			0.01		0.05						0.16
v/c Ratio	0.16	0.75		0.05	0.37	0.08				0.81	0.24	0.68
Uniform Delay, d1	31.6	38.7		15.2	15.8	13.1				47.4	40.7	45.6
Progression Factor	0.85	0.86		0.33	0.75	1.24				1.00	1.00	1.00
Incremental Delay, d2	2.1	4.4		0.1	0.4	0.4				9.3	1.4	10.5
Delay (s)	28.9	37.6		5.1	12.2	16.6				56.7	42.1	56.1
Level of Service	C	D		A	B	B				E	D	E
Approach Delay (s)		37.3			12.2			0.0			55.2	
Approach LOS		D			B			A			E	

Intersection Summary			
HCM Average Control Delay	37.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	53.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1003: 95th Street & State Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↱		↰	↑↑	↱		↰↑	↱	↰		↱
Volume (vph)	340	815	220	54	578	287	102	251	55	39	0	30
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0	3.0		5.0	5.0	5.0		5.0	5.0	5.0		5.0
Lane Util. Factor	0.97	0.95		1.00	0.95	1.00		0.95	1.00	1.00		1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.67		1.00	0.91	1.00		0.96
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Frt	1.00	0.97		1.00	1.00	0.85		1.00	0.85	1.00		0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.99	1.00	0.95		1.00
Satd. Flow (prot)	3285	3262		1710	3138	1018		3301	1359	855		734
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.99	1.00	0.95		1.00
Satd. Flow (perm)	3285	3262		1710	3138	1018		3301	1359	855		734
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	358	858	232	57	608	302	107	264	58	41	0	32
RTOR Reduction (vph)	0	18	0	0	0	228	0	0	42	0	0	30
Lane Group Flow (vph)	358	1072	0	57	608	74	0	371	16	41	0	2
Confl. Peds. (#/hr)	327		13	13		327	6		60	60		6
Confl. Bikes (#/hr)	6					6						
Heavy Vehicles (%)	1%	1%	0%	0%	9%	1%	0%	3%	2%	100%	0%	100%
Turn Type	Prot			Prot		Perm	Split		Perm	Prot		custom
Protected Phases	7	4		3	8		2	2		6		
Permitted Phases						8			2			6
Actuated Green, G (s)	44.0	68.0		8.0	32.0	32.0		28.0	28.0	8.0		8.0
Effective Green, g (s)	44.0	68.0		8.0	32.0	32.0		28.0	28.0	8.0		8.0
Actuated g/C Ratio	0.34	0.52		0.06	0.25	0.25		0.22	0.22	0.06		0.06
Clearance Time (s)	3.0	3.0		5.0	5.0	5.0		5.0	5.0	5.0		5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0	3.0	3.0		3.0
Lane Grp Cap (vph)	1112	1706		105	772	251		711	293	53		45
v/s Ratio Prot	0.11	c0.33		0.03	c0.19			c0.11		c0.05		
v/s Ratio Perm						0.07			0.01			0.00
v/c Ratio	0.32	0.63		0.54	0.79	0.30		0.52	0.06	0.77		0.04
Uniform Delay, d1	31.9	22.0		59.2	45.8	39.8		45.1	40.5	60.1		57.4
Progression Factor	0.95	0.16		1.00	1.00	1.00		0.94	0.99	1.00		1.00
Incremental Delay, d2	0.5	1.1		18.7	8.0	3.0		2.7	0.4	49.7		0.4
Delay (s)	30.7	4.7		77.9	53.8	42.8		45.3	40.6	109.9		57.8
Level of Service	C	A		E	D	D		D	D	F		E
Approach Delay (s)		11.1			51.8			44.7			87.0	
Approach LOS		B			D			D			F	

Intersection Summary			
HCM Average Control Delay	31.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	68.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1004: 95th Street & Michigan Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱		↰	↑↑		↰		↱	↰	↱	
Volume (vph)	0	893	166	105	839	0	74	0	89	9	15	7
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	11	11	8	12	12	12	14	15	12
Total Lost time (s)		4.0		4.0	4.0		4.0		4.0	4.0	4.0	
Lane Util. Factor		0.95		1.00	0.95		1.00		1.00	1.00	1.00	
Frpb, ped/bikes		0.99		1.00	1.00		1.00		0.98	1.00	0.98	
Flpb, ped/bikes		1.00		1.00	1.00		0.97		1.00	0.99	1.00	
Frt		0.98		1.00	1.00		1.00		0.85	1.00	0.95	
Flt Protected		1.00		0.95	1.00		0.95		1.00	0.95	1.00	
Satd. Flow (prot)		2997		1649	3149		1388		1451	1803	1857	
Flt Permitted		1.00		0.17	1.00		0.74		1.00	0.95	1.00	
Satd. Flow (perm)		2997		299	3149		1082		1451	1803	1857	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	992	184	117	932	0	82	0	99	10	17	8
RTOR Reduction (vph)	0	15	0	0	0	0	0	0	67	0	5	0
Lane Group Flow (vph)	0	1161	0	117	932	0	82	0	32	10	20	0
Confl. Peds. (#/hr)	67		19	19		67	38		12	12		38
Confl. Bikes (#/hr)			1	1								
Heavy Vehicles (%)	0%	2%	11%	0%	5%	0%	19%	0%	3%	0%	0%	0%
Turn Type				Perm			custom		custom	Perm		
Protected Phases		4			8						6	
Permitted Phases				8			2		2	6		
Actuated Green, G (s)		60.0		60.0	60.0		32.0		32.0	32.0	32.0	
Effective Green, g (s)		60.0		60.0	60.0		32.0		32.0	32.0	32.0	
Actuated g/C Ratio		0.60		0.60	0.60		0.32		0.32	0.32	0.32	
Clearance Time (s)		4.0		4.0	4.0		4.0		4.0	4.0	4.0	
Lane Grp Cap (vph)		1798		179	1889		346		464	577	594	
v/s Ratio Prot		0.39			0.30						0.01	
v/s Ratio Perm				c0.39			c0.08		0.02	0.01		
v/c Ratio		0.65		0.65	0.49		0.24		0.07	0.02	0.03	
Uniform Delay, d1		13.1		13.2	11.4		25.0		23.6	23.2	23.4	
Progression Factor		1.00		1.00	1.00		1.00		1.00	1.00	1.00	
Incremental Delay, d2		1.8		17.1	0.9		1.6		0.3	0.1	0.1	
Delay (s)		14.9		30.3	12.3		26.6		23.9	23.3	23.5	
Level of Service		B		C	B		C		C	C	C	
Approach Delay (s)		14.9			14.3			25.1			23.4	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM Average Control Delay	15.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	61.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1005: 98th Place & Halsted Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↰	↰↑	↱	↰	↑↑↑			↑↑↱	
Volume (vph)	0	0	0	301	0	1230	215	686	0	0	792	490
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	12	12	10	10	12	12	11	12
Total Lost time (s)				4.0		5.0	3.0	4.0			4.0	
Lane Util. Factor				0.95		1.00	1.00	0.91			0.91	
Frpb, ped/bikes				1.00		1.00	1.00	1.00			0.98	
Flpb, ped/bikes				1.00		1.00	1.00	1.00			1.00	
Frt				1.00		0.85	1.00	1.00			0.94	
Flt Protected				0.95		1.00	0.95	1.00			1.00	
Satd. Flow (prot)				1540		1530	1535	4327			4271	
Flt Permitted				0.95		1.00	0.95	1.00			1.00	
Satd. Flow (perm)				1540		1530	1535	4327			4271	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	0	0	307	0	1255	219	700	0	0	808	500
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	307	0	1255	219	700	0	0	1308	0
Confl. Peds. (#/hr)	2					2	18		3	3		18
Heavy Vehicles (%)	0%	0%	0%	2%	0%	0%	4%	6%	0%	0%	4%	1%
Turn Type				Split		Prot	Prot					
Protected Phases				8	8	8	5	2			6	
Permitted Phases												
Actuated Green, G (s)				30.0		30.0	32.0	66.0			31.0	
Effective Green, g (s)				31.0		30.0	32.0	66.0			31.0	
Actuated g/C Ratio				0.30		0.29	0.30	0.63			0.30	
Clearance Time (s)				5.0		5.0	3.0	4.0			4.0	
Lane Grp Cap (vph)				455		437	468	2720			1261	
v/s Ratio Prot				0.20		c0.82	c0.14	0.16			c0.31	
v/s Ratio Perm												
v/c Ratio				0.67		2.87	0.47	0.26			1.16dr	
Uniform Delay, d1				32.6		37.5	29.6	8.6			37.0	
Progression Factor				1.00		1.00	0.64	2.11			1.00	
Incremental Delay, d2				7.8		848.6	2.8	0.2			35.5	
Delay (s)				40.4		886.1	21.8	18.4			72.5	
Level of Service				D		F	C	B			E	
Approach Delay (s)		0.0			719.9			19.2			72.5	
Approach LOS		A			F			B			E	

Intersection Summary			
HCM Average Control Delay	326.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.43		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	102.1%	ICU Level of Service	G
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.
c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1006: 99th Street & Halsted Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↰↑↱						↑↑↑	↱↱	↰	↑↑↑	
Volume (vph)	322	770	146	0	0	0	0	579	410	359	734	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	13	12	12	12	12	12	10	10	8	12	12	12
Total Lost time (s)	5.0	5.0						4.0	4.0	3.0	4.0	
Lane Util. Factor	0.91	0.91						0.91	0.88	1.00	0.91	
Frpb, ped/bikes	1.00	1.00						1.00	1.00	1.00	1.00	
Flpb, ped/bikes	0.99	1.00						1.00	1.00	1.00	1.00	
Frt	1.00	0.98						1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00						1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1509	3156						4368	2244	1598	4680	
Flt Permitted	0.95	1.00						1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1509	3156						4368	2244	1598	4680	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	332	794	151	0	0	0	0	597	423	370	757	0
RTOR Reduction (vph)	0	14	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	299	964	0	0	0	0	0	597	423	370	757	0
Confl. Peds. (#/hr)	6		1	1		6	6					6
Heavy Vehicles (%)	6%	1%	0%	0%	0%	0%	0%	5%	4%	7%	5%	0%
Turn Type	Perm								Perm	Prot		
Protected Phases		4						2		1	6	
Permitted Phases	4								2			
Actuated Green, G (s)	34.0	34.0						28.0	28.0	31.0	62.0	
Effective Green, g (s)	34.0	34.0						28.0	28.0	31.0	62.0	
Actuated g/C Ratio	0.32	0.32						0.27	0.27	0.30	0.59	
Clearance Time (s)	5.0	5.0						4.0	4.0	3.0	4.0	
Lane Grp Cap (vph)	489	1022						1165	598	472	2763	
v/s Ratio Prot								0.14		c0.23	0.16	
v/s Ratio Perm	0.20	0.31							c0.19			
v/c Ratio	0.61	0.94						0.51	0.71	0.78	0.27	
Uniform Delay, d1	29.9	34.6						32.7	34.8	33.9	10.5	
Progression Factor	1.00	1.00						1.17	1.17	0.86	0.22	
Incremental Delay, d2	5.6	17.5						1.4	5.9	4.8	0.1	
Delay (s)	35.5	52.0						39.7	46.6	34.1	2.4	
Level of Service	D	D						D	D	C	A	
Approach Delay (s)		48.2			0.0			42.5			12.8	
Approach LOS		D			A			D			B	

Intersection Summary			
HCM Average Control Delay	34.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	102.1%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1007: 98th Place & Wentworth Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↰	↑↱		↰	↑			↱	
Volume (vph)	0	0	0	290	25	24	11	164	0	0	149	5
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	14	12	12	16	12
Total Lost time (s)				4.0	4.0		4.0	4.0			-3.0	
Lane Util. Factor				1.00	0.95		1.00	1.00			1.00	
Frpb, ped/bikes				1.00	0.99		1.00	1.00			1.00	
Flpb, ped/bikes				1.00	1.00		1.00	1.00			1.00	
Frt				1.00	0.93		1.00	1.00			1.00	
Flt Protected				0.95	1.00		0.95	1.00			1.00	
Satd. Flow (prot)				1688	3132		1710	1846			1955	
Flt Permitted				0.95	1.00		0.54	1.00			1.00	
Satd. Flow (perm)				1688	3132		974	1846			1955	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	322	28	27	12	182	0	0	166	6
RTOR Reduction (vph)	0	0	0	0	18	0	0	0	0	0	1	0
Lane Group Flow (vph)	0	0	0	322	37	0	12	182	0	0	171	0
Confl. Peds. (#/hr)	2		2	2		2			6	6		
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	0%	0%	0%	1%	0%	0%	0%	4%	0%	0%	4%	0%
Turn Type				Perm			pm+pt					
Protected Phases					8		7	2			6	
Permitted Phases				8			2					
Actuated Green, G (s)				27.0	27.0		50.0	50.0			40.0	
Effective Green, g (s)				27.0	27.0		50.0	50.0			46.0	
Actuated g/C Ratio				0.32	0.32		0.59	0.59			0.54	
Clearance Time (s)				4.0	4.0		4.0	4.0			3.0	
Lane Grp Cap (vph)				536	995		634	1086			1058	
v/s Ratio Prot					0.01		0.00	c0.10			0.09	
v/s Ratio Perm				c0.19			0.01					
v/c Ratio				0.60	0.04		0.02	0.17			0.16	
Uniform Delay, d1				24.5	20.0		10.5	8.0			9.8	
Progression Factor				1.00	1.00		1.04	1.18			1.00	
Incremental Delay, d2				4.9	0.1		0.1	0.3			0.3	
Delay (s)				29.4	20.1		11.0	9.8			10.1	
Level of Service				C	C		B	A			B	
Approach Delay (s)		0.0			28.0			9.8			10.1	
Approach LOS		A			C			A			B	

Intersection Summary			
HCM Average Control Delay	19.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	37.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1008: 99th Street & Wentworth Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱			✥			↱		↰	↑	
Volume (vph)	12	11	23	5	0	14	0	149	45	46	393	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	16	15	12	8	12	8	12	12	12	10	13	12
Total Lost time (s)	4.0	4.0			4.0			3.0		4.0	4.0	
Lane Util. Factor	1.00	1.00			1.00			1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.97			0.98			0.99		1.00	1.00	
Flpb, ped/bikes	1.00	1.00			1.00			1.00		1.00	1.00	
Frt	1.00	0.90			0.90			0.97		1.00	1.00	
Flt Protected	0.95	1.00			0.99			1.00		0.95	1.00	
Satd. Flow (prot)	1935	1735			1565			1718		1590	1860	
Flt Permitted	0.74	1.00			0.97			1.00		0.59	1.00	
Satd. Flow (perm)	1516	1735			1531			1718		987	1860	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	13	12	24	5	0	15	0	157	47	48	414	0
RTOR Reduction (vph)	0	16	0	0	10	0	0	13	0	0	0	0
Lane Group Flow (vph)	13	20	0	0	10	0	0	191	0	48	414	0
Confl. Peds. (#/hr)	1		11	11		1	1		10	10		1
Confl. Bikes (#/hr)			2	2			1		2	2		1
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%
Turn Type	Perm			Perm						pm+pt		
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8						6		
Actuated Green, G (s)	27.0	27.0			27.0			40.0		50.0	50.0	
Effective Green, g (s)	27.0	27.0			27.0			40.0		50.0	50.0	
Actuated g/C Ratio	0.32	0.32			0.32			0.47		0.59	0.59	
Clearance Time (s)	4.0	4.0			4.0			3.0		4.0	4.0	
Lane Grp Cap (vph)	482	551			486			808		630	1094	
v/s Ratio Prot		c0.01						0.11		0.01	c0.22	
v/s Ratio Perm	0.01				0.01					0.04		
v/c Ratio	0.03	0.04			0.02			0.24		0.08	0.38	
Uniform Delay, d1	20.0	20.0			19.9			13.4		8.8	9.3	
Progression Factor	1.00	1.00			1.00			1.00		0.98	0.87	
Incremental Delay, d2	0.1	0.1			0.1			0.7		0.2	0.9	
Delay (s)	20.1	20.1			20.0			14.1		8.8	9.0	
Level of Service	C	C			B			B		A	A	
Approach Delay (s)		20.1			20.0			14.1			9.0	
Approach LOS		C			B			B			A	

Intersection Summary			
HCM Average Control Delay	11.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	41.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1009: 99th Street & State Street

1/14/2013

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰↱		↰	↑	↱	
Volume (vph)	48	42	12	193	288	28
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	14	12	13	12	10	12
Total Lost time (s)	4.0		4.0	4.0	4.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.94		1.00	1.00	0.99	
Flt Protected	0.97		0.95	1.00	1.00	
Satd. Flow (prot)	1752		1765	1782	1657	
Flt Permitted	0.97		0.50	1.00	1.00	
Satd. Flow (perm)	1752		937	1782	1657	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	53	47	13	214	320	31
RTOR Reduction (vph)	32	0	0	0	5	0
Lane Group Flow (vph)	68	0	13	214	346	0
Confl. Peds. (#/hr)			2			2
Heavy Vehicles (%)	0%	0%	0%	1%	0%	0%
Turn Type			Perm			
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	21.0		36.0	36.0	36.0	
Effective Green, g (s)	21.0		36.0	36.0	36.0	
Actuated g/C Ratio	0.32		0.55	0.55	0.55	
Clearance Time (s)	4.0		4.0	4.0	4.0	
Lane Grp Cap (vph)	566		519	987	918	
v/s Ratio Prot	c0.04			0.12	c0.21	
v/s Ratio Perm			0.01			
v/c Ratio	0.12		0.03	0.22	0.38	
Uniform Delay, d1	15.5		6.6	7.4	8.2	
Progression Factor	1.00		0.51	0.61	1.43	
Incremental Delay, d2	0.4		0.1	0.5	1.0	
Delay (s)	15.9		3.4	5.0	12.7	
Level of Service	B		A	A	B	
Approach Delay (s)	15.9			4.9	12.7	
Approach LOS	B			A	B	

Intersection Summary			
HCM Average Control Delay	10.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	30.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1010: 99th St & Michigan Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↰↑↱		↰	↑			↑	↱
Volume (vph)	0	0	0	31	268	9	258	132	0	0	283	17
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	14	16	12	12	15	12	12	13	10
Total Lost time (s)					4.0		4.0	4.0			3.0	3.0
Lane Util. Factor					0.95		1.00	1.00			1.00	1.00
Frpb, ped/bikes					1.00		1.00	1.00			1.00	1.00
Flpb, ped/bikes					1.00		1.00	1.00			1.00	1.00
Frt					1.00		1.00	1.00			1.00	0.85
Flt Protected					1.00		0.95	1.00			1.00	1.00
Satd. Flow (prot)					3772		1693	1678			1738	1428
Flt Permitted					1.00		0.47	1.00			1.00	1.00
Satd. Flow (perm)					3772		844	1678			1738	1428
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	34	298	10	287	147	0	0	314	19
RTOR Reduction (vph)	0	0	0	0	3	0	0	0	0	0	0	11
Lane Group Flow (vph)	0	0	0	0	339	0	287	147	0	0	314	8
Confl. Peds. (#/hr)	1					1			5	5		
Heavy Vehicles (%)	0%	0%	0%	0%	2%	0%	1%	18%	0%	0%	7%	0%
Turn Type				Split			pm+pt					Perm
Protected Phases				8	8		7	2			6	
Permitted Phases							2					6
Actuated Green, G (s)					26.0		51.0	51.0			38.0	38.0
Effective Green, g (s)					26.0		51.0	51.0			38.0	38.0
Actuated g/C Ratio					0.31		0.60	0.60			0.45	0.45
Clearance Time (s)					4.0		4.0	4.0			3.0	3.0
Lane Grp Cap (vph)					1154		606	1007			777	638
v/s Ratio Prot					c0.09		c0.06	0.09			0.18	
v/s Ratio Perm							c0.23					0.01
v/c Ratio					0.29		0.47	0.15			0.40	0.01
Uniform Delay, d1					22.5		13.7	7.5			15.9	13.1
Progression Factor					1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2					0.6		2.6	0.3			1.6	0.0
Delay (s)					23.1		16.4	7.8			17.4	13.1
Level of Service					C		B	A			B	B
Approach Delay (s)		0.0			23.1			13.5			17.2	
Approach LOS		A			C			B			B	

Intersection Summary			
HCM Average Control Delay	17.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1011: 99th Street & Martin Luther King Jr Drive

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					✥		↰	↑↱		↰	↑↱	
Volume (vph)	0	0	0	95	94	38	133	205	30	59	703	44
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	15	12	12	12	12	12	13	12
Total Lost time (s)					4.0		3.0	4.0		3.0	4.0	
Lane Util. Factor					1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes					1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes					1.00		1.00	1.00		1.00	1.00	
Frt					0.98		1.00	0.98		1.00	0.99	
Flt Protected					0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)					1896		1710	3287		1707	3467	
Flt Permitted					0.98		0.25	1.00		0.59	1.00	
Satd. Flow (perm)					1896		446	3287		1061	3467	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	106	104	42	148	228	33	66	781	49
RTOR Reduction (vph)	0	0	0	0	10	0	0	15	0	0	6	0
Lane Group Flow (vph)	0	0	0	0	242	0	148	246	0	66	824	0
Confl. Peds. (#/hr)							5		5	5		5
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	1%	0%
Turn Type				Split			pm+pt			pm+pt		
Protected Phases				8	8		5	2		1	6	
Permitted Phases							2			6		
Actuated Green, G (s)					23.0		41.0	34.0		41.0	34.0	
Effective Green, g (s)					23.0		41.0	34.0		41.0	34.0	
Actuated g/C Ratio					0.31		0.55	0.45		0.55	0.45	
Clearance Time (s)					4.0		3.0	4.0		3.0	4.0	
Lane Grp Cap (vph)					581		362	1490		640	1572	
v/s Ratio Prot					c0.13		c0.04	0.07		0.01	c0.24	
v/s Ratio Perm							0.19			0.05		
v/c Ratio					0.42		0.41	0.16		0.10	0.52	
Uniform Delay, d1					20.7		16.4	12.1		8.2	14.7	
Progression Factor					1.00		0.84	0.82		1.00	1.00	
Incremental Delay, d2					2.2		3.4	0.2		0.3	1.3	
Delay (s)					22.9		17.1	10.2		8.5	16.0	
Level of Service					C		B	B		A	B	
Approach Delay (s)		0.0			22.9			12.7			15.4	
Approach LOS		A			C			B			B	

Intersection Summary			
HCM Average Control Delay	15.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	53.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1012: 100th Street & Martin Luther King Jr Drive

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥		↰	↑↱		↰	↑↱	
Volume (vph)	32	49	13	9	63	63	7	273	24	159	589	50
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	16	12	12	10	11	12	12	11	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.98			0.94		1.00	0.99		1.00	0.99	
Flt Protected		0.98			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1964			1655		1595	3172		1704	3231	
Flt Permitted		0.89			0.99		0.36	1.00		0.56	1.00	
Satd. Flow (perm)		1775			1637		600	3172		1008	3231	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	34	52	14	9	66	66	7	287	25	167	620	53
RTOR Reduction (vph)	0	8	0	0	42	0	0	9	0	0	8	0
Lane Group Flow (vph)	0	92	0	0	99	0	7	303	0	167	665	0
Confl. Peds. (#/hr)	2					2	1		6	6		1
Confl. Bikes (#/hr)			1	1			3					3
Heavy Vehicles (%)	0%	0%	0%	0%	2%	0%	0%	3%	0%	0%	1%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		25.0			25.0		42.0	42.0		42.0	42.0	
Effective Green, g (s)		25.0			25.0		42.0	42.0		42.0	42.0	
Actuated g/C Ratio		0.33			0.33		0.56	0.56		0.56	0.56	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		592			546		336	1776		564	1809	
v/s Ratio Prot								0.10			c0.21	
v/s Ratio Perm		0.05			c0.06		0.01			0.17		
v/c Ratio		0.16			0.18		0.02	0.17		0.30	0.37	
Uniform Delay, d1		17.6			17.7		7.3	8.0		8.7	9.1	
Progression Factor		1.00			1.00		1.00	1.00		0.27	0.25	
Incremental Delay, d2		0.6			0.7		0.1	0.2		1.2	0.5	
Delay (s)		18.1			18.5		7.5	8.2		3.5	2.8	
Level of Service		B			B		A	A		A	A	
Approach Delay (s)		18.1			18.5			8.2			2.9	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	6.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	48.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis
1013: 100th Street & Cottage Grove Avenue

	↗	↘	↖	↑	↓	↙
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰↱			↰↑	↑↱	
Sign Control	Stop			Stop	Stop	
Volume (vph)	37	192	67	251	588	81
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	41	213	74	279	653	90

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	254	167	186	436	308
Volume Left (vph)	41	74	0	0	0
Volume Right (vph)	213	0	0	0	90
Hadj (s)	-0.42	0.27	0.05	0.05	-0.15
Departure Headway (s)	5.7	6.6	6.3	5.9	5.7
Degree Utilization, x	0.41	0.30	0.33	0.71	0.48
Capacity (veh/h)	592	528	546	602	622
Control Delay (s)	12.6	11.2	11.2	20.8	12.7
Approach Delay (s)	12.6	11.2		17.4	
Approach LOS	B	B		C	

Intersection Summary			
Delay	14.9		
HCM Level of Service	B		
Intersection Capacity Utilization	53.9%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Signalized Intersection Capacity Analysis
1014: 103rd Street & Vincennes Avenue

1/14/2013

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR
Lane Configurations		↰	↑	↱	↰	↑	↱			↰	↑↱	
Volume (vph)	32	35	378	18	24	414	78	82	55	68	354	32
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		3.5	4.0	4.0	4.0	4.0	4.0			4.0	4.0	
Lane Util. Factor		1.00	1.00	1.00	1.00	1.00	1.00			1.00	0.95	
Frpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	0.92			1.00	1.00	
Flpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	
Frt		1.00	1.00	0.85	1.00	1.00	0.85			1.00	0.99	
Flt Protected		0.95	1.00	1.00	0.95	1.00	1.00			0.95	1.00	
Satd. Flow (prot)		1612	1731	1530	1710	1731	1412			1710	3251	
Flt Permitted		0.13	1.00	1.00	0.45	1.00	1.00			0.16	1.00	
Satd. Flow (perm)		215	1731	1530	812	1731	1412			280	3251	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	36	39	420	20	27	460	87	91	61	76	393	36
RTOR Reduction (vph)	0	0	0	13	0	0	29	0	0	0	5	0
Lane Group Flow (vph)	0	75	420	7	27	460	149	0	0	137	424	0
Confl. Peds. (#/hr)		25					25					3
Heavy Vehicles (%)	6%	6%	4%	0%	0%	4%	0%	0%	0%	0%	4%	0%
Turn Type	Perm	pm+pt		Perm	Perm		Perm		Perm	Perm		
Protected Phases		7	4			8					2	
Permitted Phases	4	4		4	8		8		2	2		
Actuated Green, G (s)		46.0	46.0	46.0	28.0	28.0	28.0			44.0	44.0	
Effective Green, g (s)		46.0	46.0	46.0	28.0	28.0	28.0			44.0	44.0	
Actuated g/C Ratio		0.35	0.35	0.35	0.22	0.22	0.22			0.34	0.34	
Clearance Time (s)		3.5	4.0	4.0	4.0	4.0	4.0			4.0	4.0	
Lane Grp Cap (vph)		232	613	541	175	373	304			95	1100	
v/s Ratio Prot		0.04	c0.24			c0.27					0.13	
v/s Ratio Perm		0.08		0.00	0.03		0.11			c0.49		
v/c Ratio		0.32	0.69	0.01	0.15	1.23	0.49			1.44	0.39	
Uniform Delay, d1		31.5	35.8	27.3	41.4	51.0	44.7			43.0	32.7	
Progression Factor		1.00	1.00	1.00	0.89	0.90	0.86			1.00	1.00	
Incremental Delay, d2		3.7	6.1	0.0	1.7	124.1	4.9			248.4	1.0	
Delay (s)		35.2	41.9	27.3	38.4	169.9	43.2			291.4	33.7	
Level of Service		D	D	C	D	F	D			F	C	
Approach Delay (s)			40.4			130.6					96.1	
Approach LOS			D			F					F	

Intersection Summary			
HCM Average Control Delay	131.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.34		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	104.2%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1014: 103rd Street & Vincennes Avenue

1/14/2013

Movement	SBL	SBT	SBR	SBR2	SEL2	SEL	SER	SER2
Lane Configurations	↖	↑↱				↰	↗↰	
Volume (vph)	107	571	82	103	4	114	607	197
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.5	4.5				4.5	4.5	
Lane Util. Factor	1.00	0.95				1.00	0.88	
Frpb, ped/bikes	1.00	1.00				1.00	1.00	
Flpb, ped/bikes	1.00	1.00				1.00	1.00	
Frt	1.00	0.96				1.00	0.85	
Flt Protected	0.95	1.00				0.95	1.00	
Satd. Flow (prot)	1706	3246				1710	2633	
Flt Permitted	0.41	1.00				0.95	1.00	
Satd. Flow (perm)	729	3246				1710	2633	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	119	634	91	114	4	127	674	219
RTOR Reduction (vph)	0	9	0	0	0	0	21	0
Lane Group Flow (vph)	119	830	0	0	0	131	872	0
Confl. Peds. (#/hr)	3							
Heavy Vehicles (%)	0%	2%	0%	0%	0%	0%	3%	0%
Turn Type	Perm				Split		Perm	
Protected Phases		6			9	9		
Permitted Phases	6						9	
Actuated Green, G (s)	43.5	43.5				27.5	27.5	
Effective Green, g (s)	43.5	43.5				27.5	27.5	
Actuated g/C Ratio	0.33	0.33				0.21	0.21	
Clearance Time (s)	4.5	4.5				4.5	4.5	
Lane Grp Cap (vph)	244	1086				362	557	
v/s Ratio Prot		0.26				0.08		
v/s Ratio Perm	0.16						c0.33	
v/c Ratio	0.49	0.76				0.36	1.57	
Uniform Delay, d1	34.4	38.7				43.8	51.2	
Progression Factor	1.00	1.00				1.00	1.00	
Incremental Delay, d2	6.8	5.1				2.8	262.9	
Delay (s)	41.2	43.8				46.6	314.2	
Level of Service	D	D				D	F	
Approach Delay (s)		43.5				279.9		
Approach LOS		D				F		

Intersection Summary

HCM Signalized Intersection Capacity Analysis
1015: 103rd Street & Morgan Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰			↱			✣				
Volume (vph)	65	602	0	0	506	50	85	52	18	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	11	11	11	16	11	12	15	12	12	15	12
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		1.00			0.99			0.98				
Flt Protected		1.00			1.00			0.97				
Satd. Flow (prot)		1681			1956			1842				
Flt Permitted		0.90			1.00			0.97				
Satd. Flow (perm)		1523			1956			1842				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	72	669	0	0	562	56	94	58	20	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	741	0	0	618	0	0	172	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)		40.0			40.0			17.0				
Effective Green, g (s)		40.0			40.0			17.0				
Actuated g/C Ratio		0.62			0.62			0.26				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		937			1204			482				
v/s Ratio Prot					0.32							
v/s Ratio Perm		c0.49						0.09				
v/c Ratio		0.79			0.51			0.36				
Uniform Delay, d1		9.4			7.0			19.5				
Progression Factor		0.99			1.00			1.00				
Incremental Delay, d2		5.8			1.6			2.1				
Delay (s)		15.1			8.6			21.6				
Level of Service		B			A			C				
Approach Delay (s)		15.1			8.6			21.6			0.0	
Approach LOS		B			A			C			A	

Intersection Summary			
HCM Average Control Delay	13.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	87.6%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1016: 103rd Street & Halsted Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑	↱		↰↑	↱	↰	↑↑	↱	↰	↑↑	↱
Volume (vph)	71	427	162	117	335	125	106	639	84	137	759	94
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	10	10	9	9	10	9
Total Lost time (s)		4.0	4.0		4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		1.00	0.96		1.00	0.97	1.00	1.00	0.94	1.00	1.00	0.93
Flpb, ped/bikes		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.99	1.00		0.99	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1985	1443		1953	1457	1547	3040	1285	1506	3069	1237
Flt Permitted		0.69	1.00		0.66	1.00	0.17	1.00	1.00	0.23	1.00	1.00
Satd. Flow (perm)		1373	1443		1299	1457	282	3040	1285	357	3069	1237
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	75	449	171	123	353	132	112	673	88	144	799	99
RTOR Reduction (vph)	0	0	83	0	0	74	0	0	53	0	0	50
Lane Group Flow (vph)	0	524	88	0	476	58	112	673	35	144	799	49
Confl. Peds. (#/hr)	24		45	45		24	36		24	24		36
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	2%	2%	2%	2%	3%	2%	3%	5%	1%	2%	4%	3%
Turn Type	pm+pt		Perm	Perm		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)		54.0	54.0		46.0	46.0	39.0	33.0	33.0	41.0	34.0	34.0
Effective Green, g (s)		54.0	54.0		46.0	46.0	39.0	33.0	33.0	41.0	34.0	34.0
Actuated g/C Ratio		0.51	0.51		0.44	0.44	0.37	0.31	0.31	0.39	0.32	0.32
Clearance Time (s)		4.0	4.0		4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		735	742		569	638	177	955	404	216	994	401
v/s Ratio Prot		c0.03					0.04	0.22		c0.04	c0.26	
v/s Ratio Perm		0.33	0.06		c0.37	0.04	0.20		0.03	0.22		0.04
v/c Ratio		0.71	0.12		0.84	0.09	0.63	0.70	0.09	0.67	0.80	0.12
Uniform Delay, d1		19.6	13.2		26.2	17.3	24.0	31.7	25.4	22.9	32.5	25.0
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.50	1.34	2.07
Incremental Delay, d2		5.8	0.3		13.7	0.3	7.2	4.4	0.4	7.3	6.6	0.6
Delay (s)		25.4	13.5		39.8	17.5	31.2	36.1	25.8	41.6	50.1	52.3
Level of Service		C	B		D	B	C	D	C	D	D	D
Approach Delay (s)		22.5			35.0			34.4			49.1	
Approach LOS		C			C			C			D	

Intersection Summary			
HCM Average Control Delay	36.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	95.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1017: 103rd Street & Normal Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣				
Volume (vph)	85	486	99	94	468	94	55	61	69	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	15	12	12	15	12
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		0.98			0.98			0.95				
Flt Protected		0.99			0.99			0.99				
Satd. Flow (prot)		1645			1645			1799				
Flt Permitted		0.85			0.83			0.99				
Satd. Flow (perm)		1411			1381			1799				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	94	540	110	104	520	104	61	68	77	0	0	0
RTOR Reduction (vph)	0	10	0	0	9	0	0	33	0	0	0	0
Lane Group Flow (vph)	0	734	0	0	719	0	0	173	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm			Perm					
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Actuated Green, G (s)		40.0			40.0			17.0				
Effective Green, g (s)		40.0			40.0			17.0				
Actuated g/C Ratio		0.62			0.62			0.26				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		868			850			471				
v/s Ratio Prot												
v/s Ratio Perm		c0.52			0.52			0.10				
v/c Ratio		0.85			0.85			0.37				
Uniform Delay, d1		10.0			10.0			19.6				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		10.0			10.1			2.2				
Delay (s)		20.0			20.1			21.8				
Level of Service		B			C			C				
Approach Delay (s)		20.0			20.1			21.8			0.0	
Approach LOS		B			C			C			A	

Intersection Summary			
HCM Average Control Delay	20.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	69.7%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1018: 103rd Street & Wentworth Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱		↰	↱		✥	
Volume (vph)	53	485	82	76	525	37	39	76	72	54	238	55
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	11	12	12	15	12
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frpb, ped/bikes		1.00	0.96		1.00	0.96		1.00	0.96		0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		0.99	1.00		1.00	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		0.98	
Flt Protected		1.00	1.00		0.99	1.00		0.98	1.00		0.99	
Satd. Flow (prot)		1685	1382		1713	1417		1685	1455		1879	
Flt Permitted		0.89	1.00		0.85	1.00		0.82	1.00		0.94	
Satd. Flow (perm)		1505	1382		1459	1417		1404	1455		1774	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	56	511	86	80	553	39	41	80	76	57	251	58
RTOR Reduction (vph)	0	0	37	0	0	12	0	0	52	0	9	0
Lane Group Flow (vph)	0	567	49	0	633	27	0	121	24	0	357	0
Confl. Peds. (#/hr)	25		19	19		25	36		30	30		36
Confl. Bikes (#/hr)	1		2	2		1	3					3
Heavy Vehicles (%)	0%	3%	3%	0%	1%	0%	0%	1%	1%	0%	1%	0%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		43.0	43.0		43.0	43.0		24.0	24.0		24.0	
Effective Green, g (s)		43.0	43.0		43.0	43.0		24.0	24.0		24.0	
Actuated g/C Ratio		0.57	0.57		0.57	0.57		0.32	0.32		0.32	
Clearance Time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	
Lane Grp Cap (vph)		863	792		836	812		449	466		568	
v/s Ratio Prot												
v/s Ratio Perm		0.38	0.04		c0.43	0.02		0.09	0.02		c0.20	
v/c Ratio		0.66	0.06		0.76	0.03		0.27	0.05		0.63	
Uniform Delay, d1		11.0	7.1		12.1	7.0		19.0	17.6		21.7	
Progression Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2		3.9	0.2		6.3	0.1		1.5	0.2		5.2	
Delay (s)		14.8	7.2		18.4	7.0		20.4	17.8		26.9	
Level of Service		B	A		B	A		C	B		C	
Approach Delay (s)		13.8			17.7			19.4			26.9	
Approach LOS		B			B			B			C	

Intersection Summary			
HCM Average Control Delay	18.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	100.7%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1019: 103rd Street & State Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑	↱	↰	↑	↱
Volume (vph)	59	483	34	45	537	54	45	165	55	123	210	33
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	11	16	8	10	10	10	10	10	10
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00	0.98	1.00	1.00	0.98
Flpb, ped/bikes	0.98	1.00		1.00	1.00		0.99	1.00	1.00	0.99	1.00	1.00
Frt	1.00	0.99		1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1533	3066		1652	3730		1585	1663	1370	1568	1680	1397
Flt Permitted	0.35	1.00		0.40	1.00		0.57	1.00	1.00	0.63	1.00	1.00
Satd. Flow (perm)	563	3066		687	3730		953	1663	1370	1043	1680	1397
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	66	537	38	50	597	60	50	183	61	137	233	37
RTOR Reduction (vph)	0	8	0	0	12	0	0	0	37	0	0	22
Lane Group Flow (vph)	66	567	0	50	645	0	50	183	24	137	233	15
Confl. Peds. (#/hr)	51		3	3		51	13		13	13		13
Heavy Vehicles (%)	2%	3%	3%	0%	2%	0%	0%	1%	2%	1%	0%	0%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	31.0	31.0		31.0	31.0		26.0	26.0	26.0	26.0	26.0	26.0
Effective Green, g (s)	31.0	31.0		31.0	31.0		26.0	26.0	26.0	26.0	26.0	26.0
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.40	0.40	0.40	0.40	0.40	0.40
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	269	1462		328	1779		381	665	548	417	672	559
v/s Ratio Prot		c0.19			0.17			0.11			c0.14	
v/s Ratio Perm	0.12			0.07			0.05		0.02	0.13		0.01
v/c Ratio	0.25	0.39		0.15	0.36		0.13	0.28	0.04	0.33	0.35	0.03
Uniform Delay, d1	10.1	10.9		9.6	10.8		12.3	13.1	11.9	13.5	13.6	11.8
Progression Factor	1.00	1.00		1.00	1.00		0.83	0.89	0.73	0.59	0.59	0.26
Incremental Delay, d2	2.2	0.8		1.0	0.6		0.7	1.0	0.2	2.0	1.4	0.1
Delay (s)	12.2	11.7		10.6	11.3		11.0	12.7	8.8	9.9	9.4	3.1
Level of Service	B	B		B	B		B	B	A	A	A	A
Approach Delay (s)		11.7			11.3			11.6			9.0	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM Average Control Delay	11.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	55.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1020: 103rd Street & Michigan Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	60	409	81	73	394	67	57	180	64	89	245	80
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	11	10	11	11	10	11	11	10	11	11
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.98		1.00	0.99		1.00	0.98		1.00	0.99	
Flpb, ped/bikes	0.97	1.00		0.95	1.00		0.99	1.00		0.96	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.96		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1329	3134		1519	3128		1580	2919		1452	2997	
Flt Permitted	0.44	1.00		0.42	1.00		0.53	1.00		0.59	1.00	
Satd. Flow (perm)	619	3134		678	3128		882	2919		907	2997	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	63	431	85	77	415	71	60	189	67	94	258	84
RTOR Reduction (vph)	0	0	0	0	0	0	0	39	0	0	42	0
Lane Group Flow (vph)	63	516	0	77	486	0	60	217	0	94	300	0
Confl. Peds. (#/hr)	112		99	99		112	23		53	53		23
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	16%	1%	0%	0%	1%	9%	0%	8%	2%	5%	5%	7%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	36.0	36.0		36.0	36.0		31.0	31.0		31.0	31.0	
Effective Green, g (s)	36.0	36.0		36.0	36.0		31.0	31.0		31.0	31.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.41	0.41		0.41	0.41	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	297	1504		325	1501		365	1207		375	1239	
v/s Ratio Prot		c0.16			0.16			0.07			0.10	
v/s Ratio Perm	0.10			0.11			0.07			c0.10		
v/c Ratio	0.21	0.34		0.24	0.32		0.16	0.18		0.25	0.24	
Uniform Delay, d1	11.3	12.1		11.4	12.0		13.8	13.9		14.4	14.3	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.6	0.6		1.7	0.6		1.0	0.3		1.6	0.5	
Delay (s)	12.9	12.8		13.2	12.6		14.8	14.3		16.0	14.8	
Level of Service	B	B		B	B		B	B		B	B	
Approach Delay (s)		12.8			12.7			14.4			15.1	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	13.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	51.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1021: 103rd Street & Martin Luther King Jr Drive

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱		↰	↑↱		↰	↑↱	
Volume (vph)	96	439	62	32	522	48	86	203	60	76	473	109
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	12	8	16	12	9	10	10	9	10	10
Total Lost time (s)	3.0	7.0		3.0	7.0		3.0	7.0		3.0	7.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.98		1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.99		1.00	0.97		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1595	1652		1370	1973		1534	2998		1535	3013	
Flt Permitted	0.24	1.00		0.31	1.00		0.28	1.00		0.58	1.00	
Satd. Flow (perm)	405	1652		447	1973		453	2998		939	3013	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	101	462	65	34	549	51	91	214	63	80	498	115
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	101	527	0	34	600	0	91	277	0	80	613	0
Confl. Peds. (#/hr)	21		95	95		21	36		8	8		36
Confl. Bikes (#/hr)	2		3	3		2	2					2
Heavy Vehicles (%)	0%	2%	0%	7%	2%	0%	0%	3%	0%	0%	2%	1%
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	43.9	39.3		40.7	37.7		26.7	21.8		26.7	21.8	
Effective Green, g (s)	43.9	37.3		40.7	35.7		26.7	19.8		26.7	19.8	
Actuated g/C Ratio	0.52	0.44		0.48	0.42		0.31	0.23		0.31	0.23	
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	5.0		3.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	274	725		247	829		205	698		329	702	
v/s Ratio Prot	c0.02	c0.32		0.00	0.30		c0.03	0.09		0.01	c0.20	
v/s Ratio Perm	0.17			0.06			0.11			0.06		
v/c Ratio	0.37	0.73		0.14	0.72		0.44	0.40		0.24	0.87	
Uniform Delay, d1	23.5	19.7		20.2	20.5		29.2	27.6		21.9	31.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.8	6.3		0.3	5.5		1.5	1.7		0.4	14.2	
Delay (s)	24.4	25.9		20.4	26.0		30.7	29.2		22.2	45.5	
Level of Service	C	C		C	C		C	C		C	D	
Approach Delay (s)		25.7			25.7			29.6			42.9	
Approach LOS		C			C			C			D	

Intersection Summary			
HCM Average Control Delay	31.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	79.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1022: 103rd Street & Cottage Grove Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	75	393	65	117	509	118	67	158	58	127	367	82
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	11	11	11	11	12	12	10	10	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		0.99	1.00	
Frt		0.98			0.98		1.00	0.96		1.00	0.97	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3681			3131		1652	3237		1549	3027	
Flt Permitted		0.71			0.72		0.42	1.00		0.60	1.00	
Satd. Flow (perm)		2643			2282		737	3237		983	3027	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	83	437	72	130	566	131	74	176	64	141	408	91
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	592	0	0	827	0	74	240	0	141	499	0
Confl. Peds. (#/hr)	23		30	30		23	1		20	20		1
Confl. Bikes (#/hr)	3					3						
Heavy Vehicles (%)	0%	3%	0%	2%	2%	0%	0%	1%	0%	2%	2%	3%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		33.0			33.0		32.0	32.0		32.0	32.0	
Effective Green, g (s)		34.0			34.0		33.0	33.0		33.0	33.0	
Actuated g/C Ratio		0.45			0.45		0.44	0.44		0.44	0.44	
Clearance Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)		1198			1035		324	1424		433	1332	
v/s Ratio Prot								0.07			c0.16	
v/s Ratio Perm		0.22			c0.36		0.10			0.14		
v/c Ratio		0.49			0.80		0.23	0.17		0.33	0.37	
Uniform Delay, d1		14.4			17.6		13.1	12.7		13.7	14.1	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		1.5			6.5		1.6	0.3		2.0	0.8	
Delay (s)		15.9			24.0		14.7	13.0		15.7	14.9	
Level of Service		B			C		B	B		B	B	
Approach Delay (s)		15.9			24.0			13.4			15.1	
Approach LOS		B			C			B			B	

Intersection Summary			
HCM Average Control Delay	18.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	73.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1023: 103rd Street & Woodlawn Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑↱		↰	↑↑	↱		↰↑↱			↰↑↑↱	
Volume (vph)	98	871	6	20	584	249	1	1	9	213	1	80
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	12	12	12	12	12	12	13	13	13
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00			0.95	
Frt	1.00	1.00		1.00	1.00	0.85		0.89			0.96	
Flt Protected	0.95	1.00		0.95	1.00	1.00		1.00			0.97	
Satd. Flow (prot)	1605	3206		1660	3320	1485		1545			3176	
Flt Permitted	0.38	1.00		0.25	1.00	1.00		0.98			0.77	
Satd. Flow (perm)	648	3206		436	3320	1485		1519			2533	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	109	968	7	22	649	277	1	1	10	237	1	89
RTOR Reduction (vph)	0	0	0	0	0	103	0	7	0	0	52	0
Lane Group Flow (vph)	109	975	0	22	649	174	0	5	0	0	275	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	46.1	46.1		46.1	46.1	46.1		19.5			19.5	
Effective Green, g (s)	46.1	46.1		46.1	46.1	46.1		19.5			19.5	
Actuated g/C Ratio	0.63	0.63		0.63	0.63	0.63		0.26			0.26	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		8.0			8.0	
Lane Grp Cap (vph)	406	2008		273	2080	930		402			671	
v/s Ratio Prot		c0.30			0.20							
v/s Ratio Perm	0.17			0.05		0.12		0.00			c0.11	
v/c Ratio	0.27	0.49		0.08	0.31	0.19		0.01			0.41	
Uniform Delay, d1	6.2	7.4		5.4	6.4	5.8		19.9			22.3	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00			1.00	
Incremental Delay, d2	1.6	0.8		0.6	0.4	0.4		0.0			1.7	
Delay (s)	7.8	8.2		6.0	6.8	6.3		20.0			24.0	
Level of Service	A	A		A	A	A		B			C	
Approach Delay (s)		8.2			6.6			20.0			24.0	
Approach LOS		A			A			B			C	

Intersection Summary			
HCM Average Control Delay	9.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	73.6	Sum of lost time (s)	8.0
Intersection Capacity Utilization	58.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1024: 107th Street & Halsted Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱		↰	↑↑	↱	↰	↑↑	↱
Volume (vph)	131	228	125	94	163	56	144	907	90	129	825	98
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	9	12	10	10	12	9	10	9	9	10	9
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00	0.97	1.00	1.00	0.96
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.95		1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1560	1504		1563	1585		1493	3069	1337	1523	3099	1318
Flt Permitted	0.45	1.00		0.20	1.00		0.20	1.00	1.00	0.16	1.00	1.00
Satd. Flow (perm)	743	1504		337	1585		317	3069	1337	263	3099	1318
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	138	240	132	99	172	59	152	955	95	136	868	103
RTOR Reduction (vph)	0	23	0	0	15	0	0	0	40	0	0	48
Lane Group Flow (vph)	138	349	0	99	216	0	152	955	55	136	868	55
Confl. Peds. (#/hr)	10		13	13		10	18		7	7		18
Confl. Bikes (#/hr)	2					2	2		1	1		2
Heavy Vehicles (%)	2%	1%	1%	2%	1%	2%	3%	4%	0%	1%	3%	0%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	28.0	21.0		28.0	21.0		42.0	35.0	35.0	42.0	35.0	35.0
Effective Green, g (s)	26.0	22.0		26.0	22.0		40.0	35.0	35.0	40.0	35.0	35.0
Actuated g/C Ratio	0.31	0.26		0.31	0.26		0.47	0.41	0.41	0.47	0.41	0.41
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)	285	389		190	410		232	1264	551	213	1276	543
v/s Ratio Prot	0.03	c0.23		c0.04	0.14		c0.05	c0.31		0.05	0.28	
v/s Ratio Perm	0.11			0.12			0.26		0.04	0.26		0.04
v/c Ratio	0.48	0.90		0.52	0.53		0.66	0.76	0.10	0.64	0.68	0.10
Uniform Delay, d1	22.7	30.4		22.9	27.0		14.7	21.3	15.3	15.0	20.4	15.4
Progression Factor	1.00	1.00		1.00	1.00		0.67	0.79	0.53	1.00	1.00	1.00
Incremental Delay, d2	5.8	25.9		9.9	4.8		12.3	3.8	0.3	13.8	2.9	0.4
Delay (s)	28.4	56.3		32.7	31.8		22.1	20.7	8.5	28.8	23.4	15.7
Level of Service	C	E		C	C		C	C	A	C	C	B
Approach Delay (s)		48.8			32.1			19.9			23.3	
Approach LOS		D			C			B			C	

Intersection Summary			
HCM Average Control Delay	27.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	74.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			✥			✥	
Volume (vph)	22	181	37	20	173	22	33	149	40	46	255	50
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	14	12	12	14	12	12	16	12	12	16	12
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		0.99			1.00			1.00			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.98			0.99			0.98			0.98	
Flt Protected		1.00			1.00			0.99			0.99	
Satd. Flow (prot)		1837			1848			1938			1975	
Flt Permitted		0.97			0.96			0.92			0.94	
Satd. Flow (perm)		1781			1790			1800			1869	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	23	187	38	21	178	23	34	154	41	47	263	52
RTOR Reduction (vph)	0	10	0	0	6	0	0	12	0	0	9	0
Lane Group Flow (vph)	0	238	0	0	216	0	0	217	0	0	353	0
Confl. Peds. (#/hr)	18		34	34		18	16		19	19		16
Confl. Bikes (#/hr)			6	6			1		4	4		1
Heavy Vehicles (%)	0%	1%	0%	5%	1%	0%	0%	2%	0%	0%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		27.0			27.0			30.0			30.0	
Effective Green, g (s)		27.0			27.0			30.0			30.0	
Actuated g/C Ratio		0.42			0.42			0.46			0.46	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		740			744			831			863	
v/s Ratio Prot												
v/s Ratio Perm		c0.13			0.12			0.12			c0.19	
v/c Ratio		0.32			0.29			0.26			0.41	
Uniform Delay, d1		12.8			12.6			10.7			11.6	
Progression Factor		1.00			0.70			1.22			1.00	
Incremental Delay, d2		1.1			1.0			0.7			1.4	
Delay (s)		14.0			9.8			13.8			13.0	
Level of Service		B			A			B			B	
Approach Delay (s)		14.0			9.8			13.8			13.0	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM Average Control Delay	12.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	51.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1026: 107th Street & State Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	24	193	39	25	180	19	49	200	31	43	214	39
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	0.97	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	0.99		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1496	3057		1577	3119		1518	3119		1550	3076	
Flt Permitted	0.61	1.00		0.59	1.00		0.58	1.00		0.59	1.00	
Satd. Flow (perm)	966	3057		984	3119		926	3119		968	3076	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	27	214	43	28	200	21	54	222	34	48	238	43
RTOR Reduction (vph)	0	26	0	0	12	0	0	14	0	0	18	0
Lane Group Flow (vph)	27	231	0	28	209	0	54	242	0	48	263	0
Confl. Peds. (#/hr)	20		17	17		20	2					2
Confl. Bikes (#/hr)	32		36	36		32	22		25	25		22
Heavy Vehicles (%)	4%	1%	0%	0%	0%	0%	5%	0%	0%	3%	1%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.0	20.0		20.0	20.0		39.0	39.0		39.0	39.0	
Effective Green, g (s)	19.0	19.0		19.0	19.0		38.0	38.0		38.0	38.0	
Actuated g/C Ratio	0.29	0.29		0.29	0.29		0.58	0.58		0.58	0.58	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	282	894		288	912		541	1823		566	1798	
v/s Ratio Prot		c0.08			0.07			0.08			c0.09	
v/s Ratio Perm	0.03			0.03			0.06			0.05		
v/c Ratio	0.10	0.26		0.10	0.23		0.10	0.13		0.08	0.15	
Uniform Delay, d1	16.7	17.6		16.8	17.4		6.0	6.1		5.9	6.1	
Progression Factor	0.93	0.97		0.73	0.73		1.32	1.32		0.38	0.34	
Incremental Delay, d2	0.6	0.7		0.7	0.6		0.4	0.1		0.3	0.2	
Delay (s)	16.2	17.7		12.9	13.3		8.2	8.2		2.5	2.3	
Level of Service	B	B		B	B		A	A		A	A	
Approach Delay (s)		17.5			13.2			8.2			2.3	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	9.9	HCM Level of Service	A
HCM Volume to Capacity ratio	0.18		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	46.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1027: 107th Street & Michigan Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			✥			✥	
Volume (vph)	67	168	42	25	159	38	27	247	16	40	322	33
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	9	9	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	
Flpb, ped/bikes	0.99	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.97		1.00	0.97			0.99			0.99	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1555	3056		1525	2937			1922			1938	
Flt Permitted	0.61	1.00		0.61	1.00			0.94			0.94	
Satd. Flow (perm)	1007	3056		973	2937			1823			1840	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	74	187	47	28	177	42	30	274	18	44	358	37
RTOR Reduction (vph)	0	28	0	0	25	0	0	3	0	0	5	0
Lane Group Flow (vph)	74	206	0	28	194	0	0	319	0	0	434	0
Confl. Peds. (#/hr)	11		17	17		11	26		7	7		26
Heavy Vehicles (%)	2%	1%	0%	0%	1%	3%	4%	5%	0%	0%	4%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	26.0	26.0		26.0	26.0			31.0			31.0	
Effective Green, g (s)	26.0	26.0		26.0	26.0			31.0			31.0	
Actuated g/C Ratio	0.40	0.40		0.40	0.40			0.48			0.48	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	403	1222		389	1175			869			878	
v/s Ratio Prot		0.07			0.07							
v/s Ratio Perm	c0.07			0.03				0.17			c0.24	
v/c Ratio	0.18	0.17		0.07	0.16			0.37			0.49	
Uniform Delay, d1	12.6	12.5		12.0	12.5			10.8			11.6	
Progression Factor	1.04	0.99		0.80	0.80			1.08			1.00	
Incremental Delay, d2	1.0	0.3		0.3	0.3			1.2			2.0	
Delay (s)	14.1	12.7		10.0	10.3			12.8			13.6	
Level of Service	B	B		A	B			B			B	
Approach Delay (s)		13.0			10.2			12.8			13.6	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	12.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	57.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1028: 107th Street & Martin Luther King Jr Drive

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱			✥			✥	
Volume (vph)	47	111	28	20	161	27	41	235	11	33	364	57
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	16	12	10	16	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	
Flpb, ped/bikes	1.00	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.97		1.00	0.98			0.99			0.98	
Flt Protected	0.95	1.00		0.95	1.00			0.99			1.00	
Satd. Flow (prot)	1652	1970		1584	1975			1981			1979	
Flt Permitted	0.57	1.00		0.65	1.00			0.90			0.96	
Satd. Flow (perm)	986	1970		1087	1975			1792			1912	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	52	123	31	22	179	30	46	261	12	37	404	63
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	52	154	0	22	209	0	0	319	0	0	504	0
Confl. Peds. (#/hr)	1		10	10		1	2		5	5		2
Heavy Vehicles (%)	0%	0%	0%	0%	1%	0%	0%	2%	0%	0%	1%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.0	20.0		20.0	20.0			37.0			37.0	
Effective Green, g (s)	20.0	20.0		20.0	20.0			37.0			37.0	
Actuated g/C Ratio	0.31	0.31		0.31	0.31			0.57			0.57	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	303	606		334	608			1020			1088	
v/s Ratio Prot		0.08			c0.11							
v/s Ratio Perm	0.05			0.02				0.18			c0.26	
v/c Ratio	0.17	0.25		0.07	0.34			0.31			0.46	
Uniform Delay, d1	16.4	16.9		15.9	17.4			7.3			8.2	
Progression Factor	0.83	0.81		0.96	0.98			0.82			1.00	
Incremental Delay, d2	1.2	1.0		0.4	1.5			0.8			1.4	
Delay (s)	14.8	14.6		15.6	18.7			6.8			9.6	
Level of Service	B	B		B	B			A			A	
Approach Delay (s)		14.7			18.4			6.8			9.6	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	11.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱		↰	↑	↱	↰	↑	↱
Volume (vph)	54	13	97	2	5	10	62	235	5	5	466	76
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	10	10	10	11	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.98		1.00	0.98		1.00	1.00	1.00	1.00	1.00	0.98
Flpb, ped/bikes	0.99	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.87		1.00	0.90		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1695	1727		1702	1808		1594	1647	1428	1653	2000	1496
Flt Permitted	0.75	1.00		0.68	1.00		0.39	1.00	1.00	0.59	1.00	1.00
Satd. Flow (perm)	1332	1727		1216	1808		660	1647	1428	1030	2000	1496
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	60	14	108	2	6	11	69	261	6	6	518	84
RTOR Reduction (vph)	0	78	0	0	8	0	0	0	2	0	0	28
Lane Group Flow (vph)	60	44	0	2	9	0	69	261	4	6	518	56
Confl. Peds. (#/hr)	5		5	5		5	3					3
Heavy Vehicles (%)	0%	0%	1%	0%	0%	0%	0%	2%	0%	0%	2%	0%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	17.0	17.0		17.0	17.0		39.0	39.0	39.0	39.0	39.0	39.0
Effective Green, g (s)	18.0	18.0		18.0	18.0		39.0	39.0	39.0	39.0	39.0	39.0
Actuated g/C Ratio	0.28	0.28		0.28	0.28		0.60	0.60	0.60	0.60	0.60	0.60
Clearance Time (s)	5.0	5.0		5.0	5.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	369	478		337	501		396	988	857	618	1200	898
v/s Ratio Prot		0.03			0.01			0.16			c0.26	
v/s Ratio Perm	c0.05			0.00			0.10		0.00	0.01		0.04
v/c Ratio	0.16	0.09		0.01	0.02		0.17	0.26	0.00	0.01	0.43	0.06
Uniform Delay, d1	17.8	17.4		17.0	17.1		5.8	6.2	5.2	5.2	7.0	5.4
Progression Factor	1.39	2.73		1.00	1.00		1.18	1.10	1.46	1.00	1.00	1.00
Incremental Delay, d2	0.9	0.4		0.0	0.1		0.7	0.5	0.0	0.0	1.1	0.1
Delay (s)	25.7	48.0		17.1	17.1		7.6	7.3	7.6	5.3	8.2	5.5
Level of Service	C	D		B	B		A	A	A	A	A	A
Approach Delay (s)		40.6			17.1			7.4			7.8	
Approach LOS		D			B			A			A	

Intersection Summary			
HCM Average Control Delay	13.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	52.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1030: 111th Street & Marshield Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱		↰	↑↑			↑		↰	↑↱	
Volume (vph)	0	255	163	198	215	0	0	0	0	111	470	377
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	12	12	12	12	12	11	11	12
Total Lost time (s)		4.0		3.0	3.0					5.0	5.0	
Lane Util. Factor		0.95		1.00	0.95					1.00	0.95	
Frpb, ped/bikes		0.99		1.00	1.00					1.00	0.99	
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	
Frt		0.94		1.00	1.00					1.00	0.93	
Flt Protected		1.00		0.95	1.00					0.95	1.00	
Satd. Flow (prot)		2905		1693	3288					1503	3021	
Flt Permitted		1.00		0.40	1.00					0.95	1.00	
Satd. Flow (perm)		2905		719	3288					1503	3021	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	268	172	208	226	0	0	0	0	117	495	397
RTOR Reduction (vph)	0	101	0	0	0	0	0	0	0	0	141	0
Lane Group Flow (vph)	0	339	0	208	226	0	0	0	0	117	751	0
Confl. Peds. (#/hr)	18		3	3		18	1					1
Heavy Vehicles (%)	0%	4%	1%	1%	4%	0%	0%	0%	0%	10%	2%	1%
Turn Type				D.P+P						Split		
Protected Phases		8		7	7 8					6	6	
Permitted Phases				8								
Actuated Green, G (s)		33.0		53.0	56.0					37.0	37.0	
Effective Green, g (s)		33.0		53.0	56.0					37.0	37.0	
Actuated g/C Ratio		0.32		0.52	0.55					0.36	0.36	
Clearance Time (s)		4.0		3.0						5.0	5.0	
Lane Grp Cap (vph)		940		565	1805					545	1096	
v/s Ratio Prot		0.12		c0.07	0.07					0.08	c0.25	
v/s Ratio Perm				c0.12								
v/c Ratio		0.36		0.37	0.13					0.21	0.68	
Uniform Delay, d1		26.4		13.7	11.1					22.5	27.6	
Progression Factor		1.00		2.23	2.15					1.00	1.00	
Incremental Delay, d2		1.1		1.6	0.1					0.9	3.5	
Delay (s)		27.5		32.0	24.0					23.4	31.0	
Level of Service		C		C	C					C	C	
Approach Delay (s)		27.5			27.9			0.0			30.1	
Approach LOS		C			C			A			C	

Intersection Summary			
HCM Average Control Delay	29.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	102.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	62.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1031: 111th Street & Hamlet Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑			↑↱		↰	↑	↱			
Volume (vph)	141	225	0	0	336	119	77	539	236	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	9	12	13	12	13	12	12	12
Total Lost time (s)	4.0	4.0			4.0		5.0	5.0	5.0			
Lane Util. Factor	1.00	0.95			0.95		1.00	1.00	1.00			
Frpb, ped/bikes	1.00	1.00			0.99		1.00	1.00	0.99			
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.96		1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1675	3196			2855		1767	1782	1560			
Flt Permitted	0.32	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	571	3196			2855		1767	1782	1560			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	148	237	0	0	354	125	81	567	248	0	0	0
RTOR Reduction (vph)	0	0	0	0	35	0	0	0	170	0	0	0
Lane Group Flow (vph)	148	237	0	0	444	0	81	567	78	0	0	0
Confl. Peds. (#/hr)	9		13	13		9			1	1		
Confl. Bikes (#/hr)	3					3						
Heavy Vehicles (%)	2%	7%	0%	0%	3%	1%	0%	1%	0%	0%	0%	0%
Turn Type	pm+pt						custom		Perm			
Protected Phases	4	1 4			1		2	2				
Permitted Phases	1 4						2		2			
Actuated Green, G (s)	59.0	63.0			26.0		30.0	30.0	30.0			
Effective Green, g (s)	59.0	63.0			26.0		30.0	30.0	30.0			
Actuated g/C Ratio	0.58	0.62			0.25		0.29	0.29	0.29			
Clearance Time (s)	4.0				4.0		5.0	5.0	5.0			
Lane Grp Cap (vph)	687	1974			728		520	524	459			
v/s Ratio Prot	c0.07	0.07			c0.16		0.05	c0.32				
v/s Ratio Perm	0.05								0.05			
v/c Ratio	0.22	0.12			0.61		0.16	1.08	0.17			
Uniform Delay, d1	10.4	8.1			33.5		26.6	36.0	26.7			
Progression Factor	0.42	0.43			1.00		1.00	1.00	1.00			
Incremental Delay, d2	0.7	0.1			3.8		0.6	63.3	0.8			
Delay (s)	5.0	3.6			37.3		27.3	99.3	27.5			
Level of Service	A	A			D		C	F	C			
Approach Delay (s)		4.1			37.3			73.0			0.0	
Approach LOS		A			D			E			A	

Intersection Summary			
HCM Average Control Delay	48.2	HCM Level of Service	D
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	102.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	63.1%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1032: 112th Place & Marshield Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱		↰	↑↑					↰	↑↑	↱
Volume (vph)	0	517	479	81	534	0	0	0	0	13	436	301
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	11	12	12	12	12	10	10	12
Total Lost time (s)		4.0		4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.95		1.00	0.95					1.00	0.95	1.00
Frpb, ped/bikes		0.99		1.00	1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Frt		0.93		1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00					0.95	1.00	1.00
Satd. Flow (prot)		3099		1710	3306					1596	3192	1530
Flt Permitted		1.00		0.11	1.00					0.95	1.00	1.00
Satd. Flow (perm)		3099		200	3306					1596	3192	1530
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	0	539	499	84	556	0	0	0	0	14	454	314
RTOR Reduction (vph)	0	168	0	0	0	0	0	0	0	0	0	200
Lane Group Flow (vph)	0	870	0	84	556	0	0	0	0	14	454	114
Confl. Peds. (#/hr)	8		8	8		8	3					3
Confl. Bikes (#/hr)	9					9			61	61		
Heavy Vehicles (%)	0%	1%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type				pm+pt						Split		Prot
Protected Phases		8		7	7 8					6	6	6
Permitted Phases				7 8								
Actuated Green, G (s)		36.0		54.0	58.0					34.0	34.0	34.0
Effective Green, g (s)		36.0		54.0	58.0					34.0	34.0	34.0
Actuated g/C Ratio		0.36		0.54	0.58					0.34	0.34	0.34
Clearance Time (s)		4.0		4.0						4.0	4.0	4.0
Lane Grp Cap (vph)		1116		380	1917					543	1085	520
v/s Ratio Prot		c0.28		0.04	c0.17					0.01	c0.14	0.07
v/s Ratio Perm				0.08								
v/c Ratio		0.78		0.22	0.29					0.03	0.42	0.22
Uniform Delay, d1		28.5		14.4	10.6					22.0	25.4	23.5
Progression Factor		1.00		1.01	1.19					1.00	1.00	1.00
Incremental Delay, d2		5.4		0.9	0.3					0.1	1.2	1.0
Delay (s)		33.9		15.5	12.9					22.1	26.6	24.5
Level of Service		C		B	B					C	C	C
Approach Delay (s)		33.9			13.2			0.0			25.7	
Approach LOS		C			B			A			C	

Intersection Summary			
HCM Average Control Delay	25.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	93.6%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↰↑			↑↱		↰	↰	↱			
Volume (vph)	422	104	0	0	150	6	465	480	58	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	12	12	12	10	12	11	11	12	12	12	12
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0	4.0			
Lane Util. Factor	0.91	0.91			0.95		0.95	0.95	1.00			
Frpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.99		1.00	1.00	0.85			
Flt Protected	0.95	0.97			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1469	3109			3170		1555	1653	1530			
Flt Permitted	0.64	0.71			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	992	2286			3170		1555	1653	1530			
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	435	107	0	0	155	6	479	495	60	0	0	0
RTOR Reduction (vph)	0	0	0	0	3	0	0	0	38	0	0	0
Lane Group Flow (vph)	217	325	0	0	158	0	479	495	22	0	0	0
Confl. Peds. (#/hr)	13		6	6		13			8	8		
Confl. Bikes (#/hr)	1					1			2	2		
Heavy Vehicles (%)	2%	1%	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%
Turn Type	pm+pt						custom		custom			
Protected Phases	4	1 4			1		2	2	2			
Permitted Phases	1 4						2		2			
Actuated Green, G (s)	51.0	51.0			15.0		37.0	37.0	37.0			
Effective Green, g (s)	51.0	51.0			15.0		37.0	37.0	37.0			
Actuated g/C Ratio	0.51	0.51			0.15		0.37	0.37	0.37			
Clearance Time (s)	4.0				4.0		4.0	4.0	4.0			
Lane Grp Cap (vph)	678	1462			476		575	612	566			
v/s Ratio Prot	c0.12	0.08			c0.05		c0.31	0.30	0.01			
v/s Ratio Perm	0.05	0.03										
v/c Ratio	0.32	0.22			0.33		0.83	0.81	0.04			
Uniform Delay, d1	14.1	13.5			38.0		28.7	28.3	20.1			
Progression Factor	0.25	0.26			1.00		1.00	1.00	1.00			
Incremental Delay, d2	0.7	0.2			1.9		13.3	11.0	0.1			
Delay (s)	4.2	3.7			39.9		42.0	39.3	20.3			
Level of Service	A	A			D		D	D	C			
Approach Delay (s)		3.9			39.9			39.5			0.0	
Approach LOS		A			D			D			A	

Intersection Summary			
HCM Average Control Delay	28.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	93.6%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1034: 111th Street & Halsted Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱		↰	↑↑	↱	↰	↑↑	↱
Volume (vph)	78	316	117	109	270	111	87	699	76	100	884	65
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	9	10	9	9	10	9
Total Lost time (s)		4.0			4.0		4.0	3.5	4.0	4.0	3.5	4.0
Lane Util. Factor		0.95			0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		0.99			0.99		1.00	1.00	0.97	1.00	1.00	0.96
Flpb, ped/bikes		1.00			1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.97			0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.99			0.99		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		2955			2935		1508	3069	1309	1508	3099	1298
Flt Permitted		0.77			0.72		0.16	1.00	1.00	0.25	1.00	1.00
Satd. Flow (perm)		2281			2151		254	3069	1309	401	3099	1298
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	81	329	122	114	281	116	91	728	79	104	921	68
RTOR Reduction (vph)	0	33	0	0	32	0	0	0	48	0	0	33
Lane Group Flow (vph)	0	499	0	0	479	0	91	728	31	104	921	35
Confl. Peds. (#/hr)	35		30	30		35	34		8	8		34
Confl. Bikes (#/hr)	1					1	1					1
Heavy Vehicles (%)	1%	4%	0%	1%	3%	3%	2%	4%	2%	2%	3%	2%
Turn Type	pm+pt			Perm			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)		35.0			27.0		38.0	33.0	33.0	38.0	33.0	33.0
Effective Green, g (s)		36.0			28.0		36.0	33.5	33.0	36.0	33.5	33.0
Actuated g/C Ratio		0.42			0.33		0.42	0.39	0.39	0.42	0.39	0.39
Clearance Time (s)		5.0			5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)		1014			709		167	1210	508	222	1221	504
v/s Ratio Prot		c0.03					c0.03	0.24		0.02	c0.30	
v/s Ratio Perm		0.17			c0.22		0.21		0.02	0.18		0.03
v/c Ratio		0.49			0.68		0.54	0.60	0.06	0.47	0.75	0.07
Uniform Delay, d1		17.8			24.6		16.8	20.5	16.3	15.9	22.2	16.3
Progression Factor		1.00			1.00		1.48	0.68	0.77	1.11	1.16	1.74
Incremental Delay, d2		1.7			5.1		11.1	2.0	0.2	5.0	3.1	0.2
Delay (s)		19.6			29.7		36.0	16.0	12.8	22.6	29.0	28.6
Level of Service		B			C		D	B	B	C	C	C
Approach Delay (s)		19.6			29.7			17.8			28.3	
Approach LOS		B			C			B			C	

Intersection Summary			
HCM Average Control Delay	23.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	76.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1035: 111th Street & Normal Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰			↱			✥				
Volume (vph)	76	410	0	0	367	84	54	44	33	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		1.00			0.97			0.97				
Flt Protected		0.99			1.00			0.98				
Satd. Flow (prot)		1734			1704			1654				
Flt Permitted		0.87			1.00			0.98				
Satd. Flow (perm)		1519			1704			1654				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	84	456	0	0	408	93	60	49	37	0	0	0
RTOR Reduction (vph)	0	0	0	0	12	0	0	19	0	0	0	0
Lane Group Flow (vph)	0	540	0	0	489	0	0	127	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)		38.0			38.0			19.0				
Effective Green, g (s)		38.0			38.0			19.0				
Actuated g/C Ratio		0.58			0.58			0.29				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		888			996			483				
v/s Ratio Prot					0.29							
v/s Ratio Perm		c0.36						0.08				
v/c Ratio		0.61			0.49			0.26				
Uniform Delay, d1		8.7			7.9			17.6				
Progression Factor		1.00			0.76			1.00				
Incremental Delay, d2		3.1			1.5			1.3				
Delay (s)		11.8			7.5			19.0				
Level of Service		B			A			B				
Approach Delay (s)		11.8			7.5			19.0			0.0	
Approach LOS		B			A			B			A	

Intersection Summary			
HCM Average Control Delay	10.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	70.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			↰↑↑↱			↰↑↑↱	
Volume (vph)	29	374	37	39	369	50	31	118	39	53	150	45
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	10	12	12	10	12
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		1.00			1.00			0.99			0.98	
Flpb, ped/bikes		1.00			1.00			0.99			1.00	
Frt		0.99			0.99			0.97			0.97	
Flt Protected		1.00			1.00			0.99			0.99	
Satd. Flow (prot)		1954			1941			2969			2981	
Flt Permitted		0.95			0.94			0.88			0.86	
Satd. Flow (perm)		1869			1825			2646			2589	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	32	416	41	43	410	56	34	131	43	59	167	50
RTOR Reduction (vph)	0	5	0	0	7	0	0	25	0	0	29	0
Lane Group Flow (vph)	0	484	0	0	502	0	0	183	0	0	247	0
Confl. Peds. (#/hr)	32		25	25		32	59		24	24		59
Confl. Bikes (#/hr)	3		2	2		3	4		2	2		4
Heavy Vehicles (%)	0%	3%	0%	3%	3%	0%	0%	0%	7%	4%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		30.0			30.0			27.0			27.0	
Effective Green, g (s)		30.0			30.0			27.0			27.0	
Actuated g/C Ratio		0.46			0.46			0.42			0.42	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		863			842			1099			1075	
v/s Ratio Prot												
v/s Ratio Perm		0.26			c0.28			0.07			c0.10	
v/c Ratio		0.56			0.60			0.17			0.23	
Uniform Delay, d1		12.7			13.0			11.9			12.3	
Progression Factor		0.56			0.40			1.30			0.44	
Incremental Delay, d2		2.2			2.7			0.3			0.5	
Delay (s)		9.2			7.9			15.8			5.9	
Level of Service		A			A			B			A	
Approach Delay (s)		9.2			7.9			15.8			5.9	
Approach LOS		A			A			B			A	

Intersection Summary			
HCM Average Control Delay	9.1	HCM Level of Service	A
HCM Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	73.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1037: 111th Street & State Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	51	320	49	81	464	86	46	219	98	83	227	65
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	9	10	10	9	10	10	12	10	10	12
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		0.99	1.00		0.99	1.00		0.99	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.95		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1510	3034		1572	3077		1587	2962		1585	3071	
Flt Permitted	0.32	1.00		0.47	1.00		0.56	1.00		0.54	1.00	
Satd. Flow (perm)	505	3034		775	3077		928	2962		903	3071	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	57	356	54	90	516	96	51	243	109	92	252	72
RTOR Reduction (vph)	0	19	0	0	24	0	0	50	0	0	33	0
Lane Group Flow (vph)	57	391	0	90	588	0	51	302	0	92	291	0
Confl. Peds. (#/hr)	20		31	31		20	16		20	20		16
Confl. Bikes (#/hr)							1		3	3		1
Heavy Vehicles (%)	5%	3%	0%	0%	1%	0%	0%	2%	2%	0%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	22.0	22.0		22.0	22.0		35.0	35.0		35.0	35.0	
Effective Green, g (s)	22.0	22.0		22.0	22.0		35.0	35.0		35.0	35.0	
Actuated g/C Ratio	0.34	0.34		0.34	0.34		0.54	0.54		0.54	0.54	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	171	1027		262	1041		500	1595		486	1654	
v/s Ratio Prot		0.13			c0.19			0.10			0.09	
v/s Ratio Perm	0.11			0.12			0.05			c0.10		
v/c Ratio	0.33	0.38		0.34	0.57		0.10	0.19		0.19	0.18	
Uniform Delay, d1	16.0	16.3		16.1	17.6		7.3	7.7		7.7	7.6	
Progression Factor	0.67	0.64		0.95	0.95		0.74	0.64		1.09	1.08	
Incremental Delay, d2	4.6	0.9		3.5	2.2		0.4	0.3		0.9	0.2	
Delay (s)	15.3	11.4		18.8	19.0		5.8	5.2		9.3	8.5	
Level of Service	B	B		B	B		A	A		A	A	
Approach Delay (s)		11.9			19.0			5.3			8.7	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	12.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	51.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			↰↑↱			↰↑↱	
Volume (vph)	59	338	78	87	414	50	46	231	58	46	279	65
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	9	10	9	9	16	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			0.99			0.98	
Flpb, ped/bikes	0.98	1.00		0.99	1.00			0.99			1.00	
Frt	1.00	0.97		1.00	0.98			0.97			0.98	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1509	3016		1430	3722			3485			3519	
Flt Permitted	0.45	1.00		0.48	1.00			0.86			0.88	
Satd. Flow (perm)	712	3016		725	3722			3028			3118	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	62	356	82	92	436	53	48	243	61	48	294	68
RTOR Reduction (vph)	0	30	0	0	15	0	0	27	0	0	25	0
Lane Group Flow (vph)	62	408	0	92	474	0	0	325	0	0	385	0
Confl. Peds. (#/hr)	38		17	17		38	125		53	53		125
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	0%	3%	0%	7%	2%	0%	0%	6%	10%	2%	5%	5%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	31.0	31.0		31.0	31.0			26.0			26.0	
Effective Green, g (s)	31.0	31.0		31.0	31.0			26.0			26.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48			0.40			0.40	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	340	1438		346	1775			1211			1247	
v/s Ratio Prot		c0.14			0.13							
v/s Ratio Perm	0.09			0.13				0.11			c0.12	
v/c Ratio	0.18	0.28		0.27	0.27			0.27			0.31	
Uniform Delay, d1	9.7	10.3		10.2	10.2			13.1			13.3	
Progression Factor	1.59	1.74		1.12	1.11			0.52			0.74	
Incremental Delay, d2	1.1	0.5		1.7	0.3			0.5			0.6	
Delay (s)	16.6	18.3		13.1	11.6			7.3			10.4	
Level of Service	B	B		B	B			A			B	
Approach Delay (s)		18.1			11.9			7.3			10.4	
Approach LOS		B			B			A			B	

Intersection Summary			
HCM Average Control Delay	12.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.29		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	58.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰↱			✣			✣	
Volume (vph)	86	284	91	92	289	92	120	82	47	47	82	119
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	16	12	12	16	12
Total Lost time (s)		5.0	5.0		5.0			5.0			5.0	
Lane Util. Factor		1.00	1.00		0.95			1.00			1.00	
Frt		1.00	0.85		0.97			0.97			0.94	
Flt Protected		0.99	1.00		0.99			0.98			0.99	
Satd. Flow (prot)		1670	1436		3086			1885			1835	
Flt Permitted		0.79	1.00		0.79			0.68			0.90	
Satd. Flow (perm)		1332	1436		2469			1303			1674	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	96	316	101	102	321	102	133	91	52	52	91	132
RTOR Reduction (vph)	0	0	48	0	32	0	0	13	0	0	51	0
Lane Group Flow (vph)	0	412	53	0	493	0	0	263	0	0	224	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm		Perm	Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)		34.0	34.0		34.0			21.0			21.0	
Effective Green, g (s)		34.0	34.0		34.0			21.0			21.0	
Actuated g/C Ratio		0.52	0.52		0.52			0.32			0.32	
Clearance Time (s)		5.0	5.0		5.0			5.0			5.0	
Lane Grp Cap (vph)		697	751		1291			421			541	
v/s Ratio Prot												
v/s Ratio Perm		c0.31	0.04		0.20			c0.20			0.13	
v/c Ratio		0.59	0.07		0.38			0.63			0.41	
Uniform Delay, d1		10.7	7.7		9.2			18.7			17.2	
Progression Factor		1.85	6.02		0.52			1.00			1.00	
Incremental Delay, d2		3.6	0.2		0.8			6.8			2.3	
Delay (s)		23.3	46.4		5.7			25.5			19.5	
Level of Service		C	D		A			C			B	
Approach Delay (s)		27.9			5.7			25.5			19.5	
Approach LOS		C			A			C			B	

Intersection Summary			
HCM Average Control Delay	18.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	79.2%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1040: 111th Street & Martin Luther King Jr Drive

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			↰↑↱			↰↑↱	
Volume (vph)	55	271	28	26	323	60	26	133	47	62	146	63
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	15	8	16	8	8	16	8
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			0.99			1.00	
Flpb, ped/bikes	0.99	1.00		0.98	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.98			0.97			0.97	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1443	3025		1565	3018			3582			3599	
Flt Permitted	0.49	1.00		0.55	1.00			0.90			0.84	
Satd. Flow (perm)	740	3025		909	3018			3238			3069	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	61	301	31	29	359	67	29	148	52	69	162	70
RTOR Reduction (vph)	0	12	0	0	24	0	0	30	0	0	41	0
Lane Group Flow (vph)	61	320	0	29	402	0	0	199	0	0	260	0
Confl. Peds. (#/hr)	24		47	47		24	9		36	36		9
Confl. Bikes (#/hr)			4	4			1					1
Heavy Vehicles (%)	9%	4%	0%	0%	3%	0%	0%	1%	10%	0%	0%	8%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	30.0	30.0		30.0	30.0			27.0			27.0	
Effective Green, g (s)	30.0	30.0		30.0	30.0			27.0			27.0	
Actuated g/C Ratio	0.46	0.46		0.46	0.46			0.42			0.42	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	342	1396		420	1393			1345			1275	
v/s Ratio Prot		0.11			c0.13							
v/s Ratio Perm	0.08			0.03				0.06			c0.08	
v/c Ratio	0.18	0.23		0.07	0.29			0.15			0.20	
Uniform Delay, d1	10.3	10.5		9.7	10.9			11.8			12.1	
Progression Factor	0.69	0.69		1.31	1.19			1.02			0.41	
Incremental Delay, d2	0.9	0.3		0.1	0.2			0.2			0.3	
Delay (s)	8.0	7.6		12.9	13.2			12.3			5.4	
Level of Service	A	A		B	B			B			A	
Approach Delay (s)		7.7			13.2			12.3			5.4	
Approach LOS		A			B			B			A	

Intersection Summary			
HCM Average Control Delay	9.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.25		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.7%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1041: 111th Street & Cottage Grove Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱			↰↑↱			↰↑↱	
Volume (vph)	47	440	26	86	503	222	24	124	115	340	261	82
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			0.95			0.95	
Frt		0.99			0.96			0.93			0.98	
Flt Protected		1.00			0.99			1.00			0.98	
Satd. Flow (prot)		3280			3167			3089			3181	
Flt Permitted		0.75			0.79			0.88			0.70	
Satd. Flow (perm)		2462			2502			2739			2269	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	52	489	29	96	559	247	27	138	128	378	290	91
RTOR Reduction (vph)	0	6	0	0	60	0	0	67	0	0	16	0
Lane Group Flow (vph)	0	564	0	0	842	0	0	226	0	0	743	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm			pm+pt			Perm		
Protected Phases		4			8		5	2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		24.0			24.0			31.0			23.0	
Effective Green, g (s)		24.0			24.0			31.0			23.0	
Actuated g/C Ratio		0.37			0.37			0.48			0.35	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		909			924			1333			803	
v/s Ratio Prot								c0.01				
v/s Ratio Perm		0.23			c0.34			0.07			c0.33	
v/c Ratio		0.62			0.91			0.17			1.02dl	
Uniform Delay, d1		16.8			19.5			9.7			20.2	
Progression Factor		1.63			1.00			1.00			0.77	
Incremental Delay, d2		3.2			14.6			0.3			17.5	
Delay (s)		30.5			34.1			10.0			33.1	
Level of Service		C			C			A			C	
Approach Delay (s)		30.5			34.1			10.0			33.1	
Approach LOS		C			C			A			C	

Intersection Summary			
HCM Average Control Delay	30.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	85.7%	ICU Level of Service	E
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1042: 111th Street & Ellis Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↑↱			↰↑↑↱			↰↑↱			↰↑↱	
Volume (vph)	0	895	128	48	792	0	81	0	36	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	10	10	12	12	12	12	12	12	12
Total Lost time (s)		5.0			5.0			5.0				
Lane Util. Factor		0.95			0.95			1.00				
Frt		0.98			1.00			0.96				
Flt Protected		1.00			1.00			0.97				
Satd. Flow (prot)		3041			3090			1619				
Flt Permitted		1.00			0.80			0.79				
Satd. Flow (perm)		3041			2489			1329				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	994	142	53	880	0	90	0	40	0	0	0
RTOR Reduction (vph)	0	15	0	0	0	0	0	18	0	0	0	0
Lane Group Flow (vph)	0	1121	0	0	933	0	0	112	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	custom			Perm			Perm			Perm		
Protected Phases		4 5 6 11			8			2			2	
Permitted Phases	4 6 11			8			2			2		
Actuated Green, G (s)		65.0			33.0			16.0				
Effective Green, g (s)		58.0			33.0			16.0				
Actuated g/C Ratio		0.64			0.37			0.18				
Clearance Time (s)					5.0			5.0				
Lane Grp Cap (vph)		1960			913			236				
v/s Ratio Prot		c0.37										
v/s Ratio Perm					c0.37			c0.08				
v/c Ratio		0.57			1.02			0.47				
Uniform Delay, d1		9.0			28.5			33.2				
Progression Factor		0.14			1.42			1.00				
Incremental Delay, d2		0.3			34.2			6.7				
Delay (s)		1.6			74.8			39.9				
Level of Service		A			E			D				
Approach Delay (s)		1.6			74.8			39.9			0.0	
Approach LOS		A			E			D			A	

Intersection Summary			
HCM Average Control Delay	35.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	74.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1043: 111th Street & Doty Road

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↑	↱		✥		↰	↑	↱
Volume (vph)	222	642	22	112	614	185	60	4	107	212	10	212
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	10	12	12	12	12	16	12	12	12	12
Total Lost time (s)	3.0	5.0		3.0	5.0	3.0		5.0		3.0	5.0	3.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00		1.00	1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85		0.92		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.98		0.95	1.00	1.00
Satd. Flow (prot)	1550	3194		1660	3320	1485		1782		1660	1748	1485
Flt Permitted	0.29	1.00		0.33	1.00	1.00		0.88		0.43	1.00	1.00
Satd. Flow (perm)	472	3194		585	3320	1485		1593		758	1748	1485
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	247	713	24	124	682	206	67	4	119	236	11	236
RTOR Reduction (vph)	0	2	0	0	0	95	0	92	0	0	0	135
Lane Group Flow (vph)	247	735	0	124	682	111	0	98	0	236	11	101
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	pm+pt			pm+pt		pm+ov	pm+pt			pm+pt		pm+ov
Protected Phases	7	4		3	8	1	5	2		1	6	7
Permitted Phases	4			8		8	2			6		6
Actuated Green, G (s)	55.0	42.6		47.8	38.4	48.4		12.0		25.0	25.0	38.6
Effective Green, g (s)	55.0	42.6		47.8	38.4	48.4		12.0		25.0	25.0	38.6
Actuated g/C Ratio	0.61	0.47		0.53	0.43	0.54		0.13		0.28	0.28	0.43
Clearance Time (s)	3.0	5.0		3.0	5.0	3.0		5.0		3.0	5.0	3.0
Vehicle Extension (s)	4.0	3.0		4.0	3.0	3.0		4.0		3.0	4.0	4.0
Lane Grp Cap (vph)	451	1512		423	1417	799		212		311	486	637
v/s Ratio Prot	c0.08	0.23		0.03	0.21	0.02				c0.08	0.01	0.02
v/s Ratio Perm	c0.25			0.13		0.06		0.06		c0.13		0.04
v/c Ratio	0.55	0.49		0.29	0.48	0.14		0.46		0.76	0.02	0.16
Uniform Delay, d1	9.2	16.2		10.8	18.6	10.4		36.0		28.7	23.6	15.8
Progression Factor	2.65	1.87		1.00	1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2	1.5	1.0		0.5	1.2	0.1		2.2		10.2	0.0	0.2
Delay (s)	25.7	31.3		11.3	19.8	10.5		38.2		38.9	23.6	15.9
Level of Service	C	C		B	B	B		D		D	C	B
Approach Delay (s)		29.9			16.9			38.2			27.3	
Approach LOS		C			B			D			C	

Intersection Summary			
HCM Average Control Delay	25.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	61.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
1044: 111th Street & Bishop Ford Freeway EB Ramps

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↑↑					↰		↱
Volume (veh/h)	0	518	443	2	333	0	0	0	0	19	0	578
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	576	492	2	370	0	0	0	0	21	0	642
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		498										
pX, platoon unblocked												
vC, conflicting volume	370			576			765	950	288	662	950	185
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	370			576			765	950	288	662	950	185
tC, single (s)	4.2			4.2			7.6	6.6	7.0	7.6	6.6	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	100	94	100	22
cM capacity (veh/h)	1178			987			64	256	706	345	256	823

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1	SB 2
Volume Total	288	288	492	126	247	21	642
Volume Left	0	0	0	2	0	21	0
Volume Right	0	0	492	0	0	0	642
cSH	1700	1700	1700	987	1700	345	823
Volume to Capacity	0.17	0.17	0.29	0.00	0.15	0.06	0.78
Queue Length 95th (ft)	0	0	0	0	0	5	198
Control Delay (s)	0.0	0.0	0.0	0.2	0.0	16.1	23.1
Lane LOS				A		C	C
Approach Delay (s)	0.0			0.1		22.8	
Approach LOS						C	

Intersection Summary			
Average Delay	7.2		
Intersection Capacity Utilization	54.2%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
1045: 111th Street & Bishop Ford Freeway WB Ramps

1/14/2013

	↗	↘	↖	↑	↓	↙
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰↰		↰			
Sign Control	Stop			Stop	Stop	
Volume (vph)	537	0	335	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	597	0	372	0	0	0

Direction, Lane #	EB 1	EB 2	NB 1
Volume Total (vph)	298	298	372
Volume Left (vph)	298	298	372
Volume Right (vph)	0	0	0
Hadj (s)	0.55	0.55	0.25
Departure Headway (s)	6.2	6.2	5.6
Degree Utilization, x	0.51	0.51	0.58
Capacity (veh/h)	568	570	619
Control Delay (s)	14.3	14.3	16.0
Approach Delay (s)	14.3		16.0
Approach LOS	B		C

Intersection Summary			
Delay	14.9		
HCM Level of Service	B		
Intersection Capacity Utilization	42.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱		↰	↑↑						↰↑↱	
Volume (vph)	0	472	90	192	594	0	0	0	0	101	21	58
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	12	12	12	12	12
Total Lost time (s)		3.0		4.0	4.0						5.0	
Lane Util. Factor		0.95		1.00	0.95						0.95	
Frt		0.98		1.00	1.00						0.95	
Flt Protected		1.00		0.95	1.00						0.97	
Satd. Flow (prot)		3133		1605	3210						3074	
Flt Permitted		1.00		0.33	1.00						0.97	
Satd. Flow (perm)		3133		559	3210						3074	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	524	100	213	660	0	0	0	0	112	23	64
RTOR Reduction (vph)	0	18	0	0	0	0	0	0	0	0	44	0
Lane Group Flow (vph)	0	606	0	213	660	0	0	0	0	0	155	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type				pm+pt						Split		
Protected Phases		4		3	8					6	6	
Permitted Phases				8								
Actuated Green, G (s)		36.0		49.0	49.0						27.0	
Effective Green, g (s)		36.0		49.0	49.0						27.0	
Actuated g/C Ratio		0.42		0.58	0.58						0.32	
Clearance Time (s)		3.0		4.0	4.0						5.0	
Lane Grp Cap (vph)		1327		445	1850						976	
v/s Ratio Prot		0.19		c0.06	0.21						c0.05	
v/s Ratio Perm				c0.22								
v/c Ratio		0.46		0.48	0.36						0.16	
Uniform Delay, d1		17.5		16.3	9.6						20.8	
Progression Factor		1.00		0.49	0.41						1.00	
Incremental Delay, d2		1.1		3.1	0.5						0.3	
Delay (s)		18.6		11.0	4.4						21.2	
Level of Service		B		B	A						C	
Approach Delay (s)		18.6			6.0			0.0			21.2	
Approach LOS		B			A			A			C	

Intersection Summary			
HCM Average Control Delay	12.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	46.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1047: 115th Street & Ashland Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑			↑↱			↰↑↱				
Volume (vph)	95	478	0	0	624	129	162	90	58	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	11	11	12	12	12	12	12	12
Total Lost time (s)	5.0	5.0			3.0			5.0				
Lane Util. Factor	1.00	0.95			0.95			0.91				
Frt	1.00	1.00			0.97			0.97				
Flt Protected	0.95	1.00			1.00			0.97				
Satd. Flow (prot)	1660	3320			3127			4519				
Flt Permitted	0.22	1.00			1.00			0.97				
Satd. Flow (perm)	385	3320			3127			4519				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	106	531	0	0	693	143	180	100	64	0	0	0
RTOR Reduction (vph)	0	0	0	0	21	0	0	44	0	0	0	0
Lane Group Flow (vph)	106	531	0	0	815	0	0	300	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	pm+pt						Split					
Protected Phases	7	4			8		2	2				
Permitted Phases	4											
Actuated Green, G (s)	48.0	48.0			35.0			27.0				
Effective Green, g (s)	48.0	48.0			35.0			27.0				
Actuated g/C Ratio	0.56	0.56			0.41			0.32				
Clearance Time (s)	5.0	5.0			3.0			5.0				
Lane Grp Cap (vph)	367	1875			1288			1435				
v/s Ratio Prot	0.03	c0.16			c0.26			c0.07				
v/s Ratio Perm	0.13											
v/c Ratio	0.29	0.28			0.63			0.21				
Uniform Delay, d1	18.1	9.6			19.9			21.2				
Progression Factor	0.41	0.33			1.00			1.00				
Incremental Delay, d2	1.8	0.4			2.4			0.3				
Delay (s)	9.3	3.5			22.3			21.5				
Level of Service	A	A			C			C				
Approach Delay (s)		4.4			22.3			21.5			0.0	
Approach LOS		A			C			C			A	

Intersection Summary			
HCM Average Control Delay	15.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	46.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1048: 115th Street & Racine Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱			✣			✣	
Volume (vph)	114	342	126	79	366	79	178	78	27	30	87	144
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	10	12	12	15	12	12	15	12
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			1.00			1.00	
Frt		0.97			0.98			0.99			0.93	
Flt Protected		0.99			0.99			0.97			0.99	
Satd. Flow (prot)		2969			3006			1840			1769	
Flt Permitted		0.68			0.72			0.65			0.94	
Satd. Flow (perm)		2025			2179			1242			1676	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	127	380	140	88	407	88	198	87	30	33	97	160
RTOR Reduction (vph)	0	39	0	0	22	0	0	6	0	0	68	0
Lane Group Flow (vph)	0	608	0	0	561	0	0	309	0	0	222	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		23.0			23.0			32.0			32.0	
Effective Green, g (s)		23.0			23.0			32.0			32.0	
Actuated g/C Ratio		0.35			0.35			0.49			0.49	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		717			771			611			825	
v/s Ratio Prot												
v/s Ratio Perm		c0.30			0.26			c0.25			0.13	
v/c Ratio		0.85			0.73			0.51			0.27	
Uniform Delay, d1		19.4			18.3			11.2			9.7	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		11.9			5.9			3.0			0.8	
Delay (s)		31.3			24.2			14.1			10.5	
Level of Service		C			C			B			B	
Approach Delay (s)		31.3			24.2			14.1			10.5	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM Average Control Delay	22.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	82.5%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1049: 115th Street & Halsted Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↑	↱	↰	↑↑	↱
Volume (vph)	106	201	100	203	311	65	174	589	246	95	953	146
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	12	10	16	12	9	10	9	9	10	9
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00	0.97	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.95		1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1559	2967		1574	3683		1508	3069	1333	1521	3099	1336
Flt Permitted	0.45	1.00		0.52	1.00		0.13	1.00	1.00	0.31	1.00	1.00
Satd. Flow (perm)	739	2967		862	3683		212	3069	1333	490	3099	1336
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	112	212	105	214	327	68	183	620	259	100	1003	154
RTOR Reduction (vph)	0	70	0	0	21	0	0	0	165	0	0	98
Lane Group Flow (vph)	112	247	0	214	374	0	183	620	94	100	1003	56
Confl. Peds. (#/hr)	19		16	16		19	22		25	25		22
Heavy Vehicles (%)	2%	2%	0%	1%	2%	2%	2%	4%	0%	1%	3%	0%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	32.0	27.0		32.0	27.0		38.0	31.0	31.0	38.0	31.0	31.0
Effective Green, g (s)	30.0	28.0		30.0	28.0		36.0	31.0	31.0	36.0	31.0	31.0
Actuated g/C Ratio	0.35	0.33		0.35	0.33		0.42	0.36	0.36	0.42	0.36	0.36
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)	299	977		338	1213		181	1119	486	280	1130	487
v/s Ratio Prot	0.02	0.08		c0.03	0.10		c0.07	0.20		0.03	0.32	
v/s Ratio Perm	0.11			c0.19			c0.36		0.07	0.13		0.04
v/c Ratio	0.37	0.25		0.63	0.31		1.01	0.55	0.19	0.36	0.89	0.12
Uniform Delay, d1	19.4	20.8		22.2	21.3		20.7	21.5	18.5	15.6	25.4	17.9
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.41	1.05	2.36
Incremental Delay, d2	3.6	0.6		8.7	0.7		69.8	2.0	0.9	2.6	8.0	0.4
Delay (s)	23.0	21.5		30.9	21.9		90.5	23.5	19.4	24.6	34.6	42.7
Level of Service	C	C		C	C		F	C	B	C	C	D
Approach Delay (s)		21.9			25.1			34.0			34.8	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	31.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	76.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1050: 115th Street & Wentworth Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱		↰	↱		↰	↱
Volume (vph)	97	424	30	33	425	24	33	100	41	36	124	76
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	16	12	12	16	12
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frpb, ped/bikes		1.00	0.96		1.00	0.97		1.00	0.98		1.00	0.99
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frt		1.00	0.85		1.00	0.85		1.00	0.85		1.00	0.85
Flt Protected		0.99	1.00		1.00	1.00		0.99	1.00		0.99	1.00
Satd. Flow (prot)		1957	1466		1994	1480		2015	1506		2001	1511
Flt Permitted		0.72	1.00		0.94	1.00		0.91	1.00		0.92	1.00
Satd. Flow (perm)		1426	1466		1888	1480		1863	1506		1870	1511
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	102	446	32	35	447	25	35	105	43	38	131	80
RTOR Reduction (vph)	0	0	17	0	0	13	0	0	25	0	0	47
Lane Group Flow (vph)	0	548	15	0	482	12	0	140	18	0	169	33
Confl. Peds. (#/hr)	11		20	20		11	1		4	4		1
Confl. Bikes (#/hr)	1		1	1		1			1	1		
Heavy Vehicles (%)	4%	3%	0%	0%	2%	0%	0%	0%	0%	0%	1%	0%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)		30.0	30.0		30.0	30.0		27.0	27.0		27.0	27.0
Effective Green, g (s)		30.0	30.0		30.0	30.0		27.0	27.0		27.0	27.0
Actuated g/C Ratio		0.46	0.46		0.46	0.46		0.42	0.42		0.42	0.42
Clearance Time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		658	677		871	683		774	626		777	628
v/s Ratio Prot												
v/s Ratio Perm		c0.38	0.01		0.26	0.01		0.08	0.01		c0.09	0.02
v/c Ratio		0.83	0.02		0.55	0.02		0.18	0.03		0.22	0.05
Uniform Delay, d1		15.3	9.5		12.7	9.5		12.0	11.2		12.2	11.4
Progression Factor		1.00	1.00		0.62	0.53		0.91	1.11		1.02	0.92
Incremental Delay, d2		11.8	0.1		2.5	0.0		0.5	0.1		0.6	0.2
Delay (s)		27.1	9.6		10.3	5.1		11.4	12.5		13.1	10.6
Level of Service		C	A		B	A		B	B		B	B
Approach Delay (s)		26.1			10.0			11.7			12.3	
Approach LOS		C			B			B			B	

Intersection Summary			
HCM Average Control Delay	16.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	94.8%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1051: 115th Street & State Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	115	394	20	41	271	31	10	109	21	110	214	75
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	0.98		1.00	0.98		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1550	3077		1550	3052		1550	3025		1550	2979	
Flt Permitted	0.95	1.00		0.49	1.00		0.54	1.00		0.66	1.00	
Satd. Flow (perm)	1550	3077		795	3052		878	3025		1078	2979	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	128	438	22	46	301	34	11	121	23	122	238	83
RTOR Reduction (vph)	0	6	0	0	13	0	0	13	0	0	49	0
Lane Group Flow (vph)	128	454	0	46	322	0	11	131	0	122	272	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Prot			Perm			Perm			Perm		
Protected Phases	7	4			8			2			6	
Permitted Phases				8			2			6		
Actuated Green, G (s)	7.0	32.0		22.0	22.0		27.0	27.0		27.0	27.0	
Effective Green, g (s)	7.0	32.0		22.0	22.0		27.0	27.0		27.0	27.0	
Actuated g/C Ratio	0.11	0.49		0.34	0.34		0.42	0.42		0.42	0.42	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	167	1515		269	1033		365	1257		448	1237	
v/s Ratio Prot	c0.08	c0.15			0.11			0.04			0.09	
v/s Ratio Perm				0.06			0.01			c0.11		
v/c Ratio	0.77	0.30		0.17	0.31		0.03	0.10		0.27	0.22	
Uniform Delay, d1	28.2	9.8		15.1	15.9		11.2	11.6		12.5	12.2	
Progression Factor	1.17	0.39		0.75	0.72		1.05	1.16		1.12	1.13	
Incremental Delay, d2	22.1	0.4		1.3	0.8		0.1	0.1		1.5	0.4	
Delay (s)	55.0	4.2		12.6	12.2		12.0	13.6		15.5	14.2	
Level of Service	D	A		B	B		B	B		B	B	
Approach Delay (s)		15.3			12.3			13.4			14.5	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	14.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	41.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱			↰↑↱			↰↑↱	
Volume (vph)	84	336	69	203	347	63	25	245	20	55	270	55
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	12	12	12	12	12	12
Total Lost time (s)	4.0	4.0		3.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frt	1.00	0.97		1.00	0.98			0.99			0.98	
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.99	
Satd. Flow (prot)	1550	3019		1550	3028			3272			3225	
Flt Permitted	0.49	1.00		0.95	1.00			0.90			0.86	
Satd. Flow (perm)	798	3019		1550	3028			2966			2803	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	93	373	77	226	386	70	28	272	22	61	300	61
RTOR Reduction (vph)	0	26	0	0	23	0	0	8	0	0	21	0
Lane Group Flow (vph)	93	424	0	226	433	0	0	314	0	0	401	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Prot			Perm			Perm		
Protected Phases		4		3	8			2			6	
Permitted Phases	4						2			6		
Actuated Green, G (s)	20.0	20.0		6.0	29.0			25.0			25.0	
Effective Green, g (s)	20.0	20.0		6.0	29.0			25.0			25.0	
Actuated g/C Ratio	0.31	0.31		0.09	0.45			0.38			0.38	
Clearance Time (s)	4.0	4.0		3.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	246	929		143	1351			1141			1078	
v/s Ratio Prot		c0.14		c0.15	0.14							
v/s Ratio Perm	0.12							0.11			c0.14	
v/c Ratio	0.38	0.46		1.58	0.32			0.28			0.37	
Uniform Delay, d1	17.6	18.1		29.5	11.6			13.8			14.4	
Progression Factor	0.85	0.80		1.28	1.15			0.96			0.67	
Incremental Delay, d2	4.3	1.6		277.2	0.3			0.6			1.0	
Delay (s)	19.2	16.0		314.9	13.7			13.8			10.6	
Level of Service	B	B		F	B			B			B	
Approach Delay (s)		16.6			113.5			13.8			10.6	
Approach LOS		B			F			B			B	

Intersection Summary			
HCM Average Control Delay	48.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	57.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1053: 115th Street & Indiana Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			↰↑↑↱				
Volume (vph)	16	355	26	75	620	75	55	110	165	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	12	14	12	10	15	10
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			0.95				
Frt		0.99			0.99			0.93				
Flt Protected		1.00			1.00			0.99				
Satd. Flow (prot)		1613			1602			3249				
Flt Permitted		0.96			0.92			0.99				
Satd. Flow (perm)		1557			1484			3249				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	18	394	29	83	689	83	61	122	183	0	0	0
RTOR Reduction (vph)	0	3	0	0	5	0	0	139	0	0	0	0
Lane Group Flow (vph)	0	438	0	0	850	0	0	227	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm			Perm					
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Actuated Green, G (s)		41.5			41.5			15.5				
Effective Green, g (s)		41.5			41.5			15.5				
Actuated g/C Ratio		0.64			0.64			0.24				
Clearance Time (s)		4.0			4.0			4.0				
Vehicle Extension (s)		3.0			3.0			8.0				
Lane Grp Cap (vph)		994			947			775				
v/s Ratio Prot												
v/s Ratio Perm		0.28			c0.57			0.07				
v/c Ratio		0.44			0.90			0.29				
Uniform Delay, d1		5.9			9.9			20.3				
Progression Factor		1.98			1.00			1.00				
Incremental Delay, d2		1.3			13.0			0.9				
Delay (s)		13.0			22.9			21.2				
Level of Service		B			C			C				
Approach Delay (s)		13.0			22.9			21.2			0.0	
Approach LOS		B			C			C			A	

Intersection Summary			
HCM Average Control Delay	19.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	86.4%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
1054: 115th Street & Martin Luther King Jr Drive

1/14/2013

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰↑	↑↱		↰	↱
Volume (veh/h)	93	415	598	39	119	164
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	98	437	629	41	125	173
Pedestrians		5	6		17	
Lane Width (ft)		12.0	12.0		10.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		0	1		1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		1319	491			
pX, platoon unblocked	0.85				0.85	0.85
vC, conflicting volume	688				1306	672
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	540				1270	522
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	88				9	63
cM capacity (veh/h)	848				138	465

Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total	535	671	125	173
Volume Left	98	0	125	0
Volume Right	0	41	0	173
cSH	848	1700	138	465
Volume to Capacity	0.12	0.39	0.91	0.37
Queue Length 95th (ft)	10	0	153	42
Control Delay (s)	3.0	0.0	115.9	17.2
Lane LOS	A		F	C
Approach Delay (s)	3.0	0.0	58.7	
Approach LOS			F	

Intersection Summary			
Average Delay	12.7		
Intersection Capacity Utilization	82.2%	ICU Level of Service	E
Analysis Period (min)	15		

HCM Signalized Intersection Capacity Analysis
1055: 115th Street & Cottage Grove Avenue

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↱			↰	Y	
Volume (vph)	690	0	1	619	3	29
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0			4.0	4.0	
Lane Util. Factor	1.00			1.00	1.00	
Frt	1.00			1.00	0.88	
Flt Protected	1.00			1.00	1.00	
Satd. Flow (prot)	1748			1747	1525	
Flt Permitted	1.00			1.00	1.00	
Satd. Flow (perm)	1748			1747	1525	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	767	0	1	688	3	32
RTOR Reduction (vph)	0	0	0	0	27	0
Lane Group Flow (vph)	767	0	0	689	8	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type			Perm			
Protected Phases	1 2 4			4	3	
Permitted Phases			4			
Actuated Green, G (s)	68.4			38.4	13.6	
Effective Green, g (s)	64.4			38.4	13.6	
Actuated g/C Ratio	0.72			0.43	0.15	
Clearance Time (s)				4.0	4.0	
Vehicle Extension (s)				3.0	3.0	
Lane Grp Cap (vph)	1251			745	230	
v/s Ratio Prot	c0.44				c0.01	
v/s Ratio Perm				0.39		
v/c Ratio	0.61			0.92	0.03	
Uniform Delay, d1	6.5			24.4	32.6	
Progression Factor	0.05			1.00	1.00	
Incremental Delay, d2	0.5			19.0	0.1	
Delay (s)	0.9			43.5	32.7	
Level of Service	A			D	C	
Approach Delay (s)	0.9			43.5	32.7	
Approach LOS	A			D	C	

Intersection Summary			
HCM Average Control Delay	21.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	48.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↱			↰						↰	↱
Volume (veh/h)	0	243	606	32	407	0	0	0	0	17	6	248
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	270	673	36	452	0	0	0	0	19	7	276
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	452			270			1133	1130	472	658	793	452
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	452			270			1133	1130	472	658	793	452
tC, single (s)	4.1			4.2			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			97			100	100	100	95	98	50
cM capacity (veh/h)	1119			1276			78	200	544	346	314	555

Direction, Lane #	EB 1	EB 2	WB 1	SB 1	SB 2
Volume Total	180	763	488	26	276
Volume Left	0	0	36	19	0
Volume Right	0	673	0	0	276
cSH	1700	1700	1276	337	555
Volume to Capacity	0.11	0.45	0.03	0.08	0.50
Queue Length 95th (ft)	0	0	2	6	69
Control Delay (s)	0.0	0.0	0.9	16.6	17.7
Lane LOS			A	C	C
Approach Delay (s)	0.0		0.9	17.6	
Approach LOS				C	

Intersection Summary			
Average Delay	3.3		
Intersection Capacity Utilization	60.5%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰↰		↰			
Sign Control	Stop			Stop	Stop	
Volume (vph)	260	0	439	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	289	0	488	0	0	0

Direction, Lane #	EB 1	EB 2	NB 1
Volume Total (vph)	144	144	488
Volume Left (vph)	144	144	488
Volume Right (vph)	0	0	0
Hadj (s)	0.55	0.55	0.25
Departure Headway (s)	6.4	6.4	5.0
Degree Utilization, x	0.26	0.26	0.68
Capacity (veh/h)	536	537	701
Control Delay (s)	10.3	10.3	17.7
Approach Delay (s)	10.3		17.7
Approach LOS	B		C

Intersection Summary			
Delay	15.0		
HCM Level of Service	B		
Intersection Capacity Utilization	40.2%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Signalized Intersection Capacity Analysis
1058: 119th Street & Marshield Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↰↑					↰	↰↑↑↱	↱
Volume (vph)	0	553	345	332	869	0	0	0	0	303	269	372
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	12	13	12	12	12	12	10	10	11
Total Lost time (s)		6.0	6.0		6.0					6.0	6.0	6.0
Lane Util. Factor		0.95	1.00		0.95					0.86	0.81	0.86
Frpb, ped/bikes		1.00	0.98		1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00					1.00	1.00	1.00
Frt		1.00	0.85		1.00					1.00	0.95	0.85
Flt Protected		1.00	1.00		0.99					0.95	0.99	1.00
Satd. Flow (prot)		3179	1228		3427					1359	3807	1133
Flt Permitted		1.00	1.00		0.99					0.95	0.99	1.00
Satd. Flow (perm)		3179	1228		3427					1359	3807	1133
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	582	363	349	915	0	0	0	0	319	283	392
RTOR Reduction (vph)	0	0	208	0	0	0	0	0	0	0	52	96
Lane Group Flow (vph)	0	582	155	0	1264	0	0	0	0	175	571	100
Confl. Peds. (#/hr)	4		6	6		4						
Heavy Vehicles (%)	0%	4%	6%	1%	2%	0%	0%	0%	0%	1%	1%	1%
Parking (#/hr)			0									0
Turn Type			Perm	Split						Split		custom
Protected Phases		2		10 12 14	10 12 14					4	4	
Permitted Phases			2									4 2
Actuated Green, G (s)		27.0	27.0		75.0					31.7	31.7	64.7
Effective Green, g (s)		27.0	27.0		75.0					31.7	31.7	64.7
Actuated g/C Ratio		0.17	0.17		0.47					0.20	0.20	0.40
Clearance Time (s)		6.0	6.0							6.0	6.0	
Vehicle Extension (s)		3.0	3.0							3.0	3.0	
Lane Grp Cap (vph)		536	207		1606					269	754	458
v/s Ratio Prot		c0.18			c0.37					0.13	c0.15	
v/s Ratio Perm			0.13									0.09
v/c Ratio		1.09	0.75		0.79					0.65	0.76	0.22
Uniform Delay, d1		66.5	63.3		35.8					59.1	60.5	31.1
Progression Factor		1.00	1.00		0.12					1.00	1.00	1.00
Incremental Delay, d2		64.2	21.8		0.2					5.5	4.4	0.2
Delay (s)		130.7	85.1		4.6					64.6	64.9	31.4
Level of Service		F	F		A					E	E	C
Approach Delay (s)		113.2			4.6			0.0			58.2	
Approach LOS		F			A			A			E	

Intersection Summary			
HCM Average Control Delay	53.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	28.3
Intersection Capacity Utilization	84.9%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1059: 119th Street & Ashland Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑			↑↑	↱	↰	↰↑↱				
Volume (vph)	292	564	0	0	869	233	332	214	211	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	13	12	12	11	12	13	13	14	12	12	12
Total Lost time (s)	6.0	6.0			6.0	6.0	6.0	6.0				
Lane Util. Factor	1.00	0.95			0.95	1.00	0.91	0.91				
Frt	1.00	1.00			1.00	0.85	1.00	0.94				
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.99				
Satd. Flow (prot)	1605	3431			3210	1485	1561	3056				
Flt Permitted	0.95	1.00			1.00	1.00	0.95	0.99				
Satd. Flow (perm)	1605	3431			3210	1485	1561	3056				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	324	627	0	0	966	259	369	238	234	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	94	0	75	0	0	0	0
Lane Group Flow (vph)	324	627	0	0	966	165	288	478	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Split					Perm	Split					
Protected Phases	2 4 8	2 4 8			10		12	12				
Permitted Phases						10						
Actuated Green, G (s)	77.0	77.0			35.0	35.0	22.0	22.0				
Effective Green, g (s)	77.0	77.0			35.0	35.0	22.0	22.0				
Actuated g/C Ratio	0.48	0.48			0.22	0.22	0.14	0.14				
Clearance Time (s)					6.0	6.0	6.0	6.0				
Vehicle Extension (s)					3.0	3.0	3.0	3.0				
Lane Grp Cap (vph)	772	1651			702	325	215	420				
v/s Ratio Prot	c0.20	0.18			c0.30		c0.18	0.16				
v/s Ratio Perm						0.11						
v/c Ratio	0.42	0.38			1.38	0.51	1.34	1.14				
Uniform Delay, d1	27.0	26.3			62.5	54.9	69.0	69.0				
Progression Factor	0.05	0.06			1.00	1.00	1.00	1.00				
Incremental Delay, d2	0.2	0.1			178.1	1.3	180.7	87.3				
Delay (s)	1.6	1.5			240.6	56.2	249.7	156.3				
Level of Service	A	A			F	E	F	F				
Approach Delay (s)		1.6			201.6			188.3			0.0	
Approach LOS		A			F			F			A	

Intersection Summary			
HCM Average Control Delay	134.8	HCM Level of Service	F
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	28.0
Intersection Capacity Utilization	73.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1060: 119th Street & Halsted Street

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↱		↰	↑↱		↰	↑↱	
Volume (vph)	140	506	136	89	270	67	108	522	70	96	1150	120
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	14	12	10	10	12	9	10	12
Total Lost time (s)	4.0	4.0	5.0	4.0	5.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.97		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1576	1600	1373	1596	1790		1580	3016		1537	3030	
Flt Permitted	0.27	1.00	1.00	0.12	1.00		0.08	1.00		0.32	1.00	
Satd. Flow (perm)	452	1600	1373	194	1790		133	3016		513	3030	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	147	533	143	94	284	71	114	549	74	101	1211	126
RTOR Reduction (vph)	0	0	88	0	8	0	0	9	0	0	7	0
Lane Group Flow (vph)	147	533	55	94	347	0	114	614	0	101	1330	0
Confl. Peds. (#/hr)	28		8	8		28	59		11	11		59
Confl. Bikes (#/hr)	3					3	1		2	2		1
Heavy Vehicles (%)	1%	5%	2%	0%	4%	0%	1%	4%	0%	0%	3%	3%
Turn Type	pm+pt		Perm	pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)	49.0	39.0	39.0	42.6	35.6		58.2	51.2		59.8	52.0	
Effective Green, g (s)	47.4	40.0	39.0	40.6	35.6		56.2	51.2		57.8	52.0	
Actuated g/C Ratio	0.39	0.33	0.32	0.34	0.30		0.47	0.43		0.48	0.43	
Clearance Time (s)	3.0	5.0	5.0	3.0	5.0		3.0	4.0		3.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	267	533	446	136	531		135	1287		305	1313	
v/s Ratio Prot	c0.04	c0.33		c0.03	0.19		c0.04	0.20		0.02	c0.44	
v/s Ratio Perm	0.17		0.04	0.20			0.36			0.14		
v/c Ratio	0.55	1.00	0.12	0.69	0.65		0.84	0.48		0.33	1.01	
Uniform Delay, d1	26.0	40.0	28.5	31.2	36.8		26.1	24.8		18.0	34.0	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.4	39.0	0.6	14.1	6.2		35.7	1.3		0.6	28.1	
Delay (s)	28.5	79.0	29.0	45.3	43.0		61.8	26.0		18.6	62.1	
Level of Service	C	E	C	D	D		E	C		B	E	
Approach Delay (s)		61.3			43.5			31.6			59.1	
Approach LOS		E			D			C			E	

Intersection Summary			
HCM Average Control Delay	51.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	91.6%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1061: 119th Street & Wentworth Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱		✥			✥	
Volume (vph)	88	462	111	13	334	22	49	59	19	21	91	82
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	10	10	10	12	15	12	12	16	12
Total Lost time (s)		3.0	3.0		3.0	3.0		3.0			3.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00			1.00	
Frpb, ped/bikes		1.00	0.96		1.00	0.97		1.00			0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00			1.00	
Frt		1.00	0.85		1.00	0.85		0.98			0.94	
Flt Protected		0.99	1.00		1.00	1.00		0.98			0.99	
Satd. Flow (prot)		1963	1467		1629	1381		1892			1857	
Flt Permitted		0.89	1.00		0.98	1.00		0.86			0.97	
Satd. Flow (perm)		1760	1467		1598	1381		1649			1813	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	93	486	117	14	352	23	52	62	20	22	96	86
RTOR Reduction (vph)	0	0	45	0	0	12	0	10	0	0	40	0
Lane Group Flow (vph)	0	579	72	0	366	11	0	124	0	0	164	0
Confl. Peds. (#/hr)	12		20	20		12	8		2	2		8
Confl. Bikes (#/hr)	1		2	2		1			1	1		
Heavy Vehicles (%)	3%	3%	0%	0%	3%	0%	0%	0%	0%	0%	1%	3%
Turn Type	Perm		Perm	Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)		32.0	32.0		32.0	32.0		27.0			27.0	
Effective Green, g (s)		32.0	32.0		32.0	32.0		27.0			27.0	
Actuated g/C Ratio		0.49	0.49		0.49	0.49		0.42			0.42	
Clearance Time (s)		3.0	3.0		3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)		866	722		787	680		685			753	
v/s Ratio Prot												
v/s Ratio Perm		c0.33	0.05		0.23	0.01		0.08			c0.09	
v/c Ratio		0.67	0.10		0.47	0.02		0.18			0.22	
Uniform Delay, d1		12.5	8.8		10.9	8.4		12.0			12.2	
Progression Factor		1.00	1.00		1.88	3.14		1.00			1.98	
Incremental Delay, d2		4.1	0.3		1.9	0.0		0.6			0.7	
Delay (s)		16.6	9.1		22.3	26.5		12.6			24.8	
Level of Service		B	A		C	C		B			C	
Approach Delay (s)		15.3			22.5			12.6			24.8	
Approach LOS		B			C			B			C	

Intersection Summary			
HCM Average Control Delay	18.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	78.7%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1062: 119th Street & State Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑	↱		↰↑	↱		↰↑	↱		↰↑↱	
Volume (vph)	108	244	91	11	226	10	48	114	19	15	184	82
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frpb, ped/bikes		1.00	0.94		1.00	0.97		1.00	0.97		0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		0.96	
Flt Protected		0.98	1.00		1.00	1.00		0.99	1.00		1.00	
Satd. Flow (prot)		1743	1443		1728	1487		1712	1489		1703	
Flt Permitted		0.78	1.00		0.98	1.00		0.85	1.00		0.98	
Satd. Flow (perm)		1387	1443		1692	1487		1481	1489		1680	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	114	257	96	12	238	11	51	120	20	16	194	86
RTOR Reduction (vph)	0	0	58	0	0	7	0	0	10	0	23	0
Lane Group Flow (vph)	0	371	38	0	250	4	0	171	10	0	273	0
Confl. Peds. (#/hr)	19		25	25		19	3		6	6		3
Confl. Bikes (#/hr)	1		2	2		1			1	1		
Heavy Vehicles (%)	0%	2%	0%	0%	4%	0%	0%	5%	0%	0%	0%	2%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		23.0	23.0		23.0	23.0		32.0	32.0		32.0	
Effective Green, g (s)		23.0	23.0		23.0	23.0		32.0	32.0		32.0	
Actuated g/C Ratio		0.35	0.35		0.35	0.35		0.49	0.49		0.49	
Clearance Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	
Lane Grp Cap (vph)		491	511		599	526		729	733		827	
v/s Ratio Prot												
v/s Ratio Perm		c0.27	0.03		0.15	0.00		0.12	0.01		c0.16	
v/c Ratio		0.76	0.08		0.42	0.01		0.23	0.01		0.33	
Uniform Delay, d1		18.5	13.9		15.9	13.6		9.5	8.4		10.0	
Progression Factor		1.79	3.63		0.93	0.93		1.00	1.00		1.04	
Incremental Delay, d2		8.1	0.2		2.1	0.0		0.8	0.0		1.1	
Delay (s)		41.3	50.8		16.9	12.7		10.2	8.5		11.5	
Level of Service		D	D		B	B		B	A		B	
Approach Delay (s)		43.2			16.7			10.0			11.5	
Approach LOS		D			B			B			B	

Intersection Summary			
HCM Average Control Delay	24.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	72.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1063: 119th Street & Michigan Avenue

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		✥			✥			↰	↱
Volume (vph)	167	45	96	8	16	9	43	225	8	21	481	209
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	14	12	12	16	12	12	16	12
Total Lost time (s)		3.0	3.0		3.0			3.0			3.0	3.0
Lane Util. Factor		1.00	1.00		1.00			1.00			1.00	1.00
Frpb, ped/bikes		1.00	0.95		0.99			1.00			1.00	0.94
Flpb, ped/bikes		0.98	1.00		0.99			1.00			1.00	1.00
Frt		1.00	0.85		0.96			1.00			1.00	0.85
Flt Protected		0.96	1.00		0.99			0.99			1.00	1.00
Satd. Flow (prot)		1873	1440		1782			1991			1976	1382
Flt Permitted		0.81	1.00		0.93			0.88			0.98	1.00
Satd. Flow (perm)		1573	1440		1686			1762			1946	1382
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	186	50	107	9	18	10	48	250	9	23	534	232
RTOR Reduction (vph)	0	0	63	0	7	0	0	2	0	0	0	92
Lane Group Flow (vph)	0	236	44	0	30	0	0	305	0	0	557	140
Confl. Peds. (#/hr)	37		53	53		37	39		54	54		39
Confl. Bikes (#/hr)							2					2
Heavy Vehicles (%)	4%	0%	1%	0%	0%	0%	0%	1%	0%	0%	3%	4%
Turn Type	pm+pt		Perm	Perm			Perm			Perm		Perm
Protected Phases	7	4			8			2			6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)		27.0	27.0		17.0			32.0			32.0	32.0
Effective Green, g (s)		27.0	27.0		17.0			32.0			32.0	32.0
Actuated g/C Ratio		0.42	0.42		0.26			0.49			0.49	0.49
Clearance Time (s)		3.0	3.0		3.0			3.0			3.0	3.0
Lane Grp Cap (vph)		690	598		441			867			958	680
v/s Ratio Prot		c0.04										
v/s Ratio Perm		0.10	0.03		0.02			0.17			c0.29	0.10
v/c Ratio		0.34	0.07		0.07			0.35			0.58	0.21
Uniform Delay, d1		12.9	11.5		18.0			10.1			11.7	9.3
Progression Factor		1.02	1.87		1.00			1.08			0.66	0.22
Incremental Delay, d2		1.1	0.2		0.3			0.9			2.0	0.5
Delay (s)		14.3	21.7		18.3			11.9			9.7	2.6
Level of Service		B	C		B			B			A	A
Approach Delay (s)		16.6			18.3			11.9			7.6	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM Average Control Delay	10.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	72.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1064: 127th Street & S Paulina St

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↱		↰↰	↑↑					↰	↰↑↱	↱
Volume (vph)	0	922	289	675	1189	0	0	0	0	513	284	334
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	11	11	8	8	8	11	12	14
Total Lost time (s)		6.0		4.5	6.0					6.0	6.0	6.0
Lane Util. Factor		0.91		0.97	0.95					0.91	0.86	0.91
Frpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Frt		0.96		1.00	1.00					1.00	0.98	0.85
Flt Protected		1.00		0.95	1.00					0.95	0.98	1.00
Satd. Flow (prot)		4578		3144	3210					1489	2913	1442
Flt Permitted		1.00		0.12	1.00					0.95	0.98	1.00
Satd. Flow (perm)		4578		409	3210					1489	2913	1442
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	971	304	711	1252	0	0	0	0	540	299	352
RTOR Reduction (vph)	0	38	0	0	0	0	0	0	0	0	9	42
Lane Group Flow (vph)	0	1237	0	711	1252	0	0	0	0	308	603	229
Confl. Peds. (#/hr)	15		11	11		15						
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	0%	3%	3%	2%	3%	0%	0%	0%	0%	1%	3%	3%
Turn Type				pm+pt						Perm		Perm
Protected Phases		2		1	6						4	
Permitted Phases				6						4		4
Actuated Green, G (s)		49.6		83.8	82.3					35.7	35.7	35.7
Effective Green, g (s)		49.6		83.8	82.3					35.7	35.7	35.7
Actuated g/C Ratio		0.38		0.64	0.63					0.27	0.27	0.27
Clearance Time (s)		6.0		4.5	6.0					6.0	6.0	6.0
Vehicle Extension (s)		7.0		3.5	7.0					3.5	3.5	3.5
Lane Grp Cap (vph)		1747		857	2032					409	800	396
v/s Ratio Prot		0.27		c0.18	0.39							
v/s Ratio Perm				c0.35						0.21	0.21	0.16
v/c Ratio		0.71		0.83	0.62					0.75	0.75	0.58
Uniform Delay, d1		34.1		32.4	14.3					43.1	43.1	40.7
Progression Factor		1.00		0.78	0.52					1.00	1.00	1.00
Incremental Delay, d2		2.5		3.1	0.6					7.9	4.2	2.2
Delay (s)		36.5		28.3	8.0					51.0	47.3	42.9
Level of Service		D		C	A					D	D	D
Approach Delay (s)		36.5			15.4			0.0			47.3	
Approach LOS		D			B			A			D	

Intersection Summary			
HCM Average Control Delay	30.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	10.5
Intersection Capacity Utilization	113.7%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1065: 127th Street & Marshfield Ave

1/14/2013

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑			↑↑↱			↰↑↱				
Volume (vph)	341	1094	0	0	1435	271	430	351	393	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	12	11	12	12	12	12	12	12	12
Total Lost time (s)	6.0	6.0			6.0			6.0				
Lane Util. Factor	1.00	0.95			0.91			0.91				
Frpb, ped/bikes	1.00	1.00			1.00			1.00				
Flpb, ped/bikes	1.00	1.00			1.00			1.00				
Frt	1.00	1.00			0.98			0.95				
Flt Protected	0.95	1.00			1.00			0.98				
Satd. Flow (prot)	1621	3241			4541			4492				
Flt Permitted	0.06	1.00			1.00			0.98				
Satd. Flow (perm)	106	3241			4541			4492				
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	359	1152	0	0	1511	285	453	369	414	0	0	0
RTOR Reduction (vph)	0	0	0	0	21	0	0	70	0	0	0	0
Lane Group Flow (vph)	359	1152	0	0	1775	0	0	1166	0	0	0	0
Confl. Peds. (#/hr)	7		5	5		7						
Confl. Bikes (#/hr)	1		1	1		1						
Heavy Vehicles (%)	2%	2%	0%	0%	2%	1%	2%	1%	3%	0%	0%	0%
Turn Type	pm+pt						Perm					
Protected Phases	5	2			6			8				
Permitted Phases	2						8					
Actuated Green, G (s)	83.4	83.4			58.4			34.6				
Effective Green, g (s)	83.4	83.4			58.4			34.6				
Actuated g/C Ratio	0.64	0.64			0.45			0.27				
Clearance Time (s)	6.0	6.0			6.0			6.0				
Vehicle Extension (s)	3.5	7.0			7.0			5.0				
Lane Grp Cap (vph)	289	2079			2040			1196				
v/s Ratio Prot	c0.18	0.36			0.39							
v/s Ratio Perm	c0.61							0.26				
v/c Ratio	1.24	0.55			0.87			0.98				
Uniform Delay, d1	43.2	13.0			32.4			47.3				
Progression Factor	1.12	0.18			0.62			1.00				
Incremental Delay, d2	128.4	0.8			3.5			20.3				
Delay (s)	176.8	3.1			23.6			67.6				
Level of Service	F	A			C			E				
Approach Delay (s)		44.4			23.6			67.6			0.0	
Approach LOS		D			C			E			A	

Intersection Summary

HCM Average Control Delay	42.5	HCM Level of Service	D
HCM Volume to Capacity ratio	1.13		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	113.7%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1066: 127th Street & Ashland Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	135	774	408	104	1197	100	227	179	66	85	162	121
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	12	11	12	12	10	10	13	10	10	10
Total Lost time (s)	3.5	6.0	3.5	3.5	6.0		3.5	6.0		3.5	6.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		0.99	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.96		1.00	0.94	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1565	3273	1312	1603	3285		1578	3001		1537	2938	
Flt Permitted	0.13	1.00	1.00	0.34	1.00		0.34	1.00		0.59	1.00	
Satd. Flow (perm)	214	3273	1312	581	3285		573	3001		959	2938	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	142	815	429	109	1260	105	239	188	69	89	171	127
RTOR Reduction (vph)	0	0	151	0	5	0	0	30	0	0	106	0
Lane Group Flow (vph)	142	815	278	109	1360	0	239	227	0	89	192	0
Confl. Peds. (#/hr)	11		23	23		11	8		12	12		8
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	2%	1%	3%	3%	3%	0%	1%	1%	2%	3%	0%	1%
Parking (#/hr)			0									
Turn Type	pm+pt		pm+ov	pm+pt			pm+pt			pm+pt		
Protected Phases	5	2	3	1	6		3	8		7	4	
Permitted Phases	2		2	6			8			4		
Actuated Green, G (s)	47.2	47.2	64.2	62.7	60.2		37.9	27.8		24.0	17.4	
Effective Green, g (s)	47.2	47.2	64.2	62.7	60.2		37.9	27.8		24.0	17.4	
Actuated g/C Ratio	0.36	0.36	0.49	0.48	0.46		0.29	0.21		0.18	0.13	
Clearance Time (s)	3.5	6.0	3.5	3.5	6.0		3.5	6.0		3.5	6.0	
Vehicle Extension (s)	3.0	7.0	3.0	3.0	7.0		3.0	7.0		3.0	7.0	
Lane Grp Cap (vph)	248	1188	648	511	1521		298	642		206	393	
v/s Ratio Prot	0.07	c0.25	0.06	0.05	c0.41		c0.10	0.08		0.02	0.07	
v/s Ratio Perm	0.14		0.16	0.05			c0.13			0.06		
v/c Ratio	0.57	0.69	0.43	0.21	0.89		0.80	0.35		0.43	0.49	
Uniform Delay, d1	32.0	35.1	21.1	21.4	32.0		38.8	43.5		45.9	52.2	
Progression Factor	1.15	1.01	1.43	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	7.0	2.4	0.3	0.2	8.5		14.3	1.2		1.5	3.4	
Delay (s)	43.8	37.7	30.5	21.7	40.5		53.1	44.7		47.3	55.6	
Level of Service	D	D	C	C	D		D	D		D	E	
Approach Delay (s)		36.1			39.1			48.7			53.7	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM Average Control Delay	40.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	88.9%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1067: Vermont Street & Ashland Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	46	250	367	186	441	113	362	340	107	206	408	56
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	11	12	11	12	12	11	13	12	10	11	12
Total Lost time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.91		1.00	0.97		1.00	0.96		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1707	2925		1653	3267		1620	3381		1580	3183	
Flt Permitted	0.39	1.00		0.18	1.00		0.32	1.00		0.48	1.00	
Satd. Flow (perm)	698	2925		314	3267		544	3381		802	3183	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	48	263	386	196	464	119	381	358	113	217	429	59
RTOR Reduction (vph)	0	225	0	0	19	0	0	26	0	0	9	0
Lane Group Flow (vph)	48	424	0	196	564	0	381	445	0	217	479	0
Confl. Peds. (#/hr)	12		3	3		12	5					5
Heavy Vehicles (%)	0%	2%	2%	0%	1%	1%	2%	1%	0%	1%	2%	0%
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	35.5	28.8		46.8	36.1		56.2	44.2		40.1	32.1	
Effective Green, g (s)	35.5	28.8		46.8	36.1		56.2	44.2		40.1	32.1	
Actuated g/C Ratio	0.31	0.25		0.41	0.31		0.49	0.38		0.35	0.28	
Clearance Time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	3.5	7.0		3.5	7.0		3.5	7.0		3.5	7.0	
Lane Grp Cap (vph)	274	733		291	1026		454	1299		334	888	
v/s Ratio Prot	0.01	0.15		c0.08	0.17		c0.15	0.13		0.05	0.15	
v/s Ratio Perm	0.04			c0.19			c0.26			0.18		
v/c Ratio	0.18	0.58		0.67	0.55		0.84	0.34		0.65	0.54	
Uniform Delay, d1	28.3	37.8		24.9	32.7		20.8	25.1		28.8	35.2	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.4	3.3		6.3	2.1		13.1	0.7		4.5	2.3	
Delay (s)	28.7	41.1		31.2	34.8		33.9	25.8		33.3	37.5	
Level of Service	C	D		C	C		C	C		C	D	
Approach Delay (s)		40.2			33.9			29.4			36.2	
Approach LOS		D			C			C			D	

Intersection Summary			
HCM Average Control Delay	34.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	82.5%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱			↰↑↱		↰↰	↑↱		↰	↑↱	
Volume (vph)	105	603	293	10	376	66	720	355	9	198	625	183
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	10	12	9	11	12	9	9	12
Total Lost time (s)	4.0	4.0			4.0		3.0	4.0		3.0	4.0	
Lane Util. Factor	1.00	0.95			0.95		0.97	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.95			0.98		1.00	1.00		1.00	0.97	
Flt Protected	0.95	1.00			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1690	2962			3035		2817	3230		1523	2873	
Flt Permitted	0.35	1.00			0.82		0.95	1.00		0.31	1.00	
Satd. Flow (perm)	621	2962			2479		2817	3230		497	2873	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	117	670	326	11	418	73	800	394	10	220	694	203
RTOR Reduction (vph)	0	66	0	0	15	0	0	2	0	0	30	0
Lane Group Flow (vph)	117	930	0	0	487	0	800	402	0	220	867	0
Confl. Peds. (#/hr)	4		2	2		4	8		4	4		8
Confl. Bikes (#/hr)							2					2
Heavy Vehicles (%)	1%	2%	2%	0%	2%	6%	6%	2%	0%	1%	3%	3%
Turn Type	Perm			Perm			Prot			pm+pt		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8						6		
Actuated Green, G (s)	27.0	27.0			27.0		25.0	39.5		27.0	27.0	
Effective Green, g (s)	27.0	27.0			27.0		25.0	39.5		27.0	27.0	
Actuated g/C Ratio	0.30	0.30			0.30		0.28	0.44		0.30	0.30	
Clearance Time (s)	4.0	4.0			4.0		3.0	4.0		3.0	4.0	
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	186	889			744		783	1418		292	862	
v/s Ratio Prot		c0.31					c0.28	0.12		0.10	c0.30	
v/s Ratio Perm	0.19				0.20					0.12		
v/c Ratio	0.63	1.05			0.65		1.02	0.28		0.75	1.01	
Uniform Delay, d1	27.2	31.5			27.4		32.5	16.2		26.0	31.5	
Progression Factor	1.00	1.00			1.00		0.43	0.24		1.00	1.00	
Incremental Delay, d2	6.5	43.0			2.1		31.9	0.3		10.5	32.0	
Delay (s)	33.7	74.5			29.5		45.9	4.3		36.5	63.5	
Level of Service	C	E			C		D	A		D	E	
Approach Delay (s)		70.2			29.5			32.0			58.2	
Approach LOS		E			C			C			E	

Intersection Summary			
HCM Average Control Delay	49.9	HCM Level of Service	D
HCM Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	100.7%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1069: Vermont Street & Halsted Street

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰↰	↑↱		↰	↑↑	↱	↰	↑↑	↱
Volume (vph)	67	198	222	337	167	28	414	1147	993	35	866	70
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	12	12	12	12	12
Total Lost time (s)	4.0	5.0	4.0	4.0	5.0		4.0	5.0	4.0	4.0	5.0	4.0
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	1.00	0.99	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1710	2040	1491	3130	1991		1676	3320	1429	1437	3320	1485
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.15	1.00	1.00	0.15	1.00	1.00
Satd. Flow (perm)	1710	2040	1491	3130	1991		264	3320	1429	222	3320	1485
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	69	204	229	347	172	29	427	1182	1024	36	893	72
RTOR Reduction (vph)	0	0	21	0	8	0	0	0	143	0	0	40
Lane Group Flow (vph)	69	204	208	347	193	0	427	1182	881	36	893	32
Confl. Peds. (#/hr)	3		20	20		3	2		3	3		2
Confl. Bikes (#/hr)			1	1			2		2	2		2
Heavy Vehicles (%)	0%	0%	1%	6%	0%	0%	2%	3%	6%	19%	3%	2%
Turn Type	Prot		pm+ov	Prot			pm+pt		pm+ov	pm+pt		pm+ov
Protected Phases	7	4	5	3	8		5	2	3	1	6	7
Permitted Phases			4				2		2	6		6
Actuated Green, G (s)	12.2	15.1	29.7	15.0	17.9		46.9	39.5	54.5	29.7	27.3	39.5
Effective Green, g (s)	12.2	15.1	29.7	15.0	17.9		46.9	39.5	54.5	29.7	27.3	39.5
Actuated g/C Ratio	0.14	0.17	0.33	0.17	0.20		0.52	0.44	0.61	0.33	0.30	0.44
Clearance Time (s)	4.0	5.0	4.0	4.0	5.0		4.0	5.0	4.0	4.0	5.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	232	342	492	522	396		367	1457	865	106	1007	718
v/s Ratio Prot	0.04	c0.10	0.07	0.11	0.10		c0.19	0.36	c0.17	0.01	0.27	0.01
v/s Ratio Perm			0.07				c0.42		0.45	0.10		0.02
v/c Ratio	0.30	0.60	0.42	0.66	0.49		1.16	0.81	1.02	0.34	0.89	0.04
Uniform Delay, d1	35.0	34.6	23.5	35.1	32.0		29.6	22.0	17.8	38.6	29.9	14.4
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	0.73	0.34	0.13
Incremental Delay, d2	0.7	2.8	0.6	3.2	0.9		99.4	5.0	35.4	0.2	1.2	0.0
Delay (s)	35.8	37.4	24.1	38.3	32.9		129.0	27.0	53.1	28.2	11.5	1.9
Level of Service	D	D	C	D	C		F	C	D	C	B	A
Approach Delay (s)		31.1			36.3			53.7			11.4	
Approach LOS		C			D			D			B	

Intersection Summary			
HCM Average Control Delay	40.2	HCM Level of Service	D
HCM Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	91.5%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1070: 127th Street & Wallace Street

1/14/2013

	↗	→	↙	←	↖	↰	↖	↑	↗	↘	↓	↙
Movement	**EBL**	**EBT**	**WBL**	**WBT**	**WBR**	**NBL2**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Lane Configurations		↰↱	↰	↱				✥			✥	
Volume (vph)	2	785	455	550	18	3	10	9	47	9	0	3
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	10	10	10	12	12	16	12	12	16	12
Total Lost time (s)		5.0	3.0	5.0				4.5			4.5	
Lane Util. Factor		0.95	1.00	1.00				1.00			1.00	
Frpb, ped/bikes		1.00	1.00	1.00				0.98			0.97	
Flpb, ped/bikes		1.00	1.00	1.00				1.00			1.00	
Frt		1.00	1.00	1.00				0.91			0.94	
Flt Protected		1.00	0.95	1.00				0.99			0.97	
Satd. Flow (prot)		3160	1565	1652				1795			1793	
Flt Permitted		0.95	0.14	1.00				0.93			0.87	
Satd. Flow (perm)		3015	234	1652				1681			1609	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	2	826	479	579	19	3	11	9	49	9	0	3
RTOR Reduction (vph)	0	0	0	1	0	0	0	20	0	0	5	0
Lane Group Flow (vph)	0	828	479	597	0	0	0	52	0	0	12	0
Confl. Peds. (#/hr)	7		4		7		7		2	2		7
Confl. Bikes (#/hr)							2		2	2		2
Heavy Vehicles (%)	0%	1%	2%	1%	6%	0%	0%	0%	0%	0%	0%	0%
Turn Type	Perm		pm+pt			Perm	Perm			Perm		
Protected Phases		8	7	4				2			6	
Permitted Phases	8		4			2	2			6		
Actuated Green, G (s)		25.1	67.3	67.3				6.7			6.7	
Effective Green, g (s)		25.1	67.3	67.3				6.7			6.7	
Actuated g/C Ratio		0.30	0.81	0.81				0.08			0.08	
Clearance Time (s)		5.0	3.0	5.0				4.5			4.5	
Vehicle Extension (s)		3.0	3.0	3.0				3.0			3.0	
Lane Grp Cap (vph)		906	813	1331				135			129	
v/s Ratio Prot			0.28	0.36								
v/s Ratio Perm		c0.27	0.20					c0.03			0.01	
v/c Ratio		0.91	0.59	0.45				0.38			0.10	
Uniform Delay, d1		28.2	10.6	2.5				36.4			35.6	
Progression Factor		1.00	1.00	1.00				1.00			1.00	
Incremental Delay, d2		15.2	1.1	0.2				1.8			0.3	
Delay (s)		43.3	11.7	2.7				38.3			35.9	
Level of Service		D	B	A				D			D	
Approach Delay (s)		43.3		6.7				38.3			35.9	
Approach LOS		D		A				D			D	

Intersection Summary			
HCM Average Control Delay	29.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	83.5	Sum of lost time (s)	12.5
Intersection Capacity Utilization	82.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1070: 127th Street & Wallace Street

1/14/2013

Movement	SBR2	NER
Lane Configurations		↱↱
Volume (vph)	5	1155
Ideal Flow (vphpl)	1800	1800
Lane Width	12	12
Total Lost time (s)		3.0
Lane Util. Factor		0.88
Frpb, ped/bikes		1.00
Flpb, ped/bikes		1.00
Frt		0.85
Flt Protected		1.00
Satd. Flow (prot)		2693
Flt Permitted		1.00
Satd. Flow (perm)		2693
Peak-hour factor, PHF	0.95	0.95
Adj. Flow (vph)	5	1216
RTOR Reduction (vph)	0	0
Lane Group Flow (vph)	0	1216
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		
Heavy Vehicles (%)	0%	0%
Turn Type		Over
Protected Phases		7
Permitted Phases		
Actuated Green, G (s)		39.2
Effective Green, g (s)		39.2
Actuated g/C Ratio		0.47
Clearance Time (s)		3.0
Vehicle Extension (s)		3.0
Lane Grp Cap (vph)		1264
v/s Ratio Prot		c0.45
v/s Ratio Perm		
v/c Ratio		0.96
Uniform Delay, d1		21.4
Progression Factor		1.00
Incremental Delay, d2		17.0
Delay (s)		38.4
Level of Service		D
Approach Delay (s)		
Approach LOS		

Intersection Summary

HCM Signalized Intersection Capacity Analysis
1071: 127th Street & State Street

1/14/2013

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↰	↑↑	↑↱		↰	↱
Volume (vph)	355	1614	774	63	96	257
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frt	1.00	1.00	0.99		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1660	3320	3283		1660	1485
Flt Permitted	0.25	1.00	1.00		0.95	1.00
Satd. Flow (perm)	439	3320	3283		1660	1485
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	394	1793	860	70	107	286
RTOR Reduction (vph)	0	0	3	0	0	257
Lane Group Flow (vph)	394	1793	927	0	107	29
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type	pm+pt					Perm
Protected Phases	7	4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)	115.8	115.8	91.3		14.2	14.2
Effective Green, g (s)	115.8	115.8	91.3		14.2	14.2
Actuated g/C Ratio	0.84	0.84	0.66		0.10	0.10
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	550	2786	2172		171	153
v/s Ratio Prot	c0.11	0.54	0.28		c0.06	
v/s Ratio Perm	c0.50					0.02
v/c Ratio	0.72	0.64	0.43		0.63	0.19
Uniform Delay, d1	6.5	3.9	11.0		59.4	56.7
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	4.4	1.2	0.6		7.0	0.6
Delay (s)	10.9	5.0	11.6		66.3	57.3
Level of Service	B	A	B		E	E
Approach Delay (s)		6.1	11.6		59.7	
Approach LOS		A	B		E	

Intersection Summary			
HCM Average Control Delay	13.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	138.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	61.1%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1072: 127th Street & Michigan Avenue

1/14/2013

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰↑	↑↱		↰	↱
Volume (vph)	104	1609	747	152	265	94
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	12	10	11	12	10	10
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		1.00	1.00
Frpb, ped/bikes		1.00	1.00		1.00	0.99
Flpb, ped/bikes		1.00	1.00		1.00	1.00
Frt		1.00	0.97		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		3122	3106		1506	1341
Flt Permitted		0.76	1.00		0.95	1.00
Satd. Flow (perm)		2389	3106		1506	1341
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	109	1694	786	160	279	99
RTOR Reduction (vph)	0	0	13	0	0	81
Lane Group Flow (vph)	0	1803	933	0	279	18
Confl. Peds. (#/hr)	2			2		1
Heavy Vehicles (%)	1%	2%	2%	10%	6%	5%
Turn Type	Perm					Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)		99.0	99.0		23.0	23.0
Effective Green, g (s)		99.0	99.0		23.0	23.0
Actuated g/C Ratio		0.76	0.76		0.18	0.18
Clearance Time (s)		4.0	4.0		4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		1819	2365		266	237
v/s Ratio Prot			0.30		c0.19	
v/s Ratio Perm		c0.75				0.01
v/c Ratio		0.99	0.39		1.05	0.07
Uniform Delay, d1		15.1	5.3		53.5	44.6
Progression Factor		1.00	1.00		0.80	1.25
Incremental Delay, d2		19.1	0.5		65.0	0.5
Delay (s)		34.2	5.8		107.9	56.2
Level of Service		C	A		F	E
Approach Delay (s)		34.2	5.8		94.3	
Approach LOS		C	A		F	

Intersection Summary			
HCM Average Control Delay	32.9	HCM Level of Service	C
HCM Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	102.6%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↱		↰	↑	↰	↱
Volume (vph)	1404	329	121	771	222	58
Ideal Flow (vphpl)	2300	1800	1800	2300	1800	1800
Lane Width	15	12	14	16	15	12
Total Lost time (s)	5.0		3.0	5.0	5.0	5.0
Lane Util. Factor	1.00		1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00		1.00	1.00	1.00	0.99
Flpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Frt	0.97		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	2417		1788	2506	1758	1509
Flt Permitted	1.00		0.04	1.00	0.95	1.00
Satd. Flow (perm)	2417		69	2506	1758	1509
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	1433	336	123	787	227	59
RTOR Reduction (vph)	5	0	0	0	0	50
Lane Group Flow (vph)	1764	0	123	787	227	9
Confl. Peds. (#/hr)						1
Heavy Vehicles (%)	2%	2%	2%	4%	7%	0%
Turn Type			pm+pt			Perm
Protected Phases	4		3	8	2	
Permitted Phases			8			2
Actuated Green, G (s)	106.0		116.0	116.0	22.1	22.1
Effective Green, g (s)	106.0		116.0	116.0	22.1	22.1
Actuated g/C Ratio	0.72		0.78	0.78	0.15	0.15
Clearance Time (s)	5.0		3.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1730		135	1963	262	225
v/s Ratio Prot	c0.73		c0.04	0.31	c0.13	
v/s Ratio Perm			0.67			0.01
v/c Ratio	1.02		0.91	0.40	0.87	0.04
Uniform Delay, d1	21.0		54.7	5.1	61.6	53.9
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	26.6		51.3	0.1	24.6	0.1
Delay (s)	47.7		106.0	5.2	86.1	54.0
Level of Service	D		F	A	F	D
Approach Delay (s)	47.7			18.8	79.5	
Approach LOS	D			B	E	

Intersection Summary			
HCM Average Control Delay	41.9	HCM Level of Service	D
HCM Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	148.1	Sum of lost time (s)	13.0
Intersection Capacity Utilization	109.3%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1074: 130th Street & Ellis Avenue

1/14/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑↑	↱		↰↑	↱		✥	
Volume (vph)	1	1680	84	112	875	1	73	0	157	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	15	13	11	11	12	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0	4.0	3.0	3.0	4.0		4.0	4.0			
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00	1.00			
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85			
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.95	1.00			
Satd. Flow (prot)	1881	3431	1479	1589	3320	1530		1938	1500			
Flt Permitted	0.29	1.00	1.00	0.08	1.00	1.00		0.76	1.00			
Satd. Flow (perm)	583	3431	1479	128	3320	1530		1545	1500			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1	1867	93	124	972	1	81	0	174	0	0	0
RTOR Reduction (vph)	0	0	27	0	0	0	0	0	140	0	0	0
Lane Group Flow (vph)	1	1867	66	124	972	1	0	81	34	0	0	0
Heavy Vehicles (%)	0%	3%	0%	4%	3%	0%	0%	0%	2%	0%	0%	0%
Turn Type	Perm		Perm	custom		custom	Perm		Perm	Perm		
Protected Phases		4		3	3 8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)	49.4	49.4	49.4	67.1	67.1	67.1		9.9	9.9			
Effective Green, g (s)	49.4	49.4	49.4	67.1	67.1	67.1		9.9	9.9			
Actuated g/C Ratio	0.58	0.58	0.58	0.79	0.79	0.79		0.12	0.12			
Clearance Time (s)	4.0	4.0	4.0	3.0		4.0		4.0	4.0			
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0		3.0	3.0			
Lane Grp Cap (vph)	339	1994	860	354	2621	1208		180	175			
v/s Ratio Prot		c0.54		0.06	c0.29							
v/s Ratio Perm	0.00		0.04	0.22		0.00		c0.05	0.02			
v/c Ratio	0.00	0.94	0.08	0.35	0.37	0.00		0.45	0.20			
Uniform Delay, d1	7.5	16.4	7.8	14.8	2.7	1.9		35.0	34.0			
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00			
Incremental Delay, d2	0.0	9.9	0.2	0.6	0.1	0.0		1.8	0.6			
Delay (s)	7.5	26.2	8.0	15.4	2.8	1.9		36.8	34.5			
Level of Service	A	C	A	B	A	A		D	C			
Approach Delay (s)		25.4			4.2			35.2			0.0	
Approach LOS		C			A			D			A	

Intersection Summary			
HCM Average Control Delay	19.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	70.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1942: 111th Street & Langley Avenue

1/14/2013

	↰	→	←	↱	↳	↲
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰↑	↑↱		↲↳	
Volume (vph)	9	952	843	30	71	13
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10
Total Lost time (s)		5.0	5.0		3.0	
Lane Util. Factor		0.95	0.95		1.00	
Frt		1.00	0.99		0.98	
Flt Protected		1.00	1.00		0.96	
Satd. Flow (prot)		3098	3083		1533	
Flt Permitted		0.94	1.00		0.96	
Satd. Flow (perm)		2923	3083		1533	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	10	1058	937	33	79	14
RTOR Reduction (vph)	0	0	3	0	7	0
Lane Group Flow (vph)	0	1068	967	0	86	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type	Perm					
Protected Phases		4	8 2 11		5	
Permitted Phases	4					
Actuated Green, G (s)		33.0	64.0		7.0	
Effective Green, g (s)		33.0	64.0		7.0	
Actuated g/C Ratio		0.37	0.71		0.08	
Clearance Time (s)		5.0			3.0	
Lane Grp Cap (vph)		1072	2192		119	
v/s Ratio Prot			c0.31		c0.06	
v/s Ratio Perm		c0.37				
v/c Ratio		1.00	0.44		0.72	
Uniform Delay, d1		28.4	5.5		40.5	
Progression Factor		1.00	0.01		1.00	
Incremental Delay, d2		26.6	0.2		31.1	
Delay (s)		55.0	0.2		71.7	
Level of Service		E	A		E	
Approach Delay (s)		55.0	0.2		71.7	
Approach LOS		E	A		E	

Intersection Summary			
HCM Average Control Delay	30.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	46.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↑↱			↰↑↱			↰↑	↱
Volume (vph)	58	500	0	1	582	39	3	2	28	202	0	138
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	12	12	11	12	11
Total Lost time (s)		4.0			4.0			3.0			3.0	3.0
Lane Util. Factor		1.00			0.95			1.00			1.00	1.00
Frpb, ped/bikes		1.00			1.00			0.94			1.00	0.97
Flpb, ped/bikes		1.00			1.00			1.00			0.98	1.00
Frt		1.00			0.99			0.88			1.00	0.85
Flt Protected		0.99			1.00			1.00			0.95	1.00
Satd. Flow (prot)		1772			3341			1463			1667	1346
Flt Permitted		0.87			0.95			0.77			0.86	1.00
Satd. Flow (perm)		1553			3191			1132			1515	1346
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	64	556	0	1	647	43	3	2	31	224	0	153
RTOR Reduction (vph)	0	0	0	0	5	0	0	28	0	0	0	109
Lane Group Flow (vph)	0	620	0	0	686	0	0	8	0	0	224	44
Confl. Peds. (#/hr)	60		44	44		60	14		10	10		14
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	0%	1%	0%	0%	1%	3%	20%	0%	0%	1%	0%	7%
Turn Type	Perm			Prot			Perm			pm+pt		Perm
Protected Phases		4		3	3 4			1		2	1 2	
Permitted Phases	4				3		1	1		1 2		1 2
Actuated Green, G (s)		38.4			52.0			9.0			23.0	26.0
Effective Green, g (s)		38.4			52.0			9.0			23.0	26.0
Actuated g/C Ratio		0.43			0.58			0.10			0.26	0.29
Clearance Time (s)		4.0						3.0				
Vehicle Extension (s)		3.0						3.0				
Lane Grp Cap (vph)		663			1866			113			411	389
v/s Ratio Prot					c0.06						c0.08	
v/s Ratio Perm		c0.40			0.16			0.01			c0.05	0.03
v/c Ratio		0.94			0.37			0.07			0.55	0.11
Uniform Delay, d1		24.6			10.2			36.7			29.0	23.5
Progression Factor		1.00			1.04			1.00			1.00	1.00
Incremental Delay, d2		22.2			0.0			0.3			1.5	0.1
Delay (s)		46.8			10.7			37.0			30.5	23.7
Level of Service		D			B			D			C	C
Approach Delay (s)		46.8			10.7			37.0			27.7	
Approach LOS		D			B			D			C	

Intersection Summary			
HCM Average Control Delay	27.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	78.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Appendix F
2014-2015 Red Line Extension Project Update

2014–2015 Red Line Extension Project Update

From 2012-2014, CTA evaluated benefits and impacts of four alternatives: the No Build Alternative, the Bus Rapid Transit Alternative (along Michigan Avenue), the Union Pacific Railroad (UPRR) Rail Alternative, and the Halsted Alternative. CTA evaluated three options of the UPRR Rail Alternative: Right-of-Way Option, East Option, and West Option. CTA also evaluated two options of the UPRR Rail Alternative 130th Street station: a South Station Option and a West Station Option. Based on the project description provided in Section 2 of this technical memorandum, CTA analyzed the impacts of these alternatives and station options. The benefits and impacts are included in the technical memoranda prepared in 2012-2014.

In August 2014, based on the technical analysis and public input, CTA announced the NEPA Preferred Alternative—the UPRR Rail Alternative. Additional conceptual engineering was conducted on the UPRR Rail Alternative to refine the East and West Option alignments. In addition, CTA is considering only the South Station Option of the 130th Street Station.

In late 2014 and early 2015, CTA conducted additional engineering and revised assumptions on the East and West Options to refine the alignments. The refinement of the East and West Options consisted of the following items:

- For the segment of the alignment along I-57, CTA shifted the proposed alignment from the median of I-57 to the north side of I-57 within the existing expressway right-of-way. The construction would be less complex, safer for construction workers, and have a shorter duration. The shift would also allow for fewer impacts to Wendell Smith Park for the East Option, and would allow for no permanent impacts to Wendell Smith Park for the West Option.

- CTA modified the curve speeds as the alignment heads south from I-57 along the UPRR tracks. The curve speed for both the East and West Options would be 35 mph.

- CTA shifted the East Option alignment near 103rd Street station to minimize impacts to Block Park and the Roseland Pumping Station.

- CTA modified the curves south of 103rd Street for both the East and West Options to 55 mph to maximize the train speed.

- CTA refined the layout of the 120th Street yard and shop to optimize yard operations. The refined layout of the yard would accommodate 340 train cars.

The refinement of the East and West Option alignments minimizes potential impacts to parks while providing flexibility for future design phases. The Draft Environmental Impact Statement contains the benefits and impacts of the refined East and West Option alignments and supersedes information presented in other chapters of this technical memorandum.

The refined East and West Option alignments would have no additional or different impacts from those described in the technical memoranda for the following resource areas: construction, transportation, land use and economic development, historic and cultural resources, safety and security, hazardous materials, indirect and cumulative, air quality, floodplains, vegetation and wildlife habitat, threatened and endangered species, and geology and soils.

Appendix I
Construction Impacts Technical Memorandum

RED AHEAD
Moving Ahead to a Better Red

Red Line Extension

Chicago Red Line Extension Project

Construction Impacts
Technical Memorandum

September 18, 2013
Updated July 29, 2015

Prepared for:
Chicago Transit Authority
567 W. Lake Street
Chicago, IL 60661

Prepared by:
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Abbreviations

APE	area of potential effect
API	area of potential impact
BMP	best management practices
BRT	Bus Rapid Transit
BTU	British thermal units
CERCLIS	Comprehensive Environmental Response, Compensation and Liability Information System
CFR	Code of Federal Regulations
CN	Canadian National Railroad
CTA	Chicago Transit Authority
EIS	Environmental Impact Statement
ESA	Environmental Site Assessment
IDOT	Illinois Department of Transportation
IHB	Indiana Harbor Belt Railroad
ILCS	Illinois Compiled Statutes
JULIE	Joint Utility Locating Information for Excavators
ME	Metra Electric District
MWRD	Metropolitan Water Reclamation District of Greater Chicago
NB	northbound
NEPA	National Environmental Policy Act
NICTD/CSS & SBRR	Northern Indiana Commuter Transportation District/Chicago South Shore & South Bend Railroad
NRHP	National Register of Historic Places
OEMC	Office of Emergency Management and Communications
RLE	Red Line Extension
ROW	right-of-way
UPRR	Union Pacific Railroad
USEPA	United States Environmental Protection Agency
WB	westbound

Section 1
Summary

This technical memorandum analyzes the potential construction impacts of the proposed Red Line Extension (RLE) Project. The analysis draws on the descriptions of construction-related impacts and conclusions described in the other RLE technical memoranda. Section 2 introduces the project, describes the project area, and identifies the alternatives being analyzed in the Environmental Impact Statement (EIS). Section 3 describes the methods of analysis for construction impacts, identifies federal, state and local regulations used in the analysis, identifies analysis thresholds, and describes the area of potential impact (API). Section 4 describes the affected environment. Section 5 describes constructability assumptions and construction segments and phasing. Section 6 describes potential impacts and mitigation measures for each of the RLE alternatives, and Section 7 addresses impacts after mitigation. All RLE alternatives are analyzed in this memorandum. The No Build Alternative would not involve any construction activities, so no construction impacts would occur. Because of the temporary nature of construction activities, the use of construction best management practices (BMP), and the mitigation methods proposed, the construction impacts from the build alternatives would not be adverse.

Updated July 29, 2015

In August 2014, based on the technical analysis and public input until then, CTA announced the NEPA Preferred Alternative—the UPRR Rail Alternative. CTA is considering two alignment (route) options of this alternative: the East Option and the West Option. At this time, CTA is also considering only the South Station Option of the 130th Street Station. In late 2014 and early 2015, CTA conducted additional engineering on the East and West Options to refine the East and West Option alignments. Appendix B of this technical memorandum summarizes the refined alignments and any additional or different impacts that would result. The information in Appendix B supersedes information presented in other chapters of this technical memorandum.

Section 2
Project Description

The Chicago Transit Authority (CTA) proposes to extend the Red Line from the existing 95th Street Terminal to the vicinity of 130th Street, subject to the availability of funding. The proposed RLE would include four stations. Each station would include bus transfer and parking facilities. This project is one part of the Red Ahead Program to extend and enhance the entire Red Line. The CTA is also planning 95th Street Terminal improvements that are anticipated to be completed prior to the proposed RLE construction and are therefore not included in the scope of the RLE Project.

The project area is 11 miles south of the Chicago central business district (commonly referred to as the Loop) and encompasses approximately 20 square miles. The boundaries of the project area are 95th Street on the north, Ashland Avenue on the west, Stony Island Avenue on the east, and the Calumet-Sag Channel/Little Calumet River and 134th Street on the south. The I-57 Expressway and I-94 Bishop Ford Freeway cross the western and eastern edges of the project area, respectively. Lake Calumet is in the eastern portion of the project area. The project area encompasses parts of nine community areas in the City of Chicago and the eastern section of the Village of Calumet Park. Chicago community areas include Beverly, Washington Heights, Roseland, Morgan Park, Pullman, West Pullman, Riverdale, Hegewisch, and South Deering. The project area comprises residential (primarily single family), industrial (both existing and vacant), transportation (including freight), and commercial development.

The Draft EIS focuses on the following alternatives (shown in Figure 2-1), which emerged from the Alternatives Analysis and the National Environmental Policy Act (NEPA) scoping process:

- No Build Alternative
- Bus Rapid Transit (BRT) Alternative
- Union Pacific Railroad (UPRR) Rail Alternative
  - Right-of-Way (ROW) Option
  - East Option
  - West Option
- Halsted Rail Alternative

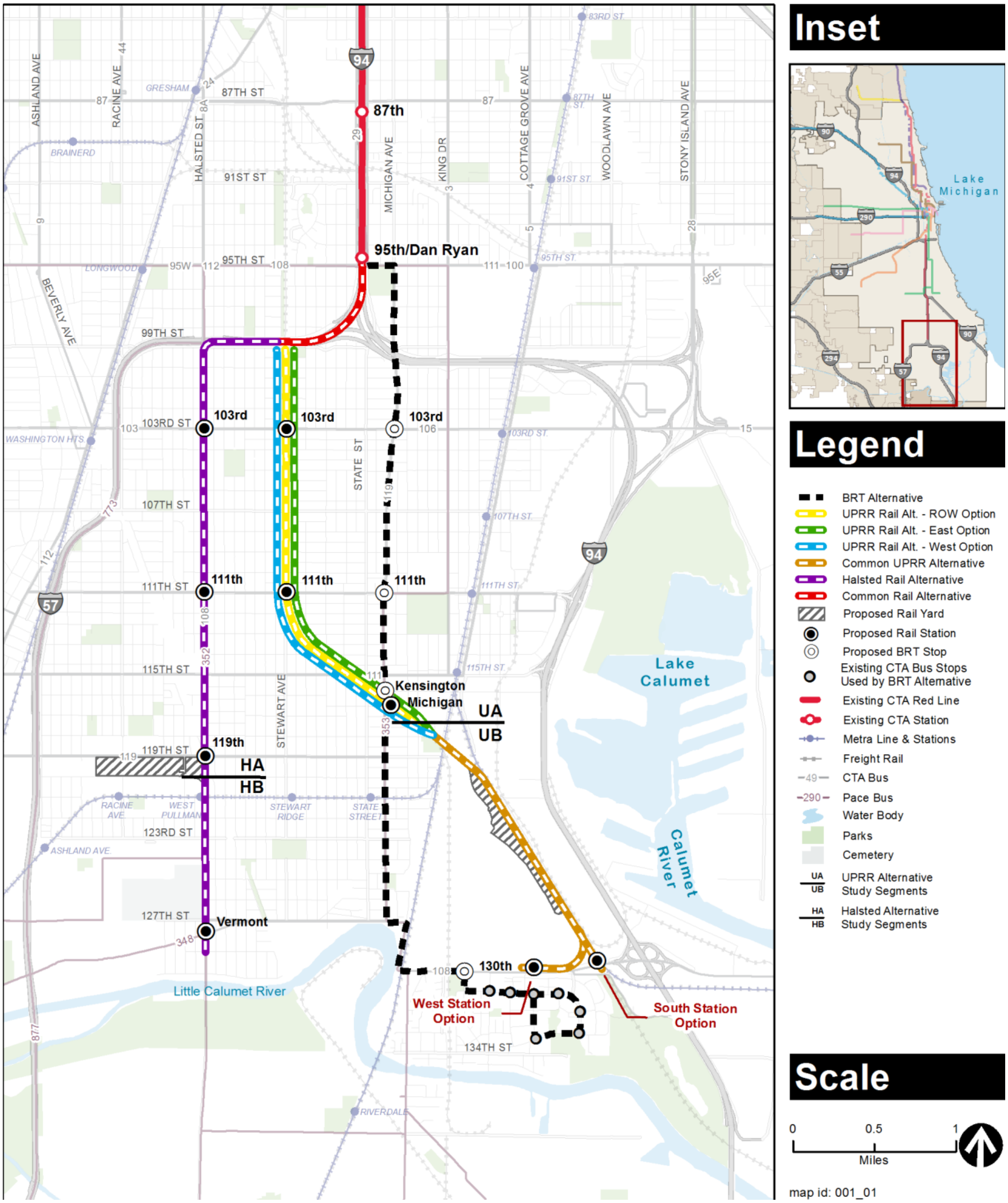

Inset
Lake Michigan
Legend
BRT Alternative
UPRR Rail Alt. - ROW Option
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
Common UPRR Alternative
Halsted Rail Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Proposed BRT Stop
Existing CTA Bus Stops Used by BRT Alternative
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
CTA Bus
Pace Bus
Water Body
Parks
Cemetery
UPRR Alternative Study Segments
Halsted Alternative Study Segments
Scale
0
0.5
1
Miles
map id: 001_01
87th
95th/Dan Ryan
103rd
103rd
103rd
111th
111th
111th
Kensington
Michigan
UA
UB
119th
HA
HB
Vermont
130th
West Station Option
South Station Option
Lake Calumet
Calumet River
Little Calumet River
87TH ST
91ST ST
95TH ST
99TH ST
103RD ST
107TH ST
111TH ST
115TH ST
119TH ST
123RD ST
127TH ST
134TH ST
ASHLAND AVE
RACINE AVE
HALSTED ST
MICHIGAN AVE
KING DR
COTTAGE GROVE AVE
WOODLAWN AVE
STONY ISLAND AVE
STATE ST
STEWART AVE
BEVERLY AVE
GRESHAM
BRAINERD
LONGWOOD
WASHINGTON HTS.
RACINE AVE
WEST PULLMAN
STEWART RIDGE
STATE STREET
ASHLAND AVE.
RIVERDALE
83RD ST
87TH ST
91ST ST
95TH ST
103RD ST
107TH ST
111TH ST
115TH ST
94
57

Figure 2-1: Red Line Extension Project Alternatives

The No Build Alternative is a required alternative as part of the NEPA environmental analysis and is used for comparison purposes to assess the relative benefits and impacts of extending the Red Line service. The No Build Alternative is carried into the Draft EIS phase of the project development regardless of its performance versus the build alternatives under consideration. No new infrastructure would be constructed as part of the No Build Alternative other than committed transportation improvements that are already in the Chicago Metropolitan Agency for Planning Fiscal Year 2010–2015 Transportation Improvement Program including the improvements to 95th Street Terminal. The Transportation Improvement Program projects within the project area consist of four bridge reconstructions, several road improvement projects including resurfacing and coordination of signal timing on 95th Street, work on Metra's facilities, construction of a bicycle/pedestrian multi-use trail, and preservation of historic facilities. The No Build Alternative includes regular maintenance of existing track and structures, and bus transit service would be focused on the preservation of existing services and projects. All elements of the No Build Alternative are included in each of the other alternatives. Under this alternative, travel times would not improve from existing conditions.

The BRT Alternative (formerly referred to as the Transportation Systems Management Alternative) is a 5.0-mile, limited-stop, enhanced BRT route, which is assumed to operate 24 hours per day between the existing 95th Street Terminal and the intersection of 130th Street and Eberhart Avenue. No dedicated bus lanes would be provided for the BRT Alternative; however, parking lanes would be removed for some portions of the alignment and four stops with improved bus shelters and park & ride facilities would be created at 103rd Street and Michigan Avenue, 111th Street and Michigan Avenue, Kensington Avenue and Michigan Avenue, and 130th Street and Eberhart Avenue. Although BRT service elements would not continue south of the 130th Street stop, the bus route would continue through Altgeld Gardens along the existing route with six stops. The BRT Alternative would be consistent with bus routing changes that may occur as part of improvements to the 95th Street Terminal. Under this alternative, travel times between 130th Street and the Loop would improve over existing conditions.

The UPRR Rail Alternative is a 5.3-mile extension of the heavy rail transit Red Line from its existing 95th Street Terminal to 130th Street, just west of I-94. The Chicago Transit Board designated the UPRR Rail Alternative as the Locally Preferred Alternative at its August 12, 2009 board meeting. This alternative includes construction and operation of new heavy rail transit tracks, mostly in existing transportation corridors. The UPRR Rail Alternative has three options for alignment (ROW, East, and West), all of which would include operation on elevated structure from 95th Street to just past the Canadian National/Metra Electric District (CN/ME) tracks near 119th Street. The alignment would then transition to at-grade through an industrial area with no public through streets, terminating at 130th Street in the vicinity of Altgeld Gardens. Four new stations would be constructed at 103rd Street, 111th Street, Michigan Avenue, and 130th Street. The 130th Street station would be the terminal, with two options under evaluation: the South Station Option and the West Station Option. A new yard and shop facility would be sited near 120th Street and Cottage Grove Avenue. The bus routes in the vicinity of the UPRR Rail Alternative would be modified to enhance connectivity between the Red Line and the bus network. The hours of operation and service frequency for the UPRR Rail Alternative are assumed to be the same as the current Red Line. Under this alternative, travel times between 130th Street and the Loop would improve substantially over existing conditions.

The Halsted Rail Alternative is a 5.0-mile heavy rail transit extension of the existing Red Line. In this alternative, the Red Line would operate on an elevated structure running south from 95th Street along I-57 until Halsted Street. The alignment would then turn south and continue along Halsted Street to the intersection of Halsted Street and Vermont Avenue near 127th Street. This alternative would include four new stations at 103rd Street, 111th Street, 119th Street, and Vermont Avenue. The Vermont Avenue station would be the terminal. A new yard and shop would be sited west of Halsted Street and between the 119th Street and Vermont Avenue stations. The bus routes in the vicinity of the Halsted Rail Alternative would be modified to enhance connectivity to the Red Line. The hours of operation and service frequency for the Halsted Rail Alternative are assumed to be the same as for the current Red Line. Under this alternative, travel times between 127th Street and the Loop would improve substantially over existing conditions. This alternative would not extend rail to Altgeld Gardens, which would be served by bus connecting to the Vermont terminal.

Section 3
Methods for Impact Evaluation

This section describes the process used to conduct a macro-level analysis of potential direct and cumulative impacts of construction activities associated with the proposed project. The regulatory framework for the analysis is presented in this section and the potential options to avoid, minimize, and mitigate adverse impacts are discussed in Section 6. Future NEPA analysis, if required for the RLE Project, may provide project-specific analysis of impacts and may provide specific details about the mitigation measures agreed upon by CTA and other project stakeholders.

3.1 Federal Regulations

The project-specific analysis of impacts for the RLE Project is documented in technical memoranda that cover the NEPA resources identified below. The regulatory frameworks relevant to each of these resources are documented in the respective memoranda. Part of the regulatory framework can be applied to construction impacts. The regulatory frameworks for the following resources apply, in part, and are included herein by reference:

- Land Use and Economic Development
- Displacements and Relocation of Existing Uses
- Neighborhood and Community Impacts
- Parklands and Community Facilities
- Visual and Aesthetic Conditions
- Noise and Vibration
- Safety and Security
- Historic and Cultural Resources
- Hazardous Materials
- Air Quality
- Water Resources
- Vegetation and Wildlife Habitat
- Energy
- Environmental Justice
- Transportation

3.2 State Regulations

In addition to the regulatory framework discussed in the other technical reports, the following state regulations apply to construction activities:

- Chapter 15 of 625 ILCS (Illinois Compiled Statutes) 5 - Illinois Vehicle Code includes statutes regarding the maximum size and weight of vehicles that can be lawfully operated throughout Illinois and the network of routes over which these vehicles may operate. Article I describes vehicle size, weight, and load. Article II describes enforcement and recording of weight limit violations. Article III explains special permitting needed to operate or move a vehicle or combination of vehicles of a size or weight of vehicle or load exceeding the maximum specified in this Act.

- The Illinois Department of Transportation's (IDOT) Standard Specifications for Road and Bridge Construction include provisions for dust control. Under these provisions, dust and airborne dirt generated by construction activities would be controlled through dust control procedures or a specific Dust Control Plan, when warranted. In addition, IDOT has developed construction-related Special Provisions dealing with the use of cleaner diesel fuel, idling reduction requirements for construction equipment, and the installation of emission control devices on contractor vehicles.

- Section 5 of 415 ILCS 5 - (Illinois Environmental Protection Act) establishes the Illinois Pollution Control Board. This independent board determines, defines, and implements the environmental control standards applicable in the State of Illinois and may adopt rules and regulations in accordance with Title VII of the Environmental Protection Act. Title 35 of the Illinois Administrative Code contains the Board's substantive pollution control standards and regulations, and the Illinois Environmental Protection Agency's rules for administering the pollution control program. Part 1100, Clean Construction or Demolition Debris, is among the provisions of Title 35 that pertain to construction impacts.

3.3 Local Regulations

The following parts of the Municipal Code of Chicago codify various noise, water quality, air quality, and construction permitting requirements in the City of Chicago. (Regulatory requirements for parts of the project area outside the City of Chicago also apply.)

- Title 9, Chapter 9-72, Section 30 codifies authority to "determine and designate streets or parts of streets upon which the operation of trucks or other commercial vehicles shall be prohibited or upon which the operation of such vehicles shall be restricted by imposing limitations as to the weight of such vehicles." It also requires that "appropriate signs will be erected and maintained on such streets or parts of streets." Section 35 authorizes vehicle weight limitations computed under subsection (g) of Section 15-111 of the Illinois Vehicle Code. These limitations are similar to those imposed by the State of Illinois on "portions of streets and highways under local jurisdiction and will be authorized on designated arterial streets and industrial access routes". Sections 40, 50, and 60 set "the maximum width of any vehicle at 8 feet, the maximum height of any vehicle at 13 feet, 6 inches, the maximum length of single vehicles at 42 feet, and the maximum length of truck tractor and semi-trailer at 55 feet." Section 70 provides "permitting for a vehicle or combination of vehicles not in conformity with the size regulations of this chapter or the wheel and axle load and gross weight provisions of Section 15-111 of the Illinois Vehicle Code."
- Title 11, Chapter 11-16, Section 120 prohibits discharging "any prohibited wastes as defined by the Metropolitan Water Reclamation District of Greater Chicago (MWRD), the department of health or any other governmental agency, or any other material which the commissioner determines is likely to obstruct or stop the flow of wastewater in the public sewer system."

3.4 Impact Analysis Thresholds

NEPA does not set specific thresholds of significance for construction-related impacts; however, there are construction-related thresholds of significance for some of the NEPA resources included in this analysis. The analyses for various resources were used as the basis for the qualitative and quantitative evaluations referenced in this document, and to determine the thresholds of significance for each resource.

For this analysis, the impact categories are as follows:

- **Beneficial** - Impact that positively affects the community**.**
- **No Impact** - No adverse or beneficial impact on the resource would result.
- **Not Adverse** - Would not result in a negative impact on the resource.
- **Not Substantially Adverse -** A negative impact on the resource would result, but it would not be severe, or it could be mitigated to minimize the impact.
- **Adverse** - Negative impact to the community that cannot be mitigated.

For the purpose of this EIS, a construction impact would occur if an impact threshold identified for any of the resources were to be exceeded during proposed construction activities.

3.5 Area of Potential Impact

Two kinds of construction impacts are considered in determining the API for a project. Direct impacts are caused by the proposed project and occur at the same time and place (40 Code of Federal Regulations [CFR] 1508.8). They are immediately related to project activities, and include impacts that result from construction, such as construction noise. Direct impacts occur at facilities and adjacent to the project. Cumulative impacts are those that result from the incremental impact of the proposed project when added to other past, present, and reasonably foreseeable future actions, regardless of what agency or person undertakes such other actions (40 CFR 1508.67).

The API for direct impacts due to construction is based on the API for the NEPA resources analyzed. The largest geographic API for direct impacts due to construction is generally bounded on the north by 91st Street; on the south by 134th Street; on the east by Martin Luther King Drive (91st Street to 99th Street) and I-94 (99th Street to 134th Street); and on the west by Halsted Street (91st Street to 95th Street), Racine Avenue (95th Street to 99th Street), and I-57 (99th Street to 134th Street). Direct impacts due to construction and construction-related traffic in this area would primarily affect traffic patterns and land uses along roadways classified as principal and minor arterials, and major and minor collectors. In subsequent phases of the RLE Project, design activities would identify potential locations of material sources, contractor storage and staging areas, and other details that determine construction access routes.

The mid-size API applied for direct impacts due to construction is primarily relevant for non-motorized travel, including pedestrians and bicyclists. One-half mile is a generally accepted distance for travel by non-motorized means for analyses such as land use and economic development impacts, neighborhood and community impacts, and parklands and community facilities impacts. The mid-size API is defined as follows for the respective alternatives:

- **BRT Alternative** - Extends ½ mile on each side of the center of the proposed alignment, from the 95th Street Terminal to the station location at 130th Street and Eberhart Avenue.
- **UPRR Rail Alternative** - Extends ½ mile on each side of the center of the proposed alignments, from the 95th Street Terminal to the 130th Street station location.
- **Halsted Rail Alternative** - Extends ½ mile on each side of the center of the proposed alignment from the 95th Street Terminal to the 127th Street/Vermont Avenue station location.

The smallest APIs are based on unique characteristics of a specific site or sites. A micro-level API is used for analysis of construction impacts on site-specific environmental resources. An example of construction impacts on a site-specific environmental resource includes construction noise and vibration impacts on a historic site adjacent to the RLE alignment. When otherwise not specifically stated, the API for direct impacts due to construction noise includes parcels within 600 feet of the existing and proposed ROWs for the each of the alternatives (Chicago City Code Section 11-4-2835).

The area used to analyze cumulative impacts due to proposed construction activities is based on the RLE *Cumulative Impacts Technical Memorandum*. In general, the API for cumulative impacts includes broader geographic areas than those for direct impacts. The API for cumulative impacts reflects the distribution of the individual resources and is not limited to the project area; it consists instead of the boundaries specific to the resources, such as the construction limits for a transportation improvement, private development, or another public infrastructure project that is near enough to the project and being performed at the same time, potentially inducing cumulative impacts.

3.6 Methods

The analysis is based on considerations including potential construction methods, staging, and possible impacts on environmental resources. The impacts were identified during the analysis performed for each of the NEPA resources. Construction impacts are temporary in nature and are not relevant to the operation of transit services once the proposed project has been constructed. Impacts associated with post-construction activities were therefore not included in this analysis.

Section 4
Affected Environment

The affected environment for construction impacts depends on the geographic frame of reference used to analyze existing conditions for each of the environmental resources listed in Section 3. Analysis of the resources used the geographic frames of reference most relevant to each field of study: the API, community areas, or designated track segments.

4.1 Analyzed by Area of Potential Impact

Resource analyses that considered general environmental conditions or the built environment at a macro level were described by API. Section 6 provides additional information regarding APIs for each environmental resource. The resources framed by API include the following:

- Parklands and Community Facilities
- Noise and Vibration
- Safety and Security
- Hazardous Materials
- Air Quality
- Water Resources
- Energy
- Environmental Justice
- Transportation

4.2 Analyzed by Community Areas

The project area encompasses parts of nine community areas in the City of Chicago and the eastern section of the Village of Calumet Park. Chicago community areas include Beverly, Washington Heights, Roseland, Morgan Park, Pullman, West Pullman, Riverdale, Hegewisch, and South Deering. The project area comprises residential (primarily single-family), industrial (both existing and vacant), transportation (including freight), and commercial development. The API for direct impacts due to RLE Project construction activities varies depending upon the API for each of the resources analyzed. Community areas were used for these resources based on the public's understanding of cultural context and community boundaries. These resources include the following:

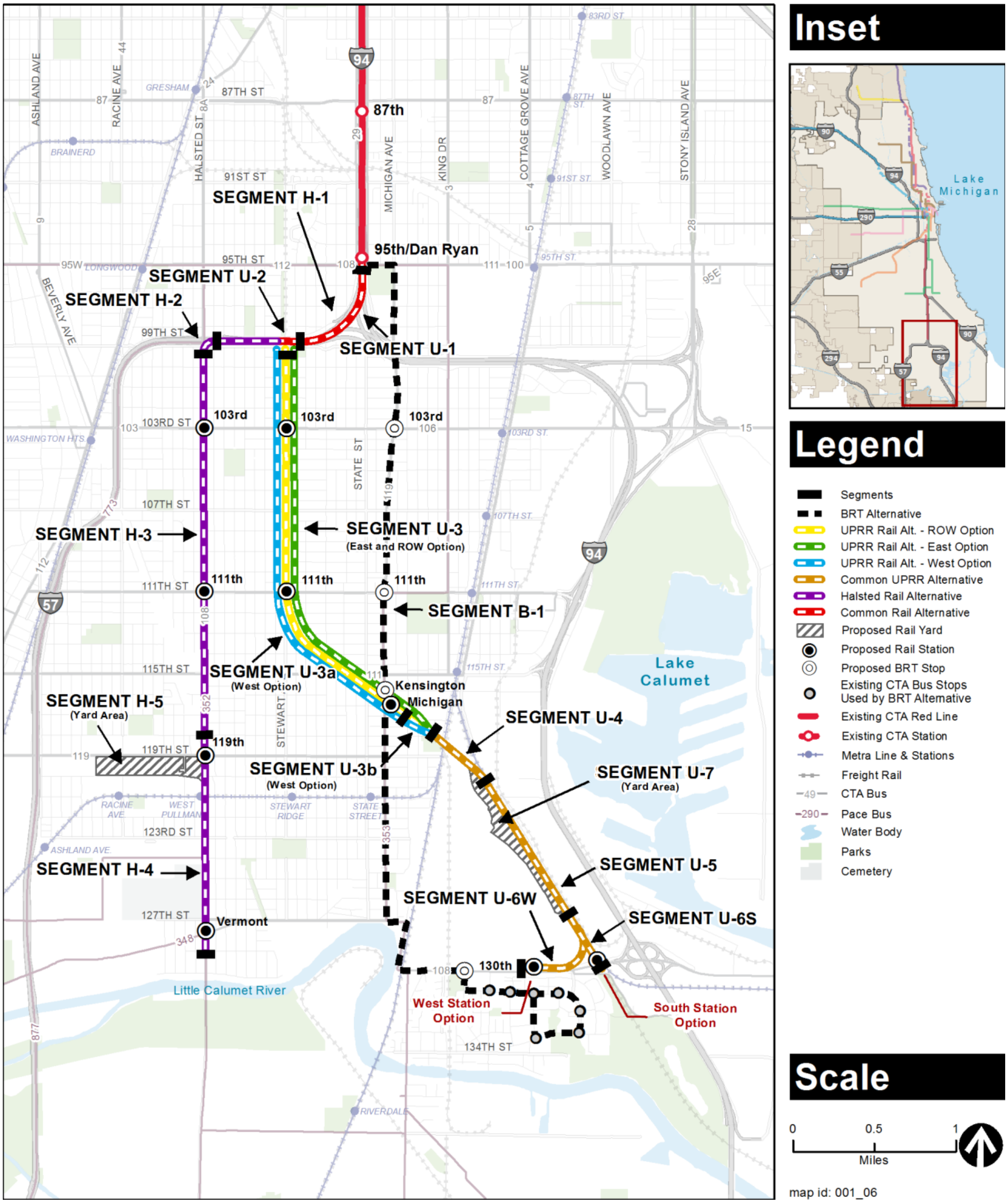
- Land Use and Economic Development
- Displacements and Relocation of Existing Uses
- Neighborhood and Community Impacts
- Historic and Cultural Resources

4.3 Analyzed by Segments of Track

The API for some resources was subdivided into several track segments as shown in Figure 4-1 at the end of this section. Analysis by track segment frames the impact on resources that may be more susceptible to construction impacts, and accounts for a variety of construction techniques that may apply only to specific segments of track. Resources described by track segment include the following:

- Visual and Aesthetic Conditions
- Vegetation and Wildlife Habitat

Track segments provide a framework for proposed sequencing and coordination with CTA operations and overall construction activities. The segments were also developed so that construction activity in a particular segment could function as a separate contract.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Lake Michigan
Legend
Segments
BRT Alternative
UPRR Rail Alt. - ROW Option
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
Common UPRR Alternative
Halsted Rail Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Proposed BRT Stop
Existing CTA Bus Stops Used by BRT Alternative
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
CTA Bus
Pace Bus
Water Body
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Cemetery
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map id: 001_06
SEGMENT H-1
SEGMENT U-2
SEGMENT H-2
SEGMENT U-1
SEGMENT H-3
SEGMENT U-3
(East and ROW Option)
SEGMENT B-1
SEGMENT U-3a
(West Option)
SEGMENT H-5
(Yard Area)
SEGMENT U-4
SEGMENT U-3b
(West Option)
SEGMENT U-7
(Yard Area)
SEGMENT H-4
SEGMENT U-5
SEGMENT U-6W
SEGMENT U-6S
87th
95th/Dan Ryan
103rd
111th
Kensington
Michigan
119th
Vermont
130th
West Station Option
South Station Option
Lake Calumet
Little Calumet River
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91ST ST
95TH ST
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103RD ST
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127TH ST
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ASHLAND AVE
RACINE AVE
HALSTED ST
MICHIGAN AVE
KING DR
COTTAGE GROVE AVE
WOODLAWN AVE
STONY ISLAND AVE
STATE ST
STEWART
BEVERLY AVE
GRESHAM
BRAINERD
LONGWOOD
WASHINGTON HTS
RACINE AVE
WEST PULLMAN
STEWART RIDGE
STATE STREET
ASHLAND AVE
RIVERDALE
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Figure 4-1: Red Line Extension Alternatives - Construction Segment Map

Section 5
Description of Construction

This section is based on and references the *Description of Construction and Phasing for Environmental Impact Statement Build Alternatives*. A summary of the report is provided below. For specific details regarding construction sequencing and phasing, please refer to Section 3 of the *Description of Construction and Phasing for Environmental Impact Statement Build Alternatives*. The report details the construction activities for the BRT Alternative, UPRR Rail Alternative, and Halsted Rail Alternative (the build alternatives).

The following are the major constructability, construction sequencing, and phasing assumptions. Phasing and construction segments may change due to refined engineering, available funding, and other factors later in the project implementation stage. Construction activities involving caisson construction, train rerouting, CTA/UPRR track shutdowns, trackwork, elevated structures, structural steel erection, and pile placement would only be associated with the rail alternatives.

5.1 Constructability Assumptions for the Bus Rapid Transit Alternative

The coordinated construction of infrastructure and stops is a key component of planning and design. Assumptions that affect design solutions include the following:

- The location of stops and parking facilities.

- The ability to perform construction so as to facilitate CTA operations, specifically near the 95th Street Terminal, UPRR operations, and adjacent vehicle traffic.

The following parameters have been assumed for the BRT Alternative:

- The methods of construction required along the proposed alignments would be conventional, using standard construction methods and materials including cast-in-place concrete and pre-cast concrete.

- Streets with adjacent alleys would be used for site access during construction.

- Space for storage and staging of construction materials, equipment, and temporary facilities would occur within the immediate construction zone or work area. Construction material storage and contractor yard areas would also be available at the proposed parking areas.

- Temporary shutdown of traffic would occur at nighttime and during low-traffic-volume intervals per IDOT and CDOT approval.

- Streets, along with adjacent alleys, would be closed temporarily or the number of travel lanes may be reduced for truck queuing and other construction activities.

5.2 Constructability Assumptions for all Rail Alternatives

The coordinated construction of infrastructure and stations is a key component of planning and design. Assumptions that affect design solutions include the following:

- The location of stations, parking facilities, and yard locations.
- The type of aerial structure. New construction of aerial structures would include foundation, columns, and decking. New construction of retained embankment structures would include foundation and two parallel reinforced concrete retaining walls with fill in between.
- The ability to construct facilities in phases to facilitate CTA operations, specifically near the 95th Street Terminal, the 95th Street substation, and 98th Street Yard and Shop.
- The ability to construct facilities in sequences and phases to facilitate UPRR operations.
- The location and size of proposed foundations and structural members that are potentially limited by clearance requirements (e.g., caisson size and depth, concrete pour access, piece weight and size, and similar).
- The ability to phase construction of structures to facilitate traffic operations on I-94 and 1-57.

The following parameters have been assumed for all rail build alternatives:

- The methods of construction required along the proposed alignments would be conventional, using standard construction methods and materials including cast-in-place concrete, pre-cast concrete, and structural steel.
- Streets with adjacent alleys would be used for site access during construction. New construction in and adjacent to the 95th Street Terminal would require track shutdowns in order to access the work site. To perform this work in an efficient manner, while maintaining reasonable service and access to the 98th Street Yard and Shop, it is anticipated that construction would be sequenced and phased to maintain some level of access to the 98th Street Yard and Shop.
- Space for storage and staging of construction materials, equipment, and temporary facilities would occur within the ROW. Construction material storage and contractor yard areas would be available at the proposed parking areas and/or maintenance yard. Construction access adjacent to the ROW could be required, especially during viaduct and station construction activities.
- During construction, access to work zones adjacent to the expressway would require shoulder and lane closures. For the superstructure erection over expressway traffic lanes, temporary shutdown of all traffic would be required. Temporary shutdown of traffic would only occur at nighttime and during low-traffic-volume intervals per IDOT and CDOT approval. Construction adjacent to or over railroads would require flagging operations and scheduled track closures.

- It is anticipated that streets crossed for station and viaduct construction would be closed temporarily and/or the number of travel lanes would only be reduced during heavy construction activities.

5.3 Construction Phasing and Segments

Phasing construction and performing construction in segments would allow CTA to limit the duration of impacts in a given area rather than potentially affecting resources and areas along the entire corridor simultaneously. Every attempt would be made to group as many construction activities as possible in a given area in order to maximize efficiency and limit the duration of the impact. Phasing and segmenting construction activities also allows for more focused analysis of potential impacts along a corridor that may have several different concentrations of resources and land uses. Construction activities would be grouped by type of work and location. The overall schedule and coordination of all construction segments would be phased and scheduled to maintain CTA operations at the 95th Street Terminal, the 95th Street substation, and 98th Street Yard and Shop, and vehicular traffic on affected expressways and roadways. Figure 4-1 shows the alignments of all alternatives and the construction segments where applicable.

5.3.1 Bus Rapid Transit Alternative

The corridor for the BRT Alternative consists of one segment for the purposes of describing construction activities. Work activities would include new construction of the following:

- BRT shelters and amenities at BRT stops and park & ride facilities.
- Pavement markings, crosswalks, and signage.
- Americans with Disabilities Act-compliant ramps, bus pads, and lighting at BRT stops.
- A traffic signal at the 130th Street/Eberhart Avenue intersection.
- Transit signal priority detectors and the improvement of traffic signal controllers at existing signalized intersections.

Construction activities would also include utility relocation, sidewalk improvements, and the removal of on-street parking spaces at the proposed BRT stop locations.

All of the construction work activities may require temporary shutdown of traffic, and possible CTA and Pace bus rerouting, which would occur during non-peak and during low-traffic-volume intervals per IDOT and CDOT approval. Work zones along the BRT Alternative would likely require temporary lane closures. Work would be sequenced to minimize impacts and access to adjacent roadways and both commercial and residential buildings.

Additional buses associated with the BRT Alternative would be stored and maintained at other CTA bus garages, such as the 103rd Street Garage.

5.3.2 Union Pacific Railroad Rail Alternative - Right-of-Way Option

The UPRR Rail Alternative corridor is divided into seven segments for the purposes of describing construction activities.

A proposed 270-car yard and shop facility, to be located at 120th Street and Cottage Grove, is included as part of all three UPRR Rail Alternative options. The facility would be located on a combination of industrial and vacant land east of the CN/ME tracks and west of the Northern Indiana Commuter Transportation District/Chicago South Shore & South Bend Railroad (NICTD/CSS & SBRR) tracks. The yard would be entirely at grade. A nominal amount of parking for employees would be included. A proposed substation within the 120th Street yard and shop west of the existing railroad tracks and east of the proposed facility may be included as part of the facility.

5.3.2.1 UPRR-ROW Segment U-1

Work activities in UPRR ROW Option Segment U-1 would include the following:

- New trackwork and signals to tie into the 95th Street Terminal.
- New construction of a retained fill structure south of the 95th Street Terminal.
- New construction of single-track, elevated structures over existing CTA tracks leading to the 98th Street Yard and Shop and over the existing CTA/southbound I-94 tunnel.
- New construction of dual-track, elevated structure through the I-94/I-57 interchange, across the westbound (WB) I-57 entrance ramp from northbound (NB) I-94, and along the I-57 corridor.
- Proposed structure construction would be sequenced to minimally affect traffic flow on the WB I-57 entrance ramp from NB I-94. For superstructure erection over the expressway traffic lanes, temporary shutdown of all traffic would be required. Temporary shutdown of traffic would occur at nighttime and during low-traffic-volume intervals per IDOT and CDOT approval.

It may be necessary to relocate trackwork leading from the 95th Street Terminal to the existing 98th Street Yard and Shop to allow construction of proposed substructure within the CTA ROW. Tying proposed trackwork and structure into existing trackwork at the 95th Street Terminal would be sequenced to provide rail car access to the 98th Street Yard and Shop. Proposed structure construction would be sequenced to maintain operating routes from the 95th Street Terminal to the 98th Street Yard and Shop, as well as maintain traffic flow on I-94 through the tunnel.

Superstructure erection over the CTA tracks, I-94, the WB I-57 entrance ramp from NB I-94, and Wentworth Avenue would require temporary shutdown of expressway traffic and CTA non-revenue operations to the yard. Temporary shutdown of traffic would occur during non-peak and low-traffic-volume intervals per IDOT and CDOT approval. CTA non-revenue operations would be shut down during off-peak hours or weekends. Work would be sequenced to minimize impacts on traffic flow on the I-57/I-94 interchange, as well as in the I-57 corridor. Work zones adjacent to the expressway would require shoulder closures and possibly lane closures.

5.3.2.2 UPRR-ROW Segment U-2

Work activities in UPRR ROW Option Segment U-2 would include new construction of dual-track, elevated structure consisting of multiple types of superstructure and substructure spanning I-57 and within the UPRR corridor.

Work would be sequenced to minimize impacts on traffic flow on I-57. Work zones adjacent to the expressway would require temporary shoulder and lane closures. Superstructure erection over I-57 would require temporary shutdown of NB traffic.

5.3.2.3 UPRR-ROW Segment U-3

Work activities in UPRR ROW Option Segment U-3 would include the following:

- New construction of an elevated structure within the UPRR corridor.
- Construction of new stations at 103rd Street, 111th Street, and Michigan Avenue.
- Construction of two new substations.
- Construction of surface parking lots and bus turnarounds at the proposed 103rd and 111th Street stations.
- Construction of a parking garage and bus turnaround at the proposed Michigan Avenue station.

All existing structures and underground utilities would be identified. All existing utilities would be protected or relocated.

5.3.2.4 UPRR-ROW Segment U-4

Work activities in UPRR ROW Option Segment U-4 would include the following:

- New construction of dual track and an elevated structure within the UPRR corridor, branching off and running along the east side of the corridor over the CN/ME tracks.
- New construction of an elevated structure to the 120th Street yard and shop tie-in.
- New construction of a retained embankment structure to carry the elevated structure to grade.

Construction at the CN/ME crossing would be phased to minimize impacts on CN and Metra operations. Construction over and adjacent to the railroads would require flagging operations and potential limited track closures.

5.3.2.5 UPRR-ROW Segment U-5

Work activities in UPRR ROW Option Segment U-5 would include the new construction of track roadbed at grade and the construction of the MWRD access road and bridge over the proposed CTA tracks and the NICTD/CSS & SBRR crossing.

5.3.2.6 UPRR-ROW Segment U-6S

There are two station options for the 130th Street Station: a South Station Option (U-6S) and a West Station Option (U-6W).

Work activities in UPRR ROW Option Segment U-6S would include the following new construction:

- Track roadbed
- The 130th Street station including parking lots and multi-story garage
- Areas for land development, bus bays, and road access for the 130th Street station
- The MWRD access road to the 130th Street station
- One new substation

Coordination with MWRD would be necessary to maintain current operations during new track roadbed construction and during the new road access for the 130th Street station. If necessary, construction would be sequenced to construct the MWRD access road to the west of the station first, allowing MWRD facilities to continue operation. Coordination with the NICTD/CSS & SBRR would be necessary because construction over and adjacent to the railroads would require flagging operations and scheduled track closures.

5.3.2.7 UPRR ROW Segment U-6W

Work activities in UPRR ROW Option Segment U-6W would be similar to those in U-6S with the addition of crosswalks, a signalized intersection at 130th Street and Evans Avenue, and a bridge, in addition to a road at 130th Street.

Coordination with MWRD would be necessary to maintain operations during construction of the new access road for the 130th Street station. If necessary, construction would be sequenced to construct the proposed MWRD access road and bridge crossing the proposed CTA tracks first, thus allowing MWRD facilities to continue operation. Coordination with the NICTD/CSS & SBRR would be necessary because construction over and adjacent to the railroads would require flagging operations and scheduled track closures.

5.3.2.8 UPRR ROW Segment U-7

Construction for the 120th Street yard and shop would be scheduled and coordinated to maintain operations at the MWRD facilities. Work would be sequenced to minimize impacts on adjacent roadways and both commercial and residential buildings. Construction activities associated with the 120th Street yard and shop would include the following:

- New construction of dual track and elevated structure, new yard and track, shop building, shop access road, and parking.
- Potential construction of a new substation.

5.3.3 Union Pacific Railroad Rail Alternative - East Option

The corridor is divided into seven segments for the purposes of describing construction activities.

5.3.3.1 UPRR East Option Segments U-1 and U-2

Construction and phasing activities would be the same as for the UPRR ROW Option.

Work activities would be sequenced to minimize impacts on traffic flow on I-57 and UPRR operations. Work zones adjacent to the expressway would require temporary shoulder and lane closures. Superstructure erection over I-57 would require temporary shutdown of NB traffic. Construction adjacent to railroads would require flagging operations and scheduled track closures.

5.3.3.2 UPRR East Option Segment U-3

Work activities in UPRR East Option Segment U-3 would include the following:

- Demolition of existing buildings and structures in the proposed ROW where necessary.
- New construction of dual-track, elevated structure consisting of multiple types of superstructure and substructure along the east side of the UPRR corridor.
- New construction of stations at 103rd Street, 111th Street, and Michigan Avenue.
- New construction of surface parking lots and a bus turnaround at 103rd Street station and 111th Street station and new construction of a parking garage and bus turnaround at the Michigan Avenue Station.
- Construction of two new substations.

Work would be sequenced along the UPRR corridor to minimize impacts on UPRR operations. Construction adjacent to railroads would require flagging operations and scheduled track closures. Possible signaling would be needed to replace existing signaling during construction of viaducts for the following at-grade UPRR crossings: 101st Street, 103rd Street, 107th Street, 109th Street, 111th Street, Michigan Avenue, and State Street. All existing structures and underground utilities would be identified, protected, or relocated as described for UPRR ROW Segment U-3.

5.3.3.3 UPRR East Option Segment U-4

Work activities in UPRR East Option Segment U-4 would include the following:

- Demolition of existing building and structures in the proposed ROW where necessary.
- New construction of dual-track, elevated structure along the east side of the UPRR corridor and over the CN/ME tracks.
- New construction of UPRR yard and shop track tie-in.

5.3.3.4 UPRR East Option Segments U-5, U-6S, U-6W, and U-7

The phasing activities would be the same as those described for the UPRR ROW Segments U-5, U-6S, U-6W, and U-7.

5.3.4 Union Pacific Railroad Rail Alternative - West Option

The corridor is divided into seven segments for the purposes of describing construction activities.

5.3.4.1 UPRR West Option Segments U-1 and U-2

Construction and phasing activities for the UPRR West Option would be the same as for the UPRR ROW Option.

Work activities in zones adjacent to the expressway and Eggleston Avenue may require temporary shoulder and lane closures. Superstructure erection over I-57 and the UPRR corridor would require temporary shutdown of NB traffic and UPRR operations. Construction adjacent and across railroads would require flagging operations and scheduled track closures.

5.3.4.2 UPRR West Option Segment U-3a

This portion of the alignment would extend from the end of the horizontal curve at the UPRR crossing to the Prairie Street crossing. Work activities in UPRR West Option Segment U-3a would include the following:

- Demolition of existing buildings and structures in the proposed ROW.
- New construction of dual track and elevated structure along the west side of the UPRR corridor.
- New construction of stations at 103rd Street, 111th Street, and Michigan Avenue.
- New construction of surface parking lots and bus turnarounds at the 103rd Street station and the 111th Street station and new construction of a parking garage and bus turnaround at the Michigan Avenue station.

Work would be sequenced along the UPRR corridor to minimize impacts on UPRR operations. Construction adjacent to railroads would require flagging operations and scheduled track closures. Signaling may be needed to replace existing signaling during construction of viaducts for the following at-grade UPRR crossings: 101st Street, 103rd Street, 107th Street, 109th Street, 111th Street, Michigan Avenue, and State Street.

5.3.4.3 UPRR West Option Segment U-3b

This portion of the alignment would extend from the Prairie Street crossing to the CN/ME crossing. Work activities in UPRR West Option Segment U-3b would include the following:

- New construction of dual-track, elevated structure along the east and west side of the UPRR corridor, as well as across the UPRR tracks, would consist of multiple types of super- and substructure spanning along and across the UPRR corridor and Prairie Avenue.

Work would be sequenced along and across the UPRR corridor to minimize impacts on UPRR operations. Construction adjacent to railroads would require flagging operations and scheduled track closures. Work zones adjacent to Prairie Avenue may require lane closures and may cause temporary shutdown of all traffic.

5.3.4.4 UPRR West Option Segment U-4

Work in UPRR West Option Segment U-4 would include the following:

- Demolition of existing buildings and structures in the proposed ROW as necessary.
- New construction of dual-track, elevated structure along the east side of the UPRR corridor and over the CN/ME tracks.
- New construction of the 120th Street yard and shop track tie-in.
- New construction of retained embankment structure to carry elevated structure to grade.

5.3.4.5 UPRR West Option Segment U-5

Construction and phasing activities in U-5 would be the same as those described for UPRR ROW Segment U-5.

5.3.4.6 UPRR West Option Segments U-6S, U-6W, and U-7

Construction and phasing activities in U-6S, U-6W, and U-7 would be the same as those described for the UPRR ROW Option.

5.3.5 Halsted Rail Alternative

The corridor is divided into five segments for the purposes of describing construction activities.

The proposed 119th Street yard and shop would be located south of the 119th Street station and north of the Vermont Avenue station west of Halsted Street. The parcel on which the yard would be constructed is west of the 119th Street park & ride location. Track height would transition from elevated at station height to at grade between Halsted Street and Morgan Street, through the park & ride facility. The yard would be entirely at grade. A nominal amount of parking for employees would be included at the yard.

5.3.5.1 Halsted Segment H-1

Work activities in H-1 would include the following:

- New trackwork and signals to tie into the 95th Street Terminal.
- New construction of retained fill structure south of the 95th Street Terminal.
- New construction of single-track, elevated structures over the existing CTA tracks leading to the 98th Street Yard and Shop and over the existing CTA/southbound I-94 tunnel.
- New construction of dual-track, elevated structure through the I-94/I-57 interchange, across the WB I-57 entrance ramp from NB I-94, and along the I-57 corridor.
- Proposed structure construction would be sequenced to minimally affect traffic flow on the WB I-57 entrance ramp from NB I-94. For superstructure erection over expressway traffic lanes, temporary shutdown of all traffic would be required. Temporary shutdown of traffic would occur at nighttime and low-traffic-volume intervals per IDOT and CDOT approval.

The phasing activities would be the same as for UPRR Rail Segment U-1.

5.3.5.2 Halsted Segment H-2

Work activities in H-2 would include new construction of dual track and elevated structures consisting of multiple types of super- and substructure spanning along and across I-57 and across Halsted Street. Work zones adjacent to and across the expressway may require shoulder and lane closures. Superstructure erection would require temporary shutdown of NB traffic on I-57 and at the intersection of 99th Street and Halsted Street.

5.3.5.3 Halsted Segment H-3

Work activities in H-3 would include the following new construction:

- Dual track and an elevated structure consisting of multiple types of super- and substructure spanning along Halsted Street
- Stations at 103rd Street and 111th Street
- A surface parking lot and bus turnaround at the 103rd Street station
- A surface parking lot at the 111th Street station
- Two new substations

Work would be phased to minimize traffic impacts on Halsted Street and adjoining streets. The construction of the elevated structure would require lane and street closures. In order to increase roadway capacity, parking along Halsted Street would potentially be eliminated during construction. Superstructure erection would require temporary shutdown of all traffic along segments of Halsted Street during off-peak or weekend hours. Traffic would be detoured to the next major north/south roadway to minimize traffic impacts. Detour routes for Halsted Street would be identified in a Maintenance of Traffic Plan as part of final engineering.

5.3.5.4 Halsted Segment H-4

Work activities in H-4 would include the following new construction:

- Dual track and an elevated structure consisting of multiple types of super- and substructure spanning along Halsted Street
- Stations at 119th Street and Vermont Avenue
- A surface parking lot and bus turnaround at the 119th Street station
- Both a surface parking lot and a parking garage, as well as bus bays, at the Vermont Avenue station
- Two new substations
- Three tracks and an elevated structure south of the Vermont Avenue station
- A surface parking lot at the 111th Street station

The phasing activities for Halsted Segment H-4 would be the same as for Segment H-3.

5.3.5.5 Halsted Segment H-5

For analysis of construction, the 119th Street yard and shop has been separated from the Halsted Rail segments. Work would be sequenced to minimize impacts on adjacent roadways and buildings. Work activities for the 119th Street yard and shop would include the demolition of existing buildings and structures in the proposed ROW where necessary and construction of a new yard, track shop building, shop road access, and parking.

5.4 Potential Construction Staging Areas

Construction staging would be within the proposed ROW or within construction easements of stations/stops and alternative alignments. The following provides a general description of the types of properties that may be used for construction staging in order to minimize impacts:

- Parcels to be acquired by CTA for the implementation of a given alternative would be used as staging areas. Whole parcels or groups of parcels may be acquired and used for the RLE Project. After construction, residual property may be sold.
- Nearby parking lots may be used through the establishment of temporary construction easements.
- Abandoned adjacent parcels may be used through the establishment of temporary construction easements.

In the event of limited available space adjacent to the construction site, off-site CTA, municipal, or privately owned storage yards may need to be provided for the contractor's use. This would allow secure storage of an equipment fleet or permanent materials needing large storage or assembly areas.

5.5 Anticipated Construction Activities and Methods

5.5.1 Basic Construction Activities and Methods

A summary of potential construction activities and methods for the build alternatives is presented in the Construction Matrix within Appendix A. The intent of the Construction Matrix is to provide a general level of construction activity that may occur with each alternative. The Construction Matrix identifies a range of activities based on currently available information and is not intended to be used for scheduling construction, nor is it intended to be used for estimating construction cost.

Terms used to describe quantities of construction materials and durations of construction activities are based on the *Description of Construction and Phasing for Environmental Impact Statement Build Alternatives*. Some, but not all, of these terms are defined below.

- Duration (Months) - Estimated number of months a work activity would be required. Activities would not be sequential, except for advance work if required in the segment. Construction phasing and the need to maintain transit operations would affect the duration of construction activities.

- Construction Equipment - Possible types of construction equipment that may be used for a particular duration within an activity.

- Soil (cubic yards) - Potential amount of cubic yards of earthwork that may be excavated or removed. Concrete removed is included in the soil quantity. Soil removed to install structural caissons and foundations is included in this category.

- Concrete (cubic yards) - Represents the potential quantity of concrete to be placed, including that for caissons and concrete repair areas. Concrete at stations/stops includes concrete used for buildings and platforms. Concrete for track support is included under column concrete in the Elevated Structure activity.

- Structural Steel (pounds) - Represents the potential quantity of new structural steel weighed in pounds. Structural steel at stations includes steel used for buildings and platforms. Structural steel for track support is included in the Elevated Steel Structure activity.

- Average Truck Trips Per Workday - Estimation of the average number of truck trips per workday for an activity. The activity does not include smaller vehicles used for administrative and management purposes or vehicles used by workers to commute to and from the work site.

- Average Workers Per Workday - Estimation of the average number of workers for an activity per workday.

5.5.2 Preconstruction Activities

Contractor preconstruction activities would include development of construction schedules, quality plan, procurement schedules, and would include the following activities as well:

- Process plans would be developed for coordination of work activities to match construction constraints and site access.
- Existing conditions would be verified for design and construction interface criteria. Survey controls would be established for verification of site, existing conditions, and utility conflict/relocation information.
- Utility protection/relocation information would be coordinated and verified in sequence of scheduled construction far in advance of the early construction activities.
- Community notifications would be initiated by the CTA and the Contractor, as early as possible.
- Demolition and building permits would be obtained at the earliest opportunity. City of Chicago Office of Underground Coordination requirements (e.g., shoring designs, support of excavation, caisson procedures) would be met and approved for permits.
- Any special trackwork/signal work/interlocking requirements would be coordinated or procured by the CTA in advance of project procurement and in sequence with any schedule requirements.
- Compliance with all CTA Quality Control and the International Organization for Standardization (ISO) requirements.

5.5.3 Traffic Rerouting

During construction, vehicles, pedestrians, buses, and trains may need to be rerouted around the construction sites. Rerouting of traffic may be done using detours and/or complete street closures. The street closures could include main streets and side streets, as well as alleys and access points. Station and viaduct construction activities, for the rail construction, would be sequenced around street and alley closures. Temporary traffic lanes, temporary access points, or staged construction would be used. The following activities would be part of the traffic rerouting activities:

- Construction signage and temporary traffic barriers, accessibility adjustment (temporary curb ramps).
- Temporary reductions in number of thru-traffic lanes in each direction from two to one, if feasible.
- Detours/complete street closures, including alleys and access points.
- Temporary traffic lanes.

- Construction vehicle access points within and/or adjacent to the ROW.
- Business, residential, and pedestrian impacts including limited parking or parking bans.
- Advance trackwork and signalization to facilitate train rerouting.
- Alternate bus routes and temporary CTA outages may be required during construction of the RLE Project at the 95th Street Terminal.
    - CTA track shutdowns during nights or weekends may be required.
    - Trains would operate on one or two tracks through the construction zones. Flagmen would be required to notify trains of construction activities.

5.5.4 Demolition

Demolition of existing buildings and structures in the proposed ROW would be required. The demolition process would result in increased noise, debris, roadway closures, and construction vehicle access. Work would be performed within parameters of local ordinances for construction activities. In general, pedestrian and vehicular traffic would not be allowed into the area of demolition.

The demolition process would include concrete removal, which would require construction workers to saw cut, jackhammer, knock out the existing concrete, cut or remove the existing reinforcement, or complete demolition of the concrete structures.

To remove foundations or streets, or to relocate existing utilities, the contractor would have to excavate with bulldozers, bobcats, or backhoes to dig and remove the earth. The material to be disposed would be placed in dump trucks and hauled offsite.

Construction vehicles would be accessing the construction site on a regular basis and would require special hauling routes to remove the debris and deliver materials and equipment to the site. The routes may require temporary shutdown of streets, complete closures, or rerouting of traffic. There is ample street capacity and land available for construction staging in the project area. While specific construction routes have not been finalized for the project, it is anticipated that impacts would either be avoided or readily mitigated. This conclusion will be confirmed after designation of a NEPA Preferred Alternative and completion of a detailed construction management plan including routing. Depending on the type of material that would be removed, special handling of waste may be necessary.

5.5.5 Temporary Shoring

During demolition and excavation, temporary shoring may be required to protect adjacent property and/or tracks. The shoring would consist of steel sheet piling that would be driven into the ground with a vibratory pile driver. The rig may be placed within the construction zone or outside the ROW, depending on space limitations and access points. The temporary shoring may require the use of tiebacks, which are long rods that would be drilled through the sheet piling, embedded into sound rock or other approved materials, and then grouted into place.

5.5.6 Foundations

Due to the variety of structures, including CTA elevated structure, stations/stops, and parking garages, there would be a variety of foundations on the RLE Project. Foundations could consist of concrete spread footings, steel pile foundations, or concrete caisson foundations with caisson caps to transition to exposed columns. The type of foundation depends on the site conditions and structure type.

All types of spread or shallow type foundations would require excavation and removal of earth to form the concrete footings. Bulldozers, bobcats, or backhoes would be used to dig and remove the earth. The earth may be placed in dump trucks and hauled off site or stored for use on the construction site for backfill.

Large cranes with pile-driving leads that help guide the piles into position would be used for the installation of a pile foundation. A diesel hammer would drive the piles into the ground by impact. Pile shoes or pile tips added to the end of a pile or a pre-drilled hole supported by a steel casing could be used to aid the pile installation process.

Caisson construction would also be performed with a crane-mounted drilling rig. An auger of the design diameter would be drilled into the ground and the spoils would be piled nearby for removal. As the auger advances, extensions are added to the supporting shaft. Often, the drilled hole is fitted with a lining when unstable soils are encountered. A pre-formed reinforcement cage would be installed and concrete would be placed to form the caisson support.

5.5.7 Concrete Placement

Determination of the concrete plant location, based on availability of the required concrete mix, is an important part of the construction logistics and process plan. The plant would supply and deliver the concrete to the site using concrete trucks. Temporary street closures and truck routes may need to be established to access the construction site. Coordination of multiple trucks may be necessary for large pours and may require special access and scheduling. The contractor may elect to create an on-site ready-mix plant to supply the concrete if there is ample on-site space and the nearest concrete plant is far away.

Before the concrete could be poured, all necessary reinforcement and concrete forms would need to be in place. The reinforcement would be delivered on large flatbed trucks and would be stored on site in bundles. The formwork could consist of large steel panels or plywood that holds the wet concrete in place. The formwork would be braced or temporarily supported to maintain the weight of the concrete until it cured.

The truck would then be positioned at the location required for the pour. If the truck could not access the location of the pour, the concrete would need to be placed by pump, conveyer system, or similar measures. It may need curing for a week before forms could be removed.

5.5.8 Structural Steel Erection

The proposed improvements would require standard steel erection to assemble the structures. Structural steel could consist of plates, angles, girders, beams, cross frames, deck plates, rails, or similar. The steel could vary in size, length, weight, and use.

The steel members would be delivered to the site on large flatbed trucks or semi-trucks and could require special hauling permits. The construction zone would require special access areas so that the steel could be delivered, assembled on site, stored, or moved into position. Cranes would be used to pick the pieces off the trucks, move the material overhead and place them into position.

5.5.9 Methods for Protecting Utilities and Adjacent Structures

Methods for protecting nearby utilities and adjacent structures would include standard industry practice techniques. These techniques include coordinating with existing utilities and field verifying locations. The Office of Underground Coordination requires a review of foundations that are within two feet of the property line. Dig requests must be submitted to Chicago DIGGER (Chicago Utility Alert Network) for areas within the limits of the City of Chicago and Joint Utility Locating Information for Excavators (JULIE) for areas outside the City of Chicago limits before any excavation can begin.

Section 6
Impacts and Mitigations

This section summarizes the potential construction impacts for each of the build alternatives, as well as the general mitigation measures. All RLE alternatives are analyzed in this memorandum; however, the No Build Alternative does not involve any construction activities, therefore, no construction impacts would occur, and no further discussion of the No Build Alternative is included here.

6.1 Land Use and Economic Development

The following is a summary of construction impacts described in the *Land Use and Economic Development Technical Memorandum*. The impact findings are highlighted here, while detailed information on potential mitigation may be found in the resource-specific technical memorandum. The API for the land use and economic development evaluation includes parcels directly adjacent to project alternative centerlines and the area within a ½-mile radius of stations.

6.1.1 Bus Rapid Transit Alternative

There would be isolated disruptions to business and residential access during construction at parcels directly adjacent to the proposed bus stops and park & ride lots. Due to the isolated site improvements and short construction timeframe, the construction impacts of the BRT Alternative would be considered not substantially adverse on existing land uses. Due to construction jobs creation (refer to the *Land Use and Economic Development Technical Memorandum* for an estimate of the number of short-term jobs), the construction impacts of the BRT Alternative would be considered beneficial for economic development.

6.1.2 Union Pacific Railroad Rail Alternative

The potential construction impacts and mitigation would be similar for the UPRR Rail Alternative options. For the 120th Street yard and shop, the CTA would coordinate construction activities with the MWRD to avoid conflicts with utility operations.

Construction would take up to 5 years and would cause temporary impacts on adjacent residential neighborhoods due to noise, fugitive dust, truck traffic, and roadway detours. Mitigation methods would include daytime construction and soundproofing for sensitive resources, if necessary. Based on mitigation and the beneficial impacts of the project, the land use impacts from construction would be considered not substantially adverse.

Construction would cause temporary impacts on adjacent commercial uses on Michigan Avenue due to noise, fugitive dust, truck traffic, and roadway detours. Mitigation would include daytime construction, commercial signage during detours, and special advertising for businesses within the ½-mile API. There would be short-term beneficial impacts from construction jobs. It is estimated that during mobilization and peak construction, up to 2,660 full-time staff (per the *Land Use and Economic Development Technical Memorandum*) would be devoted to construction of the UPRR Rail Alternative. Based on mitigation and the beneficial impacts of the project, the overall economic development impact from construction of the UPRR Rail Alternative would be considered beneficial.

6.1.3 Halsted Rail Alternative

Construction would take up to 5 years and would cause temporary impacts on residential areas on or adjacent to Halsted Street due to noise, fugitive dust, truck traffic, and roadway detours. Mitigation methods would include daytime construction and soundproofing for sensitive resources, if necessary. Based on mitigation and the beneficial impacts of the project, the land use impacts from construction would be considered not substantially adverse.

Construction would cause temporary impacts on commercial uses along Halsted Street due to noise, fugitive dust, truck traffic, and roadway detours. Construction activities would occur throughout the Halsted Street corridor within the median and adjacent travel lane, and would affect travel lane patterns and on-street parking. Due to the nature and size of the businesses along Halsted Street, some small businesses may not be able to maintain their customer base and may lose business from construction-related disruptions. Mitigation methods would include daytime construction, commercial signage during detours, and special advertising for businesses within the ½-mile API. As it would be for the UPRR Rail Alternative, it is estimated that up to 2,660 full-time staff (per the *Land Use and Economic Development Technical Memorandum*) would be devoted to construction of the Halsted Rail Alternative. Based on mitigation and the beneficial impacts of the project, the overall economic development impact from construction of the Halsted Rail Alternative would be considered beneficial.

6.2 Displacements and Relocation of Existing Uses

There would be no displacement or relocation impacts associated with the construction phase for the build alternatives. Each of the proposed alternatives requiring permanent ROW would result in land acquisitions and displacements. The BRT Alternative would affect 52 parcels and 3 buildings. The UPRR Rail Alternative ROW Option would affect 133 parcels and 24 buildings. The UPRR Rail Alternative East Option would affect 256 parcels and 112 buildings. The UPRR Rail Alternative West Option would affect 193 parcels and 53 buildings. The Halsted Rail Alternative would affect 108 parcels and 38 buildings. Please refer to the *Displacements and Relocation of Existing Uses Technical Memorandum* for additional information on displacements and relocations. Temporary construction easements would not result in displacements or relocations.

6.3 Neighborhoods and Community Impacts

The following is a summary of construction impacts described in the *Neighborhood and Community Impacts Technical Memorandum*. The impact findings are highlighted here, while detailed information on potential mitigation may be found in the resource-specific technical memorandum. The API includes the neighborhood and community areas within approximately ½ mile of the proposed build alternative alignments. Accordingly, the affected environment includes the Village of Calumet Park and the Chicago neighborhoods of Washington Heights, Roseland, Morgan Park, West Pullman, Pullman, and Riverdale.

6.3.1 Bus Rapid Transit Alternative

Construction of the BRT Alternative would involve placement of new bus shelters, lighting, park & ride facilities, crosswalks, sidewalk improvements, ramps, traffic signals, and transit signal priority infrastructure along the proposed route. Work would occur largely within the street; however, some off-street staging on adjacent publicly owned and vacant lots may occur through the establishment of temporary construction easements. Some temporary road closures would be needed, and would be scheduled at night and other low-traffic times to the extent practicable and per IDOT and/or CDOT approval.

The parking structure at the Kensington Avenue stop would require more intensive construction, but would be phased to minimize disruption. Temporary dust, noise, and visual impacts would occur, as well as minor intermittent traffic delays near the construction site. Adjacent residents would experience these temporary impacts during construction, but impacts on the West Pullman community would be mitigated through best management practices.

6.3.2 Union Pacific Railroad Rail Alternative - Right-of-Way Option

Community disruption would occur during construction for the UPRR Rail Alternative. The 120th Street yard and shop would be located far enough from established communities such that no construction impacts would occur.

Most of the construction activities and staging would occur within street ROW, properties acquired as part of the project's permanent envelope, and potentially other nearby vacant parcels through the establishment of temporary construction easements. Increased truck traffic to and from the alignment would also occur. Hoisting equipment may be visible above the roofs of existing buildings. Storage of materials, equipment, and trucks would introduce visual impacts within communities, but these impacts would not be adverse given their temporary nature and CTA's use of best management practices. CTA would notify the community in advance of disruptive activities such as building demolition, utility relocation, and necessary detours, and would perform work in a manner consistent with local ordinances. Hauling routes would be designed to minimize truck traffic and equipment passing through sensitive areas of the community, and would favor highways to the extent feasible. There is ample street capacity and land available for construction staging in the project area. While specific construction routes have not been finalized for the project, it is anticipated that impacts would either be avoided or readily mitigated. This conclusion will be confirmed after designation of a NEPA Preferred Alternative and completion of a detailed construction management plan including routing.

Temporary dust, noise, and visual impacts would occur. Residents would experience these impacts during construction on an intermittent basis, but impacts on the Washington Heights, Roseland, and West Pullman communities would not be adverse through the use of best management practices. The Michigan Avenue station would require more intensive construction activities due to the multi-level parking structure, but construction would be phased to reduce impacts. Construction activities at any one location along the alignment would not last for the entire duration of the project construction phase.

During construction of the UPRR Rail Alternative, streets crossing the proposed alignment may require temporary closure. Detours would be provided to maintain access to adjacent properties, and bus transit service would detour around closures. Temporary traffic pattern changes, such as full street closure, converting a two-way street to one-way operation, or reducing the number of available travel lanes, may also be needed. Temporary parking restrictions may also be implemented to facilitate construction activities.

Businesses around the alignment and parking structure could be affected by construction activities, construction-related traffic, and road and sidewalk closures. Temporary roadway delays due to truck traffic and construction equipment would occur. The CTA would provide adequate detours and minimize road closures to the extent practicable, but some adverse impacts on businesses may occur, as people may avoid the area altogether. These potentially adverse impacts would be mitigated through early notification of construction activities, provision of temporary alternate access routes, and advertising programs to increase the visibility of affected businesses.

Public schools, public libraries, senior living centers, hospitals, daycare centers, and other public facilities near the proposed 130th Street station (both options) would be subject to temporary adverse impacts associated with potential traffic detours; however, access would be maintained throughout the duration of the project.

6.3.3 Union Pacific Railroad Rail Alternative - East Option

With the East Option, construction impacts and mitigation for affected neighborhoods would be similar to those of the ROW Option. A greater intensity of construction activities is anticipated for the East Option than for the ROW Option, because more building demolition would be required. The East Option would require the greatest number of building acquisitions of the three UPRR Rail Alternative options.

6.3.4 Union Pacific Railroad Rail Alternative - West Option

With the West Option, construction impacts and mitigation for affected neighborhoods would be similar to those of the ROW Option. A greater intensity of construction activities is anticipated for the West Option than for the ROW Option, because more building demolition would be required. The West Option would require fewer building acquisitions overall than the East Option.

6.3.5 Halsted Rail Alternative

Community disruption would occur during construction for the Halsted Rail Alternative. Construction activities would be more disruptive than under the UPRR Rail Alternative because the Halsted Rail Alternative elevated structure would be built in the median of a major commercial street instead of on private off-street ROW.

Most of the construction activities and staging would occur within street ROW, properties acquired as part of the project’s permanent envelope, and potentially other nearby vacant parcels through the establishment of temporary construction easements. Increased truck traffic to and from the alignment would also occur, particularly on Halsted Street and major east-west cross streets. Hoisting equipment would be visible above the roofs of existing buildings and in staging areas. Storage of materials, equipment, and trucks would introduce visual impacts within communities, but these impacts would not be adverse given their temporary nature and CTA's use of best management practices. CTA would notify the community in advance of disruptive activities such as building demolition, utility relocation, pile driving, caisson driving, and necessary traffic detours, and would perform work in a manner consistent with local ordinances. Hauling routes would be designed to minimize the number of trucks and equipment passing through sensitive areas of the community, and would favor highways to the extent feasible.

Temporary dust, noise, and visual impacts would occur. Residents would experience these impacts during construction on an intermittent basis, but with the application of best management practices, impacts would not be adverse.

During construction of the Halsted Rail Alternative, Halsted Streets and its east-west cross streets would require temporary, intermittent roadway and lane closures. Detours would be provided to maintain access to adjacent properties, and bus transit service would detour around closures. Temporary traffic pattern changes may also be needed such as full street closure, converting a two-way street to one-way operation, or reducing the number of available travel lanes. Temporary parking restrictions may also be implemented to facilitate construction activities.

Businesses around the alignment and parking structure would be affected by construction activities, construction-related traffic, and road and sidewalk closures. Temporary roadway delays due to truck traffic and construction equipment would occur. The CTA would provide adequate detours and minimize road closures to the extent practicable, but some adverse impacts on businesses may occur, as people may avoid the area altogether. This potentially adverse impact would be mitigated through early notification of construction activities, provision of temporary alternate access routes, and advertising programs to increase the visibility of affected businesses.

The Vermont Avenue station would require more intensive construction activities due to the multi-level parking structure, but construction would be phased to reduce impacts. Construction activities at any one location along the alignment would not last for the entire duration of the project construction phase.

6.4 Parklands and Community Facilities

The following is a summary of construction impacts described in the *Parklands and Community Facilities Technical Memorandum*. The impact findings are highlighted here, while detailed information on potential mitigation may be found in the resource-specific technical memorandum. The API includes parklands within 500 feet of an alternative's ROW and within ½ mile around the proposed stations/stops, and community facilities within or adjacent to the permanent ROW of an alternative and within ½ mile around the proposed stations/stops.

6.4.1 Bus Rapid Transit Alternative

Golden Gate Park would be subject to temporary impacts during the construction of the parking garage at the 130th Street stop because of its location within 500 feet of construction activities. The temporary impacts would include noise impacts from construction equipment, air quality impacts from fugitive dust and/or an increase in vehicle activity, and temporary reduction in access to the park due to construction detours. After mitigation, there would be no adverse impacts on Golden Gate Park from construction. Mitigation would include the following:

- Construction BMP, including but not limited to no idling of vehicles to reduce emissions, watering disturbed ground surfaces to reduce fugitive dust, and performing heavy construction activities during off-peak times.
- Coordination with the Chicago Park District in order to inform park users of construction activities and detour routes, provide alternate parking if necessary, or temporarily relocate park activities to another park if necessary.

Rose Haven Manor Senior Housing (at the 102nd Street stop), New Testament Baptist Church (at the 111th Street stop), and Aldridge Elementary School (at the 130th Street stop) are community facilities that would be subject to temporary construction impacts such as noise impacts and temporary changes to traffic flow and/or parking. Mitigation would include construction BMP, detour routes through the construction area, and alternative parking provisions. After mitigation, there would be no adverse impacts on community facilities from construction activities.

6.4.2 Union Pacific Railroad Rail Alternative - Right-of-Way Option

Construction activities would occur in the northwest corner of Wendell Smith Park. Depending on the timing and schedule, construction would interfere with organized activities that occur in Wendell Smith Park. Construction activities would generate temporary noise and air quality impacts, and interrupt access and parking around the park. Construction activities would not interfere with the use of Fernwood Parkway or Block Park; however, access to these parklands could be temporarily altered while the structure, station and parking facilities at the 103rd Street station are under construction. After mitigation, the construction impacts would be considered not adverse.

Construction activities at the Michigan Avenue station would temporarily affect New Christian Joy Missionary Baptist Church with construction noise and temporary changes in access and available parking. Mitigation would involve construction BMP and the provision of information about construction schedules and changes in parking and/or detours to the church. After mitigation, construction impacts on this church would be considered not adverse.

Construction activities at cross streets along the UPRR corridor could temporarily reduce accessibility of the roadway network and cause delays for emergency service providers. Construction activities would be coordinated with the Chicago Office of Emergency Management and Communications (OEMC). In particular, the construction plans for the 103rd Street station would be coordinated with the adjacent Chicago Fire Department - Engine Co. 93, and the construction plans for the 111th Street station would be coordinated with Roseland Community Hospital. After mitigation, the construction impacts on emergency responders would be considered not adverse.

Construction activities would temporarily affect Kensington Park, which is within 500 feet of the construction activities that would occur between Prairie Avenue and CN/ME tracks. Because of the street configuration, construction vehicles would need access to the project via the Kensington Park parking lot at 118th Street. Impacts would include temporary noise and air quality impacts and reduced parking. Construction activities for the 130th Street South Station Option would temporarily affect the park entrance of the Beaubien Woods Nature Preserve on Doty Avenue. Any temporary change in access would be mitigated through coordination with the Forest Preserve District of Cook County. After mitigation, the construction impacts would be considered not adverse.

120th Street Yard and Shop There are no parklands or community facilities near the 120th Street yard and shop location; therefore, no impacts would result from the construction activities.

6.4.3 Union Pacific Railroad Rail Alternative - East Option

The East Option would have similar construction impacts on Wendell Smith Park as the ROW Option; however, a larger geographic area would be affected. After mitigation, the construction impacts would be considered not adverse.

Construction activities for the East Option would occur in the western parcel of Block Park within the proposed permanent envelope. The western parcel would be inaccessible during construction. Construction impacts from noise, air quality, and changes in access would be temporary and would be not substantially adverse because Block Park does not serve a recreational use, construction activities would not interfere with its current use, and the park is currently subject to noise from the adjacent UPRR freight rail traffic. After mitigation, the construction impacts would be considered not adverse.

Construction of the East Option would have the same impacts and mitigation for Fernwood Parkway as those described for the ROW Option. After mitigation, the impacts on Fernwood Parkway would be considered not adverse.

Construction of the East Option would affect the same community facility and emergency service providers identified for the ROW Option; therefore, the same mitigation would be used for the impacts of the East Option. After mitigation, the impacts on community facilities and emergency service providers would be considered not adverse.

The construction impacts on parklands discussed for the ROW Option would be the same for the East Option; therefore, the same mitigation would be used. After mitigation, the construction impacts would be considered not adverse.

The construction impacts on community facilities discussed for the ROW Option would be the same for the East Option; therefore, the same mitigation would be used. After mitigation, the construction impacts would be considered not adverse.

6.4.4 Union Pacific Railroad Rail Alternative - West Option

The construction impacts of the West Option on Wendell Smith Park would be the same as those described for the ROW Option, but the amount of parkland affected by construction would be smaller. The mitigation described for the ROW Option would be the same for the West Option. After mitigation, the construction impacts would be considered not adverse.

Construction activities would occur within Fernwood Parkway; this park is narrow and the proposed permanent envelope of the West Option would pass through the center of the park. The park would not be accessible during construction. The construction impacts would be considered not substantially adverse, because the park does not offer recreational amenities or activities and is largely underutilized. After mitigation, the construction impacts would be considered not adverse.

Construction of the West Option would affect the same community facility and emergency service providers identified for the East and ROW Options; therefore, the same mitigation would be used for the impacts of the West Option. After mitigation, the impacts on community facilities and emergency service providers would be considered not adverse.

The construction impacts on parklands discussed for the ROW and East Options would be the same for the West Option; therefore, the same mitigation would be used. After mitigation, the construction impacts would be considered not adverse.

The construction impacts on community facilities discussed for the ROW and East Options would be the same for the West Option; therefore, the same mitigation would be used. After mitigation, the construction impacts would be considered not adverse.

6.4.5 Halsted Rail Alternative

There are no parklands within 500 feet of the proposed ROW for the Halsted Rail Alternative, but construction activities for the Halsted Rail Alternative would occur near Major Taylor Bike Trail. The impacts on the trail would be the temporary rerouting of pedestrian and bicycle traffic across the 119th Street and Halsted Street intersection during construction. The mitigation would include communicating access changes to trail users and the Friends of Major Taylor Bike Trail and providing alternative routes for pedestrians and bicycle to cross the streets. After mitigation, the impacts on Major Taylor Bike Trail would be considered not adverse.

Construction activities would temporarily affect vehicle and pedestrian access to community facilities on and near Halsted Street; however, clear signage, detour routes, and alternate parking would be provided as mitigation. Construction would also result in temporary noise impacts for community facilities on Halsted Street. While construction noise is unpleasant, it is temporary and would not interfere with any community facility's ability to provide service. Construction BMP would be implemented to mitigate noise impacts. Lastly, construction would generate fugitive dust and other air quality impacts from construction vehicles. Due to sensitive populations, adjacent schools and senior centers would be more sensitive to temporary air quality impacts. Construction BMP to capture dust and minimize idling construction vehicles would be used to mitigate these impacts. After mitigation, the impacts on community facilities would be considered not adverse.

Construction activities would temporarily reduce accessibility of the roadway network, which could cause delays for emergency service providers. The same mitigation described for the UPRR Rail Alternative would be used to inform the OEMC and the Chicago Fire Department - Engine Co. 115. After mitigation, the impacts on emergency service providers would be considered not adverse.

119th Street Yard and Shop - There are no parklands within 500 feet of the proposed ROW for the 119th Street yard; however, construction of the 119th Street yard and shop would affect the Chicago Fire Department - Engine Co. 115 and Mt. Zion First Holy Miracle Church. After mitigation, the impacts on this emergency service provider and community facility would be considered not adverse.

6.5 Visual and Aesthetic Conditions

The following is a summary of construction impacts described in the *Visual and Aesthetic Conditions Technical Memorandum*. The impact findings are highlighted here, while detailed information on potential mitigation may be found in the resource-specific technical memorandum. The API includes all areas along the alternative corridors within visual range of pedestrians, but would depend on the existence of view corridors. View corridors, including parks and streets, can increase the API. View corridors perpendicular to the project area are assumed to be ¼ mile.

6.5.1 Bus Rapid Transit Alternative

There would be minimal construction impacts on the existing visual condition along the BRT Alternative route. The visual impacts would be temporary, lasting several weeks to a year, and would relate primarily to parking facilities. Visual impacts may include construction fencing, demolition of existing buildings or clearing of vacant lots, temporary street closures and related signage, and temporary lighting or entrances. During construction, BMP and debris-free construction areas would mitigate temporary visual impacts from the construction sites; therefore, the temporary visual impacts would be considered not adverse.

6.5.2 Union Pacific Railroad Rail Alternative

Construction impacts and mitigations would be similar in nature for all UPRR Rail Alternative options. The 120th yard and shop would be located within an industrial land use area, far enough from established communities such that no construction impacts would occur.

The construction impacts from the UPRR Rail Alternative would be more extensive on the existing visual condition than those of the BRT Alternative. The visual impacts would be temporary, lasting several months to a few years depending on the alignment location and occurrence of station facilities and parking. Visual impacts may include construction fencing, demolition of existing buildings, temporary walls, temporary street closures and related signage, temporary lighting, temporary entrances, and shoring of concrete structures or existing viaducts during construction. During construction, BMP and debris-free construction areas would mitigate temporary visual impacts from the construction sites; therefore, the temporary visual impacts would be considered not adverse after mitigation.

6.5.3 Halsted Rail Alternative

Construction impacts and mitigations would be the same as those described for the UPRR Rail Alternative. Additional road construction impacts would be created for the removal of trees within the median planters and replacement with hammerhead piers. Temporary visual impacts would be considered not adverse after mitigation.

6.6 Noise and Vibration

The following is a summary of construction impacts described in the *Noise and Vibration Technical Memorandum*. The impact findings are highlighted here, while detailed information on potential mitigation may be found in the resource-specific technical memorandum. A general assessment was conducted to determine the location of areas that could have a moderate or severe impact along the proposed corridors. This assessment established an impact contour (defining the outer limit of an impact corridor) because there are numerous existing noise-sensitive receptors along the entire length of the project corridor.

6.6.1 Bus Rapid Transit Alternative

Construction noise from the BRT Alternative would result from minor construction activity at the bus stop areas and parking facilities. Construction noise levels are not expected to exceed the FTA construction noise limits; therefore, the impacts would be considered not adverse.

6.6.2 Union Pacific Railroad Rail Alternative

The UPRR Rail Alternative options would include the construction of an aerial structure, stations, and parking facilities. There would be the potential for construction impacts and mitigation in residential areas and the 120th Street yard and shop. Typical construction equipment could include excavators, front-end loaders, cranes, drilling rigs, compressors, and trucks depending on the type of construction work required. The FTA construction noise impact assessment is based on the cumulative noise level from the two loudest pieces of equipment that, under worst-case conditions, would operate continuously at full power over a period of 1 hour. From the list of construction equipment in the FTA guidance manual, the two noisiest pieces of equipment would be the excavator (85 dBA at a distance of 50 feet) and truck (88 dBA at a distance of 50 feet). The combined noise level from these two pieces of equipment would be 90 dBA at a distance of 50 feet. Using the recommended FTA construction noise limits, any construction activity that occurred within 50 feet of a residential receptor would result in a noise impact during daytime hours. For commercial and industrial areas, the FTA daytime construction noise impact criterion is 100 dBA.

Construction noise levels are not expected to exceed the FTA recommended construction noise limits; therefore, construction noise mitigation measures are not required. Nevertheless, CTA would limit nighttime construction near residences to the extent practicable. All construction equipment exhaust mufflers would be kept in a state of good repair. To the maximum extent possible, vehicles that are not in use would not remain idling on the construction site. As a result of these BMPs, the impacts would be considered not adverse.

6.6.3 Halsted Rail Alternative

Construction impacts from the Halsted Rail Alternative and the 119th Street yard and shop would be the same as those described for the UPRR Rail Alternative.

6.7 Safety and Security

The following is a summary of construction impacts described in the *Safety and Security Technical Memorandum*. The impact findings are highlighted here, while detailed information on potential mitigation may be found in the resource-specific technical memorandum. The API for the safety and security evaluation includes a ½-mile radius centered on each of the proposed station and stop locations as well as the existing 95th Street Terminal. One-half mile is an approximation of the distance most patrons would walk to a station and is used to measure general pedestrian safety and security in the surrounding neighborhood.

6.7.1 Bus Rapid Transit Alternative

The BRT Alternative would primarily involve the construction of bus shelters, sidewalks, and parking facilities. While there is always a chance that a contractor could fail to follow all safety and security rules, the limited scope of work is likely to minimize the risk of incidents resulting in fatalities, injuries, or criminal acts such as vandalism or theft on construction sites.

6.7.2 Union Pacific Railroad Rail Alternative - Right-of-Way Option

The extensive scope of work for this alternative would create a need for a large number of contractors in many areas over a long time period. To mitigate risks of safety and security incidents, contractors would be expected to develop a Construction Safety and Security Plan, perform job safety analysis, monitor safety and security activities, and comply with any other relevant aspects of the CTA's *Safety and Security Management Plan* (CTA 2011b) or other manuals and policies.

Road closures and detours during construction would affect emergency services. Emergency services would be able to access construction sites at all times in the same way contractors access the sites. Emergency service providers crossing the tracks would have to use recommended detours, just as with any roadway construction project. As mitigation, neither adjacent roadways nor adjacent through streets operating in the same direction would be closed simultaneously. Emergency services would be able to access construction sites at all times in the same way contractors access the sites. An access road for the MWRD would be constructed prior to the new CTA tracks if necessary to maintain access to the MWRD facility. This roadway could also be used by emergency services. The impacts would be not substantially adverse. The 120th Street yard and shop would be within the same area, and the impacts would not be adverse.

As mitigation, traffic management plans would be created during the final engineering phase of the project to identify detour and emergency access routes, which would generally follow the nearest arterial or collector streets. Contractors would also follow the *Manual on Uniform Traffic*

*Control Devices (*FHWA 2009*)* design standards for temporary traffic control and would obtain all required local permits.

6.7.3 Halsted Rail Alternative

The extensive scope of work for this alternative would create a need for a large number of contractors in many areas over a long time period. To mitigate risks of safety and security incidents, contractors would be expected to develop a Construction Safety and Security Plan, perform job safety analysis, monitor safety and security activities, and comply with any other relevant aspects of the CTA's Safety and Security Management Plan an or other manuals and policies (CTA 2011b).

Construction work would be phased to minimize traffic impacts on Halsted Street and adjoining streets; however, elevated structure construction would require lane and street closures and superstructure erection would require temporary shutdown of all traffic along portions of Halsted Street. In order to maintain emergency access on cross-streets, only short segments of Halsted Street (less than ½ mile long) would be closed at any given time. Emergency services would need to access construction sites in the same way as contractors, by using various side streets and recommended detours. The impacts would be not substantially adverse. Mitigation would be the same as that described for the UPRR Rail Alternative.

6.8 Historic and Cultural Resources

The following is a summary of construction effects described in the *Historic and Cultural Resources Technical Memorandum*. Effects would be confirmed and considered within the Section 106 process as the preferred alternative selection and design progresses. The area of potential effect (APE) for the RLE Project was delineated considering the location of the proposed alternatives; the potential for ground disturbance, destruction, or property taking; locations from which the undertaking may be visible and/or audible; and the scale and setting of the project. Generally, the APE contains those parcels within a block of the centerlines for the UPRR and Halsted Rail Alternatives, and widens to accommodate the locations of park & ride facilities and a proposed rail yard. The APE for the BRT Alternative includes the area immediately surrounding the park & ride and parking garage locations.

6.8.1 Bus Rapid Transit Alternative

Two resources near the BRT corridor have been identified as eligible for the National Register of Historic Places (NRHP): the Venetian Hall at 133-139 E. Kensington Avenue and the Altgeld Gardens Housing Project at 927 E. 131 Street. While construction activities would likely be perceptible at the Venetian Hall, it is not anticipated to adversely affect the characteristics that qualify the resource for inclusion on the NRHP. Visual, noise, vibration, and construction effects are not anticipated to affect the characteristics that qualify Altgeld Gardens Housing Project for inclusion on the NRHP.

6.8.2 Union Pacific Railroad Rail Alternative

The effects would be similar in nature for all UPRR Rail Alternative Options and for the 120th Street yard and shop. Six resources near the UPRR corridor have been identified as NRHP eligible:

the eclectic neo-traditional residence at 444 W. 100th Place, the fire station at 324 W. 104th Street, the Roseland Pumping Station at 351 W. 104th Street, the Romanesque revival church at 10920 S. Princeton Avenue, the Venetian Hall at 133-139 E. Kensington Avenue, and the Altgeld Gardens Housing Project. Visual, noise, vibration, and construction effects are not anticipated to affect the characteristics that qualify these six resources for inclusion on the NRHP. Given that the Roseland Pumping Station is within 50 feet of the alignment, a barrier wall could be constructed for protection of this resource.

6.8.3 Halsted Rail Alternative

Based on preliminary analysis, the Halsted Rail Alternative would result in adverse effects on four historic resources: the Classical Revival CTA substation at 10227 S. Halsted Street, S.S. Peter & Paul Catholic Church at 12433 - 12439 S. Halsted Street, the fire station (Engine Co. 115) at 11940 S. Peoria Street, and the Cedar Park Cemetery gatehouse/entryway at 12540 S. Halsted Street. Although none of these structures would be physically demolished, the scale and proximity of the construction activities are anticipated to have an adverse effect on the characteristics that qualify each resource eligible for NRHP listing. None of the other alternatives are anticipated to result in adverse effects on other historic resources. Please refer to the Permanent Impacts section of the *Historic and Cultural Resources Technical Memorandum*.

6.9 Hazardous Materials

The following is a summary of construction impacts described in the *Hazardous Materials Technical Memorandum*. More detailed information on potential hazardous sites and mitigation may be found in the resource-specific technical memorandum. The API for the hazardous materials evaluation extends out to ¼ mile from the project limits. Approximate soil/hazardous material removal quantities presented in this section were based on the horizontal and vertical extent of the excavation required for the alternative and the extent of the identified contamination from historical records. The quantities presented in each of the descriptions are estimates and would require field verification during construction activities.

6.9.1 Bus Rapid Transit Alternative

Subsurface excavation associated with the BRT Alternative would occur during construction of proposed parking facilities for the 103rd Street, 111th Street, Kensington Avenue and 130th Street bus stops. Construction of this alternative would result in generation of a large quantity of soil that could contain contaminated materials requiring off-site disposal.

One “High Concern” site was identified near the proposed 130th Street park & ride location and is an operating wastewater treatment plant. Sludge, a byproduct of the wastewater treatment process, typically contains heavy metals and other contaminants and may be present throughout the site, including within the footprint of the proposed park & ride facility at 130th Street.

Construction of park & ride facilities at 103rd Street and Kensington Avenue would include demolition of existing structures that were likely constructed before 1978–1979. These structures potentially contain asbestos-containing material and lead-based paint that could result in a release of asbestos fibers and lead dust during construction. Hazardous materials typically involved with construction activities, such as paints, solvents, fuels and hydraulic fluids, could also be accidentally released during construction.

Numerous mitigation measures for the BRT Alternative would be used to avoid and minimize impacts prior and during construction. In addition, a Phase I Environmental Site Assessment (ESA) of any property to be purchased would be conducted as part of the Final EIS to identify recognized environmental conditions and assess and limit environmental liability. Based on the Phase I ESA findings, a Phase II ESA could also be required during the property acquisition phase and prior to purchasing a property. After mitigation, the construction impacts would be considered not adverse.

6.9.2 Union Pacific Railroad Rail Alternative - Right-of-Way Option

The UPRR ROW Option would require approximately 270,200 cubic yards of soil or aggregate excavation, and there would be the potential to encounter hazardous materials. The ROW Option would also include construction within the UPRR corridor, which is potentially impacted from the use of fuel, oil, paints, herbicides and pesticides, creosote, polynuclear aromatic hydrocarbons and coal ash associated with the long-term operation as a railroad. If groundwater is encountered during construction, there is the potential that it may contain hazardous materials as well. The ROW Option also would include the demolition of existing structures that were likely constructed before 1978–1979. These structures potentially contain asbestos-containing material and lead-based paint that could result in a release of asbestos fibers and lead dust during construction.

The ROW contains one “High Concern” site within the proposed permanent envelope. Three additional “High Concern” sites would be within the 120th Street Yard and Shop.

The ROW would potentially include two Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS)-Archived sites within the permanent envelope. The CERCLIS sites come with increased risk of the United States Environmental Protection Agency (USEPA) imposing liability and remediation obligations on potentially responsible parties. These sites have Archived status, which means USEPA has completed its assessment of the site and has determined that no future action would be taken to list it on the National Priorities List and removed it from their inventory of Superfund sites. This does not, however, mean that a site is considered clean, and additional caution would be taken before acquiring ownership. Construction of the 120th Street yard and shop would require approximately 138,100 cubic yards of soil or aggregate excavation, some of which would be associated with two hazardous material sites: the Keywell site at 11900 Cottage Grove Avenue and the Penn Central Corp./Lake Calumet Quad at 810 E. 124th Street. There would therefore be the potential to encounter hazardous materials, whether from the sites identified or from the presence of urban fill. For additional information for these sites, please refer to the *Hazardous Materials Technical Memorandum*, May 22, 2013.

Proposed mitigation measures for construction impacts on hazardous materials would be similar to those of the BRT Alternative, including Phase I ESA and Phase II ESA of any properties needed for the proposed permanent envelope. After mitigation, the construction impacts would be considered not adverse.

6.9.3 Union Pacific Railroad Rail Alternative - East Option

The UPRR East Option would require approximately 122,900 cubic yards of soil or aggregate excavation. Construction impacts and mitigation would be similar to those under the UPRR ROW Option. The East Option would include three “High Concern” sites within its permanent envelope. Three additional “High Concern” sites would be within the 120th Street Yard and Shop. Construction impacts and mitigation for the 120th Street yard and shop would be similar to those for the UPRR ROW Option.

6.9.4 Union Pacific Railroad Rail Alternative - West Option

The UPRR West Option would require approximately 129,400 cubic yards of soil or aggregate excavation. Construction impacts and mitigation would be similar to those under the UPRR ROW Option. The West Option would include three “High Concern” sites within its permanent envelope. Three additional “High Concern” sites would be within the 120th Street Yard and Shop. Construction impacts and mitigation for the 120th Street yard and shop would be similar to those for the UPRR ROW Option.

6.9.5 Halsted Rail Alternative

The Halsted Rail Alternative would require approximately 141,300 cubic yards of soil or aggregate excavation, and there would be the potential to encounter hazardous materials. If groundwater is encountered during construction, it may contain hazardous materials as well. Construction of the Halsted Alternative would include the demolition of existing structures that were likely constructed before 1978–1979. These structures potentially contain asbestos-containing material and lead-based paint that could result in a release of asbestos fibers and lead dust during construction. Hazardous materials typically involved with construction activities, such as paints, solvents, fuels and hydraulic fluids, could also be accidentally released during construction.

Construction of the 119th Street yard and shop would require approximately 129,100 cubic yards of soil or aggregate excavation, and there would be the potential to encounter hazardous materials. Six “High Concern” sites are within the permanent envelope of the 120th Street yard and shop. One CERCLIS site (Ingersoll Industrial Site at 1000 W. 120th Street) and one CERCLIS-No Further Remediation Planned site are within the permanent envelope. There is also an active CERCLIS site (Dutch Boy Paint Site at 1200 Peoria Avenue) adjacent to the 119th Street yard and shop location, and it has the potential for offsite migration of contamination.

Construction of the 119th Street yard and shop would include the demolition of existing structures that were constructed before 1978–1979. These structures potentially contain asbestos-containing material and lead-based paint that could result in a release of asbestos fibers and lead dust during construction. Hazardous materials typically involved with construction activities, such as paints, solvents, fuels and hydraulic fluids, could also be accidentally released during construction.

Proposed mitigation measures for construction impacts on hazardous materials would be similar to those of the BRT Alternative, including Phase I ESA and Phase II ESA of any properties needed for the proposed permanent envelope. After mitigation, the construction impacts would be considered not adverse.

6.10 Air Quality

The following is a summary of construction impacts described in the *Air Quality Technical Memorandum*. More detailed information on potential air quality impacts and mitigation may be found in the resource-specific technical memorandum. The API for air quality has both a regional and a local component. The regional component follows the analysis area adopted by the traffic analysis, which is a corridor bounded on the south by a varying boundary that includes 134th Street, on the north by 91st Street, on the west by a varying boundary that includes Halsted Street, and on the east by a varying boundary that includes I-94. The local component would be limited to the individual stations, their associated parking facilities, and nearby intersections affected by traffic entering and exiting the stations.

The air quality impacts from construction would be similar in nature for all build alternatives, as well as their respective segments, the 120th Street yard and shop, and the 119th Street yard and shop; however, the schedule for construction activities would be longer for the UPRR Rail Alternative and the Halsted Rail Alternative than with the BRT Alternative.

Emissions from construction equipment would occur during site preparation activities such as grading, installing curbs, or grubbing and removal of vegetation to prepare a site for construction. Compared with emissions from other motor vehicles sources in the project area, direct emissions from construction equipment and trucks would not likely have the potential to exceed any ambient air quality standards.

Impacts during construction would be primarily associated with fugitive dust and emissions from on-road and non-road vehicles. The equipment producing these emissions would include haul trucks, concrete trucks, front-end loaders, excavators, cranes, drill rigs, compressors, flatbed trucks, and generators. Most state air quality agencies, including Illinois Environmental Protection Agency, have strict guidelines for controlling fugitive dust (usually by good housekeeping practices), diesel particulate emissions (by exhaust emission controls and use of low sulfur fuels), and greenhouse gas emissions (by limiting equipment operations such as excessive idling and by using alternative fuels).

Construction activities would also result in traffic disruption, rerouting, and temporary shutdown of traffic. Traffic disruption, such as decreased roadway capacity or detouring, can lead to increased traffic congestion, thereby increasing motor vehicle exhaust emissions on nearby roadways, and resulting in localized elevated pollutant concentrations. Temporary shutdown of traffic would occur at nighttime and during low-traffic-volume intervals per IDOT and CDOT approval.

Proper traffic management during the construction period would mitigate any potential adverse impacts. Traffic management would include finding less congested routes for construction-related truck traffic, creating temporary detours for regular roadways where capacities were diminished, providing traffic control, routing trucks away from residential neighborhoods, and restricting construction activities during hours of high traffic volumes on the existing roadways. Staging areas and worker parking areas would be established away from sensitive receptors, where possible.

Many state agencies such as IDOT require the contractor to develop a Dust Control Plan that would address in detail how dust would be controlled at all times at the construction site, the staging areas, and the access and egress routes. The agencies also require all diesel-powered equipment and vehicles to be retrofitted with emissions control devices and to use ultra-low sulfur diesel to control diesel particulate emissions.

CTA would require the contractor to develop a plan and schedule to allow construction trucks to access and egress the construction sites and staging areas without excessive disruption and impacts on residences and commercial establishments.

With the use of appropriate mitigation measures as described above, no violations of any of the Illinois or National Ambient Air Quality Standards are anticipated; therefore, no adverse air quality impacts due to construction activities are anticipated.

6.11 Water Resources

The following is a summary of construction impacts described in the *Water Resources Technical Memorandum*. The impact findings are highlighted here, while detailed information on potential mitigation may be found in the resource-specific technical memorandum. The API for the water resources extends 500 feet on either side of the project alternative centerlines. Because the project would occur in a highly urbanized environment, the impacts of construction on water resources would not be expected to extend beyond 500 feet. The affected water resources include stormwater, groundwater, water quality, and wetlands. There are no floodplains in the API.

6.11.1 Bus Rapid Transit Alternative

The physical modifications associated with the BRT Alternative would result in potential impacts on the existing stormwater drainage infrastructure, particularly where park & ride lots and structures would be constructed. These alterations would not greatly affect the direction or volume of drainage through the API.

There would be a potential need for dewatering (by removing groundwater from the construction site by pumping) if groundwater were encountered during construction. Dewatering during construction could temporarily affect local shallow groundwater levels. Given the likelihood of encountering contaminated groundwater, compliance with federal, state, and local laws and regulations would be required during construction.

The impacts from construction of the BRT Alternative on water quality would be minor because the project area is already highly urbanized. In order to ensure that surface water runoff would not have adverse impacts on water quality, human health, or safety, appropriate mitigation measures would be taken to control runoff during implementation.

6.11.2 Union Pacific Railroad Rail Alternative

The potential construction impacts and mitigation would be similar for the UPRR Rail Alternative options and the 120th Street yard and shop. The physical modifications associated with the UPRR Rail Alternative would result in impacts on the existing stormwater drainage infrastructure; however, these alterations would not greatly affect the direction of drainage through the project area and would not change drainage within the watershed. Care would need to be taken during construction in the vicinity of the Roseland Pump Station at 104th Street, as well as the other underground utilities, in order to avoid damaging existing structures.

The impacts from construction of UPRR Rail Alternative on groundwater and water quality would be the same as for the BRT Alternative.

Approximately 27 acres of potential wetlands exist in the vicinity of the UPRR Alternative alignment; however, there would be no temporary construction impacts on wetlands associated with the UPRR Rail Alternative options. Addition information concerning wetlands in the project area is provided in the *Water Resources Technical Memorandum*.

At the 120th Street yard and shop location, physical modifications would result in impacts on the existing stormwater drainage infrastructure; however, these alterations would not greatly affect the direction of drainage through the project area. The potential impacts on groundwater, water quality, and wetlands would be similar to those described under the BRT Alternative.

6.11.3 Halsted Rail Alternative

The physical modifications associated with the Halsted Rail Alternative would result in impacts on the existing stormwater drainage infrastructure; however, these alterations would not greatly affect the direction of drainage through the project area and would not change drainage to the watershed. The potential impacts on groundwater and water quality would be similar to those described under the BRT Alternative. Because there are no wetlands within the API, there would be no construction impacts on wetlands.

At the 119th Street yard and shop location, physical modifications would result in impacts on the existing stormwater drainage infrastructure; however, these alterations would not greatly affect the direction of drainage through the project area and would not change drainage to the watershed. The potential impacts on groundwater and water quality would be similar to those described under the BRT Alternative. Because there are no wetlands at the 119th Street yard and shop site, there would be no construction impacts on wetlands.

6.12 Vegetation and Wildlife Habitat

The following is a summary of construction impacts described in the *Biological Resources Technical Memorandum*. The impact findings are highlighted here, while detailed information on potential mitigation may be found in the resource-specific technical memorandum. For potential impacts on threatened and endangered species, designated critical habitats, vegetation, and other wildlife habitats, the API includes the area within ¼ mile of the proposed alignments, stations, parking facilities, and maintenance yards for each of the project alternatives. Given that the project is in a highly urbanized environment with high existing levels of noise, light, and human activity, the impacts of construction and operation on available habitats and associated wildlife would not be expected to extend beyond ¼ mile.

6.12.1 Bus Rapid Transit Alternative

A small number of trees would likely be removed as a result of park & ride construction activities under the BRT Alternative. Construction impacts under the BRT Alternative would include potential adverse impacts on the following vegetation and wildlife habitat resources:

- The urban tree inventory, due to tree removal. This impact would be reduced to a not adverse level by compliance with local tree protection regulations.
- Migratory birds wherever tree clearing occurs. This impact would be reduced to a not adverse level by the implementation of mitigation measures.

Mitigation measures would be required for compliance with the Migratory Bird Treaty Act and local tree protection ordinances, and to reduce potential impacts on wildlife habitat. Bird species that may utilize those trees that could be removed or disturbed during construction could be affected. Potential mitigation measures would include the following:

- Tree removal would be timed as much as possible to occur outside the migratory bird nesting season, which occurs generally from April 1–September 15 and as early as March 1.
- If construction must occur during the nesting season, two biological surveys would be conducted: one 15 days prior and a second 72 hours prior to the construction that would remove or disturb suitable nesting habitat. If a protected bird were found, surveys would be continued in order to locate any nests. If an active nest were located, construction within 300 feet of the nest would be postponed until the nest is vacated and juveniles have fledged and when there is no evidence of a second attempt at nesting.
- Avoidance measures would be incorporated into the design of the project during preliminary engineering where feasible. If construction of the project requires removal of a protected tree, a permit would be required in accordance with applicable local codes and ordinances of the city in which the affected tree is located. Tree removal permits may require replanting of protected trees within the project area or at another location to mitigate for the removal of these trees. Replanting would be done according to the ratios required by tree removal permits.

6.12.2 Union Pacific Railroad Rail Alternative Options

Trees would likely be removed as a result of construction activities for the UPRR Rail Alternative and the 120th Street yard and shop. Most of the removal would likely occur at the park & ride facilities, and in the median of the interstate just south of the 95th Street Terminal. The potential impacts and mitigation would be similar to those described for the BRT Alternative.

6.12.3 Halsted Rail Alternative

A number of trees would likely be removed as a result of construction activities for the Halsted Rail Alternative and the 119th Street yard and shop. Most of the removal would likely occur from the Halsted Street median and sidewalks. Suitable habitat for listed plant species does not appear to be present in the API. The potential impacts and mitigation would be similar to those described for the BRT Alternative.

6.13 Energy

The proposed alternatives would require energy consumption to support construction activities; however, the approximate quantities used would not be substantial when compared to the annual consumption for Cook County, and would not have an adverse impact on regional energy or fuel supplies. Construction BMP would be implemented to ensure minimization of energy usage.

6.13.1 Bus Rapid Transit Alternative

Energy impacts from construction activities were computed based on typical values for construction categories. Table 6-1 provides a summary for the BRT Alternative. As construction energy use would be a very small fraction of energy use in the region (91 billion British thermal units [BTU] for construction of the BRT Alternative compared to 530 trillion BTU annual energy use in Cook County, or less than 0.02 percent of the Cook County annual energy use), no impact would occur and no mitigation is proposed. (No impact is concluded because 0.02 percent variation is well within the variations in annual energy use due to variations in average temperature and fluctuations in regional employment and manufacturing.)

Table 6-1: Estimated Energy Consumption from Construction Activities - Bus Rapid Transit Alternative

Construction Component	BTU/2012$	Construction Estimate (2012 $1,000)	Billion BTU	Typical Elements
Guideway	5,940	239	1	Concrete, Reinforcing Steel
Stations	5,940	702	4	Concrete, Reinforcing Steel, Canopy, Conduits, Lighting Fixtures
Maintenance Facilities	7,310	0	0	Maintenance Building, Equipment, Heating, Ventilation, Air Conditioning
Site Work	5,940	7,990	48	Earthwork, Removals, Utility Relocations
Systems	9,130	4,130	38	Signals, Fare Vending, Communications, Traffic Signal Priority System
Total Estimated Construction BTU			91	

BTU - British thermal units

6.13.2 Union Pacific Railroad Rail Alternative - Right-of-Way Option

Energy impacts from construction activities were computed based on typical values for construction categories. Construction energy use would vary slightly between the UPRR options.

Table 6-2 provides a summary of the energy use during construction for the UPRR Rail Alternative ROW Option. The construction energy use would be a very small fraction of energy use in the region (approximately 6 trillion BTU compared to the total annual Cook County energy consumption of 530 trillion BTU, less than 1.2 percent of the total annual Cook County energy consumption).

Table 6-2: Estimated Energy Consumption from Construction Activities - Union Pacific Railroad Rail Alternative - Right-of-Way Option

Construction Component	BTU/2012$	Construction Estimate (2012 $1,000)	Billion BTU	Typical Elements
Track and Guideway	5,940	264,000	1,568	Structural Steel, Track, Concrete, Reinforcing Steel
Stations	5,940	186,000	1,105	Concrete, Reinforcing Steel, Canopy, Conduits, Lighting Fixtures, Glass
Maintenance Facilities	7,310	71,000	519	Maintenance Building, Equipment, Heating, Ventilation, Air Conditioning
Site Work	5,940	133,000	790	Earthwork, Removals, Utility Relocations
Systems	9,130	239,000	2,182	Signals, Fare Vending, Communications, Traction Power, Substations
Total Estimated Construction BTU			6,164	

BTU - British thermal units

6.13.3 Union Pacific Railroad Rail Alternative - East Option

For the UPRR Rail Alternative East Option, Table 6-3 provides a summary of construction-related energy use. Construction energy use would be a very small fraction of the energy use in the region (approximately 6 trillion BTU compared to the total annual Cook County energy consumption of 530 trillion BTU, less than 1.2 percent of the total annual Cook County energy consumption).

Table 6-3: Estimated Energy Consumption from Construction Activities - Union Pacific Railroad Rail Alternative - East Option

Construction Component	BTU/2012$	Construction Estimate (2012 $1,000)	Billion BTU	Typical Elements
Track and Guideway	5,940	263,000	1,562	Structural Steel, Track, Concrete, Reinforcing Steel
Stations	5,940	189,000	1,123	Concrete, Reinforcing Steel, Canopy, Conduits, Lighting Fixtures, Glass
Maintenance Facilities	7,310	71,000	519	Maintenance Building, Equipment, Heating, Ventilation, Air Conditioning
Site Work	5,940	136,000	808	Earthwork, Removals, Utility Relocations
Systems	9,130	240,000	2,191	Signals, Fare Vending, Communications, Traction Power, Substations
Total Estimated Construction BTU			6,203	

BTU - British thermal units

6.13.4 Union Pacific Railroad Rail Alternative - West Option

Table 6-4 provides a summary of construction-related energy use for the UPRR Rail Alternative West Option. Construction energy use would be a very small fraction of the energy use in the region (approximately 6 trillion BTU compared to the total annual Cook County energy consumption of 530 trillion BTU, less than 1.2 percent of the total annual Cook County energy consumption).

Table 6-4: Estimated Energy Consumption from Construction Activities - Union Pacific Railroad Rail Alternative - West Option

Construction Component	BTU/2012$	Construction Estimate (2012 $1,000)	Billion BTU	Typical Elements
Track and Guideway	5,940	269,000	1,598	Structural Steel, Track, Concrete, Reinforcing Steel
Stations	5,940	195,000	1,158	Concrete, Reinforcing Steel, Canopy, Conduits, Lighting Fixtures, Glass
Maintenance Facilities	7,310	71,000	519	Maintenance Building, Equipment, Heating, Ventilation, Air Conditioning
Site Work	5,940	137,000	814	Earthwork, Removals, Utility Relocations
Systems	9,130	237,000	2,164	Signals, Fare Vending, Communications, Traction Power, Substations
Total Estimated Construction BTU			6,253	

BTU - British thermal units

6.13.5 Halsted Rail Alternative

Table 6-5 provides a summary of construction energy use for the Halsted Rail Alternative. Construction energy use would be a very small fraction of energy use in the region (approximately 7 trillion BTU compared to the total annual Cook County energy consumption of 530 trillion BTU, less than 1.3 percent of the total annual Cook County energy consumption).

Table 6-5: Estimated Energy Consumption from Construction Activities - Halsted Rail Alternative

Construction Component	BTU/2012$	Construction Estimate (2012 $1,000)	Billion BTU	Typical Elements
Track and Guideway	5,940	424,000	2,519	Structural Steel, Track, Concrete, Reinforcing Steel
Stations	5,940	140,000	832	Concrete, Reinforcing Steel, Canopy, Conduits, Lighting Fixtures, Glass
Maintenance Facilities	7,310	62,000	453	Maintenance Building, Equipment, Heating, Ventilation, Air Conditioning
Site Work	5,940	109,000	647	Earthwork, Removals, Utility Relocations
Systems	9,130	265,000	2,419	Signals, Fare Vending, Communications, Traction Power, Substations
Total Estimated Construction BTU			6,870	

BTU - British thermal units

6.14 Environmental Justice

A majority of the project area consists of minority populations; some of which are low-income populations as well. Because all of the impacts and benefits would occur in the same communities for all the alternatives, none of the construction impacts would be disproportionately adverse to these populations. Temporary construction easements would not result in displacements or relocations. No Environmental Justice mitigation would be required beyond that which is proposed in the other technical memoranda.

6.15 Transportation

During construction, vehicles, pedestrians, buses, and trains may need to be rerouted around the construction sites. Rerouting of traffic may be done using detours and/or complete street closures. The street closures could include main streets and side streets, as well as alleys and access points. Station and viaduct construction activities would be sequenced around street and alley closures. Temporary traffic lanes, temporary access points, or staged construction would be used. The following activities would be part of the traffic rerouting activities:

- Construction signage and temporary traffic barriers.
- Temporary reductions in number of thru-traffic lanes in each direction from two to one, if feasible.
- Detours/complete street closures, including alleys and access points.
- Temporary traffic lanes.
- Designated space for storage and staging of construction materials, equipment, and temporary facilities within the ROW, including parking areas or maintenance yard.
- Construction vehicle access points within and/or adjacent to the ROW.
- Business, residential, and pedestrian impacts including limited parking or parking bans.
- Advance trackwork and signalization to facilitate train reroutes (for the rail alternatives).
- Alternate bus routes and temporary CTA service changes may be required during construction of the RLE Project at the 95th Street Terminal.
    - CTA track shutdowns during nights or weekends may be required (for the rail alternatives).
    - Trains would operate on one or two tracks through the construction zones (for the rail alternatives). Flagmen would be required to notify trains of construction activities.

6.15.1 Bus Rapid Transit Alternative

6.15.1.1 Public Transportation

The BRT Alternative would include construction of improved bus shelters at four locations, four park & ride parking lots, and one proposed traffic signal. Existing traffic signals would be reprioritized. The construction activities associated with this alternative would temporarily affect the physical capacity of roadways and intersections, which may lead to increased travel times and possible shift in traffic volumes and the need to reroute bus transit service and move stop locations. With adherence to local, state, and federal construction and temporary traffic and public transportation management guidelines, no adverse impacts would result from construction of the BRT Alternative.

6.15.1.2 Traffic

The construction activities associated with this alternative would temporarily affect the physical capacity of local roadways and intersections, which may lead to increased travel times and possible shift in traffic volumes and the need to reroute traffic during construction. With adherence to local, state, and federal construction and temporary traffic management guidelines, no adverse impacts would result from construction of the BRT Alternative.

6.15.1.3 Freight Transportation

Construction of the proposed parking lot northeast of the UPRR tracks may require flagging safety near train operations; however, track closures would not be required. Construction activities would be phased to ensure that impacts on freight trains are minimized.

6.15.1.4 Bicycle

Temporary construction impacts for bicycles associated with the BRT Alternative may occur at the locations of new bus shelters and surface parking lots. Some construction activities may reduce the capacity of the roadway due to maintenance of traffic during construction activities. This may lead to increased travel times for bicyclists; however, there are no existing or proposed bicycle routes along Michigan Avenue, the proposed alignment of the BRT Alternative.

6.15.1.5 Pedestrian

Temporary construction impacts for pedestrians associated with the BRT Alternative would occur at the locations of the four upgraded bus shelters and park & ride lots. Some construction activities may result in a temporary sidewalk closure on one side of the street.

6.15.1.6 Parking Facilities

On-street parking along the roadways would be temporarily affected for construction of park & ride lots and bus shelters due to maintenance of traffic during construction activities.

6.15.2 Union Pacific Railroad Rail Alternative - Right-of-Way Option

6.15.2.1 Public Transportation

The construction activities associated with the UPRR Rail Alternative ROW Option would temporarily affect the physical capacity of roadways and intersections, requiring detours. Train and bus service, include Pace service, at the 95th Street Terminal may also be affected. These impacts may lead to increased travel times and possible shift in traffic volumes and increase travel times for bus transit users. Bus stop locations may be eliminated or relocated temporarily and buses may be rerouted during construction activities. With adherence to local, state, and federal construction and temporary traffic and public transportation management guidelines, no adverse impacts would result from construction of the UPRR Alternative ROW Option.

The UPRR Alternative ROW Option would consist of new construction of dual-track, elevated structure within the UPRR ROW, branching off and running along the east side of the corridor and over existing CN/ME tracks. Construction at the CN/ME crossing would be phased to ensure there are no impacts on Metra operations. During new track roadbed construction for the 120th Street yard and shop and the new access road for the existing MWRD facility, construction over and adjacent to the NICTD/CSS & SBRR would occur. During these construction activities, flagging operations and scheduled track closures would occur. Construction would be phased to ensure there are no impacts on passenger trains.

6.15.2.2 Traffic

The construction activities associated with this alternative would temporarily affect the physical capacity of local roadways and intersections, which may lead to increased travel times and possible shift in traffic volumes and the need to reroute traffic during construction.

Work within the median of I-94 would require temporary lane closures. Proposed structure construction would be sequenced to minimize impacts on the traffic flow on I-94. Increased traffic congestion due to construction activities may temporarily increase travel times along this portion of I-94.

Dual-track, elevated structures would be constructed through the I-94/I-57 interchange, across the WB I-57 entrance ramp from NB I-94, and within the I-57 corridor. For superstructure erection over expressway traffic lanes, temporary shutdown of all traffic would be required. Temporary shutdown of traffic would occur at nighttime and during low-traffic-volume intervals per IDOT and CDOT approval. Proposed structure construction would be sequenced to minimize impacts on the traffic flow on I-57. Increased traffic congestion due to construction activities may temporarily increase travel times along this portion of I-57.

With adherence to local, state, and federal construction and temporary traffic management guidelines, no adverse impacts would result from construction of the UPRR ROW Alternative.

6.15.2.3 Freight Transportation

The UPRR ROW Alternative would consist of new construction of a dual-track, elevated structure within the UPRR corridor, branching off and running along the east side of the corridor and over existing CN/ME tracks. There would be no impact on UPRR operations due to construction activities, because UPRR trains would be relocated to another corridor as part of a separate, earlier project. Construction at the CN/ME crossing would be phased to minimize the impacts on CN and Metra operations.

Work within the median of I-94 would require temporary lane closures. Proposed structure construction would be sequenced to minimize impacts on the traffic flow on I-94. Increased traffic congestion due to construction activities may temporarily increase freight truck travel times and cost for shipping routes that include this portion of I-94.

Dual-track, elevated structures would be constructed through the I-94/I-57 interchange, across the WB I-57 entrance ramp from NB I-94, and within the I-57 corridor. For superstructure erection over expressway traffic lanes, temporary shutdown of all traffic would be required. Temporary shutdown of traffic would occur at nighttime and during low-traffic-volume intervals per IDOT and CDOT approval. Proposed structure construction would be sequenced to minimize impacts on the traffic flow on I-57. Increased traffic congestion due to construction activities may temporarily increase freight truck travel times and cost for shipping routes that include this portion of I-57.

During new track roadbed construction for the 120th Street yard and shop and the new access road for the existing MWRD facility, construction over and adjacent to the NICTD/CSS & SBRR would occur. During these construction activities, flagging operations and scheduled track closures would occur. Construction would be phased to minimize impacts on freight operations.

A portion of the new track alignment would be constructed over abandoned Indiana Harbor Belt Railroad (IHB) tracks north of 130th Place. Construction activities would be coordinated with IHB to ensure that no construction activities would affect freight operations.

6.15.2.4 Bicycle

Bicyclists using recommended collector streets such as 103rd Street, 111th Street, or Michigan Avenue may incur increased travel times due to detours or increase vehicular traffic due to construction activities.

6.15.2.5 Pedestrian

During construction of the aerial structure and stations, some sidewalks would need to be temporarily closed. Increased travel distance and time may be incurred due to pedestrian traffic reroutes.

6.15.2.6 Parking Facilities

On-street parking would be temporarily affected during construction of the aerial structure and stations. Construction of park & ride lots would also contribute to temporary on-street parking loss due to maintenance of traffic during construction activities.

6.15.3 Union Pacific Railroad Rail Alternative - East Option

6.15.3.1 Public Transportation

Potential construction impacts on public transportation associated with the UPRR East Option would be the same as those of the UPRR ROW Option.

6.15.3.2 Traffic

The construction activities associated with this alternative would temporarily affect the physical capacity of local roadways and intersections, which may lead to increased travel times and possible shift in traffic volumes and the need to reroute traffic during construction. Please refer to the *Transportation Technical Memorandum* for additional traffic information.

Work within the median of I-94 would require temporary lane closures. Proposed structure construction would be sequenced to minimize impacts on the traffic flow on I-94. Increased traffic congestion due to construction activities may temporarily increase travel times along this portion of I-94.

The UPRR Alternative East Option alignment curves over I-57 and runs parallel to the UPRR tracks. Dual-track, elevated structures would be constructed through the I-94/I-57 interchange, across the WB I-57 entrance ramp from NB I-94, and within the I-57 corridor. For superstructure erection over expressway traffic lanes, temporary shutdown of all traffic would be required. Temporary shutdown of traffic would occur at nighttime and during low-traffic-volume intervals per IDOT and CDOT approval. Proposed structure construction would be sequenced to minimize impacts on the traffic flow on I-57. Increased traffic congestion due to construction activities may temporarily increase travel times along this portion of I-57.

With adherence to local, state, and federal construction and temporary traffic management guidelines, no adverse impacts would result from construction of the UPRR Alternative East Option.

6.15.3.3 Freight Transportation

The UPRR Alternative East Option would consist of new construction of dual-track, elevated structure immediately adjacent to and east of the UPRR ROW, branching off and running along the east side of the corridor and over existing CN/ME tracks. The East Option would require the construction activities to occur while UPRR tracks are operational. The work would be sequenced along the UPRR corridor to minimize impacts on UPRR operations. Construction adjacent to railroads would require flagging operations and scheduled track closures. Construction at the CN/ME crossing would be phased to minimize the impacts on CN freight operations.

Work within the median of I-94 would require temporary lane closures. Proposed structure construction would be sequenced to minimize impacts on the traffic flow on I-94. Increased traffic congestion due to construction activities may temporarily increase freight truck travel times and cost for shipping routes that include this portion of I-94.

The UPRR Alternative East Option alignment curves over I-57 and runs parallel to the UPRR tracks. Dual-track, elevated structures would be constructed through the I-94/I-57 interchange, across the WB I-57 entrance ramp from NB I-94, and within the I-57 corridor. For superstructure erection over expressway traffic lanes, temporary shutdown of all traffic would be required. Temporary shutdown of traffic would occur at nighttime and during low-traffic-volume intervals per IDOT and CDOT approval. Proposed structure construction would be sequenced to minimize impacts on the traffic flow on I-57. Increased traffic congestion due to construction activities may temporarily increase freight truck travel times and cost for shipping routes that include this portion of I-57.

During new track roadbed construction for the 120th Street yard and shop and the new access road for the existing MWRD facility, construction over and adjacent to the NICTD/CSS & SBRR would occur. During these construction activities, flagging operations and scheduled track closures would occur. Construction would be phased to minimize impacts on freight operations.

A portion of the new track alignment would be constructed over abandoned IHB tracks north of 130th Place. Construction activities would be coordinated with IHB to ensure that no construction activities would affect freight operations.

6.15.3.4 Bicycle

The bicycle impacts of the UPRR Alternative East Option would be similar to those of the UPRR Alternative ROW Option.

6.15.3.5 Pedestrian

The pedestrian impacts of the UPRR Alternative East Option would be similar to those of the UPRR Alternative ROW Option.

6.15.3.6 Parking Facilities

The parking facility impacts of the UPRR Alternative East Option would be similar to those of the UPRR Alternative ROW Option.

6.15.4 Union Pacific Railroad Rail Alternative - West Option

6.15.4.1 Public Transportation

Potential construction impacts on public transportation associated with the UPRR West Option would be the same as those of the UPRR ROW Option.

6.15.4.2 Traffic

The construction activities associated with this alternative would temporarily affect the physical capacity of local roadways and intersections, which may lead to increased travel times and possible shift in traffic volumes and the need to reroute traffic during construction.

Work within the median of I-94 would require temporary lane closures. Proposed structure construction would be sequenced to minimize impacts on the traffic flow on I-94. Increased traffic congestion due to construction activities may temporarily increase travel times along this portion of I-94.

Dual-track, elevated structures would be constructed through the I-94/I-57 interchange, across the WB I-57 entrance ramp from NB I-94, and within the I-57 corridor. For superstructure erection over expressway traffic lanes, temporary shutdown of all traffic would be required. Temporary shutdown of traffic would occur at nighttime and during low-traffic-volume intervals per IDOT and CDOT approval. Proposed structure construction would be sequenced to minimize impacts on the traffic flow on I-57. Increased traffic congestion due to construction activities may temporarily increase travel times along this portion of I-57.

With adherence to local, state, and federal construction and temporary traffic management guidelines, no adverse impacts would result from construction of the UPRR Alternative West Option.

6.15.4.3 Freight Transportation

The UPRR Alternative West Option would consist of new construction of dual-track, elevated structure crossing over the UPRR at Fernwood Parkway just south of I-57 and continuing immediately adjacent to and west of the UPRR ROW, crossing over the UPRR tracks again at Prairie Avenue and running along the east side of the corridor and over existing CN/ME tracks. The West Option would require the construction activities to occur while UPRR tracks are operational. This alternative would have two crossings over the active UPRR tracks that the East Option would not have: at Fernwood Parkway and Prairie Avenue. Construction at these crossings would be phased to minimize impacts on UPRR freight operations. Construction adjacent to railroads would require flagging operations and scheduled track closures. Construction activities would be phased to reduce impacts on the UPRR operations as much as possible. Construction at the CN/ME crossing would be phased to minimize the impacts on CN freight operations.

Work within the median of I-94 would require temporary lane closures. Proposed structure construction would be sequenced to minimize impacts on the traffic flow on I-94. Increased traffic congestion due to construction activities may temporarily increase freight truck travel times and cost for shipping routes that include this portion of I-94.

Dual-track, elevated structures would be constructed through the I-94/I-57 interchange, across the WB I-57 entrance ramp from NB I-94, and within the I-57 corridor. For superstructure erection over expressway traffic lanes, temporary shutdown of all traffic would be required. Temporary shutdown of traffic would occur at nighttime and during low-traffic-volume intervals per IDOT and CDOT approval. Proposed structure construction would be sequenced to minimize impacts on the traffic flow on I-57. Increased traffic congestion due to construction activities may temporarily increase freight truck travel times and cost for shipping routes that include this portion of I-57.

During new track roadbed construction for the 120th Street yard and shop and new access road for the existing MWRD facility, construction over and adjacent to the NICTD/CSS & SBRR would occur. During these construction activities, flagging operations and scheduled track closures would occur. Construction would be phased to minimize impacts on freight operations.

A portion of the new track alignment would be constructed over abandoned IHB tracks north of 130th Place. Construction activities would be coordinated with IHB to ensure that no construction activities would affect freight operations.

6.15.4.4 Bicycle

The bicycle impacts of the UPRR Alternative West Option would be similar to those of the UPRR Alternative ROW Option.

6.15.4.5 Pedestrian

The pedestrian impacts of the UPRR Alternative West Option would be similar to those of the UPRR Alternative ROW Option.

6.15.4.6 Parking Facilities

The parking facility impacts of the UPRR Alternative West Option would be similar to those of the UPRR Alternative ROW Option.

6.15.5 Halsted Rail Alternative

6.15.5.1 Public Transportation

The construction activities associated with the Halsted Rail Alternative would temporarily affect the physical capacity of roadways and intersections, requiring detours. Superstructure erection would require temporary shutdown of all traffic on Halsted Street, which may lead to increased travel times and a shift in traffic volumes, increasing travel times for bus transit users. Bus stop locations may be eliminated or relocated temporarily and buses rerouted, including Pace service, during construction activities. With adherence to local, state, and federal construction and temporary traffic and public transportation management guidelines, no adverse impacts would result from construction of the Halsted Rail Alternative.

The Metra Electric Blue Island line crosses Halsted Street between 120th Street and 122nd Street, and its West Pullman station is west of Halsted Street. Construction of the aerial structure would require temporary scheduled track closures and would be phased to minimize impacts on Metra operations.

6.15.5.2 Traffic

The construction activities associated with this alternative would temporarily affect the physical capacity of local roadways and intersections, which may lead to increased travel times and possible shift in traffic volumes and the need to reroute traffic during construction.

Work within the median of I-94 would require temporary lane closures. Proposed structure construction would be sequenced to minimize impacts on the traffic flow on I-94. Increased traffic congestion due to construction activities may temporarily increase travel times along this portion of I-94.

Dual-track, elevated structures would be constructed through the I-94/I-57 interchange, across the WB I-57 entrance ramp from NB I-94, and within the I-57 corridor. For superstructure erection over expressway traffic lanes, temporary shutdown of all traffic would be required. Temporary shutdown of traffic would occur at nighttime and during low-traffic-volume intervals per IDOT and CDOT approval. Proposed structure construction would be sequenced to minimize impacts on the traffic flow on I-57. Increased traffic congestion due to construction activities may temporarily increase travel times along this portion of I-57.

The construction activities associated with the Halsted Rail Alternative would temporarily affect the physical capacity of roadways and intersections, requiring detours. Superstructure erection would require temporary shutdown, in segments, of all traffic on Halsted Street. This may lead to increased travel times and possible shift in traffic volumes, increasing travel times for those using Halsted Street.

With adherence to local, state, and federal construction and temporary traffic management guidelines, no adverse impacts would result from construction of the Halsted Rail Alternative.

6.15.5.3 Freight Transportation

Work within the median of I-94 would require temporary lane closures. Proposed structure construction would be sequenced to minimize impacts on the traffic flow on I-94. Increased traffic congestion due to construction activities may temporarily increase freight truck travel times and cost for shipping routes that include this portion of I-94.

The Halsted Rail Alternative alignment crosses over the UPRR at Fernwood Parkway and I-57. Dual-track, elevated structures would be constructed through the I-94/I-57 interchange, across the WB I-57 entrance ramp from NB I-94, and within the I-57 corridor. For superstructure erection over expressway traffic lanes, temporary shutdown of all traffic would be required. Temporary shutdown of traffic would occur at nighttime and during low-traffic-volume intervals per IDOT and CDOT approval. Proposed structure construction would be sequenced to minimize impacts on the traffic flow on I-57. Increased traffic congestion due to construction activities may temporarily increase freight truck travel times and cost for shipping routes that include this portion of I-57.

The construction activities associated with the Halsted Rail Alternative would temporarily affect the physical capacity of roadways and intersections requiring detours. Superstructure erection would require temporary shutdown of all traffic on Halsted Street. This may lead to increased travel times and possible shift in traffic volumes, increasing travel times for freight trucks using Halsted Street. There would be no construction impacts on rail freight transportation because no freight train tracks are near or cross the Halsted Rail Alternative Alignment.

6.15.5.4 Bicycle

Portions of the Major Taylor bike trail would need to be closed temporarily during the construction of the 119th Street station and the aerial structure. Bicycle travel times may increase due to detours or shifting of routes.

6.15.5.5 Pedestrian

During construction of the aerial structure and station construction, some sidewalks would need to be temporarily closed. Increased travel distance and time may be incurred due to pedestrian traffic reroutes.

6.15.5.6 Parking Facilities

On-street parking would be temporarily affected during construction of the aerial structure and stations. Parking would potentially be eliminated from Halsted Street during construction to increase traffic flow. Construction of park & ride lots would also contribute to temporary on-street parking loss due to maintenance of traffic during construction activities.

6.16 Cumulative Impacts

Construction impacts from the other potentially concurrent projects identified in the *Cumulative Impacts Technical Memorandum* would not be likely to result in cumulative impacts when combined with RLE Project construction. No cumulative construction impacts would occur and mitigation measures beyond those already identified for direct impacts due to construction would not be required. Should construction of other nearby projects occur simultaneously with the RLE Project, CTA would coordinate construction activities among the projects to minimize disruption and use of resources.

Section 7
Impacts Remaining After Mitigation

Because of the temporary nature of construction activities, the use of construction BMP, and proposed mitigation methods, the construction impacts from the build alternatives would be considered not adverse. No construction impacts would occur with the No Build Alternative and no mitigation measures would be required.

Section 8
References Cited

Chicago Transit Authority (CTA). Description of Construction and Phasing for Environmental Impact Statement Build Alternatives. November 2012.

Federal Highway Administration. Manual on Uniform Traffic Control Devices. 2009.

Appendix A
Construction Matrix

Note: The information shown in this table reflects construction assumptions for the purposes of NEPA analysis of impacts. It represents the types and order of magnitude of construction activities associated with each alternative. It is not meant to be a final construction plan. A specific construction plan for the preferred alternative presented in the Final EIS will be prepared as design of the project proceeds.

UPRR HRT ROW Option		Construction Equipment												
Construction Activity	Duration (Months)	Haul Truck	Concrete Truck	Front End Loader	Excavator	Crane	Drill Rig	Compressor	Flatbed	Soil (CY)	Concrete (CY)	Structural Steel (LB)	Avg Truck Trips Per Work Day	Avg Workers Per Work Day
Segment U-1: 95th Street Station to Beginning of Horizontal Curve at UPRR (96+60 to 132+00)	**12-36**													
Advance Work														
Signal/cross-over installation; utility relocation; staging	12	x				x							1	5-10
At Grade														
Single Track	12-18	x		x	x	x		x	x	6,830	50	500	1	5-10
Retained Embankment														
Single Track	24	x	x	x	x	x	x	x	x	1,750	1,750	500	5-10	10-15
Elevated Concrete Structure														
Single Track-Rehab/Modify Existing CTA/IDOT tunnel	24	x	x	x	x	x	x	x	x	2,600	1,300	500	5-10	10-15
Elevated Steel Structure														
Single Track - Hammerhead Substructure	24	x	x	x	x	x	x	x	x	4,100	7,870	2,012,500	5-10	10-15
Double Track - Hammerhead Substructure	24-36	x	x	x	x	x	x	x	x	6,090	11,917	3,701,705	5-10	10-15
Segment U-2: Horizontal Curve at UPRR (132+00 to 142+19)	**12-30**													
Advance Work														
Utility relocation; staging	12	x				x							1	5-10
Elevated Steel Structure														
Double Track - Hammerhead Substructure	24-30	x	x	x	x	x	x	x	x	600	1,174	364,700	5-10	10-15
Double Track - TPG, Hammerhead Substructure	24-30	x	x	x	x	x	x	x	x	1,000	2,070	1,825,800	5-10	10-15
Double Track - Straddle Bent Substructure	24-30	x	x	x	x	x	x	x	x	170	457	892,100	5-10	10-15
Segment U-3: End of Horizontal Curve to Metra/CN Crossing (142+19 to 286+12)	**12-36**													
Advance Work														
Utility relocation; staging	12	x				x							1	5-10
Stations														
Construct - 103rd Street	24-36	x	x	x	x	x	x	x	x	7,800	9,967	3,484,100	5-10	20-30
Construct - 111th Street	24-36	x	x	x	x	x	x	x	x	7,800	9,967	3,484,100	5-10	20-30
Construct - Michigan Avenue	24-36	x	x	x	x	x	x	x	x	7,800	9,967	3,484,100	5-10	20-30
Parking														
Construct - 103rd Street	12	x	x	x	x			x		9,300	3,100		2-5	5-10
Construct - 111th Street	12	x	x	x	x	x		x	x	9,300	3,100		2-6	5-11
Construct - Michigan Avenue (2 lots)	24	x	x	x	x			x		18,600	6,200		2-7	5-12
Elevated Steel Structure														
Double Track - Hammerhead Substructure	36	x	x	x	x	x	x	x	x	43,200	84,528	26,258,400	50-100	30-35
Traction Power														
Substation - 175+00	24	x	x	x	x	x		x	x	5,000	1,100	160,000	2-5	10-15
Substation - 254+00	24	x	x	x	x	x		x	x	5,000	1,100	160,000	2-5	10-15

UPRR HRT ROW Option		Construction Equipment												
Construction Activity	Duration (Months)	Haul Truck	Concrete Truck	Front End Loader	Excavator	Crane	Drill Rig	Compressor	Flatbed	Soil (CY)	Concrete (CY)	Structural Steel (LB)	Avg Truck Trips Per Work Day	Avg Workers Per Work Day
Segment U-4: Metra/CN Crossing to At Grade Track (286+12 to 310+03)	**12-36**													
Advance Work														
Utility relocation; staging	12	x				x							1	5-10
Retained Embankment														
Double Track	24	x	x	x	x	x	x	x	x	2,771	926		5-10	10-15
Elevated Steel Structure														
Double Track - Hammerhead Substructure	24-36	x	x	x	x	x	x	x	x	6,300	12,327	3,829,350	5-10	10-15
Double Track - TPG, Hammerhead Substructure	24-36	x	x	x	x	x	x	x	x	400	895	730,320	5-10	10-15
Segment U-5: At Grade Track to 130th Street Station Options (310+03 to 360+02)	**12-36**													
Advance Work														
Utility relocation; staging	12													
At Grade														
Double Track	24-36	x	x	x	x	x	x	x	x	22,950			5-10	20-30
Access Road														
Crossing proposed tracks at 358+00	12-24	x	x	x	x			x		6,778	2,260		5-10	5-10
Bridge for Access Road, Crossing at 358+00	24	x	x	x	x	x		x	x	3,105	4,610	495,000	5-10	10-15
Connector access road, West of Proposed CTA tracks	12	x	x	x	x			x		717	239		5-10	5-10
Segment U-6S: 130th Street South Station Option (360+02 to 380+29)	**12-36**													
Advance Work														
Utility relocation; staging	12	x				x							1	5-10
Station														
Construct - 130th Street South Station Option	24-36	x	x	x	x	x	x	x	x	6,773	2,653	696,305	5-10	20-30
Parking														
Construct - 130th Street South Station Option	24	x	x	x	x			x					2-5	5-10
At Grade														
Double Track	24-36	x		x	x			x	x	5,400				
Triple Track	24	x		x	x			x	x	7,000				
Access Road														
At South Station Option	12-24	x	x	x	x			x		5,778	1,926		5-10	5-10
Segment U-6W: 130th Street West Station Option (380+29 to 395+40)	**12-36**													
Advance Work														
Utility relocation; staging	12	x				x							1	5-10

UPRR HRT ROW Option		Construction Equipment												
Construction Activity	Duration (Months)	Haul Truck	Concrete Truck	Front End Loader	Excavator	Crane	Drill Rig	Compressor	Flatbed	Soil (CY)	Concrete (CY)	Structural Steel (LB)	Avg Truck Trips Per Work Day	Avg Workers Per Work Day
Station														
Construct - 130th Street West Station Option	24-36	x	x	x	x	x	x	x	x	3,148	1,565	467,055	5-10	20-30
Parking														
Construct - 130th Street West Station Option (2 lots)	24	x	x	x	x			x					2-5	5-10
At Grade														
Double Track	24-36	x		x	x			x	x	12,600				
Triple Track	24	x		x	x			x	x	6,300				
Access Road														
At West Station Option	12-24	x	x	x	x			x		6,512	2,171		5-10	5-10
Bridge for Access Road, Crossing at 371+00	24	x	x	x	x	x		x	x	1,553	2,305	247,500	5-10	10-15
Segment U-7: 120th Street Yard and Shop (291+85/45+00 to 352+69/106+12)	**12-36**													
Advance Work														
Utility relocation; staging	12	x				x							1	5-10
Access Road														
Construct	12-24	x	x	x	x			x		10,977	3,659		5-10	5-10
At Grade														
Single Track	36	x		x	x	x		x	x	89,500	1,000		5-10	10-15
Double Track	36	x		x	x	x		x	x	8,100			5-10	10-15
Retained Embankment														
Double Track	24	x	x	x	x	x	x	x	x	2,771	926	500	5-10	10-15
Elevated Steel Structure														
Double Track - Hammerhead Substructure	24	x	x	x	x	x	x	x	x	2,100	4,109	1,276,450	5-10	10-15
Shop Facility														
Construct-Shop Building	24-36	x	x	x	x	x	x	x	x	10,380	3,114	1,038,000	5-10	20-30
Parking														
Construct - Shop	24	x	x	x	x			x		9,300	3,100		2-5	5-10
Traction Power														
Substation - Yard	24	x	x	x	x	x		x	x	5,000	1,100	160,000	2-5	10-15
Final Phase - 95th Street station to 130th Street (96+50 to 380+50/396+00)	**10 - 12**													
Signal/Communication														
Signal/Interlocking	10 - 12							x	x	--	--	--	2-5	10 - 20
Communication System	10 - 12							x	x	--	--	--	2-5	10 - 20

UPRR HRT East Side Option Construction Activity	Duration (Months)	Construction Equipment								Soil (CY)	Concrete (CY)	Structural Steel (LB)	Avg Truck Trips Per Work Day	Avg Workers Per Work Day
		Haul Truck	Concrete Truck	Front End Loader	Excavator	Crane	Drill Rig	Compressor	Flatbed					
Segment U-1: 95th Street station to Beginning of Horizontal Curve at UPRR (96+60 to 132+00)	**12-36**													
Advance Work														
Signal/cross-over installation; utility relocation; staging	12	x				x							1	5-10
At Grade														
Single Track	12-18	x		x	x	x		x	x	6,830	50	500	1	5-10
Retained Embankment														
Single Track	24	x	x	x	x	x	x	x	x	1,750	1,750	500	5-10	10-15
Elevated Concrete Structure														
Single Track-Rehab/Modify Existing CTA/IDOT tunnel	24	x	x	x	x	x	x	x	x	2,600	1,300	500	5-10	10-15
Elevated Steel Structure														
Single Track - Hammerhead Substructure	24	x	x	x	x	x	x	x	x	4,100	7,870	2,012,500	5-10	10-15
Double Track - Hammerhead Substructure	24-36	x	x	x	x	x	x	x	x	6,090	11,917	3,701,705	5-10	10-15
Segment U-2: Horizontal Curve at UPRR (132+00 to 142+00)	**12-36**													
Advance Work														
Utility relocation; staging	12	x				x							1	5-10
Elevated Steel Structure														
Double Track - Hammerhead Substructure	24-30	x	x	x	x	x	x	x	x	300	587	182,350	5-10	10-15
Double Track - TPG, Hammerhead Substructure	24-30	x	x	x	x	x	x	x	x	1,000	2,070	1,825,800	5-10	10-15
Double Track - Straddle Bent Substructure	24-30	x	x	x	x	x	x	x	x	170	457	916,100	5-10	10-15
Segment U-3: End of Horizontal Curve to Metra/CN Crossing (142+00 to 285+00)	**12-36**													
Advance Work														
Utility relocation; staging	12	x				x							1	5-10
Stations														
Construct - 103rd Street	24-36	x	x	x	x	x	x	x	x	9,000	11,767	4,030,800	5-10	20-30
Construct - 111th Street	24-36	x	x	x	x	x	x	x	x	9,000	11,767	4,030,800	5-10	20-30
Construct - Michigan Avenue	24-36	x	x	x	x	x	x	x	x	9,000	11,767	4,030,800	5-10	20-30
Parking														
Construct - 103rd Street	12	x	x	x	x			x		9,300	3,100		2-5	5-10
Construct - 111th Street	12	x	x	x	x			x		9,300	3,100		2-6	5-11
Construct - Michigan Avenue (2 lots)	24	x	x	x	x			x		18,600	6,200		2-7	5-12
Elevated Steel Structure														
Double Track - Hammerhead Substructure	36	x	x	x	x	x	x	x	x	32,700	63,983	19,876,150	50-100	30-35
Traction Power														
Substation - 175+00	24	x	x	x	x	x		x	x	5,000	1,100	160,000	2-5	10-15
Substation - 254+00	24	x	x	x	x	x		x	x	5,000	1,100	160,000	2-5	10-15

UPRR HRT East Side Option **Construction Activity**	Duration (Months)	**Construction Equipment**								Soil (CY)	Concrete (CY)	Structural Steel (LB)	Avg Truck Trips Per Work Day	Avg Workers Per Work Day
		Haul Truck	Concrete Truck	Front End Loader	Excavator	Crane	Drill Rig	Compressor	Flatbed					
Segment U-4: Metra/CN Crossing to At Grade Track (285+00 to 308+83)	**12-36**													
Advance Work														
Utility relocation; staging	12	x				x							1	5-10
Retained Embankment														
Double Track	24	x	x	x	x	x	x	x	x	2,771	926		5-10	10-15
Elevated Steel Structure														
Double Track - Hammerhead Substructure	24-36	x	x	x	x	x	x	x	x	6,300	12,327	3,829,350	5-10	10-15
Double Track - TPG, Hammerhead Substructure	24-36	x	x	x	x	x	x	x	x	400	897	730,320	5-10	10-15
Segment U-5: At Grade Track to 130th Street Station Options (308+83 to 359+00)	**12-36**													
Advance Work														
Utility relocation; staging	12													
At Grade														
Double Track	24-36	x	x	x	x	x	x	x	x	22,950			5-10	20-30
Access Road														
Crossing proposed tracks at 357+00	12-24	x	x	x	x			x		6,778	2,260		5-10	5-10
Bridge for access Road, Crossing at 357+00	24	x	x	x	x	x		x	x	3,105	4,610	495,000	5-11	10-15
Connector access road, West of Proposed CTA tracks	12	x	x	x	x			x		717	239		5-10	5-10
Segment U-6S: 130th Street South Station Option (359+00 to 379+27)	**12-36**													
Advance Work														
Utility relocation; staging	12	x				x							1	5-10
Station														
Construct - 130th Street South Station Option	24-36	x	x	x	x	x	x	x	x	6,773	2,653	696,305	5-10	20-30
Parking														
At South Station Option	24	x	x	x	x			x		13,900	4,700		2-5	5-10
At Grade														
Double Track	24-36	x		x	x			x	x	4,500				
Triple Track	24	x		x	x			x	x	7,700				
Access Road														
At South Station Option	12-24	x	x	x	x			x		5,778	1,926		5-10	5-10
Segment U-6W: 130th Street West Station Option (379+27 to 394+38)	**12-36**													
Advance Work														
Utility relocation; staging	12	x				x							1	5-10
Station														
Construct - 130th Street West Station Option	24-36	x	x	x	x	x	x	x	x	3,148	1,565	467,055	5-10	20-30

UPRR HRT East Side Option Construction Activity	Duration (Months)	**Construction Equipment**								Soil (CY)	Concrete (CY)	Structural Steel (LB)	Avg Truck Trips Per Work Day	Avg Workers Per Work Day
		Haul Truck	Concrete Truck	Front End Loader	Excavator	Crane	Drill Rig	Compressor	Flatbed					
Parking														
At West Station Option (2 lots)	24	x	x	x	x			x		27,800	9,400		2-5	5-10
At Grade														
Double Track	24-36	x		x	x			x	x	12,150				
Triple Track	24	x		x	x			x	x	6,300				
Access Road														
At West Station Option	12-24	x	x	x	x			x		6,512	2,171		5-10	5-10
Bridge for Access Road, Crossing at 369+50	24	x	x	x	x	x		x	x	1,553	2,305	247,500	5-10	10-15
Segment U-7: 120th Street Yard and Shop (290+26/45+00 to 351+67/106+79)	**12-36**													
Advance Work														
Utility relocation; staging	12	x				x							1	5-10
Access Road														
Construct	12-24	x	x	x	x			x		10,977	3,659		5-10	5-10
At Grade														
Single Track	36	x		x	x	x		x	x	89,500	1,000		5-10	10-15
Double Track	36	x		x	x	x		x	x	8,100			5-10	10-15
Retained Embankment														
Double Track	24	x	x	x	x	x	x	x	x	2,771	926	500	5-10	10-15
Elevated Steel Structure														
Double Track - Hammerhead Substructure	24	x	x	x	x	x	x	x	x	2,100	4,109	1,276,450	5-10	10-15
Shop Facility														
Construct-Shop Building	24-36	x	x	x	x	x	x	x	x	10,380	3,114	1,038,000	5-10	20-30
Parking														
Construct - Shop	24	x	x	x	x			x		9,300	3,100		2-5	5-10
Traction Power														
Substation - Yard	24	x	x	x	x	x		x	x	5,000	1,100	160,000	2-5	10-15
Final Phase - 95th Street station to 130th Street (96+50 to 379+70/394+53)	**10 - 12**													
Signal/Communication														
Signal/Interlocking	10 - 12							x	x	--	--	--	2-5	10 - 20
Communication System	10 - 12							x	x	--	--	--	2-5	10 - 20

UPRR HRT West Side Option		Construction Equipment												
Construction Activity	Duration (Months)	Haul Truck	Concrete Truck	Front End Loader	Excavator	Crane	Drill Rig	Compressor	Flatbed	Soil (CY)	Concrete (CY)	Structural Steel (LB)	Avg Truck Trips Per Work Day	Avg Workers Per Work Day
Segment U-1: 95th Street Station to Beginning of Horizontal Curve at UPRR (96+60 to 132+00)	**12-36**													
Advance Work														
Signal/cross-over installation; utility relocation; staging	12	x				x							1	5-10
At Grade														
Single Track	12-18	x		x	x	x		x	x	6,830	50	500	1	5-10
Retained Embankment														
Single Track	24	x	x	x	x	x	x	x	x	1,750	1,750	500	5-10	10-15
Elevated Concrete Structure														
Single Track-Rehab/Modify Existing CTA/IDOT tunnel	24	x	x	x	x	x	x	x	x	2,600	1,300	500	5-10	10-15
Elevated Steel Structure														
Single Track - Hammerhead Substructure	24	x	x	x	x	x	x	x	x	4,100	7,870	2,012,500	5-10	10-15
Double Track - Hammerhead Substructure	24-36	x	x	x	x	x	x	x	x	6,090	11,917	3,701,705	5-10	10-15
Segment U-2: Horizontal Curve at UPRR (132+00 to 142+43)	**12-36**													
Advance Work														
Utility relocation; staging	12	x				x							1	5-10
Elevated Steel Structure														
Double Track - Hammerhead Substructure	24-30	x	x	x	x	x	x	x	x	600	1,174	364,700	5-10	10-15
Double Track - TPG, Hammerhead Substructure	24-30	x	x	x	x	x	x	x	x	1,000	2,070	1,825,800	5-10	10-15
Double Track - Straddle Bent Substructure	24-30	x	x	x	x	x	x	x	x	340	951	1,581,000	5-10	10-15
Segment U-3A: End of Horizontal Curve to Prairie/UPRR Crossing (142+43 to 275+00)	**12-36**													
Advance Work														
Utility relocation; staging	12	x				x							1	5-10
Stations														
Construct - 103rd Street	24-36	x	x	x	x	x	x	x	x	9,000	11,767	4,030,800	5-10	20-30
Construct - 111th Street	24-36	x	x	x	x	x	x	x	x	9,000	11,767	4,030,800	5-10	20-30
Construct - Michigan Avenue	24-36	x	x	x	x	x	x	x	x	9,000	11,767	4,030,800	5-10	20-30
Parking														
Construct - 103rd Street	12	x	x	x	x			x		9,300	3,100		2-5	5-10
Construct - 111th Street	12	x	x	x	x	x		x	x	9,300	3,100		2-5	5-10
Construct -Michigan Avenue (2 lots)	24	x	x	x	x			x		18,600	6,200		2-5	5-10
Elevated Steel Structure														
Double Track - Hammerhead Substructure	36	x	x	x	x	x	x	x	x	29,700	58,113	18,052,650	50-100	30-35
Traction Power														
Substation - 180+00	24	x	x	x	x	x		x	x	5,000	1,100	160,000	2-5	10-15
Substation - 260+00	24	x	x	x	x	x		x	x	5,000	1,100	160,000	2-5	10-15

UPRR HRT West Side Option	Duration (Months)	Construction Equipment								Soil (CY)	Concrete (CY)	Structural Steel (LB)	Avg Truck Trips Per Work Day	Avg Workers Per Work Day
Construction Activity		Haul Truck	Concrete Truck	Front End Loader	Excavator	Crane	Drill Rig	Compressor	Flatbed					
Segment U-3B: Prairie/UPRR crossing to Metra/CN Crossing (275+00 to 287+20)	**24-36**													
Advance Work														
Utility relocation; staging	12	x				x							1	5-10
Elevated Steel Structure														
Double Track -Hammerhead Substructure	36	x	x	x	x	x	x	x	x	1,200	2,438	729,400	50-100	30-35
Double Track - Straddle Bent Substructure	36	x	x	x	x	x	x	x	x	1,020	3,014	3,948,600	50-100	30-35
Segment U-4: Metra/CN Crossing to At Grade Track (287+20 to 311+02)	**12-36**													
Advance Work														
Utility relocation; staging	12	x				x							1	5-10
Retained Embankment														
Double Track	24	x	x	x	x	x	x	x	x	2,771	926		5-10	10-15
Elevated Steel Structure														
Double Track - Hammerhead Substructure	24-36	x	x	x	x	x	x	x	x	5,700	11,153	3,464,650	5-10	10-15
Double Track - TPG, Hammerhead Substructure	24-36	x	x	x	x	x	x	x	x	400	895	730,320	5-10	10-15
Segment U-5: At Grade Track to 130th Street Station Options (311+02 to 361+19)	**12-36**													
Advance Work														
Utility relocation; staging	12													
At Grade														
Double Track	24-36	x	x	x	x	x	x	x	x	23,400			5-10	20-30
Access Road														
Crossing proposed tracks at 360+00	12-24	x	x	x	x			x		6,778	2,260		5-10	5-10
Bridge for Access Road, Crossing at 360+00	24	x	x	x	x	x		x	x	3,105	4,610	495,000	5-10	10-15
Connector access road, West of Proposed CTA tracks	12	x	x	x	x			x		717	239		5-10	5-10
Segment U-6S: South 130th Street Station Option (361+19 to 381+46)	**12-36**													
Advance Work														
Utility relocation; staging	12	x				x							1	5-10
Station														
Construct - 130th Street South Station Option	24-36	x	x	x	x	x	x	x	x	6,773	2,653	696,305	5-10	20-30
Parking														
Construct - 130th Street South Station Option	24	x	x	x	x			x		13,900	4,700		2-5	5-10
At Grade														

UPRR HRT West Side Option	Duration (Months)	Construction Equipment								Soil (CY)	Concrete (CY)	Structural Steel (LB)	Avg Truck Trips Per Work Day	Avg Workers Per Work Day
Construction Activity		Haul Truck	Concrete Truck	Front End Loader	Excavator	Crane	Drill Rig	Compressor	Flatbed					
Double Track	24-36	x		x	x			x	x	5,400				
Triple Track	24	x		x	x			x	x	7,700				
Access Road														
At South Station Option	12-24	x	x	x	x			x		5,778	1,926		5-10	5-10
Segment U-6W: West 130th Street Station Option (381+46 to 396+57)	**12-36**													
Advance Work														
Utility relocation; staging	12	x				x							1	5-10
Station														
Construct - 130th Street West Option	24-36	x	x	x	x	x	x	x	x	3,148	1,565	467,055	5-10	20-30
Parking														
Construct - 130th Street West Option (2 lots)	24	x	x	x	x			x		27,800	9,400		2-5	5-10
At Grade														
Double Track	24-36	x		x	x			x	x	13,050				
Triple Track	24	x		x	x			x	x	5,600				
Access Road														
At West Station Option	12-24	x	x	x	x			x		6,512	2,171		5-10	5-10
Bridge for Access Road, Crossing at 372+00	24	x	x	x	x			x		1,553	2,305	247,500	5-10	10-15
Segment U-7: 120th Street Yard and Shop (292+45/45+00 to 353+86/106+79)	**12-36**													
Advance Work														
Utility relocation; staging	12	x				x							1	5-10
Access Road														
Construct	12-24	x	x	x	x			x		10,977	3,659		5-10	5-10
At Grade														
Single Track	36	x		x	x	x		x	x	89,500	1000		5-10	10-15
Double Track	36	x		x	x	x		x	x	8,100			5-10	10-15
Retained Embankment														
Double Track	24	x	x	x	x	x	x	x	x	2,771	926	500	5-10	10-15
Elevated Steel Structure														
Double Track - Hammerhead Substructure	24	x	x	x	x	x	x	x	x	2,100	4,109	1,276,450	5-10	10-15
Shop Facility														
Construct-Shop Building	24-36	x	x	x	x	x	x	x	x	10,380	3,114	1,038,000	5-10	20-30
Parking														
Construct - Shop	24	x	x	x	x			x		9,300	3,100		2-5	5-10
Traction Power														
Substation - Yard	24	x	x	x	x	x		x	x	5,000	1,100	160,000	2-5	10-15

UPRR HRT West Side Option	Duration (Months)	**Construction Equipment**								Soil (CY)	Concrete (CY)	Structural Steel (LB)	Avg Truck Trips Per Work Day	Avg Workers Per Work Day
Construction Activity		Haul Truck	Concrete Truck	Front End Loader	Excavator	Crane	Drill Rig	Compressor	Flatbed					
Final Phase - 95th Street Station to 130th Street (96+50 to 382+30/396+50)	**10 - 12**													
Signal/Communication														
Signal/Interlocking	10 - 12							x	x	--	--	--	2-5	10 - 20
Communication System	10 - 12							x	x	--	--	--	2-5	10 - 20

Halsted Street HRT		Construction Equipment												
Construction Activity	Duration (Months)	Haul Truck	Concrete Truck	Front End Loader	Excavator	Crane	Drill Rig	Compressor	Flatbed	Soil (CY)	Concrete (CY)	Structural Steel (LB)	Avg Truck Trips Per Work Day	Avg Workers Per Work Day
Segment H-1: 95th Street Station to Beginning of Horizontal Curve at Halsted (96+60 to 158+00)	**12-36**													
Advance Work														
Signal/cross-over installation; utility relocation; staging	12	x				x							1	5-10
At Grade														
Single Track	12-18	x		x	x	x		x	x	6,830	50	500	1	5-10
Retained Embankment														
Single Track	24	x	x	x	x	x	x	x	x	1,750	1,500	500	5-10	10-15
Elevated Concrete Structure														
Single Track-Rehab/Modify Existing CTA/IDOT tunnel	24	x	x	x	x	x	x	x	x	2,600	1,300	500	5-10	10-15
Elevated Steel Structure														
Single Track-Hammerhead Substructure	24	x	x	x	x	x	x	x	x	2,381	7,870	2,012,500	5-10	10-15
Double Track - Hammerhead Substructure	24-36	x	x	x	x	x	x	x	x	8,344	26,820	8,625,155	5-10	10-15
Segment H-2: Horizontal Curve at Halsted (158+00 to 168+00)	**12-36**													
Advance Work														
Utility relocation; staging	12	x				x							1	5-10
Elevated Steel Structure														
Double Track -TPG, Hammerhead Substructure	24-30	x	x	x	x	x	x	x	x	1,000	2,070	1,825,800	5-10	10-15
Double Track - Straddle Bent Substructure	24-30	x	x	x	x	x	x	x	x	340	914	1,664,200	5-10	10-15
Segment H-3: End of Horizontal Curve to 119th Street Station (168+00 to 285+00)	**12-36**													
Advance Work														
Utility relocation; staging	12	x				x							1	5-10
Stations														
Construct - 103rd Street	24-36	x	x	x	x	x	x	x	x	2,903	4,052	4,764,000	5-10	20-30
Construct - 111th Street	24-36	x	x	x	x	x	x	x	x	2,903	4,052	4,764,000	5-10	20-30
Parking														
Construct - 103rd Street	12	x	x	x	x			x		9,300	3,100		2-5	5-10
Construct - 111th Street	12	x	x	x	x			x		9,300	3,100		2-5	5-10
Elevated Steel Structure														
Double Track - Hammerhead Substructure	24-36	x	x	x	x	x	x	x	x	12,600	23,814	7,658,700	50-100	30-35
Double Track - Straddle Bent Substructure	24-36	x	x	x	x	x	x	x	x	13,104	32,261	45,252,480	50-100	30-35
Traction Power														
Substations - 101st Street	24	x	x	x	x	x		x	x	5,000	1,100	160,000	2-5	10-15
Substations - 110th Street	24	x	x	x	x	x		x	x	5,000	1,100	160,000	2-5	10-15

Halsted Street HRT	Duration (Months)	Construction Equipment								Soil (CY)	Concrete (CY)	Structural Steel (LB)	Avg Truck Trips Per Work Day	Avg Workers Per Work Day
Construction Activity		Haul Truck	Concrete Truck	Front End Loader	Excavator	Crane	Drill Rig	Compressor	Flatbed					
Segment H-4: 119th Street station to Vermont Avenue station (285+00 to 367+30)	**12-36**													
Advance Work														
Utility relocation; staging	12	x				x							1	5-10
Stations														
Construct - 119th Street	24-36	x	x	x	x	x	x	x	x	2,903	4,052	4,764,000	5-10	20-30
Construct - Vermont Avenue	24-36	x	x	x	x	x	x	x	x	3,363	3,914	4,741,000	5-10	20-30
Parking														
Construct - 119th Street	12	x	x	x	x			x		9,300	3,100		2-5	5-10
Construct - Vermont Avenue	24	x	x	x	x			x		13,900	4,700		2-5	5-10
Elevated Steel Structure														
Double Track - Hammerhead Substructure	24-36	x	x	x	x	x	x	x	x	8,400	15,876	5,105,800	50-100	30-35
Double Track - Straddle Bent Substructure	24-36	x	x	x	x	x	x	x	x	8,736	21,507	30,168,320	50-100	30-35
Triple Track - Straddle Bent Substructure	12-24	x	x	x	x	x	x	x	x	1,260	3,420	5,875,200	50-100	30-35
Traction Power														
Substations - 118th Place	24	x	x	x	x	x		x	x	5,000	1,100	160,000	2-5	10-15
Substations - 126th Street	24	x	x	x	x	x		x	x	5,000	1,100	160,000	2-5	10-15
Segment H-5: 119th Street Yard and Shop (299+47/500+00 to 306+96/1014+64)	**12-36**													
Advance Work														
Utility relocation; staging	12	x				x							1	5-10
At Grade														
Single Track	24-36	x		x	x	x		x	x	87,000	1,000		5-10	10-15
Double Track	24-36	x		x	x	x		x	x	3,150			5-10	10-15
Retained Embankment														
Double Track	24	x	x	x	x	x	x	x	x	3,709	1,242	500	5-10	10-15
Elevated Steel Structure														
Double Track - Hammerhead Substructure	24	x	x	x	x	x	x	x	x	3,300	6,237	2,005,850	5-10	10-15
Double Track - Straddle Bent Substructure	24-36	x	x	x	x	x	x	x	x	2,520	6,204	8,702,400	5-10	10-15
Parking														
Construct - Shop	24	x	x	x	x			x		9,300	3,100		2-5	5-10
Shop Facility														
Construct-Shop Building	24-36	x	x	x	x	x	x	x	x	8,075	2,423	807,500	5-10	20-30
Access Road														
Construct	12-24	x	x	x	x			x		7,041	2,347		2-5	5-10
Traction Power														
Substations - Yard	24	x	x	x	x	x		x	x	5,000	1,100	160,000	2-5	10-15

Halsted Street HRT	Duration (Months)	Construction Equipment								Soil (CY)	Concrete (CY)	Structural Steel (LB)	Avg Truck Trips Per Work Day	Avg Workers Per Work Day
Construction Activity		Haul Truck	Concrete Truck	Front End Loader	Excavator	Crane	Drill Rig	Compressor	Flatbed					
Final Phase - 95th Street Station to 129th Street (STA 96+50 to 367+00)	**10 - 12**													
Signal/Communication														
Signal/Interlocking	10 - 12							x	x	--	--	--	2-5	10 - 20
Communication System	10 - 12							x	x	--	--	--	2-5	10 - 20

Appendix B
2014–2015 Red Line Extension Project Update

2014–2015 Red Line Extension Project Update

From 2012-2014, CTA evaluated benefits and impacts of four alternatives: the No Build Alternative, the Bus Rapid Transit Alternative (along Michigan Avenue), the Union Pacific Railroad (UPRR) Rail Alternative, and the Halsted Alternative. CTA evaluated three options of the UPRR Rail Alternative: Right-of-Way Option, East Option, and West Option. CTA also evaluated two options of the UPRR Rail Alternative 130th Street station: a South Station Option and a West Station Option. Based on the project description provided in Section 2 of this technical memorandum, CTA analyzed the impacts of these alternatives and station options. The benefits and impacts are included in the technical memoranda prepared in 2012-2014.

In August 2014, based on the technical analysis and public input, CTA announced the NEPA Preferred Alternative—the UPRR Rail Alternative. Additional conceptual engineering was conducted on the UPRR Rail Alternative to refine the East and West Option alignments. In addition, CTA is considering only the South Station Option of the 130th Street Station.

In late 2014 and early 2015, CTA conducted additional engineering and revised assumptions on the East and West Options to refine the alignments. The refinement of the East and West Options consisted of the following items:

- For the segment of the alignment along I-57, CTA shifted the proposed alignment from the median of I-57 to the north side of I-57 within the existing expressway right-of-way. The construction would be less complex, safer for construction workers, and have a shorter duration. The shift would also allow for fewer impacts to Wendell Smith Park for the East Option, and would allow for no permanent impacts to Wendell Smith Park for the West Option.
- CTA modified the curve speeds as the alignment heads south from I-57 along the UPRR tracks. The curve speed for both the East and West Options would be 35 mph.
- CTA shifted the East Option alignment near 103rd Street station to minimize impacts to Block Park and the Roseland Pumping Station.
- CTA modified the curves south of 103rd Street for both the East and West Options to 55 mph to maximize the train speed.
- CTA refined the layout of the 120th Street yard and shop to optimize yard operations. The refined layout of the yard would accommodate 340 train cars.

The refinement of the East and West Option alignments minimizes potential impacts to parks while providing flexibility for future design phases. The Draft Environmental Impact Statement contains the benefits and impacts of the refined East and West Option alignments and supersedes information presented in other chapters of this technical memorandum.

The refined East and West Option alignments would have no additional or different impacts from those described in the technical memoranda for the following resource areas: construction, transportation, land use and economic development, historic and cultural resources, safety and security, hazardous materials, indirect and cumulative, air quality, floodplains, vegetation and wildlife habitat, threatened and endangered species, and geology and soils.

Appendix J
Land Use and Economic Development Technical Memorandum

Chicago Red Line Extension Project

Land Use and Economic Development

Technical Memorandum

May 8, 2013
Updated September 9, 2015

Prepared for:
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Abbreviations

API	Area of Potential Impact
BRT	Bus Rapid Transit
CDOT	Chicago Department of Transportation
CHA	Chicago Housing Authority
CMAP	Chicago Metropolitan Agency for Planning
CN	Canadian National
CTA	Chicago Transit Authority
DCP	Developing Communities Project, Inc.
EIS	Environmental Impact Statement
FTA	Federal Transit Administration
IDOT	Illinois Department of Transportation
IHB	Indiana Harbor Belt
MWRD	Metropolitan Water Reclamation District
NEPA	National Environmental Policy Act
NICTD	Northern Indiana Commuter Transportation District
RLE	Red Line Extension
ROW	right-of-way
RTA	Regional Transportation Authority
TIF	tax increment financing
TIP	Transportation Improvement Program
TOD	transit-oriented development
UPRR	Union Pacific Railroad

Section 1
Summary

This technical memorandum analyzes the potential impacts of the Red Line Extension (RLE) Project on land use and economic development.

Per Federal Transit Administration (FTA) guidance, a land use change would cause an adverse impact if it would result in any of the following:

- An alignment would not be compatible with surrounding land uses.
- An alignment would encourage land use and development that is inconsistent with local plans, goals, and objectives.

The area of potential impact (API) for determining potential land use and economic development impacts and benefits for the RLE Project includes parcels directly adjacent to the build alternative alignments, for the full length of the alignments, as well as those parcels within a ½-mile radius of station locations per FTA guidance.

Each alternative was analyzed for potential impacts on existing and expected land use types, densities, and character resulting from permanent impacts, construction impacts, and cumulative impacts. This analysis determined the following:

- The Bus Rapid Transit (BRT) Alternative would improve land use accessibility between station areas and the 95th Street Terminal and downtown Chicago, but not as much as the Union Pacific Railroad (UPRR) Alternative options or the Halsted Rail Alternative. Travel time savings to downtown Chicago for each affected neighborhood would be greater for the BRT Alternative than for the No Build Alternative.
- Travel time savings would encourage new development or redevelopment within station areas for the UPRR Rail Alternative options or the Halsted Rail Alternative. The extent of such development activity would depend on factors such as local plans, policies, zoning, and financial incentives. The BRT Alternative would not encourage new development due to the lack of rail-like elements, such as exclusive travel lanes and substantial stations, which are typically cited as necessary to attract the attention of private developers.
- The UPRR Rail Alternative would be consistent with local and regional land use and economic development plans in the project area, as well as the U.S. Department of Transportation Livability Initiative. Because the UPRR Rail Alternative would provide new transit service to relatively isolated South Side neighborhoods, the permanent impacts would be beneficial for land use and economic development.

- The BRT Alternative would result in no adverse impacts on land use or economic development and would be consistent with existing land uses.

- Although it is not included in local and regional land use and economic development plans, the Halsted Rail Alternative would provide beneficial impacts on land use and economic impacts. The Halsted Rail Alternative would, however, result in an adverse impact on adjacent single-family residential land uses in West Pullman due to the proposed seven-story parking garage at the Vermont Avenue station.

- Property acquisitions would temporarily reduce the property tax base, but affected residences and businesses could be relocated within the same neighborhoods due to the availability of residential and commercial real estate.

Table 1-1 highlights the land use and economic development impacts of each alternative on the directly affected neighborhoods within the project area. These impacts are presented with mitigation factored into the analysis. If an alternative alignment would not pass through a neighborhood, the impact category assigned to that neighborhood is "Not Applicable," which is represented by dash marks. Section 5 of the technical memorandum provides the specific impact analysis for the proposed alternatives.

Table 1-1: Summary of Land Use and Economic Impacts after Mitigation

	Phase	Directly Affected Neighborhoods within Project Area						
		Impacts	Washington Heights	Roseland	Morgan Park	West Pullman	Riverdale	Calumet Park*
No Build Alternative	Permanent	Land Use	No Impact	No Impact	No Impact	No Impact	No Impact	No Impact
		Economic Development	No Impact	No Impact	No Impact	No Impact	No Impact	No Impact
	Construction	Land Use	No Impact	No Impact	No Impact	No Impact	No Impact	No Impact
		Economic Development	No Impact	No Impact	No Impact	No Impact	No Impact	No Impact
	Cumulative	Land Use	No Impact	No Impact	No Impact	No Impact	No Impact	No Impact
		Economic Development	No Impact	No Impact	No Impact	No Impact	No Impact	No Impact
BRT Alternative	Permanent	Land Use	---	Beneficial	---	Beneficial	Beneficial	---
		Economic Development	---	Not Adverse	---	Not Adverse	Not Adverse	---
	Construction	Land Use	---	Not Adverse	---	Not Adverse	Not Adverse	---
		Economic Development	---	Beneficial	---	Beneficial	Beneficial	---

	Phase	Directly Affected Neighborhoods within Project Area						
		Impacts	Washington Heights	Roseland	Morgan Park	West Pullman	Riverdale	Calumet Park*
	Cumulative	Land Use	---	Not Adverse	---	Not Adverse	Not Adverse	---
		Economic Development	---	Not Adverse	---	Not Adverse	Not Adverse	---
UPRR ROW Option	Permanent	Land Use	Beneficial	Beneficial	---	Beneficial	Beneficial	---
		Economic Development	Beneficial	Beneficial	---	Beneficial	Beneficial	---
	Construction	Land Use	Not Substantially Adverse	Not Substantially Adverse	---	Not Substantially Adverse	Not Substantially Adverse	---
		Economic Development	Beneficial	Beneficial	---	Beneficial	Beneficial	---
	Cumulative	Land Use	Beneficial	Beneficial	---	Beneficial	Beneficial	---
		Economic Development	Beneficial	Beneficial	---	Beneficial	Beneficial	---
UPRR East Option	Permanent	Land Use	Beneficial	Not Substantially Adverse	---	Not Substantially Adverse	Beneficial	---
		Economic Development	Beneficial	Beneficial	---	Beneficial	Beneficial	---
	Construction	Land Use	Not Substantially Adverse	Not Substantially Adverse	---	Not Substantially Adverse	Not Substantially Adverse	---
		Economic Development	Beneficial	Beneficial	---	Beneficial	Beneficial	---
	Cumulative	Land Use	Beneficial	Beneficial	---	Beneficial	Beneficial	---
		Economic Development	Beneficial	Beneficial	---	Beneficial	Beneficial	---
UPRR West Option	Permanent	Land Use	Beneficial	Not Substantially Adverse	---	Not Substantially Adverse	Beneficial	---
		Economic Development	Beneficial	Beneficial	---	Beneficial	Beneficial	---
	Construction	Land Use	Not Substantially Adverse	Not Substantially Adverse	---	Not Substantially Adverse	Not Substantially Adverse	---
		Economic Development	Beneficial	Beneficial	---	Beneficial	Beneficial	---
	Cumulative	Land Use	Beneficial	Beneficial	---	Beneficial	Beneficial	---
		Economic Development	Beneficial	Beneficial	---	Beneficial	Beneficial	---

	Phase	Directly Affected Neighborhoods within Project Area						
		Impacts	Washington Heights	Roseland	Morgan Park	West Pullman	Riverdale	Calumet Park*
Halsted Rail Alternative	Permanent	Land Use	Beneficial	Beneficial	Beneficial	Adverse	---	Beneficial
		Economic Development	Beneficial	Beneficial	Beneficial	Beneficial	---	Beneficial
	Construction	Land Use	Not Substantially Adverse	Not Substantially Adverse	Not Substantially Adverse	Not Substantially Adverse	---	Not Substantially Adverse
		Economic Development	Beneficial	Beneficial	Beneficial	Beneficial	---	No Impact
	Cumulative	Land Use	Beneficial	Beneficial	Beneficial	Beneficial	---	No Impact
		Economic Development	Beneficial	Beneficial	Beneficial	Beneficial	---	No Impact

Notes: *Village of Calumet Park

Impact Categories:

- Not Applicable (---)
- Beneficial
- No Impact
- Not Adverse
- Not Substantially Adverse
- Adverse

Updated July 27, 2015
In August 2014, based on the technical analysis and public input until then, CTA announced the NEPA Preferred Alternative—the UPRR Rail Alternative. CTA is considering two alignment (route) options of this alternative: the East Option and the West Option. At this time, CTA is also considering only the South Station Option of the 130th Street Station. In late 2014 and early 2015, CTA conducted additional engineering on the East and West Options to refine the East and West Option alignments. Appendix B of this technical memorandum summarizes the refined alignments and any additional or different impacts that would result. The information in Appendix B supersedes information presented in other chapters of this technical memorandum.

Section 2
Project Description

The Chicago Transit Authority (CTA) is proposing to extend the Red Line from the existing 95th Street Terminal to the vicinity of 130th Street, subject to the availability of funding. The proposed RLE would include four stations. Each station would include bus transfer and parking facilities. This project is one part of the Red Ahead Program to extend and enhance the entire Red Line. The CTA is also planning 95th Street Terminal improvements that are anticipated to be completed prior to the proposed RLE construction.

The project area is 11 miles south of the Chicago central business district (commonly referred to as the Loop) and encompasses approximately 20 square miles. The boundaries of the project area are 95th Street on the north, Ashland Avenue on the west, Stony Island Avenue on the east, and the Calumet-Sag Channel/Little Calumet River and 134th Street on the south. The I-57 Expressway and I-94 Bishop Ford Freeway cross the western and eastern edges of the project area, respectively. Lake Calumet is in the eastern portion of the project area. The project area encompasses parts of nine community areas in the City of Chicago and the eastern section of the Village of Calumet Park. Chicago community areas include Beverly, Washington Heights, Roseland, Morgan Park, Pullman, West Pullman, Riverdale, Hegewisch, and South Deering. The project area comprises residential (primarily single family), industrial (both existing and vacant), transportation (including freight), and commercial development.

The Draft Environmental Impact Statement (EIS) focuses on the following alternatives (shown in Figure 2-1), which emerged from the Alternatives Analysis and the National Environmental Policy Act (NEPA) scoping process:

- No Build Alternative
- BRT Alternative
- UPRR Rail Alternative
    - Right-of-Way (ROW) Option
    - East Option
    - West Option
- Halsted Rail Alternative

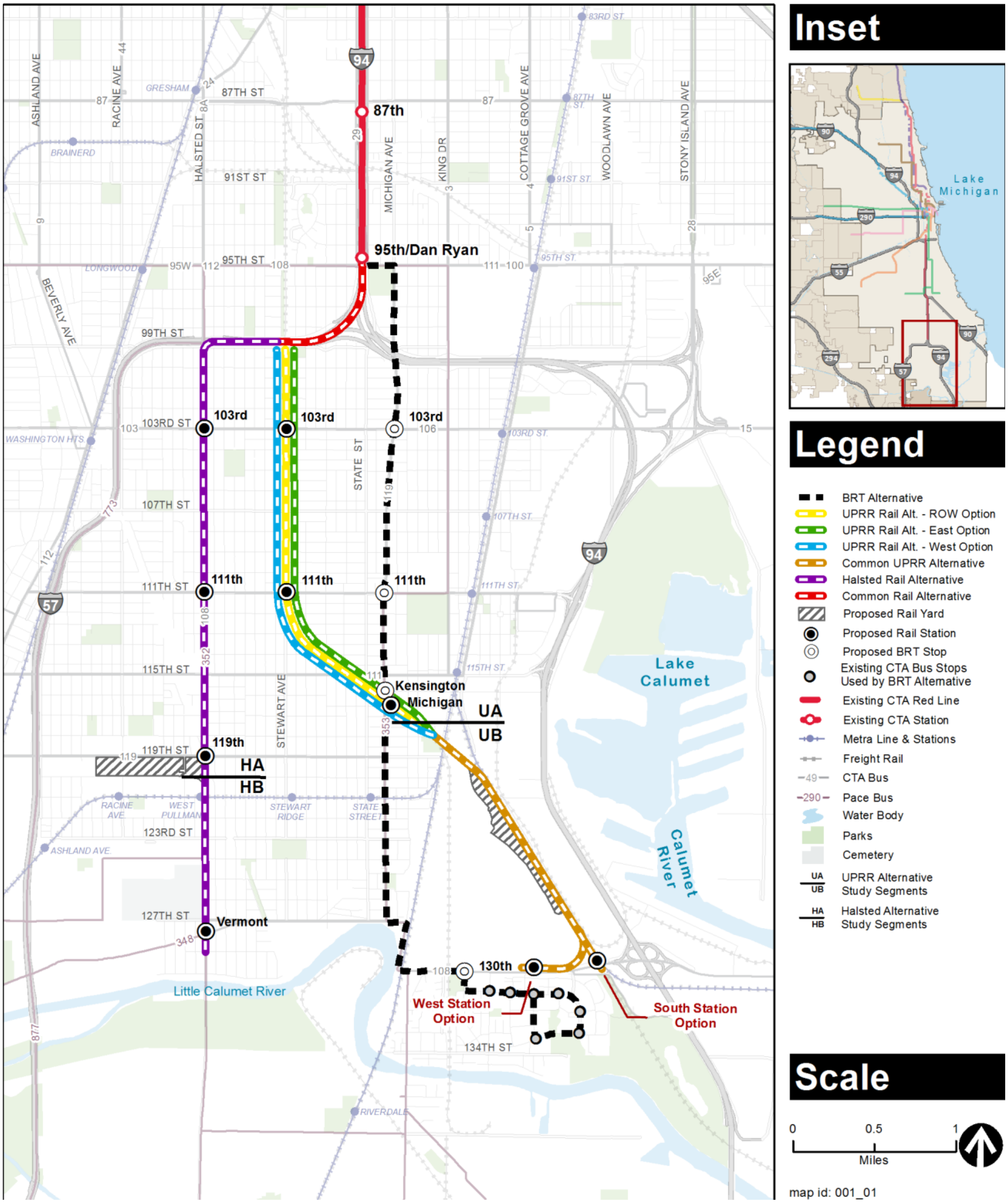

Inset
Lake Michigan
Legend
BRT Alternative
UPRR Rail Alt. - ROW Option
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
Common UPRR Alternative
Halsted Rail Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Proposed BRT Stop
Existing CTA Bus Stops Used by BRT Alternative
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
49 CTA Bus
290 Pace Bus
Water Body
Parks
Cemetery
UA UB UPRR Alternative Study Segments
HA HB Halsted Alternative Study Segments
Scale
0
0.5
1
Miles
map id: 001_01
87th
95th/Dan Ryan
103rd
103rd
103rd
111th
111th
111th
Kensington
Michigan
119th
Vermont
130th
UA
UB
HA
HB
West Station Option
South Station Option
Lake Calumet
Calumet River
Little Calumet River
87TH ST
91ST ST
95TH ST
99TH ST
103RD ST
107TH ST
111TH ST
115TH ST
119TH ST
123RD ST
127TH ST
134TH ST
ASHLAND AVE
RACINE AVE
HALSTED ST
MICHIGAN AVE
KING DR
COTTAGE GROVE AVE
WOODLAWN AVE
STONY ISLAND AVE
STATE ST
STEWART AVE
BEVERLY AVE
GRESHAM
BRAINERD
LONGWOOD
WASHINGTON HTS
RACINE AVE
WEST PULLMAN
STEWART RIDGE
STATE STREET
ASHLAND AVE
RIVERDALE
83RD ST
87TH ST
91ST ST
95TH ST
103RD ST
107TH ST
111TH ST
115TH ST
94
57

Figure 2-1: Red Line Extension Project Alternatives

The No Build Alternative is a required alternative as part of the NEPA environmental analysis and is used for comparison purposes to assess the relative benefits and impacts of extending the Red Line. The No Build Alternative is carried into the Draft EIS phase of the project development regardless of its performance versus the build alternatives under consideration. No new infrastructure would be constructed as part of the No Build Alternative other than committed transportation improvements that are already in the Chicago Metropolitan Agency for Planning (CMAP) Fiscal Year 2010–2015 Transportation Improvement Program (TIP) and the improvements to 95th Street Terminal. The TIP projects within the project area consist of four bridge reconstructions, several road improvement projects including resurfacing and coordination of signal timing on 95th Street, work on Metra's facilities, construction of a bicycle/pedestrian multi-use trail, and preservation of historic facilities. The No Build Alternative includes regular maintenance of existing track and structures, and bus transit service would be focused on the preservation of existing services and projects. All elements of the No Build Alternative are included in each of the other alternatives. Under this alternative, travel times would not improve from existing conditions.

The BRT Alternative (formerly referred to as the Transportation Systems Management Alternative) is a 5.0-mile, limited-stop, enhanced BRT route, which is assumed to operate 24 hours per day between the existing 95th Street Terminal and the intersection of 130th Street and Eberhart Avenue. No dedicated bus lanes would be provided for the BRT Alternative; however, parking lanes would be removed for some portions of the alignment and four stops with improved bus shelters and park & ride facilities would be created at 103rd Street and Michigan Avenue, 111th Street and Michigan Avenue, Kensington Avenue and Michigan Avenue, and 130th Street and Eberhart Avenue. Although BRT service elements would not continue south of the 130th Street stop, the bus route would continue through Altgeld Gardens along the existing route with six stops. The BRT Alternative would be consistent with bus routing changes that may occur as part of improvements to the 95th Street Terminal. Under this alternative, travel times between 130th Street and the Loop would improve over existing conditions.

The UPRR Rail Alternative is a 5.3-mile extension of the heavy rail transit Red Line from its existing 95th Street Terminal to 130th Street, just west of I-94. The Chicago Transit Board designated the UPRR Rail Alternative as the Locally Preferred Alternative at its August 12, 2009 board meeting. This alternative includes construction and operation of new heavy rail transit tracks, mostly in existing transportation corridors. The UPRR Rail Alternative has three options for alignment (ROW, East, and West), all of which would include operation on elevated structure from 95th Street to just past the Canadian National/Metra Electric District tracks near 119th Street. The alignment would then transition to at-grade through an industrial area with no public through streets, terminating at 130th Street in the vicinity of Altgeld Gardens. Four new stations would be constructed at 103rd Street, 111th Street, Michigan Avenue, and 130th Street. The 130th Street station would be the terminal station, with two options under evaluation: the South Station Option and the West Station Option. A new yard and shop facility would be sited near 120th Street and Cottage Grove Avenue. The bus routes in the vicinity of the UPRR Rail Alternative would be modified to enhance connectivity between the Red Line and the bus network. The hours of operation and service frequency for the UPRR Rail Alternative are assumed to be the same as

for the current Red Line. Under this alternative, travel times between 130th Street and the Loop would improve substantially over existing conditions.

The Halsted Rail Alternative is a 5.0-mile heavy rail transit extension of the existing Red Line. In this alternative, the Red Line would operate on an elevated structure running south from 95th Street along I-57 until Halsted Street. The alignment would then turn south and continue along Halsted Street to the intersection of Halsted Street and Vermont Avenue near 127th Street. This alternative would include four new stations at 103rd Street, 111th Street, 119th Street, and Vermont Avenue. The Vermont Avenue station would be the terminal station. A new yard and shop would be sited west of Halsted Street and between the 119th Street and Vermont Avenue stations. The bus routes in the vicinity of the Halsted Rail Alternative would be modified to enhance connectivity to the Red Line. The hours of operation and service frequency for the Halsted Rail Alternative are assumed to be the same as for the current Red Line. Under this alternative, travel times between 127th Street and the Loop would improve substantially over existing conditions. This alternative would not extend rail to Altgeld Gardens, which would be served by bus connecting to the Vermont terminal station.

Section 3
Methods for Impact Evaluation

This section describes the methods for analysis of potential impacts on land use and economic development. The types of impacts considered in this analysis include conflicts with or disruptions to existing land uses; inconsistencies with local and regional plans, policies, and regulations; and future land use and economic development benefits and opportunities presented by the alternatives.

3.1 Regulatory Framework

3.1.1 Federal

Sections 3 and 5 of the Urban Mass Transportation Act of 1964 require that federally funded transit projects be consistent with official plans for the comprehensive development of an area, as well as with a community's goals and objectives. To ensure compliance with this requirement, the FTA states that every environmental document should include maps that illustrate existing and proposed future land uses of the area around the proposed project alternative alignments. If a proposed project is fully consistent with existing and proposed land uses and will not be the impetus for new development that would be inconsistent with policies or plans, no further analysis is required.

In response to the U.S. Department of Transportation Livability Initiative, a 2010 FTA directive indicated that analysis of transit projects' potential to increase livability, promote economic development, and support community growth should be considered as part of the criteria for FTA's programs. According to the directive, the FTA will seek to do the following:

- Provide more transportation choices.
- Promote equitable, affordable housing.
- Enhance economic competitiveness - access to employment centers, education, services and other basic needs.
- Support existing communities - transit-oriented, mixed-use development, and land recycling.
- Coordinate policies and leverage investment - leverage funding to plan for future growth.
- Value communities and neighborhoods - invest in healthy, safe, and walkable neighborhoods.

The CTA desires to seek FTA New Starts Program funding for the capital cost of the proposed project; therefore, the FTA New Starts guidelines were utilized to document the affected environment for land use and economic development, which provides the foundation for determining potential impacts on existing land uses and plans and policies. As authorized by Section 5309 of Title 49, United States Code, the FTA created the New Starts Program to efficiently and comparatively evaluate and rate major new capital investments nationwide. Section 5309(d)(6) requires the FTA to publish policy guidance on the major capital investment program review and evaluation process and criteria each time substantial changes are made.

On January 9, 2013, the FTA published a final rule implementing New Starts Program changes that are consistent with Moving Ahead for Progress in the 21st Century (MAP-21), which was signed into law in July 2012. Accompanying the final rule is FTA's Proposed New Starts and Small Starts Policy Guidance (January 9, 2013) to provide details on the measures and analytical techniques, which will be finalized later this year. The proposed guidance does not alter the basic criteria for analyzing existing land uses and economic development, with one exception. The quantity of affordable housing or certified public housing, and related plans and policies to increase affordable housing within a proposed transit corridor, was proposed as a new measure. The proposed guidance was used for the land use and economic development assessment for the RLE Project.

3.1.2 State

The Illinois Department of Transportation (IDOT) *Community Impact Assessment Manual* provides guidance for analyzing the impacts of a transportation project on land use and development as well as impacts on the regional and local economies (IDOT 2007).

3.1.3 Local

There are no local regulations requiring environmental analysis of land use impacts. Local and regional land use plans were reviewed to inform the land use and economic development assessment for the RLE Project. The applicable plans are listed below for reference.

Chicago Metropolitan Region:

- Chicago Metropolitan Agency for Planning (CMAP) *GO TO 2040 Regional Plan (2010)*

Cook County:

- *Cook County Comprehensive Economic Development Strategy Report (2009)*

City of Chicago:

- *Chicago Sustainable Industries, Phase One: A Manufacturing Work Plan for the 21st Century (2011)*
- *Transit-Friendly Development Guide (2009)*
- *The Chicago Central Area Plan (May 2003)*
- *City Space Plan for Chicago (1998)*

Village of Calumet Park:

Note: The Village does not have a recently adopted comprehensive plan; therefore, the Village Code and Zoning Map were utilized to assess future land use within the project area.

3.2 Impact Analysis Thresholds

NEPA does not set specific thresholds of significance for land use and economic development impacts. Guidance published by the FTA and IDOT was used as the basis for a qualitative evaluation of the potential for land use and economic development impacts at parcels adjacent to the RLE Project alternative alignments. The FTA and IDOT land use criteria, as described in the guidance manuals, were used as the basis for the thresholds of impact for this project. For the purposes of this technical memorandum, impacts on land use are based on the following:

- Will the project cause substantial changes in existing land use?
- Will the project facilitate or impede potential growth?
- Is the project located in a high growth region?
- Have there been recent zoning changes in the project area and will zoning changes occur due to project implementation?
- Will the project be compatible with surrounding land uses?
- Will the project encourage land use and development that is inconsistent with local plans, goals and objectives?

Per FTA and IDOT guidance, impacts on economic development are based on the following:

- Will the project result in taxation changes?
- Will the project affect a major employer?
- Which economic sectors might be affected by the project?
- Will the project result in substantial displacement of businesses and individuals?
- Will the project cause short-term and/or long-term disruption of business activities?
- Will the project have an influence on regional construction costs?

If one or more of the above impacts is anticipated, the expected impacts on the area and a discussion of alternative locations must be presented in the environmental document. In addition, the document must identify measures that would be used to mitigate any anticipated adverse impacts. There are no additional criteria at the state and local levels.

3.3 Area of Potential Impact

The API for determining potential land use and economic development impacts and benefits for the RLE Project includes parcels directly adjacent to the build alternative alignments, for the full length of the alignments, as well as those parcels within a ½-mile radius of stations per FTA's 2004 *Guidelines and Standards for Assessing Transit-Supportive Land Use* (see Figure 3-1).

3.4 Methods

The analysis of potential land use impacts associated with each alternative entailed the following components:

- Analysis of the potential for short-term and long-term conflict with, or disruption of access to, land uses adjacent to the alternative alignments.
- Identification of potential conflicts with applicable local land use plans, policies, or regulations.
- Identification of potential land use benefits of the alternatives, such as opportunities for economic development and transit-supportive land uses.

The EIS analyzed impacts at a general level and took into account the impacts of the project on the surrounding existing and future land use categories.

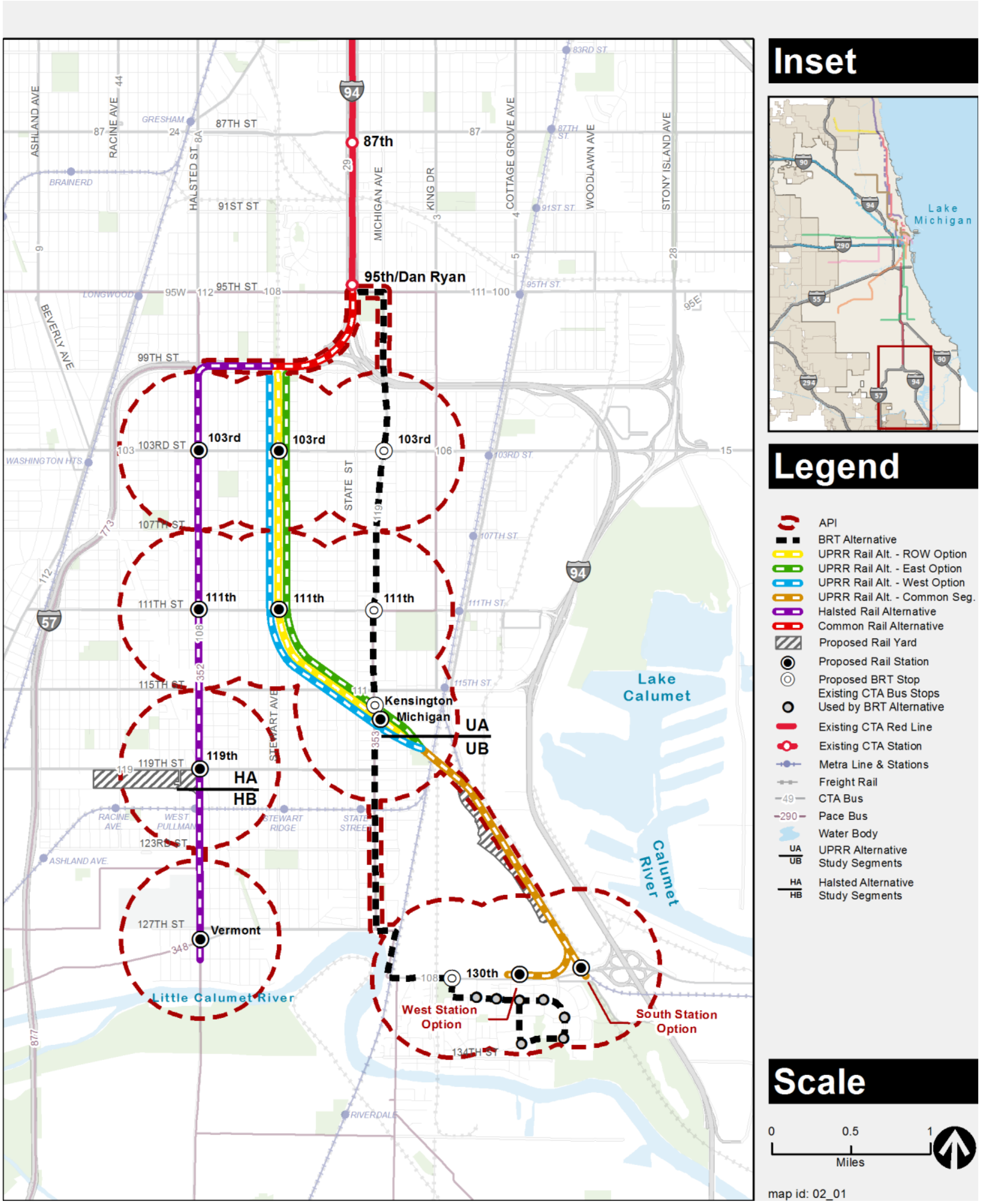

87th
95th/Dan Ryan
103rd
103rd
103rd
111th
111th
111th
119th
Vermont
Kensington
Michigan
130th
West Station Option
South Station Option
UA
UB
HA
HB
87TH ST
91ST ST
95TH ST
99TH ST
103RD ST
107TH ST
111TH ST
115TH ST
119TH ST
123RD ST
127TH ST
134TH ST
ASHLAND AVE
RACINE AVE
HALSTED ST
MICHIGAN AVE
KING DR
COTTAGE GROVE AVE
WOODLAWN AVE
STONY ISLAND AVE
STATE ST
STEWART AVE
BEVERLY AVE
GRESHAM
BRAINERD
LONGWOOD
WASHINGTON HTS
RACINE AVE
WEST PULLMAN
STEWART RIDGE
STATE STREET
ASHLAND AVE
RIVERDALE
Lake Calumet
Calumet River
Little Calumet River
Inset
Lake Michigan
Legend
API
BRT Alternative
UPRR Rail Alt. - ROW Option
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
UPRR Rail Alt. - Common Seg.
Halsted Rail Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Proposed BRT Stop
Existing CTA Bus Stops Used by BRT Alternative
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
49 CTA Bus
290 Pace Bus
Water Body
UA UB UPRR Alternative Study Segments
HA HB Halsted Alternative Study Segments
Scale
0
0.5
1
Miles
map id: 02_01

Figure 3-1: Land Use and Economic Development Area of Potential Impact

3.4.1 Land Use Incompatibility and Conflicts

The analysis began with an inventory of the existing land uses surrounding each alternative alignment, to identify the potential short- and long-term conflicts with land uses and potential disruption of access to land uses adjacent to the alternative alignments. The catalog of land uses relied on the land use designations provided by the applicable local land use plans, zoning ordinance designations, review of aerial photography, and observations made during field visits. Land use maps in the plans illustrate the land use designations for parcels near the alternative alignments.

Existing land uses were compared to the land uses that would be expected after implementation of each build alternative and/or the No Build Alternative to identify potential incompatibilities with and disruptions of existing land uses. The types of incompatibilities considered included the introduction of new transit facilities adjacent to sensitive land uses; the introduction of new land uses that are inconsistent with existing land uses; increased noise, security concerns, changes in lighting, transportation changes (e.g., pedestrian access to stations); and pedestrian safety concerns. The potential for land use incompatibility with regard to increased noise, security, lighting, transportation, and pedestrian safety is briefly summarized in this technical memorandum, but is discussed in greater detail in the separate technical memorandums that address those specific topics.

3.4.2 Policy Consistency

The analysis focused on each proposed alternative's consistency with the goals and policies presented in regional and local land use plans and regulations of the City of Chicago, Cook County, and CMAP, as well as the U.S. Department of Transportation Livability Initiative. The analysis determined whether the proposed alternatives would have differing levels of policy consistency.

3.4.3 Land Use and Economic Development Benefits

The analysis included an evaluation of the potential land use benefits associated with each of the proposed alternatives, such as opportunities for economic growth and development, increased transit-supportive development, enhanced livability, and the potential to boost local economic activity. Goals and policies presented in local land use plans and ordinances that encourage transit-supportive development were addressed, along with a comparison of how each proposed alternative would support these objectives. The potential for the proposed alternatives to generate public investment in transportation infrastructure, which would support economic vitality and environmentally sustainable communities, was also considered.

Section 4
Affected Environment

This section describes the existing and planned land use conditions, as well as the land use and economic development planning and policy framework, in the neighborhoods and jurisdictions affected by the proposed project. The analysis includes a description of existing and planned land uses within ½ mile of proposed station locations (referred to as station areas) and the alignment between station areas. The analysis also includes a review of land use and economic development plans and policies by jurisdiction. **Figure 4-1** identifies the City of Chicago neighborhoods affected by the RLE Project. Neighborhoods that may be directly affected by the proposed build alternatives include Washington Heights, Morgan Park, Roseland, West Pullman, and Riverdale.

4.1 Existing Land Uses

The overall project area has residential (primarily single family), commercial (urban mixed-use), industrial, transportation and utilities, and vacant land uses. **Figure 4-2** depicts the overall land uses affected by the RLE Project. The project area has numerous institutional land uses, including Chicago State University (7,200 students), Olive-Harvey College (4,300 students), and several high schools (including Harlan, Corliss, Fenger, Julian, Brooks, and Carver). Major activity centers in the project area include Halsted Street Commercial Corridor, Roseland Hospital, Sherwin-Williams, Ryerson, the Illinois International Port District, and Metron Steel. The Ford Motor plant at 130th Street and Torrence Avenue is just east of the project area and employs 2,800 people.

4.1.1 Bus Rapid Transit Alternative

The BRT Alternative alignment would begin at CTA's 95th Street Terminal, and continue east on 95th Street to Michigan Avenue, then on Michigan Avenue to 130th Street. The BRT route would pass through the Roseland, West Pullman, and Riverdale neighborhoods. The BRT stop locations would be at 103rd Street, 111th Street, Kensington Avenue, and 130th Street. The following subsections describe the existing land uses within ½ mile of the alignment and proposed bus stops. Appendix A contains detailed bus stop area land use maps.

95th Street Terminal to 99th Street

The adjacent land uses for the BRT Alternative alignment from the 95th Street Terminal to 99th Street include urban mixed and open space (Abbott Park) uses along 95th Street; and single-family residential and institutional (Harlan Community Academy High School) uses along Michigan Avenue to 99th Street.

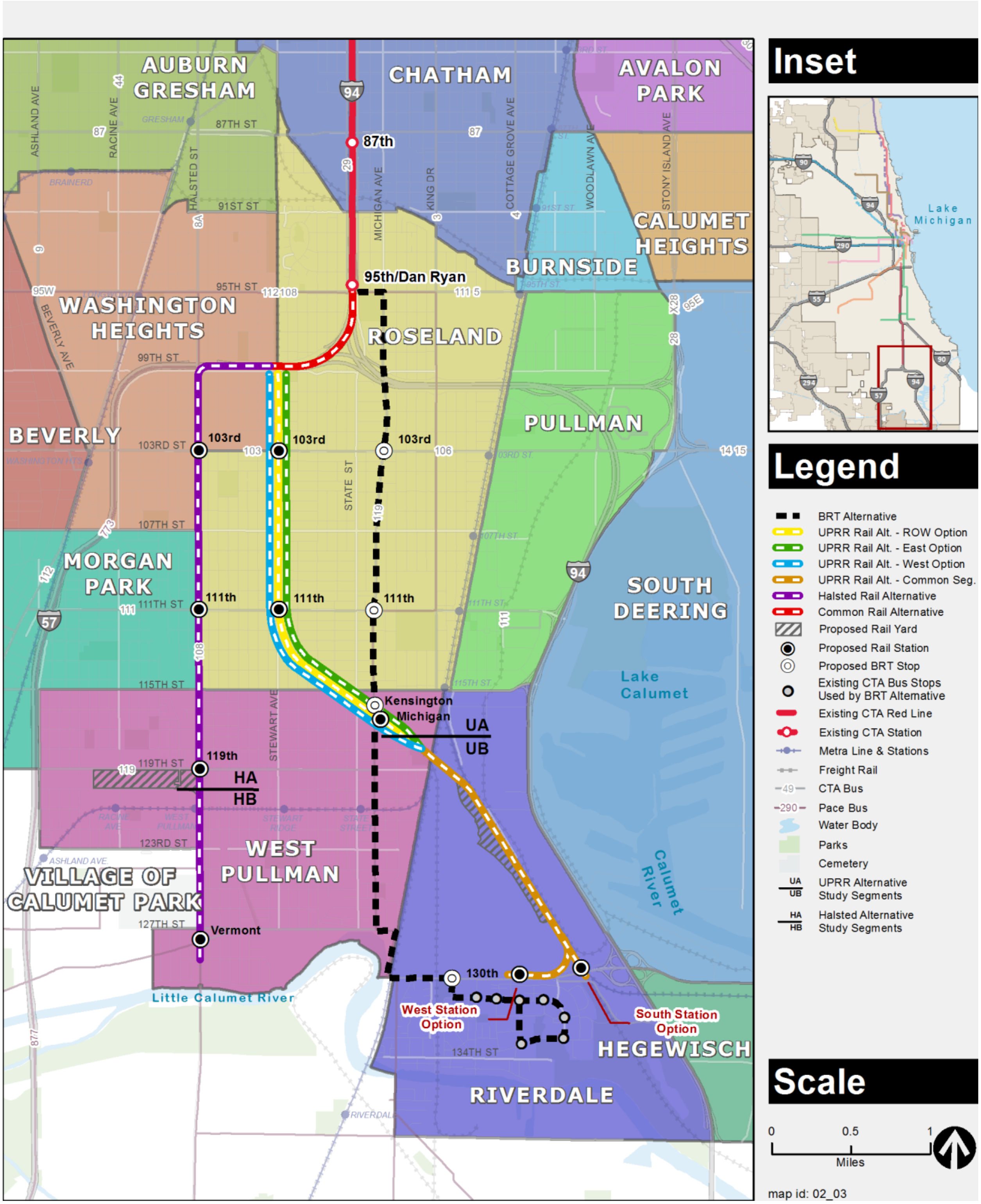
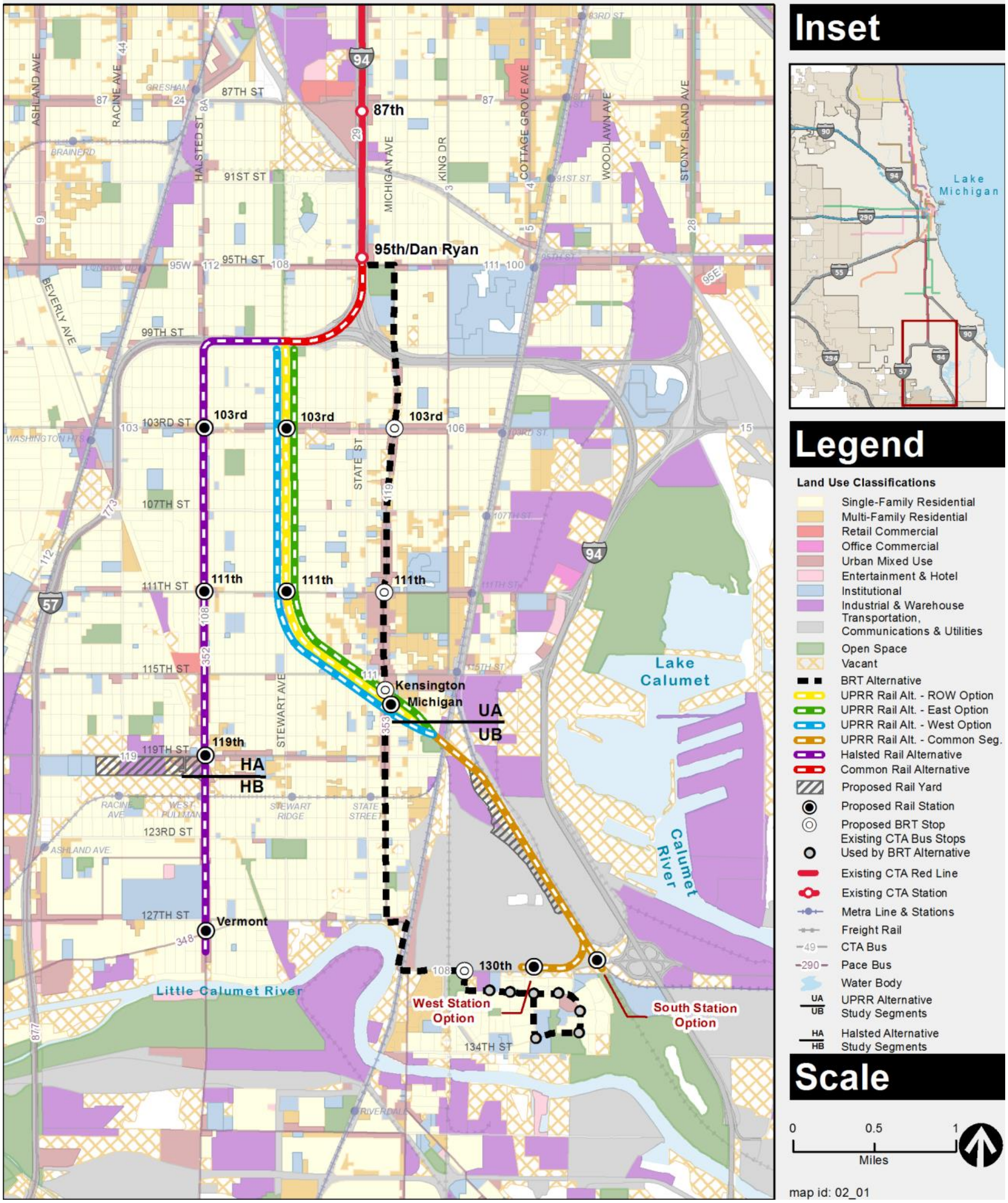

AUBURN GRESHAM
CHATHAM
AVALON PARK
CALUMET HEIGHTS
BURNSIDE
WASHINGTON HEIGHTS
ROSELAND
BEVERLY
PULLMAN
MORGAN PARK
SOUTH DEERING
WEST PULLMAN
VILLAGE OF CALUMET PARK
RIVERDALE
HEGEWISCH
Lake Calumet
Calumet River
Little Calumet River
87th
95th/Dan Ryan
103rd
111th
119th
Kensington
Michigan
Vermont
130th
UA
UB
HA
HB
West Station Option
South Station Option
87TH ST
91ST ST
95TH ST
99TH ST
103RD ST
107TH ST
111TH ST
115TH ST
119TH ST
123RD ST
127TH ST
134TH ST
ASHLAND AVE
RACINE AVE
HALSTED ST
BEVERLY AVE
MICHIGAN AVE
KING DR
COTTAGE GROVE AVE
WOODLAWN AVE
STONY ISLAND AVE
STATE ST
STEWART AVE
Inset
Lake Michigan
Legend
BRT Alternative
UPRR Rail Alt. - ROW Option
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
UPRR Rail Alt. - Common Seg.
Halsted Rail Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Proposed BRT Stop
Existing CTA Bus Stops Used by BRT Alternative
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
49 CTA Bus
290 Pace Bus
Water Body
Parks
Cemetery
UA UB UPRR Alternative Study Segments
HA HB Halsted Alternative Study Segments
Scale
0
0.5
1
Miles
map id: 02_03

Figure 4-1: Community Areas in the Red Line Extention Project Area



87th
95th/Dan Ryan
103rd
103rd
103rd
111th
111th
111th
Kensington
Michigan
UA
UB
119th
HA
HB
Vermont
130th
West Station Option
South Station Option
Lake Calumet
Calumet River
Little Calumet River
87TH ST
91ST ST
95TH ST
99TH ST
103RD ST
107TH ST
111TH ST
115TH ST
119TH ST
123RD ST
127TH ST
134TH ST
ASHLAND AVE
RACINE AVE
HALSTED ST
MICHIGAN AVE
KING DR
COTTAGE GROVE AVE
WOODLAWN AVE
STONY ISLAND AVE
STATE ST
STEWART AVE
BEVERLY AVE
94
57
Inset
Lake Michigan
Legend
Land Use Classifications
Single-Family Residential
Multi-Family Residential
Retail Commercial
Office Commercial
Urban Mixed Use
Entertainment & Hotel
Institutional
Industrial & Warehouse
Transportation, Communications & Utilities
Open Space
Vacant
BRT Alternative
UPRR Rail Alt. - ROW Option
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
UPRR Rail Alt. - Common Seg.
Halsted Rail Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Proposed BRT Stop
Existing CTA Bus Stops Used by BRT Alternative
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
CTA Bus
Pace Bus
Water Body
UPRR Alternative Study Segments
Halsted Alternative Study Segments
Scale
0
0.5
1
Miles
map id: 02_01

Figure 4-2: Existing Land Uses in the Red Line Extention Project Area

103rd Street Stop

Land uses within ½ mile of the 103rd Street stop location include urban mixed, institutional, multi-family residential, and vacant uses along Michigan Avenue; and primarily urban mixed-use along 103rd Street. The majority of uses beyond these two arterials are single-family residential uses. There are several institutions (schools and churches) throughout the stop area.

111th Street Stop

Land uses within ½ mile of the 111th Street stop location include urban mixed, institutional, multi-family residential, and vacant uses along Michigan Avenue north of 111th Street; and primarily dense urban mixed-use along Michigan south of 111th Street. West of Michigan Avenue, land uses along 111th Street include institutional (Roseland Community Hospital), urban mixed, and multi-family residential uses. East of Michigan Avenue, the primary land uses are institutional (Gwendolyn Brooks College Preparatory Academy) and open space (Palmer Park). The majority of land uses beyond the arterials are single-family residential uses and institutions.

Kensington Avenue Stop

There is a substantial overlap in land uses for the 111th Street stop location and the Kensington Avenue stop location north of 115th Street. Land uses along Michigan Avenue include urban mixed, institutional, and vacant land uses. Land uses along 115th Street include single-family residential, institutional, and vacant uses and a limited amount of urban mixed-use. The remainder of the area around the stop location contains a mix of single-family and multi-family residential uses and institutional uses (churches and schools).

Kensington Avenue Stop to 130th Street

South of the 115th Street stop location, the Michigan Avenue corridor contains primarily single-family residential uses. For areas that are within the API but not on Michigan Avenue, the majority of land uses are single-family residential with some institutions and open space. The Metra Electric District Blue Island Branch is parallel to 121st Street; the State Street Metra station is one block west of Michigan Avenue. Closer to 130th Street, there are industrial, transportation, and utility land uses.

130th Street Stop

North of 130th Street, the area within ½ mile of the 130th Street stop is dominated by a utility land use (Metropolitan Water Reclamation District [MWRD]). South of 130th Street, the area within ½ mile of the 130th Street stop location is dominated by single-family residential, multi-family residential, institutional, urban mixed, and open space uses such as the Beaubien Woods Forest Preserve. The BRT Alternative would serve the interior of the Altgeld Gardens public housing community south of 130th Street.

4.1.2 Union Pacific Railroad Rail Alternative

This section describes existing land use conditions for all three UPRR Rail Alternative options: the ROW Option, East Option, and West Option. The alignments for the three options are within 50 feet of each other; therefore, the affected environment analysis would be the same for all three options, except where noted.

The UPRR Rail Alternative would begin at CTA's 95th Street Terminal, continue south and west along the 1-94 and I-57 medians, and transition to the UPRR corridor south to 130th Street. The alignment passes through the Washington Heights, Roseland, West Pullman, and Riverdale neighborhoods. Under this alternative, the stations would be at 103rd Street, 111th Street, Michigan Avenue, and 130th Street (South Station Option or West Station Option).

The following subsections describe the existing land uses adjacent to the alignment and within ½ mile of the proposed station locations, or "station areas," in Segment UA (95th Street Terminal to Michigan Avenue station area) and Segment UB (south of Michigan Avenue station area to 130th Street station area). Appendix A contains detailed station area land use maps.

4.1.2.1 UPRR Rail Segment UA

95th Street Terminal to 99th Street

The alignment for all three UPRR Rail Alternative options would start from CTA's 95th Street Terminal and run within the median of I-94 and I-57. The adjacent land uses are primarily transportation and single-family residential uses beyond the highways.

103rd Street Station Area

Land uses within the 103rd Street station area include industrial, urban mixed, single-family residential, and open space uses along the UPRR ROW, and primarily urban mixed-use along 103rd Street. There are some vacant parcels along both corridors. The remainder of the station area consists of single-family residential uses, several institutional land uses (churches and schools), and a large recreational open space (Fernwood Park).

The UPRR Rail Alternative West Option alignment would be within a linear open space (Fernwood Parkway) along Eggleston Avenue between 99th and 103rd Streets. South of 103rd Street, the West Option alignment would be within urban mixed or vacant land uses. The East Option alignment would be within open space (Wendell Smith Park) and single-family residential land uses between 99th and 103rd Streets. South of 103rd Street, the East Option alignment would be within open space (Block Park), adjacent to the Roseland Pump House, and within single-family residential land uses.

111th Street Station Area

Land uses within the 111th Street station area include industrial, urban mixed, single-family residential, and vacant land uses along the UPRR ROW, and mostly single-family residential with some urban mixed and institutional uses along 111th Street, including Roseland Community

Hospital. The remainder of the station area consists of single-family residential uses, several institutional uses (churches and schools), and limited multi-family residential uses.

The UPRR Rail Alternative East Option alignment would be primarily through single-family residential land uses and a limited amount of industrial and institutional land uses. The West Option alignment would be through urban mixed-use, industrial, and vacant land uses.

Michigan Avenue Station Area

Land uses within the Michigan Avenue station area include urban mixed, single-family residential, open space, and vacant land uses along the UPRR ROW, and primarily urban mixed-use along Michigan Avenue. The remainder of the station area contains a mix of single-family and multi-family residential uses, institutional uses (churches and schools), and urban mixed-use along 119th Street.

The UPRR Rail Alternative East Option alignment would be through urban mixed, vacant, and single-family residential land uses. The West Option alignment would be through urban mixed-use and single-family residential land uses.

4.1.2.2 UPRR Rail Segment UB

Michigan Avenue Station Area to 130th Street Station

Between the Michigan Avenue station and 130th Street station, all three UPRR Rail Alternative options would have alignments through industrial and vacant uses, as well as land uses for transportation, communications, and utilities.

130th Street Station Area

Land uses within the 130th Street station area include utilities (MWRD), transportation (I-94), and industrial land uses north of 130th Street, and single-family residential, institutional, urban mixed-use, and open space (mostly within Altgeld Gardens). According to the *Plan for Transformation* (Chicago Housing Authority 2000), the Altgeld Gardens public housing community contains 1,998 units (approximately 8 percent) of the City's public housing stock (24,773 units).

The South Station Option location would be under the 130th Street bridge overpass to provide direct pedestrian access to/from Altgeld Gardens and Carver Military Academy High School. The West Station Option site would be within MWRD property on the north side of 130th Street across from Altgeld Gardens.

4.1.3 Halsted Rail Alternative

Halsted Street is a major north-south arterial about 1 mile west of I-94 and CTA's 95th Street Terminal. The corridor provides access to the Washington Heights, Roseland, Morgan Park, and West Pullman neighborhoods in the City of Chicago. Station locations would be on Halsted Street at 103rd Street, 111th Street, 119th Street, and Vermont Street. The following subsections describe the existing land uses adjacent to the alignment and within ½ mile of the proposed station locations, or "station areas," in Segment HA (95th Street Terminal to 119th Street station area) and Segment HB (Vermont Street station area). Appendix A contains detailed station area land use maps.

4.1.3.1 Halsted Rail Segment HA

95th Street Terminal to 99th Street

The alignment for the Halsted Rail Alternative from the 95th Street Terminal to 99th Street would be within the median of I-94 and I-57. The adjacent land uses are primarily transportation and single-family residential uses beyond the highways.

103rd Street Station Area

Land uses within the 103rd Street station area include urban mixed-use (primarily one-story retail) and institutional uses along Halsted and 103rd Streets, with a few multi-family residential uses. These arterials also have some vacant parcels. The majority of uses beyond these two arterials are single-family residential uses. Fernwood Park, which is two blocks east of Halsted Street, is a large recreational open space.

111th Street Station Area

Land uses within the 111th Street station area include urban mixed-use (primarily one-story retail) along Halsted Street. A large vacant retail commercial mall is at 115th and Halsted Streets. There is a large warehouse use on 111th Street, west of Halsted Street. The majority of land uses beyond these two arterials are single-family residential uses.

119th Street Station Area

Land uses within the 119th station area include urban mixed-use (primarily one-story retail) along Halsted Street and on 119th Street east of Halsted Street. Some vacant parcels are on these arterials. Large industrial and vacant uses are in the southwest quadrant of the station area, including a solar panel facility along 120th Street. The Metra Electric District Blue Island Branch is parallel to 120th and 122nd Streets, and the West Pullman Metra station is at Halsted Street. The remaining land uses are primarily single-family residential uses.

4.1.3.2 Halsted Rail Segment HB

Vermont Street Station Area

Land uses within the Vermont Street station area include urban mixed-use (primarily one-story retail) along Halsted Street, surrounded by single-family residential uses. The northwest quadrant is within the Village of Calumet Park, including the Cedar Park Cemetery along the west side of Halsted Street and the north side of Burr Oak Street. The far south end of the station area includes the Cal-Sag Channel and open space within the Village of Riverdale.

4.2 Planned Land Uses

The City's zoning designations, along with various area plans, guide future land use development. The City of Chicago does not have a city-wide comprehensive plan with a future land use map.

The same situation exists within the Village of Calumet Park. Therefore, this section describes the zoned land uses within ½ mile of the alignments and features of the build alternatives.

The project area includes a variety of zoning districts designated by the Chicago Zoning Ordinance. Specific zoning districts fall within broader zoning types such as residential, business, commercial, manufacturing, parks and open space, planned development, and planned manufacturing. The general purpose of each zoning type is described below according to the Chicago Zoning Ordinance.

- Residential Districts - Create, maintain and promote a variety of housing opportunities for individual households and maintain the desired physical character of the city's existing neighborhoods.

- Business and Commercial - Accommodate retail, service and commercial uses and ensure that business and commercial-zoned areas are compatible with the character of existing neighborhoods.

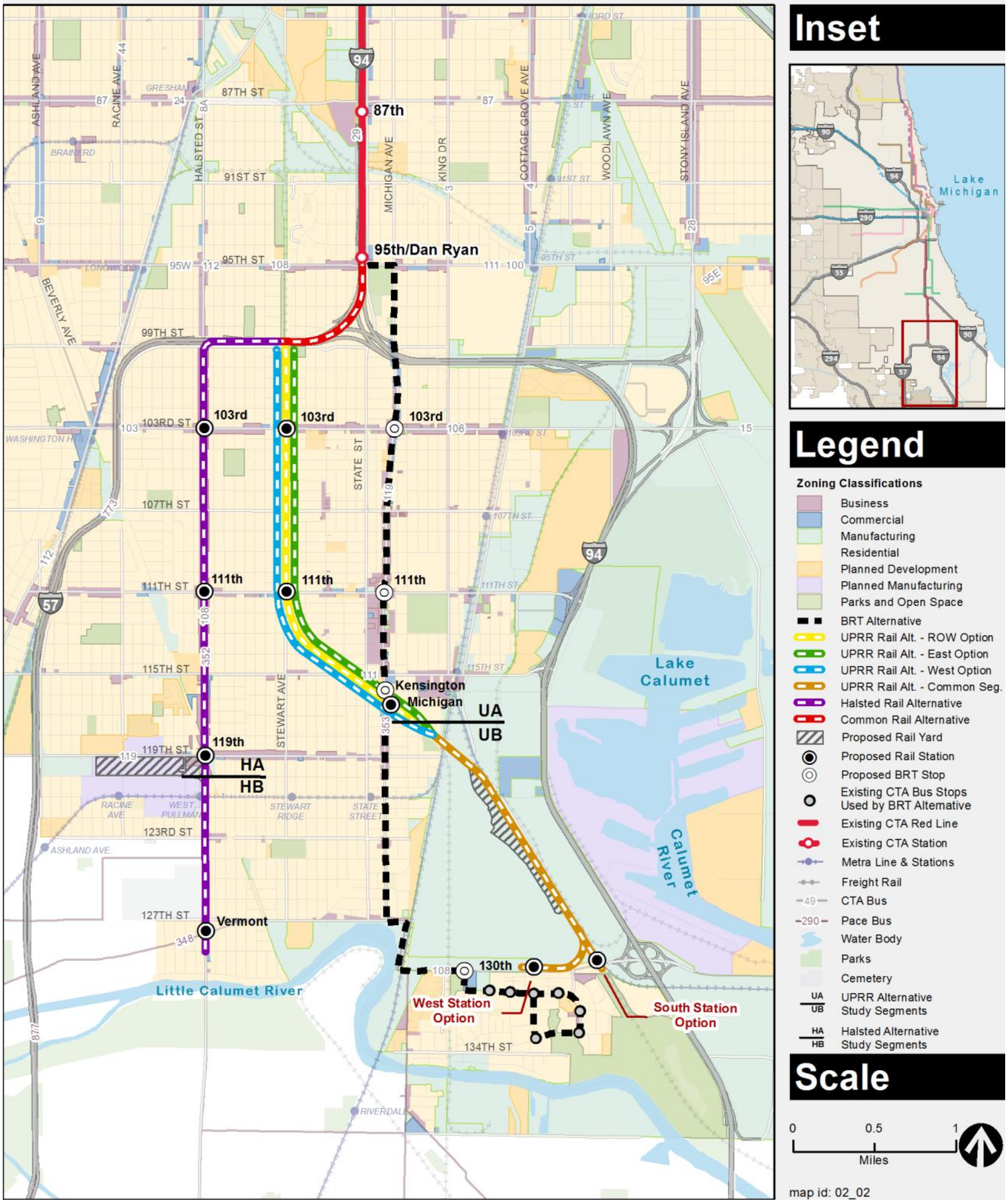
- Manufacturing - Accommodate manufacturing, warehousing, wholesale, and industrial uses outside the central area.

- Parks and Open Space - Preserve, protect, and enhance lands set aside for public open space, public parks and public beaches.

- Planned Development - Ensure adequate public review of major development proposals; encourage unified planning and development; promote economically beneficial development patterns that are compatible with the character of existing neighborhoods; ensure a level of amenities appropriate to the nature and scale of the project; allow flexibility in application of selected use and development standards in order to promote creative building design and high-quality urban design; and encourage protection and conservation of natural resources.

- Planned Manufacturing - Foster the city’s industrial base and maintain the city’s diversified economy; strengthen existing manufacturing areas that are suitable in size, location, and character; and encourage industrial investment, modernization, and expansion by providing for stable and predictable industrial environments.

Each district type dictates allowable uses, density standards, parking requirements and other character standards for development with zoning district codes. **Figure 4-3** depicts the zoning classifications within the project area. All zoning district codes within the project area are listed in Table 4-1, including the typical uses and standards within each code.


Inset
Lake Michigan
Legend
Zoning Classifications
Business
Commercial
Manufacturing
Residential
Planned Development
Planned Manufacturing
Parks and Open Space
BRT Alternative
UPRR Rail Alt. - ROW Option
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
UPRR Rail Alt. - Common Seg.
Halsted Rail Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Proposed BRT Stop
Existing CTA Bus Stops Used by BRT Alternative
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
49 CTA Bus
290 Pace Bus
Water Body
Parks
Cemetery
UA UB UPRR Alternative Study Segments
HA HB Halsted Alternative Study Segments
Scale
0 0.5 1
Miles
map id: 02_02
87th
95th/Dan Ryan
103rd
103rd
103rd
111th
111th
111th
Kensington
Michigan
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Vermont
130th
UA
UB
HA
HB
West Station Option
South Station Option
Lake Calumet
Calumet River
Little Calumet River
87TH ST
91ST ST
95TH ST
99TH ST
103RD ST
107TH ST
111TH ST
115TH ST
119TH ST
123RD ST
127TH ST
134TH ST
ASHLAND AVE
RACINE AVE
HALSTED ST
STATE ST
MICHIGAN AVE
KING DR
COTTAGE GROVE AVE
WOODLAWN AVE
STONY ISLAND AVE
STEWART AVE
BEVERLY AVE
GRESHAM
BRAINERD
LONGWOOD
WASHINGTON HTS
RACINE AVE
WEST PULLMAN
STEWART RIDGE
STATE STREET
ASHLAND AVE
RIVERDALE
94
57

Figure 4-3: Zoning Classifications in the Red Line Extention Project Area

Table 4-1: Red Line Extension Project Area Zoning District Codes and Associated Standards

Type	Code	Title	Typical Uses	Floor to Area Ratio	Max Height (feet)	Front Setbacks	Mixed-use Allowed	Parking Requirements
Residential	RS	Residential Single-Unit District	Single family detached, two flats	0.50-0.90	30	20 feet or 16% of lot depth, whichever is less	No	1 to 2 per unit
	RT	Residential Two-Flat, Townhouse, and Multi-Unit District	Single family detached, two to three flats, townhomes, multifamily	1.05-1.50	35-42	15 feet or 12% of lot depth, whichever is less	No	1 per unit
	RM	Residential Multi-Unit District	Townhomes, multifamily	1.70-6.60	47-None	15 feet or 12% of lot depth, whichever is less	Yes	1 per unit
Business	B1	Neighborhood Shopping District	Storefront-style shopping, residential dwelling above ground floor	1.20-5.00	38-80	None, or 50% of abutting residential lots	Yes	1 per residential unit; None for first 4,000 square feet, then 2.5 spaces per 1,000 square feet commercial
	B2	Neighborhood Mixed-Use District	Storefront-style shopping, residential dwelling at ground floor,	1.20-5.00	38-80	None, or 50% of abutting residential lots	Yes	1 per residential unit; None for first 4,000 square feet, then 2.5 spaces per 1,000 square feet commercial
	B3	Community Shopping District	Destination and auto-oriented retail and services, residential dwelling above ground floor	1.20-5.00	38-80	None, or 50% of abutting residential lots	Yes	1 per residential unit; None for first 4,000 square feet, then 2.5 spaces per 1,000 square feet commercial

Type	Code	Title	Typical Uses	Floor to Area Ratio	Max Height (feet)	Front Setbacks	Mixed-use Allowed	Parking Requirements
Commercial	C1	Neighborhood Commercial District	Destination and auto-oriented retail and services, residential dwelling above ground floor	1.20-5.00	38-80	None, or 50% of abutting residential lots	Yes	1 per residential unit; None for first 4,000 square feet, then 2.5 spaces per 1,000 square feet commercial
	C2	Motor Vehicle-Related Commercial District	Motor vehicle-related commercial district	1.20-5.00	38-80	None, or 50% of abutting residential lots	Yes	1 per residential unit; None for first 4,000 square feet, then 2.5 spaces per 1,000 square feet commercial
	C3	Commercial, Manufacturing, and Employment District	Commercial, manufacturing uses	1.20-5.00	38-80	None, or 50% of abutting residential lots	No	None for first 4,000 square feet, then 2.5 spaces per 1,000 square feet commercial
Manufacturing	M1	Limited Manufacturing/Business Park District	Low impact manufacturing, wholesaling, and warehousing	1.20-3.00	None	10 feet, or equal to abutting and opposite residential lots	No	1 space per 4 employees
	M2	Light Industry District	Moderate impact manufacturing, wholesaling and warehousing	1.20-3.00	None	None, or equal to abutting and opposite residential lots	No	1 space per 4 employees
	M3	Heavy Industrial District	High impact manufacturing and waste related uses	1.20-3.00	None	None, or equal to abutting and opposite residential lots	No	1 space per 4 employees
Parks and Open Space	POS	Parks and Open Space District	Parks, cemeteries, and open spaces				No	
Planned Development	PD	Planned Development District	Hospitals, Water Plants, Entertainment Grounds	Per district ordinance		Per district ordinance	Yes	Per district ordinance
Planned Manufacturing	PMD	Planned Manufacturing District	Processing assemblies, construction shops	3.00 maximum		None, or equal to abutting and opposite residential lots	No	Based on use

Source: Chicago Zoning Ordinance and Land Use Ordinance, Municipal Code of Chicago, March 14, 2012

The Chicago Zoning Ordinance allows for transit-supportive development patterns that support residential, commercial, and business densities within the RLE station areas. Medium-to-high-density residential areas, neighborhood commercial and mixed-use developments are allowable within the existing codes. These districts have various requirements for minimum lot sizes, lot widths or maximum heights.

Zoning in the project area consists of a mix of residential, office, and commercial space and allows for opportunities for greater density, encouraging transit-supportive, compact urban design. Small building setbacks and street level, pedestrian-oriented buildings are encouraged to enhance pedestrian activity and create a friendly street environment for pedestrian users.

The Ordinance has parking and loading requirements to manage the supply of off-street parking, improving mobility, promoting the use of alternative modes of transportation, supporting existing and new economic development, and enhancing the urban environment surrounding CTA or Metra rail station entrances. Minimum off-street parking ratios are reduced by 50 percent from otherwise applicable standards for rehabilitation or reuse of existing structures within 600 feet of a CTA or Metra rail station entrance for parking regulations within the station areas.

4.2.1 Bus Rapid Transit Alternative

Zoning districts adjacent to the BRT Alternative stop locations are listed in Table 4-2. The northern stop locations (103rd, 111th, and Kensington) would best support transit-supportive development. The 130th Street stop location contains a mix of allowable uses, with the majority heavily reliant on the automobile.

Table 4-2: Bus Rapid Transit Alternative Stop Location Zoning Codes

Type	Code	District Description	103rd	111th	Kensington	130th
Residential	RS	Residential Single-Unit	x	x	x	x
	RT	Residential Two-Flat, Townhouse, and Multi-Unit	x	x	x	
	RM	Residential Multi-Unit	x	x	x	x
Business	B1	Neighborhood Shopping	x	x	x	
	B2	Neighborhood Mixed-Use	x	x	x	
	B3	Community Shopping	x	x	x	x
Commercial	C1	Neighborhood Commercial	x	x	x	
	C2	Motor Vehicle-Related Commercial			x	x
	C3	Commercial, Manufacturing, and Employment				
Manufacturing	M1	Limited Manufacturing/Business Park	x	x	x	x
	M2	Light Industry				
	M3	Heavy Industrial			x	x

Type	Code	District Description	103rd	111th	Kensington	130th
Parks and Open Space	POS	Parks and Open Space		x	x	x
Planned Development	PD	Planned Development	x	x	x	x
Planned Manufacturing	PMD	Planned Manufacturing				

Source: Chicago Zoning Ordinance and Land Use Ordinance, Municipal Code of Chicago, September 12, 2012

4.2.2 Union Pacific Railroad Rail Alternative

Zoning districts within the station areas of all UPRR Rail Alternative options are listed in **Table 4-3**. The zoning profiles of the northern station areas (103rd Street, 111th Street, and 115th Street) would best support transit-supportive development. The 130th Street station option areas contain a mix of allowable uses heavy in business, commercial, and manufacturing with minimal opportunity for mixed-use development.

Table 4-3: Union Pacific Railroad Rail Alternative Station Area Zoning Code Designations

Type	Code	District Description	103rd	111th	115th	130th South	130th West
Residential	RS	Residential Single-Unit	x	x	x	x	x
	RT	Residential Two-Flat, Townhouse, and Multi-Unit	x	x	x		
	RM	Residential Multi-Unit		x	x		
Business	B1	Neighborhood Shopping	x	x	x	x	x
	B2	Neighborhood Mixed-Use	x		x		
	B3	Community Shopping	x	x	x	x	x
Commercial	C1	Neighborhood Commercial	x	x	x		
	C2	Motor Vehicle-Related Commercial	x		x		x
	C3	Commercial, Manufacturing, and Employment					
Manufacturing	M1	Limited Manufacturing/Business Park	x	x	x	x	x
	M2	Light Industry					
	M3	Heavy Industrial			x		x
Parks and Open Space	POS	Parks and Open Space	x		x	x	x
Planned Development	PD	Planned Development	x	x	x	x	x
Planned Manufacturing	PMD	Planned Manufacturing				x	

Source: Chicago Zoning Ordinance and Land Use Ordinance, Municipal Code of Chicago, September 12, 2012

4.2.3 Halsted Rail Alternative

Zoning districts within the Halsted Rail Alternative station areas are listed in **Table 4-4**. As shown below, all four station areas are similar in zoning profiles and would equally support transit-supportive development.

Table 4-4: Halsted Rail Alternative Station Area Zoning Code Designations

Type	Code	District Description	103rd	111th	119th	Vermont
Residential	RS	Residential Single-Unit	x	x	x	x
	RT	Residential Two-Flat, Townhouse, and Multi-Unit	x	x	x	x
	RM	Residential Multi-Unit			x	
Business	B1	Neighborhood Shopping	x	x	x	x
	B2	Neighborhood Mixed-Use			x	
	B3	Community Shopping	x	x	x	x
Commercial	C1	Neighborhood Commercial	x	x	x	x
	C2	Motor Vehicle-Related Commercial	x	x	x	x
	C3	Commercial, Manufacturing, and Employment				
Manufacturing	M1	Limited Manufacturing/Business Park	x	x	x	x
	M2	Light Industry				
	M3	Heavy Industrial				x
Parks and Open Space	POS	Parks and Open Space	x		x	
Planned Development	PD	Planned Development	x	x	x	x
Planned Manufacturing	PMD	Planned Manufacturing			x	

Source: Chicago Zoning Ordinance and Land Use Ordinance, Municipal Code of Chicago, September 12, 2012

4.3 Land Use and Economic Development Plans and Policies

In the Chicago metropolitan area, land development is guided by regional planning goals and objectives implemented through local land use plans, economic development plans, and interrelated policies, zoning, and incentives. The land use and economic development plans and policies that are summarized below are applicable to the entire project area, unless otherwise noted for a particular alternative. Relevant transportation plans are discussed in the *Transportation Technical Memorandum*.

4.3.1 Summary of Land Use Plans

4.3.1.1 Chicago Metropolitan Agency for Planning *GO TO 2040* Regional Plan

The CMAP serves as the regional planning body and produced *GO TO 2040* (CMAP 2010) as the comprehensive regional plan to help the seven counties and 284 communities in the Chicago metropolitan area plan together for sustainable growth through mid-century and beyond. The link between transportation and land use is recognized by CMAP as an important element of building livable communities. Notably, the RLE Project is a project of regional significance and is on the list of "fiscally constrained projects."

GO TO 2040 states that "growth that emphasizes access to transit and other transportation alternatives can reduce our reliance on cars, helping to reduce congestion and transportation costs for everyone." It also states that "the public sector cannot create a market for redevelopment where none exists, but it can invest in infrastructure and institute regulatory changes to make redevelopment more viable." Finally, *GO TO 2040* states that "community choices about land use and housing should also emphasize principles that improve livability, such as support for transit, walking, and bicycling."

While *GO TO 2040* talks in broad terms, it prioritizes updating and maintaining the existing transit system over expansion. The regional plan also discusses livability—the ability to access services easily within a community—as a main goal for the region, and specifically discusses how access for disabled populations is an important element towards achieving livability.

GO TO 2040 states that local land use decisions should focus on the interrelationship of transportation, land use, and housing, with an emphasis on development patterns that support the use of public transit and access to jobs. Improving public transit is a central element of the regional plan, and supportive land use planning is needed to make transit work well.

4.3.1.2 Transit-Friendly Development Guide

The *Transit-Friendly Development Guide* (CTA 2009) designates each of the CTA's 144 rail stations with one of seven typologies that are common across the rail system. The designations are intended to shape the public's expectations about potential development while identifying the nearby zoning and infrastructure assets that maximize each station as a community anchor. The CTA's 95th Street Terminal is designated as an "Urban Neighborhood."

4.3.1.3 What Will Your Station Look Like?

What Will Your Station Look Like? (2010) was prepared by Developing Communities Project, Inc. (DCP) in conjunction with CMAP, the Metropolitan Planning Council, and the Center for Neighborhood Technology to summarize a community vision of the proposed RLE Project stations. Nearly 130 residents, stakeholders, and public officials attended a vision session on September 14, 2010 to define their use of the RLE Project, and this report includes a preliminary assessment of station area uses, urban design, and densities produced in conjunction with the local stakeholders.

4.3.1.4 Calumet Area Land Use Plan

The *Calumet Area Land Use Plan* (City of Chicago Department of Planning and Development 2002) provides historical background, vision and goals, and a land use plan for largest industrial area in Chicago. The Calumet area has over 1,000 acres suitable for manufacturing, or almost 60 percent of Chicago's available industrial land. Created simultaneously with the Land Use Plan, the Lake Calumet Industrial Corridor Tax Increment Finance (TIF) District is a key method for the Plan's implementation and covers roughly 12,000 acres. A center for industrial development is the Illinois International Port District, which operates the largest intermodal center in the United States, with over 9 million containers per year (2001). In addition, about 4,000 acres are to be managed as the Calumet Open Space Reserve for wildlife habitat and recreation.

4.3.1.5 City Space: An Open Space Plan for Chicago

The *City Space: An Open Space Plan for Chicago* (City of Chicago, Chicago Park District, and Forest Preserve District of Cook County 1998) is a comprehensive plan for creating and preserving open space throughout the City of Chicago. The Plan has two basic goals for the City: (1) each community needs enough acres of open space available to serve the residents who live there, and (2) residents of every community deserve to have parks or other open spaces that are within reasonable travel distances. The Plan singles out the Lake Calumet area as the City's most substantial wetland and natural area, containing 1,000 acres out of the approximately 3,700 acres within the Forest Preserve District of Cook County.

4.3.2 Summary of Economic Development Plans and Studies

4.3.2.1 Chicago Sustainable Industries: A Manufacturing Work Plan for the 21st Century

The *Chicago Sustainable Industries, Phase One: A Manufacturing Work Plan for the 21st Century* (City of Chicago Department of Housing and Economic Development 2011) is a comprehensive planning initiative to support existing manufacturers, manufacturing sub-sectors, and the city's competitive advantages. In the 1990s, Chicago designated 24 Industrial Corridors to focus its industrial retention efforts. Most of these corridors have multi-modal access, favorable zoning, and TIF financing incentives. Three of the 24 Industrial Corridors are completely or partially within the project area: Calumet, Pullman, and West Pullman.

4.3.2.2 Cook County Comprehensive Economic Development Strategy Report

The Cook County *Comprehensive Economic Development Strategy Report* (Cook County Department of Economic Development 2009) is a cooperative regional approach to business development and retention. The County supports planning and development for new public transit lines and transit-oriented development (TOD). One of the ten regional objectives states that expanding access to public transit is a critical factor in making sure that residents in all areas of the region can access affordable transportation options to get to and from job centers. In addition, 1 of 19 regional strategies is to "join other local, state and national organizations to advocate for and plan new commuter rail options that expand existing rail lines, particularly in areas south, southeast, southwest and northwest in the region," and specifically supports the CTA's Red Line Extension.

4.3.2.3 What Will Your Station Look Like?

As described in Section 4.3.1.3, *What Will Your Station Look Like?* summarizes a community vision of the proposed RLE Project stations, desired station amenities, and ideas for station area development, such as small retail, neighborhood grocery, affordable housing, and a bank. Conceptual station area plans for the 103rd, 111th, 115th, and 130th stations were developed in a visioning session with community input. Based on public feedback, the proposed station on the east (i.e., the South Station Option) was preferred by the local community for the 130th Street station.

4.3.2.4 130th Street Station Market/Access Study

The *130th Street Station Market/Access Study* (Chicago Department of Transportation [CDOT] 2010) built upon the CTA's RLE Alternatives Analysis and examined TOD opportunities for the 130th Street station options. The study analyzed market potential, identified development options, evaluated overall accessibility, and provided station concept plans and a vision statement. The study provides information to support the land use and economic development ratings of the FTA's New Starts Program.

4.3.2.5 Transit Equity Matters

*Transit Equity Matters: A Regional Analysis of the Red Line and Two Other proposed CTA Transit Line Extensions (*Voorhees Center, University of Illinois at Chicago 2009) evaluates the RLE Project relative to the CTA's Orange and Yellow line extensions. The study compared these projects using a regional Equity Index with 19 indicators based on transportation equity, environmental justice, and livability. In summary, the RLE Project would affect a high priority area for transit investment with a score of 32 out of a possible 38 points. The RLE Project would also support the U.S. Department of Transportation-Housing and Urban Development-Environmental Protection Agency Interagency Partnership for Sustainable Communities and its livability principles. The TOD opportunities are also evaluated according to the FTA's New Starts criteria.

4.3.2.6 The Case for Transit-Oriented Development in the Greater Roseland Area

The Case for Transit-Oriented Development in the Greater Roseland Area (Voorhees Center, University of Illinois at Chicago 2005) is a report produced for DCP as part of its efforts to promote the RLE Project, to link jobs and economic development, and pursue TOD in Greater Roseland. Specifically, the report focuses on the proposed Michigan Avenue station and the context for future development, with a focus on unmet consumer demand, available vacant land, and potential land uses.

4.3.2.7 Improving Access, Increasing Livability: The CTA Red Line South Extension

Improving Access, Increasing Livability: The CTA Red Line South Extension (CMAP 2012) highlights the livability impacts of the RLE Project and provides a quantitative analysis of its benefits for the Greater Roseland Area. This report also provides data on station area existing conditions in anticipation of future development, as well as projected changes in commute times, access to jobs, and access to community amenities.

4.3.2.8 Chicago Housing Authority Plans

Plan Forward: Communities That Work (Chicago Housing Authority [CHA] 2013) is the latest plan for public housing in Chicago. The new plan takes as its starting point the successes and lessons of the *Plan for Transformation* (CHA 2000; see description below). According to *Plan Forward*, "CHA's new approach accounts for recent economic uncertainty and changing market conditions, reconsiders existing strategies, and develops forward-thinking, creative policies that will help people and communities prosper. It identifies how CHA will work to fulfill its existing commitments, and sets forth how the agency, with a wide array of partners, will provide housing that promotes the health and vitality of neighborhoods and plays the positive role that it can in people's lives, and how it will assist residents along a path to greater economic independence."

Plan for Transformation (CHA 2000) is a long-term plan to rehabilitate or redevelop the entire stock of public housing in Chicago. According to the plan, the City's public housing stock in 2000 was 38,776 units. After the plan's completion, the City will have approximately 25,000 remaining units. The plan calls for the demolition of high-rise developments, the rehabilitation of scattered-site, senior and lower-density family properties, and the construction of new mixed-income developments. Relative to the RLE Project and the UPRR Alternative, CHA has invested $250 million in renovations within Altgeld Gardens and has plans to renovate more units. Altgeld Gardens contains approximately 2,000 units, or 8 percent of the City's projected public housing stock of 25,000 units.

4.3.3 Summary of Transit-Supportive Policies

As described in Sections 4.3.1 and 4.3.2, the City of Chicago has a number of transit-supportive plans and studies that relate to the project area. These plans contain numerous policies that could serve as a catalyst for transit-supportive development if one of the RLE build alternatives is constructed. The following subsections summarize these transit-supportive policies, as well as related programs, according to the criteria established by the FTA New Starts Program that could provide federal funding for the RLE Project.

4.3.3.1 Growth Management

The growth management factors that influence transit-supportive development include (1) regional policies to concentrate development around established activity centers and transit, and (2) local plans, zoning, and capital improvement programs that support the regional policies. Another factor that influences transit-supportive development relates to regional policies on land conservation and management. The relevant growth management policies for the project area are summarized below.

Concentration of Development around Established Activity Centers and Regional Transit

- CMAP's *GO TO 2040* (2010) is the region's first comprehensive long-range plan. The plan addresses livability through land use and housing, TOD strategies, and new transit investments. Notably, the RLE Project is a highlighted project of regional significance and on the list of fiscally constrained projects.

- The *Cook County Comprehensive Economic Development Strategy Report* (2009) promotes a regional objective to expand access to public transit as an affordable transportation option to and from job centers. This report also promotes regional strategies to use TOD as a green development tool and to expand existing rail lines, including CTA's Red Line Extension.

- CTA's *Transit-Friendly Development Guide* (2009) is a site planning tool for future transit-supportive development. All CTA stations were designated into one of the following station typologies: major activity center, local activity center, dense urban neighborhood, urban neighborhood, service employment district, and manufacturing employment district. General design guidelines are provided for each station type, parking, connectivity, and placemaking. A development guidelines matrix simplifies all recommendations into one spreadsheet.

- The Regional Transportation Authority (RTA) has financial and budget oversight of the CTA, Pace (suburban buses), and Metra (commuter trains), and has a history of promoting TOD through planning and policies. The RTA's *Moving Beyond Congestion Strategic Plan* (2007) supports TOD and specifically calls for the regional transit system to integrate transit investments with local and regional planning processes and to integrate funding with TOD.

- The Center for Neighborhood Technology and its partner, the Center for Transit-Oriented Development, developed a planning tool called the Housing + Transportation Affordability Index (H+T Index) that measures the affordability of housing by factoring in both housing and transportation costs for a specific neighborhood. First developed in 2008, this planning tool can be used to promote more affordable housing choices by leveraging existing infrastructure.

Land Conservation and Management

- Reaching back to the Burnham Plan of 1909, CMAP's *GO TO 2040* (2010) promotes a regional green infrastructure network that follows waterway corridors, expands existing preserves, and creates new preserves. The plan specifically recommends the preservation of an additional 150,000 acres of land across the seven county regions within the next 30 years.

- The City of Chicago's *Calumet Area Land Use Plan* (2001) calls for the redevelopment of 1,000 acres of vacant industrial land (60 percent of the city's available industrial land), while at the same time restoring and preserving about 4,000 acres as the Calumet Open Space Reserve.

- The *City Space: An Open Space Plan for Chicago* (1998) singles out the Lake Calumet area as the City's most substantial wetland and natural area. The proposed 130th Street station could provide access to this area via a bus transfer.

4.3.3.2 Transit-Supportive Corridor Policies

According to the FTA New Starts guidelines, the transit corridor planning process should include a substantial focus on land use planning and may involve conceptual plans, local plans, and capital improvement programs. The factors that determine the influence of transit-supportive corridor policies include (1) plans and policies to increase corridor and station area development; (2) plans and policies to enhance transit-friendly character of corridor and station area development; (3) plans to improve pedestrian facilities and facilities for persons with disabilities; and (4) parking policies. The relevant corridor plans and policies for the project area are summarized below.

Plans and Policies to Increase Corridor and Station Area Development

- *What Will Your Station Look Like?* (2010) is a report that summarizes a community vision session on the RLE Project and potential station area development including infill, density, land uses, parking, streetscape improvements, and conceptual plans and renderings.

- The *130th Street Station Market/Access Study* (2010) analyzes the proposed station options for the 130th Street station relative to the FTA's New Starts criteria. The study includes conceptual station area plans with access and land use recommendations.

- *Transit Equity Matters: A Regional Analysis of the Red Line and Two Other proposed CTA Transit Line Extensions (*2009) evaluates the RLE Project using a regional Equity Index with 19 indicators based on transportation equity, environmental justice, and livability. In addition, TOD potential for the 103rd Street, 111th Street, Michigan Avenue, and 130th Street stations is evaluated according to the following FTA New Starts criteria: development potential of land; transit-supportive plans and policies; and economic climate.

- *The Case for Transit-Oriented Development in the Greater Roseland Area* (2005) is a report that supports the RLE Project, promotes better access to jobs and economic development, and evaluates TOD at the proposed Michigan Avenue station.

Plans and Policies to Enhance Transit-Friendly Character of Corridor and Station Area Development

- The CDOT's "Model Block Program" allocates money for sidewalk improvements by ward. Each alderman can use this fund to build or reconstruct sidewalks in the community.

- Halsted Street has recently undergone a number of streetscape improvements, including street resurfacing, streetscaping, and a landscaped median.

Plans to Improve Pedestrian Facilities and Facilities for Persons with Disabilities

- The *Chicago Pedestrian Plan* (CDOT 2012) was developed by CDOT with collaboration with the Mayor's Pedestrian Advisory Council to identify new opportunities and ongoing initiatives that will strengthen Chicago's pedestrian environment. Chicago has double the national average for hit and run pedestrian fatalities; therefore, the City has set a goal to reduce pedestrian fatalities to zero over the next ten years. The tools for safer streets and action items for short-, mid-, and long-term implementation are key elements of the Plan.

- The Mayor's Office for People with Disabilities coordinates the planning and installation of all sidewalk ramp projects in the city.

- The CTA/CDOT "Walk to Transit" is a program designed to add and improve pedestrian connections and accessibility at transit stations.

- The CDOT Pedestrian Program is the primary lead on pedestrian issues and has a wide range of programs directed toward improving safety and activity, including Safe Streets for Chicago, Safe Routes Ambassadors, Safe Routes to Schools, Walk to Transit, Safe Routes for Seniors, WalkChicago!, pedestrian fatality investigations, and education initiatives.

- Safe Streets for Chicago is a citywide initiative to improve safety on city streets, particularly related to pedestrian safety. One recent effort was crosswalk enforcement to alert motorists that they must yield to pedestrians in crosswalks.

- The City of Chicago has a Complete Streets policy to design the entire roadway ROW to accommodate all users: pedestrians, bicyclists, motorists, and transit users.

- The CDOT Streetscape program is charged with enhancing the public way to support the revitalization of commercial corridors. Enhancing the pedestrian environment is one of the goals. The City has published Streetscape Guidelines.

Parking Policies

- Within the Chicago Zoning Ordinance, specific parking requirements are included for transit-served locations. In B, C, or D districts, minimum off-street parking ratios are reduced by 50 percent from otherwise applicable standards for rehabilitation or reuse of existing structures within 600 feet of a CTA or Metra rail station entrance.

- The Chicago Zoning Ordinance states that bicycle parking must be provided in accordance with the off-street parking ratios. The Zoning Code provides details on design and location.

- The CTA has a program to install bicycle parking at rail stations.

- The terminal station is proposed to include parking facilities with approximately 2,300 spaces in the year 2030. Intermediate stations at 103rd and 111th Streets are proposed to include approximately 200 parking spaces, while the 119th Street (Halsted Rail) and the Michigan Avenue (UPRR Rail) stations are proposed to include approximately 1,000 spaces by 2030.

4.3.3.3 Supportive Zoning Regulations Near Transit Stations

Zoning establishes a framework for future development. According to the FTA, existing and proposed zoning should allow transit-supportive densities and uses, incentives to increase station area development, provisions to enhance transit-supportive character and pedestrian access, and provisions for reduced parking. The relevant zoning regulations and provisions for the project area are summarized below.

Zoning Ordinances that Support Increased Development Density in Transit Station Areas

- Existing zoning along the corridor and around station areas is transit-supportive. Floor area bonuses are included in the Chicago Zoning Ordinance. These are intended to provide an economic incentive for developers to provide affordable housing and public amenities that improve the quality of life for city residents, employees, and visitors, and are a benefit to the public. Specific menu items are included in the Ordinance that relate to transit-supportive actions, include public plazas, sidewalk widening, streetscape improvements, transit station improvements, and concealed parking.

Zoning Ordinances that Enhance Transit-Oriented Character of Station Area Development

- The Chicago Zoning Ordinance and Land Use Ordinance address "Pedestrian Streets." The regulations of this section are intended to preserve and enhance the character of streets and intersections that are widely recognized as Chicago's best examples of pedestrian-oriented shopping districts. The regulations are intended to promote transit, economic vitality, and pedestrian safety and comfort. While Halsted Street or Michigan Avenue south of downtown Chicago has not been designated as a Pedestrian Street, they contain some of the relevant characteristics. As TOD occurs around station areas, either corridor could receive this designation.

Zoning Allowances for Reduced Parking and Traffic Mitigation

- The Chicago Zoning Ordinance and Land Use Ordinance address Parking and Zoning. In B, C, or D districts, minimum off-street parking ratios are reduced by 50 percent from the otherwise applicable standards for rehabilitation or reuse of existing structures within 600 feet of a CTA or Metra rail station entrance.

4.3.3.4 Tools to Implement Land Use Policies

According to the FTA, the availability and effectiveness of tools for transit agencies and local jurisdictions to implement transit-supportive policies are as important as the plans and policies. Outreach to government agencies and the community, regulatory and financial incentives, and efforts to engage developers are primary tools to facilitate transit-supportive development. The relevant tools to implement land use policies within the project area are summarized below.

Outreach to Government Agencies and the Community in Support of Land Use Planning

- *Improving Access, Increasing Livability: The CTA Red Line South Extension* (CMAP 2012) highlights the livability impacts of the RLE Project and provides a quantitative analysis of its benefits to the Greater Roseland Area. CMAP launched its Local Technical Assistance program, through which it provides planning and grant assistance to advance the principles of *GO TO 2040*. Through the Local Technical Assistance program, DCP, CTA, CMAP, and Loyola University Chicago's Center for Urban Research and Learning worked to better understand how the proposed Red Line South Extension to 130th Street would affect the livability of the Greater Roseland area and the region as a whole. Substantial input from the local community was recorded through 15 focus groups and 20 interviews, with a goal of reaching approximately 175 community stakeholders.

- CMAP's *GO TO 2040* (2010) is the region's first comprehensive long-range plan. The planning process entailed an extensive outreach program to solicit input from local municipalities, agencies, civic groups, private sector interests, and the general public. The RLE Project is a highlighted project of regional significance and on the list of "fiscally constrained projects."

- *What Will Your Station Look Like?* (2010) summarizes a community vision meeting facilitated by DCP, in conjunction with CMAP, Metropolitan Planning Council, and the Center for Neighborhood Technology. Nearly 130 residents, stakeholders and public officials attended the meeting to define station area development and land uses.

- The *130th Street Station Market/Access Study* (2010) analyzes the proposed station options for the 130th Street station relative to the FTA's New Starts criteria. The study includes conceptual station area plans with access and land use recommendations. The study was produced with input from residents of Altgeld Gardens and the non-profit DCP.

- The RTA's Community Planning Program provides funding for local planning projects that focus on TOD and local transit improvements. The RTA program provided funding for *Transit Equity Matters: A Regional Analysis of the Red Line and Two Other proposed CTA Transit Line Extensions* (2009), which among other topics evaluated the TOD potential for the 103rd Street, 111th Street, Michigan Avenue, and 130th Street stations. The RTA, CTA, and DCP were key participants.

- *The Case for Transit-Oriented Development in the Greater Roseland Area* (2005) provides a vision for TOD at the proposed Michigan Avenue station. The report was produced with substantial input from the non-profit DCP, which is a local community group representing businesses, residents, and institutions.

Regulatory and Financial Incentives to Promote Transit-Supportive Development

- As documented in the *Chicago Sustainable Industries* (2011), three industrial corridors are within the project area. New industrial development in these corridors could provide local jobs or could be accessible via the RLE stations with bus transfers. Relevant to the UPRR Rail Alternative, the Pullman Industrial Corridor is off 115th Street, east of Michigan Avenue, and the Lake Calumet Industrial Corridor is off 130th Street, east of I-94. The West Pullman Industrial Corridor is one block west of the Halsted Rail Alternative 119th Street station location. These corridors are the focus of numerous City programs to encourage industrial development and job retention.

- Four TIF districts are within the project area. Funds from TIF districts can be used for capital improvements to support development. The West Pullman TIF and 119th/Halsted TIFs are relevant to the Halsted Rail Alternative corridor. The Lake Calumet Industrial Corridor TIF is relevant to the UPRR Rail Alternative. The Roseland/Michigan TIF is relevant to all build alternatives.

- Portions of the UPRR corridor are within Enterprise Zone 3, and portions of the Halsted Street corridor are within Enterprise Zone 3 and 6.

- The area around 119th Street and Halsted Street was designated as a Redevelopment Project Area in 2001.

Efforts to Engage the Development Community in Station Area Planning & Development

- The City of Chicago is working with a developer (Crown Commercial Real Estate & Development, Inc.) on the Roseland Plaza redevelopment proposal, which would be adjacent to the Michigan Avenue station. The proposal provides for 49,000 square feet of commercial space and includes a grocery store, pharmacy, clothing store, and a bank. The City provided TIF financing of $4,000,000 and land write-down costs of $3,000,000. The developer provided a 25-foot easement for the RLE alignment along the UPRR corridor.

4.3.3.5 Performance of Transit-Supportive Policies

The FTA New Starts guidelines encourage project sponsors, such as the CTA, to demonstrate the relative performance of transit-supportive policies in facilitating development within a proposed project area or within the region. For example, the successful application of policies to facilitate new urbanist developments anywhere in the region is an indicator of the region's potential success in applying transit-supportive policies within the project area. Demonstrated cases of development within the region and station area development proposals in the project area are listed and summarized below.

Demonstrated Cases of Development Affected by Transit-Supportive Policies

- Chicago West Side - Bethel Center at Green Line Pulaski station

- Chicago North Side - Senior housing, parking garage, and Target at Red Line Wilson station

Station Area Development Proposals and Status

The City of Chicago is working with a developer on the Roseland Plaza redevelopment proposal, adjacent to the proposed Michigan Avenue station. The City's Community Development Commission designated the developer in February 2005. The City approved the sale of its land and land write-down costs in May 2009. The developer modified its proposal and received approval of its Planned Development application from the Chicago Plan Commission in October 2011.

4.3.3.6 Plans and Policies to Maintain or Increase Affordable Housing

Any plans and policies to identify and address specific housing affordability needs along the corridor, as well as financial commitments to preserve or build new affordable housing, is an important consideration under newly proposed guidelines for FTA funding. The UPRR Alternative corridor would benefit the Altgeld Gardens public housing community, which has approximately 2,000 units or 8 percent of the City's 25,000 public housing units. CHA has invested $250 million to rehabilitate existing units, and is working to identify future opportunities within Altgeld Gardens.

4.3.3.7 Transit Investment and Regional Land Use

The existing context of a project area, including the availability of developable land and the corridor economic environment, are key factors in determining the likelihood of transit-supportive land use changes in the future due to a major transit investment. These factors also help determine the potential for a major transit investment to influence regional land use patterns. The available vacant land within the ½-mile station areas and corridor economic conditions for each alternative are summarized below.

Adaptability of Station Area Land for Development

The station areas along the UPRR corridor include vacant parcels and abandoned industrial sites, particularly along the railroad and near 115th and 130th Streets. These sites have redevelopment potential for transit-oriented uses.

- 103rd Street station area - 3.6 percent vacant land
- 111th Street station area - 2.3 percent vacant land
- Michigan Avenue station area - 5.5 percent vacant land
- 130th Street - South Option station area - 7.4 percent vacant land
- 130th Street - West Option station area - 5.8 percent vacant land

The station areas along the Halsted corridor include some vacant parcels, particularly near the 119th Street station location. These sites have redevelopment potential for transit-oriented uses.

- 103rd Street station area - 1.3 percent vacant land
- 111th Street station area - 2.6 percent vacant land
- 119th Street station area - 20.6 percent vacant land
- Vermont Street station area - 1.4 percent vacant land

The station areas along the Michigan Avenue corridor include some vacant parcels, particularly near 115th Street. These sites have redevelopment potential for transit-oriented uses.

- 103rd Street station area - 3.0 percent vacant land
- 111th Street station area - less than 0.1 percent vacant land
- Kensington Street station area - 3.9 percent vacant land
- 130th Street station area - 8.2 percent vacant land

Corridor Economic Environment

The overall economy within the project area was affected by the decline in the manufacturing and steel-producing industries in the Lake Calumet area during the 1980s. In addition, the Pullman Company closed down in 1982. Local suppliers and businesses for these industries began to close as well. Thousands of people lost their jobs, so there was less money to spend in the local economy. The economic fallout of this industrial downturn is still felt within the project area; however, the City of Chicago is promoting new development and redevelopment through plans and policies, financial incentives, and interagency initiatives. Consequently, CMAP is projecting growth within all of the alternative corridors of the project area, as summarized below.

- The BRT Alternative alignment would be primarily along the Michigan Avenue corridor. The Michigan Avenue corridor would have steady growth between 2010 Base Year and year 2030 No Build conditions, according to CMAP forecasts. Population growth within the corridor, at 18 percent, would exceed the average population growth within the metropolitan area, at 15 percent. Employment growth would be at its highest rate within the Kensington Avenue stop area, at 28 percent; however, the 111th Street stop area would contain the highest concentration of jobs within the corridor. Table 4-5 contains the quantitative land use and economic development data for the 2010 Base Year and 2030 No Build conditions along the Michigan Avenue corridor.

Table 4-5: Quantitative Land Use and Economic Development Data for Bus Rapid Transit Alternative Alignment*

Data	2010 Base Year	2030 No Build	Growth
Metropolitan Area			
Total Population	2,653,719	3,053,595	15%
Total Employment	1,241,492	1,437,387	16%
Central Business District			
Total Employment	537,369	628,882	17%
Employment - Portion of Metropolitan Area	43%	44%	---
Central Business District Land Area (square mile)	3.65	3.65	---
Employment Density (jobs per square mile)	147,189	172,255	---
Corridor			
Total Population	45,873	54,159	18%
Total Employment	3,230	3,501	8%
Population - Portion of Metropolitan Area	1.73%	1.77%	---
Employment - Portion of Metropolitan Area	0.26%	0.24%	---
Corridor Land Area (square mile)	6.65	6.65	---
Population Density (persons per square mile)	6,899	8,145	---
Employment Density (jobs per square mile)	486	527	---
All Bus Rapid Transit Stops			
Housing Units	8,433	9,365	11%
Population	25,411	29,704	17%
Employment	1,684	1,892	12%
Land Area (square mile)	2.92	2.92	---
Housing Unit Density (units per square mile)	2,891	3,211	---
Population Density (persons per square mile)	8,712	10,183	---
Employment Density (persons per square mile)	577	649	---
103rd Street Stop			
Housing Units	2,943	3,168	8%
Population	8,579	9,711	13%
Employment	318	353	11%

Data	2010 Base Year	2030 No Build	Growth
Land Area (square mile)	0.79	0.79	---
Housing Unit Density (units per square mile)	3,748	4,034	---
Population Density (persons per square mile)	10,925	12,367	---
Employment Density (persons per square mile)	405	450	---
111th Street Stop			
Housing Units	2,559	2,938	15%
Population	7,555	9,108	21%
Employment	846	967	14%
Land Area (square mile)	0.79	0.79	---
Housing Unit Density (units per square mile)	3,259	3,742	---
Population Density (persons per square mile)	9,621	11,598	---
Employment Density (persons per square mile)	1,077	1,232	---
Kensington Avenue Stop			
Housing Units	2,149	2,518	17%
Population	7,023	8,624	23%
Employment	485	623	28%
Land Area (square mile)	0.79	0.79	---
Housing Unit Density (units per square mile)	2,736	3,207	---
Population Density (persons per square mile)	8,943	10,982	---
Employment Density (persons per square mile)	618	793	---
130th Street Stop			
Housing Units	1,400	1,505	8%
Population	4,218	4,753	13%
Employment	315	308	-2%
Land Area (square mile)	0.79	0.79	---
Housing Unit Density (units per square mile)	1,782	1,917	---
Population Density (persons per square mile)	5,372	6,053	---
Employment Density (persons per square mile)	401	392	---

Source: Chicago Metropolitan Agency for Planning 2030 Forecast by Subzone, March 22, 2012 (No Build Supplemental March 12, 2013)
Note: * Quantitative data for the corridor and for stop area is measured for the area within ½ mile of the alignment.

- Between the 2010 Base Year and 2030 No Build conditions, the UPRR corridor would have population growth and varying employment growth, according to CMAP forecasts. Population growth within the UPRR corridor, at 16 percent, would remain consistent with the average population growth within the metropolitan area, at 15 percent. Employment growth would vary widely throughout the corridor's station areas. Employment changes would range from growth of 53 percent within the 103rd Street station area to a reduction of 35 percent within the 130th Street South Station Option area. The highest concentration of jobs would be within the 111th Street station area. Table 4-6 contains the quantitative land use and economic development data for the 2010 Base Year and 2030 No Build conditions for all UPRR Rail Alternative options.

Table 4-6: Quantitative Land Use and Economic Development Data for Union Pacific Railroad Rail Alternative Alignments*

Data	2010 Base Year	2030 No Build	Growth
Metropolitan Area			
Total Population	2,653,719	3,053,595	15%
Total Employment	1,241,492	1,437,387	16%
Central Business District			
Total Employment	537,369	628,882	17%
Employment - Portion of Metropolitan Area	43%	44%	---
Central Business District Land Area (square mile)	3.65	3.65	---
Employment Density (jobs per square mile)	147,189	172,255	---
Corridor			
Total Population	43,001	49,918	16%
Total Employment	3,128	3,435	10%
Population - Portion of Metropolitan Area	1.62%	0	---
Employment - Portion of Metropolitan Area	0.25%	0.00	---
Corridor Land Area (square mile)	6.45	6.45	---
Population Density (persons per square mile)	6,663	7,735	---
Employment Density (jobs per square mile)	485	532	---
All Station Areas			
Housing Units	8,162	9,146	12%
Population	26,031	30,743	18%
Employment	2,136	2,309	8%
Land Area (square mile)	3.51	3.51	---
Housing Unit Density (units per square mile)	2,324	2,604	---
Population Density (persons per square mile)	7,411	8,753	---
Employment Density (persons per square mile)	608	657	---
103rd Street Station Area			
Housing Units	2,460	2,658	8%
Population	7,716	8,923	16%
Employment	231	353	53%
Land Area (square mile)	0.79	0.79	---
Housing Unit Density (units per square mile)	3,132	3,385	---
Population Density (persons per square mile)	9,826	11,364	---
Employment Density (persons per square mile)	294	449	---

Data	2010 Base Year	2030 No Build	Growth
111th Street Station Area			
Housing Units	2,502	2,743	10%
Population	8,027	9,145	14%
Employment	1,035	1,137	10%
Land Area (square mile)	0.79	0.79	---
Housing Unit Density (units per square mile)	3,186	3,493	---
Population Density (persons per square mile)	10,221	11,646	---
Employment Density (persons per square mile)	1,318	1,448	---
Michigan Avenue Station Area			
Housing Units	2,024	2,362	17%
Population	6,600	8,090	23%
Employment	359	468	30%
Land Area (square mile)	0.79	0.79	---
Housing Unit Density (units per square mile)	2,578	3,008	---
Population Density (persons per square mile)	8,405	10,302	---
Employment Density (persons per square mile)	457	596	---
130th Street Station Area - South Station Option			
Housing Units	417	602	44%
Population	1,332	2,029	52%
Employment	301	195	-35%
Land Area (square mile)	0.79	0.79	---
Housing Unit Density (units per square mile)	532	767	---
Population Density (persons per square mile)	1,696	2,584	---
Employment Density (persons per square mile)	383	249	---
130th Street Station Area - West Station Option			
Housing Units	1,196	1,298	9%
Population	3,760	4,314	15%
Employment	476	317	-33%
Land Area (square mile)	0.79	0.79	---
Housing Unit Density (units per square mile)	1,523	1,654	---
Population Density (persons per square mile)	4,788	5,494	---
Employment Density (persons per square mile)	606	403	---

Source: Chicago Metropolitan Agency for Planning 2030 Forecast by Subzone, March 22, 2012 (No Build Supplemental March 12, 2013)
Note: * Quantitative data for the corridor and for each station or stop area is measured for the area within ½ mile of the alignment.

- The Halsted Street corridor would have slow population growth and substantial employment growth between the 2010 Base Year and 2030 under No Build conditions, according to CMAP forecasts. Population growth within the corridor, at 10 percent, would be below the average population growth within the metropolitan area, at 15 percent. Employment growth within the corridor, at 56 percent, would be well above the metropolitan average at 16 percent. The most substantial growth in employment would be at the 119th Street and Vermont Avenue station areas, with growth rates of 184 percent and 169 percent, respectively. The highest concentration of jobs within the corridor would shift geographically, from 111th Street station to 119th Street station, between 2010 and 2030. Table 4-7 contains the quantitative land use and economic development data for the 2010 Base Year and 2030 No Build conditions for the Halsted Rail Alternative along the Halsted Street corridor.

Table 4-7: Quantitative Land Use and Economic Development Data for Halsted Rail Alternative Alignment*

Data	2010 Base Year	2030 No Build	Growth
Metropolitan Area			
Total Population	2,653,719	3,053,595	15%
Total Employment	1,241,492	1,437,387	16%
Central Business District			
Total Employment	537,369	628,882	17%
Employment - Portion of Metropolitan Area	43%	44%	---
Central Business District Land Area (square mile)	3.65	3.65	---
Employment Density (jobs per square mile)	147,189	172,255	---
Corridor			
Total Population	46,556	50,644	9%
Total Employment	2,930	4,530	55%
Population - Portion of Metropolitan Area	1.75%	1.66%	---
Employment - Portion of Metropolitan Area	0.24%	0.32%	---
Corridor Land Area (square mile)	5.74	5.74	---
Population Density (persons per square mile)	8,108	8,819	---
Employment Density (jobs per square mile)	510	789	---
All Station Areas			
Housing Units	8,314	8,775	6%
Population	25,044	27,346	9%
Employment	1,748	3,037	74%
Land Area (square mile)	3.14	3.14	---
Housing Unit Density (units per square mile)	2,647	2,794	---
Population Density (persons per square mile)	7,973	8,706	---
Employment Density (persons per square mile)	556	967	---

Data	2010 Base Year	2030 No Build	Growth
103rd Street Station Area			
Housing Units	2,502	2,501	0%
Population	7,377	7,638	4%
Employment	351	427	22%
Land Area (square mile)	0.79	0.79	---
Housing Unit Density (units per square mile)	3,186	3,184.30	---
Population Density (persons per square mile)	9,394	9,727	---
Employment Density (persons per square mile)	447	544	---
111th Street Station Area			
Housing Units	2,384	2,592	9%
Population	6,999	7,737	11%
Employment	774	854	10%
Land Area (square mile)	0.79	0.79	---
Housing Unit Density (units per square mile)	3,036	3,300	---
Population Density (persons per square mile)	8,913	9,853	---
Employment Density (persons per square mile)	985	1,087	---
119th Street Station Area			
Housing Units	1,797	1,995	11%
Population	5,919	6,730	14%
Employment	562	1,591	183%
Land Area (square mile)	0.79	0.79	---
Housing Unit Density (units per square mile)	2,289	2,540	---
Population Density (persons per square mile)	7,537	8,571	---
Employment Density (persons per square mile)	716	2,026	---
Vermont Avenue Station Area			
Housing Units	1,631	1,688	4%
Population	4,749	5,240	10%
Employment	62	166	169%
Land Area (square mile)	0.79	0.79	---
Housing Unit Density (units per square mile)	2,076	2,150	---
Population Density (persons per square mile)	6,048	6,673	---
Employment Density (persons per square mile)	78	211	---

Source: Chicago Metropolitan Agency for Planning 2030 Forecast by Subzone, March 22, 2012 (No Build Supplemental March 12, 2013)
Note: * Quantitative data for the corridor and for each station area is measured for the area within ½ mile of the alignment.

Section 5
Impacts and Mitigations

For the purpose of this analysis, the impacts and mitigations discussion has been organized into three impact categories—permanent, construction, and cumulative—with references to affected neighborhoods (see Figure 4-1). Permanent impacts relate to system operations after the project has been constructed, as well as land acquisitions necessary for the permanent ROW. Construction impacts are temporary and would occur for 1 year of construction staging and utility relocations, and for the 3-year construction phase of the project. Cumulative impacts are those of the project combined with other past, present, or foreseeable future projects within the project area.

5.1 No Build Alternative

The No Build Alternative is defined as the existing transportation system plus committed transportation improvements within CMAP's Fiscal Year 2010–2015 TIP, which are included in all alternatives (see *Transportation Technical Memorandum* for TIP improvements). In part, the No Build Alternative serves as a means to compare the benefits and impacts of the build alternatives. Table 5-1 highlights the overall impacts and the following subsections describe the specific impacts for the directly affected neighborhoods.

Table 5-1: Summary of No Build Alternative Impacts*

Phase	Impacts	Washington Heights	Roseland	Morgan Park	West Pullman	Riverdale	Calumet Park
Permanent	Land Use	No Impact	No Impact	No Impact	No Impact	No Impact	No Impact
	Economic Development	No Impact	No Impact	No Impact	No Impact	No Impact	No Impact
Construction	Land Use	No Impact	No Impact	No Impact	No Impact	No Impact	No Impact
	Economic Development	No Impact	No Impact	No Impact	No Impact	No Impact	No Impact
Cumulative	Land Use	No Impact	No Impact	No Impact	No Impact	No Impact	No Impact
	Economic Development	No Impact	No Impact	No Impact	No Impact	No Impact	No Impact

* Impact Categories: Not Applicable (---), Beneficial, No Impact, Not Adverse, Not Substantially Adverse, Adverse

5.1.1 Permanent Impacts - No Build Alternative

5.1.1.1 Land Use

The No Build Alternative would be inconsistent with the goals of CMAP's *GO TO 2040* Plan, which lists the RLE Project as a fiscally constrained project; however, the No Build Alternative would not create any new inconsistencies beyond those that already exist, and would have no impact on land use.

5.1.1.2 Economic Development

The No Build Alternative would be inconsistent with Cook County's *Comprehensive Economic Development Strategy Report,* which supports the Red Line Extension; however, the No Build Alternative would not create any new inconsistencies beyond those that already exist, and would have no impact on the project area with regard to economic development.

5.1.2 Construction Impacts - No Build Alternative

There would be no construction activity as a result of the No Build Alternative, so there would be no impact on land use or economic development.

5.1.3 Cumulative Impacts - No Build Alternative

5.1.3.1 Land Use

When considered with past, present, and reasonably foreseeable projects, land use conditions under the No Build Alternative would remain unchanged and would have no impact.

5.1.3.2 Economic Development

When considered with past, present, and reasonably foreseeable projects, economic development conditions under the No Build Alternative would remain unchanged and would have no impact.

5.2 Bus Rapid Transit Alternative

The BRT Alternative includes a 5.0-mile route from the CTA's 95th Street Terminal, along Michigan Avenue to 130th Street, and through Altgeld Gardens. New bus shelters and park & ride facilities would be constructed near 103rd Street, 111th Street, Kensington Avenue, and 130th Street; therefore, the BRT Alternative would directly affect the Roseland, West Pullman, and Riverdale neighborhoods only. Table 5-2 highlights the overall impacts after mitigation and the following subsections describe the specific impacts for the directly affected neighborhoods. If the alternative would not pass through a neighborhood, the impact category assigned to that neighborhood is "Not Applicable," which is represented by dash marks.

Table 5-2: Summary of Bus Rapid Transit Alternative Impacts after Mitigation*

Phase	Impacts	Washington Heights	Roseland	Morgan Park	West Pullman	Riverdale	Calumet Park
Permanent	Land Use	---	Beneficial	---	Beneficial	Beneficial	---
	Economic Development	---	Not Adverse	---	Not Adverse	Not Adverse	---
Construction	Land Use	---	Not Adverse	---	Not Adverse	Not Adverse	---
	Economic Development	---	Beneficial	---	Beneficial	Beneficial	---
Cumulative	Land Use	---	No Impact	---	No Impact	No Impact	---
	Economic Development	---	No Impact	---	No Impact	No Impact	---

* Impact Categories: Not Applicable (---), Beneficial, No Impact, Not Adverse, Not Substantially Adverse, Adverse

5.2.1 Permanent Impacts and Mitigations - Bus Rapid Transit Alternative

The BRT Alternative alignment would be primarily along the Michigan Avenue corridor. The Michigan Avenue corridor would have steady growth between the 2010 base year and 2030 with the BRT Alternative, according to CMAP forecasts. With the BRT Alternative, population growth within the corridor, at 20 percent, would exceed the average population growth within the metropolitan area, at 15 percent. Employment growth would be at its highest rate within the 115th Street stop area, at 32 percent; however, the 111th Street stop area would contain the highest concentration of jobs within the corridor. Table 5-3 contains the quantitative land use and economic development data for the 2010 Base Year and 2030 with the BRT Alternative along the Michigan Avenue corridor.

Table 5-3: Quantitative Land Use and Economic Development Data for the Bus Rapid Transit Alternative Alignment*

Data	2010 Base Year	2030 with Bus Rapid Transit Alternative	Growth
Metropolitan Area			
Total Population	2,653,719	3,056,567	15%
Total Employment	1,241,492	1,439,154	16%
Central Business District			
Total Employment	537,369	629,690	17%
Employment - Portion of Metropolitan Area	43%	44%	---
Central Business District Land Area (square mile)	3.65	3.65	---
Employment Density (jobs per square mile)	147,189	172,476	---
Corridor			
Total Population	45,873	54,992	20%
Total Employment	3,230	3,544	10%

Data	2010 Base Year	2030 with Bus Rapid Transit Alternative	Growth
Population - Portion of Metropolitan Area	1.73%	1.80%	---
Employment - Portion of Metropolitan Area	0.26%	0.25%	---
Corridor Land Area (square mile)	6.65	6.65	---
Population Density (persons per square mile)	6,899	8,271	---
Employment Density (jobs per square mile)	486	533	---
All BRT Stops			
Housing Units	8,433	9,450	12%
Population	25,411	29,993	18%
Employment	1,684	1,926	14%
Land Area (square mile)	2.92	2.92	---
Housing Unit Density (units per square mile)	2,891	3,240	---
Population Density (persons per square mile)	8,712	10,282	---
Employment Density (persons per square mile)	577	660	---
103rd Street Stop			
Housing Units	2,943	3,187	8%
Population	8,579	9,776	14%
Employment	318	354	11%
Land Area (square mile)	0.79	0.79	---
Housing Unit Density (units per square mile)	3,748	4,059	---
Population Density (persons per square mile)	10,925	12,450	---
Employment Density (persons per square mile)	405	451	---
111th Street Stop			
Housing Units	2,559	2,956	15%
Population	7,555	9,172	21%
Employment	846	993	17%
Land Area (square mile)	0.79	0.79	---
Housing Unit Density (units per square mile)	3,259	3,764	---
Population Density (persons per square mile)	9,621	11,680	---
Employment Density (persons per square mile)	1,077	1,265	---
Kensington Avenue Stop			
Housing Units	2,149	2,547	19%
Population	7,023	8,727	24%
Employment	485	642	32%
Land Area (square mile)	0.79	0.79	---
Housing Unit Density (units per square mile)	2,736	3,243	---
Population Density (persons per square mile)	8,943	11,113	---
Employment Density (persons per square mile)	618	818	---

Data	2010 Base Year	2030 with Bus Rapid Transit Alternative	Growth
130th Street Stop			
Housing Units	1,400	1,532	9%
Population	4,218	4,835	15%
Employment	315	309	-2%
Land Area (square mile)	0.79	0.79	---
Housing Unit Density (units per square mile)	1,782	1,950	---
Population Density (persons per square mile)	5,372	6,157	---
Employment Density (persons per square mile)	401	393	---

Source: Chicago Metropolitan Agency for Planning 2030 Forecast by Subzone, March 22, 2012

Note: * Quantitative data for the corridor and for each station area is measured for the area within ½ mile of the alignment.

5.2.1.1 Land Use

The BRT Alternative would be inconsistent with the region's comprehensive plan, which supports the RLE Project along the UPRR corridor; however, implementation of the BRT Alternative would not create any new inconsistencies beyond those that already exist, would not create an adverse impact on land use, and would provide modest benefits to some neighborhoods.

A limited number of displacements would occur as a result of park & ride lots and parking garages as these facilities are proposed primarily on vacant land. Nevertheless, the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 as amended (Uniform Act) guarantees just compensation and relocation assistance for affected residential and business property owners and tenants. With just compensation and relocation assistance per the Uniform Act, these displacement impacts would be considered not adverse due to the availability of similar real estate in the project area and because the land is primarily vacant and underutilized. The park & ride lots and parking garages would be inconsistent with adjacent land uses, and zoning designations do not permit large, stand-alone surface parking lots or parking garages. Mitigation for the parking facilities would include a rezoning and screening, landscaping, and lighting appropriate for adjacent land uses.

Implementation of the BRT Alternative would result in modest travel time savings in the corridor compared to the No Build Alternative. The travel time savings between 95th and 130th Streets would be approximately five minutes when compared to the No Build Alternative (see Table 5-4). The proposed bus stops would improve land use accessibility for local residents who need goods and services from existing businesses in the corridor and need to transfer to the 95th Street Terminal. The proposed park & ride lots and parking garages would improve multi-modal accessibility for auto, bus, and rail transfers. As a result, existing land uses within the ½-mile area of proposed bus stops would benefit from improved travel times and access to the corridor and the 95th Street Terminal and CTA's regional rail network.

Table 5-4: Summary of Travel Time Saving for All Alternatives

Alternative	Total Travel Time (95th Street to 130th Street)*	Time Savings Compared to the No Build Alternative
No Build Alternative	28 minutes	0 minutes
Bus Rapid Transit Alternative	23 minutes	5 minutes
Union Pacific Railroad Rail Alternative (all options)	14 minutes	14 minutes
Halsted Rail Alternative *	10.5 minutes	17.5 minutes

* Halsted Rail Alternative travel time is calculated from 95th to 129th Streets per the RLE Alternatives Analysis Report

Based on improved land use accessibility and modest travel time savings, the BRT Alternative would be beneficial for the Roseland, West Pullman, and Riverdale neighborhoods.

5.2.1.2 Economic Development

The BRT Alternative would be inconsistent with implementation of local and regional economic development plans that support the RLE Project along the UPRR corridor. The only mitigation to remedy this inconsistency with local and regional plans would be to construct the UPRR Rail Alternative. Because implementation of the BRT Alternative would not create any new inconsistencies beyond those that already exist, the alternative would not create an adverse impact.

As stated in Section 5.2.1.1, a limited number of building acquisitions would occur as a result of park & ride lots and parking garages. Because no existing businesses or industries would be displaced, there would be no adverse impact on property tax revenues. The commercial real estate market would not be adversely affected by these park & ride lots and parking garages due to the availability of other commercial real estate in the corridor.

Implementation of the BRT Alternative would not provide any substantive economic development benefits because it would only include limited stop bus service and parking facilities. The lack of rail transit elements, such as a dedicated travel lane and substantial stations, would limit the economic development benefit of the BRT Alternative relative to the rail alternatives.

Based on the overall impacts, the BRT Alternative would have no impact on economic development in Roseland, West Pullman, and Riverdale compared to the UPRR Rail Alternative.

5.2.2 Construction Impacts and Mitigations - Bus Rapid Transit Alternative

5.2.2.1 Land Use

Construction of the proposed bus stops would occur within the public ROW on sidewalks. Construction of the proposed park & ride lots would occur on land acquired for the project. Due to the isolated site improvements and short timeframe for construction, the construction impacts of the BRT Alternative would be considered not adverse on existing land uses.

5.2.2.2 Economic Development

There would be isolated temporary disruptions to business and residential access during construction at parcels directly adjacent to the proposed bus stops and park & ride lots. Due to the short timeframe for construction, the construction impacts of the BRT Alternative would be considered not adverse for local economic development.

There would be short-term economic benefits from the creation of construction jobs. The CTA will consider adding incentives or requirements on contractors to encourage hiring of workers from the affected communities. The staff estimate is derived from an approach recommended within *Estimates of Job Creation from the American Recovery and Reinvestment Act of 2009 (May 2009)*, by the President's Council of Economic Advisers.

The methodology identifies an approximate government capital spending amount of $92,000 (in 2009 dollars) that would create or maintain one job-year (one full time job for one calendar year) of employment. This figure was escalated to current (2013) equivalent dollars through use of the US Department of Labor, Bureau of Labor Statistics "CPI Inflation Calculator." The equivalent 2013 government spending amount was calculated as approximately $100,300, with an average annual increase of approximately 2.18% from 2009-2013. The average annual increase was then applied to the 2013 spending level to project equivalent government spending levels required to create one job-year for the forecast years of capital expenditure for RLE Alternative Project Development, construction, and subsequent closeout activities.

The total estimated cost of the BRT Alternative is approximately $36.7 million, which is the year-of-expenditure. The annual capital expenditure for project development and construction activities was forecast by applying an annual inflation rate to the estimated base year cost based on a standard, design-bid-build schedule to meet the proposed opening years of 2017 (revenue operations) and 2022 (parking garage construction). During mobilization and peak construction, up to approximately 213 total jobs would be created by the BRT Alternative. Additionally, CTA is proposing construction of 2,400 structured parking spaces approximately 5 years after opening of BRT service (opening year 2022). The total cost of the additional parking facilities is estimated at $123.5 M in YOE dollars, generating up to approximately 1,009 total jobs during peak mobilization and construction.

5.2.3 Cumulative Impacts and Mitigations - Bus Rapid Transit Alternative

5.2.3.1 Land Use

When considered with past, present, and reasonably foreseeable projects, land use conditions under the BRT Alternative would generally remain unchanged and would have no impact.

5.2.3.2 Economic Development

When considered with past, present, and reasonably foreseeable projects, economic development conditions under the BRT Alternative would generally remain unchanged and would have no impact.

5.3 Union Pacific Railroad Rail Alternative - Right-of-Way Option

The UPRR Rail Alternative ROW Option (UPRR ROW Option) is a proposed rail extension from the CTA's 95th Street Terminal, along elevated structure within I-94 and 1-57 medians, and then south and southeast along elevated structure within the centerline of the vacated ROW of the UPRR. East of Prairie Avenue, the alignment would cross over Canadian National (CN)/Metra tracks and then transition to an at-grade alignment until its terminus near 130th Street. The UPRR and Amtrak trains would relocate to another corridor as part of a separate and independent project. Rail stations would be at 103rd Street, 111th Street, Michigan Avenue, and 130th Street (West Station Option and South Station Option). The UPRR ROW Option would directly affect the Washington Heights, Roseland, West Pullman, and Riverdale neighborhoods. Table 5-5 highlights the overall impacts after mitigation and the following subsections describe the specific impacts for the directly affected neighborhoods in Segment UA (95th Street to 117th Street) and Segment UB (117th Street to 130th Street). If the alternative would not pass through a neighborhood, the impact category assigned to that neighborhood is "Not Applicable," which is represented by dash marks.

Table 5-5: Summary of Union Pacific Railroad Rail Alternative - Right-of-Way Option Impacts after Mitigation

Phase	Impacts	Washington Heights	Roseland	Morgan Park	West Pullman	Riverdale	Calumet Park
Permanent	Land Use	Beneficial	Beneficial	---	Beneficial	Beneficial	---
	Economic Development	Beneficial	Beneficial	---	Beneficial	Beneficial	---
Construction	Land Use	Not Substantially Adverse	Not Substantially Adverse	---	Not Substantially Adverse	Not Substantially Adverse	---
	Economic Development	Beneficial	Beneficial	---	Beneficial	Beneficial	---
Cumulative	Land Use	Beneficial	Beneficial	---	Beneficial	Beneficial	---
	Economic Development	Beneficial	Beneficial	---	Beneficial	Beneficial	---

* Impact Categories: Not Applicable (---), Beneficial, No Impact, Not Adverse, Not Substantially Adverse, Adverse

5.3.1 Permanent Impacts and Mitigations - Union Pacific Railroad Rail Alternative - Right-of-Way Option

As described in Section 4, the UPRR ROW Option would be consistent with local and regional land use and economic development plans that support the RLE Project along the UPRR corridor to 130th Street. The DCP, with support from project area neighborhoods, has strongly advocated for the RLE Project along the UPRR corridor to 130th Street as a major capital project for the following reasons: to connect residents to regional jobs, shopping, and destinations; to provide a direct connection between affordable housing and regional jobs; to encourage new development and redevelopment near stations; and to improve overall livability in the Greater Roseland Area. The alternative's travel time savings would greatly benefit land use and economic development. The travel time savings between 95th and 130th Streets would be approximately 14 minutes when compared to the No Build Alternative (see Table 5-4). This travel time savings would be the same for all UPRR Rail Alternative options.

Between the 2010 base year and 2030 with the UPRR Rail Alternative, the UPRR corridor would have steady population growth and varying employment growth, according to CMAP forecasts. With the UPRR Rail Alternative, population growth within the UPRR corridor, at 19 percent, would well surpass the average population growth within the metropolitan area, at 15 percent. Employment growth would vary widely throughout the corridor's station areas. Changes in employment would range from a growth of 56 percent within the 103rd Street station area to a reduction of 34 percent within the 130th Street South Station Option area. The highest concentration of jobs would be within the 111th Street station area. Table 5-6 contains the quantitative land use and economic development data for the 2010 Base Year and 2030 Build conditions for all UPRR Rail Alternative options.

Table 5-6: Quantitative Land Use and Economic Development Data for Union Pacific Railroad Rail Alternative Alignments*

Data	2010 Base Year	2030 with UPRR Rail Alternative	Growth
Metropolitan Area			
Total Population	2,653,719	3,056,567	15%
Total Employment	1,241,492	1,439,154	16%
Central Business District			
Total Employment	537,369	629,690	17%
Employment - Portion of Metropolitan Area	43%	44%	---
Central Business District Land Area (square mile)	3.65	3.65	---
Employment Density (jobs per square mile)	147,189	172,476	---
Corridor			
Total Population	43,001	50,982	19%
Total Employment	3,128	3,517	12%
Population - Portion of Metropolitan Area	1.62%	1.67%	---
Employment - Portion of Metropolitan Area	0.25%	0.24%	---
Corridor Land Area (square mile)	6.45	6.45	---
Population Density (persons per square mile)	6,663	7,900	---
Employment Density (jobs per square mile)	485	545	---
All Station Areas			
Housing Units	8,162	9,359	15%

Data	2010 Base Year	2030 with UPRR Rail Alternative	Growth
Population	26,031	31,462	21%
Employment	2,136	2,377	11%
Land Area (square mile)	3.51	3.51	---
Housing Unit Density (units per square mile)	2,324	2,665	---
Population Density (persons per square mile)	7,411	8,957	---
Employment Density (persons per square mile)	608	677	---
103rd Street Station Area			
Housing Units	2,460	2,708	10%
Population	7,716	9,092	18%
Employment	231	359	56%
Land Area (square mile)	0.79	0.79	---
Housing Unit Density (units per square mile)	3,132	3,449	---
Population Density (persons per square mile)	9,826	11,579	---
Employment Density (persons per square mile)	294	458	---
111th Street Station Area			
Housing Units	2,502	2,787	11%
Population	8,027	9,297	16%
Employment	1,035	1,185	14%
Land Area (square mile)	0.79	0.79	---
Housing Unit Density (units per square mile)	3,186	3,550	---
Population Density (persons per square mile)	10,221	11,840	---
Employment Density (persons per square mile)	1,318	1,509	---
Michigan Avenue Station Area			
Housing Units	2,024	2,390	18%
Population	6,600	8,189	24%
Employment	359	479	34%
Land Area (square mile)	0.79	0.79	---
Housing Unit Density (units per square mile)	2,578	3,043	---
Population Density (persons per square mile)	8,405	10,428	---
Employment Density (persons per square mile)	457	611	---
130th Street Station Area - South Station Option			
Housing Units	417	678	62%
Population	1,332	2,282	71%
Employment	301	199	-34%
Land Area (square mile)	0.79	0.79	---
Housing Unit Density (units per square mile)	532	864	---
Population Density (persons per square mile)	1,696	2,905	---
Employment Density (persons per square mile)	383	253	---

Data	2010 Base Year	2030 with UPRR Rail Alternative	Growth
130th Street Station Area - West Station Option			
Housing Units	1,196	1,348	13%
Population	3,760	4,478	19%
Employment	476	317	-33%
Land Area (square mile)	0.79	0.79	---
Housing Unit Density (units per square mile)	1,523	1,717	---
Population Density (persons per square mile)	4,788	5,703	---
Employment Density (persons per square mile)	606	404	---

Source: Chicago Metropolitan Agency for Planning 2030 Forecast by Subzone, March 22, 2012
Notes: * Quantitative data for the corridor and for each station area is measured for the area within ½ mile of the alignment. UPRR = Union Pacific Railroad.

The following subsections focus on more localized beneficial and adverse impacts on existing land use and economic development conditions in the project area neighborhoods.

5.3.1.1 Segment UA

5.3.1.1.1 Land Use

Washington Heights

From 95th Street to 99th Street, the alignment would be located within the I-57 median, which is owned and maintained by IDOT. There would be no adverse land use impacts because the UPRR ROW Option would be consistent with the existing transportation land uses in that area. The alignment would cross into and also be within the UPRR corridor, which was previously a transportation land use. Between 99th Street and 103rd Street, the adjacent land use in Washington Heights is a linear open space called Fernwood Parkway. Implementation of the UPRR ROW Option would have impacts on this open space, comparable to those of the UPRR (noise and vibration). Therefore, the impacts would be considered not adverse. A CTA rail station would be at 103rd Street, which would provide improved access to residences and businesses within the ½-mile station area. The northwest quadrant of this station area is within Washington Heights, which would benefit from improved access in the local area and region. Due to the improved access and lack of any land acquisitions, the overall impact on Washington Heights' existing land uses would be considered beneficial.

Roseland

Like the alignment in Washington Heights, the alignment in Roseland would be within the I-94 and I-57 medians and the UPRR corridor; however, the transition between the I-57 median and the UPRR ROW centerline at 99th Street would directly affect the northwest corner of the adjacent open space, called Wendell Smith Park (see *Parklands and Community Facilities Technical Memorandum*). Between 99th Place and 103rd Street, the adjacent land uses are primarily single-family residential. The impacts from implementation of the UPRR ROW Option on these residential areas would be comparable to those of the UPRR (noise and vibration), so the impacts would be considered not adverse.

A CTA rail station would be at 103rd Street, which would provide improved access to existing land uses within the ½-mile station area. A park & ride lot would be located on either side of the station. A limited number of displacements would occur as a result of park & ride lots, as they are proposed primarily on vacant land. With just compensation per the Uniform Act, these impacts would be considered not adverse; however, the park & ride lots would be inconsistent with adjacent land uses, and zoning designations do not permit large, stand-alone surface parking lots. Mitigation for the park & ride lots would include a rezoning and screening, landscaping, and lighting appropriate for adjacent residential land uses and open space.

Between the 103rd Street and 111th Street stations, the UPRR ROW Option alignment is flanked by substantial vacant land and urban mixed uses (commercial and industrial) on the west side and by single-family residential uses, one public utility, one private school, two industrial uses, and vacant land on the east side. The impacts from implementation of the UPRR ROW Option on these land uses would be comparable to impacts from previous activities of the UPRR (noise and vibration), so the impacts would be considered not adverse. In addition, a substation is proposed on vacant land along the west side of the corridor at 105th Street. The substation would be similar in use to other heavy commercial and light industrial uses along the west side; therefore, it would be considered not adverse on existing and adjacent land uses.

A CTA rail station would be at 111th Street, which would provide improved access to existing land uses within the ½-mile station area. A park & ride lot would be located on either side of the station. No displacements would occur as a result of the park & ride lots, as they are proposed on vacant land; therefore, the land use impacts would not be adverse. The park & ride lots would, however, be inconsistent with adjacent land uses, and zoning designations do not permit large, stand-alone surface parking lots. Mitigation for the park & ride lots would include a rezoning and screening, landscaping, and lighting appropriate for adjacent residential land uses. Overall, the impacts from the 111th Street station would be considered beneficial due to improved land use access, new multi-modal access, and reuse of vacant land.

Between 111th and 115th Streets, the UPRR Option alignment is flanked by mostly single-family residential uses on both sides. There are limited amounts of vacant land, industrial, and urban mixed-use. The impacts from implementation of the UPRR ROW Option on these land uses would be comparable to impacts from previous activities of the UPRR (noise and vibration), so the impacts would be considered not adverse.

A CTA rail station would be at Michigan Avenue, which would provide improved access to existing land uses within the ½-mile station area. Roseland's southernmost border is 115th Street, and the land uses north of 115th Street would benefit from improved access. This area includes the mixed-use business district along Michigan Avenues between 113th and 115th Streets, as well as a substantial amount of multi-family residential uses. All of these land uses would receive beneficial impacts from improved access to the Michigan Avenue station and the CTA rail network.

West Pullman

Just north of the Michigan Avenue station, a substation would be on vacant land along the western side of the corridor at Lafayette Street. Although there would be no direct impacts, the substation would be inconsistent with the adjacent single-family residential uses on Lafayette Street. Mitigation would include a rezoning and screening, landscaping, and appropriate architectural design and massing. Based on the mitigation, and considering the land use benefits discussed below, the impact on adjacent residential land uses would be not substantially adverse.

The Michigan Avenue station would provide improved access to existing land uses within the ½-mile station area. West Pullman's northernmost border is 115th Street, and the land uses south of 115th Street would benefit from improved access. This area includes the mixed-use business district along Michigan Avenue between 115th and 120th Streets, and a substantial amount of single-family residential and some multi-family residential uses. In addition, the proposed "Roseland Plaza" commercial development on the eastern side of the corridor would benefit from adjacent access. All of these land uses would receive beneficial impacts from improved access to the Michigan Avenue station and the CTA rail network.

A three-story parking garage with ground-floor retail and community facilities would be on the western side of the corridor and bordered by Michigan Avenue, 116th Street, and State Street. Approximately 19 residences would be displaced by this mixed-use parking garage. With just compensation and relocation assistance per the Uniform Act, these impacts would be considered not substantially adverse due to the availability of residential real estate in the same neighborhood and considering the overall land use benefits to the neighborhood.

Across the street from the garage, single-family residential uses along State Street and 116th Street would be adversely affected by changes to the existing land use character. Although there would be no direct impacts, the mixed-use parking garage would be inconsistent with the single-family residential uses on State Street and 116th Street. Mitigation would include a rezoning and screening, landscaping, and appropriate architectural design and massing. Based on the mitigation, the impact on adjacent residential land uses would be not substantially adverse.

A park & ride lot would be located along Michigan Avenue and 116th Street on the eastern side of the corridor. Because the park & ride lot would affect vacant land and a vacant building, the impacts would be considered not adverse. The park & ride lot would, however, be inconsistent with adjacent land uses, and zoning designations do not permit large, stand-alone surface parking lots. Mitigation for the park & ride lot would include a rezoning and screening, landscaping, and lighting appropriate for adjacent residential land uses.

Between 116th and 117th Streets, the UPRR ROW Option alignment is flanked by mostly single-family residential uses on both sides of the corridor. The impacts from implementation of the UPRR ROW Option on adjacent land uses would be comparable to impacts from previous activities of the UPRR (noise, vibration, and visual), so the impacts would be considered not substantially adverse.

5.3.1.1.2 Economic Development

The UPRR ROW Option would provide beneficial travel time savings to all neighborhoods within the ½-mile station area. The travel time savings would benefit residents that desire improved access to job opportunities within the region, to downtown cultural and recreational events, and to shops and services adjacent to Red Line stations. In addition, travel time savings would benefit the local economy through new opportunities for business or residential development within the station areas. Regional TOD studies conducted by the RTA have shown a correlation between station access, business opportunities, and residential home prices.[1] These new development opportunities are also dependent on local plans, zoning, incentives, and market conditions adjacent to each station.

The following subsections highlight the economic development impacts within the project area neighborhoods that would directly benefit from a new station.

Washington Heights

There would be no acquisitions or displacements associated with the UPRR ROW Option within Washington Heights. The proposed rail station at 103rd Street would improve access for properties within ½ mile of the station. National and local experience has shown that property values tend to increase in proximity to a rail station. As such, residential and commercial properties within Washington Heights could increase in value the closer they are to the 103rd Street station. The extent to which property values would be affected also relates to local plans, policies, incentives, and economic climate, all of which influence property values near rail stations. Also, the new station would increase the potential to attract new residential and/or commercial development. For these reasons, the overall impact on Washington Heights would be considered beneficial for local economic development.

Roseland

As described in Section 5.3.1.1.1, there would be a limited number of property acquisitions related to the park & ride lots at the 103rd and 111th Street stations, and a nearby substation. The conversion of these properties to public use would not adversely affect property tax revenues, because these properties contain vacant land and/or buildings. These property acquisitions would not adversely affect the local commercial real estate market due to the availability of comparable real estate within this neighborhood. As it would be in Washington Heights, the new rail stations could increase property values in relation to their proximity to the stations. Also, the new stations would increase the potential to attract new residential and/or commercial development. Therefore, the overall impact on Roseland would be considered beneficial for local economic development.

West Pullman

As described in Section 5.3.1.1.1, there would be several property acquisitions and displacements related to the substation, three-story mixed-use parking garage, and park & ride lot near the

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[1] Transit-Oriented Development: The Future of Development (RTA 2011)

Michigan Avenue station. The conversion of these properties to public use would temporarily affect property tax revenues due to the displaced single-family homes; however, the affected families would be offered relocation assistance and the new businesses on the ground floor of the mixed-use parking garage would generate retail tax revenue. These property acquisitions would not adversely affect the local real estate market due to the availability of comparable real estate within this neighborhood. As it would be in Washington Heights and Roseland, the new rail station could increase property values in relation to their proximity to the stations. Also, the new station would increase the potential to attract new residential and/or commercial development, especially after construction of the Roseland Plaza development adjacent to the station. The overall impact would be considered beneficial for local economic development.

5.3.1.2 Segment UB

5.3.1.2.1 Land Use

West Pullman

Between 117th Street and the CN/Metra tracks, the UPRR ROW Option alignment is flanked by mostly single-family residential uses on both sides of the corridor. There is an open space called Kensington Park along the western side, but the alternative would not directly affect it. The impacts from implementation of the UPRR ROW Option on adjacent land uses would be comparable to impacts from previous activities of the UPRR (noise, vibration, and visual), so the impacts would be considered not substantially adverse. There would be one industrial displacement where the UPRR ROW Option transitions from the embankment to an aerial structure over the CN/Metra railroad tracks on the opposite side of Front Avenue. With just compensation per the Uniform Act to the affected landowner and tenants, the direct impact on this industrial use would be considered not adverse.

Riverdale

The UPRR ROW Option alignment would cross the CN/Metra tracks on an aerial structure and then transition to an at-grade alignment within a vacated railroad ROW until the proposed station at 130th Street (South and West Station Options). The adjacent land uses are transportation, utility, industrial, and vacant land, so the alternative would be consistent with existing land use character.

The 130th Street South Station Option would be accessible from both sides of 130th Street. The South Station Option would include a stationhouse, kiss & ride, bus bays, and seven-story parking garage on the north side of 130th Street, all of which would require negotiations with MWRD for use of land. The South Station Option would also include an auxiliary entrance on the south side of 130th Street, which would provide direct pedestrian access to and from the Altgeld Gardens public housing and the Carver Military Academy High School.

The proposed 130th Street West Station Option would be located along 130th Street directly across the street from Altgeld Gardens, with a new signalized intersection at Evans Avenue. The West Station Option would include a stationhouse, kiss & ride, bus bays, park & ride lot, and four-story parking garage on the north side of 130th Street, which would require negotiations with MWRD for use of land.

The South and West Station Options would equally serve the Altgeld Gardens public housing, which is isolated due to physical boundaries, its geographic position relative to the City, and the surrounding industrial, utility, and transportation land uses. The West Station Option would not only serve Altgeld Gardens, but also the adjacent residential neighborhoods along 130th Street. As is evident from Table 5-6, the West Station Option would serve a larger number of homes and people than the South Station Option. The South Station Option would be at the furthest point east on 130th Street, which would make pedestrian access challenging for half of the residential neighborhoods in this area. The South Station Option would provide easier pedestrian access for Carver High School than the West Station Option.

Both station options would serve as a regional park & ride for commuters using I-94, which would help reduce commuter traffic heading north into Chicago. In addition, the stations would serve as a bus transfer for employees within the Lake Calumet industrial area or visitors to the Lake Calumet nature preserves. Due to improved access for residents, commuters, employees, and visitors, the overall land use impact would be considered beneficial for Riverdale.

5.3.1.2.2 Economic Development

West Pullman

As described in Section 5.3.1.2.1, there would be one industrial displacement associated with the UPRR ROW Option. Due to compensation and relocation assistance within the same neighborhood, the impact would be considered not adverse. The overall economic development impacts for the remaining properties in the ½-mile station area would be considered beneficial, as described in Section 5.3.1.1.2.

Riverdale

As described in Section 5.3.1.2.1, there would be a limited number of property acquisitions related to the 130th Street station and parking facilities. The conversion of these properties to a public use would not adversely affect property tax revenues, because these properties are already tax exempt. Unlike the other proposed stations, the 130th Street station would not increase property values in relation to their proximity to the stations because the closest property is a public housing site. The Chicago Housing Authority supports the RLE Project to 130th Street in order to improve regional job accessibility for the isolated residential population at Altgeld Gardens. The Chicago Housing Authority has reinvested $250 million in residential renovation within Altgeld Gardens, and has plans to renovate more residential units. Lastly, the 130th Street station would be unlikely to increase the potential to attract new residential and/or commercial development due to the limited availability of developable land as well as the isolated nature of this area. This conclusion is supported by the findings of the *130th Street Station Access/Market Study,* which only found support for small retail near the station. Nevertheless, the overall impact on Riverdale would be considered beneficial for local economic development due to improved accessibility to the regional job market and improved access to the Lake Calumet area and communities south of 130th Street.

5.3.2 Construction Impacts and Mitigations - Union Pacific Railroad Rail Alternative - Right-of-Way Option

Construction of the proposed UPRR ROW Option, including construction staging activities, would occur on land acquired for the project's permanent ROW. As such, there would be no acquisition or displacement impacts from construction.

5.3.2.1 Segment UA

5.3.2.1.1 Land Use

Construction would take up to 5 years and would cause temporary impacts on adjacent residential neighborhoods due to noise, vibration, fugitive dust, truck traffic, and roadway detours. Mitigation methods would include daytime construction activities and other best management practices (see *Construction Impacts Technical Memorandum* for more details). Based on these mitigations and the beneficial impacts of the project, the land use impacts from construction would be considered not substantially adverse in the affected neighborhoods: Washington Heights, Roseland, and West Pullman.

5.3.2.1.2 Economic Development

Construction would take up to 5 years and would cause temporary impacts on adjacent commercial uses on Michigan Avenue due to noise, vibration, fugitive dust, truck traffic, and roadway detours. Mitigation methods would include daytime construction activities, commercial signage during detours, and special advertising for businesses within the ½-mile API. Due to mitigation, the construction impacts on existing businesses would be considered not adverse. Construction activities would occur throughout the corridor and would be more extensive than for the BRT Alternative, but would not substantially influence regional construction costs due to the large size of Chicago's construction industry.

There would be short-term economic beneficial impacts from construction jobs. CTA has developed estimates for the number and types of jobs that would be created by the construction of the RLE Project. RLE Project construction is currently not funded and is contingent upon federal approvals and funding availability. However, the possibility of leveraging Federal capital funding programs to reduce the local financing burden has led CTA to incorporate the job creation methodology identified within *Estimates of Job Creation from the American Recovery and Reinvestment Act of 2009 (May 2009)*, by the President's Council of Economic Advisers.

The methodology identifies an approximate government capital spending amount of $92,000 (in 2009 dollars) that would create or maintain one job-year (one full time job for one calendar year) of employment. This figure was escalated to current (2013) equivalent dollars through use of the US Department of Labor, Bureau of Labor Statistics "CPI Inflation Calculator." The equivalent 2013 government spending amount was calculated as approximately $100,300, with an average annual increase of approximately 2.18% from 2009-2013. The average annual increase was then applied to the 2013 spending level to project equivalent government spending levels required to create one job-year for the forecast years of capital expenditure for RLE Alternative Project Development, construction, and subsequent closeout activities.

The job estimates presented are based on the range of YOE (2026) capital costs calculated for the various UPRR alternative alignment and station configuration options, projected at approximately $2.2 billion to $2.3 billion dollars. Any future changes in the project cost or advancement in construction technologies would affect the actual number and types of jobs that would be created. CTA will revise these job estimates as the planning progresses and more or revised information becomes available.

Based on the above considerations, it is estimated that construction of the RLE Project would create approximately 5,180 total jobs during the year with peak mobilization and construction. All construction jobs would be under the General Contractor, who would be selected for this project per CTA's procurement process through competitive bidding. This competitive bidding would happen only after CTA has secured funding and federal approval for all the interim phases and for construction.

Based on the mitigations and the beneficial impacts of the project, the overall economic development impact from construction would be considered beneficial to the Washington Heights, Roseland, West Pullman, and Riverdale neighborhoods.

5.3.2.2 Segment UB

5.3.2.2.1 Land Use

Similar to the impacts and mitigation described in Section 5.3.2.1.1, the land use impacts from construction would be considered not substantially adverse in West Pullman and Riverdale.

5.3.2.2.2 Economic Development

Similar to the impacts and mitigation described in Section 5.3.2.1.2, the economic development impacts from construction would be considered beneficial due to short-term job creation.

5.3.3 Cumulative Impacts and Mitigations - Union Pacific Railroad Rail Alternative - Right-of-Way Option

5.3.3.1 Segment UA

5.3.3.1.1 Land Use

Conditions under the UPRR ROW Option would have a cumulative beneficial impact on those neighborhoods in the project area that are focused on improving employment accessibility to the Chicago region, attracting development adjacent to RLE stations, and improving the overall livability of neighborhoods through local and regional planning. These neighborhoods include Washington Heights, Roseland, and West Pullman. Furthermore, the UPRR ROW Options would only be implemented if the UPRR is relocated as part of a separate, independent project prior to the construction of the UPRR ROW Option. This action will benefit adjacent residential neighborhoods that are relieved of the noise, vibration, and traffic delays caused by the Union Pacific Railroad, and that would benefit from new heavy rail transit services.

5.3.3.1.2 Economic Development

As described in Section 5.2.3.2, the overall economy within the project area was affected by the decline in the manufacturing and steel-producing industries in the 1980s and that the planning and economic development efforts of the City of Chicago and community organizations are showing modest results in the form of new private and public sector investment. For these reasons, implementation of the UPRR ROW Option would have a beneficial cumulative impact on economic development due to new employment accessibility, attraction of new development, and overall livability improvements. The private sector would likely perceive the UPRR ROW Option as a public sector commitment to improve the overall project area and regain confidence in the area's economic development market. The affected neighborhoods include Washington Heights, Roseland, and West Pullman.

5.3.3.2 Segment UB

5.3.3.2.1 Land Use

Similar to the impacts described in Section 5.3.3.1.1, the cumulative land use impacts would be considered beneficial in West Pullman and Riverdale.

5.3.3.2.2 Economic Development

Similar to the impacts described in Section 5.3.3.1.2, the cumulative economic development impacts would be considered beneficial in West Pullman and Riverdale.

5.3.4 120th Street Yard and Shop

A new maintenance yard and shop for 270 train cars would be constructed as part of the RLE Project. The new yard and shop would be built on a combination of industrial and vacant land east of the CN/Metra tracks and west of the Indiana Harbor Belt/Northern Indiana Commuter Transportation District (IHB/NICTD) tracks at approximately 120th Street and Cottage Grove Avenue.

5.3.4.1 Permanent Impacts and Mitigations

5.3.4.1.1 Land Use

The yard and shop would be located within an industrial area; therefore, the facilities would be consistent with existing land uses. The new facilities would require the partial land acquisition of an industrial property, as well as vacant land. With just compensation per the Uniform Act to affected landowners and tenants, the direct impact on existing land uses would be considered not adverse. The maintenance yard would cut off roadway access between contiguous properties of the MWRD property; however, a new road and bridge would be built to maintain connectivity between these properties. The overall land use impacts would not be adverse.

5.3.4.1.2 Economic Development

The yard and shop would partially affect a low-intensity industrial property; therefore, there would be no adverse impacts on local economic development.

5.3.4.2 Construction Impacts and Mitigations

Because the yard and shop would be located in a heavy industrial area, the construction activities would be considered not adverse for land use or economic development. The CTA would coordinate construction activities with MWRD.

5.4 Union Pacific Railroad Rail Alternative - East Option

The UPRR Rail Alternative East Option (UPRR East Option) is a proposed rail extension from the CTA's 95th Street Terminal, along elevated structure within I-94 and 1-57 medians, and then on elevated structure south and southeast along the eastern perimeter of the UPRR. East of Prairie Avenue, the alignment would cross over CN/Metra tracks and then transition to at-grade alignment until its terminus near 130th Street. Rail stations would be at 103rd Street, 111th Street, Michigan Avenue, and 130th Street (West Station Option and South Station Option). The UPRR East Option would directly affect the Washington Heights, Roseland, West Pullman, and Riverdale neighborhoods. Table 5-7 highlights the overall impacts after mitigation and the following subsections describe the specific impacts for the directly affected neighborhoods in Segment UA (95th Street to 117th Street) and Segment UB (117th Street to 130th Street). If the alternative would not pass through a neighborhood, the impact category assigned to that neighborhood is "Not Applicable," which is represented by dash marks.

Table 5-7: Summary of Union Pacific Railroad Rail Alternative East Option Impacts after Mitigation*

Phase	Impacts	Washington Heights	Roseland	Morgan Park	West Pullman	Riverdale	Calumet Park
Permanent	Land Use	Beneficial	Not Substantially Adverse	---	Not Substantially Adverse	Beneficial	---
	Economic Development	Beneficial	Beneficial	---	Beneficial	Beneficial	---
Construction	Land Use	Not Substantially Adverse	Not Substantially Adverse	---	Not Substantially Adverse	Not Substantially Adverse	---
	Economic Development	Beneficial	Beneficial	---	Beneficial	Beneficial	---
Cumulative	Land Use	Beneficial	Beneficial	---	Beneficial	Beneficial	---
	Economic Development	Beneficial	Beneficial	---	Beneficial	Beneficial	---

* Impact Categories: Not Applicable (---), Beneficial, No Impact, Not Adverse, Not Substantially Adverse, Adverse

5.4.1 Permanent Impacts and Mitigations - Union Pacific Railroad Rail Alternative - East Option

The UPRR East Option would be consistent with local and regional land use and economic development plans, as described in Section 4, that support the RLE Project along the UPRR corridor to 130th Street. This option would offer beneficial impacts, as described for the ROW Option in Section 5.3.1. The following subsections focus on more localized beneficial and adverse impacts on existing land use and economic development conditions in the project area neighborhoods.

5.4.1.1 Segment UA

5.4.1.1.1 Land Use

Washington Heights

The alignment would be within the I-94 and I-57 medians and would transition to the eastern perimeter of the UPRR ROW. A new CTA rail station would be at 103rd Street, which would provide improved access to residences and businesses within the ½-mile station area. The northwest quadrant of this station area is within Washington Heights, which would benefit from improved access in the local area and region. Due to the improved access and lack of any land acquisitions or building displacements, the overall impact on Washington Heights' existing land uses would be considered beneficial.

Roseland

The transition between the I-57 median and the UPRR East Option centerline at 99th Street would directly affect the western portion of the adjacent open space called Wendell Smith Park (see *Parklands and Community Facilities Technical Memorandum*).

Between 99th Place and 103rd Street, three or four homes at the end of each block would be displaced by the alternative's proposed ROW and station at 103rd Street. Mitigation for these impacts would include just compensation and relocation assistance, as required by the Uniform Relocation Act. The UPRR East Option also would introduce an elevated rail line adjacent to single-family residential land uses. The impacts from implementation of the UPRR East Option on these land uses would be comparable to those of the UPRR (noise and vibration), so the impacts would be considered not substantially adverse.

The 103rd Street station would provide improved access to existing land uses within the ½-mile station area. The station would be located adjacent to a single-family residential street, a local arterial with commercial and residential uses, and within a portion of Block Park. A park & ride lot on either side of the station's alignment would affect vacant land and a vacant building. With just compensation per the Uniform Act, these impacts would be considered not substantially adverse because the land is vacant and underutilized. The park & ride lots would, however, be inconsistent with adjacent land uses, and zoning designations do not permit large, stand-alone surface parking lots. Mitigation for the park & ride lots would include a rezoning and screening, landscaping, and lighting appropriate for adjacent residential land uses and open space.

Block Park is a passive open space, which would be directly affected by the UPRR East Option; however, the underutilized park could become integrated as a gateway to and from the station and Roseland neighborhood as mitigation for the direct impacts. Additional park amenities or park space elsewhere in the Roseland neighborhood are other mitigation options (see *Parklands and Community Facilities Technical Memorandum*). Overall, the impacts from the 103rd Street station would be considered beneficial due to improved land use access, new multi-modal access, reuse of vacant properties, and reuse of a passive open space.

A substation would be on vacant land along the west side of the UPRR ROW at 105th Street. The substation would be similar in use to other heavy commercial and light industrial uses along the west side; therefore, the impact on existing and adjacent land uses would be considered not adverse.

Between the 103rd and the 111th Streets, a number of homes at the end of each block would be displaced by the alternative's ROW and station at 111th Street. The proposed ROW also would directly affect a private school's open space, two industrial uses, and vacant land. Mitigation for this affected area would be just compensation and relocation assistance. The UPRR East Option also would introduce an elevated rail line adjacent to single-family residential land uses. The impacts from implementation of the UPRR East Option on these land uses would be comparable to those of the UPRR (noise and vibration), so the impacts would be considered not substantially adverse.

The 111th Street station would provide improved access to existing land uses within the ½-mile station area. The station would be located adjacent to single-family residential streets and a local arterial with commercial and residential uses. A park & ride lot would be located on vacant land on either side of the station's alignment. The park & ride lots would be inconsistent with adjacent land uses and zoning. Mitigation for the park & ride lots would include a rezoning and screening, landscaping, and lighting appropriate for adjacent residential land uses. Overall, the impacts from the 111th Street station would be considered beneficial due to improved land use access, new multi-modal access, and reuse of vacant land.

Between 111th and 115th Streets, a number of homes at the end of each block would be displaced by the alternative's proposed ROW, as well as a limited amount of vacant land, industrial uses, and urban mixed uses. Mitigation for this affected area would be just compensation and relocation assistance. The UPRR East Option also would introduce an elevated rail line adjacent to single-family residential land uses. The impacts from implementation of the UPRR East Option on these land uses would be comparable to impacts from the UPRR (noise and vibration), so the impacts would be considered not substantially adverse.

A new CTA rail station would be at Michigan Avenue, which would provide improved access to existing land uses within the ½-mile station area. Roseland's southernmost border is 115th Street, and the land uses north of 115th Street would benefit from improved access. This area includes the mixed-use business district along Michigan Avenue between 113th and 115th Streets, as well as a substantial amount of multi-family residential uses. All of these land uses would receive beneficial impacts from improved access to the Michigan Avenue station and the CTA rail network.

West Pullman

Between 115th and 116th Streets, the UPRR East Option impacts would be similar to those described for the UPRR ROW Option under Section 5.3.1.1.1 with a few exceptions, noted below.

Between 115th and 116th Streets, the UPRR East Option alignment would displace two single-family residential uses. Between State Street and Michigan Avenue, the alignment would be within a negotiated easement area of the proposed Roseland Plaza.

A three-story parking garage with ground-floor retail and community facilities would be located on the western side of the corridor and bordered by Michigan Avenue, 116th Street, and State Street. Approximately 19 residences would be displaced by this mixed-use parking garage. With just compensation and relocation assistance per the Uniform Act, these impacts would be considered not substantially adverse due to the availability of residential real estate in the same neighborhood and considering the overall land use benefits to the neighborhood.

Across the street from the garage, single-family residential uses along State Street and 116th Street would be adversely affected by changes to the existing land use character. Although there would be no direct impacts, the mixed-use parking garage would be inconsistent with the single-family residential uses on State Street and 116th Street. Mitigation would include a rezoning and screening, landscaping, and appropriate architectural design and massing. Based on the mitigation, the impact on adjacent residential land uses would be not substantially adverse.

Between the 1116th and 117th Streets, the alignment would displace a limited number of single-family residential uses and a public use. With just compensation and relocation assistance per the

Uniform Act, the existing land use impact would be considered not substantially adverse. The impacts from implementation of the UPRR East Option on adjacent land uses would be comparable to those of the UPRR (noise, vibration, and visual), so the impacts would be considered not substantially adverse.

5.4.1.1.2 Economic Development

The UPRR East Option would provide beneficial travel time savings and new opportunities for business or residential development within the ½-mile station areas, as described for the UPRR ROW Option in Section 5.3.1.1.2.

Washington Heights

As described in Section 5.4.1.1.1, there would be no acquisitions or displacements associated with the UPRR East Option within Washington Heights. Hence, the UPRR East Option impacts on economic development would be similar to those described for the UPRR ROW Option in Section 5.3.1.1.2.

Roseland

As described in Section 5.4.1.1.1, there would be numerous property displacements related to the UPRR East Option alignment, stations, and park & ride lots at the 103rd and 111th Streets, as well as a nearby substation. The conversion of these properties to public use would temporarily affect property tax revenues due to the displaced single-family homes and businesses; however, the affected families and businesses would be offered relocation assistance within Roseland. These property acquisitions would not adversely affect the local commercial real estate market due to the availability of comparable real estate within this neighborhood. As it would be in Washington Heights, the new rail stations could increase property values in relation to their proximity to the stations. Also, the new stations would increase the potential to attract new residential and/or commercial development. Therefore, the overall impact on Roseland would be considered beneficial for local economic development.

West Pullman

As described in Section 5.4.1.1.1, there would be several property acquisitions and displacements related to the UPRR East Option alignment, three-story mixed-use parking garage, and park & ride lot near the Michigan Avenue station, as well as a nearby substation. The conversion of these properties to public use would temporarily affect property tax revenues due to the displaced single-family homes and businesses; however, the affected families and businesses would be offered relocation assistance and the new businesses on the ground floor of the mixed-use parking garage would generate retail tax revenue. These property acquisitions would not adversely affect the local real estate market due to the availability of comparable real estate within this neighborhood. As it would be in Washington Heights and Roseland, the new rail station could increase property values in relation to their proximity to the stations. Also, the new station would increase the potential to attract new residential and/or commercial development, especially after construction of the Roseland Plaza development adjacent to the station. The overall impact would be considered beneficial for local economic development.

5.4.1.2 Segment UB

5.4.1.2.1 Land Use

As described in Section 5.3.1.2.1, the UPRR East Option impacts would be similar to those described for the UPRR ROW Option for the Riverdale neighborhood. There would be a slight difference in impacts within West Pullman, as noted below.

West Pullman

Between the 117th Street and the CN/Metra tracks, the UPRR East Option alignment would displace a limited number of single-family residential uses, a public use, an industrial use, and vacant land. With just compensation and relocation assistance per the Uniform Act, the impact on existing land uses would be not substantially adverse. The impacts from implementation of the UPRR East Option on adjacent land uses would be comparable to impacts from the UPRR (noise, vibration, and visual), so the impacts would be considered not substantially adverse.

5.4.1.2.2 Economic Development

As described in Section 5.3.1.2.2, the UPRR East Option impacts would be similar to the UPRR ROW Option impacts within the Riverdale neighborhood. There would be a slight difference in impacts within West Pullman, as noted below.

West Pullman

As described in Section 5.4.1.2.1 above, there would be a limited number of displacements in this segment; therefore, the economic development benefits from the UPRR East Option would be similar to those from the UPRR ROW Option described in Section 5.3.1.2.2.

5.4.2 Construction Impacts and Mitigations - Union Pacific Railroad Rail Alternative - East Option

Construction of the proposed UPRR East Option, including construction staging activities, would occur on land acquired for the project's permanent ROW. As such, there would be no acquisition or displacement impacts from construction.

5.4.2.1 Segment UA

5.4.2.1.1 Land Use

The UPRR East Option impacts would be similar to the UPRR ROW Option impacts described in Section 5.3.2.1.1. The overall land use impacts from construction would be not substantially adverse within Washington Heights, Roseland, and West Pullman.

5.4.2.1.2 Economic Development

The UPRR East Option impacts would be similar to the UPRR ROW Option impacts described in Section 5.3.2.1.2. Based on the mitigations and the beneficial impacts of the project, the overall economic development impact from construction would be considered beneficial to the Washington Heights, Roseland, West Pullman, and Riverdale neighborhoods.

5.4.2.2 Segment UB

5.4.2.2.1 Land Use

The UPRR East Option impacts would be similar to the UPRR ROW Option impacts described in Section 5.3.2.2.1. The overall land use impacts from construction would not be adverse within West Pullman and Riverdale.

5.4.2.2.2 Economic Development

The UPRR East Option impacts would be similar to the UPRR ROW Option impacts described in Section 5.3.2.2.2. The overall economic development impacts from construction would be beneficial due to short-term job creation.

5.4.3 Cumulative Impacts and Mitigations - Union Pacific Railroad Rail Alternative - East Option

5.4.3.1 Segment UA

5.4.3.1.1 Land Use

Conditions under the UPRR East Option would have a cumulative beneficial impact on those neighborhoods in the project area that are focused on improving employment accessibility to the Chicago region, attracting development adjacent to RLE stations, and improving the overall livability of neighborhoods through local and regional planning. These neighborhoods include Washington Heights, Roseland, and West Pullman.

5.4.3.1.2 Economic Development

The UPRR East Option impacts would be similar to the UPRR ROW Option impacts described in Section 5.3.3.1.2. The cumulative economic development impacts would be beneficial for the Washington Heights, Roseland, and West Pullman neighborhoods.

5.4.3.2 Segment UB

5.4.3.2.1 Land Use

The UPRR East Option impacts would be similar to the UPRR ROW Option impacts described in Section 5.3.3.2.1. The cumulative land use impacts would be beneficial for the West Pullman and Riverdale neighborhoods.

5.4.3.2.2 Economic Development

The UPRR East Option impacts would be similar to the UPRR ROW Option impacts described in Section 5.3.3.2.2. The cumulative economic development impacts would be beneficial for the West Pullman and Riverdale neighborhoods.

5.4.4 120th Street Yard and Shop

A new yard and shop for 270 train cars would be constructed as part of the RLE Project. The new maintenance yard and shop would be built on a combination of industrial and vacant land east of the CN/Metra tracks and west of the IHB/NICTD tracks at approximately 120th Street and Cottage

Grove Avenue. Impacts and mitigations for this option would be the same as for the ROW Option, described in Section 5.3.4.

5.5 Union Pacific Railroad Rail Alternative - West Option

The Union Pacific Railroad Rail Alternative West Option (UPRR West Option) would be a rail extension from the CTA's 95th Street Terminal, along elevated structure within I-94 and 1-57 medians, and on elevated structure south and southeast along the western perimeter of the UPRR. East of Prairie Avenue, the alignment would cross over CN/Metra tracks and then transition to at-grade alignment until its terminus near 130th Street. Rail stations would be at 103rd Street, 111th Street, Michigan Avenue, and 130th Street (West Station Option and South Station Option). The UPRR West Option would directly affect the Washington Heights, Roseland, West Pullman, and Riverdale neighborhoods. Table 5-8 highlights the overall impacts after mitigation and the following subsections describe the specific impacts for the directly affected neighborhoods in Segment UA (95th Street to 117th Street) and Segment UB (117th Street to 130th Street). If the alternative would not pass through a neighborhood, the impact category assigned to that neighborhood is "Not Applicable," which is represented by dash marks.

Table 5-8: Summary of Union Pacific Railroad Rail Alternative West Option Impacts after Mitigation*

Phase	Impacts	Washington Heights	Roseland	Morgan Park	West Pullman	Riverdale	Calumet Park
Permanent	Land Use	Beneficial	Not Substantially Adverse	---	Not Substantially Adverse	Beneficial	---
	Economic Development	Beneficial	Beneficial	---	Beneficial	Beneficial	---
Construction	Land Use	Not Substantially Adverse	Not Substantially Adverse	---	Not Substantially Adverse	Not Substantially Adverse	---
	Economic Development	Beneficial	Beneficial	---	Beneficial	Beneficial	---
Cumulative	Land Use	Beneficial	Beneficial	---	Beneficial	Beneficial	---
	Economic Development	Beneficial	Beneficial	---	Beneficial	Beneficial	---

* Impact Categories: Not Applicable (---), Beneficial, No Impact, Not Adverse, Not Substantially Adverse, Adverse

5.5.1 Permanent Impacts and Mitigations - Union Pacific Railroad Rail Alternative - West Option

The UPRR West Option would be consistent with local and regional land use and economic development plans, as described in Section 4, that support the RLE Project along the UPRR corridor to 130th Street. This option would offer beneficial impacts, as described for the ROW Option in Section 5.3.1. The following subsections focus on more localized beneficial and adverse impacts on existing land use and economic development conditions in the project area neighborhoods.

5.5.1.1 Segment UA

5.5.1.1.1 Land Use

Washington Heights

The alignment would be within the I-94 and I-57 medians until it transitions to the western perimeter of the UPRR ROW, which would affect a small portion of Wendell Smith Park. Between 99th Street and 103rd Street, the UPRR West Option alignment would cross and directly affect a linear open space called Fernwood Parkway. This open space was utilized for active uses in the early 20th century, but currently exists as a passive green space. The mitigation for the direct impact would include a replacement of open space elsewhere in the neighborhood or project area. Due to the potential mitigation, the overall impact on the existing land use would be considered not substantially adverse (see *Parklands and Community Facilities Technical Memorandum*).

Across the street from Fernwood Parkway, there are approximately 35 single-family homes that front onto Eggleston Avenue and face Fernwood Parkway. This open space essentially serves as a linear buffer for the UPRR. Due to the proposed alignment, the UPRR West Option would affect the adjacent land uses because it is incompatible with single-family residential land uses. Mitigation would include additional street trees along the west side of Eggleston Avenue and an evergreen tree buffer along the east side of Eggleston Avenue. Due to potential mitigation, the overall impact on land uses would be considered not substantially adverse.

A new CTA rail station would be at 103rd Street, which would provide improved access to residences and businesses within the ½-mile station area. The northwest quadrant of this station area is within Washington Heights, which would benefit from improved access in the local area and region. The northern half of the station and primary access would be within Fernwood Parkway, which would be incorporated into the station design as a gateway park space or plaza to the station. Due to the lack of any residential or business displacements, the overall impact on Washington Heights' existing land uses would be considered beneficial due to improved land use access, new multi-modal access, and reuse of a passive open space.

Roseland

The 103rd Street station would provide improved access to existing land uses within the ½-mile station area. The southwest quadrant and eastern half of the station area would be within Roseland, which would benefit from improved access in the local area and region. The southern half of the station and auxiliary access, as well as a park & ride lot, would be on vacant land and a vacant building. With just compensation per the Uniform Act, the displacement impacts would be considered not substantially adverse because the land is vacant and underutilized. The park & ride lot would, however, be inconsistent with adjacent land uses and zoning designations for the adjacent single-family neighborhood. Mitigation for the park & ride lots would include a rezoning and screening, landscaping, and lighting appropriate for adjacent residential land uses. Overall, the impacts from the 103rd Street station would be considered beneficial due to improved land use access, new multi-modal access, and reuse of vacant properties.

A new substation would be located on vacant land along the east side of the UPRR ROW at 105th Street. The substation would be inconsistent with the adjacent single-family residential uses. Mitigation would include a rezoning and screening, landscaping, and appropriate architectural design and massing. Based on the mitigation, the impact on adjacent land uses would be not substantially adverse.

Between the 103rd and the 111th Streets, the UPRR West Option alignment would directly affect a limited number of commercial and industrial uses and a substantial amount of vacant land. In particular, the vacant land is overgrown and sometimes used for illegal dumping. This linear strip of industrial and vacant land is located behind the single-family residences along Eggleston Avenue and is detrimental to the overall quality of this residential neighborhood. With just compensation per the Uniform Act and relocation assistance, the displacement impacts would be considered not substantially adverse, because there is available commercial and industrial land elsewhere in the project area.

The 111th Street station would provide improved access to existing land uses within the ½-mile station area. The station and park & ride lot are proposed for vacant land between 110th Street and 111th Street, a local arterial with commercial and residential uses. The park & ride lot would be inconsistent with adjacent land uses and zoning designations for the adjacent single-family neighborhood. Mitigation for the park & ride lot would include a rezoning and screening, landscaping, and lighting appropriate for adjacent residential land uses. Overall, the impacts from the 111th Street station would be beneficial due to improved land use access, new multi-modal access, and reuse of vacant land.

Between 111th and 115th Streets, the UPRR West Option alignment would directly affect a limited number of single-family residences and businesses, a church property, vacant land, and unused properties of the UPRR (outside the linear railroad ROW). Mitigation for this affected area would be just compensation and relocation assistance. The UPRR West Option also would introduce an elevated rail line adjacent to single-family residential land uses. The impacts from implementation of the UPRR West Option on these land uses would be comparable to impacts from the UPRR (noise and vibration), so the impacts would be considered not substantially adverse.

A CTA rail station would be at Michigan Avenue, which would provide improved access to existing land uses within the ½-mile station area. Roseland's southernmost border is 115th Street, and the land uses north of 115th Street would benefit from improved access. This area includes the mixed-use business district along Michigan Avenue between 113th and 115th Streets, as well as a substantial amount of multi-family residential uses. All of these land uses would receive beneficial impacts from improved access to the Michigan Avenue station and the CTA rail network.

West Pullman

Between 115th and 116th Streets, the UPRR West Option impacts would be similar to those described for the UPRR ROW Option under Section 5.3.1.1.1 with a few exceptions, noted below.

An additional park & ride lot would not be included, as it would be under the UPRR ROW Option and the UPRR East Option. Instead, a five-story parking garage with ground-floor retail and community facilities would be located on the western side of the corridor and bordered by Michigan Avenue, 116th Street, and State Street. The UPRR West Option alignment and northern portion of the Michigan Avenue station would be also located within this affected area. Approximately 19 residences would be displaced by these facilities. With just compensation per the Uniform Act and relocation assistance, these impacts would be considered not substantially adverse due to the availability of residential real estate in the same neighborhood and considering the overall land use benefits to the neighborhood.

Across the street from the garage, single-family residential uses along State Street and 116th Street would be adversely affected by changes to the existing land use character. Although there would be no direct impacts, the mixed-use parking garage would be inconsistent with the single-family residential uses on State Street and 116th Street. Mitigation would include a rezoning and screening, landscaping, and appropriate architectural design and massing such as a “step-back” in the facade to help minimize the height of the garage. Based on the mitigation, the impact on adjacent residential land uses would be not substantially adverse.

Between 115th and 116th Streets, the UPRR West Option alignment and southern portion of the Michigan Avenue station would displace one residential property and vacant land. The impacts from implementation of the UPRR West Option on adjacent land uses would be comparable to impacts from the UPRR (noise, vibration, and visual), so the impacts would be considered not substantially adverse.

5.5.1.1.2 Economic Development

The UPRR West Option would provide beneficial travel time savings and new opportunities for business or residential development within the ½-mile station areas, as described for the UPRR ROW Option in Section 5.3.1.1.2. The following subsections highlight the economic development impacts within the project area neighborhoods that would directly benefit from a new station.

Washington Heights

As described in Section 5.5.1.1.1, there would be no acquisitions or displacements associated with the UPRR West Option within Washington Heights. Hence, the UPRR West Option economic development impacts would be beneficial and similar to those described for the UPRR ROW Option in Section 5.3.1.1.2 and for the UPRR East Option in Section 5.4.1.1.2.

Roseland

As described in Section 5.5.1.1.1, there would be numerous property displacements related to the UPRR West Option alignment, stations, and park & ride lots at the 103rd and 111th Streets, as well as a nearby substation. The conversion of these properties to public use would temporarily affect property tax revenues due to the displaced single-family homes and businesses; however, the affected residents and businesses would be offered relocation assistance within Roseland. These property acquisitions would not adversely affect the local real estate market due to the availability of comparable real estate within this neighborhood. As it would be in Washington Heights, the new rail stations could increase property values in relation to their proximity to the stations. Also, the new stations would increase the potential to attract new residential and/or commercial development. Therefore, the overall impact on Roseland would be considered beneficial for local economic development.

West Pullman

As described in Section 5.5.1.1.1, there would be numerous property acquisitions and displacements related to the UPRR West Option alignment, Michigan Avenue station, and five-story mixed-use parking garage, as well as a nearby substation. The conversion of these properties to public use would temporarily affect property tax revenues due to the displaced single-family homes and businesses; however, the affected residents and businesses would be offered relocation assistance within West Pullman and the new businesses on the ground floor of the mixed-use parking garage would generate retail tax revenue. These property acquisitions would not adversely affect the local real estate market due to the availability of comparable real estate within this neighborhood. As it would be in Washington Heights and Roseland, the new rail station could increase property values in relation to their proximity to the stations. Also, the new station would increase the potential to attract new residential and/or commercial development, especially after construction of the Roseland Plaza development near the station. The overall impact would be considered beneficial for local economic development in West Pullman.

5.5.1.2 Segment UB

5.5.1.2.1 Land Use

The UPRR West Option land use impacts within the Riverdale neighborhood would be similar to those described for the UPRR ROW Option (Section 5.3.1.2.1) and for the UPRR East Option (5.4.1.2.1). There would be a slight difference in impacts within West Pullman, as noted below.

West Pullman

Between the 117th Street and the CN/Metra tracks, the UPRR West Option alignment would displace a limited number of single-family residential uses, an industrial use, and vacant land. With just compensation and relocation assistance per the Uniform Act, the impact on existing land uses would be not substantially adverse. The impacts from implementation of the UPRR West Option on adjacent land uses would be comparable to those of the UPRR (noise, vibration, and visual), so the impacts would be considered not substantially adverse.

5.5.1.2.2 Economic Development

The UPRR West Option economic development impacts within the Riverdale neighborhood would be similar to those described for the UPRR ROW Option (Section 5.3.1.2.2) and for the UPRR East Option (5.4.1.2.2). There would be a slight difference in impacts within West Pullman, as noted below.

West Pullman

There would be a limited number of displacements in this segment as described in Section 5.5.1.2.1 above; therefore, the economic development benefits from the UPRR West Option would be similar to those described in Section 5.5.1.1.2 for West Pullman.

5.5.2 Construction Impacts and Mitigations - Union Pacific Railroad Rail Alternative - West Option

Construction of the proposed UPRR West Option, including construction staging activities, would occur on land acquired for the project's permanent ROW. As such, there would be no acquisition or displacement impacts from construction.

5.5.2.1 Segment UA

5.5.2.1.1 Land Use

The UPRR West Option impacts would be similar to those described for the UPRR ROW Option (Section 5.3.2.1.1) and for the UPRR East Option (Section 5.4.2.1.1). The overall land use impacts from construction would be considered not substantially adverse within Washington Heights, Roseland, and West Pullman.

5.5.2.1.2 Economic Development

The UPRR West Option impacts would be similar to those described for the UPRR ROW Option (Section 5.3.2.1.2) and for the UPRR East Option (Section 5.4.2.1.2). Based on the mitigations and the beneficial impacts of the project, the overall economic development impact from construction would be considered beneficial to the Washington Heights, Roseland, West Pullman, and Riverdale neighborhoods.

5.5.2.2 Segment UB

5.5.2.2.1 Land Use

The UPRR West Option land use impacts would be similar to those described for the UPRR ROW Option (Section 5.3.2.2.1) and for the UPRR East Option (Section 5.4.2.2.1). The overall land use impacts from construction would be considered not adverse within West Pullman and Riverdale.

5.5.2.2.2 Economic Development

The UPRR West Option economic development impacts would be similar to those described for the UPRR ROW Option (Section 5.3.2.2.2) and for the UPRR East Option (Section 5.4.2.2.2). The overall economic development impacts from construction would be considered not adverse within West Pullman and Riverdale.

5.5.3 Cumulative Impacts and Mitigations - Union Pacific Railroad Rail Alternative - West Option

5.5.3.1 Segment UA

5.5.3.1.1 Land Use

The UPRR West Option cumulative land use impacts would be similar to those described for the UPRR ROW Option (Section 5.3.3.1.1) and for the UPRR East Option (Section 5.4.3.1.1). The cumulative land use impacts would be beneficial for Washington Heights, Roseland, and West Pullman.

5.5.3.1.2 Economic Development

The UPRR West Option cumulative economic development impacts would be similar to those described for the UPRR ROW Option (Section 5.3.3.1.2) and for the UPRR East Option (Section 5.4.3.1.2). The cumulative economic development impacts would be beneficial for Washington Heights, Roseland, and West Pullman.

5.5.3.2 Segment UB

5.5.3.2.1 Land Use

The UPRR West Option cumulative land use impacts would be similar to those described for the UPRR ROW Option (Section 5.3.3.2.1) and for the UPRR East Option (Section 5.4.3.2.1). The cumulative land use impacts would be beneficial for West Pullman and Riverdale.

5.5.3.2.2 Economic Development

The UPRR West Option cumulative economic development impacts would be similar to those described for the UPRR ROW Option (Section 5.3.3.2.2) and for the UPRR East Option (Section 5.4.3.2.2). The cumulative economic development impacts would be beneficial for West Pullman and Riverdale.

5.5.4 120th Street Yard and Shop

A new yard and shop for 270 train cars would be constructed as part of the RLE Project. The new maintenance yard and shop would be built on a combination of industrial and vacant land east of the CN/Metra tracks and west of the IHB/NICTD tracks at approximately 120th Street and Cottage Grove Avenue. Impacts and mitigations for this option would be the same as for the ROW Option, described in Section 5.3.4.

5.6 Halsted Rail Alternative

The Halsted Rail Alternative is a proposed rail extension from the CTA's 95th Street Terminal, along elevated structure within I-94 and 1-57 medians, and then within the median of Halsted Street from 99th Street to 129th Street. New rail stations would be at 103rd Street, 111th Street, 119th Street, and Vermont Avenue. The Halsted Rail Alternative would directly affect the Washington Heights, Roseland, Morgan Park, and West Pullman neighborhoods. Table 5-9 highlights the overall impacts after mitigation and the following subsections describe the specific impacts for the directly affected neighborhoods in Segment HA (95th Street to 120th Street) and

Segment HB (120th Street to 129th Street). If the alternative would not pass through a neighborhood, the impact category assigned to that neighborhood is "Not Applicable," which is represented by dash marks.

Table 5-9: Summary of Halsted Rail Alternative Impacts after Mitigation*

Phase	Impacts	Washington Heights	Roseland	Morgan Park	West Pullman	Riverdale	Calumet Park
Permanent	Land Use	Beneficial	Beneficial	Beneficial	Adverse	---	Beneficial
	Economic Development	Beneficial	Beneficial	Beneficial	Beneficial	---	Beneficial
Construction	Land Use	Not Substantially Adverse	Not Substantially Adverse	Not Substantially Adverse	Not Substantially Adverse	---	Not Substantially Adverse
	Economic Development	Beneficial	Beneficial	Beneficial	Beneficial	---	No Impact
Cumulative	Land Use	Beneficial	Beneficial	Beneficial	Beneficial	---	No Impact
	Economic Development	Beneficial	Beneficial	Beneficial	Beneficial	---	No Impact

* Impact Categories: Not Applicable (---), Beneficial, No Impact, Not Adverse, Not Substantially Adverse, Adverse

5.6.1 Permanent Impacts and Mitigations - Halsted Rail Alternative

The Halsted Street corridor would have slow growth in population and substantial employment growth between the 2010 base year and 2030 with the Halsted Rail Alternative, according to CMAP forecasts. With the Halsted Rail Alternative, population growth within the corridor, at 10 percent, would be below the average population growth within the metropolitan area, at 15 percent. Employment growth within the corridor, at 56 percent, would be well above the metropolitan average at 16 percent. The most substantial growth in employment would be at the 119th Street and Vermont Avenue station areas, with growth rates of 184 percent and 169 percent, respectively. The highest concentration of jobs within the corridor would shift geographically between 2010 and 2030, from 111th Street station to 119th Street station. Table 5-10 contains the quantitative land use and economic development data for the Halsted Street corridor, for the 2010 base year and 2030 with the Halsted Rail Alternative.

Table 5-10: Quantitative Land Use and Economic Development Data for Halsted Rail Alternative Alignment*

Data	2010 Base Year	2030 with Halsted Rail Alternative	Growth
Metropolitan Area			
Total Population	2,653,719	3,056,567	15%
Total Employment	1,241,492	1,439,154	16%
Central Business District			
Total Employment	537,369	629,690	17%

Data	2010 Base Year	2030 with Halsted Rail Alternative	Growth
Employment - Portion of Metropolitan Area	43%	44%	---
Central Business District Land Area (square mile)	3.65	3.65	---
Employment Density (jobs per square mile)	147,189	172,476	---
Corridor			
Total Population	46,556	51,142	10%
Total Employment	2,930	4,571	56%
Population - Portion of Metropolitan Area	1.75%	1.67%	---
Employment - Portion of Metropolitan Area	0.24%	0.32%	---
Corridor Land Area (square mile)	5.74	5.74	---
Population Density (persons per square mile)	8,108	8,906	---
Employment Density (jobs per square mile)	510	796	---
All Station Areas			
Housing Units	8,314	8,840	6%
Population	25,044	27,558	10%
Employment	1,748	3,064	75%
Land Area (square mile)	3.14	3.14	---
Housing Unit Density (units per square mile)	2,647	2,814	---
Population Density (persons per square mile)	7,973	8,773	---
Employment Density (persons per square mile)	556	975	---
103rd Street Station Area			
Housing Units	2,502	2,524	1%
Population	7,377	7,715	5%
Employment	351	434	24%
Land Area (square mile)	0.79	0.79	---
Housing Unit Density (units per square mile)	3,186	3,214	---
Population Density (persons per square mile)	9,394	9,825	---
Employment Density (persons per square mile)	447	552	---
111th Street Station Area			
Housing Units	2,384	2,615	10%
Population	6,999	7,812	12%
Employment	774	867	12%
Land Area (square mile)	0.79	0.79	---
Housing Unit Density (units per square mile)	3,036	3,330	---
Population Density (persons per square mile)	8,913	9,948	---

Data	2010 Base Year	2030 with Halsted Rail Alternative	Growth
Employment Density (persons per square mile)	985	1,104	---
119th Street Station Area			
Housing Units	1,797	2,013	12%
Population	5,919	6,789	15%
Employment	562	1,598	184%
Land Area (square mile)	0.79	0.79	---
Housing Unit Density (units per square mile)	2,289	2,563	---
Population Density (persons per square mile)	7,537	8,646	---
Employment Density (persons per square mile)	716	2,035	---
Vermont Avenue Station Area			
Housing Units	1,631	1,688	4%
Population	4,749	5,241	10%
Employment	62	166	169%
Land Area (square mile)	0.79	0.79	---
Housing Unit Density (units per square mile)	2,076	2,150	---
Population Density (persons per square mile)	6,048	6,674	---
Employment Density (persons per square mile)	78	211	---

Source: Chicago Metropolitan Agency for Planning 2030 Forecast by Subzone, March 22, 2012
Note: * Quantitative data for the corridor and for each station area is measured for the area within ½ mile of the alignment.

5.6.1.1 Segment HA

5.6.1.1.1 Land Use

Like the No Build Alternative (Section 5.1.1.1) and the BRT Alternative (Section 5.2.1.1), the Halsted Rail Alternative would be inconsistent with the region's comprehensive plan, which supports the RLE Project along the UPRR corridor; however, the Halsted Rail Alternative would not create any new inconsistencies beyond those that already exist, and would not create an adverse impact on land uses. The Halsted Rail Alternative would provide similar land use benefits as the UPRR Rail Alternative options: to connect residents to regional jobs, shopping, and destinations; to provide a direct connection between affordable housing and regional jobs; to encourage new development and redevelopment near stations, and to improve overall livability. One of the primary factors for beneficial impacts relates to the alternative's travel time savings, which would contribute to beneficial land use and economic development impacts. The travel time savings between 95th and 129th Streets would be approximately 17.5 minutes when compared to the No Build Alternative (see Table 5-4). This travel time savings would be slightly greater than with the UPRR Rail Alternative options; however, the Halsted Rail Alternative would not have the added benefit of serving the Riverdale neighborhood, including the Altgeld Gardens public housing site. The following subsections focus on more localized beneficial and adverse impacts on existing land use and economic development conditions in the project area neighborhoods.

Washington Heights

From the existing 95th Street Terminal, the Halsted Street Alternative alignment would be in the I-94 and I-57 medians until Halsted Street. At transition from I-57 to Halsted Street, the alignment would directly affect one single-family residence and several mixed-use properties. With just compensation and relocation assistance per the Uniform Act, the impact would be not substantially adverse.

A new substation would be at 101st Street on vacant properties along Halsted Street, adjacent to a church parking lot and single-family residences. Although there would be no direct impacts, the substation would be inconsistent with the adjacent single-family residential uses on Emerald Avenue. Mitigation would include a rezoning and screening, landscaping, and appropriate architectural design and massing. Based on the mitigation, the impact on adjacent residential land uses would be not substantially adverse.

A CTA rail station would be at 103rd Street, which would provide improved access to residences and businesses within the ½-mile station area. The western half and the northeast quadrant of this station area would be within Washington Heights, which would benefit from improved access in the local area and region. A park & ride lot would be located on the northwest corner of Halsted and 103rd Streets, which would directly affect several mixed-use properties. With just compensation and relocation assistance per the Uniform Act, the impact would be not substantially adverse. The park & ride lot would, however, be inconsistent with adjacent single-family residential uses and existing zoning on Green Street. Mitigation for the park & ride lot would include a rezoning and screening, landscaping, and lighting appropriate for adjacent residential land uses. Overall, the impacts from the 103rd Street station would be beneficial due to improved land use access and new multi-modal access.

Roseland

As described above, the 103rd Street station would provide improved access to residences and businesses within the ½-mile station area. The southeast quadrant of this station area would be within Roseland, which would benefit from improved access in the local area and region. Because there would be no residential or business displacements, the overall impact on Roseland's existing land uses would be considered beneficial from improved land use access and new multi-modal access.

A substation would be at 110th Street on vacant properties along Halsted Street, adjacent to commercial uses and single-family residences. Although there would be no direct impacts, the substation would be inconsistent with the adjacent single-family residential uses on Emerald Avenue. Mitigation would include a rezoning and screening, landscaping, and appropriate architectural design and massing. Based on the mitigation, the impact on adjacent residential land uses would be not substantially adverse.

A CTA rail station would be at 111th Street, which would provide improved access to residences and businesses within the ½-mile station area. The eastern half of this station area would be within Roseland, which would benefit from improved access in the local area and region. Because there would be no residential or business displacements, the overall impact on Roseland's existing land uses would be considered beneficial from improved land use access and new multi-modal access.

Morgan Park

As described above, the 111th Street station would provide improved access to residences and businesses within the ½-mile station area. The western half of this station area would be within Morgan Park, which would benefit from improved access in the local area and region. A park & ride lot would be located on the northwest corner of Halsted and 111th Streets, which would directly affect two mixed-use properties. With just compensation and relocation assistance per the Uniform Act, the impact would be not substantially adverse. The park & ride lot would, however, be inconsistent with adjacent single-family residential uses and zoning on Green Street. Mitigation for the park & ride lot would include a rezoning and screening, landscaping, and lighting appropriate for adjacent residential land uses. Overall, the impacts from the 111th Street station would be beneficial due to improved land use access and new multi-modal access.

West Pullman

A new CTA rail station would be at 119th Street, which would provide improved access to residences and businesses within the ½-mile station area. A regional park & ride lot would be located on the southwest corner of Halsted and 119th Streets, which would directly affect numerous mixed-use properties, an industrial property, and vacant land. Because the park & ride lot would be within the West Pullman Industrial Corridor, the park & ride lot would be consistent with adjacent land uses along 119th and 120th Streets. Due to the size of the park & ride lot, there would be an impact on the neighborhood's beautification efforts for the Industrial Corridor. Mitigation for the park & ride lot would include screening, landscaping, and lighting used elsewhere within the Industrial Corridor. Overall, the impacts from the 119th Street station would be beneficial due to improved land use access and new multi-modal access.

A new substation would be located nearby on vacant properties along Halsted Street at 118th Place, adjacent to single-family residences. Although there would be no direct impacts, the substation would be inconsistent with the adjacent single-family residential uses on 118th Place. Mitigation would include a rezoning and screening, landscaping, and appropriate architectural design and massing. Based on the mitigation, the impact on adjacent residential land uses would be not substantially adverse.

5.6.1.1.2 Economic Development

The Halsted Rail Alternative would provide beneficial travel time savings and new opportunities for business or residential development within the ½-mile station areas, as described above for the UPRR Rail Alternative. The following subsections highlight the economic development impacts within the project area neighborhoods that would directly benefit from a new station due to new accessibility for residents and increased foot traffic for businesses.

Washington Heights

As described in Section 5.6.1.1.1, there would be several property displacements related to the Halsted Rail Alternative alignment and park & ride lot at the 103rd Street, as well as a nearby substation. The conversion of these properties to public use would temporarily affect property tax revenues due to the displaced mixed-use (retail/apartments) and commercial businesses; however, the affected rental tenants and businesses would be offered relocation assistance within Washington Heights. These property acquisitions would not adversely affect the local commercial real estate market due to the availability of comparable real estate within this neighborhood. Similar to the UPRR Rail Alternative, the Halsted Rail Alternative could increase property values in relation to their proximity to the 103rd Street station. Also, the new station would increase the potential to attract new residential and/or commercial development. Therefore, the overall impact on Washington Heights would be considered beneficial for local economic development.

Roseland

As described in Section 5.6.1.1.1, there would be several property displacements related to the proposed substation at 110th Street. The conversion of these properties to public use would not affect property tax revenues because the properties are currently vacant. Similar to the UPRR Rail Alternative, the Halsted Rail Alternative could increase property values in relation to their proximity to the 103rd Street and the 111th Street stations. Also, the new stations would increase the potential to attract new residential and/or commercial development. Therefore, the overall impact on Washington Heights would be considered beneficial for local economic development.

Morgan Park

As described in Section 5.6.1.1.1, there would be two property displacements related to the park & ride lot at the 111th Street station. The conversion of these properties to public use would temporarily affect property tax revenues due to the displaced businesses; however, the affected businesses would be offered relocation assistance within Morgan Park. These property acquisitions would not adversely affect the local commercial real estate market due to the availability of comparable real estate within this neighborhood. Similar to the UPRR Rail Alternative, the Halsted Rail Alternative could increase property values in relation to their proximity to the 111th Street station. Also, the new station would increase the potential to attract new residential and/or commercial development. Therefore, the overall impact on Morgan Park would be considered beneficial for local economic development.

West Pullman

As described in Section 5.6.1.1.1, there would be numerous property displacements related to the park & ride lot at the 119th Street station as well as a nearby substation. The conversion of these properties to public use would temporarily affect property tax revenues due to the displaced businesses; however, the affected businesses would be offered relocation assistance within West Pullman. These property acquisitions would not adversely affect the local commercial real estate market due to the availability of comparable real estate within this neighborhood. Similar to the UPRR Rail Alternative, the Halsted Rail Alternative could increase property values in relation to their proximity to the 119th Street station. Also, the new station would increase the potential to attract new residential and/or commercial development. Therefore, the overall impact on West Pullman would be considered beneficial for local economic development.

5.6.1.2 Segment HB

5.6.1.2.1 Land Use

West Pullman

As stated in Section 5.6.1.1, the 119th Street station would provide improved access to residences and businesses within the ½-mile station area. Because there would be no residential or business displacements, the overall impact on West Pullman's existing land uses would be considered beneficial from improved land use access and new multi-modal access.

A new substation would be located nearby on a commercial parking lot along Halsted Street at 126th Street, adjacent to single-family residences. With just compensation per the Uniform Act, the direct impact on the commercial property would be not substantially adverse. The substation would, however, be inconsistent with the adjacent single-family residential uses on Emerald Avenue. Mitigation would include a rezoning and screening, landscaping, and appropriate architectural design and massing. Based on the mitigation, the impact on adjacent residential land uses would be not substantially adverse.

A new CTA rail station would be at Vermont Avenue and Halsted Street, which would provide improved access to residences and businesses within the ½-mile station area. A seven-story mixed-use parking garage with ground-floor retail and community facilities would be located along Vermont Avenue and Halsted, Green, and 128th Streets, which would displace a mixed-use commercial building with several businesses and 11 single-family residences. With just compensation and relocation assistance per the Uniform Act, these impacts would be considered not substantially adverse due to the availability of commercial and residential real estate in the same neighborhood.

Across the street from the garage, single-family residential uses along Vermont Avenue and Green Street would be adversely affected by changes to the existing land use character. Due to the seven-story height of the garage, and because the adjacent single-family residential homes are one-story structures, the impact on existing land use character would be considered adverse.

Village of Calumet Park

As described above, the Vermont Avenue station would provide improved access to residences and businesses within the ½-mile station area. West of Carpenter Street, a small portion of the Village of Calumet Park would receive beneficial access impacts for primarily single-family residential uses. West of Halsted Street and north of 127th Street, the majority of land uses within the Village relate to the Cedar Park Cemetery. Because there would be no residential or business displacements, the overall impact on the Village of Calumet Park's existing land uses would be considered beneficial from improved land use access and new multi-modal access.

5.6.1.2.2 Economic Development

West Pullman

As described in Section 5.6.1.2.1, there would be numerous property displacements related to the mixed-use parking garage at the Vermont Avenue station as well as a nearby substation. The conversion of these properties to public use would temporarily affect property tax revenues due to the displaced single-family homes and businesses; however, the affected families and businesses would be offered relocation assistance within West Pullman. These property acquisitions would not adversely affect the local residential and commercial real estate market due to the availability of comparable real estate within this neighborhood. Similar to the UPRR Rail Alternative, the Halsted Rail Alternative could increase property values in relation to their proximity to the 119th Street station and the Vermont Avenue station. Also, the new stations would increase the potential to attract new residential and/or commercial development. Therefore, the overall impact on West Pullman would be considered beneficial for local economic development.

Village of Calumet Park

As described in Section 5.6.1.2.1, there would be no displacements within the Village of Calumet Park. Therefore, the Halsted Rail Alternative could increase property values in relation to their proximity to the Vermont Avenue station. Also, the new station would increase the potential to attract new residential and/or commercial development on vacant land adjacent to the Little Calumet River. Therefore, the overall impact on the Village of Calumet Park would be considered beneficial for local economic development.

5.6.2 Construction Impacts and Mitigations - Halsted Rail Alternative

Construction of the proposed Halsted Rail Alternative, including construction staging activities, would occur on land acquired for the project's permanent ROW. As such, there would be no acquisition or displacement impacts from construction.

5.6.2.1 Segment HA

5.6.2.1.1 Land Use

Construction would take up to 5 years and would cause temporary adverse impacts on commercial properties along Halsted Street and adjacent residential neighborhoods due to noise, vibration, fugitive dust, truck traffic, and roadway detours. Mitigation methods would include daytime construction activities and other best management practices (see *Construction Impacts Technical Memorandum* for more details). Based on these mitigations and the beneficial impacts of the project, the land use impacts from construction would be considered not substantially adverse in the affected neighborhoods: Washington Heights, Roseland, Morgan Park, and West Pullman.

5.6.2.1.2 Economic Development

Similar to the UPRR Rail Alternative, the Halsted Street Alternative would not substantially influence regional construction costs due to the large size of Chicago's construction industry. Construction would take up to 5 years and would cause temporary adverse impacts on adjacent commercial uses on Halsted Street due to noise, vibration, fugitive dust, truck traffic, and roadway detours. Construction activities would occur throughout the Halsted Street corridor within the median and adjacent travel lane, which would affect travel lane patterns and on-street parking. Mitigation methods would include daytime construction activities, commercial signage during detours, and special advertising for businesses within the ½-mile API (see *Construction Impacts Technical Memorandum* for more details). Due to the nature and size of the small businesses along Halsted Street, some businesses might not be able to maintain their customer base and could potentially lose business from construction-related disruptions. Due to the short-term nature of construction activities, these impacts would be considered not substantially adverse.

There would be short-term economic beneficial impacts from construction jobs. The total estimated YOE (2026) capital cost of the Halsted Alternative is approximately $2.4 billion. Similar to the construction job estimate described for the UPRR Rail Alternative in Section 5.3.2.1.2, the Halsted Rail Alternative would create approximately 5,350 total jobs during the year with peak mobilization and construction.

Based on the mitigations and the beneficial impacts of the project, the overall economic development impact from construction would be considered beneficial to the Washington Heights, Roseland, Morgan Park, and West Pullman neighborhoods.

5.6.2.2 Segment HB

5.6.2.2.1 Land Use

Similar to the impacts and mitigation described in Section 5.6.2.1.1, the land use impacts from construction would be considered not substantially adverse in West Pullman and the Village of Calumet Park.

5.6.2.2.2 Economic Development

Similar to the impacts and mitigation described in Section 5.6.2.1.2, the economic development impacts from construction would be considered adverse in West Pullman. Due to the lack of any businesses on Halsted Street within the Village of Calumet Park, there would be no impact on economic development.

5.6.3 Cumulative Impacts and Mitigations - Halsted Rail Alternative

5.6.3.1 Segment HA

5.6.3.1.1 Land Use

The cumulative land use impacts for the Halsted Rail Alternative would be similar to those described for the UPRR ROW Option (Section 5.3.3.1.1), the UPRR East Option (Section 5.4.3.1.1), and the UPRR West Option (Section 5.5.3.1.1). The cumulative land use impacts would be beneficial for Washington Heights, Roseland, and West Pullman. There would be one difference between the Halsted Rail Alternative and the UPRR Rail Alternative. Morgan Park would be unaffected by the UPRR Rail Alternative, but would receive beneficial impacts as a result of the Halsted Rail Alternative.

5.6.3.1.2 Economic Development

The cumulative economic development impacts for the Halsted Rail Alternative would be similar to those described for the UPRR ROW Option (Section 5.3.3.1.2), the UPRR East Option (Section 5.4.3.1.2), and the UPRR West Option (Section 5.5.3.1.2). The cumulative economic development impacts would be beneficial for Washington Heights, Roseland, and West Pullman. There would be one difference between the Halsted Rail Alternative and the UPRR Rail Alternative. Morgan Park would be unaffected by the UPRR Rail Alternative, but would receive beneficial impacts as a result of the Halsted Rail Alternative.

5.6.3.2 Segment HB

5.6.3.2.1 Land Use

The cumulative land use impacts for the Halsted Rail Alternative would be similar to those described for the UPRR ROW Option (Section 5.3.3.2.1), the UPRR East Option (Section 5.4.3.2.1), and the UPRR West Option (Section 5.5.3.2.1). The cumulative land use impacts would be beneficial for West Pullman. There would be two differences between the Halsted Rail Alternative and the UPRR Rail Alternative. The Village of Calumet Park has not developed a new comprehensive plan, station area plan, or relevant policies that would allow it to benefit more directly from the RLE Project, so there would be no adverse or beneficial cumulative land use impacts.

5.6.3.2.2 Economic Development

The cumulative economic development impacts for the Halsted Rail Alternative would be similar to those described for the UPRR ROW Option (Section 5.3.3.2.2), the UPRR East Option (Section 5.4.3.2.2), and the UPRR West Option (Section 5.5.3.2.2). The cumulative economic development impacts would be beneficial for West Pullman. There would be two differences between the Halsted Rail Alternative and the UPRR Rail Alternative. The Village of Calumet Park has not developed any economic development plans or policies that would allow it to benefit more directly from the RLE Project, so there would be no adverse or beneficial cumulative economic development impacts.

5.6.4 119th Street Yard and Shop

A new maintenance yard and shop for 270 train cars would be constructed as part of the RLE Project. The new maintenance yard and shop would be built on a combination of industrial and vacant land west of Halsted Street between 119th and 120th Streets in the West Pullman Industrial Corridor.

5.6.4.1 Permanent Impacts and Mitigations

5.6.4.1.1 Land Use

The yard and shop, as well as adjacent substation, would be located within an industrial area; therefore, these facilities would be consistent with existing land uses. These new facilities would require the displacement of a several industrial and commercial properties, as well as the acquisition of vacant land. With just compensation and relocation assistance per the Uniform Act, the direct impact on existing land uses would be considered not substantially adverse.

5.6.4.1.2 Economic Development

As described in Section 5.6.4.1.1, there would be several property displacements related to the maintenance yard and shop and adjacent substation. The conversion of these properties to public use would temporarily affect property tax revenues due to the displaced businesses; however, the businesses would be offered relocation assistance within West Pullman. These property acquisitions would not adversely affect the local real estate market due to the availability of comparable real estate within this neighborhood. In addition, the City has been working to redevelop the vacant and cleared site of the former Sherman Williams factor within the West Pullman Industrial Corridor, so these new facilities would be considered beneficial to the City's economic development effort. Because compensation and relocation assistance would mitigate displacement impacts, the overall impact on West Pullman would be considered beneficial for local economic development from redevelopment of vacant land and the development of a new industrial facility that would provide new job opportunities to local residents.

5.6.4.2 Construction Impacts and Mitigations

Construction of the proposed yard and shop, including construction staging activities, would occur on land acquired for the yard's permanent ROW. As such, there would be no acquisition or displacement impacts from construction. Because the maintenance yard and shop would be located in an industrial area, the construction activities would be considered not adverse for land use or economic development.

Section 6
Impacts Remaining After Mitigation

This section describes the permanent impacts of the RLE Project remaining after mitigating for impacts as described in Section 5.

6.1 No Build Alternative

There would be no adverse impacts on land use or on economic development as a result of the No Build Alternative.

6.2 Bus Rapid Transit Alternative

There would be no adverse impacts on land use or on economic development as a result of the BRT Alternative.

6.3 Union Pacific Railroad Rail Alternative - Right-of-Way Option

6.3.1 Segment UA

After mitigation, there would be no remaining adverse impacts on land use or on economic development from the UPRR ROW Option.

6.3.2 Segment UB

After mitigation, there would be no remaining adverse impacts on land use or on economic development from the UPRR ROW Option.

6.3.3 120th Street Yard and Shop

After mitigation, there would be no remaining adverse impacts on land use or on economic development from the 120th Street yard and shop.

6.4 Union Pacific Railroad Rail Alternative - East Option

6.4.1 Segment UA

After mitigation, there would be no remaining adverse impacts on land use or on economic development from the UPRR East Option.

6.4.2 Segment UB

After mitigation, there would be no remaining adverse impacts on land use or on economic development from the UPRR East Option.

6.4.3 120th Street Yard and Shop

After mitigation, there would be no remaining adverse impacts on land use or on economic development from the 120th Street yard and shop.

6.5 Union Pacific Railroad Rail Alternative - West Option

6.5.1 Segment UA

After mitigation, there would be no remaining adverse impacts on land use or on economic development from the UPRR West Option.

6.5.2 Segment UB

After mitigation, there would be no remaining adverse impacts on land use or on economic development from the UPRR West Option.

6.5.3 120th Street Yard and Shop

After mitigation, there would be no remaining adverse impacts on land use or on economic development from the 120th Street yard and shop.

6.6 Halsted Rail Alternative

6.6.1 Segment HA

After mitigation, there would be no remaining adverse impacts on land use or on economic development from the Halsted Rail Alternative within this segment.

6.6.2 Segment HB

There would be adverse impacts remaining after mitigation due to the Vermont Avenue mixed-use parking garage within a single-family residential area in West Pullman.

Due to the recent and current planning efforts, as well as the overall economic decline in the project area since the 1980s, there would be adverse cumulative impacts as a result of the Halsted Rail Alternative on the Riverdale neighborhood, which would not be connected by this alternative.

6.6.3 119th Street Yard and Shop

After mitigation, there would be no remaining adverse impacts on land use or on economic development from the 119th Street yard and shop.

Section 7
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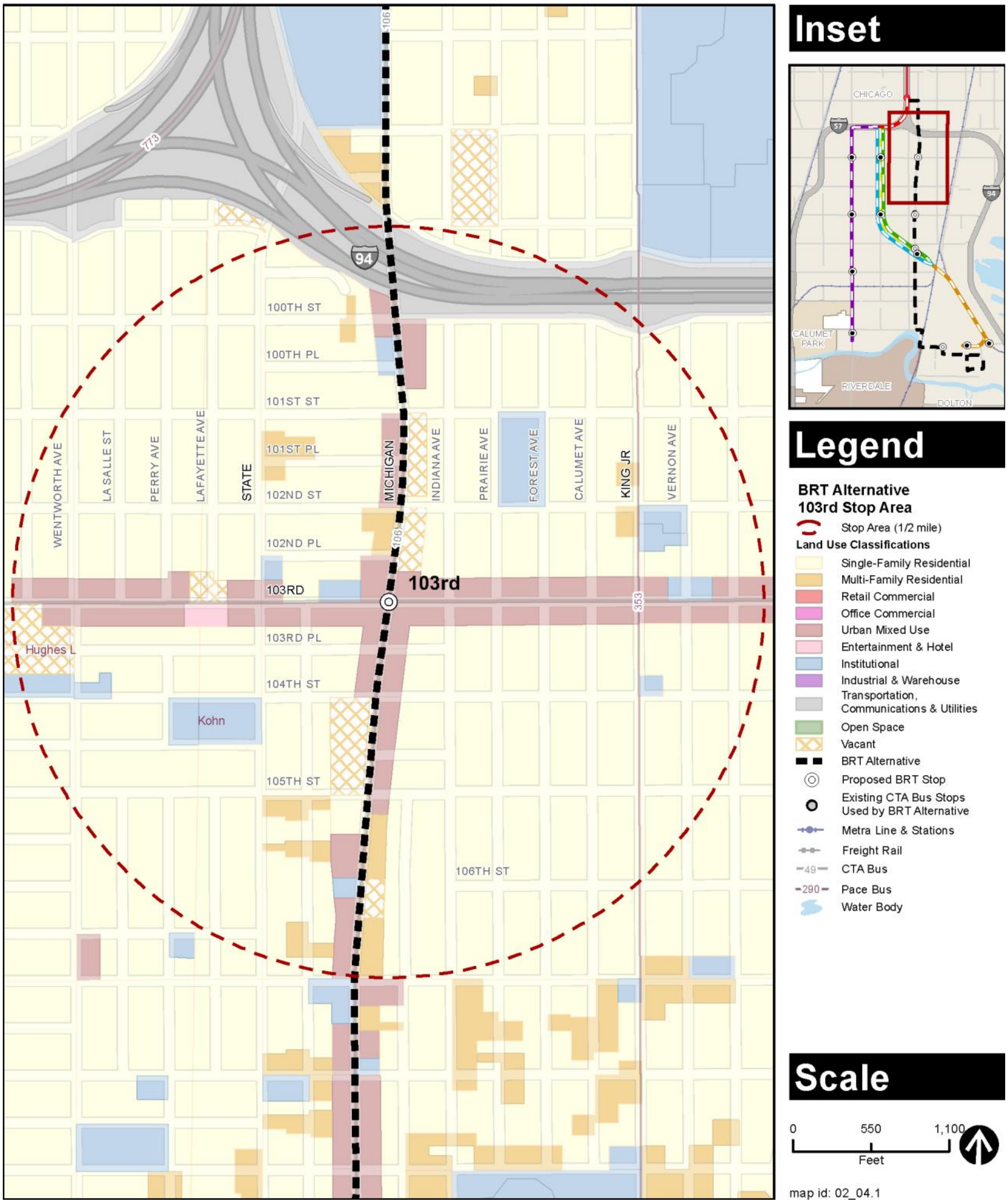
Appendix A
Detailed Maps of Current Land Uses (13 pages)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Single-Family Residential
Multi-Family Residential
Retail Commercial
Office Commercial
Urban Mixed Use
Entertainment & Hotel
Institutional
Industrial & Warehouse
Transportation, Communications & Utilities
Open Space
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BRT Alternative
Proposed BRT Stop
Existing CTA Bus Stops Used by BRT Alternative
Metra Line & Stations
Freight Rail
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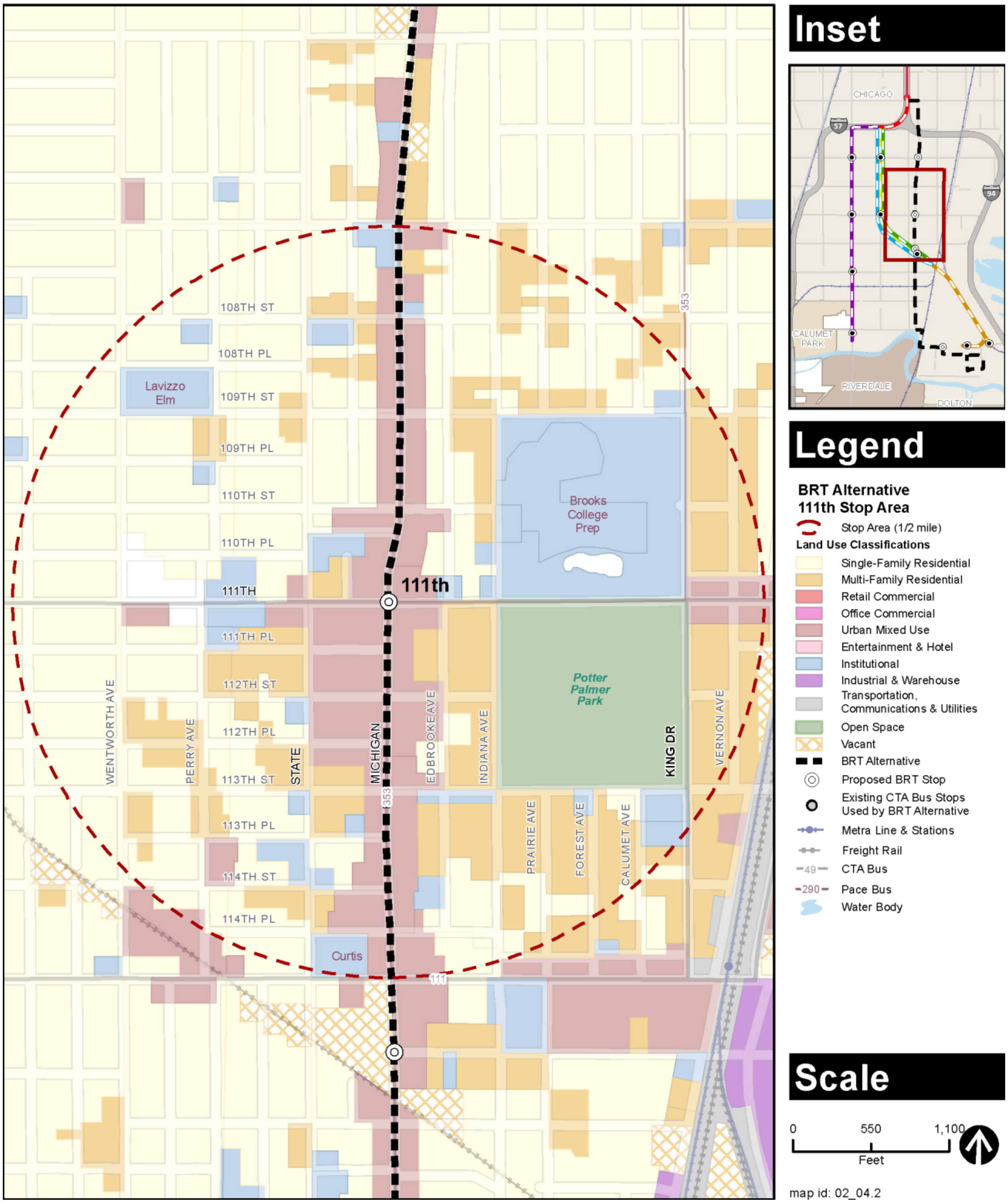
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Brooks College Prep
Potter Palmer Park
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BRT Alternative
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Multi-Family Residential
Retail Commercial
Office Commercial
Urban Mixed Use
Entertainment & Hotel
Institutional
Industrial & Warehouse
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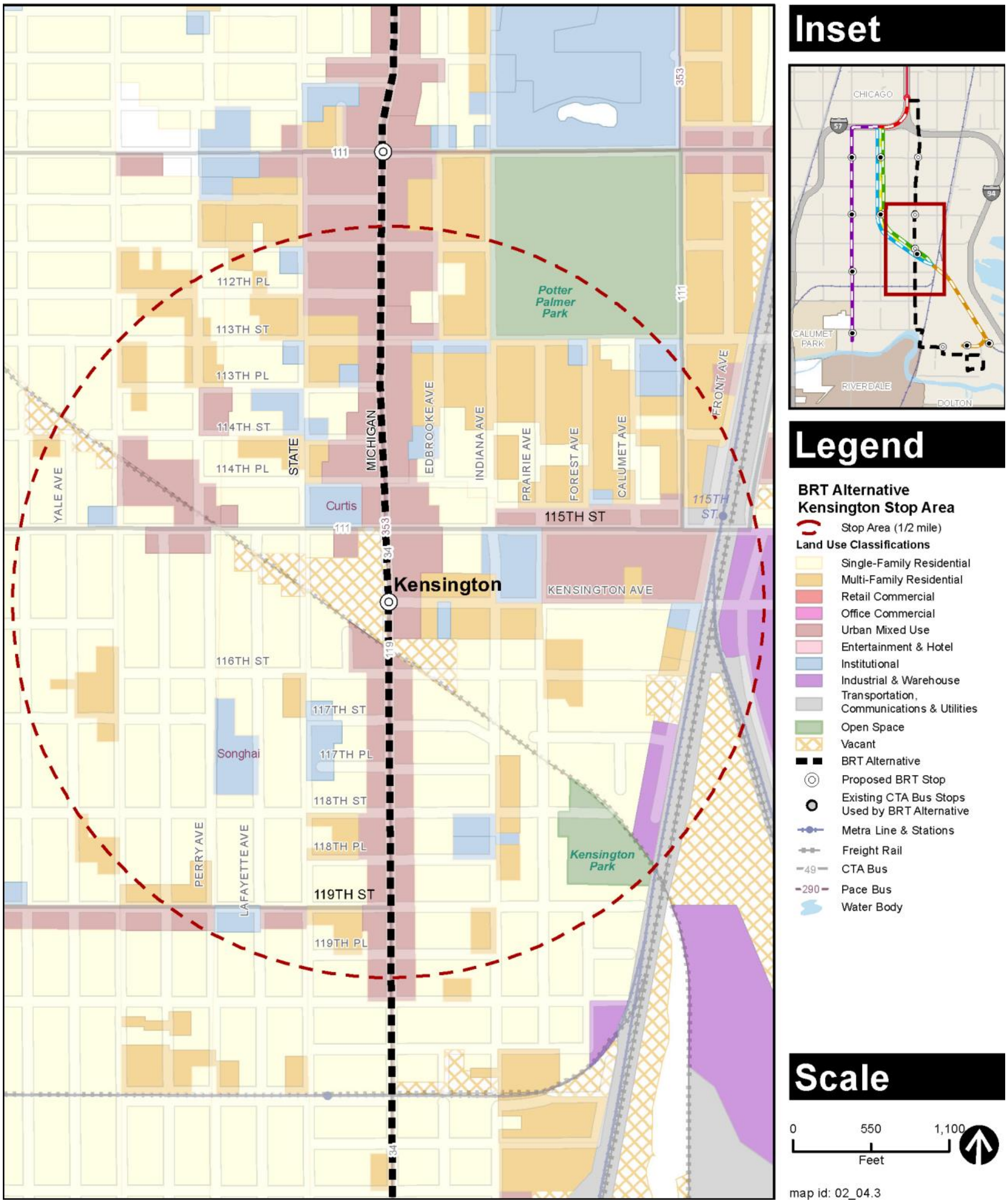
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Industrial & Warehouse
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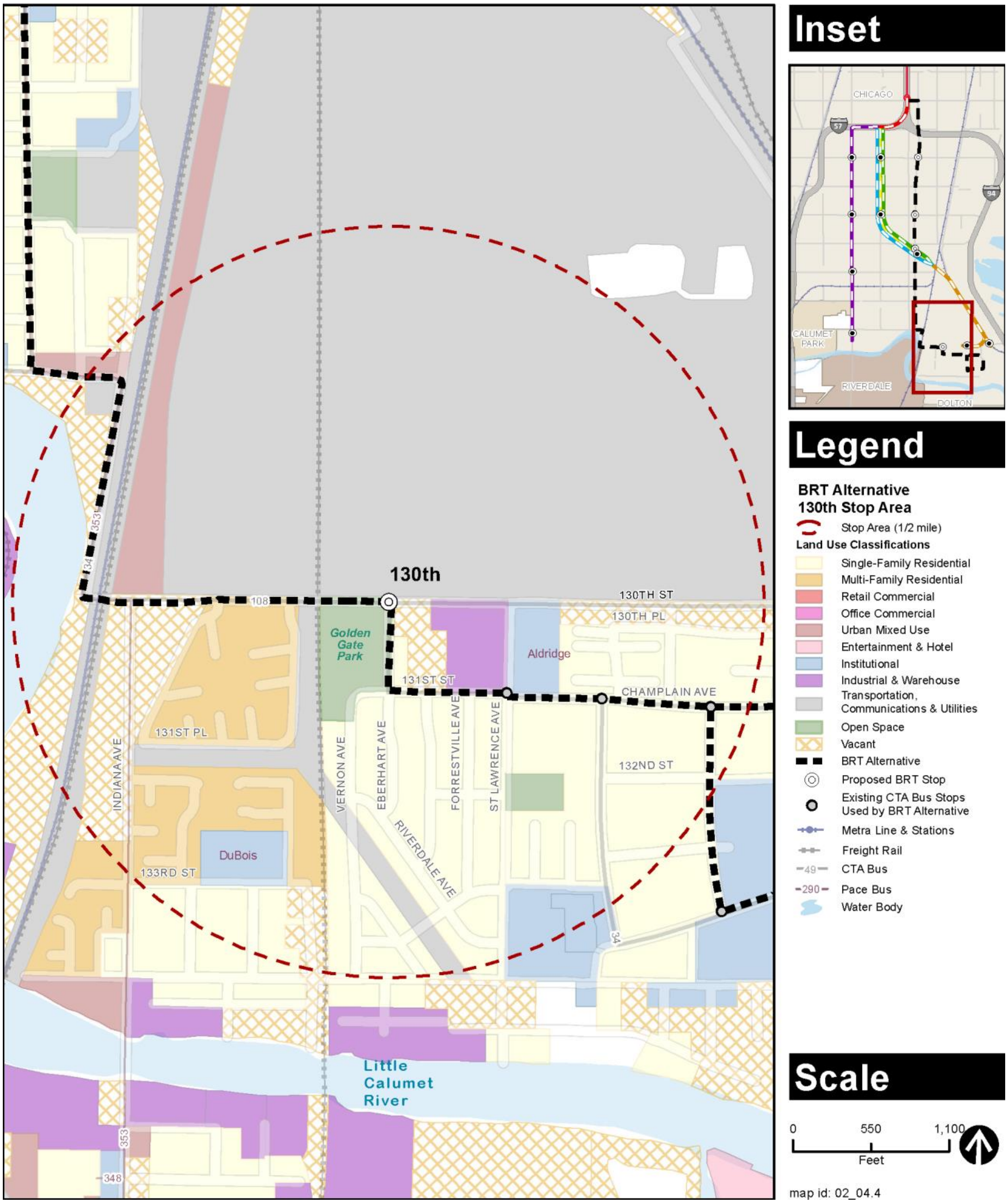
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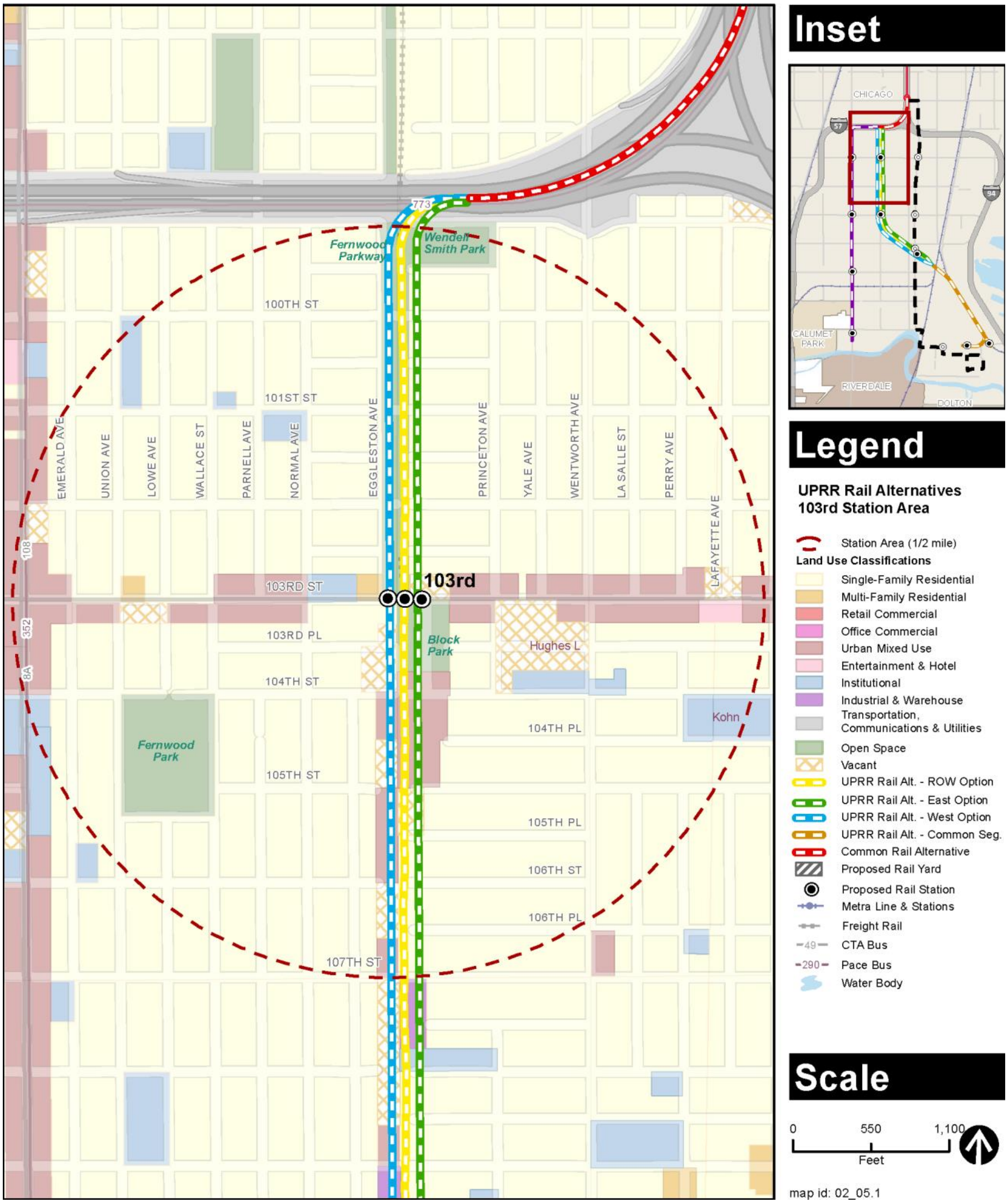
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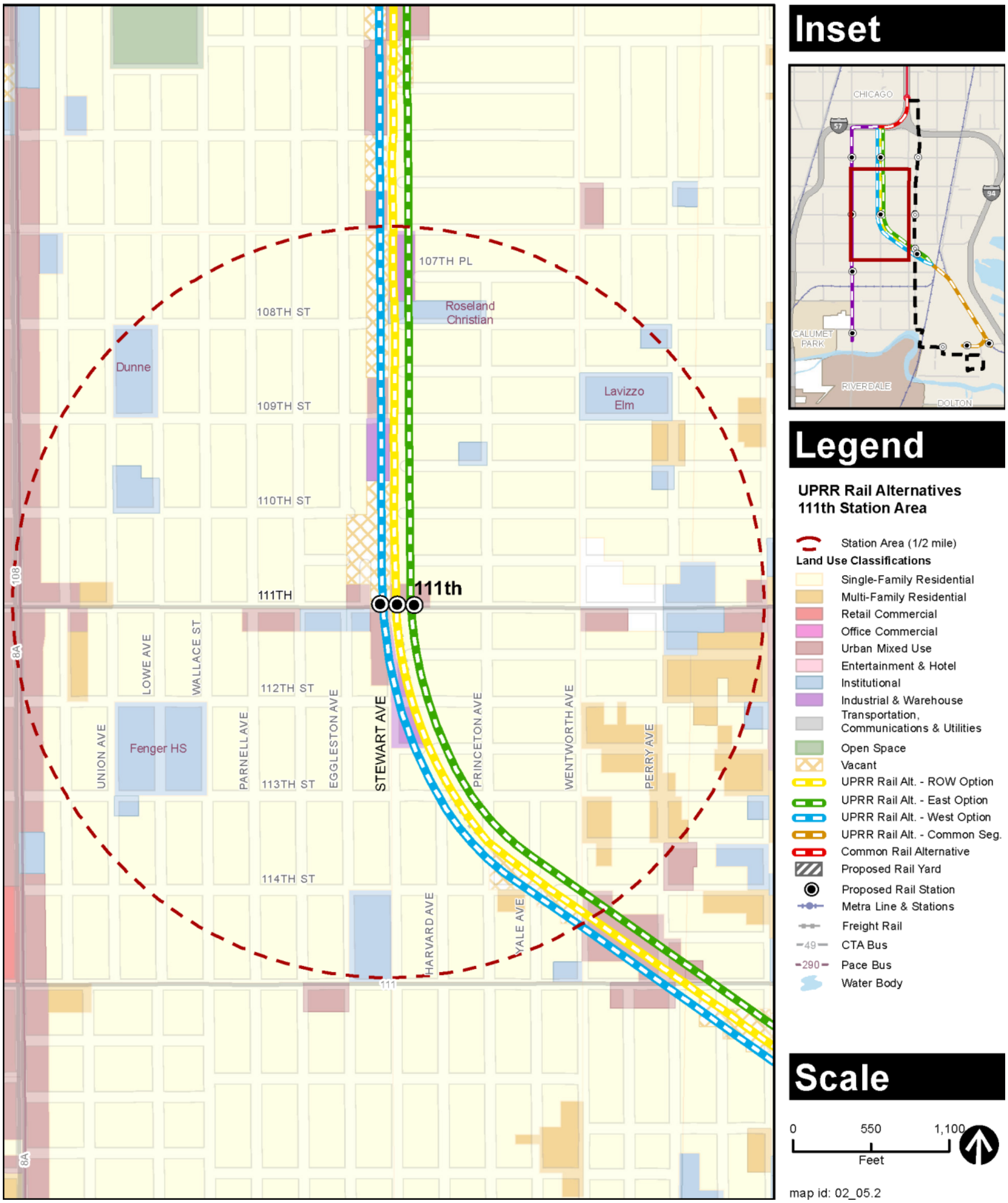
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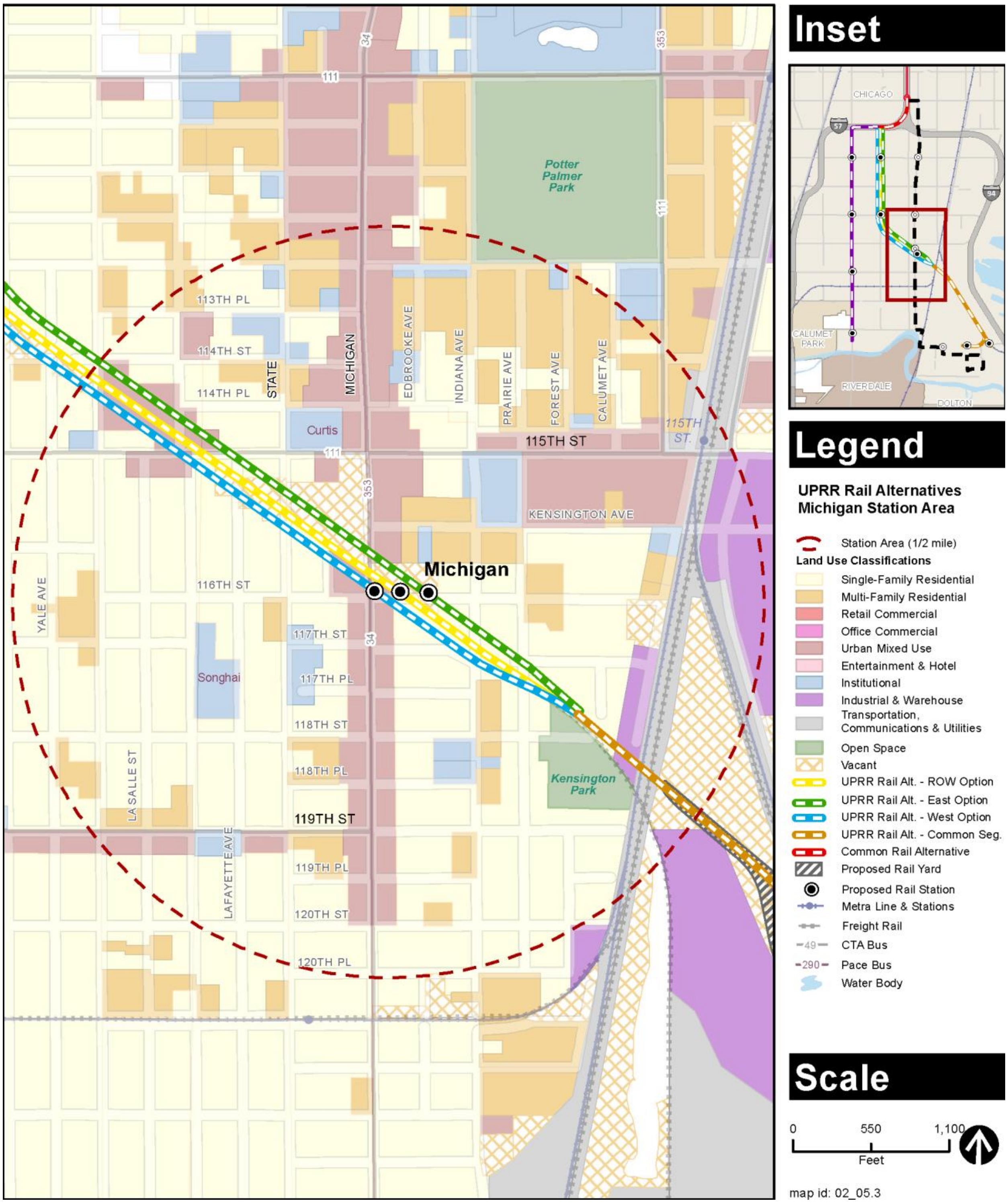
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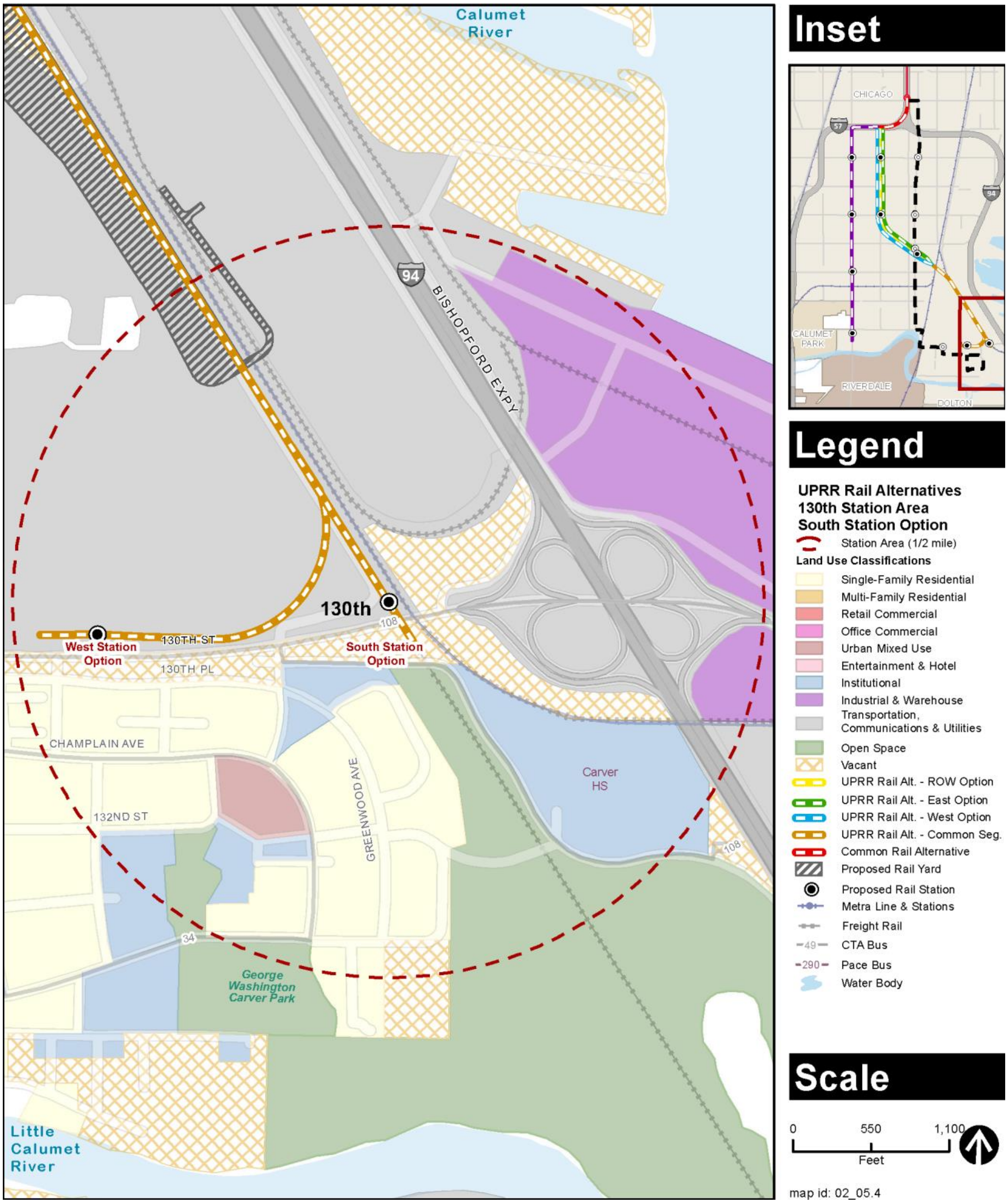
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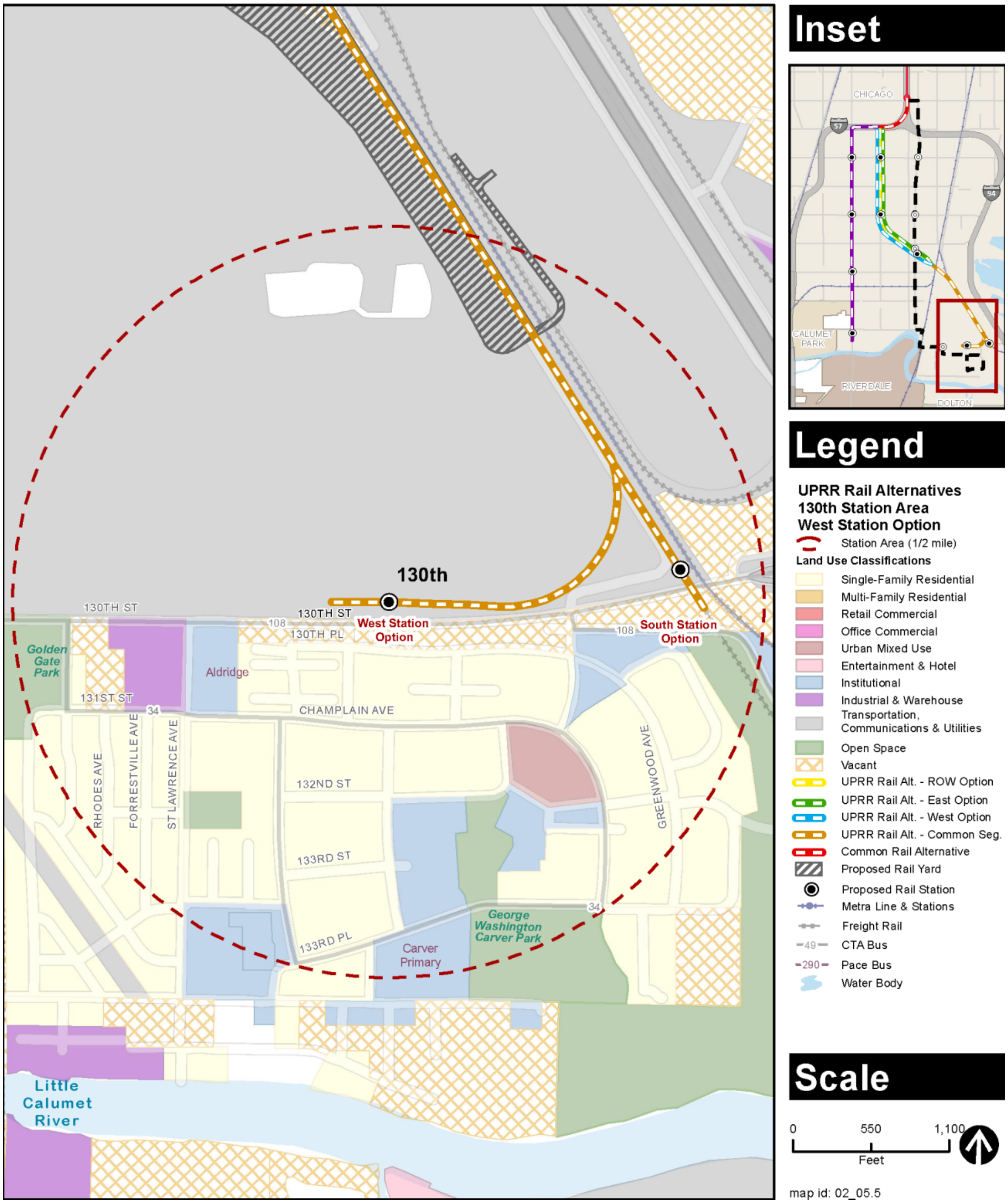
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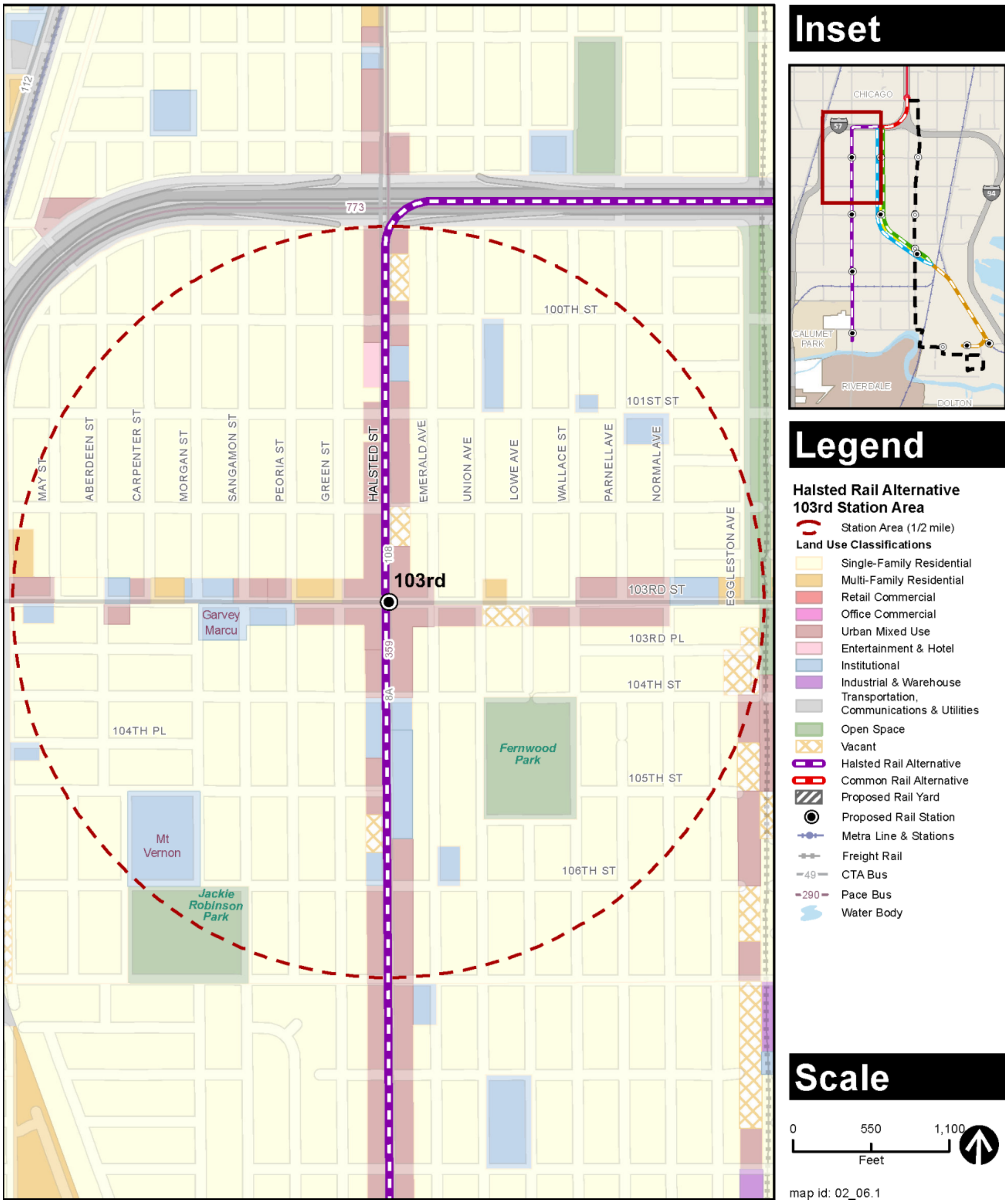
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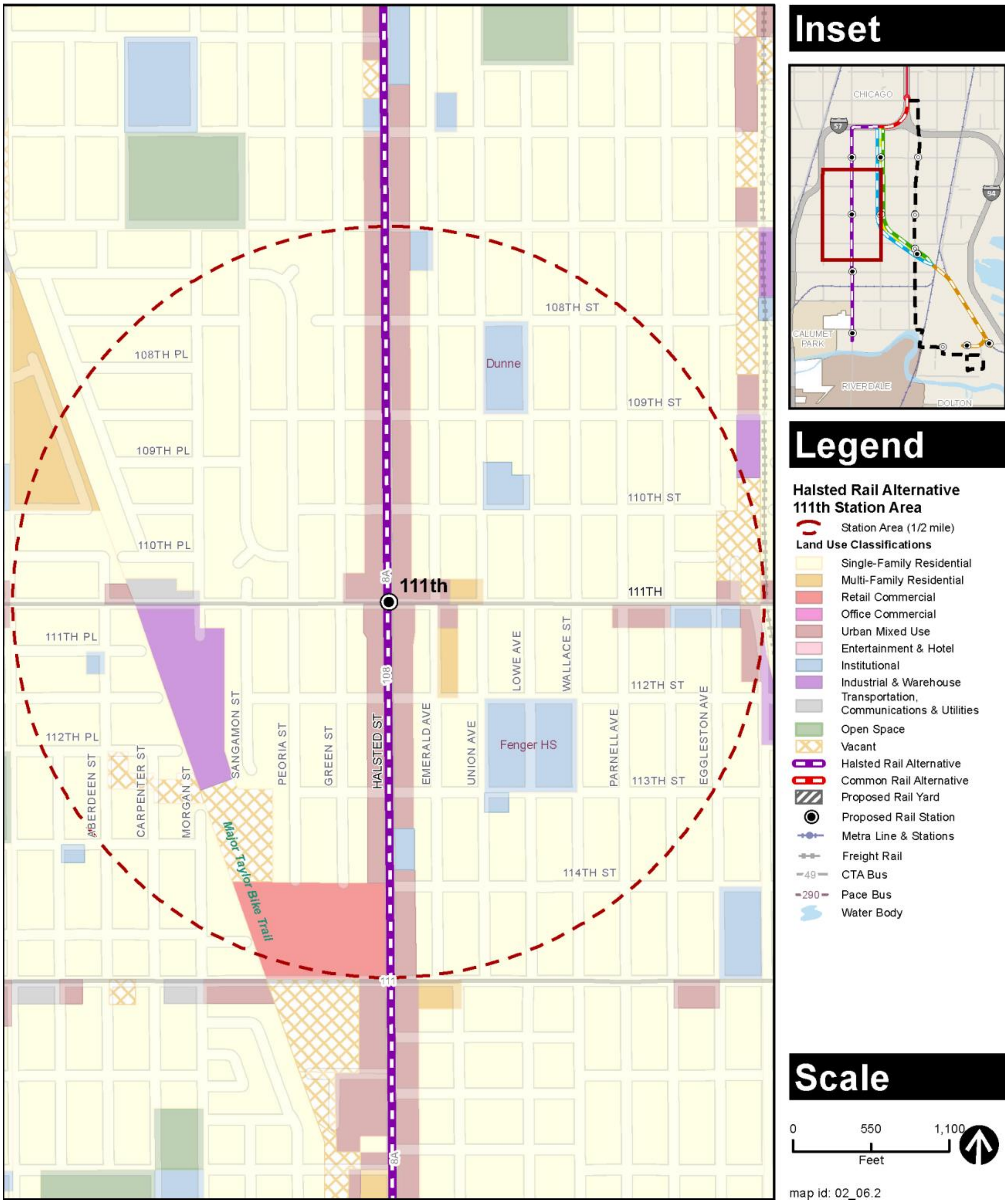
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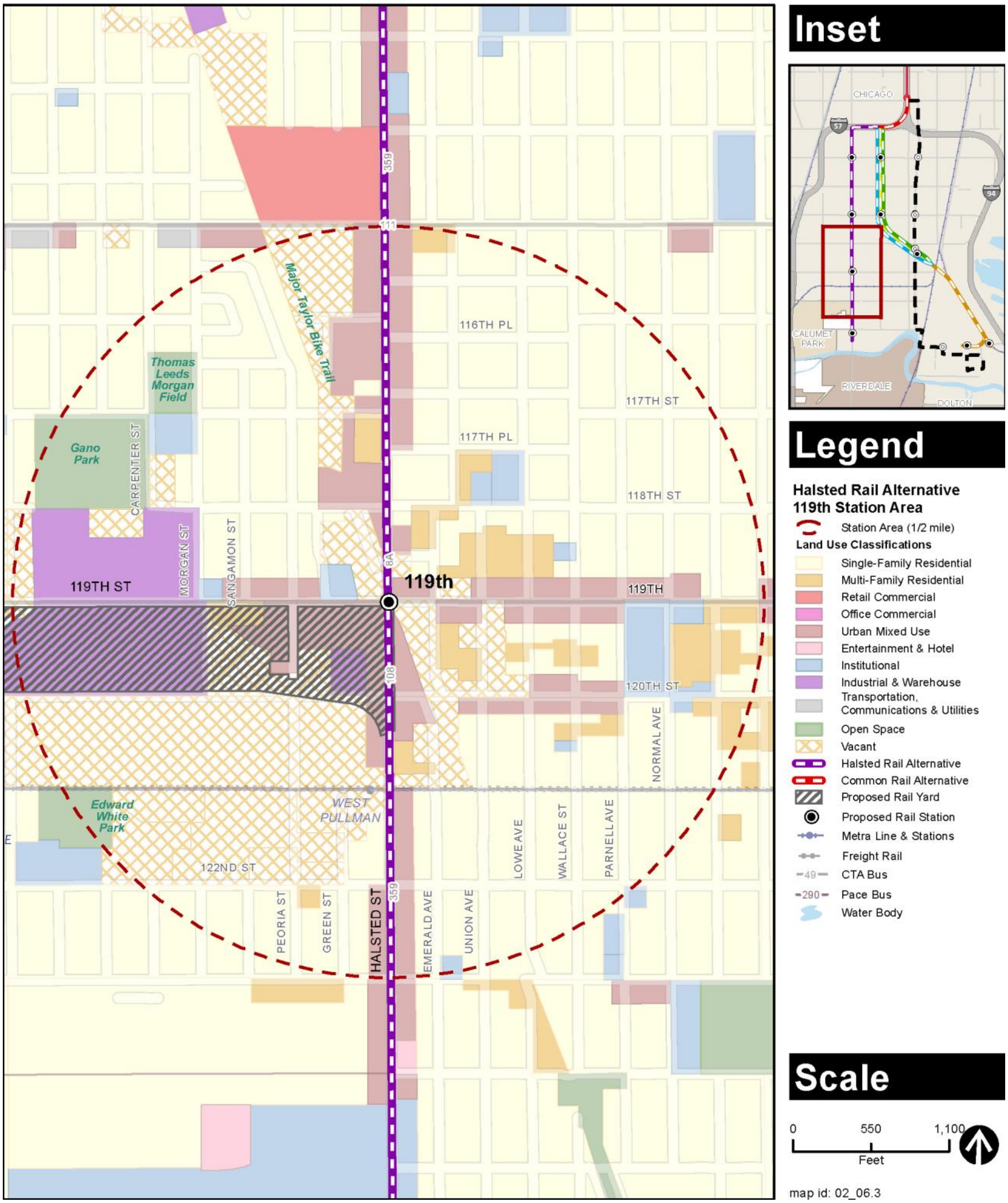
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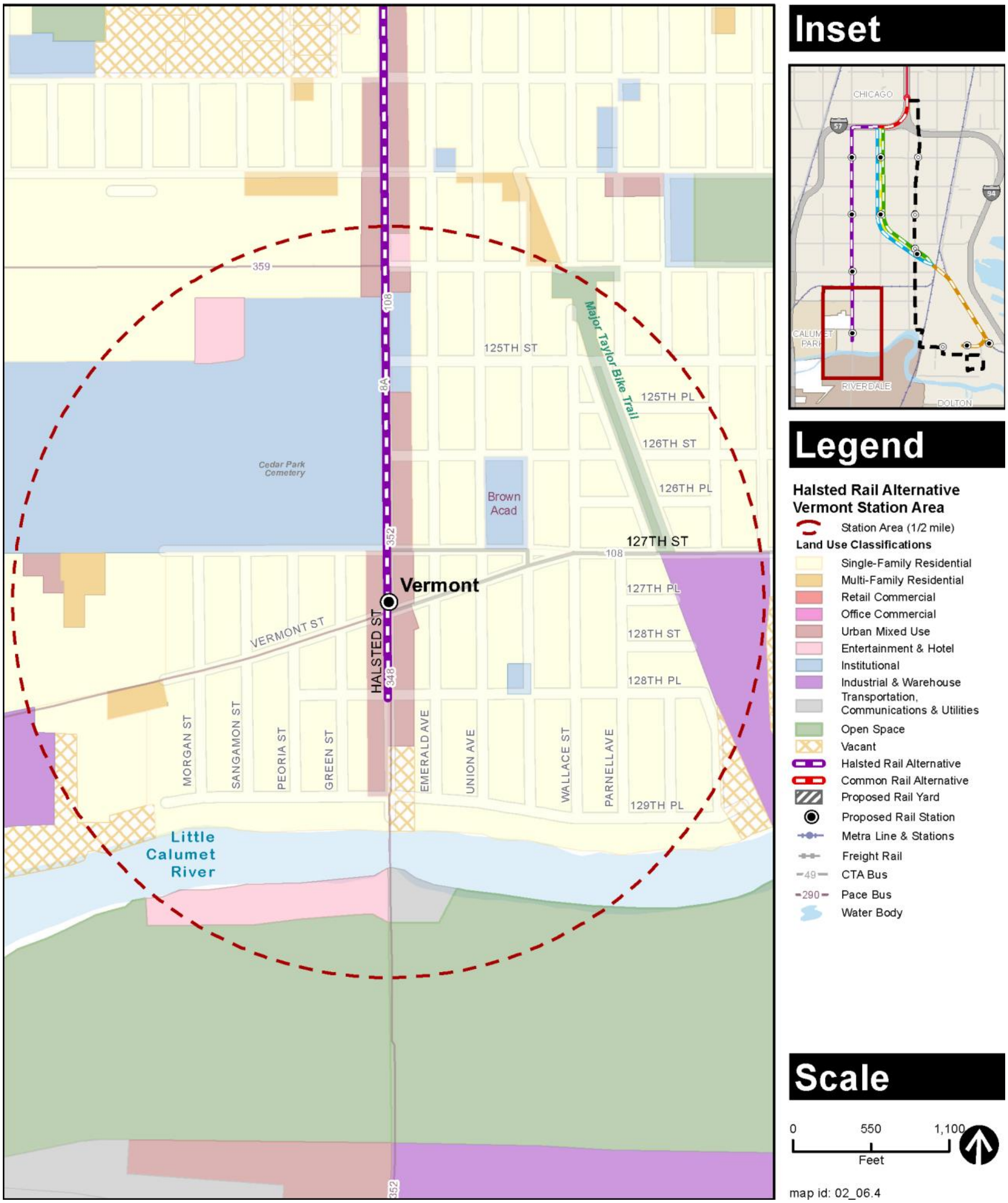
map id: 02_06.3


Inset
CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON
Legend
Halsted Rail Alternative
Vermont Station Area
Station Area (1/2 mile)
Land Use Classifications
Single-Family Residential
Multi-Family Residential
Retail Commercial
Office Commercial
Urban Mixed Use
Entertainment & Hotel
Institutional
Industrial & Warehouse
Transportation, Communications & Utilities
Open Space
Vacant
Halsted Rail Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Metra Line & Stations
Freight Rail
49 CTA Bus
290 Pace Bus
Water Body
Scale
0
550
1,100
Feet
Vermont
HALSTED ST
VERMONT ST
125TH ST
125TH PL
126TH ST
126TH PL
127TH ST
127TH PL
128TH ST
128TH PL
129TH PL
MORGAN ST
SANGAMON ST
PEORIA ST
GREEN ST
EMERALD AVE
UNION AVE
WALLACE ST
PARNELL AVE
Major Taylor Bike Trail
Cedar Park Cemetery
Brown Acad
Little Calumet River
359
108
8A
352
348

map id: 02_06.4

Appendix B
2014-2015 Red Line Extension Project Update

2014–2015 Red Line Extension Project Update

From 2012-2014, CTA evaluated benefits and impacts of four alternatives: the No Build Alternative, the Bus Rapid Transit Alternative (along Michigan Avenue), the Union Pacific Railroad (UPRR) Rail Alternative, and the Halsted Alternative. CTA evaluated three options of the UPRR Rail Alternative: Right-of-Way Option, East Option, and West Option. CTA also evaluated two options of the UPRR Rail Alternative 130th Street station: a South Station Option and a West Station Option. Based on the project description provided in Section 2 of this technical memorandum, CTA analyzed the impacts of these alternatives and station options. The benefits and impacts are included in the technical memoranda prepared in 2012-2014.

In August 2014, based on the technical analysis and public input, CTA announced the NEPA Preferred Alternative—the UPRR Rail Alternative. Additional conceptual engineering was conducted on the UPRR Rail Alternative to refine the East and West Option alignments. In addition, CTA is considering only the South Station Option of the 130th Street Station.

In late 2014 and early 2015, CTA conducted additional engineering and revised assumptions on the East and West Options to refine the alignments. The refinement of the East and West Options consisted of the following items:

- For the segment of the alignment along I-57, CTA shifted the proposed alignment from the median of I-57 to the north side of I-57 within the existing expressway right-of-way. The construction would be less complex, safer for construction workers, and have a shorter duration. The shift would also allow for fewer impacts to Wendell Smith Park for the East Option, and would allow for no permanent impacts to Wendell Smith Park for the West Option.

- CTA modified the curve speeds as the alignment heads south from I-57 along the UPRR tracks. The curve speed for both the East and West Options would be 35 mph.

- CTA shifted the East Option alignment near 103rd Street station to minimize impacts to Block Park and the Roseland Pumping Station.

- CTA modified the curves south of 103rd Street for both the East and West Options to 55 mph to maximize the train speed.

- CTA refined the layout of the 120th Street yard and shop to optimize yard operations. The refined layout of the yard would accommodate 340 train cars.

The refinement of the East and West Option alignments minimizes potential impacts to parks while providing flexibility for future design phases. The Draft Environmental Impact Statement contains the benefits and impacts of the refined East and West Option alignments and supersedes information presented in other chapters of this technical memorandum.

The refined East and West Option alignments would have no additional or different impacts from those described in the technical memoranda for the following resource areas: construction, transportation, land use and economic development, historic and cultural resources, safety and security, hazardous materials, indirect and cumulative, air quality, floodplains, vegetation and wildlife habitat, threatened and endangered species, and geology and soils.

Appendix K

Displacements and Relocation of Existing Uses by Alternative Technical Memorandum

RED AHEAD
Moving Ahead to a Better Red

Red Line Extension

Chicago Red Line Extension Project

Displacements and Relocation of Existing Uses
Technical Memorandum

August 14, 2013
Appendix I added July 29, 2015

Prepared for:
Chicago Transit Authority
567 W. Lake Street
Chicago, IL 60661

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CWC Transit Group
125 S. Wacker Drive
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cta

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Abbreviations

BRT	Bus Rapid Transit
CFR	Code of Federal Regulations
CMAP	Chicago Metropolitan Agency for Planning
CN	Canadian National
CTA	Chicago Transit Authority
EIS	Environmental Impact Statement
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
IDOT	Illinois Department of Transportation
IHB	Indiana Harbor Belt
MWRD	Metropolitan Water Reclamation District
NEPA	National Environmental Policy Act
NICTD/CSS & SBRR	Northern Indiana Commuter Transportation District Chicago South Shore & South Bend Railroad
RLE	Red Line Extension
ROW	right-of-way
STB	Surface Transportation Board
TIP	Transportation Improvement Program
UPRR	Union Pacific Railroad
USC	United States Code

Section 1
Summary

This technical memorandum analyzes the potential impacts of displacements and relocations resulting from the Chicago Transit Authority (CTA) Red Line Extension (RLE) Project. Figure 1–1 shows the location of the project alternatives.

According to Federal Transit Administration (FTA) and State of Illinois guidance, displacements and relocations would be considered adverse if they would have one or more of the following results:

- Displacement of substantial numbers of existing housing units (a concentrated number of units in one neighborhood), particularly affordable housing, and/or employer units, necessitating the construction of replacement units elsewhere. This analysis uses the definition of affordable housing provided by the Illinois Housing Development Authority for the Chicago Metro area, which is based on data provided by the U.S. Department of Housing and Urban Development.

- Displacement of a substantial number of residents or employees, necessitating construction of replacement housing or employment locations elsewhere.

The area of potential impact for determining displacement and relocation conflicts for the RLE Project includes parcels within the permanent envelope for each alternative, including the necessary right-of-way (ROW) for the alignment, transit stations, electric substations, parking facilities, and maintenance yards. Each alternative was analyzed for potential displacement impacts on existing parcels and buildings. This analysis determined the following:

- The Bus Rapid Transit (BRT) Alternative would have the fewest impacts, with 52 affected parcels and 3 building displacements, which would be caused by construction of the parking lots and garages. Forty-two of the affected parcels are vacant and/or owned by the City of Chicago.

- The Union Pacific Railroad (UPRR) Rail Alternative ROW Option would have the fewest impacts of the UPRR Rail Alternative options, with 133 affected parcels and 24 building displacements, because the UPRR ROW would be used for most of the elevated alignment. For this analysis, it was assumed that the UPRR trains would relocate to another corridor as part of a separate, earlier project that may occur regardless of RLE implementation and that the current railroad ROW would be publicly owned after freight operations have moved to a new alignment. A total of 18 single-family residences would be displaced, mainly due to construction of the parking garage for the Michigan Avenue station.

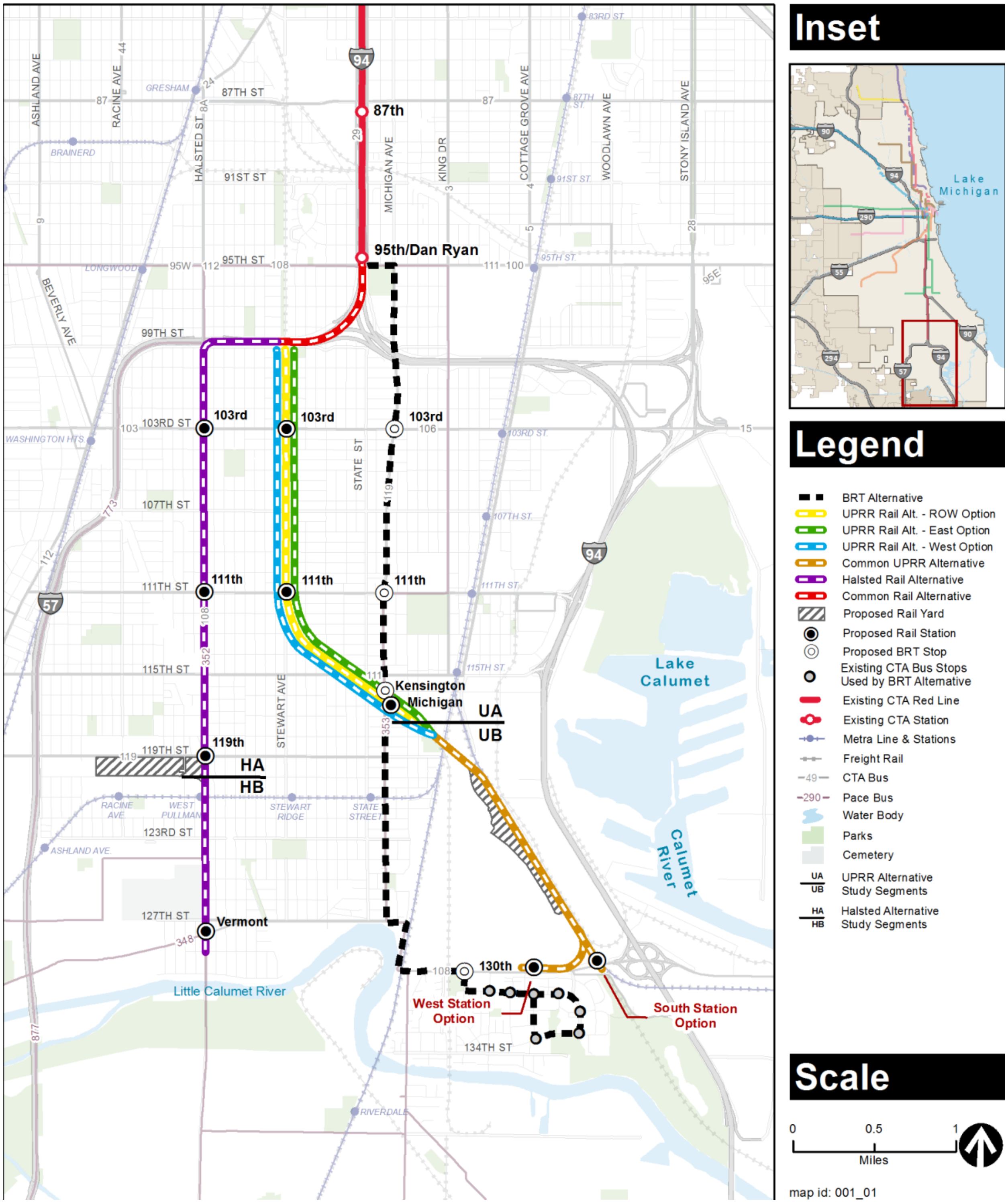
- The UPRR Rail Alternative East Option would have the most impacts of all the build alternatives, with 256 affected parcels and 112 building displacements. Eighty-five single-family residences would be displaced from the fully developed neighborhoods along the eastern perimeter of the UPRR. The UPRR Rail Alternative West Option would have fewer impacts (193 affected parcels and 53 building displacements) than the East Option, but more than the ROW Option. The West Option would have fewer impacts on single-family residences (27 displaced single-family residences) than the East Option.

- The Halsted Rail Alternative would have fewer impacts (108 affected parcels and 38 building displacements) than the other rail alternatives. The Halsted Rail Alternative would have the fewest displaced single-family residences (11) and the most displaced commercial buildings (15) of the rail alternatives. The ROW Option would displace 2 commercial buildings, the East Option would displace 3, and the West Option would displace 8.

Federal and state laws require that property owners be paid not less than fair market value for their land and buildings, and that they and their tenants be assisted in finding replacement business sites or dwellings. These protections, compensation, and relocation assistance are guaranteed by the Uniform Relocation and Real Property Assistance Act of 1970, as amended (Uniform Act, 42 United States Code [USC] 4601, et seq.). For displaced residents, the Uniform Act requires that replacement housing must be “decent, safe, and sanitary,” and be functionally equivalent in the number of rooms and living space, location, and general improvements. Replacement dwellings must meet all minimum federal housing requirements and conform to state and local occupancy codes. Relocation assistance will follow the guidelines set forth in Title 49, Part 24 of the Code of Federal Regulations (49 CFR Part 24 and FTA Circular 5010.1C dated October 1, 1998, as amended). Relocation benefits may also be available to businesses and non–profit organizations that may be displaced. Payments may be made for the following: moving costs; tangible personal property loss as a result of relocation or discontinuance of operations; reestablishment expenses; and costs incurred in finding a replacement site. The Uniform Act requires that relocation services and/or payments be made to residential and business owners and to residential and business tenants.

Due to the requirements of the Uniform Act, there would be no adverse impacts remaining after mitigation for the BRT Alternative, UPRR Rail Alternative, or Halsted Rail Alternative. The No Build Alternative is an alternative used for comparative purposes to assess the benefits and impacts of the build alternatives, and there would be no displacements or relocations associated with the No Build Alternative.

Table 1–1 summarizes the displacement impacts by land use type for each RLE alternative. Table 1-2 lists the total number of affected parcels and displacements for each alternative. Table 1-3 lists the overall displacement impacts after mitigation.


87th
95th/Dan Ryan
103rd
103rd
103rd
111th
111th
111th
Kensington
Michigan
119th
Vermont
130th
UA
UB
HA
HB
West Station Option
South Station Option
Lake Calumet
Calumet River
Little Calumet River
87TH ST
91ST ST
95TH ST
99TH ST
103RD ST
107TH ST
111TH ST
115TH ST
119TH ST
123RD ST
127TH ST
134TH ST
ASHLAND AVE
RACINE AVE
HALSTED ST
STEWART AVE
STATE ST
MICHIGAN AVE
KING DR
COTTAGE GROVE AVE
WOODLAWN AVE
STONY ISLAND AVE
BEVERLY AVE
GRESHAM
BRAINERD
LONGWOOD
WASHINGTON HTS.
RACINE AVE
WEST PULLMAN
STEWART RIDGE
STATE STREET
ASHLAND AVE
RIVERDALE
83RD ST
87TH ST
91ST ST
95TH ST
103RD ST
107TH ST
111TH ST
115TH ST
Inset
Lake Michigan
Legend
BRT Alternative
UPRR Rail Alt. - ROW Option
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
Common UPRR Alternative
Halsted Rail Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Proposed BRT Stop
Existing CTA Bus Stops Used by BRT Alternative
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
49 CTA Bus
290 Pace Bus
Water Body
Parks
Cemetery
UA UB UPRR Alternative Study Segments
HA HB Halsted Alternative Study Segments
Scale
0
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Miles
map id: 001_01

Figure 1-1: Red Line Extension Project Alternatives Map

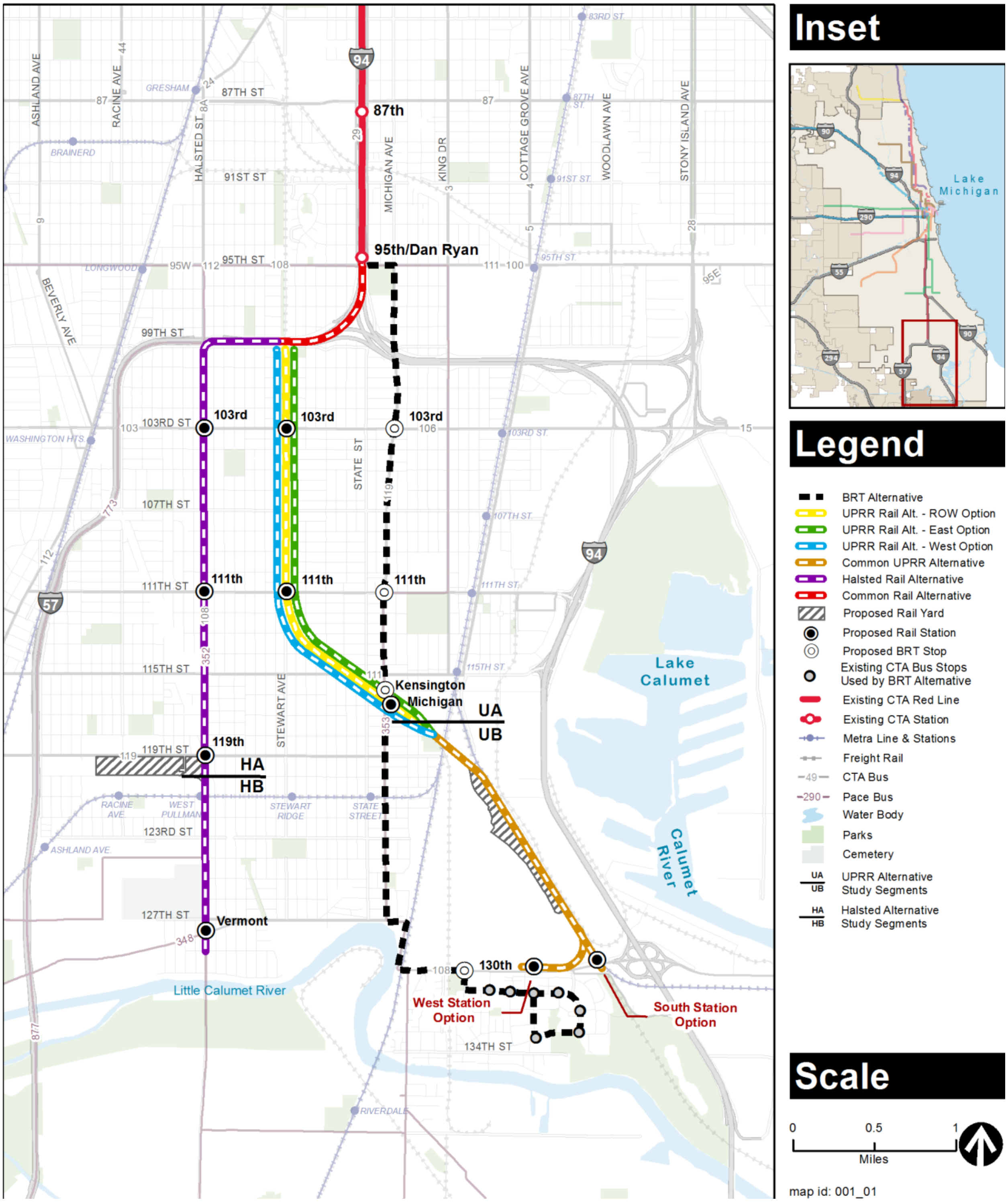
Section 2
Project Description

The CTA is proposing to extend the Red Line from the existing 95th Street Terminal to the vicinity of 130th Street, subject to the availability of funding. The proposed RLE would include four stations. Each station would include bus transfer and parking facilities. This project is one part of the Red Ahead Program to extend and enhance the entire Red Line. The CTA is also planning 95th Street Terminal improvements that are anticipated to be completed prior to the proposed RLE construction.

The project area is 11 miles south of the Chicago central business district (commonly referred to as the Loop) and encompasses approximately 20 square miles. The boundaries of the project area are 95th Street on the north, Ashland Avenue on the west, Stony Island Avenue on the east, and the Calumet-Sag Channel/Little Calumet River and 134th Street on the south. The I-57 Expressway and I-94 Bishop Ford Freeway cross the western and eastern edges of the project area, respectively. Lake Calumet is in the eastern portion of the project area. The project area encompasses parts of nine community areas in the City of Chicago and the eastern section of the Village of Calumet Park. Chicago community areas include Beverly, Washington Heights, Roseland, Morgan Park, Pullman, West Pullman, Riverdale, Hegewisch, and South Deering. The project area comprises residential (primarily single family), industrial (both existing and vacant), transportation (including freight), and commercial development.

The Draft Environmental Impact Statement (EIS) focuses on the following alternatives (shown in Figure 2-1), which emerged from the Alternatives Analysis and the National Environmental Policy Act (NEPA) scoping process:

- No Build Alternative
- BRT Alternative
- UPRR Rail Alternative
    - ROW Option
    - East Option
    - West Option
- Halsted Rail Alternative


Inset
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Halsted Rail Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Proposed BRT Stop
Existing CTA Bus Stops Used by BRT Alternative
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
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49 CTA Bus
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Water Body
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Cemetery
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map id: 001_01
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103rd
103rd
111th
111th
111th
Kensington
Michigan
UA
UB
119th
HA
HB
Vermont
130th
West Station Option
South Station Option
Lake Calumet
Calumet River
Little Calumet River
87TH ST
91ST ST
95TH ST
99TH ST
103RD ST
107TH ST
111TH ST
115TH ST
119TH ST
123RD ST
127TH ST
134TH ST
ASHLAND AVE
RACINE AVE
HALSTED ST
MICHIGAN AVE
KING DR
COTTAGE GROVE AVE
WOODLAWN AVE
STONY ISLAND AVE
STATE ST
STEWART AVE
BEVERLY AVE
GRESHAM
BRAINERD
LONGWOOD
WASHINGTON HTS
RACINE AVE.
WEST PULLMAN
STEWART RIDGE
STATE STREET
ASHLAND AVE.
RIVERDALE
83RD ST.
87TH ST.
91ST ST.
95TH ST.
103RD ST.
107TH ST.
111TH ST.
115TH ST.
94
57

Figure 2-1: Red Line Extension Project Alternatives

Table 1-1: Displacement Impacts by Land Use Type*

Land Use Type	Impact	BRT	UPRR Rail ROW Option	UPRR Rail East Option	UPRR Rail West Option	Halsted Rail Option
Vacant	Affected Parcel(s)	18	13	56	35	22
	Building Displacement	--	--	--	--	--
Single-Family Residential	Affected Parcel(s)	1	18	91	37	13
	Building Displacement	1	15	82	24	11
Multi-Family Residential**	Affected Parcel(s)	--	1	15	4	--
	Building Displacement	--	1	13	4	--
Commercial	Affected Parcel(s)	2	3	6	18	37
	Building Displacement	1	2	3	8	15
Mixed-Use (Retail/Office/ Residential)	Affected Parcel(s)	--	1	--	2	6
	Building Displacement	--	1	--	2	6
Institutional (School)	Affected Parcel(s)	--	--	2	--	--
	Building Displacement	--	--	--	--	--
Institutional (Place of Worship)	Affected Parcel(s)	1	1	1	7	1
	Building Displacement	--	--	1	1	1
Industrial	Affected Parcel(s)	3	11	19	20	4
	Building Displacement	1	4	11	13	3

Land Use Type	Impact	BRT	UPRR Rail ROW Option	UPRR Rail East Option	UPRR Rail West Option	Halsted Rail Option
Utility (MWRD)	Affected Parcel(s)	2	15	15	15	--
	Building Displacement	--	--	--	--	--
Transportation (Railroads)	Affected Parcel(s)	1	11	29	40	7
	Building Displacement	--	1	1	1	--
Public (City of Chicago)***	Affected Parcel(s)	24	59	22	15	18
	Building Displacement	--	--	1	--	2

Notes: BRT = Bus Rapid Transit, UPRR = Union Pacific Railroad, ROW = right-of-way, MWRD = Metropolitan Water Reclamation District
*Building displacements are a subset of affected parcels and relate to a primary building displacement and/or a secondary structure.
**Multi-family residential: All multi-family parcels are single-family homes that have been converted to multi-family homes. The number of multi-family units was determined by counting mailboxes during site visits.
***The publicly owned parcels are considered “affected parcels” and not easements, because the CTA would need to negotiate a fee simple property transfer or an easement with the public entity.

Table 1-2: Quantitative Summary of Displacement Impacts*

Impact	BRT	UPRR Rail ROW Option	UPRR Rail East Option	UPRR Rail West Option	Halsted Rail Option
Affected Parcels	52	133	256	193	108
Building Displacements	3	24	112	53	38

Notes: BRT = Bus Rapid Transit, UPRR = Union Pacific Railroad, ROW = right-of-way
*Building displacement impacts relate to a primary building displacement and/or a secondary structure.

Table 1-3: Overall Displacement Impacts After Mitigation*

Phase	BRT	UPRR Rail ROW Option	UPRR Rail East Option	UPRR Rail West Option	Halsted Rail Option
Operation	Not Adverse	Not Substantially Adverse	Not Substantially Adverse	Not Substantially Adverse	Not Substantially Adverse
Construction	---	---	---	---	---
Cumulative	Not Adverse	Not Adverse	Not Adverse	Not Adverse	Not Adverse

Notes: BRT = Bus Rapid Transit, UPRR = Union Pacific Railroad, ROW = right-of-way
* Impact Categories: Not Applicable (---); No Impact; Not Adverse; Not Substantially Adverse; Adverse

Updated July 29, 2015

In August 2014, based on the technical analysis and public input until then, CTA announced the NEPA Preferred Alternative—the UPRR Rail Alternative. CTA is considering two alignment (route) options of this alternative: the East Option and the West Option. At this time, CTA is also considering only the South Station Option of the 130th Street Station. In late 2014 and early 2015, CTA conducted additional engineering on the East and West Options to refine the East and West Option alignments. Appendix I of this technical memorandum summarizes the refined alignments and any additional or different impacts that would result. The information in Appendix I supersedes information presented in other chapters of this technical memorandum.

The No Build Alternative is a required alternative as part of the NEPA environmental analysis and is used for comparison purposes to assess the relative benefits and impacts of extending the Red Line. The No Build Alternative is carried into the Draft EIS phase of the project development regardless of its performance versus the build alternatives under consideration. No new infrastructure would be constructed as part of the No Build Alternative other than committed transportation improvements that are already in the Chicago Metropolitan Agency for Planning (CMAP) Fiscal Year 2010–2015 Transportation Improvement Program (TIP) and the improvements to 95th Street Terminal. The TIP projects within the project area consist of four bridge reconstructions, several road improvement projects including resurfacing and coordination of signal timing on 95th Street, work on Metra's facilities, construction of a bicycle/pedestrian multi-use trail, and preservation of historic facilities. The No Build Alternative includes regular maintenance of existing track and structures, and bus transit service would be focused on the preservation of existing services and projects. All elements of the No Build Alternative are included in each of the other alternatives. Under this alternative, travel times would not improve from existing conditions.

The BRT Alternative (formerly referred to as the Transportation Systems Management Alternative) is a 5.0-mile, limited-stop, enhanced BRT route, which is assumed to operate 24 hours per day between the existing 95th Street Terminal and the intersection of 130th Street and Eberhart Avenue. No dedicated bus lanes would be provided for the BRT Alternative; however, parking lanes would be removed for some portions of the alignment and four stops with improved bus shelters and park & ride facilities would be created at 103rd Street and Michigan Avenue, 111th Street and Michigan Avenue, Kensington Avenue and Michigan Avenue, and 130th Street and Eberhart Avenue. Although BRT service elements would not continue south of the 130th Street stop, the bus route would continue through Altgeld Gardens along the existing route with six stops. The BRT Alternative would be consistent with bus routing changes that may occur as part of improvements to the 95th Street Terminal. Under this alternative, travel times between 130th Street and the Loop would improve over existing conditions.

The UPRR Rail Alternative is a 5.3-mile extension of the heavy rail transit Red Line from its existing 95th Street Terminal to 130th Street, just west of I-94. The Chicago Transit Board designated the UPRR Rail Alternative as the Locally Preferred Alternative at its August 12, 2009 board meeting. This alternative includes construction and operation of new heavy rail transit tracks, mostly in existing transportation corridors. The UPRR Rail Alternative has three options for alignment (ROW, East, and West), all of which would include operation on elevated structure from 95th Street to just past the Canadian National/Metra Electric District tracks near 119th Street. The alignment would then transition to at-grade through an industrial area with no public through streets, terminating at 130th Street in the vicinity of Altgeld Gardens. Four new stations would be constructed at 103rd Street, 111th Street, Michigan Avenue, and 130th Street. The 130th Street station would be the terminal station, with two options under evaluation: the South Station Option and the West Station Option. A new yard and shop facility would be sited near 120th Street and Cottage Grove Avenue. The bus routes in the vicinity of the UPRR Rail Alternative would be modified to enhance connectivity between the Red Line and the bus network. The hours of operation and service frequency for the UPRR Rail Alternative are assumed to be the same as

for the current Red Line. Under this alternative, travel times between 130th Street and the Loop would improve substantially over existing conditions.

The Halsted Rail Alternative is a 5.0-mile heavy rail transit extension of the existing Red Line. In this alternative, the Red Line would operate on an elevated structure running south from 95th Street along I-57 until Halsted Street. The alignment would then turn south and continue along Halsted Street to the intersection of Halsted Street and Vermont Avenue near 127th Street. This alternative would include four new stations at 103rd Street, 111th Street, 119th Street, and Vermont Avenue. The Vermont Avenue station would be the terminal station. A new yard and shop would be sited west of Halsted Street and between the 119th Street and Vermont Avenue stations. The bus routes in the vicinity of the Halsted Rail Alternative would be modified to enhance connectivity to the Red Line. The hours of operation and service frequency for the Halsted Rail Alternative are assumed to be the same as for the current Red Line. Under this alternative, travel times between 127th Street and the Loop would improve substantially over existing conditions. This alternative would not extend rail to Altgeld Gardens, which would be served by bus connecting to the Vermont terminal station.

Section 3
Methods for Impact Evaluation

3.1 Regulatory Framework

The following sections present brief descriptions of the regulatory framework applicable to the jurisdictions with respect to displacements and relocations within the project area.

3.1.1 Federal

According to the National Environmental Policy Act of 1969 (NEPA) and FTA guidance, the Uniform Act must be implemented if displacements occur as a direct cause of the project. The Uniform Act, as described in Section 1, mandates relocation services and payments for eligible residents, businesses, and non-profit organizations as well as residential and business tenants displaced as a direct result of projects undertaken by a federal agency or with federal financial assistance. The Uniform Act provides equitable land acquisition policies and treatment of persons displaced from their homes and businesses. Owners of private property possess federal constitutional guarantees that their property will not be taken or damaged for public use without just compensation, which is measured by fair market value as determined by the affected property owners and the court.

The Interstate Commerce Commission Termination Act of 1995 created the Surface Transportation Board (STB) and granted the STB exclusive jurisdiction over the regulation of railroad transportation. Pursuant to the Act, approval must be sought from the STB if any form of state or local action, including construction, operation, and/or acquisition, could be used to deny a railroad the ability to conduct some or part of its operations and/or pose undue safety hazards(49 USC 10101 et. seq.).

3.1.2 State and Local

The Illinois Metropolitan Transit Authority Act created the CTA and grants it authority to acquire property by condemnation subject to, and exercised in accordance with, the Illinois Eminent Domain Act. The Illinois Eminent Domain Act sets forth the procedure for acquiring property through condemnation, as well as reimbursements to displaced persons for relocation costs. Relocation costs must be determined methodically as set forth in the Uniform Act described in Section 3.1.1. Similar to the federal regulations, the Illinois state constitution provides owners of private property guarantees regarding takes, damages and just compensation.

3.2 Impact Analysis Thresholds

The FTA's guidance for implementing NEPA states that impacts must be disclosed if land is being acquired for a project and businesses or individuals will be displaced. The FTA's NEPA implementation guidance requires that the characteristics and needs of persons and businesses to be displaced be considered, the available inventory of comparable replacement dwellings and sites be described, and potential relocation problems be discussed. In addition, implementing the policies and procedures required by the Uniform Act and the Illinois Eminent Doman Act (described in Sections 3.1.1 and 3. 1.2) will mitigate displacements that must occur.

As noted in Section 1, the following criteria for determining adverse impacts were used for the purposes of this analysis. These criteria are consistent with FTA and Illinois guidance and the urbanized setting of the project area. Displacements and relocation would be considered adverse if they would have one or more of the following results:

- Displacement of substantial numbers of existing housing units (a concentrated number of units in one neighborhood), particularly affordable housing, and/or employer units, necessitating the construction of replacement units elsewhere. This analysis uses the definition of affordable housing provided by the Illinois Housing Development Authority for the Chicago Metro area, which is based on data provided by the U.S. Department of Housing and Urban Development.

- Displacement of a substantial number of residents or employees, necessitating construction of replacement housing or employment locations elsewhere.

3.3 Area of Potential Impact

For purposes of evaluating the potential displacements and relocation impacts, the area of potential impact was limited to within and directly adjacent to the future ROW needed for each project alternative evaluated as part of the EIS. The Appendix contains figures for parcels affected by the future ROW or permanent envelope of the RLE Project.

3.4 Methods

Existing ROW is determined in coordination with CTA, Chicago Department of Transportation and Illinois Department of Transportation (IDOT). Conceptual engineering drawings prepared for each alternative were used to identify affected parcels and building footprints. In order to ensure a conservative analysis for this EIS, each alternative's displacement impacts were analyzed based on a permanent envelope for the alternative's maximum ROW. Displacement impacts associated with specific project components will be confirmed during the project design process and could be fewer.

Counts and locations of residential and business displacements were prepared using CMAP geographic information system parcel data, Cook County assessor data, aerial photography, and Internet desktop surveys via Google Earth, and field verified for any apparent conflicting information. For instance, CMAP parcel data indicated multi-family land uses but Cook County parcel data simply indicated residential uses without a single-family or multi-family designation. A review of Google Earth aerials and street views showed that CMAP's "multi-family land uses" contain what look like single-family homes. The number of mailboxes at the front door observed during field surveys, however, indicated that some single-family homes had been converted to multi-family homes. U.S. Census data was used for housing and population characteristics. The smallest available Census geography was used for each data component.

The majority of the area surrounding the RLE corridor is urbanized and developed, so there would be multiple displacements as a result of the project. Each alternative was analyzed for potential impacts on parcels resulting from operation. The following definitions were used to define impacts:

- **Easement** - The right to use public property (e.g., roadways) for the permanent envelope would be required. An easement can involve a general or specific portion of the property and can be either at the surface level, or above or beneath the property. Permanent easements would occur for the alignment within the median of public roadways or over public roadways.
- **Affected Parcel** - A partial or a full parcel of private or public property would be required to accommodate the project. This impact would occur if, for example, a portion of a commercial parking lot fronting the alignment is required, but not the adjacent commercial building near the alignment. The result would be a land acquisition, but not a building displacement. If the primary structure were within the ROW, land acquisition and a building acquisition would result. Essentially, building displacements are a subset of affected parcels and relate to a primary building displacement and/or a secondary structure (see description below).
- **Building displacement** - A structure would be within the future ROW. This impact would occur when any primary (e.g., house) or secondary (e.g., garage) structure is required to accommodate the project. On parcels where primary structures would not be acquired and secondary buildings would be affected, only secondary structures would be acquired.

Land use characteristics of affected parcels were consolidated into the following categories: vacant, single-family residential, multi-family residential, mixed-use, commercial, industrial, parks and open space, institutional (school or church), transportation (railroads), and utility (Metropolitan Water Reclamation District [MWRD]), and public. Public uses include any land or buildings owned by the City of Chicago.

Other current and reasonably foreseeable projects and future actions identified as part of the Indirect and Cumulative Impacts analysis were reviewed to determine whether there would be any potential impacts associated with displacements.

For potential displacements identified, the analysis used local real estate information to determine specific replacement or relocation opportunities for affected residential or commercial structures and a site reconnaissance.

Site reconnaissance of the project area and field observation of the parcels potentially acquired fully or partially was undertaken to confirm mapped/secondary source data. Impacts of potential acquisitions on the remainder of the property, on nearby properties, and neighborhoods were evaluated and general relocation opportunities, such as the availability of nearby vacant properties, were identified to assess the mitigation potential. In addition, the impact analyses contained in the *Historical and Cultural Resources Technical Memorandum* and *Land Use and Economic Development Technical Memorandum* were reviewed.

3.4.1 Residential Relocation Impacts

The potential social and financial impacts related to changes in living environments caused by residential relocation impacts were evaluated.

For each residential structure, the estimated number of persons to be displaced was determined by multiplying the estimated number of displaced residential dwelling units in each community area along the alignment by the average number of persons per household in that parcel based on the 2010 U.S. Census data.

Local real estate data, Cook County Assessor data, and U.S. Census data were collected and reviewed to determine the following for local residential household relocations:

- Amount of safe, decent, and sanitary replacement housing or building sites within existing neighborhoods
- Household types (elderly residents, low-income residents, ethnic or racial minority residents, non-English speaking residents)

3.4.2 Business or Community Facility Relocation Impacts

The impact assessment concerning business and community facility relocation used information provided by the City of Chicago and Cook County to determine relocation impacts. These data were used to identify businesses and community facilities, such as hospitals, schools, churches, cemeteries, parks, shopping centers, as well as zoning and land use designations. Data from CMAP and the U.S. Census were used in order to determine the basic economic condition and travel patterns within the project area.

The estimated number of employees displaced was calculated by multiplying affected non-residential building square footage by appropriate employment factors for commercial, office, and industrial development. The name and type of business to be displaced were determined by Cook County parcel data, City of Chicago land use designations, and field research.

Identified business and community facilities were evaluated based on the potential range of impacts for each alternative. The following community components were assessed during the determination of impact:

- Unique or one-of-a-kind community facility that is specific to its location
- Unique or one-of-a-kind business that is specific to its location
- Changes in access (improvements and/or reductions)
- Loss of public lands
- Minority-Owned Business designation

Section 4
Affected Environment

For purposes of this evaluation of property displacements and relocation of existing uses, the affected environment is limited to the areas within and directly adjacent to an alternative's ROW. Figure 4-1 shows the alternatives, the City of Chicago's neighborhoods, and the eastern portion of the Village of Calumet Park. Properties that would be directly affected by the build alternatives are in the following neighborhoods: Washington Heights, Morgan Park, Roseland, West Pullman, and Riverdale. The following subsections describe the existing uses adjacent to the ROW of each build alternative.

4.1 Bus Rapid Transit Alternative

The BRT Alternative is a 5.5-mile, limited-stop, enhanced BRT route that would operate between the existing 95th Street Terminal and the intersection of 130th Street and Eberhart Avenue via 95th Street, Michigan Avenue, 127th Street, Indiana Avenue, and 130th Street. The alignment would cross the Roseland, West Pullman, and Riverdale neighborhoods. Land acquisitions would be required for park & ride lots and parking garages; therefore, the affected environment is limited to properties displaced by these parking facilities and adjacent properties. Appendix A contains maps of the BRT Alternative's alignment and permanent envelope, which includes the ROW for the park & ride lots and parking garages.

The 103rd Street stop would have a park & ride lot along Michigan Avenue between 102nd Street and 103rd Street. The park & ride would be mostly on vacant land, but would displace one single-family residence. The adjacent properties along Indiana Avenue contain single-family residential uses. The adjacent properties along Michigan Avenue contain urban mixed-use, multi-family residential, and vacant land.

The 111th Street stop would have a park & ride lot within the block bordered by Michigan Avenue, 111th Place, State Street, and 112th Street. The park & ride would be on vacant land behind the urban mixed uses on Michigan Avenue. There are limited urban mixed uses along 111th Place and 112th Street. The New Testament Baptist Church is the only adjacent institutional use.

The Kensington Avenue stop would have a multi-level parking garage along Michigan Avenue between Kensington Avenue and 116th Street. The parking garage would be located on land that is vacant except for one vacant industrial building. The adjacent properties along Kensington Avenue and 116th Street contain single-family residential uses. The UPRR track also borders the location of the parking garage.

The 130th Street stop would have a multi-level parking garage on the north side of 130th Street near Eberhart Avenue. The parking garage would be located on property of the Calumet Water Reclamation Plant, owned by the MWRD.

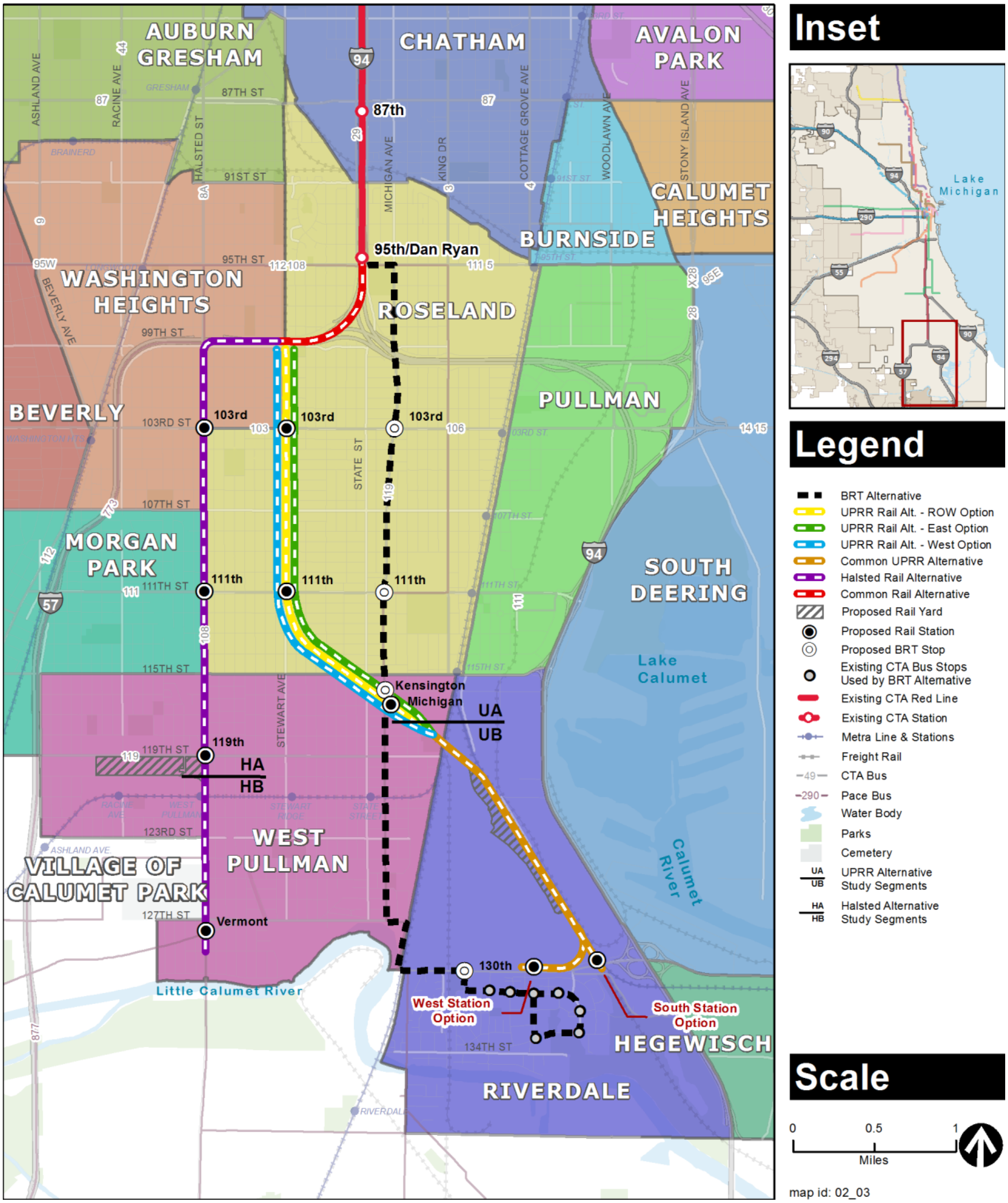

AUBURN GRESHAM
CHATHAM
AVALON PARK
CALUMET HEIGHTS
BURNSIDE
WASHINGTON HEIGHTS
ROSELAND
BEVERLY
PULLMAN
MORGAN PARK
SOUTH DEERING
WEST PULLMAN
VILLAGE OF CALUMET PARK
HEGEWISCH
RIVERDALE
Lake Calumet
Calumet River
Little Calumet River
87th
95th/Dan Ryan
103rd
111th
119th
Kensington
Michigan
Vermont
130th
UA
UB
HA
HB
West Station Option
South Station Option
87TH ST
91ST ST
95TH ST
99TH ST
103RD ST
107TH ST
111TH ST
115TH ST
119TH ST
123RD ST
127TH ST
134TH ST
ASHLAND AVE
RACINE AVE
HALSTED ST
MICHIGAN AVE
KING DR
COTTAGE GROVE AVE
WOODLAWN AVE
STONY ISLAND AVE
BEVERLY AVE
STATE ST
STEWART AVE
Inset
Lake Michigan
Legend
BRT Alternative
UPRR Rail Alt. - ROW Option
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
Common UPRR Alternative
Halsted Rail Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Proposed BRT Stop
Existing CTA Bus Stops Used by BRT Alternative
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
49 CTA Bus
290 Pace Bus
Water Body
Parks
Cemetery
UA UB UPRR Alternative Study Segments
HA HB Halsted Alternative Study Segments
Scale
0
0.5
1
Miles
map id: 02_03

Figure 4-1: Red Line Extension Alternatives and Neighborhoods Map

4.2 Union Pacific Railroad Rail Alternative - Right-of-Way Option

The alignment of the UPRR Rail Alternative ROW Option (ROW Option) would run from CTA's 95th Street Terminal along the I-94 and I-57 medians, transition to the centerline of the UPRR corridor, and run to the 130th Street station. The ROW Option corridor would be within the previous ROW of the UPRR, and would cross the Washington Heights, Roseland, West Pullman, and Riverdale neighborhoods. Land acquisitions would be required for construction of park & ride lots, parking garages, and electric substations. The following subsections briefly describe the affected environment in Segment UA (95th Street to 117th Street) and Segment UB (117th Street to 130th Street). Appendix B contains maps of the ROW Option permanent envelope, which would include the ROW for the structural alignment, stations, park & ride lots, parking garages, and electric substations.

4.2.1 Segment UA

95th Street to 99th Street
The north end of the ROW Option alignment would be at the 95th Street Terminal. The alignment would be within the median of I-94 and I-57, which are considered transportation uses. Then it would transition from the I-57 median to the UPRR corridor at approximately 99th Street.

99th Street to 103rd Street
The property adjacent to the west side of the ROW Option alignment is open space (Fernwood Parkway). The adjacent properties along the east side include open space (Wendell Smith Park) and single-family residential uses. The alignment would cross the northwest corner of Wendell Smith Park. Two park & ride lots would be located along 103rd Street on vacant land and on a vacant industrial property, which are adjacent to single-family residential uses and urban mixed uses.

103rd Street to 111th Street
The properties adjacent to the west side of the ROW Option alignment contain urban mixed uses, industrial uses, and vacant land. An electric substation would be located on vacant land at 105th Street on the west side, with adjacent single-family residences separated by an alley. The adjacent properties along the east side include open space (Block Park), utility (Roseland Pump House), single-family residential uses, industrial uses, and vacant land. Two park & ride lots would be located along 111th Street on vacant land, adjacent to institutional uses and single-family residential uses.

111th Street to 115th Street
The properties adjacent to the west side of the ROW Option alignment contain urban mixed uses, industrial uses, single-family residential uses, and vacant land. The adjacent properties along the east side contain single-family residential uses, urban mixed uses, and vacant land

115th Street to 117th Street
An electric substation would be located on vacant land at the end of Lafayette Avenue, adjacent to single-family residences. For the Michigan Avenue station, a multi-level parking garage would be located along 116th Street and State Street on single-family residential properties. A park & ride lot would be located along Michigan Avenue between Kensington Avenue and 116th Street on mostly

vacant land, except for one vacant industrial building. The adjacent properties contain single-family residences.

4.2.2 Segment UB

117th Street to 130th Street

The ROW Option's alignment would be located on industrial, transportation, and utility properties from 117th Street to the 130th Street station. For the 130th Street station (South Option), a multi-level parking garage and adjacent electric substation would be located on the MWRD Calumet Water Reclamation Plant property north of 130th Place. For the 130th Street station (West Option), a multi-level parking garage and a park & ride lot would be located on MWRD property along 130th Street across from the Altgeld Gardens public housing. An electric substation would be located on MWRD property north of 130th Place.

4.2.3 120th Street Yard and Shop

A new train maintenance yard and shop for CTA's Red Line would be located near 120th Street and Cottage Grove Avenue on vacant land and industrial property. An electric substation would be located in the same area. Adjacent properties contain vacant land, industrial, transportation, and utility uses.

4.3 Union Pacific Railroad Alternative - East Option

The alignment of the UPRR Alternative East Option (East Option) would run from CTA's 95th Street Terminal along the I-94 and I-57 medians, transition to the east side of the UPRR corridor, and run south to the 130th Street station. The alignment would cross the Washington Heights, Roseland, West Pullman, and Riverdale neighborhoods. Because the alignment would be east of the existing UPRR ROW within an urbanized area, considerable land would be required for ROW acquisitions, park & ride lots, parking garages, and electric substations. The following subsections briefly describe the affected environment in Segment UA (95th Street to 117th Street) and Segment UB (117th Street to 130th Street) of the East Option. Appendix C contains maps of the East Option permanent envelope, which would include the ROW for the structural alignment, stations, park & ride lots, parking garages, and electric substations.

4.3.1 Segment UA

95th Street to 99th Street

The alignment would start at the 95th Street Terminal and would run within the median of I-94 and I-57, which are considered transportation uses. The alignment would transition from the I-57 median to the East Option corridor at approximately 99th Street.

99th Street to 103rd Street

The alignment would affect an open space (Wendell Smith Park) and several single-family residential properties per street. Two park & ride lots would be located along 103rd Street on vacant land and a vacant industrial property; these vacant lands are adjacent to single-family residential uses and urban mixed uses.

103rd Street to 111th Street

The alignment would affect an open space (Block Park), alter course to run adjacent to a utility (Roseland Pump House) along UPRR property, and then affect property with single-family residential uses, industrial uses, and vacant land. An electric substation would be on vacant land at 105th Street on the western perimeter of the UPRR corridor, with adjacent single-family residences separated by an alley. A park & ride lot would be located along 111th Street on vacant land, adjacent to an institutional use and vacant land. Another park & ride would be located on 110th Place on vacant land, surrounded by single-family residential uses.

111th Street to 115th Street

The alignment would affect several single-family residential properties per street, as well as urban mixed-use parcels and vacant land.

115th Street to 117th Street

The alignment would affect properties with primarily single-family residential uses and vacant land. An electric substation would be located at the end of Lafayette Avenue on vacant land adjacent to single-family properties. The Michigan Avenue station would affect primarily vacant land. Adjacent to the station, a multi-level parking garage would be located along 116th Street and State Street on single-family residential properties. A park & ride lot would be located along Michigan Avenue between Kensington Avenue and 116th Street on land that is mostly vacant except for one vacant industrial building. The adjacent properties contain single-family residences.

4.3.2 Segment UB

117th Street to 130th Street

The East Option alignment varies slightly from the ROW Option alignment between 117th Street and the Canadian National (CN) railroad, and would affect the same area as the ROW Option from the CN railroad to 130th Street. See the description in Section 4.2.2.

4.3.3 120th Street Yard and Shop

The affected area would be the same as described in Section 4.2.3 for the ROW Option.

4.4 Union Pacific Railroad Alternative - West Option

The alignment of the UPRR Alternative West Option (West Option) would run from CTA's 95th Street Terminal along the I-94 and I-57 medians, transition to the west side of the UPRR corridor, and run to the 130th Street station. The alignment would cross the Washington Heights, Roseland, West Pullman, and Riverdale neighborhoods. Because this alignment would be west of the UPRR ROW within an urbanized area, considerable land acquisitions would be required for ROW, park & ride lots, parking garages, and electric substations. The following subsections briefly describe the affected environment in Segment UA (95th Street to 117th Street) and Segment UB (117th Street to 130th Street). Appendix D contains maps of the West Option permanent envelope, which would include the ROW for the structural alignment, stations, park & ride lots, parking garages, and electric substations.

4.4.1 Segment UA

95th Street to 99th Street

The alignment would start at the 95th Street Terminal and would be within the median of I-94 and I-57, which is considered a transportation use. The alignment would transition from the I-57 median to the West Option corridor at approximately 99th Street.

99th Street to 103rd Street

The alignment would be within a linear open space (Fernwood Parkway) that is directly across the street from single-family residences facing the open space. The 103rd Street station would be located on open space, a vacant industrial property, and vacant land, and a park & ride lot would be located on 103rd Place on vacant land adjacent to the station. These facilities would be adjacent to single-family residential properties.

103rd Street to 111th Street

The alignment would affect primarily urban mixed uses and vacant properties, as well as one active industrial property at 109th Street. The adjacent properties contain the back yard garages of single-family residences, which are separated by an alley. An electric substation would be located on vacant land at 105th Street on the eastern side of the UPRR corridor, with adjacent single-family residences. A park & ride lot would be located along 111th Street on vacant land, and adjacent land uses are institutional, single-family residences, and vacant land.

111th Street to 115th Street

The alignment would affect several properties with urban mixed uses, as well as vacant land and several single-family residential properties. The adjacent properties are primarily single-family uses.

115th Street to 117th Street

The alignment would affect properties with limited single-family residential and industrial uses and vacant land. An electric substation would be located at the end of Lafayette Avenue on vacant land and single-family residential properties with adjacent single-family uses. The Michigan Avenue station would be located on single-family residential properties and vacant land. Adjacent to the station, a multi-level parking garage would be located along 116th Street and State Street on single-family residential properties.

4.4.2 Segment UB

117th Street to 130th Street

The alignment would cross over the UPRR ROW from west to east between Indiana and Calumet Avenues. The adjacent properties contain single-family residences. The West Option alignment varies slightly from the ROW Option alignment between 117th Street and the CN railroad, and would affect the same area as the ROW Option from the CN railroad to 130th Street. See the description in Section 4.2.2.

4.4.3 120th Street Yard and Shop

The affected area would be the same as that described in Section 4.2.3.

4.5 Halsted Rail Alternative

The north end of the alignment of the Halsted Rail Alternative would be at CTA's 95th Street Terminal. The alignment would run within interstate ROW and the median of Halsted Street, a north-south arterial about 1 mile west of I-94 Dan Ryan Expressway, and the 95th Street Terminal. The alignment would cross the Washington Heights, Roseland, Morgan Park, and West Pullman neighborhoods in Chicago, and the Village of Calumet Park. The alignment would be within public ROW of interstate highways and a commercial arterial with urban mixed uses and institutional uses. Land acquisitions would be required for park & ride lots, parking garages, and electric substations; therefore, the affected environment would be limited to these facilities and adjacent properties. The following subsections briefly describe the affected environment in Segment HA (95th Street Terminal to 120th and Halsted Streets) and Segment HB (120th to 129th Street on Halsted Street) of the Halsted Rail Alternative. Appendix F contains maps of the Halsted Rail Alternative permanent envelope, which would include the ROW for the structural alignment, stations, park & ride lots, parking garages, and electric substations.

4.5.1 Segment HA

95th Street to 99th Street

The north end of the alignment would be at the 95th Street Terminal. The alignment would be within the median of I-94 and I-57, which are considered transportation uses. The alignment would transition from the I-57 median to the Halsted corridor at approximately 99th Street.

99th Street to 103rd Street

As part of the transition from I-57 to Halsted Street, the alignment would affect several urban mixed-use properties and a single-family residence. An electric substation would be located at 101st Street on vacant properties, adjacent to a church and single-family residences. A park & ride lot would be located on several urban mixed-use properties at 103rd and Halsted Streets, a location that is adjacent to urban mixed uses and single-family residences.

103rd Street to 111th Street

An electric substation would be located at 110th and Halsted Streets on vacant land, adjacent to urban mixed uses and single-family residences. A park & ride lot would be located on urban mixed-use properties at 111th and Halsted Streets, a location that is adjacent to urban mixed uses and single-family residences.

111th Street to 120th Street

An electric substation would be located at 118th and Halsted Streets on vacant land, adjacent to vacant land and single-family residences. A large park & ride lot would be located at 119th and Halsted Streets on properties containing several urban mixed uses and limited industrial uses.

4.5.2 Segment HB

120th Street to 129th Street

An electric substation would be located at 126th and Halsted Streets on urban mixed-use property, adjacent to single-family residences. A multi-level parking garage would be located on urban mixed-use and single-family residential properties bordered by Vermont Avenue and

Halsted, Green, and 128th Streets. The adjacent properties are urban mixed uses and single-family residences. A park & ride lot would be located on the southeast corner of Vermont and Halsted Streets on urban mixed uses, adjacent to single-family residences.

4.5.3 119th Street Yard and Shop

A new train maintenance yard and shop for CTA's Red Line would be located at 119th and Peoria Streets, within the West Pullman Industrial Corridor. The majority of the land area contains vacant and cleared industrial properties, except for a limited amount of urban mixed uses.

Section 5
Impacts and Mitigations

The Uniform Act, as described in Sections 1 and 3, must be complied with if displacements occur as a direct cause of the project. Owners of private property possess federal constitutional guarantees that their property will not be taken or damaged for public use without just compensation, which is measured by fair market value as determined by appraisers for both the CTA and the property owner, and ultimately the court if the parties cannot agree. The Uniform Act also requires that relocation services and/or payments be made to residential and business owners and to residential and business tenants.

For purposes of evaluating the potential displacements and relocation impacts, the area of potential impact was limited to within and directly adjacent to the future ROW of each alternative evaluated as part of the EIS. Impacts on many of the parcels and buildings identified in this section might be avoidable or reducible through design. The data and assumptions upon which this analysis is based represent the level of detail permitted by the conceptual design of the RLE alternatives, and reflect an approximate number of displacements and relocations. Displacement findings will be refined and confirmed during final design.

The subsections below contain maps and tables with displacement data for each affected neighborhood. The total approximate number of displacements includes parcels and buildings on land that is needed for the permanent operation of each alternative. Because all construction activities would occur on land acquired for the permanent ROW, there would be no temporary displacement or relocation impacts associated solely with the construction phase. Easements would be needed for the proposed permanent envelope of any of the rail alternatives, and would be negotiated with IDOT, the City of Chicago, and other political subdivisions. The number of parcels that would be affected by easements is highlighted in the introduction for each rail alternative in this section.

5.1 No Build Alternative

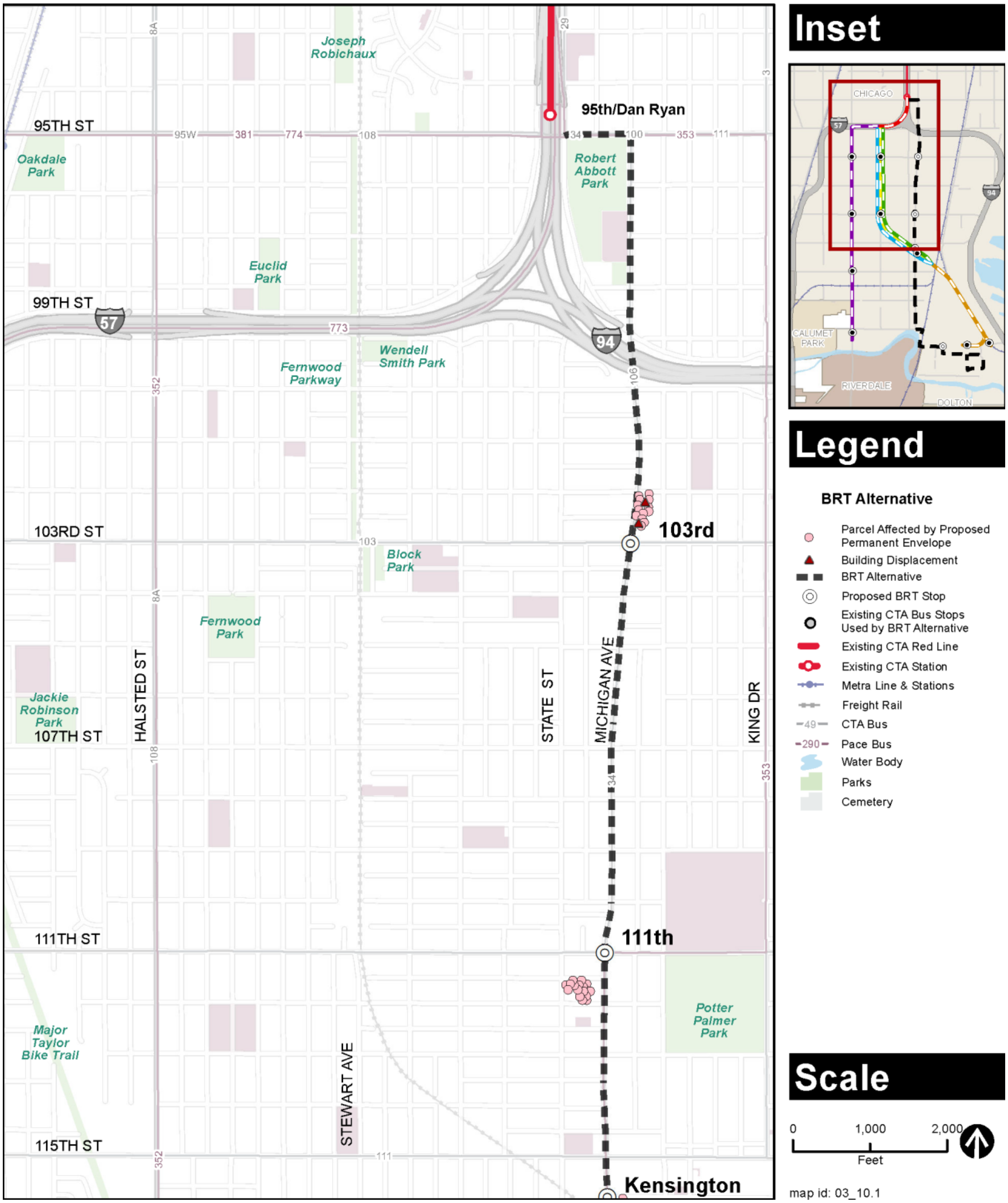
The No Build Alternative is an alternative used for comparative purposes to assess the benefits and impacts of the build alternatives. There would be no displacements or relocations associated with any portion of the No Build Alternative.

5.2 Bus Rapid Transit Alternative

The BRT Alternative is meant to identify lower cost improvements and ROW requirements than the other build alternatives. The BRT Alternative would only affect properties needed for park & ride lots and parking garages near bus stop locations. The BRT Alternative would require fewer permanent acquisitions and displacements than the other build alternatives.

5.2.1 Permanent Impacts and Mitigations - Bus Rapid Transit Alternative

As shown in Table 5-1, the BRT Alternative would affect 52 parcels and displace 3 buildings. With just compensation and relocation assistance per the Uniform Act, the impacts would be considered not substantially adverse because of available vacant land in the project area. In addition, the availability of similar real estate within the project area would facilitate relocation. Figures 5-1 and 5-2 highlight the concentration of affected parcels in the project area, while more detailed maps of affected parcels and building displacements are within Appendix A.


Inset
CHICAGO
CALUMET PARK
RIVERDALE
DOLTON
Joseph Robichaux
95th/Dan Ryan
95TH ST
Oakdale Park
Robert Abbott Park
Euclid Park
99TH ST
57
94
Wendell Smith Park
Fernwood Parkway
103RD ST
103rd
Block Park
Fernwood Park
Jackie Robinson Park
107TH ST
HALSTED ST
STATE ST
MICHIGAN AVE
KING DR
111TH ST
111th
Potter Palmer Park
Major Taylor Bike Trail
STEWART AVE
115TH ST
Kensington
Legend
BRT Alternative
Parcel Affected by Proposed Permanent Envelope
Building Displacement
BRT Alternative
Proposed BRT Stop
Existing CTA Bus Stops Used by BRT Alternative
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
49 CTA Bus
290 Pace Bus
Water Body
Parks
Cemetery
Scale
0
1,000
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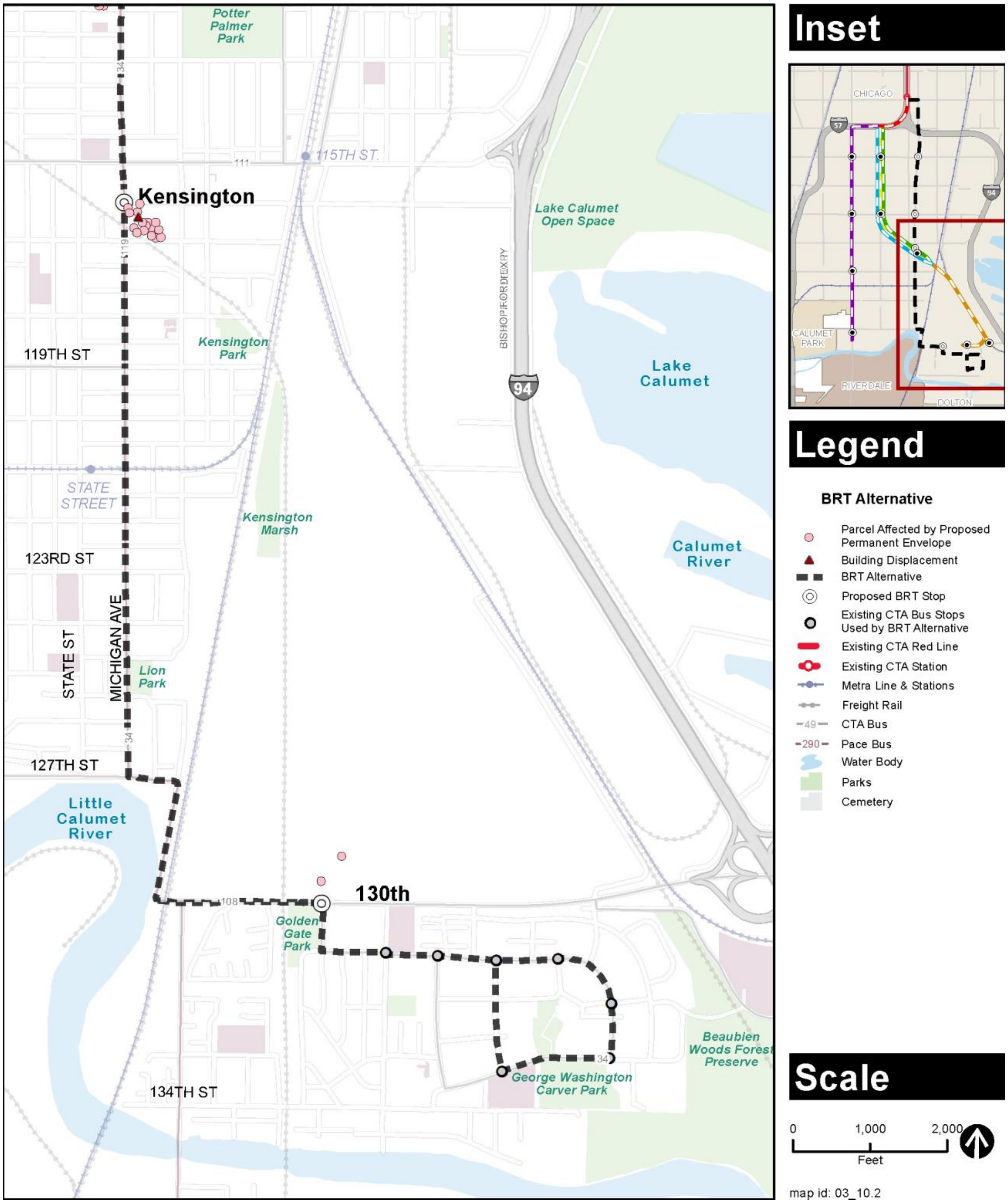
Feet
map id: 03_10.1

Figure 5-1: Bus Rapid Transit Alternative - Displacements


Potter Palmer Park
115TH ST.
111
Kensington
Lake Calumet Open Space
BISHOP FORD EXPY
94
119TH ST
Kensington Park
Lake Calumet
STATE STREET
Kensington Marsh
123RD ST
Calumet River
MICHIGAN AVE
STATE ST
Lion Park
34
127TH ST
Little Calumet River
108
130th
Golden Gate Park
Beaubien Woods Forest Preserve
134TH ST
George Washington Carver Park
Inset
CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON
Legend
BRT Alternative
Parcel Affected by Proposed Permanent Envelope
Building Displacement
BRT Alternative
Proposed BRT Stop
Existing CTA Bus Stops Used by BRT Alternative
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
49 CTA Bus
290 Pace Bus
Water Body
Parks
Cemetery
Scale
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1,000
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map id: 03_10.2

Figure 5-2: Bus Rapid Transit Alternative - Displacements

The 103rd Street stop would have a park & ride lot on Michigan Avenue between 102nd Street and 103rd Street. This park & ride lot would affect 15 parcels and displace 1 single-family residence and 1 commercial cell tower. The 111th Street stop would have a park & ride lot within the block bordered by Michigan Avenue, 111th Place, State Street, and 112th Street. This park & ride lot would affect 16 parcels and 1 institutional parcel. Both park & ride lots would be within Roseland.

The Kensington Avenue stop would have a multi-level parking garage with ground-floor retail and community facilities at Kensington and Michigan Avenues. This parking garage would affect 18 parcels and displace 1 vacant industrial building within West Pullman.

The 130th Street stop would have a multi-level parking garage on the north side of 130th Street and Eberhart Avenue. This parking garage would affect two utility parcels within Riverdale.

Table 5-1: Bus Rapid Transit Alternative - Permanent Displacements*

Land Use Type	Affected Parcels	Building Displacements
Vacant	18	
Single-Family Residential	1	1
Commercial	2	1
Institutional (Place of Worship)	1	
Industrial	3	1
Utility (MWRD)	2	
Transportation (Railroad)	1	
Public (City of Chicago)**	24	
Totals	**52**	**3**

Notes: MWRD = Metropolitan Water Reclamation District
*Building displacements are a subset of affected parcels and relate to a primary building displacement and/or a secondary structure.
**The publicly owned parcels are considered “affected parcels” and not easements, because the CTA would need to negotiate a fee simple property transfer or an easement with the public entity.

5.2.2 Construction Impacts and Mitigations - Bus Rapid Transit Alternative

Because all construction activities would occur within the public ROW for bus stop facilities or on land acquired for the parking facilities, there would be no temporary displacement or relocation impacts associated solely with the construction phase.

5.2.3 Cumulative Impacts and Mitigations - Bus Rapid Transit Alternative

No other projects identified in the *Cumulative Impacts Technical Memorandum* would cause displacements within the area of potential impact.

5.3 Union Pacific Railroad Rail Alternative - Right-of-Way Option

For this analysis, it was assumed that the UPRR trains would relocate to another corridor as part of a separate, earlier project that may occur regardless of RLE implementation and that the current railroad ROW would be publicly owned after freight operations have moved to a new alignment. The ROW Option would affect properties needed for park & ride lots, parking garages, electric substations, and maintenance yard. The ROW Option would have more land acquisitions and building displacements than the BRT Alternative, but less than the other UPRR build alternatives. The ROW Option and Halsted Rail Alternative would have a comparable number of affected properties.

5.3.1 Permanent Impacts and Mitigations - Union Pacific Railroad Rail Alternative - Right-of-Way Option

As shown in Table 5-2, the ROW Option would require 133 parcel acquisitions and 24 building displacements. With just compensation and relocation assistance per the Uniform Act, the impacts would be considered not substantially adverse because of the general availability of vacant land in the project area and the beneficial impacts of the project, including new rail transit with four stations, greater accessibility to the region, improved access to jobs, and new development opportunities in the project area. In addition, the availability of similar real estate within the project area would facilitate relocation. A total of 22 parcel easement agreements via negotiations with IDOT would be required for the aerial structure of the RLE Project. Figures 5-3 and 5-4 highlight the affected parcels on a project area map, while detailed parcel maps are within Appendix B. The following subsections describe the impacts in Segment UA (95th Street to 117th Street) and Segment UB (117th Street to 130th Street), and from the 120th Street yard and shop.

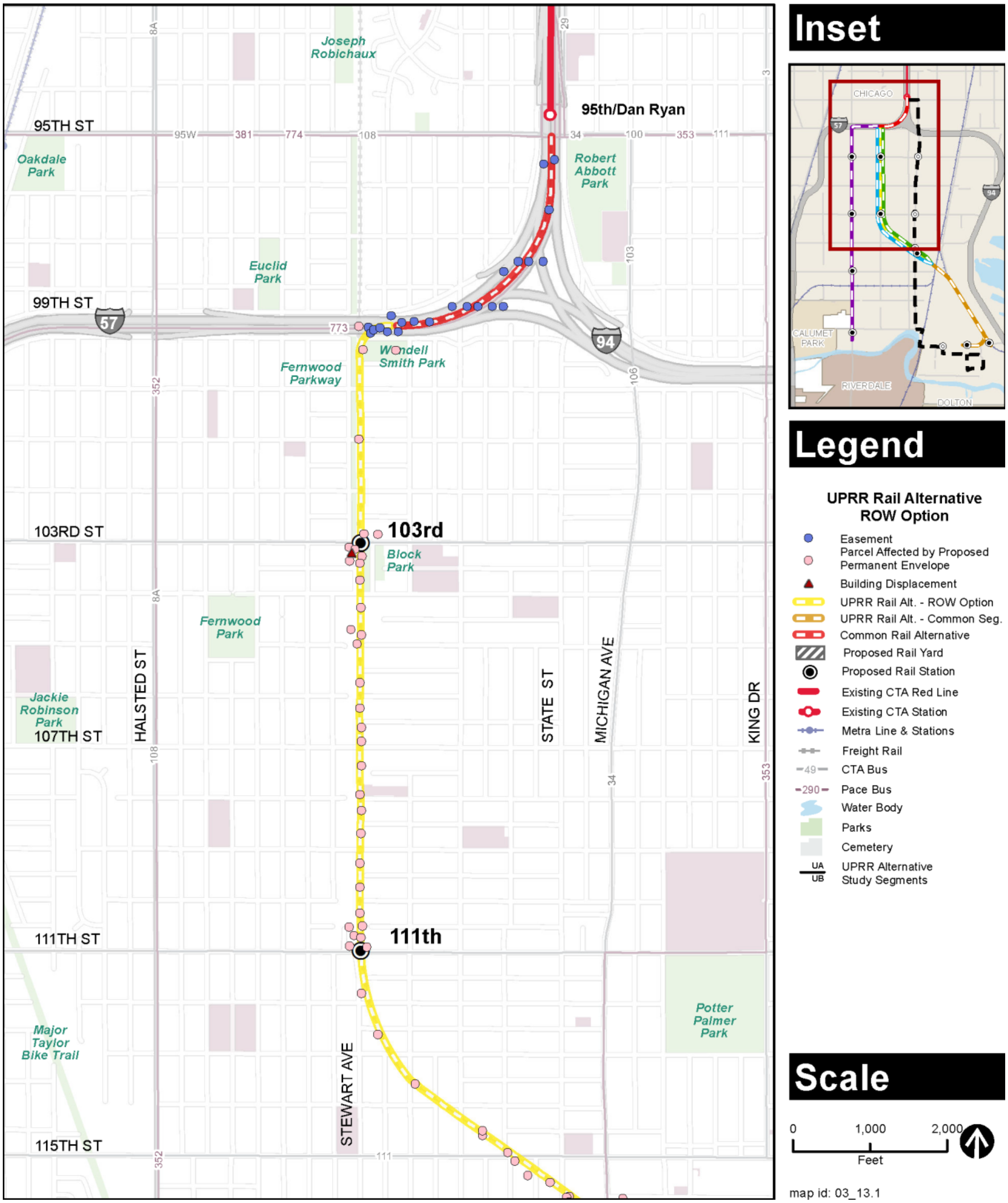
Table 5-2: Union Pacific Railroad Rail Alternative - Right-of-Way Option - Permanent Displacements*

Land Use Type	Affected Parcels	Building Displacements
Vacant	13	
Single-Family Residential	18	15
Multi-Family Residential	1	1
Commercial	3	2
Mixed-Use (Retail/Office/Residential)	1	1
Institutional (Place of Worship)	1	
Industrial	11	4
Utility (MWRD)	15	
Transportation (CN/Metra)	3	
Transportation (IHB)	6	1
Transportation (NICTD/CSS & SBRR)	2	
Public (City of Chicago)**	59	
Totals	**133**	**24**

Notes: MWRD = Metropolitan Water Reclamation District, CN = Canadian National, IHB = Indiana Harbor Belt, NICTD/CSS & SBRR = Northern Indiana Commuter Transportation District’s Chicago South Shore & South Bend Railroad

*Building displacements are a subset of affected parcels and relate to a primary building displacement and/or a secondary structure.

** For this analysis, it was assumed that the UPRR trains would relocate to another corridor as part of a separate, earlier project that may occur regardless of RLE implementation and that the current railroad ROW would be publicly owned after freight operations have moved to a new alignment. The publicly owned parcels are considered “affected parcels” and not easements, because the CTA would need to negotiate a fee simple property transfer or an easement with the public entity.


Inset
CHICAGO
CALUMET PARK
RIVERDALE
DOLTON
Legend
UPRR Rail Alternative ROW Option
Easement
Parcel Affected by Proposed Permanent Envelope
Building Displacement
UPRR Rail Alt. - ROW Option
UPRR Rail Alt. - Common Seg.
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
49 CTA Bus
290 Pace Bus
Water Body
Parks
Cemetery
UA UB UPRR Alternative Study Segments
Scale
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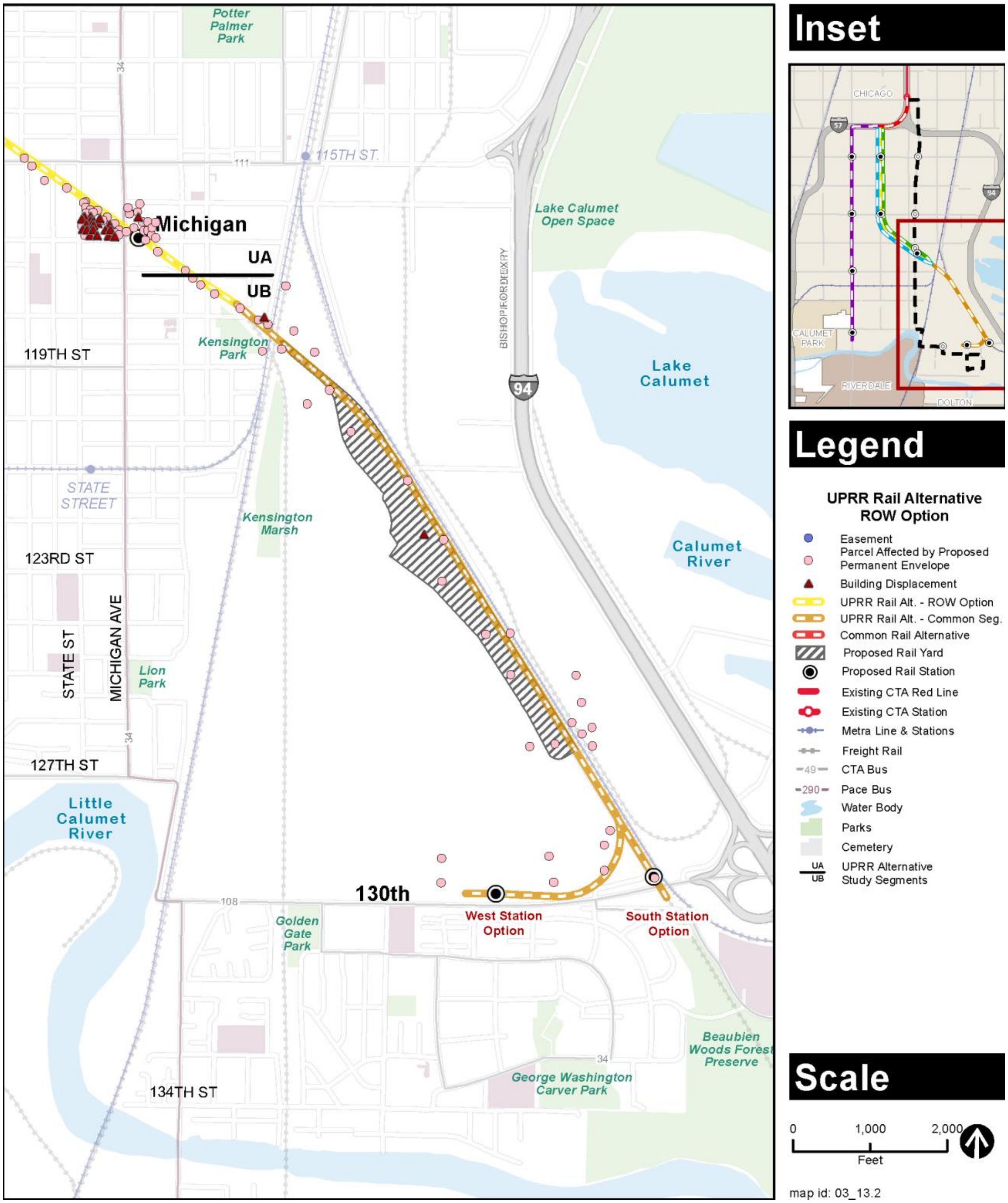
map id: 03_13.1
95TH ST
99TH ST
103RD ST
107TH ST
111TH ST
115TH ST
HALSTED ST
STEWART AVE
STATE ST
MICHIGAN AVE
KING DR
95th/Dan Ryan
103rd
111th
Joseph Robichaux
Oakdale Park
Robert Abbott Park
Euclid Park
Fernwood Parkway
Wendell Smith Park
Block Park
Fernwood Park
Jackie Robinson Park
Major Taylor Bike Trail
Potter Palmer Park
57
94
95W
381
774
108
34
100
353
111
773
8A
29
3
103
106
352
34
353
111

Figure 5-3: Union Pacific Railroad Rail Alternative - Right-of-Way Option - Displacements


Potter Palmer Park
115TH ST.
111
Michigan
UA
UB
Lake Calumet Open Space
BISHOP FORD EXPY
Kensington Park
119TH ST
94
Lake Calumet
STATE STREET
Kensington Marsh
Calumet River
123RD ST
STATE ST
MICHIGAN AVE
Lion Park
34
127TH ST
Little Calumet River
130th
108
West Station Option
South Station Option
Golden Gate Park
Beaubien Woods Forest Preserve
George Washington Carver Park
134TH ST
Inset
CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON
Legend
UPRR Rail Alternative ROW Option
Easement
Parcel Affected by Proposed Permanent Envelope
Building Displacement
UPRR Rail Alt. - ROW Option
UPRR Rail Alt. - Common Seg.
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
49 CTA Bus
290 Pace Bus
Water Body
Parks
Cemetery
UA UB UPRR Alternative Study Segments
Scale
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1,000
2,000
Feet
map id: 03_13.2

Figure 5-4: Union Pacific Railroad Rail Alternative - Right-of-Way Option - Displacements

5.3.1.1 Segment UA

95th Street to 99th Street

The alignment would be within the median of I-94 and I-57, which are interstate highways under the jurisdiction of IDOT and the Federal Highway Administration (FHWA). A total of 22 parcel easement agreements would be required for the aerial structure of the RLE Project.

99th Street to 103rd Street Station

As the part of transition from the I-57 median to the ROW Option corridor, the alignment would cross the western portion of Wendell Smith Park (see *Parklands and Community Facilities Technical Memorandum*). The alignment would be along the centerline of the UPRR corridor, which would be publicly owned. Two park & ride lots would be on 103rd Street adjacent to the station. As a result, the permanent envelope would affect 12 parcels and displace 1 single-family residence and 1 vacant commercial building within the Roseland neighborhood.

Table 5-3: Union Pacific Railroad Rail Alternative - Right-of-Way Option - Permanent Displacements (99th Street to 103rd Street Station)*

Land Use Type	Affected Parcels	Building Displacements
Vacant	2	
Single-Family Residential	1	1
Commercial	1	1
Public (City of Chicago)**	8	
Totals	**12**	**2**

*Building displacements are a subset of affected parcels and relate to a primary building displacement and/or a secondary structure.
**The publicly owned parcels are considered “affected parcels” and not easements, because the CTA would need to negotiate a fee simple property transfer or an easement with the public entity.

103rd Street to 111th Street Station

The alignment would be along the centerline of the UPRR corridor, which would be publicly owned. An electric substation at 105th Street would affect one vacant land parcel on the western perimeter of the UPRR corridor. Two park & ride lots would be on 111th Street adjacent to the station: one on vacant land east of the alignment, and one on vacant land west of the alignment. As a result, the permanent envelope would affect 21 parcels within the Roseland neighborhood.

Table 5-4: Union Pacific Railroad Rail Alternative - Right-of-Way Option - Permanent Displacements (103rd Street to 111th Street Station)

Land Use Type	Affected Parcels	Building Displacements
Vacant	1	
Institutional (Place of Worship)	1	
Industrial	2	
Public (City of Chicago)*	17	
Totals	**21**	

*The publicly owned parcels are considered “affected parcels” and not easements, because the CTA would need to negotiate a fee simple property transfer or an easement with the public entity.

111th Street to 115th Street

The alignment would be along the centerline of the UPRR corridor, which would be publicly owned. As a result, the permanent envelope would affect seven city-owned parcels.

115th Street to 117th Street

The alignment would be along the centerline of the UPRR corridor, which would be publicly owned. An electric substation would be located on vacant land at the end of Lafayette Avenue. Adjacent to the Michigan Avenue station, a multi-level parking garage along 116th Street and State Street would require displacement of 14 single-family residences, as well as 2 businesses. A park & ride lot would be located along Michigan Avenue between Kensington Avenue and 116th Street on mostly vacant land. As a result, the permanent envelope would affect 56 parcels and displace 14 single-family residences, 1 multi-family residence, 1 commercial building, 1 mixed-use building, and 1 vacant industrial building within West Pullman.

Table 5-5: Union Pacific Railroad Rail Alternative - Right-of-Way Option - Permanent Displacements* (115th to 117th Street)*

Land Use Type	Affected Parcels	Building Displacements
Vacant	8	
Single-Family Residential	17	14
Multi-Family Residential	1	1
Commercial	2	1
Mixed-Use (Retail/Office/Residential)	1	1
Industrial	3	1
Public (City of Chicago)**	24	
Totals	**56**	**18**

*Building displacements are a subset of affected parcels and relate to a primary building displacement and/or a secondary structure.
**The publicly owned parcels are considered “affected parcels” and not easements, because the CTA would need to negotiate a fee simple property transfer or an easement with the public entity.

5.3.1.2 Segment UB

117th Street to Front Avenue

Between 117th Street and Calumet Avenue, the alignment would be along the centerline of the UPRR corridor, which would be publicly owned. From Calumet Avenue to Front Avenue, the alignment would transition to the east and would affect one industrial property. As a result, the permanent envelope would affect six parcels and displace one industrial building within West Pullman.

Table 5-6: Union Pacific Railroad Rail Alternative - Right-of-Way Option - Permanent Displacements (117th Street to Front Avenue)*

Land Use Type	Affected Parcels	Building Displacements
Industrial	3	1
Public (City of Chicago)**	3	
Totals	**6**	**1**

*Building displacements are a subset of affected parcels and relate to a primary building displacement and/or a secondary structure.
**The publicly owned parcels are considered “affected parcels” and not easements, because the CTA would need to negotiate a fee simple property transfer or an easement with the public entity.

Front Avenue to 130th Street Station

South of Front Avenue, the alignment would cross the existing CN/Metra railroad tracks and other railroad properties. The alignment would then transition from an aerial structure to an at-grade alignment and would remain at grade to the 130th Street station (South Option). The alignment ROW would run through several industrial properties and utility properties. A multi-level parking garage, adjacent electric substation, and bus and auto access roads would be located on vacant utility properties owned by MWRD. South of Front Avenue, the permanent envelope would affect 16 parcels within the Riverdale neighborhood. (Note: The permanent envelopes for the 130th Street West Station Option and South Station Option would affect the same parcels.).

Table 5-7: Union Pacific Railroad Rail Alternative - Right-of-Way Option - Permanent Displacements (Front Avenue to 130th Street)

Land Use Type	Affected Parcels	Building Displacements
Industrial	2	
Utility (MWRD)	7	
Transportation (CN/Metra)	3	
Transportation (IHB)	4	
Totals	**16**	

Notes: MWRD = Metropolitan Water Reclamation District, CN = Canadian National, IHB = Indiana Harbor Belt

5.3.2 Construction Impacts and Mitigations - Union Pacific Railroad Rail Alternative - Right-of-Way Option

Because all construction activities would occur on land acquired for the permanent ROW, there would be no temporary displacement or relocation impacts associated solely with the construction phase.

5.3.3 Cumulative Impacts and Mitigations - Union Pacific Railroad Rail Alternative - Right-of-Way Option

No other projects identified in the *Cumulative Impacts Technical Memorandum* would cause displacements within the area of potential impact. If any future displacements would occur as part of a separate project prior to CTA's construction of the RLE Project, CTA would coordinate efforts to minimize cumulative displacement impacts.

5.3.4 120th Street Yard and Shop

5.3.4.1 Permanent Impacts and Mitigations

A new train maintenance yard and shop for CTA's Red Line would be located in the vicinity of 120th Street and Cottage Grove Avenue. An electric substation would be located adjacent to the maintenance yard. These facilities would affect primarily railroad properties and utility properties. As a result, the permanent envelope would affect 15 parcels within the Riverdale neighborhood. There would be three building displacements associated with these facilities. Table 5-8 lists the lists the number of affected parcels and displacements by land use type and the number of buildings displaced.

Table 5-8: 120th Street Yard and Shop - Permanent Displacements*

Land Use Type	Affected Parcels	Building Displacements
Vacant	2	
Industrial	1	2
Utility (MWRD)	8	
Transportation (IHB)	2	1
Transportation (NICTD/CSS & SBRR)	2	
Totals	**15**	**3**

Notes: MWRD = Metropolitan Water Reclamation District, IHB = Indiana Harbor Belt, NICTD/CSS & SBRR = Northern Indiana Commuter Transportation District Chicago South Shore & South Bend Railroad
*Building displacements are a subset of affected parcels and relate to a primary building displacement and/or a secondary structure.

5.3.4.2 Construction Impacts and Mitigations

Because all construction activities would occur on land acquired for the permanent ROW, there would be no temporary displacement or relocation impacts associated solely with the construction phase.

5.4 Union Pacific Railroad Rail Alternative - East Option

The corridor alignment of the UPRR Rail Alternative - East Option (East Option) would be primarily east of the existing ROW of the UPRR. The East Option would affect numerous residential, mixed-use, and industrial properties needed for the alignment ROW, park & ride lots, parking garages, electric substations, and maintenance yard. The East Option would have many more land acquisitions and building displacements than the ROW Option, Halsted Rail Alternative, or BRT Alternative. The East Option and West Option would affect a comparable number of properties.

5.4.1 Permanent Impacts and Mitigations - Union Pacific Railroad Rail Alternative - East Option

As shown in Table 5-9, the East Option would affect 256 parcels and displace 112 buildings. With just compensation and relocation assistance per the Uniform Act, the impact would be considered not substantially adverse because of the general availability of vacant land in the project area and the beneficial impacts of the project including new rail transit with four stations, greater accessibility to the region, improved access to jobs, and new development opportunities in the project area. In addition, the availability of similar real estate within the project area would facilitate relocation. A total of 22 parcel easement agreements via negotiations with IDOT would be required for the aerial structure of the RLE Project, as well as 4 parcel easement agreements through negotiations with the City of Chicago. Figures 5-5 and 5-6 highlight the affected parcels on a project area map, while detailed parcel maps are within Appendix C. The following subsections describe the impacts in Segment UA (95th Street to 117th Street) and Segment UB (117th Street to 130th Street), and from the 120th Street yard and shop.

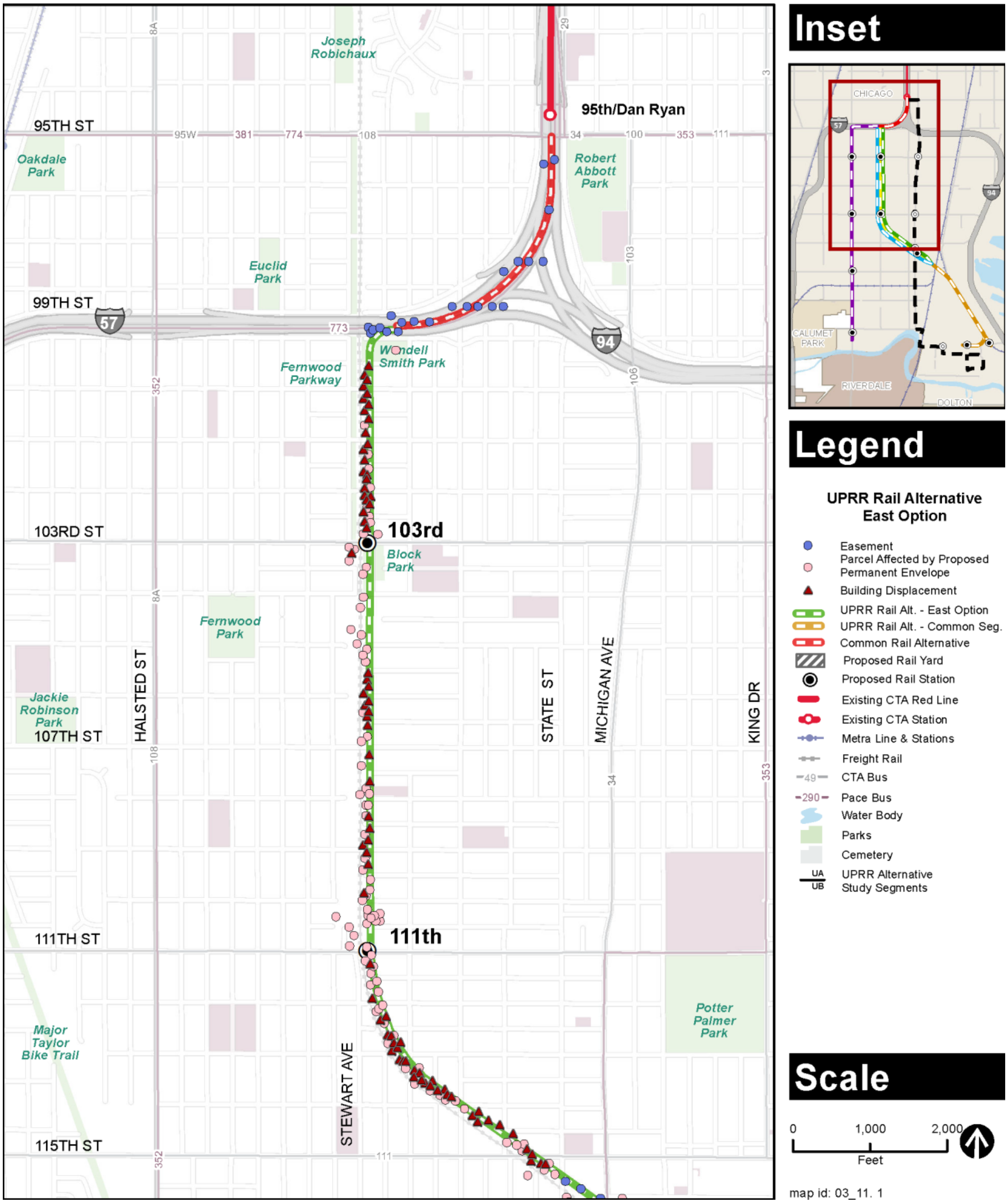
Table 5-9: Union Pacific Railroad Rail Alternative - East Option - Permanent Displacements*

Land Use Type	Affected Parcels	Building Displacements
Vacant	56	
Single-Family Residential	91	82
Multi-Family Residential	15	13
Commercial	6	3
Institutional (Place of Worship)	1	1
Institutional (School)	2	
Industrial	19	11
Utility (MWRD)	15	
Transportation (Union Pacific Railroad)	18	
Transportation (CN/Metra)	3	
Transportation (IHB)	6	1
Transportation (NICTD/CSS & SBRR)	2	
Public (City of Chicago)**	22	1
Totals	**256**	**112**

Notes: MWRD = Metropolitan Water Reclamation District, CN = Canadian National, IHB = Indiana Harbor Belt, NICTD/CSS & SBRR = Northern Indiana Commuter Transportation District Chicago South Shore & South Bend Railroad

*Building displacements are a subset of affected parcels and relate to a primary building displacement and/or a secondary structure.

**The publicly owned parcels are considered “affected parcels” and not easements, because the CTA would need to negotiate a fee simple property transfer or an easement with the public entity.


95TH ST
99TH ST
103RD ST
107TH ST
111TH ST
115TH ST
HALSTED ST
STEWART AVE
STATE ST
MICHIGAN AVE
KING DR
95th/Dan Ryan
103rd
111th
Joseph Robichaux
Oakdale Park
Robert Abbott Park
Euclid Park
Fernwood Parkway
Wendell Smith Park
Block Park
Fernwood Park
Jackie Robinson Park
Major Taylor Bike Trail
Potter Palmer Park
57
94
95W
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774
108
34
100
353
111
29
3
8A
352
773
103
106
Inset
CHICAGO
CALUMET PARK
RIVERDALE
DOLTON
Legend
UPRR Rail Alternative East Option
Easement
Parcel Affected by Proposed Permanent Envelope
Building Displacement
UPRR Rail Alt. - East Option
UPRR Rail Alt. - Common Seg.
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
49 CTA Bus
290 Pace Bus
Water Body
Parks
Cemetery
UA UB UPRR Alternative Study Segments
Scale
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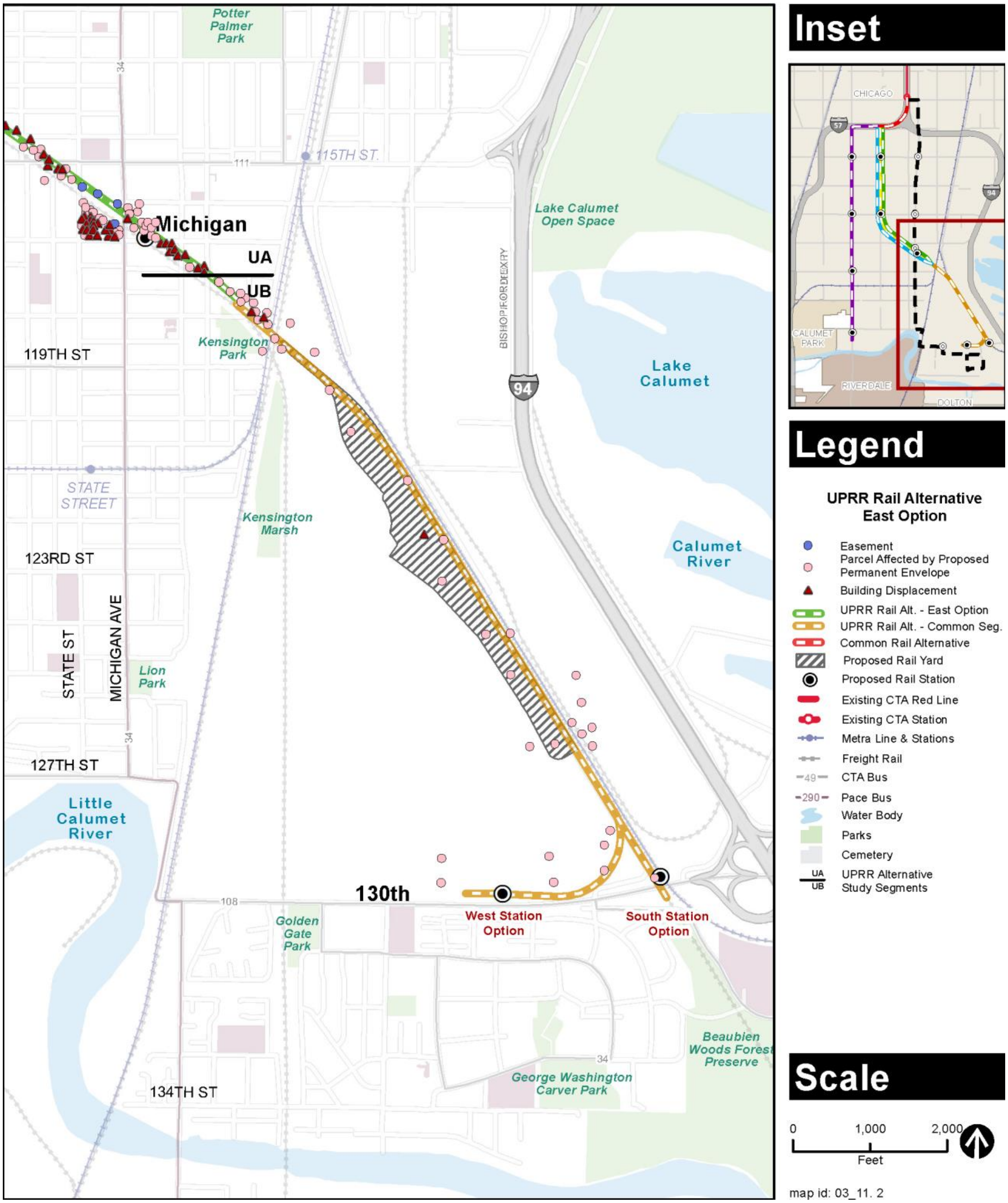
1,000
2,000
Feet
map id: 03_11. 1

Figure 5-5: Union Pacific Railroad Rail Alternative - East Option - Displacements


Potter Palmer Park
115TH ST.
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Michigan
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Kensington Park
119TH ST
Lake Calumet Open Space
BISHOP FORD EXPY
94
Lake Calumet
STATE STREET
Kensington Marsh
123RD ST
Calumet River
STATE ST
MICHIGAN AVE
Lion Park
127TH ST
Little Calumet River
130th
108
Golden Gate Park
West Station Option
South Station Option
Beaubien Woods Forest Preserve
34
George Washington Carver Park
134TH ST
Inset
CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON
Legend
UPRR Rail Alternative East Option
Easement
Parcel Affected by Proposed Permanent Envelope
Building Displacement
UPRR Rail Alt. - East Option
UPRR Rail Alt. - Common Seg.
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
49 CTA Bus
290 Pace Bus
Water Body
Parks
Cemetery
UA UB UPRR Alternative Study Segments
Scale
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1,000
2,000
Feet
map id: 03_11. 2

Figure 5-6: Union Pacific Railroad Rail Alternative - East Option - Displacements

5.4.1.1 Segment UA

95th Street to 99th Street

The alignment would be within the medians of I-94 and I-57, which are interstate highways under the jurisdiction of IDOT and the FHWA. A total of 22 parcel easement agreements would be required for the aerial structure of the RLE Project.

99th Street to 103rd Street Station

As the part of the transition from the I-57 median to the East Option corridor, the alignment would cross the western portion of Wendell Smith Park (see *Parklands and Community Facilities Technical Memorandum*). The alignment would run through numerous single-family residential properties per street from 99th Place through 103rd Street, as well as some vacant land. The 103rd Street station would affect this area between 102nd and 103rd Streets. A park & ride lot would be located adjacent to the station on vacant land. Another park & ride lot would be located at 103rd Street on the western perimeter of the UPRR ROW. As a result, the permanent envelope would affect 37 parcels and displace 25 single-family residences and 1 vacant commercial building within the Roseland neighborhood. Table 5-10 lists the number of affected parcels and displacements by land use type and the number of buildings displaced.

Table 5-10: Union Pacific Railroad Rail Alternative - East Option - Permanent Displacements (99th Street to 103rd Street Station)*

Land Use Type	Affected Parcels	Building Displacements
Vacant	4	
Single-Family Residential	28	25
Commercial	1	1
Industrial	1	
Transportation (Union Pacific Railroad)	1	
Public (City of Chicago)**	2	
Totals	**37**	**26**

*Building displacements are a subset of affected parcels and relate to a primary building displacement and/or a secondary structure.

**The publicly owned parcels are considered “affected parcels” and not easements, because the CTA would need to negotiate a fee simple property transfer or an easement with the public entity.

103rd Street to 111th Street Station

The 103rd Street station and alignment would cross Block Park (see *Parklands and Community Facilities Technical Memorandum*). Running south through Block Park, the alignment would alter course and run adjacent to a utility (Roseland Pump House) along UPRR property and then alter course outside the UPRR property. This segment of the alignment would affect five parcels owned by the UPRR. Location of an electric substation at 105th Street would affect one vacant parcel and displace one vacant single-family residence on the western perimeter of the UPRR.

South of 105th Street, the alignment would curve back outside of the UPRR property and would affect vacant land, several single-family residential uses, a few industrial uses, and the open space of an institutional use (Roseland Christian School). The 111th Street station also would affect this area between 110th and 111th Streets. Two park & ride lots would be located adjacent to the 111th Street station: one on vacant land east of the station on 110th Place, and one on vacant land west of the UPRR on 111th Street.

Between 103rd Street and 111th Street, the permanent envelope would affect 57 parcels and displace 14 single-family residences, 1 multi-family residence, and 3 industrial buildings within the Roseland neighborhood. The number of affected parcels and displacements by land use type and the number of buildings displaced is listed in Table 5-11.

Table 5-11: Union Pacific Railroad Rail Alternative - East Option - Permanent Displacements (103rd Street to 111th Street Station)*

Land Use Type	Affected Parcels	Building Displacements
Vacant	20	
Single-Family Residential	14	14
Multi-Family Residential	1	1
Institutional (School)	2	
Industrial	6	3
Transportation (Union Pacific Railroad)**	8	
Public (City of Chicago)***	6	
Totals	**57**	**18**

*Building displacements are a subset of affected parcels and relate to a primary building displacement and/or a secondary structure.
** Union Pacific Railroad right-of-way maps containing hand-written notes indicate a sale of some land area to the City of Chicago in the vicinity of Roseland Pump House; however, Cook County Assessor data indicates that all parcels are owned by the railroad.
***The publicly owned parcels are considered "affected parcels" and not easements, because the CTA would need to negotiate a fee simple property transfer or an easement with the public entity.

111th Street to 115th Street

The alignment would run through several single-family residential properties per street, as well as a few industrial properties, vacant land, and a place of worship. As a result, the permanent envelope would affect 57 parcels and displace 21 single-family residences, 6 multi-family residences, 4 industrial buildings, and 1 place of worship (Table 5-12).

Table 5-12: Union Pacific Railroad Rail Alternative - East Option - Permanent Displacements (111th to 115th Street)*

Land Use Type	Affected Parcels	Building Displacements
Vacant	16	
Single-Family Residential	24	21
Multi-Family Residential	7	6
Institutional (Place of Worship)	1	1
Industrial	4	4
Transportation (Union Pacific Railroad)	4	
Public (City of Chicago)**	1	
Totals	**57**	**32**

*Building displacements are a subset of affected parcels and relate to a primary building displacement and/or a secondary structure.
**The publicly owned parcels are considered "affected parcels" and not easements, because the CTA would need to negotiate a fee simple property transfer or an easement with the public entity.

115th Street to 117th Street

The alignment would cross several single-family residential properties, commercial properties, and vacant land. An electric substation would be located on vacant land at the end of Lafayette Avenue, west of the UPRR track. The Michigan Avenue station would affect primarily vacant land. Adjacent to the station, a three-story parking garage would be located along 116th Street and State

Street on single-family residential properties. A park & ride lot would be located along Michigan Avenue between Kensington Avenue and 116th Street on mostly vacant land, except for one vacant industrial building. In addition, four parcels would be affected by an easement agreement that the City of Chicago negotiated with the developer of the proposed Roseland Plaza adjacent to the Michigan Avenue station and east of the UPRR track. As a result, the permanent envelope would affect 64 parcels and displace 21 single-family residences, 6 multi-family residences, 2 commercial buildings, 1 vacant industrial building, and 1 public building within West Pullman. Table 5-13 lists the number of affected parcels and displacements by land use type and the number of buildings that would be displaced by the UPRR East Option from 115th Street to 117th Street.

Table 5-13: Union Pacific Railroad Rail Alternative - East Option - Permanent Displacements (115th to 117th Street)*

Land Use Type	Affected Parcels	Building Displacements
Vacant	11	
Single-Family Residential	24	21
Multi-Family Residential	7	6
Commercial	3	2
Industrial	3	1
Transportation (Union Pacific Railroad)	5	
Public (City of Chicago)**	11	1
Totals	**64**	**31**

*Building displacements are a subset of affected parcels and relate to a primary building displacement and/or a secondary structure.
**The publicly owned parcels are considered “affected parcels” and not easements, because the CTA would need to negotiate a fee simple property transfer or an easement with the public entity.

5.4.1.2 Segment UB

117th Street to Front Avenue

Between 117th Street and Front Avenue, the alignment would run through vacant properties, a single-family residential property, and an industrial property. As a result, the permanent envelope would affect 12 parcels and displace 1 single-family residence and 1 industrial building within West Pullman between 117th Street and Front Avenue (Table 5-14).

Table 5-14: Union Pacific Railroad Rail Alternative - East Option - Permanent Displacements (117th Street to Front Avenue)*

Land Use Type	Affected Parcels	Building Displacements
Vacant	3	
Single-Family Residential	1	1
Commercial	2	
Industrial	4	1
Public (City of Chicago)**	2	
Totals	**12**	**2**

*Building displacements are a subset of affected parcels and relate to a primary building displacement and/or a secondary structure.
**The publicly owned parcels are considered “affected parcels” and not easements, because the CTA would need to negotiate a fee simple property transfer or an easement with the public entity.

Front Avenue to 130th Street Station

South of Front Avenue, the alignment would cross the existing CN/Metra railroad tracks and other railroad properties. The alignment would then transition from an aerial structure to at-grade to the 130th Street station (South Station Option). The alignment would run through several industrial properties and utility properties. A multi-level parking garage, adjacent electric substation, and bus and auto access roads would be on vacant utility properties owned by MWRD. South of Front Avenue, the permanent envelope would affect 15 parcels within the Riverdale neighborhood. The permanent envelopes for the 130th Street West Station Option and South Station Option would affect the same parcels. Table 5-15 lists the number of affected parcels and displacements by land use type and the number of buildings displaced.

Table 5-15: Union Pacific Railroad Rail Alternative - East Option - Permanent Displacements (Front Avenue to 130th Street)

Land Use Type	Affected Parcels	Building Displacements
Industrial	1	
Utility (MWRD)	7	
Transportation (CN/Metra)	3	
Transportation (IHB)	4	
Totals	**15**	

Notes: MWRD = Metropolitan Water Reclamation District, CN = Canadian National, IHB = Indiana Harbor Belt

5.4.2 Construction Impacts and Mitigations - Union Pacific Railroad Rail Alternative - East Option

Because all construction activities would occur on land acquired for the permanent ROW, there would be no temporary displacement or relocation impacts associated solely with the construction phase.

5.4.3 Cumulative Impacts and Mitigations - Union Pacific Railroad Rail Alternative - East Option

No other projects identified in the *Cumulative Impacts Technical Memorandum* would cause displacements within the area of potential impact. If any future displacements would occur as part of a separate project prior to CTA's construction of the Red Line Extension, CTA would coordinate efforts to minimize cumulative displacement impacts.

5.4.4 120th Street Yard and Shop

The impacts for the 120th Street yard and shop would be the same as for the ROW Option. See Section 5.3.4.

5.5 Union Pacific Railroad Rail Alternative - West Option

The corridor alignment of the UPRR Rail Alternative West Option (West Option) would be primarily west of the existing ROW of the UPRR. The West Option would affect numerous residential, mixed-use, and industrial properties needed for the alignment ROW, park & ride lots, parking garages, electric substations, and maintenance yard. The West Option would have many more land acquisitions and building displacements than the ROW Option, Halsted Rail

Alternative, or BRT Alternative. The West Option and East Option would affect a comparable number of properties.

5.5.1 Permanent Impacts and Mitigations - Union Pacific Railroad Rail Alternative - West Option

As shown in Table 5-16, the West Option would require 193 parcel acquisitions and 53 building displacements. With just compensation and relocation assistance per the Uniform Act, the impact would be considered not substantially adverse because of the general availability of vacant land in the project area and the beneficial impacts of the project including new rail transit with four stations, greater accessibility to the region, improved access to jobs, and new development opportunities in the project area. In addition, the availability of similar real estate within the project area would facilitate relocation. A total of 22 parcel easement agreements through negotiations with IDOT would be required for the aerial structure of the RLE Project, as well as 2 parcel easement agreements via negotiations with the City of Chicago. Figures 5-7 and 5-8 highlight the affected parcels on a project area map, while detailed parcel maps are within Appendix D. The following subsections describe the impacts in Segment UA (95th Street to 117th Street) and Segment UB (117th Street to 130th Street), and from the 120th Street yard and shop.

Table 5-16: Union Pacific Railroad Rail Alternative - West Option - Permanent Displacements*

Land Use Type	Affected Parcels	Building Displacements
Vacant	35	
Single-Family Residential	37	24
Multi-Family Residential	4	4
Commercial	18	8
Mixed-Use (Retail/Office/Residential)	2	2
Institutional (Place of Worship)	7	1
Industrial	20	13
Utility (MWRD)	15	
Transportation (Union Pacific Railroad)	29	
Transportation (CN/Metra)	3	
Transportation (IHB)	6	1
Transportation (NICTD/CSS & SBRR)	2	
Public (City of Chicago)**	15	
Totals	**193**	**53**

Notes: MWRD = Metropolitan Water Reclamation District, CN = Canadian National, IHB = Indiana Harbor Belt, NICTD/CSS & SBRR = Northern Indiana Commuter Transportation District Chicago South Shore & South Bend Railroad

*Building displacements are a subset of affected parcels and relate to a primary building displacement and/or a secondary structure.

**The publicly owned parcels are considered "affected parcels" and not easements, because the CTA would need to negotiate a fee simple property transfer or an easement with the public entity.

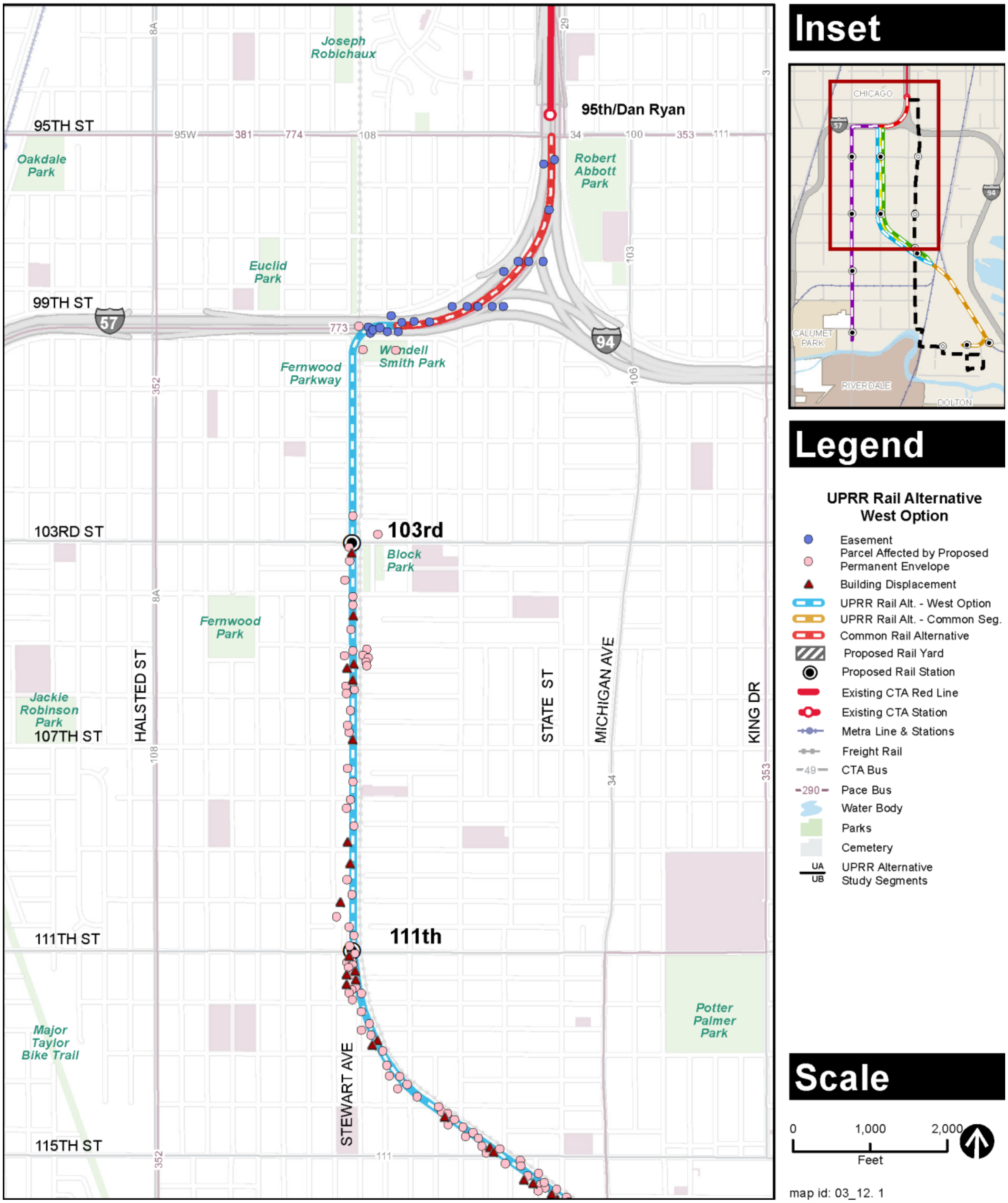

Inset
CHICAGO
CALUMET PARK
RIVERDALE
DOLTON
Joseph Robichaux
95TH ST
95th/Dan Ryan
Oakdale Park
Robert Abbott Park
Euclid Park
99TH ST
57
94
Wendell Smith Park
Fernwood Parkway
103RD ST
103rd
Block Park
Fernwood Park
Jackie Robinson Park
107TH ST
HALSTED ST
STATE ST
MICHIGAN AVE
KING DR
111TH ST
111th
Potter Palmer Park
Major Taylor Bike Trail
115TH ST
STEWART AVE
Legend
UPRR Rail Alternative West Option
Easement
Parcel Affected by Proposed Permanent Envelope
Building Displacement
UPRR Rail Alt. - West Option
UPRR Rail Alt. - Common Seg.
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
49 CTA Bus
290 Pace Bus
Water Body
Parks
Cemetery
UA UB UPRR Alternative Study Segments
Scale
0
1,000
2,000
Feet
map id: 03_12. 1

Figure 5-7: Union Pacific Railroad Rail Alternative - West Option - Displacements

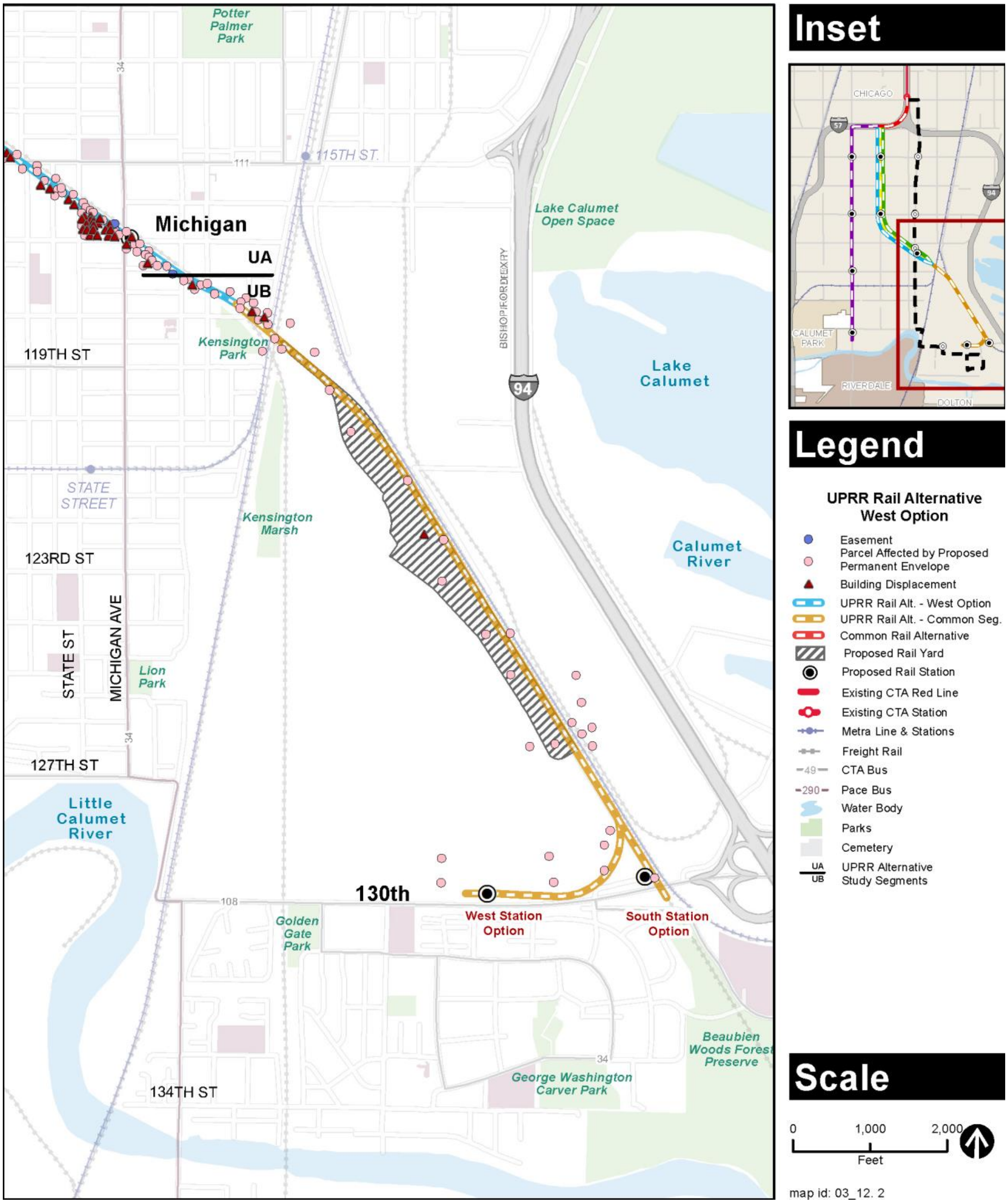

Potter Palmer Park
115TH ST.
111
Michigan
UA
UB
Lake Calumet Open Space
BISHOP FORD EXPY
94
Lake Calumet
Kensington Park
119TH ST
STATE STREET
Kensington Marsh
Calumet River
123RD ST
STATE ST
MICHIGAN AVE
Lion Park
34
127TH ST
Little Calumet River
130th
108
West Station Option
South Station Option
Golden Gate Park
Beaubien Woods Forest Preserve
George Washington Carver Park
134TH ST
Inset
CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON
Legend
UPRR Rail Alternative West Option
Easement
Parcel Affected by Proposed Permanent Envelope
Building Displacement
UPRR Rail Alt. - West Option
UPRR Rail Alt. - Common Seg.
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
49 CTA Bus
290 Pace Bus
Water Body
Parks
Cemetery
UA UB UPRR Alternative Study Segments
Scale
0
1,000
2,000
Feet
map id: 03_12. 2

Figure 5-8: Union Pacific Railroad Rail Alternative - West Option - Displacements

5.5.1.1 Segment UA

95th Street to 99th Street

The alignment would be within the median of I-94 and I-57, which are interstate highways under the jurisdiction of IDOT and the FHWA. A total of 22 parcel easement agreements would be required for the aerial structure of the RLE Project.

99th Street to 103rd Street Station

As the part of the transition from the I-57 median to the West Option corridor, the alignment would cross the western portion of Wendell Smith Park (see *Parklands and Community Facilities Technical Memorandum*). West of the UPRR, the alignment would cross a linear open space (Fernwood Parkway) from 99th Place to 103rd Street. The 103rd Street station would be partially within this open space, straddling 103rd Street (see *Parklands and Community Facilities Technical Memorandum*).

The 103rd Street station and alignment would cross both sides of 103rd Street, which is the boundary between the Washington Heights neighborhood to the north and the Roseland neighborhood to the south. South of 103rd Street, the station, alignment ROW, and park & ride lot would affect four parcels and displace one vacant commercial building and one single-family residence within the Roseland neighborhood (Table 5-17).

Table 5-17: Union Pacific Railroad Rail Alternative - West Option - Permanent Displacements (99th Street to 103rd Street Station)*

Land Use Type	Affected Parcels	Building Displacements
Vacant	3	
Single-Family Residential	1	1
Commercial	1	1
Transportation (Union Pacific Railroad)	2	
Totals	**7**	**2**

*Building displacement impacts relate to a primary building displacement and/or a secondary structure.

103rd Street to 111th Street Station

South of the 103rd Street station to the 111th Street station, the alignment would run through a number of commercial and industrial properties, vacant properties, and city-owned properties. An electric substation would be located on vacant land at 105th Street on the eastern perimeter of the UPRR. A park & ride lot would be located on vacant land adjacent to the 111th Street station. As a result, the permanent envelope would affect 35 parcels and displace 8 industrial buildings and 1 commercial building within the Roseland neighborhood (Table 5-18).

Table 5-18: Union Pacific Railroad Rail Alternative - West Option - Permanent Displacements (103rd Street to 111th Street Station)*

Land Use Type	Affected Parcels	Building Displacements
Vacant	8	
Commercial	5	1
Institutional (Place of Worship)	1	
Industrial	12	8
Transportation (Union Pacific Railroad)	1	
Public (City of Chicago)**	8	
Totals	**35**	**9**

*Building displacements are a subset of affected parcels and relate to a primary building displacement and/or a secondary structure.

**The publicly owned parcels are considered “affected parcels” and not easements, because the CTA would need to negotiate a fee simple property transfer or an easement with the public entity.

111th Street to 115th Street

South of 111th Street, the alignment would curve in parallel with the UPRR property. The alignment would run through several commercial properties, several single-family residential properties, institutional property, vacant land, and property owned by the UPRR. As a result, the permanent envelope would affect 44 parcels and displace 10 buildings within the Roseland neighborhood. The number of affected parcels and displacements by land use type and the number of buildings displaced is listed in Table 5-19.

Table 5-19: Union Pacific Railroad Rail Alternative - West Option - Permanent Displacements (111th to 115th Street)*

Land Use Type	Affected Parcels	Building Displacements
Vacant	8	
Single-Family Residential	11	2
Multi-Family Residential	1	1
Commercial	8	4
Mixed-Use (Retail/Office/Residential)	1	1
Institutional (Place of Worship)	4	
Industrial	2	2
Transportation (Union Pacific Railroad)	9	
Totals	**44**	**10**

*Building displacements are a subset of affected parcels and relate to a primary building displacement and/or a secondary structure.

115th Street to 117th Street

The permanent envelope would run through numerous single-family residential properties, as well as vacant land, railroad property, city-owned property, and some mixed uses. An electric substation would be located at the end of Lafayette Avenue. The Michigan Avenue station would be located on single-family residential properties and vacant land. Adjacent to the station, a multi-level parking garage would be located along 116th Street and State Street on primarily single-family residential properties. As a result, the permanent envelope would affect 59 properties and displace 26 buildings within West Pullman, including 19 single-family residences (Table 5-20).

Table 5-20: Union Pacific Railroad Rail Alternative - West Option - Permanent Displacements (115th to 117th Street)*

Land Use Type	Affected Parcels	Building Displacements
Vacant	10	
Single-Family Residential	23	19
Multi-Family Residential	3	3
Commercial	3	2
Mixed-Use (Retail/Office/Residential)	1	1
Institutional (Place of Worship)	2	1
Transportation (Union Pacific Railroad)	13	
Public (City of Chicago)**	4	
Totals	**59**	**26**

*Building displacements are a subset of affected parcels and relate to a primary building displacement and/or a secondary structure.
**The publicly owned parcels are considered "affected parcels" and not easements, because the CTA would need to negotiate a fee simple property transfer or an easement with the public entity.

5.5.1.2 Segment UB

117th Street to Front Avenue

Between 117th Street and Front Avenue, the alignment would run through a variety of properties including single-family residential, industrial property, railroad property, and vacant land. As a result, the permanent envelope would affect 18 parcels and displace 3 buildings in the West Pullman neighborhood between 117th Street and Front Avenue. Table 5-21 lists the number of affected parcels and displacements by land use type and the number of buildings displaced.

Table 5-21: Union Pacific Railroad Rail Alternative - West Option - Permanent Displacements (117th Street to Front Avenue)*

Land Use Type	Affected Parcels	Building Displacements
Vacant	4	
Single-Family Residential	2	2
Commercial	1	
Industrial	4	1
Transportation (Union Pacific Railroad)	5	
Public (City of Chicago)**	2	
Totals	**18**	**3**

*Building displacements are a subset of affected parcels and relate to a primary building displacement and/or a secondary structure.
**The publicly owned parcels are considered "affected parcels" and not easements, because the CTA would need to negotiate a fee simple property transfer or an easement with the public entity.

Front Avenue to 130th Street Station

South of Front Avenue, the alignment would cross the existing CN/Metra railroad tracks and other railroad properties. The alignment would then transition from an aerial structure to an at-grade alignment and would remain at grade to the 130th Street station. The alignment would run through several industrial properties and utility properties. A multi-level parking garage, adjacent electric substation, and bus and auto access roads would be located on vacant utility properties owned by MWRD. South of Front Avenue, the permanent envelope would affect 15 parcels within the Riverdale neighborhood. The permanent envelopes for the 130th Street West Station Option and South Station Option would affect the same parcels. Table 5-22 lists the number of affected parcels and displacements by land use type and the number of buildings displaced.

Table 5-22: Union Pacific Railroad Rail Alternative - West Option - Permanent Displacements (Front Avenue to 130th Street)

Land Use Type	Affected Parcels	Building Displacements
Industrial	1	
Utility (MWRD)	7	
Transportation (CN/Metra)	3	
Transportation (IHB)	4	
Totals	**15**	

Notes: MWRD = Metropolitan Water Reclamation District, CN = Canadian National, IHB = Indiana Harbor Belt

5.5.2 Construction Impacts and Mitigations - Union Pacific Railroad Rail Alternative - West Option

Because all construction activities would occur on land acquired for the permanent ROW, there would be no temporary displacement or relocation impacts associated solely with the construction phase.

5.5.3 Cumulative Impacts and Mitigations - Union Pacific Railroad Rail Alternative - West Option

No other projects identified in the *Cumulative Impacts Technical Memorandum* would cause displacements within the area of potential impact. If any future displacements would occur as part of a separate project prior to CTA's construction of the Red Line Extension, CTA would coordinate efforts to minimize cumulative displacement impacts.

5.5.4 120th Street Yard and Shop

The impacts for the 120th Street yard and shop would be the same as for the ROW Option. See Section 5.3.4.

5.6 Halsted Rail Alternative

The corridor alignment of the Halsted Rail Alternative would be primarily within the public ROW of interstate highways and an arterial roadway. The Halsted Rail Alternative would affect properties needed for the elevated structure, park & ride lots, parking garages, electric substations, and maintenance yard. The Halsted Rail Alternative would have more land acquisitions and building displacements than the BRT Alternative, but fewer than the UPRR Rail Alternative West or East Options. The Halsted Rail Alternative and UPRR Rail Alternative ROW Option would affect a comparable number of properties.

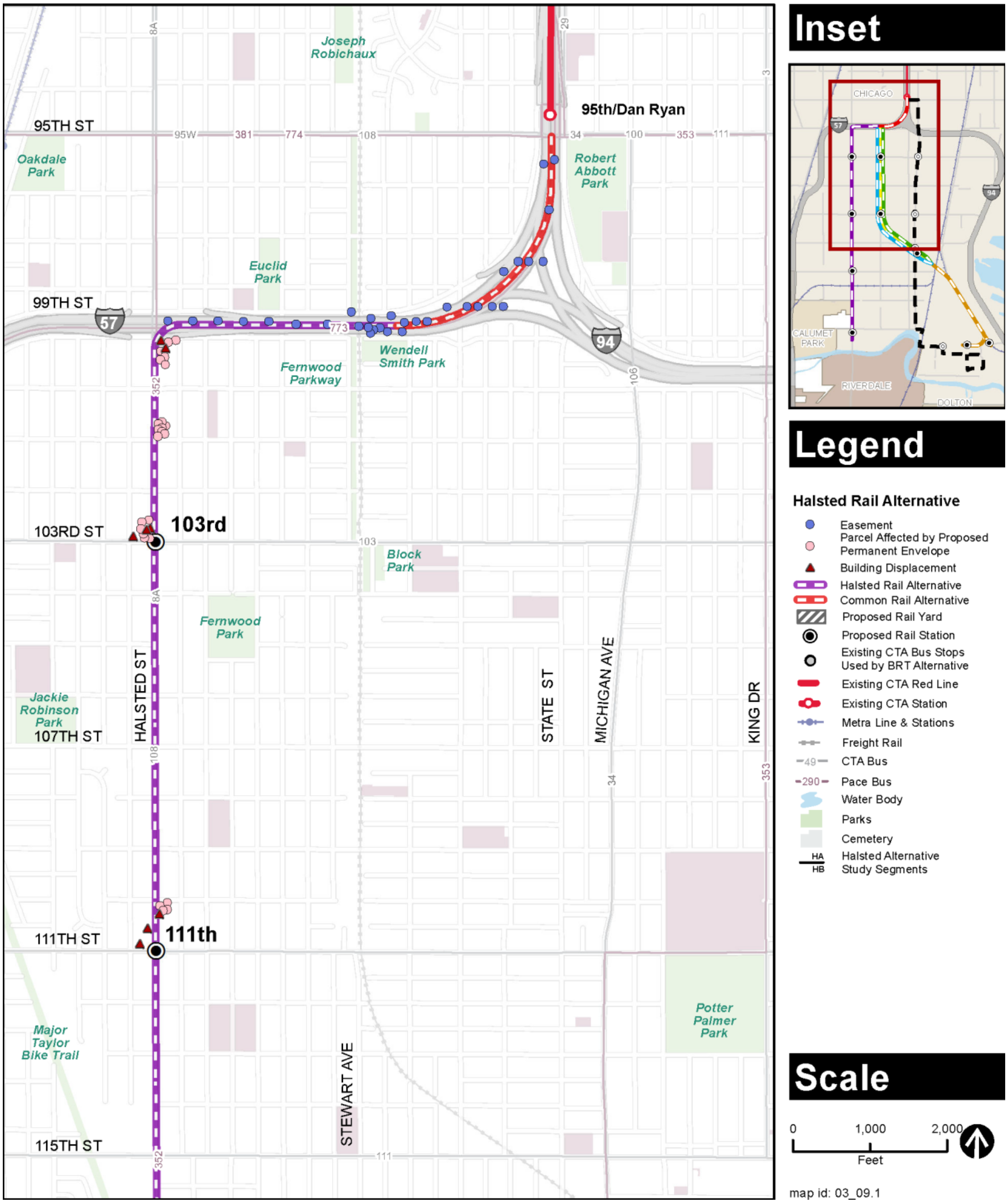
5.6.1 Permanent Impacts and Mitigations - Halsted Rail Alternative

As shown in Table 5-23, the Halsted Rail Alternative would require a total of 108 parcel acquisitions and 37 building displacements. With just compensation and relocation assistance per the Uniform Act, the impact would be considered not substantially adverse because of the general availability of vacant land in the project area and the beneficial impacts of the project including new rail transit with four stations, greater accessibility to the region, improved access to jobs, and new development opportunities in the project area. In addition, the availability of similar real estate within the same neighborhoods would facilitate relocation. A total of 32 parcel easement agreements would be required for the aerial structure of the RLE Project. These easements would be acquired through negotiations with IDOT. Figures 5-9 and 5-10 highlight the affected parcels on a project area map, while detailed parcel maps are within Appendix F. The following subsections describe the impacts in Segment HA (95th Street to 120th Street) and Segment HB (120th to 129th Street on Halsted Street), as well as the 119th Street yard and shop. Table 5-23 displays the number of affected parcels and displacements by land use type and the number of buildings displaced.

Table 5-23: Halsted Rail Alternative - Total Permanent Displacements*

Land Use Type	Affected Parcels	Building Displacements
Vacant	22	
Single-Family Residential	13	11
Commercial	37	15
Mixed-Use (Retail/Office/Residential)	6	6
Institutional (Place of Worship)	1	1
Industrial	4	3
Transportation (Railroad)	5	
Transportation (Metra)	2	
Public (City of Chicago)**	18	2
Totals	**108**	**38**

Notes: MWRD = Metropolitan Water Reclamation District
*Building displacements are a subset of affected parcels and relate to a primary building displacement and/or a secondary structure.
**The publicly owned parcels are considered “affected parcels” and not easements, because the CTA would need to negotiate a fee simple property transfer or an easement with the public entity.


Joseph Robichaux
95th/Dan Ryan
95TH ST
Oakdale Park
Robert Abbott Park
Euclid Park
99TH ST
57
94
Fernwood Parkway
Wendell Smith Park
103RD ST
103rd
Block Park
Fernwood Park
Jackie Robinson Park
107TH ST
HALSTED ST
STATE ST
MICHIGAN AVE
KING DR
111TH ST
111th
Potter Palmer Park
Major Taylor Bike Trail
STEWART AVE
115TH ST
Inset
CHICAGO
CALUMET PARK
RIVERDALE
DOLTON
Legend
Halsted Rail Alternative
Easement
Parcel Affected by Proposed Permanent Envelope
Building Displacement
Halsted Rail Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Existing CTA Bus Stops Used by BRT Alternative
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
CTA Bus
Pace Bus
Water Body
Parks
Cemetery
Halsted Alternative Study Segments
Scale
0
1,000
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Feet
map id: 03_09.1

Figure 5-9: Halsted Rail Alternative - Displacements

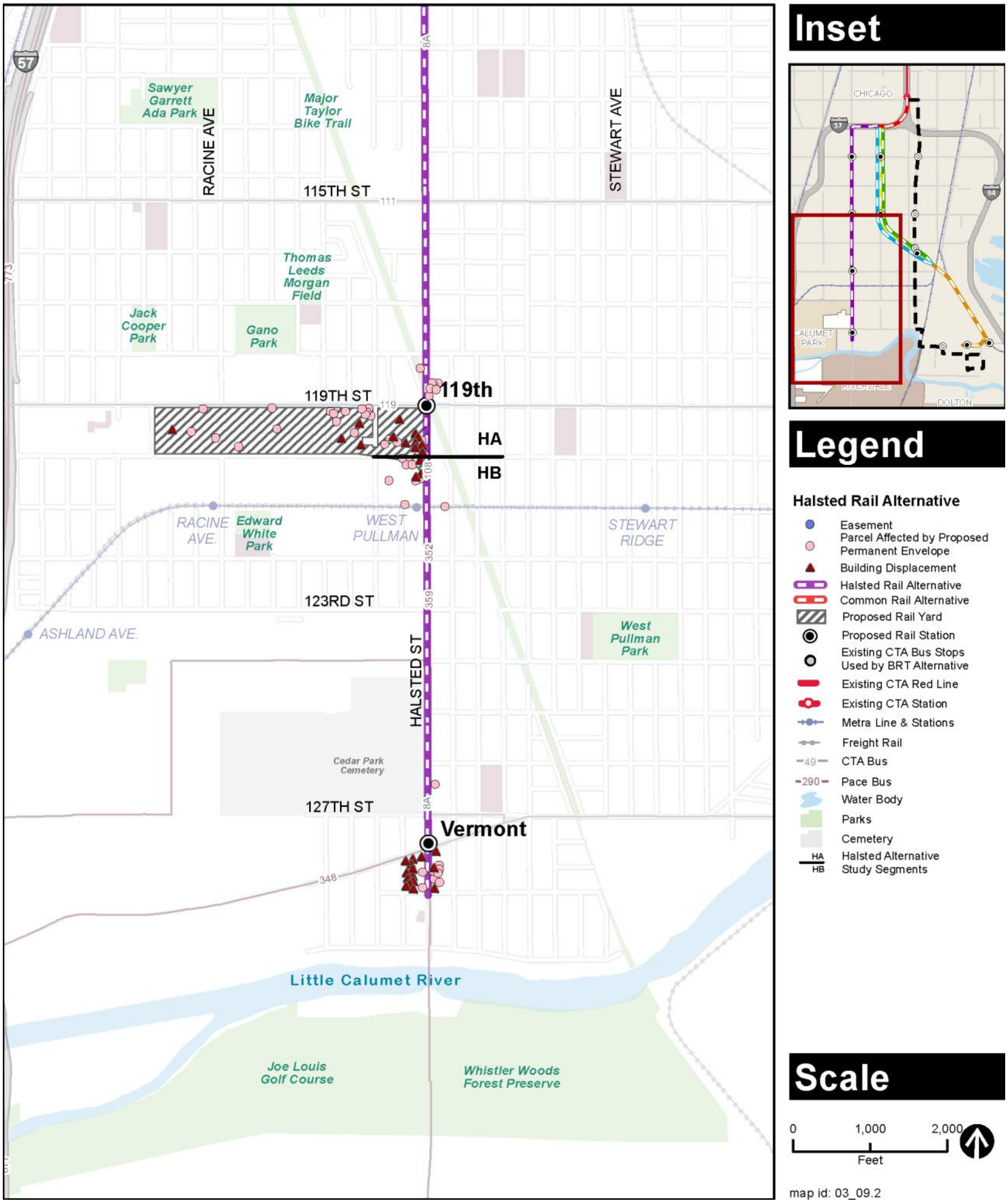

57
Sawyer Garrett Ada Park
RACINE AVE
Major Taylor Bike Trail
STEWART AVE
115TH ST
111
Thomas Leeds Morgan Field
Jack Cooper Park
Gano Park
119TH ST
119
119th
HA
HB
108
RACINE AVE.
Edward White Park
WEST PULLMAN
STEWART RIDGE
352
123RD ST
359
ASHLAND AVE.
HALSTED ST
West Pullman Park
Cedar Park Cemetery
127TH ST
8A
Vermont
348
Little Calumet River
Joe Louis Golf Course
Whistler Woods Forest Preserve
Inset
CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON
Legend
Halsted Rail Alternative
Easement
Parcel Affected by Proposed Permanent Envelope
Building Displacement
Halsted Rail Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Existing CTA Bus Stops Used by BRT Alternative
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
49 CTA Bus
290 Pace Bus
Water Body
Parks
Cemetery
HA HB Halsted Alternative Study Segments
Scale
0
1,000
2,000
Feet
map id: 03_09.2

Figure 5-10: Halsted Rail Alternative - Displacements

5.6.1.1 Segment HA

95th Street to 99th Street

The alignment would run within the median of I-94 and I-57, which are interstate highways under the jurisdiction of IDOT and the FHWA. A total of 32 parcel easement agreements would be required for the aerial structure of the RLE Project.

99th Street to 103rd Street

As part of the transition from I-57 to Halsted Street, the structural columns for the elevated rail line and emergency access path would affect a single-family residence and six commercial properties. An electric substation would be located at 101st Street on vacant land. For the 103rd Street station, a park & ride lot would be located on the northwest corner of 103rd and Halsted Streets and would affect one mixed-use building, one single-use commercial building, and one commercial building with two active and two vacant businesses. As a result, the permanent envelope would affect 25 parcels and displace 1 mixed-use building and 4 commercial buildings within the Washington Heights neighborhood (Table 5-24).

Table 5-24: Halsted Rail Alternative - Permanent Displacements (99th to 103rd Streets)*

Land Use Type	Affected Parcels	Building Displacements
Vacant	8	
Single-Family Residential	2	
Commercial	14	4
Mixed-Use (Retail/Office/Residential)	1	1
Totals	**25**	**5**

*Building displacements are a subset of affected parcels and relate to a primary building displacement and/or a secondary structure.

103rd Street to 111th Street Station

An electric substation located at 110th and Halsted Streets would affect vacant land and a vacant commercial building in the Roseland neighborhood. For the 111th Street station, a park & ride lot located on the northwest corner of 111th and Halsted Streets would affect two commercial buildings in the Morgan Park neighborhood. As a result, the permanent envelope would affect seven parcels and displace three commercial buildings (Table 5-25).

Table 5-25: Halsted Rail Alternative - Permanent Displacements (103rd to 111th Street)*

Land Use Type	Affected Parcels	Building Displacements
Vacant	4	
Commercial	3	3
Totals	**7**	**3**

*Building displacements are a subset of affected parcels and relate to a primary building displacement and/or a secondary structure.

111th Street to 120th Street

The permanent envelope would cross a public multi-use path, the Major Taylor Bike Trail, between 118th and 119th Streets (see *Parklands and Community Facilities Technical Memorandum*). An electric substation would be located at 118th and Halsted Streets and would affect vacant land only. For the 119th Street station, a large park & ride lot would be located on the southwest corner of 119th and Halsted Streets and would affect one block of developed land. As a result, the permanent envelope would affect 19 parcels and displace 4 commercial buildings, 3 mixed-use buildings, and 2 industrial buildings in the West Pullman neighborhood (Table 5-26).

Table 5-26: Halsted Rail Alternative - Permanent Displacements (111th to 120th Street)*

Land Use Type	Affected Parcels	Building Displacements
Vacant	5	
Commercial	6	4
Mixed-Use (Retail/Office/Residential)	3	3
Industrial	3	2
Public (City of Chicago)**	2	
Totals	**19**	**9**

*Building displacements are a subset of affected parcels and relate to a primary building displacement and/or a secondary structure.

**The publicly owned parcels are considered "affected parcels" and not easements, because the CTA would need to negotiate a fee simple property transfer or an easement with the public entity.

5.6.1.2 Segment HB

120th Street to 129th Street

The permanent envelope would cross Metra's Blue Island Branch between 120th and 122nd Streets and would affect two of its ROW parcels. An electric substation would be located at 126th and Halsted Streets and would affect a commercial parking lot. For the Vermont Street station, a multi-level parking garage would be located on the southwest corner of Vermont and Halsted Streets and would affect 11 single-family residences and 2 commercial properties with 4 active businesses. A park & ride lot would be located on the southeast corner of Vermont and Halsted Streets and would affect two commercial properties. As a result, the permanent envelope would affect 26 parcels and displace 11 single-family residences and 4 commercial buildings in the West Pullman neighborhood (Table 5-27).

Table 5-27: Halsted Rail Alternative - Permanent Displacements (120th to 129th Street)*

Land Use Type	Affected Parcels	Building Displacements
Vacant	1	
Single-Family Residential	11	11
Commercial	12	4
Transportation (Metra)	2	
Totals	**26**	**15**

*Building displacements are a subset of affected parcels and relate to a primary building displacement and/or a secondary structure.

5.6.2 Construction Impacts and Mitigations - Halsted Rail Alternative

Because all construction activities would occur within the public ROW (median, streets and sidewalks) and on land acquired for the parking facilities and substations, there would be no temporary displacement or relocation impacts associated solely with the construction phase.

5.6.3 Cumulative Impacts and Mitigations - Halsted Rail Alternative

No other projects identified in the *Cumulative Impacts Technical Memorandum* would cause displacements within the area of potential impact. If any future displacements would occur as part of a separate project prior to CTA's construction of the Red Line Extension, CTA would coordinate efforts to minimize cumulative displacement impacts.

5.6.4 119th Street Yard and Shop

5.6.4.1 Permanent Impacts and Mitigations

A new train maintenance yard and shop for CTA's Red Line would be located at 119th and Peoria Streets, within the West Pullman Industrial Corridor. A new electric substation would be located within the same site. These new facilities would affect vacant land, vacant buildings, and city-owned properties as well as limited mixed uses. As a result, the permanent envelope would affect 31 parcels and displace 2 mixed-use buildings, 1 industrial building, and 1 place of worship within the West Pullman neighborhood (Table 5-28).

Table 5-28: 119th Street Yard and Shop - Permanent Displacements*

Land Use Type	Affected Parcels	Building Displacements
Vacant	4	
Commercial	2	
Mixed-Use (Retail/Office/Residential)	2	2
Institutional (Place of Worship)	1	1
Industrial	1	1
Transportation (Railroad)	5	
Public (City of Chicago)**	16	2
Totals	**31**	**6**

*Building displacements are a subset of affected parcels and relate to a primary building displacement and/or a secondary structure.

**The publicly owned parcels are considered "affected parcels" and not easements, because the CTA would need to negotiate a fee simple property transfer or an easement with the public entity.

5.6.4.2 Construction Impacts and Mitigations

Because all construction activities would occur on land acquired for the permanent ROW, there would be no temporary displacement or relocation impacts associated solely with the construction phase.

Section 6
Impacts Remaining After Mitigation

6.1 No Build Alternative

The No Build Alternative is an alternative used for comparative purposes to assess the benefits and impacts of the build alternatives. There would be no displacements or relocations associated with any portion of the No Build Alternative.

6.2 Bus Rapid Transit Alternative

Due to the requirements of the Uniform Act, there would be no adverse impacts remaining after mitigation for the BRT Alternative.

6.3 Union Pacific Railroad Rail Alternative - Right-of-Way Option

Due to the requirements of the Uniform Act, there would be no adverse impacts remaining after mitigation for the UPRR Rail Alternative ROW Option.

6.4 Union Pacific Railroad Rail Alternative - East Option

Due to the requirements of the Uniform Act, there would be no adverse impacts remaining after mitigation for the UPRR Rail Alternative East Option.

6.5 Union Pacific Railroad Rail Alternative - West Option

Due to the requirements of the Uniform Act, there would be no adverse impacts remaining after mitigation for the UPRR Rail Alternative West Option.

6.6 Halsted Rail Alternative

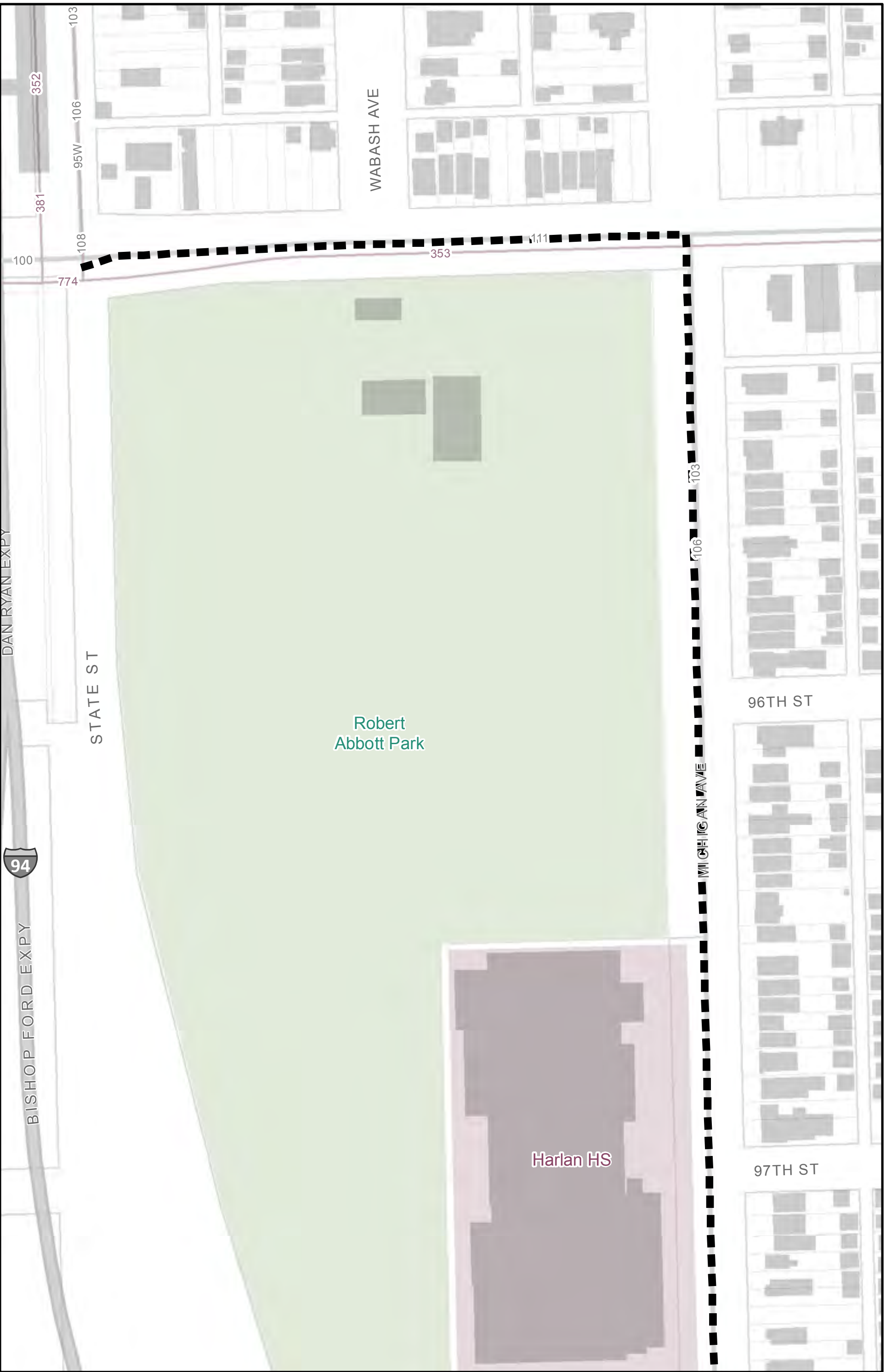
Due to the requirements of the Uniform Act, there would be no adverse impacts remaining after mitigation for the Halsted Rail Alternative.

Section 7
References Cited

City of Chicago Department of Housing and Economic Development. 2012. Affordable Rental Housing Resource List. Available at: http://www.cityofchicago.org/city/en/depts/dcd/supp_info/affordable_rentalhousingresourcelist.

Chicago Multiple Listing Service. December 2012. Available at: http://www.thechicagomls.com.

Appendix A
Bus Rapid Transit Alternative Displacements Maps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352
106
95W
381
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108
100
111
353
774
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STATE ST
Robert Abbott Park
103
106
MICHIGAN AVE
96TH ST
94
BISHOP FORD EXPY
Harlan HS
97TH ST

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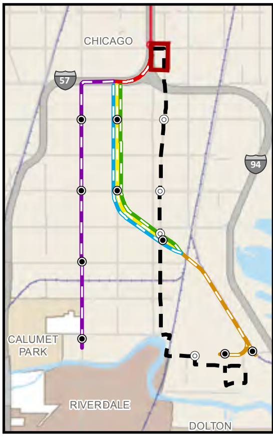

CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

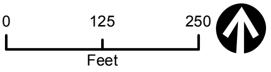
Legend

BRT Alternative

Sheet 1 of 20

▬ ▬	BRT Alternative
▨	Proposed Permanent Envelope
🟫	Parcel Affected by Proposed Permanent Envelope
🟥	Building Displacement
⬜	Building Footprint
☐	Parcels
🟩	Parks
🟪	Schools
-+-+-	Freight Rail
–49–	CTA Bus
–290–	Pace Bus

Scale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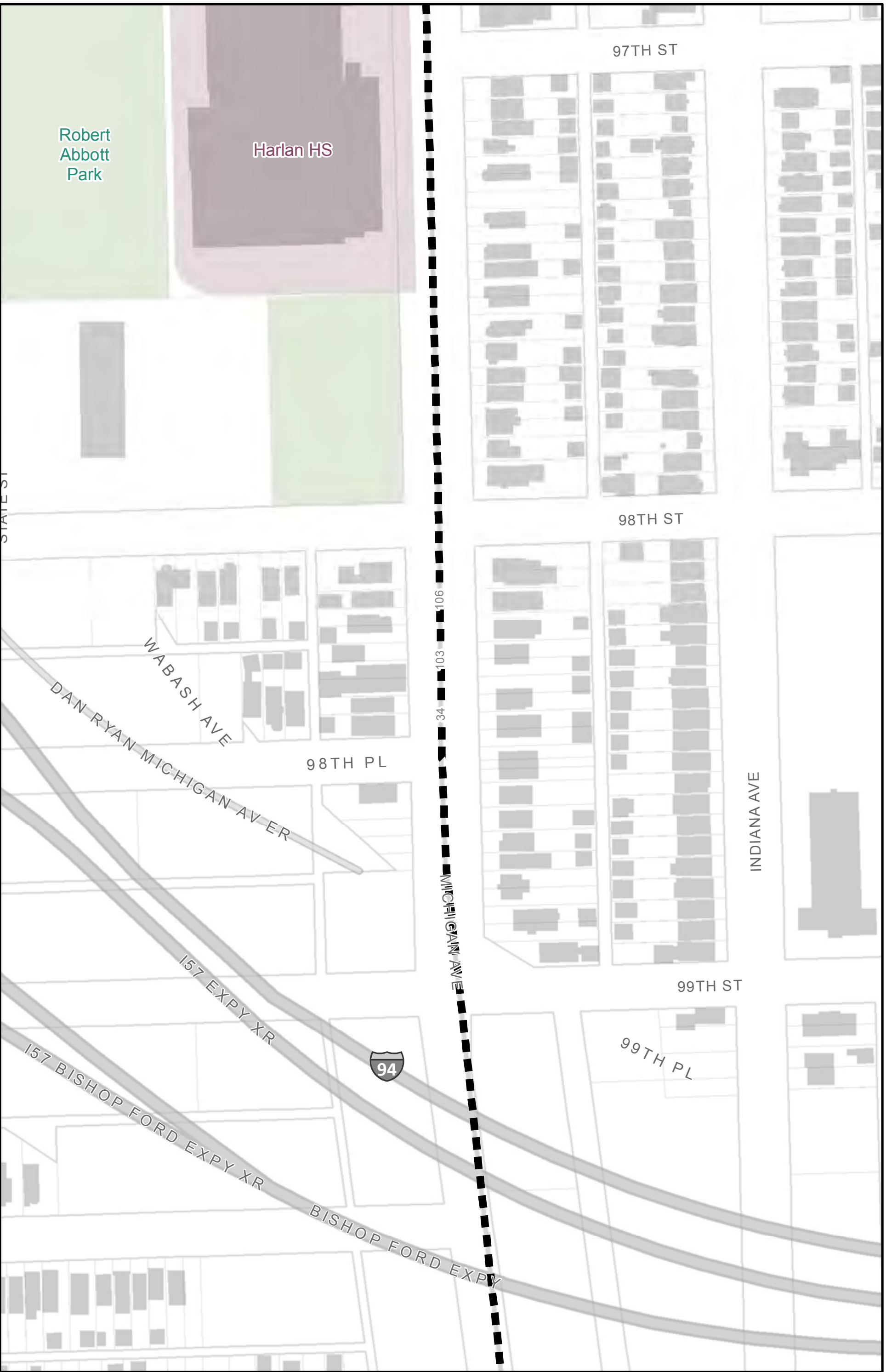
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Robert Abbott Park
Harlan HS
98TH ST
STATE ST
WABASH AVE
DAN RYAN MICHIGAN AV ER
98TH PL
106
103
34
MICHIGAN AVE
INDIANA AVE
99TH ST
99TH PL
I57 EXPY XR
94
I57 BISHOP FORD EXPY XR
BISHOP FORD EXPY

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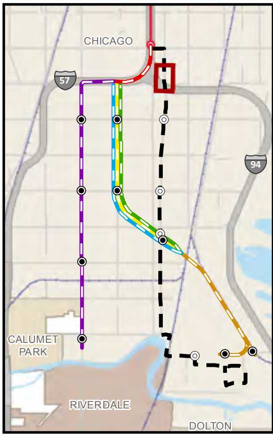
CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

BRT Alternative

Sheet 2 of 20

▬ ▬	BRT Alternative
▨	Proposed Permanent Envelope
🟫	Parcel Affected by Proposed Permanent Envelope
🟥	Building Displacement
⬜	Building Footprint
☐	Parcels
🟩	Parks
🟪	Schools
┼┼	Freight Rail
49	CTA Bus
290	Pace Bus

Scale

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Feet

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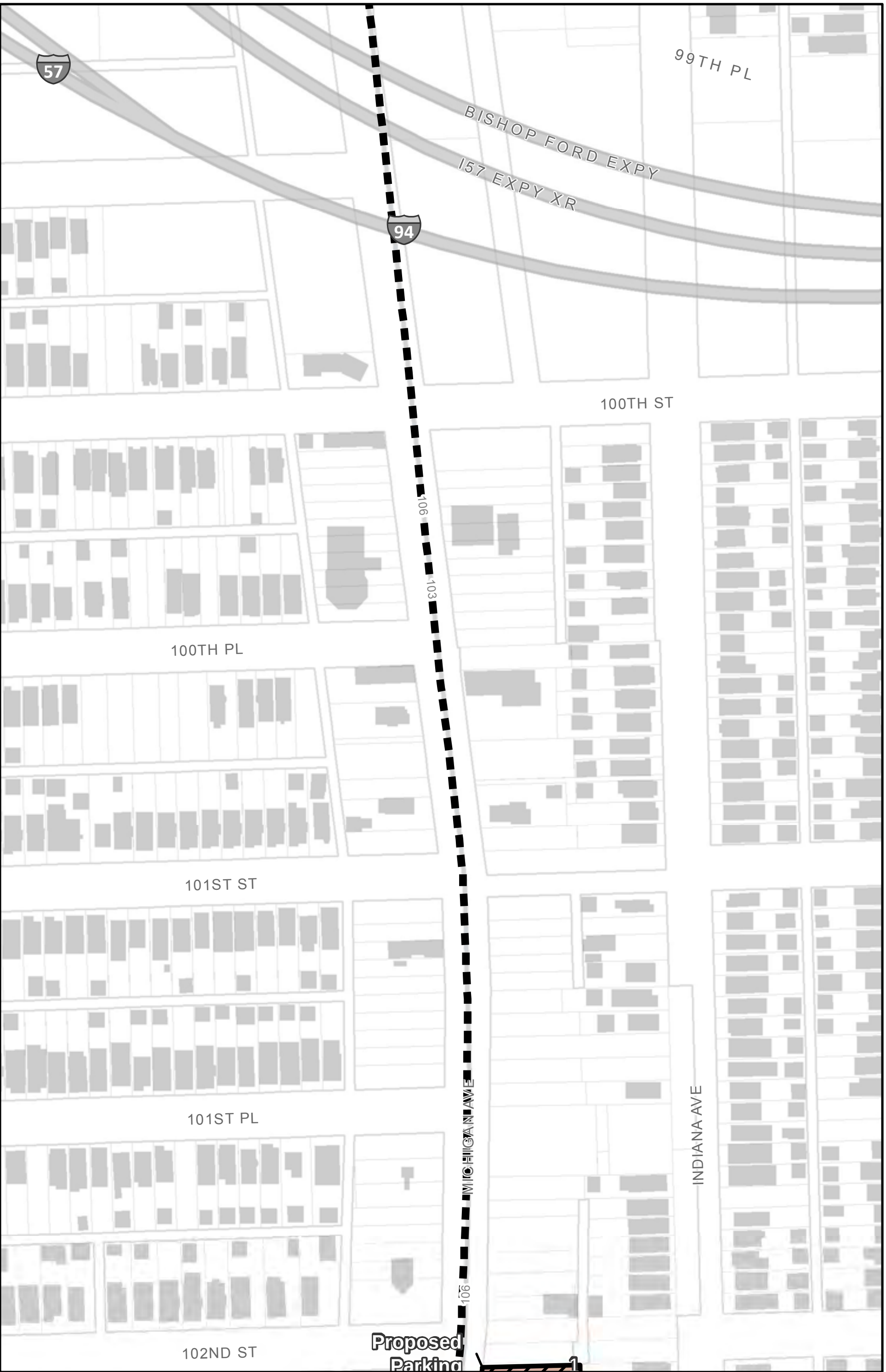
57
94
99TH PL
BISHOP FORD EXPY
I57 EXPY XR
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100TH PL
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101ST PL
102ND ST
106
103
MICHIGAN AVE
INDIANA AVE
106
Proposed Parking
1

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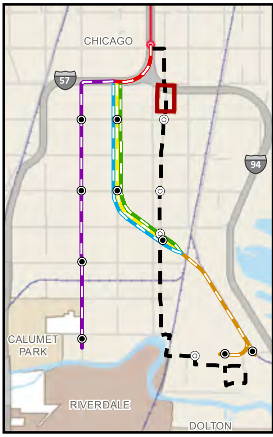

CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

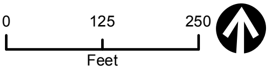
Legend

BRT Alternative

Sheet 3 of 20

▬ ▬ BRT Alternative
▨ Proposed Permanent Envelope
🟫 Parcel Affected by Proposed Permanent Envelope
🟥 Building Displacement
⬜ Building Footprint
☐ Parcels
🟩 Parks
🟪 Schools
-+- Freight Rail
-49- CTA Bus
-290- Pace Bus

Scale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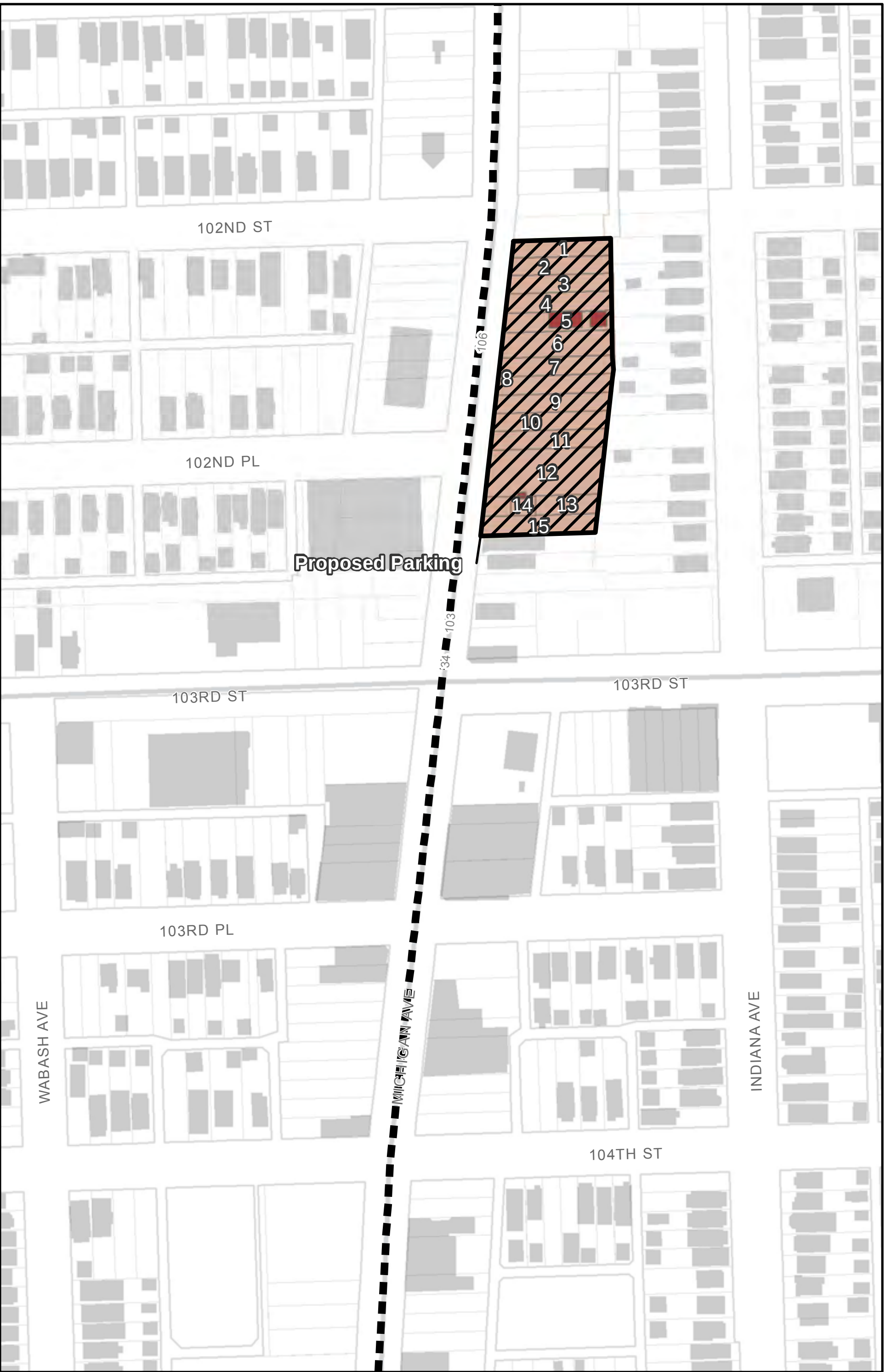
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102ND PL
103RD ST
103RD ST
103RD PL
104TH ST
WABASH AVE
MICHIGAN AVE
INDIANA AVE
Proposed Parking
106
103
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2
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5
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9
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11
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13
14
15

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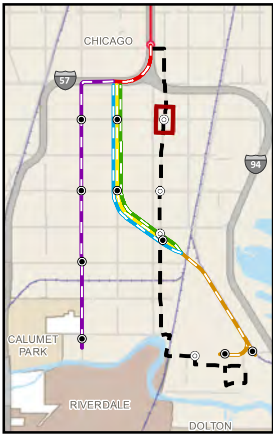
CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

BRT Alternative

Sheet 4 of 20

▬ ▬	BRT Alternative
▨	Proposed Permanent Envelope
🟫	Parcel Affected by Proposed Permanent Envelope
🟥	Building Displacement
⬜	Building Footprint
☐	Parcels
🟩	Parks
🟪	Schools
-+-	Freight Rail
-49-	CTA Bus
-290-	Pace Bus

Scale

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Feet

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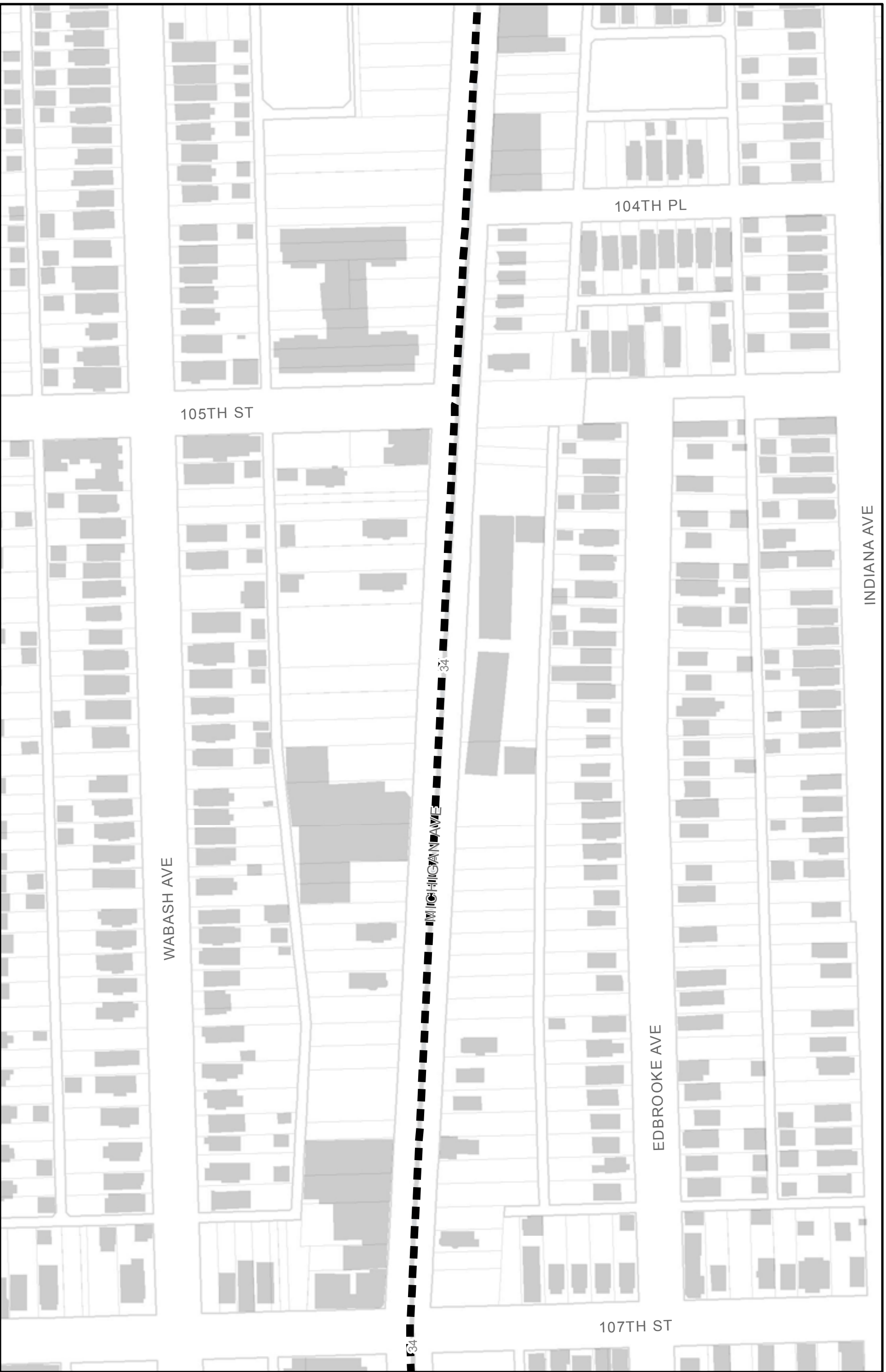
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105TH ST
107TH ST
WABASH AVE
MICHIGAN AVE
EDBROOKE AVE
INDIANA AVE
34

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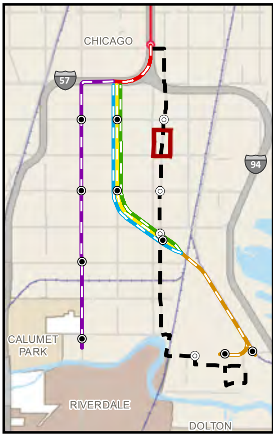

CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

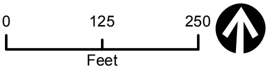
Legend

BRT Alternative

Sheet 5 of 20

▬ ▬ BRT Alternative
▨ Proposed Permanent Envelope
🟫 Parcel Affected by Proposed Permanent Envelope
🟥 Building Displacement
⬜ Building Footprint
☐ Parcels
🟩 Parks
🟪 Schools
-+-+- Freight Rail
—49— CTA Bus
—290— Pace Bus

Scale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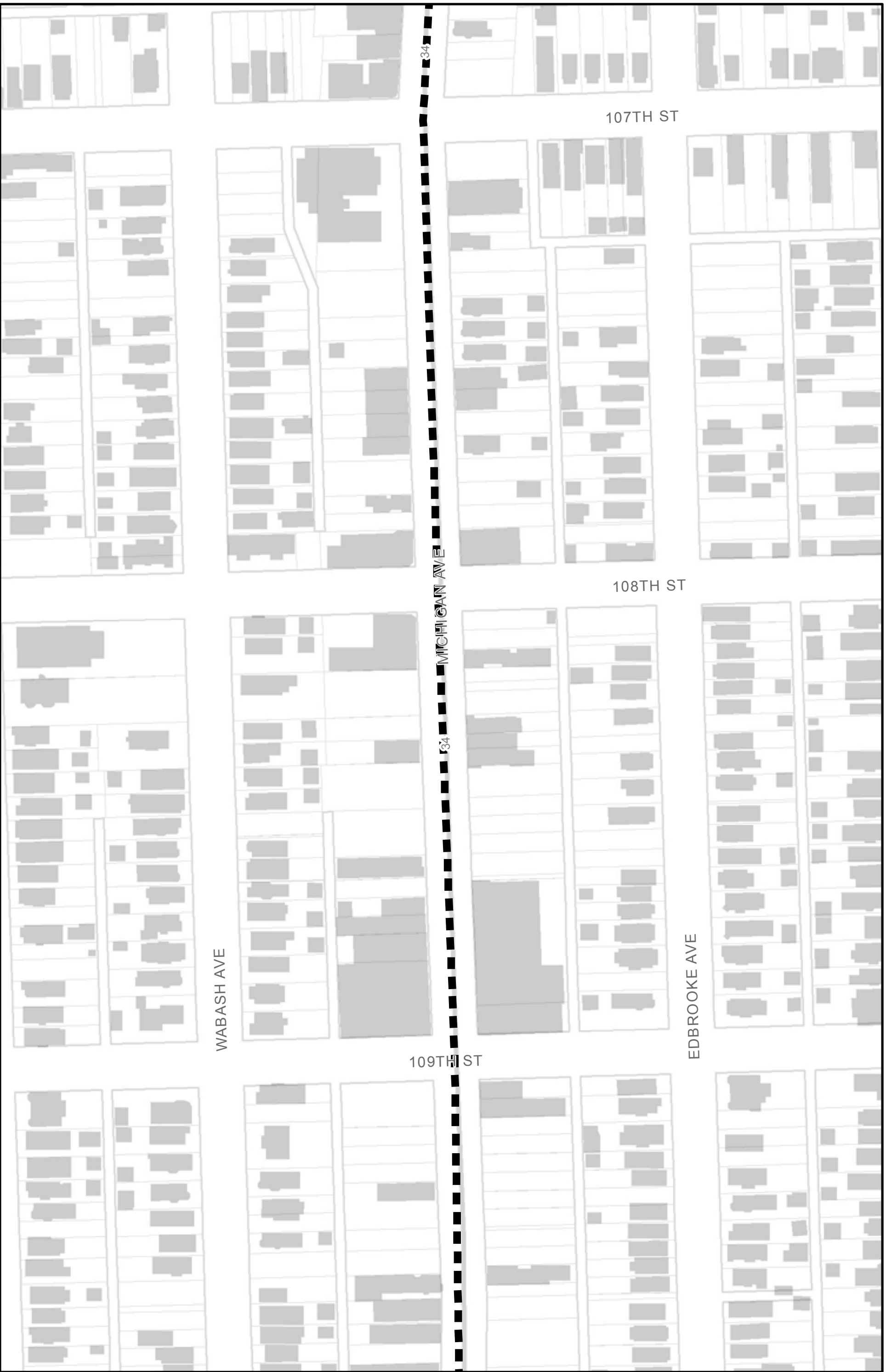
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107TH ST
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34
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EDBROOKE AVE
109TH ST

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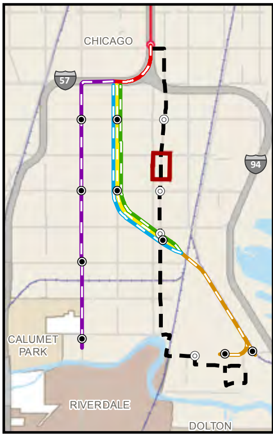

CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

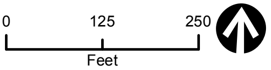
Legend

BRT Alternative

Sheet 6 of 20

▬ ▬ BRT Alternative
▨ Proposed Permanent Envelope
🟫 Parcel Affected by Proposed Permanent Envelope
🟥 Building Displacement
⬜ Building Footprint
□ Parcels
🟩 Parks
🟪 Schools
-+-+- Freight Rail
-49- CTA Bus
-290- Pace Bus

Scale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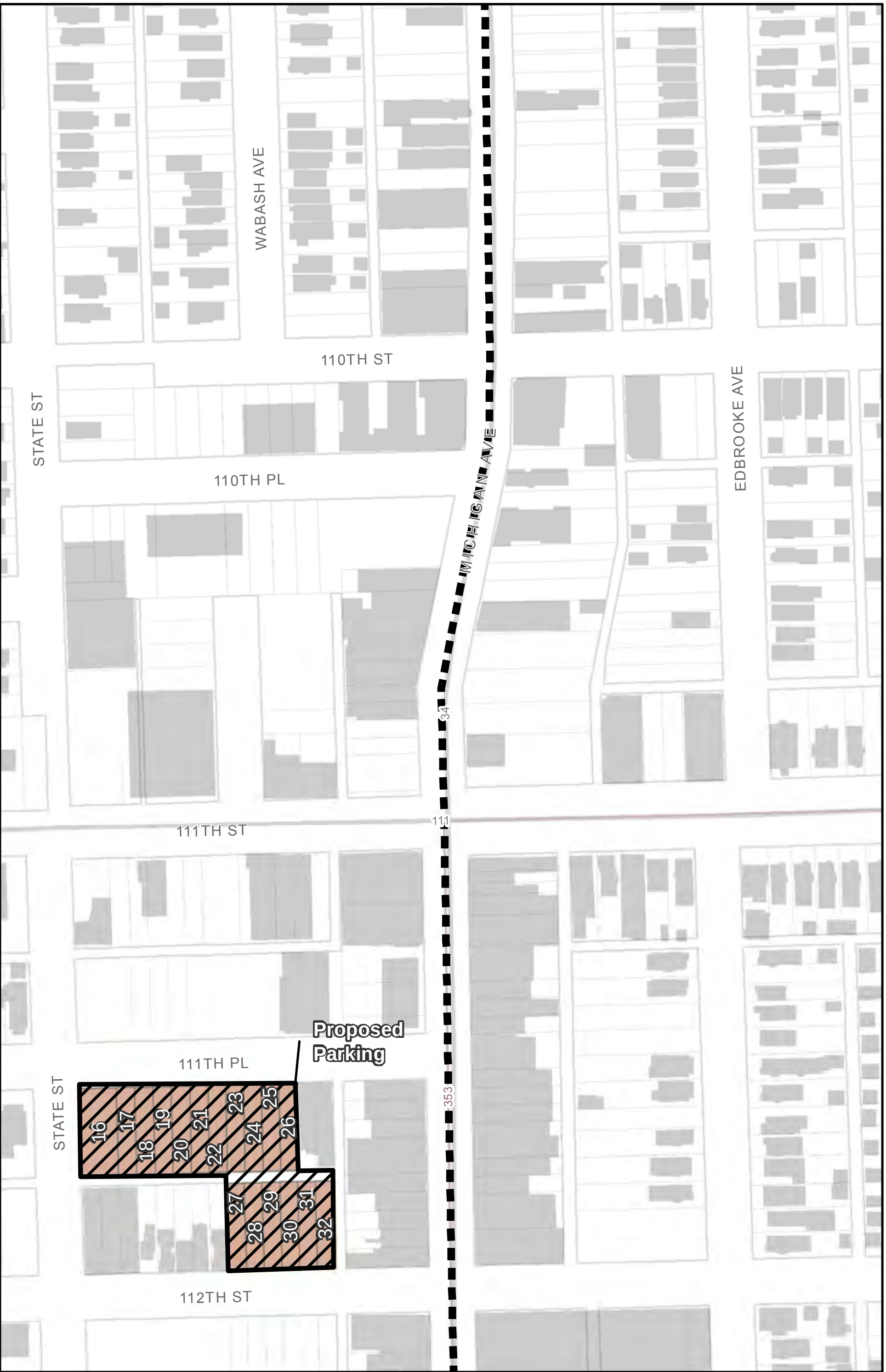
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110TH ST
STATE ST
110TH PL
MICHIGAN AVE
EDBROOKE AVE
34
111
111TH ST
Proposed Parking
111TH PL
STATE ST
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112TH ST

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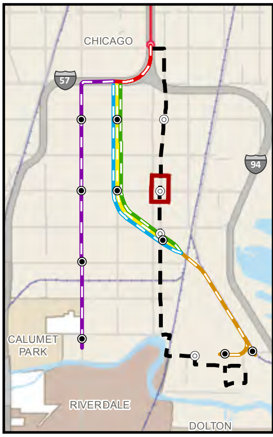

CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

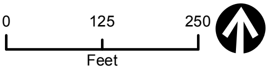
Legend

BRT Alternative

Sheet 7 of 20

▬ ▬	BRT Alternative
▨	Proposed Permanent Envelope
🟫	Parcel Affected by Proposed Permanent Envelope
🟥	Building Displacement
⬜	Building Footprint
☐	Parcels
🟩	Parks
🟪	Schools
-+-	Freight Rail
–49–	CTA Bus
–290–	Pace Bus

Scale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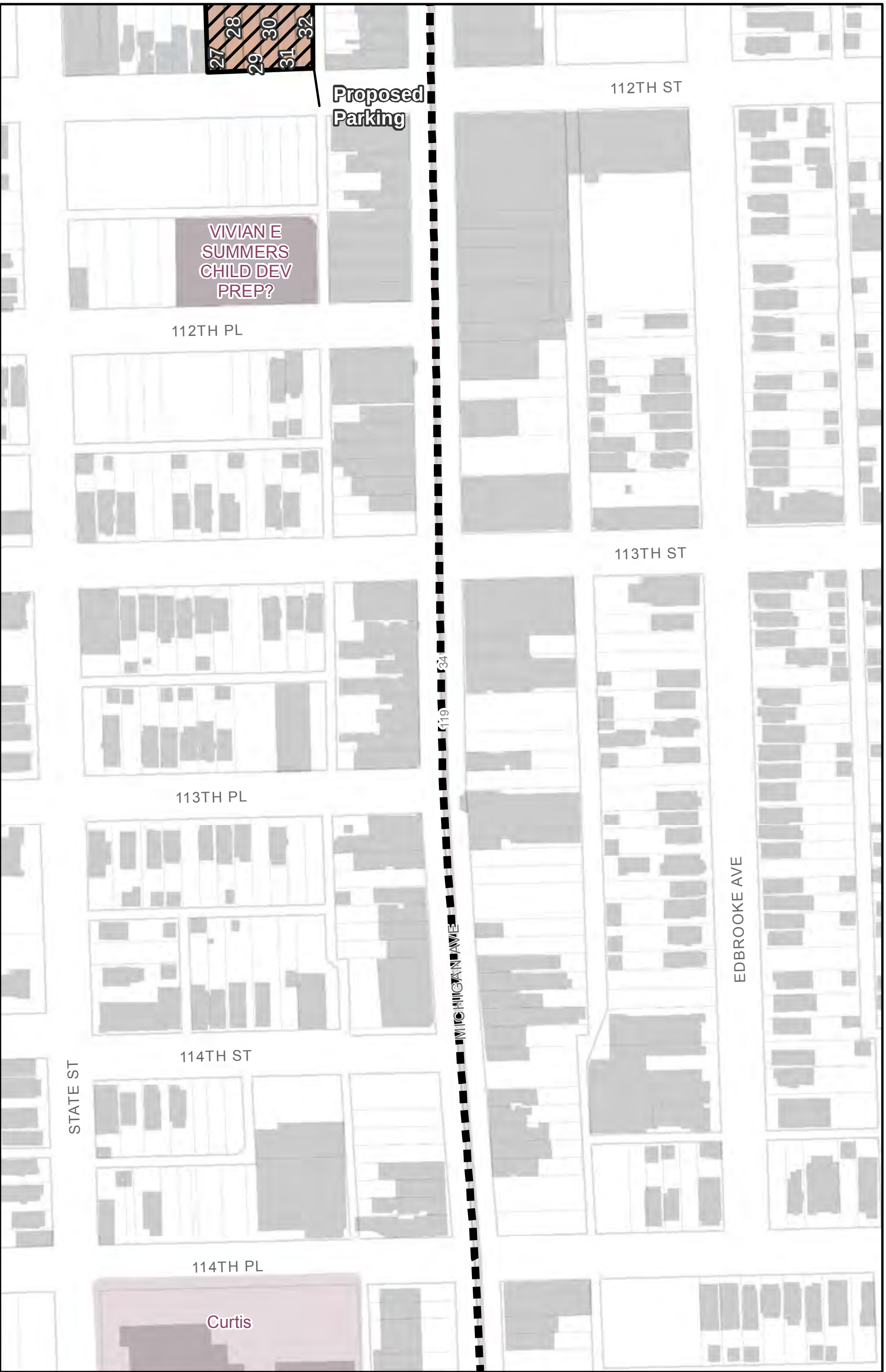
27
28
29
30
31
32
Proposed Parking
112TH ST
VIVIAN E SUMMERS CHILD DEV PREP?
112TH PL
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EDBROOKE AVE
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STATE ST
114TH PL
Curtis

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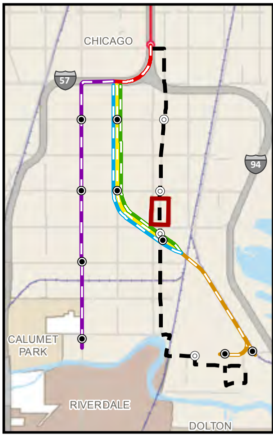
CHICAGO
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94
CALUMET PARK
RIVERDALE
DOLTON

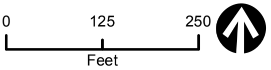
Legend

BRT Alternative

Sheet 8 of 20

▬ ▬	BRT Alternative
▨	Proposed Permanent Envelope
🟫	Parcel Affected by Proposed Permanent Envelope
🟥	Building Displacement
⬜	Building Footprint
☐	Parcels
🟩	Parks
🟪	Schools
-+-+-	Freight Rail
—49—	CTA Bus
—290—	Pace Bus

Scale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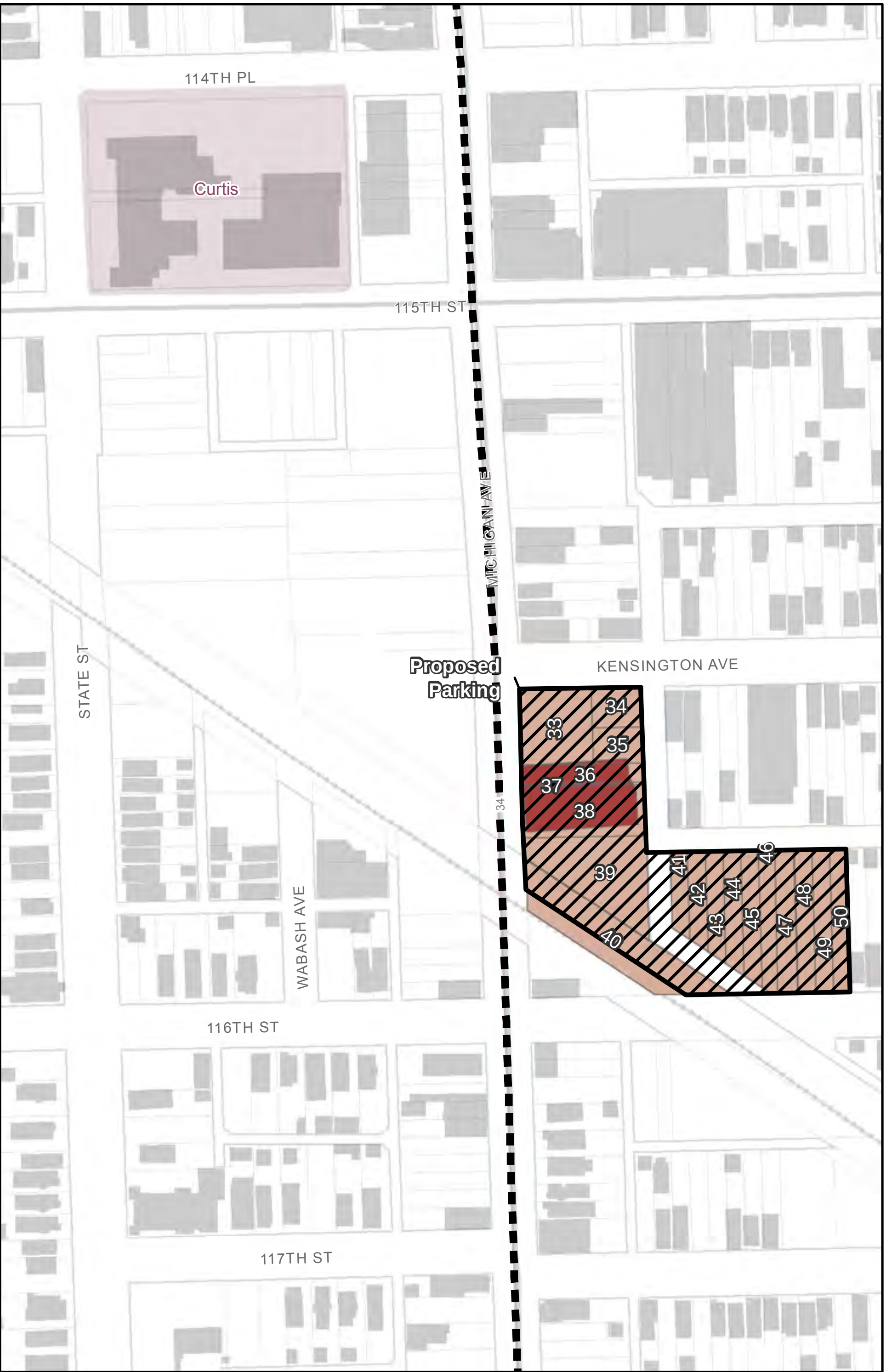
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MICHIGAN AVE
STATE ST
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KENSINGTON AVE
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WABASH AVE
116TH ST
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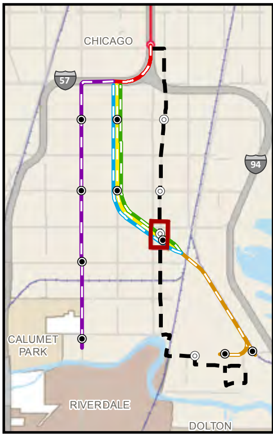

CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

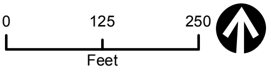
Legend

BRT Alternative

Sheet 9 of 20

▬ ▬ BRT Alternative
▨ Proposed Permanent Envelope
🟫 Parcel Affected by Proposed Permanent Envelope
🟥 Building Displacement
⬜ Building Footprint
☐ Parcels
🟩 Parks
🟪 Schools
-+-+- Freight Rail
—49— CTA Bus
—290— Pace Bus

Scale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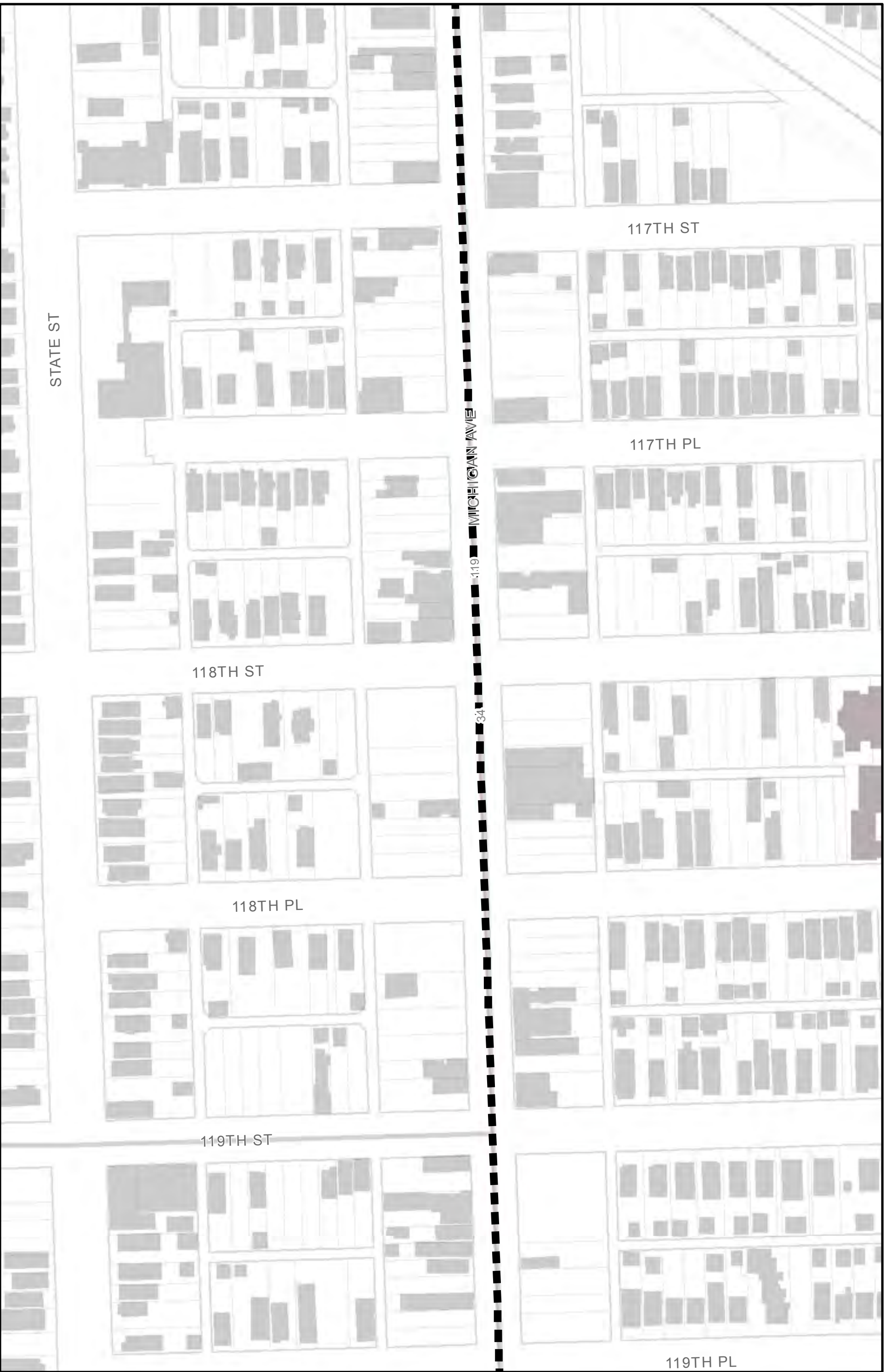
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119TH PL

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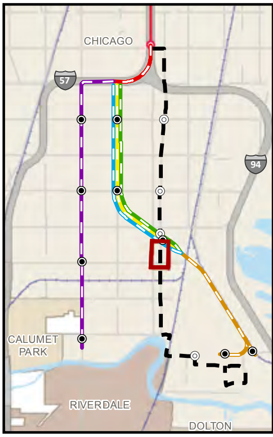

CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

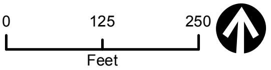
Legend

BRT Alternative

Sheet 10 of 20

▬ ▬	BRT Alternative
▨	Proposed Permanent Envelope
🟫	Parcel Affected by Proposed Permanent Envelope
🟥	Building Displacement
⬜	Building Footprint
☐	Parcels
🟩	Parks
🟪	Schools
-+-+-	Freight Rail
-49-	CTA Bus
-290-	Pace Bus

Scale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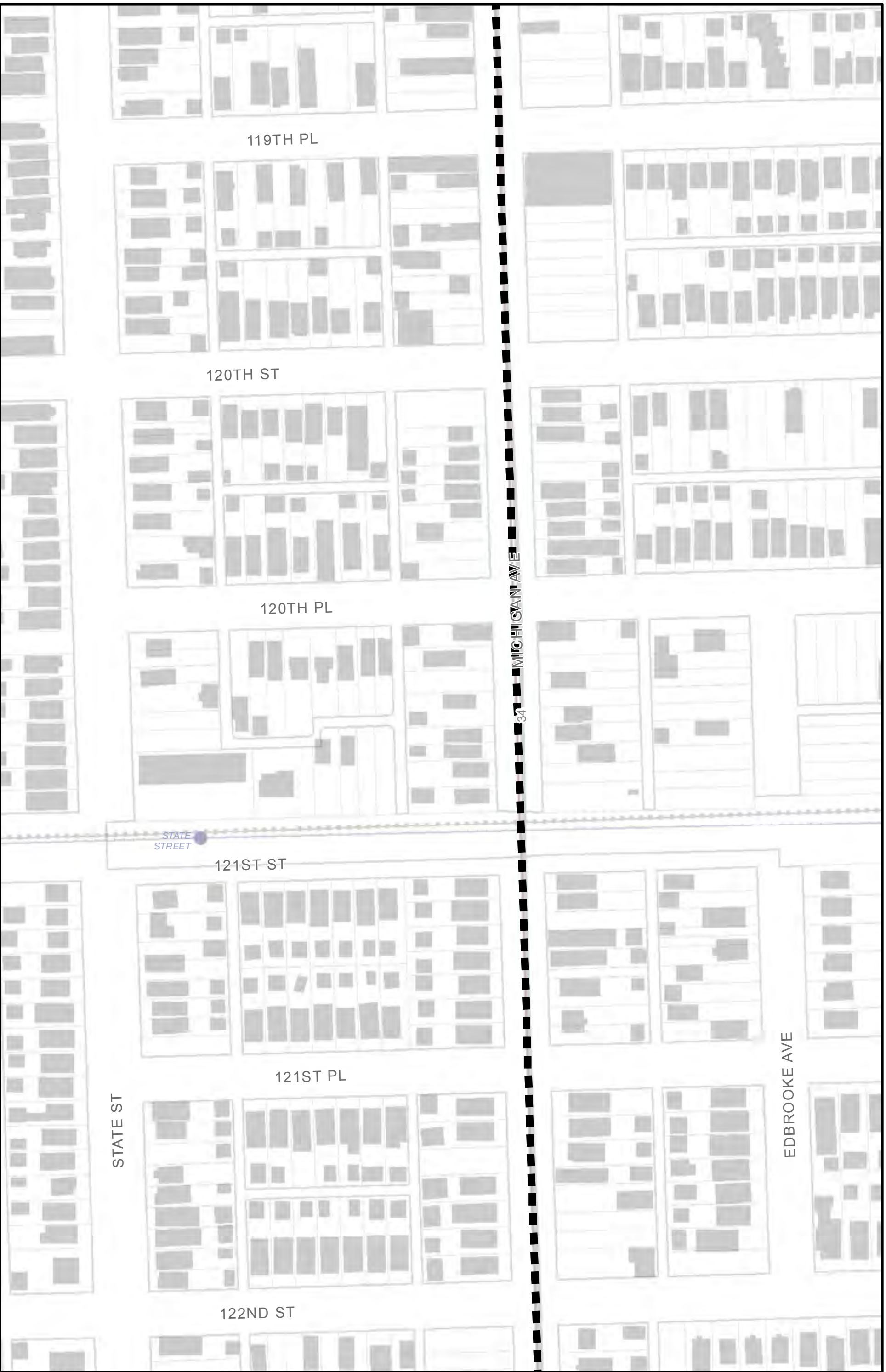
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120TH ST
120TH PL
MICHIGAN AVE
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STATE STREET
121ST ST
121ST PL
STATE ST
EDBROOKE AVE
122ND ST

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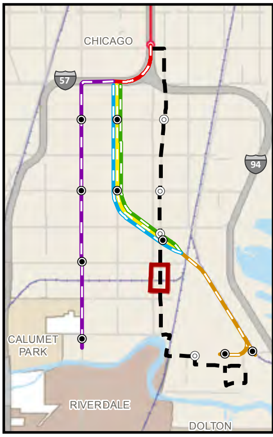

CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

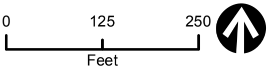
Legend

BRT Alternative

Sheet 11 of 20

- ▬ ▬ BRT Alternative
- ▨ Proposed Permanent Envelope
- 🟫 Parcel Affected by Proposed Permanent Envelope
- 🟥 Building Displacement
- ⬜ Building Footprint
- □ Parcels
- 🟩 Parks
- 🟪 Schools
- ┼┼ Freight Rail
- 49 CTA Bus
- 290 Pace Bus

Scale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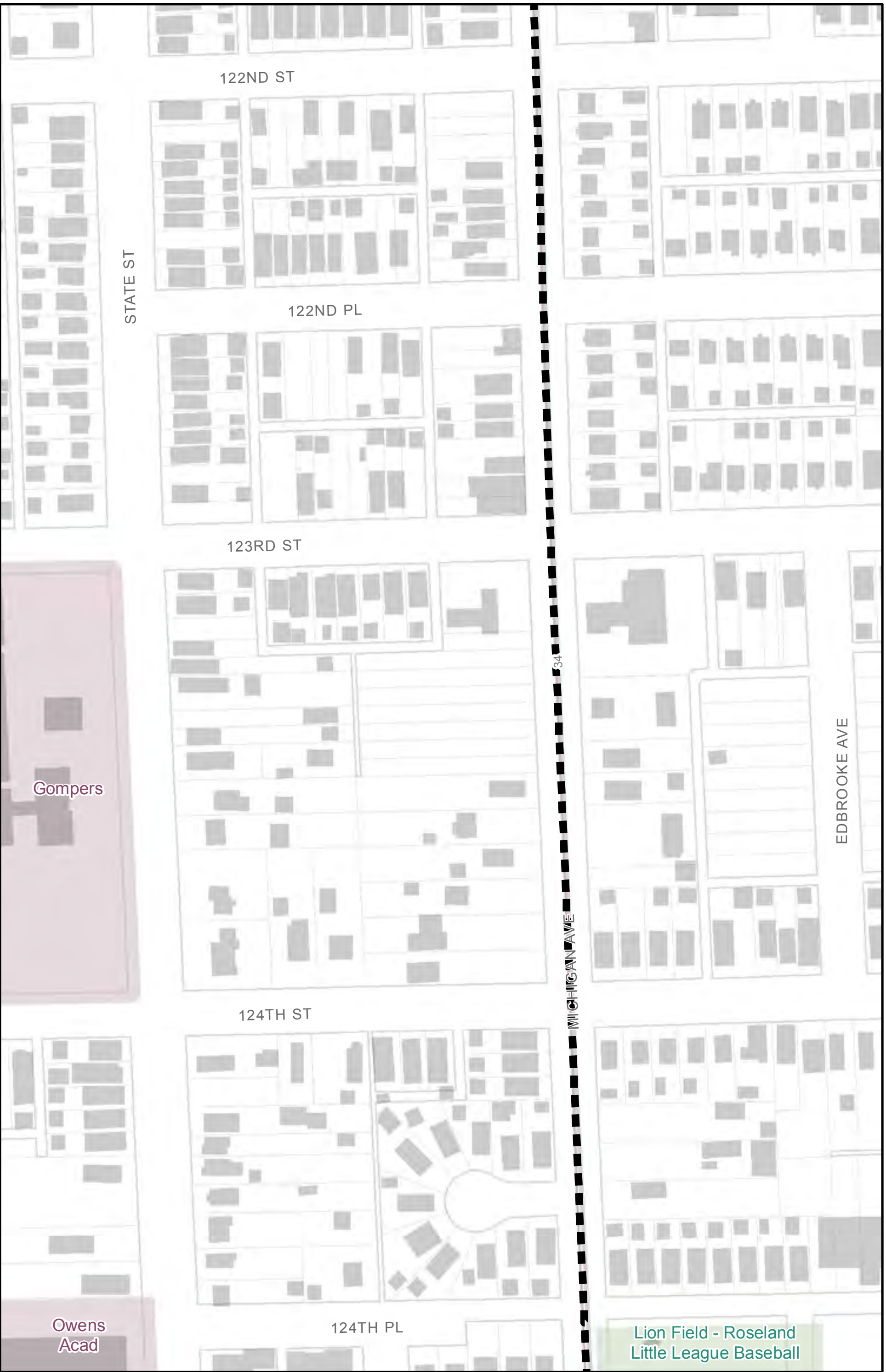
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STATE ST
122ND PL
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Gompers
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EDBROOKE AVE
Owens Acad
124TH PL
Lion Field - Roseland Little League Baseball

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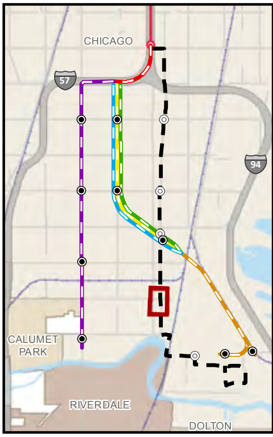

CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

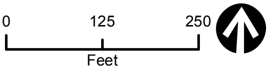
Legend

BRT Alternative

Sheet 12 of 20

- ▬ ▬ BRT Alternative
- ▨ Proposed Permanent Envelope
- 🟫 Parcel Affected by Proposed Permanent Envelope
- 🟥 Building Displacement
- ⬜ Building Footprint
- ☐ Parcels
- 🟩 Parks
- 🟪 Schools
- -+- Freight Rail
- -49- CTA Bus
- -290- Pace Bus

Scale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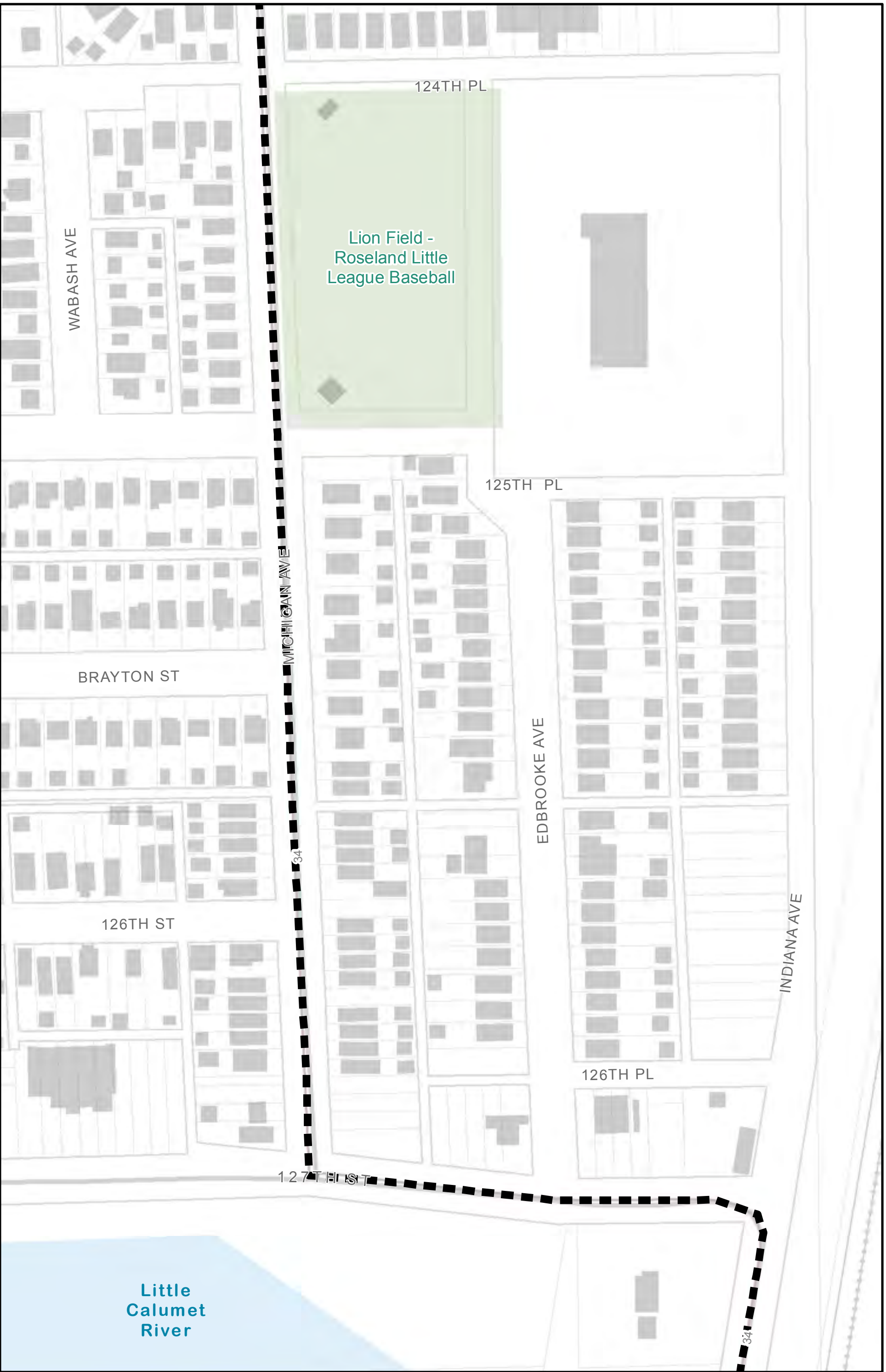
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Lion Field - Roseland Little League Baseball
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125TH PL
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126TH ST
INDIANA AVE
126TH PL
127TH ST
Little Calumet River
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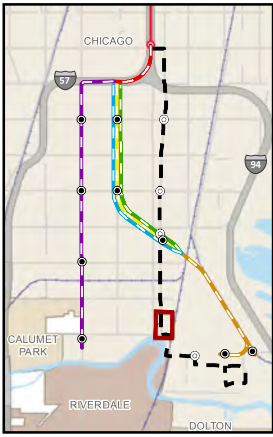

CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

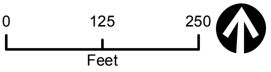
Legend

BRT Alternative

Sheet 13 of 20

▬ ▬	BRT Alternative
▨	Proposed Permanent Envelope
🟫	Parcel Affected by Proposed Permanent Envelope
🟥	Building Displacement
⬜	Building Footprint
□	Parcels
🟩	Parks
🟪	Schools
┼┼	Freight Rail
49	CTA Bus
290	Pace Bus

Scale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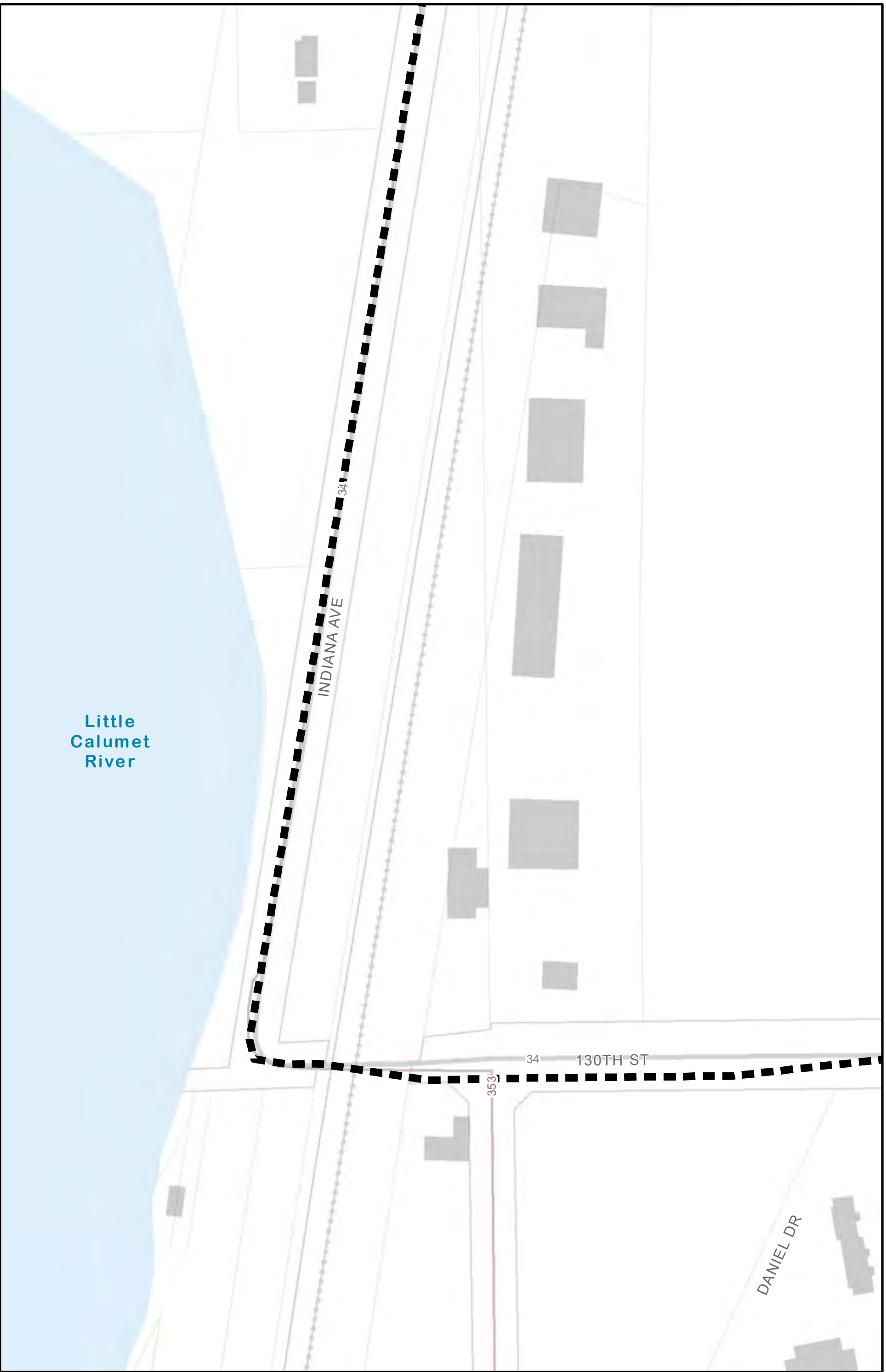
Little Calumet River
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130TH ST
34
353
DANIEL DR

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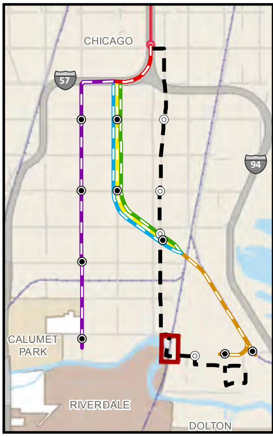

CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

BRT Alternative

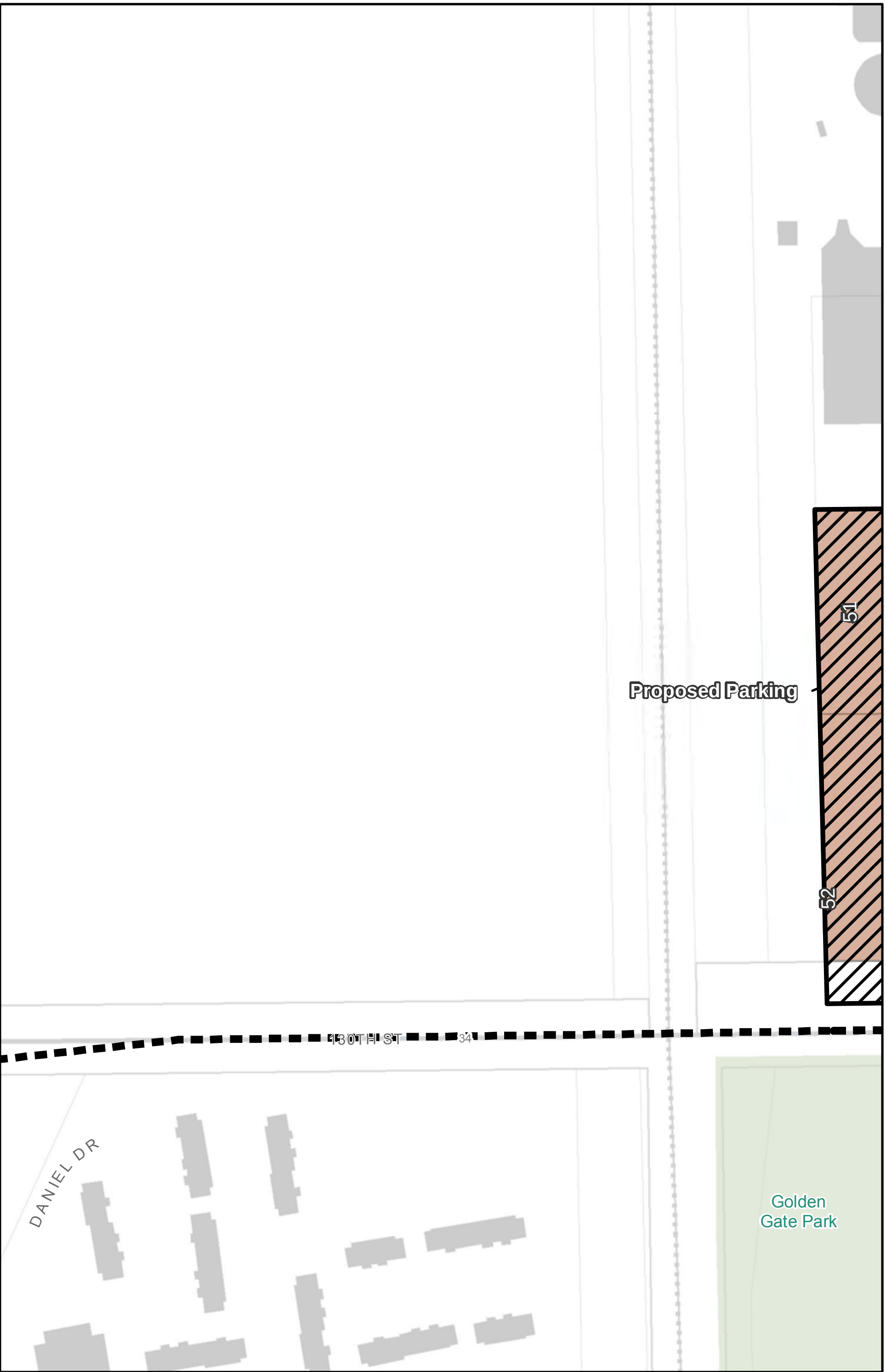
Sheet 14 of 20

▬ ▬ BRT Alternative
▨ Proposed Permanent Envelope
🟫 Parcel Affected by Proposed Permanent Envelope
🟥 Building Displacement
⬜ Building Footprint
☐ Parcels
🟩 Parks
🟪 Schools
-+- Freight Rail
-49- CTA Bus
-290- Pace Bus

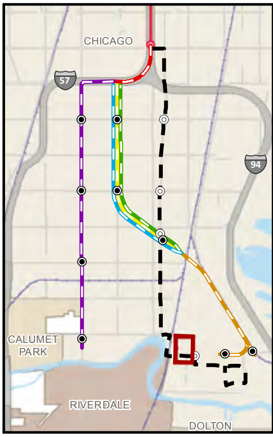
Scale

0 125 250
Feet

map id: 03_08.14


Proposed Parking
51
52
130TH ST
34
DANIEL DR
Golden Gate Park

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

BRT Alternative

Sheet 15 of 20

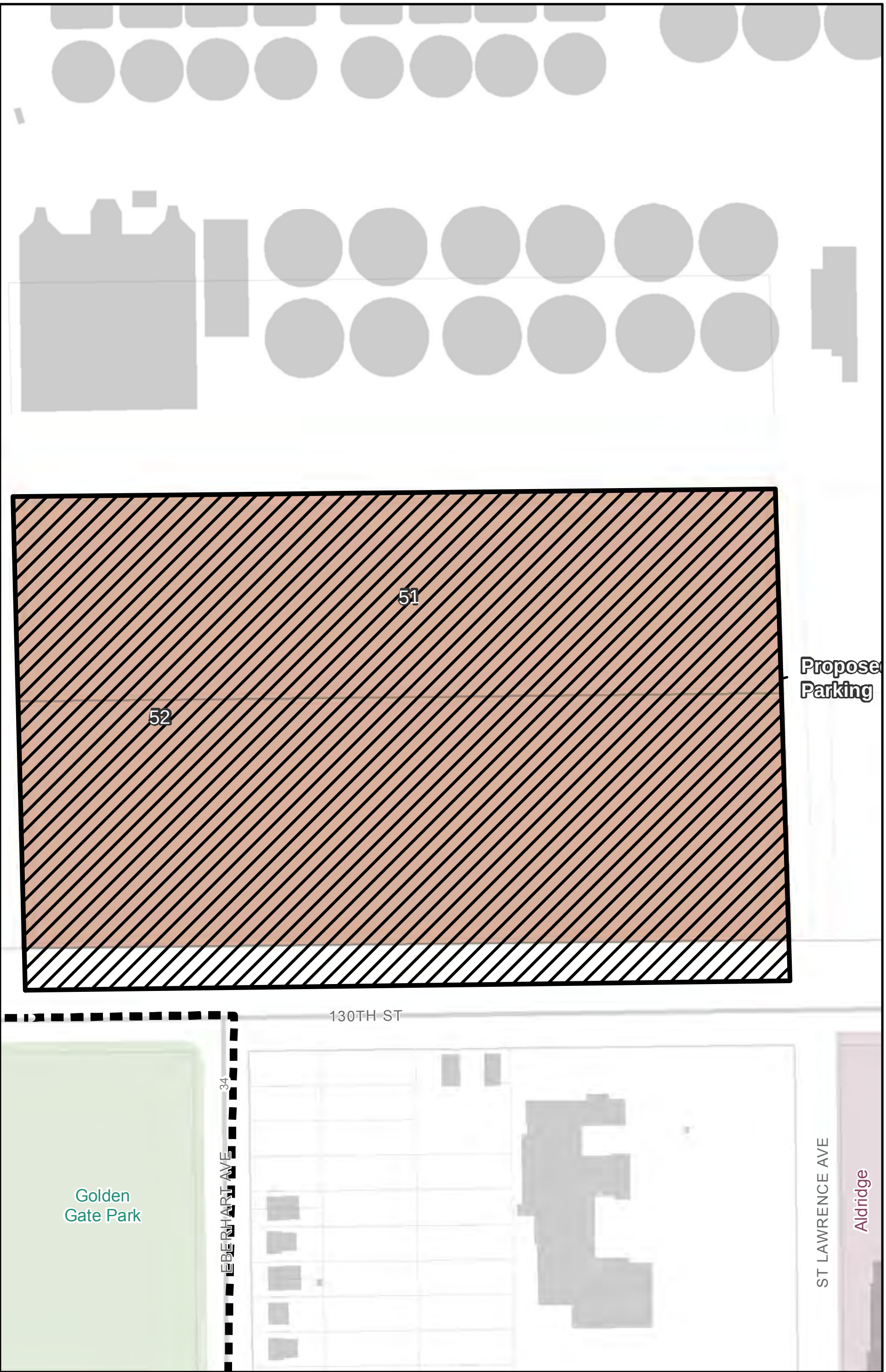
▬ ▬	BRT Alternative
▨	Proposed Permanent Envelope
🟫	Parcel Affected by Proposed Permanent Envelope
🟥	Building Displacement
⬜	Building Footprint
☐	Parcels
🟩	Parks
🟪	Schools
┼┼	Freight Rail
49	CTA Bus
290	Pace Bus

Scale

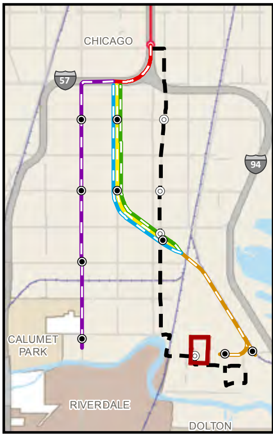
0 125 250

Feet

map id: 03_08.15


51
52
Propose
Parking
130TH ST
34
EBERHART AVE
Golden Gate Park
ST LAWRENCE AVE
Aldridge

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

BRT Alternative

Sheet 16 of 20

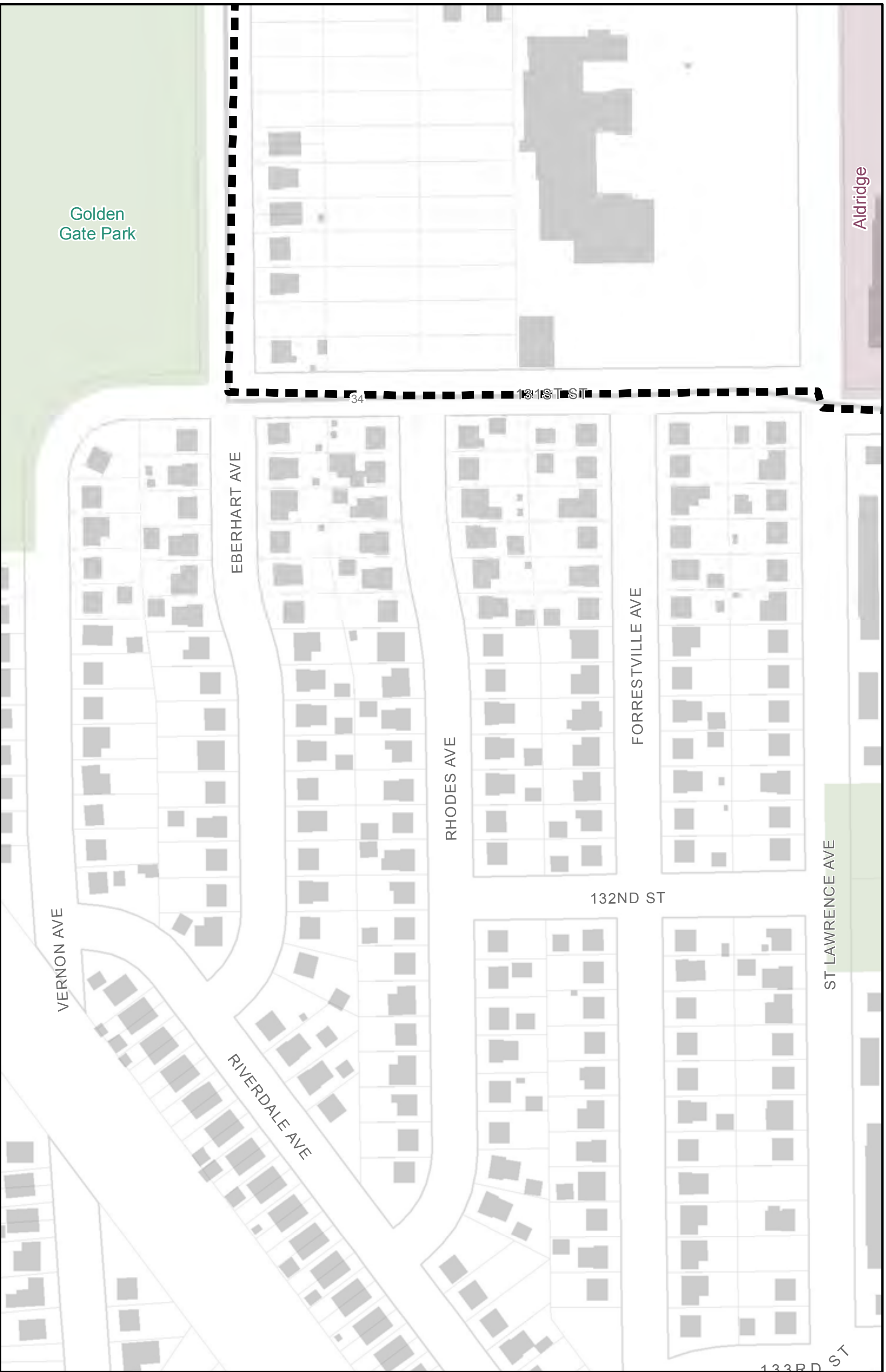
▬ ▬	BRT Alternative
▨	Proposed Permanent Envelope
🟫	Parcel Affected by Proposed Permanent Envelope
🟥	Building Displacement
⬜	Building Footprint
☐	Parcels
🟩	Parks
🟪	Schools
‒‒	Freight Rail
–49–	CTA Bus
–290–	Pace Bus

Scale

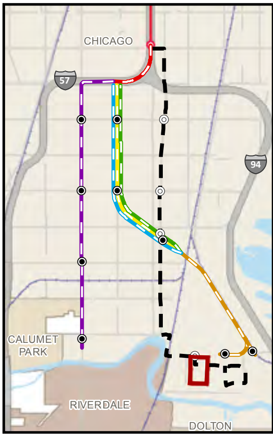
0 125 250

Feet

map id: 03_08.16


Golden Gate Park
Aldridge
34
131ST ST
EBERHART AVE
RHODES AVE
FORRESTVILLE AVE
132ND ST
ST LAWRENCE AVE
VERNON AVE
RIVERDALE AVE
133RD ST

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

BRT Alternative

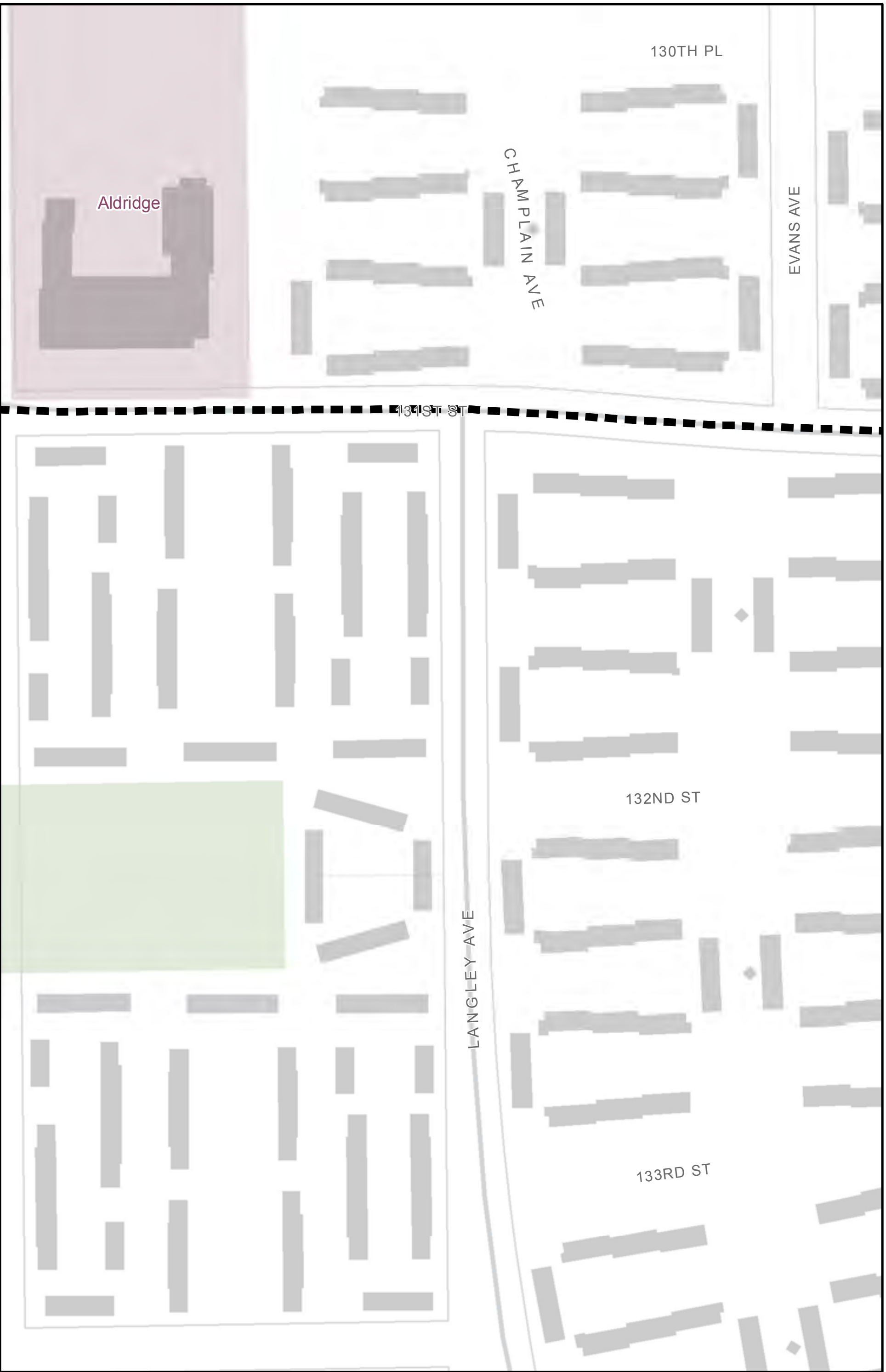
Sheet 17 of 20

▬ ▬ BRT Alternative
▨ Proposed Permanent Envelope
🟫 Parcel Affected by Proposed Permanent Envelope
🟥 Building Displacement
⬜ Building Footprint
☐ Parcels
🟩 Parks
🟪 Schools
-+-+- Freight Rail
-49- CTA Bus
-290- Pace Bus

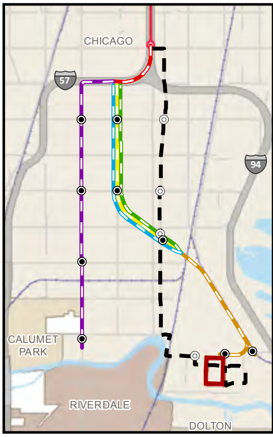
Scale

0 125 250
Feet

map id: 03_08.17


130TH PL
CHAMPLAIN AVE
EVANS AVE
Aldridge
131ST ST
132ND ST
LANGLEY AVE
133RD ST

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

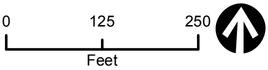
Legend

BRT Alternative

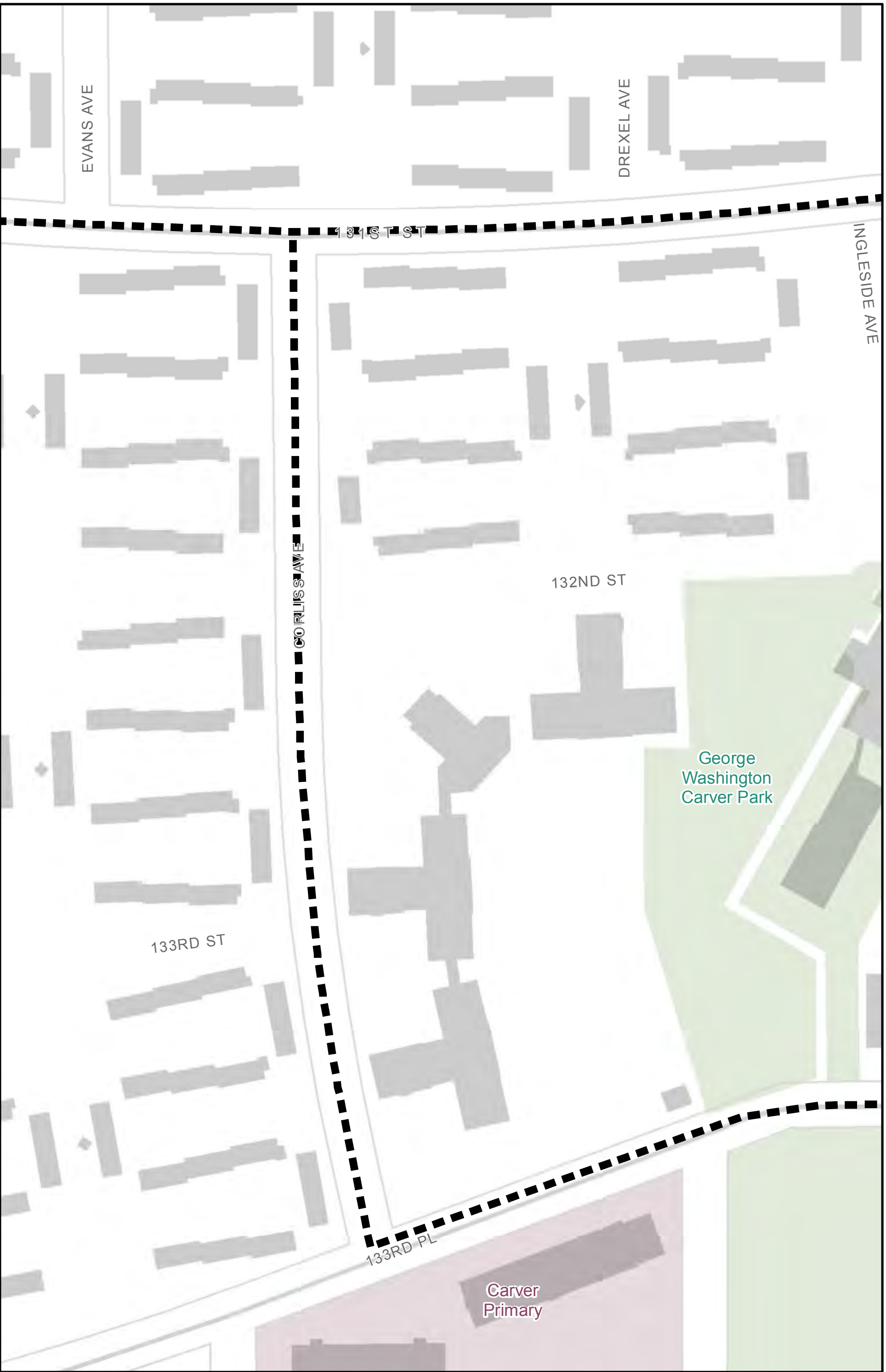
Sheet 18 of 20

▬ ▬	BRT Alternative
▨	Proposed Permanent Envelope
🟫	Parcel Affected by Proposed Permanent Envelope
🟥	Building Displacement
⬜	Building Footprint
☐	Parcels
🟩	Parks
🟪	Schools
┼┼	Freight Rail
—49—	CTA Bus
—290—	Pace Bus

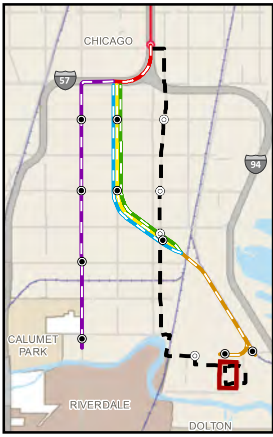
Scale


0
125
250
Feet

map id: 03_08.18


EVANS AVE
DREXEL AVE
131ST ST
INGLESIDE AVE
CORLISS AVE
132ND ST
George Washington Carver Park
133RD ST
133RD PL
Carver Primary

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

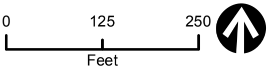
Legend

BRT Alternative

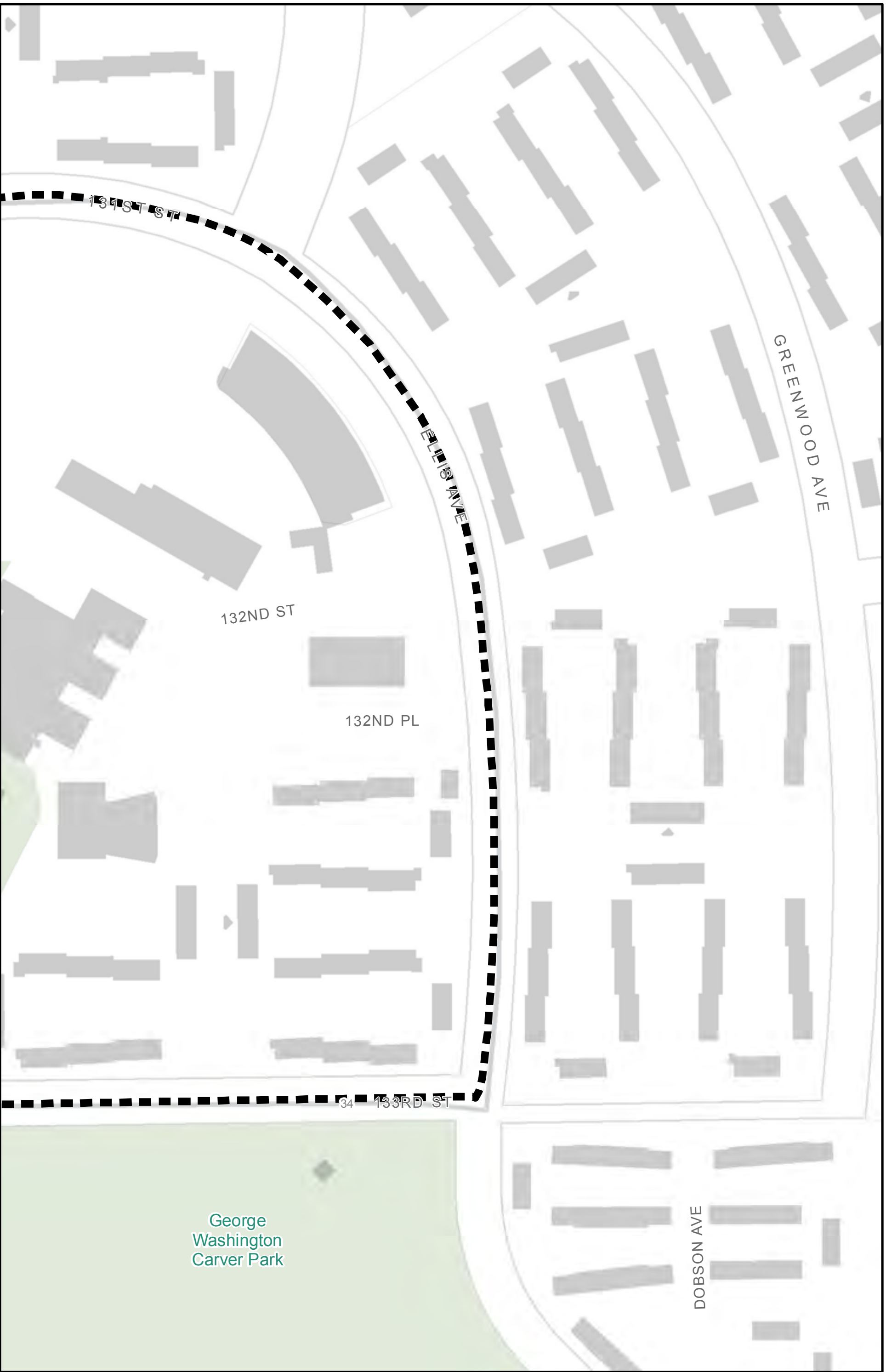
Sheet 19 of 20

▬ ▬	BRT Alternative
▨	Proposed Permanent Envelope
🟫	Parcel Affected by Proposed Permanent Envelope
🟥	Building Displacement
⬜	Building Footprint
☐	Parcels
🟩	Parks
🟪	Schools
-+-+-	Freight Rail
-49-	CTA Bus
-290-	Pace Bus

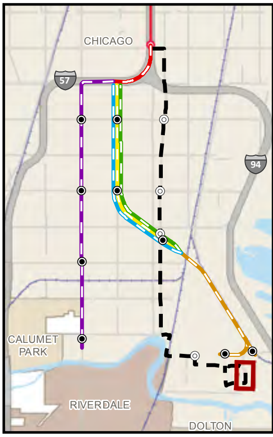
Scale


0
125
250
Feet

map id: 03_08.19


131ST ST
ELLIS AVE
GREENWOOD AVE
132ND ST
132ND PL
34
133RD ST
DOBSON AVE
George Washington Carver Park

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

BRT Alternative

Sheet 20 of 20

- ▬ ▬ BRT Alternative
- ▨ Proposed Permanent Envelope
- 🟫 Parcel Affected by Proposed Permanent Envelope
- 🟥 Building Displacement
- ⬜ Building Footprint
- ☐ Parcels
- 🟩 Parks
- 🟪 Schools
- -+-+- Freight Rail
- -49- CTA Bus
- -290- Pace Bus

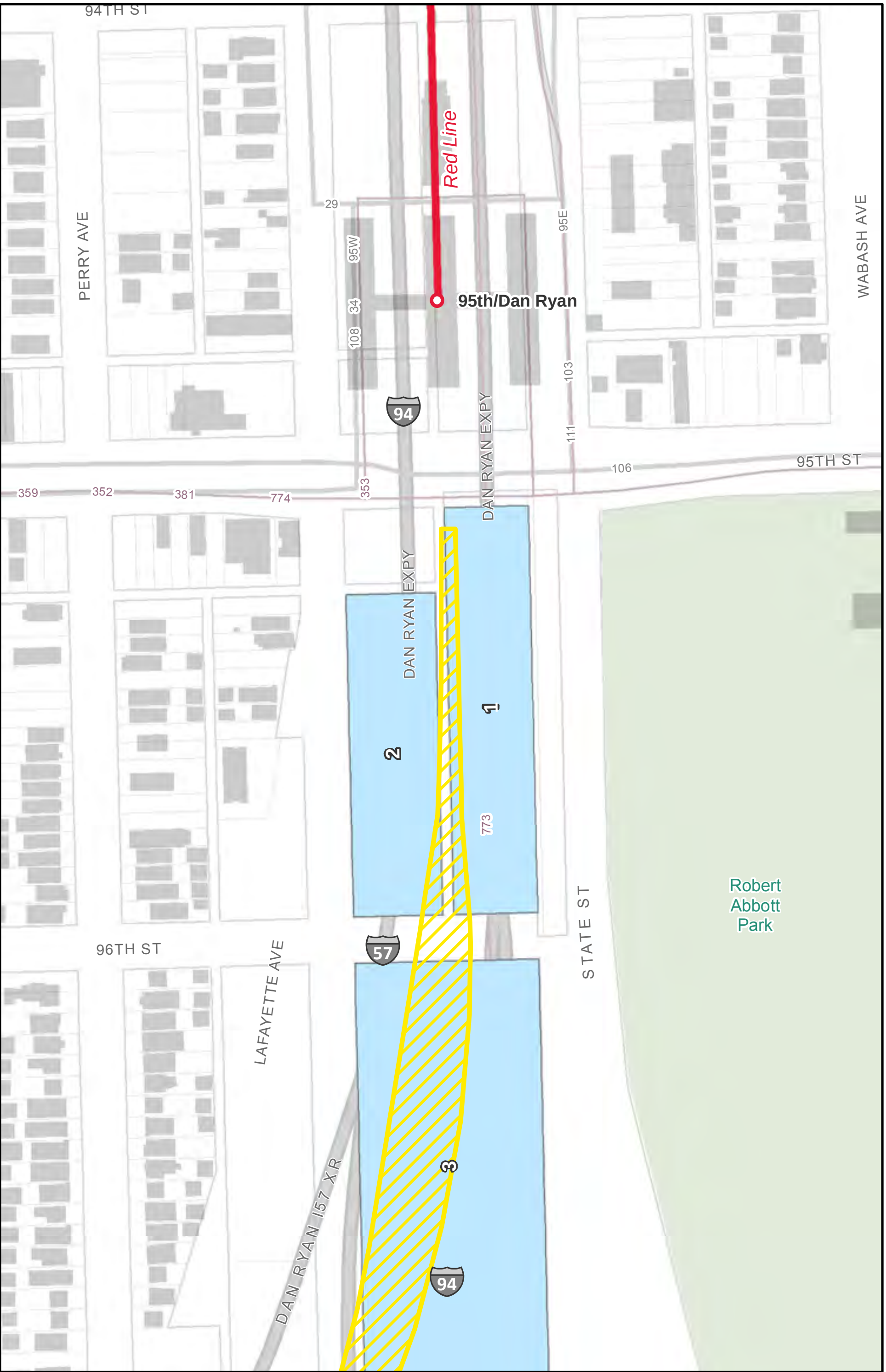
Scale

0 125 250

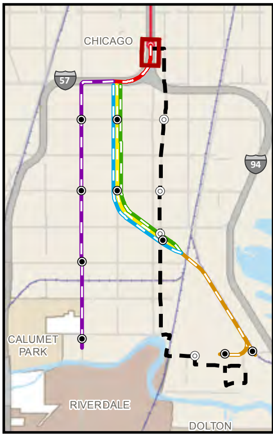
Feet

map id: 03_08.20

Appendix B
Union Pacific Railroad Rail Alternative Right-of-Way Option Displacements Maps


94TH ST
Red Line
95th/Dan Ryan
PERRY AVE
WABASH AVE
29
95W
95E
34
108
103
111
94
DAN RYAN EXPY
95TH ST
106
359
352
381
774
353
1
2
773
96TH ST
57
LAFAYETTE AVE
STATE ST
Robert Abbott Park
3
DAN RYAN I57 XR
94

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

UPRR Rail Alternative ROW Option

Sheet 1 of 15

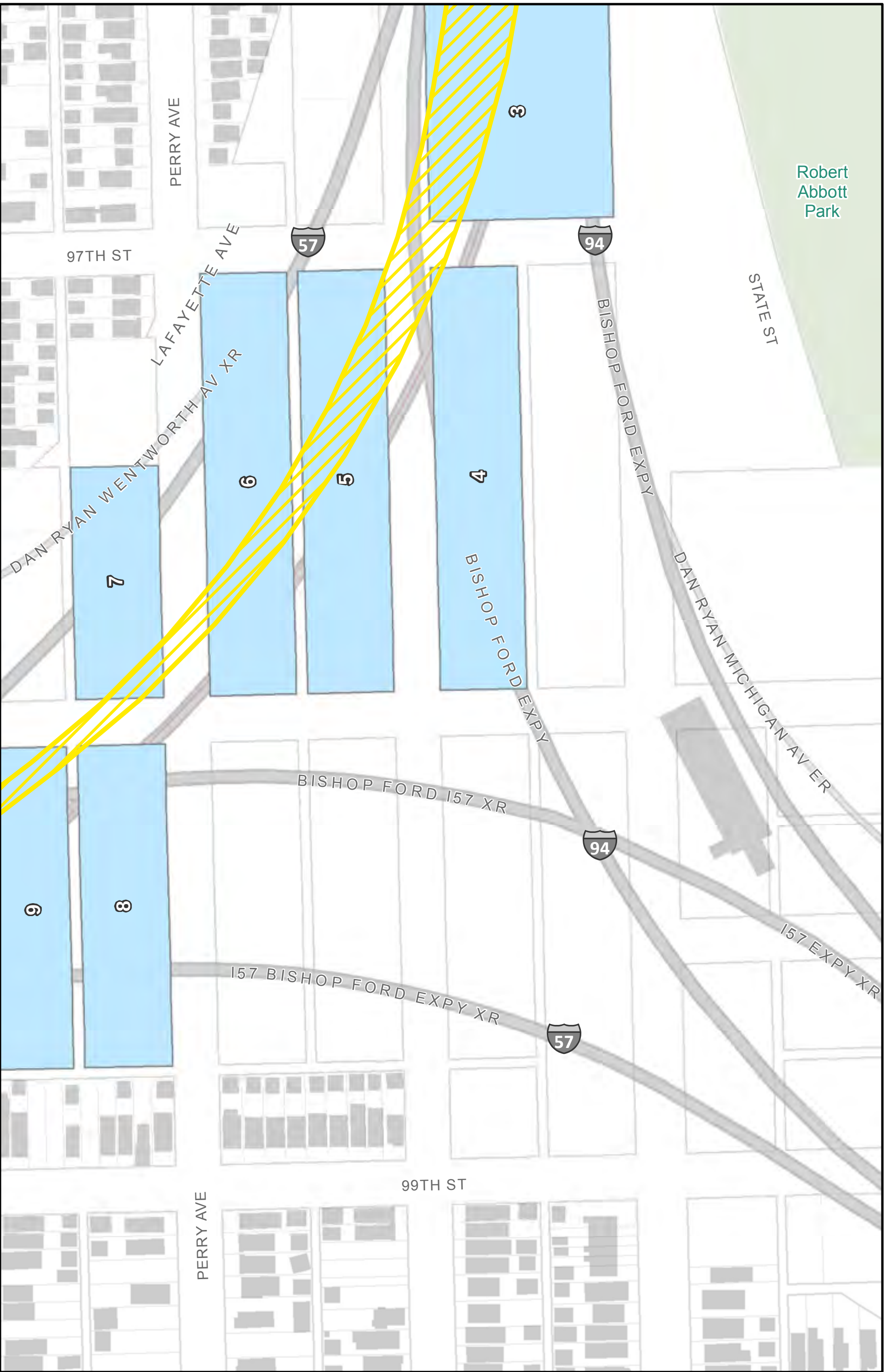
▨	Proposed Permanent Envelope
🟦	Easement
🟫	Parcel Affected by Proposed Permanent Envelope
🟥	Building Displacement
⬜	Building Footprint
☐	Parcels
🟩	Parks
🟪	Schools
-+-+-	Freight Rail
-49-	CTA Bus
-290-	Pace Bus

Scale

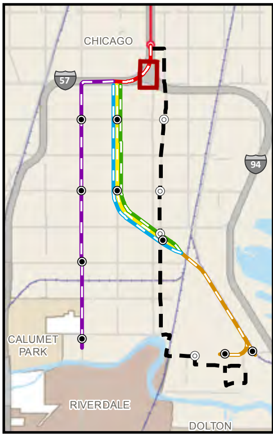
0 125 250

Feet

map id: 03_03.1


PERRY AVE
97TH ST
LAFAYETTE AVE
57
94
3
STATE ST
Robert Abbott Park
BISHOP FORD EXPY
DAN RYAN WENTWORTH AV XR
6
5
4
7
BISHOP FORD EXPY
DAN RYAN MICHIGAN AV ER
BISHOP FORD I57 XR
94
I57 EXPY XR
9
8
I57 BISHOP FORD EXPY XR
57
99TH ST
PERRY AVE

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

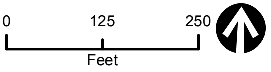
Legend

UPRR Rail Alternative ROW Option

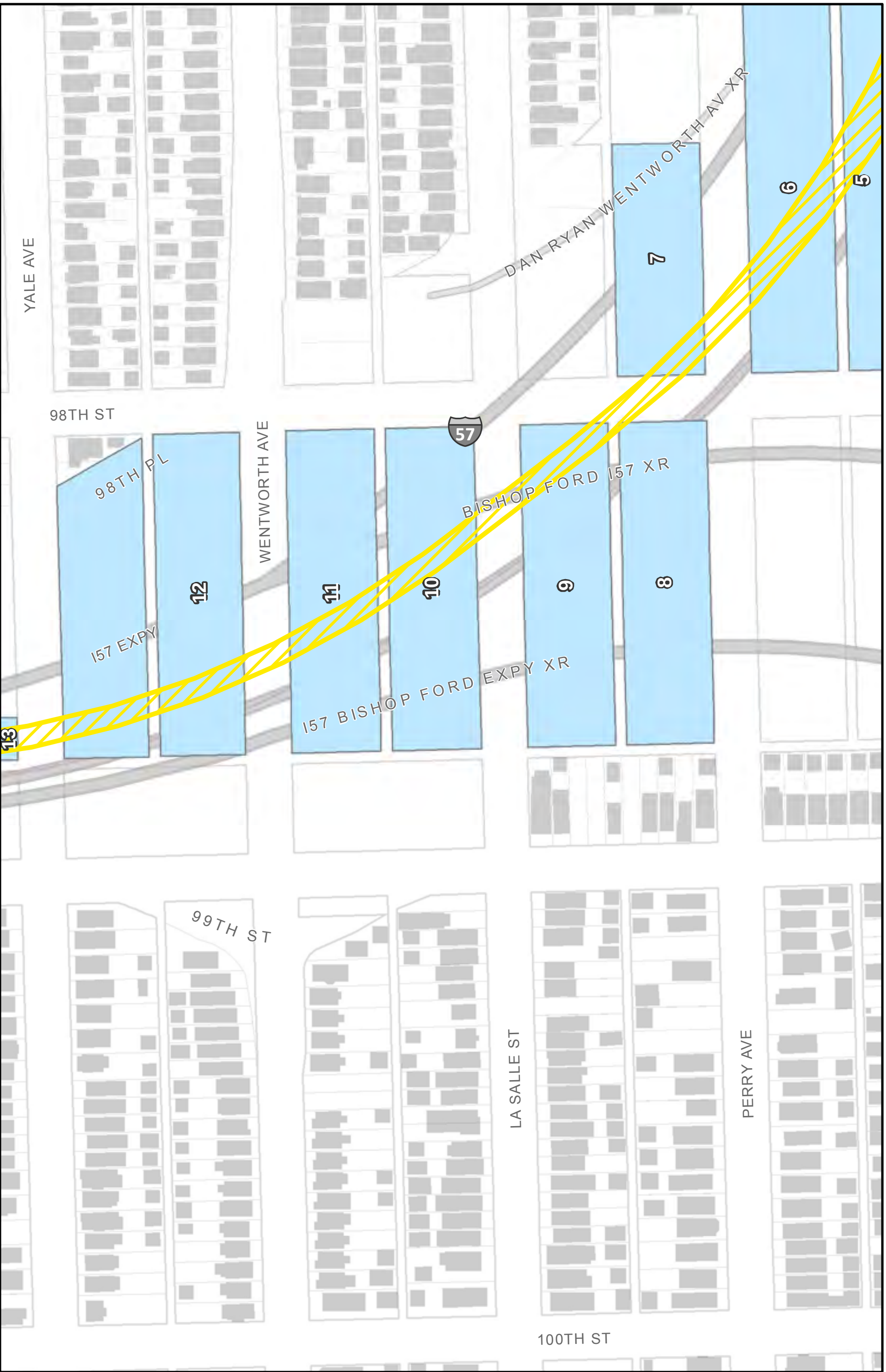
Sheet 2 of 15

- ▨ Proposed Permanent Envelope
- 🟦 Easement
- 🟫 Parcel Affected by Proposed Permanent Envelope
- 🟥 Building Displacement
- ⬜ Building Footprint
- ☐ Parcels
- 🟩 Parks
- 🟪 Schools
- -+-+- Freight Rail
- -49- CTA Bus
- -290- Pace Bus

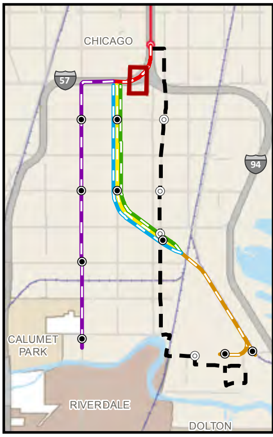
Scale


0
125
250
Feet

map id: 03_03.2


YALE AVE
DAN RYAN WENTWORTH AV XR
98TH ST
98TH PL
WENTWORTH AVE
57
BISHOP FORD I57 XR
I57 EXPY
I57 BISHOP FORD EXPY XR
99TH ST
LA SALLE ST
PERRY AVE
100TH ST
5
6
7
8
9
10
11
12
13

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

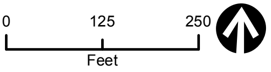
Legend

UPRR Rail Alternative ROW Option

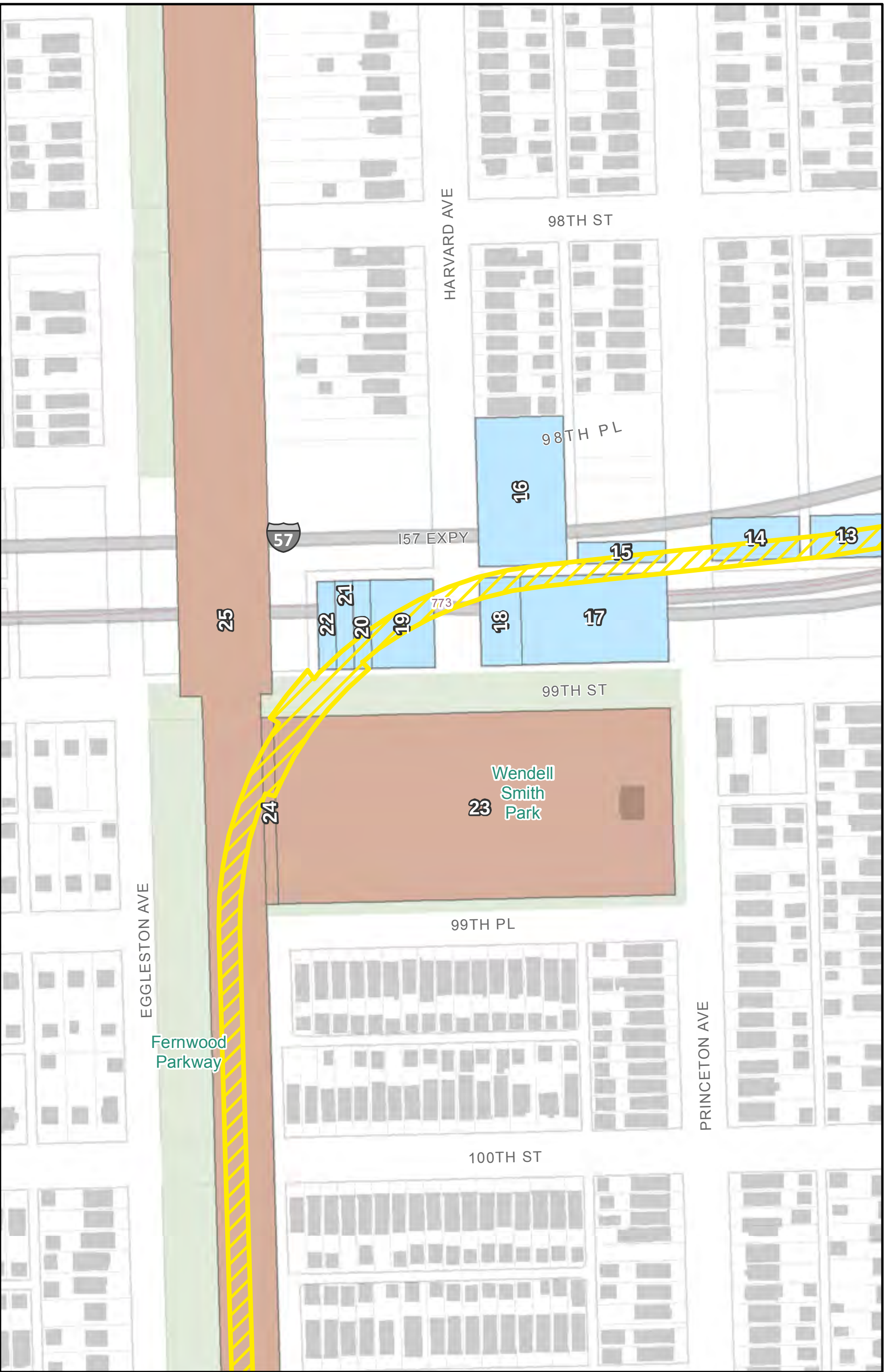
Sheet 3 of 15

- ▨ Proposed Permanent Envelope
- 🟦 Easement
- 🟫 Parcel Affected by Proposed Permanent Envelope
- 🟥 Building Displacement
- ⬜ Building Footprint
- ☐ Parcels
- 🟩 Parks
- 🟪 Schools
- Freight Rail
- 49 CTA Bus
- 290 Pace Bus

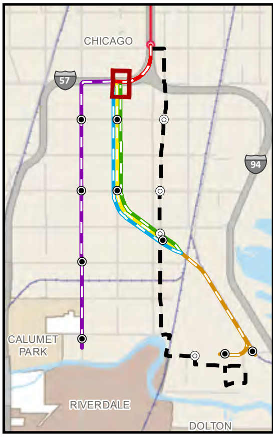
Scale


0
125
250
Feet

map id: 03_03.3


HARVARD AVE
98TH ST
98TH PL
16
57
I57 EXPY
15
14
13
21
22
20
19
773
18
17
25
99TH ST
Wendell Smith Park
23
24
EGGLESTON AVE
Fernwood Parkway
99TH PL
PRINCETON AVE
100TH ST

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

UPRR Rail Alternative ROW Option

Sheet 4 of 15

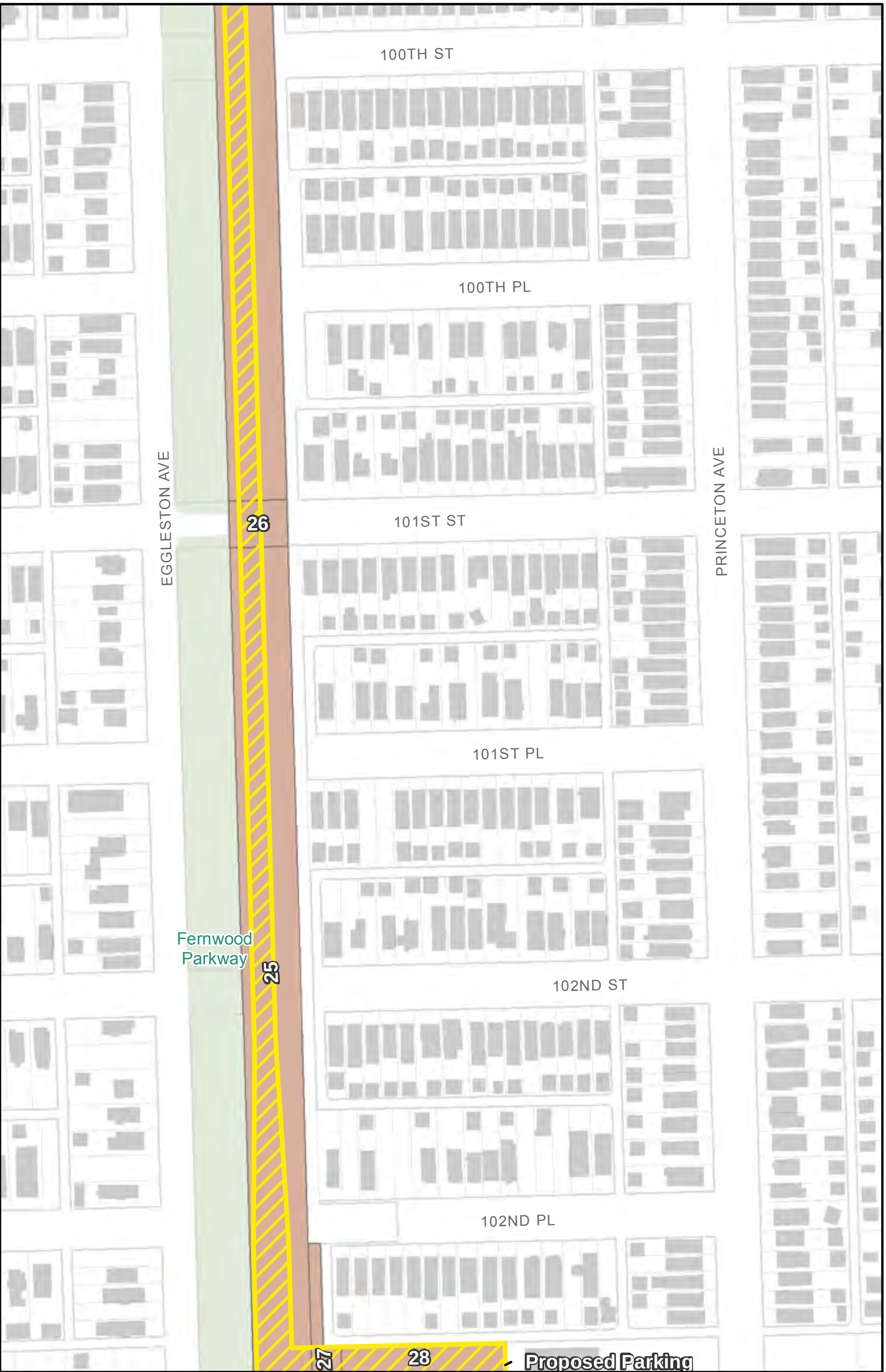
- ▨ Proposed Permanent Envelope
- 🟦 Easement
- 🟫 Parcel Affected by Proposed Permanent Envelope
- 🟥 Building Displacement
- ⬜ Building Footprint
- ⬜ Parcels
- 🟩 Parks
- 🟪 Schools
- -+-+- Freight Rail
- -49- CTA Bus
- -290- Pace Bus

Scale

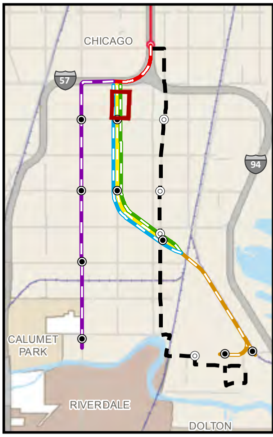
0 125 250

Feet

map id: 03_03.4


100TH ST
100TH PL
101ST ST
101ST PL
102ND ST
102ND PL
EGGLESTON AVE
PRINCETON AVE
26
25
27
28
Fernwood Parkway
Proposed Parking

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

UPRR Rail Alternative ROW Option

Sheet 5 of 15

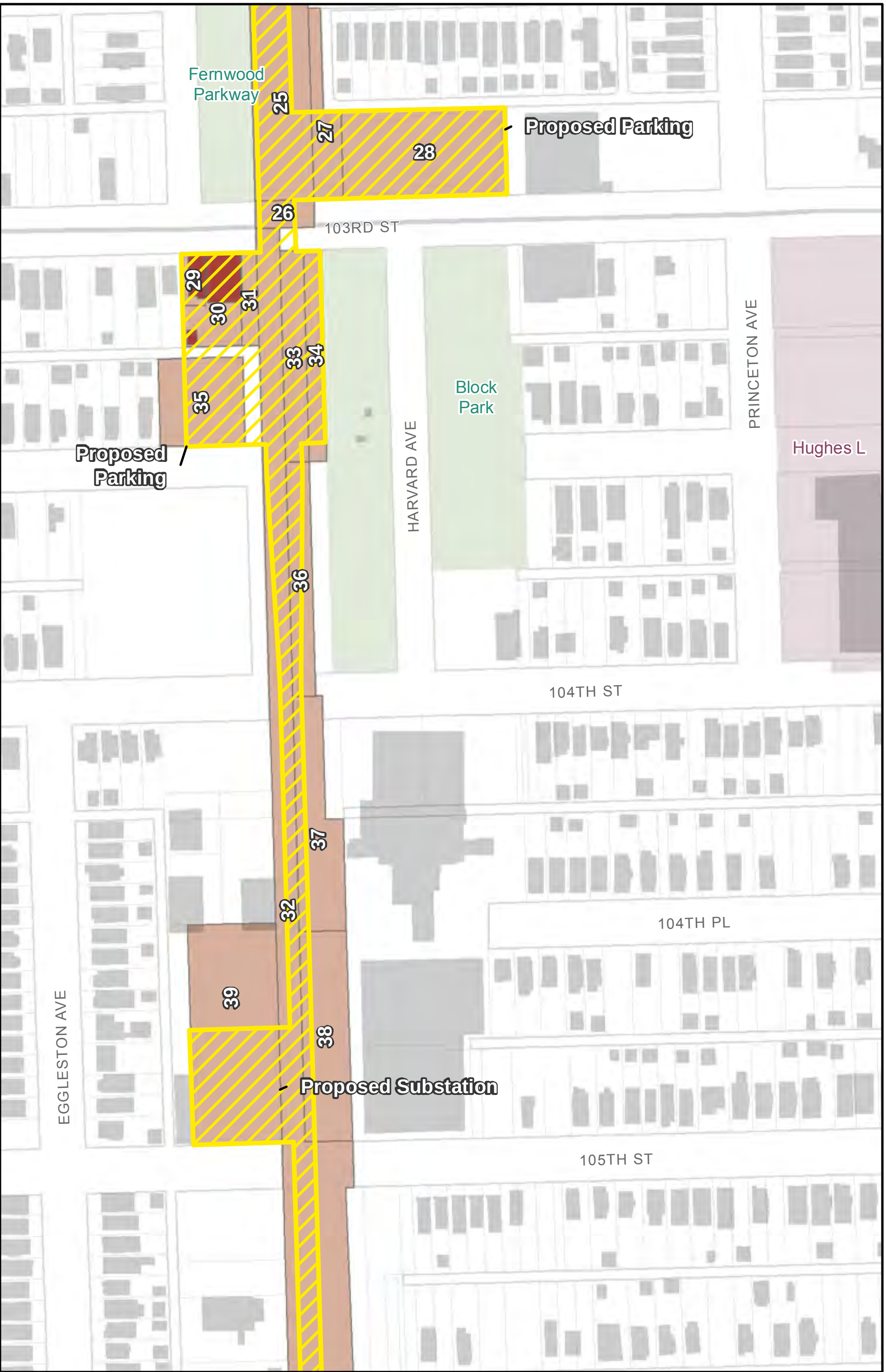
▨	Proposed Permanent Envelope
🟦	Easement
🟫	Parcel Affected by Proposed Permanent Envelope
🟥	Building Displacement
⬜	Building Footprint
□	Parcels
🟩	Parks
🟪	Schools
-+-+-	Freight Rail
–49–	CTA Bus
–290–	Pace Bus

Scale

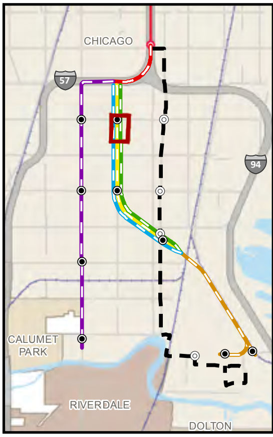
0 125 250

Feet

map id: 03_03.5


Fernwood Parkway
25
27
28
Proposed Parking
26
103RD ST
29
30
31
33
34
35
Proposed Parking
Block Park
HARVARD AVE
PRINCETON AVE
Hughes L
36
104TH ST
37
32
104TH PL
39
38
Proposed Substation
EGGLESTON AVE
105TH ST

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

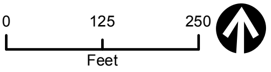
Legend

UPRR Rail Alternative ROW Option

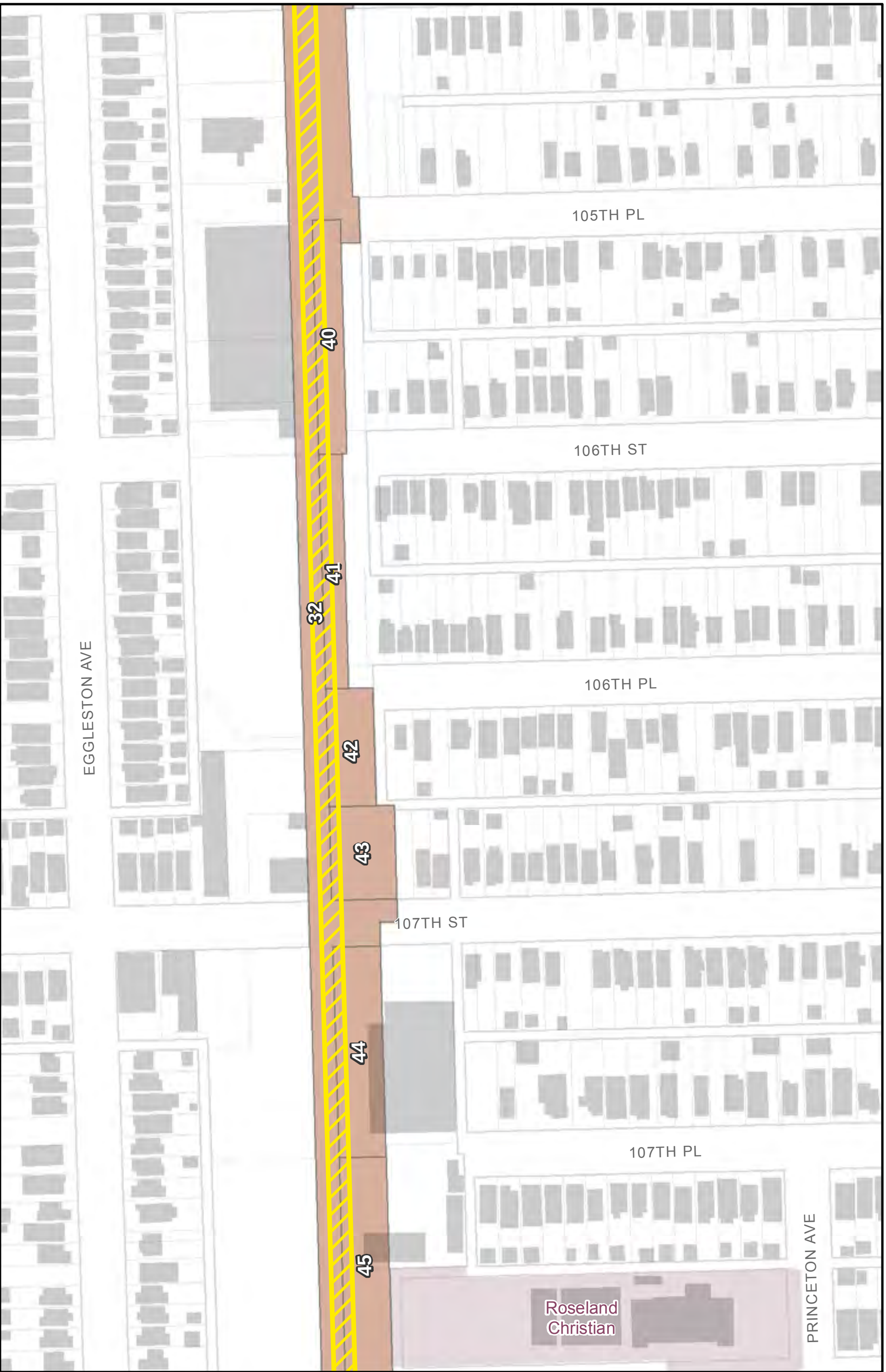
Sheet 6 of 15

- ▨ Proposed Permanent Envelope
- 🟦 Easement
- 🟫 Parcel Affected by Proposed Permanent Envelope
- 🟥 Building Displacement
- ⬜ Building Footprint
- □ Parcels
- 🟩 Parks
- 🟪 Schools
- -+- Freight Rail
- -49- CTA Bus
- -290- Pace Bus

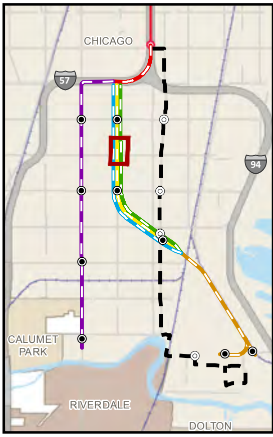
Scale


0
125
250
Feet

map id: 03_03.6


105TH PL
106TH ST
106TH PL
107TH ST
107TH PL
EGGLESTON AVE
PRINCETON AVE
40
41
32
42
43
44
45
Roseland
Christian

Inset


CHICAGO
57
94
CALUMET
PARK
RIVERDALE
DOLTON

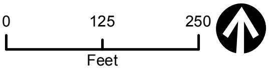
Legend

UPRR Rail Alternative ROW Option

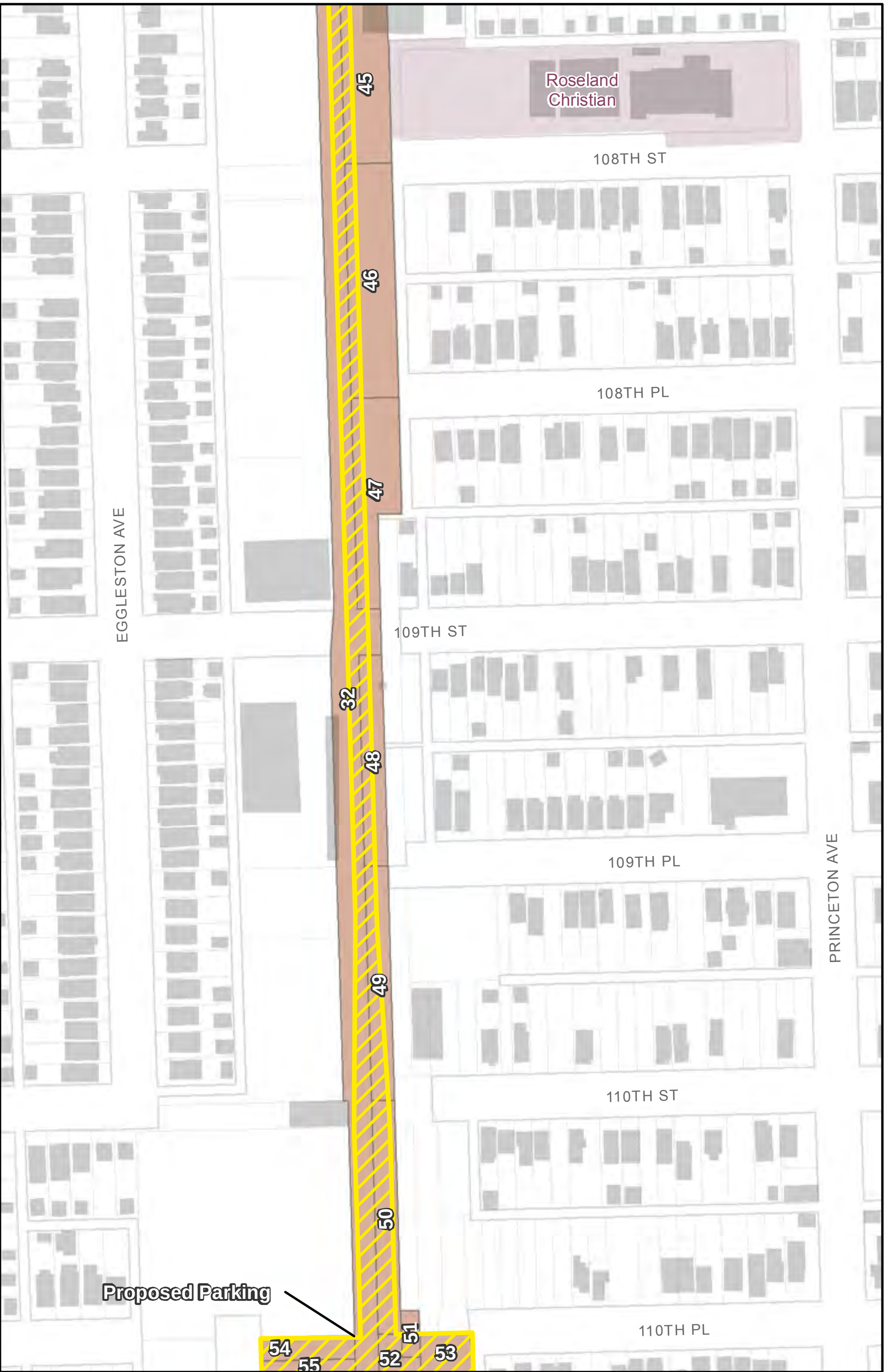
Sheet 7 of 15

▨	Proposed Permanent Envelope
🟦	Easement
🟫	Parcel Affected by Proposed Permanent Envelope
🟥	Building Displacement
⬜	Building Footprint
☐	Parcels
🟩	Parks
🟪	Schools
-+-+-	Freight Rail
-49-	CTA Bus
-290-	Pace Bus

Scale


0
125
250
Feet

map id: 03_03.7


Roseland Christian
45
108TH ST
46
108TH PL
47
EGGLESTON AVE
109TH ST
32
48
109TH PL
PRINCETON AVE
49
110TH ST
50
Proposed Parking
51
54
55
52
53
110TH PL

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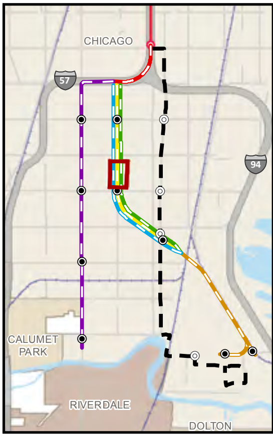

CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

UPRR Rail Alternative ROW Option

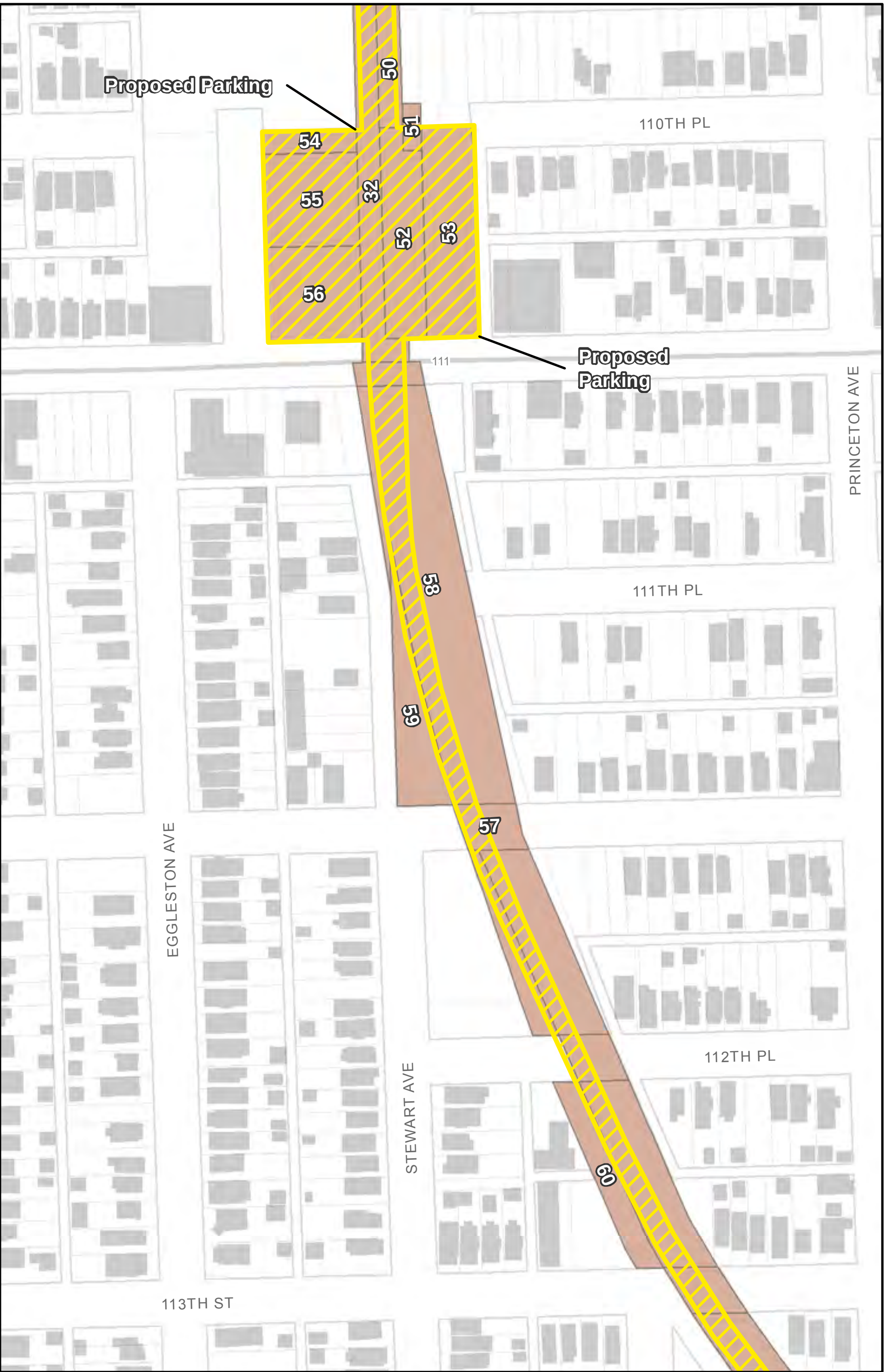
Sheet 8 of 15

▨	Proposed Permanent Envelope
🟦	Easement
🟫	Parcel Affected by Proposed Permanent Envelope
🟥	Building Displacement
⬜	Building Footprint
☐	Parcels
🟩	Parks
🟪	Schools
-+-+-	Freight Rail
–49–	CTA Bus
–290–	Pace Bus

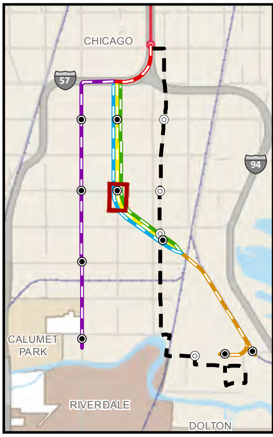
Scale

0 125 250
Feet

map id: 03_03.8


Proposed Parking
50
51
54
55
32
52
53
56
110TH PL
Proposed Parking
111
PRINCETON AVE
111TH PL
58
59
57
EGGLESTON AVE
112TH PL
STEWART AVE
60
113TH ST

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

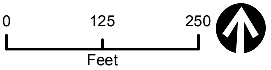
Legend

UPRR Rail Alternative ROW Option

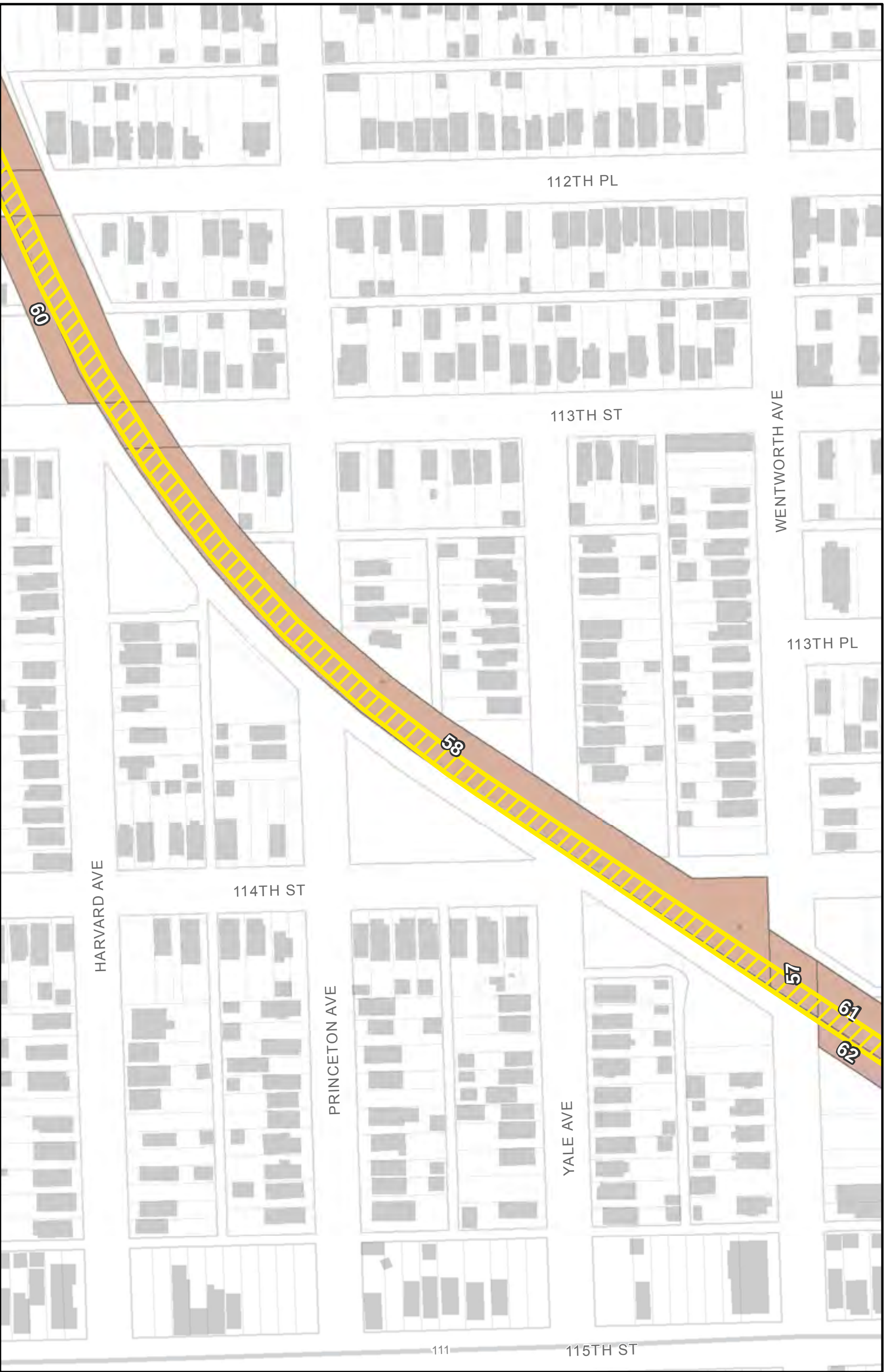
Sheet 9 of 15

▨	Proposed Permanent Envelope
🟦	Easement
🟫	Parcel Affected by Proposed Permanent Envelope
🟥	Building Displacement
⬜	Building Footprint
☐	Parcels
🟩	Parks
🟪	Schools
-+-+-	Freight Rail
-49-	CTA Bus
-290-	Pace Bus

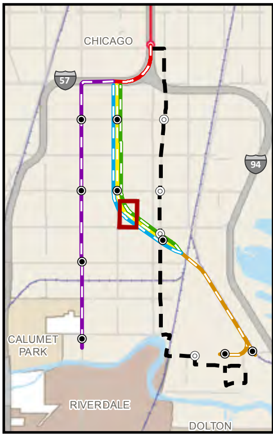
Scale


0
125
250
Feet

map id: 03_03.9


112TH PL
113TH ST
WENTWORTH AVE
113TH PL
HARVARD AVE
114TH ST
PRINCETON AVE
YALE AVE
115TH ST
111
60
58
57
61
62

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

UPRR Rail Alternative ROW Option

Sheet 10 of 15

▨ Proposed Permanent Envelope

🟦 Easement

🟫 Parcel Affected by Proposed Permanent Envelope

🟥 Building Displacement

▩ Building Footprint

□ Parcels

🟩 Parks

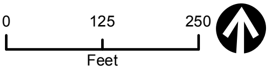
🟪 Schools

-+-+- Freight Rail

-49- CTA Bus

-290- Pace Bus

Scale


0
125
250
Feet

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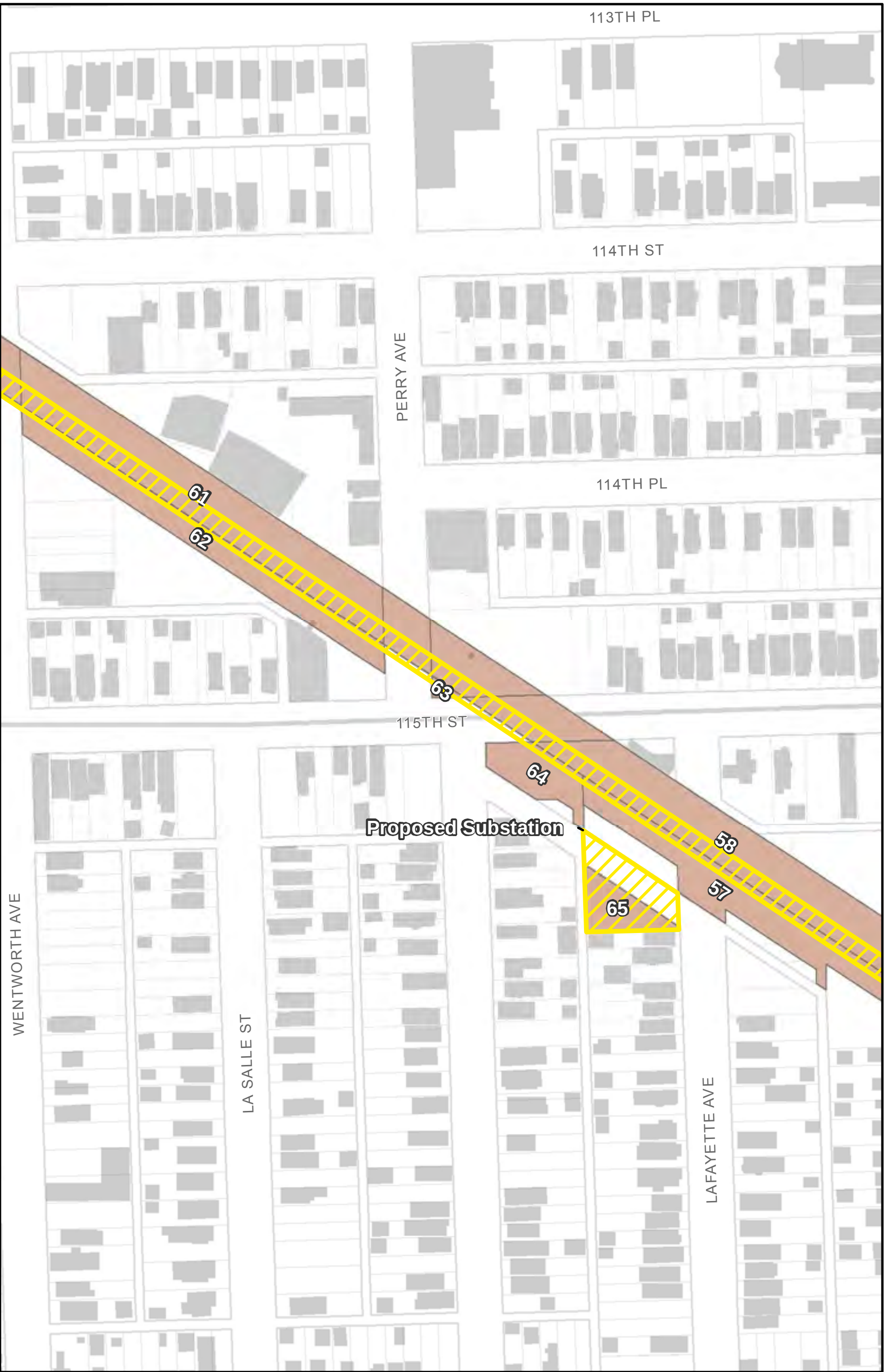
113TH PL
114TH ST
PERRY AVE
114TH PL
61
62
63
115TH ST
64
Proposed Substation
58
57
65
WENTWORTH AVE
LA SALLE ST
LAFAYETTE AVE

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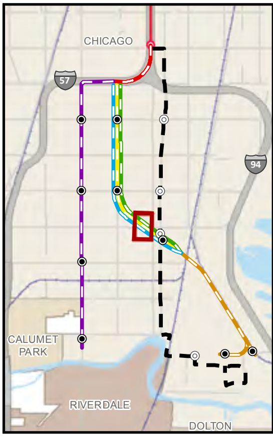

CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

UPRR Rail Alternative ROW Option

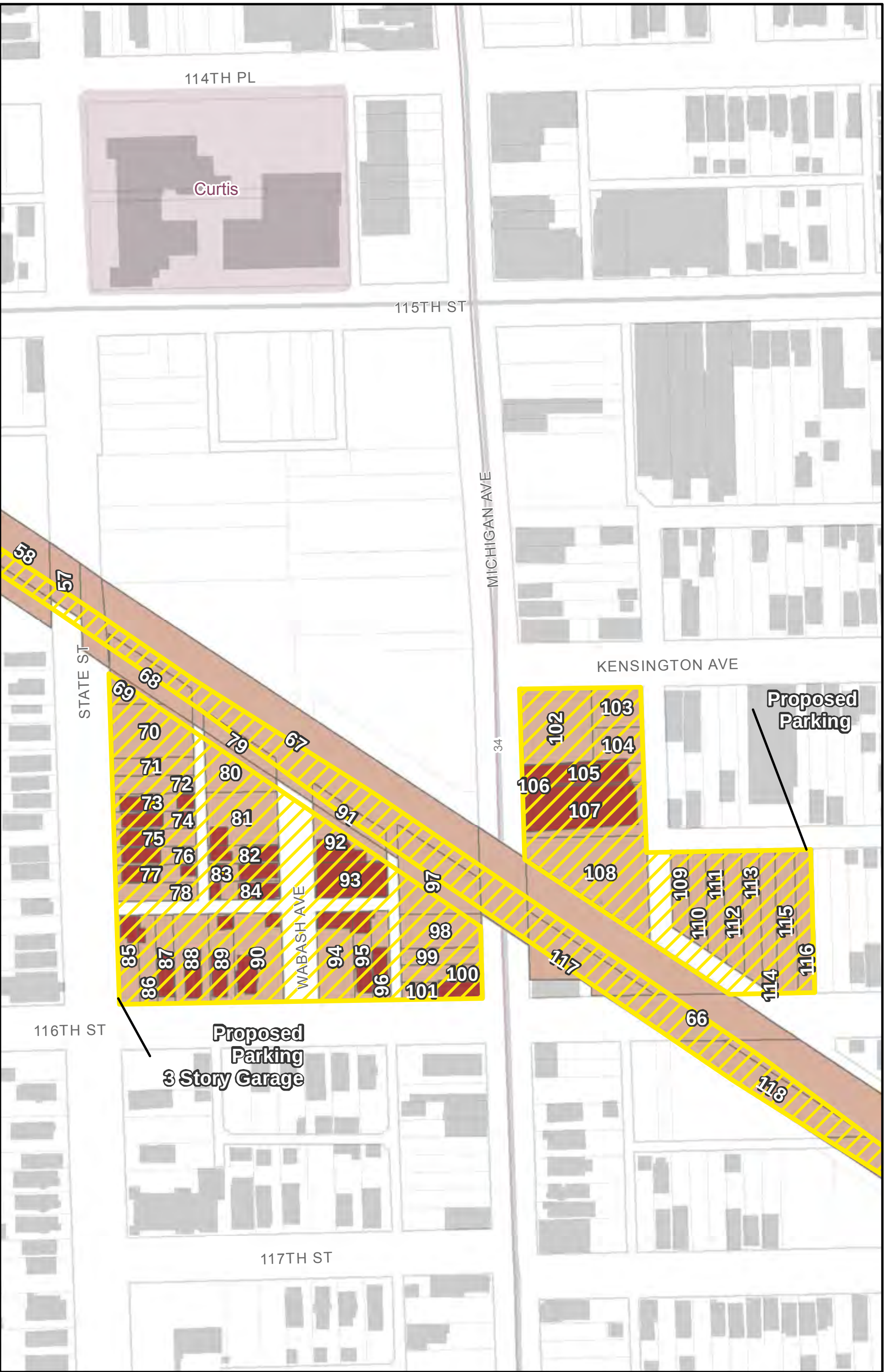
Sheet 11 of 15

▨ Proposed Permanent Envelope
🟦 Easement
🟫 Parcel Affected by Proposed Permanent Envelope
🟥 Building Displacement
⬜ Building Footprint
☐ Parcels
🟩 Parks
🟪 Schools
-+-+- Freight Rail
-49- CTA Bus
-290- Pace Bus

Scale

0 125 250
Feet

map id: 03_03.11


114TH PL
Curtis
115TH ST
MICHIGAN AVE
34
KENSINGTON AVE
STATE ST
WABASH AVE
116TH ST
117TH ST
58
57
68
69
70
71
72
73
74
75
76
77
78
79
80
81
82
83
84
67
91
92
93
97
98
99
100
101
85
86
87
88
89
90
94
95
96
102
103
104
105
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110
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112
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114
115
116
117
66
118
Proposed Parking
Proposed Parking 3 Story Garage

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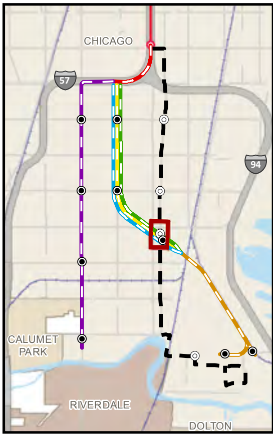

CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

UPRR Rail Alternative ROW Option

Sheet 12 of 15

▨ Proposed Permanent Envelope

🟦 Easement

🟫 Parcel Affected by Proposed Permanent Envelope

🟥 Building Displacement

⬜ Building Footprint

⬜ Parcels

🟩 Parks

🟪 Schools

-+-+- Freight Rail

-49- CTA Bus

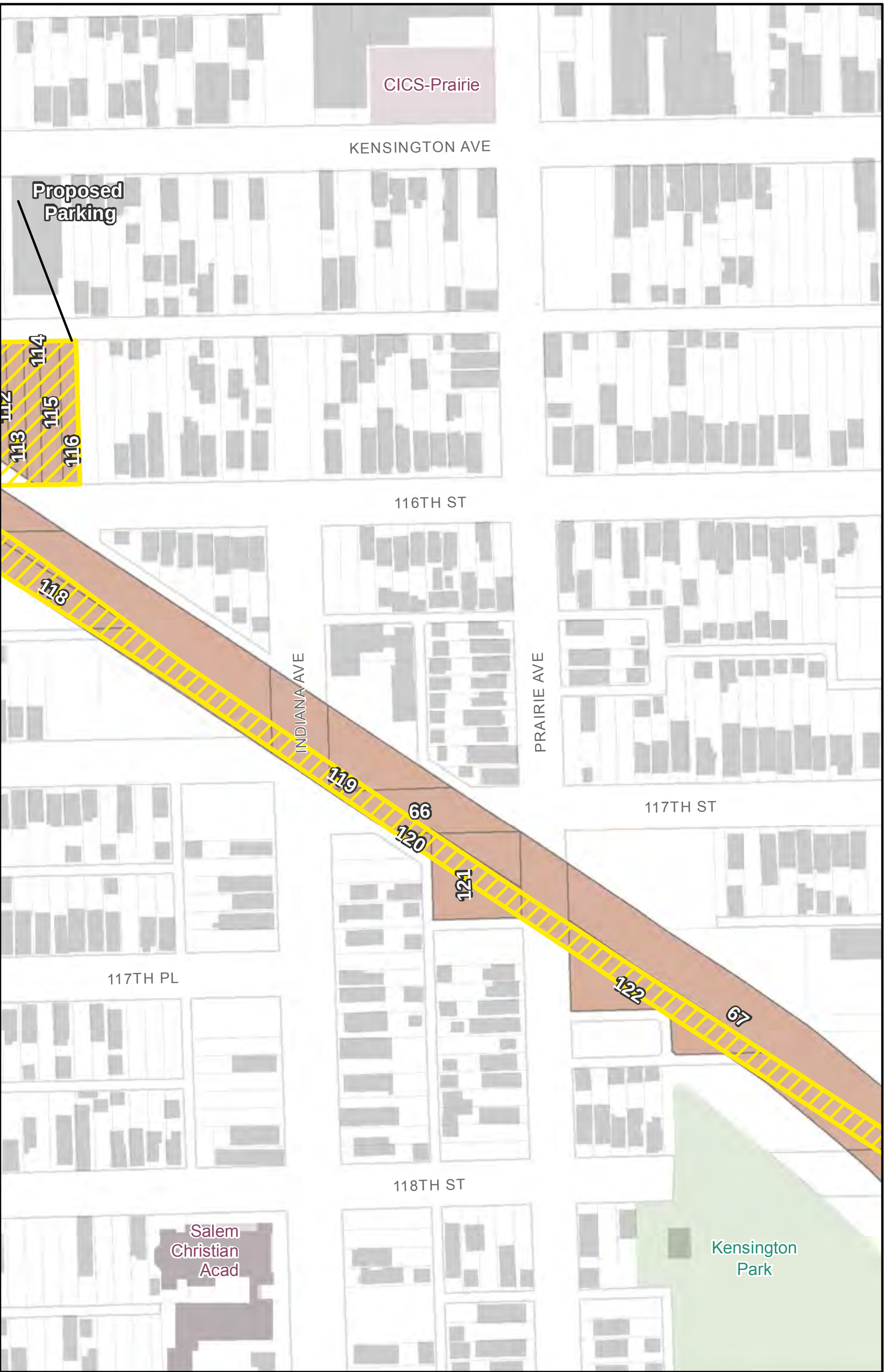
-290- Pace Bus

Scale

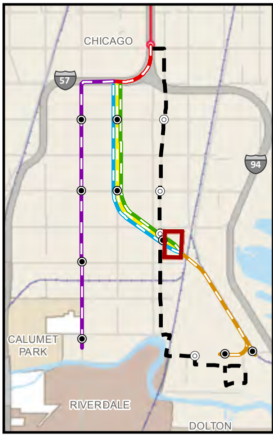
0 125 250

Feet

map id: 03_03.12


CICS-Prairie
KENSINGTON AVE
Proposed Parking
114
112
115
113
116
116TH ST
118
INDIANA AVE
PRAIRIE AVE
119
66
120
121
117TH ST
122
67
117TH PL
118TH ST
Salem Christian Acad
Kensington Park

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

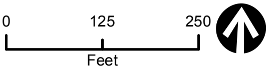
Legend

UPRR Rail Alternative ROW Option

Sheet 13 of 15

▨	Proposed Permanent Envelope
🟦	Easement
🟫	Parcel Affected by Proposed Permanent Envelope
🟥	Building Displacement
⬜	Building Footprint
☐	Parcels
🟩	Parks
🟪	Schools
-+-+-	Freight Rail
—49—	CTA Bus
—290—	Pace Bus

Scale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125
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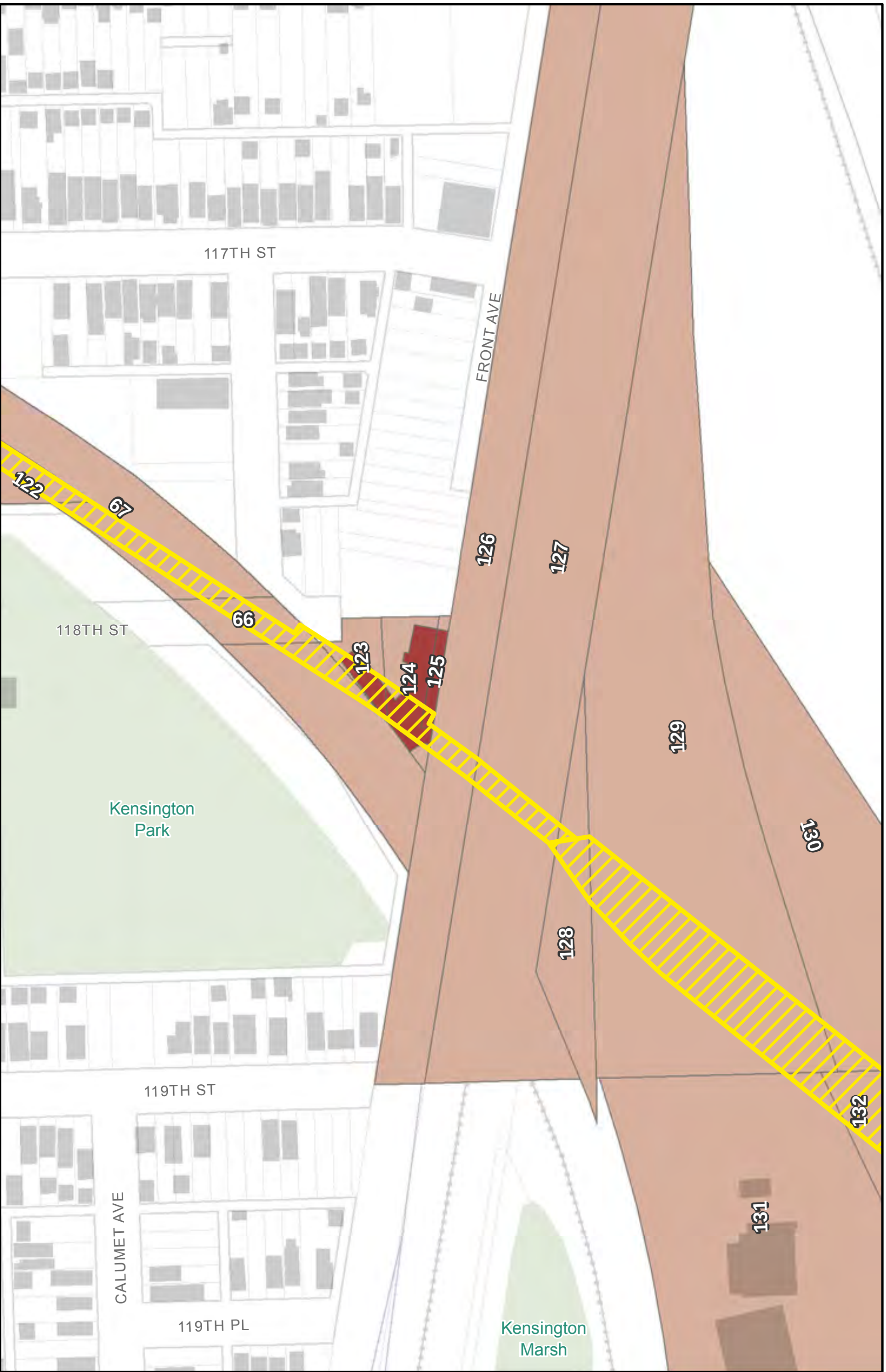
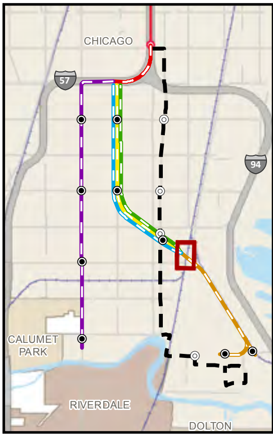
Feet

map id: 03_03.13


117TH ST
FRONT AVE
118TH ST
119TH ST
119TH PL
CALUMET AVE
Kensington Park
Kensington Marsh
122
67
66
123
124
125
126
127
128
129
130
131
132

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

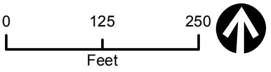
Legend

UPRR Rail Alternative ROW Option

Sheet 14 of 15

▨	Proposed Permanent Envelope
🟦	Easement
🟫	Parcel Affected by Proposed Permanent Envelope
🟥	Building Displacement
⬜	Building Footprint
☐	Parcels
🟩	Parks
🟪	Schools
-+-+-	Freight Rail
-49-	CTA Bus
-290-	Pace Bus

Scale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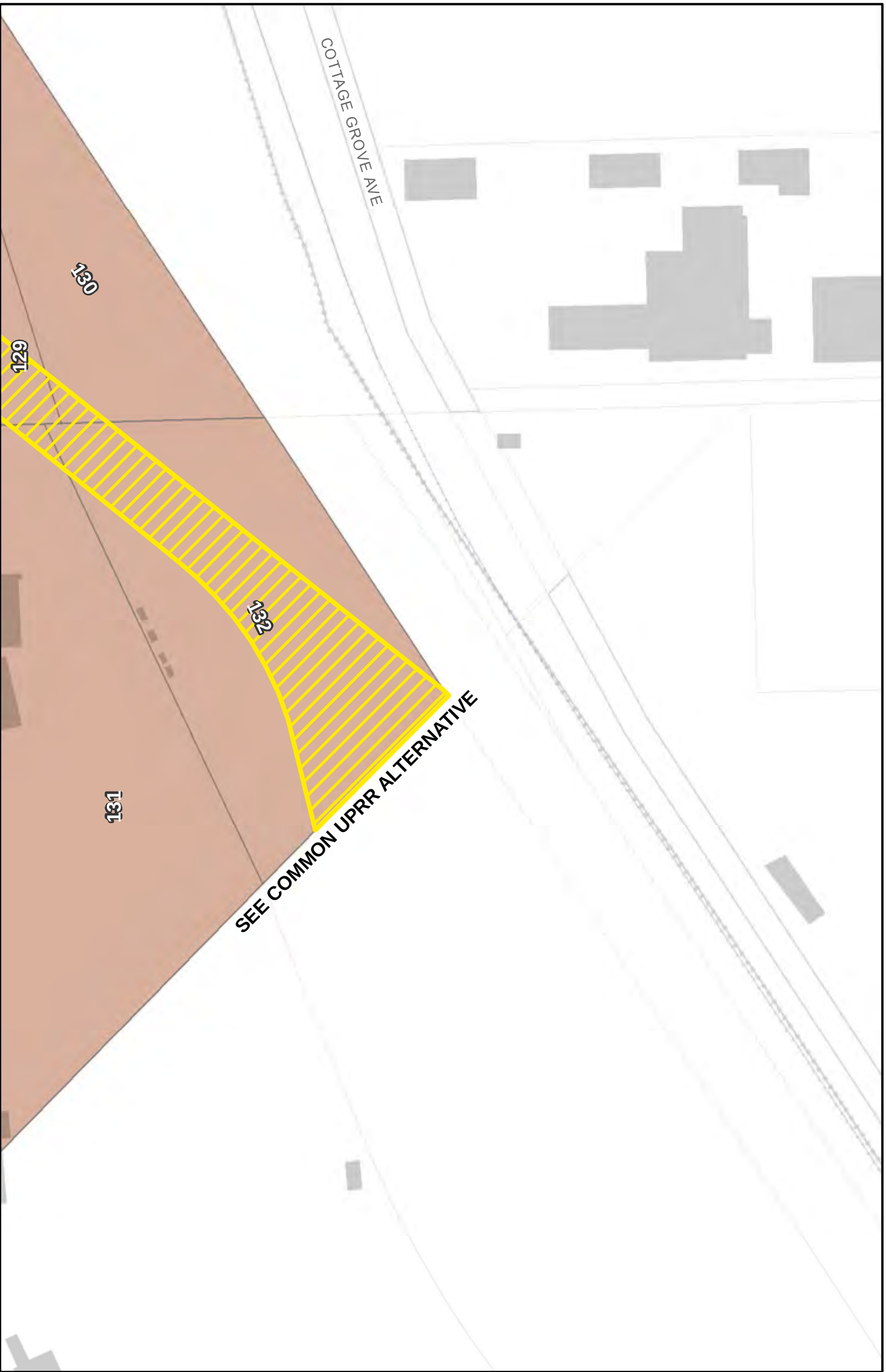
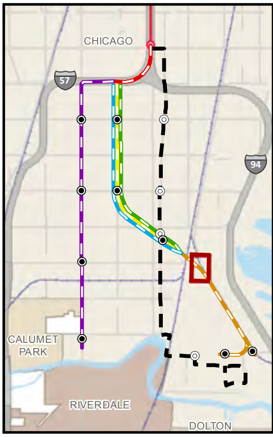
125
250
Feet

map id: 03_03.14


COTTAGE GROVE AVE
130
129
132
131
SEE COMMON UPRR ALTERNATIVE

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

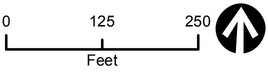
Legend

UPRR Rail Alternative ROW Option

Sheet 15 of 15

▨	Proposed Permanent Envelope
🟦	Easement
🟫	Parcel Affected by Proposed Permanent Envelope
🟥	Building Displacement
⬜	Building Footprint
□	Parcels
🟩	Parks
🟪	Schools
-+-	Freight Rail
-49-	CTA Bus
-290-	Pace Bus

Scale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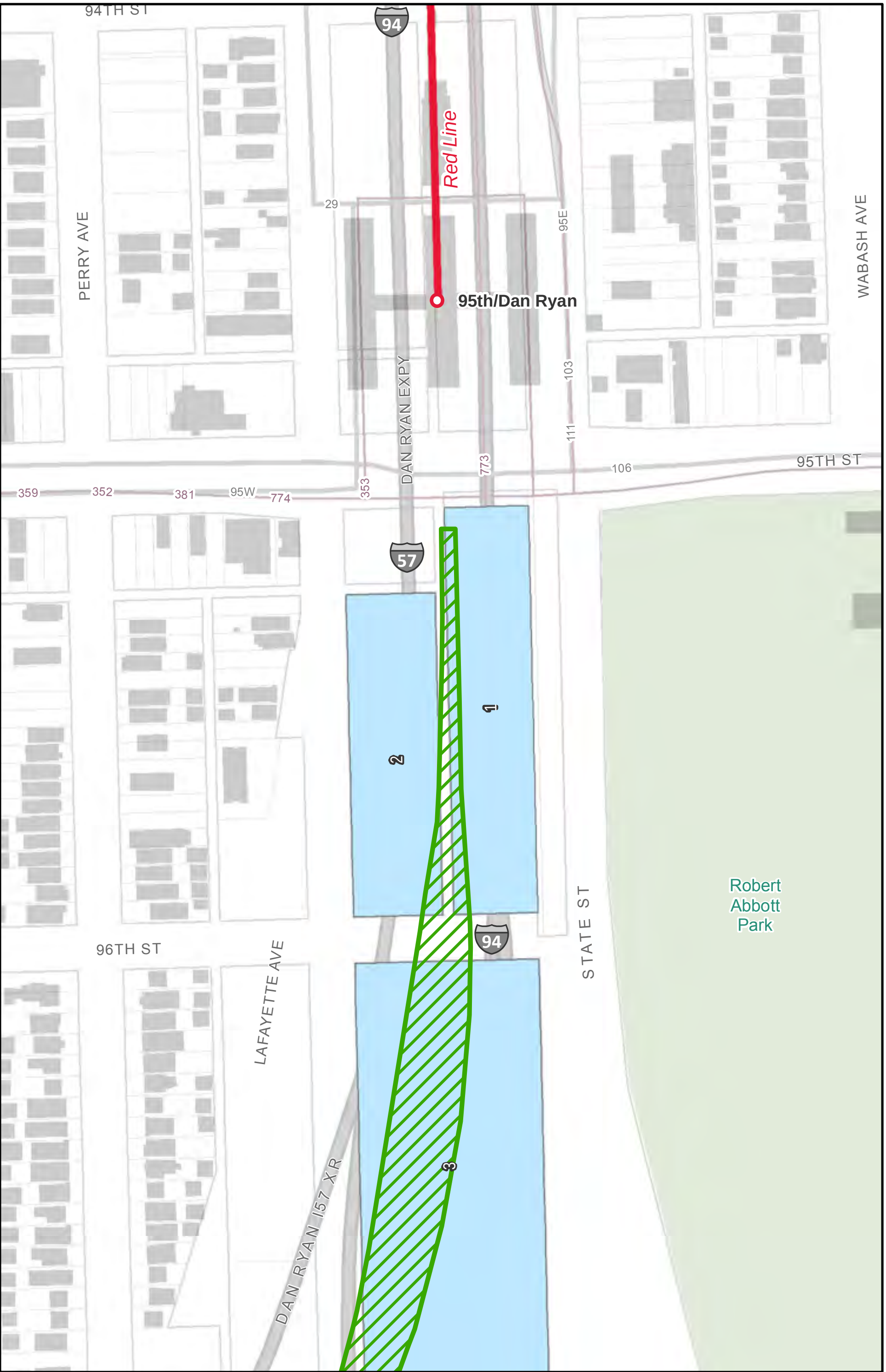
125
250
Feet

map id: 03_03.15

Appendix C
Union Pacific Railroad Rail Alternative
East Option
Displacements Maps


94TH ST
94
Red Line
95th/Dan Ryan
29
95E
PERRY AVE
WABASH AVE
DAN RYAN EXPY
103
111
773
106
95TH ST
359
352
381
95W
774
353
57
1
2
3
94
96TH ST
LAFAYETTE AVE
STATE ST
Robert Abbott Park
DAN RYAN I57 XR

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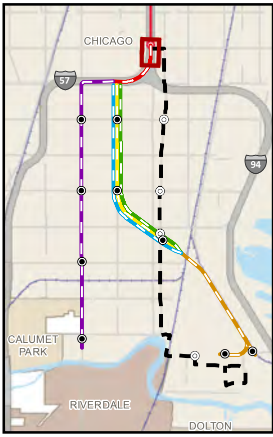

CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

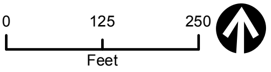
Legend

UPRR Rail Alternative East Option

Sheet 1 of 15

▨	Proposed Permanent Envelope
🟦	Easement
🟫	Parcel Affected by Proposed Permanent Envelope
🟥	Building Displacement
⬜	Building Footprint
☐	Parcels
🟩	Parks
🟪	Schools
-+-+-	Freight Rail
-49-	CTA Bus
-290-	Pace Bus

Scale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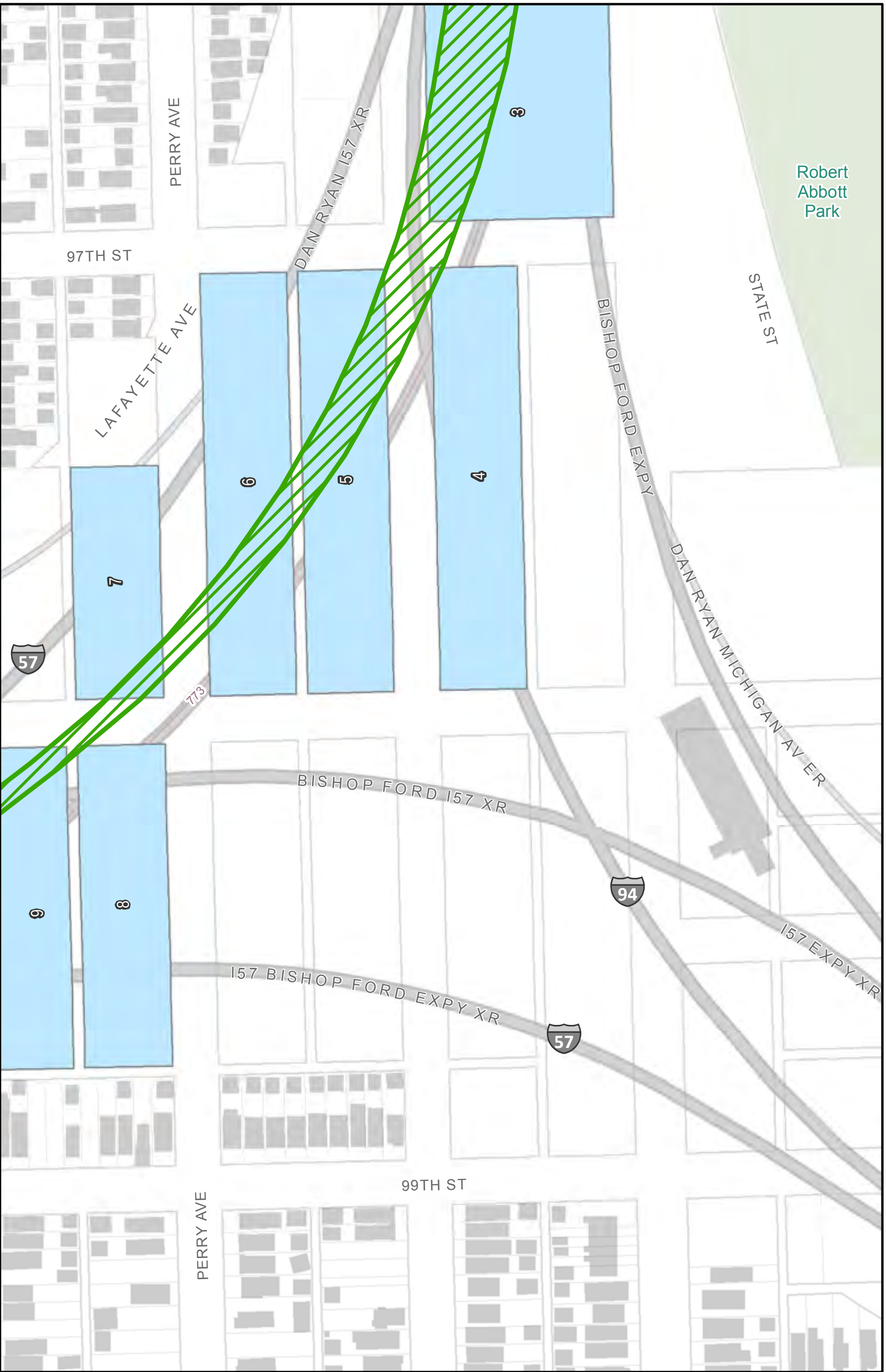
Feet

map id: 03_01.1


PERRY AVE
DAN RYAN I57 XR
Robert Abbott Park
97TH ST
3
STATE ST
BISHOP FORD EXPY
LAFAYETTE AVE
6
5
4
7
57
773
DAN RYAN MICHIGAN AV ER
BISHOP FORD I57 XR
94
9
8
I57 EXPY XR
I57 BISHOP FORD EXPY XR
57
99TH ST
PERRY AVE

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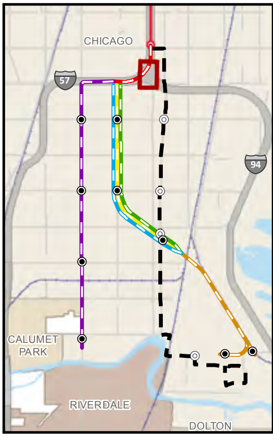

CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

UPRR Rail Alternative East Option

Sheet 2 of 15

▨ Proposed Permanent Envelope

🟦 Easement

🟫 Parcel Affected by Proposed Permanent Envelope

🟥 Building Displacement

⬜ Building Footprint

⬜ Parcels

🟩 Parks

🟪 Schools

-+-+- Freight Rail

–49– CTA Bus

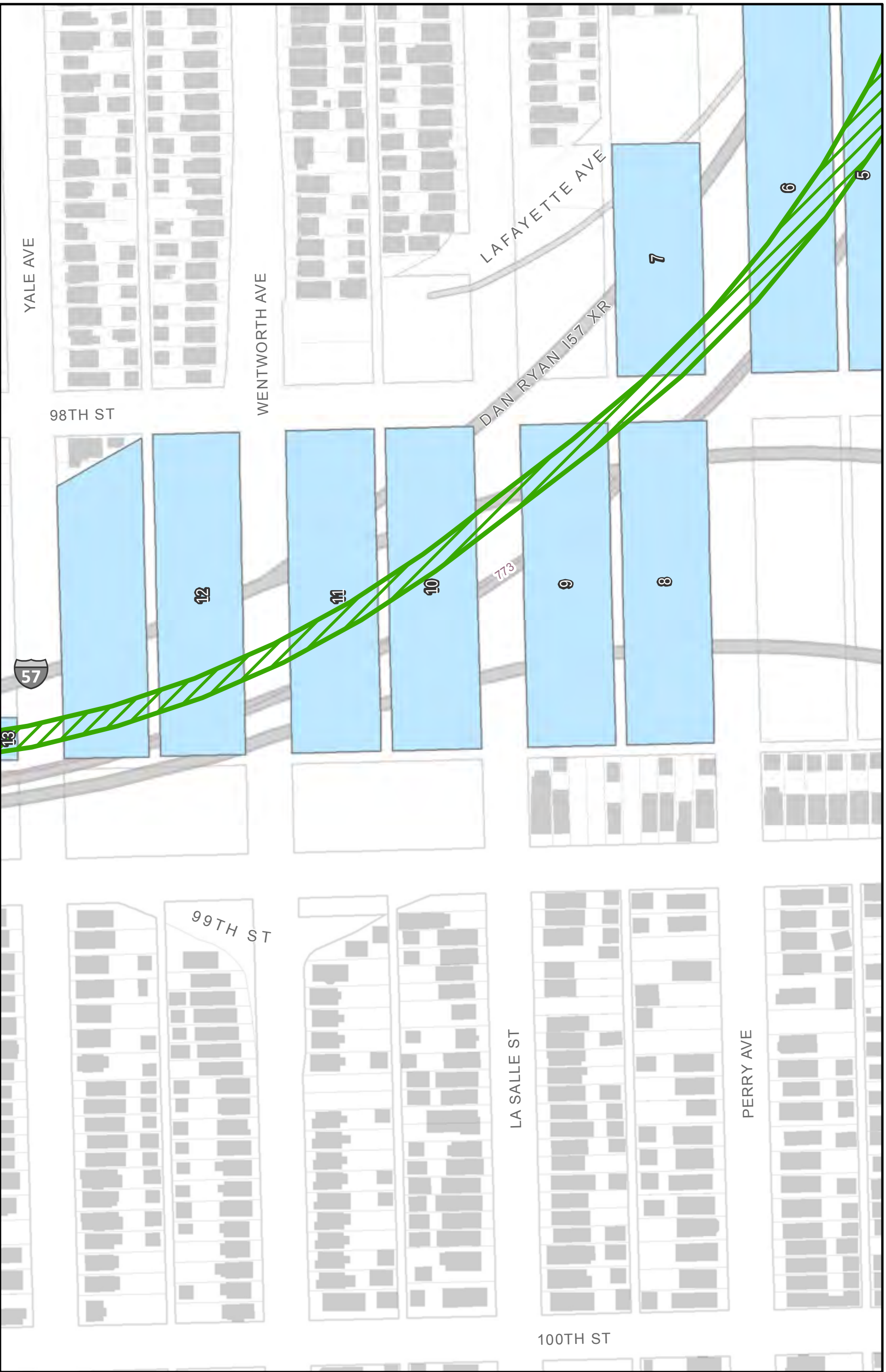
–290– Pace Bus

Scale

0 125 250

Feet

map id: 03_01.2


YALE AVE
WENTWORTH AVE
LAFAYETTE AVE
DAN RYAN I57 XR
98TH ST
99TH ST
100TH ST
LA SALLE ST
PERRY AVE
57
773
5
6
7
8
9
10
11
12
13

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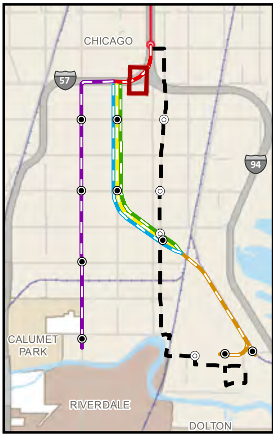

CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

UPRR Rail Alternative East Option

Sheet 3 of 15

▨ Proposed Permanent Envelope

🟦 Easement

🟫 Parcel Affected by Proposed Permanent Envelope

🟥 Building Displacement

⬜ Building Footprint

⬜ Parcels

🟩 Parks

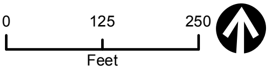
🟪 Schools

-+-+- Freight Rail

-49- CTA Bus

-290- Pace Bus

Scale


0
125
250
Feet

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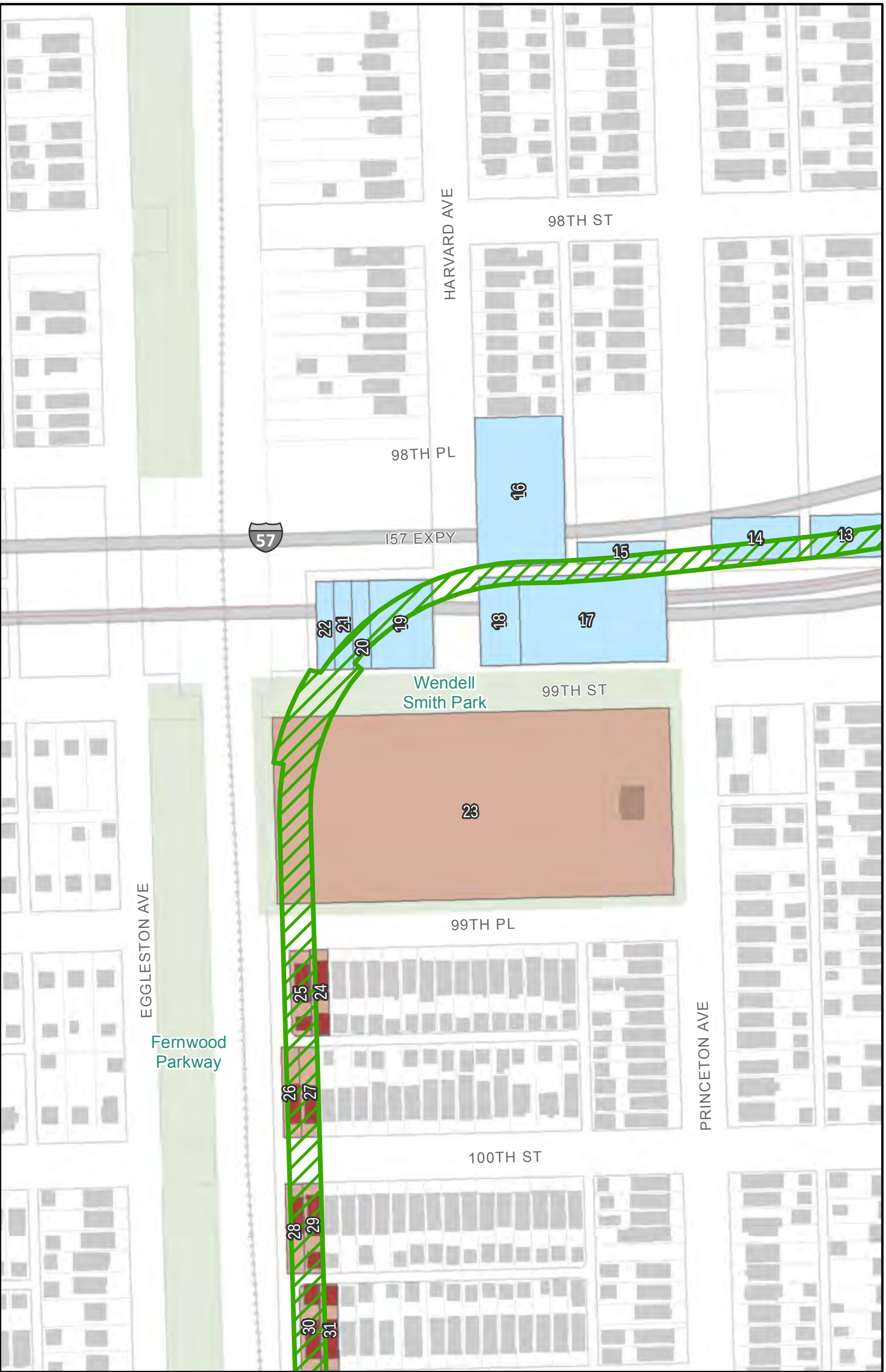
98TH ST
HARVARD AVE
98TH PL
57
I57 EXPY
16
15
14
13
22
21
20
19
18
17
Wendell Smith Park
99TH ST
23
EGGLESTON AVE
99TH PL
25
24
Fernwood Parkway
26
27
PRINCETON AVE
100TH ST
28
29
30
31

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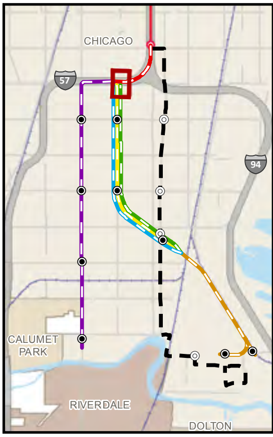

CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

UPRR Rail Alternative East Option

Sheet 4 of 15

▨ Proposed Permanent Envelope

🟦 Easement

🟫 Parcel Affected by Proposed Permanent Envelope

🟥 Building Displacement

⬜ Building Footprint

⬜ Parcels

🟩 Parks

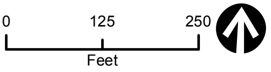
🟪 Schools

-+-+- Freight Rail

-49- CTA Bus

-290- Pace Bus

Scale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125
250
Feet

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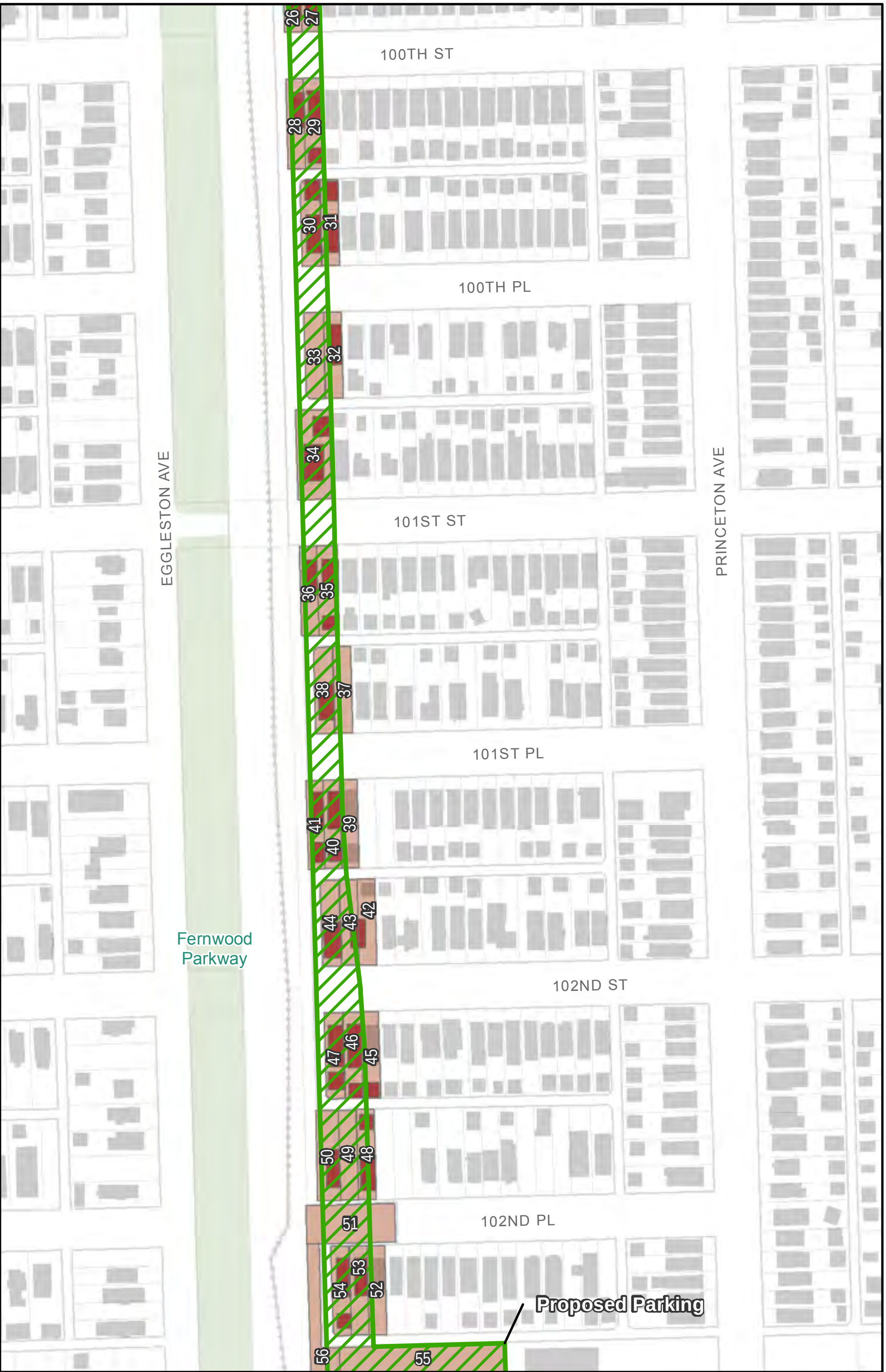
26
27
100TH ST
28
29
30
31
100TH PL
33
32
34
101ST ST
EGGLESTON AVE
PRINCETON AVE
36
35
38
37
101ST PL
41
40
39
44
43
42
Fernwood
Parkway
102ND ST
47
46
45
50
49
48
102ND PL
51
53
54
52
Proposed Parking
56
55

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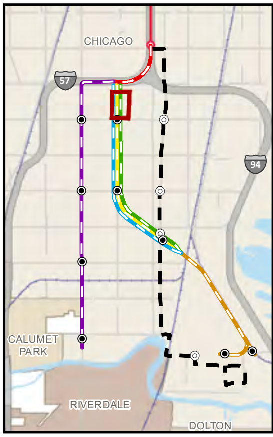

CHICAGO
57
94
CALUMET
PARK
RIVERDALE
DOLTON

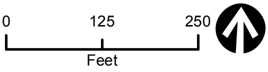
Legend

UPRR Rail Alternative
East Option

Sheet 5 of 15

▨ Proposed Permanent Envelope
🟦 Easement
🟫 Parcel Affected by Proposed Permanent Envelope
🟥 Building Displacement
⬜ Building Footprint
☐ Parcels
🟩 Parks
🟪 Schools
-+-+- Freight Rail
–49– CTA Bus
–290– Pace Bus

Scale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250
Feet

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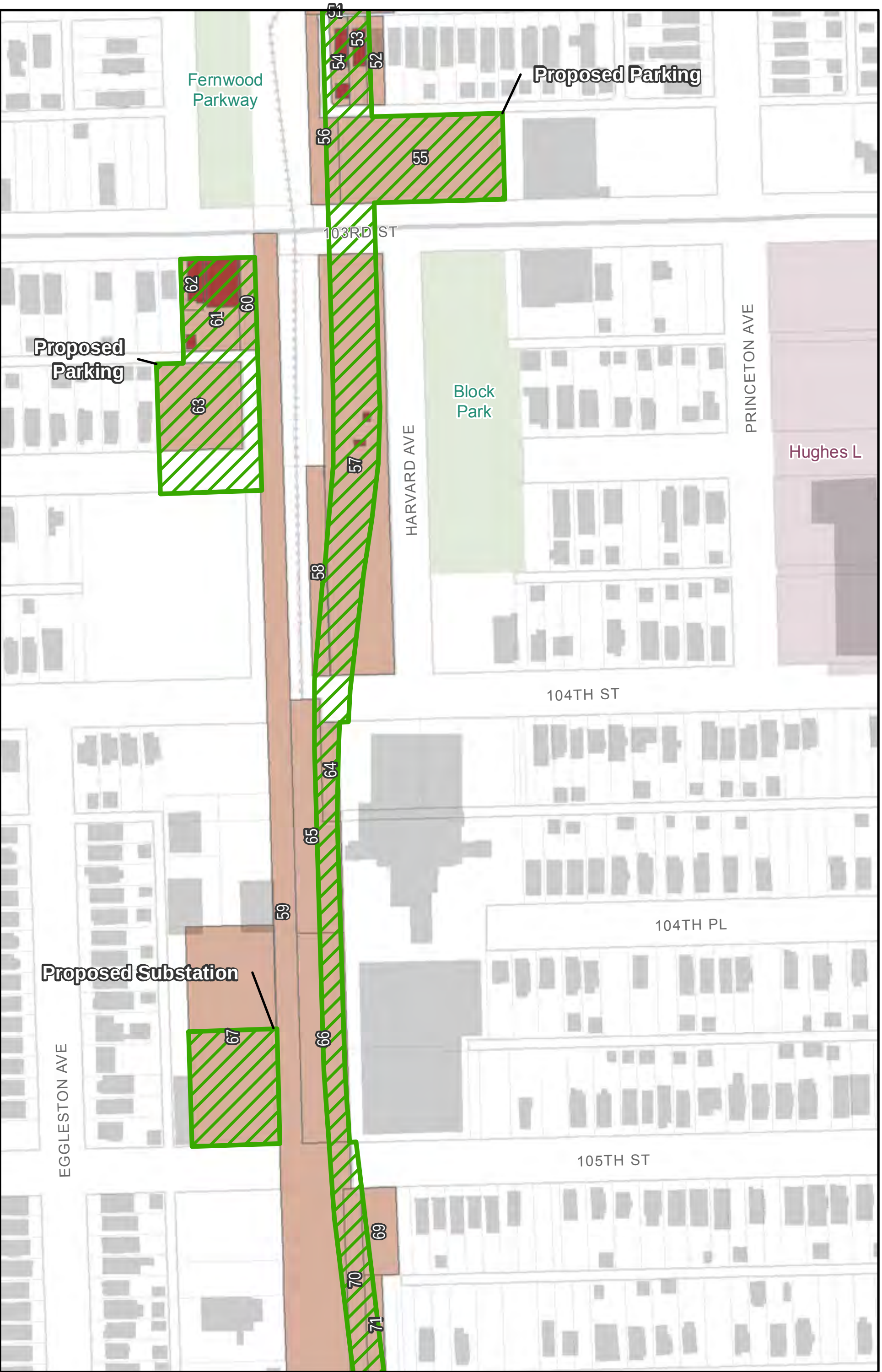
51
53
54
52
Fernwood Parkway
Proposed Parking
56
55
103RD ST
62
60
61
Proposed Parking
63
Block Park
HARVARD AVE
PRINCETON AVE
Hughes L
57
58
104TH ST
64
65
59
104TH PL
Proposed Substation
67
66
EGGLESTON AVE
105TH ST
69
70
71

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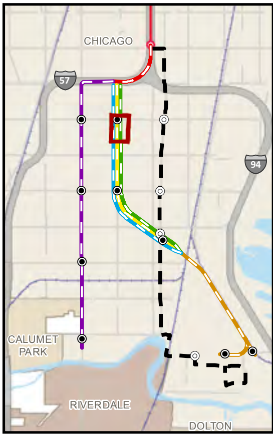

CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

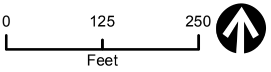
Legend

UPRR Rail Alternative East Option

Sheet 6 of 15

- ▨ Proposed Permanent Envelope
- 🟦 Easement
- 🟫 Parcel Affected by Proposed Permanent Envelope
- 🟥 Building Displacement
- ⬜ Building Footprint
- ⬜ Parcels
- 🟩 Parks
- 🟪 Schools
- ┼┼ Freight Rail
- –49– CTA Bus
- –290– Pace Bus

Scale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250
Feet

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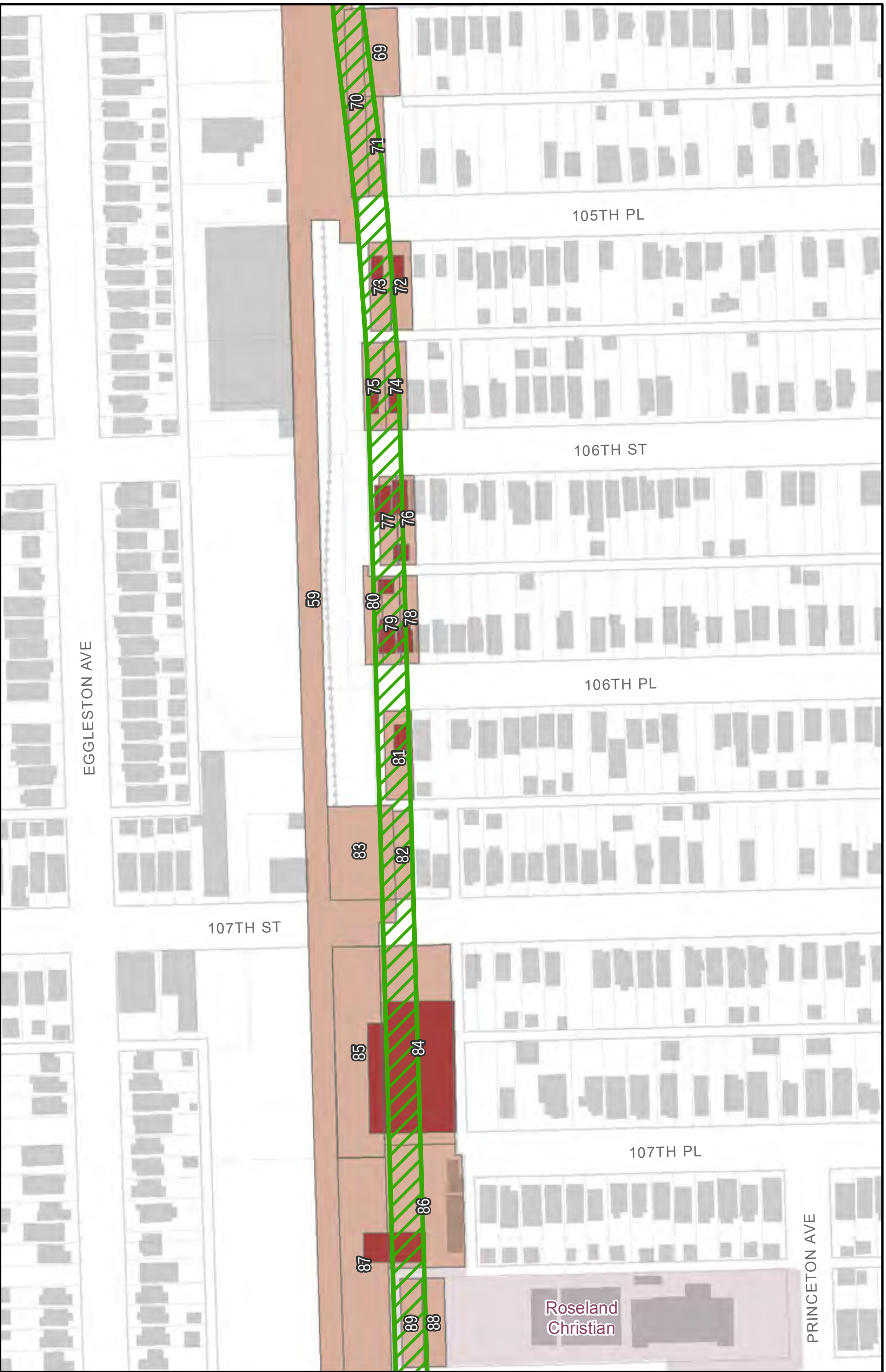
69
70
71
105TH PL
73
72
75
74
106TH ST
77
76
59
80
79
78
106TH PL
EGGLESTON AVE
81
83
82
107TH ST
85
84
107TH PL
86
87
PRINCETON AVE
89
88
Roseland Christian

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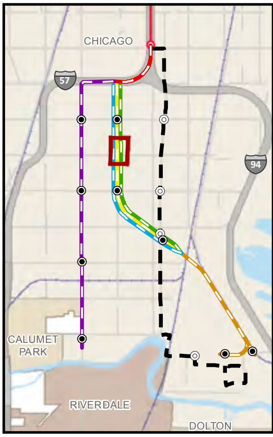

CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

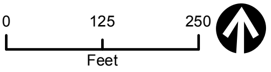
Legend

UPRR Rail Alternative East Option

Sheet 7 of 15

- ▨ Proposed Permanent Envelope
- 🟦 Easement
- 🟫 Parcel Affected by Proposed Permanent Envelope
- 🟥 Building Displacement
- ⬜ Building Footprint
- ⬜ Parcels
- 🟩 Parks
- 🟪 Schools
- -+-+- Freight Rail
- -49- CTA Bus
- -290- Pace Bus

Scale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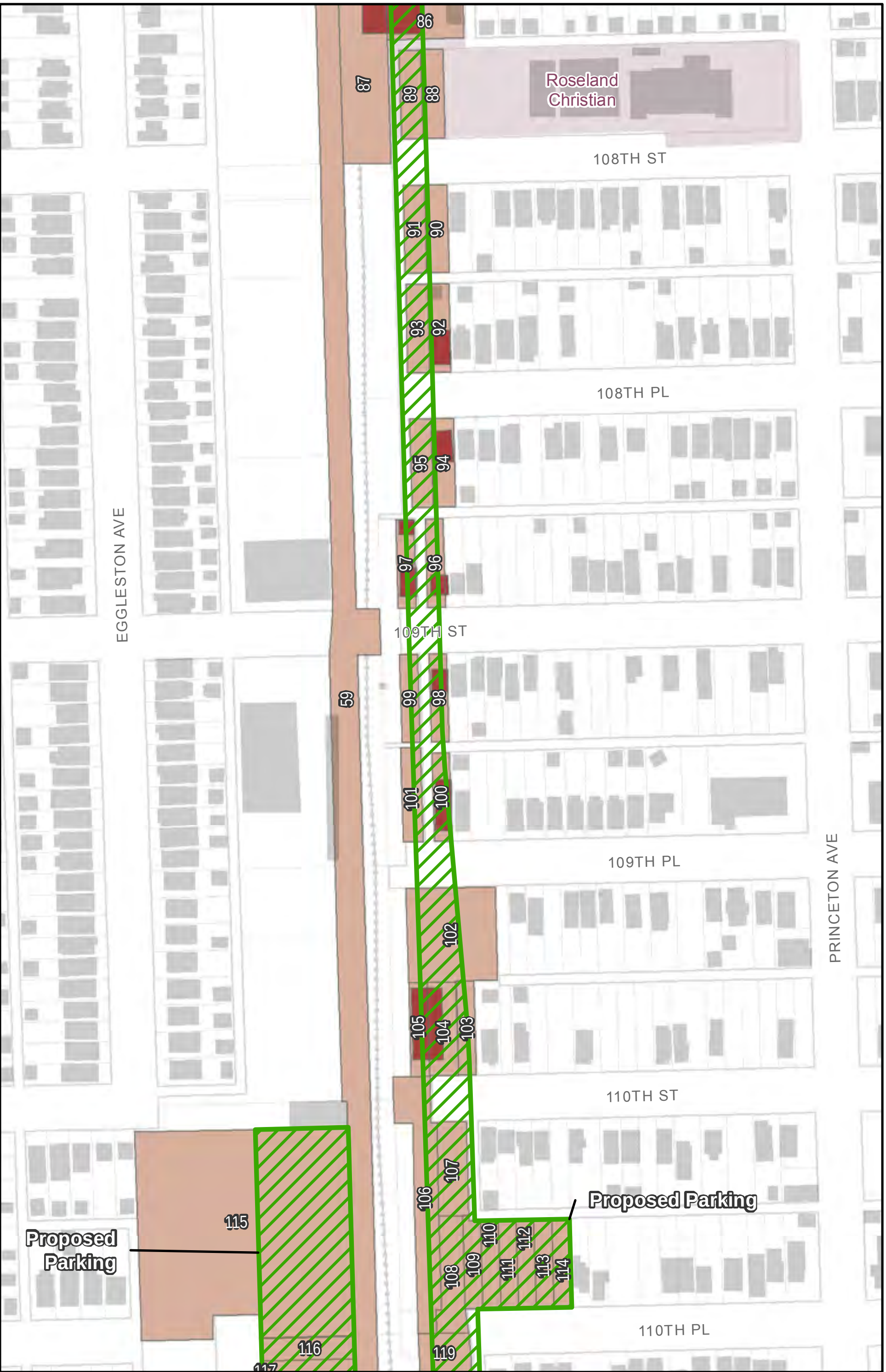
125
250
Feet

map id: 03_01.7


86
87
89
88
Roseland Christian
108TH ST
91
90
93
92
108TH PL
95
94
EGGLESTON AVE
97
96
109TH ST
59
99
98
101
100
109TH PL
PRINCETON AVE
102
105
104
103
110TH ST
107
106
Proposed Parking
115
Proposed Parking
110
112
108
109
111
113
114
110TH PL
116
119
117

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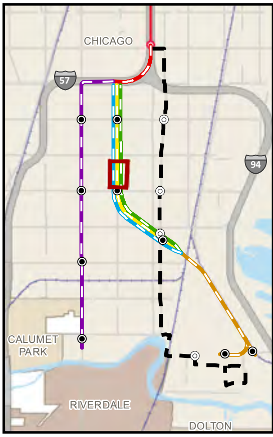

CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

UPRR Rail Alternative
East Option

Sheet 8 of 15

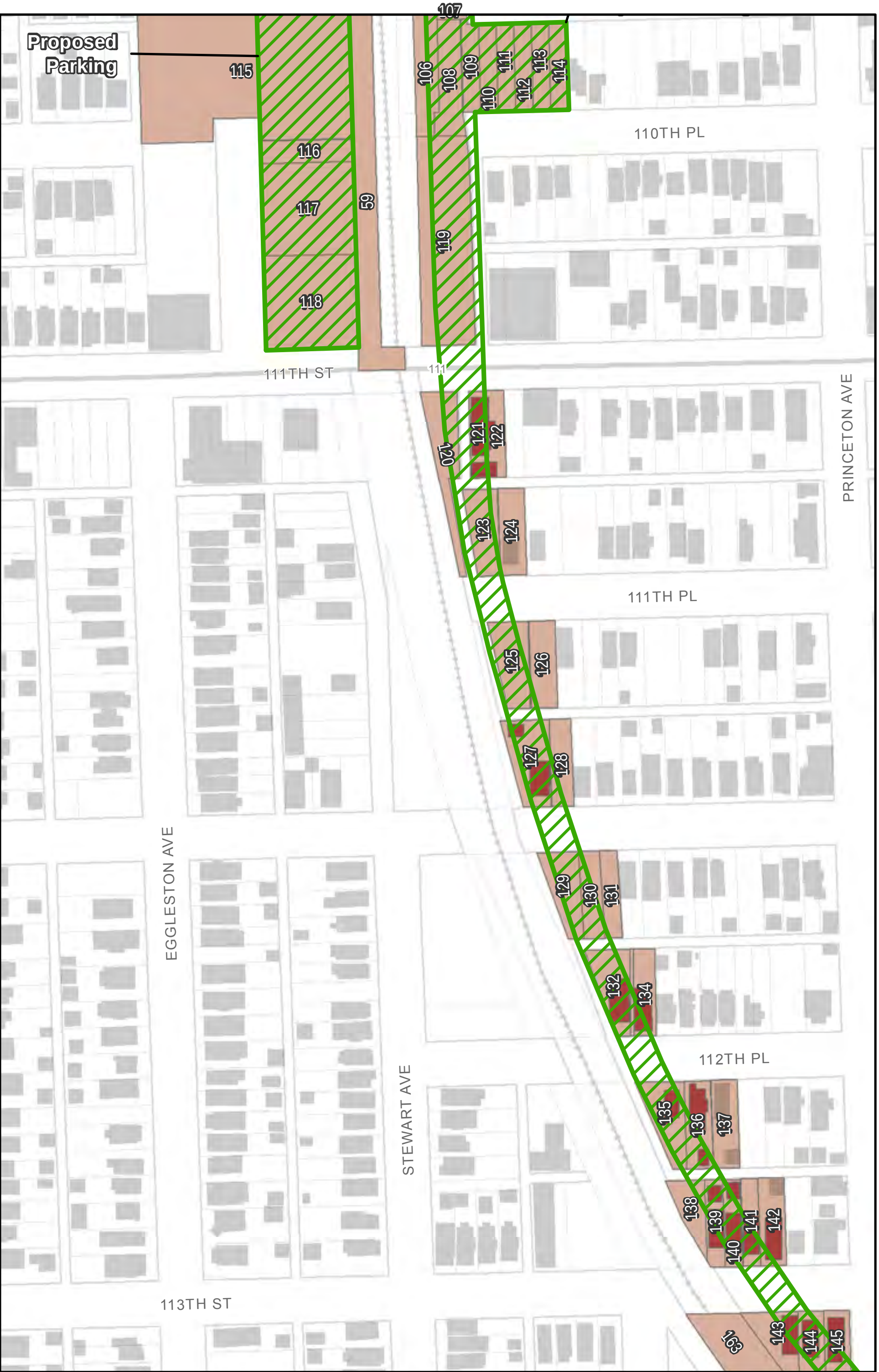
▨	Proposed Permanent Envelope
🟦	Easement
🟫	Parcel Affected by Proposed Permanent Envelope
🟥	Building Displacement
⬜	Building Footprint
☐	Parcels
🟩	Parks
🟪	Schools
-+-	Freight Rail
-49-	CTA Bus
-290-	Pace Bus

Scale

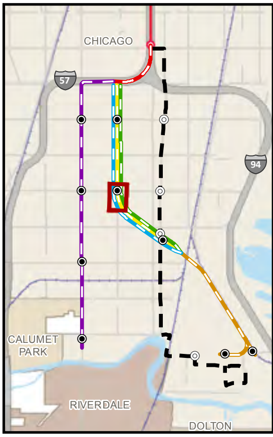
0 125 250

Feet

map id: 03_01.8


Proposed Parking
107
115
106
108
109
110
111
112
113
114
110TH PL
116
117
59
119
118
111TH ST
111
PRINCETON AVE
120
121
122
123
124
111TH PL
125
126
127
128
EGGLESTON AVE
129
130
131
132
134
112TH PL
135
136
137
STEWART AVE
138
139
140
141
142
113TH ST
163
143
144
145

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

UPRR Rail Alternative East Option

Sheet 9 of 15

▨ Proposed Permanent Envelope

🟦 Easement

🟫 Parcel Affected by Proposed Permanent Envelope

🟥 Building Displacement

⬜ Building Footprint

⬜ Parcels

🟩 Parks

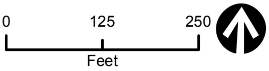
🟪 Schools

-+-+- Freight Rail

-49- CTA Bus

-290- Pace Bus

Scale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250
Feet

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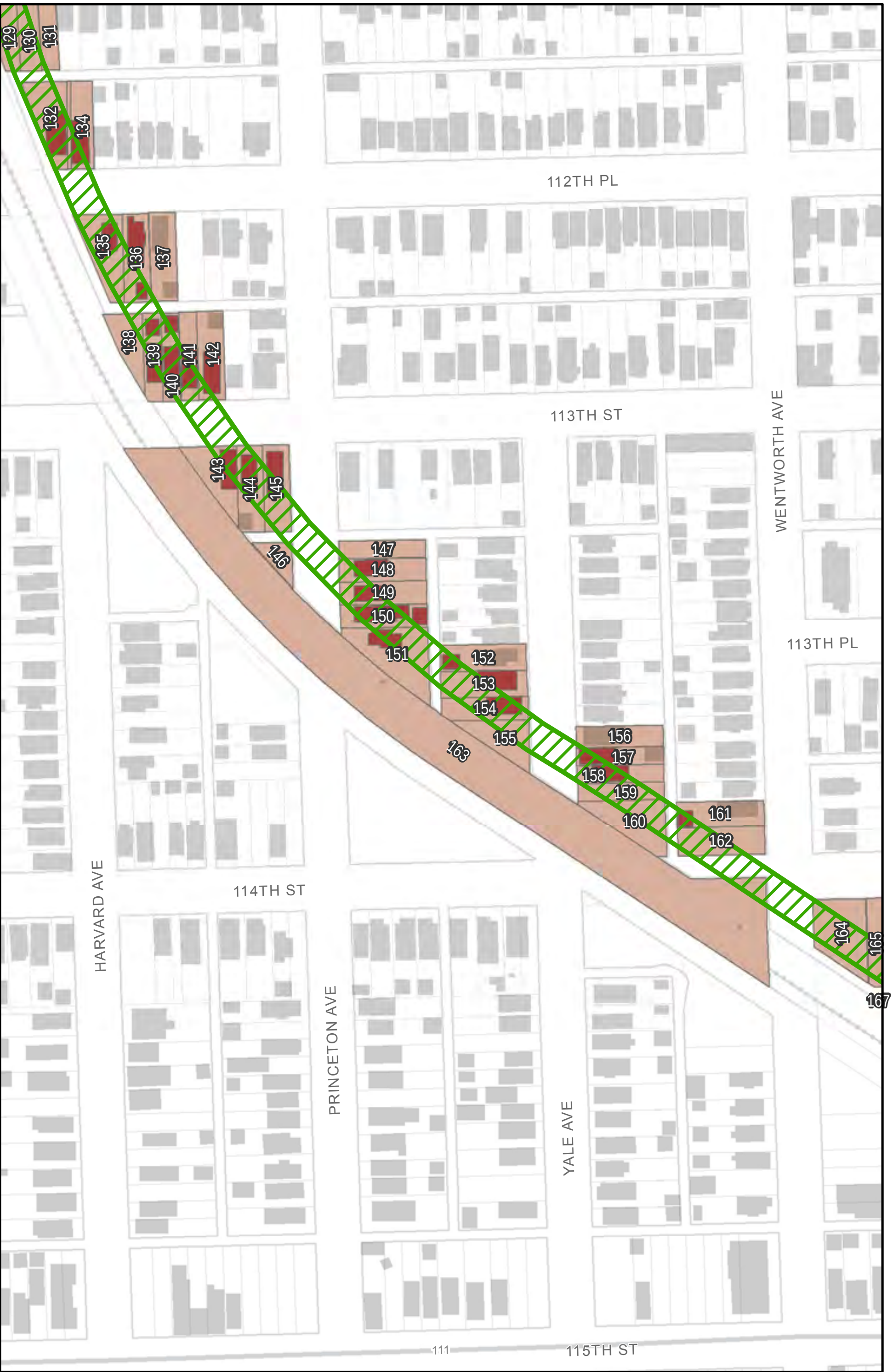
129
130
131
132
134
112TH PL
135
136
137
138
139
140
141
142
113TH ST
WENTWORTH AVE
143
144
145
146
147
148
149
150
151
152
153
154
155
163
156
157
158
159
160
161
162
113TH PL
HARVARD AVE
114TH ST
PRINCETON AVE
YALE AVE
164
165
167
111
115TH ST

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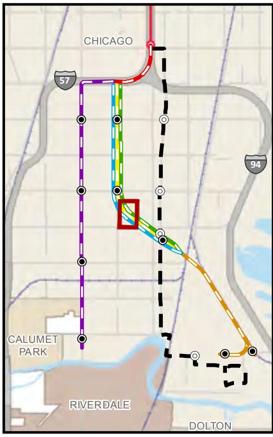

CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

UPRR Rail Alternative East Option

Sheet 10 of 15

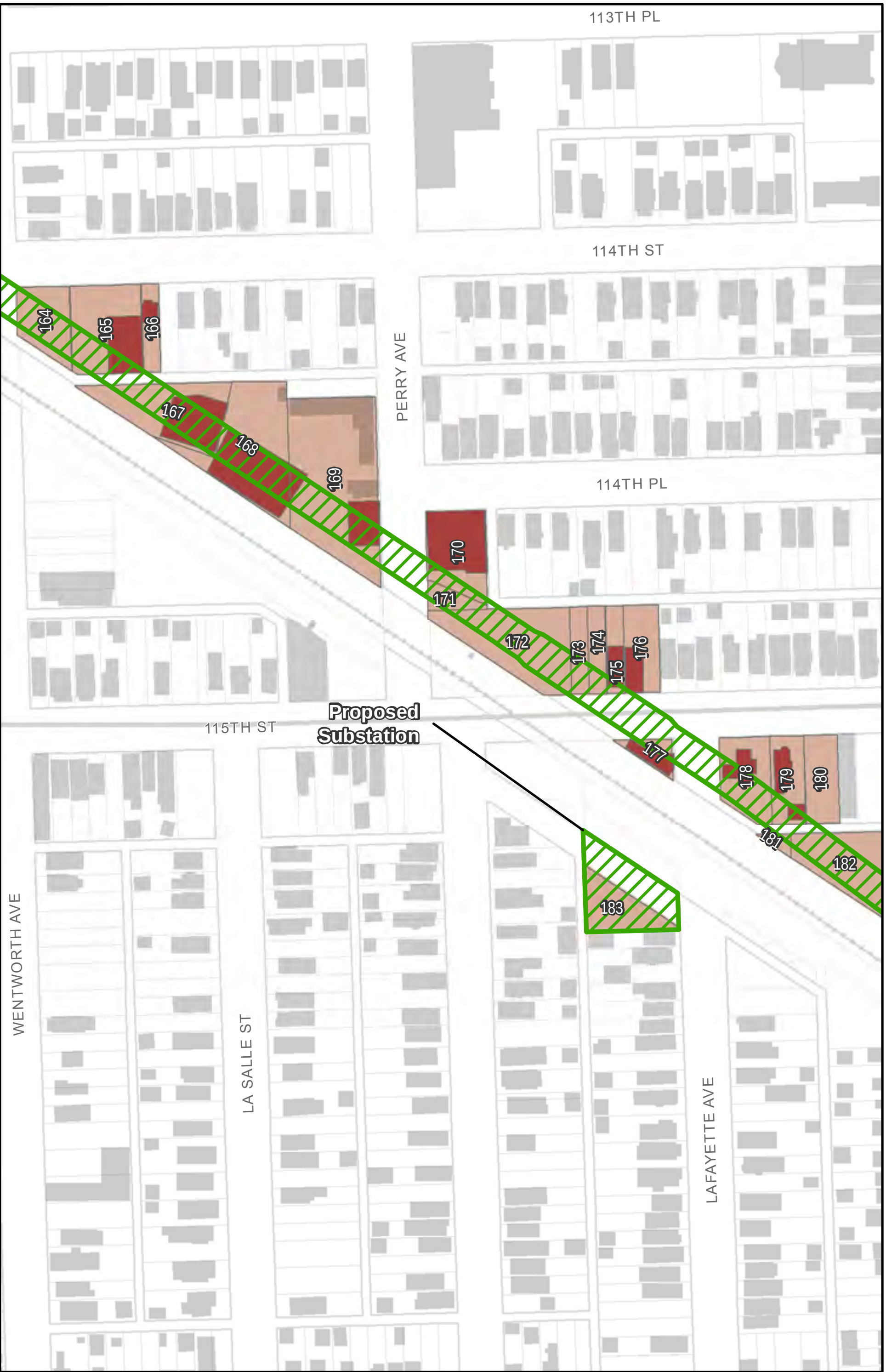
- 🟩 Proposed Permanent Envelope
- 🟦 Easement
- 🟫 Parcel Affected by Proposed Permanent Envelope
- 🟥 Building Displacement
- ⬜ Building Footprint
- ⬜ Parcels
- 🟩 Parks
- 🟪 Schools
- -+-+- Freight Rail
- -49- CTA Bus
- -290- Pace Bus

Scale

0 125 250

Feet

map id: 03_01.10


113TH PL
114TH ST
PERRY AVE
114TH PL
115TH ST
WENTWORTH AVE
LA SALLE ST
LAFAYETTE AVE
Proposed Substation
164
165
166
167
168
169
170
171
172
173
174
175
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177
178
179
180
181
182
183

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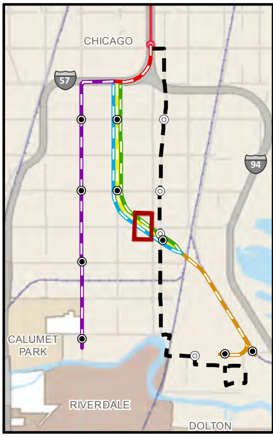

CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

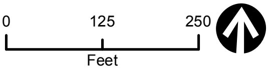
Legend

UPRR Rail Alternative East Option

Sheet 11 of 15

▨ Proposed Permanent Envelope
🟦 Easement
🟫 Parcel Affected by Proposed Permanent Envelope
🟥 Building Displacement
⬜ Building Footprint
☐ Parcels
🟩 Parks
🟪 Schools
-+-+- Freight Rail
-49- CTA Bus
-290- Pace Bus

Scale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125
250
Feet

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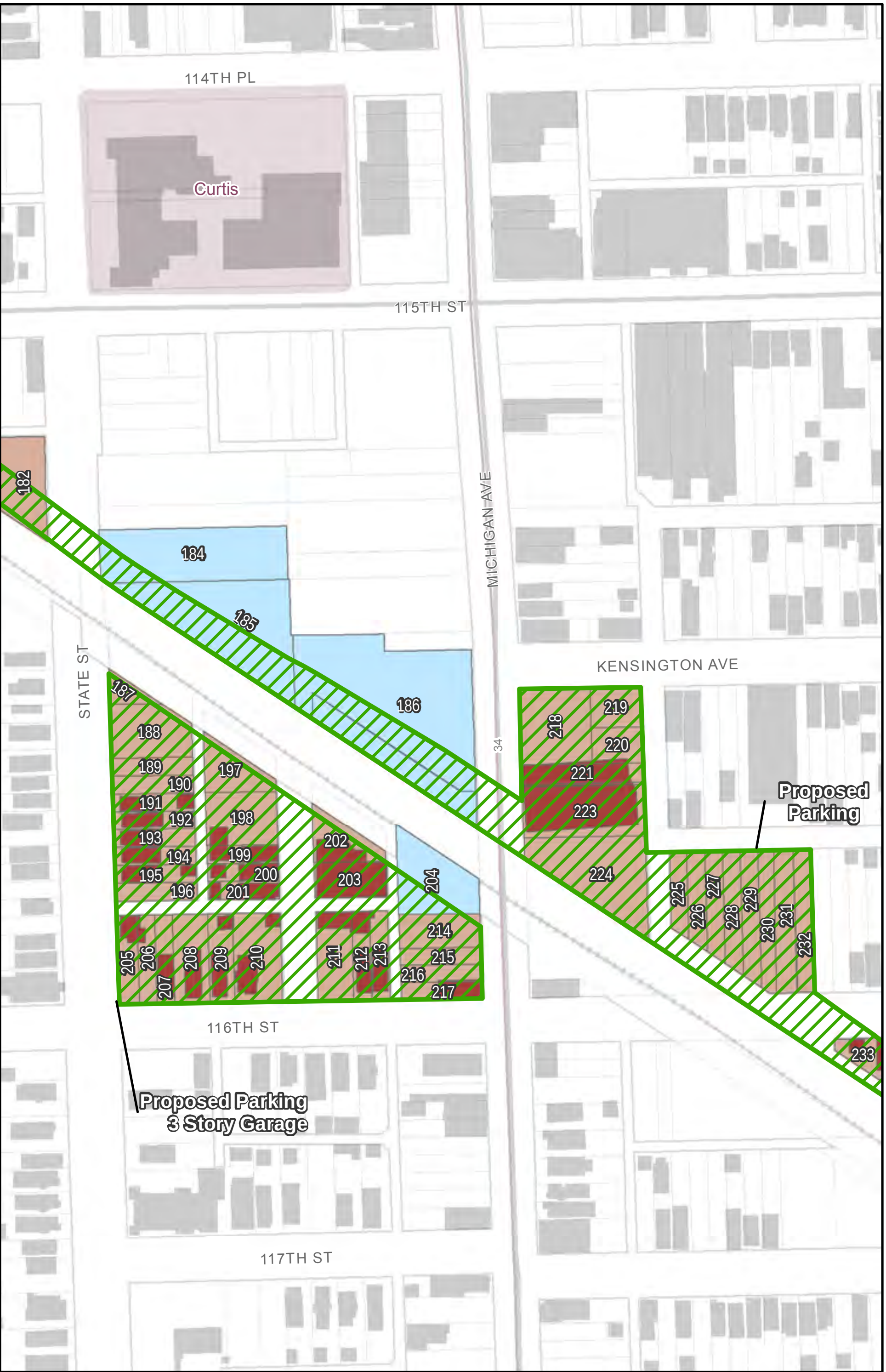
114TH PL
Curtis
115TH ST
MICHIGAN AVE
KENSINGTON AVE
STATE ST
34
116TH ST
117TH ST
182
184
185
186
187
188
189
190
191
192
193
194
195
196
197
198
199
200
201
202
203
204
205
206
207
208
209
210
211
212
213
214
215
216
217
218
219
220
221
223
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227
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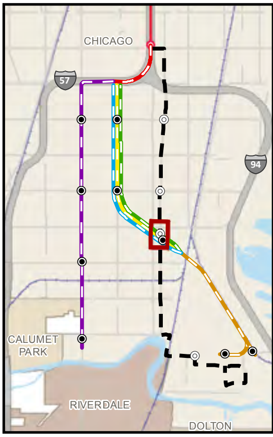
229
230
231
232
233
Proposed Parking
Proposed Parking
3 Story Garage

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

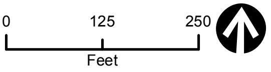
Legend

UPRR Rail Alternative East Option

Sheet 12 of 15

▨	Proposed Permanent Envelope
🟦	Easement
🟫	Parcel Affected by Proposed Permanent Envelope
🟥	Building Displacement
⬜	Building Footprint
☐	Parcels
🟩	Parks
🟪	Schools
-+-+-	Freight Rail
-49-	CTA Bus
-290-	Pace Bus

Scale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Feet

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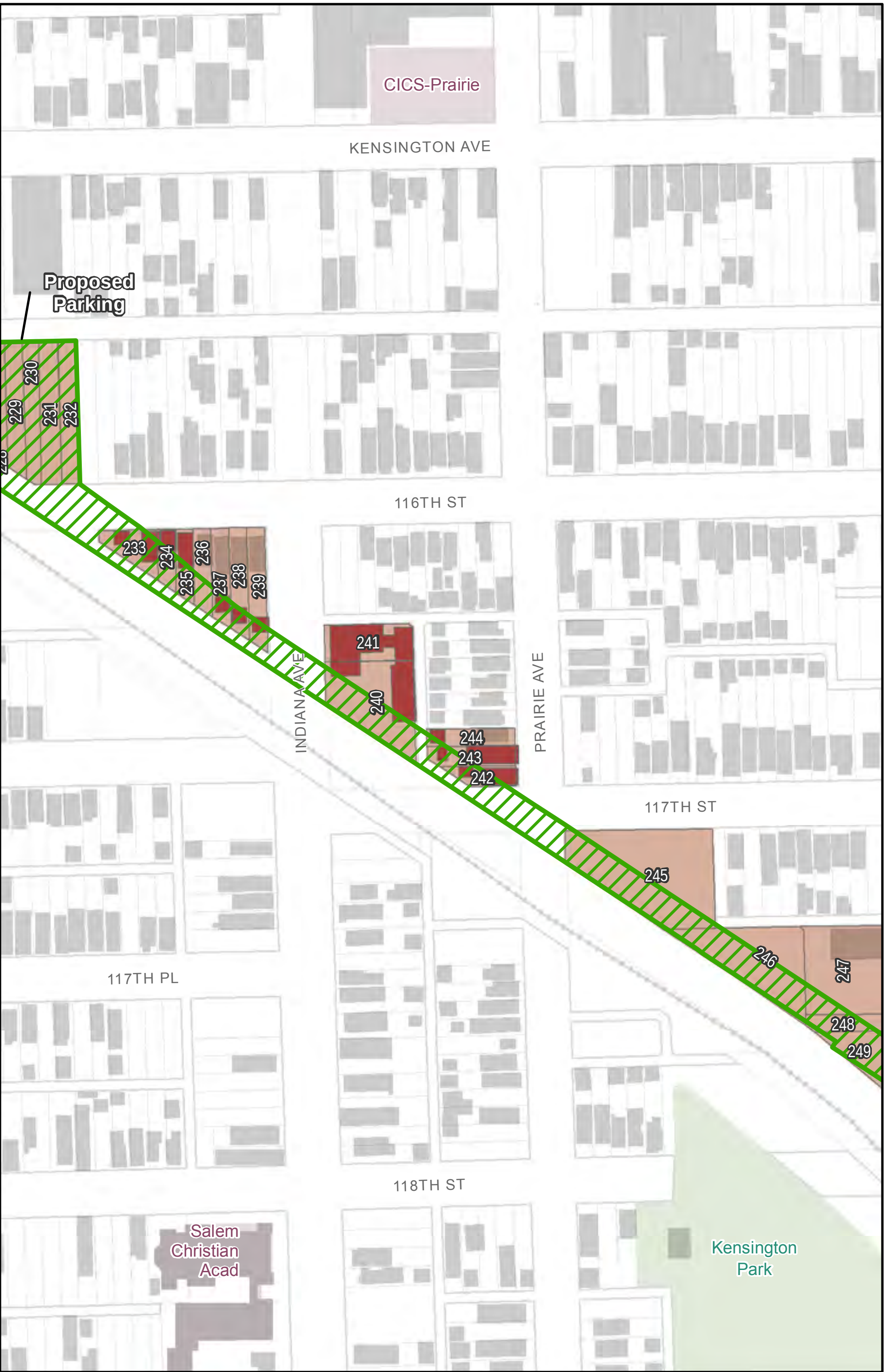
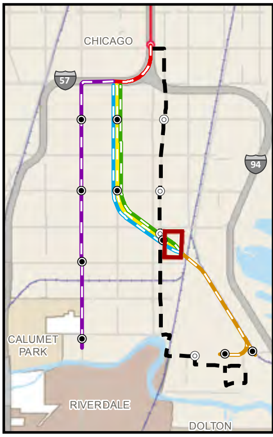

CICS-Prairie
KENSINGTON AVE
Proposed Parking
230
229
231
232
116TH ST
233
234
235
236
237
238
239
241
240
INDIANA AVE
PRAIRIE AVE
244
243
242
117TH ST
245
246
247
248
249
117TH PL
118TH ST
Salem Christian Acad
Kensington Park

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

UPRR Rail Alternative East Option

Sheet 13 of 15

▨ Proposed Permanent Envelope

🟦 Easement

🟫 Parcel Affected by Proposed Permanent Envelope

🟥 Building Displacement

⬜ Building Footprint

☐ Parcels

🟩 Parks

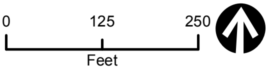
🟪 Schools

-+-+- Freight Rail

-49- CTA Bus

-290- Pace Bus

Scale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Feet

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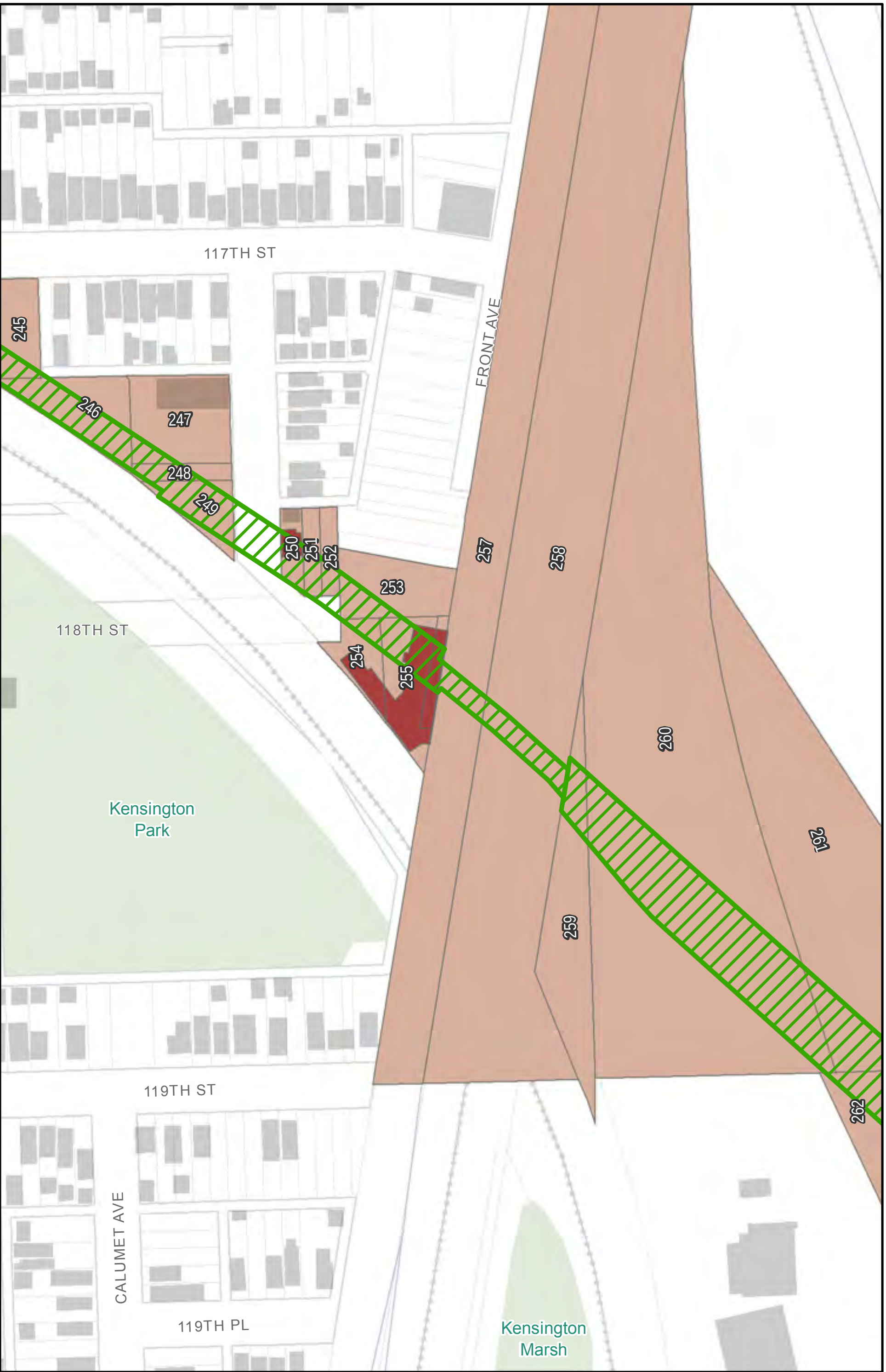
117TH ST
FRONT AVE
245
246
247
248
249
250
251
252
253
254
255
257
258
259
260
261
262
118TH ST
Kensington Park
119TH ST
CALUMET AVE
119TH PL
Kensington Marsh

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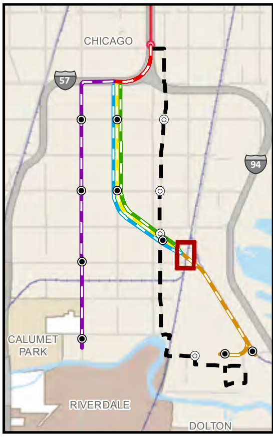

CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

UPRR Rail Alternative East Option

Sheet 14 of 15

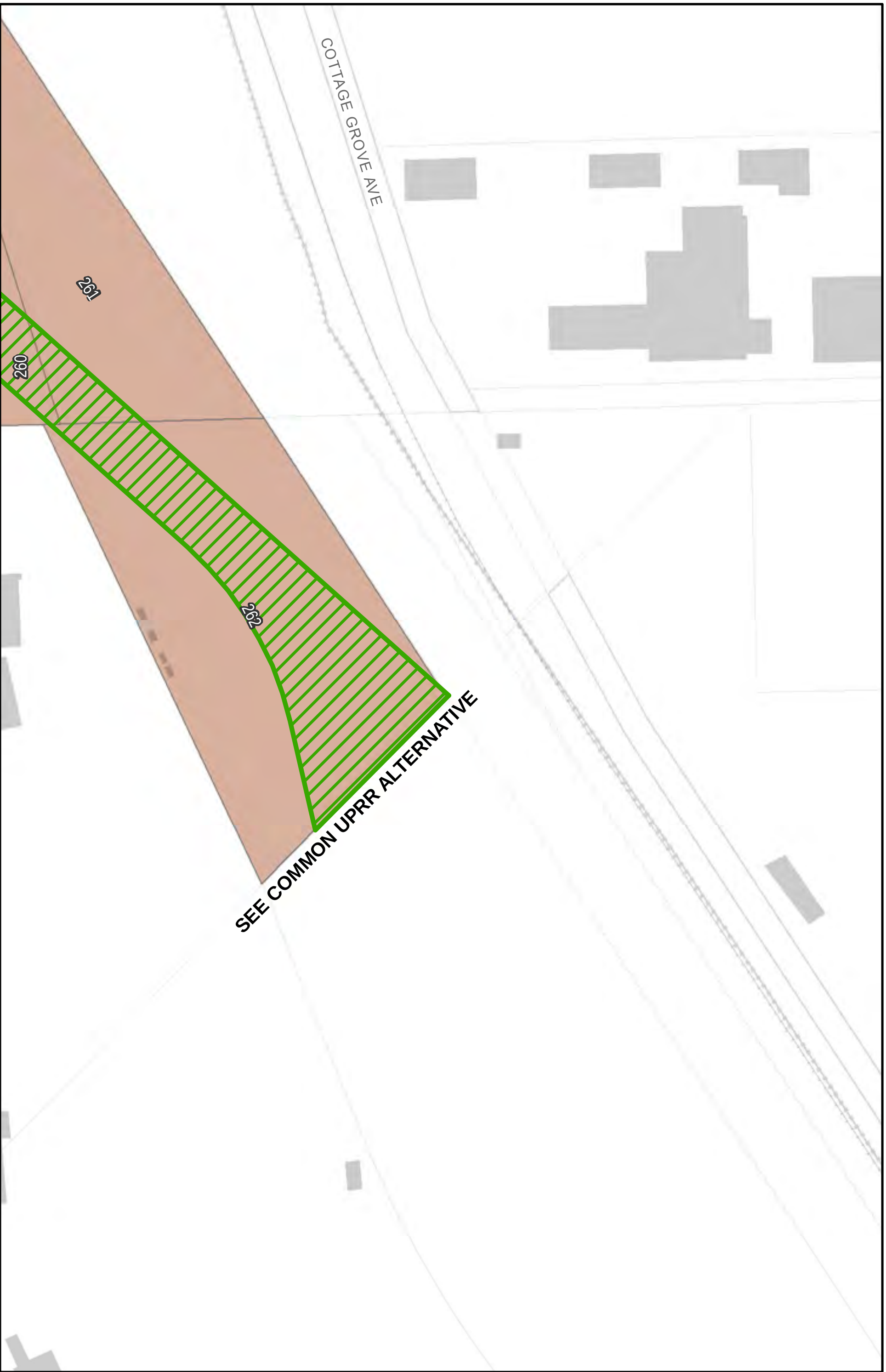
- ▨ Proposed Permanent Envelope
- 🟦 Easement
- 🟫 Parcel Affected by Proposed Permanent Envelope
- 🟥 Building Displacement
- ⬜ Building Footprint
- □ Parcels
- 🟩 Parks
- 🟪 Schools
- -+-+- Freight Rail
- —49— CTA Bus
- —290— Pace Bus

Scale

0 125 250

Feet

map id: 03_01.14


COTTAGE GROVE AVE
261
260
262
SEE COMMON UPRR ALTERNATIVE

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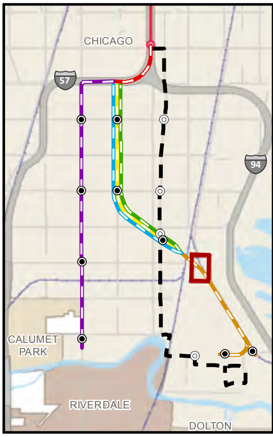

CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

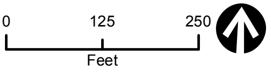
Legend

UPRR Rail Alternative East Option

Sheet 15 of 15

- ▨ Proposed Permanent Envelope
- 🟦 Easement
- 🟫 Parcel Affected by Proposed Permanent Envelope
- 🟥 Building Displacement
- ⬜ Building Footprint
- ☐ Parcels
- 🟩 Parks
- 🟪 Schools
- -+-+- Freight Rail
- -49- CTA Bus
- -290- Pace Bus

Scale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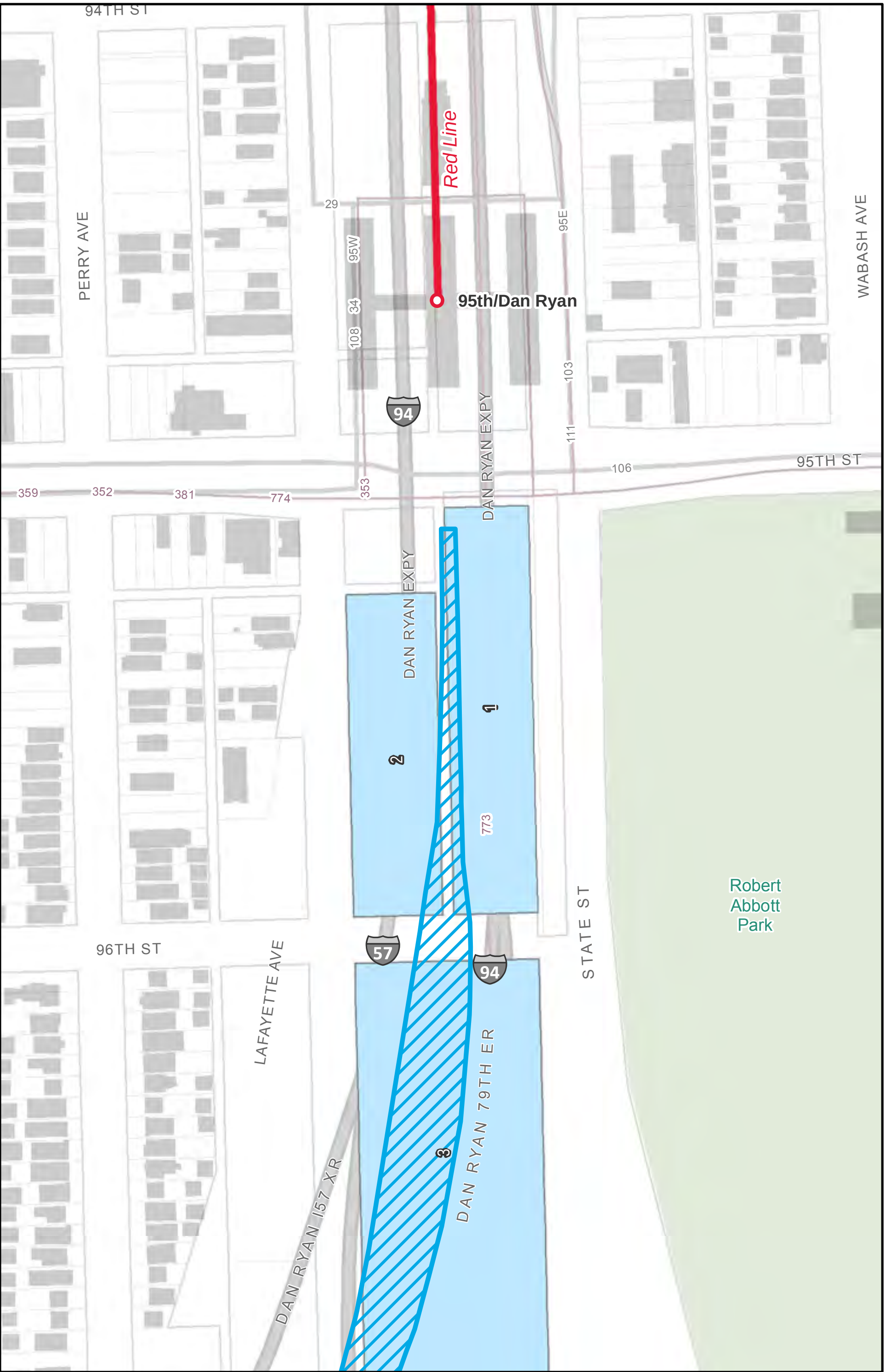
Feet

map id: 03_01.15

Appendix D
Union Pacific Railroad Rail Alternative
West Option
Displacements Maps


94TH ST
Red Line
95th/Dan Ryan
PERRY AVE
WABASH AVE
29
95W
95E
34
108
103
111
94
DAN RYAN EXPY
106
95TH ST
359
352
381
774
353
DAN RYAN EXPY
1
2
773
Robert Abbott Park
STATE ST
96TH ST
LAFAYETTE AVE
57
94
DAN RYAN 79TH ER
3
DAN RYAN I57 XR

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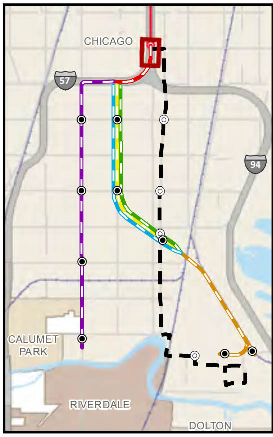

CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

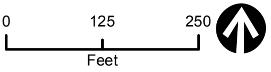
Legend

UPRR Rail Alternative West Option

Sheet 1 of 15

▨	Proposed Permanent Envelope
🟦	Parcel Easement
🟫	Parcel Affected by Proposed Permanent Envelope
🟥	Building Displacement
⬜	Building Footprint
□	Parcels
🟩	Parks
🟪	Schools
-+-+-	Freight Rail
-49-	CTA Bus
-290-	Pace Bus

Scale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250
Feet

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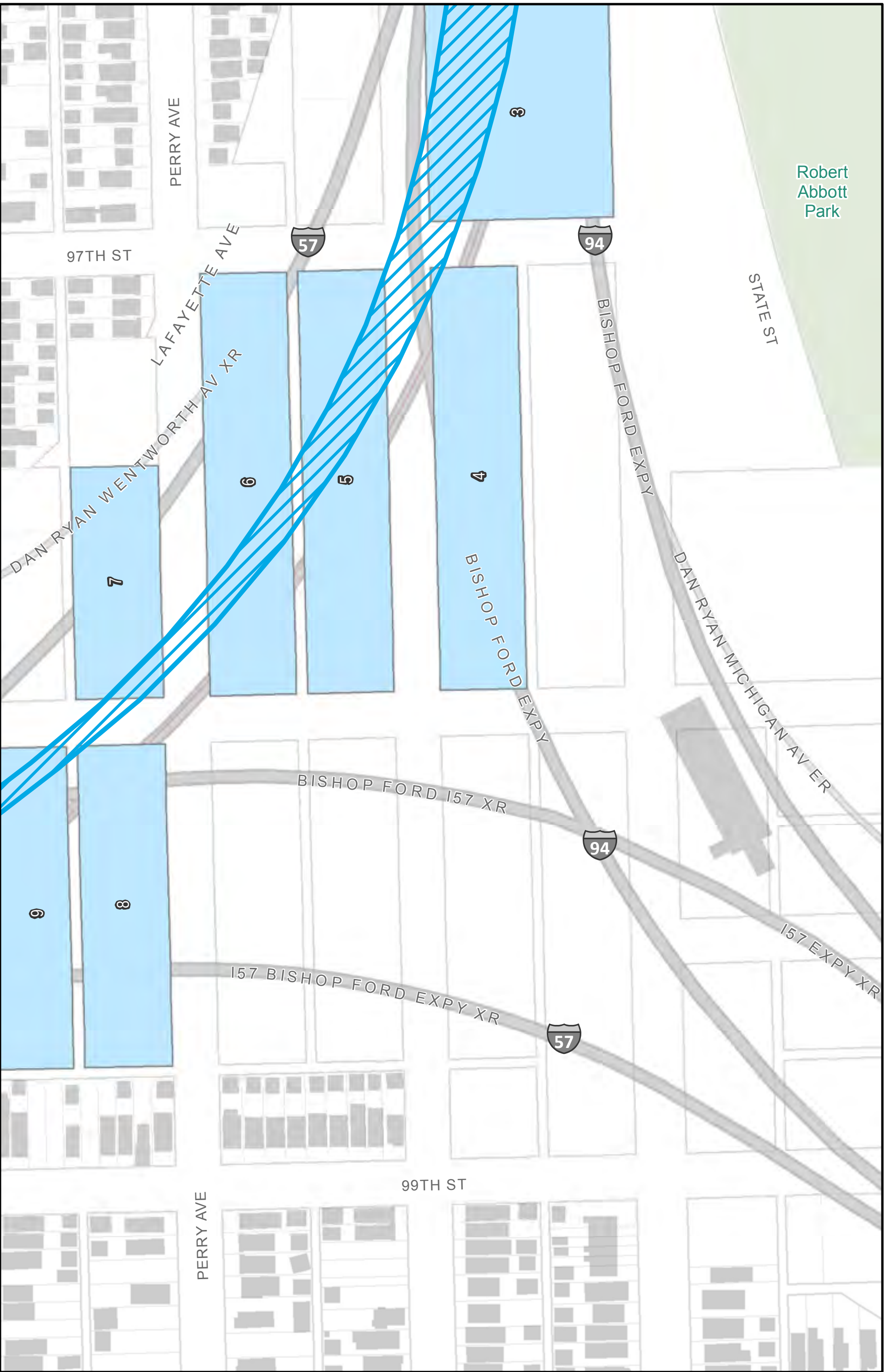
PERRY AVE
97TH ST
LAFAYETTE AVE
57
94
3
Robert Abbott Park
STATE ST
BISHOP FORD EXPY
DAN RYAN WENTWORTH AV XR
6
5
4
7
BISHOP FORD EXPY
DAN RYAN MICHIGAN AV ER
BISHOP FORD I57 XR
94
I57 EXPY XR
9
8
I57 BISHOP FORD EXPY XR
57
99TH ST
PERRY AVE

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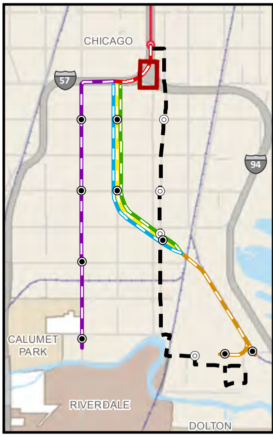

CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

UPRR Rail Alternative West Option

Sheet 2 of 15

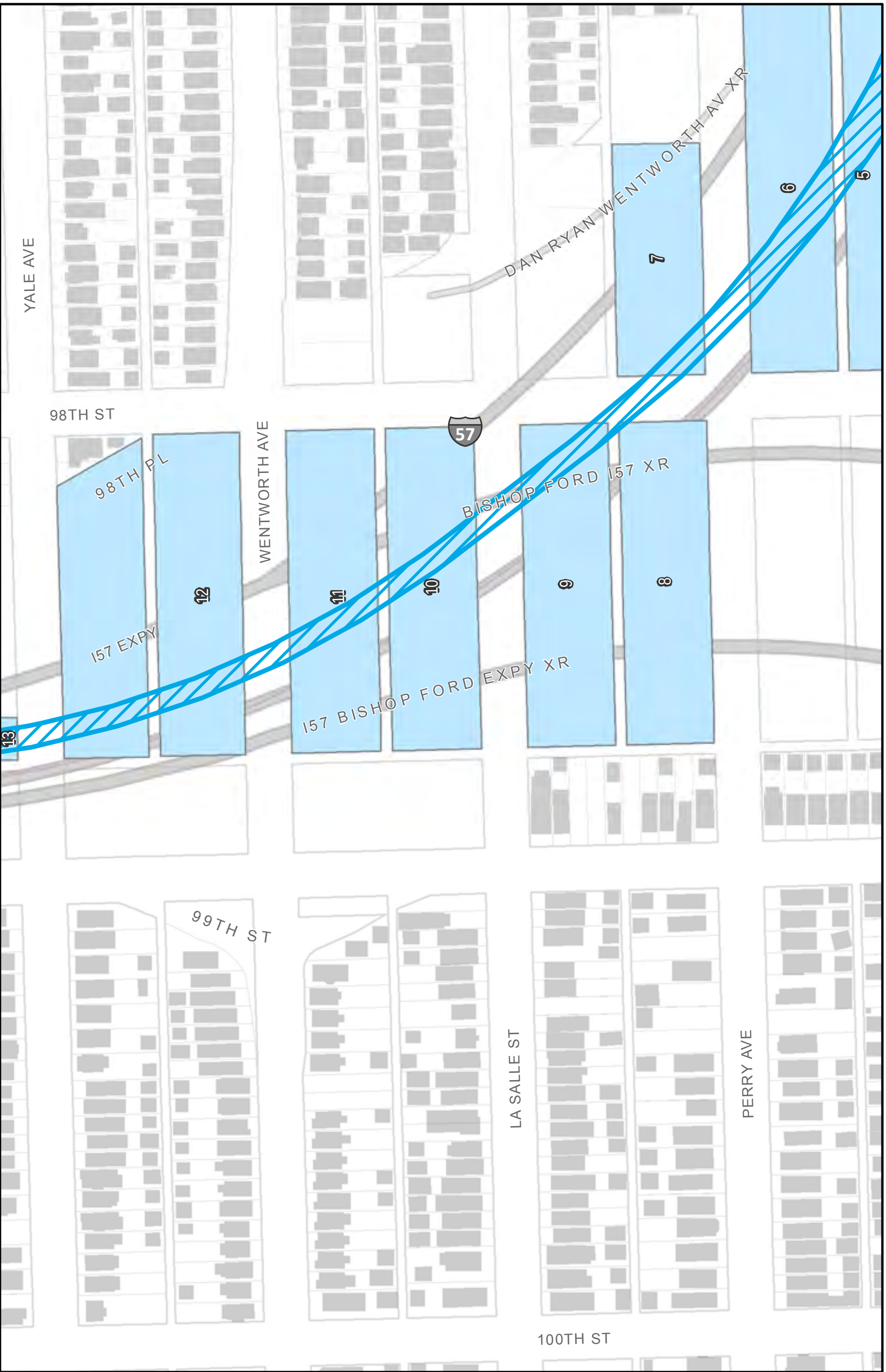
- ▨ Proposed Permanent Envelope
- 🟦 Parcel Easement
- 🟫 Parcel Affected by Proposed Permanent Envelope
- 🟥 Building Displacement
- ⬜ Building Footprint
- ⬜ Parcels
- 🟩 Parks
- 🟪 Schools
- -+-+- Freight Rail
- -49- CTA Bus
- -290- Pace Bus

Scale

0 125 250

Feet

map id: 03_02.2


YALE AVE
DAN RYAN WENTWORTH AV XR
98TH ST
98TH PL
WENTWORTH AVE
57
BISHOP FORD I57 XR
I57 EXPY
I57 BISHOP FORD EXPY XR
99TH ST
LA SALLE ST
PERRY AVE
100TH ST
5
6
7
8
9
10
11
12
13

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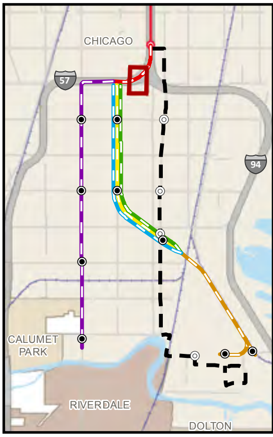

CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

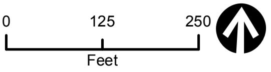
Legend

UPRR Rail Alternative West Option

Sheet 3 of 15

- ▨ Proposed Permanent Envelope
- 🟦 Parcel Easement
- 🟫 Parcel Affected by Proposed Permanent Envelope
- 🟥 Building Displacement
- ⬜ Building Footprint
- ☐ Parcels
- 🟩 Parks
- 🟪 Schools
- ┿ Freight Rail
- —49— CTA Bus
- —290— Pace Bus

Scale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125
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Feet

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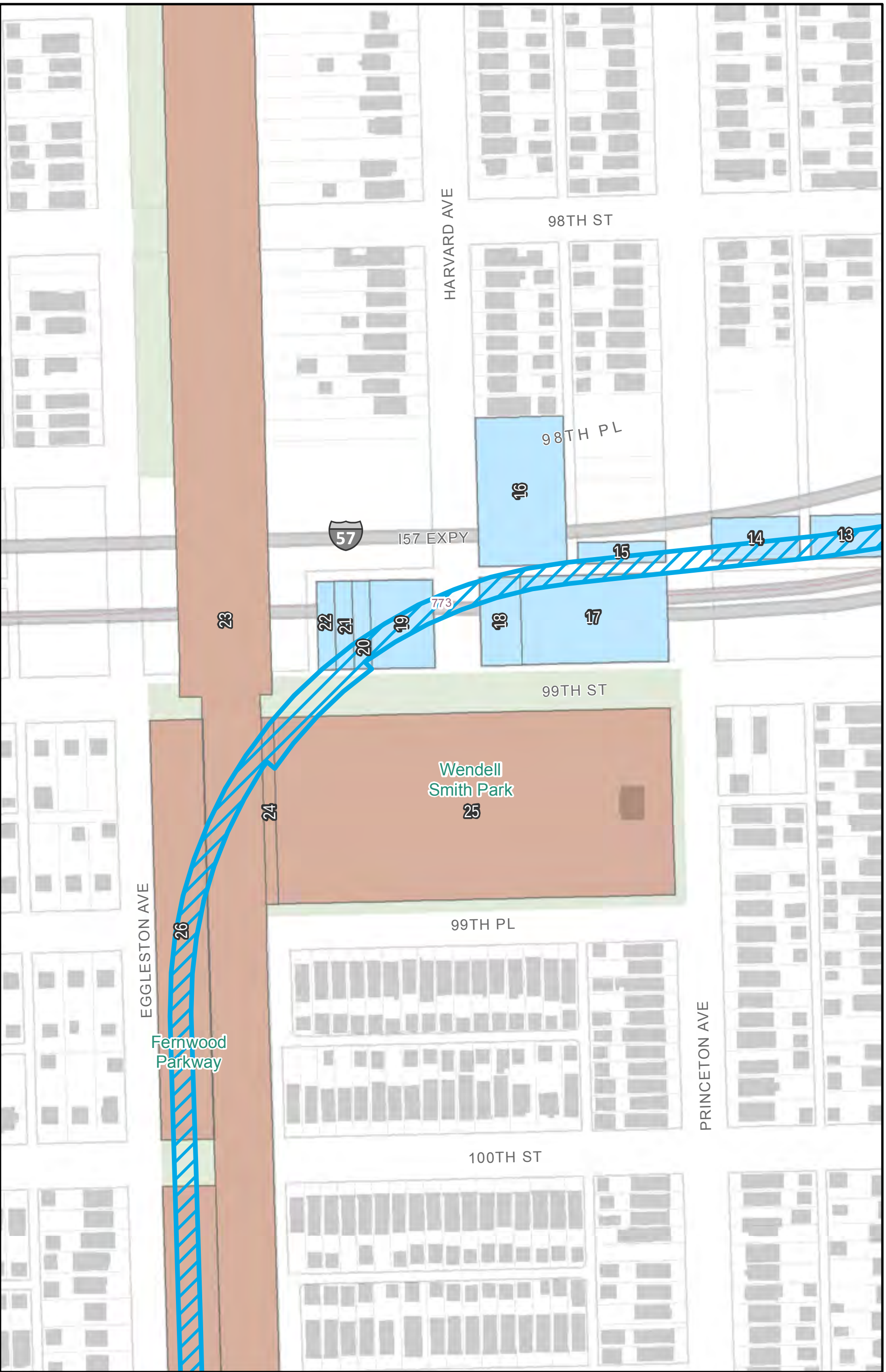
98TH ST
HARVARD AVE
98TH PL
16
57
I57 EXPY
15
14
13
773
23
22
21
19
20
18
17
99TH ST
Wendell Smith Park
25
24
26
EGGLESTON AVE
99TH PL
Fernwood Parkway
PRINCETON AVE
100TH ST

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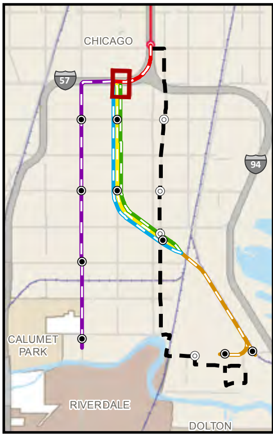

CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

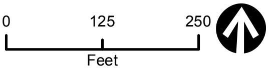
Legend

UPRR Rail Alternative West Option

Sheet 4 of 15

▨ Proposed Permanent Envelope
🟦 Parcel Easement
🟫 Parcel Affected by Proposed Permanent Envelope
🟥 Building Displacement
⬜ Building Footprint
☐ Parcels
🟩 Parks
🟪 Schools
-+-+- Freight Rail
–49– CTA Bus
–290– Pace Bus

Scale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250
Feet

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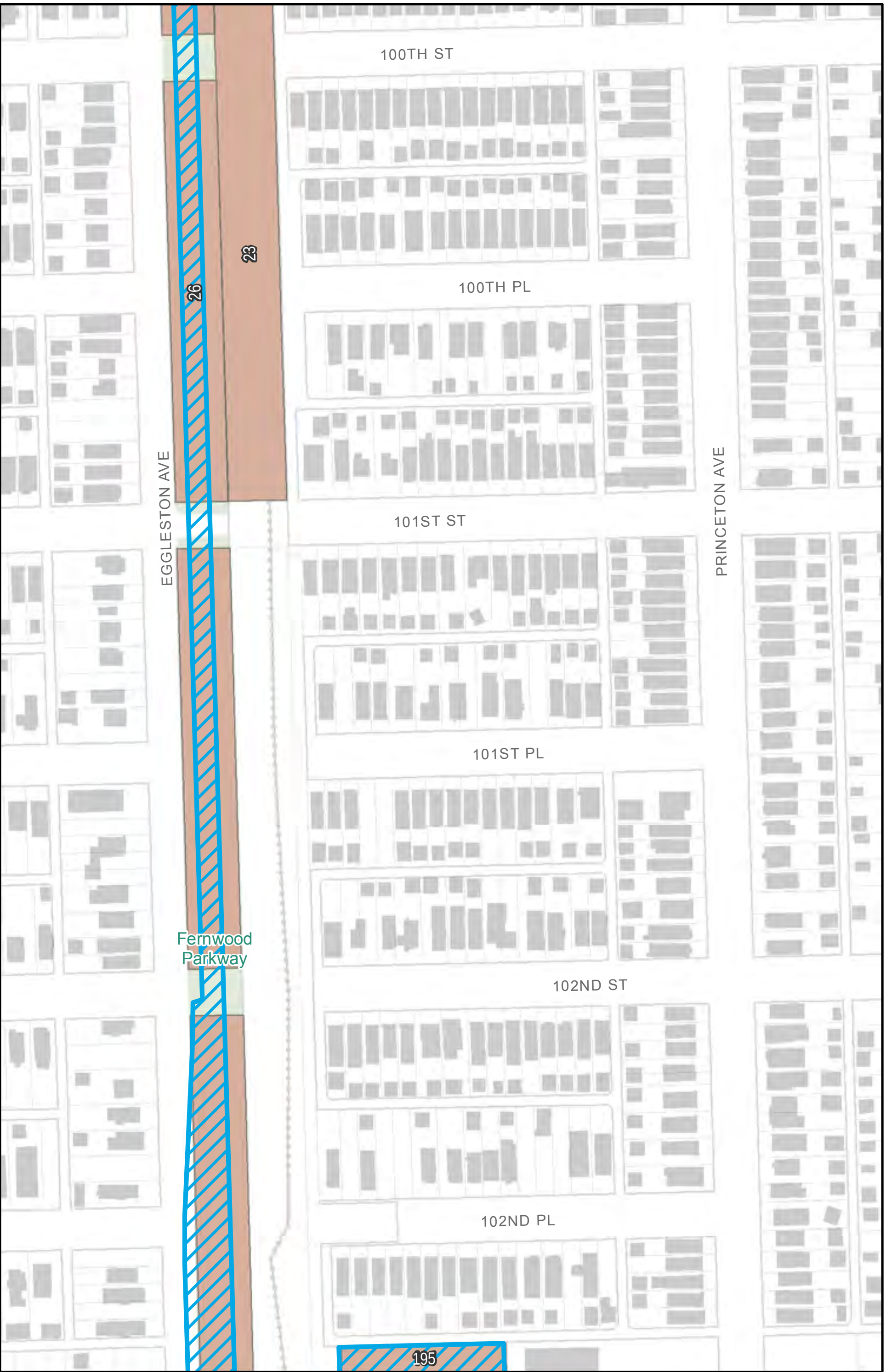
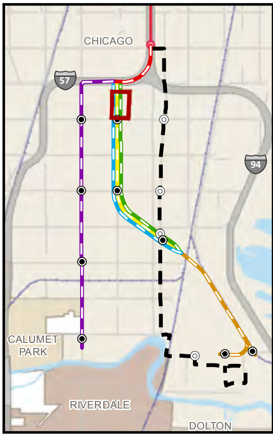

100TH ST
100TH PL
101ST ST
101ST PL
102ND ST
102ND PL
EGGLESTON AVE
PRINCETON AVE
23
26
Fernwood Parkway
195

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

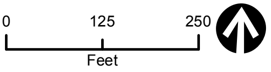
Legend

UPRR Rail Alternative West Option

Sheet 5 of 15

▨	Proposed Permanent Envelope
▭	Parcel Easement
▭	Parcel Affected by Proposed Permanent Envelope
🟥	Building Displacement
▭	Building Footprint
▭	Parcels
🟩	Parks
▭	Schools
-+-+-	Freight Rail
-49-	CTA Bus
-290-	Pace Bus

Scale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Feet

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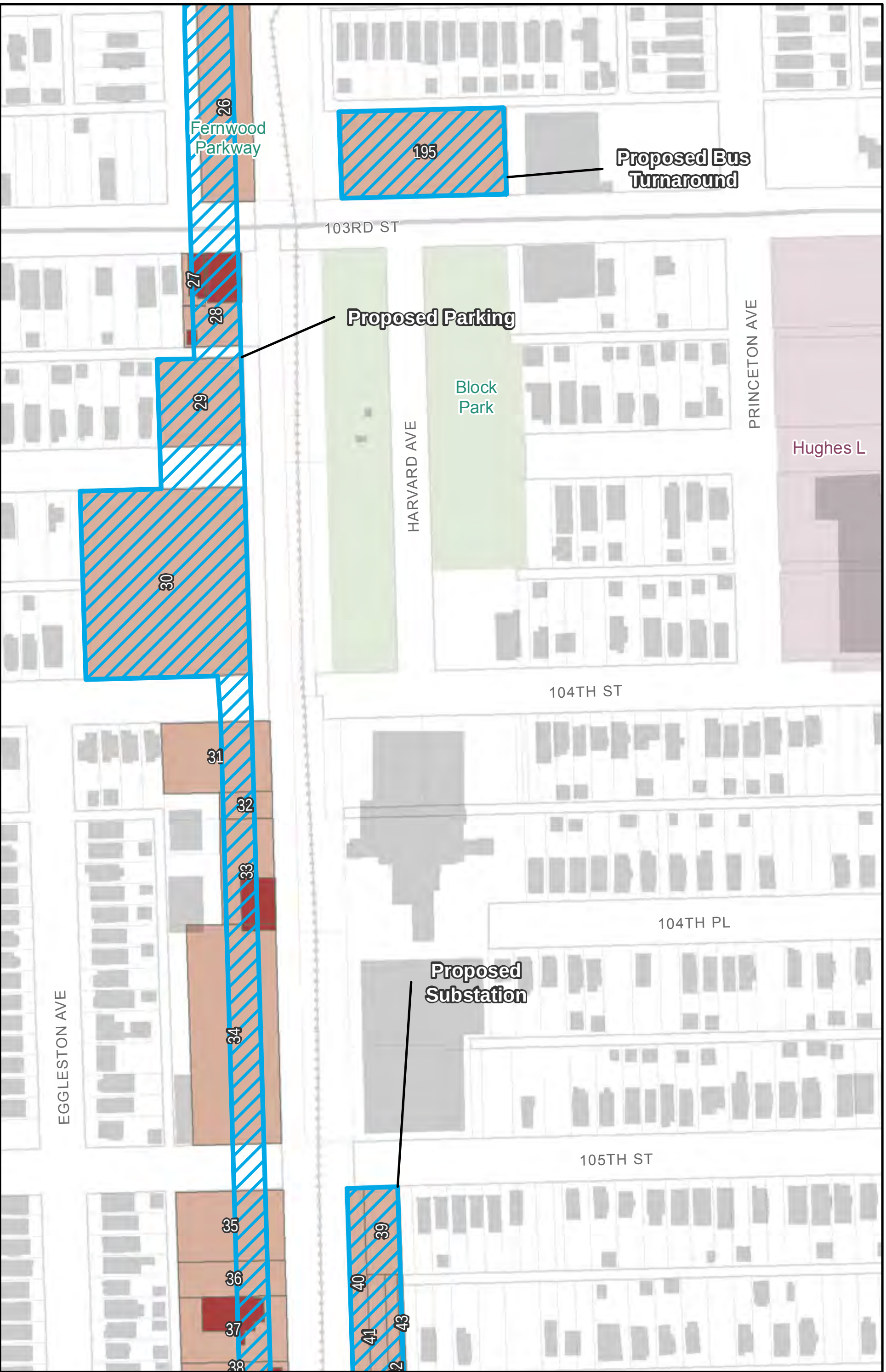
Fernwood Parkway
26
195
Proposed Bus Turnaround
103RD ST
27
28
Proposed Parking
Block Park
29
HARVARD AVE
PRINCETON AVE
Hughes L
30
104TH ST
31
32
33
104TH PL
Proposed Substation
34
EGGLESTON AVE
105TH ST
35
39
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37
41
43
38

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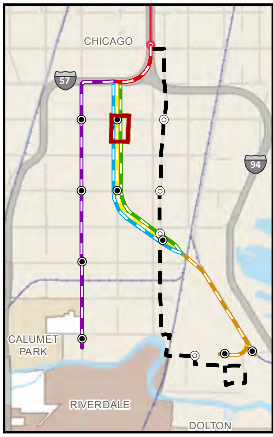

CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

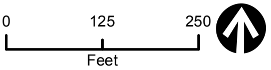
Legend

UPRR Rail Alternative West Option

Sheet 6 of 15

▨	Proposed Permanent Envelope
🟦	Parcel Easement
🟫	Parcel Affected by Proposed Permanent Envelope
🟥	Building Displacement
⬜	Building Footprint
▢	Parcels
🟩	Parks
🟪	Schools
-+-	Freight Rail
–49–	CTA Bus
–290–	Pace Bus

Scale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250
Feet

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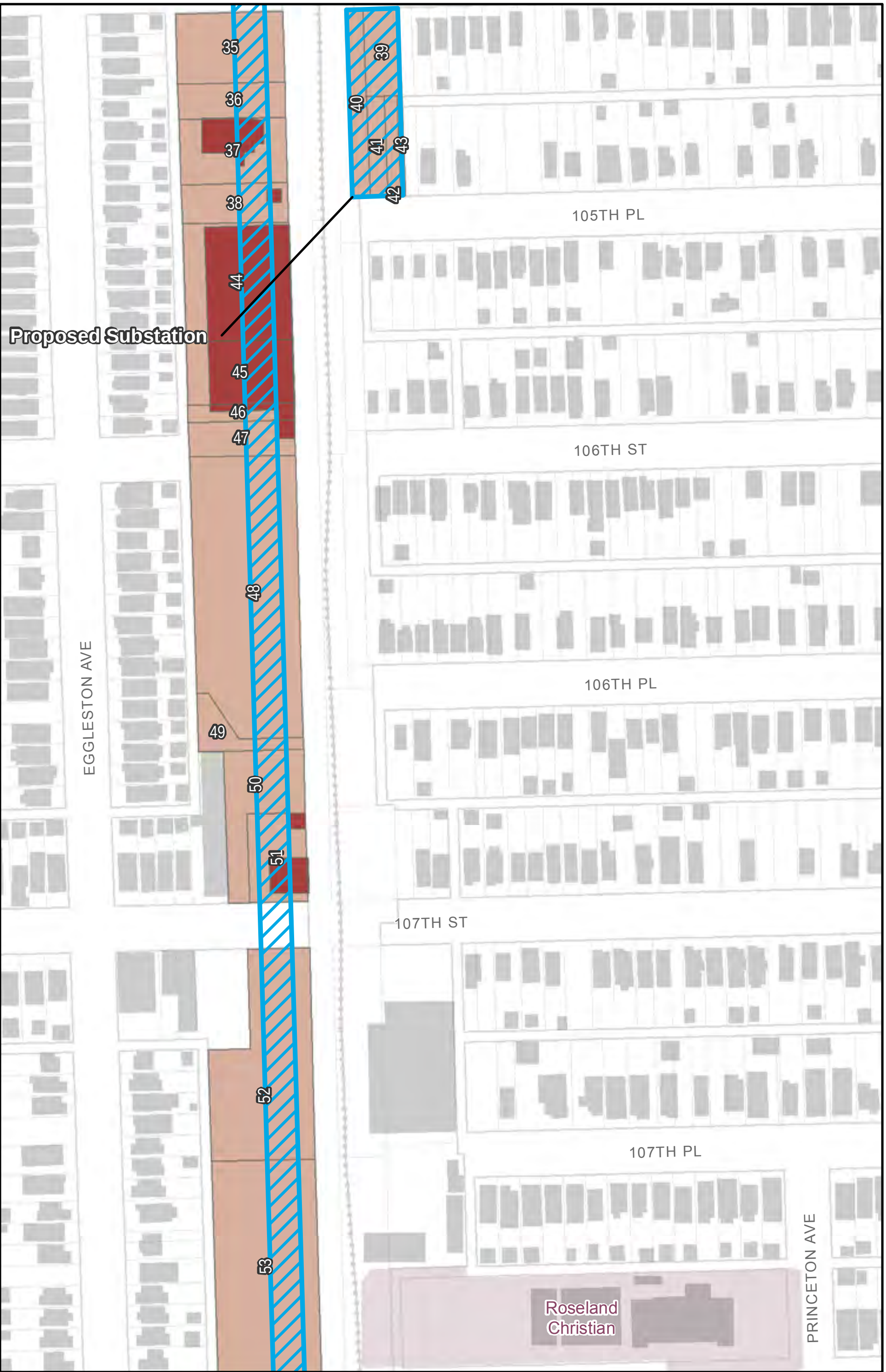
35
36
37
38
39
40
41
43
42
105TH PL
44
Proposed Substation
45
46
47
106TH ST
48
106TH PL
EGGLESTON AVE
49
50
51
107TH ST
52
107TH PL
53
PRINCETON AVE
Roseland Christian

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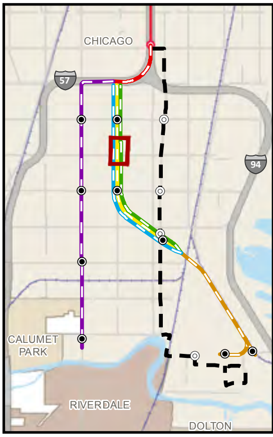

CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

UPRR Rail Alternative West Option

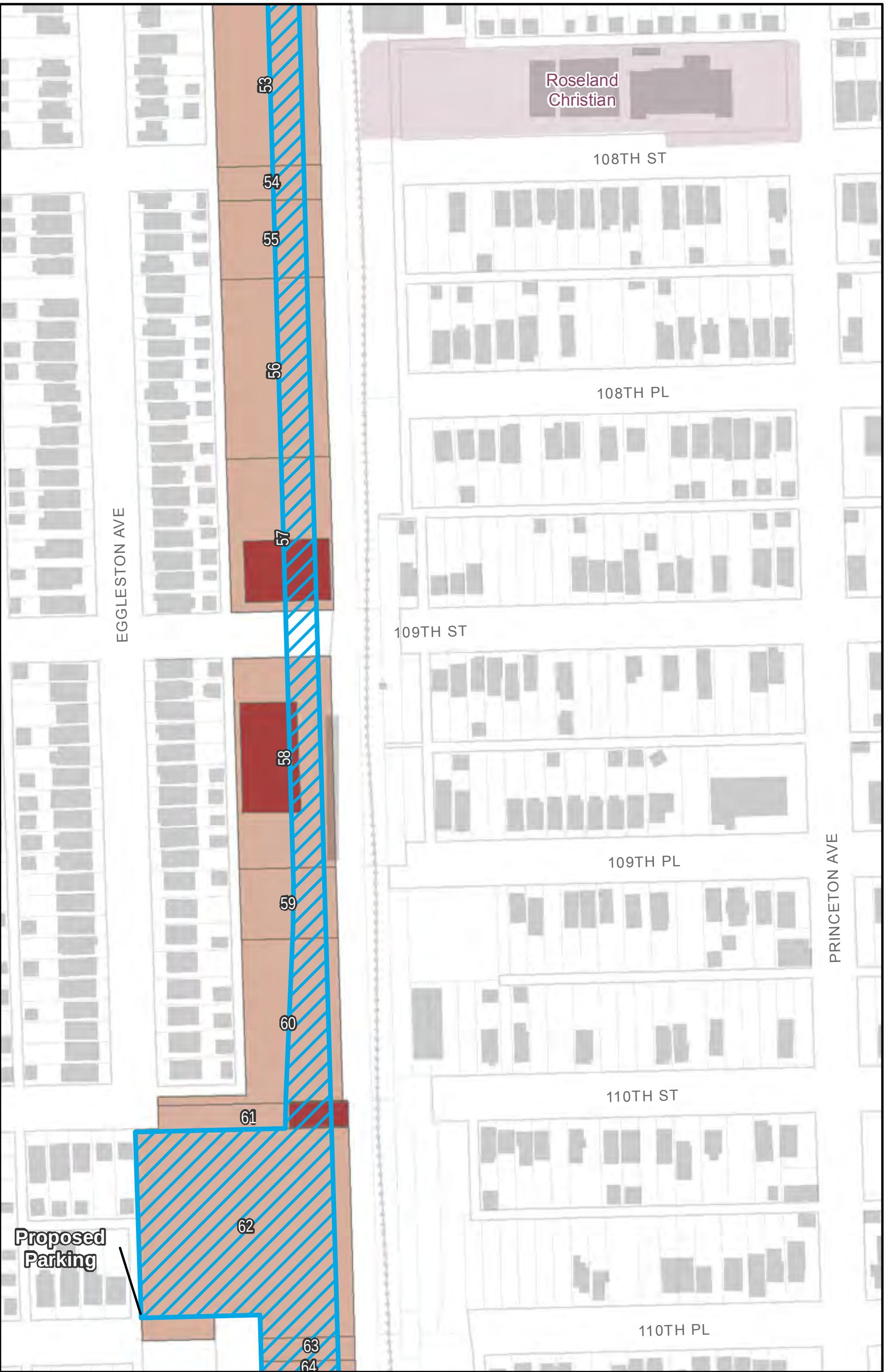
Sheet 7 of 15

- ▨ Proposed Permanent Envelope
- 🟦 Parcel Easement
- 🟫 Parcel Affected by Proposed Permanent Envelope
- 🟥 Building Displacement
- ⬜ Building Footprint
- ⬜ Parcels
- 🟩 Parks
- 🟪 Schools
- -+-+- Freight Rail
- -49- CTA Bus
- -290- Pace Bus

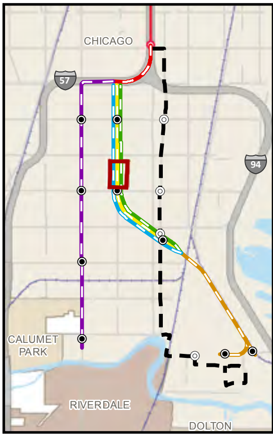
Scale

0 125 250
Feet

map id: 03_02.7


Roseland Christian
108TH ST
108TH PL
109TH ST
109TH PL
110TH ST
110TH PL
EGGLESTON AVE
PRINCETON AVE
53
54
55
56
57
58
59
60
61
62
63
64
Proposed Parking

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

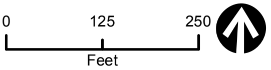
Legend

UPRR Rail Alternative West Option

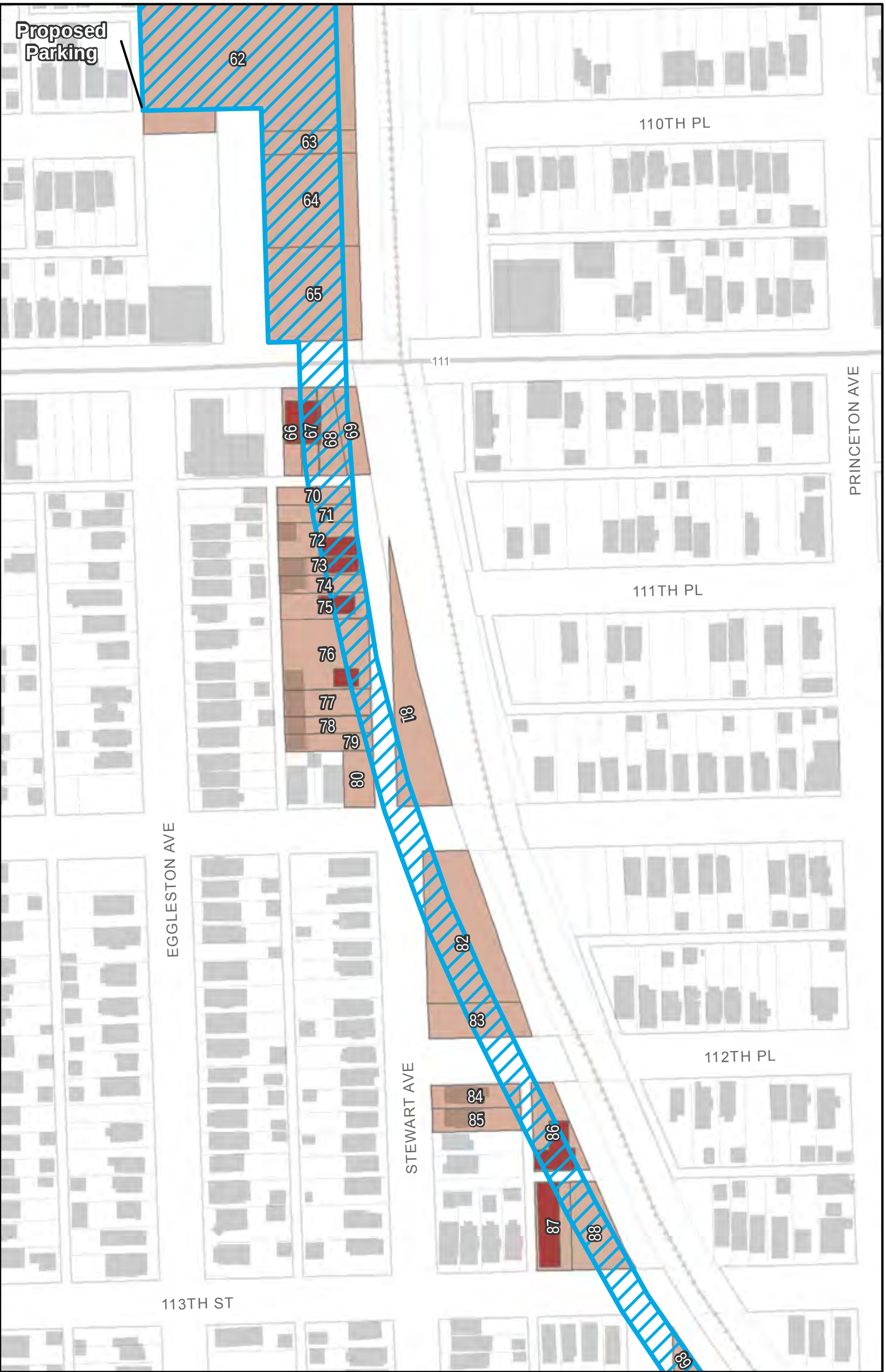
Sheet 8 of 15

- ▨ Proposed Permanent Envelope
- 🟦 Parcel Easement
- 🟫 Parcel Affected by Proposed Permanent Envelope
- 🟥 Building Displacement
- ⬜ Building Footprint
- □ Parcels
- 🟩 Parks
- 🟪 Schools
- -+-+- Freight Rail
- –49– CTA Bus
- –290– Pace Bus

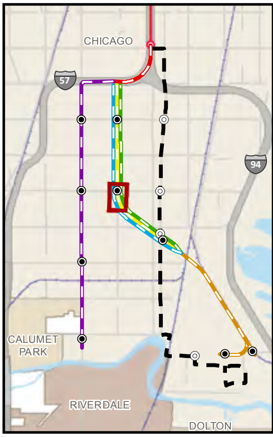
Scale


0
125
250
Feet

map id: 03_02.8


Proposed Parking
62
63
64
65
110TH PL
111
66
67
68
69
70
71
72
73
74
75
76
77
78
79
80
81
PRINCETON AVE
111TH PL
EGGLESTON AVE
82
83
112TH PL
STEWART AVE
84
85
86
87
88
113TH ST
89

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

UPRR Rail Alternative West Option

Sheet 9 of 15

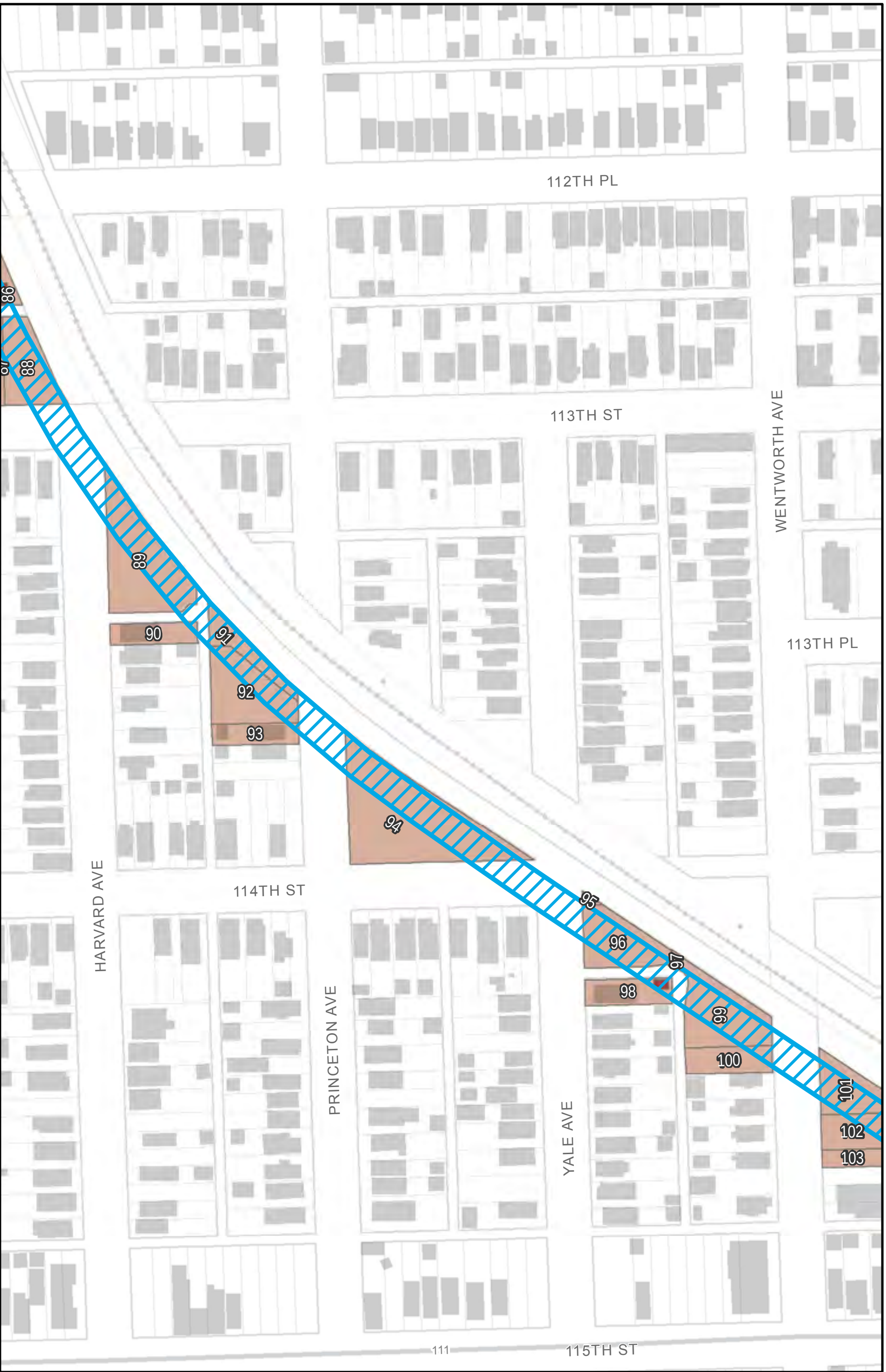
▨	Proposed Permanent Envelope
🟦	Parcel Easement
🟫	Parcel Affected by Proposed Permanent Envelope
🟥	Building Displacement
⬜	Building Footprint
☐	Parcels
🟩	Parks
🟪	Schools
-+-+-	Freight Rail
–49–	CTA Bus
–290–	Pace Bus

Scale

0 125 250

Feet

map id: 03_02.9


112TH PL
113TH ST
WENTWORTH AVE
113TH PL
114TH ST
HARVARD AVE
PRINCETON AVE
YALE AVE
115TH ST
111
86
87
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91
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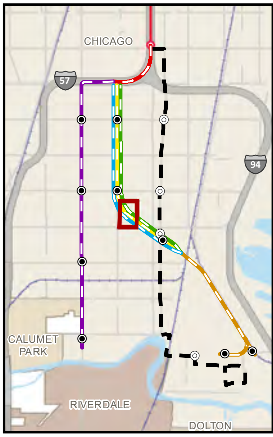
99
100
101
102
103

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

UPRR Rail Alternative West Option

Sheet 10 of 15

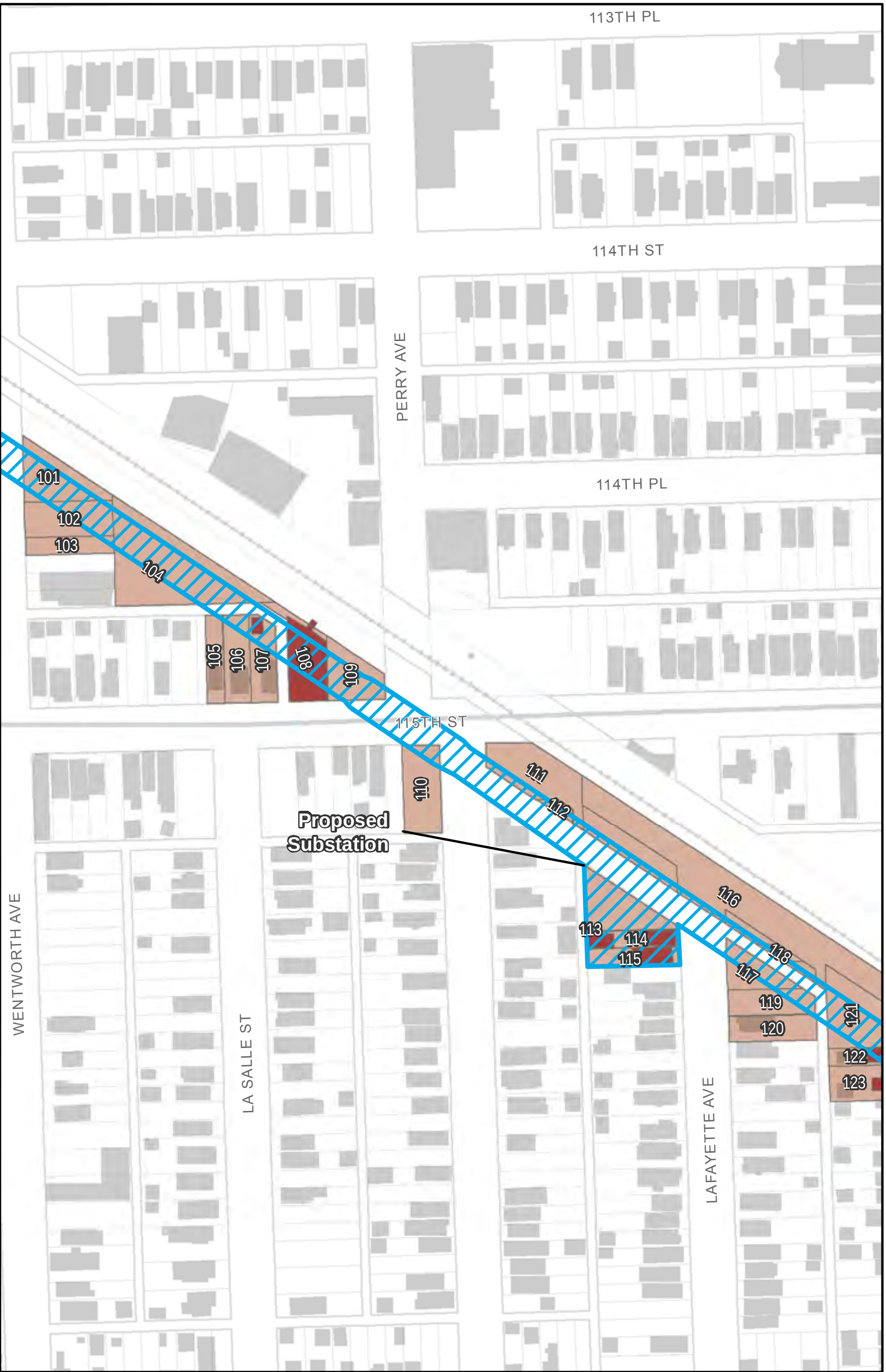
▨	Proposed Permanent Envelope
🟦	Parcel Easement
🟫	Parcel Affected by Proposed Permanent Envelope
🟥	Building Displacement
⬜	Building Footprint
☐	Parcels
🟩	Parks
🟪	Schools
-+-+-	Freight Rail
-49-	CTA Bus
-290-	Pace Bus

Scale

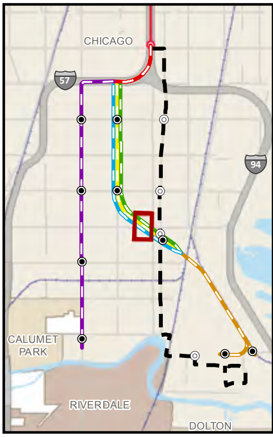
0 125 250

Feet

map id: 03_02.10


113TH PL
114TH ST
PERRY AVE
114TH PL
101
102
103
104
105
106
107
108
109
115TH ST
110
111
112
Proposed Substation
113
114
115
116
117
118
119
120
121
122
123
WENTWORTH AVE
LA SALLE ST
LAFAYETTE AVE

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

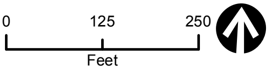
Legend

UPRR Rail Alternative West Option

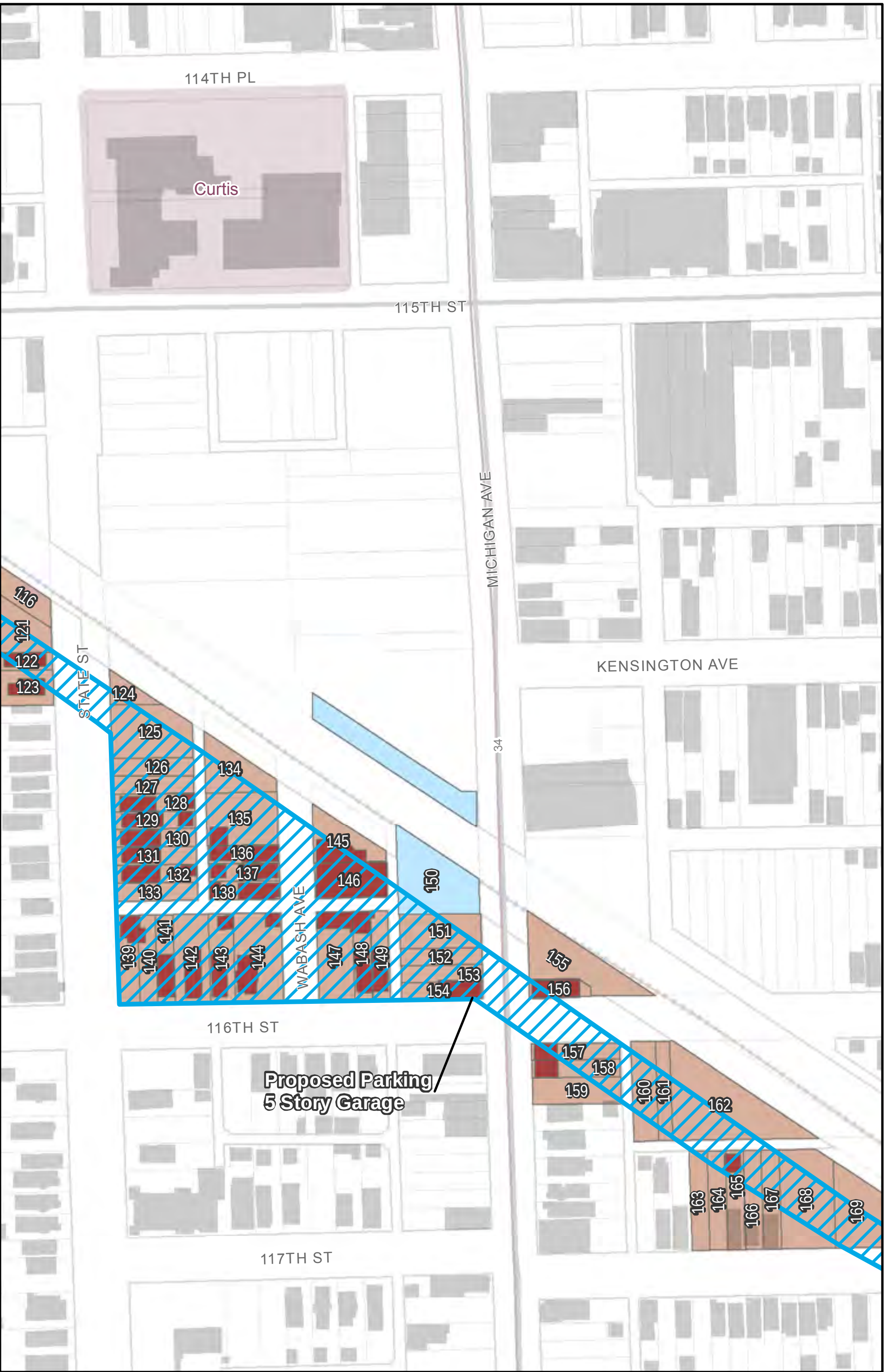
Sheet 11 of 15

▨ Proposed Permanent Envelope
🟦 Parcel Easement
🟫 Parcel Affected by Proposed Permanent Envelope
🟥 Building Displacement
⬜ Building Footprint
⬜ Parcels
🟩 Parks
🟪 Schools
-+-+- Freight Rail
-49- CTA Bus
-290- Pace Bus

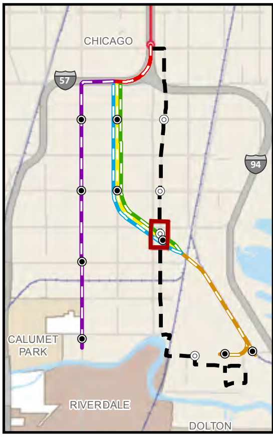
Scale


0
125
250
Feet

map id: 03_02.11


114TH PL
Curtis
115TH ST
MICHIGAN AVE
KENSINGTON AVE
34
STATE ST
WABASH AVE
116TH ST
117TH ST
116
121
122
123
124
125
126
127
128
129
130
131
132
133
134
135
136
137
138
139
140
141
142
143
144
145
146
147
148
149
150
151
152
153
154
155
156
157
158
159
160
161
162
163
164
165
166
167
168
169
Proposed Parking
5 Story Garage

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

UPRR Rail Alternative West Option

Sheet 12 of 15

▨ Proposed Permanent Envelope

🟦 Parcel Easement

🟫 Parcel Affected by Proposed Permanent Envelope

🟥 Building Displacement

⬜ Building Footprint

⬜ Parcels

🟩 Parks

🟪 Schools

-+-+- Freight Rail

—49— CTA Bus

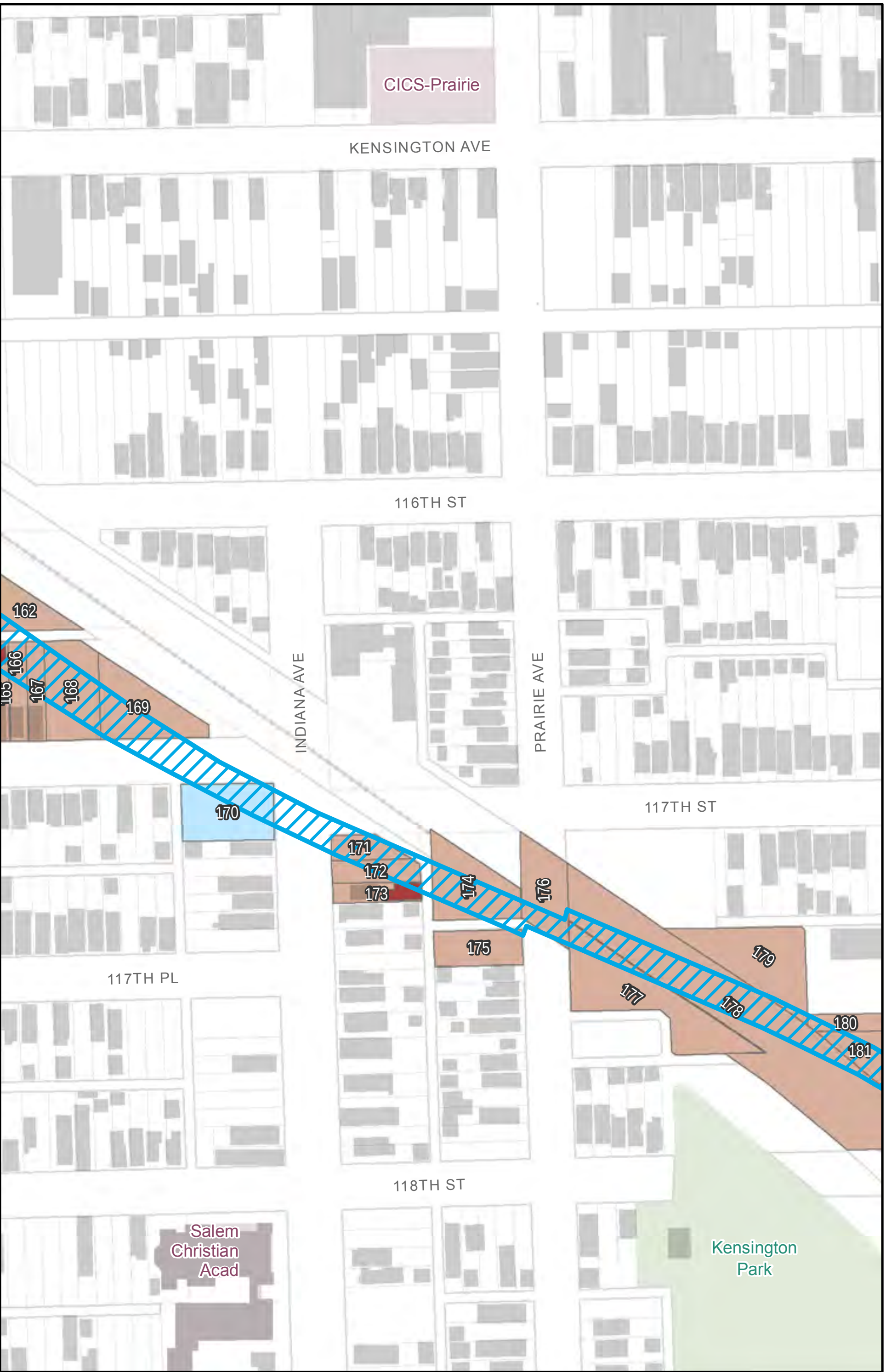
—290— Pace Bus

Scale

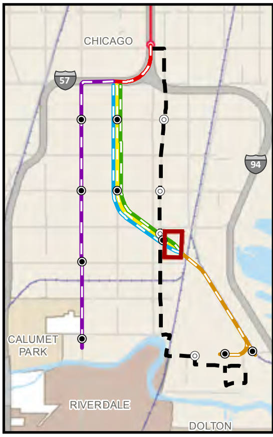
0 125 250

Feet

map id: 03_02.12


CICS-Prairie
KENSINGTON AVE
116TH ST
INDIANA AVE
PRAIRIE AVE
117TH ST
117TH PL
118TH ST
Salem Christian Acad
Kensington Park
162
165
166
167
168
169
170
171
172
173
174
175
176
177
178
179
180
181

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

UPRR Rail Alternative West Option

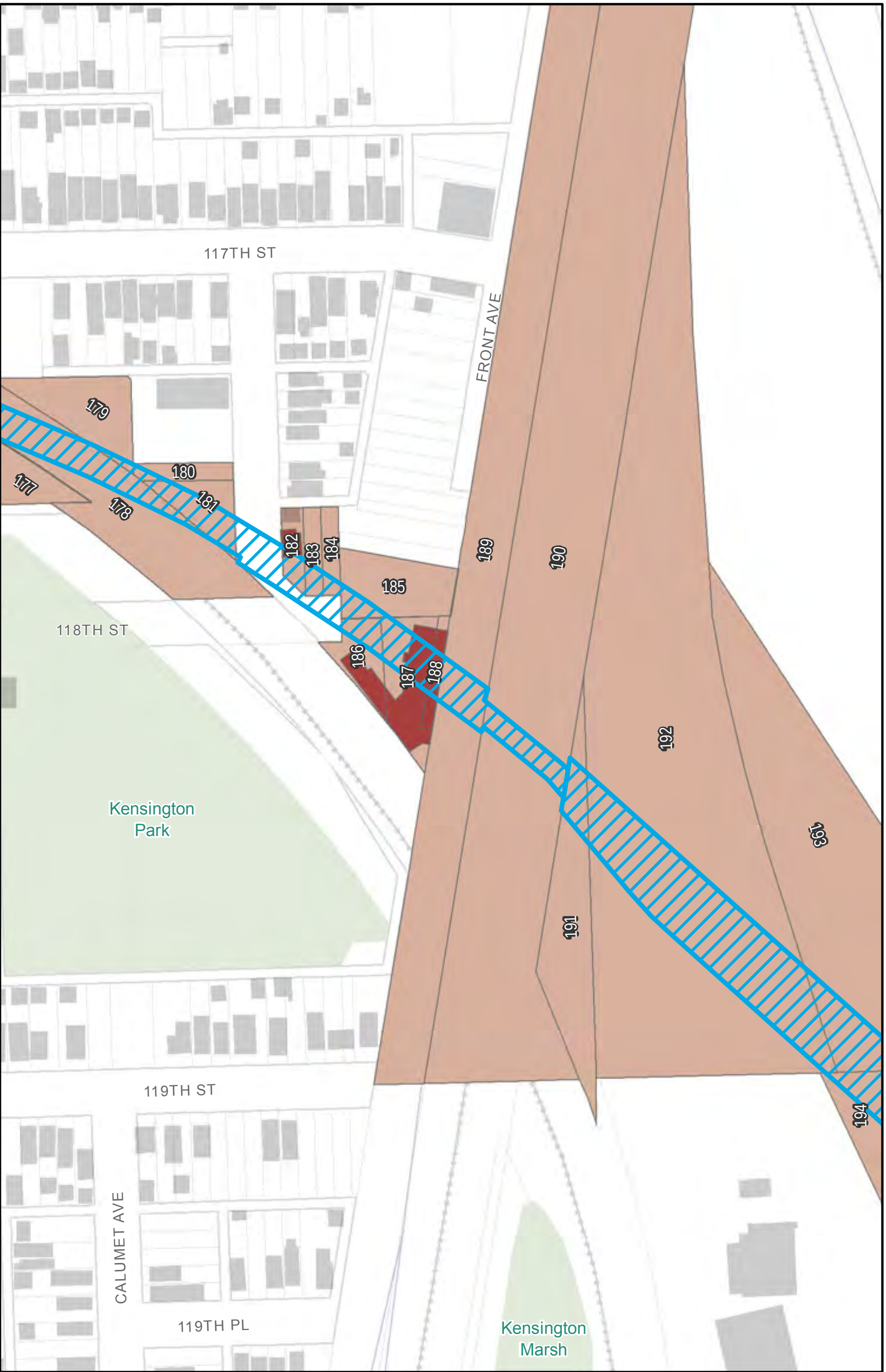
Sheet 13 of 15

▨ Proposed Permanent Envelope
🟦 Parcel Easement
🟫 Parcel Affected by Proposed Permanent Envelope
🟥 Building Displacement
⬜ Building Footprint
☐ Parcels
🟩 Parks
🟪 Schools
-+- Freight Rail
-49- CTA Bus
-290- Pace Bus

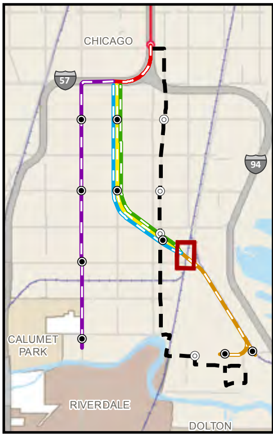
Scale

0 125 250
Feet

map id: 03_02.13


117TH ST
FRONT AVE
179
180
177
178
181
182
183
184
185
189
190
118TH ST
186
187
188
192
193
191
194
Kensington Park
119TH ST
CALUMET AVE
119TH PL
Kensington Marsh

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

UPRR Rail Alternative West Option

Sheet 14 of 15

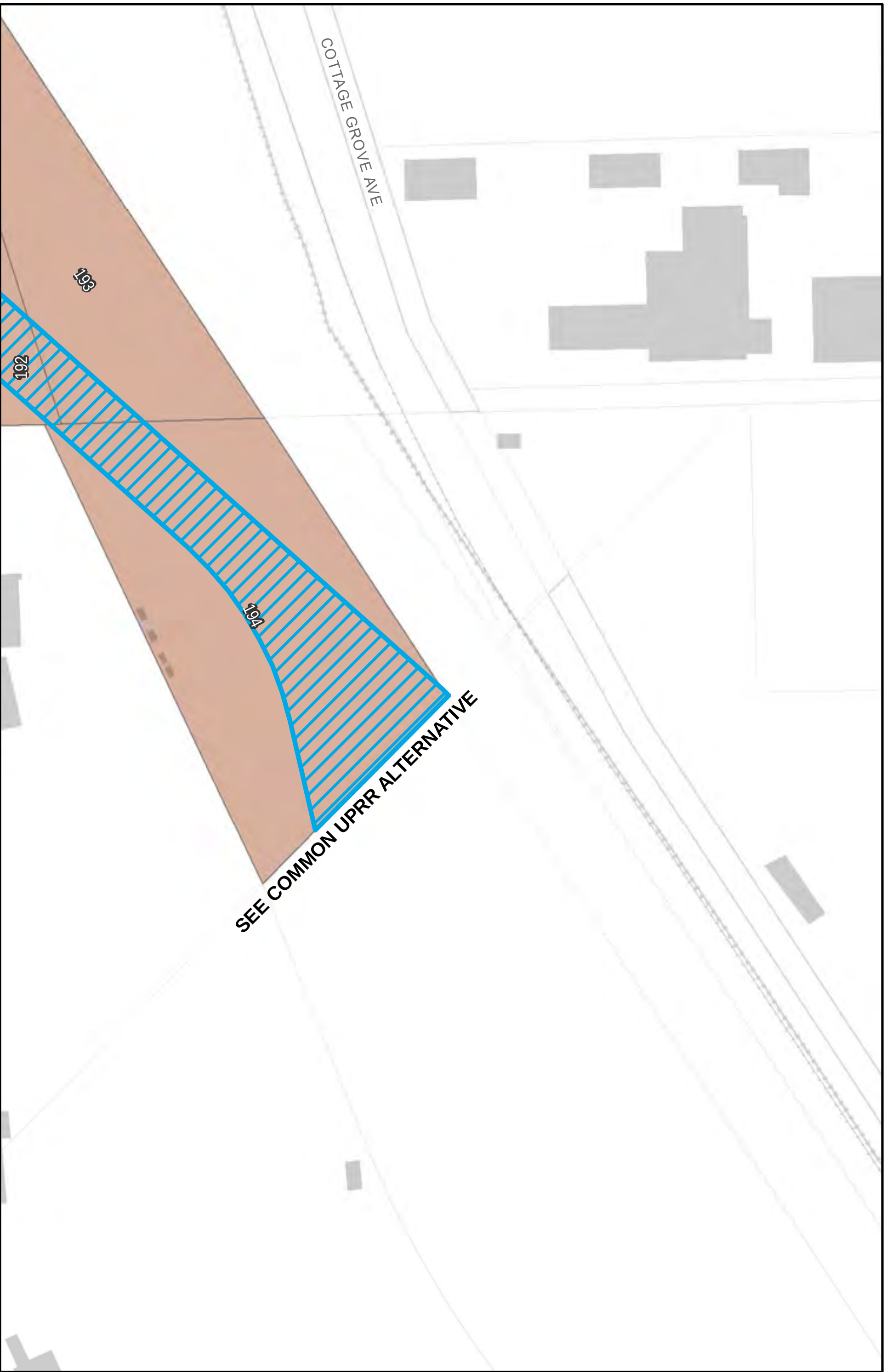
- ▨ Proposed Permanent Envelope
- 🟦 Parcel Easement
- 🟫 Parcel Affected by Proposed Permanent Envelope
- 🟥 Building Displacement
- ⬜ Building Footprint
- ☐ Parcels
- 🟩 Parks
- 🟪 Schools
- -+-+- Freight Rail
- —49— CTA Bus
- —290— Pace Bus

Scale

0 125 250

Feet

map id: 03_02.14


COTTAGE GROVE AVE
193
192
194
SEE COMMON UPRR ALTERNATIVE

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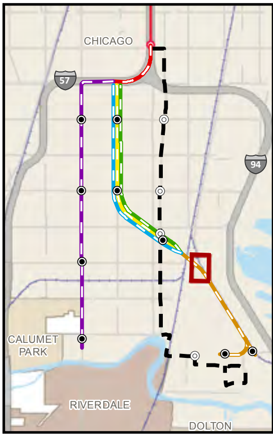

CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

UPRR Rail Alternative West Option

Sheet 15 of 15

▨	Proposed Permanent Envelope
🟦	Parcel Easement
🟫	Parcel Affected by Proposed Permanent Envelope
🟥	Building Displacement
⬜	Building Footprint
□	Parcels
🟩	Parks
🟪	Schools
-+-	Freight Rail
-49-	CTA Bus
-290-	Pace Bus

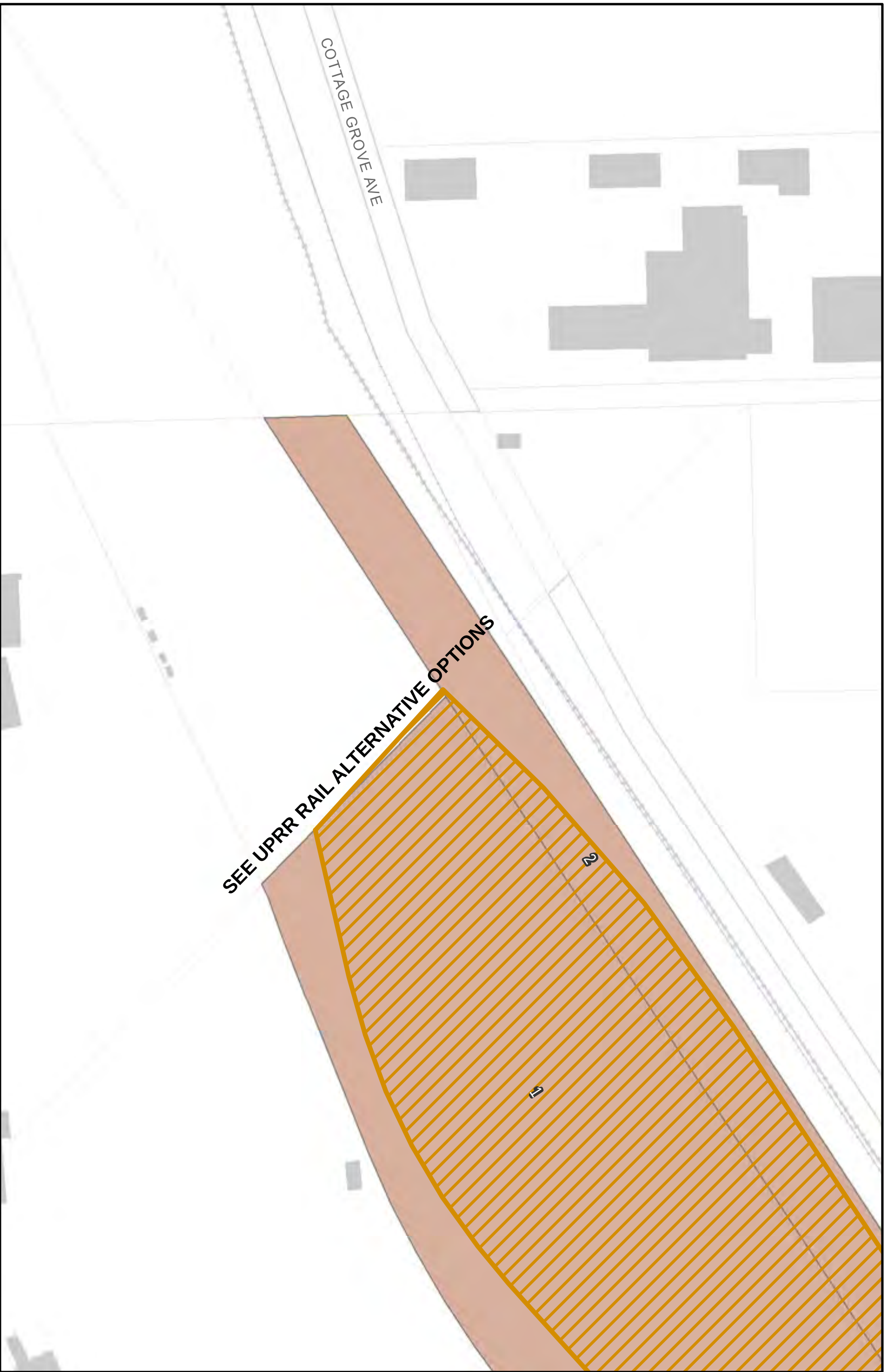
Scale

0 125 250

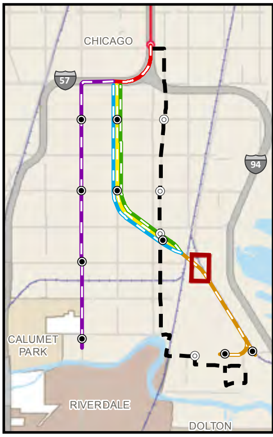
Feet

map id: 03_02.15

Appendix E
Union Pacific Railroad Rail Alternative Common Displacements Maps


COTTAGE GROVE AVE
SEE UPRR RAIL ALTERNATIVE OPTIONS
2
1

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

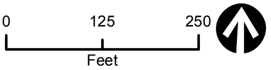
Legend

Common UPRR Rail Alternative

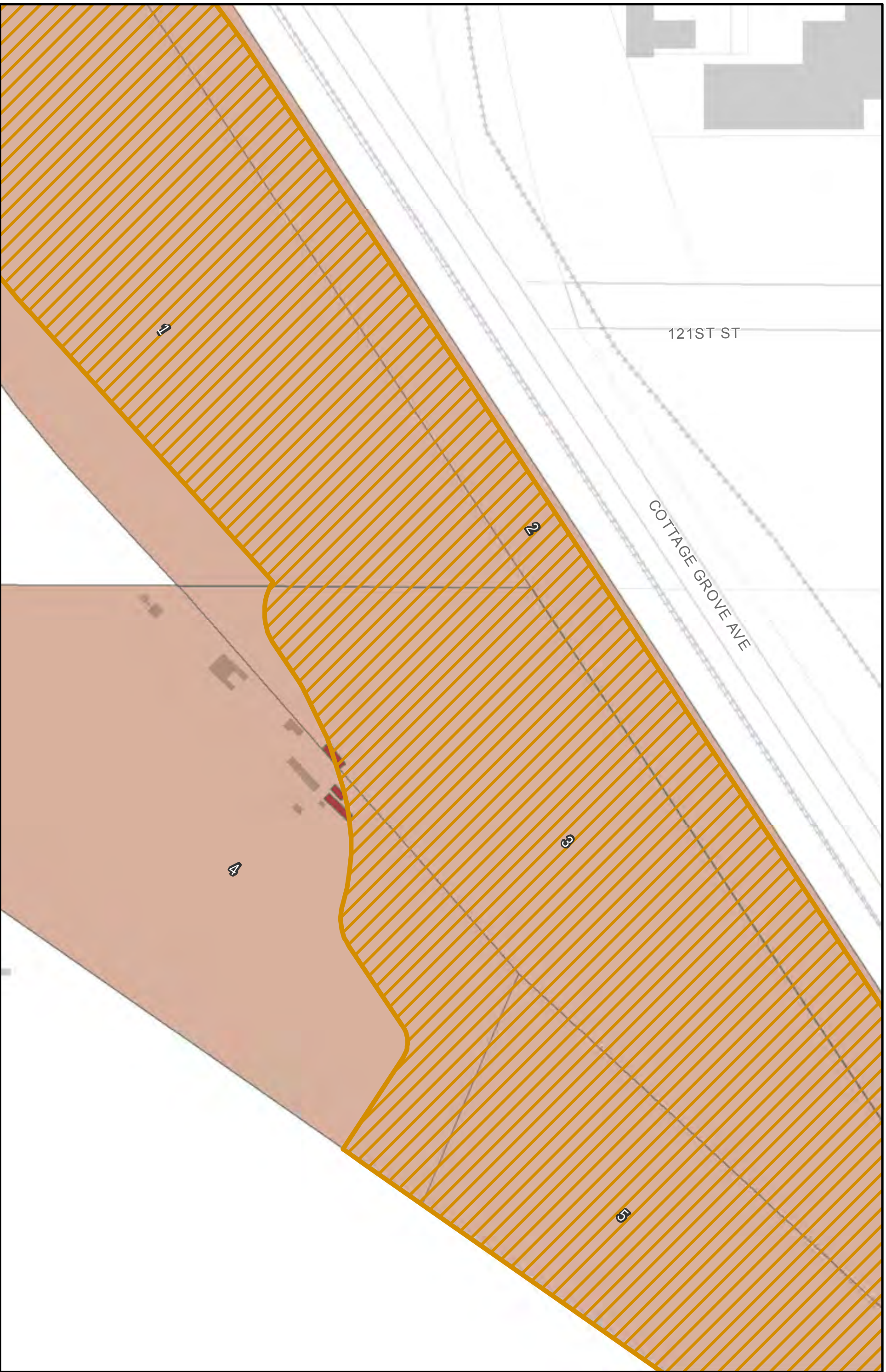
Sheet 1 of 5

▨	Proposed Permanent Envelope
🟫	Parcel Affected by Proposed Permanent Envelope
🟥	Building Displacement
⬜	Building Footprint
☐	Parcels
🟩	Parks
🟪	Schools
-+-+-	Freight Rail
–49–	CTA Bus
–290–	Pace Bus

Scale


0
125
250
Feet

map id: 03_04.1


121ST ST
COTTAGE GROVE AVE
1
2
3
4
5

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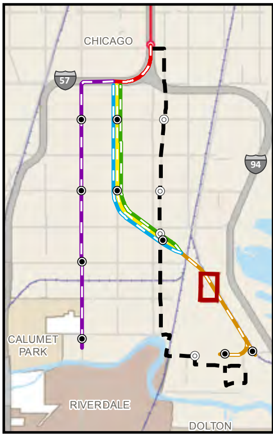

CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

Common UPRR Rail Alternative

Sheet 2 of 5

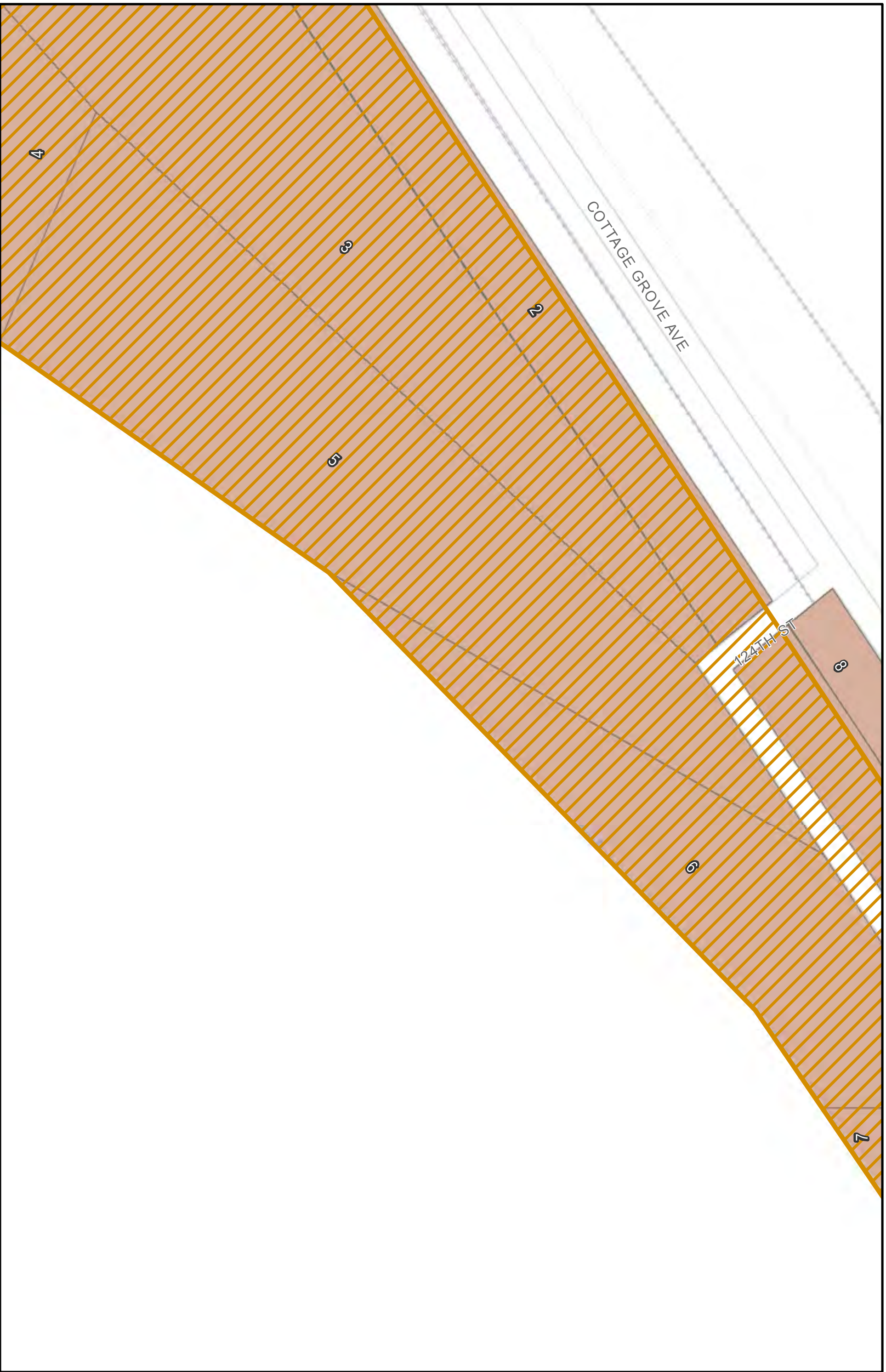
▨	Proposed Permanent Envelope
🟫	Parcel Affected by Proposed Permanent Envelope
🟥	Building Displacement
⬜	Building Footprint
□	Parcels
🟩	Parks
🟪	Schools
-+-+-	Freight Rail
-49-	CTA Bus
-290-	Pace Bus

Scale

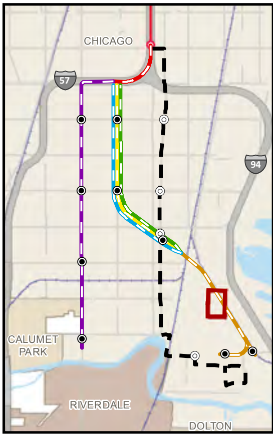
0 125 250

Feet

map id: 03_04.2


4
3
2
COTTAGE GROVE AVE
5
124TH ST
8
6
7

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

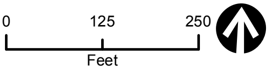
Legend

Common UPRR Rail Alternative

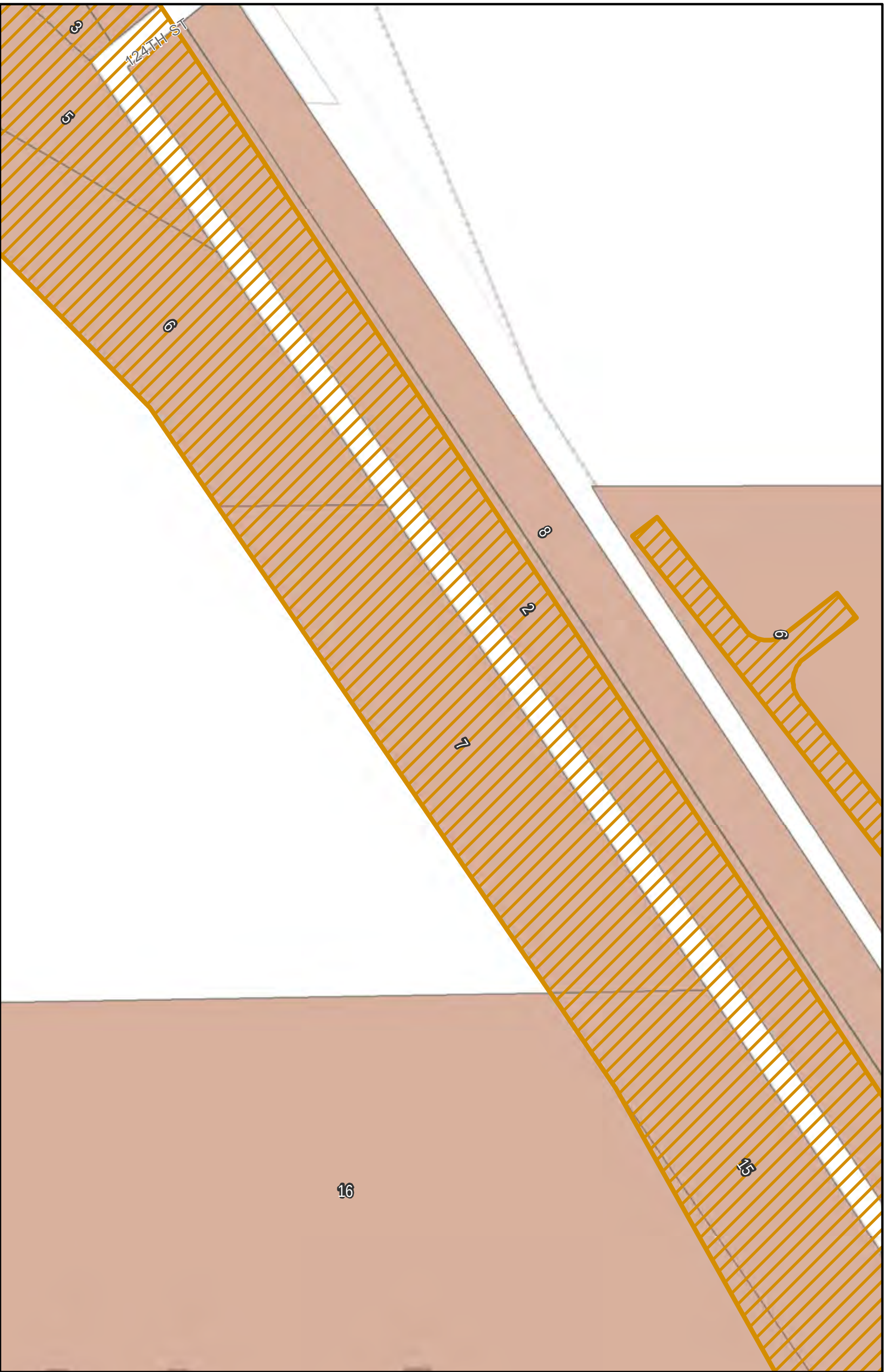
Sheet 3 of 5

- ▨ Proposed Permanent Envelope
- 🟫 Parcel Affected by Proposed Permanent Envelope
- 🟥 Building Displacement
- ⬜ Building Footprint
- ☐ Parcels
- 🟩 Parks
- 🟪 Schools
- -+- Freight Rail
- 49 CTA Bus
- 290 Pace Bus

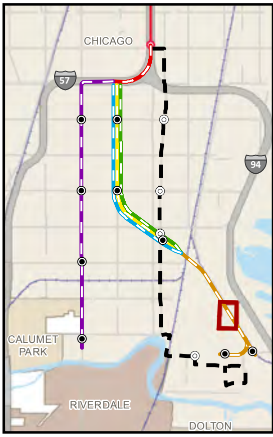
Scale


0
125
250
Feet

map id: 03_04.3


3
124TH ST
5
6
8
2
9
7
15
16

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

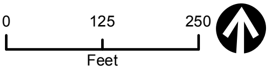
Legend

Common UPRR Rail Alternative

Sheet 4 of 5

▨	Proposed Permanent Envelope
🟫	Parcel Affected by Proposed Permanent Envelope
🟥	Building Displacement
⬜	Building Footprint
☐	Parcels
🟩	Parks
🟪	Schools
-+-+-	Freight Rail
–49–	CTA Bus
–290–	Pace Bus

Scale


0
125
250
Feet

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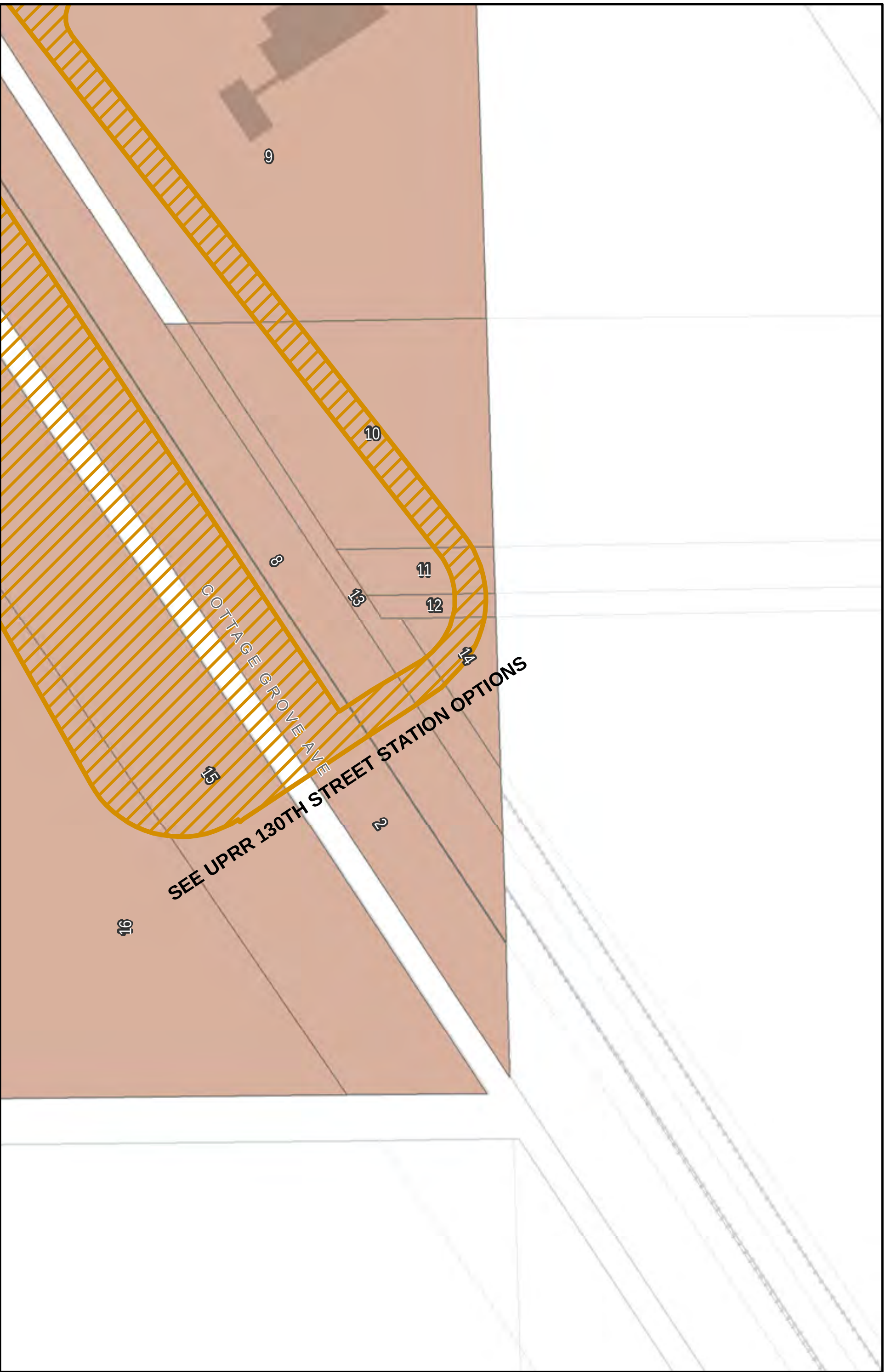
9
10
8
11
13
12
14
COTTAGE GROVE AVE
15
SEE UPRR 130TH STREET STATION OPTIONS
2
16

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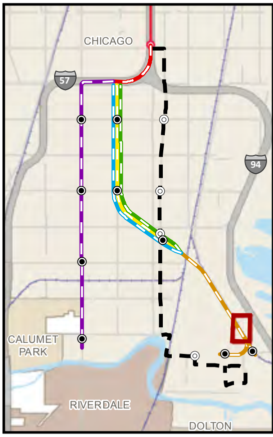

CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

Common UPRR Rail Alternative

Sheet 5 of 5

▨ Proposed Permanent Envelope

🟫 Parcel Affected by Proposed Permanent Envelope

🟥 Building Displacement

⬜ Building Footprint

☐ Parcels

🟩 Parks

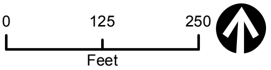
🟪 Schools

-+- Freight Rail

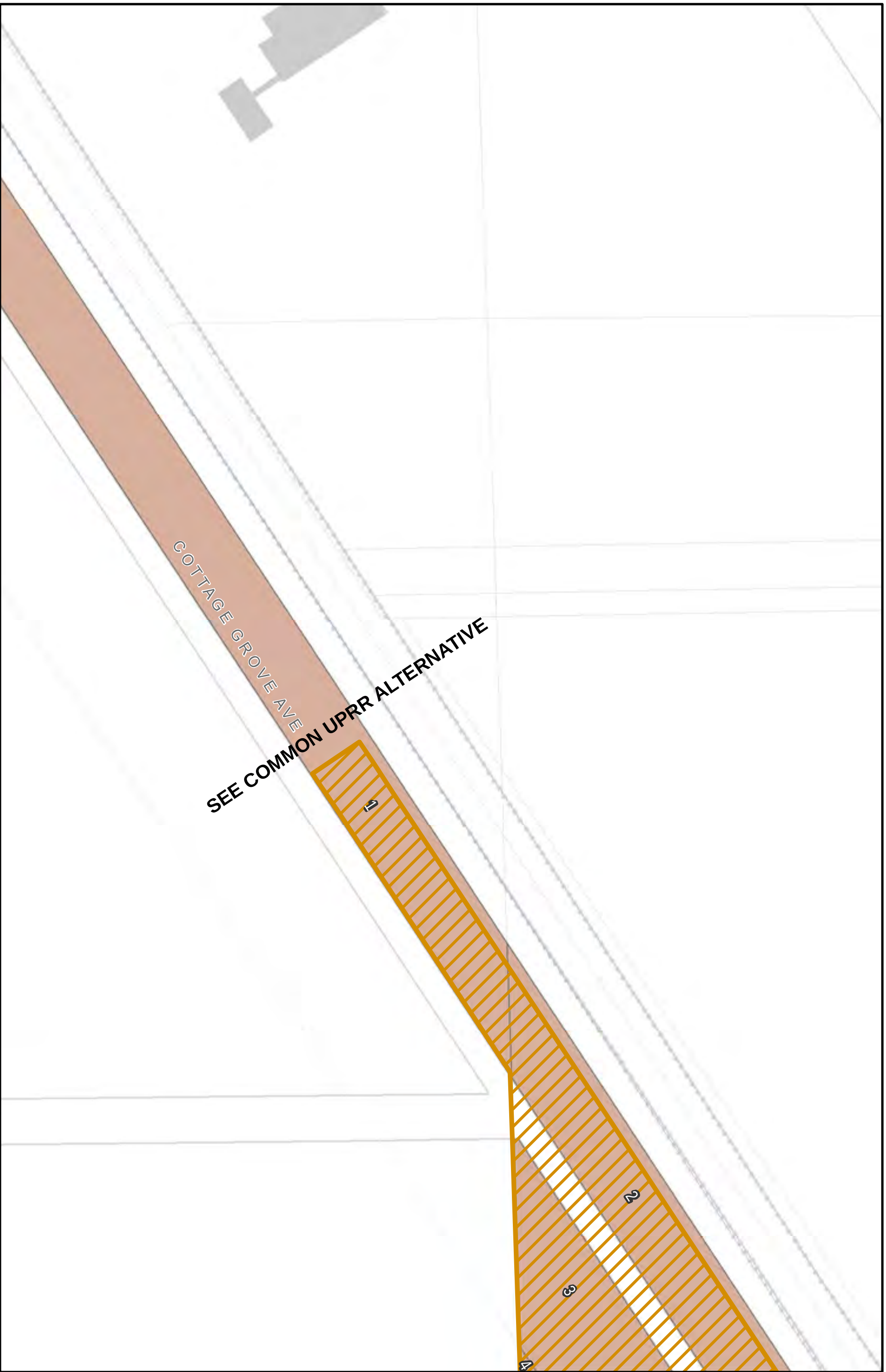
-49- CTA Bus

-290- Pace Bus

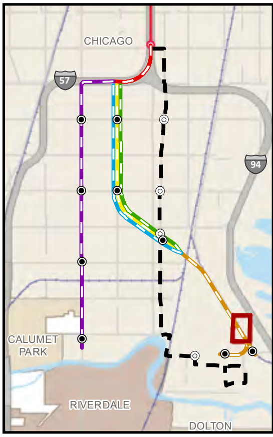
Scale


0
125
250
Feet

map id: 03_04.5


COTTAGE GROVE AVE
SEE COMMON UPRR ALTERNATIVE
1
2
3
4

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

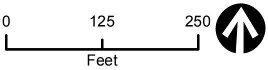
Legend

UPRR Rail Alternative
130th Street Station
South Option

Sheet 1 of 3

▨ Proposed Permanent Envelope
🟫 Parcel Affected by Proposed Permanent Envelope
🟥 Building Displacement
⬜ Building Footprint
□ Parcels
🟩 Parks
🟪 Schools
-+- Freight Rail
-49- CTA Bus
-290- Pace Bus

Scale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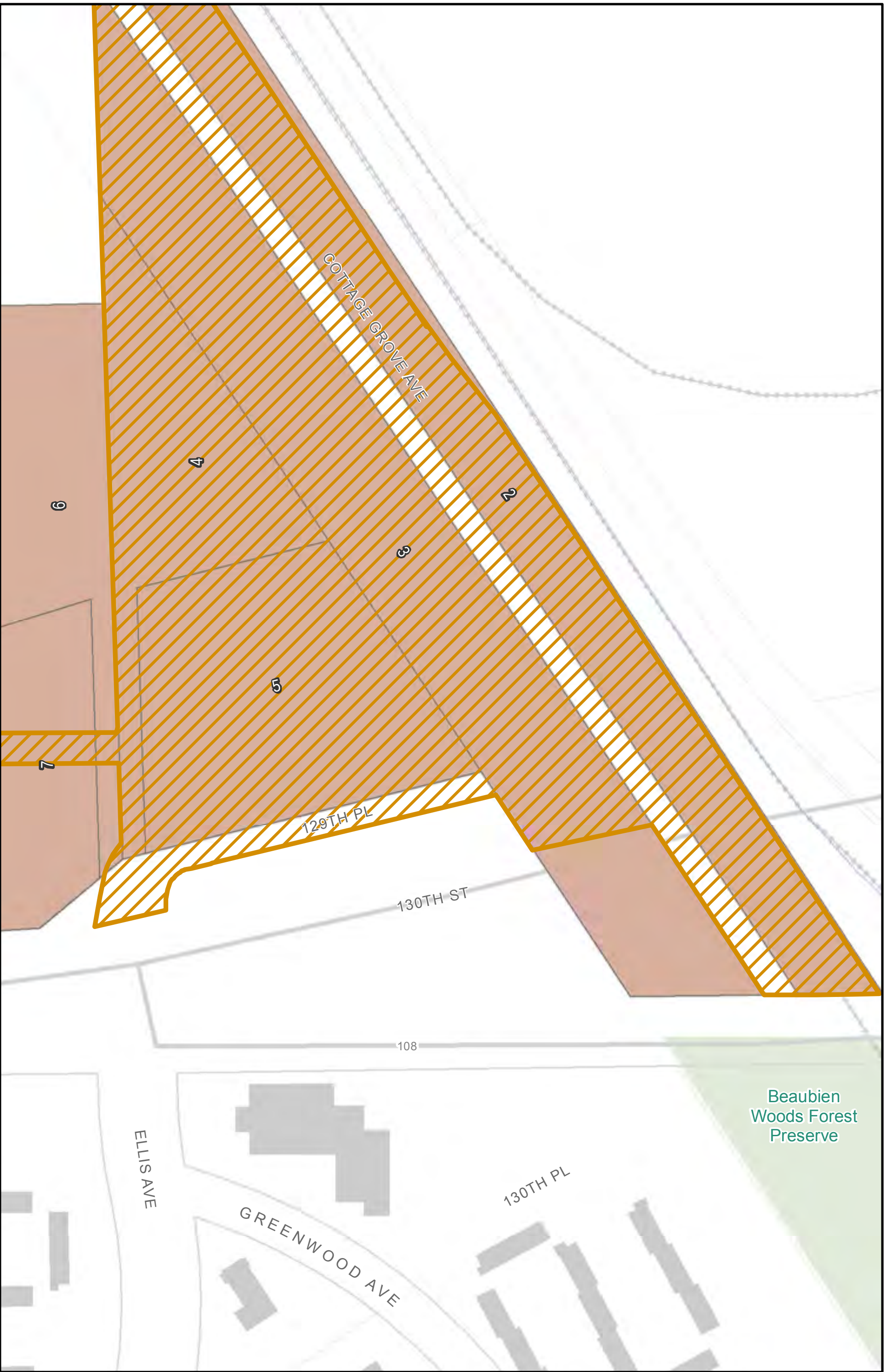
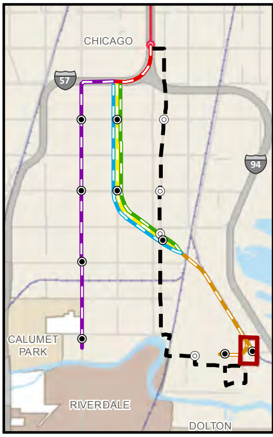
125
250
Feet

map id: 03_05.1


COTTAGE GROVE AVE
2
3
4
5
6
7
129TH PL
130TH ST
108
Beaubien Woods Forest Preserve
ELLIS AVE
GREENWOOD AVE
130TH PL

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

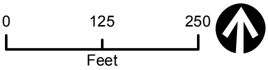
Legend

UPRR Rail Alternative
130th Street Station
South Option

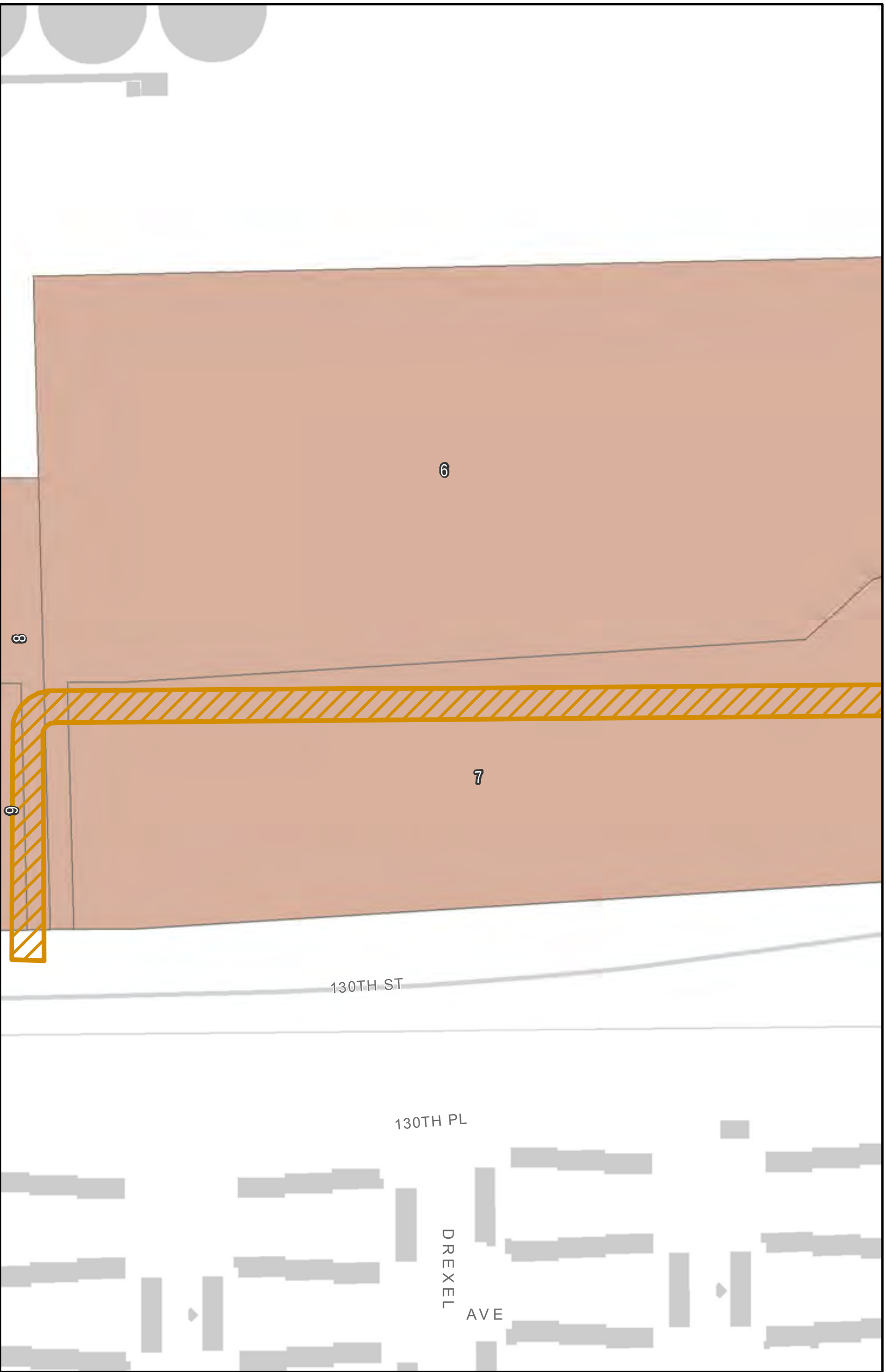
Sheet 2 of 3

▨	Proposed Permanent Envelope
🟫	Parcel Affected by Proposed Permanent Envelope
🟥	Building Displacement
⬜	Building Footprint
□	Parcels
🟩	Parks
🟪	Schools
-+-+-	Freight Rail
-49-	CTA Bus
-290-	Pace Bus

Scale


0
125
250
Feet

map id: 03_05.2


6
7
8
9
130TH ST
130TH PL
DREXEL AVE

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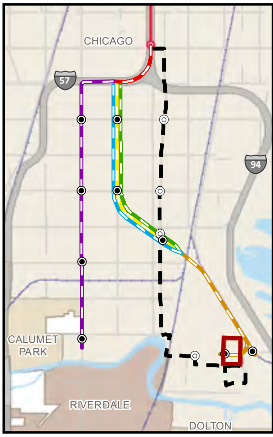

CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

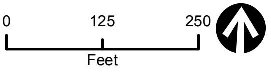
Legend

UPRR Rail Alternative 130th Street Station South Option

Sheet 3 of 3

- ▨ Proposed Permanent Envelope
- 🟫 Parcel Affected by Proposed Permanent Envelope
- 🟥 Building Displacement
- ⬜ Building Footprint
- □ Parcels
- 🟩 Parks
- 🟪 Schools
- -+- Freight Rail
- —49— CTA Bus
- —290— Pace Bus

Scale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125
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Feet

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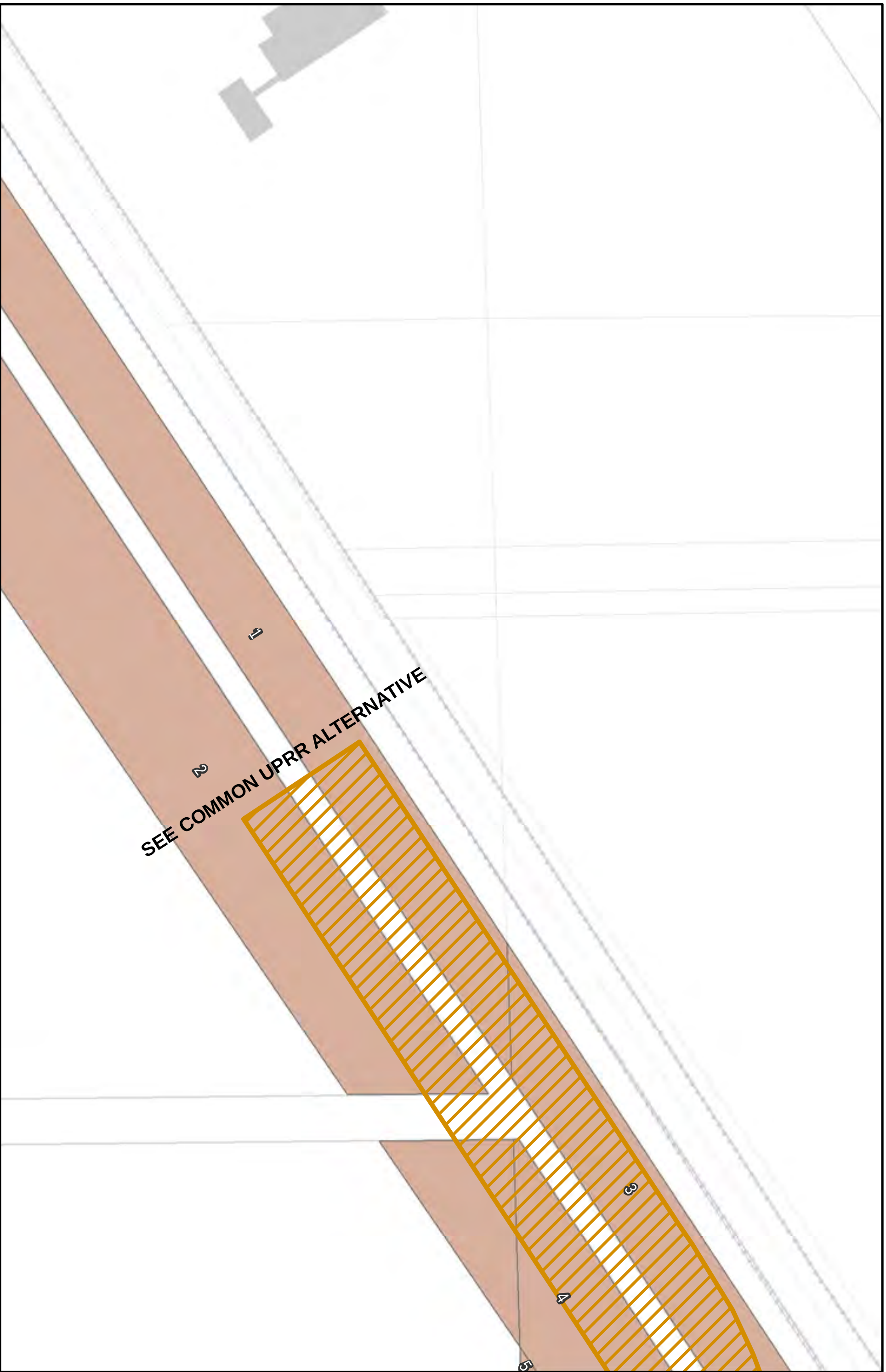
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2
SEE COMMON UPRR ALTERNATIVE
3
4
5

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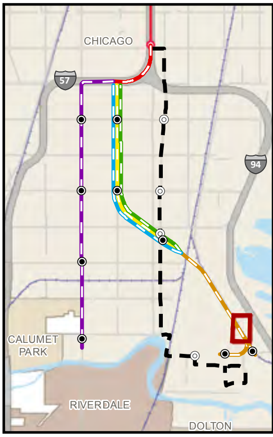

CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

UPRR Rail Alternative
130th Street Station
West Option

Sheet 1 of 4

▨ Proposed Permanent Envelope

🟫 Parcel Affected by Proposed Permanent Envelope

🟥 Building Displacement

⬜ Building Footprint

☐ Parcels

🟩 Parks

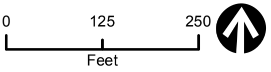
🟪 Schools

-▪-▪- Freight Rail

–49– CTA Bus

–290– Pace Bus

Scale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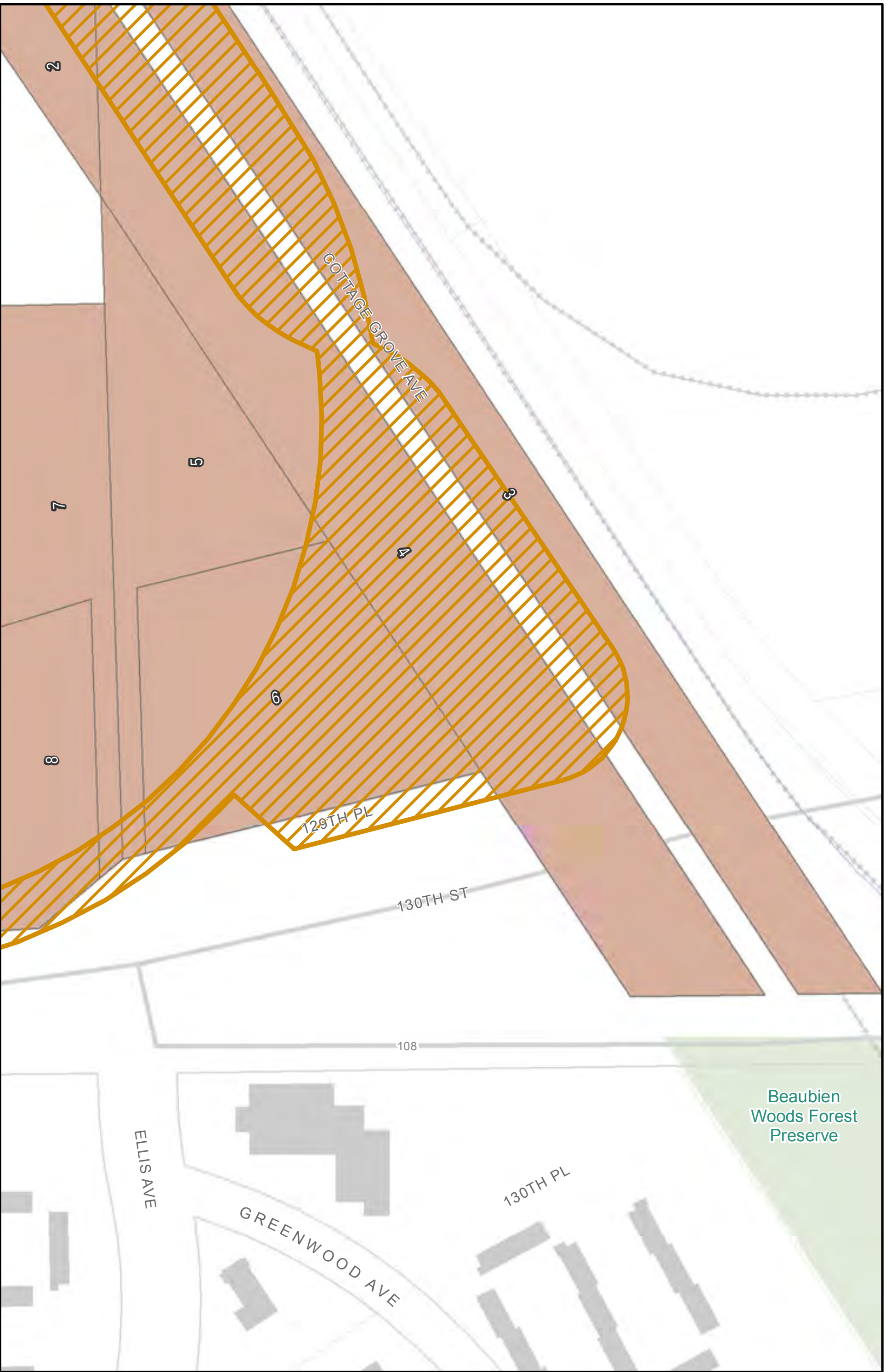
Feet

map id: 03_06.1


2
7
5
COTTAGE GROVE AVE
3
4
6
8
129TH PL
130TH ST
108
Beaubien Woods Forest Preserve
ELLIS AVE
GREENWOOD AVE
130TH PL

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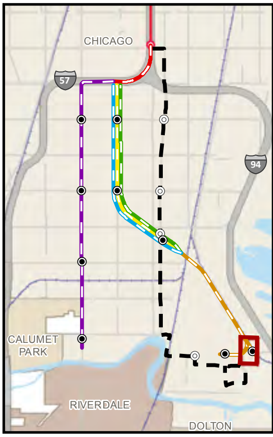

CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

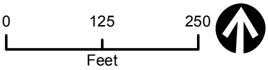
Legend

UPRR Rail Alternative 130th Street Station West Option

Sheet 2 of 4

- ▨ Proposed Permanent Envelope
- 🟫 Parcel Affected by Proposed Permanent Envelope
- 🟥 Building Displacement
- ⬜ Building Footprint
- ☐ Parcels
- 🟩 Parks
- 🟪 Schools
- -+-+- Freight Rail
- —49— CTA Bus
- —290— Pace Bus

Scale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Feet

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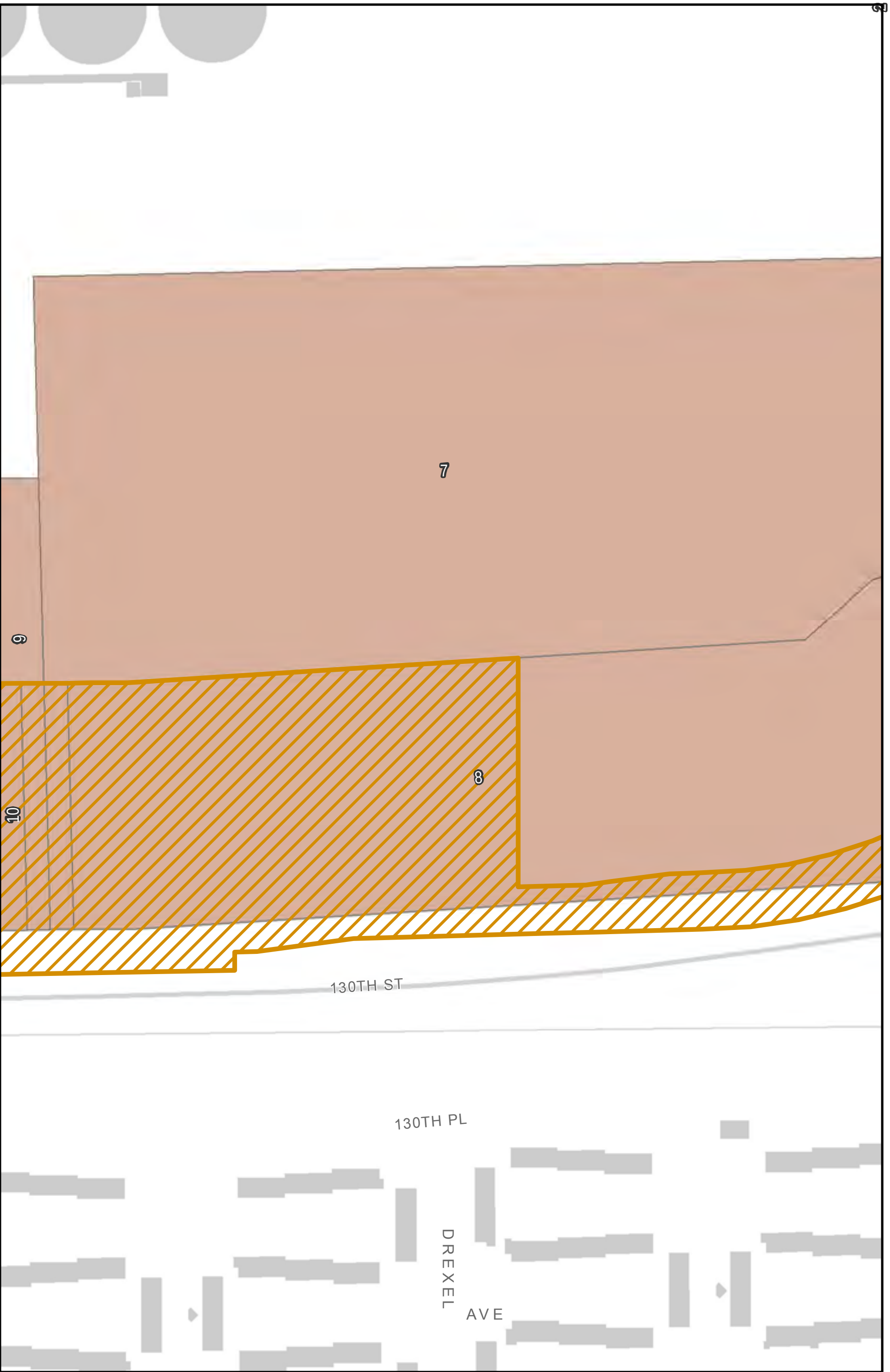
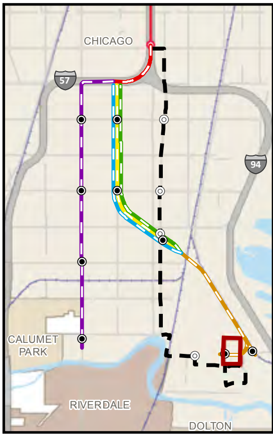

7
8
9
10
130TH ST
130TH PL
DREXEL AVE

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

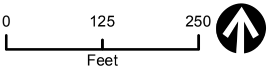
Legend

UPRR Rail Alternative
130th Street Station
West Option

Sheet 3 of 4

▨	Proposed Permanent Envelope
■	Parcel Affected by Proposed Permanent Envelope
🟥	Building Displacement
■	Building Footprint
□	Parcels
🟩	Parks
■	Schools
-+-+-	Freight Rail
-49-	CTA Bus
-290-	Pace Bus

Scale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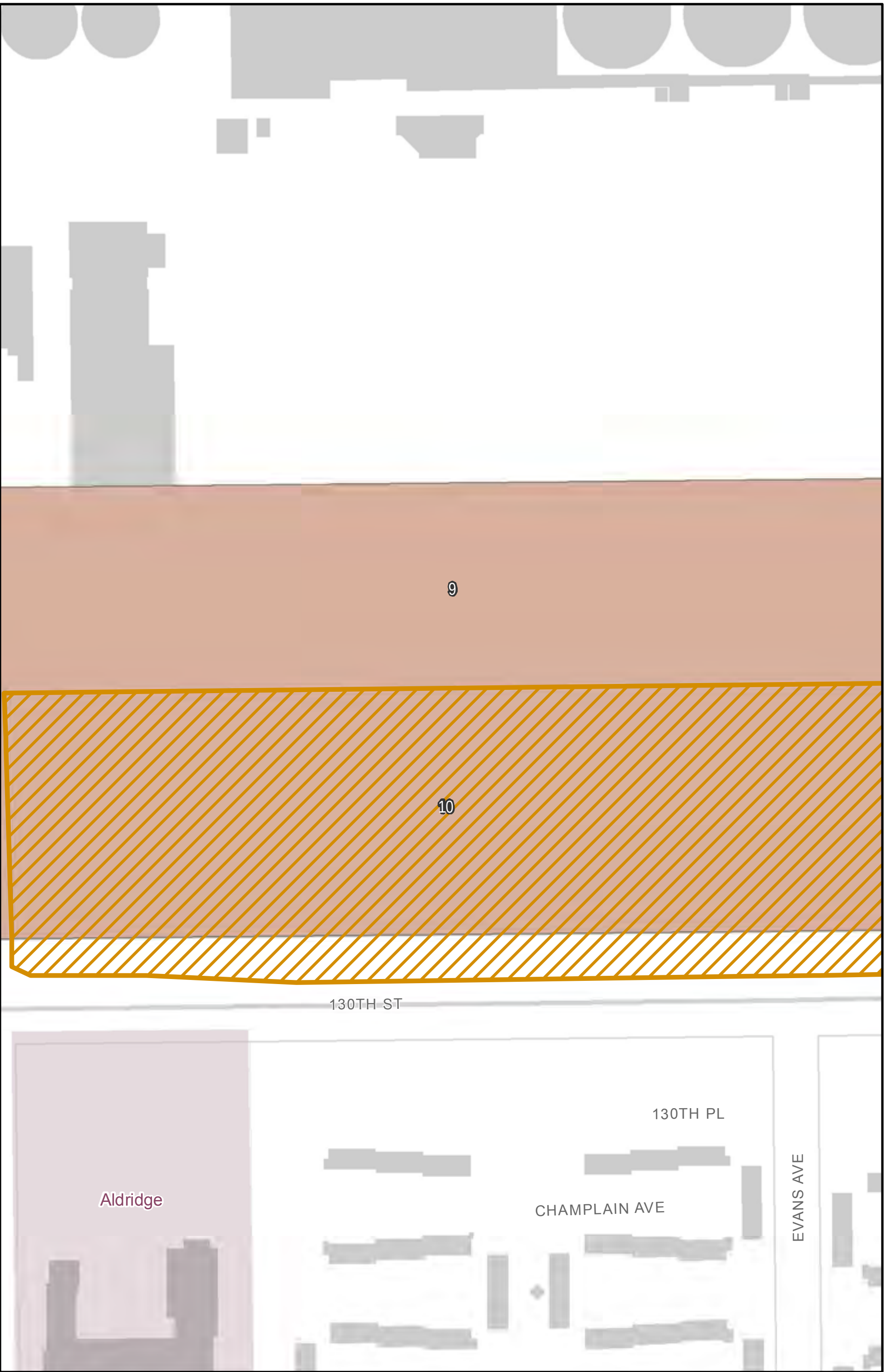
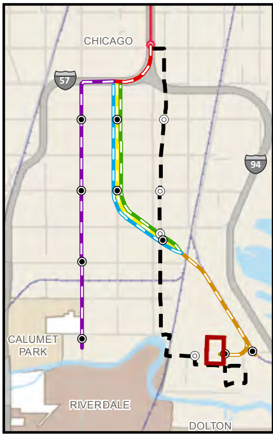
Feet

map id: 03_06.3


9
10
130TH ST
130TH PL
CHAMPLAIN AVE
EVANS AVE
Aldridge

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

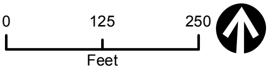
Legend

UPRR Rail Alternative
130th Street Station
West Option

Sheet 4 of 4

- ▨ Proposed Permanent Envelope
- ■ Parcel Affected by Proposed Permanent Envelope
- 🟥 Building Displacement
- ■ Building Footprint
- □ Parcels
- 🟩 Parks
- ■ Schools
- -+- Freight Rail
- —49— CTA Bus
- —290— Pace Bus

Scale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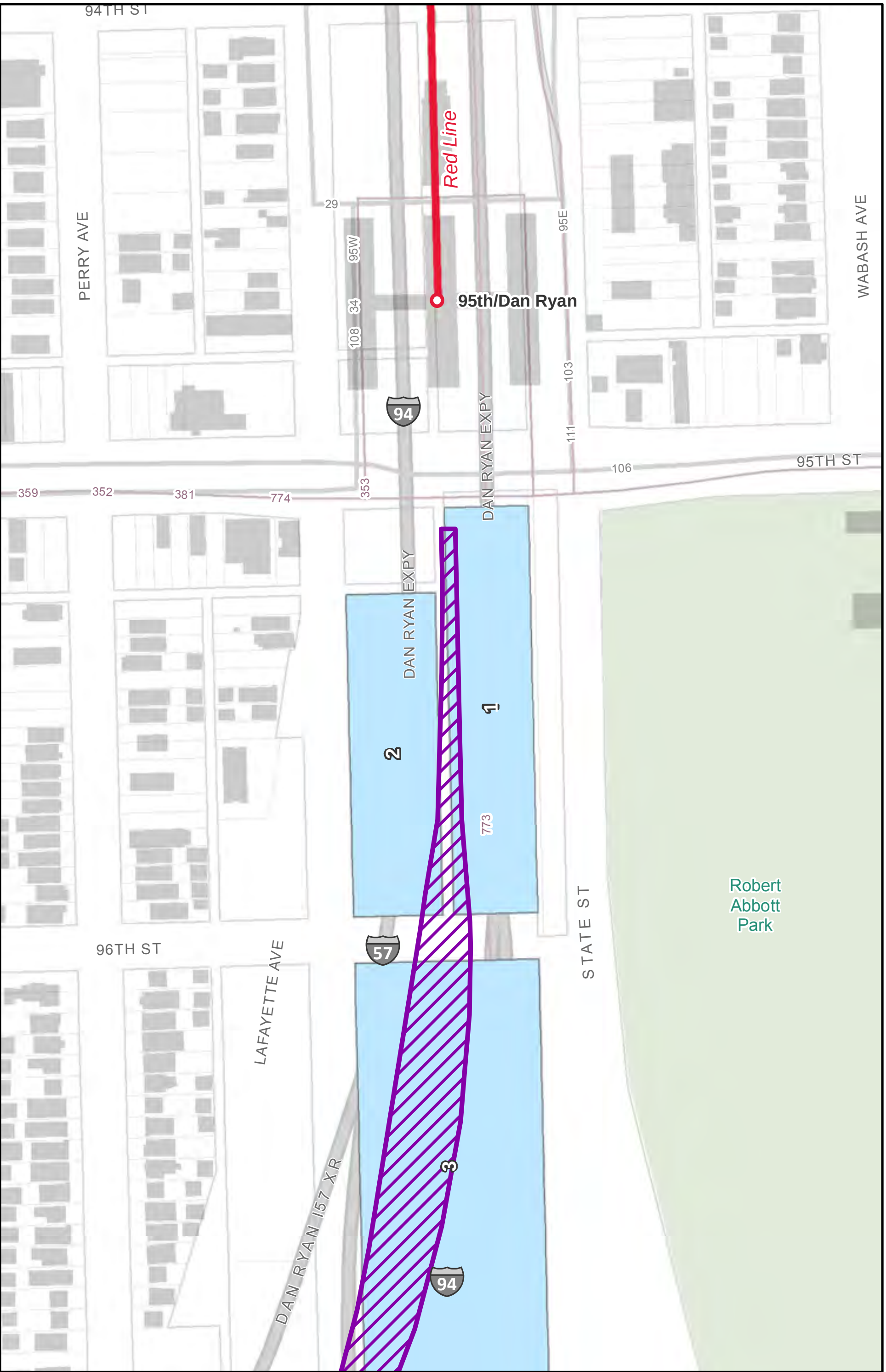
Feet

map id: 03_06.4

Appendix F
Halsted Rail Alternative Displacements Maps


94TH ST
PERRY AVE
Red Line
29
95W
34
108
95th/Dan Ryan
95E
103
111
WABASH AVE
94
DAN RYAN EXPY
106
95TH ST
359
352
381
774
353
DAN RYAN EXPY
1
2
773
Robert Abbott Park
STATE ST
96TH ST
LAFAYETTE AVE
57
3
DAN RYAN I57 XR
94

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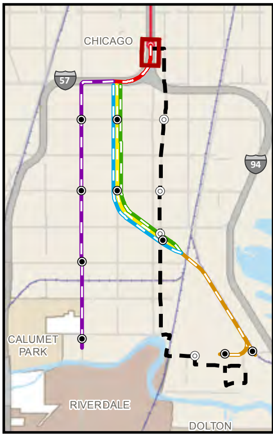

CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

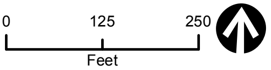
Legend

Halsted Rail Alternative

Sheet 1 of 21

▨ Proposed Permanent Envelope
🟦 Easement
🟫 Parcel Affected by Proposed Permanent Envelope
🟥 Building Displacement
⬜ Building Footprint
□ Parcels
🟩 Parks
🟪 Schools
-+-+- Freight Rail
–49– CTA Bus
–290– Pace Bus

Scale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250
Feet

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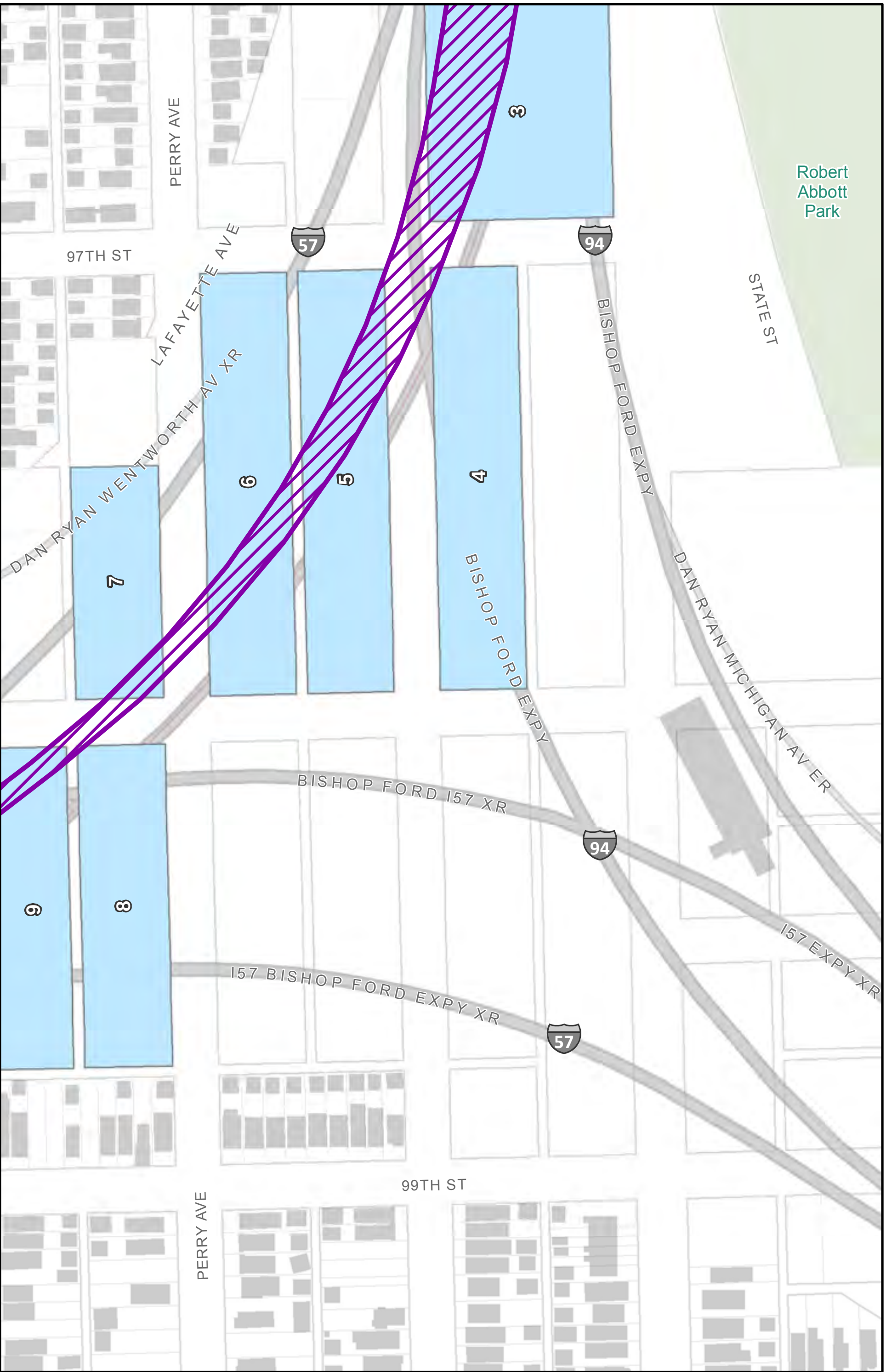
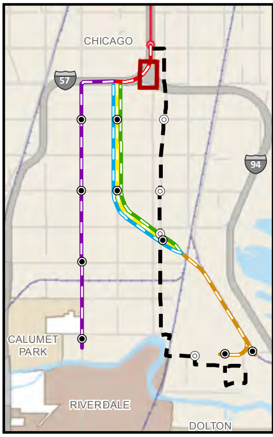

PERRY AVE
97TH ST
LAFAYETTE AVE
DAN RYAN WENTWORTH AV XR
57
94
3
Robert Abbott Park
STATE ST
BISHOP FORD EXPY
7
6
5
4
BISHOP FORD EXPY
DAN RYAN MICHIGAN AV ER
BISHOP FORD I57 XR
94
I57 EXPY XR
9
8
I57 BISHOP FORD EXPY XR
57
99TH ST
PERRY AVE

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

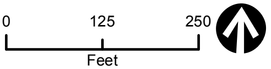
Legend

Halsted Rail Alternative

Sheet 2 of 21

- ▨ Proposed Permanent Envelope
- 🟦 Easement
- 🟫 Parcel Affected by Proposed Permanent Envelope
- 🟥 Building Displacement
- ⬜ Building Footprint
- ⬜ Parcels
- 🟩 Parks
- 🟪 Schools
- Freight Rail
- 49 CTA Bus
- 290 Pace Bus

Scale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Feet

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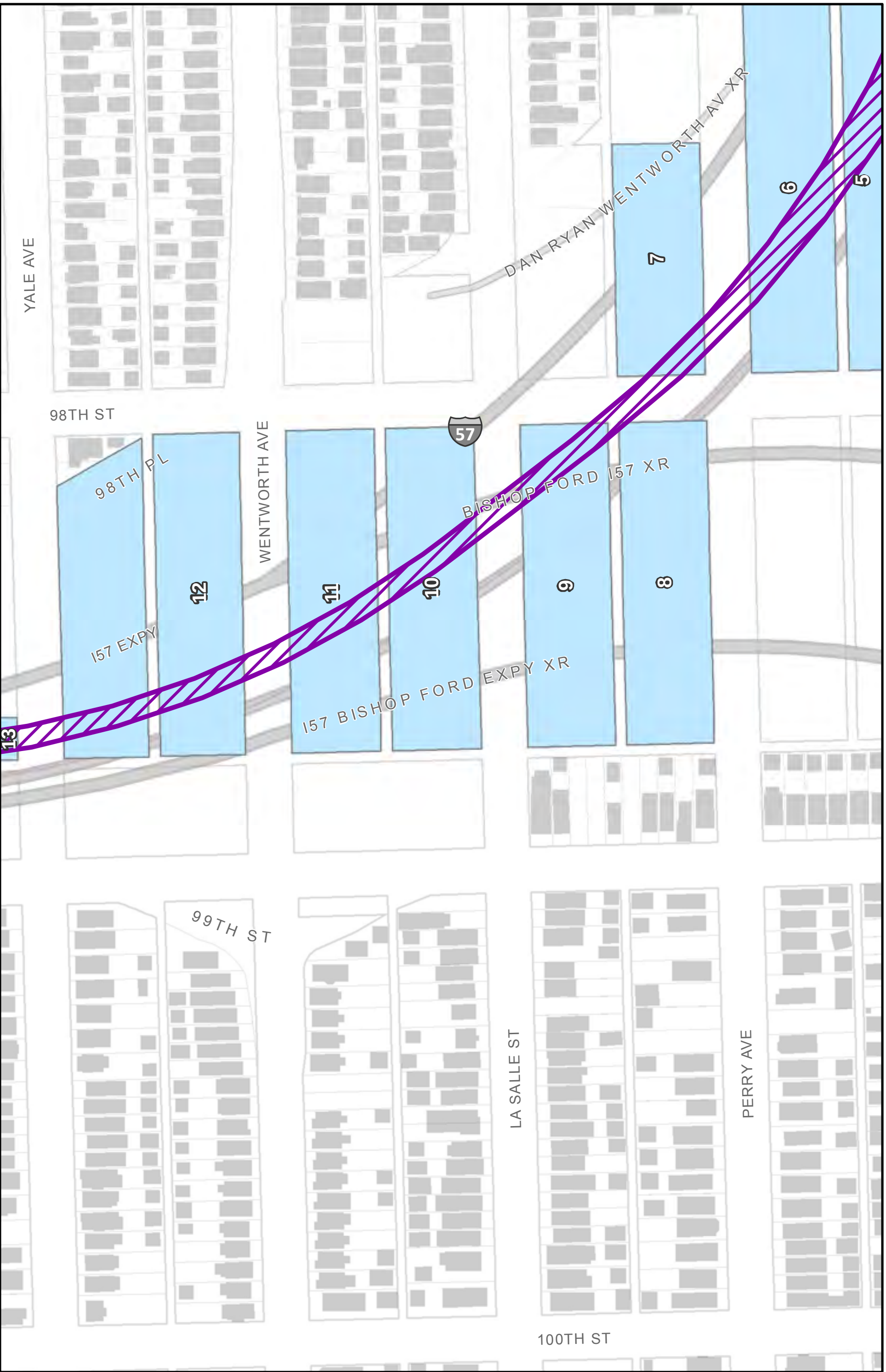
YALE AVE
98TH ST
98TH PL
WENTWORTH AVE
DAN RYAN WENTWORTH AV XR
57
BISHOP FORD I57 XR
I57 EXPY
I57 BISHOP FORD EXPY XR
99TH ST
LA SALLE ST
PERRY AVE
100TH ST
5
6
7
8
9
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11
12
13

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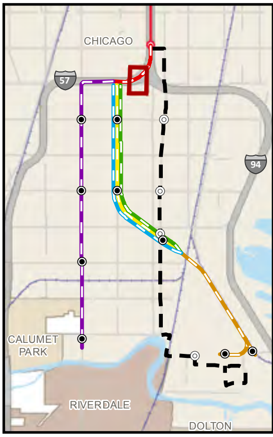

CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

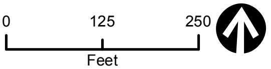
Legend

Halsted Rail Alternative

Sheet 3 of 21

▨	Proposed Permanent Envelope
🟦	Easement
🟫	Parcel Affected by Proposed Permanent Envelope
🟥	Building Displacement
⬜	Building Footprint
☐	Parcels
🟩	Parks
🟪	Schools
-+-+-	Freight Rail
-49-	CTA Bus
-290-	Pace Bus

Scale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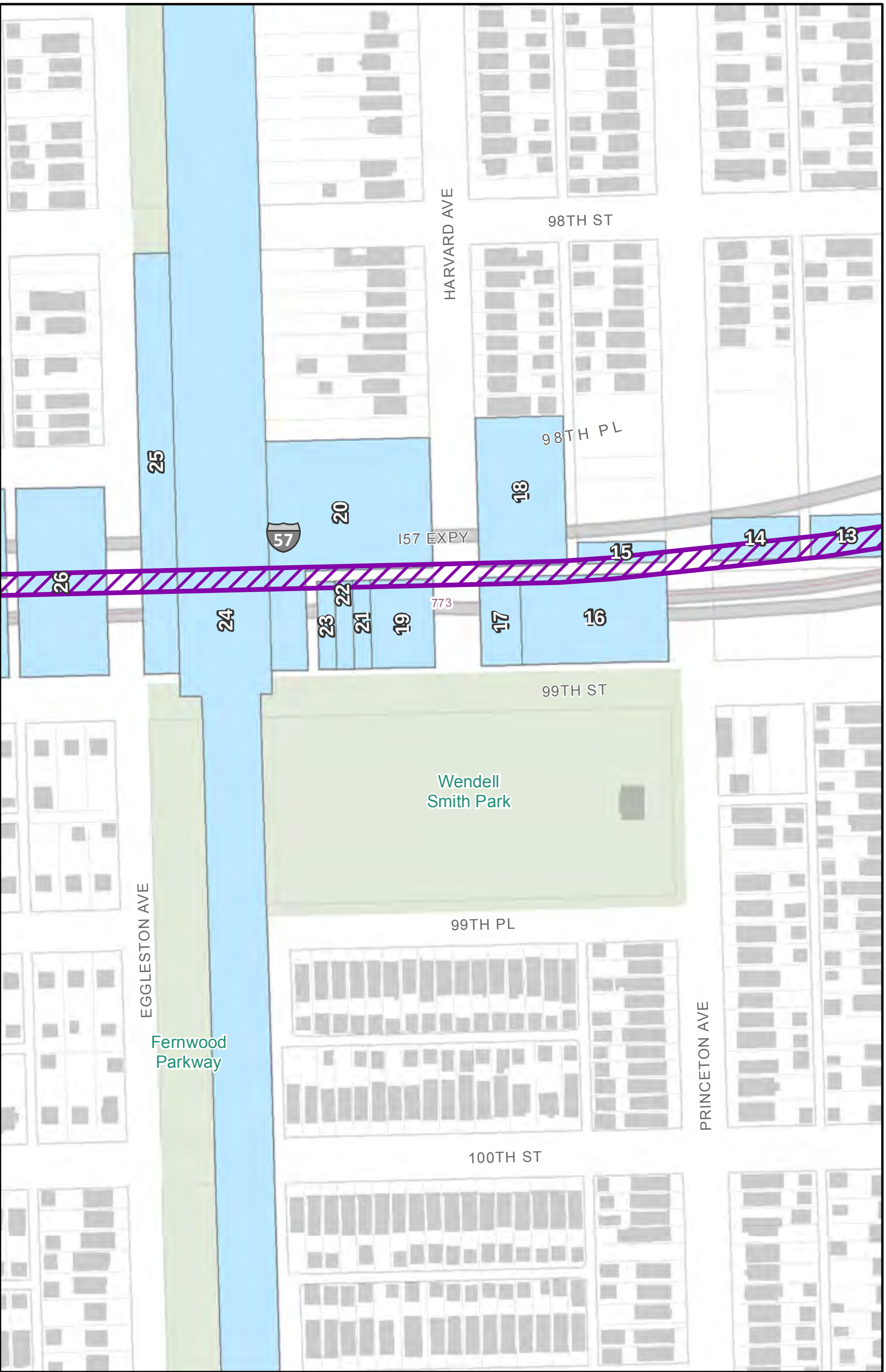
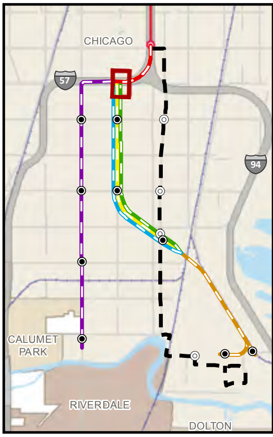
125
250
Feet

map id: 03_07.3


HARVARD AVE
98TH ST
98TH PL
I57 EXPY
57
773
99TH ST
Wendell Smith Park
99TH PL
EGGLESTON AVE
Fernwood Parkway
PRINCETON AVE
100TH ST
13
14
15
16
17
18
19
20
21
22
23
24
25
26

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

Halsted Rail Alternative

Sheet 4 of 21

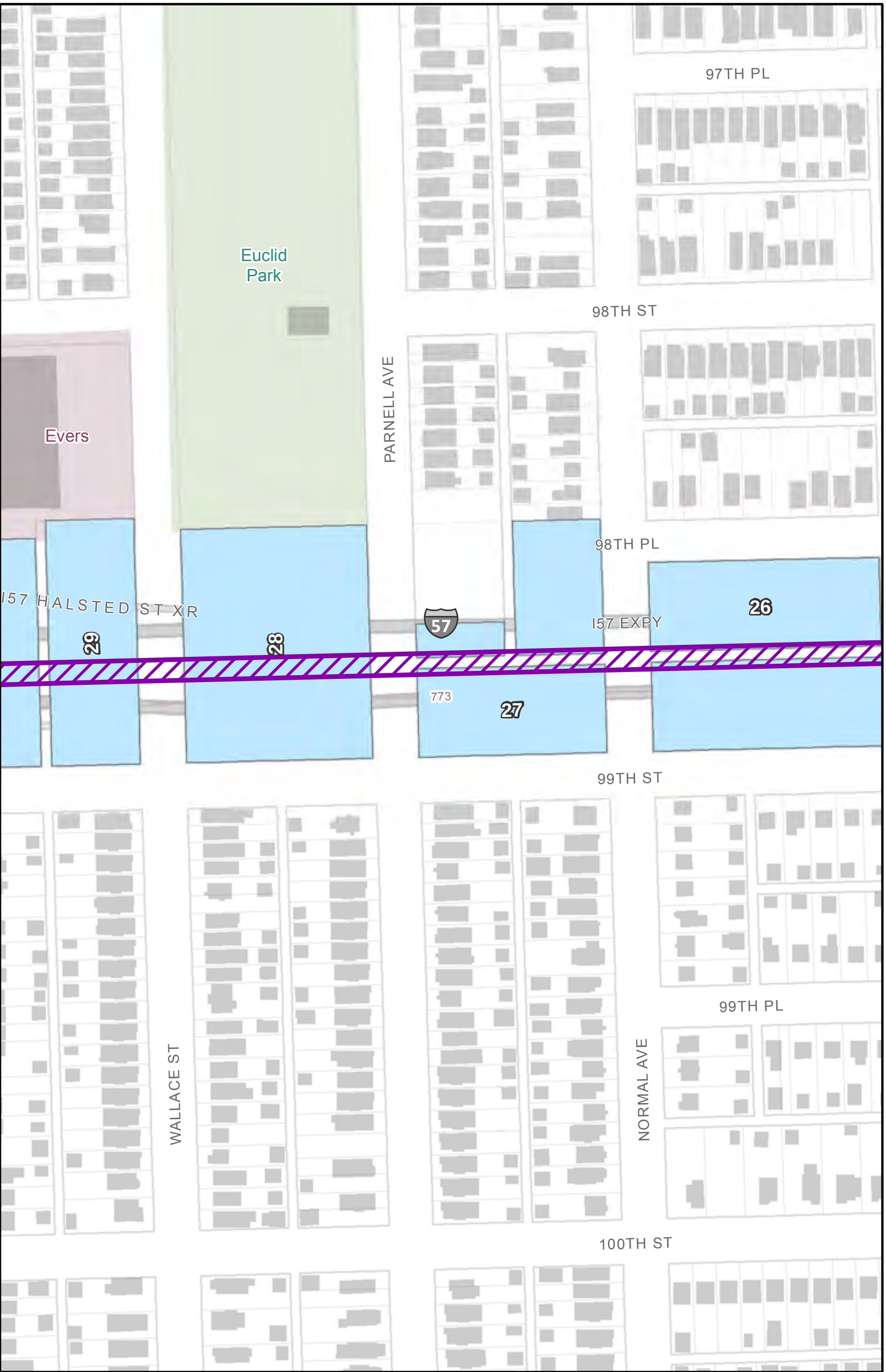
- ▨ Proposed Permanent Envelope
- 🟦 Easement
- 🟫 Parcel Affected by Proposed Permanent Envelope
- 🟥 Building Displacement
- ⬜ Building Footprint
- ☐ Parcels
- 🟩 Parks
- 🟪 Schools
- -+-+- Freight Rail
- -49- CTA Bus
- -290- Pace Bus

Scale

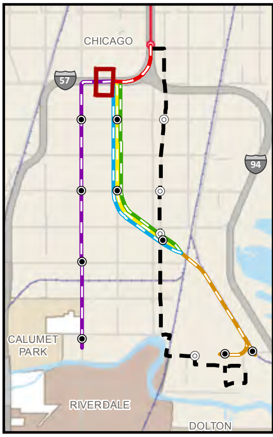
0 125 250

Feet

map id: 03_07.4


97TH PL
Euclid Park
98TH ST
PARNELL AVE
Evers
98TH PL
I57 HALSTED ST XR
29
28
57
I57 EXPY
26
773
27
99TH ST
99TH PL
WALLACE ST
NORMAL AVE
100TH ST

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

Halsted Rail Alternative

Sheet 5 of 21

▨ Proposed Permanent Envelope
🟦 Easement
🟫 Parcel Affected by Proposed Permanent Envelope
🟥 Building Displacement
⬜ Building Footprint
□ Parcels
🟩 Parks
🟪 Schools
-+-+- Freight Rail
-49- CTA Bus
-290- Pace Bus

Scale

0 125 250
Feet

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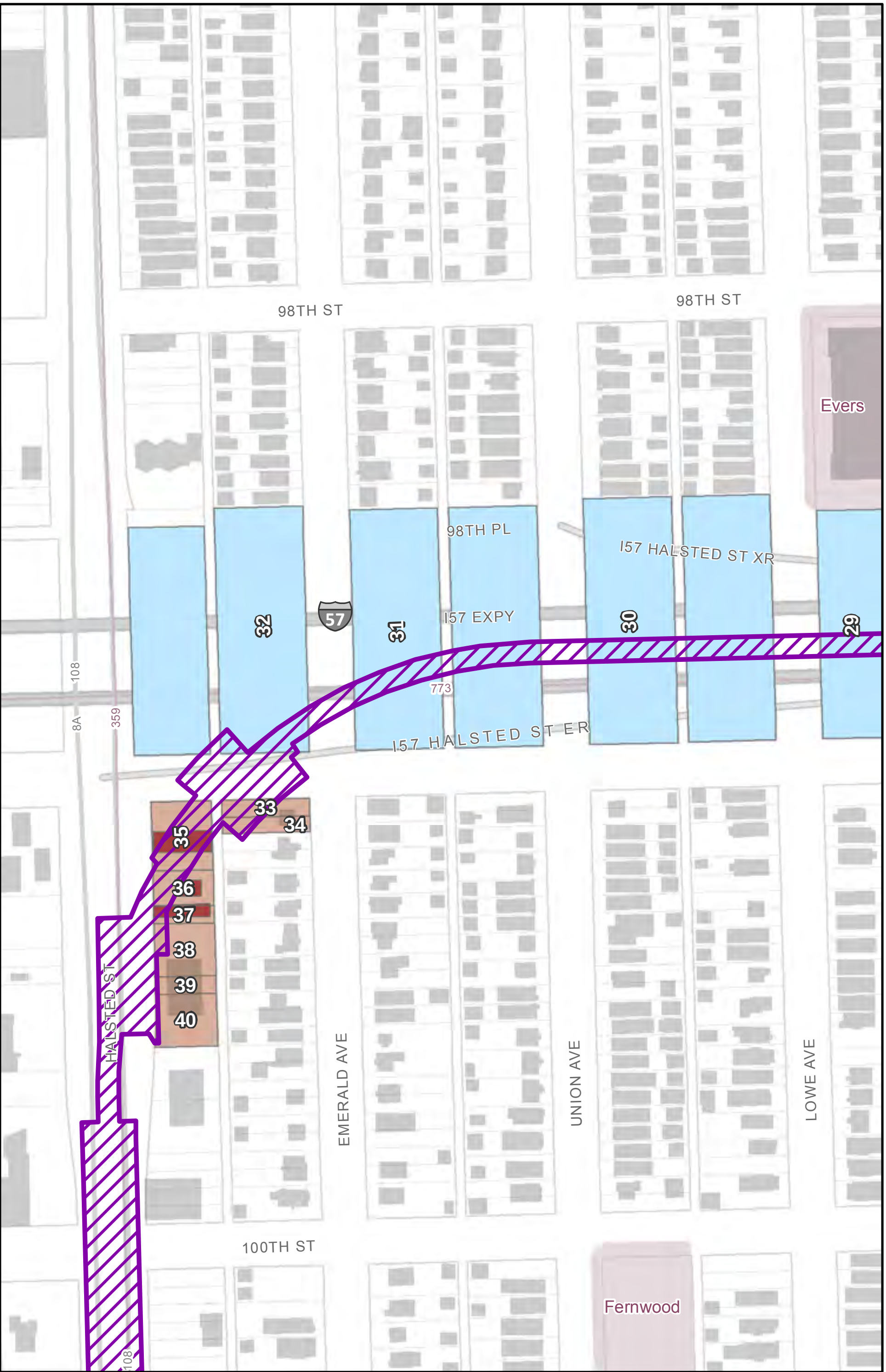
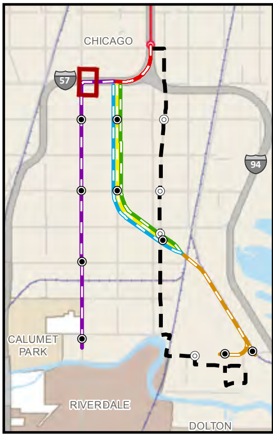

98TH ST
98TH ST
Evers
98TH PL
I57 HALSTED ST XR
57
I57 EXPY
32
31
30
29
773
108
8A
359
I57 HALSTED ST ER
33
34
35
36
37
38
39
40
HALSTED ST
EMERALD AVE
UNION AVE
LOWE AVE
100TH ST
Fernwood
108

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

Halsted Rail Alternative

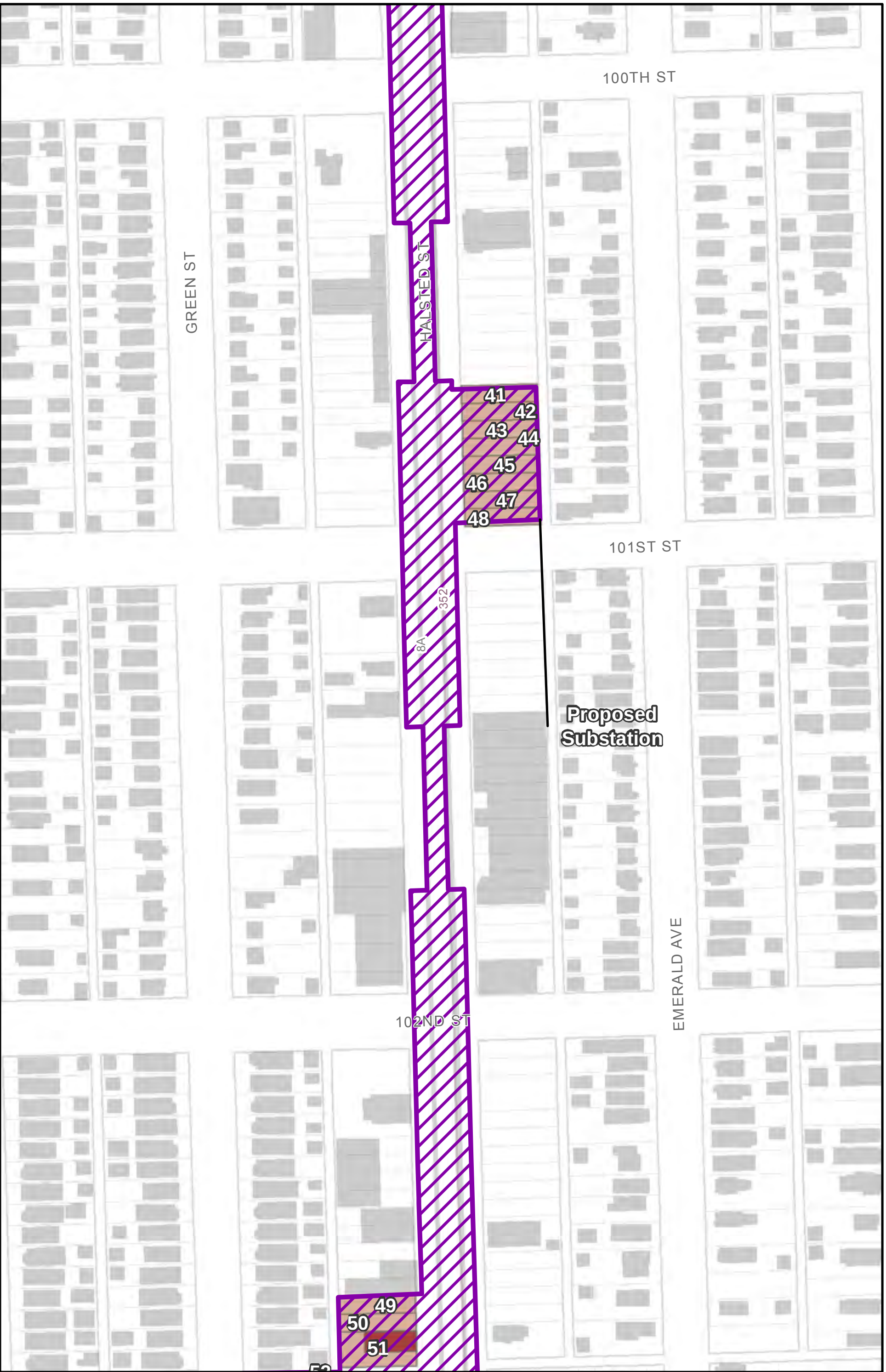
Sheet 6 of 21

▨ Proposed Permanent Envelope
🟦 Easement
🟫 Parcel Affected by Proposed Permanent Envelope
🟥 Building Displacement
⬜ Building Footprint
☐ Parcels
🟩 Parks
🟪 Schools
Freight Rail
49 CTA Bus
290 Pace Bus

Scale

0 125 250
Feet

map id: 03_07.6


100TH ST
GREEN ST
HALSTED ST
41
42
43
44
45
46
47
48
101ST ST
352
8A
Proposed Substation
EMERALD AVE
102ND ST
49
50
51
52

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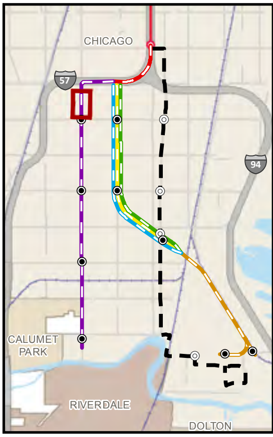

CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

Halsted Rail Alternative

Sheet 7 of 21

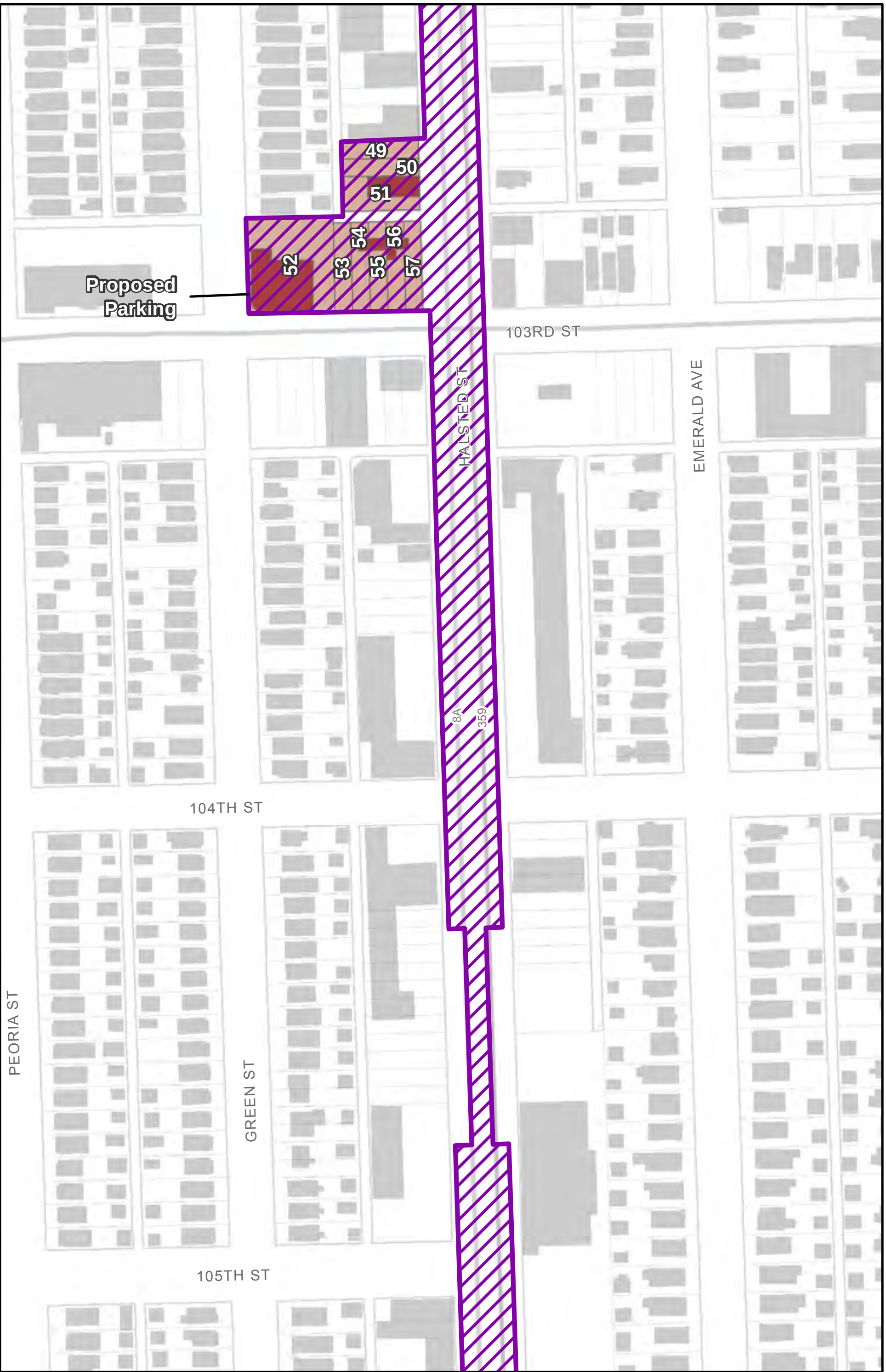
▨	Proposed Permanent Envelope
🟦	Easement
🟫	Parcel Affected by Proposed Permanent Envelope
🟥	Building Displacement
⬜	Building Footprint
☐	Parcels
🟩	Parks
🟪	Schools
-+-+-	Freight Rail
-49-	CTA Bus
-290-	Pace Bus

Scale

0 125 250

Feet

map id: 03_07.7


49
50
51
54
56
52
53
55
57
Proposed Parking
103RD ST
HALSTED ST
EMERALD AVE
8A
359
104TH ST
PEORIA ST
GREEN ST
105TH ST

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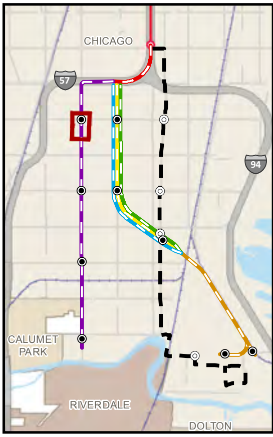

CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

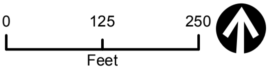
Legend

Halsted Rail Alternative

Sheet 8 of 21

- ▨ Proposed Permanent Envelope
- 🟦 Easement
- 🟫 Parcel Affected by Proposed Permanent Envelope
- 🟥 Building Displacement
- ⬜ Building Footprint
- □ Parcels
- 🟩 Parks
- 🟪 Schools
- -+- Freight Rail
- -49- CTA Bus
- -290- Pace Bus

Scale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125
250
Feet

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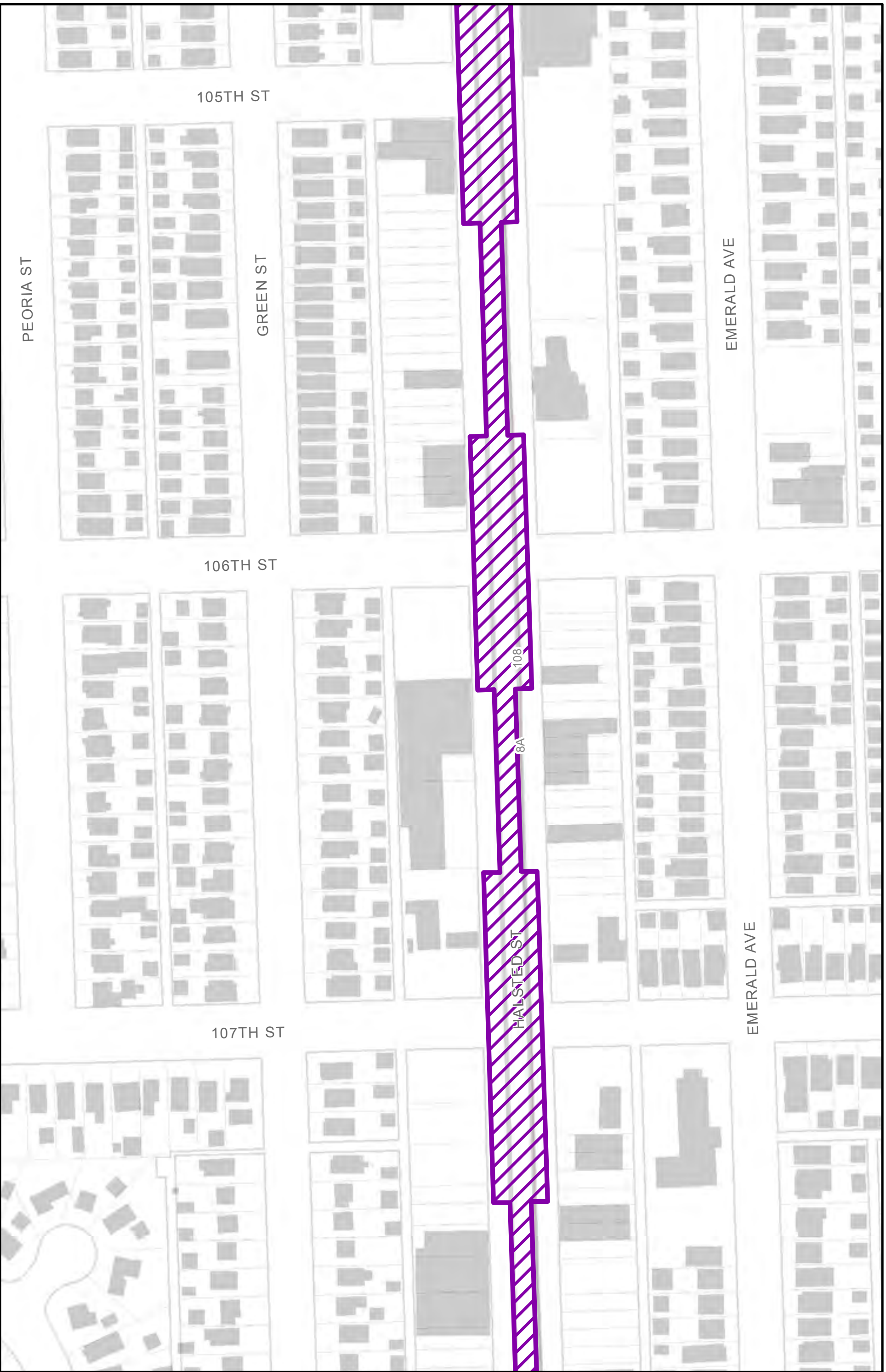
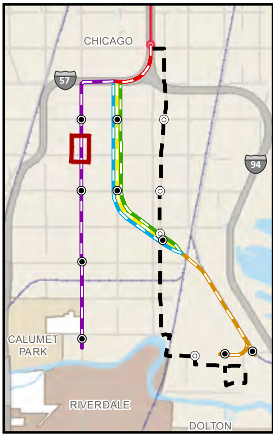

105TH ST
PEORIA ST
GREEN ST
EMERALD AVE
106TH ST
108
8A
HALSTED ST
107TH ST
EMERALD AVE

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

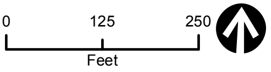
Legend

Halsted Rail Alternative

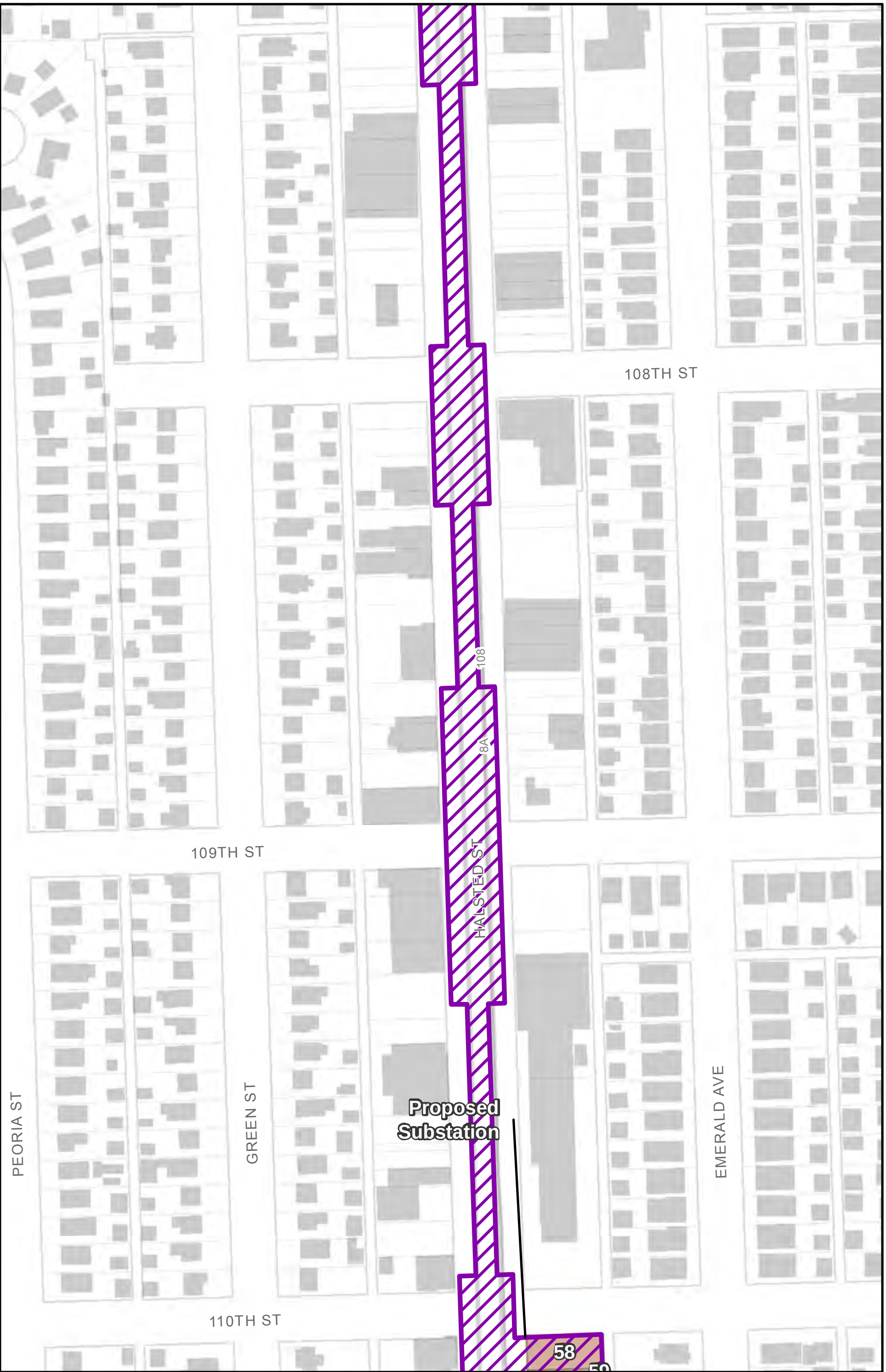
Sheet 9 of 21

- ▨ Proposed Permanent Envelope
- 🟦 Easement
- 🟫 Parcel Affected by Proposed Permanent Envelope
- 🟥 Building Displacement
- ⬜ Building Footprint
- ☐ Parcels
- 🟩 Parks
- 🟪 Schools
- -+-+- Freight Rail
- –49– CTA Bus
- –290– Pace Bus

Scale


0
125
250
Feet

map id: 03_07.9


108TH ST
109TH ST
110TH ST
PEORIA ST
GREEN ST
EMERALD AVE
HALSTED ST
108
8A
Proposed Substation
58

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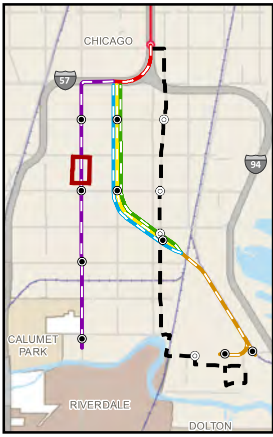

CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

Halsted Rail Alternative

Sheet 10 of 21

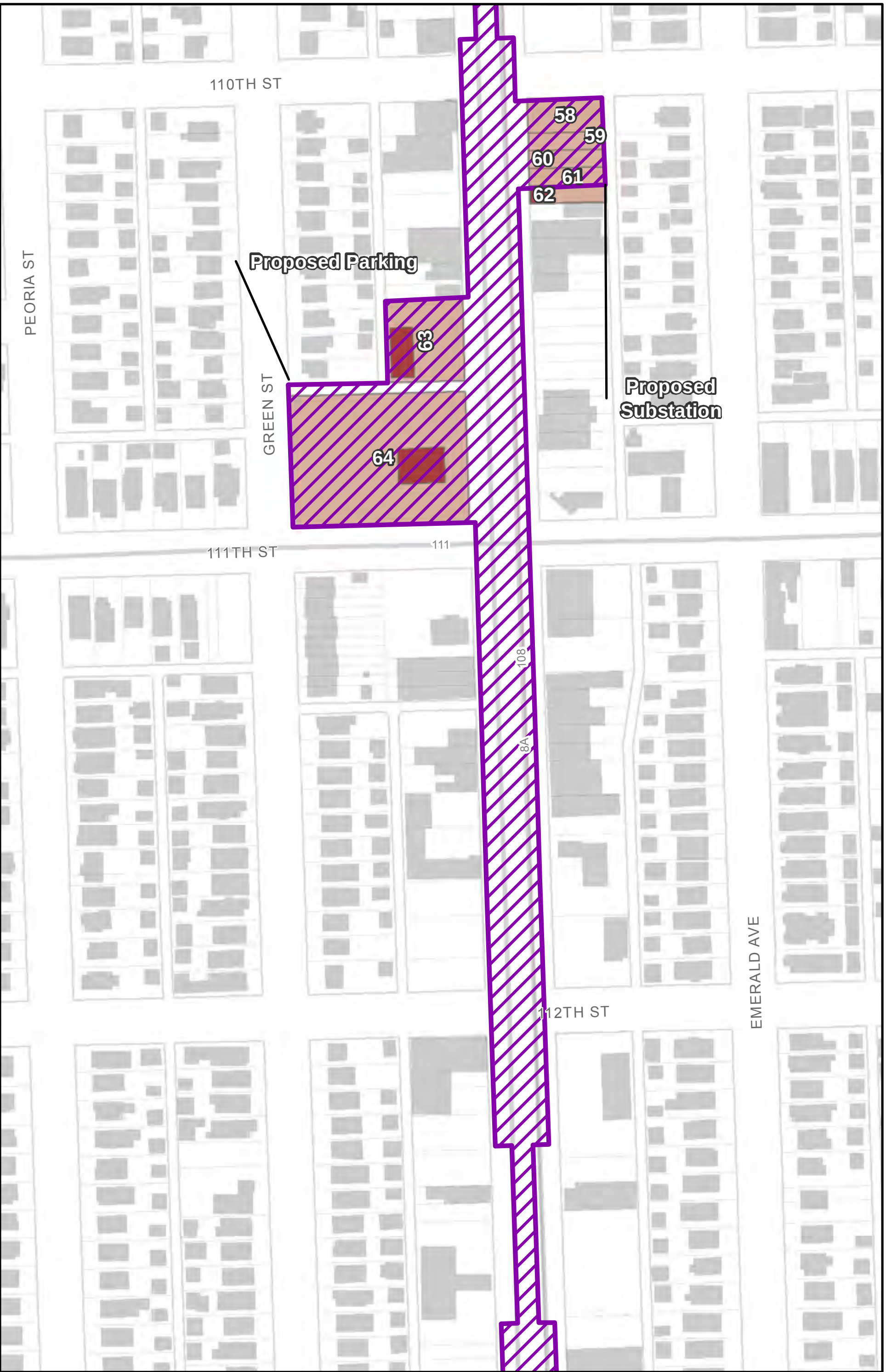
▨	Proposed Permanent Envelope
🟦	Easement
🟫	Parcel Affected by Proposed Permanent Envelope
🟥	Building Displacement
⬜	Building Footprint
☐	Parcels
🟩	Parks
🟪	Schools
-+-+-	Freight Rail
-49-	CTA Bus
-290-	Pace Bus

Scale

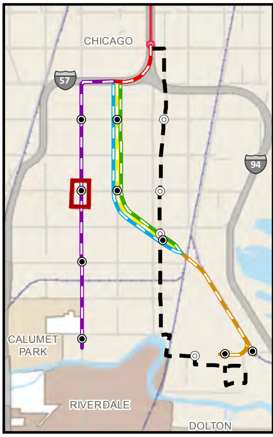
0 125 250

Feet

map id: 03_07.10


110TH ST
PEORIA ST
GREEN ST
58
59
60
61
62
63
64
Proposed Parking
Proposed Substation
111TH ST
111
108
8A
112TH ST
EMERALD AVE

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

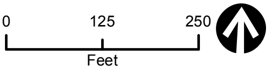
Legend

Halsted Rail Alternative

Sheet 11 of 21

▨ Proposed Permanent Envelope
🟦 Easement
🟫 Parcel Affected by Proposed Permanent Envelope
🟥 Building Displacement
⬜ Building Footprint
⬜ Parcels
🟩 Parks
🟪 Schools
-+-+- Freight Rail
-49- CTA Bus
-290- Pace Bus

Scale


0
125
250
Feet

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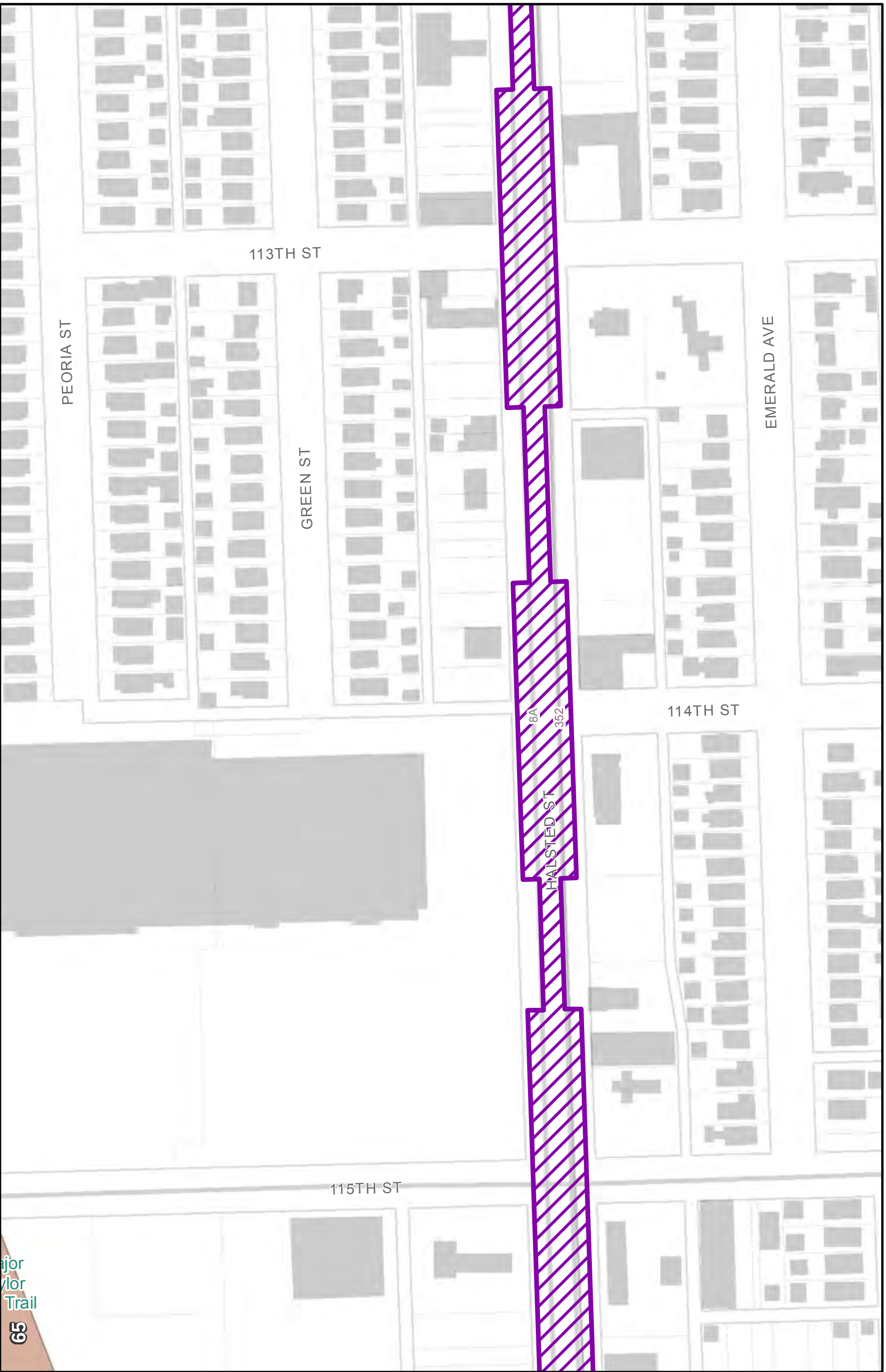
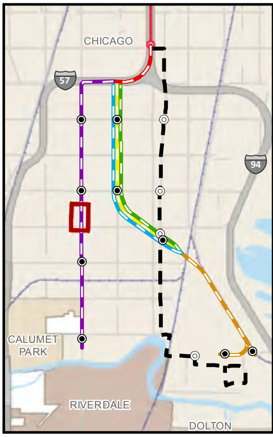

113TH ST
PEORIA ST
GREEN ST
EMERALD AVE
114TH ST
8A
352
HALSTED ST
115TH ST
ajor
ylor
Trail
65

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

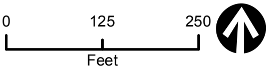
Legend

Halsted Rail Alternative

Sheet 12 of 21

▨	Proposed Permanent Envelope
🟦	Easement
🟫	Parcel Affected by Proposed Permanent Envelope
🟥	Building Displacement
⬜	Building Footprint
□	Parcels
🟩	Parks
🟪	Schools
-+-	Freight Rail
-49-	CTA Bus
-290-	Pace Bus

Scale


0
125
250
Feet

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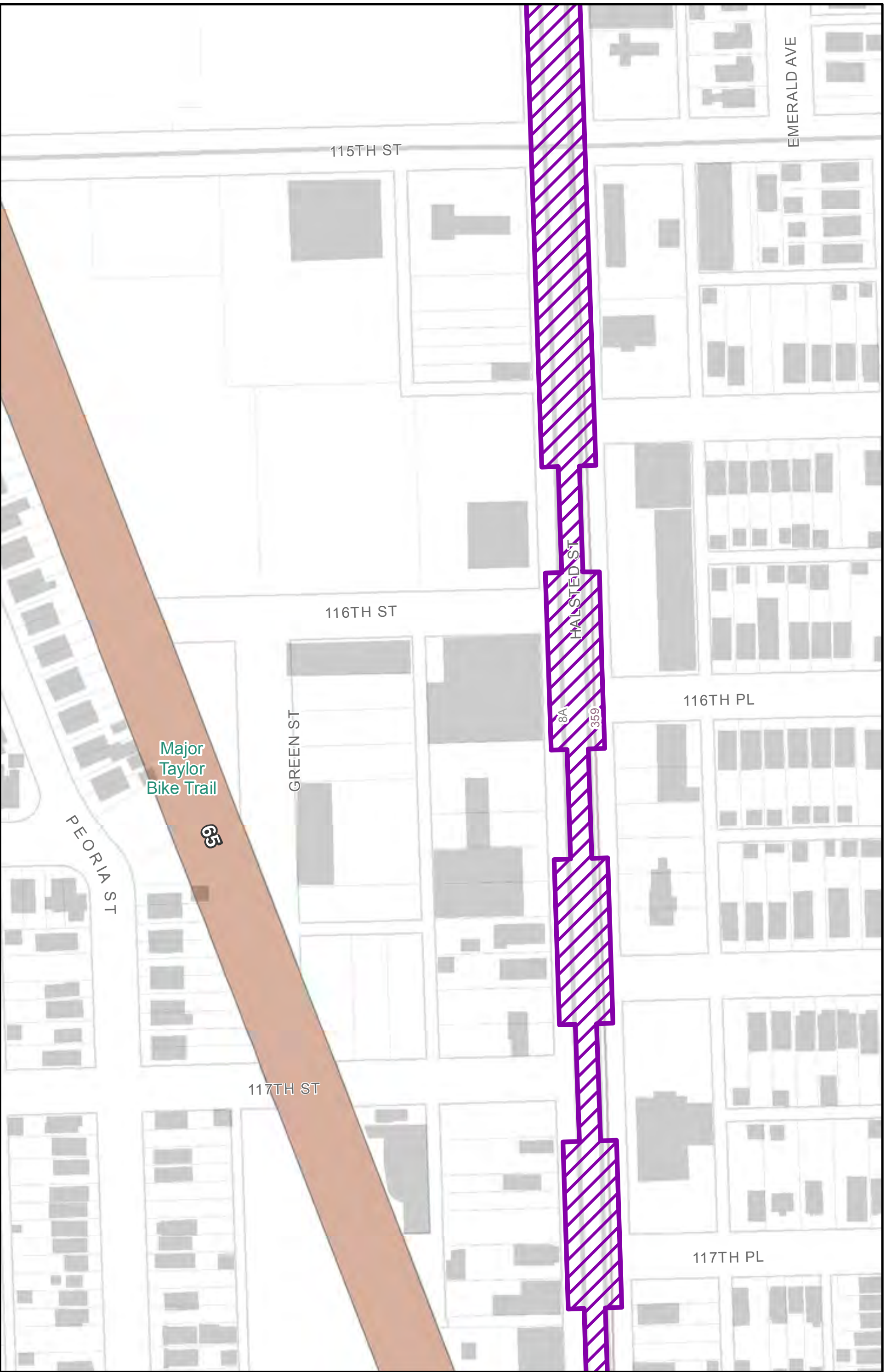
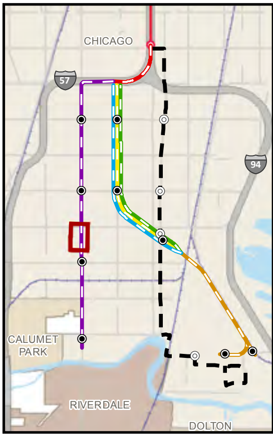

115TH ST
EMERALD AVE
116TH ST
HALSTED ST
116TH PL
8A
359
GREEN ST
Major Taylor Bike Trail
65
PEORIA ST
117TH ST
117TH PL

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

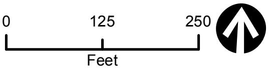
Legend

Halsted Rail Alternative

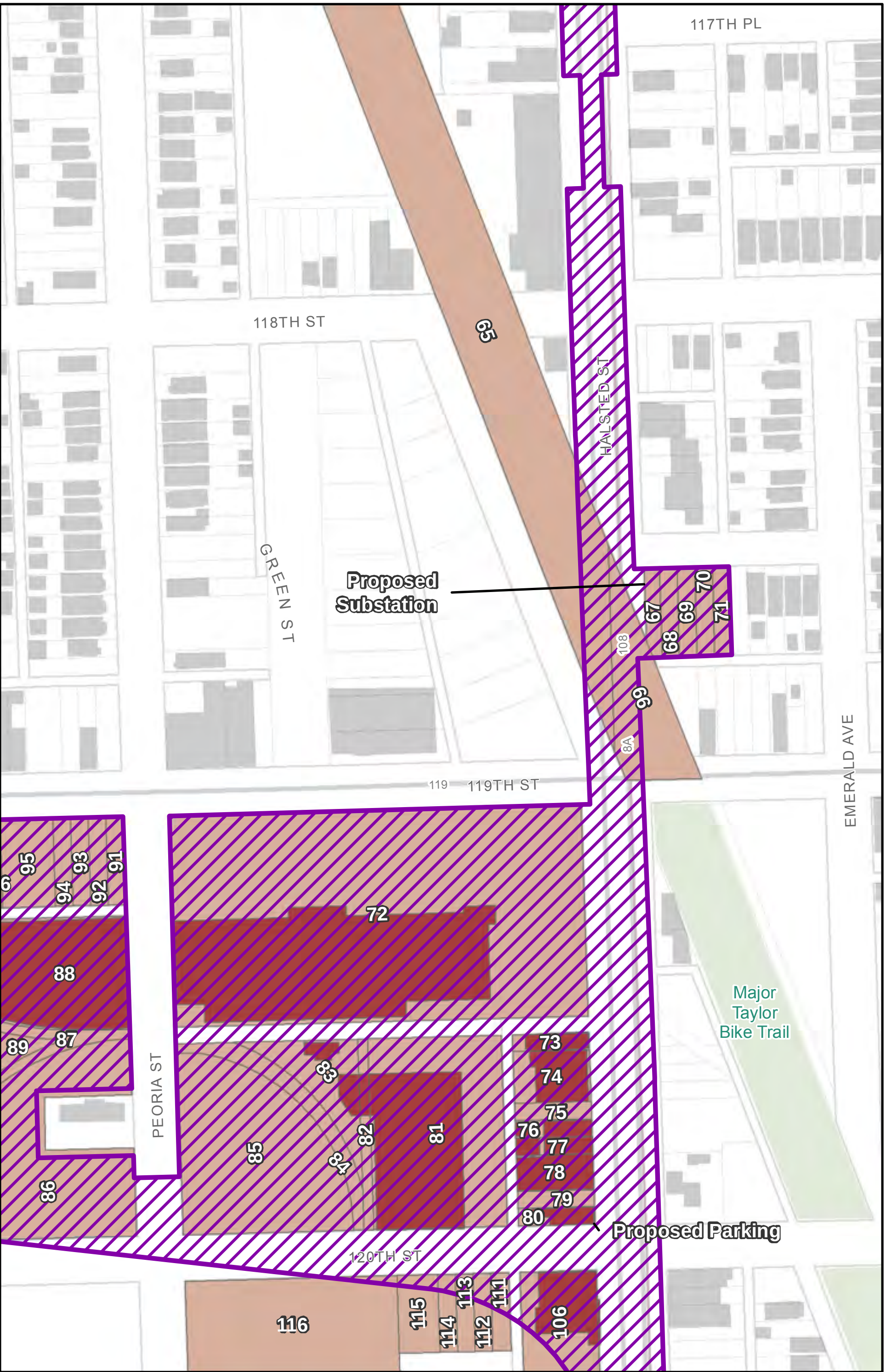
Sheet 13 of 21

▨	Proposed Permanent Envelope
🟦	Easement
🟫	Parcel Affected by Proposed Permanent Envelope
🟥	Building Displacement
⬜	Building Footprint
☐	Parcels
🟩	Parks
🟪	Schools
-+-+-	Freight Rail
-49-	CTA Bus
-290-	Pace Bus

Scale


0
125
250
Feet

map id: 03_07.13


117TH PL
118TH ST
119 119TH ST
120TH ST
HALSTED ST
GREEN ST
PEORIA ST
EMERALD AVE
108
8A
Proposed Substation
Proposed Parking
Major Taylor Bike Trail
65
66
67
68
69
70
71
72
73
74
75
76
77
78
79
80
81
82
83
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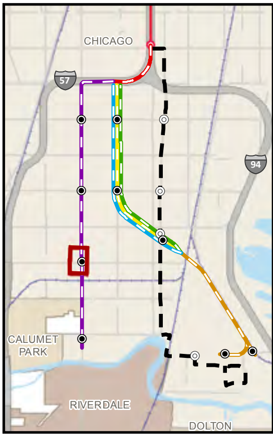
112
113
114
115
116

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

Halsted Rail Alternative

Sheet 14 of 21

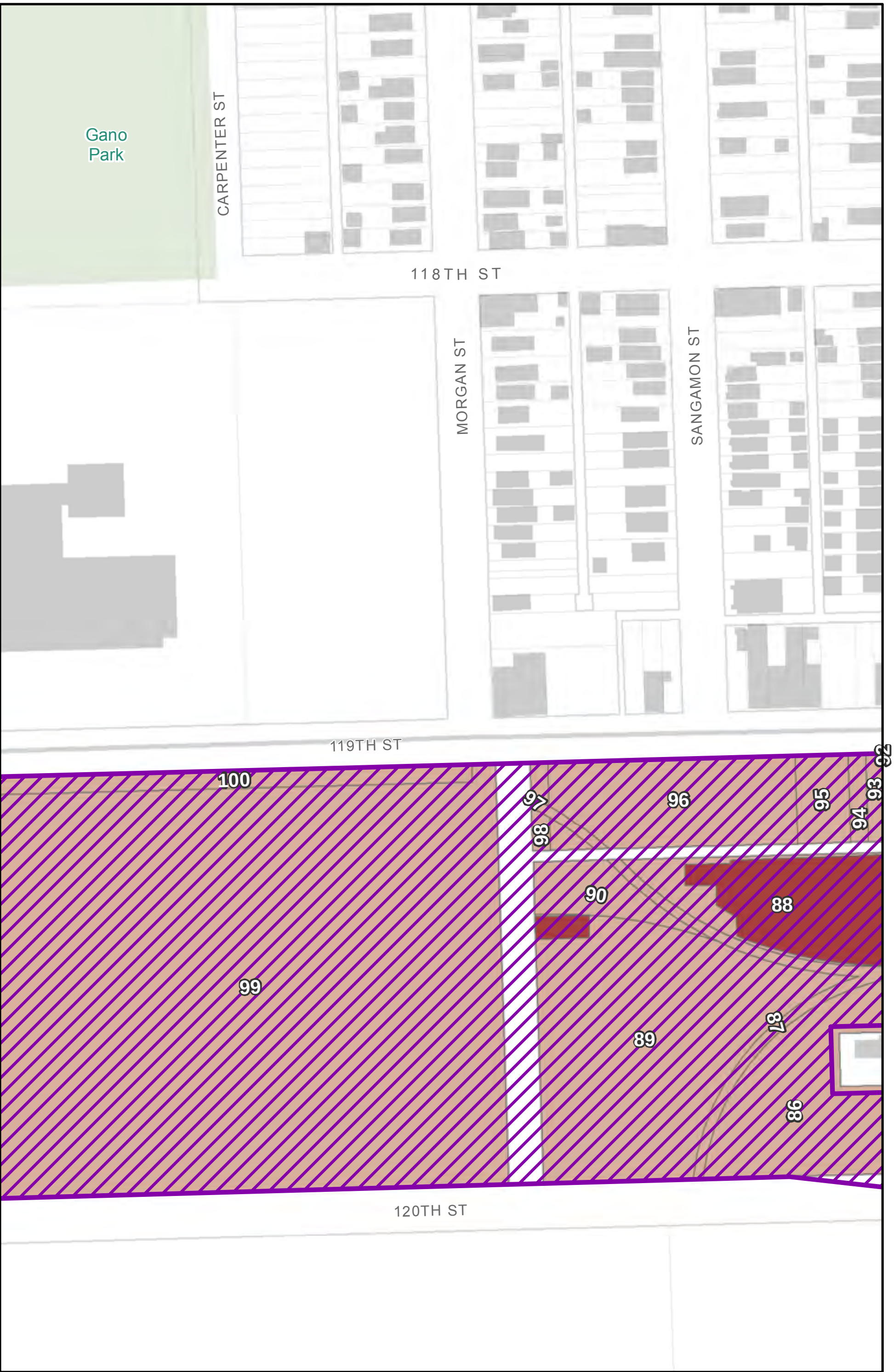
▨	Proposed Permanent Envelope
🟦	Easement
🟫	Parcel Affected by Proposed Permanent Envelope
🟥	Building Displacement
⬜	Building Footprint
☐	Parcels
🟩	Parks
🟪	Schools
‑‑•‑‑	Freight Rail
‑49‑	CTA Bus
‑290‑	Pace Bus

Scale

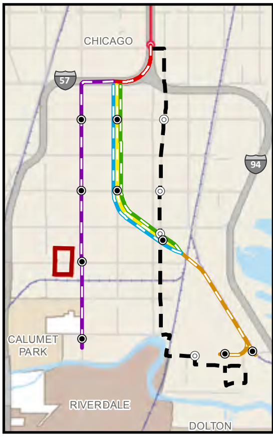
0 125 250

Feet

map id: 03_07.14


Gano Park
CARPENTER ST
118TH ST
MORGAN ST
SANGAMON ST
119TH ST
120TH ST
100
97
96
95
92
93
94
98
90
88
99
87
89
86

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

Halsted Rail Alternative

Sheet 15 of 21

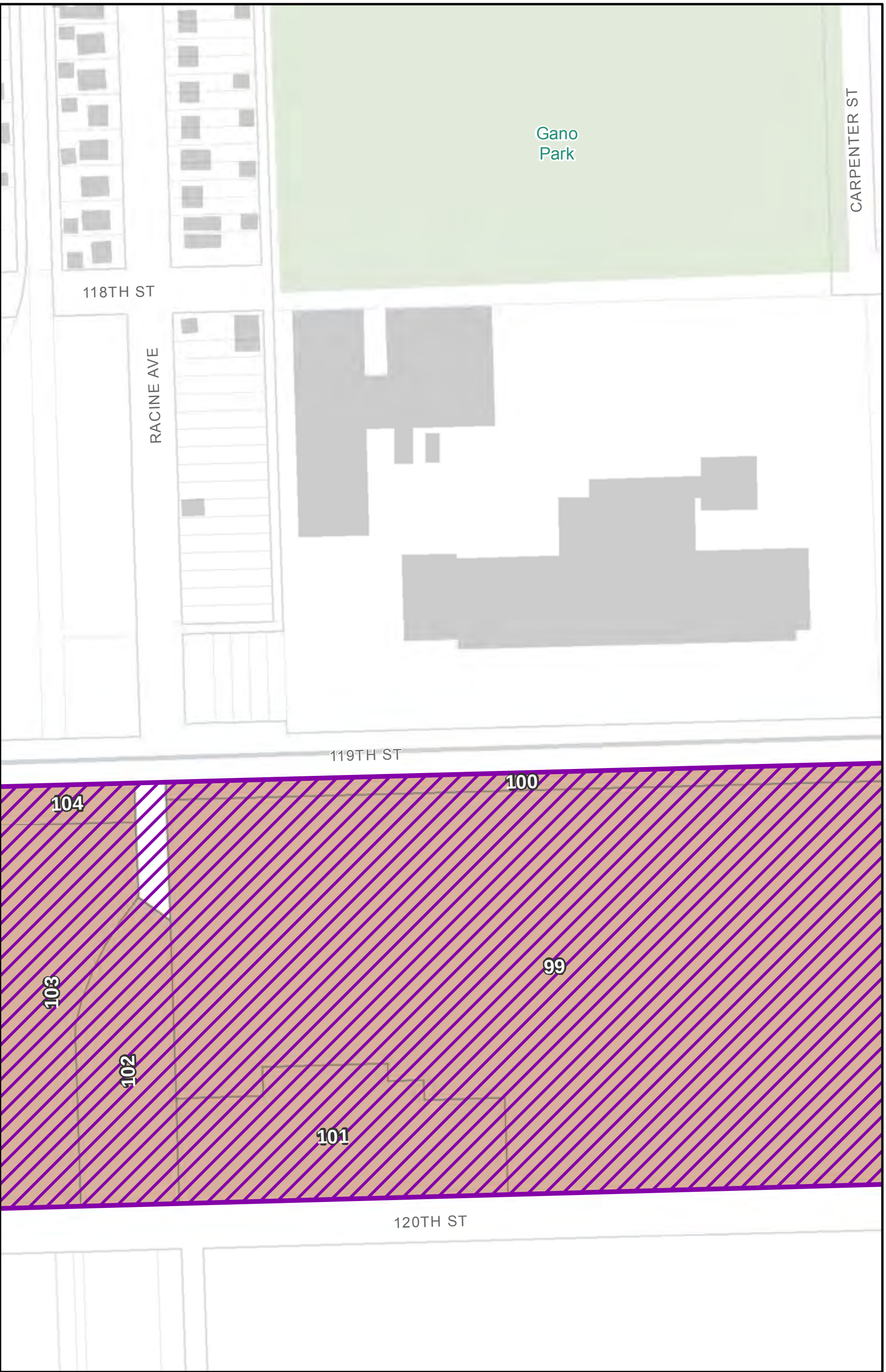
▨	Proposed Permanent Envelope
🟦	Easement
🟫	Parcel Affected by Proposed Permanent Envelope
🟥	Building Displacement
⬜	Building Footprint
☐	Parcels
🟩	Parks
🟪	Schools
-+-+-	Freight Rail
-49-	CTA Bus
-290-	Pace Bus

Scale

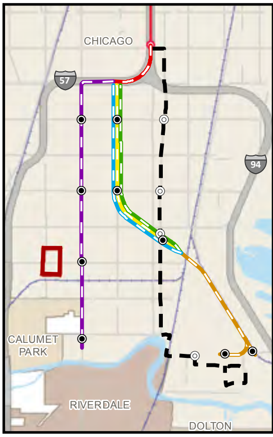
0 125 250

Feet

map id: 03_07.15


Gano
Park
CARPENTER ST
118TH ST
RACINE AVE
119TH ST
100
104
103
99
102
101
120TH ST

Inset


CHICAGO
57
94
CALUMET
PARK
RIVERDALE
DOLTON

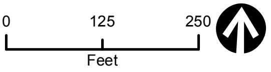
Legend

Halsted Rail Alternative

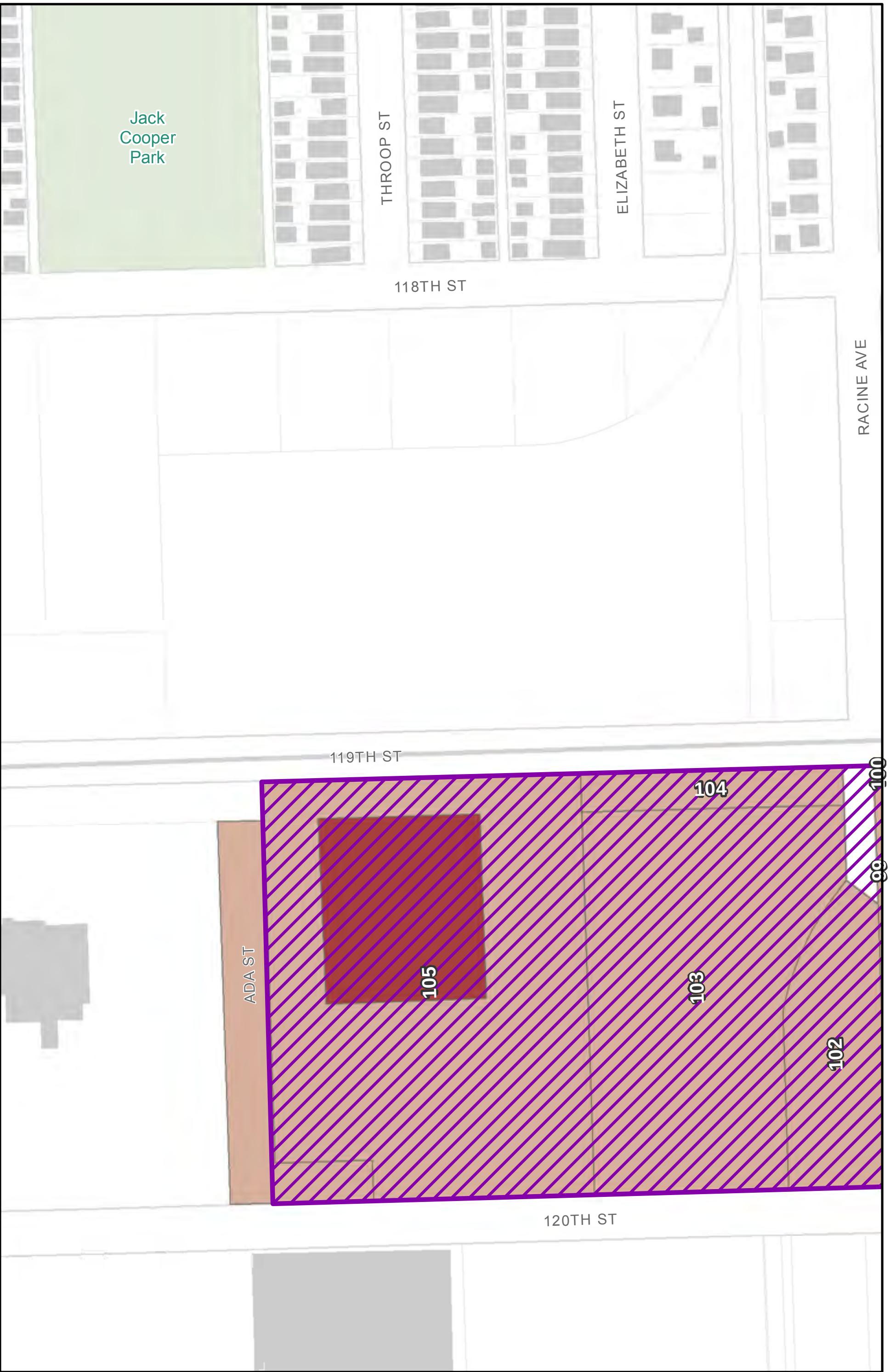
Sheet 16 of 21

▨	Proposed Permanent Envelope
🟦	Easement
🟫	Parcel Affected by Proposed Permanent Envelope
🟥	Building Displacement
⬜	Building Footprint
☐	Parcels
🟩	Parks
🟪	Schools
-+-+-	Freight Rail
-49-	CTA Bus
-290-	Pace Bus

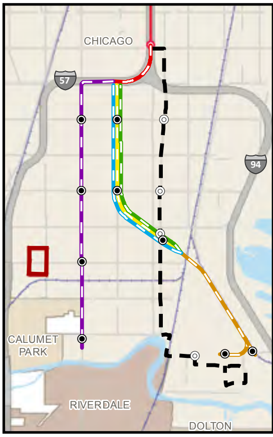
Scale


0
125
250
Feet

map id: 03_07.16


Jack Cooper Park
THROOP ST
ELIZABETH ST
118TH ST
RACINE AVE
119TH ST
104
100
99
ADA ST
105
103
102
120TH ST

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

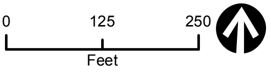
Legend

Halsted Rail Alternative

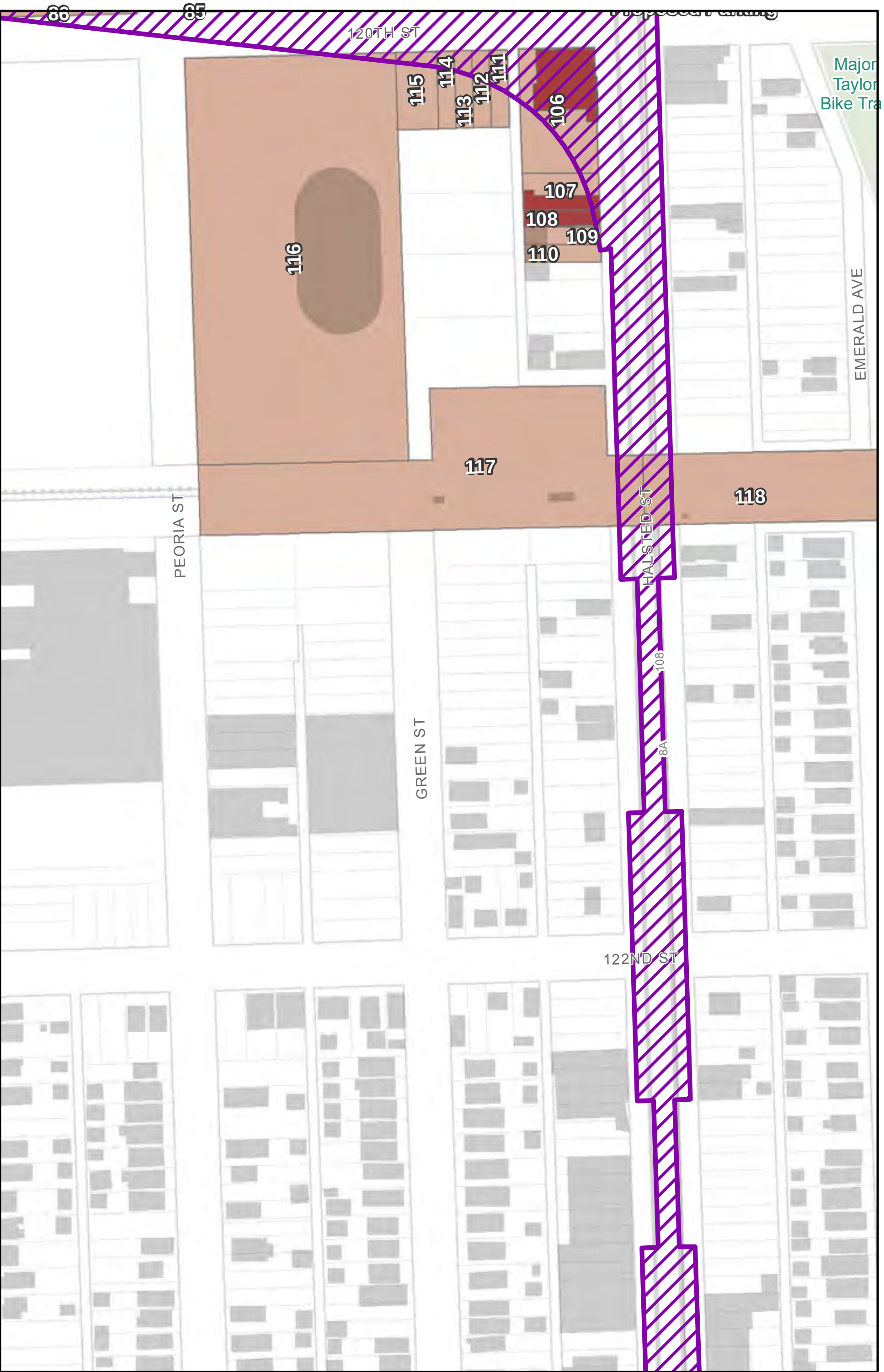
Sheet 17 of 21

▨	Proposed Permanent Envelope
🟦	Easement
🟫	Parcel Affected by Proposed Permanent Envelope
🟥	Building Displacement
⬜	Building Footprint
⬜	Parcels
🟩	Parks
🟪	Schools
-+-+-	Freight Rail
—49—	CTA Bus
—290—	Pace Bus

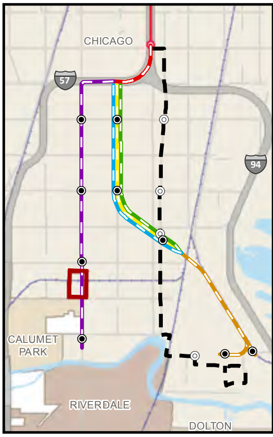
Scale


0
125
250
Feet

map id: 03_07.17


86
85
120TH ST
Major Taylor Bike Tra
115
114
113
112
111
106
107
108
109
110
116
117
118
EMERALD AVE
PEORIA ST
HALSTED ST
108
8A
GREEN ST
122ND ST

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

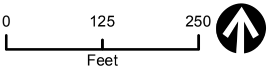
Legend

Halsted Rail Alternative

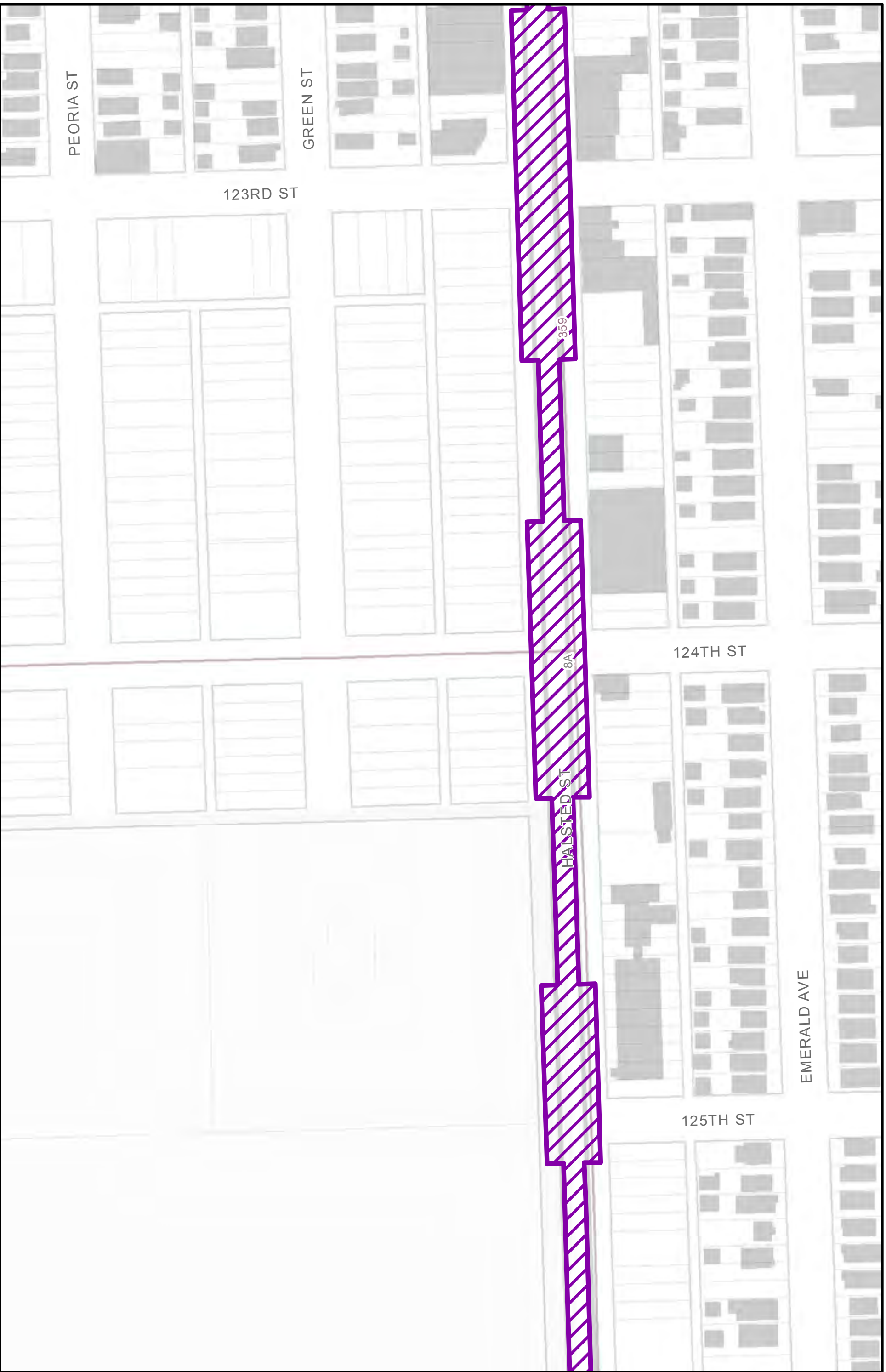
Sheet 18 of 21

▨ Proposed Permanent Envelope
🟦 Easement
🟫 Parcel Affected by Proposed Permanent Envelope
🟥 Building Displacement
⬜ Building Footprint
⬜ Parcels
🟩 Parks
🟪 Schools
-+- Freight Rail
-49- CTA Bus
-290- Pace Bus

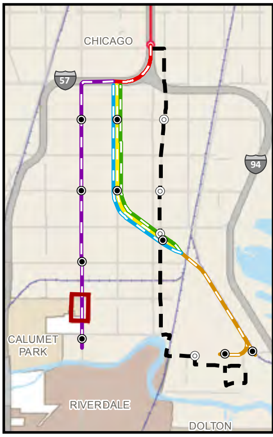
Scale


0
125
250
Feet

map id: 03_07.18


PEORIA ST
GREEN ST
123RD ST
359
124TH ST
8A
HALSTED ST
EMERALD AVE
125TH ST

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

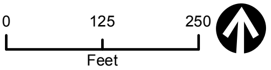
Legend

Halsted Rail Alternative

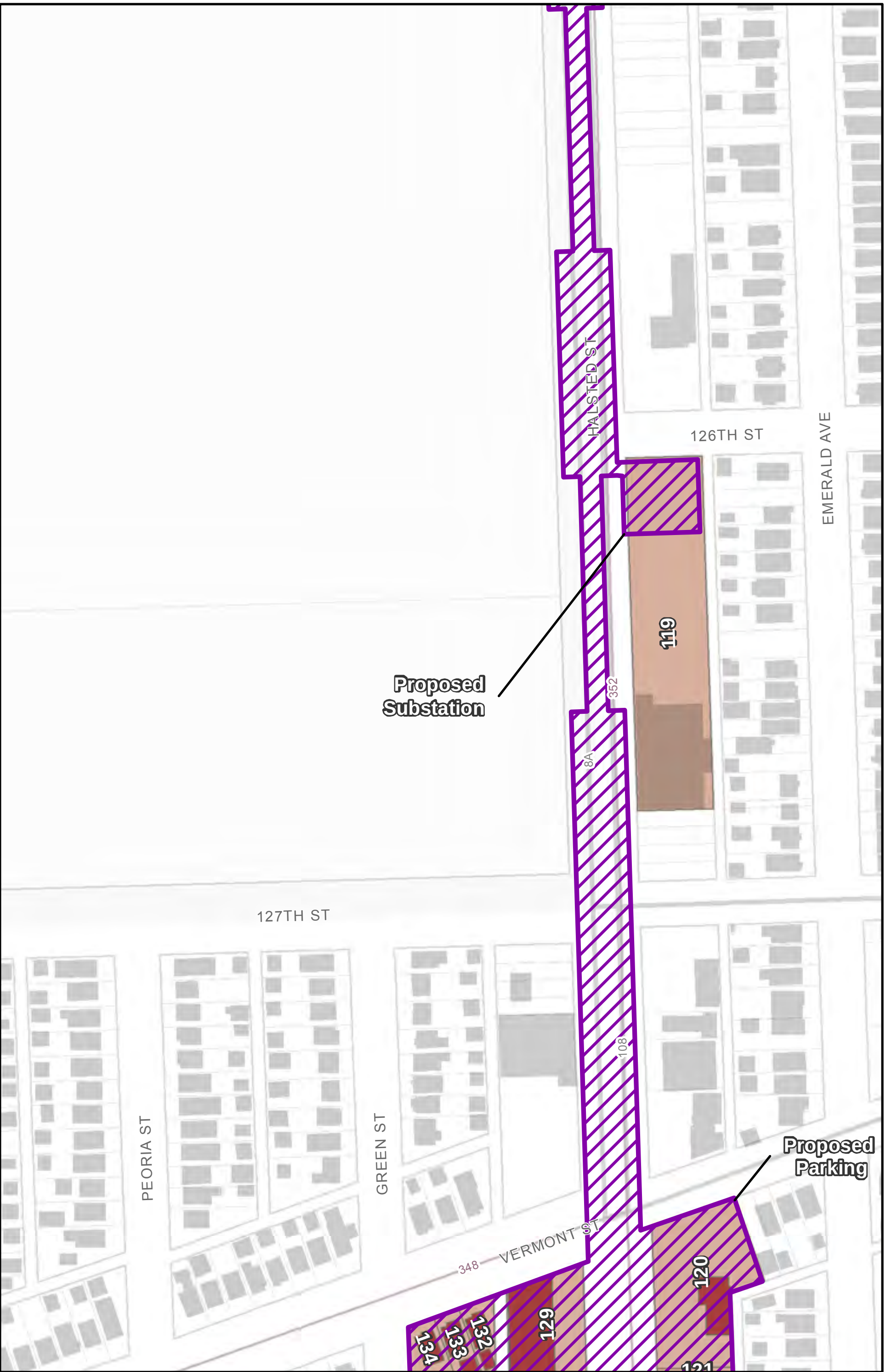
Sheet 19 of 21

▨	Proposed Permanent Envelope
🟦	Easement
🟫	Parcel Affected by Proposed Permanent Envelope
🟥	Building Displacement
⬜	Building Footprint
☐	Parcels
🟩	Parks
🟪	Schools
-+-+-	Freight Rail
-49-	CTA Bus
-290-	Pace Bus

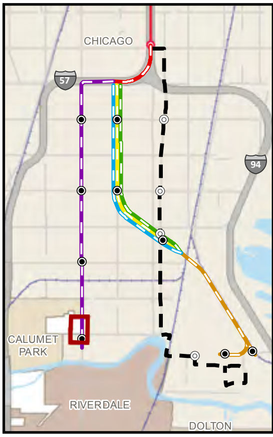
Scale


0
125
250
Feet

map id: 03_07.19


HALSTED ST
126TH ST
EMERALD AVE
119
352
8A
Proposed Substation
127TH ST
PEORIA ST
GREEN ST
108
VERMONT ST
348
Proposed Parking
120
129
132
133
134
121

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

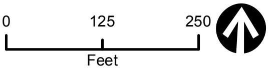
Legend

Halsted Rail Alternative

Sheet 20 of 21

- ▨ Proposed Permanent Envelope
- 🟦 Easement
- 🟫 Parcel Affected by Proposed Permanent Envelope
- 🟥 Building Displacement
- ⬜ Building Footprint
- ⬜ Parcels
- 🟩 Parks
- 🟪 Schools
- ‑‑+‑‑ Freight Rail
- –49– CTA Bus
- –290– Pace Bus

Scale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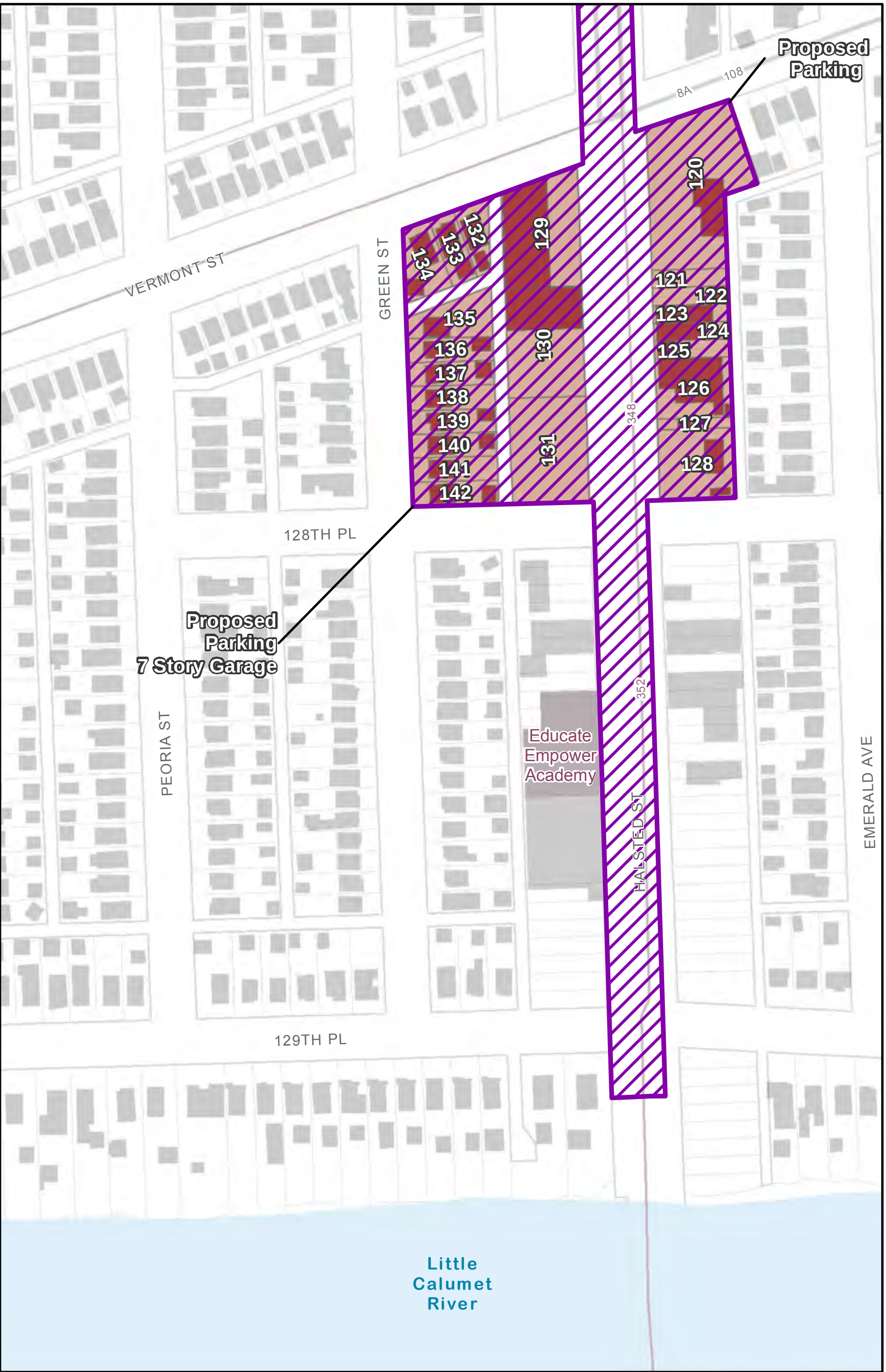
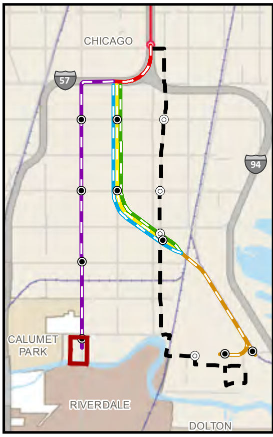
125
250
Feet

map id: 03_07.20


Proposed Parking
8A
108
VERMONT ST
GREEN ST
120
129
132
133
134
121
122
123
124
125
126
127
128
135
136
137
138
139
140
141
142
130
131
348
128TH PL
Proposed Parking
7 Story Garage
PEORIA ST
352
Educate Empower Academy
HALSTED ST
EMERALD AVE
129TH PL
Little Calumet River

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

Halsted Rail Alternative

Sheet 21 of 21

▨	Proposed Permanent Envelope
🟦	Easement
🟫	Parcel Affected by Proposed Permanent Envelope
🟥	Building Displacement
⬜	Building Footprint
⬜	Parcels
🟩	Parks
🟪	Schools
-+-+-	Freight Rail
-49-	CTA Bus
-290-	Pace Bus

Scale

0 125 250

Feet

map id: 03_07.21

Appendix G
Displacements Spreadsheets

Data Definitions
CTA RLE Displacement Excel Database

COLUMN HEADING	**DEFINITION**
Division	Geographic limits based on organization of Technical Memorandum Section 5
Segment	Geographic Segment corresponding to the Definition of Alternatives
Map ID	Number corresponding to a parcel on appendix map figure for each alternative
Parcel ID	Cook County Assessor parcel identification number
Address	Cook County Assessor parcel street address
Land Use – Field Verified	Field verified land use designations based on Cook County and CMAP data
Field Notes	Field survey notes used for parcel analysis in Technical Memorandum Section 5
Displacement Type	Type of effect on parcel by proposed alternative
Building Displacement	Number of building displacements within parcel
Land Use – Cook County	Cook County Assessor Land Use based on IMP_CODE

BRT Alternative
Parcels Affected by Land Acquisitions and Easements

Map ID	Segment	Parcel ID	Address	Land Use - Field Verified	Field Notes	Displacement Type	Displacement Subtype	Building Displace-ment	Land Use - Cook County
1	TSM/BRT	25103240010000	10205 S MICHIGAN AVE, CHICAGO	Public (City of Chicago)		Affected Parcel	Parking	0	EXEMPT - City of Chicago
2	TSM/BRT	25103240020000	10207 S MICHIGAN AVE, CHICAGO	Public (City of Chicago)		Affected Parcel	Parking	0	EXEMPT - City of Chicago
3	TSM/BRT	25103240030000	10207 S MICHIGAN AVE, CHICAGO	Public (City of Chicago)		Affected Parcel	Parking	0	EXEMPT - City of Chicago
4	TSM/BRT	25103240040000	10209 S MICHIGAN AVE, CHICAGO	Public (City of Chicago)		Affected Parcel	Parking	0	EXEMPT - City of Chicago
5	TSM/BRT	25103240050000	10213 S MICHIGAN AVE, CHICAGO	Single Family Residential		Parcel with Building Displacement	Parking	1	Residential
6	TSM/BRT	25103240060000	10215 S MICHIGAN AVE, CHICAGO	Public (City of Chicago)		Affected Parcel	Parking	0	EXEMPT - City of Chicago
7	TSM/BRT	25103240070000	10217 S MICHIGAN AVE, CHICAGO	Public (City of Chicago)		Affected Parcel	Parking	0	EXEMPT - City of Chicago
8	TSM/BRT	25103240080000	10219 S MICHIGAN AVE, CHICAGO	Vacant		Affected Parcel	Parking	0	Vacant
9	TSM/BRT	25103240090000	10221 S MICHIGAN AVE, CHICAGO	Vacant		Affected Parcel	Parking	0	Vacant
10	TSM/BRT	25103240100000	10225 S MICHIGAN AVE, CHICAGO	Vacant		Affected Parcel	Parking	0	Vacant
11	TSM/BRT	25103240110000	10229 S MICHIGAN AVE, CHICAGO	Vacant		Affected Parcel	Parking	0	Vacant
12	TSM/BRT	25103240120000	10231 S MICHIGAN AVE, CHICAGO	Commercial	cell tower site covers 2 parcels	Affected Parcel	Parking	Counted	Vacant
13	TSM/BRT	25103240490000	10235 S MICHIGAN AVE, CHICAGO	Vacant		Affected Parcel	Parking	0	Vacant
14	TSM/BRT	25103240480000	10235 S MICHIGAN AVE, CHICAGO	Commercial	United State Cellular	Parcel with Building Displacement	Parking	1	Commercial
15	TSM/BRT	25103240140000	10239 S MICHIGAN AVE, CHICAGO	Vacant		Affected Parcel	Parking	0	Vacant
16	TSM/BRT	25221010010000	1 E 111TH PL, CHICAGO	Institution (Place of Worship)	New Testament Baptist Church	Affected Parcel	Parking	0	EXEMPT - Place of Worship
17	TSM/BRT	25221010370000	25221010370000	Vacant		Affected Parcel	Parking	0	No information provided
18	TSM/BRT	25221010380000	25221010380000	Vacant		Affected Parcel	Parking	0	No information provided
19	TSM/BRT	25221010390000	25221010390000	Vacant		Affected Parcel	Parking	0	No information provided
20	TSM/BRT	25221010400000	25221010400000	Vacant		Affected Parcel	Parking	0	No information provided
21	TSM/BRT	25221010410000	25221010410000	Vacant		Affected Parcel	Parking	0	No information provided
22	TSM/BRT	25221010420000	25221010420000	Vacant		Affected Parcel	Parking	0	No information provided
23	TSM/BRT	25221010080000	23 E 111TH PL, CHICAGO	Public (City of Chicago)		Affected Parcel	Parking	0	EXEMPT - City of Chicago
24	TSM/BRT	25221010090000	25 E 111TH PL, CHICAGO	Public (City of Chicago)		Affected Parcel	Parking	0	EXEMPT - City of Chicago
25	TSM/BRT	25221010100000	27 E 111TH PL, CHICAGO	Public (City of Chicago)		Affected Parcel	Parking	0	EXEMPT - City of Chicago
26	TSM/BRT	25221010110000	29 E 111TH PL, CHICAGO	Public (City of Chicago)		Affected Parcel	Parking	0	EXEMPT - City of Chicago
27	TSM/BRT	25221010220000	22 E 112TH ST, CHICAGO	Vacant		Affected Parcel	Parking	0	Vacant
28	TSM/BRT	25221010230000	24 E 112TH ST, CHICAGO	Public (City of Chicago)		Affected Parcel	Parking	0	EXEMPT - City of Chicago
29	TSM/BRT	25221010240000	26 E 112TH ST, CHICAGO	Public (City of Chicago)		Affected Parcel	Parking	0	EXEMPT - City of Chicago
30	TSM/BRT	25221010250000	30 E 112TH ST, CHICAGO	Public (City of Chicago)		Affected Parcel	Parking	0	EXEMPT - City of Chicago
31	TSM/BRT	25221010260000	32 E 112TH ST, CHICAGO	Public (City of Chicago)		Affected Parcel	Parking	0	EXEMPT - City of Chicago
32	TSM/BRT	25221010270000	34 E 112TH ST, CHICAGO	Public (City of Chicago)		Affected Parcel	Parking	0	EXEMPT - City of Chicago
33	TSM/BRT	25223040500000	11555 S MICHIGAN AVE, CHICAGO	Vacant		Affected Parcel	Parking	0	Vacant
34	TSM/BRT	25223040470000	113 E KENSINGTON AVE, CHICAGO	Vacant		Affected Parcel	Parking	0	Vacant
35	TSM/BRT	25223040490000	11557 S MICHIGAN AVE, CHICAGO	Vacant		Affected Parcel	Parking	0	Vacant
36	TSM/BRT	25223040050000	11563 S MICHIGAN AVE, CHICAGO	Industrial	11563, 11565, & 11567 S Michigan contain one vacant industrial building	Parcel with Building Displacement	Parking	Counted	EXEMPT
37	TSM/BRT	25223040060000	11565 S MICHIGAN AVE, CHICAGO	Industrial	11563, 11565, & 11567 S Michigan contain one vacant industrial building	Parcel with Building Displacement	Parking	Counted	Vacant

BRT Alternative
Parcels Affected by Land Acquisitions and Easements

Map ID	Segment	Parcel ID	Address	Land Use - Field Verified	Field Notes	Displacement Type	Displacement Subtype	Building Displace-ment	Land Use - Cook County
38	TSM/BRT	25223040070000	11567 S MICHIGAN AVE, CHICAGO	Industrial	11563, 11565, & 11567 S Michigan contain one vacant industrial building	Parcel with Building Displacement	Parking	1	EXEMPT
39	TSM/BRT	25223040080000	11579 S MICHIGAN AVE, CHICAGO	Public (City of Chicago)		Affected Parcel	Parking	0	EXEMPT - City of Chicago
40	TSM/BRT	25225000010000	100 E 116TH ST, CHICAGO	Transportation (railroad)	UPRR	Affected Parcel	Parking		EXEMPT - Railroad
41	TSM/BRT	25223040270000	120 E 116TH ST, CHICAGO	Public (City of Chicago)		Affected Parcel	Parking	0	EXEMPT
42	TSM/BRT	25223040280000	122 E 116TH ST, CHICAGO	Public (City of Chicago)		Affected Parcel	Parking	0	EXEMPT - City of Chicago
43	TSM/BRT	25223040290000	124 E 116TH ST, CHICAGO	Public (City of Chicago)		Affected Parcel	Parking	0	EXEMPT
44	TSM/BRT	25223040300000	128 E 116TH ST, CHICAGO	Public (City of Chicago)		Affected Parcel	Parking	0	EXEMPT
45	TSM/BRT	25223040310000	130 E 116TH ST, CHICAGO	Public (City of Chicago)		Affected Parcel	Parking	0	EXEMPT
46	TSM/BRT	25223040320000	132 E 116TH ST, CHICAGO	Public (City of Chicago)		Affected Parcel	Parking	0	EXEMPT
47	TSM/BRT	25223040330000	134 E 116TH ST, CHICAGO	Public (City of Chicago)		Affected Parcel	Parking	0	EXEMPT
48	TSM/BRT	25223040340000	136 E 116TH ST, CHICAGO	Public (City of Chicago)		Affected Parcel	Parking	0	EXEMPT
49	TSM/BRT	25223040350000	140 E 116TH ST, CHICAGO	Vacant	Vacant lot	Affected Parcel	Parking	0	Single Family Residential
50	TSM/BRT	25223040360000	142 E 116TH ST, CHICAGO	Vacant		Affected Parcel	Parking	0	Vacant
51	TSM/BRT	25273010080000	320 E 130TH ST, CHICAGO	Utility (MWRD)		Affected Parcel	Parking	0	EXEMPT-METRO WATER RECLM DIST
52	TSM/BRT	25273010090000	340 E 130TH ST, CHICAGO	Utility (MWRD)		Affected Parcel	Parking	0	EXEMPT-METRO WATER RECLM DIST

Building Displacement Summary Table	
Total	3

UPRR HRT Alternative - ROW Option
Parcels Affected by Land Acquisitions and Easements

Division	Segment	Map ID	Parcel ID	Address	Land Use - Field Verified	Field Notes	Displacement Type	Displacement Subtype	Building Displacement	Land Use - Cook County
95th - 99th	UA	1	25092070500000	9512 S STATE ST, CHICAGO	Transportation (highway)	I-94	Easement	ROW	0	EXEMPT - Cook County
95th - 99th	UA	2	25092070490000	9511 W 95TH ST, CHICAGO	Transportation (highway)	I-94	Easement	ROW	0	EXEMPT - Cook County
95th - 99th	UA	3	25092150010000	9600 S LAFAYETTE AVE, CHICAGO	Transportation (highway)	I-94	Easement	ROW	0	EXEMPT - Cook County
95th - 99th	UA	4	25092230430000	9721 S LAFAYETTE AVE, CHICAGO	Transportation (highway)	I-94	Easement	ROW	0	EXEMPT - Cook County
95th - 99th	UA	5	25092220420000	9720 S LAFAYETTE AVE, CHICAGO	Transportation (highway)	I-94	Easement	ROW	0	EXEMPT - Cook County
95th - 99th	UA	6	25092220410000	9701 S PRINCETON AVE, CHICAGO	Transportation (highway)	I-94	Easement	ROW	0	EXEMPT - Cook County
95th - 99th	UA	7	25092210420000	9710 S PERRY AVE, CHICAGO	Transportation (highway)	I-94	Easement	ROW	0	EXEMPT - Cook County
95th - 99th	UA	8	25092290420000	9800 S PERRY ST, CHICAGO	Transportation (highway)	I-94	Easement	ROW	0	EXEMPT - Cook County
95th - 99th	UA	9	25092290410000	9801 S LASALLE ST, CHICAGO	Transportation (highway)	I-94	Easement	ROW	0	EXEMPT - Cook County
95th - 99th	UA	10	25092280420000	9800 S LASALLE ST, CHICAGO	Transportation (highway)	I-94	Easement	ROW	0	EXEMPT - Cook County
95th - 99th	UA	11	25092280410000	9801 S WENTWORTH AVE, CHICAGO	Transportation (highway)	I-94	Easement	ROW	0	EXEMPT - Cook County
95th - 99th	UA	12	25092270410000	9807 S YALE AVE, CHICAGO	Transportation (highway)	I-57	Easement	ROW	0	EXEMPT - Cook County
95th - 99th	UA	13	25092260440000	9810 S YALE AVE, CHICAGO	Transportation (highway)	I-57	Easement	ROW	0	EXEMPT - Cook County
95th - 99th	UA	14	25092260470000	9819 S PRINCETON AVE, CHICAGO	Transportation (highway)	I-57	Easement	ROW	0	EXEMPT - Cook County
95th - 99th	UA	15	25092250300000	9826 S PRINCETON AVE, CHICAGO	Transportation (highway)	I-57	Easement	ROW	0	EXEMPT - Cook County
95th - 99th	UA	16	25092250440000	9825 S HARVARD AVE, CHICAGO	Transportation (highway)	I-57	Easement	ROW	0	EXEMPT - Cook County
95th - 99th	UA	17	25092250450000	352 W 99TH ST, CHICAGO	Transportation (highway)	I-57	Easement	ROW	0	EXEMPT - Cook County
95th - 99th	UA	18	25092250480000	350 W 99TH ST, CHICAGO	Transportation (highway)	I-57	Easement	ROW	0	EXEMPT - Cook County
95th - 99th	UA	19	25092240200000	356 W 99TH ST, CHICAGO	Transportation (highway)	I-57	Easement	ROW	0	EXEMPT - Cook County
95th - 99th	UA	20	25092240110000	354 W 99TH ST, CHICAGO	Transportation (highway)	I-57	Easement	ROW	0	EXEMPT - Cook County
95th - 99th	UA	21	25092240100000	352 W 99TH ST, CHICAGO	Transportation (highway)	I-57	Easement	ROW	0	EXEMPT - Cook County
95th - 99th	UA	22	25092240090000	350 W 99TH ST, CHICAGO	Transportation (highway)	I-57	Easement	ROW	0	Vacant
99th - 103rd	UA	23	25094000470000	312 W 99TH PL, CHICAGO	Parkland	Wendell Smith Park	(See *Parklands and Community Resources Technical Memorandum* for park impacts.)	ROW	0	EXEMPT - Parkland
99th - 103rd	UA	24	25094000460000	341 W 99TH ST, CHICAGO	Public (City of Chicago)	UPRR - Assumed to be City-Owned for UP ROW Option	Affected Parcel	ROW	0	EXEMPT - Railroad
99th - 103rd	UA	25	25095000020000	351 W 99TH ST, CHICAGO	Public (City of Chicago)	UPRR - Assumed to be City-Owned for UP ROW Option	Affected Parcel	ROW	0	EXEMPT - Railroad

UPRR HRT Alternative - ROW Option
Parcels Affected by Land Acquisitions and Easements

Division	Segment	Map ID	Parcel ID	Address	Land Use - Field Verified	Field Notes	Displacement Type	Displacement Subtype	Building Displace-ment	Land Use - Cook County
99th - 103rd	UA	26	25099990010000	25099990010000	Public (City of Chicago)	UPRR - Assumed to be City-Owned for UP ROW Option	Affected Parcel	ROW	0	NA
99th - 103rd	UA	27	25094240690000	350 W 103RD ST, CHICAGO	Exempt - Railroad	103rd Street Station (UPRR) - Assumed to be City-Owned for UP ROW Option	Affected Parcel	Parking	0	EXEMPT - Railroad
99th - 103rd	UA	28	25094240600000	340 W 103RD ST, CHICAGO	Vacant	103rd Street Station (vacant)	Affected Parcel	Parking	0	Vacant
99th - 103rd	UA	29	25161050340000	405 W 103RD ST, CHICAGO	Single Family Residential		Parcel with Building Displacement	Parking	1	Residential
99th - 103rd	UA	30	25161050350000	403 W 103RD ST, CHICAGO	Commercial	Vacant building - potentially historic	Parcel with Building Displacement	Parking	1	Commercial
99th - 103rd	UA	31	25161050360000	401 W 103RD ST, CHICAGO	Public (City of Chicago)		Affected Parcel	Parking	0	EXEMPT - City of Chicago
99th - 103rd	UA	32	25169990010000	25169990010000	Public (City of Chicago)	Parcel affected at W 105th Pl and W 107th St, Assumed to be City-Owned for UP ROW Option	Affected Parcel	ROW	0	NA
99th - 103rd	UA	33	25165000030000	361 W 103RD ST, CHICAGO	Public (City of Chicago)	UPRR - Assumed to be City-Owned for UP ROW Option	Affected Parcel	Parking	0	EXEMPT - Railroad
99th - 103rd	UA	34	25165000010000	359 W 103RD ST, CHICAGO	Public (City of Chicago)	UPRR - Assumed to be City-Owned for UP ROW Option	Affected Parcel	Parking	0	EXEMPT - Railroad
99th - 103rd	UA	35	25161050330000	400 W 103RD PL, CHICAGO	Vacant	CTA Commuter Parking (vacant lot)	Affected Parcel	Parking	0	Vacant
103rd - 111th	UA	36	25165000020000	362 W 104TH ST, CHICAGO	Public (City of Chicago)	UPRR - Assumed to be City-Owned for UP ROW Option	Affected Parcel	ROW	0	EXEMPT - Railroad
103rd - 111th	UA	37	25165000050000	360 W 104TH PL, CHICAGO	Public (City of Chicago)	UPRR - Assumed to be City-Owned for UP ROW Option	Affected Parcel	ROW	0	EXEMPT - Railroad
103rd - 111th	UA	38	25165000060000	360 W 105TH ST, CHICAGO	Public (City of Chicago)	UPRR - Assumed to be City-Owned for UP ROW Option	Affected Parcel	ROW	0	EXEMPT - Railroad
103rd - 111th	UA	39	25161130310000	400 W 105TH ST, CHICAGO	Vacant	Substation Location (vacant lot)	Affected Parcel	Substation	0	Vacant
103rd - 111th	UA	40	25165000080000	361 W 105TH PL, CHICAGO	Public (City of Chicago)	UPRR - Assumed to be City-Owned for UP ROW Option	Affected Parcel	ROW	0	EXEMPT - Railroad
103rd - 111th	UA	41	25165000100000	362 W 106TH PL, CHICAGO	Public (City of Chicago)	UPRR - Assumed to be City-Owned for UP ROW Option	Affected Parcel	ROW	0	EXEMPT - Railroad
103rd - 111th	UA	42	25165000130000	361 W 106TH PL, CHICAGO	Public (City of Chicago)	UPRR - Assumed to be City-Owned for UP ROW Option	Affected Parcel	ROW	0	EXEMPT - Railroad
103rd - 111th	UA	43	25165000140000	360 W 107TH ST, CHICAGO	Public (City of Chicago)	UPRR - Assumed to be City-Owned for UP ROW Option	Affected Parcel	ROW	0	EXEMPT - Railroad
103rd - 111th	UA	44	25164000700000	358 W 107TH PL, CHICAGO	Industrial	F.H. Leinweber Co. Underlayments (active industrial use)	Affected Parcel	ROW	0	Industrial
103rd - 111th	UA	45	25164010250000	363 W 107TH ST, CHICAGO	Industrial	F.H. Leinweber Co. Underlayments (active industrial use)	Affected Parcel	ROW	0	Industrial
103rd - 111th	UA	46	25165000170000	362 W 108TH PL, CHICAGO	Public (City of Chicago)	UPRR - Assumed to be City-Owned for UP ROW Option	Affected Parcel	ROW	0	EXEMPT - Railroad

UPRR HRT Alternative - ROW Option
Parcels Affected by Land Acquisitions and Easements

Division	Segment	Map ID	Parcel ID	Address	Land Use - Field Verified	Field Notes	Displacement Type	Displacement Subtype	Building Displace-ment	Land Use - Cook County
103rd - 111th	UA	47	25165000180000	364 W 109TH ST, CHICAGO	Public (City of Chicago)	UPRR - Assumed to be City-Owned for UP ROW Option	Affected Parcel	ROW	0	EXEMPT - Railroad
103rd - 111th	UA	48	25165000190000	364 W 109TH PL, CHICAGO	Public (City of Chicago)	UPRR - Assumed to be City-Owned for UP ROW Option	Affected Parcel	ROW	0	EXEMPT - Railroad
103rd - 111th	UA	49	25165000210000	364 W 110TH ST, CHICAGO	Public (City of Chicago)	UPRR - Assumed to be City-Owned for UP ROW Option	Affected Parcel	ROW	0	EXEMPT - Railroad
103rd - 111th	UA	50	25165000230000	364 W 110TH PL, CHICAGO	Public (City of Chicago)	UPRR - Assumed to be City-Owned for UP ROW Option	Affected Parcel	Station	0	EXEMPT - Railroad
103rd - 111th	UA	51	25165000260000	360 W 110TH PL, CHICAGO	Public (City of Chicago)	UPRR - Assumed to be City-Owned for UP ROW Option	Affected Parcel	Parking	0	EXEMPT - Railroad
103rd - 111th	UA	52	25165000270000	360 W 111TH ST, CHICAGO	Public (City of Chicago)	UPRR - Assumed to be City-Owned for UP ROW Option	Affected Parcel	Parking	0	EXEMPT - Railroad
103rd - 111th	UA	53	25164270010000	356 W 111TH ST, CHICAGO	Public (City of Chicago)	Vacant lot - appears it is being used as parking for Agape Community Center/New Hope Fellowship which is adjacent to this parcel	Affected Parcel	Parking	0	EXEMPT - City of Chicago
103rd - 111th	UA	54	25163290090000	11037 S EGGLESTON AVE, CHICAGO	Public (City of Chicago)	Vacant lot	Affected Parcel	Parking	0	EXEMPT - City of Chicago
103rd - 111th	UA	55	25163290080000	11041 S EGGLESTON AVE, CHICAGO	Public (City of Chicago)	Vacant lot	Affected Parcel	Parking	0	EXEMPT - City of Chicago
103rd - 111th	UA	56	25163290050000	402 W 111TH ST, CHICAGO	Institution (Place of Worship)	Vacant lot w/sign "Future home of Logos Baptist Assembly"	Affected Parcel	Parking	0	Vacant
111th - 115th	UA	57	25219990010000	25219990010000	Public (City of Chicago)	UPRR - Assumed to be City-Owned for UP ROW Option	Affected Parcel	ROW	0	NA
111th - 115th	UA	58	25215010010000	401 W 111TH ST, CHICAGO	Public (City of Chicago)	UPRR - Assumed to be City-Owned for UP ROW Option	Affected Parcel	ROW	0	EXEMPT - Railroad
111th - 115th	UA	59	25215010020000	501 E 112TH ST, CHICAGO	Public (City of Chicago)	UPRR - Assumed to be City-Owned for UP ROW Option	Affected Parcel	ROW	0	EXEMPT - Railroad
111th - 115th	UA	60	25215010030000	501 E 112TH ST, CHICAGO	Public (City of Chicago)	UPRR - Assumed to be City-Owned for UP ROW Option	Affected Parcel	ROW	0	EXEMPT - Railroad
111th - 115th	UA	61	25215010050000	142 W 115TH ST, CHICAGO	Public (City of Chicago)	UPRR - Assumed to be City-Owned for UP ROW Option	Affected Parcel	ROW	0	EXEMPT - Railroad
111th - 115th	UA	62	25212280210000	11428 S PERRY AVE, CHICAGO	Public (City of Chicago)	UPRR - Assumed to be City-Owned for UP ROW Option	Affected Parcel	ROW	0	EXEMPT - Railroad
111th - 115th	UA	63	25215010060000	500 W 113TH ST, CHICAGO	Public (City of Chicago)	UPRR - Assumed to be City-Owned for UP ROW Option	Affected Parcel	ROW	0	EXEMPT - Railroad
115th - 117th	UA	64	25214060010000	11513 S PERRY AVE, CHICAGO	Public (City of Chicago)	UPRR - Assumed to be City-Owned for UP ROW Option	Affected Parcel	ROW	0	EXEMPT - Railroad
115th - 117th	UA	65	25214060300000	11524 S LAFAYETTE AVE, CHICAGO	Public (City of Chicago)	Substation Location (UPRR - Assumed to be City-Owned for UP ROW Option)	Affected Parcel	Substation	0	EXEMPT - Railroad
115th - 117th	UA	66	25229990010000	25229990010000	Public (City of Chicago)	UPRR - Assumed to be City-Owned for UP ROW Option	Affected Parcel	Station	0	NA

UPRR HRT Alternative - ROW Option
Parcels Affected by Land Acquisitions and Easements

Division	Segment	Map ID	Parcel ID	Address	Land Use - Field Verified	Field Notes	Displacement Type	Displacement Subtype	Building Displacement	Land Use - Cook County
115th - 117th	UA	67	25225000010000	100 E 116TH ST, CHICAGO	Public (City of Chicago)	UPRR - Assumed to be City-Owned for UP ROW Option	Affected Parcel	ROW	0	EXEMPT - Railroad
115th - 117th	UA	68	25223000080000	11547 S STATE ST, CHICAGO	Public (City of Chicago)	UPRR - Assumed to be City-Owned for UP ROW Option	Affected Parcel	ROW	0	EXEMPT - Railroad
115th - 117th	UA	69	25223000090000	11549 S STATE ST, CHICAGO	Public (City of Chicago)	UPRR - Assumed to be City-Owned for UP ROW Option	Affected Parcel	Parking	0	EXEMPT - Railroad
115th - 117th	UA	70	25223000100000	11551 S STATE ST, CHICAGO	Public (City of Chicago)	UPRR - Assumed to be City-Owned for UP ROW Option	Affected Parcel	Parking	0	EXEMPT - Railroad
115th - 117th	UA	71	25223000110000	11561 S STATE ST, CHICAGO	Vacant		Affected Parcel	Parking	0	Residential
115th - 117th	UA	72	25223000120000	11563 S STATE ST, CHICAGO	Vacant		Affected Parcel	Parking	0	Residential
115th - 117th	UA	73	25223000130000	11567 S STATE ST, CHICAGO	Single Family Residential	Residence and garage	Parcel with Building Displacement	Parking	1	Residential
115th - 117th	UA	74	25223000140000	11569 S STATE ST, CHICAGO	Single Family Residential	Residence and garage	Parcel with Building Displacement	Parking	1	Residential
115th - 117th	UA	75	25223000150000	11571 S STATE ST, CHICAGO	Single Family Residential		Parcel with Building Displacement	Parking	1	Residential
115th - 117th	UA	76	25223000160000	11573 S STATE ST, CHICAGO	Single Family Residential		Parcel with Building Displacement	Parking	1	Residential
115th - 117th	UA	77	25223000170000	11575 S STATE ST, CHICAGO	Single Family Residential	Residence and garage	Parcel with Building Displacement	Parking	1	Residential
115th - 117th	UA	78	25223000180000	11579 S STATE ST, CHICAGO	Vacant		Affected Parcel	Parking	0	Residential
115th - 117th	UA	79	25223000190000	11562 S WABASH AVE, CHICAGO	Public (City of Chicago)		Affected Parcel	ROW	0	EXEMPT - City of Chicago
115th - 117th	UA	80	25223000700000	11556 S WABASH AVE, CHICAGO	Public (City of Chicago)	UPRR - Assumed to be City-Owned for UP ROW Option	Affected Parcel	Parking	0	EXEMPT - Railroad
115th - 117th	UA	81	25223000690000	11562 S WABASH AVE, CHICAGO	Single Family Residential	11562 & 11572 S Wabash appear to be one property	Parcel Affected by Proposed Permanent Envelope	Parking	Counted	Residential
115th - 117th	UA	82	25223000210000	11572 S WABASH AVE, CHICAGO	Single Family Residential	11562 & 11572 S Wabash appear to be one property	Parcel with Building Displacement	Parking	1	Residential
115th - 117th	UA	83	25223000220000	11574 S WABASH AVE, CHICAGO	Single Family Residential		Parcel with Building Displacement	Parking	1	Residential
115th - 117th	UA	84	25223000230000	11578 S WABASH AVE, CHICAGO	Single Family Residential		Parcel with Building Displacement	Parking	1	Residential

UPRR HRT Alternative - ROW Option
Parcels Affected by Land Acquisitions and Easements

Division	Segment	Map ID	Parcel ID	Address	Land Use - Field Verified	Field Notes	Displacement Type	Displacement Subtype	Building Displace-ment	Land Use - Cook County
115th - 117th	UA	85	25223000240000	11583 S STATE ST, CHICAGO	Single Family Residential	4 E 116th under common ownership with 11583 S. State St	Parcel with Building Displacement	Parking	1	Residential
115th - 117th	UA	86	25223000250000	4 E 116TH ST, CHICAGO	Single Family Residential	4 E 116th under common ownership with 11583 S. State St	Parcel with Building Displacement	Parking	Counted	Vacant
115th - 117th	UA	87	25223000260000	8 E 116TH ST, CHICAGO	Single Family Residential		Parcel with Building Displacement	Parking	1	Residential
115th - 117th	UA	88	25223000270000	12 E 116TH ST, CHICAGO	Single Family Residential		Parcel with Building Displacement	Parking	1	Residential
115th - 117th	UA	89	25223000280000	16 E 116TH ST, CHICAGO	Single Family Residential	Residence and garage	Parcel with Building Displacement	Parking	1	Residential
115th - 117th	UA	90	25223000290000	20 E 116TH ST, CHICAGO	Single Family Residential	Residence and garage	Parcel with Building Displacement	Parking	1	Residential
115th - 117th	UA	91	25223000470000	11563 S WABASH AVE, CHICAGO	Public (City of Chicago)	UPRR - Assumed to be City-Owned for UP ROW Option	Affected Parcel	ROW	0	EXEMPT - Railroad
115th - 117th	UA	92	25223000710000	25223000710000	Commercial	XOXXOX Charter Bus Inc.	Parcel with Building Displacement	Parking	Counted	NA
115th - 117th	UA	93	25223000490000	11573 S WABASH AVE, CHICAGO	Commercial	XOXXOX Charter Bus Inc.	Parcel with Building Displacement	Parking	1	Commercial
115th - 117th	UA	94	25223000500000	32 E 116TH ST, CHICAGO	Single Family Residential	32 & 34 E 116th appear to be one property	Parcel with Building Displacement	Parking	Counted	Residential
115th - 117th	UA	95	25223000510000	34 E 116TH ST, CHICAGO	Single Family Residential	32 & 34 E 116th appear to be one property	Parcel with Building Displacement	Parking	1	Residential
115th - 117th	UA	96	25223000520000	38 E 116TH ST, CHICAGO	Multi-Family Residential	Multi-Family Residential (2 family)	Parcel with Building Displacement	Parking	1	Residential
115th - 117th	UA	97	25223000580000	11578 S MICHIGAN AVE, CHICAGO	Public (City of Chicago)		Affected Parcel	Parking	0	EXEMPT - City of Chicago
115th - 117th	UA	98	25223000590000	11582 S MICHIGAN AVE, CHICAGO	Public (City of Chicago)	UPRR - Assumed to be City-Owned for UP ROW Option	Affected Parcel	Parking	0	EXEMPT - Railroad
115th - 117th	UA	99	25223000600000	11586 S MICHIGAN AVE, CHICAGO	Vacant	Vacant lot	Affected Parcel	Parking	0	Vacant
115th - 117th	UA	100	25223000610000	11588 S MICHIGAN AVE, CHICAGO	Vacant	Vacant lot	Affected Parcel	Parking	0	Vacant

UPRR HRT Alternative - ROW Option
Parcels Affected by Land Acquisitions and Easements

Division	Segment	Map ID	Parcel ID	Address	Land Use - Field Verified	Field Notes	Displacement Type	Displacement Subtype	Building Displacement	Land Use - Cook County
115th - 117th	UA	101	25223000620000	11592 S MICHIGAN AVE, CHICAGO	Mixed Use Comm/Res	Two-story building w/vacant storefront	Parcel with Building Displacement	Parking	1	Residential
115th - 117th	UA	102	25223040500000	11555 S MICHIGAN AVE, CHICAGO	Vacant	Michigan Ave Station (vacant lot)	Affected Parcel	Parking	0	Vacant
115th - 117th	UA	103	25223040470000	113 E KENSINGTON AVE, CHICAGO	Vacant	Michigan Ave Station (vacant lot)	Affected Parcel	Parking	0	Vacant
115th - 117th	UA	104	25223040490000	11557 S MICHIGAN AVE, CHICAGO	Vacant	Michigan Ave Station (vacant lot)	Affected Parcel	Parking	0	Vacant
115th - 117th	UA	105	25223040050000	11563 S MICHIGAN AVE, CHICAGO	Industrial	11563, 11565, & 11567 S Michigan contain one vacant industrial building	Parcel with Building Displacement	Parking	Counted	EXEMPT
115th - 117th	UA	106	25223040060000	11565 S MICHIGAN AVE, CHICAGO	Industrial	11563, 11565, & 11567 S Michigan contain one vacant industrial building	Parcel with Building Displacement	Parking	Counted	Vacant
115th - 117th	UA	107	25223040070000	11567 S MICHIGAN AVE, CHICAGO	Industrial	11563, 11565, & 11567 S Michigan contain one vacant industrial building	Parcel with Building Displacement	Parking	1	EXEMPT
115th - 117th	UA	108	25223040080000	11579 S MICHIGAN AVE, CHICAGO	Public (City of Chicago)	Michigan Ave Station (vacant lot)	Affected Parcel	Parking	0	EXEMPT - City of Chicago
115th - 117th	UA	109	25223040270000	120 E 116TH ST, CHICAGO	Public (City of Chicago)	Michigan Ave Station (vacant lot)	Affected Parcel	Parking	0	EXEMPT
115th - 117th	UA	110	25223040280000	122 E 116TH ST, CHICAGO	Public (City of Chicago)	Michigan Ave Station (vacant lot)	Affected Parcel	Parking	0	EXEMPT - City of Chicago
115th - 117th	UA	111	25223040290000	124 E 116TH ST, CHICAGO	Public (City of Chicago)	Michigan Ave Station (vacant lot)	Affected Parcel	Parking	0	EXEMPT
115th - 117th	UA	112	25223040300000	128 E 116TH ST, CHICAGO	Public (City of Chicago)	Michigan Ave Station (vacant lot)	Affected Parcel	Parking	0	EXEMPT
115th - 117th	UA	113	25223040310000	130 E 116TH ST, CHICAGO	Public (City of Chicago)	Michigan Ave Station (vacant lot)	Affected Parcel	Parking	0	EXEMPT
115th - 117th	UA	114	25223040320000	132 E 116TH ST, CHICAGO	Public (City of Chicago)	Michigan Ave Station (vacant lot)	Affected Parcel	Parking	0	EXEMPT
115th - 117th	UA	115	25223040330000	134 E 116TH ST, CHICAGO	Public (City of Chicago)	Michigan Ave Station (vacant lot)	Affected Parcel	Parking	0	EXEMPT
115th - 117th	UA	116	25223040340000	136 E 116TH ST, CHICAGO	Public (City of Chicago)		Affected Parcel	Parking	0	EXEMPT
115th - 117th	UA	117	25223040090000	11583 S MICHIGAN AVE, CHICAGO	Public (City of Chicago)	UPRR - Assumed to be City-Owned for UP ROW Option	Affected Parcel	Station	0	EXEMPT - Railroad
115th - 117th	UA	118	25223080130000	121 E 116TH ST, CHICAGO	Public (City of Chicago)	UPRR - Assumed to be City-Owned for UP ROW Option	Affected Parcel	Station	0	EXEMPT - Railroad
115th - 117th	UA	119	25223110140000	11629 S INDIANA AVE, CHICAGO	Public (City of Chicago)	UPRR - Assumed to be City-Owned for UP ROW Option	Affected Parcel	ROW	0	EXEMPT - Railroad
117th - Front	UB	120	25223150020000	11701 S INDIANA AVE, CHICAGO	Public (City of Chicago)	UPRR - Assumed to be City-Owned for UP ROW Option	Affected Parcel	ROW	0	EXEMPT - Railroad
117th - Front	UB	121	25223150160000	11714 S PRAIRIE AVE, CHICAGO	Public (City of Chicago)	UPRR - Assumed to be City-Owned for UP ROW Option	Affected Parcel	ROW	0	EXEMPT - Railroad
117th - Front	UB	122	25223160130000	11763 S PRAIRIE AVE, CHICAGO	Public (City of Chicago)	UPRR - Assumed to be City-Owned for UP ROW Option	Affected Parcel	ROW	0	EXEMPT - Railroad

UPRR HRT Alternative - ROW Option
Parcels Affected by Land Acquisitions and Easements

Division	Segment	Map ID	Parcel ID	Address	Land Use - Field Verified	Field Notes	Displacement Type	Displacement Subtype	Building Displacement	Land Use - Cook County
117th - Front	UB	123	25223170310000	11810 S CALUMET AVE, CHICAGO	Industrial	11810 S Calumet & 375 E 118th appear to be one industrial property (active but no signage)	Parcel with Building Displacement	ROW	Counted	Industrial
117th - Front	UB	124	25223170320000	11810 S CALUMET AVE, CHICAGO	Industrial	11810 S Calumet & 375 E 118th appear to be one industrial property (active but no signage)	Parcel with Building Displacement	ROW	1	Industrial
117th - Front	UB	125	25223170330000	375 E 118TH ST, CHICAGO	Industrial	11810 S Calumet & 375 E 118th appear to be one industrial property (active but no signage)	Parcel with Building Displacement	ROW	Counted	Industrial
Front - 130th	UB	126	25223170350000	11800 S FRONT AVE, CHICAGO	Transportation (railroad)	CN/Metra	Affected Parcel	ROW	0	EXEMPT - CN/METRA
Front - 130th	UB	127	25225010050000	360 E 119TH ST, CHICAGO	Transportation (railroad)	CN/Metra	Affected Parcel	ROW	0	EXEMPT - Railroad
Front - 130th	UB	128	25223250010000	370 E 119TH ST, CHICAGO	Transportation (railroad)	CN/Metra	Affected Parcel	ROW	0	EXEMPT - Railroad
Front - 130th	UB	129	25224000260000	11600 S COTTAGE GROVE AVE, CHICAGO	Industrial		Affected Parcel	ROW	0	Industrial
Front - 130th	UB	130	25224000270000	11600 S COTTAGE GROVE AVE, CHICAGO	Transportation (railroad)	IHB	Affected Parcel	ROW	0	EXEMPT - Railroad
Front - 130th	UB	131	25271080080000	11900 S COTTAGE GROVE AVE, CHICAGO	Industrial		Affected Parcel	ROW	0	Industrial
Front - 130th	UB	132	25271080090000	11900 S COTTAGE GROVE AVE, CHICAGO	Transportation (railroad)	IHB	Affected Parcel	Yard	0	EXEMPT - Railroad

UPRR COMMON	Segment	Map ID	Parcel ID	Address	Land Use - Field Verified	Field Notes	Displacement Type	Displacement Subtype	Building Displacement	Land Use - Cook County
RRYARD	RRYARD	1	25224010340000	1355 E 121ST ST, CHICAGO	Transportation (railroad)	IHB	Affected Parcel	Yard	0	EXEMPT
Front - 130th	UB	2	25275020010000	12330 S COTTAGE GROVE AVE, CHICAGO	Transportation (railroad)	Alignment	Affected Parcel	Yard	0	EXEMPT
RRYARD	RRYARD	3	25272000090000	12256 S COTTAGE GROVE AVE, CHICAGO	Transportation (railroad)	IHB	Affected Parcel	Yard	1	EXEMPT - Railroad
RRYARD	RRYARD	4	25272000070000	12256 S COTTAGE GROVE AVE, CHICAGO	Industrial		Affected Parcel	Yard	2	Industrial
RRYARD	RRYARD	5	25272000100000	12256 S COTTAGE GROVE AVE, CHICAGO	Vacant		Affected Parcel	Yard	0	EXEMPT
RRYARD	RRYARD	6	25272000120000	12534 S COTTAGE GROVE AVE, CHICAGO	Vacant		Affected Parcel	Yard	0	EXEMPT
RRYARD	RRYARD	7	25272000130000	12546 S COTTAGE GROVE AVE, CHICAGO	Utility (Metro Water Reclamation District)	Substation Location	Affected Parcel	Yard	0	EXEMPT
RRYARD	RRYARD	8	25275030010000	12320 S COTTAGE GROVE AVE, CHICAGO	Transportation (railroad)	NTCTD/CSS and SBRR	Affected Parcel	Yard	0	EXEMPT
RRYARD	RRYARD	9	25272000040000	12500 S COTTAGE GROVE AVE, CHICAGO	Utility (Metro Water Reclamation District)		Affected Parcel	Yard	0	EXEMPT
RRYARD	RRYARD	10	25274000030000	12606 S COTTAGE GROVE AVE, CHICAGO	Utility (Metro Water Reclamation District)		Affected Parcel	Yard	0	EXEMPT

UPRR HRT Alternative - ROW Option
Parcels Affected by Land Acquisitions and Easements

Division	Segment	Map ID	Parcel ID	Address	Land Use - Field Verified	Field Notes	Displacement Type	Displacement Subtype	Building Displacement	Land Use - Cook County
RRYARD	RRYARD	11	25274000070000	12614 S COTTAGE GROVE AVE, CHICAGO	Utility (Metro Water Reclamation District)		Affected Parcel	Yard	0	EXEMPT
RRYARD	RRYARD	12	25274000050000	12608 S COTTAGE GROVE AVE, CHICAGO	Utility (Metro Water Reclamation District)		Affected Parcel	Yard	0	EXEMPT
RRYARD	RRYARD	13	25274000020000	12600 S COTTAGE GROVE AVE, CHICAGO	Transportation (railroad)	NTCTD/CSS and SBRR	Affected Parcel	Yard	0	EXEMPT
RRYARD	RRYARD	14	25274000060000	12610 S COTTAGE GROVE AVE, CHICAGO	Utility (Metro Water Reclamation District)		Affected Parcel	Yard	0	EXEMPT
RRYARD	RRYARD	15	25274000090000	12618 S COTTAGE GROVE AVE, CHICAGO	Utility (Metro Water Reclamation District)		Affected Parcel	Yard	0	EXEMPT
RRYARD	RRYARD	16	25273010070000	300 E 127TH ST, CHICAGO	Utility (Metro Water Reclamation District)		Affected Parcel	Yard	0	EXEMPT

130th Station - South Option	Segment	Map ID	Parcel ID	Address	Land Use - Field Verified	Field Notes	Displacement Type	Displacement Subtype	Building Displacement	Land Use - Cook County
Front - 130th	UB	1	25275020010000	12330 S COTTAGE GROVE AVE, CHICAGO	Transportation (railroad)	IHB *- Previously counted with Common Perm. Enve*	Affected Parcel	Station	0	EXEMPT - Railroad
Front - 130th	UB	2	25269990010000	25269990010000	Transportation (railroad)	IHB	Affected Parcel	Station	0	NA
Front - 130th	UB	3	25263000170000	12807 S COTTAGE GROVE AVE, CHICAGO	Utility (Metro Water Reclamation District)		Affected Parcel	Station	0	EXEMPT - Metro Water Reclamation
Front - 130th	UB	4	25263000150000	12813 S COTTAGE GROVE AVE, CHICAGO	Utility (Metro Water Reclamation District)		Affected Parcel	Station	0	EXEMPT - Metro Water Reclamation
Front - 130th	UB	5	25263000140000	12817 S COTTAGE GROVE AVE, CHICAGO	Utility (Metro Water Reclamation District)		Affected Parcel	Station	0	EXEMPT - Metro Water Reclamation
Front - 130th	UB	6	25273010120000	325 E 127TH ST, CHICAGO	Utility (Metro Water Reclamation District)		Affected Parcel	Station	0	EXEMPT - Metro Water Reclamation
Front - 130th	UB	7	25273010130000	310 E 130TH ST, CHICAGO	Utility (Metro Water Reclamation District)		Affected Parcel	Station	0	EXEMPT - Metro Water Reclamation
Front - 130th	UB	8	25273010110000	350 E 130TH ST, CHICAGO	Utility (Metro Water Reclamation District)		Affected Parcel	Station	0	EXEMPT - Metro Water Reclamation
Front - 130th	UB	9	25273010100000	360 E 130TH ST, CHICAGO	Utility (Metro Water Reclamation District)		Affected Parcel	Station	0	EXEMPT - Metro Water Reclamation

130th Station - West Option	Segment	Map ID	Parcel ID	Address	Land Use - Field Verified	Field Notes	Displacement Type	Displacement Subtype	Building Displacement	Land Use - Cook County
Front - 130th	UB	1	25275020010000	12330 S COTTAGE GROVE, CHICAGO	Transportation (railroad)	IHB *-Previously counted with Common Perm. Env*	Affected Parcel	Station	0	EXEMPT - Railroad
Front - 130th	UB	2	25274000090000	12618 S COTTAGE GROVE, CHICAGO	Utility (Metro Water Reclamation District)	*Previously counted with Common Perm. Envelop*	Affected Parcel	Station	0	EXEMPT - Metro Water Reclamation
Front - 130th	UB	3	25269990010000	25269990010000	Transportation (railroad)	IHB	Affected Parcel	Station	0	NA
Front - 130th	UB	4	25263000170000	12807 S COTTAGE GROVE, CHICAGO	Utility (Metro Water Reclamation District)		Affected Parcel	Station	0	EXEMPT - Metro Water Reclamation

UPRR HRT Alternative - ROW Option
Parcels Affected by Land Acquisitions and Easements

Division	Segment	Map ID	Parcel ID	Address	Land Use - Field Verified	Field Notes	Displacement Type	Displacement Subtype	Building Displacement	Land Use - Cook County
Front - 130th	UB	5	25263000150000	12813 S COTTAGE GROVE, CHICAGO	Utility (Metro Water Reclamation District)		Affected Parcel	Station	0	EXEMPT - Metro Water Reclamation
Front - 130th	UB	6	25263000140000	12817 S COTTAGE GROVE, CHICAGO	Utility (Metro Water Reclamation District)		Affected Parcel	Station	0	EXEMPT - Metro Water Reclamation
Front - 130th	UB	7	25273010120000	325 E 127TH, CHICAGO	Utility (Metro Water Reclamation District)		Affected Parcel	Station	0	EXEMPT - Metro Water Reclamation
Front - 130th	UB	8	25273010130000	310 E 130TH, CHICAGO	Utility (Metro Water Reclamation District)		Affected Parcel	Station	0	EXEMPT - Metro Water Reclamation
Front - 130th	UB	9	25273010110000	350 E 130TH, CHICAGO	Utility (Metro Water Reclamation District)		Affected Parcel	Station	0	EXEMPT - Metro Water Reclamation
Front - 130th	UB	10	25273010100000	360 E 130TH, CHICAGO	Utility (Metro Water Reclamation District)		Affected Parcel	Station	0	EXEMPT - Metro Water Reclamation

Parcel Count Summary Table		
95th - 99th	22	22 easements
99th - 103rd	13	
103rd - 111th	21	
111th - 115th	7	
115th - 117th	56	
117th - Front	6	
Front - 130th	27	includes both station options
RRYARD	15	

Building Displacement Summary Table	
95th - 99th	0
99th - 103rd	2
103rd - 111th	0
111th - 115th	0
115th - 117th	18
117th - Front	1
Front - 130th	0
RRYARD	3
Total	24

UPRR HRT Alternative - East Option
Parcels Affected by Land Acquisitions and Easements

Division	Segment	Map ID	Parcel ID	Address	Land Use - Field Verified	Field Notes	Displacement Type	Displacement Subtype	Building Displace-ment	Missed if Alley Removed	Land Use - Cook County
95th - 99th	UA	1	25092070500000	9512 S STATE ST, CHICAGO	Transportation (highway)	I-94	Easement	ROW	0	Missed	EXEMPT - Cook County
95th - 99th	UA	2	25092070490000	9511 W 95TH ST, CHICAGO	Transportation (highway)	I-94	Easement	ROW	0		EXEMPT - Cook County
95th - 99th	UA	3	25092150010000	9600 S LAFAYETTE AVE, CHICAGO	Transportation (highway)	I-94	Easement	ROW	0		EXEMPT - Cook County
95th - 99th	UA	4	25092230430000	9721 S LAFAYETTE AVE, CHICAGO	Transportation (highway)	I-94	Easement	ROW	0		EXEMPT - Cook County
95th - 99th	UA	5	25092220420000	9720 S LAFAYETTE AVE, CHICAGO	Transportation (highway)	I-94	Easement	ROW	0		EXEMPT - Cook County
95th - 99th	UA	6	25092220410000	9701 S PRINCETON AVE, CHICAGO	Transportation (highway)	I-94	Easement	ROW	0		EXEMPT - Cook County
95th - 99th	UA	7	25092210420000	9710 S PERRY AVE, CHICAGO	Transportation (highway)	I-94	Easement	ROW	0		EXEMPT - Cook County
95th - 99th	UA	8	25092290420000	9800 S PERRY ST, CHICAGO	Transportation (highway)	I-94	Easement	ROW	0		EXEMPT - Cook County
95th - 99th	UA	9	25092290410000	9801 S LASALLE ST, CHICAGO	Transportation (highway)	I-94	Easement	ROW	0		EXEMPT - Cook County
95th - 99th	UA	10	25092280420000	9800 S LASALLE ST, CHICAGO	Transportation (highway)	I-94	Easement	ROW	0		EXEMPT - Cook County
95th - 99th	UA	11	25092280410000	9801 S WENTWORTH AVE, CHICAGO	Transportation (highway)	I-94	Easement	ROW	0		EXEMPT - Cook County
95th - 99th	UA	12	25092270410000	9807 S YALE AVE, CHICAGO	Transportation (highway)	I-94	Easement	ROW	0		EXEMPT - Cook County
95th - 99th	UA	13	25092260440000	9810 S YALE AVE, CHICAGO	Transportation (highway)	I-57	Easement	ROW	0		EXEMPT - Cook County
95th - 99th	UA	14	25092260470000	9819 S PRINCETON AVE, CHICAGO	Transportation (highway)	I-57	Easement	ROW	0		EXEMPT - Cook County
95th - 99th	UA	15	25092250300000	9826 S PRINCETON AVE, CHICAGO	Transportation (highway)	I-57	Easement	ROW	0		EXEMPT - Cook County
95th - 99th	UA	16	25092250440000	9825 S HARVARD AVE, CHICAGO	Transportation (highway)	I-57	Easement	ROW	0		EXEMPT - Cook County
95th - 99th	UA	17	25092250450000	352 W 99TH ST, CHICAGO	Transportation (highway)	I-57	Easement	ROW	0		EXEMPT - Cook County
95th - 99th	UA	18	25092250480000	350 W 99TH ST, CHICAGO	Transportation (highway)	I-57	Easement	ROW	0		EXEMPT - Cook County
95th - 99th	UA	19	25092240200000	356 W 99TH ST, CHICAGO	Transportation (highway)	I-57	Easement	ROW	0		EXEMPT - Cook County
95th - 99th	UA	20	25092240110000	354 W 99TH ST, CHICAGO	Transportation (highway)	I-57	Easement	ROW	0		EXEMPT - Cook County
95th - 99th	UA	21	25092240100000	352 W 99TH ST, CHICAGO	Transportation (highway)	I-57	Easement	ROW	0		EXEMPT - Cook County
95th - 99th	UA	22	25092240090000	350 W 99TH ST, CHICAGO	Transportation (highway)	I-57	Easement	ROW	0		Vacant
99th - 103rd	UA	23	25094000470000	312 W 99TH PL, CHICAGO	Parkland	Wendell Smith Park	(See *Parklands and Community Resources Technical Memorandum* for park impacts.)	ROW	0		EXEMPT - City of Chicago
99th - 103rd	UA	24	25094010020000	349 W 99TH PL, CHICAGO	Single Family Residential	Residence, plus garage	Parcel with Building Displacement	ROW	1	Missed	Residential
99th - 103rd	UA	25	25094010010000	355 W 99TH PL, CHICAGO	Single Family Residential	Residence, plus garage	Parcel with Building Displacement	ROW	1		Residential
99th - 103rd	UA	26	25094010170000	354 W 100TH ST, CHICAGO	Single Family Residential		Parcel with Building Displacement	ROW	1		Residential

UPRR HRT Alternative - East Option
Parcels Affected by Land Acquisitions and Easements

Division	Segment	Map ID	Parcel ID	Address	Land Use - Field Verified	Field Notes	Displacement Type	Displacement Subtype	Building Displace-ment	Missed if Alley Removed	Land Use - Cook County
99th - 103rd	UA	27	25094010180000	350 W 100TH ST, CHICAGO	Single Family Residential		Parcel with Building Displacement	ROW	1		Residential
99th - 103rd	UA	28	25094080010000	355 W 100TH ST, CHICAGO	Single Family Residential		Parcel with Building Displacement	ROW	1		Residential
99th - 103rd	UA	29	25094080020000	351 W 100TH ST, CHICAGO	Single Family Residential	Residence, plus garage	Parcel with Building Displacement	ROW	1		Residential
99th - 103rd	UA	30	25094080170000	352 W 100TH PL, CHICAGO	Single Family Residential	Residence, plus garage	Parcel with Building Displacement	ROW	1		Residential
99th - 103rd	UA	31	25094080180000	348 W 100TH PL, CHICAGO	Single Family Residential	Residence, plus garage	Parcel with Building Displacement	ROW	1	Missed	Residential
99th - 103rd	UA	32	25094090020000	349 W 100TH PL, CHICAGO	Single Family Residential		Parcel with Building Displacement	ROW	1	Missed	Residential
99th - 103rd	UA	33	25094090010000	353 W 100TH PL, CHICAGO	Vacant	Vacant lot	Affected Parcel	ROW	0		Vacant
99th - 103rd	UA	34	25094090470000	352 W 101ST ST, CHICAGO	Single Family Residential	Residence, plus garage	Parcel with Building Displacement	ROW	1		Residential
99th - 103rd	UA	35	25094160020000	351 W 101ST ST, CHICAGO	Single Family Residential	Residence, plus garage	Parcel with Building Displacement	ROW	1		Residential
99th - 103rd	UA	36	25094160010000	355 W 101ST ST, CHICAGO	Single Family Residential		Parcel with Building Displacement	ROW	1		Residential
99th - 103rd	UA	37	25094160180000	348 W 101ST PL, CHICAGO	Public (City of Chicago)	Vacant lot	Affected Parcel	ROW	0	Missed	EXEMPT - City of Chicago
99th - 103rd	UA	38	25094160170000	352 W 101ST PL, CHICAGO	Single Family Residential		Parcel with Building Displacement	ROW	1		Residential
99th - 103rd	UA	39	25094170030000	349 W 101ST PL, CHICAGO	Single Family Residential		Affected Parcel	ROW	0	Missed	Residential
99th - 103rd	UA	40	25094170020000	353 W 101ST PL, CHICAGO	Single Family Residential	Residence, plus garage	Parcel with Building Displacement	ROW	1		Residential
99th - 103rd	UA	41	25094170010000	355 W 101ST PL, CHICAGO	Single Family Residential	Residence, plus garage	Parcel with Building Displacement	ROW	1		Residential
99th - 103rd	UA	42	25094170190000	348 W 102ND ST, CHICAGO	Single Family Residential		Parcel with Building Displacement	ROW	counted	Missed	Residential

UPRR HRT Alternative - East Option
Parcels Affected by Land Acquisitions and Easements

Division	Segment	Map ID	Parcel ID	Address	Land Use - Field Verified	Field Notes	Displacement Type	Displacement Subtype	Building Displace-ment	Missed if Alley Removed	Land Use - Cook County
99th - 103rd	UA	43	25094170180000	348 W 102ND ST, CHICAGO	Single Family Residential		Parcel with Building Displacement	ROW	1		Residential
99th - 103rd	UA	44	25094170170000	352 W 102ND ST, CHICAGO	Single Family Residential		Parcel with Building Displacement	ROW	1		Residential
99th - 103rd	UA	45	25094240030000	347 W 102ND ST, CHICAGO	Single Family Residential	Garage only	Parcel with Building Displacement	ROW	1	Missed	Residential
99th - 103rd	UA	46	25094240020000	351 W 102ND ST, CHICAGO	Single Family Residential	Residence, plus garage	Parcel with Building Displacement	ROW	1		Residential
99th - 103rd	UA	47	25094240010000	353 W 102ND ST, CHICAGO	Single Family Residential	Residence, plus garage	Parcel with Building Displacement	ROW	1		Residential
99th - 103rd	UA	48	25094240180000	348 W 102ND PL, CHICAGO	Single Family Residential	Residence, plus garage	Parcel with Building Displacement	ROW	1		Residential
99th - 103rd	UA	49	25094240170000	350 W 102ND PL, CHICAGO	Vacant	Vacant lot	Affected Parcel	ROW	0		Vacant
99th - 103rd	UA	50	25094240160000	354 W 102ND PL, CHICAGO	Single Family Residential		Parcel with Building Displacement	ROW	1		Residential
99th - 103rd	UA	51	25094240680000	10228 S PRINCETON AVE, CHICAGO	Industrial	Parcel is located within street ROW	Affected Parcel	Station	0		Industrial
99th - 103rd	UA	52	25094240430000	347 W 102ND PL, CHICAGO	Single Family Residential		Affected Parcel	ROW	0	Missed	Residential
99th - 103rd	UA	53	25094240420000	351 W 102ND PL, CHICAGO	Single Family Residential		Parcel with Building Displacement	Station	1		Residential
99th - 103rd	UA	54	25094240410000	353 W 102ND PL, CHICAGO	Single Family Residential	103rd Street Station (sf house)- residence, plus garage	Parcel with Building Displacement	Station	1		Residential
99th - 103rd	UA	55	25094240600000	340 W 103RD ST, CHICAGO	Vacant	103rd Street Station (vacant) - commuter parking	Affected Parcel	Parking	0		Vacant
99th - 103rd	UA	56	25094240690000	350 W 103RD ST, CHICAGO	Transportation (railroad)	103rd Street Station (UPRR)	Affected Parcel	Station	0		EXEMPT - Railroad
103rd - 111th	UA	57	25162000010000	329 W 103RD ST, CHICAGO	Parkland	Block Park with utility structure	(See *Parklands and Community Resources Technical Memorandum* for park impacts.)	Station	0		EXEMPT - City of Chicago
103rd - 111th	UA	58	25165000030000	361 W 103RD ST, CHICAGO	Transportation (railroad)	UPRR	Affected Parcel	ROW	0		EXEMPT - Railroad
103rd - 111th	UA	59	25169990010000	25169990010000	Transportation (railroad)	Parcel affected at W 105th Pl and W 107th St - UPRR	Affected Parcel	ROW	0		NA

UPRR HRT Alternative - East Option
Parcels Affected by Land Acquisitions and Easements

Division	Segment	Map ID	Parcel ID	Address	Land Use - Field Verified	Field Notes	Displacement Type	Displacement Subtype	Building Displace-ment	Missed if Alley Removed	Land Use - Cook County
99th - 103rd	UA	60	25161050360000	401 W 103RD ST, CHICAGO	Public (City of Chicago)	Vacant - commuter parking	Affected Parcel	Parking	0		EXEMPT - City of Chicago
99th - 103rd	UA	61	25161050350000	403 W 103RD ST, CHICAGO	Commercial	Vacant building - commuter parking	Parcel with Building Displacement	Parking	1		Commercial
99th - 103rd	UA	62	25161050340000	405 W 103RD ST, CHICAGO	Single Family Residential		Parcel with Building Displacement	Parking	1		Residential
99th - 103rd	UA	63	25161050330000	400 W 103RD PL, CHICAGO	Vacant	Commuter Parking (vacant lot)	Affected Parcel	Parking	0		Vacant
103rd - 111th	UA	64	25165000040000	361 W 104TH ST, CHICAGO	Transportation (railroad)	UPRR	Affected Parcel	ROW	0		EXEMPT - Railroad
103rd - 111th	UA	65	25165000050000	360 W 104TH PL, CHICAGO	Transportation (railroad)	UPRR	Affected Parcel	ROW	0		EXEMPT - Railroad
103rd - 111th	UA	66	25165000060000	360 W 105TH ST, CHICAGO	Transportation (railroad)	UPRR	Affected Parcel	ROW	0		EXEMPT - Railroad
103rd - 111th	UA	67	25161130310000	400 W 105TH ST, CHICAGO	Vacant	Substation Location (vacant lot)	Affected Parcel	Substation	0		Vacant
103rd - 111th	UA	69	25162100010000	317 W 105TH ST, CHICAGO	Public (City of Chicago)	Vacant lot	Affected Parcel	ROW	0	Missed	EXEMPT - City of Chicago
103rd - 111th	UA	70	25165000070000	360 W 105TH ST, CHICAGO	Transportation (railroad)	UPRR	Affected Parcel	ROW	0		EXEMPT - Railroad
103rd - 111th	UA	71	25162100380000	230 W 105TH PL, CHICAGO	Public (City of Chicago)	Vacant lot	Affected Parcel	ROW	0		EXEMPT - City of Chicago
103rd - 111th	UA	72	25162110780000	353 W 105TH PL, CHICAGO	Single Family Residential		Parcel with Building Displacement	ROW	1	Missed	Residential
103rd - 111th	UA	73	25162110770000	355 W 105TH PL, CHICAGO	Single Family Residential		Parcel with Building Displacement	ROW	1		Residential
103rd - 111th	UA	74	25162110830000	352 W 106TH ST, CHICAGO	Single Family Residential		Parcel with Building Displacement	ROW	1		Residential
103rd - 111th	UA	75	25162110840000	354 W 106TH ST, CHICAGO	Single Family Residential		Parcel with Building Displacement	ROW	1		Residential
103rd - 111th	UA	76	25162120020000	351 W 106TH ST, CHICAGO	Single Family Residential	Boarded up & vacant home, residence and garage	Parcel with Building Displacement	ROW	1	Missed	Residential
103rd - 111th	UA	77	25162120010000	355 W 106TH ST, CHICAGO	Single Family Residential		Parcel with Building Displacement	ROW	1		Residential
103rd - 111th	UA	78	25162120430000	348 W 106TH PL, CHICAGO	Single Family Residential		Parcel with Building Displacement	ROW	1	Missed	Residential
103rd - 111th	UA	79	25162120420000	352 W 106TH PL, CHICAGO	Single Family Residential	Residence and garage	Parcel with Building Displacement	ROW	1		Residential

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Division	Segment	Map ID	Parcel ID	Address	Land Use - Field Verified	Field Notes	Displacement Type	Displacement Subtype	Building Displace-ment	Missed if Alley Removed	Land Use - Cook County
103rd - 111th	UA	80	25165000120000	358 W 106TH PL, CHICAGO	Transportation (railroad)	UPRR	Affected Parcel	ROW	0		EXEMPT - Railroad
103rd - 111th	UA	81	25162170010000	353 W 106TH PL, CHICAGO	Single Family Residential		Parcel with Building Displacement	ROW	1		Residential
103rd - 111th	UA	82	25162170390000	354 W 107TH ST, CHICAGO	Vacant	City's building shape file has a structure on this parcel; it's a vacant lot	Affected Parcel	ROW	0		Vacant
103rd - 111th	UA	83	25165000140000	360 W 107TH ST, CHICAGO	Transportation (railroad)	UPRR	Affected Parcel	ROW	0		EXEMPT - Railroad
103rd - 111th	UA	84	25164000010000	346 W 107TH PL, CHICAGO	Industrial	F.H. Leinweber Co. Underlayments (active industrial use)	Parcel with Building Displacement	ROW	1		Industrial
103rd - 111th	UA	85	25164000700000	358 W 107TH PL, CHICAGO	Industrial	F.H. Leinweber Co. Underlayments (active industrial use)	Parcel with Building Displacement	ROW	counted		Industrial
103rd - 111th	UA	86	25164010010000	347 W 107TH PL, CHICAGO	Industrial	F.H. Leinweber Co. Underlayments (active industrial use)	Parcel with Building Displacement	ROW	1		Industrial
103rd - 111th	UA	87	25164010250000	363 W 107TH ST, CHICAGO	Industrial	F.H. Leinweber Co. Underlayments (active industrial use)	Parcel with Building Displacement	ROW	counted		Industrial
103rd - 111th	UA	88	25164010170000	254 W 108TH ST, CHICAGO	Institution (Roseland Christian School)	Parcel adjacent to school building & looks like a recreational field	Parcel Affected by Proposed Permanent Envelope	ROW	0	Missed	EXEMPT - School
103rd - 111th	UA	89	25164010160000	256 W 108TH ST, CHICAGO	Institution (Roseland Christian School)	Parcel adjacent to school building & looks like a recreational field	Affected Parcel	ROW	0		EXEMPT - School
103rd - 111th	UA	90	25164070020000	349 W 108TH ST, CHICAGO	Vacant	Vacant lot	Affected Parcel	ROW	0	Missed	Vacant
103rd - 111th	UA	91	25164070010000	351 W 108TH ST, CHICAGO	Vacant	Vacant lot	Affected Parcel	ROW	0		Vacant
103rd - 111th	UA	92	25164070200000	348 W 108TH PL, CHICAGO	Single Family Residential		Parcel with Building Displacement	ROW	1	Missed	Residential
103rd - 111th	UA	93	25164070190000	352 W 108TH PL, CHICAGO	Vacant	Vacant lot	Affected Parcel	ROW	0		Vacant
103rd - 111th	UA	94	25164110020000	351 W 108TH PL, CHICAGO	Single Family Residential		Parcel with Building Displacement	ROW	1	Missed	Residential
103rd - 111th	UA	95	25164110010000	351 W 108TH PL, CHICAGO	Vacant	Vacant lot	Affected Parcel	ROW	0		Vacant
103rd - 111th	UA	96	25164110200000	350 W 109TH ST, CHICAGO	Single Family Residential		Parcel with Building Displacement	ROW	1		Residential
103rd - 111th	UA	97	25164110190000	354 W 109TH ST, CHICAGO	Single Family Residential	Residence and garage	Parcel with Building Displacement	ROW	1		Residential

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Division	Segment	Map ID	Parcel ID	Address	Land Use - Field Verified	Field Notes	Displacement Type	Displacement Subtype	Building Displace-ment	Missed if Alley Removed	Land Use - Cook County
103rd - 111th	UA	98	25164150020000	351 W 109TH ST, CHICAGO	Single Family Residential	111th Street Station (sf home)	Parcel with Building Displacement	ROW	1		Residential
103rd - 111th	UA	99	25164150010000	355 W 109TH ST, CHICAGO	Vacant	111th Street Station (vacant lot)	Affected Parcel	ROW	0		Vacant
103rd - 111th	UA	100	25164150220000	350 W 109TH PL, CHICAGO	Multi-Family Residential	111th Street Station (two-family home)	Parcel with Building Displacement	ROW	1		Residential
103rd - 111th	UA	101	25164150210000	354 W 109TH PL, CHICAGO	Vacant	111th Street Station (vacant lot)	Affected Parcel	ROW	0		Vacant
103rd - 111th	UA	102	25164190320000	355 W 109TH PL, CHICAGO	Vacant	111th Street Station (vacant lot)	Affected Parcel	ROW	0		Vacant
103rd - 111th	UA	103	25164190150000	350 W 110TH ST, CHICAGO	Vacant	111th Street Station (vacant lot)	Affected Parcel	ROW	0		Vacant
103rd - 111th	UA	104	25164190140000	352 W 110TH ST, CHICAGO	Industrial	111th Street Station (Ransom Transportation Inc - School Buses)	Parcel with Building Displacement	ROW	counted		Industrial
103rd - 111th	UA	105	25164190360000	356 W 110TH ST, CHICAGO	Industrial	111th Street Station (Ransom Transportation Inc - School Buses)	Parcel with Building Displacement	ROW	1		Industrial
103rd - 111th	UA	106	25164230370000	353 W 110TH ST, CHICAGO	Vacant	Vacant lot	Affected Parcel	Station	0		Vacant
103rd - 111th	UA	107	25164230360000	349 W 110TH ST, CHICAGO	Vacant	Vacant lot	Affected Parcel	Station	0		Vacant
103rd - 111th	UA	108	25164230180000	352 W 110TH PL, CHICAGO	Vacant	Vacant lot	Affected Parcel	Station	0		Vacant
103rd - 111th	UA	109	25164230190000	348 W 110TH PL, CHICAGO	Vacant	Vacant lot	Affected Parcel	Parking	0		Commercial
103rd - 111th	UA	110	25164230200000	346 W 110TH PL, CHICAGO	Vacant	Vacant lot	Affected Parcel	Parking	0		Residential
103rd - 111th	UA	111	25164230210000	342 W 110TH PL, CHICAGO	Vacant	Vacant lot	Affected Parcel	Parking	0		Commercial
103rd - 111th	UA	112	25164230220000	340 W 110TH PL, CHICAGO	Vacant		Affected Parcel	Parking	0		Vacant
103rd - 111th	UA	113	25164230230000	338 W 110TH PL, CHICAGO	Vacant		Affected Parcel	Parking	0		Vacant
103rd - 111th	UA	114	25164230240000	336 W 110TH PL, CHICAGO	Vacant		Affected Parcel	Parking	0		Vacant
103rd - 111th	UA	115	25163290070000	11026 S EGGLESTON AVE, CHICAGO	Public (City of Chicago)	Vacant lot - Commuter Parking	Affected Parcel	Parking	0		EXEMPT - City of Chicago
103rd - 111th	UA	116	25163290090000	11037 S EGGLESTON AVE, CHICAGO	Public (City of Chicago)		Affected Parcel	Parking	0		EXEMPT - City of Chicago
103rd - 111th	UA	117	25163290080000	11041 S EGGLESTON AVE, CHICAGO	Public (City of Chicago)		Affected Parcel	Parking	0		EXEMPT - City of Chicago
103rd - 111th	UA	118	25163290050000	402 W 111TH ST, CHICAGO	Vacant		Affected Parcel	Parking	0		Vacant
103rd - 111th	UA	119	25164270010000	356 W 111TH ST, CHICAGO	Public (City of Chicago)	Vacant lot being used as parking for Agape Community Center/New Hope Fellowship which is adjacent to this parcel	Affected Parcel	Station	0		EXEMPT - City of Chicago
111th - 115th	UA	120	25215010030000	501 E 112TH ST, CHICAGO	Transportation (railroad)	UPRR	Affected Parcel	ROW	0		EXEMPT - Railroad

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Division	Segment	Map ID	Parcel ID	Address	Land Use - Field Verified	Field Notes	Displacement Type	Displacement Subtype	Building Displace-ment	Missed if Alley Removed	Land Use - Cook County
111th - 115th	UA	121	25212000010000	349 W 111TH ST, CHICAGO	Multi-Family Residential	Single-family house (3 family use) residence and garage	Parcel with Building Displacement	ROW	1		Residential
111th - 115th	UA	122	25212000020000	347 W 111TH ST, CHICAGO	Multi-Family Residential	Parcel shared with 349 W. 111th St.	Affected Parcel	ROW	0		Vacant
111th - 115th	UA	123	25212000140000	348 W 111TH PL, CHICAGO	Vacant	Vacant lot	Affected Parcel	ROW	0		Residential
111th - 115th	UA	124	25212000150000	344 W 111TH PL, CHICAGO	Single Family Residential		Affected Parcel	ROW	0	Missed	Residential
111th - 115th	UA	125	25212040010000	345 W 111TH PL, CHICAGO	Public (City of Chicago)	Vacant lot	Affected Parcel	ROW	0		EXEMPT - City of Chicago
111th - 115th	UA	126	25212040020000	341 W 111TH PL, CHICAGO	Vacant		Affected Parcel	ROW	0	Missed	Vacant
111th - 115th	UA	127	25212040150000	340 W 112TH ST, CHICAGO	Multi-Family Residential	Boarded up & vacant home, residence and garage	Parcel with Building Displacement	ROW	1		Residential
111th - 115th	UA	128	25212040160000	336 W 112TH ST, CHICAGO	Vacant	Structure on map (Chicago GIS data) is no longer there; vacant lot.	Affected Parcel	ROW	0		Vacant
111th - 115th	UA	129	25212080030000	339 W 112TH ST, CHICAGO	Vacant	Vacant lot	Affected Parcel	ROW	0		Vacant
111th - 115th	UA	130	25212080040000	335 W 112TH ST, CHICAGO	Vacant	Vacant lot	Affected Parcel	ROW	0		Vacant
111th - 115th	UA	131	25212080050000	333 W 112TH ST, CHICAGO	Vacant	Vacant lot	Affected Parcel	ROW	0	Missed	Vacant
111th - 115th	UA	132	25212080160000	330 W 112TH PL, CHICAGO	Single Family Residential		Parcel with Building Displacement	ROW	1		Residential
111th - 115th	UA	133	25212080170000	330 W 112TH PL, CHICAGO	Single Family Residential	This parcel is a small sliver between two residential parcels (2521208018000 and a170000) - there are no structures.	Affected Parcel	ROW	0		Residential
111th - 115th	UA	134	25212080180000	328 W 112TH PL, CHICAGO	Single Family Residential		Parcel with Building Displacement	ROW	1		Residential
111th - 115th	UA	135	25212120100000	325 W 112TH PL, CHICAGO	Single Family Residential		Parcel with Building Displacement	ROW	1		Residential
111th - 115th	UA	136	25212120110000	319 W 112TH PL, CHICAGO	Multi-Family Residential	Single-family house (2 family use), residence and garage	Parcel with Building Displacement	ROW	1		Residential
111th - 115th	UA	137	25212120120000	317 W 112TH PL, CHICAGO	Single Family Residential		Affected Parcel	ROW	0	Missed	Residential
111th - 115th	UA	138	25212120190000	320 W 113TH ST, CHICAGO	Vacant	Common ownership as 320 W 113TH ST, CHICAGO	Affected Parcel	ROW	0		Vacant
111th - 115th	UA	139	25212120200000	320 W 113TH ST, CHICAGO	Single Family Residential	Common ownership as 320 W 113TH ST, CHICAGO - residence and garage	Parcel with Building Displacement	ROW	1		Residential

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Division	Segment	Map ID	Parcel ID	Address	Land Use - Field Verified	Field Notes	Displacement Type	Displacement Subtype	Building Displace-ment	Missed if Alley Removed	Land Use - Cook County
111th - 115th	UA	140	25212120210000	316 W 113TH ST, CHICAGO	Single Family Residential	Residence and garage	Parcel with Building Displacement	ROW	1		Residential
111th - 115th	UA	141	25212120220000	312 W 113TH ST, CHICAGO	Single Family Residential		Parcel with Building Displacement	ROW	1		Residential
111th - 115th	UA	142	25212120230000	310 W 113TH ST, CHICAGO	Single Family Residential		Parcel with Building Displacement	ROW	1		Residential
111th - 115th	UA	143	25212170010000	311 W 113TH ST, CHICAGO	Multi-Family Residential	Single-family house (2 family use)	Parcel with Building Displacement	ROW	1		Residential
111th - 115th	UA	144	25212170020000	307 W 113TH ST, CHICAGO	Multi-Family Residential	Single-family house (2 family use)	Parcel with Building Displacement	ROW	1		Residential
111th - 115th	UA	145	25212170030000	303 W 113TH ST, CHICAGO	Single Family Residential		Parcel with Building Displacement	ROW	1		Residential
111th - 115th	UA	146	25212170120000	11332 S PRINCETON AVE, CHICAGO	Transportation (railroad)	UPRR	Affected Parcel	ROW	0		EXEMPT - Railroad
111th - 115th	UA	147	25212180240000	11315 S PRINCETON AVE, CHICAGO	Vacant		Affected Parcel	ROW	0	Missed	Vacant
111th - 115th	UA	148	25212180250000	11319 S PRINCETON AVE, CHICAGO	Single Family Residential		Parcel with Building Displacement	ROW	1		Residential
111th - 115th	UA	149	25212180260000	11321 S PRINCETON AVE, CHICAGO	Single Family Residential		Parcel with Building Displacement	ROW	1		Residential
111th - 115th	UA	150	25212180270000	11325 S PRINCETON AVE, CHICAGO	Single Family Residential	Residence and garage	Parcel with Building Displacement	ROW	1		Residential
111th - 115th	UA	151	25212180280000	11327 S PRINCETON AVE, CHICAGO	Single Family Residential		Parcel with Building Displacement	ROW	1		Residential
111th - 115th	UA	152	25212180200000	11330 S YALE AVE, CHICAGO	Single Family Residential	Garage only	Parcel with Building Displacement	ROW	1		Residential
111th - 115th	UA	153	25212180210000	11334 S YALE AVE, CHICAGO	Multi-Family Residential	Single-family house (2 family use)	Parcel with Building Displacement	ROW	1		Residential
111th - 115th	UA	154	25212180220000	11336 S YALE AVE, CHICAGO	Single Family Residential		Parcel with Building Displacement	ROW	1		Residential

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Division	Segment	Map ID	Parcel ID	Address	Land Use - Field Verified	Field Notes	Displacement Type	Displacement Subtype	Building Displace-ment	Missed if Alley Removed	Land Use - Cook County
111th - 115th	UA	155	25212180230000	11342 S YALE AVE, CHICAGO	Vacant	Vacant; no evidence of commercial use on this parcel	Affected Parcel	ROW	0		Commercial
111th - 115th	UA	156	25212190140000	11343 S YALE AVE, CHICAGO	Single Family Residential		Parcel Affected by Proposed Permanent Envelope	ROW	1	Missed	Residential
111th - 115th	UA	157	25212190150000	11345 S YALE AVE, CHICAGO	Single Family Residential		Parcel with Building Displacement	ROW	1		Residential
111th - 115th	UA	158	25212190160000	11347 S YALE AVE, CHICAGO	Single Family Residential		Parcel with Building Displacement	ROW	1		Residential
111th - 115th	UA	159	25212190170000	11351 S WENTWORTH AVE, CHICAGO	Vacant	Vacant lot	Affected Parcel	ROW	0		Vacant
111th - 115th	UA	160	25212190180000	11355 S WENTWORTH AVE, CHICAGO	Vacant	Vacant lot	Affected Parcel	ROW	0		Vacant
111th - 115th	UA	161	25212190360000	11352 S WENTWORTH AVE, CHICAGO	Single Family Residential	Garage only	Parcel with Building Displacement	ROW	1		Residential
111th - 115th	UA	162	25212190370000	11358 S WENTWORTH AVE, CHICAGO	Vacant	Vacant; house structure on map (City GIS data) is no longer there	Affected Parcel	ROW	0		Residential
111th - 115th	UA	163	25215010010000	401 W 111TH ST, CHICAGO	Transportation (railroad)	UPRR	Affected Parcel	ROW	0		EXEMPT - Railroad
111th - 115th	UA	164	25212280010000	149 W 114TH ST, CHICAGO	Vacant	Vacant; structure on map (City GIS data) is no longer there	Affected Parcel	ROW	0		Commercial
111th - 115th	UA	165	25212280020000	135 W 114TH ST, CHICAGO	Institution (Place of Worship)	Now Faith Church of God Holiness	Parcel with Building Displacement	ROW	1		EXEMPT - Place of Worship
111th - 115th	UA	166	25212280030000	131 W 114TH ST, CHICAGO	Single Family Residential		Parcel Affected by Proposed Permanent Envelope	ROW	1	Missed	Residential
111th - 115th	UA	167	25212280460000	11424 S PERRY AVE, CHICAGO	Industrial	Appears Vacant - no signage	Parcel with Building Displacement	ROW	1		Industrial
111th - 115th	UA	168	25212280470000	11424 S PERRY AVE, CHICAGO	Industrial	Appears Vacant - no signage	Parcel with Building Displacement	ROW	1		Industrial
111th - 115th	UA	169	25212280230000	11426 S PERRY AVE, CHICAGO	Industrial	Appears Vacant - no signage	Parcel with Building Displacement	ROW	1		Industrial

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Division	Segment	Map ID	Parcel ID	Address	Land Use - Field Verified	Field Notes	Displacement Type	Displacement Subtype	Building Displace-ment	Missed if Alley Removed	Land Use - Cook County
111th - 115th	UA	170	25212300350000	11439 W PIPPIN ST, CHICAGO	Industrial	Body Shop - S.R.M Engineering Workshop	Parcel with Building Displacement	ROW	1		Industrial
111th - 115th	UA	171	25212300340000	52 W 115TH ST, CHICAGO	Vacant	Structure on map (City GIS data) is no longer there; vacant lot.	Affected Parcel	ROW	0		Industrial
111th - 115th	UA	172	25212300360000	52 W 115TH ST, CHICAGO	Vacant	Structure on map (City GIS data) is no longer there; vacant lot.	Affected Parcel	ROW	0		Industrial
111th - 115th	UA	173	25212300190000	46 W 115TH ST, CHICAGO	Vacant	Structure on map (City GIS data) is no longer there; vacant lot.	Affected Parcel	ROW	0		Residential
111th - 115th	UA	174	25212300200000	44 W 115TH ST, CHICAGO	Transportation (railroad)	Vacant lot - UPRR	Affected Parcel	ROW	0		EXEMPT - Railroad
111th - 115th	UA	175	25212300210000	42 W 115TH ST, CHICAGO	Single Family Residential		Parcel with Building Displacement	ROW	1		Residential
111th - 115th	UA	176	25212300220000	40 W 115TH ST, CHICAGO	Single Family Residential		Parcel with Building Displacement	ROW	1	Missed	Residential
115th - 117th	UA	177	25214060290000	11502 S LAFAYETTE AVE, CHICAGO	Commercial	Donald's Auto Repair Shop	Parcel with Building Displacement	ROW	1		Commercial
115th - 117th	UA	178	25214070010000	23 W 115TH ST, CHICAGO	Single Family Residential	Boarded up & vacant home	Parcel with Building Displacement	ROW	1		Residential
115th - 117th	UA	179	25214070020000	17 W 115TH ST, CHICAGO	Multi-Family Residential	Single-family house (2 family use)	Parcel with Building Displacement	ROW	1		Residential
115th - 117th	UA	180	25214070030000	11 W 115TH ST, CHICAGO	Vacant		Affected Parcel	ROW	0	Missed	Vacant
115th - 117th	UA	181	25214070070000	11516 S STATE ST, CHICAGO	Vacant		Affected Parcel	ROW	0		Vacant
115th - 117th	UA	182	25214070290000	11514 S STATE ST, CHICAGO	Vacant		Affected Parcel	ROW	0		Vacant
115th - 117th	UA	183	25214060300000	11524 S LAFAYETTE AVE, CHICAGO	Transportation (railroad)	Substation Location (vacant lot & vacated street part of UPRR ROW)	Affected Parcel	Substation	0		EXEMPT - Railroad
115th - 117th	UA	184	25223000070000	11527 S STATE ST, CHICAGO	Public (City of Chicago)	Vacant lot -- adjacent lots have been razed and sign says it is the future home of Aldi shopping center	Easement	ROW	0		EXEMPT - City of Chicago
115th - 117th	UA	185	25223000190000	11562 S WABASH AVE, CHICAGO	Public (City of Chicago)	Vacant lot -- adjacent lots have been razed and sign says it is the future home of Aldi shopping center	Easement	ROW	0		EXEMPT - City of Chicago

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Division	Segment	Map ID	Parcel ID	Address	Land Use - Field Verified	Field Notes	Displacement Type	Displacement Subtype	Building Displace-ment	Missed if Alley Removed	Land Use - Cook County
115th - 117th	UA	186	25223000680000	11552 S MICHIGAN AVE, CHICAGO	Public (City of Chicago)	Vacant lot -- adjacent lots have been razed and sign says it is the future home of Aldi shopping center	Easement	ROW	0		EXEMPT - City of Chicago
115th - 117th	UA	187	25223000090000	11549 S STATE ST, CHICAGO	Transportation (railroad)	UPRR	Affected Parcel	Parking	0		EXEMPT - Railroad
115th - 117th	UA	188	25223000100000	11551 S STATE ST, CHICAGO	Transportation (railroad)	UPRR	Affected Parcel	Parking	0		EXEMPT - Railroad
115th - 117th	UA	189	25223000110000	11561 S STATE ST, CHICAGO	Vacant		Affected Parcel	Parking	0		Residential
115th - 117th	UA	190	25223000120000	11563 S STATE ST, CHICAGO	Vacant		Affected Parcel	Parking	0		Residential
115th - 117th	UA	191	25223000130000	11567 S STATE ST, CHICAGO	Single Family Residential	Residence and garage	Parcel with Building Displacement	Parking	1		Residential
115th - 117th	UA	192	25223000140000	11569 S STATE ST, CHICAGO	Single Family Residential		Parcel with Building Displacement	Parking	1		Residential
115th - 117th	UA	193	25223000150000	11571 S STATE ST, CHICAGO	Single Family Residential		Parcel with Building Displacement	Parking	1		Residential
115th - 117th	UA	194	25223000160000	11573 S STATE ST, CHICAGO	Single Family Residential		Parcel with Building Displacement	Parking	1		Residential
115th - 117th	UA	195	25223000170000	11575 S STATE ST, CHICAGO	Single Family Residential		Parcel with Building Displacement	Parking	1		Residential
115th - 117th	UA	196	25223000180000	11579 S STATE ST, CHICAGO	Vacant		Affected Parcel	Parking	0		Residential
115th - 117th	UA	197	25223000700000	11556 S WABASH AVE, CHICAGO	Transportation (railroad)	UPRR	Affected Parcel	Parking	0		EXEMPT - Railroad
115th - 117th	UA	198	25223000690000	11562 S WABASH AVE, CHICAGO	Single Family Residential	11562 & 11572 S Wabash appear to be one property	Parcel with Building Displacement	Parking	counted		Residential
115th - 117th	UA	199	25223000210000	11572 S WABASH AVE, CHICAGO	Single Family Residential	11562 & 11572 S Wabash appear to be one property	Parcel with Building Displacement	Parking	1		Residential
115th - 117th	UA	200	25223000220000	11574 S WABASH AVE, CHICAGO	Single Family Residential	Residence and garage	Parcel with Building Displacement	Parking	1		Residential
115th - 117th	UA	201	25223000230000	11578 S WABASH AVE, CHICAGO	Single Family Residential	Residence and garage	Parcel with Building Displacement	Parking	1		Residential
115th - 117th	UA	202	25223000710000	25223000710000	Commercial	XOXXOX Charter Bus Inc.	Parcel with Building Displacement	Parking	counted		NA
115th - 117th	UA	203	25223000490000	11573 S WABASH AVE, CHICAGO	Commercial	XOXXOX Charter Bus Inc.	Parcel with Building Displacement	Parking	1		Commercial

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Division	Segment	Map ID	Parcel ID	Address	Land Use - Field Verified	Field Notes	Displacement Type	Displacement Subtype	Building Displace-ment	Missed if Alley Removed	Land Use - Cook County
115th - 117th	UA	204	25223000580000	11578 S MICHIGAN AVE, CHICAGO	Public (City of Chicago)		Easement	Parking	0		EXEMPT - City of Chicago
115th - 117th	UA	205	25223000240000	11583 S STATE ST, CHICAGO	Single Family Residential	4 E 116th under common ownership with 11583 S. State St	Parcel with Building Displacement	Parking	1		Residential
115th - 117th	UA	206	25223000250000	4 E 116TH ST, CHICAGO	Single Family Residential	4 E 116th under common ownership with 11583 S. State St	Parcel with Building Displacement	Parking	counted		Vacant
115th - 117th	UA	207	25223000260000	8 E 116TH ST, CHICAGO	Single Family Residential		Parcel with Building Displacement	Parking	1		Residential
115th - 117th	UA	208	25223000270000	12 E 116TH ST, CHICAGO	Single Family Residential		Parcel with Building Displacement	Parking	1		Residential
115th - 117th	UA	209	25223000280000	16 E 116TH ST, CHICAGO	Single Family Residential	Residence and garage	Parcel with Building Displacement	Parking	1		Residential
115th - 117th	UA	210	25223000290000	20 E 116TH ST, CHICAGO	Single Family Residential	Residence and garage	Parcel with Building Displacement	Parking	1		Residential
115th - 117th	UA	211	25223000500000	32 E 116TH ST, CHICAGO	Single Family Residential	32 & 34 E 116th appear to one property	Parcel with Building Displacement	Parking	counted		Residential
115th - 117th	UA	212	25223000510000	34 E 116TH ST, CHICAGO	Single Family Residential	32 & 34 E 116th appear to one property	Parcel with Building Displacement	Parking	1		Residential
115th - 117th	UA	213	25223000520000	38 E 116TH ST, CHICAGO	Single Family Residential		Parcel with Building Displacement	Parking	1		Residential
115th - 117th	UA	214	25223000590000	11582 S MICHIGAN AVE, CHICAGO	Transportation (railroad)	UPRR	Affected Parcel	Parking	0		EXEMPT - Railroad
115th - 117th	UA	215	25223000600000	11586 S MICHIGAN AVE, CHICAGO	Vacant		Affected Parcel	Parking	0		Vacant
115th - 117th	UA	216	25223000610000	11588 S MICHIGAN AVE, CHICAGO	Vacant		Affected Parcel	Parking	0		Vacant
115th - 117th	UA	217	25223000620000	11592 S MICHIGAN AVE, CHICAGO	Single Family Residential		Parcel with Building Displacement	Parking	1		Residential
115th - 117th	UA	218	25223040500000	11555 S MICHIGAN AVE, CHICAGO	Vacant	Michigan Ave Station (vacant building)	Affected Parcel	Parking	0		Vacant
115th - 117th	UA	219	25223040470000	113 E KENSINGTON AVE, CHICAGO	Vacant		Affected Parcel	Parking	0		Vacant

UPRR HRT Alternative - East Option
Parcels Affected by Land Acquisitions and Easements

Division	Segment	Map ID	Parcel ID	Address	Land Use - Field Verified	Field Notes	Displacement Type	Displacement Subtype	Building Displace-ment	Missed if Alley Removed	Land Use - Cook County
115th - 117th	UA	220	25223040490000	11557 S MICHIGAN AVE, CHICAGO	Vacant	Michigan Ave Station (vacant building)	Affected Parcel	Parking	0		Vacant
115th - 117th	UA	221	25223040050000	11563 S MICHIGAN AVE, CHICAGO	Industrial	11563, 11565, & 11567 S Michigan contain one vacant industrial building	Parcel with Building Displacement	Parking	counted		EXEMPT
115th - 117th	UA	222	25223040060000	11565 S MICHIGAN AVE, CHICAGO	Industrial	11563, 11565, & 11567 S Michigan contain one vacant industrial building	Parcel with Building Displacement	Parking	counted		Vacant
115th - 117th	UA	223	25223040070000	11567 S MICHIGAN AVE, CHICAGO	Industrial	11563, 11565, & 11567 S Michigan contain one vacant industrial building	Parcel with Building Displacement	Parking	1		EXEMPT
115th - 117th	UA	224	25223040080000	11579 S MICHIGAN AVE, CHICAGO	Public (City of Chicago)	Michigan Ave Station (vacant lot)	Affected Parcel	Parking	0		EXEMPT - City of Chicago
115th - 117th	UA	225	25223040270000	120 E 116TH ST, CHICAGO	Public (City of Chicago)	Michigan Ave Station (vacant lot)	Affected Parcel	Parking	0		EXEMPT
115th - 117th	UA	226	25223040280000	122 E 116TH ST, CHICAGO	Public (City of Chicago)	Michigan Ave Station (vacant lot)	Affected Parcel	Parking	0		EXEMPT - City of Chicago
115th - 117th	UA	227	25223040290000	124 E 116TH ST, CHICAGO	Public (City of Chicago)	Michigan Ave Station (vacant lot)	Affected Parcel	Parking	0		EXEMPT
115th - 117th	UA	228	25223040300000	128 E 116TH ST, CHICAGO	Public (City of Chicago)	Michigan Ave Station (vacant lot)	Affected Parcel	Parking	0		EXEMPT
115th - 117th	UA	229	25223040310000	130 E 116TH ST, CHICAGO	Public (City of Chicago)	Michigan Ave Station (vacant lot)	Affected Parcel	Parking	0		EXEMPT
115th - 117th	UA	230	25223040320000	132 E 116TH ST, CHICAGO	Public (City of Chicago)	Michigan Ave Station (vacant lot)	Affected Parcel	Parking	0		EXEMPT
115th - 117th	UA	231	25223040330000	134 E 116TH ST, CHICAGO	Public (City of Chicago)	Michigan Ave Station (vacant lot)	Affected Parcel	Parking	0		EXEMPT
115th - 117th	UA	232	25223040340000	136 E 116TH ST, CHICAGO	Public (City of Chicago)		Affected Parcel	Parking	0		EXEMPT
115th - 117th	UA	233	25223080140000	151 E 116TH ST, CHICAGO	Multi-Family Residential	Single-family house (2 family use); residence and garage	Parcel with Building Displacement	ROW	1		Residential
115th - 117th	UA	234	25223080150000	153 E 116TH ST, CHICAGO	Multi-Family Residential	Single-family house (2 family use)	Parcel with Building Displacement	ROW	1		Residential
115th - 117th	UA	235	25223080160000	155 E 116TH ST, CHICAGO	Single Family Residential		Parcel with Building Displacement	ROW	1		Residential
115th - 117th	UA	236	25223080170000	157 E 116TH ST, CHICAGO	Multi-Family Residential	Single-family house (2 family use)	Affected Parcel	ROW	0		Residential
115th - 117th	UA	237	25223080180000	159 E 116TH ST, CHICAGO	Single Family Residential		Parcel with Building Displacement	ROW	1		Residential

UPRR HRT Alternative - East Option
Parcels Affected by Land Acquisitions and Easements

Division	Segment	Map ID	Parcel ID	Address	Land Use - Field Verified	Field Notes	Displacement Type	Displacement Subtype	Building Displace-ment	Missed if Alley Removed	Land Use - Cook County
115th - 117th	UA	238	25223080190000	163 E 116TH ST, CHICAGO	Multi-Family Residential	Vacant home	Parcel with Building Displacement	ROW	1		Residential
115th - 117th	UA	239	25223080200000	165 E 116TH ST, CHICAGO	Single Family Residential		Parcel with Building Displacement	ROW	1		Residential
115th - 117th	UA	240	25223110130000	11631 S INDIANA AVE, CHICAGO	Public (City of Chicago)	C.O.C. Dept of Streets & Sanitation	Parcel with Building Displacement	ROW	counted		EXEMPT - City of Chicago
115th - 117th	UA	241	25223110120000	11633 S INDIANA AVE, CHICAGO	Public (City of Chicago)	C.O.C. Dept of Streets & Sanitation	Parcel with Building Displacement	ROW	1	Missed	EXEMPT - City of Chicago
115th - 117th	UA	242	25223110250000	11634 S PRAIRIE AVE, CHICAGO	Multi-Family Residential	Single-family house (2 family use); residence and garage	Parcel with Building Displacement	ROW	1		Residential
115th - 117th	UA	243	25223110240000	11632 S PRAIRIE AVE, CHICAGO	Multi-Family Residential	Single-family house (2 family use); residence and garage	Parcel with Building Displacement	ROW	1		Residential
115th - 117th	UA	244	25223110210000	11630 S PRAIRIE AVE, CHICAGO	Single Family Residential		Parcel with Building Displacement	ROW	1		Residential
117th - Front	UB	245	25223160010000	319 E 117TH ST, CHICAGO	Vacant	Vacant lot	Affected Parcel	ROW	0		Vacant
117th - Front	UB	246	25223160350000	329 E 117TH ST, CHICAGO	Commercial	Back lot appears connected with 11722 S Calumet	Affected Parcel	ROW	0		Commercial
117th - Front	UB	247	25223160340000	11722 S CALUMET AVE, CHICAGO	Commercial	No Signage	Affected Parcel	ROW	0		Commercial
117th - Front	UB	248	25223160300000	11726 S CALUMET AVE, CHICAGO	Vacant		Affected Parcel	ROW	0		Vacant
117th - Front	UB	249	25223160310000	11728 S CALUMET AVE, CHICAGO	Vacant		Affected Parcel	ROW	0		Vacant
117th - Front	UB	250	25223170130000	354 E 118TH ST, CHICAGO	Single Family Residential		Parcel with Building Displacement	ROW	1		Residential
117th - Front	UB	251	25223170140000	356 E 118TH ST, CHICAGO	Public (City of Chicago)		Affected Parcel	ROW	0		EXEMPT - City of Chicago
117th - Front	UB	252	25223170150000	358 E 118TH ST, CHICAGO	Public (City of Chicago)		Affected Parcel	ROW	0		EXEMPT - City of Chicago
117th - Front	UB	253	25223170300000	11742 S FRONT AVE, CHICAGO	Vacant	Structure on map (City GIS data) is no longer there; vacant lot now used by adjacent industrial use.	Affected Parcel	ROW	0		Industrial
117th - Front	UB	254	25223170310000	11810 S CALUMET AVE, CHICAGO	Industrial	Active - No Signage	Parcel with Building Displacement	ROW	counted		Industrial

UPRR HRT Alternative - East Option
Parcels Affected by Land Acquisitions and Easements

Division	Segment	Map ID	Parcel ID	Address	Land Use - Field Verified	Field Notes	Displacement Type	Displacement Subtype	Building Displace-ment	Missed if Alley Removed	Land Use - Cook County
117th - Front	UB	255	25223170320000	11810 S CALUMET AVE, CHICAGO	Industrial	Active - No Signage	Parcel with Building Displacement	ROW	1		Industrial
117th - Front	UB	256	25223170330000	375 E 118TH ST, CHICAGO	Industrial	Active - No Signage	Parcel with Building Displacement	ROW	counted		Industrial
Front - 130th	UB	257	25223170350000	11800 S FRONT AVE, CHICAGO	Transportation (railroad)	CN/Metra	Affected Parcel	ROW	0		EXEMPT - RTA / METRA
Front - 130th	UB	258	25225010050000	360 E 119TH ST, CHICAGO	Transportation (railroad)	CN/Metra	Affected Parcel	ROW	0		EXEMPT - Railroad
Front - 130th	UB	259	25223250010000	370 E 119TH ST, CHICAGO	Transportation (railroad)	CN/Metra	Affected Parcel	ROW	0		EXEMPT - Railroad
Front - 130th	UB	260	25224000260000	11600 S COTTAGE GROVE AVE, CHICAGO	Industrial		Affected Parcel	ROW	0		Industrial
Front - 130th	UB	261	25224000270000	11600 S COTTAGE GROVE AVE, CHICAGO	Transportation (railroad)	IHB	Affected Parcel	ROW	0		EXEMPT - Railroad
Front - 130th	UB	262	25271080090000	11900 S COTTAGE GROVE AVE, CHICAGO	Transportation (railroad)	IHB	Affected Parcel	Yard	0		EXEMPT - Railroad
UPRR COMMON	**Segment**	**Map ID**	**Parcel ID**	**Address**	**Land Use - Field Verified**	**Field Notes**	**Displacement Type**	**Displacement Subtype**	**Building Displacement**		**Land Use - Cook County**
RRYARD	RRYARD	1	25224010340000	1355 E 121ST ST, CHICAGO	Transportation (railroad)	IHB	Affected Parcel	Yard	0		EXEMPT
Front - 130th	UB	2	25275020010000	12330 S COTTAGE GROVE AVE, CHICAGO	Transportation (railroad)	Alignment	Affected Parcel	Yard	0		EXEMPT
RRYARD	RRYARD	3	25272000090000	12256 S COTTAGE GROVE AVE, CHICAGO	Transportation (railroad)	IHB	Affected Parcel	Yard	1		EXEMPT - Railroad
RRYARD	RRYARD	4	25272000070000	12256 S COTTAGE GROVE AVE, CHICAGO	Industrial		Affected Parcel	Yard	2		Industrial
RRYARD	RRYARD	5	25272000100000	12256 S COTTAGE GROVE AVE, CHICAGO	Vacant		Affected Parcel	Yard	0		EXEMPT
RRYARD	RRYARD	6	25272000120000	12534 S COTTAGE GROVE AVE, CHICAGO	Vacant		Affected Parcel	Yard	0		EXEMPT
RRYARD	RRYARD	7	25272000130000	12546 S COTTAGE GROVE AVE, CHICAGO	Utility (Metro Water Reclamation District)	Substation Location	Affected Parcel	Yard	0		EXEMPT
RRYARD	RRYARD	8	25275030010000	12320 S COTTAGE GROVE AVE, CHICAGO	Transportation (railroad)	NTCTD/CSS and SBRR	Affected Parcel	Yard	0		EXEMPT
RRYARD	RRYARD	9	25272000040000	12500 S COTTAGE GROVE AVE, CHICAGO	Utility (Metro Water Reclamation District)		Affected Parcel	Yard	0		EXEMPT
RRYARD	RRYARD	10	25274000030000	12606 S COTTAGE GROVE AVE, CHICAGO	Utility (Metro Water Reclamation District)		Affected Parcel	Yard	0		EXEMPT
RRYARD	RRYARD	11	25274000070000	12614 S COTTAGE GROVE AVE, CHICAGO	Utility (Metro Water Reclamation District)		Affected Parcel	Yard	0		EXEMPT
RRYARD	RRYARD	12	25274000050000	12608 S COTTAGE GROVE AVE, CHICAGO	Utility (Metro Water Reclamation District)		Affected Parcel	Yard	0		EXEMPT
RRYARD	RRYARD	13	25274000020000	12600 S COTTAGE GROVE AVE, CHICAGO	Transportation (railroad)	NTCTD/CSS and SBRR	Affected Parcel	Yard	0		EXEMPT

UPRR HRT Alternative - East Option
Parcels Affected by Land Acquisitions and Easements

Division	Segment	Map ID	Parcel ID	Address	Land Use - Field Verified	Field Notes	Displacement Type	Displacement Subtype	Building Displace-ment	Missed if Alley Removed	Land Use - Cook County
RRYARD	RRYARD	14	25274000060000	12610 S COTTAGE GROVE AVE, CHICAGO	Utility (Metro Water Reclamation District)		Affected Parcel	Yard	0		EXEMPT
RRYARD	RRYARD	15	25274000090000	12618 S COTTAGE GROVE AVE, CHICAGO	Utility (Metro Water Reclamation District)		Affected Parcel	Yard	0		EXEMPT
RRYARD	RRYARD	16	25273010070000	300 E 127TH ST, CHICAGO	Utility (Metro Water Reclamation District)		Affected Parcel	Yard	0		EXEMPT

130th Station - South Option	Segment	Map ID	Parcel ID	Address	Land Use - Field Verified	Field Notes	Displacement Type	Displacement Subtype	Building Displacement		Land Use - Cook County
Front - 130th	UB	1	25275020010000	12330 S COTTAGE GROVE AVE, CHICAGO	Transportation (railroad)	IHB *- Previously counted with Common Perm. Envelop*	Affected Parcel	Station	0		EXEMPT - Railroad
Front - 130th	UB	2	25269990010000	25269990010000	Transportation (railroad)	IHB	Affected Parcel	Station	0		NA
Front - 130th	UB	3	25263000170000	12807 S COTTAGE GROVE AVE, CHICAGO	Utility (Metro Water Reclamation District)		Affected Parcel	Station	0		EXEMPT - Metro Water Reclamation
Front - 130th	UB	4	25263000150000	12813 S COTTAGE GROVE AVE, CHICAGO	Utility (Metro Water Reclamation District)		Affected Parcel	Station	0		EXEMPT - Metro Water Reclamation
Front - 130th	UB	5	25263000140000	12817 S COTTAGE GROVE AVE, CHICAGO	Utility (Metro Water Reclamation District)		Affected Parcel	Station	0		EXEMPT - Metro Water Reclamation
Front - 130th	UB	6	25273010120000	325 E 127TH ST, CHICAGO	Utility (Metro Water Reclamation District)		Affected Parcel	Station	0		EXEMPT - Metro Water Reclamation
Front - 130th	UB	7	25273010130000	310 E 130TH ST, CHICAGO	Utility (Metro Water Reclamation District)		Affected Parcel	Station	0		EXEMPT - Metro Water Reclamation
Front - 130th	UB	8	25273010110000	350 E 130TH ST, CHICAGO	Utility (Metro Water Reclamation District)		Affected Parcel	Station	0		EXEMPT - Metro Water Reclamation
Front - 130th	UB	9	25273010100000	360 E 130TH ST, CHICAGO	Utility (Metro Water Reclamation District)		Affected Parcel	Station	0		EXEMPT - Metro Water Reclamation

130th Station - West Option	Segment	Map ID	Parcel ID	Address	Land Use - Field Verified	Field Notes	Displacement Type	Displacement Subtype	Building Displacement		Land Use - Cook County
Front - 130th	UB	1	25275020010000	12330 S COTTAGE GROVE, CHICAGO	Transportation (railroad)	IHB *- - Previously counted with Common Perm. Envelop*	Affected Parcel	Station	0		EXEMPT - Railroad
Front - 130th	UB	2	25274000090000	12618 S COTTAGE GROVE, CHICAGO	Utility (Metro Water Reclamation District)	*Previously counted with Common Perm. Envelop*	Affected Parcel	Station	0		EXEMPT - Metro Water Reclamation
Front - 130th	UB	3	25269990010000	25269990010000	Transportation (railroad)	IHB	Affected Parcel	Station	0		NA
Front - 130th	UB	4	25263000170000	12807 S COTTAGE GROVE, CHICAGO	Utility (Metro Water Reclamation District)		Affected Parcel	Station	0		EXEMPT - Metro Water Reclamation
Front - 130th	UB	5	25263000150000	12813 S COTTAGE GROVE, CHICAGO	Utility (Metro Water Reclamation District)		Affected Parcel	Station	0		EXEMPT - Metro Water Reclamation
Front - 130th	UB	6	25263000140000	12817 S COTTAGE GROVE, CHICAGO	Utility (Metro Water Reclamation District)		Affected Parcel	Station	0		EXEMPT - Metro Water Reclamation
Front - 130th	UB	7	25273010120000	325 E 127TH, CHICAGO	Utility (Metro Water Reclamation District)		Affected Parcel	Station	0		EXEMPT - Metro Water Reclamation

UPRR HRT Alternative - East Option
Parcels Affected by Land Acquisitions and Easements

Division	Segment	Map ID	Parcel ID	Address	Land Use - Field Verified	Field Notes	Displacement Type	Displacement Subtype	Building Displace-ment	Missed if Alley Removed	Land Use - Cook County
Front - 130th	UB	8	25273010130000	310 E 130TH, CHICAGO	Utility (Metro Water Reclamation District)		Affected Parcel	Station	0		EXEMPT - Metro Water Reclamation
Front - 130th	UB	9	25273010110000	350 E 130TH, CHICAGO	Utility (Metro Water Reclamation District)		Affected Parcel	Station	0		EXEMPT - Metro Water Reclamation
Front - 130th	UB	10	25273010100000	360 E 130TH, CHICAGO	Utility (Metro Water Reclamation District)		Affected Parcel	Station	0		EXEMPT - Metro Water Reclamation

Parcel Count Summary Table		
95th - 99th	22	22 easements
99th - 103rd	38	
103rd - 111th	58	
111th - 115th	57	
115th - 117th	68	4 easements
117th - Front	12	
Front - 130th	26	includes both station options
RRYARD	15	

Building Displacement Summary Table	
95th - 99th	0
99th - 103rd	26
103rd - 111th	18
111th - 115th	32
115th - 117th	31
117th - Front	2
Front - 130th	0
RRYARD	3
Total	112

UPRR HRT Alternative - West Option
Parcels Affected by Land Acquisitions and Easements

Division	Segment	Map ID	Parcel ID	Address	Land Use - Field Verified	Field Notes	Displacement Type	Displacement Subtype	Building Displace-ment	Missed if Alley Removed	Land Use - Cook County
95th - 99th	UA	1	25092070500000	9512 S STATE ST, CHICAGO	Transportation (highway)	I-94	Easement	ROW	0	Missed	EXEMPT - Cook County
95th - 99th	UA	2	25092070490000	9511 W 95TH ST, CHICAGO	Transportation (highway)	I-94	Easement	ROW	0		EXEMPT - Cook County
95th - 99th	UA	3	25092150010000	9600 S LAFAYETTE AVE, CHICAGO	Transportation (highway)	I-94	Easement	ROW	0		EXEMPT - Cook County
95th - 99th	UA	4	25092230430000	9721 S LAFAYETTE AVE, CHICAGO	Transportation (highway)	I-94	Easement	ROW	0		EXEMPT - City of Chicago
95th - 99th	UA	5	25092220420000	9720 S LAFAYETTE AVE, CHICAGO	Transportation (highway)	I-94	Easement	ROW	0		EXEMPT - Cook County
95th - 99th	UA	6	25092220410000	9701 S PRINCETON AVE, CHICAGO	Transportation (highway)	I-94	Easement	ROW	0		EXEMPT - Cook County
95th - 99th	UA	7	25092210420000	9710 S PERRY AVE, CHICAGO	Transportation (highway)	I-94	Easement	ROW	0		EXEMPT - Cook County
95th - 99th	UA	8	25092290420000	9800 S PERRY ST, CHICAGO	Transportation (highway)	I-94	Easement	ROW	0		EXEMPT - Cook County
95th - 99th	UA	9	25092290410000	9801 S LASALLE ST, CHICAGO	Transportation (highway)	I-94	Easement	ROW	0		EXEMPT - Cook County
95th - 99th	UA	10	25092280420000	9800 S LASALLE ST, CHICAGO	Transportation (highway)	I-94	Easement	ROW	0		EXEMPT - Cook County
95th - 99th	UA	11	25092280410000	9801 S WENTWORTH AVE, CHICAGO	Transportation (highway)	I-94	Easement	ROW	0		EXEMPT - Cook County
95th - 99th	UA	12	25092270410000	9807 S YALE AVE, CHICAGO	Transportation (highway)	I-57	Easement	ROW	0		EXEMPT - Cook County
95th - 99th	UA	13	25092260440000	9810 S YALE AVE, CHICAGO	Transportation (highway)	I-57	Easement	ROW	0		EXEMPT - Cook County
95th - 99th	UA	14	25092260470000	9819 S PRINCETON AVE, CHICAGO	Transportation (highway)	I-57	Easement	ROW	0		EXEMPT - Cook County
95th - 99th	UA	15	25092250300000	9826 S PRINCETON AVE, CHICAGO	Transportation (highway)	I-57	Easement	ROW	0		EXEMPT - Cook County
95th - 99th	UA	16	25092250440000	9825 S HARVARD AVE, CHICAGO	Transportation (highway)	I-57	Easement	ROW	0		EXEMPT - Cook County
95th - 99th	UA	17	25092250450000	352 W 99TH ST, CHICAGO	Transportation (highway)	I-57	Easement	ROW	0		EXEMPT - Cook County
95th - 99th	UA	18	25092250480000	350 W 99TH ST, CHICAGO	Transportation (highway)	I-57	Easement	ROW	0		EXEMPT - Cook County
95th - 99th	UA	19	25092240200000	356 W 99TH ST, CHICAGO	Transportation (highway)	I-57	Easement	ROW	0		EXEMPT - Cook County
95th - 99th	UA	20	25092240110000	354 W 99TH ST, CHICAGO	Transportation (highway)	I-57	Easement	ROW	0		EXEMPT - Cook County
95th - 99th	UA	21	25092240100000	352 W 99TH ST, CHICAGO	Transportation (highway)	I-57	Easement	ROW	0		EXEMPT - Cook County
95th - 99th	UA	22	25092240090000	350 W 99TH ST, CHICAGO	Transportation (highway)	I-57	Easement	ROW	0		Vacant
99th - 103rd	UA	23	25095000020000	351 W 99TH ST, CHICAGO	Transportation (railroad)	UPRR	Affected Parcel	ROW	0		EXEMPT - Railroad
99th - 103rd	UA	24	25094000460000	341 W 99TH ST, CHICAGO	Transportation (railroad)	UPRR	Affected Parcel	ROW	0		EXEMPT - Railroad
99th - 103rd	UA	25	25094000470000	312 W 99TH PL, CHICAGO	Parkland	Wendell Smith Park	(See *Parklands and Community Resources Technical Memorandum* for park impacts.)	ROW	0		EXEMPT - Parklands
99th - 103rd	UA	26	25099990010000		Parkland	Parkland	(See *Parklands and Community Resources Technical Memorandum* for park impacts.)	ROW	0		NA

Division	Segment	Map ID	Parcel ID	Address	Land Use - Field Verified	Field Notes	Displacement Type	Displacement Subtype	Building Displace-ment	Missed if Alley Removed	Land Use - Cook County
99th - 103rd	UA	195	25094240600000	340 W 103RD ST, CHICAGO	Vacant	CTA Bus Turnaround	Affected Parcel	Bus Turnaround	0		Vacant
99th - 103rd	UA	27	25161050340000	405 W 103RD ST, CHICAGO	Single Family Residential		Parcel with Building Displacement	Station	1		Residential
99th - 103rd	UA	28	25161050350000	403 W 103RD ST, CHICAGO	Commercial	Vacant building - potentially historic	Parcel with Building Displacement	Station	1		Commercial
99th - 103rd	UA	29	25161050330000	400 W 103RD PL, CHICAGO	Vacant	Vacant lot	Affected Parcel	Parking	0		Vacant
99th - 103rd	UA	30	25161070100000	401 W 103RD PL, CHICAGO	Vacant	Vacant lot w/cars - no structure	Affected Parcel	Parking	0		Commercial
103rd - 111th	UA	31	25161130240000	401 W 104TH ST, CHICAGO	Commercial	This lot is designated commercial, but there is a sign on the property that says "CPO Outreach Christian School - Fellowship and Career Center."	Affected Parcel	ROW	0		Commercial
103rd - 111th	UA	32	25161130280000	10413 S EGGLESTON AVE, CHICAGO	Commercial	Potential shared use parcel (CPO)	Affected Parcel	ROW	0		Vacant
103rd - 111th	UA	33	25161130290000	405 W 104TH ST, CHICAGO	Commercial	Potential shared use parcel (CPO)	Parcel with Building Displacement	ROW	1		Industrial
103rd - 111th	UA	34	25161130310000	400 W 105TH ST, CHICAGO	Vacant	Vacant lot w/dump materials	Affected Parcel	ROW	0		Vacant
103rd - 111th	UA	35	25161210240000	411 W 105TH ST, CHICAGO	Commercial	Commercial lot w/vehicles	Affected Parcel	ROW	0		Commercial
103rd - 111th	UA	36	25161210250000	10514 S STEWART AVE, CHICAGO	Commercial	Commercial lot w/vehicles	Affected Parcel	ROW	0		Commercial
103rd - 111th	UA	37	25161210310000	10520 S STEWART AVE, CHICAGO	Industrial	Auto Garage - no signage	Parcel with Building Displacement	ROW	1		Industrial
103rd - 111th	UA	38	25161210320000	10528 S STEWART AVE, CHICAGO	Industrial	Lot w/vehicles & small structure	Parcel with Building Displacement	ROW	1		Vacant
103rd - 111th	UA	39	25162100010000	317 W 105TH ST, CHICAGO	Public (City of Chicago)		Affected Parcel	Substation	0		EXEMPT - City of Chicago
103rd - 111th	UA	40	25165000070000	360 W 105TH ST, CHICAGO	Transportation (railroad)	UPRR	Affected Parcel	Substation	0		EXEMPT - Railroad
103rd - 111th	UA	41	25162100380000	230 W 105TH PL, CHICAGO	Public (City of Chicago)		Affected Parcel	Substation	0		EXEMPT - City of Chicago
103rd - 111th	UA	42	25162100390000	232 W 105TH PL, CHICAGO	Public (City of Chicago)		Affected Parcel	Substation	0		EXEMPT - City of Chicago
103rd - 111th	UA	43	25162100400000	232 W 105TH ST, CHICAGO	Public (City of Chicago)		Affected Parcel	Substation	0		EXEMPT - City of Chicago
103rd - 111th	UA	44	25161210220000	10530 S STEWART AVE, CHICAGO	Industrial	AmeriTech	Parcel with Building Displacement	ROW	1		Industrial
103rd - 111th	UA	45	25161210270000	10548 S STEWART AVE, CHICAGO	Industrial	AT&T	Parcel with Building Displacement	ROW	1		Industrial
103rd - 111th	UA	46	25161210280000	10552 S STEWART AVE, CHICAGO	Industrial	AT&T	Parcel with Building Displacement	ROW	Counted		Industrial

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Division	Segment	Map ID	Parcel ID	Address	Land Use - Field Verified	Field Notes	Displacement Type	Displacement Subtype	Building Displace-ment	Missed if Alley Removed	Land Use - Cook County
103rd - 111th	UA	47	25161210290000	10558 S STEWART AVE, CHICAGO	Industrial	AT&T	Parcel with Building Displacement	ROW	Counted		Industrial
103rd - 111th	UA	48	25161290300000	10638 S STEWART AVE, CHICAGO	Public (City of Chicago)	Vacant lot	Affected Parcel	ROW	0		EXEMPT - City of Chicago
103rd - 111th	UA	49	25161290310000	10632 S STEWART AVE, CHICAGO	Vacant	Vacant lot	Affected Parcel	ROW	0		Vacant
103rd - 111th	UA	50	25161290290000	410 W 107TH ST, CHICAGO	Vacant	Vacant lot	Affected Parcel	ROW	0		Vacant
103rd - 111th	UA	51	25161290280000	400 W 107TH ST, CHICAGO	Industrial	Vacant building - no signage	Parcel with Building Displacement	ROW	1		Industrial
103rd - 111th	UA	52	25163070250000	405 W 107TH ST, CHICAGO	Vacant	Vacant lot	Affected Parcel	ROW	0		Vacant
103rd - 111th	UA	53	25163070220000	400 W 108TH ST, CHICAGO	Vacant	Vacant lot	Affected Parcel	ROW	0		Vacant
103rd - 111th	UA	54	25163150250000	405 W 108TH ST, CHICAGO	Vacant	Vacant lot	Affected Parcel	ROW	0		Vacant
103rd - 111th	UA	55	25163150260000	405 W 108TH ST, CHICAGO	Vacant	Vacant lot	Affected Parcel	ROW	0		Vacant
103rd - 111th	UA	56	25163150270000	410 W 109TH ST, CHICAGO	Vacant	Vacant lot	Affected Parcel	ROW	0		Vacant
103rd - 111th	UA	57	25163150240000	410 W 109TH ST, CHICAGO	Industrial	Vacant building without signage	Parcel with Building Displacement	ROW	1		Industrial
103rd - 111th	UA	58	25163200110000	409 W 109TH ST, CHICAGO	Industrial	Active industrial use - "Integrity Wall Panel"	Parcel with Building Displacement	ROW	1		Industrial
103rd - 111th	UA	59	25163200220000	410 W 109TH ST, CHICAGO	Industrial	Integrity Wall Panel	Affected Parcel	ROW	0		Residential
103rd - 111th	UA	60	25163200230000	412 W 109TH ST, CHICAGO	Industrial	Integrity Wall Panel	Affected Parcel	ROW	0		Vacant
103rd - 111th	UA	61	25163290060000	401 W 110TH ST, CHICAGO	Industrial	Lot contains construction equipment & small structure	Parcel with Building Displacement	ROW	1		Vacant
103rd - 111th	UA	62	25163290070000	11026 S EGGLESTON AVE, CHICAGO	Public (City of Chicago)	Vacant lot	Affected Parcel	Parking	0		EXEMPT - City of Chicago
103rd - 111th	UA	63	25163290090000	11037 S EGGLESTON AVE, CHICAGO	Public (City of Chicago)	Vacant lot	Affected Parcel	Parking	0		EXEMPT - City of Chicago
103rd - 111th	UA	64	25163290080000	11041 S EGGLESTON AVE, CHICAGO	Public (City of Chicago)	Vacant lot	Affected Parcel	Parking	0		EXEMPT - City of Chicago
103rd - 111th	UA	65	25163290050000	402 W 111TH ST, CHICAGO	Institution (Place of Worship)	Vacant lot w/sign "Future home of Logos Baptist Assembly"	Affected Parcel	Parking	0		Vacant
111th - 115th	UA	66	25211070060000	407 W 111TH ST, CHICAGO	Commercial	Roseland Tune Up Center	Parcel with Building Displacement	ROW	1	Missed	Commercial
111th - 115th	UA	67	25211070070000	405 W 111TH ST, CHICAGO	Commercial	Rosleand Tune Up Center	Parcel with Building Displacement	ROW	Counted		Commercial
111th - 115th	UA	68	25211070080000	401 W 111TH ST, CHICAGO	Commercial	Roseland Tune Up Center	Affected Parcel	ROW	0		Commercial
111th - 115th	UA	69	25211070090000	403 W 111TH ST, CHICAGO	Transportation (railroad)	UPRR	Affected Parcel	ROW	0		EXEMPT - Railroad
111th - 115th	UA	70	25211070250000	11114 S STEWART AVE, CHICAGO	Vacant	Vacant lot	Affected Parcel	ROW	0		Commercial

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Division	Segment	Map ID	Parcel ID	Address	Land Use - Field Verified	Field Notes	Displacement Type	Displacement Subtype	Building Displace-ment	Missed if Alley Removed	Land Use - Cook County
111th - 115th	UA	71	25211070260000	11116 S STEWART AVE, CHICAGO	Vacant	Vacant lot	Affected Parcel	ROW	0		Commercial
111th - 115th	UA	72	25211070270000	11118 S STEWART AVE, CHICAGO	Commercial	Building w/no signage	Parcel with Building Displacement	ROW	1		Commercial
111th - 115th	UA	73	25211070280000	11124 S STEWART AVE, CHICAGO	Commercial	Benson & Son Construction Contractors	Parcel with Building Displacement	ROW	1		Commercial
111th - 115th	UA	74	25211070290000	11128 S STEWART AVE, CHICAGO	Commercial	Benson & Son Construction Contractors	Affected Parcel	ROW	0		Commercial
111th - 115th	UA	75	25211070300000	11130 S STEWART AVE, CHICAGO	Single Family Residential		Parcel with Building Displacement	ROW	1		Residential
111th - 115th	UA	76	25211070310000		Commercial		Parcel with Building Displacement	ROW	1		Commercial
111th - 115th	UA	77	25211070320000	11144 S STEWART AVE, CHICAGO	Commercial	Building w/no signage	Affected Parcel	ROW	0		Residential
111th - 115th	UA	78	25211070330000	11148 S STEWART AVE, CHICAGO	Single Family Residential		Affected Parcel	ROW	0		Residential
111th - 115th	UA	79	25211070340000	11150 S STEWART AVE, CHICAGO	Single Family Residential		Affected Parcel	ROW	0	Missed	Residential
111th - 115th	UA	80	25211070370000	406 W 112TH ST, CHICAGO	Vacant		Affected Parcel	ROW	0	Missed	Vacant
111th - 115th	UA	81	25215010020000	501 E 112TH ST, CHICAGO	Transportation (railroad)	UPRR	Affected Parcel	ROW	0		EXEMPT - Railroad
111th - 115th	UA	82	25212080010000	11201 S STEWART AVE, CHICAGO	Vacant	Vacant lot	Affected Parcel	ROW	0		Industrial
111th - 115th	UA	83	25212080020000	11225 S STEWART AVE, CHICAGO	Vacant	Vacant lot	Affected Parcel	ROW	0		Industrial
111th - 115th	UA	84	25212120010000	11229 S STEWART AVE, CHICAGO	Single Family Residential	Vacant, boarded up single-family home	Affected Parcel	ROW	0		Residential
111th - 115th	UA	85	25212120020000	11239 S STEWART AVE, CHICAGO	Single Family Residential		Affected Parcel	ROW	0	Missed	Residential
111th - 115th	UA	86	25212120090000	341 W 112TH PL, CHICAGO	Industrial	Boarded up - No signage (339 W 112th)	Parcel with Building Displacement	ROW	1		Industrial
111th - 115th	UA	87	25212120170000	340 W 113TH ST, CHICAGO	Mixed Use Comm/Res	Two-Story Mixed Use (sign "Sisters Exotic Catering")	Parcel with Building Displacement	ROW	1		Residential
111th - 115th	UA	88	25212120180000	338 W 113TH ST, CHICAGO	Vacant	Vacant lot	Affected Parcel	ROW	0		Vacant
111th - 115th	UA	89	25212170040000	11325 S HARVARD AVE, CHICAGO	Transportation (railroad)	UPRR	Affected Parcel	ROW	0		EXEMPT - Railroad
111th - 115th	UA	90	25212170050000	11327 S HARVARD AVE, CHICAGO	Single Family Residential		Affected Parcel	ROW	0	Missed	Residential
111th - 115th	UA	91	25212170270000	11334 S PRINCETON AVE, CHICAGO	Transportation (railroad)	UPRR	Affected Parcel	ROW	0		EXEMPT - Railroad
111th - 115th	UA	92	25212170280000	11336 S PRINCETON AVE, CHICAGO	Single Family Residential	No building on lot/probably side yard lot for adjacent home	Affected Parcel	ROW	0		Residential
111th - 115th	UA	93	25212170290000	11340 S PRINCETON AVE, CHICAGO	Single Family Residential		Affected Parcel	ROW	0	Missed	Residential

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Division	Segment	Map ID	Parcel ID	Address	Land Use - Field Verified	Field Notes	Displacement Type	Displacement Subtype	Building Displace-ment	Missed if Alley Removed	Land Use - Cook County
111th - 115th	UA	94	25212180140000	233 W 113TH ST, CHICAGO	Transportation (railroad)	UPRR	Affected Parcel	ROW	0		EXEMPT - Railroad
111th - 115th	UA	95	25219990010000	25219990010000	Transportation (railroad)	UPRR	Affected Parcel	ROW	0		NA
111th - 115th	UA	96	25212270010000	11411 S YALE AVE, CHICAGO	Transportation (railroad)	UPRR	Affected Parcel	ROW	0		EXEMPT - Railroad
111th - 115th	UA	97	25219990010000	25219990010000	Transportation (railroad)	UPRR	Affected Parcel	ROW	0		NA
111th - 115th	UA	98	25212270020000	11413 S YALE AVE, CHICAGO	Single Family Residential		Parcel with Building Displacement	ROW	1		Residential
111th - 115th	UA	99	25212270120000	11420 S WENTWORTH AVE, CHICAGO	Transportation (railroad)	UPRR	Affected Parcel	ROW	0		EXEMPT - Railroad
111th - 115th	UA	100	25212270130000	11422 S WENTWORTH AVE, CHICAGO	Vacant	Vacant lot	Affected Parcel	ROW	0		Vacant
111th - 115th	UA	101	25212280420000	11423 S WENTWORTH AVE, CHICAGO	Institutional	My Holy Rock M.B. Church; vacant lot/no building	Affected Parcel	ROW	0		Commercial
111th - 115th	UA	102	25212280150000	11433 S WENTWORTH AVE, CHICAGO	Institutional	My Holy Rock M.B. Church; vacant lot/no building	Affected Parcel	ROW	0		Commercial
111th - 115th	UA	103	25212280160000	11437 S WENTWORTH AVE, CHICAGO	Institutional	My Holy Rock M.B. Church	Affected Parcel	ROW	0	Missed	Commercial
111th - 115th	UA	104	25212280430000	11437 S WENTWORTH AVE, CHICAGO	Institutional	My Holy Rock M.B. Church; vacant lot/no building	Affected Parcel	ROW	0		Commercial
111th - 115th	UA	105	25212280440000	124 W 115TH ST, CHICAGO	Single Family Residential		Affected Parcel	ROW	0	Missed	Residential
111th - 115th	UA	106	25212280450000	120 W 115TH ST, CHICAGO	Single Family Residential		Affected Parcel	ROW	0		Residential
111th - 115th	UA	107	25212280340000	116 W 115TH ST, CHICAGO	Multi-Family Residential	Multi-Family Residential (2 family)	Parcel with Building Displacement	ROW	1		Residential
111th - 115th	UA	108	25212280370000	112 W 115TH ST, CHICAGO	Industrial	One story garage, no sign, potentially historic	Parcel with Building Displacement	ROW	1		Industrial
111th - 115th	UA	109	25212280380000	106 W 115TH ST, CHICAGO	Vacant	Vacant lot	Affected Parcel	ROW	0		Vacant
115th - 117th	UA	110	25214050080000	103 W 115TH ST, CHICAGO	Vacant	Vacant lot/no building	Affected Parcel	ROW	0		Vacant
115th - 117th	UA	111	25214060010000	11513 S PERRY AVE, CHICAGO	Transportation (railroad)	UPRR	Affected Parcel	ROW	0		EXEMPT - Railroad
115th - 117th	UA	112	25214060550000	11515 S PERRY AVE, CHICAGO	Vacant	Vacant	Affected Parcel	ROW	0		Residential
115th - 117th	UA	113	25214060300000	11524 S LAFAYETTE AVE, CHICAGO	Transportation (railroad)	UPRR	Affected Parcel	Substation	0		EXEMPT - Railroad
115th - 117th	UA	114	25214060310000	11526 S LAFAYETTE AVE, CHICAGO	Single Family Residential		Parcel with Building Displacement	Substation	1		Residential
115th - 117th	UA	115	25214060580000	11530 S LAFAYETTE AVE, CHICAGO	Single Family Residential		Parcel with Building Displacement	Substation	1		Residential
115th - 117th	UA	116	25219990010000	25219990010000	Transportation (railroad)	UPRR	Affected Parcel	ROW	0		NA
115th - 117th	UA	117	25214070080000	11535 S LAFAYETTE AVE, CHICAGO	Transportation (railroad)	UPRR	Affected Parcel	ROW	0		EXEMPT - Railroad

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Division	Segment	Map ID	Parcel ID	Address	Land Use - Field Verified	Field Notes	Displacement Type	Displacement Subtype	Building Displace-ment	Missed if Alley Removed	Land Use - Cook County
115th - 117th	UA	118	25215010070000	500 W 113TH ST, CHICAGO	Transportation (railroad)	UPRR	Affected Parcel	ROW	0		EXEMPT - Railroad
115th - 117th	UA	119	25214070090000	11537 S LAFAYETTE AVE, CHICAGO	Vacant	Vacant lot	Affected Parcel	ROW	0		Vacant
115th - 117th	UA	120	25214070100000	11541 S LAFAYETTE AVE, CHICAGO	Single Family Residential		Affected Parcel	ROW	0	Missed	Residential
115th - 117th	UA	121	25214070300000	11512 S STATE ST, CHICAGO	Transportation (railroad)	UPRR	Affected Parcel	ROW	0		EXEMPT - Railroad
115th - 117th	UA	122	25214070310000	11546 S STATE ST, CHICAGO	Single Family Residential		Parcel with Building Displacement	ROW	1		Residential
115th - 117th	UA	123	25214070320000	11548 S STATE ST, CHICAGO	Multi-Family Residential		Parcel with Building Displacement	ROW	1		Residential
115th - 117th	UA	124	25223000090000	11549 S STATE ST, CHICAGO	Transportation (railroad)	UPRR	Affected Parcel	ROW	0		EXEMPT - Railroad
115th - 117th	UA	125	25223000100000	11551 S STATE ST, CHICAGO	Transportation (railroad)	UPRR	Affected Parcel	Parking	0		EXEMPT - Railroad
115th - 117th	UA	126	25223000110000	11561 S STATE ST, CHICAGO	Vacant		Affected Parcel	Parking	0		Residential
115th - 117th	UA	127	25223000120000	11563 S STATE ST, CHICAGO	Vacant		Affected Parcel	Parking	0		Residential
115th - 117th	UA	128	25223000130000	11567 S STATE ST, CHICAGO	Single Family Residential	Residence and garage	Parcel with Building Displacement	Parking	1		Residential
115th - 117th	UA	129	25223000140000	11569 S STATE ST, CHICAGO	Single Family Residential	Residence and garage	Parcel with Building Displacement	Parking	1		Residential
115th - 117th	UA	130	25223000150000	11571 S STATE ST, CHICAGO	Single Family Residential		Parcel with Building Displacement	Parking	1		Residential
115th - 117th	UA	131	25223000160000	11573 S STATE ST, CHICAGO	Single Family Residential		Parcel with Building Displacement	Parking	1		Residential
115th - 117th	UA	132	25223000170000	11575 S STATE ST, CHICAGO	Single Family Residential	Residence and garage	Parcel with Building Displacement	Parking	1		Residential
115th - 117th	UA	133	25223000180000	11579 S STATE ST, CHICAGO	Vacant		Affected Parcel	Parking	0		Residential
115th - 117th	UA	134	25223000700000	11556 S WABASH AVE, CHICAGO	Transportation (railroad)	UPRR	Affected Parcel	ROW	0		EXEMPT - Railroad
115th - 117th	UA	135	25223000690000	11562 S WABASH AVE, CHICAGO	Commercial		Parcel with Building Displacement	Parking	1		Residential
115th - 117th	UA	136	25223000210000	11572 S WABASH AVE, CHICAGO	Single Family Residential	Residence and garage	Parcel with Building Displacement	Parking	1		Residential
115th - 117th	UA	137	25223000220000	11574 S WABASH AVE, CHICAGO	Single Family Residential	Residence and garage	Parcel with Building Displacement	Parking	1		Residential

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115th - 117th	UA	138	25223000230000	11578 S WABASH AVE, CHICAGO	Single Family Residential	Residence and garage	Parcel with Building Displacement	Parking	1		Residential
115th - 117th	UA	139	25223000240000	11583 S STATE ST, CHICAGO	Single Family Residential		Parcel with Building Displacement	Parking	1		Residential
115th - 117th	UA	140	25223000250000	4 E 116TH ST, CHICAGO	Single Family Residential		Parcel with Building Displacement	Parking	Counted		Vacant
115th - 117th	UA	141	25223000260000	8 E 116TH ST, CHICAGO	Single Family Residential		Parcel with Building Displacement	Parking	1		Residential
115th - 117th	UA	142	25223000270000	12 E 116TH ST, CHICAGO	Single Family Residential		Parcel with Building Displacement	Parking	1		Residential
115th - 117th	UA	143	25223000280000	16 E 116TH ST, CHICAGO	Single Family Residential	Residence and garage	Parcel with Building Displacement	Parking	1		Residential
115th - 117th	UA	144	25223000290000	20 E 116TH ST, CHICAGO	Single Family Residential	Residence and garage	Parcel with Building Displacement	Parking	1		Residential
115th - 117th	UA	145	25223000710000	25223000710000	Commercial	XOXXOX Charter Bus Inc	Parcel with Building Displacement	ROW	Counted		NA
115th - 117th	UA	146	25223000490000	11573 S WABASH AVE, CHICAGO	Commercial	XOXXOX Charter Bus Inc.	Parcel with Building Displacement	Parking	1		Commercial
115th - 117th	UA	147	25223000500000	32 E 116TH ST, CHICAGO	Single Family Residential		Parcel with Building Displacement	Parking	1		Residential
115th - 117th	UA	148	25223000510000	34 E 116TH ST, CHICAGO	Single Family Residential		Parcel with Building Displacement	Parking	1		Residential
115th - 117th	UA	149	25223000520000	38 E 116TH ST, CHICAGO	Multi-Family Residential	Multi-Family Residential (2 family)	Parcel with Building Displacement	Parking	1		Residential
115th - 117th	UA	150	25223000580000	11578 S MICHIGAN AVE, CHICAGO	Public (City of Chicago)		Easement	Station	0		EXEMPT - City of Chicago
115th - 117th	UA	151	25223000590000	11582 S MICHIGAN AVE, CHICAGO	Transportation (railroad)	UPRR	Affected Parcel	Station	0		EXEMPT - Railroad
115th - 117th	UA	152	25223000600000	11586 S MICHIGAN AVE, CHICAGO	Vacant	Vacant lot	Affected Parcel	Parking	0		Vacant

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Division	Segment	Map ID	Parcel ID	Address	Land Use - Field Verified	Field Notes	Displacement Type	Displacement Subtype	Building Displace-ment	Missed if Alley Removed	Land Use - Cook County
115th - 117th	UA	153	25223000610000	11588 S MICHIGAN AVE, CHICAGO	Vacant	Vacant lot	Affected Parcel	Parking	0		Vacant
115th - 117th	UA	154	25223000620000	11592 S MICHIGAN AVE, CHICAGO	Mixed Use Comm/Res	Two-story building w/vacant storefront	Parcel with Building Displacement	Parking	1		Residential
115th - 117th	UA	155	25223040090000	11583 S MICHIGAN AVE, CHICAGO	Transportation (railroad)	UPRR	Affected Parcel	ROW	0		EXEMPT - Railroad
115th - 117th	UA	156	25223040100000	11589 S MICHIGAN AVE, CHICAGO	Multi-Family Residential	Two-story building: Sign "Step of Faith" on 1st Floor	Parcel with Building Displacement	Station	1		Residential
115th - 117th	UA	157	25223080010000	11601 S MICHIGAN AVE, CHICAGO	Institution (Place of Worship)	Vacant - Two Story Building	Parcel with Building Displacement	Station	1		EXEMPT - Place of Worship
115th - 117th	UA	158	25223080020000	11603 S MICHIGAN AVE, CHICAGO	Institution (Place of Worship)	Vacant - Two Story Building	Parcel with Building Displacement	Station	Counted		EXEMPT - Place of Worship
115th - 117th	UA	159	25223080030000	11607 S MICHIGAN AVE, CHICAGO	Public (City of Chicago)	Vacant lot	Affected Parcel	Station	0		EXEMPT - City of Chicago
115th - 117th	UA	160	25223080100000	115 E 116TH ST, CHICAGO	Public (City of Chicago)	Vacant lot	Affected Parcel	Station	0		EXEMPT - City of Chicago
115th - 117th	UA	161	25223080110000	117 E 116TH ST, CHICAGO	Public (City of Chicago)	Vacant lot	Affected Parcel	Station	0		EXEMPT - City of Chicago
115th - 117th	UA	162	25223080120000	119 E 116TH ST, CHICAGO	Public (City of Chicago)	Vacant lot	Affected Parcel	Station	0		EXEMPT - City of Chicago
115th - 117th	UA	163	25223080240000	120 E 117TH ST, CHICAGO	Vacant		Affected Parcel	ROW	0	Missed	Vacant
115th - 117th	UA	164	25223080250000	124 E 117TH ST, CHICAGO	Vacant	Vacant land under common ownership with adjacent residence	Affected Parcel	ROW	0		Vacant
115th - 117th	UA	165	25223080260000	126 E 117TH ST, CHICAGO	Single Family Residential		Parcel with Building Displacement	ROW	1		Residential
115th - 117th	UA	166	25223080270000	128 E 117TH ST, CHICAGO	Single Family Residential		Affected Parcel	ROW	0		Residential
115th - 117th	UA	167	25223080280000	132 E 117TH ST, CHICAGO	Single Family Residential		Affected Parcel	ROW	0		Residential
115th - 117th	UA	168	25223080290000	132 E 117TH ST, CHICAGO	Transportation (railroad)	UPRR	Affected Parcel	ROW	0		EXEMPT - Railroad
115th - 117th	UA	169	25223080300000	134 E 117TH ST, CHICAGO	Transportation (railroad)	UPRR	Affected Parcel	ROW	0		EXEMPT - Railroad
115th - 117th	UA	170	25223100380000	11700 S INDIANA AVE, CHICAGO		Parcel does not exist; it's a street	Easement	ROW	0		Vacant
117th - Front	UB	171	25223150010000	11705 S INDIANA AVE, CHICAGO	Vacant	Vacant lot	Affected Parcel	ROW	0		Vacant
117th - Front	UB	172	25223150030000	11707 S INDIANA AVE, CHICAGO	Vacant	Vacant lot	Affected Parcel	ROW	0		Vacant
117th - Front	UB	173	25223150040000	11709 S INDIANA AVE, CHICAGO	Single Family Residential		Parcel with Building Displacement	ROW	1	Missed	Residential
117th - Front	UB	174	25223150160000	11714 S PRAIRIE AVE, CHICAGO	Transportation (railroad)	UPRR	Affected Parcel	ROW	0		EXEMPT - Railroad
117th - Front	UB	175	25223150170000	11716 S PRAIRIE AVE, CHICAGO	Transportation (railroad)	UPRR	Affected Parcel	ROW	0	Missed	EXEMPT - Railroad
117th - Front	UB	176	25229990010000	25229990010000	Transportation (railroad)	UPRR	Affected Parcel	ROW	0		NA
117th - Front	UB	177	25223160130000	11763 S PRAIRIE AVE, CHICAGO	Transportation (railroad)	UPRR	Affected Parcel	ROW	0		EXEMPT - Railroad
117th - Front	UB	178	25225000010000	100 E 116TH ST, CHICAGO	Transportation (railroad)	UPRR	Affected Parcel	ROW	0		EXEMPT - Railroad

UPRR HRT Alternative - West Option
Parcels Affected by Land Acquisitions and Easements

Division	Segment	Map ID	Parcel ID	Address	Land Use - Field Verified	Field Notes	Displacement Type	Displacement Subtype	Building Displace-ment	Missed if Alley Removed	Land Use - Cook County
117th - Front	UB	179	25223160350000	329 E 117TH ST, CHICAGO	Commercial		Affected Parcel	ROW	0	Missed	Commercial
117th - Front	UB	180	25223160300000	11726 S CALUMET AVE, CHICAGO	Vacant		Affected Parcel	ROW	0		Vacant
117th - Front	UB	181	25223160310000	11728 S CALUMET AVE, CHICAGO	Vacant		Affected Parcel	ROW	0		Vacant
117th - Front	UB	182	25223170130000	354 E 118TH ST, CHICAGO	Single Family Residential		Parcel with Building Displacement	ROW	1		Residential
117th - Front	UB	183	25223170140000	356 E 118TH ST, CHICAGO	Public (City of Chicago)		Affected Parcel	ROW	0		EXEMPT - City of Chicago
117th - Front	UB	184	25223170150000	358 E 118TH ST, CHICAGO	Public (City of Chicago)		Affected Parcel	ROW	0		EXEMPT - City of Chicago
117th - Front	UB	185	25223170300000	11742 S FRONT AVE, CHICAGO	Industrial		Affected Parcel	ROW	0		Industrial
117th - Front	UB	186	25223170310000	11810 S CALUMET AVE, CHICAGO	Industrial	Active - No Signage	Parcel with Building Displacement	ROW	Counted		Industrial
117th - Front	UB	187	25223170320000	11810 S CALUMET AVE, CHICAGO	Industrial	Active - No Signage	Parcel with Building Displacement	ROW	1		Industrial
117th - Front	UB	188	25223170330000	375 E 118TH ST, CHICAGO	Industrial	Active - No Signage	Parcel with Building Displacement	ROW	Counted		Industrial
Front - 130th	UB	189	25223170350000	11800 S FRONT AVE, CHICAGO	Transportation (railroad)	CN/Metra	Affected Parcel	ROW	0		EXEMPT - RTA/METRA
Front - 130th	UB	190	25225010050000	360 E 119TH ST, CHICAGO	Transportation (railroad)	CN/Metra	Affected Parcel	ROW	0		EXEMPT - Railroad
Front - 130th	UB	191	25223250010000	370 E 119TH ST, CHICAGO	Transportation (railroad)	CN/Metra	Affected Parcel	ROW	0		EXEMPT - Railroad
Front - 130th	UB	192	25224000260000	11600 S COTTAGE GROVE AVE, CHICAGO	Industrial		Affected Parcel	ROW	0		Industrial
Front - 130th	UB	193	25224000270000	11600 S COTTAGE GROVE AVE, CHICAGO	Transportation (railroad)	IHB	Affected Parcel	ROW	0		EXEMPT - Railroad
Front - 130th	UB	194	25271080090000	11900 S COTTAGE GROVE AVE, CHICAGO	Transportation (railroad)	IHB	Affected Parcel	Yard	0		EXEMPT - Railroad

UPRR COMMON	Segment	Map ID	Parcel ID	Address	Land Use - Field Verified	Field Notes	Displacement Type	Displacement Subtype	Building Displacement		Land Use - Cook County
RRYARD	RRYARD	1	25224010340000	1355 E 121ST ST, CHICAGO	Transportation (railroad)	IHB	Affected Parcel	Yard	0		EXEMPT
Front - 130th	UB	2	25275020010000	12330 S COTTAGE GROVE AVE, CHICAGO	Transportation (railroad)	Alignment	Affected Parcel	Yard	0		EXEMPT
RRYARD	RRYARD	3	25272000090000	12256 S COTTAGE GROVE AVE, CHICAGO	Transportation (railroad)	IHB	Affected Parcel	Yard	1		EXEMPT - Railroad
RRYARD	RRYARD	4	25272000070000	12256 S COTTAGE GROVE AVE, CHICAGO	Industrial		Affected Parcel	Yard	2		Industrial
RRYARD	RRYARD	5	25272000100000	12256 S COTTAGE GROVE AVE, CHICAGO	Vacant		Affected Parcel	Yard	0		EXEMPT
RRYARD	RRYARD	6	25272000120000	12534 S COTTAGE GROVE AVE, CHICAGO	Vacant		Affected Parcel	Yard	0		EXEMPT

UPRR HRT Alternative - West Option
Parcels Affected by Land Acquisitions and Easements

Division	Segment	Map ID	Parcel ID	Address	Land Use - Field Verified	Field Notes	Displacement Type	Displacement Subtype	Building Displace-ment	Missed if Alley Removed	Land Use - Cook County
RRYARD	RRYARD	7	25272000130000	12546 S COTTAGE GROVE AVE, CHICAGO	Utility (Metro Water Reclamation District)	Substation Location	Affected Parcel	Yard	0		EXEMPT
RRYARD	RRYARD	8	25275030010000	12320 S COTTAGE GROVE AVE, CHICAGO	Transportation (railroad)	NTCTD/CSS and SBRR	Affected Parcel	Yard	0		EXEMPT
RRYARD	RRYARD	9	25272000040000	12500 S COTTAGE GROVE AVE, CHICAGO	Utility (Metro Water Reclamation District)		Affected Parcel	Yard	0		EXEMPT
RRYARD	RRYARD	10	25274000030000	12606 S COTTAGE GROVE AVE, CHICAGO	Utility (Metro Water Reclamation District)		Affected Parcel	Yard	0		EXEMPT
RRYARD	RRYARD	11	25274000070000	12614 S COTTAGE GROVE AVE, CHICAGO	Utility (Metro Water Reclamation District)		Affected Parcel	Yard	0		EXEMPT
RRYARD	RRYARD	12	25274000050000	12608 S COTTAGE GROVE AVE, CHICAGO	Utility (Metro Water Reclamation District)		Affected Parcel	Yard	0		EXEMPT
RRYARD	RRYARD	13	25274000020000	12600 S COTTAGE GROVE AVE, CHICAGO	Transportation (railroad)	NTCTD/CSS and SBRR	Affected Parcel	Yard	0		EXEMPT
RRYARD	RRYARD	14	25274000060000	12610 S COTTAGE GROVE AVE, CHICAGO	Utility (Metro Water Reclamation District)		Affected Parcel	Yard	0		EXEMPT
RRYARD	RRYARD	15	25274000090000	12618 S COTTAGE GROVE AVE, CHICAGO	Utility (Metro Water Reclamation District)		Affected Parcel	Yard	0		EXEMPT
RRYARD	RRYARD	16	25273010070000	300 E 127TH ST, CHICAGO	Utility (Metro Water Reclamation District)		Affected Parcel	Yard	0		EXEMPT

130th Station - South Option	Segment	Map ID	Parcel ID	Address	Land Use - Field Verified	Field Notes	Displacement Type	Displacement Subtype	Building Displacement		Land Use - Cook County
Front - 130th	UB	1	25275020010000	12330 S COTTAGE GROVE AVE, CHICAGO	Transportation (railroad)	IHB *-Previously counted with Common Perm. Envelop*	Affected Parcel	Station	0		EXEMPT - Railroad
Front - 130th	UB	2	25269990010000	25269990010000	Transportation (railroad)	IHB	Affected Parcel	Station	0		NA
Front - 130th	UB	3	25263000170000	12807 S COTTAGE GROVE AVE, CHICAGO	Utility (Metro Water Reclamation District)		Affected Parcel	Station	0		EXEMPT - Metro Water Reclamation
Front - 130th	UB	4	25263000150000	12813 S COTTAGE GROVE AVE, CHICAGO	Utility (Metro Water Reclamation District)		Affected Parcel	Station	0		EXEMPT - Metro Water Reclamation
Front - 130th	UB	5	25263000140000	12817 S COTTAGE GROVE AVE, CHICAGO	Utility (Metro Water Reclamation District)		Affected Parcel	Station	0		EXEMPT - Metro Water Reclamation
Front - 130th	UB	6	25273010120000	325 E 127TH ST, CHICAGO	Utility (Metro Water Reclamation District)		Affected Parcel	Station	0		EXEMPT - Metro Water Reclamation
Front - 130th	UB	7	25273010130000	310 E 130TH ST, CHICAGO	Utility (Metro Water Reclamation District)		Affected Parcel	Station	0		EXEMPT - Metro Water Reclamation
Front - 130th	UB	8	25273010110000	350 E 130TH ST, CHICAGO	Utility (Metro Water Reclamation District)		Affected Parcel	Station	0		EXEMPT - Metro Water Reclamation
Front - 130th	UB	9	25273010100000	360 E 130TH ST, CHICAGO	Utility (Metro Water Reclamation District)		Affected Parcel	Station	0		EXEMPT - Metro Water Reclamation

UPRR HRT Alternative - West Option
Parcels Affected by Land Acquisitions and Easements

Division	Segment	Map ID	Parcel ID	Address	Land Use - Field Verified	Field Notes	Displacement Type	Displacement Subtype	Building Displace-ment	Missed if Alley Removed	Land Use - Cook County
130th Station - West Option	**Segment**	**Map ID**	**Parcel ID**	**Address**	**Land Use - Field Verified**	**Field Notes**	**Displacement Type**	**Displacement Subtype**	**Building Displacement**		**Land Use - Cook County**
Front - 130th	UB	1	25275020010000	12330 S COTTAGE GROVE, CHICAGO	Transportation (railroad)	IHB *- Previously counted with Common Perm. Envelop*	Affected Parcel	Station	0		EXEMPT - Railroad
Front - 130th	UB	2	25274000090000	12618 S COTTAGE GROVE, CHICAGO	Utility (Metro Water Reclamation District)	*Previously counted with Common Perm. Envelop*	Affected Parcel	Station	0		EXEMPT - Metro Water Reclamation
Front - 130th	UB	3	25269990010000	25269990010000	Transportation (railroad)	IHB	Affected Parcel	Station	0		NA
Front - 130th	UB	4	25263000170000	12807 S COTTAGE GROVE, CHICAGO	Utility (Metro Water Reclamation District)		Affected Parcel	Station	0		EXEMPT - Metro Water Reclamation
Front - 130th	UB	5	25263000150000	12813 S COTTAGE GROVE, CHICAGO	Utility (Metro Water Reclamation District)		Affected Parcel	Station	0		EXEMPT - Metro Water Reclamation
Front - 130th	UB	6	25263000140000	12817 S COTTAGE GROVE, CHICAGO	Utility (Metro Water Reclamation District)		Affected Parcel	Station	0		EXEMPT - Metro Water Reclamation
Front - 130th	UB	7	25273010120000	325 E 127TH, CHICAGO	Utility (Metro Water Reclamation District)		Affected Parcel	Station	0		EXEMPT - Metro Water Reclamation
Front - 130th	UB	8	25273010130000	310 E 130TH, CHICAGO	Utility (Metro Water Reclamation District)		Affected Parcel	Station	0		EXEMPT - Metro Water Reclamation
Front - 130th	UB	9	25273010110000	350 E 130TH, CHICAGO	Utility (Metro Water Reclamation District)		Affected Parcel	Station	0		EXEMPT - Metro Water Reclamation
Front - 130th	UB	10	25273010100000	360 E 130TH, CHICAGO	Utility (Metro Water Reclamation District)		Affected Parcel	Station	0		EXEMPT - Metro Water Reclamation

Parcel Count Summary Table		
95th - 99th	22	22 easements
99th - 103rd	9	
103rd - 111th	35	
111th - 115th	44	
115th - 117th	61	2 easements
117th - Front	18	
Front - 130th	26	includes both station options
RRYARD	15	

Building Displacement Summary Table	
95th - 99th	0
99th - 103rd	2
103rd - 111th	9
111th - 115th	10
115th - 117th	26
117th - Front	3
Front - 130th	0
RRYARD	3
Total	53

Halsted Rail Alternative
Parcels Affected by Land Acquisitions and Easements

Division	Segment	Map ID	Parcel ID	Address	Land Use - Field Verified	Field Notes	Displacement Type	Displacement Subtype	Building Displace-ment	Land Use - Cook County
95th - 99th	HA	1	25092070500000	9512 S STATE ST , CHICAGO	Transportation (highway)	I-94	Easement	ROW	0	EXEMPT - Cook County
95th - 99th	HA	2	25092070490000	9511 W 95TH ST , CHICAGO	Transportation (highway)	I-94	Easement	ROW	0	EXEMPT - Cook County
95th - 99th	HA	3	25092150010000	9600 S LAFAYETTE AVE , CHICAGO	Transportation (highway)	I-94	Easement	ROW	0	EXEMPT - Cook County
95th - 99th	HA	4	25092230430000	9721 S LAFAYETTE AVE, CHICAGO	Transportation (highway)	I-94	Easement	ROW	0	EXEMPT - Cook County
95th - 99th	HA	5	25092220420000	9720 S LAFAYETTE AVE , CHICAGO	Transportation (highway)	I-94	Easement	ROW	0	EXEMPT - Cook County
95th - 99th	HA	6	25092220410000	9701 S PRINCETON AVE , CHICAGO	Transportation (highway)	I-94	Easement	ROW	0	EXEMPT - Cook County
95th - 99th	HA	7	25092210420000	9710 S PERRY AVE , CHICAGO	Transportation (highway)	I-94	Easement	ROW	0	EXEMPT - Cook County
95th - 99th	HA	8	25092290420000	9800 S PERRY ST , CHICAGO	Transportation (highway)	I-94	Easement	ROW	0	EXEMPT - Cook County
95th - 99th	HA	9	25092290410000	9801 S LASALLE ST , CHICAGO	Transportation (highway)	I-94	Easement	ROW	0	EXEMPT - Cook County
95th - 99th	HA	10	25092280420000	9800 S LASALLE ST , CHICAGO	Transportation (highway)	I-94	Easement	ROW	0	EXEMPT - Cook County
95th - 99th	HA	11	25092280410000	9801 S WENTWORTH AVE , CHICAGO	Transportation (highway)	I-57	Easement	ROW	0	EXEMPT - Cook County
95th - 99th	HA	12	25092270410000	9807 S YALE AVE , CHICAGO	Transportation (highway)	I-57	Easement	ROW	0	EXEMPT - Cook County
95th - 99th	HA	13	25092260440000	9810 S YALE AVE , CHICAGO	Transportation (highway)	I-57	Easement	ROW	0	EXEMPT - Cook County
95th - 99th	HA	14	25092260470000	9819 S PRINCETON AVE , CHICAGO	Transportation (highway)	I-57	Easement	ROW	0	EXEMPT - Cook County
95th - 99th	HA	15	25092250300000	9826 S PRINCETON AVE , CHICAGO	Transportation (highway)	I-57	Easement	ROW	0	EXEMPT - Cook County
95th - 99th	HA	16	25092250450000	352 W 99TH ST , CHICAGO	Transportation (highway)	I-57	Easement	ROW	0	EXEMPT - Cook County
95th - 99th	HA	17	25092250480000	350 W 99TH ST , CHICAGO	Transportation (highway)	I-57	Easement	ROW	0	EXEMPT - Cook County
95th - 99th	HA	18	25092250440000	9825 S HARVARD AVE , CHICAGO	Transportation (highway)	I-57	Easement	ROW	0	EXEMPT - Cook County
95th - 99th	HA	19	25092240200000	356 W 99TH ST , CHICAGO	Transportation (highway)	I-57	Easement	ROW	0	EXEMPT - Cook County
95th - 99th	HA	20	25092240190000	9822 S HARVARD AVE , CHICAGO	Transportation (highway)	I-57	Easement	ROW	0	EXEMPT - Cook County
95th - 99th	HA	21	25092240110000	354 W 99TH ST , CHICAGO	Transportation (highway)	I-57	Easement	ROW	0	EXEMPT - Cook County
95th - 99th	HA	22	25092240100000	352 W 99TH ST , CHICAGO	Transportation (highway)	I-57	Easement	ROW	0	EXEMPT - Cook County
95th - 99th	HA	23	25092240090000	350 W 99TH ST , CHICAGO	Transportation (highway)	I-57	Easement	ROW	0	Vacant
95th - 99th	HA	24	25095000020000	351 W 99TH ST , CHICAGO	Transportation (highway)	I-57/Parkland	Easement	ROW	0	EXEMPT - Railroad
95th - 99th	HA	25	25099990010000	25099990010000	Transportation (highway)	I-57	Easement	ROW	0	NA
95th - 99th	HA	26	25091310550000	9826 S EGGLESTON AVE , CHICAGO	Transportation (highway)	I-57	Easement	ROW	0	EXEMPT - Cook County
95th - 99th	HA	27	25091290560000	9825 S PARNELL AVE , CHICAGO	Transportation (highway)	I-57	Easement	ROW	0	EXEMPT - Cook County
95th - 99th	HA	28	25091280120000	9803 S WALLACE ST , CHICAGO	Transportation (highway)	I-57	Easement	ROW	0	EXEMPT - Cook County
95th - 99th	HA	29	25091270440000	9802 S WALLACE ST , CHICAGO	Transportation (highway)	I-57	Easement	ROW	0	EXEMPT - Cook County
95th - 99th	HA	30	25091260510000	9825 S UNION AVE , CHICAGO	Transportation (highway)	I-57	Easement	ROW	0	EXEMPT - Cook County
95th - 99th	HA	31	25091250860000	9825 S EMERALD AVE , CHICAGO	Transportation (highway)	I-57	Easement	ROW	0	EXEMPT - Cook County
95th - 99th	HA	32	25091240530000	9802 S EMERALD AVE , CHICAGO	Transportation (highway)	I-57	Easement	ROW	0	EXEMPT - Cook County
99th - 103rd	HA	33	25093000250000	9900 S EMERALD AVE, CHICAGO	Single Family Residential	9900 & 9902 S. Emerald contain one house on two lots	Affected Parcel	ROW	0	Residential
99th - 103rd	HA	34	25093000260000	9902 S EMERALD AVE, CHICAGO	Single Family Residential	9900 & 9902 S. Emerald contain one house on two lots	Affected Parcel	ROW	0	Vacant
99th - 103rd	HA	35	25093000570000	9901 S HALSTED ST, CHICAGO	Commercial	9901 & 9911 S. Halsted contain a gas station	Parcel with Building Displacement	ROW	Counted	Commercial
99th - 103rd	HA	36	25093000520000	9911 S HALSTED ST, CHICAGO	Commercial	9901 & 9911 S. Halsted contain a gas station	Parcel with Building Displacement	ROW	1	Commercial
99th - 103rd	HA	37	25093000070000	9915 S HALSTED ST, CHICAGO	Commercial	cell tower & ancillary building	Parcel with Building Displacement	ROW	1	Commercial

Halsted Rail Alternative
Parcels Affected by Land Acquisitions and Easements

Division	Segment	Map ID	Parcel ID	Address	Land Use - Field Verified	Field Notes	Displacement Type	Displacement Subtype	Building Displace-ment	Land Use - Cook County
99th - 103rd	HA	38	25093000530000	9921 S HALSTED ST, CHICAGO	Commercial	9921, 9925, & 9931 S. Halsted contain one single story building	Affected Parcel	ROW	0	EXEMPT - City of Chicago
99th - 103rd	HA	39	25093000110000	9925 S HALSTED ST, CHICAGO	Commercial	9921, 9925, & 9931 S. Halsted contain one single story building	Affected Parcel	ROW	0	EXEMPT - City of Chicago
99th - 103rd	HA	40	25093000540000	9931 S HALSTED ST, CHICAGO	Commercial	9921, 9925, & 9931 S. Halsted contain one single story building	Affected Parcel	ROW	0	EXEMPT - City of Chicago
99th - 103rd	HA	41	25093080170000	10041 S HALSTED ST, CHICAGO	Vacant	Vacant Lot	Affected Parcel	Substation	0	Commercial
99th - 103rd	HA	42	25093080180000	10043 S HALSTED ST, CHICAGO	Vacant	Vacant Lot	Affected Parcel	Substation	0	Vacant
99th - 103rd	HA	43	25093080190000	10045 S HALSTED ST, CHICAGO	Vacant	Vacant Lot	Affected Parcel	Substation	0	Vacant
99th - 103rd	HA	44	25093080200000	10049 S HALSTED ST, CHICAGO	Vacant	Vacant Lot	Affected Parcel	Substation	0	Vacant
99th - 103rd	HA	45	25093080210000	10051 S HALSTED ST, CHICAGO	Vacant	Vacant Lot	Affected Parcel	Substation	0	Vacant
99th - 103rd	HA	46	25093080220000	10053 S HALSTED ST, CHICAGO	Vacant	Vacant Lot	Affected Parcel	Substation	0	Vacant
99th - 103rd	HA	47	25093080230000	10055 S HALSTED ST, CHICAGO	Vacant	Vacant Lot	Affected Parcel	Substation	0	Vacant
99th - 103rd	HA	48	25093080240000	10057 S HALSTED ST, CHICAGO	Vacant	Vacant Lot	Affected Parcel	Substation	0	Vacant
99th - 103rd	HA	49	25084310280000	10234 S HALSTED ST, CHICAGO	Commercial	CTA Designated Parking	Affected Parcel	Parking	0	Commercial
99th - 103rd	HA	50	25084310290000	10236 S HALSTED ST, CHICAGO	Commercial	CTA Designated Parking	Affected Parcel	Parking	0	Commercial
99th - 103rd	HA	51	25084310300000	10238 S HALSTED ST, CHICAGO	Mixed Use	CTA Designated Parking; Mixed Use commercial/residential	Parcel with Building Displacement	Parking	1	Residential
99th - 103rd	HA	52	25084310370000	812 W 103RD ST, CHICAGO	Commercial	CTA Designated Parking	Parcel with Building Displacement	Parking	1	Commercial
99th - 103rd	HA	53	25084310310000	812 W 103RD ST, CHICAGO	Commercial	CTA Designated Parking	Affected Parcel	Parking	0	Commercial
99th - 103rd	HA	54	25084310320000	808 W 103RD ST, CHICAGO	Commercial	CTA Designated Parking	Parcel with Building Displacement	Parking	Counted	Commercial
99th - 103rd	HA	55	25084310330000	806 W 103RD ST, CHICAGO	Commercial	CTA Designated Parking	Parcel with Building Displacement	Parking	Counted	Commercial
99th - 103rd	HA	56	25084310340000	804 W 103RD ST, CHICAGO	Commercial	CTA Designated Parking	Parcel with Building Displacement	Parking	1	Commercial
99th - 103rd	HA	57	25084310350000	800 W 103RD ST, CHICAGO	Commercial	CTA Designated Parking	Parcel with Building Displacement	Parking	Counted	Commercial
103rd - 111th	HA	58	25163210010000	11003 S HALSTED ST, CHICAGO	Vacant	Vacant Lot	Affected Parcel	Substation	0	Vacant
103rd - 111th	HA	59	25163210020000	11005 S HALSTED ST, CHICAGO	Vacant	Vacant Lot	Affected Parcel	Substation	0	Vacant
103rd - 111th	HA	60	25163210030000	11007 S HALSTED ST, CHICAGO	Vacant	Vacant Lot	Affected Parcel	Substation	0	Vacant
103rd - 111th	HA	61	25163210040000	11009 S HALSTED ST, CHICAGO	Vacant	Vacant Lot	Affected Parcel	Substation	0	Vacant
103rd - 111th	HA	62	25163210050000	11013 S HALSTED ST, CHICAGO	Commercial		Parcel with Building Displacement	Substation	1	Residential
103rd - 111th	HA	63	25174230300000	11038 S HALSTED ST, CHICAGO	Commercial	Designated Parking	Parcel with Building Displacement	Parking	1	Commercial
103rd - 111th	HA	64	25174230310000	808 W 111TH ST, CHICAGO	Commercial	White Castle Fast Food	Parcel with Building Displacement	Parking	1	Commercial

Halsted Rail Alternative
Parcels Affected by Land Acquisitions and Easements

Division	Segment	Map ID	Parcel ID	Address	Land Use - Field Verified	Field Notes	Displacement Type	Displacement Subtype	Building Displace-ment	Land Use - Cook County
111th - 120th	HA	65	25202100440000	1043 W 111TH ST, CHICAGO	Parkland	City of Chicago	Affected Parcel	Station	0	EXEMPT - City of Chicago
111th - 120th	HA	66	25215000010000	759 W 119TH ST, CHICAGO	Parkland	City of Chicago	Affected Parcel	Station	0	EXEMPT - City of Chicago
111th - 120th	HA	67	25213280010000	757 W 118TH PL, CHICAGO	Vacant		Affected Parcel	Substation	0	Vacant
111th - 120th	HA	68	25213280020000	755 W 118TH PL, CHICAGO	Vacant		Affected Parcel	Substation	0	Vacant
111th - 120th	HA	69	25213280030000	753 W 118TH PL, CHICAGO	Vacant		Affected Parcel	Substation	0	Vacant
111th - 120th	HA	70	25213280040000	749 W 118TH PL, CHICAGO	Vacant		Affected Parcel	Substation	0	Vacant
111th - 120th	HA	71	25213280050000	747 W 118TH PL, CHICAGO	Vacant		Affected Parcel	Substation	0	Vacant
111th - 120th	HA	72	25292020010000	801 W 119TH ST, CHICAGO	Commercial	One-Story Strip Mall & Parking Lot	Parcel with Building Displacement	Parking	1	Commercial
111th - 120th	HA	73	25292020040000	11932 S HALSTED ST, CHICAGO	Commercial		Parcel with Building Displacement	Parking	1	Commercial
111th - 120th	HA	74	25292020050000	11938 S HALSTED ST, CHICAGO	Commercial		Parcel with Building Displacement	Parking	1	Commercial
111th - 120th	HA	75	25292020060000	11942 S HALSTED ST, CHICAGO	Commercial		Affected Parcel	Parking	0	Industrial
111th - 120th	HA	76	25292020070000	11944 S HALSTED ST, CHICAGO	Mixed Use	Mixed Use (Comm/Res)	Parcel with Building Displacement	Parking	1	Residential
111th - 120th	HA	77	25292020080000	11948 S HALSTED ST, CHICAGO	Mixed Use	Mixed Use (Comm/Res)	Parcel with Building Displacement	Parking	1	Residential
111th - 120th	HA	78	25292020090000	11952 S HALSTED ST, CHICAGO	Commercial		Parcel with Building Displacement	Parking	1	Commercial
111th - 120th	HA	79	25292020100000	11954 S HALSTED ST, CHICAGO	Commercial		Affected Parcel	Parking	0	Industrial
111th - 120th	HA	80	25292020110000	11958 S HALSTED ST, CHICAGO	Mixed Use	Mixed Use (Comm/Res)	Parcel with Building Displacement	Parking	1	Residential
111th - 120th	HA	81	25292020130000	820 W 120TH ST, CHICAGO	Industrial		Parcel with Building Displacement	Parking	1	Industrial
111th - 120th	HA	82	25292020140000	830 W 120TH ST, CHICAGO	Industrial		Parcel with Building Displacement	Parking	Counted	Vacant
111th - 120th	HA	83	25292020150000	834 W 120TH ST, CHICAGO	Industrial		Parcel with Building Displacement	Parking	1	Industrial
111th - 120th	HA	84	25292020020000	844 W 120TH ST, CHICAGO	Public (City of Chicago)		Affected Parcel	Parking	0	EXEMPT - City of Chicago
111th - 120th	HA	85	25292020160000	846 W 120TH ST, CHICAGO	Public (City of Chicago)		Affected Parcel	Parking	0	EXEMPT - City of Chicago
RRYARD	RRYARD	86	25292010210000	11953 S PEORIA ST, CHICAGO	Vacant		Affected Parcel	Yard	0	Industrial
RRYARD	RRYARD	87	25292010230000	932 W 120TH ST, CHICAGO	Transportation (railroad)	Ownership unknown	Affected Parcel	Yard	0	EXEMPT - Railroad
RRYARD	RRYARD	88	25292010200000	11918 S PEORIA ST, CHICAGO	Public (City of Chicago)	Vacant building	Parcel with Building Displacement	Yard	1	EXEMPT - City of Chicago
RRYARD	RRYARD	89	25292010250000		Public (City of Chicago)	Vacant building	Parcel with Building Displacement	Yard	1	No information available
RRYARD	RRYARD	90	25292010180000	921 W 120TH ST, CHICAGO	Transportation (railroad)	Ownership unknown	Affected Parcel	Yard	0	EXEMPT - Railroad
RRYARD	RRYARD	91	25292010170000	901 W 119TH ST, CHICAGO	Public (City of Chicago)		Affected Parcel	Substation	0	EXEMPT - City of Chicago
RRYARD	RRYARD	92	25292010160000	903 W 119TH ST, CHICAGO	Public (City of Chicago)		Affected Parcel	Substation	0	EXEMPT - City of Chicago
RRYARD	RRYARD	93	25292010150000	905 W 119TH ST, CHICAGO	Public (City of Chicago)		Affected Parcel	Substation	0	EXEMPT - City of Chicago
RRYARD	RRYARD	94	25292010140000	909 W 119TH ST, CHICAGO	Public (City of Chicago)		Affected Parcel	Substation	0	EXEMPT - City of Chicago
RRYARD	RRYARD	95	25292010130000	915 W 119TH ST, CHICAGO	Public (City of Chicago)		Affected Parcel	Substation	0	EXEMPT - City of Chicago

Halsted Rail Alternative
Parcels Affected by Land Acquisitions and Easements

Division	Segment	Map ID	Parcel ID	Address	Land Use - Field Verified	Field Notes	Displacement Type	Displacement Subtype	Building Displacement	Land Use - Cook County
RRYARD	RRYARD	96	25292010240000	919 W 119TH ST, CHICAGO	Public (City of Chicago)		Affected Parcel	Yard	0	EXEMPT - City of Chicago
RRYARD	RRYARD	97	25292010030000	1003 W 119TH ST, CHICAGO	Transportation (railroad)	Ownership unknown	Affected Parcel	Yard	0	EXEMPT - Railroad
RRYARD	RRYARD	98	25292010010000	953 W 119TH ST, CHICAGO	Public (City of Chicago)		Affected Parcel	Yard	0	EXEMPT - City of Chicago
RRYARD	RRYARD	99	25292000040000	1021 W 119TH ST, CHICAGO	Vacant	Vacant	Affected Parcel	Yard	0	Industrial
RRYARD	RRYARD	100	25292000010000	1155 W 119TH ST, CHICAGO	Transportation (railroad)	Ownership unknown	Affected Parcel	Yard	0	EXEMPT - Railroad
RRYARD	RRYARD	101	25292000050000	1021 W 119TH ST, CHICAGO	Vacant		Affected Parcel	Yard	0	Industrial
RRYARD	RRYARD	102	25291010140000	11930 S RACINE AVE, CHICAGO	Vacant		Affected Parcel	Yard	0	Industrial
RRYARD	RRYARD	103	25291010250000	1325 W 119TH ST, CHICAGO	Public (City of Chicago)	Vacant	Affected Parcel	Yard	0	EXEMPT - City of Chicago
RRYARD	RRYARD	104	25291010240000	1325 W 119TH ST, CHICAGO	Public (City of Chicago)	Vacant	Affected Parcel	Yard	0	EXEMPT - City of Chicago
RRYARD	RRYARD	105	25291010260000	1321 W 119th St, CHICAGO	Industrial	New Building	Parcel with Building Displacement	Yard	1	Industrial
RRYARD	RRYARD	106	25292040300000	12000 S HALSTED ST, CHICAGO	Institution (Place of Worship)	SURE-WAY M B CHURCH	Parcel with Building Displacement	Yard	1	EXEMPT - Place of Worship
RRYARD	RRYARD	107	25292040290000	12018 S HALSTED ST, CHICAGO	Mixed Use	Check Cashing; Mixed Use (Comm/Res)	Parcel with Building Displacement	Yard	1	Residential
RRYARD	RRYARD	108	25292040190000	12022 S HALSTED ST, CHICAGO	Mixed Use	Mixed Use (Comm/Res)	Parcel with Building Displacement	Yard	1	Commercial
RRYARD	RRYARD	109	25292040200000	12024 S HALSTED ST, CHICAGO	Commercial		Affected Parcel	Yard	0	Commercial
RRYARD	RRYARD	110	25292040210000	12028 S HALSTED ST, CHICAGO	Commercial		Affected Parcel	Yard	0	Commercial
RRYARD	RRYARD	111	25292040060000	815 W 120TH ST, CHICAGO	Public (City of Chicago)	Halsted Rail Yard	Affected Parcel	Yard	0	EXEMPT - City of Chicago
RRYARD	RRYARD	112	25292040050000	817 W 120TH ST, CHICAGO	Public (City of Chicago)	Halsted Rail Yard	Affected Parcel	Yard	0	EXEMPT - City of Chicago
RRYARD	RRYARD	113	25292040040000	819 W 120TH ST, CHICAGO	Public (City of Chicago)	Halsted Rail Yard	Affected Parcel	Yard	0	EXEMPT - City of Chicago
RRYARD	RRYARD	114	25292040030000	823 W 120TH ST, CHICAGO	Public (City of Chicago)	Halsted Rail Yard	Affected Parcel	Yard	0	EXEMPT - City of Chicago
RRYARD	RRYARD	115	25292040020000	825 W 120TH ST, CHICAGO	Public (City of Chicago)	Halsted Rail Yard	Affected Parcel	Yard	0	EXEMPT - City of Chicago
RRYARD	RRYARD	116	25292040010000	12657 S PEORIA ST, CHICAGO	Transportation (railroad)	City of Chicago Department of Sanitation	Affected Parcel	Yard	0	EXEMPT - City of Chicago
120th - Vermor	HB	117	25295000080000	12018 S RACINE AVE, CHICAGO	Transportation (railroad)	RTA/Metra	Affected Parcel	ROW	0	EXEMPT - RTA / METRA
120th - Vermor	HB	118	25285010030000	800 W 121ST ST, CHICAGO	Transportation (railroad)	RTA/Metra	Affected Parcel	ROW	0	EXEMPT - RTA / METRA
120th - Vermor	HB	119	25283220620000	12601 S HALSTED ST, CHICAGO	Commercial	One-Story Dollar General Retail Store and Parking Lot	Affected Parcel	Substation	0	Commercial
120th - Vermor	HB	120	25331010570000	12747 S HALSTED ST, CHICAGO	Commercial	Used car lot; CTA Designated Parking	Parcel with Building Displacement	Parking	1	Commercial
120th - Vermor	HB	121	25331010130000	12763 S HALSTED ST, CHICAGO	Commercial	Child's Day Care Center; CTA Designated Parking	Affected Parcel	Parking	0	Commercial
120th - Vermor	HB	122	25331010140000	12767 S HALSTED ST, CHICAGO	Commercial	Child's Day Care Center; CTA Designated Parking	Parcel with Building Displacement	Parking	1	Commercial
120th - Vermor	HB	123	25331010150000	12801 S HALSTED ST, CHICAGO	Commercial	Child's Day Care Center; CTA Designated Parking	Parcel with Building Displacement	Parking	Counted	Commercial
120th - Vermor	HB	124	25331010160000	12803 S HALSTED ST, CHICAGO	Commercial	Child's Day Care Center; CTA Designated Parking	Parcel with Building Displacement	Parking	Counted	Commercial
120th - Vermor	HB	125	25331010170000	12805 S HALSTED ST, CHICAGO	Commercial	Child's Day Care Center; CTA Designated Parking	Parcel with Building Displacement	Parking	Counted	Commercial

Halsted Rail Alternative
Parcels Affected by Land Acquisitions and Easements

Division	Segment	Map ID	Parcel ID	Address	Land Use - Field Verified	Field Notes	Displacement Type	Displacement Subtype	Building Displace-ment	Land Use - Cook County
120th - Vermor	HB	126	25331010560000	12811 S HALSTED ST, CHICAGO	Commercial	Child's Day Care Center; CTA Designated Parking	Parcel with Building Displacement	Parking	Counted	Commercial
120th - Vermor	HB	127	25331010530000	12819 S HALSTED ST, CHICAGO	Commercial	Child's Day Care Center; CTA Designated Parking	Parcel with Building Displacement	Parking	Counted	Industrial
120th - Vermor	HB	128	25331010550000	12825 S HALSTED ST, CHICAGO	Commercial	Vacant Building; CTA Designated Parking	Parcel with Building Displacement	Parking	1	Vacant
120th - Vermor	HB	129	25322110450000	12746 S HALSTED ST, CHICAGO	Commercial	CTA Designated Parking	Parcel with Building Displacement	Parking	1	Commercial
120th - Vermor	HB	130	25322110480000	12726 S HALSTED ST, CHICAGO	Commercial	Laundromat	Parcel with Building Displacement	Parking	Counted	Commercial
120th - Vermor	HB	131	25322110470000	12758 S HALSTED ST, CHICAGO	Vacant	Vacant lot	Affected Parcel	Parking	0	Vacant
120th - Vermor	HB	132	25322110040000	817 W VERMONT AVE, CHICAGO	Single Family Residential	Residence and Garage; CTA Designated Parking	Parcel with Building Displacement	Parking	1	Residential
120th - Vermor	HB	133	25322110410000	821 W VERMONT AVE, CHICAGO	Single Family Residential	Residence and Garage; CTA Designated Parking	Parcel with Building Displacement	Parking	1	Residential
120th - Vermor	HB	134	25322110400000	825 W VERMONT AVE, CHICAGO	Single Family Residential	Residence and Garage; CTA Designated Parking	Parcel with Building Displacement	Parking	1	Residential
120th - Vermor	HB	135	25322110430000	12759 S GREEN ST, CHICAGO	Single Family Residential	Residence; CTA Designated Parking	Parcel with Building Displacement	Parking	1	Residential
120th - Vermor	HB	136	25322110330000	12819 S GREEN ST, CHICAGO	Single Family Residential	Residence and Garage; CTA Designated Parking	Parcel with Building Displacement	Parking	1	Residential
120th - Vermor	HB	137	25322110340000	12823 S GREEN ST, CHICAGO	Single Family Residential	Residence and Garage; CTA Designated Parking	Parcel with Building Displacement	Parking	1	Residential
120th - Vermor	HB	138	25322110350000	12825 S GREEN ST, CHICAGO	Single Family Residential	Residence; CTA Designated Parking	Parcel with Building Displacement	Parking	1	Residential
120th - Vermor	HB	139	25322110360000	12829 S GREEN ST, CHICAGO	Single Family Residential	Residence and Garage; CTA Designated Parking	Parcel with Building Displacement	Parking	1	Residential
120th - Vermor	HB	140	25322110370000	12831 S GREEN ST, CHICAGO	Single Family Residential	Residence and Garage; CTA Designated Parking	Parcel with Building Displacement	Parking	1	Residential
120th - Vermor	HB	141	25322110380000	12835 S GREEN ST, CHICAGO	Single Family Residential	Residence; CTA Designated Parking	Parcel with Building Displacement	Parking	1	Residential
120th - Vermor	HB	142	25322110390000	12837 S GREEN ST, CHICAGO	Single Family Residential	Residence and Garage; CTA Designated Parking	Parcel with Building Displacement	Parking	1	Residential

Parcel Count Summary Table		
95th - 99th	32	32 easements
99th - 103rd	25	
103rd - 111th	7	
111th - 120th	21	
120th - Vermont	26	
RRYARD	31	

Displacement Summary Table	
95th - 99th	0
99th - 103rd	5
103rd - 111th	3
111th - 120th	9
120th - Vermont	15
RRYARD	6
Total	38

Appendix H
Availability of Project Area Real Estate

The *Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970*, as amended (Uniform Act), contains specific requirements that determine the manner in which a government entity can acquire private property for public use when federal funds are used for a project. The purpose of this Act is to provide a uniform policy for fair and equitable treatment of persons and businesses displaced as a result of federal and federally assisted programs.

The Uniform Act, as amended ensures that displaced persons are relocated to a property that is comparable in size, features, and location; is decent, safe, and sanitary; and is within the financial means of the displaced person(s). Relocation assistance would be available to all individuals, families, businesses, and nonprofit organizations displaced as a result of the project. This assistance applies to tenants as well as owners occupying the real property needed for the project. Replacement properties must be located in the same type of neighborhood and be equally accessible to public services and places of employment. Chicago Transit Authority (CTA) would also provide assistance to displaced businesses and non-profit organizations to aid in their satisfactory relocation with a minimum of delay and loss in earnings. The RLE Project would proceed to construction only when all displaced families and businesses have been compensated for loss and provided the opportunity to be relocated to adequate replacement sites.

Consistent with US DOT policy as mandated by the Uniform Act, as amended, the CTA would provide relocation resources to all displaced persons without discrimination. All property owners from whom property is needed are entitled to receive just compensation for their land and property. Just compensation is based upon the fair market value of the property. CTA would provide, through its Relocation Assistance Program, payment and services to aid in movement to a new location.

Two Multiple Listing Service (MLS) databases were used to identify by zip code existing housing and commercial stock that is currently available for sale/lease in the RLE Project Area. The RLE Project area is primarily located in zip codes 60628 and 60643. An analysis of inventory of vacant land was also compiled from the findings of the Land Use Technical Memorandum to identify potential sites where additional housing units and/or commercial structures could be constructed within the existing communities.

The RLE Project could displace property ranging in land use and function. A variety of replacement property would be necessary to comply with the Uniform Act and to mitigate the effects of displacements on communities. Table 1-1 shows the number of displacements that would occur as a result of the build alternatives by land use type and zip code.

Table 1-1: Displacements by Alternative and Land Use Type

Displacements By Alternative						
Land Use Type	Zip Code	BRT	UPRR Rail ROW Option	UPRR Rail East Option	UPRR Rail West Option	Halsted Rail
Vacant	60628	18	13	56	35	19
	60643	--	--	--	--	3
Single-Family Residential	60628	1	15	82	24	--
	60643	--	--	--	--	11
	TOTAL	**1**	**15**	**82**	**24**	**11**
Multi-Family Residential	60628	--	1	13	4	--
	60643	--	--	--	--	--
	TOTAL	**0**	**1**	**13**	**4**	**0**
Commercial	60628	1	2	3	8	11
	60643	--	--	--	--	4
	TOTAL	**1**	**2**	**3**	**8**	**15**
Mixed-Use (Retail/Office/ Residential)	60628	--	1	--	2	6
	60643	--	--	--	--	--
	TOTAL	**0**	**1**	**0**	**2**	**6**
Institutional (Place of Worship)	60628	--	--	1	1	1
	60643	--	--	--	--	--
	TOTAL	**0**	**0**	**1**	**1**	**1**
Industrial	60628	1	4	11	13	--
	60643	--	--	--	--	3
	TOTAL	**1**	**4**	**11**	**13**	**3**
Transportation (Railroads)	60628	--	1	1	1	--
	60643	--	--	--	--	--
	TOTAL	**0**	**1**	**1**	**1**	**0**
Public (City of Chicago)	60628	--	--	1	--	--
	60643	--	--	--	--	2
	TOTAL	**0**	**0**	**1**	**0**	**2**

Based on a residential MLS search on November 29, 2012, there are a total of 235 single-family residential properties for sale in zip code 60628 and 199 in 60643. Available multi-family units within the project area total 80 properties, with 67 in zip code 60628 and 13 in zip code 60643. Table 1-2 summarizes available residential properties in the RLE Project Area.

Table 1-2: Available Residential Properties in RLE Project Area

Size	Cost Range	60628	60643	Total
Single-family residential properties for sale				
6 bed / 2 bath	$14,000 to $120,000	16	10	26
5 bed / 2 bath	$14,000 to $120,000	34	29	36
4 bed / 2 bath	$14,000 to $120,000	62	62	124
3 bed / 2 bath	$14,000 to $120,000	103	94	197
2 bed / 2 bath	$14,000 to $120,000	20	4	24
Multi-family residential properties for sale				
2 to 4 units	$10,000 to $250,000	65	11	76
5+ units	$125,000 to $800,000	2	2	4

Source: www.thechicagomls.com

According to a commercial MLS search on November 29, 2012, there are a total of 9 commercial properties for sale in zip code 60628 and 8 in 60643. There are several properties with leased space for retail or office use; in zip code 60628 there are 3 available commercial rental spaces and there are 7 in 60643. Table 1-3 summarizes available commercial space in the RLE Project Area.

Table 1-3: Available Commercial Properties in RLE Project Area

Use	Size Range	Cost Range	60628	60643	Total
Properties for Sale					
Industrial	15,000 to 81,000 sq ft	$120,000 to $2,800,000	3	0	3
Garage/Warehouse	N/A	$79,900	1	0	1
Place of Worship	N/A	$395,000	1	0	1
Retail/Office	1,000 to 17,000 sq ft	$40,000 to $1,360,000	2	8	10
Vacant Commercial	20,000 sq ft	$799,900	1	0	1
Properties for Lease					
Retail/Office	750 to 3,500 sq ft	$0.09 to $83 per sq ft per month	3	7	10

Source: www.cimls.com

Based on the comparison between displaced properties and the availability of properties to absorb relocations, there would likely be sufficient single-family and multi-family residential property. However, additional commercial, mixed-use, and industrial properties would be needed to supplement the existing available land for purchase and lease. Redevelopment of compatible-zoned vacant land is one viable option for addressing the insufficiency of commercial, mixed-use and industrial properties. Table 1-4 depicts the amount of vacant land by station area (1/2 mile around each station) of each build alternative.

Table 1-4: Available Vacant Land in RLE Project Area

	Vacant Land (Acres)	Vacant Land Percentage
BRT Station Areas		
103rd Street	14.8	3.0%
111th Street	0.10	0.0%
Kensington Avenue	19.8	3.9%
130th Street	41.4	8.2%
Halsted Station Areas		
103rd Street	6.6	1.3%
111th Street	13.2	2.6%
119th Street	103.5	20.6%
Vermont Avenue	7.1	1.4%
UPRR Station Areas		
103rd Street	18.0	3.6%
111th Street	11.3	2.3%
Michigan Avenue	27.5	5.5%
130th Street - South	37.4	7.4%
130th Street - West	28.9	5.8%

As explained above, the Uniform Act requires that replacement property be comparable in size, features, and location; is decent, safe, and sanitary; is within the financial means of the displaced person; and, is located in the same type of neighborhood and be equally accessible to public services and places of employment. If suitable replacement commercial or industrial property cannot be located, some owners could be required to relocate outside of their community.

Appendix I
2014-2015 Red Line Extension Project Update

Red Line Extension

2014–2015 Red Line Extension Project Update

From 2012-2014, CTA evaluated benefits and impacts of four alternatives: the No Build Alternative, the Bus Rapid Transit Alternative (along Michigan Avenue), the Union Pacific Railroad (UPRR) Rail Alternative, and the Halsted Alternative. CTA evaluated three options of the UPRR Rail Alternative: Right-of-Way Option, East Option, and West Option. CTA also evaluated two options of the UPRR Rail Alternative 130th Street station: a South Station Option and a West Station Option. Based on the project description provided in Section 2 of this technical memorandum, CTA analyzed the impacts of these alternatives and station options. The benefits and impacts are included in the technical memoranda prepared in 2012-2014.

In August 2014, based on the technical analysis and public input, CTA announced the NEPA Preferred Alternative—the UPRR Rail Alternative. Additional conceptual engineering was conducted on the UPRR Rail Alternative to refine the East and West Option alignments. In addition, CTA is considering only the South Station Option of the 130th Street Station.

In late 2014 and early 2015, CTA conducted additional engineering and revised assumptions on the East and West Options to refine the alignments. The refinement of the East and West Options consisted of the following items:

- For the segment of the alignment along I-57, CTA shifted the proposed alignment from the median of I-57 to the north side of I-57 within the existing expressway right-of-way. The construction would be less complex, safer for construction workers, and have a shorter duration. The shift would also allow for fewer impacts to Wendell Smith Park for the East Option, and would allow for no permanent impacts to Wendell Smith Park for the West Option.

- CTA modified the curve speeds as the alignment heads south from I-57 along the UPRR tracks. The curve speed for both the East and West Options would be 35 mph.

- CTA shifted the East Option alignment near 103rd Street station to minimize impacts to Block Park and the Roseland Pumping Station.

- CTA modified the curves south of 103rd Street for both the East and West Options to 55 mph to maximize the train speed.

- CTA refined the layout of the 120th Street yard and shop to optimize yard operations. The refined layout of the yard would accommodate 340 train cars.

The refinement of the East and West Option alignments minimizes potential impacts to parks while providing flexibility for future design phases. The Draft Environmental Impact Statement contains the benefits and impacts of the refined East and West Option alignments and supersedes information presented in other chapters of this technical memorandum

Displacement and Relocation of Existing Uses

The refined East and West Option alignments would result in fewer displaced properties than the previous design. The following pages contain summary tables, detailed tables, and maps (both overview maps and detailed maps) showing displacements for both the East and West Options. Figures 1-4 are summary overview maps. CTA conducted a field verification of potentially displaced properties on March 5, 2015 and July 7-10, 2015. CTA identified numerous houses that were boarded-up and uninhabited, primarily between 105th Street and 115th Street on the east side of the corridor and along Eggleston Avenue from 107th Street south on the west side of the corridor.

Parcels and buildings that may be displaced are shown to illustrate maximum impacts and possible locations. Due to the margin for error inherent in predicting displacements based on conceptual engineering, the actual displacements for each alternative may vary from what is shown. Some of the properties shown may not ultimately need to be acquired. Land only property impacts are shown on the entire lot, however, often only portions of the lot would be required. Property acquisitions will be confirmed as project engineering progresses.

Union Pacific Railroad - East Option
Potential Displacements

Affected Count - By Location			
Location	Total Affected Parcels (with and without building displacements)[1]	Building Diplacements[2]	Easements[3]
95th St - 99th St	-	-	21
99th St - 103rd St	40	26	-
103rd St - 111th St	58	18	-
111th St - 115th St	56	28	-
115th St - 117th St	63	31	5
117th St - Front St	12	2	-
Front St - 130th St	16	-	-
120th St Yard and Shop	15	1	-
Total	**260**	**106**	**26**

1) A partial or a full parcel that would need to be acquired
2) A structure that would need to be removed (the land occupied by the structure would also be counted as an affected parcel)
3) Publicly owned parcels that include a roadway are classified as “easements” for this analysis because CTA would require a use agreement with the public entity

Affected Count - By Land Use Type		
Land Use Type	Total Affected Parcels (with and without building displacements)[1]	Building Diplacements[2]
Vacant	50	-
Single-Family Residential	87	75
Multifamily Residential	16	15
Commercial	6	3
Mixed-Use Commercial/Residential	1	1
Institutional (Place of Worship)	1	1
Institutional (School)	2	-
Industrial	17	10
Utility (MWRD)	15	-
Transportation (highway)	-	-
Transportation (railroad - Union Pacific Railroad)	19	-
Transportation (railroad - CN/ME)	3	-
Transportation (railroad - Norfolk Southern)	2	-
Transportation (railroad - Conrail)	3	-
Transportation (railroad - NICTD/CSS & SBRR)	2	-
Transportation (railroad - Chicago & Western Indiana)	-	-
Public (City of Chicago)	34	1
Parkland	2	-
Total	**260**	**106**

MWRD = Metropolitan Water Reclamation District, CN/ME = Canadian National/Metra Electric, NS = Norfolk Southern Railroad, NICTD/CSS & SBRR = Northern Indiana Commuter Transportation District/Chicago South Short & South Bend Railroad

Note: This table does not include easements. Publicly owned parcels that include a roadway are classified as “easements” for this analysis because CTA would require a use agreement with the public entity. Publicly owned parcels that do not include a roadway are classified as affected parcels or building displacements because CTA would need to negotiate a fee simple property transfer or other agreement with the public entity

1) A partial or a full parcel that would need to be acquired
2) A structure that would need to be removed (the land occupied by the structure would also be counted as an affected parcel)

Union Pacific Railroad Alternative - East Option
Parcels Affected by Land Acquisitions

Count	Map ID	Parcel ID	Address	Land Use - Field (2015)	Displacement Type	East Option Displacement Use
1	27	25-09-400-047-0000	312 W. 99TH PLACE	Parkland	Affected Parcel	Right-of-way
2	28	25-09-401-002-0000	349 W. 99TH PLACE	Single-family Residential	Parcel with Building Displacement	Right-of-way
3	29	25-09-401-001-0000	355 W. 99TH PLACE	Single-family Residential	Parcel with Building Displacement	Right-of-way
4	31	25-09-401-019-0000	348 W. 100TH STREET	Single-family Residential	Affected Parcel	Right-of-way
5	32	25-09-401-018-0000	350 W. 100TH STREET	Single-family Residential	Parcel with Building Displacement	Right-of-way
6	33	25-09-401-017-0000	354 W. 100TH STREET	Single-family Residential	Parcel with Building Displacement	Right-of-way
7	34	25-09-408-003-0000	349 W. 100TH STREET	Single-family Residential	Affected Parcel	Right-of-way
8	35	25-09-408-002-0000	351 W. 100TH STREET	Single-family Residential	Parcel with Building Displacement	Right-of-way
9	36	25-09-408-001-0000	355 W. 100TH STREET	Single-family Residential	Parcel with Building Displacement	Right-of-way
10	37	25-09-408-018-0000	348 W. 100TH PLACE	Single-family Residential	Parcel with Building Displacement	Right-of-way
11	38	25-09-408-017-0000	352 W. 100TH PLACE	Single-family Residential	Parcel with Building Displacement	Right-of-way
12	40	25-09-409-001-0000	353 W. 100TH PLACE	Vacant	Affected Parcel	Right-of-way
13	41	25-09-409-002-0000	349 W. 100TH PLACE	Single-family Residential	Parcel with Building Displacement	Right-of-way
14	42	25-09-409-047-0000	352 W. 101ST STREET	Single-family Residential	Parcel with Building Displacement	Right-of-way
15	43	25-09-409-018-0000	348 W. 101ST STREET	Single-family Residential	Affected Parcel	Right-of-way
16	44	25-09-416-002-0000	351 W. 101ST STREET	Single-family Residential	Parcel with Building Displacement	Right-of-way
17	45	25-09-416-001-0000	355 W. 101ST STREET	Single-family Residential	Parcel with Building Displacement	Right-of-way
18	46	25-09-416-018-0000	348 W. 101ST PLACE	Public (City of Chicago)	Affected Parcel	Right-of-way
19	47	25-09-416-017-0000	352 W. 101ST PLACE	Single-family Residential	Parcel with Building Displacement	Right-of-way
20	49	25-09-417-002-0000	353 W. 101ST PLACE	Single-family Residential	Parcel with Building Displacement	Right-of-way
21	50	25-09-417-001-0000	355 W. 101ST PLACE	Single-family Residential	Parcel with Building Displacement	Right-of-way
22	51	25-09-417-003-0000	349 W. 101ST PLACE	Single-family Residential	Affected Parcel	Right-of-way
23	52	25-09-417-017-0000	352 W. 102ND STREET	Single-family Residential	Parcel with Building Displacement	Right-of-way
24	53	25-09-417-018-0000	348 W. 102ND STREET	Single-family Residential	Parcel with Building Displacement	Right-of-way
25	54	25-09-424-002-0000	351 W. 102ND STREET	Single-family Residential	Parcel with Building Displacement	Right-of-way
26	55	25-09-424-001-0000	353 W. 102ND STREET	Single-family Residential	Parcel with Building Displacement	Right-of-way
27	56	25-09-424-003-0000	347 W. 102ND STREET	Single-family Residential	Parcel with Building Displacement	Right-of-way
28	57	25-09-424-018-0000	348 W. 102ND PLACE	Single-family Residential	Parcel with Building Displacement	Right-of-way
29	58	25-09-424-017-0000	350 W. 102ND PLACE	Vacant	Affected Parcel	Right-of-way
30	59	25-09-424-016-0000	354 W. 102ND PLACE	Single-family Residential	Parcel with Building Displacement	Right-of-way
31	60	25-09-424-068-0000	10228 S. PRINCETON AVENUE	Industrial	Affected Parcel	Right-of-way
32	62	25-09-424-043-0000	347 W. 102ND PLACE	Single-family Residential	Affected Parcel	Right-of-way
33	63	25-09-424-042-0000	351 W. 102ND PLACE	Single-family Residential	Parcel with Building Displacement	Right-of-way
34	64	25-09-424-041-0000	353 W. 102ND PLACE	Single-family Residential	Parcel with Building Displacement	Right-of-way
35	65	25-09-424-060-0000	340 W. 103RD STREET	Vacant	Affected Parcel	Parking for 103rd Street Station
36	66	25-09-424-069-0000	350 W. 103RD STREET	Transportation (railroad)	Affected Parcel	Right-of-way
37	67	25-16-105-034-0000	405 W. 103RD STREET	Multifamily Residential	Parcel with Building Displacement	Parking for 103rd Street Station
38	68	25-16-105-036-0000	401 W. 103RD STREET	Public (City of Chicago)	Affected Parcel	Parking for 103rd Street Station
39	69	25-16-105-035-0000	403 W. 103RD STREET	Commercial	Parcel with Building Displacement	Parking for 103rd Street Station
40	70	25-16-105-033-0000	400 W. 103RD PLACE	Vacant	Affected Parcel	Parking for 103rd Street Station
41	71	25-16-200-001-0000	329 W. 103RD STREET	Parkland	Affected Parcel	Right-of-way
42	72	25-16-500-001-0000	359 W. 103RD STREET	Transportation (railroad)	Affected Parcel	Right-of-way
43	75	25-16-500-003-0000	361 W. 103RD STREET	Transportation (railroad)	Affected Parcel	Right-of-way
44	78	25-16-500-004-0000	361 W. 104TH STREET	Transportation (railroad)	Affected Parcel	Right-of-way
45	80	25-16-500-005-0000	360 W. 104TH PLACE	Public (City of Chicago)	Affected Parcel	Right-of-way
46	82	25-16-500-006-0000	360 W. 105TH STREET	Public (City of Chicago)	Affected Parcel	Right-of-way
47	83	25-16-113-031-0000	400 W. 105TH STREET	Vacant	Affected Parcel	Substation
48	84	25-16-206-095-0000	346 W. 104TH PLACE	Commercial	Affected Parcel	Right-of-way

Union Pacific Railroad Alternative - East Option
Parcels Affected by Land Acquisitions

Count	Map ID	Parcel ID	Address	Land Use - Field (2015)	Displacement Type	East Option Displacement Use
49	86	25-16-210-001-0000	317 W. 105TH STREET	Public (City of Chicago)	Affected Parcel	Right-of-way
50	87	25-16-999-001-0000	No Street Address	Transportation (railroad)	Affected Parcel	Right-of-way
51	89	25-16-500-007-0000	360 W. 105TH STREET	Public (City of Chicago)	Affected Parcel	Right-of-way
52	92	25-16-210-038-0000	230 W. 105TH PLACE	Public (City of Chicago)	Affected Parcel	Right-of-way
53	96	25-16-211-077-0000	355 W. 105TH PLACE	Single-family Residential	Parcel with Building Displacement	Right-of-way
54	97	25-16-500-029-0000	359 W. 105TH PLACE	Transportation (railroad)	Affected Parcel	Right-of-way
55	99	25-16-211-084-0000	354 W. 106TH STREET	Single-family Residential	Parcel with Building Displacement	Right-of-way
56	100	25-16-211-083-0000	352 W. 106TH STREET	Single-family Residential	Parcel with Building Displacement	Right-of-way
57	103	25-16-212-001-0000	355 W. 106TH STREET	Single-family Residential	Parcel with Building Displacement	Right-of-way
58	104	25-16-212-002-0000	351 W. 106TH STREET	Single-family Residential	Parcel with Building Displacement	Right-of-way
59	106	25-16-212-043-0000	350 W. 106TH PLACE	Single-family Residential	Parcel with Building Displacement	Right-of-way
60	107	25-16-212-042-0000	352 W. 106TH PLACE	Single-family Residential	Parcel with Building Displacement	Right-of-way
61	108	25-16-500-012-0000	358 W. 106TH PLACE	Transportation (railroad)	Affected Parcel	Right-of-way
62	110	25-16-217-001-0000	353 W. 106TH PLACE	Single-family Residential	Parcel with Building Displacement	Right-of-way
63	112	25-16-500-014-0000	360 W. 107TH STREET	Transportation (railroad)	Affected Parcel	Right-of-way
64	113	25-16-217-039-0000	354 W. 107TH STREET	Single-Family Residential	Parcel with Building Displacement	Right-of-way
65	115	25-16-400-001-0000	346 W. 107TH PLACE	Industrial	Parcel with Building Displacement	Right-of-way
66	117	25-16-401-001-0000	347 W. 107TH PLACE	Industrial	Parcel with Building Displacement	Right-of-way
67	119	25-16-401-016-0000	252 W. 108TH STREET	Institution (School)	Affected Parcel	Right-of-way
68	120	25-16-401-017-0000	252 W. 108TH STREET	Institution (School)	Affected Parcel	Right-of-way
69	122	25-16-407-001-0000	351 W. 108TH STREET	Vacant	Affected Parcel	Right-of-way
70	123	25-16-407-002-0000	349 W. 108TH STREET	Vacant	Affected Parcel	Right-of-way
71	125	25-16-407-019-0000	352 W. 108TH PLACE	Vacant	Affected Parcel	Right-of-way
72	126	25-16-407-020-0000	348 W. 108TH PLACE	Single-family Residential	Parcel with Building Displacement	Right-of-way
73	128	25-16-411-001-0000	351 W. 108TH PLACE	Vacant	Affected Parcel	Right-of-way
74	129	25-16-411-002-0000	351 W. 108TH PLACE	Single-family Residential	Parcel with Building Displacement	Right-of-way
75	131	25-16-411-020-0000	350 W. 109TH STREET	Single-family Residential	Parcel with Building Displacement	Right-of-way
76	132	25-16-411-019-0000	354 W. 109TH STREET	Single-family Residential	Parcel with Building Displacement	Right-of-way
77	133	25-16-415-001-0000	355 W. 109TH STREET	Vacant	Affected Parcel	Right-of-way
78	134	25-16-415-002-0000	351 W. 109TH STREET	Single-family Residential	Parcel with Building Displacement	Right-of-way
79	136	25-16-415-021-0000	354 W. 109TH PLACE	Vacant	Affected Parcel	Right-of-way
80	137	25-16-415-022-0000	350 W. 109TH PLACE	Multifamily Residential	Parcel with Building Displacement	Right-of-way
81	139	25-16-419-032-0000	355 W. 109TH PLACE	Vacant	Affected Parcel	Right-of-way
82	141	25-16-419-036-0000	356 W. 110TH STREET	Industrial	Parcel with Building Displacement	Right-of-way
83	142	25-16-419-014-0000	352 W. 110TH STREET	Industrial	Affected Parcel	Right-of-way
84	143	25-16-419-015-0000	350 W. 110TH STREET	Vacant	Affected Parcel	Right-of-way
85	145	25-16-423-036-0000	349 W. 110TH STREET	Vacant	Affected Parcel	Right-of-way
86	146	25-16-423-037-0000	353 W. 110TH STREET	Vacant	Affected Parcel	Right-of-way
87	147	25-16-329-007-0000	11026 S. EGGLESTON AVENUE	Public (City of Chicago)	Affected Parcel	Parking for 111th Street Station
88	148	25-16-423-024-0000	336 W. 110TH PLACE	Public (City of Chicago)	Affected Parcel	Parking for 111th Street Station
89	149	25-16-423-019-0000	348 W. 110TH PLACE	Public (City of Chicago)	Affected Parcel	Right-of-way
90	150	25-16-423-023-0000	338 W. 110TH PLACE	Public (City of Chicago)	Affected Parcel	Parking for 111th Street Station
91	151	25-16-423-022-0000	340 W. 110TH PLACE	Public (City of Chicago)	Affected Parcel	Parking for 111th Street Station
92	152	25-16-423-021-0000	342 W. 110TH PLACE	Public (City of Chicago)	Affected Parcel	Parking for 111th Street Station
93	153	25-16-423-020-0000	346 W. 110TH PLACE	Public (City of Chicago)	Affected Parcel	Right-of-way
94	154	25-16-423-018-0000	352 W. 110TH PLACE	Vacant	Affected Parcel	Right-of-way
95	155	25-16-329-009-0000	11037 S. EGGLESTON AVENUE	Public (City of Chicago)	Affected Parcel	Parking for 111th Street Station
96	156	25-16-329-008-0000	11041 S. EGGLESTON AVENUE	Public (City of Chicago)	Affected Parcel	Parking for 111th Street Station

Union Pacific Railroad Alternative - East Option
Parcels Affected by Land Acquisitions

Count	Map ID	Parcel ID	Address	Land Use - Field (2015)	Displacement Type	East Option Displacement Use
97	157	25-16-427-001-0000	356 W. 111TH STREET	Public (City of Chicago)	Affected Parcel	Right-of-Way
98	158	25-16-329-005-0000	402 W. 111TH STREET	Vacant	Affected Parcel	Parking for 111th Street Station
99	160	25-21-501-003-0000	501 E. 112TH STREET	Transportation (railroad)	Affected Parcel	Right-of-way
100	161	25-21-200-001-0000	349 W. 111TH STREET	Multifamily Residential	Parcel with Building Displacement	Right-of-way
101	166	25-21-200-014-0000	348 W. 111TH PLACE	Vacant	Affected Parcel	Right-of-way
102	169	25-21-200-015-0000	344 W. 111TH PLACE	Single-family Residential	Affected Parcel	Right-of-way
103	173	25-21-204-001-0000	345 W. 111TH PLACE	Vacant	Affected Parcel	Right-of-way
104	174	25-21-204-002-0000	341 W. 111TH PLACE	Vacant	Affected Parcel	Right-of-way
105	179	25-21-204-015-0000	340 W. 112TH STREET	Multifamily Residential	Parcel with Building Displacement	Right-of-way
106	181	25-21-204-016-0000	336 W. 112TH STREET	Vacant	Affected Parcel	Right-of-way
107	182	25-21-208-003-0000	339 W. 112TH STREET	Vacant	Affected Parcel	Right-of-way
108	183	25-21-208-004-0000	335 W. 112TH STREET	Vacant	Affected Parcel	Right-of-way
109	184	25-21-208-005-0000	333 W. 112TH STREET	Vacant	Affected Parcel	Right-of-way
110	186	25-21-208-016-0000	330 W. 112TH PLACE	Single-family Residential	Parcel with Building Displacement	Right-of-way
111	187	25-21-208-017-0000	330 W. 112TH PLACE	Single-family Residential	Affected Parcel	Right-of-way
112	189	25-21-208-018-0000	328 W. 112TH PLACE	Single-family Residential	Parcel with Building Displacement	Right-of-way
113	192	25-21-212-010-0000	325 W. 112TH PLACE	Single-family Residential	Parcel with Building Displacement	Right-of-way
114	194	25-21-212-011-0000	319 W. 112TH PLACE	Multifamily Residential	Parcel with Building Displacement	Right-of-way
115	195	25-21-212-012-0000	317 W. 112TH PLACE	Single-family Residential	Affected Parcel	Right-of-way
116	196	25-21-212-019-0000	320 W. 113TH STREET	Vacant	Affected Parcel	Right-of-way
117	198	25-21-212-020-0000	320 W. 113TH STREET	Single-family Residential	Parcel with Building Displacement	Right-of-way
118	199	25-21-212-021-0000	316 W. 113TH STREET	Single-family Residential	Parcel with Building Displacement	Right-of-way
119	201	25-21-212-022-0000	312 W. 113TH STREET	Single-family Residential	Parcel with Building Displacement	Right-of-way
120	202	25-21-212-023-0000	310 W. 113TH STREET	Single-family Residential	Parcel with Building Displacement	Right-of-way
121	204	25-21-217-001-0000	309 W. 113TH STREET	Multifamily Residential	Parcel with Building Displacement	Right-of-way
122	205	25-21-217-002-0000	307 W. 113TH STREET	Multifamily Residential	Parcel with Building Displacement	Right-of-way
123	206	25-21-217-003-0000	303 W. 113TH STREET	Single-family Residential	Parcel with Building Displacement	Right-of-way
124	207	25-21-217-012-0000	11332 S. PRINCETON AVENUE	Transportation (railroad)	Affected Parcel	Right-of-way
125	209	25-21-218-024-0000	11315 S. PRINCETON AVENUE	Vacant	Affected Parcel	Right-of-way
126	210	25-21-218-025-0000	11319 S. PRINCETON AVENUE	Single-family Residential	Parcel with Building Displacement	Right-of-way
127	211	25-21-218-026-0000	11321 S. PRINCETON AVENUE	Single-family Residential	Parcel with Building Displacement	Right-of-way
128	212	25-21-218-027-0000	11325 S. PRINCETON AVENUE	Single-family Residential	Parcel with Building Displacement	Right-of-way
129	214	25-21-218-028-0000	11327 S. PRINCETON AVENUE	Single-family Residential	Parcel with Building Displacement	Right-of-way
130	216	25-21-218-020-0000	11330 S. YALE AVENUE	Single-family Residential	Parcel with Building Displacement	Right-of-way
131	218	25-21-218-021-0000	11334 S. YALE AVENUE	Multifamily Residential	Parcel with Building Displacement	Right-of-way
132	219	25-21-218-022-0000	11336 S. YALE AVENUE	Single-family Residential	Parcel with Building Displacement	Right-of-way
133	221	25-21-218-023-0000	11342 S. YALE AVENUE	Vacant	Affected Parcel	Right-of-way
134	222	25-21-219-014-0000	11343 S. YALE AVENUE	Single-family Residential	Affected Parcel	Right-of-way
135	223	25-21-219-015-0000	11345 S. YALE AVENUE	Vacant	Affected Parcel	Right-of-way
136	224	25-21-219-016-0000	11347 S. YALE AVENUE	Single-family Residential	Parcel with Building Displacement	Right-of-way
137	225	25-21-219-017-0000	11351 S. WENTWORTH AVENUE	Vacant	Affected Parcel	Right-of-way
138	227	25-21-219-018-0000	11355 S. WENTWORTH AVENUE	Vacant	Affected Parcel	Right-of-way
139	228	25-21-219-036-0000	11352 S. WENTWORTH AVENUE	Single-family Residential	Parcel with Building Displacement	Right-of-way
140	229	25-21-219-037-0000	11358 S. WENTWORTH AVENUE	Vacant	Affected Parcel	Right-of-way
141	230	25-21-501-001-0000	401 W. 111TH STREET	Transportation (railroad)	Affected Parcel	Right-of-way
142	233	25-21-228-001-0000	149 W. 114TH STREET	Vacant	Affected Parcel	Right-of-way
143	236	25-21-228-002-0000	135 W. 114TH STREET	Institution (Place of Worship)	Parcel with Building Displacement	Right-of-way
144	238	25-21-228-003-0000	131 W. 114TH STREET	Single-family Residential	Affected Parcel	Right-of-way

Union Pacific Railroad Alternative - East Option
Parcels Affected by Land Acquisitions

Count	Map ID	Parcel ID	Address	Land Use - Field (2015)	Displacement Type	East Option Displacement Use
145	240	25-21-228-046-0000	11424 S. PERRY AVENUE	Industrial	Parcel with Building Displacement	Right-of-way
146	242	25-21-228-047-0000	11424 S. PERRY AVENUE	Industrial	Parcel with Building Displacement	Right-of-way
147	245	25-21-228-023-0000	11426 S. PERRY AVENUE	Industrial	Parcel with Building Displacement	Right-of-way
148	248	25-21-230-035-0000	11439 S. PERRY AVENUE	Industrial	Parcel with Building Displacement	Right-of-way
149	249	25-21-230-034-0000	52 W. 115TH STREET	Vacant	Affected Parcel	Right-of-way
150	253	25-21-230-036-0000	52 W. 115TH STREET	Vacant	Affected Parcel	Right-of-way
151	255	25-21-230-019-0000	46 W. 115TH STREET	Vacant	Affected Parcel	Right-of-way
152	257	25-21-230-020-0000	44 W. 115TH STREET	Transportation (railroad)	Affected Parcel	Right-of-way
153	258	25-21-230-021-0000	42 W. 115TH STREET	Vacant	Affected Parcel	Right-of-way
154	259	25-21-230-022-0000	40 W. 115TH STREET	Multifamily Residential	Parcel with Building Displacement	Right-of-way
155	260	25-21-406-029-0000	11502 S. LAFAYETTE AVENUE	Commercial	Parcel with Building Displacement	Right-of-way
156	263	25-21-407-001-0000	23 W. 115TH STREET	Single-family Residential	Parcel with Building Displacement	Right-of-way
157	265	25-21-407-002-0000	17 W. 115TH STREET	Multifamily Residential	Parcel with Building Displacement	Right-of-way
158	266	25-21-407-003-0000	11 W. 115TH STREET	Vacant	Affected Parcel	Right-of-way
159	267	25-21-407-007-0000	11516 S. STATE STREET	Vacant	Affected Parcel	Right-of-way
160	269	25-21-407-029-0000	11514 S. STATE STREET	Vacant	Affected Parcel	Right-of-way
161	271	25-21-406-030-0000	11524 S. LAFAYETTE AVENUE	Transportation (railroad)	Affected Parcel	Substation
162	285	25-22-300-009-0000	11549 S. STATE STREET	Transportation (railroad)	Affected Parcel	Parking for Michigan Avenue Station
163	286	25-22-304-047-0000	113 E. KENSINGTON AVENUE	Vacant	Affected Parcel	Parking for Michigan Avenue Station
164	287	25-22-304-050-0000	11555 S. MICHIGAN AVENUE	Vacant	Affected Parcel	Parking for Michigan Avenue Station
165	289	25-22-300-010-0000	11551 S. STATE STREET	Transportation (railroad)	Affected Parcel	Parking for Michigan Avenue Station
166	290	25-22-304-049-0000	11557 S. MICHIGAN AVENUE	Vacant	Affected Parcel	Parking for Michigan Avenue Station
167	292	25-22-300-011-0000	11561 S. STATE STREET	Vacant	Affected Parcel	Parking for Michigan Avenue Station
168	293	25-22-300-070-0000	11556 S. WABASH AVENUE	Transportation (railroad)	Affected Parcel	Parking for Michigan Avenue Station
169	294	25-22-304-005-0000	11563 S. MICHIGAN AVENUE	Industrial	Affected Parcel	Parking for Michigan Avenue Station
170	295	25-22-300-012-0000	11563 S. STATE STREET	Vacant	Affected Parcel	Parking for Michigan Avenue Station
171	296	25-22-304-006-0000	11565 S. MICHIGAN AVENUE	Industrial	Affected Parcel	Parking for Michigan Avenue Station
172	297	25-22-300-013-0000	11567 S. STATE STREET	Single-family Residential	Parcel with Building Displacement	Parking for Michigan Avenue Station
173	298	25-22-304-007-0000	11567 S. MICHIGAN AVENUE	Industrial	Parcel with Building Displacement	Parking for Michigan Avenue Station
174	299	25-22-300-069-0000	11562 S. WABASH AVENUE	Transportation (railroad)	Affected Parcel	Parking for Michigan Avenue Station
175	300	25-22-300-014-0000	11569 S. STATE STREET	Single-family Residential	Parcel with Building Displacement	Parking for Michigan Avenue Station
176	301	25-22-300-015-0000	11571 S. STATE STREET	Single-family Residential	Parcel with Building Displacement	Parking for Michigan Avenue Station
177	302	25-22-300-071-0000	11557 S. WABASH AVENUE	Transportation (railroad)	Affected Parcel	Parking for Michigan Avenue Station
178	303	25-22-300-021-0000	11572 S. WABASH AVENUE	Single-family Residential	Parcel with Building Displacement	Parking for Michigan Avenue Station
179	304	25-22-300-016-0000	11573 S. STATE STREET	Single-family Residential	Parcel with Building Displacement	Parking for Michigan Avenue Station
180	305	25-22-300-022-0000	11574 S. WABASH AVENUE	Single-family Residential	Parcel with Building Displacement	Parking for Michigan Avenue Station
181	306	25-22-300-017-0000	11575 S. STATE STREET	Single-family Residential	Parcel with Building Displacement	Parking for Michigan Avenue Station
182	307	25-22-304-008-0000	11579 S. MICHIGAN AVENUE	Public (City of Chicago)	Affected Parcel	Parking for Michigan Avenue Station
183	308	25-22-300-049-0000	11573 S. WABASH AVENUE	Commercial	Parcel with Building Displacement	Parking for Michigan Avenue Station
184	309	25-22-300-023-0000	11578 S. WABASH AVENUE	Single-family Residential	Parcel with Building Displacement	Parking for Michigan Avenue Station
185	310	25-22-300-018-0000	11579 S. STATE STREET	Vacant	Affected Parcel	Parking for Michigan Avenue Station
186	311	25-22-304-027-0000	120 E. 116TH STREET	Public (City of Chicago)	Affected Parcel	Parking for Michigan Avenue Station
187	313	25-22-304-028-0000	122 E. 116TH STREET	Public (City of Chicago)	Affected Parcel	Parking for Michigan Avenue Station
188	314	25-22-304-029-0000	124 E. 116TH STREET	Public (City of Chicago)	Affected Parcel	Parking for Michigan Avenue Station
189	315	25-22-304-030-0000	128 E. 116TH STREET	Public (City of Chicago)	Affected Parcel	Parking for Michigan Avenue Station
190	316	25-22-304-031-0000	130 E. 116TH STREET	Public (City of Chicago)	Affected Parcel	Parking for Michigan Avenue Station
191	317	25-22-304-032-0000	132 E. 116TH STREET	Public (City of Chicago)	Affected Parcel	Parking for Michigan Avenue Station
192	318	25-22-304-034-0000	136 E. 116TH STREET	Public (City of Chicago)	Affected Parcel	Parking for Michigan Avenue Station

Union Pacific Railroad Alternative - East Option
Parcels Affected by Land Acquisitions

Count	Map ID	Parcel ID	Address	Land Use - Field (2015)	Displacement Type	East Option Displacement Use
193	319	25-22-304-033-0000	134 E. 116TH STREET	Public (City of Chicago)	Affected Parcel	Parking for Michigan Avenue Station
194	320	25-22-300-059-0000	11582 S. MICHIGAN AVENUE	Transportation (railroad)	Affected Parcel	Parking for Michigan Avenue Station
195	321	25-22-300-052-0000	38 E. 116TH STREET	Multifamily Residential	Parcel with Building Displacement	Parking for Michigan Avenue Station
196	322	25-22-300-051-0000	34 E. 116TH STREET	Single-family Residential	Parcel with Building Displacement	Parking for Michigan Avenue Station
197	323	25-22-300-050-0000	32 E. 116TH STREET	Single-family Residential	Affected Parcel	Parking for Michigan Avenue Station
198	324	25-22-300-029-0000	20 E. 116TH STREET	Single-family Residential	Parcel with Building Displacement	Parking for Michigan Avenue Station
199	325	25-22-300-028-0000	16 E. 116TH STREET	Single-family Residential	Parcel with Building Displacement	Parking for Michigan Avenue Station
200	326	25-22-300-060-0000	11586 S. MICHIGAN AVENUE	Vacant	Affected Parcel	Parking for Michigan Avenue Station
201	327	25-22-300-027-0000	12 E. 116TH STREET	Single-family Residential	Parcel with Building Displacement	Parking for Michigan Avenue Station
202	328	25-22-300-026-0000	8 E. 116TH STREET	Single-family Residential	Parcel with Building Displacement	Parking for Michigan Avenue Station
203	329	25-22-300-025-0000	11583 S. STATE STREET	Single-family Residential	Affected Parcel	Parking for Michigan Avenue Station
204	330	25-22-300-024-0000	11583 S. STATE STREET	Single-family Residential	Parcel with Building Displacement	Parking for Michigan Avenue Station
205	331	25-22-300-061-0000	11588 S. MICHIGAN AVENUE	Vacant	Affected Parcel	Parking for Michigan Avenue Station
206	333	25-22-300-062-0000	11592 S. MICHIGAN AVENUE	Mixed-Use Commercial/Residential	Parcel with Building Displacement	Parking for Michigan Avenue Station
207	336	25-22-308-014-0000	151 E. 116TH STREET	Multifamily Residential	Parcel with Building Displacement	Right-of-way
208	338	25-22-308-015-0000	153 E. 116TH STREET	Multifamily Residential	Parcel with Building Displacement	Right-of-way
209	341	25-22-308-016-0000	155 E. 116TH STREET	Single-family Residential	Parcel with Building Displacement	Right-of-way
210	343	25-22-308-017-0000	157 E. 116TH STREET	Multifamily Residential	Affected Parcel	Right-of-way
211	345	25-22-308-018-0000	159 E. 116TH STREET	Single-family Residential	Parcel with Building Displacement	Right-of-way
212	346	25-22-308-019-0000	163 E. 116TH STREET	Single-family Residential	Parcel with Building Displacement	Right-of-way
213	347	25-22-308-020-0000	165 E. 116TH STREET	Single-family Residential	Parcel with Building Displacement	Right-of-way
214	354	25-22-311-013-0000	11631 S. INDIANA AVENUE	Public (City of Chicago)	Parcel with Building Displacement	Right-of-way
215	356	25-22-311-021-0000	11630 S. PRAIRIE AVENUE	Single-family Residential	Parcel with Building Displacement	Right-of-way
216	357	25-22-311-024-0000	11632 S. PRAIRIE AVENUE	Multifamily Residential	Parcel with Building Displacement	Right-of-way
217	358	25-22-311-025-0000	11634 S. PRAIRIE AVENUE	Multifamily Residential	Parcel with Building Displacement	Right-of-way
218	363	25-22-316-001-0000	319 E. 117TH STREET	Public (City of Chicago)	Affected Parcel	Right-of-way
219	368	25-22-316-035-0000	11712 S. Calumet Avenue	Commercial	Affected Parcel	Right-of-way
220	370	25-22-316-034-0000	11722 S. CALUMET AVENUE	Commercial	Affected Parcel	Right-of-way
221	371	25-22-316-030-0000	11726 S. CALUMET AVENUE	Vacant	Affected Parcel	Right-of-way
222	372	25-22-316-031-0000	11728 S. CALUMET AVENUE	Vacant	Affected Parcel	Right-of-way
223	373	25-22-317-013-0000	354 E. 118TH STREET	Single-family Residential	Parcel with Building Displacement	Right-of-way
224	374	25-22-317-014-0000	356 E. 118TH STREET	Public (City of Chicago)	Affected Parcel	Right-of-way
225	375	25-22-317-015-0000	358 E. 118TH STREET	Public (City of Chicago)	Affected Parcel	Right-of-way
226	376	25-22-317-030-0000	11742 S. FRONT AVENUE	Vacant	Affected Parcel	Right-of-way
227	377	25-22-317-031-0000	11810 S. CALUMET AVENUE	Industrial	Affected Parcel	Right-of-way
228	378	25-22-317-032-0000	11810 S. CALUMET AVENUE	Industrial	Parcel with Building Displacement	Right-of-way
229	379	25-22-317-033-0000	375 E. 118TH STREET	Industrial	Affected Parcel	Right-of-way
230	380	25-22-317-035-0000	11800 S. FRONT AVENUE	Transportation (railroad)	Affected Parcel	Right-of-way
231	381	25-22-501-005-0000	360 E. 119TH STREET	Transportation (railroad)	Affected Parcel	Right-of-way
232	382	25-22-325-001-0000	370 E. 119TH STREET	Transportation (railroad)	Affected Parcel	Right-of-way
233	383	25-22-400-026-0000	11600 S. COTTAGE GROVE AVENUE	Industrial	Affected Parcel	Right-of-way
234	384	25-22-400-027-0000	11600 S. COTTAGE GROVE AVENUE	Transportation (railroad)	Affected Parcel	Right-of-way
235	385	25-27-108-009-0000	11900 S. COTTAGE GROVE AVENUE	Public (City of Chicago)	Affected Parcel	Right-of-way
236	386	25-27-502-001-0000	12330 S. COTTAGE GROVE AVENUE	Transportation (railroad)	Affected Parcel	Right-of-way
237	388	25-27-502-001-0000	12330 S. COTTAGE GROVE AVENUE	Transportation (railroad)	Affected Parcel	Right-of-way
238	389	25-26-999-001-0000	No Street Address	Transportation (railroad)	Affected Parcel	Right-of-way
239	390	25-26-300-017-0000	12807 S. COTTAGE GROVE AVENUE	Utility (MWRD)	Affected Parcel	Right-of-way
240	391	25-26-300-015-0000	12813 S. COTTAGE GROVE AVENUE	Utility (MWRD)	Affected Parcel	Right-of-way

Union Pacific Railroad Alternative - East Option
Parcels Affected by Land Acquisitions

Count	Map ID	Parcel ID	Address	Land Use - Field (2015)	Displacement Type	East Option Displacement Use
241	392	25-26-300-014-0000	12817 S. COTTAGE GROVE AVENUE	Utility (MWRD)	Affected Parcel	Right-of-way
242	393	25-27-301-013-0000	310 E. 130TH STREET	Utility (MWRD)	Affected Parcel	Right-of-way
243	394	25-27-301-012-0000	325 E. 127TH STREET	Utility (MWRD)	Affected Parcel	Right-of-way
244	395	25-27-301-011-0000	350 E. 130TH STREET	Utility (MWRD)	Affected Parcel	Right-of-way
245	396	25-27-301-010-0000	360 E. 130TH STREET	Utility (MWRD)	Affected Parcel	Right-of-way
246	397	25-22-401-034-0000	1355 E. 121ST STREET	Transportation (railroad)	Affected Parcel	120th Street Yard
247	398	25-27-200-007-0000	12256 S. COTTAGE GROVE AVENUE	Industrial	Parcel with Building Displacement	120th Street Yard
248	399	25-27-200-009-0000	12256 S. COTTAGE GROVE AVENUE	Public (City of Chicago)	Affected Parcel	120th Street Yard
249	400	25-27-200-010-0000	12256 S. COTTAGE GROVE AVENUE	Public (City of Chicago)	Affected Parcel	120th Street Yard
250	401	25-27-200-012-0000	12534 S. COTTAGE GROVE AVENUE	Public (City of Chicago)	Affected Parcel	120th Street Yard
251	402	25-27-200-013-0000	12546 S. COTTAGE GROVE AVENUE	Utility (MWRD)	Affected Parcel	120th Street Yard
252	403	25-27-503-001-0000	12320 S. COTTAGE GROVE AVENUE	Transportation (railroad)	Affected Parcel	120th Street Yard
253	404	25-27-200-004-0000	12500 S. COTTAGE GROVE AVENUE	Utility (MWRD)	Affected Parcel	120th Street Yard
254	405	25-27-400-003-0000	12606 S. COTTAGE GROVE AVENUE	Utility (MWRD)	Affected Parcel	120th Street Yard
255	406	25-27-400-002-0000	12600 S. COTTAGE GROVE AVENUE	Transportation (railroad)	Affected Parcel	120th Street Yard
256	407	25-27-400-007-0000	12614 S. COTTAGE GROVE AVENUE	Utility (MWRD)	Affected Parcel	120th Street Yard
257	408	25-27-400-005-0000	12608 S. COTTAGE GROVE AVENUE	Utility (MWRD)	Affected Parcel	120th Street Yard
258	409	25-27-400-006-0000	12610 S. COTTAGE GROVE AVENUE	Utility (MWRD)	Affected Parcel	120th Street Yard
259	410	25-27-301-007-0000	300 E. 127TH STREET	Utility (MWRD)	Affected Parcel	120th Street Yard
260	411	25-27-400-009-0000	12618 S. COTTAGE GROVE AVENUE	Utility (MWRD)	Affected Parcel	120th Street Yard

Note - The following parcels are defined as easements and are not included in the table: Map ID 1-21, 24, 276, 282, 288, 291, 312. Publicly owned parcels that include a roadway are classified as “easements” for this analysis because CTA would require a use agreement with the public entity.

Union Pacific Railroad - West Option
Potential Displacements

Affected Count - By Location			
Location	Total Affected Parcels (with and without building displacements) [1]	Building Diplacements [2]	Easements [3]
95th St - 99th St	-	-	23
99th St - 103rd St	13	2	-
103rd St - 111th St	35	9	-
111th St - 115th St	46	8	-
115th St - 117th St	62	23	1
117th St - Front St	18	3	-
Front St - 130th St	16	-	-
120th St Yard and Shop	15	1	-
Total	**205**	**46**	**24**

1) A partial or a full parcel that would need to be acquired
2) A structure that would need to be removed (the land occupied by the structure would also be counted as an affected parcel)
3) Publicly owned parcels that include a roadway are classified as "easements" for this analysis because CTA would require a use agreement with the public entity

Affected Count - By Land Use Type		
Land Use Type	Total Affected Parcels (with and without building displacements) [1]	Building Diplacements [2]
Vacant	41	-
Single-Family Residential	35	22
Multifamily Residential	4	4
Commercial	13	6
Mixed-Use Commercial/Residential	2	2
Institutional (Place of Worship)	2	1
Institutional (School)	-	-
Industrial	18	11
Utility (MWRD)	15	-
Transportation (highway)	-	-
Transportation (railroad - Union Pacific Railroad)	36	-
Transportation (railroad - CN/ME)	3	-
Transportation (railroad - Norfolk Southern)	2	-
Transportation (railroad - Conrail)	3	-
Transportation (railroad - NICTD/CSS & SBRR)	2	-
Transportation (railroad - Chicago & Western Indiana)	1	-
Public (City of Chicago)	24	-
Parkland	4	-
Total	**205**	**46**

MWRD = Metropolitan Water Reclamation District, CN/ME = Canadian National/Metra Electric, NS = Norfolk Southern Railroad, NICTD/CSS & SBRR = Northern Indiana Commuter Transportation District/Chicago South Short & South Bend Railroad

Note: This table does not include easements. Publicly owned parcels that include a roadway are classified as "easements" for this analysis because CTA would require a use agreement with the public entity. Publicly owned parcels that do not include a roadway are classified as affected parcels or building displacements because CTA would need to negotiate a fee simple property transfer or other agreement with the public entity

1) A partial or a full parcel that would need to be acquired
2) A structure that would need to be removed (the land occupied by the structure would also be counted as an affected parcel)

Union Pacific Railroad Alternative - West Option
Parcels Affected by Land Acquisitions

Count	Map ID	Parcel ID	Address	Land Use - Field (2015)	Displacement Type	West Option Displacement Use
1	25	25-09-400-046-0000	341 W. 99TH STREET	Transportation (railroad)	Affected Parcel	Right-of-way
2	26	25-09-500-002-0000	351 W. 99TH STREET	Transportation (railroad)	Affected Parcel	Right-of-way
3	30	25-09-999-001-0000	No Street Address	Parkland	Affected Parcel	Right-of-way
4	39	25-09-999-001-0000	No Street Address	Parkland	Affected Parcel	Right-of-way
5	48	25-09-999-001-0000	No Street Address	Parkland	Affected Parcel	Right-of-way
6	61	25-09-999-001-0000	No Street Address	Parkland	Affected Parcel	Right-of-way
7	65	25-09-424-060-0000	340 W. 103RD STREET	Vacant	Affected Parcel	Bus Turnaround for 103rd Street Station
8	67	25-16-105-034-0000	405 W. 103RD STREET	Multifamily Residential	Parcel with Building Displacement	Right-of-way
9	69	25-16-105-035-0000	403 W. 103RD STREET	Commercial	Parcel with Building Displacement	Right-of-way
10	70	25-16-105-033-0000	400 W. 103RD PLACE	Vacant	Affected Parcel	Right-of-way
11	73	25-16-107-030-0000	429 W. 103RD PLACE	Public (City of Chicago)	Affected Parcel	Right-of-way
12	74	25-16-107-010-0000	401 W. 103RD PLACE	Vacant	Affected Parcel	Parking for 103rd Street Station
13	76	25-16-107-031-0000	428 W. 104TH STREET	Public (City of Chicago)	Affected Parcel	Right-of-way
14	77	25-16-113-024-0000	401 W. 104TH STREET	Commercial	Affected Parcel	Right-of-way
15	79	25-16-113-028-0000	10413 S. EGGLESTON AVENUE	Commercial	Affected Parcel	Right-of-way
16	81	25-16-113-029-0000	405 W. 104TH STREET	Commercial	Parcel with Building Displacement	Right-of-way
17	83	25-16-113-031-0000	400 W. 105TH STREET	Vacant	Affected Parcel	Right-of-way
18	85	25-16-121-024-0000	411 W. 105TH STREET	Commercial	Affected Parcel	Right-of-way
19	86	25-16-210-001-0000	317 W. 105TH STREET	Public (City of Chicago)	Affected Parcel	Substation
20	88	25-16-121-025-0000	10514 S. STEWART AVENUE	Commercial	Affected Parcel	Right-of-way
21	89	25-16-500-007-0000	360 W. 105TH STREET	Public (City of Chicago)	Affected Parcel	Substation
22	90	25-16-210-040-0000	232 W. 105TH STREET	Public (City of Chicago)	Affected Parcel	Substation
23	91	25-16-210-039-0000	232 W 105TH PLACE	Public (City of Chicago)	Affected Parcel	Substation
24	92	25-16-210-038-0000	230 W. 105TH PLACE	Public (City of Chicago)	Affected Parcel	Substation
25	93	25-16-121-031-0000	10520 S. STEWART AVENUE	Industrial	Parcel with Building Displacement	Right-of-way
26	94	25-16-121-032-0000	10528 S. STEWART AVENUE	Industrial	Parcel with Building Displacement	Right-of-way
27	95	25-16-121-022-0000	10530 S. STEWART AVENUE	Industrial	Parcel with Building Displacement	Right-of-way
28	98	25-16-121-027-0000	10548 S. STEWART AVENUE	Industrial	Parcel with Building Displacement	Right-of-way
29	101	25-16-121-028-0000	10552 S. STEWART AVENUE	Industrial	Affected Parcel	Right-of-way
30	102	25-16-121-029-0000	10558 S. STEWART AVENUE	Industrial	Affected Parcel	Right-of-way
31	105	25-16-129-030-0000	10638 S. STEWART AVENUE	Public (City of Chicago)	Affected Parcel	Right-of-way
32	109	25-16-129-031-0000	10632 S. STEWART AVENUE	Vacant	Affected Parcel	Right-of-way
33	111	25-16-129-029-0000	410 W. 107TH STREET	Vacant	Affected Parcel	Right-of-way
34	114	25-16-129-028-0000	400 W. 107TH STREET	Industrial	Parcel with Building Displacement	Right-of-way
35	116	25-16-307-025-0000	405 W. 107TH STREET	Vacant	Affected Parcel	Right-of-way
36	118	25-16-307-022-0000	400 W. 108TH STREET	Vacant	Affected Parcel	Right-of-way
37	121	25-16-315-025-0000	405 W. 108TH STREET	Vacant	Affected Parcel	Right-of-way
38	124	25-16-315-026-0000	405 W. 108TH STREET	Vacant	Affected Parcel	Right-of-way
39	127	25-16-315-027-0000	410 W. 109TH STREET	Vacant	Affected Parcel	Right-of-way
40	130	25-16-315-024-0000	410 W. 109TH STREET	Industrial	Parcel with Building Displacement	Right-of-way
41	135	25-16-320-011-0000	409 W. 109TH STREET	Industrial	Parcel with Building Displacement	Right-of-way
42	138	25-16-320-022-0000	410 W. 109TH STREET	Industrial	Affected Parcel	Right-of-way
43	140	25-16-320-023-0000	412 W. 109TH STREET	Industrial	Affected Parcel	Right-of-way
44	144	25-16-329-006-0000	401 W. 110TH STREET	Industrial	Parcel with Building Displacement	Right-of-way
45	147	25-16-329-007-0000	11026 S. EGGLESTON AVENUE	Public (City of Chicago)	Affected Parcel	Parking for 111th Street Station
46	155	25-16-329-009-0000	11037 S. EGGLESTON AVENUE	Public (City of Chicago)	Affected Parcel	Right-of-way
47	156	25-16-329-008-0000	11041 S. EGGLESTON AVENUE	Public (City of Chicago)	Affected Parcel	Right-of-way
48	158	25-16-329-005-0000	402 W. 111TH STREET	Vacant	Affected Parcel	Right-of-way

Union Pacific Railroad Alternative - West Option
Parcels Affected by Land Acquisitions

Count	Map ID	Parcel ID	Address	Land Use - Field (2015)	Displacement Type	West Option Displacement Use
49	159	25-21-107-009-0000	403 W. 111TH STREET	Transportation (railroad)	Affected Parcel	Right-of-way
50	162	25-21-107-007-0000	405 W. 111TH STREET	Commercial	Parcel with Building Displacement	Right-of-way
51	163	25-21-107-008-0000	401 W. 111TH STREET	Commercial	Affected Parcel	Right-of-way
52	164	25-21-107-025-0000	11114 S. STEWART AVENUE	Public (City of Chicago)	Affected Parcel	Right-of-way
53	165	25-21-107-026-0000	11116 S. STEWART AVENUE	Public (City of Chicago)	Affected Parcel	Right-of-way
54	167	25-21-107-027-0000	11118 S. STEWART AVENUE	Commercial	Parcel with Building Displacement	Right-of-way
55	168	25-21-107-028-0000	11124 S. STEWART AVENUE	Commercial	Parcel with Building Displacement	Right-of-way
56	170	25-21-107-029-0000	11128 S. STEWART AVENUE	Commercial	Affected Parcel	Right-of-way
57	171	25-21-107-030-0000	11130 S. STEWART AVENUE	Single-family Residential	Parcel with Building Displacement	Right-of-way
58	172	25-21-107-031-0000	11140 S. STEWART AVENUE	Vacant	Affected Parcel	Right-of-way
59	175	25-21-107-032-0000	11144 S. STEWART AVENUE	Vacant	Affected Parcel	Right-of-way
60	176	25-21-107-033-0000	11148 S. STEWART AVENUE	Vacant	Affected Parcel	Right-of-way
61	177	25-21-107-034-0000	11150 S. STEWART AVENUE	Vacant	Affected Parcel	Right-of-way
62	178	25-21-107-037-0000	406 W. 112TH STREET	Vacant	Affected Parcel	Right-of-way
63	180	25-21-501-002-0000	501 E. 112TH STREET	Transportation (railroad)	Affected Parcel	Right-of-way
64	185	25-21-208-001-0000	11201 S. STEWART AVENUE	Vacant	Affected Parcel	Right-of-way
65	188	25-21-208-002-0000	11225 S. STEWART AVENUE	Vacant	Affected Parcel	Right-of-way
66	190	25-21-212-001-0000	11229 S. STEWART AVENUE	Single-family Residential	Affected Parcel	Right-of-way
67	191	25-21-212-002-0000	11231 S. STEWART AVENUE	Single-family Residential	Affected Parcel	Right-of-way
68	193	25-21-212-009-0000	341 W. 112TH PLACE	Industrial	Parcel with Building Displacement	Right-of-way
69	197	25-21-212-017-0000	340 W. 113TH STREET	Mixed-Use Commercial/Residential	Parcel with Building Displacement	Right-of-way
70	200	25-21-212-018-0000	338 W. 113TH STREET	Vacant	Affected Parcel	Right-of-way
71	203	25-21-216-022-0000	335 W. 113TH STREET	Vacant	Affected Parcel	Right-of-way
72	208	25-21-217-004-0000	11325 S. HARVARD AVENUE	Transportation (railroad)	Affected Parcel	Right-of-way
73	213	25-21-217-005-0000	11327 S. HARVARD AVENUE	Single-family Residential	Affected Parcel	Right-of-way
74	215	25-21-217-027-0000	11334 S. PRINCETON AVENUE	Transportation (railroad)	Affected Parcel	Right-of-way
75	217	25-21-217-028-0000	11336 S. PRINCETON AVENUE	Single-family Residential	Affected Parcel	Right-of-way
76	220	25-21-217-029-0000	11340 S. PRINCETON AVENUE	Single-family Residential	Affected Parcel	Right-of-way
77	226	25-21-218-014-0000	233 W. 113TH STREET	Transportation (railroad)	Affected Parcel	Right-of-way
78	231	25-21-999-001-0000	No Street Address	Transportation (railroad)	Affected Parcel	Right-of-way
79	232	25-21-226-008-0000	235 W. 114TH STREET	Single-family Residential	Affected Parcel	Right-of-way
80	234	25-21-227-001-0000	11411 S. YALE AVENUE	Transportation (railroad)	Affected Parcel	Right-of-way
81	235	25-21-999-001-0000	No Street Address	Transportation (railroad)	Affected Parcel	Right-of-way
82	237	25-21-227-002-0000	11413 S. YALE AVENUE	Single-family Residential	Parcel with Building Displacement	Right-of-way
83	239	25-21-227-012-0000	11420 S. WENTWORTH AVENUE	Transportation (railroad)	Affected Parcel	Right-of-way
84	241	25-21-227-013-0000	11422 S. WENTWORTH AVENUE	Vacant	Affected Parcel	Right-of-way
85	243	25-21-228-042-0000	11423 S. WENTWORTH AVENUE	Vacant	Affected Parcel	Right-of-way
86	244	25-21-228-015-0000	11433 S. WENTWORTH AVENUE	Vacant	Affected Parcel	Right-of-way
87	246	25-21-228-016-0000	11437 S. WENTWORTH AVENUE	Vacant	Affected Parcel	Right-of-way
88	247	25-21-228-043-0000	11437 S. WENTWORTH AVENUE	Vacant	Affected Parcel	Right-of-way
89	250	25-21-228-044-0000	124 W. 115TH STREET	Single-family Residential	Affected Parcel	Right-of-way
90	251	25-21-228-045-0000	120 W. 115TH STREET	Single-family Residential	Affected Parcel	Right-of-way
91	252	25-21-228-034-0000	116 W. 115TH STREET	Multifamily Residential	Parcel with Building Displacement	Right-of-way
92	254	25-21-228-037-0000	112 W. 115TH STREET	Vacant	Affected Parcel	Right-of-way
93	256	25-21-228-038-0000	106 W. 115TH STREET	Vacant	Affected Parcel	Right-of-way
94	261	25-21-405-008-0000	103 W. 115TH STREET	Public (City of Chicago)	Affected Parcel	Right-of-way
95	262	25-21-406-001-0000	11513 S. PERRY AVENUE	Transportation (railroad)	Affected Parcel	Right-of-way
96	264	25-21-406-055-0000	11515 S. PERRY AVENUE	Vacant	Affected Parcel	Right-of-way

Union Pacific Railroad Alternative - West Option
Parcels Affected by Land Acquisitions

Count	Map ID	Parcel ID	Address	Land Use - Field (2015)	Displacement Type	West Option Displacement Use
97	268	25-21-406-030-0000	11524 S. LAFAYETTE AVENUE	Transportation (railroad)	Affected Parcel	Substation
98	270	25-21-999-001-0000	No Street Address	Transportation (railroad)	Affected Parcel	Right-of-way
99	271	25-21-406-030-0000	11524 S. LAFAYETTE AVENUE	Transportation (railroad)	Affected Parcel	Substation
100	272	25-21-407-008-0000	11535 S. LAFAYETTE AVENUE	Transportation (railroad)	Affected Parcel	Right-of-way
101	273	25-21-406-031-0000	11528 S. LAFAYETTE AVENUE	Single-family Residential	Parcel with Building Displacement	Right-of-way
102	274	25-21-501-007-0000	500 W. 113TH STREET	Transportation (railroad)	Affected Parcel	Right-of-way
103	275	25-21-406-058-0000	11530 S. LAFAYETTE AVENUE	Single-family Residential	Parcel with Building Displacement	Right-of-way
104	277	25-21-407-008-0000	11535 S. LAFAYETTE AVENUE	Transportation (railroad)	Affected Parcel	Right-of-way
105	278	25-21-407-008-0000	11535 S. LAFAYETTE AVENUE	Transportation (railroad)	Affected Parcel	Right-of-way
106	279	25-21-407-009-0000	11537 S. LAFAYETTE AVENUE	Vacant	Affected Parcel	Right-of-way
107	280	25-21-407-010-0000	11541 S. LAFAYETTE AVENUE	Single-family Residential	Affected Parcel	Right-of-way
108	281	25-21-407-030-0000	11512 S. STATE STREET	Transportation (railroad)	Affected Parcel	Parking for Michigan Avenue Station
109	283	25-21-407-031-0000	11546 S. STATE STREET	Single-family Residential	Parcel with Building Displacement	Right-of-way
110	284	25-21-407-032-0000	11548 S. STATE STREET	Multifamily Residential	Parcel with Building Displacement	Right-of-way
111	285	25-22-300-009-0000	11549 S. STATE STREET	Transportation (railroad)	Affected Parcel	Parking for Michigan Avenue Station
112	289	25-22-300-010-0000	11551 S. STATE STREET	Transportation (railroad)	Affected Parcel	Parking for Michigan Avenue Station
113	292	25-22-300-011-0000	11561 S. STATE STREET	Vacant	Affected Parcel	Parking for Michigan Avenue Station
114	293	25-22-300-070-0000	11556 S. WABASH AVENUE	Transportation (railroad)	Affected Parcel	Parking for Michigan Avenue Station
115	295	25-22-300-012-0000	11563 S. STATE STREET	Vacant	Affected Parcel	Parking for Michigan Avenue Station
116	297	25-22-300-013-0000	11567 S. STATE STREET	Single-family Residential	Parcel with Building Displacement	Parking for Michigan Avenue Station
117	299	25-22-300-069-0000	11562 S. WABASH AVENUE	Transportation (railroad)	Affected Parcel	Parking for Michigan Avenue Station
118	300	25-22-300-014-0000	11569 S. STATE STREET	Single-family Residential	Parcel with Building Displacement	Parking for Michigan Avenue Station
119	301	25-22-300-015-0000	11571 S. STATE STREET	Single-family Residential	Parcel with Building Displacement	Parking for Michigan Avenue Station
120	302	25-22-300-071-0000	11557 S. WABASH AVENUE	Transportation (railroad)	Affected Parcel	Parking for Michigan Avenue Station
121	303	25-22-300-021-0000	11572 S. WABASH AVENUE	Single-family Residential	Parcel with Building Displacement	Parking for Michigan Avenue Station
122	304	25-22-300-016-0000	11573 S. STATE STREET	Single-family Residential	Parcel with Building Displacement	Parking for Michigan Avenue Station
123	305	25-22-300-022-0000	11574 S. WABASH AVENUE	Single-family Residential	Parcel with Building Displacement	Parking for Michigan Avenue Station
124	306	25-22-300-017-0000	11575 S. STATE STREET	Single-family Residential	Parcel with Building Displacement	Parking for Michigan Avenue Station
125	308	25-22-300-049-0000	11573 S. WABASH AVENUE	Commercial	Parcel with Building Displacement	Parking for Michigan Avenue Station
126	309	25-22-300-023-0000	11578 S. WABASH AVENUE	Single-family Residential	Parcel with Building Displacement	Parking for Michigan Avenue Station
127	310	25-22-300-018-0000	11579 S. STATE STREET	Vacant	Affected Parcel	Parking for Michigan Avenue Station
128	320	25-22-300-059-0000	11582 S. MICHIGAN AVENUE	Transportation (railroad)	Affected Parcel	Parking for Michigan Avenue Station
129	321	25-22-300-052-0000	38 E. 116TH STREET	Multifamily Residential	Parcel with Building Displacement	Parking for Michigan Avenue Station
130	322	25-22-300-051-0000	34 E. 116TH STREET	Single-family Residential	Parcel with Building Displacement	Parking for Michigan Avenue Station
131	323	25-22-300-050-0000	32 E. 116TH STREET	Single-family Residential	Affected Parcel	Parking for Michigan Avenue Station
132	324	25-22-300-029-0000	20 E. 116TH STREET	Single-family Residential	Parcel with Building Displacement	Parking for Michigan Avenue Station
133	325	25-22-300-028-0000	16 E. 116TH STREET	Single-family Residential	Parcel with Building Displacement	Parking for Michigan Avenue Station
134	326	25-22-300-060-0000	11586 S. MICHIGAN AVENUE	Vacant	Affected Parcel	Parking for Michigan Avenue Station
135	327	25-22-300-027-0000	12 E. 116TH STREET	Single-family Residential	Parcel with Building Displacement	Parking for Michigan Avenue Station
136	328	25-22-300-026-0000	8 E. 116TH STREET	Single-family Residential	Parcel with Building Displacement	Parking for Michigan Avenue Station
137	329	25-22-300-025-0000	11583 S. STATE STREET	Single-family Residential	Affected Parcel	Parking for Michigan Avenue Station
138	330	25-22-300-024-0000	11583 S. STATE STREET	Single-family Residential	Parcel with Building Displacement	Parking for Michigan Avenue Station
139	331	25-22-300-061-0000	11588 S. MICHIGAN AVENUE	Vacant	Affected Parcel	Parking for Michigan Avenue Station
140	332	25-22-304-009-0000	11583 S. MICHIGAN AVENUE	Transportation (railroad)	Affected Parcel	Right-of-way
141	333	25-22-300-062-0000	11592 S. MICHIGAN AVENUE	Mixed-Use Commercial/Residential	Parcel with Building Displacement	Parking for Michigan Avenue Station
142	334	25-22-304-010-0000	11589 S. MICHIGAN AVENUE	Vacant	Affected Parcel	Right-of-way
143	335	25-22-308-001-0000	11601 S. MICHIGAN AVENUE	Institution (Place of Worship)	Parcel with Building Displacement	Right-of-way
144	337	25-22-308-002-0000	11603 S. MICHIGAN AVENUE	Institution (Place of Worship)	Affected Parcel	Right-of-way

Union Pacific Railroad Alternative - West Option
Parcels Affected by Land Acquisitions

Count	Map ID	Parcel ID	Address	Land Use - Field (2015)	Displacement Type	West Option Displacement Use
145	339	25-22-308-003-0000	11607 S. MICHIGAN AVENUE	Public (City of Chicago)	Affected Parcel	Right-of-way
146	340	25-22-308-010-0000	115 E. 116TH STREET	Public (City of Chicago)	Affected Parcel	Right-of-way
147	342	25-22-308-011-0000	117 E. 116TH STREET	Public (City of Chicago)	Affected Parcel	Right-of-way
148	344	25-22-308-012-0000	119 E. 116TH STREET	Public (City of Chicago)	Affected Parcel	Right-of-way
149	348	25-22-308-024-0000	120 E. 117TH STREET	Vacant	Affected Parcel	Right-of-way
150	349	25-22-308-025-0000	124 E. 117TH STREET	Vacant	Affected Parcel	Right-of-way
151	350	25-22-308-026-0000	126 E. 117TH STREET	Single-family Residential	Parcel with Building Displacement	Right-of-way
152	351	25-22-308-027-0000	128 E. 117TH STREET	Single-family Residential	Affected Parcel	Right-of-way
153	352	25-22-308-028-0000	132 E. 117TH STREET	Single-family Residential	Affected Parcel	Right-of-way
154	353	25-22-308-029-0000	132 E. 117TH STREET	Transportation (railroad)	Affected Parcel	Right-of-way
155	355	25-22-308-030-0000	134 E. 117TH STREET	Transportation (railroad)	Affected Parcel	Right-of-way
156	359	25-22-310-038-0000	11700 S. INDIANA AVENUE	Transportation (railroad)	Affected Parcel	Right-of-way
157	360	25-22-315-001-0000	11705 S. INDIANA AVENUE	Transportation (railroad)	Affected Parcel	Right-of-way
158	361	25-22-315-003-0000	11707 S. INDIANA AVENUE	Transportation (railroad)	Affected Parcel	Right-of-way
159	362	25-22-315-004-0000	11709 S. INDIANA AVENUE	Single-family Residential	Parcel with Building Displacement	Right-of-way
160	364	25-22-315-016-0000	11714 S. PRAIRIE AVENUE	Transportation (railroad)	Affected Parcel	Right-of-way
161	365	25-22-999-001-0000	No Street Address	Transportation (railroad)	Affected Parcel	Right-of-way
162	366	25-22-315-017-0000	11716 S. PRAIRIE AVENUE	Transportation (railroad)	Affected Parcel	Right-of-way
163	367	25-22-316-013-0000	11763 S. PRAIRIE AVENUE	Transportation (railroad)	Affected Parcel	Right-of-way
164	368	25-22-316-035-0000	11712 S. Calumet Avenue	Commercial	Affected Parcel	Right-of-way
165	369	25-22-500-001-0000	100 E. 116TH STREET	Transportation (railroad)	Affected Parcel	Right-of-way
166	371	25-22-316-030-0000	11726 S. CALUMET AVENUE	Vacant	Affected Parcel	Right-of-way
167	372	25-22-316-031-0000	11728 S. CALUMET AVENUE	Vacant	Affected Parcel	Right-of-way
168	373	25-22-317-013-0000	354 E. 118TH STREET	Single-family Residential	Parcel with Building Displacement	Right-of-way
169	374	25-22-317-014-0000	356 E. 118TH STREET	Public (City of Chicago)	Affected Parcel	Right-of-way
170	375	25-22-317-015-0000	358 E. 118TH STREET	Public (City of Chicago)	Affected Parcel	Right-of-way
171	376	25-22-317-030-0000	11742 S. FRONT AVENUE	Vacant	Affected Parcel	Right-of-way
172	377	25-22-317-031-0000	11810 S. CALUMET AVENUE	Industrial	Affected Parcel	Right-of-way
173	378	25-22-317-032-0000	11810 S. CALUMET AVENUE	Industrial	Parcel with Building Displacement	Right-of-way
174	379	25-22-317-033-0000	375 E. 118TH STREET	Industrial	Affected Parcel	Right-of-way
175	380	25-22-317-035-0000	11800 S. FRONT AVENUE	Transportation (railroad)	Affected Parcel	Right-of-way
176	381	25-22-501-005-0000	360 E. 119TH STREET	Transportation (railroad)	Affected Parcel	Right-of-way
177	382	25-22-325-001-0000	370 E. 119TH STREET	Transportation (railroad)	Affected Parcel	Right-of-way
178	383	25-22-400-026-0000	11600 S. COTTAGE GROVE AVENUE	Industrial	Affected Parcel	Right-of-way
179	384	25-22-400-027-0000	11600 S. COTTAGE GROVE AVENUE	Transportation (railroad)	Affected Parcel	Right-of-way
180	385	25-27-108-009-0000	11900 S. COTTAGE GROVE AVENUE	Public (City of Chicago)	Affected Parcel	Right-of-way
181	386	25-27-502-001-0000	12330 S. COTTAGE GROVE AVENUE	Transportation (railroad)	Affected Parcel	Right-of-way
182	388	25-27-502-001-0000	12330 S. COTTAGE GROVE AVENUE	Transportation (railroad)	Affected Parcel	Right-of-way
183	389	25-26-999-001-0000	No Street Address	Transportation (railroad)	Affected Parcel	Right-of-way
184	390	25-26-300-017-0000	12807 S. COTTAGE GROVE AVENUE	Utility (MWRD)	Affected Parcel	Right-of-way
185	391	25-26-300-015-0000	12813 S. COTTAGE GROVE AVENUE	Utility (MWRD)	Affected Parcel	Right-of-way
186	392	25-26-300-014-0000	12817 S. COTTAGE GROVE AVENUE	Utility (MWRD)	Affected Parcel	Right-of-way
187	393	25-27-301-013-0000	310 E. 130TH STREET	Utility (MWRD)	Affected Parcel	Right-of-way
188	394	25-27-301-012-0000	325 E. 127TH STREET	Utility (MWRD)	Affected Parcel	Right-of-way
189	395	25-27-301-011-0000	350 E. 130TH STREET	Utility (MWRD)	Affected Parcel	Right-of-way
190	396	25-27-301-010-0000	360 E. 130TH STREET	Utility (MWRD)	Affected Parcel	Right-of-way
191	397	25-22-401-034-0000	1355 E. 121ST STREET	Transportation (railroad)	Affected Parcel	120th Street Yard
192	398	25-27-200-007-0000	12256 S. COTTAGE GROVE AVENUE	Industrial	Parcel with Building Displacement	120th Street Yard

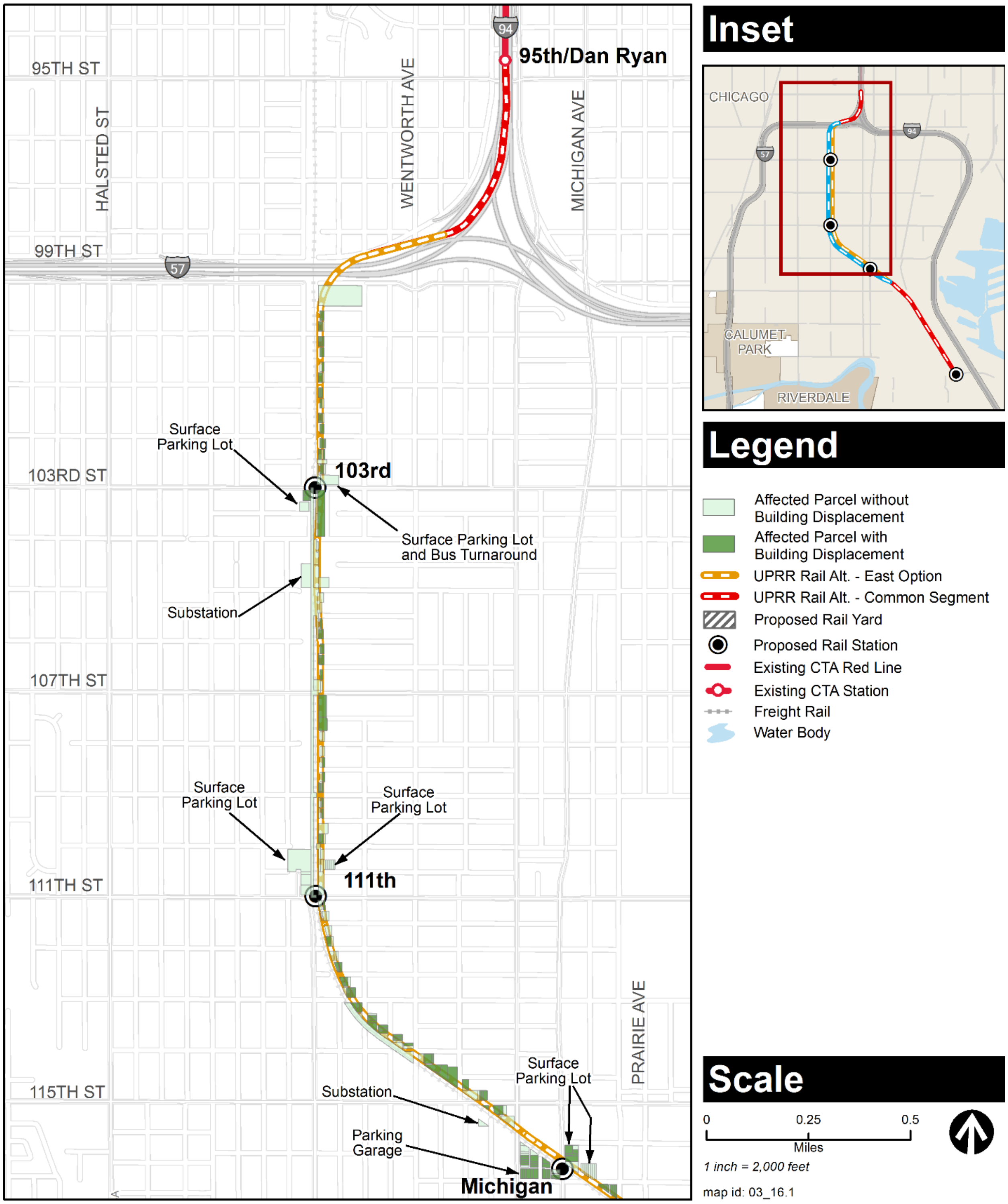
Union Pacific Railroad Alternative - West Option
Parcels Affected by Land Acquisitions

Count	Map ID	Parcel ID	Address	Land Use - Field (2015)	Displacement Type	West Option Displacement Use
193	399	25-27-200-009-0000	12256 S. COTTAGE GROVE AVENUE	Public (City of Chicago)	Affected Parcel	120th Street Yard
194	400	25-27-200-010-0000	12256 S. COTTAGE GROVE AVENUE	Public (City of Chicago)	Affected Parcel	120th Street Yard
195	401	25-27-200-012-0000	12534 S. COTTAGE GROVE AVENUE	Public (City of Chicago)	Affected Parcel	120th Street Yard
196	402	25-27-200-013-0000	12546 S. COTTAGE GROVE AVENUE	Utility (MWRD)	Affected Parcel	120th Street Yard
197	403	25-27-503-001-0000	12320 S. COTTAGE GROVE AVENUE	Transportation (railroad)	Affected Parcel	120th Street Yard
198	404	25-27-200-004-0000	12500 S. COTTAGE GROVE AVENUE	Utility (MWRD)	Affected Parcel	120th Street Yard
199	405	25-27-400-003-0000	12606 S. COTTAGE GROVE AVENUE	Utility (MWRD)	Affected Parcel	120th Street Yard
200	406	25-27-400-002-0000	12600 S. COTTAGE GROVE AVENUE	Transportation (railroad)	Affected Parcel	120th Street Yard
201	407	25-27-400-007-0000	12614 S. COTTAGE GROVE AVENUE	Utility (MWRD)	Affected Parcel	120th Street Yard
202	408	25-27-400-005-0000	12608 S. COTTAGE GROVE AVENUE	Utility (MWRD)	Affected Parcel	120th Street Yard
203	409	25-27-400-006-0000	12610 S. COTTAGE GROVE AVENUE	Utility (MWRD)	Affected Parcel	120th Street Yard
204	410	25-27-301-007-0000	300 E. 127TH STREET	Utility (MWRD)	Affected Parcel	120th Street Yard
205	411	25-27-400-009-0000	12618 S. COTTAGE GROVE AVENUE	Utility (MWRD)	Affected Parcel	120th Street Yard

Note - The following parcels are defined as easements and are not included in the table: Map ID 1-19, 21-24, 312. Publicly owned parcels that include a roadway are classified as “easements” for this analysis because CTA would require a use agreement with the public entity.

Data Definitions

Column Heading	Definition
Division	Geographic limits based on organization of Technical Memorandum Section 5
Parcel ID	Number corresponding to a parcel
Property Index Number	Cook County Assessor property index number
Address	Cook County Assessor parcel street address
Land Use – Field (2015)	Field-verified land use designations based on Cook County and CMAP data
Displacement Type	Type of effect on parcel by proposed alternative
East/West Option Displacement Use	Proposed project use for parcel
Land Use – Cook County	Cook County Assessor Land Use based on IMP_CODE


95TH ST
HALSTED ST
WENTWORTH AVE
MICHIGAN AVE
94
95th/Dan Ryan
99TH ST
57
Surface Parking Lot
103RD ST
103rd
Surface Parking Lot and Bus Turnaround
Substation
107TH ST
Surface Parking Lot
Surface Parking Lot
111TH ST
111th
PRAIRIE AVE
115TH ST
Substation
Surface Parking Lot
Parking Garage
Michigan
Inset
CHICAGO
57
94
CALUMET PARK
RIVERDALE
Legend
Affected Parcel without Building Displacement
Affected Parcel with Building Displacement
UPRR Rail Alt. - East Option
UPRR Rail Alt. - Common Segment
Proposed Rail Yard
Proposed Rail Station
Existing CTA Red Line
Existing CTA Station
Freight Rail
Water Body
Scale
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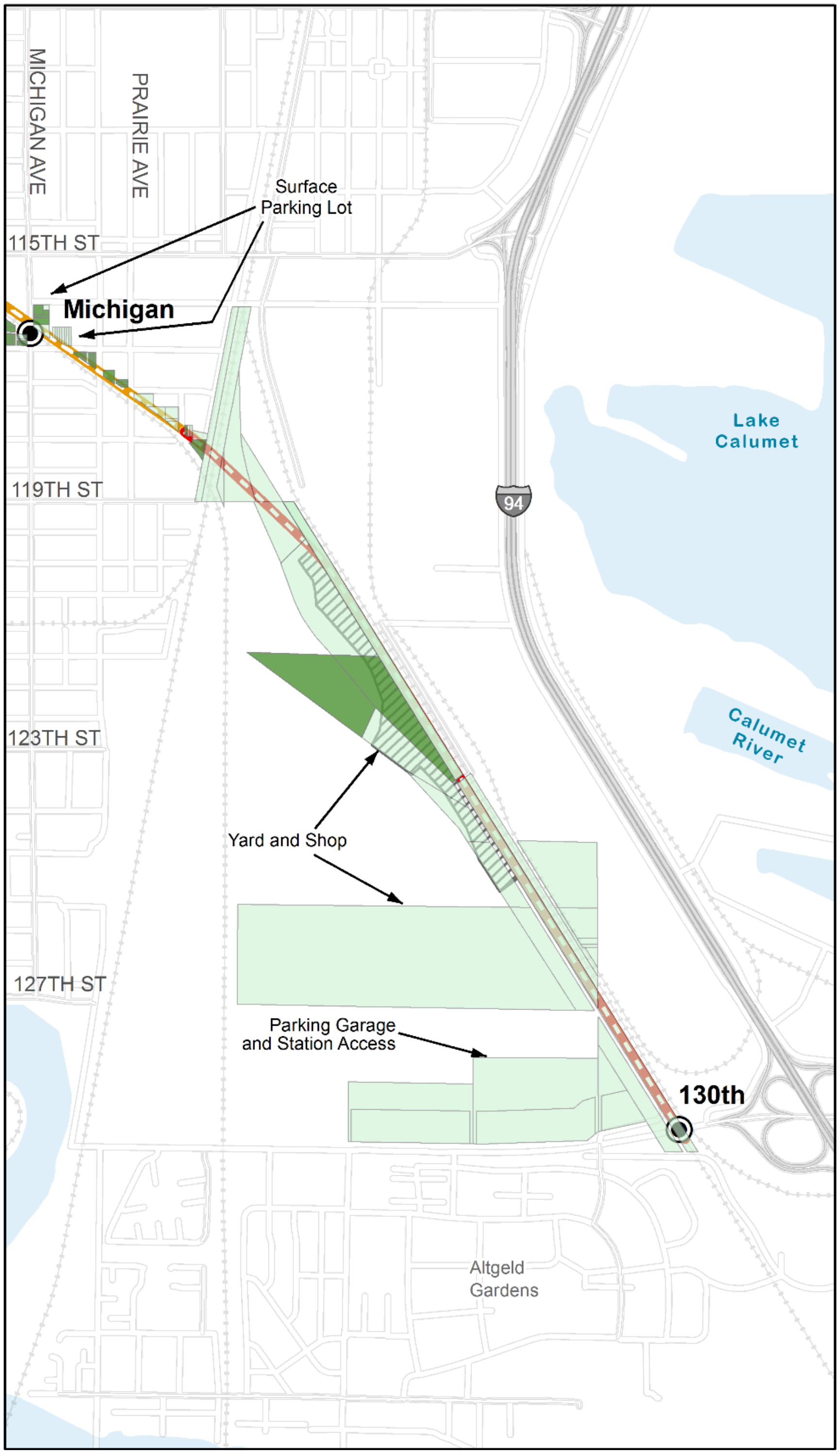
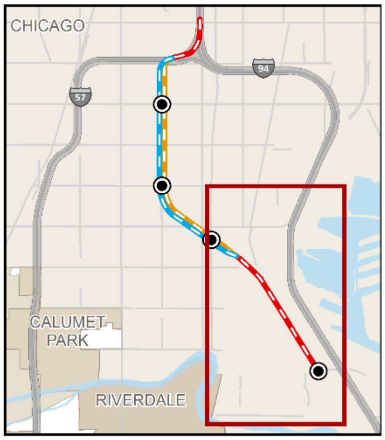
0.25
0.5
Miles
1 inch = 2,000 feet
map id: 03_16.1

Union Pacific Railroad Alternative East Option Displacements (1 of 2)


MICHIGAN AVE
PRAIRIE AVE
Surface Parking Lot
115TH ST
Michigan
119TH ST
94
Lake Calumet
Calumet River
123TH ST
Yard and Shop
127TH ST
Parking Garage and Station Access
130th
Altgeld Gardens

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE

Legend

- 🟩 Affected Parcel without Building Displacement
- 🟩 Affected Parcel with Building Displacement
- UPRR Rail Alt. - East Option
- UPRR Rail Alt. - Common Segment
- ▨ Proposed Rail Yard
- ● Proposed Rail Station
- Existing CTA Red Line
- Existing CTA Station
- Freight Rail
- Water Body

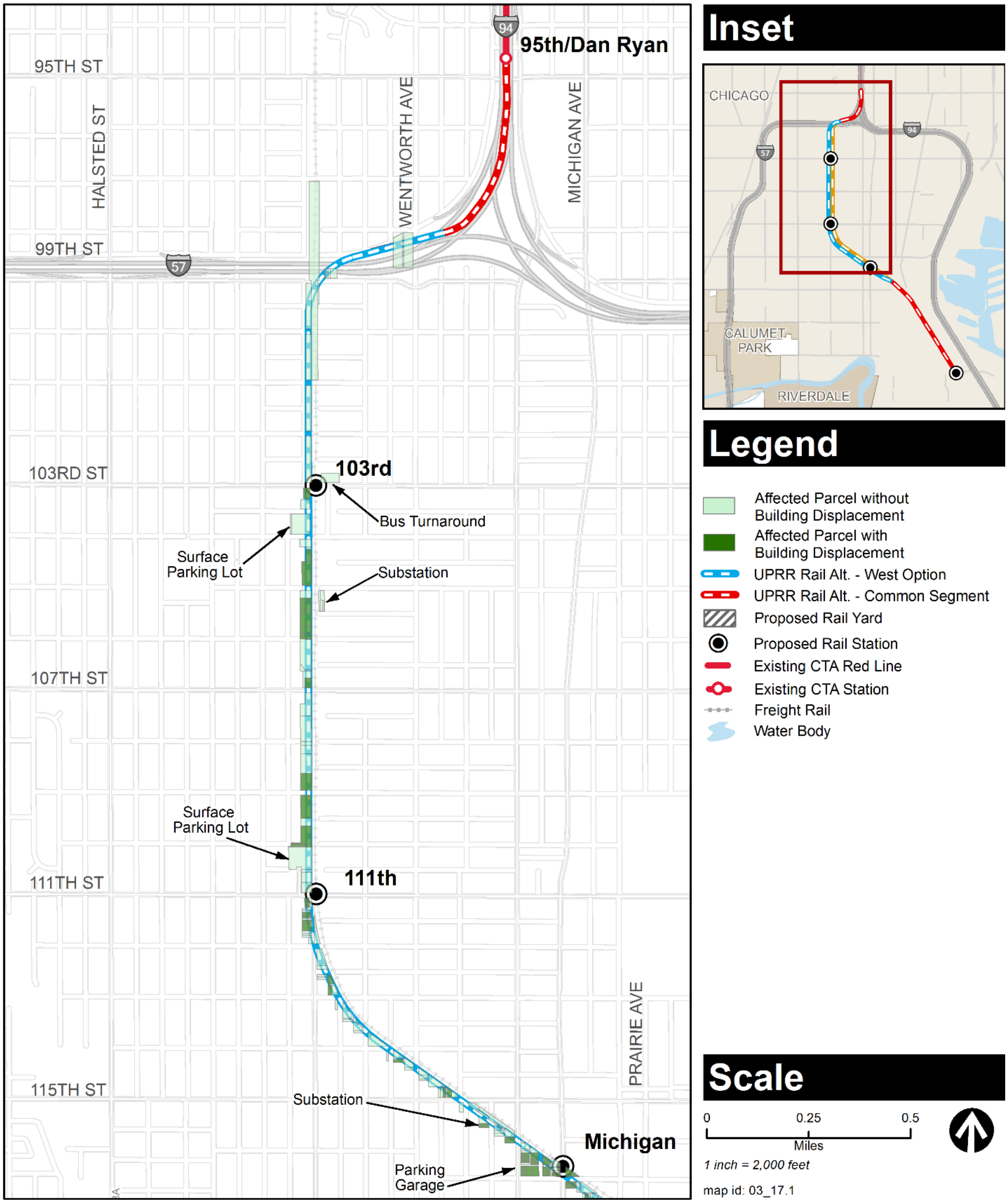
Scale

0 0.25 0.5
Miles

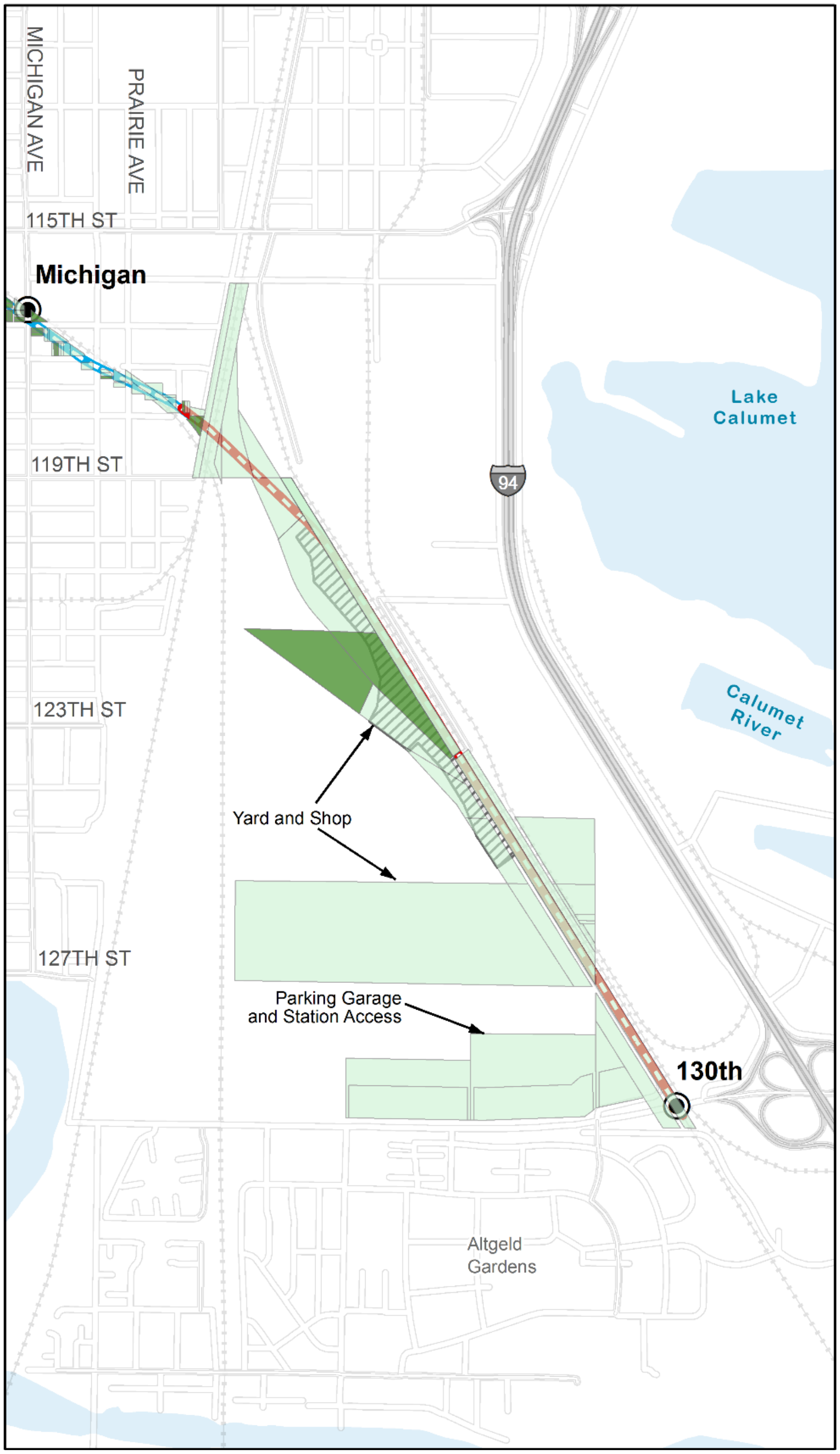
1 inch = 2,000 feet

map id: 03_16.2

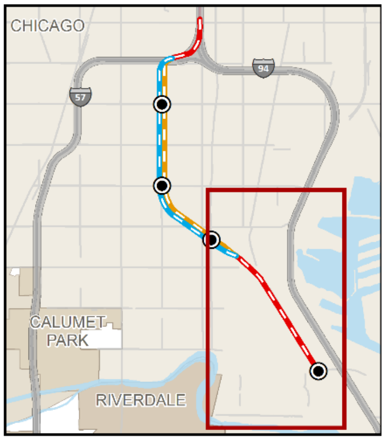
Union Pacific Railroad Alternative East Option Displacements (2 of 2)


95TH ST
HALSTED ST
WENTWORTH AVE
MICHIGAN AVE
94
95th/Dan Ryan
99TH ST
57
103RD ST
103rd
Bus Turnaround
Surface Parking Lot
Substation
107TH ST
Surface Parking Lot
111TH ST
111th
115TH ST
PRAIRIE AVE
Substation
Michigan
Parking Garage
Inset
CHICAGO
57
94
CALUMET PARK
RIVERDALE
Legend
Affected Parcel without Building Displacement
Affected Parcel with Building Displacement
UPRR Rail Alt. - West Option
UPRR Rail Alt. - Common Segment
Proposed Rail Yard
Proposed Rail Station
Existing CTA Red Line
Existing CTA Station
Freight Rail
Water Body
Scale
0
0.25
0.5
Miles
1 inch = 2,000 feet
map id: 03_17.1

Union Pacific Railroad Alternative West Option Displacements (1 of 2)


MICHIGAN AVE
PRAIRIE AVE
115TH ST
Michigan
119TH ST
123TH ST
127TH ST
94
Lake Calumet
Calumet River
Yard and Shop
Parking Garage and Station Access
130th
Altgeld Gardens

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE

Legend

- 🟩 Affected Parcel without Building Displacement
- 🟩 Affected Parcel with Building Displacement
- UPRR Rail Alt. - West Option
- UPRR Rail Alt. - Common Segment
- ▨ Proposed Rail Yard
- ● Proposed Rail Station
- Existing CTA Red Line
- Existing CTA Station
- Freight Rail
- Water Body

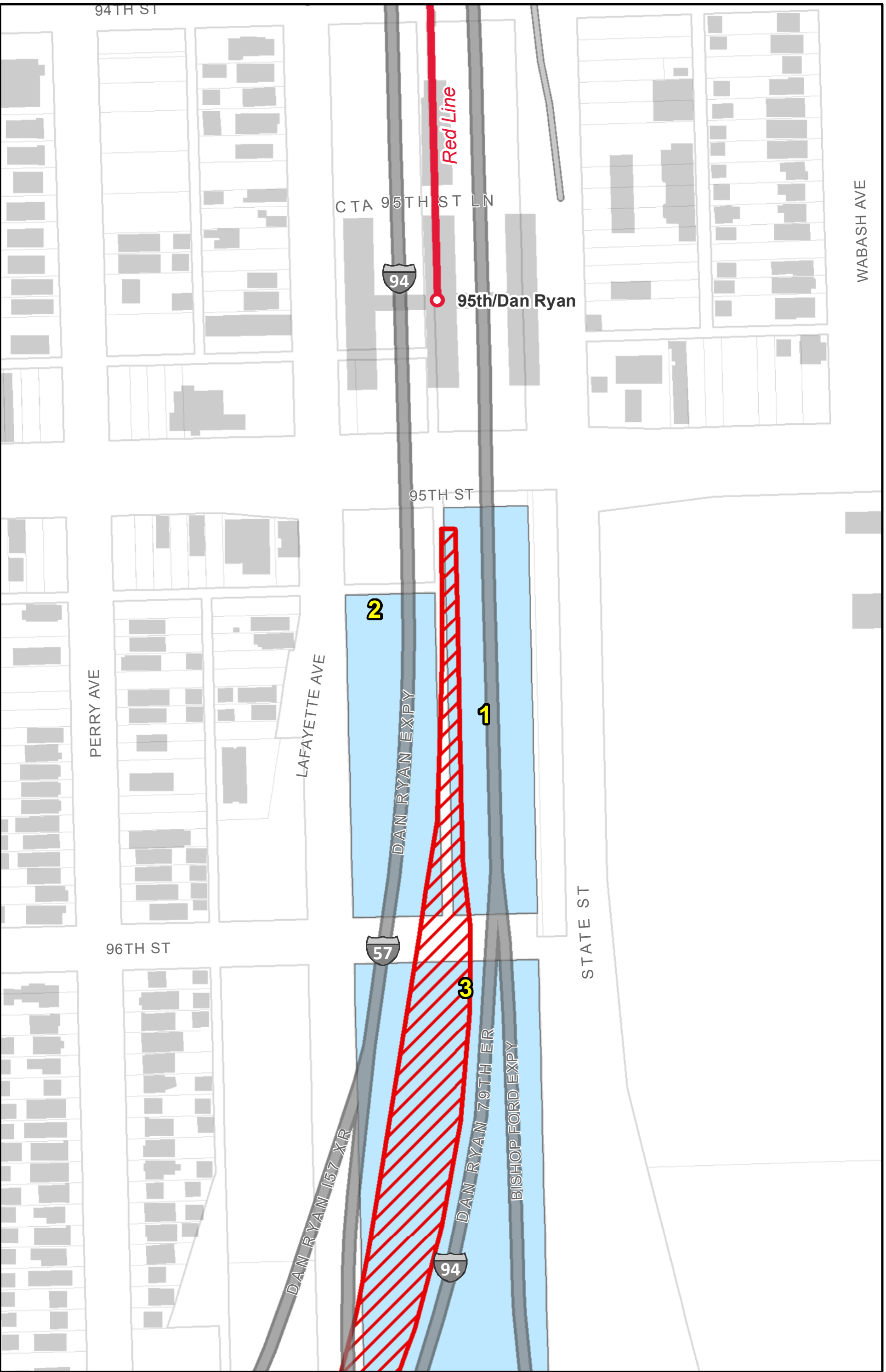
Scale

0 0.25 0.5
Miles

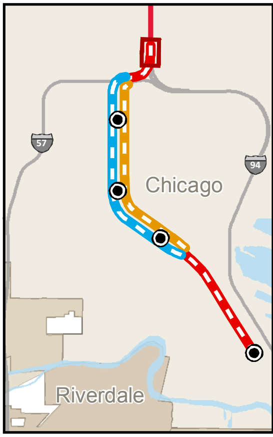
1 inch = 2,000 feet

map id: 03_17.2

Union Pacific Railroad Alternative West Option Displacements (2 of 2)


94TH ST
Red Line
CTA 95TH ST LN
94
95th/Dan Ryan
WABASH AVE
95TH ST
2
1
PERRY AVE
LAFAYETTE AVE
DAN RYAN EXPY
STATE ST
96TH ST
57
3
DAN RYAN 79TH ER
BISHOP FORD EXPY
DAN RYAN I57 XR
94

Inset


57
94
Chicago
Riverdale

Legend

UPRR Rail Alternative East Option

Sheet 1 of 21

▨	Proposed Permanent Envelope - UPRR Common
▨	Proposed Permanent Envelope - UPRR East
🟦	Parcel Easement
🟫	Parcel Affected by Proposed Permanent Envelope
🟥	Building Displacement
⬜	Building Footprint
⬜	Parcels

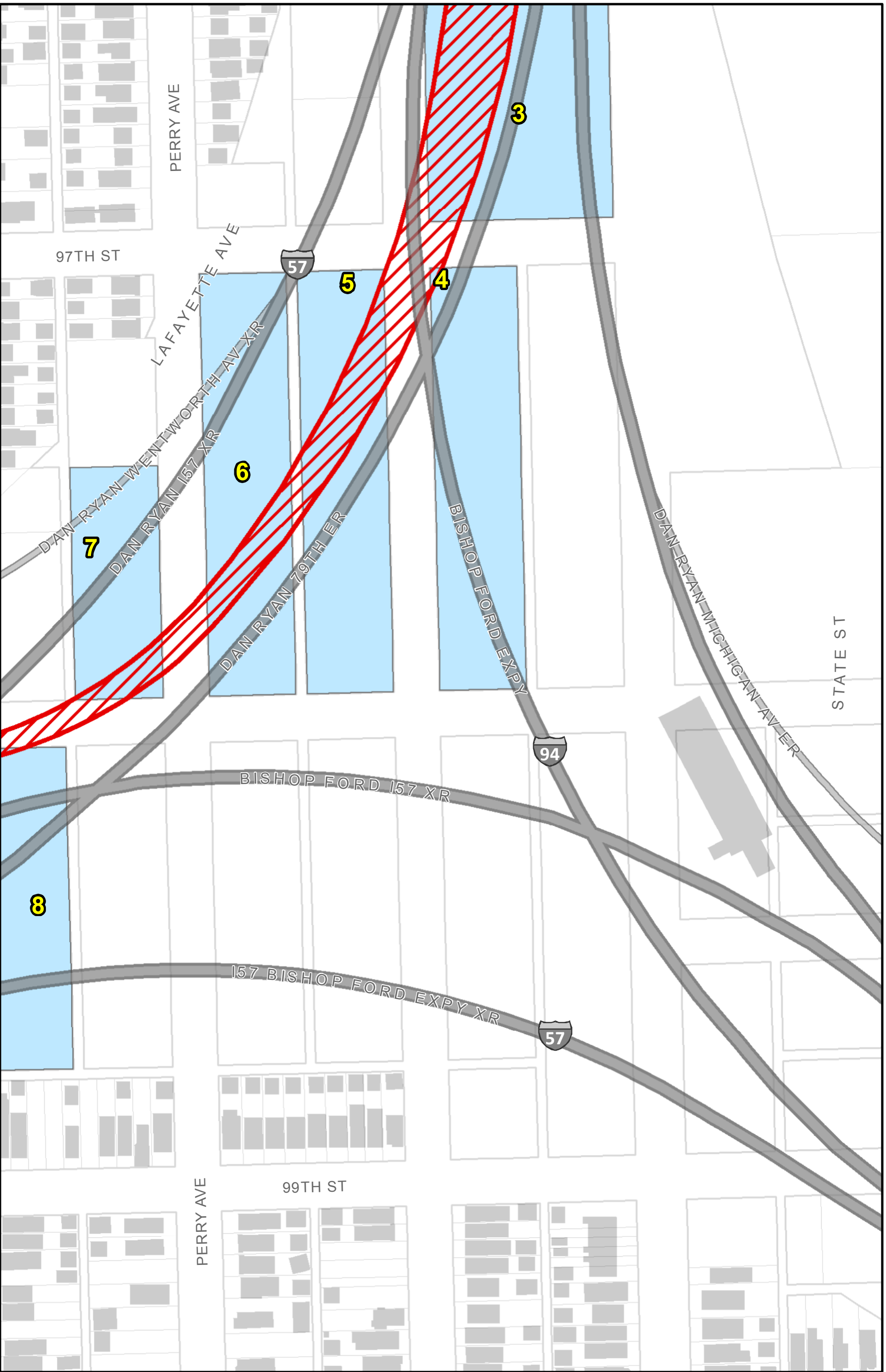
Parcels and buildings that may be displaced are shown to illustrate maximum impacts and possible locations. Due to the margin for error inherent in predicting displacements based on conceptual engineering, the actual displacements for each alternative may vary from what is shown. Some of the properties shown may not ultimately need to be acquired. Land only property impacts are shown on the entire lot, however, often only portions of the lot would be required. Property acquisitions will be confirmed as project engineering progresses.

Scale

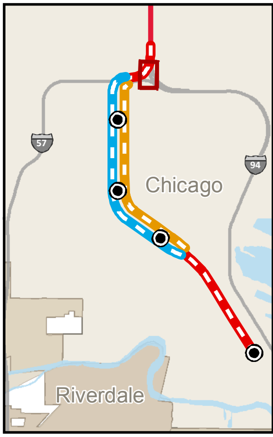
0 125 250

Feet

map id: 03_20.1


PERRY AVE
97TH ST
LAFAYETTE AVE
57
3
4
5
6
7
8
DAN RYAN WENTWORTH AV XR
DAN RYAN I57 XR
DAN RYAN 79TH ER
BISHOP FORD EXPY
DAN RYAN MICHIGAN AV ER
STATE ST
94
BISHOP FORD I57 XR
I57 BISHOP FORD EXPY XR
57
PERRY AVE
99TH ST

Inset


57
94
Chicago
Riverdale

Legend

UPRR Rail Alternative East Option

Sheet 2 of 21

▨ Proposed Permanent Envelope - UPRR Common

▨ Proposed Permanent Envelope - UPRR East

🟦 Parcel Easement

🟫 Parcel Affected by Proposed Permanent Envelope

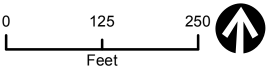
🟥 Building Displacement

⬜ Building Footprint

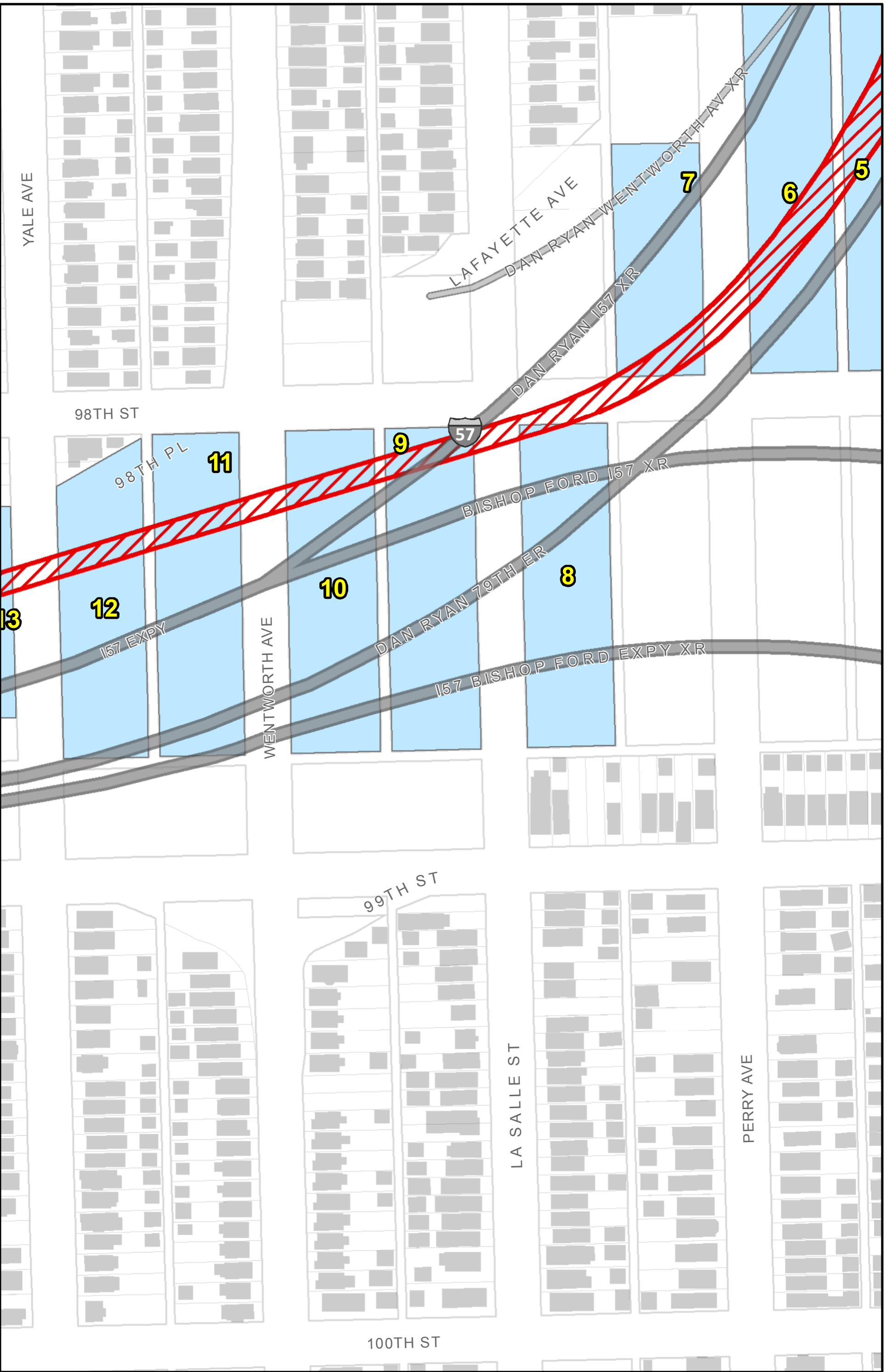
⬜ Parcels

Parcels and buildings that may be displaced are shown to illustrate maximum impacts and possible locations. Due to the margin for error inherent in predicting displacements based on conceptual engineering, the actual displacements for each alternative may vary from what is shown. Some of the properties shown may not ultimately need to be acquired. Land only property impacts are shown on the entire lot, however, often only portions of the lot would be required. Property acquisitions will be confirmed as project engineering progresses.

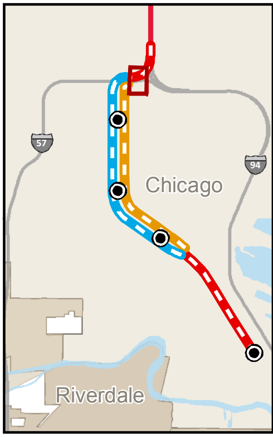
Scale


0
125
250
Feet

map id: 03_20.2


YALE AVE
LAFAYETTE AVE
DAN RYAN WENTWORTH AV XR
7
6
5
DAN RYAN I57 XR
98TH ST
98TH PL
11
57
9
BISHOP FORD I57 XR
13
12
I57 EXPY
WENTWORTH AVE
10
DAN RYAN 79TH ER
8
I57 BISHOP FORD EXPY XR
99TH ST
LA SALLE ST
PERRY AVE
100TH ST

Inset


57
94
Chicago
Riverdale

Legend

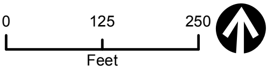
UPRR Rail Alternative East Option

Sheet 3 of 21

🟥	Proposed Permanent Envelope - UPRR Common
🟧	Proposed Permanent Envelope - UPRR East
🟦	Parcel Easement
🟫	Parcel Affected by Proposed Permanent Envelope
🟥	Building Displacement
⬜	Building Footprint
□	Parcels

Parcels and buildings that may be displaced are shown to illustrate maximum impacts and possible locations. Due to the margin for error inherent in predicting displacements based on conceptual engineering, the actual displacements for each alternative may vary from what is shown. Some of the properties shown may not ultimately need to be acquired. Land only property impacts are shown on the entire lot, however, often only portions of the lot would be required. Property acquisitions will be confirmed as project engineering progresses.

Scale


0
125
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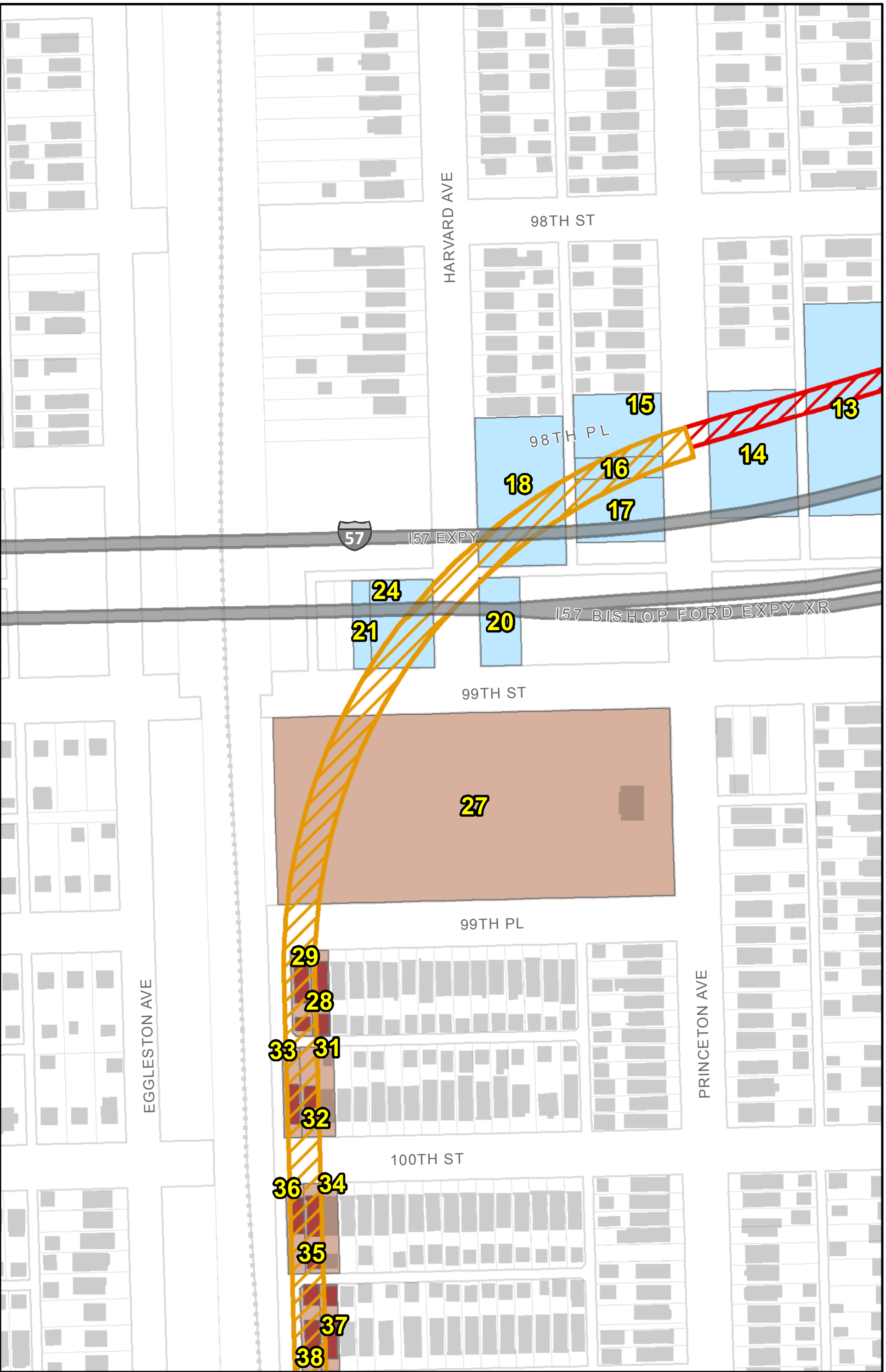
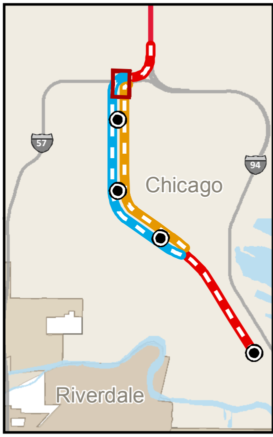
Feet

map id: 03_20.3


98TH ST
HARVARD AVE
98TH PL
I57 EXPY
57
I57 BISHOP FORD EXPY XR
99TH ST
99TH PL
100TH ST
EGGLESTON AVE
PRINCETON AVE
13
14
15
16
17
18
20
21
24
27
28
29
31
32
33
34
35
36
37
38

Inset


57
94
Chicago
Riverdale

Legend

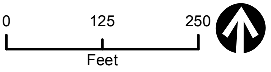
UPRR Rail Alternative East Option

Sheet 4 of 21

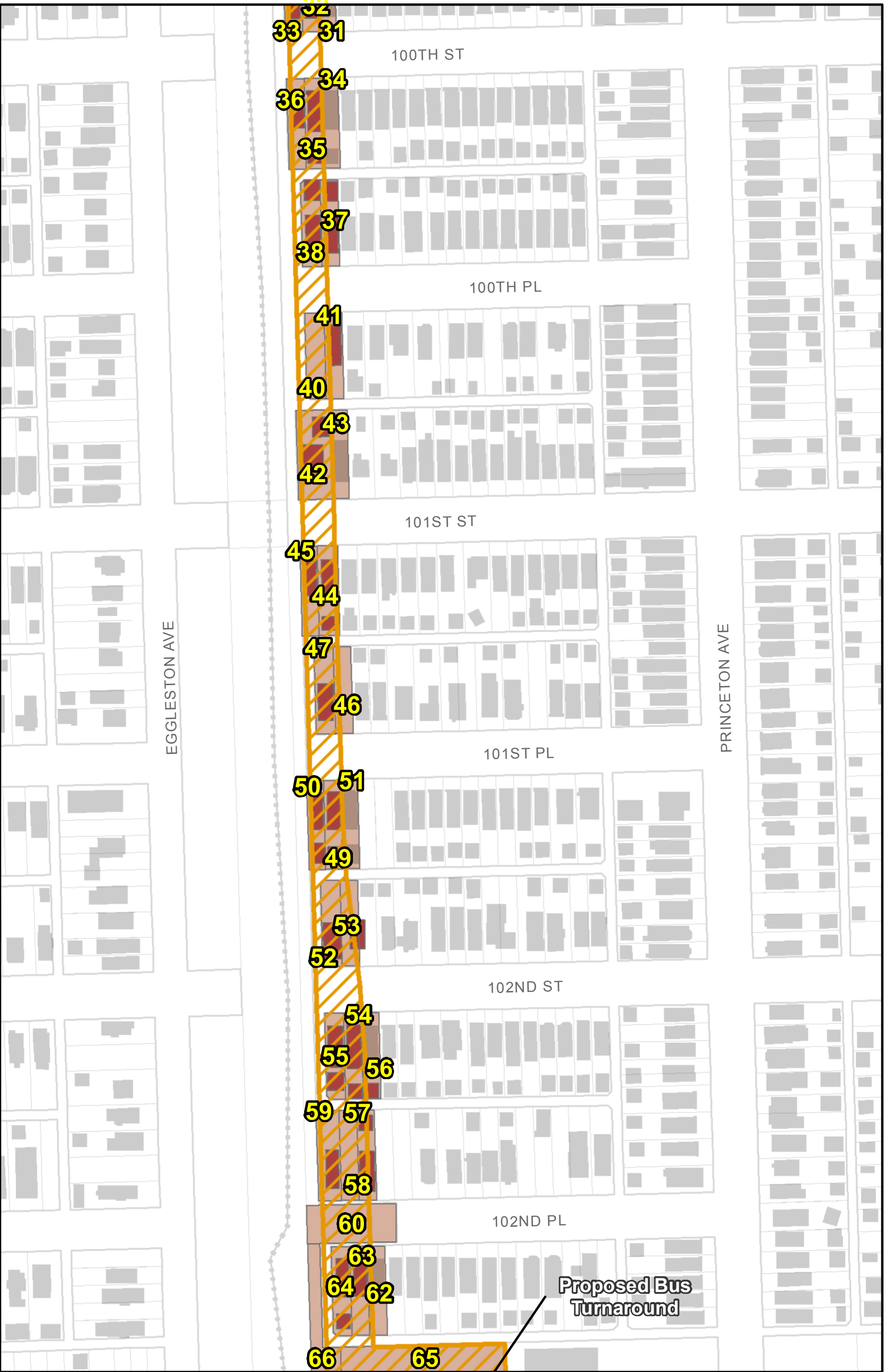
▨	Proposed Permanent Envelope - UPRR Common
▨	Proposed Permanent Envelope - UPRR East
🟦	Parcel Easement
🟫	Parcel Affected by Proposed Permanent Envelope
🟥	Building Displacement
⬜	Building Footprint
⬜	Parcels

Parcels and buildings that may be displaced are shown to illustrate maximum impacts and possible locations. Due to the margin for error inherent in predicting displacements based on conceptual engineering, the actual displacements for each alternative may vary from what is shown. Some of the properties shown may not ultimately need to be acquired. Land only property impacts are shown on the entire lot, however, often only portions of the lot would be required. Property acquisitions will be confirmed as project engineering progresses.

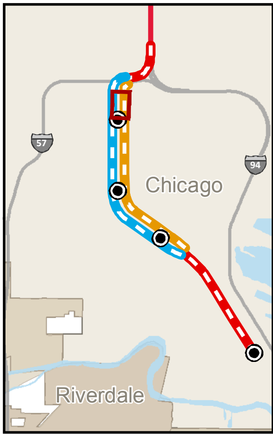
Scale


0
125
250
Feet

map id: 03_20.4


32
33
31
100TH ST
34
36
35
37
38
100TH PL
41
40
43
42
101ST ST
45
44
47
46
EGGLESTON AVE
PRINCETON AVE
101ST PL
50
51
49
53
52
102ND ST
54
55
56
59
57
58
60
102ND PL
63
64
62
Proposed Bus
Turnaround
66
65

Inset


57
94
Chicago
Riverdale

Legend

UPRR Rail Alternative
East Option

Sheet 5 of 21

▨	Proposed Permanent Envelope - UPRR Common
▨	Proposed Permanent Envelope - UPRR East
🟦	Parcel Easement
🟫	Parcel Affected by Proposed Permanent Envelope
🟥	Building Displacement
⬜	Building Footprint
⬜	Parcels

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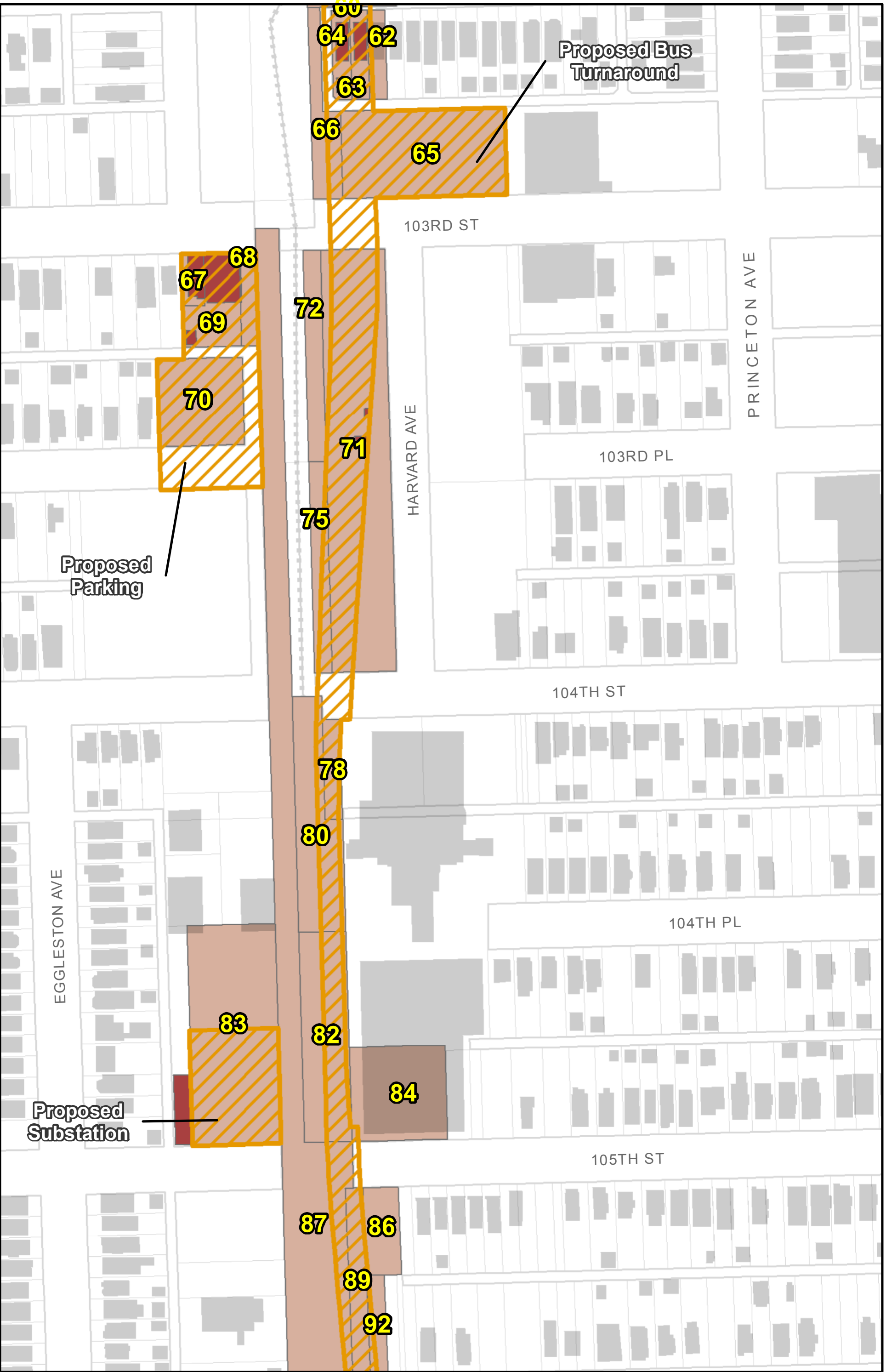
Scale

0 125 250

Feet

map id: 03_20.5


60
64
62
63
Proposed Bus Turnaround
66
65
103RD ST
68
67
72
69
70
PRINCETON AVE
71
HARVARD AVE
103RD PL
75
Proposed Parking
104TH ST
78
80
104TH PL
EGGLESTON AVE
83
82
84
Proposed Substation
105TH ST
87
86
89
92

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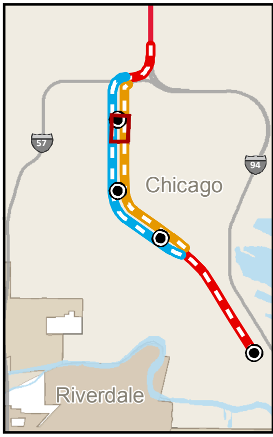

57
94
Chicago
Riverdale

Legend

UPRR Rail Alternative East Option

Sheet 6 of 21

▨ Proposed Permanent Envelope - UPRR Common

▨ Proposed Permanent Envelope - UPRR East

🟦 Parcel Easement

🟫 Parcel Affected by Proposed Permanent Envelope

🟥 Building Displacement

⬜ Building Footprint

⬜ Parcels

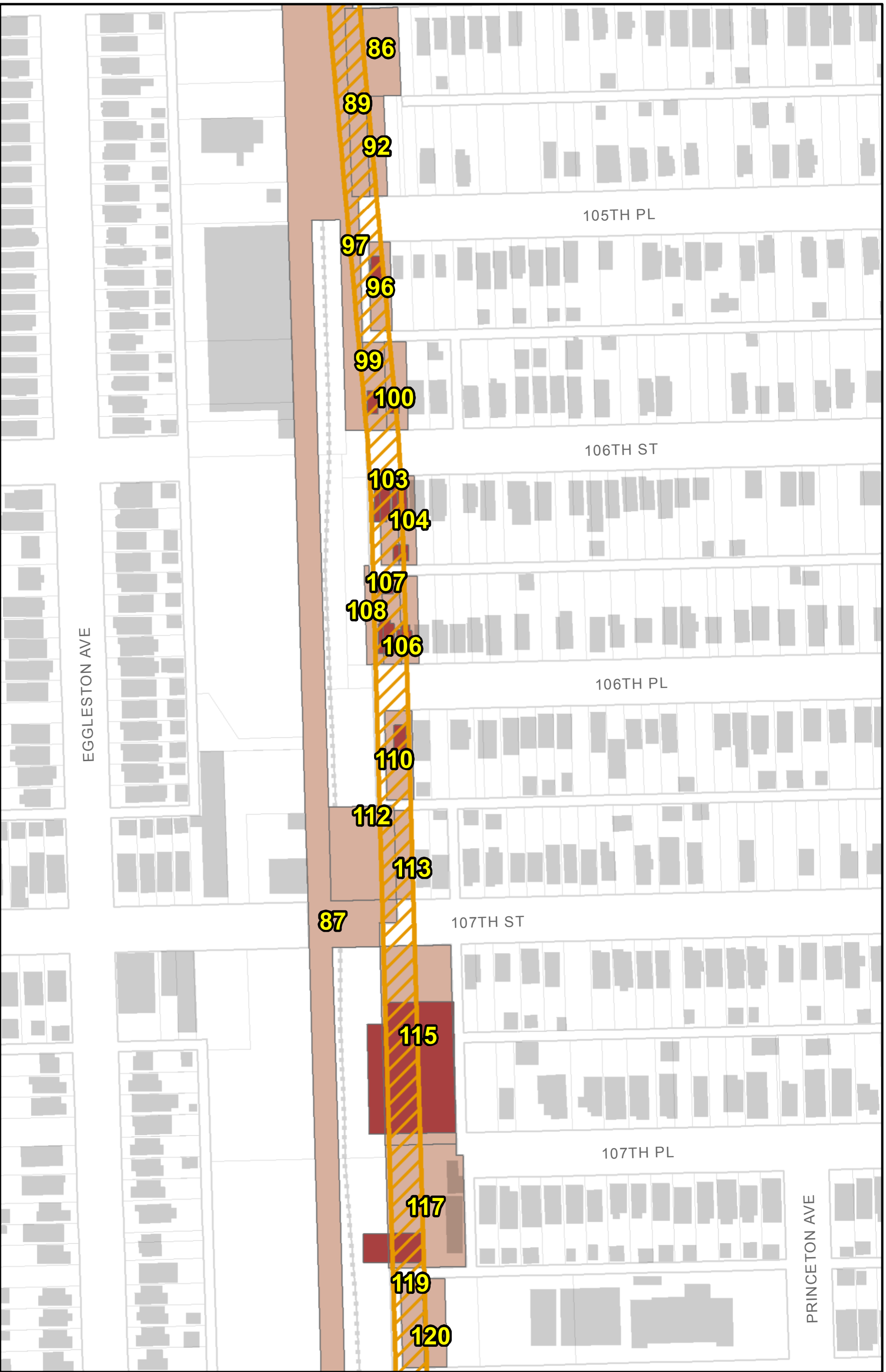
Parcels and buildings that may be displaced are shown to illustrate maximum impacts and possible locations. Due to the margin for error inherent in predicting displacements based on conceptual engineering, the actual displacements for each alternative may vary from what is shown. Some of the properties shown may not ultimately need to be acquired. Land only property impacts are shown on the entire lot, however, often only portions of the lot would be required. Property acquisitions will be confirmed as project engineering progresses.

Scale

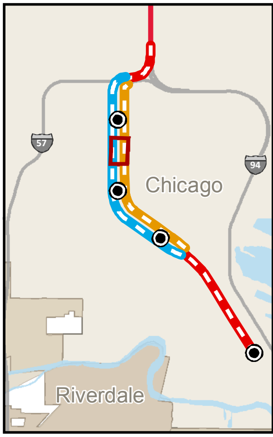
0 125 250

Feet

map id: 03_20.6


86
89
92
105TH PL
97
96
99
100
106TH ST
103
104
107
108
106
EGGLESTON AVE
106TH PL
110
112
113
87
107TH ST
115
107TH PL
117
PRINCETON AVE
119
120

Inset


57
94
Chicago
Riverdale

Legend

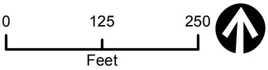
UPRR Rail Alternative East Option

Sheet 7 of 21

▨	Proposed Permanent Envelope - UPRR Common
▨	Proposed Permanent Envelope - UPRR East
■	Parcel Easement
■	Parcel Affected by Proposed Permanent Envelope
■	Building Displacement
■	Building Footprint
□	Parcels

Parcels and buildings that may be displaced are shown to illustrate maximum impacts and possible locations. Due to the margin for error inherent in predicting displacements based on conceptual engineering, the actual displacements for each alternative may vary from what is shown. Some of the properties shown may not ultimately need to be acquired. Land only property impacts are shown on the entire lot, however, often only portions of the lot would be required. Property acquisitions will be confirmed as project engineering progresses.

Scale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125
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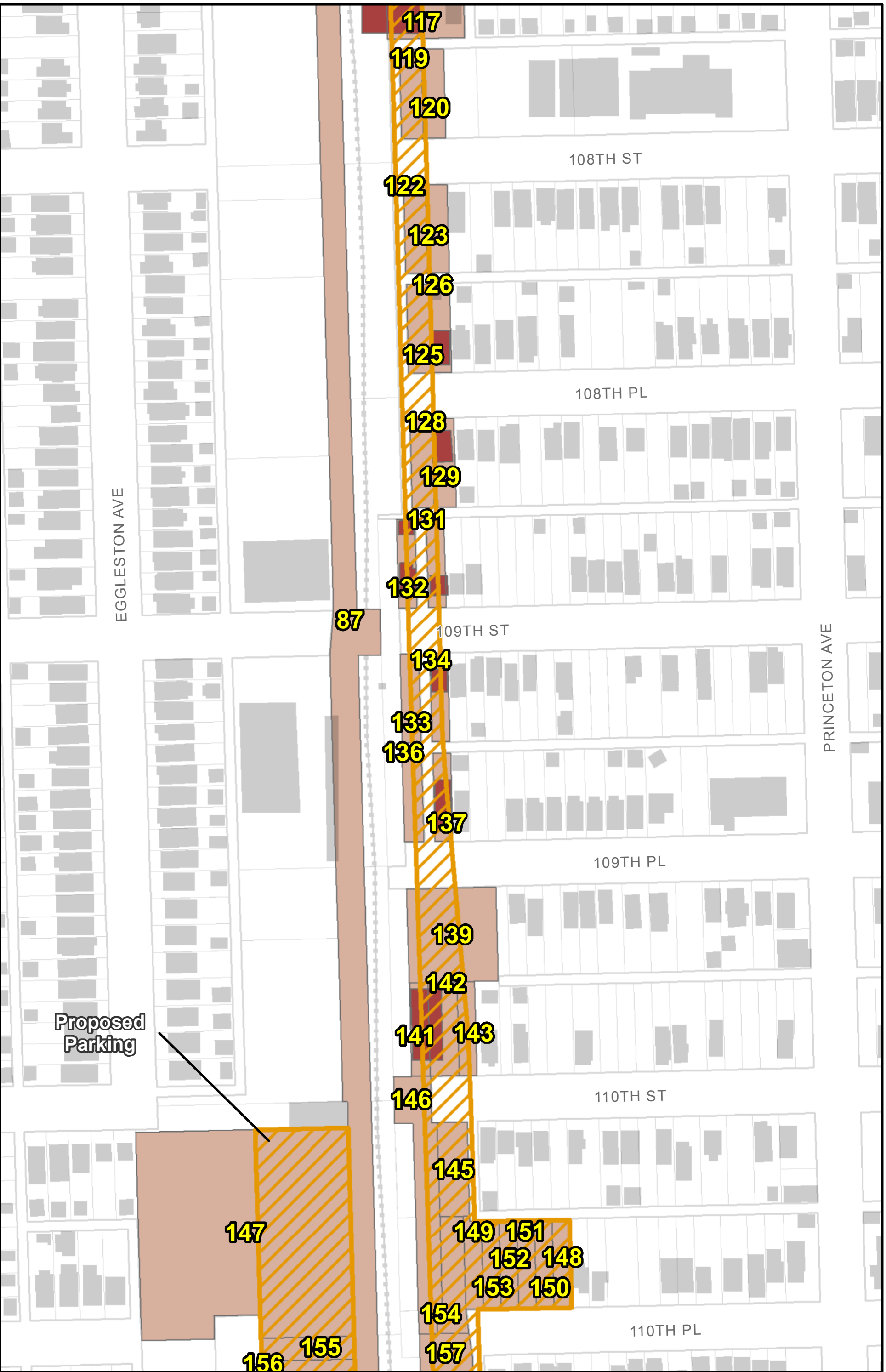
Feet

map id: 03_20.7


117
119
120
108TH ST
122
123
126
125
108TH PL
128
129
131
EGGLESTON AVE
132
87
109TH ST
134
133
136
PRINCETON AVE
137
109TH PL
139
142
Proposed Parking
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143
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110TH ST
145
147
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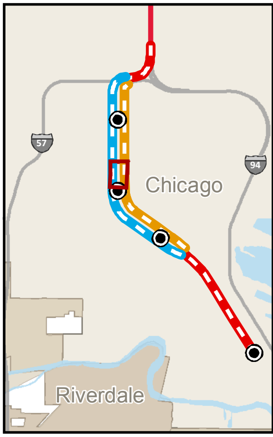
153
150
154
110TH PL
155
156
157

Inset


57
94
Chicago
Riverdale

Legend

UPRR Rail Alternative East Option

Sheet 8 of 21

- 🟥 Proposed Permanent Envelope - UPRR Common
- 🟧 Proposed Permanent Envelope - UPRR East
- 🟦 Parcel Easement
- ▨ Parcel Affected by Proposed Permanent Envelope
- ■ Building Displacement
- ⬜ Building Footprint
- □ Parcels

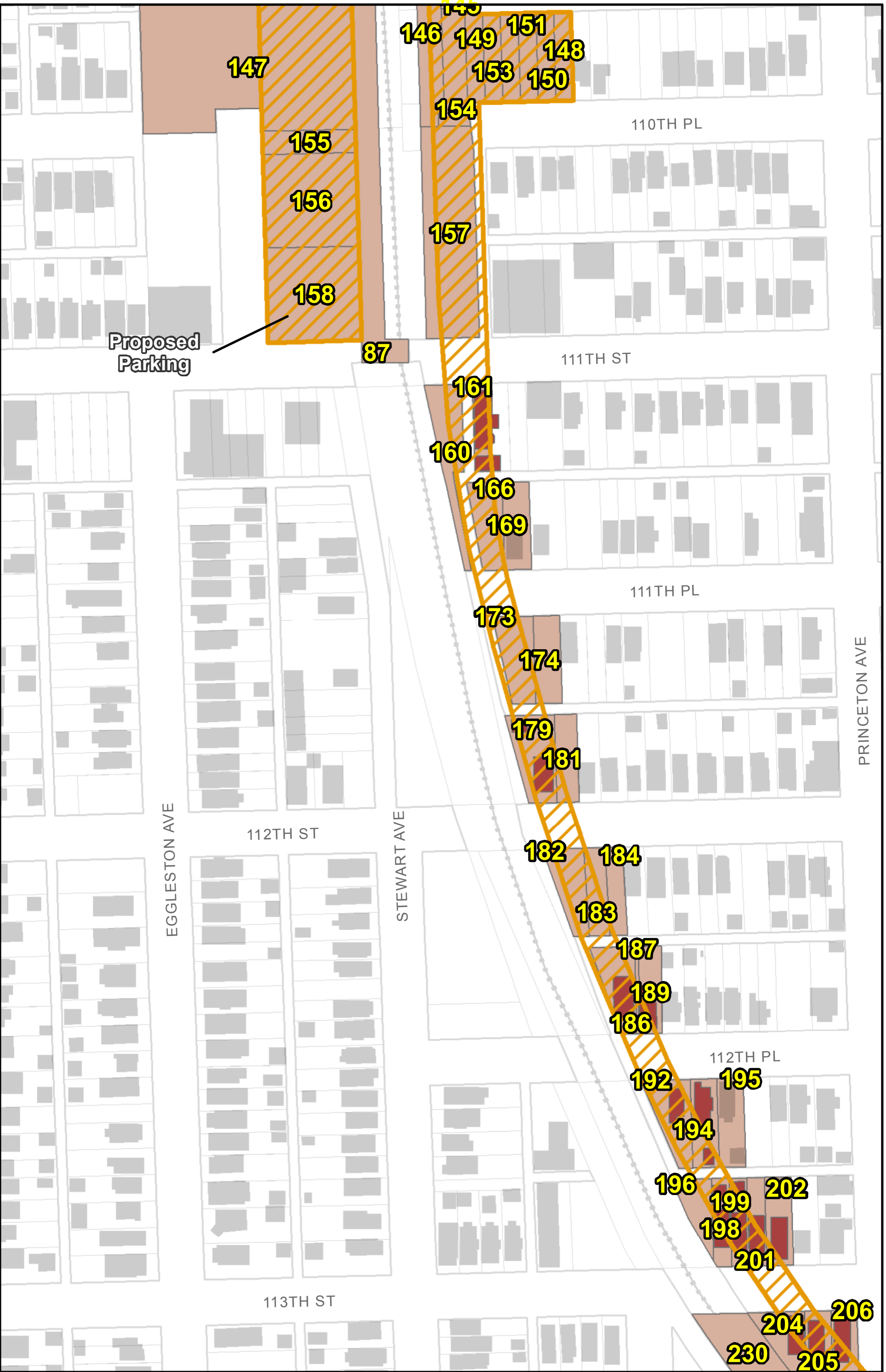
Parcels and buildings that may be displaced are shown to illustrate maximum impacts and possible locations. Due to the margin for error inherent in predicting displacements based on conceptual engineering, the actual displacements for each alternative may vary from what is shown. Some of the properties shown may not ultimately need to be acquired. Land only property impacts are shown on the entire lot, however, often only portions of the lot would be required. Property acquisitions will be confirmed as project engineering progresses.

Scale

0 125 250

Feet

map id: 03_20.8


145
146
149
151
148
147
153
150
154
110TH PL
155
156
157
158
Proposed Parking
87
111TH ST
161
160
166
169
111TH PL
173
174
PRINCETON AVE
179
181
EGGLESTON AVE
112TH ST
STEWART AVE
182
184
183
187
189
186
112TH PL
192
195
194
196
202
199
198
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113TH ST
206
204
230
205

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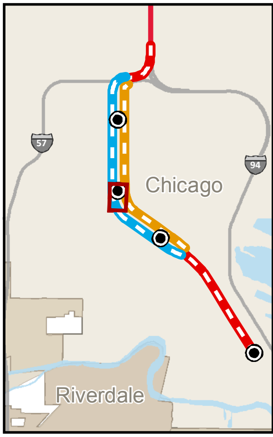

57
94
Chicago
Riverdale

Legend

UPRR Rail Alternative East Option

Sheet 9 of 21

🟥 Proposed Permanent Envelope - UPRR Common

🟧 Proposed Permanent Envelope - UPRR East

🟦 Parcel Easement

🟫 Parcel Affected by Proposed Permanent Envelope

🟥 Building Displacement

⬜ Building Footprint

⬜ Parcels

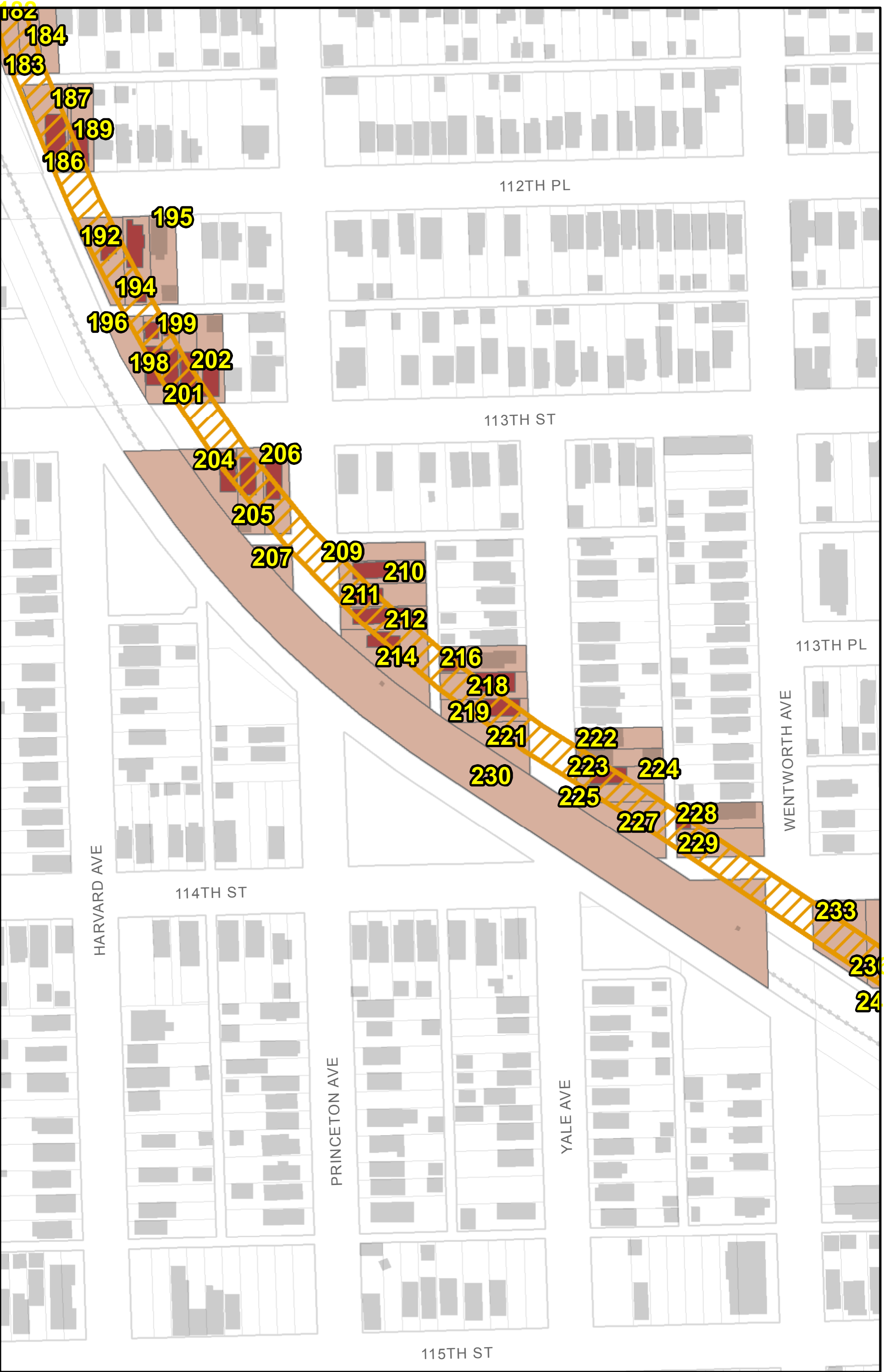
Parcels and buildings that may be displaced are shown to illustrate maximum impacts and possible locations. Due to the margin for error inherent in predicting displacements based on conceptual engineering, the actual displacements for each alternative may vary from what is shown. Some of the properties shown may not ultimately need to be acquired. Land only property impacts are shown on the entire lot, however, often only portions of the lot would be required. Property acquisitions will be confirmed as project engineering progresses.

Scale

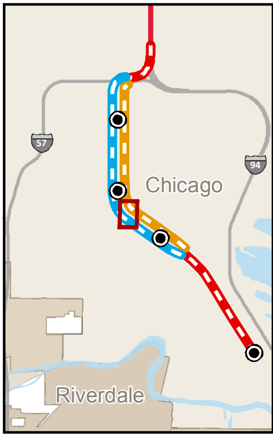
0 125 250

Feet

map id: 03_20.9


182
184
183
187
189
186
112TH PL
195
192
194
196
199
198
202
201
113TH ST
204
206
205
207
209
210
211
212
214
216
218
219
221
222
223
224
225
230
227
228
229
113TH PL
WENTWORTH AVE
HARVARD AVE
114TH ST
233
23
24
PRINCETON AVE
YALE AVE
115TH ST

Inset


57
94
Chicago
Riverdale

Legend

UPRR Rail Alternative East Option

Sheet 10 of 21

- ▨ Proposed Permanent Envelope - UPRR Common
- ▨ Proposed Permanent Envelope - UPRR East
- 🟦 Parcel Easement
- 🟫 Parcel Affected by Proposed Permanent Envelope
- 🟥 Building Displacement
- ⬜ Building Footprint
- ⬜ Parcels

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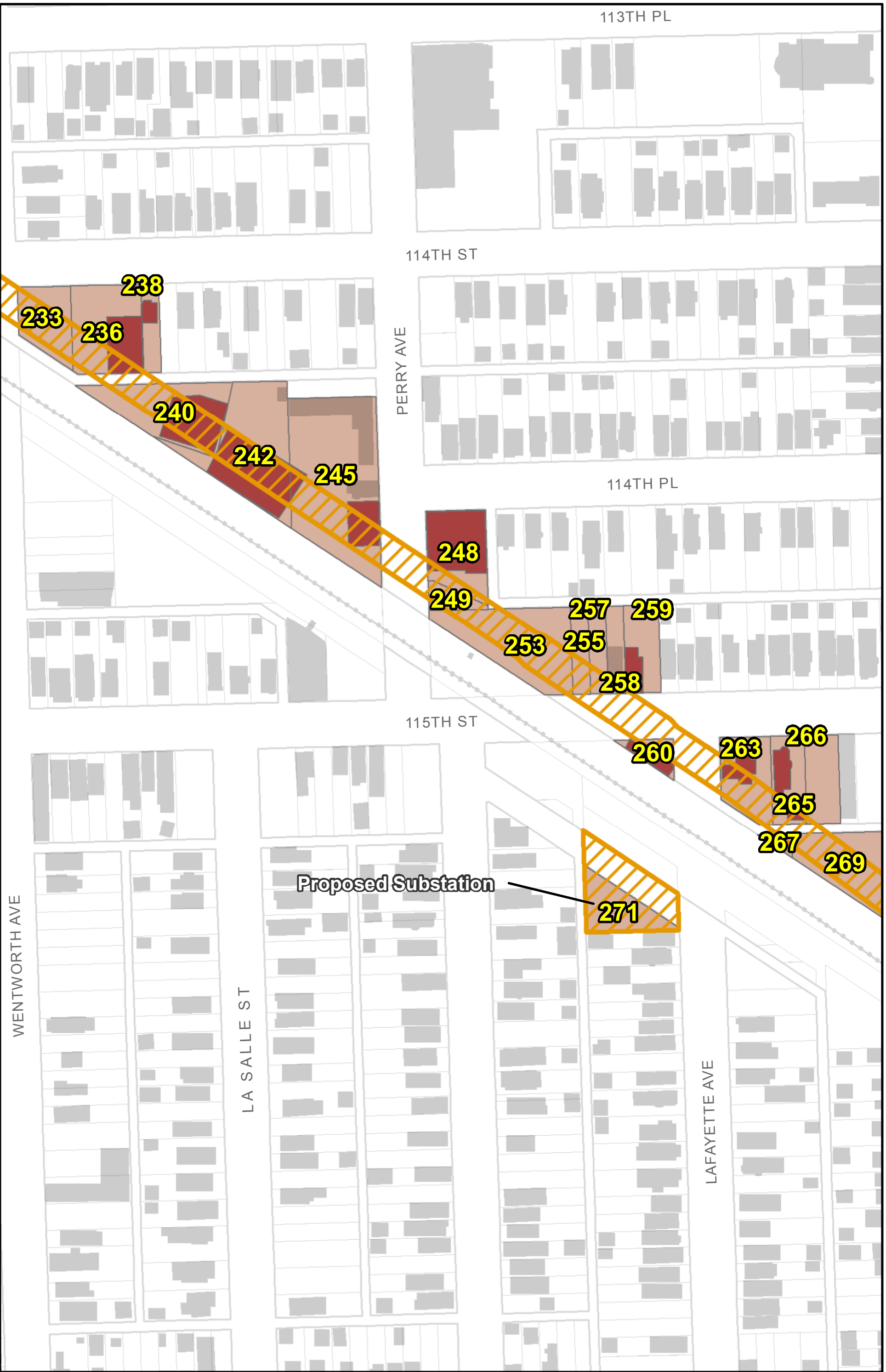
Scale

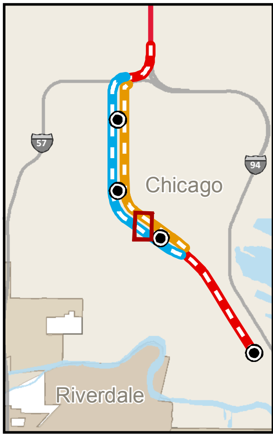
0 125 250

Feet

map id: 03_20.10


113TH PL
114TH ST
PERRY AVE
114TH PL
115TH ST
WENTWORTH AVE
LA SALLE ST
LAFAYETTE AVE
233
236
238
240
242
245
248
249
253
255
257
259
258
260
263
266
265
267
269
Proposed Substation
271

Inset


57
94
Chicago
Riverdale

Legend

UPRR Rail Alternative East Option

Sheet 11 of 21

▨	Proposed Permanent Envelope - UPRR Common
▨	Proposed Permanent Envelope - UPRR East
🟦	Parcel Easement
🟫	Parcel Affected by Proposed Permanent Envelope
🟥	Building Displacement
⬜	Building Footprint
⬜	Parcels

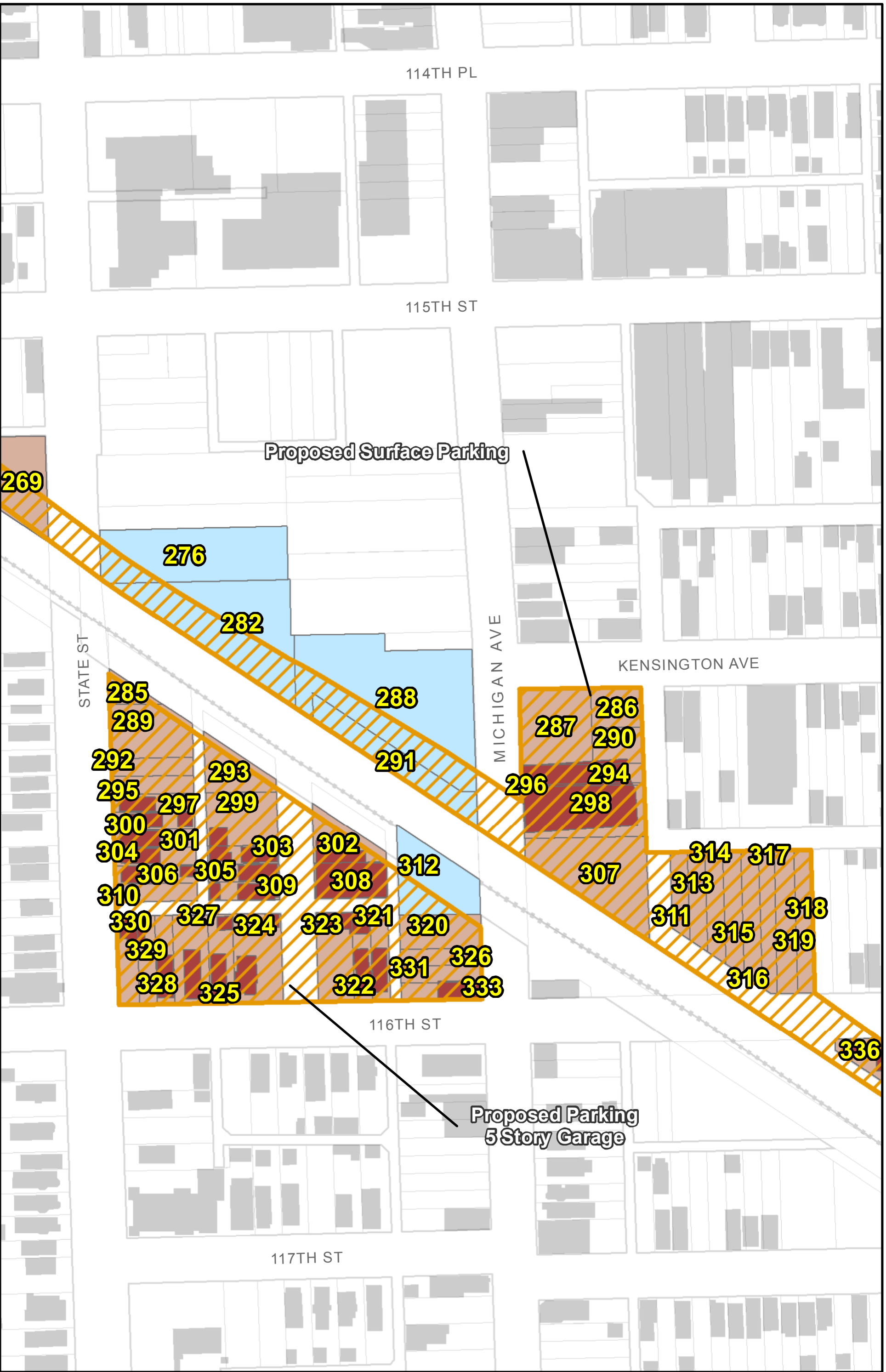
Parcels and buildings that may be displaced are shown to illustrate maximum impacts and possible locations. Due to the margin for error inherent in predicting displacements based on conceptual engineering, the actual displacements for each alternative may vary from what is shown. Some of the properties shown may not ultimately need to be acquired. Land only property impacts are shown on the entire lot, however, often only portions of the lot would be required. Property acquisitions will be confirmed as project engineering progresses.

Scale

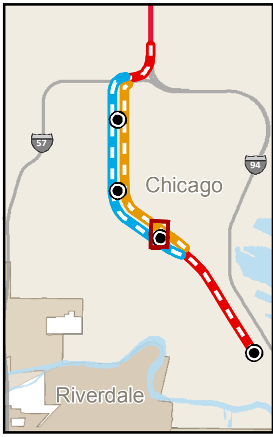
0 125 250

Feet

map id: 03_20.11


114TH PL
115TH ST
Proposed Surface Parking
269
276
282
STATE ST
MICHIGAN AVE
KENSINGTON AVE
285
289
288
286
287
290
291
292
293
294
295
296
297
299
298
300
301
303
302
304
306
305
309
308
312
314
317
313
307
310
330
327
324
323
321
320
311
318
315
319
329
326
331
316
328
325
322
333
336
116TH ST
Proposed Parking
5 Story Garage
117TH ST

Inset


57
94
Chicago
Riverdale

Legend

UPRR Rail Alternative
East Option

Sheet 12 of 21

- ▨ Proposed Permanent Envelope - UPRR Common
- ▨ Proposed Permanent Envelope - UPRR East
- 🟦 Parcel Easement
- 🟫 Parcel Affected by Proposed Permanent Envelope
- 🟥 Building Displacement
- ⬜ Building Footprint
- ⬜ Parcels

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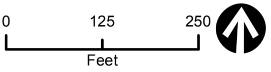
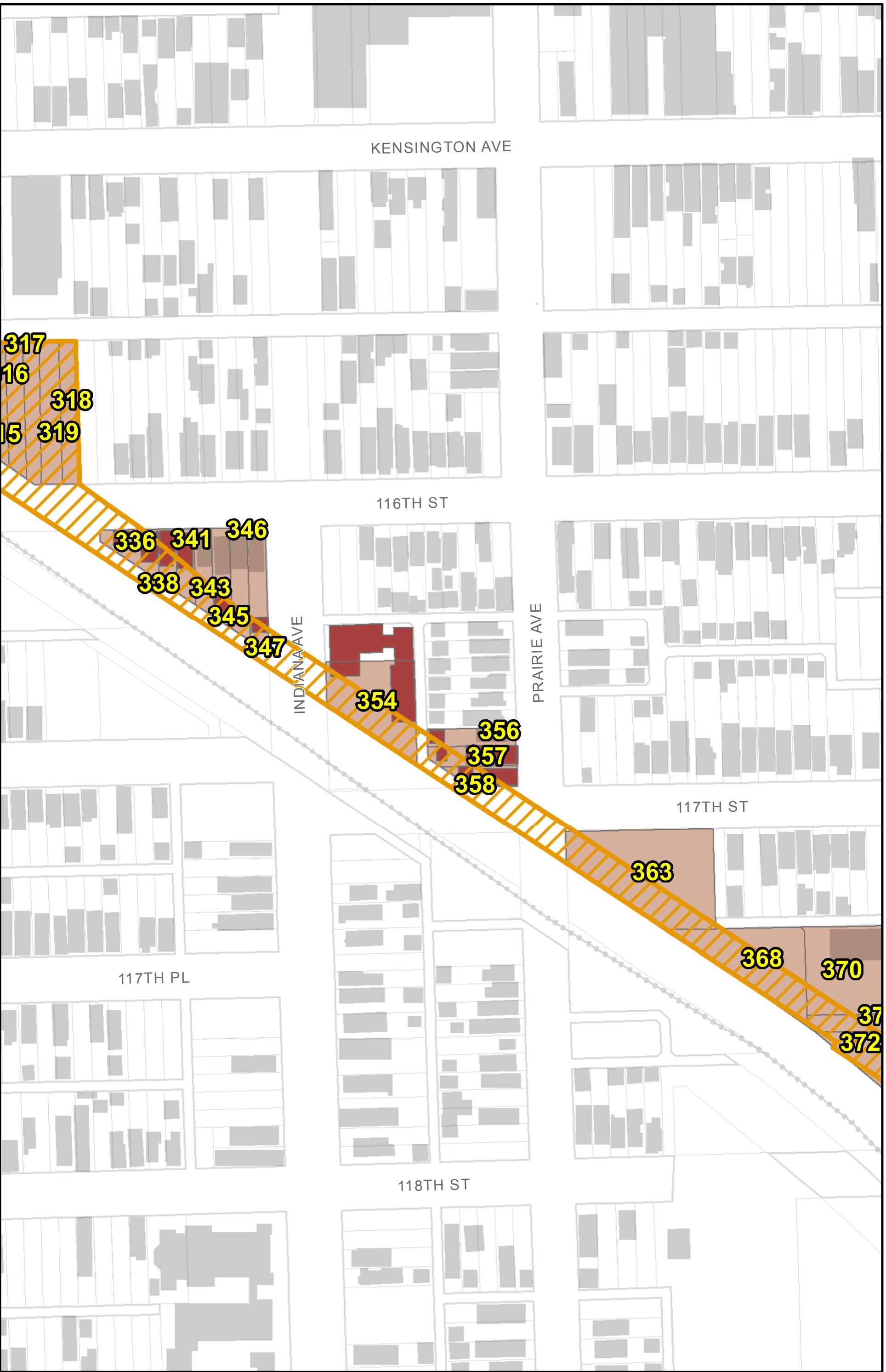
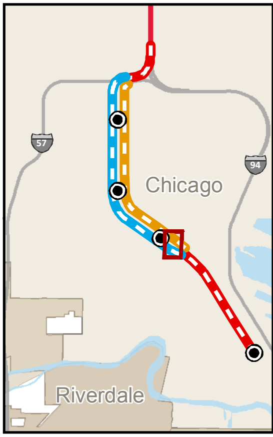
Scale


0
125
250
Feet

map id: 03_20.12


KENSINGTON AVE
317
16
318
15
319
116TH ST
336
341
346
338
343
345
347
INDIANA AVE
354
PRAIRIE AVE
356
357
358
117TH ST
363
368
370
37
372
117TH PL
118TH ST

Inset


57
94
Chicago
Riverdale

Legend

UPRR Rail Alternative East Option

Sheet 13 of 21

- 🟥 Proposed Permanent Envelope - UPRR Common
- 🟧 Proposed Permanent Envelope - UPRR East
- 🟦 Parcel Easement
- 🟫 Parcel Affected by Proposed Permanent Envelope
- 🟥 Building Displacement
- ⬜ Building Footprint
- ⬜ Parcels

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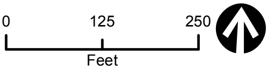
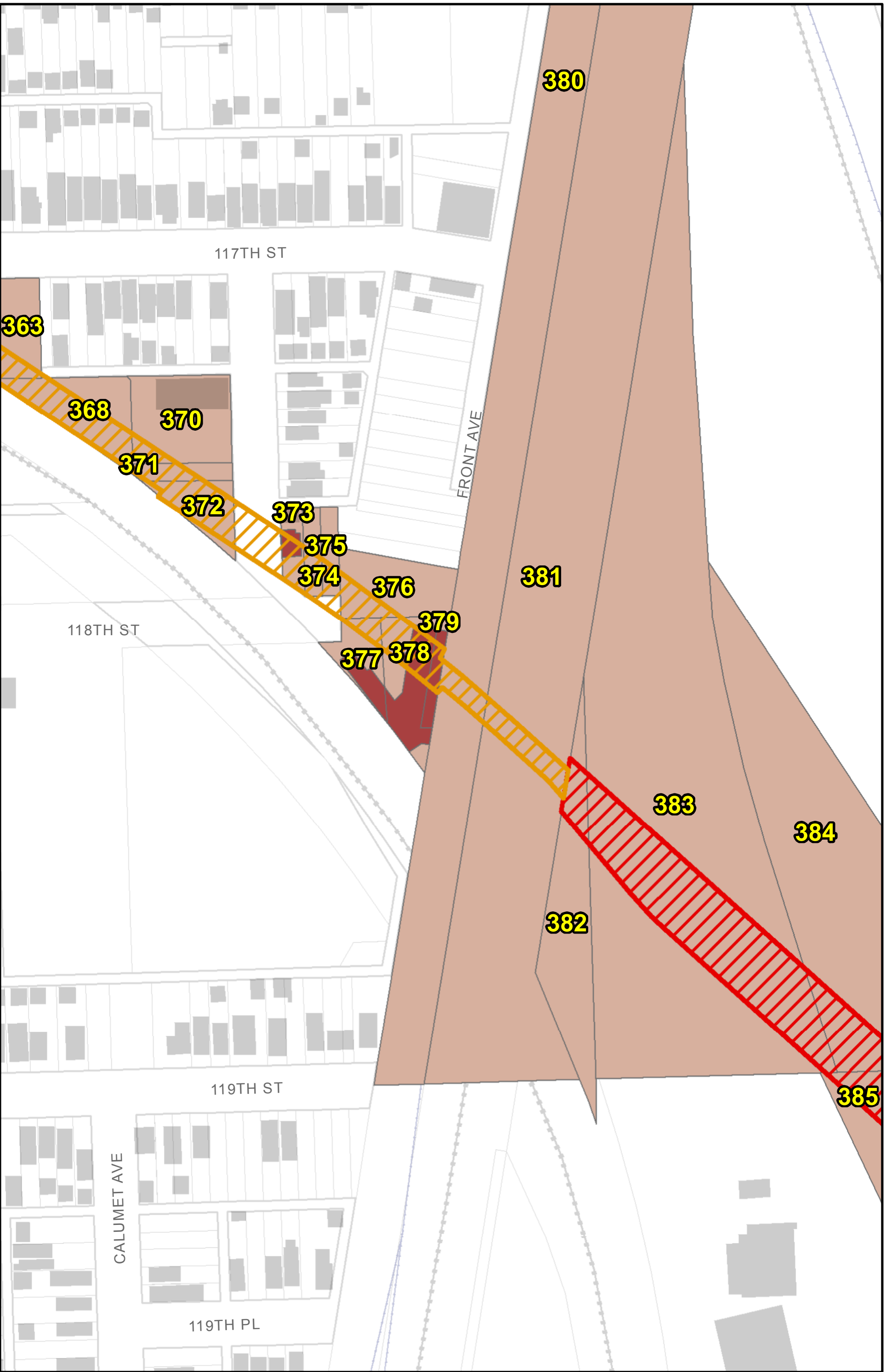
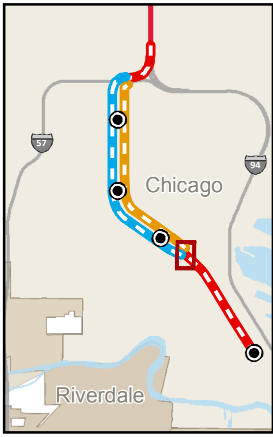
Scale


0
125
250
Feet

map id: 03_20.13


380
117TH ST
363
368
370
371
372
373
375
374
376
379
381
FRONT AVE
118TH ST
377
378
383
384
382
385
119TH ST
CALUMET AVE
119TH PL

Inset


57
94
Chicago
Riverdale

Legend

UPRR Rail Alternative East Option

Sheet 14 of 21

▨	Proposed Permanent Envelope - UPRR Common
▨	Proposed Permanent Envelope - UPRR East
🟦	Parcel Easement
🟫	Parcel Affected by Proposed Permanent Envelope
🟥	Building Displacement
⬜	Building Footprint
☐	Parcels

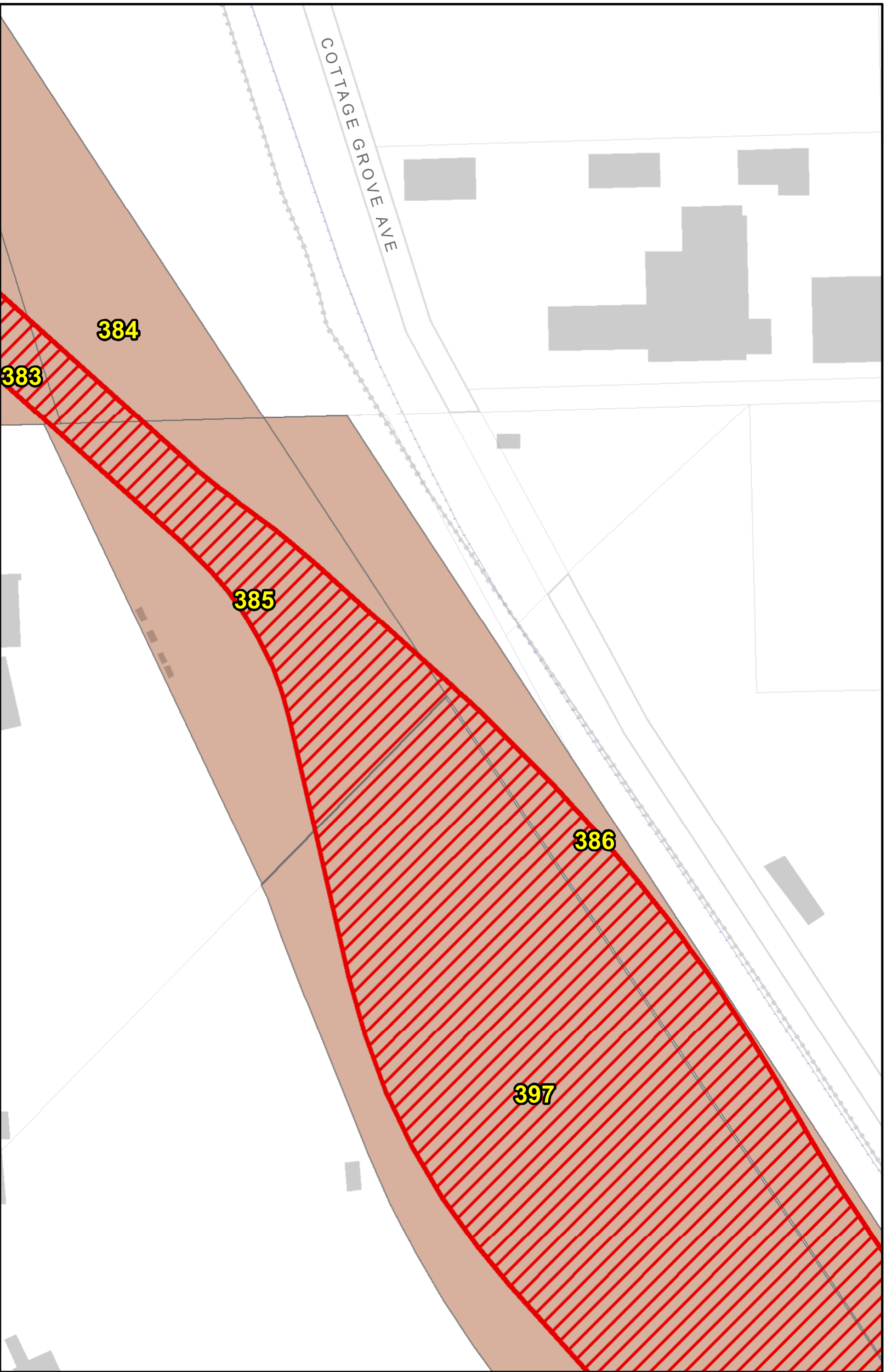
Parcels and buildings that may be displaced are shown to illustrate maximum impacts and possible locations. Due to the margin for error inherent in predicting displacements based on conceptual engineering, the actual displacements for each alternative may vary from what is shown. Some of the properties shown may not ultimately need to be acquired. Land only property impacts are shown on the entire lot, however, often only portions of the lot would be required. Property acquisitions will be confirmed as project engineering progresses.

Scale

0 125 250

Feet

map id: 03_20.14



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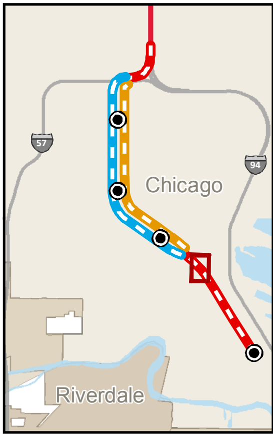


Legend

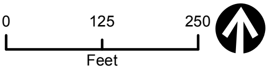
UPRR Rail Alternative East Option

Sheet 15 of 21

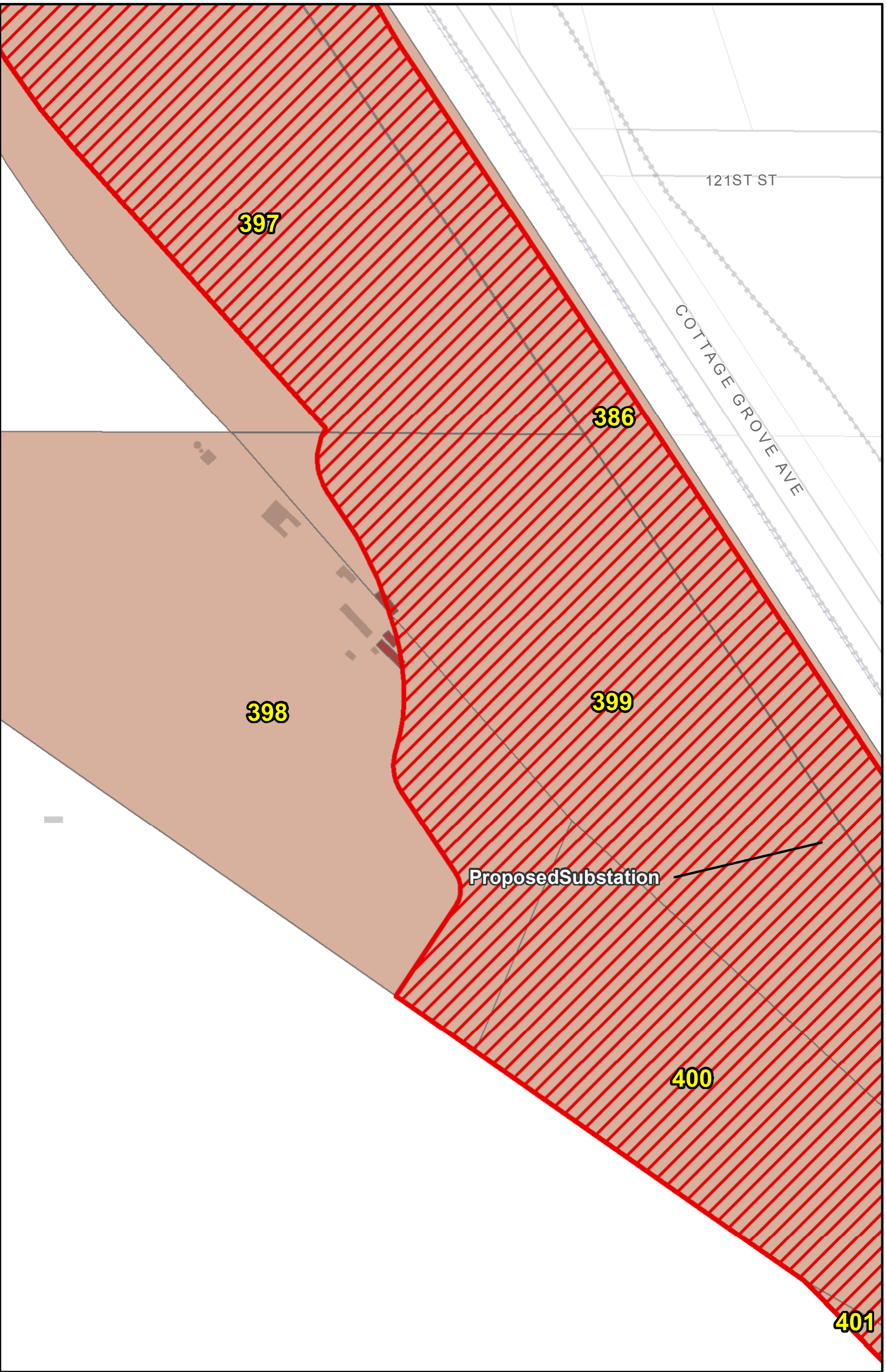
▨	Proposed Permanent Envelope - UPRR Common
▨	Proposed Permanent Envelope - UPRR East
🟦	Parcel Easement
🟫	Parcel Affected by Proposed Permanent Envelope
🟥	Building Displacement
⬜	Building Footprint
□	Parcels

Parcels and buildings that may be displaced are shown to illustrate maximum impacts and possible locations. Due to the margin for error inherent in predicting displacements based on conceptual engineering, the actual displacements for each alternative may vary from what is shown. Some of the properties shown may not ultimately need to be acquired. Land only property impacts are shown on the entire lot, however, often only portions of the lot would be required. Property acquisitions will be confirmed as project engineering progresses.

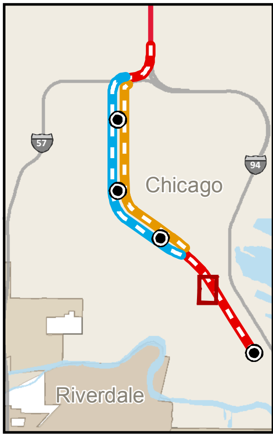
Scale



map id: 03_20.15


121ST ST
COTTAGE GROVE AVE
397
386
398
399
ProposedSubstation
400
401

Inset


57
94
Chicago
Riverdale

Legend

UPRR Rail Alternative East Option

Sheet 16 of 21

▨	Proposed Permanent Envelope - UPRR Common
▨	Proposed Permanent Envelope - UPRR East
🟦	Parcel Easement
🟫	Parcel Affected by Proposed Permanent Envelope
🟥	Building Displacement
⬜	Building Footprint
☐	Parcels

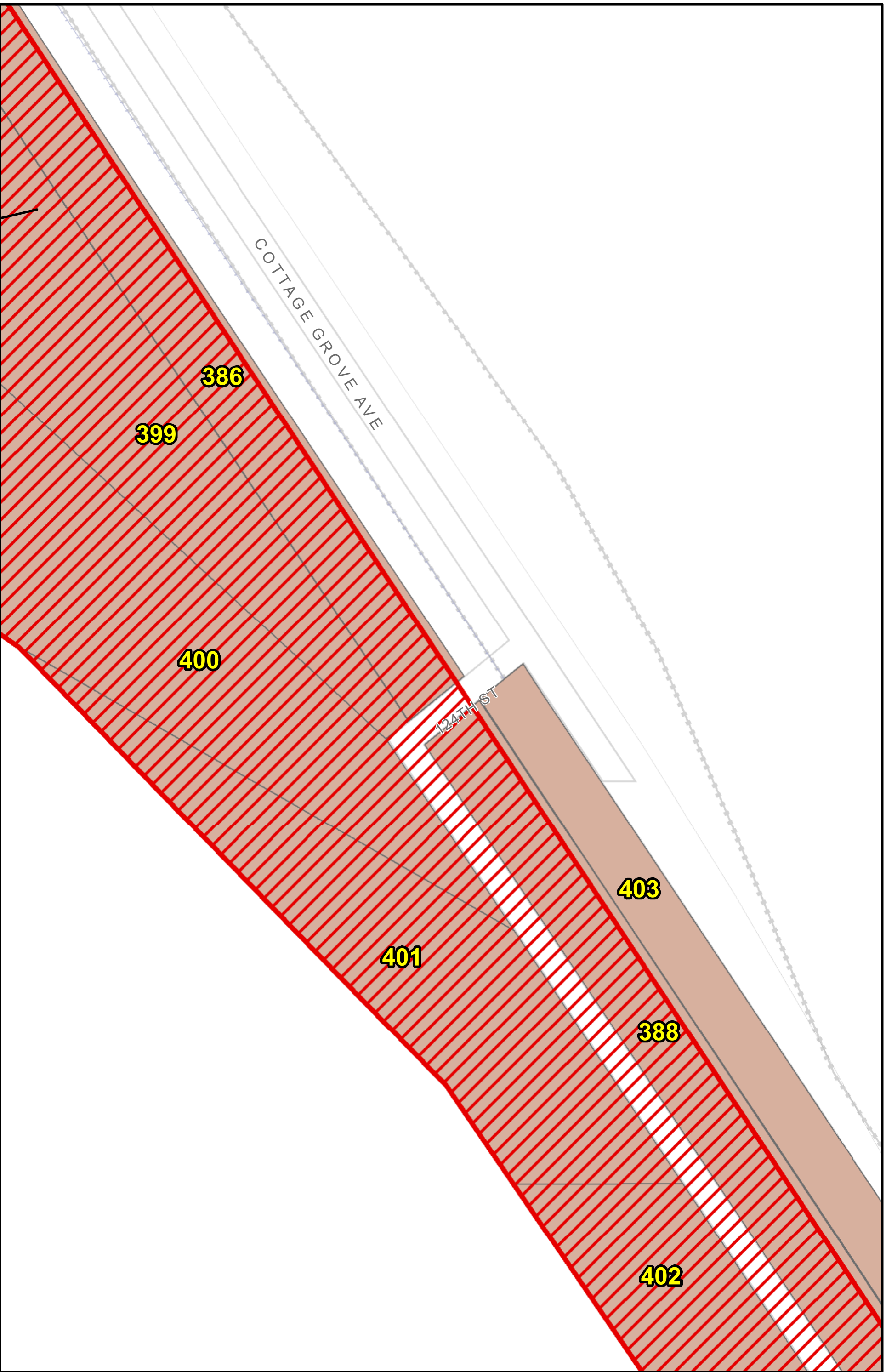
Parcels and buildings that may be displaced are shown to illustrate maximum impacts and possible locations. Due to the margin for error inherent in predicting displacements based on conceptual engineering, the actual displacements for each alternative may vary from what is shown. Some of the properties shown may not ultimately need to be acquired. Land only property impacts are shown on the entire lot, however, often only portions of the lot would be required. Property acquisitions will be confirmed as project engineering progresses.

Scale

0 125 250

Feet

map id: 03_20.16



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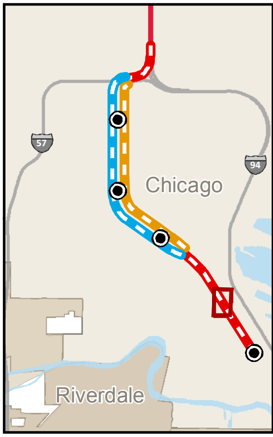


Legend

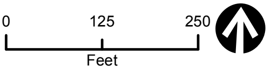
UPRR Rail Alternative East Option

Sheet 17 of 21

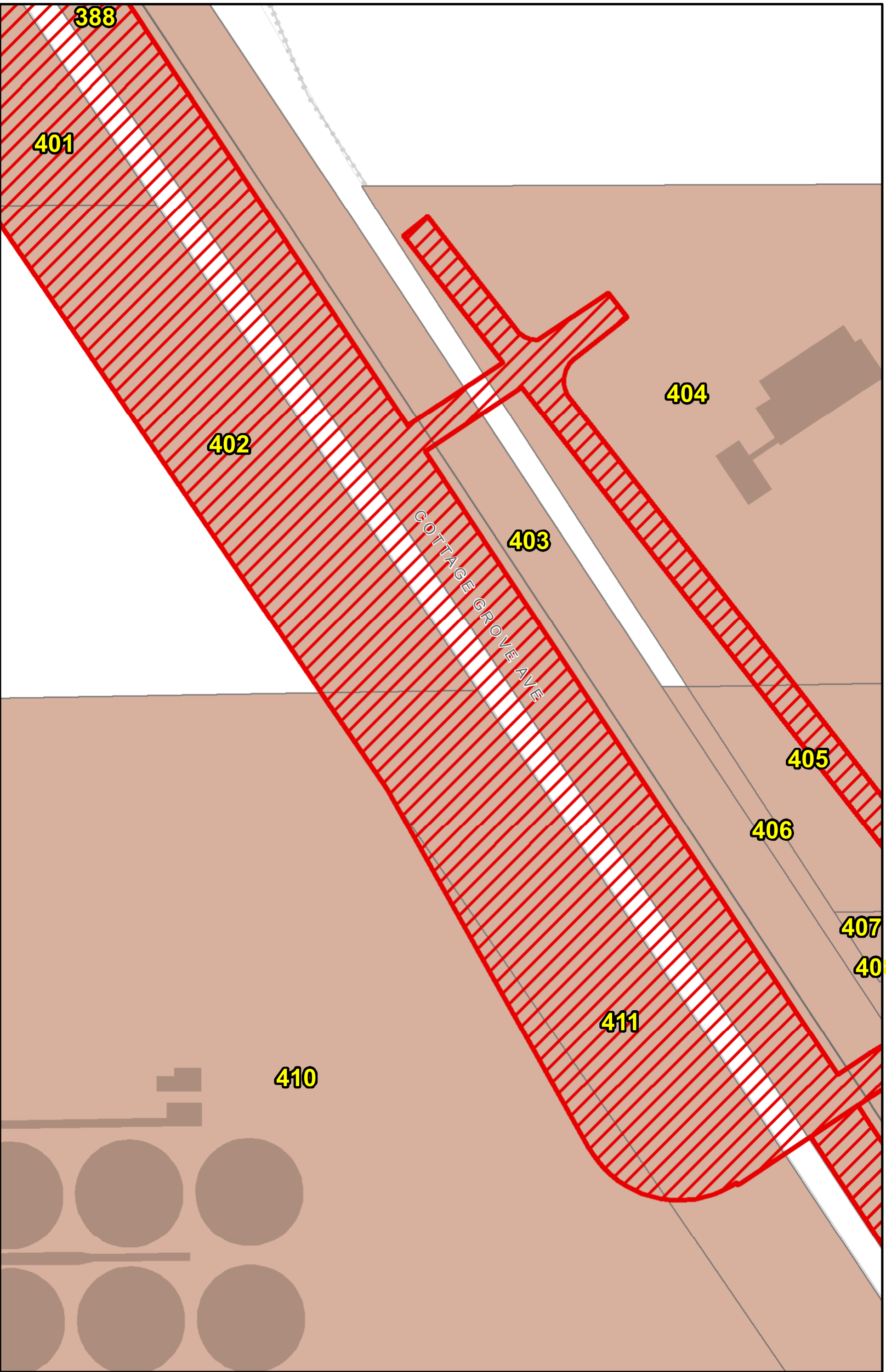
▨	Proposed Permanent Envelope - UPRR Common
▨	Proposed Permanent Envelope - UPRR East
🟦	Parcel Easement
🟫	Parcel Affected by Proposed Permanent Envelope
🟥	Building Displacement
⬜	Building Footprint
□	Parcels

Parcels and buildings that may be displaced are shown to illustrate maximum impacts and possible locations. Due to the margin for error inherent in predicting displacements based on conceptual engineering, the actual displacements for each alternative may vary from what is shown. Some of the properties shown may not ultimately need to be acquired. Land only property impacts are shown on the entire lot, however, often only portions of the lot would be required. Property acquisitions will be confirmed as project engineering progresses.

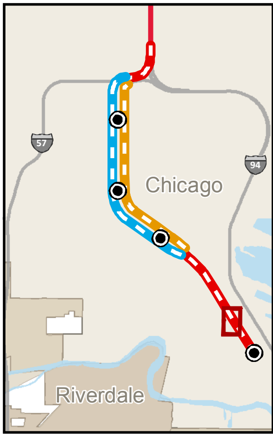
Scale



map id: 03_20.17


388
401
402
403
404
405
406
407
408
410
411
COTTAGE GROVE AVE

Inset


57
94
Chicago
Riverdale

Legend

UPRR Rail Alternative East Option

Sheet 18 of 21

▨ Proposed Permanent Envelope - UPRR Common

▨ Proposed Permanent Envelope - UPRR East

🟦 Parcel Easement

🟫 Parcel Affected by Proposed Permanent Envelope

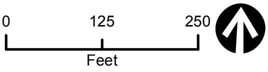
🟥 Building Displacement

⬜ Building Footprint

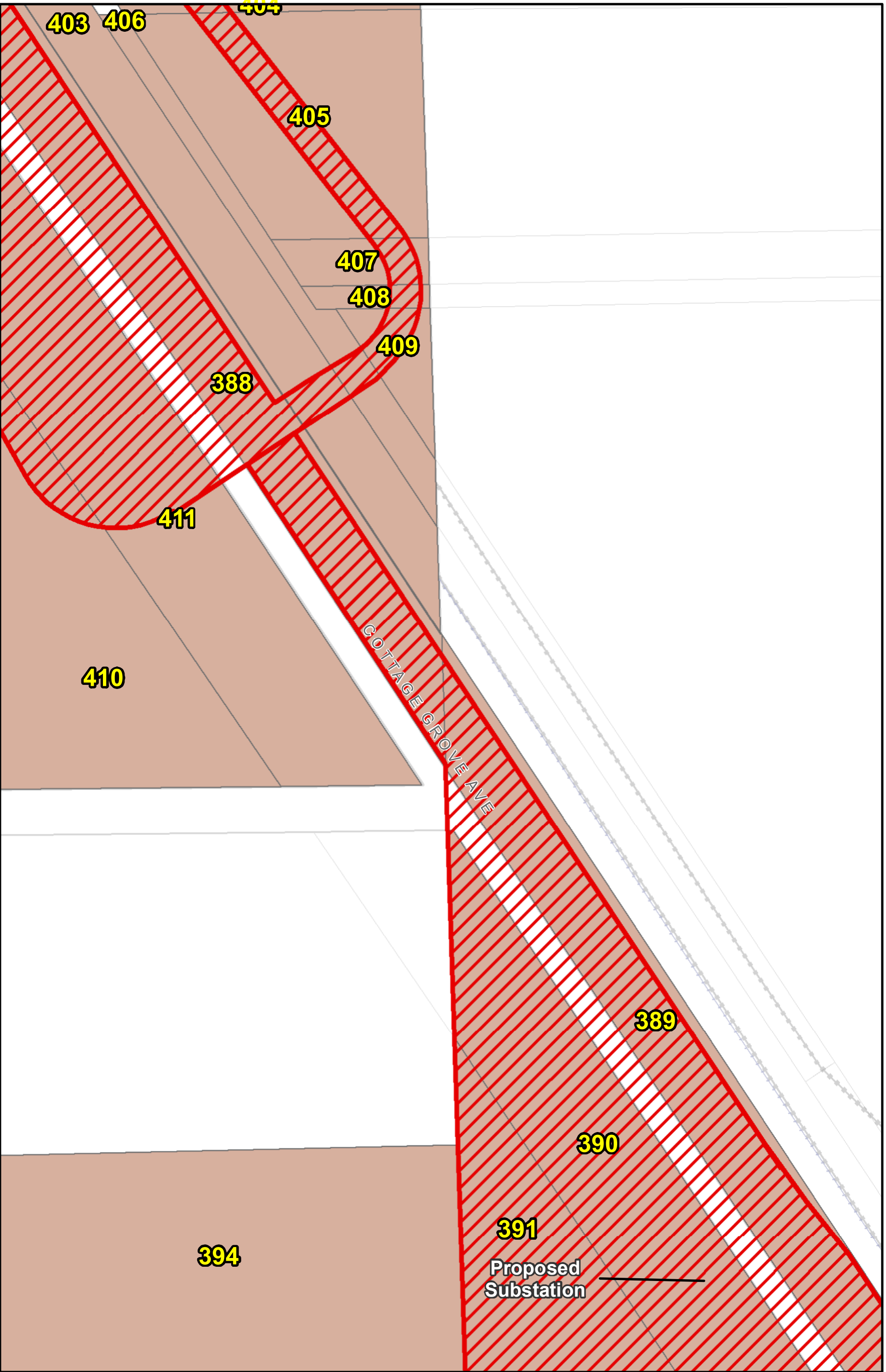
⬜ Parcels

Parcels and buildings that may be displaced are shown to illustrate maximum impacts and possible locations. Due to the margin for error inherent in predicting displacements based on conceptual engineering, the actual displacements for each alternative may vary from what is shown. Some of the properties shown may not ultimately need to be acquired. Land only property impacts are shown on the entire lot, however, often only portions of the lot would be required. Property acquisitions will be confirmed as project engineering progresses.

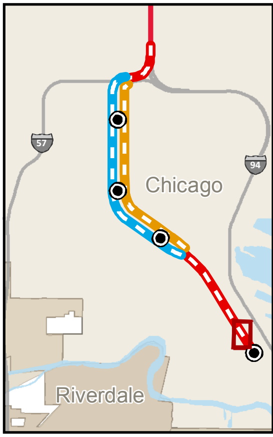
Scale


0
125
250
Feet

map id: 03_20.18


404
403
406
405
407
408
409
388
411
410
COTTAGE GROVE AVE
389
390
391
394
Proposed Substation

Inset


57
94
Chicago
Riverdale

Legend

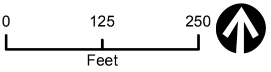
UPRR Rail Alternative East Option

Sheet 19 of 21

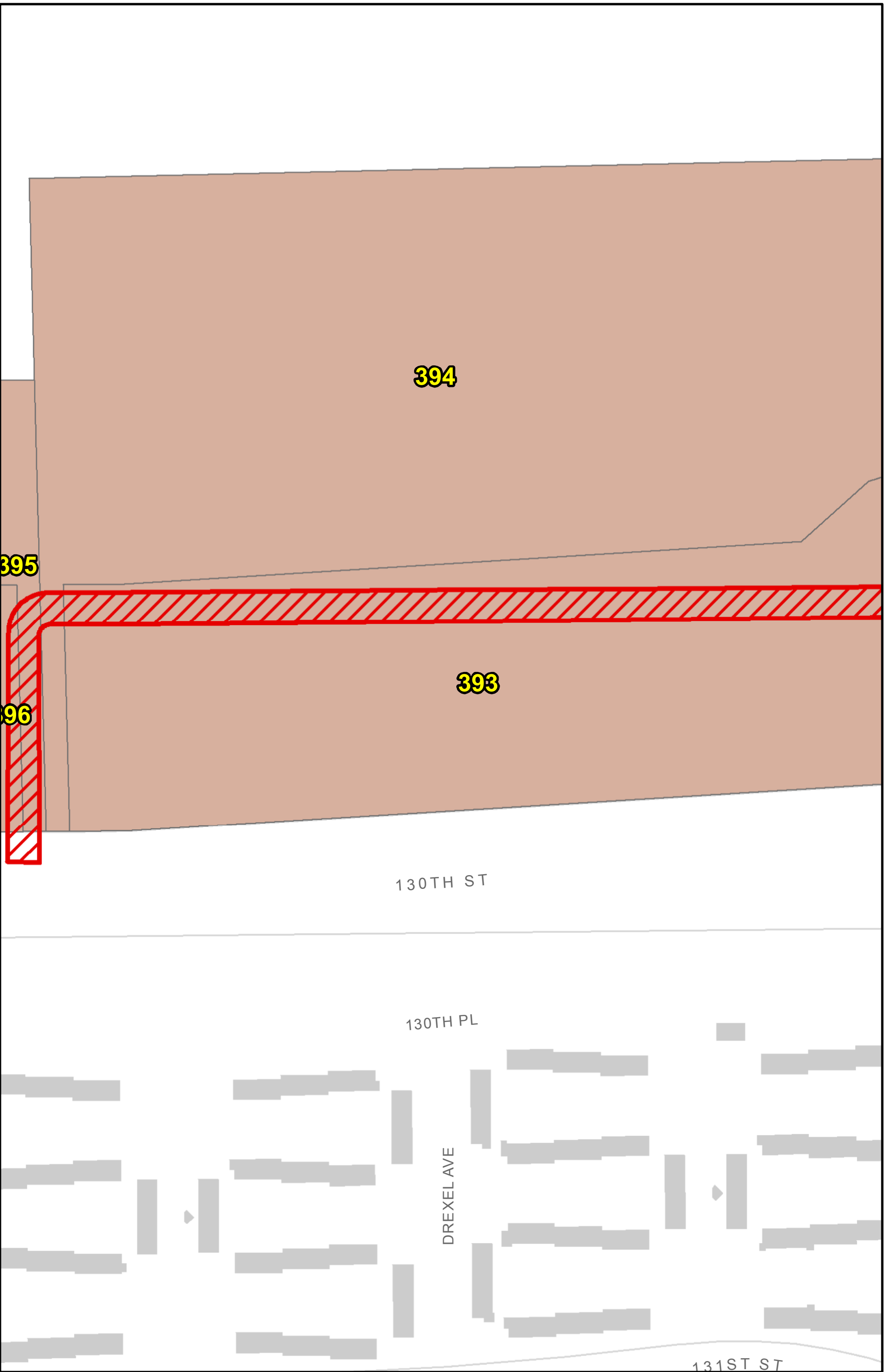
- ▨ Proposed Permanent Envelope - UPRR Common
- ▨ Proposed Permanent Envelope - UPRR East
- 🟦 Parcel Easement
- 🟫 Parcel Affected by Proposed Permanent Envelope
- 🟥 Building Displacement
- ⬜ Building Footprint
- ⬜ Parcels

Parcels and buildings that may be displaced are shown to illustrate maximum impacts and possible locations. Due to the margin for error inherent in predicting displacements based on conceptual engineering, the actual displacements for each alternative may vary from what is shown. Some of the properties shown may not ultimately need to be acquired. Land only property impacts are shown on the entire lot, however, often only portions of the lot would be required. Property acquisitions will be confirmed as project engineering progresses.

Scale


0
125
250
Feet

map id: 03_20.19



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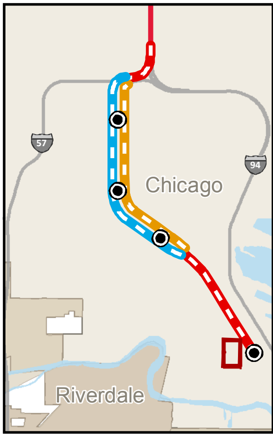


Legend

UPRR Rail Alternative East Option

Sheet 20 of 21

▨	Proposed Permanent Envelope - UPRR Common
▨	Proposed Permanent Envelope - UPRR East
🟦	Parcel Easement
🟫	Parcel Affected by Proposed Permanent Envelope
🟥	Building Displacement
⬜	Building Footprint
⬜	Parcels

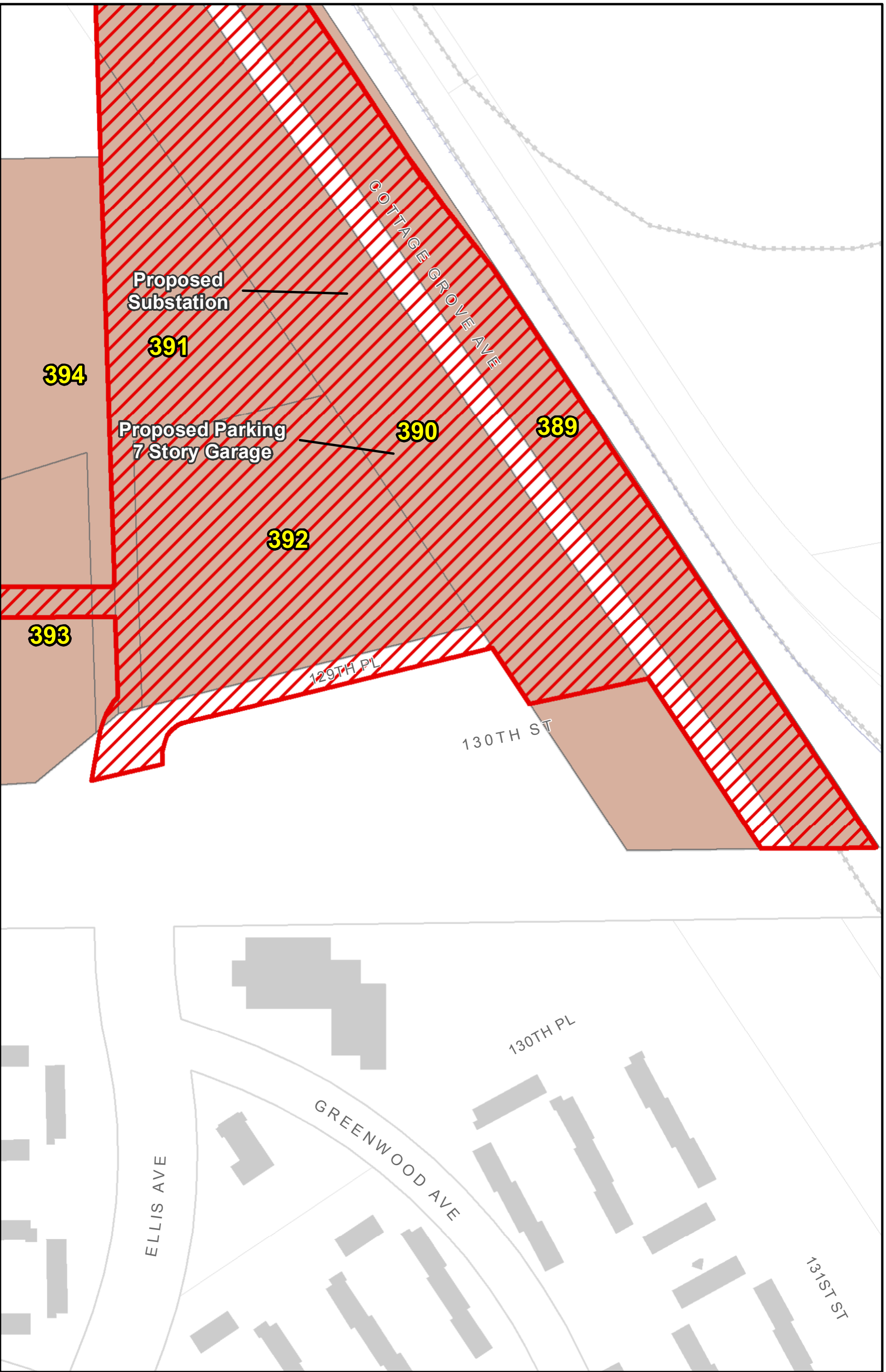
Parcels and buildings that may be displaced are shown to illustrate maximum impacts and possible locations. Due to the margin for error inherent in predicting displacements based on conceptual engineering, the actual displacements for each alternative may vary from what is shown. Some of the properties shown may not ultimately need to be acquired. Land only property impacts are shown on the entire lot, however, often only portions of the lot would be required. Property acquisitions will be confirmed as project engineering progresses.

Scale

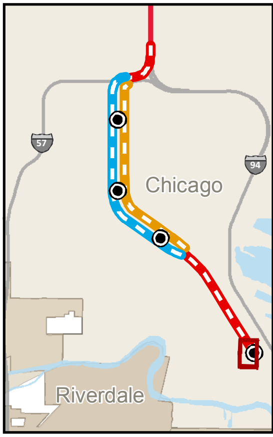
0 125 250

Feet

map id: 03_20.20


Proposed Substation
391
394
COTTAGE GROVE AVE
Proposed Parking 7 Story Garage
390
389
392
393
129TH PL
130TH ST
130TH PL
GREENWOOD AVE
ELLIS AVE
131ST ST

Inset


57
94
Chicago
Riverdale

Legend

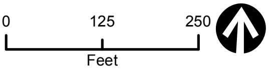
UPRR Rail Alternative East Option

Sheet 21 of 21

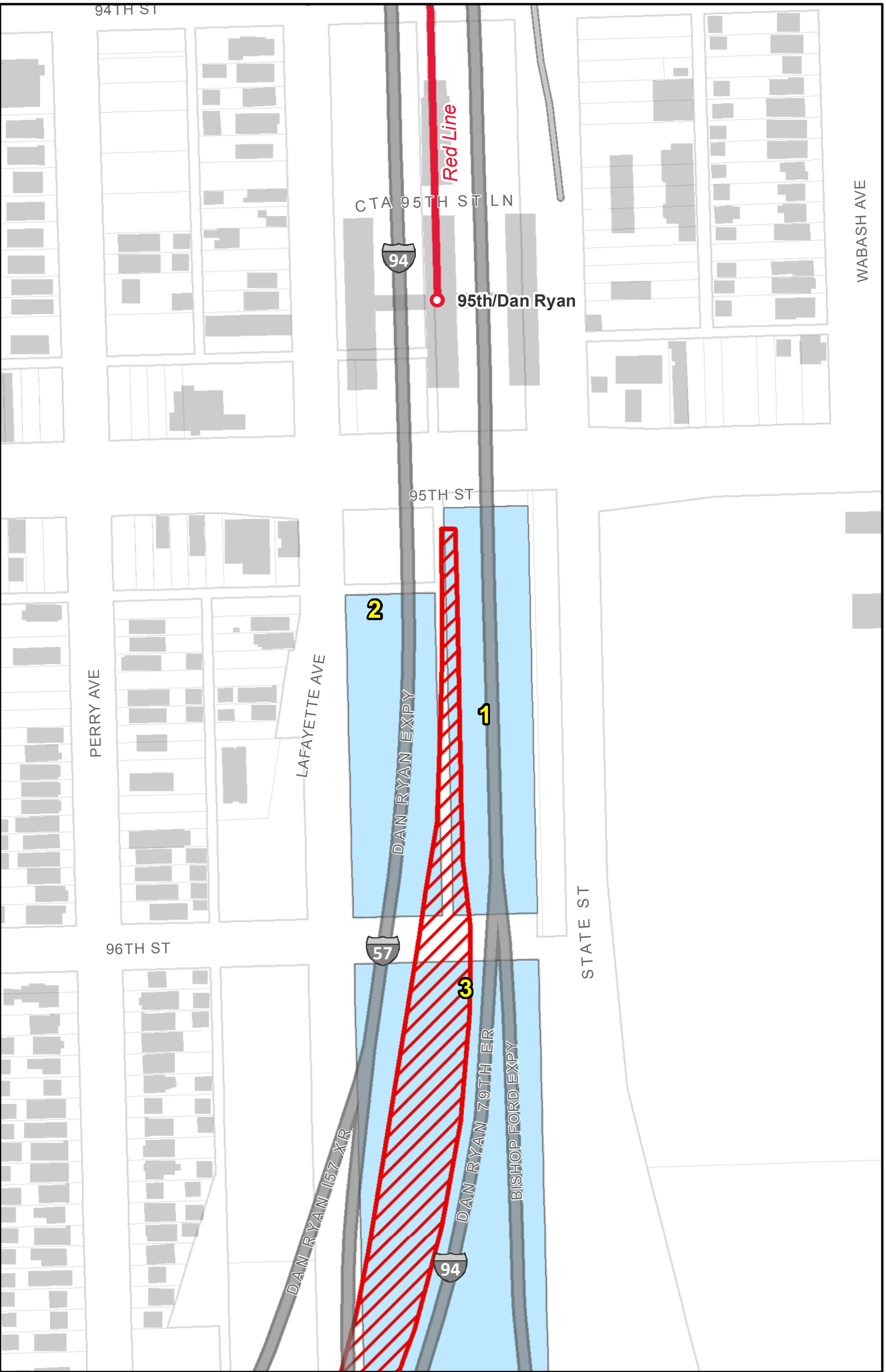
🟥	Proposed Permanent Envelope - UPRR Common
🟧	Proposed Permanent Envelope - UPRR East
🟦	Parcel Easement
🟫	Parcel Affected by Proposed Permanent Envelope
🟥	Building Displacement
⬜	Building Footprint
⬜	Parcels

Parcels and buildings that may be displaced are shown to illustrate maximum impacts and possible locations. Due to the margin for error inherent in predicting displacements based on conceptual engineering, the actual displacements for each alternative may vary from what is shown. Some of the properties shown may not ultimately need to be acquired. Land only property impacts are shown on the entire lot, however, often only portions of the lot would be required. Property acquisitions will be confirmed as project engineering progresses.

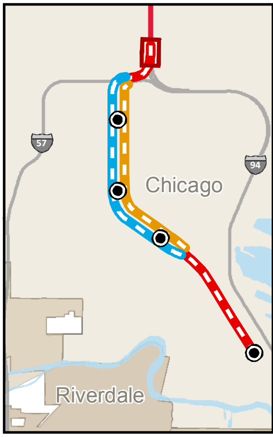
Scale


0
125
250
Feet

map id: 03_20.21


94TH ST
Red Line
CTA 95TH ST LN
94
95th/Dan Ryan
WABASH AVE
95TH ST
2
1
PERRY AVE
LAFAYETTE AVE
DAN RYAN EXPY
STATE ST
96TH ST
57
3
DAN RYAN 79TH ER
BISHOP FORD EXPY
DAN RYAN I57 XR
94

Inset


57
94
Chicago
Riverdale

Legend

UPRR Rail Alternative West Option

Sheet 1 of 21

▨ Proposed Permanent Envelope - UPRR Common

▨ Proposed Permanent Envelope - UPRR West

■ Parcel Easement

■ Parcel Affected by Proposed Permanent Envelope

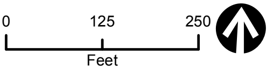
■ Building Displacement

■ Building Footprint

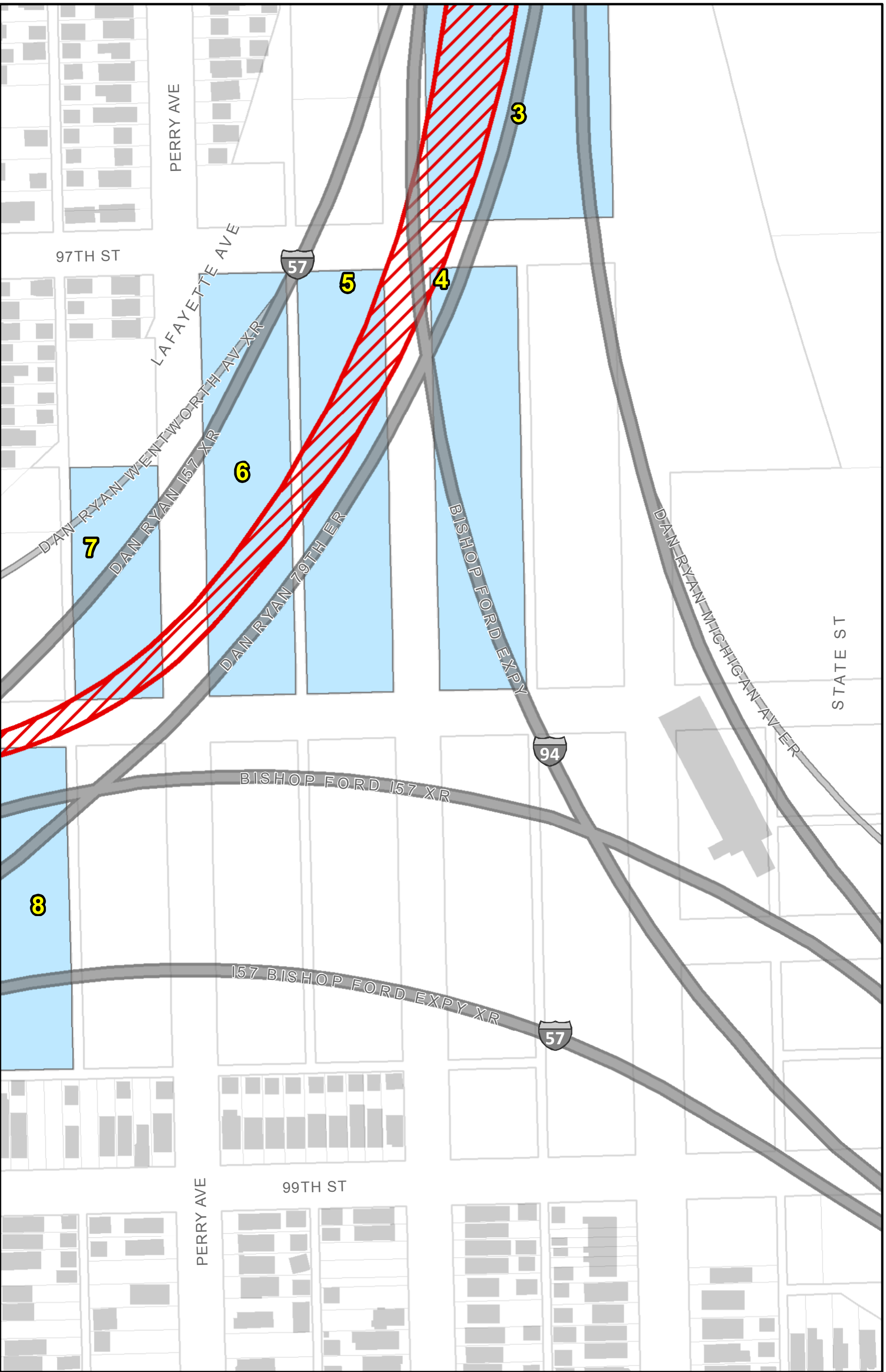
□ Parcels

Parcels and buildings that may be displaced are shown to illustrate maximum impacts and possible locations. Due to the margin for error inherent in predicting displacements based on conceptual engineering, the actual displacements for each alternative may vary from what is shown. Some of the properties shown may not ultimately need to be acquired. Land only property impacts are shown on the entire lot, however, often only portions of the lot would be required. Property acquisitions will be confirmed as project engineering progresses.

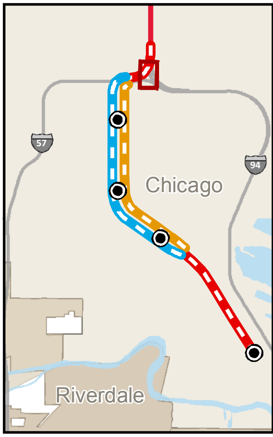
Scale


0
125
250
Feet

map id: 03_20.1


3
PERRY AVE
97TH ST
LAFAYETTE AVE
57
5
4
DAN RYAN WENTWORTH AV XR
DAN RYAN I57 XR
6
7
DAN RYAN 79TH ER
BISHOP FORD EXPY
DAN RYAN MICHIGAN AV ER
STATE ST
94
BISHOP FORD I57 XR
8
I57 BISHOP FORD EXPY XR
57
PERRY AVE
99TH ST

Inset


57
94
Chicago
Riverdale

Legend

UPRR Rail Alternative West Option

Sheet 2 of 21

▨ Proposed Permanent Envelope - UPRR Common

▨ Proposed Permanent Envelope - UPRR West

🟦 Parcel Easement

🟫 Parcel Affected by Proposed Permanent Envelope

🟥 Building Displacement

⬜ Building Footprint

☐ Parcels

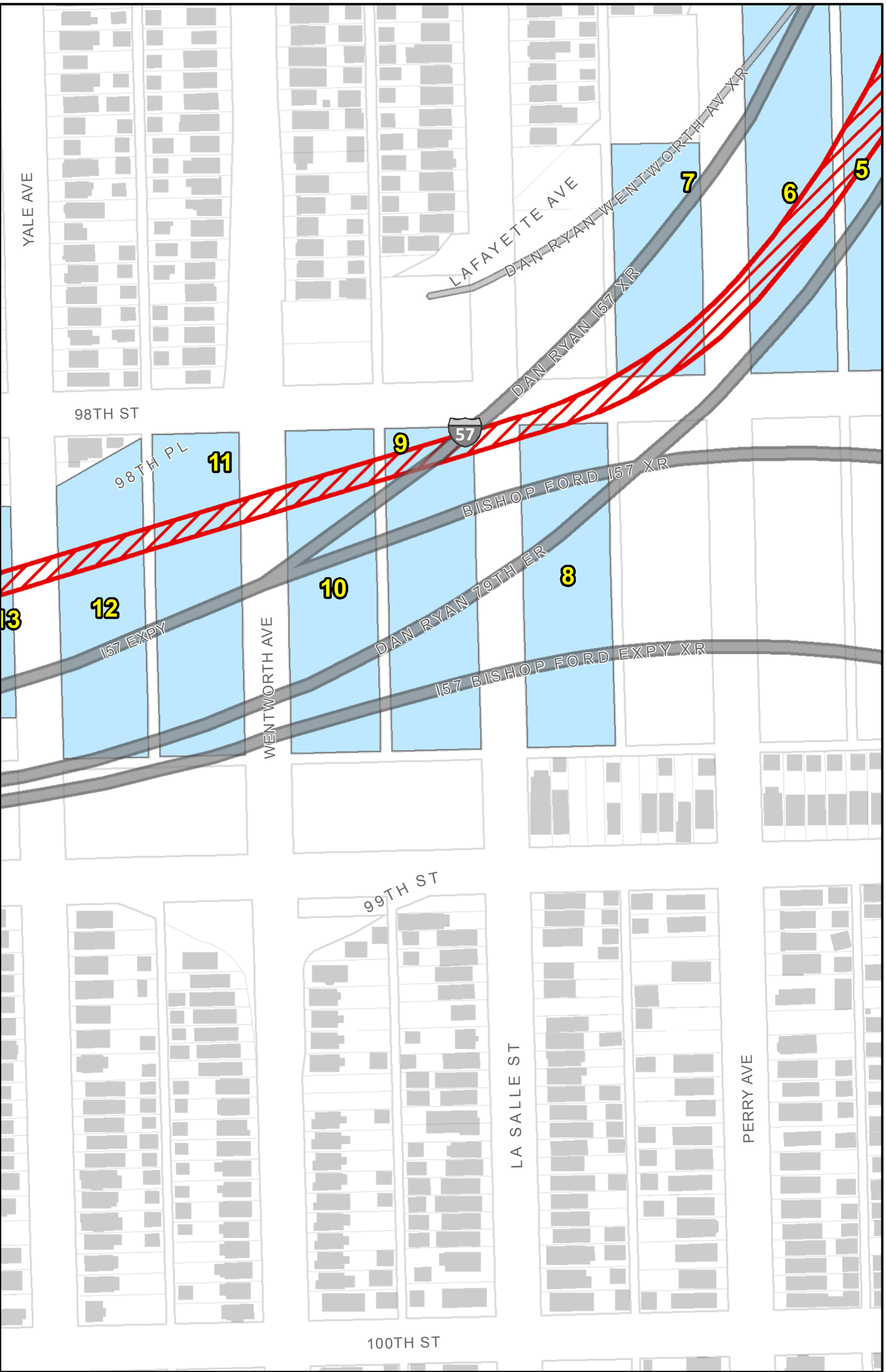
Parcels and buildings that may be displaced are shown to illustrate maximum impacts and possible locations. Due to the margin for error inherent in predicting displacements based on conceptual engineering, the actual displacements for each alternative may vary from what is shown. Some of the properties shown may not ultimately need to be acquired. Land only property impacts are shown on the entire lot, however, often only portions of the lot would be required. Property acquisitions will be confirmed as project engineering progresses.

Scale

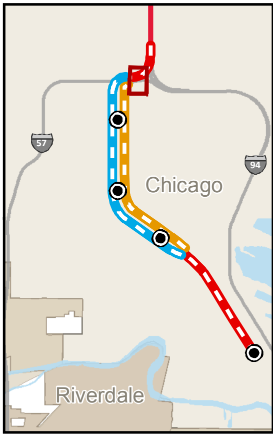
0 125 250

Feet

map id: 03_20.2


YALE AVE
LAFAYETTE AVE
DAN RYAN WENTWORTH AV XR
7
6
5
DAN RYAN I57 XR
98TH ST
98TH PL
11
9
57
BISHOP FORD I57 XR
13
12
I57 EXPY
WENTWORTH AVE
10
DAN RYAN 79TH ER
8
I57 BISHOP FORD EXPY XR
99TH ST
LA SALLE ST
PERRY AVE
100TH ST

Inset


57
94
Chicago
Riverdale

Legend

UPRR Rail Alternative West Option

Sheet 3 of 21

▨	Proposed Permanent Envelope - UPRR Common
▨	Proposed Permanent Envelope - UPRR West
🟦	Parcel Easement
🟫	Parcel Affected by Proposed Permanent Envelope
🟥	Building Displacement
⬜	Building Footprint
⬜	Parcels

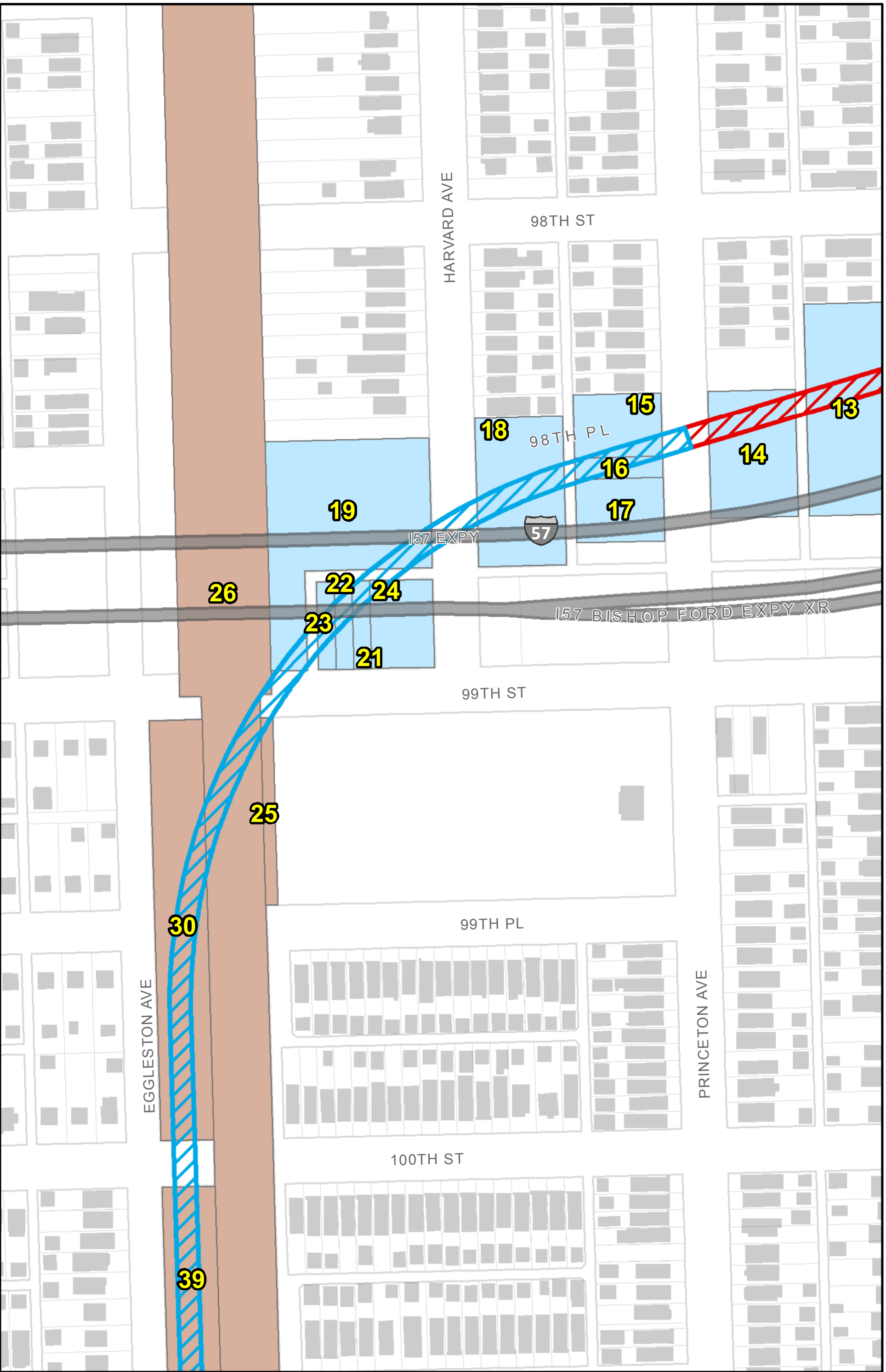
Parcels and buildings that may be displaced are shown to illustrate maximum impacts and possible locations. Due to the margin for error inherent in predicting displacements based on conceptual engineering, the actual displacements for each alternative may vary from what is shown. Some of the properties shown may not ultimately need to be acquired. Land only property impacts are shown on the entire lot, however, often only portions of the lot would be required. Property acquisitions will be confirmed as project engineering progresses.

Scale

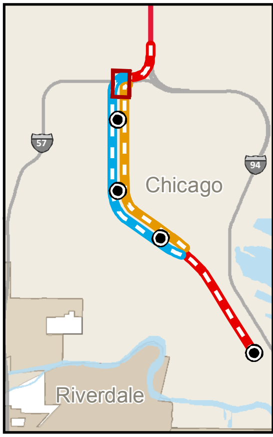
0 125 250

Feet

map id: 03_20.3


98TH ST
HARVARD AVE
98TH PL
I57 EXPY
57
I57 BISHOP FORD EXPY XR
99TH ST
99TH PL
100TH ST
EGGLESTON AVE
PRINCETON AVE
13
14
15
16
17
18
19
21
22
23
24
25
26
30
39

Inset


Chicago
Riverdale
57
94

Legend

UPRR Rail Alternative West Option

Sheet 4 of 21

🟥	Proposed Permanent Envelope - UPRR Common
🟦	Proposed Permanent Envelope - UPRR West
🟦	Parcel Easement
🟫	Parcel Affected by Proposed Permanent Envelope
🟥	Building Displacement
⬜	Building Footprint
⬜	Parcels

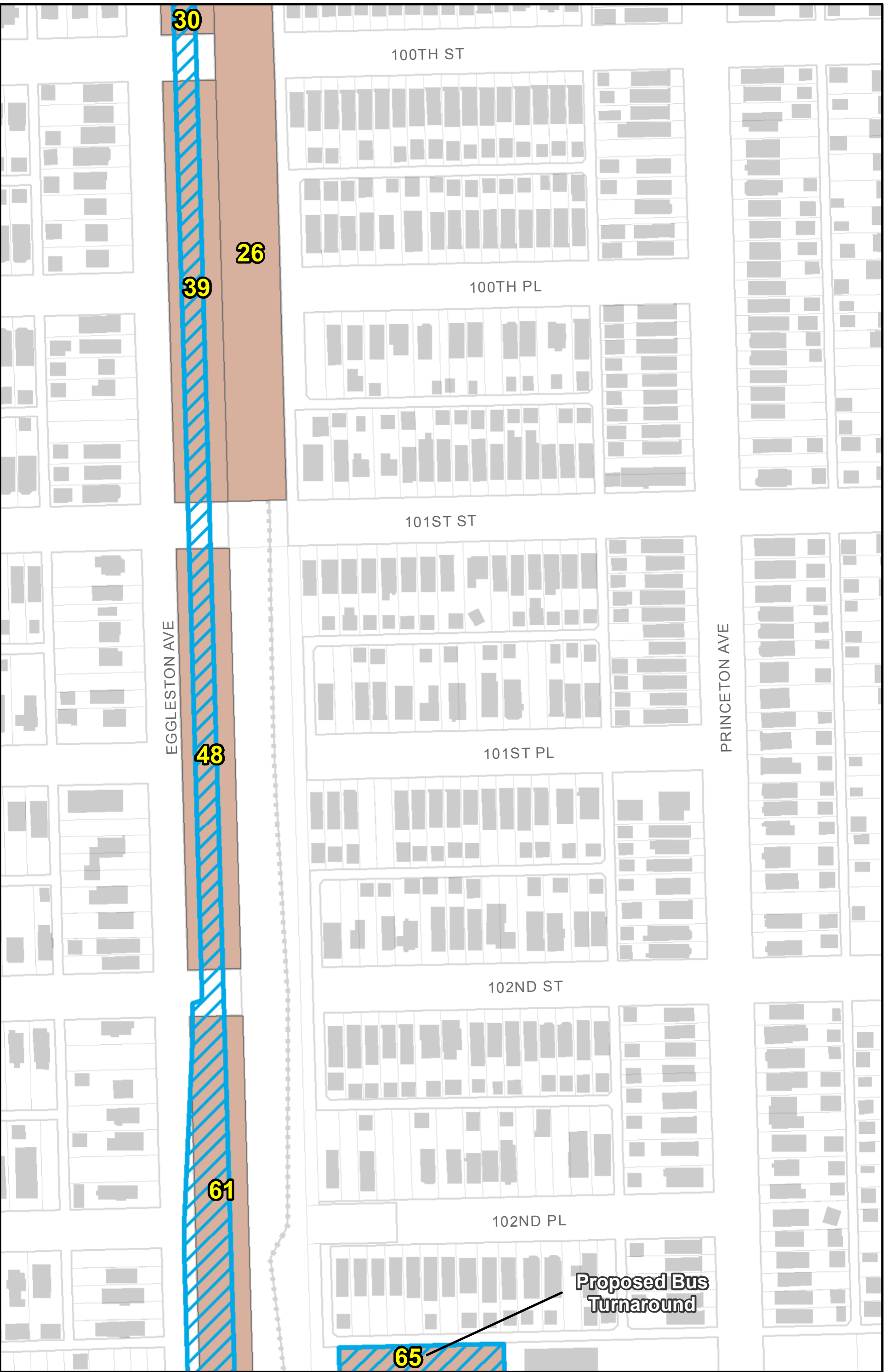
Parcels and buildings that may be displaced are shown to illustrate maximum impacts and possible locations. Due to the margin for error inherent in predicting displacements based on conceptual engineering, the actual displacements for each alternative may vary from what is shown. Some of the properties shown may not ultimately need to be acquired. Land only property impacts are shown on the entire lot, however, often only portions of the lot would be required. Property acquisitions will be confirmed as project engineering progresses.

Scale

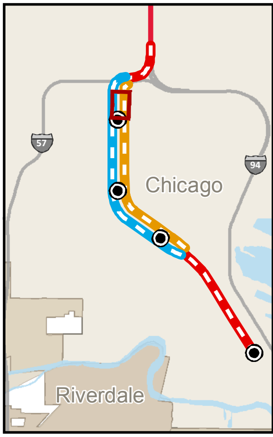
0 125 250

Feet

map id: 03_20.4


30
100TH ST
26
39
100TH PL
101ST ST
EGGLESTON AVE
PRINCETON AVE
48
101ST PL
102ND ST
61
102ND PL
Proposed Bus Turnaround
65

Inset


57
94
Chicago
Riverdale

Legend

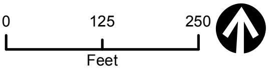
UPRR Rail Alternative West Option

Sheet 5 of 21

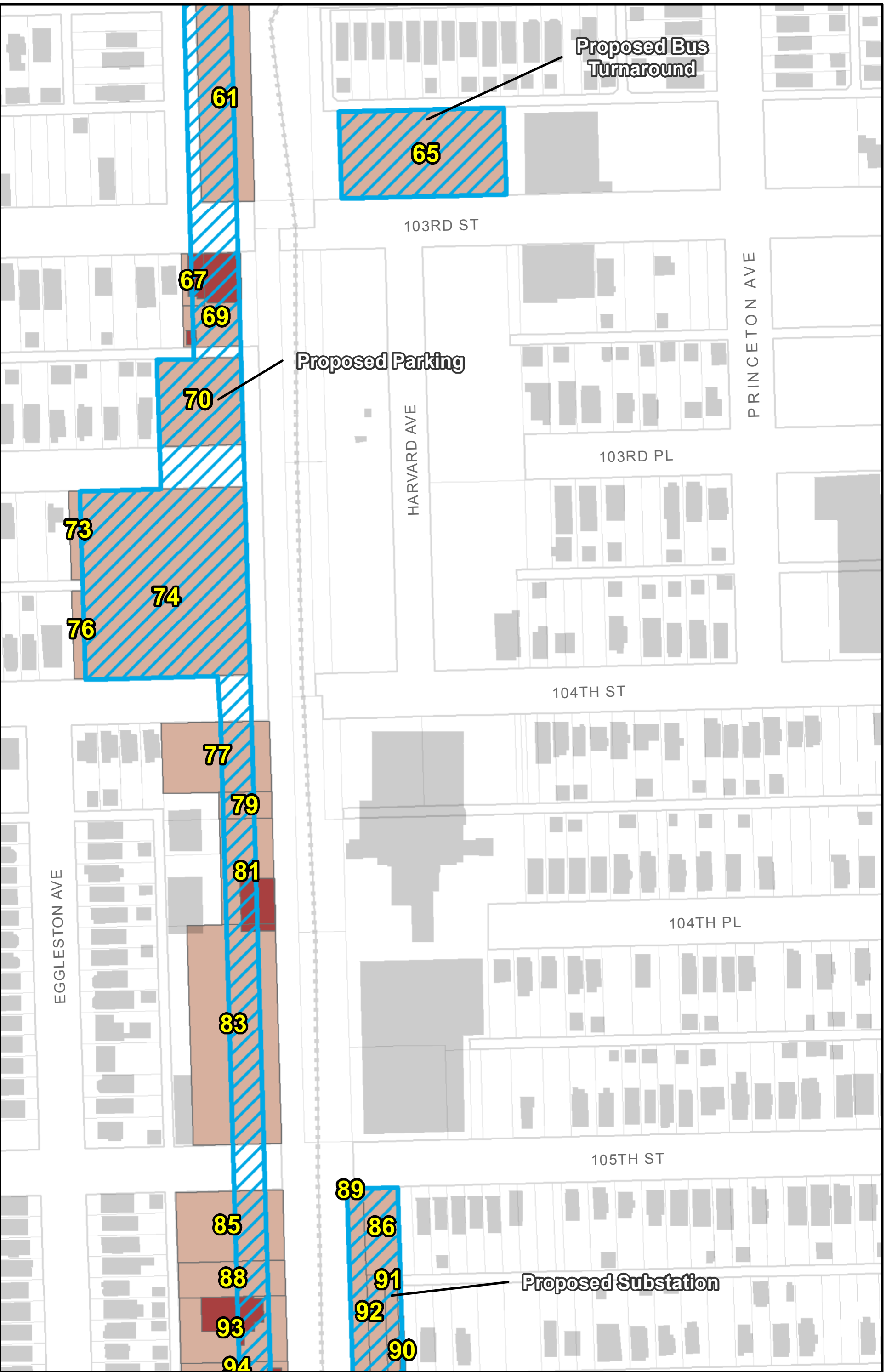
▨	Proposed Permanent Envelope - UPRR Common
▨	Proposed Permanent Envelope - UPRR West
🟦	Parcel Easement
🟫	Parcel Affected by Proposed Permanent Envelope
🟥	Building Displacement
⬜	Building Footprint
⬜	Parcels

Parcels and buildings that may be displaced are shown to illustrate maximum impacts and possible locations. Due to the margin for error inherent in predicting displacements based on conceptual engineering, the actual displacements for each alternative may vary from what is shown. Some of the properties shown may not ultimately need to be acquired. Land only property impacts are shown on the entire lot, however, often only portions of the lot would be required. Property acquisitions will be confirmed as project engineering progresses.

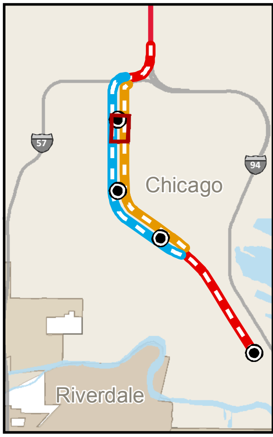
Scale


0
125
250
Feet

map id: 03_20.5


Proposed Bus Turnaround
61
65
103RD ST
67
69
Proposed Parking
70
HARVARD AVE
PRINCETON AVE
103RD PL
73
74
76
104TH ST
77
79
81
EGGLESTON AVE
104TH PL
83
105TH ST
89
85
86
88
91
Proposed Substation
92
93
90
94

Inset


57
94
Chicago
Riverdale

Legend

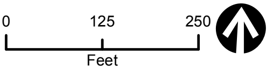
UPRR Rail Alternative West Option

Sheet 6 of 21

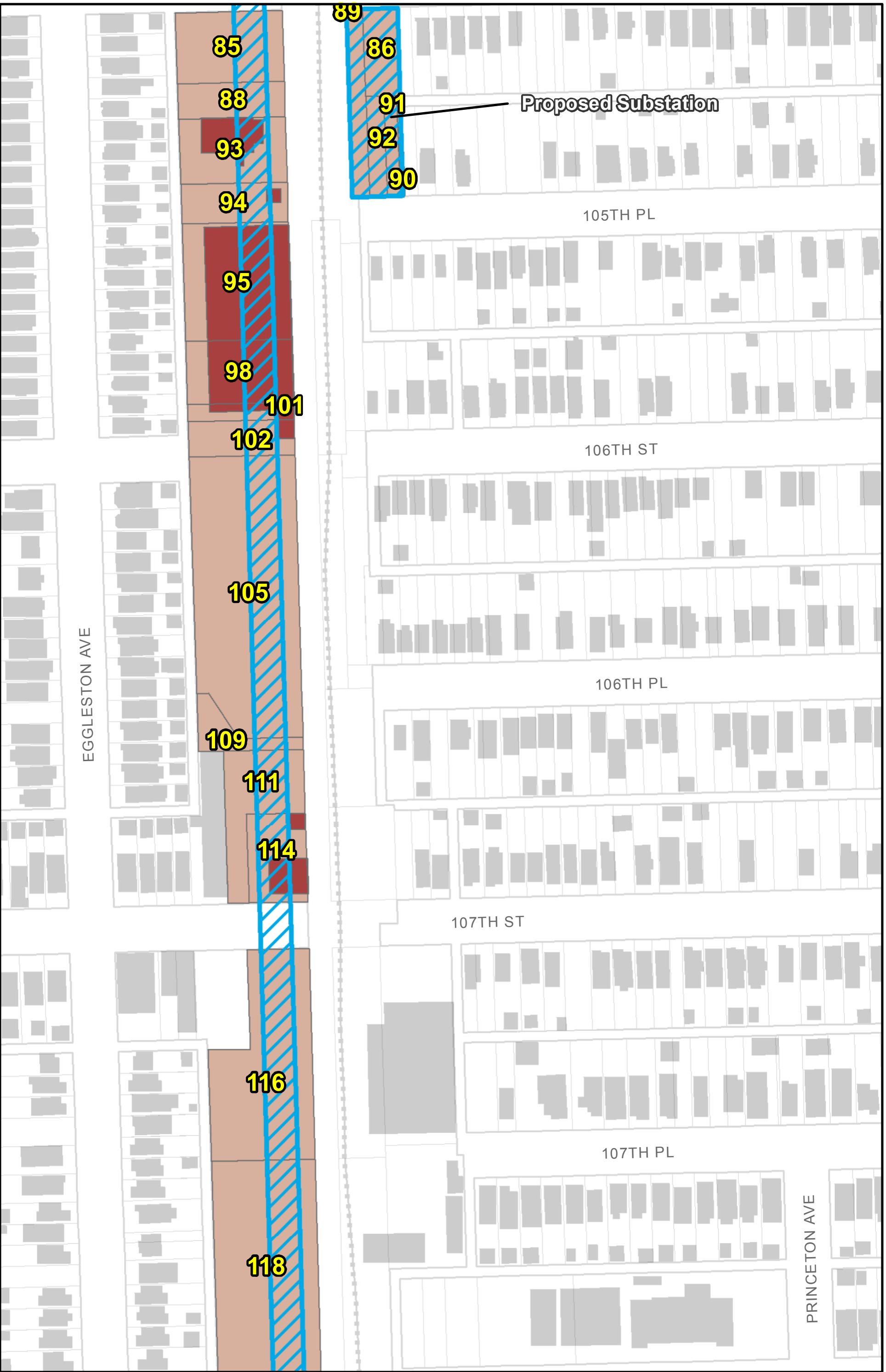
▨	Proposed Permanent Envelope - UPRR Common
▨	Proposed Permanent Envelope - UPRR West
🟦	Parcel Easement
🟫	Parcel Affected by Proposed Permanent Envelope
🟥	Building Displacement
⬜	Building Footprint
⬜	Parcels

Parcels and buildings that may be displaced are shown to illustrate maximum impacts and possible locations. Due to the margin for error inherent in predicting displacements based on conceptual engineering, the actual displacements for each alternative may vary from what is shown. Some of the properties shown may not ultimately need to be acquired. Land only property impacts are shown on the entire lot, however, often only portions of the lot would be required. Property acquisitions will be confirmed as project engineering progresses.

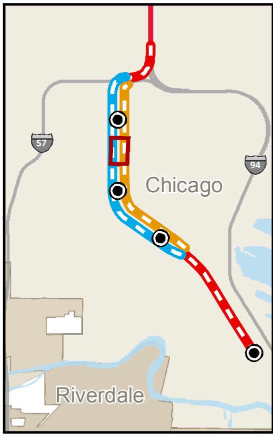
Scale


0
125
250
Feet

map id: 03_20.6


89
85
86
88
91
Proposed Substation
93
92
90
94
105TH PL
95
98
101
102
106TH ST
105
EGGLESTON AVE
106TH PL
109
111
114
107TH ST
116
107TH PL
118
PRINCETON AVE

Inset


57
94
Chicago
Riverdale

Legend

UPRR Rail Alternative
West Option

Sheet 7 of 21

▨	Proposed Permanent Envelope - UPRR Common
▨	Proposed Permanent Envelope - UPRR West
■	Parcel Easement
■	Parcel Affected by Proposed Permanent Envelope
■	Building Displacement
■	Building Footprint
□	Parcels

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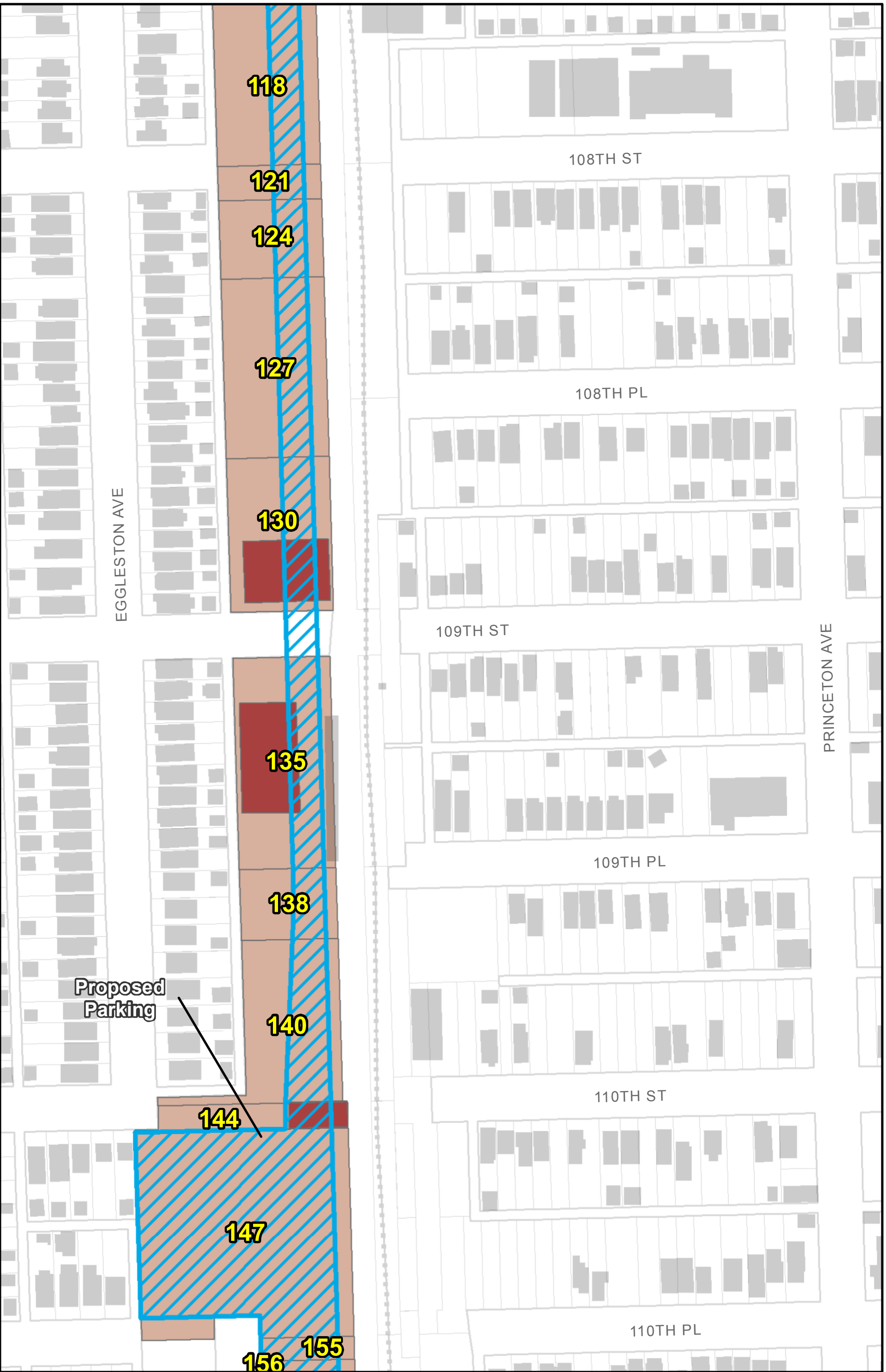
Scale

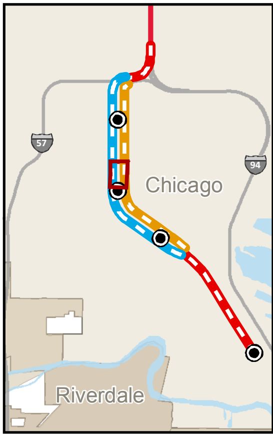
0 125 250

Feet

map id: 03_20.7


118
121
124
127
130
135
138
140
144
147
155
156
Proposed Parking
108TH ST
108TH PL
109TH ST
109TH PL
110TH ST
110TH PL
EGGLESTON AVE
PRINCETON AVE

Inset


57
94
Chicago
Riverdale

Legend

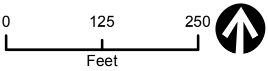
UPRR Rail Alternative West Option

Sheet 8 of 21

- ▨ Proposed Permanent Envelope - UPRR Common
- ▨ Proposed Permanent Envelope - UPRR West
- ■ Parcel Easement
- ■ Parcel Affected by Proposed Permanent Envelope
- 🟥 Building Displacement
- ■ Building Footprint
- □ Parcels

Parcels and buildings that may be displaced are shown to illustrate maximum impacts and possible locations. Due to the margin for error inherent in predicting displacements based on conceptual engineering, the actual displacements for each alternative may vary from what is shown. Some of the properties shown may not ultimately need to be acquired. Land only property impacts are shown on the entire lot, however, often only portions of the lot would be required. Property acquisitions will be confirmed as project engineering progresses.

Scale


0
125
250
Feet

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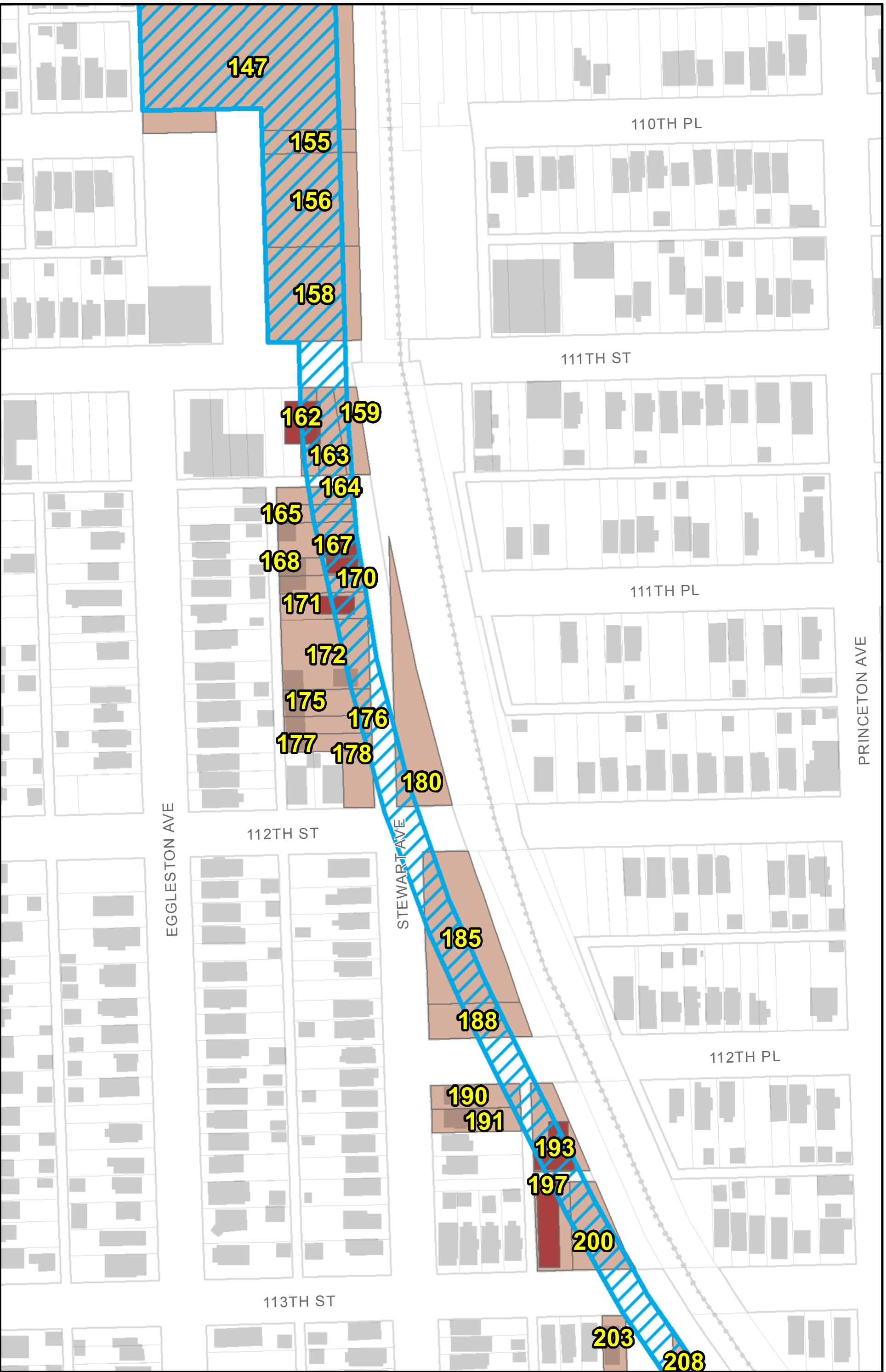
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110TH PL
111TH ST
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111TH PL
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177
178
180
PRINCETON AVE
EGGLESTON AVE
112TH ST
STEWART AVE
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113TH ST
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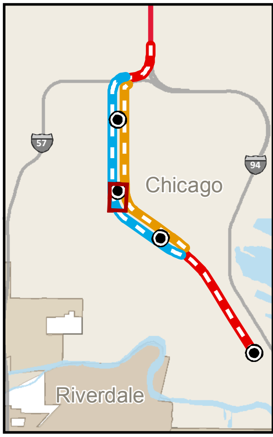
57
94
Chicago
Riverdale

Legend

UPRR Rail Alternative West Option

Sheet 9 of 21

- 🟥 Proposed Permanent Envelope - UPRR Common
- 🟦 Proposed Permanent Envelope - UPRR West
- ▭ Parcel Easement
- ▭ Parcel Affected by Proposed Permanent Envelope
- ■ Building Displacement
- ▭ Building Footprint
- ▭ Parcels

Parcels and buildings that may be displaced are shown to illustrate maximum impacts and possible locations. Due to the margin for error inherent in predicting displacements based on conceptual engineering, the actual displacements for each alternative may vary from what is shown. Some of the properties shown may not ultimately need to be acquired. Land only property impacts are shown on the entire lot, however, often only portions of the lot would be required. Property acquisitions will be confirmed as project engineering progresses.

Scale

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Feet

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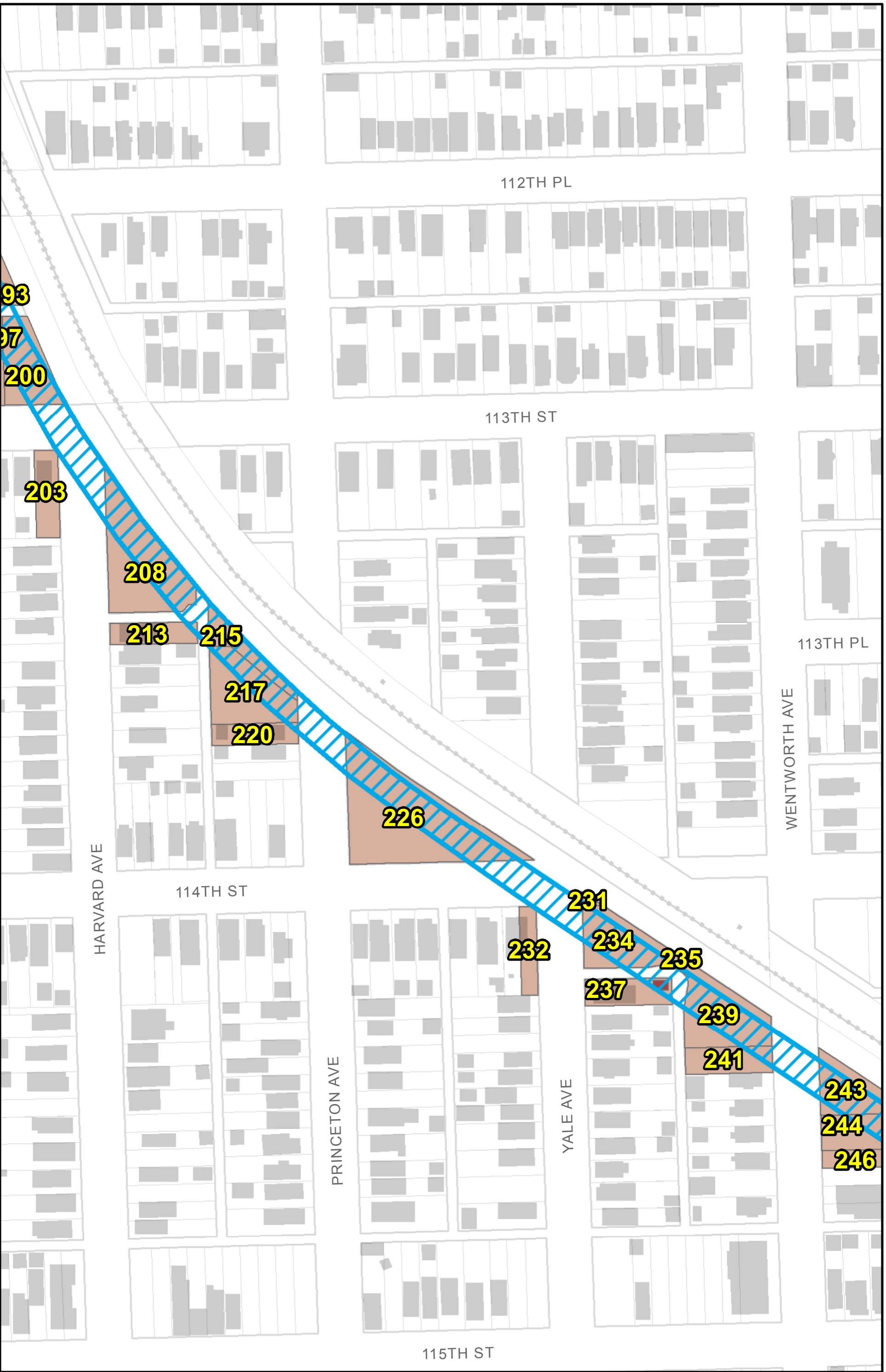
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113TH PL
114TH ST
115TH ST
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PRINCETON AVE
YALE AVE
WENTWORTH AVE
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97
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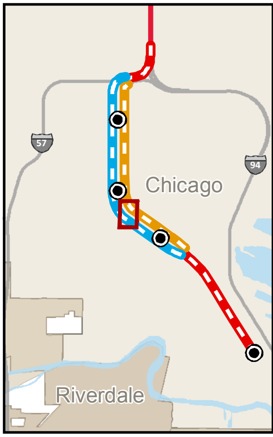
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94
Chicago
Riverdale

Legend

UPRR Rail Alternative West Option

Sheet 10 of 21

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▨	Proposed Permanent Envelope - UPRR West
🟦	Parcel Easement
🟫	Parcel Affected by Proposed Permanent Envelope
🟥	Building Displacement
⬜	Building Footprint
□	Parcels

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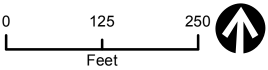
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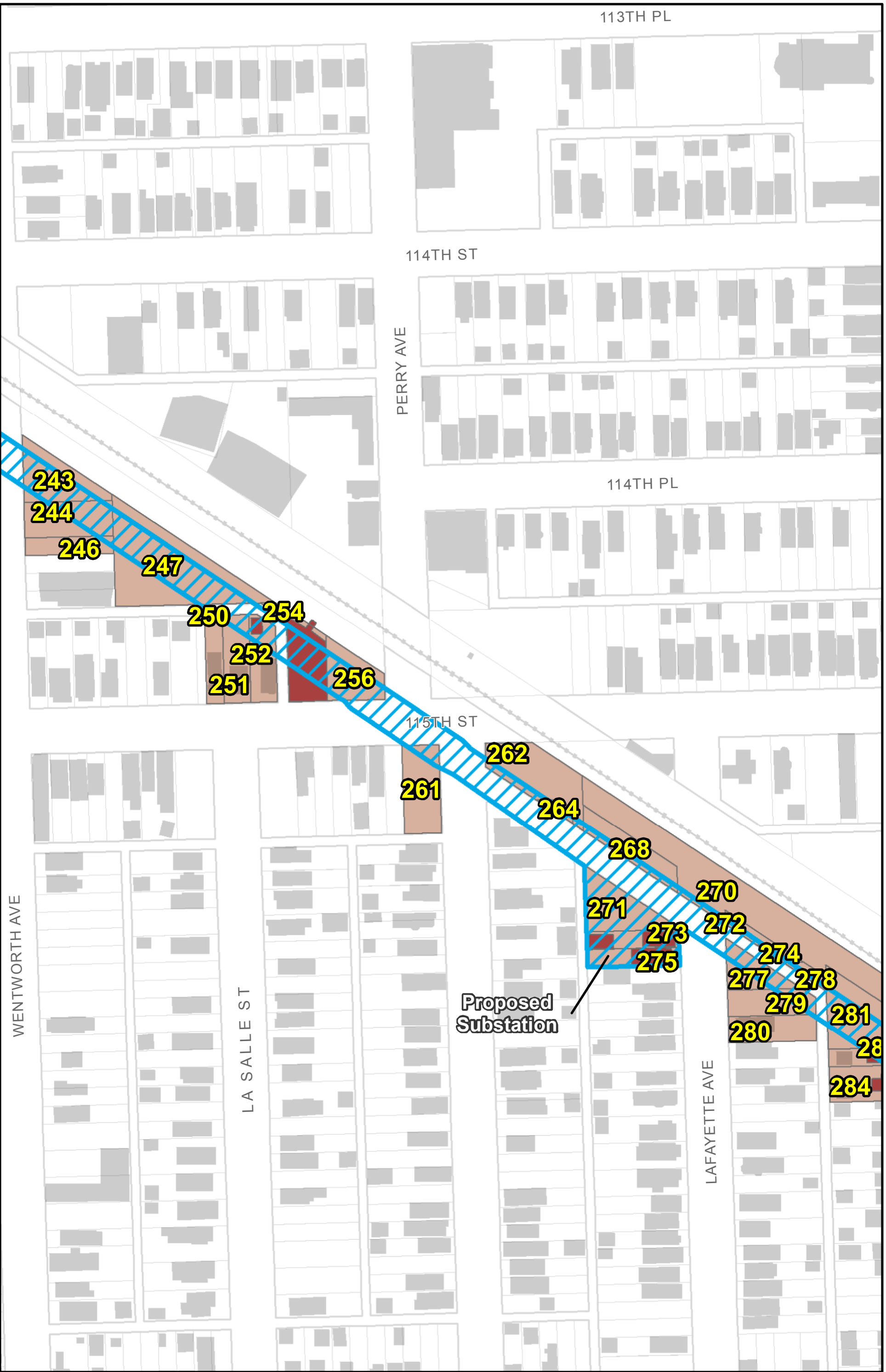
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WENTWORTH AVE
LA SALLE ST
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Proposed Substation

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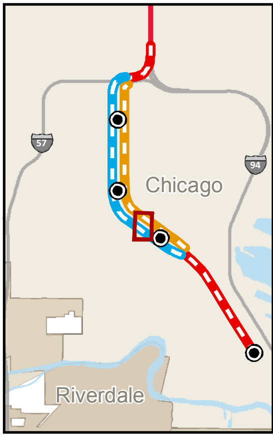
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94
Chicago
Riverdale

Legend

UPRR Rail Alternative
West Option
Sheet 11 of 21

▨ Proposed Permanent Envelope - UPRR Common
▨ Proposed Permanent Envelope - UPRR West
🟦 Parcel Easement
🟫 Parcel Affected by Proposed Permanent Envelope
🟥 Building Displacement
⬜ Building Footprint
⬜ Parcels

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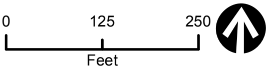
Scale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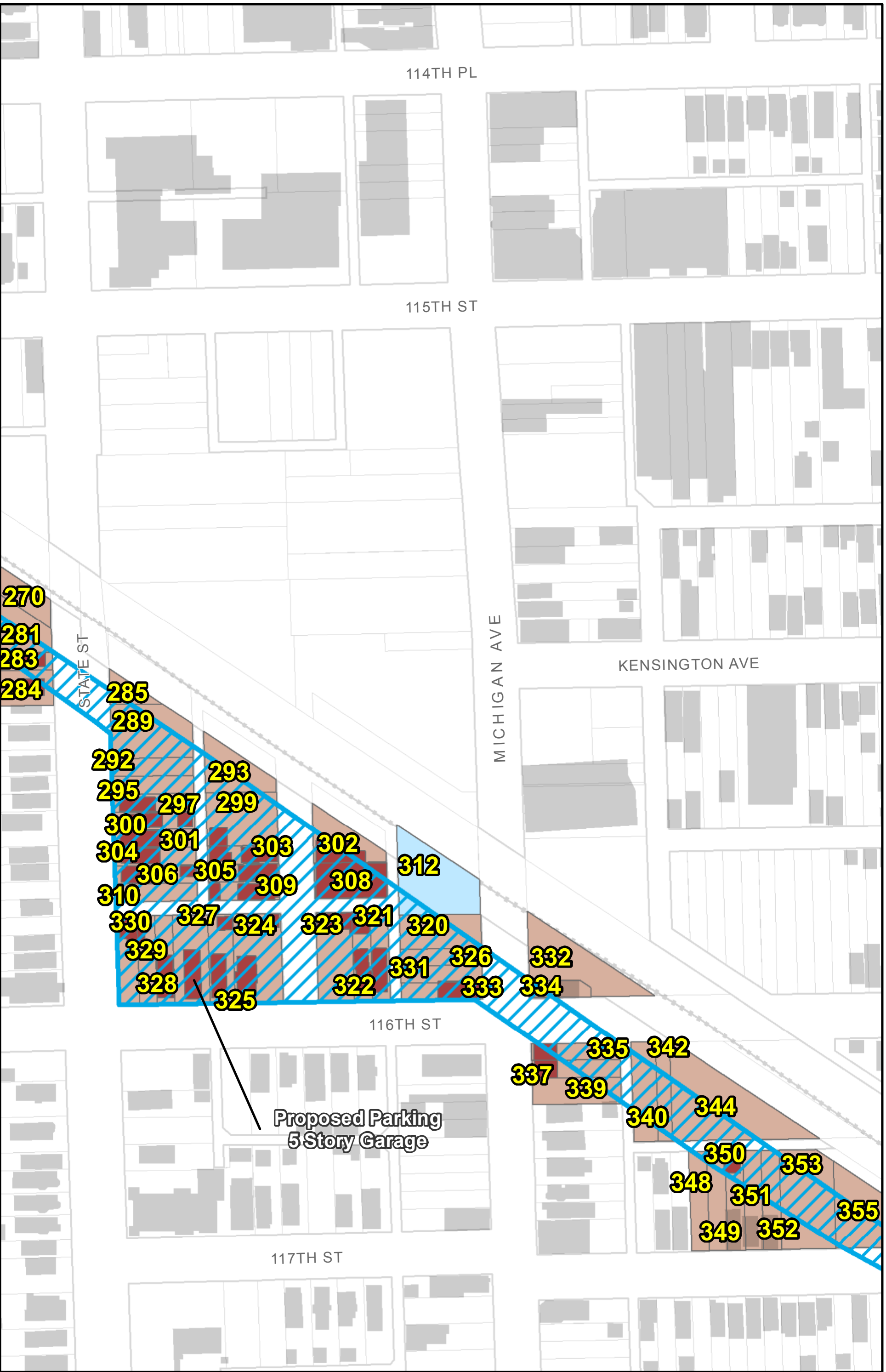
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115TH ST
KENSINGTON AVE
MICHIGAN AVE
STATE ST
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117TH ST
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295
297
299
300
301
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Proposed Parking
5 Story Garage

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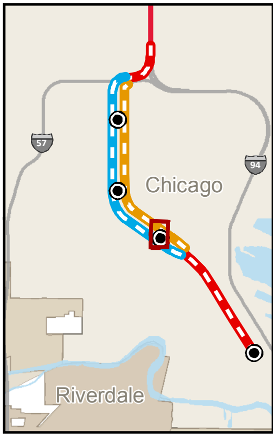
57
94
Chicago
Riverdale

Legend

**UPRR Rail Alternative
West Option**

Sheet 12 of 21

▨	Proposed Permanent Envelope - UPRR Common
▨	Proposed Permanent Envelope - UPRR West
■	Parcel Easement
■	Parcel Affected by Proposed Permanent Envelope
■	Building Displacement
■	Building Footprint
□	Parcels

Parcels and buildings that may be displaced are shown to illustrate maximum impacts and possible locations. Due to the margin for error inherent in predicting displacements based on conceptual engineering, the actual displacements for each alternative may vary from what is shown. Some of the properties shown may not ultimately need to be acquired. Land only property impacts are shown on the entire lot, however, often only portions of the lot would be required. Property acquisitions will be confirmed as project engineering progresses.

Scale

0 125 250
Feet

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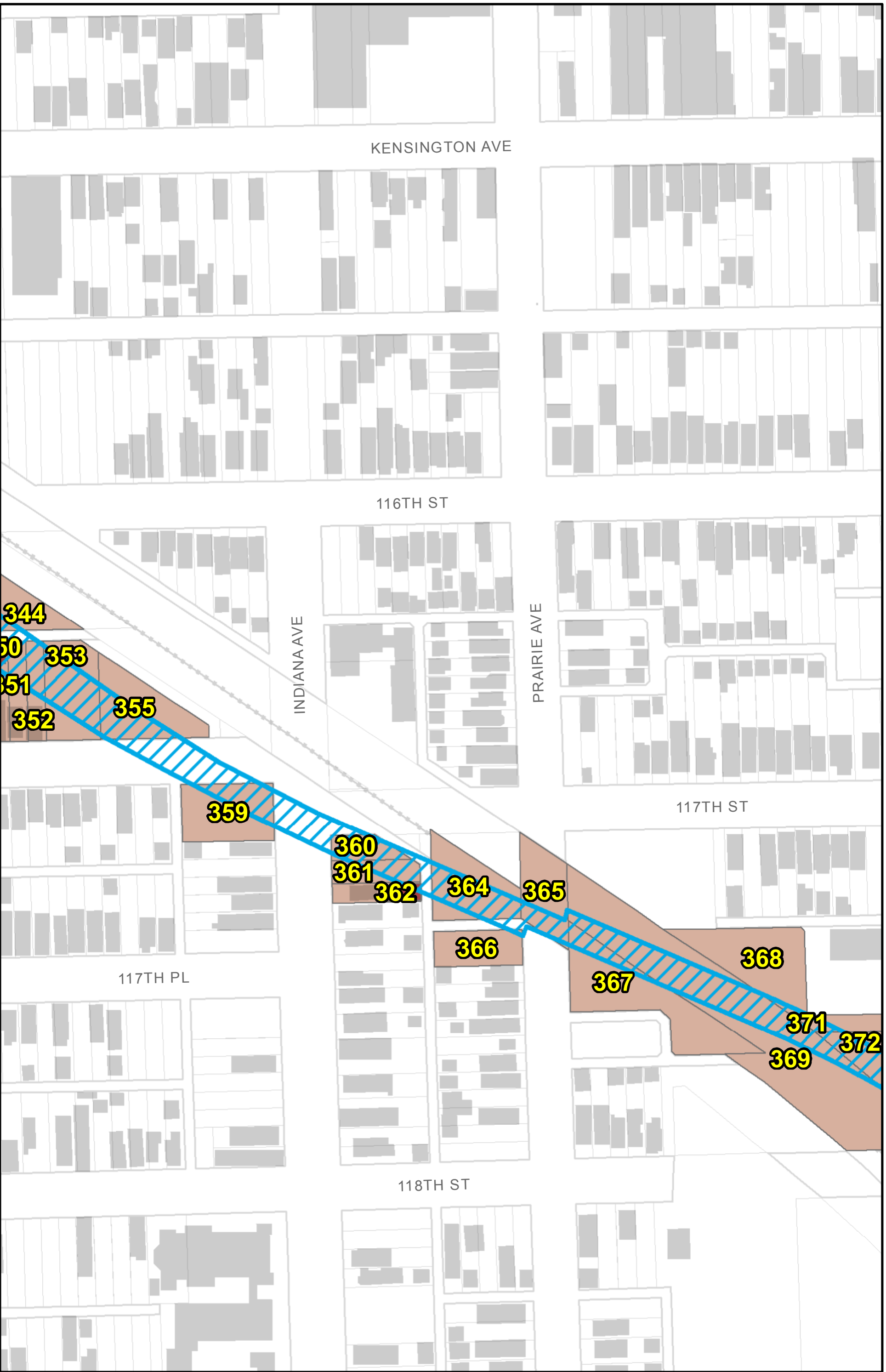
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INDIANA AVE
PRAIRIE AVE
117TH ST
117TH PL
118TH ST
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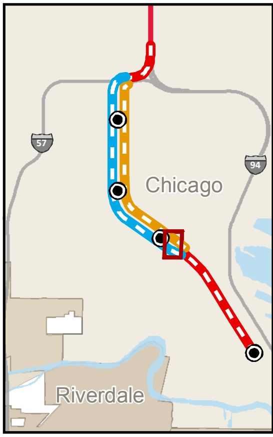
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94
Chicago
Riverdale

Legend

UPRR Rail Alternative West Option

Sheet 13 of 21

- ▨ Proposed Permanent Envelope - UPRR Common
- ▨ Proposed Permanent Envelope - UPRR West
- ▭ Parcel Easement
- ▭ Parcel Affected by Proposed Permanent Envelope
- ■ Building Displacement
- ▭ Building Footprint
- ▭ Parcels

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Scale

0 125 250

Feet

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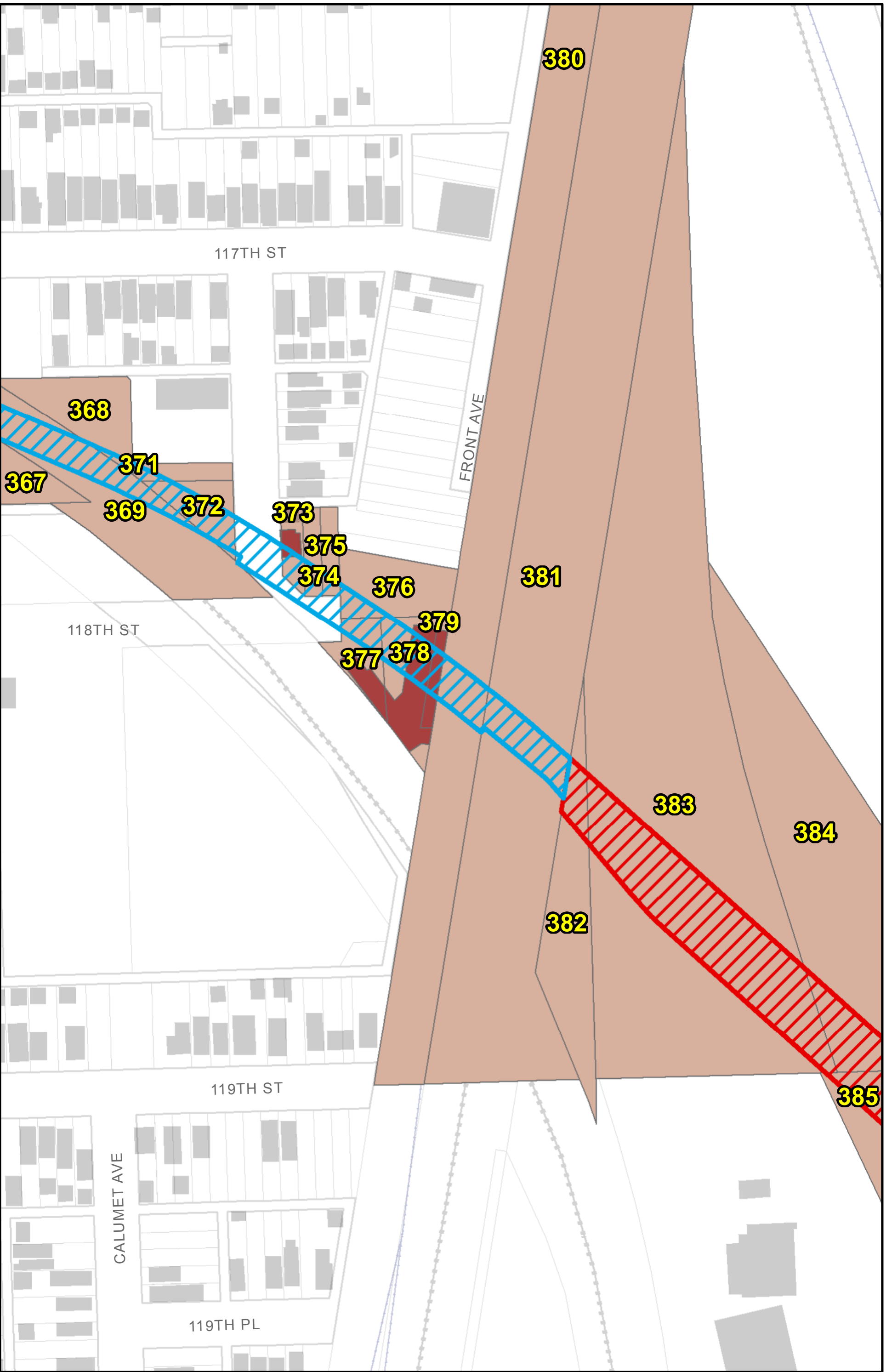
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117TH ST
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119TH PL

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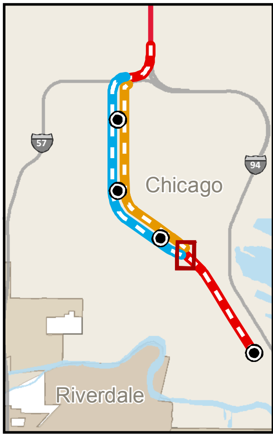
57
94
Chicago
Riverdale

Legend

UPRR Rail Alternative West Option

Sheet 14 of 21

▨	Proposed Permanent Envelope - UPRR Common
▨	Proposed Permanent Envelope - UPRR West
■	Parcel Easement
■	Parcel Affected by Proposed Permanent Envelope
■	Building Displacement
■	Building Footprint
☐	Parcels

Parcels and buildings that may be displaced are shown to illustrate maximum impacts and possible locations. Due to the margin for error inherent in predicting displacements based on conceptual engineering, the actual displacements for each alternative may vary from what is shown. Some of the properties shown may not ultimately need to be acquired. Land only property impacts are shown on the entire lot, however, often only portions of the lot would be required. Property acquisitions will be confirmed as project engineering progresses.

Scale

0 125 250

Feet

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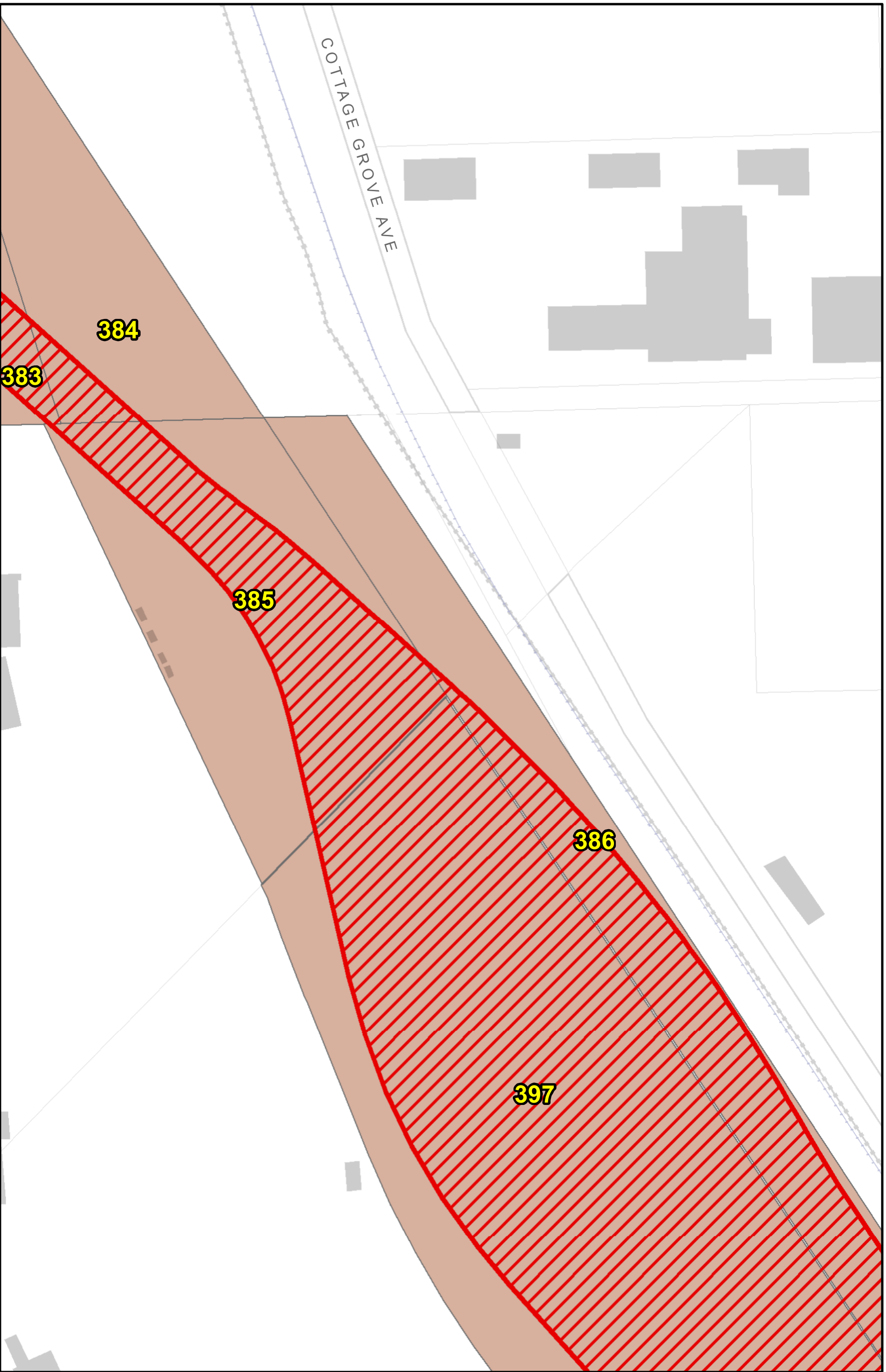

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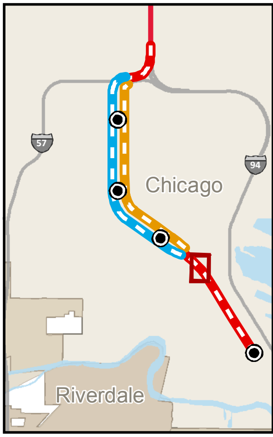

Legend

UPRR Rail Alternative West Option

Sheet 15 of 21

▨ Proposed Permanent Envelope - UPRR Common

▨ Proposed Permanent Envelope - UPRR West

🟦 Parcel Easement

🟫 Parcel Affected by Proposed Permanent Envelope

🟥 Building Displacement

⬜ Building Footprint

⬜ Parcels

Parcels and buildings that may be displaced are shown to illustrate maximum impacts and possible locations. Due to the margin for error inherent in predicting displacements based on conceptual engineering, the actual displacements for each alternative may vary from what is shown. Some of the properties shown may not ultimately need to be acquired. Land only property impacts are shown on the entire lot, however, often only portions of the lot would be required. Property acquisitions will be confirmed as project engineering progresses.

Scale

0 125 250

Feet

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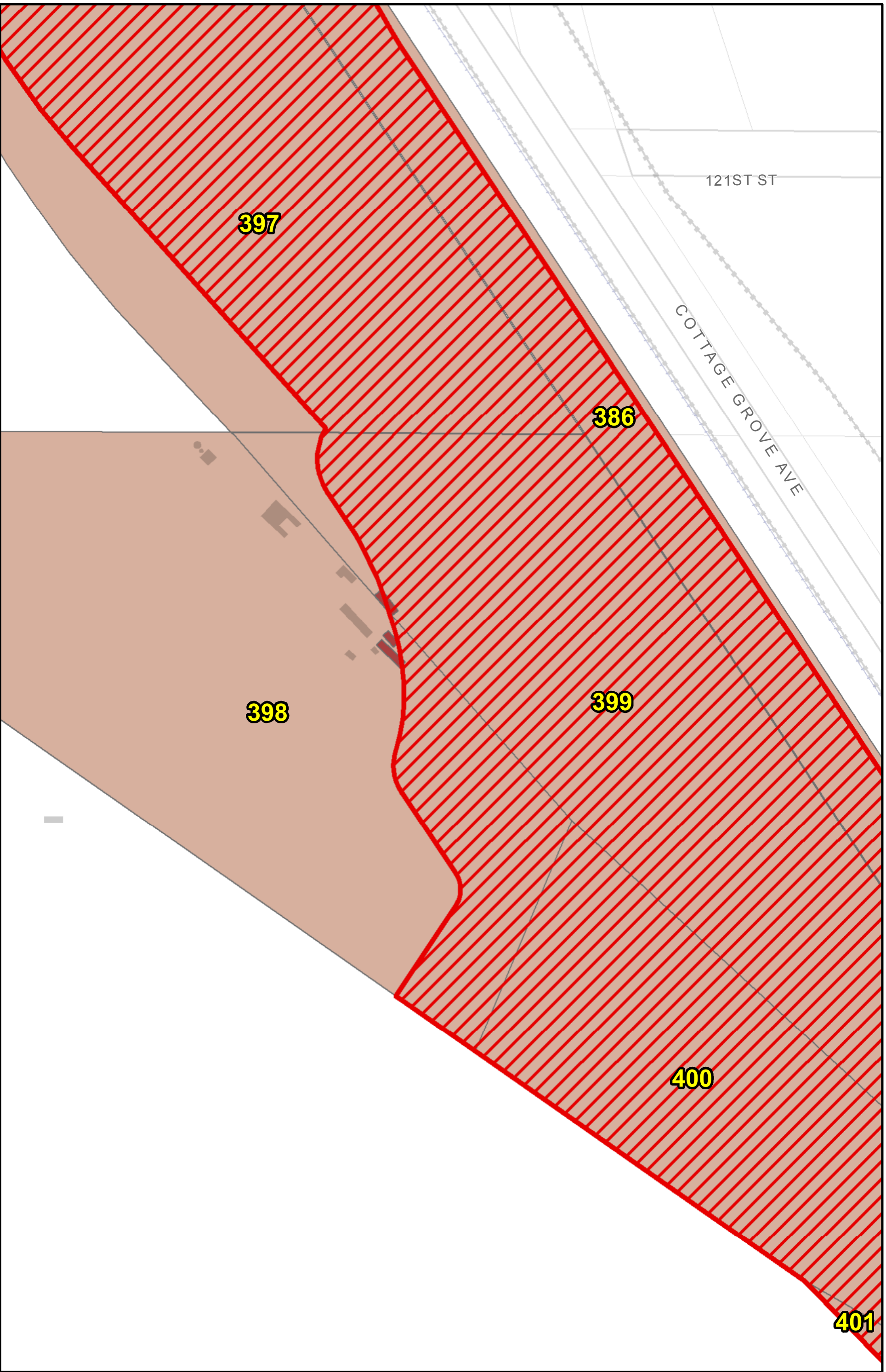

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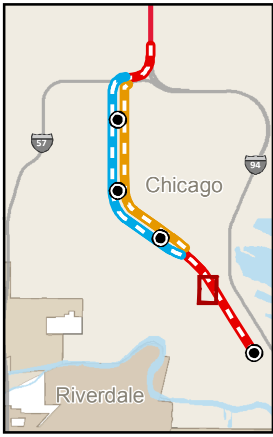

Legend

UPRR Rail Alternative West Option

Sheet 16 of 21

- ▨ Proposed Permanent Envelope - UPRR Common
- ▨ Proposed Permanent Envelope - UPRR West
- 🟦 Parcel Easement
- 🟫 Parcel Affected by Proposed Permanent Envelope
- 🟥 Building Displacement
- ⬜ Building Footprint
- ⬜ Parcels

Parcels and buildings that may be displaced are shown to illustrate maximum impacts and possible locations. Due to the margin for error inherent in predicting displacements based on conceptual engineering, the actual displacements for each alternative may vary from what is shown. Some of the properties shown may not ultimately need to be acquired. Land only property impacts are shown on the entire lot, however, often only portions of the lot would be required. Property acquisitions will be confirmed as project engineering progresses.

Scale

0 125 250

Feet

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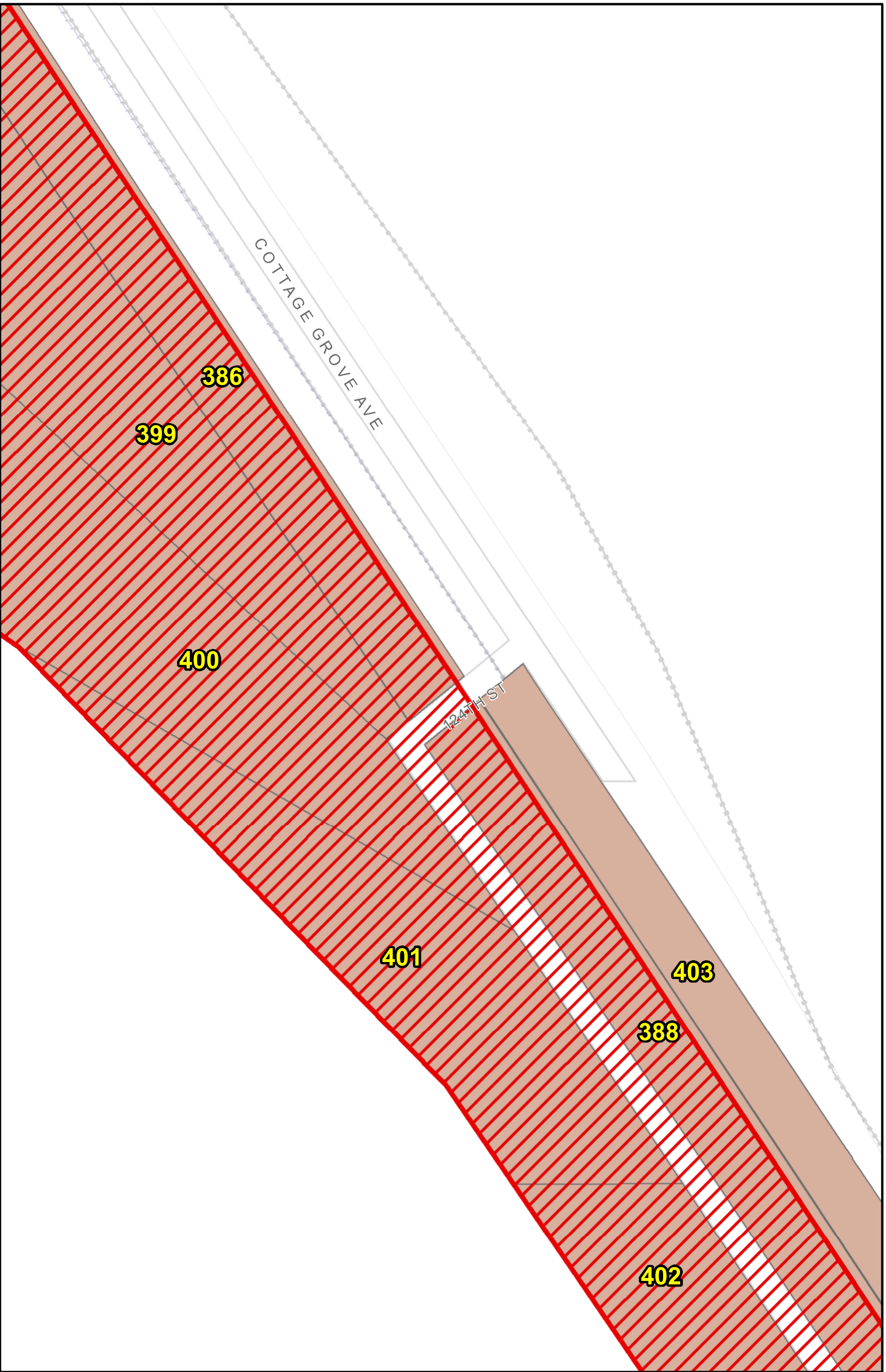

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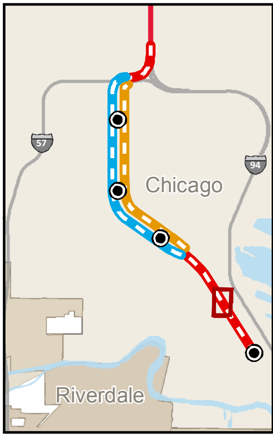


Legend

UPRR Rail Alternative West Option

Sheet 17 of 21

▨ Proposed Permanent Envelope - UPRR Common

▨ Proposed Permanent Envelope - UPRR West

🟦 Parcel Easement

🟫 Parcel Affected by Proposed Permanent Envelope

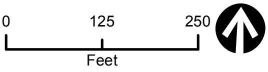
🟥 Building Displacement

⬜ Building Footprint

⬜ Parcels

Parcels and buildings that may be displaced are shown to illustrate maximum impacts and possible locations. Due to the margin for error inherent in predicting displacements based on conceptual engineering, the actual displacements for each alternative may vary from what is shown. Some of the properties shown may not ultimately need to be acquired. Land only property impacts are shown on the entire lot, however, often only portions of the lot would be required. Property acquisitions will be confirmed as project engineering progresses.

Scale



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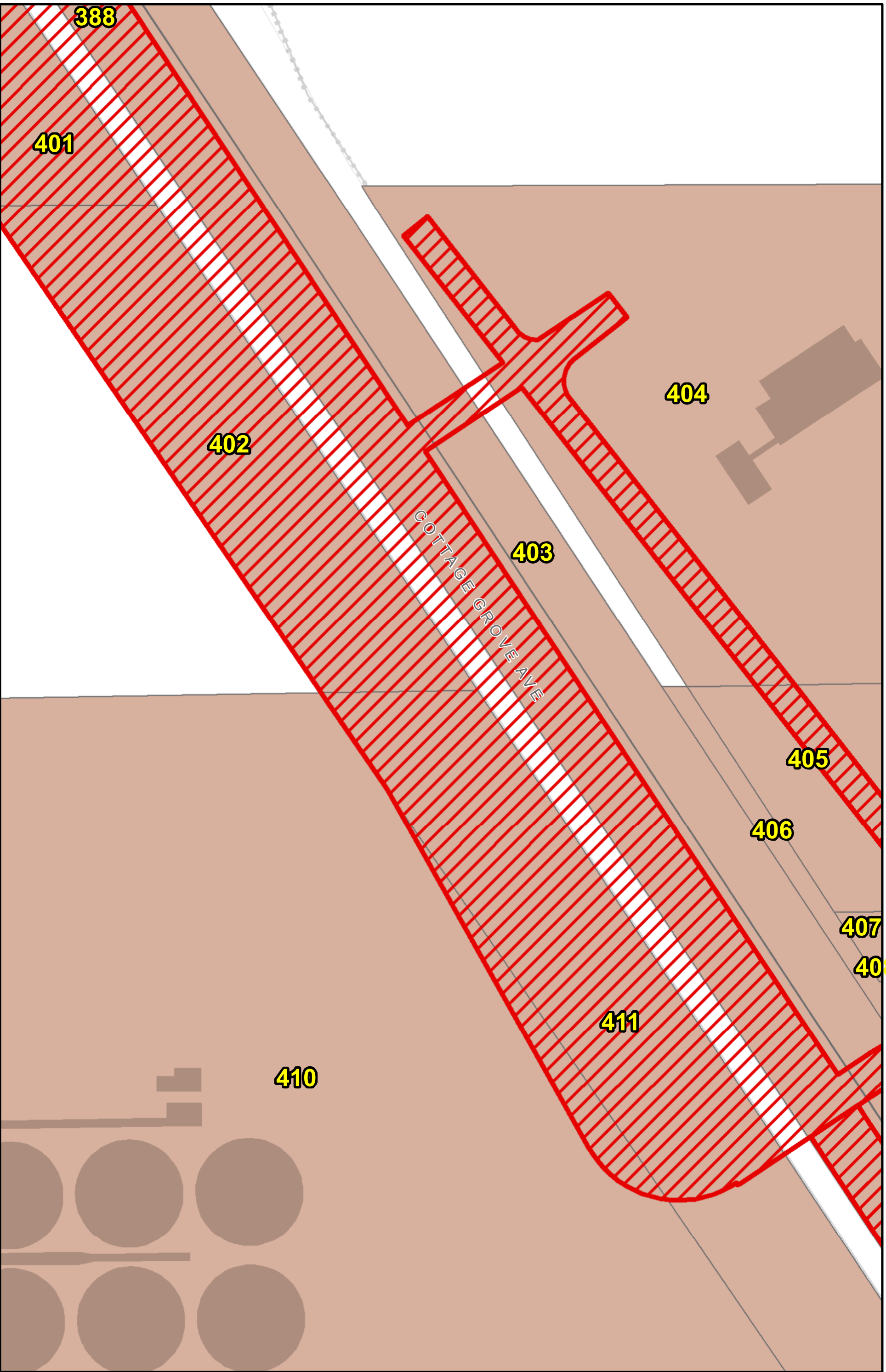
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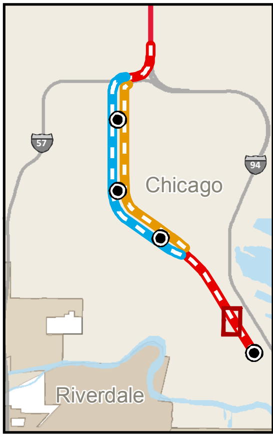
57
94
Chicago
Riverdale

Legend

UPRR Rail Alternative West Option

Sheet 18 of 21

- ▨ Proposed Permanent Envelope - UPRR Common
- ▨ Proposed Permanent Envelope - UPRR West
- 🟦 Parcel Easement
- 🟫 Parcel Affected by Proposed Permanent Envelope
- 🟥 Building Displacement
- ⬜ Building Footprint
- ☐ Parcels

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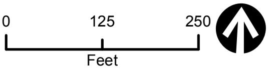
Scale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Feet

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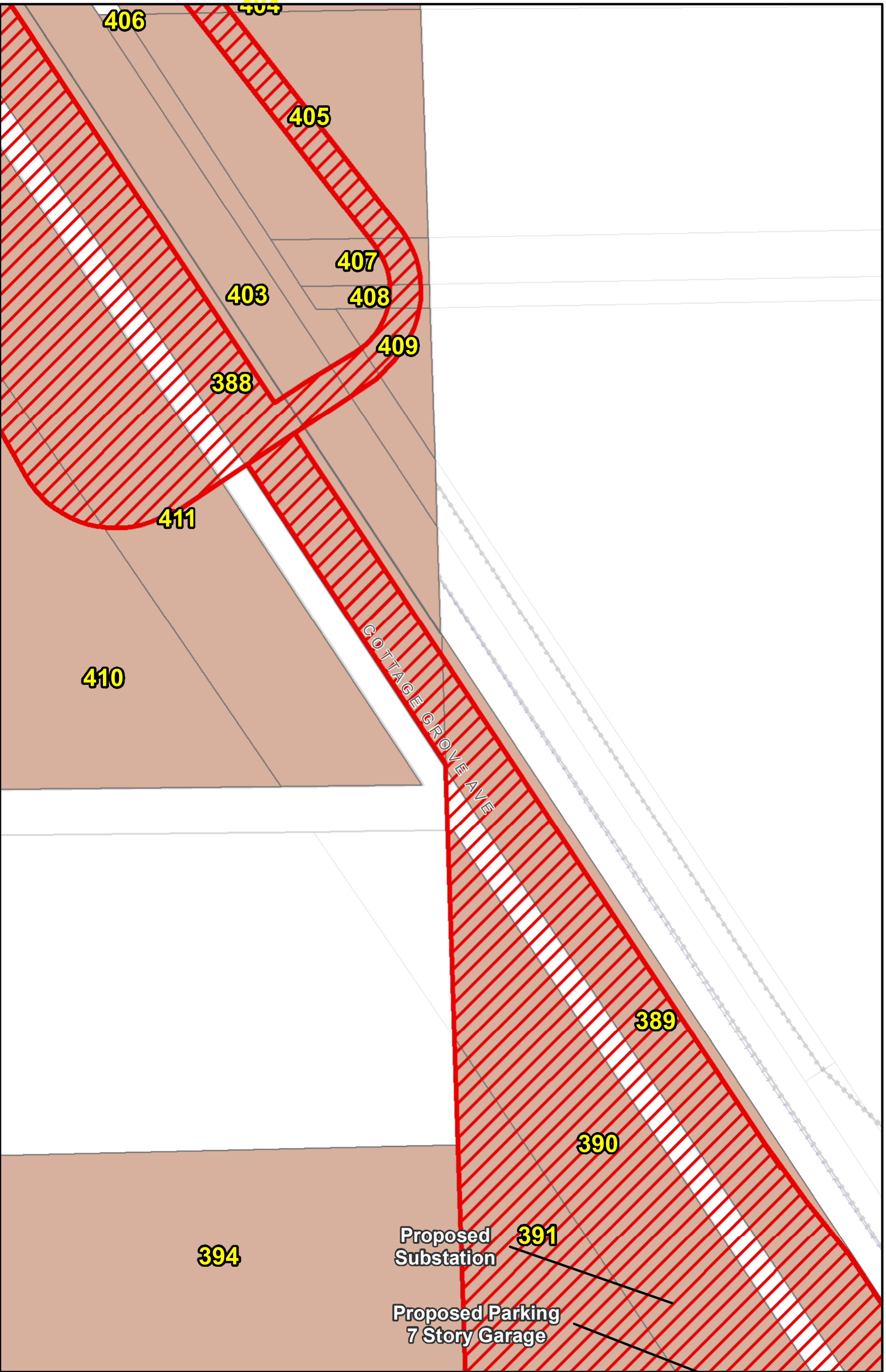
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COTTAGE GROVE AVE
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Proposed Substation
391
Proposed Parking 7 Story Garage

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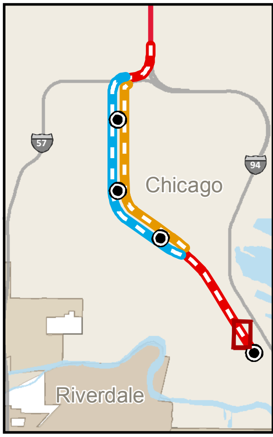
57
94
Chicago
Riverdale

Legend

UPRR Rail Alternative West Option

Sheet 19 of 21

- ▨ Proposed Permanent Envelope - UPRR Common
- ▨ Proposed Permanent Envelope - UPRR West
- 🟦 Parcel Easement
- 🟫 Parcel Affected by Proposed Permanent Envelope
- 🟥 Building Displacement
- ⬜ Building Footprint
- ☐ Parcels

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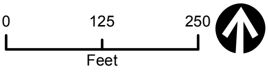
Scale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125
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Feet

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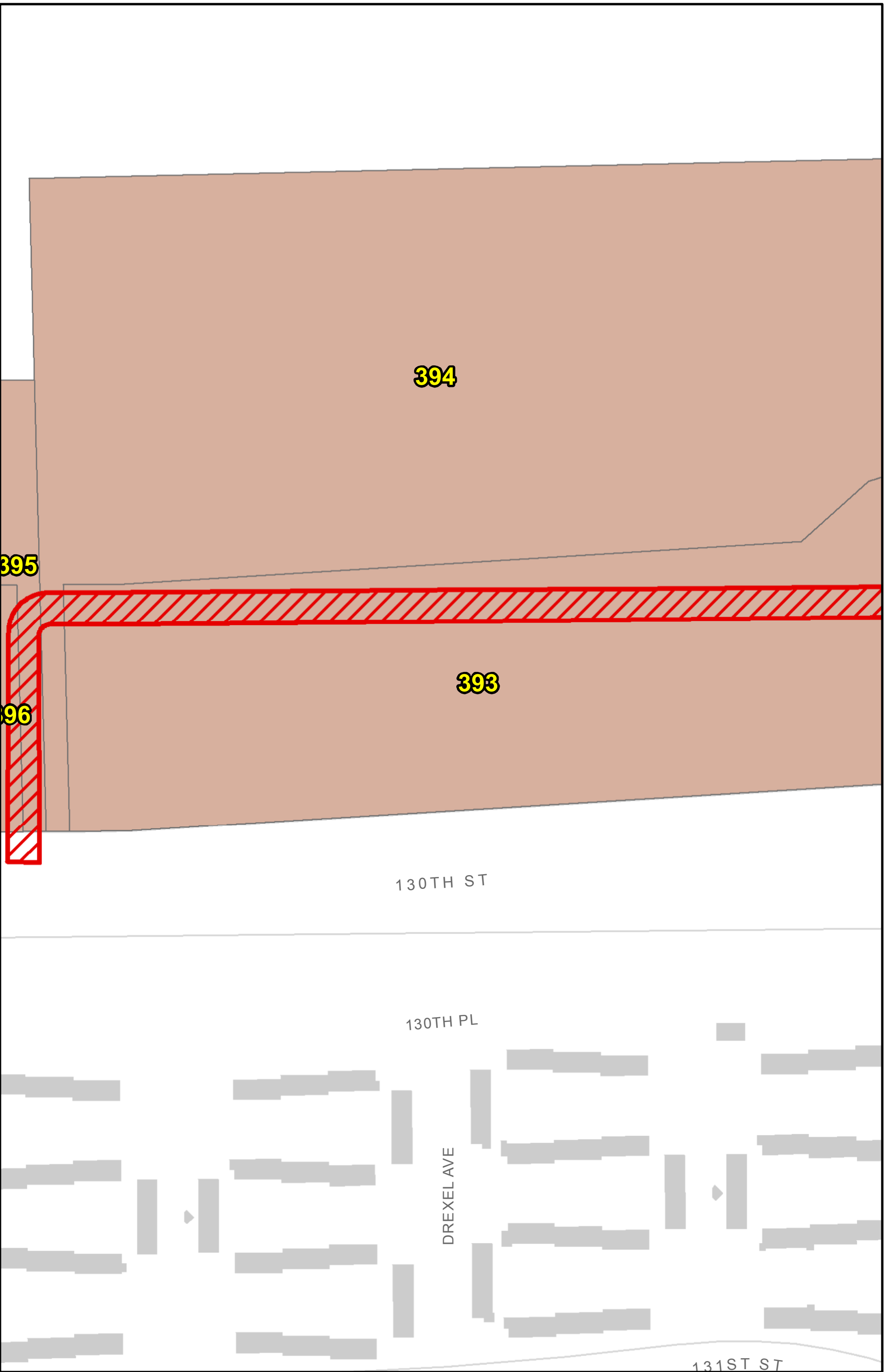

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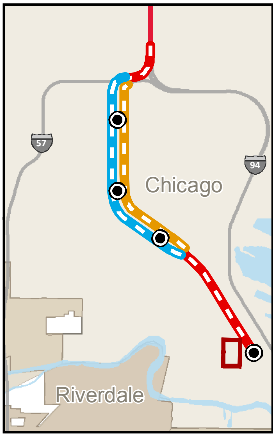

Legend

UPRR Rail Alternative West Option

Sheet 20 of 21

- ▨ Proposed Permanent Envelope - UPRR Common
- ▨ Proposed Permanent Envelope - UPRR West
- 🟦 Parcel Easement
- 🟫 Parcel Affected by Proposed Permanent Envelope
- 🟥 Building Displacement
- ⬜ Building Footprint
- ☐ Parcels

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Scale

0 125 250

Feet

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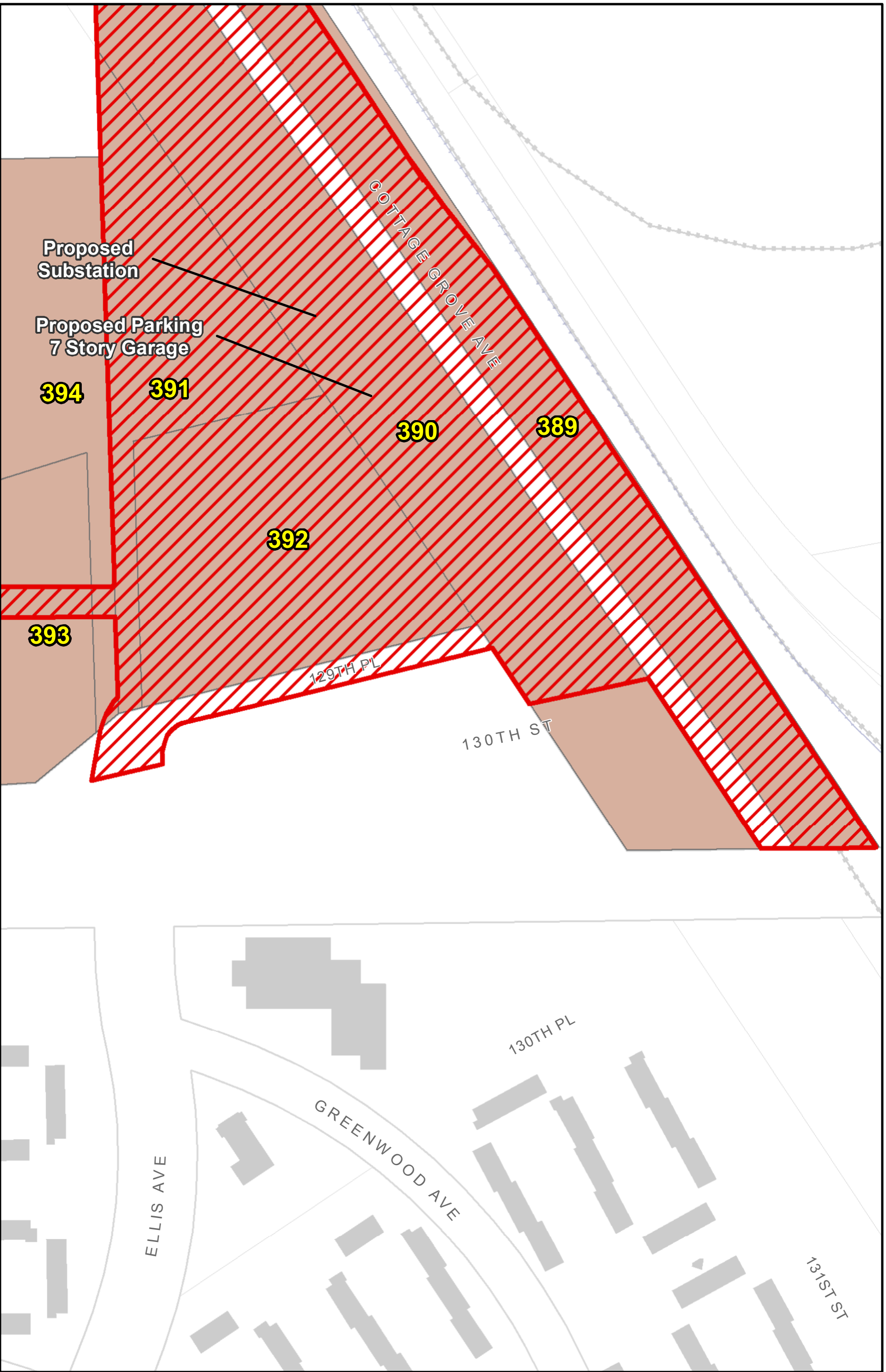

Proposed Substation
Proposed Parking 7 Story Garage
394
391
390
389
392
393
COTTAGE GROVE AVE
129TH PL
130TH ST
130TH PL
GREENWOOD AVE
ELLIS AVE
131ST ST

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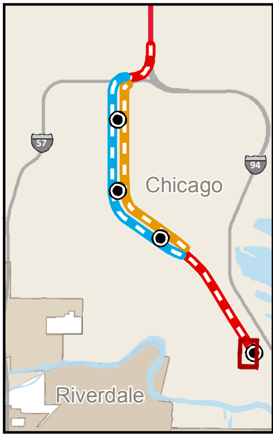

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Chicago
Riverdale

Legend

UPRR Rail Alternative West Option

Sheet 21 of 21

▨	Proposed Permanent Envelope - UPRR Common
▨	Proposed Permanent Envelope - UPRR West
🟦	Parcel Easement
🟫	Parcel Affected by Proposed Permanent Envelope
🟥	Building Displacement
⬜	Building Footprint
☐	Parcels

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Scale

0 125 250

Feet

map id: 03_20.21

Appendix L
Neighborhoods and Community Impacts Technical Memorandum

RED AHEAD
Moving Ahead to a Better Red

Red Line Extension

Chicago Red Line Extension Project

Neighborhood and Community Impacts
Technical Memorandum

August 13, 2013
Updated September 13, 2015

Prepared for:
Chicago Transit Authority
567 W. Lake Street
Chicago, IL 60661

Prepared by:
CWC Transit Group
125 S. Wacker Drive
Suite 600
Chicago, IL 60606

cta

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Appendix

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Abbreviations

BRT	Bus Rapid Transit
CHA	Chicago Housing Authority
CMAP	Chicago Metropolitan Agency for Planning
CTA	Chicago Transit Authority
EIS	Environmental Impact Statement
FSRRFS	Far South Railroad Relocation Feasibility Study
FTA	Federal Transit Administration
IDOT	Illinois Department of Transportation
MWRD	Metropolitan Water Reclamation District
NEPA	National Environmental Policy Act
PUMA	public use microdata area
RLE	Red Line Extension
ROW	right-of-way
Uniform Act	Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970
UPRR	Union Pacific Railroad
USDOT	United States Department of Transportation

Section 1
Summary

This technical memorandum analyzes the potential impacts of the Red Line Extension (RLE) Project on neighborhoods and communities. For the purposes of this analysis, the affected environment includes the Village of Calumet Park and the Chicago community areas of Washington Heights, Roseland, Morgan Park, West Pullman, Pullman, and Riverdale.

The alternatives analyzed include the No Build Alternative, the Bus Rapid Transit (BRT) Alternative, the Union Pacific Railroad (UPRR) Rail Alternative, and the Halsted Rail Alternative. The No Build Alternative would not involve any new construction beyond projects that are already planned and funded. The BRT Alternative would add enhanced bus service along Michigan Avenue connecting the 95th Street Terminal to 130th Street. The UPRR Alternative would extend the Chicago Transit Authority's (CTA's) Red Line heavy rail service from the existing 95th Street Terminal to 130th Street, primarily along the existing UPRR freight right-of-way (ROW). The UPRR Rail Alternative has three options for the positioning of the CTA tracks along the UPRR corridor: the ROW, East, and West Options. The Halsted Rail Alternative would extend the Red Line from 95th Street Terminal to Vermont Avenue, primarily along the median of Halsted Street.

This technical memorandum evaluates the potential impacts of the alternatives, including the yard and shop sites at 120th Street for the UPRR Rail Alternative and at 119th Street for the Halsted Rail Alternative, in accordance with the National Environmental Policy Act (NEPA). Criteria for evaluation include consideration of changes to community character, cohesion, resources, mobility, and development. The overall impacts of the RLE Project would be beneficial. The rail alternatives would improve quality of life, provide better access to jobs, and support the economic development of the Far South Side. Some location-specific adverse impacts would also occur as a result of the alternatives. Potential mitigation measures are identified to address potential adverse impacts where possible. The impact findings for the RLE alternatives are as follows:

- The No Build Alternative would not have adverse neighborhood and community impacts; however, it would lack the livability, mobility, and other community benefits that the other alternatives would provide.
- The BRT Alternative would not have adverse neighborhood and community impacts after mitigation, and impacts would be beneficial overall. The BRT Alternative would provide minor improvements in transit service, mobility, community character, and cohesion; however, it would have fewer livability, mobility, and other community benefits than the rail alternatives.
- The UPRR Rail Alternative ROW Option would not have adverse neighborhood and community impacts after mitigation, and impacts would be beneficial overall. The new rail

extension would facilitate access to community resources near the station locations, especially for transit-dependent residents. It would provide substantial livability and mobility improvements for the neighborhoods in the project area, and help spur economic development near stations. It would also reduce the isolation of Altgeld Gardens and the other Riverdale residential areas. The ROW Option would also require the fewest displacements of any of the rail alternatives.

- The UPRR Rail Alternative East Option would have adverse impacts at 117th Street and Prairie Avenue in West Pullman because of visual impacts from the elevated track structure that could not be mitigated. Mitigation measures would not be sufficient to offset these impacts. The East Option would also provide benefits similar to those of the ROW Option. The East Option would require the greatest number of displacements of any of the rail alternatives.

- The UPRR Rail Alternative West Option would have adverse impacts that could not be mitigated because of visual impacts from the elevated track structure between 99th and 103rd Streets in Washington Heights. The 103rd Street station area in Roseland and Washington Heights, and at the Michigan Avenue station park & ride facility in West Pullman would also result in adverse visual impacts. Mitigation measures would not be sufficient to offset these impacts. The West Option would also provide benefits similar to the ROW Option and the East Option. The West Option would require fewer displacements than the East Option, and a greater proportion of the displacements would be industrial instead of residential.

- The Halsted Rail Alternative would have an adverse impact that cannot be mitigated in the West Pullman community along Green Street between Vermont Avenue and 128th Place. The single-family homes on the east side of the block would be acquired and removed to construct a seven-story park & ride garage. The garage would be out of scale and inconsistent with the single-story residential character of the neighborhood. No available mitigation measures would effectively offset this adverse impact. The Halsted Rail Alternative would also provide beneficial livability and mobility improvements for the neighborhoods in the project area, and help revive the Halsted Street commercial corridor. The new rail extension would facilitate access to community resources near the station locations, especially for transit-dependent residents. It would also serve communities that are geographically isolated, but would not directly serve Altgeld Gardens.

All other impacts would be mitigated, or would be beneficial, as discussed further in Section 5.

Updated July 28, 2015
In August 2014, based on the technical analysis and public input until then, CTA announced the NEPA Preferred Alternative—the UPRR Rail Alternative. CTA is considering two alignment (route) options of this alternative: the East Option and the West Option. At this time, CTA is also considering only the South Station Option of the 130th Street Station. In late 2014 and early 2015, CTA conducted additional engineering on the East and West Options to refine the East and West Option alignments. Appendix A of this technical memorandum summarizes the refined alignments

and any additional or different impacts that would result. The information in Appendix A supersedes information presented in other chapters of this technical memorandum.

Section 2
Project Description

The CTA is proposing to extend the Red Line from the existing 95th Street Terminal to the vicinity of 130th Street, subject to the availability of funding. The proposed RLE would include four stations. Each station would include bus transfer and parking facilities. This project is one part of the Red Ahead Program to extend and enhance the entire Red Line. The CTA is also planning 95th Street Terminal improvements that are anticipated to be completed prior to the proposed RLE construction.

The project area is 11 miles south of the Chicago central business district (commonly referred to as the Loop) and encompasses approximately 20 square miles. The boundaries of the project area are 95th Street on the north, Ashland Avenue on the west, Stony Island Avenue on the east, and the Calumet-Sag Channel/Little Calumet River and 134th Street on the south. The I-57 Expressway and I-94 Bishop Ford Freeway cross the western and eastern edges of the project area, respectively. Lake Calumet is in the eastern portion of the project area. The project area encompasses parts of nine community areas in the City of Chicago and the eastern section of the Village of Calumet Park. Chicago community areas include Beverly, Washington Heights, Roseland, Morgan Park, Pullman, West Pullman, Riverdale, Hegewisch, and South Deering. The project area comprises residential (primarily single-family), industrial (both existing and vacant), transportation (including freight), and commercial development.

The Draft Environmental Impact Statement (EIS) focuses on the following alternatives (shown in Figure 2-1), which emerged from the Alternatives Analysis and the NEPA scoping process:

- No Build Alternative
- BRT Alternative
- UPRR Rail Alternative
  - ROW Option
  - East Option
  - West Option
- Halsted Rail Alternative

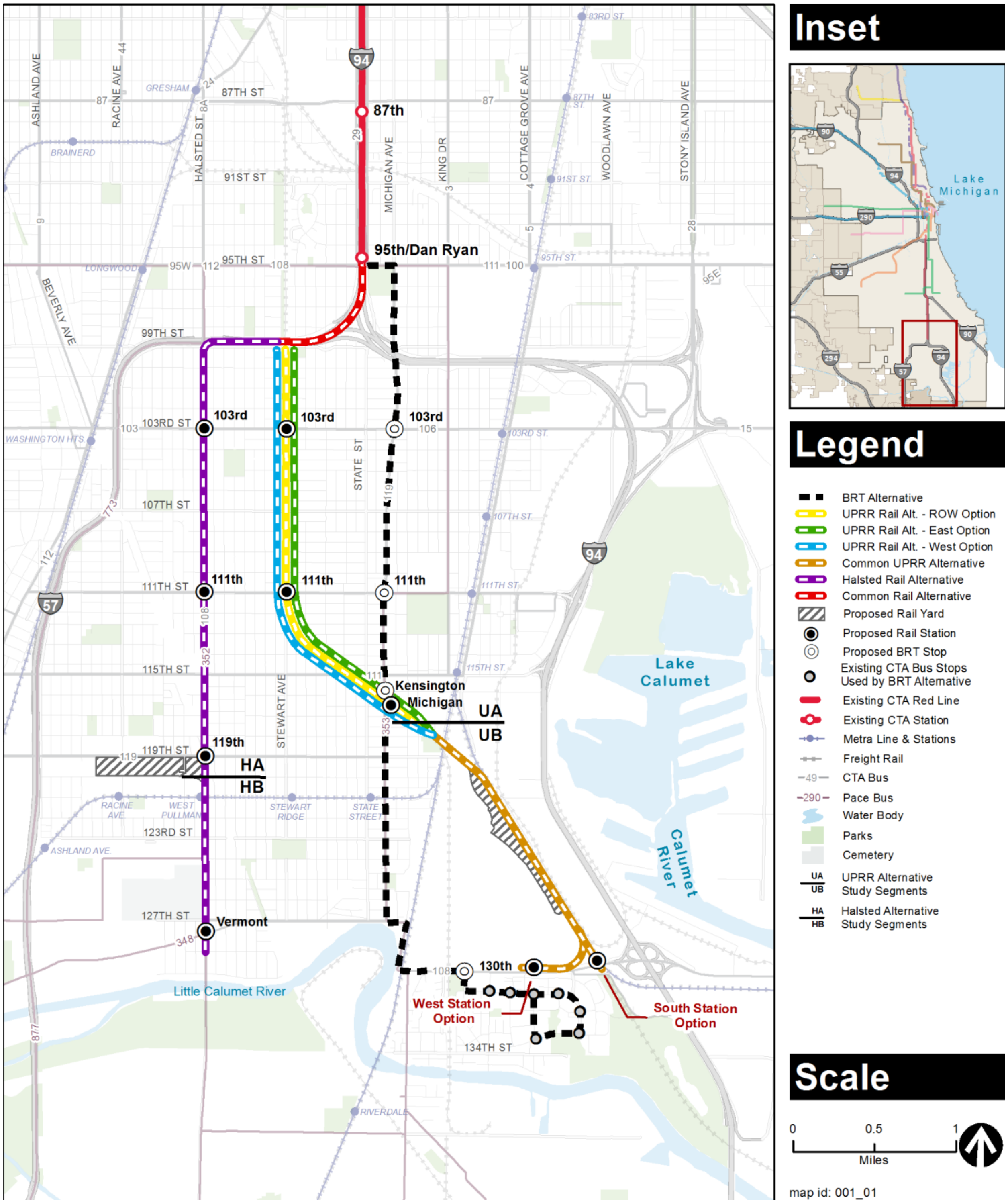

87th
95th/Dan Ryan
103rd
103rd
103rd
111th
111th
111th
Kensington
Michigan
UA
UB
119th
HA
HB
Vermont
130th
West Station Option
South Station Option
87TH ST
91ST ST
95TH ST
99TH ST
103RD ST
107TH ST
111TH ST
115TH ST
119TH ST
123RD ST
127TH ST
134TH ST
ASHLAND AVE
RACINE AVE
HALSTED ST
MICHIGAN AVE
KING DR
COTTAGE GROVE AVE
WOODLAWN AVE
STONY ISLAND AVE
STATE ST
STEWART AVE
BEVERLY AVE
GRESHAM
BRAINERD
LONGWOOD
WASHINGTON HTS
RACINE AVE
WEST PULLMAN
STEWART RIDGE
STATE STREET
ASHLAND AVE
RIVERDALE
83RD ST
87TH ST
91ST ST
95TH ST
103RD ST
107TH ST
111TH ST
115TH ST
94
57
Lake Calumet
Calumet River
Little Calumet River
Inset
Lake Michigan
90
94
290
55
294
57
Legend
BRT Alternative
UPRR Rail Alt. - ROW Option
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
Common UPRR Alternative
Halsted Rail Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Proposed BRT Stop
Existing CTA Bus Stops Used by BRT Alternative
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
49 CTA Bus
290 Pace Bus
Water Body
Parks
Cemetery
UA UB UPRR Alternative Study Segments
HA HB Halsted Alternative Study Segments
Scale
0
0.5
1
Miles
map id: 001_01

Figure 2-1: Red Line Extension Project Alternatives

The No Build Alternative is a required alternative as part of the NEPA environmental analysis and is used for comparison purposes to assess the relative benefits and impacts of extending the Red Line. The No Build Alternative is carried into the Draft EIS phase of the project development regardless of its performance versus the build alternatives under consideration. No new infrastructure would be constructed as part of the No Build Alternative other than committed transportation improvements that are already in the Chicago Metropolitan Agency for Planning (CMAP) Fiscal Year 2010–2015 Transportation Improvement. The Transportation Improvement Program projects within the project area consist of improvements to the 95th Street Terminal, four bridge reconstructions, several road improvement projects including resurfacing and coordination of signal timing on 95th Street, work on Metra's facilities, construction of a bicycle/pedestrian multi-use trail, and preservation of historic facilities. The No Build Alternative includes regular maintenance of existing track and structures, and bus transit service would be focused on the preservation of existing services and projects. All elements of the No Build Alternative are included in each of the other alternatives. Under this alternative, travel times would not improve from existing conditions.

The BRT Alternative (formerly referred to as the Transportation Systems Management Alternative) is a 5.0-mile, limited-stop, enhanced BRT route, which is assumed to operate 24 hours per day between the existing 95th Street Terminal and the intersection of 130th Street and Eberhart Avenue. No dedicated bus lanes would be provided for the BRT Alternative; however, parking lanes would be removed for some portions of the alignment and four stops with improved bus shelters and park & ride facilities would be created at 103rd Street and Michigan Avenue, 111th Street and Michigan Avenue, Kensington Avenue and Michigan Avenue, and 130th Street and Eberhart Avenue. Although BRT service elements would not continue south of the 130th Street stop, the bus route would continue through Altgeld Gardens along the existing route with six stops. The BRT Alternative would be consistent with bus routing changes that may occur as part of improvements to the 95th Street Terminal. Under this alternative, travel times between 130th Street and the Loop would improve over existing conditions.

The UPRR Rail Alternative is a 5.3-mile extension of the heavy rail transit Red Line from its existing 95th Street Terminal to 130th Street, just west of I-94. The Chicago Transit Board designated the UPRR Rail Alternative as the Locally Preferred Alternative at its August 12, 2009 board meeting. This alternative includes construction and operation of new heavy rail transit tracks, mostly in existing transportation corridors. The UPRR Rail Alternative has three options for alignment (ROW, East, and West), all of which would include operation on elevated structure from 95th Street to just past the Canadian National/Metra Electric District tracks near 119th Street. The alignment would then transition to at-grade through an industrial area with no public through streets, terminating at 130th Street in the vicinity of Altgeld Gardens. Four new stations would be constructed at 103rd Street, 111th Street, Michigan Avenue, and 130th Street. The 130th Street station would be the terminal station, with two options under evaluation: the South Station Option and the West Station Option. A new yard and shop facility would be sited near 120th Street and Cottage Grove Avenue. The bus routes in the vicinity of the UPRR Rail Alternative would be modified to enhance connectivity between the Red Line and the bus network. The hours of operation and service frequency for the UPRR Rail Alternative are assumed to be the same as

for the current Red Line. Under this alternative, travel times between 130th Street and the Loop would improve substantially over existing conditions.

The Halsted Rail Alternative is a 5.0-mile heavy rail transit extension of the existing Red Line. In this alternative, the Red Line would operate on an elevated structure running south from 95th Street along I-57 until Halsted Street. The alignment would then turn south and continue along Halsted Street to the intersection of Halsted Street and Vermont Avenue near 127th Street. This alternative would include four new stations at 103rd Street, 111th Street, 119th Street, and Vermont Avenue. The Vermont Avenue station would be the terminal station. A new yard and shop would be sited west of Halsted Street and between the 119th Street and Vermont Avenue stations. The bus routes in the vicinity of the Halsted Rail Alternative would be modified to enhance connectivity to the Red Line. The hours of operation and service frequency for the Halsted Rail Alternative are assumed to be the same as for the current Red Line. Under this alternative, travel times between 127th Street and the Loop would improve substantially over existing conditions. This alternative would not extend rail to Altgeld Gardens, which would be served by bus connecting to the Vermont terminal station.

Section 3
Methods for Impact Evaluation

Major transit infrastructure projects can affect the social and physical environment of neighborhoods and communities. Construction and operation of the RLE Project could result in changes to the physical layout of the surrounding areas, demographics, and land uses. The project could also change the sense of neighborhoods in local communities. This technical memorandum describes the methods used for the analysis of potential physical and social impacts on existing communities and neighborhoods.

3.1 Regulatory Framework

3.1.1 Federal

Federal regulations for analysis of potential impacts on communities and neighborhoods include NEPA and guidelines provided by the United States Department of Transportation (USDOT) Federal Transit Administration (FTA). A summary of the federal guidance for determining impact significance is presented in Section 3.2.

3.1.2 State

State regulations for analysis of potential impacts on communities and neighborhoods include the 2007 Illinois Department of Transportation (IDOT) *Community Impact Assessment Manual*. Section 3.2 describes the thresholds of significance identified by this manual.

3.1.3 Local

There are no identified local regulations at this time related to neighborhood and community impacts. As part of the project's technical research and analysis phase, this section may be updated with relevant citations of regional and local land use plans and zoning.

3.2 Impact Analysis Thresholds

NEPA does not set specific thresholds of significance for community impacts. Guidance provided by USDOT and IDOT was used as the basis for a qualitative evaluation of community impacts. The community impacts analysis was structured according to the IDOT Community Impact Assessment Manual, which includes four primary impact categories: community impacts as a result of relocations, community impacts as a result of economic development, community impacts as a result of land use changes, and community (cohesion) impacts. The USDOT (2008) guidance identifies qualitative criteria in question form for consideration when determining whether an adverse impact would occur. For the purpose of this EIS, the IDOT impact categories were used as primary screening for impacts and the USDOT qualitative impact criteria were generally used as a secondary screening for impacts, as summarized below.

Some of the findings are made in conjunction with the analysis from the following technical memoranda: Displacements and Relocations of Existing Uses; Land Use and Economic

Development; Visual and Aesthetic Conditions; Parklands and Community Facilities; Transportation; Safety and Security; and Environmental Justice. The community impact analysis considered overall impacts as they relate to the following four primary impact categories and related qualitative criteria.

3.2.1 Relocation Impacts on Neighborhoods

The IDOT guidance states that the following must be included in the analysis: estimate of displaced households/businesses; discussion of available alternative housing/business locations in the area; description of actions proposed to mitigate relocation problems; discussion of early consultation with local governments, business owners, and social agencies; and statements indicating that housing of last resort will be available without discrimination. The USDOT guidance provides qualitative criteria in question form for analysts to consider when determining whether an adverse impact would occur, including the following:

- Changes in Population: Would the project cause redistribution of the populations or an influx or loss of population?
- Displacement of Public Facilities: Would the project result in relocation or displacement of public facilities or community centers (e.g., places of worship)?
- Residential Displacements: How many residences would be displaced? What type(s) (e.g., multi-unit homes, single-family, rural residential, others)? Would the displaced residents have special needs (e.g., disabled, minority, elderly residents)?
- Business Displacement: How many businesses would be displaced? What type(s)? Do they have unique characteristics, such as specialty products or a unique customer base?
- Relocation Sites: Would there be available sites to accommodate those displaced?

This analysis will consider the community impacts with respect to the above criteria.

3.2.2 Economic Impacts on Neighborhoods

The IDOT guidance states that the following discussions must be included in the analysis: local and regional economic impacts; impacts on the economic vitality of existing businesses; and impacts on established business districts. The USDOT guidance provides qualitative criteria in question form for analysts to consider when determining whether an adverse impact would occur, including the following:

- Business and Employment Impacts: Would the project encourage businesses to move to the area, relocate to other locations within the area, close, or move outside the area?
- Short-term Impacts: How would the local economy be affected by construction activities? Would there be both positive (jobs generated) and negative (detours and loss of access) impacts?

- Business Visibility: Would the project alter business visibility for traffic-based businesses? How would visibility and access changes alter business activity?

- Tax Base: What would be the impact on the tax base (from taxable property removed from base, changes in property values, changes in business activity)?

- Property Values: What would be the likely impact on property values caused by relocations or change in land use?

This analysis considers the community impacts with respect to the above criteria and also uses the Major Capital Investment Projects FY 2013 Final Rule as references.

3.2.3 Land Use Impacts on Neighborhoods

The IDOT guidance states that the following discussions must be included in the analysis: compliance with local planning; impact on existing land uses; and joint development. The USDOT guidance provides qualitative criteria in question form for analysts to consider when determining whether an adverse impact would occur, including the following:

- Land Use Patterns: Would the project open new areas for development? Would it induce changes in land use and density? What changes might be expected?

- Compatibility with Plans: Would the project be consistent with local land use plans and zoning?

- Compatibility with Plans: Would the project be compatible with community goals? Have aesthetics surfaced as a community concern?

This analysis considers the community impacts with respect to the above criteria and also uses the Capital Investment Program FY 2013 Annual Report Evaluation and Rating Process and Final Rule as references.

3.2.4 Community Cohesion Impacts on Neighborhoods

The IDOT guidance states that the following discussions must be included in the analysis: changes in neighborhoods or community cohesion; changes in travel patterns; impacts on schools, recreation areas, churches, businesses, police/fire protection districts; impacts on public safety; and benefits and/or adverse impacts on special groups (e.g., disabled persons). The USDOT guidance provides qualitative criteria in question form for analysts to consider when determining whether an adverse impact would occur, including the following:

- Community Cohesion and Interaction: How would the project affect interaction among persons and groups? How would it change social relationships and patterns?

- Isolation: Would certain people be separated or set apart from others?

- Social Values: Would the project cause a change in social values?

- Quality of Life: What would be the perceived impact on quality of life?
- Barrier Effect: Would a wall or barrier effect be created (such as from noise walls or fencing) or would a barrier be removed (such as an embankment)?
- Sounds: Would noise or vibration increase?
- Other Physical Intrusions: Would dust or odor increase or decrease? Would there be a shadowing impact on property?
- Aesthetics: Would the community's aesthetic character be changed?
- Pedestrian and Bicycle Access: How would the project affect non-motorist access to businesses, public services, schools, and other facilities? Would the project impede or enhance access between residences and community facilities and businesses? Would it shift traffic?
- Public Transportation: How would the project affect access to public transportation?
- Vehicular Access: How would the project affect short- and long-term vehicular access to businesses, public services, and other facilities? Would it affect parking availability?
- Use of Public Facilities: Would the project lead to or help alleviate overcrowding of public facilities (e.g., schools, libraries, and recreation facilities)?
- Pedestrian and Bicycle Safety: Would the project increase or decrease the likelihood of accidents for non-motorists?
- Crime: Would the project increase or decrease crime?
- Emergency Response: Would there be changes in emergency response time (fire, police, and emergency medical)?
- Effect on Neighborhoods: What would be the impacts on the neighborhood from which people move and into which people are relocated?
- This analysis considers the community impacts with respect to the above criteria.

3.3 Area of Potential Impact

The area of potential impact for the community and neighborhood resource analysis includes all communities and neighborhoods that would potentially be affected by the construction and operation of the RLE Project. If a portion of a community is within ½ mile of a build alternative alignment, the entire community is included in the area of potential impact. Thus, the analysis in this technical memorandum includes the following community areas of Chicago and the Village of Calumet Park that have portions within approximately ½ mile of the build alternative alignments and proposed facility locations, which could be affected by the RLE Project:

- Washington Heights
- Roseland
- Morgan Park
- West Pullman
- Pullman
- Riverdale
- Village of Calumet Park

Section 4 provides descriptions of these community areas. Other nearby neighborhoods, as well as communities along existing CTA lines, could be beneficially affected by the project because they would now be linked to the areas listed above. Any such impacts on these communities are discussed qualitatively.

3.4 Methods

This analysis of impacts on existing communities and neighborhoods was prepared according to the *Community Impact Assessment: A Quick Reference for Transportation* (USDOT 2008).

The analysis began with the development of community profiles to identify population, housing, and employment characteristics, unique community features and events, community linkages and mobility, and important public services. These community profiles were established using community data provided by the City of Chicago, applicable local land use plans, site visits, Census Bureau statistics, CMAP data, information from the City of Chicago and Village of Calumet Park websites, and public comments and input received on the project from the ongoing meetings and outreach activities.

Communities have a set of identifiable elements (both perceptual and physical) within a specific geographic area. Once a profile was established for each of the potentially affected communities, the report was prepared to describe short-term (temporary) and long-term (permanent) impacts from both construction and operation of the project alternatives on each of the distinct communities. The analysis included several aspects: the creation of physical, social, or psychological barriers within an established community or neighborhood; the disruption of access to community assets; and the displacement impacts on the community assets. This technical memorandum describes qualitative, and where possible, quantitative impacts associated with changes to the local communities. Analysis relied heavily on field visits to verify findings.

Each impact was examined based on the profile of the community or neighborhood in which it would occur. The criteria listed in Section 3.2 were used to assess the nature of potential impacts (temporary construction impacts or permanent operational impacts), and the potential mitigation measures that could be implemented to reduce or avoid them. Potential mitigation measures were developed for all potential adverse impacts and are included in Section 6. Potential impacts that are considered controversial or have generated public concern were also examined in detail in this analysis, with a focus on community-based solutions. Beneficial impacts on the communities and neighborhoods are also described in this technical memorandum.

Consistent with the guidance and thresholds described in Section 3.2, community impacts discussions are grouped under the following three headings in Section 5:

- Character and Cohesion - Visual, noise, land use, and displacement impacts, as well as changes to the overall function and aesthetic of the community. Any addition or removal of physical divisions within the community or change in quality of life is also discussed under this heading.

- Community Resources - Impacts on the key resources identified in Section 4.

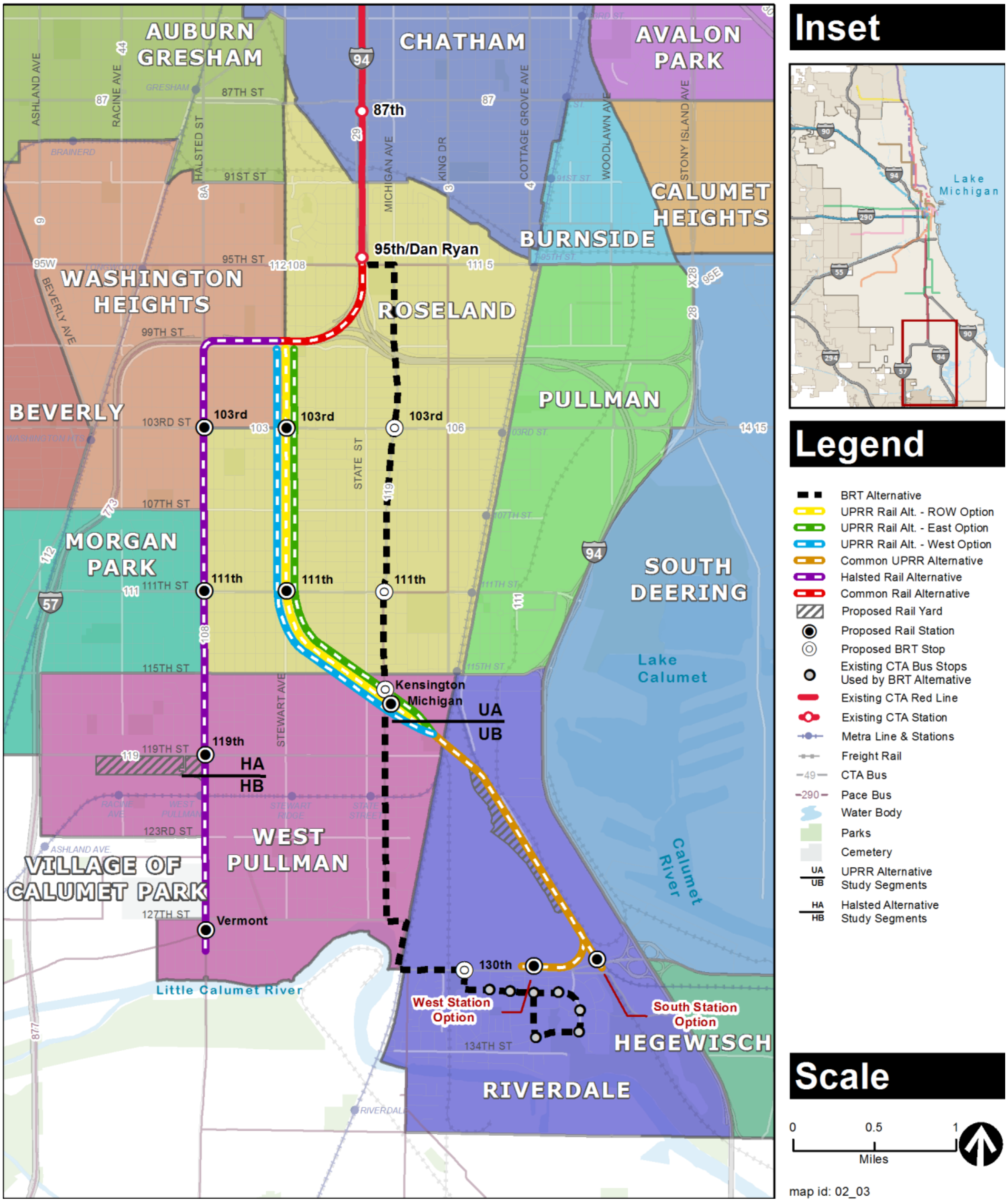
- Mobility and Development - Overall community impacts of changes in transportation options, business activity, access to jobs, and the potential for economic development.

Section 4
Affected Environment

This section describes the current demographic profiles of the communities adjacent to the alternative alignments. These communities comprise the affected environment for the project. The demographic data and community profiles presented in this section have been confirmed through field reconnaissance. All of the stations would provide connections to local buses and would include park & ride facilities, and therefore would serve a larger area than the ¼-mile walking radius typically assumed for transit projects. As such, demographic data is reported for census block groups, census tracts, community areas, public use microdata areas (PUMAs), and CMAP subzones as available, and is appropriate for the scale of the RLE Project.

4.1 Community Profiles

This section describes the community and neighborhood development patterns around the alignments and off-street storage yards in the City of Chicago and the Village of Calumet Park. Along all three alignments, the land use, demographic, and community characters of each neighborhood are similar. Figure 4-1 shows where the alignments would pass through the community areas described in this section.


AUBURN GRESHAM
CHATHAM
AVALON PARK
CALUMET HEIGHTS
BURNSIDE
WASHINGTON HEIGHTS
ROSELAND
BEVERLY
PULLMAN
MORGAN PARK
SOUTH DEERING
Lake Calumet
Calumet River
WEST PULLMAN
VILLAGE OF CALUMET PARK
Little Calumet River
HEGEWISCH
RIVERDALE
87th
95th/Dan Ryan
103rd
111th
119th
Kensington
Michigan
Vermont
130th
West Station Option
South Station Option
UA
UB
HA
HB
ASHLAND AVE
RACINE AVE
HALSTED ST
MICHIGAN AVE
KING DR
COTTAGE GROVE AVE
WOODLAWN AVE
STONY ISLAND AVE
STATE ST
STEWART AVE
BEVERLY AVE
87TH ST
91ST ST
95TH ST
99TH ST
103RD ST
107TH ST
111TH ST
115TH ST
119TH ST
123RD ST
127TH ST
134TH ST
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57
Inset
Lake Michigan
Legend
BRT Alternative
UPRR Rail Alt. - ROW Option
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
Common UPRR Alternative
Halsted Rail Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Proposed BRT Stop
Existing CTA Bus Stops Used by BRT Alternative
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
CTA Bus
Pace Bus
Water Body
Parks
Cemetery
UPRR Alternative Study Segments
Halsted Alternative Study Segments
Scale
0
0.5
1
Miles
map id: 02_03

Figure 4-1: Project Area Communities

4.1.1 Washington Heights

The northwest corner of the project area is part of the Washington Heights community area, as shown in Figure 4-1. Washington Heights includes the neighborhood of Longwood Manor, which is north of I-57, and parts of Fernwood, which is in the northwest corner of the project area. The area primarily consists of single-family residential homes along a grid of one-way streets with low- to medium-density commercial areas along major arterial streets. As it is in much of the project area, residents of Washington Heights are mostly African American.

Near the UPRR corridor at the eastern edge of Washington Heights, the community area consists primarily of one-story, single-family houses. Blocks are well maintained, and many have community-organized block associations that provide neighborhood watch and other initiatives for the purposes of enhancing residents' safety and wellbeing. Fernwood Parkway, a narrow patch of parkland between 99th and 103rd Streets, separates the single-family residences along Eggleston Avenue from the UPRR ROW and is approximately 85 feet wide. The UPRR ROW acts as a barrier within the community, because most east-west streets terminate at the tracks. In Washington Heights, only 101st and 103rd Streets cross the UPRR tracks.

In Washington Heights, the Halsted Street corridor consists of one- to two-story businesses and commercial buildings, most of which have adjacent surface parking lots. Parking lots are typically between the buildings and the sidewalk, but some buildings do have direct street frontage. Most of the uses are auto-oriented, including auto body shops and gas stations, and there are two prominent communications towers on either side of Halsted Street just south of 99th Street. Other buildings include churches (both purpose-built church buildings and converted storefronts), household convenience services such as dry cleaners and check cashing, fast food restaurants, and occasional single-family residences.

A landscaped median runs along Halsted Street, containing well-maintained trees, groundcover, and lighted decorative clock pylons at major intersections. There is non-continuous landscaping along the sides of Halsted Street in some areas as well. Several of the lots and buildings along Halsted Street are vacant, which leaves discontinuities within the business district, but to a lesser extent than in the other communities along Halsted Street within the project area. The blocks on either side of Halsted Street contain mostly one-story, single-family homes, with occasional vacant lots and houses interspersed. Senior housing lies to the east of Halsted Street along 103rd Street. Because Halsted Street is a wide state highway (four lanes, plus a center median and curb parking), it acts as a geographic division between neighborhoods.

4.1.2 Roseland

The Roseland community covers a large portion of the RLE Project area, including the existing terminus of the Red Line at the 95th Street Terminal. All of the alternative alignments would pass through a portion of Roseland. Within the project area, the Roseland community generally encompasses the area east of Halsted Street, north of 115th Street, west of Cottage Grove Avenue, and extends beyond the northern boundary of the project area. The Roseland community area also includes portions of the Fernwood neighborhood.

Michigan Avenue is a retail and commercial corridor with several blocks containing single- and multi-family housing fronting the street. North of I-57, the street runs alongside a single-family residential neighborhood, Abbott Park, and Harlan Community Academy High School. Between I-57 and 103rd Street, Michigan Avenue is lined with auto-oriented uses, including several car lots, interspersed with vacant land and occasional stores. There are three senior housing facilities between 102nd Street and 115th Street, and the blocks on either side of Michigan Avenue consist primarily of single-family homes. A busy commercial area, among the most vibrant in the project area, exists between 111th and 115th Streets; the busiest segment is between 111th and 113th Streets. Vacant land and buildings fronting Michigan Avenue are scarce in this area, and businesses include clothing retail, restaurants, banks, and other community-oriented services. The area serves as a shopping destination for the Roseland area.

Along the UPRR ROW in the Roseland community, the neighborhoods comprise mostly single-family homes along one-way streets. Similar to the adjacent Washington Heights area, many blocks have community-organized block associations that provide neighborhood watch and other initiatives for the purposes of enhancing residents' safety and wellbeing. Vacant lots are infrequent in the northern part of the community, but are more common east of the UPRR ROW south of 108th Street, and on both sides of the tracks south of 111th Street. There are strips of vacant land on either side of the UPRR tracks, and some light industrial buildings are in this space between the houses and the tracks. The UPRR ROW acts as a barrier within the community, because most east-west streets and some north-south streets terminate at the UPRR tracks. Two parks border the east side of the UPRR ROW in Roseland: Wendell Smith Park between I-57 and 99th Street, and Block Park between 103rd and 104th Streets. Most of the community's commercial and activity areas are along major streets, away from the UPRR ROW.

Halsted Street, the western edge of the Roseland community between 103rd and 115th Streets, has a similar character throughout the project area, closely resembling that of the Washington Heights community. The street is a local commercial corridor lined with businesses and commercial spaces. Most businesses have parking lots fronting Halsted Street and contribute to the auto-oriented streetscape. Businesses include drug stores, discount retail, hair/beauty suppliers, automotive services, restaurants/fast food, healthcare and dental offices, check cashing, preschools, childcare, and other neighborhood-oriented services. Some storefronts have also been converted to religious institutions. There is a large nursing home between 109th and 110th Streets. Similar to the Washington Heights community, a landscaped median with clock pylons lines the center of Halsted Street. Vacant lots and buildings are more prevalent along this portion of Halsted Street than in areas further north in Washington Heights, which leaves discontinuities within the business district. Due to the width of Halsted Street, it acts as a geographic division between the Roseland community and the adjacent community of Morgan Park.

4.1.3 Morgan Park

Morgan Park borders the western edge of Halsted Street between 107th and 115th Streets. The character of Halsted Street in Morgan Park is similar to the adjacent areas of Roseland described in Section 4.1.2. The Halsted Street commercial corridor is lined with a number of auto-oriented businesses, with single-family residential homes on the blocks immediately to the west. At the northwest corner of 115th and Halsted Streets, there is a large box retail style center and associated parking lot that is partially vacant. Other businesses along Halsted Street include grocery stores, banks, a supermarket, churches, restaurants, and strip malls. Several single-family homes and vacant lots and buildings are interspersed between the active businesses.

4.1.4 West Pullman

West Pullman would encompass portions of each of the build alternatives' footprints. Generally, the boundaries of West Pullman are I-57 on the west, 115th Street on the north, and the Metra Electric District rail corridor on the east. The southern boundary includes portions of 123rd Street and the Little Calumet River.

Michigan Avenue in the northern portion of West Pullman contains community-serving businesses, with some interspersed vacant buildings and parcels. Many of the commercial buildings have residential units above, and several storefronts have been converted for religious institution use. Notably, a large vacant parcel on the southwest corner of 115th Street and Michigan Avenue, adjacent to the UPRR ROW, is proposed for development into a supermarket center. The highest percentages of Hispanic residents in the project area live southeast of this intersection. As such, several Spanish-speaking businesses are located in this area. The blocks on either side of Michigan Avenue consist primarily of single-family homes. South of 120th Street, Michigan Avenue transitions to mostly single-family homes with few vacant lots. This neighborhood of single-family homes continues southward until Michigan Avenue terminates at 127th Street. The areas along the Little Calumet River south of 127th Street consist mostly of industrial uses.

The character of businesses along Halsted Street in West Pullman is similar to the other portions of Halsted Street within the RLE Project area; however, there is a higher proportion of vacant buildings and parcels. Businesses in the area include automotive services, check cashing, discount retail, grocery stores, restaurants, and fast food establishments. There are also several churches in the vicinity of 119th Street, in addition to a public library and an Illinois Department of Employment Security office. A portion of the Major Taylor Trail, a former rail ROW that has been converted into a bicycle and pedestrian trail, runs diagonally through the neighborhood and crosses Halsted Street at 119th Street via the intersection's signalized crosswalks. The blocks east and west of Halsted Street consist mostly of single-family residences, with some blocks exhibiting high numbers of vacant parcels. The highest concentration of vacant residential parcels along Halsted Street in West Pullman occurs east of Halsted Street between 119th Street and the Metra Electric District tracks. There are fewer vacant residential parcels south of 124th Street and very few south of 127th Street; however, vacant commercial parcels are still present on Halsted Street in these areas. A mid-rise senior housing development is on the east side of Halsted Street just north of the Metra Electric District tracks. West of Halsted Street between 119th and 122nd Streets, there are few residential properties, and most of the area consists of vacant and industrial uses, including warehouses, a salt storage dome, a firehouse, and a recently built solar power plant.

4.1.5 Pullman

The Pullman community comprises the northeast section of the project area, bounded by the Metra Electric District rail corridor on the west, I-94 to the east, 95th Street to the north, and 115th Street to the south. Although none of the alternative alignments pass through the Pullman community, portions of the community are within walking distance of the Michigan Avenue corridor in the Roseland community area, described in Section 4.8.2. This western portion of the Pullman community is mostly residential, with both single- and multi-family residences near 115th Street, and the large Palmer Park between 111th and 113th Streets. Pullman contains relatively few vacant parcels, and several churches are near 111th, 113th, and 115th Streets.

4.1.6 Riverdale

Riverdale is in the southeast portion of the project area, southwest of Lake Calumet and east of the Metra Electric District rail corridor. A large portion of the Riverdale area is industrial and municipal land. A large Metropolitan Water Reclamation District (MWRD) facility occupies a majority of the Riverdale community within the project area. There are three residential neighborhoods in Riverdale: Eden Green, Golden Gate, and the Altgeld Gardens housing project.

The Eden Green and Golden Gate neighborhoods are single-family residential areas and townhouse developments, and Altgeld Gardens is a Chicago Housing Authority (CHA) project built in 1945. The community of approximately 2,000 rowhouse units has its own schools, on-site social services, maintenance staff, and medical facilities. Approximately half of the units have been recently renovated, and the remaining units are currently vacant, awaiting redevelopment or renovation. There are few household-serving businesses or community services in the area, except for the handful of resident-focused resources in the Altgeld Gardens property, and a small grocery store on 130th Street. The area is largely isolated due to barriers on all sides of the residential developments: I-94 and the industrial areas to the east, the MWRD facility to the north, the UPRR ROW to the west, and the Little Calumet River to the west and south. The isolated location of the Riverdale area leaves few transit options for accessing jobs and services outside of the community.

4.1.7 Village of Calumet Park

The Village of Calumet Park is in the southwest portion of the project area, south and west of West Pullman. The village borders the western side of Halsted Street between 123rd and 127th Streets. Between 123rd and 124th Streets on Halsted Street are several businesses similar to those described in Roseland in Section 4.1.2 and Morgan Park in Section 4.1.3, with single-family residences on the blocks to the west. The remainder of the Halsted Street frontage in Calumet Park is occupied by the large Cedar Park Cemetery.

4.2 Population, Housing, and Employment

As reported in Table 4-1, the 2010 U.S. Census data was used for existing population and number of households in the RLE area of potential impact as a whole and for affected communities. The project area has a population of 117,070 with 40,185 households. Table 4-1 shows the project area population and the populations of affected communities through which the alternative alignments would pass (a subset of the larger project area). Roseland has the largest population and Riverdale has the smallest population and number of households of all communities in the area of potential impact. The average household for the project area is 2.9 persons, and the average family size is 3.5 persons. West Pullman has the largest average household (3.2) and family size (3.7) of all affected communities.

Table 4-1: 2010 Population and Households within the Project Area as a Whole and in Affected Communities

Area	2010 Population	2010 Households
Project Area	**117,070**	**40,185**
Washington Heights	13,847	4,821
Roseland	37,895	12,940
Morgan Park	8,589	2,967
West Pullman	29,640	9,487
Pullman	7,325	2,940
Riverdale	6,482	2,099
Village of Calumet Park	6,925	2,550

Source: U.S. Census Bureau, 2010 Census, Summary File 1, Table P1, All Block Groups within Cook County

According to the real estate website zillow.com, the median Chicago home price in October 2012 was approximately $161,100, and the median rent was $1,501. Home and rental prices in the RLE affected community areas are from 20 to 50 percent lower than the citywide median, as shown in Table 4-2.

Table 4-2: October 2012 Median Home and Rental Prices in Affected Community Areas

Area	Median Home Price	Median Monthly Rental Price
Chicago (Citywide)	*$161,100*	*$1,501*
Washington Heights	$112,300	$1,257
Roseland	$85,200	$1,232
Morgan Park	$113,500	$1,277
West Pullman	$92,700	$1,228
Pullman	$91,500	$1,213
Riverdale	N/A	N/A
Village of Calumet Park	$75,200	$1,219

Source: zillow.com, Chicago Home Prices and Home Values in IL (October 2012); zillow.com, Calumet Park Home Prices and Hom
Values in IL (October 2012)

The local metropolitan planning organization, CMAP, prepares estimates for future regional demographics in the greater Chicago area. Table 4-3 shows population estimates, number of households, and employment counts for year 2010 and year 2030 for the project area as a whole and for affected communities. Due to different methods and geographical units of measurement (e.g., census block group versus CMAP subzone), 2010 population and number of household estimates vary between the U.S. Census and CMAP; as a result, the 2010 numbers for the project area as shown in Table 4-3 are different from the numbers shown in Table 4-1. Table 4-3 presents CMAP data to show percent growth over a constant data set.

According to CMAP projections, population in the project area is expected to grow by 15 percent between 2010 and 2030. The largest population growth is projected for the Riverdale community, which is expected to grow 34 percent over the 20-year period. Riverdale is also home to Altgeld Gardens, a CHA public housing project that is currently undergoing renovation and possible redevelopment. Washington Heights and Pullman are expected to have the slowest population growth in the API. The number of households in the project area is expected to grow by 10 percent with the majority of new households occurring in Riverdale. Washington Heights and Pullman are projected to have little or no growth. Employment is expected to increase by 46 percent in the project area as a whole. In 2010, the majority of the project area's jobs were in the Roseland community. Roseland's employment is expected to increase by 11 percent. The most substantial job growth is projected to occur in West Pullman (201 percent increase) and Pullman, which is projected to double its 2010 employment by 2030. Both Washington Heights and Riverdale are projected to lose jobs over the 20-year period. Field visits have revealed that communities in the project area have been shrinking overall during recent decades, and that this trend will likely continue during the near future. The CMAP projections show the level of growth that would be possible, to ensure adequate planning for services and infrastructure.

Table 4-3: Future Population, Households, and Employment within the Project Area as a Whole and in Affected Communities

Area	Population			Households			Employment		
	2010	2030	% Growth	2010	2030	% Growth	2010	2030	% Growth
Project Area[1]	*107,303*	*123,493*	*15*	*36,964*	*40,362*	*9*	*11,103*	*16,194*	*46*
Washington Heights	14,073	14,706	4	4,965	4,984	0	950	902	-5
Roseland	36,174	42,323	17	12,491	13,819	11	4,429	4,907	11
Morgan Park	7,942	9,143	15	2,759	3,104	13	440	560	27
West Pullman	26,596	30,261	14	8,438	9,139	8	1,020	3,074	201
Pullman	8,297	8,838	7	3,399	3,417	1	1,893	3,798	101
Riverdale	7,463	9,990	34	2,480	2,993	21	941	899	-4
Village of Calumet Park	5,566	6,381	15	2,013	2,251	12	887	1,079	22

Source: Chicago Metropolitan Agency for Planning (CMAP), 2010

Note:

1. Due to different methods and geographical units of measurement (e.g., census block group versus CMAP subzone), 2010 population and number of household estimates vary between the U.S. Census and CMAP; as a result, the 2010 numbers for the project area shown here differ from the U.S. Census data shown in Table 4-1.

As shown in Table 4-4, the unemployment rate for the entire project area is 19.0 percent. The unemployment rates for the individual community areas range from a low of 17.0 percent in Morgan Park to a high of 34.8 percent in Riverdale. Unemployment in the project area is generally higher than in the rest of the City of Chicago, which has an overall unemployment rate of 12.0 percent.

Table 4-4: Unemployment Rate within the Project Area as a Whole and in Affected Communities

Area	Unemployment Rate
Project Area	**19.0%**
Washington Heights	18.8%
Roseland	21.2%
Morgan Park	17.0%
West Pullman	18.5%
Pullman	21.4%
Riverdale	34.8%
Village of Calumet Park	17.4%

Source: U.S. Census Bureau, U.S. 2010 Census, 2011 ACS 5-year estimates, Table S2301, All Census Tracts within Cook County
Note: Data not available at block group level

4.3 Ethnicity

The ethnicity of the project area is predominantly Black or African American. As shown in Table 4-5, all communities in the project area have a majority Black or African American population, ranging from just above 89 percent in the Village of Calumet Park to approximately 97 percent in Roseland and Washington Heights. After Black or African American, the second largest ethnicity in the area of potential impact is Hispanic at 4 percent. Pullman has the largest Hispanic population at 7.8 percent followed by the Village of Calumet Park at 6.2 percent and West Pullman at 5.1 percent. Pullman also has the largest white population at 7.1 percent followed by the Village of Calumet Park at 3.6 percent.

Table 4-5: Ethnicity within the Area of Project Area as a Whole and in Affected Communities

Area	White Alone	Black or African-American Alone	American Indian/ Native Alaskan Alone	Asian Alone	Native Hawaiian and Other Pacific Islander Alone	Some Other Race Alone	Multiracial	Hispanic not Alone
Project Area	**2.1%**	**92.7%**	**0.2%**	**0.1%**	**0.0%**	**0.1%**	**1.0%**	**4.0%**
Washington Heights	0.6%	96.9%	0.2%	0.0%	0.0%	0.1%	0.9%	1.3%
Roseland	0.5%	97.3%	0.2%	0.1%	0.0%	0.1%	0.9%	1.0%
Morgan Park	1.0%	96.3%	0.0%	0.3%	0.1%	0.1%	1.0%	1.2%
West Pullman	0.6%	93.1%	0.2%	0.0%	0.0%	0.0%	1.0%	5.1%
Pullman	7.1%	83.6%	0.1%	0.1%	0.0%	0.1%	1.2%	7.8%
Riverdale	0.5%	96.4%	0.1%	0.0%	0.0%	0.1%	0.8%	2.0%
Village of Calumet Park	3.6%	89.1%	0.1%	0.3%	0.0%	0.1%	0.6%	6.2%

Source: U.S. Census Bureau, 2010 Census, Summary File 1, Table P5, All Block Groups within Cook County
Note: Hispanic population includes persons who identify as white or some other race, or combination of races.

4.4 Age

According to data from the 2010 U.S. Census, the median age in the project area is 37.1 years old. Median resident age varies slightly among communities in the project area, from a low of 25.7 years in Riverdale to a high of 41.6 in Washington Heights. Median ages are shown in Table 4-6, and age ranges are shown in Table 4-7. Compared to project area as a whole, a substantial percentage (42 percent) of the Riverdale population is under age 18.

Table 4-6: Median Age within the Project Area as a Whole and in Affected Communities

Area	Both Sexes	Male	Female
Project Area	**37.1**	**34.1**	**39.0**
Washington Heights	41.6	38.7	43.7
Roseland	38.0	35.6	40.0
Morgan Park	40.3	37.0	42.6
West Pullman	34.9	32.1	36.9
Pullman	37.7	33.0	40.8
Riverdale	25.7	20.9	24.8
Village of Calumet Park	36.9	33.6	38.6

Source: U.S. Census Bureau, U.S. 2010 Census, Summary File 1, Table P13, All Block Groups within Cook County

Table 4-7: Age Ranges within the Project Area as a Whole and in Affected Communities

Area	Under 18 Years	18 Years and Over
Project Area	**27%**	**73%**
Washington Heights	24%	76%
Roseland	26%	74%
Morgan Park	24%	76%
West Pullman	28%	72%
Pullman	26%	74%
Riverdale	42%	58%
Village of Calumet Park	26%	74%

Source: U.S. Census Bureau, U.S. 2010 Census, Summary File 1, Table P16, All Block Groups within Cook County

4.5 Languages Spoken at Home

According to the 2010 U.S. Census, English is the most spoken language at home in the project area with 92.6 percent of households speaking English only. As shown in Table 4-8, Spanish is the second most spoken language at home with over 6 percent of households speaking Spanish. The largest Spanish-speaking populations live in the Village of Calumet Park with 15.5 percent of households speaking Spanish. Pullman and West Pullman also have a large percentage of Spanish-speaking households with 10.4 percent and 6.7 percent, respectively. In fact, specific census tracts in the West Pullman and South Deering community areas and the Village of Calumet Park report over 30 percent of households speaking Spanish.

The 2010 U.S. Census data is consistent with findings of a Limited English Proficiency assessment conducted for the project area in 2009. According to the Limited English Proficiency study, 1.0 percent of households within census tracts in the project area are linguistically isolated. This statistic means that in 1.0 percent of households, all household members over the age of 14 had at least some difficulty speaking English.

Table 4-8: Languages Spoken at Home within the Project Area as a Whole and in Affected Communities

Area	English Only	Spanish or Spanish Creole	Other Indo-European Languages	Asian and Pacific Island Languages	Other Languages
Project Area	**92.6%**	**6.3%**	**0.6%**	**0.1%**	**0.4%**
Washington Heights	97.0%	1.8%	0.2%	0%	1.1%
Roseland	98.5%	0.9%	0.5%	0.1%	0.1%
Morgan Park	95.7%	2.3%	1.5%	0.5%	0.1%
West Pullman	92.8%	6.7%	0.2%	0%	0.4%
Pullman	89.4%	10.4%	0.3%	0%	0%
Riverdale	96.2%	2.9%	0%	0.5%	0.5%
Village of Calumet Park	82.7%	15.5%	1.3%	0.1%	0.5%

Source: U.S. Census Bureau, U.S. 2010 Census, 2010 ACS 5-year estimates, Table S1601, All Census Tracts within Cook County
Note: Data not available at block group level

4.6 Community Mobility

Two major highways, Interstate 94 (I-94) and Interstate 57 (I-57), and several major arterial streets pass through the project area. I-94, or the Dan Ryan Expressway, runs south to 99th Street before splitting into I-57 to the west and continuing as I-94 to the east. I-57 continues south on the eastern side of the Metra Rock Island District commuter rail line on the western side of the project area. I-94 continues south on the eastern side of the project area, west of Lake Calumet.

Although there is a substantial amount of roadway infrastructure in the area, highways frequently become congested, even during off-peak hours, which limits mobility for motorists. Roadway performance in the project area is constrained by narrow arterial streets and numerous at-grade rail crossings. Mobility is further inhibited by the limited options for connecting to the CTA's rail system. There is a network of bus lines operated by CTA and Pace, but buses are frequently delayed in the same arterial street congestion as automobiles. There are also no stations along the Dan Ryan branch of the Red Line that currently have park & ride facilities, which precludes residents from accessing the stations by car unless dropped off (kiss & ride). Bus lines cross the major arterial streets and many terminate at the 95th Street Terminal, serving several Metra stations en route.

The CTA Red Line service ends at the 95th Street Terminal in the median of I-94. A lack of park & ride, passenger drop- off, and pedestrian facilities limits access to the station. Customers accessing the station by bus experience measureable delays resulting from poor performance of surrounding arterial intersections, and insufficient space for bus loading, unloading, and layovers. Additional travel time and intersection performance data is provided in the *Transportation*

Technical Memorandum. The population south of the 95th Street Terminal exhibits the demographic characteristics of transit dependency, and consists primarily of minority and low-income residents, as discussed further in the *Environmental Justice Technical Memorandum*. Difficulty reaching the station by alternate modes of transportation isolates Far South Side and South Suburban residents and results in lengthy travel times by both auto and transit to jobs north of 95th Street, including the major employment centers in downtown Chicago. In particular, the Altgeld Gardens housing project, which is south of 130th Street, is physically isolated from other neighborhoods in the city, with few community-serving businesses within walking distance. Existing transit service is provided by the #34 bus route.

Three Metra commuter lines serve the project area: the Rock Island District, Metra Electric District, and the South Shore Line. The Rock Island District commuter rail line has two stations in the project area: the Longwood Station at 95th Street and Vincennes Avenue, and the Washington Heights Station at 103rd Street and Vincennes Avenue. The Metra Electric District commuter rail line has ten stations throughout the project area running southwest from 95th Street and Cottage Grove Avenue to 120th Street where it splits and runs west towards Ashland Avenue. The Metra South Shore Line, operated by the Northern Indiana Commuter Transportation District, operates between downtown Chicago and the South Bend Regional Airport in South Bend, Indiana. The South Shore Line shares the same track with Metra Electric District until 120th Street, where it diverges southeast towards Indiana. Although unaffected by automobile congestion, Metra service is infrequent, and some stations, including both of the Longwood and Washington Heights stations, have no service during mid-day and weekend periods.

Despite having an extensive sidewalk and crosswalk system, pedestrian mobility is limited by physical divisions between communities and public transit connections. These physical divisions include the two Metra rail corridors (one of which is shared by the South Shore Line), the I-57 and I-94 expressways, Lake Calumet, the Little Calumet River, and the UPRR ROW that runs north-south between Eggleston Avenue and Princeton Avenue before turning southeast at 111th Street. All of these are difficult to cross on foot, and effectively separate the communities on either side. Other rail lines operate in the area, but do not divide the communities affected by the project.

The project area also lacks bicycle infrastructure, as there is only one paved off-street bike trail and one on-street bike lane in the project area. The off-street bike trail, the Major Taylor Trail, runs southeast from 105th Street and Throop Street to the Whistler Woods Forest Preserve, south of Little Calumet River in Riverdale, Illinois. The only existing on-street bike lane starts at the 95th Street Terminal and extends south approximately 1,700 feet to Harlan Community Academy High School.

More information on existing transportation patterns and traffic levels in the project area is available in the *Transportation Technical Memorandum*.

4.7 Emergency Services

Police services in the project area are provided by municipal agencies. The City of Chicago Police Department serves the project area within Chicago city limits. The Calumet Park Police

Department has jurisdiction over the Village of Calumet Park. The nearest police stations serving the project area include the following, which are shown in Figure 4-3:

- Chicago Police District 22 - Morgan Park at 1900 W. Monterey Avenue in Chicago
- Chicago Police District 5 - Calumet at 727 E. 111th Street in Chicago
- Calumet Park Police Department at 12409 S. Throop Street in the Village of Calumet Park

Fire services are also provided by municipal agencies. The City of Chicago Fire Department serves the project area within Chicago city limits. The Calumet Park Fire Department has jurisdiction over the Village of Calumet Park. The nearest fire stations serving the project area include the following, which are shown in Figure 4-3:

- Chicago Fire Station E62 at 34 E. 114th Street in Chicago
- Chicago Fire Station E93 at 330 W. 104th Street in Chicago
- Chicago Fire Station E75 at 11958 S. State Street in Chicago
- Chicago Fire Station E115 at 11940 S. Peoria Street in Chicago
- Chicago Fire Station E120 11035 S. Homewood Avenue in Chicago
- Chicago Fire Station E80 at 12701 S. Doty Avenue in Chicago
- Calumet Park Fire Department 12457 S. Ashland Avenue in the Village of Calumet Park

The only hospital in the project area that provides emergency medical services is Roseland Community Hospital at 45 W. 111th Street in Chicago just east of State Street.

4.8 Community Resources

During the Alternatives Analysis and scoping process, stakeholders identified a number of key locations in the project area that play an important role in shaping and defining the community. These include landmarks, parks, community centers, and other places that serve as neighborhood focal points and contribute to community character and identity. Field analysis was also performed to supplement the list of identified community resources to be evaluated in this technical memorandum. Additional consideration was given to resources within ¼ mile of the alignments, because these resources would be close enough to be subject to project-related impacts. Parks and other community resources near the alignments are shown in Figures 4-2 and 4-3, respectively. Key resources with the most potential to be subject to project-related neighborhood/community impacts due to proximity to the alternative alignments are listed below. The resources primarily serve the surrounding communities, unless otherwise noted.

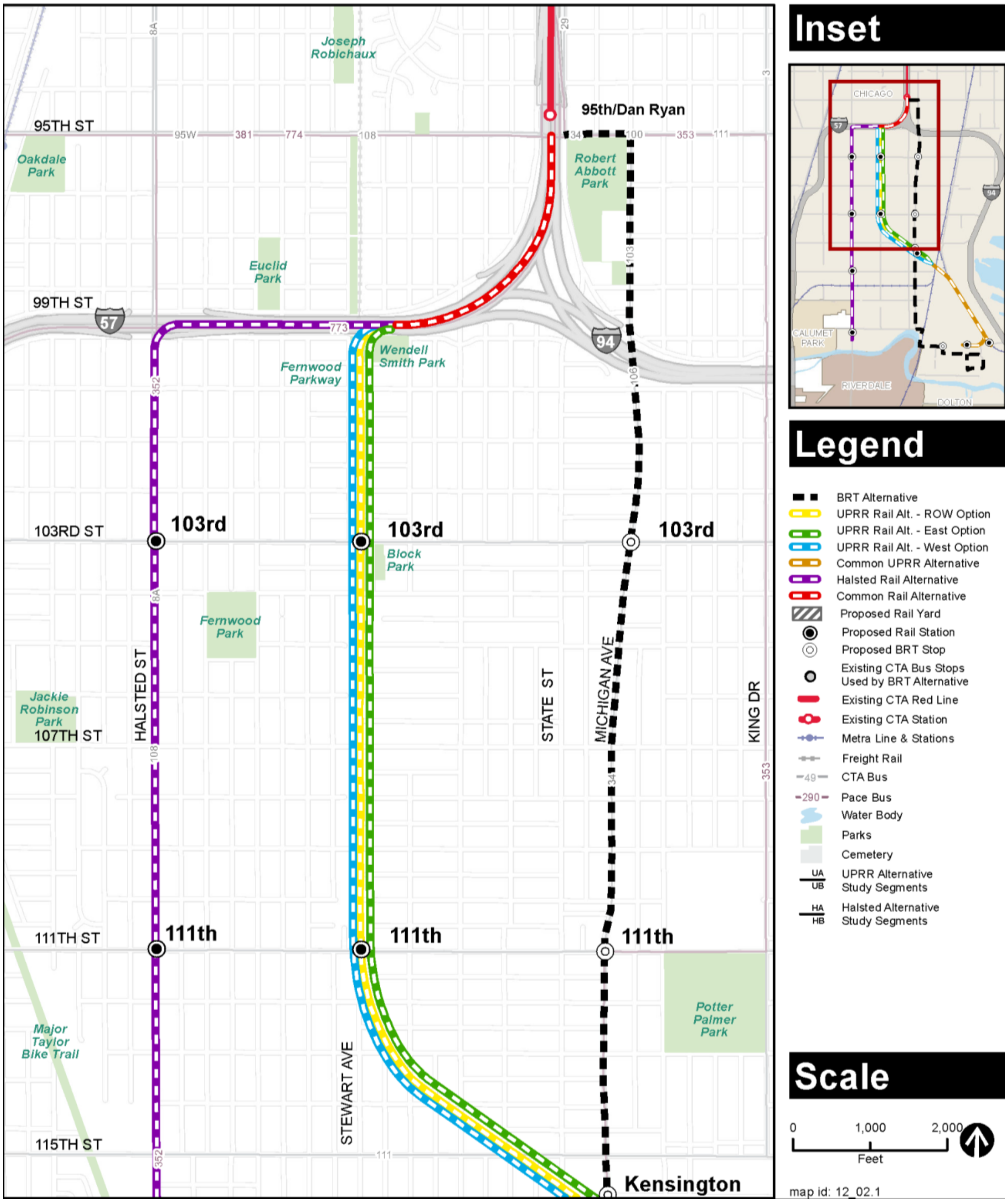

Joseph Robichaux
95TH ST
95th/Dan Ryan
Oakdale Park
Robert Abbott Park
Euclid Park
99TH ST
57
94
Fernwood Parkway
Wendell Smith Park
103RD ST
103rd
103rd
103rd
Block Park
Fernwood Park
Jackie Robinson Park
107TH ST
HALSTED ST
STATE ST
MICHIGAN AVE
KING DR
111TH ST
111th
111th
111th
Potter Palmer Park
Major Taylor Bike Trail
STEWART AVE
115TH ST
Kensington
Inset
CHICAGO
CALUMET PARK
RIVERDALE
DOLTON
Legend
BRT Alternative
UPRR Rail Alt. - ROW Option
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
Common UPRR Alternative
Halsted Rail Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Proposed BRT Stop
Existing CTA Bus Stops Used by BRT Alternative
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
49 CTA Bus
290 Pace Bus
Water Body
Parks
Cemetery
UA UB UPRR Alternative Study Segments
HA HB Halsted Alternative Study Segments
Scale
0
1,000
2,000
Feet
map id: 12_02.1

Figure 4-2a: Parks and Recreational Facilities (Northern Section)

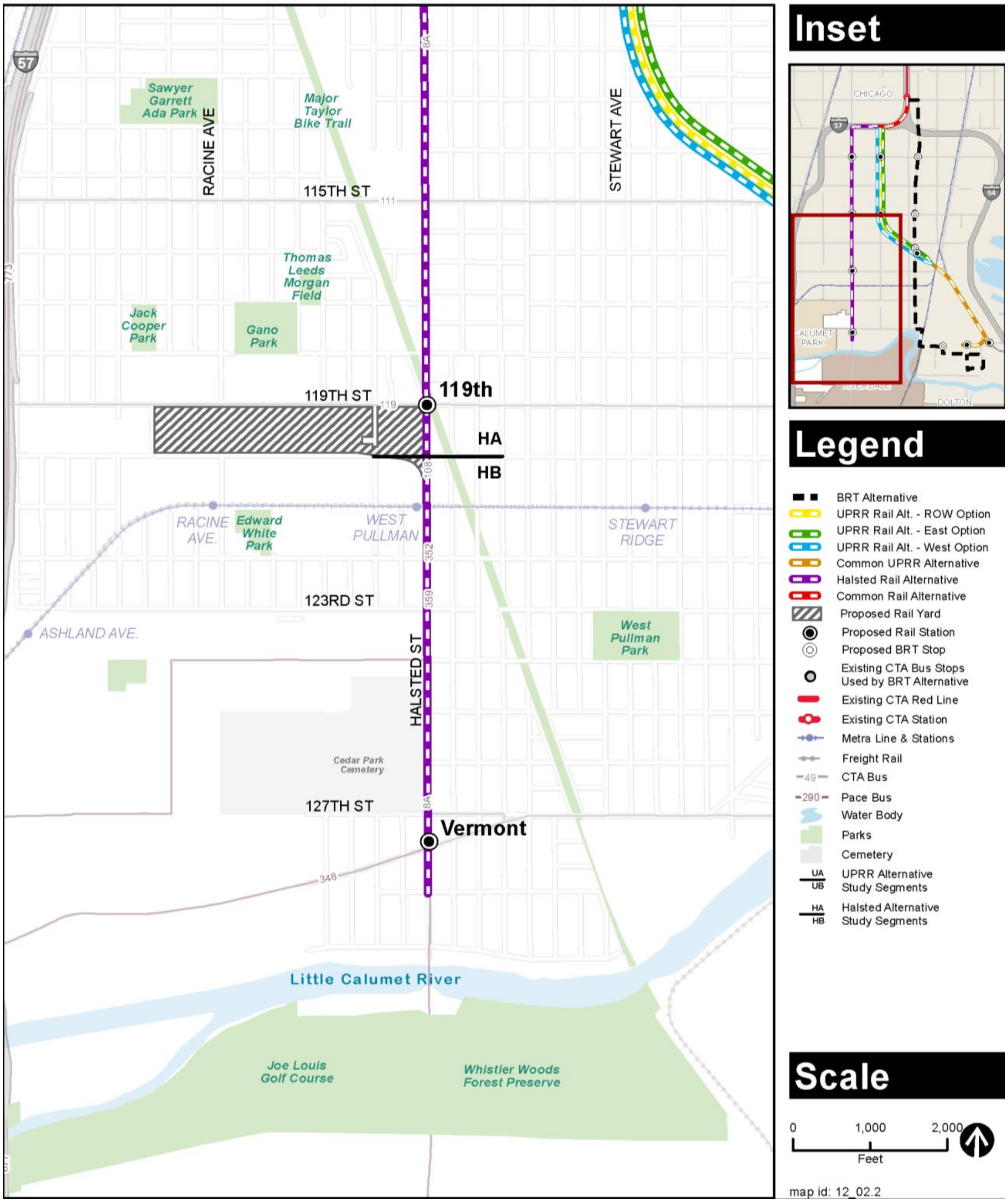
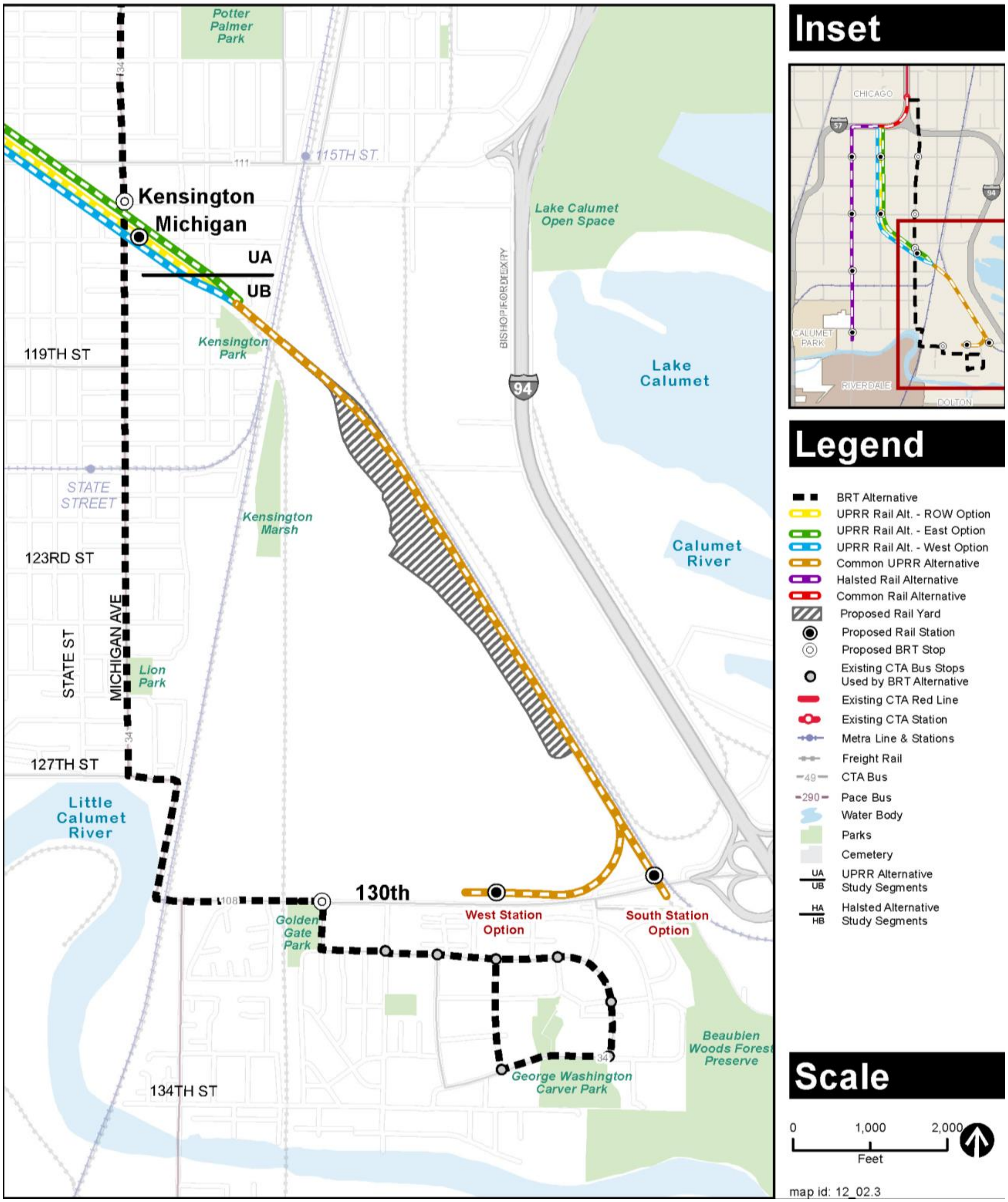

57
Sawyer Garrett Ada Park
RACINE AVE
Major Taylor Bike Trail
STEWART AVE
115TH ST
111
Thomas Leeds Morgan Field
Jack Cooper Park
Gano Park
119TH ST
119
119th
HA
HB
108
RACINE AVE.
Edward White Park
WEST PULLMAN
STEWART RIDGE
352
123RD ST
359
ASHLAND AVE.
West Pullman Park
HALSTED ST
Cedar Park Cemetery
127TH ST
8A
Vermont
348
Little Calumet River
Joe Louis Golf Course
Whistler Woods Forest Preserve
Inset
CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON
Legend
BRT Alternative
UPRR Rail Alt. - ROW Option
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
Common UPRR Alternative
Halsted Rail Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Proposed BRT Stop
Existing CTA Bus Stops Used by BRT Alternative
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
49 CTA Bus
290 Pace Bus
Water Body
Parks
Cemetery
UA UB UPRR Alternative Study Segments
HA HB Halsted Alternative Study Segments
Scale
0
1,000
2,000
Feet
map id: 12_02.2

Figure 4-2b: Parks and Recreational Facilities (Southwestern Section)


Potter Palmer Park
115TH ST.
111
Kensington
Michigan
UA
UB
Lake Calumet Open Space
BISHOP FORD EXPY
94
Kensington Park
119TH ST
Lake Calumet
STATE STREET
Kensington Marsh
123RD ST
Calumet River
STATE ST
MICHIGAN AVE
Lion Park
34
127TH ST
Little Calumet River
130th
108
Golden Gate Park
West Station Option
South Station Option
134TH ST
George Washington Carver Park
Beaubien Woods Forest Preserve
Inset
CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON
Legend
BRT Alternative
UPRR Rail Alt. - ROW Option
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
Common UPRR Alternative
Halsted Rail Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Proposed BRT Stop
Existing CTA Bus Stops Used by BRT Alternative
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
49 CTA Bus
290 Pace Bus
Water Body
Parks
Cemetery
UA UB UPRR Alternative Study Segments
HA HB Halsted Alternative Study Segments
Scale
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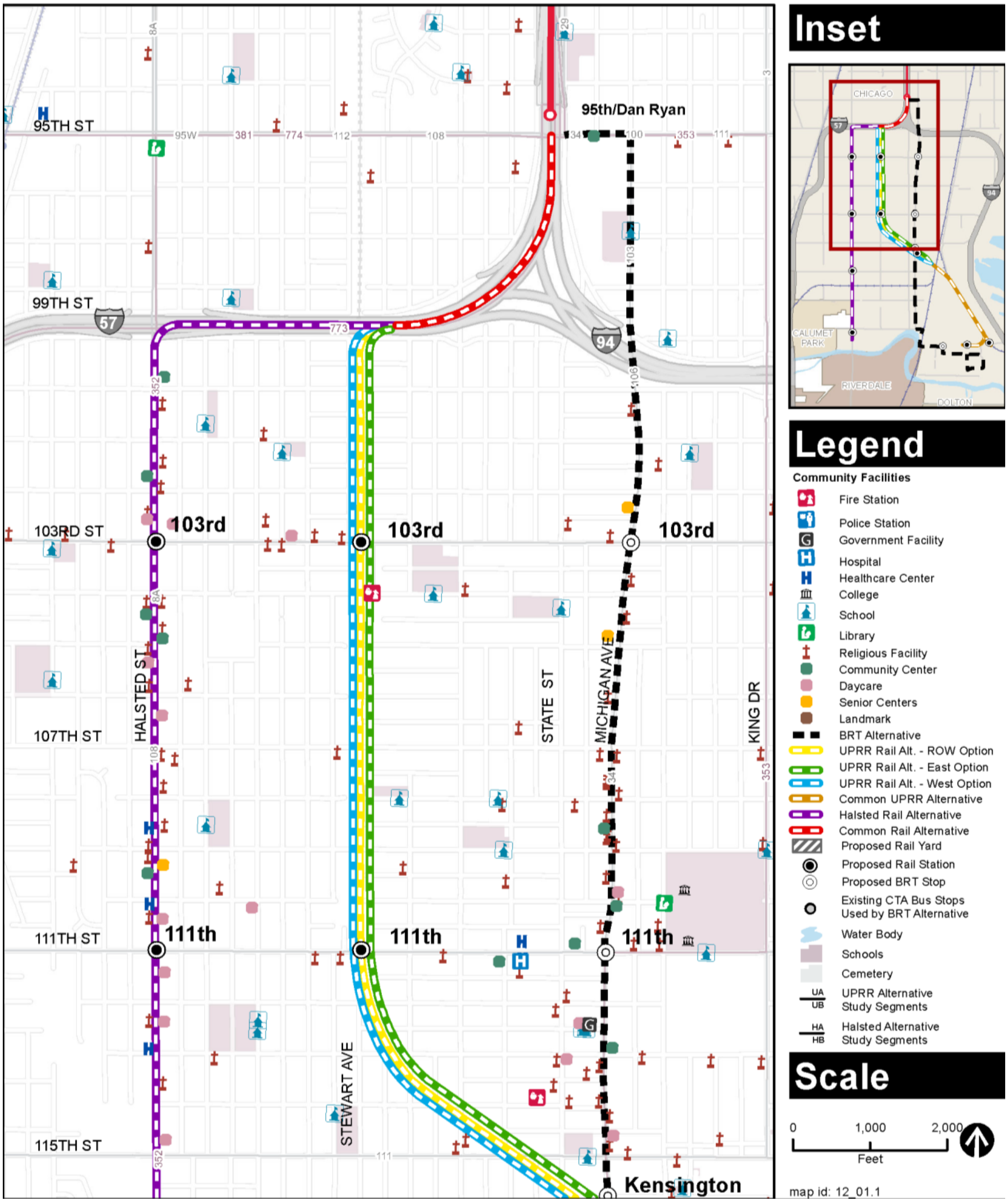
1,000
2,000
Feet
map id: 12_02.3

Figure 4-2c: Parks and Recreational Facilities (Southeastern Section)


95th/Dan Ryan
95TH ST
99TH ST
103RD ST
107TH ST
111TH ST
115TH ST
103rd
103rd
103rd
111th
111th
111th
Kensington
HALSTED ST
STEWART AVE
STATE ST
MICHIGAN AVE
KING DR
57
94
Inset
CHICAGO
CALUMET PARK
RIVERDALE
DOLTON
Legend
Community Facilities
Fire Station
Police Station
Government Facility
Hospital
Healthcare Center
College
School
Library
Religious Facility
Community Center
Daycare
Senior Centers
Landmark
BRT Alternative
UPRR Rail Alt. - ROW Option
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
Common UPRR Alternative
Halsted Rail Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Proposed BRT Stop
Existing CTA Bus Stops Used by BRT Alternative
Water Body
Schools
Cemetery
UA UB UPRR Alternative Study Segments
HA HB Halsted Alternative Study Segments
Scale
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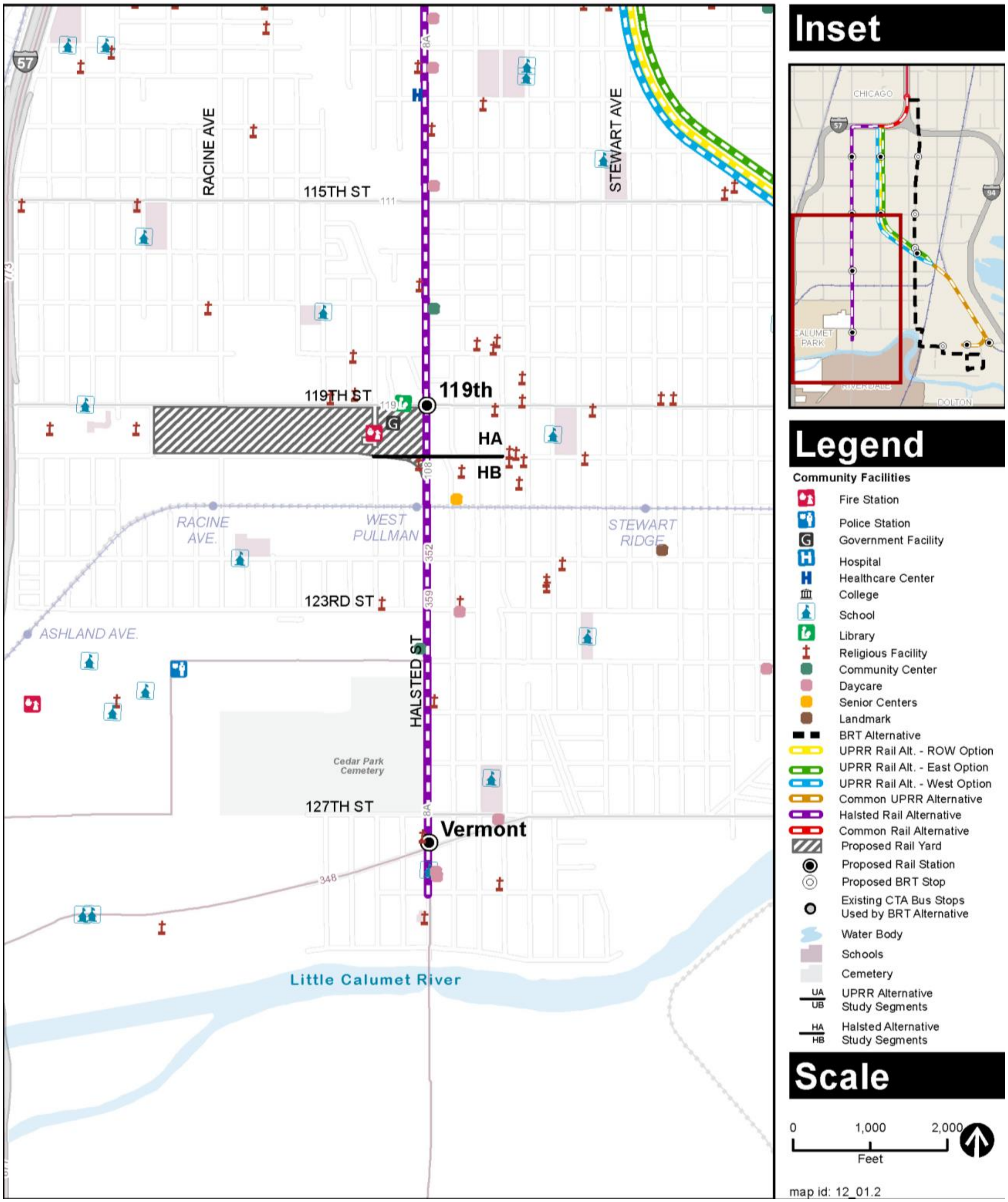
1,000
2,000
Feet
map id: 12_01.1

Figure 4-3a: Other Community Resources (Northern Section)


RACINE AVE
115TH ST
STEWART AVE
119TH ST
119th
HA
HB
RACINE AVE.
WEST PULLMAN
STEWART RIDGE
123RD ST
ASHLAND AVE.
HALSTED ST
Cedar Park Cemetery
127TH ST
Vermont
Little Calumet River
57
Inset
CHICAGO
CALUMET PARK
RIVERDALE
DOLTON
Legend
Community Facilities
Fire Station
Police Station
Government Facility
Hospital
Healthcare Center
College
School
Library
Religious Facility
Community Center
Daycare
Senior Centers
Landmark
BRT Alternative
UPRR Rail Alt. - ROW Option
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
Common UPRR Alternative
Halsted Rail Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Proposed BRT Stop
Existing CTA Bus Stops Used by BRT Alternative
Water Body
Schools
Cemetery
UA UB UPRR Alternative Study Segments
HA HB Halsted Alternative Study Segments
Scale
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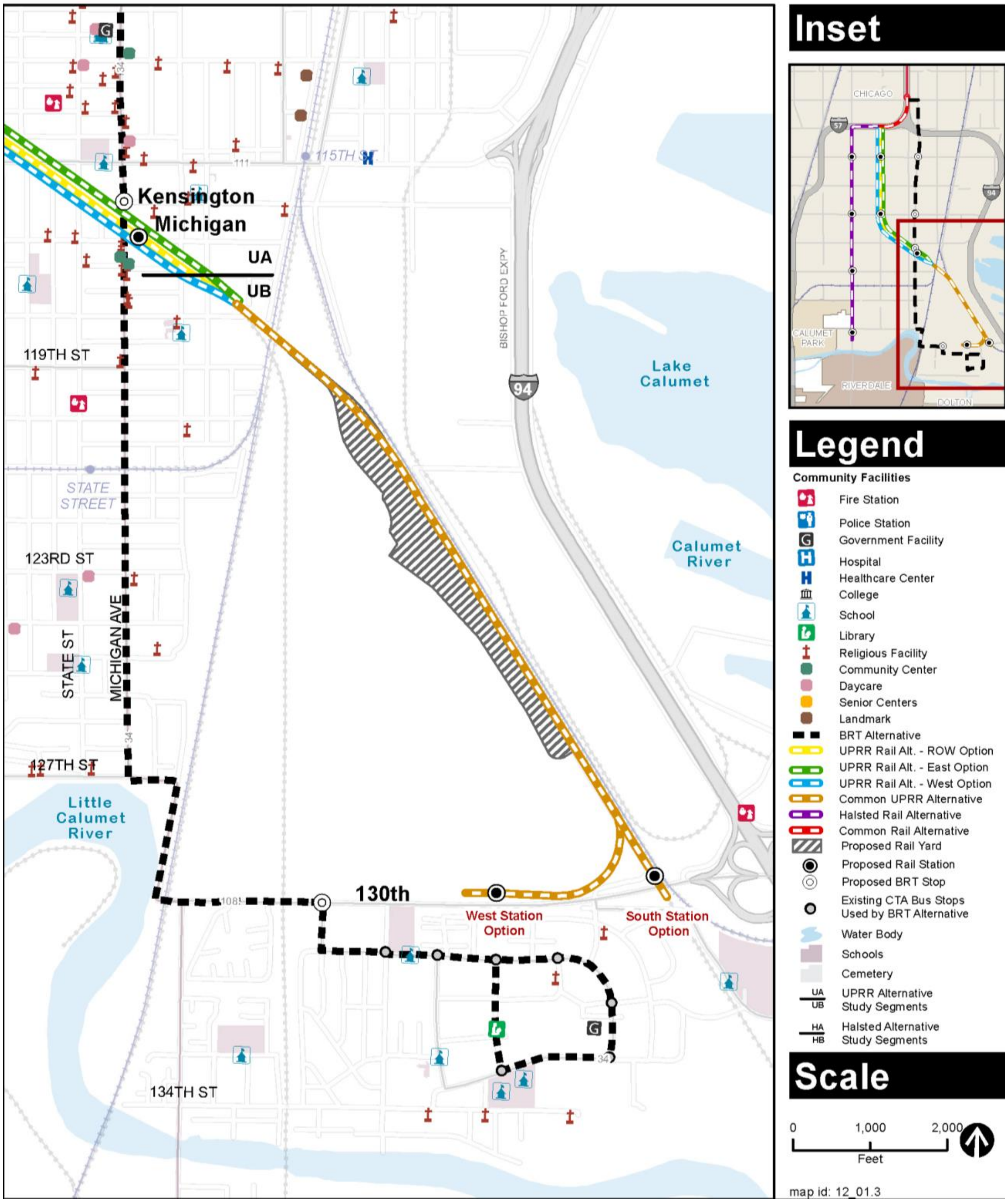
1,000
2,000
Feet
map id: 12_01.2

Figure 4-3b: Other Community Resources (Southwestern Section)


Kensington
Michigan
UA
UB
115TH ST
111
119TH ST
STATE STREET
123RD ST
STATE ST
MICHIGAN AVE
127TH ST
34
Little Calumet River
108
130th
West Station Option
South Station Option
134TH ST
BISHOP FORD EXPY
94
Lake Calumet
Calumet River
Inset
CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON
Legend
Community Facilities
Fire Station
Police Station
Government Facility
Hospital
Healthcare Center
College
School
Library
Religious Facility
Community Center
Daycare
Senior Centers
Landmark
BRT Alternative
UPRR Rail Alt. - ROW Option
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
Common UPRR Alternative
Halsted Rail Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Proposed BRT Stop
Existing CTA Bus Stops Used by BRT Alternative
Water Body
Schools
Cemetery
UA UB UPRR Alternative Study Segments
HA HB Halsted Alternative Study Segments
Scale
0
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Feet
map id: 12_01.3

Figure 4-3c: Other Community Resources (Southeastern Section)

4.8.1 Bus Rapid Transit Alternative

Roseland

- Palmer Park at 201 E. 111th Street
- Chicago State University at 9501 S. Martin Luther King Drive (serves a substantial population outside of the immediate community area)
- Kohn Elementary School at 10414 S. State Street
- Bennet Elementary School at 10115 S. Prairie Avenue
- Gwendolyn Brooks College Preparatory Academy at 250 E. 111th Street
- Vivian E. Summers Preparatory School at 30 E. 112th Place
- Curtis Elementary School at 32 E. 115th Street
- Roseland Community Hospital at 45 W. 111th Street
- Alpha Medical Center at 11240 S. Michigan Avenue
- Roseland Family Medical Center at 11309 S. Michigan Avenue
- Roseland Neighborhood Health Center at 200 E. 115th Street
- Chicago Pullman Library at 11001 S. Indiana Avenue
- Multiple religious institutions along Michigan Avenue, particularly north of 117th Street

West Pullman

- Chicago International Charter School - Prairie Elementary at 11530 S. Prairie Avenue
- Gompers Middle School at 12302 S. State Street
- Owens Elementary School at 12450 S. State Street Lion Field; two baseball fields immediately east of Michigan Avenue between 124th Place and 125th Place

Riverdale

- Carver Elementary School at 901 E. 133rd Place
- Golden Gate Park at 13000 S. Eberhart Avenue
- Carver Park at 939 E. 132nd Street
- Chicago International Charter School - Bond Elementary at 13300 S. Langley Avenue

- Chicago International Charter School - Larry Hawkins High School at 801 E. 133rd Place

- Aldridge Elementary School at 630 E. 131st Street

- Dubois Elementary School at 330 E. 133rd Street

- Carver Military High School at 13100 S. Doty Avenue

Pullman

- The Pullman State Historic Site at 11111 S. Forrestville Avenue (attracts visitors from outside of the immediate community area)

4.8.2 Union Pacific Railroad Rail Alternative

Roseland

- Wendell Smith Park at 9912 S. Princeton Avenue just south of I-57 and approximately 120 feet east of the UPRR ROW

- Block Park at 236 W. 104th Street immediately east of UPRR ROW

- Agape Community Center at 342 W. 111th Street

- Roseland Community Hospital at 45 W. 111th Street

- Roseland Neighborhood Health Center at 200 E. 115th Street

- Moderate tree cover along UPRR ROW between 99th Street and 103th Street

- Langston Hughes Elementary School at 240 W. 104th Street

- Lavizzo Elementary School at 138 W. 109th Street

- Roseland Christian School at 314 W. 108th Street

- Curtis Elementary School at 32 E. 115th Street

- Multiple religious institutions at major cross streets, particularly Michigan Avenue

West Pullman

- Chicago International Charter School - Prairie Elementary at 11530 S. Prairie Avenue

- Kensington Playground Park at 345 E. 118th Street

4.8.3 Halsted Rail Alternative

- Landscaped median along majority of Halsted Street corridor
- Multiple religious institutions along Halsted Street and within two blocks on major cross streets, particularly 119th Street

Washington Heights

- Mt Vernon Park south of Mt. Vernon Elementary School, north of 107th Street
- Mt. Vernon Elementary School at 10540 S. Morgan Street
- Marcus Moziah Garvey Elementary School at 10309 S. Morgan Street

Roseland

- Dunne Technology Academy at 10845 S. Union Avenue
- Dunne Elementary School at 10845 S. Union Avenue
- Fernwood Park at 10436 S. Wallace Street
- Fenger High School at 11220 S. Wallace Street

West Pullman

- Brown Elementary School at 12607 S. Union Avenue
- West Pullman Library at 830 W. 119th Street
- Major Taylor Trail - crosses Halsted Street at 119th Street
- Illinois Department of Employment Security at 837 W. 119th Street

Morgan Park

- Southtown Medical Clinic at 11000 S. Halsted Street immediately west of Halsted

4.9 Livability

In partnership with the Developing Communities Project, CMAP is preparing the Red Line South Extension Livability Project report, which emphasizes how the RLE Project would increase access to jobs, streamline bus-rail connections, and generate economic development in the project area. Using demographic analysis, it highlights additional goals for the RLE Project, including the following:

- Reducing transfers and commute times, and addressing gaps in transit access
- Improving transit access for seniors and people with disabilities

- Addressing the mismatch between affordable housing and transit
- Attracting new residents and minimizing the vacant housing stock
- Improving employment and educational opportunities
- Improving access to shopping and other economic development opportunities
- Supporting existing businesses, homes, and neighborhoods
- Improving community health, safety, and security
- Decreasing traffic congestion
- Fostering community pride
- Connecting communities

These goals are consistent with the neighborhood and community benefits of a transit improvement project, and are taken into account in the analysis presented in Section 5.

Section 5
Impacts and Mitigations

This section describes the potential neighborhood and community impacts that each of the alternatives would have on the affected environment described in Section 4, along with potential mitigation measures. The analysis is focused on areas where adverse impacts could occur. Discussion of areas where no adverse impacts would occur is minimized wherever practical. Impacts of the alternatives are broken down into three types:

- Permanent Impacts: Long-term impacts that would be associated with the permanent infrastructure and operation of the project
- Construction Impacts: Temporary impacts that would be associated with construction activities would be limited to the duration of the construction phase of the project
- Cumulative Impacts: Contributions the project would make to adverse impacts in conjunction with other planned projects in the area

The impacts of the rail alternatives are broken down further into two segments (UA and UB for the UPRR Rail Alternative, and HA and HB for the Halsted Rail Alternative). Consistent with the methods described in Section 3, subsections are included for the following types of neighborhood and community impacts:

- Character and Cohesion: Visual, noise, land use, and displacement impacts, as well as changes to the overall function and aesthetic of the community. Any addition or removal of physical divisions within the community or change in quality of life is also discussed under this heading.
- Community Resources: Impacts on the key resources identified in Section 4.
- Mobility and Development: Overall community impacts of changes in transportation options, business activity, access to jobs, and the potential for economic development.

Table 5-1 summarizes the potential adverse impacts that would remain after mitigation for each of the alternatives.

Table 5-1: Summary of Benefits and Adverse Impacts Remaining after Mitigation

Alternative	Adverse Impacts After Mitigation	Benefits
No Build Alternative	None	None
Bus Rapid Transit Alternative	None	Minor improvements in transit service and mobility
Union Pacific Railroad Rail Alternative - Right-of-Way Option	None	Substantial livability and mobility improvements. Potential to spur economic development near stations. Red Line would serve communities that are geographically isolated, including Altgeld Gardens. Potential reuse of the Union Pacific Railroad rail corridor as a community space.
Union Pacific Railroad Rail Alternative - East Option	Community character - 117th Street and Prairie Avenue in West Pullman: Elevated track structure would displace two houses and encroach into the neighborhood beyond the line of trees that currently shields views of the existing Union Pacific Railroad right-of-way. Height would be out of scale with the existing character of the neighborhood.	Substantial livability and mobility improvements. Potential to spur economic development near stations. Red Line would serve communities that are geographically isolated, including Altgeld Gardens.
Union Pacific Railroad Rail Alternative - West Option	Community character - Fernwood Parkway in Washington Heights/Roseland: Elevated structure would run through the parkway. The structure would change the neighborhood setting of the park and the houses facing it along the west side of Eggleston Avenue.	Substantial livability and mobility improvements. Potential to spur economic development near stations. Red Line would serve communities that are geographically isolated, including Altgeld Gardens.
Halsted Rail Alternative	Community character - Green Street between Vermont Avenue and 128th Place in West Pullman: The garage would displace one block of homes and would be out of scale with the single-story residential character of the neighborhood.	Substantial livability and mobility improvements. Potential to spur economic development along the Halsted Street corridor. Red Line would serve communities that are geographically isolated, but would not serve Altgeld Gardens.

5.1 No Build Alternative

The No Build Alternative would not involve any new construction for the RLE Project. There would be no major service improvements or new transportation infrastructure beyond projects that are listed in CMAP's *GO TO 2040* plan and Transportation Improvement Program. The transit network within the project area would remain largely the same as it is now.

5.1.1 Permanent Impacts and Mitigations – No Build Alternative

Character and Cohesion

Because no project would be built, there would be no changes to community character and cohesion, and no impacts on community resources. No mitigation measures would be required. Although no impacts would occur, the No Build Alternative would lack the potential for streetscape enhancements around stations and improved quality of life that the build alternatives would provide.

Community Resources
The No Build Alternative would have no impact on community resources in the project area. The No Build Alternative would lack the benefits of improved transit access to community resources that the build alternatives would provide. No mitigation measures would be required.

Mobility and Development
The No Build Alternative would have no impact on mobility or community development. No mitigation measures would be required. As discussed in the *Transportation Technical Memorandum*, traffic is expected to worsen in the project area by year 2030, and the No Build Alternative would lack the mobility enhancements that the build alternatives would provide. Comments received during scoping reflect a strong local desire for community growth initiatives, which the No Build Alternative would fail to support due to its inability to attract new economic development interests to the community. The No Build Alternative would also fail to strengthen the transit link between the project area and the major employment centers to the north.

5.1.2 Construction Impacts and Mitigations – No Build Alternative

Character and Cohesion
There would be no construction impacts under the No Build Alternative. Community character, resources, and cohesion would remain unchanged. No mitigation measures would be required.

Community Resources
The No Build Alternative would not cause any construction-related disruption to community resources in the project area. No mitigation measures would be required.

Mobility and Development
The No Build Alternative would not have the construction-related mobility and business disruption associated with the build alternatives; however, it would fail to create new construction jobs or support economic growth in the project area. No adverse impacts would result, and no mitigation measures would be required.

5.1.3 Cumulative Impacts and Mitigations – No Build Alternative

Although the No Build Alternative would not cause any adverse impacts, the lack of improved transportation options and new infrastructure would do little to reverse the disinvestment in the project area that has occurred over the past several decades. No mitigation measures would be required.

5.2 Bus Rapid Transit Alternative

In addition to the provisions of the No Build Alternative, the BRT Alternative would provide enhanced bus service and stops from the existing 95th Street Terminal southward along Michigan Avenue to Altgeld Gardens in the Riverdale community. Surface parking lots would be added at the 103rd and 111th Street stops, and three-story parking garages would be added at the Kensington Avenue and 130th Street stops to accommodate park & ride customers.

5.2.1 Permanent Impacts and Mitigations – Bus Rapid Transit Alternative

Character and Cohesion

With the exception of four enhanced bus stops and new parking facilities, the BRT Alternative would result in few physical environment changes. Some increased noise would result from the more frequent bus service, but the entire route of the BRT Alternative is currently served by CTA local bus route #34, so buses are already a frequent presence along the route. No new physical divisions would be created in the project area by the increased service. Bus service would not increase to the extent that the additional buses would cause substantial additional noise, traffic, or visual changes. The placement of enhanced bus shelters, lighting, and crosswalks at the 103rd Street, 111th Street, Kensington Avenue, and 130th Street stops in Roseland and West Pullman would be a streetscape improvement. The provision of new marked and signalized crosswalks would also represent a safety improvement for pedestrians currently crossing Michigan Avenue in the vicinity of the stop locations. The additional buses and enhanced stops would be consistent with Michigan Avenue's existing character as a busy commercial and residential thoroughfare.

The new parking facilities would be the sole cause of displacements for the BRT Alternative, and the multi-level parking structures at the Kensington Avenue and 130th Street stops would be the most pronounced alterations to the built environment. The parking facilities would be built primarily on vacant land and existing parking lots, but displacement of a single-family home on the eastern side of Michigan Avenue south of 102nd Street and a vacant industrial building on Michigan Avenue between Kensington Avenue and the UPRR ROW would be required. These buildings are bordered by vacant lots on both sides, and their removal would not adversely affect community character or cohesion. The three-story parking structure with ground floor retail and community facilities at the Kensington Avenue site would invite active use of the ground floor space on this parcel, resulting in a beneficial impact. Because the remainder of the land to be used for parking facilities is already vacant, the conversion to park & ride use would not meaningfully change the existing neighborhood character, provided that appropriate landscape is planted to visually screen the structure. At the 130th Street stop, the three-story garage would be north of 130th Street, adjacent to the MWRD site and other non-community-oriented land uses. With no residences or other community elements in the immediate vicinity, the new garage would not adversely affect neighborhood character or cohesion and would be shielded with landscaping to offset visual impacts. All properties would be acquired in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (Uniform Act), which would offset impacts on the displaced owners.

The BRT Alternative would be an overall beneficial change in the character and cohesion of the Roseland, West Pullman, and Riverdale communities, but not to the same extent as the rail alternatives. Impacts would not be adverse, and no mitigation measures would be required.

Community Resources

The BRT Alternative would not displace or otherwise negatively affect any of the community resources in the project area. The BRT Alternative's function as an express version of the existing #34 bus service would slightly shorten travel times for people who access community resources and activity centers near the stop locations by transit (see Section 4.8 for a list of resources near the proposed route). This benefit would be minor because the BRT Alternative would lack rail-like features to further enhance bus service and attract new riders. No adverse impacts would occur, and no mitigation measures would be required.

Mobility and Development

The BRT Alternative would shorten bus travel times along the Michigan Avenue corridor in Roseland, West Pullman, and Riverdale. It would partially meet the project purpose and need by enhancing the connection between these community areas and the 95th Street Terminal, modestly reducing travel times to the employment and activity centers north of the project area. The faster bus service would slightly reduce the isolation of Altgeld Gardens and the other Riverdale residential areas, but not enough to greatly improve economic development opportunities in the area. The BRT Alternative would also benefit the senior citizen housing along Michigan Avenue in the Roseland community, and the low-income populations along the entire alignment, as these groups are more likely to be transit-dependent. Although service would be faster, the BRT Alternative would not yield any new transit access beyond that already provided by the existing #34 bus. The lack of rail-like features to substantially enhance the bus service would limit the BRT Alternative's potential to attract new development or jobs to the project area. Some curb parking spaces along Michigan Avenue would be removed to accommodate the new bus stops, but the enhanced transit service would offset the loss of street parking. Transit mobility in the area would slightly improve as a result of the BRT Alternative, and impacts would be beneficial overall. No mitigation measures would be required.

5.2.2 Construction Impacts and Mitigations – Bus Rapid Transit Alternative

Character and Cohesion

Construction of the BRT Alternative would involve placement of new bus shelters, lighting, park & ride facilities, crosswalks, sidewalk improvements, ramps, traffic signals, and transit signal priority infrastructure along the route. Work would occur largely within the street; however, some off-street staging on adjacent publicly owned and vacant lots might occur. Some temporary road closures would be required, and would be scheduled at night and other low traffic times to the extent practicable and per IDOT approval.

The parking structure at the Kensington Avenue stop would require more intensive construction, but would be phased to minimize disruption. Temporary dust, noise, and visual impacts would occur, as well as minor intermittent traffic delays to accommodate trucks travelling to the construction site. Much of the land around the parking structure location is currently vacant, but there are residences to the east. Residents would experience these temporary impacts during construction, but impacts on the West Pullman community would not be adverse provided that best management practices are employed and nighttime construction near residences is limited to the extent practicable. Similar construction activities would be required for the 130th Street stop parking structure in Riverdale, but community impacts would be minimal given the site's isolated location north of 130th Street, away from residences and businesses.

Community Resources
Construction of bus shelters, traffic signal control systems, and parking structures would be temporary, and could be scheduled so as not to conflict with community events. The magnitude of construction would not be great enough to affect nearby community resources. Access to community resources would be maintained during construction, via detours when necessary. Construction impacts would not be adverse, and no mitigation measures would be required.

Mobility and Development
Temporary road closures would be required, and would be scheduled at night and other low traffic times to the extent practicable. Bus and auto detours around these closures would temporarily impede mobility and inconvenience residents attempting to travel through the construction zones. The construction activities would not, however, impede mobility to the extent that they would cause adverse impacts. The BRT Alternative would create temporary construction jobs, which could have a beneficial impact on community development, although the employment increase would be greater for the rail alternatives. Impacts would not be adverse overall, and no mitigation measures would be required.

5.2.3 Cumulative Impacts and Mitigations – Bus Rapid Transit Alternative

While the permanent community impacts of the BRT Alternative would be beneficial overall, the minimal improvement of transportation options and new infrastructure would do little to reverse the disinvestment in the project area that has occurred over the past several decades. No mitigation measures would be required.

The temporary impacts described in Section 5.2.2 could contribute to a cumulative impact if other nearby projects were underway at the same time as BRT Alternative construction. Currently, no projects have been identified that would coincide with BRT Alternative construction. The CTA would coordinate activities with adjacent construction projects, if any, to minimize impacts on the community.

5.3 Union Pacific Railroad Rail Alternative - Right-of-Way Option

The UPRR Rail Alternative ROW Option would involve an extension of the Red Line from its current terminus at the 95th Street Terminal southward to 130th Street in the vicinity of Altgeld Gardens via existing highway medians and railroad corridors. The three options for the UPRR Rail Alternative are analyzed in two geographic segments:

- Segment UA: from 95th Street Terminal to Michigan Avenue station area, including the communities of Roseland, Washington Heights, and West Pullman
- Segment UB: south of the Michigan Avenue station area, in the Riverdale community

New stations would be constructed: at 103rd Street on the boundary between the Roseland and Washington Heights communities; at 111th Street in Roseland; at Michigan Avenue in West Pullman; and at 130th Street in Riverdale. All stations would have bus turnarounds and park & ride facilities. The park & ride facilities would be primarily surface parking lots, but multi-level parking structures would be constructed at the Michigan Avenue and 130th Street stations. The Chicago Department of Transportation is preparing the Far South Railroad Relocation Feasibility Study (FSRRFS). The study examines a possible project to move the existing freight operations out of the UPRR corridor, leaving the corridor vacant. The CTA would implement the ROW Option only if this separate project occurs prior to the RLE. If the relocation project does not occur, then CTA would need to choose either the East Option or West Option in order to pursue the UPRR Rail Alternative. Of the three UPRR Rail Alternative options under consideration, the ROW Option would have the fewest adverse impacts. The East and West Options would have greater impacts because the RLE tracks would be located 50 feet from the centerline of the existing UPRR tracks. The UPRR requires a 50-foot separation from active freight tracks for safety reasons.

5.3.1 Permanent Impacts and Mitigations - Union Pacific Railroad Rail Alternative - Right-of-Way Option

5.3.1.1 Segment UA

Character and Cohesion

The ROW Option tracks would be located entirely within highway medians and the existing UPRR ROW in Segment UA, with the exception of an elevated curve across the northwestern corner of Wendell Smith Park at the transition from the I-57 median to the freight ROW. The tracks would transition from at-grade to elevated just south of the existing 95th Street Terminal, and would remain elevated throughout the rest of Segment UA. The primary cause of displacements for the ROW Option would be the park & ride facilities. It is assumed that if the UPRR relocates freight operations out of the corridor, the empty ROW would be owned by the City of Chicago. The ROW Option alignment would run in the center of the UPRR ROW, resulting in the fewest displacements of the three UPRR Rail Alternative options.

The alignment from the 95th Street Terminal to the UPRR ROW would be isolated in the medians of I-94 and I-57, resulting in no community impacts. The elevated track structure would be above the highway grade, and visible from residential neighborhoods to the north and south of I-57, but would not change the character of the surrounding neighborhoods due to its highway median location. The elevated tracks would not worsen the existing barrier effect of the highway, because the highway already separates the neighborhoods on either side and is crossable only at overpasses. No noise-related community impacts would occur, as the adjacent homes are already exposed to considerable highway traffic noise.

Where the elevated alignment would curve southward onto the UPRR ROW, it would pass above the northwestern corner of Wendell Smith Park. There are no active recreational uses of this area of the park, and adverse impacts on the community could be avoided if the area beneath the elevated structure remained open for park use and new trees were planted to shield views of the elevated structure from homes fronting the park. The park is already exposed to considerable noise levels from the adjacent highway, so the addition of the elevated structure would not dramatically change the park's character.

South of 99th Place, the elevated tracks would be located in the middle of the existing UPRR ROW for the remainder of Segment UA. The elevated structure would not substantially differ from the existing character of the freight railroad tracks. The structure would not introduce new separations between neighborhoods because the UPRR ROW already has limited grade crossings, and the ROW Option would not include their removal. With implementation of the potential project being studied in the FSRRFS, it would be possible to allow more crossing locations along the former freight ROW to enhance the connection between communities on both sides of the tracks. The new elevated structure would be taller than most buildings in the surrounding single-family neighborhoods, but substantial tree cover exists along the UPRR ROW between I-57 and 104th Street, and in intermittent patches between 104th Street and Michigan Avenue. Additional vegetation would be planted to supplement and fill gaps in the tree cover, effectively shielding the elevated structure from view of the adjacent neighborhoods and parks (Fernwood Parkway and Block Park). Substations would be located in the vacant areas bordering the UPRR ROW, adjacent to existing light industrial buildings and out of view from the fronts of adjoining homes. Noise levels along the UPRR ROW portion of Segment UA would be lower than they are under existing conditions due to removal of the freight operations as part of the potential project being studied in the FSRRFS.

At the 103rd Street station, vacant parcels and two vacant buildings would be acquired to accommodate the two surface parking lots and the bus turnaround. Given that there is currently little to no active use of these properties, the conversion to park & ride facilities would not adversely affect the community. The station would create a transit hub and would help revive the neighborhood with pedestrian activity, which would be beneficial. The station would also provide an attractive location for crossing the UPRR ROW, which would enhance the connection between the neighborhoods currently separated by the freight tracks. The station would be elevated above 103rd Street and would be prominently taller than surrounding buildings, but would not adversely change the character of the neighborhood if landscape were planted to provide screening and good design practices were used.

At the 111th Street station, vacant parcels adjacent to the UPRR ROW on the north side of 111th Street would be acquired to accommodate two surface parking lots and the bus turnaround. These parcels currently contain surface parking and remnants of demolished building foundations. Impacts and benefits in the surrounding neighborhood would be similar to those associated with the 103rd Street station.

At the Michigan Avenue station, a combination of vacant, residential, and commercial properties would be acquired on both sides of Michigan Avenue north of 116th Street to construct a surface parking lot, a bus turnaround, and a three-story parking structure with ground floor retail and commercial space. Acquisitions for the parking structure would include the entire triangular area bounded by 116th Street, State Street, the UPRR ROW, and Michigan Avenue. Approximately 20 structures would be removed, most of which are residential (some vacant), with interspersed commercial and storage uses along Wabash and Michigan Avenues. A vacant industrial building on the east side of Michigan Avenue just south of Kensington Avenue would also be removed to accommodate the surface parking lot. Compensation would be provided according to the Uniform Act, and there are multiple vacant, infill-ready lots in the neighborhood that could be used for relocation.

The City of Chicago is working with a developer (Crown Commercial Real Estate & Development, Inc.) on the Roseland Plaza redevelopment proposal, which would be adjacent to the Michigan Avenue station. The proposal provides for a strip mall within a 91,000 square foot property with 250 parking spaces. There would be 49,000 square feet of commercial space, which would include a grocery store, pharmacy, clothing store, and a bank. The City's Community Development Commission designated the developer in February 2005. The City approved the sale of its land and land write-down costs in May 2009. The developer received approval of its Planned Development application from the Chicago Plan Commission in October 2011.

The parking structure would be a visual alteration of existing neighborhood character and scale despite landscape screening, but the ground floor retail and community space, combined with the proposed supermarket complex north of the station site, would help activate the neighborhood and enhance the station's role as a focal point of community activity. Despite the concentration of residential displacements, the overall impacts of the station would be beneficial, and would contribute to a potential new activity center that enhances the connection between the Roseland and West Pullman communities.

Community Resources

The ROW Option would not result in displacement of any community resources in the project area, but the alignment would pass through the northwestern corner of Wendell Smith Park in Roseland. There are no active recreational uses of this area of the park, and adverse impacts on the community could be avoided if the area beneath the elevated structure remained open for park use and new trees were planted to shield views of the elevated structure from homes fronting the park. The trees planted to shield views of the structure would also serve as replacements for trees removed during the construction process. The park is already exposed to considerable noise levels from the adjacent highway, so the addition of the elevated structure would not dramatically change the park's character.

No other resources would be negatively affected. The new rail extension would facilitate access to community resources near the station locations, especially for transit-dependent residents (see Section 4.8 for a list of resources near the proposed route), and this impact would be beneficial overall.

Mobility and Development

The ROW Option would substantially reduce travel times between the Washington Heights, Roseland, West Pullman, and Riverdale communities, and would enhance their connection with major employment and activity centers north of the project area. This enhancement would increase the number and variety of viable employment opportunities available to residents of these communities, especially those who are transit-dependent. The extended Red Line service and park & ride facilities would also provide alternatives to solo driving, and would attract some motorists off of the nearby highways. More cars would drive into the area to access the park & ride lots, but the increased traffic would not be great enough to worsen congestion following implementation of the mitigation measures prescribed in the *Transportation Technical Memorandum*. Because the UPRR freight operations would have been relocated out of the corridor by the potential project being studied in the FSRRFS, the area near the extended Red Line tracks could potentially be used for a bike or pedestrian path, which would further improve mobility.

The areas around the 103rd and 111th Street stations consist of predominantly single-family homes, with small pockets of neighborhood-scale businesses around each station site. The new transit service and the subsequent increase in pedestrian traffic could attract new businesses to the area and support the growth and enhancement of these neighborhood retail and service nodes. The result would be an overall increase in community livability. There are also multiple vacant residential parcels that would become more attractive for infill development, given the convenience of the nearby Red Line service. Infill would likely occur without changing the overall scale of the neighborhood. The mobility and development impacts of the ROW Option would be beneficial.

The Michigan Avenue station would be located along an existing commercial corridor, and could encourage growth of a larger activity center on the surrounding vacant parcels. The retail and commercial space on the ground floor of the station's park & ride garage, combined with the proposed supermarket complex to the north of the station site, would help activate the neighborhood and enhance the station's role as a focal point of community activity and services. The station might also attract the vibrant commercial and entertainment district along Michigan Avenue between 111th and 113th Streets to expand south toward 115th Street, creating a contiguous transit-oriented retail and activity destination for the community. The station might also attract infill development on vacant parcels along Michigan Avenue and 115th Street that raises the overall density and livability of the neighborhood. The station would serve as a transit hub that brings additional commuters and visitors to the area, which could further boost economic development.

5.3.1.2 Segment UB

Character and Cohesion

Proceeding south from the Michigan Avenue station area, the UPRR Rail Alternative tracks would transition to an at-grade configuration and run along existing railroad corridors through industrial and vacant areas to 130th Street. The only residences, community resources, and community-oriented businesses currently in the area are south of 130th Street. No communities or neighborhoods exist in Segment UB north of 130th Street. As such, there would be no impacts north of 130th Street.

For the South Station Option, the 130th Street station would be constructed at grade on a vacant site partially underneath the 130th Street overpass immediately west of I-94. A bus turnaround, a substation, and a seven-story parking structure would be constructed adjacent to the station north of 130th Street. The overpass would partly shield views of the parking structure from the nearby residences. Residences and other receptors would be far enough from the infrastructure that no impacts would occur. The South Station Option would improve the character of the area by adding a rail station on an otherwise unused site adjacent to a highway and an active railroad. One of the station entrances would be located south of 130th Street to provide access for Altgeld Gardens residents. Residents would be able to access the station without needing to cross 130th Street, which is a busy feeder road to I-94. Most riders would likely access the station by car, with the exception of pedestrians walking from Altgeld Gardens and the surrounding schools, but the station might attract commuter-serving businesses that would benefit local residents given that the area is isolated and there are few other businesses nearby. Impacts would be beneficial overall.

For the West Station Option, the 130th Street station would be constructed at grade on a vacant site north of 130th Street near Evans Avenue. Station facilities would include a bus turnaround, a surface parking lot, and a four-story parking garage. A substation would also be constructed in approximately the same location proposed for the South Station Option. The parking garage would be visible from the homes on the opposite side of 130th Street, but landscaping and trees would be planted to shield the garage and avoid visual impacts. Residences and other receptors would be far enough from the infrastructure that no impacts would occur. The station would improve the character of the area by adding a rail station on an otherwise unused site adjacent to the MWRD facilities. Unlike the South Station Option, residents from Altgeld Gardens and other homes in the area would need to cross 130th Street to access the station, but a signalized intersection with a crosswalk would be added at the intersection of 130th Street and Evans Avenue to facilitate pedestrian access. Most riders would likely access the station by car, with the exception of pedestrians walking from Altgeld Gardens and the surrounding schools, but the station might attract commuter-serving businesses that would benefit local residents given that the area is isolated and there are few other businesses nearby. Impacts would be beneficial overall.

Community Resources

The 130th Street station would provide new transit access to several schools in Riverdale and to the Altgeld Gardens public housing project. Altgeld Gardens has the fewest neighborhood-serving resources of any community in the project area; there are few stores or household services within walking distance, and residents exhibit demographic characteristics of transit dependency. The community is surrounded by several barriers, including I-94, two active railroad lines, MWRD land, and the Little Calumet River. The extended Red Line service would allow residents to easily access community resources in other neighborhoods, and perhaps serve as a focal point for the development of additional community resources in Riverdale. The South Station Option site would be closest to the housing units in the eastern portion of Altgeld Gardens, as well as Carver Military High School. The West Station Option would be closer to the center of the Altgeld Gardens project, Aldridge Elementary School and the other Riverdale residential areas to the west.

Mobility and Development

The UPRR Rail Alternative would substantially reduce travel times between the Washington Heights, Roseland, West Pullman, and Riverdale communities, and would enhance their connection with major employment and activity centers north of the project area. This enhancement would increase the number and variety of viable employment opportunities available to residents of these communities, especially those who are transit-dependent. The extended Red Line service and park & ride facilities would also provide alternatives to solo driving, and would attract some motorists off of the nearby highways. More cars would drive into the area to access the park & ride lots, but the increased traffic would not be great enough to worsen congestion following implementation of the mitigation measures prescribed in the *Transportation Technical Memorandum*.

There are few community-oriented land uses near the 130th Street station site, aside from Altgeld Gardens. Many residents lack automobile access. This reduced mobility is compounded by the isolated location of the complex and the scarcity of nearby jobs and services. The UPRR Rail Alternative would improve transit accessibility and provide residents with fast, reliable transit service to employment centers to the north and areas where more services are available. Riverdale residents who do have automobiles would also benefit from having a new transit alternative to driving.

Private development near 130th Street station is unlikely in the absence of public incentives due to the public ownership of nearly all surrounding land; however, the CHA is currently renovating and redeveloping some of the Altgeld Gardens units, which could result in a joint development and inclusion of more community services. The UPRR Rail Alternative would support this redevelopment effort and would help attract investment interests to the area. The alternative would also support the continued public housing use of the Altgeld Gardens complex by creating a high-quality, affordable transit link that provides residents access to Chicago's major employment centers.

5.3.2 Construction Impacts and Mitigations – Union Pacific Railroad Rail Alternative - Right-of-Way Option

5.3.2.1 Segment UA

Character and Cohesion

Community disruption would occur while construction activities are performed for the UPRR Rail Alternative, with intensive construction occurring over a period of approximately 3 years. Most of the construction activities and staging would occur within street ROW, properties acquired as part of the permanent envelope for the project, and potentially other nearby vacant parcels. Increased truck traffic to and from the alignment would also occur. Given the elevated configuration of most of the UPRR Rail Alternative, hoisting equipment might be visible above the roofs of existing buildings. Storage of materials, equipment, and trucks would introduce temporary intermittent visual impacts within communities, but these impacts would not be adverse given their temporary nature and CTA's use of best management practices. CTA would notify the community in advance of disruptive activities, such as building demolition, utility relocation, and necessary detours, and would perform work in a manner consistent with local ordinances. Hauling routes would be designed to minimize the amount of trucks and equipment passing through sensitive areas of the community, and would favor highways over local roads to the extent feasible.

Temporary dust, noise, and visual impacts would occur. Residents would experience these impacts during construction on an intermittent basis, but impacts on the Washington Heights, Roseland, and West Pullman communities would not be adverse provided that best management practices are employed and nighttime construction near residences is limited to the extent practicable. The Michigan Avenue station would require more intensive construction activities due to the multi-level parking structure, but construction would be phased to reduce impacts. Construction activities at any one location along the alignment would not last for the entire duration of the project construction phase.

Community Resources

Construction would be temporary, and major activities would be scheduled so as not to conflict with community events to the extent possible. Community resources adjacent to the alignment would be subject to temporary adverse impacts, but these would be mitigated through best management practices. Access to community resources would be maintained during construction, via detours when necessary.

Construction activities would be required in Wendell Smith Park in the Roseland community, where the elevated structure would pass through the northwest corner of the park property. The temporary inaccessibility of part of the park would not adversely affect park function, and impacts would be mitigated through best management practices and coordination with community members and the Chicago Park District. Alternate parks, such as Robert Abbott Park, would remain available for use during construction in Wendell Smith Park.

Mobility and Development

During construction of the UPRR Rail Alternative, temporary closures of streets crossing the alignment might be required. Detours would be provided to maintain access to adjacent properties, and bus transit service would detour around closures. Temporary traffic pattern changes might also be needed, such as full street closure, converting a two-way street to one-way operation, or reducing the number of available travel lanes. Temporary parking restrictions might also be implemented to facilitate construction activities.

Businesses around the alignment and parking structure could be affected by construction activities, construction-related traffic, and road and sidewalk closures. Temporary roadway delays due to truck traffic and the movement of construction equipment would occur. Construction would likely result in a temporary, intermittent decrease in accessibility to some businesses. This impact would be limited to businesses on streets near the UPRR Rail Alternative alignment. The CTA would provide adequate detours and minimize road closures to the extent practicable, but some adverse impacts on businesses might occur if people avoid the area altogether. This potentially adverse impact would be mitigated through early notification of construction activities, provision of temporary alternate access routes, and advertising programs to increase the visibility of affected businesses during construction.

5.3.2.2 Segment UB

Character and Cohesion

Construction of the UPRR Rail Alternative in Segment UB would occur north of 130th Street in industrial, railroad, and vacant areas. The 130th Street station site (both options) is the only part of the alignment in Segment UB that would be close to businesses or residences, and most of the construction activities would occur away from these sensitive land uses. Storage of materials, equipment, and trucks would introduce temporary intermittent visual impacts along 130th Street, and temporary dust, noise, and visual impacts would occur. These impacts would not be adverse given their temporary nature and CTA's use of best management practices. CTA would notify the community in advance of disruptive activities, such as utility relocation detours, and would perform work in a manner consistent with local ordinances. Hauling routes would be designed to minimize the amount of trucks and equipment passing through sensitive areas of the community, and would favor highways over local roads to the extent feasible. Impacts on the Riverdale community would not be adverse provided that best management practices are employed and nighttime construction near residences is limited to the extent practicable.

Community Resources

Construction would be temporary, and major activities would be scheduled so as not to conflict with community events to the extent possible. Community resources such as the schools near the 130th Street station location (both options) would be subject to temporary adverse impacts, but these would be mitigated through use of best management practices. Access to community resources would be maintained during construction, via detours when necessary.

Mobility and Development

Some temporary street and lane closures would be required during construction. Given the width of 130th Street and the amount of available space around it for staging, construction would not result in a decrease in access to businesses and residences. Detours would be provided to maintain access to adjacent properties, and bus transit service would detour around closures. Temporary roadway delays due to truck traffic and the movement of construction equipment would also occur. Potentially adverse impacts would also be mitigated through early notification of construction activities and provision of temporary alternate access routes.

5.3.3 Cumulative Impacts and Mitigations - Union Pacific Railroad Rail Alternative - Right-of-Way Option

5.3.3.1 Segment UA

The potential project being studied in the FSRRFS would include relocation of UPRR freight operations outside of the corridor prior to CTA's implementation of the ROW Option. This relocation would leave the ROW area near the Red Line tracks available for a possible bike or pedestrian path or other community-oriented use as a separate future project, which would provide more community mobility and livability benefits than the enhanced transit service alone. The potential project being studied in the FSRRFS would also allow more potential locations where residents could cross the UPRR ROW, which currently has grade crossings only at major streets.

At the Michigan Avenue station, the retail and commercial space on the ground floor of the station's park & ride garage, combined with the proposed supermarket complex north of the station site, would help activate the neighborhood and enhance the station's role as a focal point of community activity and services. This cumulative impact of the two projects would be beneficial for the community and its economic development. The station and retail improvements might also attract the vibrant commercial and entertainment district along Michigan Avenue between 111th and 113th Streets to expand south toward 115th Street, creating a contiguous transit-oriented retail and activity destination for the community.

The temporary construction impacts of the ROW Option described in Section 5.3.2 could contribute to a cumulative impact if other nearby projects were underway at the same time as the ROW Option construction. Currently, no projects have been identified that would have coinciding construction timelines. The CTA would coordinate activities with adjacent construction projects, if any, to minimize impacts on the community.

5.3.3.2 Segment UB

Most of Segment UB is in industrial and vacant areas, away from residences and community-oriented businesses and resources. Only the 130th Street station site (either station option) would be located near an established community. The temporary construction impacts of the UPRR Rail Alternative described in Section 5.3.2 could contribute to a cumulative impact if other nearby projects were underway around the 130th Street station site at the same time as the UPRR Rail Alternative construction. Currently, no projects have been identified that would have coinciding construction timelines. The CTA would coordinate activities with adjacent construction projects, if any, to minimize impacts on the community.

5.3.4 120th Street Yard and Shop

5.3.4.1 Permanent Impacts and Mitigations

The permanent impacts of the 120th Street yard and shop would be the same for all options of the UPRR Rail Alternative. The 120th Street yard and shop would be located in industrial and vacant areas, away from residences and community-oriented businesses and resources. As such, no community impacts would result from operation of the facility.

5.3.4.2 Construction Impacts and Mitigations

The construction impacts of the 120th Street yard and shop would be the same for all options of the UPRR Rail Alternative. The 120th Street yard and shop would be located in industrial and vacant areas, away from residences and community-oriented businesses and resources. Construction activities would be far enough from established communities that no impacts would occur. Hauling routes would be designed to minimize the amount of trucks and equipment passing through sensitive community areas, and would favor highways over local roads to the extent feasible.

5.4 Union Pacific Railroad Rail Alternative - East Option

The UPRR Rail Alternative East Option would involve an extension of the Red Line from its current terminus at the 95th Street Terminal southward to 130th Street in the vicinity of Altgeld Gardens via existing highway medians and railroad corridors. The East Option would be different from the ROW Option in that the alignment would be located to the east of the existing UPRR tracks. The three options for the UPRR Rail Alternative are analyzed in two geographic segments, as described in Section 5.3 for the ROW Option.

New stations would be constructed: at 103rd Street on the boundary between the Roseland and Washington Heights communities; at 111th Street in Roseland; at Michigan Avenue in West Pullman; and at 130th Street in Riverdale. All stations would have bus turnarounds and park & ride facilities. The park & ride facilities would be primarily surface parking lots, but multi-level parking structures would be constructed at the Michigan Avenue and 130th Street stations. Compared to the ROW Option, the East and West Options would have greater impacts because the RLE tracks would be located 50 feet from the centerline of existing UPRR tracks. The UPRR requires a 50-foot separation from active freight tracks for safety reasons. This impact would be most pronounced for the East Option, which would have the greatest number of building displacements.

5.4.1 Permanent Impacts and Mitigations – Union Pacific Railroad Rail Alternative - East Option

5.4.1.1 Segment UA

Character and Cohesion

The East Option tracks would be located within highway medians and adjacent to the existing UPRR ROW in Segment UA, with the exception of an elevated curve across the western portion of Wendell Smith Park at the transition from the I-57 median to its route alongside the freight ROW. The tracks would transition from at-grade to elevated just south of the existing 95th Street Station, and remain elevated throughout the rest of Segment UA. The East Option would require the most displacements of any of the build alternatives because the RLE tracks would be located 50 feet from the centerline of the existing UPRR tracks. The UPRR requires a 50-foot separation from active freight tracks for safety reasons. As a result, the track structure footprint would require acquisition of residences on nearly every street it crosses. Additional displacements would also be needed to accommodate the park & ride facilities.

The alignment from the 95th Street Terminal to the UPRR ROW would be isolated in the medians of I-94 and I-57, resulting in no community impacts, as described for the ROW Option in Section 5.3.1.1.

Where the elevated alignment would curve southward along the eastern side of the UPRR ROW, it would pass above the western edge of Wendell Smith Park. There are no active recreational uses of this area of the park aside from a paved path, and adverse impacts on the community could be avoided if the area beneath the elevated structure remained open for park use and new trees were planted to shield views of the elevated structure from homes fronting the park. The park is already exposed to considerable noise levels from the adjacent highway, so the addition of the elevated structure would not dramatically change the park’s character.

South of 99th Place, the elevated tracks would continue southward along the eastern side of the existing UPRR ROW for the remainder of Segment UA. The elevated structure would not substantially differ from the existing character of the freight railroad tracks, but would encroach into the residential neighborhood and would be more prominent due to its height. The structure would not introduce new separations between neighborhoods because the UPRR ROW already has limited grade crossings and acts as a barrier for pedestrians. Unlike the ROW Option, the East Option would not present any new opportunities for additional crossings, due to the UPRR’s continued use of the ROW.

The new elevated structure would be closer to residences than the existing UPRR tracks, and would require removal of some homes. The CTA elevated structure would adhere to the minimum clearance and crash wall standards requested by UPRR. The elevated structure would be taller than most buildings in the surrounding single-family neighborhoods; however, substantial tree cover exists along the UPRR ROW between I-57 and 104th Street, and in intermittent patches between 104th Street and Michigan Avenue. Additional vegetation would be planted to supplement and fill gaps in the tree cover on both sides of the proposed elevated structure, effectively shielding the structure from view of the adjacent neighborhoods and parks (Fernwood Parkway and the eastern portion of Block Park). The substation sites would be located in the vacant areas bordering the proposed ROW, adjacent to existing light industrial buildings and out of view from the fronts of adjoining homes.

The track structure would require acquisition of two or three parcels closest to the eastern side of the UPRR ROW on every east-west street from 99th Place to 102nd Place, and from 105th Place to the southern end of Segment UA. Some of these parcels are vacant or have light industrial uses, but most contain single-family houses. The buildings currently occupying these parcels would be displaced. Adverse community impacts would be avoided through compensation and relocation assistance in compliance with the Uniform Act. Sufficient vacant parcels and buildings exist in the immediate area to accommodate relocation. Most of the streets in this area, with the exception of major thoroughfares, terminate at the UPRR ROW. As such, the displaced homes would be adjacent to the UPRR tracks at the ends of blocks, and not in the center of the neighborhood, thus limiting the potentially adverse impact on community cohesion and allowing the blocks to retain their integrity. The elevated tracks would encroach upon the edges of neighborhoods, but would leave them otherwise intact. Although the CTA tracks would be close to existing homes, adverse noise impacts would be avoided by constructing a 3- to 4-foot noise barrier alongside the tracks wherever noise-sensitive land uses exist within 280 feet of the alignment. The visual impacts would be mitigated by planting additional trees to screen the appearance of the new structure.

At the 103rd Street station, vacant parcels and two vacant buildings would be acquired to accommodate the two surface parking lots and the bus turnaround. Given that there is currently little to no active use of these properties, the conversion to park & ride facilities would not adversely affect the community. The station would create a transit hub and would help revive the neighborhood with pedestrian activity, which would be beneficial. The safety features at the adjacent UPRR grade crossing would be improved to facilitate foot traffic between the station and park & ride lot. The improved safety features would also provide a more attractive location for crossing the UPRR ROW, which would enhance the connection between the neighborhoods currently separated by the freight tracks. The station and track structure would be elevated above 103rd Street and a portion of Block Park, and would be prominently taller than surrounding buildings. The affected portion does not contain any facilities, and contains an open grassy area with moderate tree cover. Keeping the park area beneath the tracks and station open to public use, improving of the recreational facilities at Block Park, and improving park space elsewhere in the neighborhood would all be suitable measures to mitigate the potentially adverse impacts. The new transit infrastructure would not adversely change the character of the neighborhood if landscape were planted to provide screening and good design practices were used.

At the 111th Street station, vacant parcels adjacent to the UPRR ROW between 110th and 111th Streets would be acquired to accommodate the two surface parking lots and the bus turnaround. These parcels currently contain surface parking and remnants of demolished building foundations. Given that there is currently little to no active use of these properties, the conversion to park & ride facilities would not adversely affect the community. Impacts would be similar to those around the 103rd Street station; however, there are no parks adjacent to the 111th Street station site.

The 111th Street station would create a transit hub and would help revive the neighborhood with pedestrian activity, which would be beneficial. The safety features at the adjacent UPRR grade crossing would be improved to facilitate foot traffic between the station and park & ride lot. The improved safety features would also provide a more attractive location for crossing the UPRR ROW, which would enhance the connection between the neighborhoods currently separated by the freight tracks. The station and track structure would be prominently taller than surrounding buildings; however, the station would be less visible than 103rd Street station because it would not be located above any cross streets. The new transit infrastructure would not adversely change the character of the neighborhood if landscape were planted to provide screening and good design practices were used.

At 114th Street and Wentworth Avenue, the footprint of the elevated structure would require displacement of the Now Faith Church of God Holiness, which currently occupies a converted commercial/light industrial building. Given the availability of other buildings and vacant parcels in the immediate area, there would be no adverse impacts after compliance with the Uniform Act.

At the Michigan Avenue station, a combination of vacant, residential, and commercial properties would be acquired on both sides of Michigan Avenue north of 116th Street to construct a surface parking lot, a bus turnaround, and a three-story parking structure with ground floor retail and commercial space. Impacts on the surrounding neighborhood would be similar to those for the ROW Option; however, the station would be slightly further north. During visioning sessions held in 2010, community members indicated a desire for three- to four-story buildings near stations, which would be consistent with the scale of the proposed structure. Acquisitions for the parking structure would include the entire triangular area bounded by 116th Street, State Street, the UPRR ROW, and Michigan Avenue. Approximately 20 structures would be removed, most of which are residential (some vacant), with interspersed commercial and storage uses along Wabash and Michigan Avenues. A vacant industrial building on the east side of Michigan Avenue just south of Kensington Avenue would also be removed to accommodate the surface parking lot. Compensation would be provided according to the Uniform Act, and there are multiple vacant, infill-ready lots in the neighborhood that could be used for relocation.

Visual alteration impacts of the parking structure at the Michigan Avenue station, and the station's community character and cohesion benefits would be the same as described for the ROW Option in Section 5.3.1.1. Despite the concentration of residential displacements, the overall impacts of the station would be beneficial, and would contribute to a potential new activity center that enhances the connection between the Roseland and West Pullman communities.

At the southeastern end of the Michigan Avenue station area, near the intersection of 117th Street and Prairie Avenue in the West Pullman community, the elevated structure would displace two houses and encroach into the neighborhood beyond the line of trees that currently shields views of the UPRR ROW. The structure would be in front of several houses, and the height would be out of scale with the existing character of the neighborhood. The structure's location above an intersection would preclude screening it with additional trees. This impact would be adverse, and would not be fully offset by mitigation. Figure 5-1 shows the potential change.

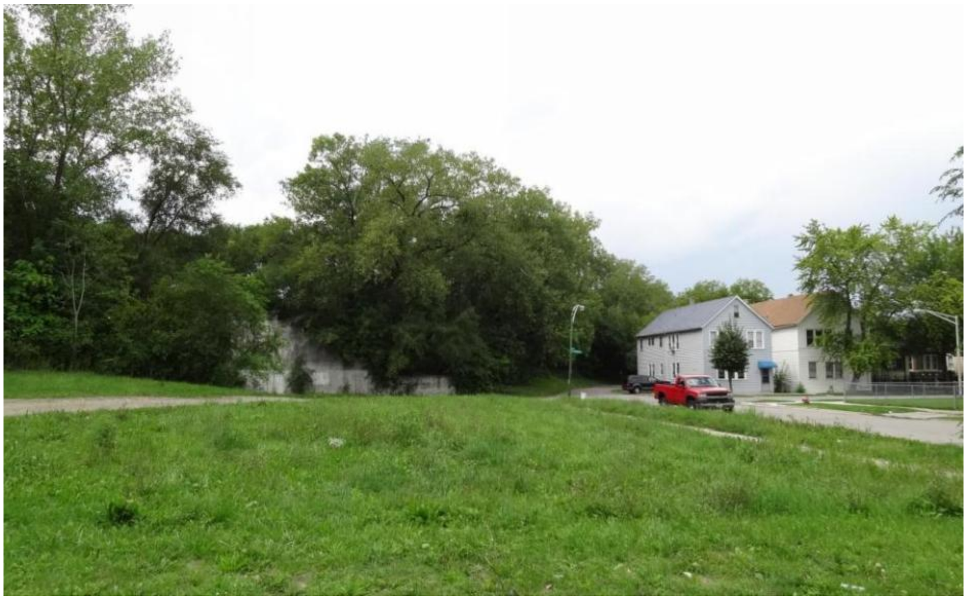

Figure 5-1(a): 117th Street and Prairie Avenue Looking Northwest - East Option (Existing View)

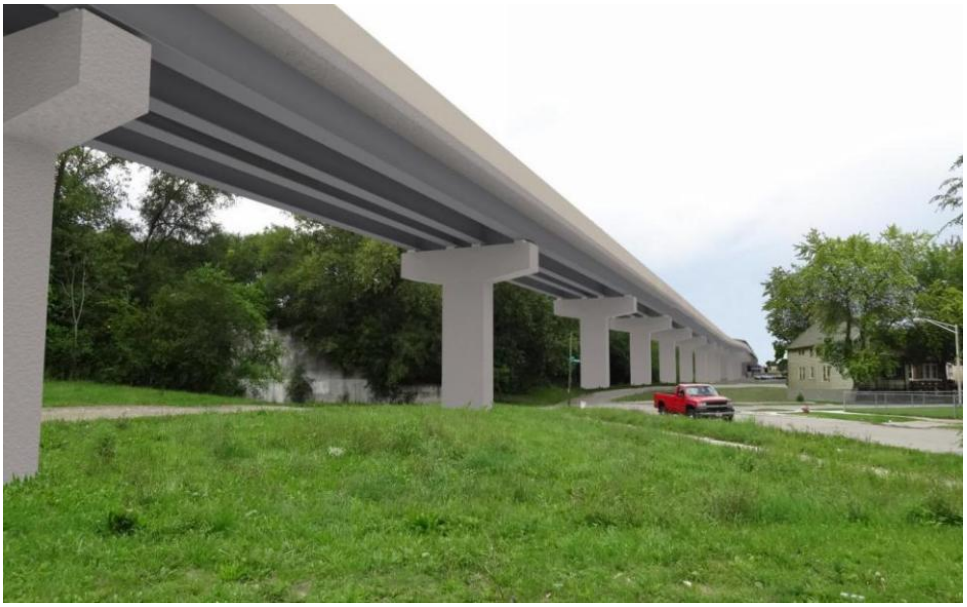

Figure 5-1(b): 117th Street and Prairie Avenue Looking Northwest - East Option (Visualization)

Community Resources

As mentioned above, the East Option would displace the Now Faith Church of God Holiness, and would cross portions of Block Park and Wendell Smith Park, all in Roseland. There are no active recreational uses in the affected portion of Wendell Smith Park aside from a paved path, and adverse impacts on the community could be avoided as described above for the ROW Option. As described for the ROW Option, the addition of the elevated structure would not dramatically change the park's character.

The affected portion of Block Park has few recreational purposes and is less attractive to users than the portion east of Harvard Avenue due to the proximity to the UPRR freight tracks and the presence of a large communication tower. Keeping the park area beneath the tracks and station open to public use, improving the recreational facilities at Block Park, and expanding park space elsewhere in the neighborhood would all be suitable measures to mitigate the potentially adverse impacts. New trees would be planted to shield views of the elevated structure from the park and to replace those removed during construction. The park is already exposed to considerable noise levels from the adjacent UPRR freight tracks, so the introduction of the elevated structure would not be adverse after mitigation.

At 114th Street and Wentworth Avenue, the footprint of the elevated structure would require displacement of the Now Faith Church of God Holiness, which currently occupies a converted commercial/light industrial building. Given the availability of other buildings and vacant parcels in the immediate area, there would be no adverse impacts after compliance with the Uniform Act. Another building in the area could be upgraded and adapted, or a new building could be provided for church use without residual adverse impacts on this community resource.

No other resources would be negatively affected. The new rail extension would facilitate access to community resources near the station locations, especially for transit-dependent residents (see Section 4.8 for a list of resources near the proposed route), and this impact would be beneficial overall.

Mobility and Development

The East Option would have the same general mobility benefits as described in Section 5.3.1.1 for the ROW Option; however, the East Option would lack the benefit of possible future redevelopment of the UPRR ROW into a bike or pedestrian path, which the ROW Option would allow.

The mobility and development impacts of the East Option would be beneficial for the areas around the 103rd and 111th Street stations and would be the same as described in Section 5.3.1.1 for the ROW Option.

The mobility and development impacts of the East Option in the area of the Michigan Avenue station would be the same as described in Section 5.3.1.1 for the ROW Option.

5.4.1.2 Segment UB

All of the UPRR Rail Alternative options would be the same in Segment UB, south of the Michigan Avenue station area. The permanent impacts of the UPRR Rail Alternative in Segment UB are described in Section 5.3.1.2.

5.4.2 Construction Impacts and Mitigations – Union Pacific Railroad Rail Alternative - East Option

5.4.2.1 Segment UA

Character and Cohesion

Construction impacts on community character and cohesion for the East Option would be similar to those of the ROW Option, described in Section 5.3.2.1. A greater intensity of construction activities would occur for the East and West Options than for the ROW Option because more building demolition would be required. The East Option would require the greatest number of building acquisitions of the three UPRR Rail Alternative options.

Community Resources

Construction would be temporary, and major activities would be scheduled so as not to conflict with community events to the extent possible. Community resources adjacent to the alignment would be subject to temporary adverse impacts, but these would be mitigated through best management practices. Access to community resources would be maintained during construction, via detours when necessary.

Construction activities would be required in Wendell Smith Park and Block Park in the Roseland community, where the elevated structure would pass through the western portions of both park properties. The temporary inaccessibility of part of the park area would not adversely affect park function, and impacts would be mitigated through best management practices and coordinating with community members and the Chicago Park District. Alternate parks, such as Robert Abbott Park and Fernwood Park, would remain available for use during construction in Wendell Smith and Block Parks.

Mobility and Development

During construction of the UPRR Rail Alternative, temporary closures of streets crossing the alignment might be required. Detours would be provided to maintain access to adjacent properties, and bus transit service would detour around closures. Temporary traffic pattern changes might also be needed such as full street closure, converting a two-way street to one-way operation, or reducing the number of available travel lanes. Temporary parking restrictions might also be implemented to facilitate construction activities. A greater intensity of construction activities would occur for the East and West Options than the ROW Option because more building demolition would be required, so impacts would be more pronounced.

Impacts and mitigations for businesses around the alignment and parking structure would be the same as for the ROW Option, described in Section 5.3.2.1.

5.4.2.2 Segment UB

All of the UPRR Rail Alternative options would be the same in Segment UB, south of the Michigan Avenue station area. The construction impacts of the UPRR Rail Alternative in Segment UB are described in Section 5.3.2.2.

5.4.3 Cumulative Impacts and Mitigations - Union Pacific Railroad Rail Alternative - East Option

5.4.3.1 Segment UA

Cumulative impacts of the East Option at the Michigan Avenue station would be the same as described for the ROW Option in Section 5.3.3.1.

The temporary construction impacts of the East Option described in Section 5.4.2 could contribute to a cumulative impact if other nearby projects were underway at the same time as the East Option construction. Currently, no projects have been identified that would have coinciding construction timelines. The CTA would coordinate activities with adjacent construction projects, if any, to minimize impacts on the community.

The UPRR Rail Alternative would not contribute to any additional adverse cumulative impacts. The East Option would, however, lack the beneficial cumulative impacts with the potential project being studied in the FSRRFS, which the ROW Option would provide.

5.4.3.2 Segment UB

All of the UPRR Rail Alternative options would be the same in Segment UB, south of the Michigan Avenue station area. The cumulative impacts of the UPRR Rail Alternative in Segment UB are described in Section 5.3.3.2.

5.4.4 120th Street Yard and Shop

5.4.4.1 Permanent Impacts and Mitigations

The permanent impacts of the 120th Street yard and shop would be the same for all options of the UPRR Rail Alternative. The 120th Street yard and shop would be located in industrial and vacant areas, away from residences and community-oriented businesses and resources. As such, no community impacts would result from operation of the facility.

5.4.4.2 Construction Impacts and Mitigations

The construction impacts of the 120th Street yard and shop would be the same for all options of the UPRR Rail Alternative. The 120th Street yard and shop would be located in industrial and vacant areas, away from residences and community-oriented businesses and resources. Construction activities would be far enough from established communities that no impacts would occur. Hauling routes would be designed to minimize the amount of trucks and equipment passing through sensitive community areas, and would favor highways over local roads to the extent feasible.

5.5 Union Pacific Railroad Rail Alternative - West Option

The UPRR Rail Alternative West Option would include extension of the Red Line from its current terminus at 95th Street Terminal southward to 130th Street in the vicinity of Altgeld Gardens via existing highway medians and railroad corridors. The West Option would be different from the ROW and East Options in that the alignment would be located to the west of the existing UPRR tracks. The three options for the UPRR Rail Alternative are analyzed in two geographic segments, as described in Section 5.3 for the ROW Option.

Four new stations would be constructed: at 103rd Street on the boundary between the Roseland and Washington Heights communities; at 111th Street in Roseland; at Michigan Avenue in West Pullman; and at 130th Street in Riverdale. All stations would have bus turnarounds and park & ride facilities. The park & ride facilities would be primarily surface parking lots, but multi-level parking structures would be constructed at the Michigan Avenue and 130th Street stations. Compared to the ROW Option, the East and West Options would have greater impacts because RLE tracks would be located 50 feet from the centerline of existing UPRR tracks. The UPRR requires a 50-foot separation from active freight tracks for safety reasons. The West Option would require fewer displacements than the East Option, and a greater proportion of the displacements would be industrial instead of residential.

5.5.1 Permanent Impacts and Mitigations – Union Pacific Railroad Rail Alternative - West Option

5.5.1.1 Segment UA

Character and Cohesion

The West Option tracks would be located within highway medians and adjacent to the existing UPRR ROW in Segment UA, with the exception of an elevated curve across the western portion of Wendell Smith Park at the transition from the I-57 median to its route alongside the freight ROW. The tracks would transition from at-grade to elevated just south of the existing 95th Street Terminal, and remain elevated throughout the rest of Segment UA. The West Option would require more displacements than the ROW Option because the RLE tracks would be located 50 feet from the centerline of the existing UPRR tracks. The UPRR requires a 50-foot separation from active freight tracks for safety reasons. As a result, the track structure footprint would require acquisition of residences on nearly every street it crosses. Additional displacements would also be needed to accommodate the park

The alignment from the 95th Street Terminal to the UPRR ROW would be isolated in the medians of I-94 and I-57, resulting in no community impacts, as described for the ROW Option in Section 5.3.1.1.

Where the elevated alignment would curve southward toward the western side of the UPRR ROW, it would pass above the northwestern corner of Wendell Smith Park. The profile of the elevated structure would be taller than the ROW and East Options in this area. There are no active recreational uses of this area of the park, and adverse impacts on the community could be avoided as described for the ROW Option in Section 5.3.1.1.

Between 99th and 103rd Streets, the elevated structure would run along Fernwood Parkway. The parkway consists of grassy areas and trees, and contains no recreational features. The impact on this park could be offset by maintaining and improving the area underneath the elevated structure, or improving park facilities nearby. The change in community character due to the visual impacts of the new elevated structure along the parkway would, however, be adverse given that the existing conditions consist of an attractive open grass area. Mitigation measures, including screening the structure with additional landscaping, would not be sufficient to offset this impact. The structure would change the neighborhood setting of the park and the houses facing it along the west side of Eggleston Avenue. This impact is depicted in Figure 5-2.

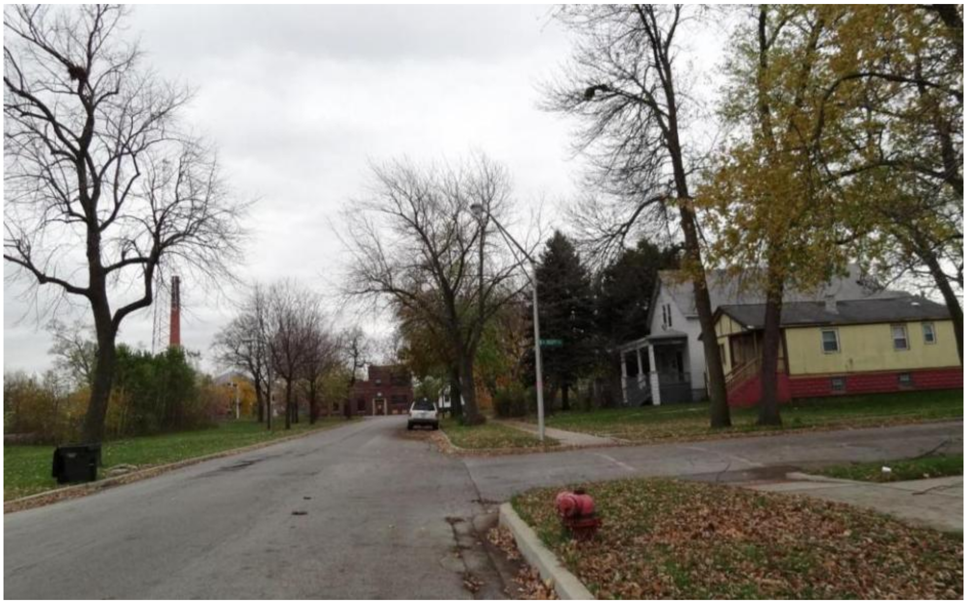

Figure 5-2(a): Fernwood Parkway Looking South - West Option (Existing View)

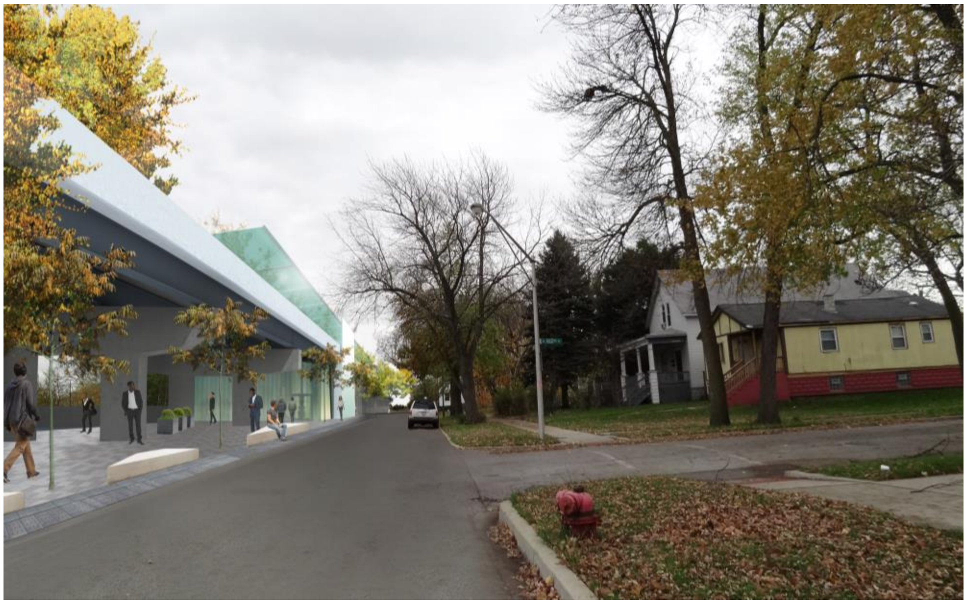

Figure 5-2(b): Fernwood Parkway Looking South - West Option (Visualization)

At the 103rd Street station, vacant parcels and two vacant buildings would be acquired to accommodate a surface parking lot and bus turnaround, which would be an adverse visual impact. Given that there is currently little to no active use of these properties, the conversion to park & ride facilities would not adversely affect the community. The station would create a transit hub and would help revive the neighborhood with pedestrian activity, which would be beneficial. The safety features at the adjacent UPRR grade crossing would be improved to facilitate foot traffic between the station and bus turnaround. The improved safety features would also provide a more attractive location for crossing the UPRR ROW, which would enhance the connection between the neighborhoods currently separated by the freight tracks. The station and track structure would be elevated above 103rd Street, and would be prominently taller than surrounding buildings. The new transit infrastructure would not adversely change the character of the neighborhood if landscape were planted to provide screening and good design practices were used.

South of 103rd Street, the elevated tracks would continue southward through private property along the western side of the existing UPRR ROW for the remainder of Segment UA. The CTA elevated structure would adhere to the minimum clearance and crash wall standards requested by UPRR. The elevated structure would not substantially differ from the existing character of the freight railroad tracks, but would encroach into the primarily vacant and light industrial areas to the west of the UPRR ROW. The structure would not introduce new separations between neighborhoods because the UPRR ROW already has limited grade crossings and acts as a barrier for pedestrians. Unlike the ROW Option, the West Option would not present any new opportunities for additional crossings, due to the UPRR's continued use of the ROW.

The new elevated structure would be closer to residences than the existing UPRR tracks, and would require removal of several homes and light industrial buildings, but the overall displacement of residences would be substantially less than under the East Option. Adverse community impacts would be avoided through compensation and relocation assistance in compliance with the Uniform Act. Sufficient vacant parcels and buildings exist in the immediate area to accommodate relocation. The elevated structure would be taller than most buildings in the surrounding single-family neighborhoods; however, the elevated structure would primarily run behind and along the sides of the houses adjacent to the alignment, so the structure would not be highly visible except at cross streets. Additional vegetation would be planted to supplement and fill gaps in the tree cover, effectively shielding the elevated structure from view of the adjacent neighborhoods. The substation sites would be located in areas bordering the proposed ROW, and would be out of view of the fronts of adjoining homes.

Most of the streets in this area, with the exception of major thoroughfares, terminate at the UPRR ROW. As such, the displaced buildings would be adjacent to the UPRR tracks at the ends of blocks, and not in the center of the neighborhood, thus limiting the potentially adverse impact on community cohesion and allowing the blocks to retain their integrity. North of the Michigan Avenue station area, the majority of the displacements would be on light industrial or vacant parcels, which do not contribute to the character of the surrounding residential neighborhoods. The elevated tracks would encroach upon the edges of neighborhoods, but would leave them otherwise intact. Although the CTA tracks would be close to existing homes, adverse noise impacts would be avoided by constructing a 3- to 4-foot noise barrier alongside the tracks wherever noise-sensitive land uses exist within 280 feet of the alignment. The visual impacts would be mitigated by planting additional trees to screen the appearance of the new structure.

At the 111th Street station, vacant parcels adjacent to the west of the UPRR ROW between 110th and 111th Streets would be acquired to accommodate the surface parking lot and the bus turnaround. These parcels currently contain trees and remnants of demolished building foundations. Given that there is currently little to no active use of these properties, the conversion to park & ride facilities would not adversely affect the community. Impacts would be similar to those around the 103rd Street station; however, there would be fewer pedestrians crossing the UPRR tracks because the parking, bus turnaround, and station would all be on the same side of the UPRR ROW.

The 111th Street station would create a transit hub and would help revive the neighborhood with pedestrian activity, which would be beneficial. The station and track structure would be prominently taller than surrounding buildings; however, the station would be less visible than 103rd Street station because it would not be located above any cross streets. The new transit infrastructure would not adversely change the character of the neighborhood if landscape were planted to provide screening and good design practices were used.

At the Michigan Avenue station, a combination of vacant, residential, and commercial properties would be acquired on both sides of Michigan Avenue south of the UPRR ROW to construct a five-story parking structure with ground floor retail and commercial space. Acquisitions for the parking structure would include the entire triangular area bounded by 116th Street, State Street, the UPRR ROW, and Michigan Avenue. Approximately 20 structures would be removed, most of which are residential (some vacant), with interspersed commercial and storage uses along Wabash and Michigan Avenues. Compensation would be provided according to the Uniform Act, and there are multiple vacant, infill-ready lots in the neighborhood that could be used for relocation. The alteration of existing neighborhood scale and character due to the parking structure would be more pronounced than it would under the ROW and East Options because the parking structure would be two stories taller for the West Option; however, the station would otherwise have community character and cohesion benefits that would be the same as described for the ROW Option in Section 5.3.1.1. Screening, landscaping, architectural design that compliments the surrounding neighborhood, and “step back” massing to reduce the appearance of garage height could be used to reduce impacts.

Community Resources
As mentioned above, the West Option would cross a corner of Wendell Smith Park and the majority of Fernwood Parkway on the boundary between Roseland and Washington Heights. There are no active recreational uses in the affected areas of these parks, and adverse impacts on these community resources could be avoided if the area beneath the elevated structure remained open for park use and new trees were planted to replace ones shield views of the elevated structure from homes fronting the park. Additional recreational facilities would be added to these parks, or other parks in the neighborhood would be expanded to offset the addition of the elevated structure. The trees planted to shield views of the structure would also serve as replacements for trees removed during the construction process. As mentioned above, however, the adverse impacts on community character resulting from the elevated structure running in Fernwood Parkway would be unavoidable.

No other resources would be negatively affected. The new rail extension would facilitate access to community resources near the stations, especially for transit-dependent residents (see Section 4.8 for a list of resources near the proposed route), and this impact would be beneficial overall.

Mobility and Development

The mobility and development benefits and impacts for the West Option would be the same as those described for the East Option in Section 5.4.1.1.

5.5.1.2 Segment UB

All of the UPRR Rail Alternative options would be the same in Segment UB, south of the Michigan Avenue station area. The permanent impacts of the UPRR Rail Alternative in Segment UB are described in Section 5.3.1.2.

5.5.2 Construction Impacts and Mitigations - Union Pacific Railroad Rail Alternative - West Option

5.5.2.1 Segment UA

Character and Cohesion

Construction impacts on community character and cohesion for the West Option would be similar to those of the ROW Option, described in Section 5.4.1. A greater intensity of construction activities would occur for the East and West Options than the ROW Option because more building demolition would be required. The West Option would require fewer building acquisitions overall than the East Option.

Community Resources

Construction would be temporary, and major activities would be scheduled so as not to conflict with community events to the extent possible. Community resources adjacent to the alignment would be subject to temporary adverse impacts, but these would be mitigated through use of best management practices. Access to community resources would be maintained during construction, via detours when necessary.

Construction activities would be required in Wendell Smith Park and Fernwood Parkway near the boundary between the Roseland and Washington Heights communities, where the elevated structure would pass through the northwestern corner of Wendell Smith Park and the nearly the entire length of the Fernwood Parkway property south of 99th Street. The temporary inaccessibility of these park areas would be mitigated through best management practices and coordination with community members and the Chicago Park District. Alternate parks, such as Robert Abbott Park and Fernwood Park, would be available for use during construction in Wendell Smith Park and Fernwood Parkway.

Mobility and Development

The mobility and development impacts for the West Option would be the same as those described for the East Option in Section 5.4.1.2.

5.5.2.2 Segment UB

All of the UPRR Rail Alternative options would be the same in Segment UB, south of the Michigan Avenue station area. The construction impacts of the UPRR Rail Alternative in Segment UB are described in Section 5.3.2.2.

5.5.3 Cumulative Impacts and Mitigations – Union Pacific Railroad Rail Alternative - West Option

5.5.3.1 Segment UA

Cumulative impacts of the West Option at the Michigan Avenue station would be the same as described for the ROW Option in Section 5.3.3.1.

The temporary construction impacts of the West Option described in Section 5.5.2 could contribute to a cumulative impact if other nearby projects were underway at the same time as the West Option construction. Currently, no projects have been identified that would have coinciding construction timelines. The CTA would coordinate activities with adjacent construction projects, if any, to minimize impacts on the community.

The UPRR Rail Alternative would not contribute to any additional adverse cumulative impacts. The West Option would, however, lack the beneficial cumulative impacts with the potential project being studied in the FSRRFS, which the ROW Option would provide.

5.5.3.2 Segment UB

All of the UPRR Rail Alternative options would be the same in Segment UB, south of the Michigan Avenue station area. The cumulative impacts of the UPRR Rail Alternative in Segment UB are described in Section 5.3.3.2.

5.5.4 120th Street Yard and Shop

5.5.4.1 Permanent Impacts and Mitigations

The permanent impacts of the 120th Street yard and shop would be the same for all options of the UPRR Rail Alternative. The 120th Street yard and shop would be located in industrial and vacant areas, away from residences and community-oriented businesses and resources. As such, no community impacts would result from operation of the facility.

5.5.4.2 Construction Impacts and Mitigations

The construction impacts of the 120th Street yard and shop would be the same for all options of the UPRR Rail Alternative. The 120th Street yard and shop would be located in industrial and vacant areas, away from residences and community-oriented businesses and resources. Construction activities would be far enough from established communities that no impacts would occur. Hauling routes would be designed to minimize the amount of trucks and equipment passing through sensitive community areas, and would favor highways over local roads to the extent feasible.

5.6 Halsted Rail Alternative

The Halsted Rail Alternative would involve extension of the Red Line from its current terminus at the 95th Street Terminal southward to Vermont Avenue via existing highway medians and the median of Halsted Street. The Halsted Rail Alternative is analyzed in two geographic segments:

- Segment HA: From the 95th Street Terminal to the 119th Street yard and shop area, including the communities of Roseland, Washington Heights, Morgan Park, and part of West Pullman

- Segment HB: south of the 119th Street yard and shop area, in the West Pullman community and the Village of Calumet Park

Four new stations would be constructed: at 103rd Street on the boundary between the Roseland and Washington Heights community areas; at 111th Street on the boundary between the Roseland and Morgan Park community areas; at 119th Street in the West Pullman area; and at Vermont Avenue in West Pullman. All stations would have bus turnarounds and park & ride facilities. The park & ride facilities would be primarily surface parking lots; however, a multi-level parking structure would be constructed at the Vermont Avenue station.

5.6.1 Permanent Impacts and Mitigations – Halsted Rail Alternative

5.6.1.1 Segment HA

Character and Cohesion

The Halsted Rail Alternative tracks would be located within highway medians and above the median of Halsted Street in Segment HA, with the exception of an elevated curve near the intersection of 99th and Halsted Streets at the transition from the I-57 median to its route down the center of Halsted Street. The tracks would transition from at-grade to elevated just south of the existing 95th Street Terminal, and would remain elevated throughout the rest of the alignment. The primary cause of displacements for the Halsted Rail Alternative would be the off-street park & ride facilities and the 119th Street yard and shop. The elevated structure itself would require few displacements because it would run primarily within existing public ROW. The Halsted Rail Alternative would have more displacements than the UPRR Rail Alternative ROW Option, but fewer than the East and West Options.

The alignment from the 95th Street Terminal to Halsted Street would be isolated in the medians of I-94 and I-57, resulting in no community impacts. The elevated track structure would be above the highway grade, and would be visible from residential neighborhoods to the north and south of I-57. The elevated structure would pass above the existing highway overpasses at Wentworth Avenue, the UPRR ROW, and Parnell Avenue, which would require it to be taller than the structure proposed for the UPRR Rail Alternative in some locations. The structure would not change the character of the surrounding neighborhoods due to its highway median location. The elevated tracks would not worsen the existing barrier effect of the highway, because the highway already separates the neighborhoods on either side, and is crossable only at overpasses. No noise-related community impacts would occur, as the adjacent homes are already exposed to considerable highway traffic noise.

Where the elevated structure would curve southward from the median of I-57 to the median of Halsted Street, the following displacements would be required: a gas station, a communication tower, a small utility building, and a small retail building just south of 99th Street. The introduction of the elevated structure in the area would be a negative visual change, especially in the area just south of 99th Street where there is a row of newly built retail space along the eastern side of Halsted Street. The negative visual change would not, however, be at the level of an adverse impact on community character. Displaced businesses would be able to relocate to other locations on Halsted Street, as there are several available vacant lots and buildings in the area.

Along most of the Halsted Street alignment, the surrounding land uses consist of automotive services, churches, vacant lots and buildings, surface parking, fast food restaurants, beauty supply and services, drug stores, check cashing, discount retail, and household-oriented services such as dry cleaners. Single-family homes and senior housing complexes are interspersed among the businesses throughout the corridor. The business areas are discontinuous due to the presence of parking lots and vacant space, and pedestrian activity is light. Halsted Street also acts as a barrier between neighborhoods due to its width; however, the landscaped median enhances the visual character of the area. Halsted Street is a designated state highway, and carries truck and bus traffic in addition to auto traffic.

The elevated structure would be out of scale with the predominantly single-story buildings along Halsted Street, but not inconsistent with its designation as a state transportation route. In most neighborhoods, the elevated structure would be the tallest structure. The mix of bents and center supports beneath the elevated structure would change the character of Halsted Street by shading the roadway and sidewalks and intensifying the visual separation between the two sides of the street.

The rail stations would enhance and improve the streetscape and bring additional pedestrians into the area, but this benefit would be tempered by the negative visual and aesthetic impacts of the elevated structure. Mitigation measures would include supplemental landscaping along the sidewalks to offset the reduction in median landscaping and partially shield views of the elevated structure. Parts of the structure, such as center supports and the closed deck trackway, may be shielded by the addition of street trees, but bents adjacent to the sidewalk may still be visible. Additional streetscape enhancements would be included. The overall community character impact of adding the elevated structure to the neighborhood would be negative, but not adverse, given the existing setting of a commercial thoroughfare with truck traffic. Moderate noise impacts would occur along the corridor, but could be mitigated with 3- to 4-foot noise barriers wherever the tracks are within 115 to 180 feet of sensitive receptors (threshold distance varies by location and anticipated train speeds).

Three substation facilities would be placed on existing vacant land along Halsted Street in Segment HA at 101st Street, 110th Street, and 119th Street. Good design practices would ensure that the substation buildings contribute to the streetscape by filling in some of the vacant spaces in the business corridor. Building displacements would occur mostly at station and yard areas, leaving most blocks of Halsted Street unaffected by property acquisition. Station and yard areas are discussed in further detail below. Figure 5-3 shows a conceptual visualization of the proposed elevated structure on Halsted Street.

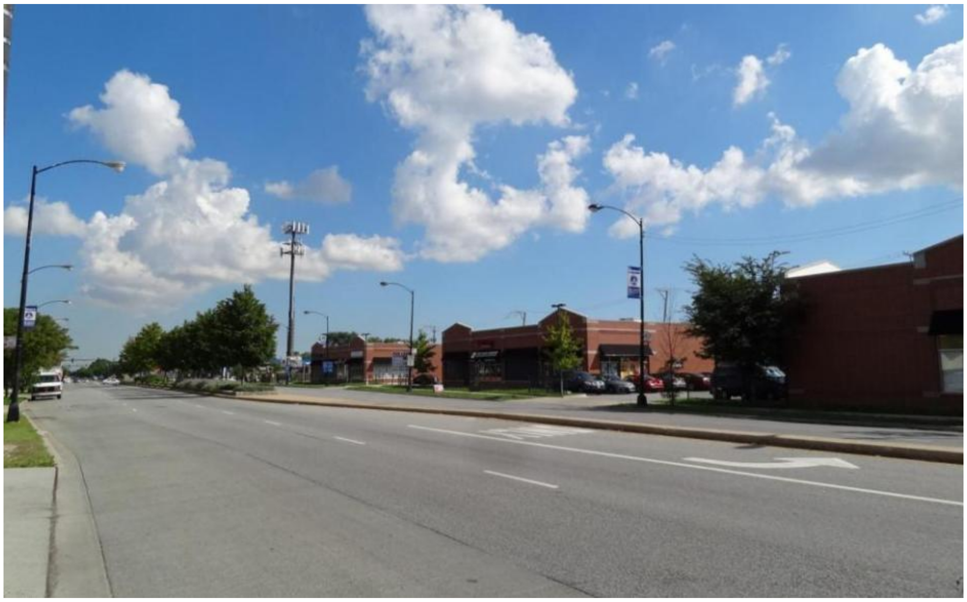

Figure 5-3(a): 100th and Halsted Streets Looking North - Halsted Rail Alternative (Existing View)

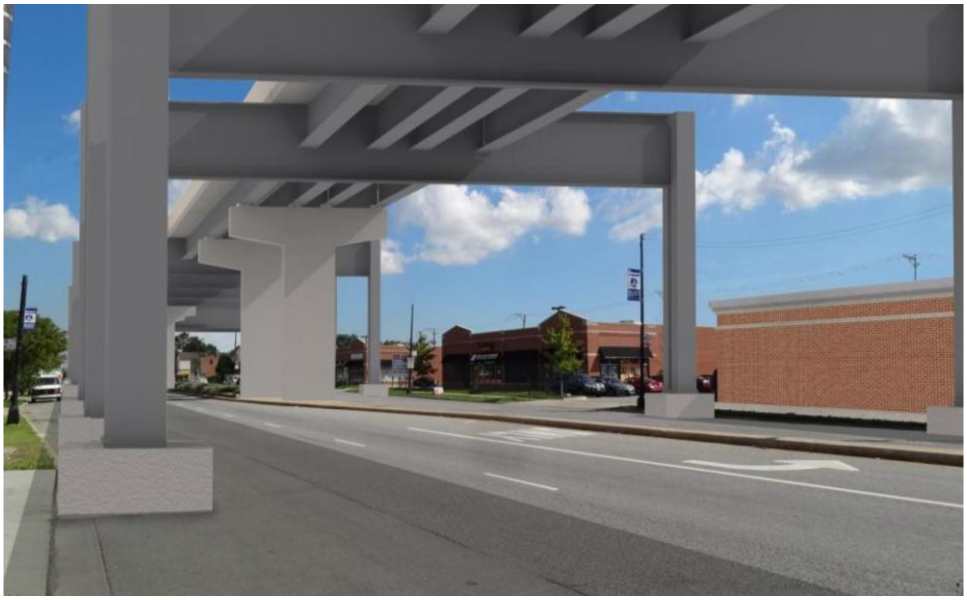

Figure 5-3(b): 100th and Halsted Streets Looking North - Halsted Rail Alternative (Visualization)

At the 103rd Street station, three commercial buildings and associated parking areas would be acquired for use as a park & ride lot and bus turnaround. The affected buildings currently house hair supply, party supply, and car loan businesses, as well as vacant storefronts. Given that there are other vacant properties available in the vicinity for the purposes of relocation, the conversion to park & ride facilities would not adversely affect the community following compliance with the

Uniform Act. The station would improve access to the senior housing complex on 103rd Street just west of Green Street, thereby enhancing mobility for community residents who are potentially transit-dependent. The station would also create a transit hub and would help revive the neighborhood with pedestrian activity, which would be beneficial. The station would also serve as a focal point for the surrounding communities that are currently separated by Halsted Street; however, some of these benefits would be limited by the aesthetic impacts that the elevated structure and supports would have on the streetscape. The new transit infrastructure would not adversely change the character of the neighborhood if landscape were planted to provide screening and good design practices were used.

The conceptual design of the 111th Street station would closely resemble the 103rd Street station. A fast food restaurant and an automotive shop would be acquired to make space for a park & ride lot on the northwest corner of 111th and Halsted Streets. The impacts and benefits of the 111th Street station would be similar to those of the 103rd Street station. The station would improve access to the senior housing/nursing complex on Halsted Street just north of 110th Street, thereby enhancing mobility for community residents who are potentially transit-dependent.

The property acquisitions at 119th Street station would be more extensive than at the 103rd and 111th Street stations. The block bounded by 119th, 120th, Peoria, and Halsted Streets would be acquired to accommodate a park & ride lot and bus turnaround. The block currently contains a large surface parking lot, automotive services, a vacant warehouse, check cashing, a supermarket, a household goods store, and an Illinois Department of Employment Security office. Compliance with the Uniform Act would mitigate the adverse community impacts associated with the business displacements, and the Illinois Department of Employment Security could be moved to other available office or storefront space nearby. Sufficient vacant commercial land exists on Halsted Street in the vicinity of 119th Street and areas southward to relocate the businesses within the same corridor. Given that the affected block already contains a substantial amount of surface parking and vacant space, replacement of the current land uses with a park & ride lot would not be an adverse change in community character. The park & ride lot is adjacent to land that has been identified for acquisition for the proposed 119th Street yard and shop, which is discussed further in Section 5.6.4. Elevated tracks leading to the yard and shop would branch off from the Halsted Street elevated structure at 120th Street, but would cross primarily industrial land that does not contain any community-oriented land uses or resources.

The 119th Street station would create a transit hub and would help revive the neighborhood with pedestrian activity, which would be beneficial. These impacts would primarily occur in areas east and north of the station, because the land to the southwest of the station would be permanently used for park & ride and yard and shop facilities. Some of these benefits would be limited by the aesthetic impacts that the elevated structure and supports would have on the streetscape, particularly along Halsted Street. The station would also serve as a focal point for the surrounding communities that are currently separated by Halsted Street; however, this impact would be limited by the amount of vacant and industrial land present on the blocks surrounding Halsted Street and the placement of the yard and shop facility southwest of the station. The new transit infrastructure would not adversely change the character of the neighborhood if landscape were planted to provide screening and good design practices were used.

Community Resources

The Halsted Rail Alternative would displace one community resource in Segment HA: the Illinois Department of Employment Security office, which would be moved to another location nearby to avoid adverse impacts. No other resources would be negatively affected.

The new rail extension would also facilitate access to community resources near the station locations, especially for transit-dependent residents (see Section 4.8 for a list of resources near the proposed route), and this impact would be beneficial overall. This impact would be greatest at the 119th Street station, where the Major Taylor Trail crosses the intersection of 119th and Halsted Streets. Station area improvements would enhance this crossing and provide a beneficial connection between the new transit line and the existing bicycle and pedestrian trail. Additional community resources, including the West Pullman Library and several churches (some possibly not currently in use), are east of the 119th Street station site, and community members would benefit from enhanced transit connections to these resources.

Mobility and Development

The Halsted Rail Alternative would substantially reduce travel times between the Washington Heights, Roseland, Morgan Park, and West Pullman communities and the Village of Calumet Park, and would enhance their connection with major employment and activity centers north of the project area. This enhancement would increase the number and variety of viable employment opportunities available to residents of these communities, especially those who are transit-dependent. The extended Red Line service and park & ride facilities would also provide alternatives to solo driving, and would attract some motorists off of the nearby highways. More cars would drive into the area to access the park & ride lots, but the increased traffic would not be great enough to worsen congestion following implementation of the mitigation measures prescribed in the *Transportation Technical Memorandum*.

The area around the 103rd Street station location consists of businesses along Halsted and 103rd Streets, and primarily single-family residences on the surrounding blocks. The business area on 103rd Street extends approximately four blocks west of Halsted Street and two blocks to the east. There are several vacant parcels and buildings in the area, and the enhanced transit service could attract infill development and encourage growth of a community business hub around the station. The station would also provide additional mobility to the residents of the senior housing complex that is two blocks to the west. There are also multiple vacant residential parcels that would become more attractive for infill development, given the convenience of the nearby Red Line service. Infill would likely occur without changing the overall scale of the neighborhood. The mobility and development impacts of the Halsted Street Rail Alternative would be beneficial; however, the development potential along Halsted Street would be limited by the negative aesthetic and shading impacts of the proposed elevated structure in the median.

Development potential would be more limited around the 119th Street station location, given the relatively large amount of land that would be used for permanent rail facilities. The parcels on the four blocks of 119th Street to the east of the station location are almost entirely vacant, however, which would potentially allow for a sizeable transit-oriented development in the future. Toward the west, the land on the north side of 119th Street contains mostly public and religious institution uses. Some of the buildings along this portion of 119th Street are vacant, which would allow additional room for limited infill development. The south side of 119th Street between Halsted and Ada Streets would be used exclusively for the park & ride facility and the yard and shop area, neither of which would be conducive to community development. The park & ride lot would have a similar impact on the west side of Halsted Street to the south of the station. The mobility and development impacts would be beneficial overall, but not to as great an extent as at the other station areas. The 119th Street station would have the added benefit of providing access to the Major Taylor Trail, thereby enhancing the multi-modal connection between the Red Line and the pedestrian and bicycle trail.

5.6.1.2 Segment HB

Character and Cohesion

In Segment HB, most of the Halsted Street alignment contains businesses similar to Segment HA, with the exception of the Cedar Park Cemetery on the west side of Halsted Street between 124th and 127th Streets. The Metra Electric District grade crossing and West Pullman Station are between 120th and 122nd Streets. A substation would be located at 126th Street on land currently occupied by part of a surface parking lot. The elevated structure would be similar in appearance to the structure in Segment HA, and would have similar impacts on the character and cohesion of the surrounding community. The same mitigation measures for community and cohesion impacts identified for Segment HA in Section 5.6.1.1 would apply to Segment HB.

At the Vermont Avenue station, the commercial properties on both sides of Halsted Street would be acquired between Vermont Avenue and 128th Place. The single-family homes on the east side of Green Street between Vermont Avenue and 128th Place would also be acquired. The acquired property would be used for a surface park & ride lot on the east side of Halsted Street, and a seven-story park & ride structure on the west. The parking structure would include retail and community space on the ground floor. The displaced buildings along Halsted Street would include a daycare facility, a restaurant, several vacant buildings, and a partially vacant strip mall. Compliance with the Uniform Act would ensure that impacts are not adverse because there is sufficient available space in the area where the displaced businesses could relocate. Some might be able to relocate into the new retail space that would be built in the parking structure. Approximately 11 single-family homes would need to be acquired along Vermont and Green Streets. There are few vacant residential lots in the immediate area, but the magnitude of residential relocations could likely still be absorbed by the housing market in the neighborhood, and impacts would not be adverse after implementation of the Uniform Act.

The seven-story parking structure at the Vermont Avenue station would have an adverse impact on the neighborhood along Green Street between Vermont Avenue and 128th Place, which currently consists of single-family homes. The houses on the east side of Green Street would be replaced by the parking structure, which would be out of scale and visually inconsistent with the single-story residential character of the neighborhood, as shown in Figure 5-4. No amount of mitigation or landscape screening would effectively offset this adverse impact.

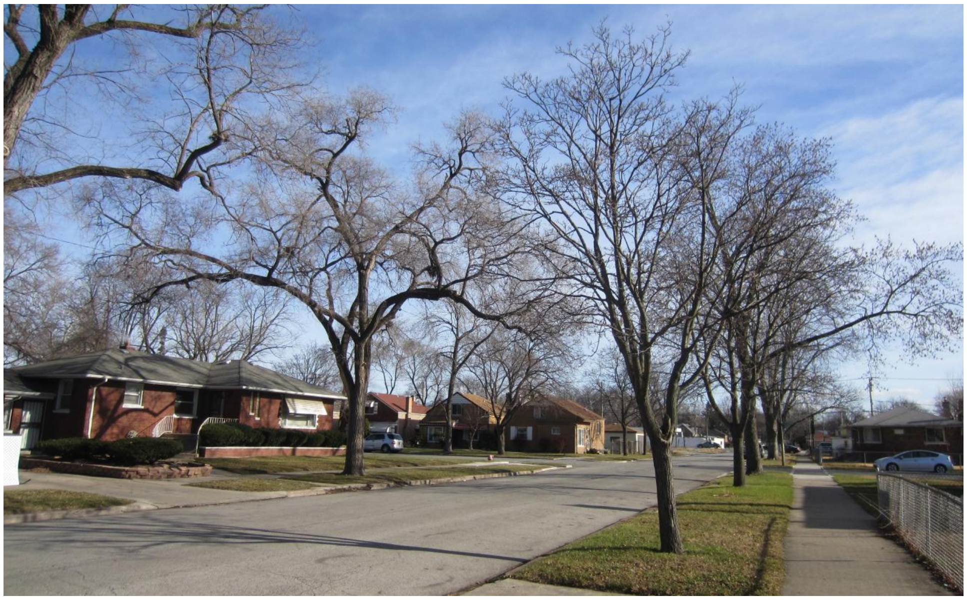

Figure 5-4(a): Vermont Avenue Park & Ride Looking West - Halsted Rail Alternative (Existing View)

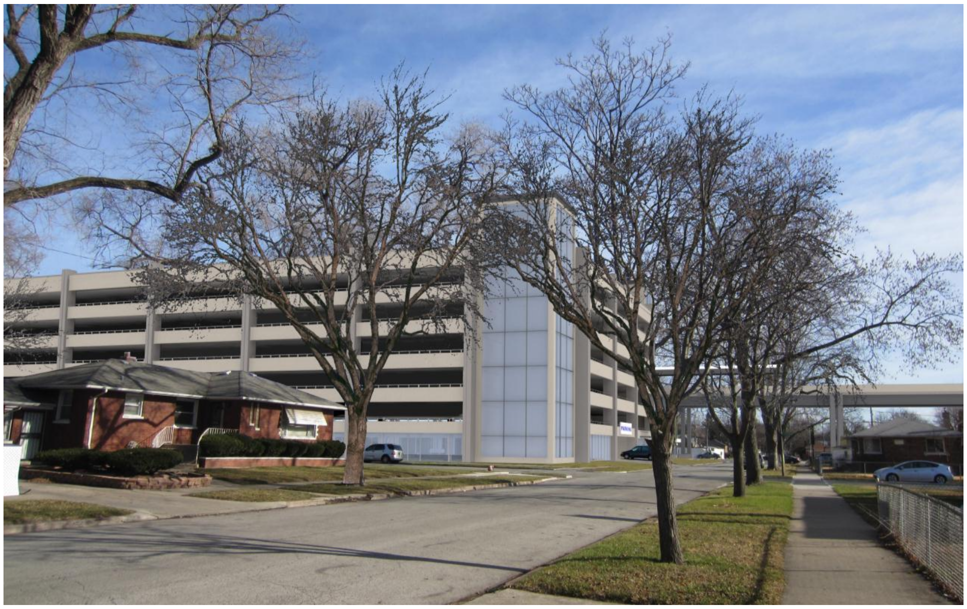

Figure 5-4(b): Vermont Avenue Park & Ride Looking West - Halsted Rail Alternative (Visualization)

Some of the adverse impacts on community character and cohesion would be balanced by the benefits of the improved transit service. The station would create a transit hub and would help revive the neighborhood with pedestrian activity, which would be beneficial. Like the other stations, the Vermont Avenue station would also serve as a focal point for the surrounding communities that are currently separated by Halsted Street; however, some of these benefits would be limited by the aesthetic impacts that the elevated structure and supports would have on the streetscape. The new transit infrastructure would not adversely change the character of the neighborhood if landscape were planted to provide screening and good design practices were used.

Community Resources

The Halsted Rail Alternative would not displace any community resources in Segment HB. The benefits of enhanced access would be the same as those in Segment HA, described in Section 5.6.1.1.

Mobility and Development

The Halsted Rail Alternative would substantially reduce travel times between the Washington Heights, Roseland, Morgan Park, and West Pullman communities and the Village of Calumet Park, and would have the same general mobility benefits as it would in Segment HA, as described in Section 5.6.1.1.

The area around the Vermont Avenue station location consists of businesses along Halsted Street and primarily single-family residences on the surrounding blocks. There are no businesses fronting Vermont Avenue in the vicinity of Halsted Street, only single-family residences. Several of the commercial parcels along Halsted Street south of 127th Street are vacant and would potentially be available for future redevelopment. The station would increase the attractiveness of the area for businesses, and would encourage economic growth in the community. Infill would likely occur without changing the overall scale of the neighborhood. The mobility and development impacts of the Halsted Street Rail Alternative would be beneficial; however, the development potential along Halsted Street would be limited by the negative aesthetic and shading impacts of the proposed elevated structure in the median.

The Halsted Rail Alternative would lack the access and mobility benefits for the Altgeld Gardens community that the UPRR Rail Alternative would provide, but bus service from Altgeld Gardens would be routed to connect to the Vermont Avenue Station. Benefits would accrue to the West Pullman community and the Village of Calumet Park instead of the Riverdale community.

5.6.2 Construction Impacts and Mitigations – Halsted Rail Alternative

5.6.2.1 Segment HA

Character and Cohesion

Community disruption would occur while construction activities are performed for the Halsted Rail Alternative, with intensive construction occurring over a period of approximately 3 years. Construction activities would be more disruptive than they would under the UPRR Rail Alternative because the Halsted Rail Alternative elevated structure would be built in the median of a major commercial street instead of on private, off-street ROW.

Most of the construction activities and staging would occur within street ROW, properties acquired as part of the permanent envelope for the project, and potentially other nearby vacant parcels. Increased truck traffic to and from the alignment would also occur, particularly on Halsted Street and major east-west cross streets. Given the elevated configuration of most of the Halsted Rail Alternative, hoisting equipment would be visible above the roofs of existing buildings and in staging areas. Storage of materials, equipment, and trucks would introduce temporary intermittent visual impacts within communities, but these impacts would not be adverse given their temporary nature and CTA's use of best management practices. CTA would notify the community in advance of disruptive activities such as building demolition, utility relocation, and necessary detours, and would perform work in a manner consistent with local ordinances. Hauling routes would be designed to minimize the amount of trucks and equipment passing through sensitive areas of the community, and would favor highways over local roads to the extent feasible.

Temporary dust, noise, and visual impacts would occur. Residents would experience these impacts during construction on an intermittent basis, but impacts would not be adverse provided that best management practices are employed and nighttime construction near residences is limited to the extent practicable.

Community Resources

Construction would be temporary, and major activities would be scheduled so as not to conflict with community events to the extent possible. Community resources adjacent to the alignment would be subject to temporary adverse impacts, but these would be mitigated through best management practices. Access to community resources would be maintained during construction, via detours when necessary.

Mobility and Development

During construction of the Halsted Rail Alternative, Halsted Streets and its east-west cross streets would require temporary, intermittent roadway and lane closures. Detours would be provided to maintain access to adjacent properties, and bus transit service would detour around closures. Temporary traffic pattern changes might also be needed such as full street closure, converting a two-way street to one-way operation, or reducing the number of available travel lanes. Temporary parking restrictions might also be implemented to facilitate construction activities.

Businesses around the alignment and parking structure could be affected by construction activities, construction-related traffic, and road and sidewalk closures. Temporary roadway delays due to truck traffic and the movement of construction equipment would occur. Construction would likely result in a temporary, intermittent decrease in accessibility to some businesses. This impact would be limited to businesses on streets near the Halsted Rail Alternative alignment. The CTA would provide adequate detours and minimize road closures to the extent practicable, but some adverse impacts on businesses might occur, as people might avoid the area altogether. This potentially adverse impact would be mitigated through early notification of construction activities, provision of temporary alternate access routes, and advertising programs to increase the visibility of affected businesses during construction.

5.6.2.2 Segment HB

The construction impacts of the Halsted Rail Alternative in Segment HB would be similar to those in Segment HA described in 5.6.2.1, with the exception of the Vermont Avenue station. The Vermont Avenue station would require more intensive construction activities due to the multi-level parking structure, but construction would be phased to reduce impacts. Construction activities at any one location along the alignment would not last for the entire duration of the project construction phase.

5.6.3 Cumulative Impacts and Mitigations – Halsted Rail Alternative

5.6.3.1 Segment HA

There are no projects identified in the *Cumulative Impacts Technical Memorandum* that could cause cumulative impacts in conjunction with the Halsted Rail Alternative. Any developments in the vicinity of the Halsted Rail Alternative stations would, however, benefit from enhanced transit access.

The temporary construction impacts of the Halsted Rail Alternative described in Section 5.6.2 could contribute to a cumulative impact if other nearby projects were underway at the same time as the Halsted Rail Alternative construction. Currently, no projects have been identified that would have coinciding construction timelines. The CTA would coordinate activities with any adjacent construction projects to minimize impacts on the community.

5.6.3.2 Segment HB

The cumulative impacts analysis results for Segment HB would be the same as for Segment HA, described in Section 5.6.3.1.

5.6.4 119th Street Yard and Shop

5.6.4.1 Permanent Impacts and Mitigations

The 119th Street yard and shop would be constructed on primarily vacant industrial parcels, with the exception of the elevated tracks leading connecting the yard to the Halsted Street elevated structure at 120th Street. The tracks would displace two commercial buildings, one of which is vacant, and the Sure-Way Missionary Baptist Church, which occupies a converted building at the southwest corner of 120th and Halsted Streets. Given the availability of other buildings and vacant parcels in the immediate area, there would be no adverse impacts after compliance with the Uniform Act. For the Sure-Way Missionary Baptist Church, another building in the area could be upgraded and adapted, or a new building could be provided for church use without residual adverse impacts on this community resource.

Although no adverse impacts are expected, the yard and shop and the adjacent park & ride lot for 119th Street station would occupy approximately one-quarter of the land area nearest to the station site. Neither the park & ride lot nor the yard and shop facility would contribute to the growth and development of the community. This would reduce the overall potential of the Halsted Rail Alternative to encourage new development in the 119th Street station area; however, the proposed rail yard and shop would be consistent with the brownfield site that currently exists on the property. Transit-supportive development would still be able to occur in the remainder of the station area.

5.6.4.2 Construction Impacts and Mitigations

Community disruption would occur while construction activities are performed for the 119th Street yard and shop, with intensive construction occurring over a period of up to 3 years. Most of the construction activities and staging would occur within the properties acquired as part of the permanent envelope for the project. Increased truck traffic to and from the yard and shop site would also occur, particularly on 119th and Halsted Streets. Hoisting equipment would be visible above the roofs of existing buildings. Storage of materials, equipment, and trucks would introduce temporary intermittent visual impacts, but these impacts would not be adverse given their temporary nature, CTA's use of best management practices, and the presence of few residences and businesses in the immediate vicinity of the yard and shop site. CTA would notify the community in advance of disruptive activities such as building demolition, utility relocation, and necessary detours, and would perform work in a manner consistent with local ordinances. Hauling routes would be designed to minimize the amount of trucks and equipment passing through sensitive areas of the community, and would favor highways over local roads to the extent feasible. The CTA would provide adequate detours and minimize road closures to the extent practicable. Temporary dust, noise, and visual impacts would occur on an intermittent basis, but impacts would not be adverse provided that best management practices were employed and nighttime construction near residences were limited to the extent practicable.

Section 6
Impacts Remaining After Mitigation

6.1 No Build Alternative

The No Build Alternative would have no adverse neighborhood and community impacts. No mitigation measures would be required. The No Build Alternative would lack the livability, mobility, and other community benefits that the other alternatives would provide.

6.2 Bus Rapid Transit Alternative

The BRT Alternative would have no adverse neighborhood and community impacts. No mitigation measures would be required. Impacts would be beneficial overall. The BRT Alternative would provide minor improvements in transit service, mobility, community character, and cohesion and it would have fewer livability, mobility, and other community benefits than the rail alternatives.

6.3 Union Pacific Railroad Rail Alternative – Right-of-Way Option

6.3.1 Segment UA

The UPRR Rail Alternative ROW Option would have no adverse neighborhood and community impacts after mitigation in Segment UA. Impacts would be beneficial overall. The UPRR Rail Alternative ROW Option would facilitate access to community resources near the station locations, especially for transit-dependent residents. It would provide substantial livability and mobility improvements for the neighborhoods in the project area, and help spur economic development near stations. It would also serve the geographically isolated communities in the area.

6.3.2 Segment UB

The UPRR Rail Alternative ROW Option would have no adverse neighborhood and community impacts after mitigation in Segment UB. Impacts would be beneficial overall. The UPRR Rail Alternative ROW Option would facilitate access to community resources near the 130th Street Station, especially for transit-dependent residents. The new rail extension would provide substantial livability and mobility improvements for the neighborhoods in the project area, and help spur economic development near stations. It would also serve the geographically isolated communities in the area, including Altgeld Gardens.

6.3.3 120th Street Yard and Shop

The 120th Street yard and shop would have no adverse neighborhood and community impacts. No mitigation measures would be required.

6.4 Union Pacific Railroad Rail Alternative – East Option

6.4.1 Segment UA

The UPRR Rail Alternative East Option would have an adverse impact on the neighborhood around 117th Street and Prairie Avenue in Segment UA that could not be mitigated. At this location, the elevated track structure would displace two houses and encroach into the neighborhood beyond the line of trees that currently shields views of the existing UPRR ROW. The structure would be in front of several houses, and the height would be out of scale with the existing character of the neighborhood. Like the ROW Option, the East Option would also provide beneficial livability and mobility improvements for the neighborhoods in the project area, and help spur economic development near stations. The new rail extension would facilitate access to community resources near the station locations, especially for transit-dependent residents. It would also serve the geographically isolated communities in the area.

6.4.2 Segment UB

The UPRR Rail Alternative East Option would have no adverse neighborhood and community impacts after mitigation in Segment UB. Like the ROW Option, the East Option would also provide beneficial livability and mobility improvements, and help spur economic development. The new rail extension would facilitate access to community resources near the station locations, especially for transit-dependent residents. It would also serve the geographically isolated communities in the area, including Altgeld Gardens.

6.4.3 120th Street Yard and Shop

The 120th Street yard and shop would have no adverse neighborhood and community impacts. No mitigation measures would be required.

6.5 Union Pacific Railroad Rail Alternative – West Option

6.5.1 Segment UA

The UPRR Rail Alternative West Option would have the following adverse neighborhood and community impacts in Segment UA that could not be mitigated:

- Between 99th Street and 103rd Street, the elevated track structure would run along Fernwood Parkway. The change in community character would be adverse due to the visual impacts of the new elevated structure along the parkway. The structure would change the neighborhood setting of the park and the houses facing it along the west side of Eggleston Avenue. Mitigation measures, including screening the structure with additional landscaping, would not be sufficient to offset this impact.

- Near 103rd Street station, the vacant parcels and two vacant buildings would be acquired to accommodate a surface parking lot and bus turnaround, which would be an adverse visual impact. Mitigation measures would not be sufficient to offset this impact.

- The Michigan Avenue station park & ride would be an adverse visual impact because the parking structure would be two stories taller and therefore more pronounced for the West Option than for the ROW and East Options. Mitigation measures would not be sufficient to offset this impact.

Like the ROW and East Options, the West Option would also provide beneficial livability and mobility improvements for the neighborhoods in the project area, and help spur economic development near stations. The new rail extension would facilitate access to community resources near the station locations, especially for transit-dependent residents. It would also serve the geographically isolated communities in the area.

6.5.2 Segment UB

The UPRR Rail Alternative West Option would have no adverse neighborhood and community impacts after mitigation in Segment UB. Like the ROW and East Options, the West Option would also provide beneficial livability and mobility improvements, and help spur economic development. The new rail extension would facilitate access to community resources near the station locations, especially for transit-dependent residents. It would also serve the geographically isolated communities in the area, including Altgeld Gardens.

6.5.3 120th Street Yard and Shop

The 120th Street yard and shop would have no adverse neighborhood and community impacts. No mitigation measures would be required.

6.6 Halsted Rail Alternative

6.6.1 Segment HA

The Halsted Rail Alternative would have no adverse neighborhood and community impacts after mitigation in Segment HA. The Halsted Rail Alternative would also provide beneficial livability and mobility improvements for the neighborhoods in the project area, and help revive the Halsted Street commercial corridor. The new rail extension would facilitate access to community resources near the station locations, especially for transit-dependent residents. It would also serve the geographically isolated communities in the area.

6.6.2 Segment HB

In the neighborhood along Green Street between Vermont Avenue and 128th Place, the Halsted Rail Alternative would have an adverse impact that could not be mitigated. The single-family homes on the east side of the block would be acquired and removed to construct a seven-story park & ride garage. The garage would be out of scale and inconsistent with the single-story residential character of the neighborhood. No available mitigation measures would effectively offset this adverse impact. The Halsted Rail Alternative would also provide beneficial livability and mobility improvements for the neighborhoods in the project area, and help revive the Halsted Street commercial corridor. The new rail extension would facilitate access to community resources near the station locations, especially for transit-dependent residents. It would also serve the geographically isolated communities in the area, but would not directly serve Altgeld Gardens.

6.6.3 119th Street Yard and Shop

The 119th Street yard and shop would have no adverse neighborhood and community impacts. No mitigation measures would be required.

Section 7
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Appendix A
2014-2015 Red Line Extension Project Update

2014–2015 Red Line Extension Project Update

From 2012-2014, CTA evaluated benefits and impacts of four alternatives: the No Build Alternative, the Bus Rapid Transit Alternative (along Michigan Avenue), the Union Pacific Railroad (UPRR) Rail Alternative, and the Halsted Alternative. CTA evaluated three options of the UPRR Rail Alternative: Right-of-Way Option, East Option, and West Option. CTA also evaluated two options of the UPRR Rail Alternative 130th Street station: a South Station Option and a West Station Option. Based on the project description provided in Section 2 of this technical memorandum, CTA analyzed the impacts of these alternatives and station options. The benefits and impacts are included in the technical memoranda prepared in 2012-2014.

In August 2014, based on the technical analysis and public input, CTA announced the NEPA Preferred Alternative—the UPRR Rail Alternative. Additional conceptual engineering was conducted on the UPRR Rail Alternative to refine the East and West Option alignments. In addition, CTA is considering only the South Station Option of the 130th Street Station.

In late 2014 and early 2015, CTA conducted additional engineering and revised assumptions on the East and West Options to refine the alignments. The refinement of the East and West Options consisted of the following items:

- For the segment of the alignment along I-57, CTA shifted the proposed alignment from the median of I-57 to the north side of I-57 within the existing expressway right-of-way. The construction would be less complex, safer for construction workers, and have a shorter duration. The shift would also allow for fewer impacts to Wendell Smith Park for the East Option, and would allow for no permanent impacts to Wendell Smith Park for the West Option.

- CTA modified the curve speeds as the alignment heads south from I-57 along the UPRR tracks. The curve speed for both the East and West Options would be 35 mph.

- CTA shifted the East Option alignment near 103rd Street station to minimize impacts to Block Park and the Roseland Pumping Station.

- CTA modified the curves south of 103rd Street for both the East and West Options to 55 mph to maximize the train speed.

- CTA refined the layout of the 120th Street yard and shop to optimize yard operations. The refined layout of the yard would accommodate 340 train cars.

The refinement of the East and West Option alignments minimizes potential impacts to parks while providing flexibility for future design phases. The Draft Environmental Impact Statement contains the benefits and impacts of the refined East and West Option alignments and supersedes information presented in other chapters of this technical memorandum

Neighborhoods and Communities

The refined East and West Option alignments would result in additional permanent adverse impacts to neighborhoods and communities which were not discussed in this technical memorandum.

The refined alignment along the I-57 corridor in the Roseland community area would result in adverse impacts related to community character and cohesion in Roseland. The elevated track structure along the I-57 corridor would cause adverse visual impacts because of the change in the visual setting in the highway right-of-way along the north side of I-57 in Roseland. Figure 1 shows existing conditions and a photo simulation of the track structure in the I-57 right-of-way.

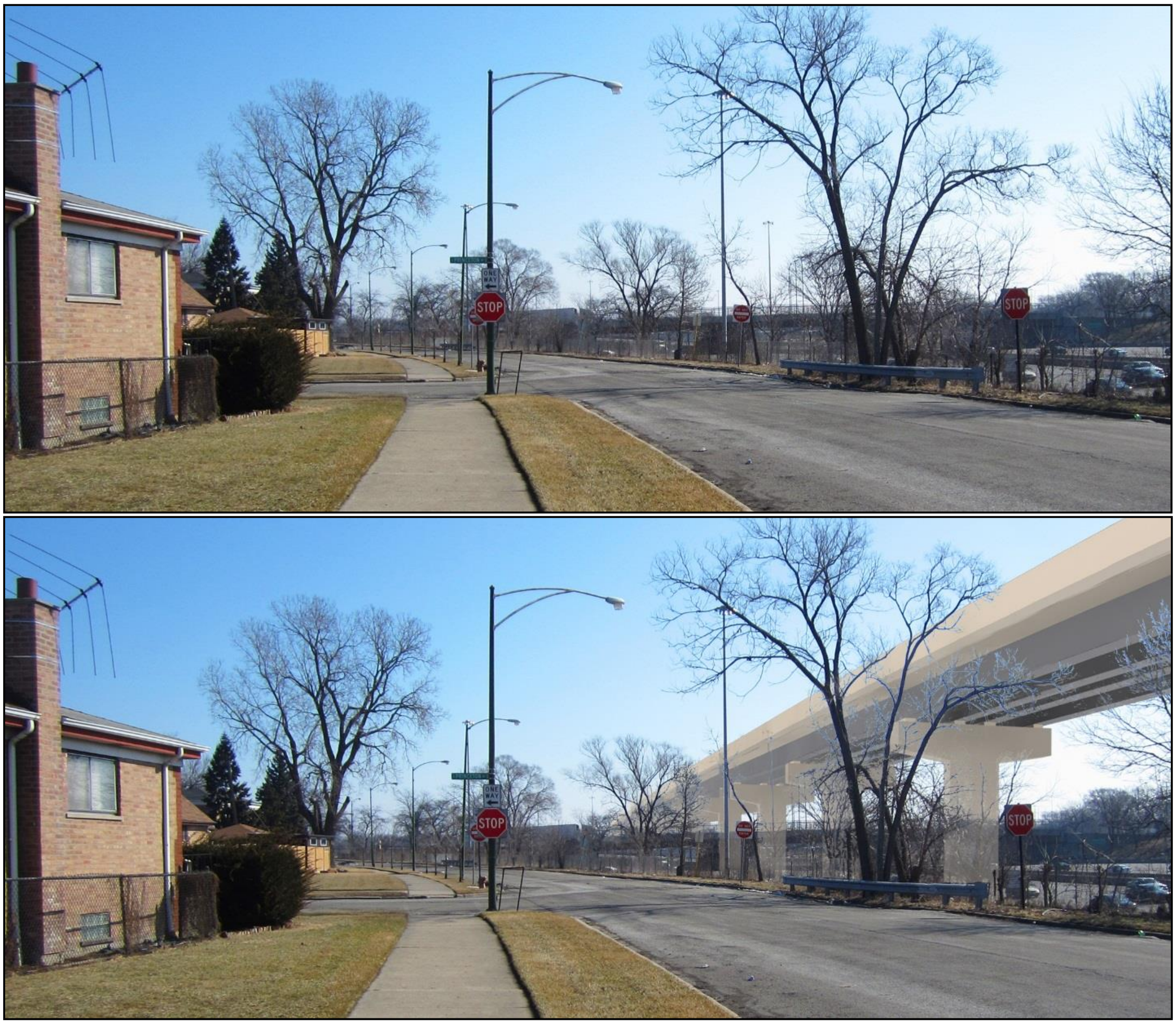

Figure 1: Photo of Existing Conditions and Photo Simulation of the Elevated Track Structure in the I-57 Right-of-Way, Facing East from Lafayette Avenue and Princeton Avenue

Appendix M
Parklands and Community Facilities Technical Memorandum

Chicago Red Line Extension Project

Parklands and Community Facilities

Technical Memorandum

July 5, 2013
Appendix B updated May 8, 2015
Updated July 28, 2015

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Abbreviations

BRT	Bus Rapid Transit
CFR	Code of Federal Regulations
CMAP	Chicago Metropolitan Agency for Planning
CN	Canadian National
CTA	Chicago Transit Authority
EIS	Environmental Impact Statement
IDNR	Illinois Department of Natural Resources
IDOT	Illinois Department of Transportation
IHB	Indiana Harbor Belt
NEPA	National Environmental Policy Act
RLE	Red Line Extension
ROW	right-of-way
UPRR	Union Pacific Railroad

Section 1
Summary

This technical memorandum analyzes the potential impacts on parklands and community facilities of alternatives for the Red Line Extension (RLE) Project. The RLE Project would result in short- and long-term adverse and beneficial impacts on parklands and community facilities in the project area. The alternatives are as follows:

- No Build Alternative
- Bus Rapid Transit (BRT) Alternative
- Union Pacific Railroad (UPRR) Rail Alternative
    - Right-of-way (ROW) Option
    - East Option
    - West Option
- Halsted Rail Alternative

Parklands

The area of potential impact (API) has 18 parklands within it; 3 of these would have permanent impacts. Permanent impacts on parklands would result if the ROW of an alternative passed through a park. Table 1-1 names the permanently affected parklands, the alternative that would affect them, and the amount of land affected within each park. The permanent impacts would be mitigated such that the impacts would not be adverse.

Table 1-1: Acres of Parklands Affected by the Red Line Extension Project Alternatives

Parkland	Bus Rapid Transit Alternative	UPRR Rail Alternative - ROW Option	UPRR Rail Alternative - East Option	UPRR Rail Alternative - West Option	Halsted Rail Alternative
Wendell Smith Park	0	0.23	0.40	0.17	0
Fernwood Parkway	0	0	0	1.90	0
Block Park	0	0	0.80	0	0
Total	0	0.23	1.20	2.07	0

Notes: UPRR = Union Pacific Railroad, ROW = right-of-way

Wendell Smith Park

At Wendell Smith Park, the UPRR Rail Alternative East Option would have the greatest impact of all the UPRR options and would displace a portion of the walking trail, which is one of the park's recreational amenities. The UPRR Rail Alternative ROW Option and West Option would affect the walking trail; however, these impacts would be minimal because the trail would be rerouted around the affected area or the trail may be avoided completely. Overall, the UPRR Rail ROW

Option and West Option would not result in the displacement of amenities that are critical to the functional or recreational use of the park. After mitigation, the impacts on Wendell Smith Park would not be adverse.

Fernwood Parkway
The area affected in Fernwood Parkway is open space only. The operation of the UPRR West Option would acquire 1.9 acres of the park for permanent ROW and would create two park fragments, one between the Chicago Transit Authority (CTA) ROW and UPRR ROW, the other between CTA ROW and Eggleston Avenue. During the Section 4(f) process, it may be determined that impacts on the parkland within the permanent ROW and created by the park fragments could be mitigated by improving nearby park space (e.g., the unaffected northern portion of Fernwood Parkway), and by converting nearby vacant land into new parks. Most of Fernwood Parkway could remain as open park space if public access were to be allowed under the elevated structure after construction. If the space under the structure were to remain open, then there would be a visual impact on the park and some impact due to the shading created by the structure. However, the combination of impacts would not diminish recreational opportunities, as no recreational amenities or organized recreational activities currently occur in Fernwood Parkway. The impacts on parklands would not be adverse after mitigation.

Block Park
The area affected in Block Park is open space only; the operation of the UPRR East Option would reduce the amount of open space by adding an auxiliary entrance for the 103rd Street station and rail infrastructure in the park. The unaffected land would be returned to open space after construction. The impacts would not diminish recreational opportunities, as no recreational amenities or organized recreational activities currently occur in the affected portion of Block Park; however, some open space would be acquired for permanent ROW and some of the remaining open space within the western parcel of the park would be shaded by the rail infrastructure. After mitigation, the impacts on Block Park would not be adverse.

Mitigation Options for Impacts on Parklands
Ongoing coordination with the Chicago Park District and the Chicago Water Department has been occurring to determine the preferred mitigation for the permanent impacts on these parks and will continue for the purposes of mitigation measure implementation. Some impacts could be minimized by the project design. For example, opportunities exist for retaining some of the park uses if public access is allowed under the elevated CTA structure. Another mitigation option is to make improvements to the affected park or another nearby park in lieu of replacing parkland. Fernwood Parkway and Block Park are generally underutilized open spaces; however, they are next to the 103rd Street station proposed for the UPRR Rail Alternative (all options). One in-lieu option would be to make improvements to the parklands around the 103rd Street station to better integrate the spaces into the station area, which would serve future transit users. Another in-lieu option would be to make use (as park space) of unused portions of parcels displaced for the project. Section 4(f) of the Department of Transportation Act requires a detailed analysis of all practicable means of minimizing harm to parks. The *Section 4(f) Technical Memorandum* provides details about the Section 4(f) process and identifies practicable mitigation alternatives.

Beneficial Impacts on Parklands - Improved Access

The introduction of new and faster transit services in the project area would improve access to those parklands within walking distance (approximately ½ mile) from the proposed stops/stations. Of the alternatives, the UPRR Rail Alternative options would improve access to the most parks (nine) while the BRT Alternative would improve access to the least (three) as documented in Table 1-2.

Table 1-2: Parklands within Walking Distance of a Proposed Station/Stop

Parkland	Bus Rapid Transit Alternative	Union Pacific Railroad Rail Alternative	Halsted Rail Alternative
Wendell Smith Park		X	
Fernwood Parkway		X	X
Block Park		X	
Fernwood Park		X	X
Jackie Robinson Park			X
Major Taylor Bike Trail			X
Thomas Leed Morgan Field			X
Edward White Park			X
Potter Palmer Park	X	X	
Kensington Park	X	X	
Lion Field			
Golden Gate Park	X	X	
George Washington Carver Park		X	
Beaubien Woods Forest Preserve		X	
Whistler Woods Forest Preserve			X
Joe Louis Golf Course			X
Total	**3**	**9**	**8**

Beneficial Impacts on Parklands - Noise and the UPRR Rail Alternative ROW Option

Unlike the other build alternatives, the UPRR Rail Alternative ROW Option assumes that the existing UPRR freight rail traffic would be relocated to another corridor as part of a separate, unrelated project. While the UPRR Rail Alternative ROW Option would generate noise, the net impact for adjacent noise-sensitive receptors such as parks would be a net benefit because the noise from the freight rail traffic would no longer be present. Three parklands (Wendell Smith Park, Fernwood Parkway, and Kensington Park) would experience a net benefit in terms of noise impacts compared to the No Build Alternative and the other two UPRR Rail Alternative options.

Community Facilities

There are 230 community facilities in the API, of which 4 would be displaced. In addition, 37 community facilities adjacent to the BRT Alternative alignment and 22 community facilities adjacent to the Halsted Rail Alternative alignment would be subject to noise impacts after mitigation. Table 1-3 describes the community facilities that would be affected by the RLE Project. Of the build alternatives, the BRT Alternative would affect the greatest number of community facilities.

Table 1-3: Community Facilities Affected by the Project Alternatives

Alternative	Community Facility
Bus Rapid Transit	• Adverse Noise - 37 community facilities that are noise-sensitive receptors *(See Section 5.2.1.2 for a list of noise-sensitive community facilities)*
UPRR Rail ROW Option	None
UPRR Rail East Option	• Displacement - Now Faith Church of God Holiness
UPRR Rail West Option	• Displacement - Grace Temple Church of God Established in Christ
120th Street Yard and Shop	None
Halsted Rail	• Displacement - Illinois Department of Employment Security • Adverse Noise - 22 community facilities that are noise-sensitive receptors *(See Section 5.6.1 for a list of noise-sensitive community facilities)*
119th Street Yard and Shop	• Displacement - Sure-Way Missionary Baptist Church

UPRR = Union Pacific Railroad, ROW = right-of-way

Noise Impacts of the BRT Alternative

The BRT Alternative would add approximately 75,000 bus trips per year to the BRT alignment when compared to the No Build Alternative. This change would result in moderate noise impacts on the 37 community facilities that are noise-sensitive receptors adjacent to the alignment of the BRT Alternative. Noise barriers are not feasible along the BRT alignment and moderate noise impacts would remain after mitigation.

Now Faith Church of God Holiness

The proposed ROW for the UPRR Rail Alternative East Option would displace Now Faith Church of God Holiness. This displacement would require replacement in compliance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended (Uniform Act). According to the *Displacements and Relocations of Existing Uses Technical Memorandum* one available replacement property is zoned for a place of worship use in the project area. Other available property in the community would have to be rezoned for religious use in order to be a comparable replacement property. The displacement of Now Faith Church of God Holiness would not be adverse after mitigation if the church were relocated to a comparable replacement property within the community and if the relocation were to occur prior to starting construction in order to minimize interruption of its services.

Grace Temple Church of God Established in Christ

The proposed ROW for the UPRR Rail Alternative West Option would displace Grace Temple Church of God Established in Christ. The displacement of this property would comply with the requirements of the Uniform Act. As noted above, one available replacement property is zoned for a place of worship in the project area, and other available property in the community would have to be rezoned for religious use in order to be considered a comparable replacement property. If the church were relocated within the community prior to starting construction to minimize interruption of its services, the impact would not be adverse after mitigation.

Illinois Department of Employment Security

The Illinois Department of Employment Security would be displaced as a result of the park & ride facilities at the 119th Street station for the Halsted Rail Alternative. Comparable replacement properties exist within the project area. If this office were relocated before construction and within the same community to avoid loss of services, then there would be no adverse impact after mitigation.

Noise Impacts of the Halsted Rail Alternative

The Halsted Rail Alternative would run in the median of Halsted Street and would generate moderate to severe noise impacts for adjacent community facilities that are noise-sensitive receptors. Twenty-two community facilities (places of worship and senior housing) would be affected by noise along the Halsted Rail Alternative alignment. Noise barriers would be built to reduce the noise impacts; however, moderate noise impacts would remain after mitigation.

Sure-Way Missionary Baptist Church

The 119th Street yard and shop would be built to support the Halsted Rail Alternative and would displace Sure-Way Missionary Baptist Church. The displacement of this property would comply with the requirements of the Uniform Act. As noted above, one available replacement property is zoned for a place of worship in the project area, and other available property in the community would have to be rezoned for religious use in order to be a comparable replacement property. If the church were relocated within the community prior to starting construction to minimize interruption of its services, the impact would not be adverse after mitigation.

Beneficial Impacts on Community Facilities - Improved Access

As explained for the parklands, the introduction of new and faster transit services in the project area would improve access to facilities within walking distance. The BRT Alternative would improve access to the greatest number of community facilities (88), followed by the Halsted Rail Alternative (79), and the UPRR Rail Alternative (72) as shown in Table 1-4. These improvements in access would be beneficial.

Table 1-4: Community Facilities within Walking Distance of a Proposed Station/Stop

Alternative	Community Facility
Bus Rapid Transit	88
Union Pacific Railroad Rail (All Options)	74
Halsted Rail Alternative	81

Beneficial Impacts on Community Facilities - Noise and the UPRR Rail Alternative ROW Option

The UPRR Rail Alternative ROW Option assumes that the existing UPRR freight rail traffic would be relocated to a different corridor as a result of a separate and unrelated project. While the UPRR Rail Alternative ROW Option would generate noise, the net impact for adjacent noise-sensitive places of worship would be a net benefit because the noise from the freight rail traffic would no longer be present. Now Faith Church of God Holiness and New Christian Joy Missionary Baptist

Church would experience a net benefit in terms of noise impacts when compared to the No Build Alternative and the other two UPRR Rail Alternative options.

2014–2015 Red Line Extension Project Update

Updated July 28, 2015

In August 2014, based on the technical analysis and public input until then, CTA announced the NEPA Preferred Alternative—the UPRR Rail Alternative. CTA is considering two alignment (route) options of this alternative: the East Option and the West Option. At this time, CTA is also considering only the South Station Option of the 130th Street Station. In late 2014 and early 2015, CTA conducted additional engineering on the East and West Options to refine the East and West Option alignments. Appendix C of this technical memorandum summarizes the refined alignments and any additional or different impacts that would result. The information in Appendix C supersedes information presented in other chapters of this technical memorandum.

Section 2
Project Description

The CTA is proposing to extend the Red Line from the existing 95th Street Terminal to the vicinity of 130th Street, subject to the availability of funding. The proposed RLE would include four stations. Each station would include bus transfer and parking facilities. This project is one part of the Red Ahead Program to extend and enhance the entire Red Line. The CTA is also planning 95th Street Terminal improvements that are anticipated to be completed prior to the proposed RLE construction.

The project area is 11 miles south of the Chicago central business district (commonly referred to as the Loop) and encompasses approximately 20 square miles. The boundaries of the project area are 95th Street on the north, Ashland Avenue on the west, Stony Island Avenue on the east, and the Calumet-Sag Channel/Little Calumet River and 134th Street on the south. The I-57 Expressway and I-94 Bishop Ford Freeway cross the western and eastern edges of the project area, respectively. Lake Calumet is in the eastern portion of the project area. The project area encompasses parts of nine community areas in the City of Chicago and the eastern section of the Village of Calumet Park. Chicago community areas include Beverly, Washington Heights, Roseland, Morgan Park, Pullman, West Pullman, Riverdale, Hegewisch, and South Deering. The project area comprises residential (primarily single family), industrial (both existing and vacant), transportation (including freight), and commercial development.

The Draft Environmental Impact Statement (EIS) focuses on the following alternatives (shown in Figure 2-1), which emerged from the Alternatives Analysis and the NEPA scoping process:

- No Build Alternative
- BRT Alternative
- UPRR Rail Alternative
    - ROW Option
    - East Option
    - West Option
- Halsted Rail Alternative

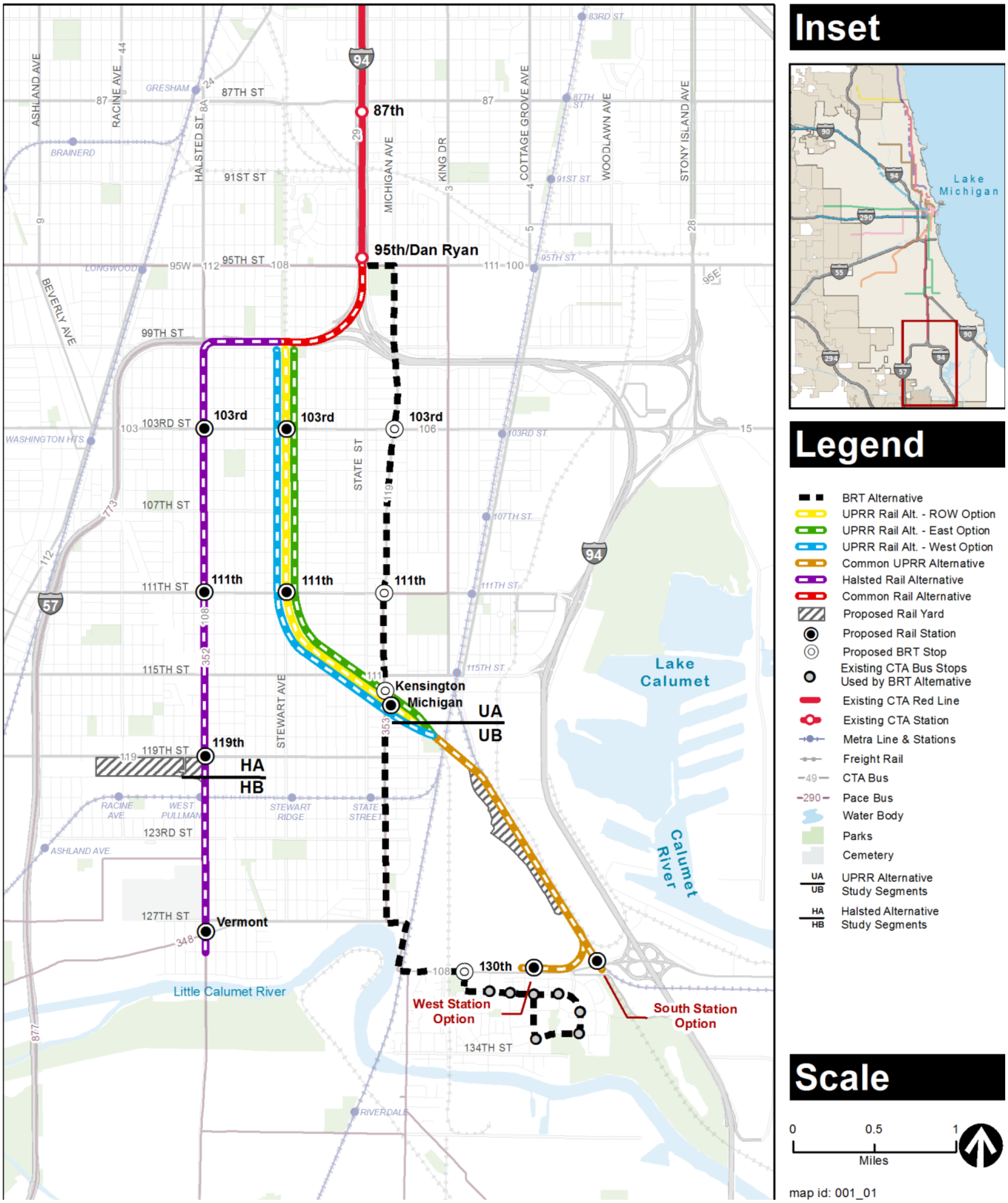

Inset
Lake Michigan
Legend
BRT Alternative
UPRR Rail Alt. - ROW Option
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
Common UPRR Alternative
Halsted Rail Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Proposed BRT Stop
Existing CTA Bus Stops Used by BRT Alternative
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
49 CTA Bus
290 Pace Bus
Water Body
Parks
Cemetery
UA UB UPRR Alternative Study Segments
HA HB Halsted Alternative Study Segments
Scale
0
0.5
1
Miles
map id: 001_01
87th
95th/Dan Ryan
103rd
111th
Kensington
Michigan
119th
Vermont
130th
UA
UB
HA
HB
West Station Option
South Station Option
Lake Calumet
Calumet River
Little Calumet River
87TH ST
91ST ST
95TH ST
99TH ST
103RD ST
107TH ST
111TH ST
115TH ST
119TH ST
123RD ST
127TH ST
134TH ST
ASHLAND AVE
RACINE AVE
HALSTED ST
MICHIGAN AVE
KING DR
COTTAGE GROVE AVE
WOODLAWN AVE
STONY ISLAND AVE
STATE ST
STEWART AVE
BEVERLY AVE
GRESHAM
BRAINERD
LONGWOOD
WASHINGTON HTS
RACINE AVE
WEST PULLMAN
STEWART RIDGE
STATE STREET
RIVERDALE
83RD ST
87TH ST
91ST ST
95TH ST
103RD ST
107TH ST
111TH ST
115TH ST
94
57
95E

Figure 2-1: Red Line Extension Project Alternatives

The No Build Alternative is a required alternative as part of the NEPA environmental analysis and is used for comparison purposes to assess the relative benefits and impacts of extending the Red Line. The No Build Alternative is carried into the Draft EIS phase of the project development regardless of its performance versus the build alternatives under consideration. No new infrastructure would be constructed as part of the No Build Alternative other than committed transportation improvements that are already in the CMAP Fiscal Year 2010–2015 Transportation Improvement Program and the improvements to 95th Street Terminal. The Transportation Improvement Program projects within the project area consist of four bridge reconstructions, several road improvement projects including resurfacing and coordination of signal timing on 95th Street, work on Metra's facilities, construction of a bicycle/pedestrian multi-use trail, and preservation of historic facilities. The No Build Alternative includes regular maintenance of existing track and structures, and bus transit service would be focused on the preservation of existing services and projects. All elements of the No Build Alternative are included in each of the other alternatives. Under this alternative, travel times would not improve from existing conditions.

The BRT Alternative (formerly referred to as the Transportation Systems Management Alternative) is a 5.0-mile, limited-stop, enhanced BRT route, which is assumed to operate 24 hours per day between the existing 95th Street Terminal and the intersection of 130th Street and Eberhart Avenue. No dedicated bus lanes would be provided for the BRT Alternative; however, parking lanes would be removed for some portions of the alignment and four stops with improved bus shelters and park & ride facilities would be created at 103rd Street and Michigan Avenue, 111th Street and Michigan Avenue, Kensington Avenue and Michigan Avenue, and 130th Street and Eberhart Avenue. Although BRT service elements would not continue south of the 130th Street stop, the bus route would continue through Altgeld Gardens along the existing route with six stops. The BRT Alternative would be consistent with bus routing changes that may occur as part of improvements to the 95th Street Terminal. Under this alternative, travel times between 130th Street and the Loop would improve over existing conditions.

The UPRR Rail Alternative is a 5.3-mile extension of the heavy rail transit Red Line from its existing 95th Street Terminal to 130th Street, just west of I-94. The Chicago Transit Board designated the UPRR Rail Alternative as the Locally Preferred Alternative at its August 12, 2009 board meeting. This alternative includes construction and operation of new heavy rail transit tracks, mostly in existing transportation corridors. The UPRR Rail Alternative has three options for alignment (ROW, East, and West), all of which would include operation on elevated structure from 95th Street to just past the Canadian National/Metra Electric District tracks near 119th Street. The alignment would then transition to at-grade through an industrial area with no public through streets, terminating at 130th Street in the vicinity of Altgeld Gardens. Four new stations would be constructed at 103rd Street, 111th Street, Michigan Avenue, and 130th Street. The 130th Street station would be the terminal station, with two options under evaluation: the South Station Option and the West Station Option. A new yard and shop facility would be sited near 120th Street and Cottage Grove Avenue. The bus routes in the vicinity of the UPRR Rail Alternative would be modified to enhance connectivity between the Red Line and the bus network. The hours of operation and service frequency for the UPRR Rail Alternative are assumed to be the same as

for the current Red Line. Under this alternative, travel times between 130th Street and the Loop would improve substantially over existing conditions.

The Halsted Rail Alternative is a 5.0-mile heavy rail transit extension of the existing Red Line. In this alternative, the Red Line would operate on an elevated structure running south from 95th Street along I-57 until Halsted Street. The alignment would then turn south and continue along Halsted Street to the intersection of Halsted Street and Vermont Avenue near 127th Street. This alternative would include four new stations at 103rd Street, 111th Street, 119th Street, and Vermont Avenue. The Vermont Avenue station would be the terminal station. A new yard and shop would be sited west of Halsted Street and between the 119th Street and Vermont Avenue stations. The bus routes in the vicinity of the Halsted Rail Alternative would be modified to enhance connectivity to the Red Line. The hours of operation and service frequency for the Halsted Rail Alternative are assumed to be the same as for the current Red Line. Under this alternative, travel times between 127th Street and the Loop would improve substantially over existing conditions. This alternative would not extend rail to Altgeld Gardens, which would be served by bus connecting to the Vermont terminal station.

Section 3
Methods for Impact Evaluation

This section describes the process used to conduct a qualitative and quantitative analysis of potential direct and cumulative impacts on parklands and community facilities that would result from the construction and operation of the RLE Project.

3.1 Regulatory Framework

Parklands and community facilities are protected by federal and state laws and regulations that require the proponents of federally funded or permitted projects to consider the projects' potential impacts on parklands and community facilities. In addition, state and local agencies develop long-range plans to serve their communities. As such, state and local entities have a stake in potential impacts that would occur on properties within their purview. Consideration must be given to these planning efforts. Coordination with the public is required, as is coordination with agencies that have responsibility, interest, or jurisdiction over potentially affected properties.

3.1.1 Federal

The preparation of an EIS for every major federal action significantly affecting the human environment is required by NEPA. These impacts include impacts on economic, social and environmental resources, including community cohesion and the availability of and access to public facilities and services. The NEPA implementation regulations that affect Department of Transportation agencies are codified in 23 Code of Federal Regulations (CFR) 771 and also in 40 CFR 1500–1508.

Access to public services is also addressed in the Uniform Fire Code. The National Fire Protection Association develops and publishes consensus codes and standards intended to minimize the possibility and impacts of fire and other human health risks. Topics addressed in the code include fire department access to the community.

Section 4(f) of the U.S. Department of Transportation Act of 1966, as amended, affords special protection to public recreational lands and facilities, including local parks that are open and available to the general public for recreational purposes, significant historic sites, and natural wildlife refuges. Federally funded projects are prohibited from using (i.e., having impacts on the constructive use of the facility or taking of the land) Section 4(f) lands, without examining all feasible alternatives and using all practicable measures to minimize harm. This topic is analyzed in the *Section 4(f) Technical Memorandum*.

State and local governments often obtain grants through Section 6(f) of the Land and Water Conservation Act to acquire parkland and/or make improvements. Section 6(f) prohibits the conversion of property acquired or developed with these funds to non-recreational use without the approval of the Department of the Interior's National Park Service. If no practical alternative exists, replacement lands of equal value, location, and usefulness must be provided. If any potentially affected parkland is determined to have used Section 6(f) funds, coordination with the National Park Service and the Illinois Department of Natural Resources (IDNR) would be required. The impacts on parklands regulated under Section 6(f) are analyzed in the *Section 4(f) Technical Memorandum*.

3.1.2 State

The IDNR is responsible for managing state parks and state wildlife and recreation areas, and is responsible for administering 6(f) Land and Water Conservation Act funds for the state. The IDNR also develops strategic plans such as the *State of Illinois Urban and Community Forestry Strategic Plan 2005-2015*. The vision statement of this plan includes “building sustainable local community forestry programs that will preserve the health and integrity of the trees,” which “will provide a safe and beneficial environment for over 80 percent of Illinois citizens” (IDNR 2005).

Changes in access to community facilities, both temporary and permanent, can lead to decline in quality of life and safety for a community. The Illinois Department of Transportation (IDOT) provides guidance for determining the impacts on community facilities in its 2007 *Community Impact Assessment Manual*. According to this manual, community facilities include “those organizations [that] fulfill a social function or provide services to the population of a community.” These facilities include parklands and recreational facilities, public service facilities such as fire and police stations, religious facilities, and educational facilities (IDOT 2007).

3.1.3 Local

Parklands and community facilities are managed by local agencies. As such, coordination with agencies from Cook County and the City of Chicago would be required and the components and implementation of the proposed project alternatives would be required to conform to local policies.

The Chicago Park District manages approximately 8,000 acres of parkland and 580 parks throughout the Chicago metropolitan area. According to the Chicago Park District’s *2011–2015 Capital Improvement Plan*, several key goals have been established to prioritize acquisition of parklands, creation of new amenities, and maintenance of existing parklands:

- Create an open and fully accessible park system so that persons of all abilities can have access to parks for recreation and the enjoyment of nature.
- Foster partnerships with public and private entities to help fund priority capital improvement projects.
- Incorporate green and sustainable practices into all capital improvement projects.
- Provide facilities that encourage physical activity.

The Chicago Metropolitan Agency for Planning (CMAP) has devised a long-term comprehensive regional plan, *GO TO 2040*, which details goals and objectives to address the region’s challenges over the next 30 years. These goals include creating livable communities and a sense of place by expanding and improving parks and open space and improving the walkability of communities and access to transportation options (CMAP 2010).

3.2 Impact Analysis Thresholds

This memorandum inventories all parklands within an API defined as a corridor encompassing the area within 500 feet of the permanent ROW for each of the RLE alternatives and within ½ mile around each of the proposed stations/stops. The API for community facilities includes properties within or immediately adjacent to the proposed ROW of each alternative and within ½ mile around each of the proposed stations/stops. The analysis describes the features, attributes, or activities of each parkland and community facility that would be affected by construction and/or operation of each alternative and whether these impacts would be temporary or permanent. It then discusses mitigation measures for impacts on affected facilities.

Impacts are described using the following terms:

- Adverse - a permanent negative impact or temporary negative impact that diminishes the overall character or use of the facility
- Adverse after Mitigation - a permanent negative impact or temporary negative impact that diminishes the overall character or use of the facility after mitigation is applied
- Not Adverse - no negative impact
- Not Adverse after Mitigation - a permanent negative impact or temporary negative impact that can be mitigated such that the resulting impact is not adverse
- Beneficial - a permanent positive impact

3.2.1 Community Facilities

NEPA does not define any significance thresholds as it relates to community facilities; however, the 2007 IDOT *Community Impact Assessment Manual* provides qualitative guidance for conducting impact assessments on community facilities; this guidance is described under Section 3.4.

3.3 Area of Potential Impact

The API includes parklands within 500 feet of an alternative's ROW and within ½ mile around the proposed stations/stops and community facilities within or adjacent to the permanent ROW of an alternative and within ½ mile around the proposed stations/stops.

3.4 Methods

Analysis of impacts on parklands and community facilities for the RLE Project will be conducted pursuant to NEPA guidance (40 CFR 1508). The following steps were taken to evaluate the proposed alternatives for the RLE Project, including the No Build Alternative.

Step 1. An inventory of parklands and community facilities was created. This inventory included the following:

- **Public Parklands and Recreational Facilities**
  - National/state/county/local parklands
  - Wildlife and waterfowl refuges
  - Museums
  - Recreational/community facilities
  - Existing or planned trails
  - Planned parks or other recreational facilities
- **Public Services and Religious Facilities**
  - Fire stations
  - Police stations
  - Libraries
  - Government facilities/offices
  - Medical facilities (hospitals, senior care centers)
  - Places of worship
  - Cemeteries
- **Public Educational Facilities**
  - Elementary/middle/high schools
  - Colleges or trade schools

Private facilities such as educational facilities and daycare centers were not analyzed in this report. Private schools, universities, technical schools and/or daycare facilities were not considered to be a "community facility" because they are not readily accessible for use by the general public.

Step 2. An overlay analysis was conducted using the inventory of parklands and community facilities and the API. This process identifies potentially affected properties and facilities.

Step 3. Community Facilities. To determine the extent of impacts on community facilities, the following questions, based on the recommendations in the 2007 IDOT *Community Impact Assessment Manual,* were considered:

- Would there be temporary or permanent change in access to and from community facilities?
- Would major services or facilities be altered or displaced?
- Would barrier impacts be created as a result of the proposed project?
- Would travel time be altered for vehicular or pedestrian traffic?
- Would the usage of existing facilities and services be altered?
- Would alternate facilities be available within a reasonable distance?

The answers to these questions were informed in part by the findings in the *Transportation, Noise and Vibration, Air Quality, Safety and Security,* and the *Displacements and Relocations of Existing Uses Technical Memoranda*, which were used to determine the extent of potential adverse impacts on community facilities and to help identify options to avoid, minimize, and mitigate the adverse impacts. The analysis of impacts on community facilities was incorporated into the *Neighborhood and Community Impacts Technical Memorandum*.

Step 4. Parklands Determine whether the construction and operation of the RLE Project alternatives would result in adverse, adverse after mitigation, not adverse, not adverse after mitigation, or beneficial impacts on the features, attributes, or activities that occur at parklands and whether these impacts would be permanent or temporary.

The analysis of impact on parklands was incorporated in the *Land Use and Economic Development Technical Memorandum*.

Section 4
Affected Environment

This section describes and illustrates the location of the existing parklands and community facilities within the project area.

4.1 Parklands

There are 18 parklands within the API for the RLE Project. As shown in Table 4-1, there are 6 parklands in the API for the BRT Alternative, 10 parklands in the API for the UPRR Rail Alternative (all options), and the 11 parklands in the API for the Halsted Rail Alternative. These parklands are within 500 feet of an alternative's ROW and/or are within ½ mile of the proposed stations/stops.

Table 4-1: Parklands within the Area of Potential Impact

Parkland	Bus Rapid Transit Alternative	UPRR Rail Alternative (All Options)	Halsted Rail Alternative
Robert Abbott Park	X	X	X
Wendell Smith Park		X	X
Fernwood Parkway		X	X
Euclid Park			X
Block Park		X	
Fernwood Park		X	X
Jackie Robinson Park			X
Thomas Leed Morgan Field			X
Major Taylor Bike Trail			X
Edward White Park			X
Potter Palmer Park	X	X	
Kensington Park	X	X	
Lion Field (Roseland Little League)	X		
Golden Gate Park	X	X	
George Washington Carver Park	X	X	
Beaubien Woods Forest Preserve		X	
Whistler Woods Forest Preserve			X
Joe Louis Golf Course			X
Total Affected Parks	**6**	**10**	**11**

UPRR = Union Pacific Railroad

Figure 4-1 shows the locations of these parklands. The amenities in these parklands range from undeveloped open space to facilities that provide diverse recreational, cultural, and community activities.

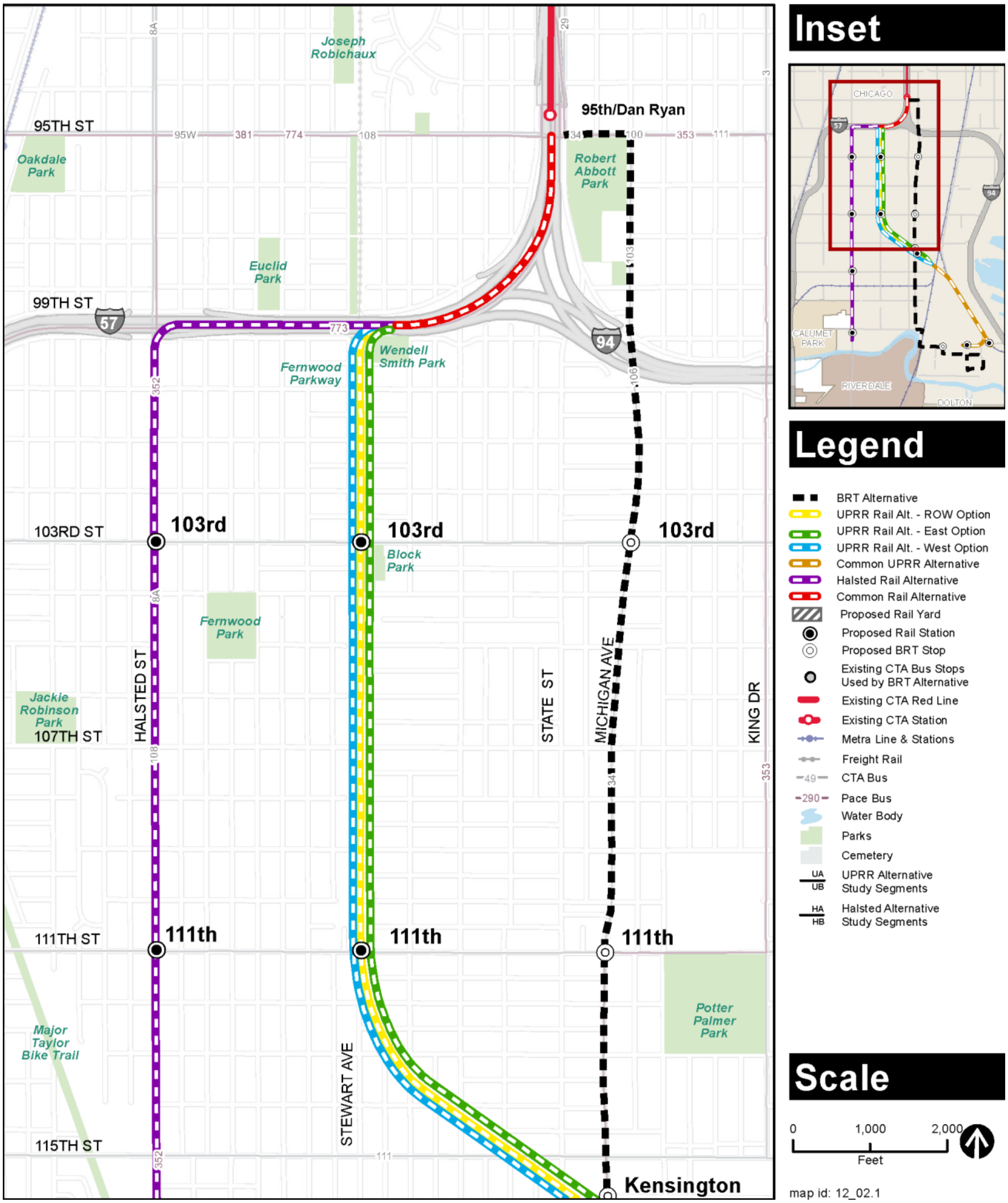

Joseph Robichaux
95th/Dan Ryan
95TH ST
Oakdale Park
Robert Abbott Park
Euclid Park
99TH ST
57
94
Fernwood Parkway
Wendell Smith Park
103RD ST
103rd
103rd
103rd
Block Park
Fernwood Park
Jackie Robinson Park
107TH ST
HALSTED ST
STATE ST
MICHIGAN AVE
KING DR
111TH ST
111th
111th
111th
Potter Palmer Park
Major Taylor Bike Trail
STEWART AVE
115TH ST
Kensington
Inset
CHICAGO
CALUMET PARK
RIVERDALE
DOLTON
Legend
BRT Alternative
UPRR Rail Alt. - ROW Option
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
Common UPRR Alternative
Halsted Rail Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Proposed BRT Stop
Existing CTA Bus Stops Used by BRT Alternative
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
49 CTA Bus
290 Pace Bus
Water Body
Parks
Cemetery
UA UB UPRR Alternative Study Segments
HA HB Halsted Alternative Study Segments
Scale
0
1,000
2,000
Feet
map id: 12_02.1

Figure 4-1: Parklands in the Area of Potential Impact (1 of 3)

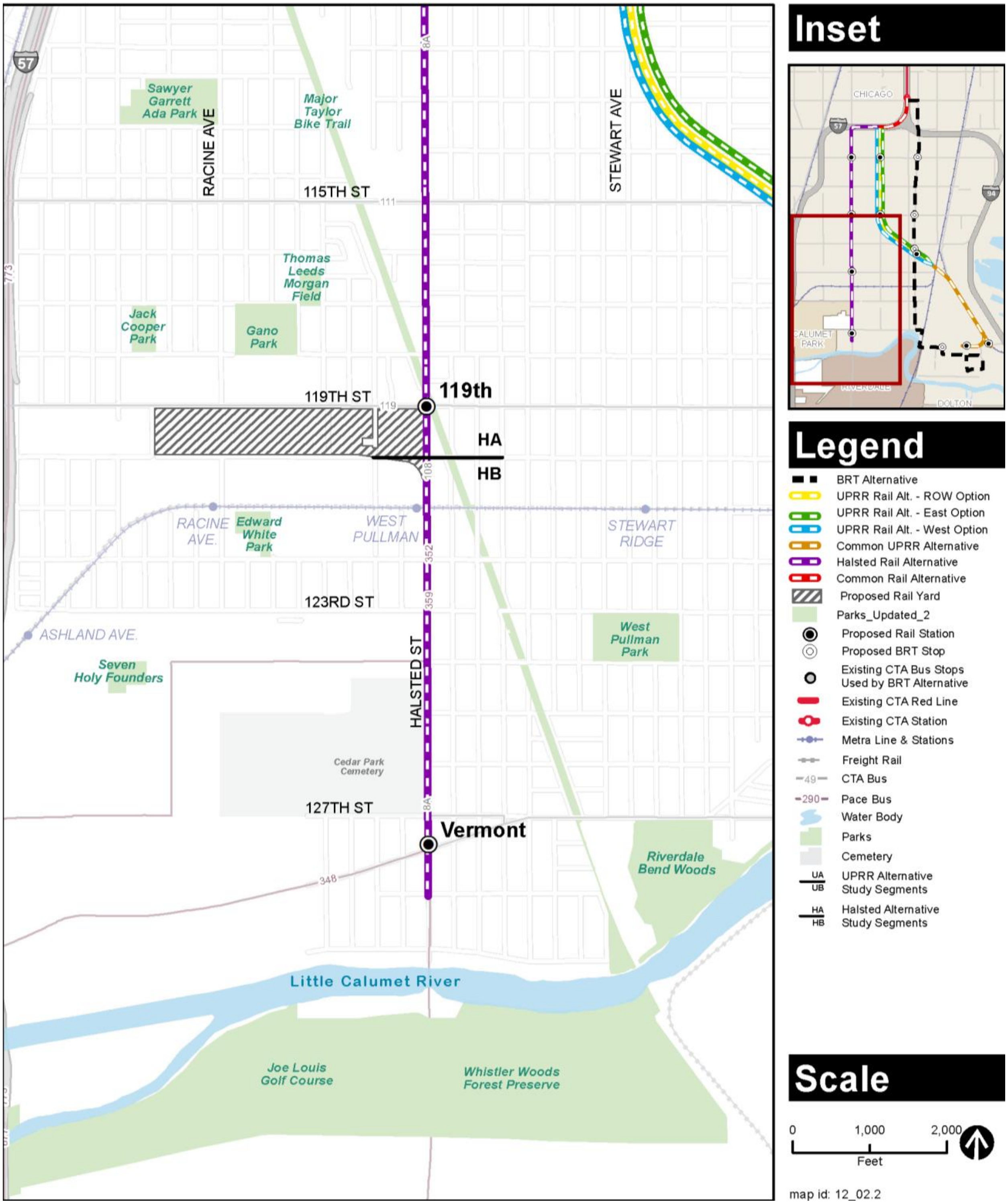

57
Sawyer Garrett Ada Park
RACINE AVE
Major Taylor Bike Trail
STEWART AVE
115TH ST
111
8A
773
Thomas Leeds Morgan Field
Jack Cooper Park
Gano Park
119TH ST
119
119th
HA
HB
108
RACINE AVE.
Edward White Park
WEST PULLMAN
STEWART RIDGE
352
123RD ST
359
ASHLAND AVE.
West Pullman Park
Seven Holy Founders
HALSTED ST
Cedar Park Cemetery
127TH ST
8A
Vermont
348
Riverdale Bend Woods
Little Calumet River
Joe Louis Golf Course
Whistler Woods Forest Preserve
Inset
CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON
Legend
BRT Alternative
UPRR Rail Alt. - ROW Option
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
Common UPRR Alternative
Halsted Rail Alternative
Common Rail Alternative
Proposed Rail Yard
Parks_Updated_2
Proposed Rail Station
Proposed BRT Stop
Existing CTA Bus Stops Used by BRT Alternative
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
49 CTA Bus
290 Pace Bus
Water Body
Parks
Cemetery
UA UB UPRR Alternative Study Segments
HA HB Halsted Alternative Study Segments
Scale
0
1,000
2,000
Feet
map id: 12_02.2

Figure 4-1: Parklands in the Area of Potential Impact (2 of 3)

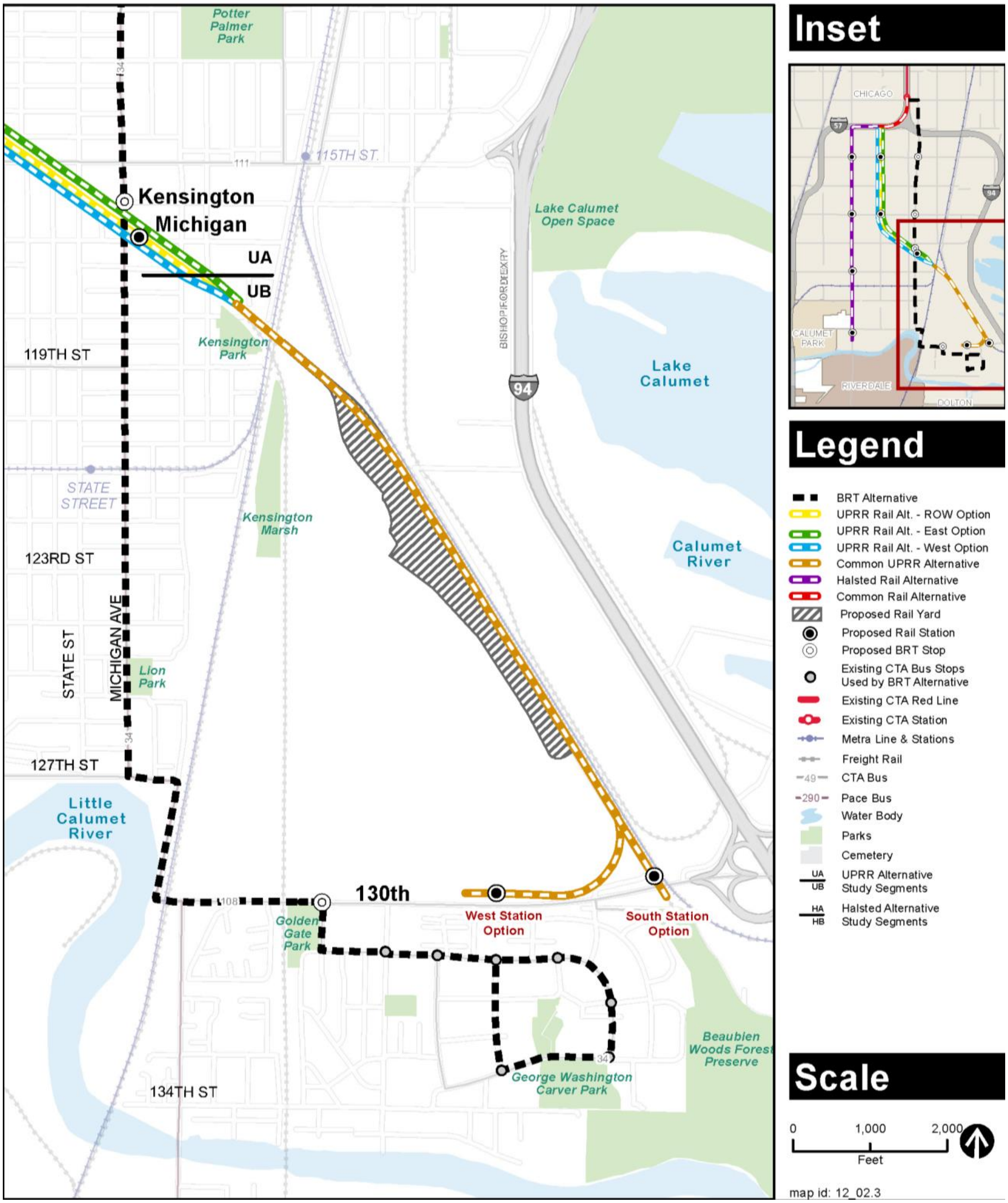

Potter Palmer Park
115TH ST
111
Kensington
Michigan
UA
UB
Kensington Park
119TH ST
Lake Calumet Open Space
BISHOP FORD EXPY
94
Lake Calumet
STATE STREET
Kensington Marsh
123RD ST
Calumet River
STATE ST
MICHIGAN AVE
Lion Park
34
127TH ST
Little Calumet River
108
130th
Golden Gate Park
West Station Option
South Station Option
Beaubien Woods Forest Preserve
George Washington Carver Park
134TH ST
Inset
CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON
Legend
BRT Alternative
UPRR Rail Alt. - ROW Option
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
Common UPRR Alternative
Halsted Rail Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Proposed BRT Stop
Existing CTA Bus Stops Used by BRT Alternative
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
49 CTA Bus
290 Pace Bus
Water Body
Parks
Cemetery
UA UB UPRR Alternative Study Segments
HA HB Halsted Alternative Study Segments
Scale
0
1,000
2,000
Feet
map id: 12_02.3

Figure 4-1: Parklands in the Area of Potential Impact (3 of 3)

4.1.1 Description of Parklands with the Potential to be Affected Permanently

Of the 18 parklands within the API, 3 would be permanently affected by the project because they fall within the proposed ROW for one or more build alternative. The other 15 parks are in areas less likely to be permanently affected because they are farther away from the project area. The parklands with the potential to be affected permanently are described in more detail below.

Wendell Smith Park
Princeton Avenue between 99th Street and 99th Place

In 1961, the Chicago Park District purchased land in the growing Roseland neighborhood to establish a community space and by 1970, the land had been transformed into a park with a small recreation building. The 4-acre park was named in honor of Wendell Smith (1914–1972), an African-American sports reporter who was known for championing for equality of black sportsmen throughout his life. While working as a reporter, Smith played a role in bringing racial equality to baseball by introducing Jackie Robinson to Branch Rickey, general manager of the Brooklyn Dodgers, which later recruited Robinson to the team. Smith moved to Chicago in 1947 and became the first full-time black sportswriter for a large daily newspaper.

Wendell Smith Park is approximately 4.7 acres (340 feet wide by 610 feet long). Along the northern boundary, a 0.8-acre (58-foot by 610-foot) portion of the park is owned by the City of Chicago but managed by the Chicago Park District. This City–owned land is managed as open space but is held as ROW for 99th Street. Wendell Smith Park is an actively used facility with basketball courts, baseball fields, a play lot, recreation building, and 0.33 mile of walking trails. Regularly scheduled activities at Wendell Smith Park include 5-on-5 basketball tournaments, baseball/softball games, and concerts in the park. The park is also actively used by day camps and for activities organized by the Chicago Park District (Chicago Park District 2011).

According to the Chicago Park District's *2010–2014 Capital Improvement Plan*, several improvements to the park have been made in the past few years, including the rehabilitation of the basketball courts in 2009; these improvements were paid for by non-Chicago Park District funds. In addition, improvements were made to the recreation building and the sidewalks in Fiscal Year 2009–2010 (Chicago Park District 2009). Figures 4-2 through 4-4 provide westerly views of the park's facilities from Princeton Avenue. Figure 4-5 shows an aerial view of Wendell Smith Park. The UPRR Rail Alternative alignments (all options) would pass through the northwest corner of Wendell Smith Park.

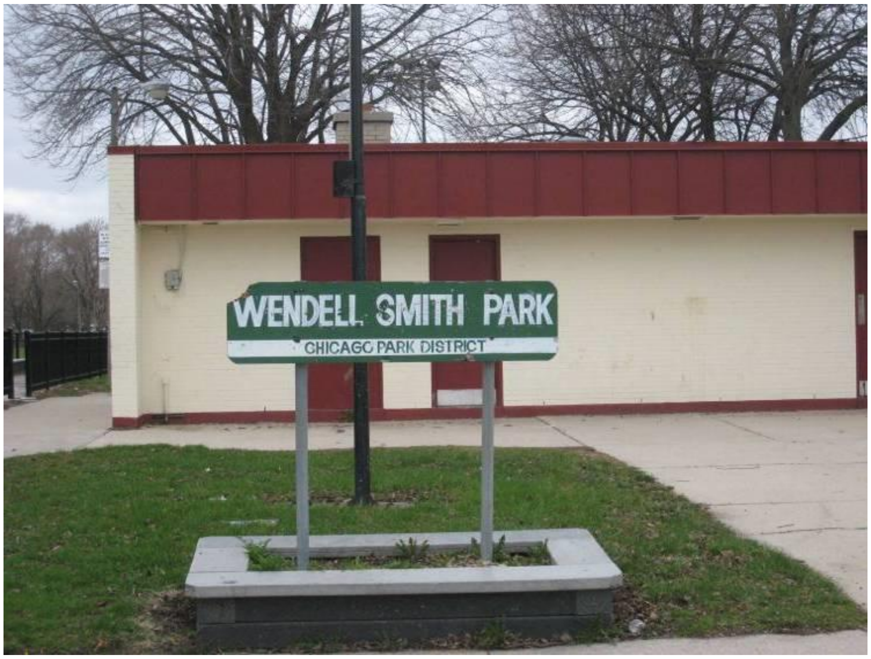

WENDELL SMITH PARK
CHICAGO PARK DISTRICT

Figure 4-2: Entrance to Wendell Smith Park (facing west)

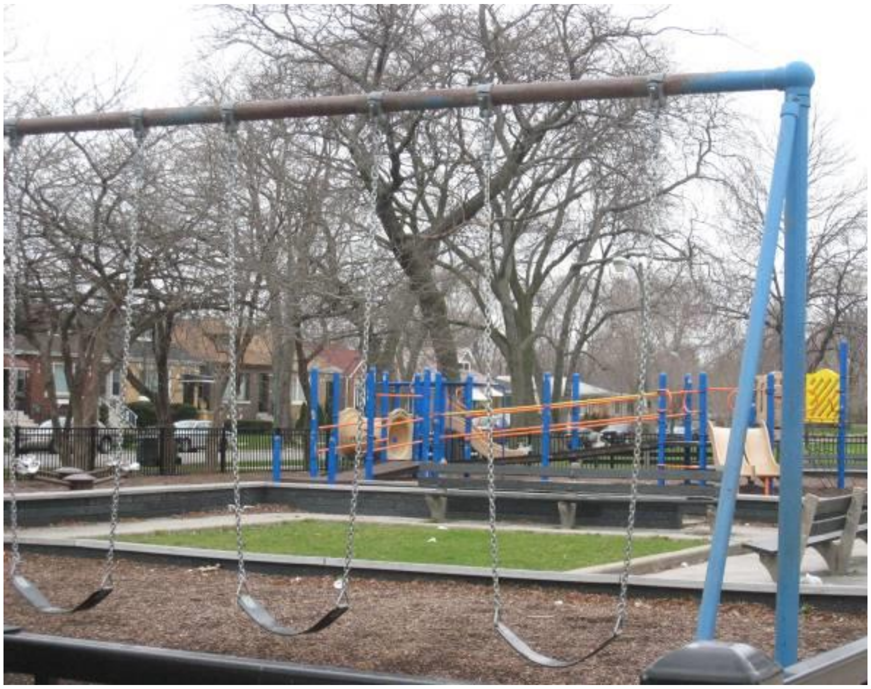


Figure 4-3: Wendell Smith Park Playground (facing southwest)

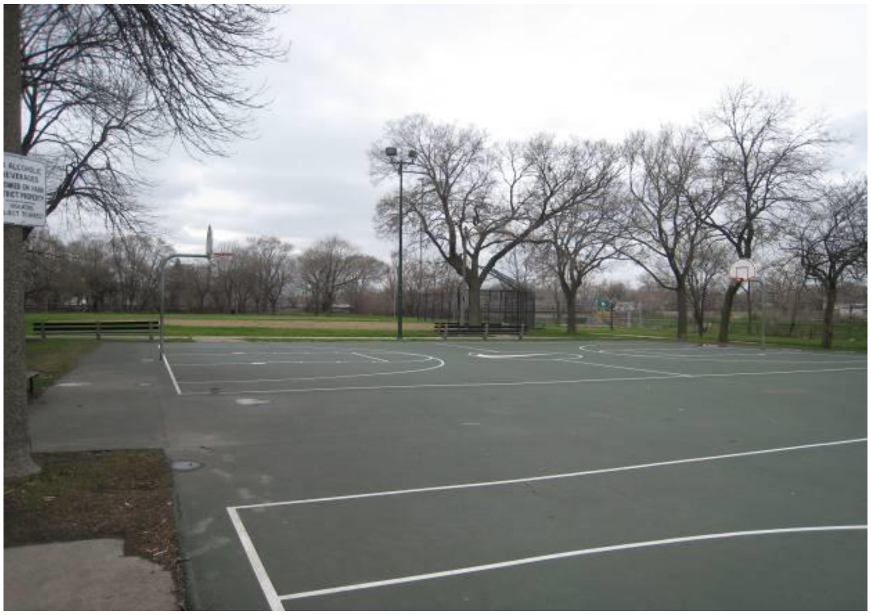
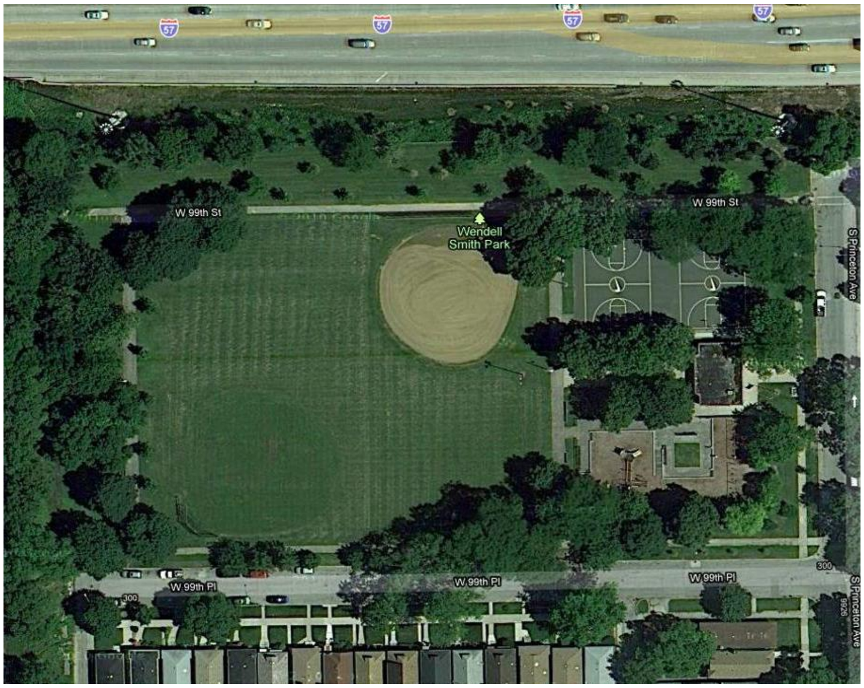


Figure 4-4: Wendell Smith Park Basketball Courts (facing west)


57
W 99th St
Wendell Smith Park
W 99th St
S Princeton Ave
W 99th Pl
W 99th Pl
W 99th Pl
300
S Princeton Ave

(Source: Google Maps, 2011)
Figure 4-5: Aerial View of Wendell Smith Park

Fernwood Parkway
Eggleston Avenue between 95th Street and 103rd Street

Fernwood Parkway was established in 1887 by the newly formed Village of Fernwood and included a green space that was planted with trees and lawn. The original park extended along Eggleston Avenue from 99th Street to 103rd Street and was later expanded northward to 95th Street. When the Village was annexed by the City of Chicago in 1891, management of Fernwood Parkway was assumed by the City. In the early 20th century, Fernwood Parkway was improved through the City's Special Park Commission, including the planting of more trees and vegetation, and the installation of a wading lagoon and iron fencing. By the late 1920s, the City's Bureau of Parks and Recreation decided that the lagoon would be filled in. In 1959, management of the park was transferred to the Chicago Park District. The most recent improvements to Fernwood Parkway occurred in the 1960s and 1970s and included regrading, plantings, and the installation of new lighting (Chicago Park District 2011).

Within the area of analysis, Fernwood Parkway is divided into two parcels that are separated by 101st Street. The northern parcel, from 99th Street to 101st Street, is approximately 2.4 acres and is 78 feet wide by 1,325 feet long. The southern parcel, from 101st Street to 103rd Street, is approximately 2.9 acres and is 78 feet wide by 1,277 feet long. Both the northern and southern parcels of Fernwood Parkway serve as open space and do not contain recreational facilities or amenities such as sidewalks or benches. According to the *2010–2014 Capital Improvement Plan*, there are no future improvement projects scheduled for Fernwood Parkway (Chicago Park District 2009). Figure 4-6 shows Fernwood Parkway from 100th Street and Eggleston Avenue looking north and Figure 4-7 is looking south. The UPRR Rail Alternative West Option alignment would pass through the center of Fernwood Parkway from 99th Street to 103rd Street.

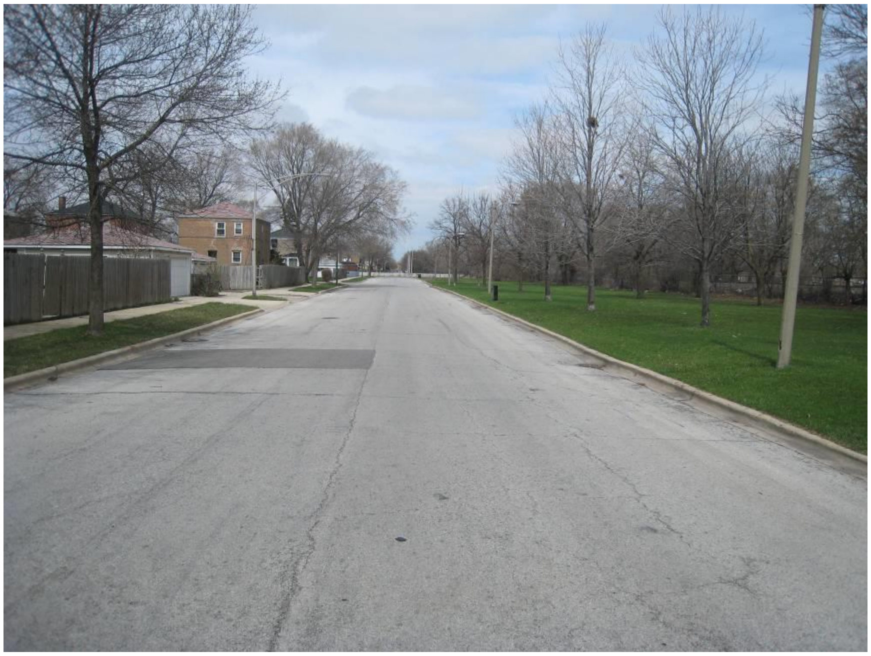


Figure 4-6: Fernwood Parkway at 100th Street and Eggleston Avenue (facing north)

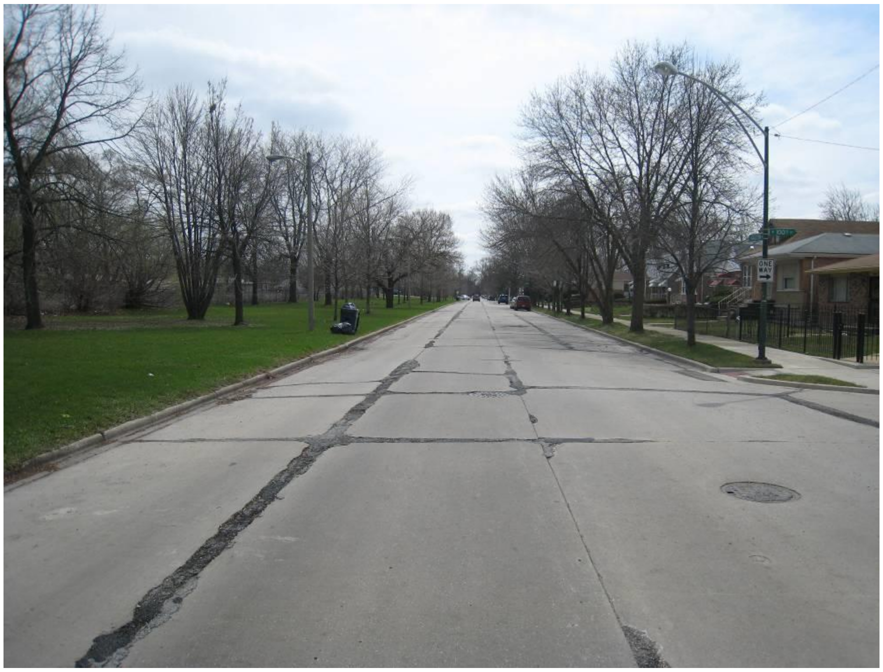


Figure 4-7: Fernwood Parkway at 100th Street and Eggleston Avenue (facing south)

Block (Griffith Natatorium) Park
Between 103rd Street and 104th Street and on either side on Harvard Avenue

When the City of Chicago purchased property for a pumping station in the Roseland neighborhood in 1912, it donated the excess land to the Special Park Commission for the creation of a park and a swimming pool or natatorium. During this time, the Special Park Commission was focused on the need for parks and playgrounds, particularly in crowded immigrant neighborhoods. The Commission began working with civic organizations to promote park creation and encouraged donation of land for these purposes. Block Park was originally two parks: Griffith Natatorium, which included a swimming pool, changing facilities, and a gymnasium; and Roseland Park, which included the green space around the pool facility. Roseland Park was later renamed in honor of Eugene H. Block, an alderman of the 33rd and 9th wards, chairman of the Special Parks Commission, and later chairman of the City Council Committee on Parks, Playgrounds and Recreation. In 1959, the Chicago Park District began leasing the two parks from the City of Chicago Department of Water Management and consolidated the two parks under the name Block Park. The natatorium facility was razed in 1998 and the site was converted to open space (Chicago Park District 2011). Today ownership of the land remains with the Chicago Department of Water Management.

Block Park is divided into two parcels by Harvard Avenue. The east parcel is approximately 1.4 acres (130 feet wide by 460 feet long) and includes amenities such as benches, walking paths, and sidewalks. The west parcel is approximately 1.3 acres (90 feet wide by 600 feet long) and is generally open space with a sidewalk and no other park amenities. In addition, a radio tower and two utility structures are on the west parcel. Figures 4-8 and 4-9 show current views of the park; Figure 4-10 shows an aerial view. The UPRR Rail Alternative East Option alignment would pass through the west parcel of Block Park.

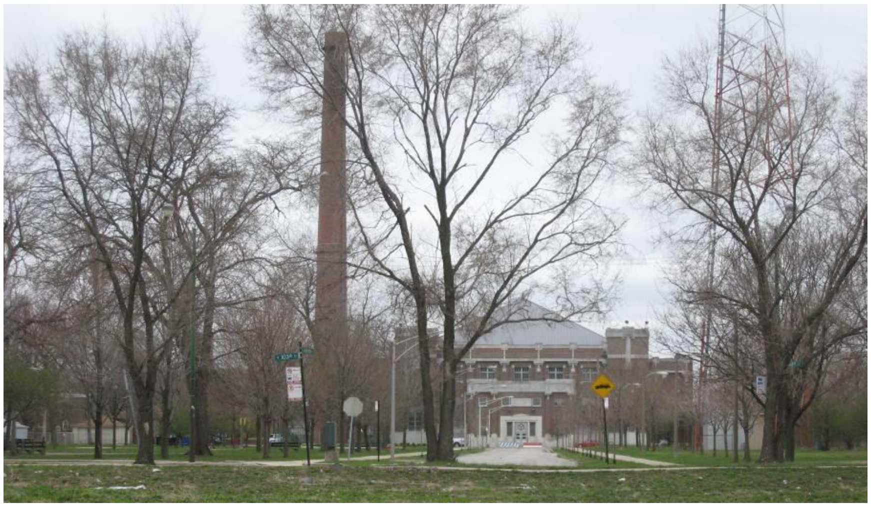


Figure 4-8: Block Park Facing South with the Roseland Pumping Station in the Background (facing south)

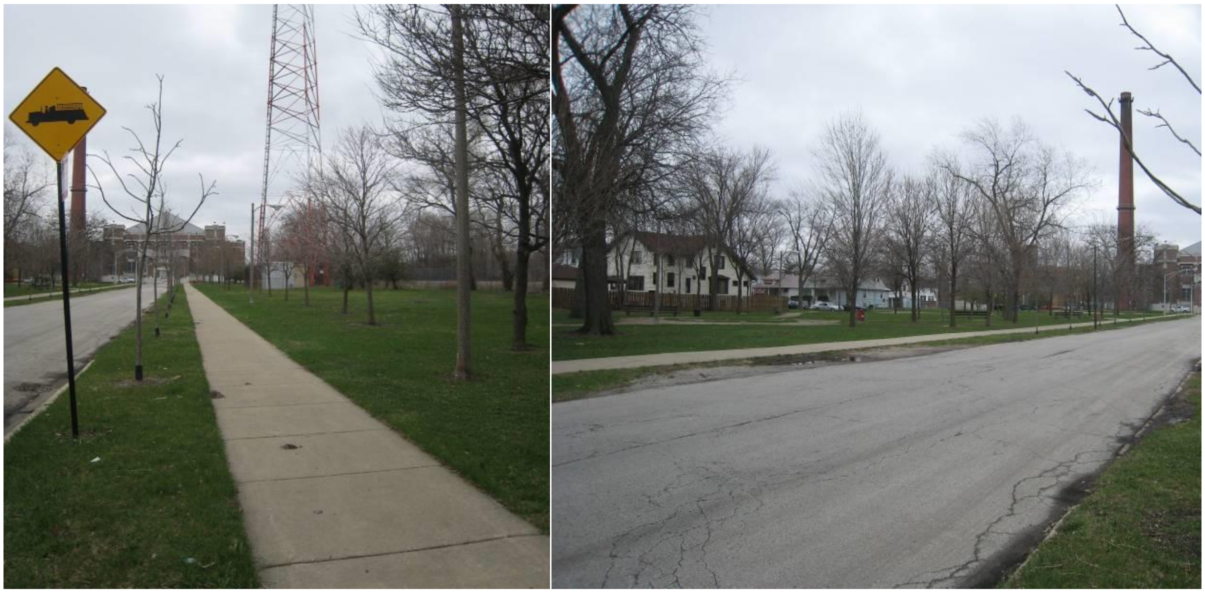
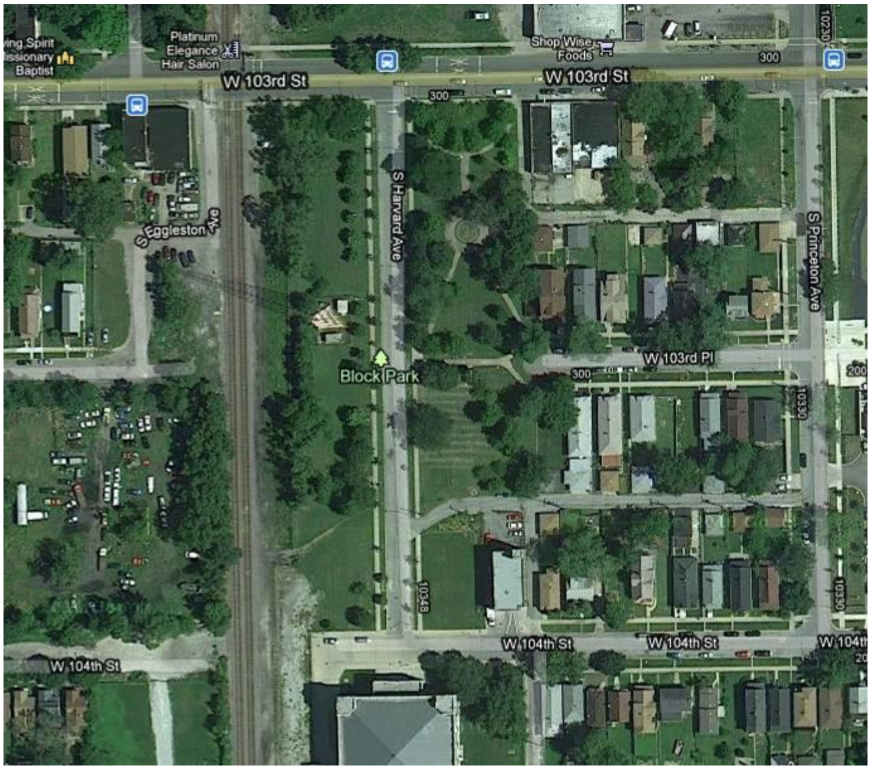


Figure 4-9: West Parcel (left) of Block Park and East Parcel (right) of Block Park


W 103rd St
W 103rd St
Platinum Elegance Hair Salon
Shop Wise Foods
S Eggleston Ave
S Harvard Ave
S Princeton Ave
Block Park
W 103rd Pl
W 104th St
W 104th St
W 104th St
W 104th St

(Source: Google Maps, 2011)

Figure 4-10: Aerial View of Block Park

4.2 Community Facilities

There are 230 community facilities within the API of the RLE Project. As shown in Table 4-2, 91 community facilities are within the API for the BRT Alternative, 73 for the UPRR Rail Alternative ROW Option, 75 for the East Option, 74 for the West Option, and 81 for the Halsted Rail Alternative. As Chapter 3 describes, these include community facilities that are adjacent to an alternative's ROW and/or are within ½ mile of a proposed station/stop location. Details about each community facility, including addresses and locations relative to each build alternative, can be found in Appendix A. Figure 4-11 shows the locations of these community facilities relative to the build alternatives.

Table 4-2: Community Facilities within the Area of Potential Impact

Facility Type	Bus Rapid Transit Alternative	UPRR Rail Alternative - ROW Option	UPRR Rail Alternative - East Option	UPRR Rail Alternative - West Option	Halsted Rail Alternative
Cemetery	0	0	0	0	1
City Facility	1	0	0	0	0
Community Center	5	2	2	2	7
Fire Station	2	4	5	4	1
Healthcare Facility	3	3	3	3	3
Library	2	1	1	1	1
Place of Worship	61	46	47	47	57

Facility Type	Bus Rapid Transit Alternative	UPRR Rail Alternative - ROW Option	UPRR Rail Alternative - East Option	UPRR Rail Alternative - West Option	Halsted Rail Alternative
School	13	15	15	15	8
Senior Center	3	0	0	0	2
State Facility	1	2	2	2	1
Total Number of Affected Community Facilities	91	73	75	74	81

UPRR = Union Pacific Railroad, “ROW = right-of-way

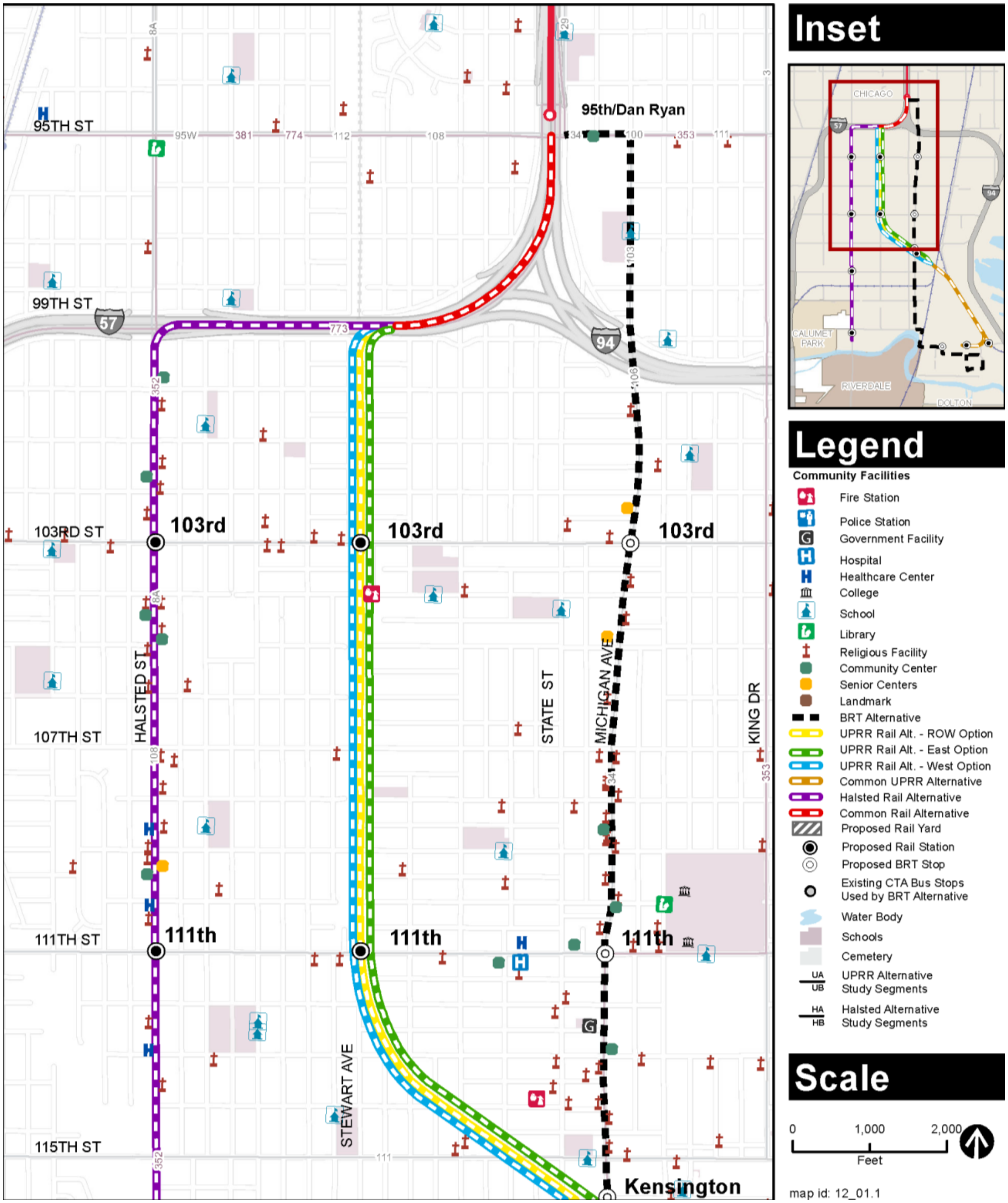

95th/Dan Ryan
95TH ST
99TH ST
103RD ST
107TH ST
111TH ST
115TH ST
HALSTED ST
STEWART AVE
STATE ST
MICHIGAN AVE
KING DR
57
94
103rd
103rd
103rd
111th
111th
111th
Kensington
Inset
CHICAGO
CALUMET PARK
RIVERDALE
DOLTON
Legend
Community Facilities
Fire Station
Police Station
Government Facility
Hospital
Healthcare Center
College
School
Library
Religious Facility
Community Center
Senior Centers
Landmark
BRT Alternative
UPRR Rail Alt. - ROW Option
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
Common UPRR Alternative
Halsted Rail Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Proposed BRT Stop
Existing CTA Bus Stops Used by BRT Alternative
Water Body
Schools
Cemetery
UA UB UPRR Alternative Study Segments
HA HB Halsted Alternative Study Segments
Scale
0
1,000
2,000
Feet
map id: 12_01.1

Figure 4-11: Community Facilities in the Area of Potential Impact (1 of 3)

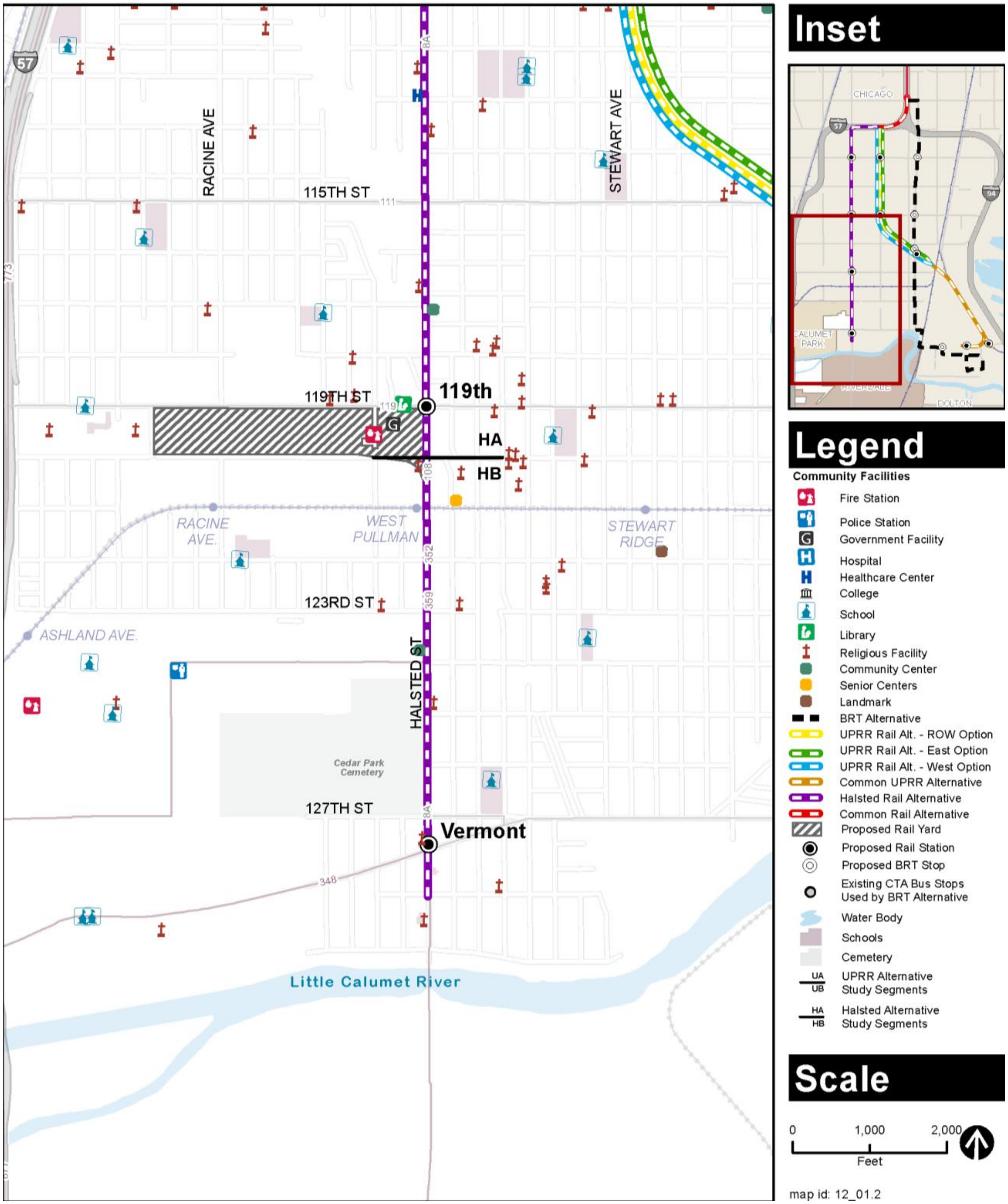

57
RACINE AVE
STEWART AVE
115TH ST
111
773
119TH ST
119
119th
G
HA
HB
108
RACINE AVE.
WEST PULLMAN
STEWART RIDGE
352
359
123RD ST
ASHLAND AVE.
HALSTED ST
Cedar Park Cemetery
127TH ST
8A
Vermont
348
Little Calumet River
Inset
CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON
Legend
Community Facilities
Fire Station
Police Station
Government Facility
Hospital
Healthcare Center
College
School
Library
Religious Facility
Community Center
Senior Centers
Landmark
BRT Alternative
UPRR Rail Alt. - ROW Option
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
Common UPRR Alternative
Halsted Rail Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Proposed BRT Stop
Existing CTA Bus Stops Used by BRT Alternative
Water Body
Schools
Cemetery
UA UB UPRR Alternative Study Segments
HA HB Halsted Alternative Study Segments
Scale
0
1,000
2,000
Feet
map id: 12_01.2

Figure 4-11: Community Facilities in the Area of Potential Impact (2 of 3)

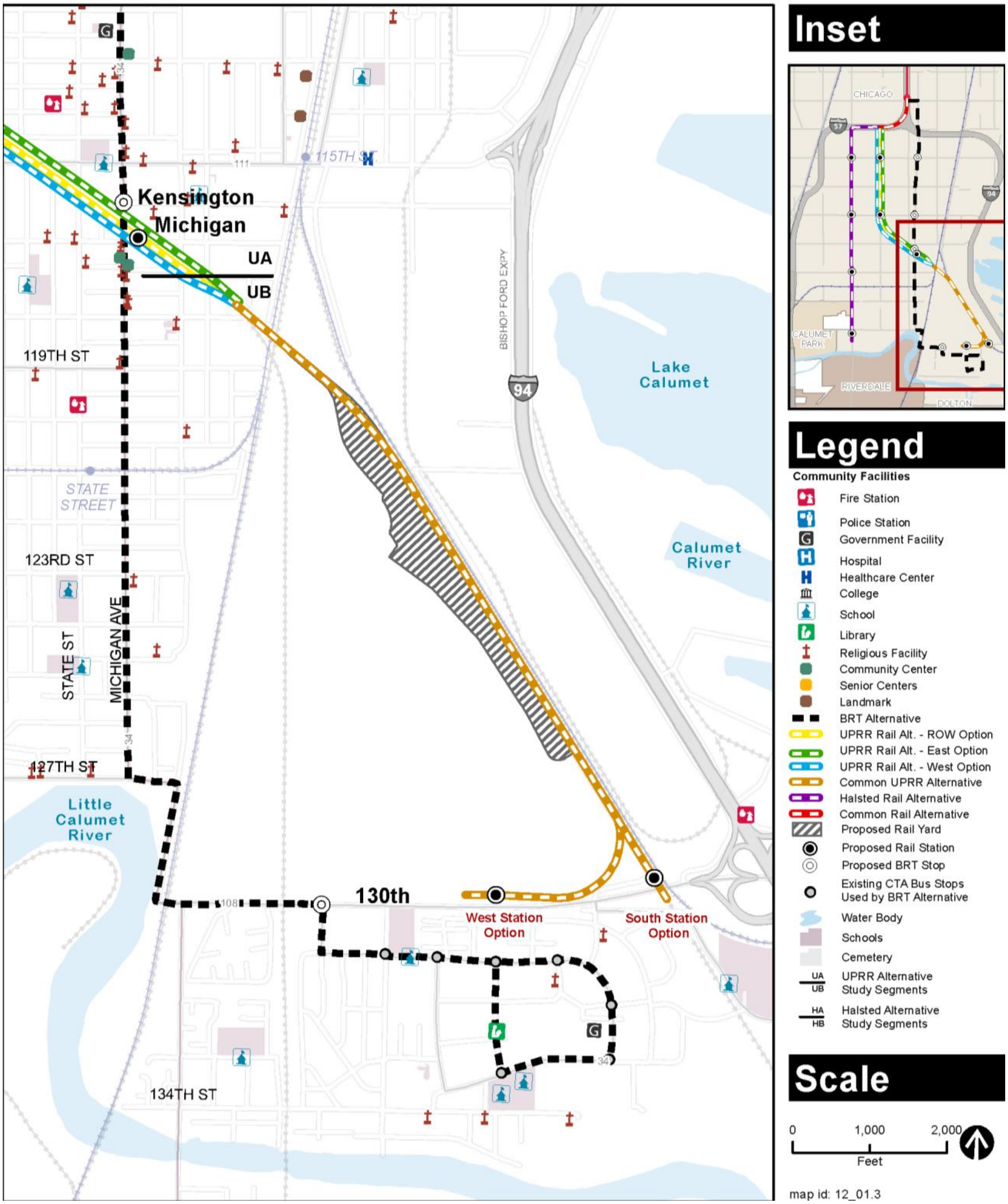

Kensington
Michigan
UA
UB
115TH ST
111
119TH ST
STATE STREET
123RD ST
STATE ST
MICHIGAN AVE
127TH ST
BISHOP FORD EXPY
94
Lake Calumet
Calumet River
Little Calumet River
130th
108
West Station Option
South Station Option
134TH ST
34
Inset
CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON
Legend
Community Facilities
Fire Station
Police Station
Government Facility
Hospital
Healthcare Center
College
School
Library
Religious Facility
Community Center
Senior Centers
Landmark
BRT Alternative
UPRR Rail Alt. - ROW Option
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
Common UPRR Alternative
Halsted Rail Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Proposed BRT Stop
Existing CTA Bus Stops Used by BRT Alternative
Water Body
Schools
Cemetery
UA UB UPRR Alternative Study Segments
HA HB Halsted Alternative Study Segments
Scale
0
1,000
2,000
Feet
map id: 12_01.3

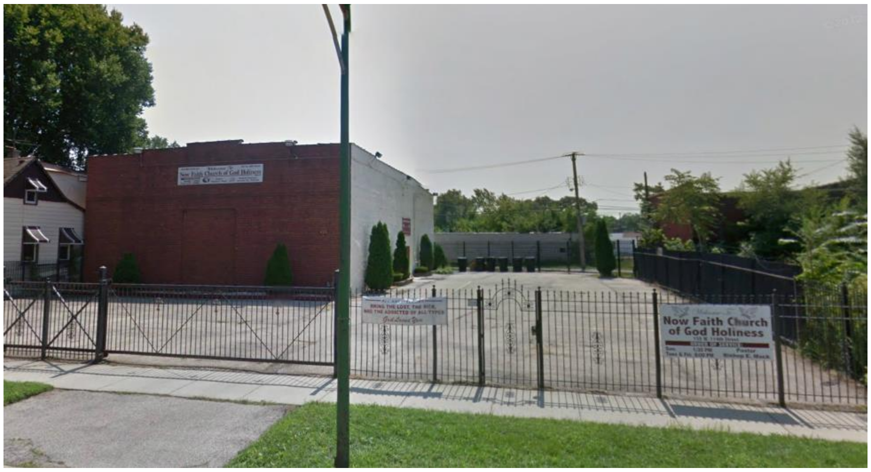
Figure 4-11: Community Facilities in the Area of Potential Impact (3 of 3)

4.2.1 Description of Potentially Displaced Community Facilities

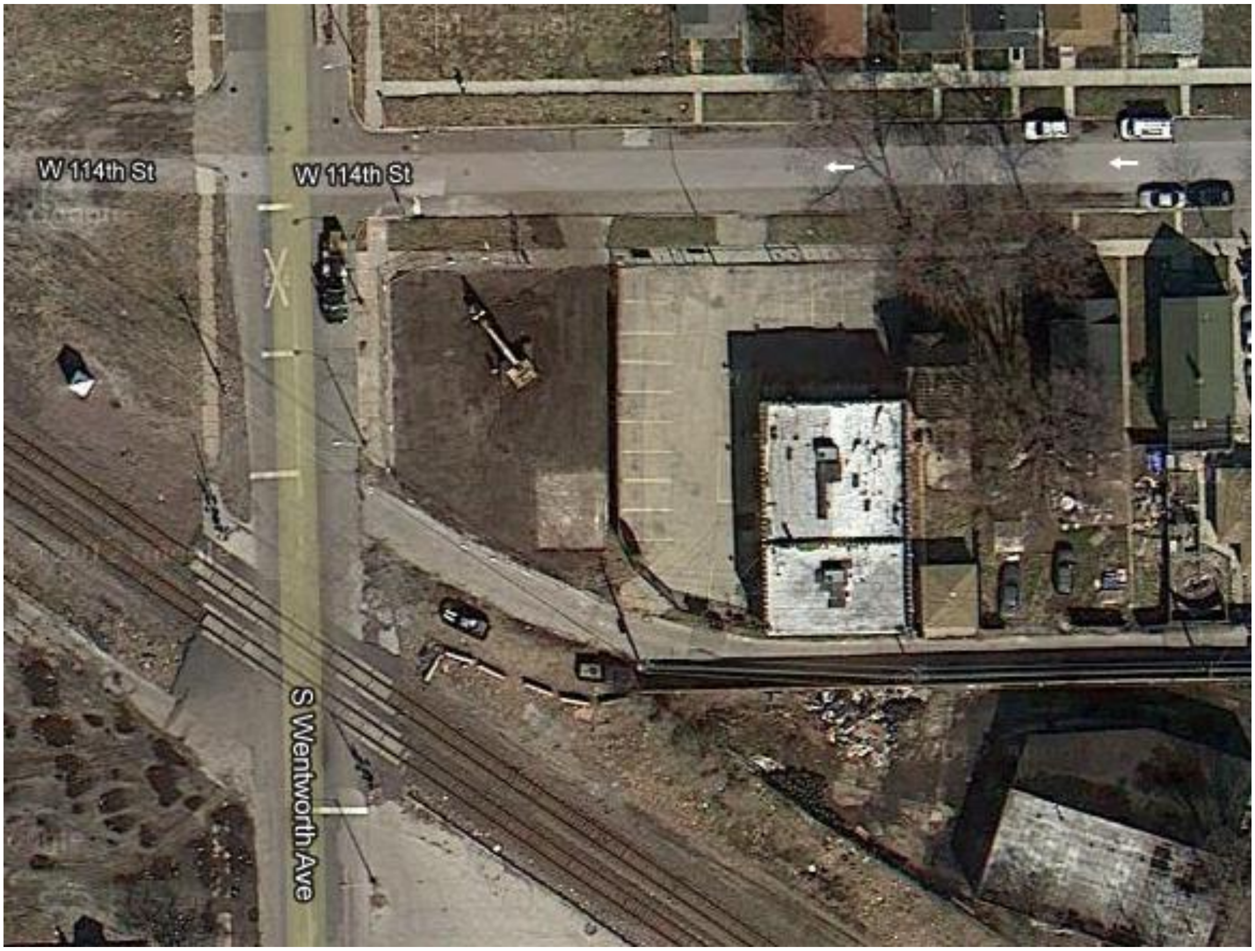
Of the 230 community facilities within the API, 4 would be displaced because they fall within the proposed ROW for one or more build alternative. The other 225 community facilities are outside the proposed ROW for the build alternatives and would not be displaced. The potentially displaced community facilities are described in more detail below.

Now Faith Church of God Holiness
135 W. 114th Street near Wentworth Avenue

Now Faith Church of God Holiness (Figures 4-12 and 4-13) is a small place of worship east of the existing UPRR freight rail ROW. The building is approximately 5,000 square feet and is on a parcel that is approximately 0.3 acre. The entire building and parcel would be affected by the proposed permanent envelope of the UPRR East Option (See Section 5).



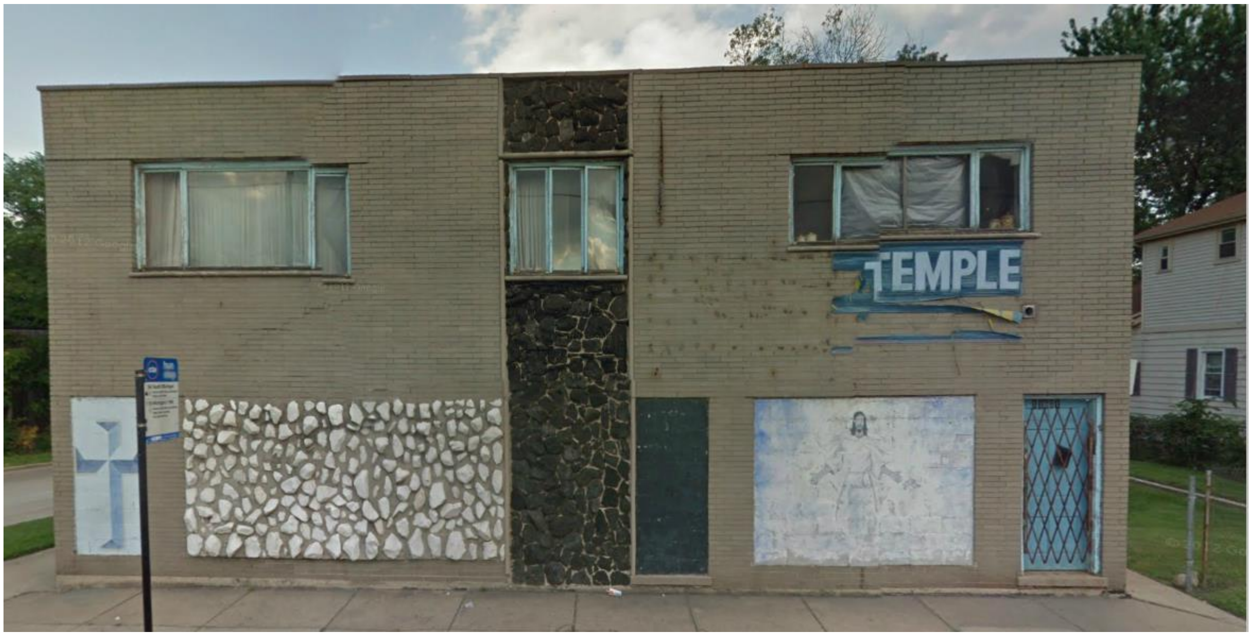
(Source: Google Maps Street View, 2012)
Figure 4-12: Now Faith Church of God Holiness



(Source: Google Maps, 2012)
Figure 4-13: Aerial View of Now Faith Church of God Holiness

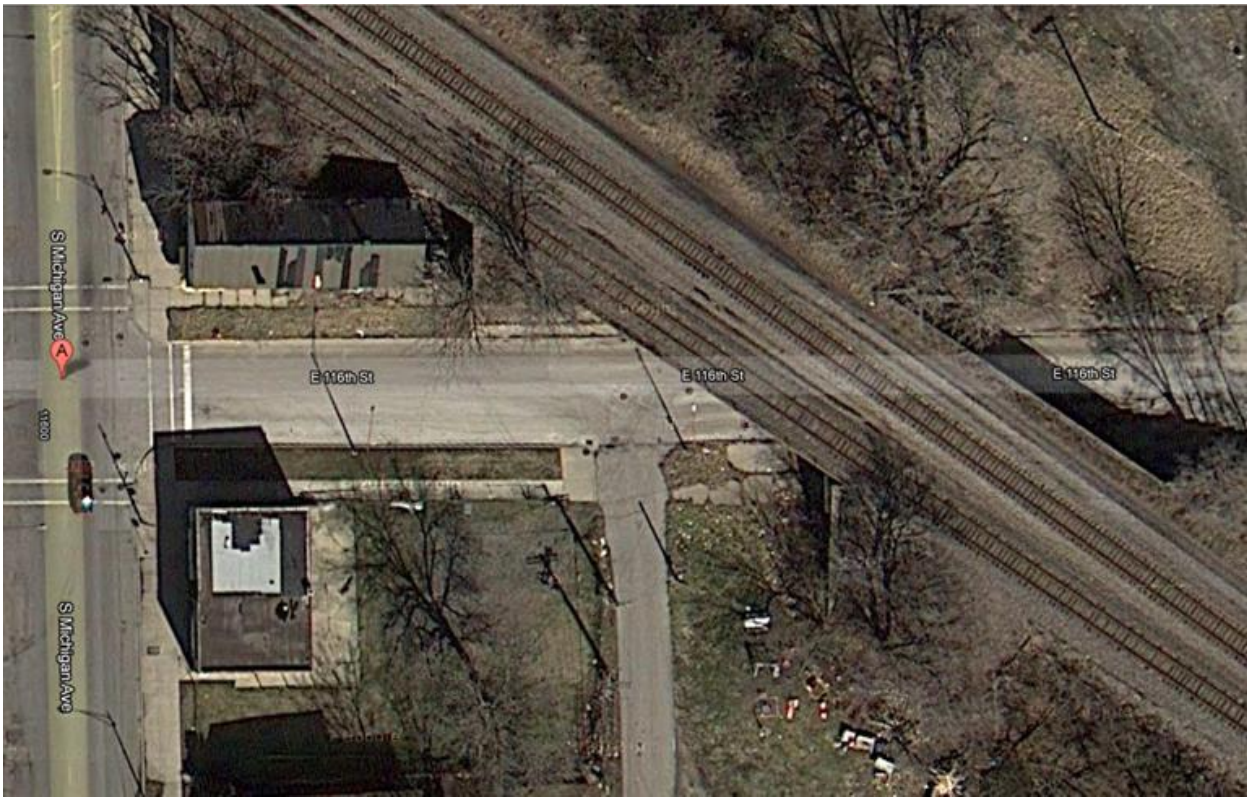
Grace Temple Church of God Established in Christ
11601 S. Michigan Avenue at 116th Street

Grace Temple Church of God Established in Christ (Figures 4-14 and 4-15) is a place of worship within a former residential building that is west of the existing UPRR freight rail embankment. The building is approximately 1,500 square feet and is on two parcels that make up approximately 0.14 acre, combined. The entire building and parcel would be affected by the proposed permanent envelope of the UPRR West Option (See Section 5).



(Source: Google Maps Street View, August 2011)

Figure 4-14: Grace Temple Church of God Established in Christ

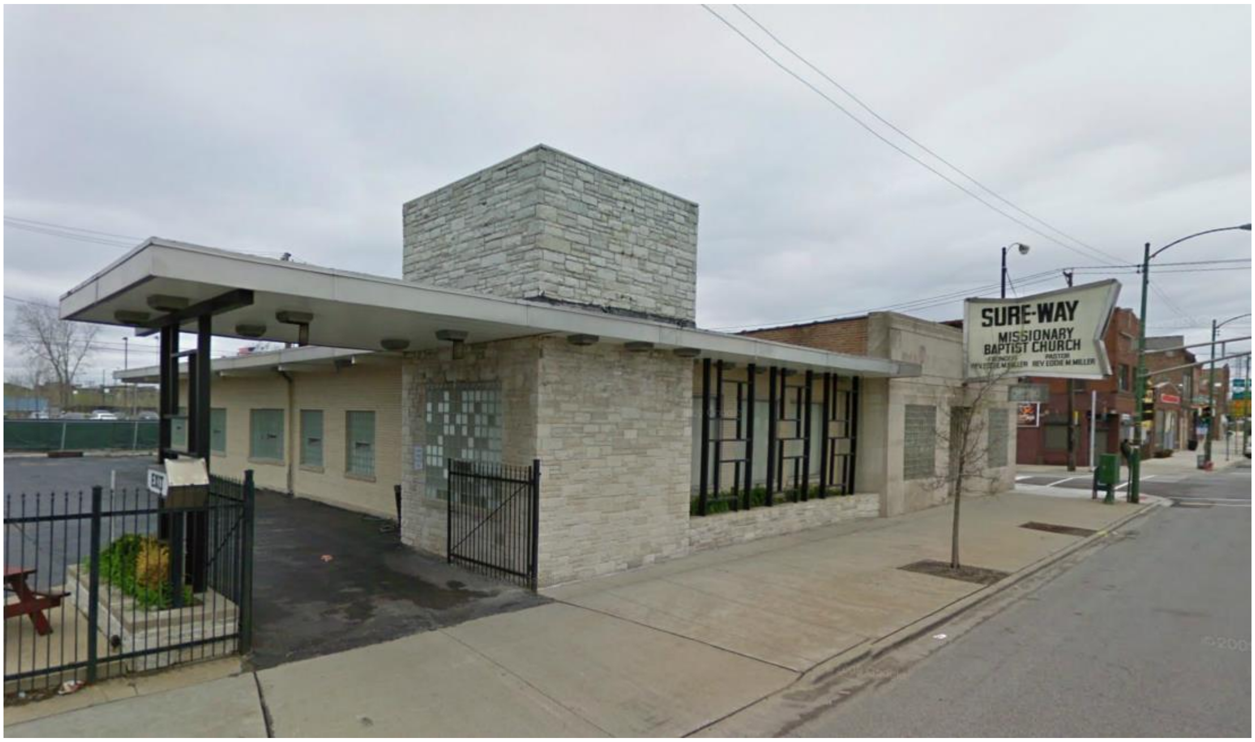

S Michigan Ave
A
11600
E 116th St
E 116th St
E 116th St
S Michigan Ave

(Source: Google Maps, 2012)

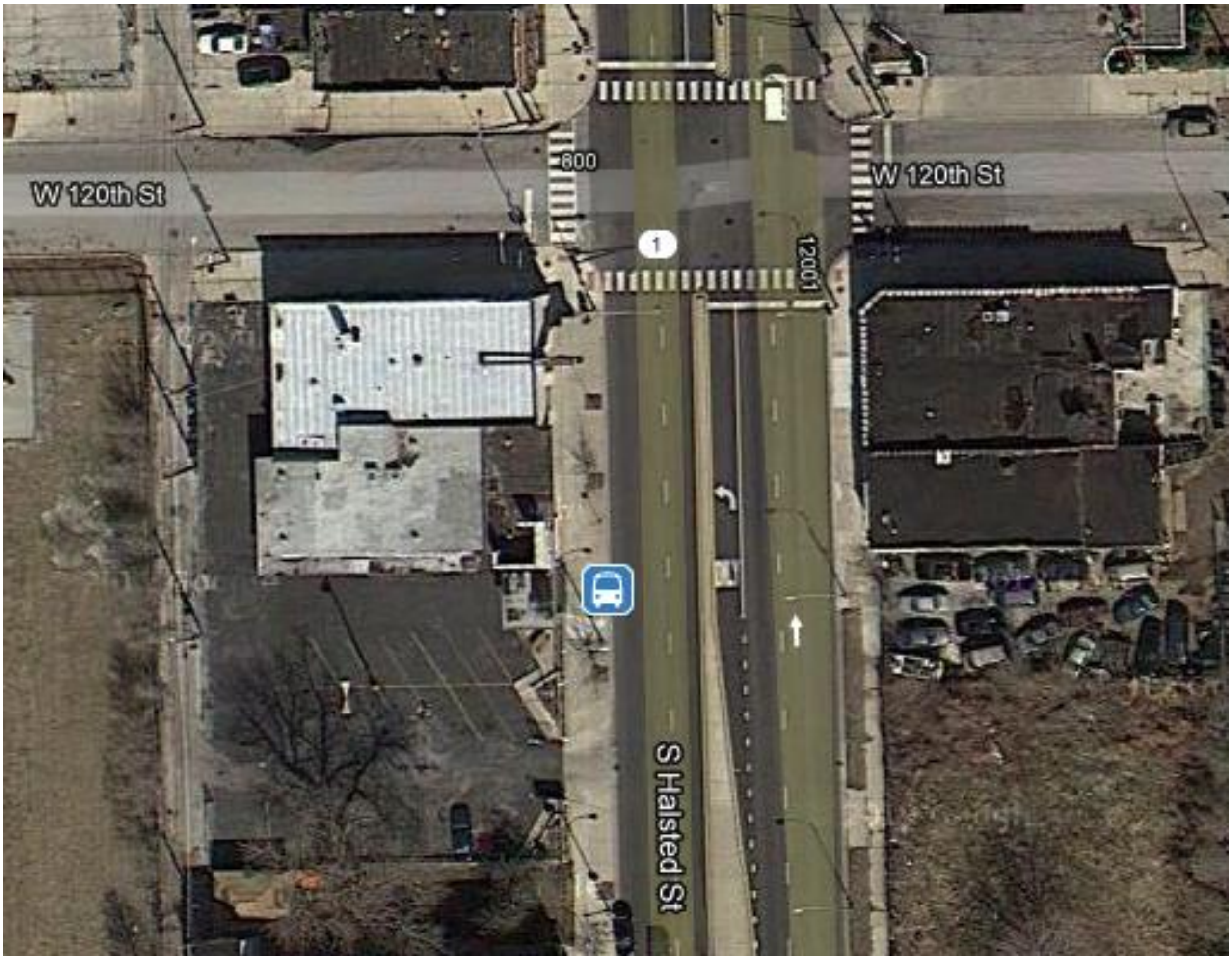
Figure 4-15: Aerial View of Grace Temple Church of God Established in Christ

Sure-Way Missionary Baptist Church
12000 S. Halsted Street at 120th Street

Sure-Way Missionary Baptist Church (Figures 4-16 and 4-17) was incorporated in 1986 and is led by Reverend Eddie M. Miller. The facility includes a worship building and a parking lot. The building is approximately 6,200 square feet and is on a parcel that is approximately 0.5 acre. The entire building and parcel would be affected by the proposed permanent envelope of the Halsted Rail Alternative (See Section 5).



(Source: Google Maps Street View, 2012)
Figure 4-16: Sure-Way Missionary Baptist Church



(Source: Google Maps, 2012)

Figure 4-17: Aerial View of Sure-Way Missionary Baptist Church

Illinois Department of Employment Security

837 W. 119th Street between Halsted Street and Peoria Street

The Illinois Department of Employment Security (Figures 4-18 and 4-19) provides unemployment insurance and employment services and guidance to workers, job seekers, and employers. Services include job development, recruitment opportunities for job seekers, seminars and job search workshops, veteran employment services, migrant seasonal farm workers program, reentry employment services for formerly incarcerated individuals, employment services for young adults (16–24 years of age), and fidelity bonding and work opportunity tax credit assistance for employers who hire at-risk employees. This office is open to the public Monday through Friday from 8:30 AM to 5:00 PM. The Department of Employment Security office is part of a larger shopping center at 119th Street and Halsted Street. The entire parcel and the shopping center would be permanently affected by the proposed permanent envelope of the Halsted Rail Alternative (See Section 5).

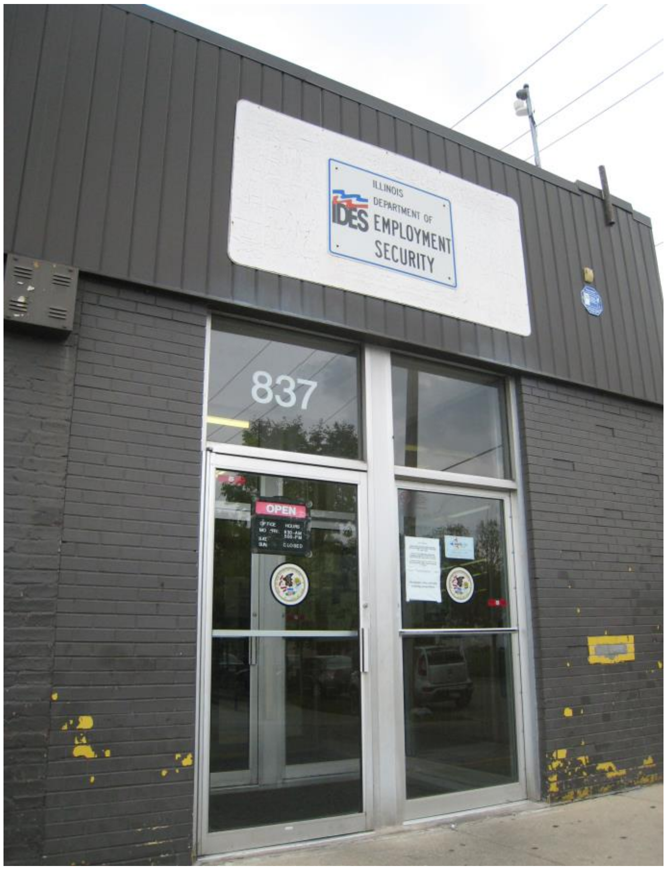
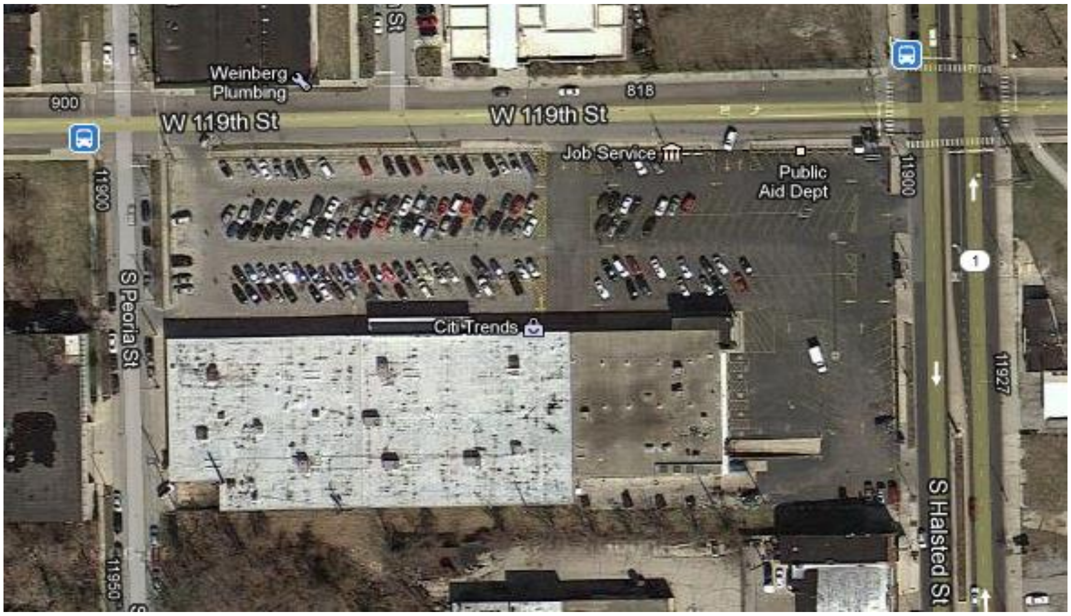

ILLINOIS DEPARTMENT OF EMPLOYMENT SECURITY
IDES
837
OPEN

Figure 4-18: Illinois Department of Employment Security


Weinberg Plumbing
900
818
W 119th St
W 119th St
Job Service
Public Aid Dept
11900
11900
S Peoria St
Citi Trends
1
11927
S Halsted St
11950

(Source: Google Maps, 2012)

Figure 4-19: Aerial View of the Illinois Department of Employment Security

Section 5
Impacts and Mitigations

This section describes the permanent and construction impacts that would result from the RLE Project. Impacts on parklands and community facilities are described as adverse, adverse after mitigation, not adverse, not adverse after mitigation, or beneficial. This section also presents potential mitigation options that would be used to avoid, minimize, and/or mitigate adverse impacts.

5.1 No Build Alternative

The No Build Alternative is defined as the existing transportation system plus any committed transportation improvements that are already in the CMAP Fiscal Year 2010–2015 Transportation Improvement Program as well as improvements to the 95th Street Terminal, as described in Section 2. All elements of the No Build Alternative are included in each of the build alternatives.

5.1.1 Permanent Impacts and Mitigations - No Build Alternative

The No Build Alternative would not affect existing parklands in the project area, nor would it change the existing access to community facilities for patrons, employees and residents in the project area overall. Existing bus transit routes in the project area would not change as part of the No Build Alternative; therefore, there would be no change in access to parklands and/or community facilities.

5.1.2 Construction Impacts and Mitigations - No Build Alternative

Under the No Build Alternative no construction activities would take place beyond the currently scheduled improvements.

5.1.3 Cumulative Impacts and Mitigations - No Build Alternative

The No Build Alternative would not change the overall distribution or character of parklands and community facilities along the RLE Project corridor. The overall health of parklands within the project area is stable based on field observations and a review of the past and future park improvement projects identified for the project area in the Chicago Park District's 2011–2015 and 2012–2016 Capital Improvement Plans. These plans identify the locations for improvements and the resources to acquire new and/or improve existing parklands in the project area. The No Build Alternative would not contribute to a decline in the health of community facilities.

5.2 Bus Rapid Transit Alternative

The proposed BRT Alternative would include a 5-mile BRT route, which would operate between the existing 95th Street Terminal and the intersection of 130th Street and Eberhart Avenue via 95th Street, Michigan Avenue, 127th Street, Indiana Avenue, and 130th Street. The BRT Alternative would have four stops with improved bus shelters located at 103rd Street and Michigan Avenue (103rd Street stop); 111th Street and Michigan Avenue (111th Street stop); Kensington Avenue and Michigan Avenue (Kensington Avenue stop); and 130th Street and Eberhart Avenue (130th Street stop). The BRT service would end at the 130th Street stop; however, the bus route would continue through Altgeld Gardens and would use the existing bus stops at 131st Street and Langley Avenue; 131st Street and Corliss Avenue; 131st Street and Ingleside Avenue; 132nd Street and Ellis Avenue; 133rd Street and Ellis Avenue; and 133rd Place and Corliss Avenue. Surface parking lots, each with a capacity for 200 spaces, would be located at the 103rd Street and 111th Street stops. A three-story parking garage would be built at the Kensington Avenue stop (1,000 space capacity). The ground level of the parking garage would be available for retail and/or community facilities. The 130th Street stop would also include a three-story parking garage (1,400 space capacity). Existing parking lanes would be removed for some portions of the alignment. Under the BRT Alternative, the existing 103rd Street Garage would be used to store vehicles.

No dedicated bus lanes would be provided for the BRT Alternative; however, BRT vehicles would use traffic signal priority at signalized intersections along 95th Street, Michigan Avenue, and 130th Street.

The BRT Alternative would offer a 5-minute improvement in travel time from the 95th Street Terminal to 130th Street during the morning peak hours, compared to the existing transit services under the No Build Alternative.

5.2.1 Permanent Impacts and Mitigations - Bus Rapid Transit Alternative

This section describes the permanent impacts that would result from the operation of the BRT Alternative and it discusses options to avoid, minimize, or mitigate adverse impacts.

5.2.1.1 Parklands

Implementation of the BRT Alternative would not displace any parkland because the proposed ROW would not cross a park. This alternative's alignment would be within 500 feet of four parklands (Robert Abbott Park, Lion Field, Golden Gate Park, and George Washington Carver Park). These parks would not be subject to impacts greater than with the No Action Alternative because there are existing bus transit services that serve the same corridor and they pass by these parks. There are three parklands within walking distance (approximately ½ mile) of the proposed BRT stops (Kensington Park, Potter Palmer Park and Golden Gate Park). The BRT Alternative would offer minimal improvement in access to these parks.

Golden Gate Park

The parking facility at the 130th Street stop would be across 130th Street from the main entrance to Golden Gate Park. The operation of the parking facilities at the 130th Street stop would generate more vehicle traffic in the immediate area when compared to the existing condition; increased traffic would affect access to the park. The increased traffic flow would primarily occur during the morning and evening peak travel times. These changes would not adversely affect the level of service on 130th Street after transportation mitigation (such as optimized signal timing) was applied. In addition, there are alternate routes to access the park through the Altgeld Gardens neighborhood. The impacts on Golden Gate Park would not be adverse after mitigation.

Parklands within ½ mile of a BRT Stop Location

The addition of BRT services would improve access to the parklands within walking distance (approximately ½ mile) of the proposed BRT stops, particularly for geographically isolated neighborhoods such as Altgeld Gardens. Bus service is already provided along this corridor; however, the BRT Alternative would provide more frequent and faster service. This improvement would be considered beneficial, but not substantial, when compared to the No Build Alternative. As shown in Table 5-1, there are three parklands within walking distance of a BRT stop location.

Table 5-1: Parklands within ½ mile of Stops - Bus Rapid Transit Alternative

Station	Name of Parkland
103rd Street	None
111th Street	Potter Palmer Park
Kensington Avenue	Kensington Park Potter Palmer Park
130th Street	Golden Gate Park

5.2.1.2 Community Facilities

The BRT Alternative would not displace any community facilities. Of the 91 community facilities in the API for the BRT Alternative, 45 are adjacent to the proposed alignment and 88 community facilities are within ½ mile of a BRT stop location; these facilities would have impacts as a result of their proximity to the route, park & ride facilities, and/or stops.

Of the 45 community facilities adjacent to the alignment, 37 are noise-sensitive receptors (schools, libraries, senior housing, and places of worship, listed below) per the definitions found in the *Noise and Vibration Technical Memorandum*. These facilities would have moderate noise impacts as a result of the BRT Alternative. Moderate noise impacts are described as a change in noise that is noticeable but not sufficient to cause a strong, adverse community reaction. The BRT buses would travel along local streets with small blocks, numerous cross streets, and driveways; therefore, noise abatement mitigation, such as barriers, would not be feasible for the BRT Alternative (see the *Noise and Vibration Memorandum* for more details).

Noise-Sensitive Receptors Affected by the Bus Rapid Transit Alternative

- Harlan Community High School
- Damascus Baptist Church
- Rose Haven Manor Senior Housing
- New Tabernacle Baptist Church
- Pentecostal Church of God
- Victory Centre of Roseland Senior Housing
- Harris Temple Church of God in Christ
- Lilydale Progressive Missionary Baptist Church
- St. John Pentecostal Holiness Church of Deliverance
- The Straight Way Pentecostal Church
- Beacon Light Ministries
- New Testament Baptist Church
- Word Alive Church Ministry
- Love Abide Missionary Baptist Church
- Mosque of Umar
- Greater Change Evangelistic
- Miracle Temple
- South of Praise Evangelistic Center
- New Covenant Church Deliverance
- True Word Ministries

- Christian Love Deliverance Church of God in Christ
- Holy Miracle - Christ the Hope of Glory Ministries
- Revelation Baptist Church
- St. Ephraim Coptic
- Roseland Christian Ministries
- Out of a Need Missionary Church Temple
- New St. John Missionary Baptist Church
- Galilee Baptist Church
- Carver Primary School
- Celestial Church of Christ
- Cottage Grove Holy Temple Church
- Word of Knowledge Ministries
- Full Gospel Christian Center Church
- Greater New Eagle Missionary Baptist Church
- Aldridge Elementary School
- Altgeld Library
- Carver Middle School

The parking facility at the 103rd Street stop would be located immediately across Michigan Avenue from Rose Haven Manor Senior Housing; the parking facility at the 111th Street stop would be immediately adjacent to New Testament Baptist Church; and the parking facility at 130th Street stop would be across 130th Street from Aldridge Elementary School. These parking facilities would generate new vehicle traffic. The change in localized traffic volumes would not adversely affect level of service of the roadway network, but would affect pedestrian safety around the parking facilities. The mitigation measures presented in the *Transportation Technical Memorandum* would mitigate the potential adverse safety impacts for pedestrians and patrons of adjacent community facilities. The impacts on community facilities would not be adverse after mitigation.

As mentioned above, the parking garage for the Kensington Avenue stop would include space for retail and community facilities. The operation of the BRT Alternative would benefit the community by offering new and modernized space for the community facilities that locate there.

Community Facilities within ½ mile of a BRT Stop Location

The BRT Alternative would result in a 5-minute improvement in travel time from the 95th Street Terminal to 130th Street compared to the No Build Alternative. As shown in Table 5-2, there are 88 community facilities within walking distance (approximately ½ mile) of the proposed bus stop locations. The improved transit travel time would improve access to these 88 community facilities (see Appendix A for a complete list of facilities within walking distance of the bus stops). These benefits would not be substantial compared to those of the No Build Alternative, because bus transit services that serve similar stop locations are already provided along this route.

Table 5-2: Community Facilities within ½ mile of Stops - Bus Rapid Transit Alternative

Facility Type	Number
City Facility	1
Community Center	6
Fire Station	2
Healthcare Facility	3
Library	2
Place of Worship	59
School	12
Senior Center	2
State Facility	1
Total	**88**

5.2.2 Construction Impacts and Mitigations - Bus Rapid Transit Alternative

Construction of the BRT Alternative would include the construction of new BRT bus stops and the construction of parking facilities at each stop. As such, construction activities would be localized around the bus stop areas. Impacts on parklands and community facilities would include temporary air quality and noise impacts and temporary changes in access; however, these impacts would not be adverse after mitigation.

5.2.2.1 Parklands

Golden Gate Park

Golden Gate Park would have temporary impacts during the construction of the parking garage at the 130th Street stop because of its location with 500 feet of construction activities. The temporary impacts would include noise impacts from construction equipment, impacts on air quality resulting from fugitive dust, and/or an increase in vehicle activity within the localized area and temporary reduction in access to the park due to detours. Mitigation options include, but are not limited to, using construction best management practices, instituting a construction Dust Control Plan, alerting park users of construction activities, and providing safe and clearly marked detour routes. After mitigation, there would be no adverse impacts on Golden Gate Park as a result of construction activities.

5.2.2.2 Community Facilities

The community facilities adjacent to construction activities would have temporary impacts; these facilities include Rose Haven Manor Senior Housing (103rd Street stop), New Testament Baptist Church (111th Street stop), and Aldridge Elementary School (130th Street stop). The construction impacts would include noise impacts, impacts on air quality, and temporary changes to traffic flow and/or parking in the localized area. The same mitigation strategies proposed for the parklands would be applied to mitigate for the adverse impacts on community facilities. Other mitigation options include planning detour routes that allow for access to/from and through the construction areas and designating alternative parking. After mitigation, there would be no adverse impacts on community facilities as a result of construction activities.

5.2.2.2.1 Construction Activities and Emergency Responders

Construction activities at the stop locations and parking facilities would temporarily reduce accessibility of the roadway network, which would cause delays for emergency responders, thereby affecting their ability to provide timely emergency services. These impacts would be mitigated by coordinating the construction schedule with the Chicago Office of Emergency Management and Communications and would require planning detour routes that allow for access to/from and through the construction areas. In particular, the construction plan for the 111th Street stop and parking facilities would be coordinated with the Roseland Community Hospital and the emergency service providers that require access to this hospital. The duration of construction activities for the BRT Alternatives would be shorter than for the rail alternatives; as such, the construction impacts on emergency responders would be fewer with the BRT Alternative that the rail alternatives. After mitigation, the construction impacts on emergency responders would not be adverse.

5.2.3 Cumulative Impacts and Mitigations - Bus Rapid Transit Alternative

The construction and operation of the BRT Alternative would not reduce the overall health of the parklands and/or community facilities in the project area. As such, no adverse cumulative impacts would occur. Improved transit in the project area would result in improved access to parklands and community facilities within and beyond the project area, and within walking distance of the larger network of CTA stop and stations.

5.3 Union Pacific Railroad Rail Alternative - Right-of-Way Option

The UPRR Rail Alternative ROW Option is an extension of the existing Red Line (5.4 miles with the South Station Option, or 5.7 miles with the West Station Option) that would operate in the existing UPRR ROW. The UPRR trains would relocate to another corridor as part of a separate, earlier project that may occur regardless of RLE implementation. The City of Chicago is performing this separate, independent study to evaluate relocating the UPRR trains to another corridor. The CTA trains would operate on an elevated structure heading south from the 95th Street station in the median of I-57 for nearly ½ mile until reaching the UPRR corridor in the vicinity of Eggleston Avenue. The alignment would then turn south along the UPRR corridor to approximately 111th Street where it would turn southeast. East of Prairie Avenue, the alignment would cross over the Canadian National (CN)/Metra tracks near 119th Street, where it would transition to an at-grade profile and then continue southeast along the former Michigan Central/Indiana Harbor Belt (IHB) railroad ROW to terminate at 130th Street.

Three intermediate stops would be included at 103rd Street, 111th Street, and Michigan Avenue with a terminal station at 130th Street. There are two station options for 130th Street: the South Option, which would be along the IHB ROW at 130th Street; and the West Option, which would be on the north side of 130th Street west of the IHB route.

Bus and park & ride facilities would be provided at each station with a total capacity of up to 3,700 parking spaces. The 103rd Street station would include two parking lots, one northeast and one southwest of 103rd Street and the UPRR track, each with a capacity of 100 vehicles; the northeastern parking lot would include a bus turnaround to serve the CTA bus route #9. The 111th Street station would include two parking lots, one northwest and one northeast of 111th Street and the UPRR track, each with a capacity of 100 vehicles; the northwest parking lot would include a bus turnaround to serve the Pace bus route #352. The Michigan Avenue station would include a three-story parking garage with a capacity for 750 vehicles (the ground level of the garage would be available for retail and/or community facilities use and would include a bus turnaround for the CTA bus route #119 and the Pace bus route #359) A surface parking lot with the capacity for 175 vehicles would be located east of the tracks between 116th Street and Kensington Avenue. The 130th Street station (West or South Option) would include four bus bays, an overhead canopy, a vehicle drop-off area, and weather-protected bicycle parking. The South Option would include a seven-story parking garage with a capacity for 2,300 vehicles. The West Option would include a surface parking lot with the capacity for 350 vehicles and a four-story parking garage with the capacity of 1,950 vehicles.

An at-grade, 270-car yard and shop facility would be built east of the CN/Metra Electric tracks and west of the Northern Indiana Commuter Transportation District/Chicago South Shore & South Bend Railroad tracks at approximately 120th Street and Cottage Grove Avenue (120th Street yard and shop). The 120th Street yard and shop would also include a small amount of parking for staff. The existing 98th Street Yard and Shop and the south end of the existing tracks would continue to be used for Red Line trains.

Electric substations have been proposed for several locations: west of the CTA tracks between 104th and 105th Street; west of the CTA tracks between Perry Avenue and Lafayette Avenue; west of the CTA tracks north of the proposed parking structure (if the 130th Street South Station Option is the preferred station location), or along the CTA tracks near (if the 130th Street West Station Option is the preferred station location); and within the 120th Street yard and shop facility.

5.3.1 Permanent Impacts and Mitigations - Union Pacific Railroad Rail Alternative - Right-of-Way Option

This section describes the permanent impacts that would result from the operation of the UPRR Rail Alternative ROW Option and it discusses options to avoid, minimize or mitigate adverse impacts.

5.3.1.1 Segment UA

Segment UA is the northern project area for all three options of the UPRR Rail Alternative. It extends from the existing 95th Street Terminal in the north to just south of the proposed Michigan Avenue station in the south.

5.3.1.1.1 Parklands

The permanent ROW for the UPRR Rail Alternative ROW Option would cross Wendell Smith Park. There are three parks within 500 feet of the ROW: Robert Abbott Park, Fernwood Parkway, and Block Park. These parks would be affected due to their proximity to the proposed tracks, park & ride facilities, and/or stations. In Segment UA, there are six parklands within walking distance (approximately ½ mile) of a proposed station; improved access to these parks would be a benefit of station proximity. Impacts on each park are described below.

Wendell Smith Park

The UPRR Rail Alterative ROW Option would affect Wendell Smith Park. The UPRR Rail ROW Option alignment would run through the northwestern corner of the park. Of the 4.72 acres of the park, approximately 0.23 acre (10,019 square feet) would be within the ROW of the project; this impact would leave an isolated park fragment, between the UPRR and CTA ROWs, of approximately 4,350 square feet (Figure 5-1). The acreage in the ROW and the park fragment includes open space, trees at the park's edge, and the northwest corner of the walking trail.

After construction, the space under the proposed CTA structure would be returned to park use as open space and would provide access to the park fragment. Even if the affected land did not retain its park use, Wendell Smith Park would largely retain its active recreational use because the major amenities in the park would not be in the affected area.

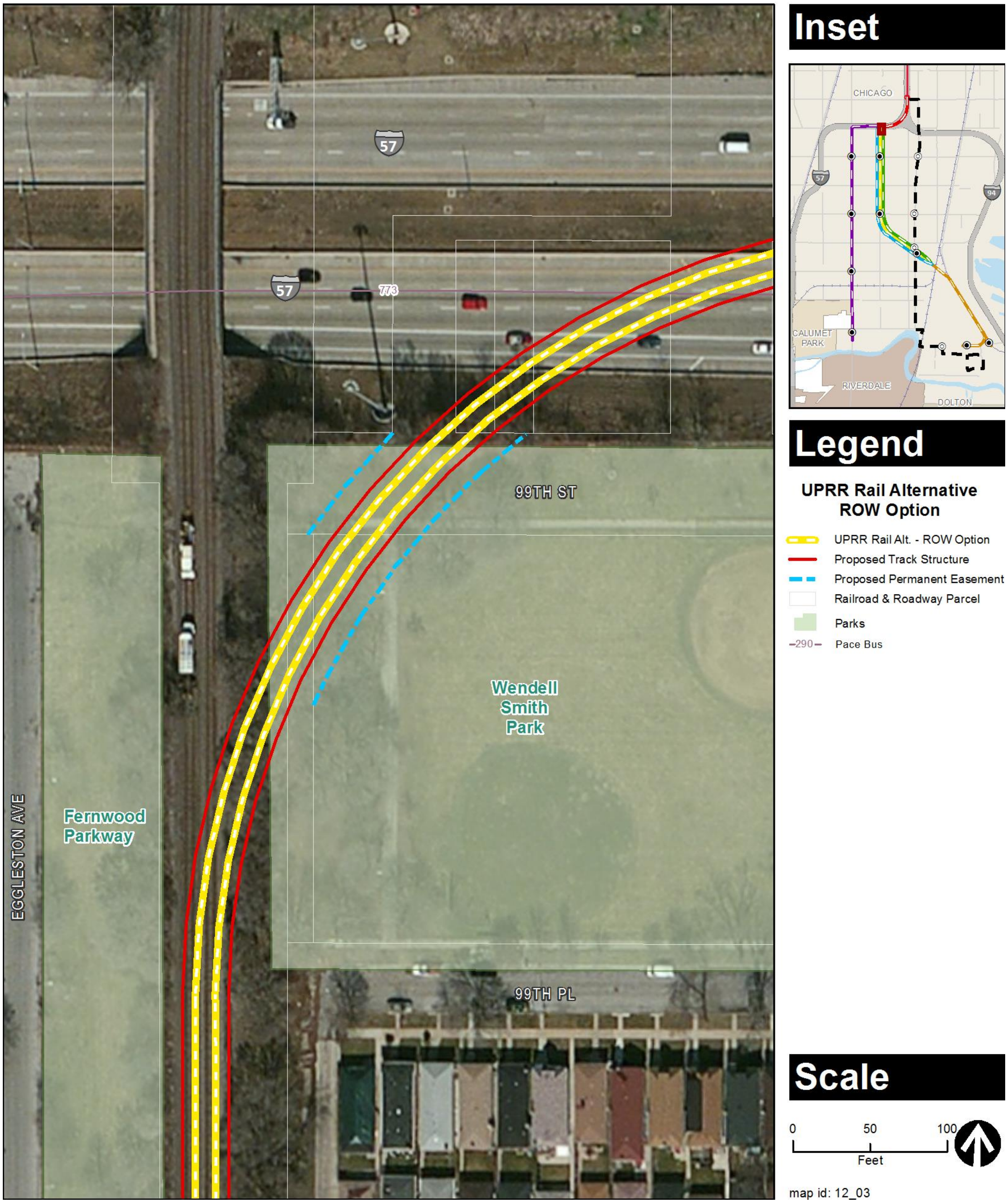
The operation of the UPRR Rail ROW Option would change the visual aesthetic of Wendell Smith Park by adding an elevated rail structure to the park property. The existing visual character of Wendell Smith Park is described in the *Visual and Aesthetic Conditions Technical Memorandum* as having high visual quality. The addition of the rail structure in the park would reduce the visual quality to moderate; however, mitigation such as landscaping would be applied such that the long-term visual impact would not be adverse.

The section of the UPRR Rail ROW Option alignment through the Wendell Smith Park would be curved, which would generate some noise and vibration. The UPRR Rail ROW Option assumes that the freight rail traffic would be relocated to another corridor as part of a separate, earlier project that may occur regardless of RLE implementation; as such, the freight rail noise would no longer be present. The removal of the freight train traffic would reduce the noise impacts such that the net noise impacts of the UPRR Rail ROW Option at Wendell Smith Park would be an overall improvement over the existing condition and no noise mitigation would be needed (see the *Noise and Vibration Technical Memorandum* for more details).

The identification of mitigation options for impacts on Wendell Smith Park would require coordination with the Chicago Park District. Mitigation strategies would include making use of the property under the CTA structure for open space and/or making improvements to Wendell Smith Park such as landscaping, aesthetic improvements on or near the elevated structure, and trail rerouting with tree replanting, which would mitigate impacts on park amenities. The impacts on Wendell Smith Park would not be adverse after mitigation is applied.

Robert Abbott Park

Robert Abbott Park is southeast of the 95th Street Terminal on 95th Street between Michigan Avenue and State Street. While the UPRR Rail Alternative ROW Option would operate within 500 feet of the park, it would not generate greater impacts than the existing condition. Robert Abbott Park currently has impacts associated with its location adjacent to the I-94/I-57 interchange, the bus and rail transit activities at the 95th Street Terminal, and nearby rail yard activities. The addition of the UPRR Rail ROW Option would generate noise and vibration; however, it would not be adverse to Robert Abbott Park, as it would not interfere with the functional and/or recreational use of the park.


57
57
773
99TH ST
Wendell Smith Park
Fernwood Parkway
EGGLESTON AVE
99TH PL
Inset
CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON
Legend
UPRR Rail Alternative ROW Option
UPRR Rail Alt. - ROW Option
Proposed Track Structure
Proposed Permanent Easement
Railroad & Roadway Parcel
Parks
290 Pace Bus
Scale
0
50
100
Feet
map id: 12_03

(Source: Chicago Park District, 2012)

Figure 5-1: Impacts on Wendell Smith Park - Union Pacific Railroad Rail Alternative Right-Of-Way Option

Block Park and Fernwood Parkway

Block Park and Fernwood Parkway are near the proposed 103rd Street station and are adjacent to the alignment and parking facilities proposed for this station. The addition of a passenger rail line, a station, and parking facilities near these parklands would result in more vehicle and pedestrian traffic in and around the parks, which may result in traffic and/or pedestrian safety concerns. The mitigation measures proposed in the *Transportation Technical Memorandum* would adequately improve safety. After mitigation, the impacts on Block Park and Fernwood Parkway would not be adverse.

The UPRR Rail ROW Option would not diminish the overall functional use of either park. Today, Block Park has few amenities and Fernwood Parkway is open space only; neither park offers organized activities and they appear to be underutilized based on field observation. The operation of the proposed 103rd Street station and the increased foot traffic may generate more use of these parks and may create an opportunity to improve the parklands' amenities to better integrate Block Park and/or Fernwood Parkway into the station area. Improvements could include adding more seating, improving the landscaping/garden area, adding an outdoor clock, attracting a vendor (such as a newsstand, or coffee cart) and/or incorporating aesthetic elements of the station area design into the parks.

Parklands within ½ mile of a Station Location in Segment UA

The addition of rail transit services would improve access to the parklands within walking distance (approximately ½ mile) of the proposed stations in Segment UA, particularly for geographically isolated neighborhoods such as Altgeld Gardens, and would result in a beneficial impact on the parks. As shown in Table 5-3, there are 6 parklands within walking distance of a proposed station.

Table 5-3: Parklands within ½ mile of Stations - Union Pacific Railroad Rail Alternative Right-Of-Way Option - Segment UA

Station	Name of Parkland
103rd Street	Wendell Smith Park Fernwood Parkway Block Park Fernwood Park
111th Street	None
Michigan Avenue	Kensington Park Potter Palmer Park

5.3.1.1.2 Community Facilities

No community facilities would be displaced as a result of the UPRR Rail Alternative ROW Option. One community facility, New Christian Joy Missionary Baptist Church, is adjacent to the proposed ROW and would have impacts. Fifty-one community facilities are within approximately ½ mile of one or more of the stations proposed for Segment UA; these facilities would have benefits as a result of their proximity to the stations.

New Christian Joy Missionary Baptist Church
New Christian Joy Missionary Baptist Church would have impacts due to its proximity to the proposed parking facility at the Michigan Avenue station. New Christian Joy Missionary Baptist Church is at 11594 S. State Street. The increased peak-hour traffic would result in congestion and reduced accessibility to this church; however, through transportation mitigation, the UPRR Rail ROW Option would not reduce the level of service of the roadway network around the Michigan Avenue station. New Christian Joy Missionary Baptist Church would not have adverse impacts after mitigation.

As mentioned above, the proposed parking garage at the Michigan Avenue station would include space for retail and community facilities. The operation of the UPRR Rail ROW Option would benefit the community by offering new and modernized space for the community facilities that locate there.

Community Facilities within ½ mile of a Station
The UPRR Rail Alternative ROW Option would result in a 20-minute improvement in travel time from the 95th Street Terminal to 130th Street compared to the No Build Alternative (includes wait time and transfer time at 95th Street Terminal). The improved travel time would improve access to the community facilities within walking distance (approximately ½ mile) of the new rail stations, which would result in a beneficial impact. As shown in Table 5-4, 51 community facilities are within ½ mile of a station location in Segment UA (see Appendix A for a complete list).

Table 5-4: Community Facilities within ½ mile of Stations - Union Pacific Railroad Rail Alternative - Right-Of-Way Option - Segment UA

Facility Type	Number
Community Center	1
Fire Station	2
Healthcare Facility	2
Place of Worship	36
School	9
State Facility	1
Total	51

Noise-Sensitive Community Facilities
The UPRR Rail Alternative ROW Option assumes that the UPRR freight rail traffic would be relocated to another corridor as a result of a separate, unrelated project. While the UPRR Rail Alternative ROW Option would generate noise, the net noise would be less than under existing conditions because the freight rail traffic would be absent. Two noise-sensitive community facilities (Now Faith Church of God Holiness and New Christian Joy Missionary Baptist Church) would experience less noise from the UPRR Rail Alternative ROW Option than with the No Action Alternative.

Operations and Emergency Responders
The operation of the UPRR Rail ROW Option would result in a change in traffic patterns, particularly around the station areas. These changes would cause delays for emergency

responders, thereby adversely affecting their ability to provide timely emergency services. Transportation planning associated with this project would be coordinated with the Chicago Office of Emergency Management and Communications (see the *Safety and Security Technical Memorandum* for more details about the impacts of the project on emergency responders). The impacts on emergency responders would not be adverse after mitigation.

5.3.1.2 Segment UB

Segment UB is the southern project area for all three options of the UPRR Rail Alternative. It extends from just south of the Michigan Avenue station on the north to the proposed 130th Street station (South and West Options) on the south.

5.3.1.2.1 Parklands

The permanent ROW for the UPRR Rail ROW Option would not cross any parkland in Segment UB and would not displace parklands. There are two parks within 500 feet of the ROW: Kensington Park and Beaubien Woods Forest Preserve. These parks would be affected due to their proximity to the tracks, park & ride, and/or stations. In Segment UB there are three parklands within walking distance (approximately ½ mile) of a proposed station; improved access to these parks would be a benefit of station proximity. Impacts on each park are described below.

Kensington Park

Kensington Park is east and south of Prairie Avenue and 118th Street and is bordered to the east by the existing UPRR freight rail ROW. The operation of the UPRR Rail ROW Option would not affect the functional or recreational use of the park. The electrified CTA trains would produce less noise than is generated by the existing freight rail traffic, which would result in a net noise improvement. As such, no noise mitigation would be needed (see the *Noise and Vibration Technical Memorandum* for more details). The impacts on Kensington Park would not be adverse.

Beaubien Woods Forest Preserve

The entrance to the Beaubien Woods Forest Preserve is across Doty Avenue from the 130th Street South Station Option site. This entrance serves the boat launch and does not directly connect to the remainder of the preserve. This section of the preserve is bordered on the west by the Altgeld Gardens neighborhood and on the east by freight rail tracks. The 130th Street South Station Option would improve transit access to the woods. Pedestrian and vehicle traffic would likely use 130th Street to access the station, which would not affect access to the boat launch.

Parklands within ½ mile of a Station

The addition of high capacity rail transit services would improve transit access to the parklands within walking distance (approximately ½ mile) of the proposed stations, which would be a beneficial impact on the parks. As shown in Table 5-5, there are three parklands within walking distance of the proposed station locations.

Table 5-5: Parklands within ½ mile of Rail Stations - Union Pacific Railroad Alternative - Right-Of-Way Option - Segment UB

Station	Name of Parkland
130th Street West Option	Golden Gate Park Beaubien Woods Nature Preserve George Washington Carver Park
130th Street South Option	Beaubien Woods Nature Preserve George Washington Carver Park

5.3.1.2.2 Community Facilities

No community facilities in Segment UB would be displaced as a result of the UPRR Rail Alternative ROW Option. No community facilities are adjacent to the proposed ROW in Segment UB; however, Aldridge Elementary School is near the parking facility location for the 130th Street West Option. There are 23 community facilities within walking distance (approximately ½ mile) of the proposed stations in Segment UB. Improved access to these facilities would be a benefit of station proximity.

Aldridge Elementary School

Aldridge Elementary School is at 131st Street; it is across 130th Street from the 130th Street West Station Option site near one of the proposed parking facility's access points. One of the school's entrances and its playground and play yard face 130th Street. As it currently exists, there are no school zone signs or sidewalks on 130th Street; this suggests that children do not use 130th Street to access the school. Increased peak hour vehicular traffic in this area would generate traffic congestion in the localized area but would not pose a hazard to the school children. Transportation mitigation strategies presented in the *Transportation Technical Memorandum* would offset potential traffic impacts such that there would be no adverse impacts at Aldridge Elementary School after mitigation.

Community Facilities within ½ mile of a Station

The UPRR Rail ROW Option would result in improved travel time and would improve access to the community facilities within walking distance (approximately ½ mile) of the new rail stations, which would be a beneficial impact on community facilities. As shown in Table 5-6, there are 23 community facilities with walking distance of the proposed station options in Segment UB (see Appendix A for a complete list).

Table 5-6: Community Facilities within ½ mile of the Proposed Station Locations - Union Pacific Railroad Rail Alternative Right-Of-Way Option - Segment UB

Facility Type	Number
Community Center	1
Fire Station	2
Healthcare Facility	1
Library	1
Place of Worship	12
School	5
State Facility	1
Total	**23**

5.3.2 Construction Impacts and Mitigations - Union Pacific Railroad Rail Alternative - Right-of-Way Option

The UPRR Rail Alternative ROW Option would require the construction of elevated structure from 95th Street to the CN/Metra Electric tracks near 119th Street, and at-grade track from approximately 119th Street to 130th Street. Where the track would cross roadways and/or rail lines, viaducts would be built and a grade separation would be constructed on the property of the Metropolitan Water Reclamation District of Greater Chicago. Four stations would be built (103rd Street, 111th Street, Michigan Avenue, and 130th Street West or South Option). Construction would also include the bus and park & ride facilities at all stations, the 120th Street yard and shop, and substations, as described above.

5.3.2.1 Segment UA

5.3.2.1.1 Parklands

Construction activities would occur in Wendell Smith Park and would temporarily affect this park. Robert Abbott Park, Fernwood Parkway and Block Park are within 500 feet of the proposed ROW and would have temporary construction impacts.

Wendell Smith Park

Construction activities for the UPRR Rail ROW Option would occur in the northwest corner of Wendell Smith Park, where the alignment would cross through the park. This portion of the park, in addition to the park remnant between the proposed ROW and the existing UPRR freight rail ROW, would be temporarily inaccessible for public use during construction. This section of Wendell Smith Park contains few amenities (open space, trees, and a small section of the walking trail) so the temporary closure would not affect the functional or recreational use of the park. Construction activities would occur adjacent to the baseball field and open space. Depending on the timing and schedule, construction would interfere with the organized activities that occur in Wendell Smith Park such as baseball/softball games and/or concerts in the park. Construction activities would generate temporary noise and air quality impacts, and/or change access to, or parking around the park. These impacts would be temporary in nature and would be mitigated through the use of construction best management practices; by alerting parkland users of construction activities; and by providing clearly marked detour routes and alternate parking. Coordination with the Chicago Park District would result in options to mitigate impacts on any of the organized park activities; for example the recreational activities would be temporarily relocated to a nearby park, such as Robert Abbott Park, while construction is underway. After mitigation, construction of the UPRR Rail ROW Option would not adversely affect Wendell Smith Park.

Robert Abbott Park
This park would be separated from the construction activities for the UPRR Rail ROW Option by the I-57/I-94 interchange and State Street. Because of this separation, no construction impacts on the Robert Abbott Park would occur.

Fernwood Parkway and Block Park
The impacts of construction on Fernwood Parkway and Block Park would include temporary noise impacts, air quality impacts, and changes in access to the parks. These impacts would be minimal because the parks do not offer organized recreational activities and are largely underutilized, based on field observation. Construction activities would not interfere with the use of Fernwood Parkway or Block Park; however, access to these parklands would be temporarily altered while the structure, station and parking facilities at the 103rd Street Station are under construction. In addition to using construction best management practices to mitigate noise and air quality impacts, mitigation would include alerting park users of temporary closures and/or reduction in access to the parks and providing safe and clearly marked detour routes. Similar amenities are available at Fernwood Park, which is within walking distance of Fernwood Parkway and Block Park; as such, affected parkland users would have an alternate place to recreate during construction. Construction of the UPRR Rail ROW Option would not adversely affect Fernwood Parkway or Block Park after mitigation.

5.3.2.1.2 Community Facilities

Construction of the UPRR Rail Alternative ROW Option would temporarily affect New Christian Joy Missionary Baptist Church because it is adjacent to the proposed ROW.

Now Faith Church of God Holiness and New Christian Joy Missionary Baptist Church
Construction associated with the building of the elevated structure would occur near Now Faith Church of God Holiness and would have temporary impacts. Construction activities at the Michigan Avenue station would temporarily affect New Christian Joy Missionary Baptist Church. Construction noise impacts would interrupt services conducted at these churches and the temporary changes in access and available parking would make it more difficult for church patrons to access the facilities. These temporary impacts would be mitigated by providing information about construction schedules and changes in parking and/or detours to the churches to share with its patrons. Best management practices would be used as part of UPRR Rail ROW Option construction to minimize the temporary noise impacts and clearly marked detour routes and designated alternate parking would mitigate the temporary changes in access. After mitigation, these churches would not have adverse impacts.

5.3.2.1.3 Construction Activities and Emergency Responders

Construction activities at the station locations and at viaducts would temporarily reduce accessibility of the roadway network, which would cause delays for emergency responders. The scheduling of construction activities would be coordinated with the Chicago Office of Emergency

Management and Communications. In particular, the construction plans for the 103rd Street station and parking facilities would be coordinated with the adjacent Chicago Fire Department - Engine 93 and the construction plans for the 111th Street station and parking facilities would be coordinated with Roseland Community Hospital and the emergency service providers that require access to this hospital. Additional mitigation measures ensuring that there is access both to/from and through the construction zone area; this access would be achieved by making sure that adjacent through streets are not temporarily closed at the same time.

5.3.2.2 Segment UB

5.3.2.2.1 Parklands

No parklands would be displaced in Segment UB as a result of construction for the ROW Option. Kensington Park and the park entrance to Beaubien Woods Nature Preserve are within 500 feet of where construction activities would occur in Segment UB; these parks would have the temporary impacts of construction.

Kensington Park

Kensington Park is within 500 feet of the construction activities that would occur between Prairie Avenue and CN/Metra Electric rail tracks; however, because of the street configuration in this area, construction vehicles would need to access to the project via the Kensington Park parking lot (via 118th Street). Construction impacts on Kensington Park would include temporary noise and air quality impacts and reduced parking.

Mitigation options would include, but not be limited to, using best management practices to reduce the construction noise and air quality impacts from fugitive dust and/or construction vehicle activity in the localized area; providing clearly marked and safe alternate access routes to the park and alternate parking spaces; and coordinating with the Chicago Park District to determine whether scheduled recreational activities would need to be relocated during the construction timeframe. After mitigation, Kensington Park would not have adverse impacts.

Beaubien Woods Forest Preserve

The 130th Street South Station Option would be in close proximity to the entrance to Beaubien Woods Nature Preserve. Construction activities at this location would temporarily affect the park entrance on Doty Avenue. This entrance primarily serves the boat launch. Any temporary change in access to the boat launch would be mitigated through coordination with the Forest Preserve District of Cook County; boat launch users would be notified of temporary changes in access and temporary signage would direct users to a clearly marked detour route, for example, via 132nd Street.

5.3.2.2.2 Community Facilities

Aldridge Elementary School is in close proximity to the 130th Street West Station Option site and would have impacts associated with construction activities.

Aldridge Elementary School

One of the school's entrances and its playground and play yard face 130th Street. Construction would temporary affect access to this school entrance if construction required a detour from 130th Street. There is, however, an auxiliary entrance to the school at 131st Street, so the change in access would not be anticipated to be adverse. Construction activities would result in temporary noise and air quality impacts; however, these impacts would largely be limited to the times when the school yard is in use and the impacts would not be substantial because the school yard is separated from the construction activities by 130th Street. The adverse impacts would be mitigated using construction best management practices, clearly marked detour routes, and notification to the school regarding the construction schedule.

5.3.3 Cumulative Impacts and Mitigations - Union Pacific Railroad Rail Alternative - ROW Option

The construction and operation of the UPRR Rail Alternative ROW Option would not reduce the overall health of the parklands and/or community facilities in the project area. As such, no adverse cumulative impacts would occur. Improved transit in the project area would result in cumulative benefits by improving access, via transit, to parklands and community facilities within and beyond the project area and within walking distance of the larger CTA network.

5.3.4 120th Street Yard and Shop

There are no parklands or community facilities in proximity to the 120th Street yard and shop site; therefore, no adverse impacts would result from the construction or operation of the yard and shop.

5.4 Union Pacific Railroad Rail Alternative - East Option

The UPRR Rail Alternative East Option would be similar to the UPRR Rail Alternative ROW Option; the major difference would be the alignment: the East Option would operate immediately adjacent and east of the UPRR ROW between I-57 and the CN/Metra Electric track. The UPRR is considering the addition of a third track east of its existing two tracks. The proposed CTA structure would, where feasible, be built 50 feet from the centerline of the easternmost UPRR track, assuming a third track is built. Pier protection crash walls would be installed where a 50-foot buffer is not feasible, such as at the 103rd Street station, and between State Street and Michigan Avenue.

The other major difference between the East Option and the UPRR Rail ROW Option is the proposed configuration of the bus and park & ride facilities at the stations:

- At the 103rd Street station the East Option would include a surface parking lot with the capacity for 75 vehicles east of the tracks and north of 103rd Street, with a turnaround for CTA bus route #9. This station would also have a surface parking lot with the capacity for 125 vehicles west of the tracks between 103rd Street and 103rd Place.

- The 111th Street station would include a surface parking lot with the capacity for 55 vehicles east of the tracks and north of 110th Place, and a second surface parking lot with the capacity for 145 vehicles west of the tracks between 111th Street and 110th Street; a turnaround for the Pace bus route #352 would be incorporated into the west parking lot.

- The facilities at the Michigan Avenue station would be essentially the same as the ROW and East Options; however, for the East Option the parking garage would accommodate 825 vehicles and the surface parking lot would accommodate 175 vehicles.

The 130th Street station would have the same configuration and amenities in all three UPRR Rail Alternative options.

Substations would be included in the East Option: west of the UPRR ROW between 104th and 105th Streets; west of the UPRR ROW between Perry Avenue and Lafayette Avenue; west of the CTA tracks south of the 120th Street yard and shop site; and within the 120th Street yard and shop facility.

5.4.1 Permanent Impacts and Mitigations - Union Pacific Railroad Rail Alternative - East Option

This section describes the permanent impacts that would result from the operation of the UPRR Rail Alternative East Option and discusses measures to avoid, minimize, or mitigate adverse impacts.

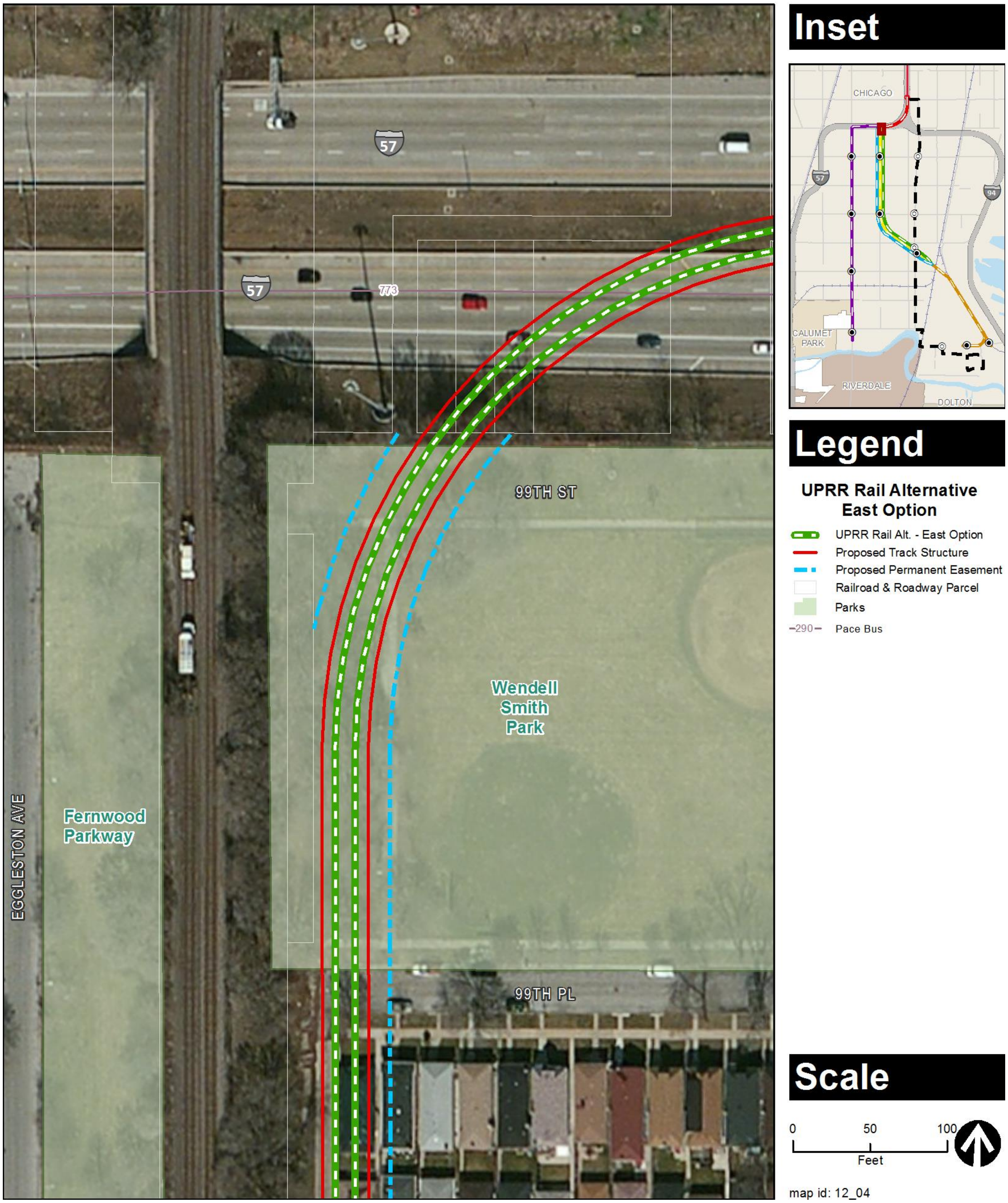
5.4.1.1 Segment UA

5.4.1.1.1 Parklands

The ROW for the UPRR Rail Alterative East Option would pass through Wendell Smith Park and Block Park and would result in adverse impacts. There are also two parks within 500 feet of the proposed ROW: Robert Abbott Park and Fernwood Parkway. These parks would have impacts due to their proximity to the proposed track, park & ride facilities, and/or stations. As with the UPRR Rail ROW Option, the stations proposed for the East Option in Segment UA would be within walking distance (approximately ½ mile) of six parklands; improved access to these parks would be a benefit of station proximity.

Wendell Smith Park

Like the UPRR Rail ROW Option, the East Option would affect the northwestern portion of Wendell Smith Park; however, the ROW for the East Option would displace a larger portion of the park than the UPRR Rail ROW Option. The ROW for the East Option would cross 0.40 acre (17,424 square feet) of the park and would leave an isolated park fragment that is approximately 13,719 square feet (Figure 5-2). This acreage includes trees, the west portion of the walking trail, and several benches.


57
57
773
99TH ST
Wendell Smith Park
Fernwood Parkway
EGGLESTON AVE
99TH PL
Inset
CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON
Legend
UPRR Rail Alternative East Option
UPRR Rail Alt. - East Option
Proposed Track Structure
Proposed Permanent Easement
Railroad & Roadway Parcel
Parks
290 Pace Bus
Scale
0
50
100
Feet
map id: 12_04

(Source: Chicago Park District, 2012)

Figure 5-2: Impacts on Wendell Smith Park - Union Pacific Railroad Rail Alternative - East Option

The East Option would result in similar impacts on Wendell Smith Park as the UPRR Rail ROW Option. One major difference between the UPRR Rail ROW Option and the East Option is that the East Option would affect a larger portion of open space and a larger portion of the walking trail and would affect several benches. These impacts would interfere with the recreational use of the walking trail. These amenities would be returned to the park after construction is complete, if public access were to be allowed under the CTA structure. Another mitigation option includes making improvements in Wendell Smith Park.

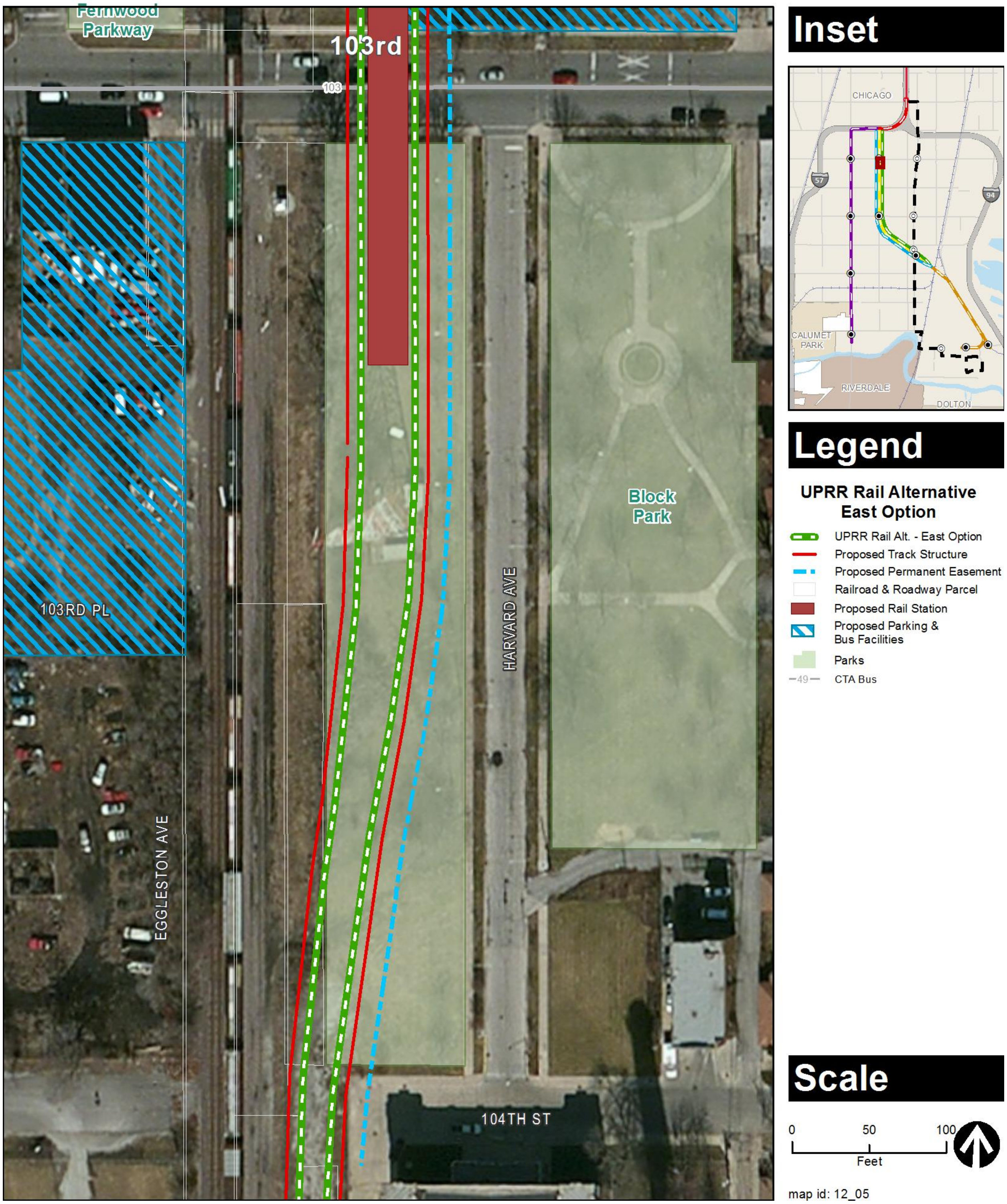
Another difference between the ROW and East Options is that the UPRR freight rail traffic would continue to run in its existing corridor with the East Option; in consequence, the East Option would result in greater noise impacts when compared to the No Build Alternative and the ROW Option. The noise impacts would be mitigated through the use of noise barriers; as such, no adverse noise impacts would occur after mitigation.

Both the ROW and the East Option would change the visual aesthetic of the park by adding an elevated rail structure in the park. The existing visual condition of Wendell Smith Park is considered high quality. Like the UPRR Rail ROW Option, under the East Option the visual quality would be reduced to moderate. Landscaping would be added to the park to mitigate for the visual impacts. The impacts on Wendell Smith Park would not be adverse after mitigation.

Block Park

Block Park is 2.6-acre passive parkland made up of two open space parcels, walking trails, and benches; no organized activities occur in Block Park and the park appears to be underutilized based on field observations. The ROW for the East Option would run through the west parcel and would affect 0.80 acre (34,848 square feet) and would leave two fragments: 0.10 acre (4,356 square feet) west of the CTA ROW and 0.34 acre (14,810 square feet) to the east (Figure 5-3). The acreage within the ROW would include open space and a radio tower.

The area in Block Park that would be affected is open space only; the East Option would reduce the amount of open space by adding an auxiliary entrance for the 103rd Street station and rail infrastructure in the western parcel. If public access is allowed under the CTA structure, the unaffected land in the western parcel would be returned to open space use but may be shaded by the rail infrastructure. The west parcel would likely be displaced if public access under the track is not allowed; the remaining fragments would be too small to be functional park space. The radio tower would be displaced but this displacement would not affect the parkland’s use. The impacts would not diminish recreational opportunities, as no recreational amenities or organized recreational activities currently occur in Block Park. The Chicago Park District leases Block Park from the Chicago Water Department and, according to early communications with the Park District, the terms of this lease have likely expired (see Appendix B).


Fernwood Parkway
103rd
103
Block Park
103RD PL
HARVARD AVE
EGGLESTON AVE
104TH ST
Inset
CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON
Legend
UPRR Rail Alternative East Option
UPRR Rail Alt. - East Option
Proposed Track Structure
Proposed Permanent Easement
Railroad & Roadway Parcel
Proposed Rail Station
Proposed Parking & Bus Facilities
Parks
49 CTA Bus
Scale
0
50
100
Feet
map id: 12_05

(Source: Chicago Park District, 2012)

Figure 5-3: Impacts on Block Park - Union Pacific Railroad Rail Alternative - East Option

The east parcel of Block Park would have a visual change as a result of the operation of the UPRR Rail Alternative East Option. The existing visual character of Block Park is described as having a moderate visual quality in the *Visual and Aesthetic Conditions Technical Memorandum.* The presence of the elevated track and station would result in a change; however, the visual quality would remain moderate. The visual impacts would be mitigated through landscaping and would result in no adverse impacts after mitigation.

The operation of the East Option would generate moderate noise impacts. These impacts might .detract from the enjoyment of the park but would not change its functional use. The noise impacts would be mitigated with noise barriers such that no adverse impacts would remain after mitigation.

The operation of the proposed 103rd Street Station would generate more foot traffic near Block Park and might create an opportunity to improve the amenities as a means of mitigation for the impacts on the open space. Improvements may include, but not limited to, adding more seating, improving the landscaping/garden area, adding an outdoor clock, attracting a vendor (for example a newsstand, or coffee cart) and/or incorporating aesthetic elements of the station area design into the park. Other mitigation alternatives would include making improvements to another nearby park in lieu of improvements to Block Park, acquiring land for a new park space and/or making use park use of parcel remnants that would be displaced by the project. See the *Displacements and Relocations of Existing Uses Technical Memorandum* for the locations of parcel fragments in reference to Block Park. After mitigation, the impacts on Block Park would not be adverse.

Like the UPRR Rail ROW Option, the East Option would provide beneficial impacts in the form of improved access to Block Park from other neighborhoods within the ½-mile walking distance of stations, particularly for geographically isolated neighborhoods such as Altgeld Gardens.

Robert Abbott Park and Fernwood Parkway

The operation of the UPRR Rail Alternative East Option would have the same impacts on Robert Abbott Park and Fernwood Parkway as those described for the UPRR Rail ROW Option. The same mitigation strategies identified for the UPRR Rail ROW Option would be applied to mitigate the impacts of the East Option. No adverse impacts on these parks would occur after mitigation.

Parklands within ½ mile of a Station

The addition of high capacity rail transit services would improve transit access to the parklands within walking distance (approximately ½ mile) of the proposed stations, particularly for geographically isolated neighborhoods such as Altgeld Gardens. The East Option would improve access to, and result in benefits to the same parklands as identified for the UPRR Rail ROW Option.

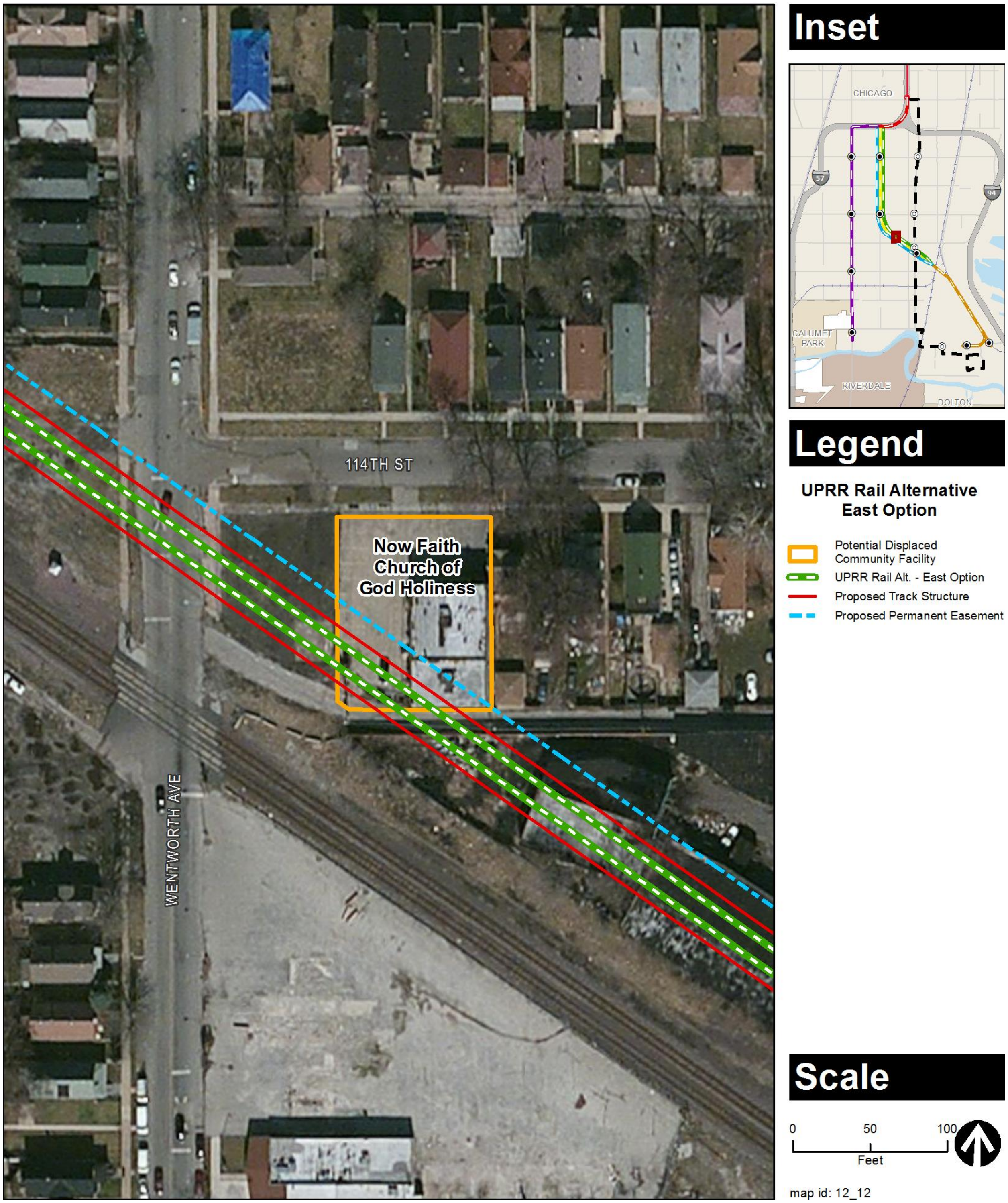
5.4.1.1.2 Community Facilities

The UPRR Rail Alternative East Option would result in the displacement of Now Faith Church of God Holiness and would affect the same community facilities that were discussed for the UPRR Rail ROW Option. New Christian Joy Missionary Baptist Church is adjacent to the proposed ROW at the Michigan Avenue station and would be affected, and the 51 community facilities that are within ½ mile of a station location in Segment UA would have beneficial impacts (see Appendix A for a complete list).

Now Faith Church of God Holiness
The ROW for the UPRR Rail Alternative East Option would displace this place of worship and its parking lot (Figure 5-4). The displacement of this property would have to comply with the requirements of the Uniform Act. According to the *Displacements and Relocations of Existing Uses Technical Memorandum,* there is one replacement property that is zoned for a place of worship in the project area. Other available property in the community would have to be rezoned for religious use in order to be considered a comparable replacement property. If the church was relocated within the community in accordance with the Uniform Act prior to starting construction to minimize interruption of its services, the impact would not be adverse after mitigation.

New Christian Joy Missionary Baptist Church
The operation of the Michigan Avenue station and parking facilities for the East Option would have the same impacts on the New Christian Joy Missionary Baptist Church as the UPRR Rail ROW Option. The same mitigation options identified for the UPRR Rail ROW Option would be applied to mitigate for the impacts of the East Option.

Community Facilities within ½ mile of a Station
Like the UPRR Rail ROW Option, the East Option would result in a 20-minute improvement in travel time (including wait time and transfer time) from the 95th Street Terminal to 130th Street and would improve access to community facilities within walking distance ½ mile) of the proposed stations in Segment UA. The 51 affected community facilities identified for the UPRR Rail ROW Option would be the same for the East Option; these facilities would have benefits because of their proximity to the proposed stations in Segment UA (see Appendix A for a complete list).


114TH ST
WENTWORTH AVE
Now Faith Church of God Holiness
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CALUMET PARK
RIVERDALE
DOLTON
Legend
UPRR Rail Alternative East Option
Potential Displaced Community Facility
UPRR Rail Alt. - East Option
Proposed Track Structure
Proposed Permanent Easement
Scale
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Feet
map id: 12_12

(Source: City of Chicago and Google Maps Aerial View, 2012)

Figure 5-4: Impacts on Now Faith Church of God Holiness - Union Pacific Railroad Alternative - East Option

5.4.1.2 Segment UB

5.4.1.2.1 Parklands

No parklands would be crossed by the ROW for the East Option in Segment UB; therefore, no displacement of parklands would occur. The impacts on parklands discussed for the UPRR Rail ROW Option would be the same for the East Option; as such, the same mitigation measures would be applied.

5.4.1.2.2 Community Facilities

No community facilities would be displaced as a result of the East Option in Segment UB. The East Option would have the same potential impacts on community facilities as the UPRR Rail ROW Option and the same mitigation measures identified for the impacts of the UPRR Rail ROW Option would be applied to the impacts of the East Option.

5.4.2 Construction Impacts and Mitigations - Union Pacific Railroad Rail Alternative - East Option

The UPRR Alternative - East Option would include similar construction activities as the UPRR Rail ROW Option; however, the elevated structure from 95th Street to the CN/Metra Electric tracks near 119th Street would be immediately east of the existing UPRR ROW as opposed to within it. Like the UPRR Rail ROW Option, the East Option would have viaducts and several grade separations; four stations (103rd Street, 111th Street, Michigan Avenue, and 130th Street West or South Option) including bus and park & ride facilities at all stations; the 120th Street yard and shop; and several substations.

5.4.2.1 Segment UA

5.4.2.1.1 Parklands

Construction of the UPRR Rail Alternative East Option would temporarily affect Wendell Smith Park and Block Park, and would affect Fernwood Parkway.

Wendell Smith Park

The UPRR Rail Alternative East Option would have similar impacts on Wendell Smith Park as the UPRR Rail ROW Option; however, more of the parkland would be within the construction envelope with the East Option. Despite this difference, the impacts would be the same and similar mitigation strategies would be applied to mitigate the construction impacts on Wendell Smith Park. Coordination with the Chicago Park District would occur to discuss whether some of the organized park activities would need to take place in other nearby parks, such as Robert Abbott Park, while construction is underway. After mitigation, there would be no adverse construction impacts on Wendell Smith Park.

Block Park

Construction activities would occur in the west parcel of Block Park within the proposed ROW. The west parcel would be inaccessible during construction. The temporary impacts of construction would also occur in the east parcel of the park. The construction impacts (such as noise, air quality impacts, and changes in access) would be temporary and would be minimal because Block Park does not serve a recreational use, construction activities would not interfere with its current use, and Block Park currently has noise from the adjacent UPRR freight rail traffic. Mitigation strategies include alerting park users of temporary construction activities, providing safe and clearly marked detour routes, and referring park users to other nearby parks, such as Fernwood Park, as a place to enjoy passive recreation while construction is underway. Other mitigation options would include, but not be limited to, using construction best management practices to reduce the adverse impacts associated with noise and air quality. After mitigation, the impacts on Block Park would not be adverse.

Fernwood Parkway

Construction of the East Option would have the same impacts on Fernwood Parkway as those described for the UPRR Rail ROW Option; the same mitigation strategies identified for the UPRR Rail ROW Option would be applied to mitigate the impacts of the East Option. After mitigation, the impacts on Fernwood Parkway would not be adverse.

5.4.2.1.2 Community Facilities

Like the UPRR Rail Alternative ROW Option, East Option construction would not displace any community facilities. Construction activities associated with the East Option would temporarily affect the New Christian Joy Missionary Baptist Church at 11594 S. State Street and Miracle Temple at 137 E. Kensington Avenue. Now Faith Church of God Holiness would be displaced prior to construction of the East Option so it would not be subject to construction impacts. The mitigation options proposed for the UPRR Rail ROW Option for construction impacts on community facilities would be used to mitigate for the impacts on the two places of worship affected by the East Option. After mitigation, the impacts on community facilities would not be adverse.

5.4.2.1.3 Construction Activities and Emergency Responders

Construction activities at the station locations and at viaducts would temporarily increase congestion and reduce accessibility of the roadway network, which would cause delays for emergency responders. The scheduling of construction activities would be coordinated with the Chicago Office of Emergency Management and Communications. In particular, the construction plans for the 103rd Street station and parking facilities would be coordinated with the adjacent Chicago Fire Department - Engine 93, and the construction plans for the 111th Street station and parking facilities would be coordinated with Roseland Community Hospital and the emergency service providers that require access to this hospital. Other mitigation options would include ensuring continual access to/from and through the construction zones by not temporarily closing adjacent streets at the same time.

5.4.2.2 Segment UB

5.4.2.2.1 Parklands

The construction impacts on parklands discussed for the UPRR Rail Alternative ROW Option in Segment UB would be the same for the East Option; as such, the same mitigation measures would be applied. After mitigation, there would be no adverse impacts.

5.4.2.2.2 Community Facilities

The construction impacts on community facilities discussed for the UPRR Rail Alternative ROW Option in Segment UB would be the same for the East Option; as such, the same mitigation measures would be applied. After mitigation, there would be no adverse impacts.

5.4.3 Cumulative Impacts and Mitigations - Union Pacific Railroad Rail Alternative - East Option

The construction and operation of the UPRR Rail Alternative East Option would not reduce the overall health and/or distribution of parklands and community facilities in the project area, after mitigation. As such, no adverse cumulative impacts would occur. Like the UPRR Rail Alternative ROW Option, improved transit in the project area with the East Option would result in cumulative benefits by improving access, via transit, to parklands and community facilities within and beyond the project area and within walking distance of the larger CTA network.

5.4.4 120th Street Yard and Shop

There are no parklands or community facilities in proximity to the 120th Street yard and shop site; therefore, no adverse impacts would result from the construction or operation of the yard and shop.

5.5 Union Pacific Railroad Rail Alternative - West Option

The UPRR Rail Alternative West Option would be similar to the UPRR Rail ROW Option and the East Option; the major difference is the alignment: the West Option would operate immediately adjacent to and west of UPRR ROW between I-57 and the CN/Metra Electric track. The proposed CTA structure would, where feasible, be built 50 feet from the centerline of the westernmost UPRR track. Pier protection crash walls would be installed where a 50-foot buffer is not feasible, such as at 99th Street, at Prairie Avenue, and the UPRR crossing.

The West Option would have a different configuration of bus and park & ride facilities at stations than the ROW and East Options:

- At the 103rd Street station, the West Option would include a surface parking lot with the capacity for 200 vehicles west of the tracks between 103rd Street and 104th Street; a turnaround for CTA bus route #9 would be included at the northeast corner of 103rd Street at the UPRR tracks.

- The 111th Street station would include a surface parking lot with the capacity for 200 vehicles west of the tracks between 110th Place and 110th Street; a turnaround for Pace bus route #352 would be incorporated into the parking lot.

- The facilities at the Michigan Avenue station would include a five-story parking garage west of the track and northeast of the 116th Street and State Street intersection. The garage would accommodate 1,000 vehicles and the ground level would be available for retail and/or community facilities; a bus turnaround would be provided to serve CTA bus route #119 and Pace bus route #359.

The 130th Street station would have the same configuration and amenities in all three UPRR Rail Alternative options.

Substations would be included in the West Option: east of the UPRR ROW between 105th Street and 105th Place; west of the UPRR ROW between Perry Avenue and Lafayette Avenue; west of the CTA track south of the 120th Street yard and shop site; and within the proposed yard.

5.5.1 Permanent Impacts and Mitigations - Union Pacific Railroad Rail Alternative - West Option

This section describes the permanent impacts that would result from the operation of the UPRR Rail Alternative West Option and discusses options to avoid, minimize or mitigate adverse impacts.

5.5.1.1 Segment UA

5.5.1.1.1 Parklands

The ROW for the UPRR Rail Alterative West Option would run through Wendell Smith Park and Fernwood Parkway. Robert Abbott Park and Block Park are within 500 feet of the proposed ROW and would be affected due to their proximity. As with the ROW and East Options, the stations proposed for the West Option in Segment UA would be within ½ mile of six parklands; improved access to these parklands would be a benefit of being walkable from a station.

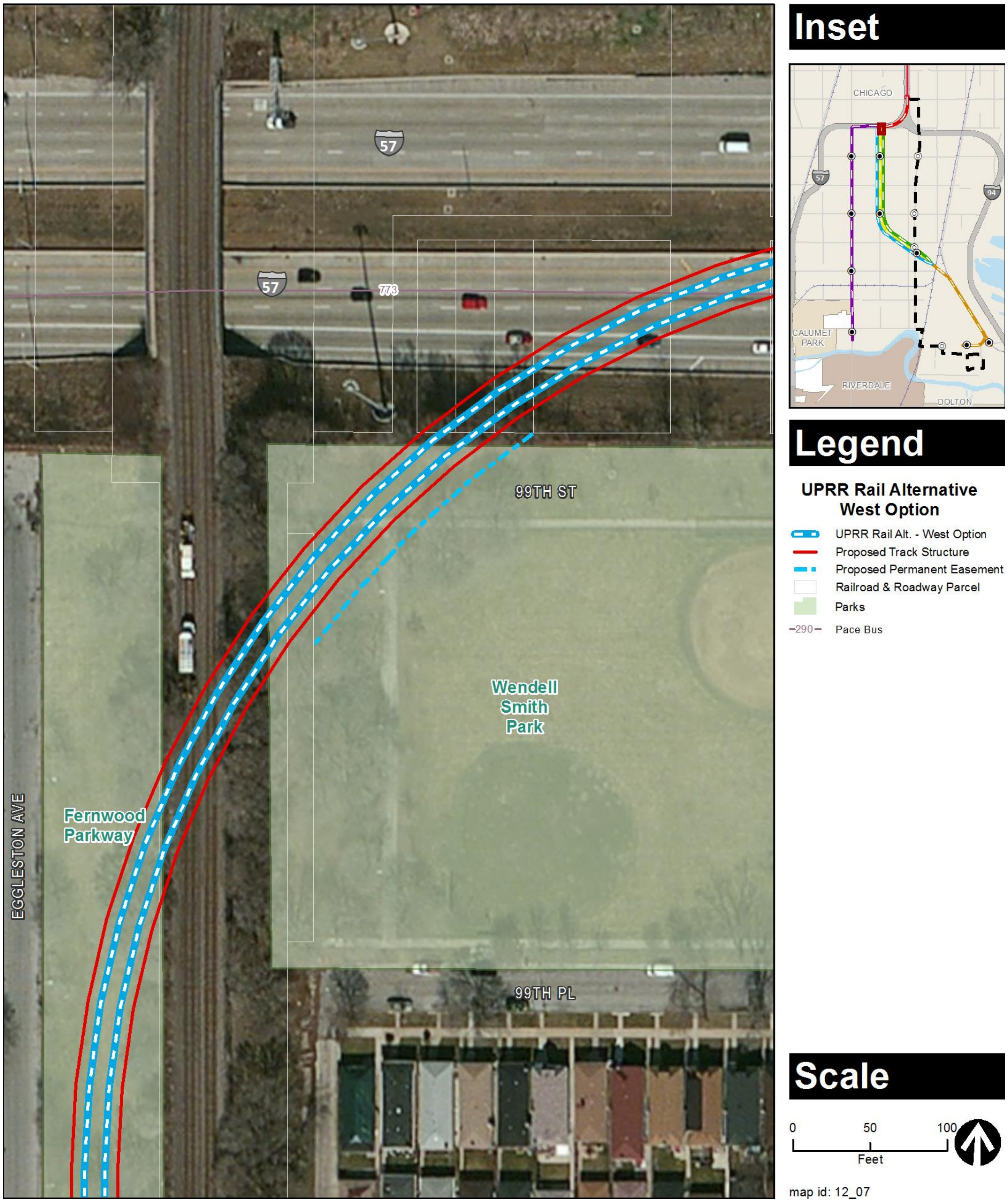
Wendell Smith Park

The ROW for the West Option would run through the northwestern corner of the Wendell Smith Park and would affect 0.17 acre of the park (7,405 square feet). An isolated park fragment, approximately 4,167 square feet, would remain in the northwest corner of the park (Figure 5-5). Of the three UPRR Rail Alternatives, the UPRR Rail Alternative West Option would affect the least amount of land in Wendell Smith Park.

The West Option would affect the smallest amount of open space and trail when compared to the other UPRR Rail Options. Like the ROW Option, the West Option would affect a small portion of the trail and would largely leave the functional use of this amenity unharmed. For both Options, the trail would be rerouted around the affected area or possibly be avoided completely. As such, the same mitigation measures identified for the UPRR Rail ROW Option would be applied to the West Option.

Like the ROW and East options, the West Option would result in visual impacts because the rail infrastructure would be in Wendell Smith Park. The same mitigation measures described for the ROW and East Options would be applied to the West Option and would result in not adverse impacts after mitigation.

Operation of the West Option would result in the same noise impacts as described for the East Option and the same mitigation strategies would be applied. Both the West and East Options would result in greater noise impacts when compared to the No Build Alternative and the ROW Option. After mitigation, the noise impacts would not be adverse.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Fernwood
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UPRR Rail Alternative
West Option
UPRR Rail Alt. - West Option
Proposed Track Structure
Proposed Permanent Easement
Railroad & Roadway Parcel
Parks
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(Source: Chicago Park District, 2012)

Figure 5-5: Impacts on Wendell Smith Park - Union Pacific Railroad Rail Alternative - West Option

Fernwood Parkway

The UPRR Rail Alternative West Option would run through two of the four parcels that make up Fernwood Parkway; the affected parcels are between 101st Street and I-57, and between 101st Street and 103rd Street. Fernwood Parkway is 9.26 acres of green space with grass and some trees; there are no active or passive recreational amenities in this park. Approximately 1.90 acres (82,958 square feet) of Fernwood Parkway would be affected by the ROW of the project and two isolated park fragments would be created to the east and west of the ROW; approximately 1.48 acres would be created between the UPRR and CTA ROWs, and approximately 1.27 acres would be created between the CTA ROW and Eggleston Avenue (see Figure 5-6).

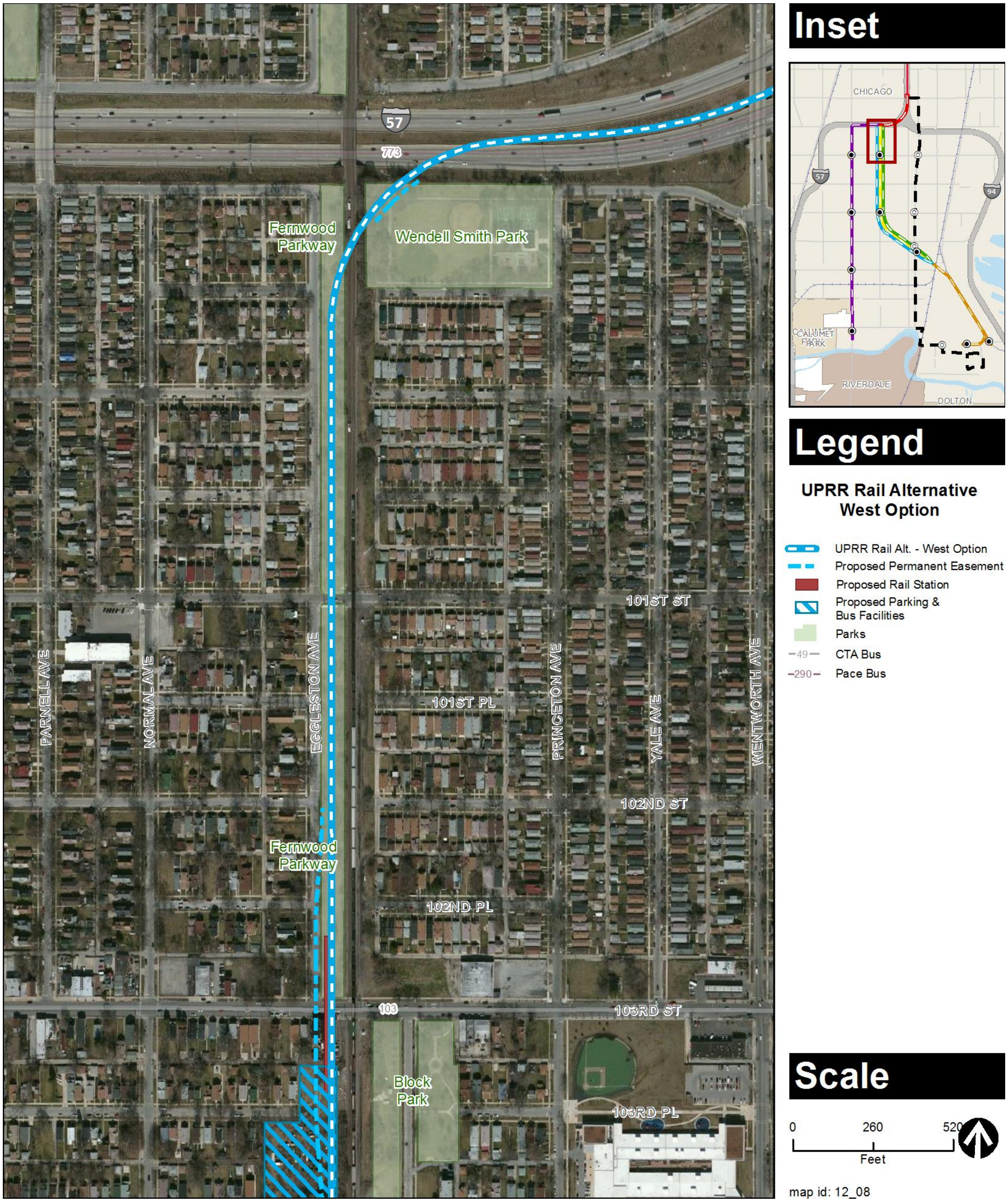
Depending on the decisions made during the Section 4(f) process, it may be determined that mitigation could be applied to another, nearby parkland (e.g., the northern, unaffected parcels of Fernwood Parkway), and/or new park space would be acquired. It may also be possible to create a similar linear park from the displaced parcel remnants that would not be needed for the West Option. See the *Displacements and Relocations of Existing Uses Technical Memorandum* for the locations of potential parcel fragments near Fernwood Parkway. The *Section 4(f) Technical Memorandum* provides details on practicable measures to minimize impacts to Fernwood Parkway.

The West Option would result in moderate noise impacts; however, noise barriers would be installed to mitigate these impacts. No adverse noise impacts would result in Fernwood Parkway after mitigation.

Fernwood Parkway is considered to have a high visual quality and the West Option would result in a high visual impact in that the impacts would not be completely mitigated through the use of landscaping. The visual impact might reduce the enjoyment of the park for park users somewhat but would have a much greater impact on the surrounding residential community than on park users. Other in lieu improvements, such as the addition of a trail, hardscaping, or the addition of other passive recreational amenities such as benches, could be added to enhance the park beyond its existing condition. After mitigation, the parklands impacts on Fernwood Parkway would not be adverse.

Robert Abbott Park

Like operation of the ROW and East Options, the operation of the West Option would not affect the functional or recreational use of Robert Abbott Park.


57
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Fernwood Parkway
Wendell Smith Park
101ST ST
101ST PL
102ND ST
102ND PL
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103RD ST
103RD PL
Block Park
PARNELL AVE
NORMAL AVE
EGGLESTON AVE
PRINCETON AVE
YALE AVE
WENTWORTH AVE
Inset
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Legend
UPRR Rail Alternative West Option
UPRR Rail Alt. - West Option
Proposed Permanent Easement
Proposed Rail Station
Proposed Parking & Bus Facilities
Parks
49 CTA Bus
290 Pace Bus
Scale
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260
520
Feet
map id: 12_08

(Source: Chicago Park District, 2012)

Figure 5-6: Impacts on Fernwood Parkway - Union Pacific Railroad Rail Alternative - West Option

Block Park

The operation of the UPRR Rail Alternative West Option would result in some of the same impacts on Block Park as described for the UPRR Rail ROW Option; however, the number and scale of impacts would be much smaller with the West Option, because the bus and parking amenities for the West Option would be on the west side of the existing UPRR freight rail ROW only and would not be immediately adjacent to Block Park. In comparison, the UPRR Rail ROW Option would include bus and parking facilities on both the east and west sides of the UPRR freight rail ROW and adjacent to Block Park. Most of the pedestrian and vehicle activity associated with the West Option would also occur west of the UPRR freight rail ROW and on the other side of these tracks from Block Park. Traffic management and planning and pedestrian amenities would be used to mitigate any adverse impacts that would occur at Block Park. After mitigation, the impacts on Block Park would not be adverse.

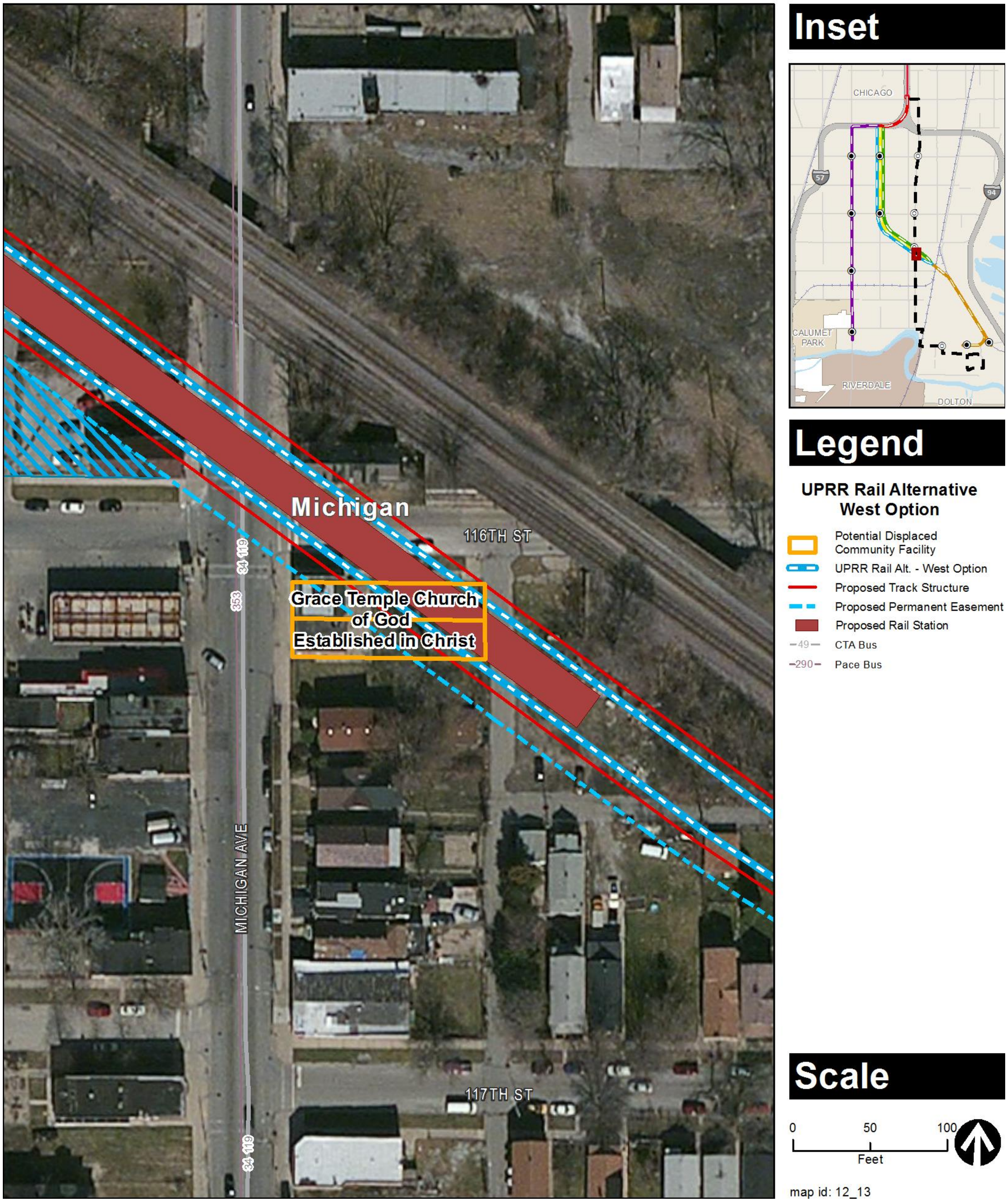
5.5.1.1.2 Community Facilities

The UPRR Rail Alternative West Option would result in the displacement of Grace Temple Church of God Established in Christ. The operation of the UPRR Rail Alternative West Option would result in the same impacts on New Christian Joy Missionary Baptist Church as the ROW and East Options. The same mitigation measures identified for the ROW and East Options for impacts on the church would be applied to mitigate the impacts of the West Option. No adverse impacts on community facilities would occur after mitigation.

The same beneficial impacts described for the ROW and East Options would occur for the 51 community facilities within ½ mile of the proposed stations (see Appendix A for a complete list of facilities).

Grace Temple Church of God Established in Christ

The ROW for West Option would displace this place of worship (Figure 5-7). The displacement of this property would have to comply with the requirements of the Uniform Act. According to the *Displacements and Relocations of Existing Uses Technical Memorandum* there is one replacement property that is zoned for a place of worship in the project area. Other available property in the community would have to be rezoned for religious use in order to be considered a comparable property. If the church were relocated within the community in accordance with the Uniform Act prior to starting construction to minimize interruption of its services, the impact would not be adverse after mitigation.


Michigan
116TH ST
117TH ST
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353
Grace Temple Church of God Established in Christ
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CALUMET PARK
RIVERDALE
DOLTON
Legend
UPRR Rail Alternative West Option
Potential Displaced Community Facility
UPRR Rail Alt. - West Option
Proposed Track Structure
Proposed Permanent Easement
Proposed Rail Station
49 CTA Bus
290 Pace Bus
Scale
0
50
100
Feet
map id: 12_13

(Source: City of Chicago and Google Maps Aerial View, 2013)

Figure 5-7: Impacts on Grace Temple Church of God in Christ - Union Pacific Railroad Alternative - West Option

5.5.1.2 Segment UB

5.5.1.2.1 Parklands

No parklands would be crossed by the ROW for the West Option in Segment UB; as such, no displacement of parklands would occur in Segment UB. The other impacts on parklands discussed for the ROW and East Options would be the same for the West Option; as such, the same mitigation measures would be applied. After mitigation, there would be no adverse impacts on parklands in Segment UB.

5.5.1.2.2 Community Facilities

No community facilities would be displaced as a result of the UPRR Rail Alternative West Option in Segment UB; therefore, no adverse impacts would occur. The West Option would have the same impacts the as the ROW and East Options and the same mitigation would be applied to mitigate the impacts of the West Option. No adverse impacts on community facilities would occur after mitigation.

5.5.2 Construction Impacts and Mitigations - Union Pacific Railroad Rail Alternative - West Option

The UPRR Alternative West Option would include similar construction activities as the ROW and East Options; however, the elevated structure from 95th Street to the CN/Metra Electric tracks near 119th Street would be immediately west of the existing UPRR ROW. Like the ROW and East Options, the West Option would involve construction of viaducts; several grade separations; four stations (103rd Street, 111th Street, Michigan Avenue, and 130th Street West or South Option) including bus and park & ride facilities at all stations; the 120th Street yard and shop; and several substations.

5.5.2.1 Segment UA

5.5.2.1.1 Parklands

Construction activities for the West Option would occur in Wendell Smith Park and Fernwood Parkway and would result in temporary impacts. Robert Abbott Park and Block Park are within 500 feet of the ROW in Segment UA and would have some impacts.

Wendell Smith Park

The construction impacts of the West Option would be the same as described for the UPRR Rail ROW Option; however, the amount of parkland within the construction zone would be smaller for the West Option. The amount of the land in the construction zone would not change the types of potential impacts that would occur in Wendell Smith Park. The impacts and mitigation strategies described for the UPRR Rail ROW Option would be the same for the West Option.

Fernwood Parkway

Construction activities would also occur in the portion of Fernwood Parkway that would be affected by the ROW of the project. Because Fernwood Parkway is narrow, and the proposed ROW would generally pass through the center of the park, it is likely that the park would not be accessible during construction. Fernwood Parkway does not offer recreational amenities or activities and is largely underutilized based of field observation and discussions about the park with the Chicago Park District. The construction impacts on this park would be minimal because the park is not often used; however, some users would be affected. There are other parks within walking distance that offer open space, such as the northern parcels of Fernwood Parkway, Fernwood Park, or Block Park. Coordination with the Chicago Park District would result in the posting of signage to notify park users of the schedule for construction activities and to map the location of other comparable facilities in the neighborhood. After mitigation, the overall construction impacts would be not adverse.

Robert Abbott Park
Based on its location relative to the alignment of the West Option, it is not likely that this park would have impacts as a result of the construction. Robert Abbott Park would be separated from the West Option alignment by a highway.

Block Park
The construction activities for the West Option would be on the other side of the UPRR freight rail track from Block Park; as such, the only likely construction impact on the park would be temporarily reduced access. There are several ways to access Block Park; therefore, this impact would not be adverse. Any temporary detours that might be required near the park would be clearly posted to mitigate the temporary impacts of a reduction in access.

5.5.2.1.2 Community Facilities
Construction associated with the West Option would have the same impact on Now Faith Church of God Holiness and New Christian Joy Missionary Baptist Church as described for the ROW Option. The mitigation strategies described for the ROW Option would be applied for the West Option, as well.

Construction Activities and Emergency Responders
Construction activities at the station locations and at viaducts would temporarily reduce accessibility of the roadway network, which would cause delays for emergency responders. The scheduling of construction activities would be coordinated with the Chicago fire and police departments and all medical facilities that provide emergency services. In particular, the construction plans for the 103rd Street station and parking facilities would be coordinated with the adjacent Chicago Fire Department - Engine 93, and the construction plans for the 111th Street station and parking facilities would be coordinated with Roseland Community Hospital and the emergency service providers that require access to this hospital (see the *Safety and Security Technical Memorandum* for more details about the impacts on emergency responders).

5.5.2.2 Segment UB

5.5.2.2.1 Parklands
The construction impacts on parklands discussed for the ROW and East Options would be the same for the West Option; as such, the same mitigation measures would be applied.

5.5.2.2.2 Community Facilities
The construction impacts on community facilities discussed for the ROW and East Options would be the same for the West Option; as such, the same mitigation measures would be applied.

5.5.3 Cumulative Impacts and Mitigations - Union Pacific Railroad Rail Alternative - West Option

The construction and operation of the UPRR Rail Alternative West Option would not reduce the overall health and/or distribution of parklands and/or community facilities in the project area. As such, no adverse cumulative impacts would be anticipated. Like the ROW and East Options, improved transit in the project area with the West Option would result in cumulative benefits by improving access, via transit, to parklands and community facilities within and beyond the project area and within walking distance of the larger CTA network.

5.5.4 120th Street Yard and Shop

There are no parklands or community facilities in proximity to the 120th Street yard and shop site; therefore, no adverse impacts would result from the construction or operation of the yard and shop.

5.6 Halsted Rail Alternative

The Halsted Rail Alternative would be a 5-mile extension of the existing Red Line that would operate on an elevated structure within the median of Halsted Street. The CTA trains would continue south from the 95th Street Station in the median of I-57 until reaching Halsted Street. The alignment would then turn south and continue along Halsted Street until the intersection of Halsted Street and Vermont Street.

Four stations would be built with ADA accessible elevators; stations would be built at 103rd Street, 111th Street, 119th Street and a terminal station would be built at Vermont Street. The 103rd, 111th and 119th Street stations would include 14-foot-wide and 520-foot-long side platforms and the Vermont Street station would be configured as an island platform that would be 26 feet wide and 520 feet long. The primary entrance to the Vermont Street station would be ADA accessible.

Bus and park & ride facilities would be provided at each station with a total capacity of up to 3,700 parking spaces by 2030. The 103rd Street station would include a surface park & ride lot on the northwest of the 103rd Street and Halsted Street intersection; this lot would accommodate 200 vehicles and would include a turnaround for CTA bus route #9. The 111th Street station would include a surface park & ride lot on the northwest corner of the 111th Street and Halsted Street intersection; this lot would accommodate 200 vehicles. The 119th Street station would have a surface park & ride lot to the southwest of the 119th Street and Halsted Street intersection that would accommodate 1,000 vehicles and would include a turnaround for Pace bus route #359. The Vermont Street station would include a surface park & ride lot east of Halsted Street and between Vermont Street and 128th Street; this lot would accommodate 300 vehicles and a seven-story parking garage with the capacity for 2,000 vehicles west of Halsted Street and between Vermont Street and 128th Street. The ground level of the parking garage would be available for CTA office space, retail/commercial space, and/or community facilities. The Vermont Street station would also include bus bays for CTA bus route #8A and Pace bus routes #348 and #352.

The 119th Street yard and shop would be south of the 119th Street station, north of Vermont Street and west of the proposed park & ride lot at the 119th Street station. The track height would transition from elevated at station height to at-grade between Halsted Street and Morgan Street. The rail yard would be at-grade and would include a small amount of parking for employees.

Several electric substations would be constructed: the northeast corner of Halsted Street and 101st Street; the southeast corner of 110th Street and Halsted Street; along Halsted Street between 120th Street and the CN/Metra Electric tracks; the southeast corner of 126th Street and Halsted Street; and at the entrance of the 119th Street yard and shop along Peoria Street.

5.6.1 Permanent Impacts and Mitigations - Halsted Rail Alternative

This section describes the permanent impacts on parklands and community facilities that would result from the operation of the Halsted Rail Alternative and discusses options to avoid, minimize, or mitigate adverse impacts.

5.6.1.1 Segment HA

Segment HA is the northern project area for the Halsted Rail Alternative. It extends from the existing 95th Street Terminal in the north to just south of the proposed 119th Street station in the south. The 119th Street yard and shop would be partially in Segment HA; however, the operational and construction impacts are analyzed separately in Section 5.8.4.

5.6.1.1.1 Parklands

The proposed ROW for the Halsted Rail Alternative would not cross any parkland in Segment HA; therefore, no displacement of parklands would occur. Robert Abbott Park, Euclid Park Wendell Smith Park, and Major Taylor Bike Trail are within 500 feet of the ROW; they would have impacts as a result of their proximity to the proposed tracks, park & ride facilities, and/or stations. Five parks are within walking distance (½ mile) of a proposed station location in Segment HA; these parklands would have the benefit of improved accessibility as a result of their proximity to the stations.

Robert Abbott Park, Euclid Park and Wendell Smith Park

Based on the location of these three parks relative to the Halsted Rail Alternative ROW, no impacts on Robert Abbot Park, Euclid Park, and Wendell Smith Park would occur. All three are separated from the Halsted Rail Alternative ROW by a major highway; as such, any possible operational impact would not be greater than those of the No Build Alternative.

Major Taylor Bike Trail

Major Taylor Bike Trail is in the public ROW at the intersection of Halsted Street and 119th Street to cross Halsted Street. This bike trail connects 105th Street (just west of I-57) to 129th Street (at the Little Calumet River) and serves both for recreation and as an alternative means of north-south transportation. The infrastructure planned near the 119th/Halsted Street intersection includes a station, a rail yard and a substation; the impacts of operating these facilities would include a change in pedestrian/bicycle flow through this intersection. In order for this park to continue to serve its recreational and transportation functions, the changes at this intersection would allow for safe and clearly marked pedestrian and bicycle access across Halsted Street. The transportation plans for this intersection would be communicated to trail users and the Friends of

Major Taylor Trail, a non-profit organization that oversees the use and maintenance of the trail. After mitigation, the impacts on Major Taylor Bike Trail would not be adverse.

Parklands within ½ mile of a Station

The addition of high capacity rail transit services would improve transit access to the parklands within walking distance (approximately ½ mile) of the proposed stations. As shown in Table 5-7, there are six parklands within ½ mile of the station locations in Segment HA.

Table 5-7: Parklands within ½ mile of Station Locations - Halsted Rail Alternative - Segment HA

Station	Name of Parkland
103rd Street	Fernwood Parkway Fernwood Park Jackie Robinson Park
111th Street	Major Taylor Bike Trail
119th Street	Major Taylor Bike Trail Thomas Leed Morgan Field Edward White Park

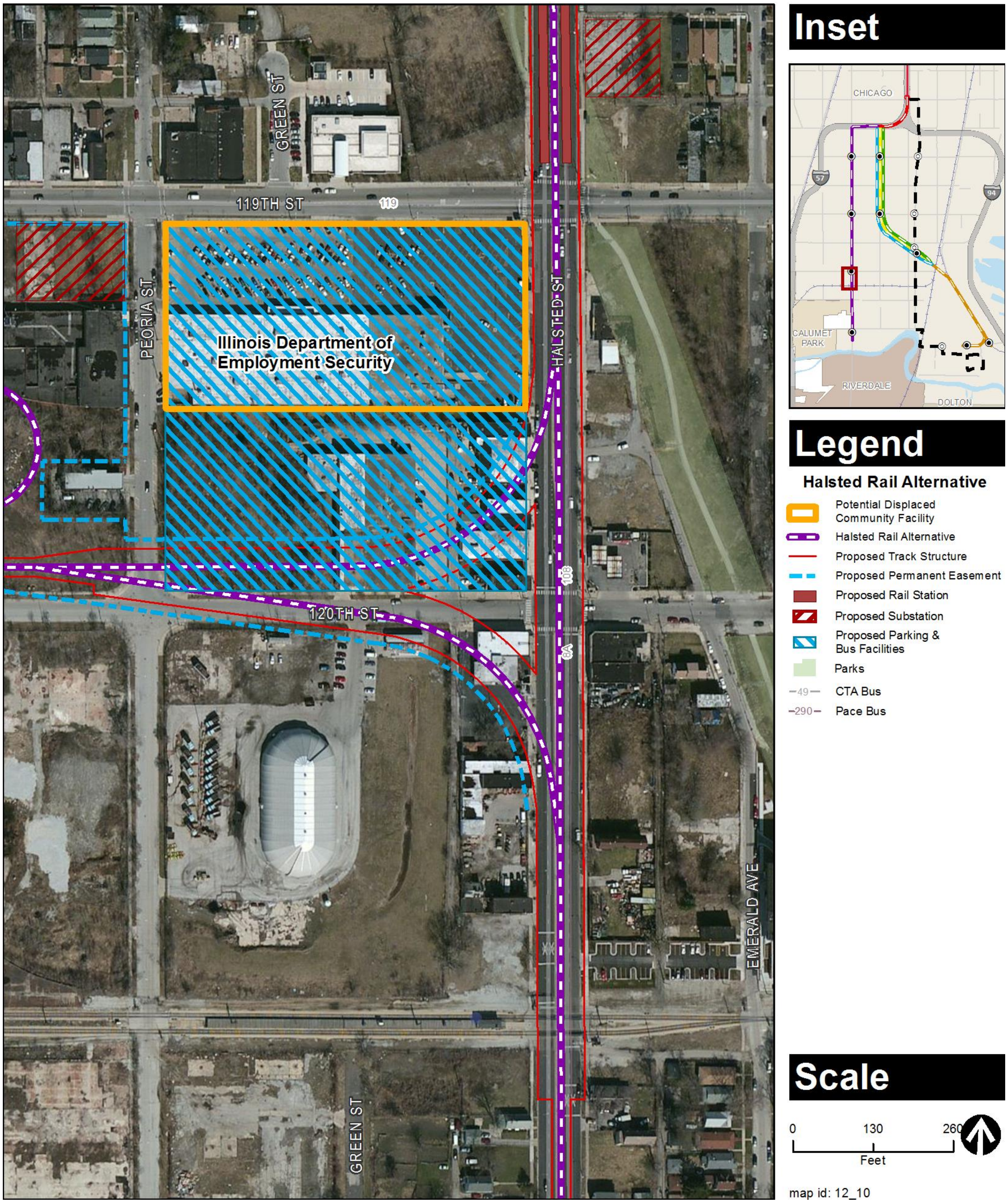
5.6.1.1.2 Community Facilities

The Illinois Department of Employment Security office would be displaced as a result of the operation of the Halsted Rail Alternative in Segment HA. In addition, there are 33 community facilities adjacent to the proposed ROW, of which 18 are noise-sensitive receptors. These facilities would have impacts due to their proximity to the project. Seventy-three community facilities are within ½ mile of the station locations in the Segment HA; these facilities would have the benefits of station proximity (see Appendix A for a complete list).

The Illinois Department of Employment Security office

The Illinois Department of Employment Security office is in a shopping center at the intersection of 119th Street and Halsted Street; it would be displaced as a result of the operation of the park & ride facilities at the 119th Street station (see Figure 5-8).

The next closest Employment Security office to the project area is the Woodlawn office, at 1515 E. 71st Street, which is approximately 9 miles away from the Halsted office. The Halsted facility provides essential employment assistance services for traditionally underserved populations and the general population in the community; as such, it is important that it be relocated within the community. The displacement of this facility would have to comply with the requirements of the Uniform Act. There is comparable property within the same general area that would be available to accommodate the relocation of this office (see the *Displacements and Relocations of Existing Uses Technical Memorandum* for more details about available replacement property). If the office were to be replaced and relocated, according to the Uniform Act, within the community and prior to its displacement, then there would be no long-term adverse impacts after mitigation.


119TH ST
119
GREEN ST
PEORIA ST
HALSTED ST
Illinois Department of Employment Security
120TH ST
1A
EMERALD AVE
GREEN ST
Inset
CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON
Legend
Halsted Rail Alternative
Potential Displaced Community Facility
Halsted Rail Alternative
Proposed Track Structure
Proposed Permanent Easement
Proposed Rail Station
Proposed Substation
Proposed Parking & Bus Facilities
Parks
49 CTA Bus
290 Pace Bus
Scale
0
130
260
Feet
map id: 12_10

(Source: City of Chicago, 2012)

Figure 5-8: Impacts on the Illinois Department of Employment Security - Halsted Rail Alternative - Segment HA

West Pullman Library

West Pullman Library is at 830 W. 119th Street and would be across 119th Street from the park & ride facilities at the 119th Street station and within a block of the 119th Street station and the 119th Street yard and shop. Quiet is assumed to be a part of a library's environment; however, based on its location, this library would not have noise impacts as a result of the Halsted Rail Alternative. The operation of the Halsted Rail Alternative facilities would generate more vehicle, rail, and pedestrian traffic in the localized area. The increased traffic flow could result in localized congestion; however, transportation changes would be mitigated through the transportation management plans devised to manage the change in traffic patterns as presented in the *Transportation Technical Memorandum*. The adjacency of the 119th Street station would improve access to the library via transit. The level of service on the roadway network around the library would not be adversely affected after mitigation. As such, West Pullman Library would not have adverse impacts after mitigation.

Impacts on Community Facilities Adjacent to the Halsted Rail Alternative Alignment

There are 17 places of worship and one senior housing facility (Renaissance Park South) on Halsted Street that are defined as noise-sensitive receptors. The operation of the Halsted Rail Alternative would result in moderate to severe noise impacts on these places of worship. These impacts would be minimized using noise barriers; however, moderate noise impacts would remain. After mitigation, the operational noise would result in impacts on the adjacent noise-sensitive receptors (places of worship are listed below).

- Gospel Truth Missionary Baptist Church
- Gatling's Chapel Funeral Home
- Rehoboth Apostolic Worship Center
- The Whole Word of God Christian Outreach
- Messiah Baptist Church
- Covenant Faith Church of God
- Missing Peace Church of Living Hope
- Shiloh Missionary Baptist Church
- Way of Holiness Mission
- Bellevue Ministry Center
- Cherubim & Seraphim Church
- Logos Baptist Assembly
- Greater Mt. Eagle Baptist Church
- Christ Church of Chicago
- Sheldon Heights Church of Christ
- Christ the Way of Holiness
- Tabernacle Number One God's House of Holiness in Christ

The Halsted Rail Alternative would change the lane configuration on Halsted Street somewhat by reducing some street parking and adding new turn lanes at intersections. These changes would affect how vehicle traffic accesses the community facilities on Halsted Street. For those community facilities adjacent to parking facilities, the increased traffic flow would result in congestion that reduces accessibility to the facilities. These impacts would be mitigated with the transportation management measures presented in the *Transportation Technical Memorandum*; these measures were devised to ensure that the existing roadway network around the Halsted Rail Alternative alignment would not be affected adversely. The addition of rail transit service would reduce the demand for parking along Halsted Street, as it would encourage a mode shift from personal vehicles to rail transit.

Community Facilities within ½ mile of a Station

The Halsted Rail Alternative would result in a 17.5-minute improvement in travel time from the 95th Street Terminal to 129th Street. The improved travel time would improve access, thereby resulting in benefits to the community facilities within walking distance (approximately ½ mile) of the new rail stations as shown in Table 5-8.

Table 5-8: Community Facilities within ½ mile of Stations - Halsted Rail Alternative - Segment HA

Facility Type	Number
Community Center	6
Fire Station	1
Healthcare Facility	3
Library	1
Place of Worship	52
School	7
Senior Center	2
State Facility	1
Total	73

5.6.1.2 Segment HB

Segment HB is the southern project area for the Halsted Rail Alternative. It extends from the proposed 119th Street station to the proposed Vermont Street station. The 119th Street yard and shop would be partially in Segment HB; however, the operational and construction impacts are analyzed separately in Section 5.8.4.

5.6.1.2.1 Parklands

The proposed ROW for the Halsted Rail Alternative would not cross any parkland; therefore, no impacts would occur on parklands in Segment HB. No parklands are within 500 feet in Segment HB; however, two parks (Whistler Woods Forest Preserve and Joe Louis Golf Course) are within ½ mile of the Vermont Street station location. The addition of high capacity rail transit services would improve access to the two parks within ½ mile of Vermont Street station, thereby resulting in benefits.

5.6.1.2.2 Community Facilities

No community facilities would be displaced as a result of the operation of the Halsted Rail Alternative in Segment HB. There are five community facilities adjacent to the ROW, of which four are considered noise-sensitive receptors (one cemetery and three places of worship). The sensitive receptors would have some impacts. Eight community facilities within ½ mile of Vermont Street station would have benefits as result of improved transit (and thereby improved accessibility).

Impacts on Community Facilities Adjacent to the Halsted Rail Alternative Alignment

The operation of the Halsted Rail Alternative would result in moderate to severe noise impacts on the four noise-sensitive community facilities on Halsted Street in Segment HB (see list below). The noise impacts would be minimized through the use of noise barriers; however, moderate noise impacts would remain. After mitigation, the operational noise would result in impacts on the four community facilities that are noise-sensitive receptors in Segment HB.

- Light of Zion Ministries
- St. Peter & Paul Church
- Cedar Park Cemetery
- Christ Spiritual Way of Truth

As mentioned above, the parking garage for the Vermont Street station would include space for commercial uses and/or community facilities. The operation of the Halsted Rail Alternative would benefit the community by offering new and modernized space for the community facilities that locate there.

Community Facilities within ½ mile of a Station

The Halsted Rail Alternative would result in a 17.5-minute improvement in travel time from the 95th Street Terminal to Vermont Street. The improved travel time would improve access to the community facilities within walking distance (approximately ½ mile) of the new rail stations as shown in Table 5-9.

Table 5-9: Community Facilities within ½ mile of Stations - Halsted Rail Alternative - Segment HB

Facility Type	Number
Cemetery	1
Community Center	1
Place of Worship	5
School	1
Total	8

5.6.2 Construction Impacts and Mitigations - Halsted Rail Alternative

Construction of the Halsted Rail Alternative includes the building of elevated structure, stations, bus and park & ride facilities, and substations in and around Halsted Street.

5.6.2.1 Segment HA

5.6.2.1.1 Parklands

Construction activities associated with the Halsted Rail Alternative would not occur in any parkland but would occur in close proximity to Major Taylor Bike Trail. The impacts on the trail would be the temporary rerouting of pedestrian/bicycle traffic across the intersection of 119th Street and Halsted Street while the elevated structure, station, and other facilities are being built. This impact would be mitigated by communicating the temporary access changes to trail users and the Friends of Major Taylor Bike Trail and by providing safety and clearly marked alternative routes for pedestrians and bicycles to cross the street. After mitigation, the impacts on Major Taylor Bike Trail would not be adverse.

5.6.2.1.2 Community Facilities

The Halsted Rail Alternative would be built in the median of Halsted Street from just south of 99th Street to the Vermont Street station. Construction activities would temporarily affect the flow of vehicle and pedestrian traffic and street parking on Halsted Street. These impacts would temporarily make it more difficult for patrons to access the community facilities on and around Halsted Street; however, clear signage, safe detour routes, and alternate parking options would be provided during construction. There would be no adverse transportation impacts after mitigation.

Construction would also result in temporary noise that would affect community facilities on Halsted Street and/or adjacent to the proposed stations and park & ride facilities. While construction noise is unpleasant, it is temporary and would not interfere with any community facility's ability to provide service. Construction best management practices would be implemented to mitigate noise impacts. The noise impacts would not be adverse after mitigation.

Construction would generate fugitive dust and other air quality impacts from construction vehicles. Children and the elderly are most susceptible to air toxics; as such, adjacent schools and the senior center may be more sensitive to temporary air quality impacts than other community facilities. Construction best management practices (such capturing dust and reducing construction vehicle idling time) would be used to mitigate these temporary impacts. There would be no adverse air quality impacts on community facilities after mitigation.

Construction Activities and Emergency Responders
Construction activities would temporarily reduce accessibility of the roadway network, which would cause delays for emergency responders. The scheduling of construction activities would be coordinated with the Chicago Office of Emergency Management and Communications. In particular, the construction plans for the 119th Street station and parking facilities would be coordinated with the adjacent Chicago Fire Department - Engine 115. Other mitigation would include ensuring that adjacent major cross streets were not temporarily closed at the same time. There would be no adverse impacts after mitigation.

5.6.2.2 Segment HB

5.6.2.2.1 Parklands

No parklands are within the proposed ROW or within 500 feet of the proposed ROW for the Halsted Rail Alternative. Construction activities would not affect parklands in Segment HB.

5.6.2.2.2 Community Facilities

As it would be for Segment HA, construction activities in Segment HB would temporarily change the vehicle and pedestrian access and parking availability along and around Halsted Street; however, clear signage, safe detour routes, and alternate parking would be provided as mitigation for these impacts. After mitigation, the transportation impacts would not be adverse.

Construction would also result in temporary noise impacts on the community facilities on Halsted Street and/or adjacent to the proposed stations and park & ride facilities. These impacts would be temporary and would not interfere with the community facilities' ability to provide services if mitigation strategies such as construction best management practices were applied. After mitigation, the temporary noise impacts would not be adverse.

5.6.3 Cumulative Impacts and Mitigations - Halsted Rail Alternative

The construction and operation of the Halsted Rail Alternative would not reduce the overall health of the parklands and/or community facilities in the project area. As such, no adverse cumulative impacts would occur. The project would result in benefits overall, with improved access to community facilities within and beyond the project area and within walking distance of CTA's greater rail network.

5.6.4 119th Street Yard and Shop

The 119th Street yard and shop would be south of the 119th Street station and west of the park & ride facility. The CTA track would transition from elevated to at-grade track between Halsted Street and Morgan Street. The yard would include a small amount of parking for employees.

5.6.4.1 Permanent Impacts and Mitigations

This section describes the permanent impacts that would result from the operation of the 119th Street yard and shop and it discusses strategies to avoid, minimize, or mitigate adverse impacts.

5.6.4.1.1 Parklands

The proposed ROW for the 119th yard and shop does not cross or pass within 500 feet of any parkland; as such, no parklands would be affected by its operation.

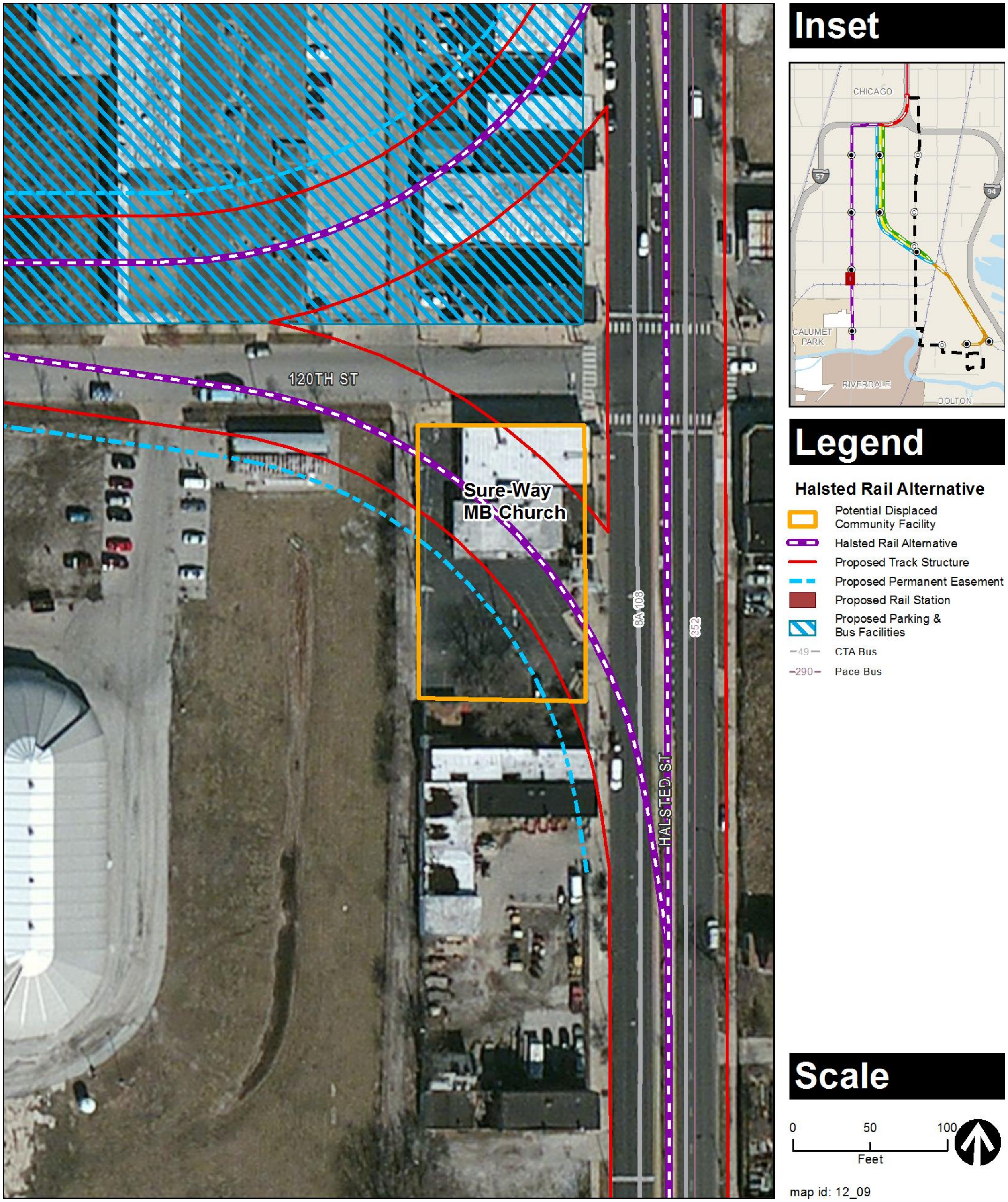
5.6.4.1.2 Community Facilities

One place of worship would be displaced as a result of operating the 119th Street yard and shop; this displacement would result in an adverse impact. One fire station and one place of worship are adjacent to the proposed facility; these community facilities would have impacts.

Sure-Way Missionary Baptist Church

Sure-Way Missionary Baptist Church, at 12000 S. Halsted Street, is in the ROW proposed for the southernmost yard entrance (see Figure 5-9).

The displacement of this property would have to comply with the requirements of the Uniform Act. According to the *Displacements and Relocations of Existing Uses Technical Memorandum* there is one replacement property that is zoned for a place of worship in the project area. Other available property in the community would have to be rezoned for religious use in order to be considered a comparable property. If the church were relocated within the community in accordance with the Uniform Act prior to starting construction to minimize interruption of its services, the impact would not be adverse after mitigation. If the church were relocated outside of the project area, the impact would be not substantially adverse after mitigation; the adverse impact would not be substantial because there are other similar churches within the community and the relocation would occur in accordance with the Uniform Act.


Inset
CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON
Legend
Halsted Rail Alternative
Potential Displaced Community Facility
Halsted Rail Alternative
Proposed Track Structure
Proposed Permanent Easement
Proposed Rail Station
Proposed Parking & Bus Facilities
49 CTA Bus
290 Pace Bus
120TH ST
Sure-Way MB Church
8A 108
352
HALSTED ST
Scale
0
50
100
Feet
map id: 12_09

(Source: City of Chicago, 2012)

Figure 5-9: Impacts on Sure-Way Missionary Baptist Church - Halsted Rail Alternative - 119th Street Yard and Shop

5.6.4.2 Construction Impacts and Mitigations

Construction of the 119th Street yard and shop would include the construction of the rail entrances that transition from elevated to at-grade track, the at-grade rail yard and shop, and minimal parking for employees.

5.6.4.2.1 Parklands

The proposed ROW for the 119th Street yard and shop does not cross or pass within 500 feet of any parkland; as such, no parklands would be affected by its construction.

5.6.4.2.2 Community Facilities

The Chicago Fire Department - Engine 115 and Mt. Zion First Holy Miracle Church would have impacts from the construction of the 119th Street yard and shop. Impacts on the fire station would include temporary changes in access. The scheduling of construction activities and detours would be coordinated with the Chicago Office of Emergency Management and Communications. Mt. Zion First Holy Miracle Church would be affected by temporary changes in access and construction noise. The construction impacts would be temporary and would be mitigated by using construction best management practices and by providing clearly marked and safe detour routes. Construction of the 119th Street yard and shop would not result in adverse impacts after mitigation.

Section 6
Impacts Remaining After Mitigation

6.1 No Build Alternative

The No Build Alternative would not result in permanent or temporary impacts on parklands or community facilities; therefore, no mitigation strategies would be needed.

6.2 BRT Alternative

The BRT Alternative alignment would not pass through any parkland and would not displace any community facilities. Most adverse impacts of operations would be mitigated; however, there are 35 community facilities that are noise-sensitive receptors that would have moderate noise impacts after mitigation. No parkland or community facilities would have adverse construction impacts after mitigation.

The BRT Alternative would result in moderate noise impacts on the 35 community facilities that are noise-sensitive receptors adjacent to the BRT alignment. These noise impacts would not be mitigated because noise barriers are not feasible along the alignment. Moderate noise impacts would remain after mitigation.

By improving travel time, BRT Alternative operation would improve access to parklands and community facilities within walking distance (½ mile) of the proposed BRT stops when compared to the No Build Alternative; there are 3 parklands and 88 community facilities within ½ mile of a proposed BRT stop location.

The parking garage at the Kensington Avenue stop would provide space for retail and community facilities. This garage would result in a benefit to the community overall because it would provide new and modernized space that would be used by community facilities.

6.3 Union Pacific Railroad Rail Alternative - Right-of-Way Option

The UPRR Rail Alternative ROW Option would result in permanent adverse and beneficial impacts as a result of its operation. After mitigation, no parkland or community facilities would be subject to adverse construction impacts.

6.3.1 Segment UA

In segment UA, the UPRR Rail Alternative ROW Option alignment would pass through Wendell Smith Park but would not displace any community facilities. All of the adverse impacts of operations would be mitigated. After mitigation, no parkland or community facilities would have adverse construction impacts.

Wendell Smith Park

The ROW for the UPRR Rail ROW Option would run through the northwest corner of Wendell Smith Park; this impact would largely leave the functional and recreational use of the park intact. Options to avoid, minimize, and mitigate most of the adverse impacts on this park exist; however, the presence of the rail structure in the park would still be adverse without additional mitigation. Mitigations options could include, but would not be limited to, using the space under the CTA track as parkland and making improvements within Wendell Smith Park. Impacts on the trail would be avoided; the trail would be rerouted around the affected area or avoided completely. After mitigation, there would be no adverse impacts on Wendell Smith Park.

Parklands and Community Facilities within ½ Mile of a Station
By improving travel time, operation of the UPRR Rail ROW Option in Segment UA would improve access to parklands and community facilities within walking distance (½ mile) of the proposed stations in Segment UA when compared to the No Build Alternative. There are 6 parklands and 51 community facilities within ½ mile of a station location in Segment UA.

New Space for Community Facilities
The parking garage at the Michigan Avenue station would provide space for retail and community facilities; this would result in a benefit to the community overall because it would provide new and modernized space that would be used by community facilities.

6.3.2 Segment UB

The UPRR Rail Alternative ROW Option alignment would not pass through any parkland and would not displace any community facilities in Segment UB. By improving travel time, operations in Segment UB would improve access to parklands and community facilities within walking distance (½ mile) of the proposed station when compared to the No Build Alternative; there are 3 parklands and 23 community facilities within ½ mile of a station location in Segment UB.

6.3.3 120th Street Yard and Shop

There are no parklands or community facilities in, adjacent to or within 500 feet of the proposed ROW for the 120th Street yard and shop. As such, there would be no impacts on parklands or community facilities as a result of the operation and/or construction of the 120th Street yard and shop.

6.4 Union Pacific Railroad Rail Alternative - East Option

The UPRR Rail Alternative East Option would result in permanent adverse and beneficial impacts as a result of its operation. Most of the permanent adverse impacts would be mitigated. The displacement of Now Faith Church of God Holiness would not be adverse after mitigation if it were relocated within the project area. After mitigation, no parkland or community facilities would have adverse construction impacts.

6.4.1 Segment UA

In segment UA, the UPRR Rail Alternative East Option alignment would pass through Wendell Smith Park and Block Park and would displace Now Faith Church of God Holiness.

Wendell Smith Park
The ROW proposed for East Option would run through the northwest corner of Wendell Smith Park; this impact would largely leave the functional and recreational use of the park intact.

Coordination with the Chicago Park District is being conducted as part of the Section 4(f) process and practicable mitigation measures are being identified. As it would be for the UPRR rail ROW Option, there are means to avoid, minimize, and mitigate most of the adverse impacts on this park as a result of the East Option; however, the presence of the rail structure in the park and the impacts on the trail would still be adverse without additional mitigation. Mitigation options would be similar to those of the UPRR Rail ROW Option; however, additional mitigation measures would be required to address the impacts on the trail. The trail could be rerouted within the park and/or other improvements could be made within Wendell Smith Park. After mitigation there would be no adverse impacts on Wendell Smith Park.

Block Park

The ROW for the East Option would run through the west parcel of Block Park; this parcel is open space only and does not contain any active and/or passive recreational amenities. Options to avoid, minimize and mitigate most of the adverse impacts on this park exist; however, the presence of the rail structure and the auxiliary entrance for the 103rd Street station in the park would still be adverse without additional mitigation. Mitigation alternatives are being developed through the Section 4(f) process, through coordination with the Chicago Park District and practicable measures to minimize harm are being identified. These mitigation options may include making improvements in the remaining parcel of Block Park After mitigation, there would be no adverse impacts on Block Park.

Now Faith Church of God Holiness

The ROW proposed for East Option would displace Now Faith Church of God Holiness. The displacement of this property would comply with the requirements of the Uniform Act. According to the *Displacements and Relocations of Existing Uses Technical Memorandum* there is one replacement property that is zoned for a place of worship in the project area. Other available property in the community would have to be rezoned for religious use in order to be considered a comparable property. If the church were relocated within the community prior to starting construction, to minimize interruption of its services, the impact would not be adverse after mitigation.

Parklands and Community Facilities within ½ Mile of a Station

By improving travel time, operation of the East Option in Segment UA would improve access to parklands and community facilities within walking distance (½ mile) of the proposed stations in Segment UA when compared to the No Build Alternative. There are 6 parklands and 51 community facilities within ½ mile of a station location in Segment UA.

New Space for Community Facilities

The parking garage at the Michigan Avenue station would provide space for community facilities; this would result in a benefit to the community overall because it would provide new and modernized space for community facilities that locate there.

6.4.2 Segment UB

The UPRR Rail Alternative East Option alignment would not pass through any parkland and would not displace any community facilities in Segment UB; therefore, there would be no adverse impacts. By improving travel time, operations in Segment UB would improve access to parklands and community facilities within walking distance (½ mile) of the proposed station when compared to the No Build Alternative; there are 3 parklands and 23 community facilities within ½ mile of a station location in Segment UB.

6.4.3 120th Street Yard and Shop

There are no parklands or community facilities in, adjacent to or within 500 feet of the proposed ROW for the 120th Street yard and shop. As such, there would be no impacts on parklands or community facilities as a result of the operation and/or construction of the 120th Street yard and shop.

6.5 Union Pacific Railroad Rail Alternative - West Option

The UPRR Rail Alternative West Option would result in beneficial and adverse impacts as a result of its operation. Most of the adverse impact would be mitigated; however, there would be some remaining visual impacts at Fernwood Parkway after mitigation. The UPRR Rail Alternative West Option would result in permanent impacts to one community facility, Grace Temple Church of God Established in Christ; however, the impact would not be adverse after mitigation if it were to be relocated within the project area. No parkland or community facilities would have adverse construction impacts after mitigation is applied.

6.5.1 Segment UA

In segment UA, the UPRR Rail Alternative West Option would pass through Wendell Smith Park and Fernwood Parkway, and would displace Grace Temple Church of God Established in Christ.

Wendell Smith Park

The ROW proposed for the West Option would run through the northwest corner of Wendell Smith Park; this impact would largely leave the functional and recreational use of the park intact. As it would be for the ROW Option, there are means to avoid, minimize, and mitigate most of the adverse impacts on this park as a result of the West Option; however, the presence of the rail structure in the park would still be adverse without additional mitigation. Mitigation options would be the same as for the ROW Option. After mitigation, there would be no adverse impacts on Wendell Smith Park.

Fernwood Parkway

The ROW proposed for West Option would run through two of the four parcels that make up Fernwood Parkway; these parcels are open space only and do not contain any active or passive recreational amenities. The permanent ROW would acquire 1.9 acres of the park and would create two park fragments. There are options to mitigate the adverse impacts created by the elevated rail structure. Depending on the decisions made during the Section 4(f) process, mitigation could be applied to a nearby parkland (e.g., the northern, unaffected parcels of Fernwood Parkway), or conversion of vacant parcels into new park space. It may also be possible to create a similar linear park from the displaced parcel remnants that would not be needed for the West Option. The visual quality of Fernwood Parkway is considered high and the West Option would result in high visual impacts that would not be completely mitigated. These visual impacts would have a greater impact on the surrounding single-family neighborhood around the park than on park users and would not be substantially adverse after mitigation.

Coordination with the Chicago Park District has been taking place through the Section 4(f) process to identify means to reduce the overall harm. After mitigation, the parklands impacts on Fernwood Parkway would not be adverse.

Grace Temple Church of God Established in Christ
The ROW proposed for West Option would displace Grace Temple Church of God Established in Christ. The displacement of this property would comply with the requirements of the Uniform Act. According to the *Displacements and Relocations of Existing Uses Technical Memorandum* there is one replacement property that is zoned for a place of worship in the project area. Other available property in the community would have to be rezoned for religious use in order to be considered a comparable property. If the church were relocated within the community prior to starting construction, to minimize interruption of its services, the impact would not be adverse after mitigation.

Parklands and Community Facilities within ½ Mile of a Station
By improving travel time, operation of the West Option in Segment UA would improve access to parklands and community facilities within walking distance (½ mile) of the proposed stations in Segment UA when compared to the No Build Alternative. There are 6 parklands and 51 community facilities within ½ mile of a station location in Segment UA.

New Space for Community Facilities
The parking garage at the Michigan Avenue station would provide space for retail and community facilities; this would result in a benefit to the community overall because it would provide new and modernized space for community facilities that locate there.

6.5.2 Segment UB

The UPRR Rail Alternative West Option would not pass through any parkland and would not displace any community facilities in Segment UB. By improving travel time, operations in Segment UB would improve access to parklands and community facilities within walking distance (½ mile) of the proposed station when compared to the No Build Alternative; there are 3 parklands and 23 community facilities within ½ mile of a station location in Segment UB.

6.5.3 120th Street Yard and Shop

There are no parklands or community facilities in, adjacent to or within 500 feet of the proposed ROW for the 120th Street yard and shop. As such, there would be no impacts on parklands or community facilities as a result of the operation and/or construction of the 120th Street yard and shop.

6.6 Halsted Rail Alternative

The Halsted Rail Alternative would result in permanent benefits and adverse impacts as a result of its operation. After mitigation, no parkland or community facilities would have adverse construction impacts.

6.6.1 Segment HA

The Halsted Rail Alternative would not pass through any parkland in Segment HA; however, the ROW would displace one community facility. After mitigation, moderate noise impacts would remain as a result of the operation of the Halsted Rail Alternative, which would affect adjacent noise-sensitive receptors. No parkland or community facilities would have adverse construction impacts after mitigation is applied.

Illinois Department of Employment Security
The ROW proposed for park & ride facility at the 119th Street station would displace the Illinois Department of Employment Security office. This facility provides a vital service to the community and the closest alternate office to the project area is 9 miles away. The displacement of this property would comply with the requirements of the Uniform Act. There is comparable replacement property available within the neighborhood to relocate this facility (see the *Displacements and Relocations of Existing Uses Technical Memorandum* for more details on available property near the employment office). As such, there would be no adverse impact on this facility after mitigation.

Community Facilities Adjacent to the Halsted Rail Alternative Alignment
There are 19 noise-sensitive receptors adjacent to the Halsted Rail Alternative alignment in Segment HA. These community facilities would have moderate to severe noise impacts; however, noise barriers would be used to minimize these impacts. After mitigation, moderate noise impacts on these noise-sensitive receptors would remain.

Parklands and Community Facilities within ½ Mile of a Station
By improving travel time, operation of the Halsted Rail Alternative would improve access to parklands and community facilities within walking distance (½ mile) of the proposed stations in Segment HA when compared to the No Build Alternative; there are 6 parklands and 73 community facilities within ½ mile of a station location.

6.6.2 Segment HB

The Halsted Rail Alternative alignment would not pass through any parkland or displace any community facilities; however, there would be some impacts on community facilities after mitigation. After mitigation, no parkland or community facilities would have construction impacts.

Community Facilities Adjacent to the Halsted Rail Alternative Alignment
There are four noise-sensitive receptors adjacent to the Halsted Rail Alternative alignment in Segment HB. These community facilities would have moderate to severe noise impacts; however, noise barriers would be used to minimize these impacts. After mitigation, moderate noise impacts on these noise-sensitive receptors would remain.

Parklands and Community Facilities within ½ Mile of a Station

By improving travel time, operation of the Halsted Rail Alternative would improve access to parklands and community facilities within walking distance (½ mile) of the proposed stations in

Segment HB when compared to the No Build Alternative; there are 2 parklands and 8 community facilities within ½ mile of a station location.

New Space for Community Facilities
The parking garage at the Vermont Street station would provide space for retail and community facilities; this would result in a benefit to the community overall because it would provide new and modernized space.

6.6.3 119th Street Yard and Shop

The 119th Street yard and shop would not pass through any parkland; however, the ROW would displace a place of worship. After mitigation, no parkland or community facilities would have adverse construction impacts.

Sure-Way Missionary Baptist Church
The ROW for the southernmost entrance to the 119th Street yard and shop would displace Sure-Way Missionary Baptist Church. This church is relatively small and with the exception of its sign, the building does not contain architectural features that would identify it as a place of worship. The displacement of this property would comply with the requirements of the Uniform Act. According to the *Displacements and Relocations of Existing Uses Technical Memorandum* there is one replacement property that is zoned for a place of worship in the project area. Other available property in the community would have to be rezoned for religious use in order to be considered a comparable property. If the church were relocated within the community in accordance with the Uniform Act prior to starting construction to minimize interruption of its services, the impact would not be adverse after mitigation.

Section 7
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Appendix A
Community Facilities

Tables A-1 through A-5 provide the name and address of the community facilities that are within the community facilities area of potential impact for each of the build alternatives. These tables also locate community facilities in reference to the alternative's alignment, proposed right-of way (ROW), and proposed stop/station locations.

Table A-1: Community Facilities in Area of Potential Impact - Bus Rapid Transit Alternative

Type	Name	Address	Adjacent	½ mile from Stop
Senior Center	Satellite Senior Center at Abbott Park	49 E. 95th Street	X	
School	Harlan Community Academy High School	9652 S. Michigan Avenue	X	
School	Shedd Elementary School	200 E. 99th Street		X
Place of Worship	Damascus Baptist Church	10014 S. Michigan Avenue	X	X
School	Bennett Elementary School	10115 S. Prairie Avenue		X
Place of Worship	Salem Baptist Church	10126 S. Indiana Avenue		X
Senior Center	Rose Haven Manor Senior Housing	10200-10220 S. Michigan Avenue	X	X
Place of Worship	St. John de la Salle Catholic Church	10205 S. King Drive		X
Place of Worship	Emmanuel Reformer Church	10241 S. State Street		X
Place of Worship	Kingdom Hall of Jehovah's Witnesses	60 E. 103rd Street		X
Place of Worship	Pullman Christian Reformer Church	424 W. 103rd Street		X
Place of Worship	New Tabernacle Baptist Church	10413 S. Michigan Avenue	X	X
Place of Worship	Christian Missionary Baptist Church	130 W. 104th Street		X
Place of Worship	Great Way Full Gospel	10359 S. King Drive		X
School	Kohn Elementary School	10414 S. State Street		X
Place of Worship	Pentecostal Church of God	10429 S. Michigan Avenue	X	X
Senior Center	Victory Centre of Roseland Senior Housing	10450 S. Michigan Avenue	X	X

Type	Name	Address	Adjacent	½ mile from Stop
Place of Worship	Harris Temple Church of God in Christ	10558 S. Michigan Avenue	X	
Place of Worship	Lilydale Progressive Missionary Baptist Church	10706 S. Michigan Avenue	X	X
Place of Worship	St. John Pentecostal Holiness Church of Deliverance	10707 S. Michigan Avenue	X	X
Place of Worship	The Straight Way Pentecostal Church	10740 S. Michigan Avenue	X	X
Place of Worship	Christian Love Deliverance Church of God in Christ	10742 S. Michigan Avenue	X	X
Place of Worship	Holy Miracle - Christ, the Hope of Glory Ministries	10757 S. Michigan Avenue	X	X
Place of Worship	Beacon of Joy SDA Church	101 W. 108th Street		X
Place of Worship	Universal Community Missionary	10809 S. State Street		X
Place of Worship	Revelation Baptist Church	10818 S. Michigan Avenue	X	X
Community Center	Stamps Funeral Home	10834 S. Michigan Avenue	X	X
Place of Worship	St. Ephraim Coptic	10844 S. Michigan Avenue	X	X
Place of Worship	Roseland Christian Ministries	10846 S. Michigan Avenue	X	X
Place of Worship	Out of a Need Missionary Church Temple	10857 S. Michigan Avenue	X	X
School	Lavizzo Elementary School	138 W. 109th Street		X
Place of Worship	Zion Lutheran Church	312 E. 109th Street		X
School	Brooks College Prep Academy High School	250 E. 111th Street		X
Place of Worship	New St. John Missionary Baptist Church	10930 S. Michigan Avenue	X	X
Place of Worship	Mary Magdalene Missionary Baptist Church	111 W. 109th Place		X
Library	Chicago Pullman Library	11001 S. Indiana Avenue		X
Place of Worship	Galilee Baptist Church	10955 S. Michigan Avenue	X	X

Type	Name	Address	Adjacent	½ mile from Stop
Community Center	Neighborhood Housing Services of Chicago	11001 S. Michigan Avenue	X	X
Place of Worship	Beacon Light Ministries	11026 S. Michigan Avenue	X	X
Healthcare Facility	Chicago Family Health Center	45 W. 111th Street		X
Community Center	A Place for You	11040 S. Wabash Avenue		X
Place of Worship	First Corinthians Baptist Church	134 E. 111th Street		X
Place of Worship	St. George and St. Matthias Episcopal Church	164 E. 111th Street		X
Community Center	Human Resources Development Institute	101 W. 11th Street		X
Hospital	Roseland Community Hospital	45 W. 111th Street		X
Place of Worship	New Testament Baptist Church	2 E. 112th Street	X	X
Place of Worship	Cornerstone Presbyterian Church	11210 S. State Street		X
School	Vivian E. Summers Alternative High School	30 E. 112th Place		X
State Facility	Illinois Department of Human Services Food Center	11253 S. Michigan Avenue	X	X
Place of Worship	Starlight St. James Missionary Baptist Church	11300 S. State Street		X
Place of Worship	New Pasadena Missionary Baptist Church	11300 S. Indiana Avenue		X
Place of Worship	Word Alive Church Ministry	11312 S. Michigan Avenue	X	X
Place of Worship	House of Inspiration Church of God in Christ	659 W. 107th Street		X
Place of Worship	St. James Temple Church of God	11336 S. State Street		X
Fire Station	Chicago Fire Department - Engine 62	34 E. 114th Street		X
Place of Worship	First Corinthians Baptist Church	11341 S. State Street		X
Place of Worship	Love Abide Missionary Baptist Church	11352 S. Michigan Avenue	X	X

Type	Name	Address	Adjacent	½ mile from Stop
Place of Worship	Mosque of Umar	11409 S. Michigan Avenue	X	X
Place of Worship	Greater Change Evangelistic	11477 S. Michigan Avenue	X	X
Place of Worship	Paradise Temple Church of God in Christ	11437 S. Forest Avenue		X
Place of Worship	Mt. Holy Rock Missionary Baptist Church	11441 S. Wentworth Avenue		X
Place of Worship	Christian Covenant Missionary Baptist Church	200 W. 115th Street		X
School	Curtis Elementary School	32 E. 115th Street		X
Place of Worship	Faith United Missionary Baptist Church	120 E. 115th Street		X
Place of Worship	St. John Missionary Baptist Church	211 E. 115th Street		X
Place of Worship	Crown of Light Missionary Baptist Church	11500 S. Front Avenue		X
Place of Worship	St. Anthony's Church	11533 S. Prairie Avenue		X
Place of Worship	Miracle Temple	137 E. Kensington Avenue	X	X
Place of Worship	Christian Life Ministries	11592 S. Lafayette Avenue		X
Place of Worship	New Christian Joy Missionary Baptist Church	11594 S. State Street		X
Place of Worship	South of Praise Evangelistic Center	11602 S. Michigan Avenue	X	X
Place of Worship	New Covenant Church Deliverance	11608 S. Michigan Avenue	X	X
Place of Worship	Bethel Apostolic Faith Church	11613 S. State Street		X
Community Center	Kids Off the Block Youth Center	11625 S. Michigan Avenue	X	X
Place of Worship	True Word Ministries	11700 S. Michigan Avenue	X	X
Place of Worship	Celestial Church of Christ	11705 S. Michigan Avenue	X	X
School	Songhai Elementary Learning Institute	11725 S. Perry Avenue		X

Type	Name	Address	Adjacent	½ mile from Stop
Place of Worship	Cottage Grove Holy Temple Church	11739 S. Michigan Avenue	X	X
Place of Worship	Word of Knowledge Ministries	11743 S. Michigan Avenue	X	X
Place of Worship	Saint Salomea Catholic Church	148 E. 118th Place		X
Place of Worship	Full Gospel Christian Center Church	11852 S. Michigan Avenue	X	X
Fire Station	Chicago Fire Department - Engine 75	11958 S. State Street		X
Place of Worship	Greater New Eagle Missionary Baptist Church	12301 S. Michigan Avenue	X	X
School	Aldridge Elementary School	630 E. 131st Street	X	X
School	Dubois Elementary School	330 E. 133rd Street		X
Library	Altgeld Library	13281 S. Corliss Avenue	X	X
School	Carver Middle School	901 E. 133rd Place	X	X
School	Carver Primary School	901 E. 133rd Place	X	X
Healthcare Facility	Altgeld Murray Clinic	972 E. 133rd Street	X	X
City Facility	Chicago Housing Authority	976 E. 132nd Place	X	X
Community Center	Catholic Charities Outreach	13150 S. Ingleside Avenue	X	X

Table A-2: Community Facilities in the Area of Potential Impact - Union Pacific Railroad Rail Alternative - All Options

Segment	Type	Name	Address	Adjacent			½ Mile from Station
				West	ROW	East	
UA	School	Fernwood Elementary School	10041 S. Union Avenue				X
	Place of Worship	Fernwood United Methodist Church	10047 S. Wallace Street				X
	Place of Worship	Rehoboth Apostolic Worship Center	10159 S. Halsted Street				X
	Place of Worship	New Macedonia Baptist Church	458 W. 103rd Street				X

Segment	Type	Name	Address	Adjacent			½ Mile from Station
				West	ROW	East	
UA	Place of Worship	Loving Spirit Missionary Baptist Church	424 W. 103rd Street				X
	Place of Worship	God's House - Holiness in Christ	538 W. 103rd Street				X
	Place of Worship	Ambassadors for Christ Church	535 W. 103rd Street				X
	Fire Station	Chicago Fire Department, Engine 93	330 W. 104th Street			X	X
	School	Hughes Elementary School	226 W. 104th Street				X
	Place of Worship	Christian Missionary Baptist Church	130 W. 104th Street				X
	School	Kohn Elementary School	10414 S. State Street				X
	Place of Worship	Mount Ebal Missionary Baptist Church	425 W. 107th Street				X
	Place of Worship	Beacon of Joy SDA Church	101 W. 108th Street				X
	School	Dunne Elementary School	10845 S. Union Avenue				X
	School	Lavizzo Elementary School	138 W. 109th Street				X
	Place of Worship	Mary Magdalene Missionary	318 W. 109th Place				X
	Place of Worship	Mary Magdalene Missionary Baptist Church	111 W. 109th Place				X
	Place of Worship	Allen Metropolitan Christian Methodist Episcopal Church	10937 S. Union Avenue				X
	Healthcare Facility	Chicago Family Health Center	45 W. 111th Street				X
	Place of Worship	Christ Cathedral Baptist Church	445 W. 111th Street				X

Segment	Type	Name	Address	Adjacent			½ Mile from Station
				West	ROW	East	
UA	Place of Worship	Church of God in Christ State Temple	421 W. 111th Street				X
	Community Center	A Place for You	11040 S. Wabash Avenue				X
	Healthcare Facility	Roseland Community Hospital	45 W. 111th Street				X
	Place of Worship	Christ Temple Cathedral Church	44 W. 111th Place				X
	School	Fenger Academy High School	11220 S. Wallace Street				X
	State Facility	Illinois Department of Human Services Food Center	11253 S. Michigan Avenue				X
	Place of Worship	Lilydale First Baptist Church	640 W. 113th Street				X
	School	Haley Elementary Academy	11411 S. Eggleston Avenue				X
	Place of Worship	Starlight St. James Missionary Baptist Church	11300 S. State Street				X
	Place of Worship	New Pasadena Missionary Baptist Church	11300 S. Indiana Avenue				X
	Place of Worship	Reformation Lutheran Church	11310 S. Forest Avenue				X
	Place of Worship	Word Alive Church Ministry	11312 S. Michigan Avenue				X
	Place of Worship	House of Inspiration Church of God in Christ	659 W. 107th Street				X
	Place of Worship	St. James Temple Church of God	11336 S. State Street				X
	Fire Station	Chicago Fire Department - Engine 62	34 E. 114th Street				X
	Place of Worship	First Corinthians Baptist Church	134 E. 111th Street				X

Segment	Type	Name	Address	Adjacent			½ Mile from Station
				West	ROW	East	
UA	Place of Worship	Now Faith Church of God Holiness	135 W. 114th Street		X	X	X
	Place of Worship	Love Abide Missionary Baptist Church	11352 S. Michigan Avenue				X
	Place of Worship	Mosque of Umar	11409 S. Michigan Avenue				X
	Place of Worship	Paradise Temple Church of God in Christ	11437 S. Forest Avenue				X
	Place of Worship	Mt. Holy Rock Missionary Baptist Church	11441 S. Wentworth Avenue				X
	Place of Worship	Christian Covenant Missionary Baptist Church	200 W. 115th Street				X
	School	Curtis Elementary School	32 E. 115th Street				X
	Place of Worship	Greater Change Evangelistic	11477 S. Michigan Avenue				X
	Place of Worship	Faith United Missionary Baptist Church	120 E. 115th Street				X
	Place of Worship	St. John Missionary Baptist Church	211 E. 115th Street				X
	School	CICS Prairie	11530 S. Prairie Avenue				X
	Place of Worship	St. Anthony's Church	11533 S. Prairie Avenue				X
	Place of Worship	Miracle Temple	137 E. Kensington Avenue			X	
	Place of Worship	New Christian Joy Missionary Baptist Church	11594 S. State Street	X	X	X	X
	Place of Worship	Christian Life Ministries	11592 S. Lafayette Avenue				X
	Place of Worship	Grace Temple Church of God Established in Christ	11601 S. Michigan Avenue	X			X

Segment	Type	Name	Address	Adjacent			½ Mile from Station
				West	ROW	East	
UB	Place of Worship	South of Praise Evangelistic Center	11602 S. Michigan Avenue				X
	Place of Worship	New Covenant Church Deliverance	11608 S. Michigan Avenue				X
	Place of Worship	Bethel Apostolic Faith Church	11613 S. State Street				X
	Community Center	Kids Off the Block	11625 S. Michigan Avenue				X
	Place of Worship	True Word Ministries	11700 S. Michigan Avenue				X
	Place of Worship	Celestial Church of Christ	11705 S. Michigan Avenue				X
	School	Songhai Elementary Learning Institute	11725 Perry Avenue				X
	Place of Worship	Cottage Grove Holy Temple Church	11739 S. Michigan Avenue				X
	Place of Worship	Word of Knowledge Ministries	11743 S. Michigan Avenue				X
	Place of Worship	Saint Salomea Catholic Church	148 E. 118th Place				X
	Place of Worship	Full Gospel Christian Center Church	11852 S. Michigan Avenue				X
	Place of Worship	Greater Canaan Missionary Baptist Church	41 W. 119th Street				X
	Fire Station	Chicago Fire Department - Engine 75	11958 S. State Street				X
	Fire Station	Chicago Fire Department - Engine 80	12701 S. Doty Avenue				X
	Place of Worship	United Church of Altgeld Garden	13040 S. Dobson Avenue				X
	School	Aldridge Elementary School	630 E. 131st Street	X	X	X	X

Segment	Type	Name	Address	Adjacent			½ Mile from Station
				West	ROW	East	
UB	Place of Worship	Catholic Charities Outreach	13150 S. Ingleside Avenue				X
	Healthcare Facility	Altgeld Murray Clinic	972 E. 133rd Street				X
	School	Carver Military Academy High School	13100 S. Doty Avenue				X
	Library	Altgeld Library	13281 Corliss Avenue				X
	State Facility	Chicago Housing Authority	976 E. 132nd Place				X
	School	Carver Middle School	801 E. 133rd Street				X
	School	Carver Primary School	901 E. 113rd Street				X

Table A-3: Community Facilities within the Area of the Potential Impact - Halsted Rail Alternative

Segment	Type	Name	Address	Adjacent to ROW	½ Mile from Station
HA	Community Center	Far South Community Development Corporation	9923 S. Halsted Street	X	X
	Place of Worship	Gospel Truth Missionary Baptist Church	10015 S. Halsted Street	X	X
	School	Fernwood Elementary School	10041 S. Union Avenue		X
	Place of Worship	Fernwood United Methodist Church	10047 S. Wallace Street		X
	Place of Worship	Gatling's Chapel Funeral Home	10133 S. Halsted Street	X	X
	Community Center	Paul Hall Family Center	10140 S. Halsted Street	X	X
	Place of Worship	Rehoboth Apostolic Worship Center	10159 S. Halsted Street	X	X
	Place of Worship	The Whole Word of God Christian Outreach	10222-224 S. Halsted Street	X	X
	Place of Worship	Prayer Center Baptist Church	10235 S. Wallace Street		X
	Place of Worship	New Macedonia Baptist Church	458 W. 103rd Street		X
	Place of Worship	Loving Spirit Missionary Baptist Church	424 W. 103rd Street		X
	Place of Worship	God's House-Holiness in Christ	551 W. 103rd Street		X
	Place of Worship	Ambassadors for Christ Church	531 W. 103rd Street		X
	Place of Worship	Oasis of Hope - Sanctuary of Prayer Christian Church	851 W. 103rd Street		X
	Place of Worship	Prayer & Faith Outreach Ministries	944 W. 103rd Street		X
	School	Garvey Elementary School	10309 S. Morgan Street		X
	Place of Worship	Gospel Temple Missionary Baptist Church	1040 W. 103rd Street		X
	Place of Worship	Tabernacle Number One Church	1151 W. 103rd Street		X

Segment	Type	Name	Address	Adjacent to ROW	½ Mile from Station
HA	Place of Worship	Way of Holiness Mission	10407-409 S. Halsted Street	X	X
	Place of Worship	Messiah Baptist Church	10400 S. Halsted Street	X	X
	Community Center	The South Side Help Center	10420 S. Halsted Street	X	X
	Place of Worship	Covenant Faith Church of God	10505 S. Halsted Street	X	X
	Community Center	Shared Manna Food Pantry	10505 S. Halsted Street	X	X
	Place of Worship	Missing Peace Church of Living Hope	10504 S. Halsted Street	X	X
	School	Mount Vernon Elementary School	10540 S. Morgan Street		X
	Place of Worship	House of God	10555 S. Emerald Avenue		X
	Place of Worship	Shiloh Missionary Baptist Church	10540 S. Halsted Street	X	X
	Place of Worship	Bellevue Ministry Center	10715 S. Halsted Street	X	X
	Place of Worship	Bellevue Baptist Church	10730 S. Emerald Avenue		X
	Place of Worship	Cherubim & Seraphim Church	10751 S. Halsted Street	X	X
	Place of Worship	Logos Baptist Assembly	10805 S. Halsted Street	X	X
	Healthcare Facility	Urban Family Health Center	10830 S. Halsted Street	X	X
	School	Dunne Elementary School	10845 S. Union Avenue		X
	Place of Worship	Greater Mt. Eagle Baptist Church	10856 S. Halsted Street	X	X
	Place of Worship	Tabernacle Number One God’s House of Holiness in Christ	10906 S. Halsted Street	X	X
	Senior Center	Renaissance Park South	10935 S. Halsted Street	X	X
	Place of Worship	Hamlett Lena Church	10916 S. Sangamon Street		X
	Community Center	SGA Roseland Children’s Youth & Family Center	10928 S. Halsted Street	X	X

Segment	Type	Name	Address	Adjacent to ROW	½ Mile from Station
HA	Place of Worship	Allen Metropolitan Christian Methodist Episcopal Church	10946 S. Lowe Avenue		X
	Healthcare Facility	Southtown Medical Center	11000 S. Halsted Street	X	X
	Place of Worship	Christ Church of Chicago	11020 S. Halsted Street	X	X
	Place of Worship	Church of God in Christ State Temple	421 W. 111th Street		X
	Place of Worship	Christ Cathedral Baptist Church	445 W. 111th Street		X
	Place of Worship	Holy Zion Healing Temple	1037 W. 112th Place		X
	Place of Worship	Christ the Way of Holiness	11200 S. Halsted Street	X	X
	School	Fenger Academy High School	11220 S. Wallace Street		X
	Healthcare Facility	Planned Parenthood	11250 S. Halsted Street	X	X
	Place of Worship	Lilydale First Baptist Church	640 W. 113th Street		X
	Place of Worship	Sheldon Heights Church of Christ	11325-55 S. Halsted Street	X	X
	Community Center	Community Assistance Programs	11444 S. Halsted Street	X	X
	Place of Worship	Light of Zion Ministries	11636 S. Halsted Street	X	X
	School	Higgins Elementary Community Academy	11710 S. Morgan Street		X
	Place of Worship	West Pullman Baptist Church	656 W. 118th Street		X
	Place of Worship	St. James Church of God in Christ	640 W. 118th Street		X
	Place of Worship	Redeeming Grace Church	11801 S. Sangamon Street		X
	Place of Worship	Original New Paradise	11830 S. Wallace Street		X
	Library	West Pullman Library	830 W. 119th Street	X	X
	Place of Worship	Christian Service Missionary	914 W. 119th Street	X	X
	Place of Worship	Mt. Zion First Holy Miracle	956 W. 119th Street	X	X

Segment	Type	Name	Address	Adjacent to ROW	½ Mile from Station
HA	State Facility	Illinois Department of Employment Security	837 W. 119th Street	X	X
	Place of Worship	House of Prayer Missionary Baptist Church	641 W. 119th Street		X
	Place of Worship	New Mt. Zion Missionary Baptist Church	604 W. 119th Street		X
	Place of Worship	Unveiled Ministries	437 W. 119th Street		X
	Fire Station	Chicago Fire Department - Engine 115	11940 S. Peoria Street	X	X
	School	West Pullman Elementary School	11941 S. Parnell Avenue		X
	Place of Worship	Lively Stone Apostolic Church	620 W. 120th Street		X
	Place of Worship	New Jerusalem Temple	619 W. 120th Street		X
	Place of Worship	House of Rhema	607 W. 120th Street		X
	Place of Worship	Fellowship United Methodist Church of West Pullman	12001 S. Normal Avenue		X
	Place of Worship	Sure-Way Missionary Baptist Church	12000 S. Halsted Street	X	X
	Place of Worship	Divine Love Missionary Baptist Church	713 W. 120th Street		X
	Place of Worship	New Life Full Gospel Christian	12030 S. Wallace Street		X
	Senior Center	Hancock Senior Center	12045 S. Emerald Avenue		X
HB	Place of Worship	St. Titus Church	12257 S. Emerald Avenue		X
	Community Center	Chicago South Community Development Corporation	12338 S. Halsted Street	X	X
	Place of Worship	St. Peter & Paul Church	12433 S. Halsted Street	X	X
	Cemetery	Cedar Park Cemetery	12540 S. Halsted Street	X	X

Segment	Type	Name	Address	Adjacent to ROW	½ Mile from Station
HB	School	Brown Elementary Community Academy	12607 S. Union Avenue		X
	Place of Worship	Christ Spiritual Way of Truth	12730 S. Halsted Street	X	X
	Place of Worship	Colonial Village Church-Christ	12814 S. Lowe Avenue		X
	Place of Worship	Praise Temple	12900 S. Halsted Street	X	X

Appendix B
Notes for Early Coordination with the Chicago Park District

Notes from the following meetings are included in this appendix:

- *April 18, 2011*
- *July 24, 2013*
- *May 8, 2014*
- *April 8, 2015*

Appendix B updated in May 2015.

MEETING NOTES

RE: **CTA-CWC-Chicago Park District Meeting**
Red Line South Extension Project

MEETING DATE: **April 18, 2011**

CHAIRPERSON: **Sonali Tandon, CTA**

LOCATION: **at CTA and via Conference Call**

TO: **Distribution and All Attendees**

ATTENDEES:

Name	***Initials***	***Organization / Title***
Sonali Tandon	ST	CTA
Steve Hands	SH	CTA
Joe Iacobucci	JI	CTA
Helene Kornblatt	HK	CWC Transit Group
Claudia Lea	CL	CWC Transit Group
Joseph Bornstein	JB	Chicago Park District

PREPARED BY: Claudia Lea

ISSUE DATE: April 19, 2011

Meeting called to order at 1:30 pm

Project Background

Sonali Tandon discussed the project background, including the Alternatives Analysis process, the determination of a Locally Preferred Alternative (Union Pacific Railroad Heavy Rail Transit Alternative – UPRR HRT Alternative), the scoping process, as well as an overview of the EIS process.

Helene Kornblatt provided background regarding the 4(f) process: Section 4(f) of the Department of Transportation Act of 1966 prohibits the Federal Transit Administration (FTA) from approving a project or program that uses land from a significant public park, recreation area, wildlife or waterfowl refuge, or historic site except if the Administration determines that the other alternatives are not feasible. All parkland that is used for a transit project needs to be compensated. A 4(f) report will need to be completed as part of the EIS.

West Option

The UPRR HRT West Option would intersect Fernwood Park, located along the proposed alignment between 99th Street and 103rd Street. Fernwood Park is a linear park which runs between the UPRR tracks and Eggleston Avenue. There are limited improvements to the park (no sidewalks), and it is not programmed much as a park. Abandoned houses and vacant lots are located along the park.

Joseph Bornstein indicated that CPD would be amenable to talking about this park. JB stated that if any of the park is used for the Red Line Extension, the remainder of the park will be unusable, and CTA will be responsible for a one-to-one acreage trade for the entire park area between 99th and 103rd Street. JB indicated that there would likely be land available to create new parks given the vacant land in the near vicinity of the park, but CTA will need to see what the community would like. CPD has no current plans for improvements to Fernwood Park. CTA will recommend several sites in the vicinity of Fernwood Park that would replace the entire Fernwood Park area (4.5 acres), and will begin by reviewing City of Chicago owned property.

East Option

The UPRR HRT East Option would intersect Wendell Smith Park, located on South Princeton Avenue between 99th Street and 99th Place. Wendell Smith Park is 4 acres in size and has basketball courts, baseball fields, a play lot, a recreation building, and 0.33 miles of walking trails. There are regularly-scheduled basketball, baseball, and softball games, concerts, and day camps that take place at the park. The UPRR HRT East Option would run through the northwest corner of the park. Impacts to the park would involve the loss of trees in the unused and unkempt northwest corner of the park, a total of 0.66 acres of impacted area.

The East Option would also run through the eastern parcel of Block Park. Block Park is located on two parcels, to the east and west of South Harvard Avenue, and runs along the eastern boundary of the UPRR. A natatorium was located on this property until 1998. A radio tower is located on the property at this time. Approximately 0.69 acres of the park would be impacted by the UPRR HRT East Option; the total parcel area is 1.26 acres. Following the meeting, JB provided information that the potentially impacted parcel is leased property from the Water Department. He indicated that the lease on the property is most likely expired, and CTA may need to work with the Water Department regarding the future of their parcels.

Process

- CTA will need to get feedback from the community regarding their wants and needs
- CPD does one-for-one land swaps
- CPD requires a two-acre minimum for new parks. CPD would prefer new parks to be greater than two acres, if possible.
- Land actions need to go though the CPD Board, which is a relatively quick process.
- CTA will need to discuss findings with FTA prior to proceeding.
- Funding for the park development will need to be discussed with FTA.
- CPD estimates that it costs ~$1 million per acre for development of property into usable park land, which includes lighting, improvements, etc.

Next Steps

As CTA begins to draft the EIS, they will get back in touch with CPD regarding potential sites and compensation, based on FTA's feedback. At this time, the EIS is not funded. CPD has no plans for further park development in the vicinity of the LPA.

Please notify the author of the minutes of any corrections and/or clarifications within five (5) business days.

cc: Attendees

MEETING NOTES

RE: **Chicago Park District Meeting**
Red Line Extension Draft EIS

MEETING DATE: **Wednesday, July 24, 2013 1:00PM**

LOCATION: **Chicago Park District Offices**

ATTENDEES:

Name	***Initials***	***Organization***
Sonali Tandon	ST	CTA
Rob Rejman	RR	Chicago Park District
Doreen O’Donnell	DO	Chicago Park District
Helene Kornblatt	HK	CWC Transit Group
Kansai Uchida	KU	CWC Transit Group

PREPARED BY: Kansai Uchida

ISSUE DATE: Thursday, July 25, 2013

- CTA is currently preparing the Draft Environmental Impact Statement for the Red Line Extension project. The ultimate funding sources and schedule for project implementation are still being determined.
- CPD’s policy regarding other agencies’ use of their property is replacement (whether the property is active or not). Replacement does not need to be in the same location.
- CTA, CPD, and CWC reviewed draft conceptual plan and profile drawings for the UPRR Rail Alternative options at Wendell Smith Park, Fernwood Parkway, and Block Park.
- CPD recently renewed its lease on Block Park for 25 years.
- CPD recognized that a Fernwood Parkway alignment might mean fewer residential displacements. If CPD received equal acreage nearby, they would have the opportunity to provide a better park for the neighborhood than the existing Fernwood Parkway.
- CWC described the potential Section 4(f) findings:
    - Use of Wendell Smith Park under all of the UPRR Rail Alternative Options
    - Use of Fernwood Parkway under the UPRR Rail Alternative West Option
    - De minimis impact on Block Park under the UPRR Rail Alternative East Option
- CPD understands the accessibility benefits that the extension would provide to the community. CPD sees this as an opportunity to improve existing parks or create a new park in alternate locations that would better serve the neighborhood.
- CPD will conduct an internal analysis of the needs of the community, and potential parks for improvement or new park lands to compensate for parks that may be affected by RLE project alternatives.

- CPD would like to have a representative attend a future meeting that CTA may have with Friends of the Parks.
- ST provided a copy of map showing Red Line Extension alternatives.

Please notify the author of the minutes of any corrections and/or clarifications within five (5) business days.

cc: Attendees

Meeting Notes

Date: Thursday, May 8, 2014

Meeting: CTA with Chicago Park District and Friends of the Parks

Meeting Purpose: CTA to share RLE Project updates and Parks Impacts

Present:
Erika Sellke, Chicago Park District
Cassandra Francis, Friends of the Parks
Sylvia Jones, Friends of the Parks
Sonali Tandon, Chicago Transit Authority
Virginia Jackson, CWC Transit Group
Jenifer Palmer, CWC Transit Group

Time: 1:00 pm to 2:00 pm

Location: CTA Headquarters, 567 West Lake Street, 10th Floor, Chicago, IL

Presentation Highlights
CTA staff delivered a presentation about the proposed Red Line Extension (RLE) Project that would extend the Red Line from the existing 95th Street Terminal to the vicinity of 130th Street. Representatives from the CTA discussed:

- **Project Overview and Benefits**
  The RLE Project would mean a better served Far South Side, by providing direct CTA rail service and reducing commute times from the project area. The project would include four new stations, a new rail yard, and bus and parking facilities at all stations. The project would encourage economic development and benefit the community by bringing construction jobs to the area and increasing access to jobs outside of the project area.

- **RLE Project Alternatives and Potential Impacts**
  CTA is evaluating three options for the Locally Preferred Alternative along the Union Pacific Railroad (UPRR) tracks including an option within the existing freight right-of-way (ROW Option), an East Option, and a West Option. CTA is also evaluating a rail alternative along Halsted Street, a Bus Rapid Transit (BRT) Alternative along Michigan Avenue, and the No Build Alternative.

- **CTA is preparing an Environmental Impact Statement (EIS)**
  CTA has been evaluating the project alternatives and has begun to prepare a Draft EIS which will analyze the potential positive and negative environmental impacts of construction and operation of each alternative and will propose mitigation measures to reduce or eliminated potential negative impacts. Once the CTA completes the Draft EIS, a public hearing will be held to share the findings of the Draft EIS.

- **Parks Impacts**
  CTA has been analyzing the potential impacts of the project from a number of different perspectives, including potential for displacements, noise and vibration, impacts to historic properties and others and understands this meeting is mainly to discuss findings with respect to parks. Based on the analysis, the No-Build, BRT and Halsted Rail Alternative have no associated potential park impacts. All UPRR Alternatives have an impact to Wendell Smith Park due to the overlap with the park and elevated structure/vertical clearances. There would be temporary occupancy of a small portion of the park during construction, but the area underneath the elevated structure would remain open after construction. Depending upon the UPRR alternative selected, the acreage impacted varies.

  In addition to potential temporary impacts to Wendell Smith Park from all UPRR Alternatives, the UPRR East Alternative has potential impact to Block Park. The affected area includes an isolated portion of the park's open space and a communications tower and is in an area of the park that does not currently serve a recreational use. The key recreational features of the park, walking trails and benches, are on the other side of Harvard Avenue in the eastern half of the park. While there would be some temporary construction impacts, no permanent incorporation is needed as the area underneath the elevated track structure would remain open after construction.

  In addition to potential temporary impacts to Wendell Smith Park from all UPRR Alternatives, the UPRR West Alternative has potential permanent impact to Fernwood Parkway. The West Option alignment would run through two of the four parcels that make up Fernwood Parkway between 101st and 103rd Streets and would affect about 1.9 acres of the park. Temporary closure of the section of the park overlapped by the elevated structure would be necessary during construction. Public use of the park could resume after construction, as long as the area underneath the elevated structure is reopened. However, much of the park between 101st and 103rd Streets would be permanently overlapped and shaded by the structure. Concrete aerial supports would be placed permanently in the park space. The West Option would result in a permanent incorporation of the park space and if this option is selected, CTA would work with the Chicago Parks District on appropriate mitigation. Some options have already been discussed with the City, including creating replacement park space nearby and/or adding enhanced recreational features to improve Fernwood Parkway's functionality as a park. The end result would potentially be a net benefit for park users.

Questions and Comments from Meeting Participants

- Discussion ensued about appropriated funds for project development and Sylvia Jones noted that it was her understanding that $1.5 Billion was to be appropriated in 2009 for the Red Line Extension. CTA stated that funding for the EIS planning study had been received and was used to fund this portion of the project. Once the Final EIS is submitted and a Record of Decision is determined by the Federal Transit Administration (FTA), the project would become eligible under the federally competitive New Starts grant funding. Additional local and state funding sources would be needed at that time for further project development.
- Sylvia Jones asked about the future parking fee for the proposed park and ride facility. This has not yet been determined by CTA and would be dependent upon the alternative selected to move forward. As the project develops further, CTA will evaluate the size and scale needed for the park and ride facilities.
- CTA asked about any areas of community concern with regard to the potential for park impacts of proposed alternatives. Discussion ensued about specific parks in the surrounding community. Sylvia Jones asked about impacts to Princeton Park and Trinity Church. Based on review of study area mapping, these facilities are located near 95th Street, east of Eggleston. CTA noted that these areas are outside of the proposed alternatives' alignments and study area. Similarly, CTA was asked whether the study reviewed potential impacts to Kensington Park. CTA noted that this had been reviewed but was outside of the area of potential effect.
- Sylvia Jones noted that Carver Park in Altgeld Gardens is a good example park in the area.
- Cassandra Francis asked that Major Taylor Bike Trail be added to the park impacts mapping, as appropriate. Major Taylor Bike Trail is not impacted by the project, but should be shown for reference purposes.
- Discussion ensued about potential impacts from all UPRR alternatives on Wendell Smith Park. It is understood that this is not a permanent incorporation and that only a small portion of parkland is affected. However, Ms. Francis noted that leaving the area of overlap between the park and elevated structure afterwards does change the nature of the park use.
- Cassandra Francis had concerns about impacts to parks from the UP Rail alternatives and noted that replacement of parks should be considered as part of the mitigation efforts for Block Park as well as Fernwood Parkway. CTA explained that the portion of Block Park that would be impacted is not used for recreational activity currently and does not contain any amenities. If the UPRR West Option is selected, and Fernwood Parkway is impacted, CTA would work with the Chicago Parks Department on appropriate mitigation, including creating replacement park area nearby and other amenities.
- Ms. Francis noted that she would like to work with Erika Sellke at the Chicago Parks Department to conduct a field visit of the potentially impacted parks and determine ways to enhance compact, integrated park areas within the project study area.

Follow Up

CTA Government and Community Relations staff will provide Ms. Jones with a copy of the Section 106 (Historic) Effects Report.

Friends of the Parks and Chicago Parks Department staff will further coordinate a field visit to discuss the potential impacts on parks and appropriate mitigation. CTA offered to coordinate and be part of these field visits if desired.

Friends of the Parks will look for other properties in the area that could be used for parkland mitigation.

MEETING NOTES

RE: **Chicago Park District Coordination Meeting**
Chicago Transit Authority Red Line Extension Project

DATE: **April 8, 2015, 9:00 a.m.**

LOCATION: **Chicago Park District, 541 N. Fairbanks Court, Chicago, IL**

ATTENDEES:

Name	*Initials*	*Organization*
Sonali Tandon	ST	CTA
Jenifer Palmer	JP	CWC Transit Group
Michael Lange	MH	CPD
Doreen O’Donnell	DO	CPD
Rob Rejman	RR	CPD

PREPARED BY: **Jenifer Palmer**

ISSUE DATE: **April 15, 2015**

MEETING NOTES:

- Sonali Tandon (CTA) provided an update on the status of the Red Line Extension Project. Since CTA last met with the Chicago Park District (CPD), there have been some new developments. CTA is preparing a Draft Environmental Impact Statement (EIS) and has narrowed the number of alternatives under consideration to two options of the Union Pacific Railroad Rail Alternative—the East Option and the West Option.

- After the Draft EIS phase, only one option will move forward for further study in the Final EIS. This is a community-driven project and public feedback on the environmental impacts of each option will help in refining the alignment and in selection of a single preferred option.

- There are a number of environmental resource areas studied in the Draft EIS in addition to parks, such as property displacements and noise and vibration, which could have an effect on community decision-making. CTA’s goal, therefore, is to work with CPD on further detailing appropriate mitigation measures for each of these options that will result in a no adverse effect to parks following implementation of measures and which allows the public an opportunity to review the park impacts of the two options after mitigation.

- CPD stated that they would provide further information on appropriate mitigation measures for each option that are responsive to community needs and would allow the public to weigh in on the park impacts and mitigation measures in line with other considerations on a preferred option.

- CTA shared maps and information on impacts for each option. The alignment has been refined to reduce park impacts and CTA is continuing to coordinate with Illinois Department of Transportation to seek concurrence on refinements in the I-57 segment. For the East Option, park impacts include a portion of Wendell Smith Park and a portion of Block Park. The West Option would impact Fernwood Parkway – a fewer number of parks but greater acreage affected. CPD noted that mitigation measures should note acre-for-acre replacement in either option.

- CTA shared potential mitigation measures for CPD comment, including replacement park provisions, maintaining park area beneath the structure, restoration/landscaping of any disturbed areas, and incorporating design features into the final transportation infrastructure to enhance parks while maintaining safety of the transit facility. For the West Option, there would also be a potential for creating a bike path beneath the elevated structure. CTA would still need to use the area for maintenance purposes.

- CPD noted that when clipping portions of a park, maintaining the park underneath is not as desirable a mitigation measure from a CPD perspective as replacement. The bike path concept is a very desirable one, especially if it could be a connector to other bike park plans that CPD has (i.e., Calumet). There may also be some interesting opportunities/ideas with regard to both options and providing replacement park space near stations. While a park next to the new station might be a non-continuous park, it would have the potential to enhance the surrounding area and provide better park access and connectivity. When parks are incorporated near transit, they are known to attract greater transit-oriented development.

- CTA shared some additional information on requirements under the National Environmental Policy Act and Section 4(f) as it relates to park impacts. Findings related to Section 4(f) will consider not only the impacts to parks, but the significance of parks and the mitigation measures proposed for the determination of a no adverse effect finding on each option after implementation of mitigation measures.

- Obtaining consensus from CPD, as the official with jurisdiction over findings of the impacts and mitigation measures proposed for each option, will allow the continued community-driven process for selection of a preferred option. A public meeting and comment period on findings of all environmental impacts and mitigation measures proposed is expected to occur in spring 2016.

- As a next step, CTA will send CPD a letter (and the materials reviewed during the meeting) that will outline the major items where CTA would like feedback from CPD.

- CTA shared with CPD next steps in the coordination process. These steps will help formalize mitigation measures and impact findings for both options, which can then be shared with the public for further input and feedback on a preferred option.

Appendix C
2014-2015 Red Line Extension Project Update

2014–2015 Red Line Extension Project Update

From 2012-2014, CTA evaluated benefits and impacts of four alternatives: the No Build Alternative, the Bus Rapid Transit Alternative (along Michigan Avenue), the Union Pacific Railroad (UPRR) Rail Alternative, and the Halsted Alternative. CTA evaluated three options of the UPRR Rail Alternative: Right-of-Way Option, East Option, and West Option. CTA also evaluated two options of the UPRR Rail Alternative 130th Street station: a South Station Option and a West Station Option. Based on the project description provided in Section 2 of this technical memorandum, CTA analyzed the impacts of these alternatives and station options. The benefits and impacts are included in the technical memoranda prepared in 2012-2014.

In August 2014, based on the technical analysis and public input, CTA announced the NEPA Preferred Alternative—the UPRR Rail Alternative. Additional conceptual engineering was conducted on the UPRR Rail Alternative to refine the East and West Option alignments. In addition, CTA is considering only the South Station Option of the 130th Street Station.

In late 2014 and early 2015, CTA conducted additional engineering and revised assumptions on the East and West Options to refine the alignments. The refinement of the East and West Options consisted of the following items:

- For the segment of the alignment along I-57, CTA shifted the proposed alignment from the median of I-57 to the north side of I-57 within the existing expressway right-of-way. The construction would be less complex, safer for construction workers, and have a shorter duration. The shift would also allow for fewer impacts to Wendell Smith Park for the East Option, and would allow for no permanent impacts to Wendell Smith Park for the West Option.

- CTA modified the curve speeds as the alignment heads south from I-57 along the UPRR tracks. The curve speed for both the East and West Options would be 35 mph.

- CTA shifted the East Option alignment near 103rd Street station to minimize impacts to Block Park and the Roseland Pumping Station.

- CTA modified the curves south of 103rd Street for both the East and West Options to 55 mph to maximize the train speed.

- CTA refined the layout of the 120th Street yard and shop to optimize yard operations. The refined layout of the yard would accommodate 340 train cars.

The refinement of the East and West Option alignments minimizes potential impacts to parks while providing flexibility for future design phases. The Draft Environmental Impact Statement contains the benefits and impacts of the refined East and West Option alignments and supersedes information presented in other chapters of this technical memorandum

Parklands and Community Facilities

The refined East and West Option alignments would reduce impacts to parklands in the project area.

Union Pacific Railroad Alternative - East Option

The East Option alignment would run through the northwestern corner of Wendell Smith Park, as shown in **Figure 1**. Of the 4.7 acres of the park, approximately 0.7 acre would be overlapped by the elevated structure and its associated clearances. The overlap area includes open space, trees, benches, and a portion of the park's walking trail. The outfield of an existing baseball field would be used. Piers would be located in the park, and the bottom of the elevated structure would be approximately 15 feet above ground level. Temporary closure of the overlapped portion of Wendell Smith Park would be necessary during construction.

The East Option alignment would also run through the west parcel of Block Park. The elevated structure and its associated clearances would overlap 0.9 acre of the park's west parcel, which is 1.3 acres in size, as shown in **Figure 2**. An auxiliary station entrance would also be located in the park, along its western edge. The affected parcel includes an isolated portion of the park's open space and a communications tower, and does not currently serve a recreational use. The key recreational features of the park, walking trails and benches, are on the other side of Harvard Avenue in the east parcel of the park. Some temporary closure of the overlapped area would be necessary during construction.

Union Pacific Railroad Alternative - West Option

The West Option track structure would run through two of the four parcels that make up Fernwood Parkway between 101st and 103rd Streets. Approximately 1.9 acres of the parkway, which is 2.4 acres in size, would be overlapped by the elevated structure and its associated clearances, as shown in **Figure 3**. The parkway functions as open space, and does not contain recreational amenities. Temporary closure of the overlapped section of the parkway would be necessary during construction. Public use of the parkway could resume after construction, as long as the area beneath the elevated track structure were reopened, but much of the parkway between 101st and 103rd Streets would be permanently overlapped and shaded by the structure. Elevated track structure supports would be placed permanently in the park space.

Construction of the West Option would also affect the northwestern corner of Wendell Smith Park. Temporary closure of the overlapped portion of Wendell Smith Park would be necessary during construction. The West Option would have no permanent impacts on Wendell Smith Park.

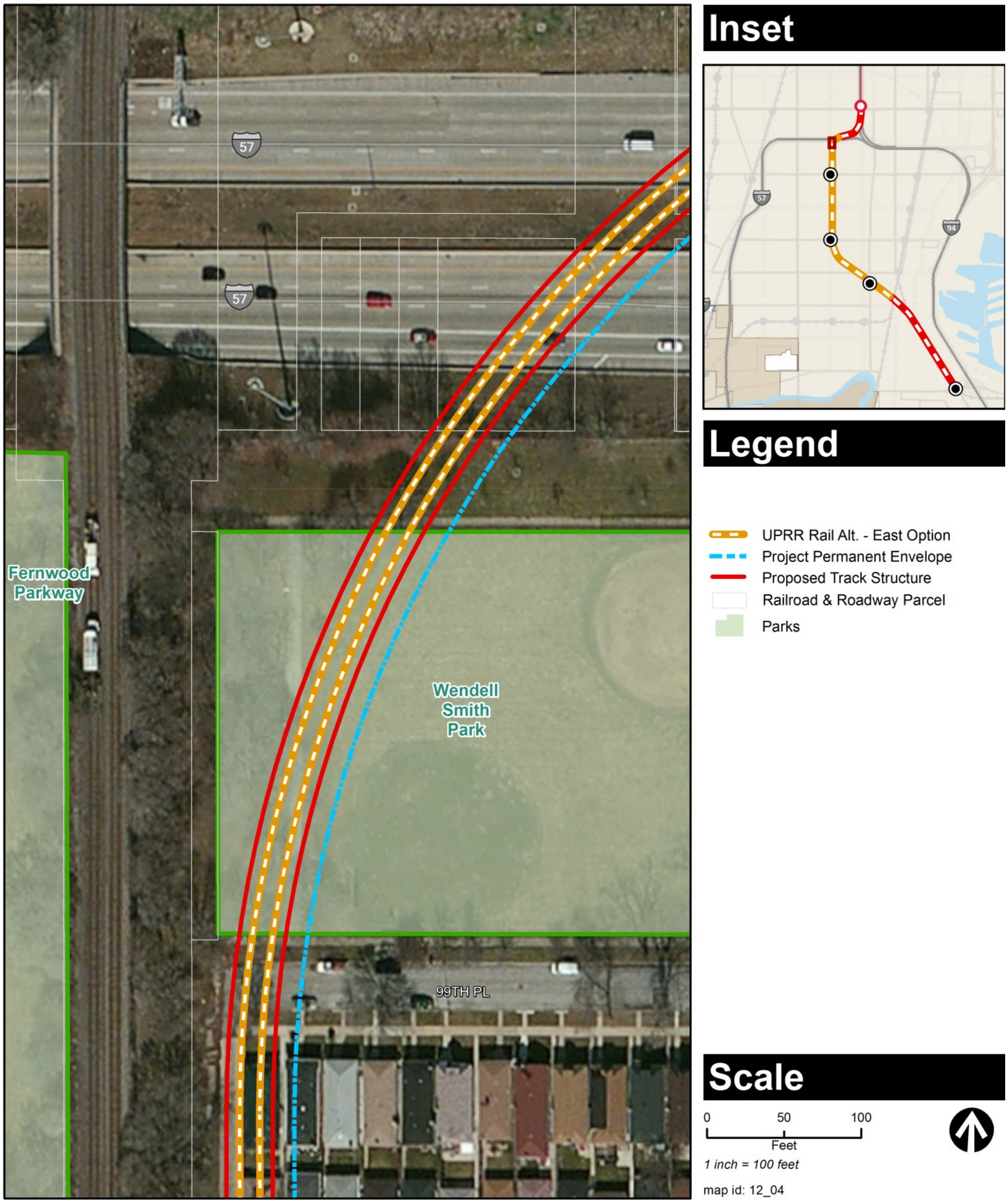
57
57
Fernwood Parkway
Wendell Smith Park
99TH PL
Inset
57
94
Legend
UPRR Rail Alt. - East Option
Project Permanent Envelope
Proposed Track Structure
Railroad & Roadway Parcel
Parks
Scale
0
50
100
Feet
1 inch = 100 feet
map id: 12_04

Figure 1: Impacts on Wendell Smith Park - Union Pacific Railroad Alternative East Option

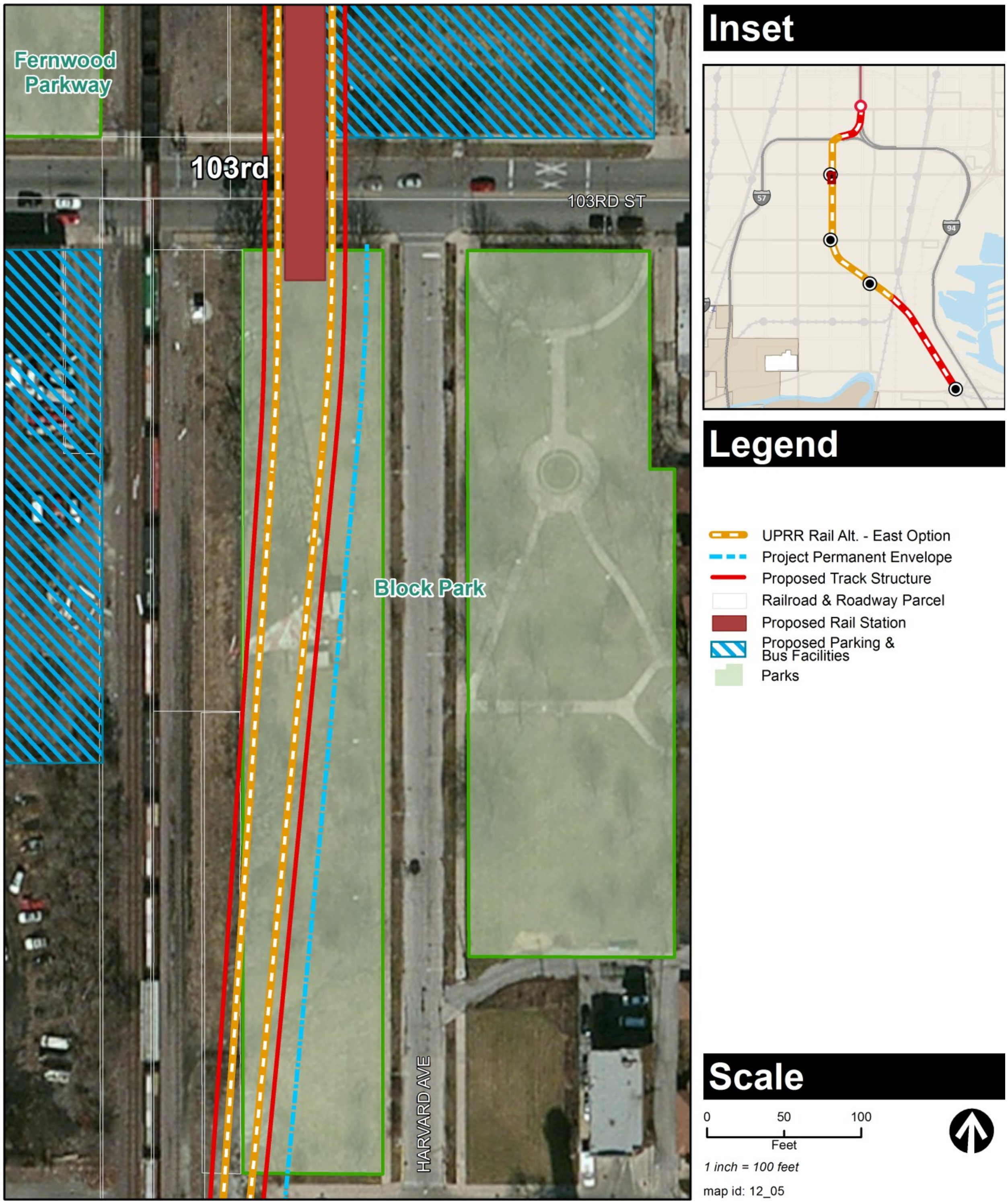
Fernwood Parkway
103rd
103RD ST
Block Park
HARVARD AVE
Inset
57
94
Legend
UPRR Rail Alt. - East Option
Project Permanent Envelope
Proposed Track Structure
Railroad & Roadway Parcel
Proposed Rail Station
Proposed Parking & Bus Facilities
Parks
Scale
0
50
100
Feet
1 inch = 100 feet
map id: 12_05

Figure 2: Impacts on Block Park - Union Pacific Railroad Alternative East Option

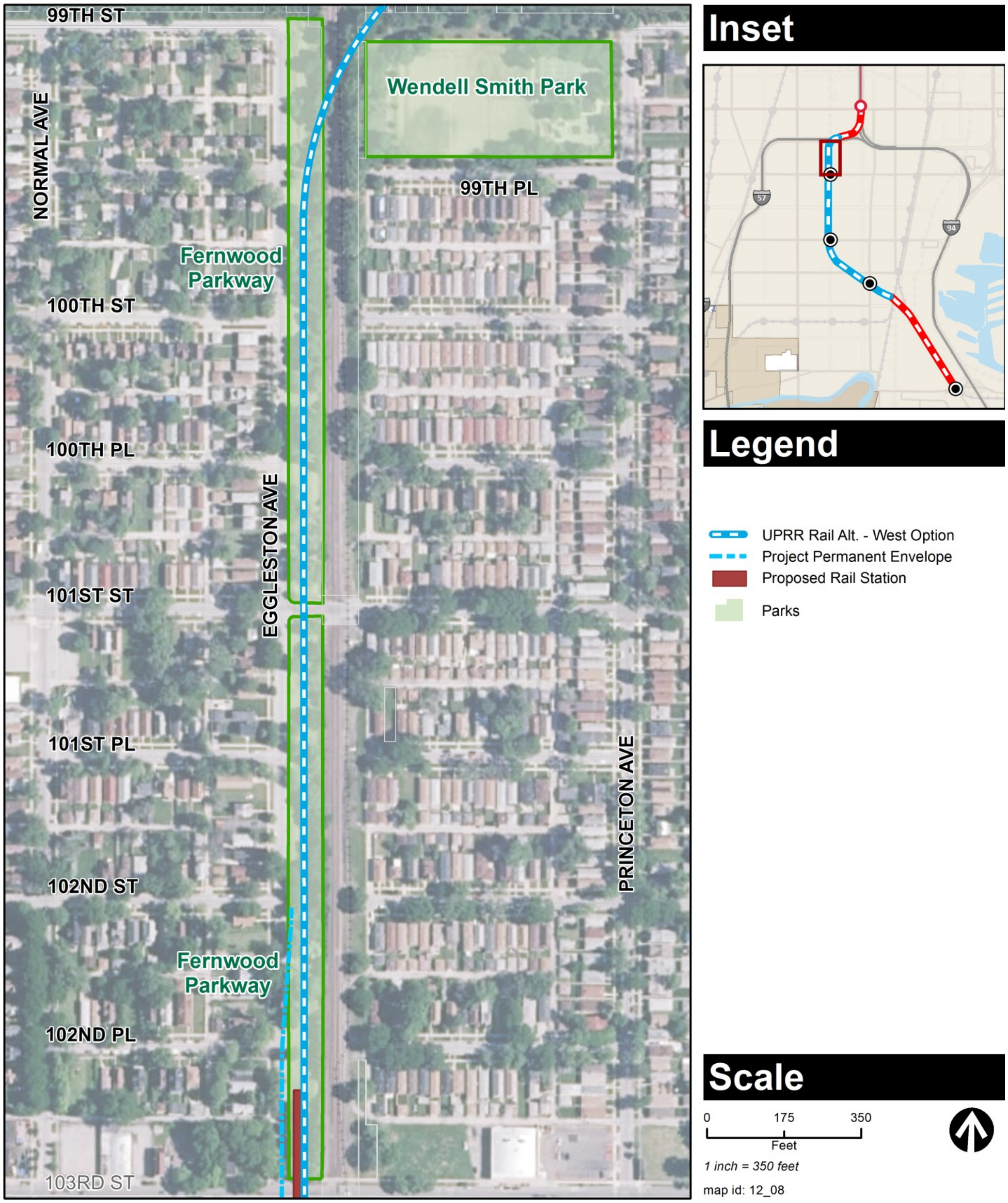
99TH ST
Wendell Smith Park
99TH PL
NORMAL AVE
Fernwood Parkway
100TH ST
100TH PL
EGGLESTON AVE
101ST ST
101ST PL
PRINCETON AVE
102ND ST
Fernwood Parkway
102ND PL
103RD ST
Inset
57
94
Legend
UPRR Rail Alt. - West Option
Project Permanent Envelope
Proposed Rail Station
Parks
Scale
0
175
350
Feet
1 inch = 350 feet
map id: 12_08

Figure 3: Impacts on Fernwood Parkway - Union Pacific Railroad Alternative West Option

Appendix N

Visual and Aesthetic Conditions Technical Memorandum

RED AHEAD
Moving Ahead to a Better Red

Red Line Extension

Chicago Red Line Extension Project

Visual and Aesthetic Conditions

Technical Memorandum

October 24, 2013
Updated September 18, 2015

Prepared for:
Chicago Transit Authority
567 W. Lake Street
Chicago, IL 60661

Prepared by:
CWC Transit Group
125 S. Wacker Drive
Suite 600
Chicago, IL 60606

cta

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Abbreviations

API	area of potential impact
BRT	Bus Rapid Transit
CSS & SBRR	Chicago South Shore & South Bend Railroad
CMAP	Chicago Metropolitan Agency for Planning
CN	Canadian National
CFR	Code of Federal Regulations
CTA	Chicago Transit Authority
EIS	Environmental Impact Statement
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NICTD	Northern Indiana Commuter Transportation District
Metra	Northeast Illinois Regional Commuter Railroad Corporation
ME	Metra Electric District
RLE	Red Line Extension
ROW	right-of-way
TIP	Transportation Improvement Program
UPRR	Union Pacific Railroad

Section 1
Summary

This technical memorandum analyzes the potential impacts of the Red Line Extension (RLE) Project on visual and aesthetic conditions. The potential for impacts on visual and aesthetic conditions was evaluated for each project alternative, including the No Build Alternative, Bus Rapid Transit (BRT) Alternative, Union Pacific Railroad (UPRR) Rail Alternative, and the Halsted Rail Alternative. The UPRR and Halsted Rail Alternatives were divided into two segments for analysis. Segment UA consists of the UPRR Rail Alternative alignment north of Michigan Avenue and Segment UB consists of the alignment south of Michigan Avenue. Segment HA consists of the Halsted Rail Alternative alignment north of 119th Street and Segment HB is the alignment south of 119th Street. The visual and aesthetic analysis considered potential visual impacts on the visual environment, including changes to infrastructure, building mass and/or scale, visible density, landscape patterns, and viewers' sensitivities. The RLE Project corridor extends through a diverse mix of residential, commercial, and light industrial areas in the southern edge of Chicago. Developments in the project area include a diversity of scale, architectural style, and neighborhood character.

The visual analysis was based on fieldwork, professional judgment and analysis of the visual simulations included in Appendix A of this report. The following summarizes the results of the potential beneficial and adverse impacts analysis, both temporary and permanent, associated with the build alternatives.

1.1 Permanent Impacts

Typical positive impacts on visual and aesthetic conditions include creating visual density[1] and a visual gateway between two low-density areas. This addition can provide visual interest and aesthetically activate underdeveloped areas, especially where vacant lots or structures currently exist. In neglected or derelict areas, where project-related mitigation measures are utilized, visual quality for pedestrians and adjacent residences or businesses would improve. Examples include providing new vegetation, landscaping, or other urban design amenities.

Typical adverse impacts include the replacement of existing cohesive community fabric with large-scale parking structures that would substantially alter the scale, character, and density of viewsheds. The addition of stations and elevated structures could affect character and visual quality substantially, and would create new shadows and light obstructions on adjacent neighborhoods. In many, but not all, instances, mitigations such as designing the station and structures to match the character of the surrounding fabric, using urban design techniques to reduce massing and create pedestrian friendly surroundings, and providing landscaping and visual screening would help reduce visual and aesthetic impacts on viewsheds.

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[1] Visual density relates to the massing of objects within a view. Density may be related to buildings or structures, but density may also be created with vegetation, landscaping, or other amenities.

Impacts related to each RLE Project alternative are summarized as follows:

- BRT Alternative - Impacts would be concentrated at the Kensington Avenue and 130th Street stops, where minor land acquisition and demolition would be required to accommodate a park & ride structure at each stop. The impacts from the BRT Alternative would not be adverse after mitigation.

- The UPRR Rail Alternative Right-of-Way (ROW) Option – After mitigation, impacts would not be adverse at the Michigan Avenue station and the area of the park & ride facility (View 13A). The mitigation would involve design features for the parking structure which create relief in the façade in order to match the residential pattern in the vicinity of the parking structure.

- The UPRR Rail Alternative East Option - Impacts would be **adverse** to the southeast of the Michigan Avenue station.

- The UPRR Rail Alternative West Option – Even after application of mitigation measures, impacts would be **adverse** from 99th Street to 103rd Street, including the 103rd Street station and the park & ride facility for the Michigan Avenue station. The height and mass of the structures and its proximity to residences could not be mitigated.

- The Halsted Rail Alternative would have **adverse** impacts in Segment HA in the area at the transition from the I-57 ROW to Halsted Street (see View 23). The visual impact due to the height of the elevated structure could not be mitigated. The Vermont Street station in Segment HB would have **adverse** impacts after mitigation. The height of the structure and its proximity to residences could not be mitigated.

1.2 Construction Impacts

Construction activities associated with the alternatives would cause temporary impacts on visual and aesthetic conditions. The amount of construction activity proposed under the UPRR Rail Alternative East and West Options would be greater than for other options and alternatives due to land acquisition and demolition. Maintaining as much vegetation as practical, limiting light trespassing from night lighting, and maintaining debris-free construction areas are all discussed as construction mitigations to minimize the temporary visual impacts.

1.3 Cumulative Impacts

The No Build Alternative would not cause cumulative impacts. Any proposed developments already being considered for development within the RLE Project corridor would still occur under the No Build Alternative. There are no future developments planned for the project corridor that would have cumulative impacts on visual and aesthetic conditions with the BRT Alternative, UPRR Rail Alternative, or Halsted Rail Alternative.

1.4 2014-2015 Red Line Extension Project Update

Updated July 28, 2015

In August 2014, based on the technical analysis and public input until then, CTA announced the NEPA Preferred Alternative—the UPRR Rail Alternative. CTA is considering two alignment (route) options of this alternative: the East Option and the West Option. At this time, CTA is also considering only the South Station Option of the 130th Street Station. In late 2014 and early 2015, CTA conducted additional engineering on the East and West Options to refine the East and West Option alignments. Appendix B of this technical memorandum summarizes the refined alignments and any additional or different impacts that would result. The information in Appendix B supersedes information presented in other chapters of this technical memorandum.

Section 2
Project Description

The Chicago Transit Authority (CTA) is proposing to extend the Red Line from the existing 95th Street Terminal to the vicinity of 130th Street, subject to the availability of funding. The proposed RLE would include four stations. Each station would include bus transfer and parking facilities. This project is one part of the Red Ahead Program to extend and enhance the entire Red Line. The CTA is also planning 95th Street Terminal improvements that are anticipated to be completed prior to the proposed RLE construction.

The project area is 11 miles south of the Chicago central business district (commonly referred to as the Loop) and encompasses approximately 20 square miles. The boundaries of the project area are 95th Street on the north, Ashland Avenue on the west, Stony Island Avenue on the east, and the Calumet-Sag Channel/Little Calumet River and 134th Street on the south. The I-57 Expressway and I-94 Bishop Ford Freeway cross the western and eastern edges of the project area, respectively. Lake Calumet is in the eastern portion of the project area. The project area encompasses parts of nine community areas in the City of Chicago and the eastern section of the Village of Calumet Park. Chicago community areas include Beverly, Washington Heights, Roseland, Morgan Park, Pullman, West Pullman, Riverdale, Hegewisch, and South Deering. The project area comprises residential (primarily single family), industrial (both existing and vacant), transportation (including freight), and commercial development.

The Draft Environmental Impact Statement (EIS) focuses on the following alternatives (shown in Figure 2-1), which emerged from the Alternatives Analysis and the National Environmental Policy Act (NEPA) scoping process:

- No Build Alternative
- BRT Alternative
- UPRR Rail Alternative
    - ROW Option
    - East Option
    - West Option
- Halsted Rail Alternative

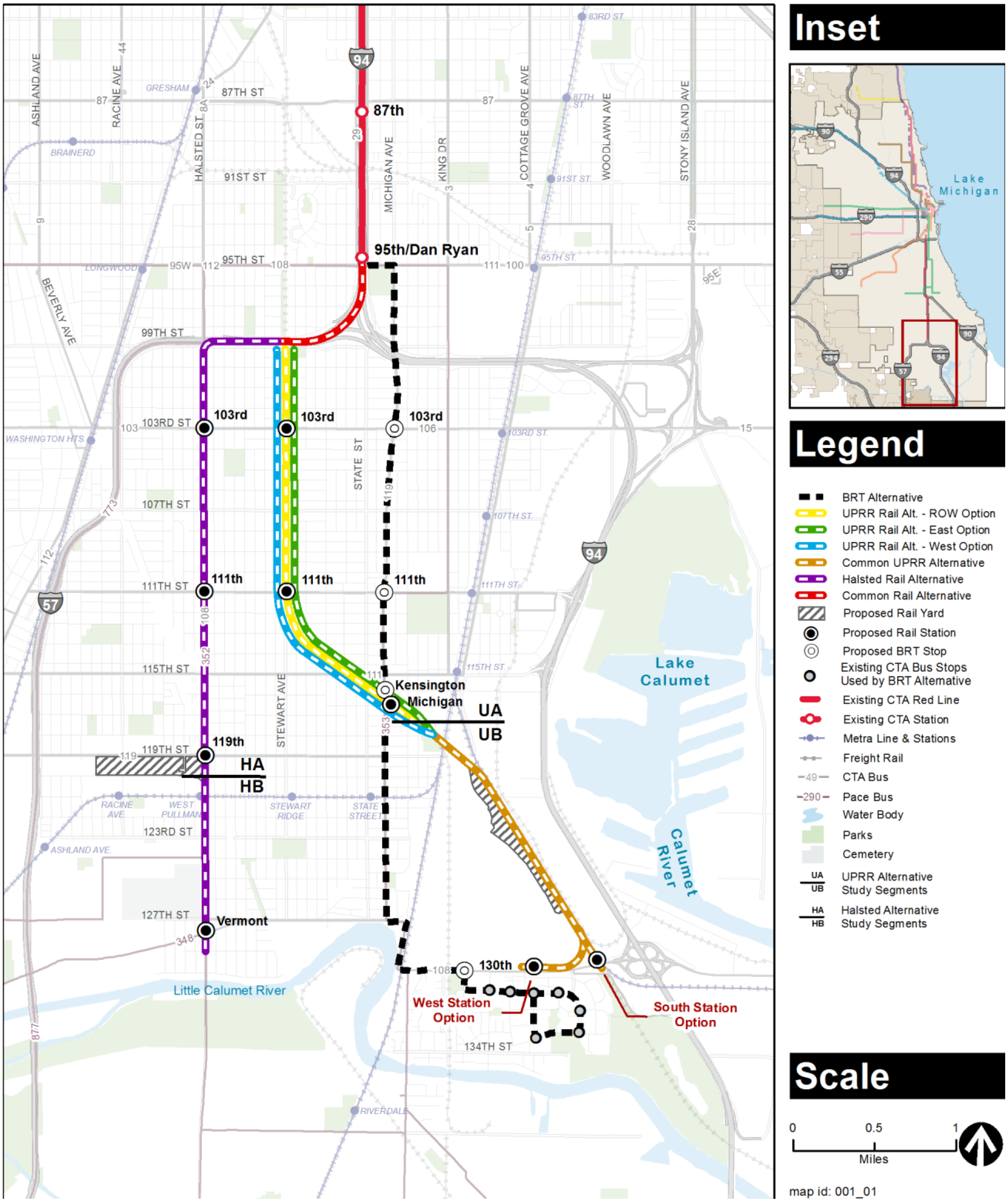
Inset
Lake Michigan
Legend
BRT Alternative
UPRR Rail Alt. - ROW Option
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
Common UPRR Alternative
Halsted Rail Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Proposed BRT Stop
Existing CTA Bus Stops Used by BRT Alternative
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
49 CTA Bus
290 Pace Bus
Water Body
Parks
Cemetery
UA UB UPRR Alternative Study Segments
HA HB Halsted Alternative Study Segments
Scale
0 0.5 1
Miles
map id: 001_01
87th
95th/Dan Ryan
103rd
103rd
103rd
111th
111th
111th
Kensington
Michigan
119th
Vermont
130th
UA
UB
HA
HB
West Station Option
South Station Option
Lake Calumet
Calumet River
Little Calumet River
87TH ST
91ST ST
95TH ST
99TH ST
103RD ST
107TH ST
111TH ST
115TH ST
119TH ST
123RD ST
127TH ST
134TH ST
ASHLAND AVE
RACINE AVE
HALSTED ST
BEVERLY AVE
STEWART AVE
STATE ST
MICHIGAN AVE
KING DR
COTTAGE GROVE AVE
WOODLAWN AVE
STONY ISLAND AVE
GRESHAM
BRAINERD
LONGWOOD
WASHINGTON HTS
RACINE AVE
WEST PULLMAN
STEWART RIDGE
STATE STREET
ASHLAND AVE
RIVERDALE
83RD ST
87TH ST
91ST ST
95TH ST
103RD ST
107TH ST
111TH ST
115TH ST
94
57

Figure 2-1: Red Line Extension Alternatives

The No Build Alternative is a required alternative as part of the NEPA environmental analysis and is used for comparison purposes to assess the relative benefits and impacts of extending the Red Line. The No Build Alternative is carried into the Draft EIS phase of the project development regardless of its performance versus the build alternatives under consideration. No new infrastructure would be constructed as part of the No Build Alternative other than committed transportation improvements that are already in the Chicago Metropolitan Agency for Planning (CMAP) Fiscal Year 2010–2015 Transportation Improvement Program (TIP) and the improvements to 95th Street Terminal. The TIP projects within the project area consist of four bridge reconstructions, several road improvement projects including resurfacing and coordination of signal timing on 95th Street, work on Metra Electric District's (ME) facilities, construction of a bicycle/pedestrian multi-use trail, and preservation of historic facilities. The No Build Alternative includes regular maintenance of existing track and structures, and bus transit service would be focused on the preservation of existing services and projects. All elements of the No Build Alternative are included in each of the other alternatives. Under this alternative, travel times would not improve from existing conditions.

The BRT Alternative (formerly referred to as the Transportation Systems Management Alternative) is a 5.0-mile, limited-stop, enhanced BRT route, which is assumed to operate 24 hours per day between the existing 95th Street Terminal and the intersection of 130th Street and Eberhart Avenue. No dedicated bus lanes would be provided for the BRT Alternative; however, parking lanes would be removed for some portions of the alignment and four stops with improved bus shelters and park & ride facilities would be created at 103rd Street and Michigan Avenue, 111th Street and Michigan Avenue, Kensington Avenue and Michigan Avenue, and 130th Street and Eberhart Avenue. Although BRT service elements would not continue south of the 130th Street stop, the bus route would continue through Altgeld Gardens along the existing route with six stops. The BRT Alternative would be consistent with bus routing changes that may occur as part of improvements to the 95th Street Terminal. Under this alternative, travel times between 130th Street and the Loop would improve over existing conditions.

The UPRR Rail Alternative is a 5.3-mile extension of the heavy rail transit Red Line from its existing 95th Street Terminal to 130th Street, just west of I-94. The Chicago Transit Board designated the UPRR Rail Alternative as the Locally Preferred Alternative at its August 12, 2009 board meeting. This alternative includes construction and operation of new heavy rail transit tracks, mostly in existing transportation corridors. The UPRR Rail Alternative has three options for alignment (ROW, East, and West), all of which would include operation on elevated structure from 95th Street to just past the Canadian National (CN)/ME tracks near 119th Street. The alignment would then transition to at-grade through an industrial area with no public through streets, terminating at 130th Street in the vicinity of Altgeld Gardens. Four new stations would be constructed at 103rd Street, 111th Street, Michigan Avenue, and 130th Street. The 130th Street station would be the terminal station, with two options under evaluation: the South Station Option and the West Station Option. A new yard and shop facility would be sited near 120th Street and Cottage Grove Avenue. The bus routes in the vicinity of the UPRR Rail Alternative would be modified to enhance connectivity between the Red Line and the bus network. The hours of operation and service frequency for the UPRR Rail Alternative are assumed to be the same as

for the current Red Line. Under this alternative, travel times between 130th Street and the Loop would improve substantially over existing conditions.

The Halsted Rail Alternative is a 5.0-mile heavy rail transit extension of the existing Red Line. In this alternative, the Red Line would operate on an elevated structure running south from 95th Street along I-57 until Halsted Street. The alignment would then turn south and continue along Halsted Street to the intersection of Halsted Street and Vermont Avenue near 127th Street. This alternative would include four new stations at 103rd Street, 111th Street, 119th Street, and Vermont Avenue. The Vermont Avenue station would be the terminal station. A new yard and shop would be sited west of Halsted Street and between the 119th Street and Vermont Avenue stations. The bus routes in the vicinity of the Halsted Rail Alternative would be modified to enhance connectivity to the Red Line. The hours of operation and service frequency for the Halsted Rail Alternative are assumed to be the same as for the current Red Line. Under this alternative, travel times between 127th Street and the Loop would improve substantially over existing conditions. This alternative would not extend rail to Altgeld Gardens, which would be served by bus connecting to the Vermont terminal station.

Section 3
Methods for Impact Evaluation

Impacts on the visual and aesthetic conditions include changes to the existing condition and visible environment that would be brought on by construction and operation of the RLE Project alternatives. Depending on location, these changes might adversely affect or positively enhance the visual environment and might have varying degrees of impact on viewer sensitivity.

3.1 Regulatory Framework

This section summarizes relevant federal, state, and local laws and regulations that guided the aesthetic and visual analysis.

3.1.1 Federal

For historic properties, Section 106 of the National Historic Preservation Act (NHPA) as amended in 1966 [36 Code of Federal Regulations [CFR] § 800.5(a)(2)] regulates activities that could diminish the visual integrity of a property's significant historic features. Potential visual impacts on historic resources were evaluated in the *Historic and Cultural Resources Technical Memorandum*.

Title 23, Section 162 of the United States Code designates National Scenic Byways or All-American Roads based on archaeological, cultural, historic, natural, recreational, and scenic qualities. The RLE Project would not affect any such designated byways or roadways and these are not discussed further in this document.

3.1.2 State

Context Sensitive Design - Public Act 093-0545, Context Sensitive Solutions, is an interdisciplinary approach that seeks effective, multimodal transportation solutions by working with stakeholders to develop, build, and maintain cost-effective transportation facilities that fit into and reflect the project's surroundings—its "context." Through early, frequent, and meaningful communication with stakeholders, and a flexible and creative approach to design, the resulting projects are intended to improve safety and mobility for the traveling public, while preserving and enhancing the scenic, economic, historic, and natural qualities of the settings through which they pass.

3.1.3 Local

The RLE Project would occur within the jurisdiction of the City of Chicago for each of the planned alternatives. In addition, a portion of the Halsted Rail Alternative alignment borders the Village of Calumet Park. The City of Chicago has guidelines or ordinances governing aspects of the aesthetics of developments including the following:

- City of Chicago Zoning Ordinance and Land Use Ordinance - Municipal Code Titles 16 and 17. The City of Chicago's Zoning Ordinance includes requirements for review of Planned

Developments (17-8-0500) including all development using Air Rights (17-8-0501). In addition to the review of building designs and plans, the zoning ordinance requires adherence to the City of Chicago's Landscape Ordinance.

- City of Chicago Landmarks Ordinance - Municipal Code Title 2, Chapter 120, Article XVII. The City of Chicago Landmarks Ordinance requires that buildings designated or "pending" landmarks be reviewed by the Commission on Chicago Landmarks.
- Community and Neighborhood Plans and Studies.

The Village of Calumet Park uses the Code of Ordinances to govern aspects of the aesthetics of developments.

3.2 Impact Analysis Thresholds

Although NEPA offers no specific thresholds for visual significance, the following thresholds were used to identify adverse impacts. For the purpose of this EIS, an impact would be adverse if it resulted in one of more of the following:

- A major change in the community's aesthetic character
- A major incompatibility with the character of the area (i.e., a project feature would contrast strongly with its surroundings)
- Incompatibility with community goals
- A substantial degradation of the existing visual character or quality of a site and its surroundings
- Impacts on a historic site through extensive remodeling or removal of buildings or their surrounding area
- Creation of new shade and shadow effects

In addition to the thresholds listed above which are related to the change in the resource, determination of impacts is influenced by a more subjective measure termed viewer response. Viewer response is related to factors such as number of people in each viewer group and distance between the viewer group and resource. Related to the number of people in each viewer group, if few people are able to view the change in resource, the impact may be low.[2] Related to the distance between the viewer group and the resource, a change in resource that is far away from viewers may be a low impact even if the change in resource is quite substantial because the ability to see the details of an object decreases with distance (USDOT 1981).

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[2] Note that no counts of the number of people in a viewer group were made. Size of the viewer groups was made by professional judgment based on adjacent land use and housing density.

3.3 Area of Potential Impact

The geographic area of potential impact (API) for aesthetics includes all areas along the RLE Project corridor within visual range of major viewer groups, including residents, business owners, recreationists, commuters, and visitors. The distance of the API from the path of the RLE Project would depend on the existence of view corridors. View corridors, including parks and streets, can increase the API. View corridors perpendicular to the project area are assumed to be ¼ mile. Figure 3-1 shows the API.

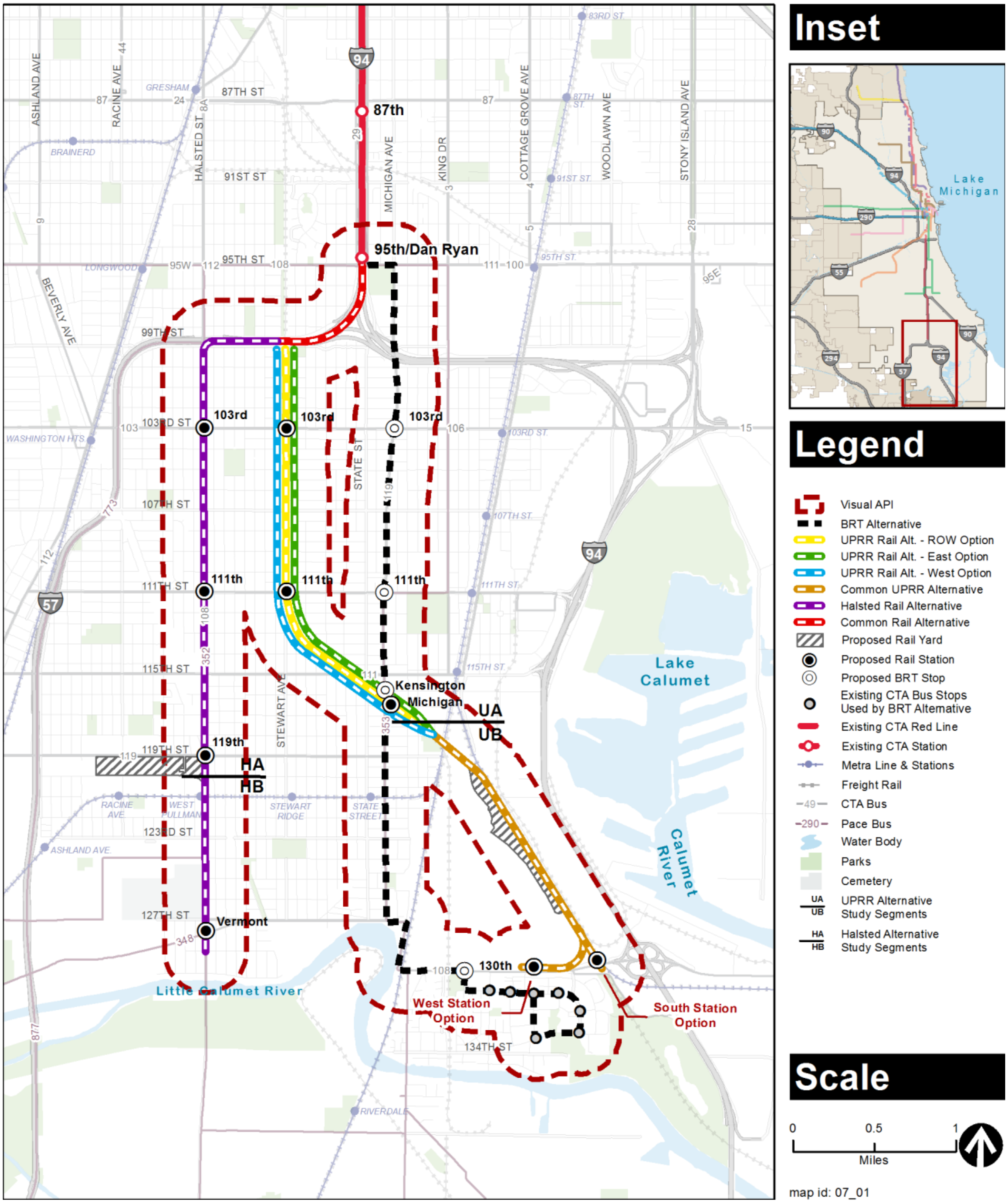

Inset
Lake Michigan
Legend
Visual API
BRT Alternative
UPRR Rail Alt. - ROW Option
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
Common UPRR Alternative
Halsted Rail Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Proposed BRT Stop
Existing CTA Bus Stops Used by BRT Alternative
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
CTA Bus
Pace Bus
Water Body
Parks
Cemetery
UPRR Alternative Study Segments
Halsted Alternative Study Segments
Scale
0
0.5
1
Miles
map id: 07_01
87th
95th/Dan Ryan
103rd
111th
119th
Vermont
Kensington
Michigan
130th
UA
UB
HA
HB
West Station Option
South Station Option
Lake Calumet
Calumet River
Little Calumet River
87TH ST
91ST ST
95TH ST
99TH ST
103RD ST
107TH ST
111TH ST
115TH ST
119TH ST
123RD ST
127TH ST
134TH ST
ASHLAND AVE
RACINE AVE
HALSTED ST
MICHIGAN AVE
KING DR
COTTAGE GROVE AVE
WOODLAWN AVE
STONY ISLAND AVE
STATE ST
STEWART AVE
BEVERLY AVE
GRESHAM
BRAINERD
LONGWOOD
WASHINGTON HTS
WEST PULLMAN
STEWART RIDGE
STATE STREET
RIVERDALE

Figure 3-1: Area of Potential Impact

3.4 Methods

It is imperative when evaluating visual and aesthetic conditions to apply an objective process of uniform criteria. Areas of study were developed through fieldwork, evaluations of the scoping document public comments, community planning documents, and analysis of viewsheds.

The identified potential viewsheds included the following types:

- Views to and from historic, or potentially historic, structures or districts
- Views where the project features (either horizontal or vertical) might negatively affect the visual character of the viewshed, including changes to the scale and character of the neighborhood
- Views depicting built or natural features that might be negatively affected by shade and shadow from new structures.
- Notable views of natural features, including waterways or open space.

Potential viewsheds were inventoried and documented with photographs (Appendix A).

Characteristics of *Visual Changes* were categorized by a ranking of the degree of change on the given environment. Table 3-1 identifies the characteristics used to determine the visual change for a viewshed.

Table 3-1: Characteristics of High, Moderate, and Low Levels of Visual Change

High Level of Visual Change	Moderate Level of Visual Change	Low Level of Visual Change
Removal of Historic Building	Moderate Property Displacement	Maintaining Existing Scale
Removal of Historic Neighborhood	Moderate Change in Scale	No Removal of Vegetation
Displacement of Community	Moderate Removal of Vegetation	Similar Construction
Substantial Property Displacement		Within Existing Row
Substantial Change in Scale		Low View Disruption
Blocking Historic or Scenic Views		Low Property Displacement
Removal of All Vegetation		

In addition to classifications of visual change, the identification and determination of *Viewer Sensitivity* (*Federal Highway Administration Visual Impact Assessment for Highway Projects*, p. 63) was taken into consideration. Depending on which user groups interact the most with a given viewshed, and their priorities, the level of significance might increase or decrease. Major viewer groups along the RLE Project corridor include residents, business owners, recreationists, commuters, and visitors:

- *Residents* are defined as individuals residing within direct visual contact of the project area, who typically have a high sensitivity to visual change due to a high degree of familiarity with their surroundings and high level of frequency of visual interaction.

- *Business Owners* are operators of businesses within direct visual contact of the project area and who also typically have a high sensitivity to visual change based on familiarity with the existing conditions and frequency of interaction.

- *Recreationists* are individuals that may walk, run, or bike in direct visual contact of the project area. Individuals using parks are considered recreationists in this assessment. Recreationists have a higher sensitivity to changes to scenic views, historic neighborhoods, displacement of community, or removal of vegetation than other viewers.

- *Commuters* would view the project area in the course of daily travel to and from their ultimate destination. Commuters would typically show less visual sensitivity than other viewers because they are travelling through the project area or traveling to reach a destination within the project area. Commuters living in the immediate vicinity would be categorized as residents.

- *Visitors* are individuals who rarely have visual interaction with the project area and have little familiarity with existing conditions. Visitors would be most affected by changes to historic buildings or structures, and by the blocking or removal of scenic views.

Fifty-two viewsheds from the project area for the BRT, UPRR, and Halsted Rail Alternatives were selected for further analysis. These locations were studied using photo montage techniques for overlaying a 3D graphic rendering of a typical station on photographs representing the viewshed. Rankings of *Visual Impact*, *Viewer Sensitivity* were summarized for each location to determine a comprehensive level of impact in Section 5 of this document. Visual illustrations are provided in Appendix A.

Section 4
Affected Environment

The affected environment includes the existing visual conditions surveyed in the API. The existing conditions and the level of visual quality were used as a baseline to measure the visual impacts of each proposed alternative. For the purpose of this report, all of the RLE alternatives except the BRT Alternative have been subdivided into two segments per alternative. Figure 2-1 shows the alternatives and segment divisions, and Figures 4-1 through 4-17 show the alternatives and the specific viewpoint locations for each alternative. Figures 4-18 through 4-23 illustrate the typical conditions within each segment.

The RLE alignment would run through a diverse mix of land uses including residential, commercial, and light industrial. Each RLE alternative alignment, except for the BRT Alternative, would begin at the existing 95th Street Terminal and would run south along I-94, then curve west to follow I-57. Figures 4-18 and 4-19 show typical visual conditions along this corridor. This segment of the corridor provides a relatively cohesive landscape for all proposed alternatives.

The BRT Alternative would operate between the existing 95th Street Terminal and the intersection of 130th Street and Eberhart Avenue. The BRT Alternative is shown on Figure 4-1. The low- to medium-density corridor consists of one- to two-story residential and light commercial structures. There is little to no architectural character or significance along the alternative corridor, shown in View 40 in Appendix A. On-street parking and generous sidewalks flank both sides of Michigan Avenue. Areas of visual interest include new development between 104th and 107th Streets and Lion Field between 124th and 125th Place. The portion of the route south of 120th Place is partially lined with trees and consists of mostly residential structures with relatively cohesive character. The portion of the BRT Alternative alignment south of Michigan Avenue runs through a low-density residential and light commercial district until 130th Street and Eberhart Avenue, near the Altgeld Gardens neighborhood. Refer to View 41 in Appendix A. Figures 4-2 through 4-5 show viewpoint locations for the BRT Alternative and Table 4-1 provides a summary of the existing viewpoints for the BRT Alternative. The table contains the description of the characteristics and baseline condition assessment for the existing visual quality.

The UPRR Rail Alternative alignment south of I-57 runs along an existing railroad corridor that is surrounded by a mix of residential and light commercial districts. Figure 4-6 shows the segments and options of the UPRR Rail Alternative. UPRR Rail Alternative Segment UA (north of 117th Street) encompasses residential development consisting of one- to two-story structures of similar style. Light commercial buildings are typically at intersections that meet the existing UPRR tracks at grade. A substantial portion of the development in this segment is vacant and contains minimum architectural embellishments. Figures 4-20 and 4-21 show typical conditions along this segment. The Roseland pumping station at 104th Street and Harvard Avenue is one of the few structures in the area with architectural character and is shown in Figure 4-22. Segment UB (UPRR Rail Alternative south of Michigan Avenue) runs along the Metropolitan Water Reclamation District property and terminates just north of the Altgeld Gardens neighborhood.

Views 18 and 41 in Appendix A show typical conditions in this area. Aside from the neighboring residences, this area has a light industrial character. The partially vacant neighborhood is relatively isolated between 130th Street, I-94, and Little Calumet River. Figures 4-7 through 4-11 show viewpoint locations for the UPRR Alternative and Table 4-1 provides a summary of the existing viewpoints for the UPRR Alternative. The table contains the description of the characteristics and baseline condition assessment for the existing visual quality.

The Halsted Rail Alternative alignment runs south along Halsted Street through a light commercial and retail corridor surrounded by residential districts. Figure 4-12 shows the Halsted Rail Alternative segments. The architectural style and character along both Segment HA and HB is relatively consistent, comprising one- to two-story structures with minimal architectural detail. Large sidewalks and parking lanes flank both sides of Halsted Street, while the street itself contains two through lanes in either direction. Figure 4-23 shows a typical visual condition along Halsted Street. Segment HA (Halsted Rail Alternative north of 119th Street) is low to moderate density and many of the commercial structures have adjacent parking lots. This portion of Halsted Street contains planters along a tree-lined median and is shown in Views 23 and 24 in Appendix A. Segment HB (Halsted Rail Alternative south of 119th Street) has an older, more commercial character but is still low to moderate density. Views 34 and 35 in Appendix A show typical conditions along this segment. The Halsted Rail Alternative alignment runs past Cedar Park Cemetery and terminates north of the bridge that carries Halsted Street over the Little Calumet River. Figures 4-13 through Figure 4-17 show viewpoint locations for the Halsted Street Alternative and Table 4-1 provides a summary of the existing viewpoints for the Halsted Street Alternative. The table contains the description of the characteristics and baseline condition assessment for the existing visual quality.

Land acquisition would be required for all UPRR Rail Alternative options and the Halsted Rail Alternative along the RLE Project corridor. Required building demolition would have impacts on the surrounding scale and character of affected areas by various degrees. Due to the large area of potential impact, not all affected viewsheds are discussed in Table 4-1. Visualization illustrations of project impacts were completed on representative areas and those with highest potential visual impact; thus, only those selected viewsheds have been shown in Table 4-1.

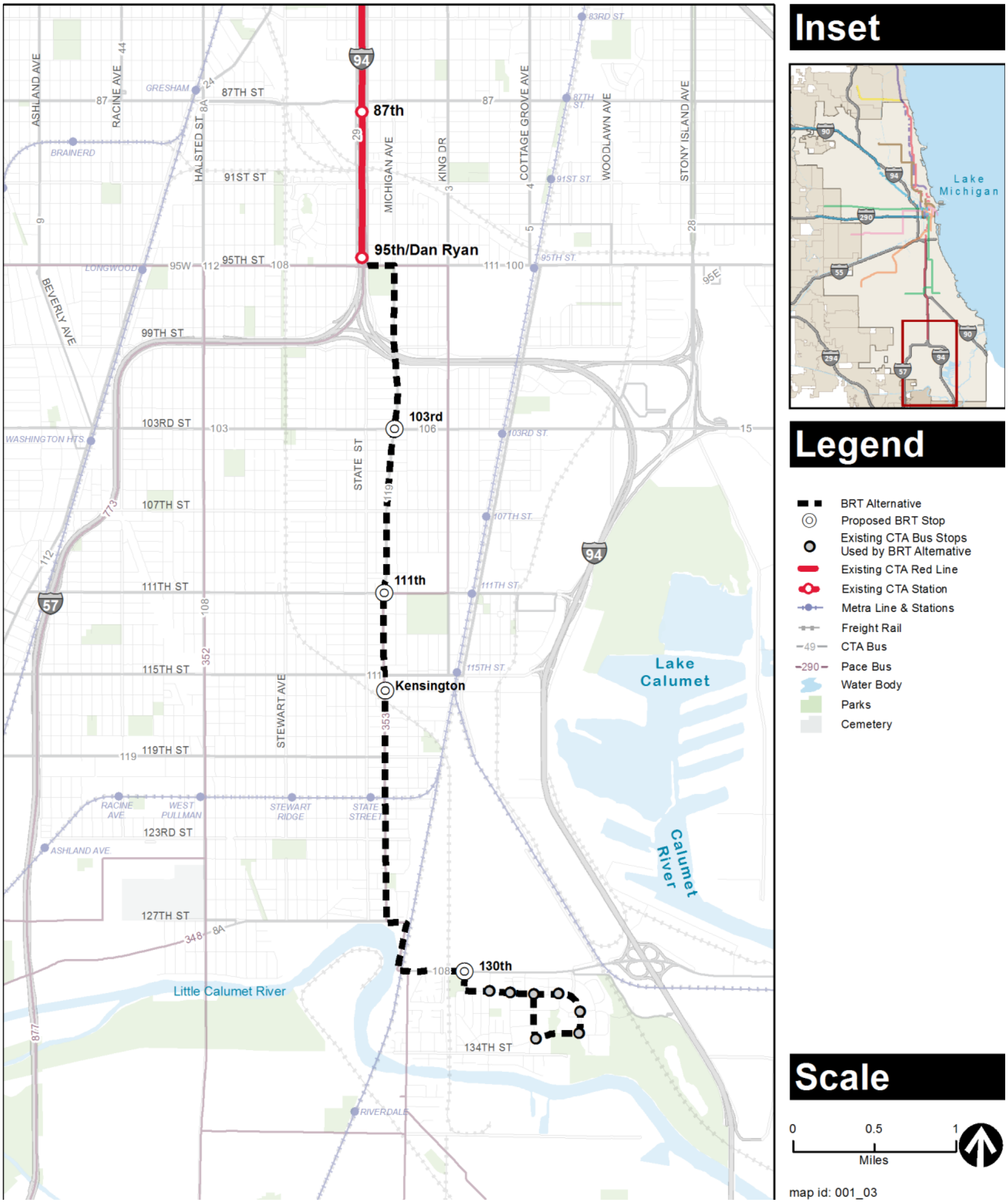

87th
95th/Dan Ryan
103rd
111th
Kensington
130th
87TH ST
91ST ST
95TH ST
99TH ST
103RD ST
107TH ST
111TH ST
115TH ST
119TH ST
123RD ST
127TH ST
134TH ST
ASHLAND AVE
RACINE AVE
HALSTED ST
MICHIGAN AVE
KING DR
COTTAGE GROVE AVE
WOODLAWN AVE
STONY ISLAND AVE
STATE ST
STEWART AVE
BEVERLY AVE
GRESHAM
BRAINERD
LONGWOOD
WASHINGTON HTS
RACINE AVE
WEST PULLMAN
STEWART RIDGE
STATE STREET
ASHLAND AVE
RIVERDALE
83RD ST
87TH ST
91ST ST
95TH ST
103RD ST
107TH ST
111TH ST
115TH ST
Lake Calumet
Calumet River
Little Calumet River
94
57
Inset
Lake Michigan
Legend
BRT Alternative
Proposed BRT Stop
Existing CTA Bus Stops Used by BRT Alternative
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
CTA Bus
Pace Bus
Water Body
Parks
Cemetery
Scale
0
0.5
1
Miles
map id: 001_03

Figure 4-1: Bus Rapid Transit Alternative

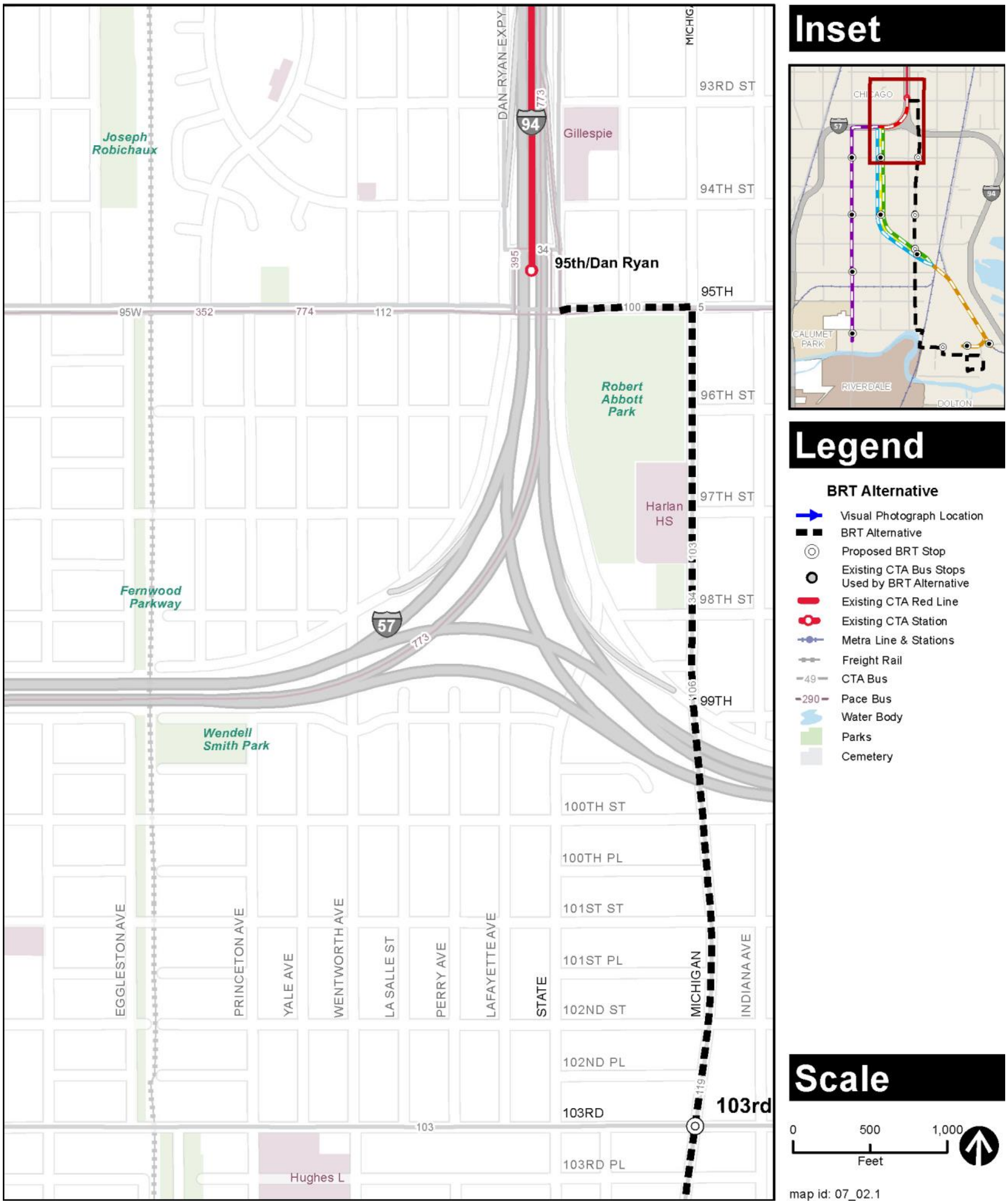

Inset
CHICAGO
CALUMET PARK
RIVERDALE
DOLTON
Legend
BRT Alternative
Visual Photograph Location
BRT Alternative
Proposed BRT Stop
Existing CTA Bus Stops Used by BRT Alternative
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
CTA Bus
Pace Bus
Water Body
Parks
Cemetery
Scale
0
500
1,000
Feet
map id: 07_02.1
DAN RYAN EXPY
MICHIG
93RD ST
94TH ST
95TH
96TH ST
97TH ST
98TH ST
99TH
100TH ST
100TH PL
101ST ST
101ST PL
102ND ST
102ND PL
103RD
103RD PL
95th/Dan Ryan
103rd
Gillespie
Joseph Robichaux
Robert Abbott Park
Harlan HS
Fernwood Parkway
Wendell Smith Park
Hughes L
EGGLESTON AVE
PRINCETON AVE
YALE AVE
WENTWORTH AVE
LA SALLE ST
PERRY AVE
LAFAYETTE AVE
STATE
MICHIGAN
INDIANA AVE
94
57
773
395
34
95W
352
774
112
100
5
103
106
119
103

Figure 4-2: View Locations for the Bus Rapid Transit Alternative - North

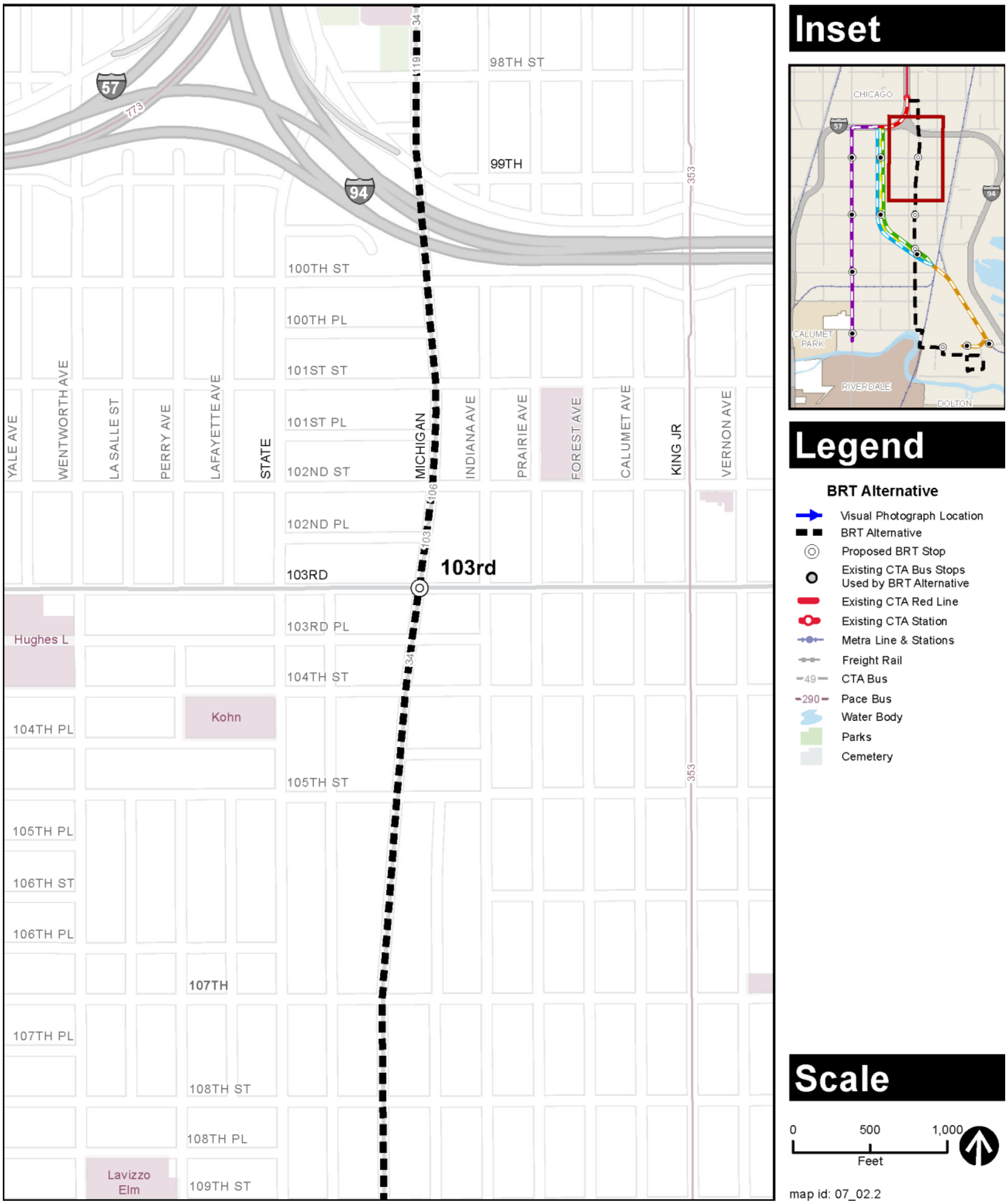

98TH ST
99TH
57
773
94
119
34
353
100TH ST
100TH PL
101ST ST
101ST PL
102ND ST
102ND PL
103RD
103rd
103RD PL
104TH ST
104TH PL
105TH ST
105TH PL
106TH ST
106TH PL
107TH
107TH PL
108TH ST
108TH PL
109TH ST
106
103
YALE AVE
WENTWORTH AVE
LA SALLE ST
PERRY AVE
LAFAYETTE AVE
STATE
MICHIGAN
INDIANA AVE
PRAIRIE AVE
FOREST AVE
CALUMET AVE
KING JR
VERNON AVE
Hughes L
Kohn
Lavizzo Elm
Inset
CHICAGO
CALUMET PARK
RIVERDALE
DOLTON
Legend
BRT Alternative
Visual Photograph Location
BRT Alternative
Proposed BRT Stop
Existing CTA Bus Stops Used by BRT Alternative
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
49
CTA Bus
290
Pace Bus
Water Body
Parks
Cemetery
Scale
0
500
1,000
Feet
map id: 07_02.2

Figure 4-3: View Locations for the Bus Rapid Transit Alternative - North Central

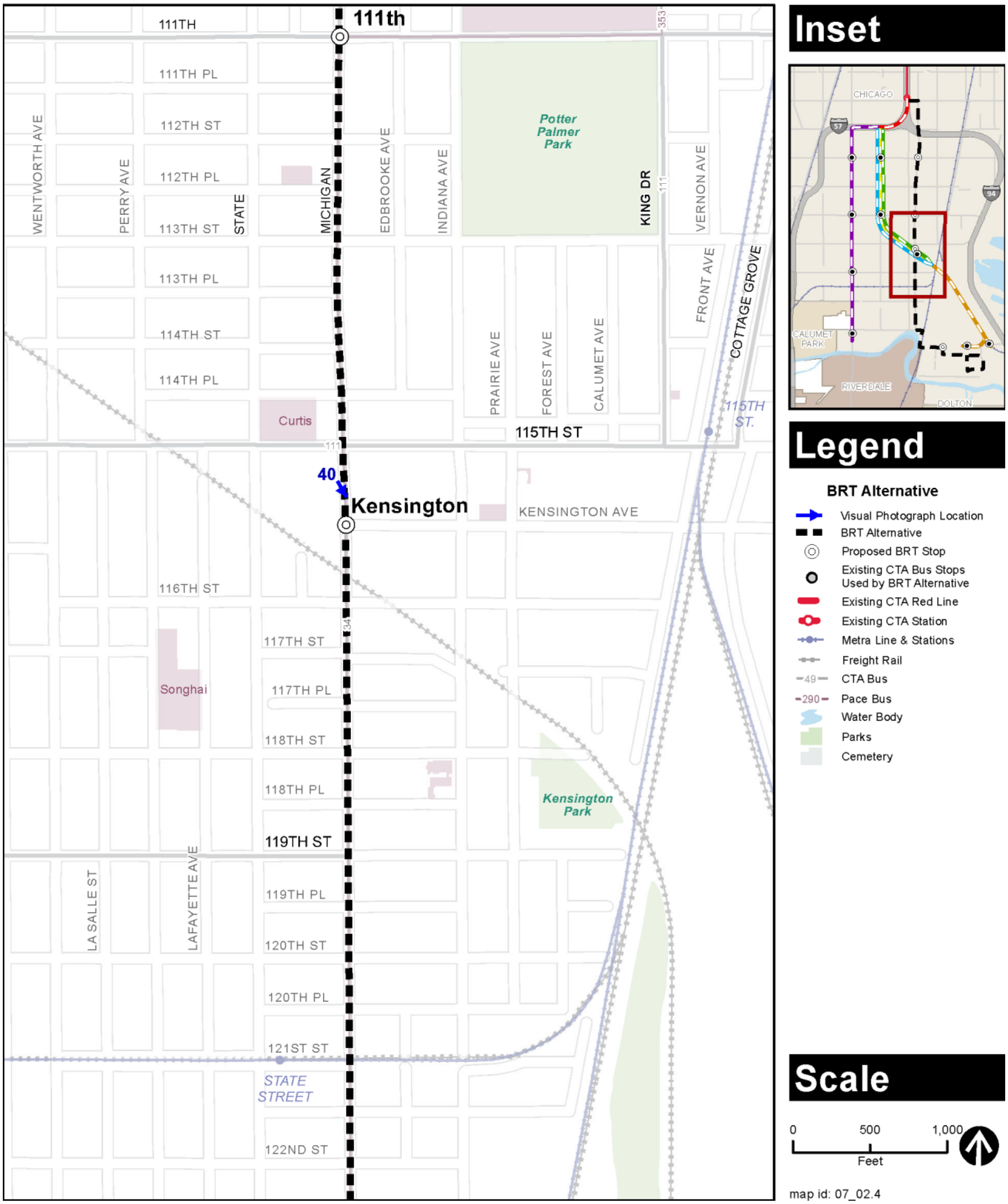

111th
111TH
111TH PL
112TH ST
112TH PL
113TH ST
113TH PL
114TH ST
114TH PL
115TH ST
KENSINGTON AVE
116TH ST
117TH ST
117TH PL
118TH ST
118TH PL
119TH ST
119TH PL
120TH ST
120TH PL
121ST ST
122ND ST
WENTWORTH AVE
PERRY AVE
STATE
MICHIGAN
EDBROOKE AVE
INDIANA AVE
KING DR
VERNON AVE
FRONT AVE
COTTAGE GROVE
PRAIRIE AVE
FOREST AVE
CALUMET AVE
LA SALLE ST
LAFAYETTE AVE
Potter Palmer Park
Kensington Park
Curtis
Songhai
Kensington
40
115TH ST.
STATE STREET
353
111
34
Inset
CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON
Legend
BRT Alternative
Visual Photograph Location
BRT Alternative
Proposed BRT Stop
Existing CTA Bus Stops Used by BRT Alternative
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
49 CTA Bus
290 Pace Bus
Water Body
Parks
Cemetery
Scale
0
500
1,000
Feet
map id: 07_02.4

Figure 4-4: View Locations for the Bus Rapid Transit Alternative - South Central

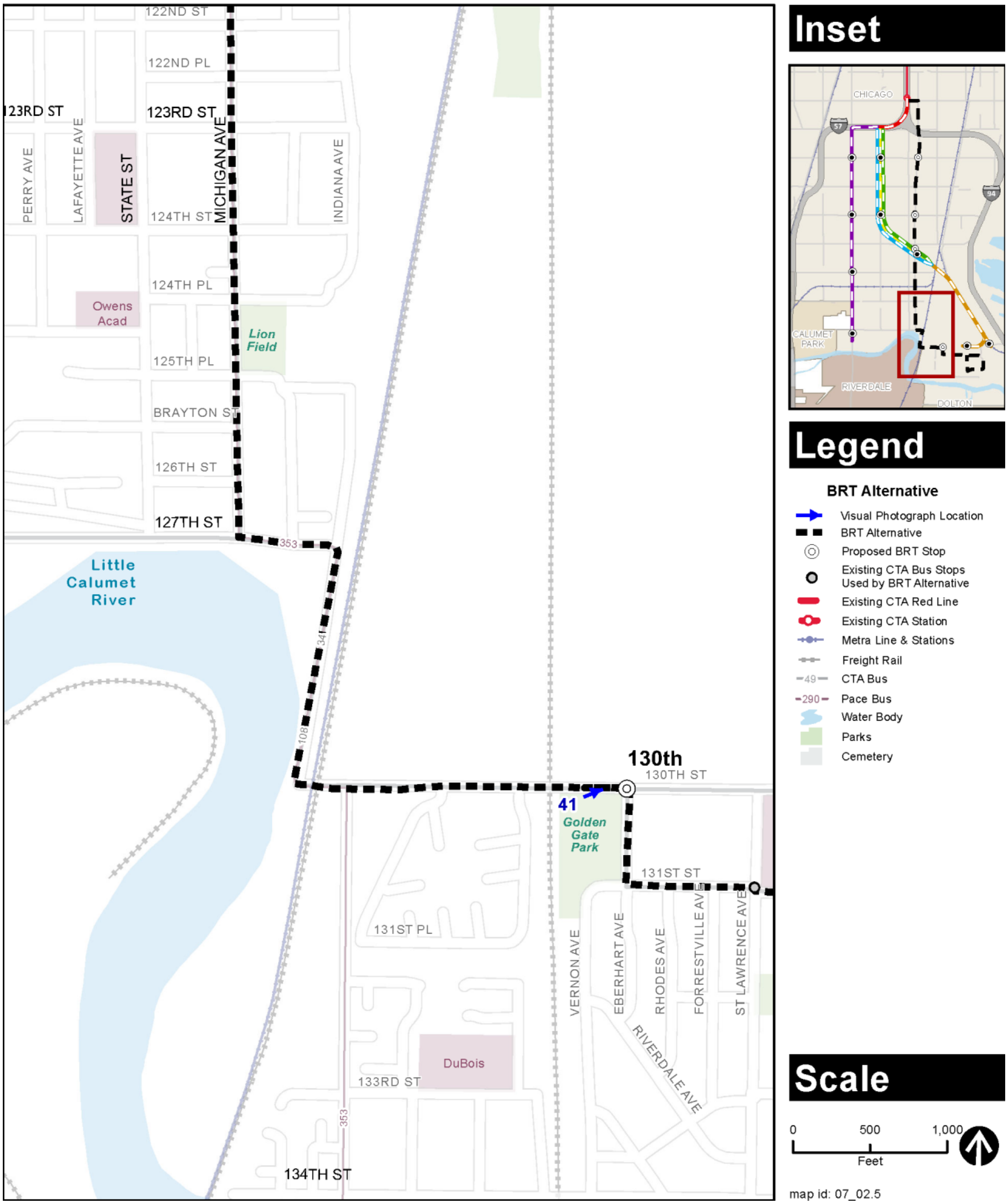

122ND ST
122ND PL
123RD ST
123RD ST
PERRY AVE
LAFAYETTE AVE
STATE ST
MICHIGAN AVE
124TH ST
INDIANA AVE
124TH PL
Owens Acad
Lion Field
125TH PL
BRAYTON ST
126TH ST
127TH ST
353
Little Calumet River
341
108
130th
130TH ST
41
Golden Gate Park
131ST ST
131ST PL
VERNON AVE
EBERHART AVE
RHODES AVE
FORRESTVILLE AVE
ST LAWRENCE AVE
RIVERDALE AVE
DuBois
133RD ST
353
134TH ST
Inset
CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON
Legend
BRT Alternative
Visual Photograph Location
BRT Alternative
Proposed BRT Stop
Existing CTA Bus Stops Used by BRT Alternative
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
49 CTA Bus
290 Pace Bus
Water Body
Parks
Cemetery
Scale
0
500
1,000
Feet
map id: 07_02.5

Figure 4-5: View Locations for the Bus Rapid Transit Alternative - South

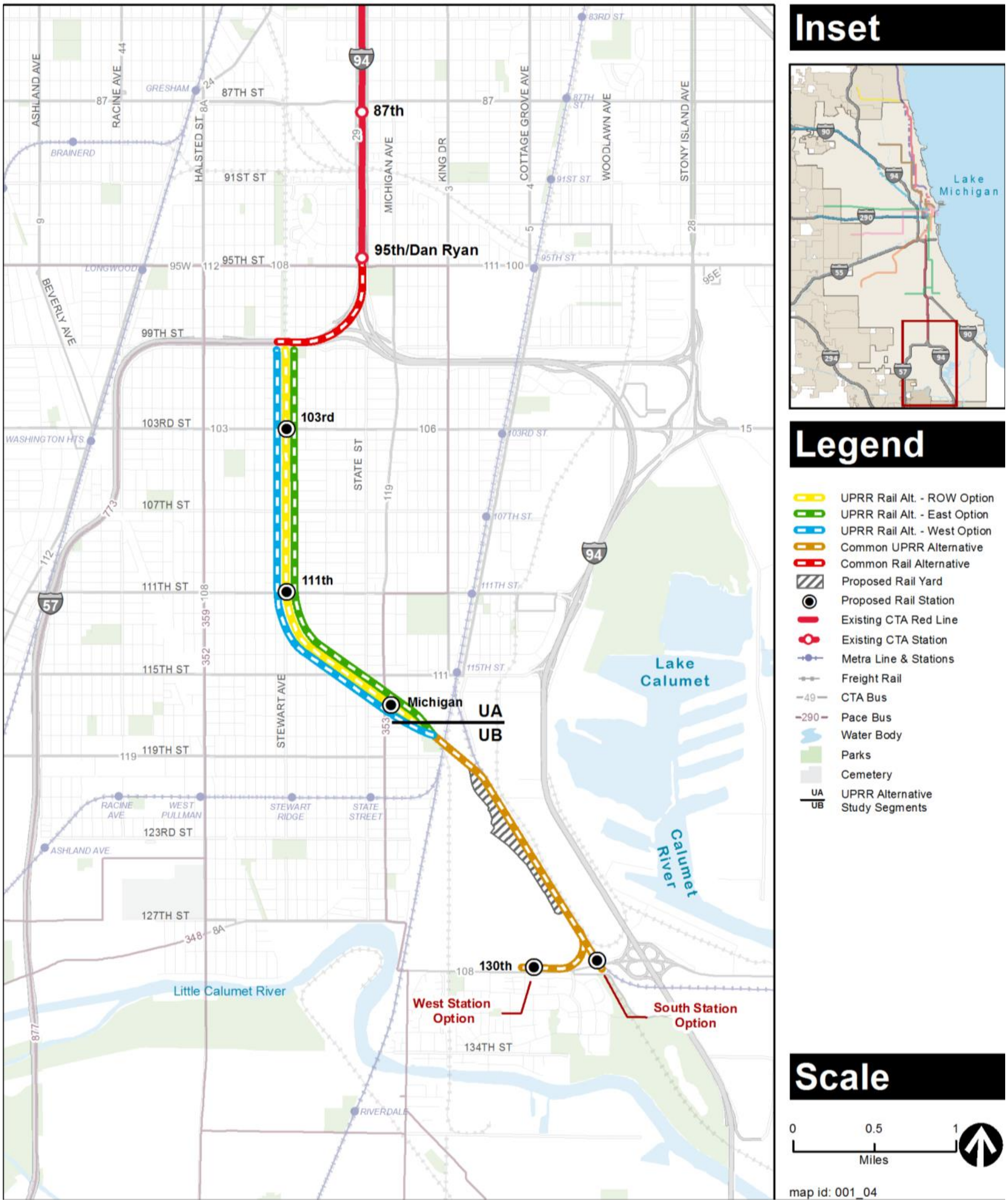
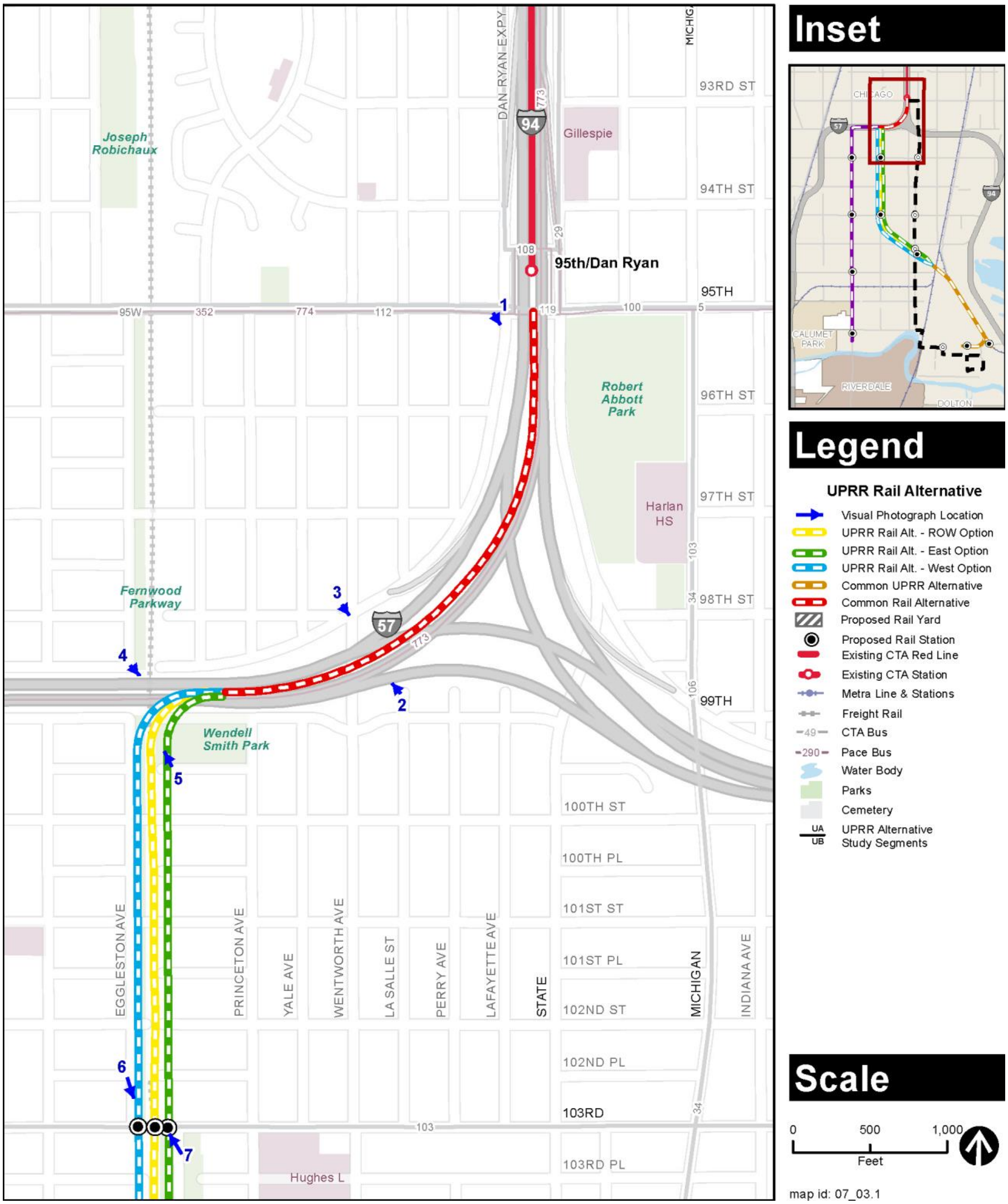

87th
95th/Dan Ryan
103rd
111th
Michigan
UA
UB
130th
West Station Option
South Station Option
Lake Calumet
Calumet River
Little Calumet River
87TH ST
91ST ST
95TH ST
99TH ST
103RD ST
107TH ST
111TH ST
115TH ST
119TH ST
123RD ST
127TH ST
134TH ST
ASHLAND AVE
RACINE AVE
HALSTED ST
MICHIGAN AVE
KING DR
COTTAGE GROVE AVE
WOODLAWN AVE
STONY ISLAND AVE
STATE ST
STEWART AVE
BEVERLY AVE
GRESHAM
BRAINERD
LONGWOOD
WASHINGTON HTS
83RD ST
87TH ST
91ST ST
95TH ST
103RD ST
107TH ST
111TH ST
115TH ST
RACINE AVE
WEST PULLMAN
STEWART RIDGE
STATE STREET
ASHLAND AVE
RIVERDALE
94
57
Inset
Lake Michigan
Legend
UPRR Rail Alt. - ROW Option
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
Common UPRR Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
CTA Bus
Pace Bus
Water Body
Parks
Cemetery
UPRR Alternative Study Segments
Scale
0
0.5
1
Miles
map id: 001_04

Figure 4-6: Union Pacific Railroad Rail Alternative



Inset
CHICAGO
CALUMET PARK
RIVERDALE
DOLTON
Legend
UPRR Rail Alternative
Visual Photograph Location
UPRR Rail Alt. - ROW Option
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
Common UPRR Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
CTA Bus
Pace Bus
Water Body
Parks
Cemetery
UPRR Alternative Study Segments
Scale
0
500
1,000
Feet
map id: 07_03.1
DAN RYAN EXPY
95th/Dan Ryan
93RD ST
94TH ST
95TH
96TH ST
97TH ST
98TH ST
99TH
100TH ST
100TH PL
101ST ST
101ST PL
102ND ST
102ND PL
103RD
103RD PL
Joseph Robichaux
Gillespie
Robert Abbott Park
Harlan HS
Fernwood Parkway
Wendell Smith Park
Hughes L
EGGLESTON AVE
PRINCETON AVE
YALE AVE
WENTWORTH AVE
LA SALLE ST
PERRY AVE
LAFAYETTE AVE
STATE
MICHIGAN
INDIANA AVE
1
2
3
4
5
6
7

Figure 4-7: Union Pacific Railroad Rail Alternative View Locations - Segment UA North

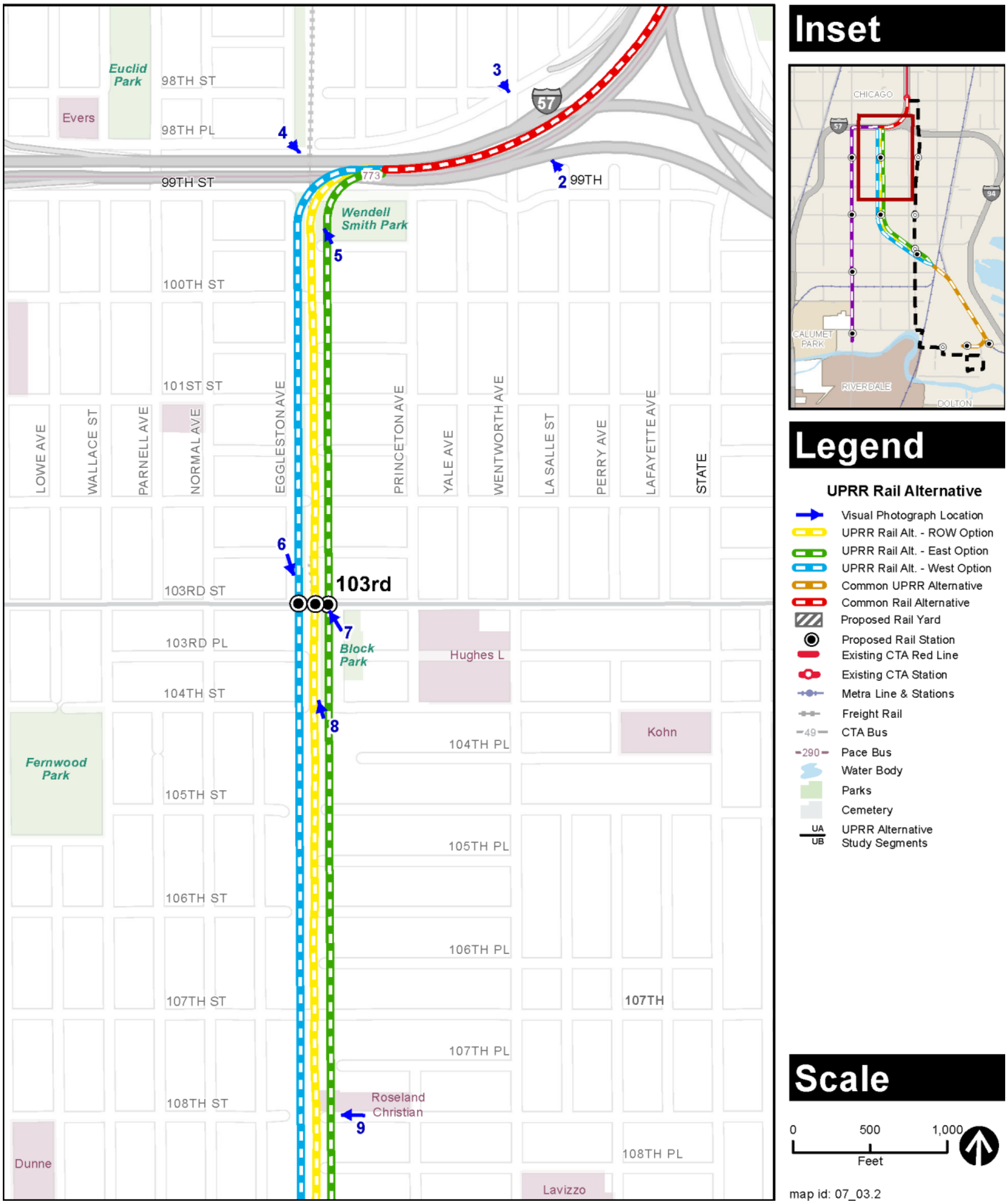

Euclid Park
Evers
98TH ST
98TH PL
99TH ST
57
773
99TH
Wendell Smith Park
100TH ST
101ST ST
LOWE AVE
WALLACE ST
PARNELL AVE
NORMAL AVE
EGGLESTON AVE
PRINCETON AVE
YALE AVE
WENTWORTH AVE
LA SALLE ST
PERRY AVE
LAFAYETTE AVE
STATE
103RD ST
103rd
103RD PL
Block Park
Hughes L
104TH ST
104TH PL
Kohn
Fernwood Park
105TH ST
105TH PL
106TH ST
106TH PL
107TH ST
107TH
107TH PL
108TH ST
Roseland Christian
108TH PL
Dunne
Lavizzo
1
2
3
4
5
6
7
8
9
Inset
CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON
Legend
UPRR Rail Alternative
Visual Photograph Location
UPRR Rail Alt. - ROW Option
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
Common UPRR Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
49 CTA Bus
290 Pace Bus
Water Body
Parks
Cemetery
UA UB UPRR Alternative Study Segments
Scale
0
500
1,000
Feet
map id: 07_03.2

Figure 4-8: Union Pacific Railroad Rail Alternative View Locations - Segment UA

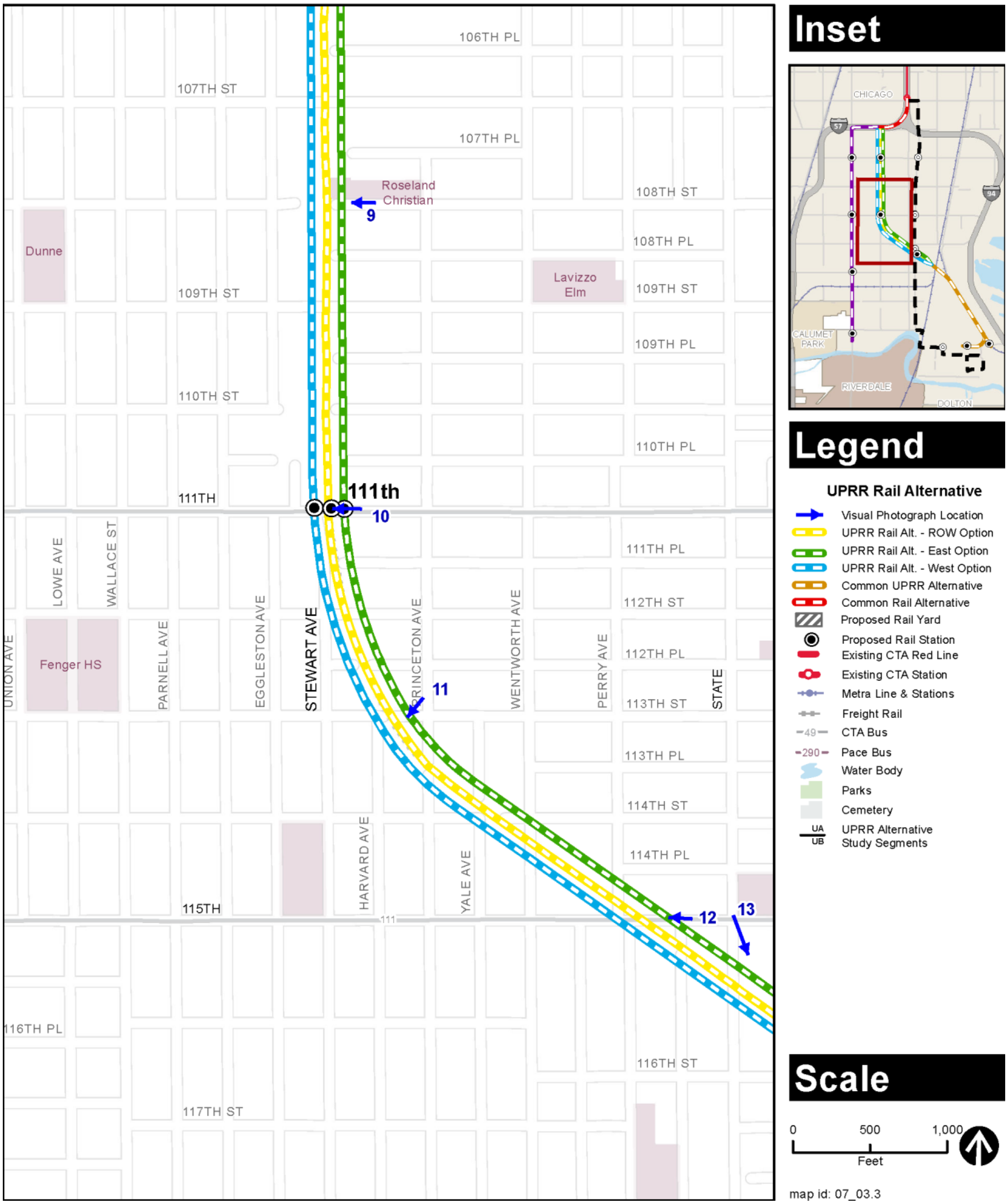

106TH PL
107TH ST
107TH PL
Roseland Christian
9
108TH ST
Dunne
108TH PL
Lavizzo Elm
109TH ST
109TH PL
110TH ST
110TH PL
111TH
111th
10
111TH PL
LOWE AVE
WALLACE ST
112TH ST
UNION AVE
Fenger HS
PARNELL AVE
EGGLESTON AVE
STEWART AVE
PRINCETON AVE
WENTWORTH AVE
PERRY AVE
112TH PL
11
STATE
113TH ST
113TH PL
114TH ST
114TH PL
HARVARD AVE
YALE AVE
115TH
111
12
13
116TH PL
116TH ST
117TH ST
Inset
CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON
Legend
UPRR Rail Alternative
Visual Photograph Location
UPRR Rail Alt. - ROW Option
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
Common UPRR Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
49
CTA Bus
290
Pace Bus
Water Body
Parks
Cemetery
UA
UB
UPRR Alternative Study Segments
Scale
0
500
1,000
Feet
map id: 07_03.3

Figure 4-9: Union Pacific Railroad Rail Alternative View Locations - Segment UA

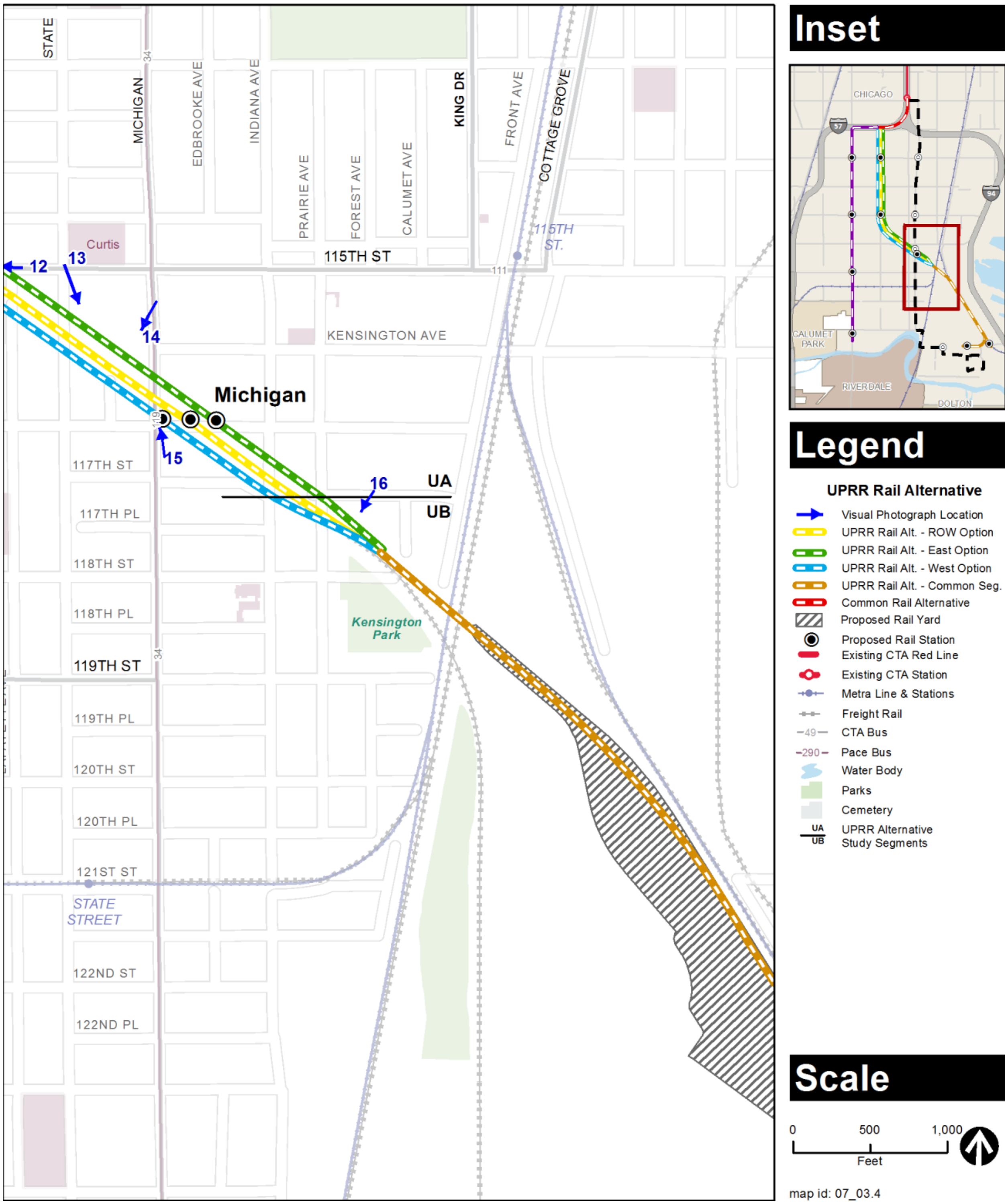

STATE
MICHIGAN
EDBROOKE AVE
INDIANA AVE
PRAIRIE AVE
FOREST AVE
CALUMET AVE
KING DR
FRONT AVE
COTTAGE GROVE
115TH ST.
115TH ST
Curtis
KENSINGTON AVE
Michigan
117TH ST
117TH PL
118TH ST
118TH PL
119TH ST
119TH PL
120TH ST
120TH PL
121ST ST
STATE STREET
122ND ST
122ND PL
Kensington Park
12
13
14
15
16
UA
UB
34
111
119
Inset
CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON
Legend
UPRR Rail Alternative
Visual Photograph Location
UPRR Rail Alt. - ROW Option
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
UPRR Rail Alt. - Common Seg.
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
49 CTA Bus
290 Pace Bus
Water Body
Parks
Cemetery
UA UB UPRR Alternative Study Segments
Scale
0
500
1,000
Feet
map id: 07_03.4

Figure 4-10: Union Pacific Railroad Rail Alternative View Locations - Segment UA and UB

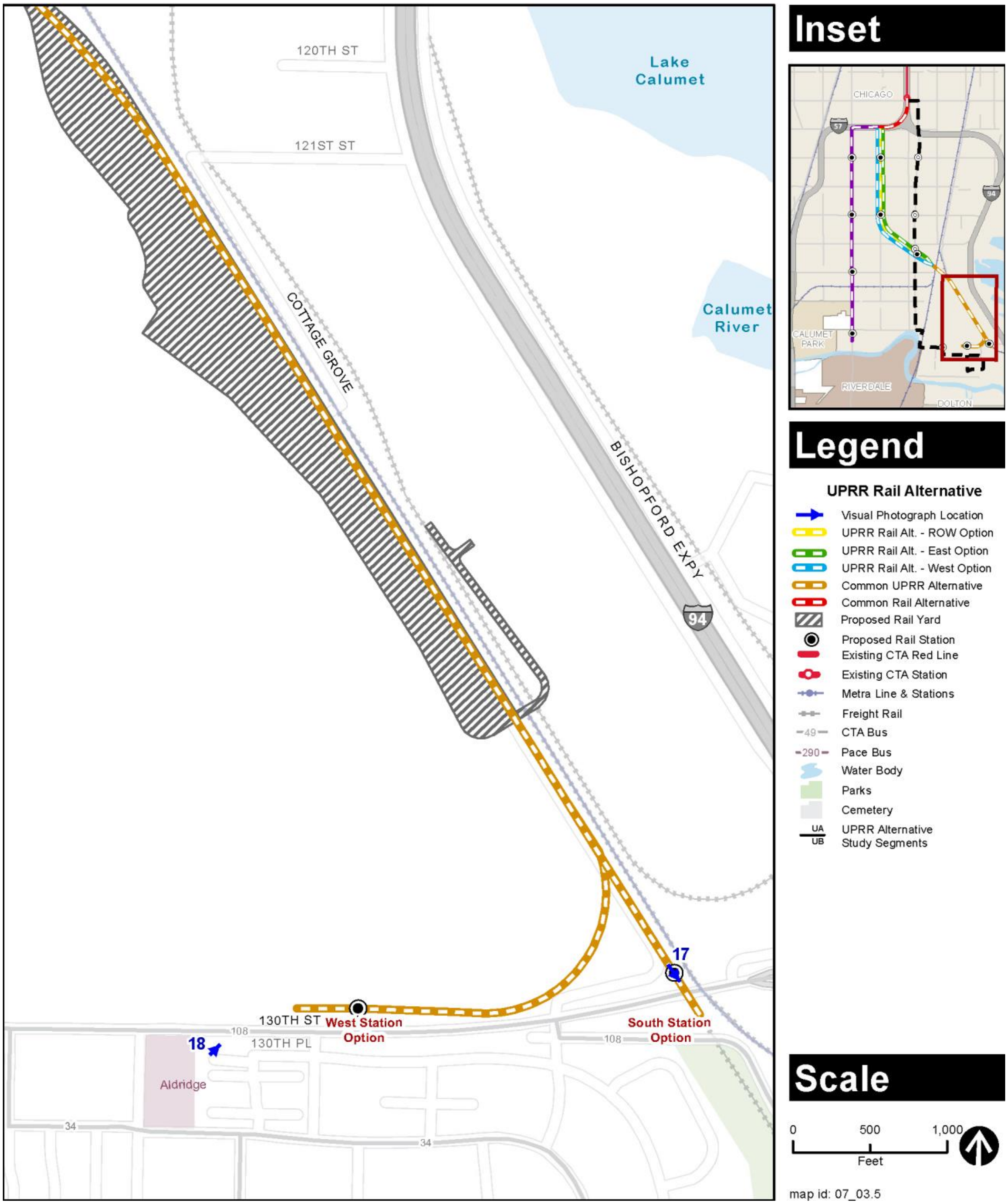

120TH ST
121ST ST
Lake Calumet
Calumet River
COTTAGE GROVE
BISHOPFORD EXPY
94
17
18
130TH ST
130TH PL
108
West Station Option
South Station Option
Aldridge
34
Inset
CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON
Legend
UPRR Rail Alternative
Visual Photograph Location
UPRR Rail Alt. - ROW Option
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
Common UPRR Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
49 CTA Bus
290 Pace Bus
Water Body
Parks
Cemetery
UA UB UPRR Alternative Study Segments
Scale
0
500
1,000
Feet
map id: 07_03.5

Figure 4-11: Union Pacific Railroad Rail Alternative View Locations - Segment UB

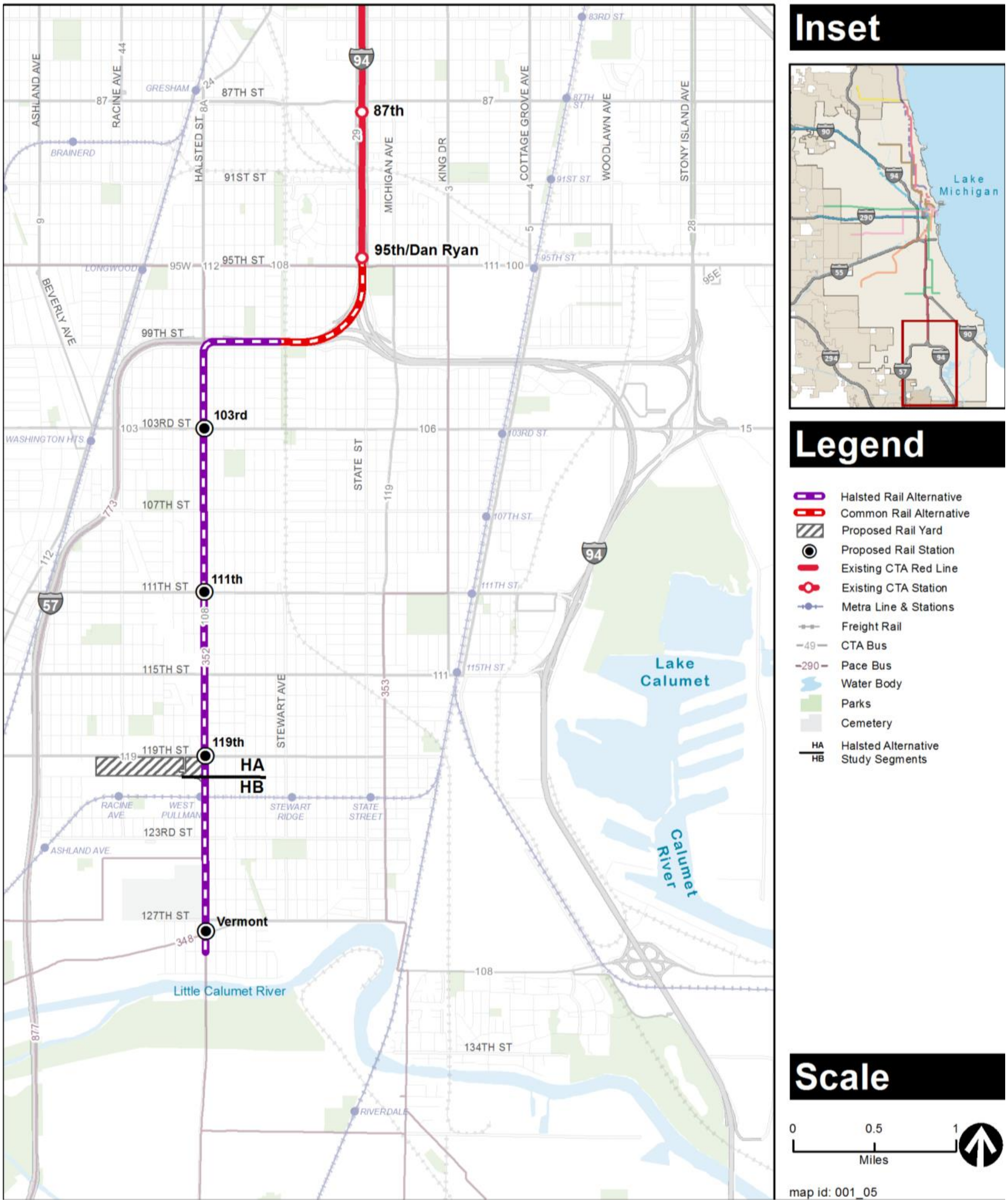

87th
95th/Dan Ryan
103rd
111th
119th
Vermont
HA
HB
87TH ST
91ST ST
95TH ST
99TH ST
103RD ST
107TH ST
111TH ST
115TH ST
119TH ST
123RD ST
127TH ST
134TH ST
ASHLAND AVE
RACINE AVE
HALSTED ST
MICHIGAN AVE
KING DR
COTTAGE GROVE AVE
WOODLAWN AVE
STONY ISLAND AVE
STATE ST
STEWART AVE
BEVERLY AVE
GRESHAM
BRAINERD
LONGWOOD
WASHINGTON HTS
RACINE AVE
WEST PULLMAN
STEWART RIDGE
STATE STREET
ASHLAND AVE
RIVERDALE
83RD ST
87TH ST
91ST ST
95TH ST
103RD ST
107TH ST
111TH ST
115TH ST
Lake Calumet
Calumet River
Little Calumet River
94
57
Inset
Lake Michigan
Legend
Halsted Rail Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
49 CTA Bus
290 Pace Bus
Water Body
Parks
Cemetery
HA HB Halsted Alternative Study Segments
Scale
0
0.5
1
Miles
map id: 001_05

Figure 4-12: Halsted Rail Alternative

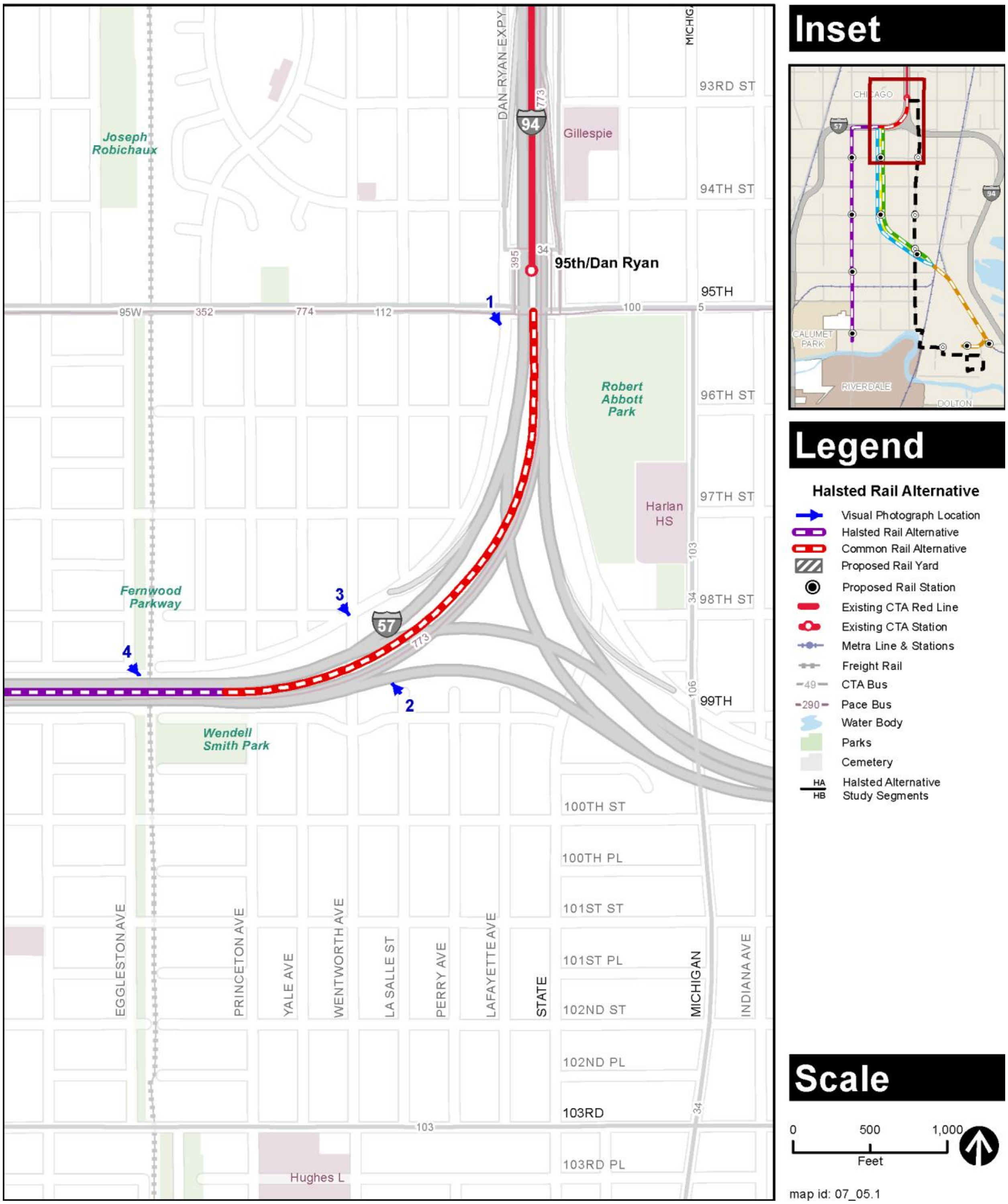

DAN RYAN EXPY
MICHIG
93RD ST
94
773
Gillespie
Joseph Robichaux
94TH ST
395
34
95th/Dan Ryan
95TH
95W
352
774
112
100
5
1
Robert Abbott Park
96TH ST
97TH ST
Harlan HS
103
98TH ST
34
Fernwood Parkway
3
57
773
4
2
106
99TH
Wendell Smith Park
100TH ST
100TH PL
101ST ST
101ST PL
102ND ST
102ND PL
103RD
103
34
103RD PL
Hughes L
EGGLESTON AVE
PRINCETON AVE
YALE AVE
WENTWORTH AVE
LA SALLE ST
PERRY AVE
LAFAYETTE AVE
STATE
MICHIGAN
INDIANA AVE
Inset
CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON
Legend
Halsted Rail Alternative
Visual Photograph Location
Halsted Rail Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
49 CTA Bus
290 Pace Bus
Water Body
Parks
Cemetery
HA HB Halsted Alternative Study Segments
Scale
0
500
1,000
Feet
map id: 07_05.1

Figure 4-13: Halsted Rail Alternative View Locations - Segment HA

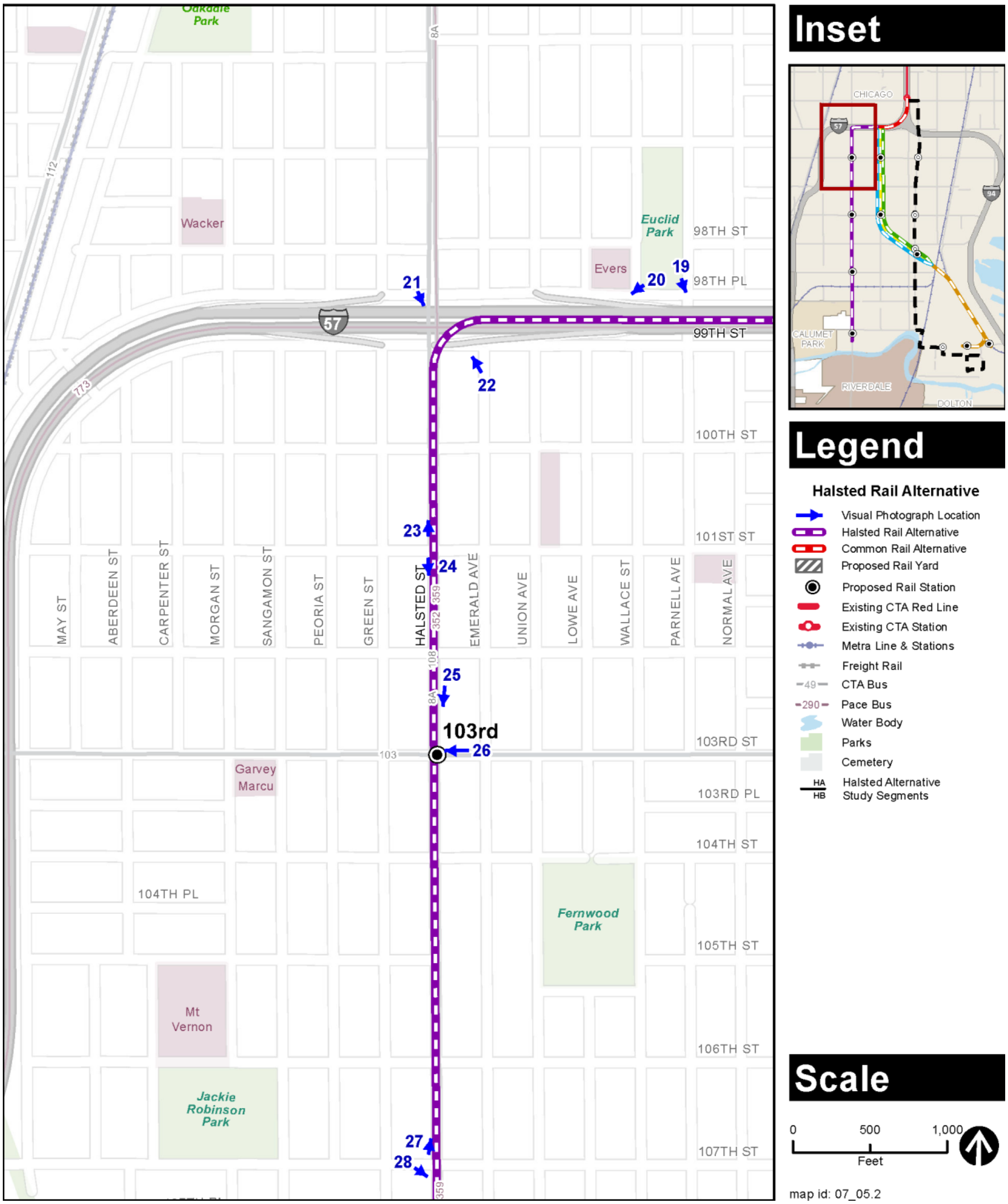

Oakdale Park
Wacker
Euclid Park
Evers
98TH ST
98TH PL
99TH ST
100TH ST
101ST ST
103RD ST
103RD PL
104TH ST
104TH PL
105TH ST
106TH ST
107TH ST
MAY ST
ABERDEEN ST
CARPENTER ST
MORGAN ST
SANGAMON ST
PEORIA ST
GREEN ST
HALSTED ST
EMERALD AVE
UNION AVE
LOWE AVE
WALLACE ST
PARNELL AVE
NORMAL AVE
Garvey
Marcu
Fernwood Park
Mt Vernon
Jackie Robinson Park
57
112
773
8A
108
352
359
103
103rd
19
20
21
22
23
24
25
26
27
28
Inset
CHICAGO
CALUMET PARK
RIVERDALE
DOLTON
57
94
Legend
Halsted Rail Alternative
Visual Photograph Location
Halsted Rail Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
49 CTA Bus
290 Pace Bus
Water Body
Parks
Cemetery
HA HB Halsted Alternative Study Segments
Scale
0
500
1,000
Feet
map id: 07_05.2

Figure 4-14: Halsted Rail Alternative View Locations - Segment HA

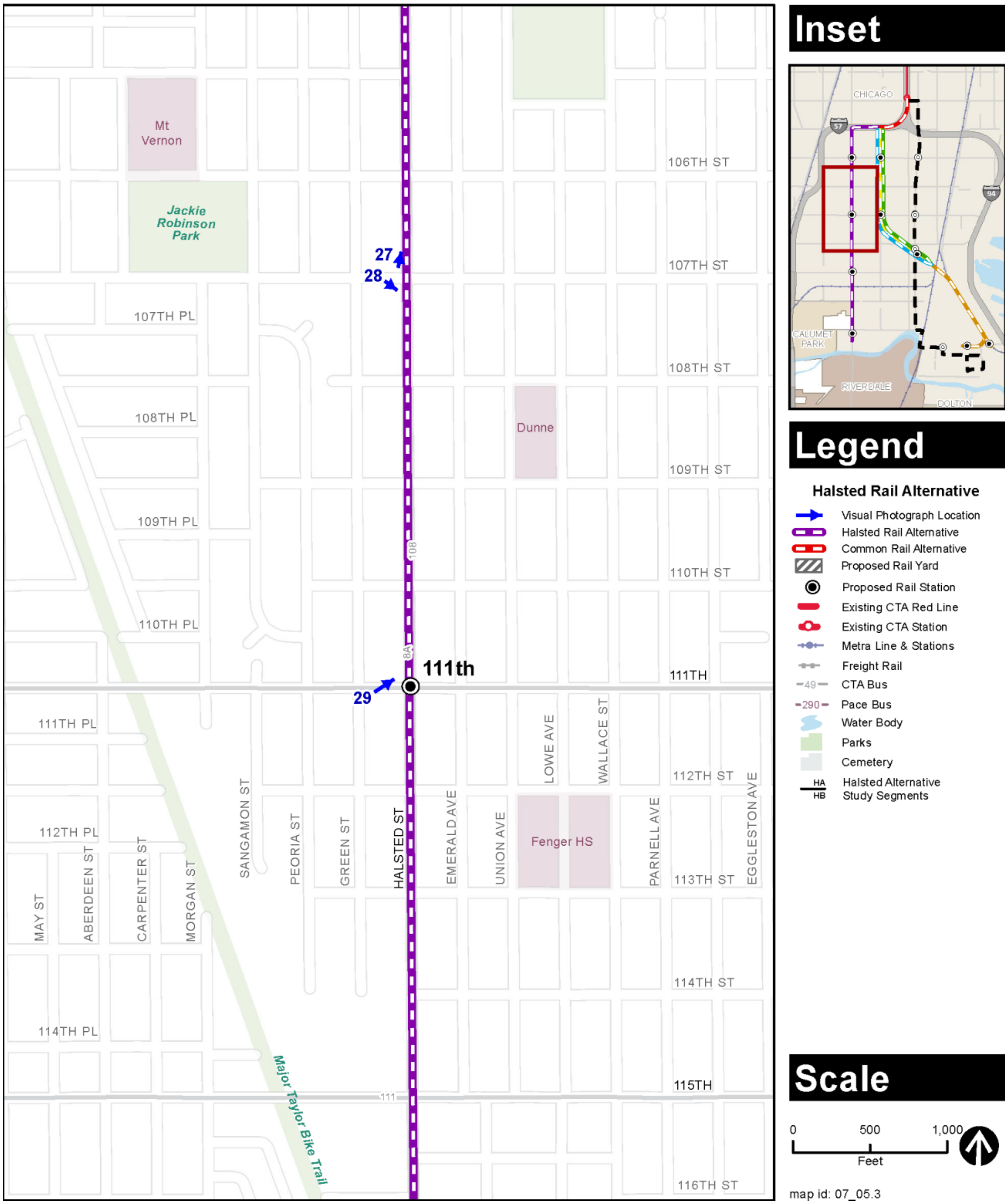

Mt Vernon
Jackie Robinson Park
Dunne
Fenger HS
Major Taylor Bike Trail
27
28
29
111th
106TH ST
107TH ST
108TH ST
109TH ST
110TH ST
111TH
112TH ST
113TH ST
114TH ST
115TH
116TH ST
107TH PL
108TH PL
109TH PL
110TH PL
111TH PL
112TH PL
114TH PL
MAY ST
ABERDEEN ST
CARPENTER ST
MORGAN ST
SANGAMON ST
PEORIA ST
GREEN ST
HALSTED ST
EMERALD AVE
UNION AVE
LOWE AVE
WALLACE ST
PARNELL AVE
EGGLESTON AVE
108
8A
111
Inset
CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON
Legend
Halsted Rail Alternative
Visual Photograph Location
Halsted Rail Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
49 CTA Bus
290 Pace Bus
Water Body
Parks
Cemetery
HA HB Halsted Alternative Study Segments
Scale
0
500
1,000
Feet
map id: 07_05.3

Figure 4-15: Halsted Rail Alternative View Locations - Segment HA

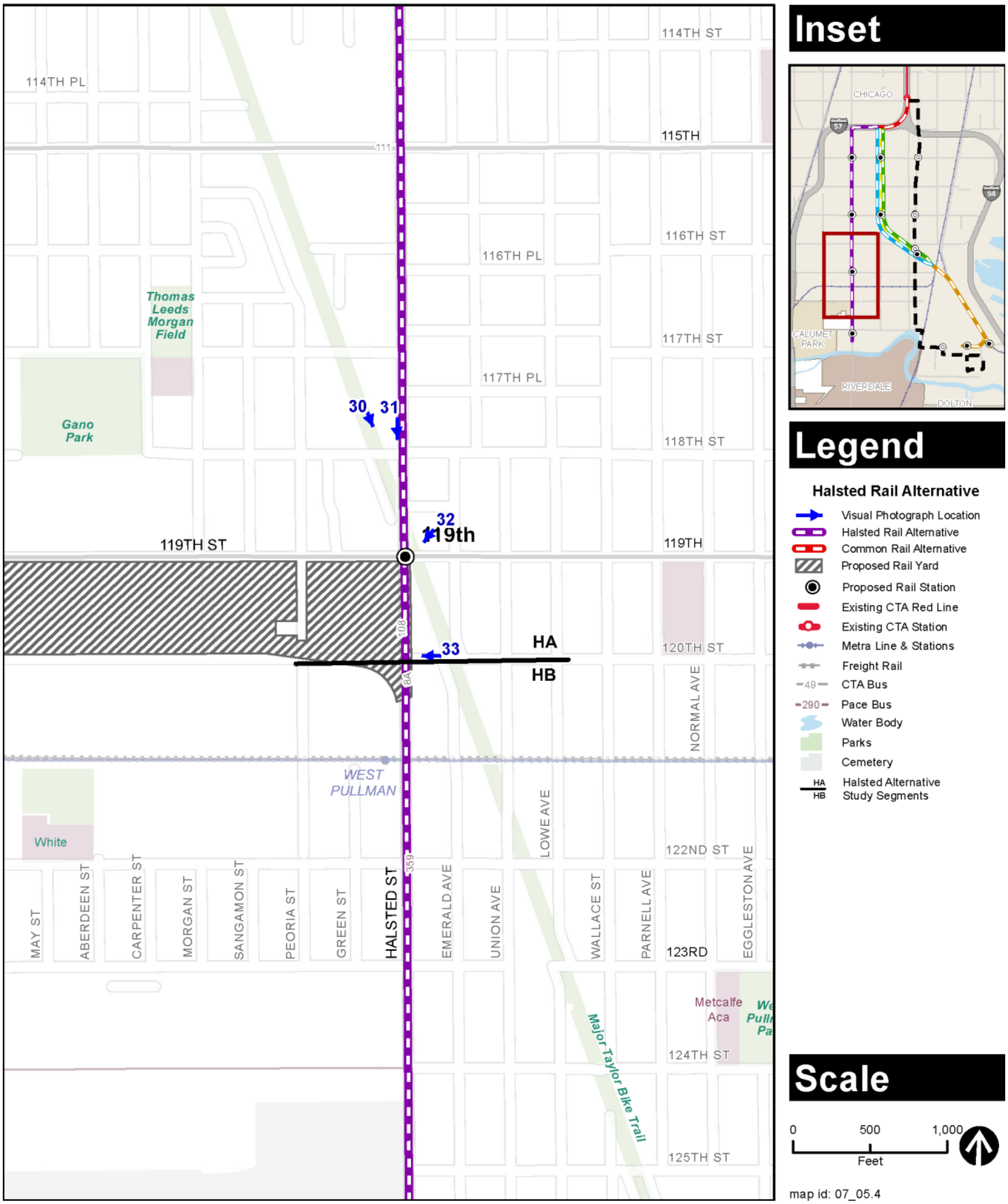

114TH PL
114TH ST
115TH
116TH ST
116TH PL
117TH ST
117TH PL
118TH ST
119TH ST
119th
119TH
120TH ST
122ND ST
123RD
124TH ST
125TH ST
Thomas Leeds Morgan Field
Gano Park
White
WEST PULLMAN
Metcalfe Aca
We Pull Pa
Major Taylor Bike Trail
30
31
32
33
HA
HB
MAY ST
ABERDEEN ST
CARPENTER ST
MORGAN ST
SANGAMON ST
PEORIA ST
GREEN ST
HALSTED ST
EMERALD AVE
UNION AVE
LOWE AVE
WALLACE ST
PARNELL AVE
EGGLESTON AVE
NORMAL AVE
Inset
CHICAGO
CALUMET PARK
RIVERDALE
DOLTON
Legend
Halsted Rail Alternative
Visual Photograph Location
Halsted Rail Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
49 CTA Bus
290 Pace Bus
Water Body
Parks
Cemetery
HA HB Halsted Alternative Study Segments
Scale
0
500
1,000
Feet
map id: 07_05.4

Figure 4-16: Halsted Rail Alternative View Locations - Segment HA and HB

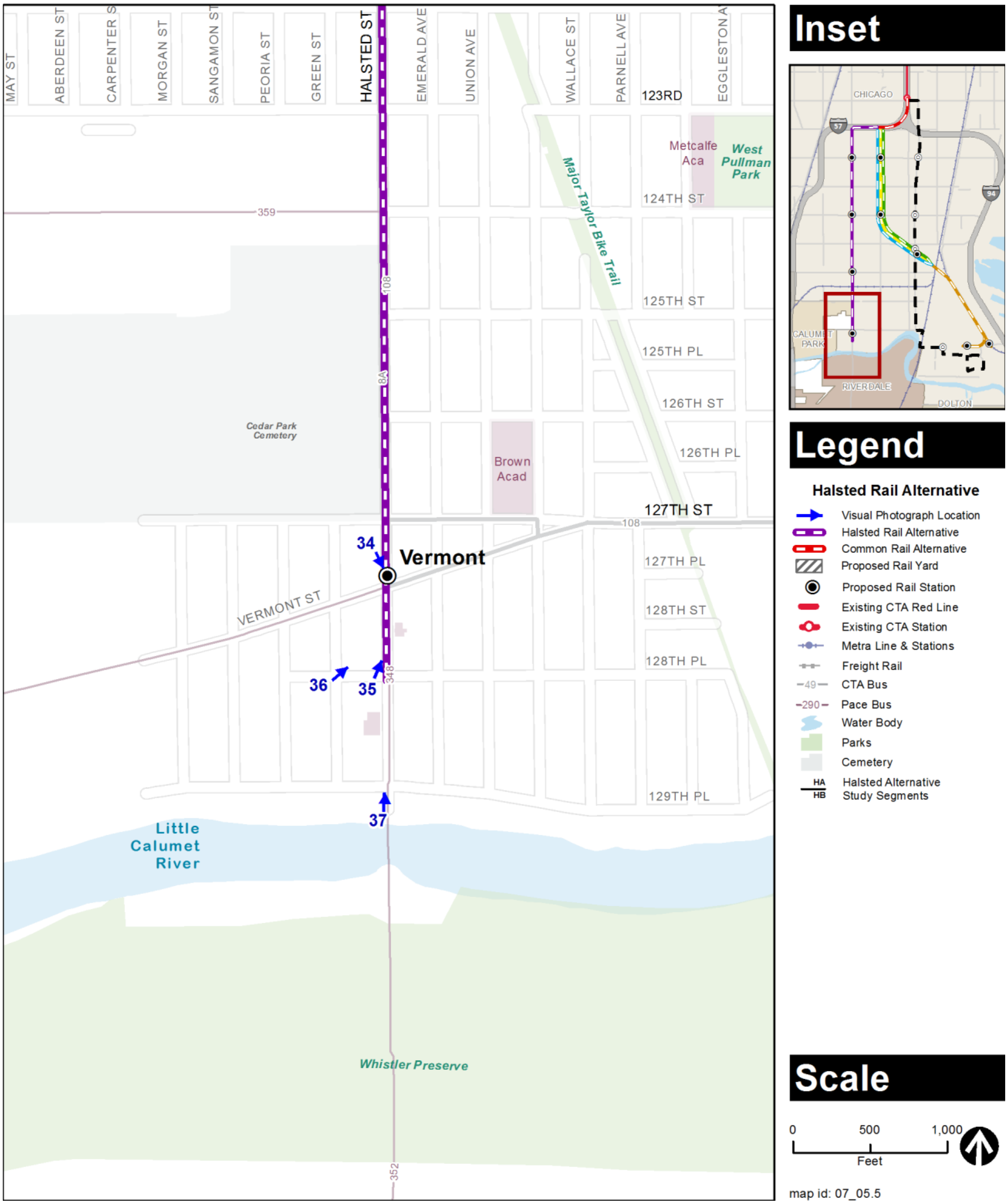

MAY ST
ABERDEEN ST
CARPENTER S
MORGAN ST
SANGAMON ST
PEORIA ST
GREEN ST
HALSTED ST
EMERALD AVE
UNION AVE
WALLACE ST
PARNELL AVE
EGGLESTON A
123RD
Metcalfe Aca
West Pullman Park
Major Taylor Bike Trail
124TH ST
359
108
125TH ST
125TH PL
8A
126TH ST
126TH PL
Cedar Park Cemetery
Brown Acad
127TH ST
108
34
Vermont
127TH PL
VERMONT ST
128TH ST
128TH PL
36
35
348
129TH PL
37
Little Calumet River
Whistler Preserve
352
Inset
CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON
Legend
Halsted Rail Alternative
Visual Photograph Location
Halsted Rail Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
49 CTA Bus
290 Pace Bus
Water Body
Parks
Cemetery
HA HB Halsted Alternative Study Segments
Scale
0
500
1,000
Feet
map id: 07_05.5

Figure 4-17: Halsted Rail Alternative View Locations - Segment HB

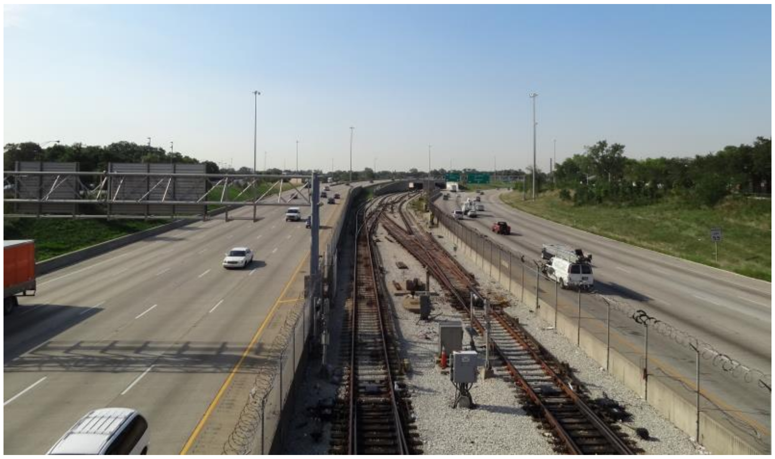


Figure 4-18: Affected Environment - Typical I-94 Visual Condition

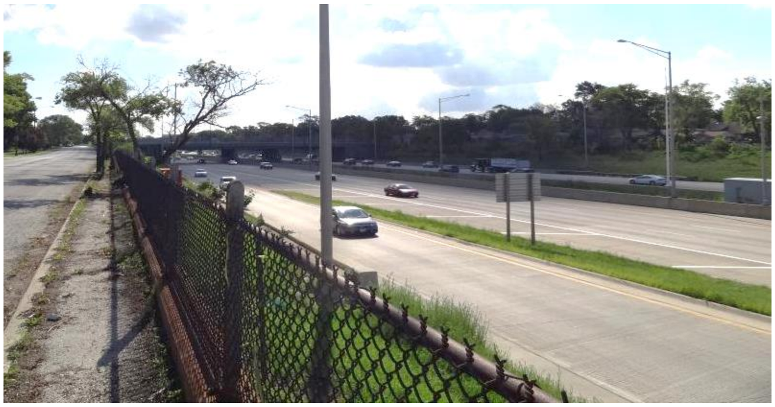


Figure 4-19: Affected Environment - Typical I-57 Visual Condition

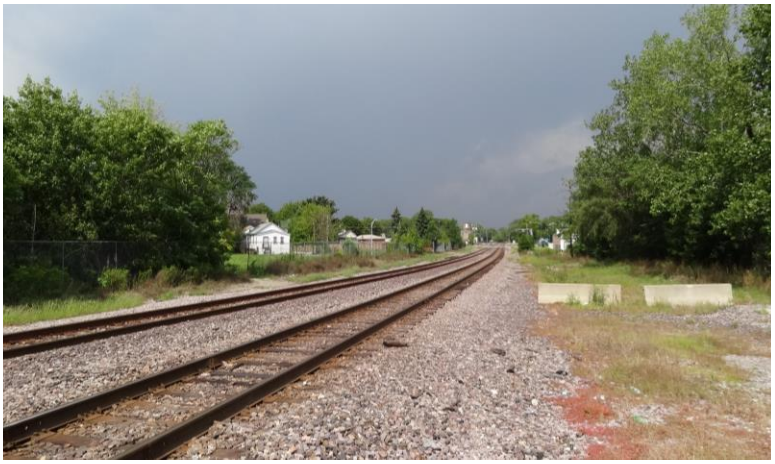


Figure 4-20: Affected Environment - Typical Existing Union Pacific Railroad Condition

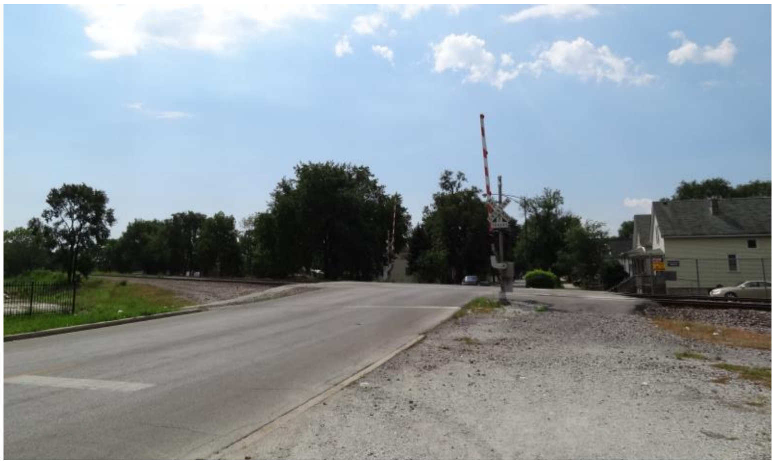


Figure 4-21: Affected Environment - Typical Intersection at Existing Union Pacific Railroad

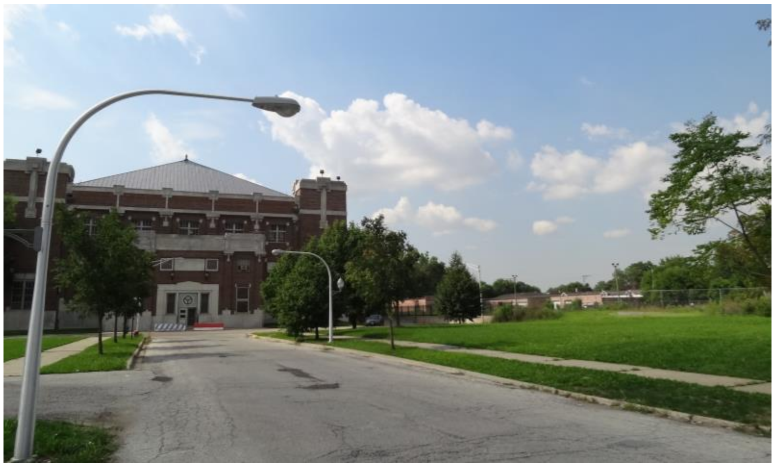


Figure 4-22: Affected Environment - View of Roseland Pumping Station

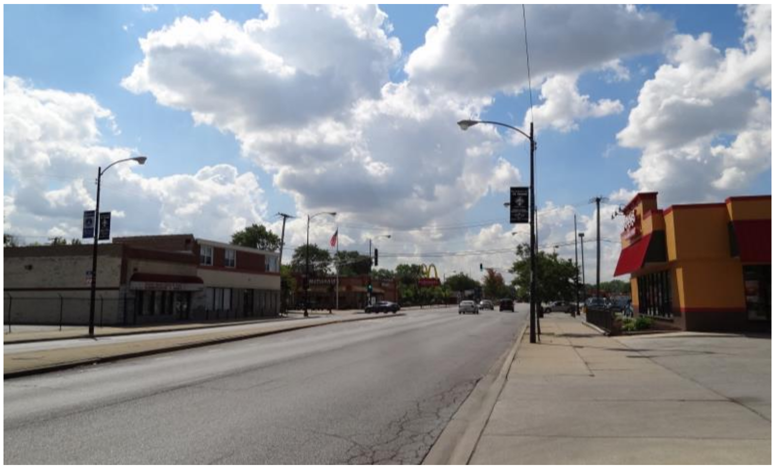


Figure 4-23: Affected Environment - Typical Halsted Street Visual Condition

Table 4-1: Affected Environment - Existing Visual Conditions Assessment

Viewpoint *See Figures 4-2 - 4-17*	View *See Attach-ment A*	Location/View Direction	Existing Visual Quality	Assessment Area
Bus Rapid Transit Alternative				
40	View 40	View south from Michigan Avenue between 115th Street and Kensington Avenue	Moderate	The viewshed consists of older commercial structures and a parking lot along the east side of Michigan Avenue, with a vacant lot along the west side.
41	View 41	View northeast from Golden Gate Park at 130th Street and Eberhart Avenue	Moderate	The viewshed includes the Altgeld Gardens neighborhood south of 130th Street and the Metropolitan Water Reclamation District property to the north.
Segment UA - UPRR Rail Alternative north of Michigan Avenue				
1	View 1	View south over I-94 from 95th Street overpass and Lafayette Avenue	Low	The viewshed includes I-94 and I-57 corridor and existing Red Line tracks to the yard.
2	View 2	View northwest toward Wentworth Avenue overpass from 99th and LaSalle Street	Low	The viewshed includes I-94 and I-57 corridor, with Wentworth Avenue overpass and surrounding residential neighborhoods visible in the distance.
3	View 3	View south toward I-57 overpass from Wentworth Avenue	Moderate	The surrounding neighborhood viewshed includes medium-density residential fabric of similar scale and style and with I-94 overpass visible in the distance.
4	View 4	View southeast from Eggleston Avenue and 98th Place	Low	The viewshed includes I-57 and existing railroad overpass with Wendell Smith Park beyond.
5	View 5	View northwest from the southwest corner of Wendell Smith Park	High	Existing views from Wendell Smith Park south of I-57 and adjacent to existing Union Pacific Railroad tracks are covered by well-established vegetation.
6	View 6	View south along Eggleston Avenue and Fernwood Parkway toward 103rd Street	High	Existing residential neighborhood fabric to the east of Fernwood Parkway is cohesive in scale and style, while the parkway is lightly vegetated and blocks the view of the existing tracks. The viewshed terminates with light commercial structures.
7	View 7	View northwest from 103rd Street and Harvard Avenue	Moderate	The existing railroad intersection at 103rd Street consists of lightly vegetated, low-density development, with residential neighborhood visible in the distance.
8	View 8	View north from the pumping station on Harvard Avenue	Moderate	The viewshed includes existing tree-lined railroad tracks to the west, a moderately vegetated green space along Harvard Avenue, and an electrical tower in the distance

Viewpoint *See Figures 4-2 - 4-17*	View *See Attach-ment A*	Location/View Direction	Existing Visual Quality	Assessment Area
9	View 9	View northwest from 108th Street adjacent to Roseland Christian School	Low	The view south of Roseland Christian School includes schoolyard with existing tree-lined railroad tracks to the west and light industrial buildings to the north.
10	View 10	View west from 111th Street	Low	The viewshed includes existing railroad crossing at 111th Street with light commercial buildings west of the tracks and vacant lots to the east. Existing residential buildings are in the foreground.
11	View 11	View southwest from 113th Street and Princeton Avenue	Low	The corner of 113th Street and Princeton Avenue shows a tree-lined residential fabric consisting of similar scale and style.
12	View 12	View northeast from 115th Street	Low	The existing railroad intersection at 115th Street consists of low-density, light industrial development west of the tracks and a vacant lot and residential building to the east.
13	View 13	View southeast from State Street	Low	The existing railroad intersection at State Street includes a vacant lot east of the tracks and a consistently developed residential neighborhood lined with trees to the west.
14	View 14	View south toward the existing UPRR viaduct from Michigan Avenue	Low	The viewshed includes an existing railroad berm and viaduct crossing over Michigan Avenue. A vacant lot is to the west and poorly maintained commercial buildings line the east side.
15	View 15	View northwest toward the existing UPRR viaduct from Michigan Avenue	Moderate	The viewshed includes an existing railroad viaduct crossing over Michigan Avenue and medium-density commercial and residential development in the surrounding area, some of which is vacant.
16	View 16	View southeast from 117th Street east of Prairie Avenue	Moderate	The viewshed includes highly vegetated existing railroad embankment with residential fabric of similar scale and style adjacent to it.
Segment UB - UPRR Rail Alternative South of Michigan Avenue				
17	View 17	View southeast toward 130th Street overpass from 130th Place	Low	The viewshed includes existing railroad tracks passing under the 130th Street overpass with medium-density vegetation surrounding it.

Viewpoint *See Figures 4-2 - 4-17*	View *See Attachment A*	Location/View Direction	Existing Visual Quality	Assessment Area
18	View 18	View northeast on 130th Place adjacent to Altgeld Gardens neighborhood	Low	The viewshed includes Altgeld Gardens neighborhood buildings with adjacent parking and 130th Street lined with trees. The Metropolitan Water Reclamation District property is visible to the north of 130th Street.
Segment HA - Halsted Rail Alternative North of 119th Street				
19	View 19	View southeast toward I-57 overpass from 98th and Parnell Street	Moderate	The viewshed includes the intersection of 98th and Parnell Street in the foreground with the I-57 overpass to the south and existing residential area to the east.
20	View 20	View southwest from 98th Place looking across I-57	Low	The viewshed shows typical conditions along the expressway corridor and adjacent residential areas to the south.
21	View 21	View southeast toward 98th Street from the Halsted Street overpass	Moderate	The viewshed includes the I-57 overpass at Halsted Street in the foreground with light commercial structures and a vegetated median in the distance.
22	View 22	View northwest from Emerald Avenue	High	Existing neighborhood fabric is intact and buildings are of similar style and scale.
23	View 23	View northeast from Halsted Street just north of 100th Street	Moderate	The visually cohesive, light commercial corridor consists of structures of similar style, surface parking lots, some on-street parking, and a vegetated median.
24	View 24	View south from Halsted Street at 100th Street	Low	The viewshed includes varying degrees of building styles in a low-density commercial area consisting of a vacant lot, parking lot, various commercial buildings, and a church.
25	View 25	View south from Halsted Street between 102nd Street and 103rd Street	Moderate	The viewshed includes a vegetated median along a medium-density commercial area of consistent style and scale.
26	View 26	View west from the corner of 103rd Street and Emerald Avenue	Moderate	The viewshed consists of a medium-density, light commercial district of similar style and scale, with a new commercial building and parking lot to the south and residential fencing to the north.
27	View 27	View north on Halsted Street at 107th Street	Low	The intersection includes a vacant parking lot and older light commercial buildings of similar scale and style with a newer gas station on the northeast corner.

Viewpoint *See Figures 4-2 - 4-17*	View *See Attach-ment A*	Location/View Direction	Existing Visual Quality	Assessment Area
28	View 28	View southeast from 107th Street between Halsted Street and Green Street	Low	The viewshed includes low-density commercial buildings with a large grocery parking lot in the foreground and a church on the east side of Halsted Street. Residential structures are in the distance.
29	View 29	View east from 111th Street between Halsted Street and Green Street	Low	The viewshed includes varying degrees of building style near a low-density commercial intersection. A tree-lined neighborhood is in the distance.
30	View 30	View southeast from the Major Taylor Trail at 118th Street	Moderate	The viewshed includes a tree-lined bike path with commercial structures along Halsted Street in the distance.
31	View 31	View south on Halsted Street at 118th Street	Moderate	The viewshed includes vegetated median along a very low-density, tree-lined, light commercial area.
Segment HB - Halsted Rail Alternative south of 119th Street				
32	View 32	View southwest at the corner of 119th Street and Halsted Street	Low	The intersection includes a large parking lot and older light commercial buildings of similar scale and style with the Major Taylor bike trail to the southeast.
33	View 33	View northwest at the corner of 120th Street and Halsted Street	Low	The viewshed consists of older commercial buildings of similar style and scale along a medium-density corridor.
34	View 34	View south on Halsted Street at Vermont Avenue	Low	The intersection includes older light commercial buildings of similar scale and style with a car sales lot to the west and a non-vegetated median along Halsted Street.
35	View 35	View northeast at the corner of 128th Street and Halsted Street	Low	The viewshed includes two vacant lots adjacent to light commercial buildings that appear to be old and rundown.
36	View 36	View northeast from the corner of 128th Place and Green Street	Moderate	The viewshed includes a medium-density residential neighborhood of similar scale and style with light commercial buildings in the distance.
37	View 37	View north from Halsted Street at the Little Calumet River bridge	Moderate	The viewshed includes the bridge/overpass with vegetation along both sides. Light commercial structures, vegetated median, and vacant lots are in the distance.

UPRR = Union Pacific Railroad

Section 5
Impacts and Mitigations

The No Build Alternative would have no impact on the visual and aesthetic conditions and the BRT Alternative would have very little impact. The BRT Alternative impacts would be concentrated at the Kensington Avenue and the 130th Street stops, where minor demolition would be required to accommodate a parking garage at each stop. The RLE Project could improve visual quality, depending on the location and option in question. The UPRR Rail Alternative ROW Option would require moderate land acquisition that also would typically be concentrated near station locations. Overall, this option would result in a modest change on the visual and aesthetic conditions of views for the affected project area and would be the least impactful of the three UPRR Rail Alternative options. As part of the UPRR Rail Alternative East Option, substantial land acquisition and demolition of buildings would occur along the project corridor, especially in Segment UA, with the most affected areas occurring along route curves and concentrated near station locations (refer to visual simulation). Overall, this option would result in a moderate impact on the visual and aesthetic conditions of views for the affected project area. The UPRR Rail Alternative West Option would have similar impacts as the East Option. The Halsted Rail Alternative would mainly result in visual impacts along Halsted Avenue due to the proposed structure and removal of some existing trees in the median.

5.1 No Build Alternative

The No Build Alternative would not have an impact on the visual and aesthetic conditions of the project area. This alternative only includes projects that are committed in the CMAP Fiscal Year 2010–2015 TIP and does not include extending the existing Red Line south of the 95th Street Terminal. Improvements to the 95th Street Terminal are part of the CMAP Fiscal Year 2010–2015 TIP. Generally, the No Build Alternative would not improve the current visual and aesthetic conditions, and the low visual quality of the existing area would remain and continue to degrade with time.

5.1.1 Permanent Impacts and Mitigations - No Build Alternative

Permanent impacts under the No Build Alternative would consist of minimal visual and aesthetic impacts. There are no existing CTA facilities in the project area.

5.1.2 Cumulative Impacts and Mitigations - No Build Alternative

The No Build Alternative would not cause cumulative impacts. Any proposed developments already being considered for development within the RLE Project corridor would still occur under the No Build Alternative.

5.2 Bus Rapid Transit Alternative

The proposed BRT Alternative would operate between the existing 95th Street Terminal and the intersection of 130th Street and Eberhart Avenue with stops at 103rd Street, 111th Street, Kensington Avenue, and 130th Street. Stops along this portion would include improved bus shelters and park & ride facilities. The route would then continue through the Altgeld Gardens neighborhood along the existing #34 route, in which existing bus shelters would remain unchanged. Figure 4-1 shows the BRT Alternative.

5.2.1 Permanent Impacts and Mitigations - Bus Rapid Transit Alternative

Because parking lanes would be removed for some portions as part of the alignment, there would visually be fewer cars parked on the street in areas near new bus stops. New bus shelters would be provided at the 103rd Street, 111th Street, Kensington Avenue, and 130th Street stops and would result in minimal visual impact. Park & ride facilities would also be constructed at each stop and demolition would occur as part of this alternative. These changes would alter the density of some viewsheds in the project area by varying degrees. Potential impacts created by these parking structures are represented in Views 40 and 41 in Appendix A. Aside from the addition of a three-story parking garage at the Kensington Avenue stop and at the 130th Street stop, the implementation of the BRT Alternative overall would have minimal impact on the visual and aesthetic conditions in the project area.

Visualizations were completed for representative areas and those with highest potential visual impact. Impacts on station areas were determined based on representative visualization and the amount of change that would occur around the station areas. Specific impacts are discussed below. Mitigations to reduce visual impacts related to the BRT Alternative would include shielding exterior lighting and providing special consideration for lighting placement adjacent to sensitive areas such as residential communities; providing landscaping and/or visual screening at park & ride locations where possible; and designing the parking structure to match the character of the surrounding fabric as well as using urban design techniques to reduce massing. The impacts would not be considered adverse for the low to moderate impacts after mitigation.

- 103rd Street stop - Low visual impact - Improved bus shelters near the intersection of 102nd Street and Michigan Avenue would have little to no visual impact. A surface parking lot on the southeast quadrant of the 102nd Street and Michigan Avenue intersection would require one building to be removed, which would decrease the visual quality of the area. Visual impacts would be mitigated using measures described above.

- 111th Street stop - Low visual impact - Improved bus shelters near the intersection of 111th Street and Michigan Avenue would have little to no visual impact. A surface parking lot located on the southeast quadrant of the 111th Place and State Street would replace existing vacant lots, which would result in an increase in visual quality.

- Kensington Avenue stop - Moderate visual impact prior to mitigation - Improved bus shelters near the intersection of the Kensington Avenue and Michigan Avenue would have little to no visual impact. A three-story parking garage with retail and/or community facilities on the southeast quadrant of the Kensington Avenue and Michigan Avenue intersection would require removal of vegetation and a few structures, which would create a moderate change in scale, density, and character. Due to low density and low viewer sensitivity in the immediate area, the impacts after mitigations discussed above would result in minimal (low) visual impact. See View 40 in Appendix A for visual illustration of this impact.

- 130th Street stop - Moderate visual impact prior to mitigation - Improved bus shelters near the intersection of 130th Street and Eberhart Avenue would have little to no visual impact. The addition of a three-story parking garage, located on the northwest quadrant of the 130th Street and Water Treatment Plant access road intersection, would change the character and scale of the surrounding area. No buildings would be removed; however, the existing area across from the Altgeld Gardens neighborhood and Golden Gate Park is mostly vegetated. The addition of a large hard surface would decrease the visual quality of the area. Due to a major change in scale of the surrounding area and high viewer sensitivity, impacts after mitigations described above would be moderate. See View 41 in Appendix A for visual illustration of this impact.

Table 5-1 summarizes the impacts on visual and aesthetic conditions for the BRT Alternative and provides an assessment of the impacts. Figures 4-2 through 4-5 show the view locations.

Table 5-1: Impacts - Bus Rapid Transit Alternative

Viewpoint *See Figures 4-2-4-5*	View *See Attachment A*	Location/View Direction	Visual Impact after Mitigation	Assessment Area
Bus Rapid Transit Alternative				
40	View 40	View south from 115th Street and Michigan Avenue	Low	Minimal removal of buildings and addition of a three-story parking garage would create a change in scale and character. The addition of a bus shelter would have almost no visual impact.
41	View 41	View northeast from Golden Gate Park at 130th Street	Moderate	Removal of vegetation and addition of a three-story parking garage would alter the scale and character of the area; however, the bus shelter would have no visual impact.

5.2.2 Construction Impacts and Mitigations - Bus Rapid Transit Alternative

Projects already committed through the CMAP TIP would be constructed as described for the No Build Alternative. There would be minimal construction impacts on the existing visual condition along the BRT Alternative route. Because no dedicated bus lanes would be provided as part of the BRT Alternative, the only construction would be isolated in locations related to the installation of new bus stops, including shelters and a possible parking lot or parking garage depending on location. These visual conditions would be temporary, lasting several weeks to a year and might include construction fencing, cones, and other construction related to parking facilities. At locations where park & ride structures and lots would be created, example impacts would include the following:

- Construction fencing
- Demolition of existing buildings or clearing of vacant lots
- Temporary street closures and related signage
- Temporary lighting or entrances

During construction the CTA would attempt to maintain as much existing vegetation as practical, and minimize temporary construction impacts on the neighborhood with measures such as limiting light trespassing from night lighting. Best management practices and debris-free construction areas would mitigate temporary visual impacts from the construction sites.

5.2.3 Cumulative Impacts and Mitigations - Bus Rapid Transit Alternative

There are no future developments planned for the project corridor that would have cumulative impacts on the visual and aesthetic conditions with the BRT Alternative.

5.3 Union Pacific Railroad Rail Alternative - Right-of-Way Option

The UPRR Rail Alternative is an extension of the existing Red Line with three alternative options: the UPRR ROW Option, East Option, and West Option. The trains would operate on an elevated structure that would run south from 95th Street along I-57 for nearly ½ mile to the existing UPRR corridor in the vicinity of Eggleston Avenue. Note that Views 1A, 2A, 3A, and 4A apply to all rail alternatives. The alignment would then run south along the UPRR corridor to approximately 111th Street where it would turn southeast. East of Prairie Avenue, the alignment would cross over the CN/ME tracks near 119th Street, where it would transition to an at-grade profile and then continue southeast along the Northern Indiana Commuter Transportation District Chicago South Shore & South Bend Railroad (NICTD/CSS & SBRR) ROW to terminate at 130th Street. Four stations would be included: 103rd Street, 111th Street, Michigan Avenue, and 130th Street. Figure 4-6 shows the UPRR Rail Alternative.

The scale, density, and character of several viewsheds would change by varying degrees as part of UPRR Rail Alternative. Refer to Views 1A, 2A, 3A, 4A, 10 and 10A, 13 and 13A, and 14 and 14A for visual illustrations and examples of these impacts.

The UPRR ROW Option would place CTA tracks on an elevated structure located in the existing UPRR ROW between I-57 and CN/ME tracks. UPRR Trains would relocate to another corridor as part of a separate, earlier project that may occur regardless of RLE Project implementation. A visual illustration of this impact is represented in View 12A in Appendix A. Moderate land acquisition would occur as part of this alternative, and would typically be concentrated near station locations. Overall, this option would have a modest change on the visual and aesthetic conditions of views for the affected project area.

Track alignments typically are shown to have a higher degree of visual impact than other changes, due to the demolition of existing structures and, in many cases, a substantial change in scale, density and character of the surrounding environment. Project components for all alternatives would be visible, depending on viewshed and alignment location, which would change the visual and aesthetic quality of the project corridor by varying degrees. Some of the more impactful elements would include elevated tracks and platforms, concrete piers and steel cross-girders, stations and substations, parking structures and surface lots.

5.3.1 Permanent Impacts and Mitigations - Union Pacific Railroad Rail Alternative - Right-of-Way Option

The UPRR Rail Alternative was analyzed in two segments. Segment UA consists of the UPRR Rail Alternative north of Michigan Avenue and Segment UB is the portion south of Michigan Avenue. Refer to Figure 4-6 for segment division.

In order to reduce adverse impacts on visual and aesthetic conditions, several standard mitigation measures would be implemented for any location identified as having moderate or high impact. Mitigation actions that would apply to all alternatives include, but are not limited to, the following:

- The final design of new stations and additional structures would reflect the character and material quality of uniquely identified neighborhoods or communities.

- In locations where track alignment would lead to the removal of buildings or cohesive neighborhood fabric, all efforts would be made to create new developments on parcels no longer needed; these developments would utilize equivalent scales, styles, and character of the surrounding community.

- Replacement or restoration of removed vegetation and landscaping is assumed in nearly all instances, and additional locations would be considered in areas where new building development prohibits restoration or is limited by size of parcels. Landscaping would be in compliance with the City of Chicago Green Street Project.

- When possible the project would be designed to address neighborhood plan recommendations related to visual and aesthetic issues, especially as they relate to station, substation, and parking garage design. Where parking structures would be taller than surrounding structures, design techniques such as stepping the massing back from the street would be used to reduce the impacts of a dramatic change in scale.

- Exterior lighting would be shielded and carefully placed when adjacent to sensitive areas such as residential communities.

- Landscaping and/or visual screening would be provided at park & ride locations, where possible, to reduce the visual impact of large, open, hard surfaces or structures.

- In locations where the alignment would be immediately adjacent to commercial and residential corridors, methods of good urban design would be used to reduce adverse impacts on neighborhood character and maintain a welcoming visual character for pedestrians.

These mitigation measures would apply in varying degrees to each alternative depending on the quantity and degree of visual and aesthetic impacts. Mitigation measures specific to particular locations are addressed under designated high-impact views within each alternative. Even with mitigation measures that would lessen impacts, several locations would still have adverse impacts, such as the addition of large-scale parking structures that are out of context and scale in residential neighborhoods, or taller, flyover structures that would be at a greater scale and alter the character of their surroundings. These impacts are discussed in Section 6.

5.3.1.1 Segment UA

The creation of elevated structures along Segment UA from 95th Street to the vicinity of Eggleston Avenue would have minimal impact on the visual quality. The elevated structure and creation of related stations would have a moderate impact on the visual quality of Segment UA from the vicinity of Eggleston Avenue to 119th Street. This visual change is subjective.

Shadows created by the elevated structure would change throughout the day and season. The shadows would vary depending on the height, orientation, and density of surrounding structures, vegetation and development. Shadows would have the most impact along Segment UA. The majority of vegetation along the UPRR ROW Option corridor would remain and would help minimize visible light and shadow effects on adjacent neighborhoods. There would be additional lighting introduced to the project area that would be associated with park & ride facilities, stations, substations, yard and shop facilities, and trains (which include interior/safety lighting and exterior headlights). For most of the UPRR Rail Alternative project corridor, light and glare associated with the alignment and trains would not have an adverse impact because the proposed features would generally be located in the existing expressway/highway corridor or the existing UPRR railroad corridor, which currently produce transportation-related light and glare.

Each station in Segment UA comprises elevated island platforms with covered canopies, street level stations structures, and adjacent parking facilities. These stations include the 103rd Street station, 111th Street station, and Michigan Avenue station.

Visualizations were completed for representative areas and those with highest potential visual impact. Impacts on station areas were determined based on representative visualization and the amount of change that would occur around the station areas. Specific impacts at each station, as well as view locations with high visual impact, are discussed below. Locations with low to moderate impacts would be mitigated using the standard mitigation measures discussed at the beginning of Section 5.3.1. Impacts would not be considered adverse for the low to moderate impacts after mitigation. High visual impact views would have specific measures to reduce adverse impacts after mitigation.

- 103rd Street station would have a low visual impact. Minimal buildings would be removed along 103rd Street to accommodate two surface parking lots, which would minimally alter the character of the surrounding neighborhood. The new station on the north side of 103rd Street would minimally change the character and density of the intersection. The creation of elevated platforms and track structure would have a moderate impact on the viewshed of residences adjacent to the project alignment. These impacts would be mitigated by using standard mitigation measures, including design of the station to match the character and scale of surrounding developments and landscaping. See View 8A in Appendix A for a visual illustration of this impact.

- 111th Street station would have a low visual impact. No buildings would be removed. The new station just north of 111th street would minimally change the character and density of the intersection. The creation of elevated platforms and track structure would have a moderate impact on the viewshed of residences adjacent to the project route. The removal of vegetation and addition of two surface parking lots would affect the surrounding neighborhood character. Impacts would be mitigated using standard mitigation measures, including landscaping and design of the station to match the character and scale of surrounding developments. See View 10A in Appendix A for visual illustration of this impact.

- Michigan Avenue station would have a high visual impact prior to mitigation. The new station on the west side of Michigan Avenue would change the character, scale, and density of the immediate area. The addition of elevated platforms and track structure and the substantial removal of buildings and vegetation for the creation of a three-story parking garage west of the tracks would have a high impact on the character and density of the local community. Despite mitigation measures, the impact on residents of State Street and 116th Street would still be substantial due to the large mass of the parking structure adjacent to the neighborhood. The moderate removal of vegetation in the existing vacant lot east of the tracks to accommodate a surface lot would have additional minimal visual impact for adjacent residents. Impacts would be mitigated using standard mitigation measures, which include designing the station and structures to match the character of the surrounding fabric, using urban design techniques to reduce massing and create pedestrian friendly surroundings, and providing landscaping and visual screening. Impacts after mitigation would be moderate due to the mass of the parking garage. See Views 13A, 14A, and 15A in Appendix A for visual illustration of this impact.

- A high visual impact prior to mitigation would occur at View 13A (see Appendix A). See description of Michigan Avenue station above or refer to Table 5-2.

The UPRR ROW Option along Segment UA would include substations located west of CTA tracks between 104th and 105th Street and west of the CTA tracks between Perry Avenue and Lafayette

Avenue. Additional minimal visual impacts would occur for surrounding residences adjacent to these locations.

Table 5-2 summarizes the impacts on visual and aesthetic conditions for the UPRR ROW Option along Segment UA and provides an assessment of the impacts. Figures 4-7 through 4-10 show the view locations.

Table 5-2: Impacts - Right of Way Option - Segment UA

Viewpoint *See Figures 4-7- 4-10*	View *See Attach-ment A*	Location/View Direction	Visual Impact after Mitigation	Assessment Area
Segment UA - North of Michigan Avenue				
1	View 1A	View south over I-94 from 95th Street overpass and Lafayette Avenue	Low	The overall visual character would not change, but the increase in scale and shadows would be noticeable to motorists due to elevated structures.
2	View 2A	View northwest toward Wentworth Avenue overpass from 99th and LaSalle Street	Low	The overall visual character would not change, but the increase in scale and shadows would be noticeable to motorists due to elevated structures. The structure would be visible in the distance to adjacent neighborhoods.
3	View 3A	View south toward I-57 overpass from Wentworth Avenue	Low	The character and scale of neighborhood would not change, but the elevated structure would be visible in the distance
4	View 4A	View southeast from 98th Place and Eggleston Avenue	Low	The character of the area would not change; however, there would be an increase in scale. The elevated structure and removal of vegetation beyond would be visible in the distance to adjacent neighborhoods.
5	View 5A	View northwest from the southwest corner of Wendell Smith Park	Moderate	The visual character would change with the removal of minimal vegetation and view of the structure in the distance.
8	View 8A	View north from the pumping station on Harvard Avenue	Low	The elevated structure would create a change in scale; however, the viewshed would otherwise remain unaltered.
9	View 9A	View northwest from 108th Street adjacent to Roseland Christian School	Low	The elevated structure would create a change in scale; however, the view from Roseland Christian School would otherwise remain unaltered.
10	View 10A	View west from 111th Street	Moderate	The character and scale of the intersection would change with the addition of the elevated structure, elevated platform, and at-grade station. No buildings and minimum vegetation would be removed.
11	View 11A	View southwest from 113th Street and Princeton Avenue	Low	The elevated structure would be minimally visible to residents due to existing vegetation.
12	View 12A	View northeast from 115th Street	Low	The elevated structure would create a minimal change in scale and character for the surrounding area.

Viewpoint *See Figures 4-7- 4-10*	View *See Attach-ment A*	Location/View Direction	Visual Impact after Mitigation	Assessment Area
13	View 13A	View southeast from State Street	Moderate	The addition of a three-story park & ride garage would substantially change the scale, character, and density of the neighborhood. The elevated structure would have minimal impact. Visual impact would be moderate after mitigation.
14	View 14A	View south toward the existing UPRR viaduct from Michigan Avenue	Moderate	The scale and character or the viewshed would moderately change with the addition of an elevated structure, elevated platform, and raised station. The removal of vegetation and structures beyond for a three-story park & ride garage would also alter the visual quality, Visual impact would be moderate after mitigation.
15	View 15A	View northwest toward the existing UPRR viaduct from Michigan Avenue	Low	The elevated structure and station would be partially hidden by the existing vegetation and structures. Only minimal vegetation would be removed,
16	View 16A	View southeast from 117th Street east of Prairie Avenue	Low	The elevated structure would be minimally visible to residents due to existing vegetation.

5.3.1.2 Segment UB

Aside from a portion of alignment north of the 120th Street yard and shop location, the UPRR ROW Option alignment in Segment UB runs along an embankment and terminates at grade. This segment continues through an industrial area with no public streets and thus would have minimal impact on the visual quality of the surrounding area. Due to the lack of architectural character and low visual quality of the existing area, changes to the visual and aesthetic conditions would be very minimal. The creation of 130th Street South Station Option or West Station Option would have a moderate impact on the visual quality. These stations would have at-grade island platforms with covered canopies, CTA Rail stationhouse, and adjacent parking facilities. Visualizations were completed for representative areas and those with highest potential visual impact. Impacts on station areas were determined based on representative visualization and the amount of change that would occur around the station areas. Specific impacts at each station would be as follows:

- 130th Street South Station Option would have a minimal visual impact. Although the new station located west of the NICTD/CSS & SBRR ROW would moderately change the scale and character of the existing light industrial area, changes in a light industrial area are not considered impacts. No buildings would be removed, but some vegetation would be affected. The tracks and platform would be lower in elevation than the 130th Street overpass and would be partially screened. The stationhouse would be similar in height to the overpass and to the one- to two-story structures at Altgeld Gardens neighborhood; however, the creation of a seven-story parking garage would have a high impact on the scale, be out of character with the surrounding area, and be visible from the adjacent residential community, albeit at a distance. Standard mitigation measures include designing the station and structures to match the character of the surrounding fabric, using urban design techniques to reduce massing, and providing landscaping and visual screening. Due to low density and viewer sensitivity in this area, overall impacts after mitigation would be minimal. Note that at community visioning sessions, community members expressed desire for higher density surrounding this proposed station. See View 17A in Appendix A for visual illustration of this impact.

- 130th Street West Station Option would have a moderate visual impact. The new station along the north side of 130th Street would moderately change the scale and character of the existing light industrial and low-density residential area. No buildings would be removed, but some vegetation would be affected. The stationhouse, at-grade tracks, and platform would be moderately visible from 130th Street or by residences in the Altgeld Gardens neighborhood, albeit at a distance. The creation of a four-story parking garage would have a high impact on the scale and density of the area due to height and mass. Additionally, the adjacent parking lot would create a large surface area with moderate visual impact. Standard mitigation measures include designing the station and structures to match the character of the surrounding fabric, using urban design techniques to reduce massing, and providing landscaping and visual screening. As with the South Station Option, community members expressed desire for higher density surrounding this proposed station. See View 18A in Appendix A for visual illustration of this impact.

The UPRR ROW Option along Segment UB would include substations located west of CTA tracks north of the proposed parking structure for the South Option or along the curve of the CTA tracks near 130th Street for the West Option. An additional substation is proposed for a site within the 120th Street yard and shop facility. There would be additional minimal visual impact for surrounding residences adjacent to these locations.

Table 5-3 summarizes the impacts on visual and aesthetic conditions for the UPRR ROW Option along Segment UB and provides an assessment of the impacts. Figures 4-11 through 4-12 show the view locations.

Table 5-3: Impacts: Right of Way Option - Segment UB

Viewpoint *See Figures 4-10-4-11*	View *See Attach-ment A*	Location/View Direction	Visual Impact after Mitigation	Assessment Area
Segment UB - South of Michigan Avenue				
17	View 17A	View southeast toward 130th Street overpass from 130th Place	Low	The mass of the seven-story parking garage would change the scale and character of the area. Due to the low-density location, however, viewer sensitivity would be low and these impacts would be minimal. The addition of a stationhouse and at-grade platform, partially blocked by the elevation of 130th Street, would be low impact.
18	View 18A	View northeast on 130th Place adjacent to Altgeld Gardens neighborhood	Moderate	The mass of the four-story parking garage would change the scale and character of the area. The addition of a stationhouse, large parking lot, and at-grade platform would change the character of the area creating a moderate impact.

5.3.2 Construction Impacts and Mitigations - Union Pacific Railroad Rail Alternative - Right-of-Way Option

During construction for the RLE Project, the CTA would attempt to maintain as much existing vegetation as practical and minimize temporary construction impacts on neighborhoods by limiting light trespassing from night lighting. Best management practices and debris-free construction areas would mitigate temporary visual impacts from the construction sites. The visual impacts of construction under the UPRR ROW Option would include temporary visual conditions related to construction. The durations of these visual conditions would vary from several months to a few years depending on the alignment location and occurrence of station facilities. Examples include the following:

- Construction fencing
- Demolition of existing buildings
- Temporary walls
- Temporary street closures and related signage
- Temporary lighting
- Temporary entrances
- Shoring of concrete structures or existing viaducts during construction

The overall visual impact on commuters and visitors would be relatively limited along the I-94 and I-57 corridor because they typically only see the location during commute times or upon entering and exiting. Residents, business owners, and recreationists typically view one station and portion of the project in their local community. Construction impacts would only be temporary in nature, and would be most extensive in areas of land acquisition.

5.3.2.1 Segment UA

Construction impacts would be longer in nature, lasting a few years, at the Michigan Avenue station due to the substantial removal of buildings and construction of a three-story park & ride garage.

5.3.2.2 Segment UB

Construction impacts would be similar in nature to those discussed in Section 5.3.2.

5.3.3 Cumulative Impacts and Mitigations - Union Pacific Railroad Rail Alternative - Right-of-Way Option

There are no future developments planned for the project corridor that would have cumulative impacts on the visual and aesthetic conditions along the alignment for the UPRR ROW Option.

5.3.4 120th Street Yard and Shop

The 120th Street yard and shop would be located on a combination of industrial/vacant land east of the CN/ME tracks and west of the NICTD/CSS & SBRR tracks at approximately 120th Street and Cottage Grove Avenue. The yard would be entirely at grade with a nominal amount of parking for employees. A substation is proposed for a site within the 120th Street yard on the west of the existing railroad tracks and east of the proposed shop facility.

5.3.4.1 Permanent Impacts and Mitigations

Due to the location in a low-density light industrial area, impacts would be minimal. At-grade tracks would not be visible from nearby structures nor would they disrupt the existing visual character of the industrial surroundings. In addition to the standard mitigations discussed in Section 5.3.1 that would be used, additional measures for the 120th Street yard and shop would include designing the shop facility structure to be aesthetically compatible with surrounding uses.

5.3.4.2 Construction Impacts and Mitigations

Construction impacts other than those mentioned in Section 5.3.2 would be minor for the 120th Street yard and shop due to its location in a low-density area and the nature of at-grade construction.

5.4 Union Pacific Railroad Rail Alternative - East Option

The UPRR Rail Alternative East Option would include new CTA tracks on an elevated structure located immediately adjacent to and east of the existing UPRR ROW. Under this option, the UPRR would remain operational and there would be a 50-foot offset from the existing railroad tracks. Substantial land acquisition and demolition of buildings would occur along the project corridor, especially in Segment UA. The most affected areas would occur along route curves and would be concentrated near station locations. Visual illustrations of these impacts are represented in Views 1A, 2A, 3A, 4A, 10B and 11B in Appendix A. Note that Views 1A, 2A, 3A, and 4A apply to all rail alternatives. Overall, this option would result in a substantial change on the visual and aesthetic conditions of views for the affected project area. Mitigations for the substantial visual change associated with the UPRR Rail Alternative East Option are discussed in Section 5.3.1.

5.4.1 Permanent Impacts and Mitigations - Union Pacific Railroad Rail Alternative - East Option

The UPRR Rail Alternative was analyzed in two segments: Segment UA consists of the UPRR Rail Alternative north of Michigan Avenue and Segment UB is the portion south of Michigan Avenue. Please refer to Figure 4-6 for segment division.

5.4.1.1 Segment UA

The creation of elevated structures along the Segment UA from 95th Street to the vicinity of Eggleston Avenue would have moderate impact on visual quality. The proximity to the expressway corridor is currently screened by vegetation that would be substantially removed as part of the UPRR Rail Alternative East Option, making the new elevated structure visible and intrusive to the viewshed from the adjacent neighborhood and Wendell Smith Park. The elevated structure and creation of related stations would have substantial impact on the visual and aesthetic conditions of Segment UA from the vicinity of Eggleston Avenue to 119th Street. This visual change is subjective. General light and shadow conditions for the UPRR Rail Alternative East Option would be similar to those discussed in Section 5.3.1.1; however, a substantial portion of vegetation would be removed on the east side of the project corridor, which would introduce new shadows and light patterns on developments to the east. The majority of vegetation along the west side of the East Option project corridor would remain and would help minimize visible light and shadow effects on residences to the west.

Visualizations were completed for representative areas and those with highest potential visual impact. Impacts on station areas were determined based on representative visualization and the amount of change that would occur around the station areas. Specific impacts at each station area, as well as view locations with high visual impact, are discussed below. Locations with low to moderate impacts would be mitigated using the standard mitigation measures discussed at the beginning of Section 5.3.1. Impacts would not be considered adverse for the low to moderate impacts after mitigation. High visual impact views would have specific measures to reduce adverse impacts after mitigation.

- 103rd Street station would have a moderate visual impact. Several buildings would be removed along the existing UPRR corridor. The new station on the north side of 103rd Street would minimally change the character and density of the intersection of 103rd Street and the existing UPRR tracks. The creation of elevated platforms and track structure would affect the viewshed and create new shadows on residences adjacent to the project route. Two surface parking lots east of the station and west of the existing UPRR corridor would have additional minimal impacts on the surrounding neighborhood character. These impacts would be partially mitigated by using standard mitigation measures, including landscaping and design of the station to match the character and scale of surrounding developments. See Views 7B and 8B in Appendix A for visual illustration of this impact.

- 111th Street station would have a moderate visual impact. Minimal buildings would be removed. The new station just north of 111th street would minimally change the character and density of the intersection at 111th Street and the existing UPRR tracks. The creation of elevated platforms and track structure would alter the viewshed of residences adjacent to the project route. The substantial removal of vegetation to allow for two surface parking lots would have a moderate impact on the surrounding neighborhood character. Impacts would be mitigated using standard mitigation measures, including landscaping and design of the station to match the character and scale of surrounding developments. See View 10B in Appendix A for visual illustration of this impact.

- Michigan Avenue station area would have a moderate visual impact. Several buildings would be removed along the existing UPRR corridor. The new station on the east side of the existing UPRR corridor would not change the character, scale, and density of the immediate area. Elevated platforms and track structure would minimally affect the viewshed of the surrounding area. The substantial removal of buildings and vegetation for the creation of a three-story parking garage west of the existing UPRR corridor would have a moderate impact on the character and density of the local community. The impact on residents of State Street and 116th Street would still be substantial due to the large mass of the parking structure adjacent to a neighborhood; however mitigation measures such as designing the parking facility to match the character of the surrounding fabric would help to minimize the visual impact. The moderate removal of vegetation in the existing vacant lot east of the tracks to accommodate a surface lot would have additional minimal visual impact. Impacts would be mitigated using standard mitigation measures, which include designing the station and structures to match the character of the surrounding fabric, using urban design techniques to reduce massing and create pedestrian friendly surroundings, and providing landscaping and visual screening. See View 14B in Appendix A for visual illustration of this impact.

- A high visual impact would occur at View 16B at 117th Street and Prairie Avenue. Refer to Table 5-4. Standard mitigation measures include using landscaping and screening to minimize adverse impacts. Due to structure height, proximity to adjacent residences and intact existing neighborhood fabric, however, impacts after mitigation would still be high.

The UPRR Rail Alternative East Option along Segment UA would include substations west of existing UPRR tracks between 104th and 105th Street and west of the existing UPRR tracks between Perry Avenue and Lafayette Avenue. There would be additional minimal visual impact for surrounding residences adjacent to these locations.

Table 5-4 summarizes the impacts on visual and aesthetic conditions for the UPRR Rail Alternative East Option along Segment UA and provides an assessment of the impacts. Figures 4-8 through 4-11 show the view locations.

Table 5-4: Impacts - East Option - Segment UA

Viewpoint *See Figures 4-7-4-10*	View *See Attachment A*	Location/View Direction	Visual Impact after Mitigation	Assessment Area
Segment UA - North of Michigan Avenue				
5	View 5B	View northwest from the southwest corner of Wendell Smith Park	Moderate	The visual character and scale would change with removal of moderate vegetation and the view of the elevated structure introduced to the park.
7	View 7B	View northwest from 103rd Street and Harvard Avenue	Low	The scale and character of the viewshed would change with the removal of existing residential fabric and the addition of an elevated structure, elevated platform, and at-grade station. A surface park & ride lot in the foreground would also alter the character and density of the area.
8	View 8B	View north from the pumping station on Harvard Avenue	Moderate	The removal of vegetation along Harvard avenue and the elevated structure would moderately alter the scale and character of the area surrounding the pump station.
9	View 9B	View northwest from 108th Street adjacent to Roseland Christian School	Low	The elevated structure would create a change in scale and would partially encroach on the yard at Roseland Christian School and thus would minimally affect this viewshed.
10	View 10B	View west from 111th Street	Moderate	The character and scale of the intersection would change with the addition of an elevated structure and platform and at-grade station. Minimal residential structures would be removed to the east while moderate vegetation would be removed for a surface lot to the west.
11	View 11B	View southwest from 113th Street and Princeton Avenue	Moderate	Substantial vegetation and residential structures would be removed and the elevated structure would alter the scale and character of the neighborhood.
12	View 12B	View northeast from 115th Street	Moderate	The elevated structure would create a minimal change in scale and character for the surrounding area. Moderate commercial structures would be removed.
14	View 14B	View south toward the existing Union Pacific Railroad viaduct from Michigan Avenue	Moderate	The scale and character or the viewshed would moderately change with the addition of an elevated structure, elevated platform and Michigan Avenue stationhouse in the foreground. The removal of vegetation and structures beyond the existing UPRR tracks for a three-story park & ride garage would also alter the visual quality.
16	View 16B	View southeast from 117th Street east of Prairie Avenue	High	The residential character and scale would be substantially altered by the substantial removal of vegetation and neighborhood fabric and the addition of elevated structure east of the embankment

5.4.1.2 Segment UB

The impacts, mitigations, West Station Option, and South Station Option in Segment UB would be the same for all UPRR Rail Alternative options. See Section 5.3.1.2. No specific viewpoints were assessed in Segment UB for the East Option. See Table 5.3 Views 17A and 18A show conditions reflected in all UPRR Rail Alternative options.

5.4.2 Construction Impacts and Mitigations - Union Pacific Railroad Rail Alternative - East Option

Construction impacts and mitigations would be similar in nature for all UPRR Rail Alternative options. See Section 5.3.2.

5.4.2.1 Segment UA

Construction impacts would be longer in nature for the East Option than for the UPRR ROW Option, lasting a few years, at the Michigan Avenue station due to the substantial removal of buildings and construction of a three-story park & ride garage.

5.4.2.2 Segment UB

Construction impacts would be similar in nature to those discussed in Section 5.3.2.

5.4.3 Cumulative Impacts and Mitigations - Union Pacific Railroad Rail Alternative - East Option

There are no future developments planned for the project corridor that would have cumulative impacts on the visual and aesthetic conditions along the alignment for the UPRR Rail Alternative East Option.

5.4.4 120th Street Yard and Shop

The 120th Street yard and shop would be the same for all UPRR Rail Alternative options. See Section 5.3.4.

5.4.4.1 Permanent Impacts and Mitigations

See Section 5.3.4.1

5.4.4.2 Construction Impacts and Mitigations

See Section 5.3.4.2

5.5 Union Pacific Railroad Rail Alternative - West Option

The UPRR Rail Alternative West Option would include new CTA tracks on an elevated structure located immediately adjacent to and west of the existing UPRR ROW. Under this option, the UPRR would remain operational and there would be a 50-foot offset from the existing railroad tracks. Substantial land acquisition and demolition of buildings would occur along the project corridor, especially in Segment UA. The most affected areas would occur along route curves and would be concentrated near station locations. Similar to the East Option, this option would generally result in a substantial change on the visual and aesthetic conditions of views for the affected project area. Visual illustrations of these impacts are represented in Views 1A, 2A, 3A, 4A, 12C and 15C in Appendix A. Note that Views 1A, 2A, 3A, and 4A apply to all rail alternatives. Mitigations for the substantial visual change associated with the UPRR Rail Alternative West Option are discussed in Section 5.3.1.

5.5.1 Permanent Impacts and Mitigations - Union Pacific Railroad Rail Alternative - West Option

The UPRR Rail Alternative was analyzed in two segments. Segment UA consists of the UPRR Rail Alternative north of Michigan Avenue and Segment UB is the portion south of Michigan Avenue. Please refer to Figure 4-6 for segment division.

5.5.1.1 Segment UA

The creation of elevated structures along the Segment UA from 95th Street to the vicinity of Eggleston Avenue would have minimal impact on visual quality. The elevated structure and creation of related stations would have substantial impact on the visual and aesthetic conditions of Segment UA from the vicinity of 99th Street to 103rd Street. Vegetation along Fernwood Parkway would be removed and the viewshed for residents along Eggleston Parkway would be adversely affected. This visual change is subjective. General light and shadow conditions for the West Option would be similar to those discussed in Section 5.3.1.1. In addition to shadows and light patterns created by the elevated structure, the removal of vegetation along the west side of the existing UPRR ROW for the majority of Segment UA would alter the visual quality for developments to the west. Standard mitigation measures include providing landscaping and replanting vegetation where possible. Due to the scale and proximity of the elevated structure to adjacent residences, however impacts after mitigation would remain adverse. The majority of vegetation along the east side of existing UPRR corridor would remain and would help minimize impacts on residences to the east.

Visualizations were completed for representative areas and those with highest potential visual impact. Impacts on station areas were determined based on representative visualization and the amount of change that would occur around the station areas. Specific impacts at each station, as well as view locations with high visual impact, are discussed below. Locations with low to moderate impacts would be mitigated using the standard mitigation measures discussed at the beginning of Section 5.3.1. Impacts would not be considered adverse for the low to moderate impacts after mitigation. High visual impact views would have specific measures to reduce adverse impacts after mitigation.

- 103rd Street station would have a high visual impact. Several buildings and vegetation along the west side of the existing UPRR corridor would be removed to accommodate the new station and surface parking lot. The new station within the existing Eggleston Parkway would moderately alter the scale and density of the intersection. The creation of elevated platforms and track structure would have a high impact on the viewshed of residences adjacent to the project route and create new shadows. These impacts would be partially mitigated by using standard mitigation measures, including design of the station to match the character and scale of surrounding neighborhood and provision of landscaping as screening. Despite mitigation measures, impacts would still be high for adjacent residences due to scale of the structure. See View 6C in Appendix A for visual illustration of this impact.

- 111th Street station would have a moderate visual impact. Minimal buildings would be removed. The substantial removal of vegetation and addition of the new station north of 111th street would have a moderate impact on the visual character of the intersection. The creation of elevated platforms and track structure would substantially affect the viewshed of residences adjacent to the project route. A surface parking lot located west of the station would have a high impact on the surrounding neighborhood character due to the removal of substantial vegetation and adjacency to residential structures to the north. Impacts would be mitigated using standard mitigation measures, including design of the station to match the character and scale of surrounding developments and provision of landscaping to replace removed vegetation. See View 10C in Appendix A for visual illustration of this impact.

- Michigan Avenue station area would have a high visual impact. Several buildings would be removed along the existing UPRR corridor. The new station on the west side of Michigan Avenue would not change the character, scale, and density of the immediate area. Elevated platforms and track structure would minimally affect the viewshed of the surrounding area. The substantial removal of buildings and vegetation for the creation of a five-story parking garage west of the elevated structure would, however, have an impact on the character and density of the local community. Despite mitigation measures, the impact on residents of State Street and 116th Street would still be substantial due to the large mass of the parking structure adjacent to a neighborhood. The moderate removal of vegetation in the existing vacant lot to accommodate a surface parking lot would have minimal visual impact. Impacts would be partially mitigated using standard mitigation measures, which include designing the station and structures to match the character of the surrounding fabric, using urban design techniques to reduce massing and create pedestrian friendly surroundings, and providing landscaping and visual screening. See Views 13C and 15C in Appendix A for visual illustration of this impact. Due to the five-story parking garage, impacts would remain high despite mitigation.

- A high visual impact would occur at View 6C (Appendix A). See description of 103rd Street station above or refer to Table 5-6.

- A high visual impact would occur at View 13C (Appendix A). Refer to Table 5-6. Standard mitigation measures include using landscaping and screening to minimize adverse impacts. Due to structure height, proximity to adjacent residences, and intact neighborhood fabric, however, impacts after mitigation would still be substantial.

- View 15C in Appendix A: High visual impact - See description of Michigan Avenue station above or refer to Table 5-6.

The UPRR Rail Alternative West Option along Segment UA would include substations located east of existing UPRR tracks between 105th Street and 105th Place and west of the existing UPRR tracks between Perry Avenue and Lafayette Avenue. There would be additional minimal visual impact for surrounding residences adjacent to these locations.

Table 5-5 summarizes the impacts on visual and aesthetic conditions for the UPRR Rail Alternative West Option along Segment UA and provides an assessment of the impacts. Figures 4-8 through 4-11 show the view locations.

Table 5-5: Impacts - West Option - Segment UA

Viewpoint *See Figures 4–7-4-10*	View *See Attach-ment A*	Location/View Direction	Visual Impact after Mitigation	Assessment Area
Segment UA - North of Michigan Avenue				
5	View 5C	View northwest from the southwest corner of Wendell Smith Park	Moderate	The visual character and scale would change with the removal of vegetation and addition of an elevated structure in park views.
6	View 6C	View south along Eggleston Avenue and Fernwood Parkway toward 103rd Street	High	Removal of vegetation and addition of elevated structure would substantially change the character of the residential street. Removal of existing buildings and addition of surface parking lot in the distance would moderately affect the viewshed.
10	View 10C	View west from 111th Street	Moderate	The character and scale of the intersection would change with the addition of an elevated structure, elevated platform, and at-grade station and removal of moderate residential and commercial structures. Vegetation would be replaced by a surface park & ride lot located to the west.
12	View 12C	View northeast from 115th Street	Moderate	The elevated structure would create a minimal change in scale and character for the surrounding area. Moderate commercial structures would be removed.
13	View 13C	View southeast from State Street	High	The substantial removal of residential structures for the addition of a five-story park & ride garage and elevated structure would substantially change the scale, character, and density of the neighborhood
15	View 15C	View northwest toward the existing UPRR viaduct from Michigan Avenue	High	The removal of structures and vegetation and the addition of an elevated structure, platform, and stationhouse, would alter the scale, character, and density of the viewshed. The five-story park & ride garage to the west would affect the scale of the surrounding area.

5.5.1.2 Segment UB

The impacts, mitigations, West Station Option, and South Station Option in Segment UB would be the same for all UPRR Rail Alternative options, with the exception described in the following paragraph. For all other impacts and mitigations, see Section 5.3.1.

The UPRR Rail Alternative West Option in the vicinity of Prairie Avenue and 117th Street would have additional minimal impacts at the elevated structure's east-west crossing over the existing UPRR tracks. This condition is unique to the West Option and would require the typical hammerhead piers to span straddle bent supports with typical pier protection. The elevation of the structure would be 16 feet higher than in other locations, to maintain a minimum clearance of 23 feet 4 inches over the existing UPRR tracks. There would be additional minimal visual impact isolated to this area and adjacent residences.

5.5.2 Construction Impacts and Mitigations - Union Pacific Railroad Rail Alternative - West Option

Construction impacts and mitigations would be similar in nature for all UPRR Rail Alternative options. See Section 5.3.2.

5.5.2.1 Segment UA

Construction impacts would be longer in nature for the West Option than for the UPRR ROW Option, lasting a few years, at the Michigan Avenue station due to the substantial removal of buildings and construction of a five-story park & ride garage.

5.5.2.2 Segment UB

Construction impacts would be similar in nature to those discussed in Section 5.3.2.

5.5.3 Cumulative Impacts and Mitigations - Union Pacific Railroad Rail Alternative - West Option

There are no future developments planned for the project corridor that would have cumulative impacts on the visual and aesthetic conditions along alignment for the UPRR Rail Alternative West Option.

5.5.4 120th Street Yard and Shop

The 120th Street yard and shop would be the same for all UPRR Rail Alternative options. See Section 5.3.4.

5.5.4.1 Permanent Impacts and Mitigations

See Section 5.3.4.1

5.5.4.2 Construction Impacts and Mitigations

See Section 5.3.4.2

5.6 Halsted Rail Alternative

The Halsted Rail Alternative would include new CTA tracks on an elevated structure running south from 95th Street along I-57 until Halsted Street, and then continuing south along Halsted Street to its intersection at Vermont Avenue near 127th Street. The scale, density, and character of several viewsheds would change by varying degrees as part of this alternative. The elevated structure would alternate between steel, cross-girder bents spanning the corridor and reinforced, cast-in-place concrete hammerhead piers in the existing median along Halsted Street. In these locations, trees in the planter median would be removed. Moderate land acquisition and demolition of buildings would occur along the project corridor, with most concentrated areas near station locations. Due to the low density and viewer sensitivity along much of the Halsted Rail Alternative corridor, the overall impacts would be moderate with regards to the visual and aesthetic conditions of views for the affected project area. Figure 4-13 shows the Halsted Rail Alternative.

Track alignments typically have a higher degree of visual impact than other changes, due to the demolition of existing structures and, in many cases, a substantial change in scale, density, and character of the surrounding environment.

5.6.1 Permanent Impacts and Mitigations - Halsted Rail Alternative

The retail and commercial establishments along Halsted Street are set back from the curb, with parking lots and parking lanes in front, creating a utilitarian appearance and character. The introduction of elevated structures would alter this character to a more urban quality and would also create density in an area that currently has a large portion of vacant lots and unoccupied structures. The trees in the existing vegetated median would be removed as part of the alternative and the addition of the elevated structure would be a visible encroachment, creating new shadows and light patterns, especially to those travelling along Halsted Street by foot or vehicle. Those travelling immediately adjacent to the alternative corridor would experience similar impacts. Visual illustrations of these impacts are represented in Views 1A, 2A, 3A, 4A, 23 and 33 in Appendix A. Note that Views 1A, 2A, 3A, and 4A apply to all rail alternatives. The concrete piers and steel cross-girders would become a prominent visual feature and the introduction of the seven-story park & ride facility at the Vermont Street station would dramatically change the scale, character, and shadows, making a strong impact on the surrounding residential neighborhoods. View 36 in Appendix A shows example station impacts.

Viewsheds that are roughly two to four blocks away and are not immediately adjacent to the alignment would be less sensitive to the impacts on visual and aesthetic conditions along Halsted Street because they take in a longer, more expansive view. In many instances, viewsheds from east-west locations only capture a small portion of the elevated structure due to a narrow perpendicular position. In these views the project elements would be noticeable but not dominant; thus, visual impacts related to the alignment would not be considered substantial unless immediately adjacent to the project corridor. Because the viewshed from east-west locations is narrow, existing views across Halsted Street would be blocked by the elevated structure and piers. With minimum vertical clearances of 14 feet 9 inches, the rail alignment would create new visual light conditions along the retail and commercial corridor for pedestrians, motorists, and adjacent structures. The elevated structure and associated piers would cast shadows that vary in intensity by time of day and season.

In addition to the standard mitigation discussed in Section 5.3.1, additional measures to reduce impacts of the Halsted Rail Alternative include the following:

- Encouraging more pedestrian-oriented urban development
- Introducing elements such as landscaping, planters, or fencing to provide a visual buffer between the project corridor and the adjacent residential neighborhoods

The Halsted Rail Alternative was analyzed in two segments: Segment HA consists of the Halsted Rail Alternative north of 119th Street and Segment HB is the portion south of 119th Street. Figure 4-13 shows the segment division.

5.6.1.1 Segment HA

The creation of elevated structures along the Segment HA from 95th Street to the vicinity of 99th and Halsted Streets would have overall minimal to moderate impacts on the visual quality. The project corridor between 99th Street and 103rd Street in Segment HA has more high quality commercial development than Segment HB; thus, impacts on visual and aesthetic conditions along this portion would be more substantial. The alternative would introduce an aesthetic, scale, and density that is not currently present along this light commercial corridor and would therefore create a moderate degree of change on the visual and aesthetic condition of views. This visual change is subjective. It would affect the vegetated median in many instances and would create new shadows on the surrounding area.

Visualizations were completed for representative areas and those with highest potential visual impact. Impacts on station areas were determined based on representative visualization and the amount of change that would occur around the station areas. Specific impacts at each station, as well as view locations with high visual impact, are discussed below. Locations with low to moderate impacts would be mitigated using the standard mitigation measures discussed at the beginning of Section 5.3.1. Impacts would not be considered adverse for the low to moderate impacts after mitigation. High visual impact views would have specific measures to reduce adverse impacts after mitigation.

- 103rd Street station would have a low visual impact. The new station at the intersection of 103rd and Halsted Streets would minimally change the character and density of the intersection. Minimal buildings would be removed for a surface park & ride lot on the northwest parcel adjacent to the station, which would have little impact on the surrounding neighborhood character. Due to low density and viewer sensitivity, impacts would be minimal. Standard mitigations would reduce impacts. See View 26 in Appendix A for visual illustration of this impact.

- 111th Street station would have a low visual impact. The new station at the intersection of 111th and Halsted Streets would minimally change the character and density of the intersection. Minimal buildings would be removed for a surface park & ride lot adjacent to the station, which would have little impact on the surrounding neighborhood character. Due to low density and viewer sensitivity, impacts would be minimal. Standard mitigations would reduce impacts. See View 29 in Appendix A for visual illustration of this impact.

- 119th Street station would have a low visual impact. The new station at the intersection of 119th and Halsted Streets would minimally change the character and density of the intersection. Minimal buildings would be removed for a surface park & ride lot adjacent to the station, which would have little impact on the surrounding neighborhood character. Due to low density and viewer sensitivity, impacts would be minimal. Standard mitigations would reduce impacts. See Views 30 and 31 in Appendix A for visual illustration of this impact.

- A high visual impact would occur at View 23 (Appendix A, and Table 5-8). To minimize adverse visual impacts, mitigations would include using landscaping and screening. Due to the structure's height and proximity to the established commercial area, however, impacts after mitigation would still be substantial.

The Halsted Rail Alternative along Segment HA would include substations on the northeast corner at the intersection of 101st and Halsted Streets and the southeast corner at the intersection of 110th and Halsted Streets. There would be additional minimal visual impact for surrounding residences adjacent to these locations.

Table 5-6 summarizes the impacts on visual and aesthetic conditions for the Halsted Rail Alternative along Segment HA and provides an assessment of the impacts. Figures 4-15 through 4-18 show the view locations.

Table 5-6: Impacts - Segment HA

Viewpoint *See Figures 4-13 - 4-16*	View *See Attach-ment A*	Location/View Direction	Visual Impact after Mitigation	Assessment Area
Segment HA - North of 119th Street				
19	View 19	View southeast from 98th Street and Parnell Avenue	Low	The overall visual character would not change and there would be a minimal increase in scale for adjacent neighbors due to the elevated structure.
20	View 20	View southwest over I-57 from 98th Place	Low	The overall visual character would not change, but the increase in scale and shadows would be noticeable to motorists due to elevated structures. The structure would be visible in the distance to adjacent neighborhoods.

Viewpoint *See Figures 4-13 - 4-16*	View *See Attach-ment A*	Location/View Direction	Visual Impact after Mitigation	Assessment Area
21	View 21	View southeast from I-57 overpass at Halsted Street	Low	The character and scale of the intersection would change with the addition of an elevated structure and associated shadows. Minimal removal of commercial buildings, vegetation, and median planters would be visible in the distance.
22	View 22	View northwest from Emerald Avenue	Low	The elevated structure in the distance would be minimally visible beyond the existing residential neighborhood.
23	View 23	View northeast from 100th and Halsted Streets	High	The elevated structure and removal of trees within the median planters would moderately change the scale and character of the area. The immediately adjacent commercial structures would introduce new shadows and light on storefronts and create a new visual character for pedestrians.
24	View 24	View south from 100th and Halsted Streets	Moderate	The elevated structured would alter the viewshed of the church and affect the scale of the surrounding area. Due to user sensitivity, the impacts would be moderate.
25	View 25	View south from Halsted Street between 102nd and 103rd Streets	Moderate	The removal of trees within the median planters and a structure to accommodate a surface parking lot would moderately change the character of the viewshed while the elevated structure would introduce new shadows and light patterns to pedestrians and adjacent businesses.
26	View 26	View west from 103rd Street toward Halsted Street	Low	The change of scale and density created by the elevated structure and station would have minimal impact on the viewshed from the adjacent neighborhood due to the existing commercial activity at the intersection.
27	View 27	View north from 107th Street and Halsted Street	Low	The addition of the elevated structure and introduction of shadows would minimally affect and alter the character of the low-density intersection.
28	View 28	View southeast from 107th Street toward Halsted Street	Moderate	The elevated structured would alter the viewshed of the church and affect the scale of the surrounding area. Due to user sensitivity, the impacts would be moderate.
29	View 29	View east from 111th Street toward Halsted Street	Moderate	The elevated structure, platform and station in the distance would have minimal impact on the intersection; however, moderate removal of buildings and parking lot to north of 111th Street station for a new park & ride lot would change the character and density of viewshed from the neighborhood.
30	View 30	View southeast from the Major Taylor Trail at 118th Street	Low	The elevated structure in the distance would be highly visible beyond the existing vegetation.

Viewpoint *See Figures 4-13 - 4-16*	View *See Attach-ment A*	Location/View Direction	Visual Impact after Mitigation	Assessment Area
31	View 31	View south from 118th Street and Halsted Street	Moderate	The removal of trees within the median planters and removal of greenway along the sidewalk to accommodate station entry would moderately change the character of the viewshed. The elevated structure would introduce new shadows and light patterns to pedestrians and adjacent businesses.
32	View 32	View southwest from 119th Street and Halsted Street	Moderate	The viewshed would show the elevated structure over Halsted Street, as well as tracks traveling to the yard to the east, which would change the scale, character, and density for adjacent businesses and residences. New shadows and light patterns would also be created for pedestrians and recreationists on the Major Taylor Trail. Due to low density and viewer sensitivity in this area, impacts would be moderate.

5.6.1.2 Segment HB

The creation of elevated structures and stations along the alignment in Segment HB from the vicinity of 119th Street to the bridge at Little Calumet River would have moderate impact on the visual quality. The alternative would introduce an aesthetic, scale, and density that is not currently present along this light commercial corridor and would thus create a moderate degree of change on the visual and aesthetic condition of views. This visual change is subjective. It would affect the vegetated median in many instances and create new shadows on the surrounding area; however, it would only require minimal land acquisition. Visualizations were completed for representative areas and those with highest potential visual impact. Impacts on station areas were determined based on representative visualization and the amount of change that would occur around the station areas.

- Vermont Street station would have a high visual impact. The new station at the intersection of Vermont Avenue and Halsted Street would substantially change the character and density of the intersection and surrounding neighborhood. Substantial removal of a cohesive residential block to accommodate a seven-story park & ride facility west of Halsted Street would have a marginal impact on the scale, density, shadows, and aesthetic of the surrounding cohesive residential character. Additionally, the removal of commercial structures on the east side of Halsted Street to accommodate a surface lot would have moderate impacts on the adjacent neighborhood to the east. Impacts would be partially mitigated using standard mitigation measures, which include designing the station and structures to match the character of the surrounding fabric, using urban design techniques to reduce massing and create pedestrian friendly surroundings, and providing landscaping and visual screening. Due to the large mass and proximity to adjacent one- to two-story residential buildings, however, impacts would still be adverse after mitigation. See Views 34, 35 and 36 for visual illustration of this impact.

- A high visual impact would occur at Views 34 and36 (Appendix A and Table 5-9).

The Halsted Rail Alternative along Segment HB would include substations along Halsted Street between 120th Street and the ME tracks, the southeast corner at the intersection of 126th and Halsted Streets, and at the entrance to the yard along Peoria Street. There would be additional minimal visual impact for surrounding residences adjacent to these locations.

Table 5-7 summarizes the impacts on visual and aesthetic conditions for the Halsted Rail Alternative along Segment HB and provides an assessment of the impacts. Figures 4-17 through 4-18 show the view locations.

Table 5-7: Impacts - Segment HB

Viewpoint *See Figures 4-16-4-17*	View *See Attach-ment A*	Location/View Direction	Visual Impact after Mitigation	Assessment Area
Segment HB - South of 119th Street				
33	View 33	View northwest from 120th Street and Halsted Street	Moderate	Moderate removal of commercial and retail structures to accommodate elevated structure traveling to yard would alter the scale and density of the area and create new shadows and light patterns. Due to low density and viewer sensitivity in this area, impacts would be moderate.
34	View 34	View south from Vermont Avenue and Halsted Street	High	Substantial removal of commercial and retail structures along both sides of Halsted Street to accommodate a park & ride lot on the east and a seven-story garage on the west would visually alter the scale, density, and character of the area.
35	View 35	View northeast from 128th Street and Halsted Street	Moderate	A seven-story park & ride garage would replace the vacant lot west of Halsted Street and a surface lot would replace the vacant lot on the east, altering the scale, density and character of the area. The elevated structure, platform, and supports would alter views and shadows for pedestrians; however, due to low density and viewer sensitivity in this area, impacts would be moderate.
36	View 36	View northeast from 128th Street and Green Street	High	The substantial removal of residential and light commercial structures to accommodate a seven-story park & ride garage in the foreground and a lot on the opposite side of Halsted Street would substantially change the scale, character, and density of the neighborhood. The elevated structure, platform, and associated supports would moderately block views across Halsted Street and would alter the visual quality.
37	View 37	View north from Halsted Street bridge at Little Calumet River	Low	The addition of the elevated structure would minimally affect and alter the character of the low-density area.

5.6.2 Construction Impacts and Mitigations - Halsted Rail Alternative

Construction impacts and mitigations would be similar in nature to those described for the UPRR Rail Alternative, as construction methods would be the same. See Section 5.3.2. Additional road construction impacts would be created for the removal of trees within the median planters and replacement with hammerhead piers. In general, the Halsted Rail Alternative would require more temporary traffic lane closures than any alternative. Parking lanes would be eliminated at portions along Halsted Street to accommodate steel cross-girder and column locations near cross-intersections or stations and would require more temporary traffic lane closures than other alternatives.

5.6.2.1 Segment HA

Construction impacts would be similar in nature to those described for the UPRR Rail Alternative for all locations along Segment HA. See Section 5.3.2.

5.6.2.2 Segment HB

Construction impacts would be similar in nature to those described for the UPRR Rail Alternative for all locations along Segment HB. See Section 5.3.2 Construction impacts would be longer in nature, lasting a few years, at the Vermont Avenue station than at other locations due to the substantial removal of buildings and construction of a seven-story park & ride garage.

5.6.3 Cumulative Impacts and Mitigations - Halsted Rail Alternative

There are no future developments planned for the project corridor that would have cumulative impacts on the visual and aesthetic conditions along the alignment of the Halsted Rail Alternative.

5.6.4 119th Street Yard and Shop

The 119th Street yard and shop would be located south of the 119th Street station and north of Vermont Avenue station, west of Halsted Street. The yard would be entirely at grade with a nominal amount of parking for employees. A substation would be within the 120th Street yard, west of the existing railroad tracks and east of the proposed shop facility.

5.6.4.1 Permanent Impacts and Mitigations

Moderate land acquisition would include the removal of several buildings and a large parking lot. Track height would transition from elevated to at-grade between Halsted Street and Morgan Street, which would help minimize the visual impact on the surrounding residential community. Overall, the street yard and shop would dramatically change the character and scale of the surrounding area, which includes light commercial and residential neighborhoods. In addition to the standard mitigations discussed in the beginning of Section 5, additional measures for the 120th Street yard and shop would include designing the shop facility to be aesthetically compatible with surrounding structures.

5.6.4.2 Construction Impacts and Mitigations

The construction of the 119th Street yard and shop would last several years and would have high visual impacts. The removal of existing buildings and parking lots, including associated debris, would be more substantial than other locations along the project corridor. These impacts could be mitigated using the measures discussed in Section 5.3.2.

Section 6
Impacts Remaining After Mitigation

Adverse impacts for all alternatives would be minimized through various mitigations. At view locations where impacts would be low to moderate, visual and aesthetic impacts would be reduced or eliminated after standard mitigation measures. Due to the scale and height of the proposed improvements, the visual impacts in many instances could not be completely mitigated and would remain. Impacts at high impact views could be minimized by implementing many of the standard mitigations, as well as specific mitigations described for each view in Section 5. Typical adverse impacts that would remain after mitigation would include the replacement of existing cohesive fabric with large parking structures that would substantially alter the scale, character, and density of viewsheds. Despite mitigation measures such as planting vegetation, urban design techniques, stepping back massing, or using context sensitive design and materials, the contrasting mass would still be out of scale and character. Additionally, in many instances, despite mitigations such as incorporating planters and street trees and other methods of good urban design, the addition of stations and elevated structures, which would still be visible beyond vegetation and taller than surrounding structures, would adversely affect neighborhood viewsheds, visual character, and cohesive neighborhood fabric. For structures immediately adjacent to the alignment, shadows would be created, which would alter the visual character of the area and could not be mitigated.

The following sections present a summary of the impacts that would remain after mitigation for each of the alternatives.

6.1 No Build Alternative

There would be no adverse impacts under the No Build Alternative; therefore, there would be no mitigation or impacts remaining.

6.2 Bus Rapid Transit Alternative

No adverse impacts would remain after mitigation.

6.3 Union Pacific Railroad Rail Alternative - Right-of-Way Option

6.3.1 Segment UA

Michigan Avenue station and View 13A would not have adverse impacts after mitigation. Moderate impacts would remain after mitigation due to the mass of the parking structure and its proximity to residences.

6.3.2 Segment UB

No adverse impacts would remain after mitigation.

6.3.3 120th Street Yard and Shop

No adverse impacts would remain after mitigation.

6.4 Union Pacific Railroad Rail Alternative - East Option

6.4.1 Segment UA

The area southeast of the Michigan Avenue station (shown in View 16B) would still have adverse impacts after mitigation. The height and mass of the structure and its proximity to residences could not be mitigated. See Section 5.4.1.1 and Table 5.4-1.

6.4.2 Segment UB

No adverse impacts would remain after mitigation.

6.4.3 120th Street Yard and Shop

No adverse impacts would remain after mitigation.

6.5 Union Pacific Railroad Rail Alternative - West Option

6.5.1 Segment UA

The area from 99th Street to 103rd Street, including the 103rd Street station and park & ride structure at the Michigan Avenue station, specifically Views 6C and 13C, would still have adverse impacts after mitigation. The height and mass of the structures and the proximity to residences could not be mitigated. See Section 5.5.1.1 and Table 5.5-1.

6.5.2 Segment UB

No adverse impacts would remain after mitigation.

6.5.3 120th Street Yard and Shop

No adverse impacts would remain after mitigation.

6.6 Halsted Rail Alternative

6.6.1 Segment HA

View 23 would still have adverse impacts after mitigation due to structure height and proximity to the established commercial corridor. See Section 5.6.1.1 and Table 5.6-1.

6.6.2 Segment HB

Vermont Street station, specifically Views 34 and 36, would still have adverse impacts after mitigation. The height and mass of the structure and its proximity to residences could not be mitigated. See Section 5.6.1.2 and Table 5.6-2.

6.6.3 119th Street Yard and Shop

No adverse impacts would remain after mitigation.

Section 7
References Cited

City of Chicago. Landmarks Ordinance - Municipal Code Title 2, Chapter 120, Article XVII.

City of Chicago. Zoning Ordinance and Land Use Ordinance - Municipal Code Titles 16 and 17.

Illinois Department of Transportation. 2007. Illinois State Transportation Plan: Context Sensitive Solutions. June.

The National Historic Preservation Act. Amended 1966. Section 106.

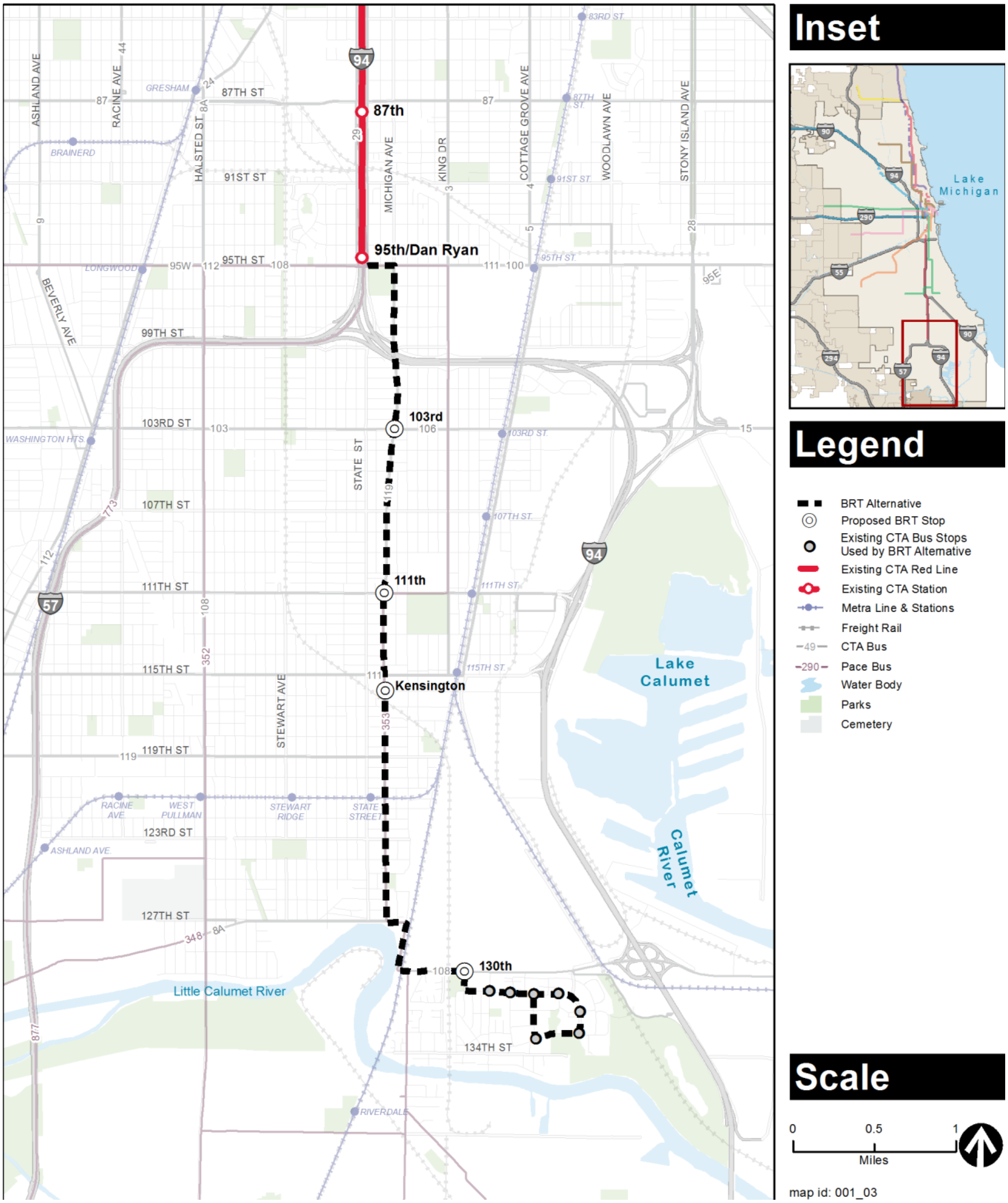
U.S Department of Transportation. 1981. Federal Highway Administration Visual Impact Assessment for Highway Projects.

Visual and Aesthetic Visualizations

Appendix A

Note that appearance of project elements (such as parking structures, beams, columns, etc.) in visualizations is intended to show scale of project elements. Actual construction appearance may differ based on design decisions for colors, textures, finishes, and choice of specific design features.

*** View numbers are not consecutive. Analysis and photography were done in different order than views appear in this appendix.**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Legend
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Proposed BRT Stop
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Parks
Cemetery
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Kensington
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107TH ST
111TH ST
115TH ST
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123RD ST
127TH ST
134TH ST
ASHLAND AVE
RACINE AVE
HALSTED ST
MICHIGAN AVE
KING DR
COTTAGE GROVE AVE
WOODLAWN AVE
STONY ISLAND AVE
STATE ST
STEWART AVE
BEVERLY AVE
GRESHAM
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LONGWOOD
WASHINGTON HTS
RACINE AVE
WEST PULLMAN
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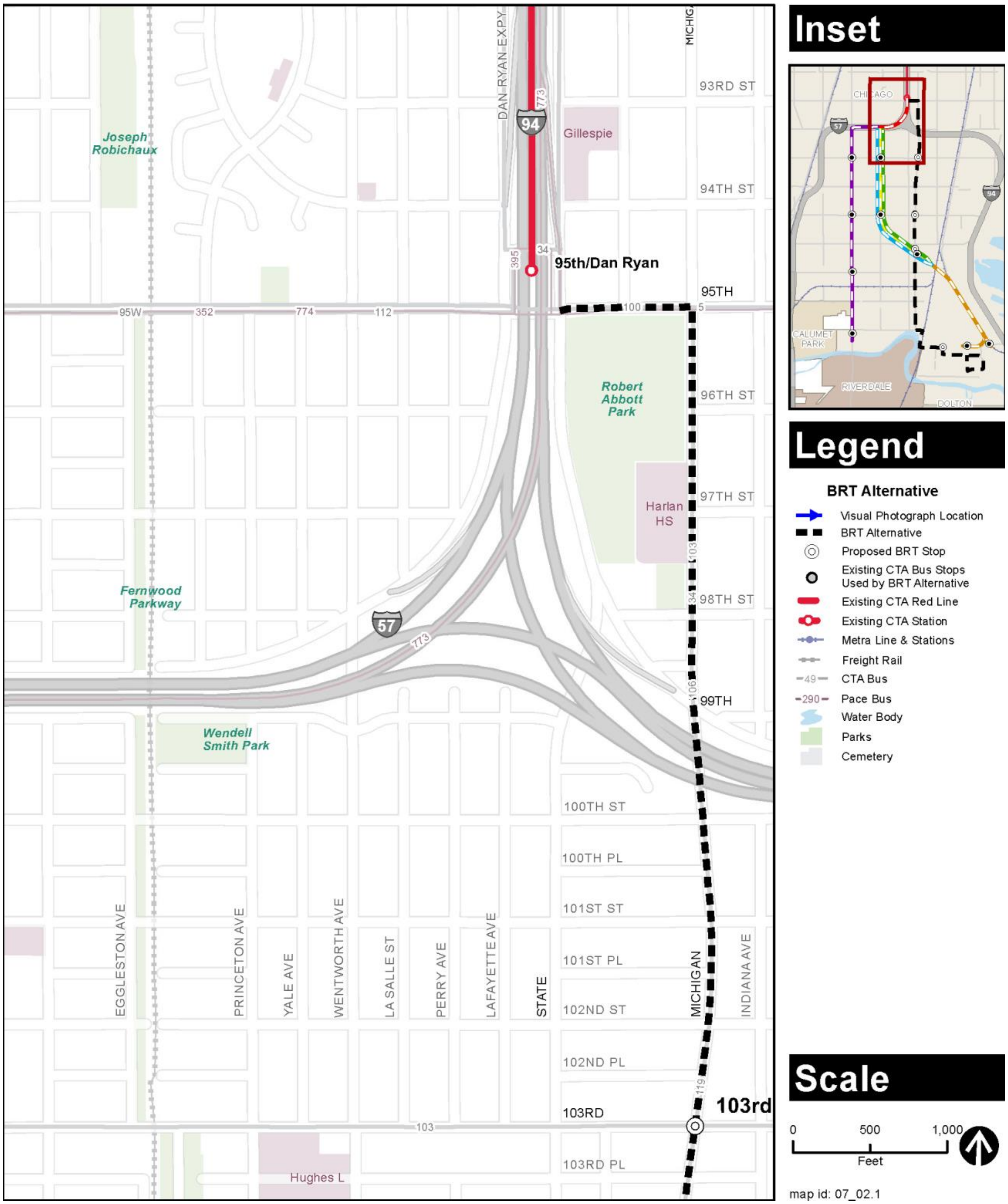
Lake Calumet
Calumet River
Little Calumet River

Figure A-1: Bus Rapid Transit Alternative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Gillespie
Joseph Robichaux
94TH ST
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95th/Dan Ryan
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95W
352
774
112
100
5
Robert Abbott Park
96TH ST
97TH ST
Harlan HS
103
98TH ST
34
Fernwood Parkway
57
773
106
99TH
Wendell Smith Park
100TH ST
100TH PL
101ST ST
101ST PL
102ND ST
102ND PL
103RD
103rd
119
103
103RD PL
Hughes L
EGGLESTON AVE
PRINCETON AVE
YALE AVE
WENTWORTH AVE
LA SALLE ST
PERRY AVE
LAFAYETTE AVE
STATE
MICHIGAN
INDIANA AVE
Inset
CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON
Legend
BRT Alternative
Visual Photograph Location
BRT Alternative
Proposed BRT Stop
Existing CTA Bus Stops Used by BRT Alternative
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
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290 Pace Bus
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Parks
Cemetery
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Feet
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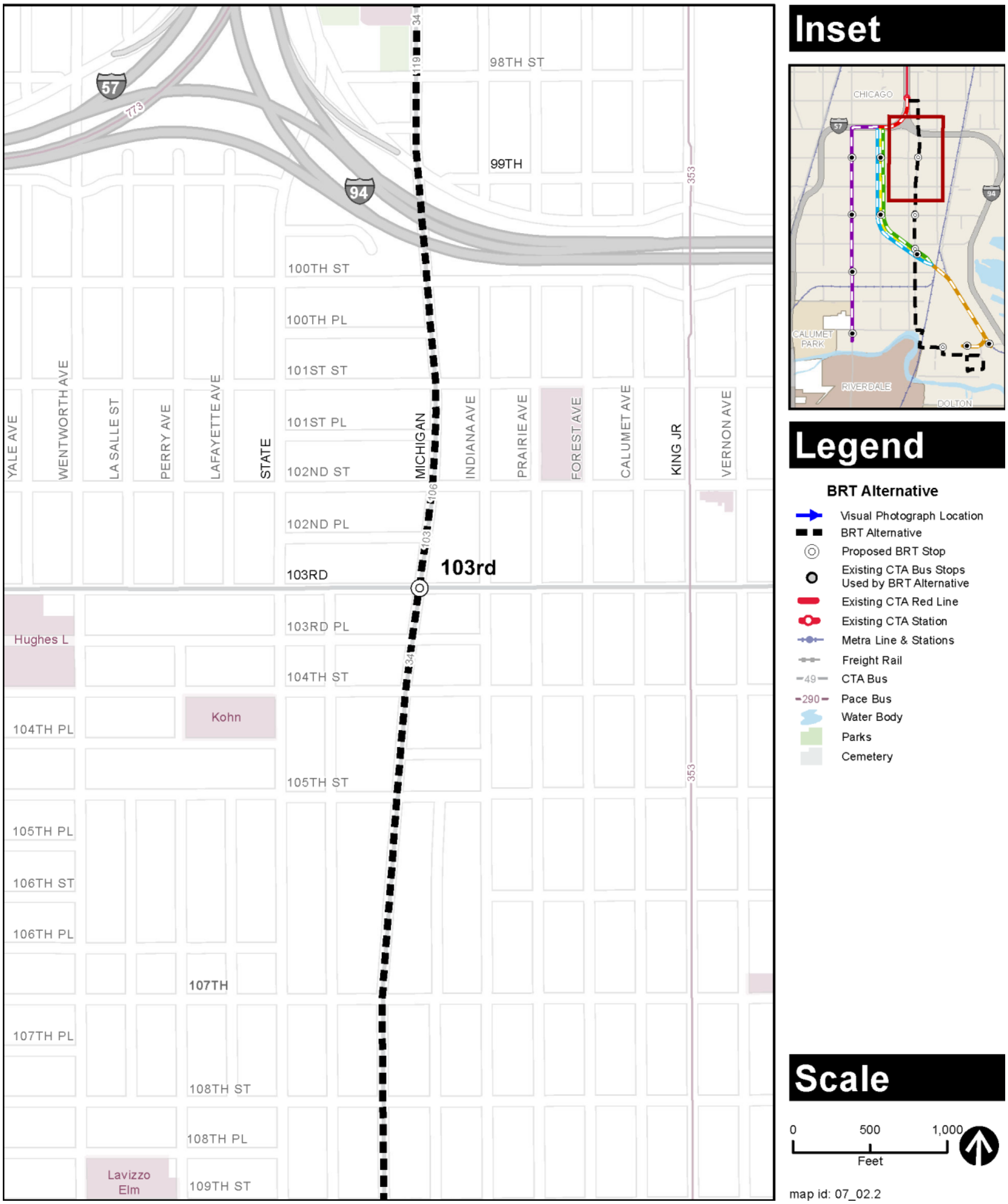
Figure A-2: View Locations for the Bus Rapid Transit Alternative - North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BRT Alternative
Visual Photograph Location
BRT Alternative
Proposed BRT Stop
Existing CTA Bus Stops Used by BRT Alternative
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
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290 Pace Bus
Water Body
Parks
Cemetery
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Feet
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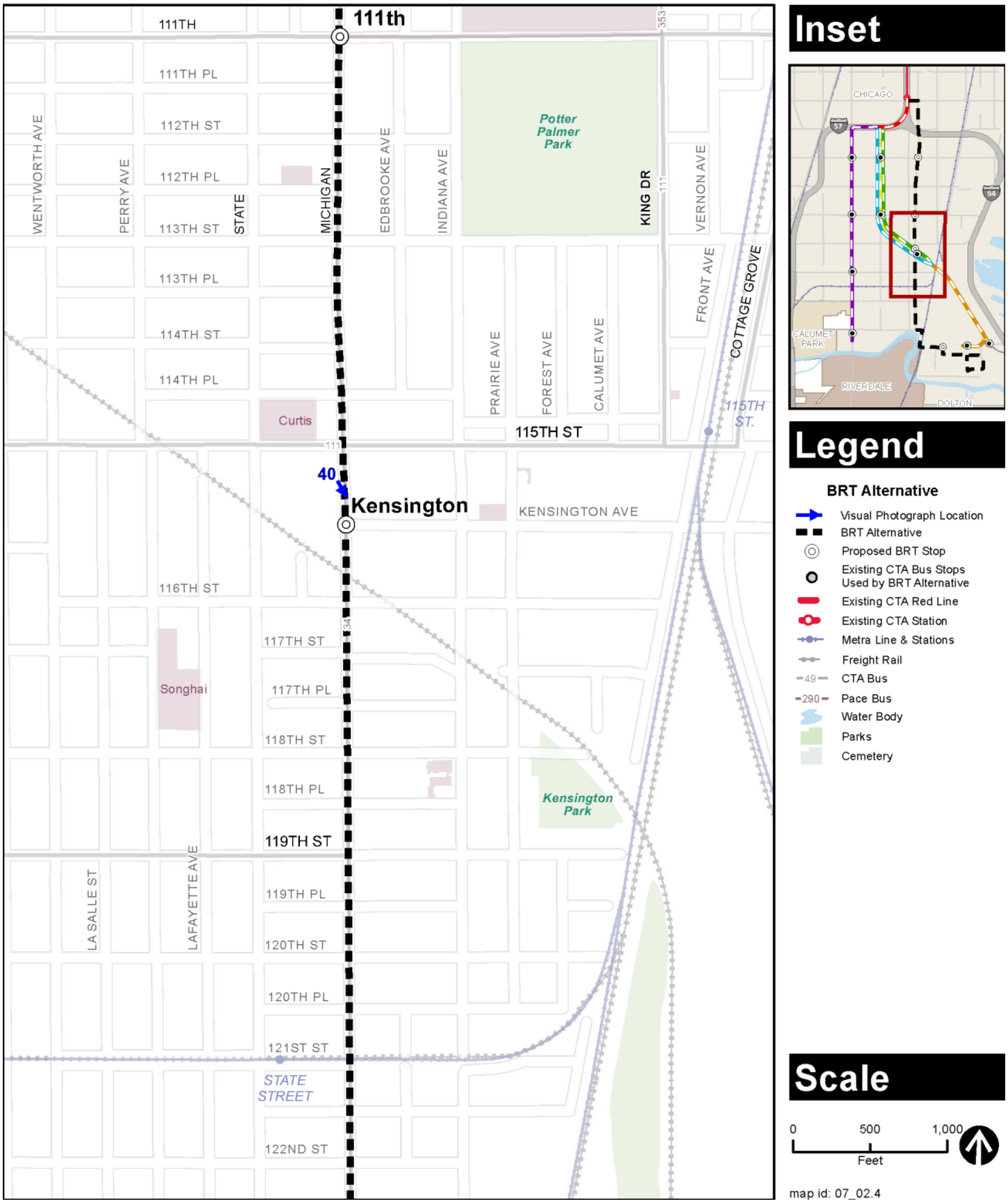
Figure A-3: View Locations for the Bus Rapid Transit Alternative - North Central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120TH PL
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STATE
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EDBROOKE AVE
INDIANA AVE
KING DR
VERNON AVE
FRONT AVE
COTTAGE GROVE
PRAIRIE AVE
FOREST AVE
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LAFAYETTE AVE
Potter Palmer Park
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BRT Alternative
Visual Photograph Location
BRT Alternative
Proposed BRT Stop
Existing CTA Bus Stops Used by BRT Alternative
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
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290 Pace Bus
Water Body
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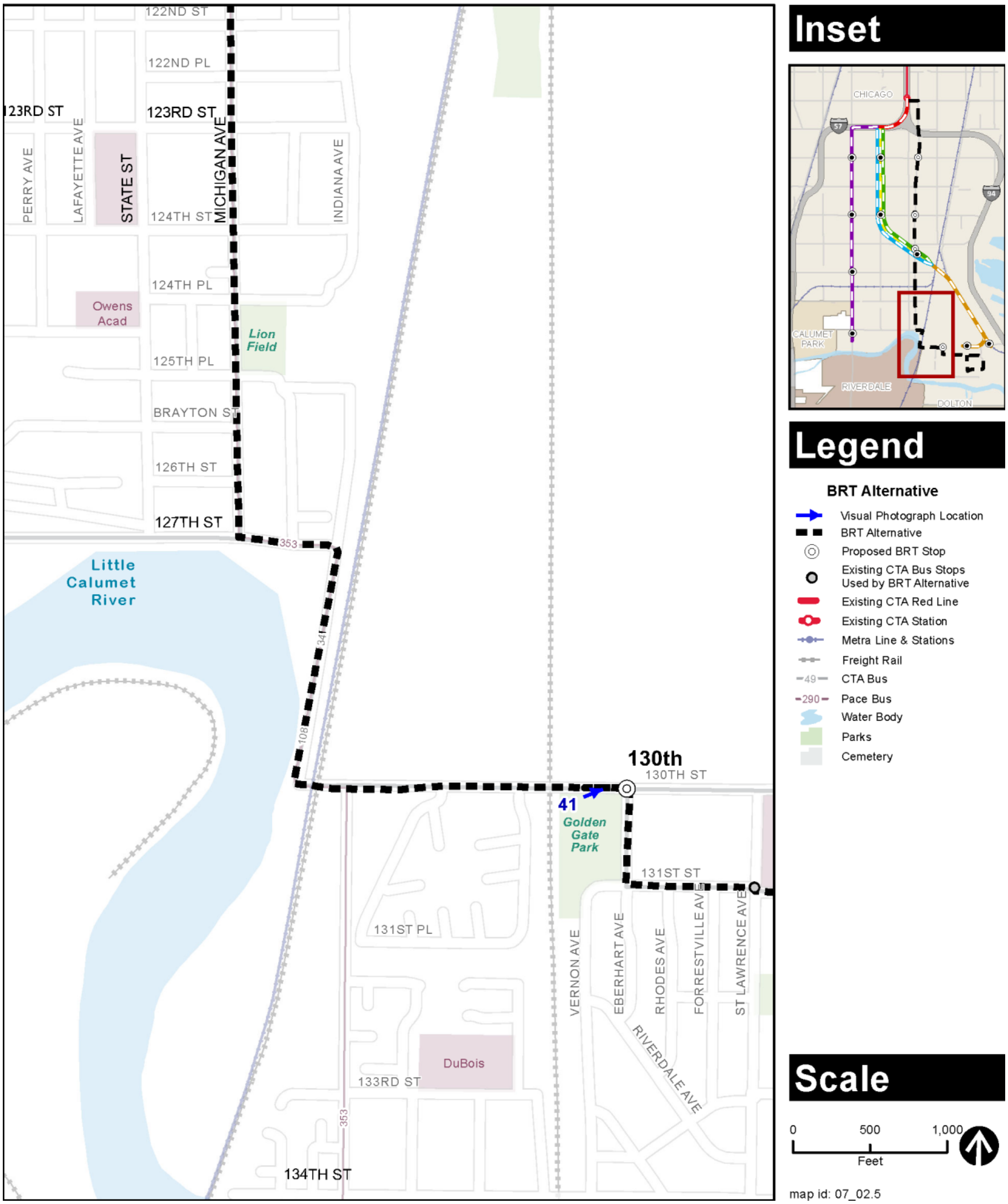
Figure A-4: View Locations for the Bus Rapid Transit Alternative - South Central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Owens Acad
Lion Field
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BRAYTON ST
126TH ST
127TH ST
353
Little Calumet River
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130th
130TH ST
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Golden Gate Park
131ST ST
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RHODES AVE
FORRESTVILLE AVE
ST LAWRENCE AVE
RIVERDALE AVE
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CHICAGO
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CALUMET PARK
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BRT Alternative
Visual Photograph Location
BRT Alternative
Proposed BRT Stop
Existing CTA Bus Stops Used by BRT Alternative
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
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Cemetery
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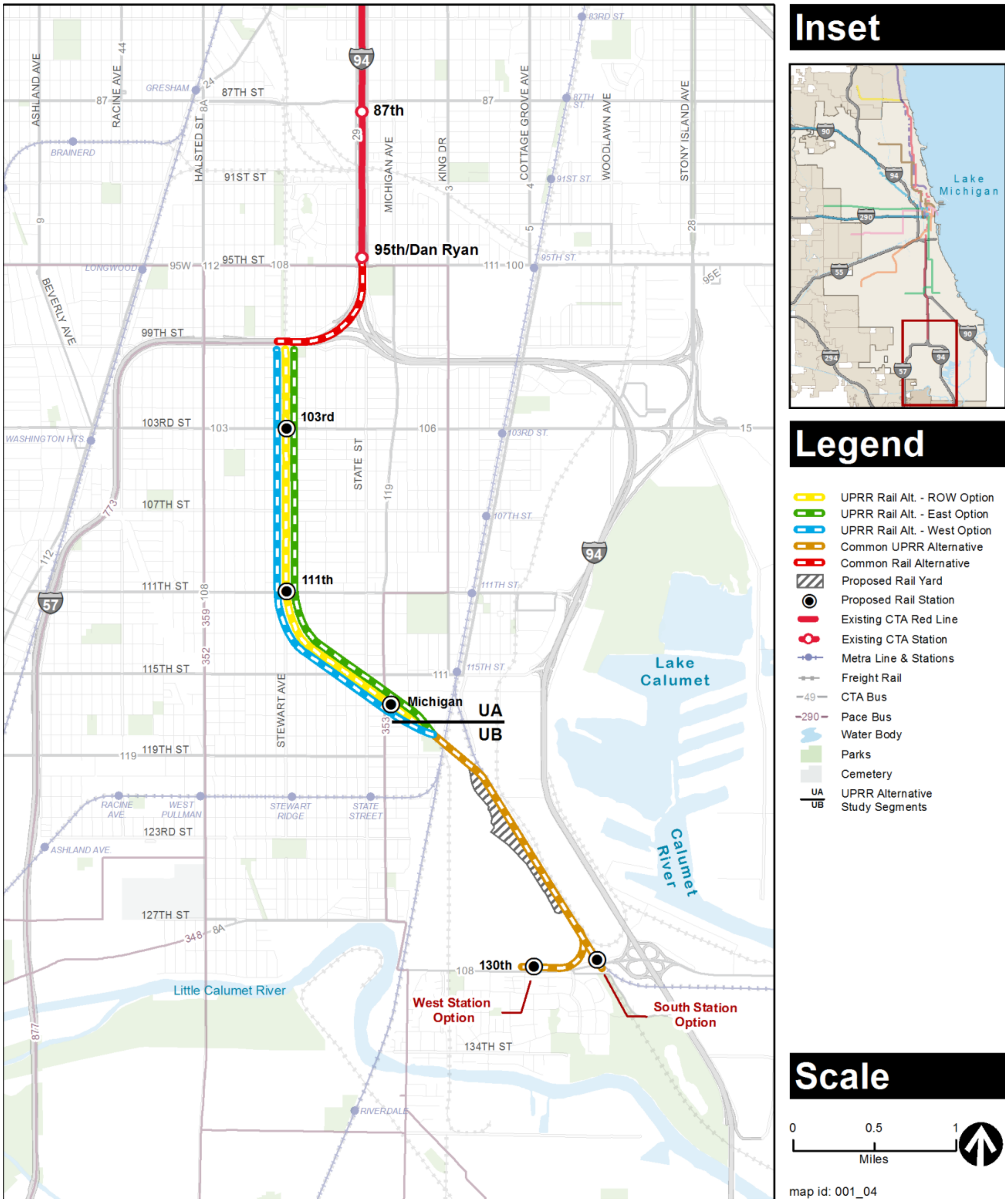
Figure A-5: View Locations for the Bus Rapid Transit Alternative - South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103rd
111th
Michigan
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130th
West Station Option
South Station Option
Lake Calumet
Calumet River
Little Calumet River
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Lake Michigan
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UPRR Rail Alt. - ROW Option
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
Common UPRR Alternative
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Proposed Rail Yard
Proposed Rail Station
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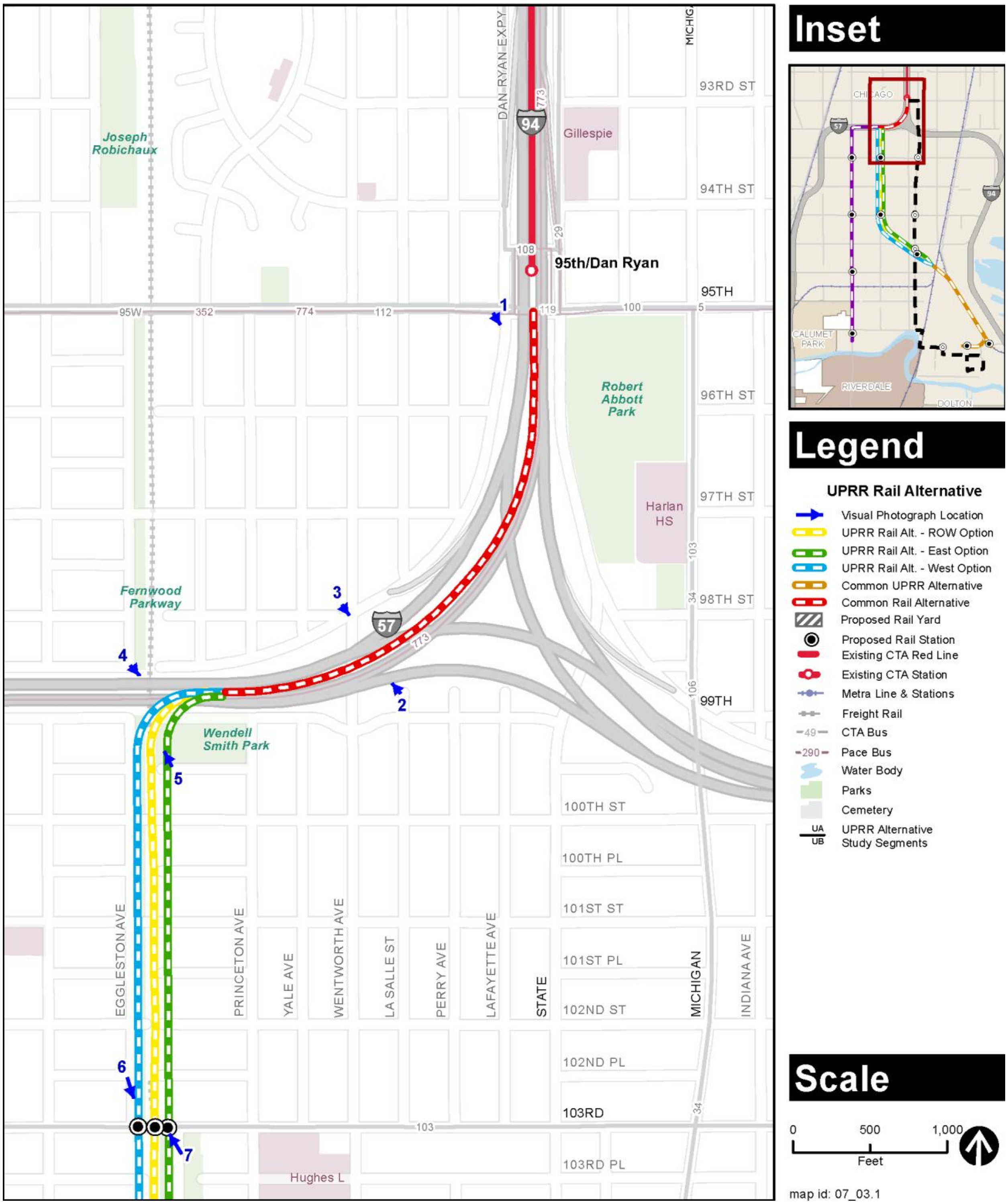
Figure A-6: Union Pacific Railroad Rail Alternative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UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
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Existing CTA Station
Metra Line & Stations
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103RD
103RD PL
Joseph Robichaux
Gillespie
95th/Dan Ryan
Robert Abbott Park
Harlan HS
Fernwood Parkway
Wendell Smith Park
Hughes L
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WENTWORTH AVE
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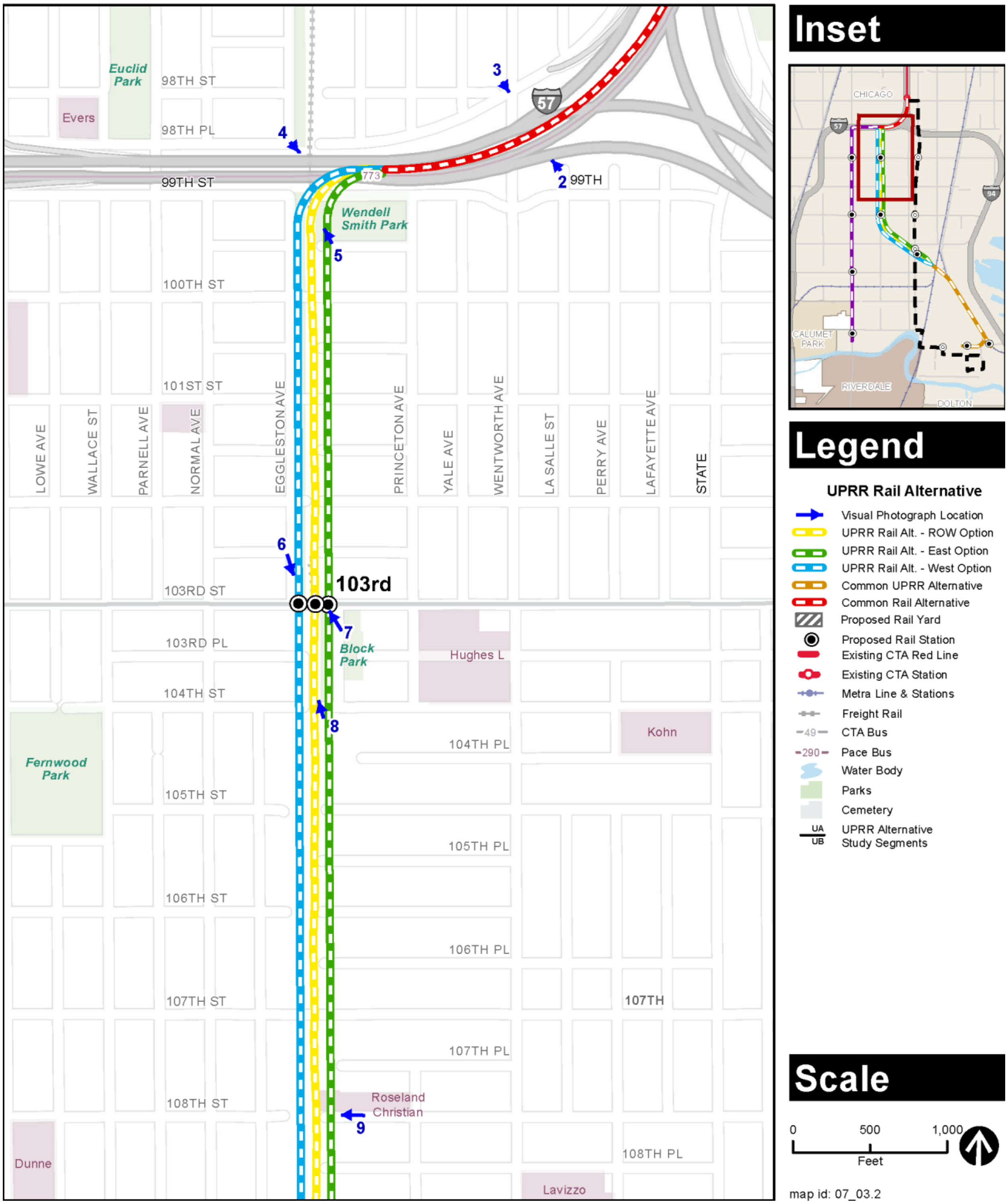
MICHIGAN
INDIANA AVE

Figure A-7: Union Pacific Railroad Rail Alternative View Locations - Segment UA North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NORMAL AVE
EGGLESTON AVE
PRINCETON AVE
YALE AVE
WENTWORTH AVE
LA SALLE ST
PERRY AVE
LAFAYETTE AVE
STATE
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CALUMET PARK
RIVERDALE
DOLTON
Legend
UPRR Rail Alternative
Visual Photograph Location
UPRR Rail Alt. - ROW Option
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
Common UPRR Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
49 CTA Bus
290 Pace Bus
Water Body
Parks
Cemetery
UA UB UPRR Alternative Study Segments
Scale
0
500
1,000
Feet
map id: 07_03.2

Figure A-8: Union Pacific Railroad Rail Alternative View Locations - Segment UA

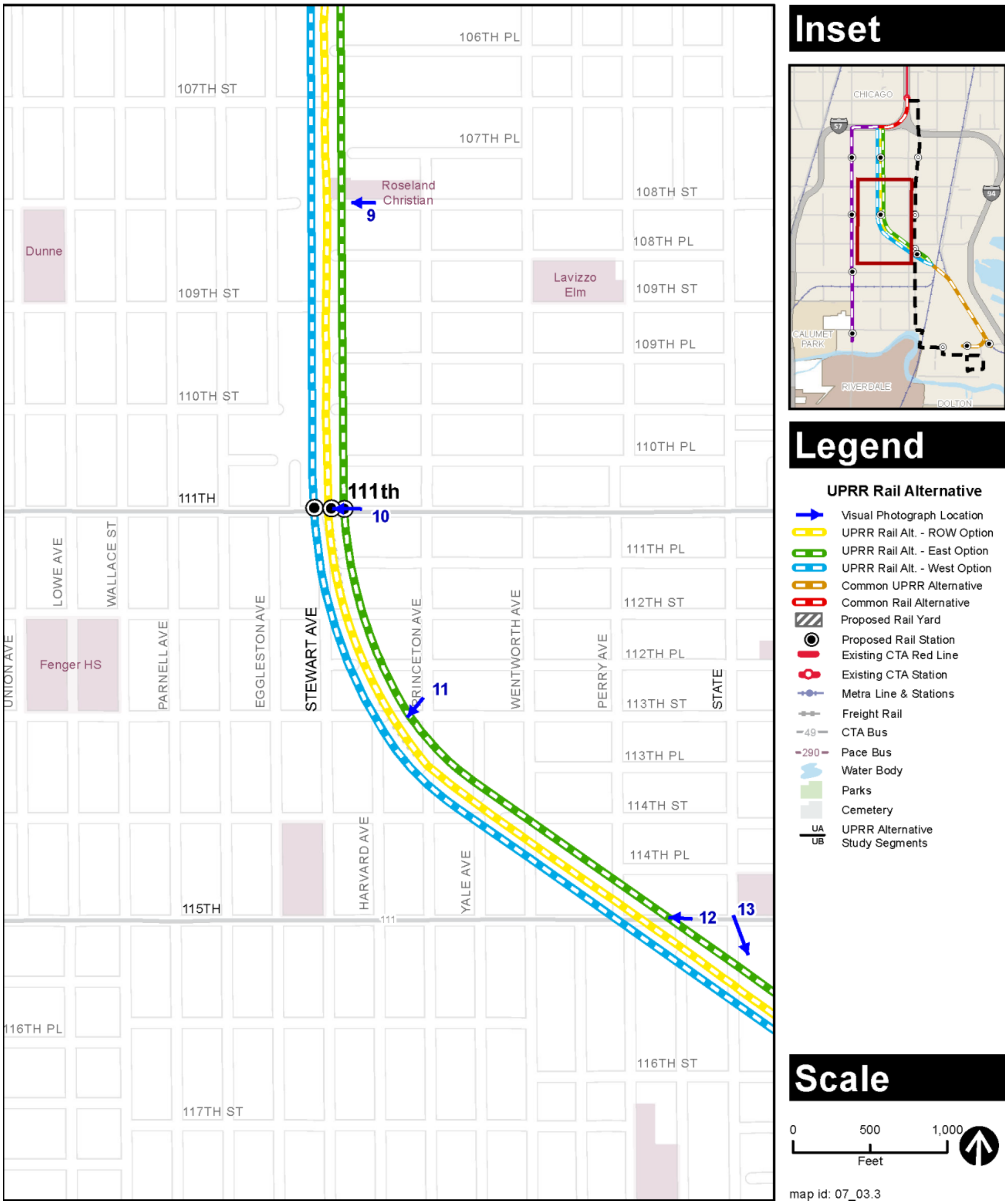

106TH PL
107TH ST
107TH PL
Roseland Christian
9
108TH ST
108TH PL
Dunne
Lavizzo Elm
109TH ST
109TH PL
110TH ST
110TH PL
111TH
111th
10
111TH PL
LOWE AVE
WALLACE ST
112TH ST
UNION AVE
Fenger HS
PARNELL AVE
EGGLESTON AVE
STEWART AVE
PRINCETON AVE
WENTWORTH AVE
PERRY AVE
112TH PL
STATE
11
113TH ST
113TH PL
114TH ST
114TH PL
HARVARD AVE
YALE AVE
115TH
111
12
13
116TH PL
116TH ST
117TH ST
Inset
CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON
Legend
UPRR Rail Alternative
Visual Photograph Location
UPRR Rail Alt. - ROW Option
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
Common UPRR Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
49 CTA Bus
290 Pace Bus
Water Body
Parks
Cemetery
UA UB UPRR Alternative Study Segments
Scale
0
500
1,000
Feet
map id: 07_03.3

Figure A-9: Union Pacific Railroad Rail Alternative View Locations - Segment UA

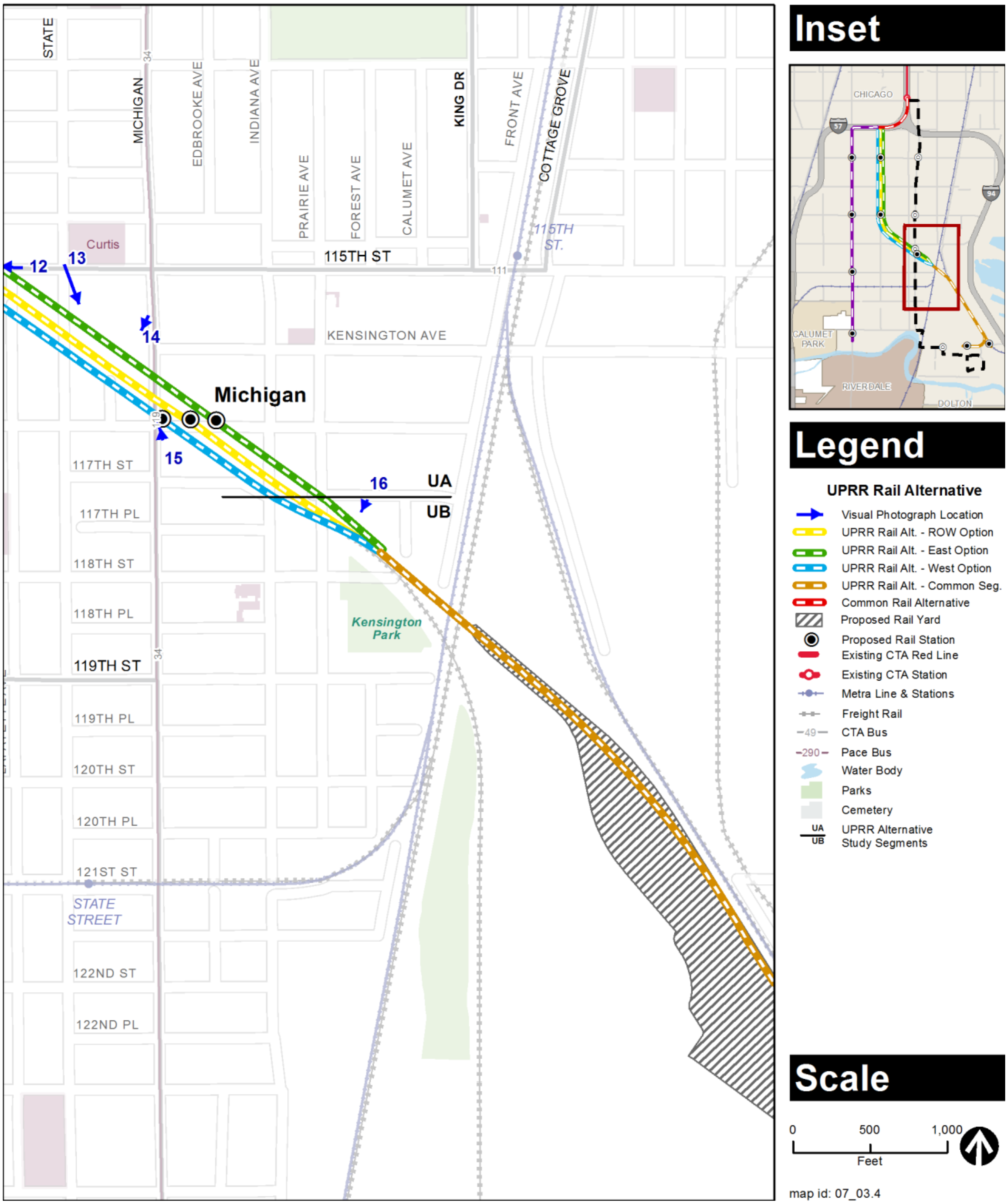

STATE
MICHIGAN
EDBROOKE AVE
INDIANA AVE
PRAIRIE AVE
FOREST AVE
CALUMET AVE
KING DR
FRONT AVE
COTTAGE GROVE
115TH ST.
Curtis
115TH ST
KENSINGTON AVE
Michigan
117TH ST
117TH PL
118TH ST
118TH PL
119TH ST
119TH PL
120TH ST
120TH PL
121ST ST
STATE STREET
122ND ST
122ND PL
Kensington Park
12
13
14
15
16
UA
UB
34
111
119
Inset
CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON
Legend
UPRR Rail Alternative
Visual Photograph Location
UPRR Rail Alt. - ROW Option
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
UPRR Rail Alt. - Common Seg.
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
49 CTA Bus
290 Pace Bus
Water Body
Parks
Cemetery
UA UB UPRR Alternative Study Segments
Scale
0
500
1,000
Feet
map id: 07_03.4

Figure A-10: Union Pacific Railroad Rail Alternative View Locations - Segment UA

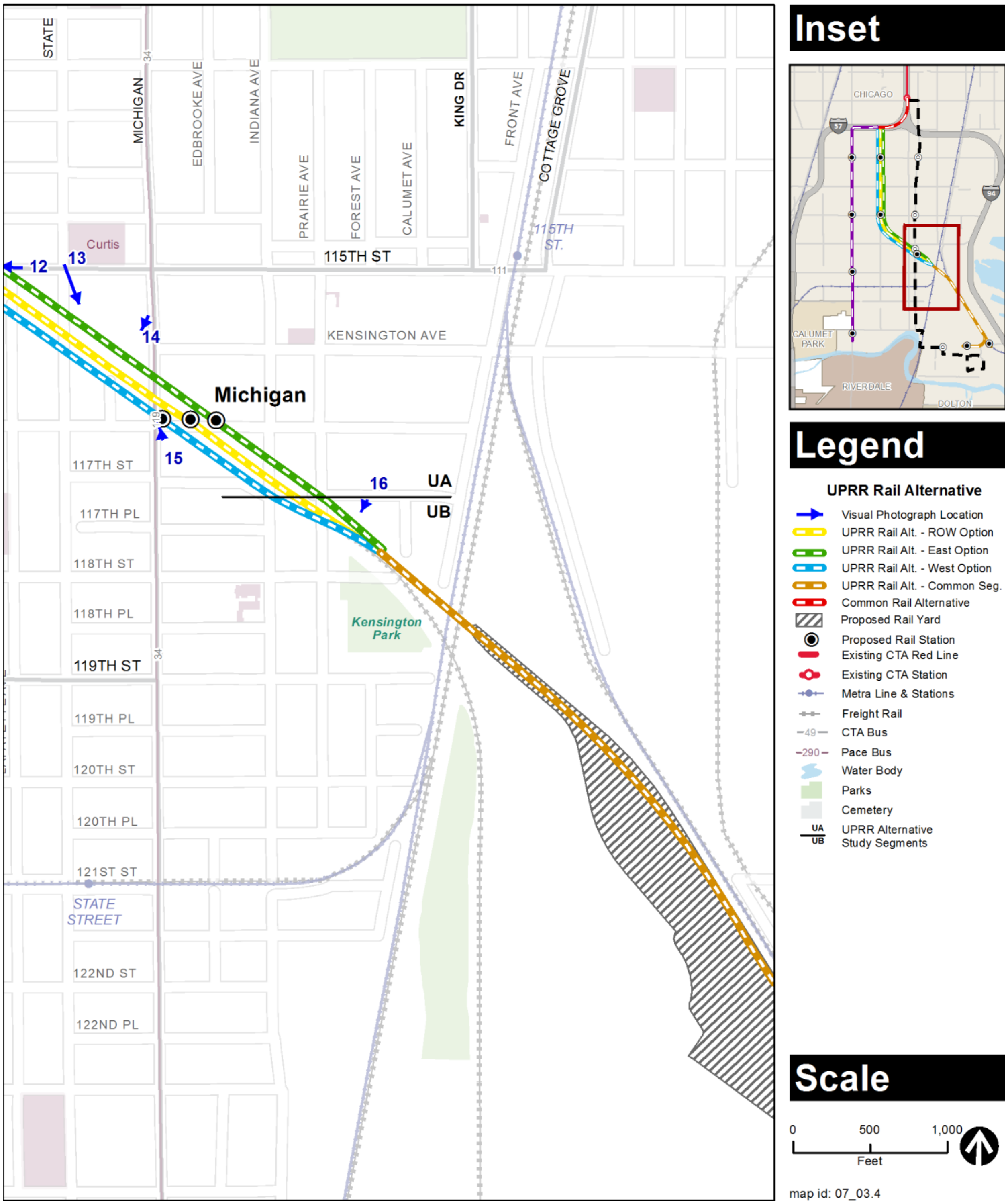

STATE
MICHIGAN
EDBROOKE AVE
INDIANA AVE
PRARIE AVE
FOREST AVE
CALUMET AVE
KING DR
FRONT AVE
COTTAGE GROVE
115TH ST.
Curtis
12
13
14
15
16
115TH ST
KENSINGTON AVE
Michigan
UA
UB
117TH ST
117TH PL
118TH ST
118TH PL
119TH ST
119TH PL
120TH ST
120TH PL
121ST ST
STATE STREET
122ND ST
122ND PL
Kensington Park
Inset
CHICAGO
CALUMET PARK
RIVERDALE
DOLTON
Legend
UPRR Rail Alternative
Visual Photograph Location
UPRR Rail Alt. - ROW Option
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
UPRR Rail Alt. - Common Seg.
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
CTA Bus
Pace Bus
Water Body
Parks
Cemetery
UPRR Alternative Study Segments
Scale
0
500
1,000
Feet
map id: 07_03.4

Figure A-11: Union Pacific Railroad Rail Alternative View Locations - Segment UB

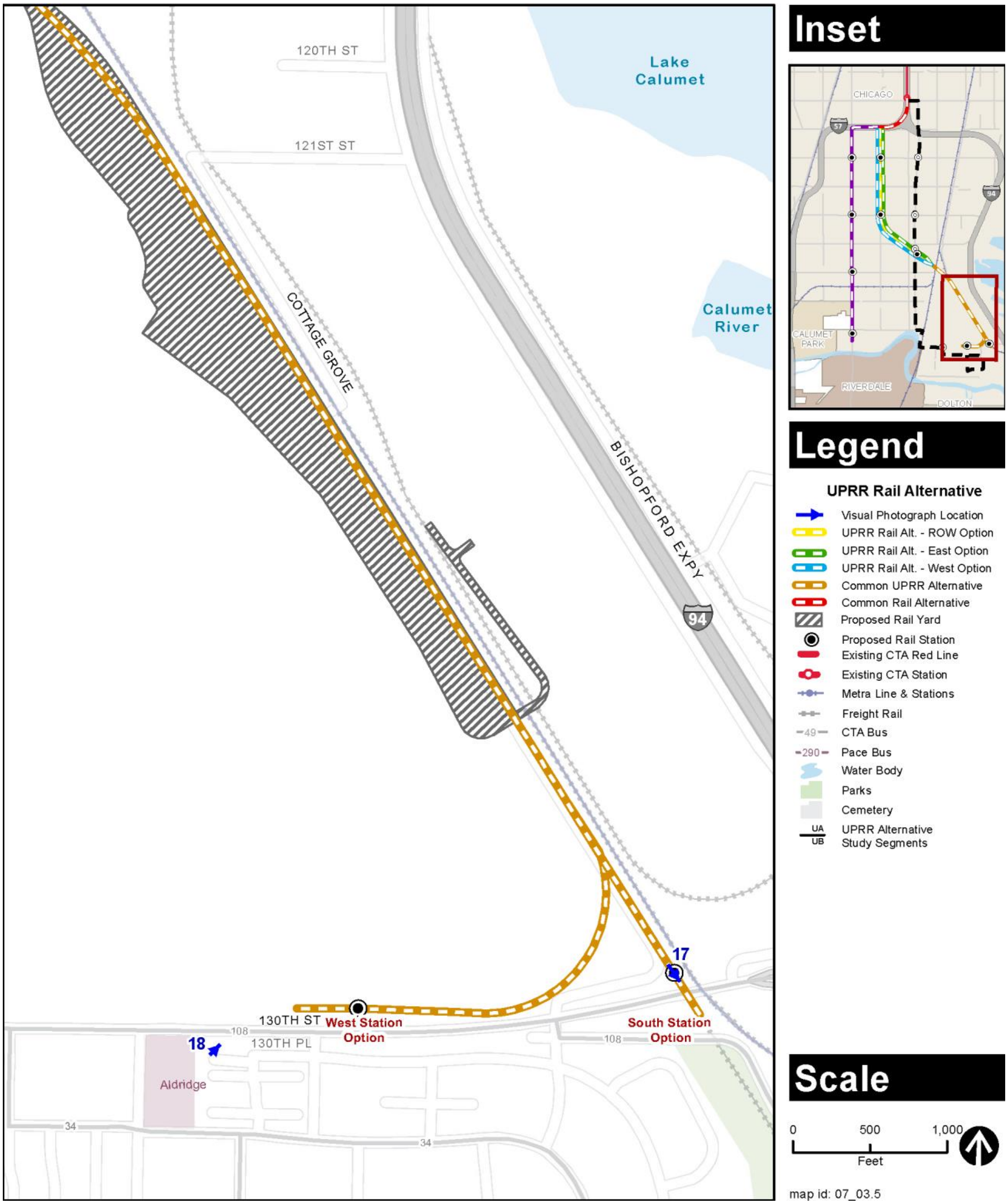

120TH ST
121ST ST
Lake Calumet
Calumet River
COTTAGE GROVE
BISHOPFORD EXPY
94
17
18
130TH ST
130TH PL
108
34
West Station Option
South Station Option
Aldridge
Inset
CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON
Legend
UPRR Rail Alternative
Visual Photograph Location
UPRR Rail Alt. - ROW Option
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
Common UPRR Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
49 CTA Bus
290 Pace Bus
Water Body
Parks
Cemetery
UA UB UPRR Alternative Study Segments
Scale
0
500
1,000
Feet
map id: 07_03.5

Figure A-12: Union Pacific Railroad Rail Alternative View Locations - Segment UB

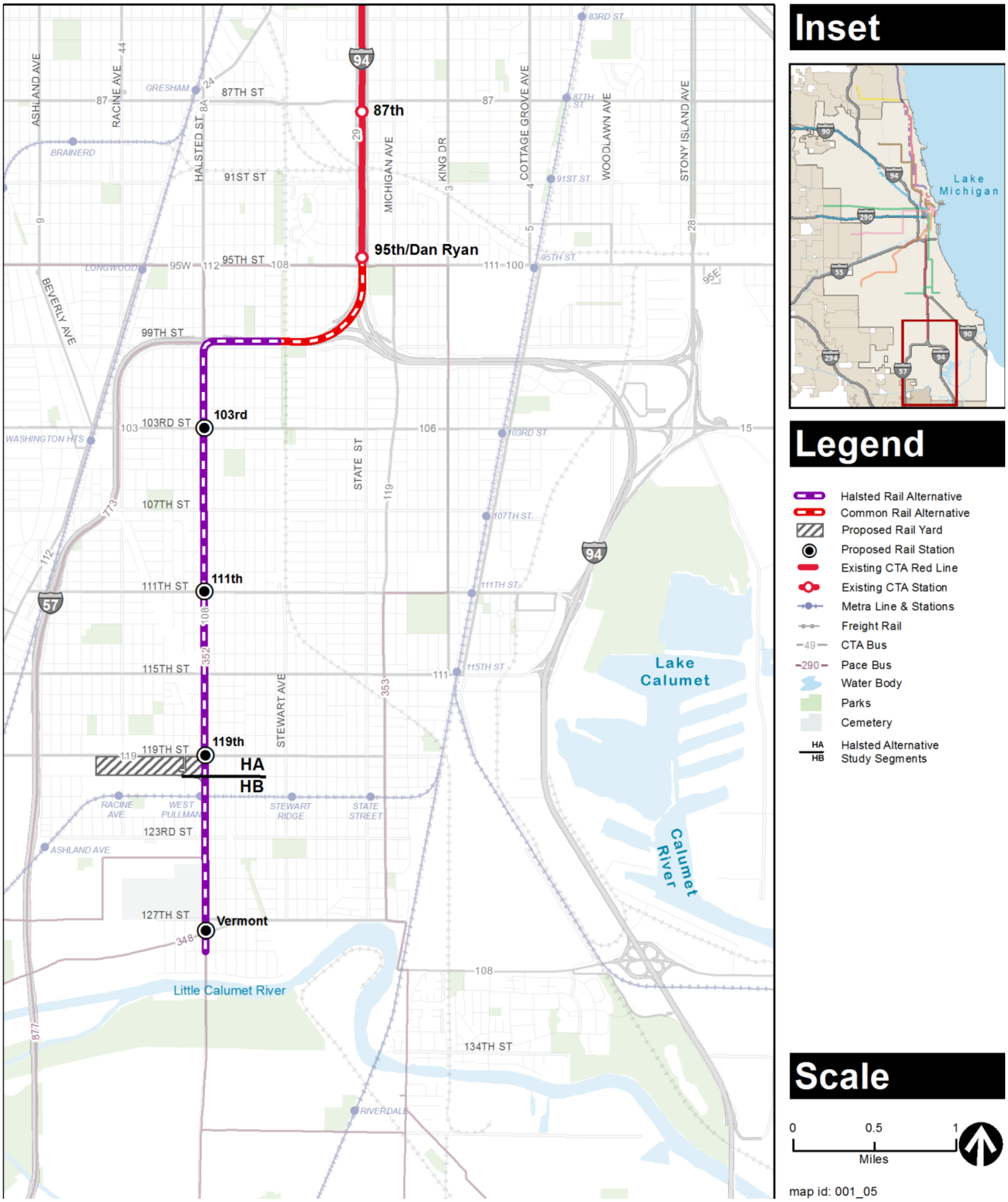

Inset
Lake Michigan
Legend
Halsted Rail Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
CTA Bus
Pace Bus
Water Body
Parks
Cemetery
HA
HB
Halsted Alternative Study Segments
Scale
0
0.5
1
Miles
map id: 001_05
87th
95th/Dan Ryan
103rd
111th
119th
Vermont
HA
HB
87TH ST
91ST ST
95TH ST
99TH ST
103RD ST
107TH ST
111TH ST
115TH ST
119TH ST
123RD ST
127TH ST
134TH ST
ASHLAND AVE
RACINE AVE
HALSTED ST
MICHIGAN AVE
KING DR
COTTAGE GROVE AVE
WOODLAWN AVE
STONY ISLAND AVE
STATE ST
STEWART AVE
BEVERLY AVE
GRESHAM
BRAINERD
LONGWOOD
WASHINGTON HTS
RACINE AVE
WEST PULLMAN
STEWART RIDGE
STATE STREET
ASHLAND AVE
RIVERDALE
83RD ST
87TH ST
91ST ST
95TH ST
103RD ST
107TH ST
111TH ST
115TH ST
Lake Calumet
Calumet River
Little Calumet River
94
57

Figure A-13: Halsted Rail Alternative

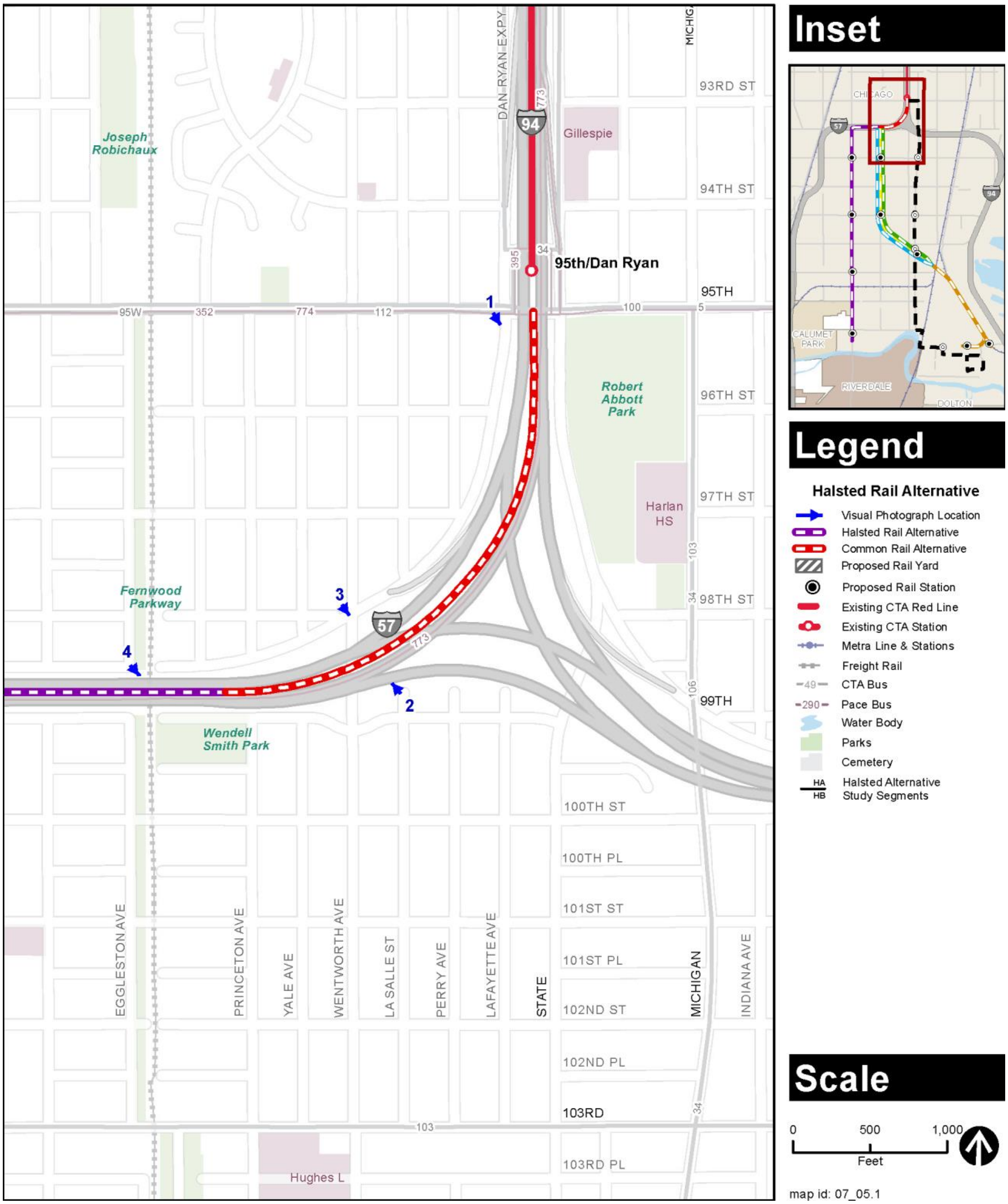

Inset
CHICAGO
CALUMET PARK
RIVERDALE
DOLTON
Legend
Halsted Rail Alternative
Visual Photograph Location
Halsted Rail Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
49 CTA Bus
290 Pace Bus
Water Body
Parks
Cemetery
HA HB Halsted Alternative Study Segments
Scale
0
500
1,000
Feet
map id: 07_05.1
DAN RYAN EXPY
94
57
95th/Dan Ryan
Joseph Robichaux
Gillespie
Robert Abbott Park
Harlan HS
Fernwood Parkway
Wendell Smith Park
Hughes L
93RD ST
94TH ST
95TH
95W
96TH ST
97TH ST
98TH ST
99TH
100TH ST
100TH PL
101ST ST
101ST PL
102ND ST
102ND PL
103RD
103RD PL
EGGLESTON AVE
PRINCETON AVE
YALE AVE
WENTWORTH AVE
LA SALLE ST
PERRY AVE
LAFAYETTE AVE
STATE
MICHIGAN
INDIANA AVE
1
2
3
4

Figure A-14: Halsted Rail Alternative View Locations - Segment HA

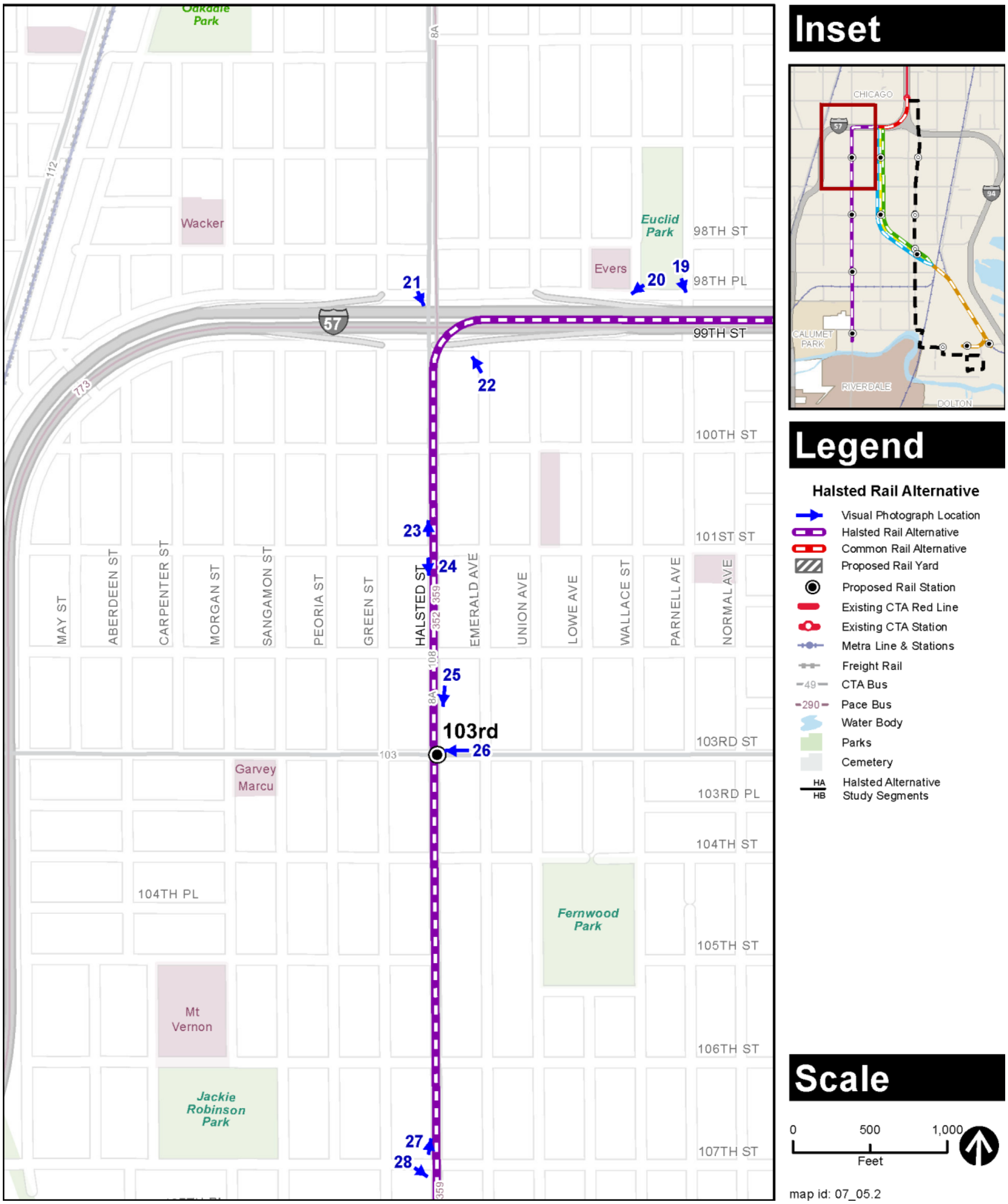

Oakdale Park
Wacker
Euclid Park
Evers
98TH ST
98TH PL
99TH ST
100TH ST
101ST ST
103RD ST
103RD PL
104TH ST
104TH PL
105TH ST
106TH ST
107TH ST
MAY ST
ABERDEEN ST
CARPENTER ST
MORGAN ST
SANGAMON ST
PEORIA ST
GREEN ST
HALSTED ST
EMERALD AVE
UNION AVE
LOWE AVE
WALLACE ST
PARNELL AVE
NORMAL AVE
57
112
773
8A
352
359
108
103
103rd
19
20
21
22
23
24
25
26
27
28
Garvey Marcu
Mt Vernon
Fernwood Park
Jackie Robinson Park
Inset
CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON
Legend
Halsted Rail Alternative
Visual Photograph Location
Halsted Rail Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
49 CTA Bus
290 Pace Bus
Water Body
Parks
Cemetery
HA HB Halsted Alternative Study Segments
Scale
0
500
1,000
Feet
map id: 07_05.2

Figure A-15: Halsted Rail Alternative View Locations - Segment HA

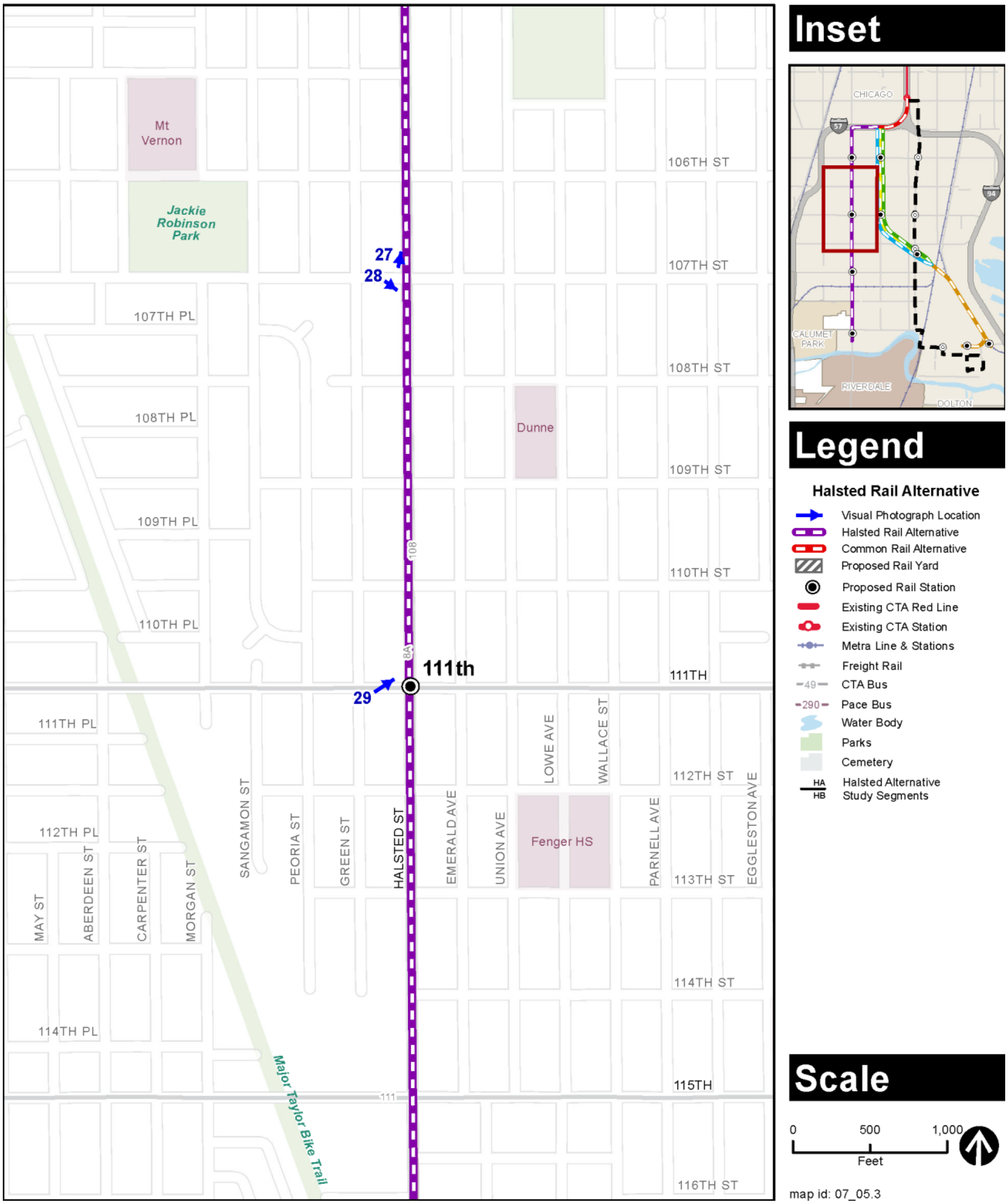

Mt Vernon
Jackie Robinson Park
Dunne
Fenger HS
27
28
29
111th
106TH ST
107TH ST
108TH ST
109TH ST
110TH ST
111TH
112TH ST
113TH ST
114TH ST
115TH
116TH ST
107TH PL
108TH PL
109TH PL
110TH PL
111TH PL
112TH PL
114TH PL
MAY ST
ABERDEEN ST
CARPENTER ST
MORGAN ST
SANGAMON ST
PEORIA ST
GREEN ST
HALSTED ST
EMERALD AVE
UNION AVE
LOWE AVE
WALLACE ST
PARNELL AVE
EGGLESTON AVE
Major Taylor Bike Trail
108
8A
111
Inset
CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON
Legend
Halsted Rail Alternative
Visual Photograph Location
Halsted Rail Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
49 CTA Bus
290 Pace Bus
Water Body
Parks
Cemetery
HA HB Halsted Alternative Study Segments
Scale
0
500
1,000
Feet
map id: 07_05.3

Figure A-16: Halsted Rail Alternative View Locations - Segment HA

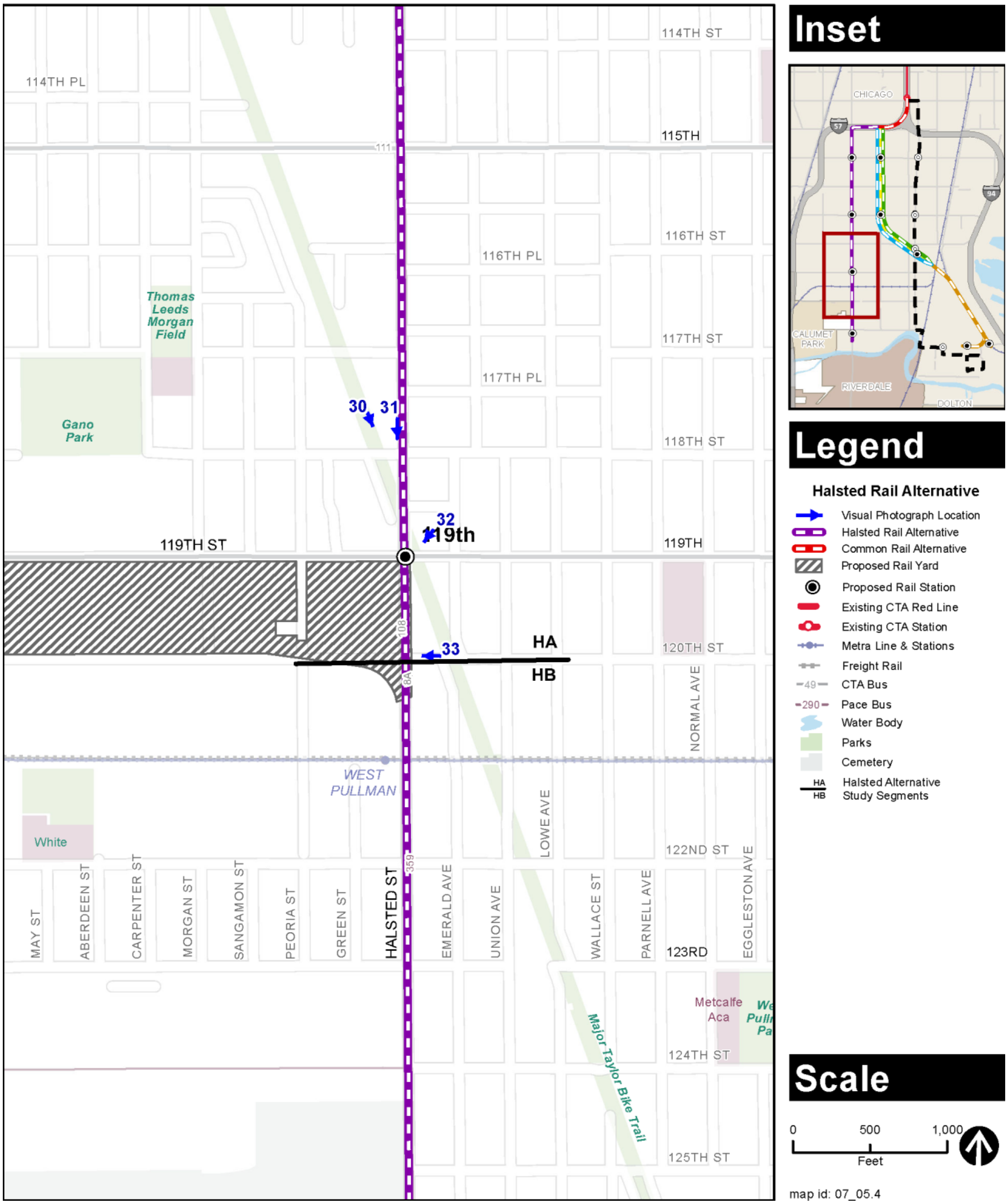

114TH ST
114TH PL
115TH
111
116TH ST
116TH PL
Thomas Leeds Morgan Field
117TH ST
117TH PL
Gano Park
30
31
118TH ST
32
119th
119TH ST
119TH
108
33
HA
HB
120TH ST
8A
NORMAL AVE
WEST PULLMAN
White
LOWE AVE
122ND ST
359
MAY ST
ABERDEEN ST
CARPENTER ST
MORGAN ST
SANGAMON ST
PEORIA ST
GREEN ST
HALSTED ST
EMERALD AVE
UNION AVE
WALLACE ST
PARNELL AVE
123RD
EGGLESTON AVE
Metcalfe Aca
We Pull Pa
124TH ST
Major Taylor Bike Trail
125TH ST
Inset
CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON
Legend
Halsted Rail Alternative
Visual Photograph Location
Halsted Rail Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
49 CTA Bus
290 Pace Bus
Water Body
Parks
Cemetery
HA HB Halsted Alternative Study Segments
Scale
0
500
1,000
Feet
map id: 07_05.4

Figure A-17: Halsted Rail Alternative View Locations - Segment HA and HB

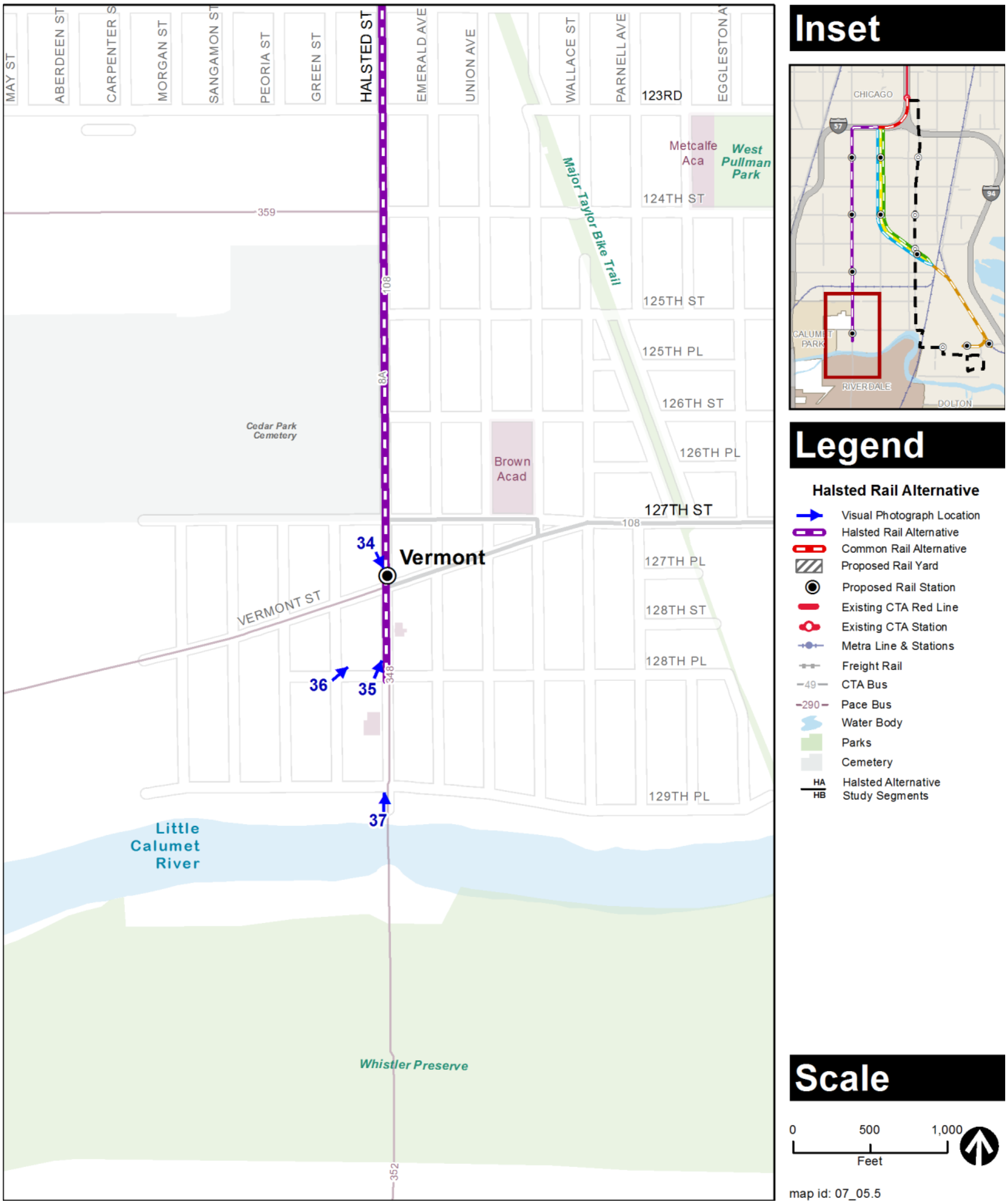
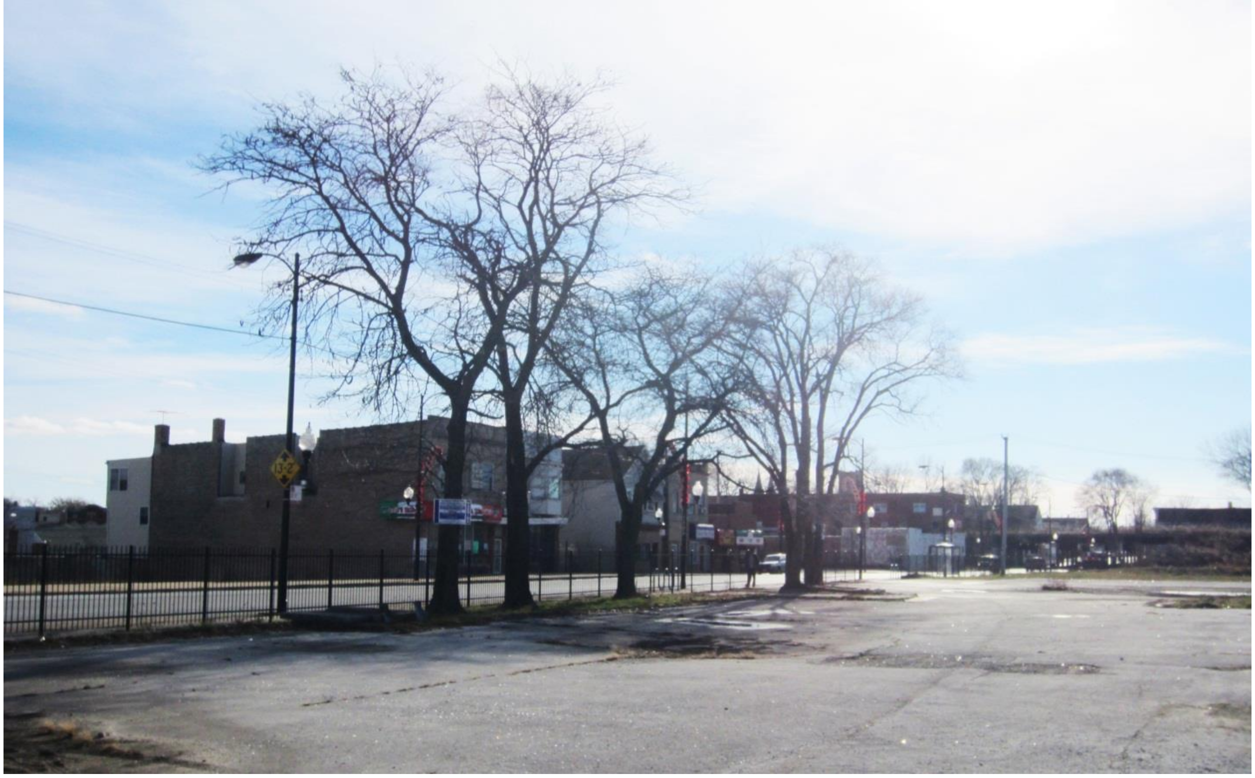

MAY ST
ABERDEEN ST
CARPENTER S
MORGAN ST
SANGAMON ST
PEORIA ST
GREEN ST
HALSTED ST
EMERALD AVE
UNION AVE
WALLACE ST
PARNELL AVE
123RD
EGGLESTON A
Metcalfe Aca
West Pullman Park
124TH ST
359
Major Taylor Bike Trail
108
125TH ST
125TH PL
8A
126TH ST
Cedar Park Cemetery
Brown Acad
126TH PL
127TH ST
108
34
Vermont
127TH PL
VERMONT ST
128TH ST
36
35
348
128TH PL
129TH PL
37
Little Calumet River
Whistler Preserve
352
Inset
CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON
Legend
Halsted Rail Alternative
Visual Photograph Location
Halsted Rail Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
49 CTA Bus
290 Pace Bus
Water Body
Parks
Cemetery
HA HB Halsted Alternative Study Segments
Scale
0
500
1,000
Feet
map id: 07_05.5

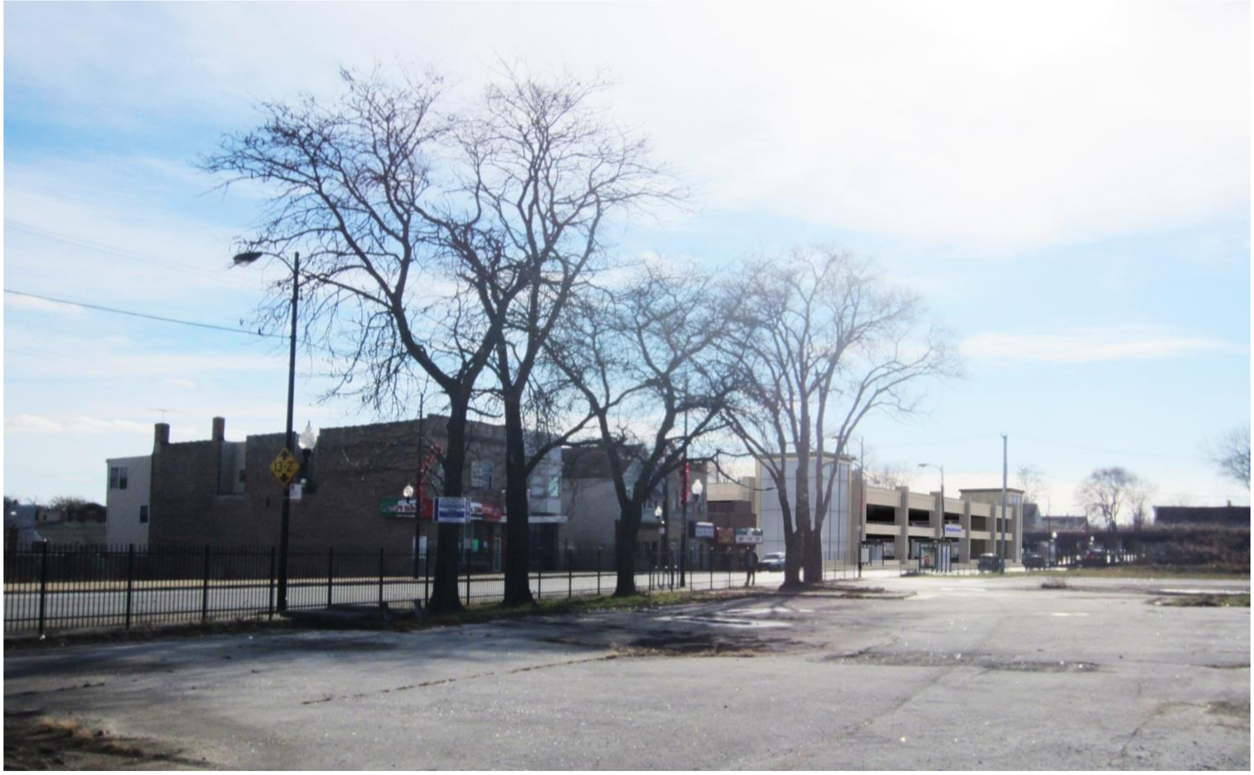
Figure A-18: Halsted Rail Alternative View Locations - Segment HB

BRT ALTERNATIVE

View 40: Existing view

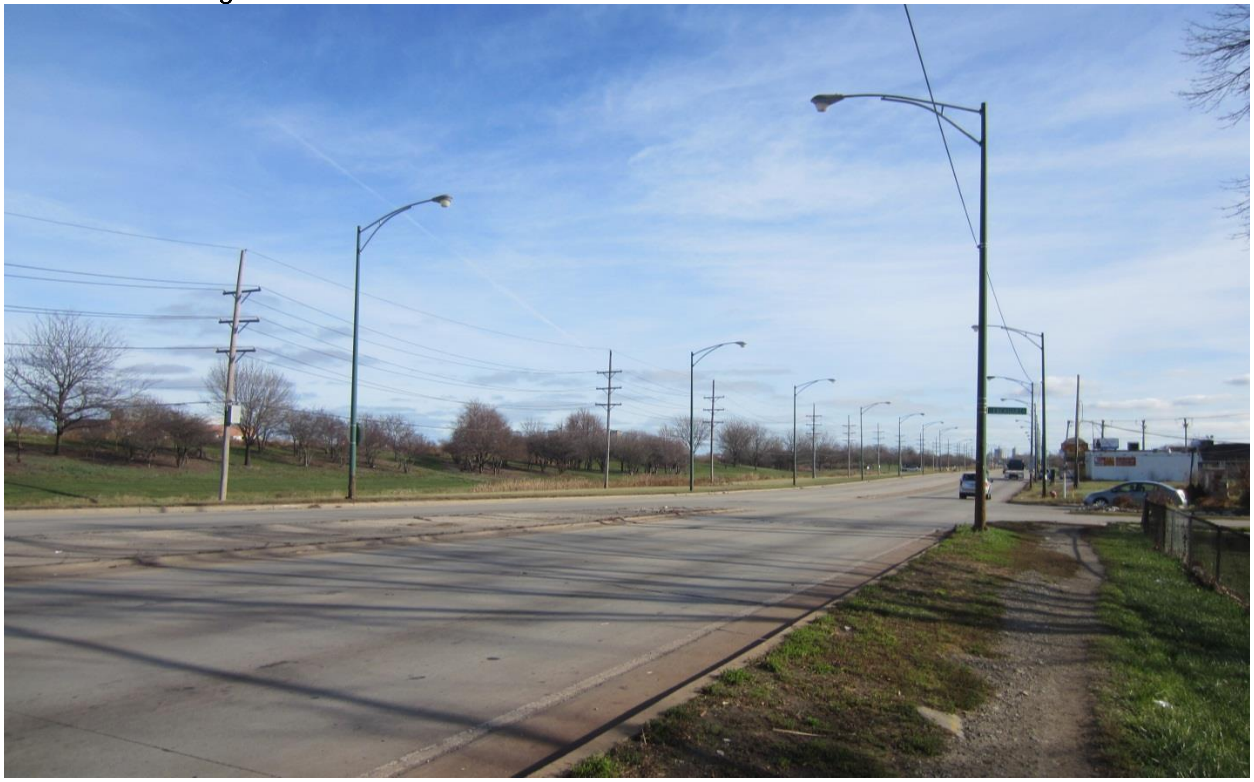


View 40: Visualization- BRT Alternative

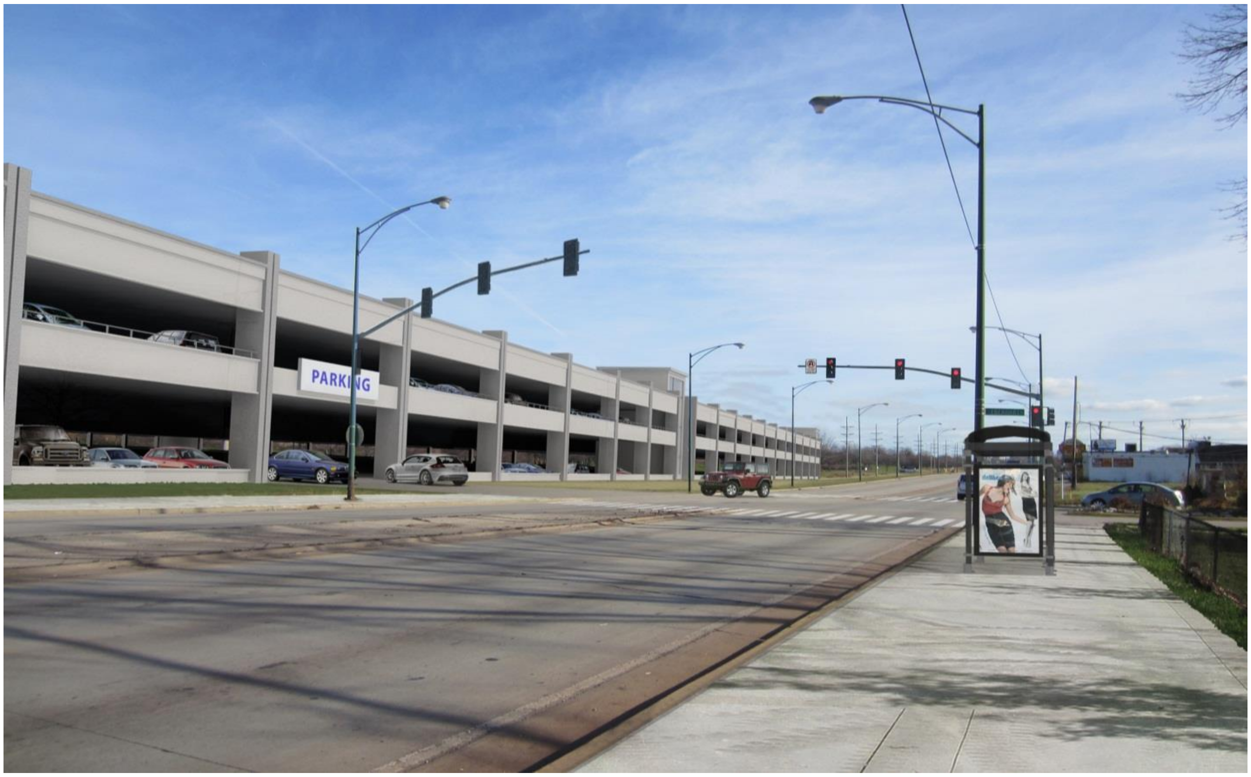


BRT ALTERNATIVE

View 41: Existing view

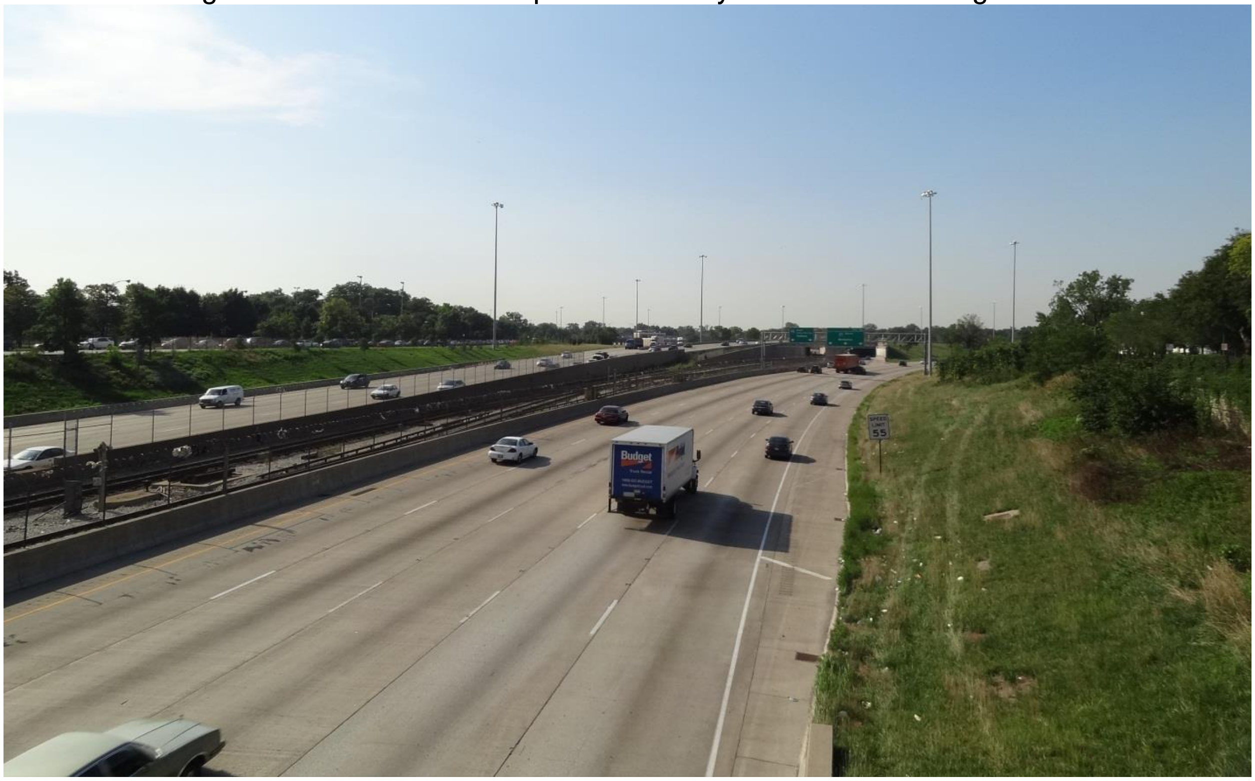


View 41: Visualization- BRT Alternative

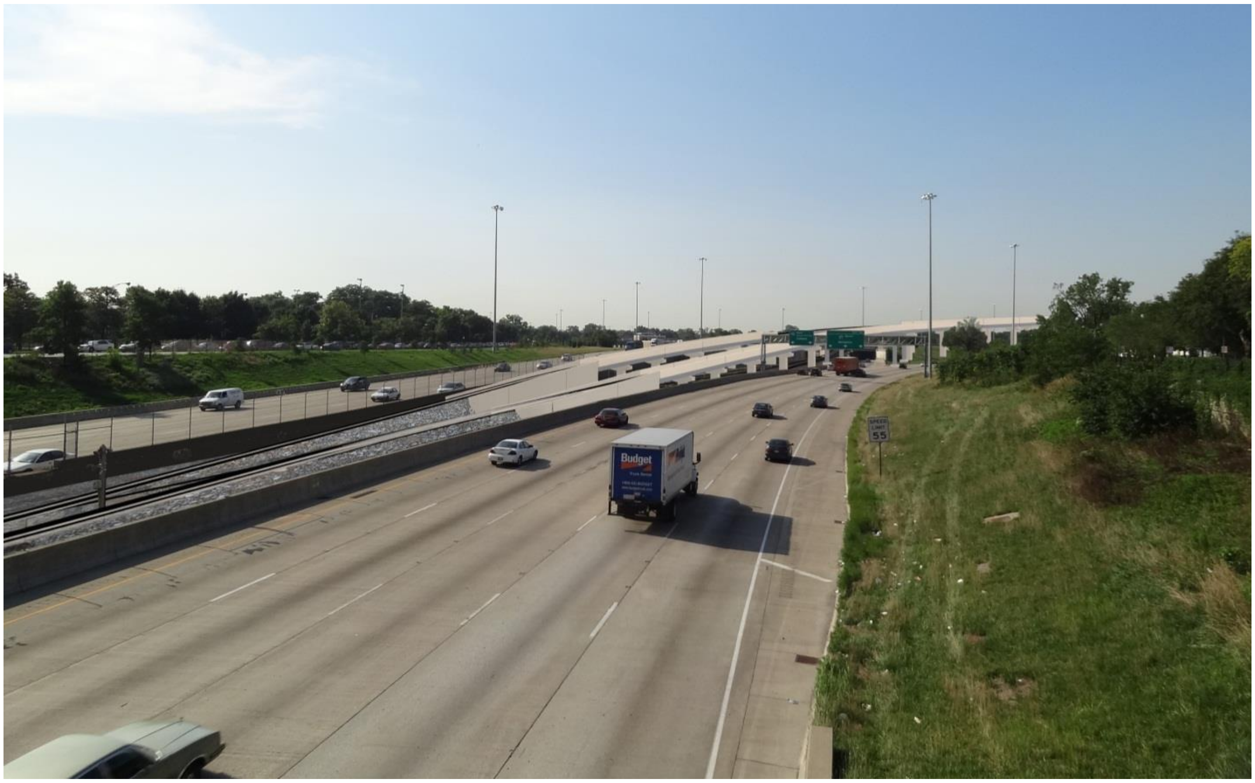


All ALTERNATIVES – Segment U-A and Segment H-B

View 1: Existing view at 95th Street overpass and Lafayette Avenue looking South over I-94

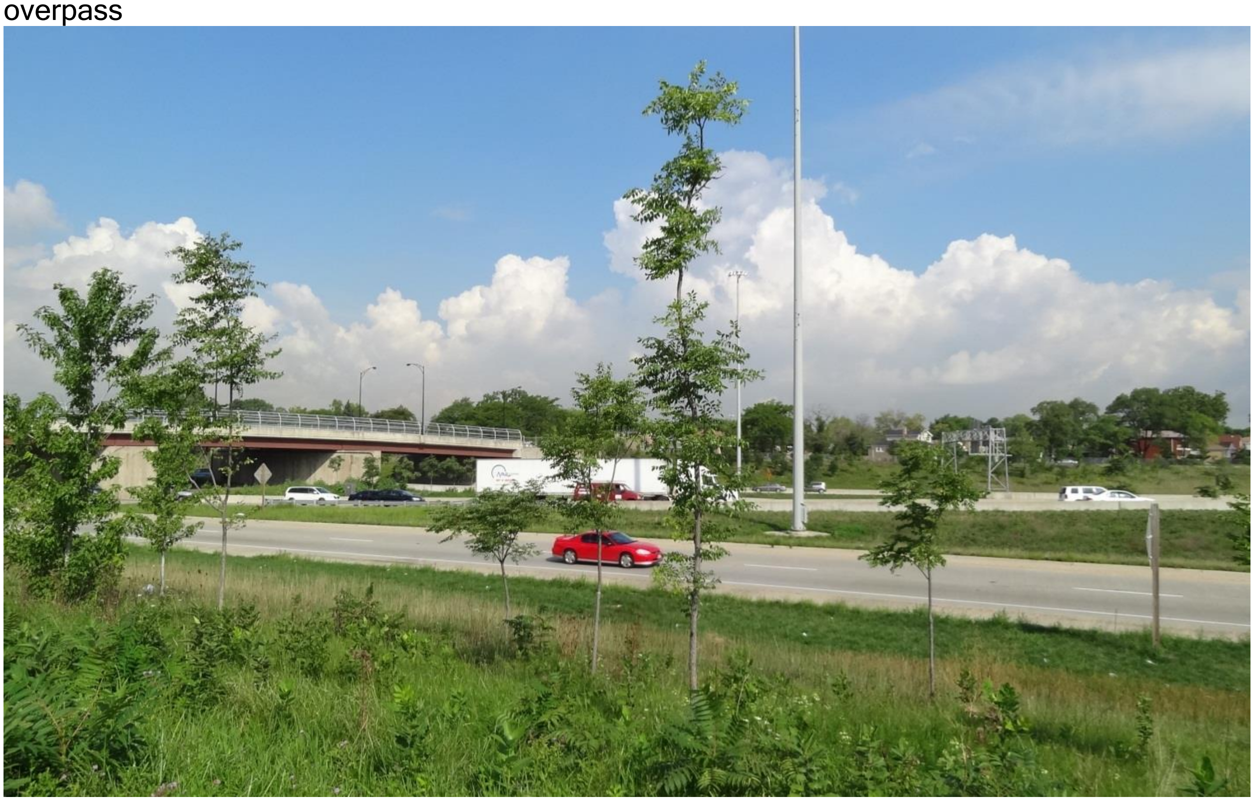


View 1A: Visualization – All Alternatives

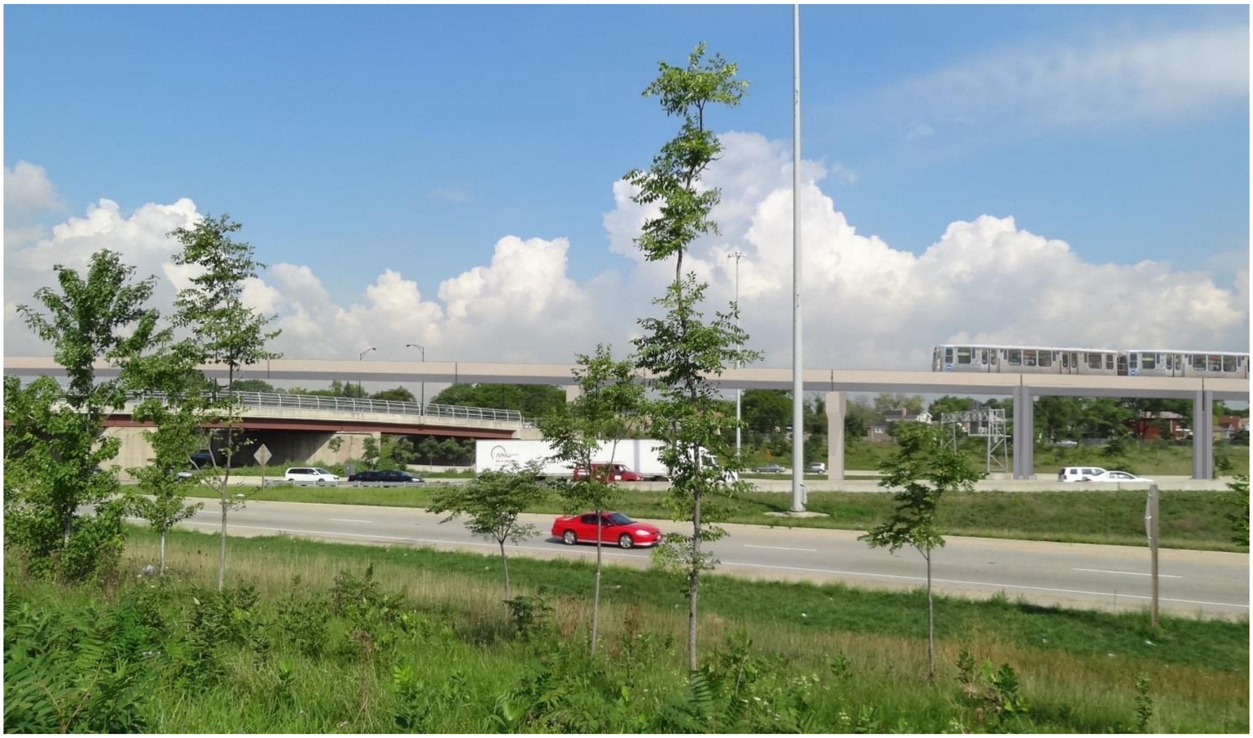


All ALTERNATIVES – Segment U-A and Segment H-B

View 2: Existing view northwest from LaSalle Street and 99th Street toward Wentworth overpass

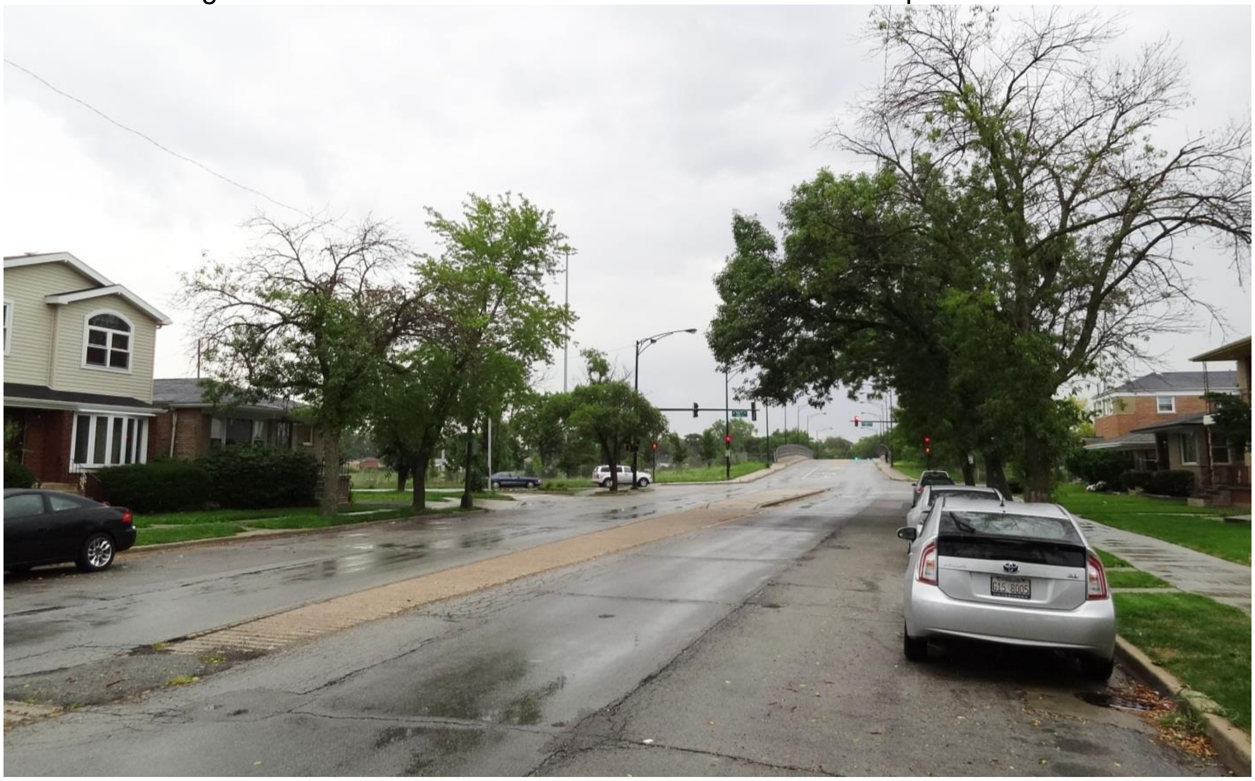


View 2A: Visualization – All Alternatives

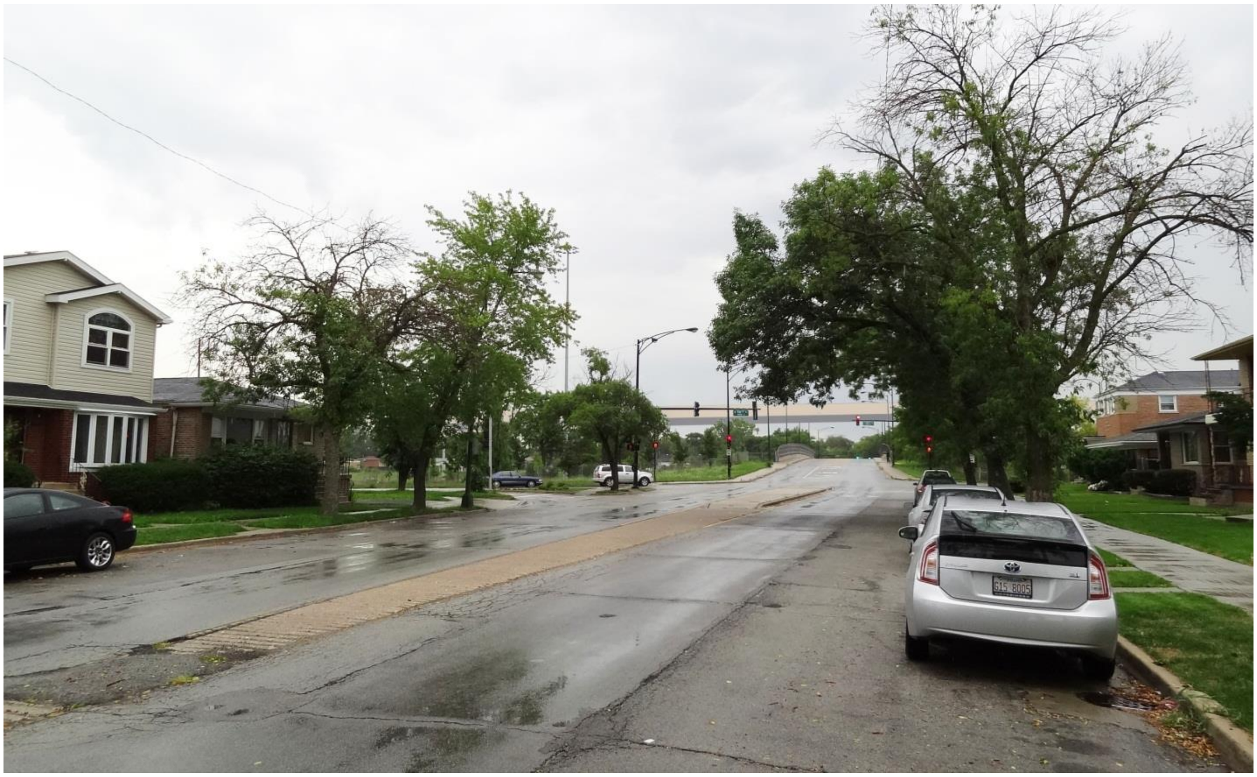


All ALTERNATIVES – Segment U-A and Segment H-B

View 3: Existing view south from Wentworth Avenue toward I-57 overpass

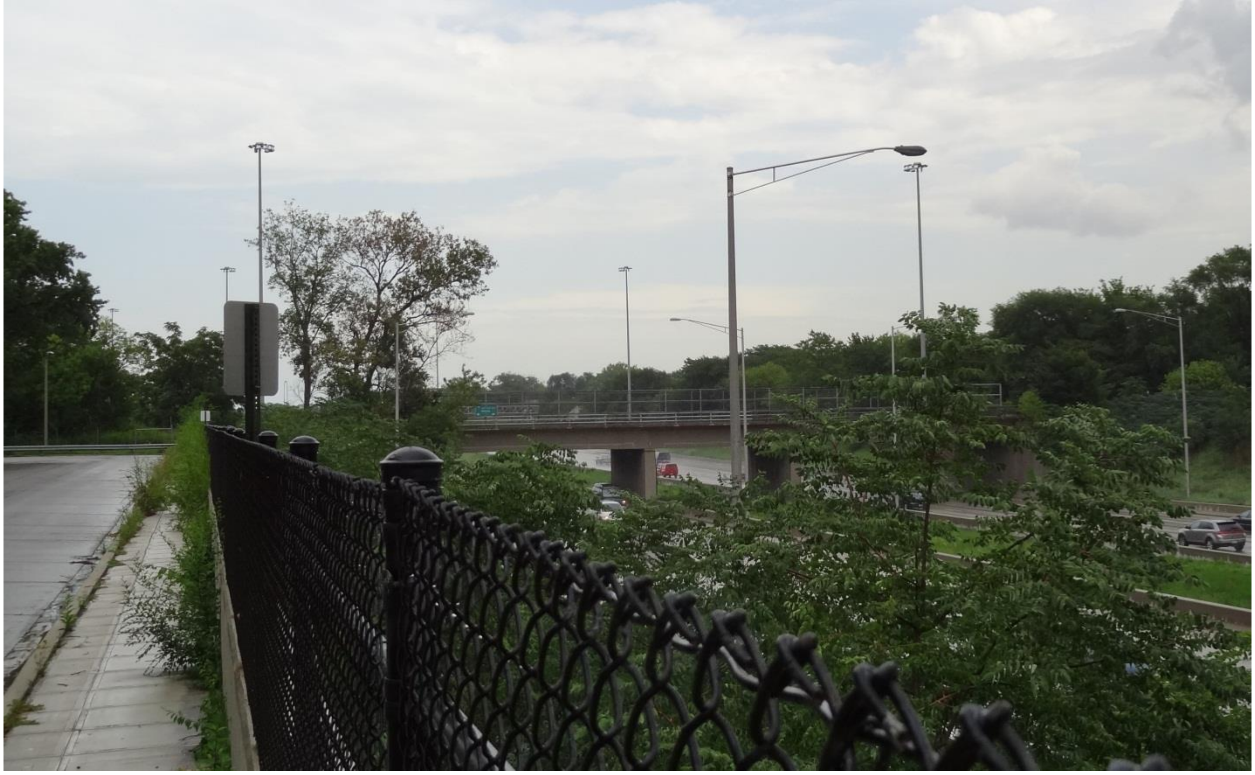


View 3A: Visualization – All Alternatives

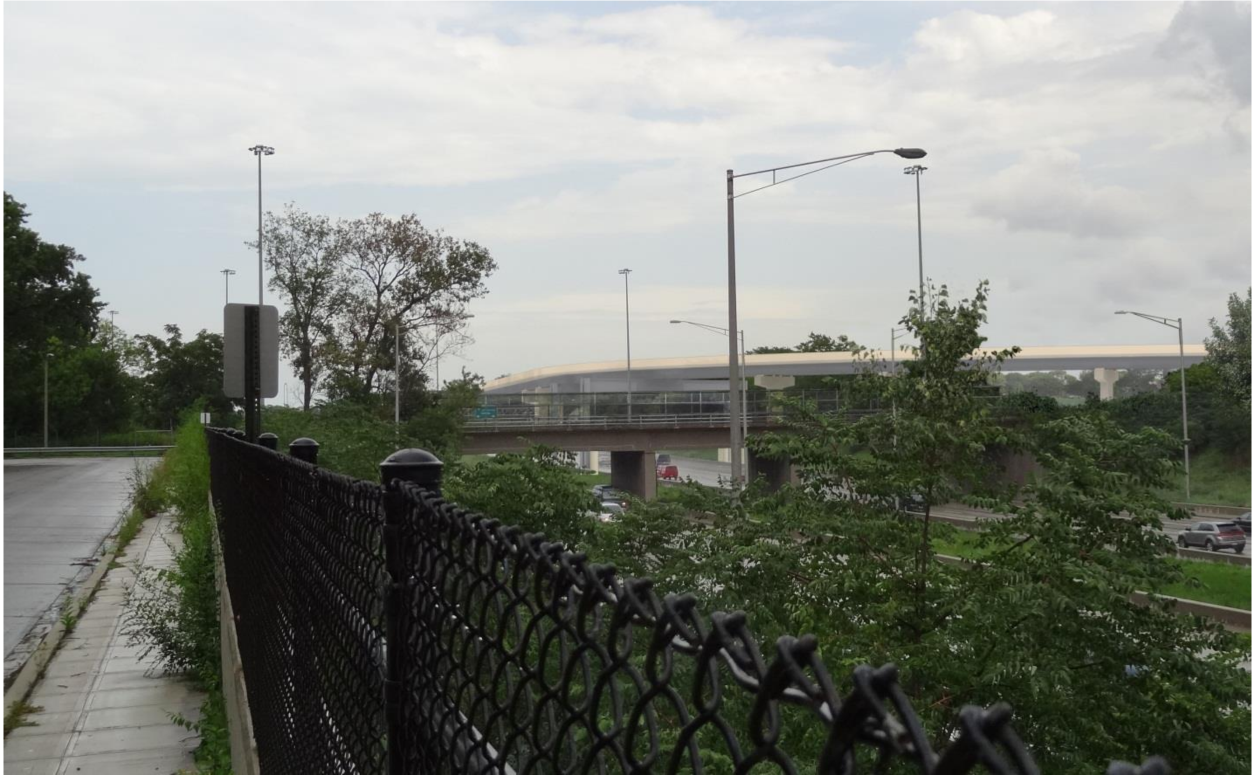


UNION PACIFIC RAILROAD ALTERNATIVES – Segment U-A

View 4: Existing view southeast over I-57 from Eggleston Avenue and 98th Street

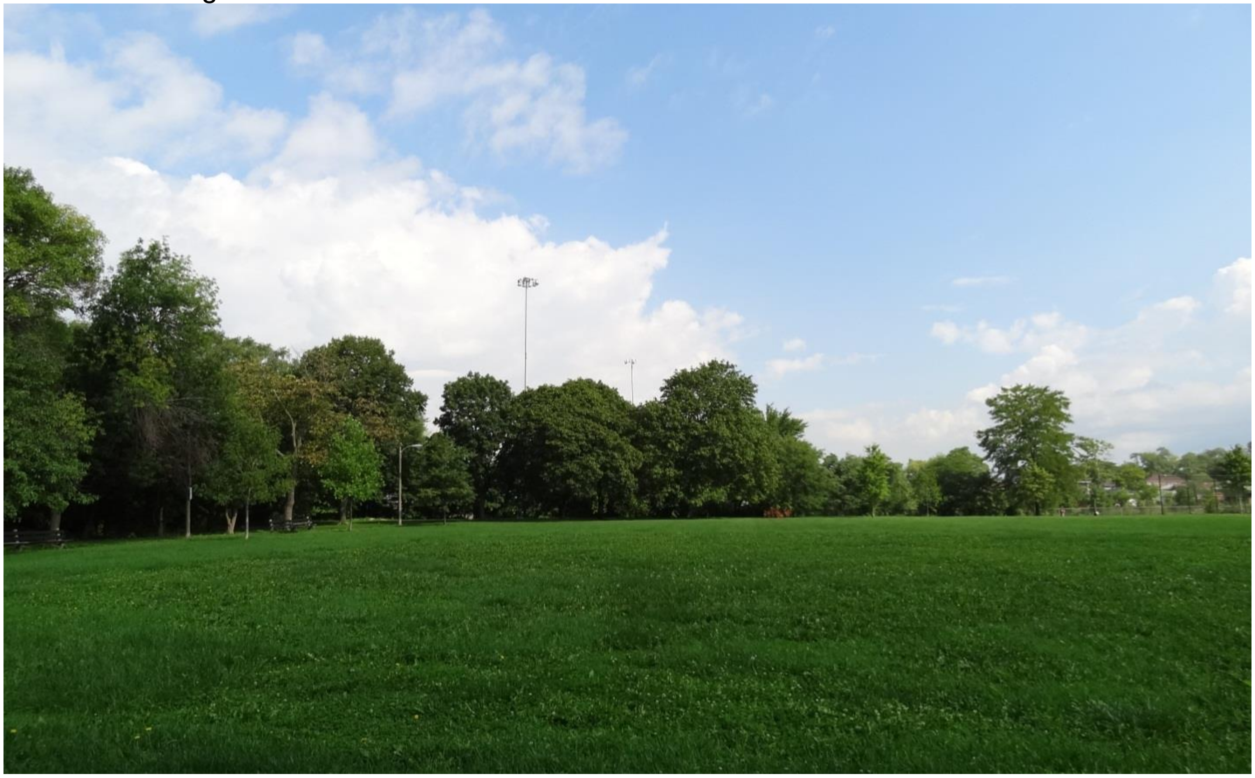


View4A: Visualization – All Alternatives

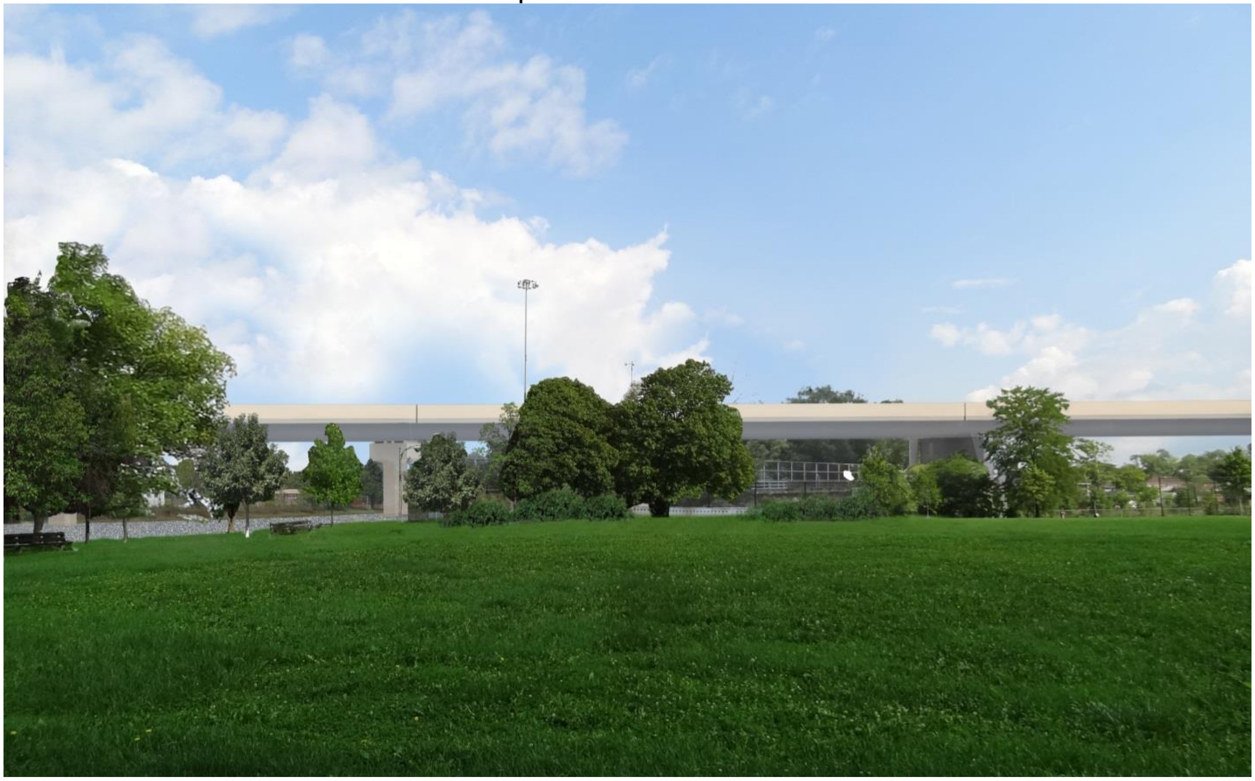


UNION PACIFIC RAILROAD ALTERNATIVES – Segment U-A

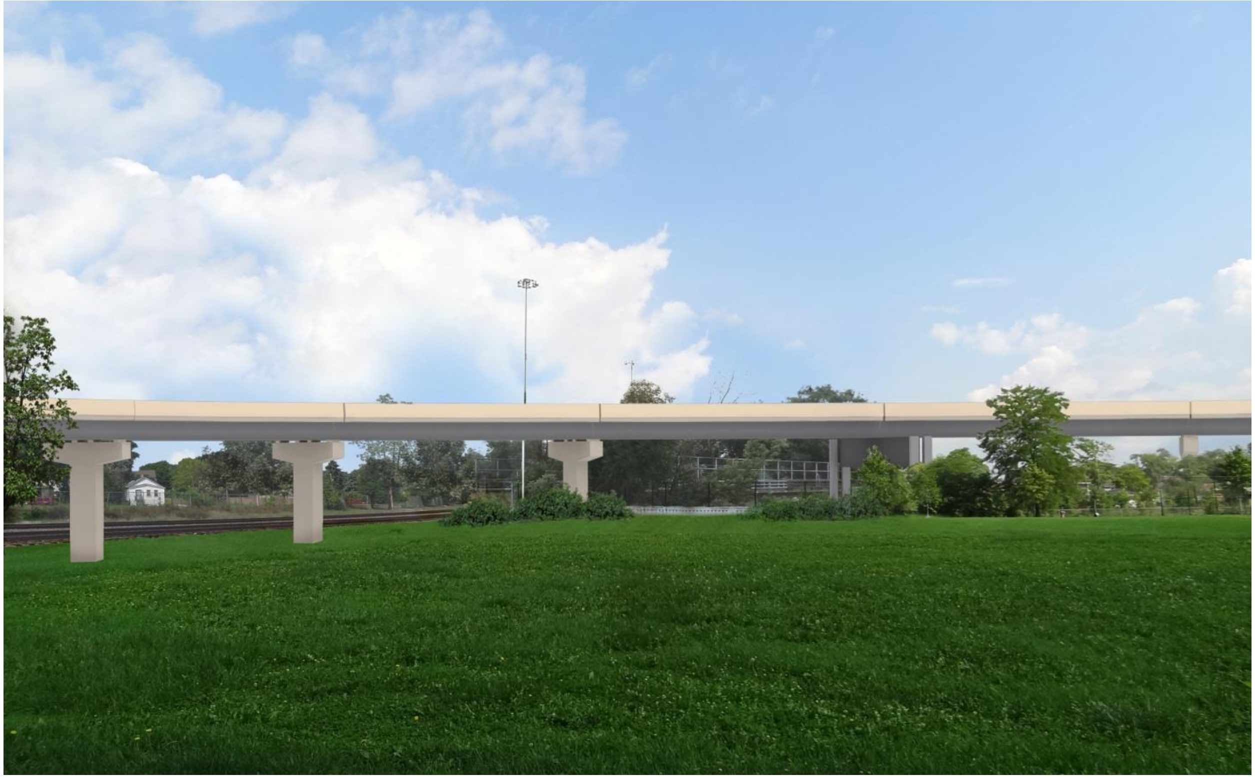
View 5: Existing view northwest across Wendell Smith Park



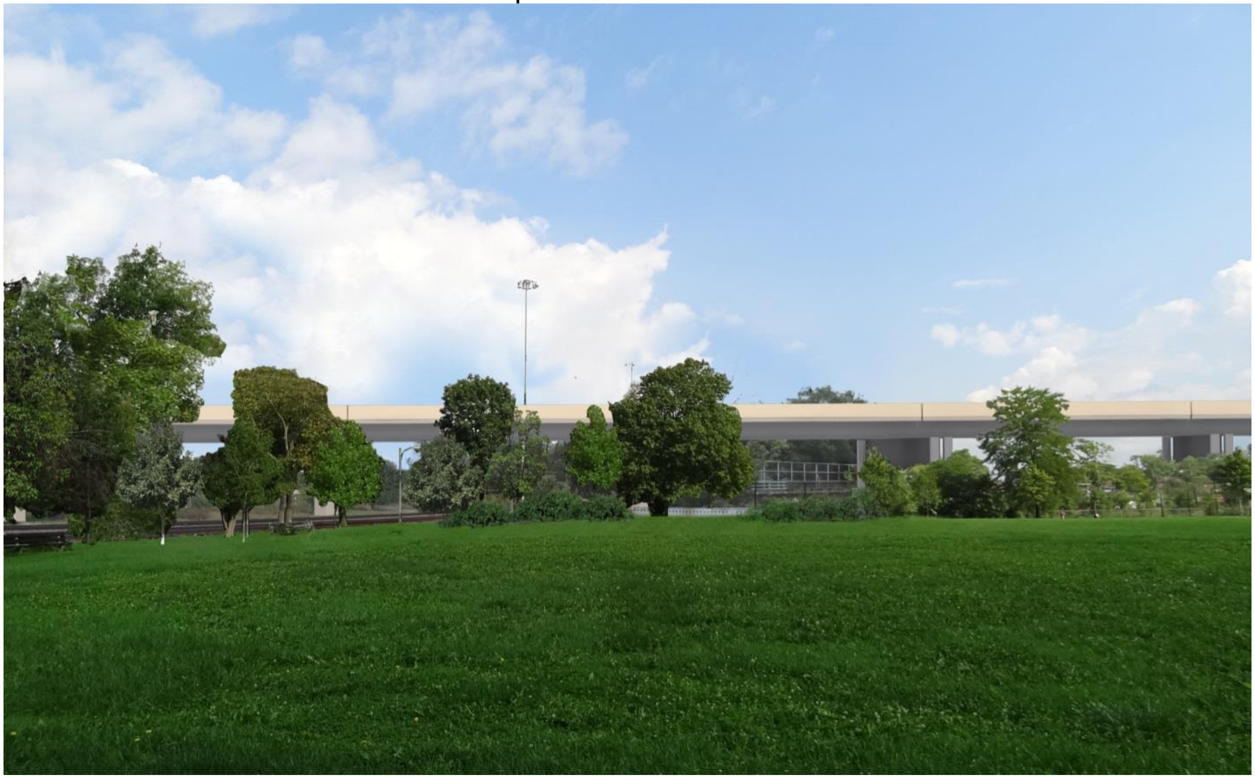
View 5A: Visualization – UPRR ROW Option



View 5B: Visualization – UPRR East Option

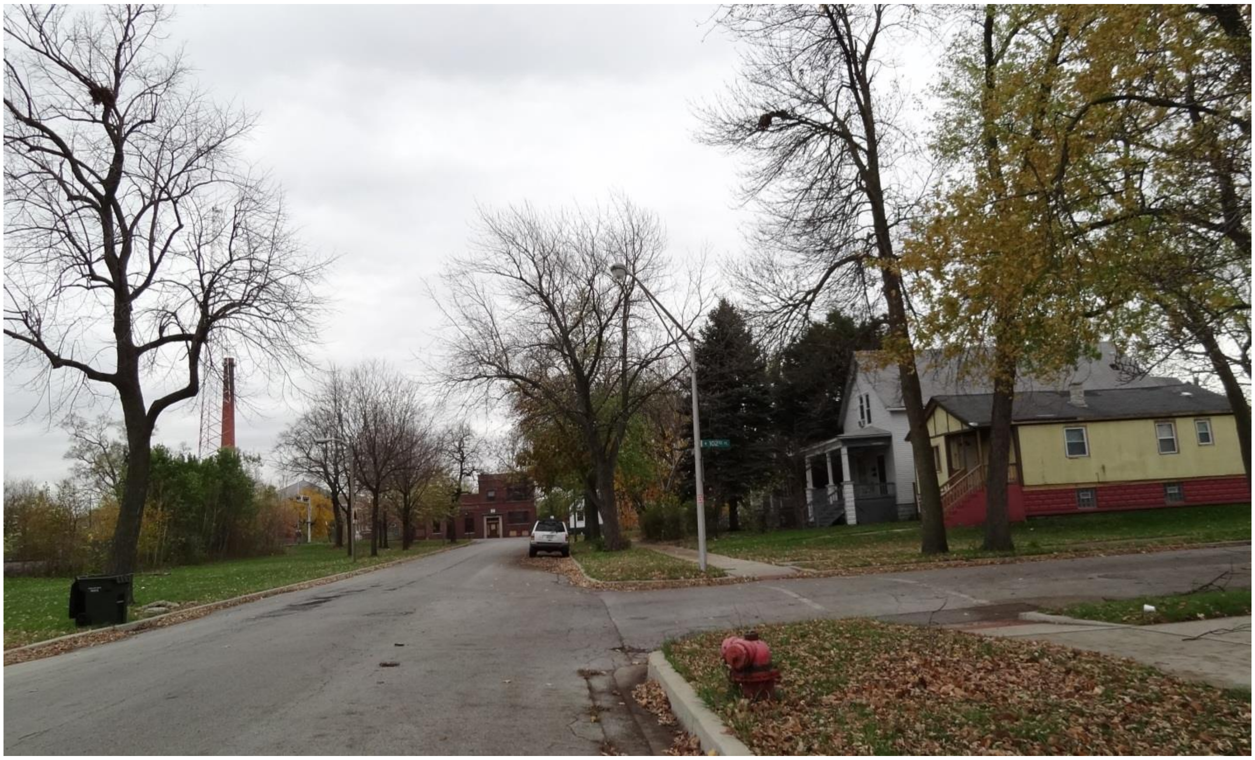


View 5C: Visualization – UPRR West Option

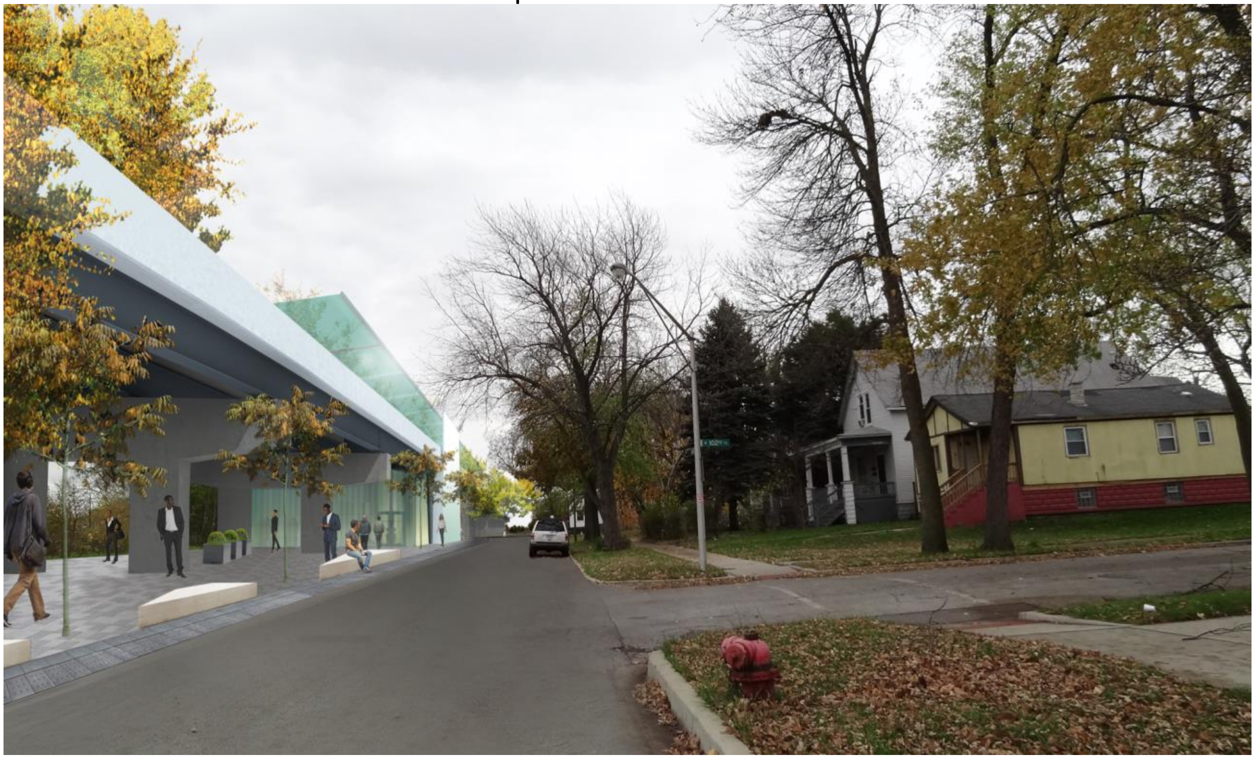


UNION PACIFIC RAILROAD ALTERNATIVES – Segment U-A

View 6: Existing view south along Eggleston Avenue and Fernwood Parkway toward 103rd Street

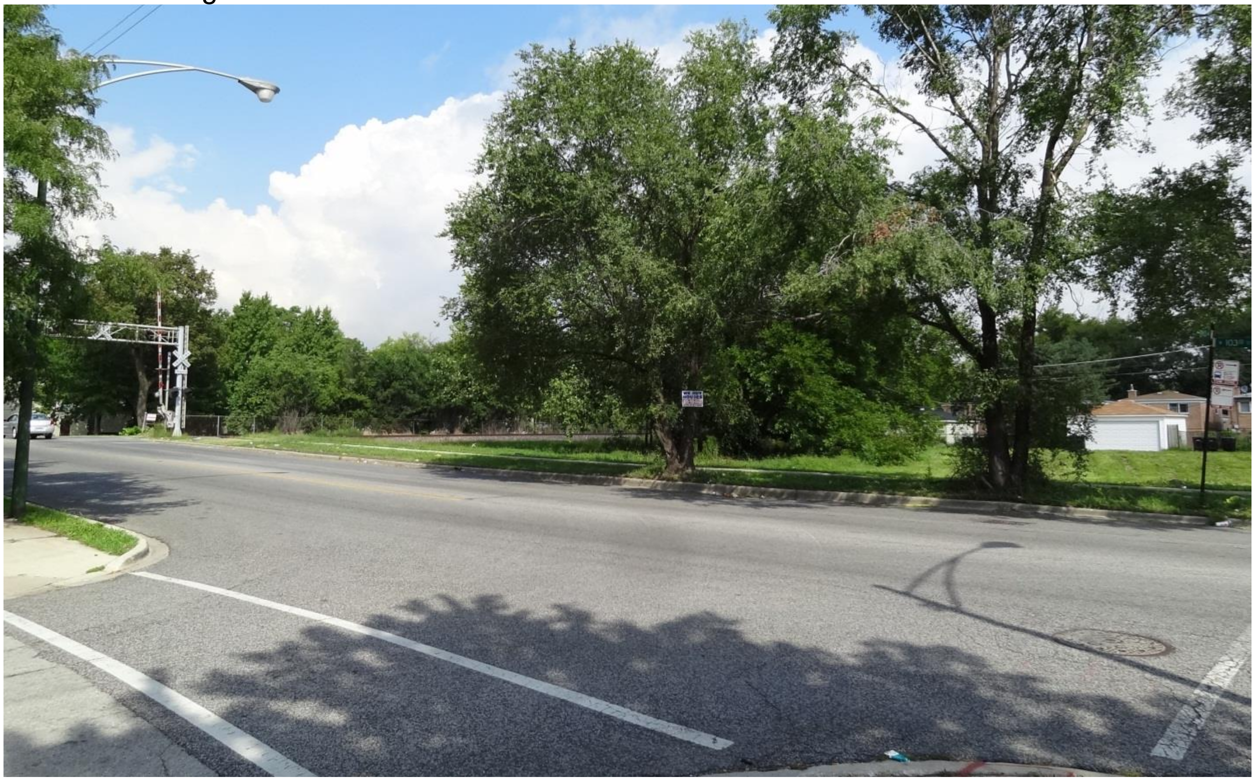


View 6C: Visualization – UPRR West Option

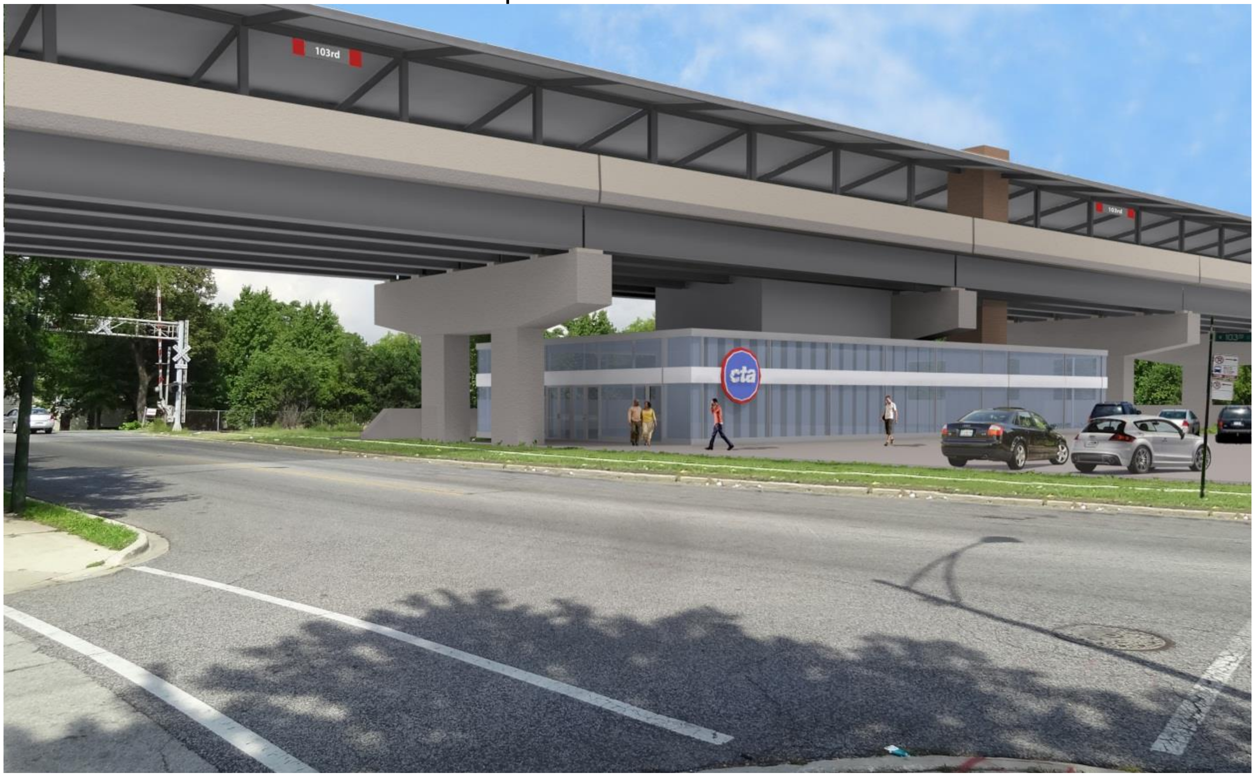


UNION PACIFIC RAILROAD ALTERNATIVES – Segment U-A

View 7: Existing view northwest from 103rd Street and Harvard Avenue

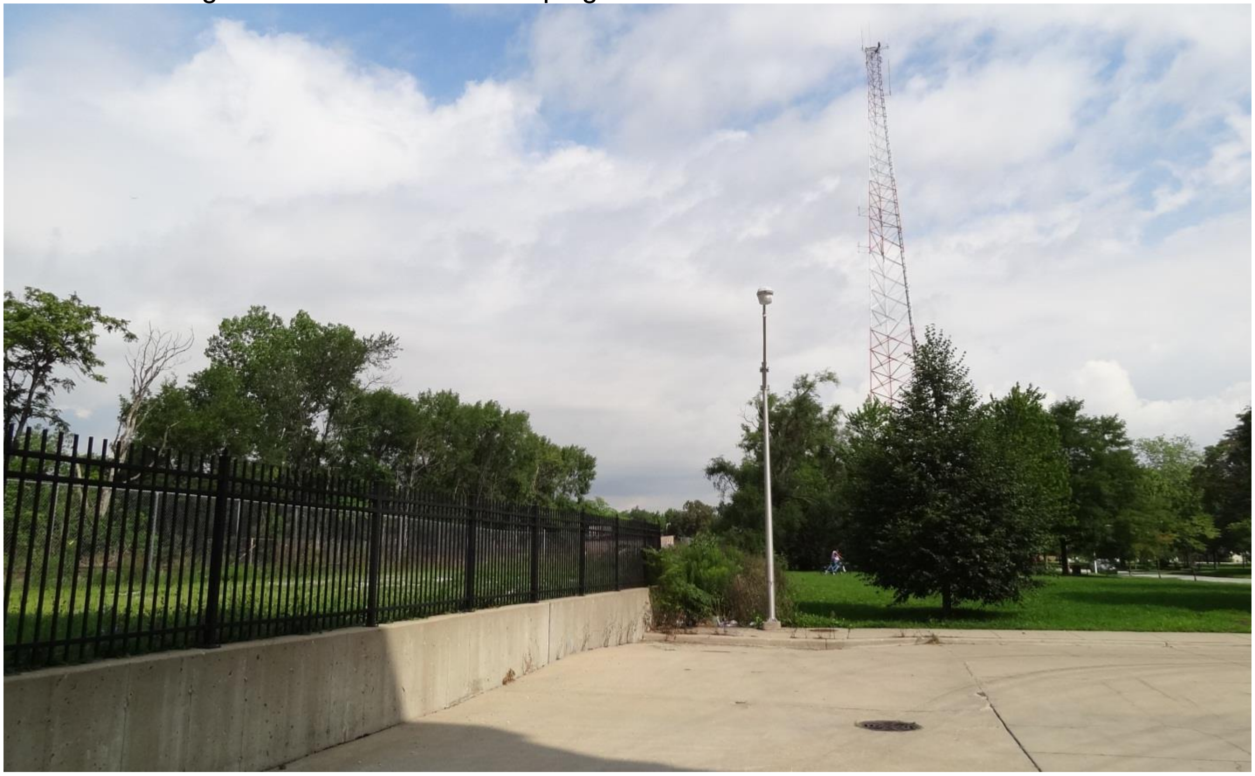


View 7B: Visualization – UPRR East Option

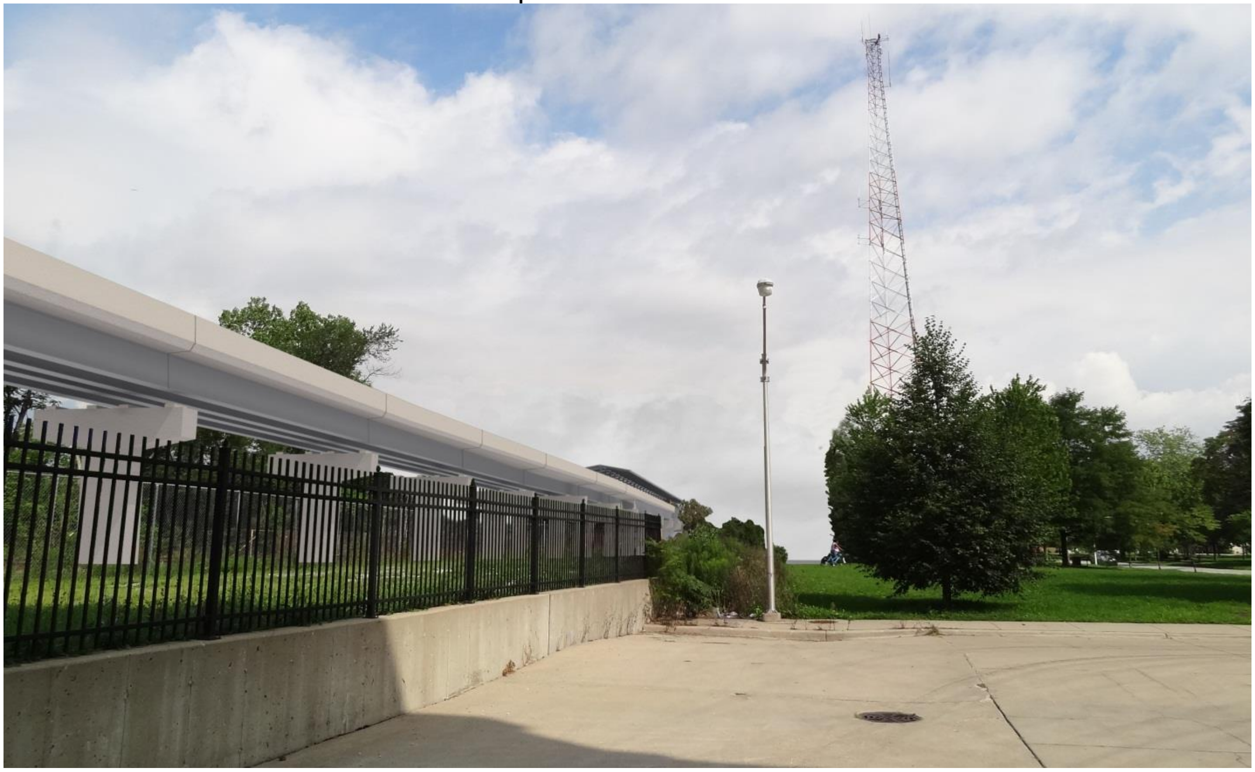


UNION PACIFIC RAILROAD ALTERNATIVES – Segment U-A

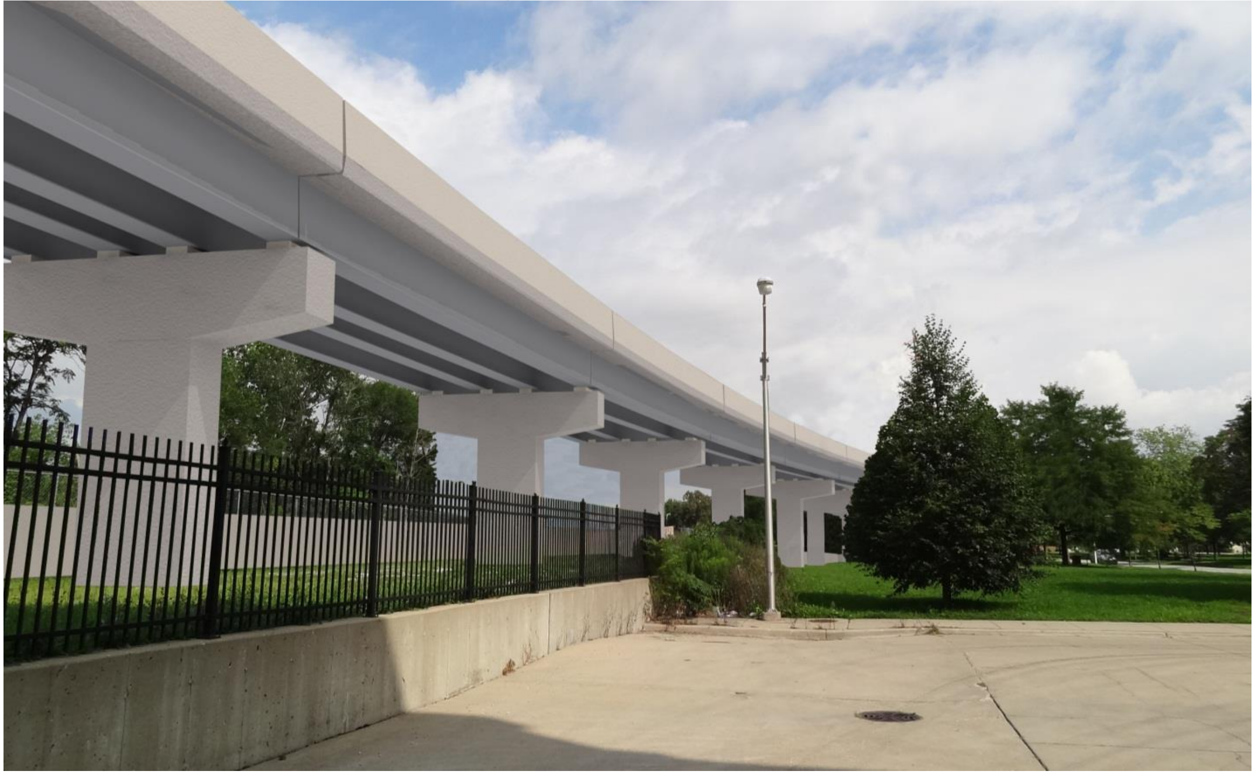
View 8: Existing view north from the Pumping Station on Harvard Avenue



View 8A: Visualization – UPRR ROW Option

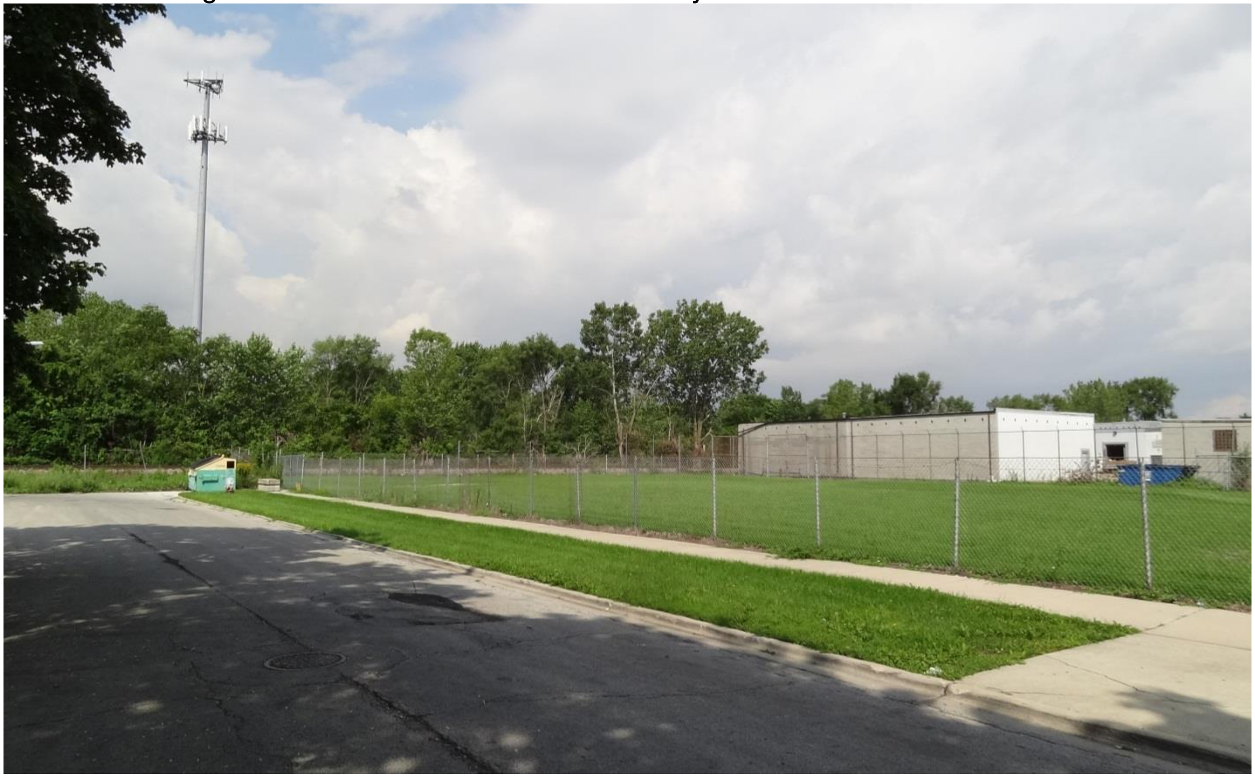


View 8B: Visualization – UPRR East Option

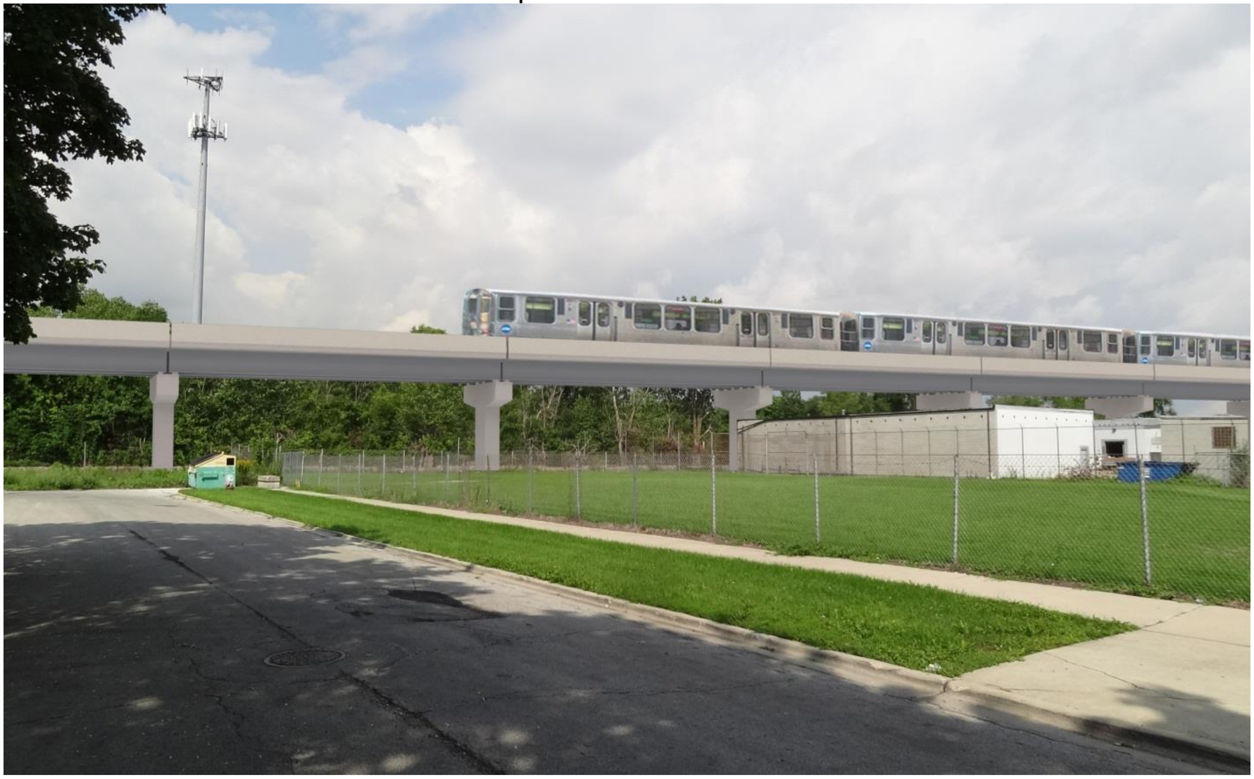


UNION PACIFIC RAILROAD ALTERNATIVES – Segment U-A

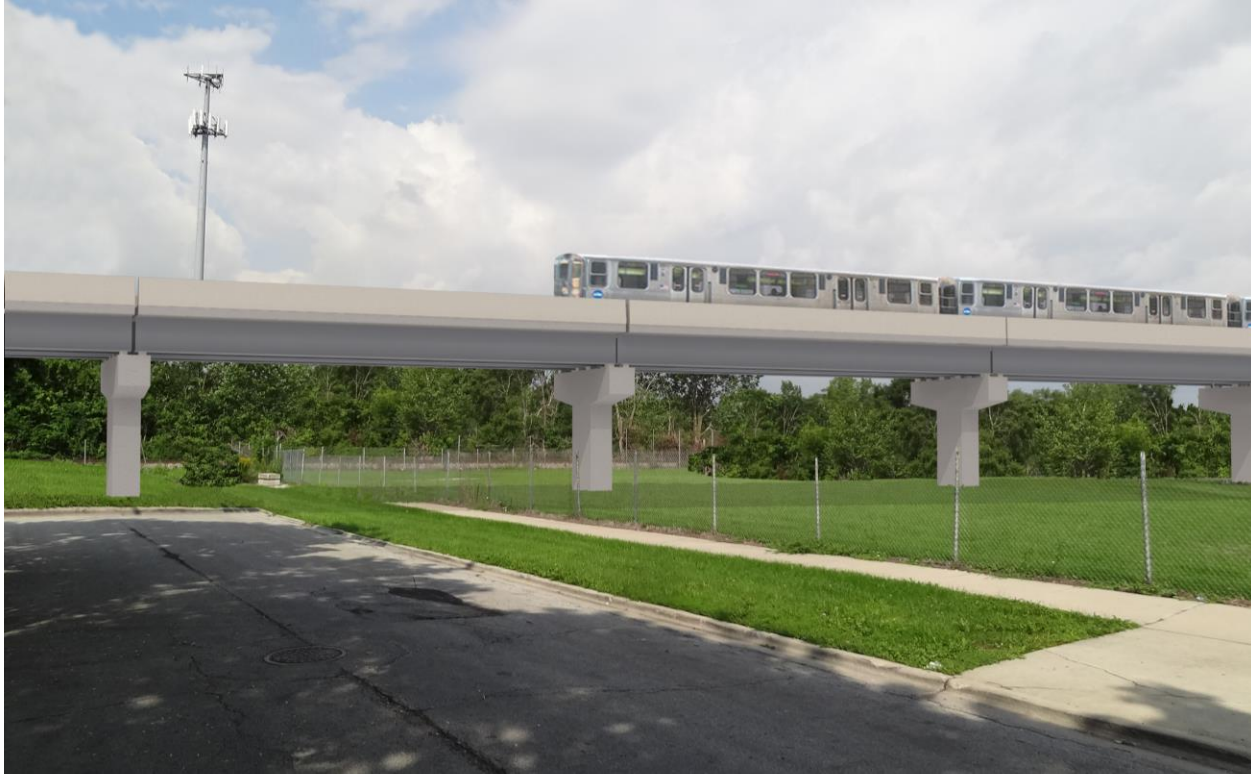
View 9: Existing view northwest from 108th Street adjacent to Roseland Christian School



View 9A: Visualization – UPRR ROW Option

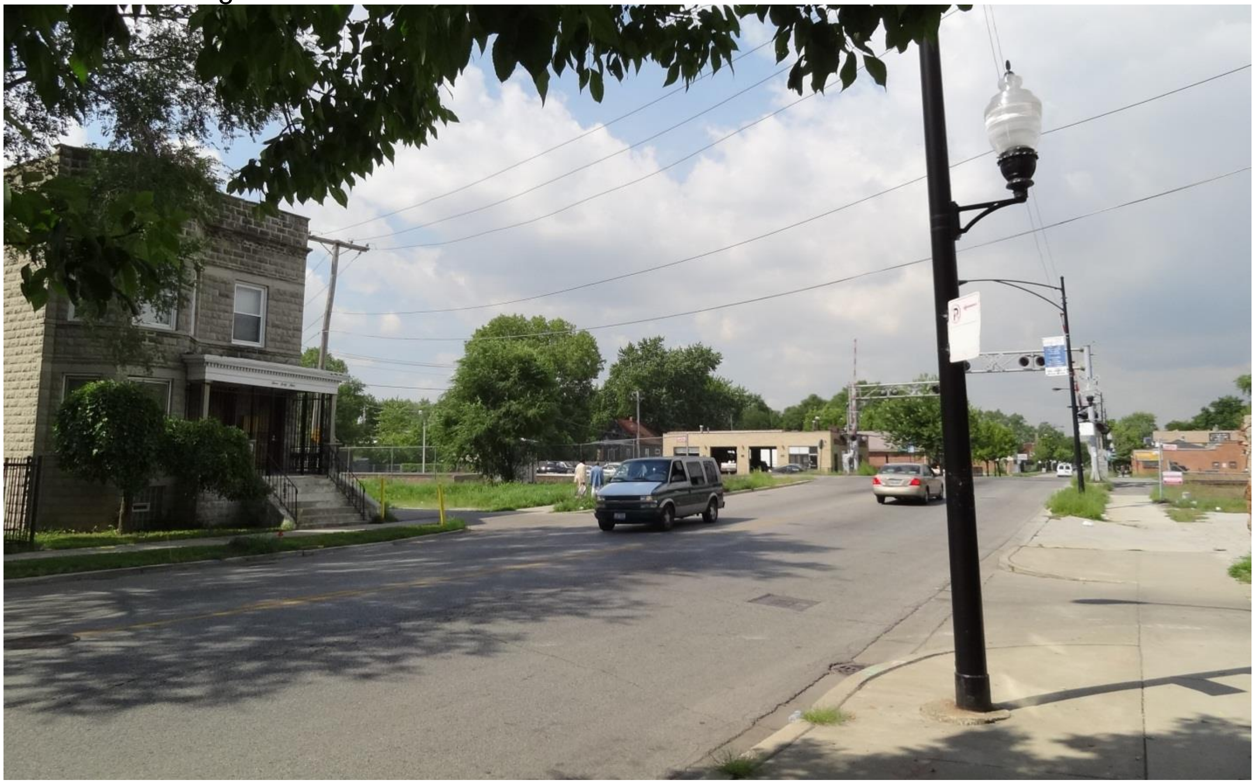


View 9B: Visualization – UPRR East Option

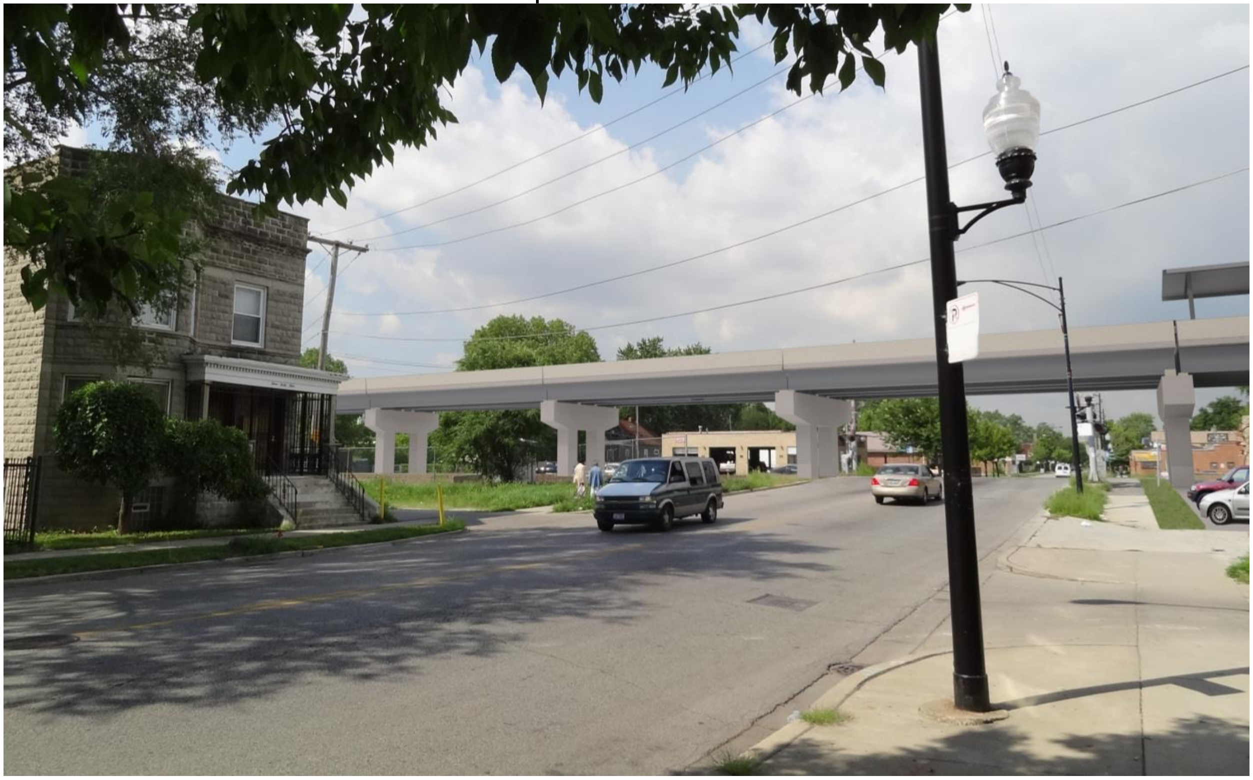


UNION PACIFIC RAILROAD ALTERNATIVES – Segment U-A

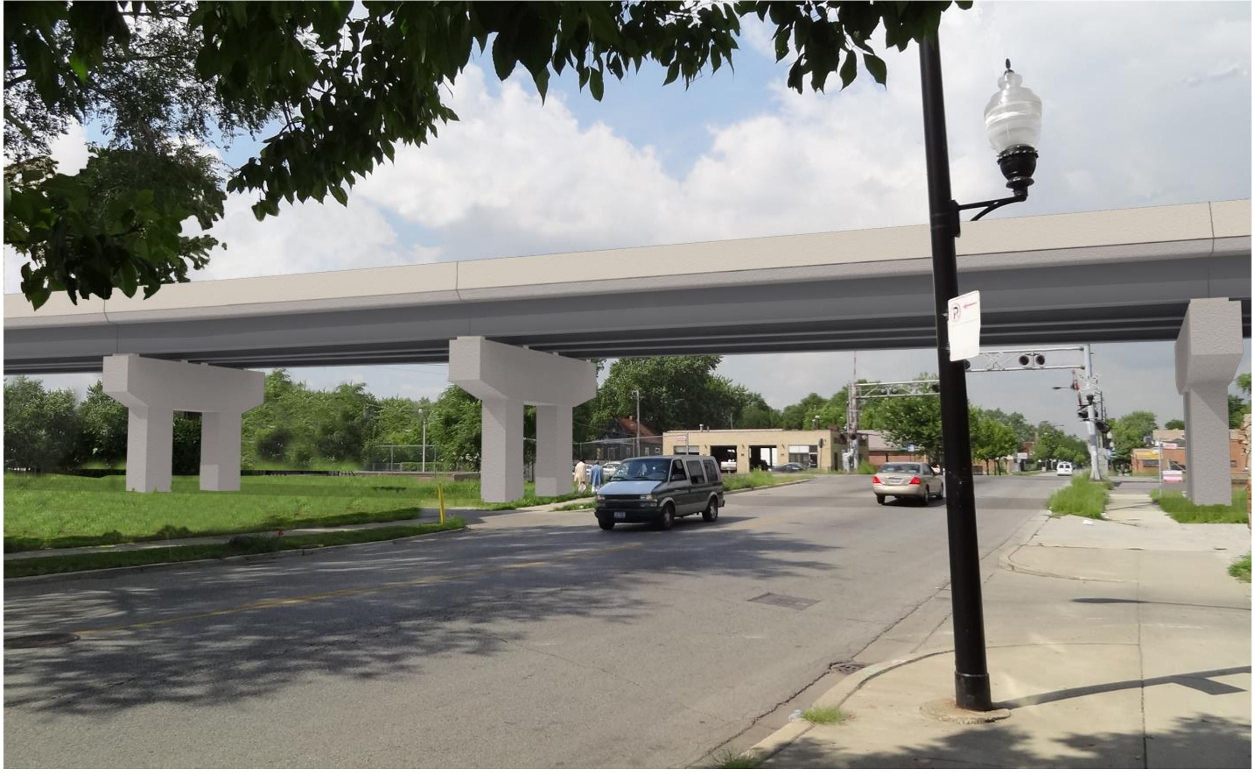
View 10: Existing view west from 111th Street



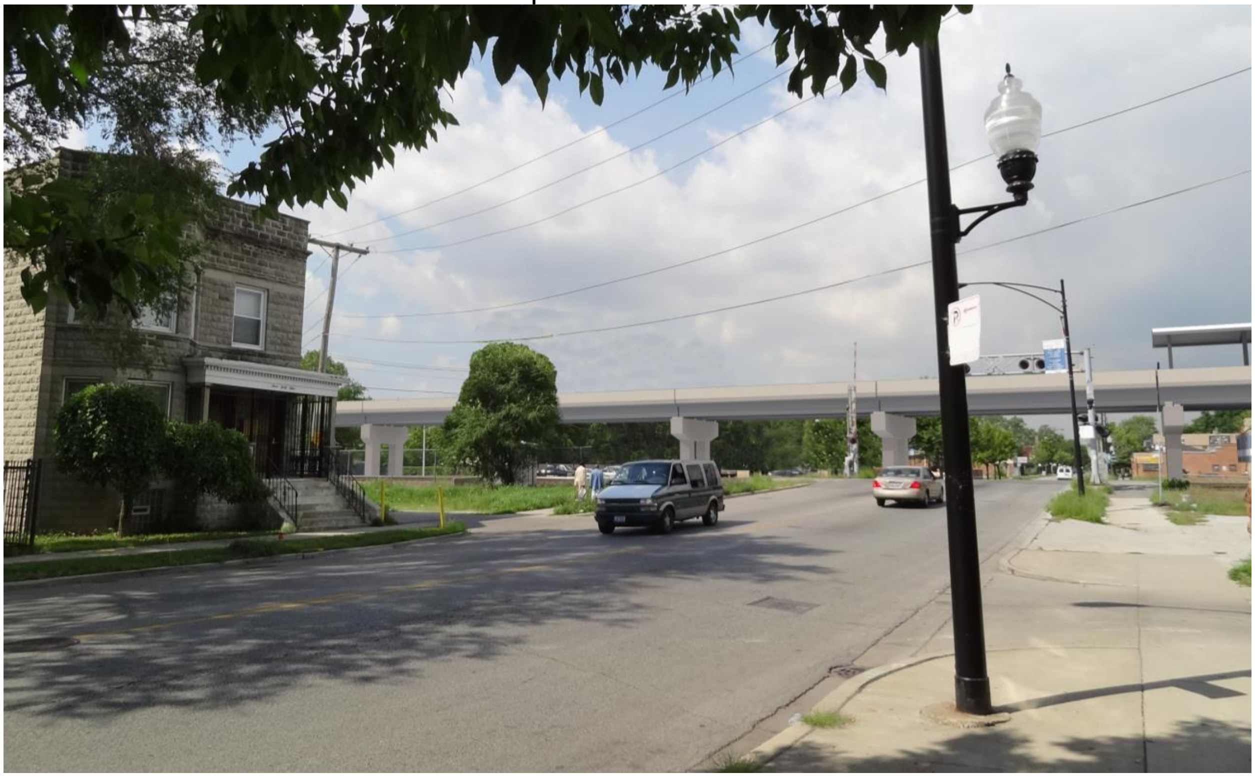
View 10A: Visualization – UPRR ROW Option



View 10B: Visualization - UPRR East Option

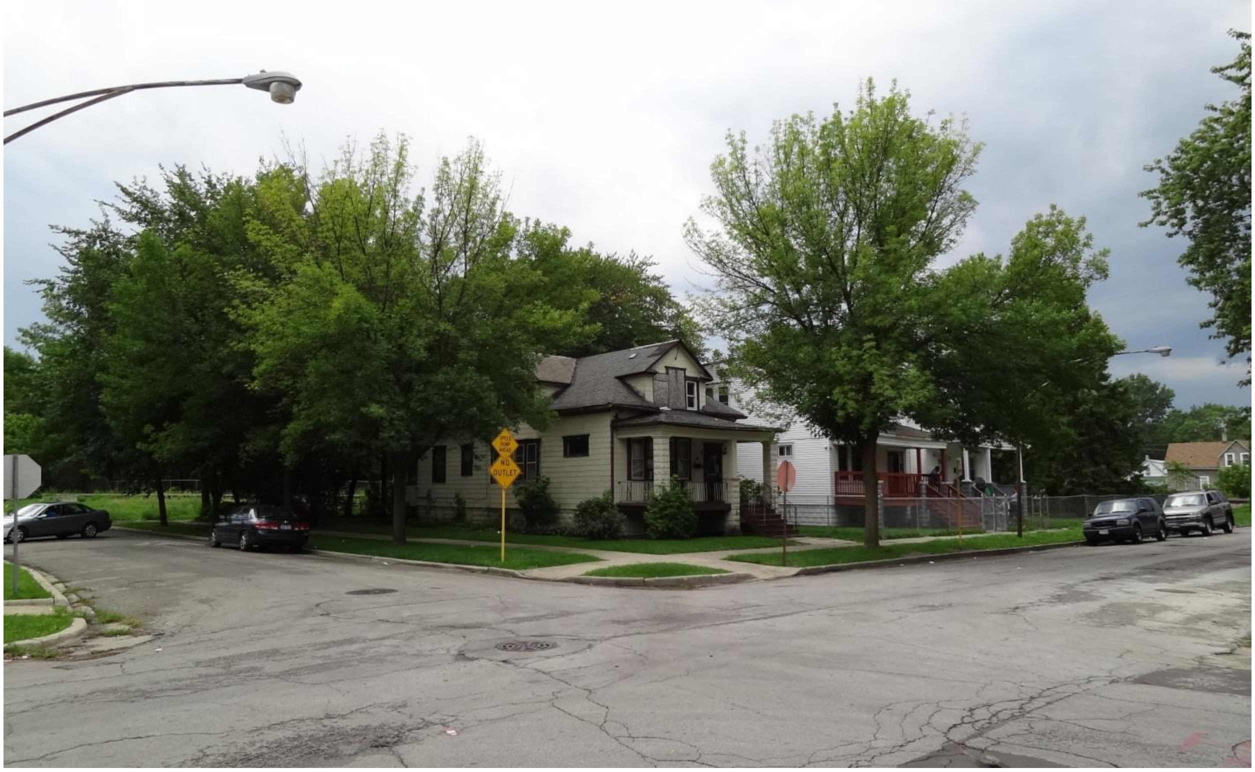


View 10C: Visualization - UPRR West Option

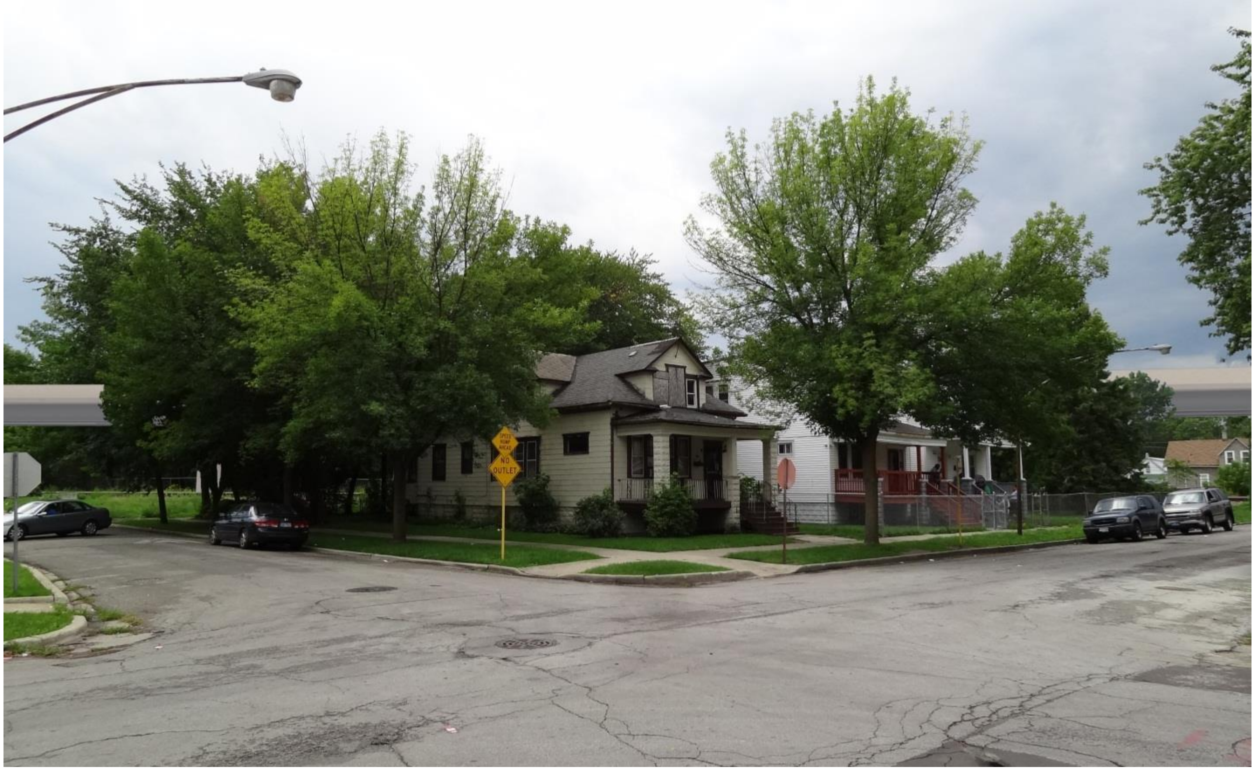


UNION PACIFIC RAILROAD ALTERNATIVES – Segment U-A

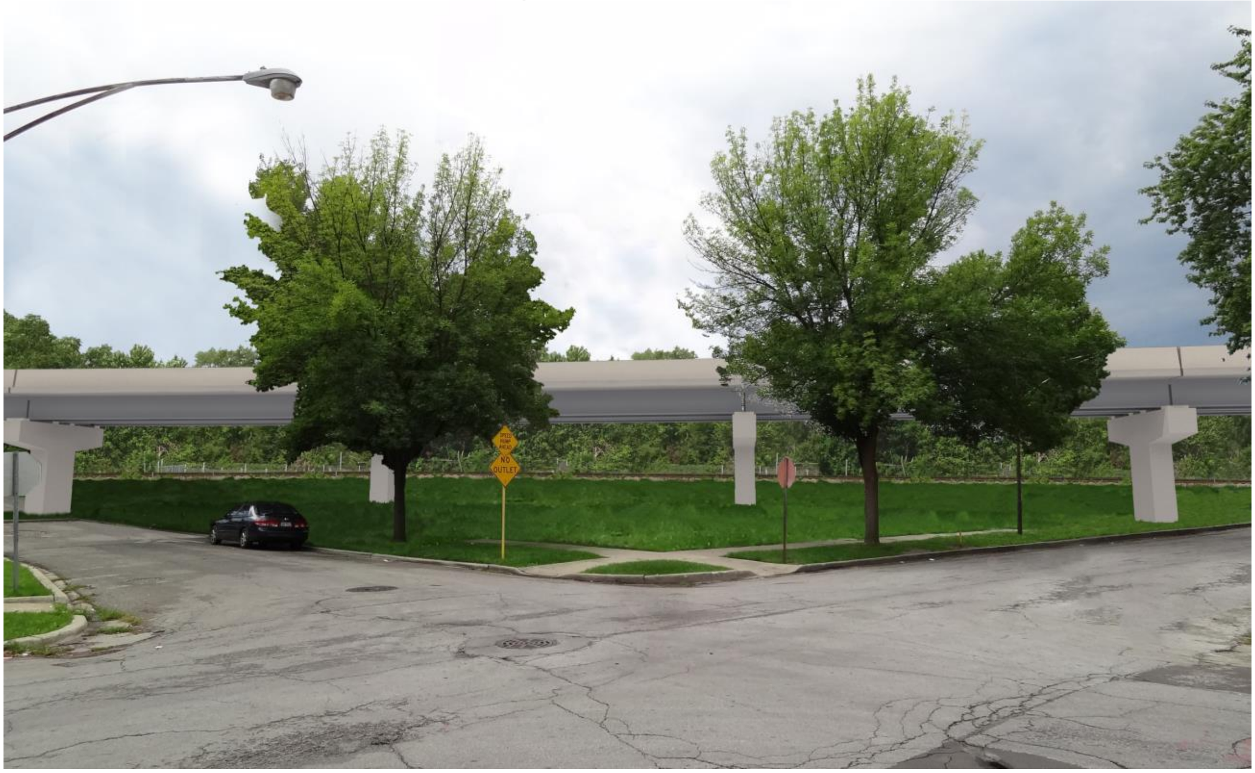
View 11: Existing view southwest from 113th Street and Princeton Avenue



View 11A: Visualization – UPRR ROW Option

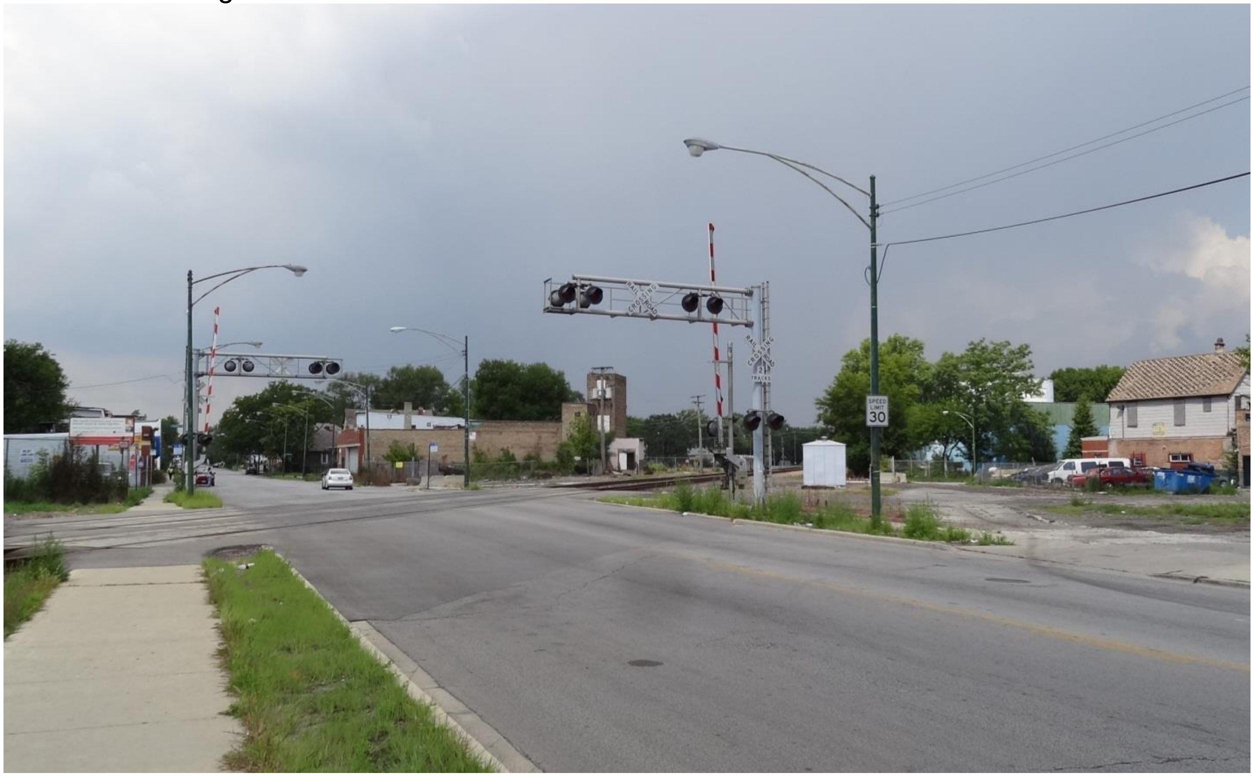


View 11B: Visualization – UPRR East Option



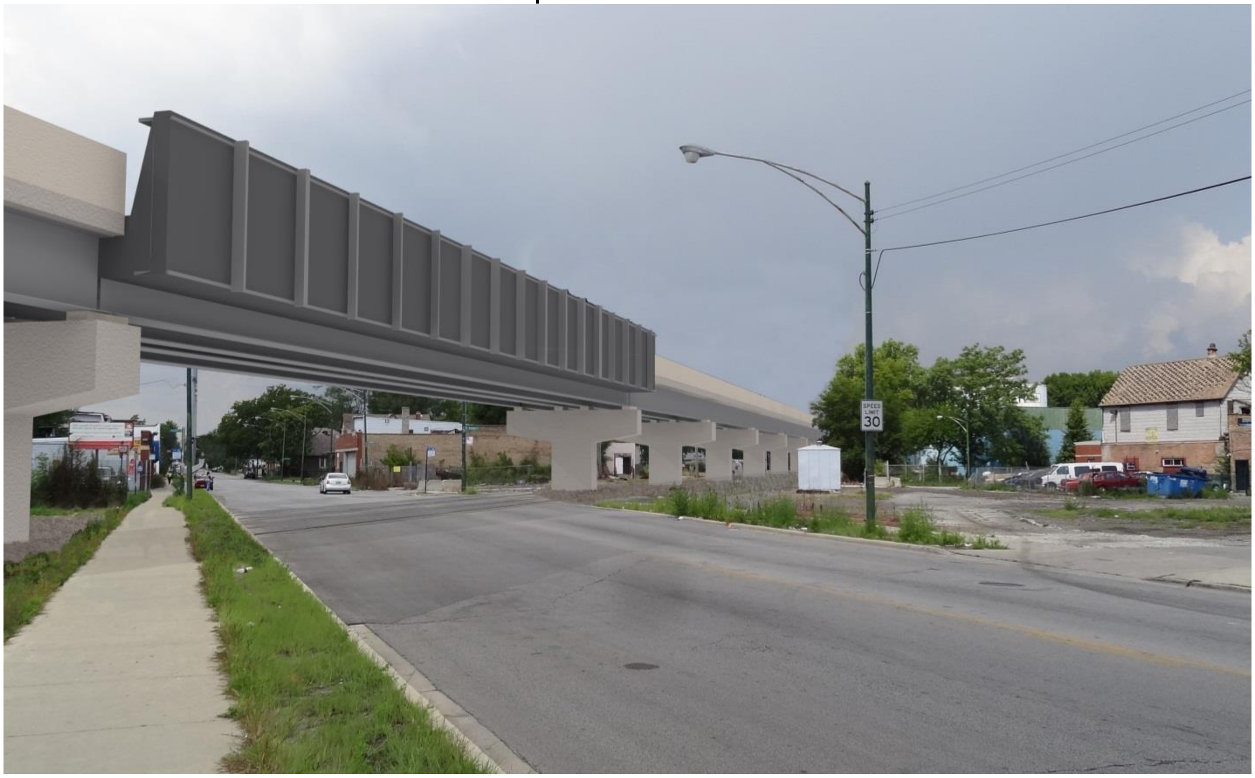
UNION PACIFIC RAILROAD ALTERNATIVES – Segment U-A

View 12: Existing view northwest from 115th Street



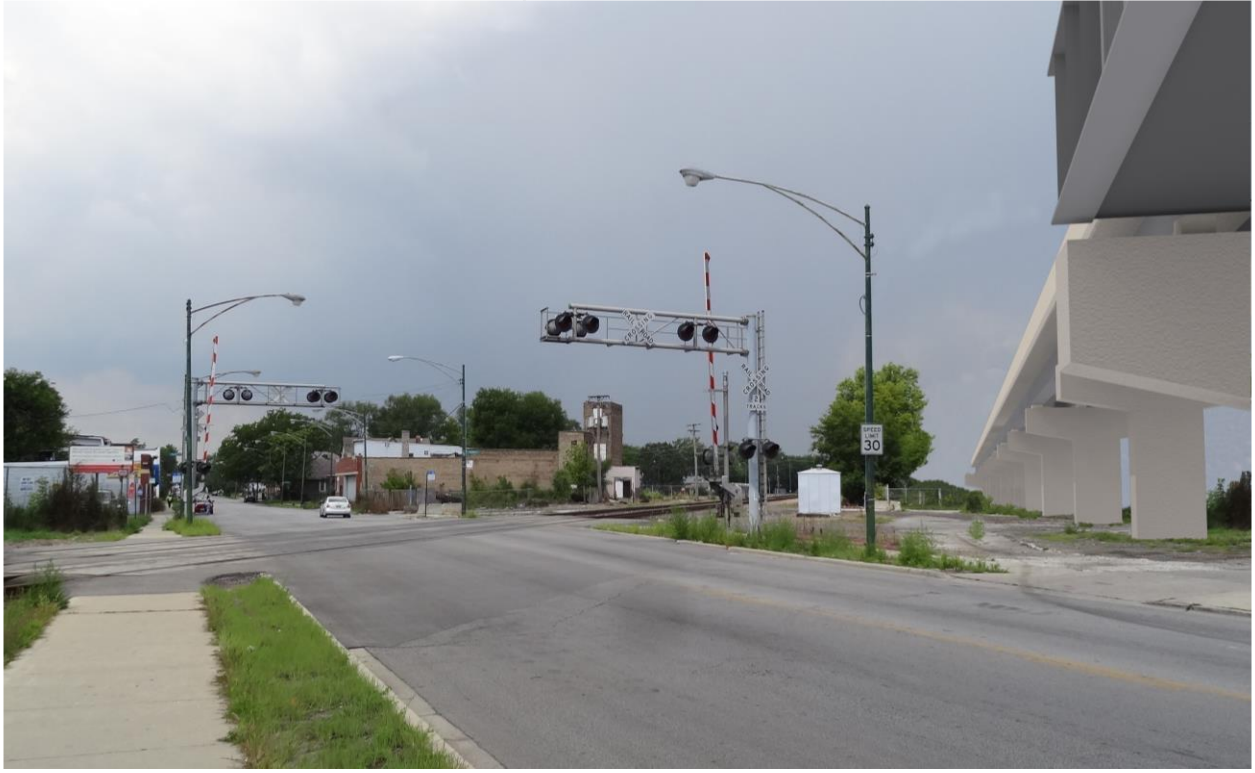
SPEED LIMIT 30
RAILROAD CROSSING
2 TRACKS

View 12A: Visualization – UPRR ROW Option

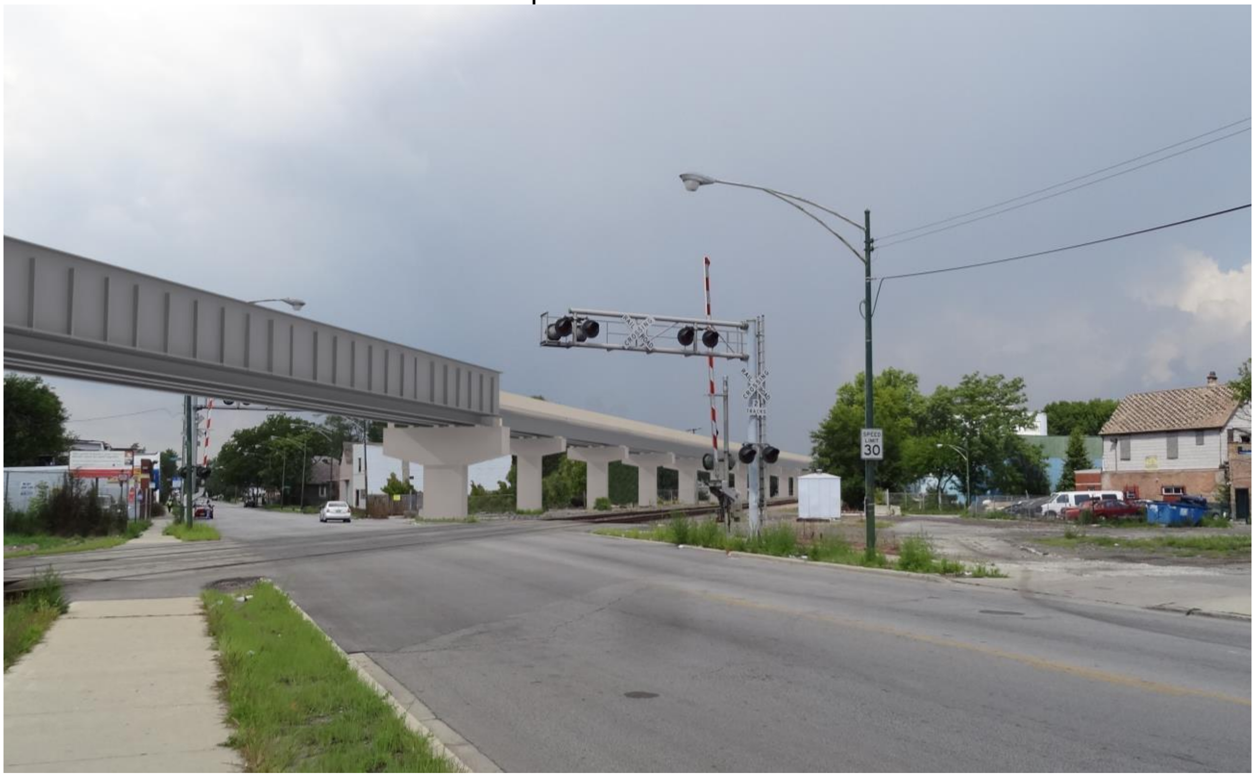


SPEED LIMIT 30

View 12B: Visualization – UPRR East Option

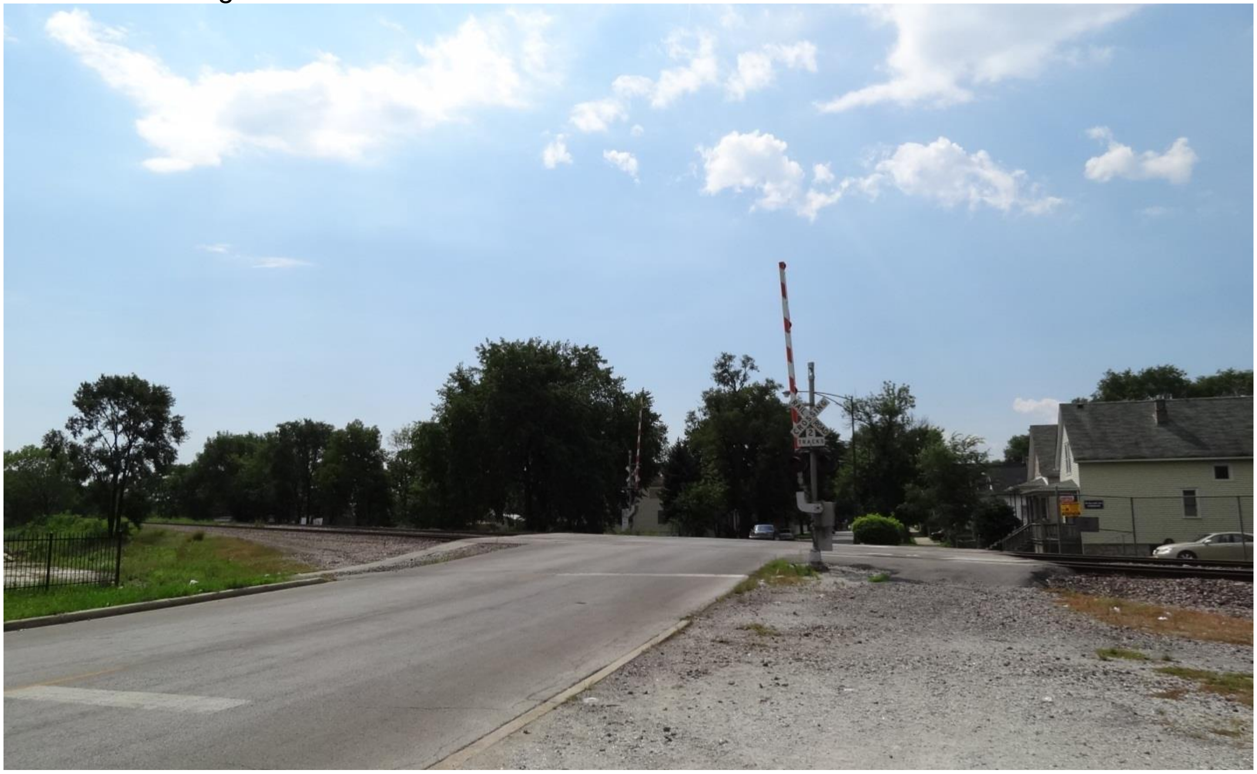

SPEED LIMIT 30

View 12C: Visualization – UPRR West Option

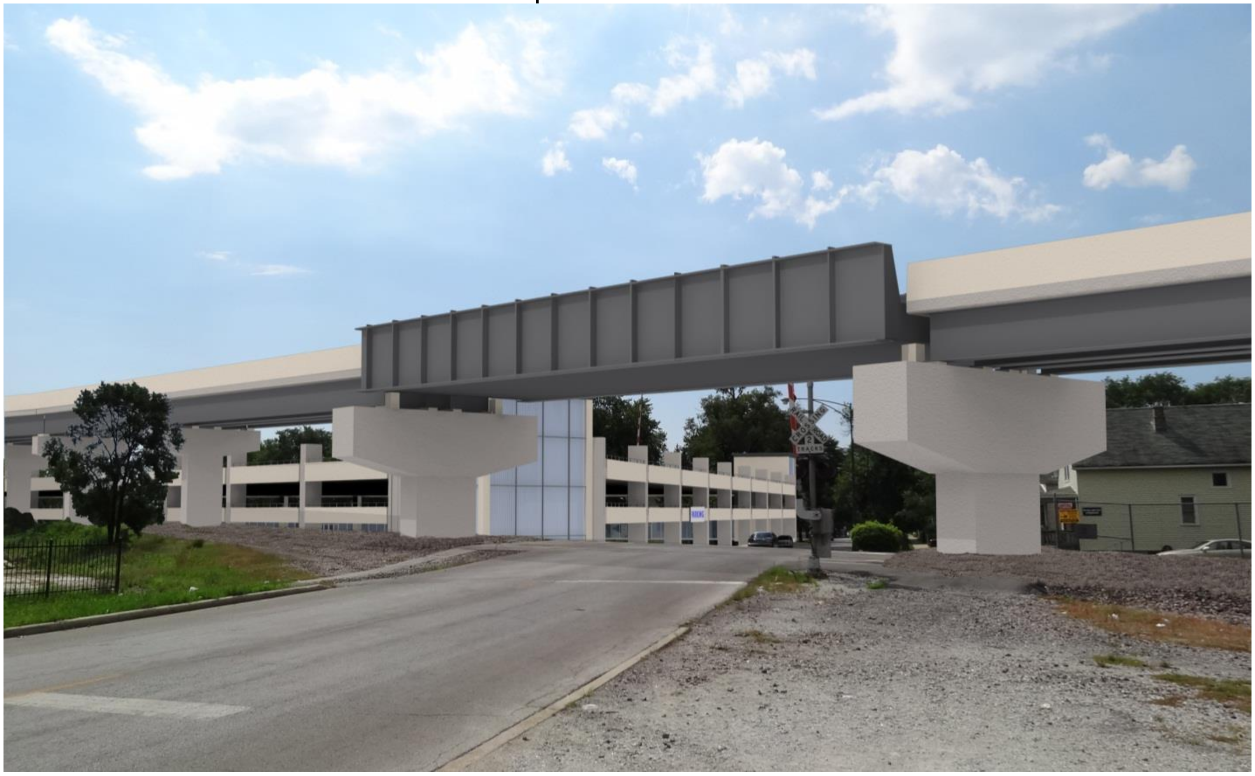

SPEED LIMIT 30

UNION PACIFIC RAILROAD ALTERNATIVES – Segment U-A

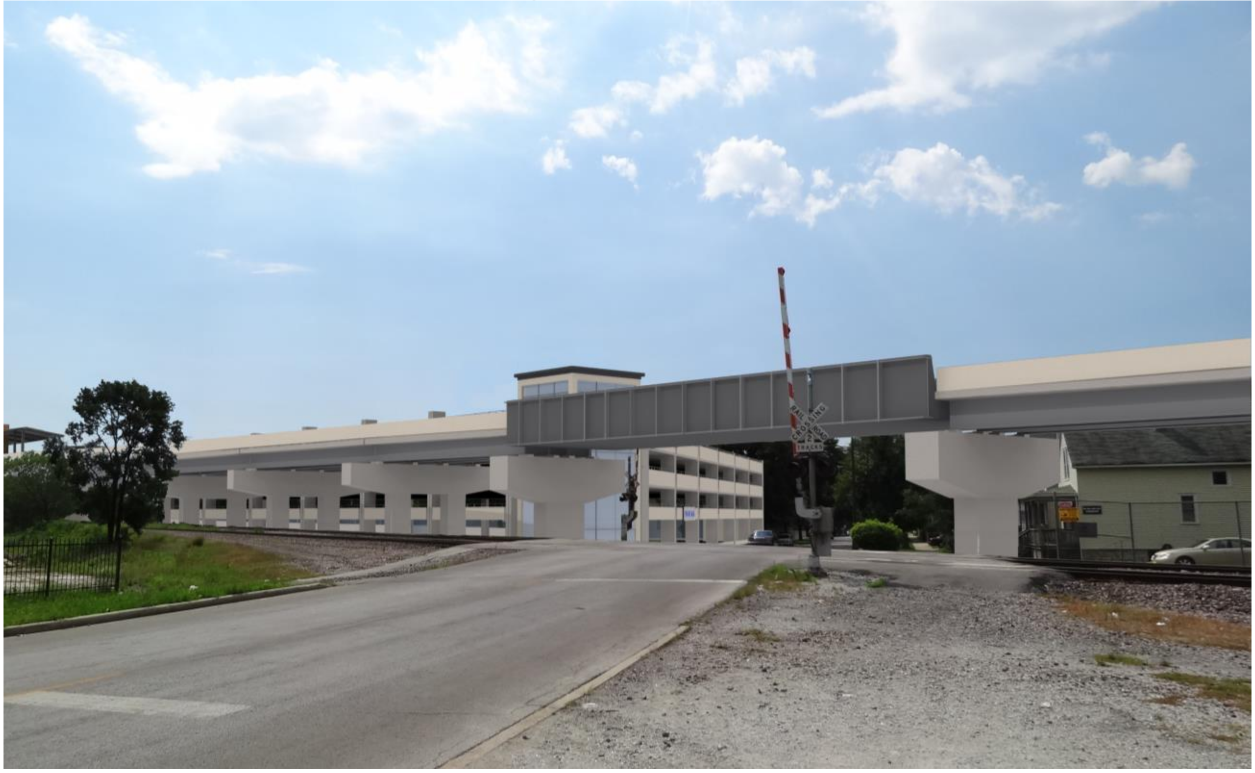
View 13: Existing view southeast from State Avenue



View 13A: Visualization – UPRR ROW Option

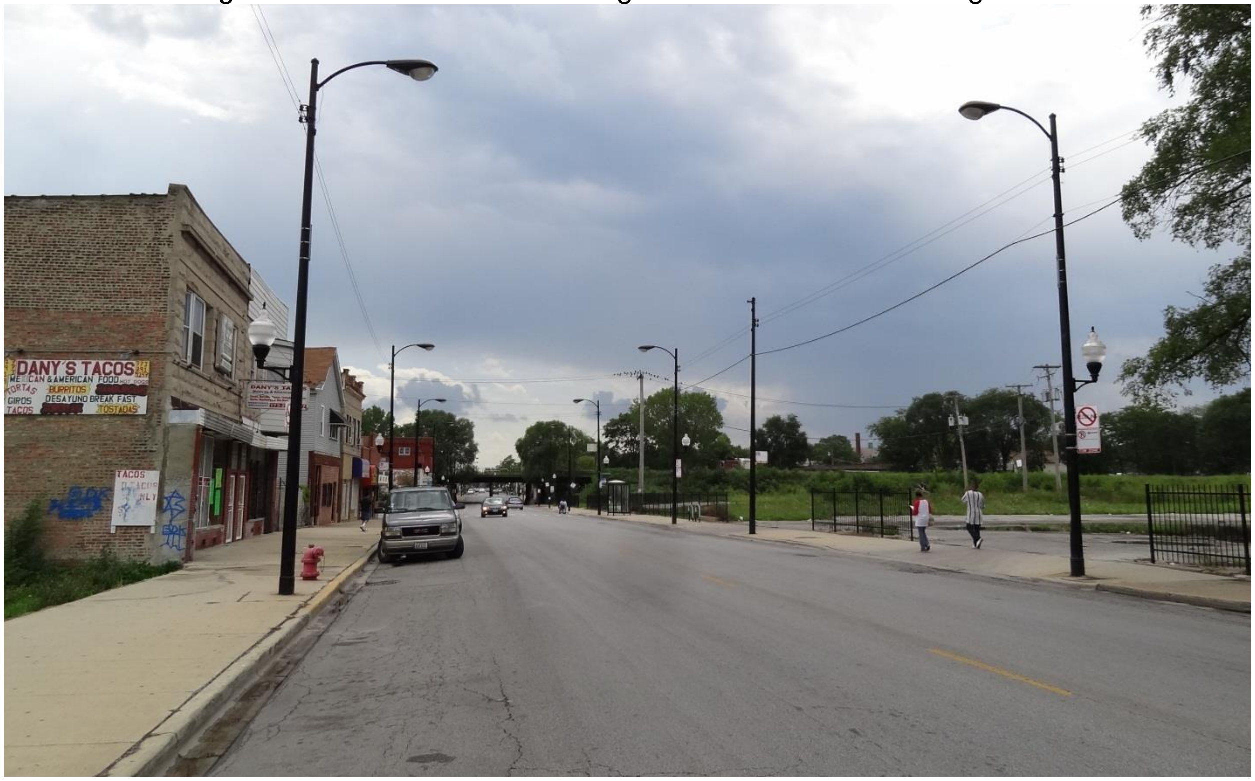


View 13C: Visualization – UPRR West Option

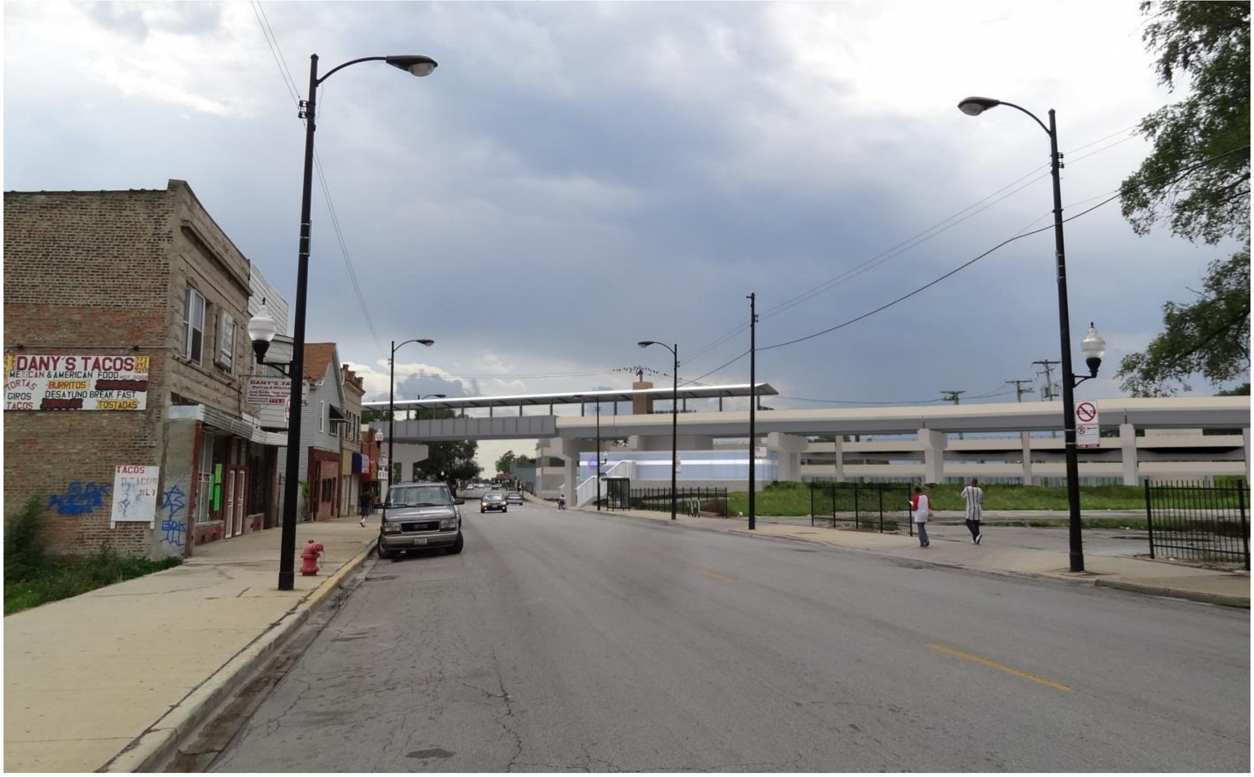


UNION PACIFIC RAILROAD ALTERNATIVES – Segment U-A

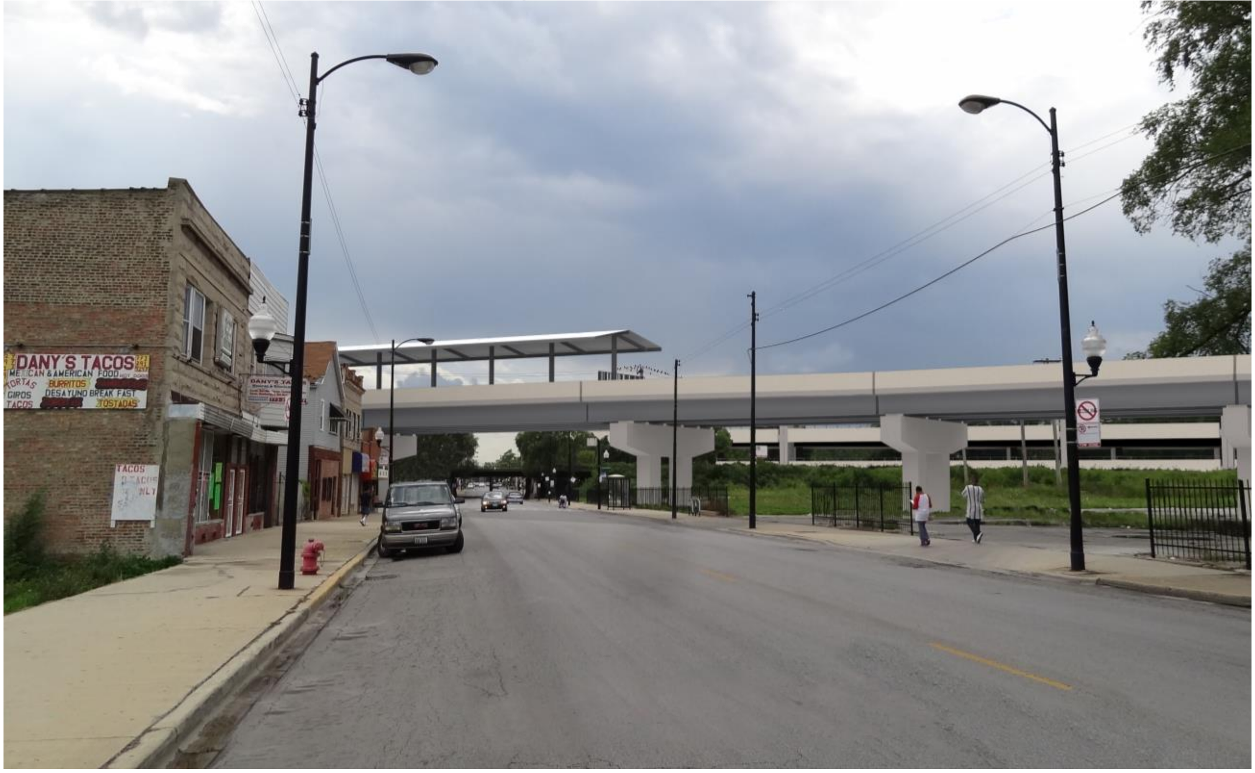
View 14: Existing view south toward the existing UPRR viaduct from Michigan Avenue


DANY'S TACOS
MEXICAN & AMERICAN FOOD
TORTAS BURRITOS
GIROS DESAYUNO BREAK FAST
TACOS TOSTADAS

View 14A: Visualization – UPRR ROW Option

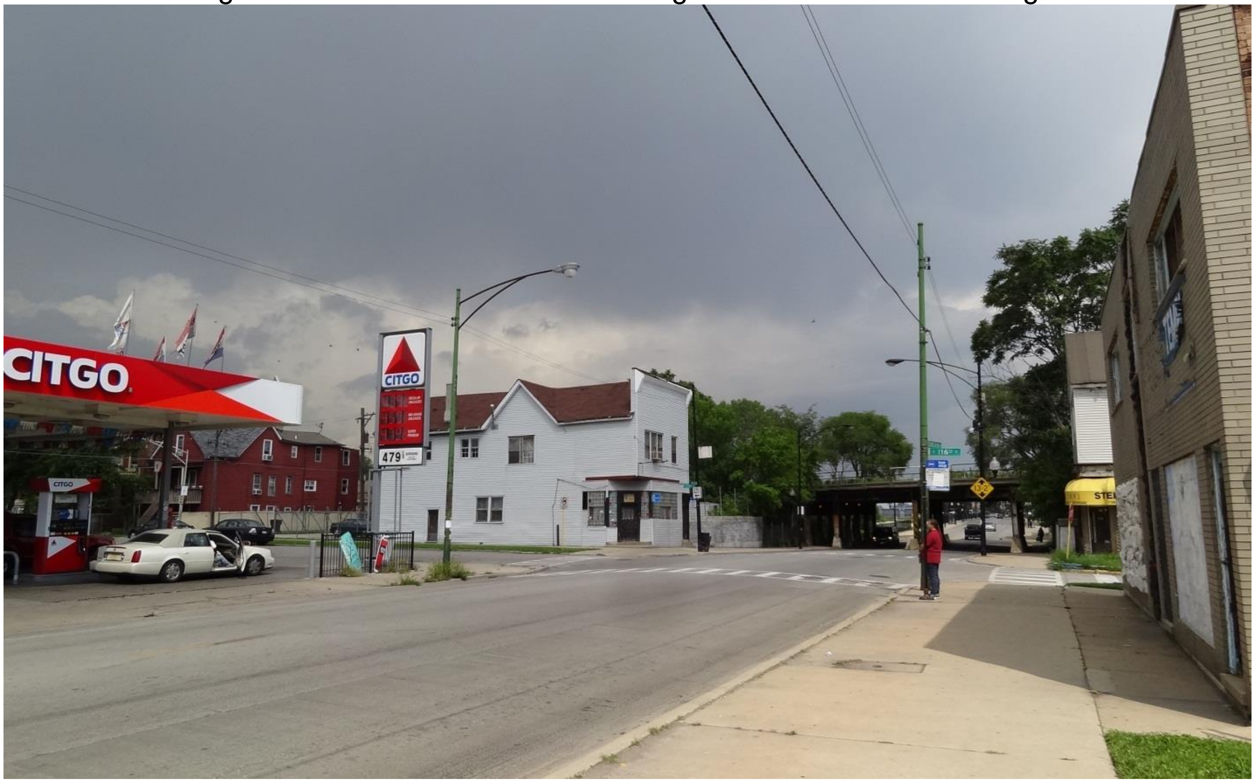

DANY'S TACOS
MEXICAN & AMERICAN FOOD
TORTAS BURRITOS
GIROS DESAYUNO BREAK FAST
TACOS TOSTADAS

View 14B: Visualization – UPRR East Option

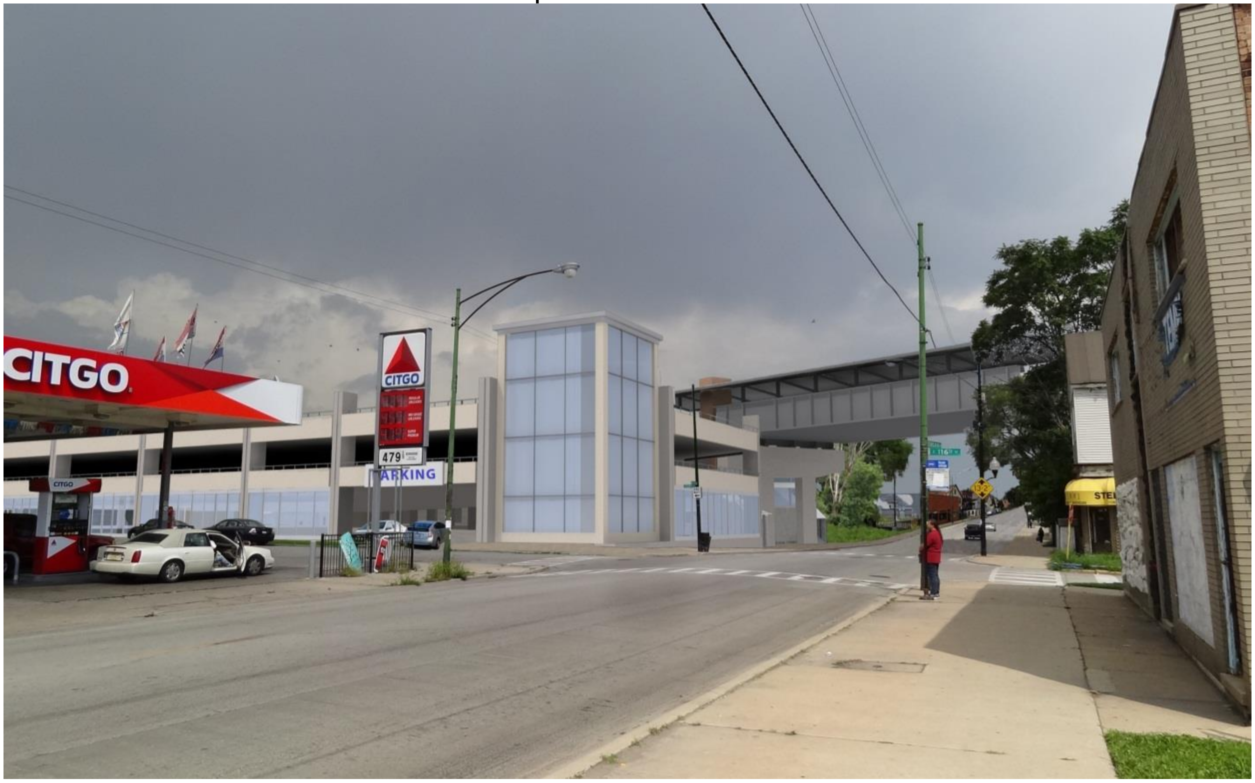

DANY'S TACOS
MEXICAN & AMERICAN FOOD
TORTAS
BURRITOS
GIROS
DESAYUNO BREAK FAST
TACOS
TOSTADAS

UNION PACIFIC RAILROAD ALTERNATIVES – Segment U-A

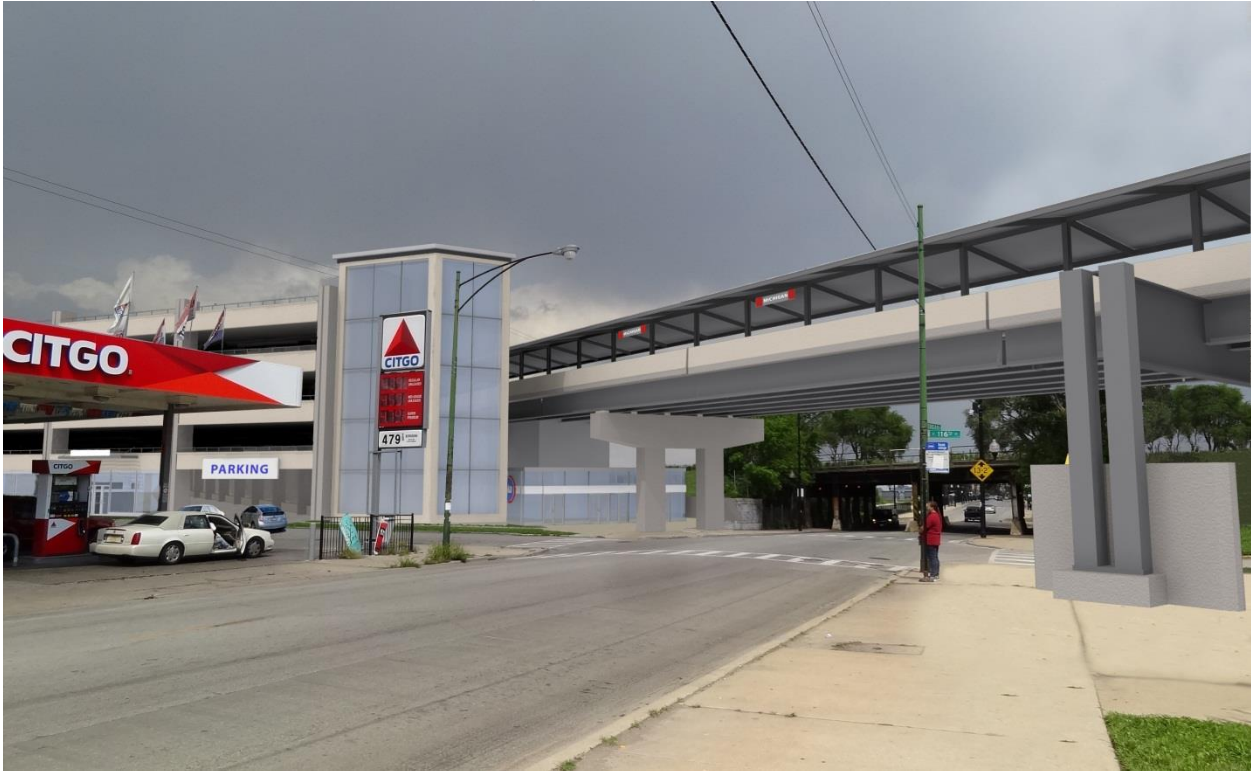
View 15: Existing view northwest toward the existing UPRR viaduct from Michigan Avenue


CITGO
CITGO
479

View 15A: Visualization – UPRR ROW Option

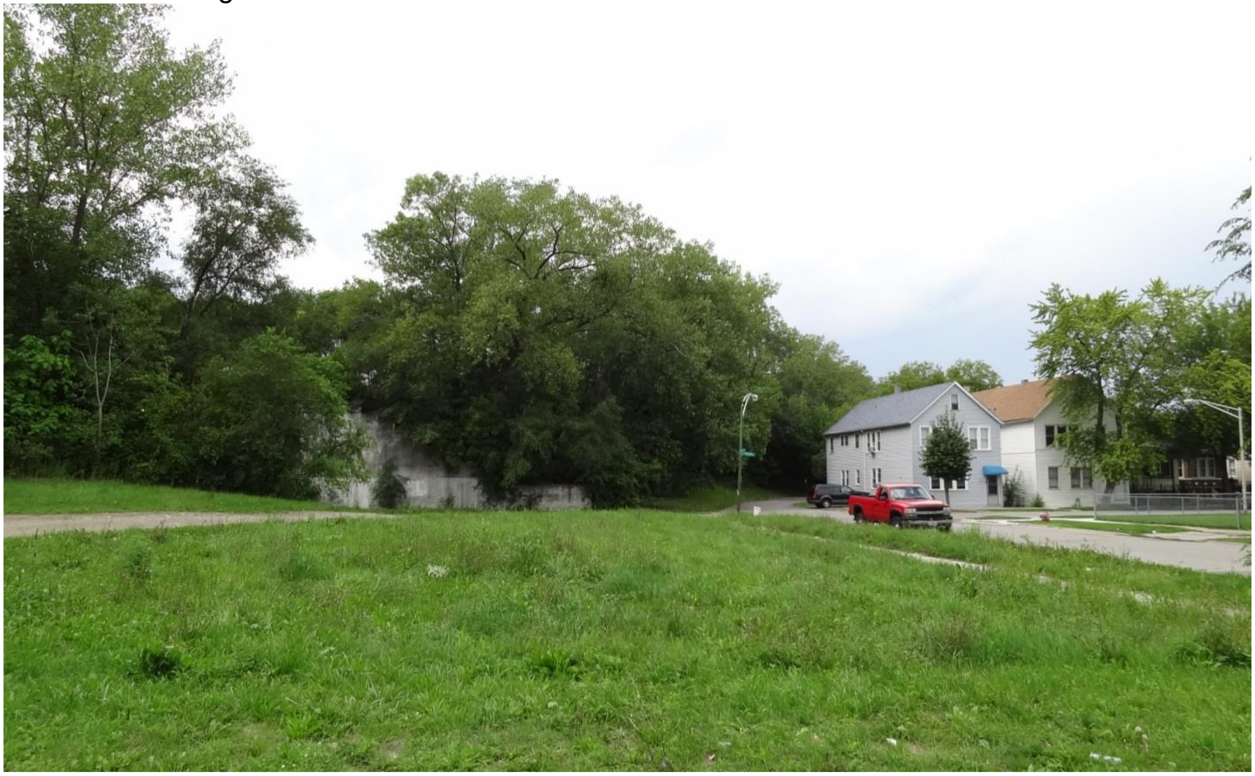

CITGO
CITGO
479
ARKING

View 15C: Visualization – UPRR West Option

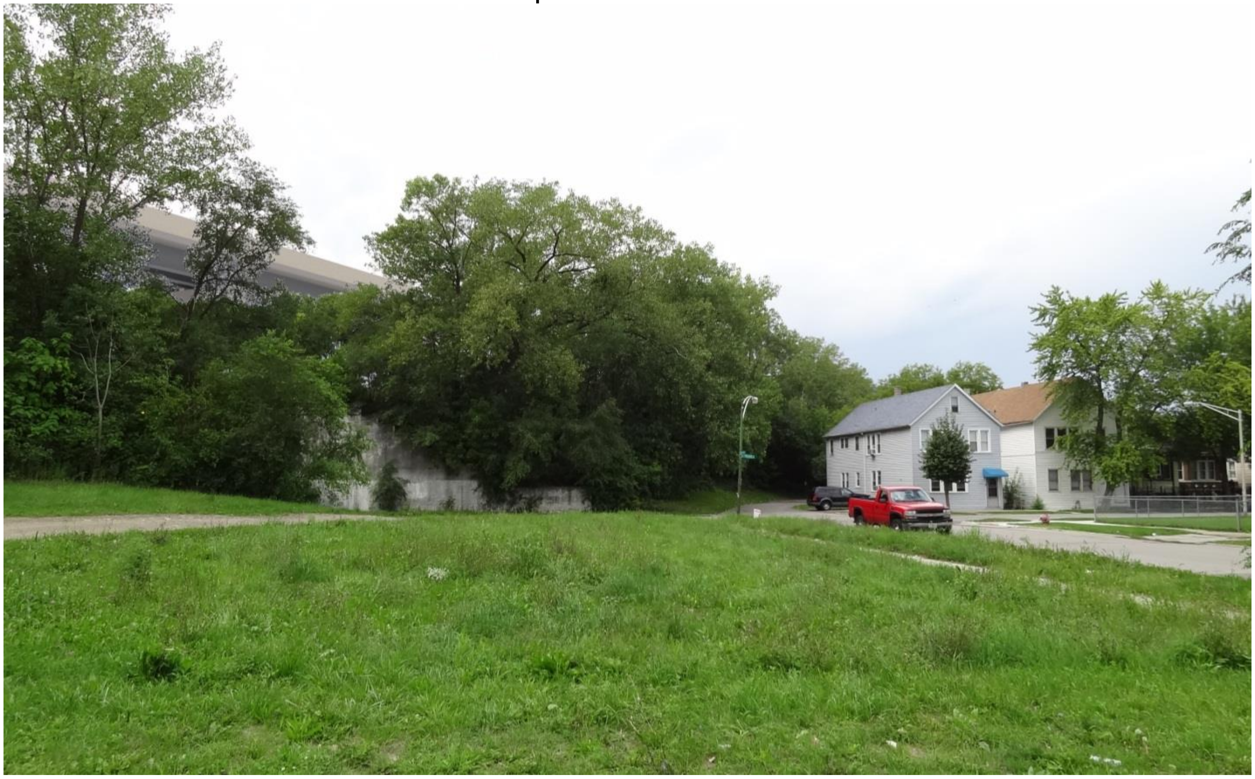

CITGO
CITGO
PARKING
479

UNION PACIFIC RAILROAD ALTERNATIVES – Segment U-A

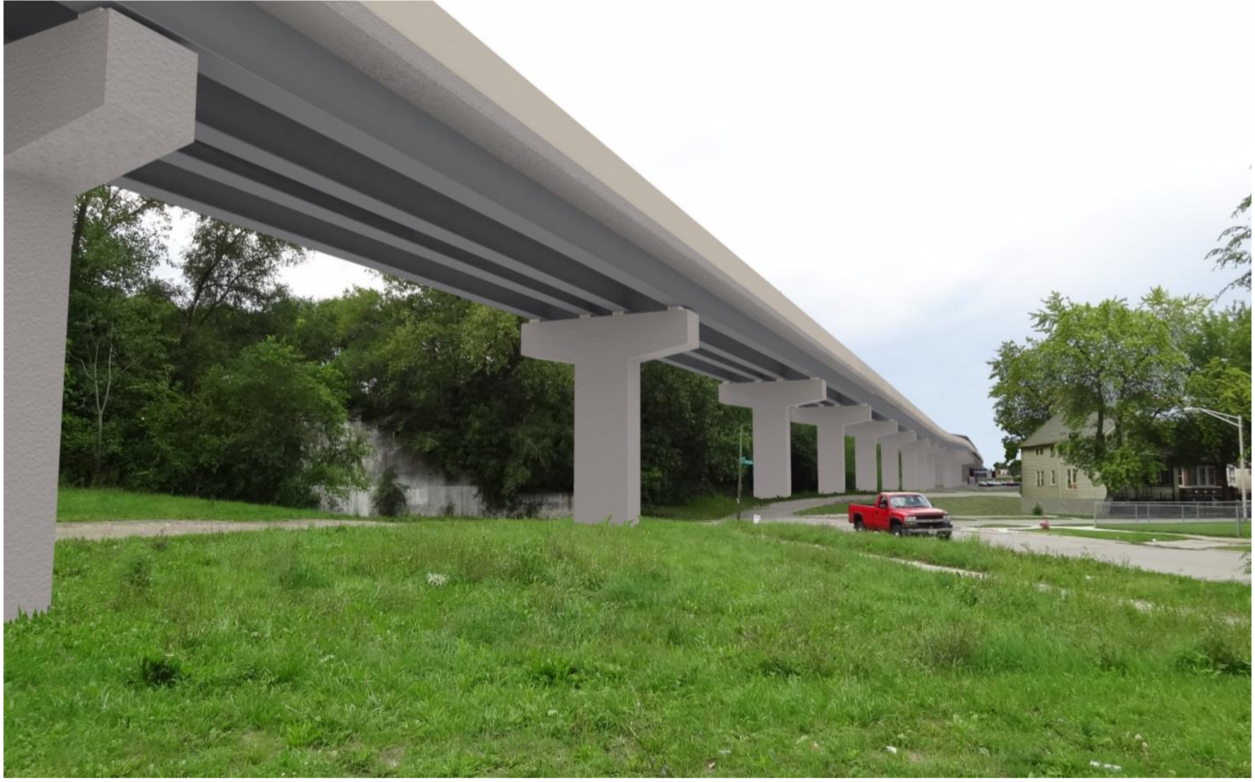
View 16: Existing view southeast from 117th Street east of Prairie Avenue



View 16A: Visualization – UPRR ROW Option

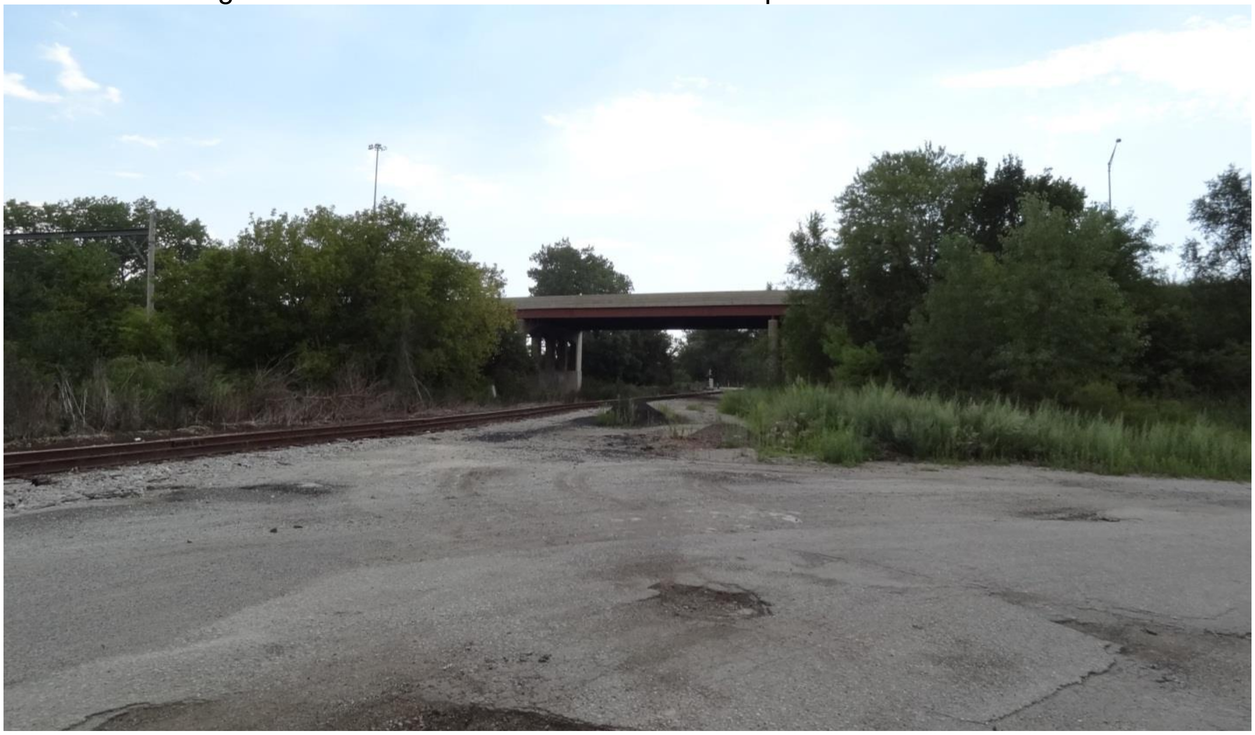


View 16B: Visualization – UPRR East Option



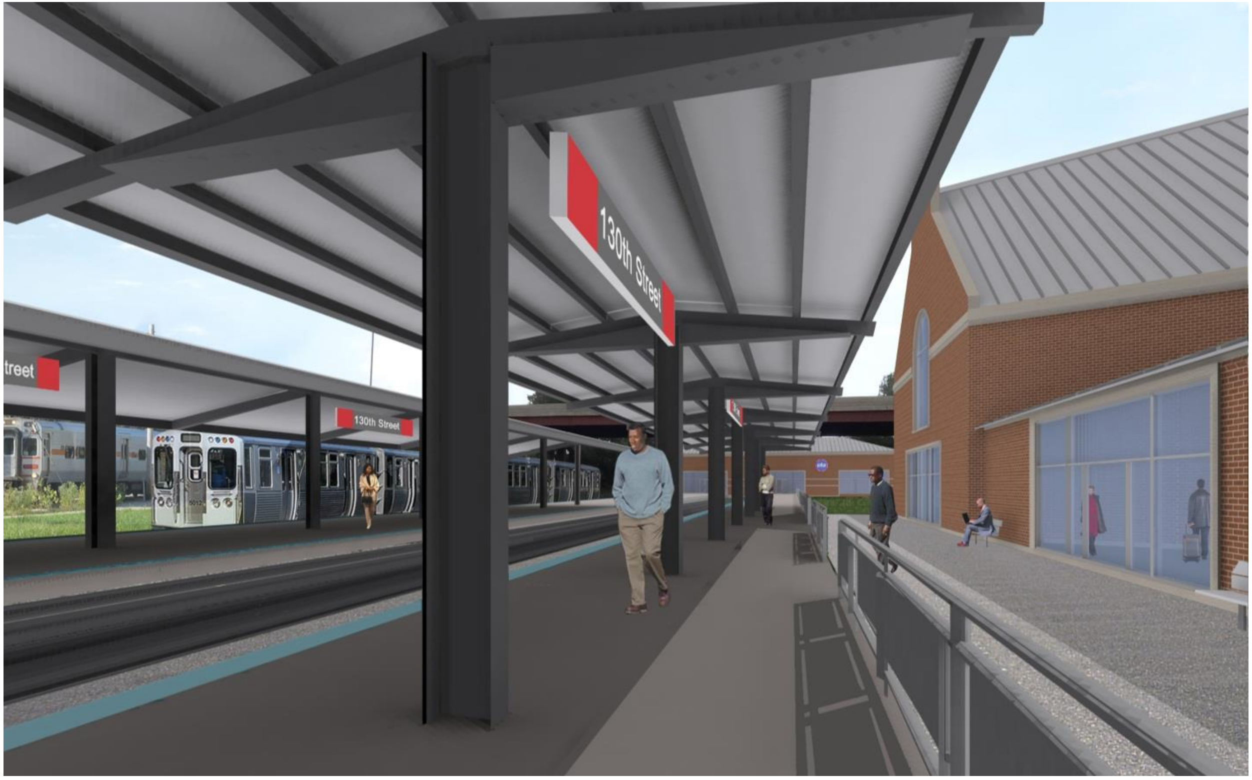
UNION PACIFIC RAILROAD ALTERNATIVES – Segment U-B

View 17: Existing view southeast toward 130th Street overpass from 130th Place



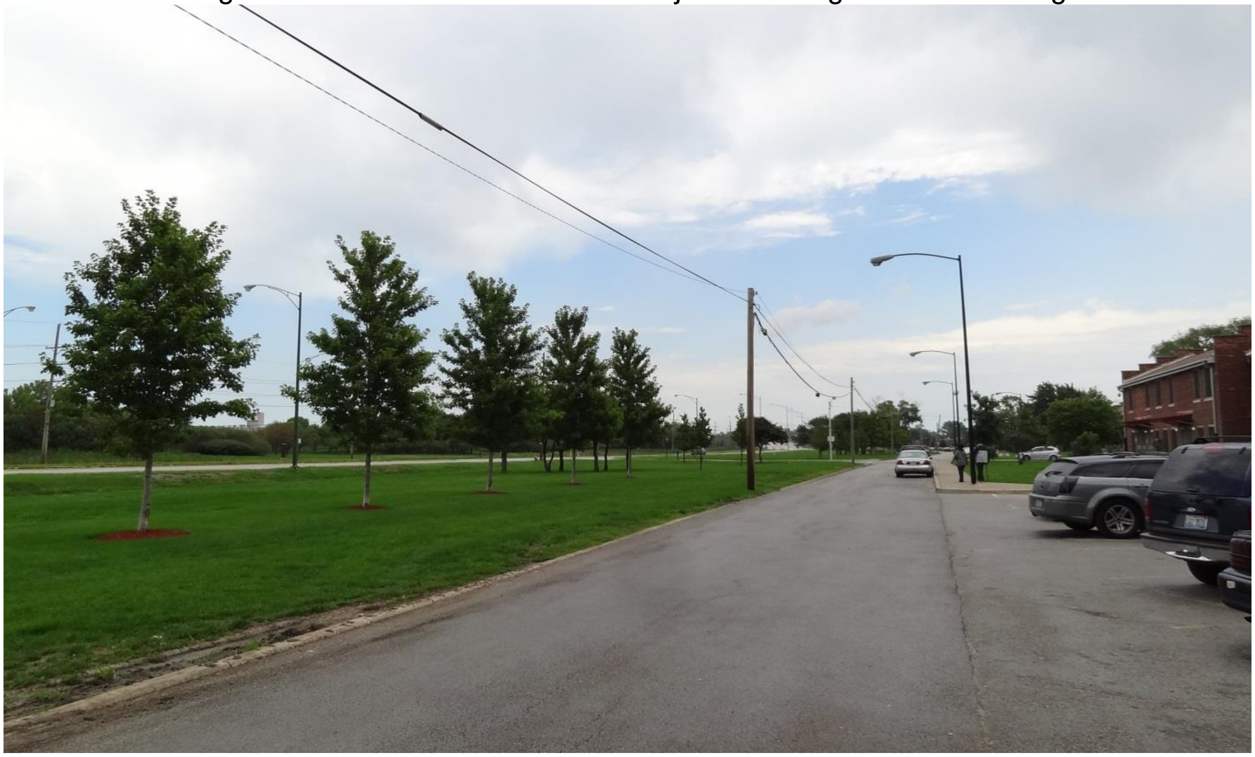
View 17A: Visualization – South Station Option, All Alternatives

(130th Street Station Market/Access Study, Dec. 2010)



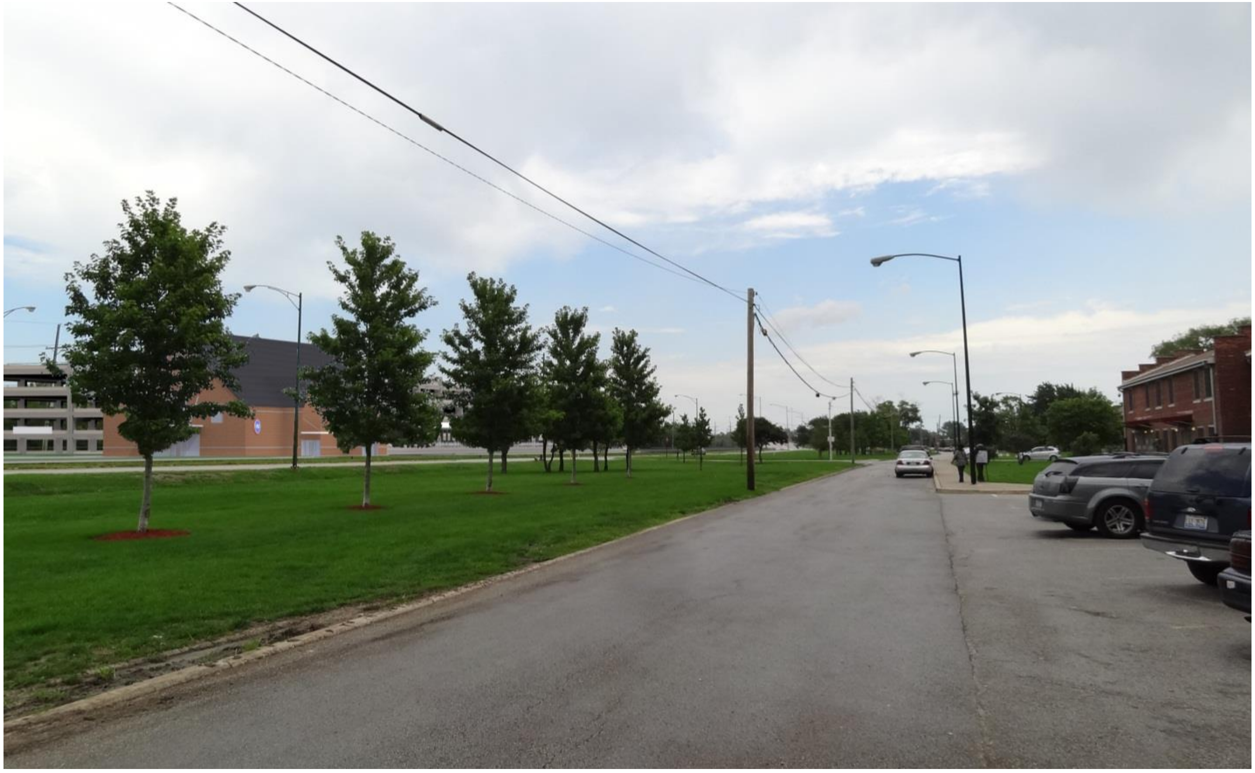
UNION PACIFIC RAILROAD ALTERNATIVES – Segment U-B

View 18: Existing view northeast on 130th Place adjacent to Altgeld Gardens neighborhood



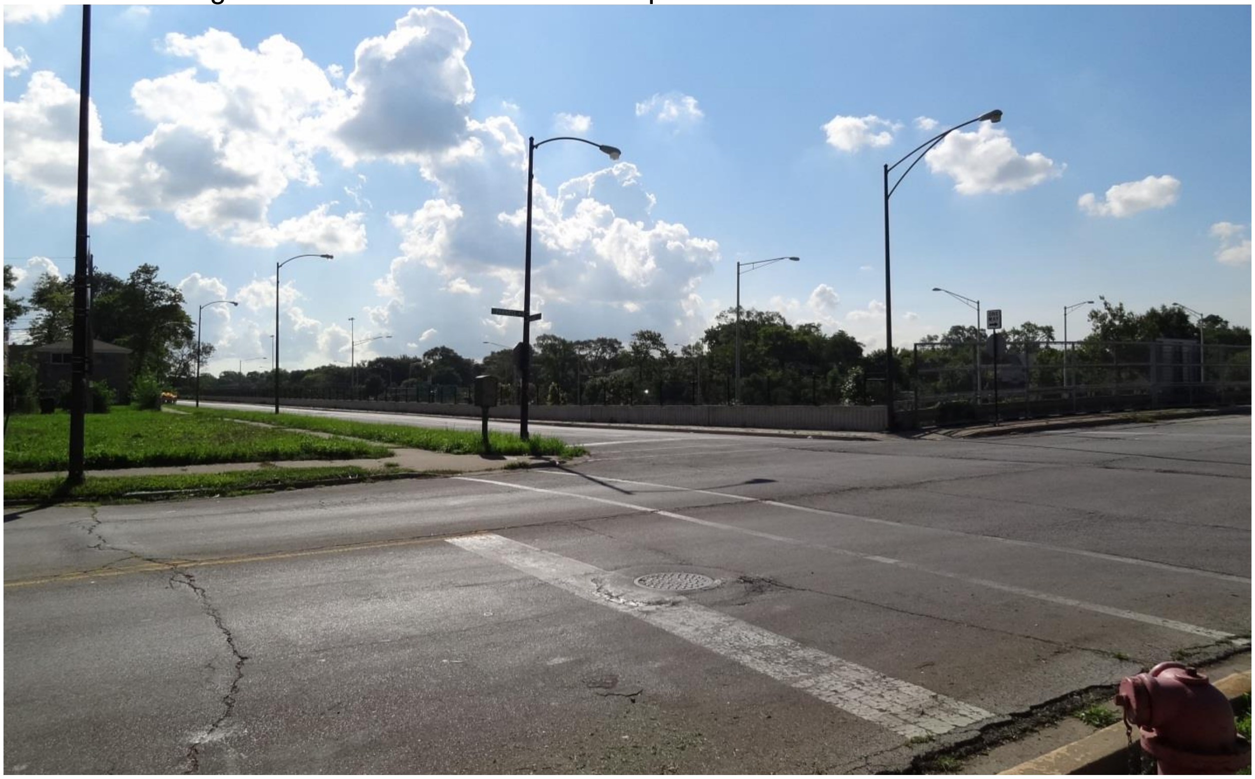
View 18A: Visualization – West Station Option, All Alternatives

(Station design reflects CDOT Concept Sketch)

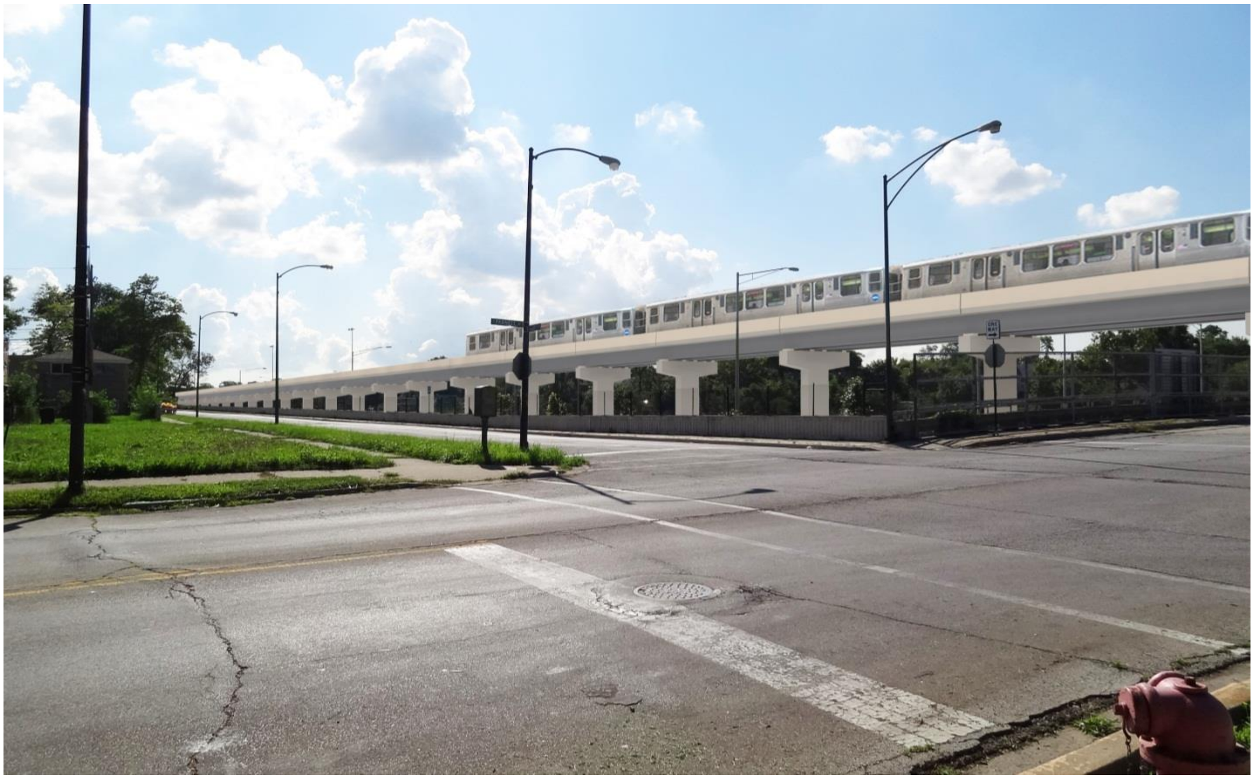


HALSTED ALTERNATIVE – Segment H-A

View 19: Existing view southeast toward I-57 overpass from Parnell Avenue and 98th Street

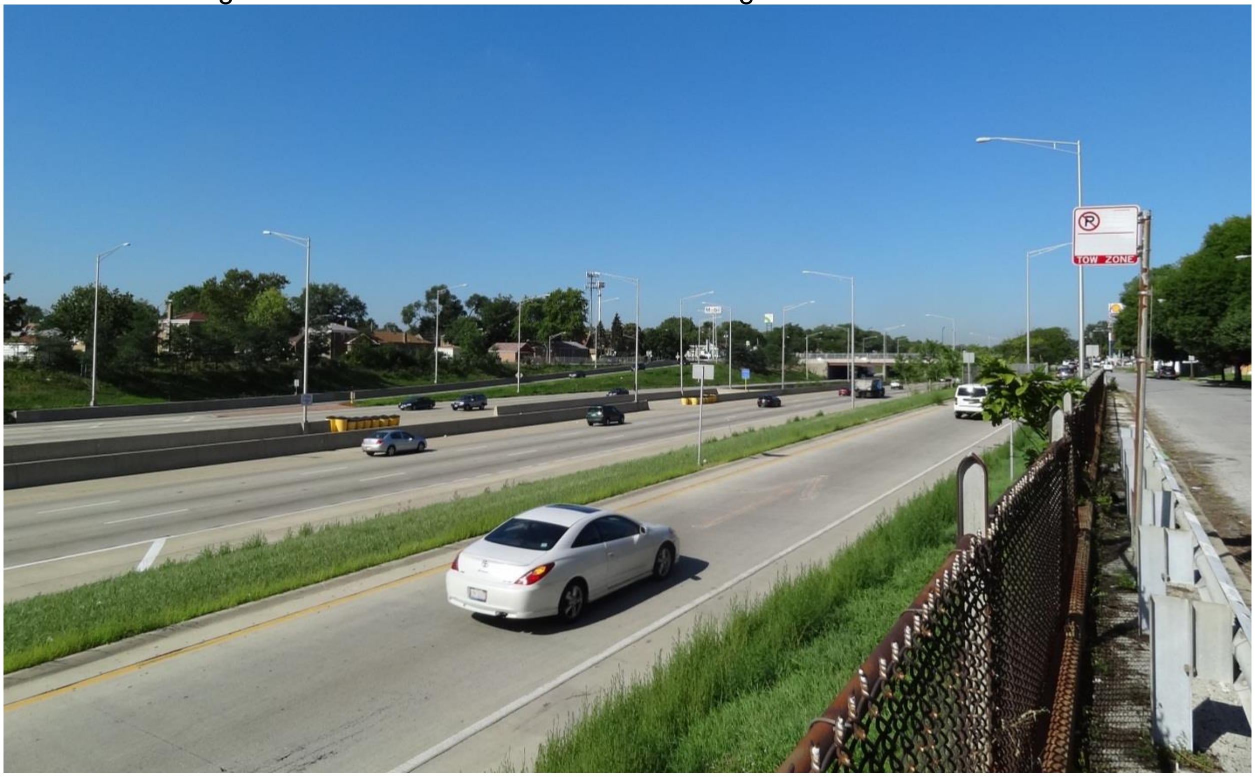


View 19: Visualization- Halsted Alternative

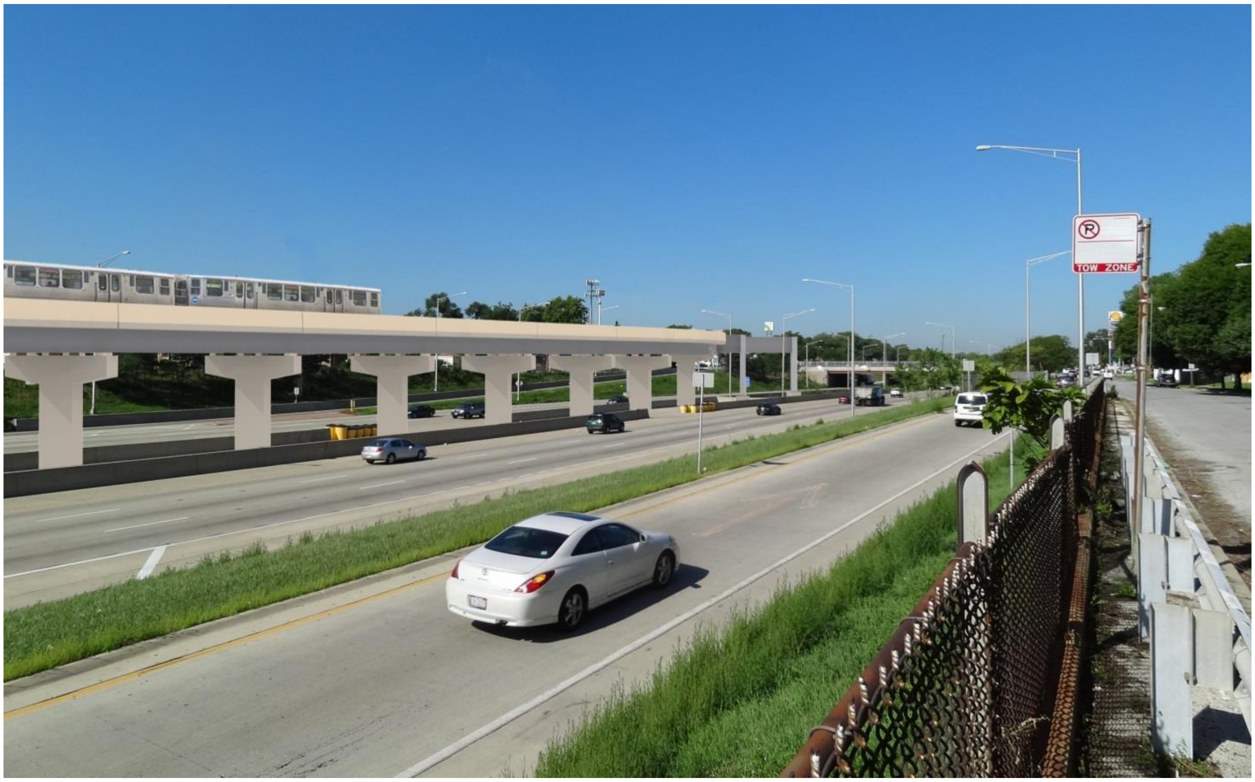


HALSTED ALTERNATIVE – Segment H-A

View 20: Existing view southwest from 98th Place looking across I-57

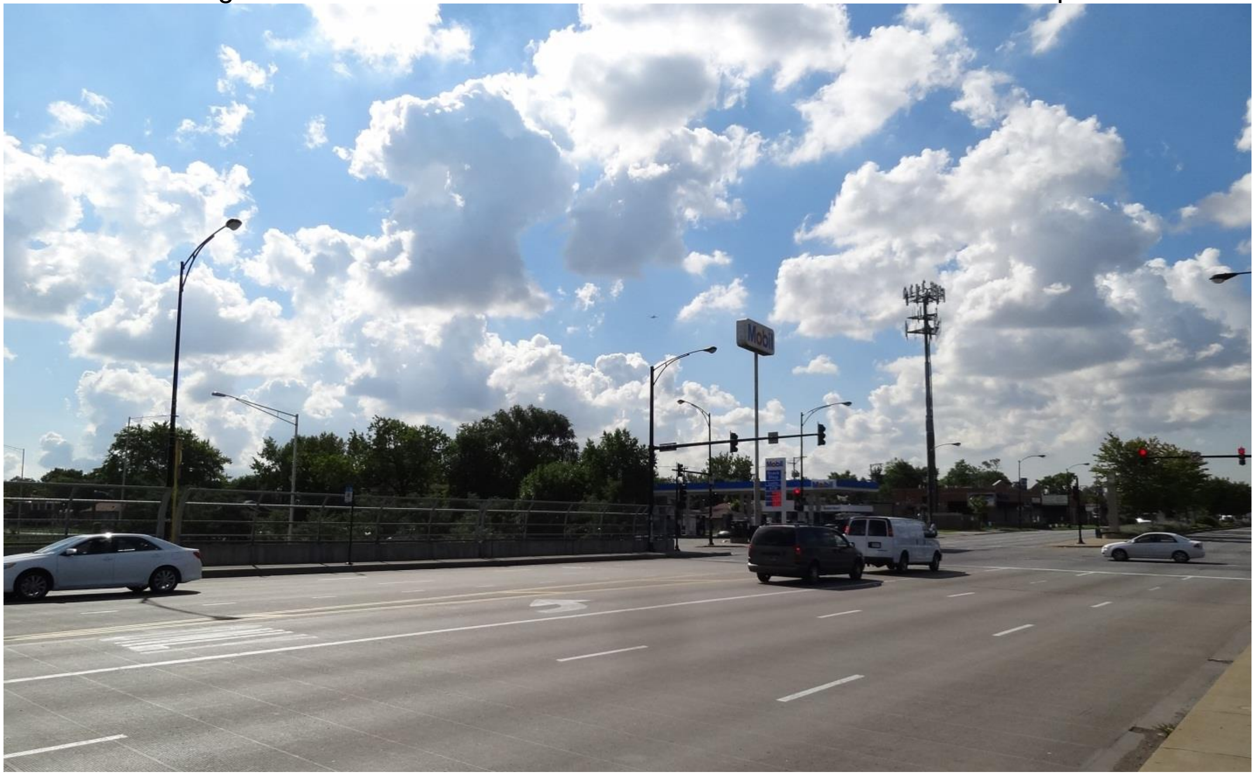


View 20: Visualization- Halsted Alternative

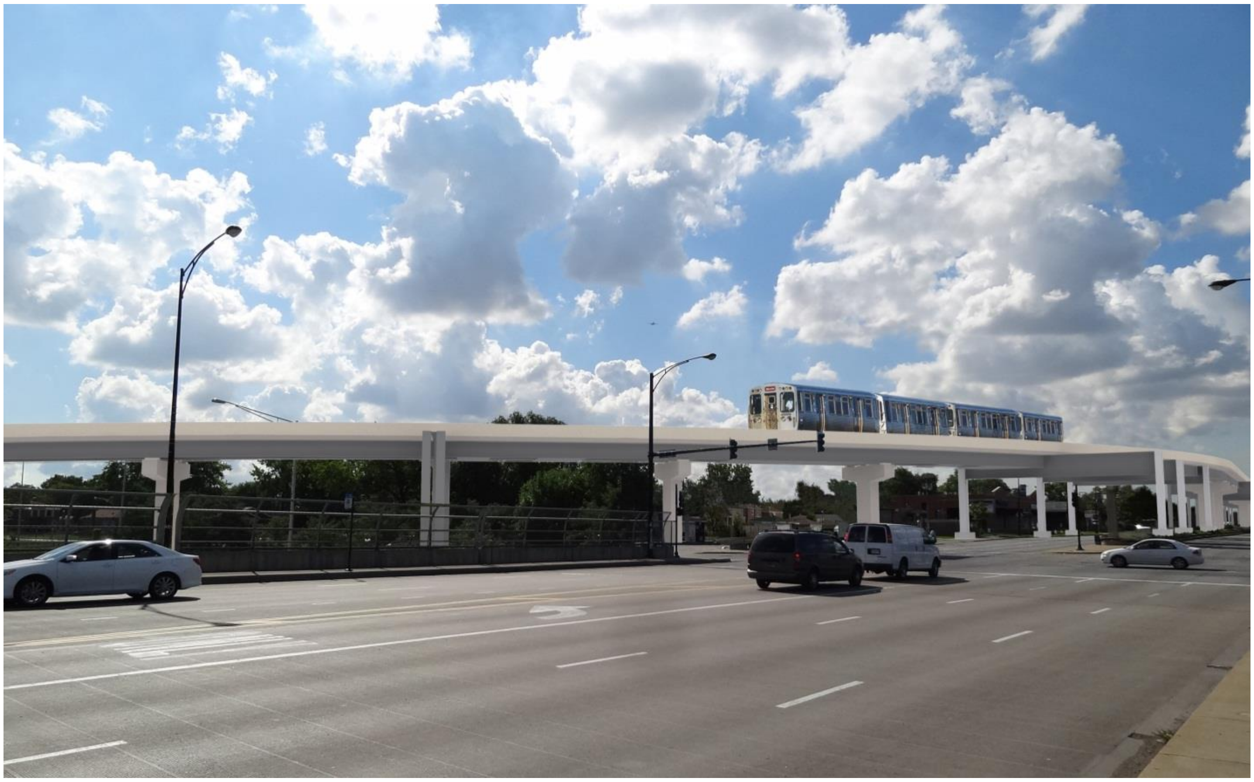


HALSTED ALTERNATIVE – Segment H-A

View 21: Existing view southeast toward 98th Street from the Halsted Street overpass

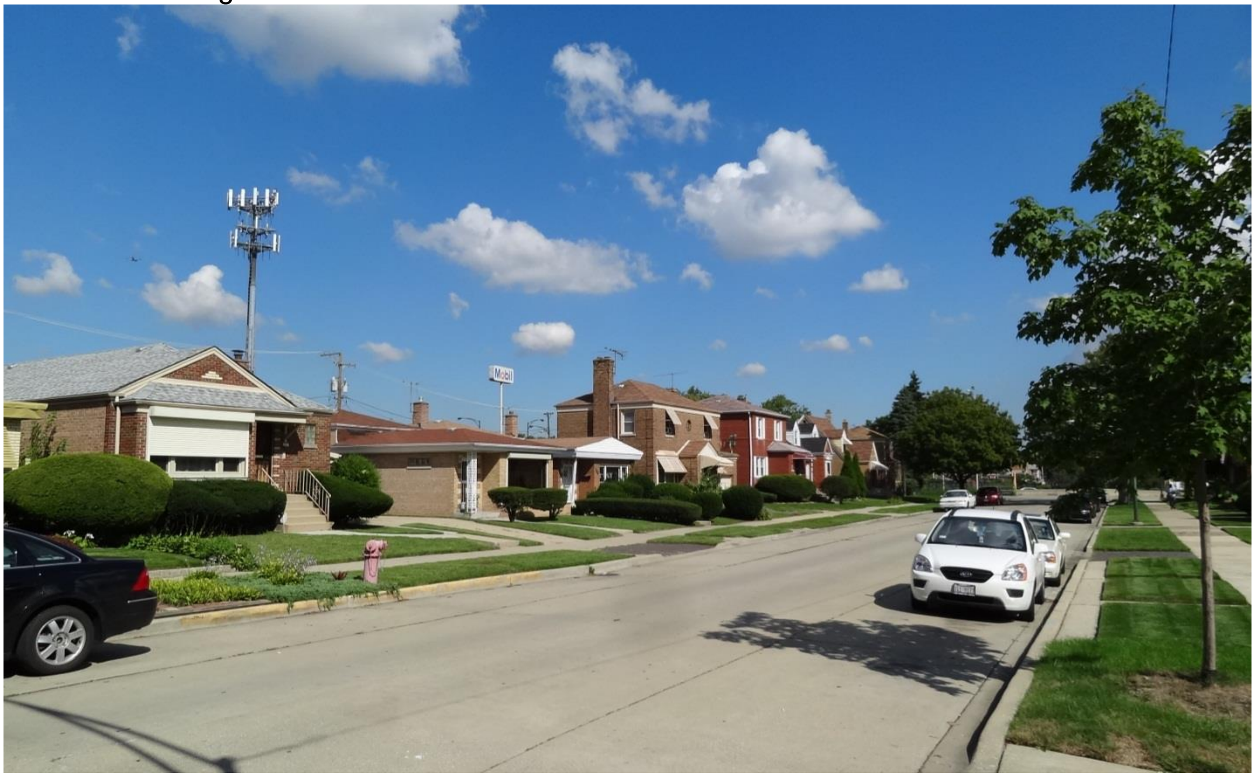


View 21: Visualization- Halsted Alternative

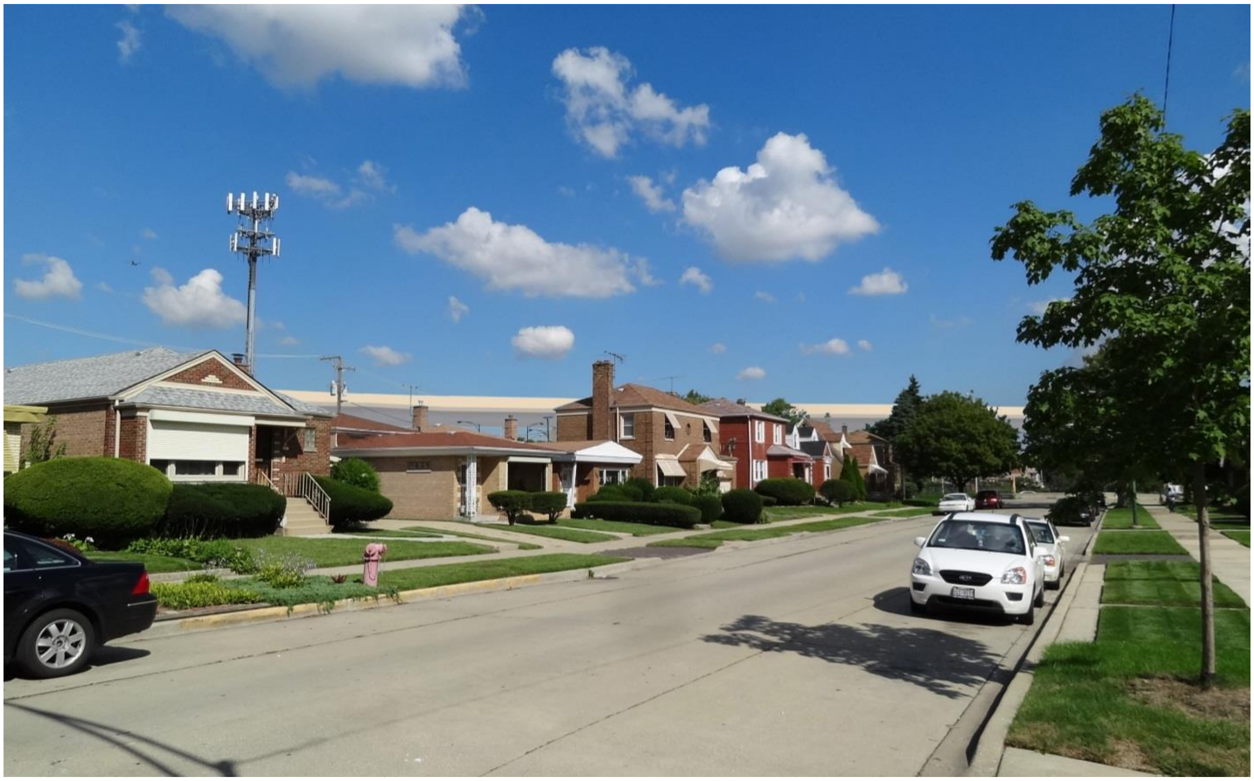


HALSTED ALTERNATIVE – Segment H-A

View 22: Existing view northwest from Emerald Avenue

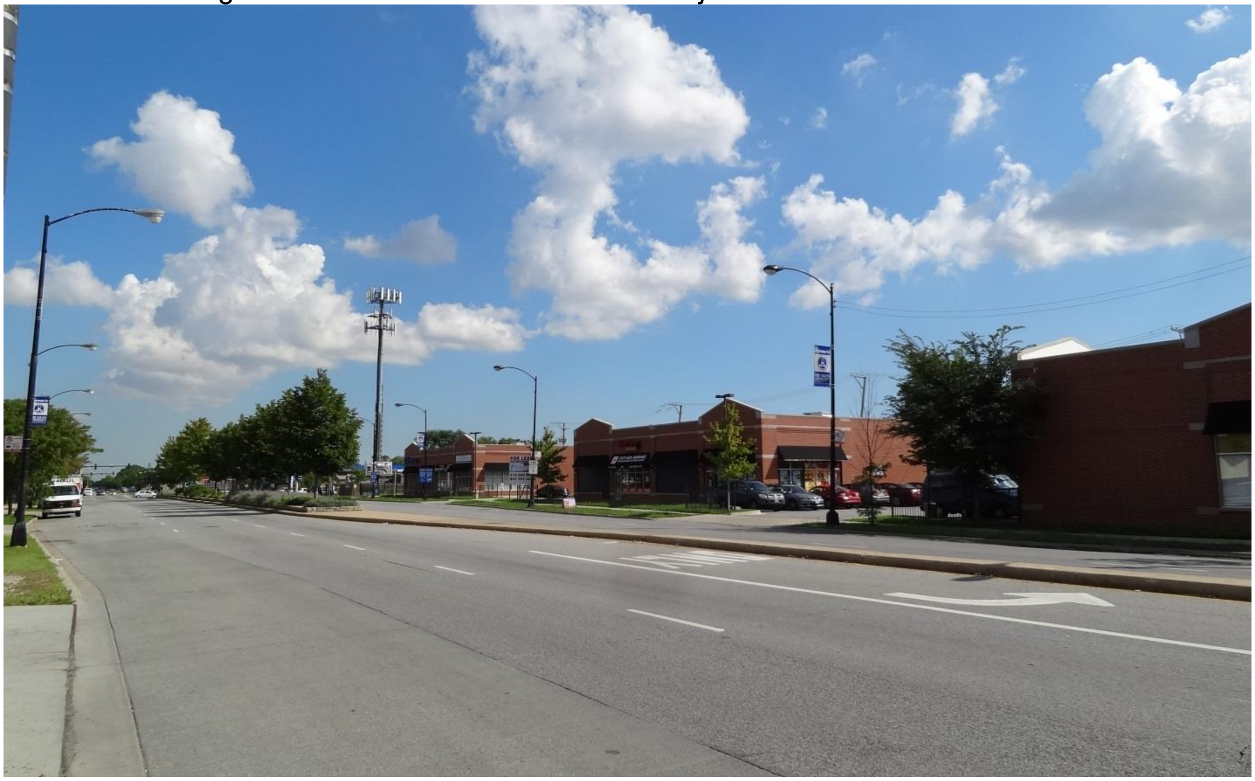


View 22: Visualization- Halsted Alternative

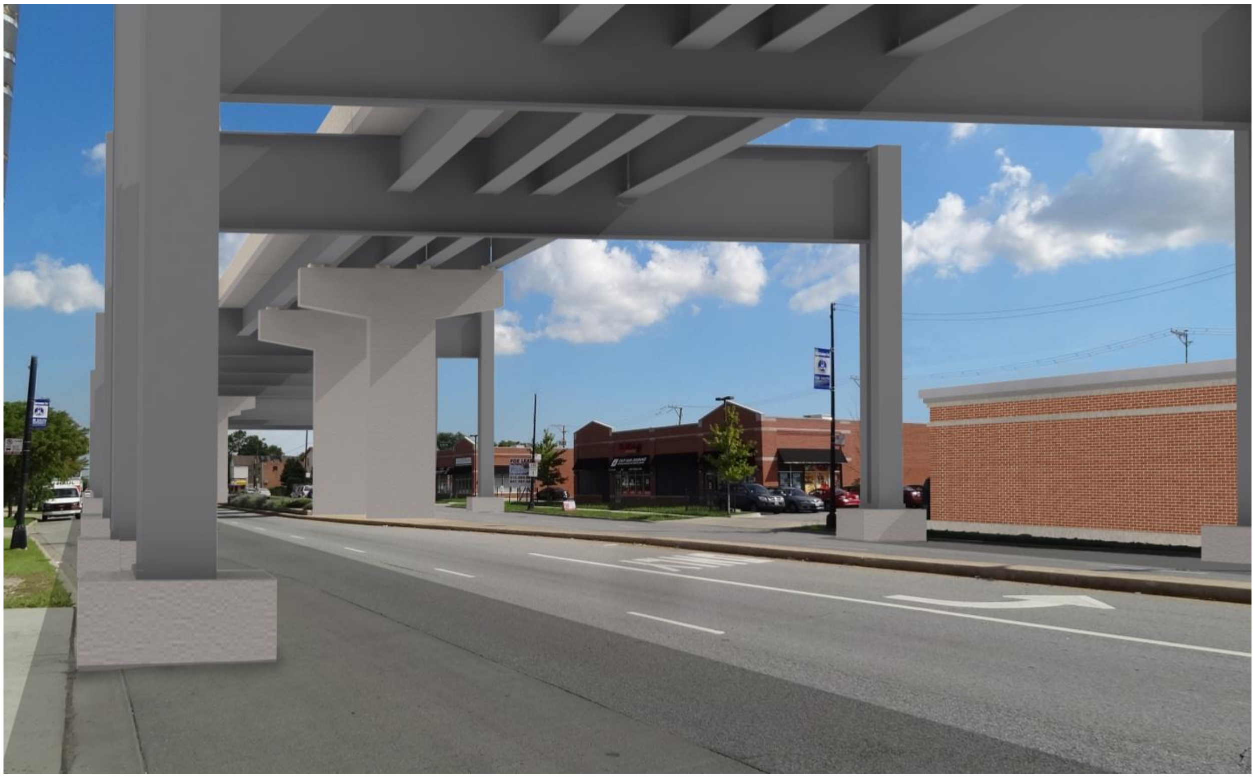


HALSTED ALTERNATIVE – Segment H-A

View 23: Existing view northeast from Halsted Street just north of 100th Street

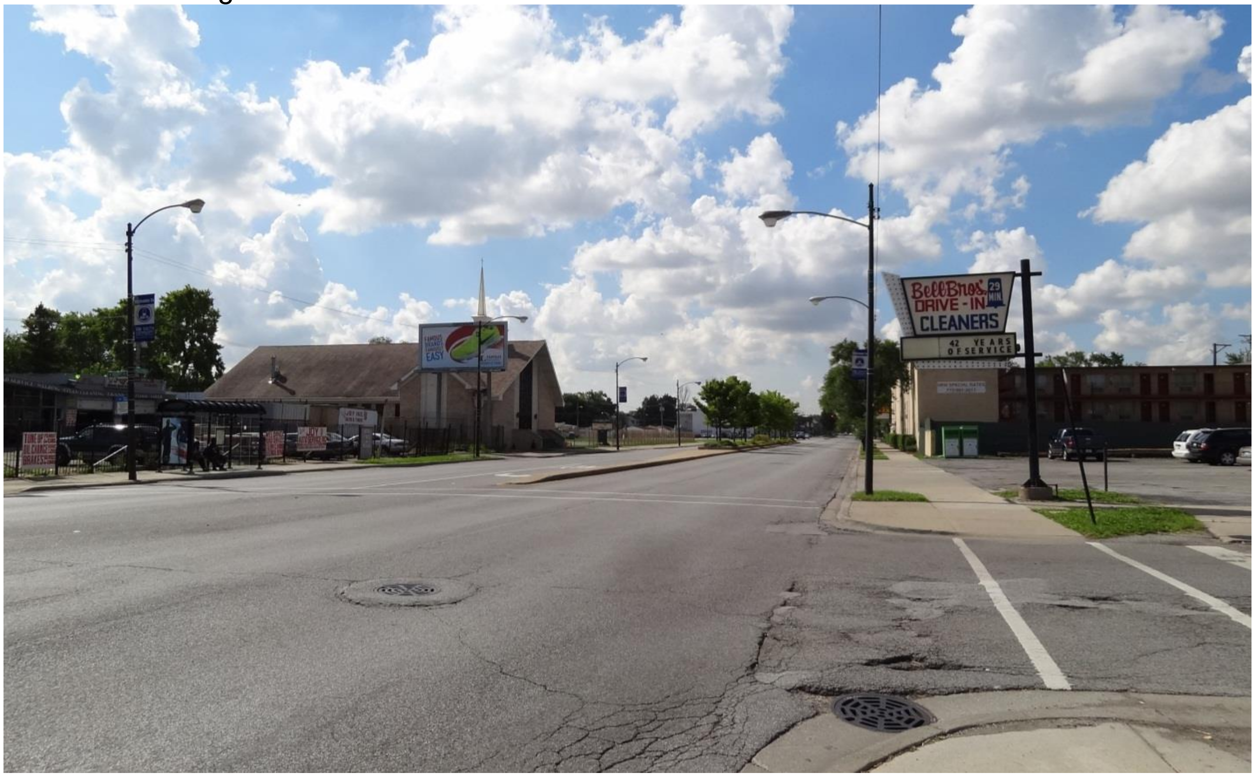


View 23: Visualization- Halsted Alternative

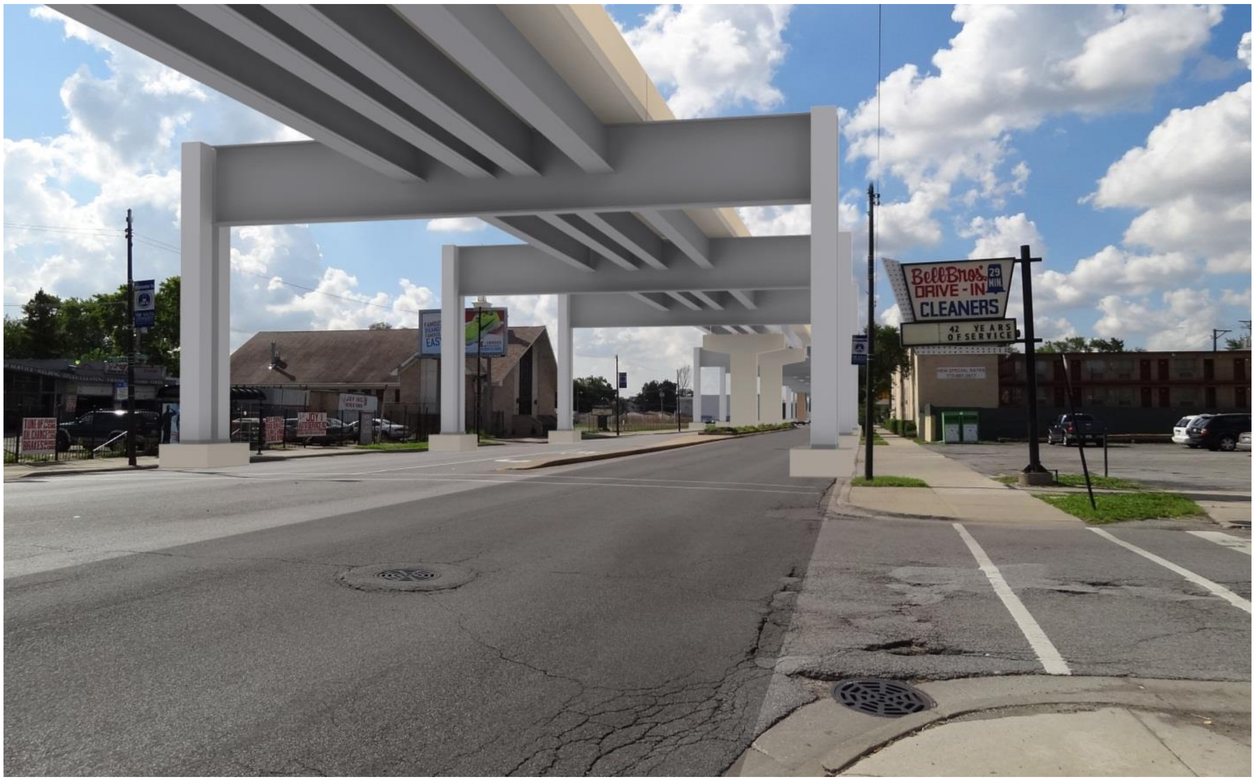


HALSTED ALTERNATIVE – Segment H-A

View 24: Existing view south from Halsted Street at 100th Street

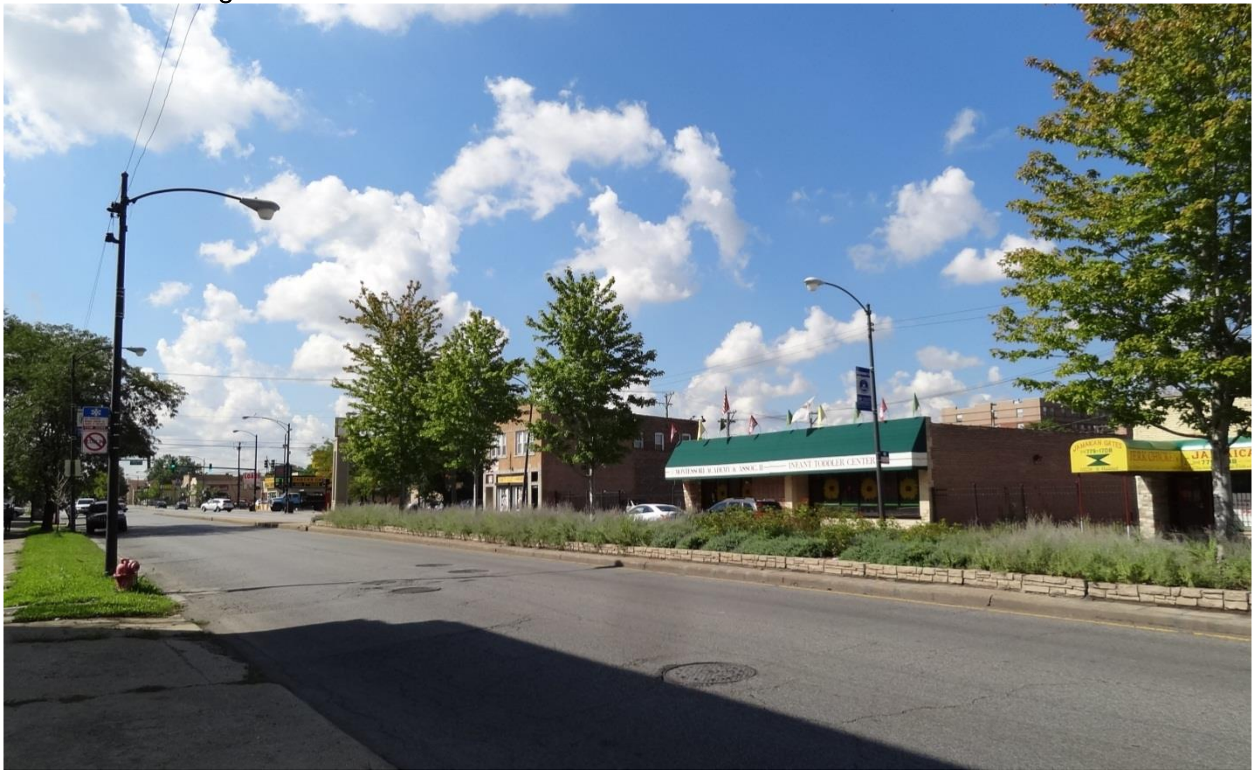

Bell Bros. DRIVE-IN CLEANERS
29 MIN.
42 YEARS OF SERVICE

View 24: Visualization- Halsted Alternative

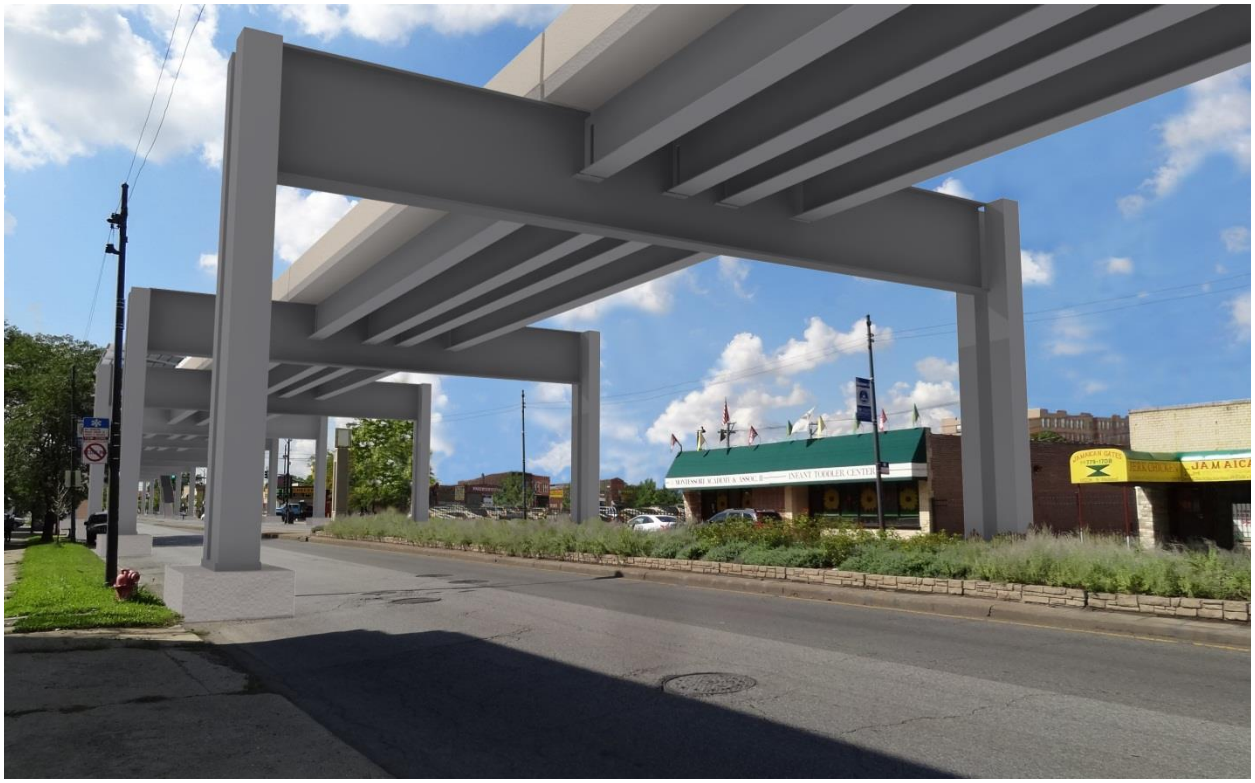

Bell Bros. DRIVE-IN CLEANERS
29 MIN.
42 YEARS OF SERVICE

HALSTED ALTERNATIVE – Segment H-A

View 25: Existing view south from Halsted Street between 102nd Street and 103rd Street

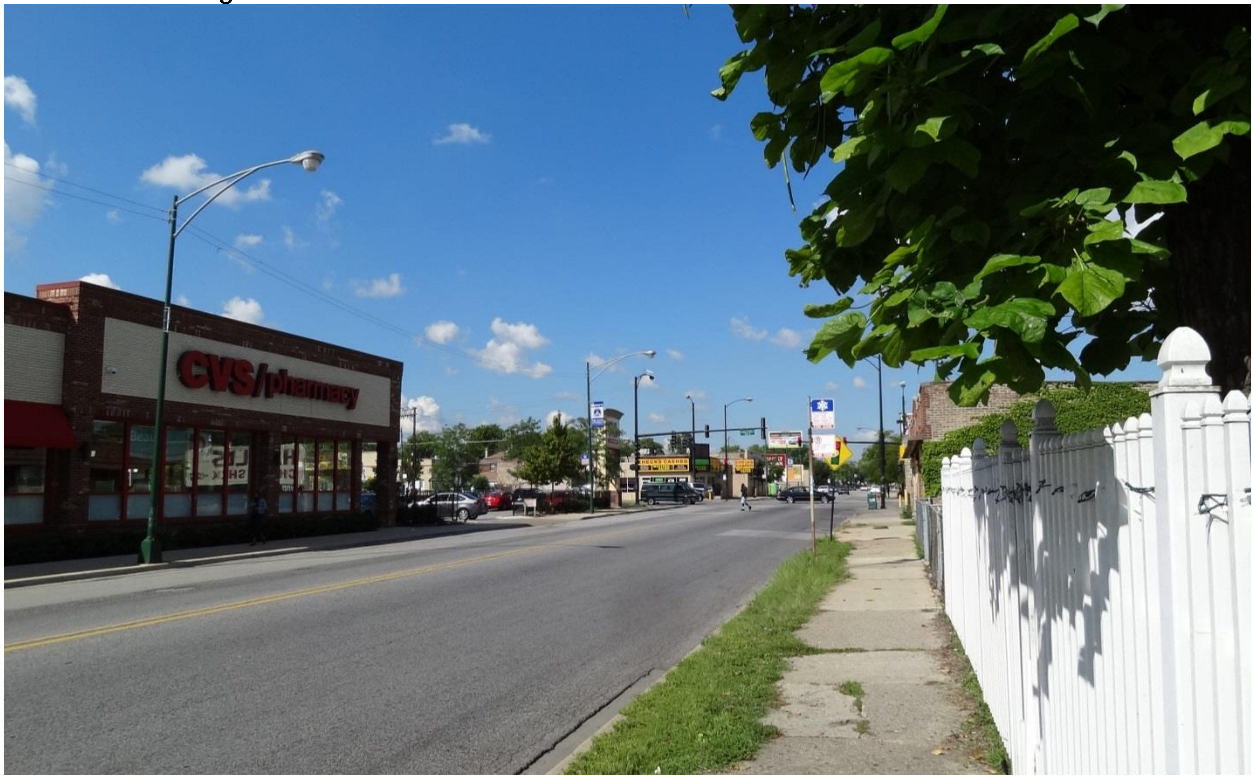


View 25: Visualization- Halsted Alternative

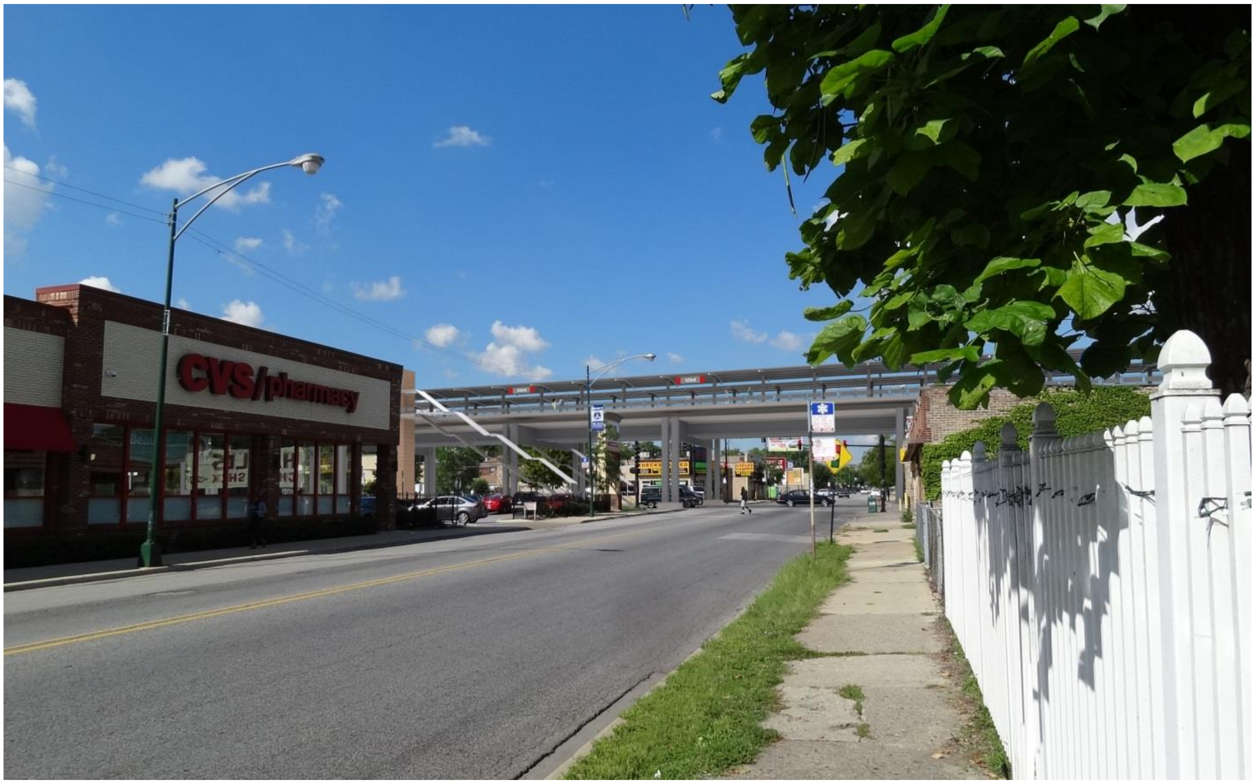


HALSTED ALTERNATIVE – Segment H-A

View 26: Existing view west from the corner of 103rd Street and Emerald Avenue

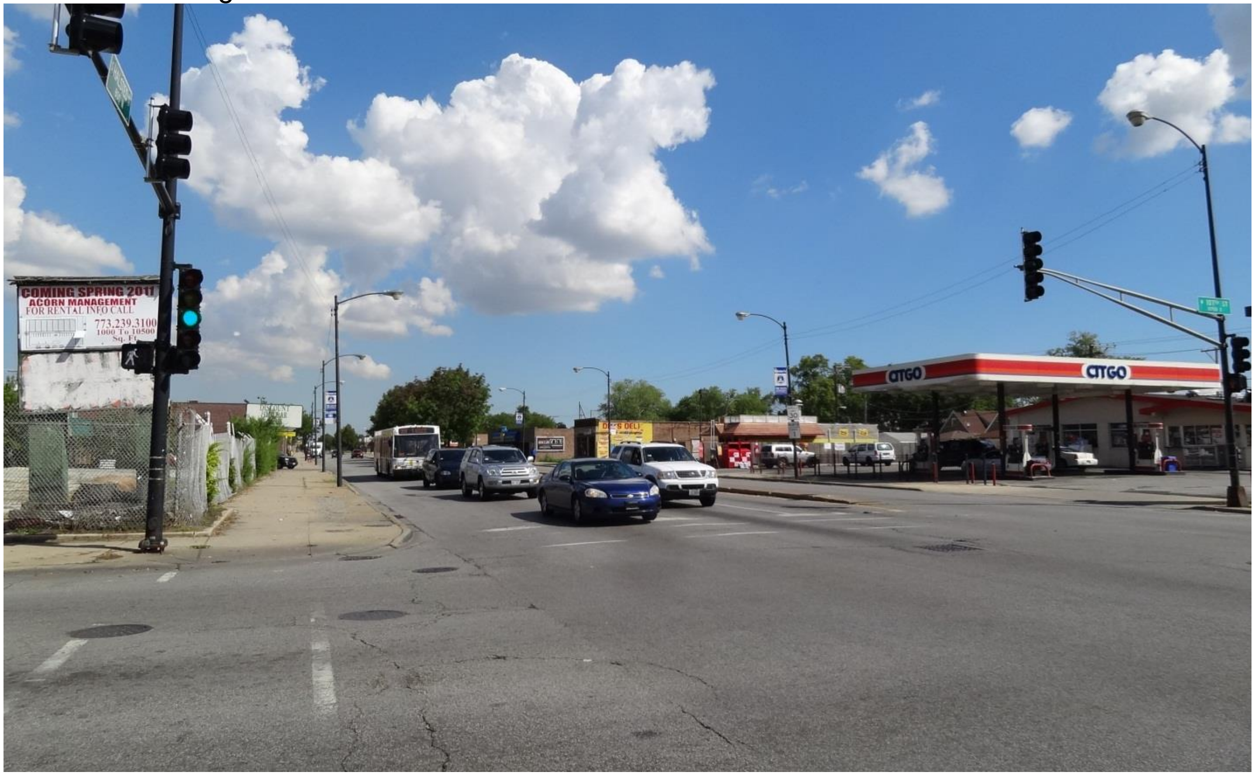


View 26: Visualization- Halsted Alternative

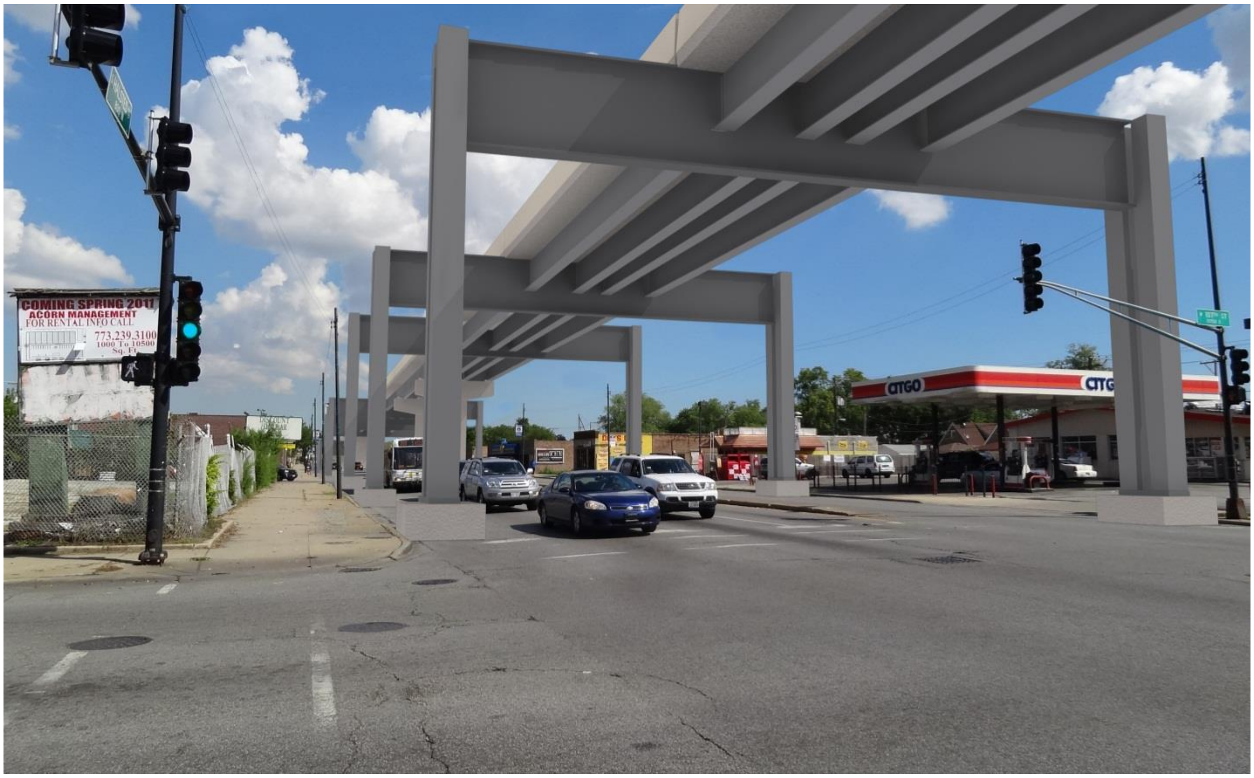


HALSTED ALTERNATIVE – Segment H-A

View 27: Existing view north on Halsted Street at 107th Street

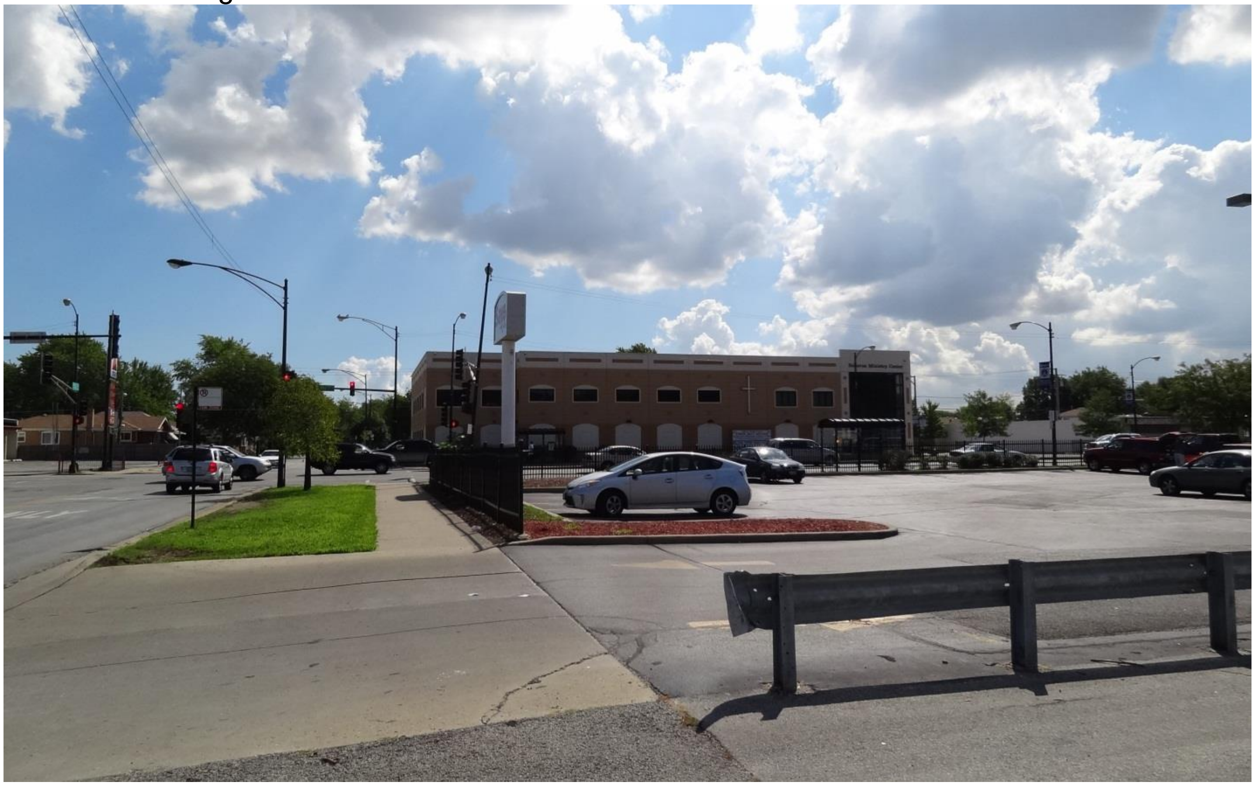

COMING SPRING 2011
ACORN MANAGEMENT
FOR RENTAL INFO CALL
773.239.3100
CITGO
CITGO

View 27: Visualization- Halsted Alternative

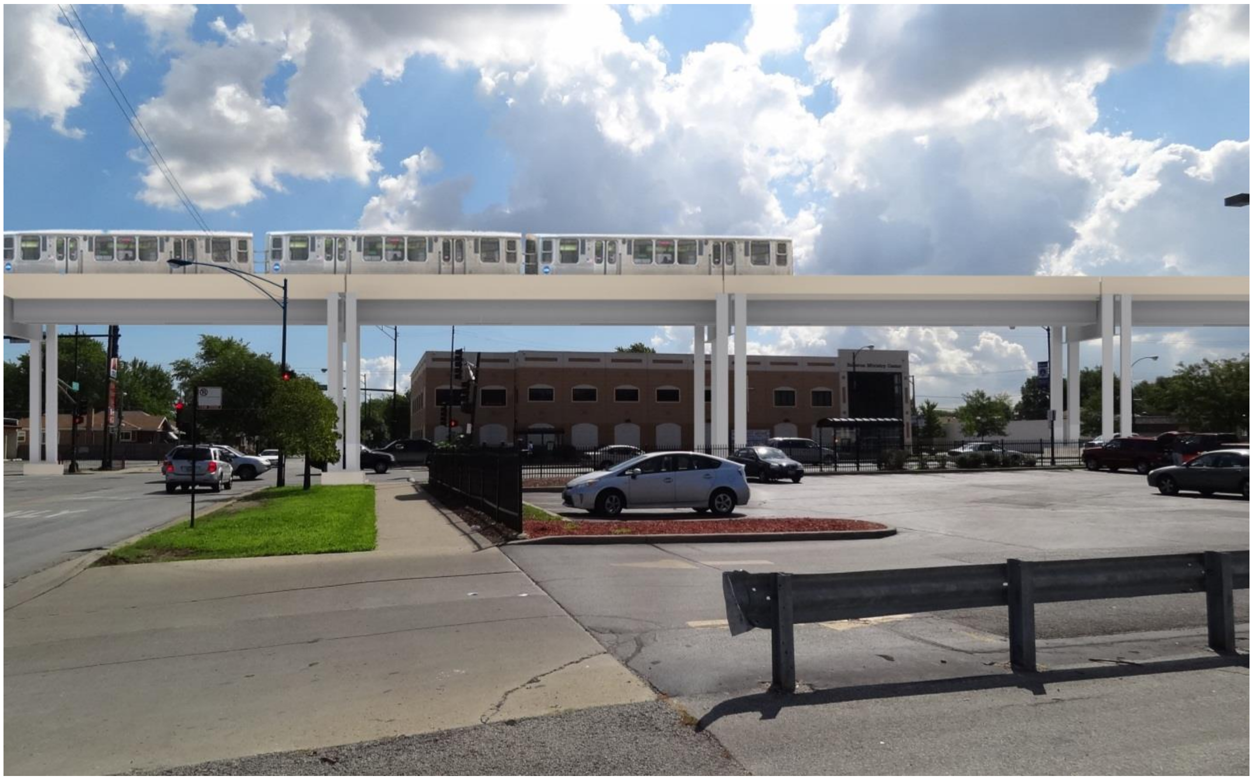

COMING SPRING 2011
ACORN MANAGEMENT
FOR RENTAL INFO CALL
773.239.3100
CITGO

HALSTED ALTERNATIVE – Segment H-A

View 28: Existing view southeast from 107th Street between Halsted Street and Green Street

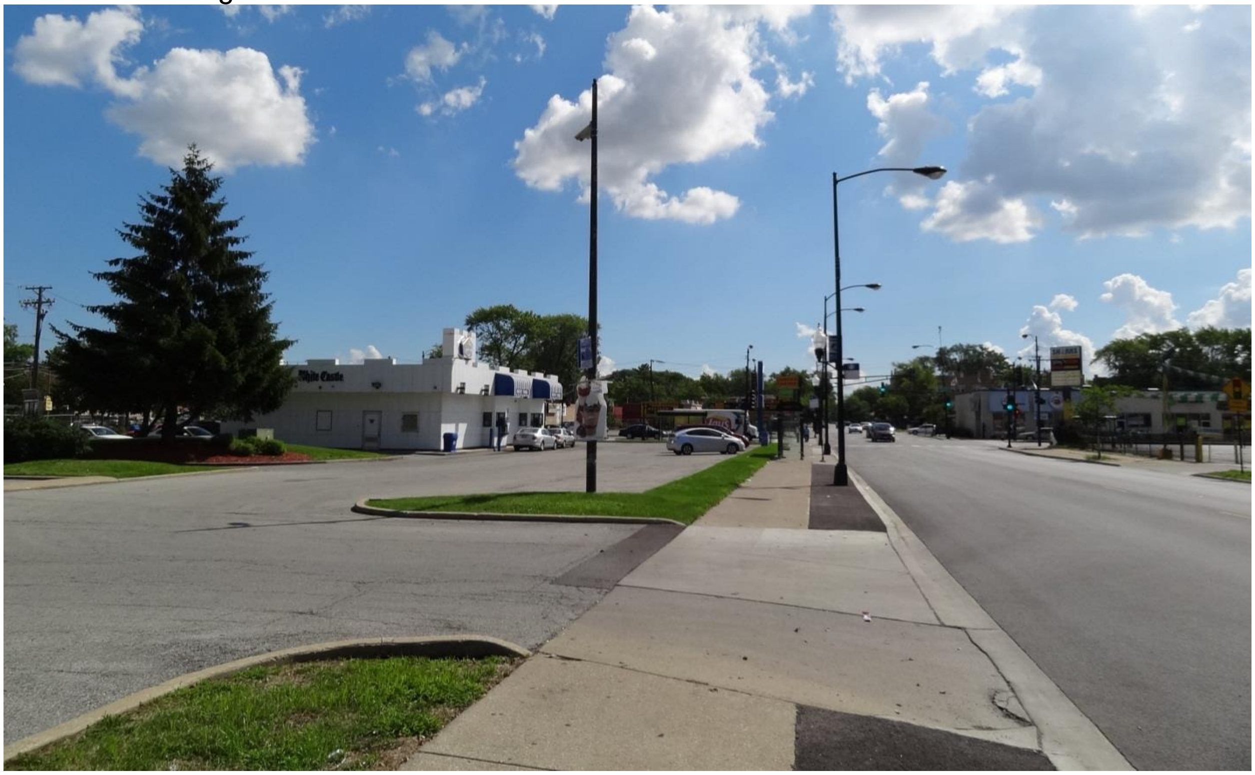


View 28: Visualization- Halsted Alternative

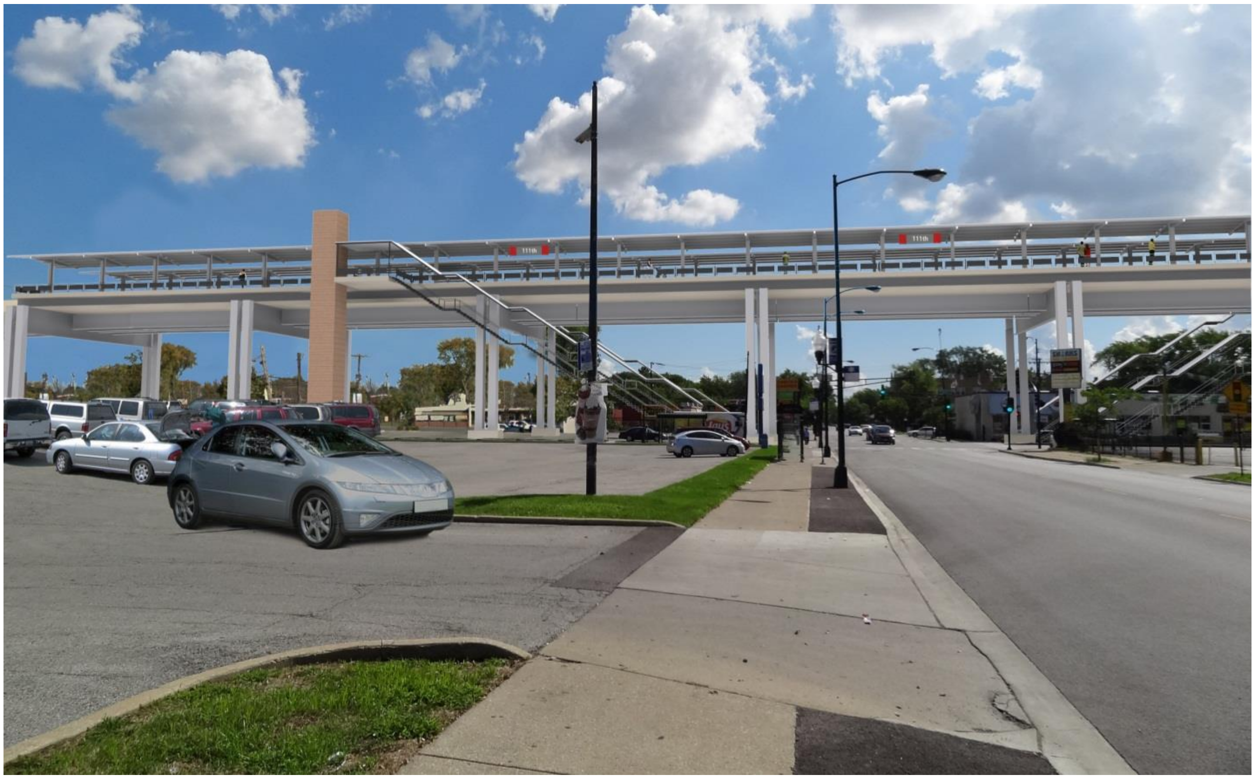


HALSTED ALTERNATIVE – Segment H-A

View 29: Existing view east from 111th Street between Halsted Street and Green Street

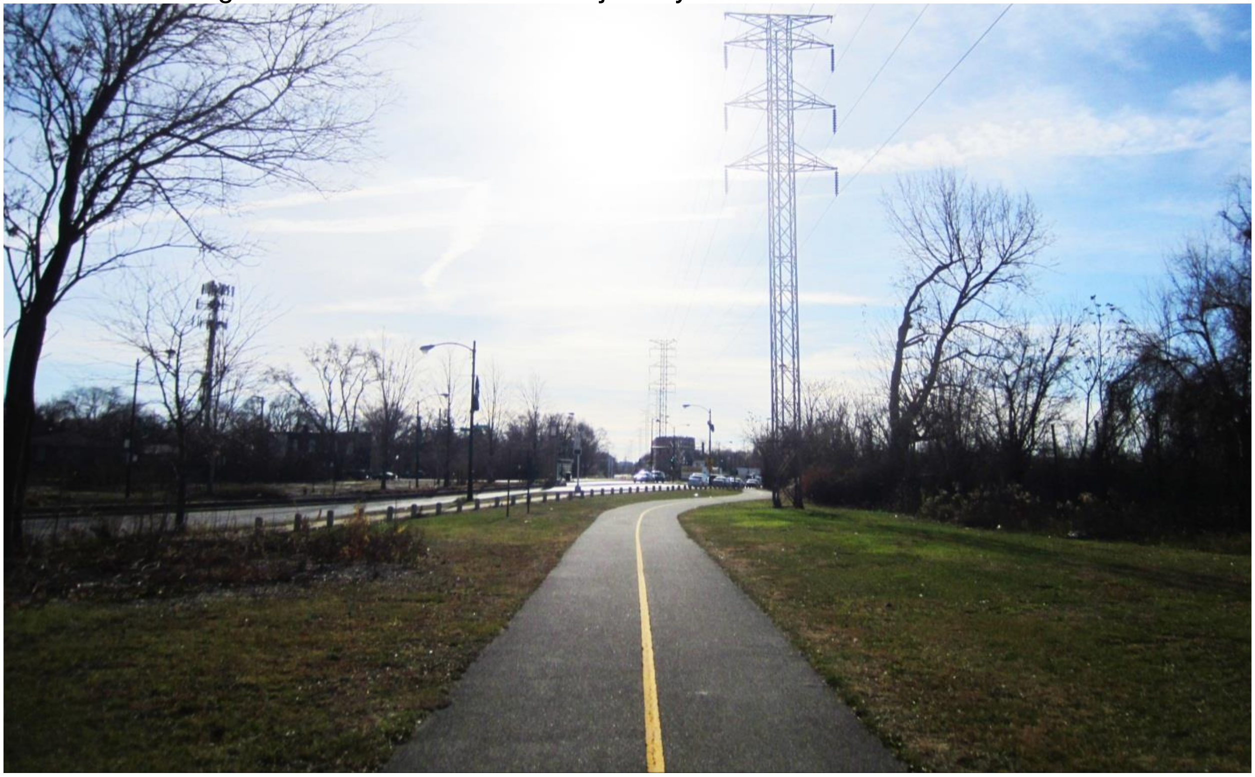


View 29: Visualization- Halsted Alternative

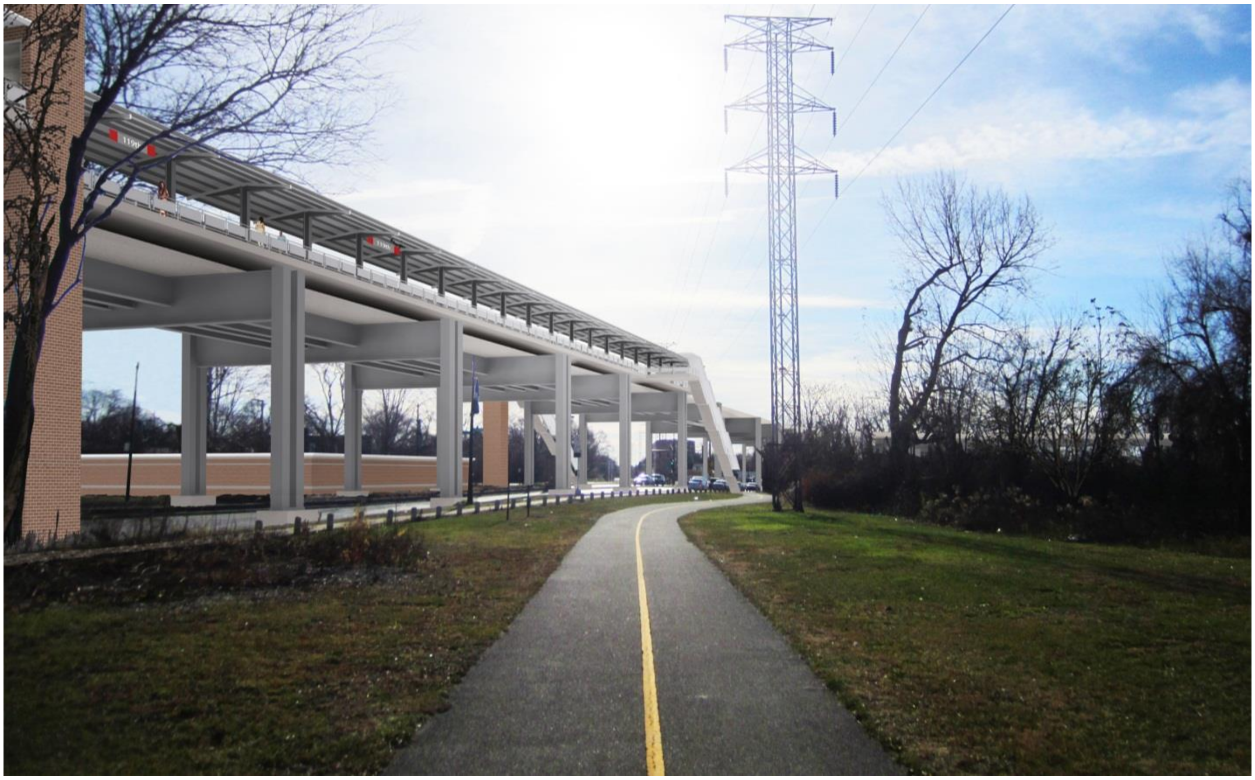


HALSTED ALTERNATIVE – Segment H-A

View 30: Existing view southeast from the Major Taylor Trail at 118th Street

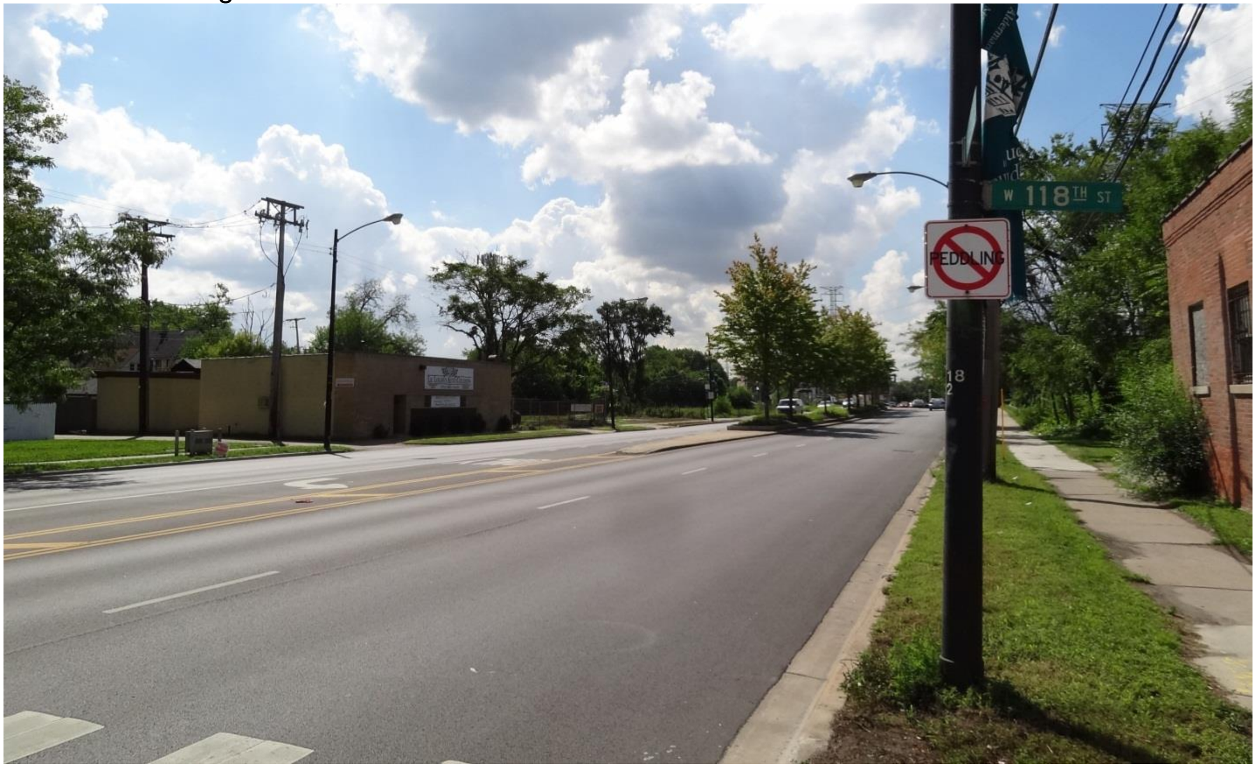


View 30: Visualization- Halsted Alternative

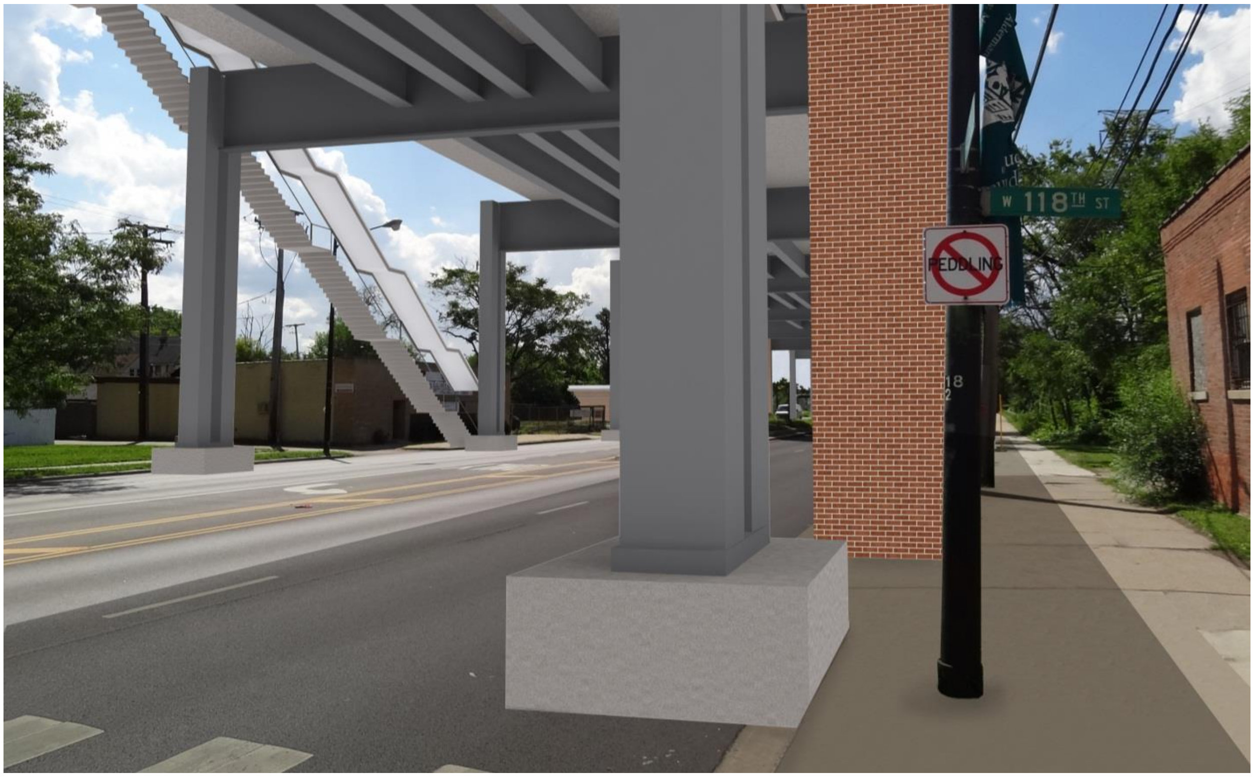


HALSTED ALTERNATIVE – Segment H-A

View 31: Existing view south on Halsted at 118th Street

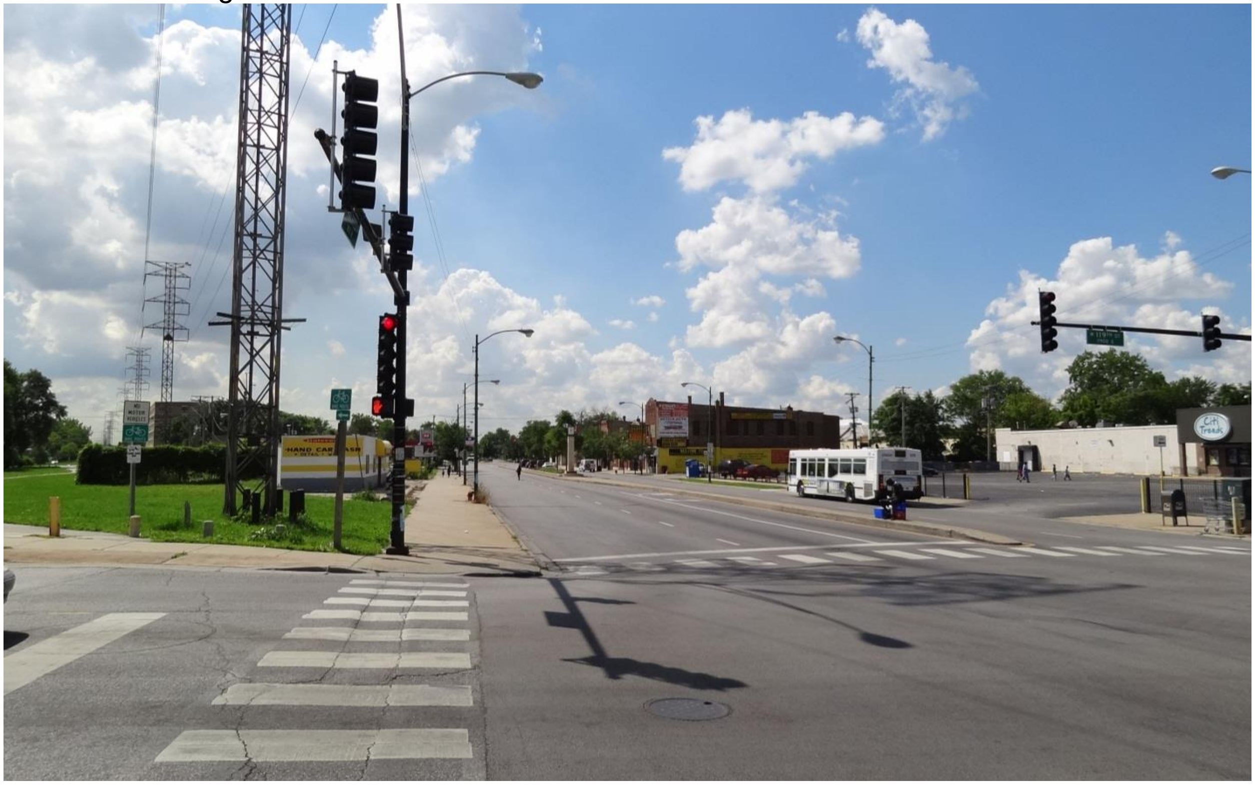

W 118TH ST
PEDDLING

View 31: Visualization- Halsted Alternative

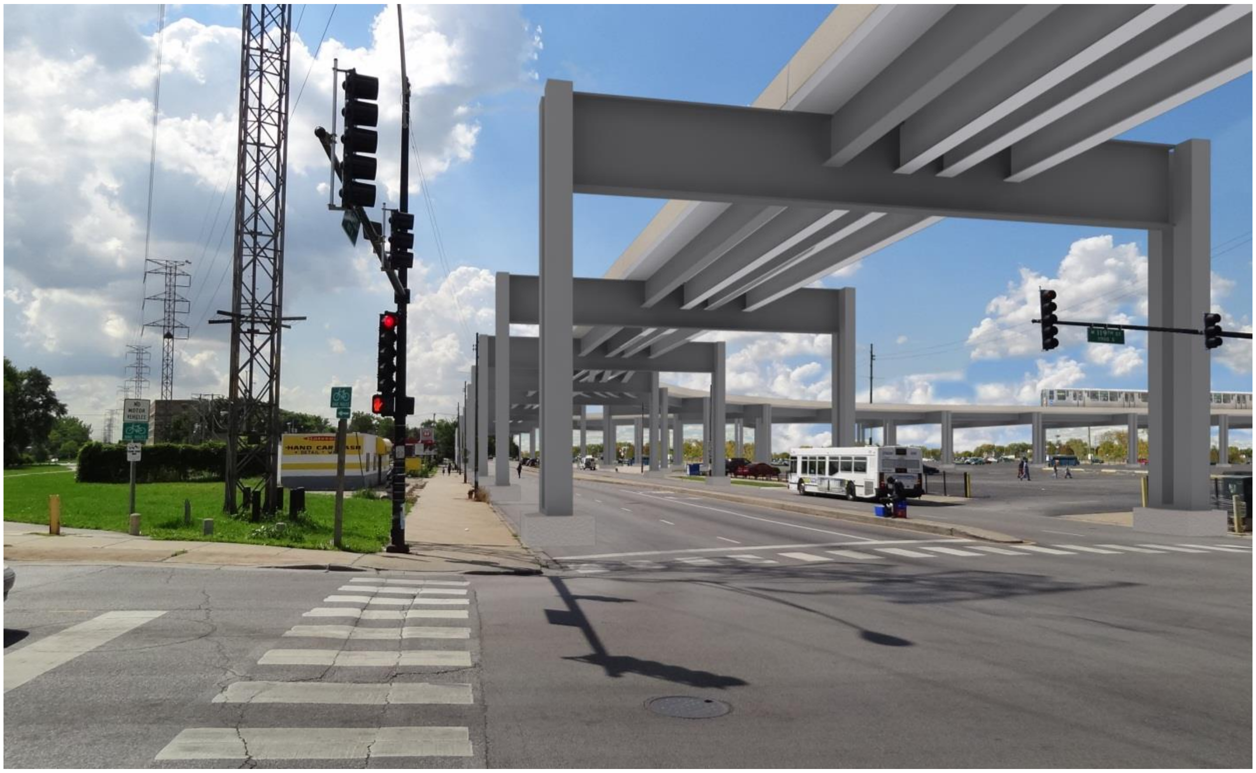

W 118TH ST
PEDDLING

HALSTED ALTERNATIVE – Segment H-A

View 32: Existing view southwest at the corner of 119th Street and Halsted Street

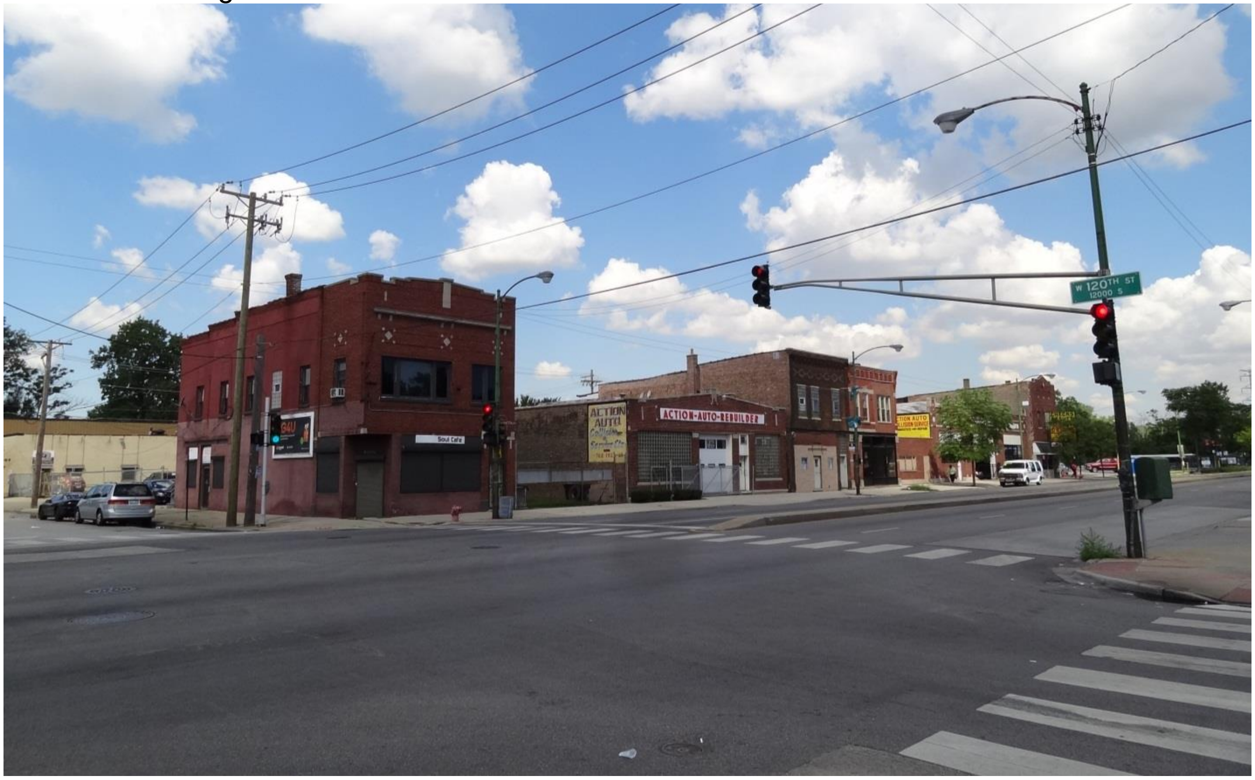


View 32: Visualization- Halsted Alternative

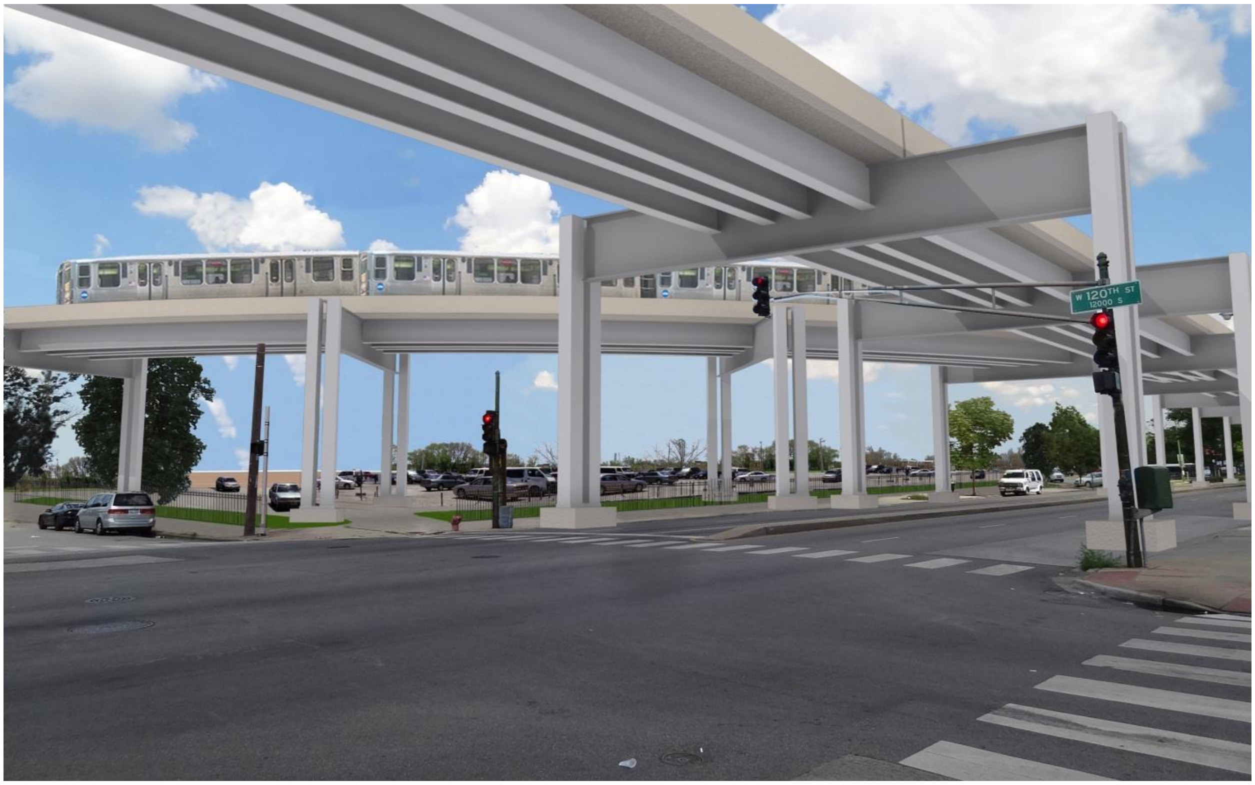


HALSTED ALTERNATIVE – Segment H-B

View 33: Existing view northwest at the corner of 120th Street and Halsted Street

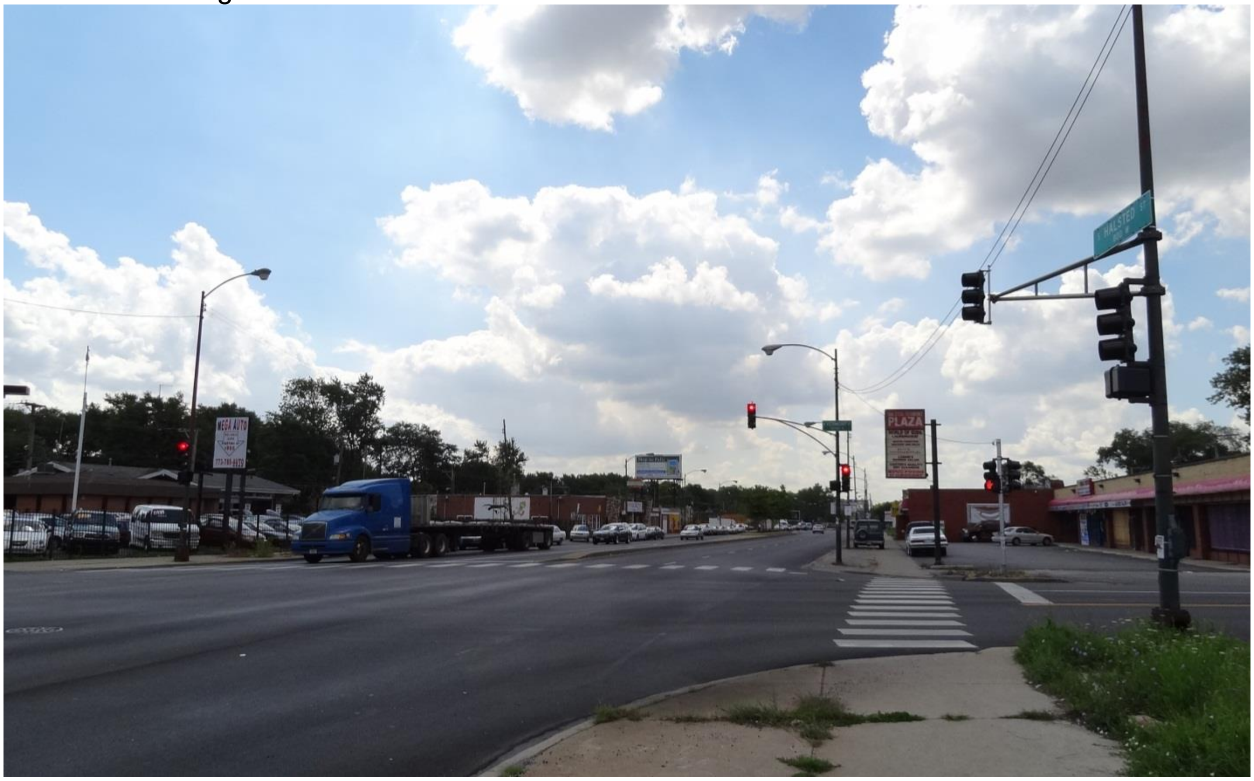

W 120TH ST
12000 S
ACTION AUTO REBUILDER
ACTION AUTO

View 33: Visualization- Halsted Alternative

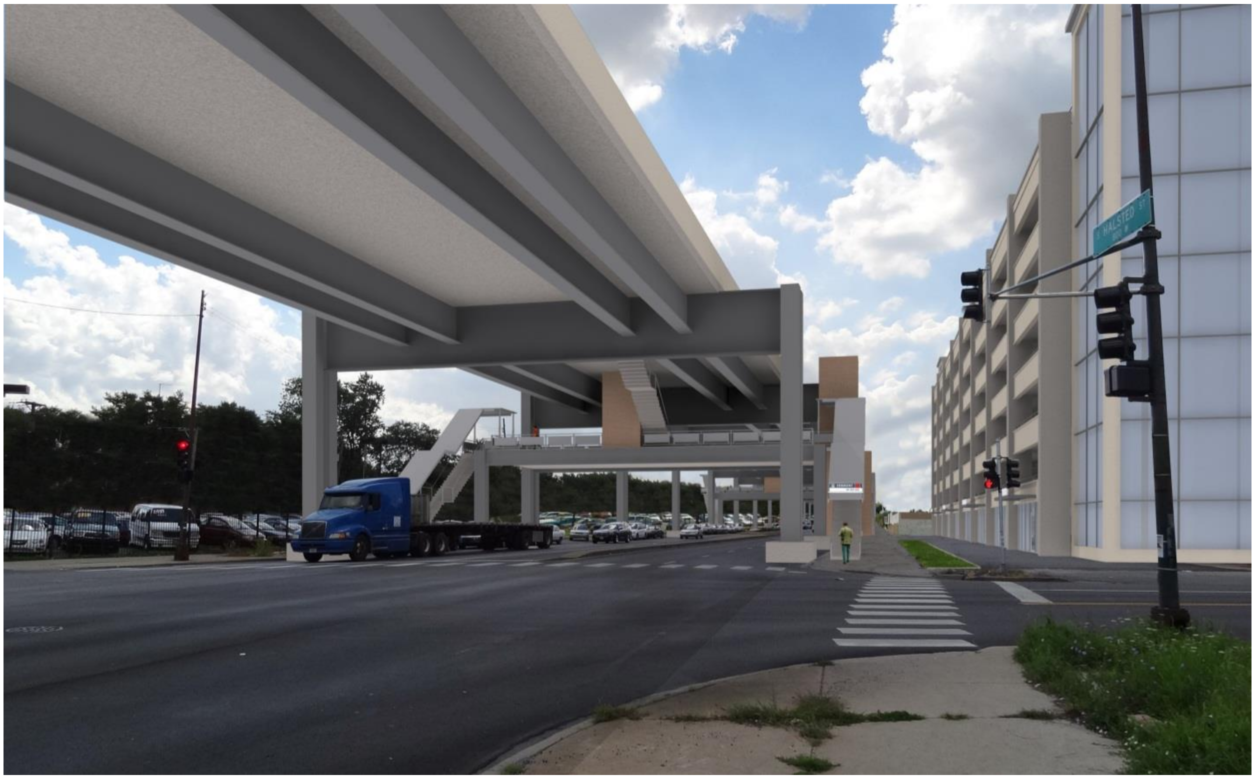

W 120TH ST
12000 S

HALSTED ALTERNATIVE- Segment H-B

View 34: Existing view south on Halsted Street at Vermont Avenue

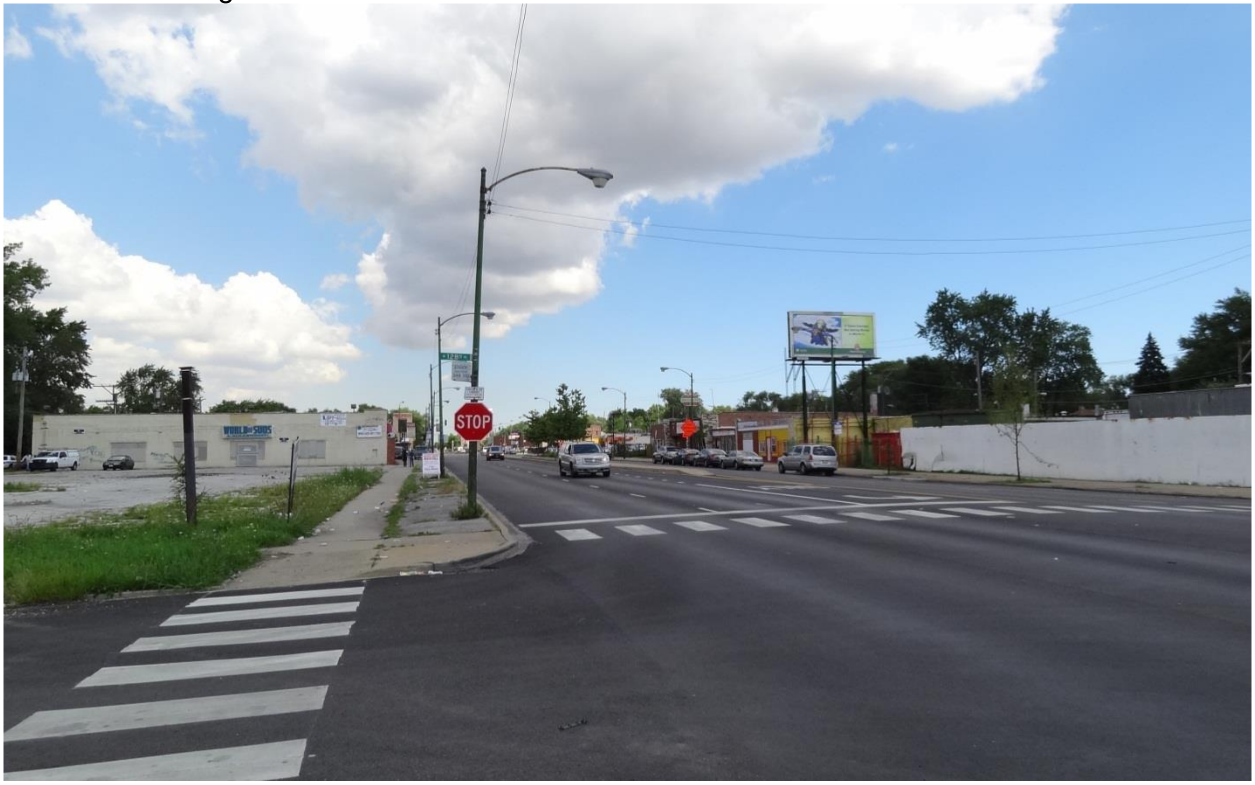

HALSTED
PLAZA
MEGA AUTO

View 34: Visualization- Halsted Alternative

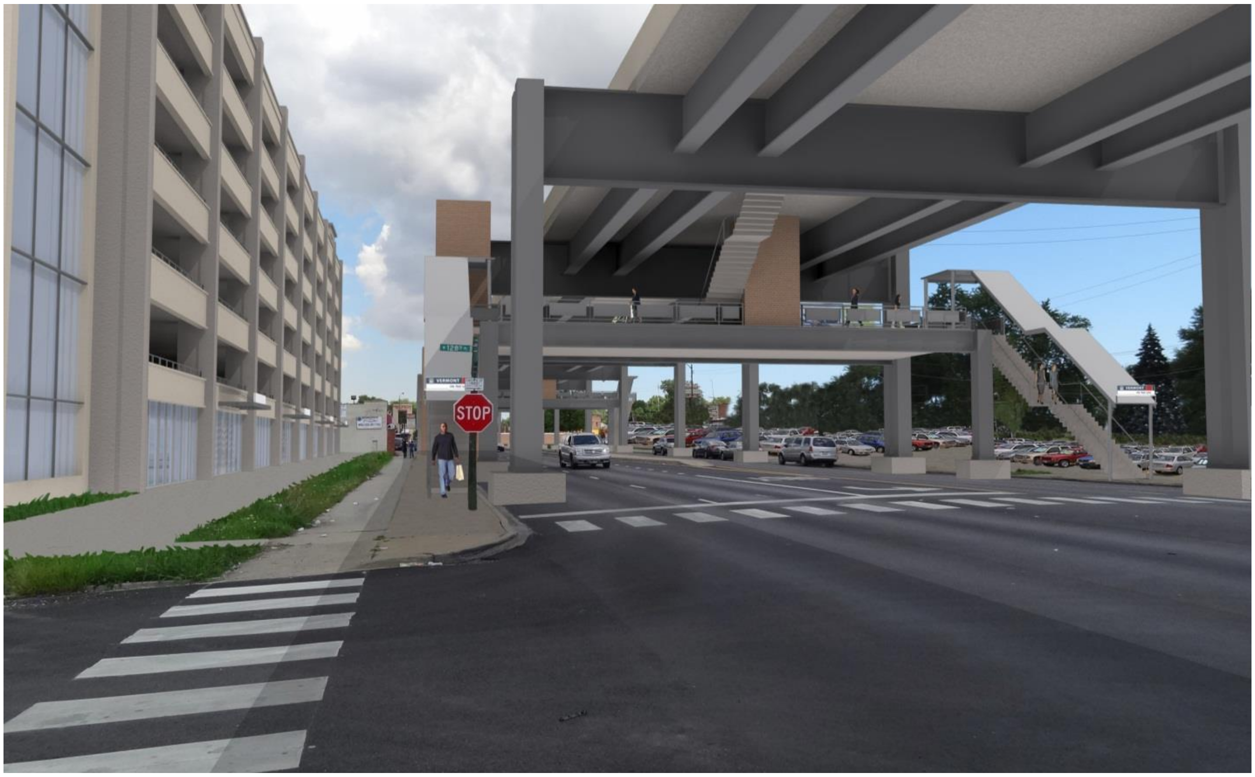


HALSTED ALTERNATIVE- Segment H-B

View 35: Existing view northeast at the corner of 128th Street and Halsted Street

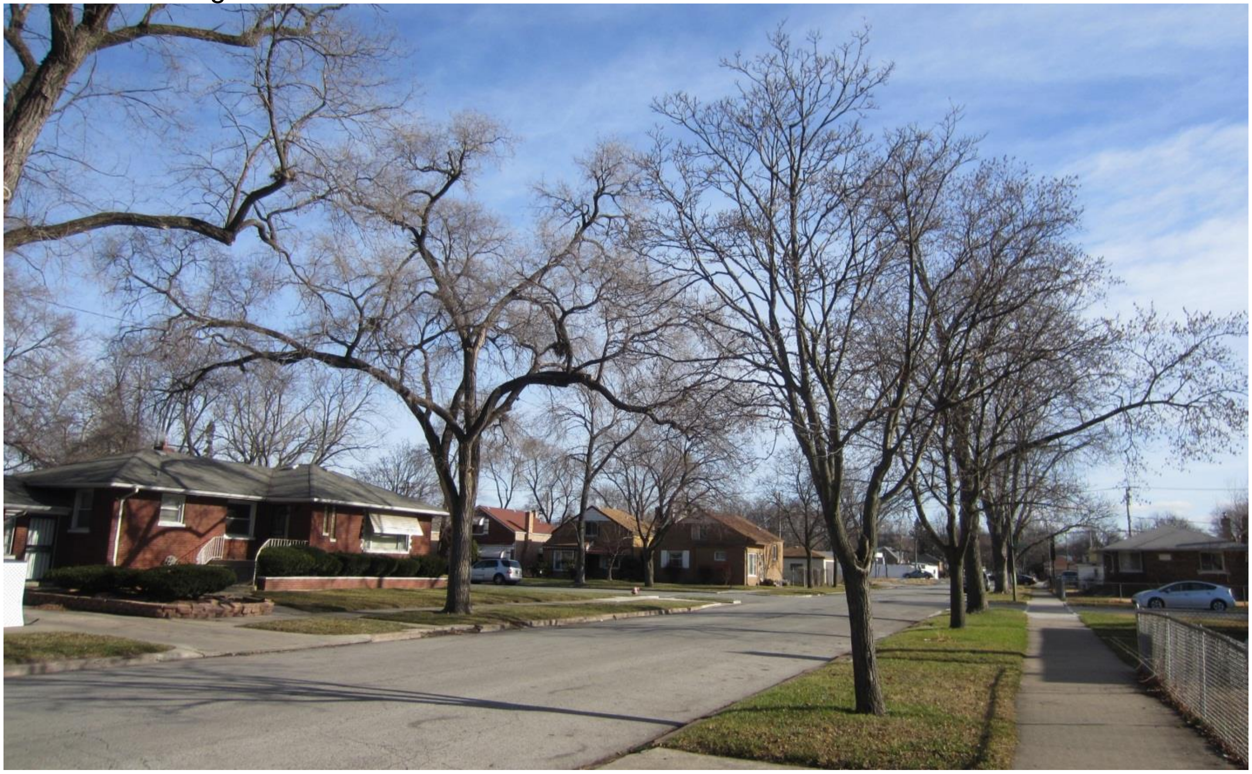


View 35: Visualization- Halsted Alternative

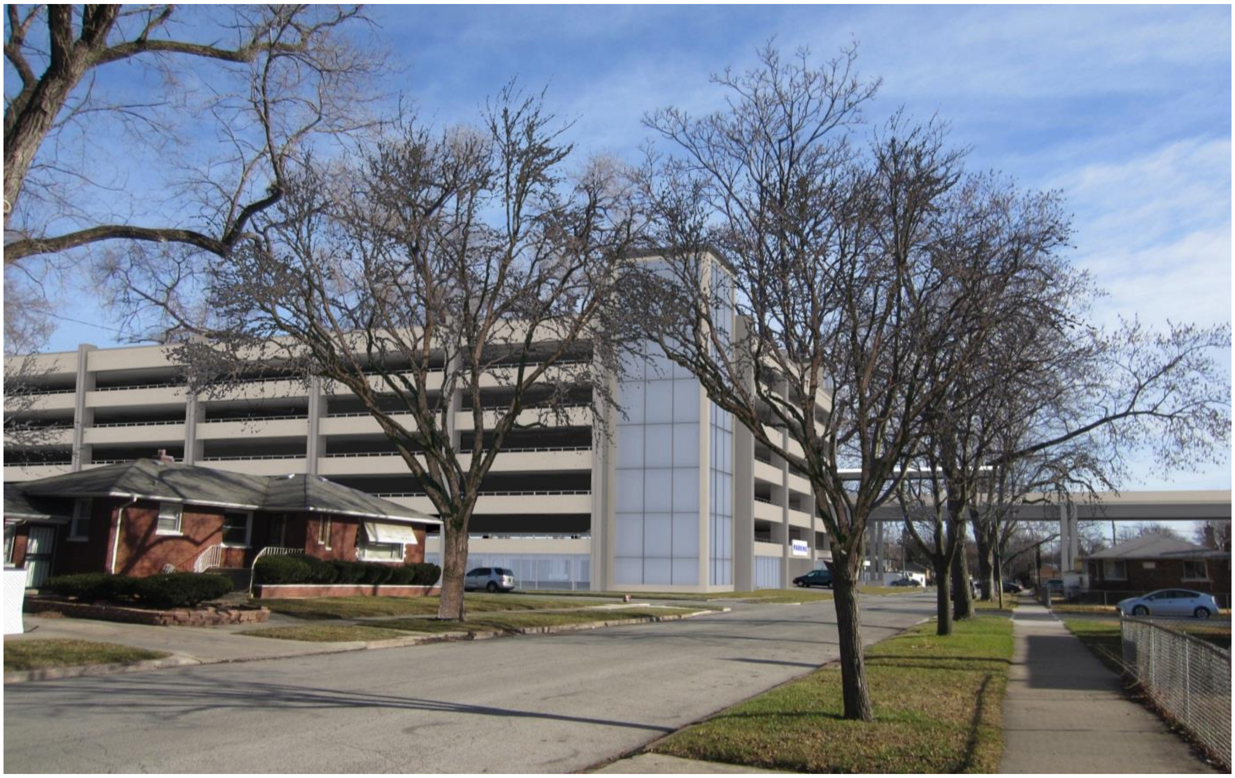


HALSTED ALTERNATIVE– Segment H-B

View 36: Existing view northeast from the corner of Green Street and 128th Place

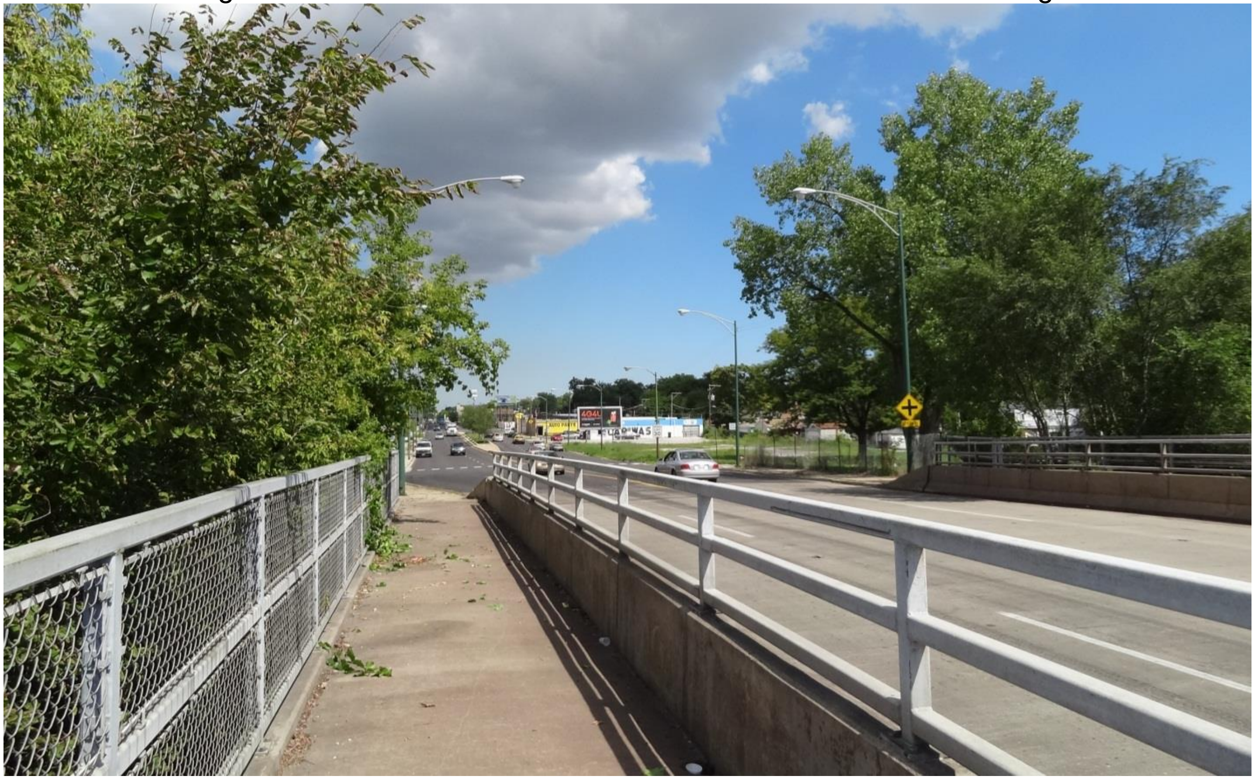


View 36: Visualization- Halsted Alternative

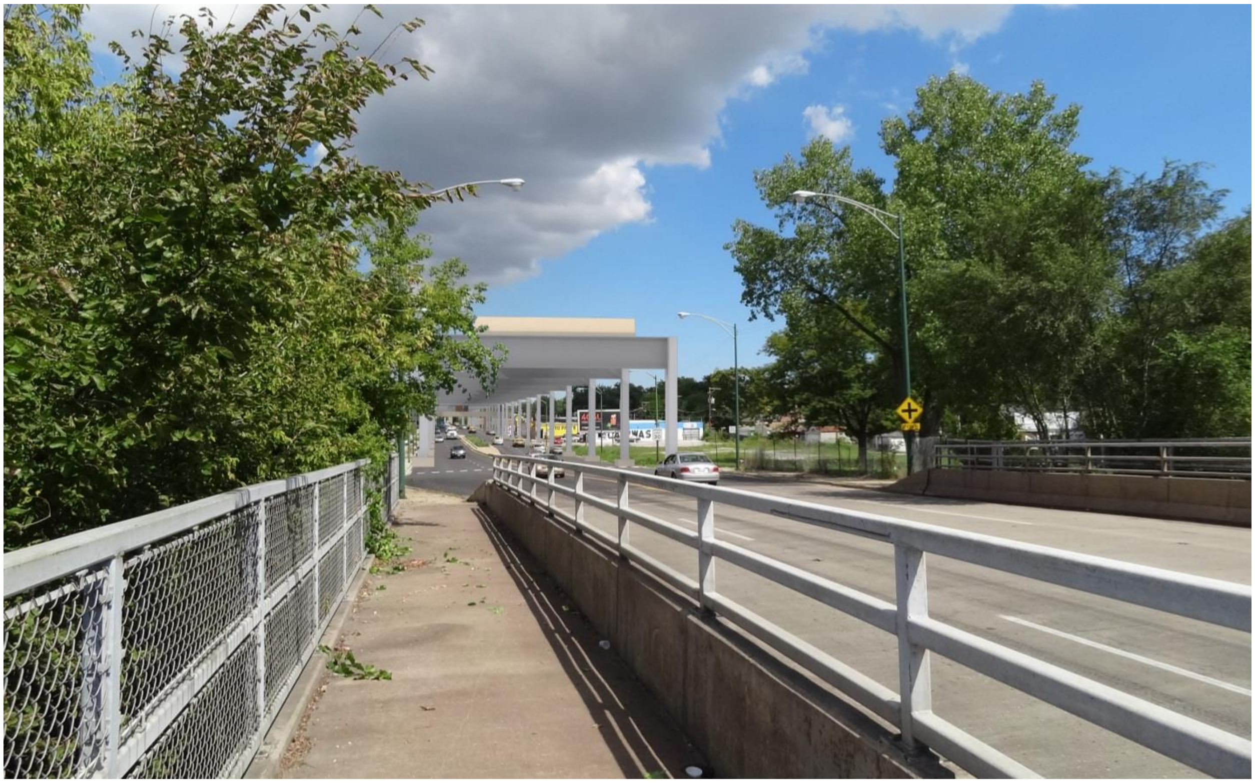


HALSTED ALTERNATIVE– Segment H-B

View 37: Existing view north from Halsted Street at the Little Calumet River bridge



View 37: Visualization- Halsted Alternative



Appendix B
2014-2015 Red Line Extension Project Update

2014-2015 Red Line Extension Project Update

From 2012–2014, CTA evaluated benefits and impacts of four alternatives: the No Build Alternative, the Bus Rapid Transit Alternative (along Michigan Avenue), the Union Pacific Railroad (UPRR) Rail Alternative, and the Halsted Alternative. CTA evaluated three options of the UPRR Rail Alternative: Right-of-Way Option, East Option, and West Option. CTA also evaluated two options of the UPRR Rail Alternative 130th Street station: a South Station Option and a West Station Option. Based on the project description provided in Section 2 of this technical memorandum, CTA analyzed the impacts of these alternatives and station options. The benefits and impacts are included in the technical memoranda prepared in 2012–2014.

In August 2014, based on the technical analysis and public input, CTA announced the NEPA Preferred Alternative—the UPRR Rail Alternative. Additional conceptual engineering was conducted on the UPRR Rail Alternative to refine the East and West Option alignments. In addition, CTA is considering only the South Station Option of the 130th Street Station.

In late 2014 and early 2015, CTA conducted additional engineering and revised assumptions on the East and West Options to refine the alignments. The refinement of the East and West Options consisted of the following items:

- For the segment of the alignment along I-57, CTA shifted the proposed alignment from the median of I-57 to the north side of I-57 within the existing expressway right-of-way. The construction would be less complex, safer for construction workers, and have a shorter duration. The shift would also allow for fewer impacts to Wendell Smith Park for the East Option, and would allow for no permanent impacts to Wendell Smith Park for the West Option.

- CTA modified the curve speeds as the alignment heads south from I-57 along the UPRR tracks. The curve speed for both the East and West Options would be 35 mph.

- CTA shifted the East Option alignment near 103rd Street station to minimize impacts to Block Park and the Roseland Pumping Station.

- CTA modified the curves south of 103rd Street for both the East and West Options to 55 mph to maximize the train speed.

- CTA refined the layout of the 120th Street yard and shop to optimize yard operations. The refined layout of the yard would accommodate 340 train cars.

The refinement of the East and West Option alignments minimizes potential impacts to parks while providing flexibility for future design phases. The Draft Environmental Impact Statement contains the benefits and impacts of the refined East and West Option alignments and supersedes information presented in other chapters of this technical memorandum.

Visual and Aesthetic Conditions

CTA prepared two additional photo simulations in early 2015, at the locations shown on the map in **Figure 1**.

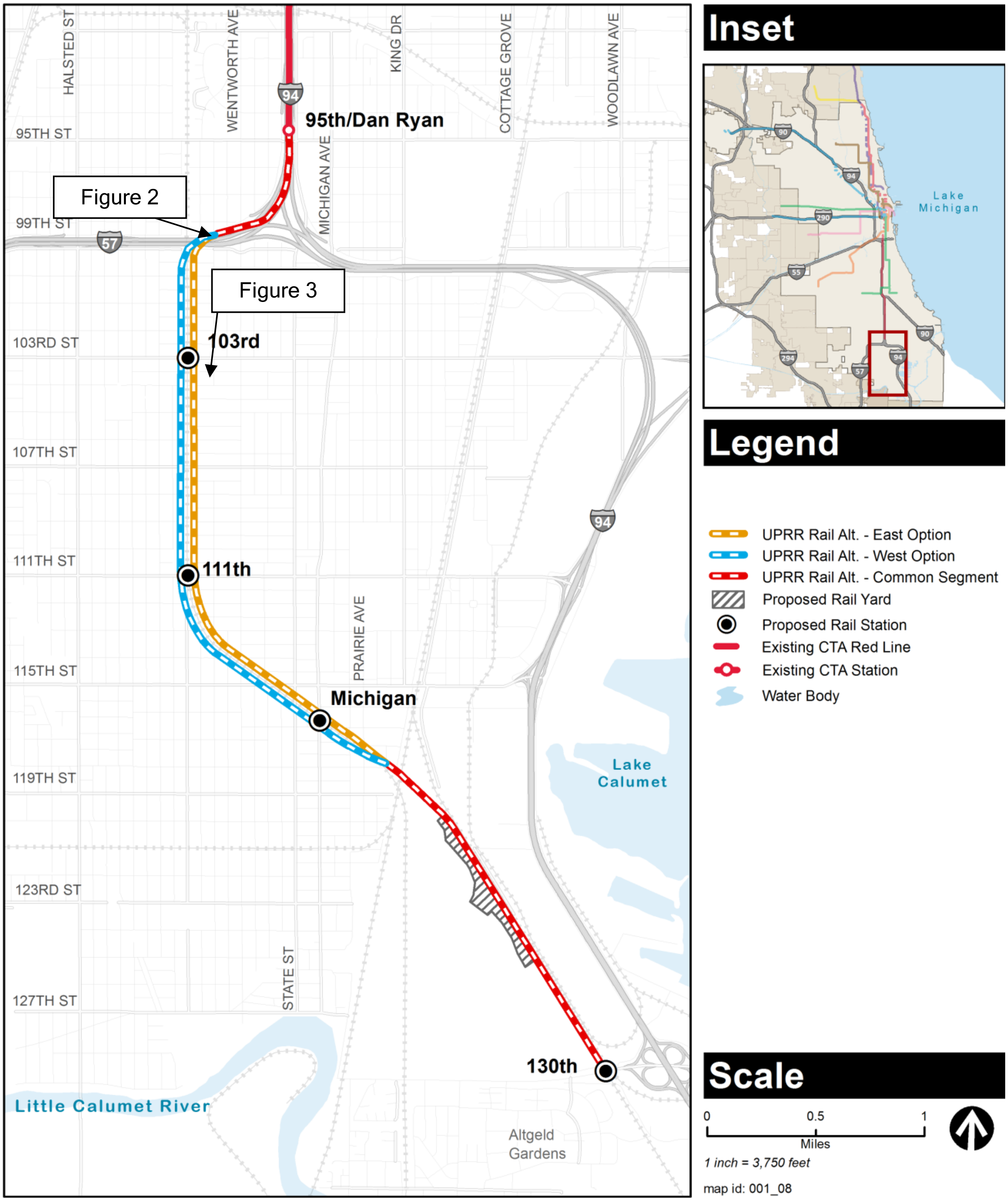

HALSTED ST
WENTWORTH AVE
KING DR
COTTAGE GROVE
WOODLAWN AVE
MICHIGAN AVE
PRAIRIE AVE
STATE ST
95TH ST
99TH ST
103RD ST
107TH ST
111TH ST
115TH ST
119TH ST
123RD ST
127TH ST
94
57
95th/Dan Ryan
Figure 2
Figure 3
103rd
111th
Michigan
130th
Lake Calumet
Little Calumet River
Altgeld Gardens
Inset
Lake Michigan
90
290
55
294
Legend
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
UPRR Rail Alt. - Common Segment
Proposed Rail Yard
Proposed Rail Station
Existing CTA Red Line
Existing CTA Station
Water Body
Scale
0
0.5
1
Miles
1 inch = 3,750 feet
map id: 001_08

Figure 1: Locations of Additional Photo Simulations

The refined alignment along the I-57 corridor would result in high and adverse visual impacts because of the change in the visual setting due to the elevated track structure in the highway right-of-way. This would change the scale, density, and character of the residential neighborhood north of I-57. The houses that currently have a partial or full view of the expressway would experience a substantial change in their field of view due to the elevated structure and its proximity to 98th Place (frontage road) that parallels I-57. The elevated structure would block the horizon for the homes or pedestrians closest to 98th Place. The elevated structure would also create a new shadow at street level due to the movement of the sun. **Figure 2** shows existing conditions and a photo simulation of the track structure in the I-57 right-of-way.

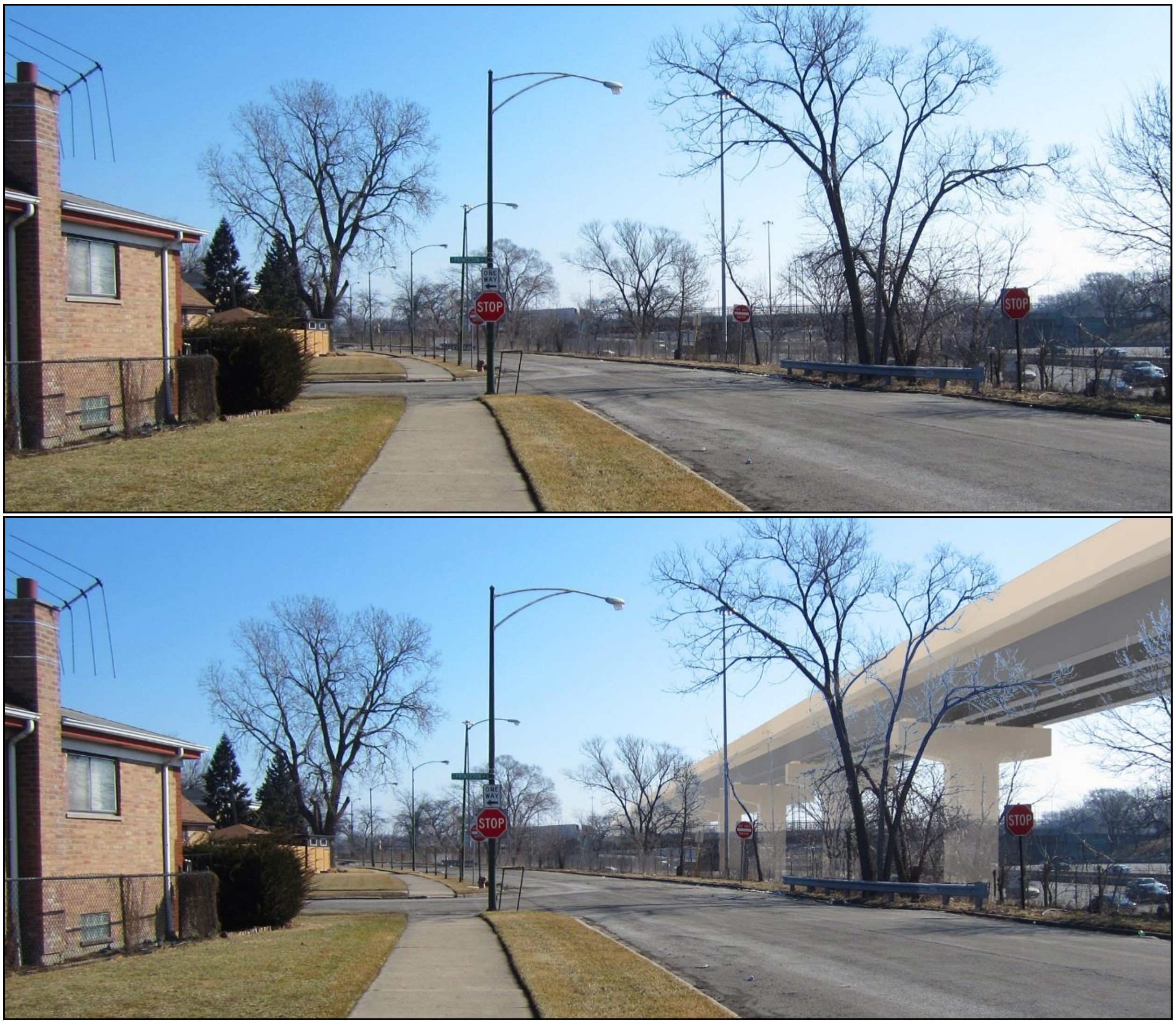


Figure 2: Photo of Existing Conditions and Photo Simulation of the Elevated Track Structure in the I-57 Right-of-Way, Facing East from 98th Place and Princeton Avenue

CTA also prepared a photo simulation of the East Option track structure adjacent to the Roseland Pumping Station based on feedback from Section 106 consulting parties. The pumping station would not be displaced or directly affected by the East or West Option. The visual changes to the setting would not be high or adverse. **Figure 3** shows existing conditions and a photo simulation of the track structure adjacent to Roseland Pumping Station.

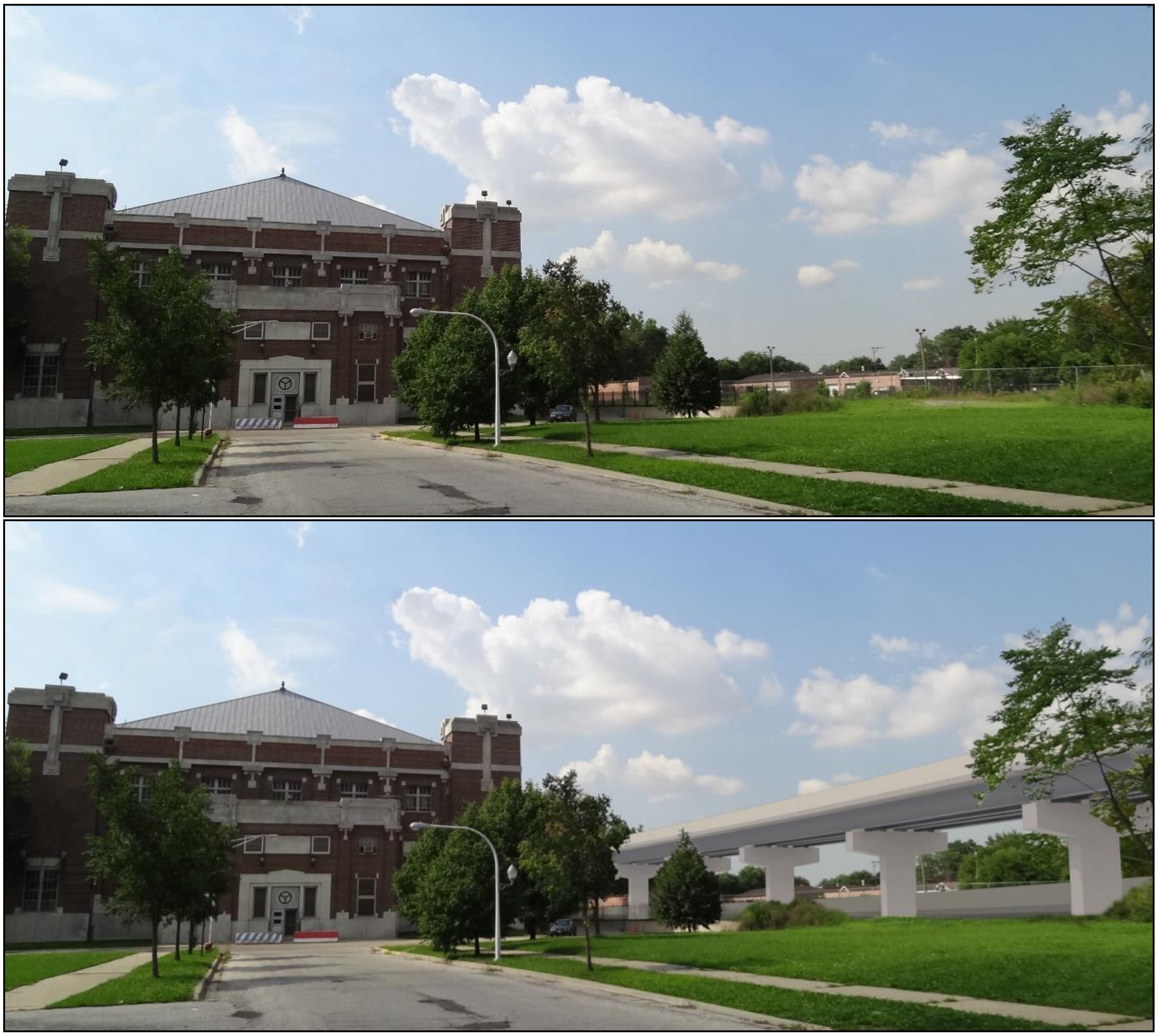


Figure 3: Photo of Existing Conditions and Photo Simulation of the East Option Elevated Track Structure adjacent to the Roseland Pumping Station, Facing South on Harvard Avenue

Appendix O
Noise and Vibration Technical Memorandum

RED AHEAD
Moving Ahead to a Better Red

Red Line Extension

Chicago Red Line Extension Project

Noise and Vibration
Technical Memorandum

May 9, 2016

Prepared for:
Chicago Transit Authority
567 W. Lake Street
Chicago, IL 60661

Prepared by:
CWC Transit Group
125 S. Wacker Drive
Suite 600
Chicago, IL 60606

cta

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Abbreviations

BRT	Bus Rapid Transit
CTA	Chicago Transit Authority
dBA	A-weighted decibel
EIS	Environmental Impact Statement
ft	Feet
FTA	Federal Transit Administration
Ldn	day-night average sound level
Leq	Equivalent continuous sound level
Lmax	Maximum noise level
micro in./sec	microinch per second
mph	miles per hour
NEPA	National Environmental Policy Act
ppv	peak particle velocity
rms	root mean square
RLE	Red Line Extension
ROW	right-of-way
SEL	sound exposure level
UPRR	Union Pacific Railroad
VdB	decibels referenced to 1 microinch per second

Section 1
Summary

This technical memorandum was prepared to support the environmental impact statement (EIS) for the Chicago Transit Authority (CTA) Red Line Extension (RLE) Project. The purpose is to identify, evaluate, and characterize potential noise and vibration impacts and potential mitigation measures associated with each of the RLE Project alternatives. The following is a summary of the results of the noise and vibration analysis for each of the project alternatives.

1.1 No Build Alternative

The No Build Alternative assumes no change in the existing conditions and therefore would result in no change to the existing noise and vibration levels within the project area. The No Build Alternative would result in no noise and vibration impacts.

1.2 BRT Alternative

The results of the noise analysis for the Bus Rapid Transit (BRT) Alternative indicate that noise impacts could occur along the project alignment. Figure 5-1 shows the noise contours for moderate noise impact for the BRT Alternative. Residential receptors within the noise contours could be affected by the project. Because the buses would travel along local streets that have small blocks, numerous cross streets, and driveways, noise abatement mitigation such as barriers would not be feasible for the BRT Alternative.

1.3 UPRR Rail Alternative – Right-of-Way Option

The Union Pacific Railroad (UPRR) Rail Alternative Right-of-Way (ROW) Option would only occur if the freight relocation project were implemented prior to RLE Project implementation. UPRR trains would relocate to another corridor as part of a separate, earlier project that may occur regardless of RLE implementation. The City of Chicago is evaluating the UPRR train relocation in an independent study. If the freight relocation project were implemented, the noise levels along the rail corridor would decrease by 5 to 7 decibels (dBA) from existing conditions due to the removal of the freight rail operations. Because of the reduction in noise level due to replacing the freight operations with the RLE Project, noise mitigation was not considered for the UPRR Rail Alternative ROW Option.

No mitigation measures are proposed for vibration because the aerial structure with continuously welded rail would have vibration levels that are below the Federal Transit Administration (FTA) impact criterion of 72 VdB (root mean square [rms] velocity levels expressed in decibels [VdB] relative to one micro-inch per second). In addition, by moving the freight operations out of the rail corridor, the existing vibration levels generated during freight rail pass-bys would be eliminated from the rail corridor.

1.4 UPRR Rail Alternative – East Option

Based on FTA analysis methods, the UPRR Rail Alternative East Option could result in both moderate and severe noise impacts along the project corridor. Figure 5-2 shows the noise contours for moderate and severe noise impacts from the East Option. Residential receptors within these noise contours could be affected by implementation of this alternative. A noise barrier approximately 4 feet in height (measured from the top surface of the concrete deck) installed along the outer tracks of the aerial structure could provide a 7 to 10-dBA reduction in noise level. A noise barrier approximately 4 feet in height on the aerial structure that could provide a 10-dBA reduction could result in no affected receptors remaining after mitigation.

With regard to vibration, no mitigation measures are proposed. The aerial structure with continuously welded rail could result in vibration levels that are below the FTA impact criterion of 72 VdB at the residential receptors along the project corridor.

1.5 UPRR Rail Alternative – West Option

The UPRR Rail Alternative West Option could result in both moderate and severe noise impacts along the project corridor. Figure 5-3 shows the noise contours for moderate and severe noise impacts from the West Option. Residential receptors within these noise contours could be affected by implementation of this alternative. Noise barrier mitigation measures could be the same as for the East Option. A noise barrier approximately 4 feet in height on the aerial structure that could provide a 10-dBA reduction could result in no affected receptors remaining after mitigation. As it would be for the East Option, vibration levels for the West Option could be below the FTA impact criterion of 72 VdB, and no mitigation measures are proposed for vibration.

1.6 Halsted Rail Alternative

The Halsted Rail Alternative could result in both moderate and severe noise impacts along the project corridor. Figure 5-4 shows the noise contours for moderate and severe noise impact from the Halsted Rail Alternative. Residential receptors within these noise contours could be affected by implementation of this alternative. Noise barrier mitigation measures would be the same as for the East and West Options. Based on a noise reduction of 10 dBA, a noise barrier approximately 4 feet in height on the aerial structure could substantially reduce the number of impacts; however, a noise barrier approximately 4 feet in height on the aerial structure could still result in moderate noise impacts along Halsted Street after mitigation. No severe noise impacts would remain after mitigation.

No mitigation measures are proposed for vibration because the aerial structure with continuously welded rail would have vibration levels that are below the FTA impact criterion of 72 VdB.

1.7 2014-2015 Red Line Extension Project Update

Updated July 27, 2015
In August 2014, based on the technical analysis and public input until then, CTA announced the NEPA Preferred Alternative—the UPRR Rail Alternative. CTA is considering two alignment (route) options of this alternative: the East Option and the West Option. At this time, CTA is also

considering only the South Station Option of the 130th Street Station. In late 2014 and early 2015, CTA conducted additional engineering on the East and West Options to refine the East and West Option alignments. Appendix A of this technical memorandum summarizes the refined alignments and any additional or different impacts that could result. The information in Appendix A supersedes information presented in other chapters of this technical memorandum.

Section 2
Project Description

The CTA is proposing to extend the Red Line from the existing 95th Street Terminal to the vicinity of 130th Street, subject to the availability of funding. The proposed RLE would include four stations. Each station would include bus transfer and parking facilities. This project is one part of the Red Ahead Program to extend and enhance the entire Red Line. The CTA is also planning 95th Street Terminal improvements that are anticipated to be completed prior to the proposed RLE construction.

The project area is 11 miles south of the Chicago central business district (commonly referred to as the Loop) and encompasses approximately 20 square miles. The boundaries of the project area are 95th Street on the north, Ashland Avenue on the west, Stony Island Avenue on the east, and the Calumet-Sag Channel/Little Calumet River and 134th Street on the south. The I-57 Expressway and I-94 Bishop Ford Freeway cross the western and eastern edges of the project area, respectively. Lake Calumet is in the eastern portion of the project area. The project area encompasses parts of nine community areas in the City of Chicago and the eastern section of the Village of Calumet Park. Chicago community areas include Beverly, Washington Heights, Roseland, Morgan Park, Pullman, West Pullman, Riverdale, Hegewisch, and South Deering. The project area comprises residential (primarily single family), industrial (both existing and vacant), transportation (including freight), and commercial development.

The Draft EIS focuses on the following alternatives (shown in Figure 2-1), which emerged from the Alternatives Analysis and the National Environmental Policy Act (NEPA) scoping process:

- No Build Alternative
- BRT Alternative
- UPRR Rail Alternative
    - ROW Option
    - East Option
    - West Option
- Halsted Rail Alternative

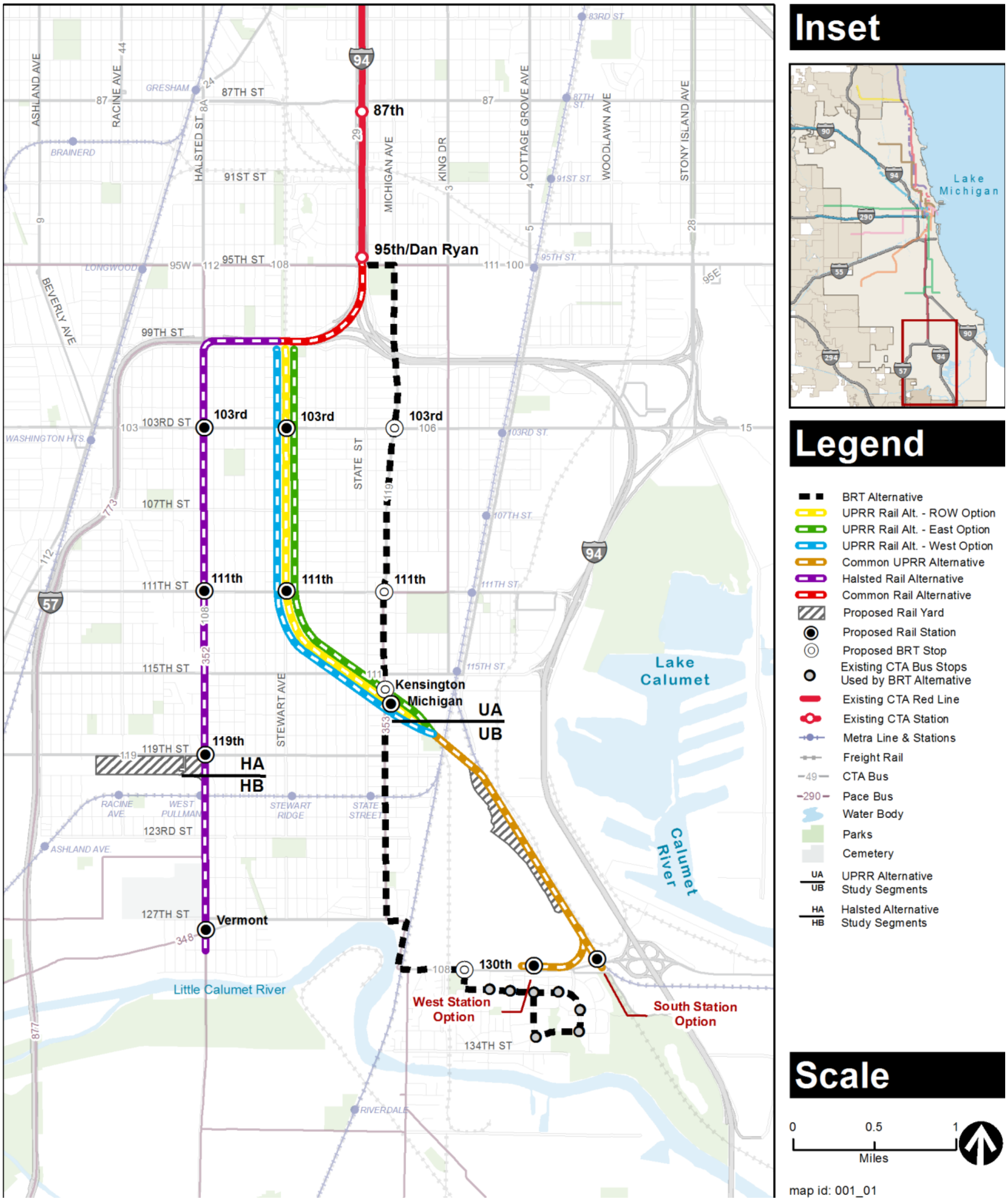

87th
95th/Dan Ryan
103rd
103rd
103rd
111th
111th
111th
119th
Vermont
Kensington
Michigan
UA
UB
HA
HB
130th
West Station Option
South Station Option
Lake Calumet
Calumet River
Little Calumet River
87TH ST
91ST ST
95TH ST
99TH ST
103RD ST
107TH ST
111TH ST
115TH ST
119TH ST
123RD ST
127TH ST
134TH ST
ASHLAND AVE
RACINE AVE
HALSTED ST
MICHIGAN AVE
KING DR
COTTAGE GROVE AVE
WOODLAWN AVE
STONY ISLAND AVE
STATE ST
STEWART AVE
BEVERLY AVE
Inset
Lake Michigan
Legend
BRT Alternative
UPRR Rail Alt. - ROW Option
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
Common UPRR Alternative
Halsted Rail Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Proposed BRT Stop
Existing CTA Bus Stops Used by BRT Alternative
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
CTA Bus
Pace Bus
Water Body
Parks
Cemetery
UPRR Alternative Study Segments
Halsted Alternative Study Segments
Scale
0
0.5
1
Miles
map id: 001_01

Figure 2-1: Red Line Extension Project Alternatives

The No Build Alternative is a required alternative as part of the NEPA environmental analysis and is used for comparison purposes to assess the relative benefits and impacts of extending the Red Line. The No Build Alternative is carried into the Draft EIS phase of the project development regardless of its performance versus the build alternatives under consideration. No new infrastructure would be constructed as part of the No Build Alternative other than committed transportation improvements that are already in the Chicago Metropolitan Agency for Planning (CMAP) Fiscal Year 2010–2015 Transportation Improvement Program (TIP) and the improvements to 95th Street Terminal. The TIP projects within the project area consist of four bridge reconstructions, several road improvement projects including resurfacing and coordination of signal timing on 95th Street, work on Metra's facilities, construction of a bicycle/pedestrian multi-use trail, and preservation of historic facilities. The No Build Alternative includes regular maintenance of existing track and structures, and bus transit service would be focused on the preservation of existing services and projects. All elements of the No Build Alternative are included in each of the other alternatives. Under this alternative, travel times would not improve from existing conditions.

The BRT Alternative (formerly referred to as the Transportation Systems Management Alternative) is a 5.0-mile, limited-stop, enhanced BRT route, which is assumed to operate 24 hours per day between the existing 95th Street Terminal and the intersection of 130th Street and Eberhart Avenue. No dedicated bus lanes would be provided for the BRT Alternative; however, parking lanes would be removed for some portions of the alignment and four stops with improved bus shelters and park & ride facilities would be created at 103rd Street and Michigan Avenue, 111th Street and Michigan Avenue, Kensington Avenue and Michigan Avenue, and 130th Street and Eberhart Avenue. Although BRT service elements would not continue south of the 130th Street stop, the bus route would continue through Altgeld Gardens along the existing route with six stops. The BRT Alternative would be consistent with bus routing changes that may occur as part of improvements to the 95th Street Terminal. Under this alternative, travel times between 130th Street and the Loop would improve over existing conditions.

The UPRR Rail Alternative is a 5.3-mile extension of the heavy rail transit Red Line from its existing 95th Street Terminal to 130th Street, just west of I-94. The Chicago Transit Board designated the UPRR Rail Alternative as the Locally Preferred Alternative at its August 12, 2009 board meeting. This alternative includes construction and operation of new heavy rail transit tracks, mostly in existing transportation corridors. The UPRR Rail Alternative has three options for alignment (ROW, East, and West), all of which would include operation on elevated structure from 95th Street to just past the Canadian National/Metra Electric District tracks near 119th Street. The alignment would then transition to at-grade through an industrial area with no public through streets, terminating at 130th Street in the vicinity of Altgeld Gardens. Four new stations would be constructed at 103rd Street, 111th Street, Michigan Avenue, and 130th Street. The 130th Street station would be the terminal station, with two options under evaluation: the South Station Option and the West Station Option. A new yard and shop facility would be sited near 120th Street and Cottage Grove Avenue. The bus routes in the vicinity of the UPRR Rail Alternative would be modified to enhance connectivity between the Red Line and the bus network. The hours of operation and service frequency for the UPRR Rail Alternative are assumed to be the same as

for the current Red Line. Under this alternative, travel times between 130th Street and the Loop would improve substantially over existing conditions.

The Halsted Rail Alternative is a 5.0-mile heavy rail transit extension of the existing Red Line. In this alternative, the Red Line would operate on an elevated structure running south from 95th Street along I-57 until Halsted Street. The alignment would then turn south and continue along Halsted Street to the intersection of Halsted Street and Vermont Avenue near 127th Street. This alternative would include four new stations at 103rd Street, 111th Street, 119th Street, and Vermont Avenue. The Vermont Avenue station would be the terminal station. A new yard and shop would be sited west of Halsted Street and between the 119th Street and Vermont Avenue stations. The bus routes in the vicinity of the Halsted Rail Alternative would be modified to enhance connectivity to the Red Line. The hours of operation and service frequency for the Halsted Rail Alternative are assumed to be the same as for the current Red Line. Under this alternative, travel times between 127th Street and the Loop would improve substantially over existing conditions. This alternative would not extend rail to Altgeld Gardens, which would be served by bus connecting to the Vermont terminal station.

Section 3
Methods for Impact Evaluation

This section describes the regulatory framework, the impact analysis thresholds, the area of potential impact, and the methods used to assess the potential for noise and vibration impacts from the RLE Project.

3.1 Regulatory Framework

3.1.1 Federal

The noise and vibration analyses for this project were prepared in accordance with the FTA (2006) *Transit Noise and Vibration Impact Assessment* guidance manual. This manual sets forth the basic concepts, methods, and procedures for evaluating the extent and severity of the noise and vibration impacts from transit projects. All aspects of the noise and vibration analyses were coordinated with CTA and FTA. The FTA employs three levels of analysis that may be applied depending on the complexity of the project. The first level is a screening procedure to determine whether noise-sensitive receivers are present based on the land uses in the vicinity of the project and is used to determine whether more detailed noise and vibration analysis is required. There are two levels of quantitative analysis for predicting impacts: a general assessment and a detailed analysis. The general assessment is used to identify and estimate the severity of noise and vibration impacts in an area. This method is used to provide information needed to differentiate potential alternatives. The detailed analysis is used to quantify impacts through an in-depth analysis of a single alternative.

The screening procedure was not required for this project because a majority of the corridor is within residential area and is known to contain noise- and vibration-sensitive land uses (Category 2). Three parks, six schools, and four churches (Category 3) are near the corridor. There are no Category 1 land uses within the corridor. Because there are known sensitive receivers for the RLE Project, further analysis was required. CTA completed a general assessment for the UPRR corridor to provide basic information for comparing the severity of impacts from implementation of the East and West Options. The impacts disclosed in this Draft EIS are maximum, worst-case impacts. More detailed analysis in the Final EIS may identify areas where impacts may be further reduced through design.

3.1.2 State

The State of Illinois in Title 35: Environmental Protection; Subtitle H: Noise; Part 900 established Sound Emission Standards and Limitations for Property Line Noise Sources for different land use classifications; however, the State of Illinois indicates that the noise limits do not apply to sound emitted from transit systems, or from equipment being used for construction.

3.1.3 Local

The City of Chicago Municipal Code Article XXI: Environmental Noise and Vibration Control (also referred to as the Chicago Environmental Noise Ordinance) established “noise disturbance” requirements. The City of Chicago noise limits do not apply to sounds or vibration generated in the operation of any mass transit system. In addition, these noise limits do not apply to any construction, demolition, or repair work of an emergency nature or to work on public improvements authorized by a governmental body or agency.

The Village of Calumet Park also has a Noise Code that refers to nuisance noise. Municipal services, such as transit systems that provide a public service, are exempt from such nuisance noise regulations.

3.2 Impact Analysis Thresholds

Because the State of Illinois and the City of Chicago noise limits do not apply to transit projects, the FTA's operational and construction noise and vibration criteria, as described in the guidance manual, were used to determine the thresholds of significance for this project.

3.2.1 Operational Noise

The FTA's *Transit Noise and Vibration Impact Assessment* guidance manual sets forth the basic concepts, methods, and procedures for evaluating the extent and severity of noise impacts from transit projects. In order to determine whether the noise levels from a proposed project might have an impact on an area, a comparison is made of the existing noise levels in the vicinity of the proposed project and the projected future outdoor noise levels from the project. The FTA guidance manual provides a set of criteria to determine land use types where noise-sensitive receptors would most likely occur (see Table 3-1). The FTA does not consider most commercial and industrial receptors to be sensitive to transit-related noise. Existing noise levels at representative noise-sensitive receptor locations along the RLE corridor were measured. Using the general noise assessment process, estimated noise levels were predicted for the No Build Alternative and the build alternatives. The results of the analysis were compared to the existing conditions and FTA noise criteria to determine the potential for impact.

Table 3-1: Federal Transit Administration Land Use Categories and Noise Metrics

Land Use Category[1]	Noise Level[2]	Description
1	L_{eq}(h)	Tracts of land set aside for serenity and quiet, such as outdoor amphitheaters, concert pavilions, and historic landmarks.
2	L_{dn}	Buildings used for sleeping, including residences, hospitals, hotels, and other areas where nighttime sensitivity to noise is of utmost importance.
3	L_{eq}(h)	Institutional land uses with primarily daytime and evening uses including schools, libraries, churches, museums, cemeteries, historical sites and parks, and certain recreational facilities used for study or meditation.

1. Land Use categories are based on sensitivity to noise intrusions.
2. The threshold noise limits include an hourly equivalent noise level (or L_{eq}(h)) for Category 1 and 3 receptors to the day-night noise level (or L_{dn}) for Category 2 receptors. The Federal Transit Administration noise limits, which are based on the existing background levels, are determined using empirical formulas shown graphically in Figure 3-1

The FTA noise impact criteria are delineated into two categories: moderate impact and severe impact. The moderate impact threshold defines areas where the change in noise would be noticeable but might not be sufficient to cause a strong, adverse community reaction. The severe impact threshold defines the noise limits above which a substantial percentage of the population would be highly annoyed by the change in noise. As shown in Figure 3-1, the FTA noise impact criteria are defined by two curves that allow increasing project noise levels as existing noise increases up to a point, beyond which impact is determined based on project noise alone.

Category 1 receptors (such as an amphitheater or historic landmark) are represented along the left axis and are described by the hourly equivalent noise level (hourly L_{eq}). Category 2 receptors (such as residences, hotels, and hospitals) are also represented along the left axis, but are described by the 24-hour day-night level (L_{dn}). Category 3 receptors (such as schools and churches) are represented along the right axis and are described by the hourly L_{eq} noise metric.

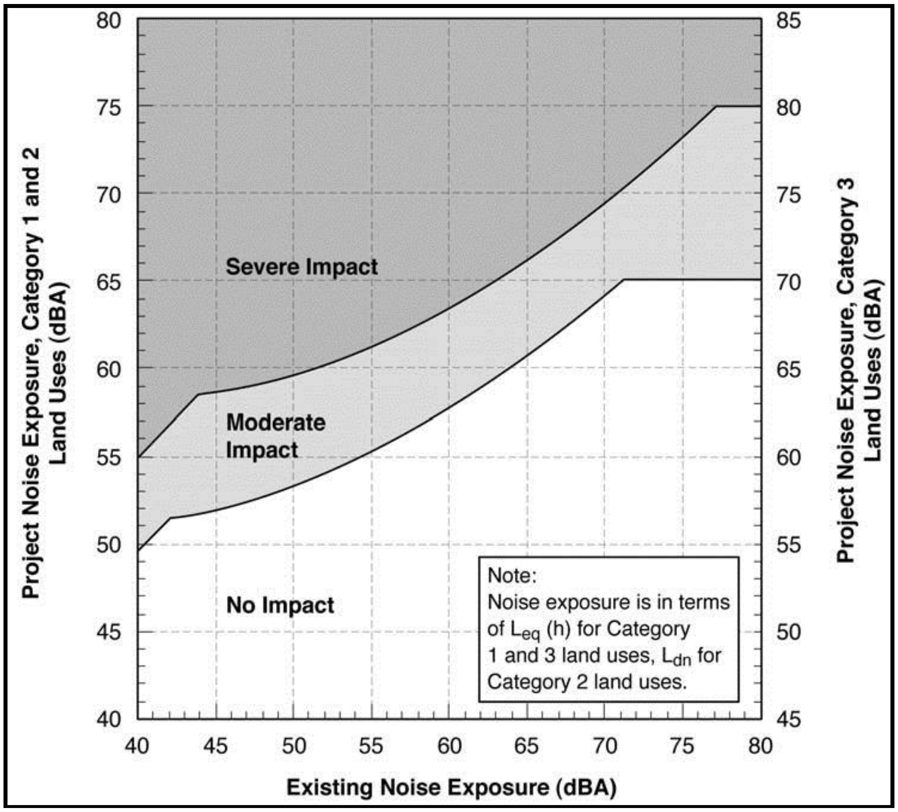


Figure 3-1: Federal Transit Administration Noise Impact Criteria for Transit Projects

Source: Transit Noise and Vibration Impact Assessment (FTA 2006)

Although the curves in Figure 3-1 are defined in terms of the project noise exposure and the existing noise exposure, it is the project's increase in noise from the existing noise levels that is the basis for the criteria. To illustrate this point, Figure 3-2 shows the noise impact criteria for Category 1 and 2 land uses in terms of the allowable increase in the existing noise exposure. The horizontal axis is the existing noise exposure and the vertical axis is the increase in noise level due to the RLE Project. The curves in Figure 3-2 indicate that the criterion for impact allows a noise exposure increase of 10 dBA if the existing noise exposure is 42 dBA or less, but only a one dBA increase when the existing noise level is 70 dBA. As the existing level of noise increases, the total amount that the community noise exposure is allowed to increase is reduced.

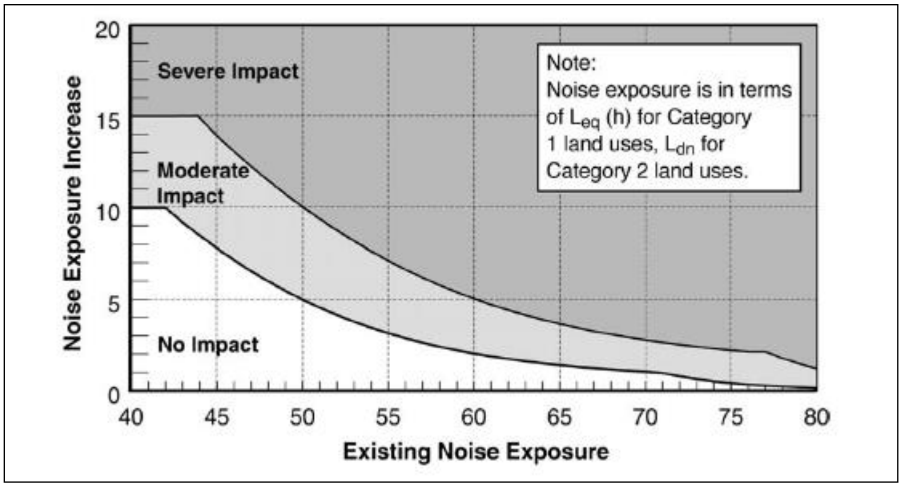


Figure 3-2: Increase in Noise Levels Allowed by Federal Transit Administration Criteria

Source: Transit Noise and Vibration Impact Assessment (FTA 2006)

3.2.2 Operational Vibration

The FTA criteria were used to assess annoyance due to vibration and ground-borne noise from transit operations. Table 3-2 shows the FTA vibration criteria for evaluating ground-borne vibration and noise impacts from train pass-bys at nearby sensitive receptors. These vibration criteria are related to ground-borne vibration levels that are expected to result in human annoyance, and are based on root mean square (rms) velocity levels expressed in decibels (VdB) relative to one micro-inch per second. The FTA's experience with community response to ground-borne vibration indicates that when there are only a few train events per day, it would take higher vibration levels to evoke the same community response that would be expected from more frequent events. This community response to ground-borne vibration is accounted for in the FTA criteria by distinguishing between projects with frequent (more than 70 train events per day), occasional (30 to 70 train events per day), and infrequent events (fewer than 30 train events per day). The vibration levels shown in Table 3-2 are defined in terms of human annoyance for different land use categories: high sensitivity (Category 1), residential (Category 2), and institutional (Category 3). In general, the threshold of human perceptibility of vibration is 65 VdB.

The vibration levels shown in Table 3-2 are well below the damage criteria levels of 95 to 100 VdB. It is extremely rare for vibration from transit operations to cause any sort of building damage, even minor cosmetic damage. Impacts from transit operations were determined for both vibration and ground-borne noise.

Table 3-2: Federal Transit Administration Ground-Borne Vibration and Noise Impact Criteria for Annoyance

Land Use Category	Ground-Borne Vibration Levels (VdB)[1]			Ground-Borne Noise Levels (dBA)[2]		
Description	Frequent Events[3]	Occasional Events[4]	Infrequent Events[5]	Frequent Events[3]	Occasional Event[4]	Infrequent Event[5]
Category 1: Buildings where low vibration is essential for interior operations	65	65	65	N/A[6]	N/A[6]	N/A[6]
Category 2: Residences and buildings where people normally sleep	72	75	80	35	38	43
Category 3: Institutional buildings with primarily daytime use	75	78	83	40	43	48

1. Root mean square vibration velocity levels are reported in decibels (or VdB) referenced to 1 microinch per second.
2. Ground-Borne noise levels are reported in A-weighted decibels (dBA) referenced to 20 micro Pascals.
3. “Frequent Events” is defined as more than 70 vibration events per day.
4. “Occasional Events” is defined as 30 to 70 vibration events per day.
5. “Infrequent Events” is defined as fewer than 30 vibration events per day.
6. N/A means “not applicable.” Vibration-sensitive equipment is not sensitive to ground-borne noise.

While vibration criteria are generally used to assess annoyance from transit sources at the exterior facade of receptors, ground-borne noise, or the rumbling sound due to vibrating room surfaces, is typically assessed indoors. In general, the relationship between vibration and ground-borne noise depends on the dominant frequency of the vibration and the acoustical absorption characteristics of the receiving room. Due to the limited data available regarding soil and ground propagation characteristics, average or typical soil conditions (hard compacted soil) were assumed everywhere along the RLE Project corridor. According to the FTA guidance, the dominant vibration frequency from train pass-bys along typical ground and soil conditions generally occurs in the 30–60 Hertz range. The ground-borne noise levels were adjusted accordingly.

3.2.3 Construction Noise

During the preliminary environmental permitting phase of a project, when construction details are limited, the FTA suggests evaluating proposed construction scenarios against the 1-hour L_{eq} thresholds shown in Table 3-3. These criteria are compared to noise levels from the two loudest pieces of equipment that, under worst-case conditions, would operate continuously for 1 hour.

Table 3-3: Recommended Federal Transit Administration Construction Noise Limits (in dBA)[1]

Land Use Category	Daytime[2]	Nighttime
Residential	90	80
Commercial	100	100
Industrial	100	100

1. The FTA construction noise limits are reported for the peak 1-hour period in A-weighted decibels (or dBA).
2. Construction noise limits are established for both daytime (7 AM-10 PM) and nighttime (10 PM-7 AM) activities. The maximum noise limits represent noise levels from the two loudest pieces of equipment operating at full power over a period of 1 hour.

3.2.4 Construction Vibration

For evaluating potential annoyance or interference with vibration-sensitive activities due to construction vibration, the FTA criteria in Table 3-2 were used. In most cases the primary concern regarding construction vibration relates to potential damage effects on buildings. Table 3-4 contains the FTA's guideline vibration damage criteria for various structural categories of buildings. The vibration damage criteria listed for Category IV structures includes historic buildings.

Table 3-4: Construction Vibration Damage Criteria

Building Category	Peak Particle Velocity (inches/second)	Approximate VdB[1]
Reinforced concrete, steel or timber (no plaster)	0.5	102
Engineered concrete and masonry (no plaster)	0.3	98
Non-engineered timber and masonry buildings	0.2	94
Buildings extremely susceptible to vibration damage	0.12	90

1. RMS velocity in decibels (VdB) relative to 1 micro-inch/second

Construction vibration is generally assessed in cases where there is a substantial potential for impacts from construction activity. Such activities include blasting, pile-driving, demolition, and drilling or excavation in close proximity to sensitive structures.

3.3 Area of Potential Impact

A general assessment was conducted to determine the areas that could have a moderate or severe impact along the proposed corridors. A general assessment was used to establish an impact contour (which defines the outer limit of an impact corridor) because there are numerous existing noise-sensitive receptors along the entire length of the project corridor. This noise and vibration assessment estimated the potential for noise and vibration impacts along each of the project alternative alignments.

3.4 Methods

3.4.1 Noise and Vibration Measurements

A noise-monitoring program was conducted to (1) establish the existing ambient background noise levels within the project area, and (2) develop the project criteria noise limits using the FTA guidance. Noise measurements were conducted at representative noise-sensitive receptor locations along each of the proposed project alignments. Using aerial base maps of the project corridor, and information obtained during a site visit, a total of 15 noise measurement locations and 4 vibration measurement locations were selected to represent the different types of residential and other noise-sensitive land uses along each of the project alignments. The primary goal of the initial selection of the noise and vibration measurement locations was to provide a reasonable distribution of locations along the project corridor in order to predict future conditions along the corridor. Only residential receptors were selected for the noise measurement locations because they represent the most noise sensitive locations along each of the proposed project corridors. A total of 15 noise measurement locations was considered reasonable for this project because the Halsted Rail Alternative alignment and the BRT Alternative alignment (along Michigan Avenue) are along streets where local traffic is the major noise source. For the UPRR Rail Alternatives, existing freight rail operation is the primary noise source and is relatively uniform along the project corridor. A distribution of the noise measurement locations along each of these alignments provided a reasonable representation of the existing noise levels. Table 3-5 lists the noise measurement locations along each of the project alternatives and describes the measurement type. Figure 3-3 shows the noise measurement locations along each of the alternative alignments.

The results of the noise-monitoring program were used to establish the existing background noise levels and to develop the allowable project noise increases using the FTA guidance. The noise-monitoring program consisted of measuring peak-hour L_{eq} at non-residential receptors and 24-hour L_{dn} at residential receptors along the RLE Project corridor. Section 4 summarizes the results of the noise-monitoring program. The sound level meters used on this project were Larson Davis Model 820A and CEL Model 593 meters, which are in compliance with the American National Standards Institute standards for Type I accuracy and quality.

Vibration measurements were obtained at four locations along the project corridor to determine the existing vibration levels from freight operations. The four vibration measurement sites are described in Table 3-6, and their locations are shown in Figure 3-3. They are at the same sites (locations 13, 7, 9, and 3) where the noise measurements were obtained. Vibration measurements were obtained using PCB Model 393 accelerometers, with the acceleration levels converted to velocity (in VdB) using a CEL model 293 Integrator, and recorded on a CEL Model 593 analyzer.

The sound level and vibration meters for this project were rented from Scantek. Rental agreements come with calibration verification information and associated documentation for each unit rented.

Table 3-5: Noise Measurement Locations

Location Number	Receptor Description	Measurement Type	Primary Noise Source
Noise Measurement Locations along the BRT Alternative Alignment			
12	Residence at 9630 S. Michigan Avenue	24-hour L_{dn} Hourly L_{eq}	Local Street Traffic
13	Residence at 10445 S. Michigan Avenue	24-hour L_{dn} Hourly L_{eq}	Local Street Traffic
14	Residence at 12221 S. Michigan Avenue	24-hour L_{dn} Hourly L_{eq}	Local Street Traffic
15	Residence at 12505 S. Michigan Avenue	24-hour L_{dn} Hourly L_{eq}	Local Street Traffic
Noise Measurement Locations along the UPRR Rail Alternative Alignment			
7	Residence at 354 W. 102nd Place	24-hour L_{dn} Hourly L_{eq}	UPRR Freight Rail
8	Residence at 352 W. 109th Street	24-hour L_{dn} Hourly L_{eq}	UPRR Freight Rail
9	Residence at 307 W. 113th Street	24-hour L_{dn} Hourly L_{eq}	UPRR Freight Rail
10	Residence at 11718 S. Prairie Avenue	24-hour L_{dn} Hourly L_{eq}	UPRR Freight Rail
11	Altgeld Gardens (along East 130 Place)	24-hour L_{dn} Hourly L_{eq}	Local Street Traffic
Noise Measurement Locations along the Halsted Rail Alternative Alignment			
1	Residence at 9901 S. Emerald Avenue	24-hour L_{dn} Hourly L_{eq}	Traffic on I-57
2	Residence at 10229 S. Halsted Street	24-hour L_{dn} Hourly L_{eq}	Local Street Traffic
3	Residence at 11005 S. Halsted Street	24-hour L_{dn} Hourly L_{eq}	Local Street Traffic
4	Residence along 119th Street	24-hour L_{dn} Hourly L_{eq}	Local Street Traffic
5	Residence at 12125 S. Halsted Street	24-hour L_{dn} Hourly L_{eq}	Local Street Traffic

Notes: L_{dn} = day-night average sound level, L_{eq} = equivalent continuous sound level. BRT = Bus Rapid Transit, UPRR = Union Pacific Railroad

Table 3-6: Vibration Measurement Locations

Location Number	Receptor Description	Vibration Source
13	Residence at 10445 S. Michigan Avenue	Local Street Traffic
7	Residence at 354 W. 102nd Place	UPRR Freight Trains
9	Residence at 307 W. 113th Street	UPRR Freight Trains
3	Residence at 11005 S. Halsted Street	Local Street Traffic

Notes: UPRR = Union Pacific Railroad

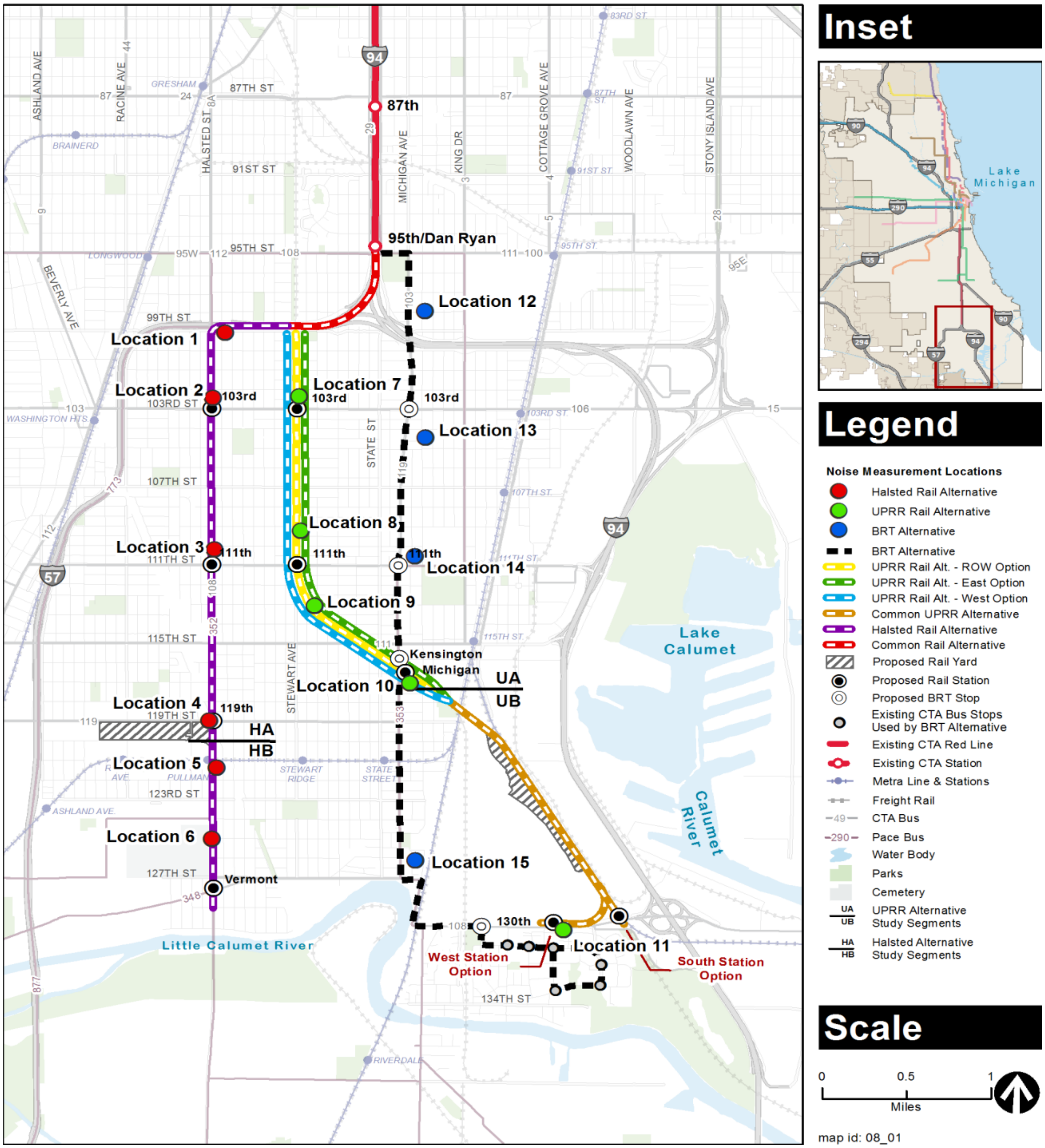

Location 1
Location 2
Location 3
Location 4
Location 5
Location 6
Location 7
Location 8
Location 9
Location 10
Location 11
Location 12
Location 13
Location 14
Location 15
87th
95th/Dan Ryan
103rd
111th
119th
Vermont
Kensington
Michigan
130th
UA
UB
HA
HB
West Station Option
South Station Option
87TH ST
91ST ST
95TH ST
99TH ST
103RD ST
107TH ST
111TH ST
115TH ST
119TH ST
123RD ST
127TH ST
134TH ST
ASHLAND AVE
RACINE AVE
HALSTED ST
MICHIGAN AVE
KING DR
COTTAGE GROVE AVE
WOODLAWN AVE
STONY ISLAND AVE
STATE ST
STEWART AVE
BEVERLY AVE
GRESHAM
BRAINERD
LONGWOOD
WASHINGTON HTS
STEWART RIDGE
STATE STREET
PULLMAN AVE
ASHLAND AVE
RIVERDALE
83RD ST
87TH ST
91ST ST
95TH ST
103RD ST
107TH ST
111TH ST
115TH ST
Lake Calumet
Calumet River
Little Calumet River
94
57
Inset
Lake Michigan
90
94
290
55
294
57
Legend
Noise Measurement Locations
Halsted Rail Alternative
UPRR Rail Alternative
BRT Alternative
BRT Alternative
UPRR Rail Alt. - ROW Option
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
Common UPRR Alternative
Halsted Rail Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Proposed BRT Stop
Existing CTA Bus Stops Used by BRT Alternative
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
-49- CTA Bus
-290- Pace Bus
Water Body
Parks
Cemetery
UA UB UPRR Alternative Study Segments
HA HB Halsted Alternative Study Segments
Scale
0
0.5
1
Miles
map id: 08_01

Figure 3-3: Noise Measurement Locations

3.4.2 Impact Assessment

Noise and vibration levels were predicted along the project corridor at the representative sensitive receptors within the project area for the proposed alternatives using FTA modeling methods as described in Section 3.4.2.1 below. Potential corridor-wide impacts were identified at noise-sensitive land uses based on model outcomes to determine areas where increases in noise would be moderate or severe. A similar assessment of the project-related vibration levels was performed to determine the location of vibration impacts. Total project noise levels (e.g., L_{eq} and L_{dn}) and single event transit pass-by vibration levels were compared to the FTA criteria to determine impacts. In addition, the predicted project build noise and vibration levels were compared to the existing measured noise and vibration levels to estimate any expected changes along the project corridor. Maximum hourly L_{eq} construction noise levels and equipment peak particle velocity (ppv) vibration levels were compared to FTA criteria to determine the potential impact during construction.

If the predicted noise and vibration levels exceeded the FTA criteria, the feasibility of abatement measures listed in the FTA guidance was evaluated for mitigating impacts at noise- and vibration-sensitive receptors. For locations where noise barriers were recommended, their feasibility was evaluated in a qualitative manner by identifying potential barrier locations, the approximate length and height of the noise barrier, and other factors that would limit barrier performance.

3.4.2.1 Noise Modeling Analysis

The FTA noise prediction guidance contains mathematical algorithms that allow the computation of project-generated noise levels at the representative receptor locations. The model requires inputs such as maximum noise levels at 50 feet for each type of noise source (e.g., rapid transit pass-bys, wheel squeal) that would occur along the RLE Project corridor. The reference source noise levels to be included in the assessment are described in Table 3-5. Inputs such as vehicle volumes, number of cars, and speeds were used to determine the predicted project noise levels at identified receptors within each of the project corridor alternatives. Other inputs such as track type (continuously welded rail), the presence of an intervening noise barrier, ground attenuation effects, and the shielding effects from rows of buildings were used to refine the modeling assessment. Each of the applicable noise metrics and criteria thresholds, as described in Section 3.2, were used to evaluate project-related noise impacts at receptor locations.

The rail operations proposed along the project corridor would consist of train types similar to those that currently operate along the Red Line corridor. These vehicles consist of electric powered passenger rail cars operating on jointed track. The analysis assumed continuous welded rail on an aerial closed deck structure throughout the RLE rail corridor (CTA 2012). Switches and other trackwork that would increase noise levels were also included in this noise analysis. Adjustments to the predicted noise levels for each pass-by included the following:

- Track type - aerial (closed deck concrete slab) with continuous welded rail
- Train speed

- Distance from the track to the receptor
- Number of cars per train
- Daytime and nighttime train volumes

Table 3-7 shows reference data such as maximum noise level (L_{max}), sound exposure level (SEL), and average acoustical source height for transit pass-by noise sources. The L_{max} level is the maximum noise level generated during the train pass-by. The SEL is the total sound energy generated by the train pass-by compressed into a 1-second time interval.

Table 3-7: Transit Sources Included in the Noise Impact Assessment

Description	Type[4]	Location	Noise Level[1] (L_{max})	Noise Level[1] (SEL)	Time[2] (seconds)	Height[3] (feet)
Rapid Transit Car Pass-bys	Mobile	Alignment	80	82	N/A[5]	2
Wheel Squeal	Stationary	Curves	100	136	4	0
Auxiliary Equipment - Rapid Transit[6]	Stationary	Stations	67	103	30	10

1. Reference Federal Transit Authority maximum noise levels (or L_{max}) or sound exposure levels (or SEL) are reported in A-weighted decibels (dBA) at a reference distance of 50 feet and 50 miles per hour (for mobile sources only).
2. Average duration time for various events is reported in seconds per vehicle or event.
3. The effective acoustical source heights are reported in feet above rail (for train source) or feet above ground.
4. Moving transit sources are modeled as mobile or line sources, while stationary sources are modeled as stationary or point sources.
5. N/A means not applicable. Pass-by and facility noise prediction equations do not require a duration time.
6. Auxiliary equipment refers to the air conditioning units under the passenger rail cars, which are the primary noise source when the trains are stopped at the stations.

Using the peak- and 24-hour train volumes provided by CTA for the build alternatives, pass-by noise levels from train operations were predicted at each of the identified receptor locations along each alternative alignment using the FTA fixed-guideway calculation algorithms from the FTA guidance manual.

3.4.2.2 Vibration Modeling Analysis

As with noise, the FTA guidance was used to predict vibration levels from transit operations. The FTA vibration model combines various algorithms with empirically developed ground surface curves to estimate transit vibration levels in average soil conditions. Figure 3-4 shows the FTA surface vibration curves that were used to predict ground-borne vibration and noise levels from transit operations at receptor locations. For each segment along the RLE Project corridor, other inputs, including source-, path-, and receptor-specific adjustment factors, are specified for each train/receptor combination. The model then computes rms velocity levels and converted ground-borne noise levels at each identified receptor location for single-event train pass-bys. These computed levels were then compared to the FTA ground-borne vibration impact criteria to determine the onset of impact. As shown in Figure 3-4, vibration curves are specified for locomotives, rapid transit, and buses.

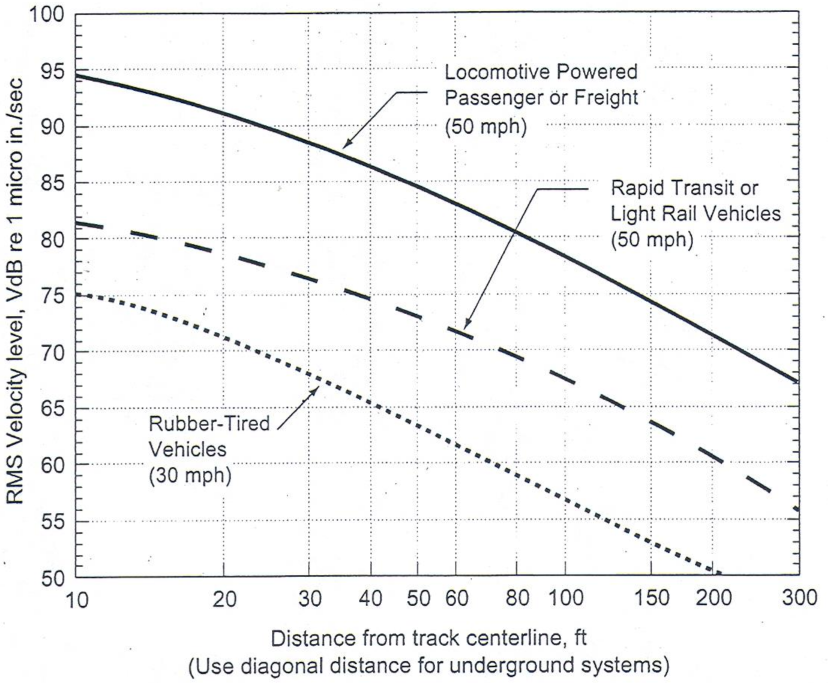


Figure 3-4: Increase in Noise Levels Allowed by Federal Transit Administration Criteria

Source: Transit Noise and Vibration Impact Assessment (FTA 2006)
Notes: mph = miles per hour, ft = feet, micro in./sec = microinch per second

3.4.2.3 Construction Noise and Vibration

Construction noise levels were calculated for the different phases of construction activity associated with the project. The type and number of pieces of construction equipment that could be required during each phase of construction are in the *Construction Technical Report*. Using the construction equipment reference source noise levels and the calculation methods described in the FTA guidance manual, estimates of predicted construction noise levels were determined for the representative receptors to determine potential impacts.

Peak particle velocity (ppv) in inches/second is the metric of interest for evaluating construction vibration impacts on buildings. The ppv is defined as the maximum instantaneous positive or negative peak of the vibration event. Although ppv is appropriate for evaluating the potential for building damage, it is not suitable for evaluating human response to vibration. Because it takes some time for the human body to respond to vibration signals, the average (rms) vibration level expressed in VdB was used to evaluate vibration impacts in terms of annoyance to humans. Vibration from construction activity is caused by general equipment operations, and is usually highest during pile-driving, blasting, soil compacting, jackhammering, and construction-related demolition activities. Construction equipment source vibration levels from the FTA guidance manual were used to assess the potential for structural damage to buildings (ppv) and human annoyance (rms VdB) to building occupants.

Section 4
Affected Environment

4.1 Noise Measurements

Noise measurements were obtained at a total of 15 representative locations near the alignments for the three project alternatives. These 15 measurement locations are shown in Figure 3-3. Six measurement locations were along the Halsted Rail Alternative alignment, five measurement locations were along the UPRR Rail Alternative alignment, and four locations were along the BRT Alternative alignment. All measurement locations represented sensitive receptors that might be affected by noise from the RLE Project.

The noise measurements were obtained during October 19–26, 2012, and consisted of 24-hour noise measurements at residential locations to determine the existing L_{dn} and highest hourly L_{eq} along each of the alignments. Table 4-1 shows the measured L_{dn} and L_{eq} obtained at each of the 15 locations.

4.1.1 BRT Alternative

Measurement Locations 12, 13, 14, and 15 were along Michigan Avenue, the proposed route of the BRT Alternative. The measured L_{dn} levels along Michigan Avenue were due to local street traffic and ranged from 60.8 dBA at measurement Location 13 to 65.5 dBA at measurement Location 15.

4.1.2 UPRR Rail Alternative

Measurement Locations 7, 8, 9, and 10 were along the UPRR Rail Corridor. Because of the existing freight rail operations along the UPRR Rail Corridor, the L_{dn} measurements were high, ranging from 74.6 dBA at Location 8 to 77.0 dBA at Location 9. Measurement Location 11 was at Altgeld Gardens along East 130 Place across from the proposed 130th Street West Station Option. The measured L_{dn} at Location 11 was 63.2 dBA due to the local street traffic on 130th Street.

4.1.3 Halsted Rail Alternative

The measured L_{dn} of 65.0 dBA at Location 1 at 9901 S. Emerald Avenue is representative of the traffic noise along I-57. Measurement Locations 2, 3, 5, and 6 were along Halsted Street, where L_{dn} measurements from local street traffic ranged from 60.5 dBA at Location 3 and 64.2 dBA at Location 2. Measurement Location 4 was along 119th Street adjacent to the proposed yard and shop location. The measured L_{dn} at Location 4 was 58.6 dBA.

Table 4-1: Noise Level Measurements at Representative Locations

Location Number	Receptor Description	Measured L_{dn}	Highest Hourly L_{eq}
Noise Measurement Locations along the BRT Alternative Alignment			
12	Residence at 9630 S. Michigan Avenue	63.7 dBA	63.2 dBA
13	Residence at 10445 S. Michigan Avenue	60.8 dBA	67.5 dBA
14	Residence at 12221 S. Michigan Avenue	64.1 dBA	63.7 dBA
15	Residence at 12505 S. Michigan Avenue	65.5 dBA	71.0 dBA
Noise Measurement Locations along the UPRR Rail Alternative Alignment			
7	Residence at 354 W. 102nd Place	75.5 dBA	76.7 dBA
8	Residence at 352 W. 109th Street	74.6 dBA	73.6 dBA
9	Residence at 307 W. 113th Street	77.0 dBA	78.4 dBA
10	Residence at 11718 S. Prairie Avenue	74.2 dBA	73.0 dBA
11	Altgeld Gardens (along East 130 Place)	63.2 dBA	62.5 dBA
Noise Measurement Locations along the Halsted Rail Alternative Alignment			
1	Residence at 9901 S. Emerald Avenue	65.0 dBA	64.5 dBA
2	Residence at 10229 S. Halsted Street	64.2 dBA	69.2 dBA
3	Residence at 11005 S. Halsted Street	60.5 dBA	59.1 dBA
4	Residence on 119th Street	58.6 dBA	59.7 dBA
5	Residence at 12125 S. Halsted Street	63.7 dBA	70.0 dBA
6	Residence at 12412 S. Halsted Street	61.6 dBA	68.4 dBA

Notes: L_{dn} = day-night average sound level, L_{eq} = hourly equivalent sound level, dBA = A-weighted decibels, BRT = Bus Rapid Transit, UPRR = Union Pacific Railroad

4.2 Vibration Measurements

Vibration measurements were obtained at four locations to determine the existing vibration levels along the alignments of each of the project alternatives. Vibration measurements were obtained at noise measurement Location 3 along the Halsted Rail Alternative alignment, vibration measurements were obtained at two locations along the UPRR Rail Alternative alignment (noise measurement Locations 7 and 9), and the fourth vibration measurement location was along the BRT Alternative alignment (noise measurement Location 13). The vibrations measured along Halsted Street and Michigan Avenue were due to local street traffic, primarily trucks and buses. Typical measured vibration levels from trucks and buses along Halsted Street and Michigan Avenue ranged from 60 to 70 VdB. The vibration levels measured along the UPRR Rail Corridor were due to freight rail operations. At a distance of approximately 100 feet from the freight train pass-bys, the measured vibration levels ranged from 75 to 80 VdB. Table 4-2 shows the results of the vibration measurements.

Table 4-2: Measured Vibration Levels

Location Number	Receptor Description	Measured Vibration Levels
Vibration Measurement Location along the BRT Alternative Alignment		
13	Residence at 10445 S. Michigan Avenue	60 to 70 VdB
Vibration Measurement Locations along the UPRR Rail Alternative Alignment		
7	Residence at 354 W. 102nd Place	75 to 80 VdB
9	Residence at 307 W. 113th Street	75 to 80 VdB
Vibration Measurement Location along the Halsted Rail Alternative Alignment		
3	Residence at 11005 S. Halsted Street	60 to 70 VdB

Notes: BRT = Bus Rapid Transit, UPRR = Union Pacific Railroad, VdB = decibels referenced to 1 microinch per second

Section 5
Impacts and Mitigations

The following sections describe the results of the noise and vibration analysis, identify areas of impact along each of the project alternatives, and present the results and effectiveness of the potential mitigation measures.

5.1 No Build Alternative

The No Build Alternative assumes no change in the existing conditions and therefore no change to the existing noise and vibration levels would occur within the project area.

5.1.1 Permanent Impacts and Mitigations – No Build Alternative

The No Build Alternative would result in no noise and vibration impacts. As a result, mitigation measures were not considered.

5.1.2 Construction Impacts and Mitigations – No Build Alternative

The No Build Alternative would not include any construction. As a result, mitigation measures were not considered.

5.2 Bus Rapid Transit Alternative

In accordance with FTA guidance for residential receptors, the L_{dn} measurements were used to determine the FTA moderate and severe impact criteria for the BRT Alternative using the curves in Figure 3-1. For example, the measured L_{dn} at location 12 was 63.7 dBA. From the curves in Figure 3-1, an existing L_{dn} noise exposure of 63.7 dBA for a residential receptor (Category 2) could result in a moderate noise impact criterion of 60.0 dBA, and a severe noise impact criterion of 65.4 dBA. Table 5-1 shows the measured L_{dn} at each of the four measurement locations along the BRT Alternative Alignment, along with the corresponding FTA moderate and severe noise impact criteria.

Table 5-1: Federal Transit Administration Moderate and Severe Impact Criteria for the Bus Rapid Transit Alternative

Location Number	Receptor Description	Measured Noise Level (L_{dn})	FTA Moderate Impact Criterion	FTA Severe Impact Criterion
12	Residence at 9630 S. Michigan Avenue	63.7 dBA	60.0 dBA	65.4 dBA
13	Residence at 10445 S. Michigan Avenue	60.8 dBA	58.2 dBA	63.8 dBA
14	Residence at 12221 S. Michigan Avenue	64.1 dBA	60.2 dBA	65.7 dBA
15	Residence at 12505 S. Michigan Avenue	65.5 dBA	61.2 dBA	66.5 dBA

Notes: L_{dn} = day-night average sound level, FTA = Federal Transit Administration, dBA = A-weighted decibel

For the BRT Alternative, buses would operate on 4-minute headways in each direction between the hours of 6 AM and 8 PM, and on 12-minute headways in each direction between the hours of 8 PM and 6 AM. Based on these headway times, the total number of northbound and southbound bus operations over a 24-hour period would be 520 (410 daytime bus operations between 7 AM and 10 PM, and 110 nighttime bus operations between 10 PM and 7 AM). Based on the number of daytime and nighttime bus operations and a speed of 35 miles per hour (mph), the 24-hour L_{dn} from the bus operations would be 62.1 dBA at a distance of 50 feet. Extrapolating this noise level using the distance attenuation methods described in the FTA guidance manual results in the impact distances within which moderate and severe noise impacts would occur for the BRT Alternative. For example, for noise measurement Location 12, which represents the existing noise level along the BRT Alternative alignment from 95th Street to 103rd Street, the noise at residential receptors within 69 feet of the buses would exceed the FTA's moderate impact criteria level of 60 dBA, and the noise at residential receptors within 30 feet of the buses would exceed the FTA's severe impact criteria level of 65.4 dBA shown in Table 5-1. Table 5-2 lists the moderate and severe impact distances for the BRT Alternative.

Table 5-2: Federal Transit Administration Moderate and Severe Impact Distances for the Bus Rapid Transit Alternative

Location Number	Receptor Description/(Area of Impact)	Measured Noise Level (L_{dn})	FTA Moderate Impact Distance	FTA Severe Impact Distance
12	Residence at 9630 S. Michigan Avenue/ (from 95th Street to 103rd Street)	63.7 dBA	69 feet	30 feet
13	Residence at 10445 S. Michigan Avenue/ (from 103rd Street to 115th Street)	60.8 dBA	91 feet	38 feet
14	Residence at 12221 S. Michigan Avenue/ (from 115th Street to 124th Street)	64.1 dBA	67 feet	29 feet
15	Residence at 12505 S. Michigan Avenue/ (from 124th Street to 130th Street)	65.5 dBA	57 feet	26 feet

Notes: L_{dn} = day-night average sound level, FTA = Federal Transit Administration, dBA = A-weighted decibel

5.2.1 Permanent Impacts and Mitigations - Bus Rapid Transit Alternative

Using the impact distances from Table 5-2, noise contours were developed for the BRT Alternative to show the areas of moderate and severe impact along the project corridor. Figures 5-1a through 5-1f show the BRT Alternative with the moderate and severe noise impact contours. From 95th Street to 103rd Street, the moderate noise impact distance would be 69 feet from the nearest bus lane, and the severe noise impact distance would be 30 feet from the nearest bus lane. From 103rd Street to 115th Street, the moderate noise impact distance would be 91 feet, and the severe noise impact distance would be 38 feet. From 115th Street to 124th Street, the moderate noise impact distance would be 67 feet, and the severe impact distance would be 29 feet. From 124th Street to 130th Street, the moderate noise impact distance would be 57 feet, and the severe noise impact distance would be 26 feet. Residential receptors within the FTA moderate noise impact contours shown in Figure 5-1 would be affected by the BRT Alternative.

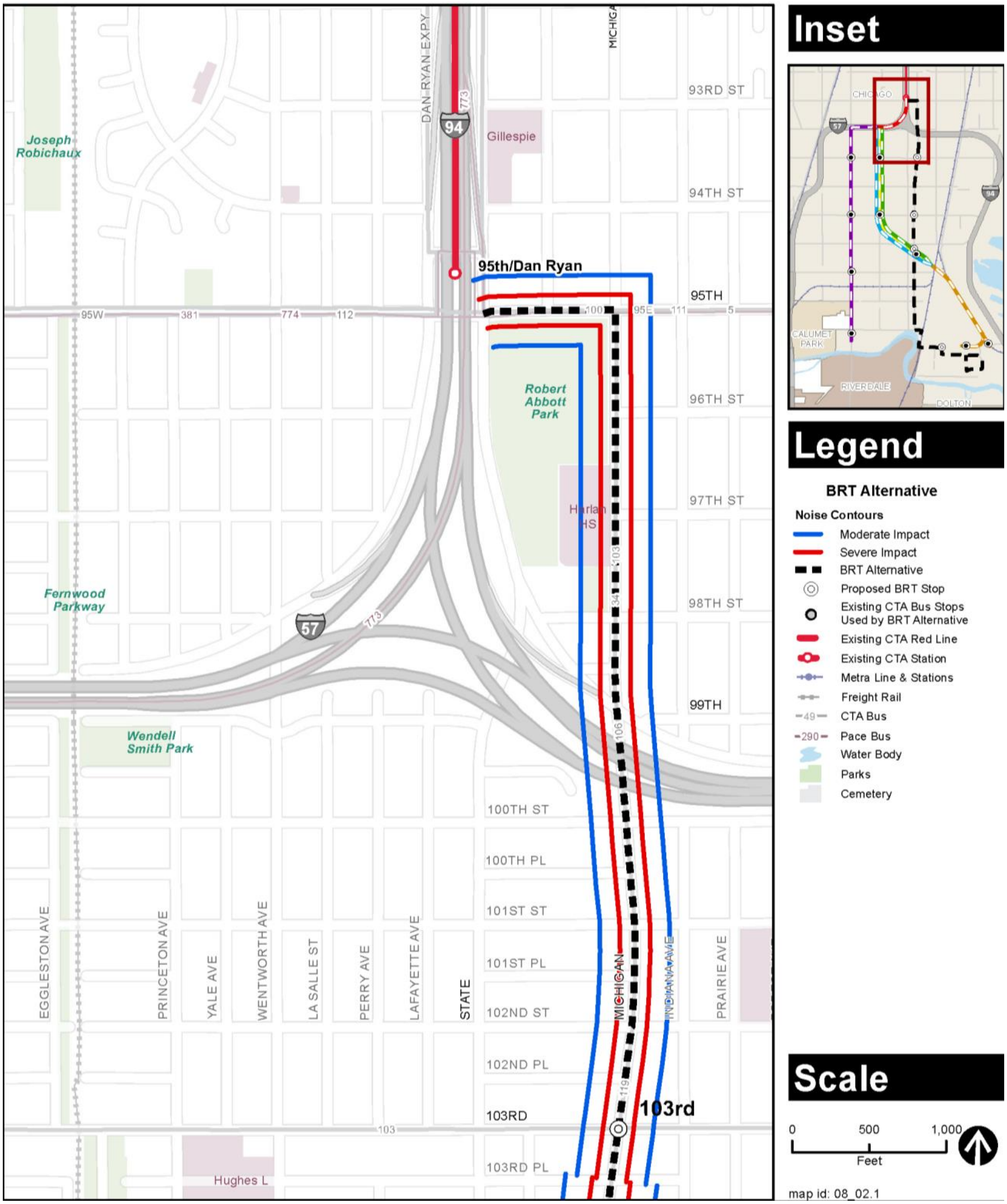
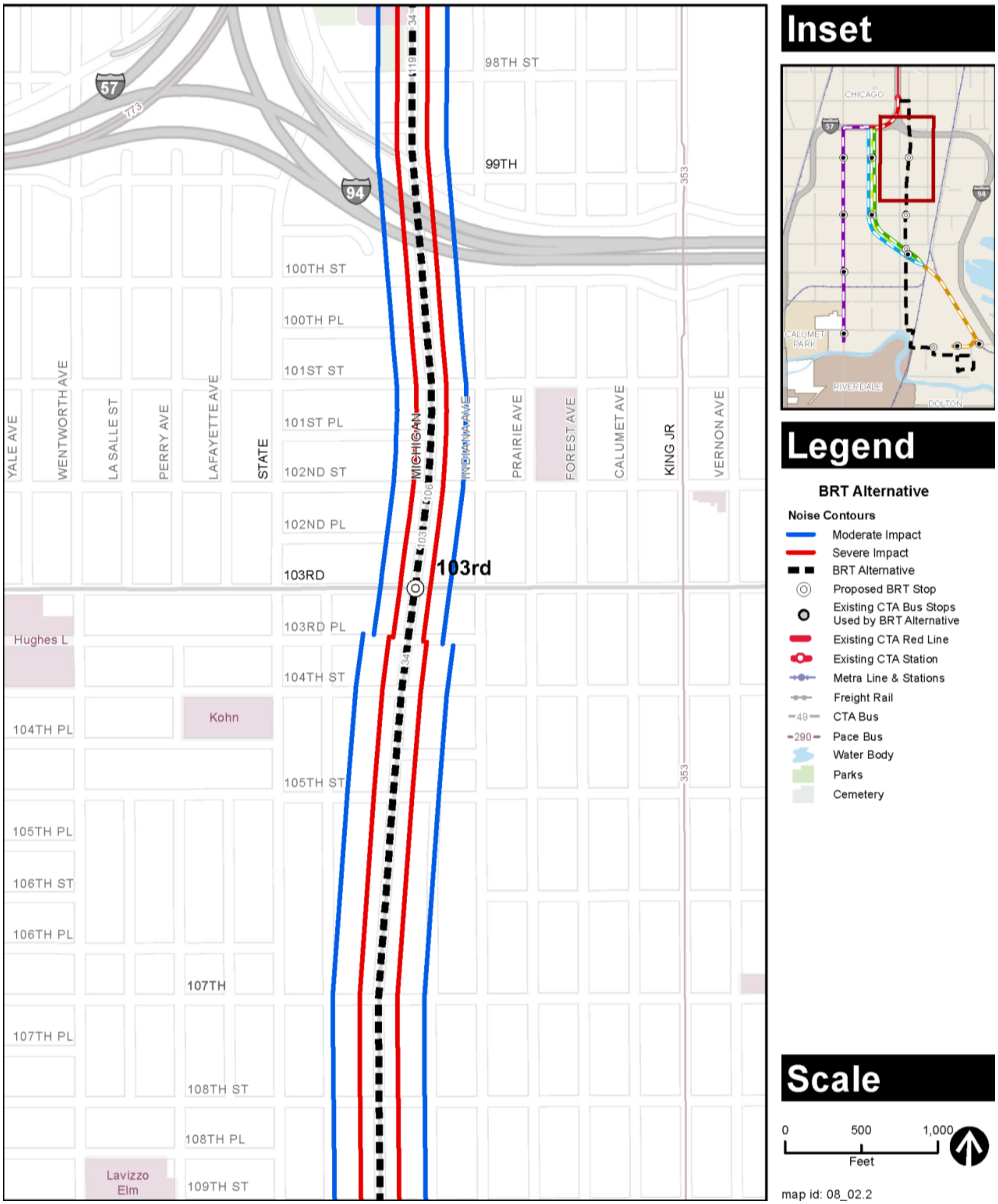

Inset
CHICAGO
CALUMET PARK
RIVERDALE
DOLTON
Legend
BRT Alternative
Noise Contours
Moderate Impact
Severe Impact
BRT Alternative
Proposed BRT Stop
Existing CTA Bus Stops Used by BRT Alternative
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
49 CTA Bus
290 Pace Bus
Water Body
Parks
Cemetery
Scale
0
500
1,000
Feet
map id: 08_02.1
DAN RYAN EXPY
94
773
MICHIGAN
93RD ST
Gillespie
94TH ST
Joseph Robichaux
95th/Dan Ryan
95TH
95W
381
774
112
100
95E
111
5
Robert Abbott Park
96TH ST
Harlan HS
97TH ST
103
Fernwood Parkway
57
98TH ST
99TH
Wendell Smith Park
106
100TH ST
100TH PL
101ST ST
101ST PL
102ND ST
102ND PL
103RD
103rd
103RD PL
Hughes L
EGGLESTON AVE
PRINCETON AVE
YALE AVE
WENTWORTH AVE
LA SALLE ST
PERRY AVE
LAFAYETTE AVE
STATE
MICHIGAN
INDIANA AVE
PRAIRIE AVE
119

Figure 5-1a: Bus Rapid Transit Alternative with Moderate (in Blue) and Severe (in Red) Impact Noise Contours


98TH ST
99TH
100TH ST
100TH PL
101ST ST
101ST PL
102ND ST
102ND PL
103RD
103rd
103RD PL
104TH ST
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105TH ST
105TH PL
106TH ST
106TH PL
107TH
107TH PL
108TH ST
108TH PL
109TH ST
YALE AVE
WENTWORTH AVE
LA SALLE ST
PERRY AVE
LAFAYETTE AVE
STATE
MICHIGAN
INDIANA AVE
PRAIRIE AVE
FOREST AVE
CALUMET AVE
KING JR
VERNON AVE
57
94
773
353
Hughes L
Kohn
Lavizzo
Elm
Inset
CHICAGO
CALUMET PARK
RIVERDALE
DOLTON
Legend
BRT Alternative
Noise Contours
Moderate Impact
Severe Impact
BRT Alternative
Proposed BRT Stop
Existing CTA Bus Stops Used by BRT Alternative
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
49 CTA Bus
290 Pace Bus
Water Body
Parks
Cemetery
Scale
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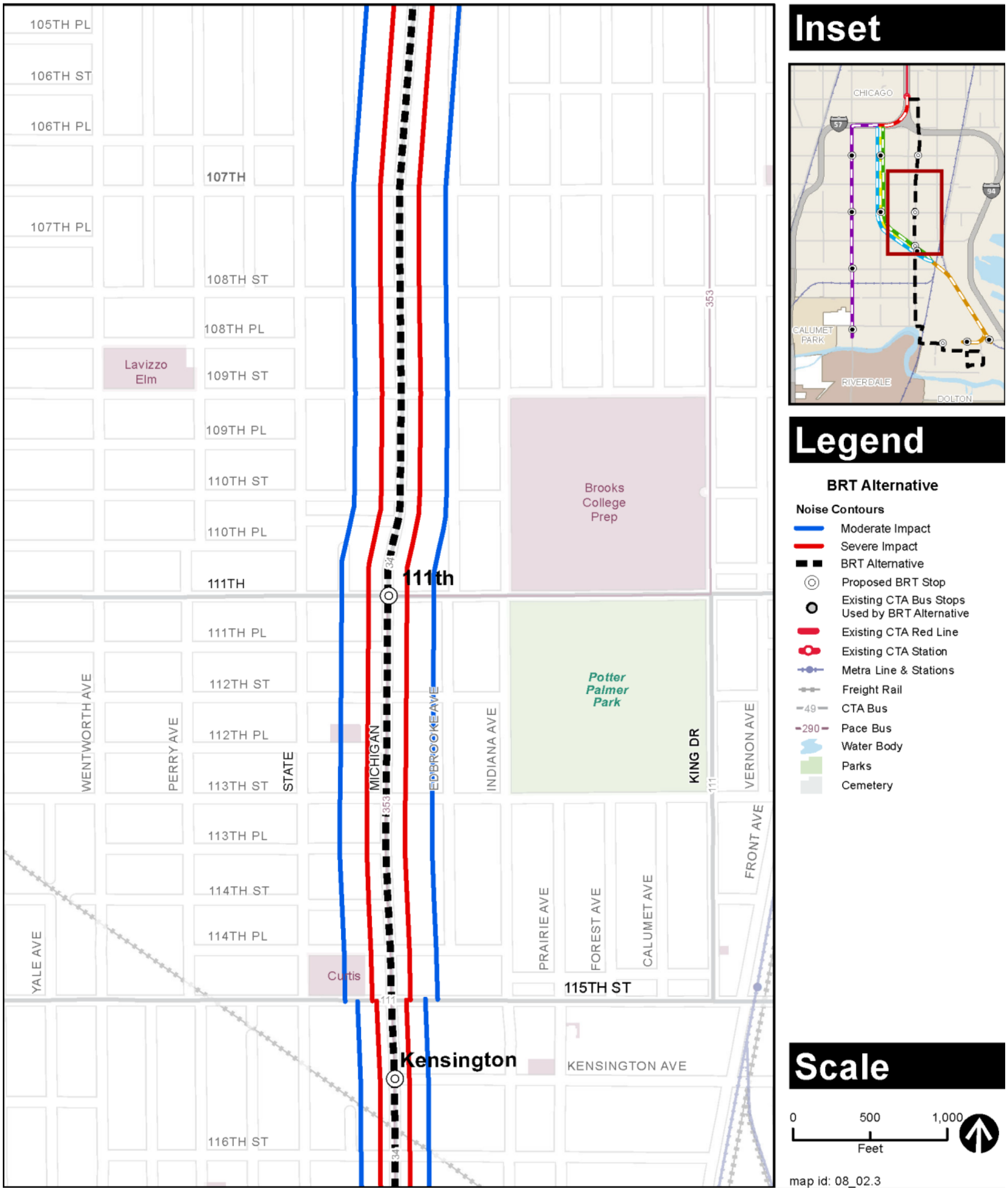
1,000
Feet
map id: 08_02.2

Figure 5-1b: Bus Rapid Transit Alternative with Moderate (in Blue) and Severe (in Red) Impact Noise Contours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106TH PL
107TH
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Lavizzo Elm
109TH ST
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110TH ST
110TH PL
111TH
111th
Brooks College Prep
111TH PL
112TH ST
112TH PL
113TH ST
113TH PL
114TH ST
114TH PL
Potter Palmer Park
WENTWORTH AVE
PERRY AVE
STATE
MICHIGAN
EDBROOKE AVE
INDIANA AVE
KING DR
VERNON AVE
FRONT AVE
YALE AVE
PRAIRIE AVE
FOREST AVE
CALUMET AVE
Curtis
115TH ST
Kensington
KENSINGTON AVE
116TH ST
353
111
34
Inset
CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON
Legend
BRT Alternative
Noise Contours
Moderate Impact
Severe Impact
BRT Alternative
Proposed BRT Stop
Existing CTA Bus Stops Used by BRT Alternative
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
49 CTA Bus
290 Pace Bus
Water Body
Parks
Cemetery
Scale
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1,000
Feet
map id: 08_02.3

Figure 5-1c: Bus Rapid Transit Alternative with Moderate (in Blue) and Severe (in Red) Impact Noise Contours

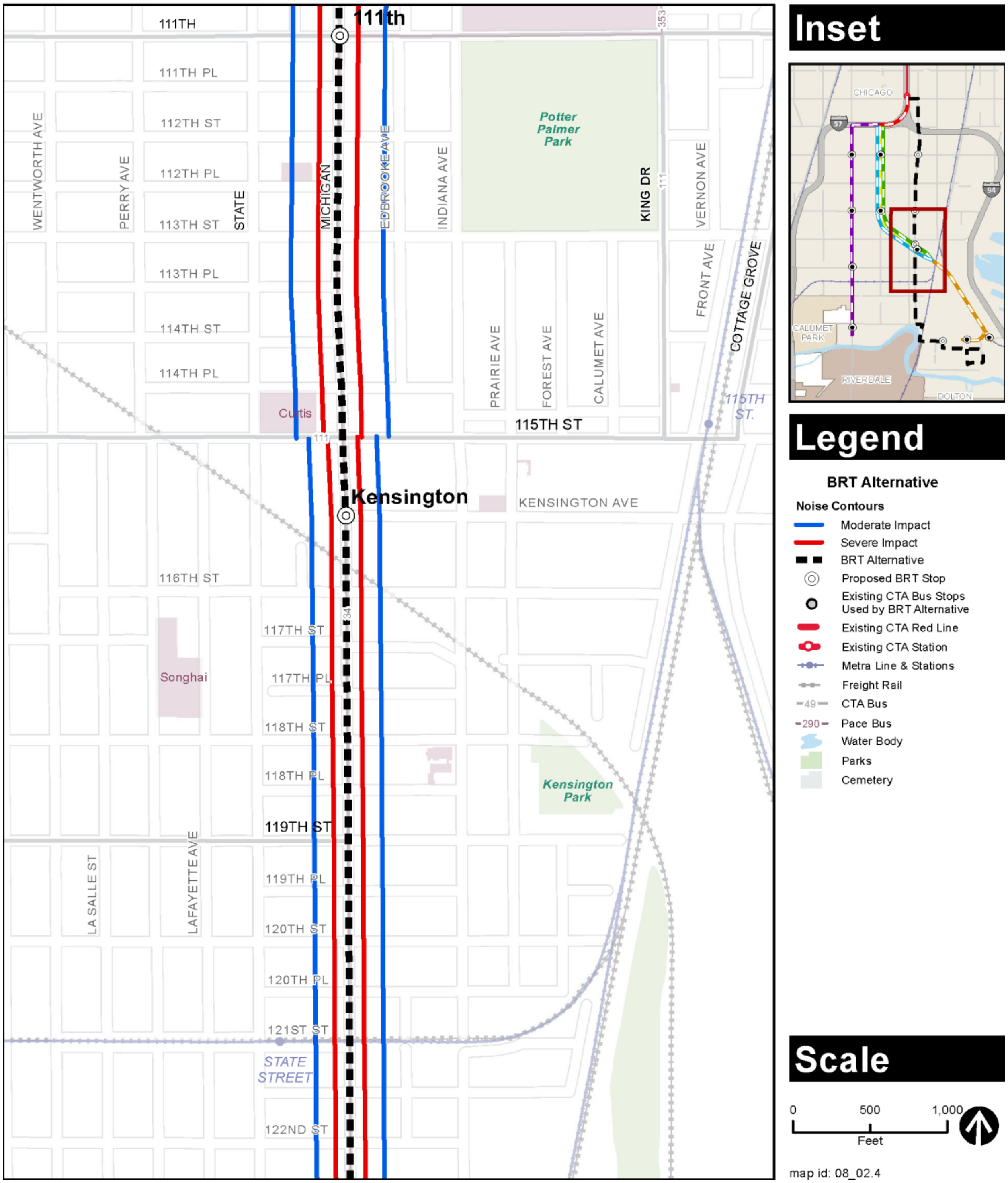

111TH
111th
111TH PL
112TH ST
112TH PL
113TH ST
113TH PL
114TH ST
114TH PL
WENTWORTH AVE
PERRY AVE
STATE
MICHIGAN
EDBROOKE AVE
INDIANA AVE
Potter Palmer Park
KING DR
VERNON AVE
FRONT AVE
COTTAGE GROVE
PRAIRIE AVE
FOREST AVE
CALUMET AVE
115TH ST.
Curtis
115TH ST
Kensington
KENSINGTON AVE
116TH ST
117TH ST
Songhai
117TH PL
118TH ST
118TH PL
Kensington Park
119TH ST
119TH PL
LA SALLE ST
LAFAYETTE AVE
120TH ST
120TH PL
121ST ST
STATE STREET
122ND ST
353
111
34
Inset
CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON
Legend
BRT Alternative
Noise Contours
Moderate Impact
Severe Impact
BRT Alternative
Proposed BRT Stop
Existing CTA Bus Stops Used by BRT Alternative
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
49 CTA Bus
290 Pace Bus
Water Body
Parks
Cemetery
Scale
0
500
1,000
Feet
map id: 08_02.4

Figure 5-1d: Bus Rapid Transit Alternative with Moderate (in Blue) and Severe (in Red) Impact Noise Contours

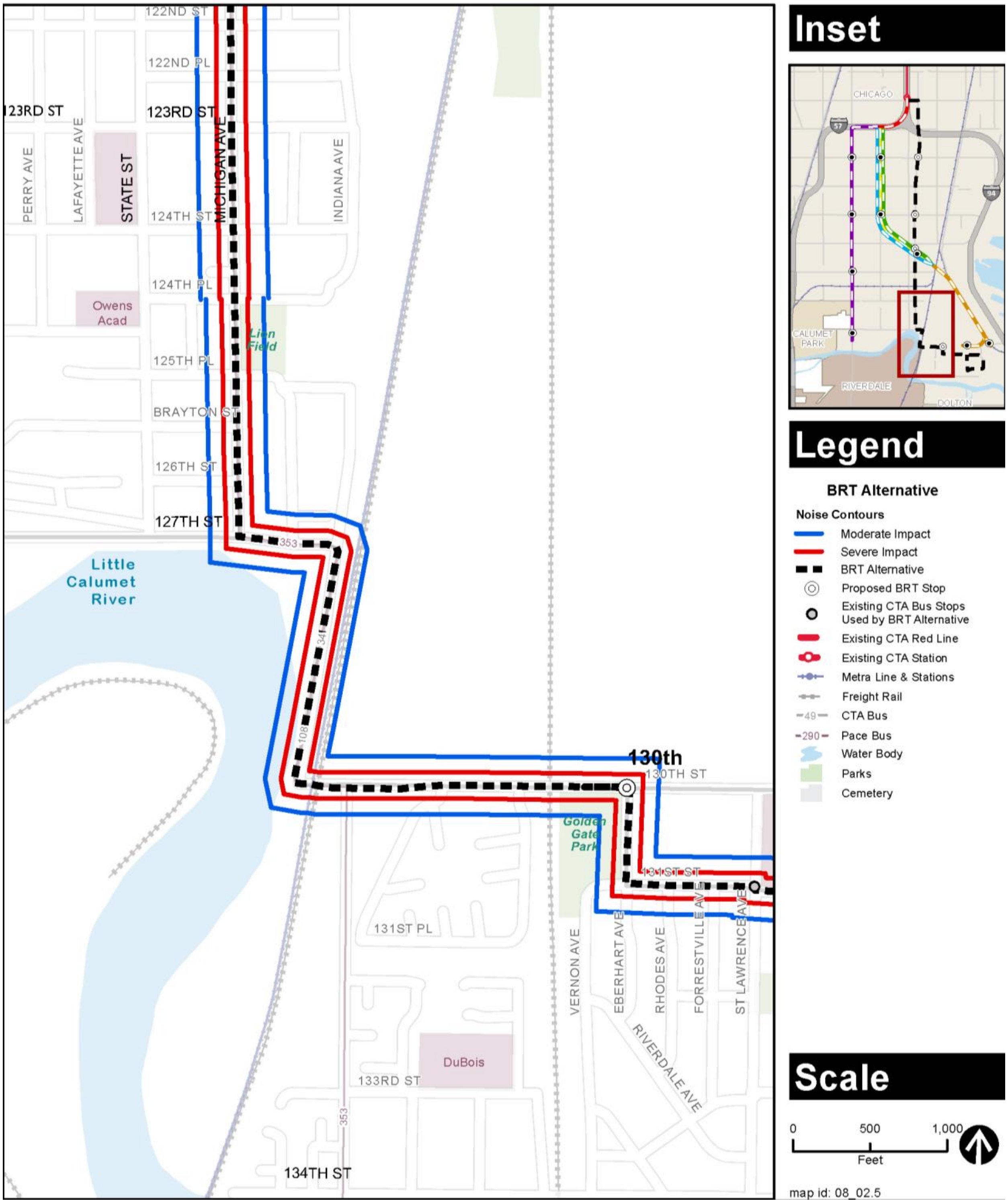
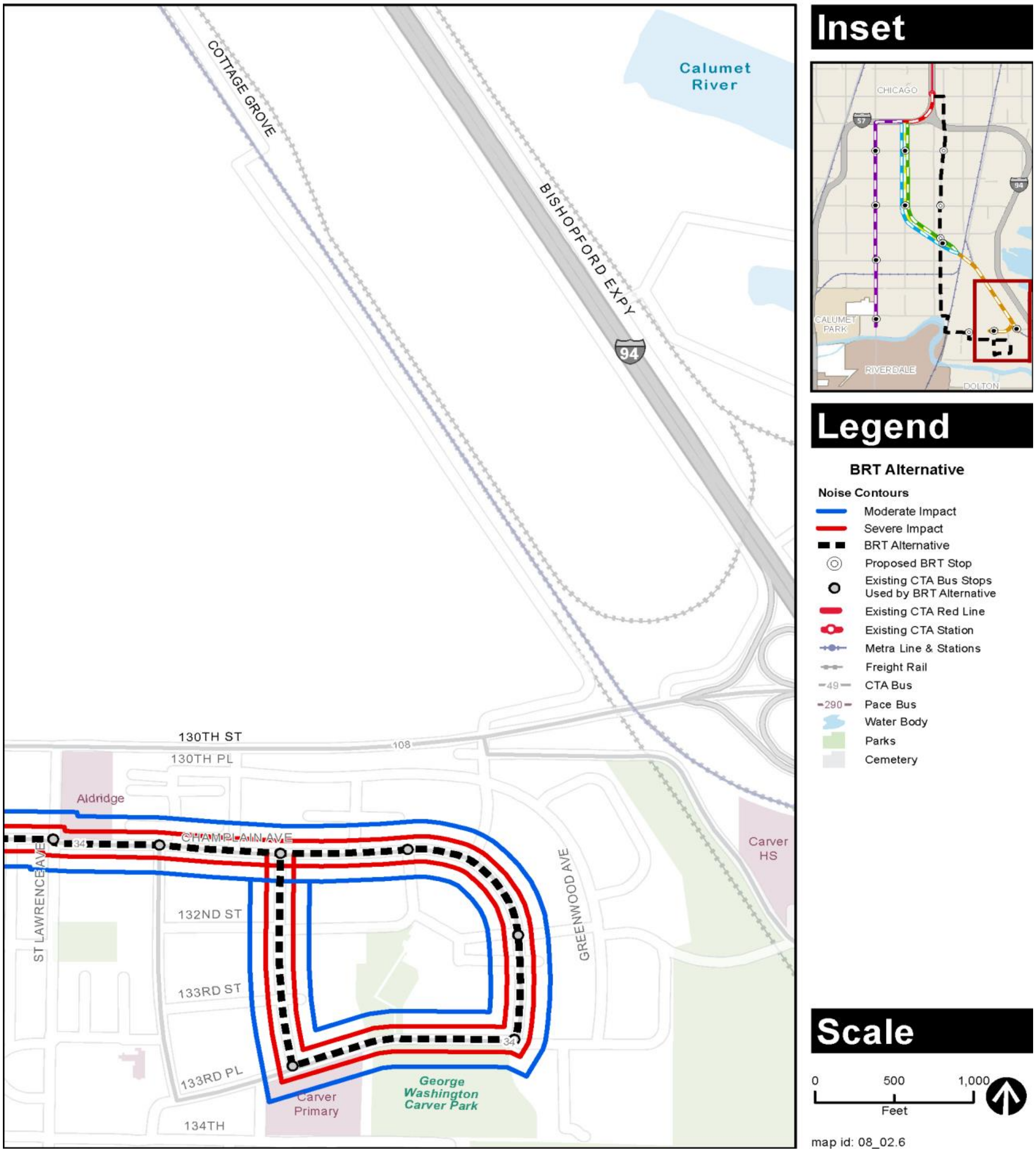

Inset
CHICAGO
CALUMET PARK
RIVERDALE
DOLTON
Legend
BRT Alternative
Noise Contours
Moderate Impact
Severe Impact
BRT Alternative
Proposed BRT Stop
Existing CTA Bus Stops Used by BRT Alternative
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
CTA Bus
Pace Bus
Water Body
Parks
Cemetery
Scale
0
500
1,000
Feet
map id: 08_02.5
122ND ST
122ND PL
123RD ST
123RD ST
PERRY AVE
LAFAYETTE AVE
STATE ST
MICHIGAN AVE
INDIANA AVE
124TH ST
124TH PL
Owens Acad
Lion Field
125TH PL
BRAYTON ST
126TH ST
127TH ST
Little Calumet River
130th
130TH ST
Golden Gate Park
131ST ST
131ST PL
VERNON AVE
EBERHART AVE
RHODES AVE
FORRESTVILLE AVE
ST LAWRENCE AVE
RIVERDALE AVE
DuBois
133RD ST
134TH ST
353
108

Figure 5-1e: Bus Rapid Transit Alternative with Moderate (in Blue) and Severe (in Red) Impact Noise Contours


COTTAGE GROVE
BISHOPFORD EXPY
94
Calumet River
130TH ST
108
130TH PL
Aldridge
CHAMPLAIN AVE
34
ST LAWRENCE AVE
132ND ST
133RD ST
133RD PL
134TH
Carver Primary
George Washington Carver Park
GREENWOOD AVE
Carver HS
Inset
CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON
Legend
BRT Alternative
Noise Contours
Moderate Impact
Severe Impact
BRT Alternative
Proposed BRT Stop
Existing CTA Bus Stops Used by BRT Alternative
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
49
CTA Bus
290
Pace Bus
Water Body
Parks
Cemetery
Scale
0
500
1,000
Feet

map id: 08_02.6

Figure 5-1f: Bus Rapid Transit Alternative with Moderate (in Blue) and Severe (in Red) Impact Noise Contours

Because the buses would travel along local streets that have small blocks, numerous cross streets, and driveways, noise abatement mitigation such as barriers would not be feasible for the BRT Alternative.

5.2.2 Construction Impacts and Mitigations - Bus Rapid Transit Alternative

Construction noise from the BRT Alternative is expected to consist of minor construction activity at the stop locations. Construction noise levels are not expected to exceed the FTA construction noise limits described in Table 3-3.

5.3 Union Pacific Railroad Rail Alternative - Right-of-Way Option

For the UPRR Rail Alternative, the trains would operate on an aerial structure with continuous welded rail. Based on the headway times shown in Table 5-3, the total number of northbound and southbound trains over a 24-hour period would be 378 (286 daytime trains between 7 AM and 10 PM, and 92 nighttime trains between 10 PM and 7 AM). Based on the number of daytime and nighttime trains traveling at a speed of 55 mph, the 24-hour L_{dn} would be 76.3 dBA at a distance of 50 feet. Near the stations, where the trains would decelerate and accelerate as they enter and leave the station area, the 24-hour L_{dn} would be 65.0 dBA.

Table 5-3: Proposed Red Line Extension Train Operations

Service Period	Time Period	Hours	Average Northbound Headways	Number of Cars/Train
Early Morning	3 AM to 6 AM	3	13 minutes	8
AM Peak	6 AM to 9 AM	3	5 minutes	8
Mid-day	9 AM to 3 PM	6	7 minutes	8
PM Peak	3 PM to 6 PM	3	5 minutes	8
Evening	6 PM to 10 PM	4	7.5 minutes	4
Nighttime	10 PM to 3 AM	5	15 minutes	4

5.3.1 Permanent Impacts and Mitigations - Union Pacific Railroad Rail Alternative - Right-of-Way Option

The UPRR Rail Alternative ROW Option would only occur if the freight relocation project were implemented prior to RLE Project. As a result, the noise levels along the rail corridor would decrease by 5 to 7 dBA due to the removal of the freight operations. Because of the reduction in noise level due to replacing the freight operations with the RLE Project, noise mitigation was not considered for the UPRR ROW Option.

With regard to vibration, no mitigation measures are proposed. The aerial structure with continuously welded rail could result in vibration levels that are below the FTA impact criterion of 72 VdB at the residential receptors along the project corridor. In addition, by moving the freight operations out of the rail corridor, the existing vibration levels generated during freight rail pass-bys would be eliminated from the rail corridor.

5.3.1.1 Segment UA

Because of the reduction in noise level due to replacing the freight operations with the rail transit operations, noise mitigation was not considered for the UPRR ROW Option.

5.3.1.2 Segment UB

Because of the reduction in noise level due to replacing the freight rail operations with the rail transit operations, noise mitigation was not considered for the UPRR ROW Option.

5.3.2 Construction Impacts and Mitigations – Union Pacific Railroad Rail Alternative - Right-of-Way Option

This alternative would include the construction of an aerial structure, stations, and parking facilities at the stations. Typical construction equipment could include excavators, front-end loaders, cranes, drilling rigs, compressors, and trucks depending on the type of construction work required. The FTA construction noise impact assessment is based on the cumulative noise level from the two loudest pieces of equipment that, under worst-case conditions, would operate continuously at full power over a period of 1 hour. From the list of construction equipment in the FTA guidance manual, the two noisiest pieces of equipment would be the excavator (85 dBA at a distance of 50 feet) and truck (88 dBA at a distance of 50 feet). The combined noise level from these two pieces of equipment is 90 dBA at a distance of 50 feet. In addition to equipment mentioned, pile-driving may be required to support permanent structures such as the aerial track structure. Pile-driving can produce maximum short-term noise levels of 101 dBA at 50 feet. Actual levels vary, depending on the distance and topographical conditions between the pile-driving location and the receiver location. An alternative to impact pile-driving is to drill holes and use impact only to set piles. Using the recommended FTA construction noise limits described in Table 3-3, any construction activity that occurred within 50 feet of a noise sensitive receptor could result in a noise impact during daytime hours. For commercial and industrial areas, the FTA daytime construction noise impact criterion is 100 dBA. For construction that occurs during nighttime hours, the FTA construction noise limit is 80 dBA for residential receptors, resulting in an impact distance of 150 feet.

Construction noise levels are not expected to exceed the FTA recommended construction noise limits. There are no noise sensitive receptors within 50 feet of construction. As a result, construction noise mitigation measures were not considered. Construction activities would, however, be limited to daytime hours for locations that are within 150 feet of the residential locations, and all construction equipment exhaust mufflers would be kept in a state of good repair. As part of the construction specifications, the contractor would be responsible for adhering to the noise control requirements of the project. To the maximum extent possible, vehicles not in use would not remain idling on the construction site. For construction that could occur during the nighttime hours within the expressway median, there would be no residential receptors within 150 feet of the construction activity and no noise impacts are anticipated.

High-vibration activities during construction include demolition of buildings, construction of aerial structures, pavement breaking, and ground compaction. Vibration limits are the levels at which there is a risk for damage, not the level at which damage would occur. The impact threshold distances were calculated and it was determined from the analysis that most of the equipment can be operated without risk of damage at distances of 15 feet or greater from non-engineered timber and masonry buildings or at distances of 8 feet or greater from reinforced concrete buildings. Pile-driving activities would be avoided in the vicinity of the historic Roseland Pumping Station.

5.3.3 120th Street Yard and Shop

Because there are no sensitive receptors in the vicinity of the 120th Street yard and shop site and because of the much lower amount of train activity in and out of the facility and the lower train speeds compared to other parts of the project corridor, the noise levels generated in this area are anticipated to be lower than the noise levels generated along other parts of the project corridor even with noise generated by maintenance activities conducted at the yard and shop. As a result, the noise generated at the 120th Street yard and shop would not exceed the FTA impact criteria at the nearest sensitive receptors. Therefore, noise mitigation was not considered at the 120th Street yard and shop. In addition, because there are no sensitive receptors in the vicinity of the 120th Street yard and shop site, there would be no construction noise impacts.

5.4 Union Pacific Railroad Rail Alternative - East Option

In accordance with FTA guidance for residential receptors, the L_{dn} measurements were used to determine the FTA moderate and severe impact criteria for the UPRR Rail Alternative using the curves in Figure 3-1. Table 5-4 shows the measured L_{dn} at each of the five measurement locations along the UPRR Rail Alternative alignment, along with the corresponding FTA moderate and severe noise impact criteria.

Table 5-4: Federal Transit Administration Moderate and Severe Impact Criteria for the Union Pacific Railroad Rail Alternative

Location Number	Receptor Description	Measured Noise Level (L_{dn})	FTA Moderate Impact Criterion	FTA Severe Impact Criterion
7	Residence at 354 W. 102nd Place	75.5 dBA	65.0 dBA	73.6 dBA
8	Residence at 352 W. 109th Street	74.6 dBA	65.0 dBA	72.9 dBA
9	Residence at 307 W. 113th Street	77.0 dBA	65.0 dBA	74.8 dBA
10	Residence at 11718 S. Prairie Avenue	74.2 dBA	65.0 dBA	72.6 dBA
11	Altgeld Gardens (along East 130th Place)	63.2 dBA	59.7 dBA	65.1 dBA

Notes: L_{dn} = day-night average sound level, FTA = Federal Transit Administration, dBA= A-weighted decibels

For the UPRR Rail Alternative, the trains would operate on a new aerial structure with continuous welded rail. For the East Option, the aerial structure would be located along the east side of the UPRR rail corridor. Based on the headway times shown in Table 5-3, the total number of northbound and southbound trains over a 24-hour period would be 378 (286 daytime trains between 7 AM and 10 PM, and 92 nighttime trains between 10 PM and 7 AM). Based on the number of daytime and nighttime trains traveling at a speed of 55 mph, the 24-hour L_{dn} would be

76.3 dBA at a distance of 50 feet. Extrapolating this noise level using the distance attenuation methods described in the FTA guidance manual results in the impact distances within which moderate and severe noise impacts would occur for the UPRR Rail Alternative. Table 5-5 indicates the moderate and severe impact distances for the UPRR Rail Alternative.

Table 5-5: Federal Transit Administration Moderate and Severe Impact Distances - Union Pacific Railroad Rail Alternative - East Option (at 55 miles per hour)

Location Number	Receptor Description	Measured Noise Level (L_{dn})	FTA Moderate Impact Distance	FTA Severe Impact Distance
7	Residence at 354 W. 102nd Place	75.5 dBA	280 feet	75 feet
8	Residence at 352 W. 109th Street	74.6 dBA	280 feet	85 feet
9	Residence at 307 W. 113th Street	77.0 dBA	280 feet	65 feet
10	Residence at 11718 S. Prairie Avenue	74.2 dBA	280 feet	90 feet
11	Altgeld Gardens (along East 130 Place at 45 mph)	63.2 dBA	265 feet	117 feet

Notes: L_{dn} = day-night average sound level, FTA = Federal Transit Administration, dBA = A-weighted decibels

At the stations, where the trains idle, the 24-hour L_{dn} is 65.0 dBA. Extrapolating this noise level using the distance attenuation methodology described in the FTA guidance manual results in the impact distances within which moderate and severe noise impacts are expected to occur for the UPRR Rail Alternative. Table 5-6 indicates the moderate and severe impact distances from the idling trains at the station for the UPRR Rail Alternative East Option.

Table 5-6: Federal Transit Administration Moderate and Severe Impact Distances - Union Pacific Railroad Rail Alternative - East Option (at the Stations)

Location Number	Receptor Description/(Station Location)	Measured Noise Level (L_{dn})	FTA Moderate Impact Distance	FTA Severe Impact Distance
7	Residence at 354 W. 102nd Place/ (103rd Street station)	75.5 dBA	50 feet	13 feet
8	Residence at 352 W. 109th Street/ (111th Street station)	74.6 dBA	50 feet	15 feet
10	Residence at 11718 S. Prairie Avenue/ (Michigan station)	74.2 dBA	50 feet	15 feet
11	Altgeld Gardens (along East 130th Place)/ (130th Street station - West and South Station Options)	63.2 dBA	110 feet	50 feet

Notes: L_{dn} = day-night average sound level, FTA = Federal Transit Administration, dBA = A-weighted decibels

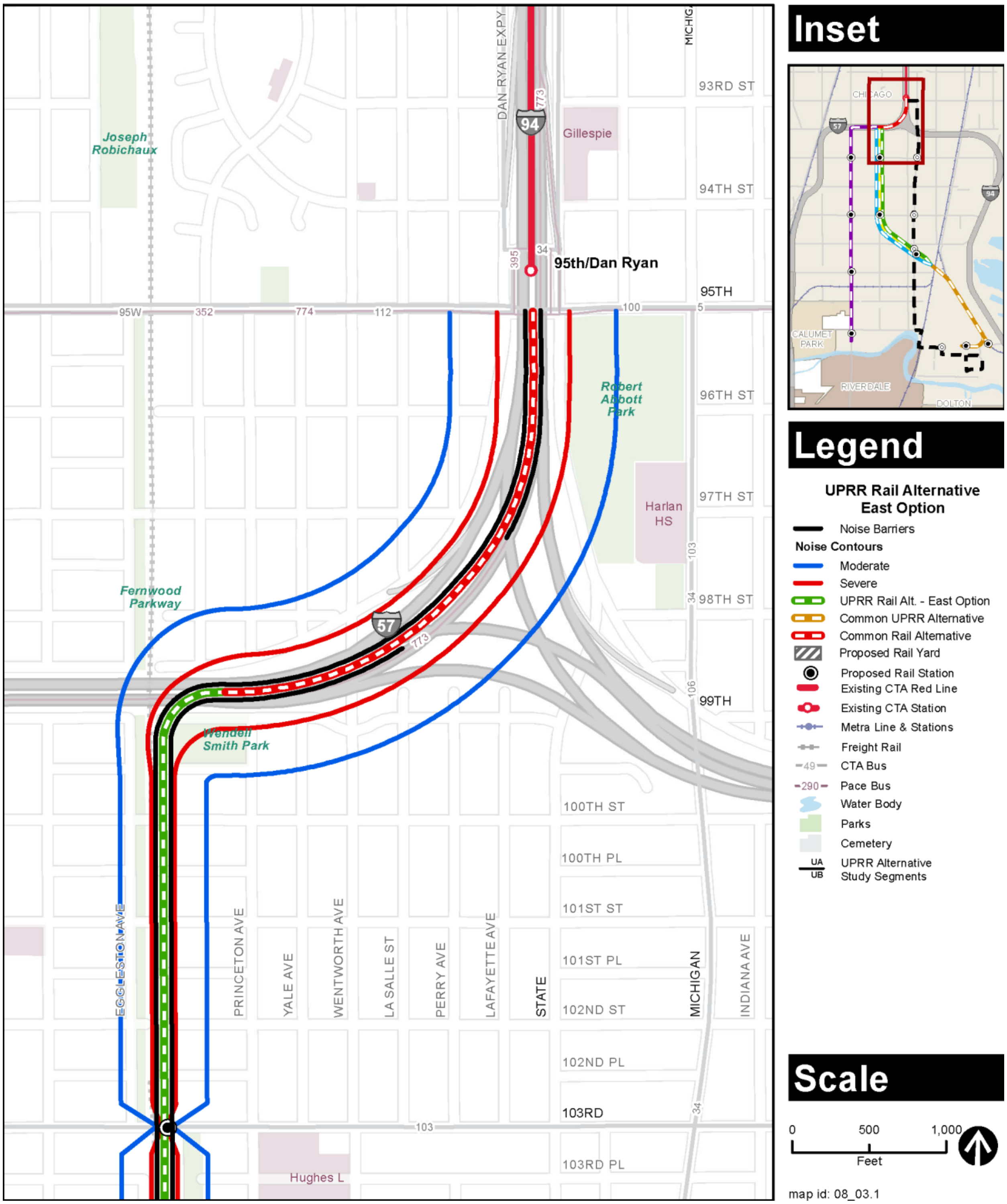
5.4.1 Permanent Impacts and Mitigations - Union Pacific Railroad Rail Alternative - East Option

Using the impact distances from Tables 5-5 and 5-6, noise contours were developed for the UPRR Rail Alternative East Option to show the areas of moderate and severe impact along the project corridor. Figures 5-2a through 5-2e show the East Option with both the moderate and severe noise impact contours. From I-57 to the Metra Electric District rail corridor, the moderate noise impact distance would be 280 feet from the centerline of the RLE aerial structure. Near the proposed stations, the moderate noise impact distance would be 50 feet. For the 130th Street station options, the moderate noise impact distance would be 110 feet. Residential receptors within these noise contours would be affected by implementation of the East Option. In addition, there would be a transition zone that extends for a distance of approximately 200 feet north and south of the station platforms where the trains decelerate and accelerate as they enter and leave the station area. Residential receptors within the noise contours shown in Figure 5-2 in the transition zones north and south of the stations would be affected by implementation of the East Option.

From I-57 to 103rd Street, the severe noise impact distance would be 75 feet. From 103rd Street to 111th Street, the severe noise impact distance would be 85 feet. From 111th Street to the Michigan Avenue station, the severe noise impact distance would be 65 feet. From the Michigan Avenue station to the Metra Electric District rail corridor, the severe noise impact distance would be 90 feet. Near the proposed stations, the severe noise impact distance would be approximately 15 feet. For the 130th Street station options, however, the severe noise impact distance would be 50 feet.

Figures 5-2a through 5-2e show the UPRR Rail Alternative East Option with both the moderate and severe noise impact contours. Mitigation measures for noise-affected residential receptors along the project corridor were considered. The moderate impact noise contours shown in Figure 5-2a through 5-2d extend into the residential areas along both sides of the rail corridor. As a result, noise barriers were considered along both sides of the aerial structure from the 95th Street Terminal to the Metra Electric District Rail Corridor. Noise barriers were not considered south of the Metra Electric District Rail Corridor because this area is primarily industrial land use. A noise barrier approximately 4 feet in height (measured from the top surface of the concrete deck) installed along the outer tracks of the aerial structure would reduce the wheel/rail noise that would propagate into the surrounding community. A noise barrier approximately 4 feet in height would provide a 7 to 10-dBA reduction in noise level in the surrounding community. A noise barrier approximately 4 feet in height on the aerial structure that would provide a 10-dBA reduction could result no impacts remaining after mitigation. Figures 5-2a through 5-2e show the location of the proposed noise barriers for the UPRR Rail Alternative East Option.

With regard to vibration, no mitigation measures are proposed. The aerial structure with continuously welded rail could result in vibration levels that would be below the FTA impact criterion of 72 VdB at the noise sensitive receptors along the project corridor.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Legend
UPRR Rail Alternative
East Option
Noise Barriers
Noise Contours
Moderate
Severe
UPRR Rail Alt. - East Option
Common UPRR Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
CTA Bus
Pace Bus
Water Body
Parks
Cemetery
UPRR Alternative
Study Segments
Scale
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500
1,000
Feet
map id: 08_03.1
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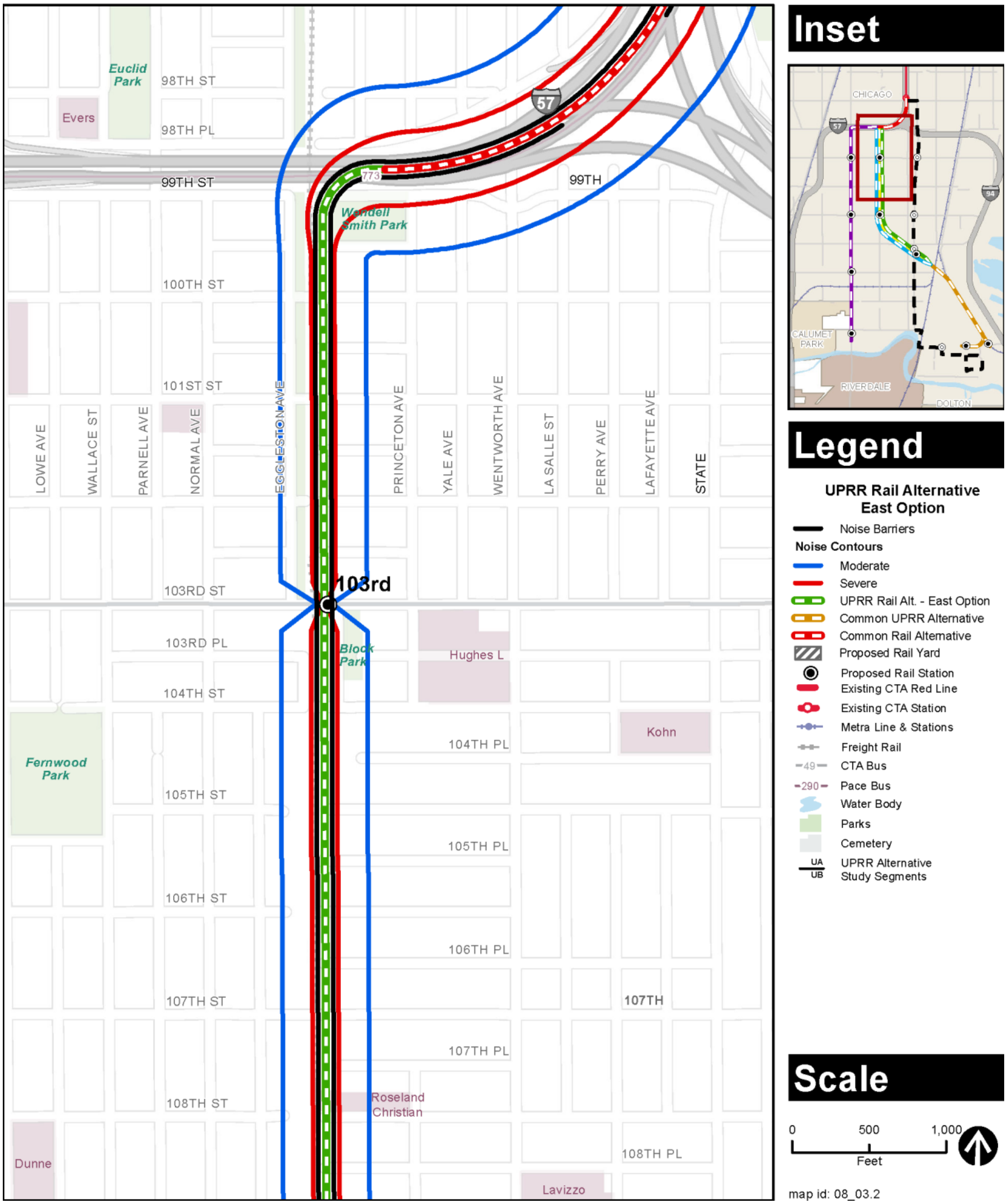
94
57
95th/Dan Ryan
93RD ST
94TH ST
95TH
96TH ST
97TH ST
98TH ST
99TH
100TH ST
100TH PL
101ST ST
101ST PL
102ND ST
102ND PL
103RD
103RD PL
Joseph Robichaux
Gillespie
Robert Abbott Park
Harlan HS
Fernwood Parkway
Wendell Smith Park
Hughes L
EGGLESTON AVE
PRINCETON AVE
YALE AVE
WENTWORTH AVE
LA SALLE ST
PERRY AVE
LAFAYETTE AVE
STATE
MICHIGAN
INDIANA AVE
CHICAGO
CALUMET PARK
RIVERDALE
DOLTON

Figure 5-2a: Union Pacific Railroad Rail Alternative - East Option with Moderate (in Blue) and Severe (in Red) Impact Noise Contours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Evers
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98TH PL
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Wendell Smith Park
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101ST ST
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WALLACE ST
PARNELL AVE
NORMAL AVE
EGGLESTON AVE
PRINCETON AVE
YALE AVE
WENTWORTH AVE
LA SALLE ST
PERRY AVE
LAFAYETTE AVE
STATE
103rd
103RD ST
103RD PL
Block Park
Hughes L
104TH ST
104TH PL
Kohn
Fernwood Park
105TH ST
105TH PL
106TH ST
106TH PL
107TH ST
107TH
107TH PL
108TH ST
Roseland Christian
108TH PL
Dunne
Lavizzo
Inset
CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON
Legend
UPRR Rail Alternative East Option
Noise Barriers
Noise Contours
Moderate
Severe
UPRR Rail Alt. - East Option
Common UPRR Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
49 CTA Bus
290 Pace Bus
Water Body
Parks
Cemetery
UA UB UPRR Alternative Study Segments
Scale
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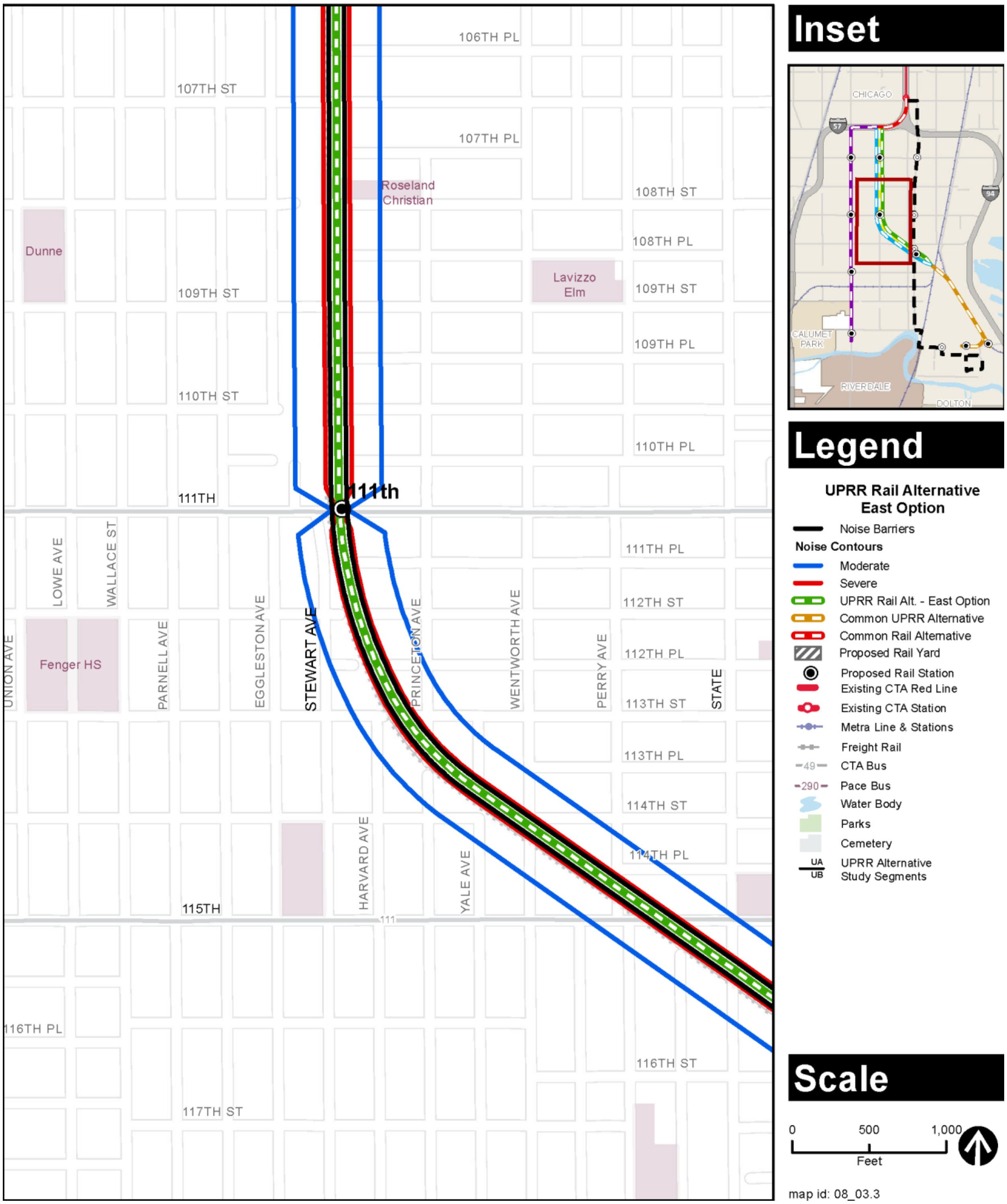
500
1,000
Feet
map id: 08_03.2

Figure 5-2b: Union Pacific Railroad Rail Alternative - East Option with Moderate (in Blue) and Severe (in Red) Impact Noise Contours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Lavizzo Elm
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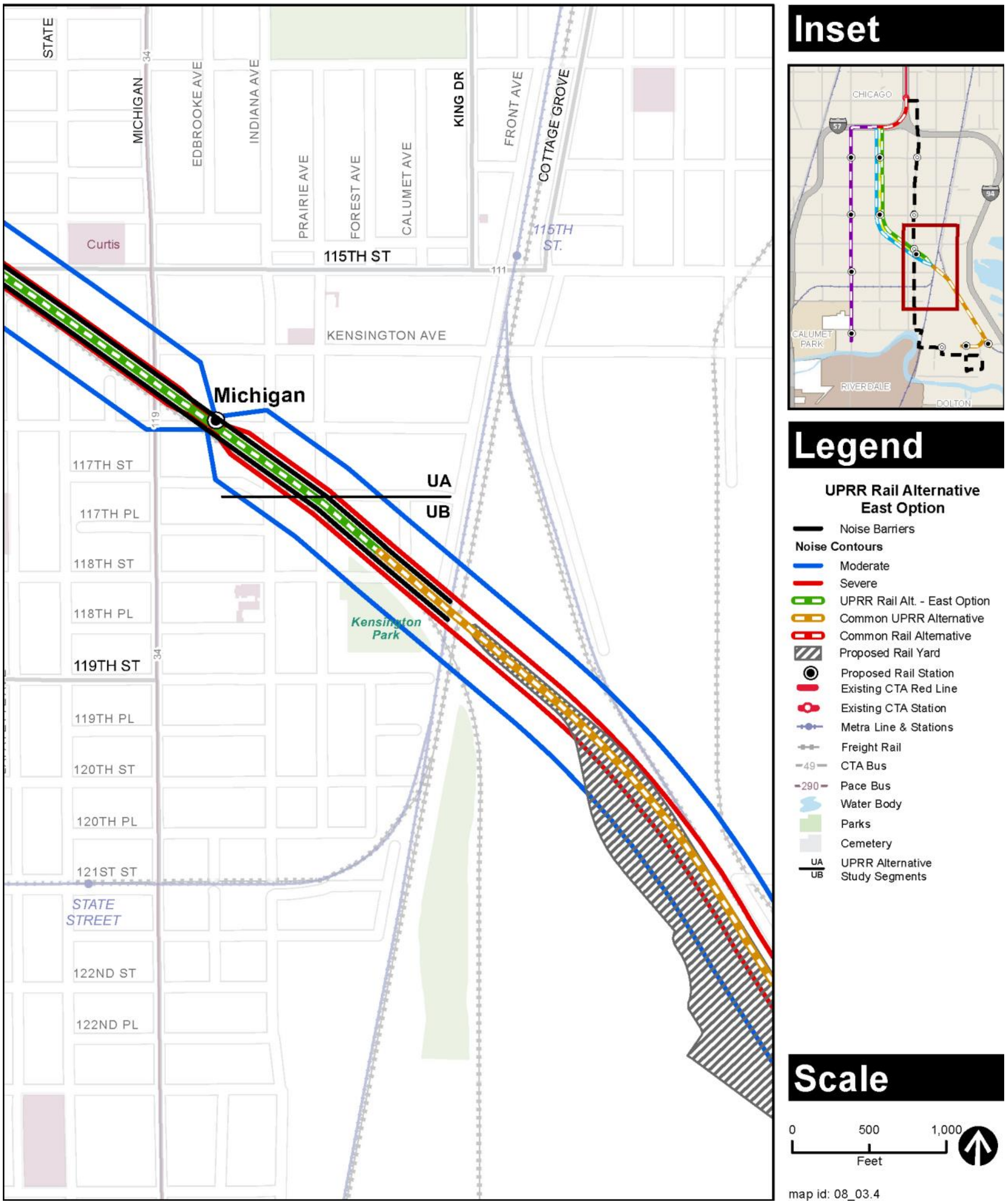
110TH ST
110TH PL
111TH
111th
111TH PL
LOWE AVE
WALLACE ST
112TH ST
UNION AVE
Fenger HS
PARNELL AVE
EGGLESTON AVE
STEWART AVE
PRINCETON AVE
WENTWORTH AVE
PERRY AVE
112TH PL
STATE
113TH ST
113TH PL
114TH ST
114TH PL
HARVARD AVE
YALE AVE
115TH
111
116TH PL
116TH ST
117TH ST
Inset
CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON
Legend
UPRR Rail Alternative East Option
Noise Barriers
Noise Contours
Moderate
Severe
UPRR Rail Alt. - East Option
Common UPRR Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
49 CTA Bus
290 Pace Bus
Water Body
Parks
Cemetery
UA UB UPRR Alternative Study Segments
Scale
0
500
1,000
Feet
map id: 08_03.3

Figure 5-2c Union Pacific Railroad Rail Alternative - East Option with Moderate (in Blue) and Severe (in Red) Impact Noise Contours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MICHIGAN
EDBROOKE AVE
INDIANA AVE
PRAIRIE AVE
FOREST AVE
CALUMET AVE
KING DR
FRONT AVE
COTTAGE GROVE
Curtis
115TH ST
115TH ST.
KENSINGTON AVE
Michigan
117TH ST
117TH PL
118TH ST
118TH PL
119TH ST
119TH PL
120TH ST
120TH PL
121ST ST
STATE STREET
122ND ST
122ND PL
UA
UB
Kensington Park
34
111
119
Inset
CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON
Legend
UPRR Rail Alternative East Option
Noise Barriers
Noise Contours
Moderate
Severe
UPRR Rail Alt. - East Option
Common UPRR Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
49 CTA Bus
290 Pace Bus
Water Body
Parks
Cemetery
UA UB UPRR Alternative Study Segments
Scale
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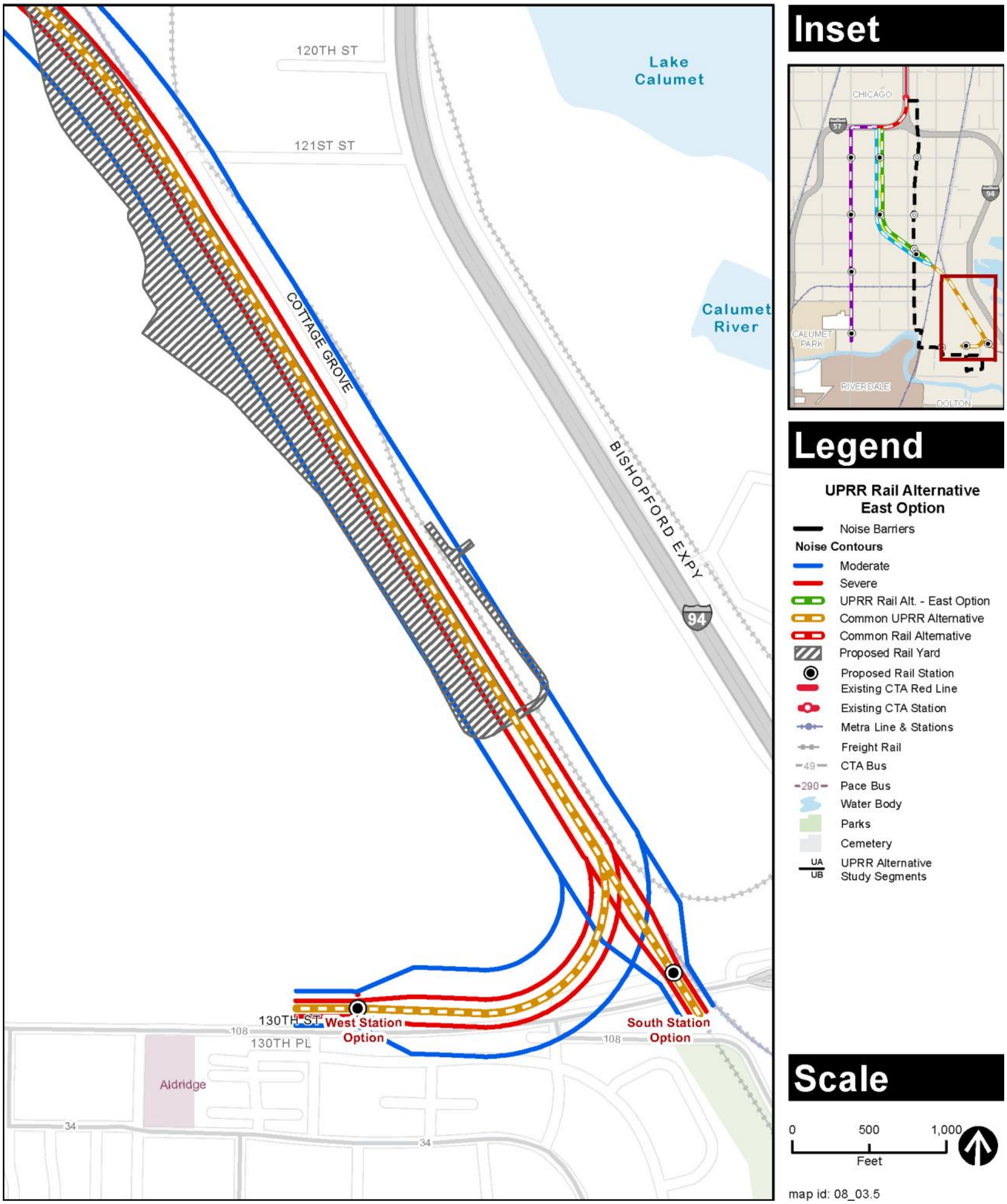
1,000
Feet
map id: 08_03.4

Figure 5-2d: Union Pacific Railroad Rail Alternative – East Option with Moderate (in Blue) and Severe (in Red) Impact Noise Contours


120TH ST
121ST ST
Lake Calumet
Calumet River
COTTAGE GROVE
BISHOPFORD EXPY
94
130TH ST
130TH PL
108
West Station Option
South Station Option
Aldridge
34
Inset
CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON
Legend
UPRR Rail Alternative East Option
Noise Barriers
Noise Contours
Moderate
Severe
UPRR Rail Alt. - East Option
Common UPRR Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
49 CTA Bus
290 Pace Bus
Water Body
Parks
Cemetery
UA UB UPRR Alternative Study Segments
Scale
0
500
1,000
Feet

map id: 08_03.5

Figure 5-2e: Union Pacific Railroad Rail Alternative – East Option with Moderate (in Blue) and Severe (in Red) Impact Noise Contours

5.4.1.1 Segment UA

Segment UA of the UPRR Rail Alternative is north of Michigan Avenue. As shown in Figure 5-2, there would be a substantial number of affected receptors along this section of the rail corridor where the train speeds reach 55 mph.

5.4.1.2 Segment UB

Segment UB of the UPRR Rail Alternative is south of Michigan Avenue. Although there would be affected receptors between Michigan Avenue and the Metra Electric District Rail Corridor, there would be no affected receptors south of the Metra Electric District Rail Corridor. This area of the rail corridor consists primarily of industrial land use.

5.4.2 Construction Impacts and Mitigations - Union Pacific Railroad Rail Alternative - East Option

As it would be for the UPRR ROW Option, this alternative would include the construction of an aerial structure, stations, and parking facilities at the stations. Construction noise impacts would be the same as for the UPRR ROW Option. Construction noise levels are not expected to exceed the FTA recommended construction noise limits. As a result, construction noise mitigation measures were not considered. This analysis assumes that the same noise-reducing construction practices described for the UPRR ROW Option would be used for the East Option.

As with the UPRR ROW Option, no vibration impacts are anticipated from construction. The impact threshold distances were calculated for vibration and it was determined from the analysis that most of the equipment can be operated without risk of damage at distances of 15 feet or greater from non-engineered timber and masonry buildings or at distances of 8 feet or greater from reinforced concrete buildings. Pile-driving activities would be avoided in the vicinity of the historic Roseland Pumping Station.

5.4.3 120th Street Yard and Shop

Because there are no sensitive receptors in the vicinity of the 120th Street yard and shop and because of the much lower amount of train activity in and out of the facility and the lower train speeds compared to other parts of the project corridor, the noise levels generated in this area are anticipated to be lower than the noise levels generated along other parts of the project corridor even with noise generated by maintenance activities conducted at the yard and shop. As a result, the noise generated at the 120th Street yard and shop would not exceed the FTA impact criteria at the nearest sensitive receptors. Therefore, noise mitigation was not considered at the 120th Street yard and shop. In addition, because of the distance from the nearest noise sensitive receptors, there would be no construction noise impacts.

5.5 Union Pacific Railroad Rail Alternative - West Option

The results of the noise assessment for the UPRR Rail Alternative West Option are identical to the analysis results for the UPRR Rail Alternative East Option discussed in Section 5.4. The same moderate and severe noise impact contour distances would be applied to the West Option alignment. See Table 5-4 for the impact criteria and impact distances.

For the West Option, the aerial structure for the trains would be located along the west side of the UPRR rail corridor. See Table 5-5 for the moderate and severe impact distances for the UPRR Rail Alternative East Option, which would be the same for the West Option. Likewise, the moderate and severe impact distances from the idling trains at the station would be the same as for the East Option, as shown in Table 5-6.

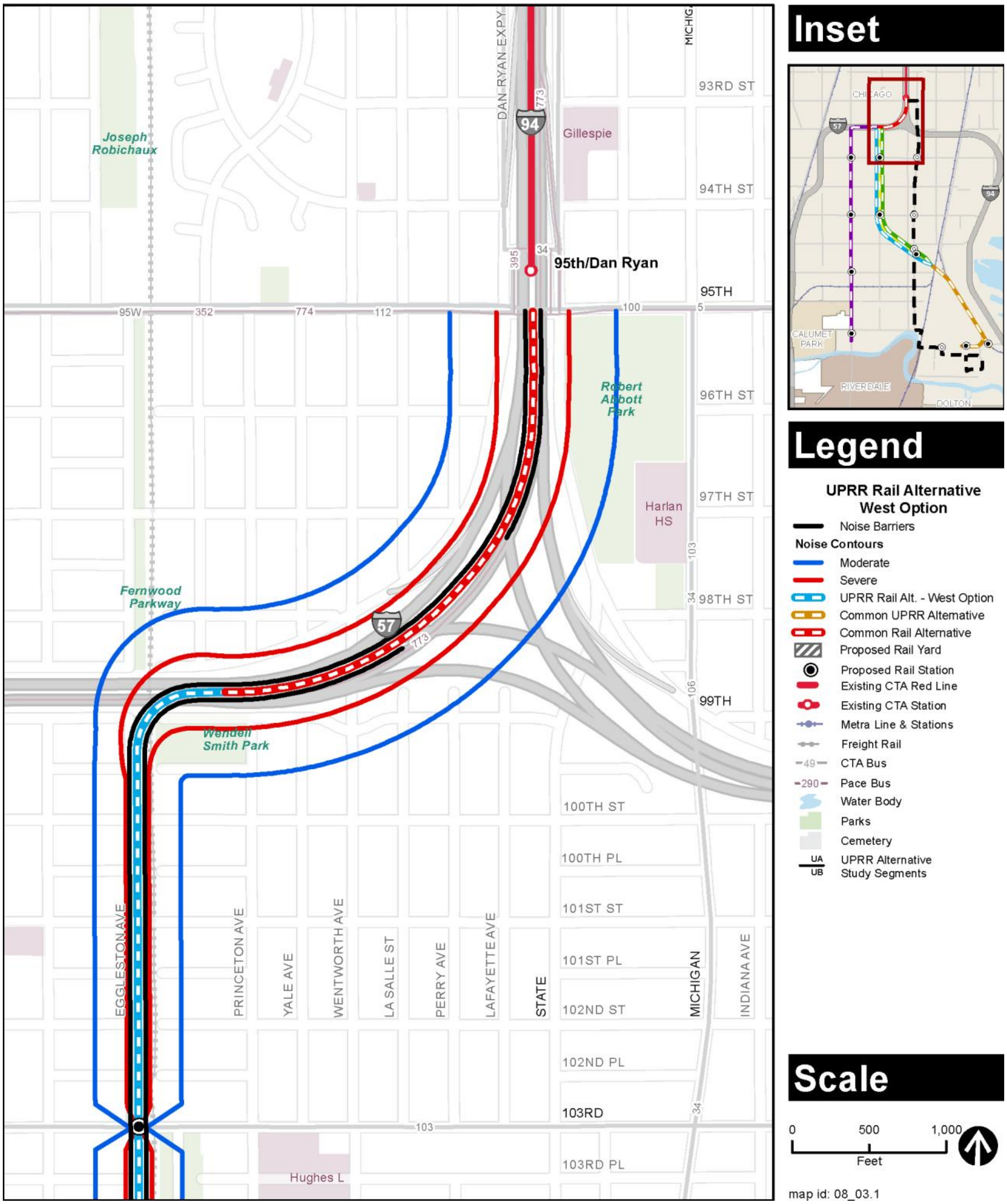
5.5.1 Permanent Impacts and Mitigations – Union Pacific Railroad Rail Alternative - West Option

Using the impact distances from Tables 5-4 and 5-5, noise contours were developed for the UPRR Rail Alternative West Option to show the areas of moderate and severe impact along the project corridor. Figures 5-3a through 5-3e show the West Option with both the moderate and severe noise impact contours. From I-57 to the Metra Electric District rail corridor, the moderate noise impact distance would be 280 feet from the centerline of the RLE aerial structure. Near the proposed stations, the moderate noise impact distance would be 50 feet. For the 130th Street station options, however, the moderate noise impact distance would be 110 feet because of the lower measured noise levels near this station location. Residential receptors within these noise contours would be affected by noise. In addition, there is a transition zone that extends for a distance of approximately 200 feet north and south of the station platforms where the trains decelerate and accelerate as they enter and leave the station area. Residential receptors within the noise contours shown in Figure 5-3 in the transition zones north and south of the stations would be affected by noise.

From I-57 to 103rd Street, the severe noise impact distance would be 75 feet. From 103rd Street to 111th Street, the severe noise impact distance would be 85 feet. From 111th Street to the Michigan Avenue station, the severe noise impact distance would be 65 feet. From the Michigan Avenue station to the Metra Electric District rail corridor, the severe noise impact distance would be 90 feet. Near the proposed stations, the severe noise impact distance would be approximately 15 feet. For the 130th Street station options, however, the severe noise impact distance would be 50 feet.

Figures 5-3a through 5-3e show the UPRR Rail Alternative West Option with both the moderate and severe noise impact contours. Mitigation measures for noise-affected residential receptors along the project corridor were considered. The moderate impact noise contours shown in Figures 5-3a through 5-3d extend into the residential areas along both sides of the rail corridor. As a result, noise barriers were considered along both sides of the aerial structure from the 95th Street Terminal to the Metra Electric District Rail Corridor. Noise barriers would not be required south of the Metra Electric District Rail Corridor because this area is primarily industrial land use. A noise barrier approximately 4 feet in height installed along the outer tracks of the aerial structure would reduce the wheel/rail noise that would propagate into the surrounding community. A noise barrier approximately 4 feet in height would provide a 7 to 10-dBA reduction in noise level in the surrounding community. A noise barrier approximately 4 feet in height on the aerial structure that would provide a 10-dBA reduction could result in no impacts remaining after mitigation. Figures 5-3a through 5-3e show the location of the proposed noise barriers for the UPRR Rail Alternative West Option.

With regard to vibration, no mitigation measures are proposed. The new aerial structure with continuously welded rail could result in vibration levels that would be below the FTA impact criterion of 72 VdB at noise sensitive receptors along the project corridor.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94TH ST
95th/Dan Ryan
95TH
96TH ST
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102ND PL
103RD
103RD PL
DAN RYAN EXPY
MICHIGAN
EGGLESTON AVE
PRINCETON AVE
YALE AVE
WENTWORTH AVE
LA SALLE ST
PERRY AVE
LAFAYETTE AVE
STATE
INDIANA AVE
Joseph Robichaux
Gillespie
Robert Abbott Park
Harlan HS
Fernwood Parkway
Wendell Smith Park
Hughes L
94
57
Inset
CHICAGO
CALUMET PARK
RIVERDALE
DOLTON
Legend
UPRR Rail Alternative West Option
Noise Barriers
Noise Contours
Moderate
Severe
UPRR Rail Alt. - West Option
Common UPRR Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
CTA Bus
Pace Bus
Water Body
Parks
Cemetery
UPRR Alternative Study Segments
Scale
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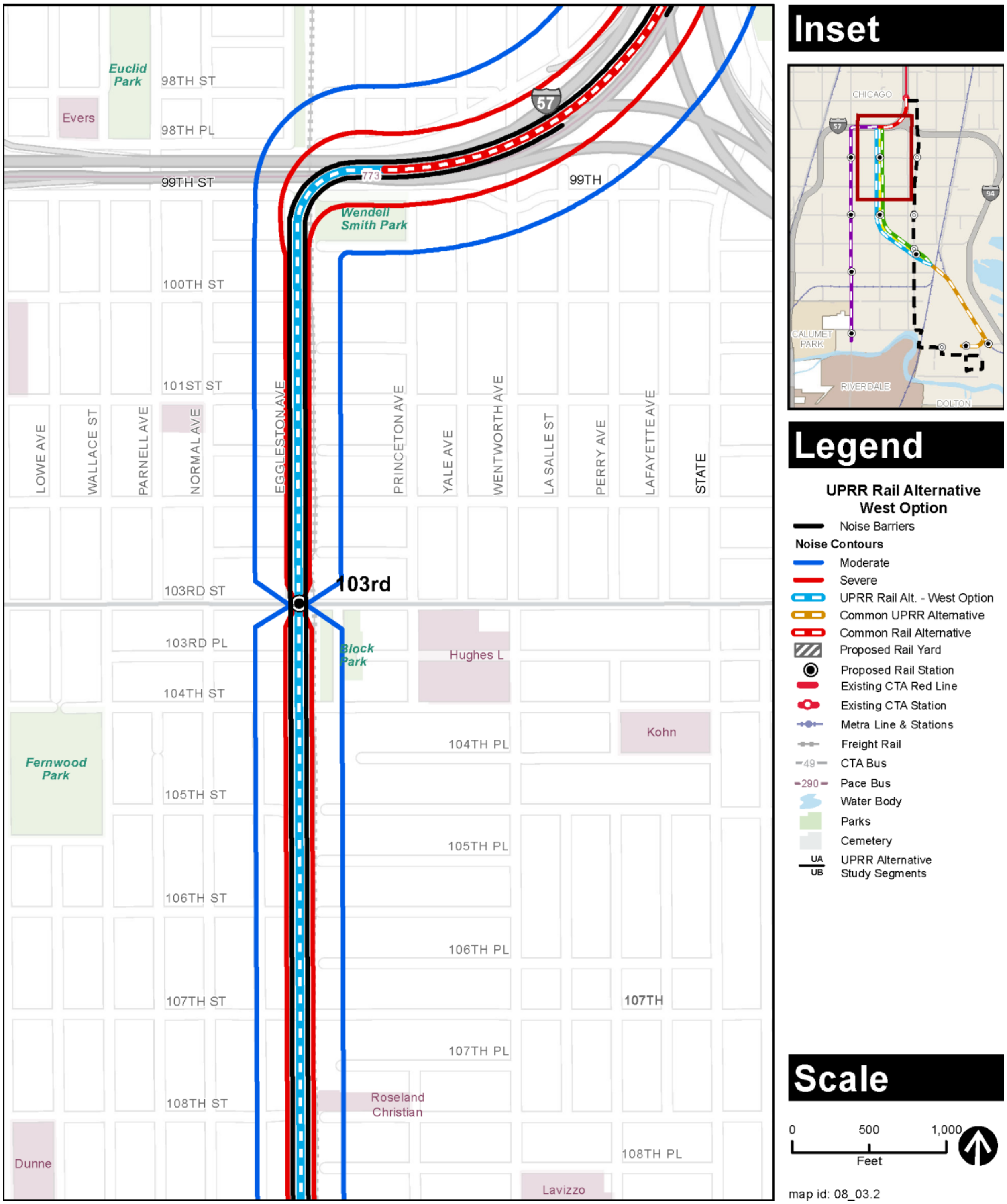
500
1,000
Feet
map id: 08_03.1

Figure 5-3a: Union Pacific Railroad Rail Alternative – West Option with Moderate (in Blue) and Severe (in Red) Impact Noise Contours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99TH
Wendell Smith Park
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101ST ST
LOWE AVE
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NORMAL AVE
EGGLESTON AVE
PRINCETON AVE
YALE AVE
WENTWORTH AVE
LA SALLE ST
PERRY AVE
LAFAYETTE AVE
STATE
103RD ST
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103RD PL
Block Park
Hughes L
104TH ST
104TH PL
Kohn
Fernwood Park
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105TH PL
106TH ST
106TH PL
107TH ST
107TH
107TH PL
108TH ST
Roseland Christian
108TH PL
Dunne
Lavizzo
Inset
CHICAGO
CALUMET PARK
RIVERDALE
DOLTON
Legend
UPRR Rail Alternative West Option
Noise Barriers
Noise Contours
Moderate
Severe
UPRR Rail Alt. - West Option
Common UPRR Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
49 CTA Bus
290 Pace Bus
Water Body
Parks
Cemetery
UA UB UPRR Alternative Study Segments
Scale
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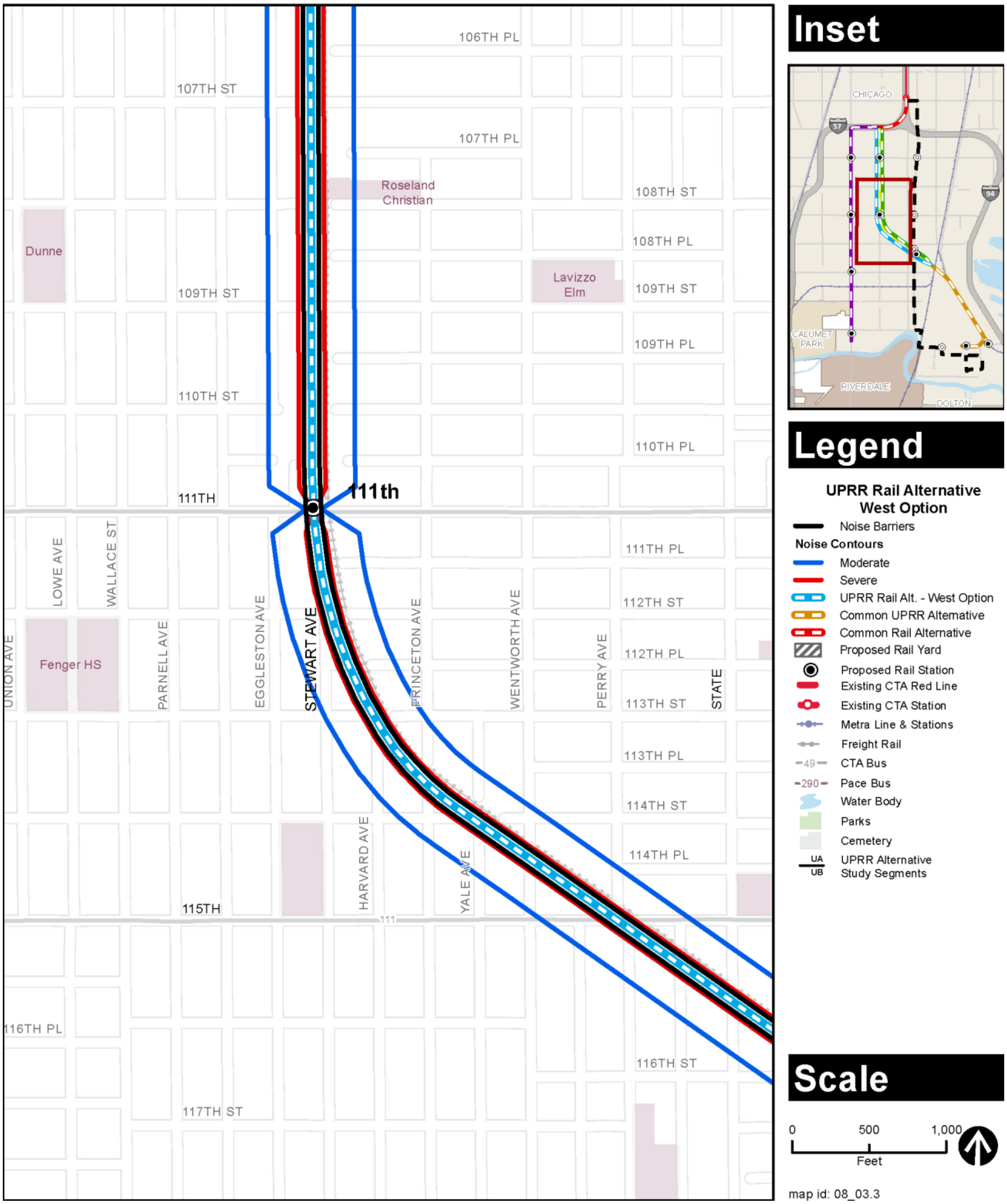
500
1,000
Feet
map id: 08_03.2

Figure 5-3b: Union Pacific Railroad Rail Alternative - West Option with Moderate (in Blue) and Severe (in Red) Impact Noise Contours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Roseland Christian
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Dunne
109TH ST
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109TH PL
110TH ST
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111TH
111th
111TH PL
LOWE AVE
WALLACE ST
112TH ST
UNION AVE
Fenger HS
PARNELL AVE
EGGLESTON AVE
STEWART AVE
PRINCETON AVE
WENTWORTH AVE
PERRY AVE
112TH PL
STATE
113TH ST
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114TH ST
114TH PL
HARVARD AVE
YALE AVE
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116TH PL
116TH ST
117TH ST
Inset
CHICAGO
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CALUMET PARK
RIVERDALE
DOLTON
Legend
UPRR Rail Alternative West Option
Noise Barriers
Noise Contours
Moderate
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UPRR Rail Alt. - West Option
Common UPRR Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
49 CTA Bus
290 Pace Bus
Water Body
Parks
Cemetery
UA UB UPRR Alternative Study Segments
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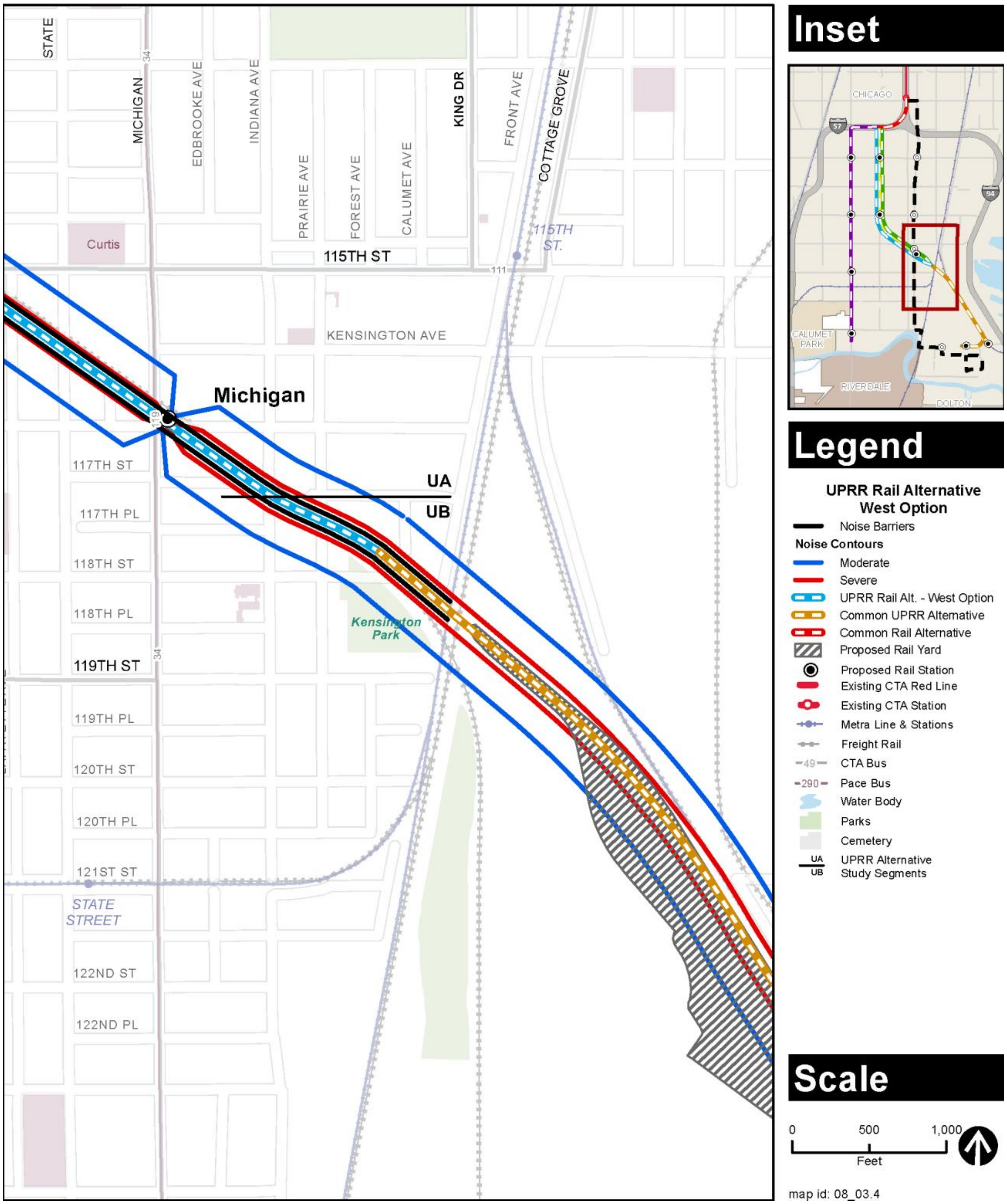
Feet
map id: 08_03.3

Figure 5-3c: Union Pacific Railroad Rail Alternative - West Option with Moderate (in Blue) and Severe (in Red) Impact Noise Contours


STATE
MICHIGAN
EDBROOKE AVE
INDIANA AVE
PRAIRIE AVE
FOREST AVE
CALUMET AVE
KING DR
FRONT AVE
COTTAGE GROVE
Curtis
115TH ST
115TH ST.
111
KENSINGTON AVE
Michigan
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117TH PL
118TH ST
118TH PL
119TH ST
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STATE STREET
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Kensington Park
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CHICAGO
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CALUMET PARK
RIVERDALE
DOLTON
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UPRR Rail Alternative West Option
Noise Barriers
Noise Contours
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UPRR Rail Alt. - West Option
Common UPRR Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
49 CTA Bus
290 Pace Bus
Water Body
Parks
Cemetery
UA UB UPRR Alternative Study Segments
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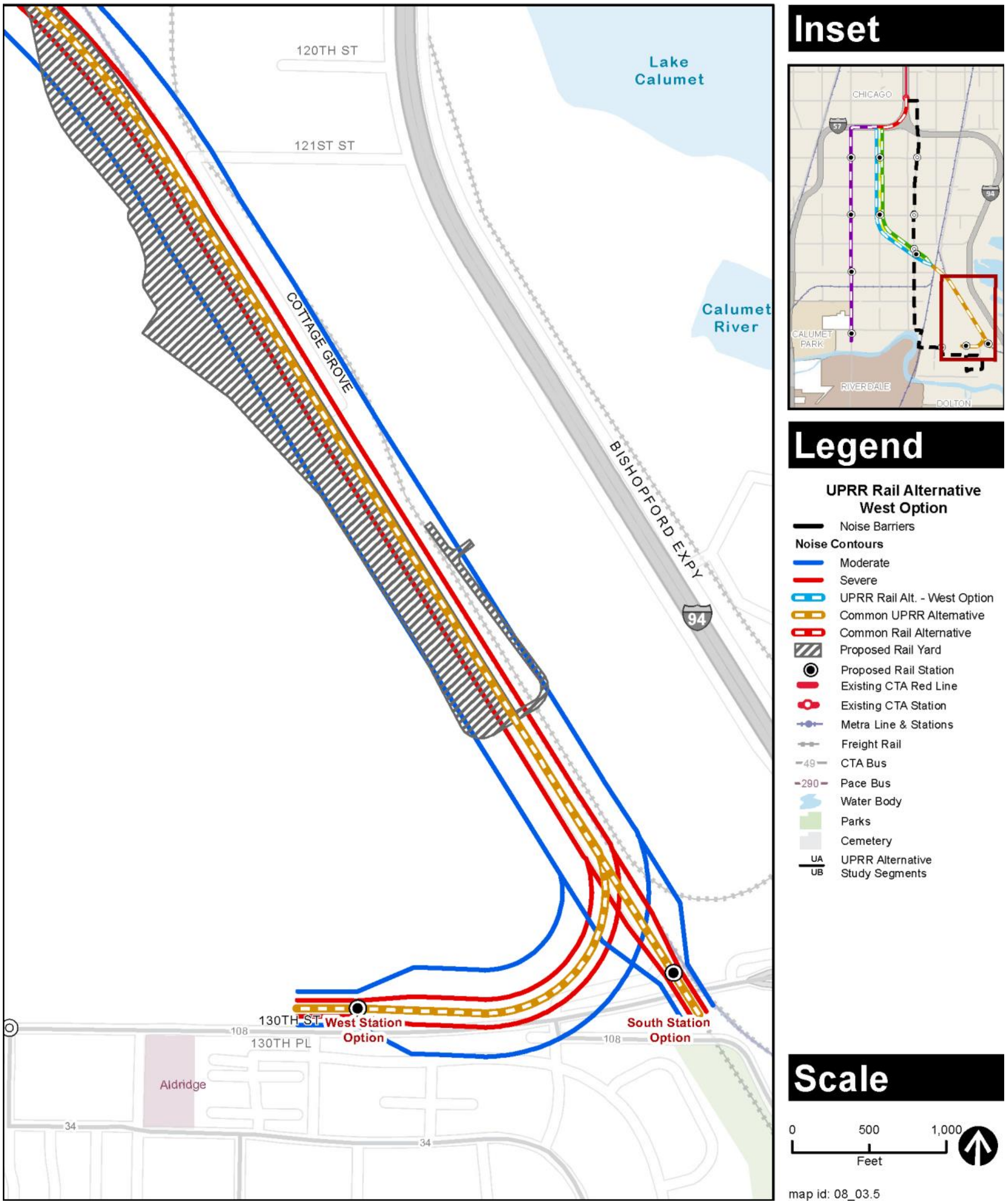
Feet
map id: 08_03.4

Figure 5-3d: Union Pacific Railroad Rail Alternative – West Option with Moderate (in Blue) and Severe (in Red) Impact Noise Contours


120TH ST
121ST ST
Lake Calumet
Calumet River
COTTAGE GROVE
BISHOPFORD EXPY
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130TH ST
130TH PL
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West Station Option
South Station Option
Aldridge
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CHICAGO
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CALUMET PARK
RIVERDALE
DOLTON
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UPRR Rail Alternative West Option
Noise Barriers
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UPRR Rail Alt. - West Option
Common UPRR Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
49 CTA Bus
290 Pace Bus
Water Body
Parks
Cemetery
UA UB UPRR Alternative Study Segments
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1,000
Feet
map id: 08_03.5

Figure 5-3e: Union Pacific Railroad Rail Alternative - West Option with Moderate (in Blue) and Severe (in Red) Impact Noise Contours

5.5.1.1 Segment UA

Segment UA of the UPRR Rail Alternative is north of Michigan Avenue. As shown in Figure 5-2, there would be a substantial number of affected receptors along this section of the rail corridor where the train speeds reach 55 mph.

5.5.1.2 Segment UB

Segment UB of the UPRR Rail Alternative is south of Michigan Avenue. Although there would be affected receptors between Michigan Avenue and the Metra Electric District Rail Corridor, there would be no affected receptors south of the Metra Electric District Rail Corridor. This area of the rail corridor consists primarily of industrial land use.

5.5.2 Construction Impacts and Mitigations – Union Pacific Railroad Rail Alternative - West Option

As it would be for the UPRR ROW and East Options, this alternative would include the construction of an aerial structure, stations, and parking facilities at the stations. Construction noise impacts would be the same as for the UPRR ROW and East Options. Construction noise levels are not expected to exceed the FTA recommended construction noise limits. As a result, construction noise mitigation measures were not considered. This analysis assumes that the same noise-reducing construction practices described for the UPRR ROW Option would be used for the West Option.

As with the UPRR ROW and East Options, no vibration impacts are anticipated from construction. The impact threshold distances were calculated for vibration and it was determined from the analysis that most of the equipment can be operated without risk of damage at distances of 15 feet or greater from non-engineered timber and masonry buildings or at distances of 8 feet or greater from reinforced concrete buildings. Pile-driving activities would be avoided in the vicinity of the historic Roseland Pumping Station.

5.5.3 120th Street Yard and Shop

Because there are no sensitive receptors in the vicinity of the 120th Street yard and shop site and because of the much lower amount of train activity in and out of the facility and the lower train speeds compared to other parts of the project corridor, the noise levels generated in this area are anticipated to be lower than the noise levels generated along other parts of the project corridor even with noise generated by maintenance activities conducted at the yard and shop. As a result, the noise generated at the 120th Street yard and shop would not exceed the FTA impact criteria at the nearest sensitive receptors. Therefore, noise mitigation was not considered at the 120th Street yard and shop. In addition, because of the distance from the nearest noise sensitive receptors, there would be no construction noise impacts.

5.6 Halsted Rail Alternative

In accordance with FTA guidance, for residential receptors, the L_{dn} measurements are used to determine the FTA moderate and severe impact criteria for the Halsted Rail Alternative using the curves in Figure 3-1. Table 5-7 shows the measured L_{dn} at each of the six measurement locations along the Halsted Rail Alternative, along with the corresponding FTA moderate and severe noise impact criteria.

Table 5-7: Federal Transit Administration Moderate and Severe Impact Criteria for the Halsted Rail Alternative

Location Number	Receptor Description	Measured Noise Level (L_{dn})	FTA Moderate Impact Criterion	FTA Severe Impact Criterion
1	Residence at 9901 S. Emerald Avenue	65.0 dBA	60.8 dBA	66.2 dBA
2	Residence at 10229 S. Halsted Street	64.2 dBA	60.3 dBA	65.7 dBA
3	Residence at 11005 S. Halsted Street	60.5 dBA	58.1 dBA	63.7 dBA
4	Residence along 119th Street	58.6 dBA	57.0 dBA	62.7 dBA
5	Residence at 12125 S. Halsted Street	63.7 dBA	60.0 dBA	65.4 dBA
6	Residence at 12412 S. Halsted Street	61.6 dBA	58.7 dBA	64.2 dBA

Notes: L_{dn} = day-night average sound level, FTA = Federal Transit Administration, dBA = A-weighted decibels

For the Halsted Rail Alternative, the trains would operate on an aerial structure with continuous welded rail. For the Halsted Rail Alternative, the aerial structure would be located down the middle of Halsted Street. Based on the headway times shown in Table 5-3, the total number of northbound and southbound trains over a 24-hour period would be 378 (286 daytime trains between 7 AM and 10 PM, and 92 nighttime trains between 10 PM and 7 AM). Based on the number of daytime and nighttime trains traveling at a speed of 55 mph, the 24-hour L_{dn} would be 76.3 dBA at a distance of 50 feet. Extrapolating this noise level using the distance attenuation methodology described in the FTA guidance manual results in the impact distances within which moderate and severe noise impacts are expected to occur for the Halsted Rail Alternative. Table 5-8 lists the moderate and severe impact distances for the Halsted Rail Alternative for the trains traveling at 55 mph. The impact distances shown in Table 5-8 are substantially greater than the impact distances for the UPRR Rail Alternatives because of the lower measured L_{dn} noise levels along Halsted Street. These lower measured noise levels result in lower moderate and severe impact criteria based on the FTA curves in Figure 3-1. As a result, the impact distances for moderate and severe impact for the Halsted Rail Alternative are substantially greater than the impact distances for the UPRR Rail Alternatives, even though the noise generated by the trains would be the same.

Table 5-8: Federal Transit Administration Moderate and Severe Impact Distances for the Halsted Rail Alternative (at 55 miles per hour)

Location Number	Receptor Description/(Area of Impact)	Measured Noise Level (L_{dn})	FTA Moderate Impact Distance	FTA Severe Impact Distance
1	Residence at 9901 S. Emerald Avenue/ (along I-57)	65.0 dBA	540 feet	235 feet
2	Residence at 10229 S. Halsted Street/ (from I-57 to 103rd Street)	64.2 dBA	590 feet	255 feet
3	Residence at 11005 S. Halsted Street/ (from 103rd Street to 119th Street)	60.5 dBA	810 feet	345 feet
4	Residence along 119th Street/ (along 119th Street)	58.6 dBA	73 feet	20 feet
5	Residence at 12125 S. Halsted Street/ (from 119th Street to 124th Street)	63.7 dBA	610 feet	265 feet
6	Residence at 12412 S. Halsted Street/ (from 124th Street to 128th Street)	61.6 dBA	740 feet	320 feet

Notes: L_{dn} = day-night average sound level, FTA = Federal Transit Administration, dBA = A-weighted decibels

Near the stations, where the trains would decelerate and accelerate as they enter and leave the station area, the trains were assumed to decelerate from a speed of 55 mph within a distance of approximately 200 feet from the train station, as a conservative estimate. A 200-foot distance was also assumed for the train acceleration to 55 mph when leaving the station. As a result, the noise contours narrow near the stations. At the stations, where the trains would be idling, the 24-hour L_{dn} would be 65.0 dBA. Extrapolating this noise level using the distance attenuation methodology described in the FTA guidance manual results in the impact distances within which moderate and severe noise impacts are expected to occur for the Halsted Rail Alternative. Table 5-9 indicates the moderate and severe impact distances for the Halsted Rail Alternative within a distance of approximately 200 feet north and south of the station platforms.

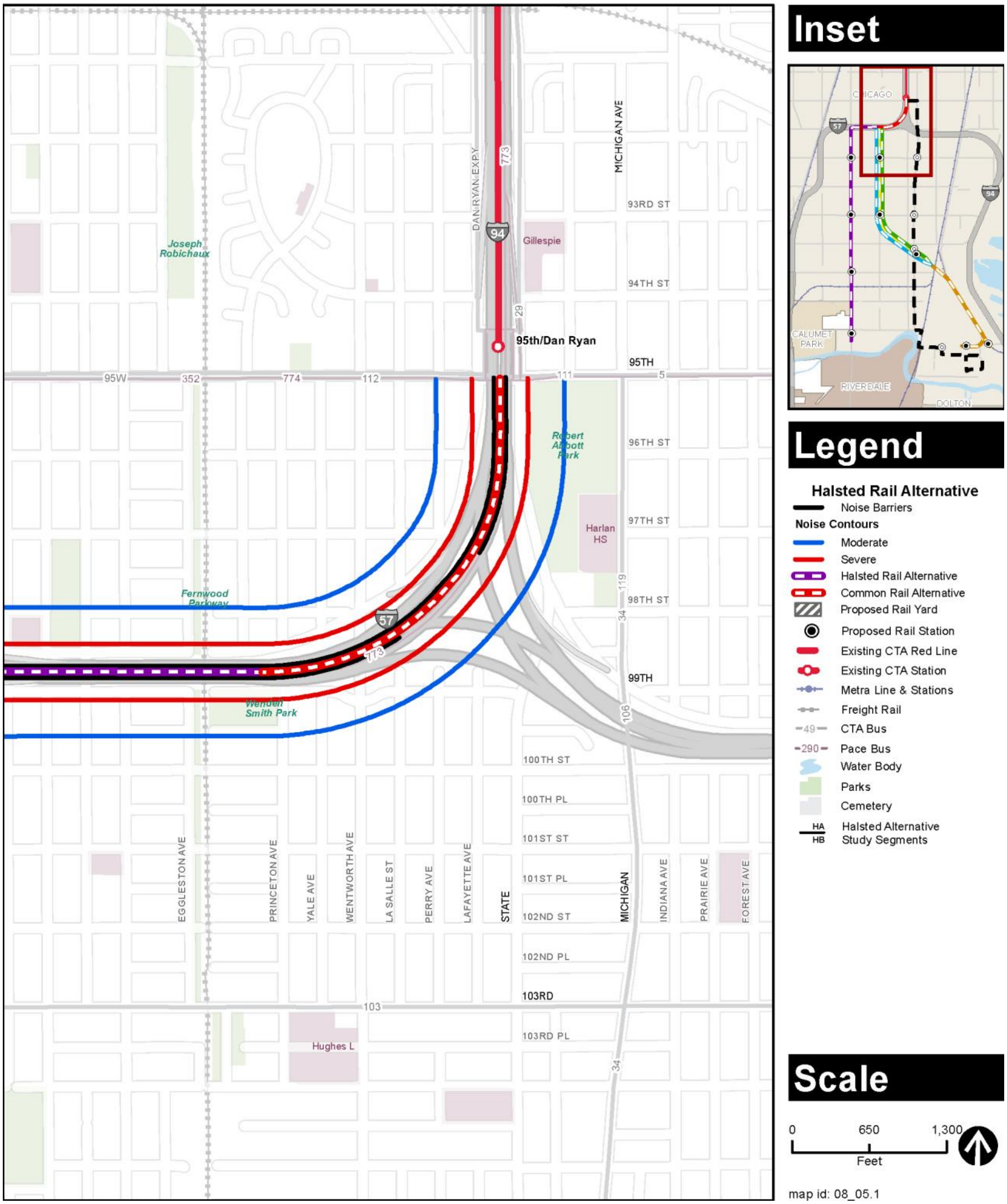
Table 5-9: Federal Transit Administration Moderate and Severe Impact Distances for the Halsted Rail Alternative (near the stations)

Location Number	Receptor Description/(Station Location)	Measured Noise Level (L_{dn})	FTA Moderate Impact Distance	FTA Severe Impact Distance
2	Residence at 10229 S. Halsted Street/ (103rd Street station)	64.2 dBA	105 feet	45 feet
3	Residence at 11005 S. Halsted Street/ (111th Street station)	60.5 dBA	145 feet	41 feet
5	Residence at 12125 S. Halsted Street/ (119th Street station)	63.7 dBA	110 feet	53 feet
6	Residence at 12412 S. Halsted Street/ (Vermont station)	61.6 dBA	130 feet	44 feet

Notes: L_{dn} = day-night average sound level, FTA = Federal Transit Administration, dBA = A-weighted decibels

Using the impact distances from Tables 5-8 and 5-9, noise contours were developed for the Halsted Rail Alternative to show the areas of moderate and severe impact along the project corridor. Figures 5-4a through 5-4e show the Halsted Rail Alternative with both the moderate and severe noise impact contours. Along I-57, the moderate noise impact distance would be 540 feet from the centerline of the RLE aerial structure. From I-57 to 103rd Street, the moderate noise impact distance would be 590 feet. From 103rd Street to 119th Street, the moderate noise impact distance would be 810 feet. From 119th Street to 128th Street, the moderate noise impact distance would be 740 feet. At the 103rd Street station, the moderate noise impact distance would be 105 feet. At the 111th Street station, the moderate noise impact distance would be 145 feet. At the 119th Street station, the moderate noise impact distance would be 110 feet. At the Vermont Street station, the moderate noise impact distance would be 130 feet. Approximately 200 feet north and south of the stations would be a transition zone where the trains decelerate and accelerate as they enter and leave the station area.

Along I-57, the severe noise impact distance would be 235 feet. From I-57 to 103rd Street, the severe noise impact distance would be 255 feet. From 103rd Street to 119th Street, the severe noise impact distance would be 345 feet. From 119th Street to 128th Street, the severe noise impact distance would be 320 feet. At the 103rd Street station, the severe noise impact distance would be 45 feet. At the 111th Street station, the severe noise impact distance would be 41 feet. At the 119th Street station, the severe noise impact distance would be 53 feet. At the Vermont Street station, the severe noise impact distance would be 44 feet.


Inset
CHICAGO
CALUMET PARK
RIVERDALE
DOLTON
57
94
Legend
Halsted Rail Alternative
Noise Barriers
Noise Contours
Moderate
Severe
Halsted Rail Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
49 CTA Bus
290 Pace Bus
Water Body
Parks
Cemetery
HA HB Halsted Alternative Study Segments
Scale
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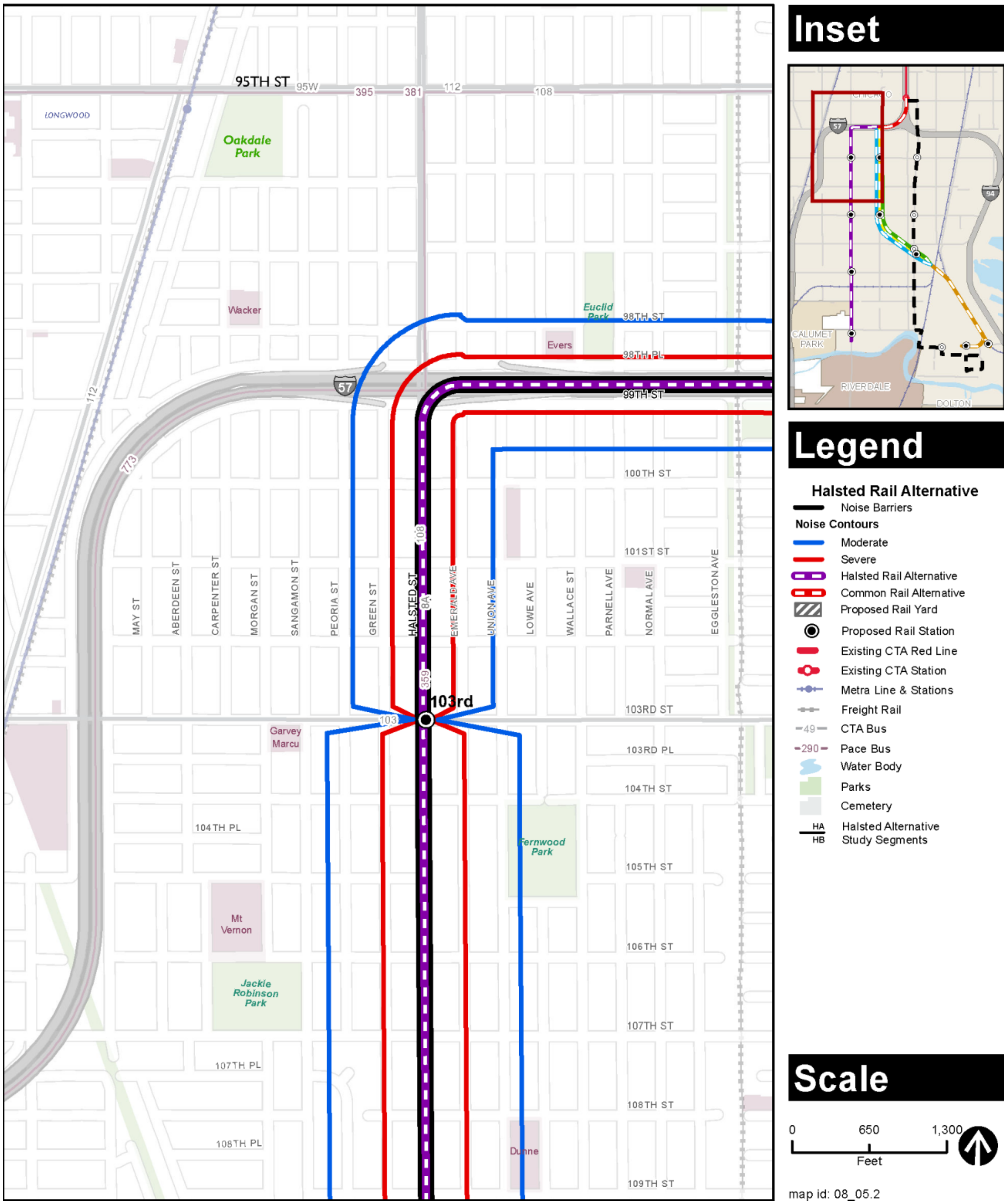
650
1,300
Feet
map id: 08_05.1
95th/Dan Ryan
DAN RYAN EXPY
MICHIGAN AVE
93RD ST
94TH ST
95TH
96TH ST
97TH ST
98TH ST
99TH
100TH ST
100TH PL
101ST ST
101ST PL
102ND ST
102ND PL
103RD
103RD PL
95W
352
774
112
111
5
773
29
119
34
106
103
Joseph Robichaux
Gillespie
Robert Abbott Park
Harlan HS
Fernwood Parkway
Wendell Smith Park
Hughes L
EGGLESTON AVE
PRINCETON AVE
YALE AVE
WENTWORTH AVE
LA SALLE ST
PERRY AVE
LAFAYETTE AVE
STATE
MICHIGAN
INDIANA AVE
PRAIRIE AVE
FOREST AVE

Figure 5-4a: Halsted Rail Alternative with Moderate (in Blue) and Severe (in Red) Impact Noise Contours


95TH ST
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112
108
LONGWOOD
Oakdale Park
Wacker
Euclid Park
98TH ST
Evers
98TH PL
57
99TH ST
112
773
100TH ST
101ST ST
108
MAY ST
ABERDEEN ST
CARPENTER ST
MORGAN ST
SANGAMON ST
PEORIA ST
GREEN ST
HALSTED ST
8A
EMERALD AVE
UNION AVE
LOWE AVE
WALLACE ST
PARNELL AVE
NORMAL AVE
EGGLESTON AVE
359
103rd
103
103RD ST
Garvey Marcu
103RD PL
104TH ST
104TH PL
Fernwood Park
105TH ST
Mt Vernon
106TH ST
Jackie Robinson Park
107TH ST
107TH PL
108TH ST
108TH PL
Dunne
109TH ST
Inset
CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON
Legend
Halsted Rail Alternative
Noise Barriers
Noise Contours
Moderate
Severe
Halsted Rail Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
49 CTA Bus
290 Pace Bus
Water Body
Parks
Cemetery
HA HB Halsted Alternative Study Segments
Scale
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Feet
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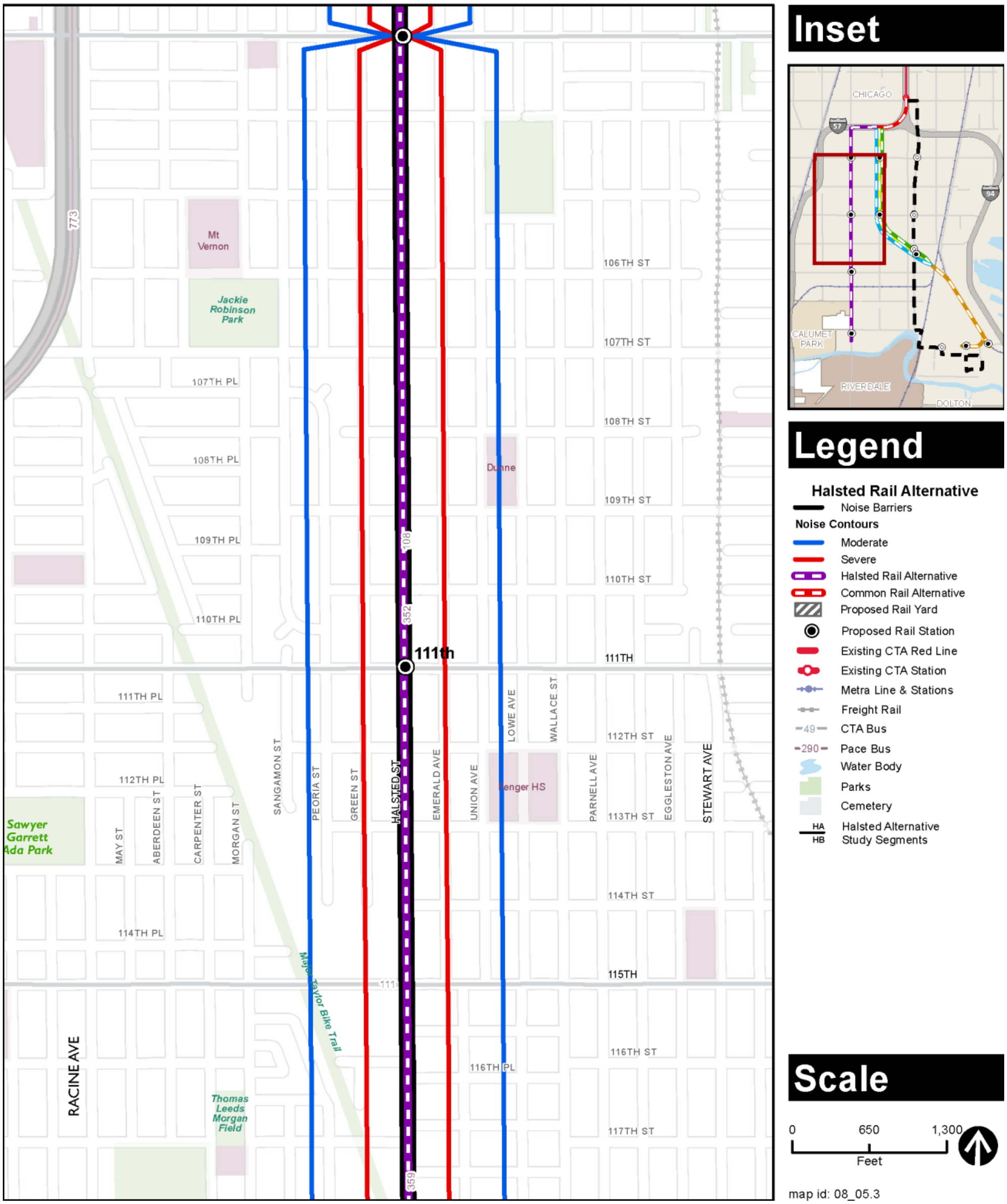
Figure 5-4b: Halsted Rail Alternative with Moderate (in Blue) and Severe (in Red) Impact Noise Contours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CHICAGO
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94
CALUMET PARK
RIVERDALE
DOLTON
Legend
Halsted Rail Alternative
Noise Barriers
Noise Contours
Moderate
Severe
Halsted Rail Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
49 CTA Bus
290 Pace Bus
Water Body
Parks
Cemetery
HA HB Halsted Alternative Study Segments
Scale
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Feet
map id: 08_05.3
773
Mt Vernon
Jackie Robinson Park
106TH ST
107TH ST
107TH PL
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Dunne
109TH ST
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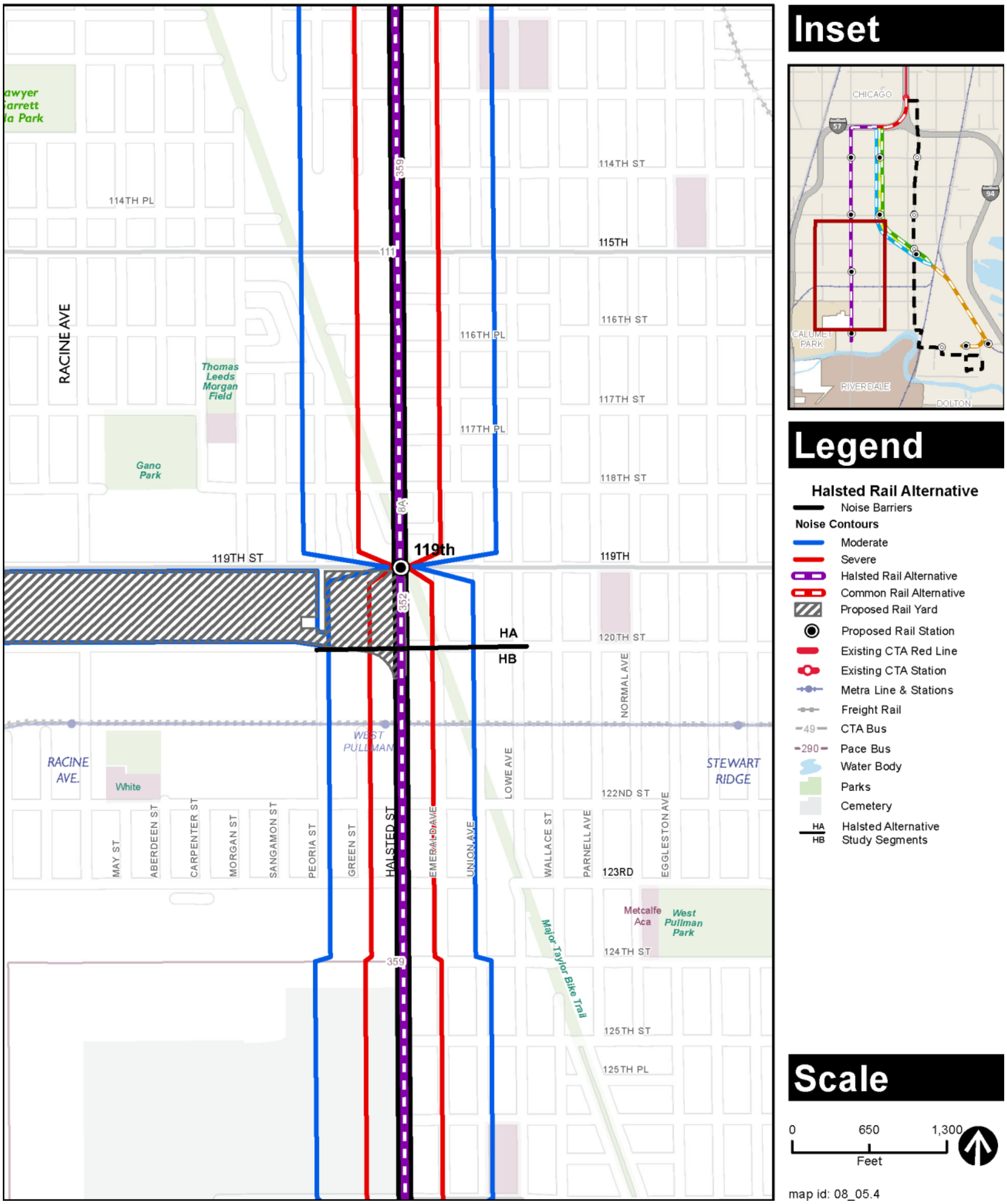
108
110TH ST
110TH PL
352
111th
111TH
111TH PL
112TH ST
112TH PL
LOWE AVE
WALLACE ST
SANGAMON ST
PEORIA ST
GREEN ST
HALSTED ST
EMERALD AVE
UNION AVE
Fenger HS
PARNELL AVE
EGGLESTON AVE
STEWART AVE
113TH ST
Sawyer Garrett Ada Park
MAY ST
ABERDEEN ST
CARPENTER ST
MORGAN ST
114TH ST
114TH PL
Major Taylor Bike Trail
115TH
111
116TH ST
116TH PL
RACINE AVE
Thomas Leeds Morgan Field
117TH ST
359

Figure 5-4c: Halsted Rail Alternative with Moderate (in Blue) and Severe (in Red) Impact Noise Contours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CHICAGO
CALUMET PARK
RIVERDALE
DOLTON
Legend
Halsted Rail Alternative
Noise Barriers
Noise Contours
Moderate
Severe
Halsted Rail Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
CTA Bus
Pace Bus
Water Body
Parks
Cemetery
HA HB Halsted Alternative Study Segments
Scale
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Feet
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HA
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114TH PL
114TH ST
115TH
116TH PL
116TH ST
117TH PL
117TH ST
118TH ST
119TH ST
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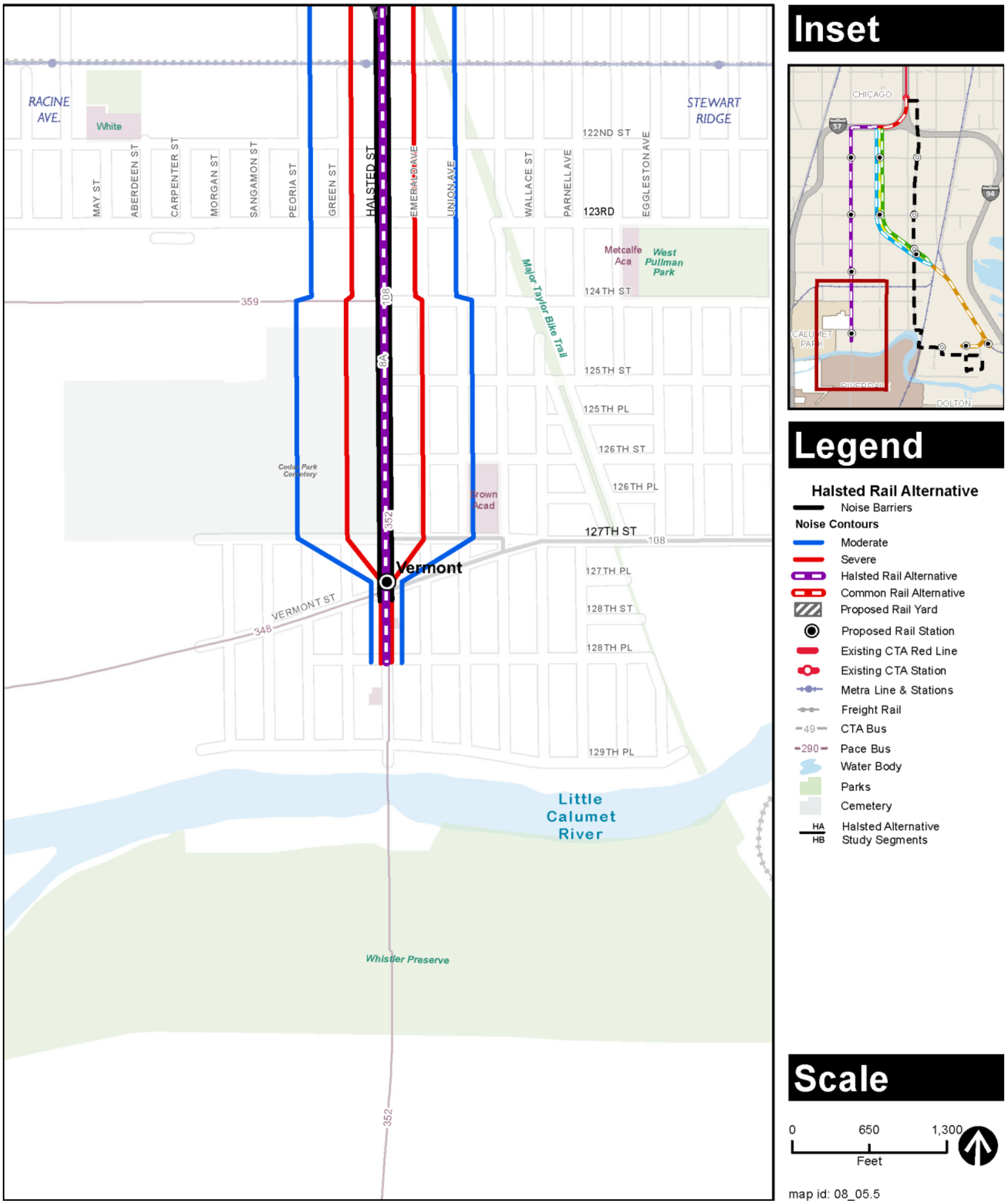
120TH ST
122ND ST
123RD
124TH ST
125TH ST
125TH PL
RACINE AVE
Thomas Leeds Morgan Field
Gano Park
WEST PULLMAN
RACINE AVE.
STEWART RIDGE
White
Metcalfe Aca
West Pullman Park
Major Taylor Bike Trail
MAY ST
ABERDEEN ST
CARPENTER ST
MORGAN ST
SANGAMON ST
PEORIA ST
GREEN ST
HALSTED ST
EMERALD AVE
UNION AVE
LOWE AVE
WALLACE ST
PARNELL AVE
NORMAL AVE
EGGLESTON AVE
359
352
111

Figure 5-4d: Halsted Rail Alternative with Moderate (in Blue) and Severe (in Red) Impact Noise Contours


Inset
CHICAGO
CALUMET PARK
RIVERDALE
DOLTON
Legend
Halsted Rail Alternative
Noise Barriers
Noise Contours
Moderate
Severe
Halsted Rail Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
CTA Bus
Pace Bus
Water Body
Parks
Cemetery
HA HB Halsted Alternative Study Segments
Scale
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Feet
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STEWART RIDGE
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123RD
124TH ST
125TH ST
125TH PL
126TH ST
126TH PL
127TH ST
127TH PL
128TH ST
128TH PL
129TH PL
MAY ST
ABERDEEN ST
CARPENTER ST
MORGAN ST
SANGAMON ST
PEORIA ST
GREEN ST
HALSTED ST
EMERALD AVE
UNION AVE
WALLACE ST
PARNELL AVE
EGGLESTON AVE
Metcalfe Aca
West Pullman Park
Major Taylor Bike Trail
Cedar Park Cemetery
Brown Acad
Vermont
VERMONT ST
Little Calumet River
Whistler Preserve

Figure 5-4e: Halsted Rail Alternative with Moderate (in Blue) and Severe (in Red) Impact Noise Contours

5.6.1 Permanent Impacts and Mitigations - Halsted Rail Alternative

Figures 5-4a through 5-4e show the Halsted Rail Alternative with both the moderate and severe noise impact contours. Mitigation measures for noise-affected residential receptors along the project corridor were considered. A noise barrier approximately 4 feet in height installed along the outer tracks of the aerial structure could reduce the wheel/rail noise that would propagate into the surrounding community. A noise barrier approximately 4 feet in height could provide a 10-dBA reduction in noise level in the surrounding community. Figures 5-4a through 5-4e show the location of the proposed noise barriers for the Halsted Rail Alternative.

With regard to vibration, no mitigation measures are proposed. The aerial structure with continuously welded rail could result in vibration levels that would be below the FTA impact criterion of 72 VdB at the residential receptors along the project corridor.

5.6.1.1 Segment HA

Segment HA of the Halsted Rail Alternative is north of 119th Street. As shown in Figure 5-4, there would be a substantial number of affected receptors along this section of the rail corridor in areas where the train speeds reach 55 mph.

5.6.1.2 Segment HB

Segment HB of the Halsted Rail Alternative is south of 119th Street. As shown in Figure 5-4, there would be a substantial number of affected receptors along this section of the rail corridor in areas where the train speeds reach 55 mph.

5.6.2 Construction Impacts and Mitigations - Halsted Rail Alternative

As it would be for the other build alternatives, this alternative would include the construction of an aerial structure, stations, and parking facilities at the stations. Construction noise impacts would be the same as for the other build alternatives. Construction noise levels are not expected to exceed the FTA recommended construction noise limits. As a result, construction noise mitigation measures were not considered. This analysis assumes that the same noise-reducing construction practices described for the UPRR ROW Option would be used for all of the build alternatives, including the Halsted Rail Alternative.

As with the UPRR ROW Option, no vibration impacts are anticipated from construction. The impact threshold distances were calculated for vibration and it was determined from the analysis that most of the equipment can be operated without risk of damage at distances of 15 feet or greater from non-engineered timber and masonry buildings or at distances of 8 feet or greater from reinforced concrete buildings.

5.6.3 119th Street Yard and Shop

Because of the much lower amount of train activity in and out of the 119th Street yard and shop and the lower train speeds compared to other parts of the project corridor, the noise levels generated in this area (an L_{dn} of 58 dBA at a distance of 50 feet) are anticipated to be lower than the noise levels generated along other parts of the project corridor even with noise generated by maintenance activities conducted at the yard and shop. . The Kroc Center is located more than 135 feet to the northwest of the yard and shop site and is not within the noise impact contours. As a result, the noise generated at the 119th Street yard and shop would have no impact noise sensitive receptors along 119th Street.

5.6.3.1 Permanent Impacts and Mitigations

The noise generated at the 119th Street yard and shop would have no impact on noise sensitive receptors along 119th Street. As a result, noise mitigation was not considered for the 119th Street yard and shop.

5.6.3.2 Construction Impacts and Mitigations

Construction noise levels are not expected to exceed the FTA recommended construction noise limits described in Table 3-3. As a result, construction noise mitigation measures were not considered. Construction activities would, however, be restricted to daytime hours, and all construction equipment exhaust mufflers would be kept in a state of good repair. To the maximum extent possible, vehicles that are not in use would not remain idling on the construction site.

Section 6
Impacts Remaining After Mitigation

6.1 No Build Alternative

The No Build Alternative assumes no change in the existing conditions and therefore no change to the existing noise and vibration levels would occur within the project area. As a result, the No Build Alternative could result in no impact, and therefore no mitigation was considered.

6.2 Bus Rapid Transit Alternative

There would be noise impacts associated with the BRT Alternative as shown in Figure 5-1. Noise mitigation would not be feasible because the buses would travel along local streets that have small blocks, numerous cross streets, and driveways.

6.3 Union Pacific Railroad Rail Alternative – Right-of-Way Option

The UPRR Rail Alternative ROW Option would only occur if the freight relocation project were implemented prior to RLE Project implementation. As a result, the noise levels along the rail corridor would decrease by 5 to 7 dBA due to the removal of the freight operations. Because of the reduction in noise level, noise mitigation was not considered for the UPRR Rail Alternative ROW Option.

The aerial structure with continuous welded rail could result in vibration levels that are below the FTA impact criterion of 72 VdB for residential receptors along the project corridor. As a result, vibration mitigation measures are not proposed.

6.4 Union Pacific Railroad Rail Alternative – East Option

A noise barrier approximately 4 feet in height on the aerial structure would provide a 7 to 10-dBA reduction in the projected noise level in the surrounding community. Based on a noise reduction of 10 dBA, the moderate noise impact distance for trains traveling at 55 mph would decrease from 280 feet without mitigation to 60 feet from the centerline of the tracks with mitigation. The severe noise impact distance would be less than 20 feet with mitigation. A noise barrier approximately 4 feet in height on the aerial structure that would provide a 10-dBA reduction could result in no affected receptors remaining after mitigation.

The aerial structure with continuous welded rail could result in vibration levels that are below the FTA impact criterion of 72 VdB for residential receptors along the project corridor. As a result, vibration mitigation measures are not proposed.

6.5 Union Pacific Railroad Rail Alternative – West Option

Noise impacts remaining after mitigation would be the same as for the East Option, but would apply to distances from the centerline of the West Option alignment.

The aerial structure with continuous welded rail could result in vibration levels that are below the FTA impact criterion of 72 VdB for residential receptors along the project corridor. As a result, vibration mitigation measures are not proposed.

6.6 Halsted Rail Alternative

A noise barrier approximately 4 feet in height on the aerial structure would provide a 7 to 10-dBA reduction in projected noise level in the surrounding community. Based on a noise reduction of 10 dBA, the moderate noise impact distance for trains traveling at 55 mph would decrease from the distances shown in Table 5-8, to distances ranging from 115 feet to 180 feet from the centerline of the aerial structure. The severe noise impact distance would be less than 45 feet with mitigation. As a result, the Halsted Rail Alternative after mitigation (i.e., including a noise barrier approximately 4 feet in height on the aerial structure) would still result in moderate noise impacts along Halsted Street. No severely affected receptors would remain after mitigation.

The aerial structure with continuous welded rail could result in vibration levels that are below the FTA impact criterion of 72 VdB for residential receptors along the project corridor. As a result, vibration mitigation measures are not proposed.

6.6.1 119th Street Yard and Shop

The noise generated at the 119th Street yard and shop would have no impact to noise sensitive receptors along 119th Street. As a result, noise mitigation was not considered for the 119th Street yard and shop.

Because of the slow speed of the trains entering and leaving the 119th Street yard and shop, vibration levels would be below the FTA impact criterion of 72 VdB for residential receptors. As a result, vibration mitigation measures are not proposed.

Section 7
References Cited

Chicago Transit Authority (CTA). 2012. Personal Communication - Email from Chicago Transit Authority (Sonali Tandon, Red Line Extension Project Manager) regarding RLE Track Structure Assumptions for noise and vibration analysis (aerial structure with closed deck and continuous welded rail), dated 3 October 2012.

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Federal Transit Administration (FTA). 2006. Transit Noise and Vibration Impact Assessment, Department of Transportation, Federal Transit Administration, Report No. FTA-VA-90-1003-06, May 2006.

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Appendix A
2014-2015 Red Line Extension Project Update

2014–2015 Red Line Extension Project Update

From 2012-2014, CTA evaluated benefits and impacts of four alternatives: the No Build Alternative, the Bus Rapid Transit Alternative (along Michigan Avenue), the Union Pacific Railroad (UPRR) Rail Alternative, and the Halsted Alternative. CTA evaluated three options of the UPRR Rail Alternative: Right-of-Way Option, East Option, and West Option. CTA also evaluated two options of the UPRR Rail Alternative 130th Street station: a South Station Option and a West Station Option. Based on the project description provided in Section 2 of this technical memorandum, CTA analyzed the impacts of these alternatives and station options. The benefits and impacts are included in the technical memoranda prepared in 2012-2014.

In August 2014, based on the technical analysis and public input, CTA announced the NEPA Preferred Alternative—the UPRR Rail Alternative. Additional conceptual engineering was conducted on the UPRR Rail Alternative to refine the East and West Option alignments. In addition, CTA is considering only the South Station Option of the 130th Street Station.

In late 2014 and early 2015, CTA conducted additional engineering and revised assumptions on the East and West Options to refine the alignments. The refinement of the East and West Options consisted of the following items:

- For the segment of the alignment along I-57, CTA shifted the proposed alignment from the median of I-57 to the north side of I-57 within the existing expressway right-of-way. The construction would be less complex, safer for construction workers, and have a shorter duration. The shift would also allow for fewer impacts to Wendell Smith Park for the East Option, and would allow for no permanent impacts to Wendell Smith Park for the West Option.
- CTA modified the curve speeds as the alignment heads south from I-57 along the UPRR tracks. The curve speed for both the East and West Options would be 35 mph.
- CTA shifted the East Option alignment near 103rd Street station to minimize impacts to Block Park and the Roseland Pumping Station.
- CTA modified the curves south of 103rd Street for both the East and West Options to 55 mph to maximize the train speed.
- CTA refined the layout of the 120th Street yard and shop to optimize yard operations. The refined layout of the yard would accommodate 340 train cars.

The refinement of the East and West Option alignments minimizes potential impacts to parks while providing flexibility for future design phases. The Draft Environmental Impact Statement contains the benefits and impacts of the refined East and West Option alignments and supersedes information presented in other chapters of this technical memorandum

Noise and Vibration

In early 2015, CTA refined the general assessment that was conducted in 2012-2013. CTA identified individual noise-sensitive receivers within the moderate and severe impact contours and conducted a field verification of noise-sensitive receiver locations on March 5, 2015. Residential noise-sensitive receivers within the moderate and severe impact contours were counted unless identified as potentially displaced properties. The land use in the vicinity of the corridor is predominantly residential (Category 2). Three parks, six schools, and four churches (Category 3) are near the corridor and were assessed for impacts. During the field verification, numerous uninhabited residences were identified scattered throughout the area. Although they are not occupied and are not likely to be occupied, these properties are included in the counts of noise-sensitive receivers because they are not contiguous and are adjacent to occupied homes. The land use in the area is expected to continue to be residential, and it is possible that these properties may be resold for residential development. The majority of these houses were between 105th Street and 115th Street on the east side of the corridor and along Eggleston Avenue from 107th Street south on the west side of the corridor. Although these areas would be affected and there are noise-sensitive receivers in the area, the overall impacts would likely be less because the properties are not in use. The identified affected noise-sensitive receivers were counted individually but mapped as sensitive receiver clusters because of the small size of the individual parcels. The clusters of receivers were determined to be similar distances from the proposed tracks and where the CTA operating conditions, such as train speed, were determined to be similar.

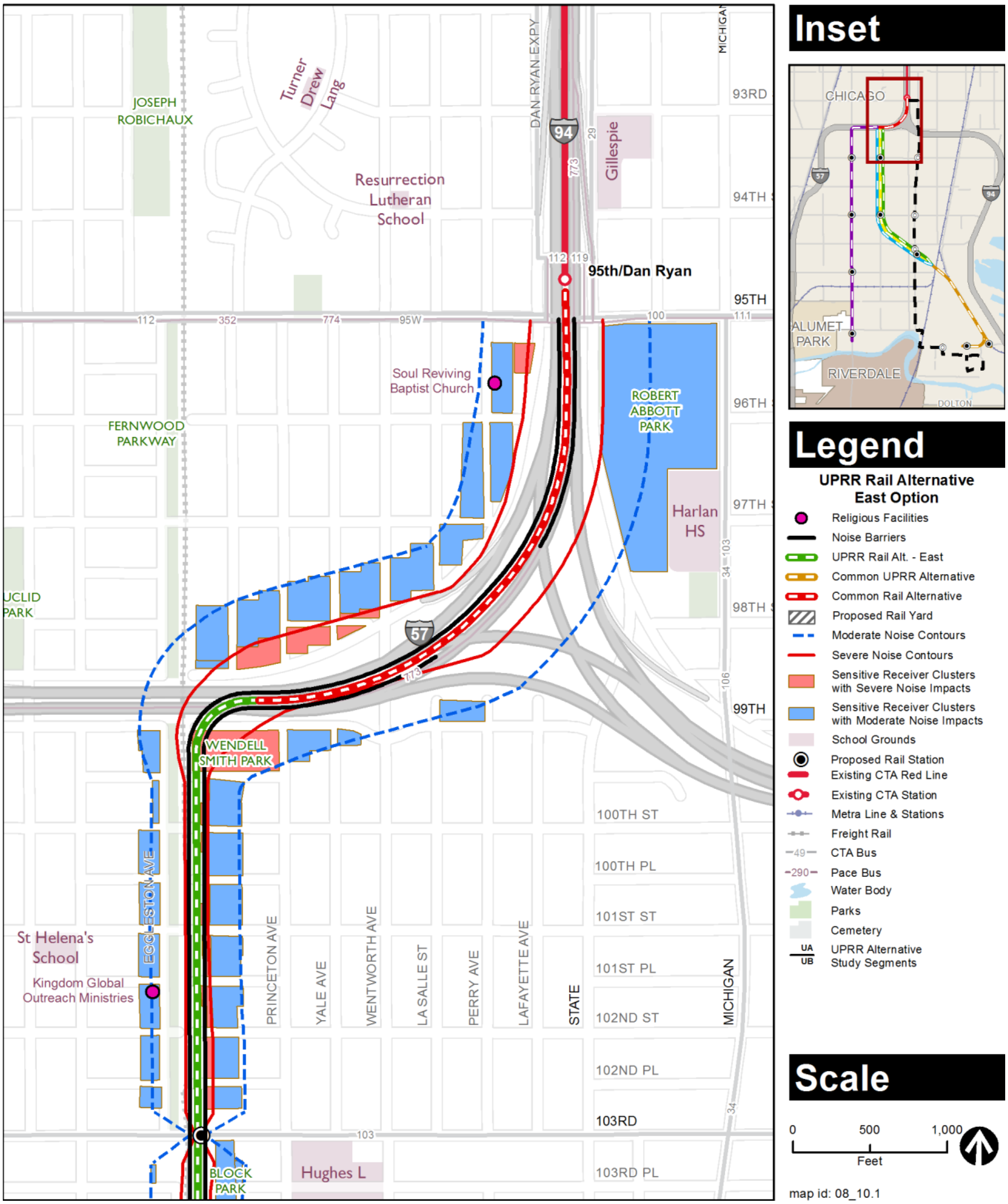
The revised alignment along I-57 would result in different permanent noise impacts for both the East and West Options than what was presented previously.

Operating assumptions are based on the operating plan for 95th Street Station because service frequency on the proposed service is anticipated to be the same as for the Red Line. March 2016 average daytime headway at 95th Street Station is 6.1 minutes, which is consistent with the daytime average headway used for noise modeling. Service frequency varies by the time of day and by line; therefore, CTA provides frequency ranges in public schedules. The service frequency would be adjusted to accommodate demand once the proposed project service has been implemented.

Table 1 and **Figures 1a through 1e** summarize the sensitive receivers within the moderate and severe noise impact contours for the East Option.

Table 1: Sensitive Receivers within Moderate and Severe Noise Impact Contours - Union Pacific Railroad Alternative East Option

Area of Impact	West of Track Structure	East of Track Structure	Total
95th Street to 103rd Street	167 Moderate 25 Severe	108 Moderate 22 Severe	275 Moderate 47 Severe
103rd Street to 111th Street	1 Moderate 0 Severe	107 Moderate 25 Severe	108 Moderate 25 Severe
111th Street to Michigan Avenue at 116th Street	37 Moderate 0 Severe	98 Moderate 4 Severe	135 Moderate 4 Severe
Michigan Avenue to CN/ME Rail Corridor	16 Moderate 0 Severe	40 Moderate 7 Severe	56 Moderate 7 Severe
Total	**221 Moderate** **25 Severe**	**353 Moderate** **58 Severe**	**574 Moderate** **83 Severe**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CHICAGO
CALUMET PARK
RIVERDALE
DOLTON
Legend
UPRR Rail Alternative East Option
Religious Facilities
Noise Barriers
UPRR Rail Alt. - East
Common UPRR Alternative
Common Rail Alternative
Proposed Rail Yard
Moderate Noise Contours
Severe Noise Contours
Sensitive Receiver Clusters with Severe Noise Impacts
Sensitive Receiver Clusters with Moderate Noise Impacts
School Grounds
Proposed Rail Station
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
49 CTA Bus
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UA UB UPRR Alternative Study Segments
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JOSEPH ROBICHAUX
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Resurrection Lutheran School
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MICHIGAN
93RD
94TH
95TH
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97TH
98TH
99TH
95th/Dan Ryan
Soul Reviving Baptist Church
ROBERT ABBOTT PARK
Harlan HS
FERNWOOD PARKWAY
EUCLID PARK
57
WENDELL SMITH PARK
100TH ST
100TH PL
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101ST PL
102ND ST
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103RD
103RD PL
EGGLESTON AVE
PRINCETON AVE
YALE AVE
WENTWORTH AVE
LA SALLE ST
PERRY AVE
LAFAYETTE AVE
STATE
MICHIGAN
St Helena's School
Kingdom Global Outreach Ministries
BLOCK PARK
Hughes L
112
352
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119
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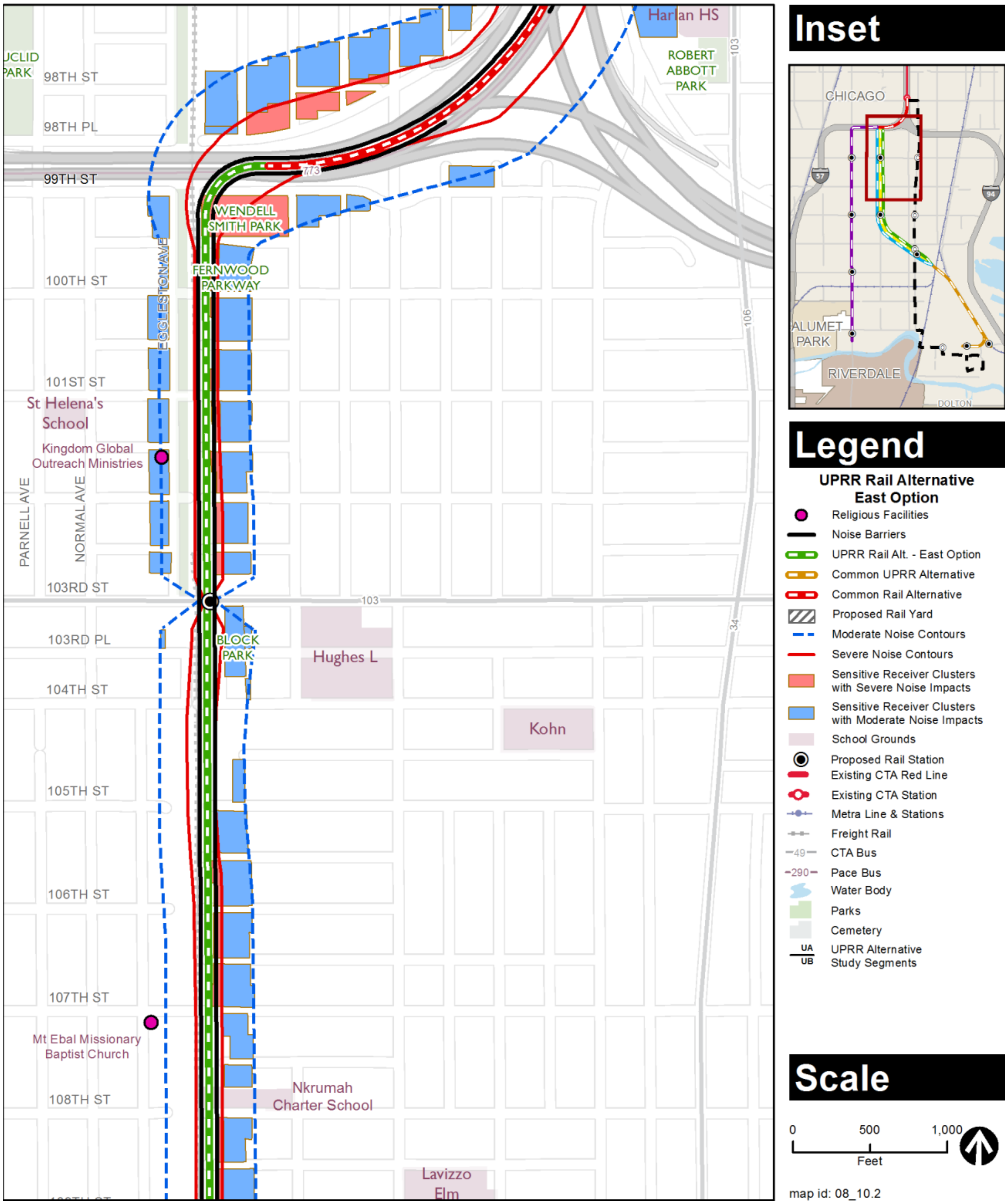
34

Figure 1a: Union Pacific Railroad Alternative East Option with Moderate (in Blue) and Severe (in Red) Impact Noise Contours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EGGLESTON AVE
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St Helena's School
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PARNELL AVE
NORMAL AVE
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BLOCK PARK
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Nkrumah Charter School
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CALUMET PARK
RIVERDALE
DOLTON
Legend
UPRR Rail Alternative East Option
Religious Facilities
Noise Barriers
UPRR Rail Alt. - East Option
Common UPRR Alternative
Common Rail Alternative
Proposed Rail Yard
Moderate Noise Contours
Severe Noise Contours
Sensitive Receiver Clusters with Severe Noise Impacts
Sensitive Receiver Clusters with Moderate Noise Impacts
School Grounds
Proposed Rail Station
Existing CTA Red Line
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Metra Line & Stations
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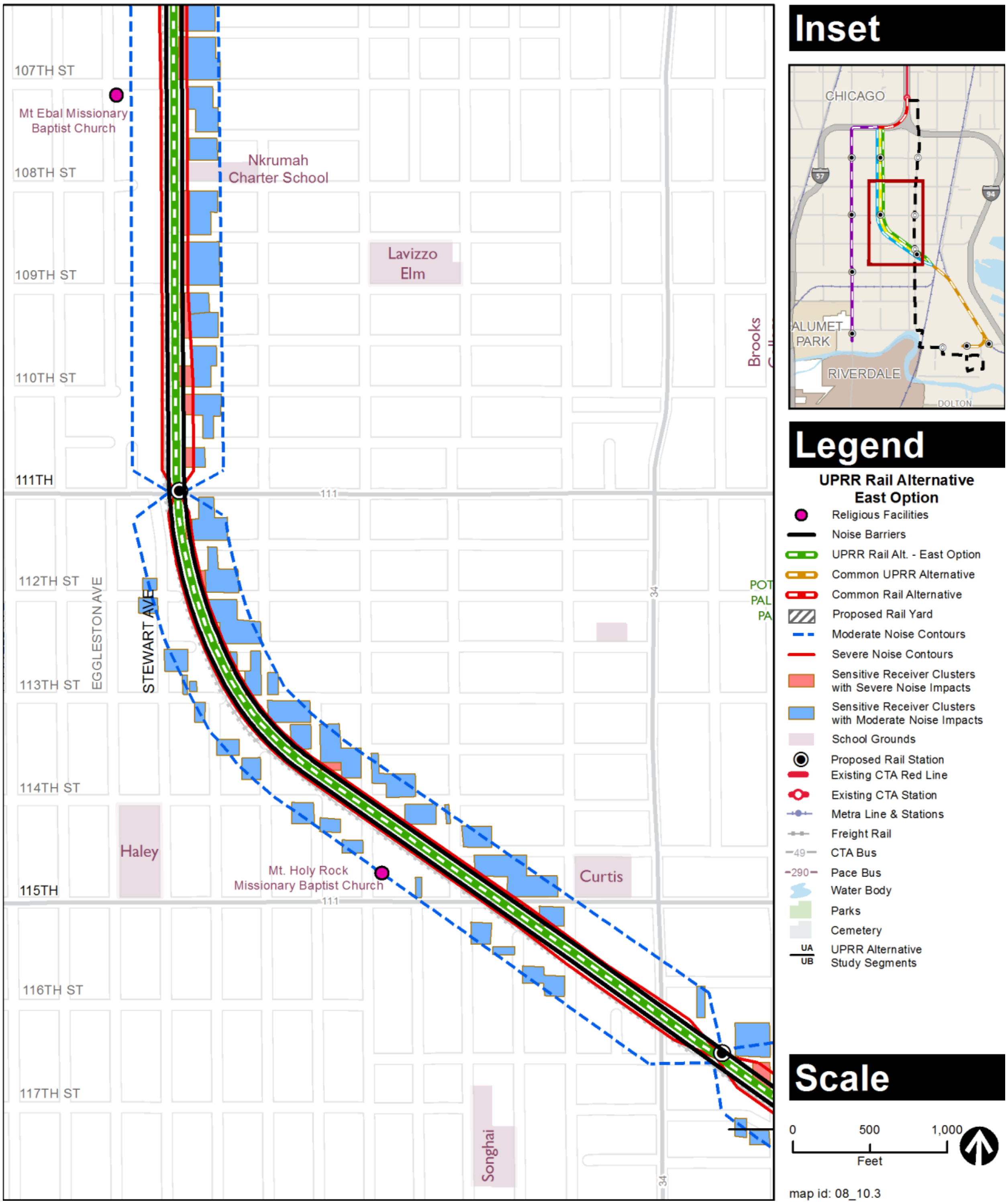
Figure 1b: Union Pacific Railroad Alternative East Option with Moderate (in Blue) and Severe (in Red) Impact Noise Contours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Lavizzo Elm
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112TH ST
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STEWART AVE
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113TH ST
114TH ST
Haley
Mt. Holy Rock Missionary Baptist Church
Curtis
115TH
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117TH ST
Songhai
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CHICAGO
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ALUMET PARK
RIVERDALE
DOLTON
Legend
UPRR Rail Alternative East Option
Religious Facilities
Noise Barriers
UPRR Rail Alt. - East Option
Common UPRR Alternative
Common Rail Alternative
Proposed Rail Yard
Moderate Noise Contours
Severe Noise Contours
Sensitive Receiver Clusters with Severe Noise Impacts
Sensitive Receiver Clusters with Moderate Noise Impacts
School Grounds
Proposed Rail Station
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
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290 Pace Bus
Water Body
Parks
Cemetery
UA UB UPRR Alternative Study Segments
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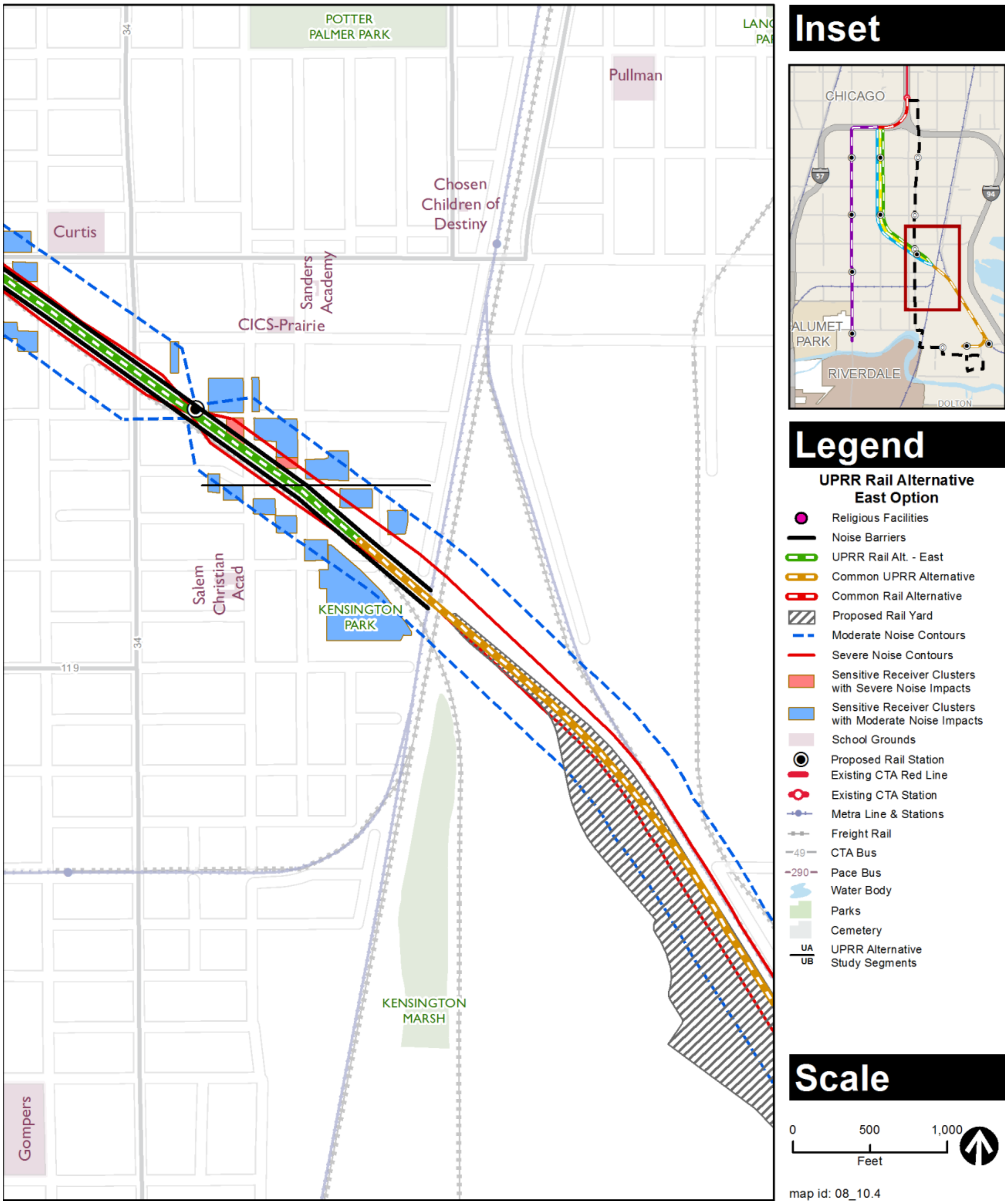
Figure 1c: Union Pacific Railroad Alternative East Option with Moderate (in Blue) and Severe (in Red) Impact Noise Contours


POTTER PALMER PARK
LANG PAI
Pullman
Chosen Children of Destiny
Curtis
Sanders Academy
CICS-Prairie
Salem Christian Acad
KENSINGTON PARK
KENSINGTON MARSH
Gompers
34
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119
Inset
CHICAGO
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ALUMET PARK
RIVERDALE
DOLTON
Legend
UPRR Rail Alternative East Option
Religious Facilities
Noise Barriers
UPRR Rail Alt. - East
Common UPRR Alternative
Common Rail Alternative
Proposed Rail Yard
Moderate Noise Contours
Severe Noise Contours
Sensitive Receiver Clusters with Severe Noise Impacts
Sensitive Receiver Clusters with Moderate Noise Impacts
School Grounds
Proposed Rail Station
Existing CTA Red Line
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Metra Line & Stations
Freight Rail
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290 Pace Bus
Water Body
Parks
Cemetery
UA UB UPRR Alternative Study Segments
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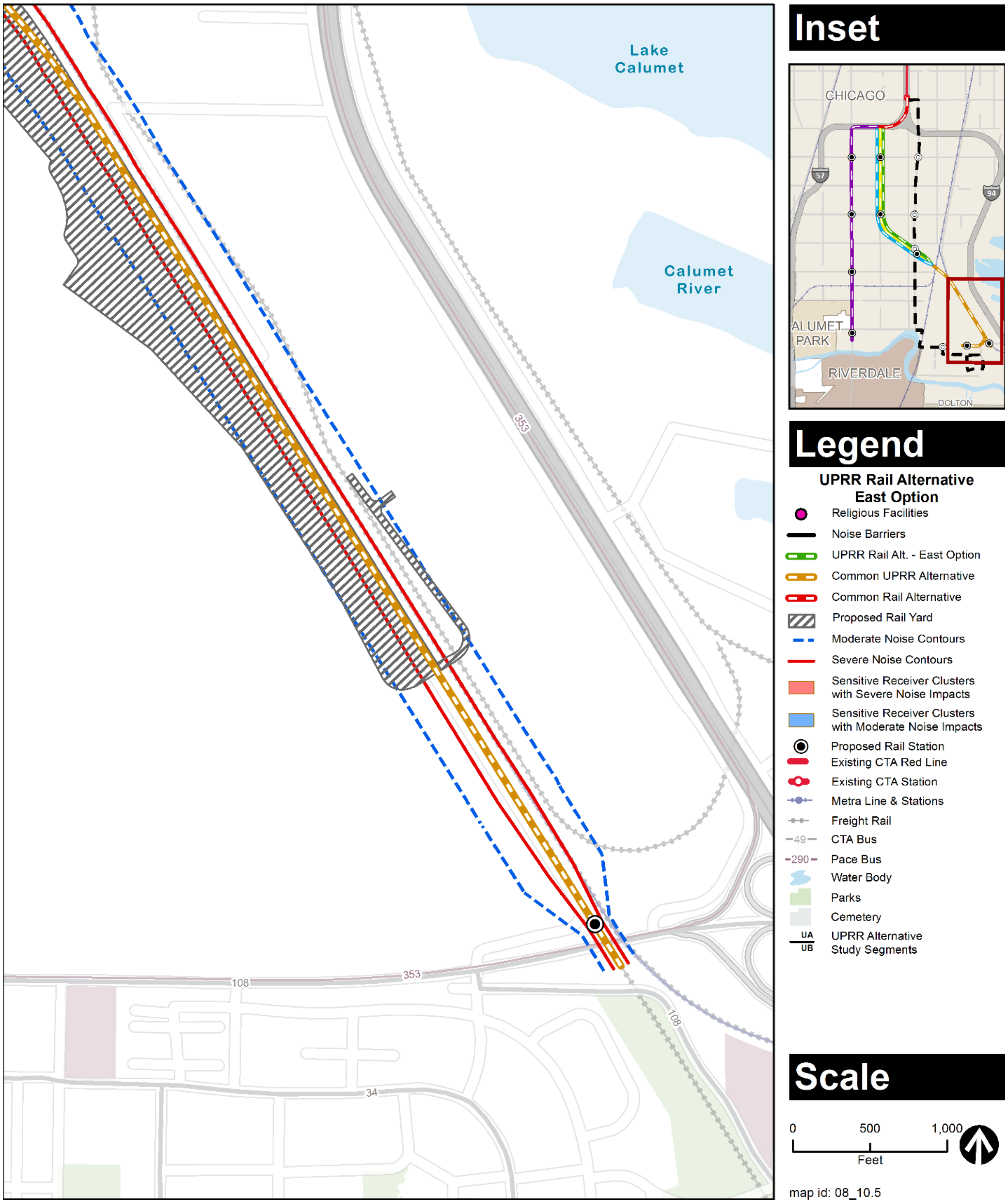
Figure 1d: Union Pacific Railroad Alternative East Option with Moderate (in Blue) and Severe (in Red) Impact Noise Contours


Lake Calumet
Calumet River
353
108
353
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Inset
CHICAGO
57
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ALUMET PARK
RIVERDALE
DOLTON
Legend
UPRR Rail Alternative East Option
Religious Facilities
Noise Barriers
UPRR Rail Alt. - East Option
Common UPRR Alternative
Common Rail Alternative
Proposed Rail Yard
Moderate Noise Contours
Severe Noise Contours
Sensitive Receiver Clusters with Severe Noise Impacts
Sensitive Receiver Clusters with Moderate Noise Impacts
Proposed Rail Station
Existing CTA Red Line
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Metra Line & Stations
Freight Rail
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290 Pace Bus
Water Body
Parks
Cemetery
UA UB UPRR Alternative Study Segments
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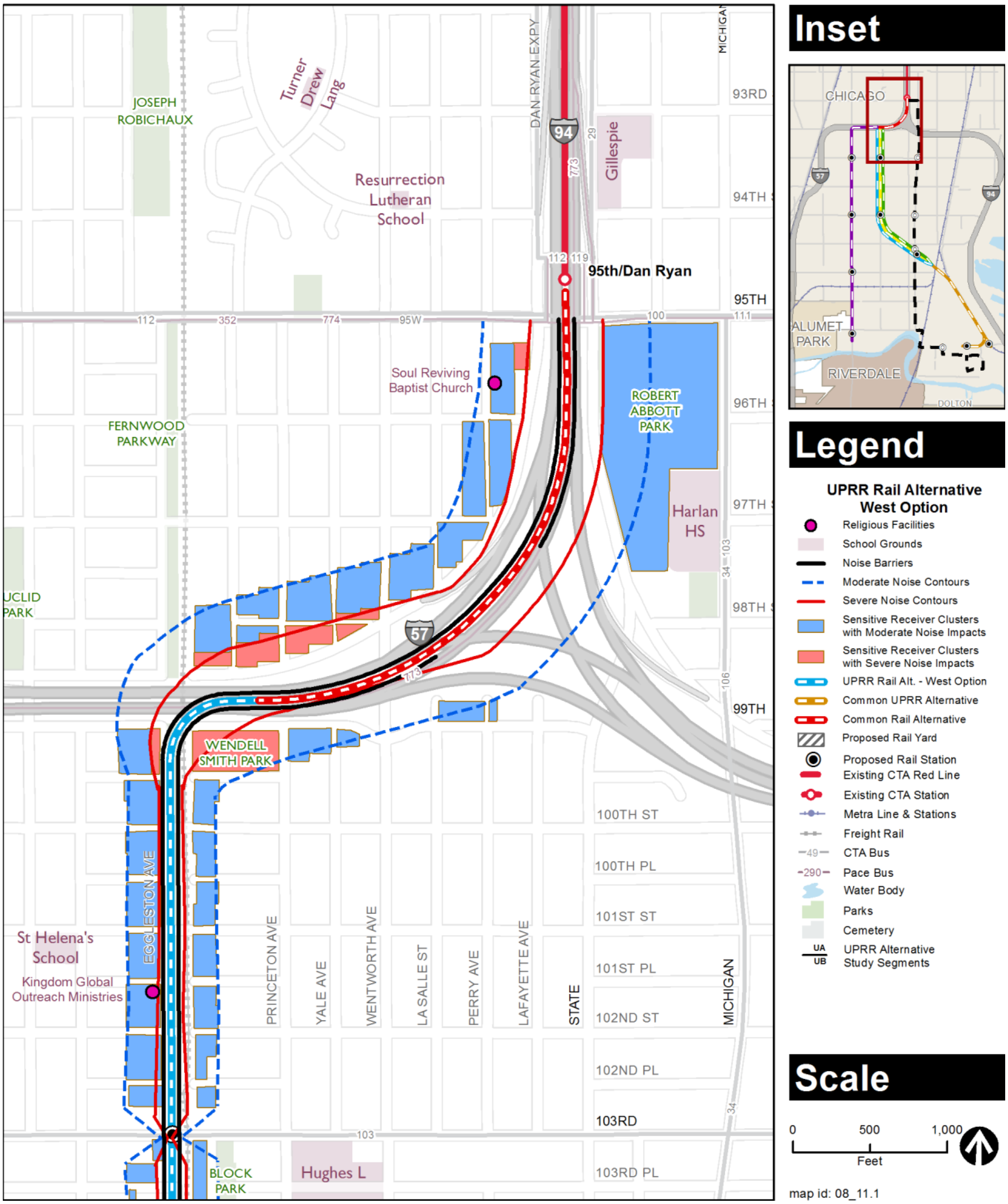
Figure 1e: Union Pacific Railroad Alternative East Option with Moderate (in Blue) and Severe (in Red) Impact Noise Contours

Table 2 and **Figures 2a through 2e** summarize the sensitive receivers within the moderate and severe noise impact contours for the West Option.

Table 2: Sensitive Receivers within Moderate and Severe Noise Impact Contours – Union Pacific Railroad Alternative West Option

Area of Impact	West of Track Structure	East of Track Structure	Total
95th Street to 103rd Street	209 Moderate 32 Severe	81 Moderate 1 Severe	290 Moderate 33 Severe
103rd Street to 111th Street	125 Moderate 0 Severe	62 Moderate 0 Severe	187 Moderate 0 Severe
111th Street to Michigan Avenue at 116th Street	145 Moderate 9 Severe	47 Moderate 0 Severe	192 Moderate 9 Severe
Michigan Avenue to CN/ME Rail Corridor	41 Moderate 7 Severe	28 Moderate 0 Severe	69 Moderate 7 Severe
Total	**520 Moderate** **48 Severe**	**218 Moderate** **1 Severe**	**738 Moderate** **49 Severe**


Inset
CHICAGO
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CALUMET PARK
RIVERDALE
DOLTON
Legend
UPRR Rail Alternative West Option
● Religious Facilities
School Grounds
Noise Barriers
Moderate Noise Contours
Severe Noise Contours
Sensitive Receiver Clusters with Moderate Noise Impacts
Sensitive Receiver Clusters with Severe Noise Impacts
UPRR Rail Alt. - West Option
Common UPRR Alternative
Common Rail Alternative
▨ Proposed Rail Yard
Proposed Rail Station
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
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Parks
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JOSEPH ROBICHAUX
Turner Drew Lang
Resurrection Lutheran School
DAN RYAN EXPY
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MICHIGAN
93RD
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95th/Dan Ryan
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ROBERT ABBOTT PARK
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100TH PL
101ST ST
101ST PL
102ND ST
102ND PL
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103RD PL
EGGLESTON AVE
PRINCETON AVE
YALE AVE
WENTWORTH AVE
LA SALLE ST
PERRY AVE
LAFAYETTE AVE
STATE
MICHIGAN
St Helena's School
Kingdom Global Outreach Ministries
103
BLOCK PARK
Hughes L
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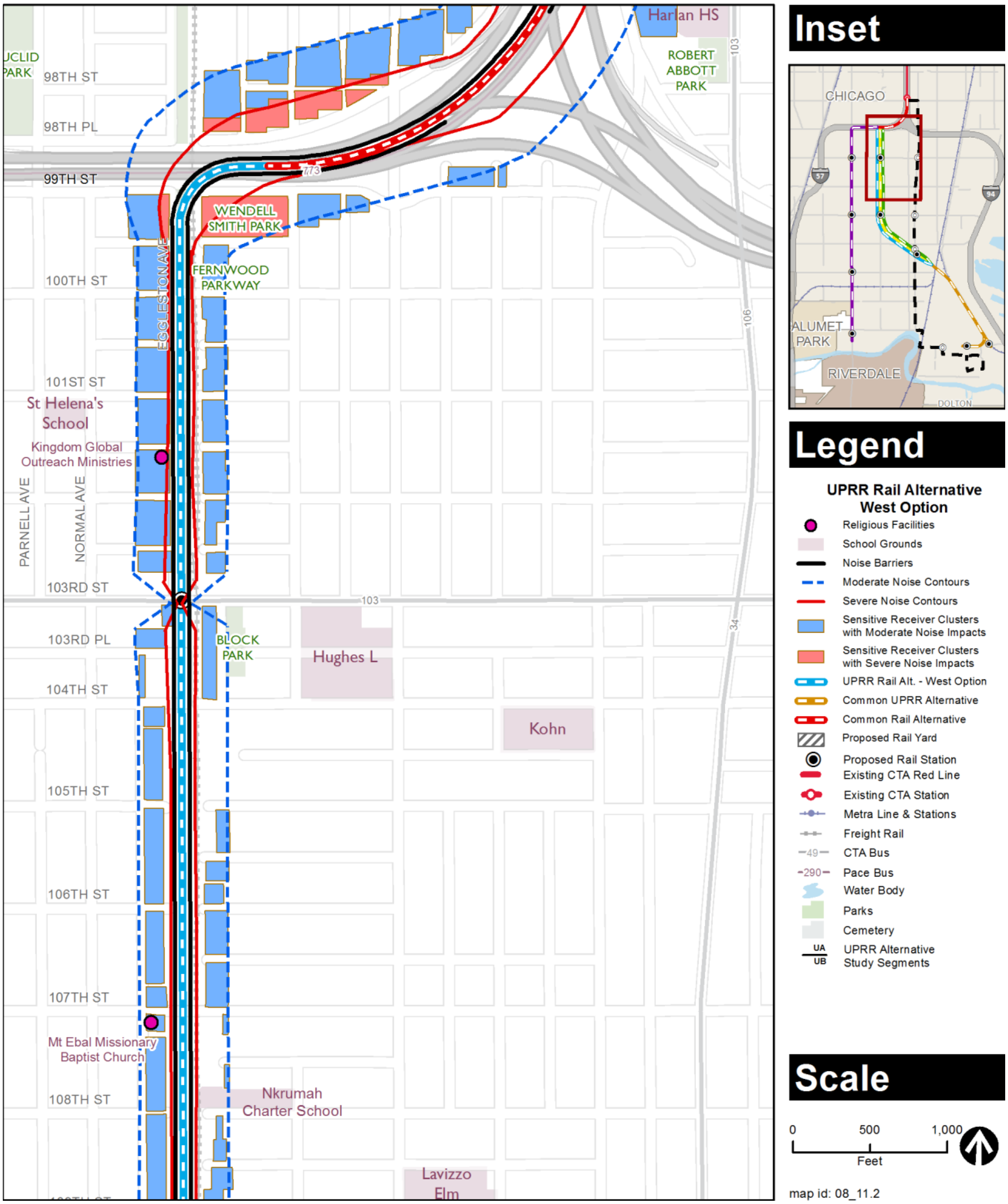
Figure 2a: Union Pacific Railroad Alternative West Option with Moderate (in Blue) and Severe (in Red) Impact Noise Contours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108TH ST
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Proposed Rail Station
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
49 CTA Bus
290 Pace Bus
Water Body
Parks
Cemetery
UA UB UPRR Alternative Study Segments
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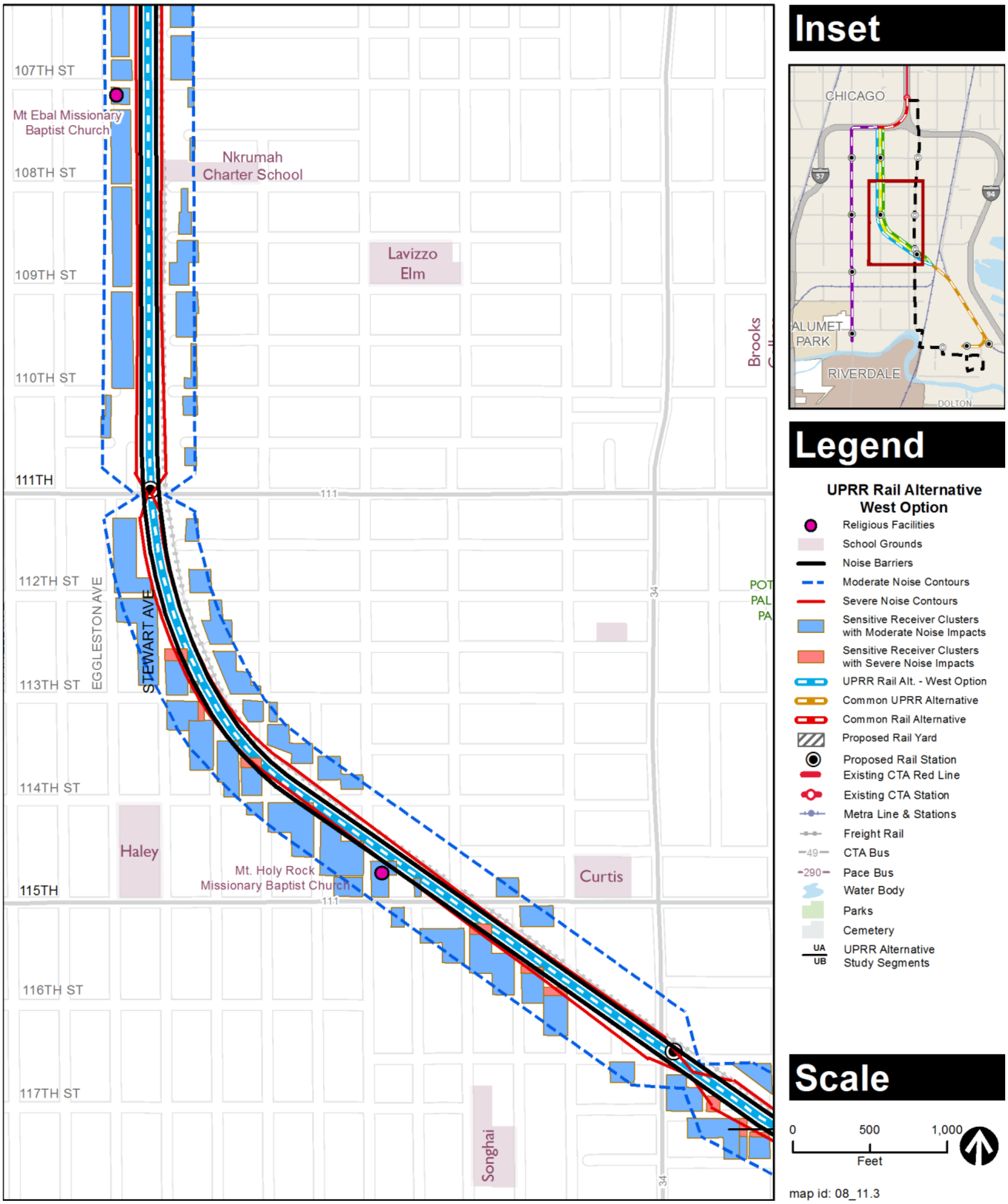
Figure 2b: Union Pacific Railroad Alternative West Option with Moderate (in Blue) and Severe (in Red) Impact Noise Contours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Nkrumah Charter School
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UPRR Rail Alt. - West Option
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Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
49 CTA Bus
290 Pace Bus
Water Body
Parks
Cemetery
UA UB UPRR Alternative Study Segments
Scale
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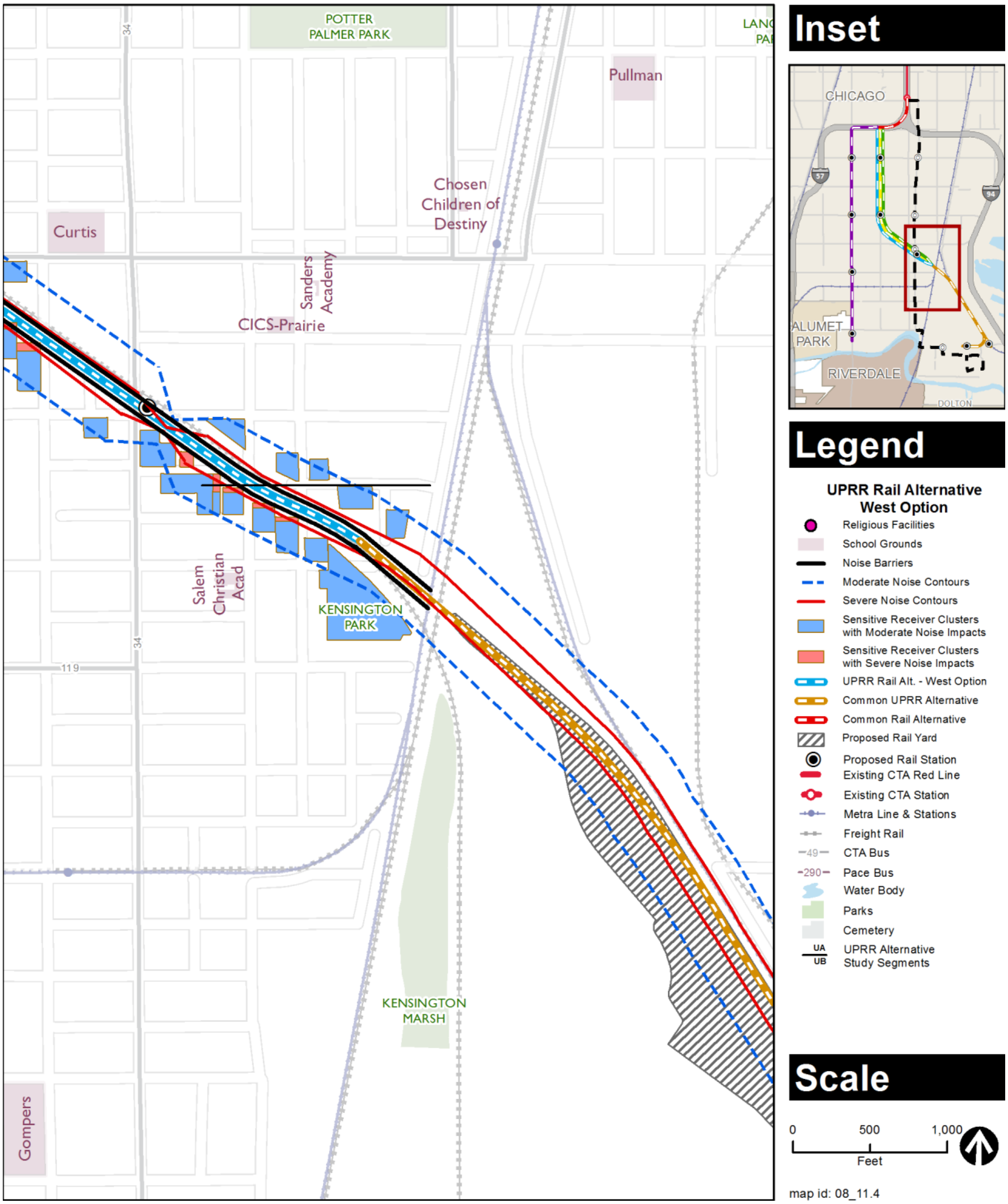
Figure 2c: Union Pacific Railroad Alternative West Option with Moderate (in Blue) and Severe (in Red) Impact Noise Contours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Sanders
Academy
CICS-Prairie
Salem
Christian
Acad
KENSINGTON
PARK
KENSINGTON
MARSH
Gompers
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119
Inset
CHICAGO
57
94
ALUMET
PARK
RIVERDALE
DOLTON
Legend
UPRR Rail Alternative
West Option
Religious Facilities
School Grounds
Noise Barriers
Moderate Noise Contours
Severe Noise Contours
Sensitive Receiver Clusters
with Moderate Noise Impacts
Sensitive Receiver Clusters
with Severe Noise Impacts
UPRR Rail Alt. - West Option
Common UPRR Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
49
CTA Bus
290
Pace Bus
Water Body
Parks
Cemetery
UA
UB
UPRR Alternative
Study Segments
Scale
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Feet
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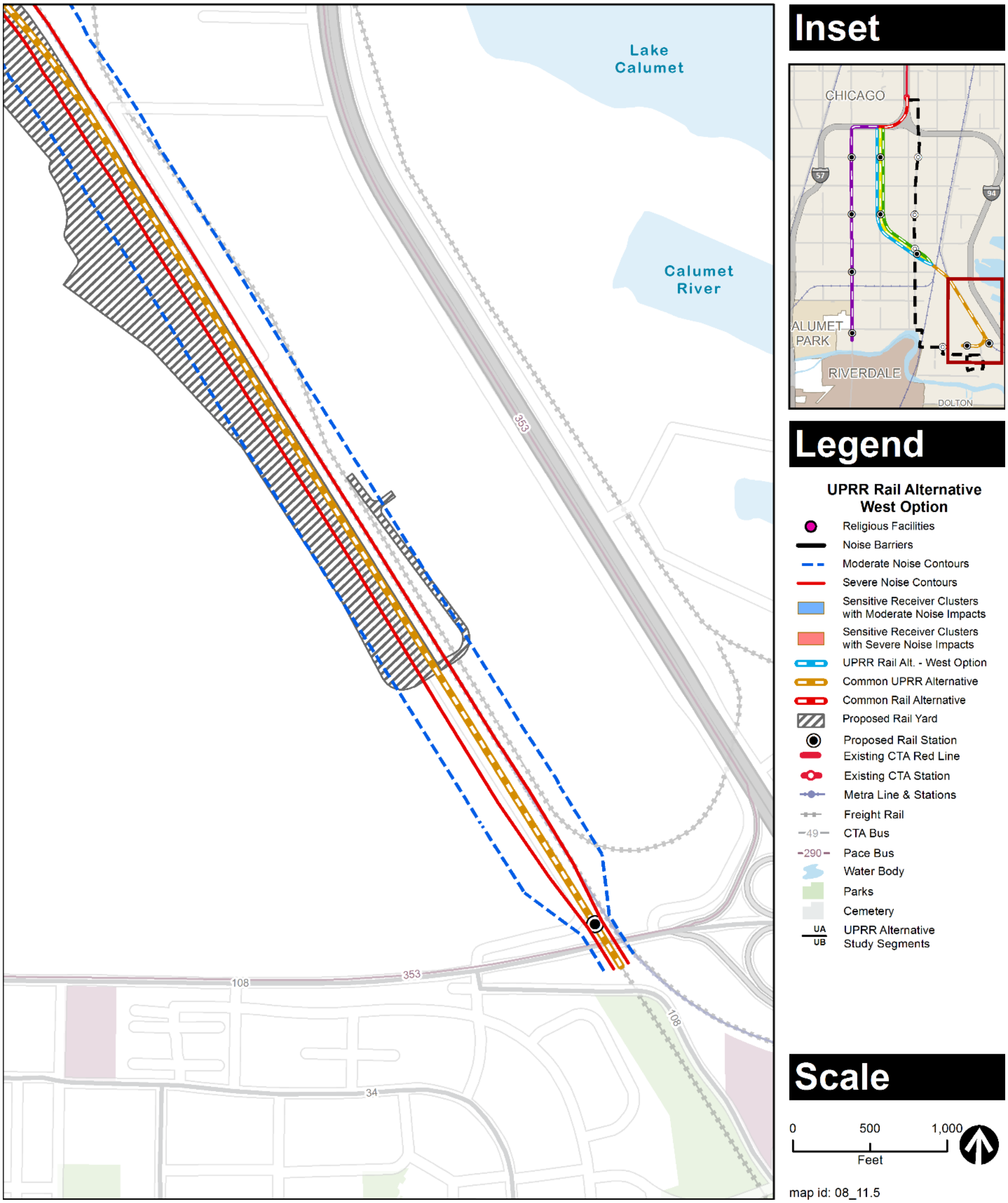
Figure 2d: Union Pacific Railroad Alternative West Option with Moderate (in Blue) and Severe (in Red) Impact Noise Contours


Lake Calumet
Calumet River
353
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353
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CHICAGO
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94
CALUMET PARK
RIVERDALE
DOLTON
Legend
UPRR Rail Alternative West Option
Religious Facilities
Noise Barriers
Moderate Noise Contours
Severe Noise Contours
Sensitive Receiver Clusters with Moderate Noise Impacts
Sensitive Receiver Clusters with Severe Noise Impacts
UPRR Rail Alt. - West Option
Common UPRR Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
49 CTA Bus
290 Pace Bus
Water Body
Parks
Cemetery
UA UB UPRR Alternative Study Segments
Scale
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Feet
map id: 08_11.5

Figure 2e: Union Pacific Railroad Alternative West Option with Moderate (in Blue) and Severe (in Red) Impact Noise Contours

Appendix P
Safety and Security Technical Memorandum

RED AHEAD
Moving Ahead to a Better Red

Red Line Extension

Chicago Red Line Extension Project

Safety and Security
Technical Memorandum

April 27, 2015
Updated September 9, 2015

Prepared for:
Chicago Transit Authority
567 W. Lake Street
Chicago, IL 60661

Prepared by:
CWC Transit Group
125 S. Wacker Drive
Suite 600
Chicago, IL 60606

cta

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Abbreviations

ADA	Americans with Disabilities Act
ADT	average daily traffic
BRT	Bus Rapid Transit
CDOT	Chicago Department of Transportation
CFR	Code of Federal Regulations
CHA	Chicago Housing Authority
CTA	Chicago Transit Authority
EIS	Environmental Impact Statement
FTA	Federal Transit Administration
ICC	Illinois Commerce Commission
IDOT	Illinois Department of Transportation
mph	miles per hour
MUTCD	Manual on Uniform Traffic Control Devices
MWRD	Metropolitan Water Reclamation District
NEPA	National Environmental Policy Act
NFPA	National Fire Protection Association
RLE	Red Line Extension
ROW	right-of-way
RTA	Regional Transit Authority
RTD	Regional Transportation District
UPRR	Union Pacific Railroad
VMT	vehicle miles traveled
VRH	vehicle revenue hours

Section 1
Summary

This technical memorandum was prepared to support an environmental impact statement (EIS) for the Chicago Transit Authority (CTA) Red Line Extension (RLE) Project. The purpose is to identify, evaluate, and characterize potential safety and security impacts and mitigation measures within the project area or associated with various RLE Project alternatives. Impacts can relate to transit patrons, employees, pedestrians, motorists, and the public.

1.1 Safety and Security Defined

Safety refers to freedom from harm resulting from unintentional acts or circumstances. With regard to the RLE Project, safety includes all incidents within the CTA right-of-way (ROW); including areas along tracks, in yards, and at stations, meeting certain threshold criteria (see Section 3.2). Examples could include collisions, derailments, fires, property damage, injuries, and fatalities.

Security refers to freedom from harm resulting from intentional acts or circumstances. Intentional acts include crimes, and must be reported if the intentional act meets thresholds for notification as specified in the Federal Transit Administration's (FTA's) State Safety Oversight Rule (40 Code of Federal Regulations [CFR] Part 659).

1.2 Key Findings

The following sections summarize the identified adverse impacts for each alternative considered, the mitigation measures to address the adverse impacts, and the impacts remaining after mitigation. Issues that the local community identified as important safety and security concerns are also addressed in the summary. Details regarding impacts that are not adverse or not substantially adverse can be found in Section 5 and Section 6 in this document.

1.2.1 No Build Alternative

There would be no expected permanent impacts, construction impacts, or cumulative impacts on safety and security associated with the No Build Alternative. Therefore, there would be no mitigation measures and no impacts remaining after mitigation.

1.2.2 Bus Rapid Transit Alternative

The Bus Rapid Transit (BRT) Alternative would have the following impacts:

- Pedestrian Safety - An adverse impact was identified at the proposed Kensington Avenue stop because a large number of pedestrians would need to cross Michigan Avenue without traffic controls or other pedestrian safety treatments. This impact would be mitigated through the installation of traffic signals, median refuge islands, and/or other pedestrian crossing treatments as applicable in coordination with the results of traffic studies completed during the final design phase. The impact remaining after mitigation would be not adverse.

- Bus Stop Security - The public scoping comments included concerns about the potential for crime at stops. In general, either existing major bus stops would be upgraded with new shelters, or BRT stops would be located away from existing crime hot spots. With increased ridership, more pedestrian activity would be expected than under the No Build Alternative. The bus stop crime impacts would all be either not adverse or beneficial.

- Parking Security - All parking facilities would be designed, constructed, and operated with features such as open design, lighting, surveillance cameras and/or security patrols, convex mirrors, emergency push buttons, fencing, and landscaping. For surface lots, pedestrian access routes through or adjacent to parking lots would be considered on a case-by-case basis where they could increase the pedestrian activity and pass-by surveillance. Given these design elements, there would be no adverse impacts on parking security.

- Neighborhood Security - The public scoping comments included concerns about the potential for increased crime in neighborhoods surrounding proposed stops. The addition of BRT service in an existing corridor served by frequent bus service (route #34) would not be expected to generate changes in travel patterns or demographics to an extent that would affect crime in surrounding neighborhoods. Therefore, there would be no adverse impacts on neighborhood security.

- Emergency Services - The public comments received during the scoping period included concerns about the ability of first responders to access construction areas and it is assumed that there would also be concerns about access through construction areas. It is expected that the BRT Alternative would be constructed with equipment temporarily occupying the parking lane, and without closures of the through travel lanes. Therefore, access for emergency services would not be restricted, and the impacts would be not adverse.

1.2.3 Union Pacific Railroad Rail Alternative

The UPRR Rail Alternative would have the following impacts:

- Pedestrian Safety - An adverse impact was identified at the proposed 103rd Street, 111th Street, and Michigan Avenue stations because a large number of pedestrians would need to cross major streets without traffic controls or other pedestrian safety treatments. This impact would be mitigated through the installation of traffic signals, median refuge islands, and/or other pedestrian crossing treatments as applicable in coordination with the results of traffic studies completed during the final design phase. The remaining impact would be not adverse.

- Station Security - The public scoping comments included concerns about the potential for crime at stations. All stations would be designed and constructed in compliance with the standards and guidelines in CTA's *Design and Rehabilitation Criteria Manual* (1996) and other design guidelines. Stations would be well lit, with clear lines of sight. The final design would consider lines of sight for surveillance by station personnel as well as video cameras. Given these design elements, there would be no adverse impacts on station security.

- Parking Security - As described for the BRT Alternative above, all parking facilities and pedestrian access routes would be designed, constructed, and operated with security features. Given these design elements, there would be no adverse impacts on parking security.

- Neighborhood Security - The public scoping comments included concerns about the potential for increased crime in neighborhoods surrounding proposed stations. A literature review of multiple sources found that new train stations would be unlikely to have much, if any, impact on neighborhood crime (Plano 1993, Denver Regional Transportation District [RTD] 2006, Liggett et al. 2003, San Diego Association of Governments 2007). However, some studies have found a correlation between train service and higher crime rates, particularly in low-income areas similar to the project area (Poister 1996, Ihlanfeldt 2003, Block and Davis 1996). The impact would therefore be not substantially adverse. Suggested mitigation measures would be security surveillance cameras and sidewalk lighting along commercial streets within the immediate vicinity (one block, or 660 feet) of train station entrances. The remaining impacts would be not adverse.

- Highway-Rail Crossings - An increase in train volumes, pedestrian volumes, and motor vehicle volumes in the vicinity of the 103rd Street and 111th Street stations would have both cumulative and permanent adverse impacts on safety for the East Option and the West Option. Pedestrian gates blocking the sidewalks is a potential mitigation measure for these two at-grade crossings. Fencing could be installed around parking lots and ROW lines, or intertrack fencing could be installed between the Union Pacific Railroad (UPRR) tracks to prevent pedestrians from crossing the tracks at places other than the designated locations. The remaining impacts would be not adverse.

- Emergency Services - The public comments received during the scoping period included concerns about the ability of first responders to access construction areas and it is assumed that there would also be concerns about access through construction areas. Emergency services would be able to access construction sites at all times in the same way contractors access the sites, and detours would be needed at times due to roadway closures. The impacts would be not substantially adverse. As a mitigation, to minimize detour lengths, neither adjacent roadways nor adjacent through streets operating in the same direction would be closed simultaneously. The remaining impacts would be not substantially adverse.

1.2.4 Halsted Rail Alternative

The Halsted Rail Alternative would have the following impacts:

- Station Security - The public scoping comments included concerns about the potential for crime at stations. As described for the UPRR Rail Alternative above, all stations would be designed and constructed in compliance with CTA guidelines and standards, and would incorporate security features. Given these design elements, there would be no adverse impacts on station security.

- Parking Security - As described for the BRT Alternative above, all parking facilities and pedestrian access routes would be designed, constructed, and operated with security features. Given these design elements, there would be no adverse impacts on parking security.

- Neighborhood Security - The public scoping comments included concerns about the potential for increased crime in neighborhoods surrounding proposed stations. As explained above for the UPRR Rail Alternative, research associated with this issue indicates that the impact would be not substantially adverse. The suggested mitigation measures would be the same as for the UPRR Rail Alternative.

- Emergency Services - The public comments received during the scoping period included concerns about the ability of first responders to access construction areas and it is assumed that there would also be concerns about access through construction areas. Emergency services would be able to access construction sites at all times in the same way contractors access the sites, and detours would be needed at times due to roadway closures. The impacts would be not substantially adverse. As a mitigation, only short segments of Halsted Street (less than ½ mile long) would be closed at any given time to prevent adjacent major cross streets from being closed simultaneously. The remaining impacts would be not substantially adverse.

1.3 2014-2015 Red Line Extension Project Update

Updated July 29, 2015

In August 2014, based on the technical analysis and public input until then, CTA announced the NEPA Preferred Alternative—the UPRR Rail Alternative. CTA is considering two alignment (route) options of this alternative: the East Option and the West Option. At this time, CTA is also considering only the South Station Option of the 130th Street Station. In late 2014 and early 2015, CTA conducted additional engineering on the East and West Options to refine the East and West Option alignments. Appendix B of this technical memorandum summarizes the refined alignments and any additional or different impacts that would result. The information in Appendix B supersedes information presented in other chapters of this technical memorandum.

Section 2
Introduction

The CTA is proposing to extend the Red Line from the existing 95th Street Terminal to the vicinity of 130th Street, subject to the availability of funding. The proposed RLE would include four stations. Each station would include bus transfer and parking facilities. This project is one part of the Red Ahead Program to extend and enhance the entire Red Line. The CTA is also planning 95th Street Terminal improvements that are anticipated to be completed prior to the proposed RLE construction.

The project area is 11 miles south of the Chicago central business district (commonly referred to as the Loop) and encompasses approximately 20 square miles. The boundaries of the project area are 95th Street on the north, Ashland Avenue on the west, Stony Island Avenue on the east, and the Calumet-Sag Channel/Little Calumet River and 134th Street on the south. The I-57 Expressway and I-94 Bishop Ford Freeway cross the western and eastern edges of the project area, respectively. Lake Calumet is in the eastern portion of the project area. The project area encompasses parts of nine community areas in the City of Chicago and the eastern section of the Village of Calumet Park. Chicago community areas include Beverly, Washington Heights, Roseland, Morgan Park, Pullman, West Pullman, Riverdale, Hegewisch, and South Deering. The project area comprises residential (primarily single family), industrial (both existing and vacant), transportation (including freight), and commercial development.

The Draft EIS focuses on the following alternatives (shown in Figure 2-1), which emerged from the Alternatives Analysis and the National Environmental Policy Act (NEPA) scoping process:

- No Build Alternative
- BRT Alternative
- UPRR Rail Alternative
    - ROW Option
    - East Option
    - West Option
- Halsted Rail Alternative

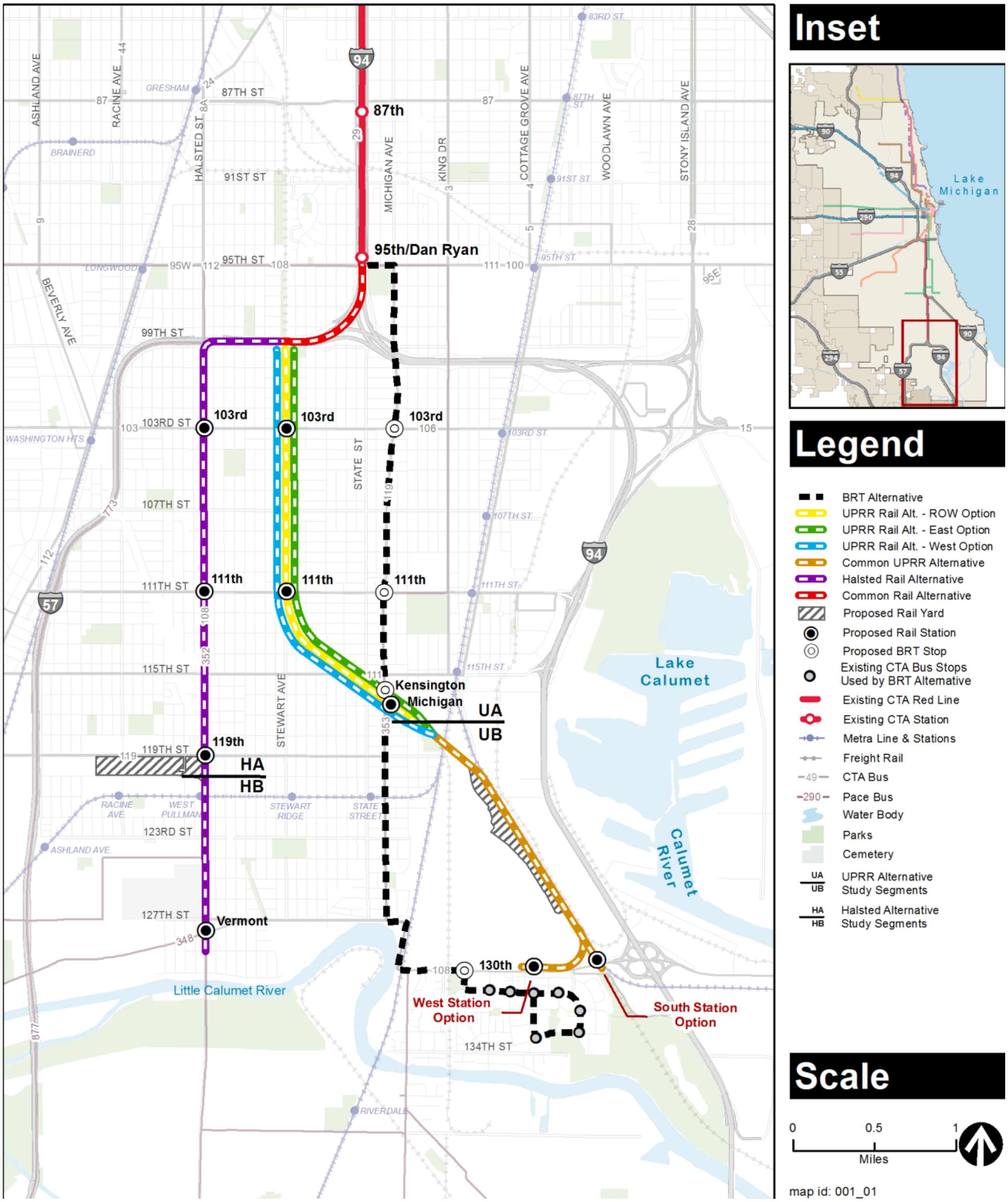
Inset
Lake Michigan
Legend
BRT Alternative
UPRR Rail Alt. - ROW Option
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
Common UPRR Alternative
Halsted Rail Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Proposed BRT Stop
Existing CTA Bus Stops Used by BRT Alternative
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
49 CTA Bus
290 Pace Bus
Water Body
Parks
Cemetery
UA UB UPRR Alternative Study Segments
HA HB Halsted Alternative Study Segments
Scale
0
0.5
1
Miles
map id: 001_01
87th
95th/Dan Ryan
103rd
111th
Kensington
Michigan
119th
Vermont
130th
UA
UB
HA
HB
West Station Option
South Station Option
Lake Calumet
Calumet River
Little Calumet River
87TH ST
91ST ST
95TH ST
99TH ST
103RD ST
107TH ST
111TH ST
115TH ST
119TH ST
123RD ST
127TH ST
134TH ST
ASHLAND AVE
RACINE AVE
HALSTED ST
STEWART AVE
STATE ST
MICHIGAN AVE
KING DR
COTTAGE GROVE AVE
WOODLAWN AVE
STONY ISLAND AVE
BEVERLY AVE
GRESHAM
BRAINERD
LONGWOOD
WASHINGTON HTS.
RACINE AVE
WEST PULLMAN
STEWART RIDGE
STATE STREET
ASHLAND AVE.
RIVERDALE
83RD ST
87TH ST
91ST ST
95TH ST
103RD ST
107TH ST
111TH ST
115TH ST
94
57

Figure 2-1: RLE Project Alternatives

The No Build Alternative is a required alternative as part of the NEPA environmental analysis and is used for comparison purposes to assess the relative benefits and impacts of extending the Red Line. The No Build Alternative is carried into the Draft EIS phase of the project development regardless of its performance versus the build alternatives under consideration. No new infrastructure would be constructed as part of the No Build Alternative other than committed transportation improvements that are already in the Chicago Metropolitan Agency for Planning (CMAP) Fiscal Year 2010–2015 Transportation Improvement Program (TIP) and the improvements to 95th Street Terminal. The TIP projects within the project area consist of four bridge reconstructions, several road improvement projects including resurfacing and coordination of signal timing on 95th Street, work on Metra's facilities, construction of a bicycle/pedestrian multi-use trail, and preservation of historic facilities. The No Build Alternative includes regular maintenance of existing track and structures, and bus transit service would be focused on the preservation of existing services and projects. All elements of the No Build Alternative are included in each of the other alternatives. Under this alternative, travel times would not improve from existing conditions.

The BRT Alternative (formerly referred to as the Transportation Systems Management Alternative) is a 5.0-mile, limited-stop, enhanced BRT route, which is assumed to operate 24 hours per day between the existing 95th Street Terminal and the intersection of 130th Street and Eberhart Avenue. No dedicated bus lanes would be provided for the BRT Alternative; however, parking lanes would be removed for some portions of the alignment and four stops with improved bus shelters and park & ride facilities would be created at 103rd Street and Michigan Avenue, 111th Street and Michigan Avenue, Kensington Avenue and Michigan Avenue, and 130th Street and Eberhart Avenue. Although BRT service elements would not continue south of the 130th Street stop, the bus route would continue through Altgeld Gardens along the existing route with six stops. The BRT Alternative would be consistent with bus routing changes that may occur as part of improvements to the 95th Street Terminal. Under this alternative, travel times between 130th Street and the Loop would improve over existing conditions.

The UPRR Rail Alternative is a 5.3-mile extension of the heavy rail transit Red Line from its existing 95th Street Terminal to 130th Street, just west of I-94. The Chicago Transit Board designated the UPRR Rail Alternative as the Locally Preferred Alternative at its August 12, 2009 board meeting. This alternative includes construction and operation of new heavy rail transit tracks, mostly in existing transportation corridors. The UPRR Rail Alternative has three options for alignment (ROW, East, and West), all of which would include operation on elevated structure from 95th Street to just past the Canadian National/Metra Electric District tracks near 119th Street. The alignment would then transition to at-grade through an industrial area with no public through streets, terminating at 130th Street in the vicinity of Altgeld Gardens. Four new stations would be constructed at 103rd Street, 111th Street, Michigan Avenue, and 130th Street. The 130th Street station would be the terminal station, with two options under evaluation: the South Station Option and the West Station Option. A new yard and shop facility would be sited near 120th Street and Cottage Grove Avenue. The bus routes in the vicinity of the UPRR Rail Alternative would be modified to enhance connectivity between the Red Line and the bus network. The hours

of operation and service frequency for the UPRR Rail Alternative are assumed to be the same as for the current Red Line. Under this alternative, travel times between 130th Street and the Loop would improve substantially over existing conditions.

The Halsted Rail Alternative is a 5.0-mile heavy rail transit extension of the existing Red Line. In this alternative, the Red Line would operate on an elevated structure running south from 95th Street along I-57 until Halsted Street. The alignment would then turn south and continue along Halsted Street to the intersection of Halsted Street and Vermont Avenue near 127th Street. This alternative would include four new stations at 103rd Street, 111th Street, 119th Street, and Vermont Avenue. The Vermont Avenue station would be the terminal station. A new yard and shop would be sited west of Halsted Street and between the 119th Street and Vermont Avenue stations. The bus routes in the vicinity of the Halsted Rail Alternative would be modified to enhance connectivity to the Red Line. The hours of operation and service frequency for the Halsted Rail Alternative are assumed to be the same as for the current Red Line. Under this alternative, travel times between 127th Street and the Loop would improve substantially over existing conditions. This alternative would not extend rail to Altgeld Gardens, which would be served by bus connecting to the Vermont terminal station.

Section 3
Methods for Impact Evaluation

This section describes the process used to conduct an analysis of potential safety and security impacts that could result from the construction and operation of the alternatives analyzed in the EIS for the RLE Project. This technical memorandum also identifies potential options to avoid, minimize, and mitigate adverse impacts.

3.1 Regulatory Framework

The following sections briefly discuss the regulatory framework used to guide the evaluation of project safety and security.

3.1.1 Federal

States with rail fixed guideway systems must comply with 49 CFR Part 659. This rule sets the FTA's requirements for improving rail transit safety and security. Part 659, Implementation Guidelines, produced by the FTA Office of Safety and Security (2006) lists the following requirements:

- Designating a Safety and Security Oversight agency
- Developing a program standard and supporting procedures
- Requiring, reviewing, and approving rail transit agency System Safety Program Plans and System Security Plans
- Requiring an annual cycle for rail transit agencies to review System Safety Program Plans and System Security Plans to determine whether they should be updated
- Requiring and overseeing implementation of the rail transit agency internal safety and security audit program and requiring, reviewing, and approving annual reports and certifications from rail transit agencies
- Requiring and overseeing implementation of the rail transit agency hazard management process
- Requiring and receiving notification of accidents meeting the revised Part 659 thresholds
- Conducting investigations of accidents meeting the revised Part 659 thresholds
- Conducting Three-Year safety and security reviews at rail transit agencies

- Requiring, reviewing, approving, and tracking corrective action plans for findings from accident investigations and Three-Year reviews

- Reporting to FTA

To inform employees about the hazards associated with chemicals in their workplaces, the Occupational Safety and Health Administration issued a Hazard Communication Standard, which is published in 29 CFR 1910.1200 or 1926.59. The Hazard Communication Standard requires that CTA make its employees aware of the hazards of chemicals in their workplace, provide access to information about these chemicals, and properly train employees to work safely with the chemicals.

The Federal Railroad Administration requires all railroads to comply with regulations under Title 49 CFR Part 214 - Roadway Worker Safety, which identifies requirements for workers performing construction, inspection, or maintenance activities in close proximity to active railroad tracks and identifies measures to be followed to provide on-track safety for workers.

On January 9, 2013 a Final Rule was issued to amend Part 611 of Title 49 of the CFR, under which the FTA evaluates and rates major transit capital investments seeking funding under the discretionary programs authorized by Section 5309 of Title 49, U.S. Code. The FTA's Proposed New Starts and Small Starts Policy Guidance, released on the same date as the Final Rule, includes factors to calculate the expected change in injuries and fatalities based on the projected change in vehicle-miles traveled (VMT) for automobile and transit modes, but not other modes such as pedestrians or bicyclists. The guidance also assigns an economic value to each injury and fatality. The analysis to quantify the economic value associated with the Preferred Alternative will be completed as a part of the New Starts process and in the Final EIS.

3.1.2 State

The Illinois Regional Transportation Authority (RTA) Act includes a section on safety (Section 2.11) that requires the RTA to develop and adopt a system safety program and requires all applicable Service Boards (i.e., CTA) to meet all compliance standards associated with Part 659 (Illinois General Assembly 1997).

The Illinois Commercial Transportation Law grants authority to the Illinois Commerce Commission (ICC) to create safety standards for passenger and freight trail carriers for the purpose of protecting public safety (Illinois General Assembly 1996). The ICC Rail Safety Program includes the following functions (ICC 2012c):

- "Manage crossing safety projects paid, in part, by the Grade Crossing Protection Fund.

- Engineering oversight of all safety improvements and/or modifications to the state's public highway/rail crossings.

- Inspection of all Railroad track in the state for defects which could cause train derailments.
- Oversight of all Railroad hazardous material shipments through the state, including radioactive waste and spent nuclear fuel.
- Engineering oversight of all improvements/modifications to highway traffic signal systems interconnected with railroad warning devices.
- Implementation of Illinois' Operation Lifesaver public education campaign.
- Investigation of highway/rail collisions and other rail-related incidents that occur in Illinois.”

This analysis assumes that all portions of the proposed project within the jurisdiction of the Illinois Department of Transportation (IDOT) would comply with all design standards in the *Bureau of Design and Environment Manual* (IDOT 2010a) or obtain authorizations for design exceptions as required.

3.1.3 Regional and Local

3.1.3.1 Regional Transportation Authority of Northeastern Illinois

The RTA of Northeastern Illinois is designated as the state safety oversight agency for the CTA’s heavy rail rapid transit system. In accordance with Part 659, the RTA has developed program standards and requirements to be followed by the CTA. These standards require the CTA to complete all of the activities described in Section 3.1.1.

3.1.3.2 Chicago Transit Authority

The CTA implements policies, plans, and actions specifically directed toward maintaining safety and security during construction and operation of the transit system. Safety and security planning is included in the CTA’s *Rail System Safety Program Plan* and *Security and Emergency Preparedness Plan*, both of which are required of the CTA under 49 CFR Part 659 as noted above. These documents are typically not available for public dissemination due to information security concerns.

The CTA’s *Safety and Security Management Plan* includes information on the integration of safety and security into the project development process, responsibilities of various parties, the hazard management process, safety and security design criteria, and the safety and security verification process (CTA 2011b). The primary responsibilities of contractors during the construction phase include developing a Construction Safety and Security Plan, performing job safety analysis, and monitoring safety and security activities. In addition, personnel requiring access to the track bed must undergo an 8-hour CTA rail safety training program.

The CTA, along with the Chicago Police Department as a security partner, also regularly coordinates with the Department of Homeland Security and the Federal Security Director for the Transportation Security Administration. This coordination includes triennial security reviews, the most recent of which is in progress and is planned to be coordinated with Metra, the regional commuter rail agency, and Pace, a suburban bus transit provider. The CTA's *Security and Emergency Preparedness Plan* is updated annually. The CTA participates in the BASE (Baseline Assessment for Security Enhancement) program, which measures performance in 17 categories related to safety and security.

Other existing CTA manuals that include design standards relevant to safety and security include the *Design and Rehabilitation Criteria Manual* (1996) and the *Bus Facilities Handbook* (2007). The standards in all CTA manuals would be followed for new construction where feasible and practical.

The design standards in the *Design and Rehabilitation Criteria Manual* address system safety, security, fire protection, human factors, reliability, maintainability, configuration management, and quality control. Patron safety is the highest priority in system safety objectives. Construction, installation, inspection, and testing procedures and the safety of CTA personnel are additional objectives.

The *Design and Rehabilitation Criteria Manual* emphasizes the importance of an open station concept, with plenty of lighting to eliminate dark spaces; transparent furnishings; and minimum widths of vertical and horizontal circulation elements (such as stairs, escalators, and aisles) to be determined by the CTA based on passenger volume forecasts.

The *Bus Facilities Handbook* provides the dimensions of bus stops and the appropriate places to locate street furniture and landscaping to ensure safe and accessible operations.

Construction safety is addressed in the CTA's (2011) *Safety Manual for Contract Construction On, Above, or Adjacent to the CTA Rail System* (Construction Safety Manual). The Construction Safety Manual is applicable whenever contractors or consultants perform work on, above, or adjacent to the CTA rail system in order to protect themselves, their employees, sub-contractors, CTA passengers, employees, and the public. The Construction Safety Manual is not addressed to CTA personnel. A comprehensive system of CTA standard operating procedures and rail service bulletins directed to CTA rail-operating personnel governs operations throughout the rail system and supports the safe and expeditious movement of trains.

3.1.3.3 City of Chicago

The portions of the project within the City of Chicago must comply with all applicable City of Chicago Building Code regulations (City of Chicago 2012a). The City of Chicago Building Code contains provisions for structural design, construction material performance, accessibility, fire protection systems, means of egress, and more. Many elements of the code would be applicable to the design of stations and track structure.

3.1.3.4 Village of Calumet Park

Portions of the proposed project within the Village of Calumet Park (along the west side of Halsted Street from 123rd Street to 125th Street) must comply with all requirements of the Village of Calumet Park Building Department (Village of Calumet Park 2013). Requirements are included for construction, demolition, electrical, plumbing, sidewalks, and more.

3.1.4 Other

3.1.4.1 National Fire Protection Association

Fire Code regulations for transit infrastructure are codified in the National Fire Protection Association (NFPA) 130 *Standard for Fixed Guideway Transit and Passenger Rail Systems* (NFPA 2010a). Topics addressed in the NFPA 130 Standard include fire department access, fire hydrants, automatic sprinkler systems, fire alarm systems, fire and explosion hazards safety, hazardous materials storage and use, provisions intended to protect and assist fire responders, industrial processes, and many other general and specialized fire safety requirements for new and existing buildings and their premises. Fire compartmentalization and evacuation requirements for transit facilities include the following:

- Enclosed stations or portions of stations must be of non-combustible construction built to a fire resistant period of 4 hours.
- Non-public areas must be separated from public areas by construction providing at least 2 hours of fire resistance.
- Commercial spaces (and other non-transit uses) must have at least 3 hours of fire resistance separation.
- Non-public area fire resistance requirements include 3 hours for electrical substations, 4 hours for generator rooms, and 2 hours for enclosed staircases, electrical code shafts, other plant rooms, storerooms, and refuse storage.
- Evacuation time for station occupant load must be a maximum of 4 minutes from the platform to ground level point of safety access and 6 minutes from the most remote point on the platform.
- The number of normal accessways (typically open stairways or escalators) can vary and is a function of exit time, given entraining and detraining peak passengers loads.
- Enclosed stairs must be provided at one or both ends of the platform of enclosed stations. Enclosed exits are for passenger use in emergencies, and must be electronically locked for security reasons. Electronically controlled locks must disengage upon fire alarm control panel command or in the event of a power loss. At least one enclosed stair must be designated for firefighter entry.

- Maximum travel distance to an exit on a platform must be 300 feet or less.

- Exit signs and emergency lighting must be provided and must have connections to secondary power.

- Automatic sprinkler systems must be provided for commercial spaces, storage, refuse storage, escalator pits, mechanical plant rooms, and other areas with combustible loading. Otherwise, public areas need not have sprinkler systems as long as non-combustible construction provides negligible fire load.

- Standpipe and hose systems must be in accordance with NFPA 14, *Standard for the Installation of Standpipes and Hose Systems* (NFPA 2010b), and must be installed in enclosed stations.

- Elevators counted as contributing to the means of egress capacity must be accessed via holding areas or lobbies that must be separate from the platform by a smoke-tight fire separation having a fire resistance rating of at least 1 hour, but not less than the time required to evacuate the holding area occupant load. Other requirements include having at least one stair accessible from the holding area, 5 square feet per person size requirements, pressurization to a minimum of 25 Pascals when smoke control is activated, and emergency alarm devices with two-way communication to the system operations control center.

3.1.4.2 Union Pacific Railroad

Several of the EIS alternative footprints would be in and/or adjacent to the active UPRR freight railroad corridor. The analysis considered safety and security issues related to portions of the project area in or adjacent to the freight railroad corridor.

To address the safety risk of collapse of the CTA structure due to damage caused by potential freight train derailment, the CTA track structure will generally have a minimum horizontal separation of 50 feet from the centerline of a proposed third track, planned to be located east of the existing two tracks. A crash wall capable of protecting the CTA track structure and piers from being struck by a derailed train will be provided where the minimum separation distance cannot be achieved. Where crash walls are not practical, the design of the CTA structure will include crash-worthy piers meeting American Railway Engineering and Maintenance of Way Association (2012) requirements.

The American Association of Railroads and its member Class I railroads, including UPRR, also currently participate in e-RAILSAFE program to improve the security of railroad employees, operations, and facilities. The program requires all third-party railroad contractors, vendors, and suppliers to comply with the following:

- Complete a railroad safety training course.

- Complete a railroad security awareness course.

- Acquire a contractor photo identification credential.
- Pass a criminal background check.

The Union Pacific Corporation will require flagging when activities have the potential to foul the track.

3.2 Impact Analysis Thresholds

There are no specific thresholds for safety and security identified under NEPA. The FTA requires transit agencies to report major safety and security incidents within 30 days of their occurrence. This EIS addresses potential safety and security impacts through a combination of qualitative and quantitative analysis. For the purpose of this EIS, an adverse safety and security impact is defined as an impact that would cause one or more of the following:

- Creation of the potential for increased rate of reportable major incidents to the FTA. Major incidents include fatalities, mainline derailments, injuries requiring off-site medical attention, property damage greater than or equal to $25,000, or an evacuation due to life safety reasons (National Transit Database 2010).
- Failure to meet the applicable design standards related to safety.
- Marked increase in pedestrian or motorist safety incidents at highway-rail grade crossings in the immediate vicinity of proposed CTA stations.
- The potential for a marked increase in pedestrian safety incidents in the immediate vicinity of proposed CTA stations.
- The potential for a marked increase in crime incidents near proposed CTA stations.
- Notable increases in emergency response times.
- Marked increase in other security risks on or off the CTA system.

3.2.1 Construction Impacts

The Construction Safety Manual provides guidance regarding security (CTA 2011). For the purpose of this EIS, the following safety and security impacts would be considered adverse:

- The contractor failed to provide a site security plan including measures to prevent unauthorized entry to the site and measures to prevent vandalism.
- Pre-existing security equipment (e.g., at the 95th Street Terminal or City of Chicago “Blue Light” cameras) was disabled without first incorporating similar temporary or permanent

security measures for the construction site, or without prior consent from the CTA's Office of Security.

- A CTA safety inspector determined that the contractor or contractor personnel committed serious or repeated violations of the safety rules or procedures contained in or referenced in the Construction Safety Manual.
- The contractor failed to take prompt and decisive corrective action on safety deficiencies identified at the work site.
- Closure of major roadways or extensive detours that noticeably degrade emergency response times.

3.3 Area of Potential Impact

The area of potential impact for safety and security includes a ½-mile radius centered on each of the proposed stations and stops as well as the existing 95th Street Terminal. One-half mile is used as an approximation of the distance most patrons will walk to a station and is therefore used to measure general pedestrian safety and security in the surrounding neighborhood. Pedestrian activity concentrates in the immediate vicinity of a station, which for this analysis is defined as the area within one full block, or ⅛ mile (660 feet) of station entrances or bus stops.

A small portion of the Village of Calumet Park, and the following Chicago community areas are within the area of potential impact: Beverly, Morgan Park, Pullman, Riverdale, Roseland, Washington Heights, and West Pullman.

3.4 Methods

Impacts on safety and security for the RLE Project were conducted pursuant to NEPA guidance (40 CFR 1508). This section describes the methods that were used to evaluate the safety and security impacts of each alternative.

The CTA has a formal process for the management of safety hazards and security threats and vulnerabilities. This process includes the identification of potential hazards and a risk assessment process. The risk assessment process includes a determination of severity (critical or marginal) and probability of occurrence (probable, occasional, or remote). These factors are put into a Hazard

- **Critical risks** are those that result in death or serious injury to workers, customers, or the public; in system loss; or in major to severe damage to the system environment.
- **Marginal risks** result in minor or less than minor injuries, or service disruptions
- **Probable risks** can be expected to happen regularly, at a rate of 1 in 20 or more.
- **Occasional risks** can be expected to happen at some point during the life of the item or system, at a rate of 1 in 20 to 1 in 200.
- **Remote risks** probably will not occur, but remain a possibility.

Assessment Matrix (see Table 3-1 and sidebar) to determine the required action (CTA 2011b).

The risk assessment process was used in the analysis of potential adverse impacts in this memorandum. Beneficial impacts are analyzed qualitatively on a scale of low impact, medium impact, or high impact. The classification as a low, medium, or high impact was based on the frequency of the event, the scope of work for the alternative being considered, and professional judgment.

The first priority is to eliminate or minimize hazards through design (CTA 1996). This analysis identified minimization measures for the prototypical design. The second priority is to mitigate the hazard, reducing it to an acceptable level of safety. Mitigation measures were developed in response to specific hazards identified. The third priority is to install warning devices to alert persons to the hazard. If it is impossible or impractical to eliminate, minimize, or mitigate identified hazards, then the CTA would develop special procedures and training.

Table 3-1: CTA Risk Assessment Matrix

Probability/Severity	Critical	Marginal
Probable	**Unacceptable** - Requires design or safety solution. Considered “Adverse” for NEPA analysis.	**Undesirable** - Requires management review and mitigating action if at all possible. Considered “Adverse” for NEPA analysis.
Occasional	**Undesirable** - Requires management review and mitigating action if at all possible. Considered “Adverse” for NEPA analysis.	**Review** to determine and sustain acceptability. Considered “Not Substantially Adverse” for NEPA analysis.
Remote	**Review** to determine and sustain acceptability. Considered “Not Substantially Adverse” for NEPA analysis.	**Acceptable** with no review needed. Considered “Not Adverse” for NEPA analysis.

3.4.1 Safety

The safety assessment considered hazards to pedestrians, bicyclists, transit patrons, employees, motorists, and the transit system itself as they relate to the project area. The following types of analysis were conducted:

- The expected change in the number of major incidents reportable to the FTA was performed by multiplying the expected change in service hours for each mode (rail versus bus) for each alternative by the incident rate per service hour for that mode. Major incidents include fatalities, mainline derailments, injuries requiring immediate off-site medical attention, property damage greater than or equal to $25,000, or an evacuation due to life safety reasons (National Transit Database 2010).

- The “Expected Crash Frequency” (ECF) at existing highway-rail grade crossings was calculated using Equation 7-3.1 in the IDOT *Bureau of Design and Environment Manual*, and compared to actual crash frequency shown in ICC data. A site survey was also conducted to evaluate the presence of existing warnings of approaching trains (e.g., signs, signals, gates), and fencing to prevent or discourage crossing except at authorized locations.

- The existing pedestrian environment near proposed station sites was evaluated both quantitatively and qualitatively. The number of traffic crashes involving pedestrians was evaluated. Recognizing that the number of incidents is related to exposure, the existing pedestrian environment was considered. The evaluated issues included the presence of sidewalks, crosswalks, curb ramps, pedestrian signals, and lighting. Conditions at intersections were considered, including pedestrian delays, number of lanes crossed, traffic volumes, and speed of traffic. The location and adequacy of barriers near railroad tracks (curbs, fences, and vegetation) to channelize pedestrians and bicyclists was considered.

- The public comments received during the scoping period included concerns about the ability of first responders to access construction areas. The impact of the construction and operation of the project on emergency response times was evaluated qualitatively based on the locations of proposed construction areas and proposed transit stations in relation to at-grade rail crossings and public health and safety facilities (e.g., fire stations, hospitals).

- The general safety of the CTA system, including train stations or bus stops, was addressed by assuming newly constructed project elements would conform to CTA standards described in Section 3.1.3.2. The various design standards cover all track, structural, station, electrical, and mechanical elements, as well as other items. In general, stations would be well lit, with clear lines of sight. The final design would also consider lines of sight for surveillance by station personnel as well as video cameras. This guidance is consistent with the results of a community visioning session for the project, where participants noted security as one of their top concerns, and requested well-lit areas, security personnel, and glass elevators as high priorities (Developing Communities Project et al. 2010).

- Fire safety was addressed by assuming newly constructed project elements would conform to NFPA 130 standards for fire protection, prevention, detection, notification, suppression, and evacuation. These standards state that the design would include fire retardant materials, surveillance and detection equipment, adequate egress routes for patrons, and adequate ingress routes for emergency responders. In addition, sprinklers, fire extinguishers, and standpipe systems would be installed where required by code.

Measures to mitigate safety concerns, or to improve safety, were identified where applicable. The inclusion of these mitigation measures in the project could help to avoid certain impacts entirely, reduce the probability of incident occurrence, reduce the severity of incidents that occur, or compensate for the impacts in some way.

3.4.2 Security

Security includes intentional acts, including crime to persons or property, and acts of terrorism. The goal of the design for the RLE Project would be to deter and detect acts of vandalism, terrorism, and other criminal acts. The design would allow for rapid response by emergency services (CTA 1996).

The public scoping comments included concerns about the potential for crime at stations and in surrounding neighborhoods as a result of the project. The existing crime activity in the areas surrounding proposed transit stations was evaluated by using geographic information systems to identify existing crime hot spots in the project area (see Figure A-2 through Figure A-4 in Appendix A). A literature review was completed to determine how the proposed transit stations would be expected to affect crime in the immediate vicinity of proposed stations and in surrounding neighborhoods. The potential for crime at parking lots and parking garages was also considered.

The potential for other security incidents to occur, particularly related to homeland security risks, was analyzed qualitatively for each alternative. A more detailed analysis of these risks will be conducted by CTA for the selected NEPA preferred alternative identified in the EIS. This Threat and Vulnerability Assessment to be completed by the CTA will ultimately identify security threats in the transit system, and make recommendations to reduce those threats.

The analysis included identification of mitigation measures that could be incorporated into the project's Safety and Security Plan to be developed in the final design phase. The inclusion of these mitigation measures in the project could help to avoid certain impacts entirely, reduce the probability of incident occurrence, reduce the severity of incidents that do occur, or compensate for the impacts in some way.

Section 4
Affected Environment

The affected environment for this analysis includes areas that could be affected by impacts on the CTA system (e.g., vehicles, stations, rail yards), impacts in the areas surrounding stations, and cumulative impacts related to other reasonably foreseeable projects. Groups covered in the affected environment include transit passengers, operators, employees, contractors, and the general public. Members of these groups all come in contact with the system in some way, and could be susceptible to certain safety and security impacts.

4.1 Bus Rapid Transit Alternative

The affected environment for the BRT Alternative includes the CTA bus system, proposed BRT stations and stops, and the area in the immediate vicinity of proposed stations.

4.1.1 Major Safety and Security Incidents on CTA Bus System

The CTA is required to report major safety and security incidents, such as collisions, fires, fatalities, serious injuries, and more, to the FTA within 30 days of their occurrence. The minimum thresholds for reporting these incidents are described in Section 3.2 of this document. Table A-1 shows a summary of these incidents for the most recent three years of complete data for the entire CTA bus system. From 2009 through 2011, there were 1,025 incidents, including 7 fatalities and 1,814 injuries requiring immediate off-site medical attention.

4.1.2 Crime Summary

Criminal incidents occurring on the CTA system and on other property (e.g., rail yards, maintenance facilities, parking facilities) are recorded by local police in the jurisdiction in which they occur. In some cases, such as fatalities and serious injuries, these criminal incidents could also be counted as “major safety and security incidents” (see Section 4.1.1). Table A-3 shows the number and percent of crime types occurring on CTA buses and at CTA bus stops throughout the City of Chicago. Incidents at maintenance facilities, parking facilities, and other locations are shown in the last column of Table A-4.

Over the three-year period, there was an average of 3.6 incidents per day reported on buses, 1.3 incidents per day reported at bus stops, and 2.4 incidents per day on other property. Robbery, which involves violence or the threat of violence, was more common at bus stops, while theft was more common on buses. Battery, which involves actual harm to an individual, was more common on buses, while assault was more common at bus stops. Narcotics crimes are very rare on CTA buses, but very common at bus stops and on other property. Criminal damage is a problem everywhere in the affected environment, but more so on buses and on other property than at bus stops. Section 4.2.2 provides additional analysis and comparison to the rail system.

4.1.3 Pedestrian Safety

The BRT Alternative would include improved bus shelters along Michigan Avenue at the intersections of 103rd Street, 111th Street, and at Kensington Avenue. Improved shelters would also be provided on 130th Street at Eberhart Avenue. Seven existing route #34 bus stops along local residential streets would also be used in the Altgeld Gardens neighborhood. Because many of the BRT stops would be at the intersection of one or more major through streets, the safety of pedestrians crossing those streets to access stations or nearby destinations would be a concern. Source: (City of Chicago 2012b)

CTA = Chicago Transit Authority

Table A-5 shows frequencies of traffic crashes involving pedestrians for the past five years (2007–2011) within one full block, or ⅛ mile (660 feet), for the intersections where the BRT stops would be. The intersections with the highest number of pedestrian crashes in the region typically have 5 to 10 pedestrian crashes per year (Chicago Metropolitan Agency for Planning 2008).

103rd Street Stop

The five years of data show a high crash frequency (22) within ⅛ mile of 103rd Street and Michigan Avenue, with 10 of the crashes occurring at the intersection of 103rd Street and Michigan Avenue, 1 at 103rd Place and Michigan Avenue, 1 at 103rd Street and Wabash Avenue, and the remaining 10 at mid-block locations, mostly along 103rd Street east of Michigan Avenue.

Michigan Avenue is a two-lane collector street carrying 14,300 vehicles per weekday, and 103rd Street is a two-lane minor arterial carrying 21,700 vehicles per weekday (Chicago Department of Transportation [CDOT] 2006). The intersection of 103rd Street and Michigan Avenue is controlled by traffic signals, with transverse crosswalk markings and pedestrian crossing signals on all legs of the intersection. Lighting is typical of that found along major streets in the City of Chicago.

111th Street Stop

The five years of data show a high crash frequency (20) within ⅛ mile of 111th Street and Michigan Avenue, with 6 incidents at the intersection of 111th Street and Michigan Avenue, 1 at 111th Street and State Street, and 13 at mid-block locations.

Michigan Avenue is a two-lane collector carrying 11,900 vehicles per weekday, and 111th Street is a two-lane minor arterial carrying 12,200 vehicles per weekday (CDOT 2006). The intersections of 111th Street and Michigan Avenue, 112th Street and Michigan Avenue, and 111th Street and State Street are signalized. Transverse crosswalk markings and pedestrian crossing signals are present at all three intersections. Lighting is typical of that found along major streets in the City of Chicago.

Kensington Avenue Stop

The five years of data show the crash frequency near Michigan Avenue and Kensington Avenue (eight) is lower than the frequencies near 103rd Street or 111th Street, but the level of pedestrian activity is also much lower, so this is an expected result. Of the eight crashes within ⅛ mile of Kensington Avenue, five occurred at the intersection of Michigan Avenue and 115th Street, one occurred at 116th Street, and two occurred at mid-block locations.

Michigan Avenue and 115th Street are both two-lane collector streets carrying 11,900 vehicles per weekday and 11,700 vehicles per weekday, respectively (CDOT 2006). Kensington Avenue is a two-lane residential street terminating at Michigan Avenue to form a three-leg intersection. The intersection of 115th Street and Michigan Avenue is controlled by traffic signals, while 116th Street and Kensington Avenue both stop for Michigan Avenue. Transverse crosswalk markings and pedestrian crossing signals are present on all four legs of the intersections at 115th Street and 116th Street, but only on the north and east legs at Kensington Avenue. Lighting is typical of that found along major streets in the City of Chicago.

Eberhart Avenue Stop

The data show only one pedestrian crash in five years near 130th Street and Eberhart Avenue, which occurred one block to the south at 131st Street and Eberhart Avenue. However, the level of pedestrian activity is low, so the existing crash frequency is consistent with expectations.

The traffic volume on 130th Street, a five-lane arterial roadway, is 25,100 vehicles per day traveling at high speeds (CDOT 2006). Eberhart Avenue is a two-lane local residential street with a planted median, and 131st Street is a two-way local residential street. Eberhart stops for 130th Street, and the intersection of 131st Street and Eberhart Avenue is controlled by all-way stop signs. There are no marked crosswalks across 130th Street and no sidewalks along the street. There are sidewalks along Eberhart Avenue and along the south side of 131st Street. There is roadway lighting along 130th Street and intersection lighting for the residential streets.

Additional Stops

The existing route #34 completes a 1.7-mile loop around the Altgeld Gardens neighborhood, making up to 14 stops on four residential streets: 131st Street, Ellis Avenue, 133rd Street, 133rd Place, and Langley Avenue. The proposed BRT route would operate on a similar route, but use Corliss Avenue instead of Langley Avenue, and only serve seven stops. There were 12 pedestrian crashes in this area over a five-year period, with 8 of them occurring at or near the intersections of 131st Street and Langley Avenue, 131st Street and Evans Avenue, or 131st Street and Corliss Avenue.

The Langley Avenue, Evans Avenue, and Corliss Avenue intersections are all three-legged intersections terminating at 131st Street. Vehicles on Evans Avenue stop for 131st Street. However, traffic on 131st Street stops for Langley Avenue and Corliss Avenue, neither of which have stop signs. There are curb-attached sidewalks and roadway lighting along all the area streets.

It is notable that the Chicago Housing Authority (CHA) has recently completed the rehabilitation of a total of 1,323 units in the Altgeld Gardens neighborhood, including 1,009 units at Altgeld Gardens and 314 units at Phillip Murray Homes. CHA is also working with stakeholders to explore the integration of a “town center” with a variety of land uses, including commercial, institutional, residential and mixed-use development to bring much needed resources to the community (CHA 2012). This type of rehabilitation and redevelopment is likely to have a positive impact on pedestrian safety in the area.

4.1.4 Pedestrian Security

The *RLE Project Scoping Report* identified the potential for crime at new CTA stations and in surrounding neighborhoods as a concern of residents. Figure A-2 and Figure A-4 show a "heat map" of the crime density (measured in crimes per acre) for 2009 through 2011 in the public ROW (e.g., streets, sidewalks, alleys, parks) and other open areas (railroad property, vacant lots, parking lots) near each proposed station site (City of Chicago 2012b). The highest crime areas along the BRT alignment are clustered at the 95th Street Terminal; 103rd Street and Michigan Avenue; Michigan Avenue from 111th Street to 111th Place; 119th Street and Michigan Avenue; and 131st Street and Langley Avenue.

4.1.5 Emergency Services

The *RLE Project Scoping Report* identified the potential for emergency access *to* construction areas as a concern of residents. It is assumed that residents would also be concerned about emergency access through construction areas, and the impact of detours on response times. Figure A-1 (City of Chicago 2012b) shows a map of the police, fire, and hospital facilities in the area.

The affected environment for the BRT Alternative falls entirely within the boundaries of the 5th Police District, with the station at 727 E. 111th Street. Several fire stations are in the corridor: Engine 93 (330 W. 104th Street), Engine 62 (34 E. 114th Street), Engine 75 (11958 S. State Street), and Engine 80 (12701 S. Doty Avenue). Fire stations also house ambulances serving hospitals. The only hospital near the corridor is Roseland Community Hospital at 45 W. 111th Street.

4.2 Union Pacific Railroad Rail Alternative

The affected environment for the UPRR Rail Alternative includes the CTA rail system, proposed station areas, and the area in the immediate vicinity of proposed station locations.

4.2.1 Major Safety and Security Incidents on CTA Rail System

As noted in Section 4.1.1, the CTA is required to report major safety and security incidents to the FTA. Table A-2 shows a summary of these incidents for the most recent three years of complete data for the entire CTA rail system. From 2009 through 2011, there were 209 incidents, including 28 fatalities and 191 injuries requiring immediate off-site medical attention. Additional details about the incidents are not provided in the available data.

4.2.2 Crime Summary

As noted in Section 4.1.2, criminal incidents occurring on CTA trains, platforms, and other property (e.g., rail yards, maintenance facilities, parking facilities) are recorded by local police in the jurisdiction in which they occur. Table A-4 shows the number and percent of crime types occurring on CTA trains, on CTA platforms, and on other property throughout the City of Chicago. The incidents on other property include elements of both the bus and rail system, such as rail yards, vehicle maintenance facilities, offices, and parking garages.

Over the three-year period, there was an average of 4.1 incidents per day reported on trains, 5.7 incidents per day reported on train platforms, and 2.4 per day on other property.

Robbery and theft were both more common on trains than on train platforms. Narcotics crimes are mostly the possession of small amounts of marijuana, but often other drugs (e.g., crack cocaine, cocaine, and heroin) as well. Narcotics crimes were more common at train platforms than on trains. Figure 4-1 is a bar chart comparing the percentages of different types of crimes on the bus system, on the rail system, and on other CTA property.

Deceptive practice was the second most common crime reported. The Illinois Compiled Statues defines unfair or deceptive acts or practices as “including but not limited to the use or employment of any deception fraud, false pretense, false promise, misrepresentation or the concealment, suppression or omission of any material fact, with intent that others rely upon the concealment, suppression or omission of such material fact, or the use or employment of any practice described in Section 2 of the ‘Uniform Deceptive Trade Practices Act,’ approved August 5, 1965, in the conduct of any trade or commerce are hereby declared unlawful whether any person has in fact been misled, deceived or damaged thereby” (815 ILCS 505/2). Examples of these practices include credit card fraud, illegal use of cash card, theft of lost or mislaid property, and theft of labor or services. These crimes occurred on CTA buses or trains, on platforms at train stations, or at CTA property such as garages.

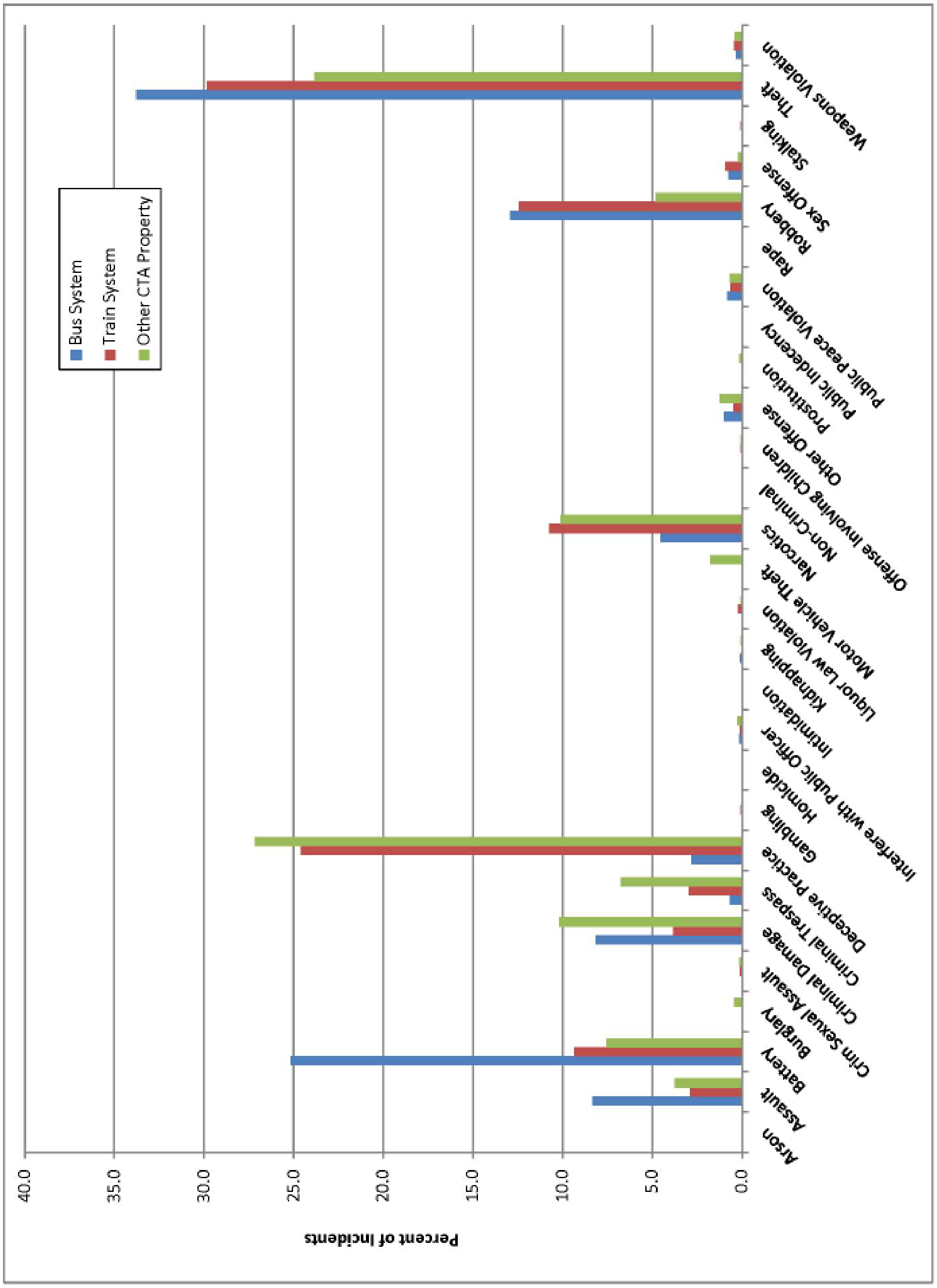

Figure 4-1: Reported Chicago Transit Authority-Related Crimes in Chicago (2009-2011)
Source: City of Chicago 2012

Over 96 percent of the CTA-related crimes fell into eight categories: assault, battery, criminal damage, criminal trespassing, deceptive practice, narcotics, robbery, and theft. Theft (30.2 percent of crimes) was the most commonly reported CTA-related crime, mostly pick-pocketing. Robbery (11.5 percent) is similar to theft, but involves violence or the threat of violence. Assault (4.6 percent) and battery (13.7 percent) are also similar crimes with differing levels of severity. Assault is the threatening of a victim, while battery is the actual harm of an individual. Both were more common on the bus system than on the rail system.

Criminal trespassing (2.8 percent), typically in the form of ROW intrusions, can occur from CTA platforms or elsewhere along the track. The intent of criminal trespassing is often to cause criminal damage (6.0 percent), usually graffiti. Criminal damage was most common at CTA garages and on other property (e.g., rail yards).

4.2.3 Segment UA

Segment UA (see Figure A-1) includes the portion of the UPRR Rail Alternative alignment from 95th Street to the crossing over the Metra Electric District railroad track southeast of the proposed Michigan Avenue station.

4.2.3.1 Pedestrian Safety

The primary station entrances for the UPRR Rail Alternative on Segment UA would be at 103rd Street, 111th Street, and Michigan Avenue. Auxiliary entrances would be at 103rd Place, 110th Street, and 116th Street. Because the primary entrances would be on major through streets, the safety of pedestrians crossing those streets to access stations or nearby destinations would be a concern. Source: (City of Chicago 2012b)

CTA = Chicago Transit Authority

Table A-5 shows the frequencies of traffic crashes involving pedestrians in the immediate vicinity of proposed stations.

There were fewer pedestrian crashes near the proposed station locations for the UPRR Rail Alternative than for the BRT Alternative (see Section 4.1.3) or the Halsted Rail Alternative (see Section 4.3.3.1), but this result is expected due to the lower amounts of pedestrian activity. The existing pedestrian environments around proposed stations are discussed qualitatively below to complement the crash data.

103rd Street Station

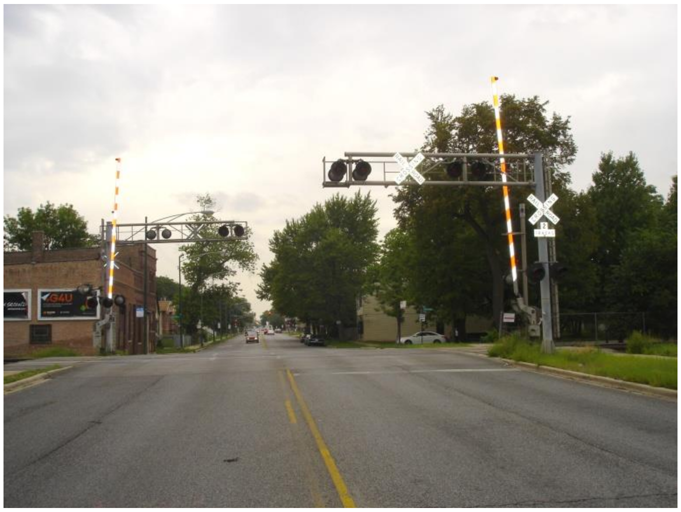

Figure 4-2: 103rd Street at the Union Pacific Railroad tracks, looking west

The crossing of 103rd Street at the UPRR tracks is shown in Figure 4-2. The street is an arterial carrying approximately 18,700 vehicles on an average weekday. The posted speed limit is 30 miles per hour (mph), but the 85th percentile speeds are 37 mph (IDOT 2010b). Drivers reduce speed over the UPRR tracks due to a slight hump in the roadway. There are two lanes in each direction, but on-street parking in the curb lanes effectively reduces the roadway to one lane in each direction for most of the day. There are two through lanes at times during peak travel periods due to parking restrictions prohibiting on-street parking from 7 AM to 9 AM in the eastbound direction and from 4 PM to 6 PM in the westbound direction.

The nearest controlled intersections to the 103rd Street station location are traffic signals at Normal Avenue, ⅛ mile west, and all-way stop signs at Princeton Avenue, ⅛ mile east. The nearest marked crosswalks across 103rd Street are at Eggleston Avenue, 140 feet west of the railroad tracks, and at Harvard Avenue, 195 feet east of the railroad tracks.

Standard 6-foot-wide sidewalks are on both sides of 103rd Street. Sidewalk ramps are present on all corners in the immediate vicinity of the 103rd Street station location, with new Americans with Disabilities Act (ADA)-compliant ramps on the north leg of Eggleston Avenue. Standard City of Chicago roadway lighting is present on 103rd Street. Eastbound bus stops for route #111 are at Normal Avenue, Eggleston Avenue, and Princeton Avenue. Westbound bus stops for route #111 are at Princeton Avenue, Harvard Avenue, and Normal Avenue.

The land uses along 103rd Street are primarily residential, with some light industrial, commercial, and vacant land uses as well. Block Park is immediately southeast of the railroad tracks along Harvard Avenue.

The auxiliary entrance to the 103rd Street station would be at 103rd Place, which is a residential street, and not a pedestrian safety concern.

111th Street Station

The crossing of 111th Street at the UPRR tracks is shown in Figure 4-3. The street is an arterial carrying approximately 12,800 vehicles on an average weekday. The posted speed limit is 30 mph. The 85th percentile speeds are not known. The roadway width allows for two lanes in each direction, but lightly used parking in the curb lanes effectively reduces the roadway to one through lane in each direction.

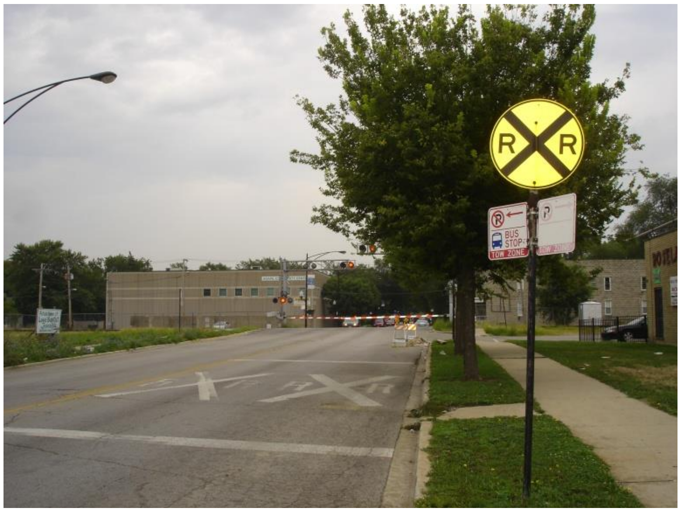

Figure 4-3: 111th Street at the Union Pacific Railroad tracks, looking west

The nearest controlled intersections are traffic signals at Normal Avenue, ⅛ mile west and all-way stop signs at Princeton Avenue, ⅛ mile east. The nearest marked crosswalks across 111th Street are at Eggleston Avenue, 230 feet west of the railroad tracks, and at Princeton Avenue to the east.

Standard 6-foot-wide sidewalks are on both sides of 111th Street. Sidewalk ramps are present on all corners in the immediate vicinity of the 111th Street station location, but do not meet all of the current ADA standards. Standard City of Chicago roadway lighting is present on 111th Street, with additional sidewalk lighting on the north side of the street. Eastbound bus stops for route #111 are at Normal Avenue, Eggleston Avenue, and Princeton Avenue. Westbound bus stops for route #111 are at Princeton Avenue, the east side of the UPRR tracks, and Normal Avenue.

The land uses along 111th Street are primarily residential, with an auto repair business northeast of the railroad tracks, several religious facilities, and vacant land northwest of the railroad tracks. The Agape Community Center is northeast of the railroad tracks.

The auxiliary entrance to the 111th Street station would be at 110th Street, which is a residential street, and not a pedestrian safety concern.

Michigan Avenue Station

The UPRR tracks are grade-separated as they cross over Michigan Avenue. Michigan Avenue is a two-lane collector street carrying approximately 11,900 vehicles on an average weekday. The nearest controlled intersections are traffic signals at 115th Street, 800 feet north, and all-way stop signs at 117th Street, 450 feet south. The nearest marked crosswalks across Michigan Avenue are at Kensington Avenue, 330 feet north of the railroad tracks, and at 116th Street, 115 feet south of the railroad tracks. The crosswalks at 116th Street are of the higher visibility international style, and are supplemented by pedestrian crossing warning signs.

The sidewalks along Michigan Avenue are approximately 12 feet wide. Sidewalk ramps are present on all corners in the immediate vicinity of the station location, but do not meet all of the current ADA standards. Standard City of Chicago roadway and sidewalk lighting are present along Michigan Avenue. Northbound and southbound bus stops for routes #34 and #119 are at 115th Street, Kensington Avenue, 116th Street, and 117th Street. Eastbound and westbound bus service is available along 115th Street on route #111.

There is a large amount of vacant land along Michigan Avenue and in the surrounding areas. However, there are plans for a new development on the southwest corner of Michigan Avenue and 115th Street called Roseland Plaza, a 91,000 square foot strip mall with 250 parking spaces that would be anchored by a grocery store. The existing occupied buildings are typically mixed-use, with ground floor retail and residential above. Nearby businesses include a gas station, corner store, hair salon, and Mexican restaurant. There are also religious facilities in the area.

The auxiliary entrance to the Michigan Avenue station would be at 116th Street, east of Michigan Avenue; 116th Street is a low-volume residential street, and not a pedestrian safety concern.

4.2.3.2 Pedestrian Security

As discussed in Section 4.1.4, the *RLE Project Scoping Report* identified the potential for crime at new CTA stations and in surrounding neighborhoods as a concern of residents. Figure A-2, Figure A-3, and Figure A-4 show the crime density (measured in crimes per acre) for 2009 through 2011 in the public ROW and open areas near each proposed station site. The highest crime areas along Segment UA are clustered at the 95th Street Terminal, and south of the Michigan Avenue station centered at 119th Street.

4.2.3.3 Highway-Rail Grade Crossings

There are two existing highway-rail at-grade crossings near proposed stations. The crossings are where the UPRR tracks intersect 103rd Street (see Figure 4-2) and 111th Street (see Figure 4-3). Both crossings have two-quadrant crossing gates and signals cantilevered over the roadway. There are no gates to block pedestrians on the sidewalks. The appropriate crossbuck signs, railroad crossing warning signs, and railroad crossing pavement markings are all present. There is fencing along the railroad ROW to the northwest at 103rd Street, and along the east side of the ROW at 111th Street, but other locations could be accessed by pedestrians.

The most current available Average Daily Traffic (ADT) volumes for 103rd Street and 111th Street are from 2006, and show 18,700 vehicles per weekday on 103rd Street and 12,800 vehicles per weekday on 111th Street (CDOT 2006). Pedestrian volumes are relatively low, but would be expected to increase with the addition of new transit stations. A total of 4,386 weekday passenger boardings are forecasted at the 103rd Street station and 5,048 weekday passenger boardings are forecasted at the 111th Street station, both in 2030 (AECOM 2009).

The existing train volumes (year 2009) on the UPRR line include 24 freight trains per day and 2 Amtrak passenger trains per day (Chicago Transportation Coordination Office 2011). If the projects in the CREATE Program[1] are implemented, the volume is projected to increase to 44 freight trains and 4 passenger trains per day by 2029, an 85 percent increase in total volume compared to existing conditions.

The additional automobile and pedestrian traffic crossing the rail line, combined with additional rail traffic, could create a safety concern. The expected life of a railroad crossing device is 20 to 30 years, so a period of 25 years was used for analysis. Crash histories for the past 25 years (1987 through 2011) at the 103rd Street and 111th Street grade crossings are shown in Table 4–1 and Table 4–2, respectively. Both crossings had two recorded crashes in the 25-year period. For comparison, the most recent crash data for Cook County shows 161 collisions at 802 public grade crossings from 2007 through 2012 (ICC 2013). Based on this data, an average of one crash per grade crossing would be expected every 30 years.

Table 4–1: Crashes at 103rd Street and Union Pacific Railroad Grade Crossing

Date	Time	Crash Type	Warning Devices	Weather	Fatalities	Injuries
10/15/2006	12:30 PM	Freight-Pedestrian	Cantilever Signals and Gates	Cloudy	0	1
11/16/1989	5:25 AM	Freight-Truck	Gates	Cloudy	0	1

Source: (Illinois Commerce Commission 2012a)

Table 4–2: Crashes at 111th Street and Union Pacific Railroad Grade Crossing

Date	Time	Crash Type	Warning Devices	Weather	Fatalities	Injuries
4/11/2009	11:15 PM	Other-Auto	Cantilever Signals and Gates	Clear	0	0
6/5/2000	12:52 AM	Other-Auto	Cantilever Signals and Gates	Rain	0	0

Source: (Illinois Commerce Commission 2012b)

4.2.3.4 Emergency Services

As explained in Section 4.1.3, the *RLE Project Scoping Report* identified concerns regarding emergency access. Figure A-1 shows a map of the police, fire, and hospital facilities in the area.

The Segment UA alignment along the UPRR tracks forms the border of the 5th Police District to the east and the 22nd Police District to the west, from 95th Street to 111th Street. Southeast of 111th Street, Segment UA would be entirely within the 5th Police District. The 5th District station is at 727 E. 111th Street. The 22nd District station is at 1900 W. Monterey Avenue. Several fire stations are in the corridor: Engine 93 (330 W. 104th Street), Engine 62 (34 E. 114th Street), and Engine 75 (11958 S. State Street). Fire stations also house ambulances serving hospitals. The only hospital near the corridor is Roseland Community Hospital, three blocks east of the corridor at 45 W. 111th Street.

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[1] The Chicago Region Environmental and Transportation Efficiency (CREATE) Program is a partnership between U.S. Department of Transportation, the State of Illinois, City of Chicago, Metra, Amtrak, and the nation's freight railroads. The Program includes approximately 70 component projects designed to reduce delays to passenger rail, freight rail, and highway systems.

4.2.4 Segment UB

Segment UB (see Figure A-1) includes the portion of the proposed UPRR Rail Alternative alignment from the crossing over the Metra Electric District railroad tracks southeast of the proposed Michigan Avenue station to the terminal station at 130th Street.

4.2.4.1 Pedestrian Safety

There are two sites under consideration for a terminal station at 130th Street. The West Option would be a station along the north side of 130th Street between Evans Avenue and Ellis Avenue. The South Option would be a station along the Northern Indiana Commuter Transportation District South Shore Line and CSX Kensington Branch tracks, north of Doty Avenue and the 130th Street local road. Source: (City of Chicago 2012b)

CTA = Chicago Transit Authority

Table A-5 shows the crash data for both sites. There were two pedestrian crashes in the vicinity of the West Station Option site, both on Evans Avenue south of 130th Street, and no pedestrian crashes in the vicinity of the South Station Option site. The pedestrian environment for the two stations is described below.

130th Street Station - West Option

The West Station Option site along 130th Street is shown in Figure 4-4. The roadway is a four-lane principal arterial with a divided median, carrying approximately 25,100 vehicles on an average weekday. The speed limit is posted at 35 mph.

The nearest controlled intersections are traffic signals at Ellis Avenue, immediately to the east, and all-way stop signs at 127th Street and Indiana Street, 1.1 miles northwest. A cloverleaf interchange with I-94 is approximately 0.5 mile east of the 130th Street station location and an at-grade highway-rail crossing with the UPRR tracks is approximately 0.5 mile west of the 130th Street station location. There are no marked crosswalks at the intersection.

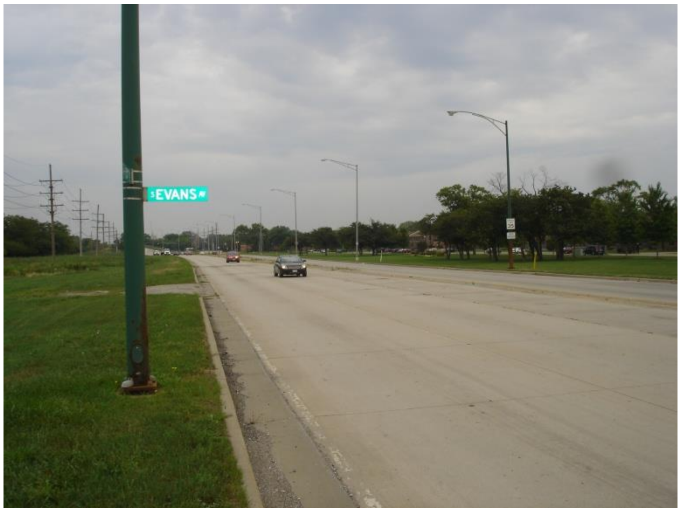

Figure 4-4: 130th Street at Evans Avenue, looking east

There are no sidewalks at the intersection, but there are 6-foot-wide, curb-attached sidewalks along Evans Avenue, Ellis Avenue, and throughout the Altgeld Gardens neighborhood to the south. There are no sidewalk ramps at the intersections of 130th Street and Ellis Avenue or Evans Avenue. Roadway lighting is present along both sides of 130th Street. There are no bus stops on 130th Street east of Eberhart Avenue, but the #34 route does use the roadway for some trips to Carver High School. The nearest bus stop is approximately 1,000 feet southeast at 131st Street and Corliss Avenue.

The north side of 130th Street is bordered by wetlands and a large Metropolitan Water Reclamation District (MWRD) treatment facility. The south side of 130th Street is bordered by Altgeld Gardens, a low-rise Chicago Housing Authority property focused on providing housing to low-income families. There are very few nearby businesses, but there is a grocery store, take-out restaurant, and check-cashing service just over ¼ mile west of the 130th Street station location, and a health clinic east of Ellis Avenue.

130th Street Station - South Option
Near the South Station Option site, there are two streets called 130th Street. One is the four-lane, principal arterial roadway with a bridge over the railroad tracks to the east. The other is a low-volume, local roadway immediately to the south of the arterial (see Figure 4-5). This parallel street provides access to a health clinic, Carver Military Academy High School, and the Beaubien Woods Forest Preserve.

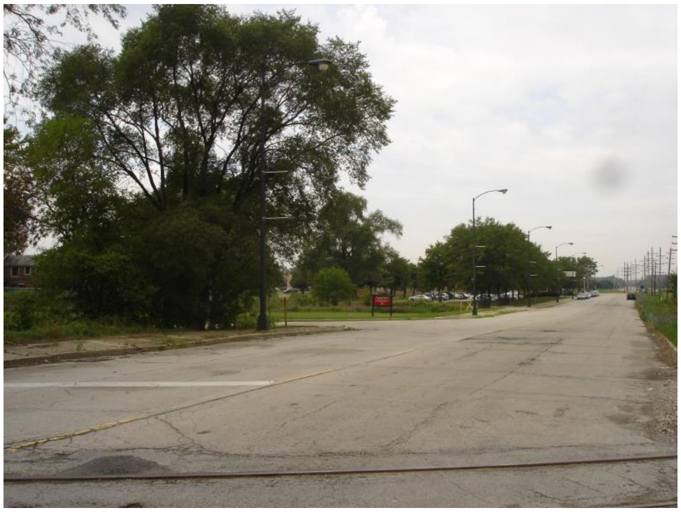

Figure 4-5: 130th Street/Doty Avenue at the Kensington Branch rail line, looking west

The local 130th Street terminates at Ellis Avenue to the west and curves to become Doty Avenue to the southeast. There is a 6-foot-wide, curb-attached sidewalk along the south side of the street. There are no marked crosswalks or sidewalk ramps. Roadway lighting is present along the south side of 130th Street. The nearest bus stops are 1,800 feet southwest, at Ellis Avenue and 131st Street, and 1,300 feet southeast, at Carver High School.

The east side of the 130th Street station site is bordered by wetlands and train tracks. Carver Military Academy High School and the Beaubien Woods Forest Preserve are to the south. A TCA Health medical clinic is 670 feet west of the 130th Street station site. Some residences are as close as 350 feet from the 130th Street station site, but there is no existing sidewalk connection. Along sidewalks, the nearest homes are approximately 1,200 feet from the 130th Street station site.

4.2.4.2 Pedestrian Security

As discussed in Section 4.1.4, the *RLE Project Scoping Report* identified the potential for crime at new CTA stations and in surrounding neighborhoods as a concern of residents. Figure A-4 shows the crime density (measured in crimes per acre) for 2009 through 2011 in the public ROW and other open areas near the proposed 130th Street station sites. The highest crime area near Segment UB is at 131st Street and Langley Avenue, approximately ¼ mile southwest of the proposed 130th Street station West Option site.

4.2.4.3 Emergency Services

As explained in Section 4.1.3, the *RLE Project Scoping Report* identified concerns regarding emergency access. Figure A-1 shows a map of the police, fire, and hospital facilities in the area.

Segment UB is entirely within Chicago's 5th Police District. The 5th District station is at 727 E. 111th Street. The nearest fire stations are Engine 75 (11958 S. State Street) and Engine 80 (12701 S. Doty Avenue). Fire stations also house ambulances serving hospitals. The nearest hospital is Roseland Community Hospital at 45 W. 111th Street.

4.3 Halsted Rail Alternative

The affected environment for the Halsted Rail Alternative includes the CTA rail system, proposed station areas, and the area in the immediate vicinity of proposed stations.

4.3.1 Major Safety and Security Incidents on CTA Rail System

The major incident summary for the CTA rail system described in Section 4.2.1 also applies to the Halsted Rail Alternative.

4.3.2 Crime Summary

The crime summary for the CTA rail system described in Section 4.2.2 also applies to the Halsted Rail Alternative.

4.3.3 Segment HA

Segment HA (see Figure A-1) includes the portion of the Halsted Rail Alternative alignment from 95th Street to 119th Street, including the proposed 119th Street station and its surrounding area.

4.3.3.1 Pedestrian Safety

The station entrances for the Halsted Rail Alternative on Segment HA would be at 103rd Street, 111th Street, and 119th Street. Because the entrances would all be at the intersection of two major through streets, the safety of pedestrians crossing those streets to access stations or nearby destinations would be a concern. Source: (City of Chicago 2012b)

CTA = Chicago Transit Authority

Table A-5 shows the frequencies of traffic crashes involving pedestrians in the immediate vicinity of the proposed stations.

For the Halsted Rail Alternative, there were a high number of pedestrian crashes near 103rd Street, 111th Street, and 119th Street, and a moderate number of crashes near Vermont Avenue. The existing pedestrian environments around proposed stations are discussed qualitatively below to complement the crash data.

103rd Street Station

The intersection of 103rd Street and Halsted Street is shown in Figure 4-6. At this location, Halsted Street is a major arterial carrying approximately 31,800 vehicles per weekday and 103rd Street is a minor arterial carrying 21,000 vehicles per weekday (CDOT 2006). Halsted Street has two through lanes in each direction, a landscaped median or left turn lanes, and on-street parking permitted. On 103rd Street there is one through lane in each direction with on-street parking permitted, but lightly used. Left turn lanes are marked on Halsted Street, but not 103rd Street.

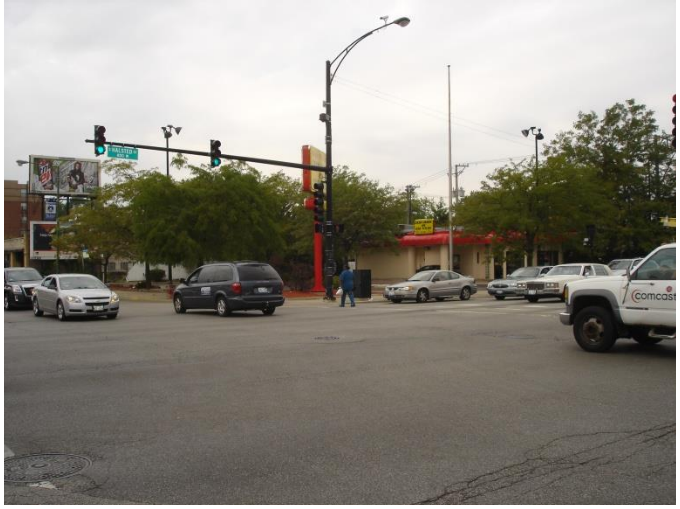

Figure 4-6: 103rd Street and Halsted Street, looking northwest

The intersection of 103rd Street and Halsted Street is controlled by traffic signals, with protected-permissive left turn phasing for all approaches except the westbound direction. There are also red light enforcement cameras at the intersection. High visibility crosswalk markings and pedestrian crossing signals are present on all four legs of the intersection. The adjacent intersections within 660 feet are two-way stop controlled except the 103rd Street and Peoria Street intersection, which is controlled by all-way stop signs.

Sidewalks on Halsted Street are mostly 14 to 16 feet wide, and sidewalks on 103rd Street are 9 to 11 feet wide. ADA-compliant sidewalk ramps are present on all but the northeast corner of the 103rd Street and Halsted Street intersection. Standard City of Chicago roadway lighting is present on both streets. The bus stops on Halsted Street for routes #8A, #108, and #352 are on the far side of the intersection;[2] on 103rd Street for route #103 on the west leg of the intersection; and at intersections ⅛ mile away in all four directions.

The land uses adjacent to the intersection are primarily commercial, and include a drug store, a fast food restaurant, a currency exchange, and a title load business.

111th Street Station

The intersection of 111th Street and Halsted Street is shown in Figure 4-7. At this location, Halsted Street is a major arterial carrying approximately 30,000 vehicles per weekday and 111th Street is a minor arterial carrying 11,800 vehicles per weekday (CDOT 2006, IDOT 2010b). Halsted Street has two through lanes in each direction, a landscaped median or left turn lanes, and on-street parking permitted. At this location, 111th Street has one through lane in each direction with on-street parking permitted, but lightly used. Left turn lanes are marked on Halsted Street, but not 111th Street.

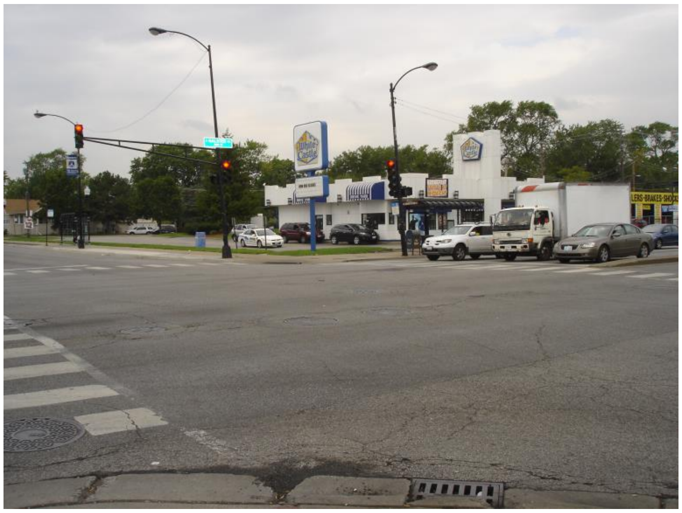

Figure 4-7: 111th Street and Halsted Street, looking northwest

The intersection of 111th Street and Halsted Street is controlled by traffic signals, with protected-permissive left turn phasing for all approaches except the westbound direction. High visibility crosswalk markings and pedestrian countdown signals are present on all four legs of the intersection. The adjacent intersections within 660 feet are two-way stop controlled except 111th Street and Peoria Street, which is controlled by all-way stop signs.

Sidewalks on Halsted Street are 13 to 17 feet wide, and sidewalks on 111th Street are 11 to 13 feet wide. ADA-compliant sidewalk ramps are present on the east side of Halsted Street and older ramps are present on the west side of the street. Standard City of Chicago roadway lighting is present on both streets. Bus stops are on Halsted Street for routes #8A, #108, and #352 on the near side of the intersection; on 111th Street for route #111 on the far side of the intersection; and at intersections ⅛ mile away in all four directions.

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[2] Bus stops on the "near side" of an intersection are on the corner in advance of the intersection in the direction of travel. Bus stops on the "far side" of an intersection are on the corner just past the intersection in the direction of travel.

The land uses adjacent to the intersection are primarily commercial, and include fast food restaurants, a currency exchange, tax preparation services, insurance providers, and auto repair businesses.

119th Street Station

The intersection of 119th Street and Halsted Street is shown in Figure 4-8. At this location, Halsted Street is a major arterial carrying approximately 30,300 vehicles per weekday and 119th Street is a minor arterial carrying 11,500 vehicles per weekday (CDOT 2006). Halsted Street has two through lanes in each direction, a landscaped median or left turn lanes, and on-street parking permitted. At this location, 119th Street has one through lane in each direction with on-street parking permitted, but lightly used. Left turn lanes are marked on Halsted Street and 119th Street.

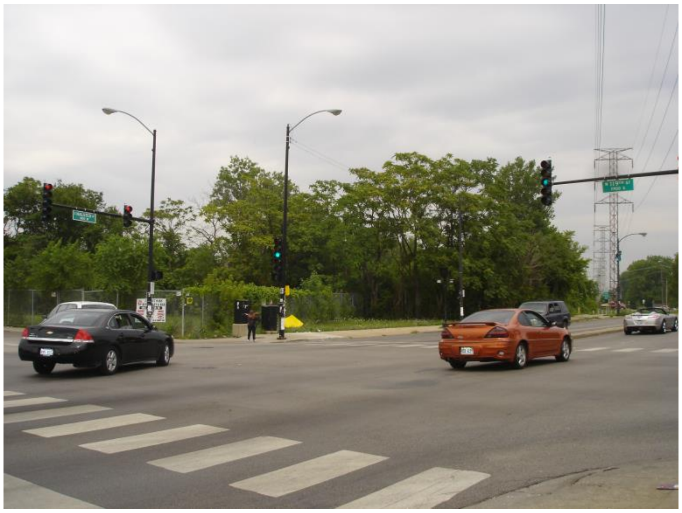

Figure 4-8: 119th Street and Halsted Street, looking northwest

The intersection of 119th Street and Halsted Street is controlled by traffic signals, with protected-permissive left turn phasing for all approaches. There are also red light enforcement cameras at the intersection. High visibility crosswalk markings and pedestrian countdown signals are present on all four legs of the intersection. The adjacent intersections within 660 feet are two-way stop controlled except 120th Street and Halsted Street, which is signalized.

Sidewalks on Halsted Street are approximately 16 feet wide at the intersection, but they narrow to 6 feet wide north of the intersection. Sidewalks on 119th Street vary from 12 to 19 feet wide, but end on the south side of the street at the alley west of Halsted Street. ADA-compliant sidewalk ramps are present on the west side of Halsted Street and older ramps are present on the east side of the street. Standard City of Chicago roadway lighting is present on both streets. Bus stops are on Halsted Street for routes #8A, #108, #352, and #359 on the far side of the intersection; on 119th Street for route #119 on the west leg of the intersection; and at intersections ⅛ mile away in all four directions.

The land on three of the four intersection quadrants is largely vacant. However, the Major Taylor Trail is northwest and southeast of the intersection on former rail ROW that is also now occupied by high-tension power lines. A busy strip mall containing a grocery store, dollar store, and clothing store is on the southwest corner of the intersection. The West Pullman branch of the Chicago Public Library is just west of the intersection on the north side of 119th Street.

4.3.3.2 Pedestrian Security

As discussed in Section 4.1.4, the *RLE Project Scoping Report* identified the potential for crime at new CTA stations and in surrounding neighborhoods as a concern of residents. Figure A-2 and Figure A-3 show the crime density (measured in crimes per acre) for 2009 through 2011 in the public ROW and open areas near each proposed station site. The highest crime area along Segment HA is centered on the 95th Street Terminal, with a lower intensity area near 111th Street, and low levels of crime near the proposed 103rd Street or 119th Street station locations.

4.3.3.3 Emergency Services

As explained in Section 4.1.3, the *RLE Project Scoping Report* identified concerns regarding emergency access. Figure A-1 shows a map of the police, fire, and hospital facilities in the area.

Segment HA falls within the boundaries of Chicago's 22nd Police District north of 1115th Street and within the 5th Police District south of 115th Street. The 22nd District station is at 1900 W. Monterey Avenue. The 5th District station is at 727 E. 111th Street. Several fire stations are in the corridor: Engine 93 (330 W. 104th Street), Truck 24 (10400 S. Vincennes Avenue), and Engine 115 (11940 S. Peoria Street). Fire stations also house ambulances serving hospitals. The only hospital near the corridor is Roseland Community Hospital at 45 W. 111th Street.

4.3.4 Segment HB

Segment HB (see Figure A-1) includes the portion of the Halsted Rail Alternative alignment from south of 119th Street to Vermont Avenue.

4.3.4.1 Pedestrian Safety

The Halsted Rail Alternative would include one train station in Segment HB. The primary station entrance would be south of Vermont Avenue and the auxiliary entrance would be north of 128th Place. Table A-5 shows the pedestrian crash data for this site. There were five pedestrian crashes within ⅛ mile of the station entrances in the five-year period. The pedestrian environment for the station is described below.

Vermont Avenue Station
The intersection of Vermont Avenue and Halsted Street is shown in Figure 4-9. At this location, Halsted Street is a major arterial carrying approximately 23,600 vehicles per weekday and Vermont Avenue is classified as a collector carrying 5,100 vehicles per weekday (CDOT 2006, IDOT 2010b). Halsted Street has two through lanes in each direction, a landscaped median or left turn lanes, and on-street parking permitted. Vermont Avenue has one through lane in each direction with on-street parking permitted. Left turn lanes are marked on Halsted Street and Vermont Avenue.

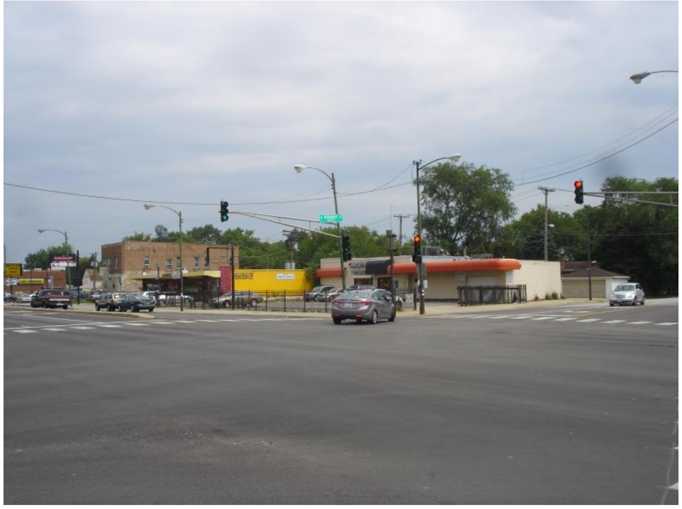

Figure 4-9: Halsted Street and Vermont Avenue, looking northeast

The intersection of Halsted Street and Vermont Avenue is controlled by traffic signals with standard two-phase operation. High visibility crosswalk markings and pedestrian countdown signals are present on all four legs of the intersection. Approximately 445 feet north of the intersection is 127th Street, which is also signalized. The Vermont Avenue and Peoria Avenue intersections and the Halsted Street and 128th Place intersections are also controlled by all-way stop signs. Other adjacent intersections are two-way stop controlled.

Sidewalks on Halsted Street are 13 to 17 feet wide and sidewalks on Vermont Avenue vary from 6 to 10 feet wide depending on the location. Sidewalk ramps are present on all corners of the Halsted Street and Vermont Avenue intersection, but do not meet the newest ADA standards. Standard City of Chicago roadway lighting is present on both streets. Bus (CTA) routes #8A and #108 stop on eastbound Vermont Avenue, but do not operate throughout the entire day south of 119th Street. Bus (Pace) route #352 also serves the corridor, and stops on Halsted Street at 128th Place and 127th Street, but not at Vermont Avenue.

The land uses adjacent to the intersection are mostly commercial. There is a strip mall in the southwest quadrant containing a laundromat, dry cleaner, barbershop, and beauty salon. There is a car dealership on the southeast corner, a vacant building on the northeast corner, and a religious facility on the northwest corner.

4.3.4.2 Pedestrian Security

As discussed in Section 4.1.4, the RLE Project Scoping Report identified the potential for crime at new CTA stations and in surrounding neighborhoods as a concern of residents. Figure A-2 and Figure A-3 show the crime density (measured in crimes per acre) for 2009 through 2011 in the public ROW and other open areas near each proposed station site. Crime near the proposed Vermont Avenue station appears to be very low.

4.3.4.3 Emergency Services

As explained in Section 4.1.3, the *RLE Project Scoping Report* identified concerns regarding emergency access. Figure A-1 shows a map of the police, fire, and hospital facilities in the area.

Segment HB falls mostly within the boundaries of Chicago's 5th Police District. However, Halsted Street borders the Village of Calumet Park from 123rd Street to 125th Street to the west, and Cedar

Park Cemetery (unincorporated area) from 125th Street to 127th Street also to the west. Chicago's 5th District police station is at 727 E. 111th Street. The Village of Calumet Park police station is six full blocks (0.625 mile) west of Halsted Street at 12409 S. Throop Street. Chicago's Engine 115 is at 11940 S. Peoria Street, one block west of Halsted Street. Calumet Park's fire station is 1 mile west of Halsted Street at 12457 S. Ashland Avenue. Fire stations also house ambulances serving hospitals. The nearest hospitals are Roseland Community Hospital at 45 W. 111th Street and MetroSouth Medical Center, 2 miles west in Blue Island.

Section 5
Impacts and Mitigations

This section analyzes the impacts of the RLE Project for each alternative in three categories: permanent, construction, and cumulative.

5.1 No Build Alternative

There would not be expected permanent impacts, construction impacts, or cumulative impacts on safety and security associated with the No Build Alternative.

5.2 Bus Rapid Transit Alternative

The permanent and construction impacts and mitigations for the BRT Alternative are discussed below.

5.2.1 Permanent Impacts and Mitigations - Bus Rapid Transit Alternative

5.2.1.1.1 Major Incidents

The forecasted change in major incidents reportable to the FTA was calculated by multiplying the change in vehicle revenue hours (VRH) for the BRT Alternative by the existing major incident rate for the CTA buses (see Table 5-1). The additional service hours would be expected to increase the *frequency* of major incidents by an average of 0.19 per year, or 1 every 5.4 years, compared to existing conditions. However, the incident *rate* would not be expected to change substantially. It is also possible that the incident rate for BRT would be lower than for local bus service because buses would not need to merge in and out of traffic as often to make stops. The CTA attempts to minimize bus incidents by continuously upgrading the bus fleet and through extensive driver training. The impact on major incidents would be not adverse.

Table 5-1: Change in Major Incidents for Bus Rapid Transit Alternative

Item	Bus	Rail	Total
A. Annual Change in VRH	10,307	0	10,307
B. Annual Major Incidents per Million VRH (2009-2011)	18.06	6.52	13.89
C. Annual Change in Major Incidents [(A/1,000,000)*B)]	0.19	0	0.19

Sources: (CTA 2009, National Transit Database 2012)
VRH = vehicle revenue hours

5.2.1.1.2 Motor Vehicle Safety

The FTA released Proposed New Starts and Small Starts Policy guidance on January 9, 2013 that includes factors used to measure the change in safety as a result of transit projects. The factors use the change in VMT to estimate changes in injuries and fatalities for automobiles and transit.

The BRT Alternative is expected to cause a small shift in travel modes from motor vehicles to transit, thus decreasing automobile VMT and slightly increasing bus VMT. This shift is expected to result in a small decrease in fatalities and injuries, and the associated costs.

5.2.1.1.3 Pedestrian Safety

Under existing conditions, nearly 600 passengers per day board or alight on Michigan Avenue at 115th Street, which is controlled by traffic signals. Many of these passengers would likely shift to the faster BRT service that would stop ½ block south at Kensington Avenue, where Michigan Avenue is uncontrolled. A large volume of pedestrians crossing a major street without positive traffic control would cause an adverse impact on pedestrian safety. Signals are already in place at the intersections of 103rd Street and 111th Street with Michigan Avenue, so there would be no adverse impact at those two locations. At the intersection of 130th Street and Eberhart Avenue, signals, sidewalks, sidewalk ramps, and marked crosswalks are part of the project design, so there would be no adverse impacts on pedestrian safety at that intersection. There would also be no adverse pedestrian safety impacts at the additional bus stops in the Altgeld Gardens neighborhood. Pedestrians would likely not have difficulty safely crossing the low-volume local streets in this area.

Traffic signals are one option for mitigating the adverse pedestrian safety impacts at Kensington Avenue if the minimum requirements for traffic signals described in the Manual on Uniform Traffic Control Devices (MUTCD) are met. Based on the existing bus passenger volumes at the intersection, the pedestrian volume signal warrant[3] could likely be met. Other pedestrian crossing treatments, such as refuge medians with appropriate signage, would also have the potential to mitigate safety impacts if confirmed by the results of a traffic gap study. Alternatively, the Kensington Avenue BRT stop could be relocated to 115th Street, which would allow pedestrians to cross Michigan Avenue at an existing signal.

5.2.1.1.4 Bus Stop Security

Research that compared bus stops with varying crime rates within the downtown area identified several variables with statistically significant correlations to bus stop crime (Liggett et al. 2001). The presence of liquor stores, check cashing establishments, vacant lots, vacant buildings, rundown buildings, and litter were all related to higher crime rates. The presence of large commercial storefronts, presence of bus shelters, better visibility, higher automobile traffic, and more pedestrian activity were all associated with lower crime rates. The researchers recommended siting bus stops away from corners containing the variables correlated with more crime where possible in order to reduce impacts. The potential impact for each bus stop is described below:

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[3] The MUTCD contains nine sets of factors called Warrants that can be used, in part, to determine whether traffic signals should be installed at an intersection. The pedestrian volume signal warrant (Warrant 4) is used where pedestrians experience delay crossing a major street and the volumes of pedestrians and vehicles on a major street exceed some threshold values.

- 103rd Street and Michigan Avenue - A mix of negative and positive factors would influence bus stop crime at 103rd Street. Negative factors include locating the proposed bus stops within the existing crime hot spot at 103rd Street, where there is an existing liquor store on the northeast corner of the intersection. Positive factors include replacing vacant land on the east side of Michigan Avenue with a park & ride lot, installing new lighted bus shelters, and attracting more pedestrian activity due to the enhanced transit service. Given that there are existing bus stops at this location, the overall impact on bus stop crime would be not adverse.

- 111th Street and Michigan Avenue - A mix of negative and positive factors would influence bus stop crime at 103rd Street. Negative factors include locating the proposed bus stops within the existing crime hot spot at 111th Street, where there is a currency exchange on the northeast corner. Positive factors include replacing vacant land west of Michigan Avenue and south of 111th Place with a park & ride lot, installing new lighted bus shelters, and attracting more pedestrian activity due to the enhanced transit service. Given that there are existing bus stops at this location, the overall impact on bus stop crime would be not adverse.

- Kensington Avenue and Michigan Avenue - The proposed bus stops would be located between two higher crime areas north of 115th Street and south of 116th Street. The stops would be adjacent to a grocery store and hair salon at Kensington Avenue instead of a currency exchange at 115th Street or a corner store and gas station retail at 116th Street. Some vacant land and two buildings east of Michigan Avenue and south of Kensington Avenue would be replaced with a park & ride lot. A large amount of vacant land southwest of Michigan Avenue and 115th Street is also expected to be replaced with Roseland Plaza, a 91,000 square foot retail strip mall and 250-space parking lot that would include a new grocery store. New lighted bus shelters would be added, and pedestrian activity in the area would increase compared to the No Build Alternative. Overall, this would have a beneficial impact on bus stop crime.

- 130th Street - The proposed bus stops would be located at Eberhart Avenue, away from an existing crime hot spot, adjacent to vacant land and a public park, and approximately 300 to 400 feet west of an existing currency exchange. New lighted bus shelters would be added, and pedestrian activity in the area would increase compared to the No Build Alternative due to a large park & ride lot to be located on the north side of 130th Street. Overall, this would be expected to have no adverse impact on bus stop crime.

- Additional Stops - The proposed BRT route would serve seven existing bus stops in the Altgeld Gardens neighborhood on 131st Street, Ellis Avenue, 133rd Street, 133rd Place, and Corliss Avenue. Because these stops are existing, pedestrian activity would not be likely to change markedly as a result of the proposed BRT service. The overall impact on bus stop crime would be expected to be not adverse.

5.2.1.1.5 Parking Security

Research in Los Angeles found that a large percentage—60 percent of “serious crime” and 19 percent of all crimes—of the crime at transit facilities occurred in park & ride lots, and that larger parking lots with less pedestrian activity and less visibility from the sidewalk resulted in more thefts (Loukaitou-Sideris et al. 2002) than at more active, more visible lots. There was no correlation between the presence of a parking attendant and crime, but a trial of a bicycle security patrol in large Vancouver commuter parking lots found that the patrol significantly reduced theft (Barclay et al. 1996). Other sources also suggest that security patrols can improve security at parking lots (Witherspoon Security Consulting 2012).

For these reasons, all parking facilities would incorporate an open design that eliminates blind spots and isolated areas, including in parking garage stairwells. All parking facilities would be well lit, well maintained, and incorporate security surveillance cameras and/or frequent security patrols during the hours the lots are open. Emergency push buttons would also be considered in the final design. In parking garages, convex mirrors would be used to improve visibility around corners for both pedestrians and drivers. The design will also adhere to the fencing and landscaping design requirements in the Chicago Landscape Ordinance (City of Chicago 1991).

Security impacts for parking facilities at each proposed station are described below:

- 103rd Street - A surface parking lot would be located on the east side of Michigan Avenue, mostly between 102nd Street and 102nd Place. The lot would be modestly sized, easily visible from the sidewalk, and therefore would be expected to have no adverse impact.

- 111th Street - An L-shaped parking lot would be located behind the commercial buildings to the west of Michigan Avenue, between 111th Place and 112th Street. Various design elements would be incorporated to provide security in the lot, which would result in no adverse impact. However, given the shape and location of the lot, additional mitigation measures described below would be considered.

- Kensington Avenue - A 1,000-space, three-story parking garage would be located east of Michigan Avenue between Kensington Avenue and 116th Street. Various design elements would be incorporated to improve security in the garage, which would result in no adverse impact.

- 130th Street - A 1,400-space, three-story parking garage would be located on the north side of 130th Street between Eberhart Avenue and St. Lawrence Avenue. Various design elements would be incorporated to improve security in the garage, which would result in no adverse impact.

As a mitigation, pedestrian access routes through or adjacent to surface parking lots would be considered on a case-by-case basis in the final design phase where total elimination of blind spots or isolated areas may be impractical, such as at the 111th Street lot. Where such sidewalks have the potential to increase pedestrian activity, perhaps by reducing walking distances to the transit station or other destinations, they could create pass-by surveillance that would deter criminal activity.

5.2.1.1.6 Neighborhood Security

Research regarding the impact of new transit service on crime in surrounding neighborhoods is primarily focused on rail stations, and is somewhat mixed in results. The majority of studies have found no adverse impact (see Section 5.3.1). The addition of a BRT service in an existing corridor served by frequent bus service (route #34) would be expected to generate fewer changes in travel patterns and demographics than a new rail alignment, and therefore would have fewer impacts. Therefore, no adverse impacts related to security are expected in the surrounding neighborhoods. Security impacts related to bus stops and parking lots are discussed above.

5.2.1.1.7 Terrorism and Homeland Security

Terrorist events could theoretically happen at any time and any place, including on CTA buses or at bus stops; however, an attack on the bus system is considered less likely than an attack on the rail system, due to the greater level of casualties, damage, and service disruption that would occur with an attack on the rail system. The addition of BRT service on Michigan Avenue is unlikely to further increase the risk of a terrorist attack beyond what currently exists. Therefore, the impact would be not adverse. The CTA prepares for acts of terrorism by updating various plans on a regular basis and coordinating with law enforcement and other agencies as described in Section 3.1.3.2.

5.2.2 Construction Impacts and Mitigations - Bus Rapid Transit Alternative

The BRT Alternative primarily involves the construction of bus shelters, sidewalks, and parking facilities. While there is always a chance that a contractor could fail to follow all safety and security rules, the limited scope of work would minimize the risk of incidents resulting in fatalities, injuries, or criminal acts such as vandalism or theft on construction sites.

To mitigate risks, contractors would be required to develop a Construction Safety and Security Plan, perform job safety analysis, monitor safety and security activities, and comply with other relevant aspects of the CTA's *Safety and Security Management Plan* or other manuals and policies (CTA 2011b). The contractor would take prompt and decisive corrective action on safety deficiencies identified at the work site.

5.2.2.1.1 Emergency Services

It is expected that the BRT Alternative would be constructed with construction equipment temporarily occupying the parking lane, and without closures of the through travel lanes. Therefore, access for emergency services would not be restricted, and the impacts would be not adverse. Contractors would follow the MUTCD design standards for temporary traffic control and would obtain required local permits.

5.2.3 Cumulative Impacts and Mitigations – Bus Rapid Transit Alternative

There would not be expected cumulative impacts on safety and security associated with the BRT Alternative.

5.3 Union Pacific Railroad Rail Alternative - Right-of-Way Option

The permanent and construction impacts and mitigations for the UPRR Rail Alternative ROW Option are discussed below.

5.3.1 Permanent Impacts and Mitigations - Union Pacific Railroad Rail Alternative - Right-of-Way Option

5.3.1.1 Segment UA

5.3.1.1.1 Major Incidents

The forecasted change in major incidents reportable to the FTA was calculated by multiplying the change in VRH for the CTA rail and bus systems by the existing major incident rates for those modes (see Table 5-2). For Segment UA, the UPRR Rail Alternative would be expected to increase the *frequency* of major incidents on the rail system by an average of 0.16 per year and decrease the *frequency* of major incidents on the bus system by an average of 0.29 per year compared to existing conditions. The sum of the two changes in crash frequency results in a decrease of 0.13 major incidents per year, or 1 every 7.5 years. However, the incident *rates* for each mode would not be expected to change substantially. It is also possible that the incident rate for the project area would be lower than for the system as a whole given its newer infrastructure. The CTA also attempts to minimize incidents by continuously upgrading the bus and rail fleets and through extensive operator training. The impact on major incidents would be not adverse.

Table 5-2: Change in Major Incidents for Segment UA

Item	Bus	Rail	Total
A. Annual Change in VRH	-15,994	23,816	7,822
B. Annual Major Incidents per Million VRH (2009-2011)	18.06	6.52	13.89
C. Annual Change in Major Incidents [(A/1,000,000)*B)]	-0.29	0.16	-0.13

Sources: (CTA 2009, National Transit Database 2012)
VRH = vehicle revenue hours

5.3.1.1.2 Motor Vehicle Safety

The FTA released Proposed New Starts and Small Starts Policy guidance on January 9, 2013 that includes factors used to measure the change in safety as a result of transit projects. The factors use the change in VMT to estimate changes in injuries and fatalities for automobiles and transit.

The UPRR Rail Alternative is expected to cause a small shift in travel modes from automobiles and buses to rail transit, thus decreasing automobile and bus VMT, and slightly increasing rail VMT. Overall, this would be expected to lead to a small decrease in fatalities and injuries, and the associated costs.

5.3.1.1.3 Pedestrian Safety

The new train stations at 103rd Street, 111th Street, and Michigan Avenue would generate a large amount of pedestrian activity, causing a large increase in the number of pedestrians crossing the three major through streets near stations compared to the No Build Alternative. All three streets have ADT volumes over 10,000 vehicles per day. The nearest controlled intersections (signals or all-way stops) to proposed station locations are approximately one block away in most cases. However, many pedestrians will want to cross the streets immediately adjacent to the station entrances, particularly to access the nearest available bus stops (assumed to be adjacent to stations). Therefore, a large volume of pedestrians would be expected to cross the major streets without positive traffic control, which would be an adverse impact on pedestrian safety.

It is expected that the minimum requirements for traffic signals described in the MUTCD would be met by pedestrian volumes at any of the three station locations. If warranted by an engineering traffic study, traffic signals would be included to mitigate the pedestrian safety impacts. Other pedestrian crossing treatments, such as refuge medians with appropriate signage, would also have the potential to adequately reduce pedestrian delays and improve safety if confirmed by the results of a traffic gap study.

5.3.1.1.4 Parking Security

As described in Section 5.2.1, research has found that larger parking lots with less pedestrian activity and less visibility from the sidewalk can result in more thefts (Loukaitou-Sideris et al. 2002). Security impacts for parking facilities at the three proposed stations on Segment UA are described below:

- 103rd Street - Two 100-space surface parking lots would be expected to have no adverse impact.
- 111th Street - Two 100-space surface parking lots would be expected to have no adverse impact.
- Michigan Avenue - A 750-space, three-story parking structure would be located northeast of State Street and 116th Street and a 250-space surface lot would be located southeast of Michigan Avenue and Kensington Avenue. Various design elements would be incorporated to improve security for the facilities, which would result in no adverse impacts. However, given the size and location of the surface lot, additional mitigation would be considered as described below.

Mitigation measures would be the same as described for the BRT Alternative (see Section 5.2.1).

Figure 5-1 shows an example of potential locations for sidewalk connections through surface parking lots at the 103rd Street station.

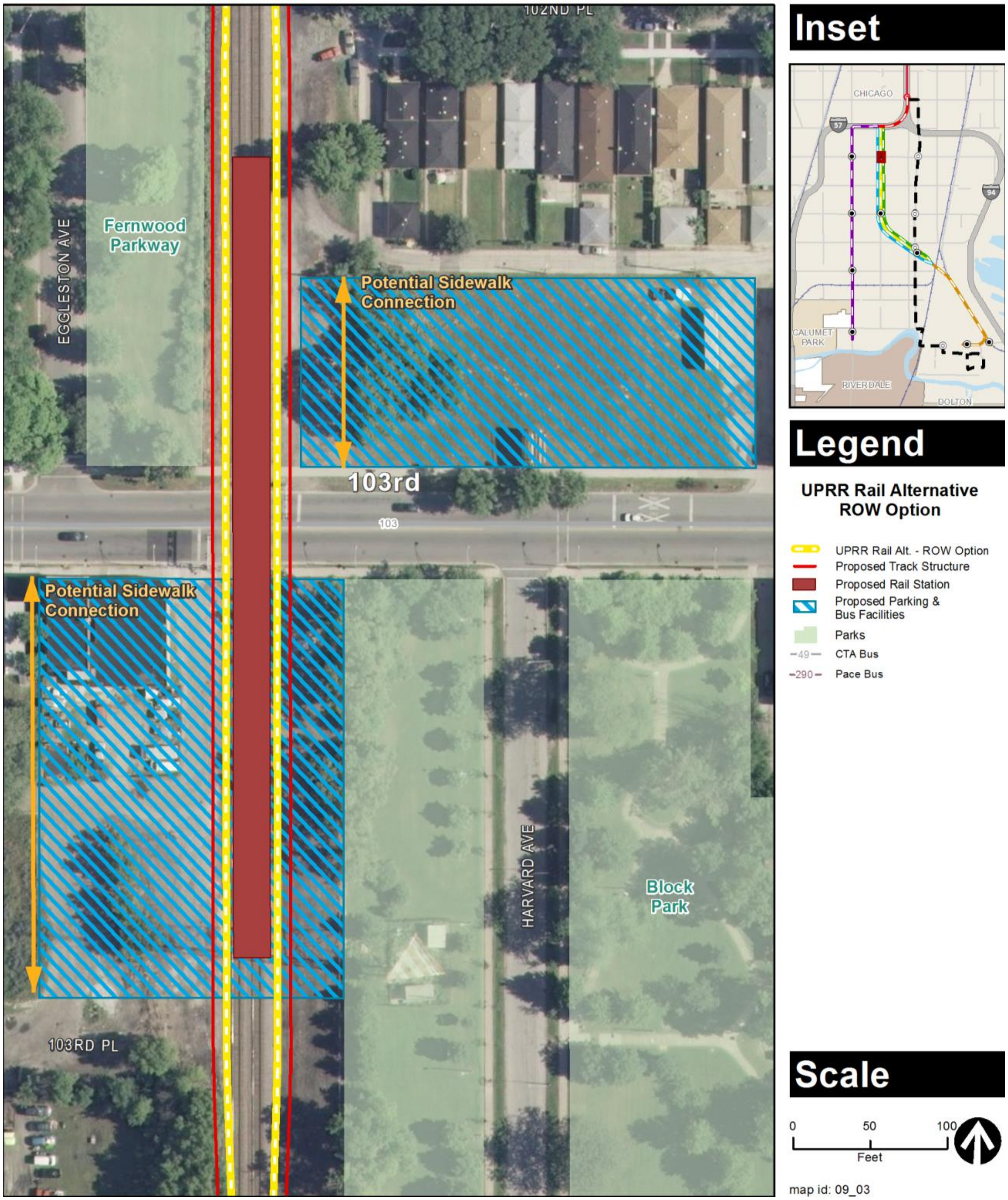
102ND PL
EGGLESTON AVE
Fernwood Parkway
Potential Sidewalk Connection
103rd
103
Potential Sidewalk Connection
HARVARD AVE
Block Park
103RD PL
Inset
CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON
Legend
UPRR Rail Alternative ROW Option
UPRR Rail Alt. - ROW Option
Proposed Track Structure
Proposed Rail Station
Proposed Parking & Bus Facilities
Parks
49 CTA Bus
290 Pace Bus
Scale
0
50
100
Feet
map id: 09_03

Figure 5-1: Potential Sidewalk Connections at 103rd Street Station Parking Lots

5.3.1.1.5 Neighborhood Security

Comments from the general public during the EIS scoping process included concerns about the potential for increased crime in the neighborhoods surrounding new rail transit stations compared to existing conditions. A literature review was conducted to determine whether the presence or introduction of rail transit stations is expected to have an impact on neighborhood crime. Results were mixed. Studies in Baltimore and Denver examined crime before and after the opening of stations and found no significant relationship to crime rates (Plano 1993, Denver RTD 2006). However, a study of two stations in Atlanta found slight increases in crime after station openings, with rates regressing to the mean over the next several months (Poister 1996).

A study of crime patterns around Los Angeles Green Line stations considered more variables related to the surrounding environment, and found that the rail line had no significant impacts on crime trends (Liggett et al. 2003). This study is mirrored by a recent study in San Diego to compare crime rates in neighborhoods that are similar demographically, but differ with respect to rail transit access. No significant differences in crime were found between similar neighborhoods with and without train access, and crime around San Diego's Green Line extension followed city and county trends after opening (San Diego Association of Governments 2007).

However, an econometric model of crime activity in Atlanta found that adding rail access increases crime in low-income neighborhoods (Ihlanfeldt 2003). A study of street robberies in four Chicago police districts found a disproportionate number of crimes per acre near rapid transit stations (Block and Davis 1996). However, the level of pedestrian and commercial activity is also higher near transit stations, and it was not clear whether the number of crimes was disproportionately high compared to those measures. Regardless, street robberies on the wealthier northeast side peaked not directly outside a train station, but within 1,000 feet of a train station. On the lower income west side, robberies were more widespread throughout the neighborhood, and were concentrated around commercial activity on major streets rather than at train stations.

Overall, it appears that new train stations would be unlikely to have much, if any, impact on neighborhood crime, but research indicates that some risk would remain, particularly in low-income areas. The impact would be not substantially adverse. Suggested mitigation measures would be security surveillance cameras and sidewalk lighting along commercial streets within the immediate vicinity (one block, or 660 feet) of train station entrances. CTA would need to coordinate the implementation of these measures with the City of Chicago because the cameras and lighting would be located on City ROW.

5.3.1.1.6 Terrorism and Homeland Security

As a whole, the CTA heavy rail system is potentially a high profile target of would-be terrorists. However, the damage inflicted by attacking the Red Line within the project area (i.e., south of 95th Street) would not be as large as attacking higher ridership areas and would not cause the same level of service disruption as attacking a more central location. Therefore, it is unlikely that the Red Line Extension would be a primary target of terrorists. The probability of an attack is remote, but the damage would be critical. Based on the Risk Assessment Matrix in Table 3-1, this is classified as a not substantially adverse impact.

The CTA prepares for acts of terrorism by updating various safety and security plans on a regular basis and coordinating with law enforcement and other agencies as described in Section 3.1.3.2. As additional mitigation, access to the areas under the tracks, where a bomb could be concealed in a vehicle or other container, would be prohibited. A means of detecting intrusions, most likely video and/or thermal imaging, with analytics software to alert security personnel to potential threats, would be considered in the final design of the project. Lighting under the elevated structure would also be considered to deter terrorism and other criminal activity, and improve surveillance visibility. Parking would also be prohibited where the tracks pass over public roadways.

5.3.1.2 Segment UB

5.3.1.2.1 Major Incidents

The forecasted change in major incidents reportable to the FTA was calculated by multiplying the change in VRH for the CTA rail and bus systems by the existing major incident rates for those modes (see Table 5-3). The change in VRH for Segment UB would be expected to increase the frequency of major incidents on the rail system by an average of 0.09 per year and increase the *frequency* of major incidents on the bus system by an average of 0.22 per year compared to existing conditions. The sum of the two changes in crash frequency results in an increase of 0.30 major incidents per year, or 1 every 3.3 years. However, the incident *rates* for each mode would not be expected to change substantially. It is also possible that the incident rate for the project area would be lower than for the system as a whole given its newer infrastructure. The CTA also attempts to minimize incidents by continuously upgrading the bus and rail fleets, and through extensive operator training. The impact on major incidents would be not adverse.

Table 5-3: Change in Major Incidents for Segment UB

Item	Bus	Rail	Total
A. Annual Change in VRH	12,003	13,411	25,414
B. Annual Major Incidents per Million VRH (2009-2011)	18.06	6.52	13.89
C. Annual Change in Major Incidents [(A/1,000,000)*B)]	0.22	0.09	0.30

Sources: (CTA 2009, National Transit Database 2012)
VRH = vehicle revenue hours

5.3.1.2.2 Motor Vehicle Safety

The impacts and mitigations associated with Segment UB would be the same as described for segment UA (see Section 5.3.1.1).

5.3.1.2.3 Pedestrian Safety

Either option for a train station at 130th Street would generate a large amount of pedestrian activity. For the West Option, pedestrians from the Altgeld Gardens neighborhood would need to cross 130th Street at Evans Avenue. A traffic signal, sidewalks, curb ramps, and marked crosswalks are included in the design, so there would be no adverse impact given these improvements. It is suggested that the entire 130th Street corridor from at least Indiana Avenue to Ellis Avenue be considered for a future redesign with "complete streets" principles. Reduced speeds, narrower travel lanes, pedestrian crossing treatments, bicycle facilities, and opportunities for development would all be considered for the corridor.

For the South Option station, an auxiliary entrance would allow pedestrians to access the station without crossing 130th Street. This would result in no adverse impact for the South Option station, and would offer superior safety to the West Option station, even accounting for the pedestrian facilities to be constructed.

5.3.1.2.4 Parking Security

As described in Section 5.2.1, research has found that larger parking lots with less pedestrian activity and less visibility from the sidewalk can result in more thefts (Loukaitou-Sideris et al. 2002). All parking facilities would incorporate design features as described for the BRT Alternative in Section 5.2.1. Security impacts for the parking facilities at the two 130th Street station options are described below:

- 130th Street South Option - A 2,300-space, seven-story parking structure would be located adjacent to the 130th Street station location. Various design elements would be incorporated to improve security in the garage, which would result in no adverse impact.

- 130th Street West Option - A 1,950-space, four-story parking structure and a 350-space surface lot would be located adjacent to the 130th Street station site in an area of very low pedestrian activity. Various design elements would be incorporated to improve security at the lots, which would result in no adverse impacts.

Mitigation measures would be the same as described for the BRT Alternative (see Section 5.2.1).

5.3.1.2.5 Neighborhood Security

The probability of adverse impacts on neighborhood security on Segment UB would be limited because Segment UB does not have any stations centered in neighborhoods. There are no commercial streets within the immediate vicinity of the two 130th Street station locations, so the probability of adverse security impacts would also be limited in those areas. The impacts would therefore be not adverse. No mitigation measures would be necessary.

5.3.1.2.6 Terrorism and Homeland Security

The impacts and mitigation measures for Segment UB would be the same as those for Segment UA (see Section 5.3.1.1), except that the train line would not pass over any public roadways, so parking prohibitions would not apply.

5.3.2 Construction Impacts and Mitigations - Union Pacific Railroad Rail Alternative - Right-of-Way Option

The UPRR Rail Alternative ROW Option would require the removal of the existing UPRR tracks and construction of an extension of the existing CTA Red Line, mostly on elevated structure. The extensive scope of work for this alternative would create a need for a large number of contractors in many areas over a long time period. To mitigate risks of safety and security incidents, contractors would be required to develop a Construction Safety and Security Plan, perform job safety analysis, monitor safety and security activities, and comply with other relevant aspects of the CTA's *Safety and Security Management Plan* or other manuals and policies (CTA 2011b). The contractor would take prompt and decisive corrective action on safety deficiencies identified at the work site.

5.3.2.1 Segment UA

5.3.2.1.1 Emergency Services

The elevated structure would cross over seven arterial or collector streets (103rd Street, 107th Street, 111th Street, Wentworth Avenue, 115th Street, State Street, and Michigan Avenue) and five local residential streets (101st Street, 109th Street, 116th Street, Indiana Avenue, and Prairie Avenue) on Segment UA. All but four of the streets (Michigan Avenue, 116th Street, Indiana Avenue, and Prairie Avenue) currently have at-grade crossings with the UPRR.

For at-grade crossings, full road closures would be required for approximately two weeks to remove the crossing. If the profile of the roadway were to be reconstructed, a through street would need to be one-way for approximately two months, while a minor street would likely be closed completely. For major streets, the new bridge spans for the Red Line structure could be rolled into place over a weekend with a full closure. For local streets, the roadway could be closed for approximately a week to set the new bridge.

At Michigan Avenue, the existing structure could be demolished and the new bridge span for the Red Line could be rolled into place over a weekend with a full closure. For the other three local streets with grade-separated crossings, full road closures could be required for approximately two weeks to remove each existing bridge structure. New structures could be either rolled in over a weekend or the road could be closed for approximately 1 week to set a new bridge structure.

Emergency services would be able to access construction sites at all times in the same way contractors access the sites. Emergency services wishing to cross the tracks would have to use recommended detours, just as with a typical roadway construction project. The impacts would be not substantially adverse.

As a mitigation, neither adjacent roadways nor adjacent through streets operating in the same direction would be closed simultaneously. For example, while 111th Street is closed, 109th Street and Wentworth Avenue would remain open because they are the nearest crossings, and 107th Street and 115th Street would also remain open because they are the nearest east-west arterial/collector streets. Traffic management plans would be created during the final engineering phase of the project, and would identify detour and emergency access routes. Detour routes would generally follow the nearest arterial or collector streets. Contractors would follow the MUTCD design standards for temporary traffic control and would obtain required local permits.

5.3.2.2 Segment UB

5.3.2.2.1 Emergency Services

South and east of the Canadian National/Metra Electric tracks, the new tracks would be located adjacent to an existing railroad with no public roadway crossings. Emergency services would be able to access construction sites at all times in the same way contractors access the sites. The impacts would be not adverse.

As a mitigation, an access road for the MWRD would be constructed prior to the new CTA tracks if necessary to maintain access to the MWRD facility. This roadway could also be used by emergency services. Traffic management plans would be created during the final engineering phase of the project if necessary. The plans would identify detour and emergency access routes, which would generally follow the nearest arterial or collector streets. Contractors would also follow the MUTCD design standards for temporary traffic control and would obtain the required local permits.

5.3.3 Cumulative Impacts and Mitigations – Union Pacific Railroad Rail Alternative - Right-of-Way Option

There would not be any expected cumulative impacts on safety and security associated with the UPRR Rail Alternative ROW Option.

5.3.4 120th Street Yard and Shop

5.3.4.1 Permanent Impacts and Mitigations

5.3.4.1.1 Security

A study of ROW intrusions for the CTA's Red and Purple Modernization Project found a large number of incidents at the Howard Yard and the Linden Yard, primarily related to graffiti. Some of the same type of activity would be likely to occur at the proposed 120th Street yard and shop. However, the relatively isolated location of the proposed yard and shop may help to reduce the frequency of incidents from a regular occurrence to an occasional occurrence. The yard would be located adjacent to a water treatment plant for the MWRD and other industrial facilities, separated from residential areas by railroads and major arterial streets. It would be approximately 1 mile southeast of the proposed Michigan Avenue station and 0.75 mile northwest of the proposed 130th Street station South Option. Given the occasional probability and the marginal severity, the risk per the CTA's risk assessment matrix (see Table 3-1) is classified as "Review" for acceptability, or not substantially adverse for the NEPA analysis.

To mitigate the risk of security incidents, the design of the yard and shop would comply with all relevant design standards, as discussed in Section 3.1. Security fencing at least 8 feet in height would be installed around the perimeter of the yard per FTA guidance (FTA 2004). Security cameras would be installed to monitor potential access points. The latest technologies available for automated intrusion detection, such as thermal imaging with analytics software, would be reviewed at the time of final design and construction.

5.3.4.2 Construction Impacts and Mitigations

The construction impacts and mitigation measures associated with the 120th Street yard and shop would be the same as the general construction impacts and mitigation measures associated with Segment UA (see Section 5.3.2.1).

5.4 Union Pacific Railroad Rail Alternative - East Option

The impacts and mitigations for the UPRR Rail Alternative East Option would be the same as described for the UPRR Rail Alternative ROW Option (see Section 5.2.3) except as noted below.

5.4.1 Permanent Impacts and Mitigations - Union Pacific Railroad Rail Alternative - East Option

5.4.1.1 Segment UA

5.4.1.1.1 Major Incidents

The impacts and mitigations associated with the East Option would be the same as described for the ROW Option (see Section 5.3.1.1).

5.4.1.1.2 Motor Vehicle Safety

The impacts and mitigations associated with the East Option would be the same as described for the ROW Option (see Section 5.3.1.1).

5.4.1.1.3 Pedestrian Safety

The impacts and mitigations associated with the East Option would be the same as described for the ROW Option (see Section 5.3.1.1), but new traffic signals in the vicinity of the station for mitigation would likely need to be interconnected with the railroad crossing warning devices. Pedestrian safety impacts related to crossing the railroad tracks are discussed below under “Highway-Rail Grade Crossings.”

5.4.1.1.4 Parking Security

The parking security impacts for the UPRR Rail Alternative East Option would be similar to those described for the ROW Option, but some differences in proposed sizes and locations affect the impacts:

- 103rd Street - The East Option would include a 75-space parking lot east of the station and a 125-space lot west of the station. Both would be small and would be visible from the sidewalks along 103rd Street, resulting in no adverse impact.

- 111th Street - The East Option would include a 55-space parking lot east of the station along 110th Place and a 145-space lot west of the station between 110th Street and 111th Street. The 55-space lot would be located on a minor residential street with little pedestrian activity for surveillance. A large portion of the 145-space lot would be far from 111th Street, limiting visibility. Various design elements would be incorporated to improve security in the lot, which would result in no adverse impact. However, given the locations of the lots, additional mitigation would be considered.

- Michigan Avenue - The East Option would include an 825-space, three-story parking structure west of the UPRR tracks and a 175-space surface lot southeast of Michigan Avenue and Kensington Avenue. Various design elements would be incorporated to improve security in the lots, which would result in no adverse impacts. However, the surface lot would be sited such that portions may not be easily visible from sidewalks, so additional mitigation would be considered.

Mitigation measures would be the same as described for the BRT Alternative (see Section 5.2.1).

5.4.1.1.5 Neighborhood Security

The impacts and mitigations associated with the East Option would be the same as described for the ROW Option (see Section 5.3.1.1).

5.4.1.1.6 Terrorism and Homeland Security

The impacts and mitigations associated with the East Option would be the same as described for the ROW Option (see Section 5.3.1.1), except access would be permitted under the rail structure for park uses at Wendell Smith Park and Block Park.

5.4.1.1.7 Highway-Rail Grade Crossings

The UPRR Rail Alternative East Option would directly increase the number of vehicles (mostly buses) and pedestrians crossing the UPRR tracks at 103rd Street and 111th Street compared to the No Build Alternative, and could indirectly induce land development that would further increase traffic volumes.

Table 5-4 shows the Expected Crash Frequency (ECF) for the 103rd Street and 111th Street crossings using Equation 7-3.1 in the IDOT *Bureau of Design and Environment Manual* (IDOT 2010a). Future ADT volumes have not been forecasted, but a modest 1 percent annual growth in vehicle traffic between the construction year (2018) and the planning horizon year (2030) was assumed for the build conditions. This increase in traffic volume would result in an approximately 11 percent increase in ECF at each of the crossings in the UPRR Alternative East Option compared to the No Build Alternative. At 103rd Street, a crash would be expected once every 10.4 years (1/ECF) instead of every 11.6 years. At 111th Street, a crash would be expected once every 14.7 years instead of every 16.3 years. This frequency would be considered an occasional risk with critical severity, which is classified as adverse.

Table 5-4: Calculated Expected Crash Frequencies at Union Pacific Railroad Grade Crossings

Scenario	Item	103rd Street	111th Street
Existing (2009)	Average Daily Traffic	18,700	12,800
	Daily Train Volume	26	26
	Expected Crash Frequency	0.047	0.033
	Existing Crash Frequency	0.080	0.080
No Build Alternative (2030)	Average Daily Traffic	18,700	12,800
	Daily Train Volume	48	48
	Expected Crash Frequency	0.086	0.061
Union Pacific Railroad Alternative, East Option (2030)	Average Daily Traffic	21,100	14,400
	Daily Train Volume	48	48
	Expected Crash Frequency	0.096	0.068

The new CTA train stations would be expected to generate additional pedestrian volume crossing the UPRR tracks at 103rd Street and 111th Street. Some of the pedestrians would come from the planned surface parking lots and some would come from the surrounding neighborhood. For the East Option, a 125-space parking lot would be located across the tracks from the 103rd Street station entrance and a 145-space parking lot would be located across the tracks from the 111th Street station entrance. It is assumed that bus stops would be relocated adjacent to the station entrances, eliminating the need for passengers making bus-rail connections to cross the tracks on foot.

Given that transit passengers are often in a hurry, and given the likely delays to pedestrians due to the expected increase in freight volumes over existing conditions, it is reasonable to think that some pedestrians may choose to take unacceptable safety risks by crossing the tracks while the signals are flashing. This adverse impact could be mitigated in one or more ways. Pedestrian crossing gates could be used at sidewalks to provide the same level of warning to pedestrians as is provided to motorists. Pedestrian crossing gates are provided at other CTA at-grade crossings (see Figure 5-2). Pending coordination with the UPRR, intertrack fencing with signs clearly prohibiting crossing would be installed between tracks to discourage pedestrians from crossing at locations other than designated crossing points (see Figure 5-3). If intertrack fencing is not feasible, fencing would be installed along parking lots or at the ROW line to prevent unsafe pedestrian crossings of the railroad tracks.

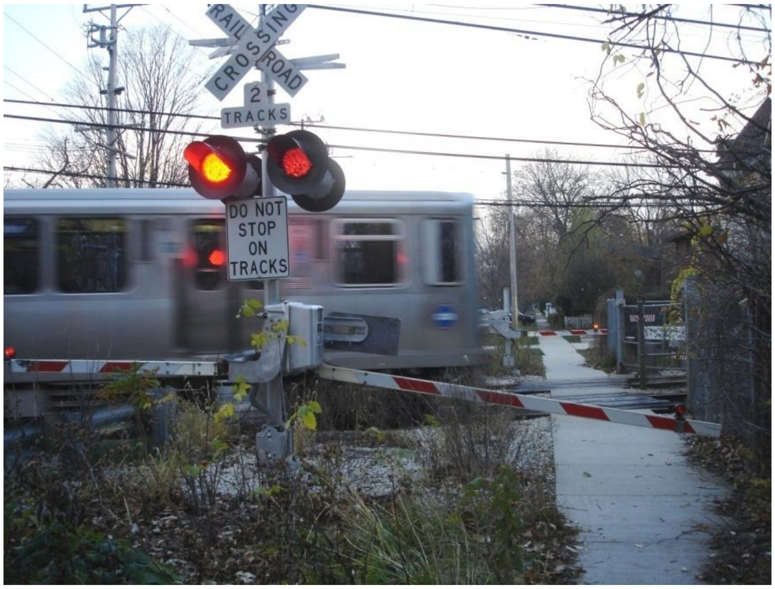
RAILROAD CROSSING
2 TRACKS
DO NOT STOP ON TRACKS

Figure 5-2: Pedestrian Crossing Gates at Isabella Street on Chicago Transit Authority Purple Line

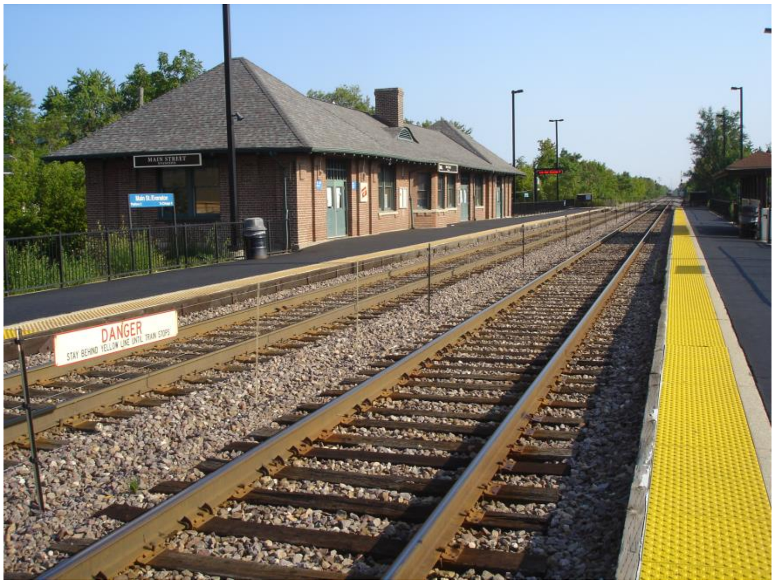
DANGER
STAY BEHIND YELLOW LINE UNTIL TRAIN STOPS

Figure 5-3: Intertrack Fencing at a Metra Station

5.4.1.2 Segment UB

The design of Segment UB for the UPRR Rail Alternative is the same for all three options. Therefore, the impacts and mitigations associated with the East Option would be the same as described for the ROW Option (see Section 5.3.1.2).

5.4.2 Construction Impacts and Mitigations - Union Pacific Railroad Rail Alternative - East Option

The overall scope of work for the UPRR Rail Alternative East Option would be similar to the UPRR Rail Alternative ROW Option, but the elevated CTA rail line would be constructed adjacent to the existing, at-grade freight railroad line instead of in place of it. Completing construction adjacent to an active freight rail line could create some additional construction safety risks for the project. To mitigate risks of safety and security incidents, contractors would be required to develop a Construction Safety and Security Plan, perform job safety analysis, monitor safety and security activities, and comply with other relevant aspects of the CTA's *Safety and Security Management Plan* or other manuals and policies (CTA 2011b). The contractor would take prompt and decisive corrective action on safety deficiencies identified at the work site.

5.4.2.1 Segment UA

5.4.2.1.1 Emergency Services

Impacts for Segment UA for the East Option would be the same as described for the ROW Option (see Section 5.3.2.1), except existing railroad grade crossings would not be removed, and the roadway profiles would not be reconstructed.

5.4.2.2 Segment UB

The design of Segment UB for the UPRR Rail Alternative is the same for all three options. Therefore, the impacts and mitigations associated with the East Option would be the same as described for the ROW Option (see Section 5.3.2.2).

5.4.3 Cumulative Impacts and Mitigations - Union Pacific Railroad Rail Alternative - East Option

5.4.3.1 Segment UA

5.4.3.1.1 Highway-Rail Crossings

In addition to the expected increase in automobile and pedestrian traffic volumes as a result of the RLE Project (see Section 5.4.1.1) compared to the No Build Alternative, the full implementation of the CREATE program would increase the number of trains using the UPRR tracks from 26 to 48 per day, an 85 percent increase over existing conditions. The proposed Metra SouthEast Service Line could also increase the number of passenger trains per day on the line beyond the existing two Amtrak trains per day. Based on Equation 7-3.1 in the IDOT *Bureau of Design and Environment Manual*, increases in train volume proportionally increase the ECF at highway-rail grade crossings (IDOT 2010a). This increase in crash potential would be an adverse impact at the existing highway-rail grade crossings along the UPRR tracks at 101st Street, 103rd Street, 107th Street, 109th Street, 111th Street, Wentworth Avenue, 115th Street, and State Street. All of these crossings currently have gates on both roadway approaches and flashing lights. Crash potential could be further mitigated by installing safety protection technologies for vehicles to prevent drivers from going around the gates, and by installing pedestrian gates on the sidewalks.

5.4.3.2 Segment UB

There would be no cumulative impacts on safety and security for Segment UB of the UPRR Rail Alternative East Option.

5.4.4 120th Street Yard and Shop

The permanent and construction impacts and mitigations associated with the 120th Street yard and shop for the East Option would be the same as described for the ROW Option (see Section 5.3.3).

5.5 Union Pacific Railroad Rail Alternative - West Option

The impacts and mitigations for the UPRR Rail Alternative West Option would be the same as described for the UPRR Rail Alternative East Option (see Section 5.4) except as noted below.

5.5.1 Permanent Impacts and Mitigations - Union Pacific Railroad Rail Alternative - West Option

5.5.1.1 Segment UA

5.5.1.1.1 Major Incidents

The impacts associated with the West Option would be the same as described for the ROW Option and the East Option (see Section 5.3.1.1).

5.5.1.1.2 Motor Vehicle Safety

The impacts and mitigations associated with the West Option would be the same as described for the ROW Option and the East Option (see Section 5.3.1.1).

5.5.1.1.3 Pedestrian Safety

The impacts and mitigations associated with the West Option would be the same as described for the East Option (see Section 5.4.1.1). Pedestrian safety impacts related to crossing the railroad tracks are discussed below under “Highway-Rail Grade Crossings.”

5.5.1.1.4 Parking Security

The parking security impacts for the UPRR Rail Alternative West Option would be similar to those described for the ROW Option, but some differences in proposed sizes and locations affect the impacts:

- 103rd Street - The West Option would include a 200-space parking lot west of the station, north of 104th Street. The lot would be somewhat large and portions could be difficult to see from the adjacent sidewalks. Various design elements would be incorporated to improve security in the lot, which would result in no adverse impact. However, given the size and location of the lot, additional mitigation would be considered.

- 111th Street - A 200-space parking lot would be located west of the station, between 110th Street and 111th Street. A large portion of the 145-space lot would be far from 111th Street or other public sidewalks, limiting visibility. Various design elements would be incorporated to improve security in the lot, which would result in no adverse impact. However, given the location of the lot, additional mitigation would be considered.

- Michigan Avenue - A 1,000-space, five-story parking structure would be located west of the UPRR tracks and northeast of the 116th Street and State Street intersection. Various design elements would be incorporated to improve security for the structure, which would result in no adverse impact.

Mitigation measures would be the same as described for the BRT Alternative (see Section 5.2.1).

5.5.1.1.5 Neighborhood Security

The impacts and mitigations associated with the West Option would be the same as described for the ROW Option (see Section 5.3.1.1).

5.5.1.1.6 Terrorism and Homeland Security

The impacts and mitigations associated with the West Option would be the same as described for the ROW Option (see Section 5.3.1.1), except access would be permitted under the rail structure for park uses at Fernwood Parkway Park.

5.5.1.1.7 Highway-Rail Grade Crossings

Compared to the East Option, the volume of pedestrians crossing the tracks to access the new station would be lower for the West Option because the proposed parking lots would be located on the same side of the tracks as the proposed stations. However, the presence of the new train station adjacent to the highway-rail grade crossing would still generate additional pedestrian volume and create an adverse safety impact at 103rd Street and 111th Street. This impact could be mitigated in the same ways described for the East Option in Section 5.4.1.1, with pedestrian crossing gates and/or intertrack fencing.

5.5.1.2 Segment UB

The design of Segment UB for the UPRR Rail Alternative is the same for all three options. Therefore, the impacts and mitigations associated with the West Option would be the same as described for the ROW Option (See Section 5.3.1.2).

5.5.2 Construction Impacts and Mitigations - Union Pacific Railroad Rail Alternative - West Option

The overall scope of work for the UPRR Rail Alternative West Option would be similar to the UPRR Rail Alternative ROW Option, but the CTA rail line would be constructed west of the at-grade UPRR freight railroad line instead of east of the line. To mitigate risks of safety and security incidents, contractors would be required to develop a Construction Safety and Security Plan, perform job safety analysis, monitor safety and security activities, and comply with other relevant aspects of the CTA's *Safety and Security Management Plan* or other manuals and policies (CTA

2011b). The contractor would take prompt and decisive corrective action on safety deficiencies identified at the work site.

5.5.2.1 Segment UA

5.5.2.1.1 Emergency Services

The impacts and mitigating actions for the West Option would be the same as described for the East Option (see Section 5.4.2.1).

5.5.2.2 Segment UB

The design of Segment UB for the UPRR Rail Alternative is the same for all three options. Therefore, the impacts and mitigations associated with the West Option would be the same as described for the ROW Option (see Section 5.3.1.2).

5.5.3 Cumulative Impacts and Mitigations - Union Pacific Railroad Rail Alternative - West Option

5.5.3.1 Segment UA

The cumulative impacts for the UPRR Rail Alternative West Option would be the same as described for the East Option (see Section 5.4.3.1).

5.5.3.2 Segment UB

There would be no cumulative impacts on safety and security for Segment UB of the UPRR Rail Alternative West Option.

5.5.4 120th Street Yard and Shop

The permanent and construction impacts and mitigations associated with the 120th Street yard and shop in the West Option would be the same as described for the ROW Option (see Section 5.3.3).

5.6 Halsted Rail Alternative

The permanent and construction impacts and mitigations for the Halsted Rail Alternative are discussed below.

5.6.1 Permanent Impacts and Mitigations - Halsted Rail Alternative

5.6.1.1 Segment HA

5.6.1.1.1 Major Incidents

The forecasted change in major incidents reportable to the FTA was calculated by multiplying the change in VRH for the CTA rail and bus systems by the existing major incident rates for those modes (see Table 5-5). For Segment HA, the Halsted Rail Alternative would be expected to increase the *frequency* of major incidents on the rail system by approximately 0.18 per year and decrease the *frequency* of major incidents on the bus system by approximately 0.48 per year compared to existing conditions. Combining the two results in a decrease of 0.30 major incidents per year, or 1 every 3.3 years. However, the incident *rates* for each mode would not be expected to change substantially. It is also possible that the incident rate for the project area would be lower than for the system as a whole given its newer infrastructure. The CTA also attempts to minimize incidents by continuously upgrading the bus and rail fleets and through extensive operator training. The impact on major incidents would be not adverse.

Table 5-5: Change in Major Incidents for Segment HA

Item	Bus	Rail	Total
A. Annual Change in VRH	-26,406	26,919	513
B. Annual Major Incidents per Million VRH (2009-2011)	18.06	6.52	13.89
C. Annual Change in Major Incidents [(A/1,000,000)*B)]	-0.48	0.18	-0.30

Sources: (CTA 2009, National Transit Database 2012)
VRH = vehicle revenue hours

5.6.1.1.2 Motor Vehicle Safety

The FTA released Proposed New Starts and Small Starts Policy guidance on January 9, 2013 that includes factors used to measure the change in safety as a result of transit projects. The factors use the change in VMT to estimate changes in injuries and fatalities for automobiles and transit.

The Halsted Rail Alternative is expected to cause a small shift in travel modes from automobiles and buses to rail transit, thus decreasing automobile and bus VMT, and slightly increasing rail VMT. Overall, this would lead to a small decrease in fatalities and injuries, and the associated costs.

5.6.1.1.3 Pedestrian Safety

The new train stations at 103rd Street, 111th Street, and 119th Street would generate a large amount of pedestrian activity, potentially increasing in the number of pedestrians crossing at the intersections near station entrances compared to the No Build Alternative. Impacts at each station location are described below:

- 103rd Street - Station entrances would be located on all four corners of the intersection with Halsted Street. Therefore, the number of pedestrians crossing Halsted Street and 103rd Street would not be directly increased by the RLE Project. However, new stations would be expected to generate changes in land use and increased economic activity, indirectly increasing the pedestrians crossing in the vicinity of the station compared to the No Build Alternative. There are existing pedestrian safety concerns at the intersection (see Source: (City of Chicago 2012b)

CTA = Chicago Transit Authority

- Table A-5). An increase in the volume of pedestrians would possibly increase the *frequency* of pedestrian crashes, but likely not the *crash rate* due to the safety-in-numbers effect.[4]

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[4] Safety in numbers is the hypothesis that increasing the size of a group or situation can reduce the rate of incidents involving that group or situation. Related to pedestrian safety, an increased number of

Therefore, the impact would be not adverse. Pedestrian safety improvements such as curb extensions, refuge medians, leading pedestrian intervals, and protected-only lagging left turns would be considered in the final design.

- 111th Street - Station entrances would be located on all four corners of the intersection with Halsted Street. Therefore, the number of pedestrians crossing Halsted Street and 103rd Street would not be directly increased by implementation of the Halsted Rail Alternative. However, new stations would be expected to generate changes in land use and increased economic activity, indirectly increasing the pedestrians crossing in the vicinity of the station compared to the No Build Alternative. There are existing pedestrian safety concerns regarding this intersection (see Source: (City of Chicago 2012b)

CTA = Chicago Transit Authority

- Table A-5). An increase in the volume of pedestrians would possibly increase the *frequency* of pedestrian crashes, but likely not the *crash rate* due to the safety-in-numbers effect. Therefore, the impact would be categorized as not adverse. Pedestrian safety improvements such as those described for the 103rd Street station would also be considered in the final design.

- 119th Street - The entrances for the 119th Street station would be located north of 119th Street and south of 118th Street, on both sides of Halsted Street. Having these entrances would directly increase the number of pedestrians crossing 119th Street to make the connection from the eastbound #119 bus. New stations would also be expected to generate changes in land use and increased economic activity, indirectly increasing the pedestrians crossing in the vicinity of the station compared to the No Build Alternative. There are existing pedestrian safety concerns regarding the 119th Street intersection (see Source: (City of Chicago 2012b)

CTA = Chicago Transit Authority

- Table A-5). An increase in the volume of pedestrians would possibly increase the *frequency* of pedestrian crashes, but likely not the *crash rate* due to the safety-in-numbers effect. Therefore, the impact would be not adverse. Pedestrian safety improvements such as those described for the 103rd Street station would also be considered in the final design at both the 118th Street and 119th Street intersections.

5.6.1.1.4 Parking Security

As described in Section 5.2.1, research has found that larger parking lots with less pedestrian activity and less visibility from the sidewalk can result in more thefts (Loukaitou-Sideris et al. 2002). All parking facilities would incorporate design features as described for the BRT Alternative

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pedestrians at an intersection could increase driver awareness of pedestrians at that intersection, thus causing drivers to behave more carefully and crash rates (and sometimes absolute frequency) to decrease.

in Section 5.2.1. Security impacts for parking facilities at the three proposed stations on Segment HA are described below:

- 103rd Street - A 200-space surface parking lot would be located at the northwest corner of 103rd Street and Halsted Street. The lot would be easily visible from the sidewalk and would be expected to have no adverse impact.
- 111th Street - A 200-space surface parking lot would be located at the northwest corner of 111th Street and Halsted Street. The lot would be easily visible from the sidewalk and would be expected to have no adverse impact.
- 119th Street - A 1,000-space surface parking lot would be located at the southwest corner of 119th Street and Halsted Street. The lot would be very large and would be partially hidden under elevated rail tracks going to the proposed rail yard. Various design elements would be incorporated to improve security in the lot, which would result in no adverse impact. However, given the size of the lot, additional mitigation would be considered.

Mitigation measures would be the same as described for the BRT Alternative (see Section 5.2.1).

5.6.1.1.5 Neighborhood Security

As described in Section 5.3.1.1, a review of research related to crime in neighborhoods surrounding new transit stations found that a marked impact on neighborhood crime would be unlikely, but some risk would remain, particularly in low-income areas. The impact on neighborhood security would be not substantially adverse. Suggested mitigation measures would be security surveillance cameras and sidewalk lighting along commercial streets within one block (660 feet of train station entrances. CTA would need to coordinate the implementation of these measures with the City of Chicago because the cameras and lighting would be located on City ROW.

5.6.1.1.6 Terrorism and Homeland Security

The risks of terrorism for the Halsted Rail Alternative would be similar to those described for the UPRR Rail Alternative (see Section 5.3.1.1). As a whole, the CTA rail system is potentially a high profile target for terrorism, but other parts of the system are more likely targets than the proposed portions in the project area. The probability of an attack is remote, but the damage would be critical. Based on the Risk Assessment Matrix in Table 3-1, this is classified as a not substantially adverse impact.

The CTA prepares for acts of terrorism by updating various plans on a regular basis and coordinating with law enforcement and other agencies as described in Section 3.1.3.2. Unlike the UPRR Rail Alternative, access to the areas under the track structure could not be prohibited for mitigation purposes with the Halsted Rail Alternative, because the train line would be above a public roadway. Lighting and surveillance equipment would be considered in the final design phase to deter criminal activities and to facilitate criminal and vehicle identification

5.6.1.2 Segment HB

5.6.1.2.1 Major Incidents

Table 5-6 shows the forecasted change in major incidents reportable to the FTA. For Segment HB, the Halsted Rail Alternative would be expected to increase the *frequency* of major incidents on the rail system by approximately 0.06 per year and decrease the *frequency* of major incidents on the bus system by approximately 0.05 per year compared to existing conditions. Combining the two results in approximately no change in major incidents. The incident *rates* for each mode would also not be expected to change substantially. It is also possible that the incident rate for the project would be lower than for the system as a whole given its newer infrastructure. The CTA also attempts to minimize incidents by continuously upgrading the bus and rail fleets and through extensive operator training. The impact on major incidents would be not adverse.

Table 5-6: Change in Major Incidents for Segment HB

Item	Bus	Rail	Total
A. Annual Change in VRH	-2,848	8,472	5,624
B. Annual Major Incidents per Million VRH (2009-2011)	18.06	6.52	13.89
C. Annual Change in Major Incidents [(A/1,000,000)*B)]	-0.05	0.06	0.00

Sources: (CTA 2009, National Transit Database 2012)
VRH = vehicle revenue hours

5.6.1.2.2 Motor Vehicle Safety

The impacts and mitigations associated with the Segment HB would be the same as described for Segment HA (see Section 5.6.1.1).

5.6.1.2.3 Pedestrian Safety

The new train station at Vermont Avenue would have station entrances on both sides of Halsted Street south of Vermont Avenue and north of 128th Place. Implementation of the Halsted Rail Alternative would not directly increase the number of pedestrians crossing at Halsted Street and Vermont Avenue. However, new stations would be expected to generate changes in land use and increased economic activity, indirectly increasing the pedestrians crossing in the vicinity of the station compared to the No Build Alternative.

An increase in the volume of pedestrians would not be expected to have an adverse impact on crash rates at a signalized intersection such as Vermont Avenue. However, the intersection of 128th Place and Halsted Street is controlled by all-way stop signs. All-way stop signs can have an adverse impact on pedestrian safety on multi-lane streets such as Halsted Street due to a situation known as the multiple-threat, where one driver stops, but a second driver cannot see the pedestrian crossing (see Figure 5-4) and fails to come to a complete stop. It is expected that the minimum requirements for traffic signals described in the MUTCD could be met at the 128th Place and Halsted Street intersection. Traffic signals would be considered for mitigation in coordination with the results of traffic studies completed during the final design phase. Pedestrian safety improvements such as curb extensions, refuge medians, leading pedestrian intervals, and protected-only lagging left turns would also be considered at both intersections in the final design.

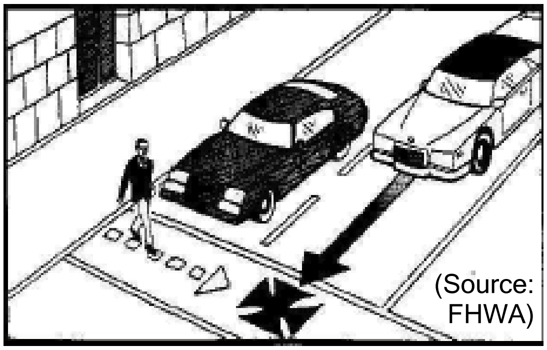

Figure 5-4: Multiple Threat Pedestrian Crash

5.6.1.2.4 Parking Security

As described in Section 5.2.1, research has found that larger parking lots with less pedestrian activity and less visibility from the sidewalk can result in more thefts (Loukaitou-Sideris et al. 2002). All parking facilities would incorporate design features as described for the BRT Alternative in Section 5.2.1. Mitigation measures would also be the same as described for the BRT Alternative (see Section 5.2.1).

Two parking facilities are proposed for the Vermont Avenue station. A 300-space surface parking lot would be located on the east side of Halsted Street between Vermont Avenue and 128th Place. The lot would be easily visible from the sidewalk and would be expected to have no adverse impact on security. A 2,000 space, six-story parking structure would be located on the west side of Halsted Street between Vermont Avenue and 128th Place. Various design elements would be incorporated to improve security in the garage, which would result in no adverse impact.

5.6.1.2.5 Neighborhood Security

The impacts and mitigation measures for Segment HB would be the same as those described for Segment HA (see Section 5.6.1.1).

5.6.1.2.6 Terrorism and Homeland Security

The impacts and mitigation measures for Segment HB would be the same as those described for Segment HA (see Section 5.6.1.1).

5.6.2 Construction Impacts and Mitigations - Halsted Rail Alternative

The Halsted Rail Alternative would include construction of a 5.0-mile extension of the existing CTA Red Line, mostly on elevated structure over the median of Halsted Street. The extensive scope of work for this alternative would create a need for a large number of contractors in many areas over a long time period. To mitigate risks of safety and security incidents, contractors would be required to develop a Construction Safety and Security Plan, perform job safety analysis, monitor safety and security activities, and comply with other relevant aspects of the CTA's *Safety* *and Security Management Plan* or other manuals and policies (CTA 2011b). The contractor would take prompt and decisive corrective action on safety deficiencies identified at the work site.

5.6.2.1 Segment HA

5.6.2.1.1 Emergency Services

Construction work would be phased to minimize traffic impacts on Halsted Street and adjoining streets. However, elevated structure construction would require lane and street closures and superstructure erection would require temporary shutdown of all traffic along portions of Halsted Street. In order to maintain emergency access on cross-streets, only short segments of Halsted Street (less than ½ mile long) would be closed at any given time. Emergency services would need to access construction sites in the same way as contractors, by using various side streets and recommended detours. The impacts would be not substantially adverse.

As a mitigation, traffic management plans would be created during the final engineering phase of the project to identify detour and emergency access routes, which would generally follow the nearest arterial or collector streets. Contractors will also follow the MUTCD design standards for temporary traffic control and would obtain required local permits.

5.6.2.2 Segment HB

The construction impacts and mitigation measures for Segment HB would be the same as described for Segment HA (see Section 5.6.2.1).

5.6.3 Cumulative Impacts and Mitigations - Halsted Rail Alternative

There would not be expected cumulative impacts on safety and security associated with the Halsted Rail Alternative.

5.6.4 119th Street Yard and Shop

5.6.4.1 Permanent Impacts and Mitigations

A study of ROW intrusions for the CTA's Red and Purple Modernization Project found a large number of incidents at the Howard Yard and the Linden Yard, primarily related to graffiti. The same type of activity would be likely to occur at the proposed 119th Street yard and shop. The yard and shop would be located west of Halsted Street, and would be somewhat separated from residential areas by development north of 119th Street and south of 120th Street. It would also be just ¼ mile west of the proposed 119th Street station. The area surrounding 119th Street and Halsted Street has substantially less background crime activity than the area surrounding the Howard station on the CTA Red Line, so the expected occurrence of incidents would be occasional frequency. The combination of occasional probability and marginal severity for graffiti incidents results in a risk classification of "Review" per the CTA's risk assessment matrix (see Table 3-1), or not substantially adverse for the NEPA analysis.

To mitigate the risk of security incidents, the design of the yard and shop would comply with all relevant design standards, as discussed in Section 3.1. Security fencing at least 8 feet in height would be installed around the perimeter of the yard per FTA guidance (FTA 2004). Security cameras would be installed to monitor potential access points. The latest technologies available for automated intrusion detection, such as thermal imaging with analytics software, would be reviewed at the time of final design and construction.

5.6.4.2 Construction Impacts and Mitigations

The construction impacts and mitigation measures associated with the 119th Street yard and shop would be the same as the general construction impacts and mitigation measures associated with Segment HA (see Section 5.6.2.1).

Section 6
Impacts Remaining after Mitigation

This section describes the impacts of the RLE Project that would remain after mitigating for impacts as described in Section 5.

6.1 No Build Alternative

There would be no expected permanent impacts, construction impacts, or cumulative impacts on safety and security associated with the No Build Alternative. Therefore, there would also be no impacts remaining after mitigation.

6.2 Bus Rapid Transit Alternative

Table 6-1 summarizes the impacts, mitigation measures, and impacts remaining after mitigation for seven topic areas for the BRT Alternative. There would be no remaining adverse impacts after mitigation. See Section 5.2 for details about the impacts.

Table 6-1: Impacts Remaining after Mitigation - Bus Rapid Transit Alternative

Topic	Impact Before Mitigation	Mitigation	Impact Remaining after Mitigation
Permanent Impacts			
Major Incidents	Not Adverse	None necessary	Not Adverse
Motor Vehicle Safety	Beneficial	None necessary	Beneficial
Pedestrian Safety	▪ Adverse (1 Location) ▪ Not Adverse (4 locations)	Install new traffic signals and/or other pedestrian crossing treatments (e.g., refuge medians).	▪ Not Adverse (5 locations)
Bus Stop Security	▪ Beneficial (1 location) ▪ Not Adverse (3 locations)	None necessary	▪ Beneficial (1 location) ▪ Not Adverse (3 locations)
Parking Security	Not Adverse	Consider pedestrian access routes (i.e., sidewalks) through or adjacent to surface lots on a case-by case basis where it would increase pass-by surveillance.	Not Adverse
Neighborhood Security	Not Adverse	None necessary	Not Adverse
Terrorism and Homeland Security	Not Adverse	Continue to update safety and security plans. Continue coordination with law enforcement, homeland security, and other agencies.	Not Adverse

Topic	Impact Before Mitigation	Mitigation	Impact Remaining after Mitigation
Construction Impacts			
Emergency Services	Not Adverse	Contractors would follow MUTCD standards for temporary traffic control, and would obtain required local permits.	Not Adverse

MUTCD = Manual on Uniform Traffic Control Devices

6.3 Union Pacific Railroad Rail Alternative - Right-of-Way Option

6.3.1 Segment UA

Table 6-1 summarizes the impacts, mitigation measures, and impacts remaining after mitigation for six topic areas for the UPRR Rail Alternative ROW Option, Segment UA. There would be no remaining adverse impacts after mitigation. See Section 5.3 for details about the impacts.

Table 6-2: Impacts Remaining after Mitigation - Union Pacific Railroad Rail Alternative Right-of-Way Option, Segment UA

Topic	Impact Before Mitigation	Mitigation	Impact Remaining after Mitigation
Permanent Impacts			
Major Incidents	Not Adverse	None necessary	Not Adverse
Motor Vehicle Safety	Beneficial	None necessary	Beneficial
Pedestrian Safety	Adverse	Install new traffic signals and/or other pedestrian crossing treatments (e.g., refuge medians).	Beneficial
Parking Security	Not Adverse	Consider pedestrian access routes (i.e., sidewalks) through or adjacent to surface lots on a case-by case basis where it would increase pass-by surveillance.	Not Adverse
Neighborhood Security	Not Substantially Adverse	Coordinate with City of Chicago to install sidewalk lighting and surveillance cameras along commercial streets within one block (660 feet) of station entrances.	Not Adverse
Terrorism and Homeland Security	Not Substantially Adverse	Continue to update safety and security plans. Continue coordination with law enforcement, homeland security, and other agencies. Prohibit parking where tracks cross over public streets. Prohibit access to areas under track structure with fencing, barriers, or signage. Include a means of detecting ROW intrusions in final design. Consider lighting under track structure for improved visibility and crime deterrence.	Not Adverse

Topic	Impact Before Mitigation	Mitigation	Impact Remaining after Mitigation
Construction Impacts			
Emergency Services	Not Substantially Adverse	Neither adjacent roadways nor adjacent parallel through streets would be closed simultaneously. Traffic management plans would be created that would identify recommended detour routes. Contractors would follow MUTCD standards for temporary traffic control and would obtain required local permits.	Not Substantially Adverse

ROW = right-of-way, MUTCD = Manual on Uniform Traffic Control Devices

6.3.2 Segment UB

Table 6-13 summarizes the impacts, mitigation measures, and impacts remaining after mitigation for six topic areas for the UPRR Rail Alternative ROW Option, Segment UB. There would be no remaining adverse impacts after mitigation. See Section 5.3 for details about these impacts.

Table 6-3: Impacts Remaining after Mitigation - Union Pacific Railroad Rail Alternative Rail Alternative ROW Option, Segment UB

Topic	Impact Before Mitigation	Mitigation	Impact Remaining after Mitigation
Permanent Impacts			
Major Incidents	Not Adverse	None necessary	Not Adverse
Motor Vehicle Safety	Beneficial	None necessary	Beneficial
Pedestrian Safety	Not Adverse	In addition to new traffic signal, sidewalks, curb ramps, and marked crosswalks planned at 130th Street and Evans Avenue, consider additional "complete streets" modifications for 130th Street corridor.	Not Adverse
Parking Security	Not Adverse	Consider pedestrian access routes (i.e., sidewalks) through or adjacent to surface lots on a case-by case basis where it would increase pass-by surveillance.	Not Adverse
Neighborhood Security	Not Adverse	None applicable	Not Adverse
Terrorism and Homeland Security	Not Substantially Adverse	Continue to update safety and security plans. Continue coordination with law enforcement, homeland security, and other agencies. Prohibit access to areas under track structure with fencing, barriers, or signage. Include a means of detecting ROW intrusions in final design. Consider lighting under track structure for improved visibility and crime deterrence.	Not Adverse

Topic	Impact Before Mitigation	Mitigation	Impact Remaining after Mitigation
Construction Impacts			
Emergency Services	Not Adverse	A new access road to the MWRD plant would be constructed prior to the new CTA rail alignment if necessary to maintain access. Traffic management plans would be created that would identify recommended detour routes. Contractors would follow MUTCD standards for temporary traffic control and would obtain required local permits.	Not Adverse

ROW = right-of-way, MWRD = Metropolitan Water Reclamation District, CTA = Chicago Transit Authority, MUTCD = Manual on Uniform Traffic Control Devices

6.3.3 120th Street Yard and Shop

Table 6-4 summarizes the impacts, mitigation measures, and impacts remaining after mitigation for one topic area for the UPRR Rail Alternative, 120th Street yard and shop. There would be no remaining adverse impacts after mitigation. See Section 5.3 for details.

Table 6-4: Impacts Remaining after Mitigation - Union Pacific Railroad Rail Alternative Rail Alternative Right-of-Way Option, 120th Street Yard and Shop

Topic	Impact Before Mitigation	Mitigation	Impact Remaining after Mitigation
Permanent Impacts			
Security	Not Substantially Adverse	Design of yard would comply with relevant design standards. Fencing or barriers would be included around perimeter of rail yard. Security cameras would monitor access points. Intrusion detection technologies would be considered in final design.	Not Substantially Adverse

6.4 Union Pacific Railroad Rail Alternative - East Option

6.4.1 Segment UA

The impacts remaining after mitigation for the East Option would be the same as described for the ROW Option (see Section 6.3.1), but with some changes and additions as shown in Table 6-5. There would be no remaining adverse impacts after mitigation. See Section 5.4 for details.

Table 6-5: Impacts Remaining after Mitigation - Union Pacific Railroad Rail Alternative Rail Alternative East Option, Segment UA

Topic	Impact Before Mitigation	Mitigation	Impact Remaining after Mitigation
Permanent Impacts			
Terrorism and Homeland Security	Not Substantially Adverse	Continue to update safety and security plans. Continue coordination with law enforcement, homeland security, and other agencies. Prohibit parking where tracks cross over public streets. Prohibit access to areas under track structure with fencing, barriers, or signage, except for park uses. Include a means of detecting ROW intrusions in final design. Consider lighting under track structure for improved visibility and crime deterrence.	Not Adverse
Highway-Rail Crossings	Adverse	Install safety protection technologies for vehicles and pedestrians at 103rd Street and 111th Street crossings. Install either intertrack fencing or fencing along parking lots and ROW lines to prevent pedestrian crossings away from sidewalks.	Not Adverse
Cumulative Impacts			
Highway-Rail Crossings	Adverse	Install safety protection technologies for vehicles and pedestrians at 103rd Street and 111th Street crossings.	Not Adverse

ROW = right-of-way

6.4.2 Segment UB

The design of Segment UB for the UPRR Rail Alternative would be the same for all three options. Therefore, the impacts remaining after mitigation associated with the East Option would be the same as described for the ROW Option (see Section 6.3.2).

6.4.3 120th Street Yard and Shop

The design of the 120th Street yard and shop for the UPRR Rail Alternative would be the same for all three options. Therefore, the impacts remaining after mitigation associated with the East Option would be the same as described for the ROW Option (see Section 6.3.3).

6.5 Union Pacific Railroad Rail Alternative - West Option

6.5.1 Segment UA

The impacts remaining after mitigation associated with the West Option would be the same as described for the East Option (see Section 6.3.1). There would be no remaining adverse impacts after mitigation. See Section 5.5 for details.

6.5.2 Segment UB

The design of Segment UB for the UPRR Rail Alternative would be the same for all three options. Therefore, the impacts and mitigations associated with the West Option would be the same as described for the ROW Option (see Section 6.3.2).

6.5.3 120th Street Yard and Shop

The design of the 120th Street yard and shop for the UPRR Rail Alternative would be the same for all three options. Therefore, the impacts remaining after mitigation associated with the East Option would be the same as described for the ROW Option (see Section 6.3.3).

6.6 Halsted Rail Alternative

6.6.1 Segment HA

Table 6-6 summarizes the impacts, mitigation measures, and impacts remaining after mitigation for six topic areas for the Halsted Rail Alternative, Segment HA. There would be no remaining adverse impacts after mitigation. See Section 5.6 for details.

Table 6-6: Impacts Remaining after Mitigation - Halsted Rail Alternative, Segment HA

Topic	Impact Before Mitigation	Mitigation	Impact Remaining after Mitigation
Permanent Impacts			
Major Incidents	Not Adverse	None necessary	Not Adverse
Motor Vehicle Safety	Beneficial	None necessary	Beneficial
Pedestrian Safety	Not Adverse	Consider pedestrian safety improvements such as curb extensions, refuge medians, and signal timing modifications in final design.	Not Adverse or Beneficial
Parking Security	Not Adverse	Consider pedestrian access routes (i.e., sidewalks) through or adjacent to surface lots on a case-by case basis where it would increase pass-by surveillance.	Not Adverse
Neighborhood Security	Not Substantially Adverse	Coordinate with City of Chicago to install sidewalk lighting and surveillance cameras along commercial streets within one block (660 feet) of station entrances.	Not Adverse
Terrorism and Homeland Security	Not Substantially Adverse	Continue to update safety and security plans. Continue coordination with law enforcement, homeland security, and other agencies. Consider additional lighting and surveillance cameras under track structure for improved visibility and crime deterrence.	Not Substantially Adverse

Topic	Impact Before Mitigation	Mitigation	Impact Remaining after Mitigation
Construction Impacts			
Emergency Services	Not Substantially Adverse	Only short segments of Halsted Street (½ mile or less) would be closed at any given time. Traffic management plans would be created that would identify recommended detour routes. Contractors would follow MUTCD standards for temporary traffic control and would obtain required local permits.	Not Substantially Adverse

MUTCD = Manual on Uniform Traffic Control Devices

6.6.2 Segment HB

Table 6-7 summarizes the impacts, mitigation measures, and impacts remaining after mitigation for six topic areas for the Halsted Rail Alternative, Segment HB. There would be no remaining adverse impacts after mitigation. See Section 5.6 for details.

Table 6-7: Impacts Remaining after Mitigation - Halsted Rail Alternative, Segment HB

Topic	Impact Before Mitigation	Mitigation	Impact Remaining after Mitigation
Permanent Impacts			
Major Incidents	Not Adverse	None necessary	Not Adverse
Motor Vehicle Safety	Beneficial	None necessary	Beneficial
Pedestrian Safety	Adverse	Replace all-way stop signs at Halsted Street and 128th Place with traffic signals if warranted per MUTCD standards. Otherwise, remove stop signs from Halsted Street only. Consider pedestrian safety improvements such as curb extensions, refuge medians, and signal timing modifications in final design.	Not Adverse or Beneficial
Parking Security	Not Adverse	Consider pedestrian access routes (i.e., sidewalks) through or adjacent to surface lots on a case-by case basis where it would increase pass-by surveillance.	Not Adverse
Neighborhood Security	Not Substantially Adverse	Coordinate with City of Chicago to install sidewalk lighting and surveillance cameras along commercial streets within one block (660 feet) of station entrances.	Not Adverse
Terrorism and Homeland Security	Not Substantially Adverse	Continue to update safety and security plans. Continue coordination with law enforcement, homeland security, and other agencies. Consider additional lighting and surveillance cameras under track structure for improved visibility and crime deterrence.	Not Substantially Adverse

Topic	Impact Before Mitigation	Mitigation	Impact Remaining after Mitigation
Construction Impacts			
Emergency Services	Not Substantially Adverse	Only short segments of Halsted Street (½ mile or less) would be closed at any given time. Traffic management plans would be created that would identify recommended detour routes. Contractors would follow MUTCD standards for temporary traffic control and would obtain required local permits.	Not Substantially Adverse

MUTCD = Manual on Uniform Traffic Control Devices

6.6.3 119th Street Yard and Shop

Table 6-8 summarizes the impacts, mitigation measures, and impacts remaining after mitigation for one topic area for the Halsted Rail Alternative, 119th Street yard and shop. There would be no remaining adverse impacts after mitigation. See Section 5.6.3 for details.

Table 6-8: Impacts Remaining after Mitigation - Halsted Rail Alternative, 119th Street Yard and Shop

Topic	Impact Before Mitigation	Mitigation	Impact Remaining after Mitigation
Permanent Impacts			
Security	Not Substantially Adverse	Design of yard would comply with all relevant design standards. Fencing or barriers would be included around perimeter of rail yard. Security cameras would monitor access points. Intrusion detection technologies would be considered in final design.	Not Substantially Adverse

Section 7
References Cited

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Appendix A
Tables and Figures

Table A-1: Safety and Security Incident Summary for Entire Chicago Transit Authority Bus System

Year	Major Incident Type						Vehicle Revenue Hours	Major Incidents per Million Vehicle Revenue Hours
	Collisions	Derailments	Fires	Security	Not Otherwise Classified	Total		
2009	273	0	3	39	15	330	7,008,308	47.09
2010	252	0	1	72	6	331	5,955,896	55.58
2011	272	0	8	77	7	364	5,955,896	61.12
Total	797	0	12	188	28	1,025	18,920,100	54.18

Source: (National Transit Database 2012)

Table A-2: Safety and Security Incident Summary for Entire Chicago Transit Authority Rail System

Year	Major Incident Type						Vehicle Revenue Hours	Major Incidents per Million Vehicle Revenue Hours
	Collisions	Derailments	Fires	Security	Not Otherwise Classified	Total		
2009	21	2	4	33	7	67	3,732,593	17.95
2010	21	3	4	28	7	63	3,479,766	18.10
2011	10	1	3	56	9	79	3,479,766	22.70
Total	52	6	11	117	23	209	10,692,125	19.55

Source: (National Transit Database 2012)

Table A-3: Crimes on Chicago Transit Authority Buses and at Bus Stops

Type of Crime	Crimes on CTA Buses in Chicago		Crimes at CTA Bus Stops in Chicago	
	2009 2011	Percent	2009 2011	Percent
Arson	0	0.0	0	0.0
Assault	378	9.5	77	5.2
Battery	1,109	27.9	264	17.9
Burglary	0	0.0	1	0.1
Criminal Sexual Assault	1	0.0	1	0.1
Criminal Damage	375	9.4	70	4.7
Criminal Trespassing	15	0.4	23	1.6
Deceptive Practice	133	3.3	20	1.4
Gambling	0	0.0	3	0.2
Homicide	1	0.0	0	0.0
Interfere with Public Officer	4	0.1	4	0.3
Intimidation	2	0.1	1	0.1
Kidnapping	0	0.0	6	0.4
Liquor Law Violation	0	0.0	3	0.2
Motor Vehicle Theft	1	0.0	0	0.0
Narcotics	36	0.9	212	14.4
Non-Criminal	2	0.1	0	0.0
Offense Involving Children	1	0.0	0	0.0
Other Offense	34	0.9	22	1.5
Prostitution	0	0.0	0	0.0
Public Indecency	1	0.0	0	0.0
Public Peace Violation	33	0.8	12	0.8
Rape	0	0.0	0	0.0
Robbery	275	6.9	431	29.2
Sex Offense	22	0.6	19	1.3
Stalking	0	0.0	3	0.2
Theft	1,546	38.8	298	20.2
Weapons Violation	12	0.3	6	0.4
Total	3,981	100.0	1,476	100.0

Source: (City of Chicago 2012b)

CTA = Chicago Transit Authority

Table A-4: Crimes on Chicago Transit Authority Trains, Platforms, and Other Property in Chicago

Type of Crime	Crimes on CTA Trains in Chicago		Crimes on CTA Platforms in Chicago		Crimes at CTA Garages and Other Property in Chicago	
	2009 2011	Percent	2009 2011	Percent	2009 2011	Percent
Arson	0	0.0	2	0.0	0	0.0
Assault	85	1.9	228	3.6	97	3.8
Battery	400	8.9	606	9.7	196	7.6
Burglary	0	0.0	2	0.0	12	0.5
Criminal Sexual Assault	7	0.2	4	0.1	4	0.2
Criminal Damage	202	4.5	211	3.4	264	10.2
Criminal Trespassing	27	0.6	294	4.7	175	6.8
Deceptive Practice	184	4.1	2,463	39.2	702	27.1
Gambling	4	0.1	4	0.1	1	0.0
Homicide	0	0.0	1	0.0	1	0.0
Interfere with Public Officer	3	0.1	8	0.1	7	0.3
Intimidation	0	0.0	1	0.0	0	0.0
Kidnapping	0	0.0	3	0.0	2	0.1
Liquor Law Violation	3	0.1	20	0.3	2	0.1
Motor Vehicle Theft	0	0.0	0	0.0	46	1.8
Narcotics	316	7.1	843	13.4	262	10.1
Non-Criminal	0	0.0	0	0.0	0	0.0
Offense Involving Children	4	0.1	3	0.0	2	0.1
Other Offense	21	0.5	30	0.5	32	1.2
Prostitution	0	0.0	0	0.0	4	0.2
Public Indecency	1	0.0	2	0.0	0	0.0
Public Peace Violation	19	0.4	51	0.8	18	0.7
Rape	0	0.0	0	0.0	0	0.0
Robbery	846	18.9	494	7.9	125	4.8
Sex Offense	72	1.6	29	0.5	6	0.2
Stalking	4	0.1	4	0.1	0	0.0
Theft	2,270	50.7	939	15.0	617	23.9
Weapons Violation	13	0.3	36	0.6	11	0.4
Total	4,481	100.0	6,278	100.0	2,586	100.0

Source: (City of Chicago 2012b)
CTA = Chicago Transit Authority

Table A-5: Pedestrian Crashes within ⅛ mile of Proposed Station Locations

Station	2007	2008	2009	2010	2011	Total
BRT Alternative						
103rd Street	7	4	7	3	1	22
111th Street	6	4	3	6	1	20
Kensington Avenue	2	2	2	2	0	8
130th Street and Eberhart Avenue	0	0	1	0	0	1
131st Street, Ellis Avenue, 133rd Street/Place, Corliss Avenue	1	1	2	2	6	12
UPRR Rail Alternative						
103rd Street	1	0	0	1	0	2
111th Street	1	1	1	0	1	4
Michigan Avenue	2	1	1	0	0	4
130th Street - West Option	1	0	1	0	0	2
130th Street - South Option	0	0	0	0	0	0
Halsted Rail Alternative						
103rd Street	3	4	2	2	3	14
111th Street	5	3	3	5	3	19
119th Street	4	2	4	0	2	12
Vermont Avenue	1	1	1	1	1	5

Sources: (City of Chicago 2012c, CTA 2011a)

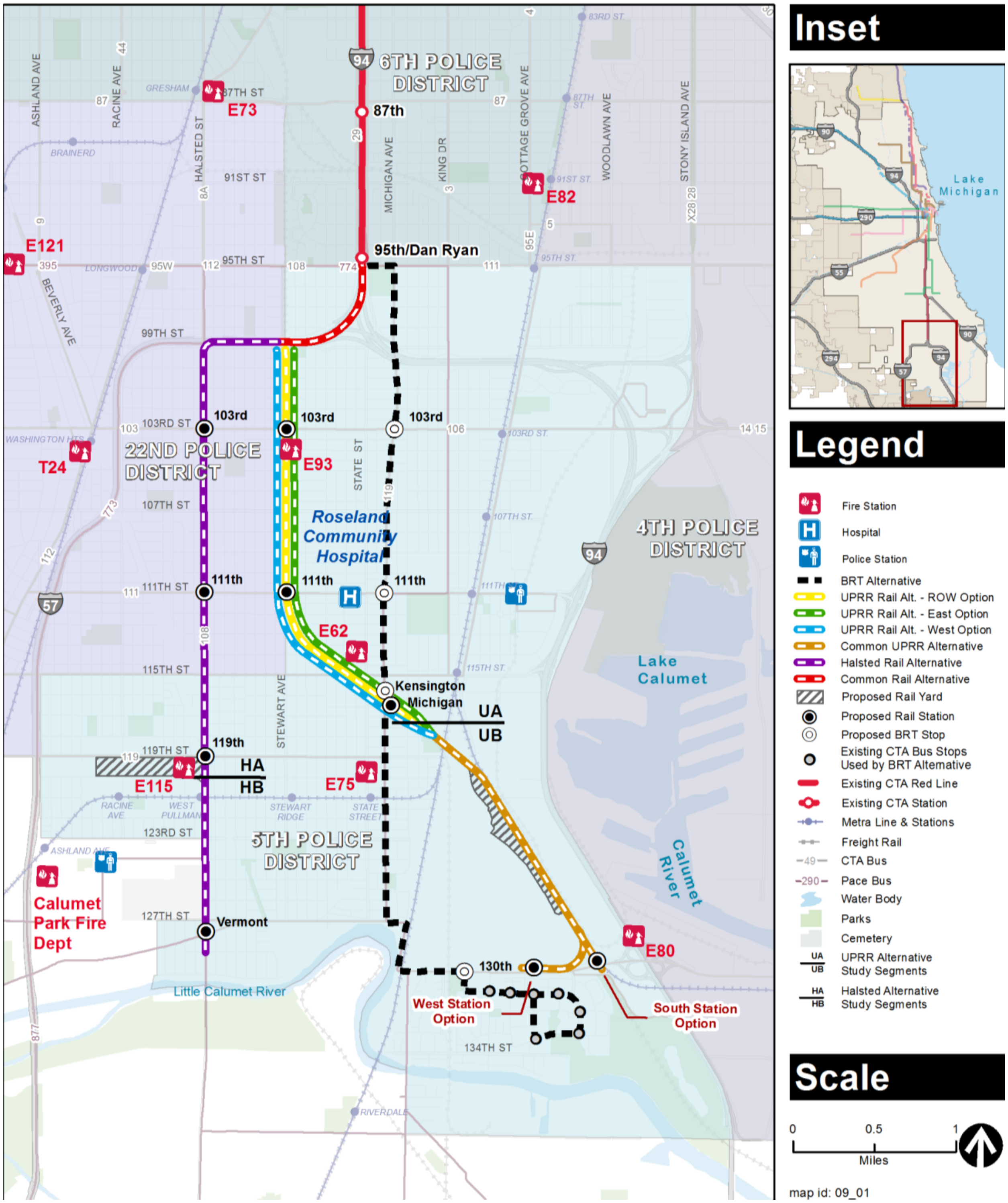
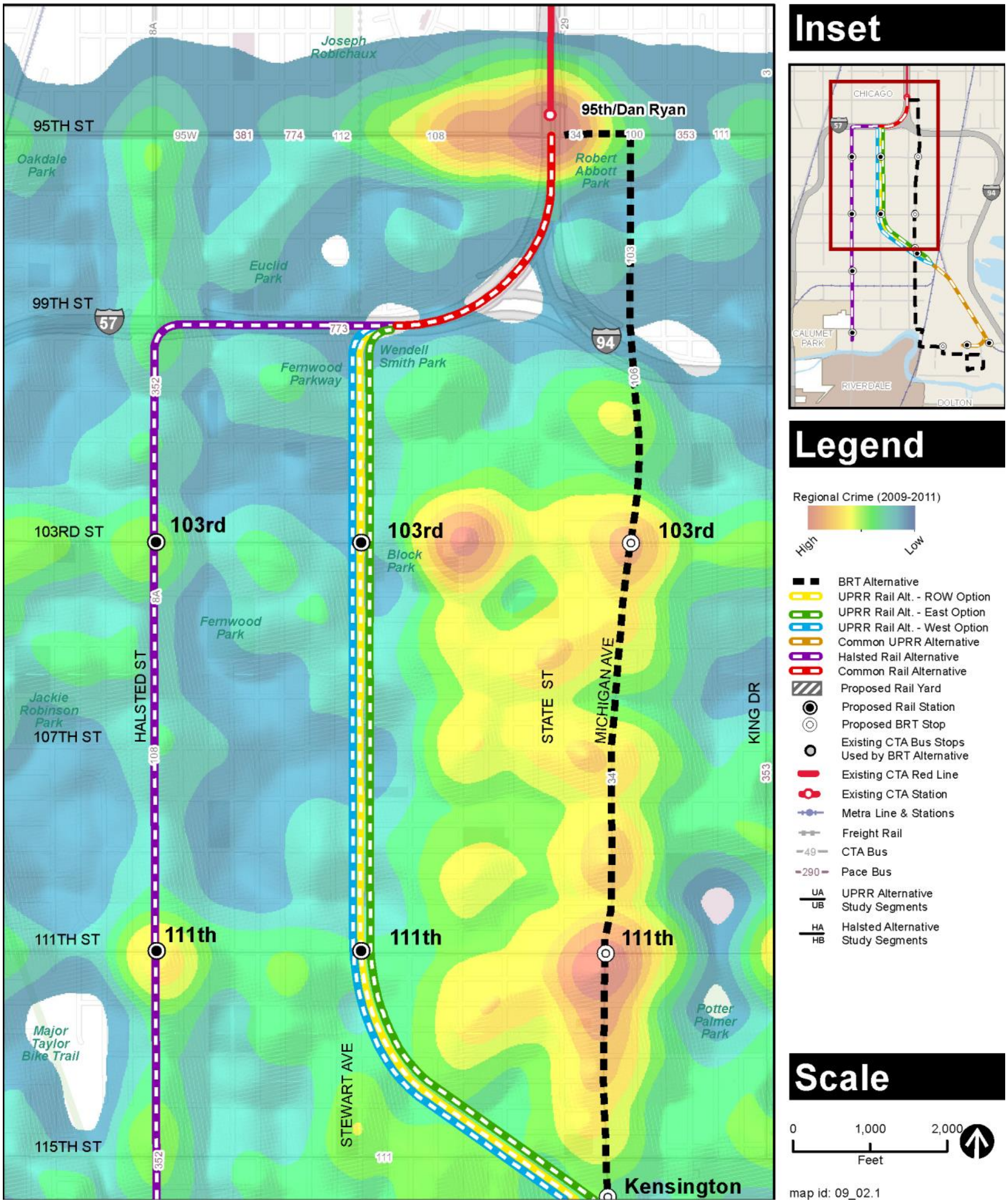

Inset
Lake Michigan
Legend
Fire Station
Hospital
Police Station
BRT Alternative
UPRR Rail Alt. - ROW Option
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
Common UPRR Alternative
Halsted Rail Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Proposed BRT Stop
Existing CTA Bus Stops Used by BRT Alternative
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
CTA Bus
Pace Bus
Water Body
Parks
Cemetery
UA UB UPRR Alternative Study Segments
HA HB Halsted Alternative Study Segments
Scale
0 0.5 1
Miles
map id: 09_01
6TH POLICE DISTRICT
22ND POLICE DISTRICT
5TH POLICE DISTRICT
4TH POLICE DISTRICT
87th
95th/Dan Ryan
103rd
111th
119th
Vermont
Kensington
Michigan
130th
UA
UB
HA
HB
E73
E82
E121
T24
E93
E62
E75
E115
E80
Calumet Park Fire Dept
Roseland Community Hospital
Lake Calumet
Calumet River
Little Calumet River
West Station Option
South Station Option
87TH ST
91ST ST
95TH ST
99TH ST
103RD ST
107TH ST
111TH ST
115TH ST
119TH ST
123RD ST
127TH ST
134TH ST
ASHLAND AVE
RACINE AVE
HALSTED ST
MICHIGAN AVE
KING DR
COTTAGE GROVE AVE
WOODLAWN AVE
STONY ISLAND AVE
STATE ST
STEWART AVE
BEVERLY AVE
GRESHAM
BRAINERD
LONGWOOD
WASHINGTON HTS
WEST PULLMAN
STEWART RIDGE
STATE STREET
RIVERDALE
94
57

Figure A-1: Emergency Services Map

Source: (City of Chicago 2012b)


Joseph Robichaux
95TH ST
95th/Dan Ryan
Oakdale Park
Robert Abbott Park
Euclid Park
99TH ST
57
94
Wendell Smith Park
Fernwood Parkway
103RD ST
103rd
103rd
103rd
Block Park
Fernwood Park
Jackie Robinson Park
107TH ST
HALSTED ST
STATE ST
MICHIGAN AVE
KING DR
111TH ST
111th
111th
111th
Major Taylor Bike Trail
Potter Palmer Park
STEWART AVE
115TH ST
Kensington
Inset
CHICAGO
CALUMET PARK
RIVERDALE
DOLTON
Legend
Regional Crime (2009-2011)
High
Low
BRT Alternative
UPRR Rail Alt. - ROW Option
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
Common UPRR Alternative
Halsted Rail Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Proposed BRT Stop
Existing CTA Bus Stops Used by BRT Alternative
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
49 CTA Bus
290 Pace Bus
UA UB UPRR Alternative Study Segments
HA HB Halsted Alternative Study Segments
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1,000
2,000
Feet
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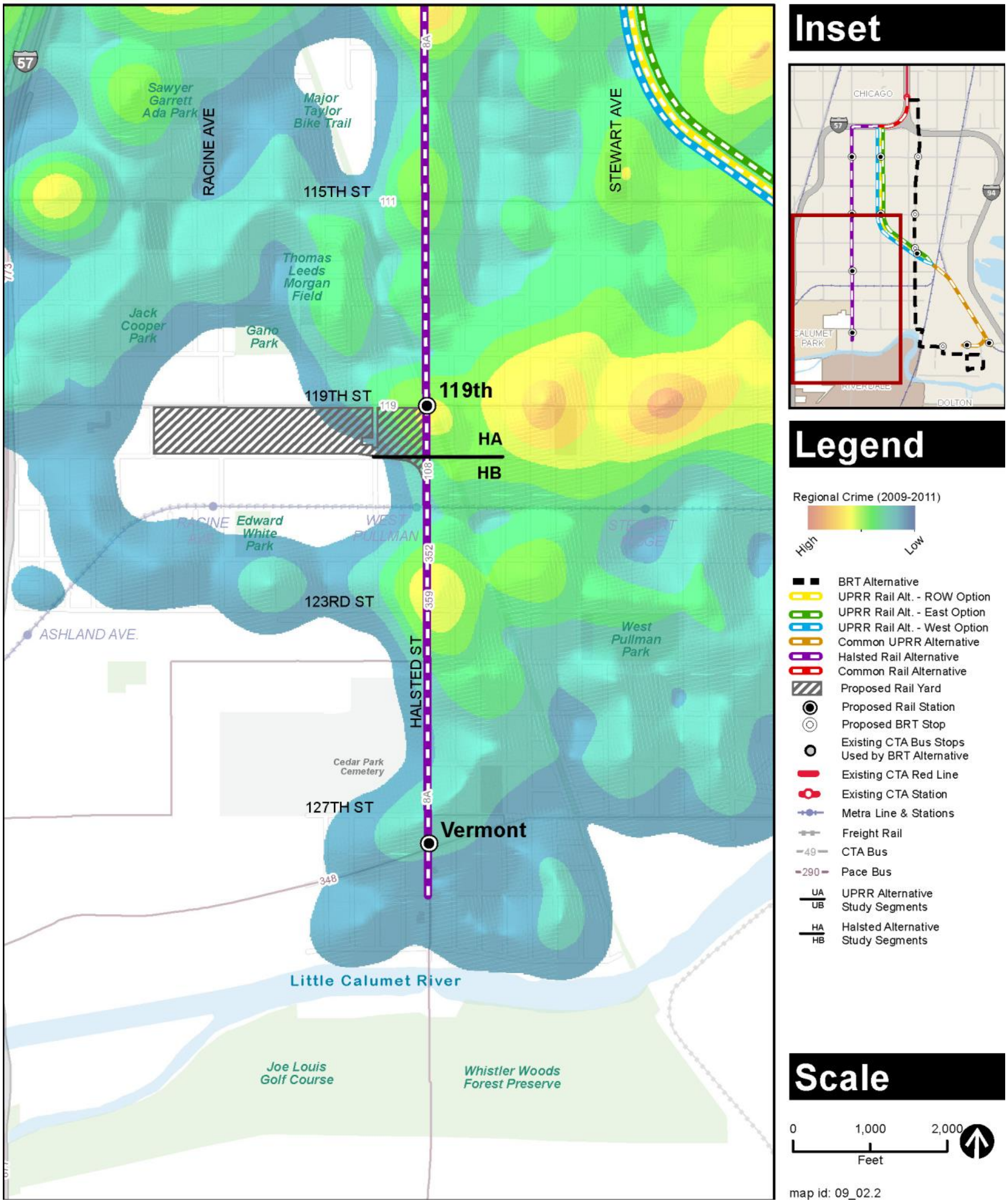
Figure A-2: Crime Heat Map - North Area

Source: (City of Chicago 2012b)


57
Sawyer Garrett Ada Park
RACINE AVE
Major Taylor Bike Trail
8A
STEWART AVE
115TH ST
111
Thomas Leeds Morgan Field
Jack Cooper Park
Gano Park
119TH ST
119
119th
HA
HB
108
RACINE AVE
Edward White Park
WEST PULLMAN
STEWART RIDGE
352
123RD ST
359
ASHLAND AVE
HALSTED ST
West Pullman Park
Cedar Park Cemetery
127TH ST
8A
Vermont
348
Little Calumet River
Joe Louis Golf Course
Whistler Woods Forest Preserve
Inset
CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON
Legend
Regional Crime (2009-2011)
High
Low
BRT Alternative
UPRR Rail Alt. - ROW Option
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
Common UPRR Alternative
Halsted Rail Alternative
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Proposed Rail Yard
Proposed Rail Station
Proposed BRT Stop
Existing CTA Bus Stops Used by BRT Alternative
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
49 CTA Bus
290 Pace Bus
UA UB UPRR Alternative Study Segments
HA HB Halsted Alternative Study Segments
Scale
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1,000
2,000
Feet
map id: 09_02.2

Figure A-3: Crime Heat Map - Southwest Area

Source: (City of Chicago 2012b)

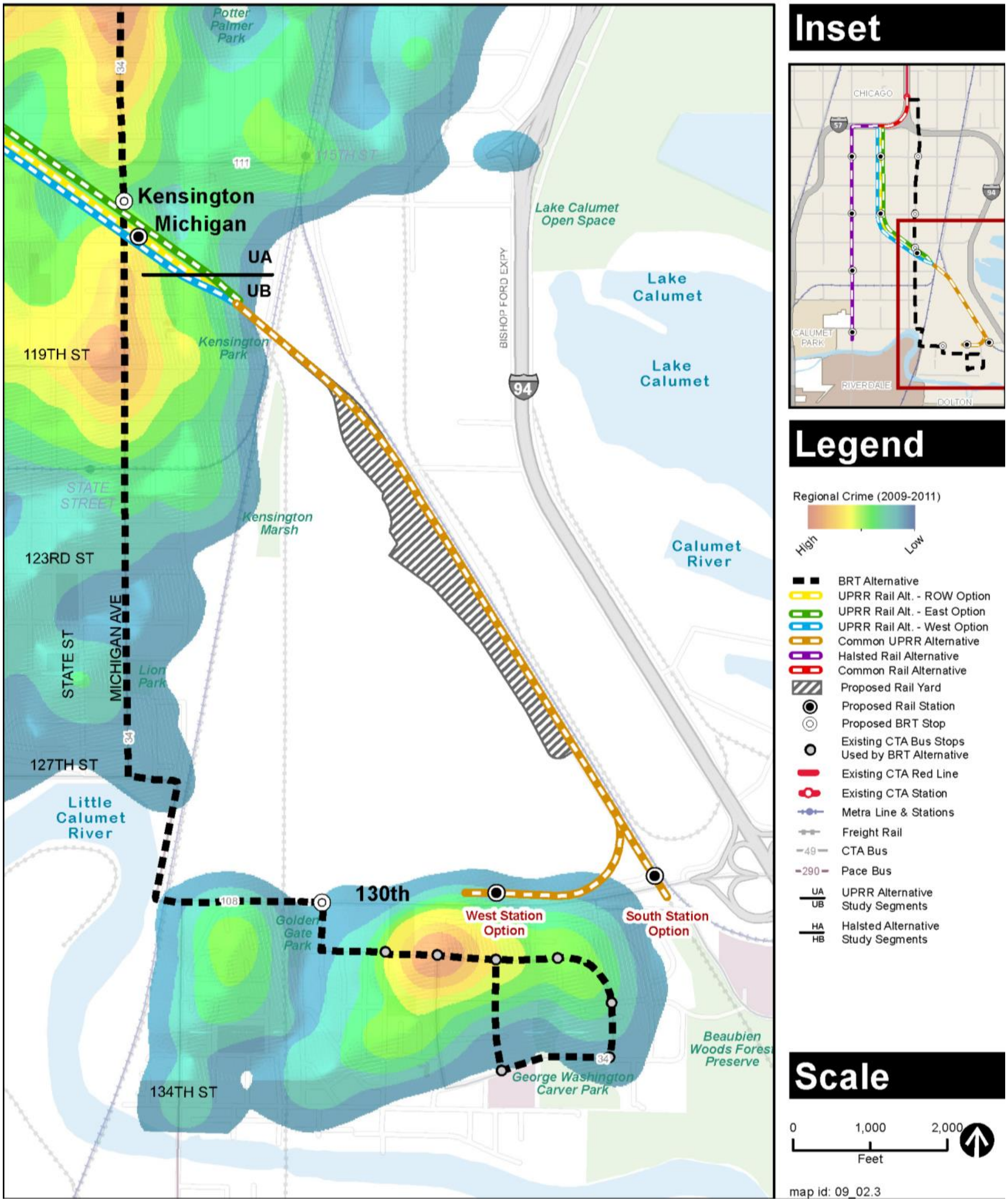
Potter Palmer Park
115TH ST
111
Kensington
Michigan
UA
UB
119TH ST
Kensington Park
STATE STREET
Kensington Marsh
123RD ST
STATE ST
MICHIGAN AVE
Lion Park
34
127TH ST
Little Calumet River
108
130th
Golden Gate Park
West Station Option
South Station Option
134TH ST
George Washington Carver Park
Beaubien Woods Forest Preserve
Lake Calumet Open Space
Lake Calumet
Lake Calumet
Calumet River
BISHOP FORD EXPY
94
Inset
CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON
Legend
Regional Crime (2009-2011)
High
Low
BRT Alternative
UPRR Rail Alt. - ROW Option
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
Common UPRR Alternative
Halsted Rail Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Proposed BRT Stop
Existing CTA Bus Stops Used by BRT Alternative
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
49 CTA Bus
290 Pace Bus
UA UB UPRR Alternative Study Segments
HA HB Halsted Alternative Study Segments
Scale
0
1,000
2,000
Feet
map id: 09_02.3

Figure A-4: Crime Heat Map - Southeast Area

Source: (City of Chicago 2012b)

Appendix B
2014–2015 Red Line Extension Project Update

2014–2015 Red Line Extension Project Update

From 2012-2014, CTA evaluated benefits and impacts of four alternatives: the No Build Alternative, the Bus Rapid Transit Alternative (along Michigan Avenue), the Union Pacific Railroad (UPRR) Rail Alternative, and the Halsted Alternative. CTA evaluated three options of the UPRR Rail Alternative: Right-of-Way Option, East Option, and West Option. CTA also evaluated two options of the UPRR Rail Alternative 130th Street station: a South Station Option and a West Station Option. Based on the project description provided in Section 2 of this technical memorandum, CTA analyzed the impacts of these alternatives and station options. The benefits and impacts are included in the technical memoranda prepared in 2012-2014.

In August 2014, based on the technical analysis and public input, CTA announced the NEPA Preferred Alternative—the UPRR Rail Alternative. Additional conceptual engineering was conducted on the UPRR Rail Alternative to refine the East and West Option alignments. In addition, CTA is considering only the South Station Option of the 130th Street Station.

In late 2014 and early 2015, CTA conducted additional engineering and revised assumptions on the East and West Options to refine the alignments. The refinement of the East and West Options consisted of the following items:

- For the segment of the alignment along I-57, CTA shifted the proposed alignment from the median of I-57 to the north side of I-57 within the existing expressway right-of-way. The construction would be less complex, safer for construction workers, and have a shorter duration. The shift would also allow for fewer impacts to Wendell Smith Park for the East Option, and would allow for no permanent impacts to Wendell Smith Park for the West Option.

- CTA modified the curve speeds as the alignment heads south from I-57 along the UPRR tracks. The curve speed for both the East and West Options would be 35 mph.

- CTA shifted the East Option alignment near 103rd Street station to minimize impacts to Block Park and the Roseland Pumping Station.

- CTA modified the curves south of 103rd Street for both the East and West Options to 55 mph to maximize the train speed.

- CTA refined the layout of the 120th Street yard and shop to optimize yard operations. The refined layout of the yard would accommodate 340 train cars.

The refinement of the East and West Option alignments minimizes potential impacts to parks while providing flexibility for future design phases. The Draft Environmental Impact Statement contains the benefits and impacts of the refined East and West Option alignments and supersedes information presented in other chapters of this technical memorandum.

The refined East and West Option alignments would have no additional or different impacts from those described in the technical memoranda for the following resource areas: construction, transportation, land use and economic development, historic and cultural resources, safety and security, hazardous materials, indirect and cumulative, air quality, floodplains, vegetation and wildlife habitat, threatened and endangered species, and geology and soils.

Appendix Q
Historic and Cultural Resources Technical Memorandum

Chicago Red Line Extension Project

Historic and Cultural Resources

Technical Memorandum

April 27, 2015
Updated September 9, 2015

Prepared for:
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Chicago, IL 60661

Prepared by:
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125 S. Wacker Drive
Suite 600
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Abbreviations

APE	area of potential effect
BRT	bus rapid transit
CHA	Chicago Housing Authority
CHRS	Chicago Historic Resources Survey
CFR	Code of Federal Regulations
CTA	Chicago Transit Authority
EIS	Environmental Impact Statement
FTA	Federal Transit Administration
GIS	geographic information system
HARGIS	Historic Architectural Resources Geographic Information System
HUD	Department of Housing and Urban Development
MARS	Midwest Archaeological Research Services
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NRHP	National Register of Historic Places
RLE	Red Line Extension
ROW	right-of-way
SHPO	State Historic Preservation Office
THPO	Tribal Historic Preservation Office
TIF	tax increment financing
UPRR	Union Pacific Railroad
USC	United States Code

Section 1
Summary

1.1 Purpose and Scope

Archeological and historic specialists on the CWC Transit Group team (Midwest Archaeological Research Services, Inc. [MARS, Inc.], independent consultant Jean Guarino, and CDM Smith) conducted a cultural resources overview analysis of archaeological sites and aboveground historic structures that may be affected by the Chicago Transit Authority's (CTA's) proposed Red Line Extension (RLE) Project. These specialists compiled the available records and datasets, conducted fieldwork, and prepared this technical memorandum, which is the historic and cultural resources analysis that will be presented in the Draft Environmental Impact Statement (Draft EIS).

This report follows the general outline of the analysis steps required by the National Historic Preservation Act (NHPA): the identification of historic resources, an assessment of effects of the project on historic resources, and the resolution of adverse effects through avoidance, minimization, and/or mitigation efforts. Additional sections describe the area of potential effects (APE), provide an overview of archaeological investigations, and describe the consultation process pursuant to Section 106 of the NHPA. Information about historic resources and project effects that is developed as part of the Section 106 process will be included in the EIS, satisfying the National Environmental Policy Act (NEPA) requirement that the effects of federal actions on the environment be considered.

The project area is in the City of Chicago and the Village of Calumet Park in Cook County, Illinois. The RLE Project would extend the Red Line from the 95th Street Terminal to the vicinity of 130th Street, subject to the availability of funding. Four alternatives are being considered: the No Build Alternative, the Bus Rapid Transit (BRT) Alternative, the Union Pacific Railroad (UPRR) Rail Alternative, and the Halsted Rail Alternative. Analysis presented in this document is confined to the APE, the geographic area where a project may directly or indirectly change the character or use of historic properties.

1.2 Identification of Archaeological Resources

Cultural resource specialists conducted a records search to identify archaeological sites within the vicinity of the project area. Eight prehistoric Native American sites have been recorded within 0.6 mile of the project area. All eight fall outside of the RLE APE. The undertaking will produce no effect on these known resources. Additional archaeological sites may remain undiscovered within the RLE Project footprint; within areas of ground disturbance for the preferred alternative, archaeological investigations would occur prior to construction.

1.3 Identification of Architectural Resources

The cultural resource specialists evaluated 541 properties within the APE and determined that 15 historic resources are eligible for inclusion on the National Register of Historic Places (NRHP).

This includes 13 individual buildings plus two historic districts. No previously listed NRHP properties or districts lie within the APE.

The following resources were identified as NRHP eligible. Maps in Appendix A show the locations of these resources in relation to the alternatives considered:

- 1930 Eclectic Neo-Traditional Home at 444 W. 100th Place (Washington Heights)
- 1920 Classical Revival Substation at 10227 S. Halsted Street (Washington Heights)
- Green Street Historic District (Washington Heights/Morgan Park)
- 1917 Chicago Fire Department Engine Co. 93 at 324 W. 104th Street (Roseland)
- 1911 Roseland Pumping Station at 351 W. 104th Street (Roseland)
- 1928 French Eclectic Home at 11310 S. Emerald Avenue (Roseland)
- 1916 Romanesque Revival Church at 10920 S. Princeton Avenue (Roseland)
- 1934 Bethany Reformed Church Manse at 3 W. 111th Place (Roseland)
- 1930s Roseland Community Hospital Nurses Home at 11321 S. Wentworth Avenue (Roseland)
- 1931 Galloy & Van Etten Stone Contractors at 11756 S. Halsted Avenue (West Pullman)
- 1897–1911 Fire Department Engine Co. 115 at 931 W. 120th Street (West Pullman)
- 1958 S.S. Peter & Paul Catholic Church at 12433–12439 S. Halsted Street (West Pullman)
- 1925 former Venetian Hall at 133–139 E. Kensington Avenue (West Pullman)
- 1923 Romanesque Revival Gatehouse and Entryway to Cedar Park Cemetery at 12540 S. Halsted Street (Calumet Park)
- Altgeld Gardens Housing Project (Riverdale)

1.4 Project Effects

Neither the BRT nor the UPRR Rail Alternative would result in adverse effects on historic resources; however, the Halsted Rail Alternative would result in adverse effects on four historic resources: the Classical Revival substation at 10227 S. Halsted Street, the church at 12433–12439 S. Halsted Street, the fire station at 931 W. 120th Street, and the Cedar Park Cemetery gatehouse and entryway at 12540 S. Halsted Street. Although none of these structures would be physically demolished, the scale and proximity of the construction are anticipated to have an adverse effect on the characteristics that qualify each resource as eligible for NRHP listing.

1.5 Mitigation Recommendations

Due to the scale and proximity of construction for the Halsted Rail Alternative, it is unlikely that the anticipated adverse effects on these resources could be resolved; however, consultation with the State Historic Preservation Office (SHPO) and other interested parties may identify measures to mitigate effects. These measures may include but would not be limited to structural documentation, interpretative signage, further study to identify noise mitigation options for the church, or special provisions regarding construction in the vicinity.

1.6 2014-2015 Red Line Extension Project Update

In August 2014, based on the technical analysis and public input until then, CTA announced the NEPA Preferred Alternative—the UPRR Rail Alternative. CTA is considering two alignment (route) options of this alternative: the East Option and the West Option. At this time, CTA is also considering only the South Station Option of the 130th Street Station. In late 2014 and early 2015, CTA conducted additional engineering on the East and West Options to refine the East and West Option alignments. Appendix E of this technical memorandum summarizes the refined alignments and any additional or different impacts that would result. The information in Appendix E supersedes information presented in other chapters of this technical memorandum. (Updated July 29, 2015)

Section 2
Project Description

The CTA is proposing to extend the Red Line from the existing 95th Street Terminal to the vicinity of 130th Street, subject to the availability of funding. The proposed RLE would include four stations. Each station would include bus transfer and parking facilities. This project is one part of the Red Ahead Program to extend and enhance the entire Red Line. The CTA is also planning 95th Street Terminal improvements that are anticipated to be completed prior to the proposed RLE construction.

The project area is 11 miles south of the Chicago central business district (commonly referred to as the Loop) and encompasses approximately 20 square miles. The boundaries of the project area are 95th Street on the north, Ashland Avenue on the west, Stony Island Avenue on the east, and the Calumet-Sag Channel/Little Calumet River and 134th Street on the south. The I-57 Expressway and I-94 Bishop Ford Freeway cross the western and eastern edges of the project area, respectively. Lake Calumet is in the eastern portion of the project area. The project area encompasses parts of nine community areas in the City of Chicago and the eastern section of the Village of Calumet Park. Chicago community areas include Beverly, Washington Heights, Roseland, Morgan Park, Pullman, West Pullman, Riverdale, Hegewisch, and South Deering. The project area comprises residential (primarily single-family), industrial (both existing and vacant), transportation (including freight), and commercial development.

The Draft EIS focuses on the following alternatives (shown in Figure 2-1), which emerged from the Alternatives Analysis and the NEPA scoping process:

- No Build Alternative
- BRT Alternative
- UPRR Rail Alternative
    - Right-of-Way (ROW) Option
    - East Option
    - West Option
- Halsted Rail Alternative

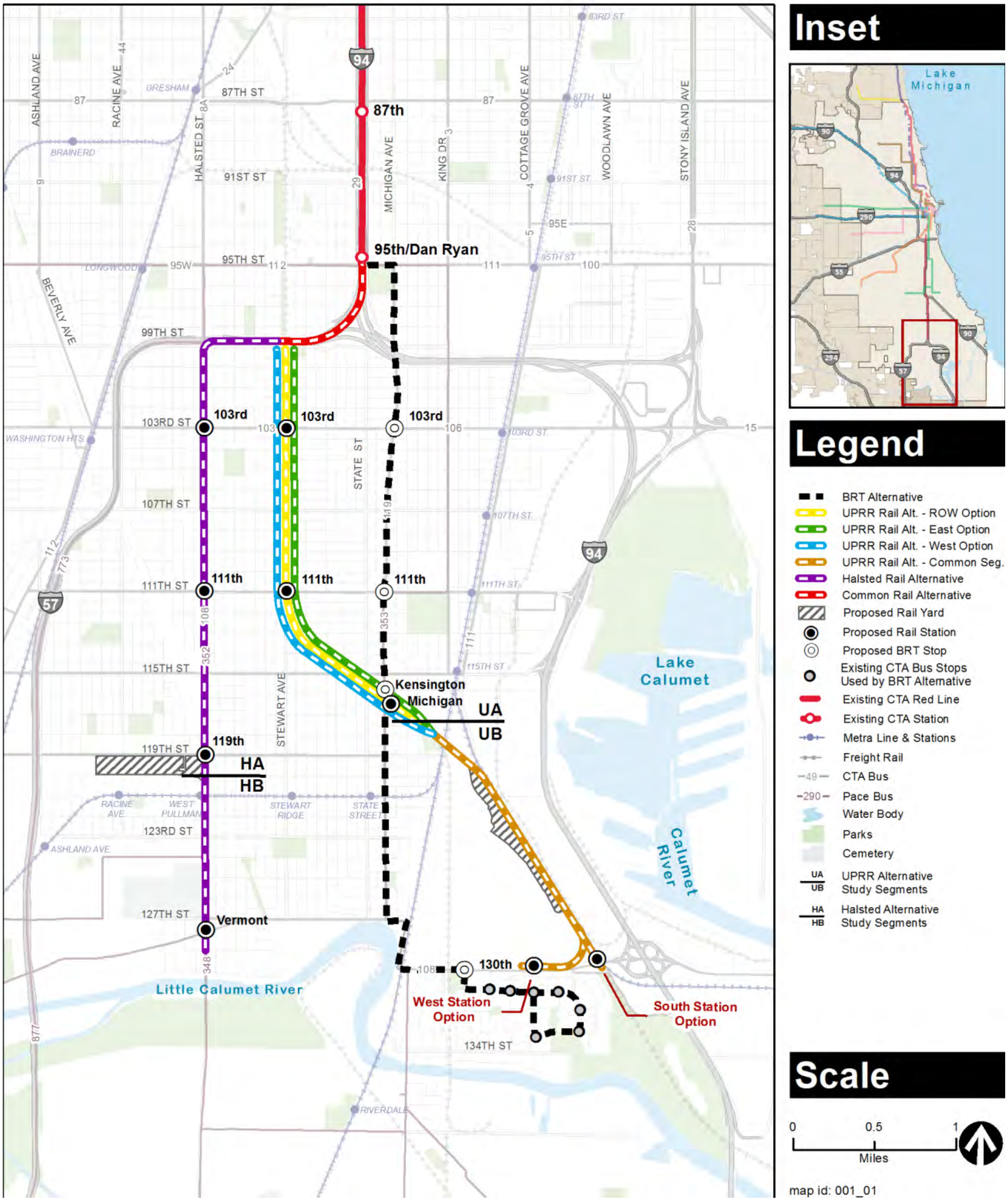
87th
95th/Dan Ryan
103rd
103rd
103rd
111th
111th
111th
Kensington
Michigan
119th
Vermont
130th
UA
UB
HA
HB
West Station Option
South Station Option
Lake Calumet
Calumet River
Little Calumet River
87TH ST
91ST ST
95TH ST
99TH ST
103RD ST
107TH ST
111TH ST
115TH ST
119TH ST
123RD ST
127TH ST
134TH ST
ASHLAND AVE
RACINE AVE
HALSTED ST
MICHIGAN AVE
KING DR
COTTAGE GROVE AVE
WOODLAWN AVE
STONY ISLAND AVE
STATE ST
STEWART AVE
BEVERLY AVE
Inset
Lake Michigan
Legend
BRT Alternative
UPRR Rail Alt. - ROW Option
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
UPRR Rail Alt. - Common Seg.
Halsted Rail Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Proposed BRT Stop
Existing CTA Bus Stops Used by BRT Alternative
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
CTA Bus
Pace Bus
Water Body
Parks
Cemetery
UPRR Alternative Study Segments
Halsted Alternative Study Segments
Scale
0
0.5
1
Miles
map id: 001_01

Figure 2-1: RLE Project Alternatives

The No Build Alternative is a required alternative as part of the NEPA environmental analysis and is used for comparison purposes to assess the relative benefits and impacts of extending the Red Line. The No Build Alternative is carried into the Draft EIS phase of project development regardless of its performance versus the build alternatives under consideration. No new infrastructure would be constructed as part of the No Build Alternative other than committed transportation improvements that are already in the Chicago Metropolitan Agency for Planning Fiscal Year 2010–2015 Transportation Improvement Program, including the improvements to 95th Street Terminal. The Transportation Improvement Program projects within the project area consist of four bridge reconstructions, several road improvement projects including resurfacing and coordination of signal timing on 95th Street, work on Metra's facilities, construction of a bicycle/pedestrian multi-use trail, and preservation of historic facilities. The No Build Alternative includes regular maintenance of existing track and structures, and bus transit service would be focused on the preservation of existing services and projects. All elements of the No Build Alternative are included in each of the other alternatives. Under this alternative, travel times would not improve from existing conditions.

The BRT Alternative (formerly referred to as the Transportation Systems Management Alternative) is a 5.0-mile, limited-stop, enhanced BRT route, which is assumed to operate 24 hours per day along Michigan Avenue between the existing 95th Street Terminal and the intersection of 130th Street and Eberhart Avenue. No dedicated bus lanes would be provided for the BRT Alternative due to the limited existing lane capacity along the alignment; however, parking lanes would be removed for some portions of the alignment and four stops with improved bus shelters and park & ride facilities would be created at 103rd Street and Michigan Avenue, 111th Street and Michigan Avenue, Kensington Avenue and Michigan Avenue, and 130th Street and Eberhart Avenue. Although BRT service elements would not continue south of the 130th Street stop, the bus route would continue through Altgeld Gardens public housing project along the existing route with six stops. The BRT Alternative would be consistent with bus routing changes that may occur as part of improvements to the 95th Street Terminal. Under this alternative, travel times between 130th Street and the Loop would improve over existing conditions.

The UPRR Rail Alternative is a 5.3-mile extension of the heavy rail transit Red Line from its existing 95th Street Terminal to 130th Street, just west of I-94. The Chicago Transit Board designated the UPRR Rail Alternative as the Locally Preferred Alternative at its August 12, 2009 board meeting. This alternative includes construction and operation of new heavy rail transit tracks, mostly in existing transportation corridors. The UPRR Rail Alternative has three options for alignment (ROW, East, and West), all of which would include operation on elevated structure from 95th Street to just past the Canadian National/Metra Electric District tracks near 119th Street. The alignment would then transition to at-grade through an industrial area with no public through streets, terminating at 130th Street in the vicinity of Altgeld Gardens. Four new stations would be constructed at 103rd Street, 111th Street, Michigan Avenue, and 130th Street. The 130th Street station would be the terminal station, with two options under evaluation: the South Station Option and the West Station Option. A new yard and shop facility would be sited near 120th Street and Cottage Grove Avenue. The bus routes in the vicinity of the UPRR Rail Alternative would be modified to enhance connectivity between the Red Line and the bus network. The hours

of operation and service frequency for the UPRR Rail Alternative are assumed to be the same as for the current Red Line. Under this alternative, travel times between 130th Street and the Loop would improve substantially over existing conditions.

The Halsted Rail Alternative is a 5.0-mile heavy rail transit extension of the existing Red Line. In this alternative, the Red Line would operate on an elevated structure running south from 95th Street along I-57 to Halsted Street. The alignment would then turn south and continue along Halsted Street to the intersection of Halsted Street and Vermont Avenue near 127th Street. This alternative would include four new stations at 103rd Street, 111th Street, 119th Street, and Vermont Avenue. The Vermont Avenue station would be the terminal station. A new yard and shop would be sited west of Halsted Street and between the 119th Street and Vermont Avenue stations. The bus routes in the vicinity of the Halsted Rail Alternative would be modified to enhance connectivity to the Red Line. The hours of operation and service frequency for the Halsted Rail Alternative are assumed to be the same as for the current Red Line at the 95th Street Terminal. Under this alternative, travel times between 127th Street and the Loop would improve substantially over existing conditions. This alternative would not extend rail to the Altgeld Gardens public housing project, which would be served by bus connecting to the Vermont terminal station.

Section 3
Methods for Effect Evaluation

3.1 Regulatory Framework

This section discusses the applicable federal and state regulations that define archaeological resources and historic properties and provide thresholds for determining effects on the archaeological resources and historic properties.

3.1.1 Federal

Among the federal laws and regulations that address the protection of archaeological resources and historic properties are the NHPA, NEPA, and the Department of Transportation Act of 1966. These laws and regulations resulted from the recognition that historic resources provide valuable opportunities to study human behavior and to plan for the future while conserving and protecting these resources and environments.

Methods employed during the archaeological and architectural investigations associated with the RLE Project were conducted in accordance with the applicable federal laws and regulations as well as with the Secretary of the Interior's *Standards and Guidelines*.

3.1.1.1 National Historic Preservation Act of 1966, as Amended

Undertakings permitted, licensed, approved, or funded, in whole or in part, by a federal agency are required to comply with Section 106 of the NHPA (Public Law 89-665; 16 United States Code [USC] 470 et seq.). The NHPA set up a national framework for historic preservation, requiring the federal government to establish a national system for identifying, evaluating, protecting, and rehabilitating historic places. The act appropriated funds to conduct surveys and planning in each state (Section 101), called for the establishment of the NRHP (Section 101), requires federal agencies to consider archaeological resources and historic properties when undertakings are planned (Section 106), and established the Advisory Council on Historic Preservation (Section 201).

The Section 106 consultation process covers four distinct coordination points that apply to specific projects:

1. Initiation of the process, in which consulting parties (including the SHPO and appropriate Tribal Historic Preservation Offices [THPOs]) are invited to participate in the process

2. Identification of historic properties, in which the APE is established and a reasonable and good faith effort is undertaken to identify historic properties within the APE and evaluate their significance

3. Assessment of adverse effects, in which effects from the project are examined to determine whether they may alter the integrity of historic properties

4. Resolution of adverse effects, in which the SHPO, THPO, and other parties consult to develop measures to avoid, minimize, or mitigate adverse effects on historic resources

To guide the selection of properties included in the NRHP, the National Park Service developed Criteria for Evaluation (36 Code of Federal Regulations [CFR] 60.4). The quality of significance in American history, architecture, archaeology, engineering, or culture may be present in districts, sites, buildings, structures, or objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association with one or more of the following criteria:

A. Events that have made a significant contribution to the broad patterns of American history on a local, state, and/or national level

B. Lives of persons significant in the history of the city, state, and/or the United States

C. Distinctive characteristics of a type, period, or method of construction, or the work of a master, or high artistic values, or a significant and distinguishable entity whose components may lack individual distinction

D. Information important in prehistory or history

Subpart B of the regulations for the NHPA (36 CFR 800.5) defines the assessment of adverse effects on archaeological resources and historic properties: "an adverse effect is found when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association…Adverse effects may include reasonably foreseeable effects caused by the undertaking that may occur later in time, be farther removed in distance or be cumulative" (36 CFR 800.5.a.1). A finding of "no adverse effect" can be made when the undertaking's effects would not meet this Criteria of Adverse Effect or when the undertaking would be modified to avoid adverse effects (36 CFR 800.5.b).

An analysis of archaeological and historic resources undertaken for the RLE Project is documented in this technical memorandum and will be summarized in the EIS. This analysis satisfies the requirements of NEPA.

3.1.1.2 National Environmental Policy Act of 1969

NEPA (Public Law 91-190; 42 USC 4321-4347) requires federal agencies to evaluate the significance of potential direct and indirect effects on the environment, including effects on archaeological resources and historic properties. Information about historic resources and project effects that is developed as part of the Section 106 process will be included in the EIS, satisfying the requirements of NEPA.

3.1.1.3 Department of Transportation Act of 1966, as Amended

Section 4(f), a special provision of the Department of Transportation Act (Public Law 109-59; 49 USC 303, 23 USC 138; 23 CFR 774), provides substantive protection for archaeological resources and historic properties relating to undertakings on publicly owned land involving the U.S. Department of Transportation agencies. The act establishes a policy that mandates initiation of a special effort to preserve parks, wildlife refuges, and historic sites; consideration of feasible and prudent alternatives; and the implementation of measures to minimize harm. Adversely affected historic properties that would be subject to direct effects have been analyzed in accordance with the requirements of Section 4(f); this analysis is contained in a separate technical memorandum.

3.1.2 State – Illinois

Pertinent state laws, regulations, and guidelines relating to the proposed undertaking include the Human Skeletal Remains Protection Act of 1989 and the Illinois Archaeological and Paleontological Resources Act of 1989. The Illinois State Museum maintains site files for archaeological sites, which are available online to qualified researchers.

Methods employed during the archaeological and architectural investigations associated with the RLE Project were conducted in accordance with the applicable state laws and regulations as well as with the memorandum *Protecting Illinois Cultural Resources: An Introduction to Archaeological Surveys Cultural Resources Guidelines* and the *Survey and Reporting Requirements Addendum* (Illinois Historic Preservation Agency 2010).

3.1.3 Local

The City of Chicago has local historic preservation ordinances, commissions, and designated landmarks. Available data from the city was used to help identify previously listed historic properties. In addition, local government representatives and other local preservation groups were invited to participate in the Section 106 consultation process.

The 2003 Demolition Delay Ordinance establishes a 90-day hold period prior to demolition of historic buildings rated Red or Orange in the Chicago Historic Resources Survey (CHRS), a citywide historic survey completed from 1983 to 1995. These designations represent potentially significant resources at the city or community level, respectively. Although these resources are evaluated independent of the evaluation of NRHP eligibility, they are discussed in this technical memorandum as well.

3.2 Effect Analysis Thresholds

The NHPA establishes qualitative criteria that define whether a historic property would be subject to an adverse effect: when a project "may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association" (36 CFR 800.5.a). Based on this regulatory framework, an adverse effect finding will be applied to any historic property that would be subject to one or more of the following (36 CFR 800.5.a.2):

- Physical destruction or damage to all or part of the archaeological resource or historic property
- Alteration that is inconsistent with the Secretary of the Interior's *Standards for the Treatment of Historic Properties*
- Removal of the property from its historic location
- Introduction of visual, atmospheric, or audible elements that diminish the integrity of the property's significant features
- Change to the character of the property's use or the physical features within the property's setting that contribute to its significance
- Neglect of a property that causes deterioration
- Transfer, lease, or sale of property out of federal ownership or control without adequate and legally enforceable restrictions or conditions to ensure long-term preservation

If an adverse effect is found, the Federal Transit Administration (FTA) would consult with the Illinois Historic Preservation Agency (the SHPO for Illinois) and other interested parties to develop and evaluate alternatives or modifications to the undertaking that could avoid, minimize, or mitigate adverse effects on the resource (36 CFR 800.6.a).

3.3 Area of Potential Effects

In the context of Section 106, the APE is defined as “the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist” (36 CFR 800.16.d). The APE for the RLE Project was delineated after considering the location of the proposed alternatives; the potential for ground disturbance, destruction, or property taking; locations from which the undertaking may be visible and/or audible; and the scale and setting of the project. The APE was developed in consultation with CTA, FTA, and the SHPO.

Cultural resource specialists developed the APE boundaries after conducting site visits and reviewing the aerial maps and engineering details (such as alignment locations, elevation of the proposed rail line, expected ROW limits, and the locations of the yards, stations, and parking facilities) for the various alternatives.

Generally, the APE contains those parcels that are within one block of the centerlines for the UPRR Rail and Halsted Rail Alternatives. The APE widens to accommodate the locations of each park & ride and yard and shop beyond the one-block boundary. The APE for the BRT Alternative includes the area immediately surrounding park & ride facilities. Figure 3-1 shows the APE for each alternative corridor.

While the necessary archaeological investigations will occur within the APE, they will be limited only to areas of ground disturbance for the preferred alternative.

3.4 Methods

The Section 106 consultation process includes four distinct coordination points: initiation, identification of properties, assessment of effects, and mitigation of adverse effects. The following subsections summarize how technical analyses will be undertaken to facilitate these four consultation points.

For the RLE Project, “representative sampling” was pursued for the identification of aboveground historic resources. Because of the developed urban environment and linear nature of the project, effects on properties would be similar for adjacent properties. This method is consistent with November 2011 guidance provided by the Advisory Council on Historic Preservation regarding the “Reasonable and Good Faith Identification Standard in Section 106 Review.”

3.4.1 Historic Context and Known Sites

Background research was conducted to describe the historic context for the project area. Understanding the historic context is essential in establishing the significance of individual properties, and by extension, NRHP eligibility for the built environment and any archaeological resources. In addition to reviewing the Historic Architectural Resources Geographic Information System (HARGIS) and city records, the following resources were consulted in developing the historic context:

- Sanborn Fire Insurance maps and other historic maps
- Chicago’s citywide GIS database
- CHRS
- Previous architectural studies in the area
- Other relevant scholarly publications

Using information in HARGIS and the other sources listed above, a list of previously identified historic properties within the RLE APE was compiled and mapped. This effort included the identification of known archaeological sites, NRHP-listed districts and structures, and any properties identified as local landmarks in Chicago.

The delineation of the APE is described in **Section 3.3**. Historic contexts are presented for archaeological resources in **Section 4** and for individual communities in **Section 5**.

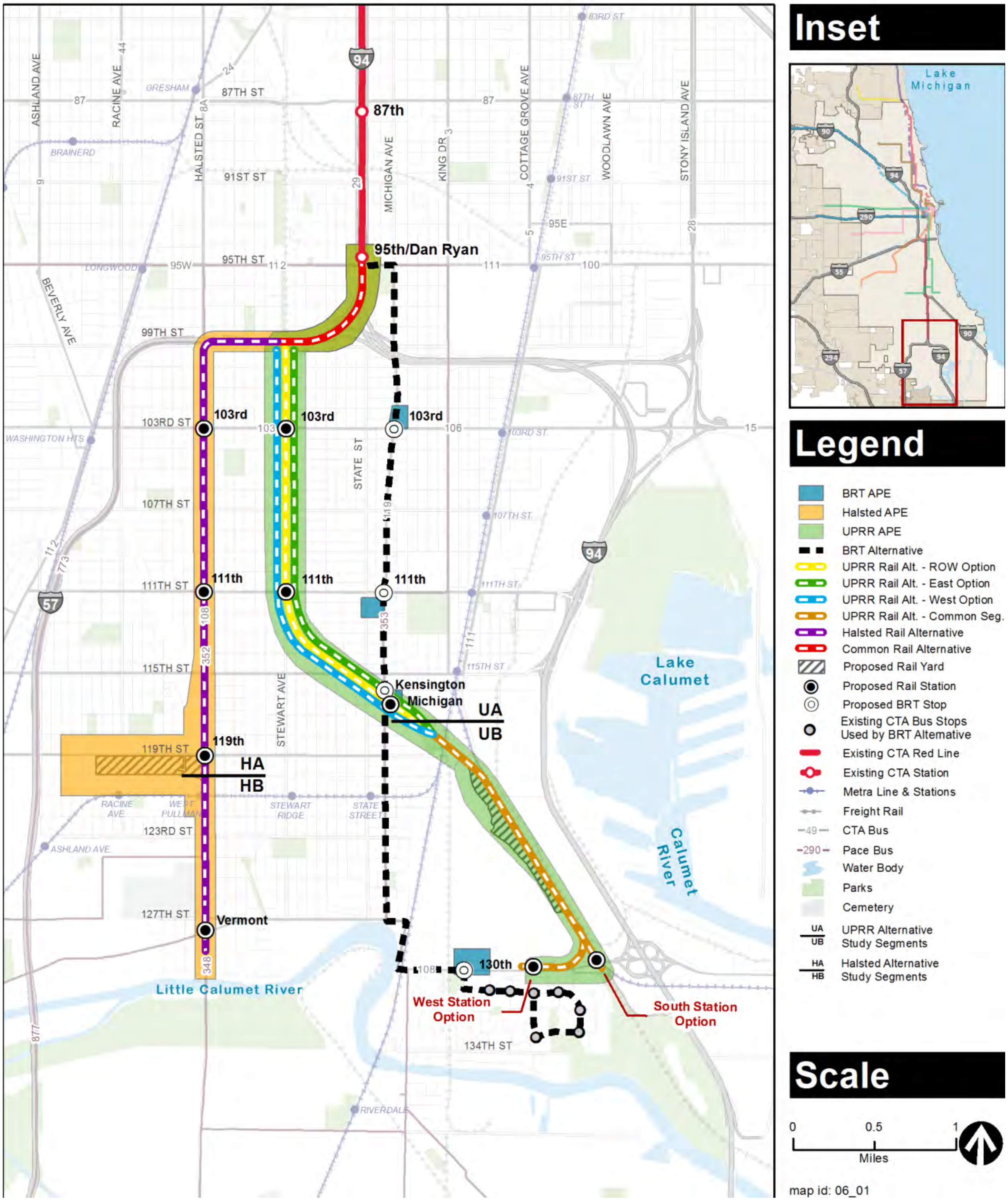
87th
95th/Dan Ryan
103rd
111th
Kensington
Michigan
119th
Vermont
130th
UA
UB
HA
HB
West Station Option
South Station Option
Lake Calumet
Calumet River
Little Calumet River
87TH ST
91ST ST
95TH ST
99TH ST
103RD ST
107TH ST
111TH ST
115TH ST
119TH ST
123RD ST
127TH ST
134TH ST
ASHLAND AVE
RACINE AVE
HALSTED ST
MICHIGAN AVE
STATE ST
STEWART AVE
KING DR
COTTAGE GROVE AVE
WOODLAWN AVE
STONY ISLAND AVE
BEVERLY AVE
GRESHAM
BRAINERD
LONGWOOD
WASHINGTON HTS
RACINE AVE
WEST PULLMAN
STEWART RIDGE
STATE STREET
ASHLAND AVE
RIVERDALE
83RD ST
87TH ST
91ST ST
95TH ST
103RD ST
107TH ST
111TH ST
115TH ST
94
57
Inset
Lake Michigan
Legend
BRT APE
Halsted APE
UPRR APE
BRT Alternative
UPRR Rail Alt. - ROW Option
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
UPRR Rail Alt. - Common Seg.
Halsted Rail Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Proposed BRT Stop
Existing CTA Bus Stops Used by BRT Alternative
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
CTA Bus
Pace Bus
Water Body
Parks
Cemetery
UPRR Alternative Study Segments
Halsted Alternative Study Segments
Scale
0
0.5
1
Miles
map id: 06_01

Figure 3-1: Area of Potential Effects and the Red Line Extension Alternatives

3.4.2 Identification of Historic Resources

Following the development of the APE and historic contexts, cultural resources specialists conducted field surveys on two distinct categories of properties: properties that would likely be displaced or demolished as a result of one or more alternatives, and a representative sample of other properties within the APE. The following subsection identifies how the representative sample in the latter category was identified.

For both categories of properties that were surveyed, cultural resource specialists conducted archival research and photo-documented the exterior of each structure from the public ROW. Each property was assessed for NRHP eligibility using the data gathered during the fieldwork and research phases of the investigation. Results of this analysis are described by community in **Section 5**.

Defining the Representative Sample

To determine the properties to be included in the representative sample, the team’s architectural historian relied on the GIS database provided by the City of Chicago, the HARGIS database, online mapping resources, SHPO records, and field reconnaissance. Examining the APE block by block, the historic character of each block was considered, including the following:

- What age are the buildings?
- What types of buildings are present?
- What function(s) do they serve?
- What architectural styles are apparent?
- How does the structure fit the context of the larger neighborhood?

In light of the neighborhood and block level contexts, analysts selected one or more properties per block to represent the range of buildings over 50 years in age throughout the area. In areas where the project would likely cause more substantial effects, a greater concentration of sample properties was selected. More sample properties were selected for heterogeneous blocks (e.g., blocks having a mix of property types and ages) than homogenous blocks. Where multiple similar buildings exist within the block, analysts selected the building with the greatest integrity or most distinguishing architectural features.

For example, block A contains only residential buildings, both Craftsman style bungalows and Minimal Traditional brick homes. Structures date to the 1920s and 1930s. The project would cause moderate effects on the adjacent block, but block A would be screened from the transit line by an existing row of buildings. Analysts therefore selected one bungalow and one Minimal Traditional house from this block. Alternatively, Block B contains a mix of residential and commercial properties, dating from 1902 through the 1950s, plus some modern infill. A mix of architectural styles is present. In this case, analysts selected five structures on this block to represent the cross-section of existing structures.

This process was repeated along the entire APE corridor.

Available Resources for Architectural Research

Architectural datasets for Cook County that were consulted for the RLE Project included the following:

- The **HARGIS database** was created by the Illinois Historic Preservation Agency in 2003 to manage information about Illinois historic properties; this database documents the state's built environment. The HARGIS database includes data gathered as a result of three statewide survey projects: the Illinois Historic Structures Survey, the Illinois Historic Landmarks Survey, and the Illinois Rural Survey (conducted 1970–1987). The HARGIS database also includes properties identified as part of a NRHP nomination, surveys by local preservation groups, and information from the Illinois Department of Transportation's Bridge Survey. The database includes data forms, photographs, background documentation, and spatial information within a geographical context for each historic property and historic district within the dataset.

- The **CHRS** is an inventory of buildings that was compiled during 1983–1995. The Chicago Department of Housing and Economic Development published its findings in a report titled *Chicago Historic Resources Survey: An Inventory of Architecturally and Historically Significant Structures* in 1996. Organized according to Chicago's 77 neighborhoods, the inventory lists over 17,000 architecturally and historically significant buildings and structures that predate 1940. The information is also available online and is searchable by neighborhood, building address, decade of construction, architect's name, building style and type, survey ranking, and landmark status.

- **Sanborn Fire Insurance maps** contain a wealth of information on the built environment in urban areas. Originally created and maintained to assess fire insurance liability, the maps provide dated contexts in which to describe the development of neighborhoods as well as the compositional components and historical use of individual buildings. Data especially useful for this project include the building footprint, number of stories, foundation material, and cladding material. The Sanborn maps are available online through subscription.

- **NRHP nomination forms** for individually listed historic properties and districts provide a wealth of contextual information for the individual properties and the historic districts. They include construction dates for most historic properties discussed therein and identify the architect in most instances.

Architectural datasets at the local level were reviewed as well, including information from the Commission on Chicago Landmarks.

The Commission on Chicago Landmarks recommends individual buildings, sites, objects, or entire districts to the Mayor and City Council for designation as Chicago Landmarks. To be recommended by the Commission for landmark designation, these resources must meet at least two criteria: (1) being valuable as an example of city, state, or national heritage, and (2) being historically significant—the site of a significant historic event, association with a significant person, architecturally significant, the work of a significant architect or designer, association with a significant historic theme, or a having unique visual feature. In addition, the potential landmark must maintain integrity in light of its location, design, setting, materials, workmanship, and ability to express such historic, community, architectural, or aesthetic interest or value. The Commission reviews any proposed alteration, demolition, or new construction affecting individual landmarks or properties in landmark districts as part of the permit review process. The Commission produces two new publications each year, one for individual landmarks and landmark districts and another for Chicago listings on the NRHP.

3.4.3 Effects from the Project

In consultation with FTA, CTA, the SHPO, and other consulting parties, effects were assessed for each resource previously listed on the NRHP and for those determined to be NRHP eligible. Effects were largely drawn from the other technical memos prepared for the RLE Project and were applied to the NRHP-eligible properties to assess how the project may alter the characteristics that qualify properties for inclusion in the NRHP. Because indirect effects (e.g., noise, vibration, and changes in the visual environment) would be similar for individual properties in close proximity along the corridor, effects on potentially historic properties beyond the representative sample set will be evaluated at a district or neighborhood level. Effects on historic resources are discussed in **Section 6**.

In consultation under Section 106, mitigation strategies will be developed to address any adverse effect determinations. As appropriate, a Memorandum of Agreement will be developed in consultation with FTA, CTA, and Section 106 consulting parties. Mitigation measures are discussed in **Section 7**.

3.4.4 Consultation

As required by Section 106 of the NHPA, consultation covered four distinct coordination points:

1. Initiation of the process
2. Identification of historic properties
3. Assessment of adverse effects
4. Resolution of adverse effects (developing measures to avoid, minimize, or mitigate adverse effects on historic resources)

Section 8 of this technical memorandum discusses the Section 106 consultation process for the RLE Project.

Section 4
Archaeological Resources

This chapter presents an overview of the prehistoric development of the area and an overview of archaeological discoveries in the vicinity. Eight prehistoric Native American sites have been recorded within 0.6 mile of the project area; no known sites fall within the project footprint or the APE itself. Although the landscape through which the transit lines would pass is developed, additional archaeological sites may remain undiscovered within protected locations such as parks and gardens.

4.1 Prehistoric Context

This section briefly describes the natural landscape features that influenced the prehistoric development of the area, followed by a description of the prehistoric context for the Paleoindian, Archaic, Woodland, Mississippian, Proto-Historic, and Historic Periods.

Although humans probably entered North America from Asia at least 20,000 years ago, solid evidence for their presence in the Midwest before 10,000 B.C. is elusive. From the time of the initial arrival until the arrival of the Europeans in the 17th century, the archaeological record shows evidence for continuous population growth and changing social adaptations to new developments in both the natural and cultural landscape.

The following description of the cultural landscape in northeastern Illinois will serve as a framework for assessing the significance of the archaeological remains within the APE (adapted and updated from Bird and Tolmie 2000). The recorded sites represent only a small percentage of the prehistoric cultural resources in the Chicago area, as substantial numbers of sites have been destroyed by urban development or were found by amateur archaeologists or relic collectors but have not been reported. Other sites remain undiscovered on unsurveyed land.

4.1.1 Natural Landscape

The RLE Project would be wholly contained within the exceptionally flat, crescent-shaped Chicago Lake Plain. The approximately 45-mile by 15-mile plain occupies the exposed floor of glacial Lake Chicago. Relief within the lake plain varies only 10 feet above the former lake floor where sand spits, dunes, and beaches formed near the shoreline during one of three high water stages of Lake Chicago, when water levels reached 600–620 feet: Glenwood Stage, Calumet Stage, and Tolleston Stage.

The project area includes lake plain-associated surface features such as Calumet Stage beach ridges, the Washington Heights Spit, and the Stewart Ridge Spit (Bretz 1939:105, 108, Plate 1).

Philip C. Hanson (1981), then with the Field Museum of Natural History, used the General Land Office survey notes and plats to reconstruct pre-settlement vegetation in the Chicago Lake Plain. Hanson's analysis (1981:160) identified nine plant communities within the lake plain, with wet prairie, prairie, and oak savanna plant communities mapped along the RLE corridor. The savanna community, dominated by black oak and bur oak, is associated with the sandy beach ridges and spits in the “Calumet area” at the southern end of the lake plain (Hanson 1981:161). The beach ridges and spits provided dry, elevated landforms suitable for habitation sites and for travel by land. The wet prairie community is mapped south of the “Old Indian Reservation Boundary” line shown on the U.S. Geological Survey quadrangles, between the Little Calumet River to the south and Lake Calumet to the north. Hanson (1981) mapped prairie north of the boundary line. Surface water drains into Lake Michigan by way of the Little Calumet, Calumet, and Grand Calumet rivers, unless artificially diverted into the Calumet-Saganashkee Canal.

4.1.2 Paleoindian Period (10,000 to 8,000 B.C.)

During the Paleoindian Period, populations across the Midwest were highly mobile bands of hunters and gatherers occupying large territories. The Paleoindians hunted a variety of mammals including the now extinct mammoth and mastodon, elk, and deer, and gathered locally available plants. Sites within the Chicago area dating to the Paleoindian Period are rare, although individual tools are more common. The stone tools most often associated with this period, fluted projectile points and knives, are occasionally recovered as isolated finds in upland areas and along the margins of large river valleys and ancient lake beds. Many archaeological sites in the Chicago Lake Plain dating to the Paleoindian Period have been either destroyed by erosional processes or buried by natural deposition.

Very little is known regarding the actual distribution, subsistence pattern, and social organization of the Paleoindians. Within recent years three sites in northeastern Illinois dating to this period and/or a late Paleoindian/Early Archaic transitional period have been investigated. Fluted points and preforms, along with other tools diagnostic of early Paleoindian technology, have been recovered from Hawk’s Nest (11-L-344) during archaeological investigations (Loebel, Amick, and Lurie 2000). The Gainey Phase Hawk’s Nest site in Lake County is one of the few extensively studied early Paleoindian sites in northeastern Illinois. Repeated surface collections and limited excavations at the 11,000-year-old site have yielded close to 200 chipped stone tools, including fluted point preforms, end and sidescrapers, and gravers, along with manufacturing debris from raw materials obtained up to 350 miles away. The size of the assemblage and its distinctive content suggest a place that was repeatedly being used as a transient camp during extended hunting forays (perhaps seasonal) in the Upper Illinois and Lake Michigan basins (Amick et al. 2000).

The multi-component Garrison Site (11-L-337), on Lake Border Moraine till along a linear slough now carrying the North Branch of the Chicago River, contains an ephemeral late Paleoindian component that has not been disturbed by plowing. MARS, Inc. conducted Phase II testing and Phase III data recovery at Garrison over three field seasons (Lurie et al. 1993, Demel 2000). Floral and faunal analyses suggest a late summer through fall and possibly winter occupation of the site with a focus on plant and/or nut processing (Demel 2000:403).

Archaeologists from Northwestern University recovered late Paleoindian/Early Archaic diagnostic lithics during Phase II investigations at Plenemuk Mound (11-Wi-241). Plenemuk Mound is a 5.6-acre site with a buried Archaic component and an Upper Mississippian component including a probable Langford Tradition Upper Mississippian burial mound (estimated at about 3 feet high and 50 feet in diameter) associated with the 11-Wi-280 habitation site to the east (Bird 1997:321). The scatter of artifacts along a high terrace (valley train remnant) above the Kankakee River is most likely associated with a seasonally occupied late Paleoindian/Early Archaic base camp (Doershuk 1988:143). Late prehistoric people disturbed the earlier Paleoindian/Early Archaic occupation during the subsequent erection of a burial mound.

Recent research into the poorly defined Chesrow Complex of far southeastern Wisconsin has uncovered important information bearing on mammoth and mastodon exploitation (Overstreet 1993). Although radiocarbon dates from bone collagen and preserved spruce suggest that the megafauna were exploited by Paleoindians, no temporally diagnostic tools have been recovered in association with the remains and the integrity of some sites is questioned (Mason 1997:97).

4.1.3 Archaic Period (8,000 to 1,500 B.C.)

The long Archaic Period was a time of transition in the Midwest. After the final retreat of the glaciers, subsistence pursuits adjusted to the changing natural environment as deciduous forests replaced coniferous forests and as the prairie expanded to the east. Human population densities gradually increased, mobility decreased, resource exploitation and technology became more diverse and localized, and social organization became more complex.

During the Archaic Period, hunting began to focus on deer as the primary source of meat. A variety of smaller animals and fish were also collected, with increased emphasis on aquatic resources throughout the period. Plant foods including tubers, nuts, and seeds became increasingly important for subsistence. Some native plants, such as goosefoot, sumpweed, and possibly native squash or gourd, may have been domesticated during the latter part of the Archaic. Domesticated dog has been identified at archaeological sites in the Midwestern United States.

New tool types were developed, including new forms of spear or projectile points, the chipped stone adze, ground stone tools, copper tools, stone mortars for processing plants, and ornaments from bone, shell, and copper. The first cemeteries in Illinois appear during the Middle Archaic and late in this period; graves were occasionally covered with low mounds of earth. Toward the end of the Archaic Period, groups had established particular territories within which settlements were shifted to exploit the seasonally available natural resources. Networks for the exchange of resources within and between regions also developed toward the end of the Archaic.

Although many archaeological sites date within the long Archaic Period, few have been extensively excavated in the Upper Illinois drainage. Until recently, very little was known about the nature of subsistence practices, social organization, or the processes of cultural change and stability during the Archaic (Lurie et al. 2009). Demel (2000:482) posits that sites affiliated with Early Archaic and early Middle Archaic periods have been inundated under the waters of Lake

Michigan. Groups taking advantage of coastal resources would have established extraction camps and villages along the now inundated shoreline of glacial Lake Chippewa.

McGraw Farm (11-L-386) mortuary and habitation site, located on a prominent glacial kame overlooking the Fox River, was mitigated in 1996 (Porubcan et al. 1998). Formal burial features on the site were grouped into two sets, with Middle to late Middle Archaic burials (dated 3,630 to 3,350 B.C.) densely concentrated near the ridge crest. Multiple mortuary treatments including primary burial, cremation, and bundle reburial were represented, and no selection of treatment type based upon age or sex was apparent. Non-burial features contained moderate amounts of lithic debris, tool fragments, and carbonized plant and animal remains.

In 2001 and 2002 MARS, Inc. tested and mitigated the Chen site (11-Wi-2514), an unplowed Late Archaic Period campsite on a northwest-facing bluff slope above the DuPage River (Lurie et al. 2002). The excavations yielded over 2,700 artifacts including two Late Archaic Period projectile points or knives; geomorphological investigations confirmed the undisturbed nature of the deposits. Site location and analysis of chipped stone tools and debris suggest that the Chen site probably functioned as a spring, summer, or fall habitation where general activities linked to resource extraction from the nearby DuPage River floodplain and upland margin areas were conducted. Substantial amounts of lithic debris indicate that tool manufacture and maintenance were frequently conducted on site.

A nutshell, recovered in association with a Matanzas point in feature context at the Garrison site, was dated by calibrated radiocarbon assay at 3,363 B.C. Demel (2000:479) suggests that the site was most densely occupied during the Early Archaic and the late Middle Archaic/early Late Woodland as a residential camp where plant processing was an important activity.

4.1.4 Woodland Period (1,500 B.C. to A.D. 1,000)

The onset of the Woodland Period is traditionally marked by the introduction of pottery technology; however, in the southern Midwest pottery was manufactured as early as 2,500 B.C., well within the Late Archaic. This early pottery, such as Black Sand and Marion, tends to be thick and porous, with fiber or coarse grit temper. Gillette (1949:64) notes that Marion Thick sherds and Adena points have been found at the Fisher site (11-Wi-5) near the mouth of the Illinois River. Slaymaker and Slaymaker (1971:192) report “typical” Early Woodland pottery from surface collections at Knoll Spring (11-Ck-19) on Calumet Stage beach deposits overlooking the Sag Valley. The available information suggests, therefore, that both Black Sand and Marion ceramics have been recovered within Early Woodland Period sites in northeastern Illinois.

Early Woodland patterns of settlement, subsistence, and social organization were probably not very different from those of the Late Archaic. Hunting and fishing remained focal subsistence activities. While nuts continued to be an important food item, seeds were increasingly important, although plant cultivation did not account for the bulk of subsistence calories. Sunflower may have been added to the list of domesticated plants at this time. Data from the Lower Illinois Valley and the Mississippi River in Illinois suggest that Early Woodland groups focused on river bottom resources during at least part of the year. Early Woodland sites are identified by the occurrence of the first pottery vessels, by particular forms of projectile points and other stone tools, and by the construction of substantial earthen burial mounds.

Charles Faulkner (1960:43-44) noted an early expression of the Early Woodland, contemporaneous with the Red Ochre Culture, at a small number of sites within the sand ridges of the lake plain surrounding the head of Lake Michigan. Red Ochre is now widely recognized to fall mainly within the Early Woodland Period, although ceramics are absent in the complex (Brown 1986:605).

During the Middle Woodland Period, settlements in the Midwest tended to concentrate along broad river valleys. Burials were placed in mounds on nearby bluffs, possibly serving as territorial markers. Sites were occupied for longer periods of time during the year and by greater numbers of people than in preceding periods. Subsistence activities focused on harvesting the abundant seed plants of the floodplain as well as on raising some native domesticates. Deer, fish, and a variety of small mammals and birds were also important food resources.

The best-known data on Middle Woodland come from the region of the Ohio, Mississippi, and Illinois Rivers in Ohio and Illinois. Along the lower Illinois River, Middle Woodland settlement systems consisted of a number of functionally differentiated site types including regional centers, base camps, small seasonal camps, and mortuary sites. Exotic and stylized artifacts called Hopewell have been found in both mortuary and habitation contexts throughout the Midwest during the period. They suggest a widespread social and economic network that stretched as far west as the Rocky Mountains, north to Lake Superior, south to the Gulf of Mexico, and east to the southern Appalachians. Middle Woodland can be recognized by diagnostic pottery vessel decoration, projectile point types, exotic artifacts, large burial mounds, complexes of earthworks, and other remains. Site 11-Ck-250 includes Middle Woodland artifacts (e.g., corner-notched projectile points, scrapers, and grit-tempered sherds) within the Oscar Biedes collection. Weaver ceramics in association with Steuben points, diagnostic of the transition from Middle Woodland to Late Woodland, have been recovered from two radiocarbon-dated sites in northeastern Illinois (11-Wi-684 and 11-Mh-125) excavated by Kullen (1995) and Lurie and Johnson (1996), respectively. The sites are confidently placed within the Steuben Phase (circa A.D. 200 to 419) as defined by Wolforth (1995).

During the late Middle Woodland and early Late Woodland, the trade of long-distance materials came to an end. Mortuary activities became less complex, and settlement patterns changed. There appears to have been a radical reorganization of social and economic systems in the Midwest, the impetus for which is currently unclear. Throughout the region, Late Woodland appears to have been a period of population growth and expansion with settlements no longer restricted to broad alluvial river valleys. Late Woodland sites are found in a variety of topographic settings, sometimes in the same locations as earlier Archaic sites. The hierarchy of sites present during the Middle Woodland disappeared and Late Woodland settlement systems apparently consisted of small seasonal villages and associated support camps.

Although subsistence continued to be based on hunting, fishing, and the gathering of plants, corn horticulture began to be increasingly important in the economy. The quantity and diversity of seeds recovered from Late Woodland period sites indicate extensive use of this resource in the subsistence strategy.

Burials continued to be placed in mounds. Some Late Woodland mounds were constructed in the form of animal effigies in southern Wisconsin and northern Illinois. Late Woodland sites can be recognized by the presence of thin-walled, harder, grit-tempered ceramics and new projectile point types, including arrow points. The Late Woodland Period local pattern may be suggested through examination and integration of information encompassing the recent investigations at Hurd (11-L-71) and McGraw Farm (11-L-386), 0.6 mile northeast of Hurd (Bird 1998, Porubcan et al. 1998). Hurd and McGraw are temporally and culturally related sites, perhaps task-specific sites within the Late Woodland seasonal round—one a fall hunting and harvesting encampment, the other a mortuary facility. Flint Creek separates the encampment from the mortuary site. Three Late Woodland burial features have been identified at McGraw; these comprise a minimum burial population of ten individuals. Temporal affiliation was determined using radiocarbon assays, diagnostic artifacts in association with inhumations, and similarity of burial treatment program. Dr. Anne Grauer's analysis (Porubcan et al., 1998: 29) suggests that the Late Woodland burials appear to be primary interments, although the disposition of some of the flexed burials may indicate postmortem processing. The low incidence of infection and anemia compared to contemporaneous burial populations in west-central and southern Illinois suggests to Grauer that the McGraw Late Woodland population was not sedentary; however, equivalent rates of dental caries suggest that the McGraw population had a similar diet, high in carbohydrates and probably related to the consumption of corn.

Calibrated radiocarbon assays from Hurd and McGraw suggest that Hurd is somewhat later than McGraw. Hurd calibrated dates range from A.D. 1180 to 1280 while calibrated dates at McGraw range from A.D. 970 to 1195. Ceramics recovered from two of the features relate the occupation to people who used Starved Rock Collared jars within the territorial region encompassing the Upper Illinois River system and the Middle Rock River. The occupants grew corn and gathered resources from the uplands and floodplain at the confluence of Flint Creek and the Fox River.

Starved Rock and Aztalan Collared vessels are commonly found within sites south of the coniferous/deciduous tension zone in Wisconsin encompassing mixed prairie-oak-hickory woodland and the Prairie Peninsula. Hurley (1975), Fowler and Hall (1978:560), Benn (1979), Hall (1987:66-68), Salkin (1987, 1993), Goldstein (1991:224), Richards (1992:418), Bird (1997), Emerson and Titlebaum (2010), and Kelly (2002) have presented theories to account for the relationship among various Late Woodland groups in the Midwest. Most researchers agree that the Late Woodland collared-style pottery appears circa 900 to 1000, disappears circa 1100 or 1200, and is replaced by Upper Mississippian ceramics in the region. Based on morphological attributes and paste recipes, Aztalan Collared, Starved Rock Collared, and Upper Mississippian Langford Corded are indistinguishable without rim segments.

Two of the eight sites (11-Ck-244 and 11-Ck-246) recorded near the project area contain artifacts diagnostic of the Late Woodland Period (e.g., grit-tempered sherds and triangular projectile points). Both are situated on a low sand bar associated with glacial Lake Chicago and formed during the Calumet stage of Lake Chicago (Bretz 1939:Plate 1).

4.1.5 Mississippian Period (A.D. 1000 to A.D. 1600) and Proto-Historic Period (A.D. 1600–1673)

Mississippian subsistence relied increasingly on cultivated plants, particularly corn and squash. Beans enter the archaeological record for the first time in the Midwest late in the period. Deer was the most important faunal resource, although migratory waterfowl, elk, bison, fish, and raccoon also contributed to the protein intake.

Two types of Mississippian occupations have been identified in Illinois: Middle Mississippian and Upper Mississippian. Middle Mississippian sites tend to occur along rivers with wide, fertile floodplains and reliance on cultivated plants appears to have been substantial. Upper Mississippian sites, on the other hand, tend to occur along rivers extending into the Prairie Peninsula, where reliance on cultivation may have been less intense than for Middle Mississippian populations.

Middle Mississippian peoples achieved the greatest level of cultural complexity in the prehistory of the United States. The river valleys were densely occupied and the settlement systems included permanent towns surrounded by smaller villages and farmsteads. In the Greater St. Louis area of Illinois and Missouri, this Mississippian development may have reached urban proportions. Exchange networks and new systems of political control extended throughout much of the eastern United States. Middle Mississippian sites can be recognized by their diagnostic substructure mounds, house forms, pottery styles, and stone hoes. Although major Middle Mississippian sites are found in the southern part of the state, there is little evidence of Middle Mississippian occupation in northeastern Illinois.

Upper Mississippian peoples were probably more dispersed across the landscape than Middle Mississippian peoples, and apparently lived in smaller villages and farmsteads. In northeastern Illinois, Upper Mississippian occupations known as Fisher/Oneota and Langford are well documented and can be recognized primarily by their distinctive ceramics. The Sanctuary Golf Course in New Lenox in Will County, Illinois near the confluence of Marley and Hickory Creeks contains the remnants of a number of archaeological sites including 11-Wi-654, a 7.0-acre single component Langford Tradition habitation (circa A.D. 1110 and 1426), and 11-Wi-213, an 18.5-acre multi-component habitation (circa A.D. 1165 through 1644). The analysis of ceramics from these sites focused on separating site components, defining temporal trends, and examining regional interaction (Bird 1997). The analysis illuminated temporal, spatial, and social trends involving late prehistoric and proto-historic group interaction at the head of Lake Michigan (Bird 1999, 2010). Important Oneota sites within the Chicago Lake Plain include Huber (11-Ck-1), Hoxie (11-Ck-4) and Oak Forest (11-Ck-53). All three were situated to utilize the resources along the edge of the lake plain. Huber is 6.9 miles west of the confluence of Tinley Creek and the Sag. Hoxie is 7.1

miles south-southeast of Thorn Creek, south of the Little Calumet River. Oak Forest is 4.9 miles south of the interface between the morainal uplands and the lake plain.

Two of the eight sites (11-Ck-28 and 11-Ck-284) recorded near the RLE Project contain artifacts diagnostic of the Mississippian or Proto-Historic periods. The shell-tempered sherds recovered by Bluhm and Wenner from ridges adjacent to a slough at 11-Ck-28 suggest a Fisher/Oneota occupation for the site. Lace and Nowicki reported the Joe Louis site (11-Ck-284) above the south bank of the Little Calumet River near a spring. Artifacts included fauna, lithics, and late Fisher Phase shell-tempered ceramics (primarily), some from feature context (including superimposed pits). Subsequent survey and testing of this substantial habitation site further defined the site limits and concentrations of materials within the site.

4.1.6 Historic Period (1673 to Present)

Historic Indian tribes known to have inhabited northeastern Illinois during this time include Fox (Mesquakie), Kickapoo, Mascouten, Menominee, Miami, Ojibwa (Chippewa), Ottawa (Odawa), Potawatomi, Winnebago (Ho-Chunk), and Sauk (Tanner 1987:93, 98, 106, 140). The Potawatomi were firmly established in the vicinity when the settlers arrived following the Black Hawk War of 1832. Portage points and river junctures along the waterways were important locations for Native American encampments and villages as well as Euro-American trading posts, towns, and forts.

Trails around the head of Lake Michigan (Calumet Region) skirted the lakeshore or used beach ridges to cross the Chicago Lake Plain. The 1819 General Land Office plat notes an “Indian Trail” passing along the western shore of Lake Calumet. The Bishop Ford Freeway and Cottage Grove Avenue follow the approximate alignment of the old trail within the project area. Outside the project area, the trail continues to the southeast aligned with State Street through Calumet City. The “Indian Trail” joined Scharf’s Trail P, a branch of the historic Chicago-Vincennes Trace (Quaife 1923:51-71), at about Kensington (near the center of Section 22). James Rees’ 1851 map and Albert Scharf’s 1901 map of *Indian Trails and Villages of Chicago* (1901) show Trail P crossing the Little Calumet River at the toll bridge established by George Dolton and Levi Osterhoudt in 1842 at Riverdale Crossing, which aligns with Indiana Avenue and Vincennes Avenue. The General Land Office “Indian Trail” and Trail P are branches of the Chicago-Vincennes Trace.

Railroads followed the same general alignments as the early trails, around the head of the lake from the eastern states into Chicago. The Illinois Central appears on the 1870 plat of Calumet Township and aligns with Trail P while the Michigan Central Railroad appears on the same plat aligned with the “Indian Trail.” The rail lines, like the trails before them, join at Kensington (Van Vetchen 1870).

Sources of information about the Historic Period include accounts of traders, missionaries, Indian agents, surveyors, military personnel, travelers, and settlers as well as the insights gained from archaeological investigations.

Section 5 discusses the historic development of each of the six neighborhoods and communities along the RLE Project corridor.

4.2 Archaeological Sites in Project Vicinity

Based on artifacts collected by amateur archaeologists Albert Scharf, Oscar Biedes, and Ed Lace, as well as professional investigations completed by the Illinois State Archaeological Survey, eight prehistoric Native American sites have been recorded within 0.6 mile of the RLE Project vicinity, although none fall within the APE. The sites are listed in Table 4-1.

Table 4-1: Archaeological Sites in the Red Line Extension Project Vicinity

Site #	Site Name	Recorded	Archaeologist(s)	Temporal
11-Ck-28	T. Shapas Collection	1957	E. Bluhm, D. Wenner	Middle Woodland Upper Mississippian
11-Ck-177	(Detail No. 38)	1919	A. Scharf	Two mounds, Village
11-Ck-244	Flat Foot Lake South	1987	E. Lace	Late Woodland
11-Ck-245	Flat Foot Lake North	1987	E. Lace	Prehistoric
11-Ck-246	Flat Foot Lake Central	1987	E. Lace	Late Woodland
11-Ck-247	Beaubien Woods	1987	E. Lace	Prehistoric
11-Ck-250	Oscar Biedes Collection	1987	E. Lace	Middle Woodland
11-Ck-284	Joe Louis Site	1986, 2010	E. Lace, ISAS	Upper Mississippian

Source: Illinois State site files

Site 11-Ck-284 is south of the Little Calumet River (0.6 mile southwest of the Halsted Rail Alternative footprint), and sites 11-Ck-28, 11-Ck-177, 11-Ck-244 through 247, and 11-Ck-250 are near Flatfoot Lake within the 135-acre Beaubien Woods Forest Preserve of Cook County (0.6 mile southeast of the UPRR Rail Alternative footprint). Only the Joe Louis site (11-Ck-284) has been reviewed for NRHP eligibility and was determined eligible, independent of the RLE Project.

Elaine Bluhm and David J. Wenner recorded site 11-Ck-28 based on a collection of grit-tempered and shell-tempered ceramics gathered from the site and held by Theodore Shapas. The site dates to the Middle Woodland (grit-tempered sherds) and Upper Mississippian (shell-tempered, Oneota sherds) periods.

Betty Broyles recorded 11-Ck-177 in 1959 as comprising the village (Ckv125 and Ckv126) and associated mounds (Ck-127 and Ck-128) detailed by Chicago tobacconist and avocational archaeologist Albert Scharf in 1919: “Two mounds and a camp site were located along the bend of the river” (Brown 1917). Regarding the Calumet Marshes, Scharf (1919) notes:

> “The several Indian villages in these marshes were all located along the canoe routes or portage trails of which they form the route simply passing from one to the other & together we have one of the links of the great highway leading from the Illinois River to the ‘Great Lake.’”—Manuscript transcribed and on file at MARS, Inc.

David J. Keene and Theodore J. Karamanski (1980) reported sites 11-Ck-244 through 11-Ck-247 and site 11-Ck-250 in 1979 during survey work completed for the Forest Preserve District of Cook County. Ed Lace, an avocational archaeologist with the Forest Preserve District of Cook County with whom Keene and Karamanski had worked on the project, formally recorded the Woodland Period and undefined prehistoric sites in 1987. An undated newspaper article from the Star-Tribune shows photographs of the Oscar Biedes collection (included with the 11-Ck-250 site form).

David J. Keene and Theodore J. Karamanski (1980) also reported site 11-Ck-284 within the Joe Louis "The Champ" Golf Course (designed by Dick Nugent) during survey work completed for the Forest Preserve District of Cook County. Ed Lace recorded the Joe Louis site in 1986 after an informal testing program. The 21.2-acre late Fisher Upper Mississippian site (circa A.D. 1200–1400) has been partially destroyed by golf course construction, but further testing in 2010 discovered that part of the site is preserved in the wooded area between the golf course and the Little Calumet River (Porubcan and Baltus 2011).

4.3 Potential for Project Effects

As no previously recorded sites fall within the RLE APE, the RLE Project would produce no effect on known archaeological resources. Additional archaeological sites may remain undiscovered within the project footprint; archaeological investigations will occur within areas of ground disturbance for the preferred alternative.

Section 5
Identification of Architectural Resources

This chapter presents the historic contexts and a description of historic properties for each of the six communities within the RLE Project APE: Washington Heights, Roseland, Morgan Park, West Pullman, and Riverdale within the City of Chicago, and the Village of Calumet Park. Figure 5-1 illustrates the location of each community relative to the project.

A series of maps in Appendix A graphically presents an overview of listed sites and surveyed properties; individual inventory sheets for surveyed properties are included in Appendix B. The map also identifies properties surveyed in the CHRS that were rated Red or Orange. CHRS properties are discussed further in **Section 5.7**.

Following the discussions of the built environment in the six communities, **Section 5.8** discusses parks that fall within the APE. Parks and other Section 4(f) resources are discussed in a separate technical memorandum prepared for the project; this memo only evaluates their eligibility for listing on the NRHP as historic resources.

5.1 Washington Heights

The following subsections include a description of the historic context for the development of Washington Heights (**Section 5.1.1**) and an overview of properties that were surveyed (**Section 5.1.2**). No NRHP-listed sites or districts fall within the RLE APE in the Washington Heights community.

5.1.1 Historic Context

The community of Washington Heights, approximately 11 miles south of Chicago's Loop, is roughly bounded by 89th and 91st Streets on the north, 107th Street on the south, Stewart Avenue on the east, and Beverly Avenue on the west.

Washington Heights Development in the 19th Century
The present community of Washington Heights is bisected by Vincennes Avenue, originally an Indian trail that served as an important route to Chicago from the south during the 19th century. Pioneer Norman Rexford established a home and tavern at 91st Street and Vincennes Avenue in 1834, just a year after Chicago was incorporated, and farmers slowly moved into the area during the ensuing decades. The coming of the railroads hastened drainage of the swampy flatlands, thereby encouraging settlement. In the 1860s a small settlement of German and Irish railroad workers gravitated to the vicinity of 103rd Street and Vincennes Avenue, near the intersection of the Chicago, Rock Island and Pacific Line, and the Panhandle Line (Pittsburgh, Cincinnati and St. Louis Railroad), an area that became known as "The Crossing" (Chicago Fact Book Consortium 1995:206).

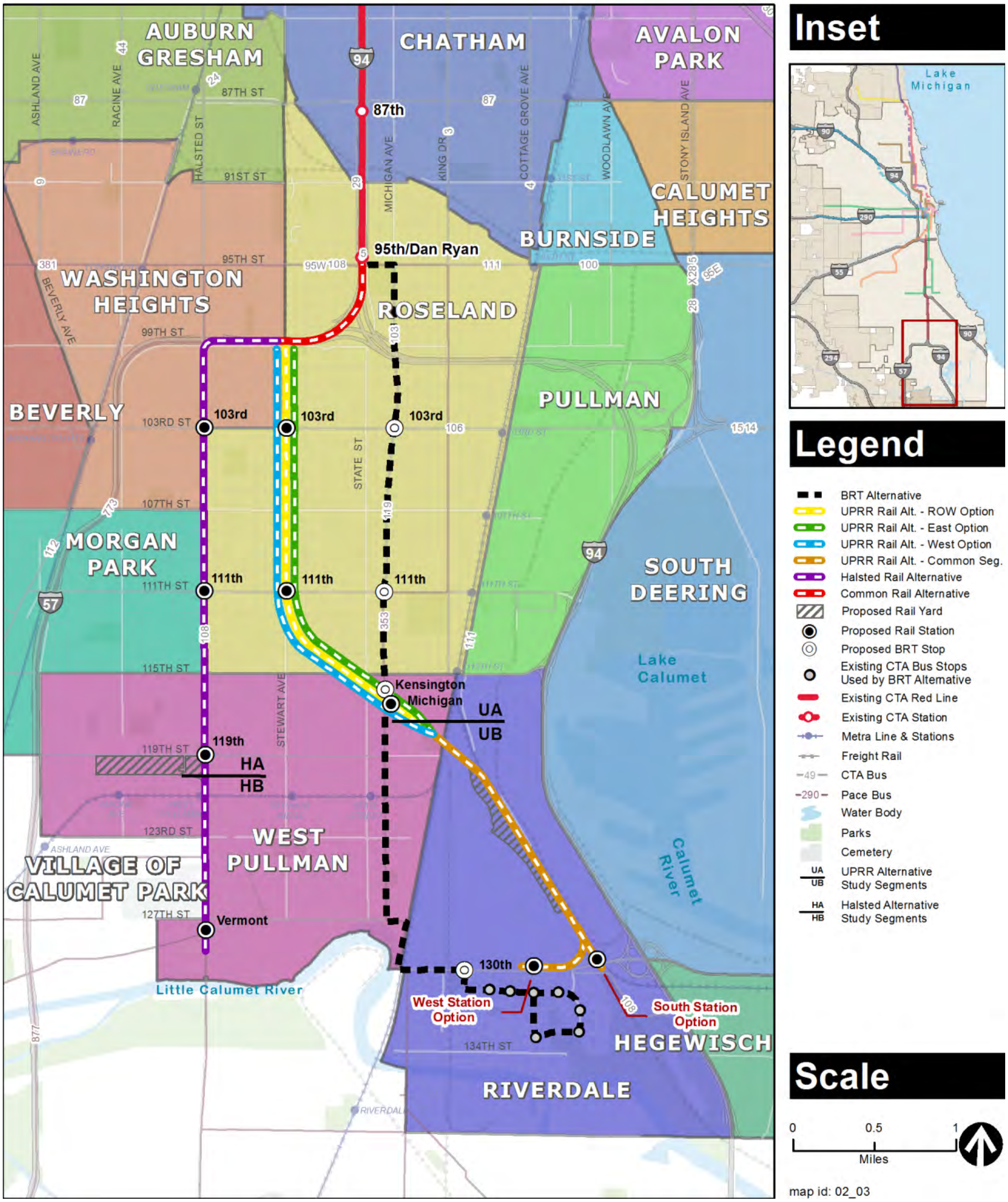
AUBURN GRESHAM
CHATHAM
AVALON PARK
CALUMET HEIGHTS
BURNSIDE
WASHINGTON HEIGHTS
ROSELAND
BEVERLY
PULLMAN
MORGAN PARK
SOUTH DEERING
WEST PULLMAN
VILLAGE OF CALUMET PARK
HEGEWISCH
RIVERDALE
Lake Calumet
Calumet River
Little Calumet River
87th
95th/Dan Ryan
103rd
111th
119th
Kensington
Michigan
Vermont
130th
West Station Option
South Station Option
UA
UB
HA
HB
ASHLAND AVE
RACINE AVE
HALSTED ST
MICHIGAN AVE
KING DR
COTTAGE GROVE AVE
WOODLAWN AVE
STONY ISLAND AVE
STATE ST
STEWART AVE
BEVERLY AVE
87TH ST
91ST ST
95TH ST
99TH ST
103RD ST
107TH ST
111TH ST
115TH ST
119TH ST
123RD ST
127TH ST
134TH ST
Inset
Lake Michigan
Legend
BRT Alternative
UPRR Rail Alt. - ROW Option
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
UPRR Rail Alt. - Common Seg.
Halsted Rail Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Proposed BRT Stop
Existing CTA Bus Stops Used by BRT Alternative
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
CTA Bus
Pace Bus
Water Body
Parks
Cemetery
UPRR Alternative Study Segments
Halsted Alternative Study Segments
Scale
0
0.5
1
Miles
map id: 02_03

Figure 5-1: Community Areas and Red Line Extension Alternatives

Subdivision of the present Washington Heights community began in its southwestern corner during the mid-1860s when Willis M. Hitt and Lauren P. Hilliard bought farmland in the area between 103rd and 107th Streets, between Loomis and Racine Avenues. A small settlement was established around a new station on the Rock Island Railroad line that ran through this area. In 1870 the Blue Island Land and Building Company purchased and subdivided 1,500 acres between 99th and 107th Streets, but it was not extensively developed during the 19th century (Keating 2008:289).

The Village of Washington Heights was incorporated in 1874, with boundaries that stretched from 95th to 107th Streets between Halsted Street and Western Avenue and included much of the present Chicago community of Beverly. A substantial public school building was erected in 1874 at a cost of $20,000, replacing a one-room schoolhouse built in 1866 along 103rd Avenue (Andreas 1884:647). Surviving houses from this early stage of development include a modest Greek Revival style frame house at 9635 South Genoa Avenue and a larger frame home at 9802 South Winston Avenue, distinguished by pointed arch windows in the Gothic Revival style; both homes date to the 1870s (Chicago Department of Housing and Economic Development 1996).

In 1874 the Catholic Church of the Sacred Heart established the Academy of Our Lady of the Sacred Heart in its convent along 95th Street. The school educated about 150 young women, both day and boarding students, by the mid-1880s. The growing population of the girls-only school led the church to build an impressive four-story red brick Romanesque Revival-style edifice at the southwest corner of 95th and Throop Streets in 1899. The girls' school housed classrooms, dormitories, and an auditorium. The German Lutheran Zion Congregation, also founded in 1874, built a frame church at the corner of 99th Street and Vincennes Avenue and a small adjacent school (Andreas 1884:648).

During the 1880s two additional settlements were established within the present boundaries of Washington Heights, although they were originally outside the 1874 boundaries of the Village of Washington Heights. The first, called "Fernwood," was located along the line of the Chicago and Eastern Illinois Railroad east of Halsted Street, between 99th and 103rd Streets. By 1885 there were a reported 180 homes in the area, inhabited mainly by native-born Americans and some Dutch (Keating 2008:289). In 1887 the newly formed Village of Fernwood created a wide parkway between 99th and 103rd Streets. Trees and grass were planted and the village extended Fernwood Parkway north to 95th Street the following year. Though the new parkway provided a lovely setting for new homes and its handful of businesses, the sleepy village remained sparsely settled in the 19th century.

The Brainerd subdivision was created in 1885 and extended from 87th Street to 91st Street, between Racine and Ashland Avenues. The portion of this subdivision north of the Rock Island tracks is now part of the Auburn Gresham community. A Rock Island station was opened at 89th and Loomis Streets in 1889, but settlement awaited the 20th century. By 1890 there were only about six houses in Brainerd (Keating 2008:289).

In 1889 Kansas City bridge builder Horace Horton established the Chicago Bridge and Iron Company in the southwest corner of Washington Heights near the "The Crossing" at 103rd Street and Vincennes Avenue. The company is credited with establishing the Beverly Bank in Washington Heights, which served as a mortgage lender to many Chicago Bridge and Iron Company workers.

Annexation by Chicago of what is now considered the Washington Heights community took place in three stages. In 1890 the area north of 95th Street, including the Brainerd subdivision, was annexed along with South Englewood. Later that year the Village of Washington Heights voted to join them. Fernwood residents feared that becoming part of Chicago would result in the opening of saloons and increasing taxes and thus voted against annexation. Due to its refusal to be annexed, the Village of Fernwood became an island in the city, nicknamed "the Monaco of Chicago" (Chicago Tribune 1890). Residents soon reconsidered their decision, as the small village could not afford to pave its streets or build a school. Annexation of the Fernwood neighborhood took place in 1891 and brought the last section of the current community area within the Chicago city limits. Washington Heights remained sparsely settled through the 1890s, although subdivision activity continued. The land from 91st to 95th Streets, between Vincennes and Ashland Avenues, was subdivided by Cremin and Brenan in 1891 and marketed as the Fairview Park Subdivision (Chicago Tribune 1891a).

Washington Heights Development: 1900 to 1950

By 1900 the western portion of Washington Heights had become known as Beverly. The low-lying eastern portion retained the name of Washington Heights. The present Washington Heights community grew slowly and continued its slow growth in the early 20th century due to poor transportation to Chicago's Loop. It wasn't until 1919 and 1920 that streetcar lines were extended southward along Halsted Street, Racine Avenue, and Ashland Avenue to Washington Heights. As late as 1920, Washington Heights had a population of just about 8,000 and still featured large areas of undeveloped land. This was to change during the citywide construction boom of the 1920s, during which the population more than doubled to 18,000 (Chicago Fact Book Consortium 1995: 206). Vacant parcels throughout the community were improved with brick bungalows and, to a lesser degree, with two- and three-flat residential buildings, homes designed in the popular American Foursquare style, and small brick apartment buildings.

Many of Washington Heights' residents during this period were Germans, Swedes, and Irish who had moved from South Englewood and Greater Grand Crossing in search of better housing. They were served by new institutions and parks, such as the Gothic Revival style Mt. Vernon Public School at 10540 S. Morgan Street, which featured a large adjacent park. The growing St. Margaret of Scotland Parish, which had a large Irish congregation, built a commodious new church (1928) and school (1930) near the intersection of 98th and Throop Streets. Architect Charles Wallace designed both of these Gothic Revival style edifices. The Academy of Our Lady School at 95th and Throop Streets (which became known as Longwood Academy) expanded its campus during the 1920s with three additional buildings that housed dormitories, a music conservatory, and a science hall. After 1950, it served only as a high school (Illinois High School Glory Days 2012).

The 5.5-acre Euclid Park at 9800 S. Parnell Avenue was established during the 1920s to serve the area that was once the old Village of Fernwood. An area real estate office building was moved into the new park for use as a small recreation building and ball fields were installed. The 8-acre Brainerd Park was established during the 1930s at 1246 S. 92nd Street, and featured outdoor athletic facilities and a small field house. It was named for Mr. Brainerd, one of the five founders of the Rock Island Railroad (Chicago Park District 2012).

The boom period of the 1920s was mainly confined to residential development. Washington Heights never developed a cohesive business district, although major thoroughfares in the community such as 103rd Street, Vincennes Avenue, and Halsted Street developed as mixed-use districts with one- to three-story commercial buildings and structures such as gas stations intermixed with residential buildings. Commercial buildings from this period were typically one to three stories in height, mainly faced in brick, with storefronts below and apartments above. Detailing was restrained and included stone lintels and sills, storefront surrounds of stone or terra cotta, and stone or metal cornices or parapets. Most of the commercial buildings were not designed in a specific architectural style, but often included details from a style, such as the Queen Anne, Romanesque, or Classical Revival.

The Chicago Bridge and Iron Company was a major employer in Washington Heights during the first half of the 20th century, with about 600 workers in 1910. During World War II, the company temporarily became a large military contractor and had 12,000 workers making military vessels (Wilson 2005). Residential growth continued through the Depression and World War II, and Washington Heights reached residential maturity before 1950. In that year the population was approaching 25,000 (Chicago Fact Book Consortium 1995:206).

Washington Heights Development: 1950 to Present

Vacant lots throughout Washington Heights were improved with suburban style tract homes and split-level homes during the 1950s and 1960s, a period that also saw the construction of Interstate 57 through the community's southeast quadrant. Community demographics also began to change in the post-World War II period as African-Americans began moving into the area east of Halsted Street. By 1960, African-Americans comprised 12 percent of the total population of about 30,000 residents. Irish, Germans, and Swedes were still the predominant white ethnic groups. During the 1960s, the white population dropped by almost two-thirds while the number of African-American residents increased. A new Washington Heights civic organization was formed in 1967 with the goal of promoting "racial stability" (Wright 1967). By 1970 African-Americans comprised 75 percent of the population, which peaked at 36,540. Ten years later the community had declined in population to 29,843 residents, 98 percent of whom were African-American (Chicago Fact Book Consortium 1995:206).

Several new Modernist style schools were erected in Washington Heights during this period, including the Charles Wacker Elementary School at 9746 S. Morgan Street; the two-story Medgar Evers Elementary School at 9811 S. Lowe Avenue; the three-story Marcus Garvey Elementary School at 10309 S. Morgan Street; and the three-story Percy Julian High School at 10330 S. Elizabeth Street, which opened in 1975. The Carter G. Woodson Regional Library at 9525 S.

Halsted Street, named for an African-American historian, opened in 1975. The two-story building features a 182-seat auditorium and houses the Vivian Harsh Collection, which is the second-largest collection of African-American history and literature in the country. Longwood Academy (originally Academy of Our Lady) at 95th and Throop Streets closed its doors in 1999 and its campus is now the home of Chicago International Charter School-Longwood (Bechetta 1999).

During the late 1990s, much of Halsted Street between 99th and 107th Streets was designated as a Redevelopment Area by the City Council. This designation entitled the city to acquire and assemble land to attract developers. Beautification efforts included median improvements and the installation of planters (Almada 1999). In 2001 the City designated a 58-acre parcel in the southwestern corner of the community as the 105th/Vincennes Avenue Tax Increment Financing (TIF) District. The parcel extends from 103rd to 107th Streets, between I-57 and Vincennes Avenue. Many blocks within the district are irregularly shaped due to the various railroad ROWs and the diagonal alignment of Vincennes Avenue. At the time of designation, this area was largely characterized by vacant and underused land and deteriorated and obsolete buildings, and suffered from a lack of private investment (URS/TPAP 2003:3-4).

The 105th/Vincennes Avenue TIF District was created to assemble large tracts of vacant and underused land for redevelopment as a cohesive and distinct residential neighborhood. Targeted development sites include the former Chicago Bridge and Iron Works property (Ernst and Young 2005, 2010, Camiros Ltd. 2003). New residential development within the TIF District has had a slow start, however. A plan to build 124 homes on six square blocks collapsed and only about two dozen two-story homes were built in the vicinity of 105th Street and Vincennes Avenue (Rodkin 2012). Today Washington Heights is a middle class, African-American neighborhood and the vast majority of its built landscape comprises small, single-family, owner-occupied homes. The community has seen little new construction in recent years.

5.1.2 Surveyed Resources

As part of the fieldwork for the RLE Project, 69 buildings within the Washington Heights portion of the APE were surveyed. These properties, along with their construction date and an assessment of their eligibility for listing on the NRHP, are presented in Table 5-1, alphabetized by street name. Properties determined individually eligible are highlighted. A series of maps in Appendix A graphically presents these findings; individual inventory sheets for surveyed properties are presented in Appendix B.

Table 5-1: 69 Surveyed Properties in Washington Heights

Address	Year Built	Description	Eligibility**
435 W. 100th Place	1942	Single-Family	Not Eligible
444 W. 100th Place	1930	Eclectic Neo-Traditional Home	Eligible
426 W. 100th Street	1943	Single-Family	Not Eligible
430 W. 100th Street	1919	Single-Family	Not Eligible
438 W. 101st Place	1955	Single-Family	Not Eligible
416 W. 102nd Place	1929	Chicago Style Bungalow	Not Eligible
444 W. 102nd Street	1913	Single-Family	Not Eligible
424 W. 103rd Street	1889	Religious Building	Not Eligible
748 W. 103rd Street	1928	Commercial (vacant)	Not Eligible
800-804 W. 103rd Street or 10252-10258 S. Halsted Street	1991	Commercial	Modern
814-824 W. 103rd Street	1958	Commercial	Not Eligible
418 W. 98th Place	1931	Chicago Style Bungalow	Not Eligible
401 W. 99th Street	1942	Single-Family	Not Eligible
9824 S. Eggleston Avenue	1965	Single-Family	Not Eligible
10024 S. Eggleston Avenue	1943	Single-Family	Not Eligible
10058 S. Eggleston Avenue	1930	Chicago Style Bungalow	Not Eligible
10100 S. Eggleston Avenue	1894	Single-Family	Not Eligible
10104 S. Eggleston Avenue	1904	Single-Family	Not Eligible
10142 S. Eggleston Avenue	1948	Single-Family	Not Eligible
10148 S. Eggleston Avenue	1919	Single-Family	Not Eligible
10200 S. Eggleston Avenue	1888	Single-Family	Not Eligible
10236 S. Eggleston Avenue	1913	Single-Family	Not Eligible
9818 S. Emerald Avenue	1899	Single-Family	Not Eligible
9823 S. Emerald Avenue	1944	Single-Family	Not Eligible
9900 S. Emerald Avenue	1947	Single-Family	Not Eligible
9906 S. Emerald Avenue	1942	Single-Family	Not Eligible
9909 S. Emerald Avenue	1944	Single-Family	Not Eligible
9936 S. Emerald Avenue	1955	Modernist Style Residence	Not Eligible
10004 S. Emerald Avenue	1909	Flat	Not Eligible
10100 S. Emerald Avenue	1940	Neo-Tudor Style Residence	Not Eligible
10134 S. Emerald Avenue	1939	Minimal Traditional Residence	Not Eligible
10216 S. Emerald Avenue	1956	Single-Family	Not Eligible
9909 S. Green Street	1929	Chicago Style Bungalow	Not Eligible
9957 S. Green Street	1952	Single-Family	Not Eligible
10051 S. Green Street	1928	Craftsman Style Residence	Not Eligible

Address	Year Built	Description	Eligibility**
10157 S. Green Street	1957	Single-Family	Not Eligible
10201 S. Green Street	1926	Chicago Style Bungalow	Not Eligible
10237 S. Green Street	1926	Chicago Style Bungalow	Not Eligible
10345 S. Green Street	1919	Single-Family	Not Eligible
10401 S. Green Street*	1949	Minimal Traditional Residence	Not Eligible
10457 S. Green Street*	1956	Single-Family	Not Eligible
10541 S. Green Street*	1962	Single-Family	Not Eligible
10601 S. Green Street*	1954	Single-Family	Not Eligible
9901 S. Halsted Street	1987	Commercial	Modern
9911 S. Halsted Street	1986	Commercial	Modern
9915 S. Halsted Street	1996	Substation & Cell Tower	Modern
10004 S. Halsted Street	1957	Commercial	Not Eligible
10019 S. Halsted Street	1996	Church	Modern
10114 S. Halsted Street	1903	Multi-Family	Not Eligible
10116 S. Halsted Street	1937	Multi-Family	Not Eligible
10159 S. Halsted Street	1952-1962	Religious	Not Eligible
10227 S. Halsted Street	1919-1920	Classical Revival Substation	Eligible CHRS Orange
10238-10240 S. Halsted Street	1938	Mixed-Use	Not Eligible
10241 S. Halsted Street	1894	Single-Family	Not Eligible
10326 S. Halsted Street	1938-1959	Mixed-Use	Not Eligible
10506 S. Halsted Street	1955	Commercial	Not Eligible
9906 S. Lowe Avenue	1904	Single-Family	Not Eligible
9907 S. Lowe Avenue	1926	Single-Family	Not Eligible
9822 S. Normal Avenue	1947	Single-Family	Not Eligible
9900 S. Normal Avenue	1953	Single-Family	Not Eligible
9925 S. Normal Avenue	1946	Single-Family	Not Eligible
9821 S. Parnell Avenue	1961	Single-Family	Not Eligible
9900 S. Parnell Avenue	1950	Single-Family	Not Eligible
9901 S. Parnell Avenue	1965	Single-Family	Not Eligible
9819 S. Union Avenue	1962	Single-Family	Not Eligible
9822 S. Union Avenue	1944	Single-Family	Not Eligible
9901 S. Union Avenue	1948	Minimal Traditional Residence	Not Eligible
9906 S. Union Avenue	1957	Single-Family	Not Eligible
9912 S. Wallace Street	1922	Single-Family	Not Eligible

CHRS = Chicago Historic Resources Survey
* Surveyed property within proposed Green Street Historic District
** Properties noted as “Modern” are less than 50 years in age and do not exhibit “exceptional importance.”

5.1.2.1 National Register of Historic Places-Eligible Resources

Of the 69 buildings surveyed within the Washington Heights portion of the RLE APE, 2 were identified as eligible for listing on the NRHP. These are briefly described below.

In addition, one NRHP-eligible historic district was identified along Green Street, between 104th Street and 109th Street. A cluster of Chicago Georgian and Raised Ranch homes exist in this area. While only one side of Green Street falls within the APE, the area could form a district under NRHP Criterion C based on its architecture. The linear streetscape features a cohesive grouping of vernacular homes of the type used to build up the outlying areas of Chicago that developed in the post-WWII era. Although such neighborhoods are common throughout the city, these five blocks include front gabled and hip roof ranch homes, front gabled cottages, and Chicago Georgian style homes with little to no modern infill. Individual homes date from the 1950s and 1960s and feature the same setbacks and similar brick cladding. They appear to be well maintained. A portion of the district falls within the Morgan Park neighborhood. The proposed district boundary is shown in Figure 5-2. Eight buildings were surveyed within the proposed Green Street Historic District but none are recommended as individually eligible.

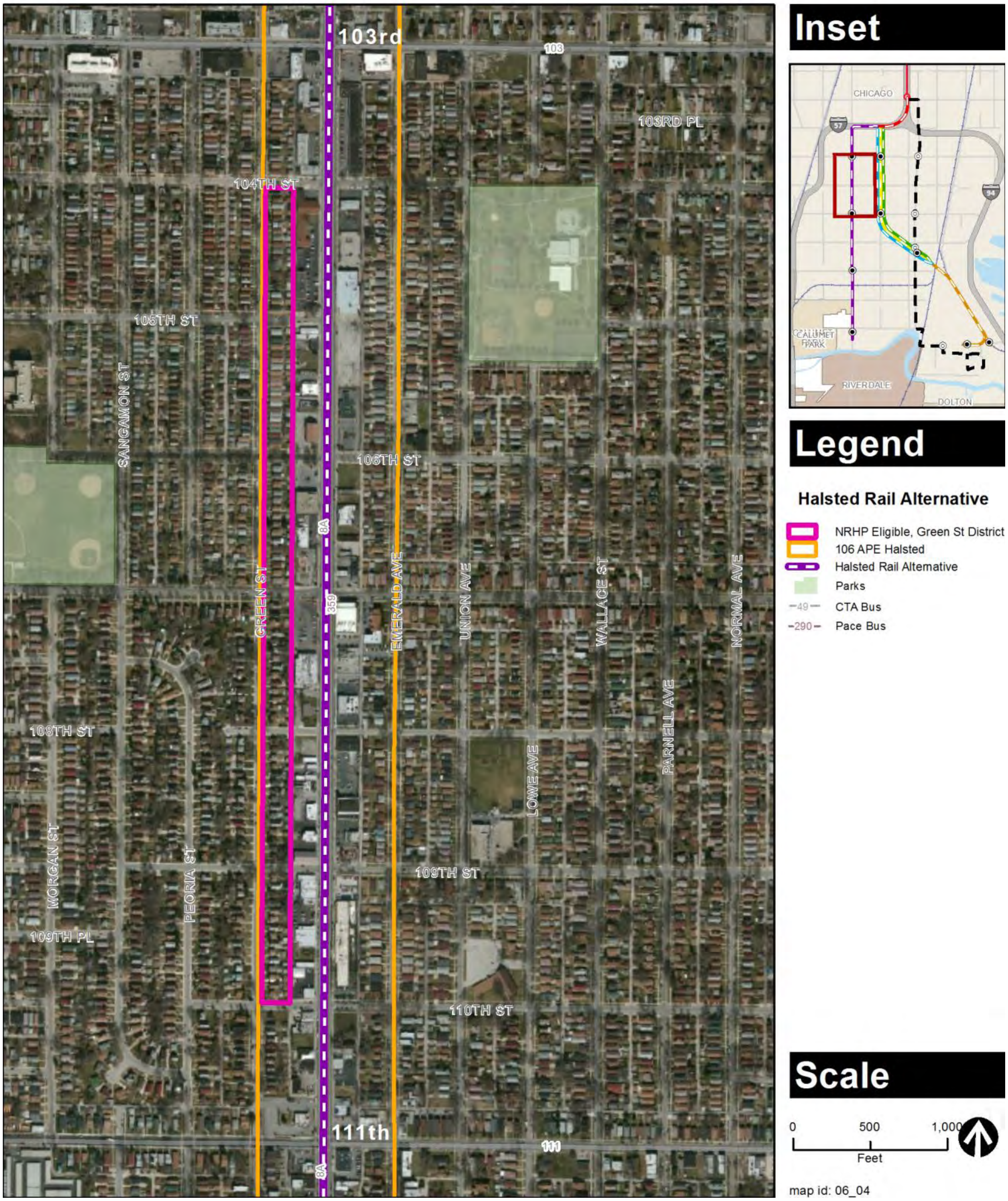
103rd
103
103RD PL
104TH ST
105TH ST
106TH ST
108TH ST
109TH ST
109TH PL
110TH ST
111th
111
SANGAMON ST
GREEN ST
EMERALD AVE
UNION AVE
WALLACE ST
NORMAL AVE
LOWE AVE
PARNELL AVE
MORGAN ST
PEORIA ST
8A
359
Inset
CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON
Legend
Halsted Rail Alternative
NRHP Eligible, Green St District
106 APE Halsted
Halsted Rail Alternative
Parks
-49- CTA Bus
-290- Pace Bus
Scale
0
500
1,000
Feet
map id: 06_04

Figure 5-2: Proposed Boundary for Green Street Historic District and Red Line Extension Area of Potential Effects

Eclectic Neo-Traditional Home, 444 W. 100th Place

This one-story home in the Washington Heights community rests on a raised basement as shown in Figure 5-3. Built in 1930, it is clad with polychromatic brick and has a side gabled roof covered with asphalt shingles. Its front elevation has a gabled living room bay pavilion with paired basement windows, a group of three non-original one-over-one windows with concrete sills, brick arch lintels, colonettes with acanthus leaf capitals, and a small round-arched window in the gable. The house has a recessed corner porch with a metal storm door, round-arch openings, a Neo-Gothic castellated top, concrete steps, and brick sidewalls. The integrity of its materials and detailing is very good. Its Eclectic Neo-Traditional ornamentation makes it stand out among the vernacular, stripped-down brick and frame bungalows and cottages that comprise the predominant building stock in the Washington Heights community. As a result, it was identified as individually eligible for NRHP listing under Criterion C for its architecture.

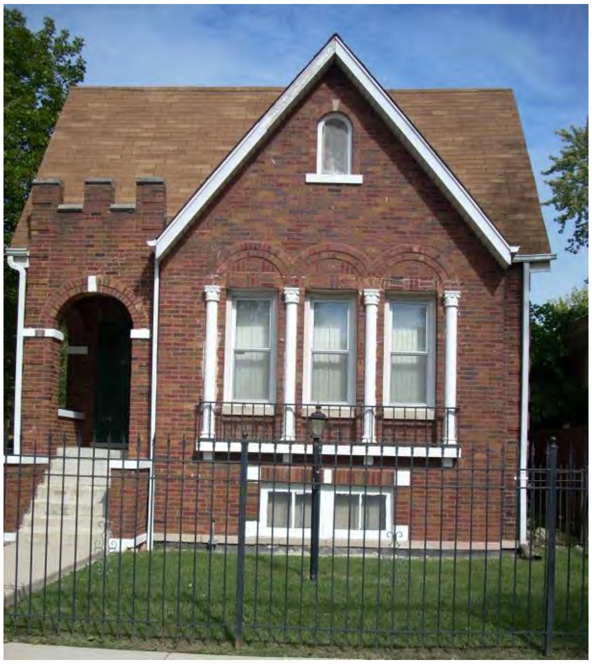

Figure 5-3: South Facade of the Eclectic Neo-Traditional Home at 444 W. 100th Place

Classical Revival Substation, 10227 S. Halsted Street
This vacant two-story Classical Revival style substation in Washington Heights has a stone water table. Built circa 1920, it is clad with multi-hued brown face brick on its front elevation and common brick along its side and rear elevations. The building is shown in Figure 5-4. The building has a flat roof with parapet. Dark brown-colored brick accents the facade with stringcourses, soldier courses, and cruciform patterns against the reddish brown-colored brick. The front elevation features a centrally located entrance with a Classical surround that includes Ionic columns and an entablature including a segmental pediment and frieze band with incised lettering that reads, "Southwest Substation." The original door, sidelight, and transom have been removed and their openings covered with plywood. Directly above the entrance is a strip of three plywood-covered window openings with stone casing. Decorative detailing includes full-height brick corner pilasters, a stone belt course above the windows, and a stone cornice with widely spaced dentils. Directly beneath the cornice is a stone panel with incised lettering that reads, "City of Chicago Dep't of Gas & Electricity." Nearly all of the side elevation window openings are covered with plywood.

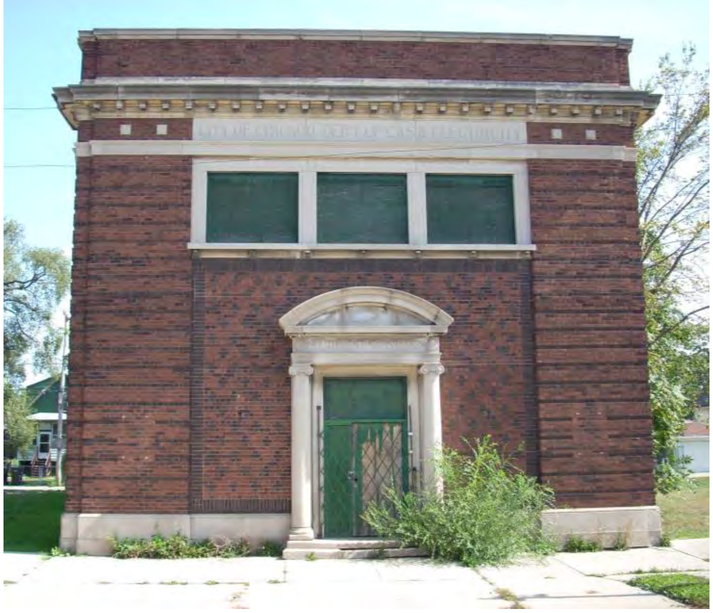

Figure 5-4: West Facade of the Classical Revival Substation at 10227 S. Halsted Street

This is a rare extant example of a Classical Revival substation in Washington Heights. The substation has retained its decorative detailing; it is possible that original windows may be behind the wood covering. Assuming that the interior has retained interior fabric, this building is recommended as individually eligible for listing on the NRHP under Criterion A for its association with utilities infrastructure and under Criterion C for architecture.

5.1.2.2 Properties Surveyed but Determined Ineligible

Beyond the properties that were identified as individually eligible for NRHP listing, a number of properties were surveyed that did not meet the criteria. Generally, these properties had subsequent alterations that compromise their historic integrity, or they do not feature a level of distinctive architectural detailing necessary to qualify for the NRHP.

5.2 Roseland Community

The following subsections include a description of the historic context for the development of the Roseland community (**Section 5.2.1**) and an overview of historic properties that were surveyed (**Section 5.2.2**). No NRHP-listed sites or districts fall within the RLE APE in the Roseland community.

5.2.1 Historic Context

The Roseland community, which is approximately 12 miles south of Chicago's Loop, is bounded by train tracks on the north, 115th Street on the south, Cottage Grove Avenue on the east, and Halsted and Stewart Streets on the west. The community is served by public transportation via the CTA Red Line station at 95th Street, the last stop on this line, and by the Metra with four stops between 103rd and 115th Streets.

Roseland Development in the 19th Century
The Roseland community was undeveloped wet prairie with occasional patches of dry prairie in the mid-19th century. The Chicago-Thornton Road (now Indiana Avenue), which was built on high prairie, crossed the community. Initial settlement occurred in 1849 when a group of Dutch families from the district between Amsterdam and Rotterdam in Holland, in search of land for truck farming, established a settlement of frame houses along this road between 103rd and 111th Streets. One of the immigrants' first endeavors was to build a small wood meeting house at the southwest corner of 107th Street and Michigan Avenue in 1850 for the First Reformed Church of Roseland, the first of three Dutch churches on this site (Andreas 1884:607).

The immigrants became known as the "Hollanders of the High Prairie." They cultivated cabbage, cauliflower, beets, carrots, potatoes, and tomatoes, which they hauled to Chicago's South Water Street Market on the Chicago-Thornton Road. More Dutch immigrants settled the low-lying land between the high prairie and Lake Calumet to the east. Some of the Dutch worked on the construction of the new railroads. The community was called Hope when the first post office opened in 1861, and was initially part of the Lake Township. In 1867 the area east of State Street became part of the newly incorporated Village of Hyde Park (Chicago Fact Book Consortium 1995:152). The Dutch truck farmers also grew flowers, and the lavish annual display of red roses led to the adoption of the name of Roseland for the community in the 1870s. The gable-roofed cottage at 10057 S. Michigan Avenue (1869) is a rare extant home from this early period of agricultural settlement.

Roseland remained a sparsely settled pastoral village of 772 residents in 1880, featuring Old World language and customs as noted by A.T. Andreas (1884:607) in his History of Cook County:

> "Its inhabitants are the sturdy phlegmatic, industrious, natives of Holland; and standing by some of the little, squat, small-windowed houses, hearing the high-Dutch gutturals, seeing the pollards and rectangular enclosures, the square-faced, wooden-shoed, tow-headed little Dutchmen; in fact, observing the *tout ensemble* would cause one to fancy themselves rather near Amsterdam, or in primitive Nieuw Amsterdam, rather than fifteen miles from Chicago."

Roseland's transformation to an urban community began in the 1880s with the establishment of the Pullman Palace Car Company to the east and the development of several additional railroads along the borders of the area. The annexation of both Lake Township and the Village of Hyde Park in the early 1890s brought Roseland within Chicago's city limits. The Calumet region became steadily industrialized during the 1890s as the Illinois Central Railroad built its Burnside shops in the northeast section of Roseland.

Swedish, German, English, and Irish workers moved into the Roseland community in the late 19th century, attracted to readily available jobs for the railroads, the Pullman shops, steel plants, and other industries that moved into the Calumet region. Roseland's population spread to the south and west and the new residences included modest one- and one-and-a-half-story frame workers' cottages, such as those at 351 W. 109th Street (1889) and 11336 S. Yale Avenue (1894). Less common were cottages built of brick, such as the Italianate style example at 11452 S. Indiana Avenue (1880s).

An impressive Romanesque Revival style public elementary school, the Peter Van Vlissingen School at 137 W. 108th Street (demolished 1999), was completed in 1892 by the Chicago Board of Education. Numerous churches were built in the community during the 1880s and 1890s, including the German Catholic St. Nicholas Church at 11324 S. State Street (built 1896 by architect William Brinkmann) and the church at 11032 S. Indiana Avenue (1891), both designed in the Gothic Revival style. Holy Rosary Church at 113th Street and Martin Luther King Drive was built for the Irish community in 1890 and designed in the Romanesque style by Pullman architect Solon Beman. The First Reformed Church of Roseland at 10706 S. Michigan Avenue, a designated Chicago landmark built in 1887 by architects Henrik De Jong and Jan Kleinhuizen, became the third Dutch church on this site (Taussig 1989).

The corner of 111th Street and Michigan Avenue served as a commercial node for Roseland's earliest settlers, growing to the north and south with the extension of the Michigan Avenue streetcar line to 115th Street in 1892. The two-story buildings at 11314 S. Michigan Avenue, 11349 S. Michigan Avenue, and 11433 S. Michigan Avenue with ground floor shops and flats above are representative of this period of development. The 11314 and 11349 S. Michigan Avenue buildings retain their decorative second-story pressed metal window bays, while the 11433 S. Michigan Avenue building features intact terra cotta detailing. By the turn of the 20th century, Roseland's Michigan Avenue stores served customers from several nearby communities, including Burnside and West Pullman, and its merchants had formed the South End Merchants Association (later called the South End Chamber of Commerce).

Roseland Development: 1900 to 1950

Roseland's largest green space—the 40-acre Palmer Park—was created in 1904 on the tract bounded by 111th and 113th Streets to the north and south, and by King Drive and Indiana Avenue to the east and west. The park is named for Potter Palmer (1826–1902), one of Chicago's most successful merchants and a member of the South Park Commission that established Palmer Park as part of its revolutionary neighborhood parks system to provide green space in Chicago's crowded immigrant neighborhoods. Palmer Park, as well as the nine other South Side neighborhood parks that opened in 1905, was designed by the Olmsted Brothers, a nationally renowned landscape architecture firm. The Classically styled fieldhouse was designed by the prominent Chicago firm of D. H. Burnham and Company. In 1934, Park District Art Director James Edward McBurney created three murals for the Palmer Park Fieldhouse as a Works Progress Administration project funded by the federal government. They are titled "Native Americans," "Explorers," and "Dutch Settlers."

In 1910 the City of Chicago erected a pumping station and firehouse across the street from each other on the 300 block of West 104th Street and donated adjacent property to Chicago's Special Park Commission for the creation of a natatorium with swimming and changing room facilities. The natatorium, which opened in 1916, was equipped to serve 1,500 patrons per day. A gymnasium was added to the natatorium in the 1920s. The surrounding park was named in 1940 for Eugene H. Block (1865–1938), who served as Alderman for the 33rd and 9th Wards between 1910 and 1917.

The Pullman Free School of Manual Training opened in 1915 at 11006 S. Indiana Avenue, on the block just north of Palmer Park. Designed by architect Frank Jobson in the Classical Revival style, the school was built through a bequest of $1.2 million made by George Pullman upon his death in 1897, with an additional bequest made later by Mrs. Pullman. The school served the children of employees of the Pullman car works and the Pullman-Roseland communities (*Chicago Tribune* 1914, 1915). The school closed in 1950, as its endowment could no longer sustain the rising costs of the school, which was prohibited from charging tuition according to Pullman's will. In subsequent years, the building served as the Gregor Mendel Roman Catholic High School, operated by the Augustinians (1951–88), and as St. Martin de Porres High School, operated by the Archdiocese of Chicago (1989–97). The building was sold to the Chicago Public Schools system in 1998, and opened in 1998 as the Southside College Preparatory Academy, which was renamed in 2001 in honor of Gwendolyn Brooks, a former South Side resident and U.S. poet laureate.

Polish and Italian immigrants were added to Roseland's ethnic mix in the early 20th century. In 1920 Roseland's population stood at 28,241 and abundant undeveloped land remained throughout the community. This situation was to change quickly during the decade to follow, when Roseland's population rapidly increased with an influx of Lithuanians, Italians, Germans, and a small number of African-Americans. The accompanying building boom of the 1920s transformed Roseland into a mature residential community and vacant parcels were improved with one- to two-story gable-roofed wood cottages, brick bungalows, and wood frame homes in the popular American Foursquare style. Some multi-family brick two-flats and small apartment buildings were built as well, including an Art Deco style apartment building at 10411 S. Rhodes Avenue (1929).

The years from 1900 to 1950 saw the erection of numerous churches to serve Roseland's growing multi-ethnic community. Holy Rosary Church added a rectory (1901) and a two-story Renaissance Revival style Catholic school (1916; Anders G. Lund) along the 113th block of Martin Luther King Drive (Chicago Real Estate Daily 2008). Solon S. Beman was the architect of the Classical Revival style Sixth Church of Christ, Scientist at 11325 S. Prairie Avenue (1911), one of six Christian Science church buildings he designed in Chicago. The Roseland Christian School, a three-story brick building at 314 W. 108th Street, was built by the Dutch community in 1929. Institutional buildings erected during the 1920s in Roseland included the Pullman Public Library at 11011 S. Indiana Avenue, a Classical Revival style building designed by Arthur Hussander, and the Roseland Community Hospital at 45 W. 111th Street.

During the early 20th century, Roseland's Michigan Avenue commercial district expanded to encompass the mile-long stretch from 103rd Street to 115th Street. Its wide range of small shops, department stores, and recreational amenities including bowling alleys and movie theaters attracted customers from an ever-expanding geographic area on the South Side. Buildings erected along Roseland's commercial spine were typically one to two stories in height, mainly faced in brick, with commercial storefronts and apartments above. Detailing was restrained and included stone lintels and sills, storefront surrounds of stone or terra cotta, and stone or metal cornices or parapets. The two-story building at 11000 S. Michigan Avenue is an example of a terra cotta-clad building from this period. Most of the commercial buildings were not designed in a specific architectural style, but often included details from a style such as the Queen Anne, Romanesque, Classical Revival, or Chicago School. Some buildings had more elaborate upper-story ornamentation, such as pressed metal window bays or Sullivanesque panels in terra cotta, as displayed in the one-story building at 10351 S. Michigan Avenue.

In 1917 James Gately opened the two-story Gately's People Store at the corner of 112th Street and Michigan Avenue, a Chicago School style department store that became a fixture in the community until its closure in 1980. The 2,000-seat State Theater at 110th Street and Michigan Avenue opened in 1922; the block-long building, which featured store-and-office wings flanking the theater, quickly became a prominent visual landmark in the community with its marquees and exuberant, Classically styled ornamentation in terra cotta. The considerably smaller Roseland Theater at 11331 S. Michigan Avenue was designed in a restrained version of the Art Deco style.

Roseland's growth slowed during the economic depression of the 1930s but rebounded during the 1940s following World War II, with population rising from 44,009 in 1940 to 56,705 in 1950 (Priddy 1954). African-Americans constituted a large portion of this increase. They moved to an enclave called Lilydale, which was established north of 99th Street after World War I. The Lilydale Improvement Association was formed to provide assistance to African-Americans seeking homeownership in the area (*Chicago Tribune* 1928). During the 1940sthe Lilydale neighborhood was increasingly developed with small brick homes and duplexes. Many of these homes were located in the Princeton Park development, which was built in 1944 and bounded by 91st Street, 95th Street, Wentworth Avenue, and Harvard Avenue, and later expanded to State Street. In 1947 prominent African-American contractor Matthew Goodwin Sr., who worked in partnership with his two sons, built 30 homes in the Lilydale neighborhood. Goodwin's work was described in a

1947 *Chicago Tribune* article by Albert F. Barnett titled “Chicago Negroes Fight Housing Shortage, Build Their Own Homes:”

> Goodwin Sr. is rated in housing circles as one of the ablest contractors in the city regardless of race…Goodwin up to date has constructed more than 700 homes for Negroes, a record reportedly without precedent anywhere in the nation among Negroes…At present Goodwin and Sons has 30 homes under construction on the far Southside in the section ranging from 90th Street to 95th Street and from State Street west to Perry Avenue.

Roseland Development: 1950 to Present

The private rental Princeton Park development was joined in 1954 by an adjacent Chicago Housing Authority project, comprising 128 row houses in 18 clusters centered around 95th Street and Wentworth Avenue. Designed by architect Sydney H. Morris, the Governor Frank O. Lowden Homes were mainly occupied by African-Americans fleeing the Black Belt of the inner city (Bowly 1978:86). The growing African-American community in Roseland’s northern section was served by the creation in 1950 of the 23-acre Abbott Park, which was bounded by 95th Street, 98th Street, State Street, and Michigan Avenue. The park, which features both a swimming pool and field, was named for Robert Abbott (1868–1940), who founded the influential *Chicago Defender* newspaper in 1905. In 1956, the park district sold a portion of the parkland to the Board of Education for the establishment of Harlan High School at 9652 S. Michigan Avenue.

During the 1950s and 1960s, Roseland served as a community—albeit on its northern end only—where African-Americans could purchase a home and build a future. Construction of the Dan Ryan Expressway during the late 1950s cut a wide swath through Roseland’s north end. This dramatic intervention on the urban landscape resulted in the demolition of many homes and physically divided this area from the remainder of the community to the south.

Roseland’s vacant edges were developed from the 1950s through the early 1970s with clusters of identical one-story and split-level tract homes. Residents of Roseland and neighboring communities continued to be served by the Michigan Avenue commercial district, which thrived into the 1950s. A 1957 *Chicago Tribune* article noted that the stretch of Michigan Avenue from 101st Street to 119th Street, which included four blocks of the West Pullman community to the south, featured “close to 500 stores which saw a $76 million retail business as far back as 1954.” During the 1950s “The Avenue,” as it was called by Roseland residents, featured 119 food stores, 72 eating and drinking places, 72 apparel stores, 34 furniture and appliance dealers, and 18 drug stores, leading a contemporary *Chicago Tribune* reporter (Bach 1957) to optimistically state “Roseland is alive with new plans to meet the demands of its promising business future.”

Roseland’s economic fortunes began a rapid decline in the 1970s, however, due in large part to the collapse of the South Side’s industrial base. Industries such as the Pullman Company, Wisconsin Steel, International Harvester, CIP Warehousing, Allied Chemical, and Dutch Boy Paint Company that once hired numerous Roseland residents closed their doors, and other industries dramatically reduced their work forces. The establishment in 1972 of the Chicago State University on the former site of Illinois Central Railroad’s Burnside Shops in the northeastern corner of the community was seemingly the only bright spot during this period. Jobs in Roseland decreased from 22,945 to 9,889 between 1974 and 1985 (City of Chicago Department of Planning 1991:9). The 53 percent decline in employment in this decade had a devastating effect on many households and businesses in the area.

Chicago's South Side workers followed their jobs to the far south suburbs. Joining them were residents who feared integration during a period when Roseland's racial composition changed dramatically. During the decade of 1970–80, Roseland changed from a racially mixed community to an almost exclusively African-American community. Roseland's economic woes quickly sparked a downward slide that featured a variety of community woes, such as unemployment, mortgage defaults, business failures, and gang-related problems. More than 900 mortgages were foreclosed during the 1970s and the Department of Housing and Urban Development (HUD) announced the beginning of a repair-and-sell program for repossessed houses in the Roseland area (Chicago Fact Book Consortium 1995:152). Roseland also lost a key recreational amenity when the 1915 natatorium building with swimming pool and gymnasium in Block Park was razed in 1998 and its site was converted to green space.

The most dramatic changes to Roseland's urban landscape, however, have occurred throughout its once thriving and densely built spine along Michigan Avenue. Decline set in as early as the 1960s, as the district found it hard to compete with automobile-oriented shopping centers such as Evergreen Plaza (95th Street and Western Avenue in Evergreen Park), Ford City (75th Street and Cicero Avenue), and River Oaks (Calumet City). The loss of residents' buying power in subsequent decades hastened the decline of the business district, which spurred the closure of larger community businesses such as Gately's Peoples Store and J.C. Penney, leaving behind smaller and more marginal businesses. Numerous commercial buildings that suffered from years of vacancy and neglect were razed, including the block-long State Theater, once a prominent visual landmark in the community. By the 1990s the Michigan Avenue corridor was characterized by large swaths of land and vacant buildings, especially in the area between 104th and 110th Streets; however, the stretch between 110th and 115th streets retained a concentration of buildings with viable retail establishments.

In response to this situation, the Chicago Department of Housing and Economic Development initiated a Community Assistance Panel in 1990 to analyze the Michigan Avenue Commercial District and to provide recommendations for its revitalization. The panel recommended that the area between 110th and 116th Streets be designated as the community's primary commercial district and that the area between 103rd and 110th Streets be designated as a primarily residential district (Chicago Department of Planning 1990:1).

In 2002 the city created the Roseland/Michigan TIF District, which encompasses 176 acres of commercial, residential, and institutional properties along Michigan Avenue between 100th and 120th Streets in the Roseland and West Pullman communities. The TIF District was created "to encourage a broad range of improvements to existing commercial and residential properties and to foster new construction where appropriate" (Chicago Department of Housing and Economic Development 1996). At the time of its designation, there were 484 buildings in the project area, 420 (86 percent) of which were classified as deteriorating, and 252 vacant lots (Trkla, Pettigrew, Allen & Payne:4). Some positive new developments in Roseland over the past decade include the Victory Centre of Roseland, a senior housing development at 10450 S. Michigan Avenue, single-family houses and two-flats along South Michigan Avenue between 105th and 107th Streets by Neighborhood Housing Services, and the Art Deco style Roseland Theater at 11331 S. Michigan Avenue that has been restored and converted to retail space.

5.2.2 Surveyed Resources

As part of the fieldwork for the RLE Project, 279 buildings within the Roseland portion of the APE were surveyed. These properties, along with their construction date and an assessment of their eligibility for listing on the NRHP, are presented in Table 5-2, alphabetized by street name. Properties determined individually eligible are highlighted. A series of maps in Appendix A graphically present these findings; individual inventory sheets for surveyed properties are presented in Appendix B.

Table 5-2: 279 Surveyed Properties in Roseland

Address	Year Built	Description	Eligibility
222 W. 98th Street	1964	Single-Family	Not Eligible
349 W. 99th Place	1979	Single-Family	Modern
355 W. 99th Place	1972	Single-Family	Modern
124 W. 99th Street	1965	Single-Family	Not Eligible
314 W. 100th Place	1965	Single-Family	Not Eligible
319 W. 100th Place	1949	Single-Family	Not Eligible
348 W. 100th Place	1967	Single-Family	Modern
349 W. 100th Place	1967	Single-Family	Modern
352 W. 100th Place	1967	Single-Family	Modern
318 W. 100th Street	1947	Minimal Traditional Residence	Not Eligible
348 W. 100th Street	1974	Single-Family	Modern
349 W. 100th Street	1969	Single-Family	Modern
350 W. 100th Street	1973	Single-Family	Modern
351 W. 100th Street	1970	Single-Family	Modern
354 W. 100th Street	1967	Single-Family	Modern
355 W. 100th Street	1971	Single-Family	Modern
317 W. 101st Place	1966	Single-Family	Modern
334 W. 101st Place	1949	Single-Family	Not Eligible
349 W. 101st Place	1965	Single-Family	Not Eligible
352 W. 101st Place	1967	Single-Family	Modern
353 W. 101st Place	1973	Single-Family	Modern
355 W. 101st Place	1973	Single-Family	Modern
331 W. 101st Street	1952	Single-Family	Not Eligible

Address	Year Built	Description	Eligibility
342 W. 101st Street	1948	Single-Family	Not Eligible
348 W. 101st Street	1970	Single-Family	Modern
349 W. 101st Street	1930	Chicago Style Bungalow	Not Eligible
351 W. 101st Street	1930	Chicago Style Bungalow	Not Eligible
352 W. 101st Street	1960	Single-Family	Not Eligible
355 W. 101st Street	1971	Single-Family	Modern
330 W. 102nd Place	1930	Chicago Style Bungalow	Not Eligible
347 W. 102nd Place	1973	Single-Family	Modern
348 W. 102nd Place	1927	Single-Family	Not Eligible
351 W. 102nd Place	1973	Single-Family	Modern
353 W. 102nd Place	1972	Single-Family	Modern
354 W. 102nd Place	1973	Single-Family	Modern
320 W. 102nd Street	1929	Single-Family	Not Eligible
337 W. 102nd Street	1930	Single-Family	Not Eligible
342 W. 102nd Street	1940	Single-Family	Not Eligible
347 W. 102nd Street	1966	Single-Family	Modern
348 W. 102nd Street	1939	Minimal Traditional Residence	Not Eligible
351 W. 102nd Street	1967	Single-Family	Modern
352 W. 102nd Street	1930	Single-Family	Not Eligible
353 W. 102nd Street	1969	Single-Family	Modern
301 W. 103rd Place	1921	Craftsman Style Residence	Not Eligible
306 W. 103rd Place	1941	Single-Family (vacant)	Not Eligible
321 W. 103rd Place	1924	Craftsman Style Residence	Not Eligible
326 W. 103rd Place	1923	Multi-Family	Not Eligible
426 W. 103rd Place	1909	Single-Family	Not Eligible
427 W. 103rd Place	1898	Multi-Family	Not Eligible
436 W. 103rd Place	1908	Single-Family	Not Eligible
440 W. 103rd Place	1893	Single-Family	Not Eligible
455 W. 103rd Place	1908	Single-Family	Not Eligible
316 W. 103rd Street	1962	Commercial (vacant)	Not Eligible
319 W. 103rd Street	1953	Commercial	Not Eligible
403-405 W. 103rd Street	1900	Former Hay, Grain, & Feed Store	Not Eligible
421 W. 103rd Street	1899	Single-Family	Not Eligible
453 W. 103rd Street	1878	Single-Family	Not Eligible
262 W. 104th Place	1910	Single-Family	Not Eligible
328 W. 104th Place	1923	Craftsman Style Residence	Not Eligible
335 W. 104th Place	1919	Single-Family	Not Eligible
310 W. 104th Street	1923	Craftsman Style Residence	Not Eligible

Address	Year Built	Description	Eligibility
324 W. 104th Street or 328-330 W. 104th Street	1917	Fire Department Engine Co. 93	Eligible CHRS Orange
325 W. 104th Street	1924	Single-Family	Not Eligible
351 W. 104th Street	1911	Roseland Pumping Station	Eligible CHRS Orange
401 W. 104th Street	1967	Education	Modern
405 W. 104th Street	1967	Education	Modern
415 W. 104th Street	1923	Single-Family	Not Eligible
430 W. 104th Street	1927	Chicago Style Bungalow	Not Eligible
457 W. 104th Street	1922	Single-Family	Not Eligible
351 W. 105th Place	1972	Single-Family	Modern
355 W. 105th Place	1972	Single-Family	Modern
343 W. 105th Place	1926	Craftsman Style Residence	Not Eligible
344 W. 105th Place	1925	Craftsman Style Residence	Not Eligible
411 W. 105th Street	1960/2005	Industrial	Not Eligible
416 W. 105th Street or 410 W. 105th Street	1929	Mixed-Use (vacant)	Not Eligible
338 W. 106th Place	1913	Single-Family	Not Eligible
340 W. 106th Place	1925	Craftsman Style Residence	Not Eligible
343 W. 106th Place	1907	Single-Family	Not Eligible
349 W. 106th Place	1914	Single-Family	Not Eligible
350 W. 106th Place	1908	Single-Family	Not Eligible
352 W. 106th Place	1924	Single-Family	Not Eligible
353 W. 106th Place	1972	Single-Family	Modern
341 W. 106th Street	1903	Single-Family	Not Eligible
346 W. 106th Street	1964	Single-Family	Not Eligible
351 W. 106th Street	1898	Single-Family	Not Eligible
352 W. 106th Street	1972	Single-Family	Modern
353 W. 106th Street	1924	Single-Family	Not Eligible
354 W. 106th Street	1972	Single-Family	Modern
332 W. 107th Place	1949	Single-Family	Not Eligible
333 W. 107th Place	1924	Craftsman Style Residence	Not Eligible
346 W. 107th Place	1927	Industrial	Not Eligible
355 W. 107th Place	1986	Industrial	Modern
335 W. 107th Street	1899	Single-Family	Not Eligible
350 W. 107th Street	1979	Single-Family	Modern
352 W. 107th Street	1974	Single-Family	Modern
400 W. 107th Street	1929	Industrial	Not Eligible
415 W. 107th Street	1920	Commercial	Not Eligible

Address	Year Built	Description	Eligibility
432 W. 107th Street	1962	Single-Family	Not Eligible
744 W. 107th Street	1957	Single-Family	Not Eligible
300 W. 108th Place	1908	Single-Family	Not Eligible
313 W. 108th Place	1918	Single-Family	Not Eligible
348 W. 108th Place	1928	Single-Family	Not Eligible
349 W. 108th Place	1909	Single-Family	Not Eligible
234 W. 108th Street or 314 W. 108th Street	1928	Educational	Not Eligible
340 W. 109th Place	1925	Craftsman Style Residence	Not Eligible
341 W. 109th Place	1883	Single-Family	Not Eligible
348 W. 109th Place	1930	Single-Family	Not Eligible
350 W. 109th Place	1908	Multi-Family	Not Eligible
301 W. 109th Place	1905	Multi-Family (vacant)	Not Eligible
349 W. 109th Street	1888	Multi-Family	Not Eligible
350 W. 109th Street	1894	Single-Family	Not Eligible
351 W. 109th Street	1889	Single-Family	Not Eligible
354 W. 109th Street	1894	Single-Family	Not Eligible
404-410 W. 109th Street	1965	Industrial (vacant)	Not Eligible
407-409 W. 109th Street	1956	Industrial	Not Eligible
743 W. 109th Street	1954	Single-Family	Not Eligible
332 W. 110th Place	1899	Single-Family	Not Eligible
341 W. 110th Place	1916	Single-Family	Not Eligible
347 W. 110th Place	1892	Single-Family	Not Eligible
301 W. 110th Street or 11010 S. Princeton Avenue	1903	Single-Family	Not Eligible
331 W. 110th Street	1909	Single-Family	Not Eligible
340 W. 110th Street	1909	Multi-Family	Not Eligible
352 W. 110th Street	1968	Industrial	Modern
401 W. 110th Street	1981	Industrial	Modern
Two W. 111th Place	1922	Apartment Building	Not Eligible
3 W. 111th Place	1934	Bethany Reformed Church Manse	Eligible
340 W. 111th Place	1908	Multi-Family	Not Eligible
344 W. 111th Place	1913	Single-Family	Not Eligible
303 W. 111th Street	1923	Craftsman Style Residence	Not Eligible
316 W. 111th Street	1893	Multi-Family (vacant)	Not Eligible
339-341 W. 111th Street	1924	Mixed-Use	Not Eligible
349 W. 111th Street	1917	Greystone Flat	Not Eligible
401 W. 111th Street	1964	Commercial	Not Eligible

Address	Year Built	Description	Eligibility
428 W. 111th Street	1960	Single-Family	Not Eligible
256 W. 112th Place	1888	Single-Family	Not Eligible
303 W. 112th Place	1909	Single-Family	Not Eligible
312 W. 112th Place	1914	Single-Family	Not Eligible
319 W. 112th Place	1914	Multi-Family	Not Eligible
325 W. 112th Place	1899	Single-Family	Not Eligible
328 W. 112th Place	1963	Single-Family	Not Eligible
330 W. 112th Place	1966	Single-Family	Modern
339 W. 112th Place	1908	Industrial	Not Eligible
10 E 112th Street	1883	Single-Family (vacant)	Not Eligible
20 E 112th Street	1926	Mixed-Use	Not Eligible
303 W. 112th Street	1908	Single-Family	Not Eligible
334 W. 112th Street	1912	Single-Family	Not Eligible
340 W. 112th Street	1964	Flat (vacant)	Not Eligible
410 W. 112th Street	1929	Chicago Style Bungalow	Not Eligible
139 W. 113th Place	1923	Flat (vacant)	Not Eligible
228 W. 113th Street	1890	Single-Family	Not Eligible
235 W. 113th Street	1905	Single-Family	Not Eligible
303 W. 113th Street	1919	Single-Family	Not Eligible
307 W. 113th Street	1917	Multi-Family	Not Eligible
309 W. 113th Street	1904	Multi-Family	Not Eligible
310 W. 113th Street	1904	Multi-Family (vacant)	Not Eligible
312 W. 113th Street	1962	Single-Family	Not Eligible
316 W. 113th Street	1962	Single-Family	Not Eligible
320 W. 113th Street	1962	Single-Family	Not Eligible
337 W. 113th Street	1910	Single-Family	Not Eligible
340 W. 113th Street	1924	Multi-Family	Not Eligible
345 W. 113th Street	1911	Single-Family	Not Eligible
41 W. 114th Place	1889	Single-Family	Not Eligible
62 W. 114th Place	1924	Craftsman Style Residence	Not Eligible
131 W. 114th Street	1903	Single-Family	Not Eligible
135 W. 114th Street or 131 W. 114th Street	1922	Religious	Not Eligible
138 W. 114th Street	1909	Single-Family	Not Eligible
235 W. 114th Street	1964	Single-Family	Not Eligible
324 W. 114th Street	1907	Multi-Family	Not Eligible
8 W. 115th Street	1903	Flat	Not Eligible
40 W. 115th Street	1894	Multi-Family	Not Eligible

Address	Year Built	Description	Eligibility
42 W. 115th Street	1899	Single-Family	Not Eligible
112 W. 115th Street	1927	Industrial	Not Eligible
116 W. 115th Street	1904	Multi-Family	Not Eligible
120 W. 115th Street	1899	Single-Family	Not Eligible
10415 S. Eggleston Avenue	1927	Craftsman Style Residence	Not Eligible
10531 S. Eggleston Avenue	1940	Minimal Traditional Residence	Not Eligible
10558 S. Eggleston Avenue	1924	Craftsman Style Residence	Not Eligible
10601 S. Eggleston Avenue	1929	Chicago Style Bungalow	Not Eligible
10612 S. Eggleston Avenue	1947	Single-Family	Not Eligible
10720 S. Eggleston Avenue	1924	Single-Family (vacant)	Not Eligible
10757 S. Eggleston Avenue	1923	Single-Family (vacant)	Not Eligible
10904 S. Eggleston Avenue	1927	Single-Family	Not Eligible
10953 S. Eggleston Avenue	1960	Single-Family	Not Eligible
11130 S. Eggleston Avenue	1914	Flat	Not Eligible
11133 S. Eggleston Avenue	1888	Single-Family	Not Eligible
11139 S. Eggleston Avenue	1915	Single-Family	Not Eligible
11211 S. Eggleston Avenue	1922	Craftsman Style Residence	Not Eligible
11257 S. Eggleston Avenue	1908	Single-Family	Not Eligible
10316 S. Emerald Avenue	1919	Craftsman Style Residence	Not Eligible
10428 S. Emerald Avenue	1941	Single-Family	Not Eligible
10554 S. Emerald Avenue	1962	Single-Family	Not Eligible
10614 S. Emerald Avenue	1948	Minimal Traditional Residence	Not Eligible
10750 S. Emerald Avenue	1956	Single-Family	Not Eligible
10824 S. Emerald Avenue	1955	Single-Family	Not Eligible
10952 S. Emerald Avenue	1962	Single-Family	Not Eligible
11034 S. Emerald Avenue	1924	Single-Family	Not Eligible
11104 S. Emerald Avenue	1951	Single-Family	Not Eligible
11212 S. Emerald Avenue	1951	Single-Family	Not Eligible
11310 S. Emerald Avenue	1928	French Eclectic Style House	Eligible, CHRS Orange
11456 S. Emerald Avenue	1951	Single-Family	Not Eligible
10401-10419 S. Halsted Street	1957	Mid-Century Modern Church	Not Eligible
10615 S. Halsted Street	1954	Commercial	Not Eligible
10861 S. Halsted Street	1954	Commercial	Not Eligible
11011 S. Halsted Street	1961	Commercial	Not Eligible
11013 S. Halsted Street	1879	Multi-Family	Not Eligible
11121 S. Halsted Street	1969	Commercial	Modern
11139 S. Halsted Street	1957	Modernistic Commercial Building	Not Eligible

Address	Year Built	Description	Eligibility
9820 S. Harvard Avenue	1959	Single-Family	Not Eligible
9823 S. Harvard Avenue	1915	Single-Family	Not Eligible
11314 S. Harvard Avenue	1926	Craftsman Style Residence	Not Eligible
11356 S. Harvard Avenue	1916	Multi-Family (vacant)	Not Eligible
11415 S. Harvard Avenue	1898	Flat (vacant)	Not Eligible
10204 S. Indiana Avenue	1903	Single-Family	Not Eligible
10242 S. Indiana Avenue	1906	Multi-Family	Not Eligible
9723 S. La Salle Street	1955	Single-Family	Not Eligible
9738 S. La Salle Street	1964	Single-Family	Not Eligible
9902 S. La Salle Street	1919	Single-Family	Not Eligible
9706 S. Lafayette Avenue or 9708 S. Perry Avenue	1957	Single-Family	Not Eligible
10159 S. Michigan Avenue	1918	Craftsman Style Residence	Not Eligible
10213 S. Michigan Avenue	1888	Single-Family	Not Eligible
10220 S. Michigan Avenue	1900s	Multi-Family	Modern
10259 S. Michigan Avenue	1888	Commercial	Not Eligible
11156 S. Michigan Avenue	1923	Commercial	Not Eligible
11200-11206 S. Michigan Avenue	1904	Mixed-Use	Not Eligible CHRS Orange (11206)
10457 S. Normal Avenue	1927	Dutch Colonial Style Residence	Not Eligible
10511 S. Normal Avenue	1949	Single-Family	Not Eligible
10641 S. Normal Avenue	1925	Chicago Style Bungalow	Not Eligible
10701 S. Normal Avenue	1955	Ranch	Not Eligible
10747 Normal Avenue	1928	Craftsman Style Residence	Not Eligible
10853 S. Normal Avenue	1929	Chicago Style Bungalow	Not Eligible
10959 S. Normal Avenue	1938	Minimal Traditional Residence	Not Eligible
11001 S. Normal Avenue	1938	Single-Family	Not Eligible
11035 S. Normal Avenue	1924	Single-Family	Not Eligible
11439 S. Perry Avenue or 11439 S. Pippin Avenue	1892	Industrial Complex	Not Eligible
11426 S. Perry Avenue	1920s	Industrial Complex	Not Eligible
9815 S. Princeton Avenue	1963	Single-Family	Not Eligible
9818 S. Princeton Avenue	1964	Single-Family	Not Eligible
9915 S. Princeton Avenue	1964	Single-Family	Not Eligible
9938 S. Princeton Avenue	1964	Single-Family	Modern
10000 S. Princeton Avenue	1967	Single-Family	Modern
10040 S. Princeton Avenue	1967	Single-Family	Modern
10054 S. Princeton Avenue	1934	Multi-Family	Not Eligible
10136 S. Princeton Avenue	1954	Single-Family (vacant)	Not Eligible

Address	Year Built	Description	Eligibility
10224 S. Princeton Avenue	1930	Single-Family	Not Eligible
10920 S. Princeton Avenue	1916	Romanesque Revival Style Church	Eligible CHRS Orange
11122 S. Princeton Avenue	1922	Apartment Building	Not Eligible
11142 S. Princeton Avenue	1908	Flat	Not Eligible
11319 S. Princeton Avenue	1916	Single-Family	Not Eligible
11321 S. Princeton Avenue	1903	Single-Family	Not Eligible
11325 S. Princeton Avenue	1903	Single-Family	Not Eligible
11327 S. Princeton Avenue	1903	Single-Family	Not Eligible
11340 S. Princeton Avenue	1948	Single-Family	Not Eligible
11210 S. State Street	1910, 1936	Gothic Revival Style Church	Not Eligible
11118 S. Stewart Avenue	1922	Garage	Not Eligible
11124 S. Stewart Avenue	1972	Commercial	Modern
11130 S. Stewart Avenue	1914	Single-Family	Not Eligible
11142 S. Stewart Avenue	1950	Industrial (vacant)	Not Eligible
11224 S. Stewart Avenue	1923	Single-Family	Not Eligible
11229 S. Stewart Avenue	1924	Single-Family (vacant)	Not Eligible
11231 S. Stewart Avenue	1925	Craftsman Style Residence	Not Eligible
9745 S. Wentworth Avenue	1964	Single-Family	Not Eligible
9756 S. Wentworth Avenue	1963	Single-Family	Not Eligible
9907 S. Wentworth Avenue	1966	Single-Family	Modern
11321 S. Wentworth Avenue	1911-1938	Roseland Community Hospital Nurses Home	Eligible
11334 S. Wentworth Avenue	1906	Single-Family	Not Eligible
11352 S. Wentworth Avenue	1897	Single-Family	Not Eligible
11428 S. Wentworth Avenue	1908	Single-Family (vacant)	Not Eligible
11441 S. Wentworth Avenue	1974-1988	Church	Modern
9808 S. Yale Avenue	1963	Single-Family	Not Eligible
9904 S. Yale Avenue	1923	Craftsman Style Residence	Not Eligible
9905 S. Yale Avenue	1924	Craftsman Style Residence	Not Eligible
11319 S. Yale Avenue	1909	Single-Family (vacant)	Not Eligible
11330 S. Yale Avenue	1916	Single-Family	Not Eligible
11334 S. Yale Avenue	1922	Multi-Family	Not Eligible
11336 S. Yale Avenue	1894	Single-Family	Not Eligible
11343 S. Yale Avenue	1914	Craftsman Style Residence	Not Eligible
11347 S. Yale Avenue	1966	Single-Family	Modern
11413 S. Yale Avenue	1920	Craftsman Style Residence	Not Eligible
11417 S. Yale Avenue	1914	Single-Family	Not Eligible

CHRS = Chicago Historic Resources Survey

5.2.2.1 Resources Eligible for National Register of Historic Places

Of the 279 buildings surveyed within the Roseland portion of the RLE APE, 6 were identified as eligible for listing on the NRHP. These are briefly described below.

Fire Department Engine Company 93, 324 W. 104th Street

This two-story firehouse in the Roseland community is clad with light brown face brick, as shown in Figure 5-5. The building has a flat roof and a parapet with concrete coping. The front elevation has a two-story projecting pavilion, an overhead garage door, two window openings, an off-center, hollow-core metal door on the first floor, and a strip of three windows and a single window on the second floor. All windows are non-original, one-over-one aluminum sash. The spandrel area between the garage door and the windows above features a large stone sign plate inscribed with the words, "City of Chicago Fire Department." The spandrel area between the corner door and window above has a metal plate identifying the 1917 construction date and the names of a series of people associated with the building's construction, including the mayor, alderman, city architect (Charles W. Kallal), and contractor (Butler & Co.). Detailing includes stone door and window surrounds on the first floor, bracketed stone window lintels, concrete belt courses, and brick pilasters topped by stone panels with the City of Chicago's "Y" emblem and decorative scrolls. The "Y" emblem is also repeated above the off-center door.

This building is eligible for individual listing on the NRHP under Criterion C for architecture. It is a rare extant example of an early 20th century neighborhood firehouse in Roseland, has largely retained its original building materials and detailing, and still functions as a firehouse.

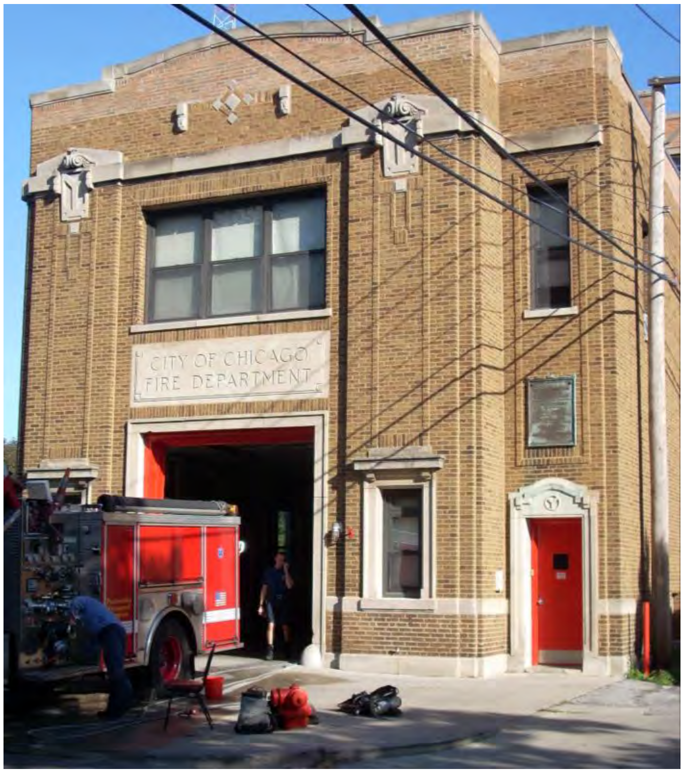

Figure 5-5: South Facade of Chicago Fire Department Engine Company 93

Roseland Pumping Station, 351 W. 104th Street

The two-story Prairie style Roseland Pumping Station, designed by architect William G. Kreig in 1911, is clad in brown brick, as shown in Figure 5-6. The building has a high limestone water table, a flat roof, parapet, and two square towers at the corners of the front elevation. The front elevation features a projecting, two-story, flat roofed entrance pavilion with a pair of centrally located glass double doors, sidelights, and a stone panel above that features the City of Chicago's "Y" emblem in metal. The entrance has a smooth stone surround. Above the entrance is a limestone panel incised with the words "City of Chicago Roseland Pumping Station." Detailing on the entrance pavilion includes brick pilasters with stone bases and coping and geometric motifs. The parapet is clad in limestone and features decorative geometric motifs. The building's fenestration is largely composed of multi-paned, steel-sash windows, some of which have transoms.

This is an excellent intact example of a neighborhood pumping station with fine integrity that still functions in its original use. It was identified as individually eligible for the NRHP under Criterion C for architecture, as it stands as an excellent, well-preserved example of a neighborhood pumping station designed in the Prairie style.

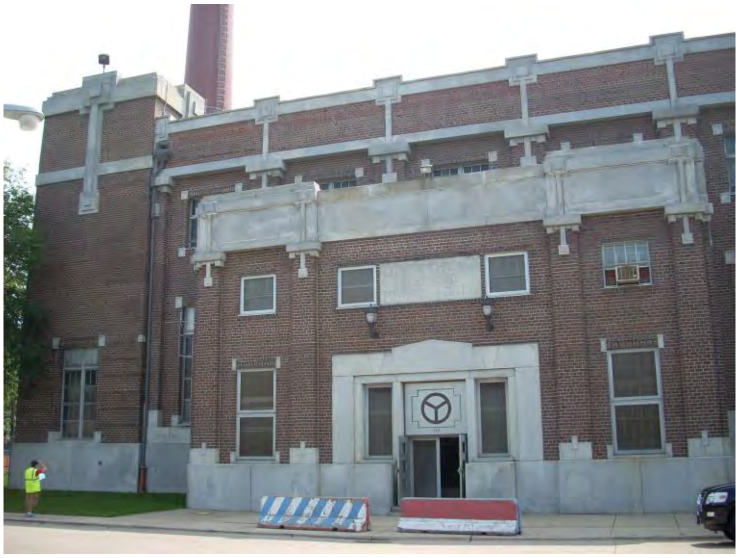

Figure 5-6: North Facade of the City of Chicago Roseland Pumping Station

French Eclectic Style Home, 11310 S. Emerald Avenue

This two-story, asymmetrical French Eclectic style house in the Roseland community is clad with brownish-orange face brick. Built circa 1928, it is shown in Figure 5-7. The building has a steeply pitched roof covered with slate, a pair of gabled pavilions along its north elevation, and an L-shaped footprint with a one-story, side-gabled wing that features two flat-roofed dormers. The front elevation of the main block has two first-floor windows that are obscured by metal grates and two through-the-cornice wall dormers with paired casement windows. The recessed front door has a smooth stone surround. A stone-clad, upper-story oriel is at the juncture between the front wing and its adjacent gabled pavilion. Attic windows in the paired gable pavilions are surrounded by stone quoins. Fenestration appears to be mainly casement windows.

This is an unusual example of a French Eclectic style home in Roseland and stands as a visual landmark among the predominant building stock of cottages and bungalows. Although windows appear to be replacements, overall it has very good integrity and is individually eligible for NRHP listing under Criterion C for architecture.

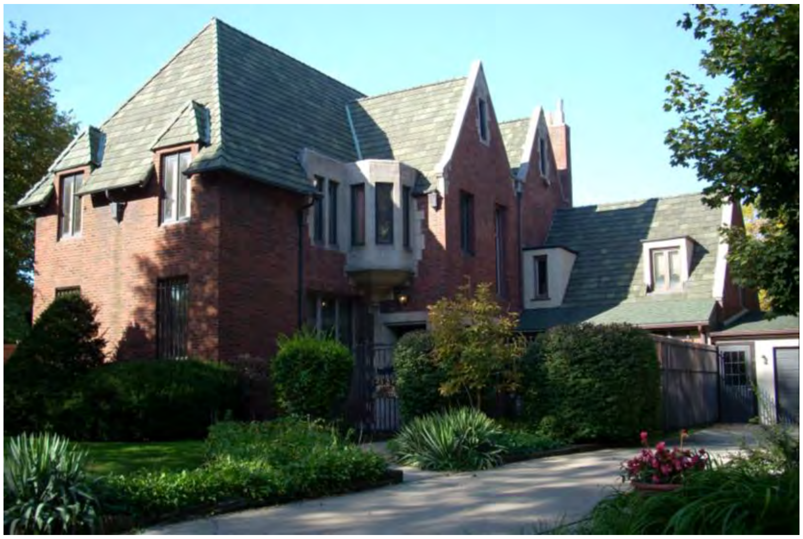

Figure 5-7: North and East Facades of the French Eclectic Home at 11310 S. Emerald Avenue

Romanesque Revival Style Church, 10920 S. Princeton Avenue

This circa 1916 Romanesque Revival style church in the Roseland community has a front elevation and two flanking towers clad with brown face brick, while the remainder of the side elevation and the rear elevation are clad with common brick. Shown in Figure 5-8, the church has a gable roof covered with asphalt shingles and gable wall dormers with shaped parapets on both side elevations. The east tower has a flat roof and a shaped parapet while the west tower has a peaked roof with overhanging eaves and exposed rafters and is topped by a finial. The central bay of the front elevation has a broad, round-arched entrance with a stone surround and two sets of single-light oak double doors. A strip of double-hung windows is within a broad arch and there is a rose window with tracery. Windows on both towers and along the side elevations include round-arch windows with tracery. It is unknown whether the original stained glass for all of these windows is extant inside the church. Both towers also feature paired casement windows. Window openings at the top of the west tower have been boarded over. Detailing includes stone sills, belt courses, brick pilasters, and keystones. A one-story, brick-clad entrance vestibule is along the rear of the west elevation.

Built as the First Reformed Church of Roseland, this church was identified as individually eligible for NRHP listing under Criterion A for its association with the community's once-dominant Dutch population and under Criterion C as a fine example of a Romanesque Revival style church in Roseland.

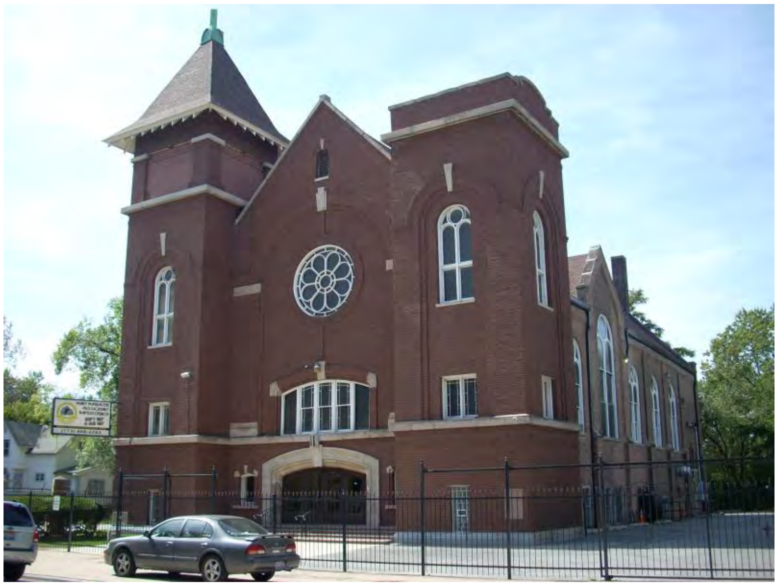

Figure 5-8: East and North Facades of Church at 10920 S. Princeton Avenue

Bethany Reformed Church Manse, 3 W. 111th Place

This Craftsman house at the southwest corner of 111th Place and State Street sits on a raised basement and is clad with brown face brick. The building has a hip roof covered with asphalt shingles, overhanging eaves with knee braces, and a hip dormer along the 111th Place elevation. Built in 1934, the main block of the house has two additions: a one-story Gothic Revival style east wing with a flat roof and battlemented parapet and a one-story hipped-roof sun porch to the west that is surrounded by double-hung windows. Both wings are also clad in brown face brick. The home's front elevation has a centrally located single-light wood door with sidelights, brick piers, concrete steps with low brick sidewalls, and a flat-roofed wood canopy. The front entrance is flanked on either side by a group of three windows: a picture window flanked by double-hung windows. The second floor of the front elevation features a series of double-hung windows. The front elevation of the Gothic Revival style wing has an off-center metal storm door with slit windows on either side, as well as a picture window flanked by double-hung windows. The door and window group have stone quoins and drip molding. Detailing also includes stone insert blocks.

The residence is identified as individually eligible for NRHP listing under Criterion B due to its association with Reverend Harry J. Hager (1899-1983), a pioneer in media evangelism in Chicago during the mid-20th century. Reverend Hager served as pastor of the adjacent Bethany Reformed Church for 44 years (1929-1975). He was a pioneer in the emerging media ministry, beginning in 1933 with the weekly Bethany Bible Broadcast on the FM station WHIP. Starting in 1944, Reverend Hager's preaching reached a national audience when Chicago's high-powered AM station WCFL began broadcasting his Sunday evening services across America. The manse is shown in Figure 5-9.

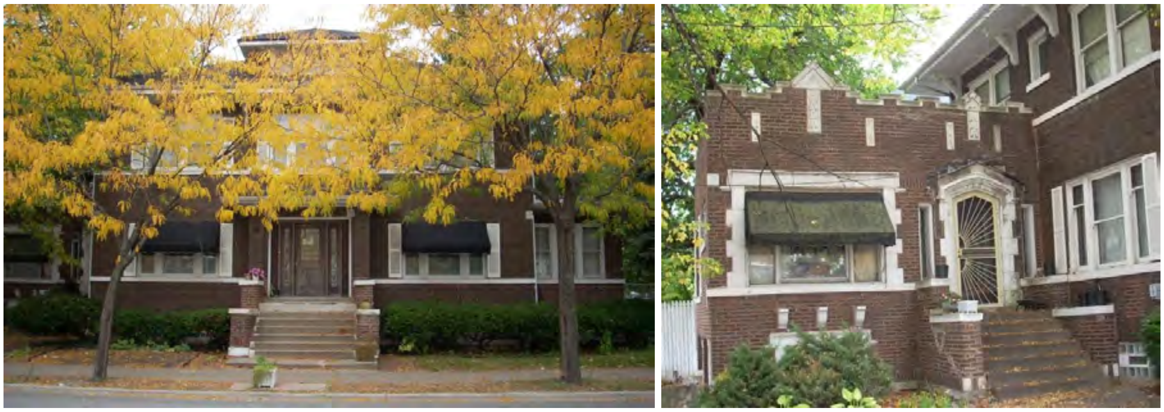

Figure 5-9: Front Facade (left) and East Wing (right) of 3 W. 111th Place

Roseland Community Hospital Nurses Home, 11321 S. Wentworth Avenue
Shown in Figure 5-10, this four-story building has a flat roof and parapet. Its symmetrical front elevation is clad with brown face brick and has a centrally located entrance with a glass door and stone surround topped by two stone owls holding books. Windows are non-original one-over-one aluminum sash; those directly above the entrance have stone casings. Detailing includes stone sills, coping, insert blocks, sill courses, cornice, panels, and pinnacles at the parapet level.

This building is locally significant and eligible for NRHP listing under Criterion A for Education. Formerly the Roseland Community Hospital Nurses Home, it was built by the hospital as a dormitory and educational facility for its nurses. Closely affiliated with Roseland Community Hospital, which has served as an important institution in the Roseland area since its establishment in 1924, the Nurses Home is an excellent example of this building type on Chicago's South Side. The exterior of the building has very good integrity and the interior—which now functions as a homeless shelter—appears to retain classrooms and other spaces associated with its original use.

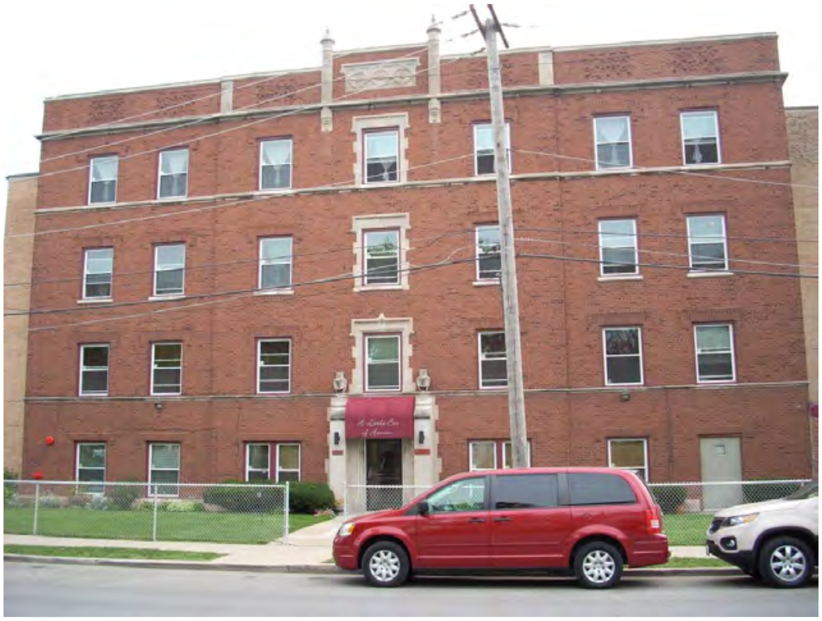

Figure 5-10: Front Facade of Nurses Home at 11321 S. Wentworth Avenue

5.2.2.2 Properties Surveyed but Determined Ineligible

Beyond the properties that were identified as individually eligible for NRHP listing, a number of properties were surveyed that did not meet the criteria. Generally, these properties have had subsequent alterations that compromise their historic integrity or do not feature a level of distinctive architectural detailing necessary to qualify for the NRHP.

5.3 Morgan Park Community

The following subsections include a description of the historic context for the development of the Morgan Park community (**Section 5.3.1**) and an overview of historic properties that were surveyed (**Section 5.3.2**). No NRHP-listed sites or districts fall within the RLE APE in the Morgan Park community.

5.3.1 Historic Context

The community of Morgan Park, approximately 16 miles southwest of Chicago's Loop, is roughly bounded by 107th Street on the north, 115th and 119th Streets on the south, Halsted Street on the east, and California and Rockwell Avenues on the west.

Morgan Park Development in the 19th Century
Morgan Park is named for Thomas Morgan, an Englishman who in 1844 purchased a heavily wooded 3,000-acre tract stretching from the present 91st to 115th Streets on either side of a glacial moraine. The Blue Island moraine remnant, which is roughly 6 miles long and 2 miles wide, is the only high ground within this portion of the lake plain. Morgan built a home at 92nd Street and Pleasant Avenue, in today's Beverly community, and fenced his land for farming, ranching, and hunting (Chicago Fact Book Consortium 1995:210). Other farmers purchased land near the Morgan farm and used the Vincennes Trail along the morainal ridge for access to Chicago.

The transformation of the rural ridge area to a suburban community began in 1869 when the Blue Island Land and Building Company purchased Morgan's property from his heirs and subdivided the land south of 107th Street, between Ashland and Western Avenues, as a subdivision of the Washington Heights community (much of which is Beverly today) to the north (Andreas 1884:639). West of Vincennes Avenue, English landscape architect Thomas F. Nichols designed a series of picturesque, curving streets dotted with parks on behalf of the Blue Island Company (Pacyga and Skerrett 1976:535). This area featured large, deep lots suitable for spacious Victorian homes and evoked the ambiance of an English country town. East of Vincennes Avenue and south of 111th Street, the area was platted with a more typical, rectilinear street grid featuring smaller lots. This section was developed with more modest homes.

The new subdivision benefitted from the 1871 opening of a branch line of the Chicago, Rock Island, and Pacific Railroad, which provided commuter service from Blue Island to downtown Chicago and included a stop at 111th (formerly Morgan) Street. Several important early institutions were established that spurred development in the area. In 1873 the Blue Island Company donated land for the Mt. Vernon Military Academy, which still exists as the Morgan Park Academy, on 111th Street between Hoyne and Bell Avenues. The military academy's headmaster lived in the house at 2203 W. 111th Street, which was built during the 1870s. Dwight Perkins designed a fieldhouse, located at 2147 W. 112th Street, for the Academy in 1900. The exclusive Chicago Female College was established in 1875, but has been demolished.

In 1877 the Blue Island Company convinced the Baptist Union Theological Seminary to move to Morgan Park from the Douglas area of Chicago. By 1879 its well-regarded faculty included William Rainey Harper, who later became the first president of the University of Chicago (Keating 2008:216). The seminary was located near the present day intersection of 111th Street and Western Avenue, a block west of the Morgan Park Academy. According to an early guidebook, the seminary, together with the Morgan Park Military Academy and the Chicago Female College, “formed the chief attraction of the place” (Pacyga and Skerrett 1976:536). Morgan Park received its first Baptist Church in 1874 at 110th Street and Bell Avenue (replaced by a new church begun in 1896). With the arrival of the Baptist Union Theological Seminary in 1877, Morgan Park Baptist Church became one of the most powerful institutions in the community.

During these early years, the Blue Island Company sponsored land auctions and advertised in Chicago newspapers and building journals. An 1889 publication of Morgan Park boosters noted that the village was “much superior to other localities” because it was “near enough to Chicago and sufficiently far removed to afford all the blessings of a Suburban Home with all the conveniences and advantages of the city, far from all its objectionable features.” The scenery was an added attraction. Set on a ridge 100 feet above Lake Michigan, it was claimed to be in “semi-mountainous” country, on “the oak-shaded heights of the Blue Island plateau” (Mayer and Wade 1969:170).

Italianate mansions from the early 1870s are located along the ridge at 11347 S. Lothair Avenue and at 11410 S. Longwood Drive. More modest houses from the same period include those at 10934 S. Prospect Avenue, 10970 S. Prospect Avenue, and 2204 W. 111th Street. Reflecting its origins as a Baptist community, Morgan Park prohibited the sale of liquor in the area between Western and Vincennes Avenues when it was incorporated as a village in 1882. Its middle-class character was further reinforced by the construction of other mainline protestant churches, among them Methodist (1888), Episcopalian (1889), Congregational (1890), and Presbyterian (1891), rivaling in size and influence the earlier Morgan Park Baptist Church (Keating 2008:217). For decades, village life centered on its churches; Morgan Park developed a reputation as a temperance town.

Prospect Avenue became Morgan Park’s most fashionable street during the 1880s and 1890s, although elaborately designed homes were also built on nearby streets. Examples of the Queen Anne style include an 1888 house at 10920 S. Oakley Avenue and an 1892 house at 11156 S. Longwood Avenue. Local architect Harry Hale Waterman developed a distinctive picturesque style, exemplified by houses at 10838 S. Longwood Drive (1892) and 2023 W. 108th Place (1894). Among those who built homes in the village were executives of the Rock Island line, the Chicago stockyards, and the Chicago Bridge and Iron Company, which opened in 1889 on nearby Vincennes Avenue.

By the late 1880s, 2,800 people lived in Morgan Park (Chicago Fact Book Consortium 1995:210) and the community received regular commuter service to downtown Chicago via the Rock Island Railroad's branch commuter line, the tracks of which were situated to the west of the railroad's main line. Monterey Avenue became the community's commercial center, concentrated around the railroad's Queen Anne style depot at the intersection of 111th Street and Hale Avenue (1890). The year 1890 also saw the completion of Esmond Public School, a substantial three-story, brick edifice at the intersection of Montvale and Home Avenues, and the Walker Library at 11071 S. Hoyne Avenue. The Walker Library was donated by George C. Walker, President of the Blue Island Land and Building Company, and designed in the Richardsonian Romanesque style by noted Chicago architect Charles Frost.

Despite these clear signs of growth, Morgan Park lost its bid to become the home of the University of Chicago, which settled in Hyde Park. After the Baptist Theological Union left Morgan Park in 1892, its buildings were used by Morgan Park Military Academy. During the 1890s The Budget, a local newspaper, advocated streetcar connections with nearby communities as the way to build up Morgan Park. Although service along Vincennes Avenue began in 1896, Morgan Park and its twin community of Beverly to the north remained isolated from the expanding city (Pacyga and Skerrett 1976:537).

Morgan Park Development: 1900 to 1950

The battle over annexation to Chicago, which began in 1911, sharply divided the community and dragged on in court until 1914, finally passing with a margin of only 15 votes (Chicago Fact Book Consortium 1995:210). The building boom that occurred in Morgan Park between 1910 and 1930 reinforced earlier patterns of settlement and the community remained suburban in character. No saloons, factories, or businesses were allowed along the ridge, and developers took care to remove "only trees that actually interfere with building" (Pacyga and Skerrett 1976:539). The community lacked industry, major commercial thoroughfares with heavy traffic, and recreational amenities such as movie palaces or dance halls. Community leaders believed that streetcar lines threatened the exclusivity of the area and consequently streetcars were not extended along Western Avenue to Morgan Park until the 1930s.

Morgan Park's small town character remained appealing to many, and residential growth increased as existing subdivisions were re-divided and new subdivisions were platted west of Western Avenue and south of 115th Street. The Classical Revival style Morgan Park High School opened in 1916 at 111th Street and Vincennes Avenue. The community's growing population, which increased from 7,780 to 12,747 between 1920 and 1930 (Keating 2008:216), necessitated a high school addition in 1925 that featured a new gymnasium, auditorium, and natatorium. Monterey Avenue remained the community's commercial center during this period, although retail strips along 95th Street to the north and along Michigan Avenue to the east, in the Roseland community, also attracted shoppers.

Many of the homes erected during the early 20th century reflected the popular Craftsman style of the period, which was used for both frame bungalows and American Foursquare homes. Builders constructed brick Chicago Style Bungalows as well as more elaborate homes in a variety of historical styles, with Tudor and Colonial Revival being especially popular. Although a few apartment buildings were erected, Morgan Park remained primarily a community of single-family homes.

During the 1920s Longwood Drive emerged as the area's most prestigious street, eclipsing Prospect Avenue as the main north-south thoroughfare. Many elaborate homes were also built along Hoyne Avenue between 111th and 112th Streets. Sidewalks, shade trees, and carefully tended lawns enhanced Morgan Park's high quality housing. Longwood Drive was also the setting for several prominent churches including the brick Gothic Revival style Morgan Park Methodist Church at 11030 S. Longwood Drive. Built in 1913 and designed by Henry H. Waterman, the church received a 1927 addition designed by Dwight Perkins. A Gothic Revival style stone Presbyterian Church was designed by Anders Lund and erected at 11052 S. Longwood Drive in 1933.

Whereas Morgan Park's Protestants tended to live and worship in the oldest part of the neighborhood, in 1904 a small community of French immigrant Roman Catholics established Sacred Heart Church at 11652 S. Church Street. The largely Irish Roman Catholic parishes of St. Cajetan at 2445 W. 112th Street (1927) and St. Walter at 11722 S. Oakley Street (1953) drew most of their congregations from the area west of Western Avenue.

Morgan Park was also home to a small but growing middle class African-American community during this period, which had established itself in the area between Vincennes Avenue and Halsted Street in the late 19th century. In 1921 the Chicago Commission on Race Relations reported that whites and blacks in Morgan Park "maintain a friendly attitude," but it also noted "there seems to be a common understanding that Negroes must not live west of Vincennes Road" (Pacyga and Skerrett 1976:540). Public institutions such as the Morgan Park High School and the Walker Branch Public Library, however, were integrated. The African-American population in Morgan Park increased from 12 percent in 1920 to 35 percent in 1930. Other residents were mostly of English, German, Swedish, and Irish descent, with only a small proportion of foreign-born residents (Chicago Fact Book Consortium 1995:210).

Morgan Park Development: 1950 to Present

Morgan Park experienced a residential building boom following World War II as the community developed areas along its fringes and subdivided some of the large lots in the older area of the community for single-family homes. The community maintained a stable residential population and continued to be "dry," a prohibition demanded by early Baptist settlers and upheld by Catholic newcomers. By 1960 an increase in the number of Irish residents made them the predominant group, followed by those of German, English, and Swedish descent. The South Side St. Patrick's Day parade down Western Avenue, organized in 1979, has become a symbol of the large Irish population and the Catholic presence in the ridge area that stretches north to the neighboring Beverly community.

The Morgan Park Military Academy dropped the military aspect of its program in 1950 and is today a private coeducational grammar school and high school that attracts students from all over the South Side of Chicago and neighboring suburbs. Monterey Avenue remained the business center of old Morgan Park until the 1970s. After urban renewal, all that remain of the former commercial district are the post office, police station, train station, and a few stores west of Hale Avenue.

During the late 1960s the I-57 Expressway had effectively isolated the older black settlement east of Vincennes Avenue. Between 1960 and 1970 Morgan Park's population peaked at more than 31,000 due to an over 50 percent increase in the number of African-Americans (Chicago Fact Book Consortium 1995:210). Perhaps the greatest change to Morgan Park's urban landscape involved the construction of nearly 400 "Section 235" subsidized housing units between 1969 and 1974, the largest number built in any Chicago neighborhood. Most of these homes—which were modern versions of the 19th-century workers cottage—were built along Vincennes Avenue, south of Morgan Park High School (Pacyga and Skerrett 1976:544).

During the 1970s the Beverly Area Planning Association, comprising civic groups from both Morgan Park and neighboring Beverly, succeeded in halting panic peddling by unscrupulous real estate dealers to avoid the rapid racial turnover experienced by other Chicago South Side neighborhoods. As a result, by the mid-1970s home values in both communities had stabilized and began to rise. The African-American population rose to 63 percent in 1980 and then slowed. Today Morgan Park has both integrated and racially segregated areas: the population east of Ashland is nearly all black; the population west of Western Avenue is nearly all white; and the area in between is mixed (Chicago Fact Book Consortium 1995:210).

Residents of both Morgan Park and Beverly began to jointly promote their shared architectural heritage of historic homes along the ridge through the leadership of the Beverly Area Planning Association, which sponsored home tours that continue to attract thousands of Chicagoans each year. The establishment of the Ridge Historical Society in 1971 sparked an interest in the past of Morgan Park and Beverly with its museum at 10616 S. Longwood Drive. The Society has identified landmark homes throughout the area over the past several decades and established an oral history program and archives.

Today Morgan Park's winding, tree-shaded streets display a rich array of residential architecture. The Ridge Historic District, listed on the NRHP in 1975, is centered on Longwood Drive, running from 87th to 115th Streets and linking the center of Morgan Park to the Beverly community area to the north. In 1981 the Longwood Drive District became a designated City of Chicago landmark district. This narrow, 12-block-long district extends along Longwood Drive between 98th and 110th Streets and also along Seeley Avenue between 102nd and 107th Streets. Both districts feature intact collections of homes dating from the 1870s through the 1920s that display a wide variety of architectural styles including the Italianate, Queen Anne, Tudor Revival, Colonial Revival, French Provincial, Craftsman, and Prairie. Morgan Park remains a stable, largely integrated, middle-class neighborhood that boasts the Beverly Arts Center's complex for the performing arts, which was built in 2002 at 2407 W. 111th Street and has sparked redevelopment at the intersection of 111th Street and Western Avenue.

5.3.2 Surveyed Resources

As part of the fieldwork for the RLE Project, 13 buildings within the Morgan Park portion of the APE were surveyed. These properties, along with their construction date and an assessment of their eligibility for listing on the NRHP, are presented in Table 5-3, alphabetized by street name. No properties were determined individually eligible. A series of maps in Appendix A graphically presents these findings; individual inventory sheets for surveyed properties are presented in Appendix B.

Table 5-3: 13 Surveyed Properties in Morgan Park

Address	Year Built	Description	Eligibility
808 W 111th Street or 11050 S. Halsted Street	1982	Commercial	Modern
10701 S. Green Street*	1950	Single-Family	Not Eligible
10757 S. Green Street*	1947	Single-Family	Not Eligible
10829 S. Green Street*	1948	Single-Family	Not Eligible
10901 S. Green Street*	1948	Single-Family	Not Eligible
11001 S. Green Street	1942	Single-Family	Not Eligible
11039 S. Green Street	1942	Single-Family	Not Eligible
11121 S. Green Street	1959	Multi-Family	Not Eligible
11247 S. Green Street	1950	Single-Family	Not Eligible
11359 S. Green Street	1951	Single-Family	Not Eligible
11038 S. Halsted Street	1977	Commercial	Modern
11200 S. Halsted Street	1925	Commercial	Not Eligible
11320-11322 S. Halsted Street	1962	Modernistic Mixed-Use Building	Not Eligible

* Surveyed property within proposed Green Street Historic District

Of the 13 buildings surveyed within the Morgan Park portion of the RLE APE, none were identified as eligible for listing on the NRHP. Generally, these properties have had alterations that compromise their historic integrity or do not feature a level of distinctive architectural detailing necessary to qualify for the NRHP. A portion of the Green Street Historic District, which was identified as NRHP eligible, falls within the Morgan Park community. A description of the resource is presented in **Section 5.1.2.1**.

5.4 West Pullman Community

The following subsections include a description of the historic context for the development of the West Pullman community (**Section 5.4.1**) and an overview of historic properties that were surveyed (**Section 5.4.2**). No NRHP-listed sites or districts fall within the RLE APE in the West Pullman community.

5.4.1 Historic Context

The West Pullman community, approximately 16 miles south of Chicago's Loop, is bounded by 115th Street to the north, 123rd Street and the Little Calumet River to the south, Front Street and railroad tracks to the east, and Ashland Avenue, Halsted Street, and Morgan Street (city limits) to the west.

West Pullman Development in the 19th Century
The first settlers in the area known as West Pullman were civil engineer and land surveyor David Andrews and his wife Caroline, who married in 1840 and established a 360-acre farm near the northeast corner of the future community. The couple only had two neighbors who were about 3 miles away, and at that time, "prairie wolves, deer, and prairie chickens abounded, and occasionally a lynx was seen" according to A. T. Andreas in his *History of Cook County* (1884:603). The first signs of change arrived in 1852, when the Illinois Central and Michigan Central Railroad companies established the Calumet Station at the present intersection of 115th Street and Cottage Grove Avenue. A settlement grew slowly around the Calumet Station and came to be called Kensington. It initially consisted of a general store and saloon at the corner of Front Street and Kensington Avenue, wood shanties, and a boarding house inhabited by men working on freight handling for the railroads.

Kensington became part of the Village of Hyde Park in 1867. Ten years later, the small community comprised only about 20 houses; however, Kensington's population would soon more than quadruple, from 250 in 1880 to 1,280 in 1883. This sudden growth was due to the establishment of the Pullman Palace Car Factory as well as other industries, such as the Chicago Forge Company Works at 116th Street and Cottage Grove Avenue. Kensington's boundaries came to encompass the area bounded by 115th and 125th Streets, between State Street and the Illinois Central tracks. Some of the more prominent residents who arrived in the community during this decade were from the East Coast. They included native New Yorkers Thomas Gaines, proprietor of the Gaines Hotel, A. Burchard, a physician who established a large medical practice in the community, and various other merchants who created commercial enterprises (Andreas 1884:604-606).

In 1881, the Gano Company of Cincinnati purchased and subdivided a large tract of land that was part of Calumet Township, just west in Kensington. This subdivision, then called Gano, extended from 115th Street to 119th Street, between State Street and Wentworth Avenue. In 1888, the Village of Gano was organized and withdrawn from control of Calumet Township. The new village extended from 115th Street to the Little Calumet River, between State and Halsted Streets, but was only very sparsely settled along its eastern portion. The area beyond the initial Gano subdivision boundaries comprised open prairie and farmland, including what would become the West Pullman residential district. Kensington was annexed to Chicago in 1889 and Gano's need to secure municipal services led its residents to seek annexation the following year (Chicago Fact Book Consortium 1995:161).

The name West Pullman came to the current community area in the 1890s following the West Pullman Land Association's November 1891 purchase of 480 acres of farmland that encompassed much of the former Village of Gano (West Pullman Land Association 1900:3). This initial parcel was between 119th and 123rd Streets, from Wentworth Avenue to Halsted Street. By January 1893, the Land Association purchased additional tracts of undeveloped land that extended their original holdings west to Ashland Avenue, between 115th and 123rd Streets. The land was platted to include an industrial district west of Halsted Street, workers' housing in the center with a commercial strip along Halsted Street, and a district called Stewart Ridge for the "finer class of residence" to the east. The Association aimed to create an industrial village to rival and even surpass the already established town of Pullman to the northeast, as was clear by the comments made by director H. D. Patton at a May 17, 1893 groundbreaking for the Whitman and Barnes Company:

> "You are in the center of what will be the greatest manufacturing district in the world, and I predict that in time this suburb will outgrow the beautiful citadel to the east, that it will eventually be known as east Pullman and this place will take the parent name (*Chicago Tribune* 1893c)."

Whitman and Barnes, whose large facility encompassed 19 buildings, was one of two manufacturers of agricultural implements that moved to West Pullman in 1893. The other was the Plano Manufacturing Company, which relocated from Plano, Illinois to a sprawling facility on its 25-acre tract in West Pullman. The *Chicago Tribune* (1893b) estimated that Plano Manufacturing would employ 1,500 workers. Other early industries located in West Pullman's factory district by 1893 were the Illinois Electrical Forging Company, the White and Ballard Shoe Company, the Burgland & Sheal Woodenware Company, and the West Pullman Lumber Company. They were joined by the end of the decade by others including the Chicago Malleable Casting Company, the Chicago Pail Company, the Inglis Photographic Supply Company, the Phoenix Boot and Shoe Company, and the Chicago Brass Bed Factory (West Pullman Land Association 1900:8-9).

The West Pullman Land Association had phenomenal success in attracting both industry and workers to its industrial village at the southern outskirts of Chicago due to a range of transportation improvements. The Illinois Central constructed its Blue Island Branch westward along 121st Street and located three stations within West Pullman, including one in the midst of the Stewart Ridge residential district, one at Halsted Street, and one within the factory district. The Pittsburg, Cincinnati, Chicago & St. Louis (known as the Pan Handle of the Pennsylvania railway system) already crossed the property from north to south and established passenger and freight stations at 119th and 120th Streets. The Chicago, Rock Island & Pacific Railway Company arriving from the west established its freight station at Morgan and 119th Streets. The Land Association constructed and controlled a terminal railway system connecting these three trunk lines to ensure they reached all parts of the factory district. The Illinois Central's passenger service from West Pullman ran an express train north to 67th Street that reached the Loop in 38 minutes. Additional passenger service along Michigan Avenue was provided by the Calumet Electric Railway, which was extended south from 115th Street to 119th Street and then westward along 119th Street to Halsted in 1893 (West Pullman Land Association 1900:8-9, 16; *Chicago Tribune* 1893a). West Pullman was annexed to the City of Chicago in 1895.

Many executives of the West Pullman Land Association and of the community's various industries resided in the community's Stewart Ridge district, which was about a mile east of the factory district, around the Illinois Central's station at the intersection of Stewart and 121st Streets. Streets on either side of Stewart, such as Harvard and Princeton Avenues to the east and Eggleston and Normal Avenues to the west, featured large, architect-designed homes of various styles built between the 1890s and the early 1900s. The homes at 12134 S. Eggleston Avenue (1896), 12112 S. Normal Avenue (1895), and 12021 S. Stewart Avenue (1896) are representative of this period of development.

Outside the Stewart Ridge district, 19th century residential development throughout West Pullman—including the earlier Kensington and Gano communities of the 1880s—featured workers' housing with modest one- to two-story, gable-roof, frame cottages and homes. An Italianate style home at 605 W. 116th Street (1880s) is among the extant homes from West Pullman's earlier period of development. By 1893 the West Pullman Land Association had built nearly 300 speculative homes and also had sold lots to individuals and builders, providing for some variety in the stock of workers' homes erected during this decade of rapid growth. A promotional booklet developed by the Land Association wrote that this area provided "every opportunity for cheap, good and contented living," noting the following:

> "The property there is of low price, ranging from $350 to $500 per lot; and if a home-seeker lacks either the means or the inclination to build, a company having capital and surplus of $200,000 and especially organized for this purpose, stands ready to construct such a home as may be desired, to be paid for on the monthly installment plan (West Pullman Land Association 1900:24)."

Nineteenth-century workers who flocked to West Pullman's newly established industries were a multi-ethnic mix of French, Dutch, Swedish, Irish, and German immigrants who established their own churches and parochial schools. These included St. Louis de France Church (later called St. Ambrose), established by the French community in the 1880s at 117th and State Streets; the Irish St. Catherine of Genoa Church at 118th and Lowe Streets (founded 1890s); the Polish St. Salomea Catholic Church at 118th Street and Indiana Avenue (founded 1890s); and the Norwegian Nazareth Lutheran Church at the corner of 118th and Yale Streets (founded 1890s). Two large public schools were also built in West Pullman during the 1890s for its rapidly growing population: the Romanesque Revival style West Pullman School at 11919 S. Parnell Avenue (1894) and the Classical Revival style Thomas Scanlon School at 11721 S. Perry Avenue (1897; now the Songhai Learning Institute); both feature Classical detailing.

West Pullman residents were served by community commercial districts that sprang up along Michigan Avenue, between 115th and 119th Streets to the east, and around the intersection of 119th and Halsted Streets to the west. Historic photos show that 19th century commercial buildings erected in these areas were typically one to three stories in height, mainly faced in brick, with storefronts on the ground level and apartments above. Detailing was restrained and included stone lintels and sills, storefront surrounds of stone or terra cotta, and stone or metal cornices or parapets. Most of the commercial buildings were not designed in a specific architectural style, but often included details from a style such as the Queen Anne, Romanesque, or Classical Revival.

An 1893 *Chicago Tribune* article that discussed a tour of West Pullman by a number of dignitaries noted, “Halsted Street is the principal business thoroughfare, and considerable favorable comment was indulged in at the amount of business now carried on and the number of business blocks that have been built since the suburb sprang into existence a year ago” (1893c). Another article from the same year that highlighted the construction of a new commercial block at the corner of 119th Street and Lowe Avenue reported, “There is demand for business houses, and especially for hotels and boarding houses, to accommodate the increasing population” (*Chicago Tribune* 1893d). The Enright Block at the corner of Emerald Avenue and 120th Street was “rapidly filled with businesses: a tailor store, grocery, printing office, bakery, and millinery store being among the number” (*Chicago Tribune* 1893e).

West Pullman Development: 1900 to 1950

The early 20th century brought a wave of Eastern European immigrants that included Lithuanians, Poles, Hungarians, Armenians, and Czechoslovakians. After World War I, many Italians arrived. These new residents built their own churches and ethnic institutions, and in some cases older groups expanded their existing institutions. In 1903 the Italian community built the Renaissance Revival style St. Anthony of Padua Church at 11153 S. Prairie Avenue.

The Lithuanian community built S.S. Peter and Paul Catholic Church at 123rd Street and Emerald Avenue in 1914 (now St. Titus Missionary Baptist Church), which features Romanesque Revival style detailing. In 1928 the Irish parish of St. Catherine of Genoa replaced its earlier church with a Renaissance Revival style edifice at the corner of 118th Street and Lowe Avenue, and also added an elementary school and convent during this period.

West Pullman saw the erection of two church complexes—Assumption of the Blessed Virgin Mary and St. Salomea—built by its large Polish community in the early 20th century. The Assumption Blessed Virgin Mary Society, which had been founded in 1895, built a frame church in 1904 at 123rd Street and Parnell Avenue. In 1907, the parish built a brick rectory at 544 W. 123 Street and converted its old rectory at 12240 S. Parnell Avenue into classrooms. A convent was built at 12242 S. Parnell Avenue in 1919 (now demolished) and 4 years later, a brick church/school building was erected at 12238 S. Parnell Avenue to accommodate the needs of the rapidly growing parish (now Glory to the Holy Family Baptist Church). At that time, the former frame church was remodeled as a parish hall (now demolished) (Polish Genealogical Society of America 2012). In 1911, St. Salomea parish built an imposing Gothic Revival style church at the corner of 118th Street and Indiana Avenue in West Pullman’s Kensington neighborhood and also erected an adjacent rectory and elementary school.

Corporate officers continued to reside in the Stewart Ridge district, where larger than average homes of varying styles continued to be built through the early 1900s. The most notable home in this district was designed by Frank Lloyd Wright for Stephen A. Foster, a director of the West Pullman Land Association (1900). The Stephen A. Foster House and Stable at 12147 S. Harvard

Avenue, a designated Chicago landmark, shows Wright's interest in Japanese architecture during the years he was developing his Prairie style (Chicago Historical and Architectural Landmarks 1996). The Queen Anne style home at 12225 S. Harvard Avenue (1905) and the Colonial Revival style home at 12204 S. Stewart Avenue (1903) are representative of this period in the Stewart Ridge neighborhood's development.

The West Pullman Land Association went bankrupt in 1908 during an economic downturn, but residential development continued sporadically with mainly gable-roofed frame cottages, Craftsman style bungalows, and some multi-family two-flats and small apartment buildings. The community received an important recreational amenity with the establishment of the 15-acre West Pullman Park in 1915. The park—which extends from 123rd to 124th Street, between Princeton and Normal Avenues—included tennis courts, baseball diamonds, and a one-story brick field house that offered a range of civic education and social welfare programs in its early years.

In 1920, West Pullman had a population of 23,019 and still featured large areas of undeveloped land. This was to change during the citywide construction boom of the 1920s, during which vacant parcels throughout the community were improved with bungalows and two-flat residential buildings in frame and brick, homes designed in the popular American Foursquare style, and small brick apartment buildings. By 1930 West Pullman's population reached 28,000. Commercial streets continued to develop with buildings such as the Classical Revival style State Bank of West Pullman at 622 W. 120th Street (1919; John Hetherington), now Lively Stone Apostolic Church. In 1927–28, two additional parcels of industrial land along the Calumet River were annexed to Chicago, completing the land area of the present West Pullman community (Chicago Fact Book Consortium 1995:161). Many developers of new subdivisions in the community placed restrictions on their property that prohibited its purchase by African-Americans, contributing to a concerted effort among residents to keep Pullman white. Some employers hired only white workers; International Harvester refused to hire African-Americans at its West Pullman works until mandated to do so during World War II (Keating 2008:298-299).

West Pullman Development: 1950 to Present

West Pullman's population rose from 29,000 in 1950 to 35,000 in 1960, a period in which Poles, Italians, and Germans predominated among the whites who constituted nearly 100 percent of the community's population (Chicago Fact Book Consortium 1995:161). Vacant lots throughout the community and along its undeveloped southern and western edges were improved during the post-War period with suburban style tract homes and split-level homes. Duplexes were also built, especially on the south, north, and west sides of the factory district. Starting in the 1960s, some of the vacant land on West Pullman's western edges, such as the Maple Park subdivision, finally opened to African-Americans. Gradually, African-Americans began moving into other West Pullman neighborhoods, although racial turnover in the next decade was accompanied by brewing social unrest. By 1980, 90 percent of West Pullman's 45,000 residents were African-American. This figure rose to 94 percent by 1990 (Chicago Fact Book Consortium 1995:161).

The collapse of the South Side's industrial base, starting in the 1970s, led to a rapid decline of West Pullman's economic fortunes. Industries such as the Pullman Company, Wisconsin Steel, International Harvester, and Dutch Boy Paint Company that once hired numerous West Pullman residents closed their doors. Other industries such as Carl Buddig and Ingersoll Products dramatically reduced their work forces. Layoffs and plant shutdowns made it difficult for many residents to continue payments on their homes, which had been acquired through loans from HUD. After owners defaulted, many HUD homes were foreclosed. By 1982 the Greater Roseland Organization began rehabilitating HUD homes in the northeastern area, where the housing stock is the oldest. Continued depressed economic conditions during the 1980s contributed to the demolition of 450 homes by the end of the decade (Chicago Fact Book Consortium 1995: 161). In 1985 West Pullman received a major new institution when Christ Universal Church was built on a 32-acre parcel at 119th Street and Ashland Avenue. (Buursma 1985).

By the 1990s West Pullman's once thriving industrial district west of Halsted Street featured large tracts of vacant land, blighted or underutilized buildings, deteriorated infrastructure, and substantial environmental contamination, which served as major impediments to redevelopment and new industrial investment. In response to this situation, in 1998 the City of Chicago created the 220-acre West Pullman Industrial Park TIF, which aims to foster the area's revitalization through site assembly efforts, soil remediation projects, and numerous infrastructure improvements. The TIF District also supports job training and relocation costs (Friedman & Co. 1997:1).

Some important developments within the West Pullman Industrial Park TIF District boundaries since its designation include the redevelopment of a 39-acre brownfield parcel around the 1000 block of 120th Street—formerly the home of International Harvester's West Pullman Works and the Dutch Boy Paint factory—as a solar energy facility by Chicago-based Exelon and SunPower, a California energy company. Opened in 2010, the parcel is the largest urban solar panel plant in the nation, capable of providing electricity for as many as 1,500 homes. Just a couple of blocks east of this ambitious project is the new West Pullman Branch of the Chicago Public Library at 830 W. 119th Street. Perhaps the most important project in terms of its direct effect on a large number of residents is the $160 million Ray and Joan Kroc Community Center, which opened in 2012 on a 33-acre site at 1250 W. 119th Street. The multi-purpose center features an aquatics center, a performing arts center, a soccer field, and other recreational activities, as well as job training classes (Bryne 2012).

Adjacent to the West Pullman Park Industrial TIF District is the 183-acre 119th/Halsted TIF District, which was designated by the City of Chicago in 2002. The TIF District includes the stretch of Halsted Street from 113th to 123rd Street, as well as stretches of 119th, 120th, and 121st Streets east of Halsted Street. The area encompassed by the 119th/Halsted TIF District consists of commercial, residential, industrial, and mixed-use property. It also includes Metra's electric rail commuter line along 121st Street with a commuter station on Halsted and 121st Streets. By the 1990s, this area was characterized by blighted and vacant buildings and large amounts of vacant land created through building demolition. The TIF District aims to foster a viable business district along Halsted Street at its intersections with 115th and 119th Streets, while promoting the development of affordable rental and for-sale housing along portions of 119th and 120th Streets. The TIF District also supports the creation of a pedestrian/bike trail along the former Penn Central Railroad ROW, which was purchased by the Chicago Department of Transportation (Camiros, Ltd. 2001, 2003:5-6, 15).

Small portions of land along West Pullman's western edge are included within the 119th/I-57 TIF District designated by the City of Chicago in 2002 to enable new development at key sites within the Morgan Park community. The West Pullman portions of this TIF District include 111th Street between Ashland and Racine Avenues, and the parcel roughly bounded by 119th and 123rd Streets, between Ashland Avenue and Loomis Street. Homeowners within both the 119th/Halsted TIF District and the 119th/I-57 TIF District are eligible for home repair grants through the City's TIF District-Neighborhood Improvement Program, which is administered through HUD. In recent years, new homes have been built along West Pullman's western edge near Christ Universal Church, including a gated community called Renaissance Estates in the Victory Heights neighborhood.

5.4.2 Surveyed Resources

As part of the fieldwork for the RLE Project, 172 buildings within the West Pullman portion of the APE were surveyed. These properties, along with their construction date and an assessment of their eligibility for listing on the NRHP, are presented in Table 5-4, alphabetized by street name. Properties determined individually eligible are highlighted. A series of maps in Appendix A graphically present these findings; individual inventory sheets for surveyed properties are presented in Appendix B.

Table 5-4: 172 Surveyed Properties in West Pullman

Address	Year Built	Description	Eligibility
1 W. 115th Street	1907	Queen Anne Style Mixed-Use	Not Eligible
17 W. 115th Street	1897	Greystone Flat	Not Eligible
23 W. 115th Street	1883	Single-Family (vacant)	Not Eligible
35 W. 115th Street	1936	Commercial	Not Eligible
143 W. 115th Street	1911	Single-Family	Not Eligible
738 W. 116th Place	1925	Craftsman Style Residence	Not Eligible
8 E. 116th Street	1908	Single-Family	Not Eligible
12 E. 116th Street	1913	Multi-Family	Not Eligible
16 E. 116th Street	1902	Single-Family	Not Eligible
20 E. 116th Street	1893	Queen Anne Style Single-Family	Not Eligible
32 E. 116th Street	1922	Garage	Not Eligible
36 E. 116th Street	1918	Flat	Not Eligible
38 E. 116th Street	1888	Multi-Family	Not Eligible
144 E. 116th Street	1888	Single-Family	Not Eligible
150 E. 116th Street	1891	Single-Family	Not Eligible

Address	Year Built	Description	Eligibility
151 E. 116th Street	1898	Multi-Family	Not Eligible
153 E. 116th Street	1898	Multi-Family	Not Eligible
155 E. 116th Street	1903	Single-Family	Not Eligible
157 E. 116th Street	1898	Multi-Family	Not Eligible
159 E. 116th Street	1903	Single-Family	Not Eligible
163 E. 116th Street	1898	Multi-Family	Not Eligible
165 E. 116th Street	1898	Single-Family	Not Eligible
207 E. 116th Street	1888	Multi-Family	Not Eligible
742 W. 116th Street	1919	Single-Family	Not Eligible
120 E. 117th Place	1908	Single-Family	Not Eligible
736 W. 117th Place	1946	Single-Family	Not Eligible
126 E. 117th Street	1898	Multi-Family	Not Eligible
128 E. 117th Street	1908	Single-Family	Not Eligible
132 E. 117th Street	1908	Single-Family	Not Eligible
149 E. 117th Street	1908	Craftsman Style Residence	Not Eligible
312 E. 117th Street	1891	Single-Family	Not Eligible
322 E. 117th Street	1878	Single-Family	Not Eligible
345 E. 117th Street	1903	Single-Family	Not Eligible
742 W. 117th Street	1925	Craftsman Style Residence	Not Eligible
306 E. 118th Street	1898	Single-Family	Not Eligible
354 E. 118th Street	1886	Single-Family	Not Eligible
737 W. 118th Street	1897	Multi-Family	Not Eligible
834 W. 118th Street	1909	Single-Family	Not Eligible
738 W. 119th Street	1893	Multi-Family	Not Eligible
829-837 W. 119th Street	1971	Commercial	Modern
846 W. 119th Street	1915	Industrial	Not Eligible
918 W. 119th Street	1925	Multi-Family	Not Eligible
956 W. 119th Street	1906	Religious	Not Eligible
820 W. 120th Street	1968	Industrial	Modern
931 W. 120th Street	1897-1911	Fire Department, Engine Co. 115	Eligible
1455 W. 120th Street	1919	Single-Family	Not Eligible
738 W. 129th Place	1951	Single-Family	Not Eligible
743 W. 129th Place	1952	Single-Family	Not Eligible
814 W. 129th Place	1953	Single-Family	Not Eligible
817 W. 129th Place	1956	Single-Family	Not Eligible
1215 S. Ada Street	2000	Industrial	Modern
12015 S. Bishop Street	1914	Single-Family	Not Eligible
12050 S. Bishop Street	1889	Single-Family	Not Eligible

Address	Year Built	Description	Eligibility
11727 S. Calumet Avenue	1893	Single-Family	Not Eligible
11824 S. Emerald Avenue	1927	Multi-Family	Not Eligible
12012 S. Emerald Avenue	1904	Multi-Family	Not Eligible
12110 S. Emerald Avenue	1949	Single-Family	Not Eligible
12206 S. Emerald Avenue	1923	Craftsman Style Residence	Not Eligible
12254 S. Emerald Avenue	1904	Multi-Family	Not Eligible
12300 S. Emerald Avenue	1915	Mixed-Use	Not Eligible
12350 S. Emerald Avenue	1931	Craftsman Style Residence	Not Eligible
12400 S. Emerald Avenue	1924	Craftsman Style Residence	Not Eligible
12446 S. Emerald Avenue	1950	Single-Family	Not Eligible
12552 S. Emerald Avenue	1942	Single-Family	Not Eligible
12608 S. Emerald Avenue	1925	Single-Family	Not Eligible
12650 S. Emerald Avenue	1943	Single-Family	Not Eligible
12706 S. Emerald Avenue	1957	Single-Family	Not Eligible
12814 S. Emerald Avenue	1952	Single-Family	Not Eligible
12842 S. Emerald Avenue	1954	Single-Family	Not Eligible
12904 S. Emerald Avenue	1955	Single-Family	Not Eligible
11730-11736 S. Front Avenue	1952-1962	Industrial Complex	Not Eligible
12143 S. Green Street	1909	Flat	Not Eligible
12257 S. Green Street	1911	Single-Family	Not Eligible
12713 S. Green Street	1953	Single-Family	Not Eligible
12817 S. Green Street	1952	Single-Family	Not Eligible
12819 S. Green Street	1952	Single-Family	Not Eligible
12823 S. Green Street	1952	Single-Family	Not Eligible
12825 S. Green Street	1952	Single-Family	Not Eligible
12829 S. Green Street	1952	Single-Family	Not Eligible
12831 S. Green Street	1952	Single-Family	Not Eligible
12835 S. Green Street	1952	Single-Family	Not Eligible
12837 S. Green Street	1952	Single-Family	Not Eligible
12851 S. Green Street	1951	Single-Family	Not Eligible
12877 S. Green Street	1952	Single-Family	Not Eligible
11600 S. Halsted Street	1962	Commercial	Not Eligible
11601 S. Halsted Street	1987	Commercial	Modern
11642 S. Halsted Street	1925	Chicago Style Bungalow	Not Eligible
11753 S. Halsted Street	1914	Craftsman Style Residence	Not Eligible
11756 S. Halsted Street	1931	Galloy & Van Etten Stone Contractors	Eligible
11763 S. Halsted Street	1904	Multi-Family	Not Eligible
11800 S. Halsted Street	1922	Former Coal Yard Storage	Not Eligible

Address	Year Built	Description	Eligibility
11932 S. Halsted Street	1893	Commercial	Not Eligible
11934-11938 S. Halsted Street	1926	Commercial	Not Eligible
11944 S. Halsted Street	1926	Mixed-Use	Not Eligible
11946 S. Halsted Street	1926	Commercial	Not Eligible
11948-11950 S. Halsted Street	1926	Former Feed Store	Not Eligible
11958 S. Halsted Street	1894	Mixed-Use	Not Eligible
12000 S. Halsted Street	1939	Art Deco Commercial	Not Eligible
12001-12003 S. Halsted Street	1894	Commercial	Not Eligible
12018 S. Halsted Street	1916	Mixed-Use	Not Eligible
12022 S. Halsted Street	1898	Mixed-Use	Not Eligible
12033 S. Halsted Street	1914	Multi-Family	Not Eligible
12048 S. Halsted Street	1901	Mixed-Use	Not Eligible
12142 S. Halsted Street	1942	Single-Family	Not Eligible
12155 S. Halsted Street	1920	Multi-Family	Not Eligible
12156 S. Halsted Street	1937	Commercial	Not Eligible
12212-12220 S. Halsted Street	1955	Commercial	Not Eligible
12217 S. Halsted Street	1928	Mixed-Use	Not Eligible
12246 S. Halsted Street	1929	Industrial	Not Eligible
12309 S. Halsted Street	1953	Commercial	Not Eligible
12345 S. Halsted Street	1959	Commercial	Not Eligible
12433-14239 S. Halsted Street	1958	S.S. Peter & Paul Catholic Church	Eligible
12717 S. Halsted Street	1952	Mixed-Use	Not Eligible
12730 S. Halsted Street	1957	Religious	Not Eligible
12746-12804 S. Halsted Street	1952	Commercial	Not Eligible
12747 S. Halsted Street	1968	Commercial	Modern
12801-12811 S. Halsted Street	1957	Commercial	Not Eligible
12825 S. Halsted Street	1970	Industrial	Modern
12841 S. Halsted Street	1955	Commercial	Not Eligible
12856-12900 S. Halsted Street	1952-1962	Religious	Not Eligible
11615-11617 S. Indiana Avenue	1964-1973	Public Building	Modern
11708 S. Indiana Avenue	1908	Multi-Family	Not Eligible
11709 S. Indiana Avenue	1908	Single-Family	Not Eligible
11715 S. Indiana Avenue	1908	Multi-Family	Not Eligible
11740 S. Indiana Avenue	1888	Single-Family (vacant)	Not Eligible
112 E. Kensington Avenue	1900	Flat	Not Eligible
121 E. Kensington Avenue	1900	Flat	Not Eligible
121 1/2 E. Kensington Avenue	1888	Multi-Family	Not Eligible

Address	Year Built	Description	Eligibility
133-139 E. Kensington Avenue	1925	Commercial Building (former Venetian Hall)	Eligible
11528 S. Lafayette Avenue	1889	Single-Family	Not Eligible
11532 S. Lafayette Avenue	1888	Single-Family	Not Eligible
11557 S. Lafayette Avenue	1883	Multi-Family	Not Eligible
12018 S. Loomis Street	1904	Single-Family	Not Eligible
11563-11565 S. Michigan Avenue	1900/1962	Industrial	Not Eligible
11592 S. Michigan Avenue	1888	Commercial	Not Eligible
11593 S. Michigan Avenue	1883	Mixed-Use	Not Eligible
11601-11603 S. Michigan Avenue	1966	Religious	Modern
11611 S. Michigan Avenue	1888	Multi-Family	Not Eligible
11835 S. Morgan Street	1971	Single-Family	Modern
9939 S. Normal Avenue	1939	Single-Family	Not Eligible
11701 S. Peoria Street	1904	Multi-Family	Not Eligible
11805 S. Peoria Street	1913	Flat	Not Eligible
11842 S. Peoria Street	1890	Single-Family	Not Eligible
12139 S. Peoria Street	1951	Industrial (vacant)	Not Eligible
11515 S. Perry Avenue	1965	Single-Family	Not Eligible
11516 S. Perry Avenue	1913	Craftsman Style Residence	Not Eligible
11521 S. Perry Avenue	1879	Multi-Family	Not Eligible
11630 S. Prairie Avenue	1898	Single-Family	Not Eligible
11632 S. Prairie Avenue	1888	Multi-Family	Not Eligible
11634 S. Prairie Avenue	1927	Multi-Family	Not Eligible
11718 S. Prairie Avenue	1885	Single-Family	Not Eligible
11814 S. Prairie Avenue	1926	Chicago Style Bungalow	Not Eligible
11801 S. Sangamon Street	1909	Religious	Not Eligible
11820 S. Sangamon Street	1904	Multi-Family	Not Eligible
11546 S. State Street	1901	Single-Family	Not Eligible
11548 S. State Street	1889	Single-Family	Not Eligible
11567 S. State Street	1908	Multi-Family (vacant)	Not Eligible
11569 S. State Street	1898	Single-Family	Not Eligible
11571 S. State Street	1898	Single-Family	Not Eligible
11573 S. State Street	1908	Single-Family	Not Eligible
11575 S. State Street	1908	Single-Family (vacant)	Not Eligible
11583 S. State Street	1926	Single-Family	Not Eligible
11594 S. State Street	1924	Religious Building	Not Eligible
741 W. Vermont Street	1954	Single-Family	Not Eligible
814 W. Vermont Street	1953	Single-Family	Not Eligible

Address	Year Built	Description	Eligibility
817 W. Vermont Street	1956	Single-Family	Not Eligible
821 W. Vermont Street	1956	Single-Family	Not Eligible
825 W. Vermont Street	1956	Single-Family	Not Eligible
11572 S. Wabash Avenue	1903	Multi-Family	Not Eligible
11573 S. Wabash Avenue	1910	Garage	Not Eligible
11574 S. Wabash Avenue	1922	Multi-Family	Not Eligible
11578 S. Wabash Avenue	1893	Multi-Family	Not Eligible

5.4.2.1 Resources Eligible for National Register of Historic Places

Of the 172 buildings surveyed within the West Pullman portion of the RLE APE, 4 were identified as eligible for listing on the NRHP. These are described briefly below.

Galloy & Van Etten Stone Contractors, 11756 S. Halsted Street

This two-story light industrial building in the West Pullman community was built in 1931 and is home to the Flagstone Veneer Stone/Galloy & Van Etten Inc. Cut Stone Contractors business. The building has a one-story wing at its south end; both the main building and wing have flat roofs. A line of buttresses divides the building's long Halsted Street elevation into a series of 13 bays; large windows have all been filled in with synthetic materials. One of these bays features an overhead garage door. The front (south) elevation of the one-story office wing has a hollow-core metal door with a filled in transom, three non-original one-over-one aluminum-sash windows, and two large window openings filled with concrete block. An additional flat-roofed one-and-a-half-story wing is situated along the rear of the main building block. Its west elevation features a series of windows and overhead doors. Detailing includes concrete stringcourses and applied letters.

Shown in Figure 5-11, this industrial building is eligible for NRHP listing under Criterion A for Industry. Dutch immigrant Abram Van Etten and his partner George Galloy established the stone fabricating company in 1899. It has been in operation at its current location for nearly 100 years. Located in a community that experienced a collapse of its industrial base in the 1970s and considerable disinvestment since that time, the building serves as an important and rare example of an early 20th century industrial building in West Pullman that retains its original use and ownership. It retains the majority of its original materials with the exception of fenestration along Halsted Street, where it appears that the windows have either been covered or removed.

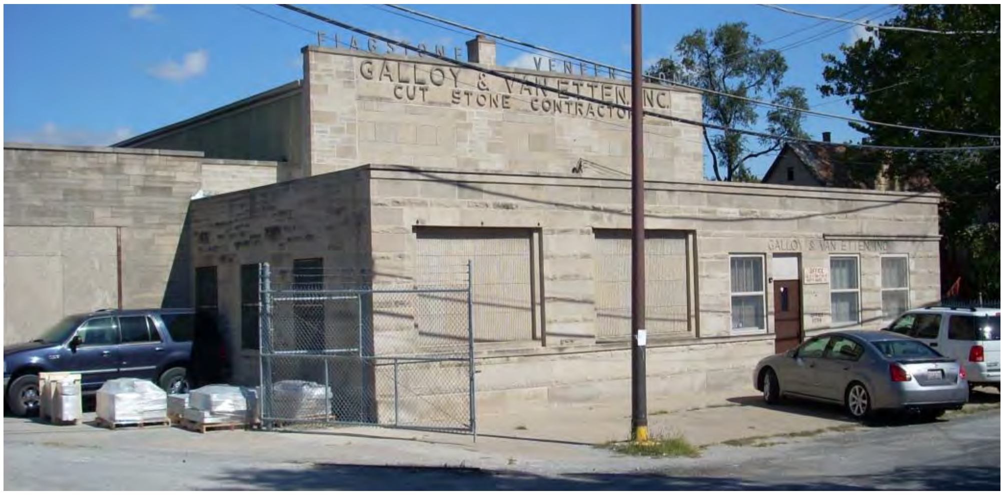

Figure 5-11: South Facade of Galloy & Van Etten Industrial Building

Fire Department Engine Company 115, 931 W. 120th Street

This two-story firehouse in the West Pullman community was built circa 1897–1911 and has a flat roof and parapet. The building is shown in Figure 5-12. The front elevation is clad in brown face brick and has a centrally located overhead metal door flanked by single one-over-one windows on the first floor. Four non-original one-over-one windows are on the second floor. The overhead opening for the station’s fire truck features a Classical stone surround with Ionic columns atop low pedestals, a frieze band incised with the words “Fire Department,” and a pediment. Detailing includes a circular motif in stone, stone sills, sill courses, and a metal cornice. This is an excellent example of a neighborhood fire station that still functions in its original use and has very good integrity. It is individually eligible for listing on the NRHP under Criterion C.

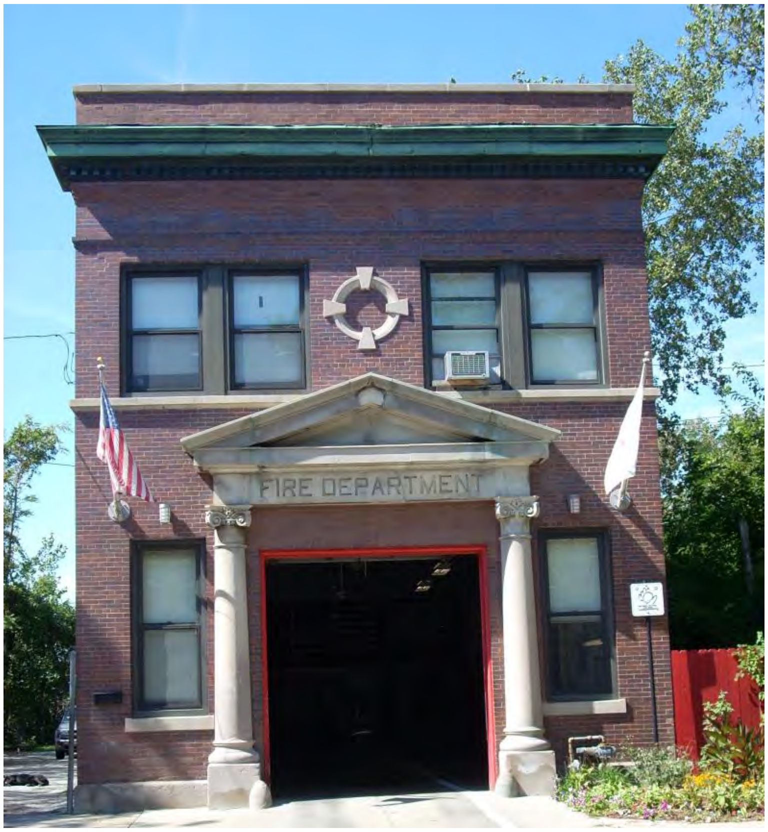

Figure 5-12: East Facade of Fire Department Engine Company 115 at 931 W. 120th Street

S.S. Peter & Paul Roman Catholic Church, 12433–12439 S. Halsted Street

This Mid-Century Modern church at the northeast corner of 125th and Halsted Streets in the West Pullman community was built in 1958 for the parish of Saints Peter and Paul. Shown in Figure 5-13, the church is clad with orange face brick and stone veneer. The building has a steeply pitched gable roof, deep roof overhangs along the front elevation, and a square hip-roofed corner tower with a vertical strip of leaded glass windows. The front elevation has a central pavilion flanked by projecting full-height brick piers, three sets of original double doors divided by concrete piers and topped with a concrete spandrel with incised lettering that reads “S.S. Peter and Paul,” and an expansive area above which is glazed with leaded glass. The side elevations feature a series of narrow windows that appear to be double-hung.

This building was identified as individually eligible for NRHP listing under Criterion C for architecture as an excellent and rare example of a Mid-Century Modern church in West Pullman.

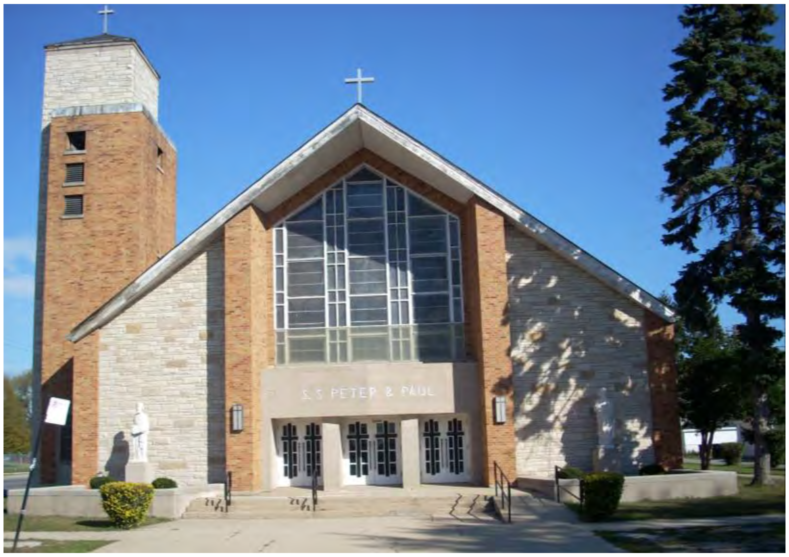

Figure 5-13: South Facade of S.S. Peter & Paul Catholic Church at 12433-12439 S. Halsted Street

Venetian Hall, 133–139 E Kensington Avenue

The two-story performance hall was built for cultural and recreational purposes, although it has long since been repurposed as a church. The 1938 Sanborn map shows the hall with a stage, balcony, and place for storage of scenery. The street entrance was flanked by two storefronts in 1938, as it is today.

Shown in Figure 5-14, the 1925 building is clad with face brick on its front elevation and common brick on its side and rear elevations. The building has a flat roof and a shaped parapet with concrete coping. The first floor of the front elevation has a recessed, centrally located bay with three pairs of multi-light wood doors and in-filled transoms. This central bay is flanked by two original storefronts with central recessed doors and flanking display windows that are covered with wood and topped by transoms that have been filled in with glass block. Separating the central bay from the two flanking storefronts and providing access to the second floor are two doors with transoms. The spandrel area directly above the central entrance bay has a concrete sign plate with incised lettering that reads “Venetian Hall.” Fenestration on the second floor features six-over-one and three-over-one wood-sash windows arranged in pairs and in groups of three, topped by round-arch stone lintels with rosette motifs. The parapet features a series of Classical shields and swags.

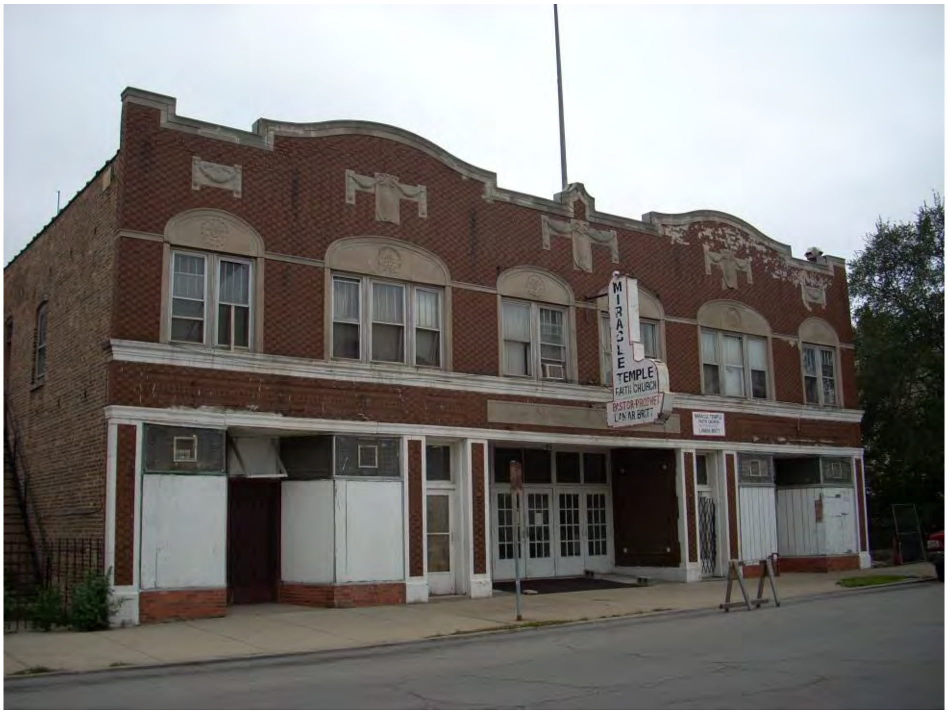

Figure 5-14: Front Facade of Venetian Hall

The exterior of this building has good overall integrity, although elements of the original storefront materials are no longer extant. It does not display sufficient distinguishing architectural features to qualify as individually eligible for listing on the NRHP for its architecture. Instead, is recommended for individual listing under Criterion A for its original use as a social venue for area residents in the early 20th century. Local theater houses such as the Venetian Hall were jewels within the local communities. It is rare to see an early 20th century neighborhood social hall that retains its original storefronts and is set within a residential area of workers' housing, rather than along a commercial thoroughfare. The opening of Illinois Terra Cotta Works in the first half of the 20th century brought Italians to Kensington; the area gradually became a center of South Side Italian-American life with the establishment of Venetian Hall and the nearby San Antonio de Padua (patron saint of Venice) Roman Catholic Church.

5.4.2.2 Properties Surveyed but Determined Ineligible

Beyond the properties that were identified as individually eligible for NRHP listing, a number of properties were surveyed that did not meet the criteria. Generally, these properties have had subsequent alterations that compromise their historic integrity or do not feature a level of distinctive architectural detailing necessary to qualify for the NRHP.

5.5 Riverdale Community

The following subsections include a description of the historic context for the development of the Riverdale community within Chicago (**Section 5.5.1**) and an overview of historic properties that were surveyed (**Section 5.5.2**).

5.5.1 Historic Context

The community of Riverdale—distinct from the adjacent Village of Riverdale to the southwest—is approximately 16 miles south of Chicago's Loop. It is bounded by the Bishop Ford Expressway (I-94) on the east, the Illinois Central Railroad on the west, 115th Street on the north, and the Chicago city limits (138th Street) on the south. The northern two-thirds of the community is occupied by rail yards, industry, and the Calumet Sewage Treatment Plant, while residential development is concentrated south of 130th Street and east of Indiana Avenue.

Riverdale Development in the 19th Century
The earliest settler in the Riverdale area was George Dolton, who arrived with his wife and seven children in 1835. He was joined near the banks of the Little Calumet River by several other pioneers over the next few years, including J. C. Matthews. Dolton and Matthews operated a ferryboat across the river starting in 1836. In 1836, Dolton and another settler, Levi Osterhoudt, built a toll bridge across the river, which they operated until 1842 when it was purchased by the county (Goodspeed and Healy 1909:317). The area grew slowly as a truck farming community that provided produce to Chicago. Early farmers were soon joined by Dutch and Swedish railroad workers during construction of the Illinois Central tracks through the area from 1850 to 1852 (Andreas 1884:601-602).

Riverdale became part of Hyde Park Township in 1867, the year a small frame school was built in the community. The following year George Dolton commissioned David Andrews, an early resident of West Pullman, to make the first plat of Riverdale. The name Riverdale came into common use in 1873 when the first post office was opened. Prior to that time, the area had been called Dolton or Dolton Junction. A larger school building replaced the earlier one in 1874. By

1884 the Riverdale settlement had a population of just 600, and settlement was concentrated around the railroad station and post office on West 137th Street (Andreas 1884:602).

Riverdale was annexed to Chicago in 1889. During the 1880s and 1890s the fledgling community consisted mostly of small frame cottages. Surviving homes of this period can be found at 231 E. 136th Street and 13778 S. Leyden Avenue. A storefront building with flats above from the 1880s at 136176 S. Indiana Avenue recalls the early Indiana Avenue commercial district that was shared with the Village of Riverdale to the west. A *Chicago Tribune* article (1891b) about Riverdale's volunteer fire department noted, "The town consists of only a few dozen scattered houses and a few stores, and its comparative insignificance, coupled with the fact that it lies just on the edge of the corporation line, has caused the Fire Department to overlook its needs for fire protection." The population of Riverdale became more mixed as Irish groups moved into the area to work on the railroads and in the factories. A group of Russians of German descent settled north of the Little Calumet River between 133rd and 136th Streets (Chicago Fact Book Consortium 1995:163).

Riverdale's industrial development had its beginnings in the 1860s, when widespread truck farming gave rise to establishments that processed foods, such as a sugar beet refinery founded in 1865. The Union Copper Distilling Company of Chicago established the Riverdale Distillery in 1871, and by 1883 the company employed an average of 50 men and boasted a profit of $1.5 million. In the late 19th century Riverdale was also home to lumber yards and planing mills operated by the Riverdale Lumber Company, which was established in 1879, and by the Calumet Lumber Company (Andreas 1884:602). Several railroads were built through the area between 1852 and 1880, claiming large parcels of land for their ROWs and yards. In addition to the Illinois Central, the railroads included the Pittsburg, Cincinnati, Chicago and St. Louis Railroad and the Chicago and Eastern Line.

The Pullman Company owned substantial acreage in the northern section of Riverdale, upon which they operated several businesses including a farm, a brickyard, and a paint company. Lake Calumet was dredged to supply clay for the brick-making operation that by 1893 reportedly manufactured from 20 to 30 million bricks a year. The Calumet Paint Company on 116th Street manufactured the paint used in Pullman's shops and factories. The paint company was purchased by Sherwin-Williams in 1888. The 140-acre Pullman Farm was fertilized by the sewage from George M. Pullman's self-sustaining, planned community; the farm's most profitable crops were onions, cabbage, and celery (Doty 1893:31-32, 155).

Riverdale Development: 1900 to 1950

By the start of the 20th century, the land in the northern two-thirds of the community had become increasingly industrialized. In 1902, Sherwin-Williams enlarged its 116th Street facility with new buildings on an additional 10 acres purchased that year from the Pullman Land Company. Over the next half century, the company's Riverdale plant grew to encompass 100 acres, which included land once used by the Pullman Farm. It became one of the largest paint factories in the world, capable of making the complete product, from raw material to container (*Chicago Tribune* 1902, Sherwin-Williams 2008). Other industries that moved into the area included Chicago Drop Forge, the Illinois Terra Cotta Works, and the Swift and Knickerbocker ice plants (Keating 2008:259).

Industries dumped wastes into Calumet waterways, and sewers deposited human wastes in increasing amounts as factories and population grew. The currents flowing into the lake were inadequate to remove sewage and industrial wastes, and frequent dredging was necessary to keep channels open. The dredging and widening of the Little Calumet River to make it navigable for barges and the building of the Cal-Sag Channel (1911–1922) by the Sanitary District of Chicago (now Metropolitan Water Reclamation District of Greater Chicago) spurred further industrialization of the Calumet area during the first decades of the 20th century. The Cal-Sag Canal channel was dug between the Little Calumet River and the Sanitary and Ship Canal, altering the flow of the rivers and diverting wastes to the Illinois River and away from Lake Michigan. In 1922 the Sanitary District located a sewage treatment plant in Riverdale to service the growing communities on Chicago's Far South Side.

Riverdale's population did not keep pace with its burgeoning industries due to its remoteness from downtown Chicago and lack of accessible public transit. By 1920 the community had a population of just 1,207, which was concentrated between 133rd and 138th Streets. Its small housing stock consisted mainly of single-family frame cottages and bungalows. By 1940 there were only 1,500 residents and Riverdale was widely considered a place to work, but not to live (Chicago Fact Book Consortium 1995:163).

World War II revitalized industries on Chicago's Far South Side and stimulated demand for low-cost war-worker housing for African-Americans. The response of the federal government and the Chicago Housing Authority (CHA) was construction of the Altgeld Gardens public housing project on an immense 157-acre tract of vacant land between 130th and 133rd Streets, from Langley to Greenwood Avenues. Construction started in November 1943 and the complex was dedicated before a crowd of 5,000 people on August 26, 1945. It was developed and managed by CHA in conjunction with the National Housing Agency and the Federal Public Housing Authority. Ownership was originally held by the federal government but was transferred to CHA in 1956 (*Chicago Tribune* 1945, Bowly 1978:42).

Built at a cost of $9 million, Altgeld Gardens featured 1,500 apartments that housed 7,000 people in 162 two-story row houses. The complex was designed by the modernist Chicago firm of Naess and Murphy. Its architects Sigurd Naess and Charles Murphy subsequently designed Chicago's first major skyscraper in the post-war era, the Prudential Building (1952-55). The row houses are constructed of common brick with concrete canopies over the front doors, and each house features a front lawn and rear yard (Bowly 1978:43-44).

Because Altgeld Gardens was created at an isolated location far from the established residential sections of the city, it lacked easy access to mass transit except for limited bus service. Provision had to be made for many community facilities including a Board of Health station, public library, nursery school, auditorium, and a community center. The Chicago Board of Education built four one-story school buildings for elementary and high school classes. Included in the center of the development were privately owned businesses including a grocery store, bakery, barber and beauty shops, and a drug store. An interdenominational church was built in 1950 under the sponsorship of the Church Federation of Greater Chicago (Bowly 1978:45, *Chicago Tribune* 1944). Residents were served by the adjacent 16-acre Carver Park with its indoor gymnasium, swimming pool, fitness center, boxing ring, and multi-purpose clubrooms. Outside, the park offers a playground, baseball diamonds, and basketball courts. Carver High School—named for African-American scientist and educator George Washington Carver—was built in 1947 at 13100 S. Doty Avenue (Chicago Park District 2012).

Riverdale Development: 1950 to Present

The creation of Altgeld Gardens dramatically altered life in Riverdale as its population more than quadrupled by 1950 to 9,790 residents. In 1954 the CHA built the Philip Murray Homes as a 500-unit extension of Altgeld Gardens. Its two-story row houses, also designed by Naess and Murphy, were similar to, if somewhat simpler than, the adjacent houses of Altgeld Gardens. The new complex boosted Riverdale's population to more than 11,000 in 1960, 90 percent of whom were African-Americans residing in public housing.

In 1967–1968, the 800-unit Eden Green was built as the nation's first majority African-American owned and operated apartment and town house complex. The federally financed project, built on a 50-acre tract along Indiana Avenue between 130th and 133rd Streets, was sponsored by the Antioch Missionary Baptist Church of Englewood through the Antioch Foundation and targeted low and moderate-income families. The series of low-rise buildings were designed by architect Charles Edward Stade and featured housing that ranges in size from one-bedroom garden apartments to four-bedroom town houses (*Chicago Tribune* 1967a, 1967b, 1968).

Riverdale's population reached a peak of 15,018 by 1970, despite the fact that several hundred white residents moved out. The area has lost both population and jobs since that time. A long history of heavy industrial use throughout the community—factories, railroads, landfills, and a wastewater treatment facility—has likely contaminated large tracts of land; additional information about hazardous materials and contaminations is presented in the *Hazardous Materials Technical Memorandum*. By 1990 only 10,821 people lived in Riverdale and two-thirds of its households lived in poverty. By 2000, the population had dropped to 9,809 residents and nearly all Riverdale residents are African-American (Keating 2008:260). Riverdale still lacks basic commercial amenities; most residents shop in retail areas in Roseland or in the south suburbs. Roseland Community Hospital on 111th Street is the nearest major medical facility.

Limited educational options for Riverdale children led to the 2009 construction of the Chicago International Lloyd Bond Charter School in Altgeld Gardens, which serves kindergarten through eighth grade. The school is named for Lloyd Bond, a Johns Hopkins-trained psychologist who grew up in Altgeld on the same block where the school now stands. The school replaced the private Our Lady of the Gardens, which was a fixture in the complex since its inception (Mack 2009). Particularly problematic for the community was the transformation of Carver High School to a selective high school military academy in 2000. This meant that high school students from Altgeld Gardens had to travel about 5 miles to Fenger High School in the Roseland community, the next closest school. A long-running feud between Altgeld and Fenger students culminated in the death of a Fenger student in 2009 (Ahmed 2009). Escalating tensions finally prompted the Chicago Public Schools to build the Larry Hawkins Charter School in Altgeld Gardens, which opened in time for the 2010–2011 school year and serves grades 7 to 12.

A more than decade-long grassroots campaign by residents and community groups—including a young community organizer named Barack Obama—to have asbestos removed from apartments at Altgeld Gardens culminated in the 2003 asbestos abatement program funded by the federal government. In 1992, Altgeld Gardens was determined eligible for listing on the National Register by the Preservation Services staff of the Illinois Historic Preservation Agency.

Riverdale's most significant natural amenity is the 135-acre Beaubien Preserve, part of the Forest Preserve District of Cook County, which is in the southeastern corner of the community. The wooded preserve features large oaks that are over 100 years old with a few pockets of remnant prairie that harbor native species. At the center of the preserve is Flatfoot Lake, a popular fishing spot in the region. In recent years the Forest Preserve District of Cook County has worked to rehabilitate the area around the lake by cleaning up debris, testing water quality, restocking the lake with fish, refurbishing facilities, and establishing access to the waterway.

5.5.2 Surveyed Resources

As part of the fieldwork for the RLE Project, one building within the Riverdale portion of the APE was surveyed: 501 E. 130th Street. Altgeld Gardens, which was identified as an NRHP-eligible resource independent of the RLE Project, also lies within the Riverdale community. Maps in Appendix A present these findings graphically.

5.5.2.1 Resources Eligible for National Register of Historic Places

Altgeld Gardens, which was identified as NRHP-eligible independent of the RLE Project, was not surveyed as part of the RLE Project but lies within the Riverdale community.

5.5.2.2 Properties Surveyed but Determined Ineligible

The one surveyed property, a commercial property at 501 E. 130th Street, is too recent (constructed circa 1974–1988) to be eligible for inclusion on the NRHP.

5.6 Village of Calumet Park

The following subsections include a description of the historic context for the development of the Village of Calumet Park (**Section 5.6.1**) and an overview of historic properties that were surveyed (**Section 5.6.2**). No NRHP-listed sites or districts fall within the RLE APE in the Village of Calumet Park.

5.6.1 Historic Context

The Village of Calumet Park is approximately 15 miles south of Chicago's Loop. It is roughly bounded by 123rd Street on the north, with a parcel west of I-57 that extends to 119th Street; the

Metra train tracks on the west; Halsted Street, Racine Avenue, and Morgan Street to the east; and the Chicago city limits (138th Street) to the south.

Village of Calumet Park Development: 1900 to 1950

The Village of Calumet Park, settled by 200 to 300 residents representing a variety of ethnicities, was incorporated in 1912 as the Village of De Young (*Chicago Tribune* 1962). By 1914, the name had changed to Burr Oak. Throughout the first half of the 20th century it remained a sparsely settled, virtually lawless area that was mainly associated in the public's mind with vice and crime. A search of the *Chicago Tribune* historical archive for the Village of Burr Oak during the 1910s and 1920s revealed dozens of articles regarding notorious road houses, taverns, and poolrooms, mainly in the north section of the community, that were havens of drugs and gambling and locations for shootouts with outside authorities. The most infamous of these was the Burr Oak Inn at 119th and Wood Streets, a tavern and dance hall known as the "Crime Castle" in news accounts. It featured secret escape tunnels, concealed opium dens, and underground arsenals before it burned to the ground in 1920 (*Chicago Tribune* 1918a, 1918b, 1920).

Regular raids of the village seemingly did little to curb its illicit activities. During a January 1922 raid of four saloons and poolrooms in which four slot machines were confiscated, the Chief Deputy Sheriff admitted, "these places have been raided before," and vowed to "continue these raids, one after the other, until all gambling is stopped" (*Chicago Tribune* 1921). The most lucrative activity in the village during the 1920s era of Prohibition was bootlegging. A July 1924 raid of 11941 S. Wood Street revealed a moonshine layout, which Chief Raider Otto Grewuch described as "the most wonderful I've ever seen," that was in full operation. Three truckloads of moonshining equipment were confiscated, including 100-gallon stills and 100 barrels of mash (*Chicago Tribune* 1924b). In one 1927 raid, 35 prohibition agents discovered stills ranging from 50 gallons to 500 gallons at various locations throughout the village. A vat of 3,500 gallons of newly brewed beer was still simmering at 12402 S. Green Street (*Chicago Tribune* 1927).

The unsavory reputation of their village led residents to petition the mayor and the board of trustees for a name change from Burr Oak to Calumet Park in 1925 (*Chicago Tribune* 1925). Among the earliest residential subdivisions was Calumet Highlands, a 40-acre tract bounded by Ashland Avenue, Loomis Street, 125th Street, and 127th Street. The tract was owned by the National Realty Association, which in 1924 announced its intention to build approximately 200 bungalows and two-flat residential buildings at a cost of $1.5 million (*Chicago Tribune* 1924a). The Village of Calumet Park received its first recreational amenity in 1938 with the opening of the 23-acre Raceway Park at the southeast corner of Ashland Avenue and Vermont Street (*Chicago Tribune* 1938). This ¼-mile stock car racetrack, which operated for decades, mainly featured midget car racing during the late 1930s and early 1940s. Calumet Park remained largely undeveloped during the first half of the 20th century and did not have a single religious institution within its boundaries. By 1940 it had a population of just 1,593 (Biggott 2005).

Village of Calumet Park Development: 1950 to Present

The Village of Calumet Park experienced its greatest period of growth during the 1950s, a decade that saw its population more than double from 2,500 in 1950 to an estimated 5,600 in 1955

(*Chicago Tribune* 1955a). By 1959 the population had nearly doubled again to approximately 9,000 residents (Bliss 1959c). During this decade streetscapes began to fill with small, one-story brick-clad tract homes that remain the predominant building type in the village, along with split-level homes and some small apartment buildings. Calumet Park still featured large tracts of undeveloped land in the late 1950s, as evidenced by a 1959 Chicago Tribune article about a proposed 90-home development in the vicinity of 124th and Bishop Streets (*Chicago Tribune* 1959a). Although the area had been subdivided, it was unpaved and lacked sewer and water mains.

In 1951 Calumet Park received its first religious edifice with the construction of the Church of the Seven Holy Founders at 124th and Ada Streets. The brick building of modernist design included five classrooms for the parish's 300 Polish and Irish Catholic families, who had worshipped in the Village Hall since 1949 (*Chicago Tribune* 1951). In 1956, the Community Covenant Church of Calumet Park erected an educational building at 125th and Loomis Streets. Designed by Whitehead, Billman and Associates, the one-story brick building housed a large fellowship hall intended for worship services and 15 classrooms for its congregation of 100, which the pastor expected to double within the year (*Chicago Tribune* 1955b).

The growing suburb retained its reputation for vice, however. In 1959, the *Chicago Tribune* ran a series of articles on the village, noting that it had replaced Calumet City as the center of gambling by organized crime in the south suburbs. The village at that time lacked a full-time police force, although it had 26 part-time men on the payroll at $1.25 an hour. Its part-time police chief worked during the day as a clerk in the office of the Cook County Recorder of Deeds. The most elaborate and profitable gambling enterprise in the village at that time was the Club Corral at 12906 S. Ashland Avenue, which one reporter referred to as the "mob's newest gaming den," doing business that "far exceeded the hopes of the syndicate." According to one gambler who patronized its four roulette wheels, four dice tables, two blackjack tables, and faro and poker games, the Corral handled more money in one night than any single gambling room in Las Vegas. The swanky club, with its plush bar and attractive restaurant, attracted customers of the "mink coat set" from Chicago's North Shore suburbs (Bliss 1959a).

Business at the Club Corral was booming seven nights a week until it was shut down following a July 1959 exposé on the establishment. Illegal gambling run by the crime syndicate was not, however, confined to one establishment. On an ordinary afternoon, hundreds of factory workers and housewives could be found making horse race bets and gambling in numerous taverns and other buildings throughout the village. For example, the second floor of a large garage at 1129 W. 127th Street hosted a busy gaming operation run by George (Babe) Tuffanelli, the gambling power in the south Cook County area. And a tavern at the southwest corner of 123rd and Green Streets had so many customers for its gaming operations in 1959 that residents had to park two and three blocks from their homes (Bliss 1959e).

Village President John Swalec's reaction to newspaper revelations of widespread gambling aroused the ire of residents when he stated at an August 1959 public meeting, "he never heard of gambling in the village until he read about it in the Tribune." In response, one woman shouted:

"Our town has the biggest crap game in the country" (*Chicago Tribune* 1959b). Four Calumet Park trustees, who were elected on a "good government" platform, pressed for reform and vowed they would work for an end to gaming in the village (Bliss 1959b). Swalec's subsequent clampdown on church bingo games was widely viewed by residents as a vindictive measure (Bliss 1959d).

The decade of the 1960s saw construction of the I-57 expressway through the west side of Calumet Park. The Burr Oak Elementary School at 1440 W. 125th Street received a four-room addition in 1964 (*Chicago Tribune* 1964a). In the same year, the Calumet Park recreation association built a public swimming pool at 124th and Morgan Streets, and the village established a small public library in rented quarters at 12545 S. Ashland Avenue (*Chicago Tribune* 1964b). By 1970 the population reached 10,069 with 60 businesses, most of which were along the commercial strips of 127th Street and Ashland Avenue (Biggott 2005). The lack of diversity among these commercial establishments—which featured numerous fast food restaurants, motels, and automotive services—led residents to depend on larger neighbors such as Blue Island for jobs and shopping.

As late as 1978 the village's population was 80 percent white, 5 percent African-American, and 15 percent Latino (Gaspar 1978). By 1992 African-Americans accounted for 72 percent of the population (Biggott 2005). The transition from a white to a black suburb produced conflict. In the summer of 1992 two black prisoners died in the village jail within weeks of each other, allegedly by suicide. The incidents attracted the attention of Chicago Alderman Robert Shaw and led to rallies and protests against the community's all-white police force (Kirby 1992). Buster Porch was elected in 1996 as the first African-American mayor of Calumet Park.

Despite its dip in population from 8,516 to 7,835 between 2000 and 2010, Calumet Park has experienced some development over the past decade, including two large condominium buildings erected in 1998 on 127th Street west of I-57 and at 123rd and Laflin Streets (Kukec 1998). In the same year, 17 single-family homes were erected near 129th and Aberdeen Streets. Raceway Park continued in operation through the 20th century, featuring many types of motorsport activity over the decades including stock car and motorcycle racing and demolition derbies. The racetrack closed in 2000 and was subsequently replaced by the Raceway Park Shopping Center.

5.6.2 Surveyed Resources

As part of the fieldwork for the RLE Project, seven buildings within the Calumet Park portion of the APE were surveyed. These properties, along with their construction date and an assessment of their eligibility for listing on the NRHP, are presented in Table 5-5, alphabetized by street name. Properties determined individually eligible are highlighted. A series of maps in Appendix A graphically present these findings; individual inventory sheets for surveyed properties are presented in Appendix B.

Table 5-5: Seven Surveyed Properties in Calumet Park

Address	Year Built	Description	Eligibility
12317 S. Green Street	1907	Single-Family	Not Eligible
12359 S. Green Street	1949	Single-Family	Not Eligible
12409 S. Green Street	1925	Single-Family	Not Eligible
12308 S. Halsted Street	1950	Commercial	Not Eligible
12338 S. Halsted Street	1938-1952	Public	Not Eligible
12352 S. Halsted Street	1924	Single-Family	Not Eligible
12540 S. Halsted Street	1923	Cedar Park Cemetery Entryway and Gatehouse	Eligible

5.6.2.1 Resources Eligible for National Register of Historic Places

Of the seven resources surveyed within the Calumet Park portion of the RLE APE, one was identified as eligible for listing on the NRHP.

Gatehouse and Entryway to Cedar Park Cemetery, 12540 S. Halsted Street
The Cedar Park Cemetery, founded in the early 20th century, comprises a formal landscape on 94.5 acres at 12540 S. Halsted Street. Plantings include large deciduous shade trees, as well as ornamental shrubs and mowed lawn. Grave markers are mounted flush with the lawn. Extant buildings and structures include the office/gatehouse with ornamental gate and fence, an obelisk, three mausoleums, and a cinder block building.

Overall, the landscape is not exceptional, nor does it contain any distinctive design features; the cemetery does not warrant listing on the NRHP. Of the extant structures, only the gatehouse and adjacent fenced entryway were identified as NRHP-eligible. The unusual stonework that is not readily seen in the area, the high quality of craftsmanship in their construction, and the high level of integrity the resource retains in regards to location, materials, design, setting, workmanship, and feeling, make the building, piers, and gates locally eligible for NRHP listing under Criterion C for architecture.

Cedar Park Cemetery's one-story Romanesque Revival style gatehouse, shown in Figure 5-15, is at its Halsted Street entrance. The entrance features two pairs of massive stone gateposts and metal entrance gates. Original metal fencing extends along the length of the cemetery's Halsted Street boundary, which also features several stone piers. The gatehouse, gateposts, and piers are built of grey, brown, and pink stones that are randomly laid. The building and piers have excellent integrity and were likely installed circa 1923, along with the metal entrance gates and fencing along Halsted Street, when the Cedar Park Cemetery Association purchased its original 53-acre site. The building, piers, and gates are locally eligible for NRHP listing under Criterion C for architecture due to their high quality craftsmanship and unusual stonework.

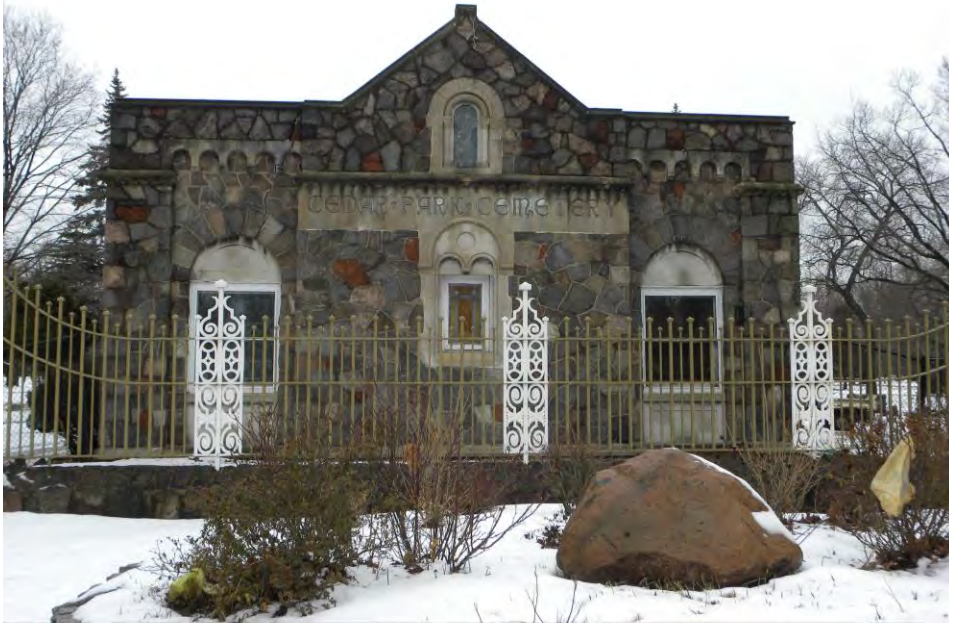

Figure 5-15: Cedar Park Cemetery Gatehouse

The gatehouse has a flat roof, parapet, and stone cornice. All windows have stone sills and stone lintels with a type of scallop shell motif. The Halsted Street elevation has four windows: a small stained glass window in its projecting bay, a single window with round-arched transoms on either side of the bay, and a small, round-arched window flanked by slender colonettes in the parapet gable. The Halsted Street elevation bay is topped with stone banding incised with the words "Cedar Park Cemetery." The north elevation has a centrally located pair of wood French doors and six wood sash windows, three each on either side of the entrance. The south elevation has a centrally located, multi-paned wood door with sidelights flanked by slender engaged columns. The south elevation's four windows include a single one-over-one window on one side of the door and a group of three windows—a single pane flanked by one-over-one windows—on the other. Doors on both the north and south elevations are topped by flat stone lintels and accessed via concrete steps flanked by stone piers. The rear elevation has five one-over-one windows: a single, centrally located window with a pair of windows on either side.

Elsewhere in the cemetery, the three granite-clad mausoleums appear to date from the middle to late 20th century. One of these features a chapel, which hosts non-denominational funeral services. The cinder block building, accessed by a secondary entrance just north of 125th Street, is utilitarian in nature and may serve as a maintenance building and/or as a crematorium. Neither the mausoleums nor the cinder block building are eligible for inclusion on the NRHP.

5.6.2.2 Properties Surveyed but Determined Ineligible

Beyond the properties that were identified as individually eligible for NRHP listing, a number of properties were surveyed that did not meet the criteria. Generally, these properties have had subsequent alterations that compromise their historic integrity or do not feature a level of distinctive architectural detailing necessary to qualify for the NRHP.

5.7 Summary of CHRS Resources

Independent of the evaluation process described above, several resources within the APE were evaluated as part of the CHRS. Those rated as Red or Orange in the survey are subject to the City's Demolition Delay Ordinance. Red- and Orange-rated properties within the RLE APE are listed in Table 5-6, alphabetized by street name.

Table 5-6: Chicago Historic Resources Survey Red/Orange Properties in the Area of Potential Effects

Address	CHRS Rating
Chicago Fire Department, 324 W. 104th Street (Alternate: 328-330 W. 104th Street)	Orange
Roseland Pumping Station, 351 W. 104th Street	Orange
1000-1120 W. 120th Street (Note: Demolished since CHRS completed)	Orange
House, 11310 S. Emerald Avenue	Orange
Substation, 10227 S. Halsted Street	Orange
St. Salomea Church, 11800-11808 S. Indiana Avenue	Orange
Commercial Building, 11206 S. Michigan Avenue	Orange
First Christian Reform Church, 10920 S. Princeton Avenue (Alternate: 10914 S. Princeton Avenue)	Orange

5.8 Parks as Historic Resources

Eight parks fall within the RLE APE. They are summarized in Table 5-7 and shown graphically in Figure 5-16. Cultural historians conducted archival research, drawing largely from recent work by Julia Bachrach of the Chicago Park District, and visited these sites in fall 2012 to assess their eligibility according to NRHP guidelines. Of the eight parks, none are recommended eligible for NRHP listing; however, each will be described in the separate *Section 4(f) Technical Memorandum* for the RLE Project.

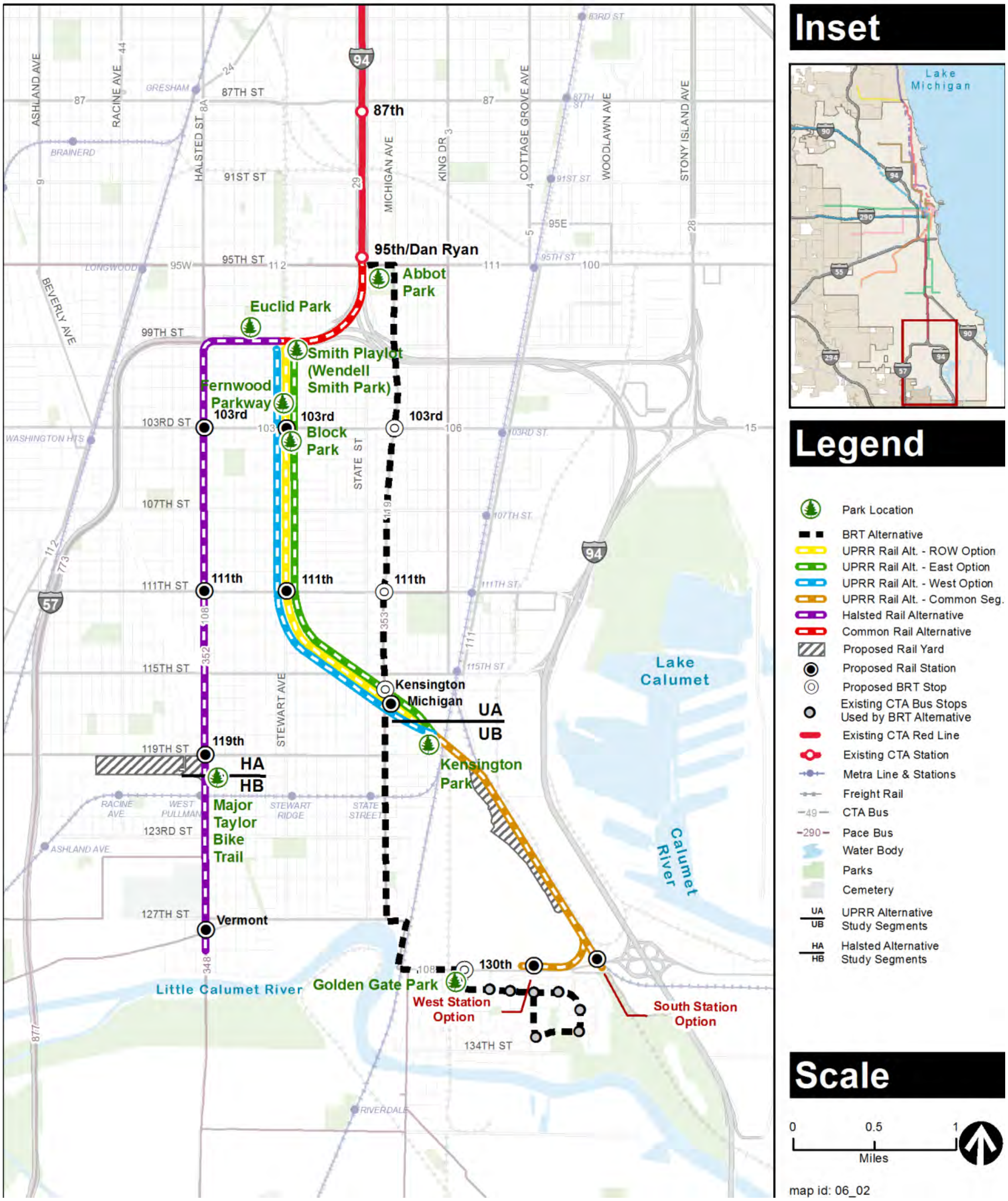
87th
95th/Dan Ryan
Abbot Park
Euclid Park
Smith Playlot (Wendell Smith Park)
Fernwood Parkway
Block Park
103rd
111th
Kensington
Michigan
UA
UB
Kensington Park
119th
HA
HB
Major Taylor Bike Trail
Vermont
130th
Golden Gate Park
West Station Option
South Station Option
Little Calumet River
Lake Calumet
Calumet River
87TH ST
91ST ST
95TH ST
99TH ST
103RD ST
107TH ST
111TH ST
115TH ST
119TH ST
123RD ST
127TH ST
134TH ST
ASHLAND AVE
RACINE AVE
HALSTED ST
MICHIGAN AVE
KING DR
COTTAGE GROVE AVE
WOODLAWN AVE
STONY ISLAND AVE
STATE ST
STEWART AVE
BEVERLY AVE
Inset
Lake Michigan
Legend
Park Location
BRT Alternative
UPRR Rail Alt. - ROW Option
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
UPRR Rail Alt. - Common Seg.
Halsted Rail Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Proposed BRT Stop
Existing CTA Bus Stops Used by BRT Alternative
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
CTA Bus
Pace Bus
Water Body
Parks
Cemetery
UPRR Alternative Study Segments
Halsted Alternative Study Segments
Scale
0
0.5
1
Miles
map id: 06_02

Figure 5-16: Surveyed Parks within the Area of Potential Effects

Table 5-7: Eight Surveyed Parks in the Area of Potential Effects

Park	Address*	Date Open	Eligibility
Abbot Park	49 E. 95th Street	1950	Not Eligible: Lacks Historic Integrity
Block Park	341 W. 104th Street	1912	Not Eligible: Building Razed
Euclid Park	9800 S. Parnell Avenue	1926	Not Eligible: Lacks Historic Integrity
Fernwood Parkway	9501 S. Eggleston Avenue	1887	Not Eligible: Lacks Historic Integrity
Golden Gate Park	13000 S. Eberhart Avenue	1969	Not Eligible: Less than 50 years
Kensington Park	345 E. 118th Street	1942	Not Eligible
Major Taylor Bike Trail	117th to 122nd Streets	2007	Not Eligible: Less than 50 years
Smith Playlot (Wendell Smith Park)	9912 S. Princeton Avenue	1970	Not Eligible: Less than 50 years

* Based on Chicago Park District files

Three of the parks within the APE do not meet the 50-year age threshold for listing in the NRHP. The five older parks have had modern alterations that compromise their historic integrity, as summarized below:

- Abbot Park, which opened in 1950, is home to modern recreational amenities including baseball diamonds, tennis courts, a volleyball court, a basketball court, a swimming pool, walking trails, and playground equipment. Two structures on the property are over 50 years in age; neither has distinguishing architectural features. Overall, the historic integrity of the park has been compromised by modern alterations.

- Block Park, which opened in 1912, originally included the Griffith Natatorium and Roseland Park. The natatorium was razed in 1998; today the park includes open space with benches and walking paths. Overall, the historic integrity of the park has been compromised by the demolition of the structure.

- Euclid Park, which opened in 1926, originally contained open space and ball fields. The park was rehabilitated in the 1960s, when the original structure was replaced with a new fieldhouse. Overall, the historic integrity of the park has been compromised by modern modifications.

- Fernwood Parkway, which was established in 1887, originally included green space planted with trees and lawn. In the early 20th century the park was replanted and a wading lagoon was added, but was removed in the 1920s. Additional alterations occurred in the 1960s and 1970s including planting, lighting, and grading. Although Fernwood Parkway was the first parkland in the neighborhood and has long been a defining feature of the Roseland community and Fernwood area, the park site lacks integrity and sufficient historical significance to be considered eligible for NRHP listing.

- Kensington Park, which was purchased by the City in 1942, contains a number of recreational amenities: a mid-20th century field house that is no longer in use, modern playground equipment, a splash pad, a paved basketball court, a horseshoe pit, and baseball fields. Although the fieldhouse is over 50 years in age, it lacks any distinguishing architectural features. The remaining elements of the park are modern additions. Overall, the historic integrity of the park has been compromised by modern alterations.

Section 6
Effects and Mitigations

The following subsections describe the effect findings following consultation with the SHPO and consulting parties. Figure 6-1 presents the locations of each NRHP-eligible resource in relation to the proposed project alternatives; maps in **Appendix D**, prepared for the *Displacements and Relocations of Existing Uses Technical Memorandum*, depict the relationship between each alternative alignment and nearby historic resources at a larger scale.

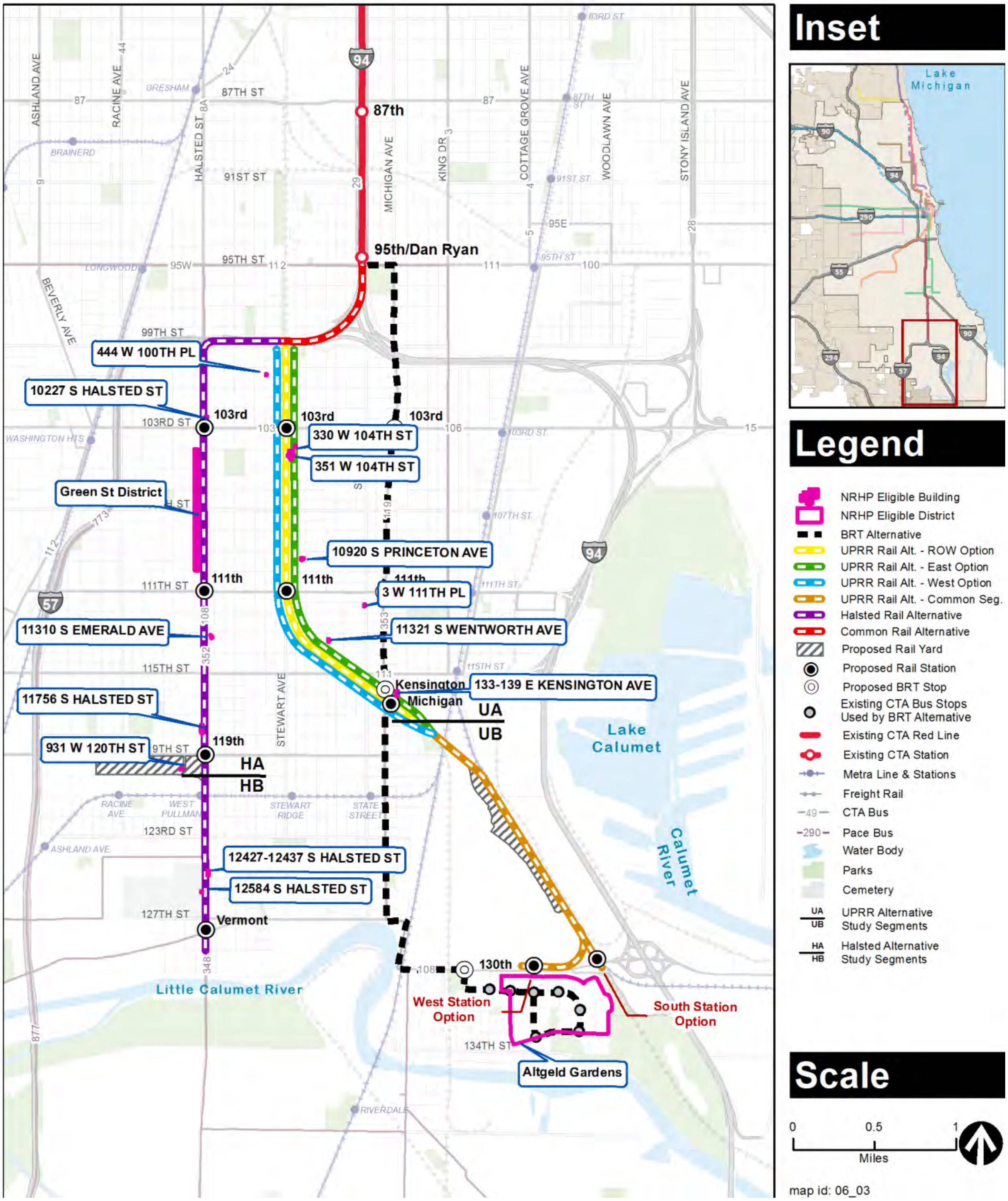
87th
95th/Dan Ryan
87TH ST
91ST ST
95TH ST
99TH ST
103RD ST
111TH ST
115TH ST
123RD ST
127TH ST
134TH ST
ASHLAND AVE
RACINE AVE
HALSTED ST
MICHIGAN AVE
KING DR
COTTAGE GROVE AVE
WOODLAWN AVE
STONY ISLAND AVE
STEWART AVE
BEVERLY AVE
GRESHAM
BRAINERD
LONGWOOD
WASHINGTON HTS
RACINE AVE
WEST PULLMAN
STEWART RIDGE
STATE STREET
RIVERDALE
444 W 100TH PL
10227 S HALSTED ST
Green St District
11310 S EMERALD AVE
11756 S HALSTED ST
931 W 120TH ST
12427-12437 S HALSTED ST
12584 S HALSTED ST
330 W 104TH ST
351 W 104TH ST
10920 S PRINCETON AVE
3 W 111TH PL
11321 S WENTWORTH AVE
133-139 E KENSINGTON AVE
Altgeld Gardens
103rd
111th
119th
Vermont
Kensington
Michigan
130th
UA
UB
HA
HB
West Station Option
South Station Option
Lake Calumet
Calumet River
Little Calumet River
Inset
Lake Michigan
Legend
NRHP Eligible Building
NRHP Eligible District
BRT Alternative
UPRR Rail Alt. - ROW Option
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
UPRR Rail Alt. - Common Seg.
Halsted Rail Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Proposed BRT Stop
Existing CTA Bus Stops Used by BRT Alternative
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
49 CTA Bus
290 Pace Bus
Water Body
Parks
Cemetery
UA UB UPRR Alternative Study Segments
HA HB Halsted Alternative Study Segments
Scale
0
0.5
1
Miles
map id: 06_03

Figure 6-1: NRHP Eligible Sites within the Area of Potential Effects

6.1 No Build Alternative

No adverse effects to historic resources are anticipated to occur as a result of the No Build Alternative.

6.2 Bus Rapid Transit Alternative

Three resources near the BRT corridor have been identified as NRHP-eligible: the Bethany Reformed Church Manse at Three West 111th Place, the Venetian Hall at 133–139 East Kensington Avenue, and the Altgeld Gardens Housing Project. None are anticipated to be adversely affected by the BRT Alternative. Table 6-1 summarizes effects for each historic resource.

Table 6-1: Effects Findings (BRT Alternative)

NRHP Eligible Resource	Effect Finding
Bethany Reformed Church Manse, 3 W. 111th Place	No Effect
Former Venetian Hall, 133-139 E. Kensington Avenue	No Adverse Effect
Altgeld Gardens Housing Project	No Effect

Bethany Reformed Church Manse: No Effect
This Craftsman style residence was home to pioneer media evangelist Reverend Harry J. Hager; it is eligible under Criterion B for its association with Reverend Hager. Under the BRT Alternative, a surface parking lot would be constructed to the east of the building.

The Bethany Reformed Church Manse would not be displaced by the BRT Alternative. Technical analyses suggest that the property would not be subject to visual, noise, or vibratory effects. Construction activities would not affect the characteristics that qualify the resource for inclusion on the NRHP; therefore, the finding is that the BRT Alternative would have no effect on the Bethany Reformed Church Manse.

Former Venetian Hall: No Adverse Effect
This former social venue and performance hall for Italian-Americans has been converted to a church; it is eligible under Criterion A for its original use as a social venue for area residents in the early 20th century. Under the BRT Alternative, a three-story parking structure would be constructed to the south and west of the building.

The former Venetian Hall would not be displaced by the BRT Alternative. While the construction of the parking structure would alter the local setting visually, it would not adversely affect the characteristics that qualify the property for inclusion on the NRHP. Technical analyses suggest that the former Venetian Hall would not be subject to noise or vibratory effects. While construction activities would likely be perceptible at the hall, it would not adversely affect the characteristics that qualify the resource for inclusion on the NRHP; therefore, the finding is that the BRT Alternative would have no adverse effect on the Venetian Hall.

Altgeld Gardens Housing Project: No Effect
This large housing project was built in the early 1940s and is eligible as a district for NRHP listing

under Criterion A for its association with community development, planning, and social history. Under the BRT Alternative, buses would travel between the 95th Street Terminal and 130th Street before continuing to circulate through Altgeld Gardens.

The Altgeld Gardens public housing project would not be displaced or have any direct effects due to implementation of the BRT Alternative. No visual, noise, vibration, or construction effects would affect the characteristics that qualify the resource for inclusion on the NRHP; therefore, the finding is that the BRT Alternative would have no effect on the Altgeld Gardens public housing project as a historic resource.

6.3 Union Pacific Railroad Rail Alternative - Right-of-Way Option

Seven resources near the UPRR corridor have been identified as NRHP-eligible: the Eclectic Neo-Traditional Home at 444 W. 100th Place, the fire station at 324 W. 104th Street, the Roseland Pumping Station at 351 W.104th Street, the Romanesque revival church at 10920 S. Princeton Avenue, the Venetian Hall at 133–139 E. Kensington Avenue, the Roseland Community Hospital Nurses Home at 11321 S. Wentworth Avenue, and the Altgeld Gardens Housing Project. None are anticipated to be adversely affected by the UPRR Rail Alternative; Table 6-2 summarizes effects for each historic resource. With the exception of one property (the Roseland Pumping Station), effects for all three UPRR Rail Alternative options (ROW, East, and West) would be the same.

Table 6-2: Effects Findings (UPRR Rail Alternative - ROW Option)

NRHP Eligible Resource	Effect Finding
Eclectic Neo-Traditional Home, 444 W. 100th Place	No Effect
Fire Department Engine Co. 93, 324 W. 104th Street	No Effect
Roseland Pumping Station, 351 W. 104th Street	No Effect
Romanesque Revival Church, 10920 S. Princeton Avenue	No Effect
Roseland Community Hospital Nurses Home, 11321 S. Wentworth Avenue	No Effect
Former Venetian Hall, 133-139 E. Kensington Avenue	No Effect
Altgeld Gardens Housing Project	No Effect/No Adverse Effect[1]

[1] No Effect finding for South Station Option; No Adverse Effect for West Station Option

Archaeological sites may be uncovered during construction activities. If this occurs, additional investigations will be necessary to determine the eligibility of sites and whether the project would lead to an adverse effect.

6.3.1 Segment UA

Six of the seven resources fall within the northern portion of the route, Segment UA.

Eclectic Neo-Traditional Home: No Effect
The Eclectic Neo-Traditional Home at 444 W. 100th Place is NRHP-eligible under Criterion C for its architecture. The UPRR Rail Alternative ROW Option corridor would be approximately one block east of the property.

The Eclectic Neo-Traditional Home would not be displaced by the UPRR Rail Alternative. No visual, noise, vibration, or construction effects would affect the characteristics that qualify the resource for inclusion on the NRHP; therefore, the finding is that the UPRR Rail Alternative ROW Option would have no effect on this residence.

Fire Department Engine Company 93: No Effect
The fire station at 324 W. 104th Street is NRHP-eligible under Criterion C for its architecture. The UPRR Rail Alternative ROW Option corridor would be approximately 200 feet east of the property.

The Fire Department Engine Company 93 station would not be displaced by the UPRR Rail Alternative. No visual, noise, vibration, or construction effects would affect the characteristics that qualify the resource for inclusion on the NRHP; therefore, the finding is that the UPRR Rail Alternative ROW Option would have no effect on this property.

Roseland Pumping Station: No Effect
The Roseland Pumping Station is NRHP-eligible under Criterion C for its architecture. The UPRR Rail Alternative ROW Option corridor would be immediately east of the property.

The pumping station would not be displaced or directly affected by the UPRR Rail Alternative. No visual, noise, vibration, or construction effects would affect the characteristics that qualify the resource for inclusion on the NRHP. The close proximity of the proposed alternative to the resource is offset by the presence of the existing UPRR freight line; implementation of the UPRR Rail Alternative would not alter the setting or feeling of the resource. Therefore, the finding is that the UPRR Rail Alternative ROW Option would have no effect on this resource.

Romanesque Revival Church: No Effect
The church at 10920 S. Princeton Avenue is NRHP-eligible under Criterion A for its association with the community's former Dutch population and under Criterion C for its architecture. The UPRR Rail Alternative ROW Option corridor would be over ½ block west of the property.

The church would not be displaced or directly affected by the UPRR Rail Alternative. No visual, noise, vibration, or construction effects would affect the characteristics that qualify the resource for inclusion on the NRHP; therefore, the finding is that the UPRR Rail Alternative ROW Option would have no effect on the church.

Roseland Community Hospital Nurses Home: No Effect
Built by the Roseland Community Hospital, this former nurses' home served as an educational facility for nurses; it is NRHP-eligible under Criterion A for its association with education. The UPRR Rail Alternative ROW Option corridor would be over 350 feet southwest of the property, separated from the line by numerous smaller residential buildings.

The Roseland Community Hospital Nurses Home would not be displaced by the UPRR Rail Alternative. No visual, noise, vibration, or construction effects would affect the characteristics that qualify the resource for inclusion on the NRHP; therefore, the finding is that the UPRR Rail Alternative ROW Option would have no effect on this resource.

Former Venetian Hall: No Effect
This former social venue and performance hall for Italian-Americans has been converted to a church; it is NRHP-eligible under Criterion A. The UPRR Rail Alternative ROW Option corridor would be over 150 feet southwest of the property, separated from the line by smaller buildings and a vacant surface lot.

The former Venetian Hall would not be displaced by the UPRR Rail Alternative. No visual, noise, vibration, or construction effects would affect the characteristics that qualify the resource for inclusion on the NRHP; therefore, the finding is that the UPRR Rail Alternative ROW Option would have no effect on this resource.

6.3.2 Segment UB

One of the seven resources falls within the southern portion of the route, Segment UB.

Altgeld Gardens Housing Project: No Effect for South Station Option; No Adverse Effect for West Station Option
This large housing project was built in the early 1940s and is eligible for NRHP listing under Criterion A for its association with community development, planning, and social history. Under the UPRR Rail Alternative, an at-grade station to provide access to Altgeld Gardens would be constructed in one of two locations: a South Station Option or a West Station Option. Either station location option is separated from Altgeld Gardens Historic District by a multi-lane street (i.e., E. 130th Street and/or E. 130th Place). Preliminary plans for each terminal station option would include parking for 2,300 vehicles through a combination of a parking structure and surface parking lots.

The complex would not be displaced or directly affected by the UPRR Rail Alternative.

The South Station Option parking structure for the UPRR 130th Street Station is approximately 800 feet from Altgeld Gardens Historic District at its closest point; the parking structure would not be visible from within the historic district and would not affect the historic district.

The West Station Option parking structure for the UPRR 130th Street Station is approximately 400 feet from Altgeld Gardens Historic District at its closest point and would only be visible from the outer line of buildings on the north side of the Altgeld Gardens development. This outer row of buildings would obstruct the view of the parking structure from interior buildings and streets. The construction of the West Station Option would not adversely affect the characteristics that qualify the district as eligible for NRHP listing, i.e., its association with community development, planning, and social history.

Therefore, the finding is that the South Station Option would have no effect on this resource, and the West Station Option would have no adverse effect on this resource.

6.3.3 120th Street Yard and Shop

No properties identified as NRHP-eligible lie in the vicinity of the proposed yard and shop location; therefore, no effects are anticipated.

6.4 Union Pacific Railroad Rail Alternative - East Option

For six of the seven properties, findings for effects on historic properties under the UPRR Rail Alternative East Option are the same as those presented in **Section 6.3** for the ROW Option:

6.4.1 Segment UA

- Eclectic Neo-Traditional Home at 444 W. 100th Place, No Effect
- Fire Department Engine Company 93 at 324 W. 104th Street, No Effect
- Roseland Pumping Station at 351 W. 104th Street, No Adverse Effect - discussed below
- Romanesque Revival Church at 10920 S. Princeton Avenue, No Effect
- Roseland Community Hospital Nurses Home at 11321 S. Wentworth Avenue, No Effect
- Former Venetian Hall at 133-139 E. Kensington Avenue, No Effect

6.4.2 Segment UB

- Altgeld Gardens Housing Project, No Effect

Because of the proximity of the East Option to the Roseland Pumping Station, the project is anticipated to have no adverse effect. Based on conceptual designs, the track structure is approximately 8.8 feet from the side of the building at its nearest point. It should be noted that an existing at-grade freight line runs in close proximity to this location. The pumping station would not be displaced or directly affected by the UPRR Rail Alternative. The changes in the setting (visual, noise, vibration, etc.) would not adversely affect the characteristics that qualify the resource as eligible for NRHP listing, i.e., its architecture.

Archaeological sites may be uncovered during construction activities. If this occurs, additional investigations will be necessary to determine the eligibility of sites and whether the project would lead to an adverse effect.

6.4.3 120th Street Yard and Shop

No properties identified as NRHP-eligible lie in the vicinity of the proposed yard and shop location; therefore, no effects are anticipated.

6.5 Union Pacific Railroad Rail Alternative - West Option

Findings for effects on historic properties under the UPRR Rail Alternative West Option are the same as those presented in **Section 6.3** for the ROW Option:

6.5.1 Segment UA

- Eclectic Neo-Traditional Home at 444 W. 100th Place, No Effect
- Fire Department Engine Company 93 at 324 W. 104th Street, No Effect
- Roseland Pumping Station at 351 W. 104th Street, No Effect
- Romanesque Revival Church at 10920 S. Princeton Avenue, No Effect
- Roseland Community Hospital Nurses Home at 11321 S. Wentworth Avenue, No Effect
- Former Venetian Hall at 133-139 E. Kensington Avenue, No Effect

6.5.2 Segment UB

- Altgeld Gardens Housing Project, No Effect

Archaeological sites may be uncovered during construction activities. If this occurs, additional investigations will be necessary to determine the eligibility of sites and whether the project would lead to an adverse effect.

6.5.3 120th Street Yard and Shop

No properties identified as NRHP-eligible lie in the vicinity of the proposed yard and shop location; therefore, no effects are anticipated.

6.6 Halsted Rail Alternative

6.6.1 Rail Corridor

Seven resources near the Halsted Rail Alternative corridor have been identified as NRHP-eligible: the Green Street Historic District, the former substation at 10227 S. Halsted Street, the French Eclectic residence at 11310 S. Emerald Avenue, the Galloy and Van Etten industrial building at 11756 S. Halsted Street, the church at 12427 S. Halsted Street, the fire station at 931 W. 120th Street, and the Cedar Park Cemetery entryway and gatehouse at 12540 S. Halsted Street. The fire station lies within the footprint of the proposed rail yard and is discussed separately in **Section 6.6.2**. Four resources are anticipated to be adversely affected by the alternative. Table 6-3 summarizes effects for each historic resource.

Table 6-3: Effects Findings (Halsted Rail Alternative)

NRHP Eligible Resource	Effects Finding
Green Street Historic District	No Adverse Effect
Former Classic Revival Substation, 10227 S. Halsted Street	Adverse Effect
French Eclectic Home, 11310 S. Emerald Avenue	No Adverse Effect
Galloy & Van Etten Stone Contractors, 11756 S. Halsted Street	No Adverse Effect
S.S. Peter & Paul Catholic Church, 12433-12439 S. Halsted Street	Adverse Effect
Cedar Park Cemetery Entryway and Gatehouse, 12540 S. Halsted Street	Adverse Effect
Fire Department Engine Co. 115, 931 W. 120th Street	Adverse Effect

Archaeological sites may be uncovered during construction activities. If this occurs, additional investigations will be necessary to determine the eligibility of sites and whether the project would lead to an adverse effect.

Green Street Historic District: No Adverse Effect
This district along Green Street between 104th and 109th Streets is eligible under Criterion C as a cohesive collection of 1950s and 1960s homes. The Halsted Rail Alternative corridor would be over 100 feet west of the property, generally screened by commercial properties along the western side of Halsted Street.

No homes within the Green Street Historic District would be displaced or directly affected by the Halsted Rail Alternative. Construction of the track structure would alter the setting along Halsted Street; this change would be visible from some locations within the district and would lead to a severe noise impact along Green Street. With the installation of noise walls, the noise impact would be reduced to moderate. These changes in setting along Halsted Street would not adversely affect the characteristics that qualify the district for inclusion on the NRHP. Technical analyses suggest that the homes would not be subject to vibratory effects. While construction activities would likely be perceptible within the district, they would not adversely affect the characteristics that qualify the resource for inclusion on the NRHP. The finding is that the Halsted Rail Alternative would not have an adverse effect on this resource.

Classical Revival Substation: Adverse Effect
The Classical Revival style substation at 10227 S. Halsted Street is eligible under Criterion C for its architecture. The Halsted Rail Alternative corridor would be immediately adjacent to the property.

Although the former substation would not be demolished as a result of implementing the Halsted Rail Alternative, the elevated track structure would be located a few feet from the front facade. This resource would be subject to an adverse visual impact due to construction of the Halsted Rail Alternative. Short-term effects due to construction activities may also lead to adverse effects, depending on the construction techniques employed. Neither noise nor vibratory effects would affect the characteristics that qualify the resource for inclusion on the NRHP. The finding is that the Halsted Rail Alternative would have an adverse effect on this resource.

French Eclectic Home: No Adverse Effect
The home at 11310 S. Emerald Avenue is NRHP-eligible under Criterion C for its architecture. The Halsted Rail Alternative corridor would be over 150 feet west of the property, screened by vegetation and a commercial property on Halsted Street.

The home would not be displaced or directly affected by the Halsted Rail Alternative. Changes in the setting along Halsted Street would not adversely affect the characteristics that qualify the French Eclectic Home as eligible for NRHP listing, i.e., its architecture. The property stands away from the proposed track structure and would be screened by the intervening space, vegetation, and buildings along Halsted Street; therefore, the finding is that the Halsted Rail Alternative would have no adverse effect on this resource.

Galloy and Van Etten Stone Contractors: No Adverse Effect
The industrial building at 11756 S. Halsted Street is eligible under Criterion A for its association with industry. The Halsted Rail Alternative corridor would be immediately adjacent to the property.

Although the property would not be demolished as a result of implementing the Halsted Rail Alternative, the elevated track structure would be located a few feet from the side of the building. While it would be subject to visual, noise, and construction impacts due to implementation of this alternative, these changes would not adversely affect the characteristics that qualify the resource for inclusion on the NRHP. Technical analyses suggest that the property would not be subject to vibratory effects. The finding is that the Halsted Rail Alternative would have no adverse effect on this resource.

S.S. Peter & Paul Catholic Church: Adverse Effect
The modernistic church at 12427 S. Halsted Street is eligible under Criterion C for its architecture. The Halsted Rail Alternative corridor would be immediately adjacent to the property.

Although the church would not be demolished as a result of implementing the Halsted Rail Alternative, the elevated track structure would be located a few feet from the facade. This resource would be subject to an adverse visual impact due to construction of the Halsted Rail Alternative and an adverse noise impact due to its operation, which would alter the feeling and setting associated with the quieter atmosphere anticipated within a religious building. With the installation of noise walls, the severity of the noise impact would be reduced. Short-term effects due to construction activities may also lead to adverse effects, depending on the construction techniques employed. Vibratory effects would not affect the characteristics that qualify the resource for inclusion on the NRHP. The finding is that the Halsted Rail Alternative would have an adverse effect on this resource.

Cedar Park Cemetery Gatehouse and Entryway: Adverse Effect
The Cedar Park Cemetery entryway and gatehouse, at 12540 S. Halsted Street, is NRHP-eligible under Criterion C for its architecture. The Halsted Rail Alternative corridor would be immediately adjacent to the property.

Although the entrance would not be demolished as a result of implementing the Halsted Rail Alternative, the elevated track structure would be located a few feet in front of the resource. This resource would be subject to an adverse visual impact due to construction of the Halsted Rail Alternative. Short-term effects due to construction activities may also lead to adverse effects, depending on the construction techniques employed. Noise and vibratory effects would not affect the characteristics that qualify the resource for inclusion on the NRHP. The finding is that the Halsted Rail Alternative would have an adverse effect on this resource.

6.6.2 119th Street Yard and Shop

The fire station at 931 W. 120th Street lies within the footprint of the proposed yard. The Fire Department Engine Company 115 is eligible under Criterion C for its architecture. Although the fire station would not be demolished as a result of implementing the alternative, it would be surrounded by track on three sides, in close proximity to the west. This resource would be subject to an adverse visual impact due to construction of the Halsted Rail Alternative. Short-term effects due to construction activities may also lead to adverse effects, depending on the construction techniques employed. Neither noise nor vibratory effects would affect the characteristics that qualify the resource for inclusion on the NRHP. The finding is that the Halsted Rail Alternative would have an adverse effect on this resource.

Section 7
Effects Remaining After Mitigation

Due to the scale and proximity of construction of the Halsted Rail Alternative, it is unlikely that the anticipated adverse effects on these resources could be resolved; however, consultation with the SHPO and other interested parties may identify measures to mitigate effects. This may include, but would not be limited to, structural documentation, interpretative signage, further study to identify noise mitigation options for the church, and special provisions regarding construction in the vicinity. Measures mentioned by consulting parties at the May 2014 effects meeting included reconsidering the design and scale of proposed garages and incorporating the former Classic Revival substation into the Halsted 103rd Street Station designs.

Table 7-1 summarizes the effect findings following consultation with the SHPO and consulting parties. Properties are rated as experiencing No Effect (NE), No Adverse Effect (NAE), or an Adverse Effect (AE) as defined under the NHPA.

Table 7-1: Effects Findings

NRHP Eligible Resource	No Build	Bus Rapid Transit	Union Pacific Railroad Rail	Halsted Rail
Bethany Reformed Church Manse, 3 W. 111th Place	NE	NE	NE	NE
Eclectic Neo-Traditional Home, 444 W. 100th Place	NE	NE	NE	NE
Fire Department Engine Co. 93, 324 W. 104th Street	NE	NE	NE	NE
Roseland Pumping Station, 351 W. 104th Street	NE	NE	NE/NAE[1]	NE
Romanesque Revival Church, 10920 S. Princeton Avenue	NE	NE	NE	NE
Roseland Community Hospital Nurses Home, 11321 S. Wentworth Avenue	NE	NE	NE	NE
Former Venetian Hall, 133-139 E. Kensington Avenue	NE	NAE	NE	NE
Altgeld Gardens Housing Project	NE	NE	NE/NAE[2]	NE
Green Street Historic District	NE	NE	NE	NAE
Former Classic Revival Substation, 10227 S. Halsted Street	NE	NE	NE	AE
French Eclectic Home, 11310 S. Emerald Avenue	NE	NE	NE	NAE
Galloy & Van Etten Stone Contractors, 11756 S. Halsted Street	NE	NE	NE	NAE
S.S. Peter & Paul Catholic Church, 12433-12439 S. Halsted Street	NE	NE	NE	AE
Cedar Park Cemetery Entryway and Gatehouse, 12540 S. Halsted Street	NE	NE	NE	AE
Fire Department Engine Co. 115, 931 W. 120th Street	NE	NE	NE	AE

NE = No Effect; NAE = No Adverse Effect; AE = Adverse Effect
[1] No Effect finding for ROW and West Options; No Adverse Effect for East Option
[2] No Effect finding for South Station Option; No Adverse Effect for West Station Option

Section 8
Section 106 Consultation Process

In accordance with requirements for consultation established in Section 106 of the NHPA, four distinct rounds of coordination occurred during the RLE Project: initiation activities, identification of historic properties, assessment of effects, and resolution of adverse effects. Each outreach effort is described in the following sections.

8.1 Initiation Activities

8.1.1 Invitations to Participate

In August 2012 FTA sent invitation letters to 11 Native American tribes to inform them of the process and request assistance in identifying areas with potential cultural and/or religious significance. Letters were sent to the following nations: the Ho-Chunk Nation, the Miami Tribe of Oklahoma, the Peoria Tribe of Indians of Oklahoma, the Sac and Fox Nation of Oklahoma, the Pokagon Band of Potawatomi Indians, the Prairie Band of the Potawatomi Nation, the Citizen Potawatomi Nation, the Forest County Potawatomi Nation, the Potawatomi Nation, the Sac and Fox Nation of Mississippi in Iowa, and the Sac and Fox Nation of Missouri.

Also in August 2012, CTA sent invitation letters to 20 state and local level preservation interest groups to inform them of the project and invite them to participate in the upcoming consultation process. Invitation letters were sent to the following groups: the SHPO, the Advisory Council on Historic Preservation, the Illinois State Museum, Illinois State Archaeological Survey, the City of Chicago Historic Preservation Division Department of Housing and Economic Development, Preservation Chicago, Landmarks Illinois, the Chicago Historical Society, the Ridge Historical Society, the Beverly Area Planning Association, the East Beverly Association, the Rosemoor Community Association, the Cottage Grove Heights Community Coalition, the Historic Pullman Foundation, the South Suburban Genealogical and Historical Society, Chicago Neighborhood Initiatives, Neighborhood Housing Services of Chicago, Mercy Housing Lakefront, and Friends of the Parks. Nine groups indicated they would like to participate in the process. Accordingly, materials and meeting notices were sent to the SHPO, the City of Chicago Historic Preservation Division Department of Housing and Economic Development, Preservation Chicago, Landmarks Illinois, the Ridge Historical Society, the Rosemoor Community Association, Chicago Neighborhood Initiatives, and Friends of the Parks. The list of organizations that accepted the invitation to participate in the consultation process is included in **Appendix C**.

8.1.2 Section 106 Kickoff Webinar

On October 24, 2012, a kickoff webinar was held. The webinar included an overview of the Section 106 process, a description of the project and the build alternatives, and an outline of the schedule for the consultation process over the coming months. A full summary of this meeting is provided in **Appendix C**.

8.2 Identification of Historic Properties

On January 30, 2013, the project team held a meeting at CTA to discuss the identification of historic properties, specifically those that were recommended as eligible for listing on the NRHP. A CD containing a summary table, maps of the resources, and individual site forms was mailed to consulting parties on January 5, 2013. A full summary of the meeting is provided in **Appendix C**. The meeting was followed by an informal tour of the corridor that afternoon.

As part of this phase of coordination, written comments were received from six consulting parties. A summary of these comments and copies of the individual letters are included in **Appendix C**.

8.3 Assessment of Effects

On May 8, 2014, the project team held a meeting at CTA to discuss potential project effects on NRHP historic properties. A Draft Effects Report was mailed to consulting parties on April 18, 2014, requesting any written comments by May 23, 2014. A full summary of the meeting is provided in **Appendix C**.

As part of this phase of coordination, written comments were received from four consulting parties. A summary of these comments and copies of the individual letters are included in **Appendix C**.

8.4 Resolution of Adverse Effects

This stage of consultation has not yet occurred.

Section 9
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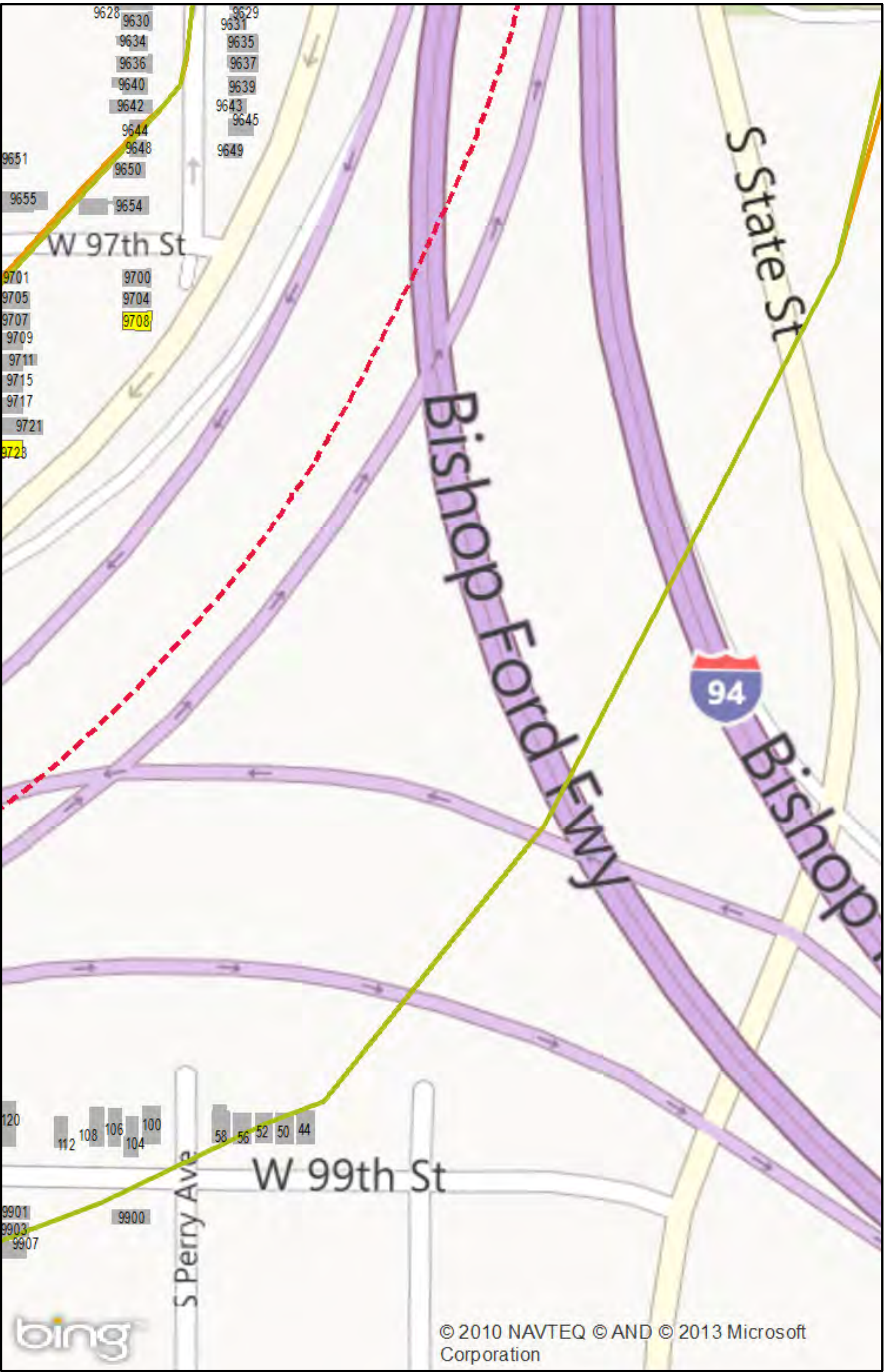
Appendix A
Maps of Properties Surveyed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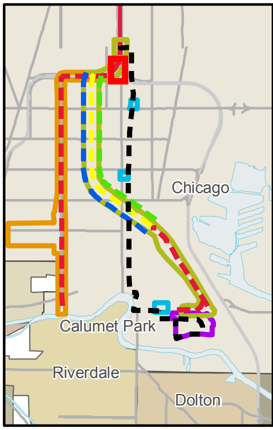
Chicago
Calumet Park
Riverdale
Dolton

Legend

◎ Proposed Rail Station

● Proposed BRT Stop

🟥 Existing Rail Alignment / Station

- - - Proposed BRT Route

- - - Halsted Alternative

- - - Union Pacific (UPRR); East, West & right of Way Optsions

☐ CHRS Orange Property

☐ NRHP Eligible District

☐ 106 APE for UPRR Alternative

☐ 106 APE for BRT Alternative

☐ 106 APE for Halsted Alternative

🟪 NRHP Eligible Building

🟨 Other Properties Surveyed

⬜ Building Footprint

Page 1 of 47

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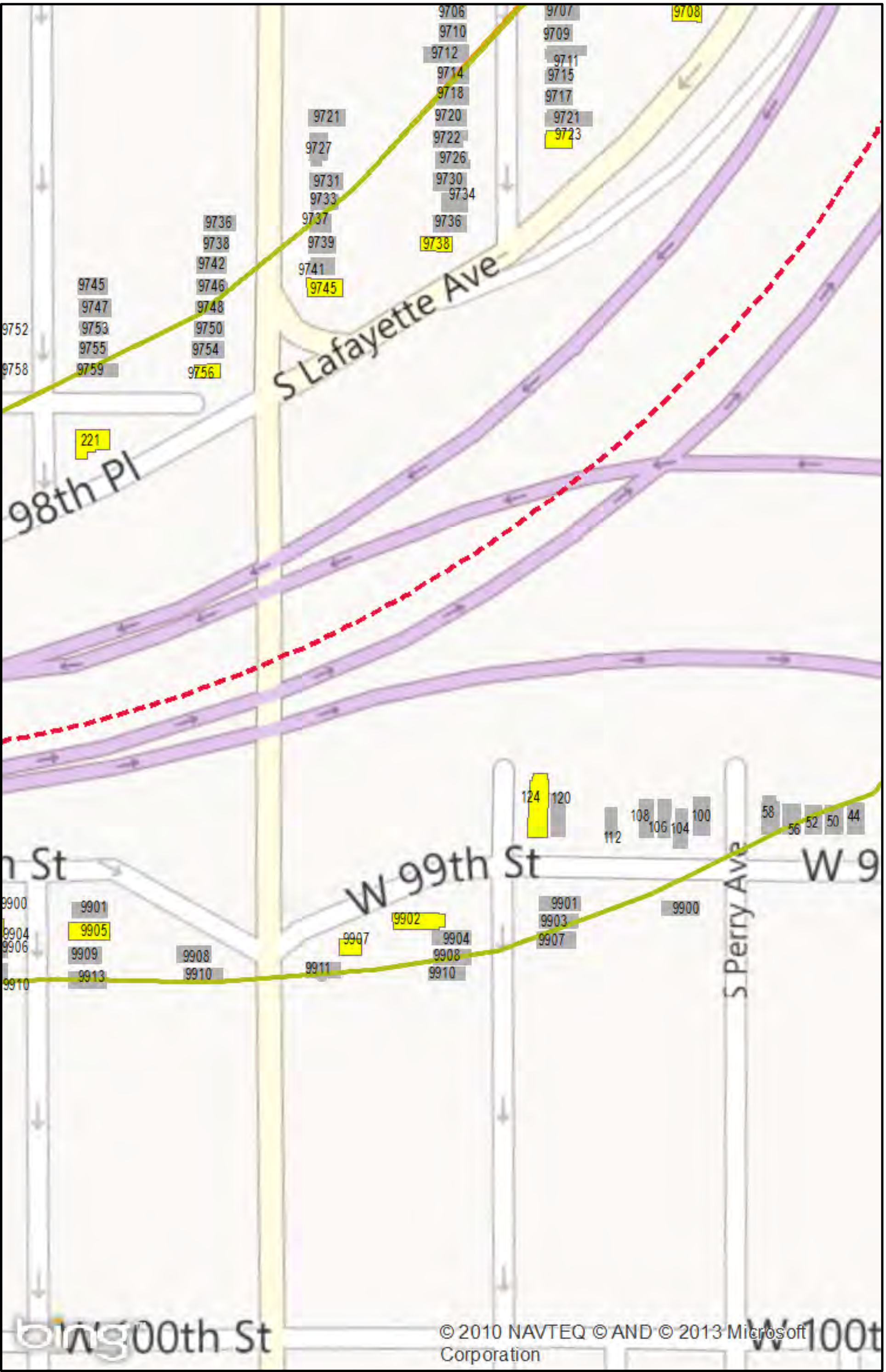

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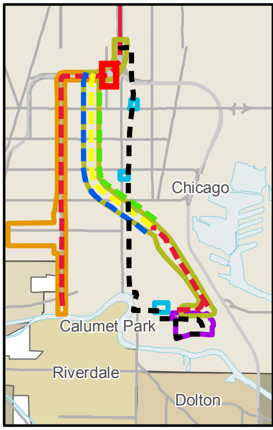

Chicago
Calumet Park
Riverdale
Dolton

Legend

◎ Proposed Rail Station

● Proposed BRT Stop

🟥 Existing Rail Alignment / Station

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■ ■ ■ Halsted Alternative

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☐ NRHP Eligible District

☐ 106 APE for UPRR Alternative

☐ 106 APE for BRT Alternative

☐ 106 APE for Halsted Alternative

■ NRHP Eligible Building

■ Other Properties Surveyed

■ Building Footprint

Page 2 of 47

Scale

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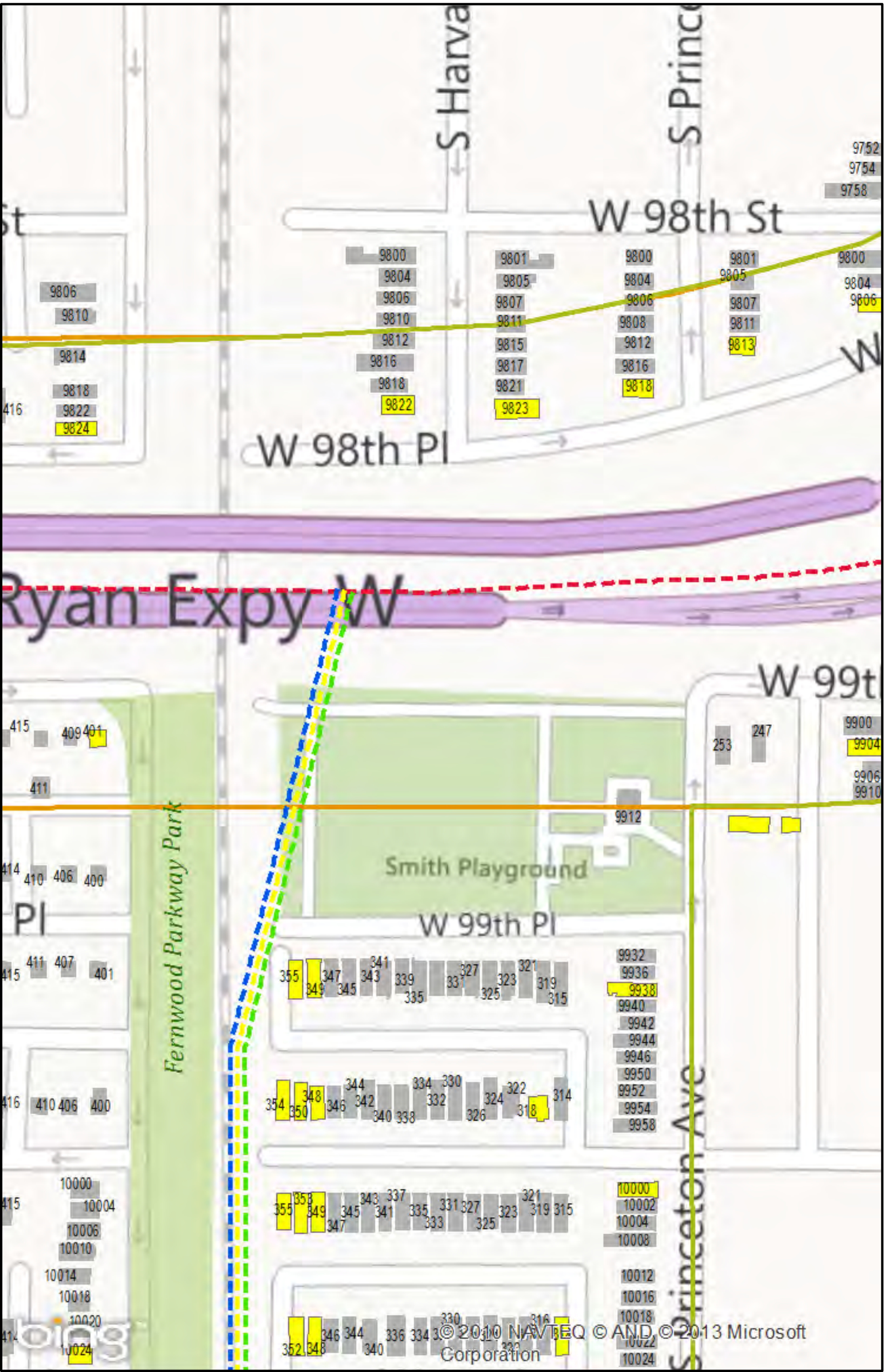
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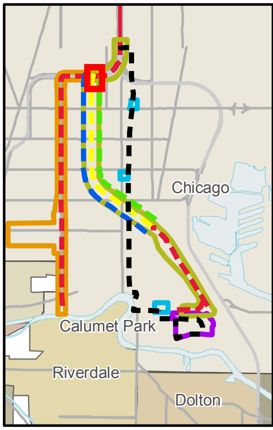
Chicago
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Riverdale
Dolton

Legend

- ◎ Proposed Rail Station
- ● Proposed BRT Stop
- Existing Rail Alignment / Station
- Proposed BRT Route
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- Union Pacific (UPRR); East, West & right of Way Optsions
- CHRS Orange Property
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- 106 APE for UPRR Alternative
- 106 APE for BRT Alternative
- 106 APE for Halsted Alternative
- NRHP Eligible Building
- Other Properties Surveyed
- Building Footprint

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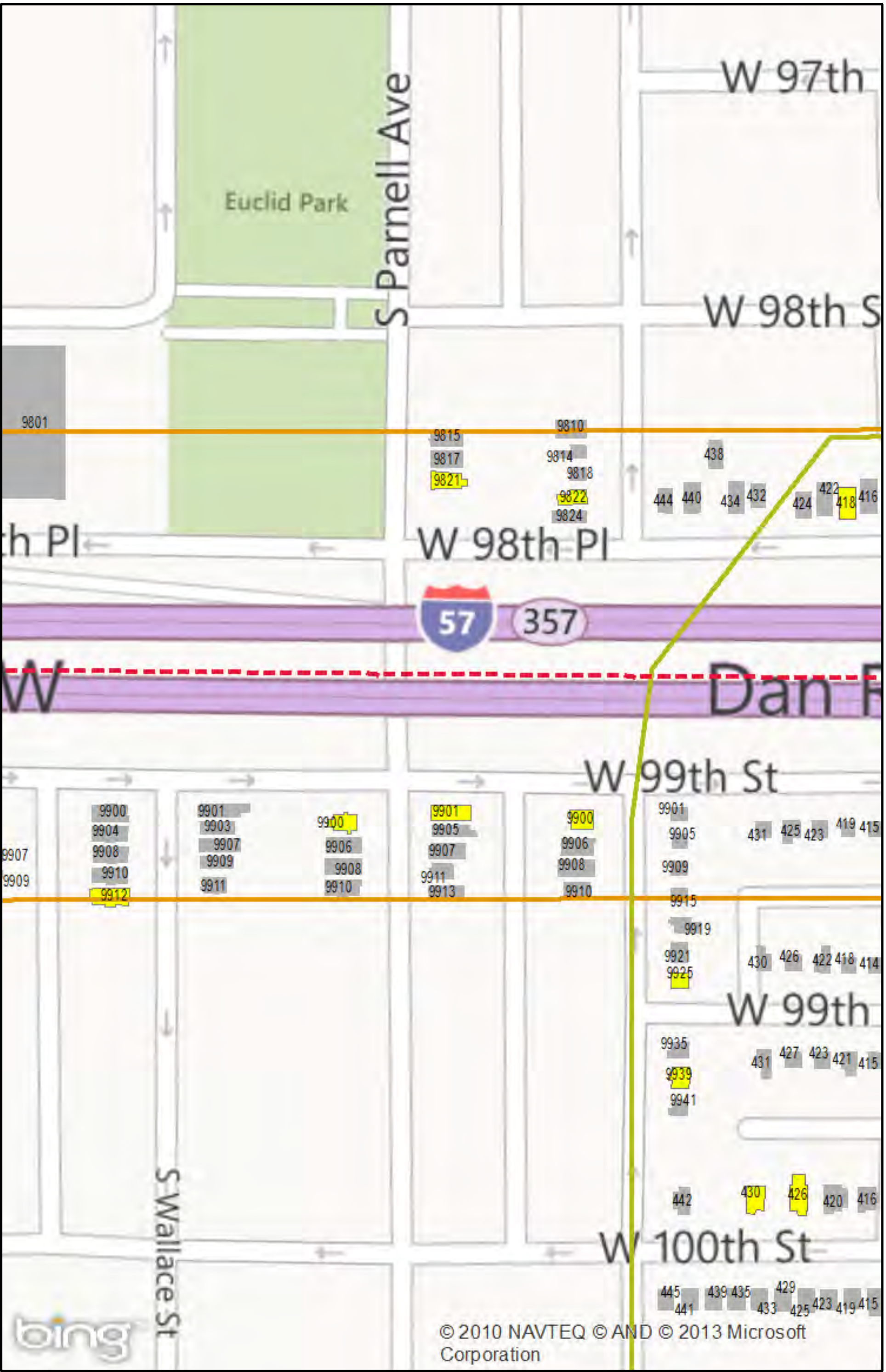
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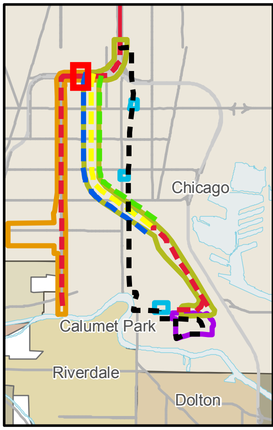
Chicago
Calumet Park
Riverdale
Dolton

Legend

◎ Proposed Rail Station

● Proposed BRT Stop

🟥 Existing Rail Alignment / Station

- - - Proposed BRT Route

- - - Halsted Alternative

- - - Union Pacific (UPRR); East, West & right of Way Optsions

☐ CHRS Orange Property

☐ NRHP Eligible District

☐ 106 APE for UPRR Alternative

☐ 106 APE for BRT Alternative

☐ 106 APE for Halsted Alternative

🟪 NRHP Eligible Building

🟨 Other Properties Surveyed

⬛ Building Footprint

Scale

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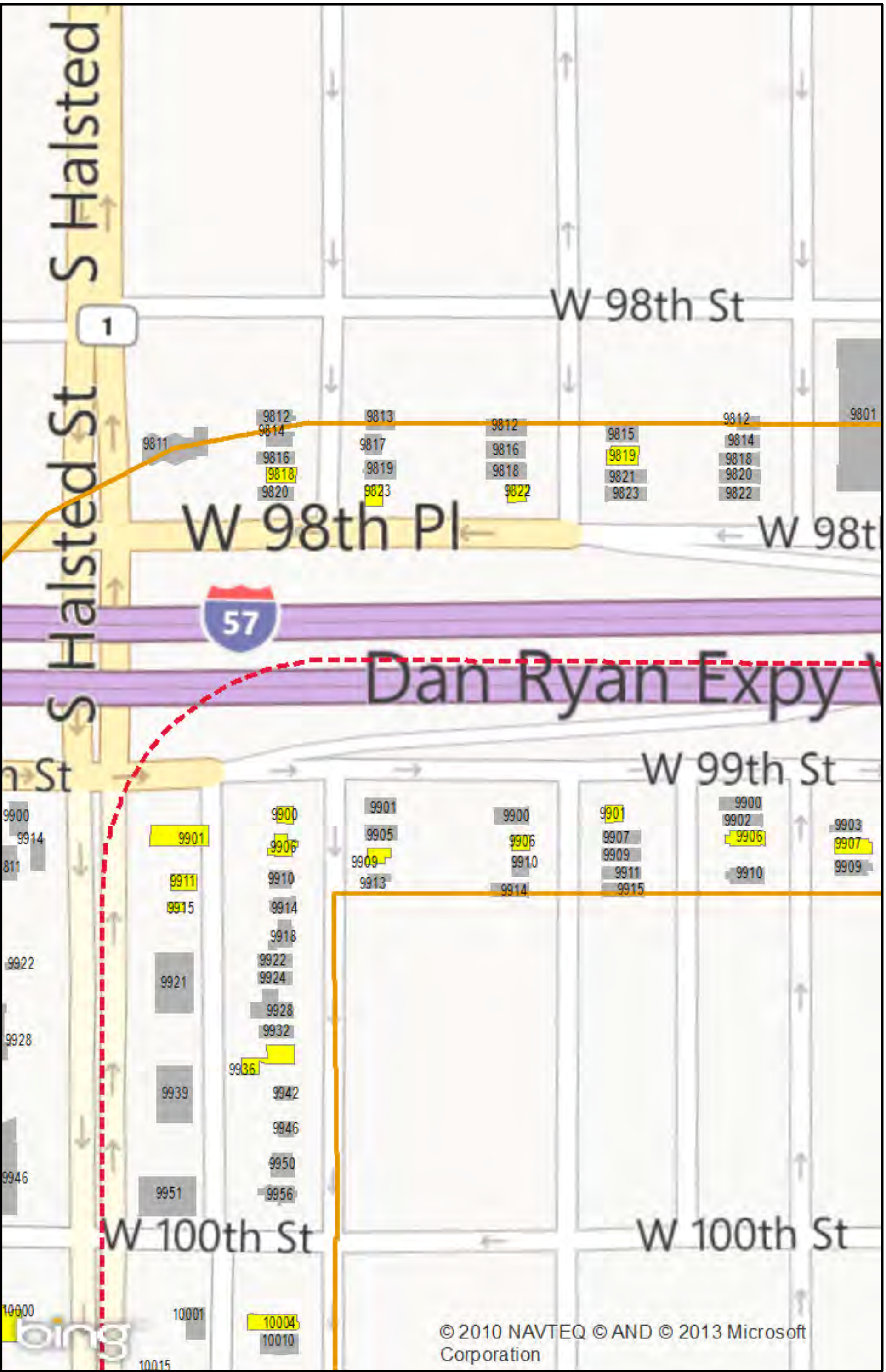
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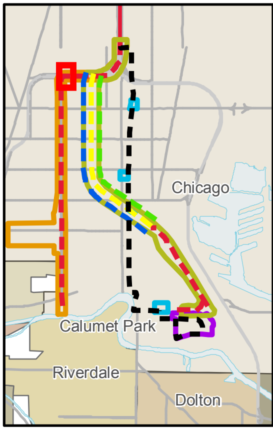
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Dolton

Legend

- ◎ Proposed Rail Station
- ● Proposed BRT Stop
- Existing Rail Alignment / Station
- Proposed BRT Route
- Halsted Alternative
- Union Pacific (UPRR); East, West & right of Way Optsions
- CHRS Orange Property
- NRHP Eligible District
- 106 APE for UPRR Alternative
- 106 APE for BRT Alternative
- 106 APE for Halsted Alternative
- NRHP Eligible Building
- Other Properties Surveyed
- Building Footprint

Page 5 of 47

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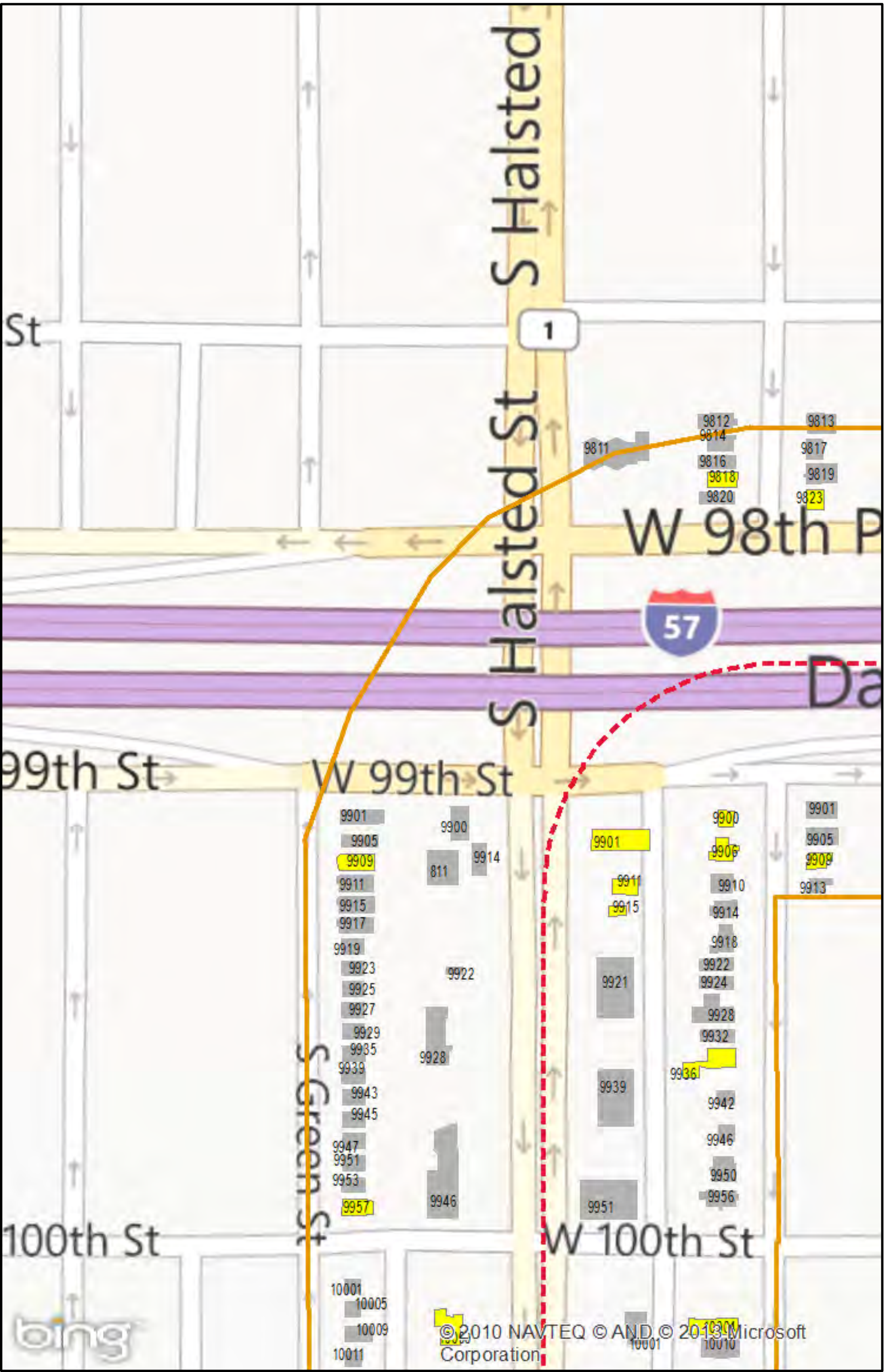
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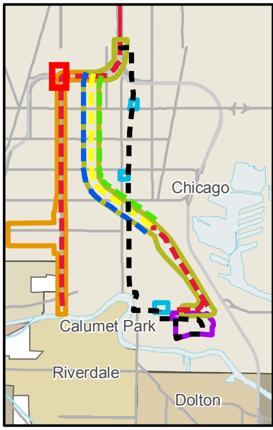
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Legend

- ◎ Proposed Rail Station
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- ▬ Existing Rail Alignment / Station
- - - - Proposed BRT Route
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- ■ NRHP Eligible Building
- ■ Other Properties Surveyed
- ■ Building Footprint

Page 6 of 47

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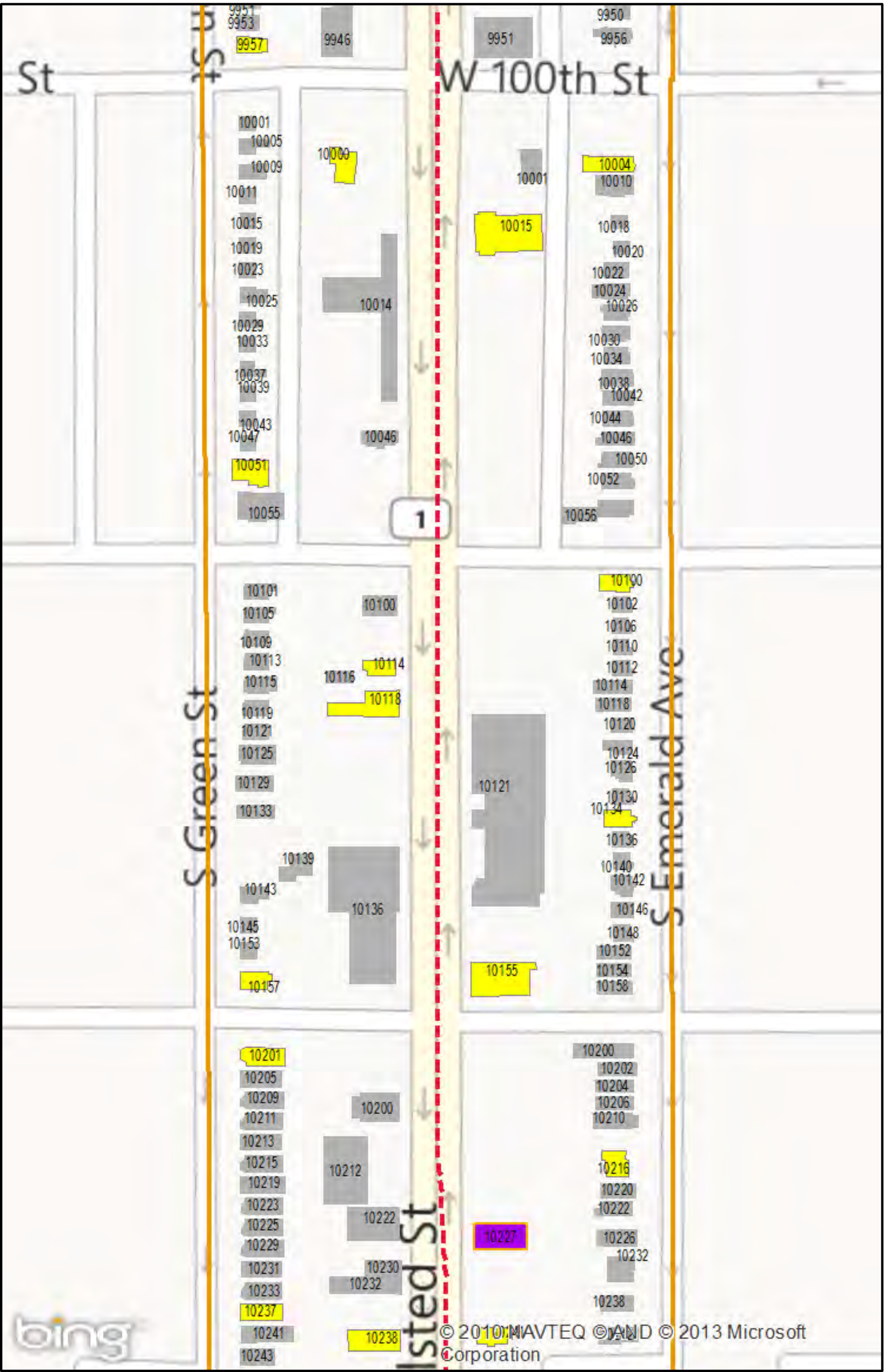
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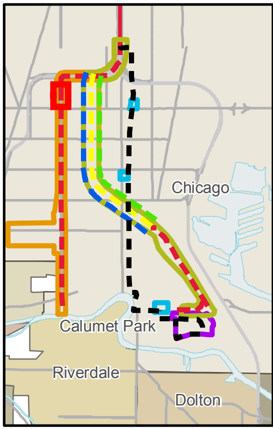
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Legend

- ◎ Proposed Rail Station
- ● Proposed BRT Stop
- ▬ Existing Rail Alignment / Station
- - - Proposed BRT Route
- - - Halsted Alternative
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- ☐ NRHP Eligible District
- ☐ 106 APE for UPRR Alternative
- ☐ 106 APE for BRT Alternative
- ☐ 106 APE for Halsted Alternative
- ■ NRHP Eligible Building
- ■ Other Properties Surveyed
- ■ Building Footprint

Scale

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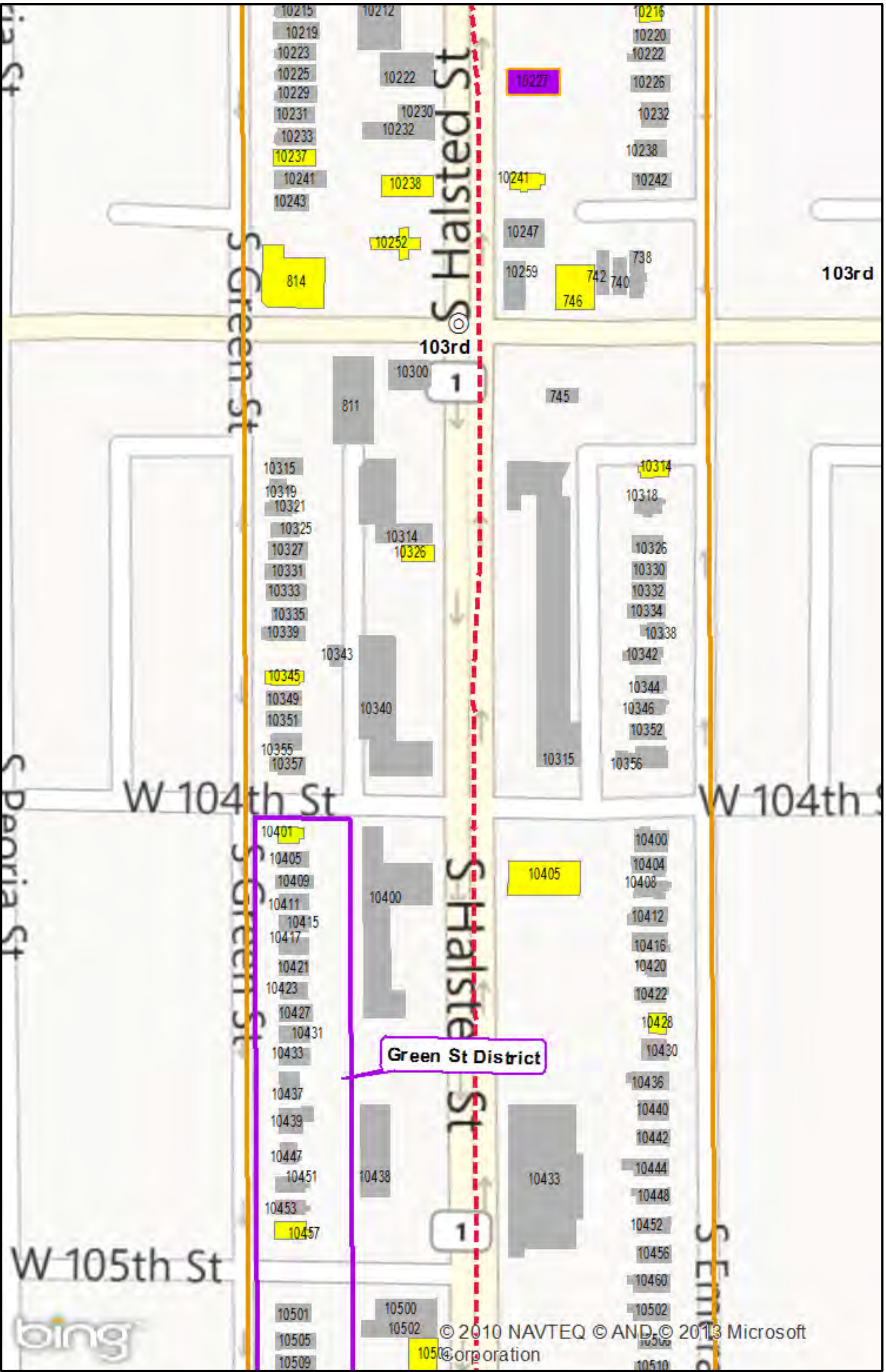
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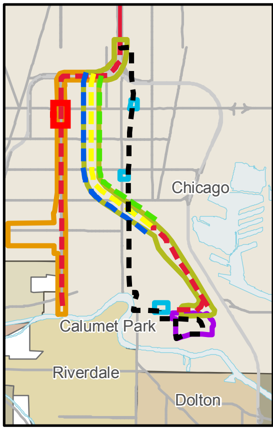
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Legend

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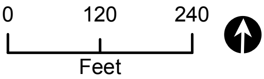
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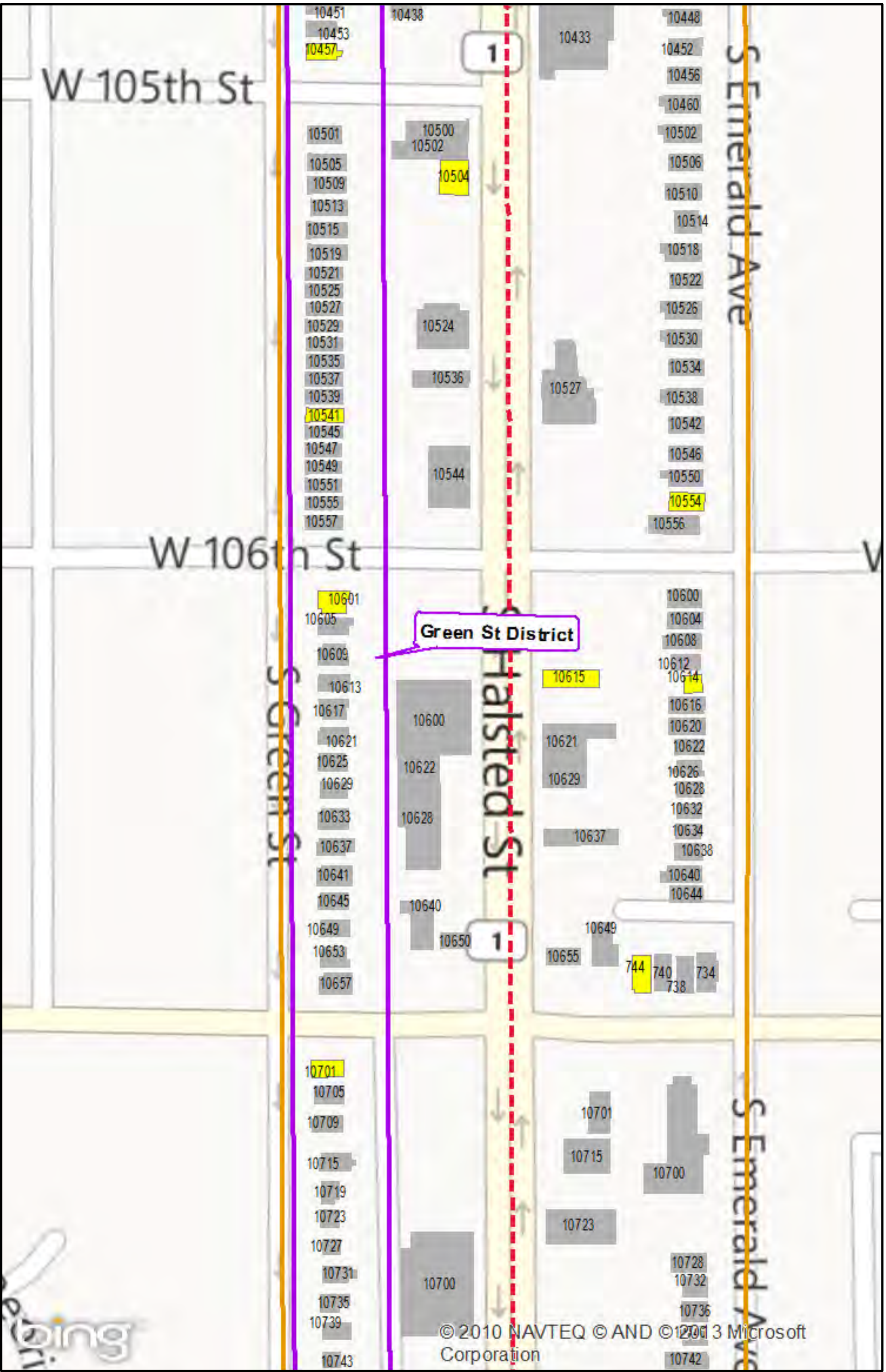
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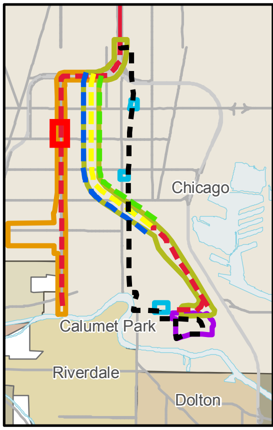
Chicago
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Dolton

Legend

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● Proposed BRT Stop

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■ NRHP Eligible Building

■ Other Properties Surveyed

■ Building Footprint

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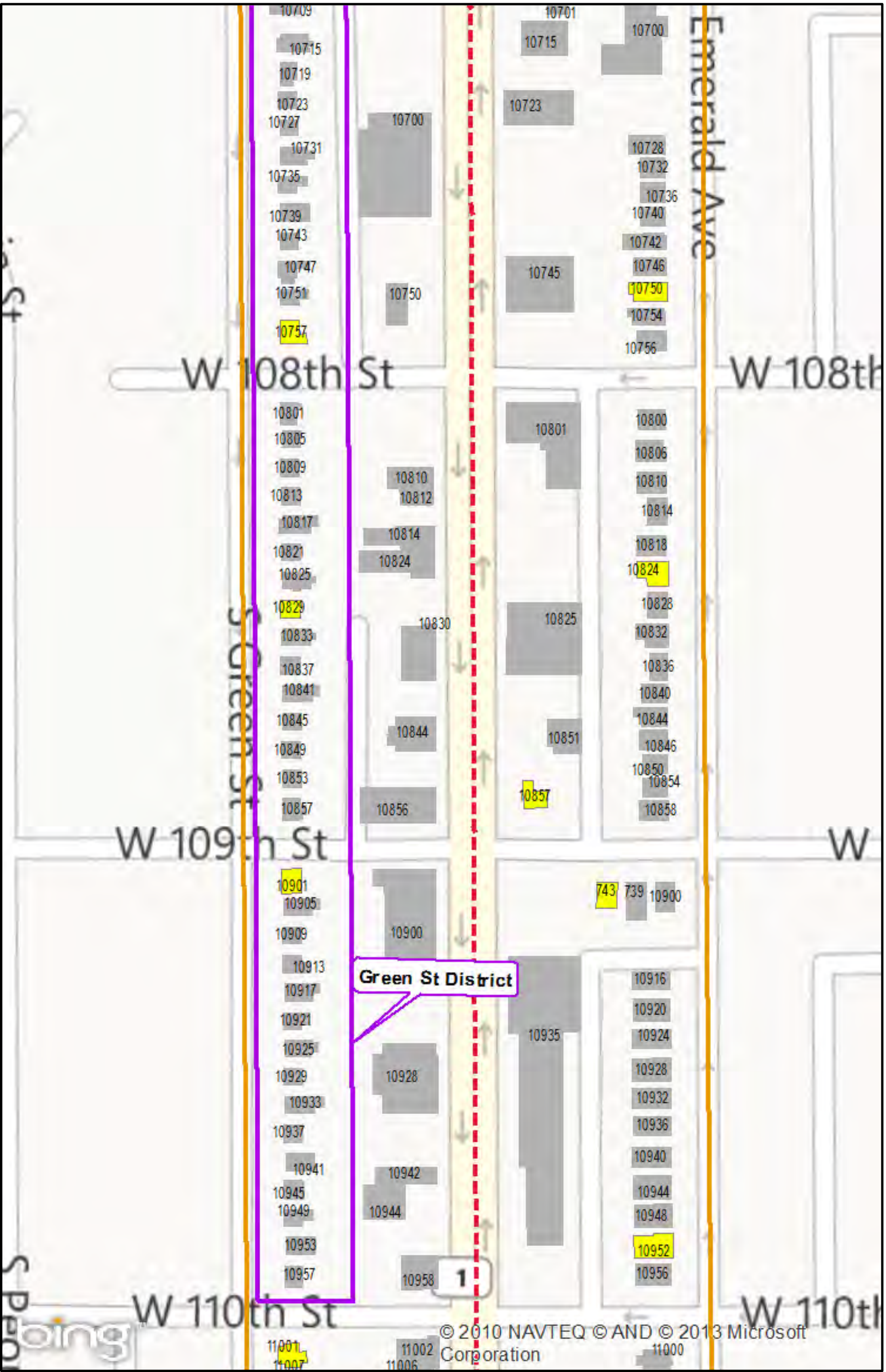
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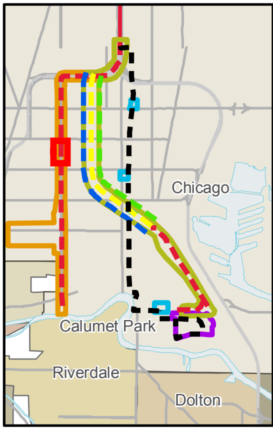
Chicago
Calumet Park
Riverdale
Dolton

Legend

◎ Proposed Rail Station

● Proposed BRT Stop

▬ Existing Rail Alignment / Station

- - - Proposed BRT Route

- - - Halsted Alternative

- - - Union Pacific (UPRR); East, West & right of Way Optsions

☐ CHRS Orange Property

☐ NRHP Eligible District

☐ 106 APE for UPRR Alternative

☐ 106 APE for BRT Alternative

☐ 106 APE for Halsted Alternative

■ NRHP Eligible Building

■ Other Properties Surveyed

■ Building Footprint

Page 10 of 47

Scale

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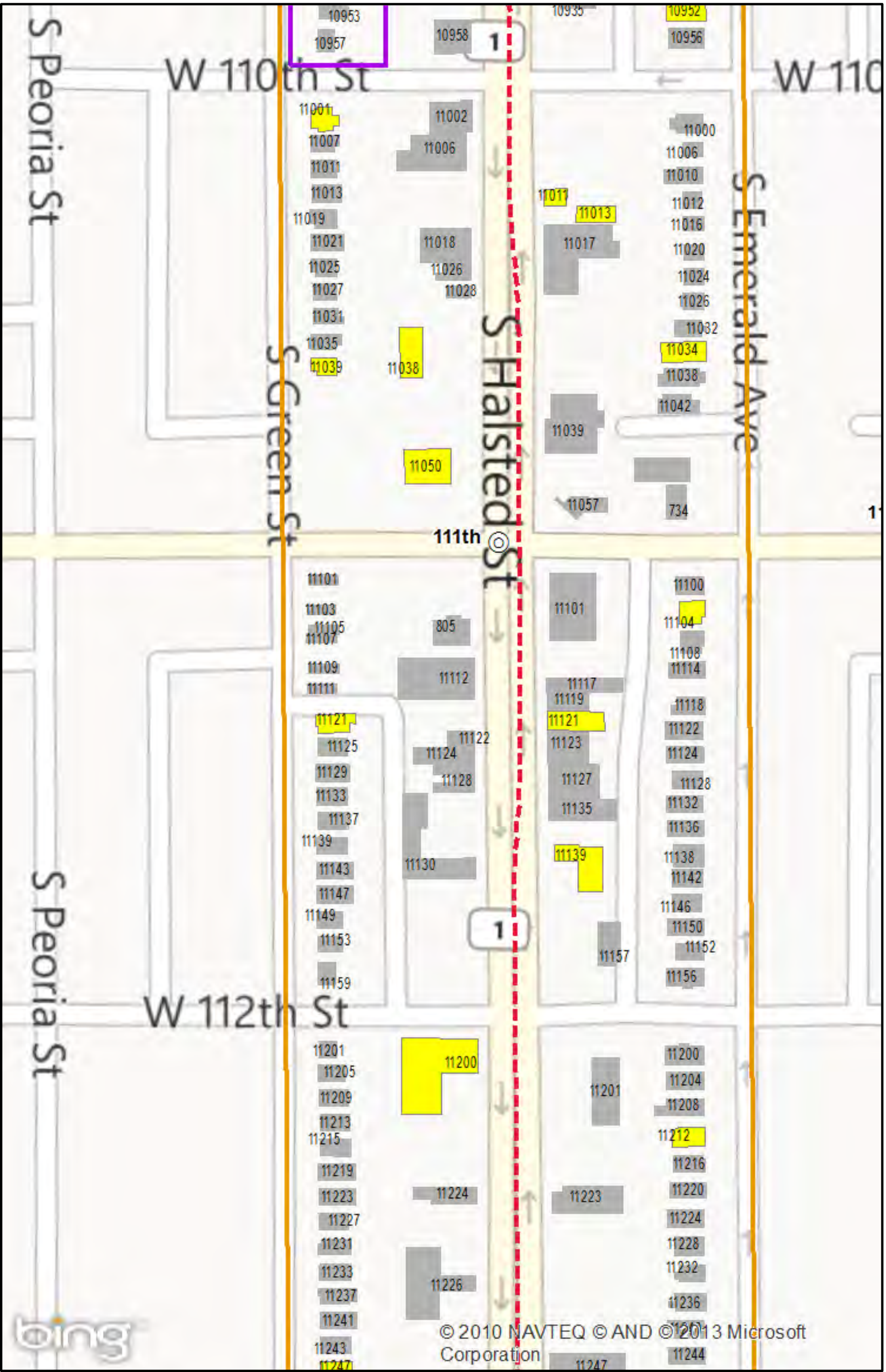
Feet

NRHPeligible.mxd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S Green St
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S Emerald Ave
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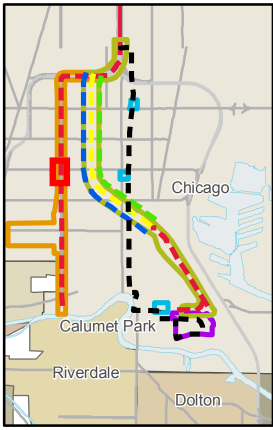
Chicago
Calumet Park
Riverdale
Dolton

Legend

- ◎ Proposed Rail Station
- ● Proposed BRT Stop
- 🟥 Existing Rail Alignment / Station
- ▬ ▬ Proposed BRT Route
- ▬ ▬ Halsted Alternative
- ▬ ▬ Union Pacific (UPRR); East, West & right of Way Optsions
- ☐ CHRS Orange Property
- ☐ NRHP Eligible District
- ☐ 106 APE for UPRR Alternative
- ☐ 106 APE for BRT Alternative
- ☐ 106 APE for Halsted Alternative
- 🟪 NRHP Eligible Building
- 🟨 Other Properties Surveyed
- ▨ Building Footprint

Page 11 of 47

Scale

1:3,000

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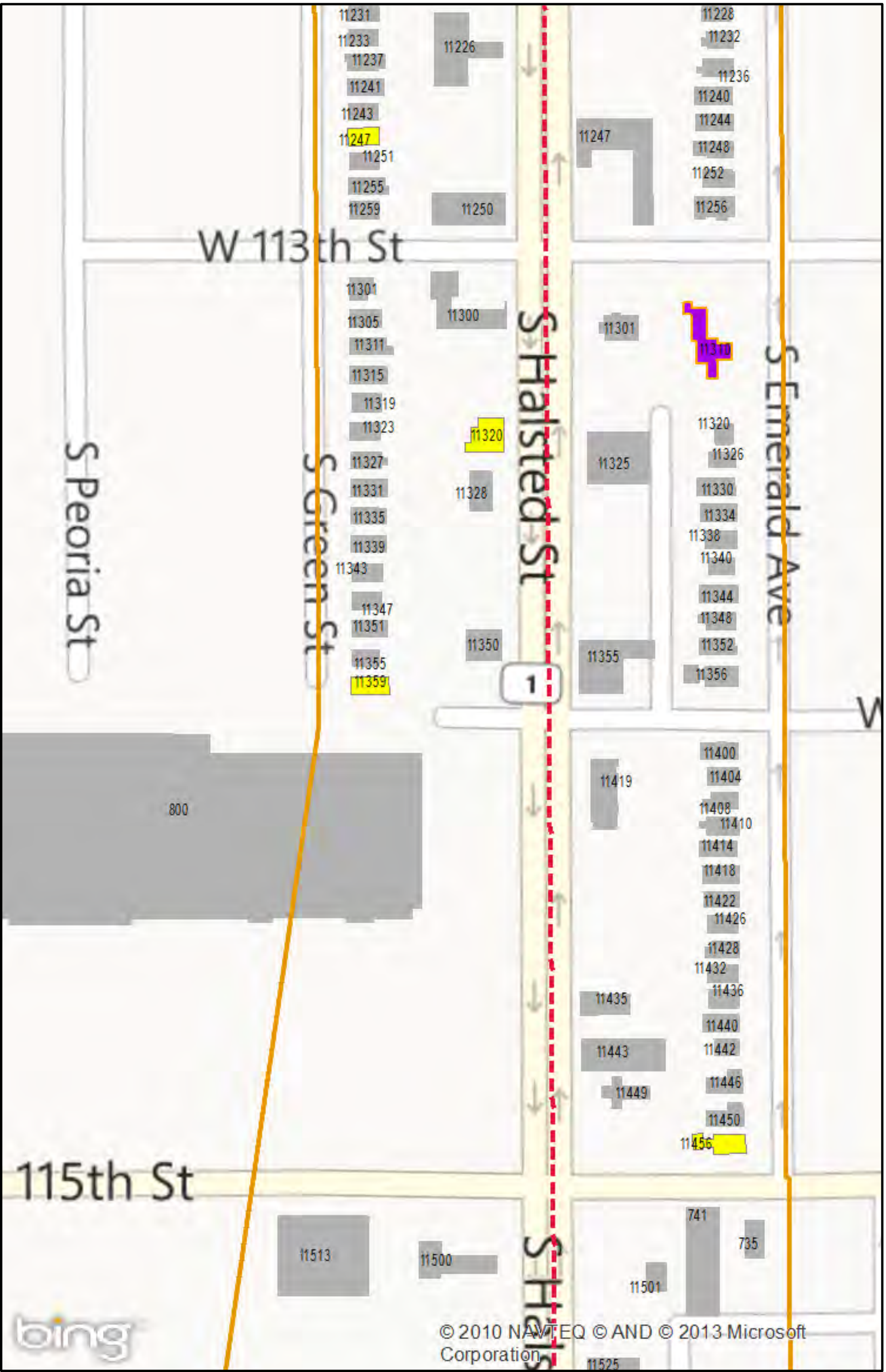
Feet

NRHPeligible.mxd



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bing

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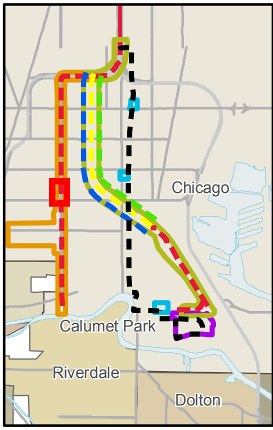

Chicago
Calumet Park
Riverdale
Dolton

Legend

◎ Proposed Rail Station

● Proposed BRT Stop

▬ Existing Rail Alignment / Station

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- - - Halsted Alternative

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☐ 106 APE for Halsted Alternative

■ NRHP Eligible Building

■ Other Properties Surveyed

■ Building Footprint

Scale

1:3,000

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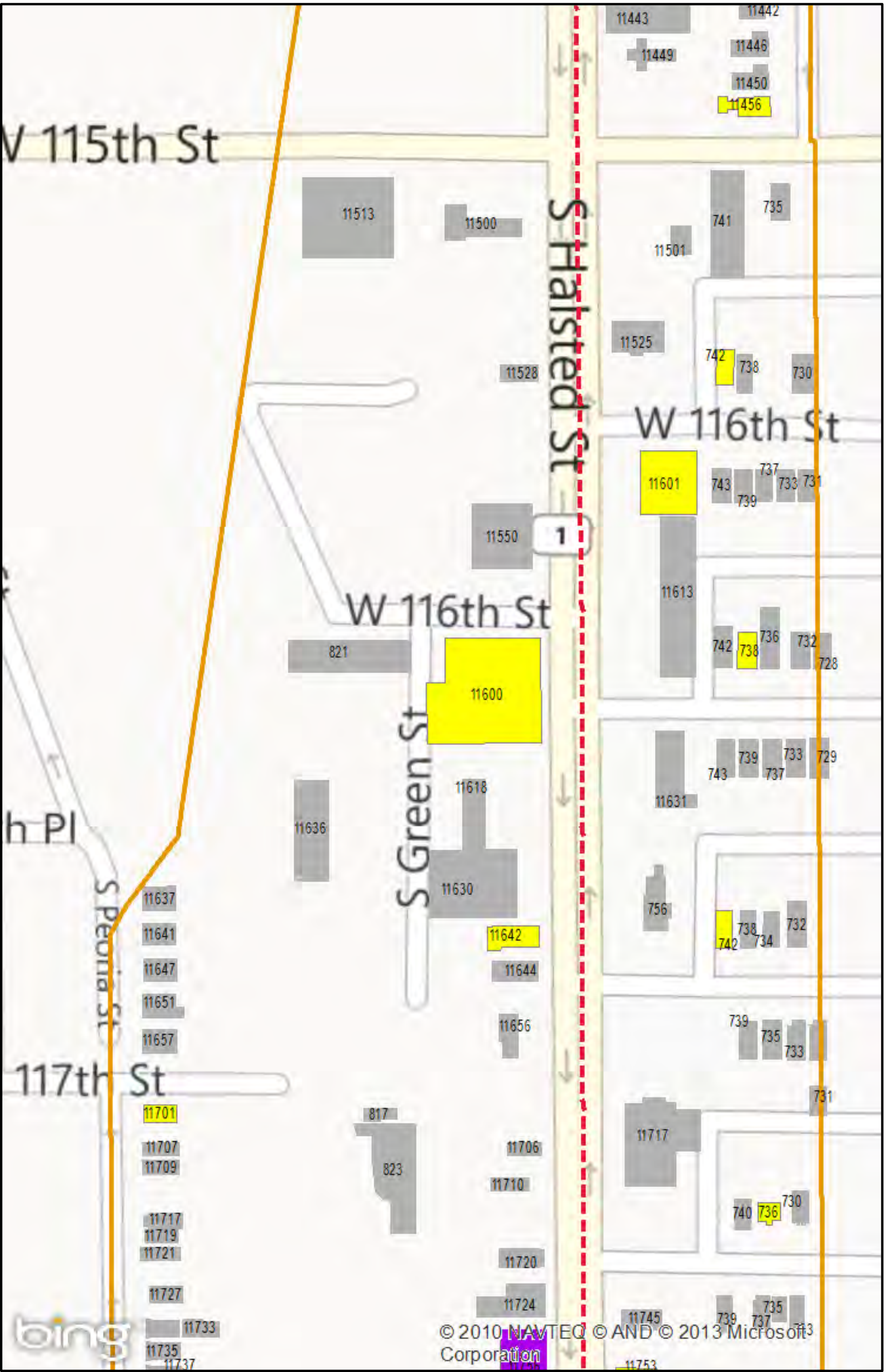
Feet

NRHPeligible.mxd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© 2010 NAVTEQ © AND © 2013 Microsoft Corporation
bing

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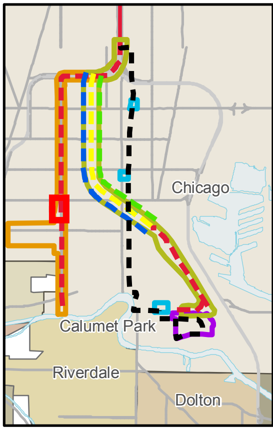
Chicago
Calumet Park
Riverdale
Dolton

Legend

◎ Proposed Rail Station

● Proposed BRT Stop

🟥 Existing Rail Alignment / Station

- - - Proposed BRT Route

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☐ 106 APE for BRT Alternative

☐ 106 APE for Halsted Alternative

🟪 NRHP Eligible Building

🟨 Other Properties Surveyed

▨ Building Footprint

Page 13 of 47

Scale

1:3,000

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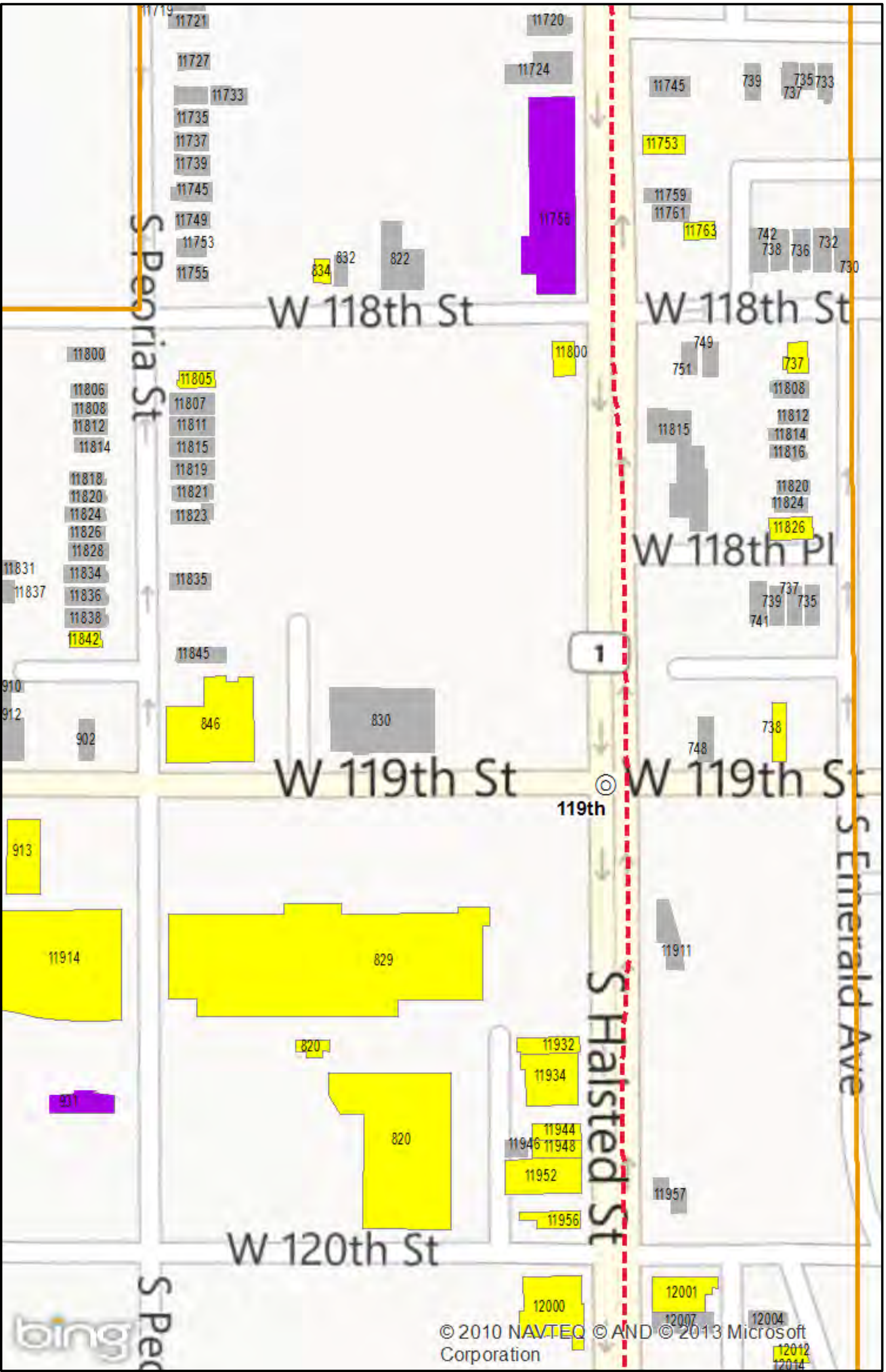
Feet

NRHPeligible.mxd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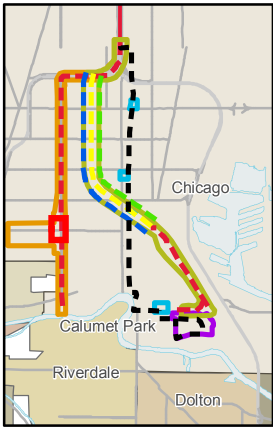
Chicago
Calumet Park
Riverdale
Dolton

Legend

◎ Proposed Rail Station

● Proposed BRT Stop

▬ Existing Rail Alignment / Station

- - - Proposed BRT Route

- - - Halsted Alternative

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☐ 106 APE for BRT Alternative

☐ 106 APE for Halsted Alternative

■ NRHP Eligible Building

■ Other Properties Surveyed

■ Building Footprint

Scale

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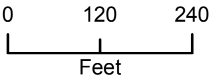
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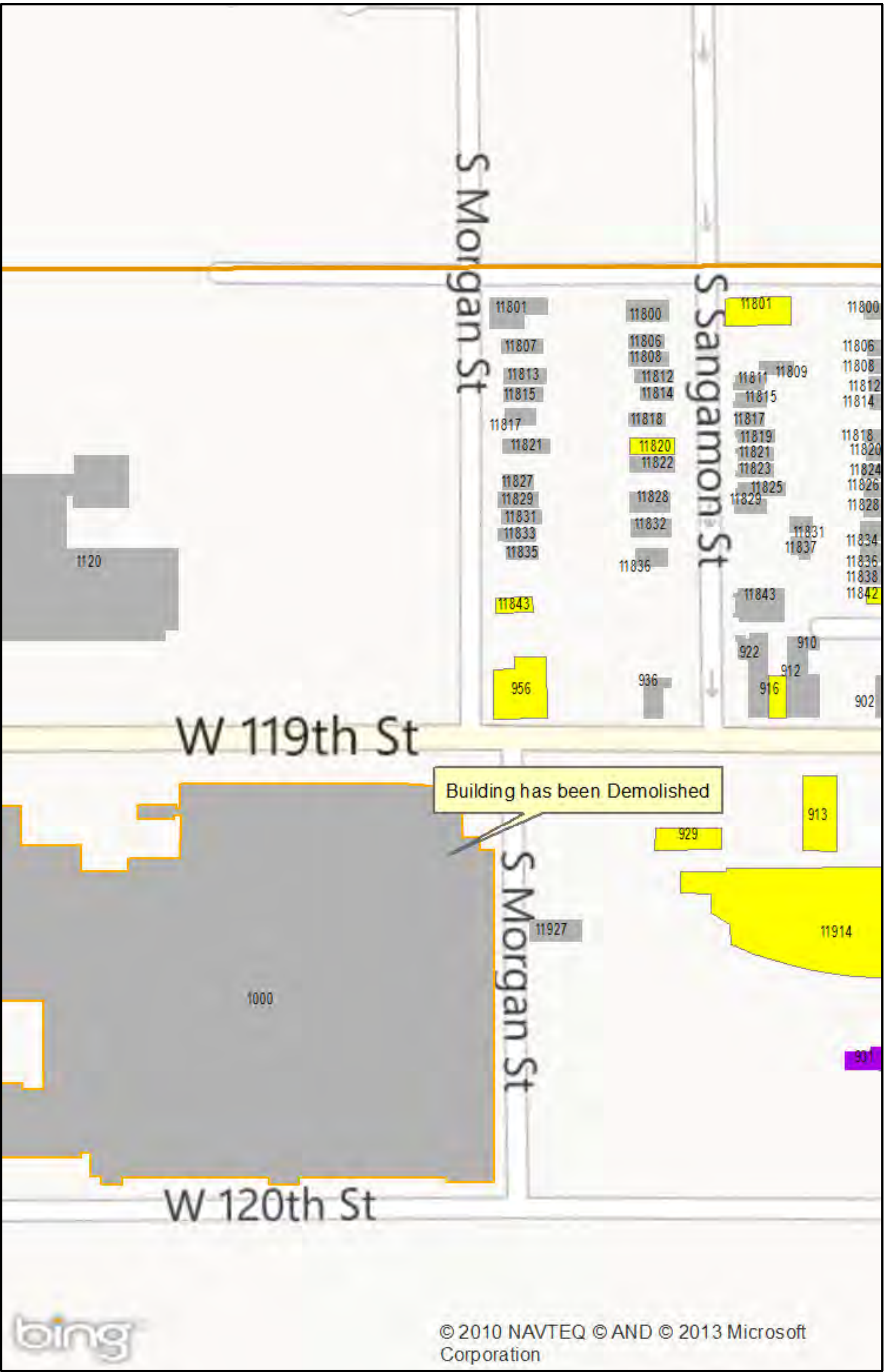
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© 2010 NAVTEQ © AND © 2013 Microsoft Corporation

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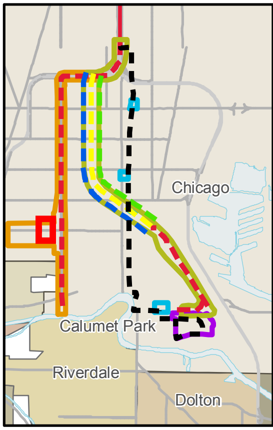
Chicago
Calumet Park
Riverdale
Dolton

Legend

- ◎ Proposed Rail Station
- ● Proposed BRT Stop
- 🟥 Existing Rail Alignment / Station
- ■ ■ ■ Proposed BRT Route
- 🟥 🟥 🟥 Halsted Alternative
- 🟩 🟨 🟦 Union Pacific (UPRR); East, West & right of Way Optsions
- ☐ CHRS Orange Property
- ☐ NRHP Eligible District
- ☐ 106 APE for UPRR Alternative
- ☐ 106 APE for BRT Alternative
- ☐ 106 APE for Halsted Alternative
- 🟪 NRHP Eligible Building
- 🟨 Other Properties Surveyed
- ▨ Building Footprint

Page 15 of 47

Scale

1:3,000

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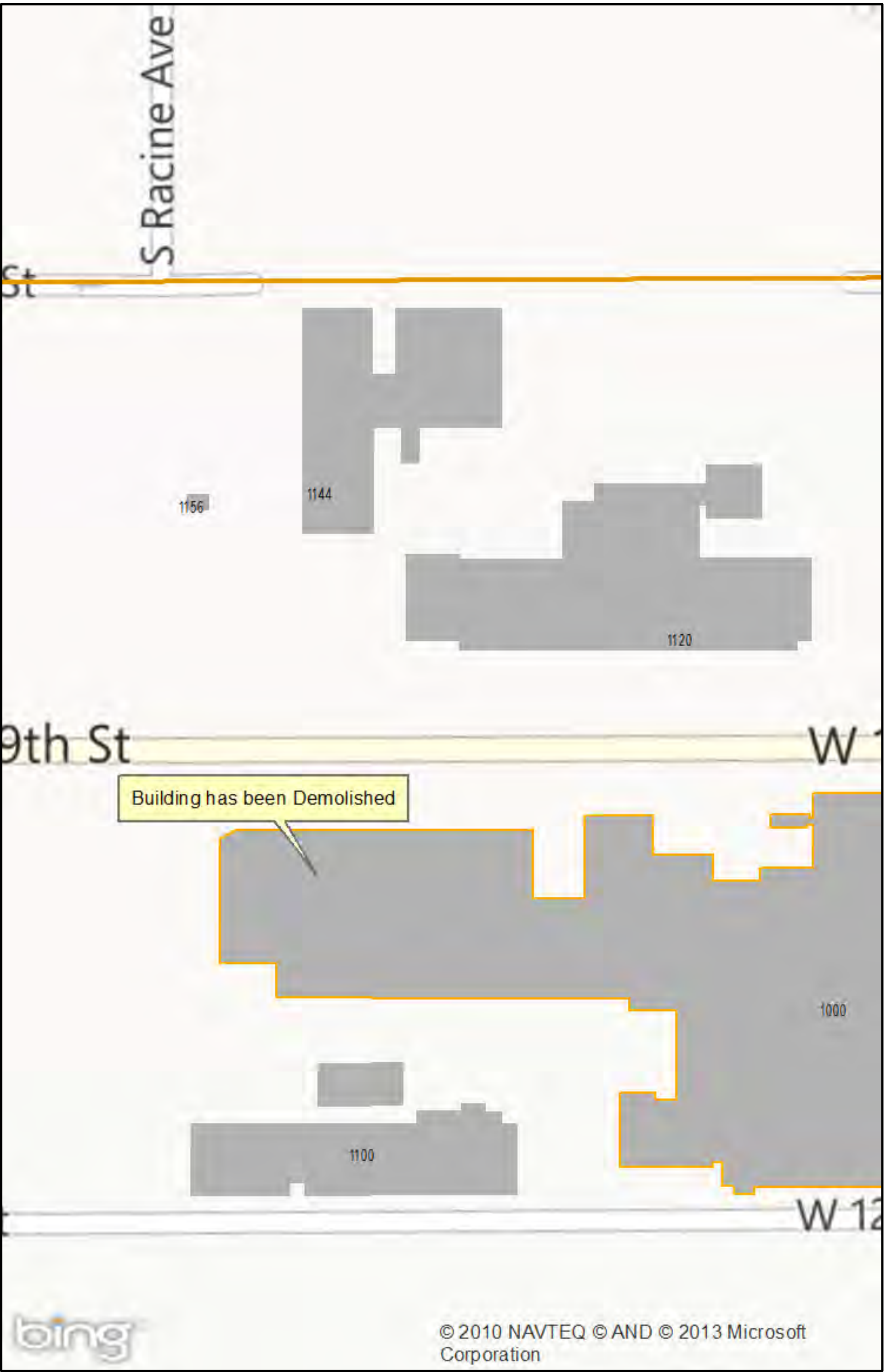
NRHPeligible.mxd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Building has been Demolished

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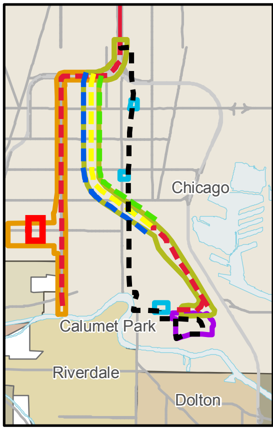
Chicago
Calumet Park
Riverdale
Dolton

Legend

◎ Proposed Rail Station
● Proposed BRT Stop
━ Existing Rail Alignment / Station
╍ Proposed BRT Route
╍ Halsted Alternative
╍ Union Pacific (UPRR); East, West & right of Way Optsions
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▭ NRHP Eligible District
▭ 106 APE for UPRR Alternative
▭ 106 APE for BRT Alternative
▭ 106 APE for Halsted Alternative
■ NRHP Eligible Building
■ Other Properties Surveyed
■ Building Footprint

Page 16 of 47

Scale

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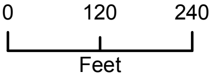
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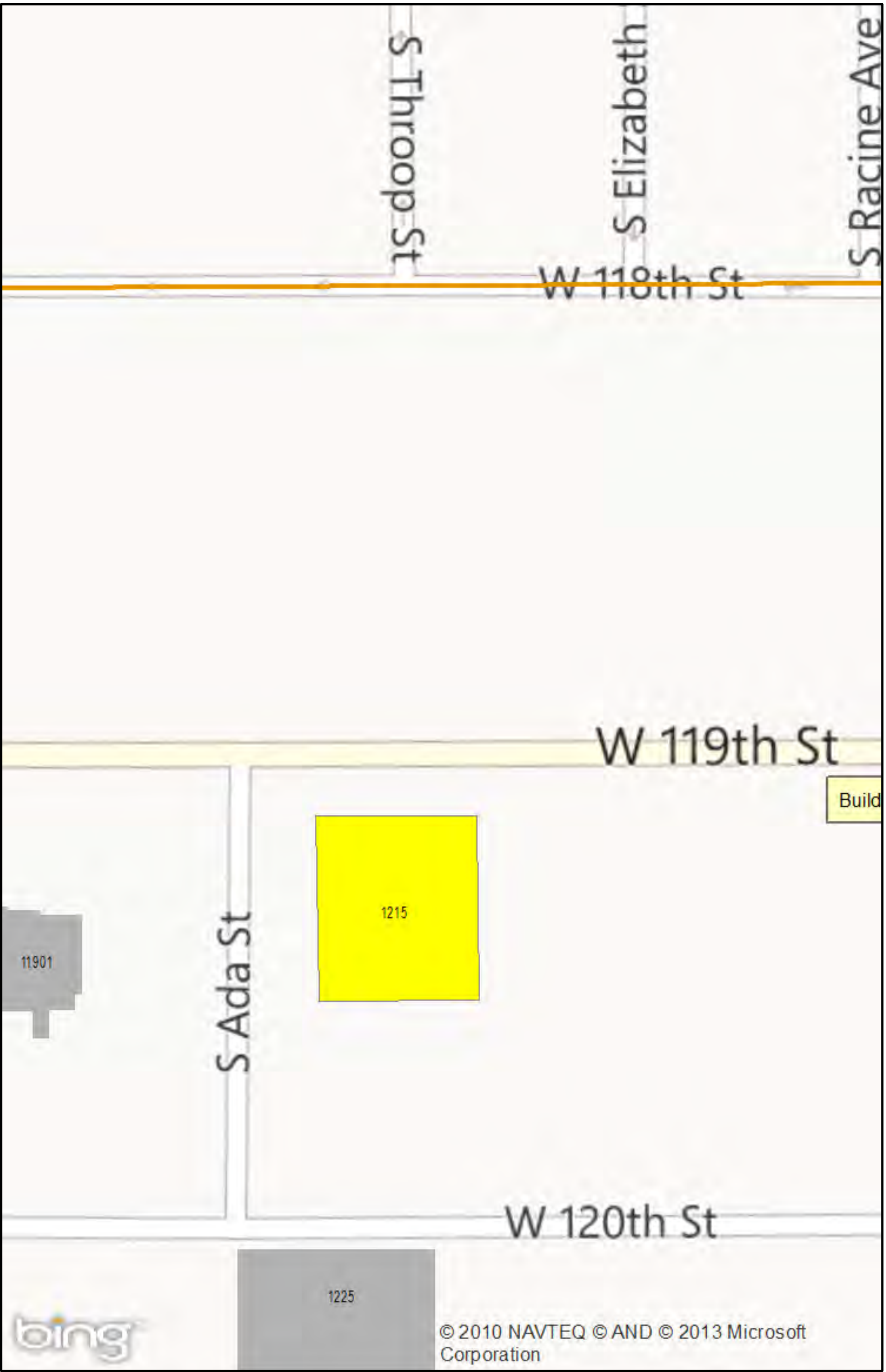
S Throop St
S Elizabeth
S Racine Ave
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S Ada St
W 120th St
1225
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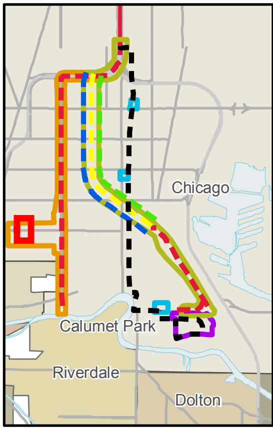
© 2010 NAVTEQ © AND © 2013 Microsoft Corporation

Inset


Chicago
Calumet Park
Riverdale
Dolton

Legend

◎ Proposed Rail Station
● Proposed BRT Stop
🟥 Existing Rail Alignment / Station
- - - Proposed BRT Route
- - - Halsted Alternative
- - - Union Pacific (UPRR); East, West & right of Way Optsions
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☐ 106 APE for Halsted Alternative
🟪 NRHP Eligible Building
🟨 Other Properties Surveyed
▨ Building Footprint

Scale

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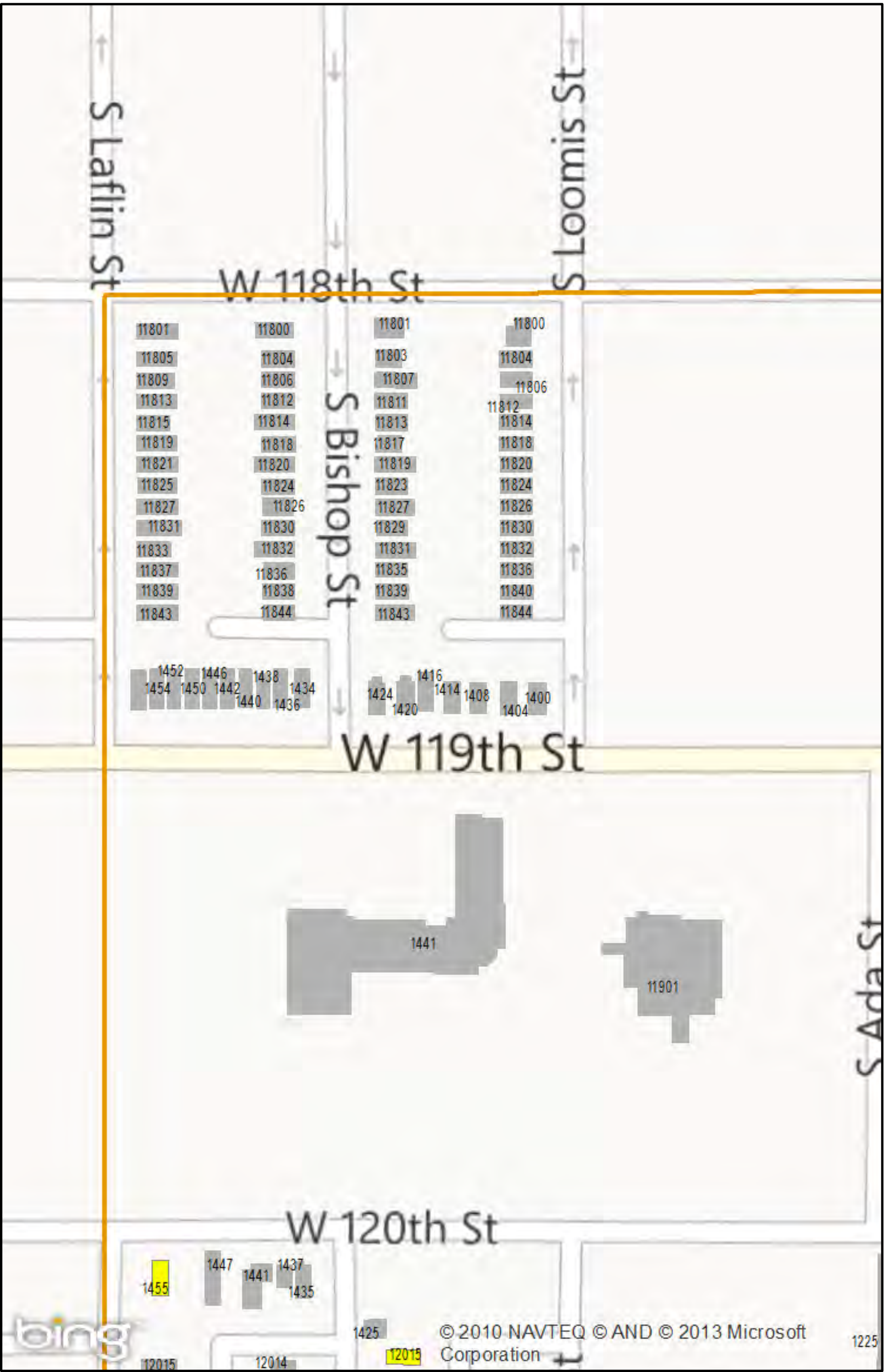
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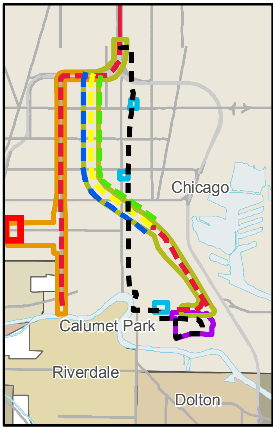
Chicago
Calumet Park
Riverdale
Dolton

Legend

◎ Proposed Rail Station

● Proposed BRT Stop

▬ Existing Rail Alignment / Station

- - - Proposed BRT Route

- - - Halsted Alternative

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☐ 106 APE for Halsted Alternative

■ NRHP Eligible Building

■ Other Properties Surveyed

■ Building Footprint

Scale

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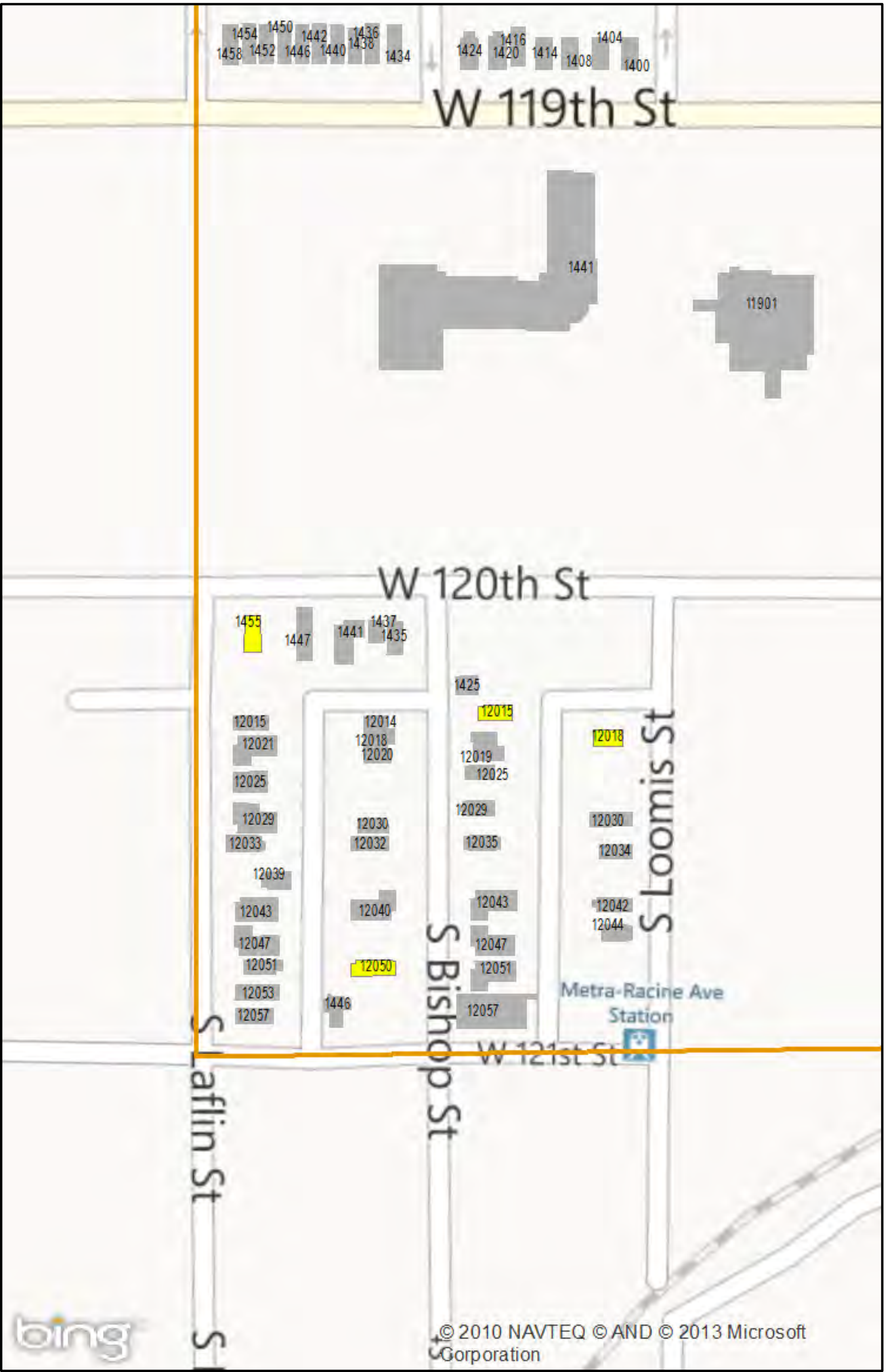
Feet

NRHPeligible.mxd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W 121st St
Metra-Racine Ave Station
bing

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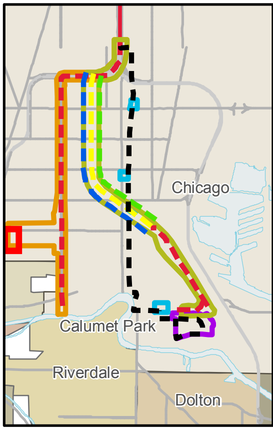
Inset


Chicago
Calumet Park
Riverdale
Dolton

Legend

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Scale

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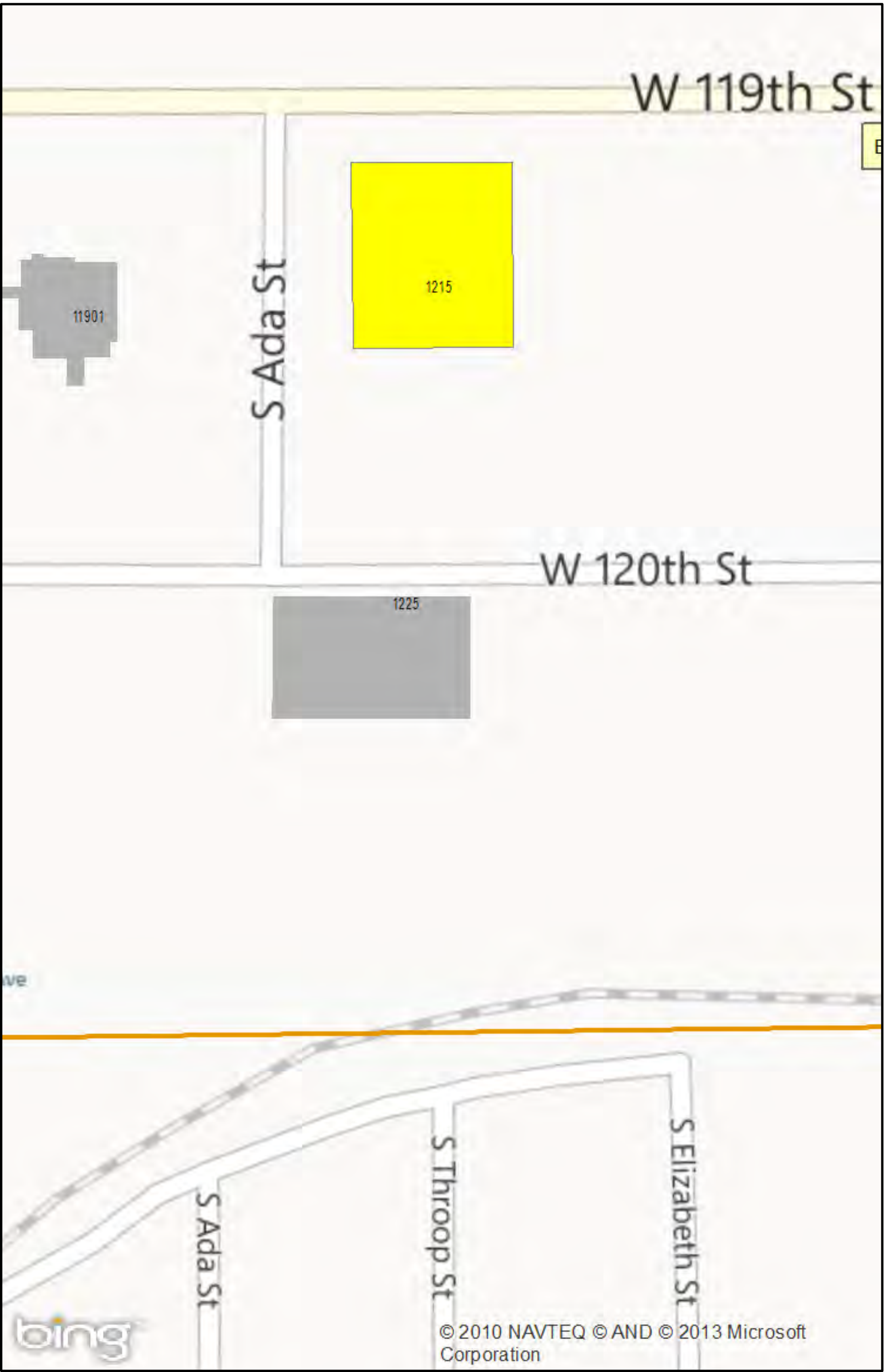
Feet

NRHPeligible.mxd


W 119th St
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© 2010 NAVTEQ © AND © 2013 Microsoft Corporation

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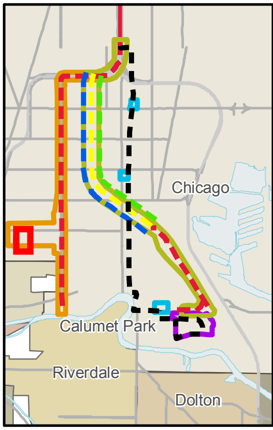
Chicago
Calumet Park
Riverdale
Dolton

Legend

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🟨 Other Properties Surveyed
■ Building Footprint

Scale

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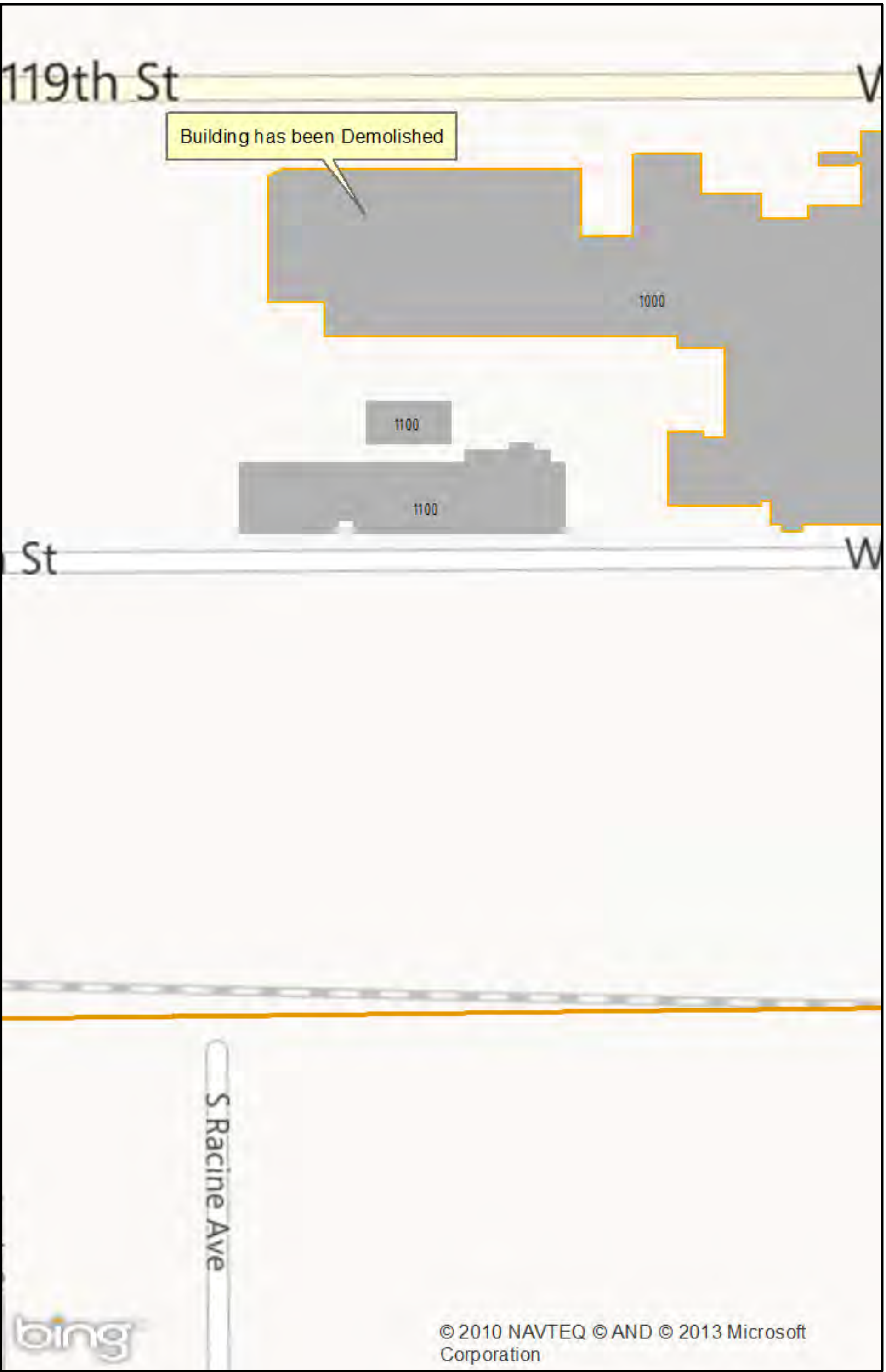
119th St
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Building has been Demolished

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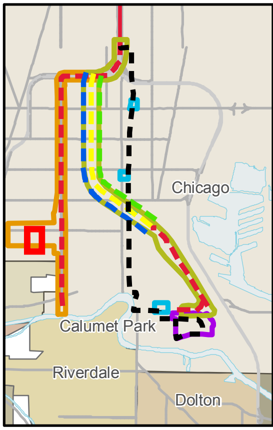
Inset


Chicago
Calumet Park
Riverdale
Dolton

Legend

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- ● Proposed BRT Stop
- ▬ Existing Rail Alignment / Station
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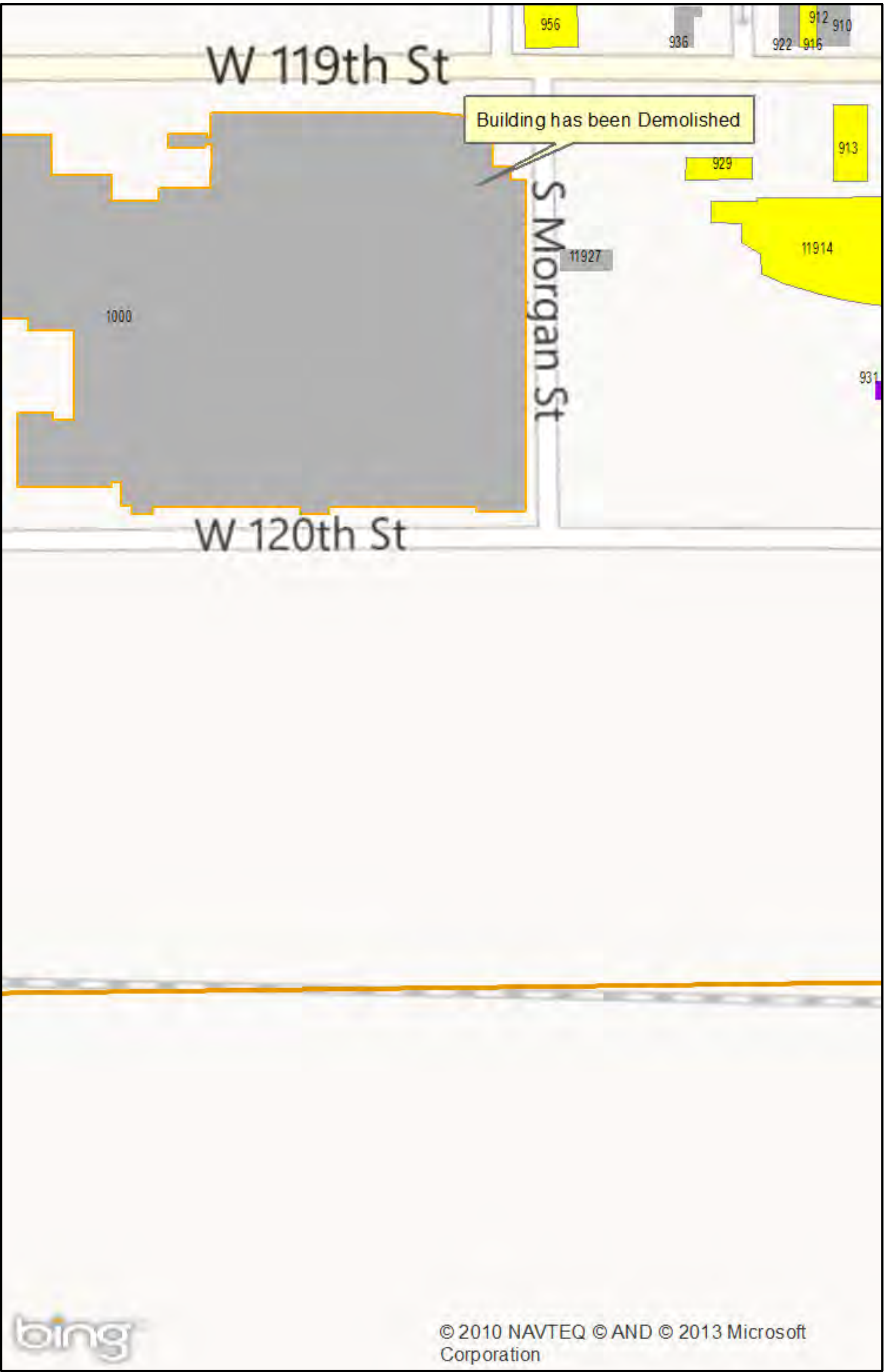
Feet

NRHPeligible.mxd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S Morgan St
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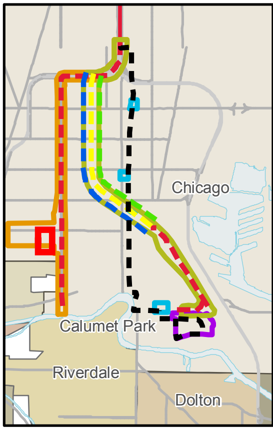
11914
1000
931
W 120th St
bing
© 2010 NAVTEQ © AND © 2013 Microsoft Corporation

Inset


Chicago
Calumet Park
Riverdale
Dolton

Legend

◎	Proposed Rail Station
●	Proposed BRT Stop
▬	Existing Rail Alignment / Station
- - -	Proposed BRT Route
- - -	Halsted Alternative
- - -	Union Pacific (UPRR); East, West & right of Way Optsions
☐	CHRS Orange Property
☐	NRHP Eligible District
☐	106 APE for UPRR Alternative
☐	106 APE for BRT Alternative
☐	106 APE for Halsted Alternative
■	NRHP Eligible Building
■	Other Properties Surveyed
■	Building Footprint

Scale

1:3,000

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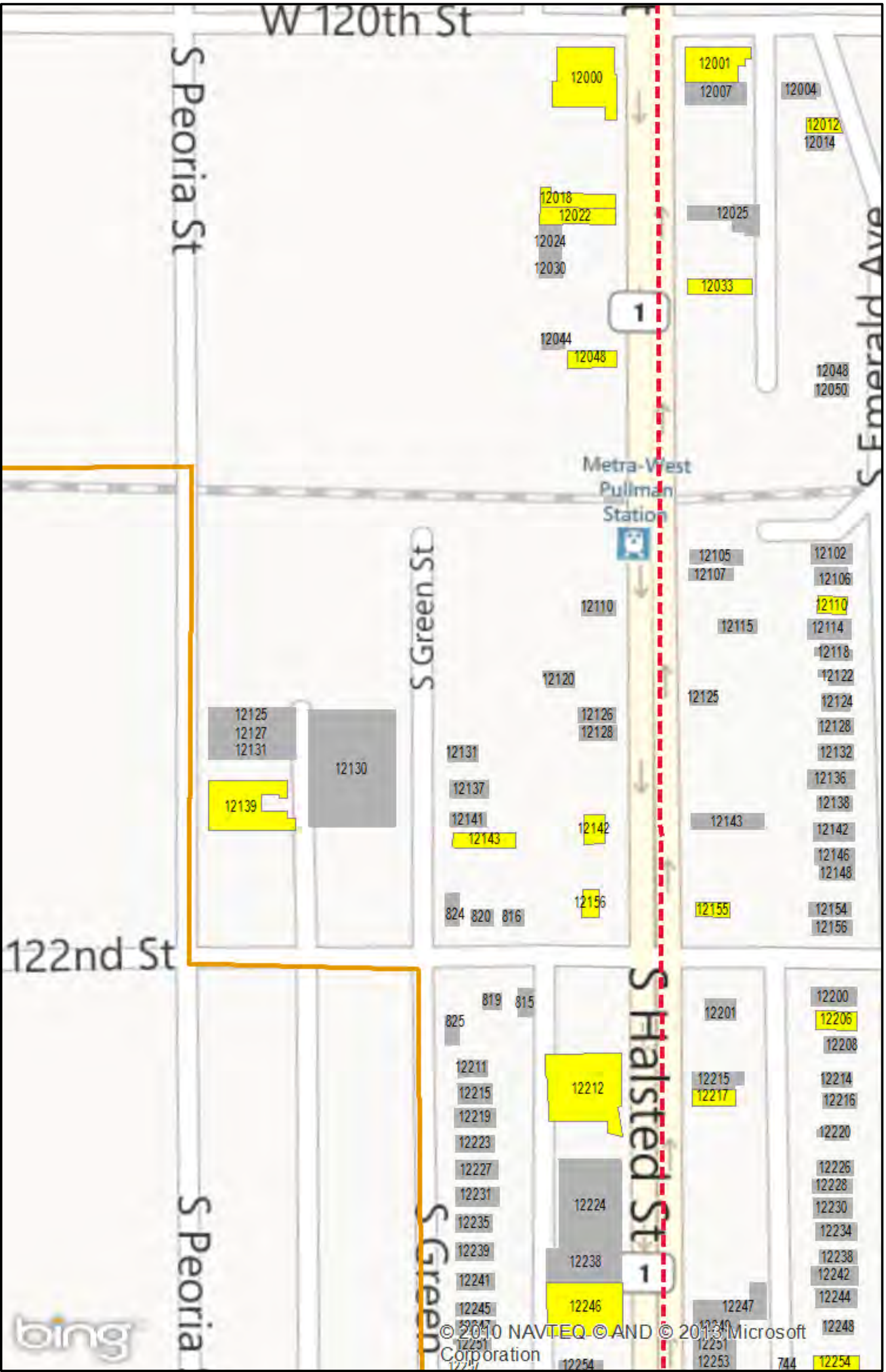
Feet

NRHPeligible.mxd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S Green St
S Halsted St
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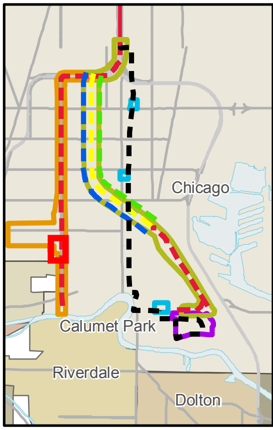
© 2010 NAVTEQ © AND © 2013 Microsoft Corporation

Inset


Chicago
Calumet Park
Riverdale
Dolton

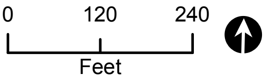
Legend

- ◎ Proposed Rail Station
- ● Proposed BRT Stop
- ▬ Existing Rail Alignment / Station
- - - Proposed BRT Route
- - - Halsted Alternative
- - - Union Pacific (UPRR); East, West & right of Way Optsions
- ☐ CHRS Orange Property
- ☐ NRHP Eligible District
- ☐ 106 APE for UPRR Alternative
- ☐ 106 APE for BRT Alternative
- ☐ 106 APE for Halsted Alternative
- ■ NRHP Eligible Building
- ■ Other Properties Surveyed
- ■ Building Footprint

Page 23 of 47

Scale

1:3,000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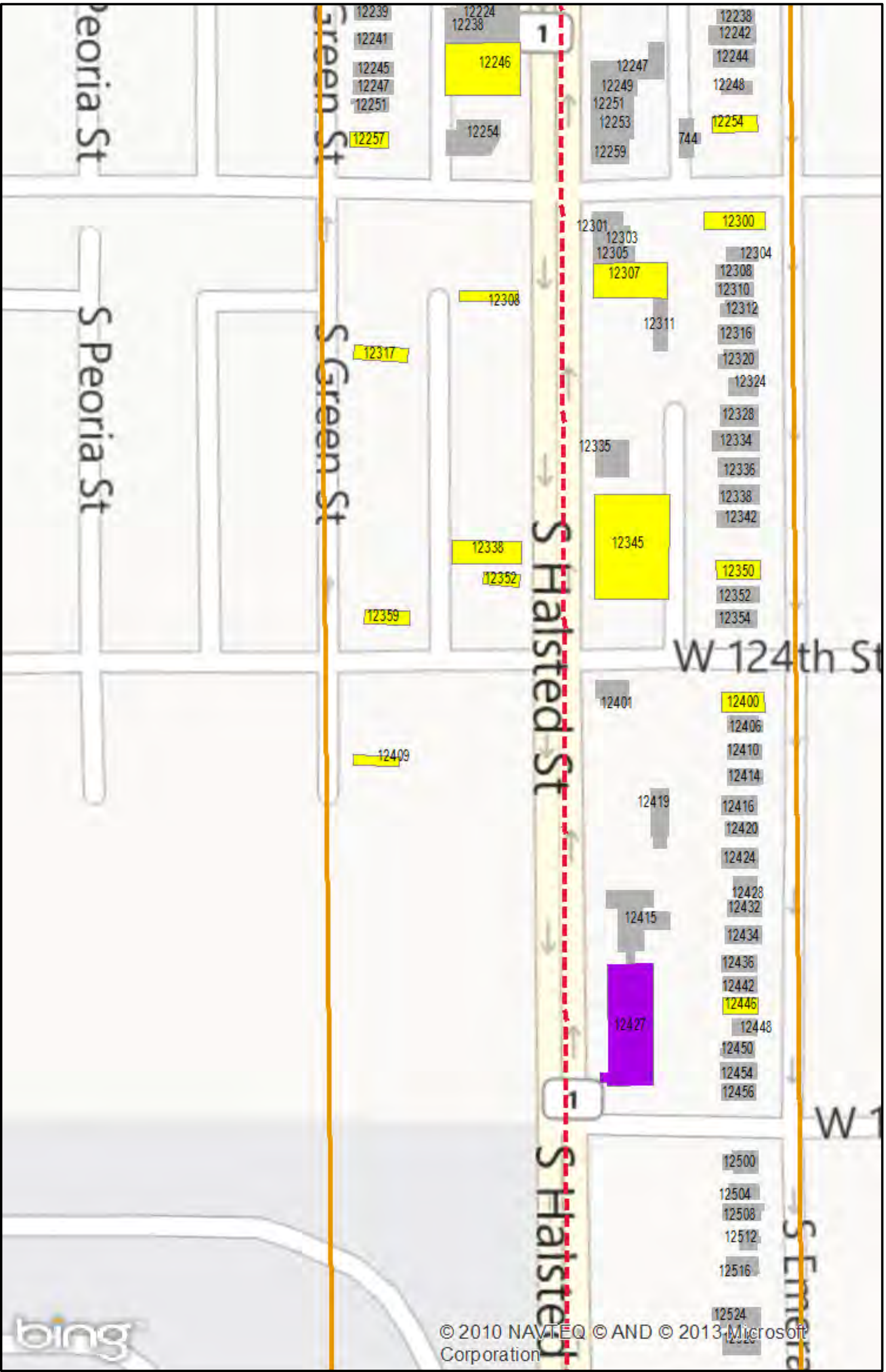
NRHPeligible.mxd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© 2010 NAVTEQ © AND © 2013 Microsoft Corporation

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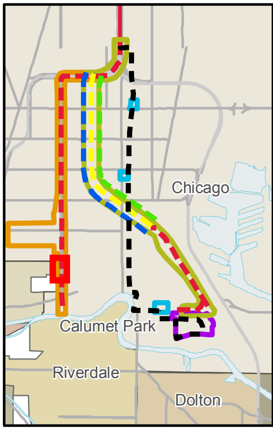
Chicago
Calumet Park
Riverdale
Dolton

Legend

- ◎ Proposed Rail Station
- ● Proposed BRT Stop
- Existing Rail Alignment / Station
- Proposed BRT Route
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- ■ NRHP Eligible Building
- ■ Other Properties Surveyed
- ■ Building Footprint

Scale

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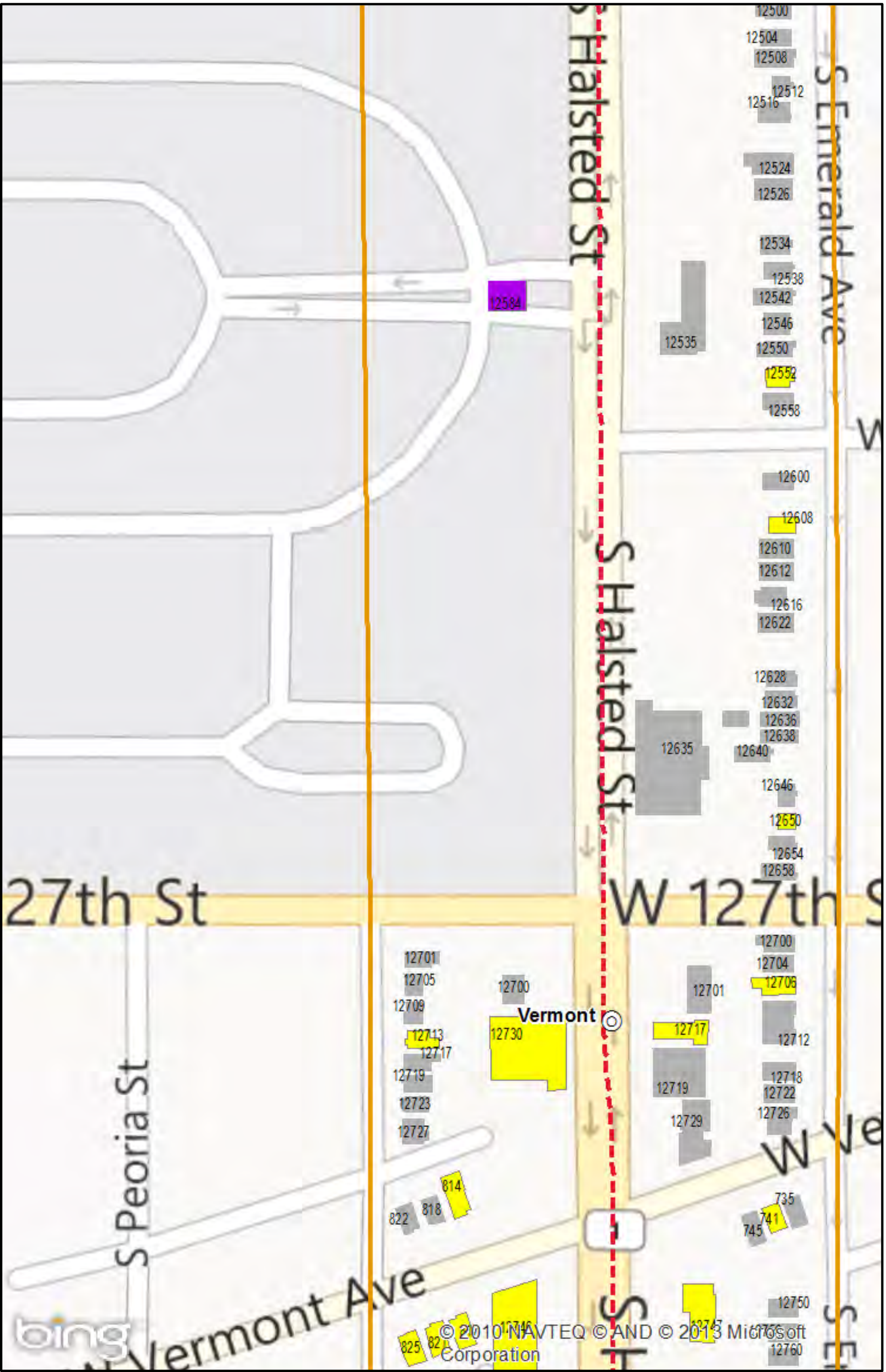
Feet

NRHPeligible.mxd



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© 2010 NAVTEQ © AND © 2013 Microsoft Corporation
bing

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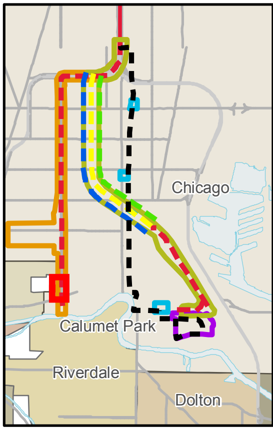

Chicago
Calumet Park
Riverdale
Dolton

Legend

◎ Proposed Rail Station

● Proposed BRT Stop

━ Existing Rail Alignment / Station

- - - Proposed BRT Route

- - - Halsted Alternative

- - - Union Pacific (UPRR); East, West & right of Way Optsions

☐ CHRS Orange Property

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☐ 106 APE for UPRR Alternative

☐ 106 APE for BRT Alternative

☐ 106 APE for Halsted Alternative

■ NRHP Eligible Building

■ Other Properties Surveyed

■ Building Footprint

Page 25 of 47

Scale

1:3,000

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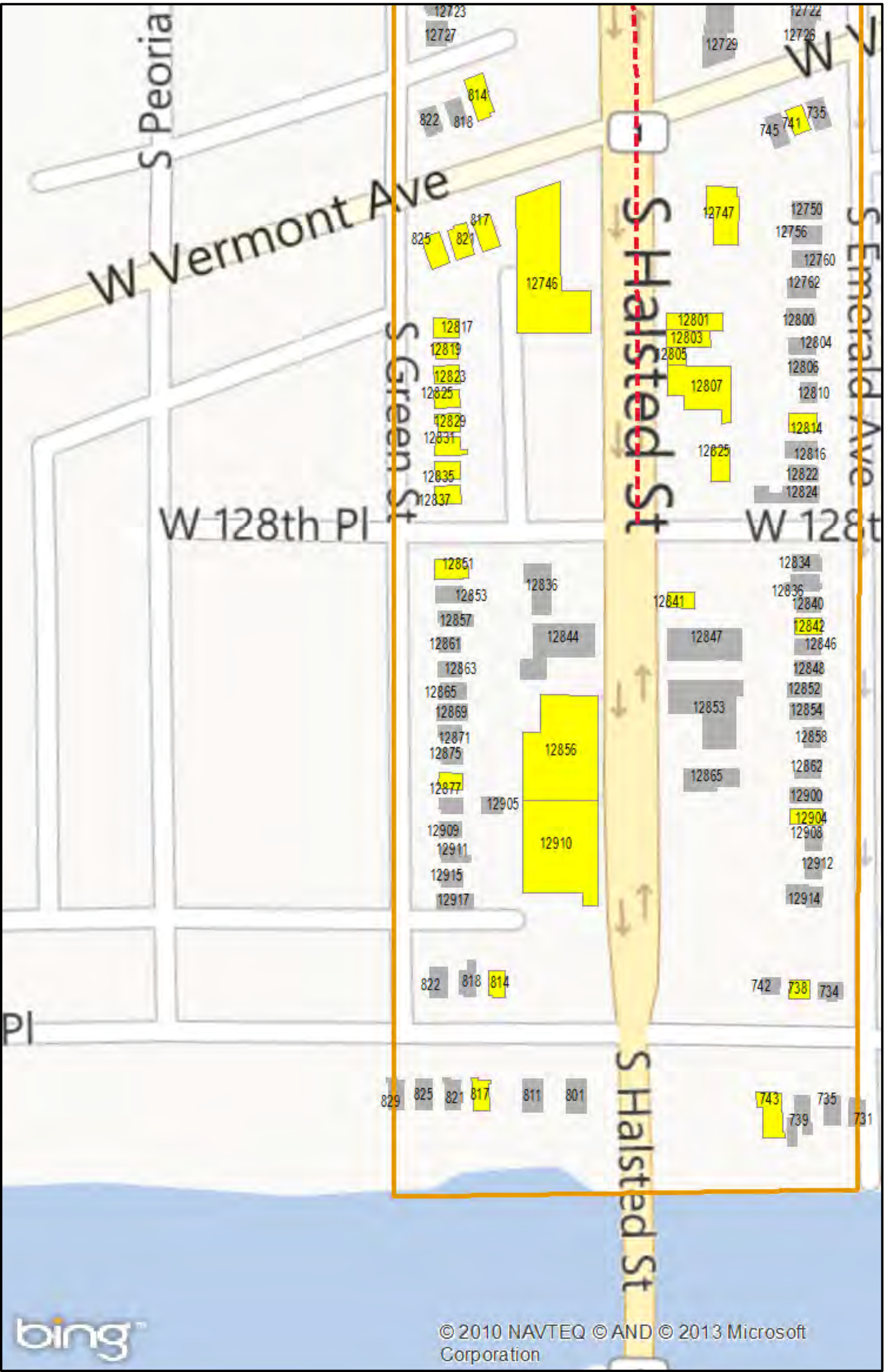
Feet

NRHPeligible.mxd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© 2010 NAVTEQ © AND © 2013 Microsoft Corporation

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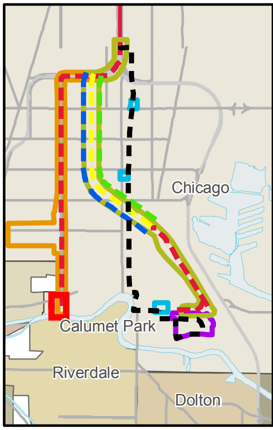
Chicago
Calumet Park
Riverdale
Dolton

Legend

◎	Proposed Rail Station
●	Proposed BRT Stop
━	Existing Rail Alignment / Station
- - -	Proposed BRT Route
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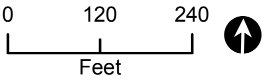
■	NRHP Eligible Building
■	Other Properties Surveyed
■	Building Footprint

Scale

1:3,000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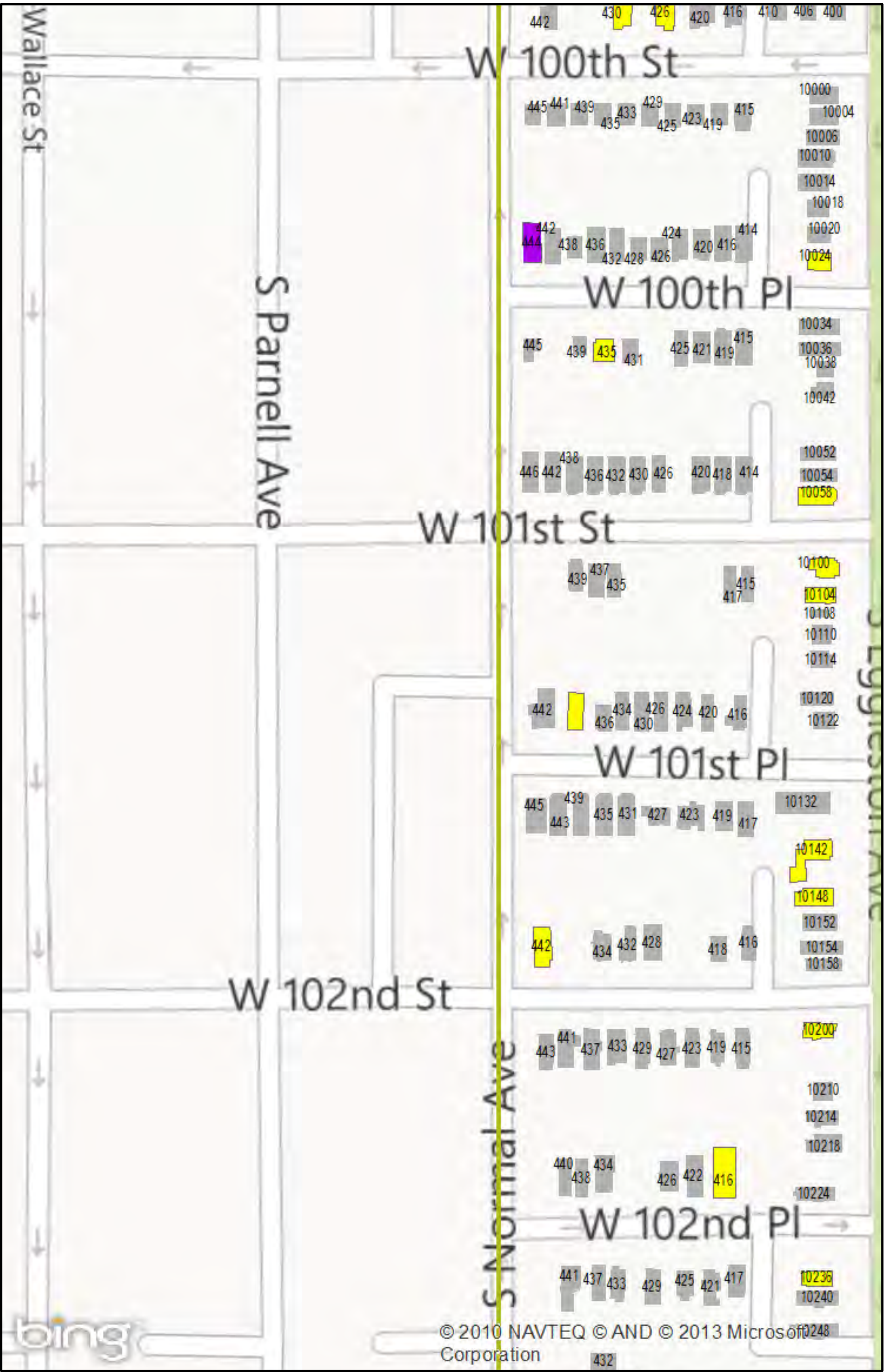
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S Normal Ave
S Eggleston Ave
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© 2010 NAVTEQ © AND © 2013 Microsoft Corporation

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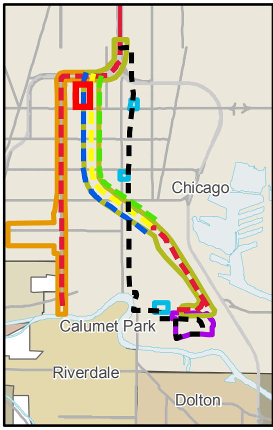
Chicago
Calumet Park
Riverdale
Dolton

Legend

◎ Proposed Rail Station

● Proposed BRT Stop

▬ Existing Rail Alignment / Station

- - - Proposed BRT Route

- - - Halsted Alternative

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☐ 106 APE for BRT Alternative

☐ 106 APE for Halsted Alternative

■ NRHP Eligible Building

■ Other Properties Surveyed

■ Building Footprint

Page 27 of 47

Scale

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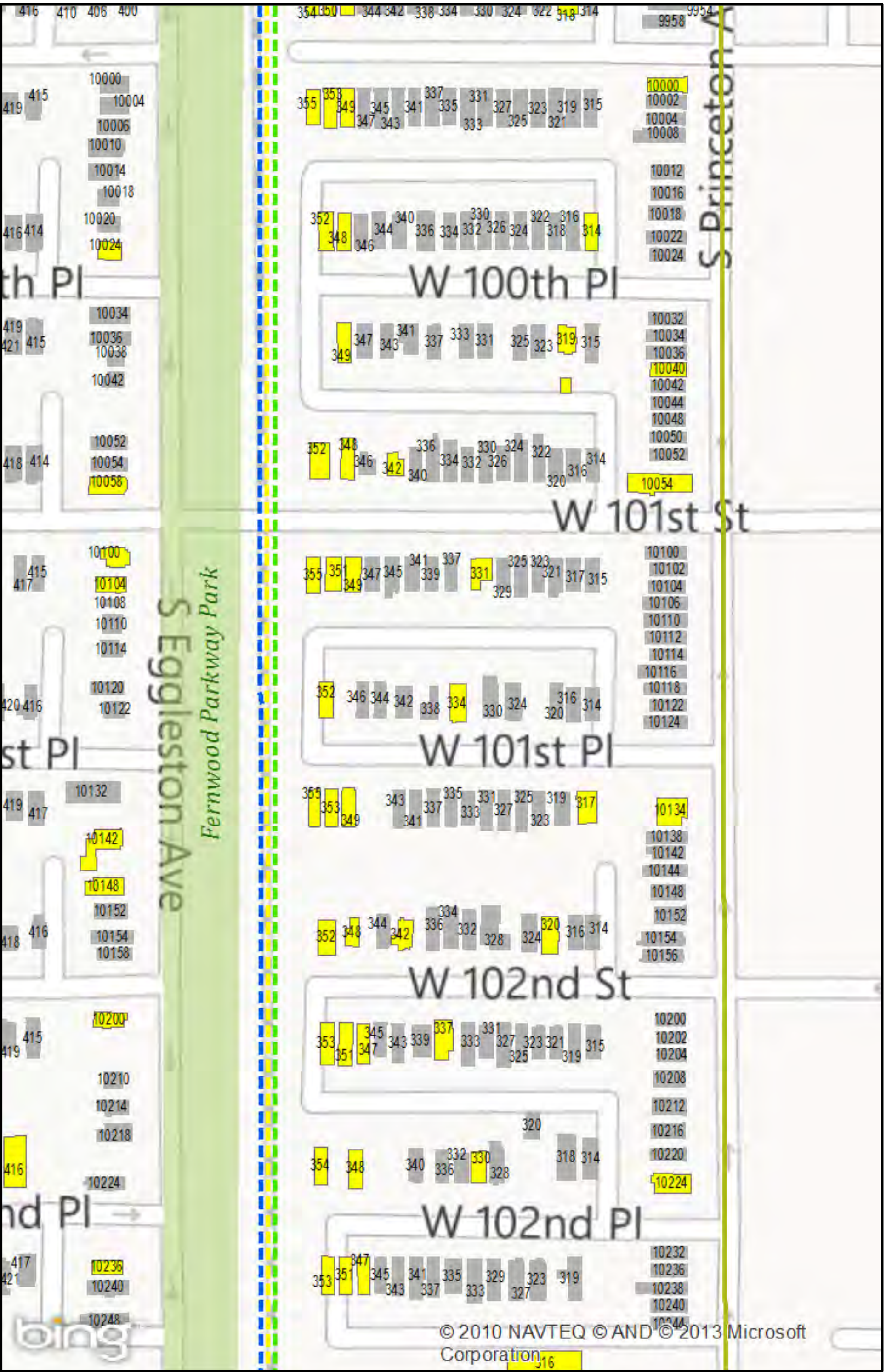
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© 2010 NAVTEQ © AND © 2013 Microsoft Corporation

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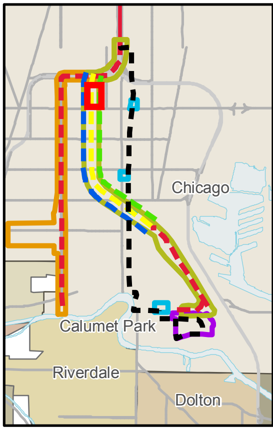
Chicago
Calumet Park
Riverdale
Dolton

Legend

◎ Proposed Rail Station

● Proposed BRT Stop

🟥 Existing Rail Alignment / Station

▬ ▬ Proposed BRT Route

▬ ▬ Halsted Alternative

▬ ▬ Union Pacific (UPRR); East, West & right of Way Optsions

☐ CHRS Orange Property

☐ NRHP Eligible District

☐ 106 APE for UPRR Alternative

☐ 106 APE for BRT Alternative

☐ 106 APE for Halsted Alternative

🟪 NRHP Eligible Building

🟨 Other Properties Surveyed

⬜ Building Footprint

Scale

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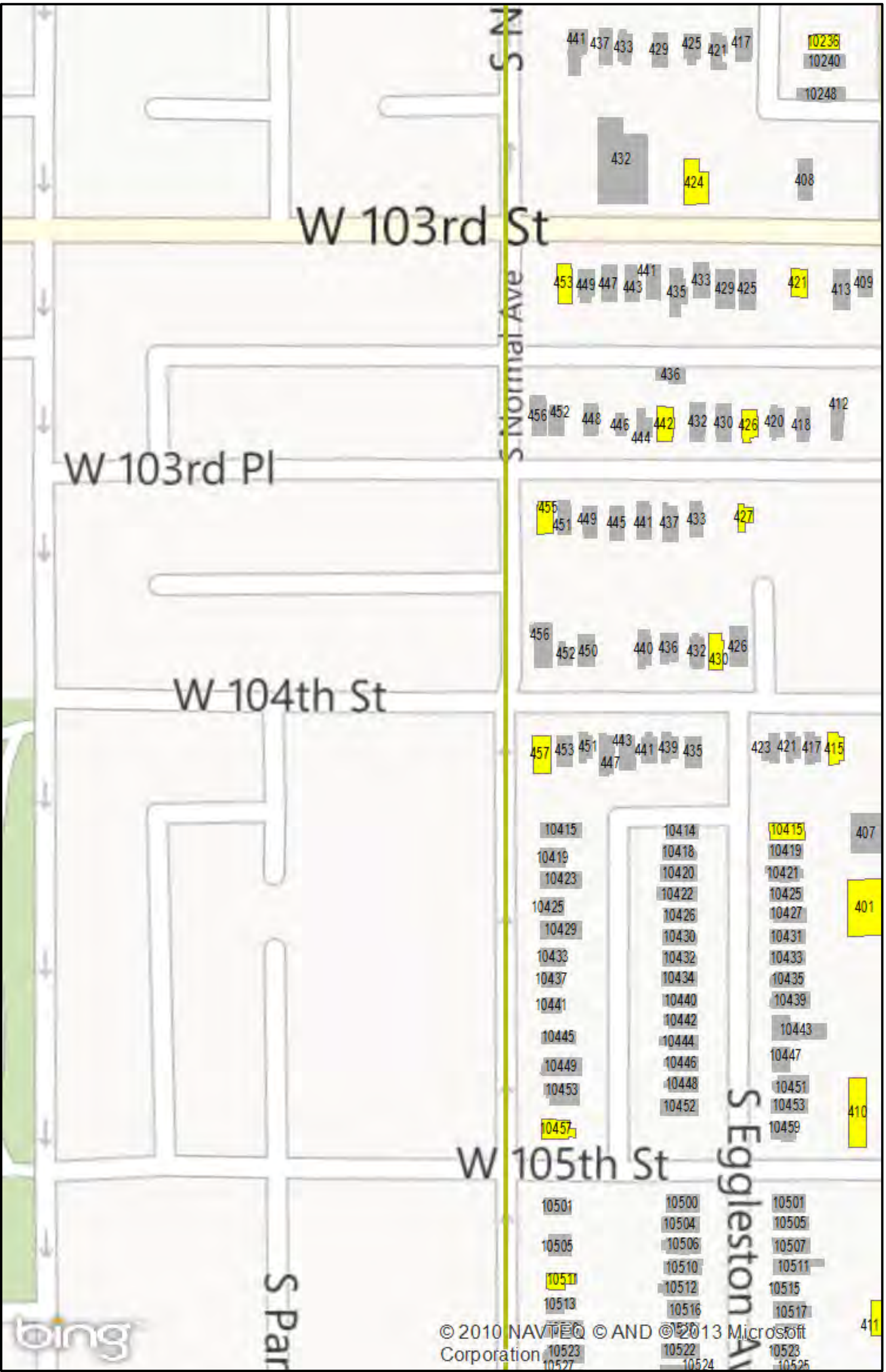
Feet

NRHPeligible.mxd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© 2010 NAVTEQ © AND © 2013 Microsoft Corporation

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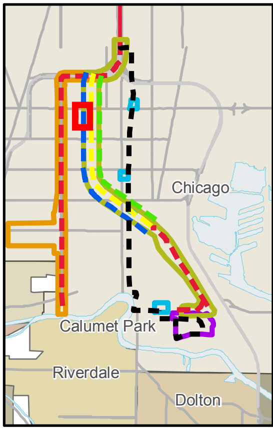
Chicago
Calumet Park
Riverdale
Dolton

Legend

- ◎ Proposed Rail Station
- ● Proposed BRT Stop
- ▬ Existing Rail Alignment / Station
- ▪▪▪ Proposed BRT Route
- ▪▪▪ Halsted Alternative
- ▪▪▪ Union Pacific (UPRR); East, West & right of Way Optsions
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- ☐ NRHP Eligible District
- ☐ 106 APE for UPRR Alternative
- ☐ 106 APE for BRT Alternative
- ☐ 106 APE for Halsted Alternative
- ■ NRHP Eligible Building
- ■ Other Properties Surveyed
- ■ Building Footprint

Scale

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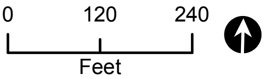
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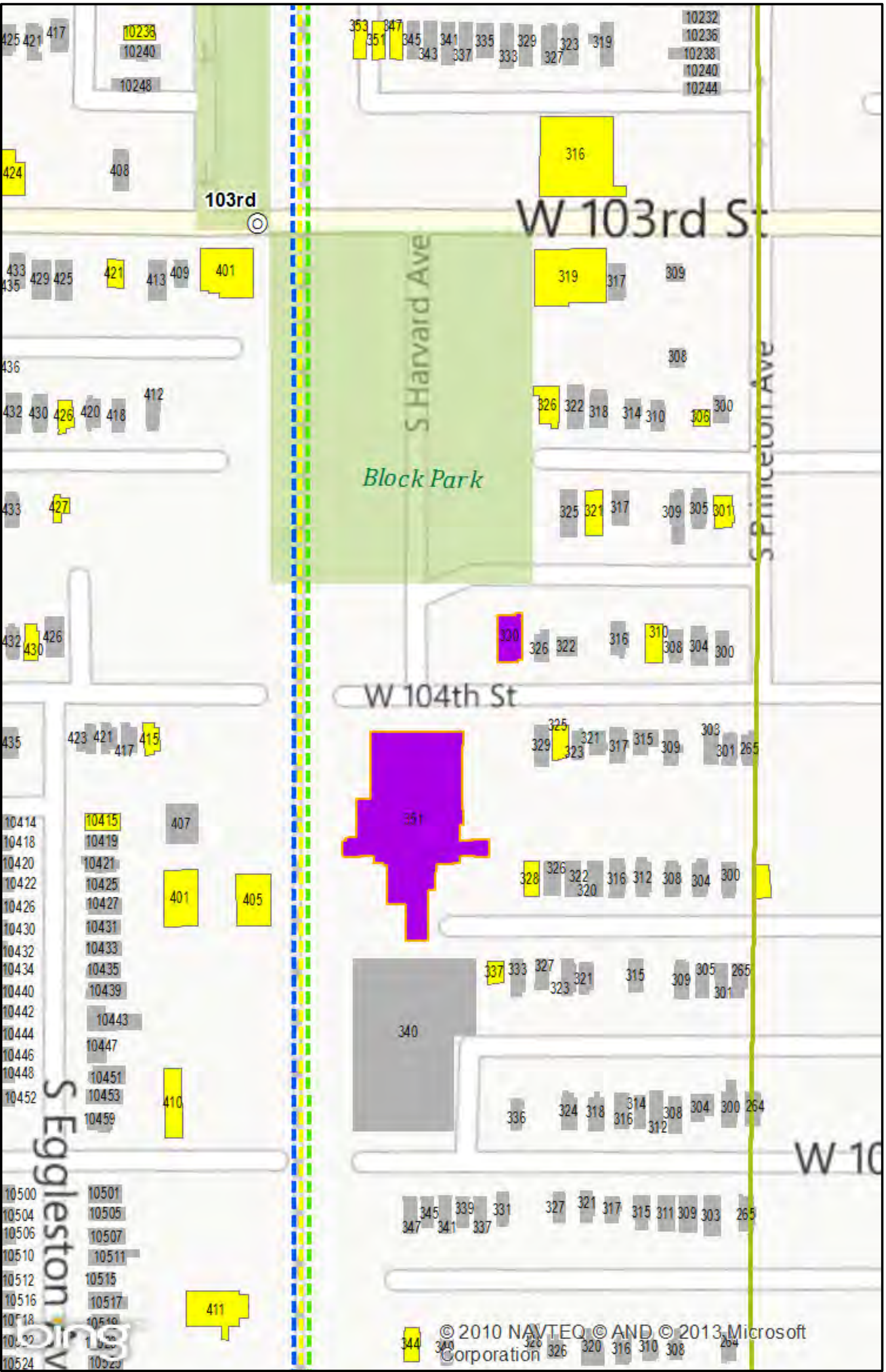
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Block Park
S Princeton Ave
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© 2010 NAVTEQ © AND © 2013 Microsoft Corporation

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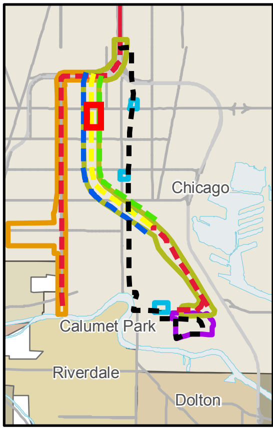
Chicago
Calumet Park
Riverdale
Dolton

Legend

◎ Proposed Rail Station

● Proposed BRT Stop

━ Existing Rail Alignment / Station

- - - Proposed BRT Route

- - - Halsted Alternative

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☐ 106 APE for Halsted Alternative

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Scale

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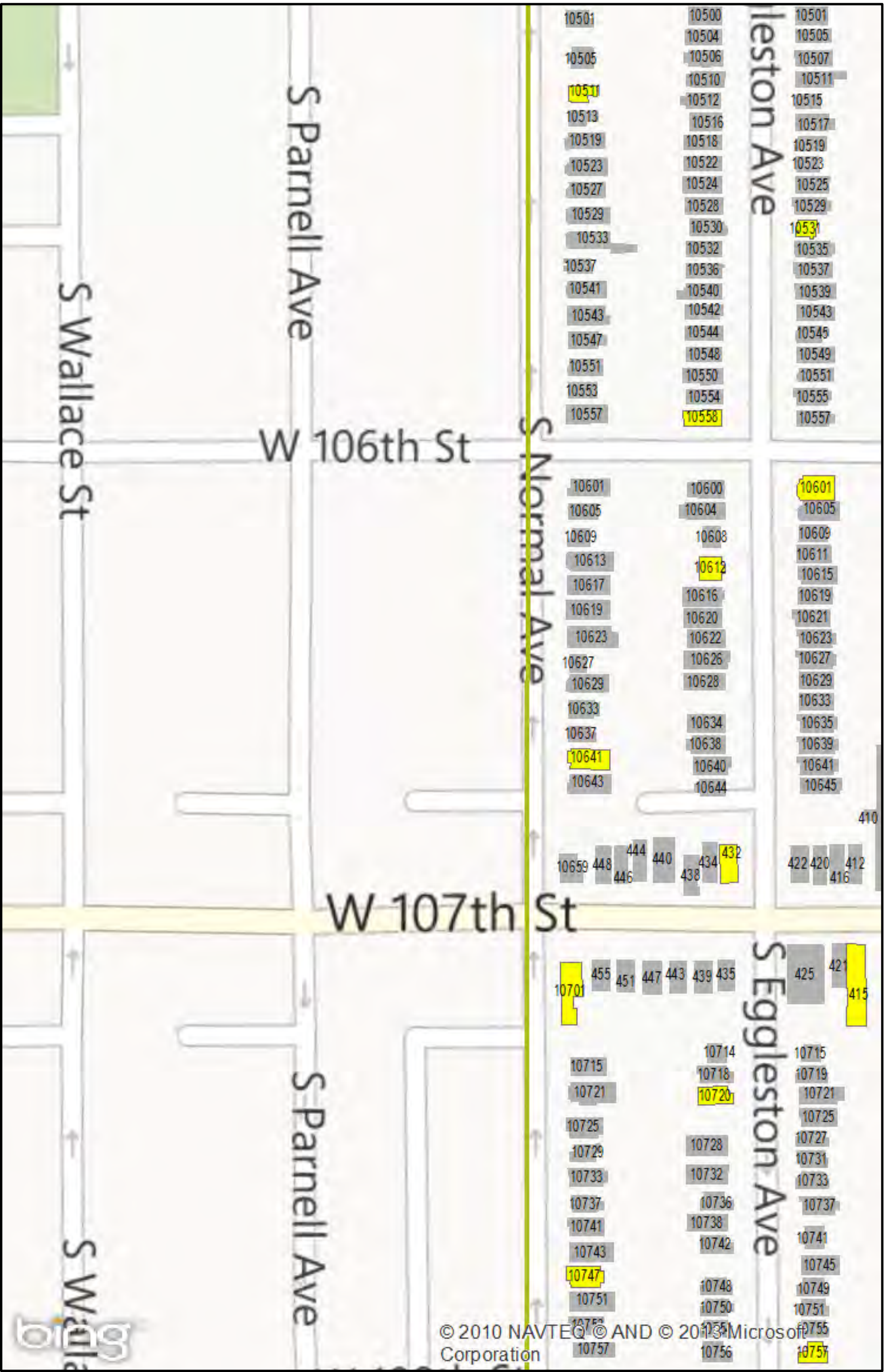
NRHPeligible.mxd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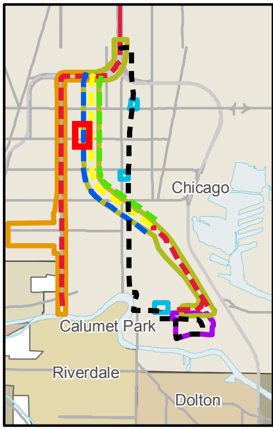
Chicago
Calumet Park
Riverdale
Dolton

Legend

- ◎ Proposed Rail Station
- ● Proposed BRT Stop
- 🟥 Existing Rail Alignment / Station
- ■ ■ ■ Proposed BRT Route
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Scale

1:3,000

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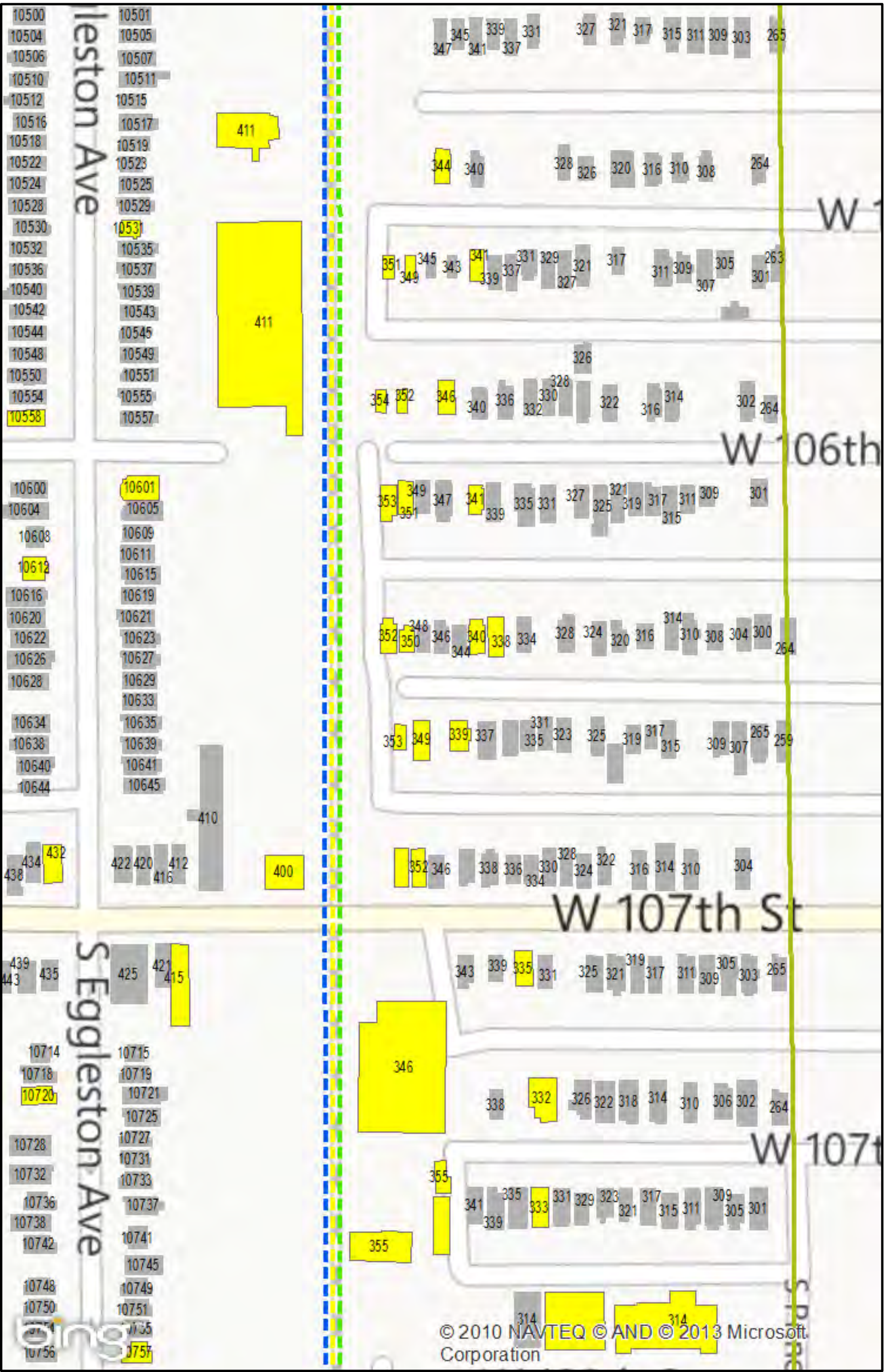
Feet

NRHPeligible.mxd


S Eggleston Ave
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346
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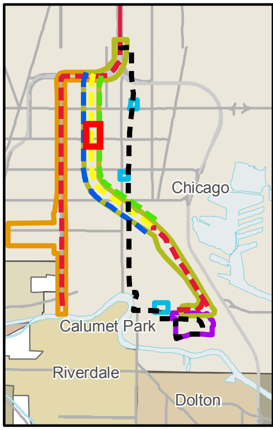
© 2010 NAVTEQ © AND © 2013 Microsoft Corporation

Inset


Chicago
Calumet Park
Riverdale
Dolton

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◎ Proposed Rail Station

● Proposed BRT Stop

▬ Existing Rail Alignment / Station

- - - Proposed BRT Route

- - - Halsted Alternative

- - - Union Pacific (UPRR); East, West & right of Way Optsions

☐ CHRS Orange Property

☐ NRHP Eligible District

☐ 106 APE for UPRR Alternative

☐ 106 APE for BRT Alternative

☐ 106 APE for Halsted Alternative

■ NRHP Eligible Building

■ Other Properties Surveyed

■ Building Footprint

Scale

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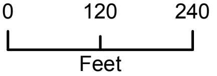
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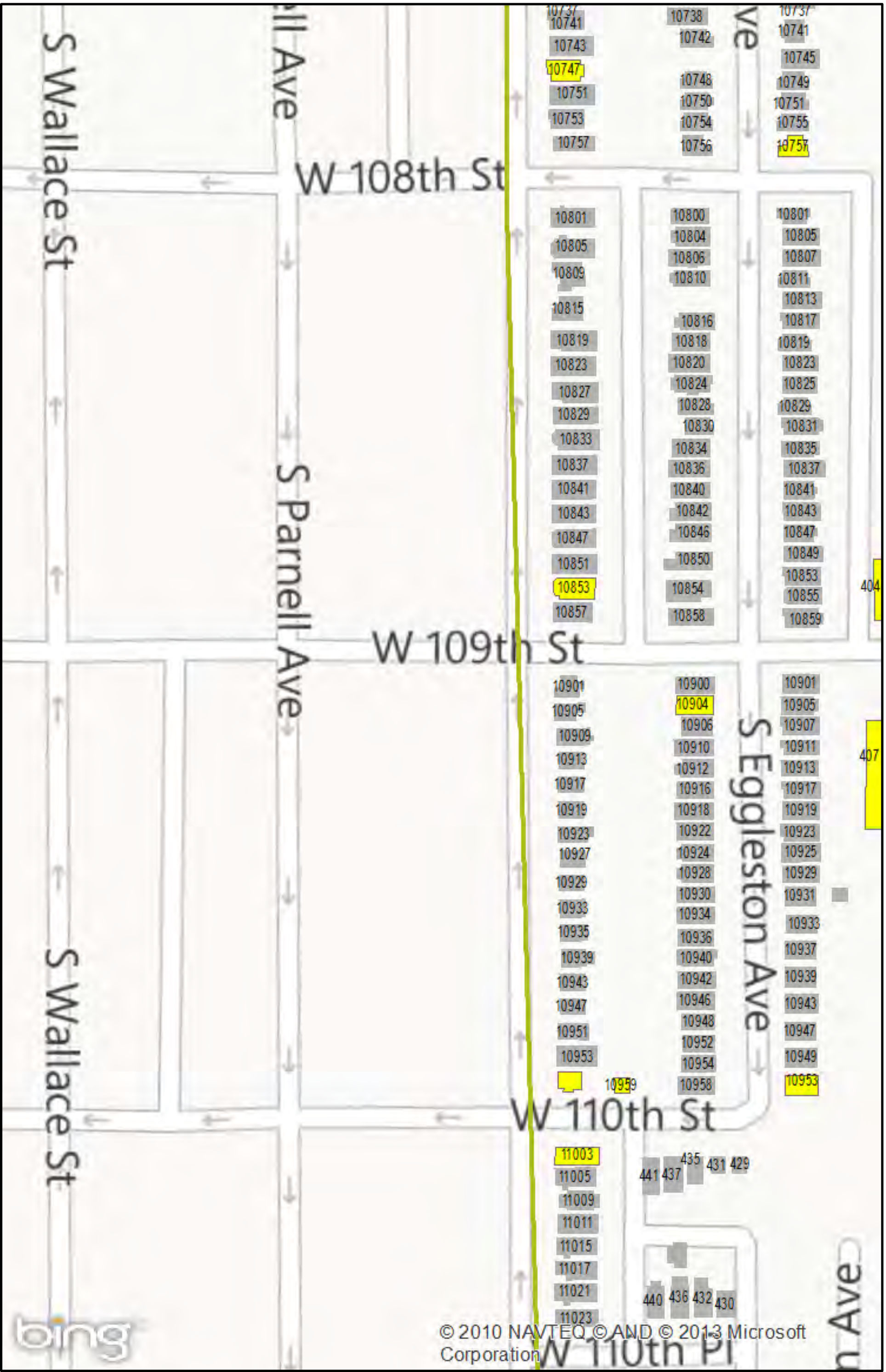
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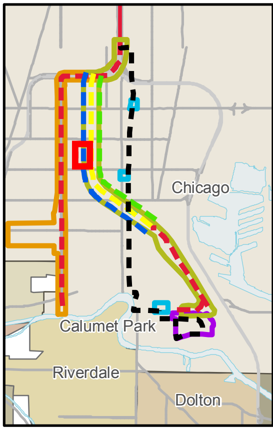
Chicago
Calumet Park
Riverdale
Dolton

Legend

- ◎ Proposed Rail Station
- ● Proposed BRT Stop
- Existing Rail Alignment / Station
- Proposed BRT Route
- Halsted Alternative
- Union Pacific (UPRR); East, West & right of Way Optsions
- ☐ CHRS Orange Property
- ☐ NRHP Eligible District
- ☐ 106 APE for UPRR Alternative
- ☐ 106 APE for BRT Alternative
- ☐ 106 APE for Halsted Alternative
- NRHP Eligible Building
- Other Properties Surveyed
- Building Footprint

Scale

1:3,000

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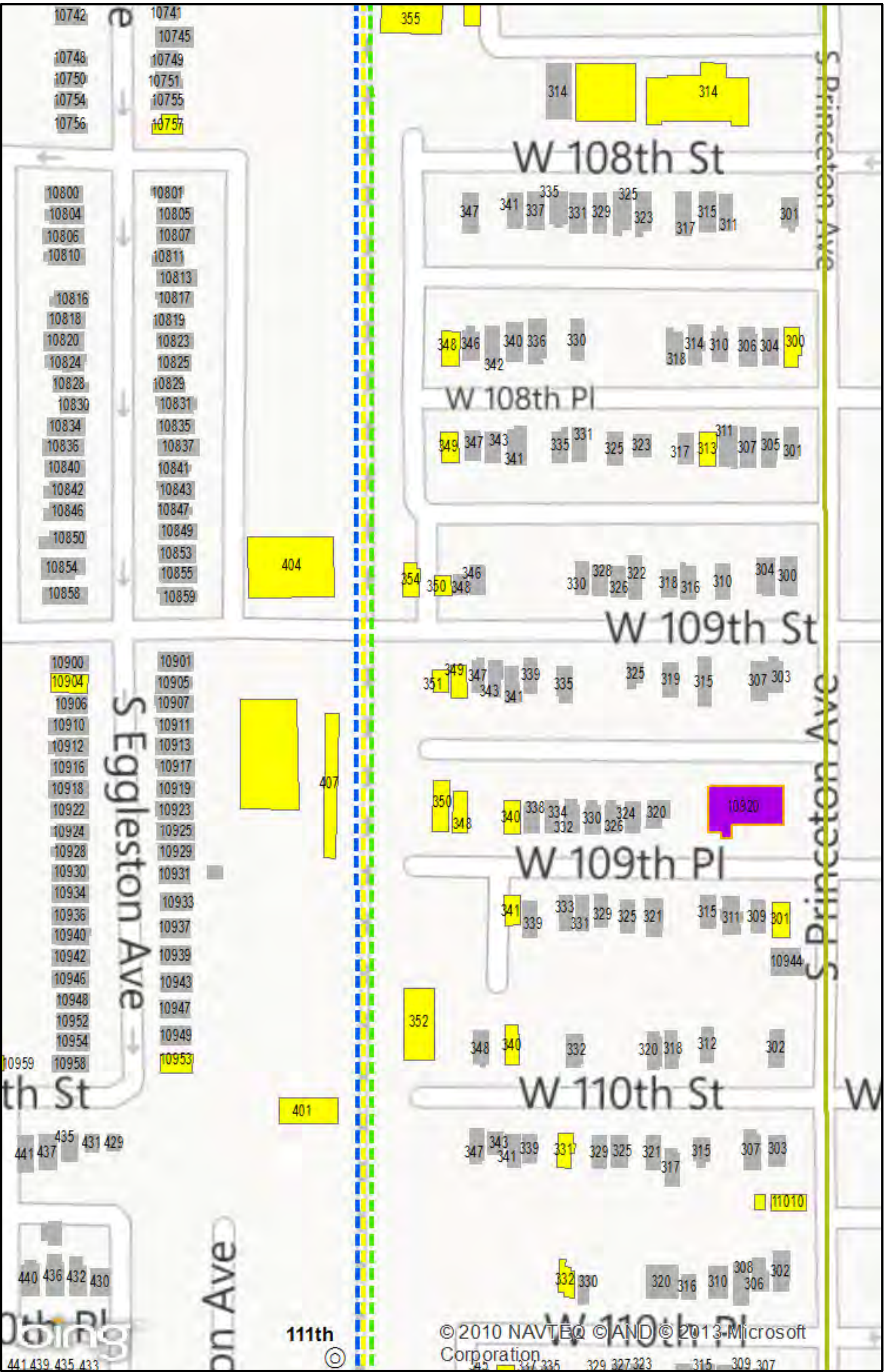
Feet

NRHPeligible.mxd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404
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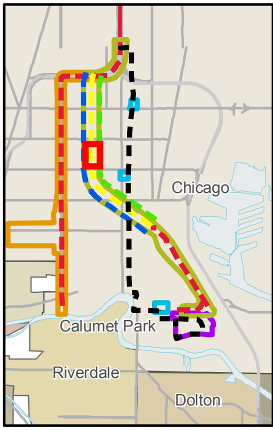
Chicago
Calumet Park
Riverdale
Dolton

Legend

- ◎ Proposed Rail Station
- ● Proposed BRT Stop
- Existing Rail Alignment / Station
- Proposed BRT Route
- Halsted Alternative
- Union Pacific (UPRR); East, West & right of Way Optsions
- ☐ CHRS Orange Property
- ☐ NRHP Eligible District
- ☐ 106 APE for UPRR Alternative
- ☐ 106 APE for BRT Alternative
- ☐ 106 APE for Halsted Alternative
- ■ NRHP Eligible Building
- ■ Other Properties Surveyed
- ■ Building Footprint

Scale

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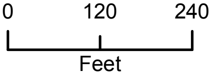
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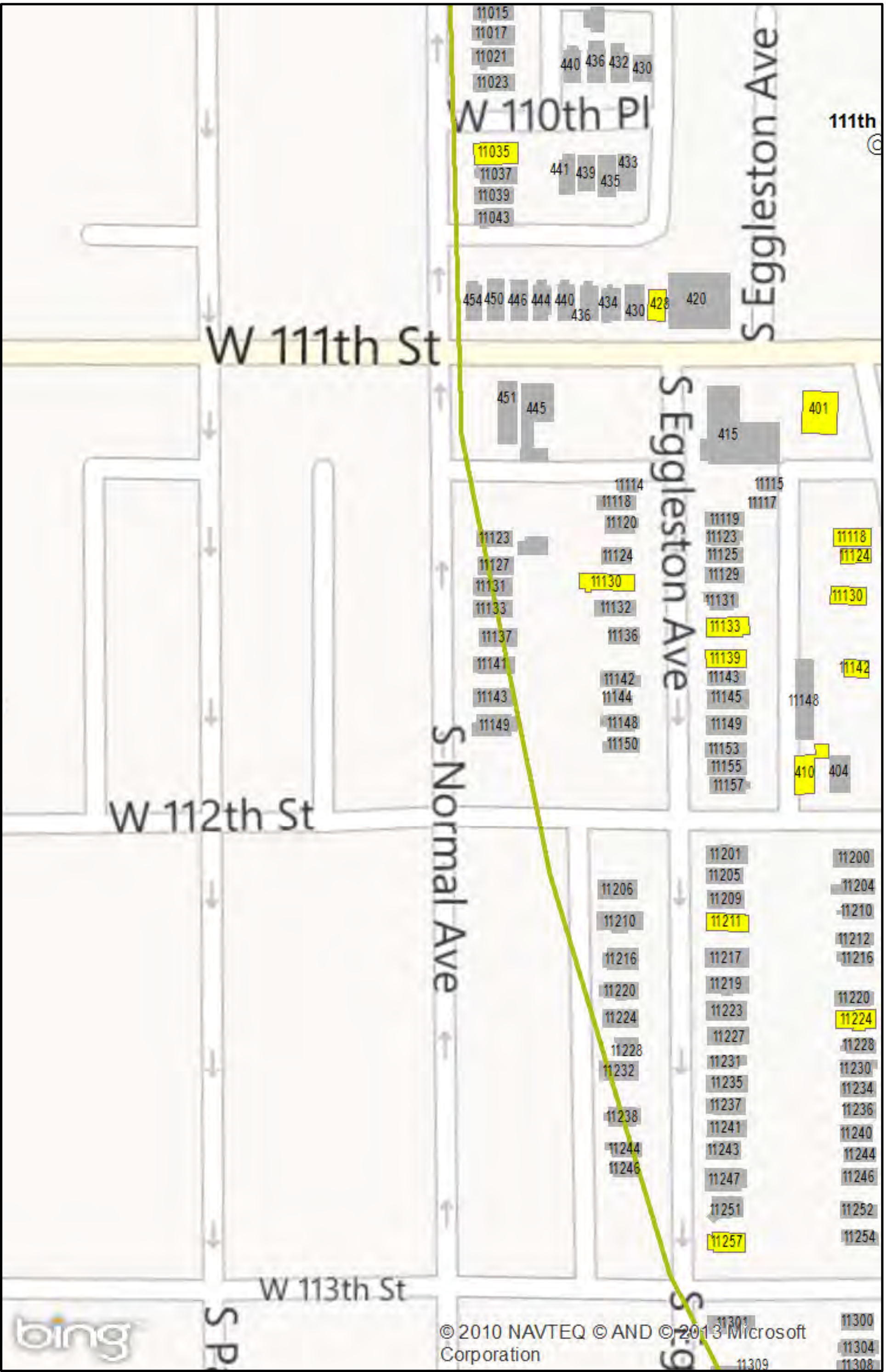
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© 2010 NAVTEQ © AND © 2013 Microsoft Corporation

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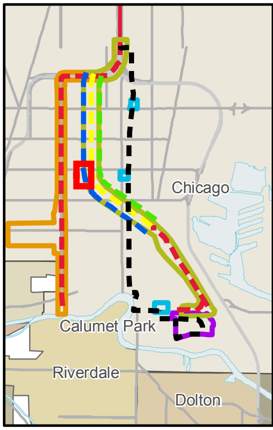
Chicago
Calumet Park
Riverdale
Dolton

Legend

◎ Proposed Rail Station

● Proposed BRT Stop

Existing Rail Alignment / Station

Proposed BRT Route

Halsted Alternative

Union Pacific (UPRR); East, West & right of Way Optsions

CHRS Orange Property

NRHP Eligible District

106 APE for UPRR Alternative

106 APE for BRT Alternative

106 APE for Halsted Alternative

NRHP Eligible Building

Other Properties Surveyed

Building Footprint

Scale

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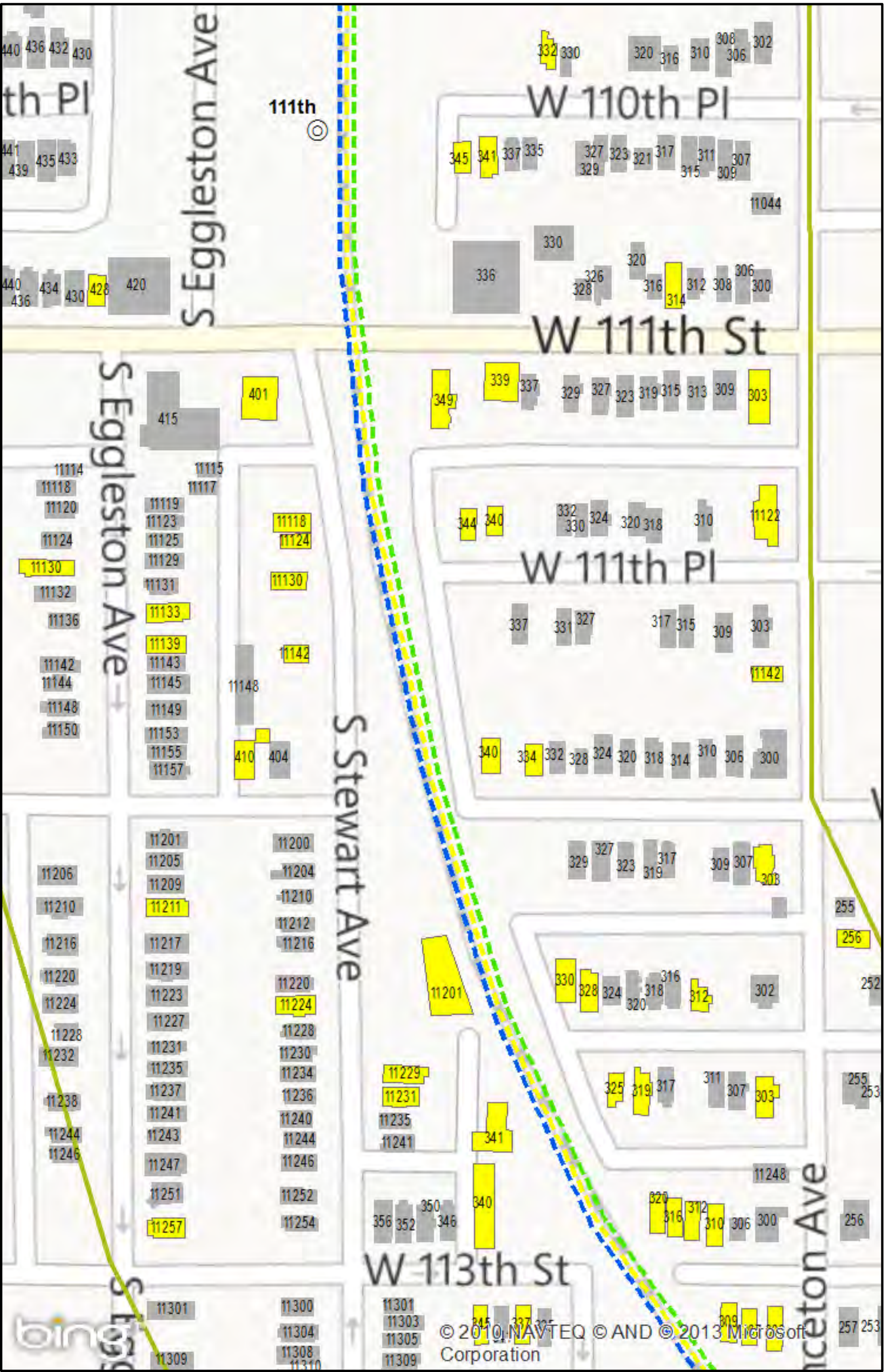
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S Stewart Ave
W 111th Pl
W 113th St
S Princeton Ave
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© 2010 NAVTEQ © AND © 2013 Microsoft Corporation

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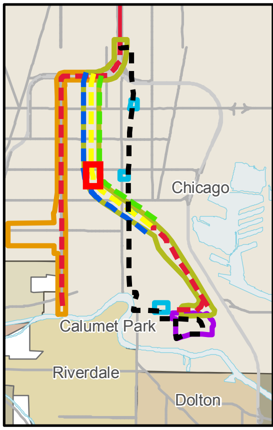
Chicago
Calumet Park
Riverdale
Dolton

Legend

◎ Proposed Rail Station

● Proposed BRT Stop

🟥 Existing Rail Alignment / Station

- - - Proposed BRT Route

- - - Halsted Alternative

- - - Union Pacific (UPRR); East, West & right of Way Optsions

☐ CHRS Orange Property

☐ NRHP Eligible District

☐ 106 APE for UPRR Alternative

☐ 106 APE for BRT Alternative

☐ 106 APE for Halsted Alternative

🟪 NRHP Eligible Building

🟨 Other Properties Surveyed

⬜ Building Footprint

Scale

1:3,000

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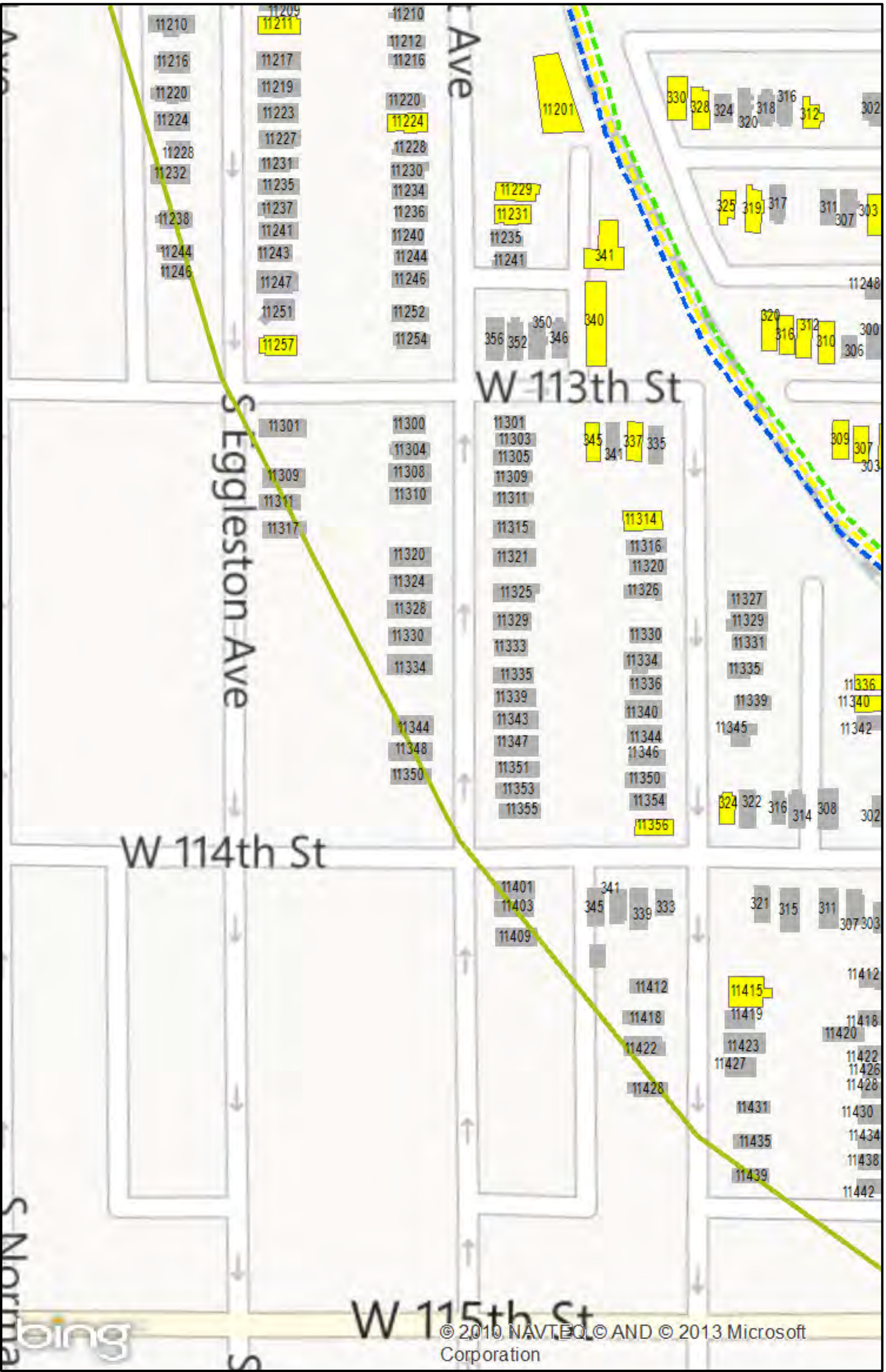
Feet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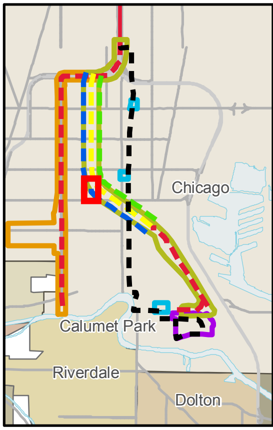
Chicago
Calumet Park
Riverdale
Dolton

Legend

◎	Proposed Rail Station
●	Proposed BRT Stop
🟥	Existing Rail Alignment / Station
- - -	Proposed BRT Route
- - -	Halsted Alternative
- - -	Union Pacific (UPRR); East, West & right of Way Optsions
☐	CHRS Orange Property
☐	NRHP Eligible District
☐	106 APE for UPRR Alternative
☐	106 APE for BRT Alternative
☐	106 APE for Halsted Alternative
🟪	NRHP Eligible Building
🟨	Other Properties Surveyed
⬜	Building Footprint

Scale

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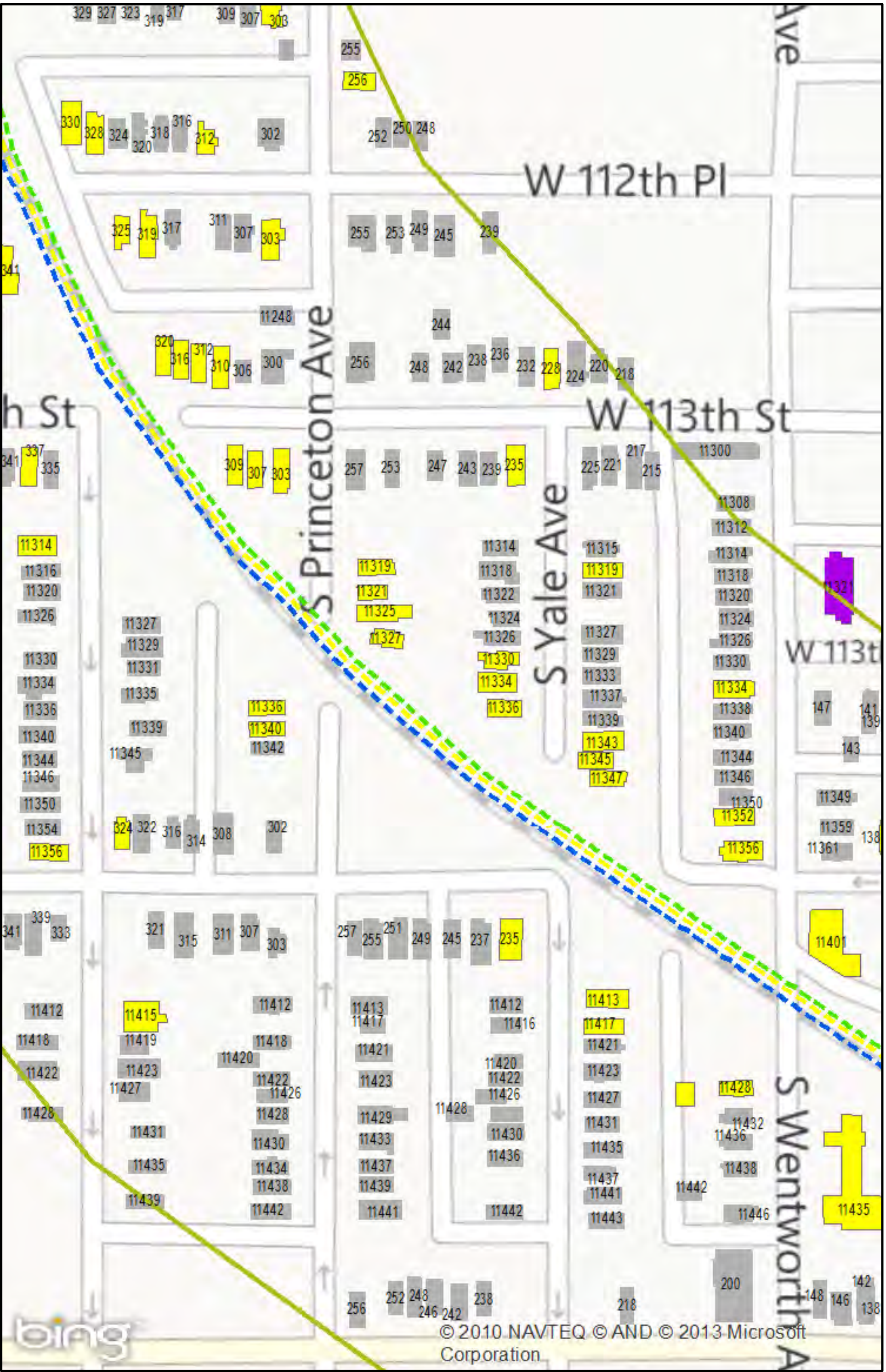
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S Yale Ave
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© 2010 NAVTEQ © AND © 2013 Microsoft Corporation

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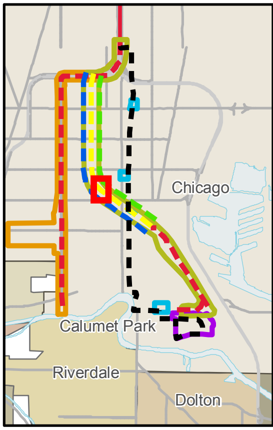
Chicago
Calumet Park
Riverdale
Dolton

Legend

- ◎ Proposed Rail Station
- ● Proposed BRT Stop
- 🟥 Existing Rail Alignment / Station
- ▪ ▪ ▪ Proposed BRT Route
- ▪ ▪ ▪ Halsted Alternative
- ▪ ▪ ▪ Union Pacific (UPRR); East, West & right of Way Optsions
- ☐ CHRS Orange Property
- ☐ NRHP Eligible District
- ☐ 106 APE for UPRR Alternative
- ☐ 106 APE for BRT Alternative
- ☐ 106 APE for Halsted Alternative
- ■ NRHP Eligible Building
- 🟨 Other Properties Surveyed
- ■ Building Footprint

Scale

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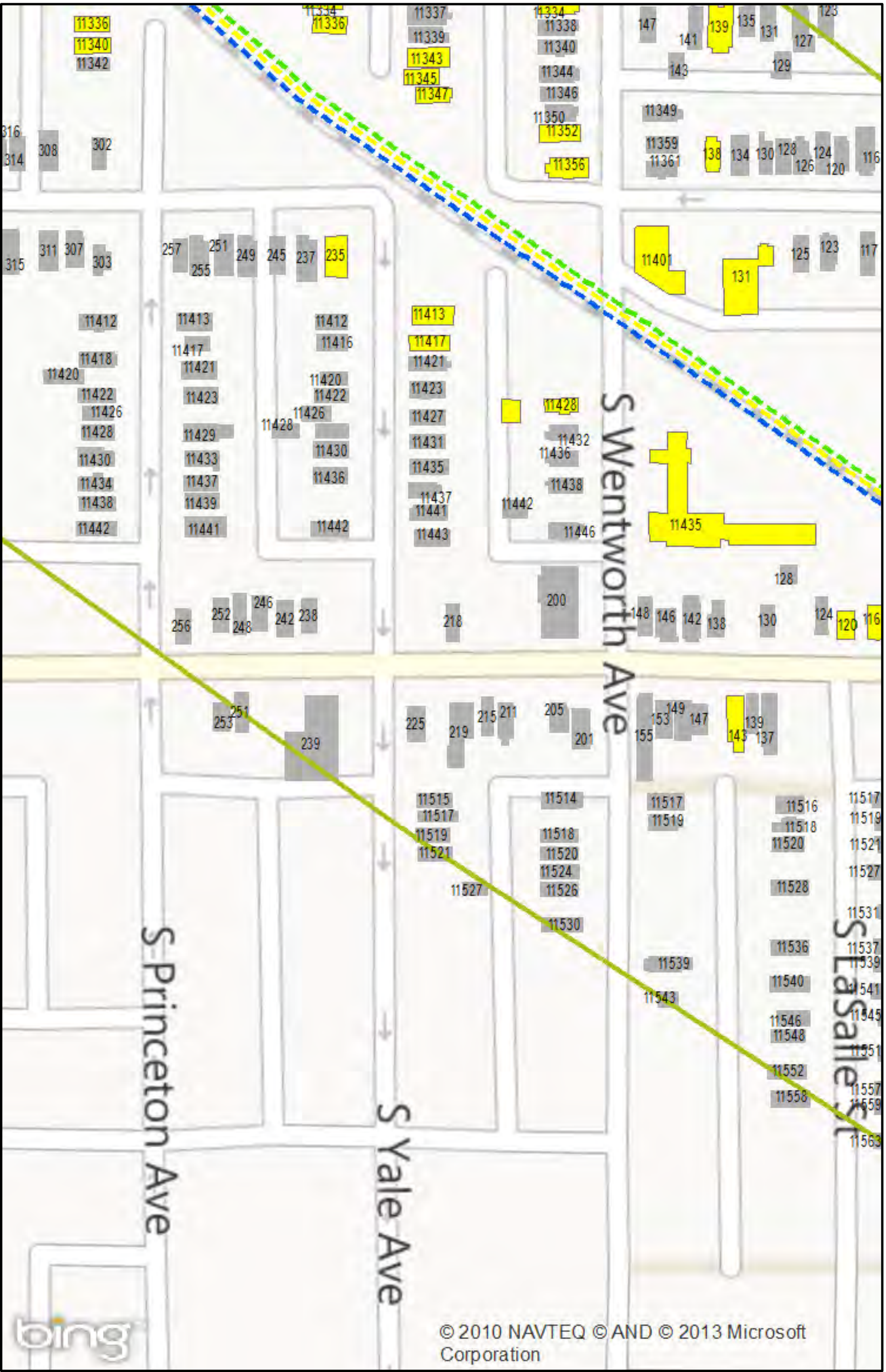
Feet

NRHPeligible.mxd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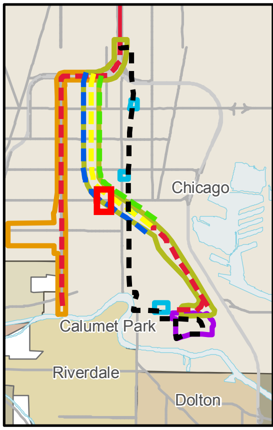
Inset


Chicago
Calumet Park
Riverdale
Dolton

Legend

◎ Proposed Rail Station

● Proposed BRT Stop

▬ Existing Rail Alignment / Station

- - - Proposed BRT Route

- - - Halsted Alternative

- - - Union Pacific (UPRR); East, West & right of Way Optsions

☐ CHRS Orange Property

☐ NRHP Eligible District

☐ 106 APE for UPRR Alternative

☐ 106 APE for BRT Alternative

☐ 106 APE for Halsted Alternative

■ NRHP Eligible Building

■ Other Properties Surveyed

■ Building Footprint

Scale

1:3,000

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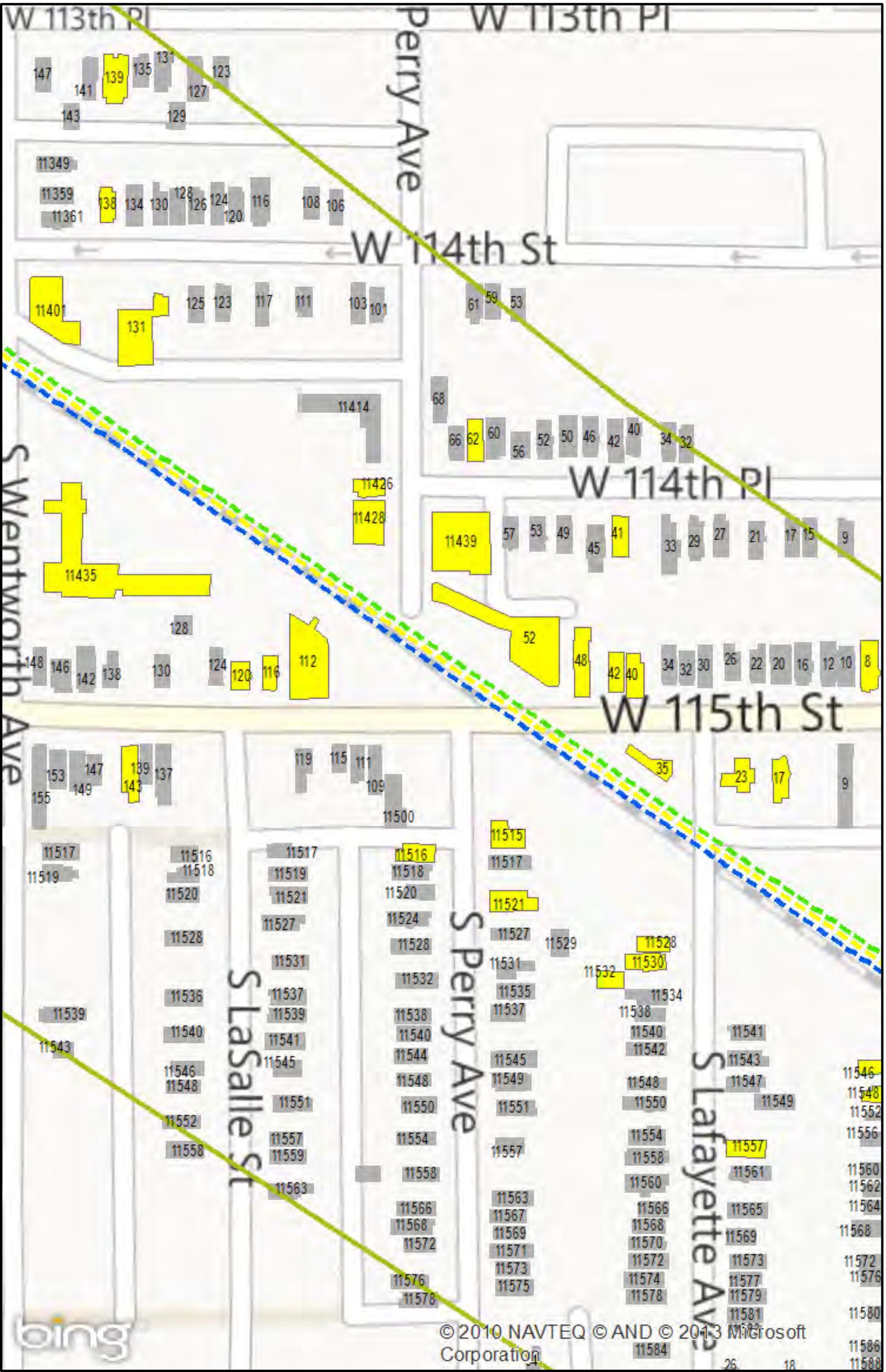
Feet

NRHPeligible.mxd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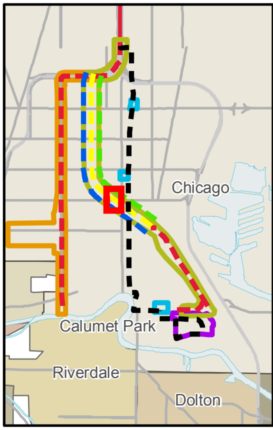
Chicago
Calumet Park
Riverdale
Dolton

Legend

◎ Proposed Rail Station

● Proposed BRT Stop

▬ Existing Rail Alignment / Station

▪▪▪ Proposed BRT Route

▪▪▪ Halsted Alternative

▪▪▪ Union Pacific (UPRR); East, West & right of Way Optsions

☐ CHRS Orange Property

☐ NRHP Eligible District

☐ 106 APE for UPRR Alternative

☐ 106 APE for BRT Alternative

☐ 106 APE for Halsted Alternative

■ NRHP Eligible Building

■ Other Properties Surveyed

■ Building Footprint

Scale

1:3,000

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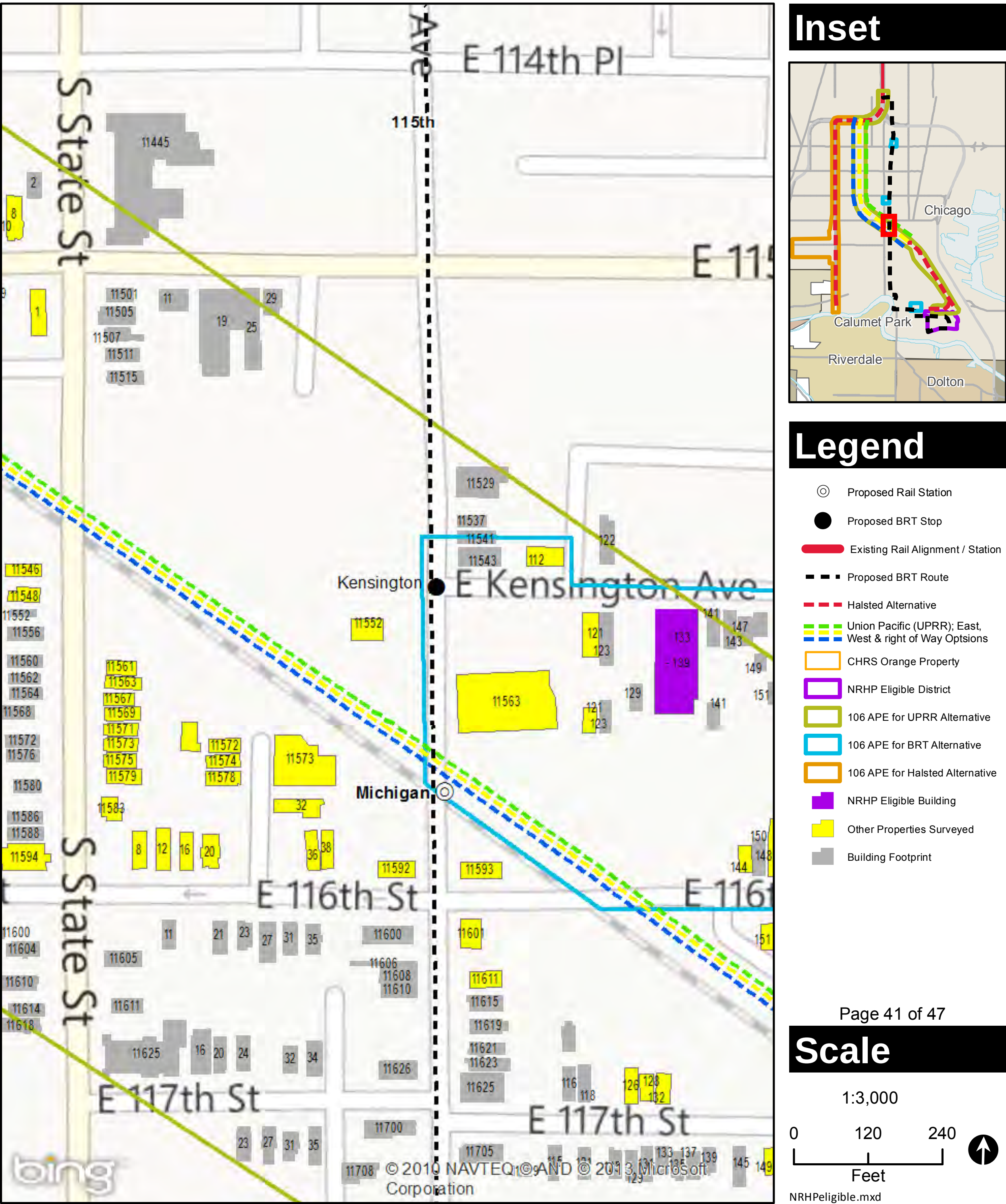
Feet

NRHPeligible.mxd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Chicago
Calumet Park
Riverdale
Dolton
Legend
Proposed Rail Station
Proposed BRT Stop
Existing Rail Alignment / Station
Proposed BRT Route
Halsted Alternative
Union Pacific (UPRR); East, West & right of Way Opstions
CHRS Orange Property
NRHP Eligible District
106 APE for UPRR Alternative
106 APE for BRT Alternative
106 APE for Halsted Alternative
NRHP Eligible Building
Other Properties Surveyed
Building Footprint
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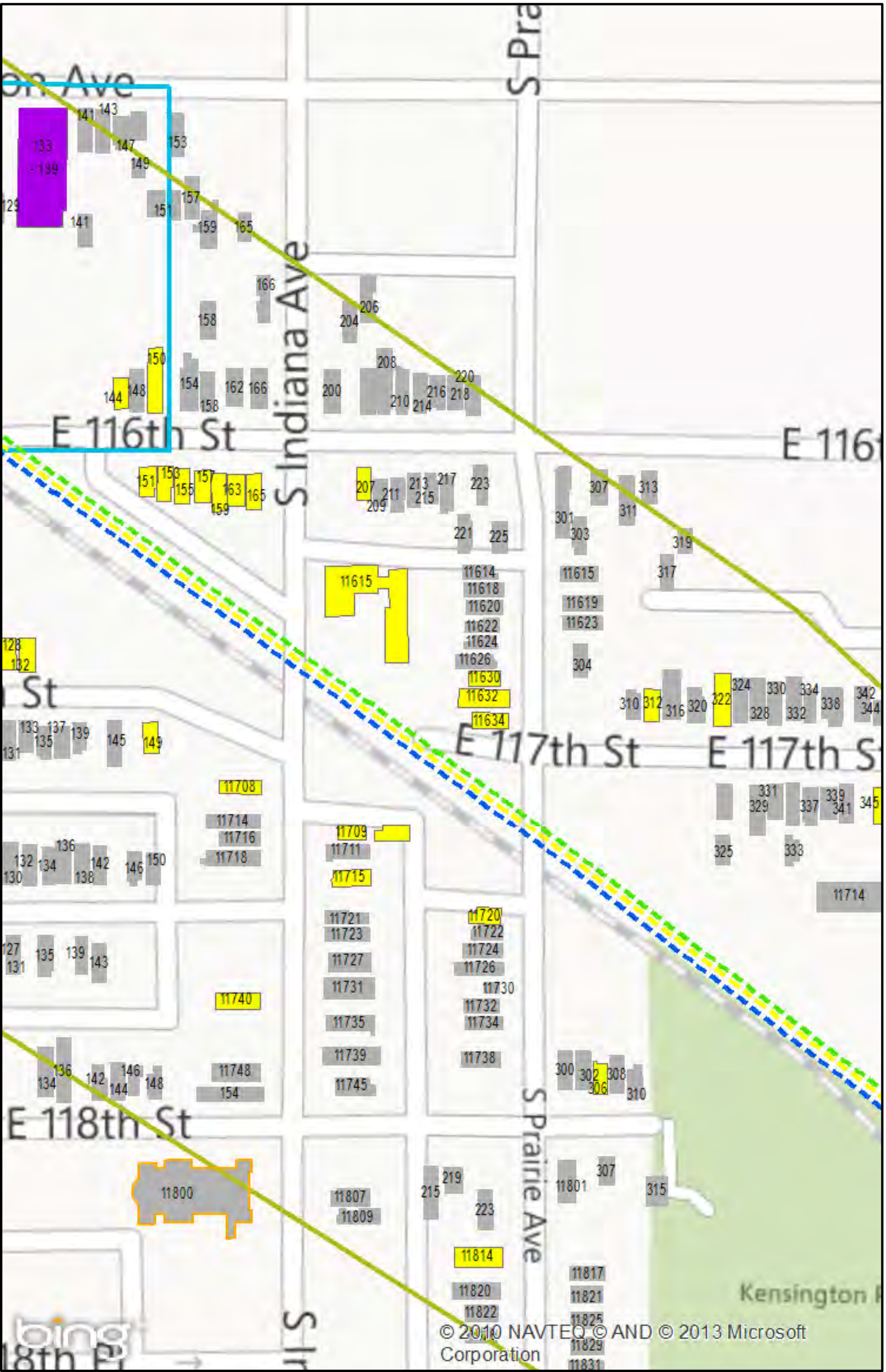
NRHPeligible.mxd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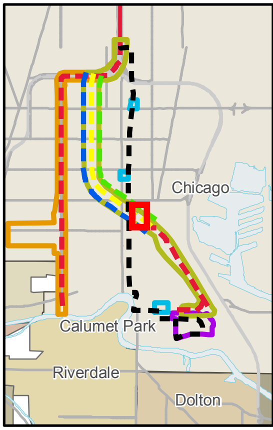
Inset


Chicago
Calumet Park
Riverdale
Dolton

Legend

◎	Proposed Rail Station
●	Proposed BRT Stop
▬	Existing Rail Alignment / Station
- - -	Proposed BRT Route
- - -	Halsted Alternative
- - -	Union Pacific (UPRR); East, West & right of Way Opsions
☐	CHRS Orange Property
☐	NRHP Eligible District
☐	106 APE for UPRR Alternative
☐	106 APE for BRT Alternative
☐	106 APE for Halsted Alternative
■	NRHP Eligible Building
■	Other Properties Surveyed
■	Building Footprint

Page 42 of 47

Scale

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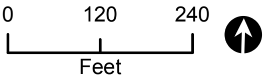
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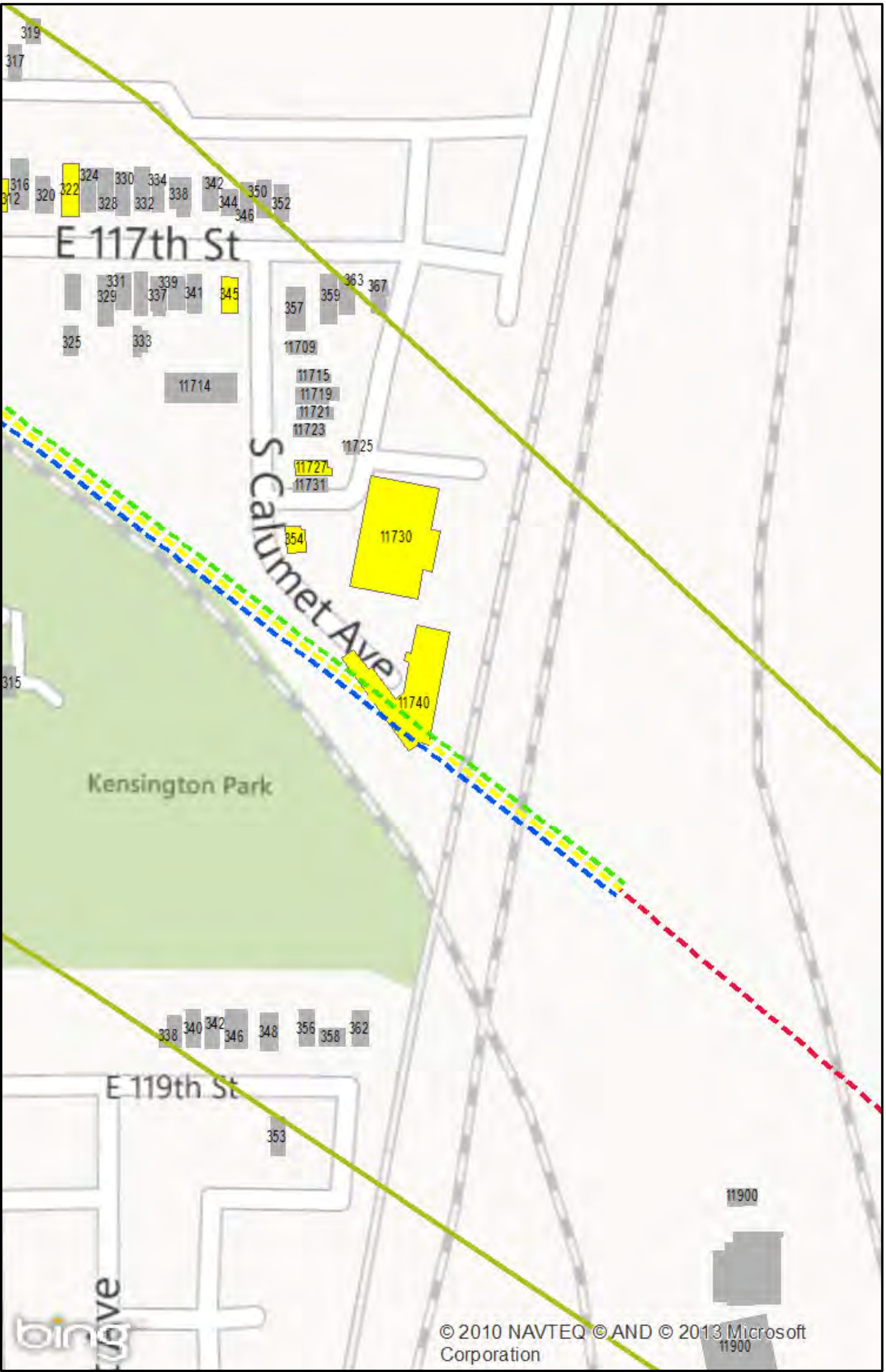
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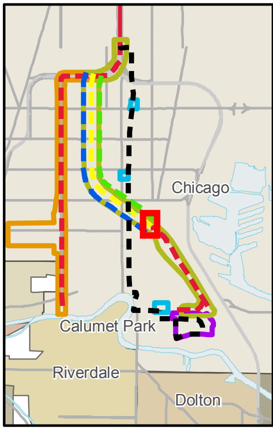
Chicago
Calumet Park
Riverdale
Dolton

Legend

- ◎ Proposed Rail Station
- ● Proposed BRT Stop
- ▬ Existing Rail Alignment / Station
- - - - Proposed BRT Route
- - - - Halsted Alternative
- - - - Union Pacific (UPRR); East, West & right of Way Optsions
- ☐ CHRS Orange Property
- ☐ NRHP Eligible District
- ☐ 106 APE for UPRR Alternative
- ☐ 106 APE for BRT Alternative
- ☐ 106 APE for Halsted Alternative
- ■ NRHP Eligible Building
- ■ Other Properties Surveyed
- ■ Building Footprint

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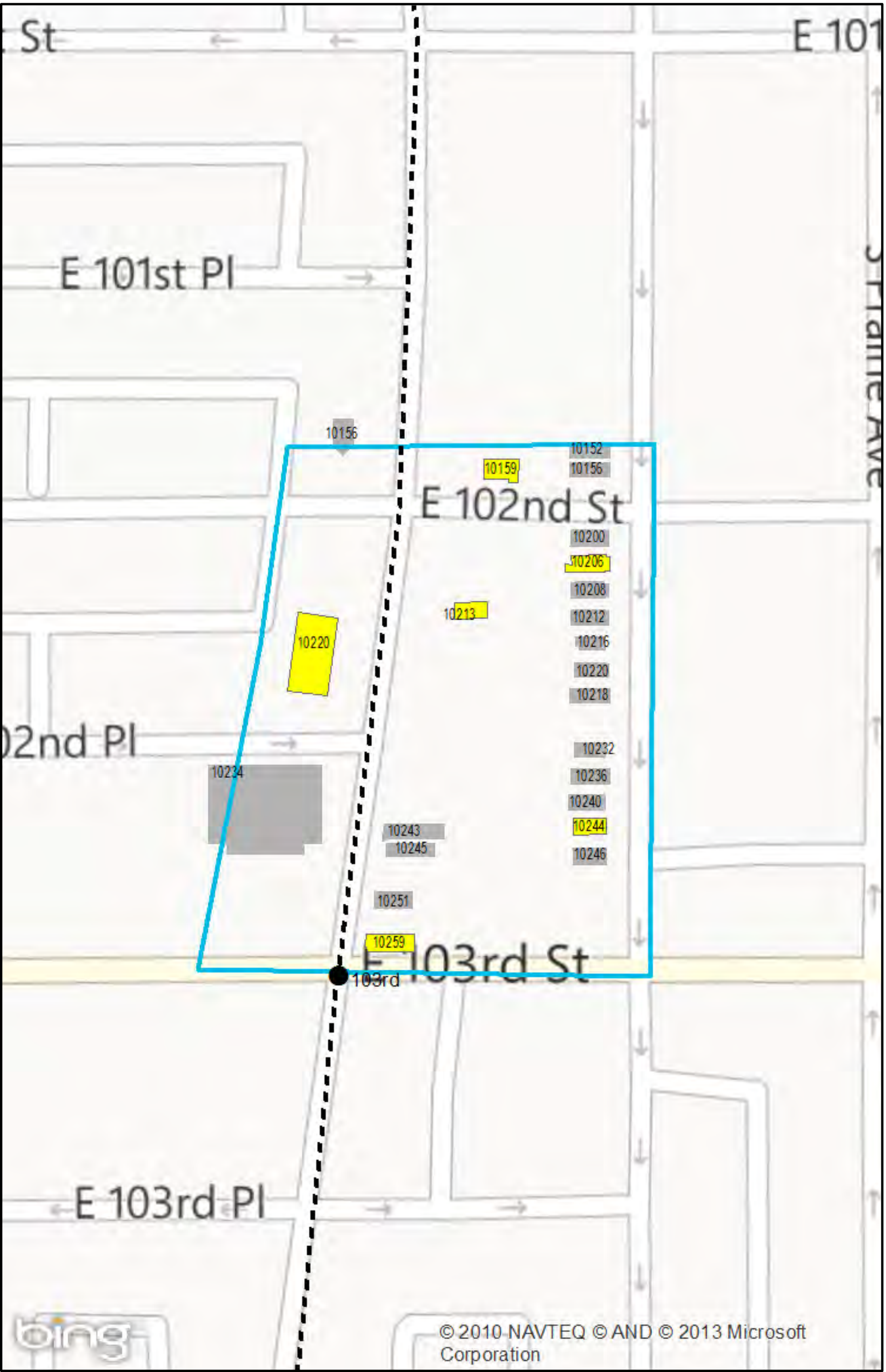
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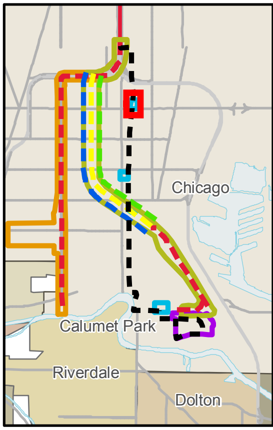
Chicago
Calumet Park
Riverdale
Dolton

Legend

- ◎ Proposed Rail Station
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- ■ NRHP Eligible Building
- ■ Other Properties Surveyed
- ■ Building Footprint

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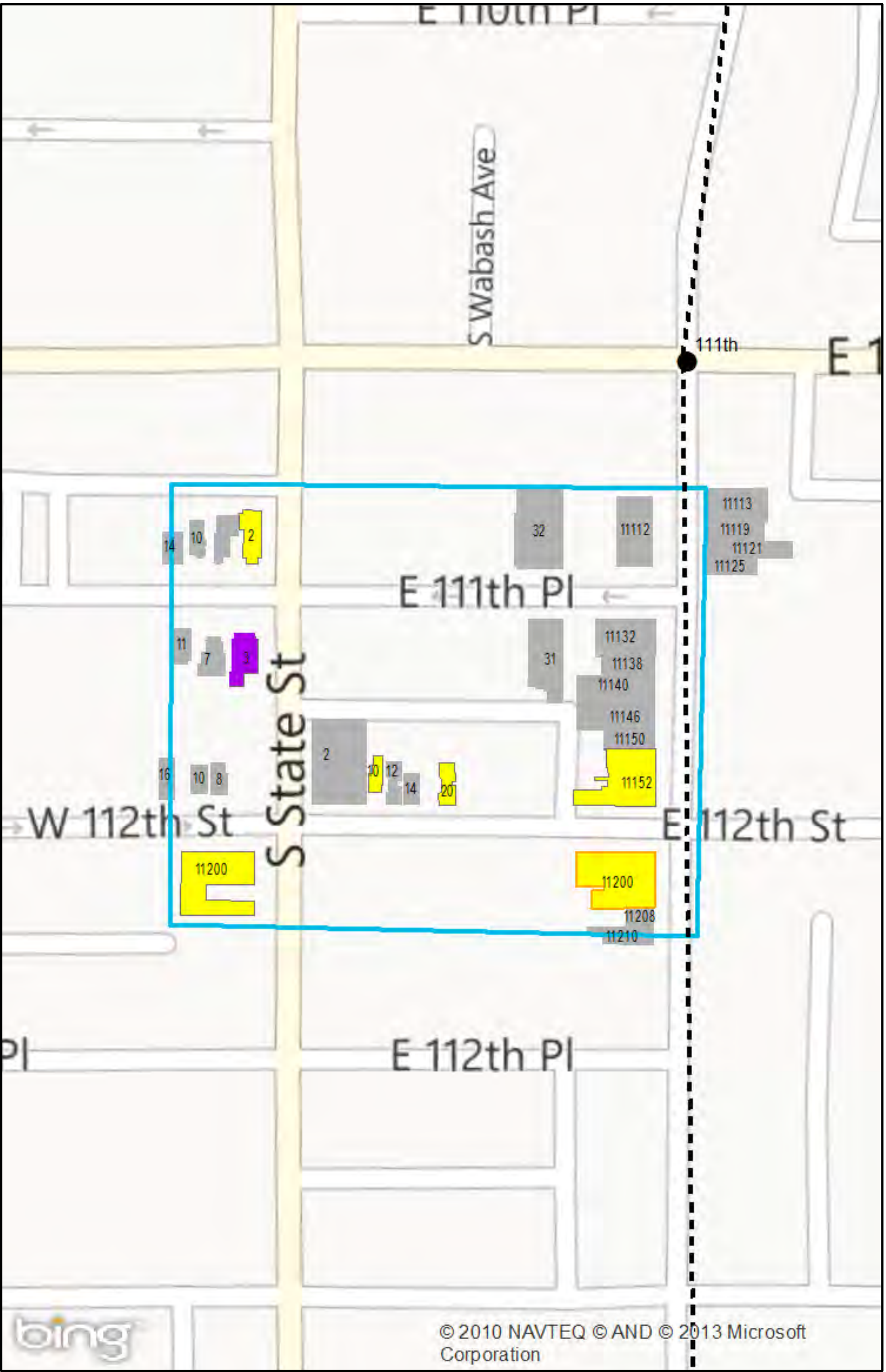
NRHPeligible.mxd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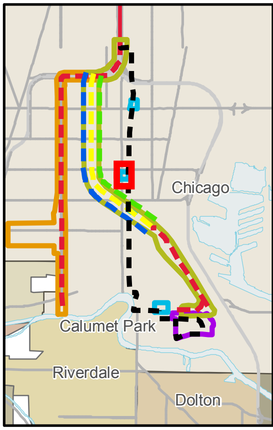
Chicago
Calumet Park
Riverdale
Dolton

Legend

- ◎ Proposed Rail Station
- ● Proposed BRT Stop
- ▬ Existing Rail Alignment / Station
- ▪ ▪ ▪ Proposed BRT Route
- ▪ ▪ ▪ Halsted Alternative
- ▪ ▪ ▪ Union Pacific (UPRR); East, West & right of Way Optsions
- ☐ CHRS Orange Property
- ☐ NRHP Eligible District
- ☐ 106 APE for UPRR Alternative
- ☐ 106 APE for BRT Alternative
- ☐ 106 APE for Halsted Alternative
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- ■ Other Properties Surveyed
- ■ Building Footprint

Scale

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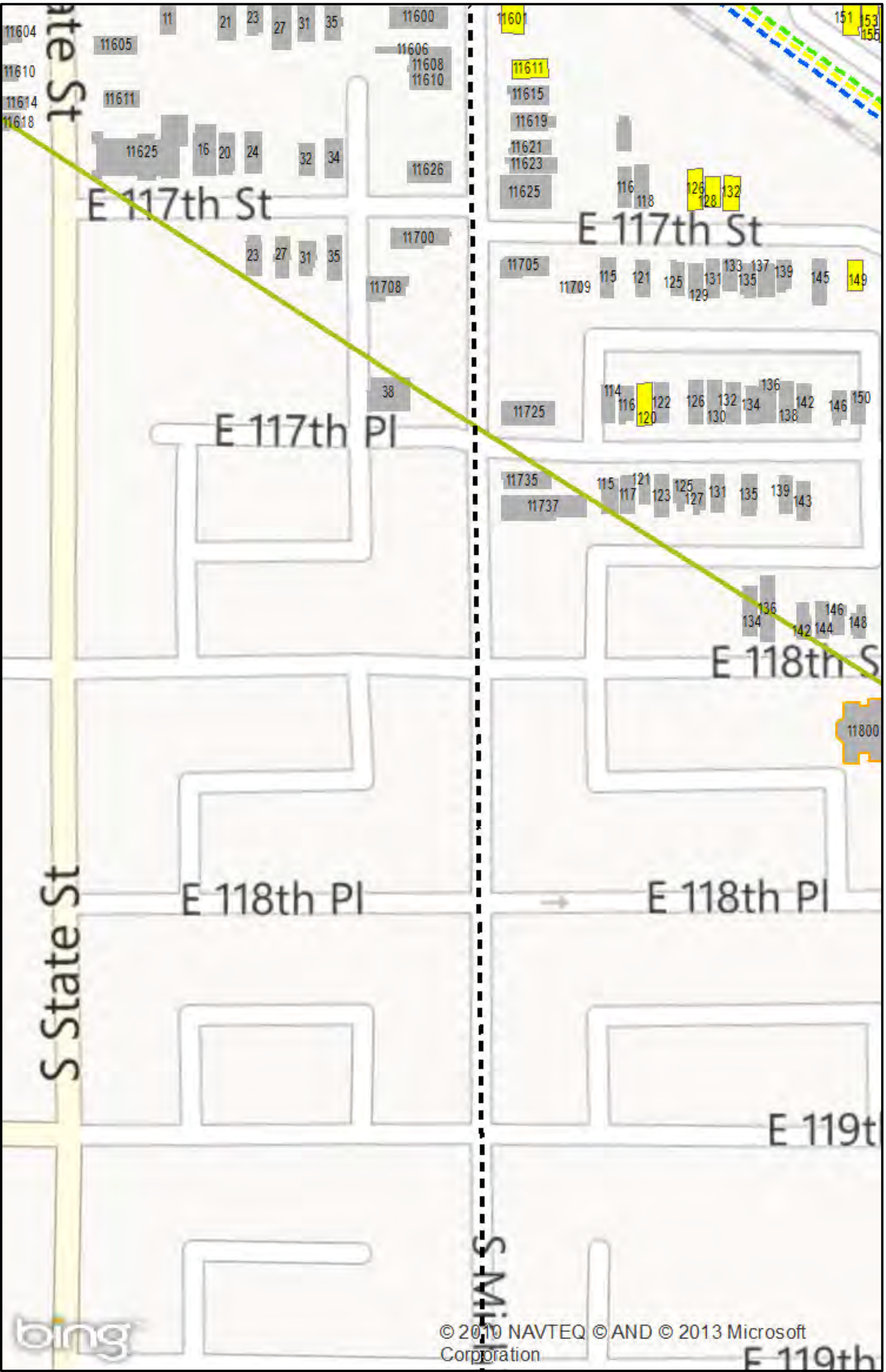
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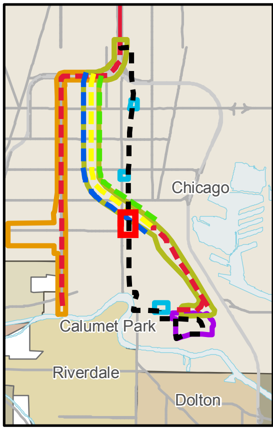
Chicago
Calumet Park
Riverdale
Dolton

Legend

◎ Proposed Rail Station

● Proposed BRT Stop

▬ Existing Rail Alignment / Station

- - - Proposed BRT Route

- - - Halsted Alternative

- - - Union Pacific (UPRR); East, West & right of Way Optsions

☐ CHRS Orange Property

☐ NRHP Eligible District

☐ 106 APE for UPRR Alternative

☐ 106 APE for BRT Alternative

☐ 106 APE for Halsted Alternative

■ NRHP Eligible Building

■ Other Properties Surveyed

■ Building Footprint

Scale

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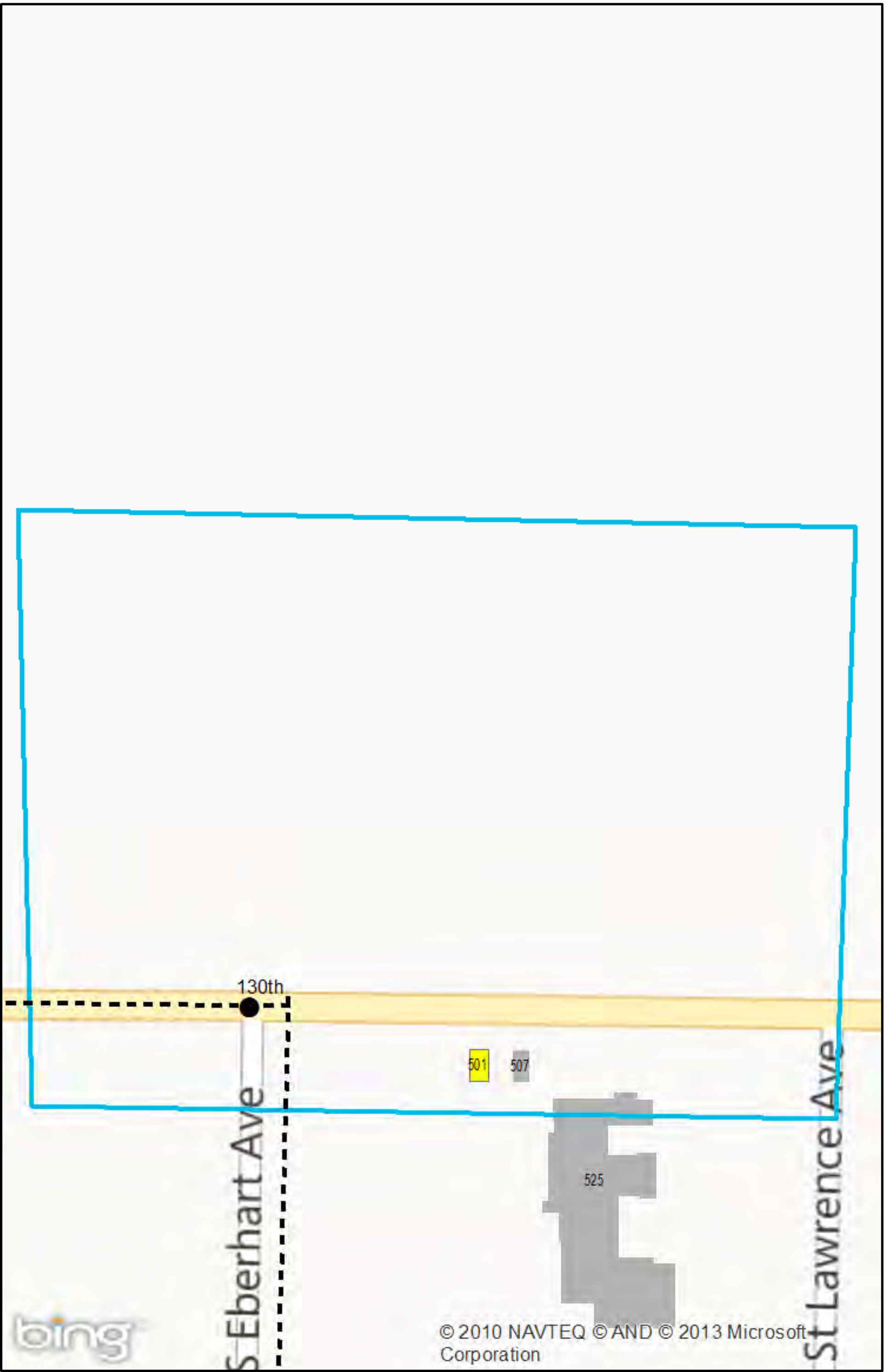

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© 2010 NAVTEQ © AND © 2013 Microsoft Corporation

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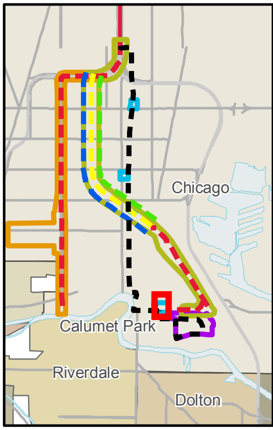

Chicago
Calumet Park
Riverdale
Dolton

Legend

◎ Proposed Rail Station
● Proposed BRT Stop
▬ Existing Rail Alignment / Station
- - - Proposed BRT Route
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☐ 106 APE for UPRR Alternative
☐ 106 APE for BRT Alternative
☐ 106 APE for Halsted Alternative
■ NRHP Eligible Building
■ Other Properties Surveyed
■ Building Footprint

Scale

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Appendix B
Inventory Sheets for Properties Surveyed

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

418 W. 98th Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1931

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

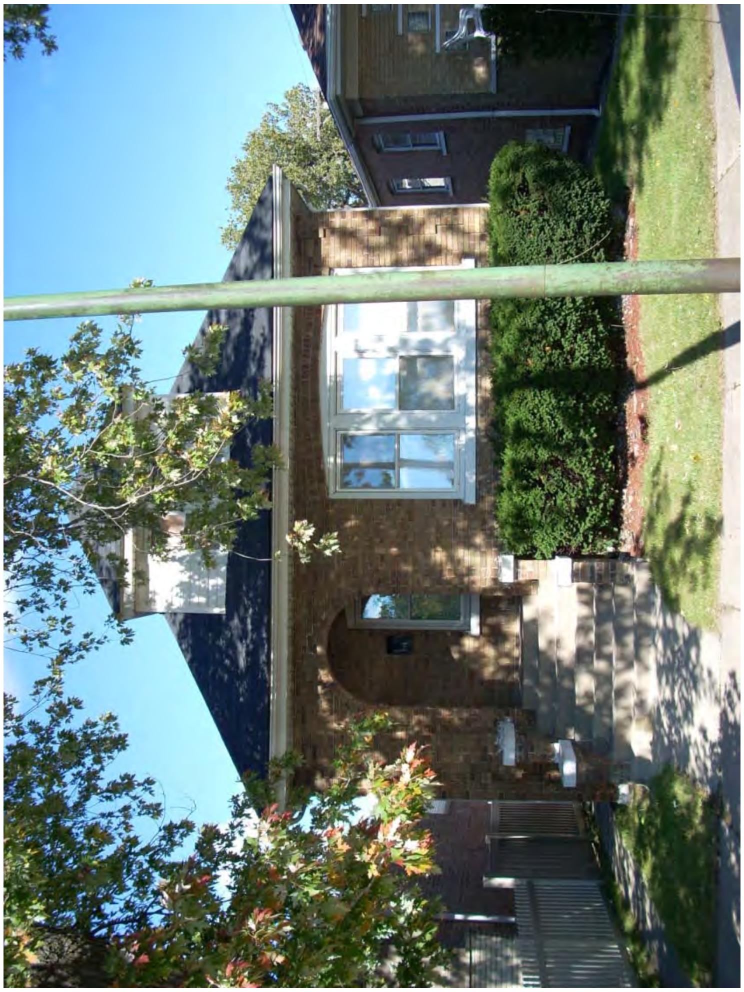
Chicago Style Bungalow

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 31 October 2012

Photos with Captions:
South façade of a one-story, single family, brick residence.



Property Description: **Stories:** 1

This one-story brick bungalow in the Washington Heights community is clad with tan face brick on its front elevation, common brick on its side elevations, and synthetic siding on its rear elevation. It has a steeply pitched hip roof covered with asphalt shingles and synthetic-clad, hip roof dormers with paired one-over-one windows on both the front and rear elevations. The front elevation has a recessed corner porch with round-arch opening, low brick sidewalls, and concrete steps. The residence also includes a door tucked into the side of the living room bay and four one-over-one windows, three of which are grouped together under a segmental arch. All windows are modern replacements with aluminum sashes. This house lacks distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement cladding and windows
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick (main), Synthetic siding (rear)	
Roof Material Asphalt shingle	**Roof Features** Dormers	**Roof Type** Hip	
Ornamental Architectural Details Segmental arch, round arch porch opening			**Windows** Double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

221 W. 98th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1964

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

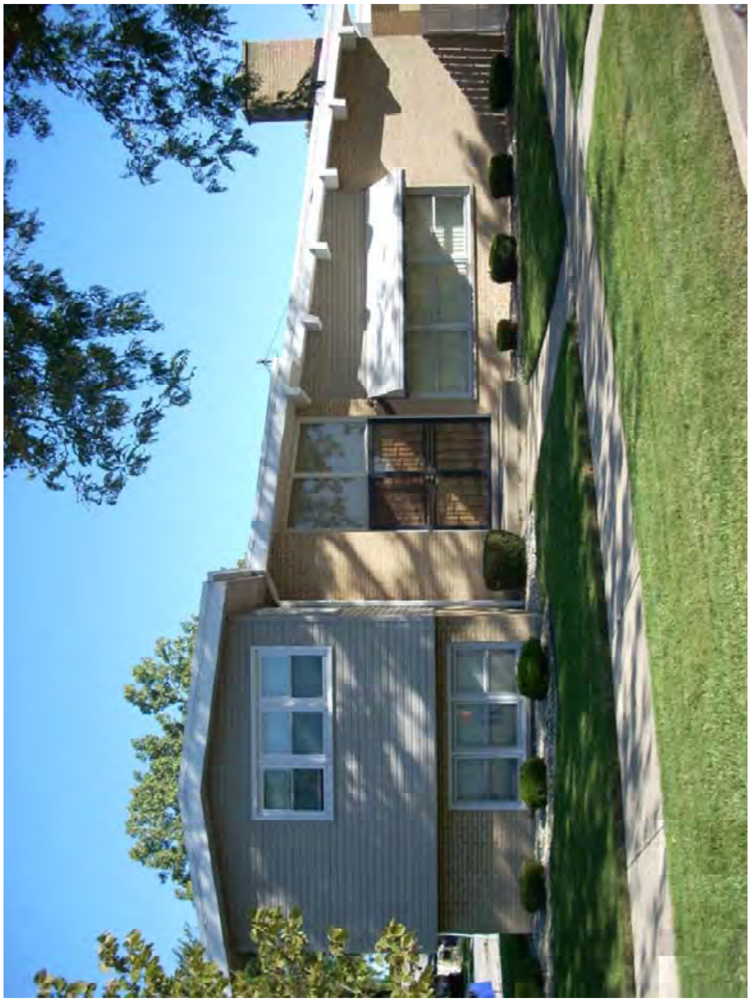
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 9 October 2012

Photos with Captions:
West façade of a brick, split-level, single family residence.



Property Description: **Stories:** Spilt-level

This split-level home in the Roseland community is clad with buff brick and synthetic siding, has a shed roof with exposed rafters above its one-story section and a gable roof above its two-story section. It has centrally located wood double-doors topped by two large fixed-pane windows; other windows are arranged in groups of three along its front elevation. Windows are one-over-one aluminum-sash. This split-level home does not have distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity:

[✓ Unaltered] Slight Modification Major Alteration

Additional Notes/Descriptions

Condition:

[✓ Excellent] Good Poor

Additional Alterations

Structure Usage Current: NA Historic: NA	**Exterior Wall Surface** Brick, synthetic siding

Roof Material Asphalt	**Roof Features** None	**Roof Type** Gable, shed

Ornamental Architectural Details

Exposed rafters

Windows

Double-hung, fixed-pane

Outbuildings (*Number and Description*)

None

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

124 W. 99th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1965

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

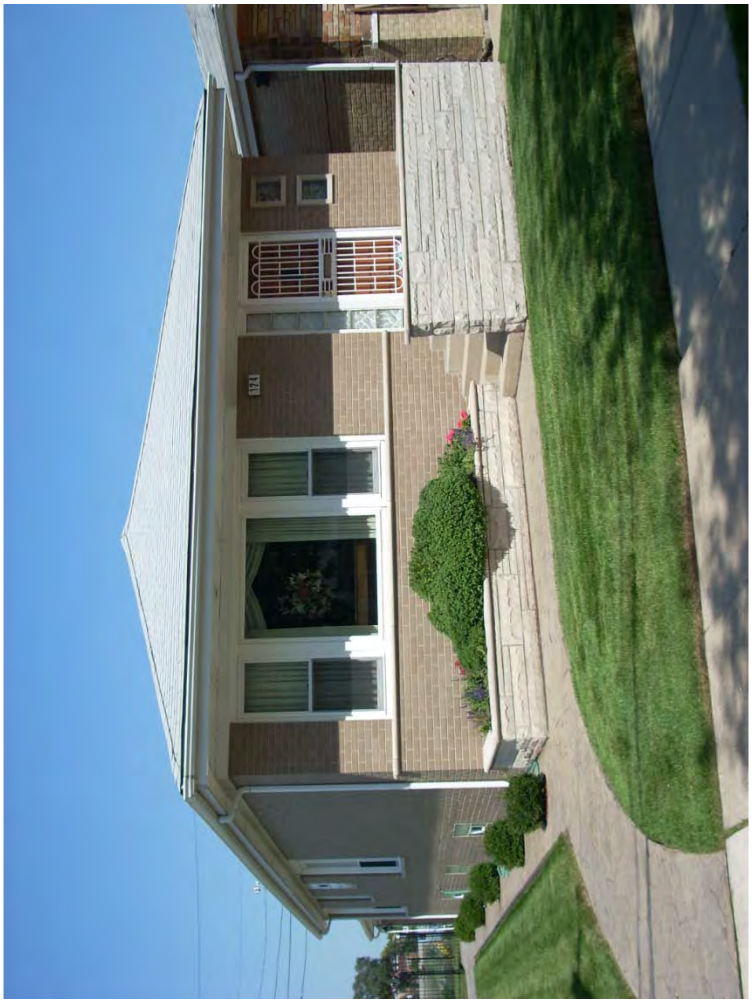
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 8 October 2012

Photos with Captions:
South façade of a brick, one-story, single family residence.



Property Description: **Stories:** 1

This one-story home in the Roseland community is situated on a raised brick basement with glass block windows, is clad with buff brick, and has a hip roof covered with asphalt shingles and overhanging eaves. Its front elevation is fronted by a faux stone planter. It has an off-center door and sidelight comprised of glass blocks, two decorative glass block inserts, a picture window flanked by one-over-one aluminum-sash windows, and concrete steps behind a low faux stone wall. An attached two-car hip roof garage clad in the same buff brick is situated along the home's rear elevation. It does not display distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: [✓ Unaltered] Slight Modification Major Alteration			**Additional Notes/Descriptions**
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt	**Roof Features** None	**Roof Type** Hip	
Ornamental Architectural Details Planter, glass block inserts, faux stone wall at entry			**Windows** Double-hung, fixed-pane, glass block
Outbuildings (*Number and Description*) Attached two-car garage.			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

401 W. 99th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1942

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

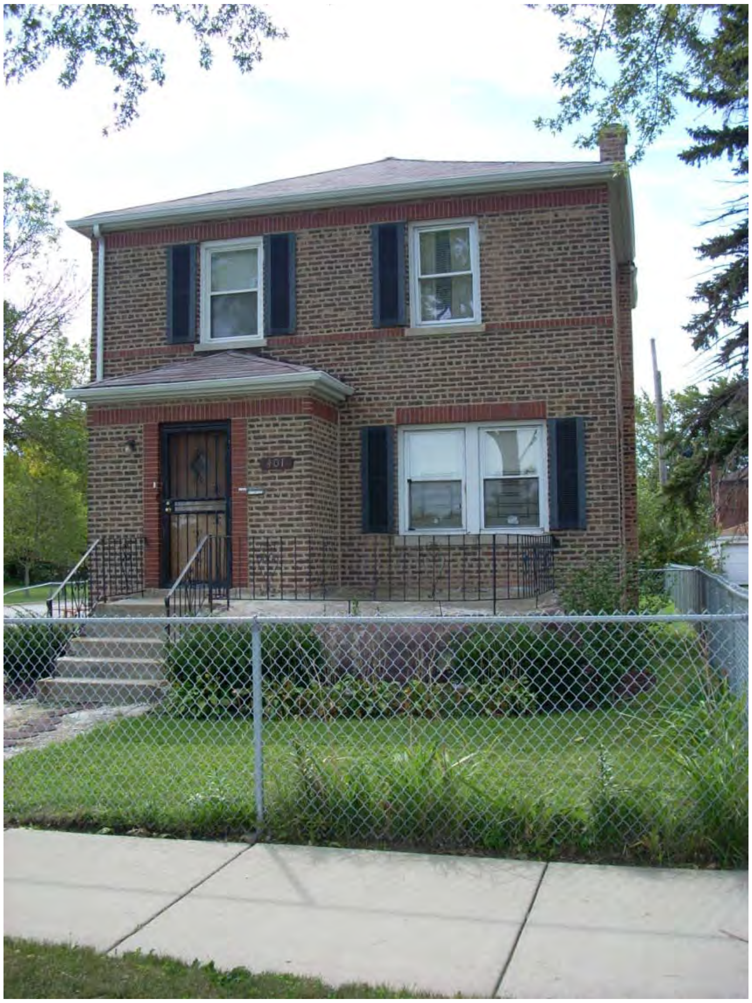
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 10 October 2012

Photos with Captions:
North façade of a brick, two-story, single family residence



Property Description: **Stories:** 2

This two-story, brick clad house in the Washington Heights community is situated on a raised brick basement with glass block windows. The house has a hip roof covered with asphalt shingles. Its front elevation has a partial-width, hip roof, brick clad, enclosed porch with a metal storm door. It has concrete steps, metal railings, a pair of windows on the first floor and two single windows on the second floor. Windows throughout the house are non-original one-over-one aluminum-sash. Detailing includes concrete sills and orange brick banding that contrasts with the brown face brick cladding. It does not feature distinguishing architectural elements and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity:

Unaltered [✓ Slight Modification] Major Alteration

Additional Notes/Descriptions

Replacement windows

Condition:

[✓ Excellent] Good Poor

Additional Alterations

Structure Usage	**Exterior Wall Surface**
Current: NA Historic: NA	Brick

Roof Material	**Roof Features**	**Roof Type**
Asphalt shingle	None	Hip

Ornamental Architectural Details

Brick banding, concrete sills

Windows

Double-hung, glass block

Outbuildings (*Number and Description*)

None

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

314 W. 100th Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1965

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

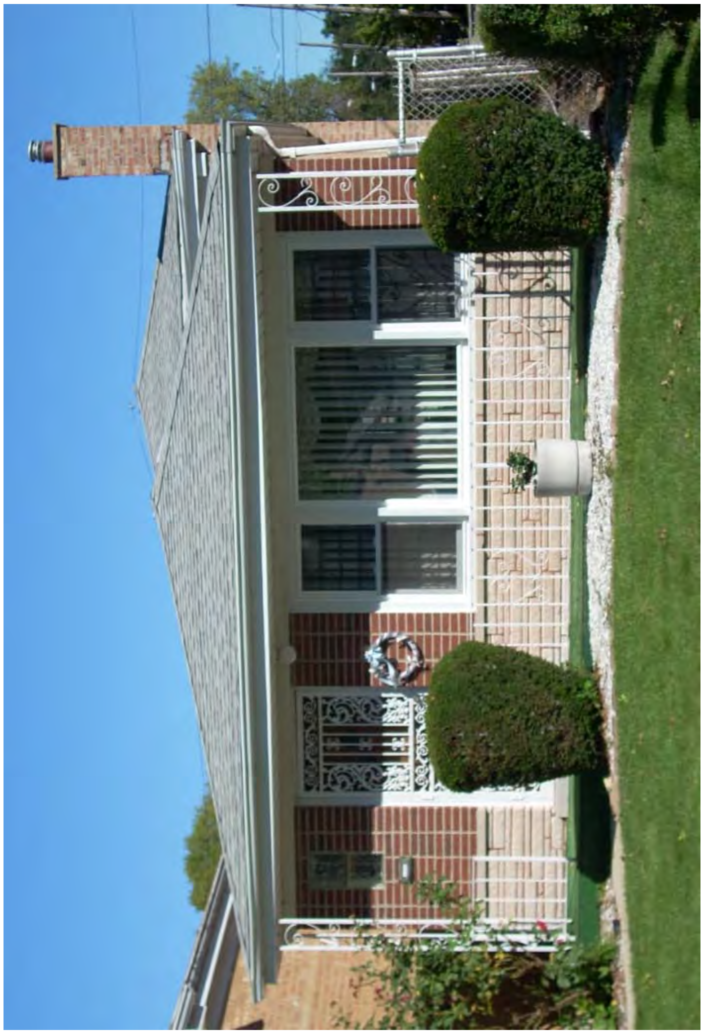
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 16 September 2012

Photos with Captions:
South façade of split-level, single-family residence.



Property Description:

Stories: Split-level

This back-split home in the Roseland community has a hip roof on both levels covered with asphalt shingles. The front elevation is clad with faux stone below the concrete sill line and brown brick above. This elevation has an off-center hollow core metal door, a picture window flanked by one-over-one aluminum-sash windows, and two decorative glass block inserts. It does not feature distinguishing architectural elements and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: [✓ Unaltered] Slight Modification Major Alteration			**Additional Notes/Descriptions**
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick (main), Faux stone (lower façade)	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Hip	
Ornamental Architectural Details Glass block inserts			**Windows** Double-hung, fixed-pane
Outbuildings (*Number and Description*) Garage			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

319 W. 100th Place

Alternate: 321 W. 100th Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1949

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

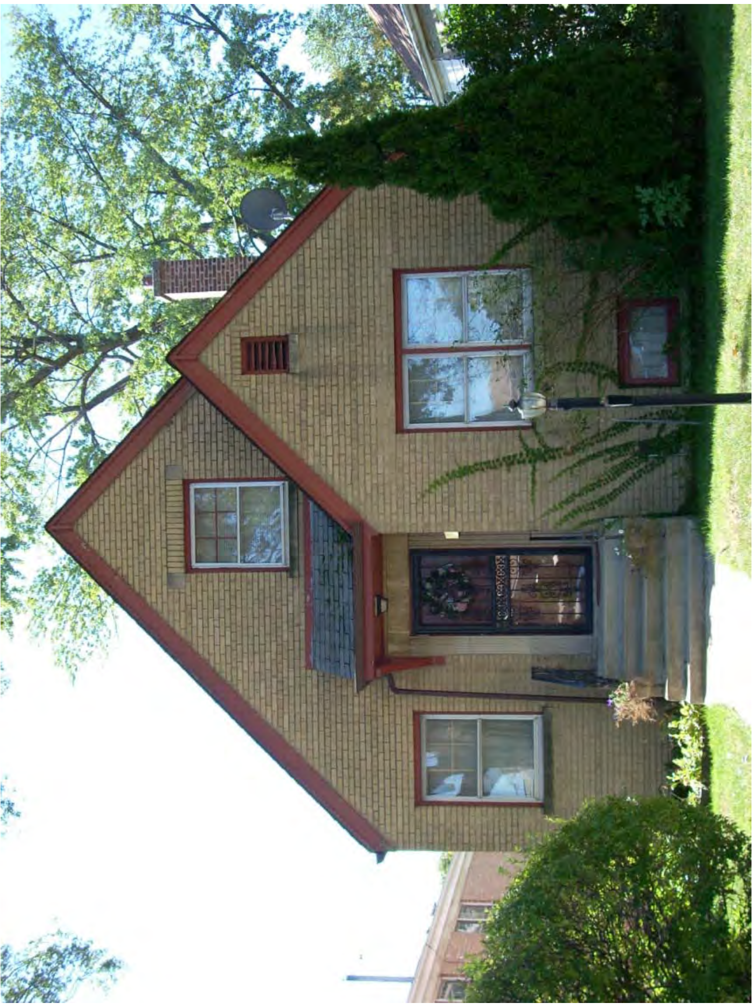
Vernacular

Prepared By: C. Tolmie, M. C. Bird

Photo By: S. Katz

Date: 16 September 2012

Photos with Captions:
North façade of one-story, single-family residence.



Property Description: **Stories:** 1

This one-story house in the Roseland community is situated on a raised brick basement and has a front gable roof covered with asphalt shingles. Its front elevation is clad with buff brick and has a projecting gabled living room bay. This elevation also has a centrally located entrance with a metal storm door, concrete steps, metal railings, a bracketed shed-roofed door hood, and four six-over-one windows: three on the first floor and one in the gable. This house lacks distinctive architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

<table>
<tr><td colspan="3">Integrity:
[✓ Unaltered] Slight Modification Major Alteration</td><td>Additional Notes/Descriptions</td></tr>
<tr><td colspan="3">Condition:
[✓ Excellent] Good Poor</td><td></td></tr>
<tr><td colspan="3">Additional Alterations</td><td></td></tr>
<tr><td colspan="2">Structure Usage
Current: NA
Historic: NA</td><td>Exterior Wall Surface
Brick</td><td></td></tr>
<tr><td>Roof Material
Asphalt shingle</td><td>Roof Features
None</td><td>Roof Type
Gable</td><td></td></tr>
<tr><td colspan="3">Ornamental Architectural Details
Concrete sills</td><td>Windows
Double-hung</td></tr>
<tr><td colspan="4">Outbuildings (<i>Number and Description</i>)
Garage</td></tr>
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Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

435 W. 100th Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1942

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

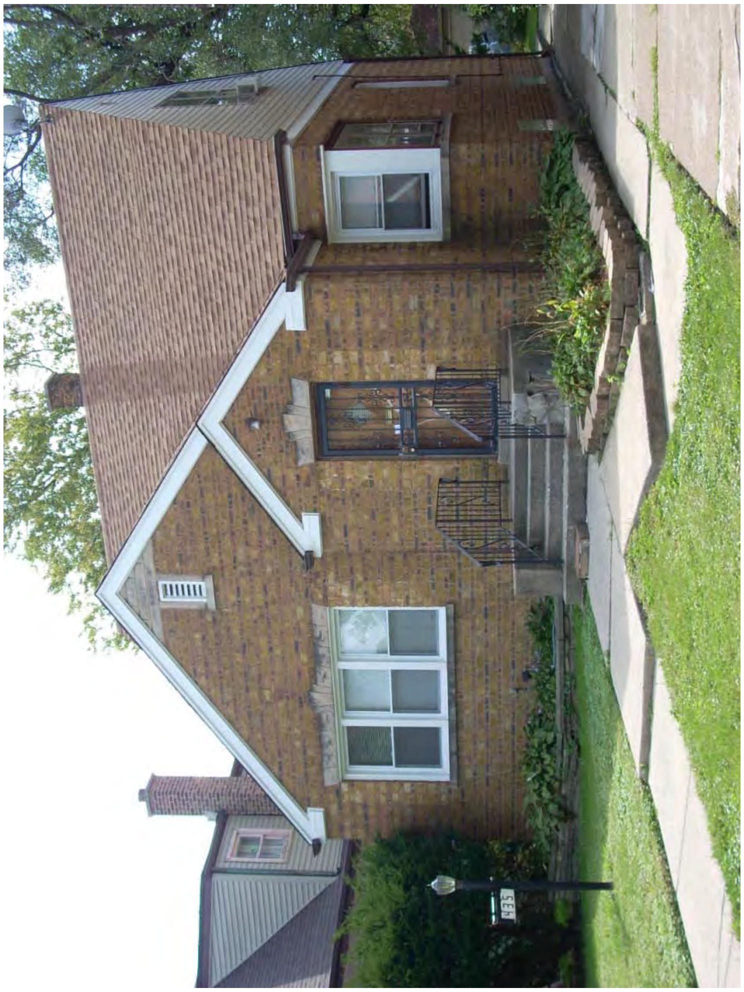
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 10 October 2012

Photos with Captions:
North façade of a brick, one-story, single family residence.



Property Description: **Stories:** 1

This one-story house in the Washington Heights community is clad with polychromatic brick and has a side-gabled roof covered with asphalt shingles. End gable walls are clad in aluminum siding. Its front elevation features a gabled pavilion with a strip of three non-original one-over-one aluminum-sash windows and a gabled entrance vestibule featuring a wood door with diamond pane window, concrete steps, and metal railings. A single non-original one-over-one aluminum-sash window is located in the corner of the front elevation. A small ventilating louver is situated in the gable. Detailing includes concrete sills and lintels with keystones. This house does not display distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered	[✓ Slight Modification]	Major Alteration	**Additional Notes/Descriptions** Replacement windows and siding in gable ends
Condition: [✓ Excellent]	Good	Poor	
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick (main), Synthetic siding (gable ends)	
Roof Material Asphalt shingles	**Roof Features** None	**Roof Type** Side gable	
Ornamental Architectural Details Concrete sills and lintels with keystones			**Windows** Double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y [✓ N]**	
National Register Historic Places	**Y [✓ N]**	
National Register Historic District	**Y [✓ N]**	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

444 W. 100th Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1930

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

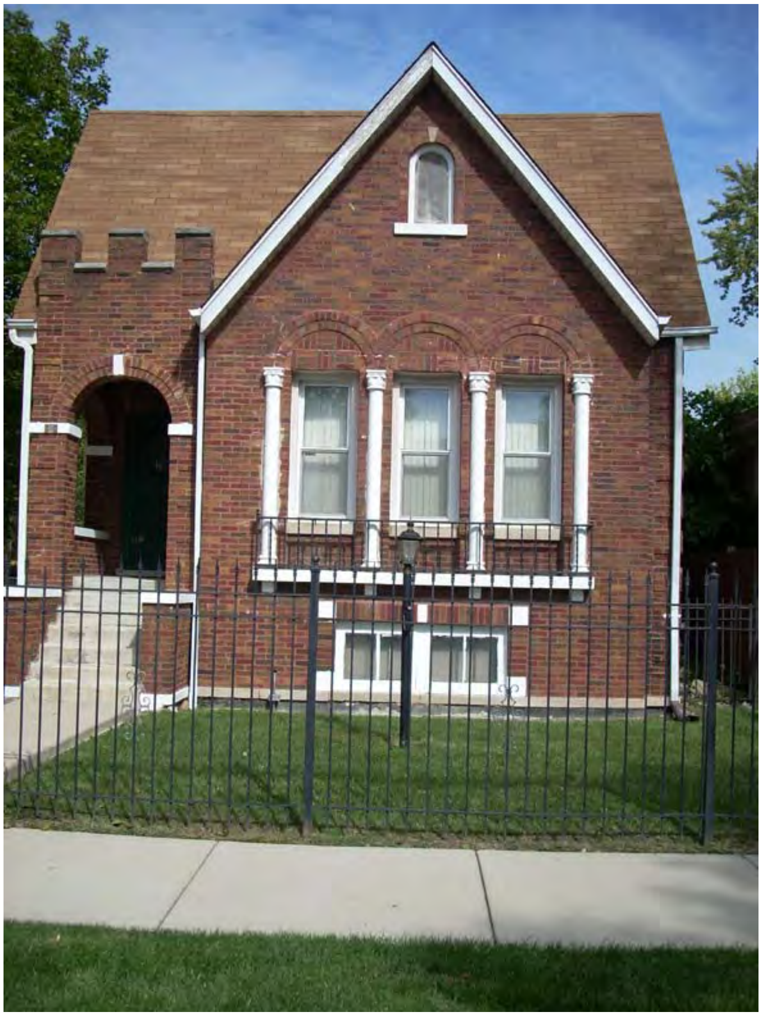
Eclectic Neo-Traditional

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 10 October 2012

Photos with Captions:
South façade of a brick one-story, brick, single family residence.



Property Description: **Stories:** 1

This one-story house in the Washington Heights community sits on a raised basement. It is clad with polychromatic brick and has a side gabled roof covered with asphalt shingles. Its front elevation has a gabled living room bay pavilion with paired basement windows that appear to be casements. There is a group of three non-original one-over-one windows with concrete sills and brick arch lintels that are separated by colonettes with acanthus leaf capitals. A small round-arched window is located in the gable. The house has a recessed corner porch with a metal storm door, round-arch openings, a Neo-Gothic castellated top, concrete steps, and brick sidewalls. This house has very good integrity in terms of its materials and detailing, and its Eclectic Neo-Traditional ornamentation makes it stand out among the vernacular, stripped-down brick and frame bungalows and cottages that comprise the predominant building stock in the Washington Heights community. As a result, it is recommended as individually eligible for National Register listing under Criterion C for architecture.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingle	**Roof Features** Castellated porch roofline	**Roof Type** Gable	
Ornamental Architectural Details Concrete sills, brick arched lintels, colonettes, arched window with keystone, stone insets, decorative brickwork, porch with castellated roofline			**Windows** Double-hung, fixed-pane, casement
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? Yes	**A B** [✓ **C**]	**Significance:** The Eclectic Neo-Traditional ornamentation stands out among the vernacular, stripped-down brick and frame residences that comprise the predominant building stock in the Washington Heights community.

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

318 W. 100th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1947

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

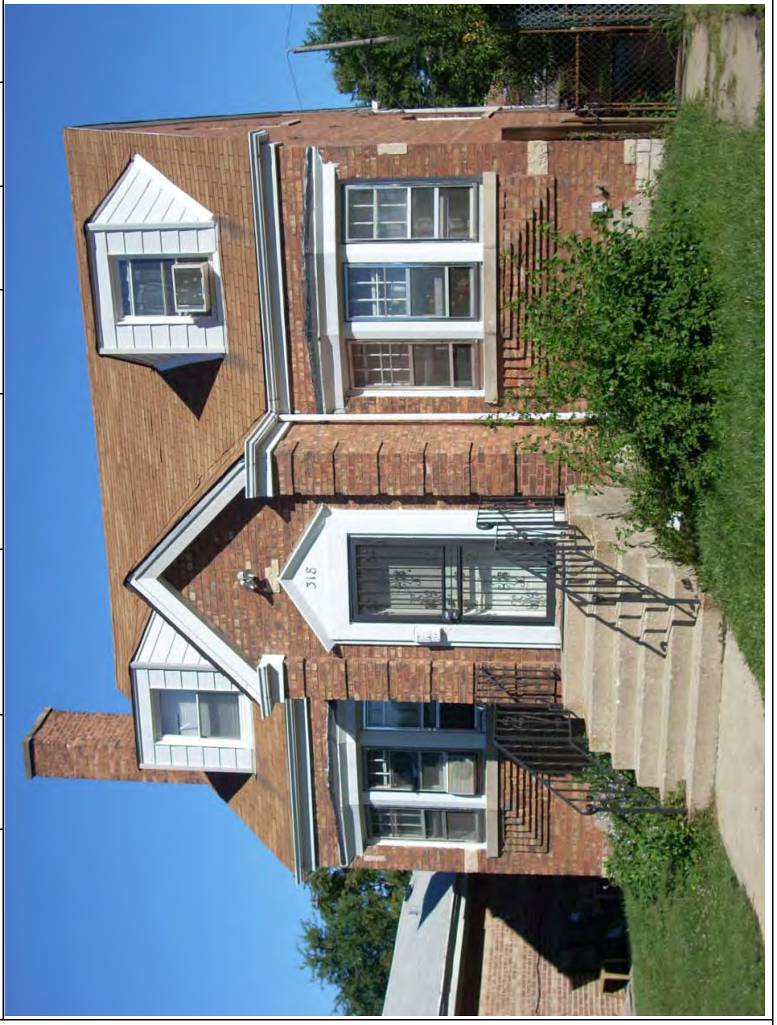
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 16 September 2012

Photos with Captions:
North façade of 1.5-story, brick, single family residence.



Property Description: **Stories:** 1.5

This one-and-a-half-story brick-clad home has a steeply pitched side gable roof covered with asphalt shingles, an exterior brick chimney, and two aluminum-clad shed dormers, each of which has a single one-over-one aluminum-sash window (non-original). Its front elevation has a centrally located gabled front vestibule with brick quoins, a door with wood surround and pediment, and concrete steps with metal railings. The entrance is flanked by three-sided window bays, which feature six-over-one windows with decorative brick corbelling beneath. It does not feature sufficient distinguishing architectural features to qualify as individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement door, dormer windows, and siding
Condition: [✓ Excellent] Good Poor			
Additional Alterations Dormers may be post-construction addition.			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingle	**Roof Features** Dormer	**Roof Type** Side gable	
Ornamental Architectural Details Brick quoins and corbelling; stone quoins and inserts			**Windows** Double-hung
Outbuildings (*Number and Description*) Garage			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

426 W. 100th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1943

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

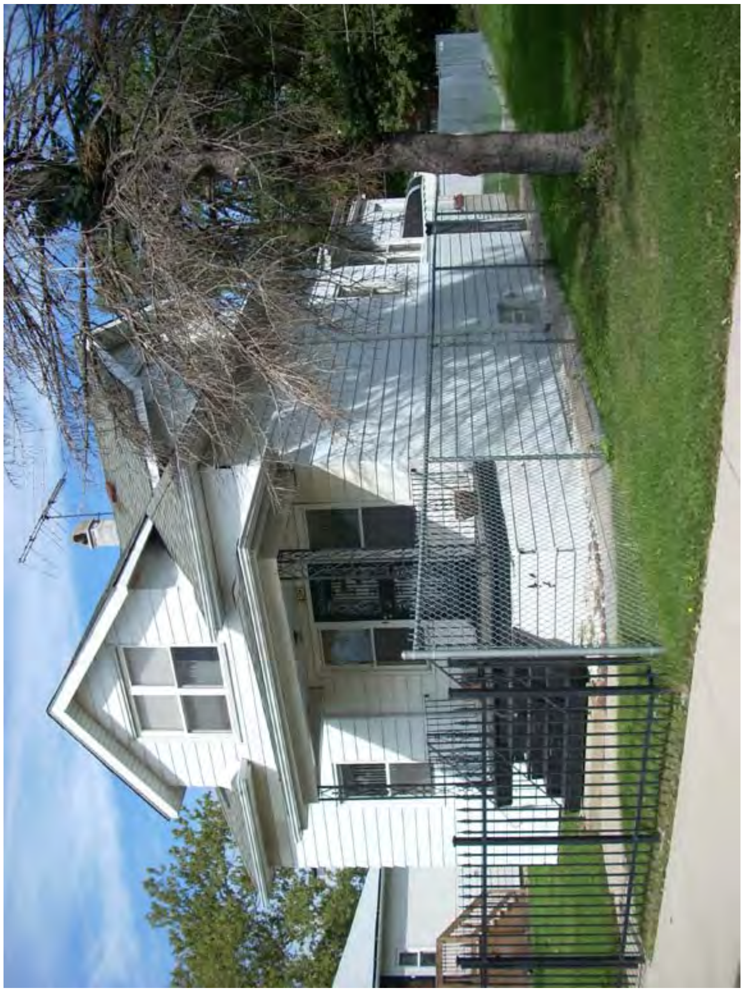
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 10 October 2012

Photos with Captions:
South and façades of a 1.5-story, single family, frame residence.



Property Description: **Stories:** 1.5

This one-and-a-half story house in the Washington Heights community is situated on a raised basement that is covered with siding and has glass block windows. The house is clad with synthetic siding and has a hip roof covered with asphalt shingles, overhanging eaves, and gable dormers on the front and side elevations. Its front elevation has an off-center hollow-core metal door and a partial-width hip-roof porch with wood steps and open metal supports. There are three windows on the first floor and two in its gabled wall dormer, all of which are non-original one-over-one aluminum-sash. This house lacks integrity, does not display distinguishing architectural features, and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
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Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement door, windows, and cladding
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** Dormers	**Roof Type** Hip	
Ornamental Architectural Details None			**Windows** Double-hung, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

430 W. 100th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1919

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

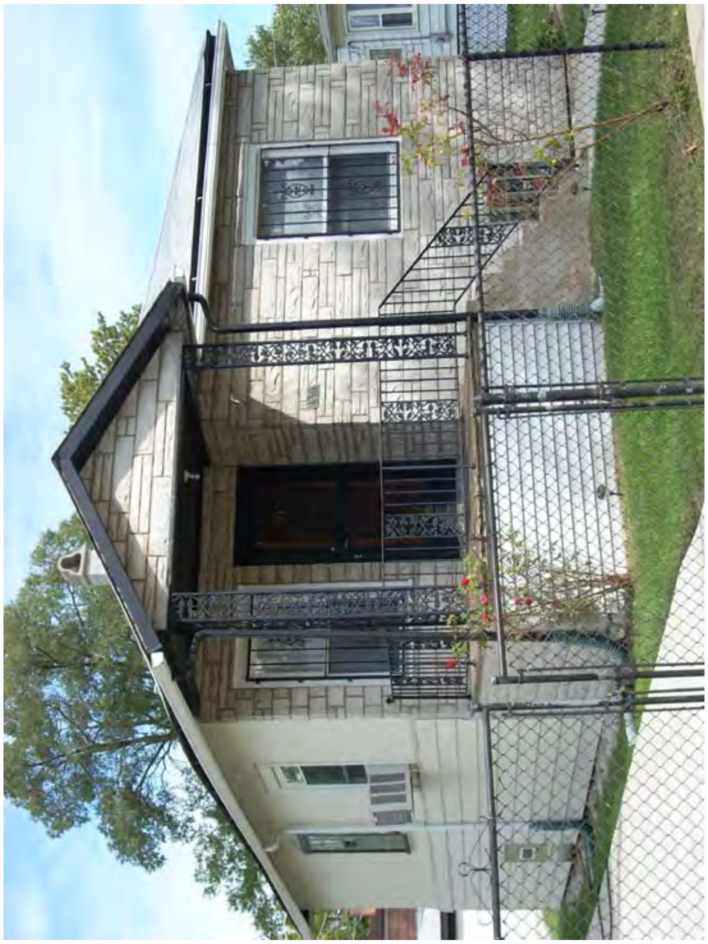
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 10 October 2012

Photos with Captions:
South and west façades of a one-story, single family residence.



Property Description: **Stories:** 1

This one-story cottage in the Washington Heights community sits on a raised basement with glass block windows. It has a hip roof covered with asphalt shingles. Its front elevation is clad with faux stone and its side and rear elevations are clad with synthetic siding and stucco. Its front elevation has a partial-width gabled porch with concrete steps and non-original open metal supports. It also has an off-center entrance with a metal storm door and two non-original one-over-one aluminum-sash windows. This house lacks integrity, does not feature distinguishing architectural elements, and is not individually eligible for listing on the National Register.

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Phone (815) 568- 0680

Structural Survey

Integrity:			**Additional Notes/Descriptions**
Unaltered	[✓ Slight Modification]	Major Alteration	Replacement windows, porch supports, and cladding
Condition:			
[✓ Excellent]	Good	Poor	
Additional Alterations			
Structure Usage		**Exterior Wall Surface**	
Current: NA Historic: NA		Synthetic siding (sides), faux stone (façade), stucco (sides)	
Roof Material	**Roof Features**	**Roof Type**	
Asphalt shingle	None	Hip	
Ornamental Architectural Details			**Windows**
None			Double-hung, glass block
Outbuildings (*Number and Description*)			
None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

334 W. 101st Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1949

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

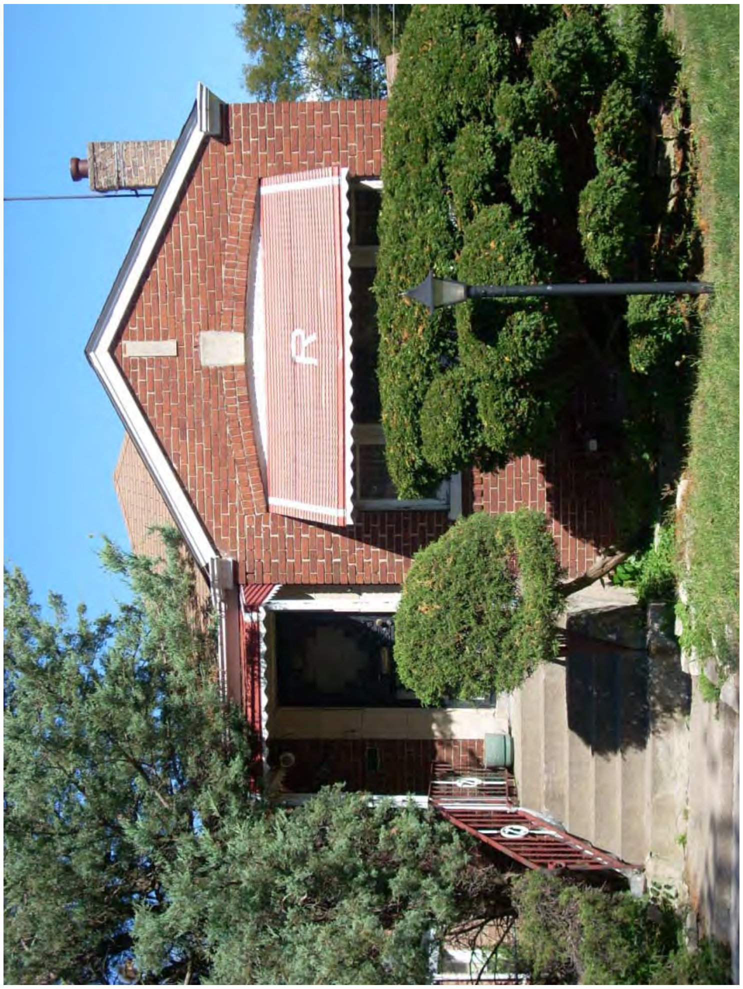
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 9 October 2012

Photos with Captions:
South façade of a brick, one-story, single family residence.



Property Description: **Stories:** 1

This one-story house in the Roseland community has a hip roof covered with asphalt shingles and a projecting gable-roofed living room. The front elevation is clad with brownish-orange face brick. Its off-center entrance features a metal storm door and a porch with concrete steps, metal railings and open metal posts supporting a metal awning. The front elevation has a window grouping that is partially obscured by a low metal canopy but appears to be a picture window flanked by double-hung windows. The side elevations are clad with common brick. Detailing includes a brick arch with stone keystone above the front elevation window group and stone blocks surrounding the door. This house does not feature sufficient distinguishing architectural elements to be individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
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Structural Survey

Integrity: [✓ Unaltered] Slight Modification Major Alteration			**Additional Notes/Descriptions**
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Hip	
Ornamental Architectural Details Brick arch with stone keystone, stone blocks at entrance			**Windows** Double-hung, fixed-pane
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

349 W. 101st Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1965

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

Vernacular

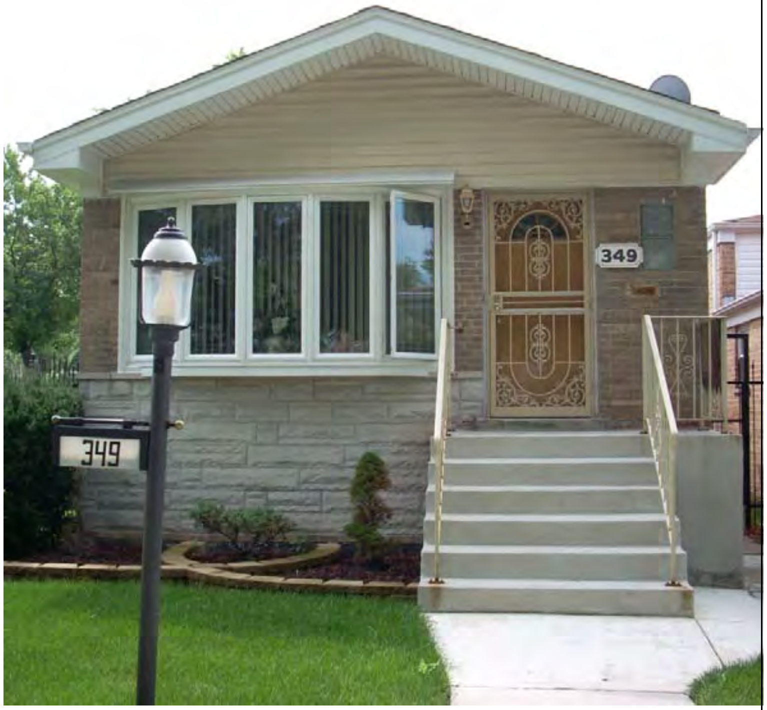
Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 4 September 2012

Photos with Captions:

North façade of brick, single family residence.



Property Description: **Stories:** 1

This one-story house has gable front roof covered with asphalt shingles. Its front façade is sheltered by an overhang and is clad orange face brick, stone, and clapboards. A bow window with casements fronts the street façade. The off-center metal core door is accessed via a concrete stoop with metal hand rails. The side elevations are clad in common brick. This home does not have distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
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Structural Survey

Integrity:

[✓ Unaltered] Slight Modification Major Alteration

Additional Notes/Descriptions

Condition:

[✓ Excellent] Good Poor

Additional Alterations

Structure Usage Current: NA Historic: NA	**Exterior Wall Surface** Brick and stone (façade), clapboard (gable end)

Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Hip

Ornamental Architectural Details

None

Windows

Casement

Outbuildings (*Number and Description*)

Garage

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

438 W. 101st Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1955

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

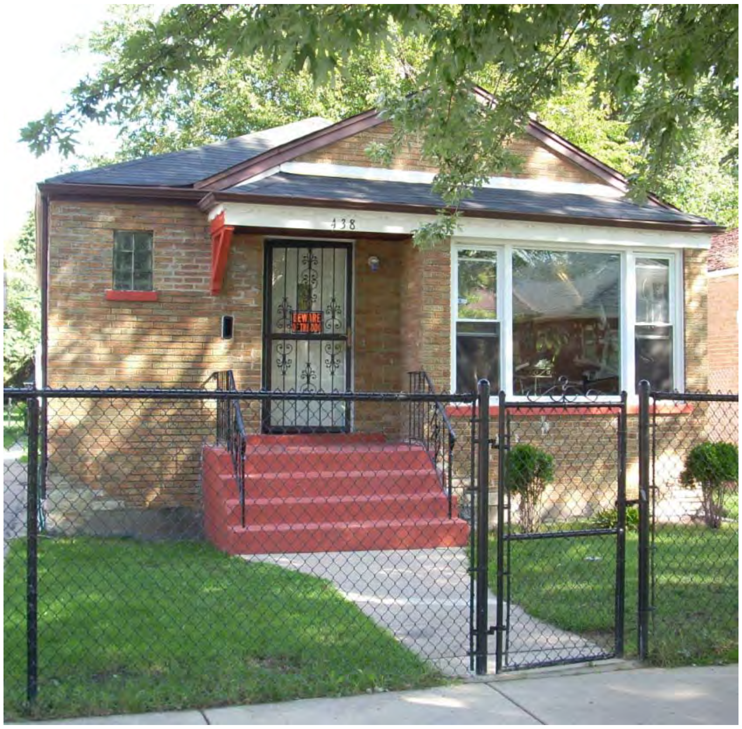
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 10 October 2012

Photos with Captions:
South façade of a brick, one-story, single family residence.



Property Description: **Stories:** 1

This one-story, brick-clad house in the Washington Heights community is situated on a raised basement with glass block windows and has a gable-on-hip roof covered with asphalt shingles. Its front elevation features an off-center hollow core metal door, concrete steps with metal railings, a projecting living room bay with a non-original picture window flanked by one-over-one aluminum-sash windows, a pent roof with bracket, and a small glass block window. It does not feature distinguishing architectural elements and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement door and windows
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingles	**Roof Features** None	**Roof Type** Gable-on-hip	
Ornamental Architectural Details Bracket under pent roof			**Windows** Double-hung, fixed-pane, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

331 W. 101st Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1952

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

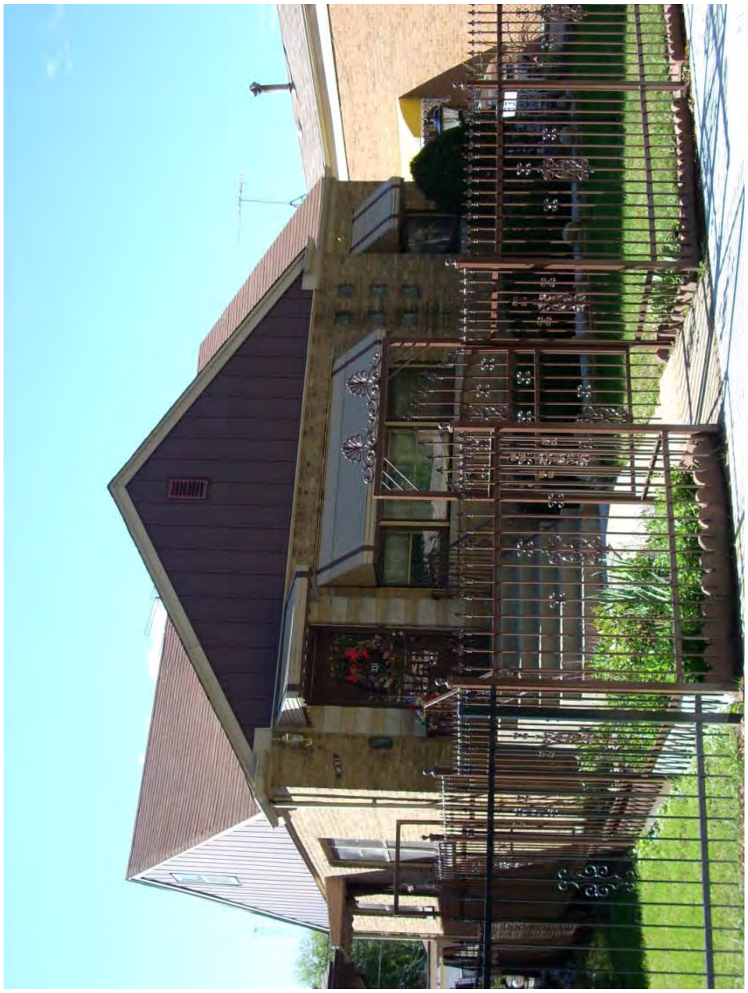
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 16 September 2012

Photos with Captions:
North façade of one-story, single family, brick residence.



Property Description: **Stories:** 1

This one-story house in the Roseland community has a side gable roof covered with asphalt shingles. It is clad with brick on the first floor and with synthetic siding in the gables. The front elevation has a gabled projecting living room, an off-center door with concrete steps and metal railings, a picture window flanked by non-original one-over-one aluminum-sash windows, and a single non-original one-over-one aluminum-sash window. Detailing includes stone insert blocks flanking the door and several decorative glass insert blocks. It does not display distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows on street elevation
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick (main), Synthetic siding (gable ends)	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Side-gable	
Ornamental Architectural Details Stone insert blocks around door, decorative glass insert blocks			**Windows** Double-hung, fixed-pane
Outbuildings (*Number and Description*) Storage shed			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

342 W. 101st Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1948

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

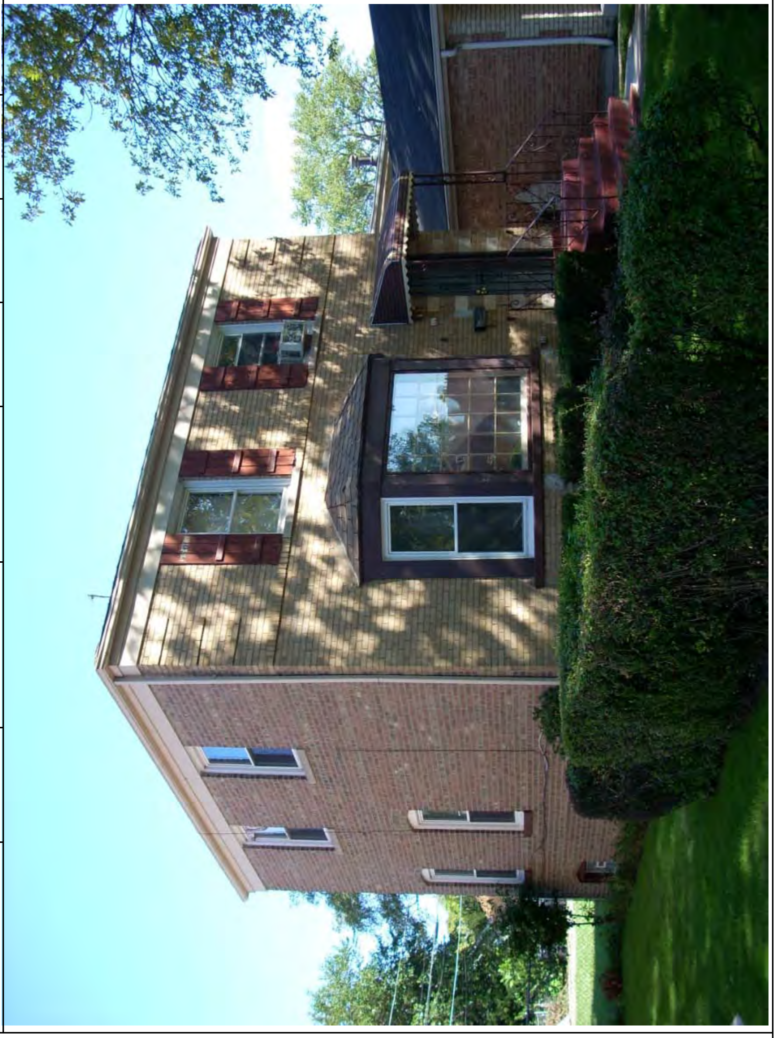
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 16 September 2012

Photos with Captions:
South and west façades of two-story, brick, single-family residence.



Property Description: **Stories:** 2

This two-story house in the Roseland community is situated on a raised brick basement and has a hip roof covered with asphalt shingles. Its front elevation is clad with buff brick. This elevation has an off-center hollow core metal door, a porch with concrete steps and metal railings, open metal supports, and a metal awning roof. It has a three-sided first floor bay with central multi-light fixed-pane window flanked by non-original one-over-one aluminum-sash windows and two non-original one-over-one aluminum-sash windows on the second floor. Detailing includes brick quoins and faux stone insert blocks flanking the door and beneath the window bay. It does not display distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement door and windows
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Hip	
Ornamental Architectural Details Brick quoins, faux stone insert blocks			**Windows** Double hung, fixed-pane
Outbuildings (*Number and Description*) Storage shed			

Local Landmark	**Y [✓ N]**	
National Register Historic Places	**Y [✓ N]**	
National Register Historic District	**Y [✓ N]**	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

349 W. 101st Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1930

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

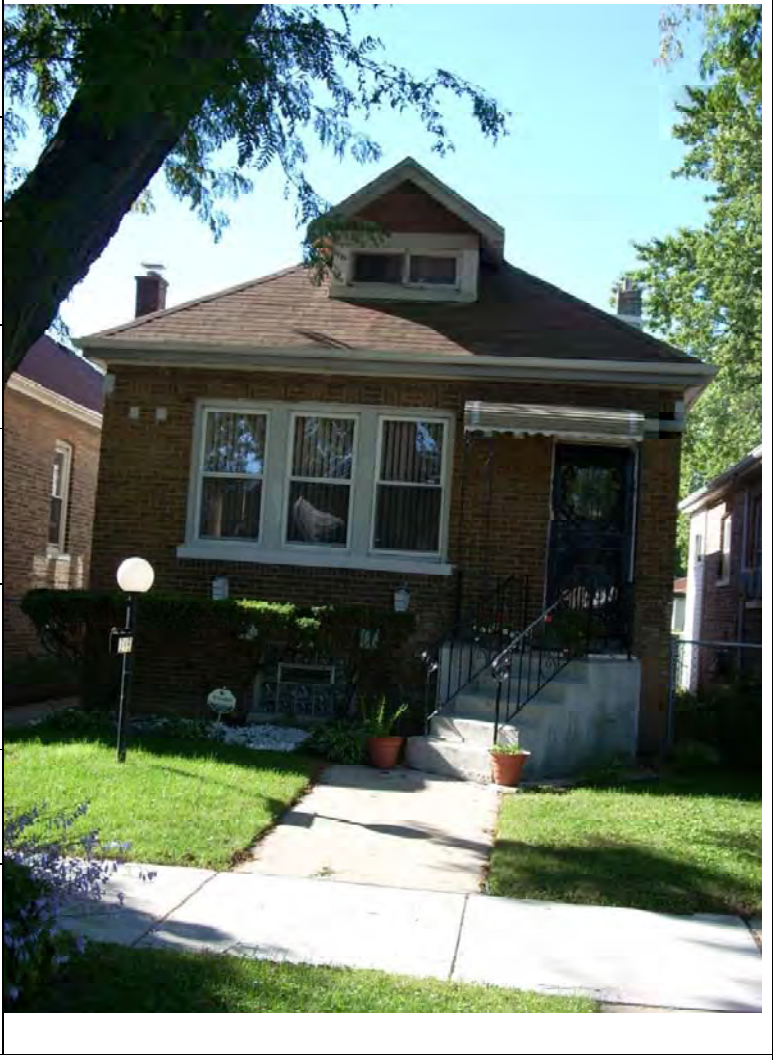
Chicago Bungalow

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 10 September 2012

Photos with Captions:
North façade of brick, single family residence.



Property Description: **Stories:** 1

This one-story home in the Roseland community is clad in brown face brick and common brick along its front and side elevations, respectively. It has a hip roof covered with asphalt shingles. Its front elevation has an off-center door and a porch with concrete steps, metal railings, open metal supports, and metal awning roof. The front façade features a strip of three non-original one-over-one windows with concrete sills and a gable dormer with two single-pane windows. Glass block windows provide light in the basement. This building lacks distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

<table>
<tr><td colspan="3">Integrity:
Unaltered [✓ Slight Modification] Major Alteration</td><td>Additional Notes/Descriptions
Replacement windows and door</td></tr>
<tr><td colspan="3">Condition:
Excellent [✓ Good] Poor</td><td></td></tr>
<tr><td colspan="3">Additional Alterations</td><td></td></tr>
<tr><td colspan="2">Structure Usage
Current: NA
Historic: NA</td><td>Exterior Wall Surface
Brick</td><td></td></tr>
<tr><td>Roof Material
Asphalt shingle</td><td>Roof Features
Dormer</td><td>Roof Type
Hip</td><td></td></tr>
<tr><td colspan="3">Ornamental Architectural Details
Concrete sills</td><td>Windows
Double-hung, glass block</td></tr>
<tr><td colspan="4">Outbuildings (<i>Number and Description</i>)
None</td></tr>
</table>

Local Landmark	**Y [✓ N]**	
National Register Historic Places	**Y [✓ N]**	
National Register Historic District	**Y [✓ N]**	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

351 W. 101st Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1930

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

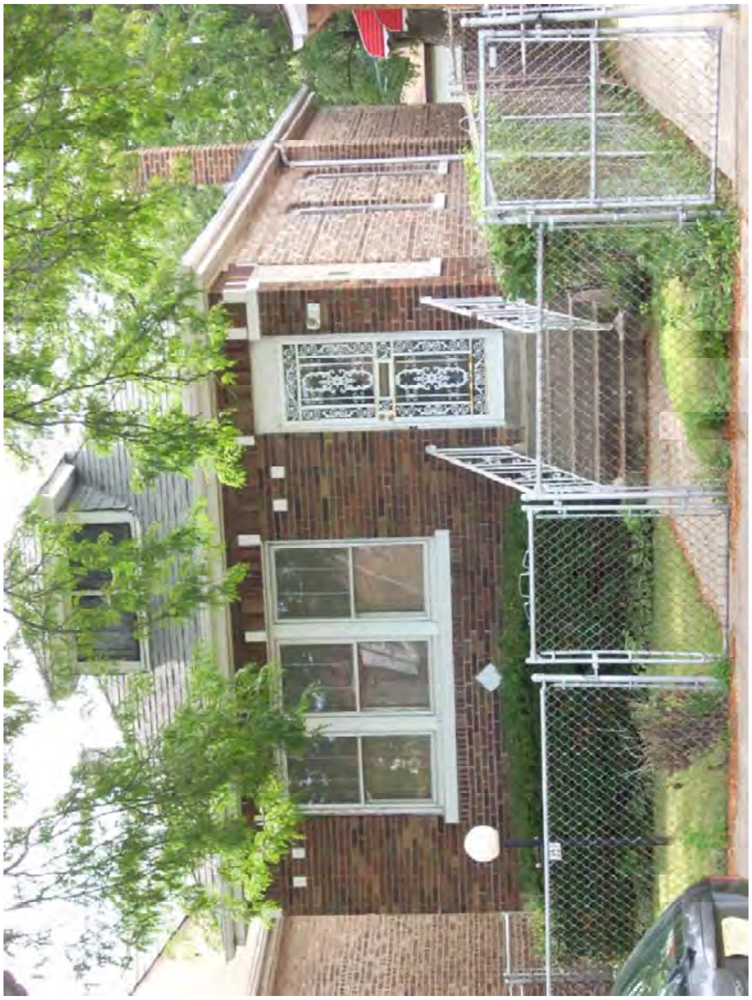
Chicago Bungalow

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S.Katz

Date: 4 September 2012

Photos with Captions:
North and west façades of a one-story, brick single family residence.



Property Description: **Stories:** 1

This one-story house is situated on a raised basement. It has a rectangular footprint, a hip roof covered with asphalt shingles, and a hip roof dormer with paired windows. Its front façade is clad in brown face brick with concrete block inserts and has a strip of three three-over-one windows. Its off-center metal core door is accessed via a short flight of concrete steps with metal railings. The side elevations are clad in common brick. This home does not have distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

<table>
<tr><td colspan="3">Integrity:
[✓ Unaltered] Slight Modification Major Alteration</td><td>Additional Notes/Descriptions</td></tr>
<tr><td colspan="3">Condition:
Excellent [✓ Good] Poor</td><td></td></tr>
<tr><td colspan="3">Additional Alterations</td><td></td></tr>
<tr><td colspan="2">Structure Usage
Current: NA
Historic: NA</td><td>Exterior Wall Surface
Brick</td><td></td></tr>
<tr><td>Roof Material
Asphalt shingle</td><td>Roof Features
Dormer</td><td>Roof Type
Hip</td><td></td></tr>
<tr><td colspan="3">Ornamental Architectural Details
Concrete block inserts</td><td>Windows
Double-hung</td></tr>
<tr><td colspan="4">Outbuildings (<i>Number and Description</i>)
Garage</td></tr>
</table>

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

352 W. 101st Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1960

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

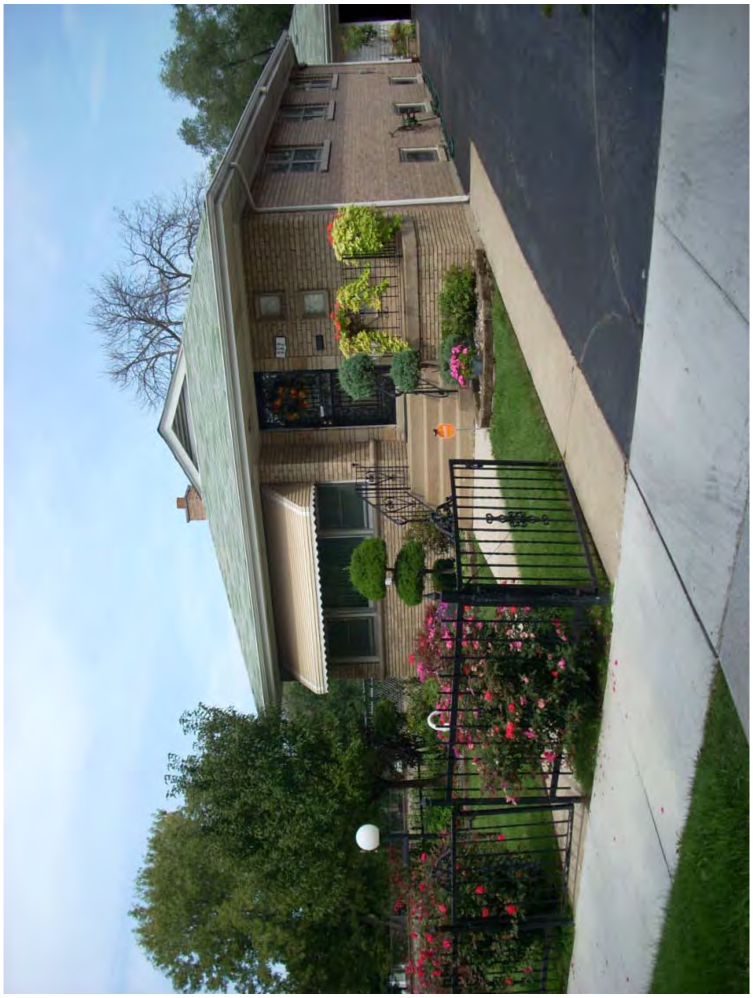
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 4 September 2012

Photos with Captions:
South and east façades of one-story, brick story single family residence.



Property Description: **Stories:** 1

This one-story house is situated on a raised basement. It has a rectangular footprint, a hip roof covered with asphalt shingles, and overhanging eaves. Its front façade is clad in buff face brick and has a strip of three windows, which appears to be one large picture window flanked by double-hung windows, beneath a metal awing. The off-center metal core front door is accessed via a flight of concrete steps with metal railings. Two large decorative glass blocks are situated next to the door. The side elevations are clad in common brick. This home does not have distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions**
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingle	**Roof Features** Gablet	**Roof Type** Hip	
Ornamental Architectural Details None			**Windows** Fixed-pane, double-hung, glass block
Outbuildings (*Number and Description*) Garage			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

330 W. 102nd Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1930

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

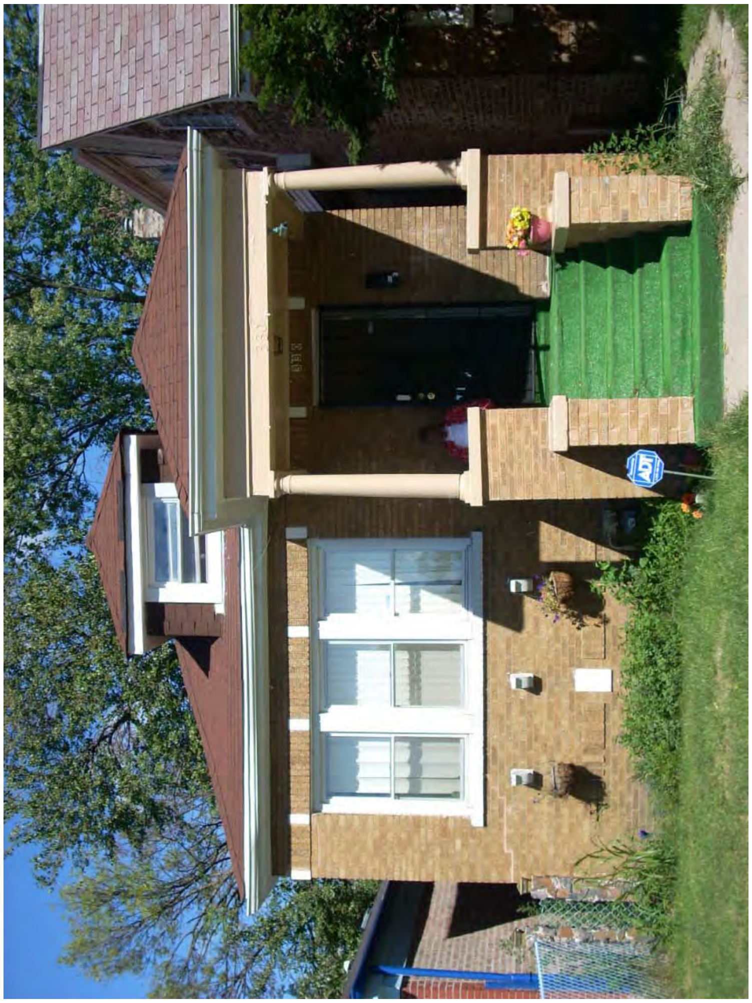
Chicago Style Bungalow

Prepared By: J. Martinez, M. C. Bird, J. Guairno

Photo By: S. Katz

Date: 9 October 2012

Photos with Captions:
South façade of a brick, one-story, single family residence.



Property Description: **Stories:** 1

This one-story bungalow in the Roseland community has a hip roof covered with asphalt shingles and a hip dormer with a non-original one-over-one aluminum-sash window. The front elevation is clad with light brown face brick and has a hip-roofed porch with brick sidewalls, concrete steps, short wood Doric columns and frieze band. This elevation also has a strip of three non-original one-over-one aluminum-sash windows. Detailing includes a stone sill course, a brick soldier course with stone insert blocks above the windows, and decorative scrolled stone brackets. This house does not feature sufficient distinguishing architectural features to qualify as individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
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Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingle	**Roof Features** Dormer	**Roof Type** Hip	
Ornamental Architectural Details Doric columns and frieze band, stone sill course, brick soldier course with stone insert block, stone brackets			**Windows** Double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

348 W 102nd Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1927

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

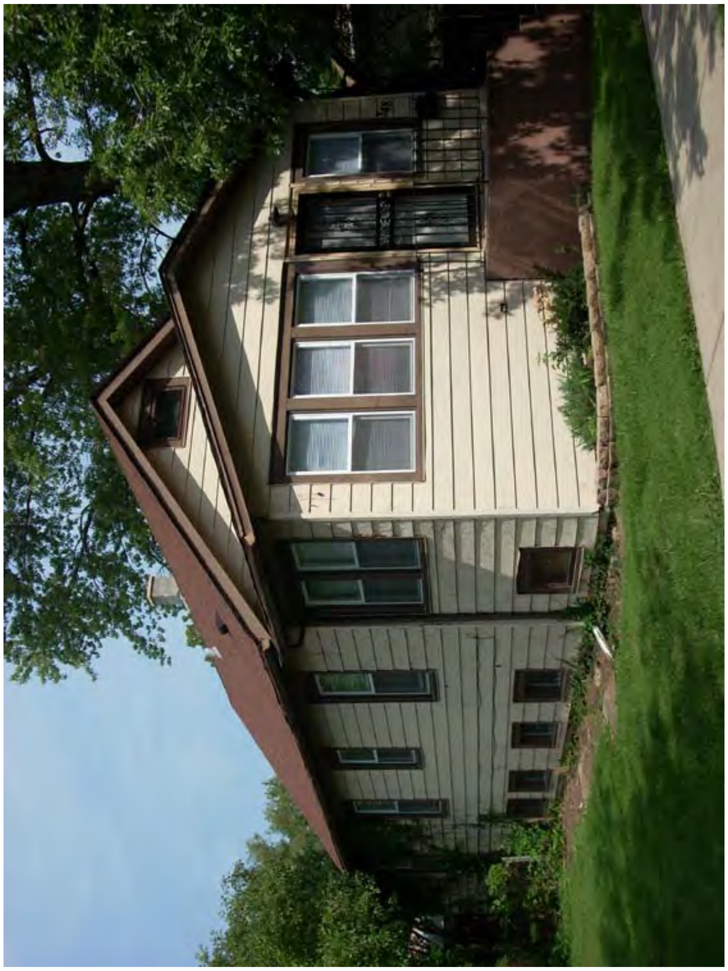
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: Steve Katz

Date: 21 September 2012

Photos with Captions:
South and west façades of one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story house in Roseland is clad in synthetic siding, sits atop a raised basement, and has a front gable roof covered with asphalt shingles. The front elevation features a projecting, enclosed, gable roofed sun porch also clad in synthetic siding with one-over-one windows and an off-center front door accessed by a flight of concrete steps with metal railings. This home does not have distinguishing architectural features and is covered with synthetic siding, both of which preclude it from individual listing on the National Register.

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Structural Survey

Integrity:			**Additional Notes/Descriptions**
Unaltered	[✓ Slight Modification]	Major Alteration	Replacement siding
Condition:			
[✓ Excellent]	Good	Poor	
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Vinyl siding	
Roof Material Asphalt	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

416 W. 102nd Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1929

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

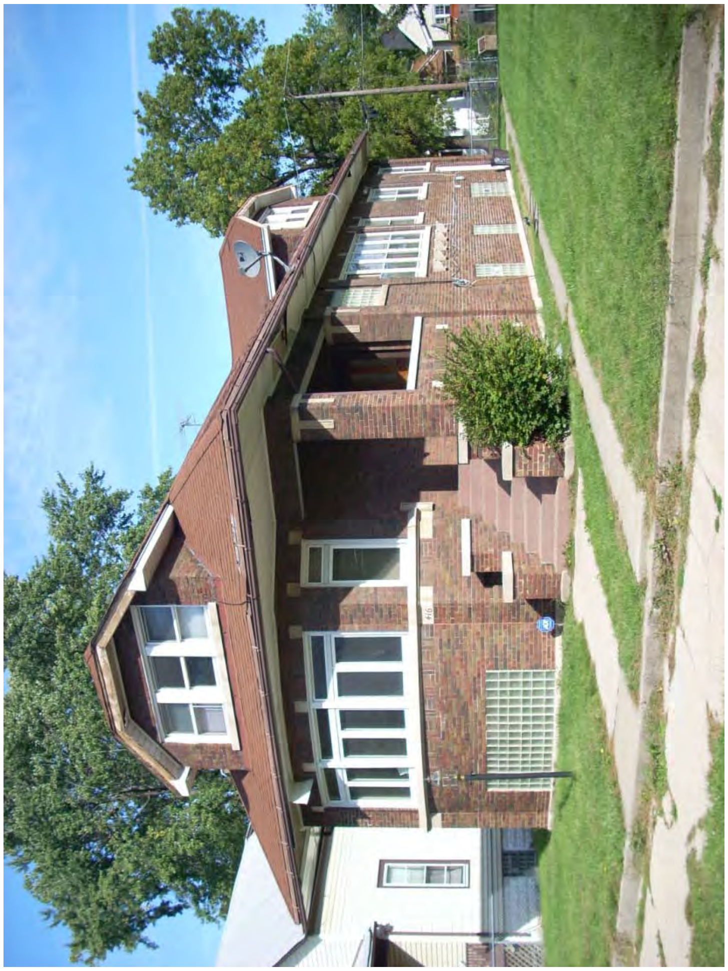
Chicago Style Bungalow

Prepared By: J. Martinez, M. C. Bird, J. Guairno

Photo By: S. Katz

Date: 10 October 2012

Photos with Captions:
South and east façades of a brick, one-story, single family residence.



Property Description: **Stories:** 1

This one-story house in the Washington Heights community is situated on a raised basement with glass block windows. It is clad with brown brick and has a hip roof covered with asphalt shingles and overhanging eaves. There are hip-on-gable dormers on the front and side elevations, each of which has a strip of non-original one-over-one aluminum-sash windows. The house features a recessed corner porch with a single-light oak door, concrete steps, low brick sidewalls, and a brick corner pier. The front elevation’s rounded living room bay has a series of casement windows and transoms. Detailing includes a brickwork soldier course above windows with decorative stone insert blocks and concrete sills. This is a good example of a brick Chicago Style Bungalow, a building type that was produced in the thousands throughout the city’s undeveloped areas and in nearby suburbs during the 1910s and 1920s. This house does not feature sufficient distinguishing architectural features to be individually eligible for listing on the National Register.

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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingle	**Roof Features** Dormers	**Roof Type** Hip	
Ornamental Architectural Details Brick soldier courses above windows, stone insert blocks, concrete sills			**Windows** Double-hung, casement, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y [✓ N]**	
National Register Historic Places	**Y [✓ N]**	
National Register Historic District	**Y [✓ N]**	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
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Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

320 W 102nd Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1929

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

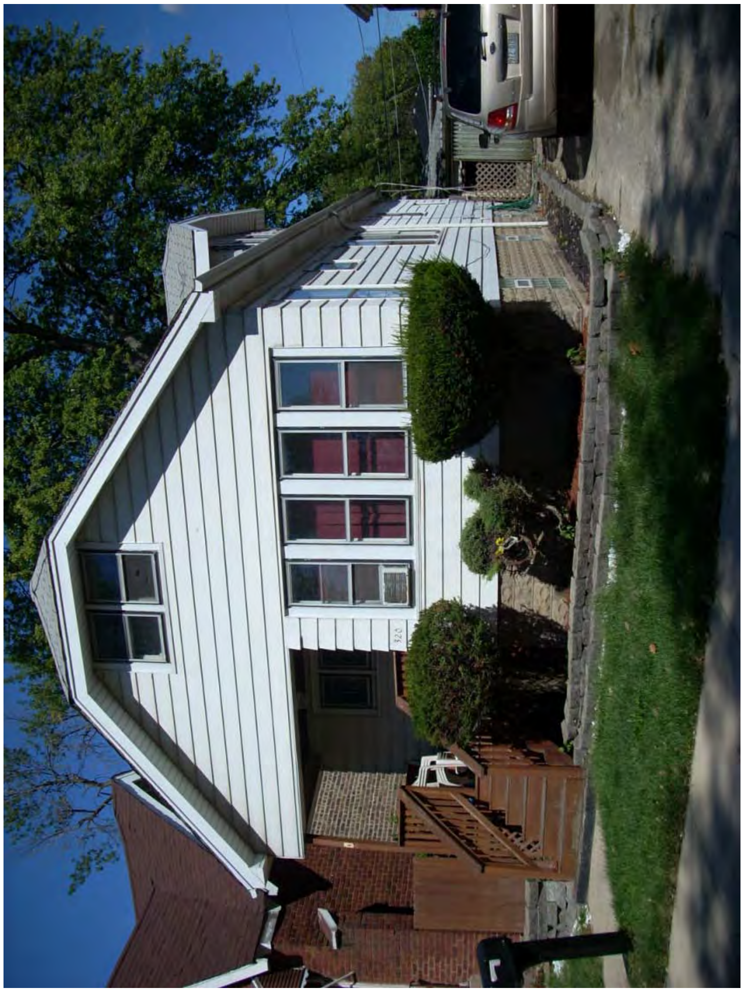
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 9 October 2012

Photos with Captions:
South façade of a one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story frame house in the Roseland community is situated on a raised concrete block basement with glass block windows. It is clad with synthetic siding, has a hip-on-gable roof covered with asphalt shingles, and has overhanging eaves in front with aluminum soffits. The front elevation features a recessed corner porch with wood steps, railings, and corner post. A pair of casement windows is located within the porch. There is a strip of four windows on the first floor and a pair of windows in the gable. All windows are non-original one-over-one aluminum-sash. This house does not feature sufficient integrity or distinguishing architectural features to qualify as individually eligible for listing on the National Register.

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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows and siding
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** Dormer	**Roof Type** Hip-on-gable	
Ornamental Architectural Details None			**Windows** Double-hung, glass block, casement
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

337 W. 102nd Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1930

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

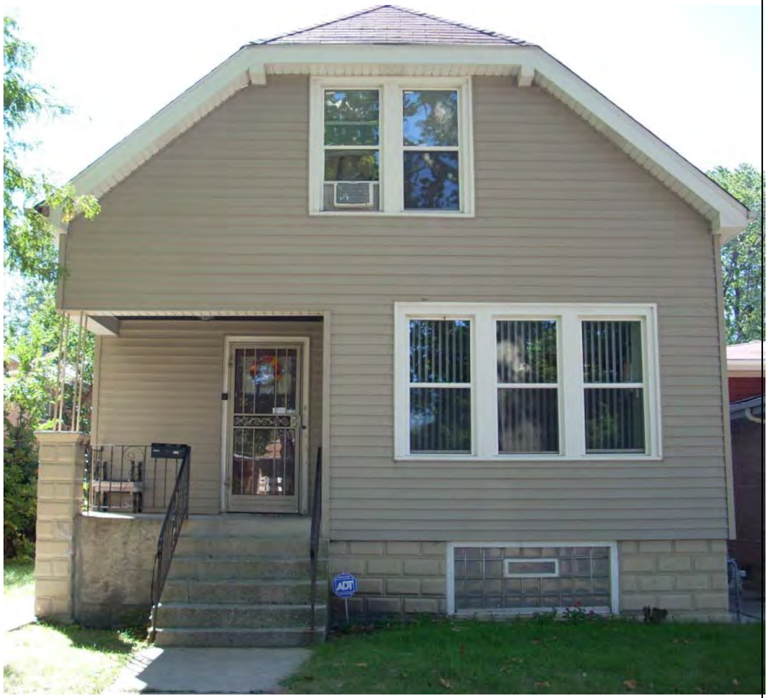
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 9 October 2012

Photos with Captions:
North façade of a 1.5-story, single family, frame residence.



Property Description: **Stories:** 1.5

This one-and-a-half-story frame house in the Roseland community is situated on a raised concrete block basement with glass block windows. It is clad with synthetic siding and has a hip-on-gable roof covered with asphalt shingles. The front elevation features a recessed porch with concrete steps, metal railings, and a corner support consisting of a faux stone pier with open metal post above. This elevation also has overhanging eaves with aluminum soffits and decorative exposed rafters, an off-center recessed door with a metal storm door, and a strip of three windows on the first floor and a pair of windows in the gable, all of which are non-original one-over-one aluminum-sash. This residence does not feature sufficient integrity or distinguishing architectural features to qualify as individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

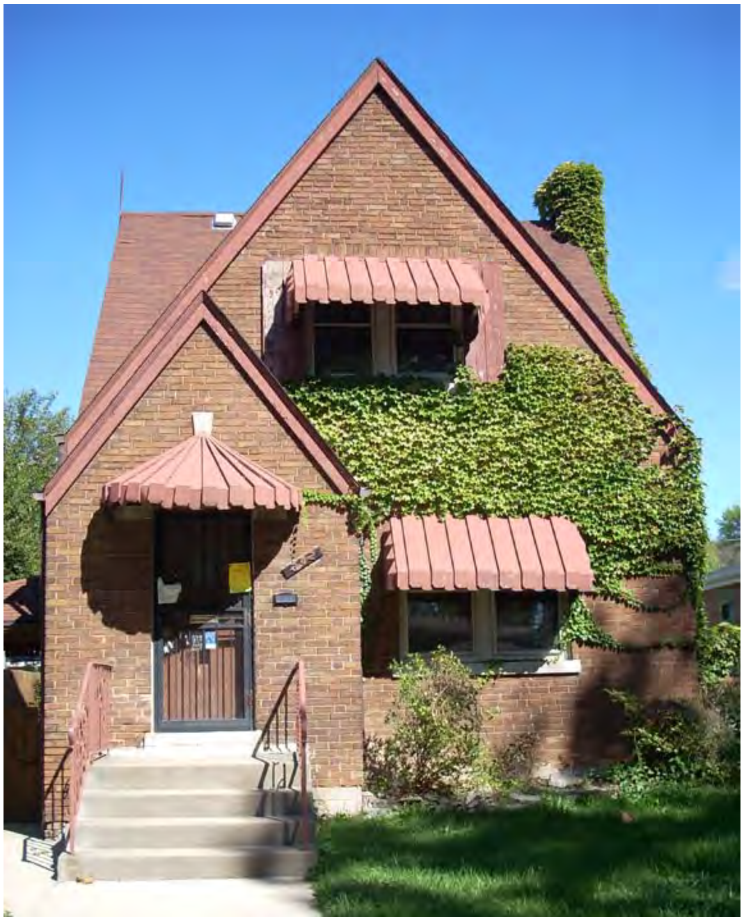
Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** Dormer	**Roof Type** Hip-on-gable	
Ornamental Architectural Details Exposed rafters			**Windows** Double-hung, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y [✓ N]**	
National Register Historic Places	**Y [✓ N]**	
National Register Historic District	**Y [✓ N]**	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name **Historic:** Bldg. not labeled, not in CHRS **Common/Current:** Unknown	**Photos with Captions:** South façade of a brick, 1.5-story, single family residence. 
Property Address: 342 W. 102nd Street	
HAARGIS Number: Not in database	
Present Owner and /or Occupant: Unknown	
Property Use **Historic:** Single family residence **Current:** Single family residence	
Date of Construction: 1940 **Architect's Name:** Not in CHRS **Builder/Contractor:** Not in CHRS	
Architectural Style: Vernacular	
Prepared By: J. Martinez, M. C. Bird, J. Guarino **Photo By:** S. Katz **Date:** 9 October 2012	

Property Description: **Stories:** 1.5

This one-and-a-half-story house in the Roseland community has a cross-gable roof covered with asphalt shingles and is clad with brown face brick. Its front elevation has an off-center, gable roofed entrance vestibule with a metal storm door sheltered by a metal awning, concrete steps, metal railings, and paired double-hung windows on both the first and second floors that are partially obscured by low metal awnings. A one-story hip roof covered side entrance is situated along the west elevation. Detailing includes concrete sills, a keystone above the entrance, and brick soldier course lintels. This house does not feature sufficient distinguishing architectural features to qualify as individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
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Structural Survey

Integrity: [✓ Unaltered] Slight Modification Major Alteration			**Additional Notes/Descriptions**
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingle	**Roof Features** Dormer	**Roof Type** Cross-gable	
Ornamental Architectural Details Concrete sills, keystone above the entrance, brick soldier course lintels			**Windows** Double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

348 W 102nd Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1939

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

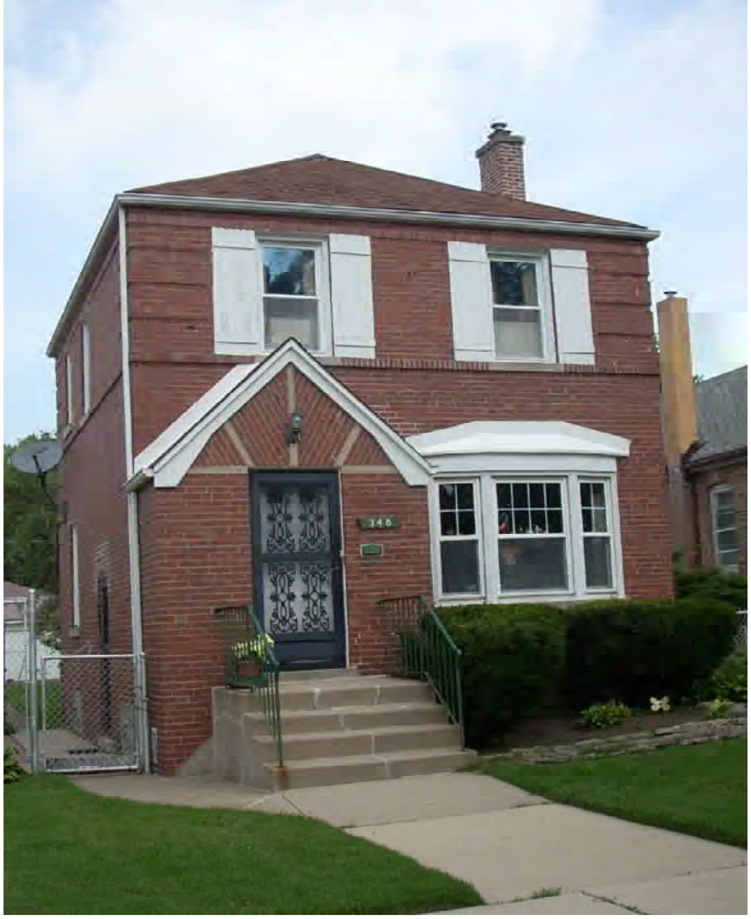
Minimal Traditional

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: J. Martinez

Date: September 2012

Photos with Captions:
South façade of brick, two-story, single family residence.



Property Description: **Stories:** 2

This two-story, brick-clad house in Roseland has a square footprint and a hip roof covered with asphalt shingles. An off-center, projecting, gable-roofed vestibule with front door is accessed via a short flight of concrete steps with metal railings. The front elevation has a three-sided bay with a central eight-over-one window flanked by four-over-one windows, and the second floor has two one-over-one windows with wood shutters. Windows are modern replacements. Detailing includes brick banding on the second floor and concrete bands in the vestibule gable meant to simulate half-timbering. This house lacks architectural distinction; as a result, it is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Unknown	**Roof Features** None	**Roof Type** Hip	
Ornamental Architectural Details Brick banding, concrete bands for half-timber look			**Windows** Double-hung
Outbuildings (*Number and Description*) Garage			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

352 W. 102nd St.

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1930

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

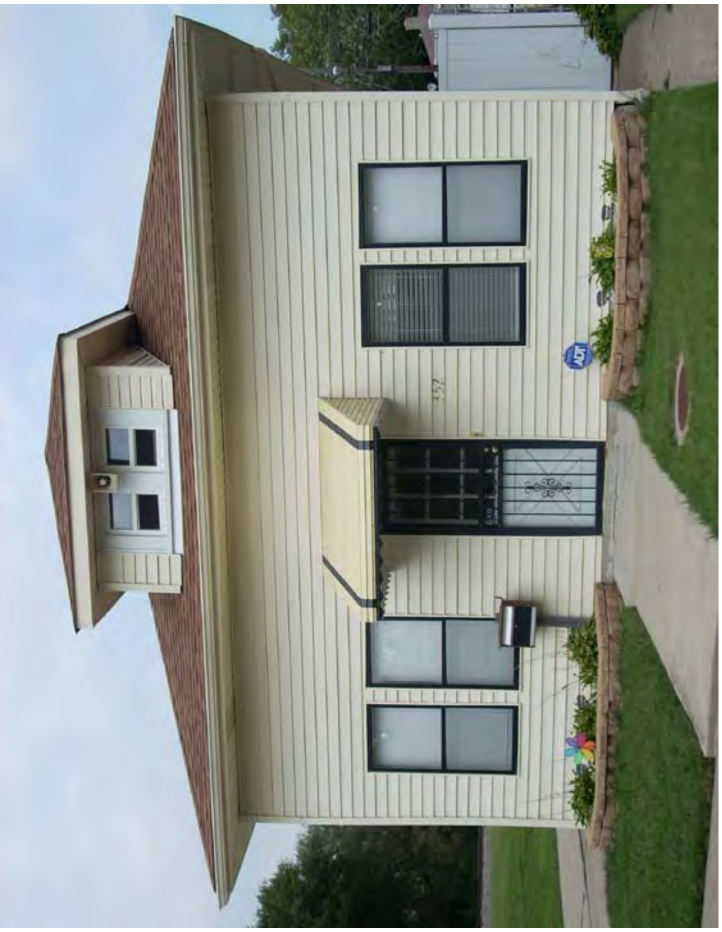
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: Steve Katz

Date: 21 September 2012

Photos with Captions:
South façade of one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story home in the Roseland community is clad in synthetic siding and has a hipped roof with asphalt shingles and overhanging eaves. The front elevation features a centrally located front door flanked by two one-over-one aluminum-sash windows and has a hipped roof dormer with paired one-over-one windows. Windows are modern replacements; replacement windows in the dormer are smaller than the original windows. This structure lacks integrity and architectural distinction and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

<table>
<tr><td colspan="3">Integrity:
Unaltered [✓ Slight Modification] Major Alteration</td><td>Additional Notes/Descriptions
Replacement windows and cladding</td></tr>
<tr><td colspan="3">Condition:
[✓ Excellent] Good Poor</td><td></td></tr>
<tr><td colspan="3">Additional Alterations</td><td></td></tr>
<tr><td colspan="2">Structure Usage
Current: NA
Historic: NA</td><td>Exterior Wall Surface
Vinyl siding</td><td></td></tr>
<tr><td>Roof Material
Asphalt</td><td>Roof Features
Dormer</td><td>Roof Type
Hip</td><td></td></tr>
<tr><td colspan="3">Ornamental Architectural Details
None</td><td>Windows
Double-hung</td></tr>
<tr><td colspan="4">Outbuildings (<i>Number and Description</i>)
Garage</td></tr>
</table>

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

444 W. 102nd Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1913

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

Vernacular

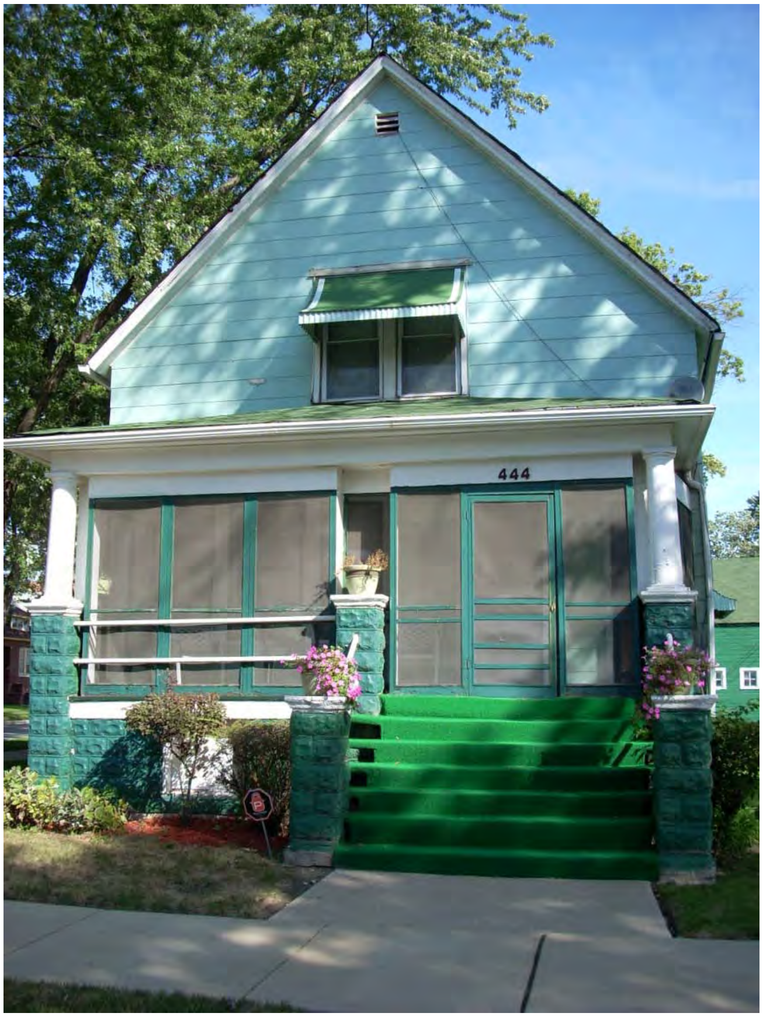
Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 10 October 2012

Photos with Captions:

South façade of a 1.5-story, single family, frame residence.



Property Description: **Stories:** 1.5

This one-and-a-half-story frame house in the Washington Heights community is situated on a raised concrete block basement. It is clad with synthetic siding and has a gable roof covered with asphalt shingles. Its front elevation features a hip-roofed full-width screened-in porch with concrete steps, metal pipe railings, a faux stone base, and supports comprised of faux stone pedestals topped by squat Doric columns. A pair of windows sheltered by a metal awning is situated in the gable. A two-story, gable-roofed, bay pavilion is situated along one of the side elevations. Windows throughout the house are non-original one-over-one aluminum-sash. This house lacks integrity, does not display distinguishing architectural features, and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity:

Unaltered [✓ Slight Modification] Major Alteration

Additional Notes/Descriptions

Replacement windows and cladding

Condition:

[✓ Excellent] Good Poor

Additional Alterations

Porch screened in

Structure Usage		**Exterior Wall Surface**
Current: NA Historic: NA		Synthetic siding
Roof Material	**Roof Features**	**Roof Type**
Asphalt shingle	None	Gable

Ornamental Architectural Details

None

Windows

Double-hung, glass block

Outbuildings (*Number and Description*)

None

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

301 W. 103rd Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1921

Architect's Name: Not in CHRS database

Builder/Contractor: Not in CHRS database

Architectural Style:

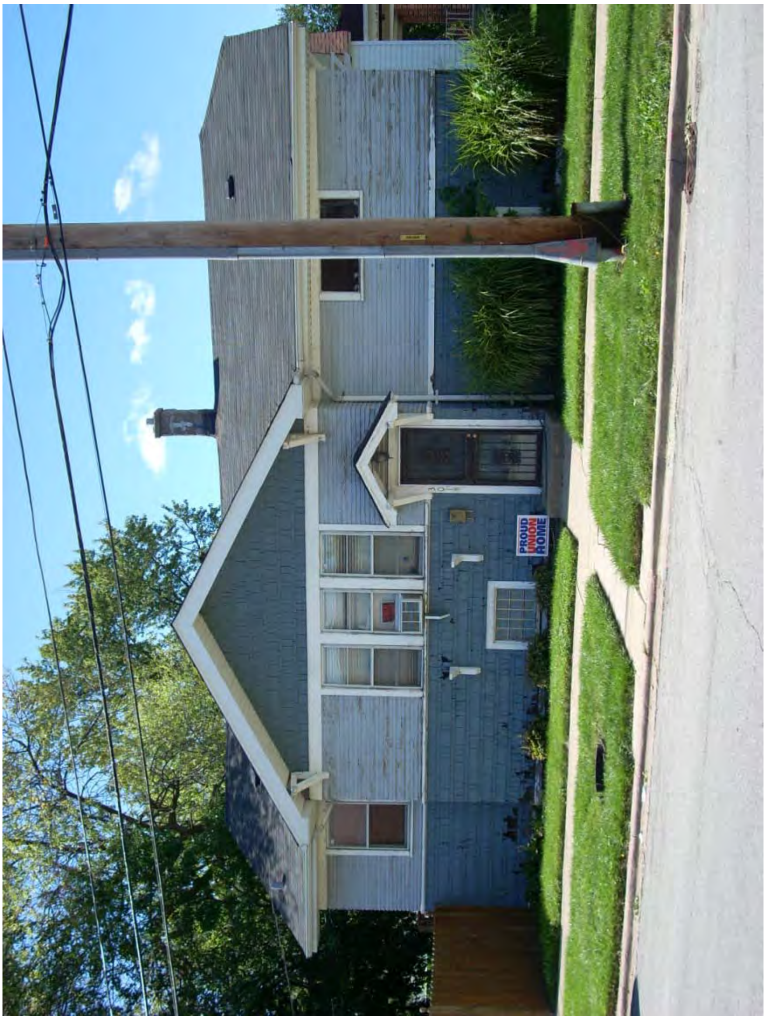
Craftsman

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 16 September 2012

Photos with Captions:
East (Princeton) façade of one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story Craftsman bungalow is situated at the southwest corner of 103rd Place and Princeton Avenue in the Roseland community. It has a hip-on-gable roof covered with asphalt shingles and overhanging eaves with decorative knee braces located on the front gable section of the roof. The central portion of the house retains its original wood clapboard siding; the areas above and below are clad with wood shingles. Its 103rd Place elevation has a strip of three one-over-one windows, a strip of three casements, and a strip of three windows in the gable that appear to be casements. Its Princeton Street elevation has a metal storm door topped by a gabled hood with two knee braces, glass block basement windows, a strip of three one-over-one windows, a single one-over-one window, and a pair of casements. This house does not have sufficient distinguishing features to qualify as individually eligible for listing on the National Register.

Structural Survey

Integrity: [✓ Unaltered] Slight Modification Major Alteration			**Additional Notes/Descriptions**
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Wood clapboards and shingles	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Hip-on-gable	
Ornamental Architectural Details Knee braces			**Windows** Double-hung, casement, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

306 W. 103rd Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Vacant

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1941

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

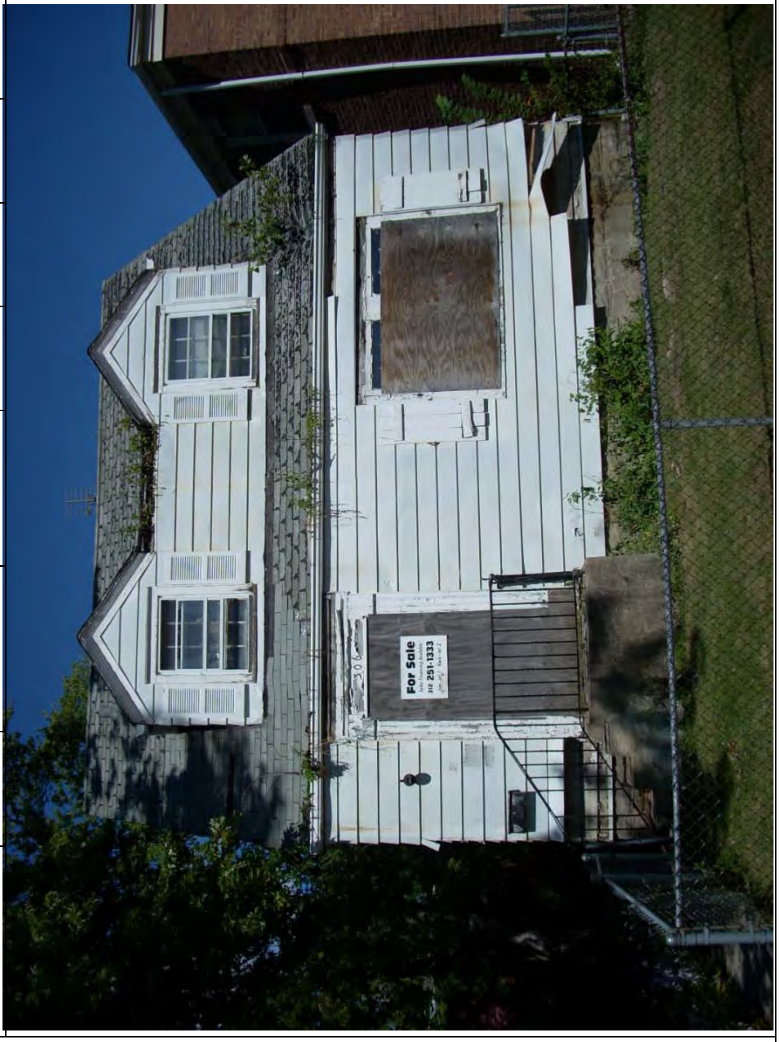
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 16 September 2012

Photos with Captions:
South façade of one-story, single-family, frame residence.



Property Description: **Stories:** 1

This one-story frame cottage in the Roseland community is clad with synthetic siding, has a side-gabled roof covered with asphalt shingles, and has two gable dormers with double-hung multi-sash windows that are visually connected with aluminum siding. The front elevation has an off-center door covered with plywood and a Classical surround consisting of simple wood pilasters and unadorned entablature. The front elevation also has concrete steps with metal railings and paired windows that are covered with plywood. This home does not have distinguishing features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
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Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** replacement siding and windows
Condition: Excellent Good [✓ Poor]			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** Dormers	**Roof Type** Side-gable	
Ornamental Architectural Details Pilasters at surround			**Windows** Double-hung, covered
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

321 W. 103rd Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1924

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

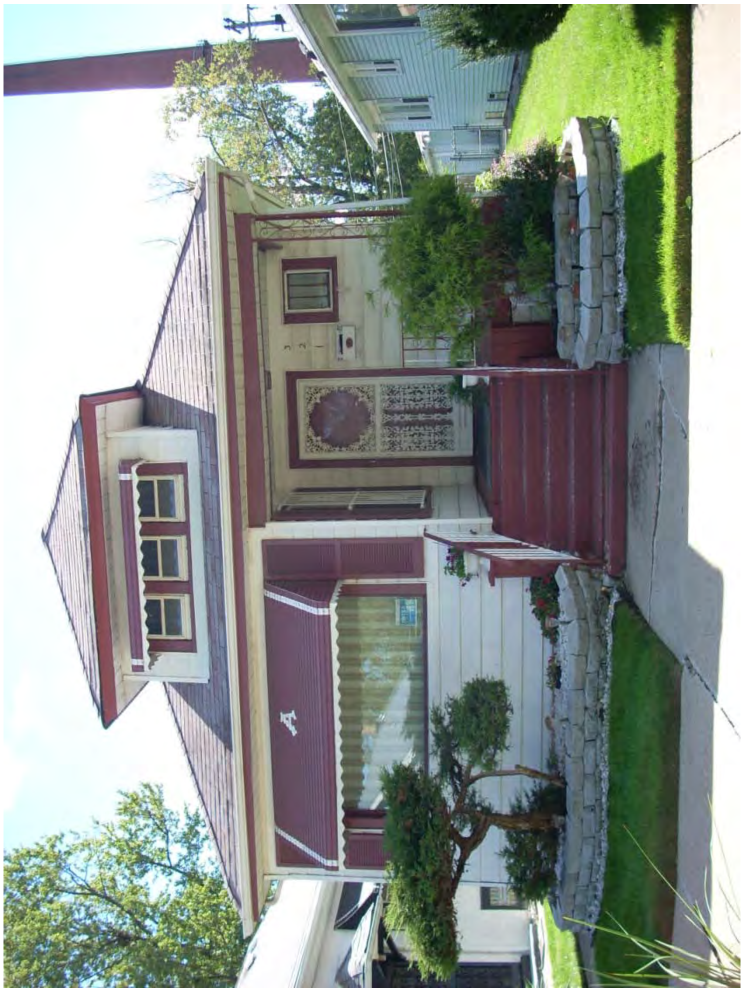
Craftsman

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 23 October 2012

Photos with Captions:
North façade of a one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story frame house in the Roseland community is clad with synthetic siding, has a hip roof covered with asphalt shingles, and a hip dormer with three one-over-one windows beneath a metal awning. The front elevation has a recessed corner porch with concrete steps, metal railings, and an open metal corner post. It also features an off-center entrance with metal storm door, a small casement window within the porch, and a large picture window beneath a metal awning. This house does not have sufficient integrity or distinguishing features to qualify as individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered	[✓ Slight Modification]	Major Alteration	**Additional Notes/Descriptions** Replacement cladding
Condition: [✓ Excellent]	Good	Poor	
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** Dormer	**Roof Type** Hip	
Ornamental Architectural Details None			**Windows** Double-hung, fixed pane, casement
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

326 W. 103rd Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Multi-family residence

Date of Construction: 1923

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

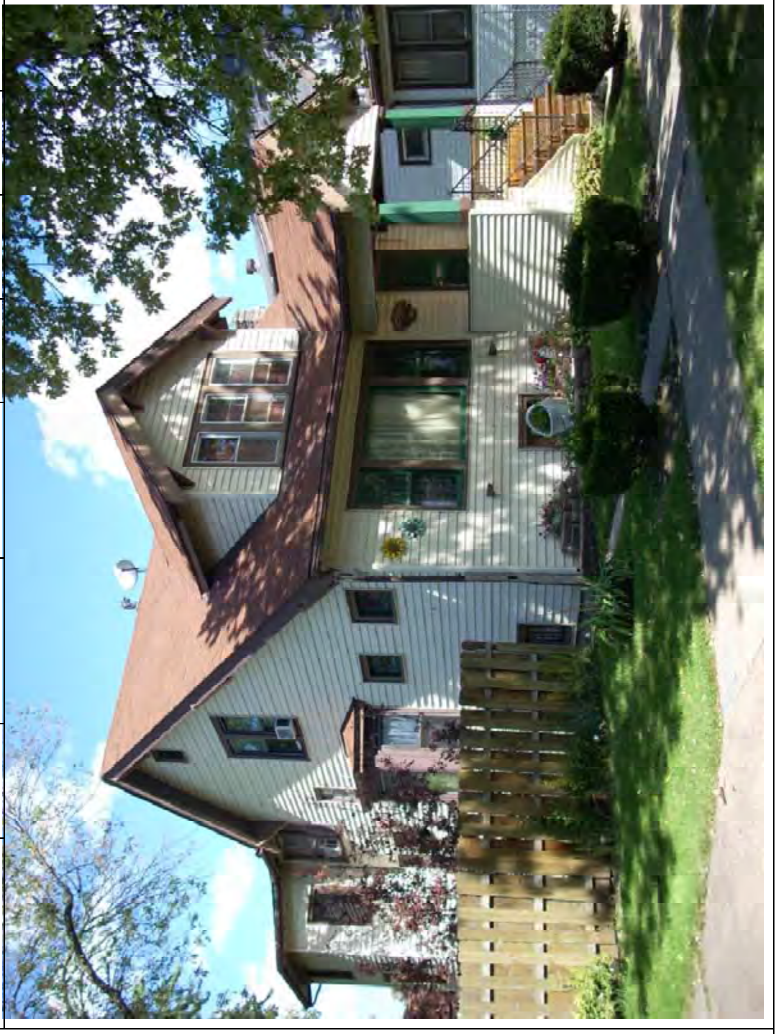
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 16 September 2012

Photos with Captions:
South and west façades of 1.5-story, multi-family, frame residence.



Property Description: **Stories:** 1.5

This one-and-a-half-story frame cottage in the Roseland community is situated on a raised brick basement with glass block windows. It is clad with aluminum siding and has a side-gabled roof covered with asphalt shingles. The house also has a gable dormer with a strip of one-over-one windows and decorative knee braces. Its front elevation has a partial-width, off-center, gable-roofed, wood porch with two squat Doric column supports atop aluminum-clad sidewalls, a door with metal storm, and a picture window flanked by one-over-one windows. Its western elevation has a three-sided window bay as well as a large shed roofed addition. This house does not have sufficient integrity or distinguishing features to qualify as individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
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Structural Survey

<table>
<tr><td colspan="3">Integrity:
Unaltered [✓ Slight Modification] Major Alteration</td><td>Additional Notes/Descriptions
Replacement siding</td></tr>
<tr><td colspan="3">Condition:
[✓ Excellent] Good Poor</td><td></td></tr>
<tr><td colspan="3">Additional Alterations
Shed roof addition</td><td></td></tr>
<tr><td colspan="2">Structure Usage
Current: NA
Historic: NA</td><td>Exterior Wall Surface
Synthetic siding</td><td></td></tr>
<tr><td>Roof Material
Asphalt shingle</td><td>Roof Features
Dormer</td><td>Roof Type
Side-gable</td><td></td></tr>
<tr><td colspan="3">Ornamental Architectural Details
Doric columns, knee braces</td><td>Windows
Double-hung, fixed-pane, glass block</td></tr>
<tr><td colspan="4">Outbuildings (<i>Number and Description</i>)
Two-car garage with hipped roof</td></tr>
</table>

Local Landmark	**Y [✓ N]**	
National Register Historic Places	**Y [✓ N]**	
National Register Historic District	**Y [✓ N]**	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

426 W. 103rd Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1909

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

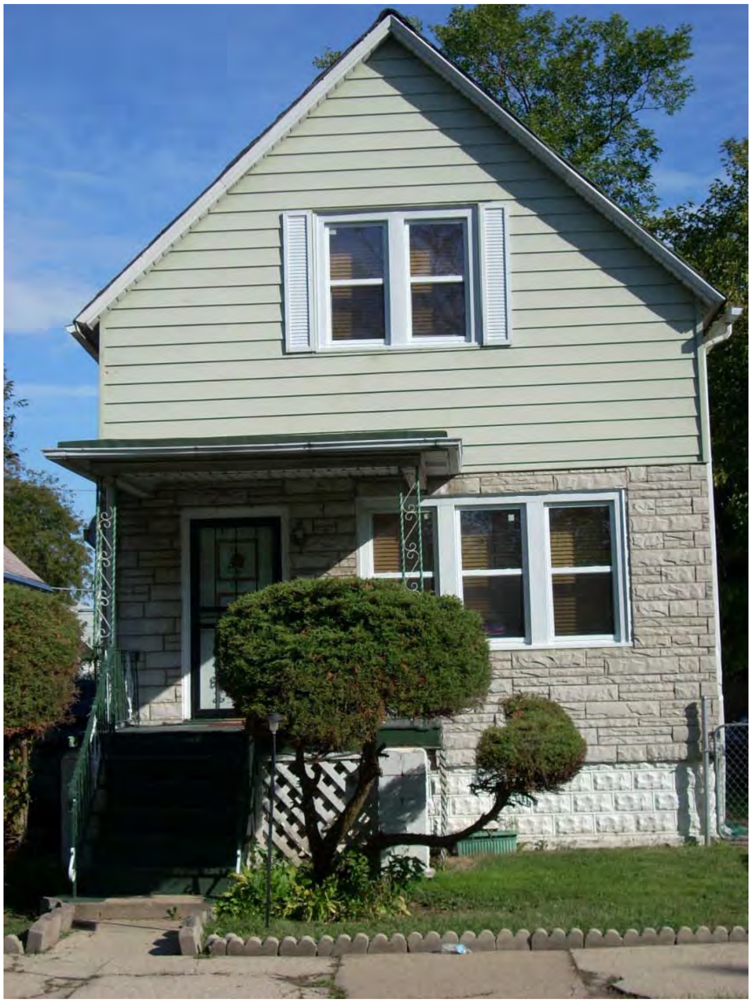
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 10 October 2012

Photos with Captions:
South façade of a 1.5-story, single family, frame residence.



Property Description: **Stories:** 1.5

This one-and-one-half-story frame house in the Roseland community is situated on a raised concrete block basement with glass block windows. It is clad with faux stone and synthetic siding and has a front gable roof covered with asphalt shingles. Its front elevation has an off-center entrance with metal storm door and a flat-roofed, partial-width porch with a wood deck, wooden steps, metal railings, and open metal posts. There is a strip of three windows on the first floor and three on the second. All windows are non-original one-over-one aluminum sash. This house does not have sufficient integrity or distinguishing features to qualify as individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows, door, porch, and cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding, faux stone	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y [✓ N]**	
National Register Historic Places	**Y [✓ N]**	
National Register Historic District	**Y [✓ N]**	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

427 W. 103rd Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Multi-family residence

Date of Construction: 1898

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

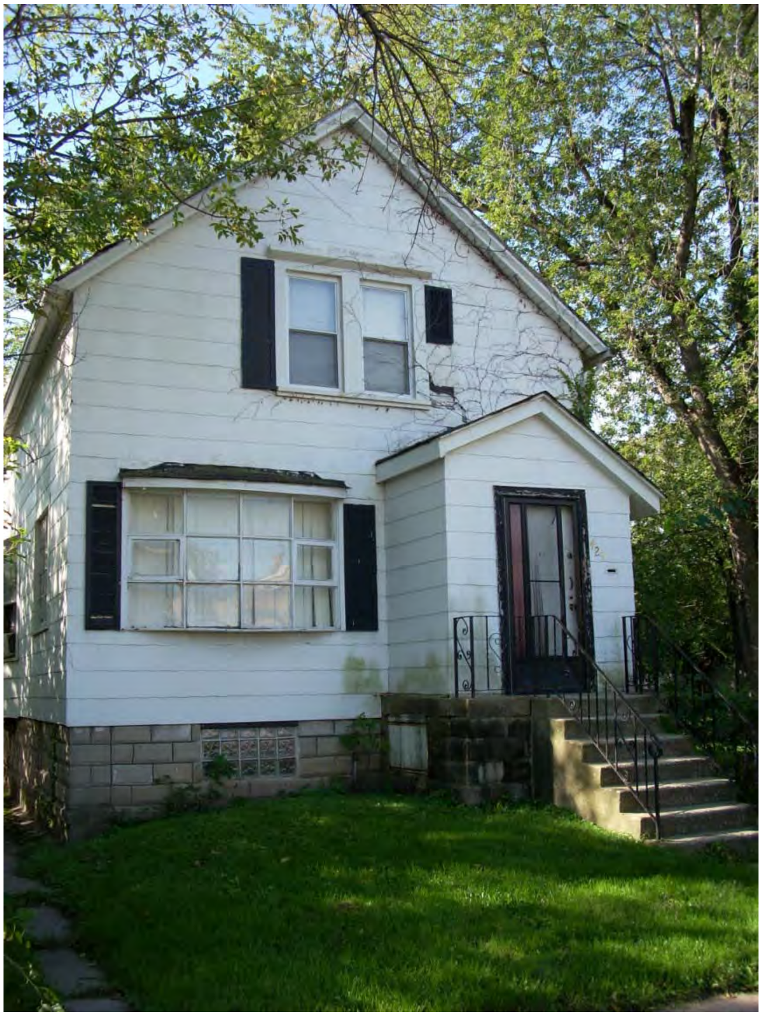
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 10 October 2012

Photos with Captions:
North façade of a 1.5-story, frame multi-family residence.



Property Description: **Stories:** 1.5

This one-and-a-half-story frame cottage in the Roseland community is situated on a raised concrete block basement with glass block windows. It is clad with synthetic siding and has a front gable roof covered with asphalt shingles. Its front elevation has an off-center, enclosed, gabled roof vestibule with a metal storm door and concrete steps with metal railings. There is a multi-paned bow window on the first floor and a pair of non-original one-over-one aluminum-sash windows in the gable. This house does not have sufficient integrity or distinguishing features to qualify as individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows and cladding
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung, fixed-pane, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

436 W. 103rd Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1908

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

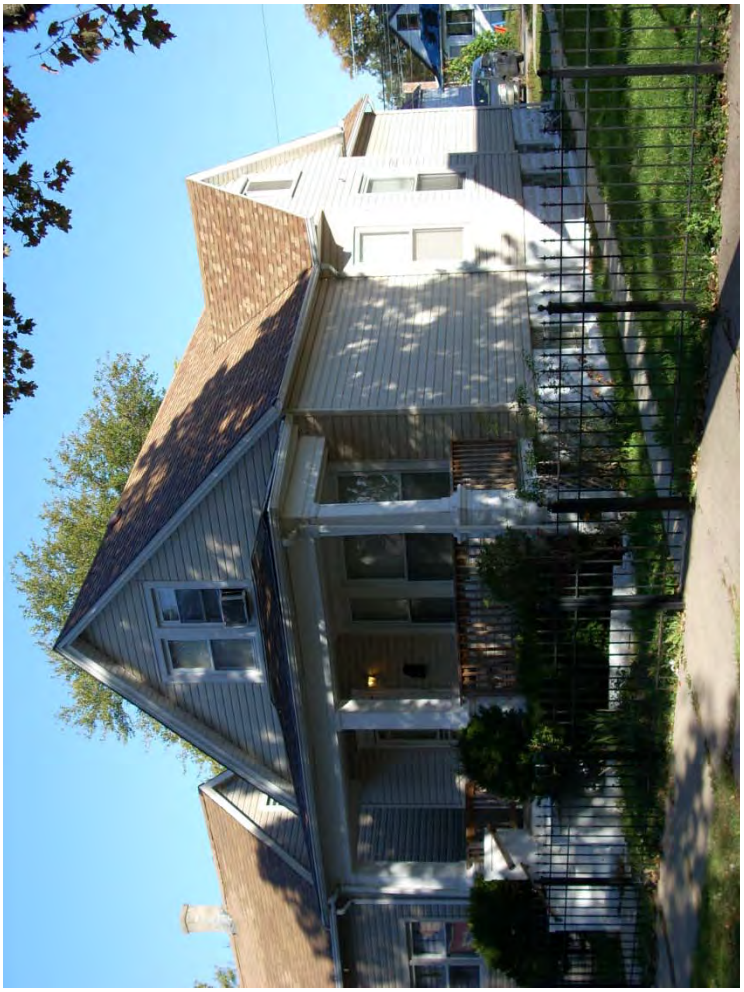
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 30 October 2012

Photos with Captions:
South and east façades of a one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story frame house in the Roseland community is situated on a raised basement with glass block windows and is covered with aluminum siding. The building has a front-gable roof covered with asphalt shingles. The front elevation has a full-width, hip-roof, wood porch with straight railings and three supports consisting of faux stone piers topped by squat, squared wood Doric columns. The residence also includes an off-center metal storm door, a three-sided bay window on the first floor and paired windows in the gable, all of which feature non-original one-over-one aluminum sashes. The door and adjacent window bay are each topped by a cornice. The west elevation has a large shed-roofed dormer and the east elevation has a three-sided window bay on the first floor topped by a gable wall dormer. This house lacks integrity and distinctive architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows and cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingles	**Roof Features** Dormers	**Roof Type** Gable	
Ornamental Architectural Details Squared columns			**Windows** Double-hung, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y [✓ N]**	
National Register Historic Places	**Y [✓ N]**	
National Register Historic District	**Y [✓ N]**	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

440 W. 103rd Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1893

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

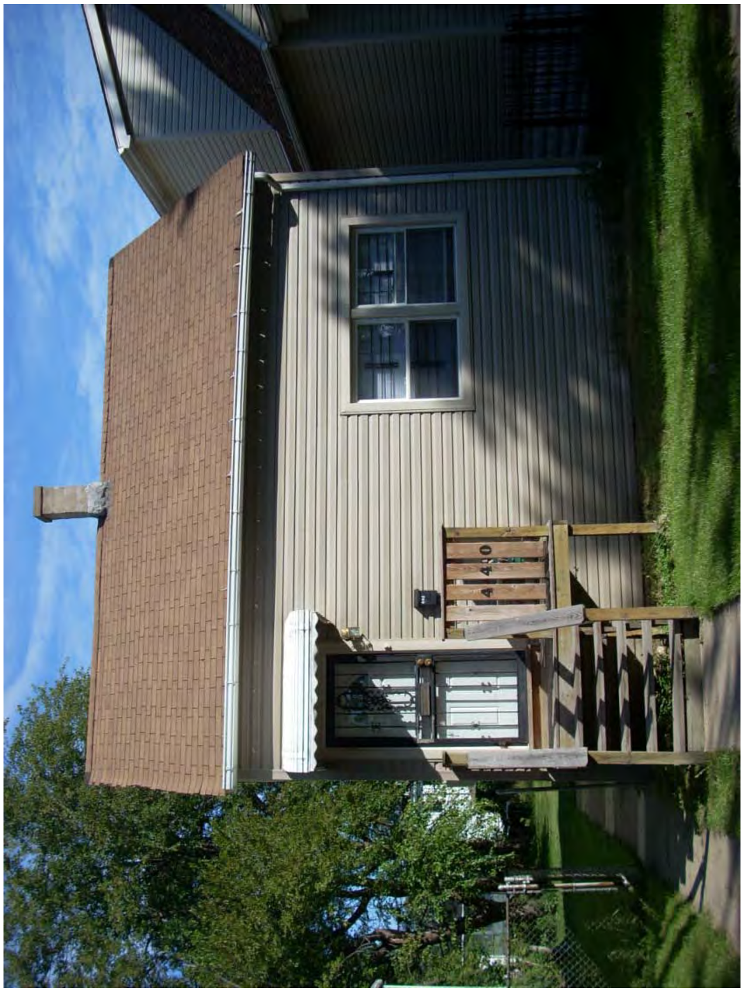
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 31 October 2012

Photos with Captions:
South façade of a one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story house in the Roseland community is situated on a raised concrete block basement and is covered with synthetic siding. The building has a side-gabled roof covered with asphalt shingles. The front elevation has an off-center metal storm door topped by a metal awning, non-original wood steps and railings, and a pair of non-original one-over-one aluminum-sash windows. This house lacks integrity and any distinguishing architectural features and is not eligible for individual listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement door, windows, and cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

455 W. 103rd Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1908

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

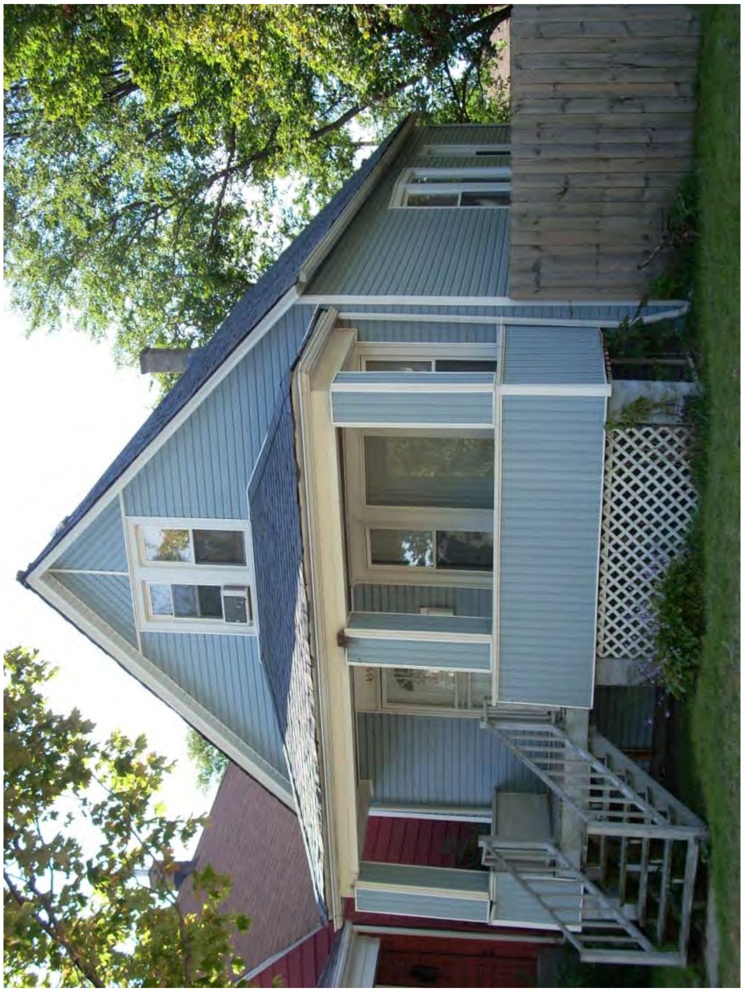
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 10 October 2012

Photos with Captions:
North façade of a one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story frame cottage in the Roseland community is situated on a raised concrete block basement with glass block windows. It is clad with synthetic siding and has a gable roof covered with asphalt shingles. Its front elevation has a full-width hip-roof porch with wood steps, boxed supports, and low aluminum-clad walls. This elevation also has an off-center hollow core metal paneled door with fanlight, a strip of three windows on the first floor, and a pair of windows in the gable. All windows above the raised basement are non-original one-over-one aluminum-sash. This house does not have sufficient integrity or distinguishing features to qualify as individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
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Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement door, windows, and cladding
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung, fixed-pane, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

316 W. 103rd Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Vacant

Property Use

Historic: Commercial

Current: Commercial

Date of Construction: 1962

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

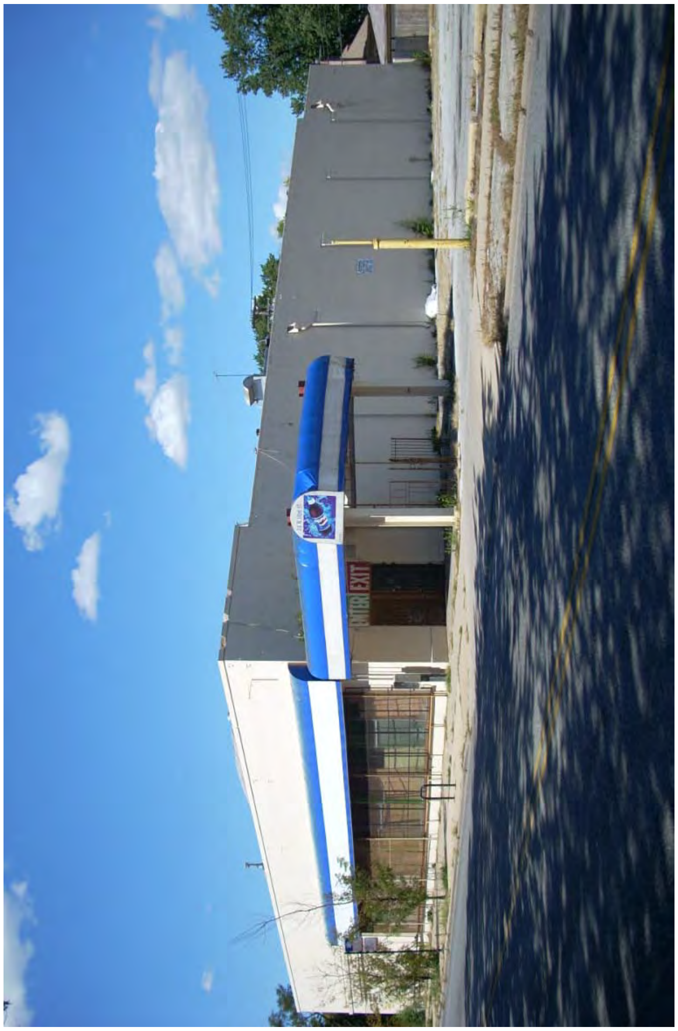
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 16 September 2012

Photos with Captions:
South and east façades of one-story, brick supermarket.



Property Description: **Stories:** 1

This one-story brick-clad former supermarket in the Roseland community has a flat roof, a parapet and a strip of large fixed-pane display windows along its 103rd Street elevation. It has a pair of doors along its east elevation, which are sheltered by a nylon canopy supported by two metal I-beam posts. This building does not have any distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: [✓ Unaltered] Slight Modification Major Alteration			**Additional Notes/Descriptions**
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details None			**Windows** Fixed-pane
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

319 W. 103rd Street

Alternate: 327 W. 103rd St

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Chazap Barber College

Property Use

Historic: Commercial

Current: Educational

Date of Construction: 1953

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

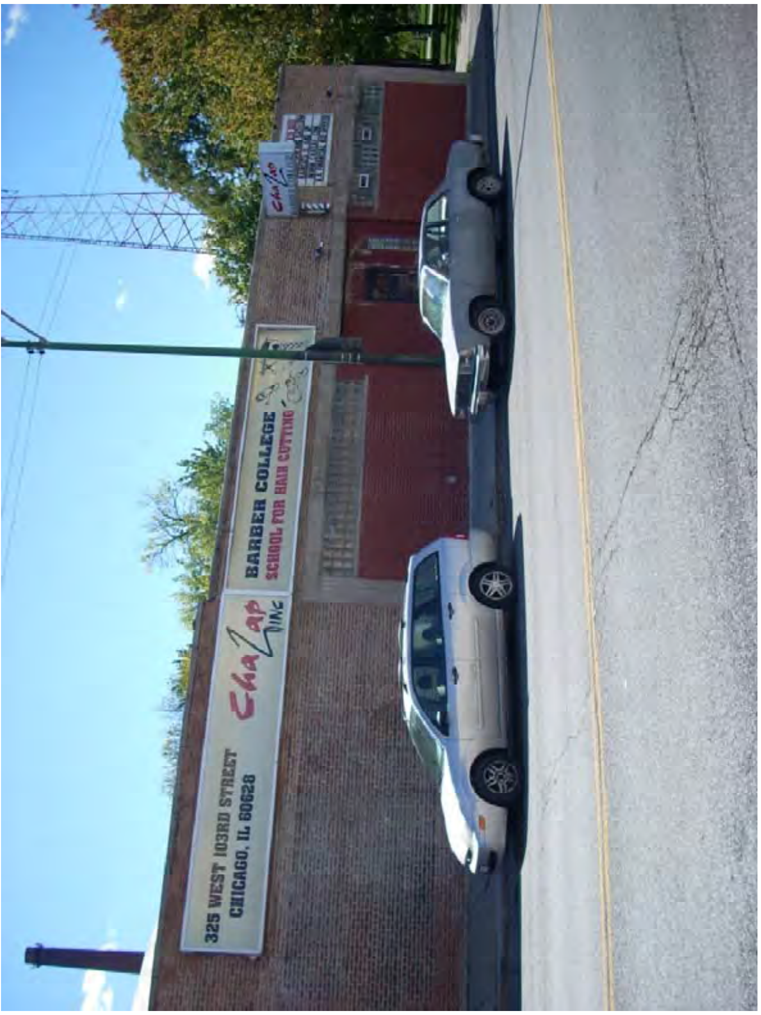
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 16 September 2012

Photos with Captions:
North façade of one-story, brick property



Property Description: **Stories:** 1

This one-story brick-clad barber college building in the Roseland community has a flat roof and parapet. A single course of limestone surrounds its former storefront area, which has been in-filled with red brick, a recessed entrance with metal door, and a continuous strip of glass block windows. The eastern end of the building’s front elevation has a metal overhead door and a single glass door. This building does not feature sufficient integrity to be individually eligible for listing on the National Register.

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Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered	[✓ Slight Modification]	Major Alteration	**Additional Notes/Descriptions** In-filled windows, modified storefront
Condition: Excellent	[✓ Good]	Poor	
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Unknown	**Roof Features** None	**Roof Type** Flat	
Ornamental Architectural Details None			**Windows** Glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Hay, Grain & Feed (1905)

Common/Current: Unknown

Property Address:

403-405 W. 103rd St.

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Vacant

Property Use

Historic: Commercial

Current: Commercial

Date of Construction: 1900

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

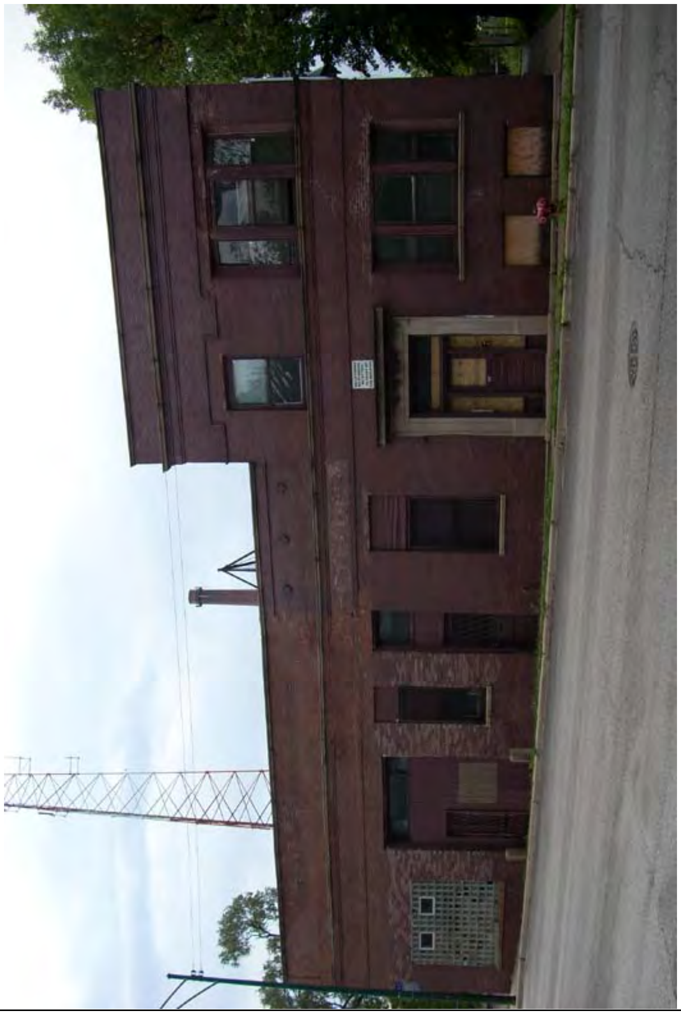
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: Steve Katz

Date: 24 September 2012

Photos with Captions:
North façade of a brick, commercial building.



Property Description: **Stories:** 2

The two-story commercial portion of this building is identified as a “Hay, Grain & Feed” shop in the 1905 Sanborn while the one-story portion is identified as used for related storage. The buildings were joined at a later date. Both are clad in brown face brick and have flat roofs and parapets. The two-story section has an off-center entrance with an original wood door, sidelights, transom, and a stone surround with cornice, as well as a metal cornice. The glass panes in the sidelights and door have been removed and their openings in-filled with wood. It has bay windows on the first and second floors and an additional window opening above the entrance bay. All windows are comprised of one-over-one wood-sash. Detailing includes brick banding and a stone cornice. The one-story part has altered door and window openings, including one large window opening that has been in-filled with glass blocks. Side elevations are clad in common brick. This structure lacks architectural distinction and is not individually eligible for listing on the National Register.

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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Some window openings in-filled with wood and glass block
Condition: Excellent Good [✓ Poor]			
Additional Alterations Two buildings connected after 1905			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details Stone cornice and surround at entrance, brick banding, metal cornice			**Windows** Glass block, double hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

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Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

421 W. 103rd Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1899

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

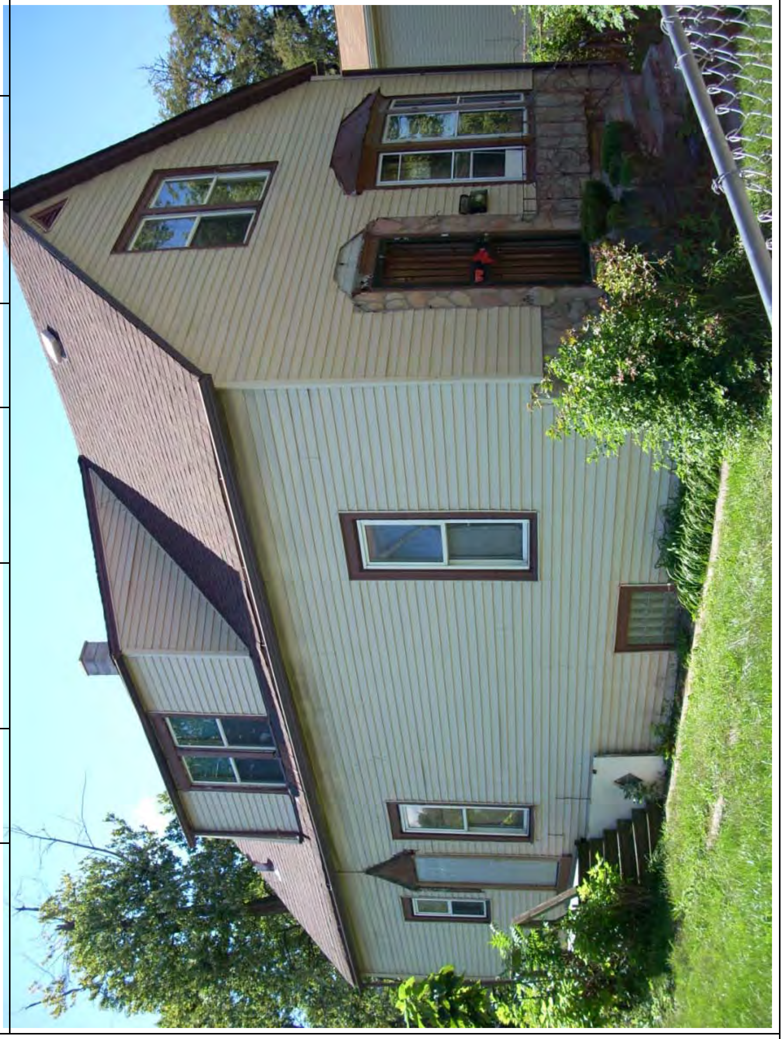
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 16 September 2012

Photos with Captions:
North and east façades of 1.5-story, single family, frame residence.



Property Description: **Stories:** 1.5

This one-and-a-half-story frame house in the Roseland community is situated on a raised basement with glass block windows. It is clad with synthetic siding and has a front gable roof covered with asphalt shingles. Its front elevation has an off-center door, concrete steps and metal railings, and faux stone cladding below the first floor sill line and surrounding the door. There is a three-sided window bay on the first floor and a pair of windows in the gable. Both side elevations feature shed-roofed dormers. Windows throughout the house are non-original one-over-one aluminum-sash. This house does not feature sufficient integrity to qualify as individually eligible for listing on the National Register.

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Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement widows and siding
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** Dormer	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
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Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

424 W. 103rd Street
Alternate: 440 W. 103rd Street (CCA)

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Loving Spirit M.B. Church

Property Use

Historic: Commercial

Current: Religious

Date of Construction: 1889

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

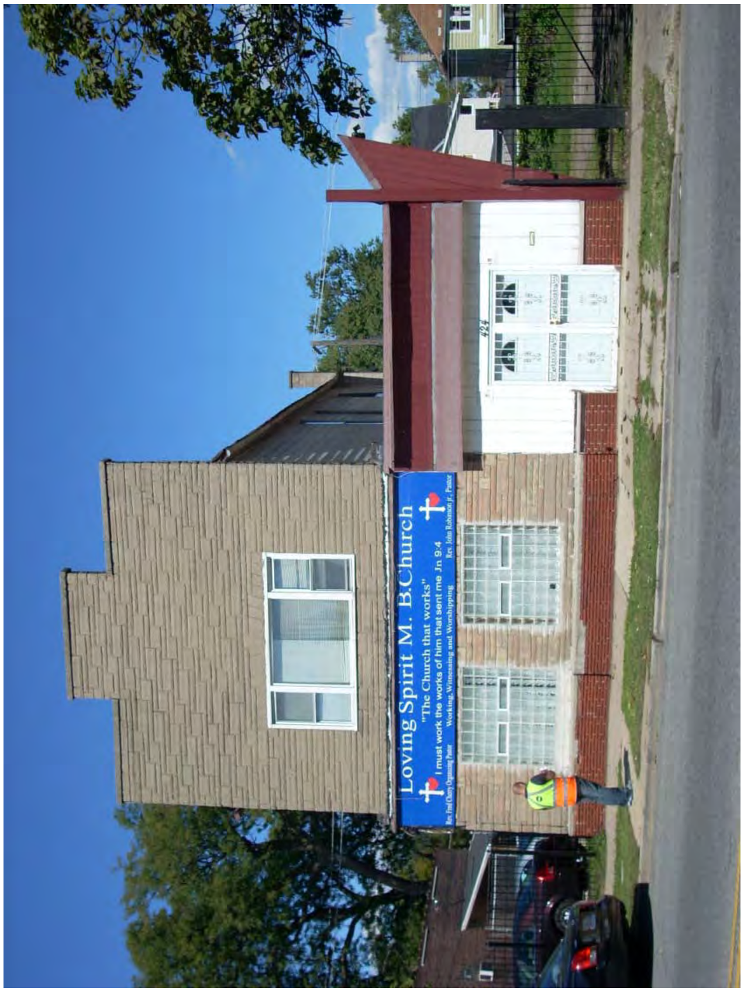
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 9 October 2012

Photos with Captions:
South façade of a two-story, frame, religious building.



Property Description: **Stories:** 2

This two-story frame building in the Washington Heights community has a gable roof covered with asphalt shingles that is obscured by a false front with faux stone siding and high stepped parapet. The first floor has two large window openings that are in-filled with glass block. The second floor has a non-original picture window flanked by one-over-one aluminum-sash windows. The building has a one-story flat-roofed wing. The wing's front elevation is clad with vertically laid wood boards above a brick base. It has a pair of non-original hollow core metal paneled doors with fanlights. The wing also features decorative modern angled wood pylons at its corner and along its side elevation. This building does not feature sufficient integrity to qualify as individually eligible for listing on the National Register.

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Structural Survey

Integrity: Unaltered	[✓ Slight Modification]	Major Alteration	**Additional Notes/Descriptions** Replacement windows, doors, and cladding
Condition: [✓ Excellent]	Good	Poor	
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding, brick, faux stone	
Roof Material Asphalt shingle	**Roof Features** Parapet	**Roof Type** Gable, flat	
Ornamental Architectural Details Stepped parapet			**Windows** Double-hung, fixed-pane, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

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Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

453 W. 103rd Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1878

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

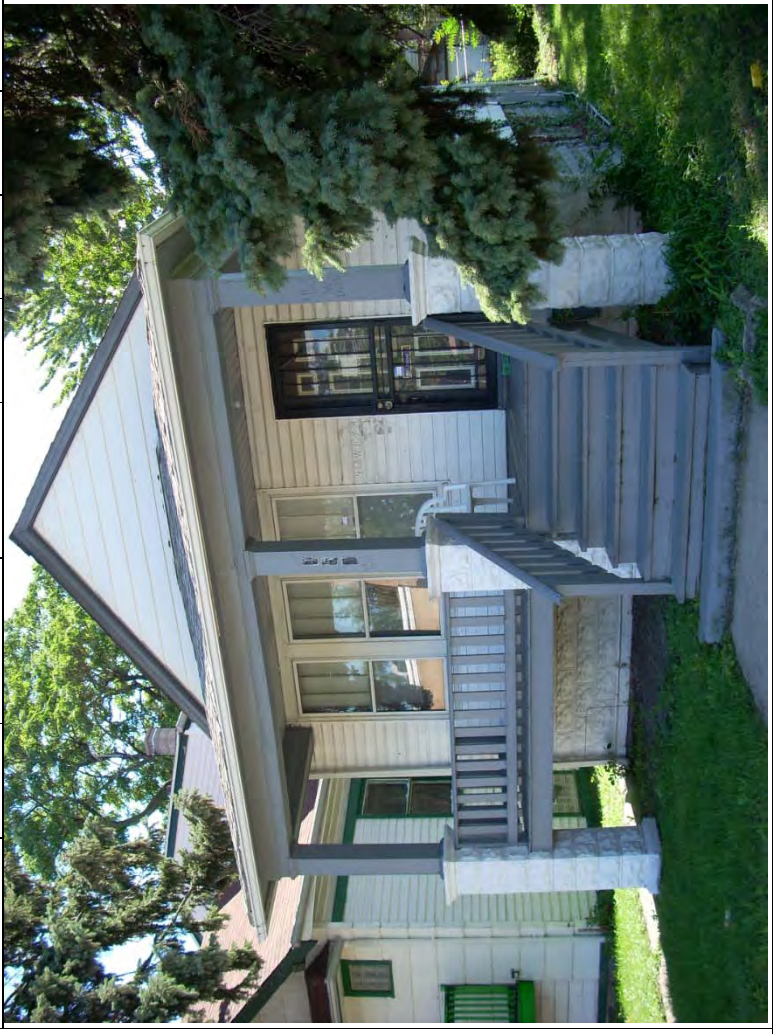
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 16 September 2012

Photos with Captions:
North façade of one-story, frame, single-family residence.



Property Description: **Stories:** 1

This one-story frame cottage in the Roseland community sits on a raised concrete block basement with glass block windows. It is clad with synthetic siding and has a gable roof covered with asphalt shingles. Its front elevation features a full-width wood porch with wooden steps, wooden railing, and supports consisting of faux stone piers topped by squat, square columns. It has an off-center hollow core metal door and a strip of three non-original three-over-one windows. This house does not display distinguishing architectural features and is not individually eligible for listing on the National Register.

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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement door, windows, and cladding
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details Square columns			**Windows** Double-hung, glass block
Outbuildings (*Number and Description*) Garage			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
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Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

748 W. 103rd Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Vacant

Property Use

Historic: Commercial

Current: Commercial

Date of Construction: 1928

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

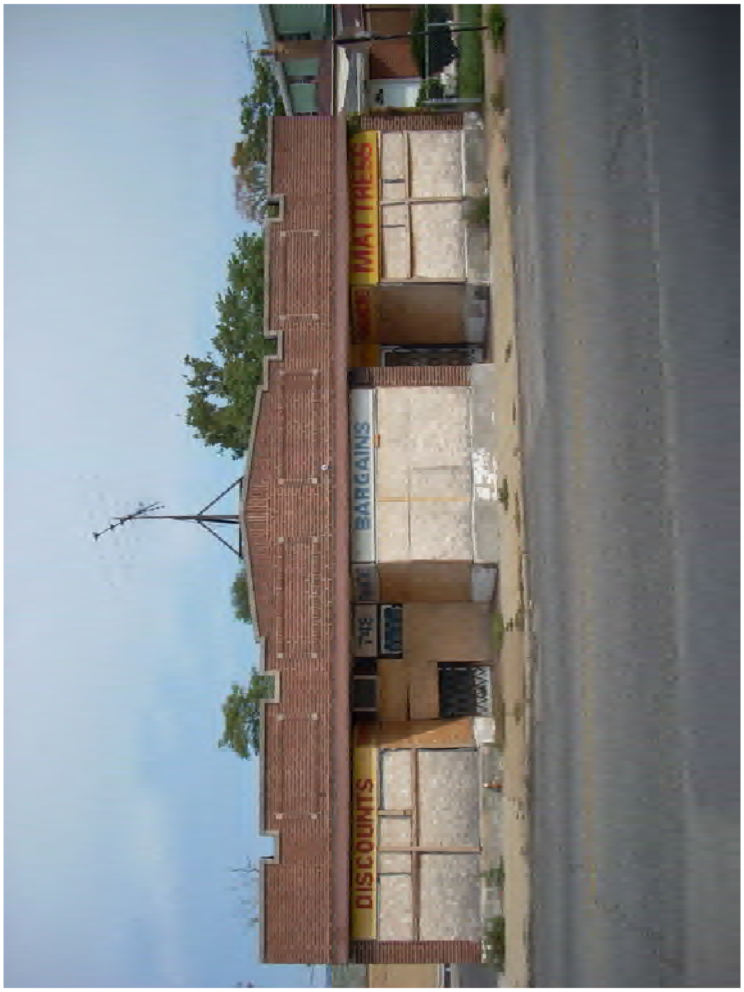
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 24 October 2012

Photos with Captions:
South façade of a brick, one-story, commercial building.



Property Description: **Stories:** 1

This one-story brick-clad commercial building in the Washington Heights community has a flat roof and shaped parapet with concrete coping. Its front elevation has three storefronts that have been covered with plywood and three non-original glass doors with transoms that have largely been covered with plywood as well. Detailing includes brick panels with stone insert blocks. The rear elevation windows have been in-filled with brick. This building lacks integrity and distinctive architectural features and is not individually eligible for listing on the National Register.

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Rear windows in-filled
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details Shaped parapet with concrete coping, brick panels, stone insert blocks			**Windows** Covered
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
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Marengo, Illinois 60152
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Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

814-824 W. 103rd Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Gee-Gees, Nu-Era, Tiquisi, Bomber

Property Use

Historic: Commercial

Current: Commercial

Date of Construction: 1958

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

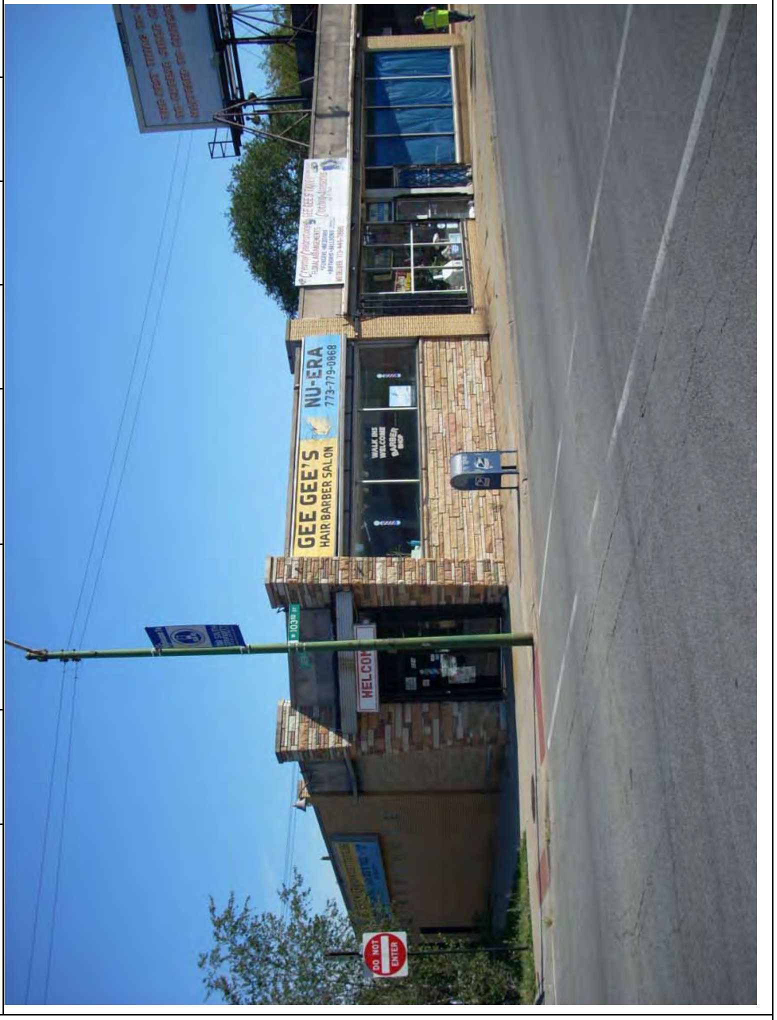
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 13 September 2012

Photos with Captions:
East and south façades of one-story, brick commercial property.



Property Description: **Stories:** 1

This one-story, brick-clad, commercial building at the corner of 103rd and Green streets in the Washington Heights community has a flat roof, parapet, and three storefronts with non-original windows and glass doors. The corner storefront has been re-clad with faux stone and has two piers flanking its glass double-doors. This building does not feature sufficient distinguishing features to qualify as eligible for individual listing on the National Register.

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Structural Survey

Integrity: Unaltered	[✓ Slight Modification]	Major Alteration	**Additional Notes/Descriptions** Replacement doors, windows, cladding
Condition: Excellent	[✓ Good]	Poor	
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Faux stone, brick	
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details None			**Windows** Fixed-pane
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
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Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

262 W. 104th Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1910

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

Vernacular

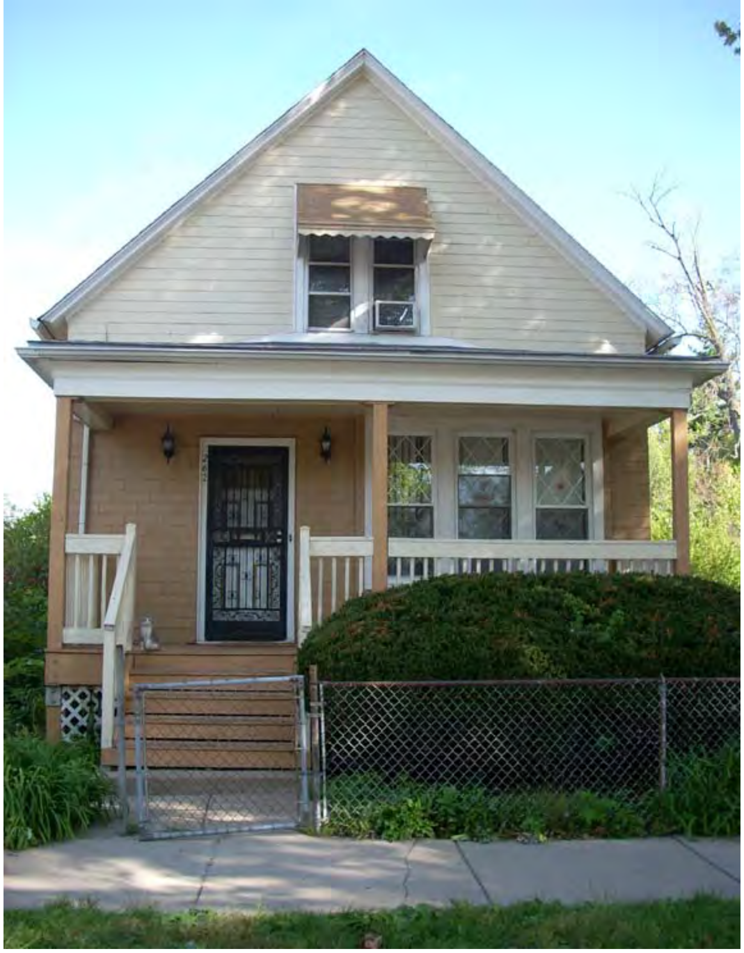
Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 16 October 2012

Photos with Captions:

South façade of a one-and-a-half-story, single family, frame residence.



Property Description: **Stories:** 1.5

This one-and-a-half-story house in the Roseland community is situated on a raised concrete block basement with glass block windows and is clad with either synthetic siding or wide wood shingles. The building has a front gable roof covered with asphalt shingles. Its front elevation has a full-width, flat-roofed, wood porch with a frieze band and non-original straight railings and posts. There is an off-center entrance with a metal storm door and non-original windows: a strip of three double-hung windows on the first floor and paired double-hung windows in the gable. The east elevation has a gable wall dormer. This house lacks integrity and distinguishing architectural features and is not individually eligible for listing on the National Register.

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Structural Survey

Integrity:

Unaltered [✓ Slight Modification] Major Alteration

Additional Notes/Descriptions

Replacement door and windows.

Condition:

[✓ Excellent] Good Poor

Additional Alterations

Unclear whether cladding is original

Structure Usage	**Exterior Wall Surface**
Current: NA Historic: NA	Synthetic siding or Wood shingles

Roof Material	**Roof Features**	**Roof Type**
Asphalt	Dormer	Gable

Ornamental Architectural Details

Frieze band

Windows

Double-hung, glass blok

Outbuildings (*Number and Description*)

None

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

328 W. 104th Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1923

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

Craftsman

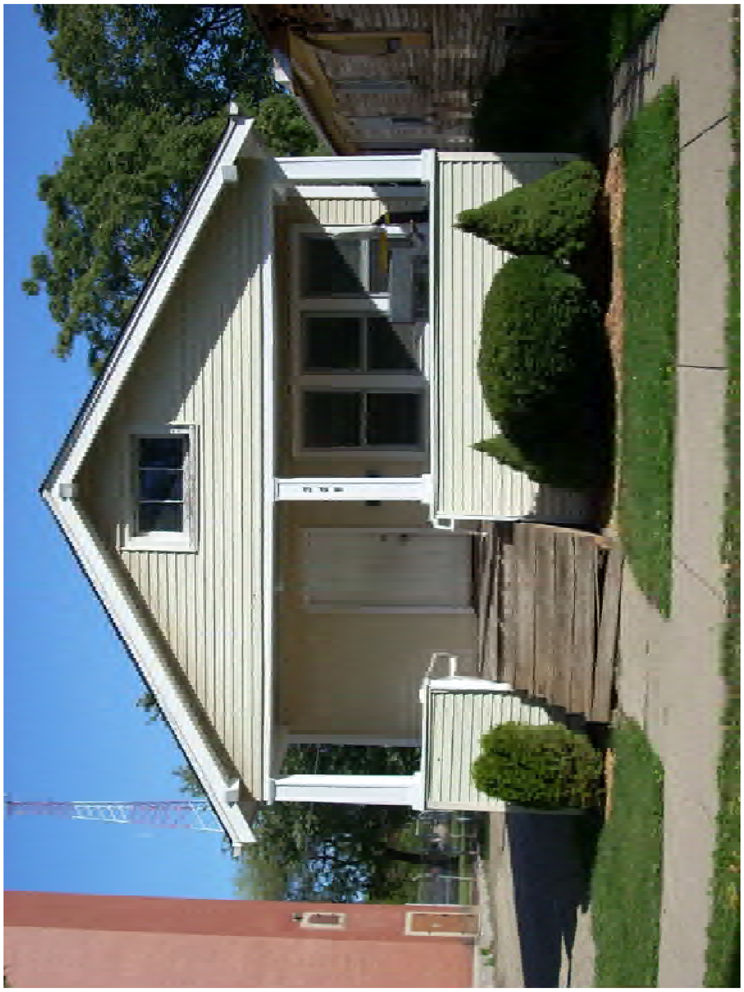
Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 16 October 2012

Photos with Captions:

South façade of a one-story, single family, frame residence.



Property Description:

Stories: 1

This one-story Craftsman style bungalow in the Roseland community is situated on a raised basement and clad with synthetic siding. The building has a front gable roof covered with asphalt shingles and overhanging eaves with decorative rafters. Its roof overhangs to shelter the full-width wood porch with supports consisting of low square wood columns atop synthetic-clad porch walls. The front elevation has an off-center non-original hollow core metal paneled door, a strip of three non-original double-hung windows, and an original wood casement window in the attic gable. This house lacks integrity and distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement door and windows
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingles	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details Exposed rafters, square columns on porch			**Windows** Double-hung, casement
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
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Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

335 W 104th Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1919

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

Vernacular

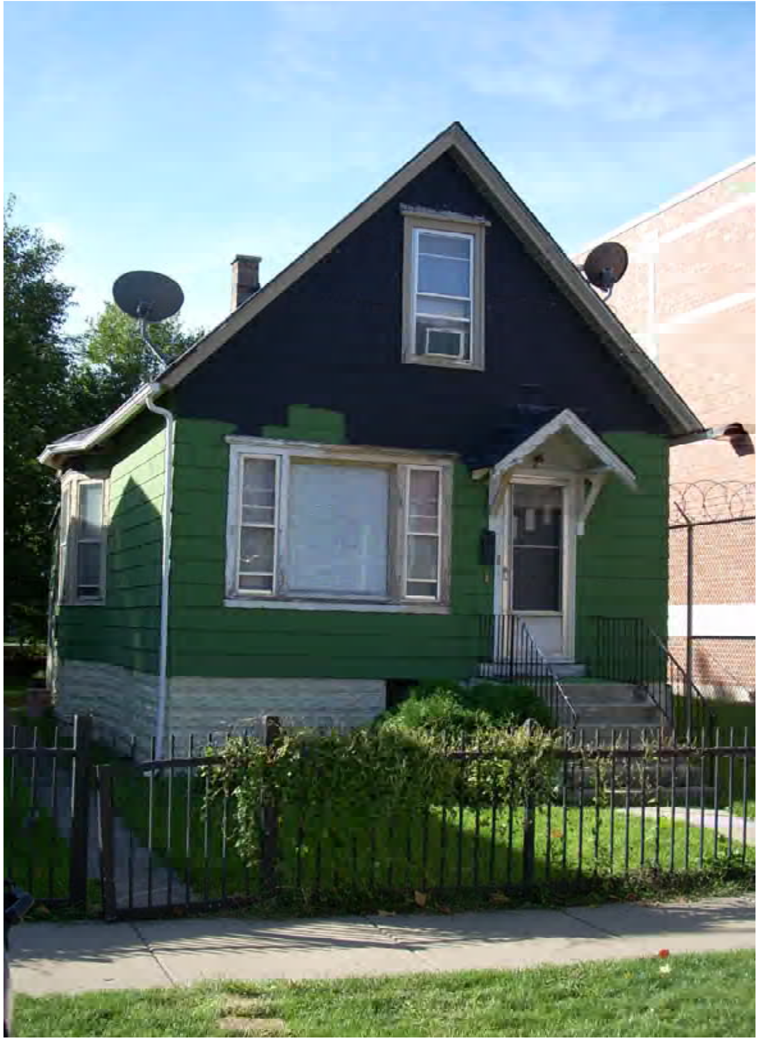
Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 16 October 2012

Photos with Captions:

North façade of a one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story house in the Roseland community is situated on a raised concrete block basement with glass block windows and is clad with shingles. The building has a front gable roof covered with asphalt shingles. The front elevation has an off-center door with bracketed gable hood, concrete steps with metal railings, a picture window flanked by double-hung windows, and a non-original one-over-one window in the gable. The east elevation has a three-sided bay window. This house lacks integrity and distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
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Structural Survey

Integrity: [✓ Unaltered] Slight Modification Major Alteration				**Additional Notes/Descriptions**
Condition: Excellent [✓ Good] Poor				
Additional Alterations Some windows have aluminum storms				
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Wood shingles		
Roof Material Asphalt	**Roof Features** None	**Roof Type** Gable		
Ornamental Architectural Details Bracketed hood above entrance				**Windows** Double-hung, glass block
Outbuildings (*Number and Description*) None				

Local Landmark	**Y [✓ N]**	
National Register Historic Places	**Y [✓ N]**	
National Register Historic District	**Y [✓ N]**	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

310 W. 104th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1923

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

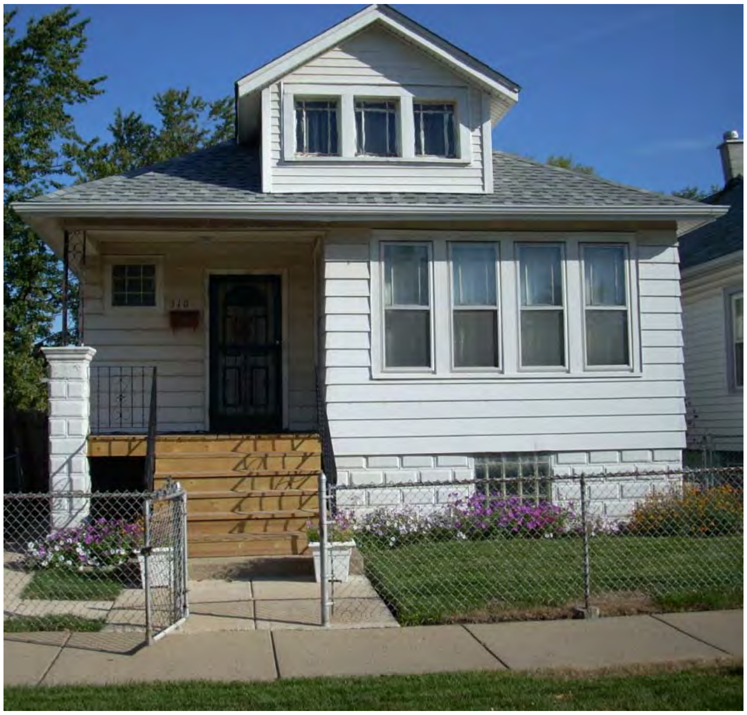
Craftsman

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 15 October 2012

Photos with Captions:
South façade of a one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story Craftsman bungalow in the Roseland community is situated on a raised concrete block basement with glass block windows. The residence is clad with synthetic siding, has a hip roof covered with asphalt shingles, overhanging eaves, and a gable dormer with three original wood casement windows. The front elevation features a strip of four one-over-one wood-sash windows and a recessed corner porch with a hollow core metal door, an adjacent casement window, wood steps, metal railings, and a corner support consisting of a low faux stone pier topped by a short open metal post. This house lacks integrity and distinguishing architectural features and is not individually eligible for listing on the National Register.

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Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity:

Unaltered [✓ Slight Modification] Major Alteration

Additional Notes/Descriptions

Replacement door and cladding

Condition:

[✓ Excellent] Good Poor

Additional Alterations

Structure Usage Current: NA Historic: NA	**Exterior Wall Surface** Synthetic siding

Roof Material Asphalt shingle	**Roof Features** Dormer	**Roof Type** Hip

Ornamental Architectural Details

None

Windows

Double-hung, casement, glass block

Outbuildings (*Number and Description*)

None

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Chicago Fire Department. Engine Company #93

Property Address:

324 W. 104th Street
Alternate: 328-330 W. 104th Street

HAARGIS Number:

140602

Present Owner and /or Occupant:

Chicago Fire Department

Property Use

Historic: Public

Current: Public

Date of Construction: 1917

Architect's Name: Charles W. Kallal

Builder/Contractor: Butler & Co. General Contractors

Architectural Style:

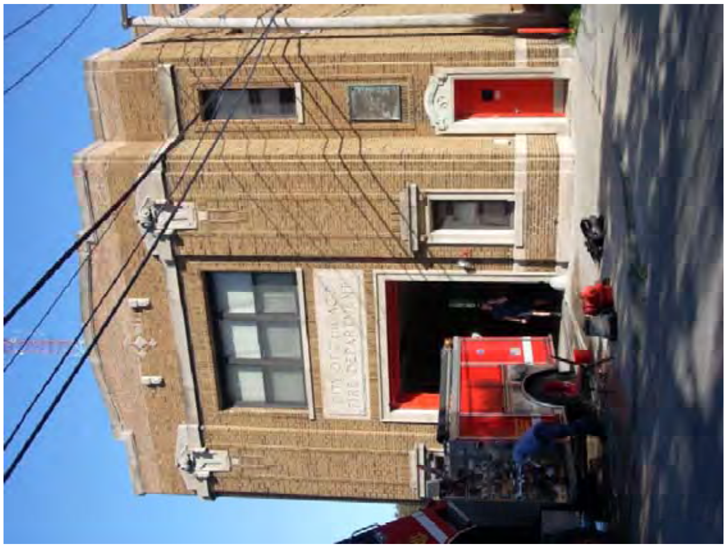
Classical Revival

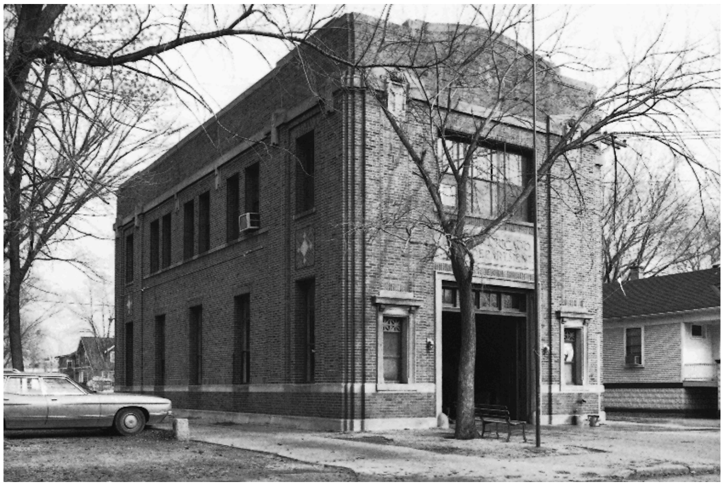
Prepared By: J. Martinez, M. C. Bird, J. Gaurino

Photo By: S. Katz

Date: 15 October 2012

Photos with Captions:
South façade of a brick, two-story, fire station (above), HAARGIS (below)





Property Description: **Stories:** 2

This two-story firehouse in the Roseland community is clad with light brown face brick and has a flat roof and a parapet with concrete coping. Its front elevation has a two-story projecting pavilion, an overhead garage door, two window openings, an off-center hollow core metal door on the first floor, and a strip of three windows and a single window on the second floor. All windows are non-original one-over-one aluminum sash. The spandrel area between the garage door and the windows above features a large stone sign plate inscribed with the words, “City of Chicago Fire Department.” The spandrel area between the corner door and window above has a metal plate identifying the 1917 construction date and the names of a series of people associated with the building’s construction, including the mayor, alderman, city architect, and contractor. Detailing includes stone door and window surrounds on the first floor, bracketed stone window lintels, concrete belt courses, and brick pilasters topped by stone panels with the City of Chicago’s “Y” motif and decorative scrolls. The “Y” motif is also situated above the off-center door. This building is

recommended as eligible for individual listing on the National Register under Criterion C for architecture. It is a rare extant example of an early twentieth-century neighborhood firehouse in Roseland, has largely retained its original building materials and detailing, and still functions as a firehouse.

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement doors and windows
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details Concrete coping, stone sign plate, metal info plate, bracketed stone window lintels, concrete belt courses, brick pilasters with stone panels (including city motif and scrolls)			**Windows** Double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? Yes	**A B** [✓ **C**]	**Significance:** Rare example of an early twentieth century firehouse in Roseland.

Additional Comments:

CHRS coded orange: property possesses some architectural feature or historical association that made it potentially significant in the context of the surrounding community.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

325 W. 104th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1924

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

Vernacular

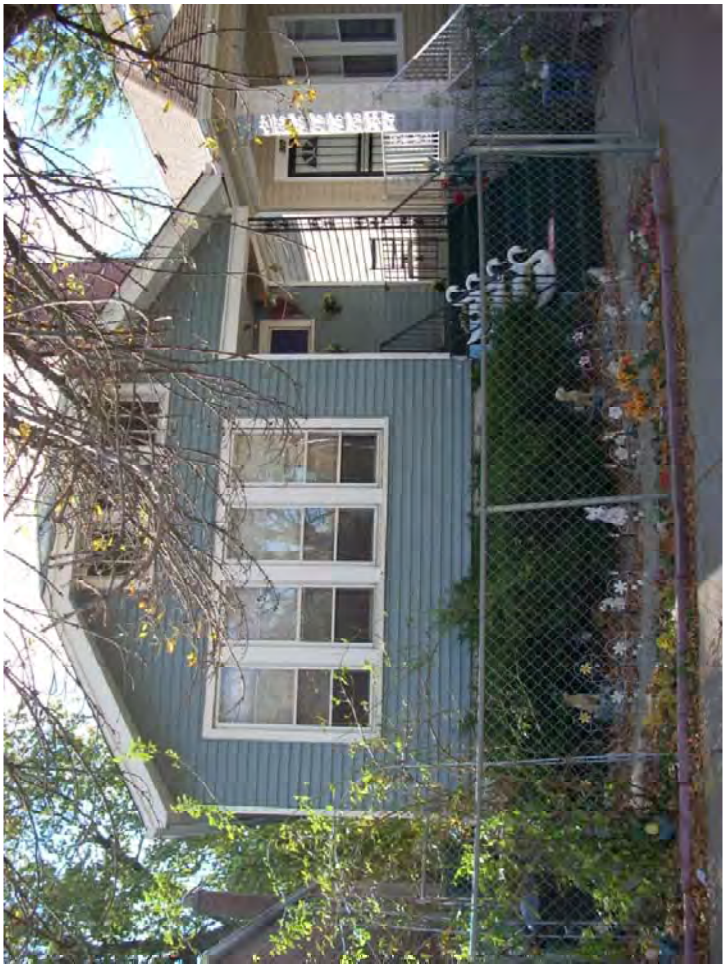
Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 30 October 2012

Photos with Captions:

North façade of a one-story, single family, frame residence



Property Description: **Stories:** 1

This one-story house in the Roseland community is situated on a raised concrete block basement and is clad with synthetic siding. The building has a hip-on-gable roof covered with asphalt shingles. The front elevation has a recessed corner porch with wood steps, metal railings, and an open metal corner post. Additional features include a front door tucked into the side of the living room bay, a casement window, a strip of four non-original one-over-one aluminum-sash windows on the first floor, and a strip of three single-pane casement windows in the gable. This house lacks distinctive architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows and cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Hip-on-gable	
Ornamental Architectural Details None			**Windows** Double-hung, casement
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Roseland Pumping Station

Common/Current: Roseland Pumping Station

Property Address:

351 W 104th Street

HAARGIS Number:

140603

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Industrial

Current: Industrial

Date of Construction: 1911

Architect's Name: William G. Krieg

Builder/Contractor: Not in CHRS

Architectural Style:

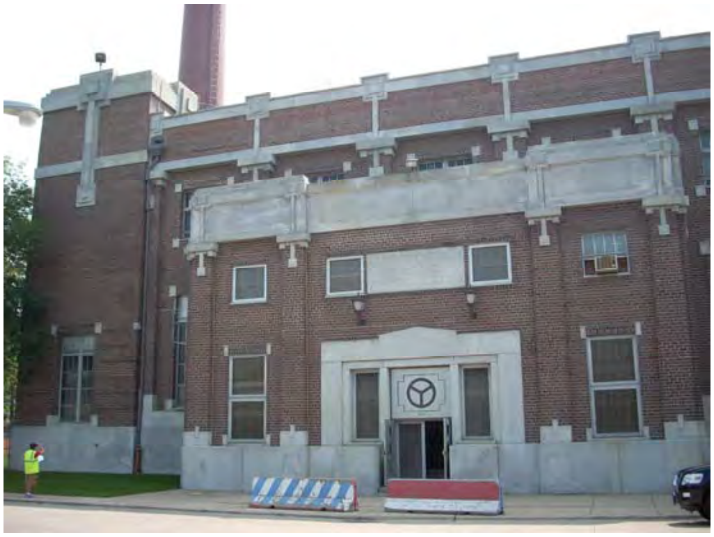
Prairie

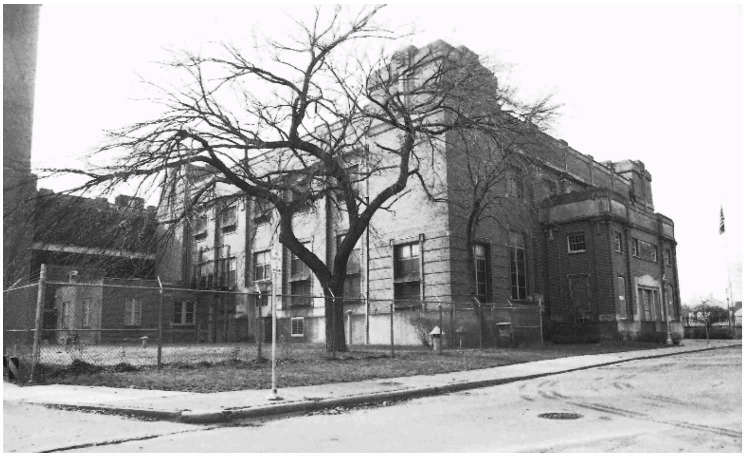
Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: Steve Katz, HAARGIS

Date: 24 September 2012

Photos with Captions:
North façade of brick pumping station (above), north and east facades of pumping station from HAARGIS (below).





Property Description: **Stories:** 2

The two-story Prairie style Roseland Pumping Station is clad in brown brick. It has a high limestone watertable, a flat roof, parapet, and two square towers at the corners of the front (Roseland) elevation. The front elevation features a projecting, two-story flat-roofed entrance pavilion with a pair of centrally located glass double-doors, sidelights, and a stone panel above that features the City of Chicago’s “Y” emblem in metal. The entrance has a smooth stone surround. Above the entrance is a limestone panel incised with the words: “City of Chicago Roseland Pumping Station.” Detailing on the entrance pavilion includes brick pilasters with stone bases, coping, and geometric motifs. The parapet is clad in limestone and features decorative geometric motifs. The building’s fenestration is largely comprised of multi-paned steel sash windows, some of which have transoms.

This is an excellent intact example of a community pumping station with fine integrity that still functions in its original use. It is recommended as individually eligible for the National Register under Criterion C for architecture as a well-preserved example of a community pumping station designed in the Prairie style.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered	[✓ Slight Modification]	Major Alteration	**Additional Notes/Descriptions** View of some windows obscured by aluminum storms; others are original steel sash
Condition: [✓ Excellent]	Good	Poor	
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details Entrance pavilion with brick pilasters; stone bases, coping, cornice, banding, and geometric motifs			**Windows** Fixed-pane, double-hung
Outbuildings (*Number and Description*)			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? Yes	**A B** [✓ **C**]	**Significance:** Excellent example of a well-preserved community pumping station designed in the Prairie style that still functions in its original use.

Additional Comments:

CHRS coded orange: property possesses some architectural feature or historical association that made it potentially significant in the context of the surrounding community.

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

415 W. 104th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1923

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

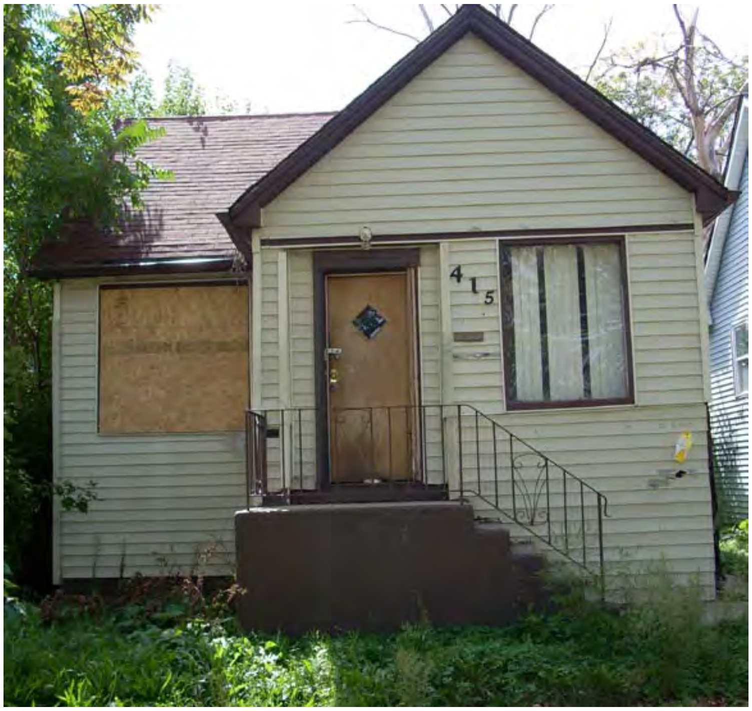
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 10 October 2012

Photos with Captions:
North façade of a one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story T-Plan house in the Roseland community is clad with synthetic siding and has a cross-gabled roof covered with asphalt shingles. Its front elevation has a centrally located wood door with a diamond-shaped window located in a projecting gable front bay with concrete steps with metal railings. There are two window openings on the front façade, one of which is covered with plywood. The other window is fixed-pane or casement. Side elevation window openings are also covered with plywood. This house lacks integrity, does not feature any distinguishing architectural features, and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

<table>
<tr><td colspan="3">Integrity:
Unaltered [✓ Slight Modification] Major Alteration</td><td>Additional Notes/Descriptions
Replacement windows and cladding</td></tr>
<tr><td colspan="3">Condition:
Excellent [✓ Good] Poor</td><td></td></tr>
<tr><td colspan="3">Additional Alterations</td><td></td></tr>
<tr><td colspan="2">Structure Usage
Current: NA
Historic: NA</td><td>Exterior Wall Surface
Synthetic siding</td><td></td></tr>
<tr><td>Roof Material
Asphalt shingles</td><td>Roof Features
None</td><td>Roof Type
Cross-gable</td><td></td></tr>
<tr><td colspan="3">Ornamental Architectural Details
None</td><td>Windows
Fixed-pane or casement; others covered with plywood</td></tr>
<tr><td colspan="4">Outbuildings (<i>Number and Description</i>)
None</td></tr>
</table>

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

430 W. 104th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1927

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

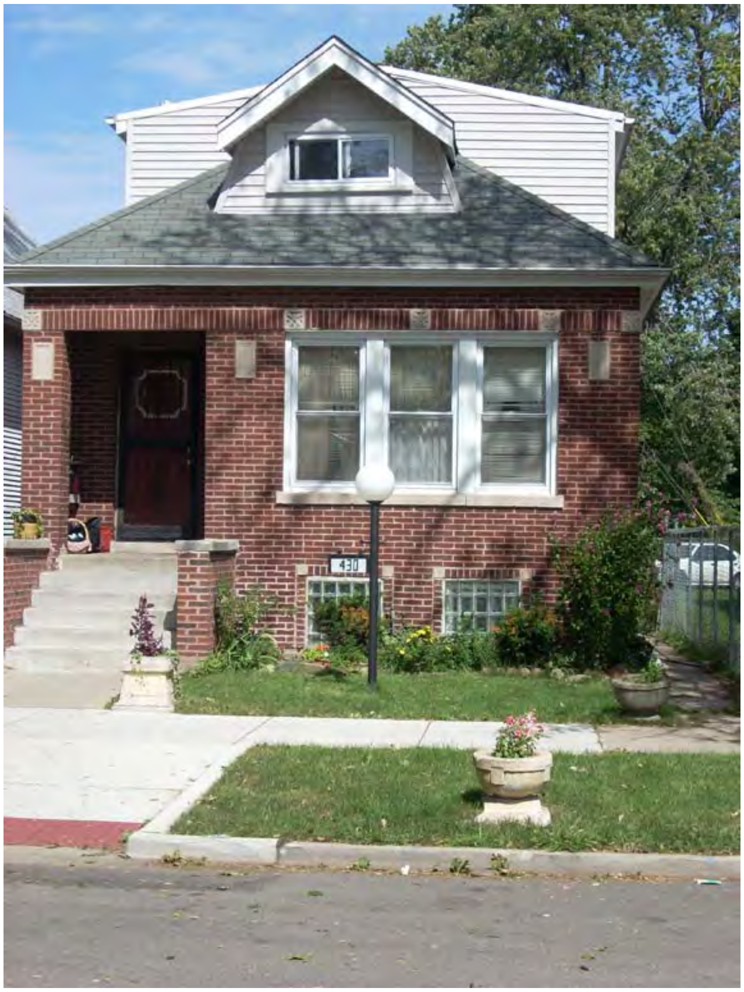
Chicago Style Bungalow

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: Steve Katz

Date: 10 October 2012

Photos with Captions:
South façade of a brick, one-story, single family residence.



Property Description: **Stories:** 1

This one-story, brick-clad house in the Roseland community is situated on a raised brick basement with glass block windows. It has a hip roof covered with asphalt shingles, an aluminum-clad front gable dormer with a pair of sliding glass windows, and a set-back synthetic-clad gable-roofed addition on the second story. The front elevation has a strip of three one-over-one aluminum-sash windows, a metal storm door, and a recessed corner porch with concrete steps, low brick side walls, and a brick corner pier support. Detailing includes decorative concrete block inserts. This house does not feature distinguishing architectural features, does not retain its integrity, and, therefore, is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows and new cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations Second story addition at rear			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick (main), synthetic siding (dormers)	
Roof Material Asphalt	**Roof Features** Dormer	**Roof Type** Hip, Gable	
Ornamental Architectural Details Concrete block inserts			**Windows** Double-hung, glass block, sliding
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

457 W. 104th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1922

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

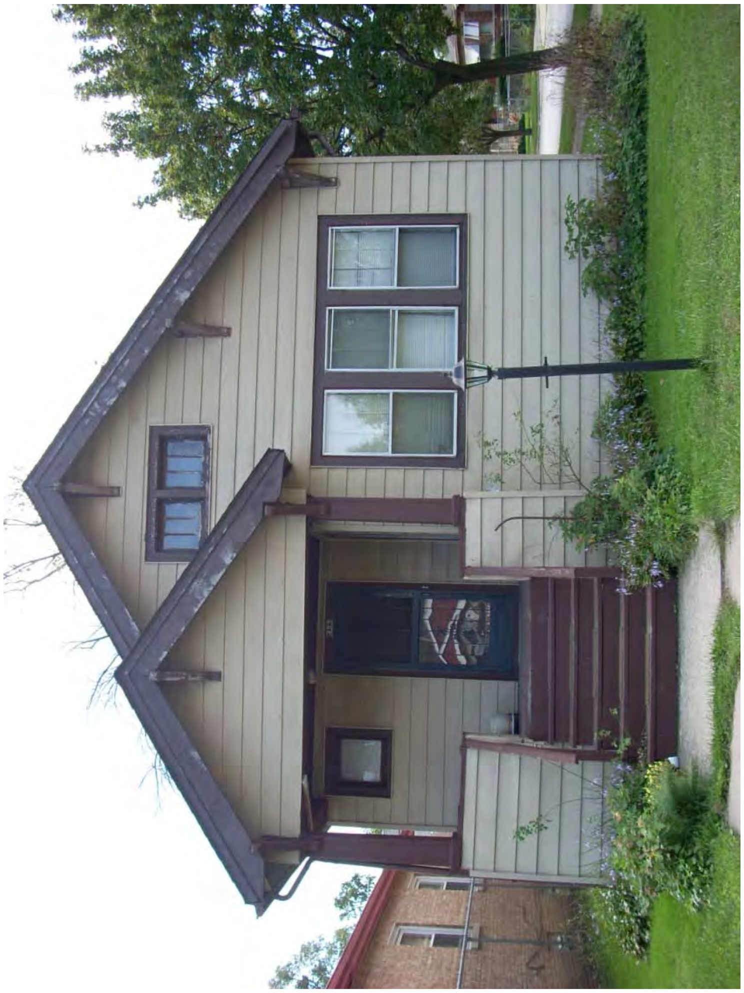
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 12 October 2012

Photos with Captions:
North façade of a one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story cottage in the Roseland community is clad with synthetic siding and has a front gable roof covered with asphalt shingles. The front elevation has a strip of three non-original one-over-one windows, a recessed corner porch with a metal storm door and adjacent casement window, wood steps, and low aluminum-clad sidewalls topped by two squat wood columns supporting the porch’s gabled roof. Decorative knee braces are situated beneath the eaves of the front elevation. The pair of windows in the gable appears to be casements. This house does not have sufficient integrity or distinguishing architectural features to qualify as individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement cladding and some windows
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details Brackets under eaves			**Windows** Double-hung, casement
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

343 W. 105th Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1926

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

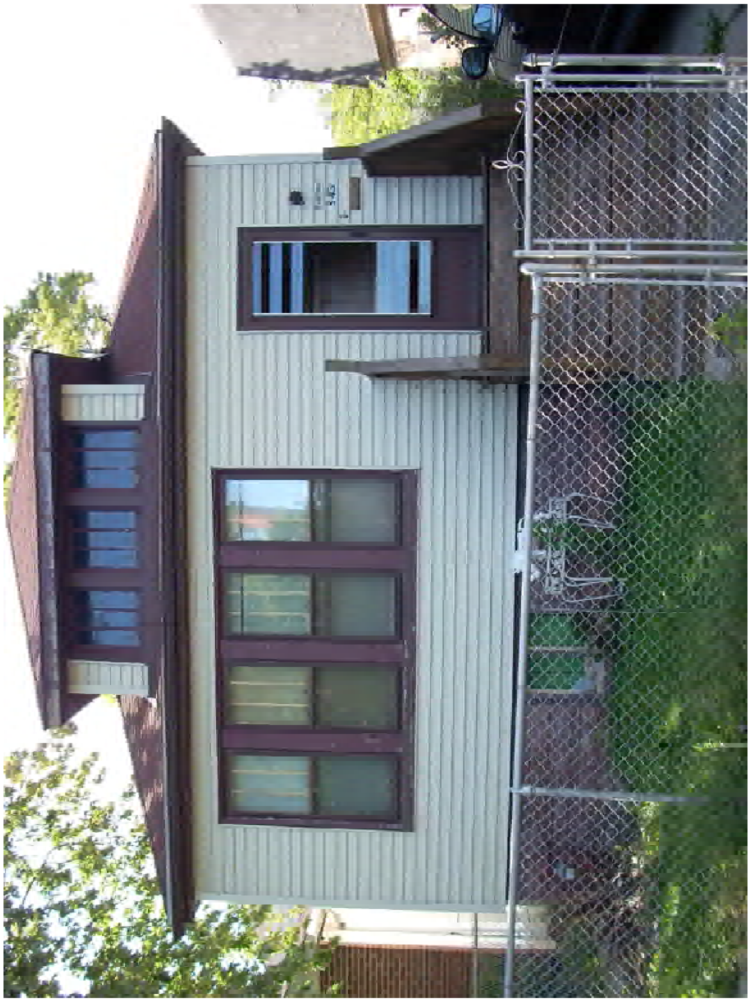
Craftsman

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 16 October 2012

Photos with Captions:
North façade of a one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story, frame bungalow in the Roseland community is situated on a raised concrete block basement and is clad with synthetic siding. The building has a hip roof covered with asphalt shingles and a hip dormer with three original wood casement windows. Its front elevation has an off-center door with a metal storm door, non-original wood steps and railings, and a strip of four double-hung windows. This house lacks integrity and distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

<table>
<tr><td colspan="3">Integrity:
Unaltered [✓ Slight Modification] Major Alteration</td><td>Additional Notes/Descriptions
Replacement cladding and railings</td></tr>
<tr><td colspan="3">Condition:
Excellent [✓ Good] Poor</td><td></td></tr>
<tr><td colspan="3">Additional Alterations</td><td></td></tr>
<tr><td colspan="2">Structure Usage
Current: NA
Historic: NA</td><td>Exterior Wall Surface
Synthetic siding</td><td></td></tr>
<tr><td>Roof Material
Asphalt shingles</td><td>Roof Features
Dormer</td><td>Roof Type
Hip</td><td></td></tr>
<tr><td colspan="3">Ornamental Architectural Details
None</td><td>Windows
Double-hung, casement</td></tr>
<tr><td colspan="4">Outbuildings (<i>Number and Description</i>)
None</td></tr>
</table>

Local Landmark	**Y [✓ N]**	
National Register Historic Places	**Y [✓ N]**	
National Register Historic District	**Y [✓ N]**	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

344 W. 105th Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1925

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

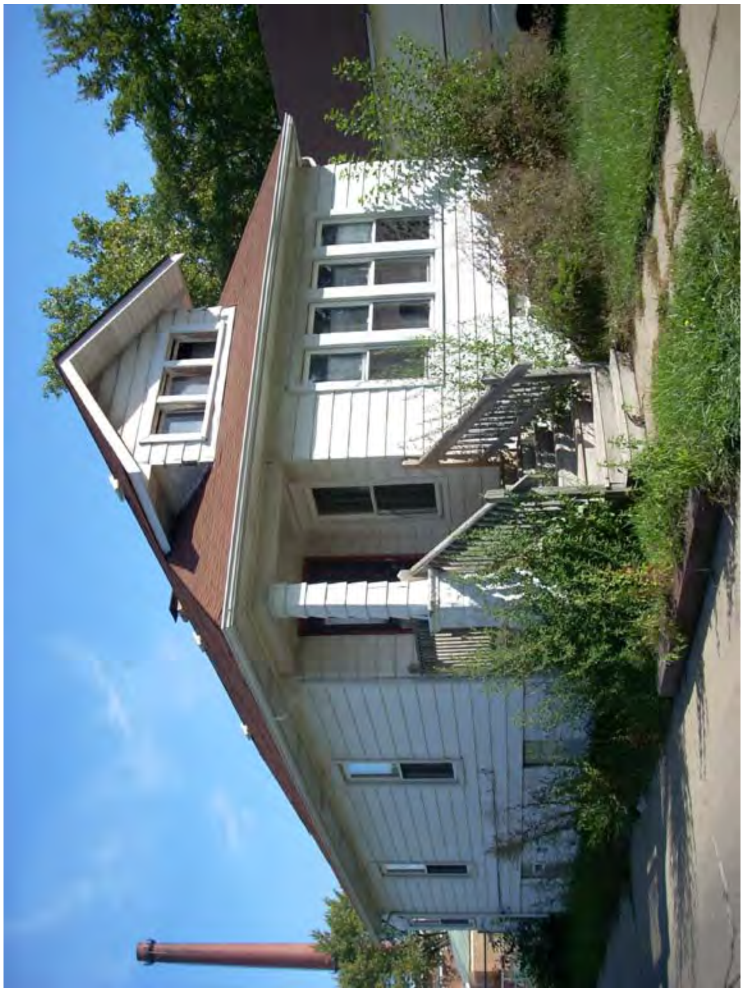
Craftsman

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 16 October 2012

Photos with Captions:
South façade of a one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story Craftsman bungalow in the Roseland community is situated on a raised concrete block basement with glass block windows and is clad with synthetic siding. The building has a hip roof covered with asphalt shingles, overhanging eaves, and a gable dormer with three small casement windows. Its front elevation features a strip of four non-original one-over-one aluminum-sash windows and a recessed corner porch with metal storm door, wood steps and railings, and a corner support consisting of a low faux stone pier topped by a short aluminum-clad post. This house lacks integrity and distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered	[✓ Slight Modification]	Major Alteration	**Additional Notes/Descriptions** Replacement windows and cladding
Condition: Excellent	[✓ Good]	Poor	
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingles	**Roof Features** Dormer	**Roof Type** Hip	
Ornamental Architectural Details None			**Windows** Double-hung, casement, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

411 W. 105th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

AT&T

Property Use

Historic: Industrial

Current: Industrial

Date of Construction: 1960/2005

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

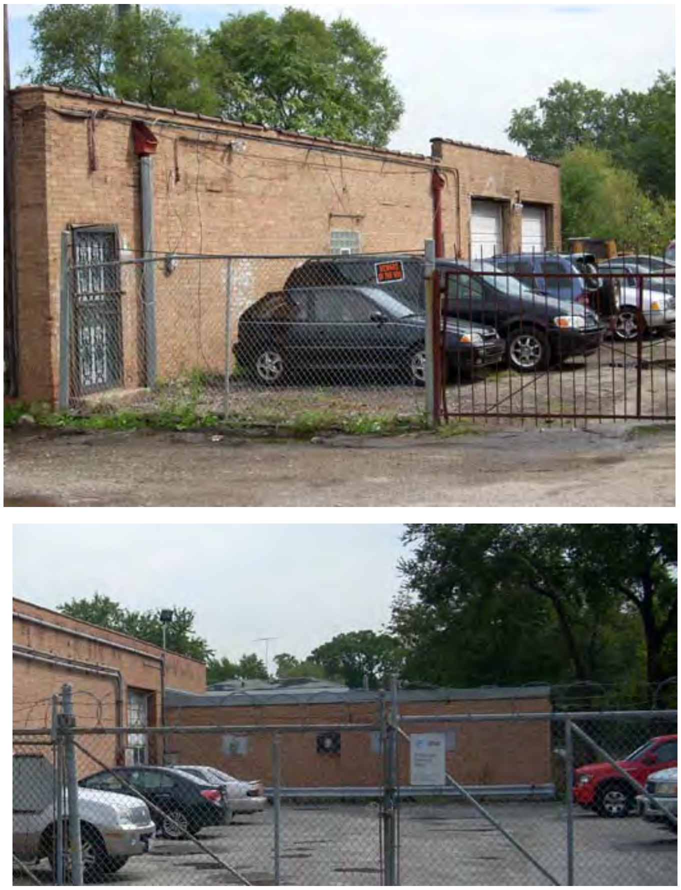
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 25 September 2012

Photos with Captions:
South façade of two, brick, one-story light industrial buildings. The building dating to 1960 is shown in the top photo while the building dating to 2005 is shown in the bottom photo.



Property Description: **Stories:** 1

These one-story brick-clad flat-roofed light industrial buildings in Roseland have overhead garage doors and a hinged hollow metal door opening. The earlier building has a parapet with tile coping. Original window openings along the side elevations have been in-filled with brick or glass blocks with central casement windows. The newer building has a flat roof. These buildings lack any architectural distinction and are not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Bricked over windows
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details None			**Windows** Glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

416 W. 105th Street
Alternate: 410 W 105th St

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Vacant

Property Use

Historic: Commercial (Warehouse, 1938)

Current: Mixed-Use

Date of Construction: 1929

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

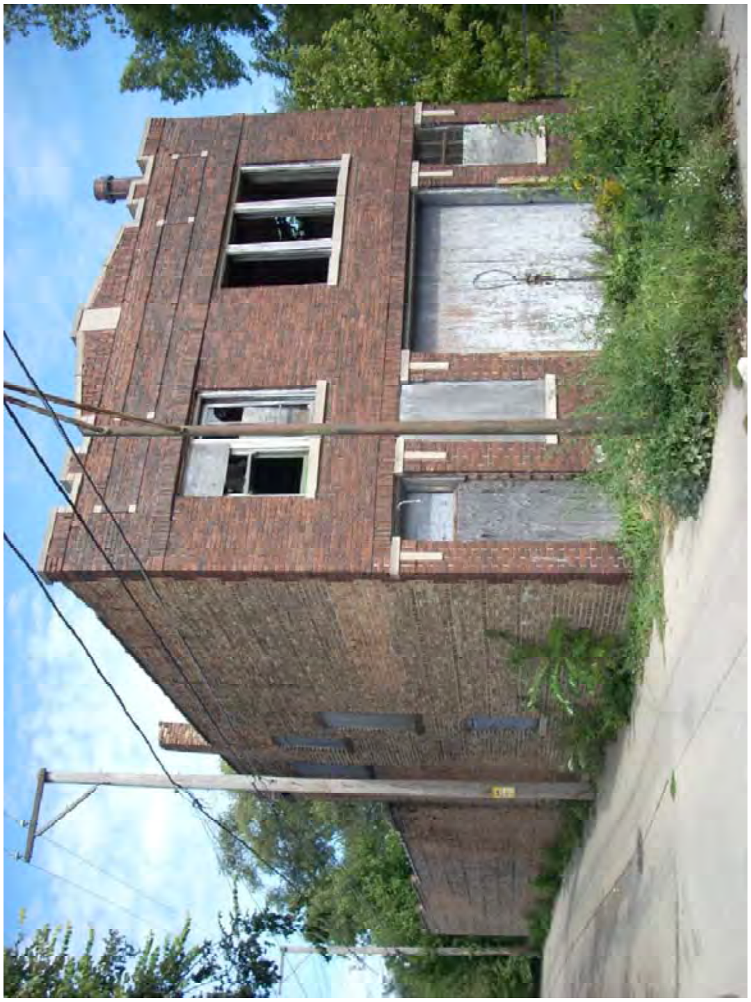
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 12 October 2012

Photos with Captions:
South façade of a brick, two-story, mixed-use building.



Property Description: **Stories:** 2

This two-story building in the Roseland community, a former warehouse later converted to residential use and now abandoned, has a flat roof and shaped parapet with concrete coping. Its front elevation is clad in brown face brick and its side and rear elevations are clad with common brick. The front elevation has an off-center door opening with transom, a garage door opening, and two window openings, all of which are covered with plywood. A portion of one of these window openings is visible and reveals a multi-paned upper sash. The second floor has a pair of window openings and a strip of three window openings, all of which have had their glass panes removed. Detailing includes concrete sills and insert blocks between the first floor openings, two brick soldier courses, and brick stringcourses at the parapet level. This building does not have sufficient integrity or distinguishing architectural features to qualify as individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Abandoned building with broken windows, partially secured with plywood
Condition: Excellent Good [✓ Poor]			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details Concrete sills and insert blocks, brick soldier courses, and brick stringcourses, shaped parapet			**Windows** Covered
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

338 W. 106th Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1913

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

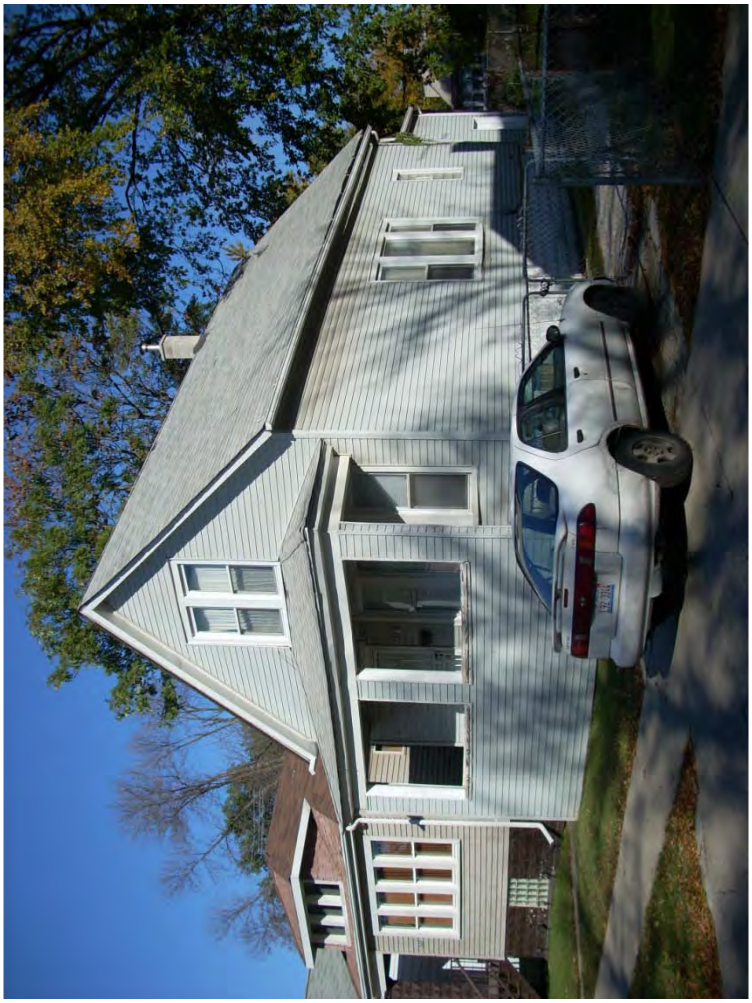
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 30 October 2012

Photos with Captions:
South and east façades of a 1.5-story, single family, frame residence.



Property Description: **Stories:** 1.5

This one-and-a-half-story frame house in the Roseland community is situated on a raised concrete block basement with glass block windows and is covered with synthetic siding. The building has a front gable roof covered with asphalt shingles. The front elevation has a full-width, hip-roof, wood porch with low, synthetic-clad walls, boxed supports, and side-facing steps. The residence also has an off-center metal storm door, a three-sided bay window on the first floor, and paired windows in the gable, all of which feature non-original one-over-one aluminum sashes. This house lacks integrity and distinctive architectural features and is not individually eligible for listing on the National Register.

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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows and cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

340 W. 106th Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1925

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

Craftsman

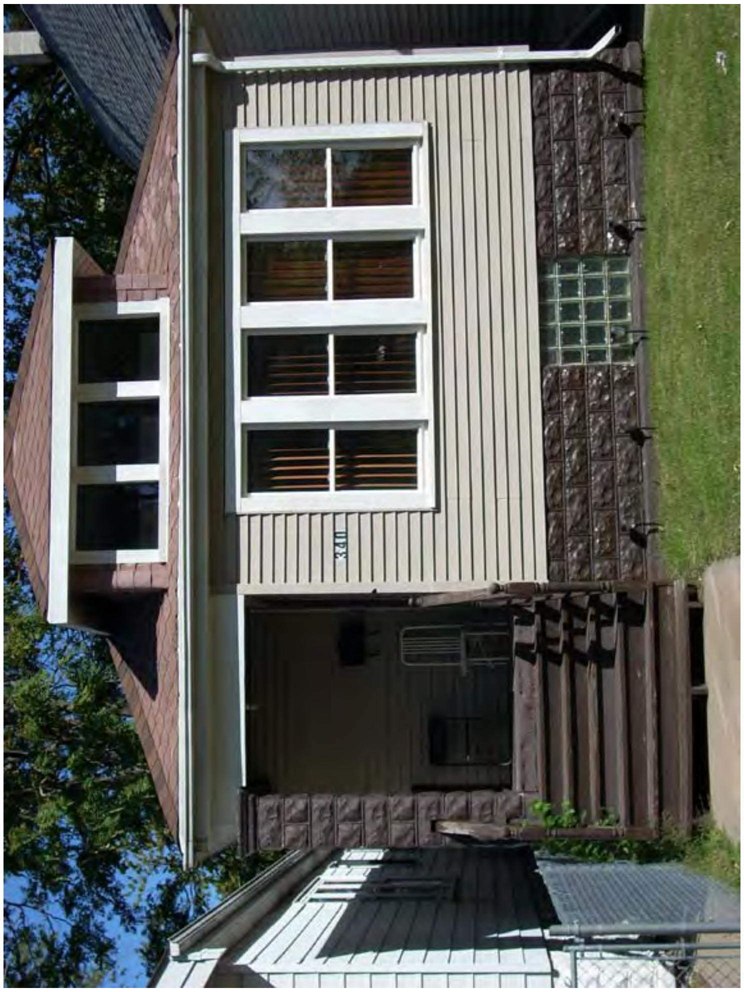
Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 30 October 2012

Photos with Captions:

South façade of a one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story, Craftsman style, frame bungalow in the Roseland community is situated on a raised concrete block basement with glass block windows and is covered with synthetic siding. The building has a hip roof covered with asphalt shingles, overhanging eaves, and a hip dormer with three casement windows. The front elevation has a recessed corner porch with a concrete block corner pier, a front door tucked into the north side of the living room bay, wood steps with wood railings, and a strip of non-original one-over-one aluminum-sash windows. This is an example of a frame Craftsman bungalow, a residential building type that was produced during the 1910s and 1920s. This house does not feature distinguishing architectural elements and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows and cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingles	**Roof Features** Dormer	**Roof Type** Hip	
Ornamental Architectural Details None			**Windows** Double-hung, casement, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

343 W. 106th Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1907

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

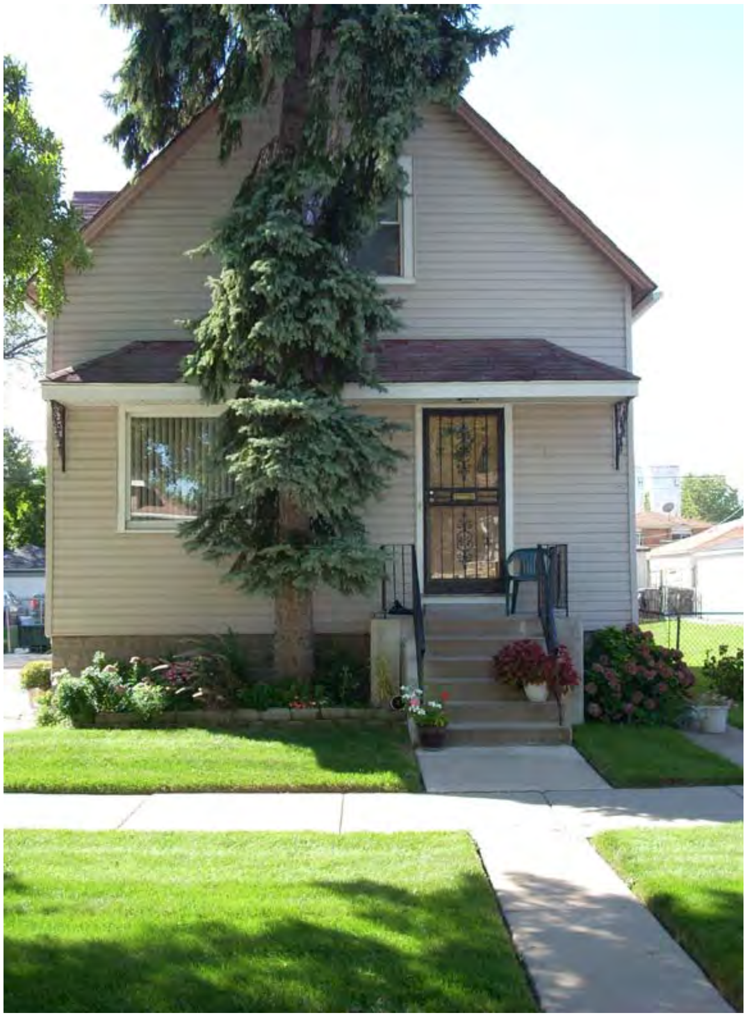
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 16 October 2012

Photos with Captions:
North façade of a 1.5-story, single family, frame residence.



Property Description: **Stories:** 1.5

This one-and-a-half-story house in the Roseland community is situated on a raised concrete block basement with glass block windows and is clad with synthetic siding. The building has a front gable roof covered with asphalt shingles. Its front elevation has a pent roof, off-center door with a metal storm door, concrete steps with metal railings, a large picture window on the first floor, and a pair of non-original one-over-one aluminum sash windows in the gable. Its east elevation has a three-sided window bay with a projecting gable wall dormer directly above. This house lacks integrity and distinguishing architectural features and is not individually eligible for listing on the National Register.

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Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows, cladding, and porch railings
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung, fixed-pane, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

349 W 106th Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1914

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

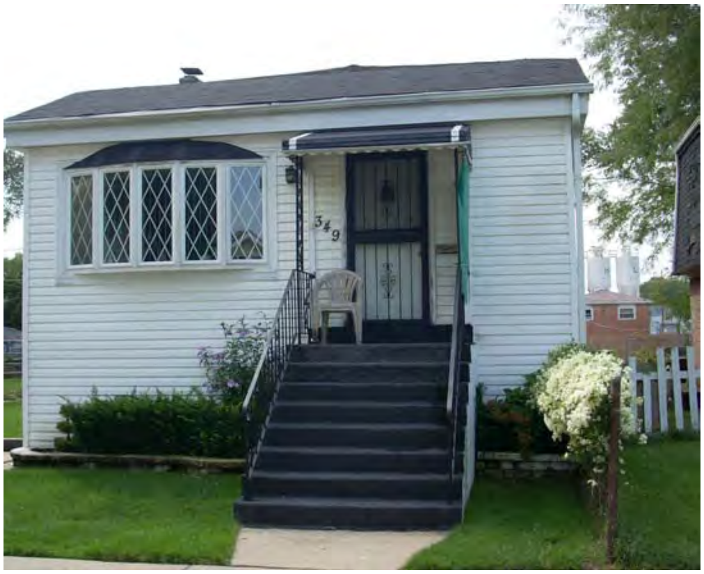
Vernacular

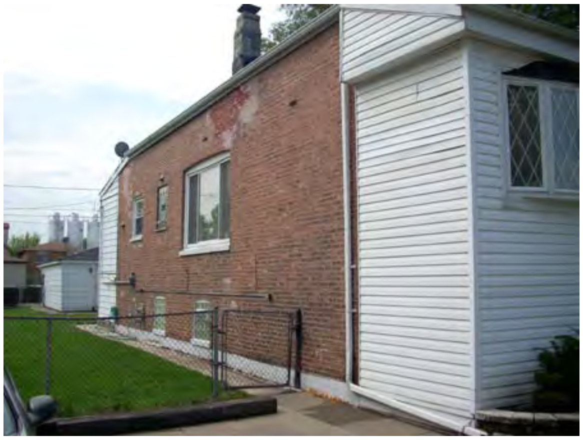
Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: Steve Katz

Date: 25 September 2012

Photos with Captions:
North façade of a brick and vinyl, one-story, single family residence.





Property Description: **Stories:** 1

This building consists of a central, hipped-roof, brick clad structure on a raised basement that was constructed in 1914. Later, shed-roof, vinyl clad additions were constructed on the front and rear of the central brick portion. The front elevation features an off-center porch with concrete steps, metal railings and supports topped by a metal awning roof. It also has a hollow metal front door and a five-sided bow window. This home lacks both integrity and architectural distinction and is not individually eligible for listing on the National Register.

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505 North State Street
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Structural Survey

Integrity:

Unaltered Slight Modification [✓ Major Alteration]

Additional Notes/Descriptions

Replacement windows

Condition:

Excellent [✓ Good] Poor

Additional Alterations

Additions to front and rear

Structure Usage	**Exterior Wall Surface**
Current: NA Historic: NA	Brick (original part), Vinyl (front and rear additions)

Roof Material	**Roof Features**	**Roof Type**
Asphalt	None	Hip, shed

Ornamental Architectural Details

None

Windows

Double-hung, fixed-pane, glass block

Outbuildings (*Number and Description*)

None

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

350 W 106th Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1908

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

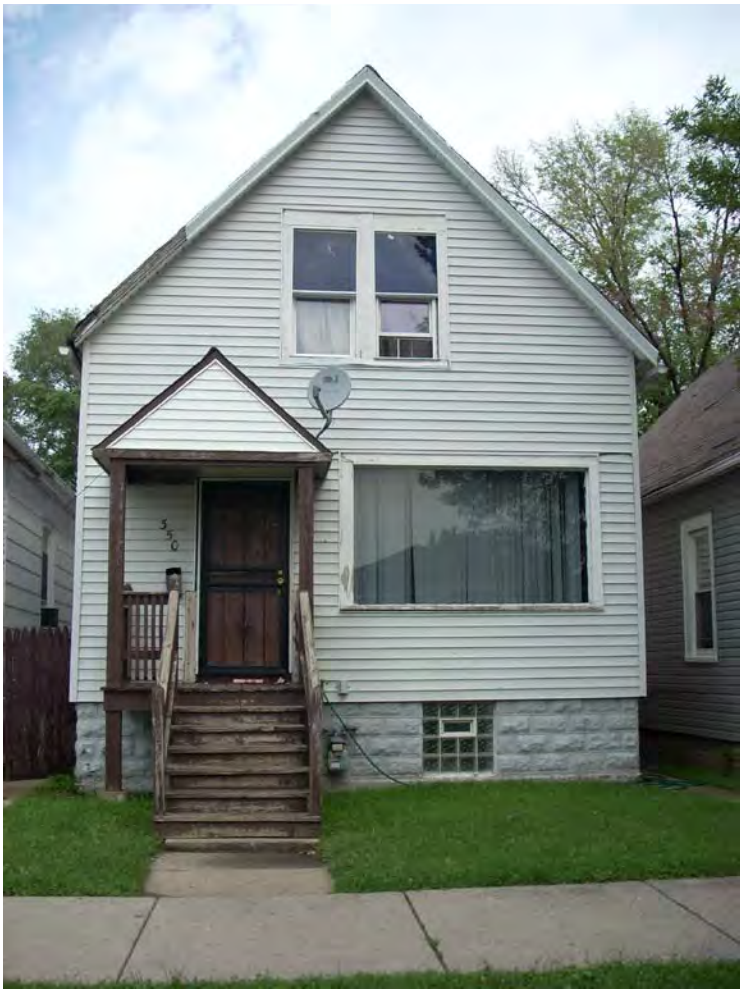
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: Steve Katz

Date: 25 September 2012

Photos with Captions:
South façade of vinyl-sided, one-and-a-half-story, single-family residence.



Property Description: **Stories:** 1.5

This one-and-a-half story home in the Roseland community is situated on a raised basement, is clad in aluminum siding, and has a front-gabled roof covered with asphalt shingles. Its front elevation features an off-center, gable-roofed porch with wood steps, railings, and posts. It has a front door that appears to be hollow metal, a picture window on the first floor, and paired one-over-one windows on the second floor. This home lacks both integrity and architectural distinction and is not individually eligible for listing on the National Register.

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Structural Survey

<table>
<tr><td colspan="3">Integrity:
Unaltered [✓ Slight Modification] Major Alteration</td><td>Additional Notes/Descriptions
Replacement siding and windows; new porch</td></tr>
<tr><td colspan="3">Condition:
Excellent [✓ Good] Poor</td><td></td></tr>
<tr><td colspan="3">Additional Alterations
Fixed-pane picture window replaces original windows</td><td></td></tr>
<tr><td colspan="2">Structure Usage
Current: NA
Historic: NA</td><td>Exterior Wall Surface
Synthetic siding</td><td></td></tr>
<tr><td>Roof Material
Asphalt</td><td>Roof Features
None</td><td>Roof Type
Gable</td><td></td></tr>
<tr><td colspan="3">Ornamental Architectural Details
None</td><td>Windows
Fixed- pane, double-hung, glass block</td></tr>
<tr><td colspan="4">Outbuildings (<i>Number and Description</i>)
None</td></tr>
</table>

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

352 W. 106th Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1924

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

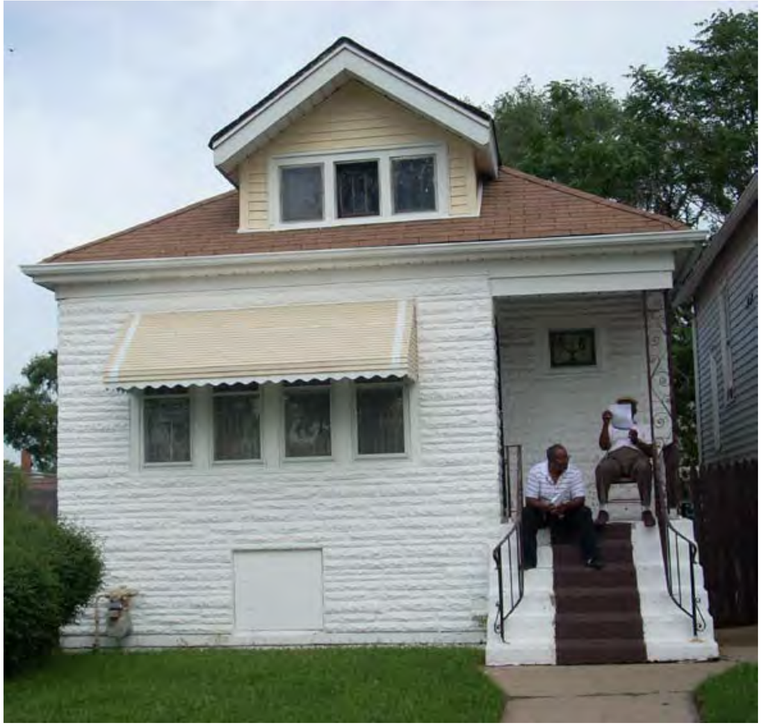
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 25 September 2012

Photos with Captions:
South façade of one-story, single family residence.



Property Description: **Stories:** 1

This one-story home in the Roseland community is situated on a raised basement and clad with stone (first floor) and synthetic siding (dormer). It has a hip roof covered with asphalt shingles and a gable-roofed dormer with three windows that appear to be casements. Its front façade features a recessed porch with concrete steps, metal railings, and a metal corner support; it also has a leaded glass casement window and a strip of four one-over-one windows. This home lacks both integrity and architectural distinction and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
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Marengo, Illinois 60152
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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement siding on dormer
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Stone, synthetic siding (dormer)	
Roof Material Asphalt	**Roof Features** Gabled dormer	**Roof Type** Hip	
Ornamental Architectural Details None			**Windows** Casement, double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

341 W. 106th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1903

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

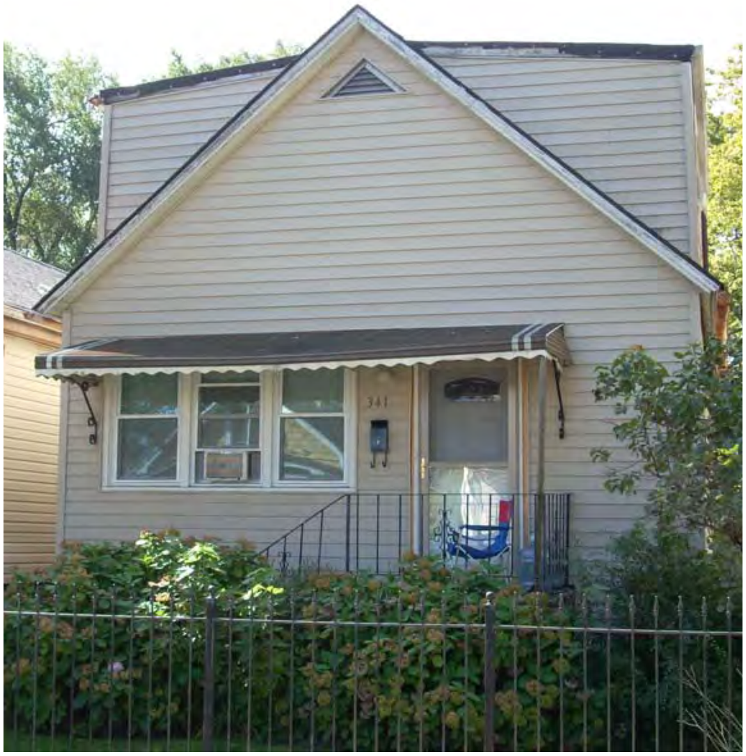
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 16 October 2012

Photos with Captions:
North façade of a one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story cottage in the Roseland community is situated on a raised concrete block basement and is clad with synthetic siding. The building has a front gable roof covered with asphalt shingles and two large non-original flat-roofed side elevation dormers with one-over-one aluminum-sash windows. The front elevation has an off-center non-original hollow core metal door, steps obscured by foliage with metal railings, and a strip of three non-original one-over-one aluminum-sash windows. This house lacks integrity and distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
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Structural Survey

Integrity:

Unaltered Slight Modification [✓ Major Alteration]

Additional Notes/Descriptions

Replacement door, windows, and cladding

Condition:

[✓ Excellent] Good Poor

Additional Alterations

Side dormers added

Structure Usage	**Exterior Wall Surface**
Current: NA Historic: NA	Synthetic siding

Roof Material	**Roof Features**	**Roof Type**
Asphalt shingles	None	Gable, flat

Ornamental Architectural Details

None

Windows

Double-hung

Outbuildings (*Number and Description*)

None

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

346 W. 106th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1964

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

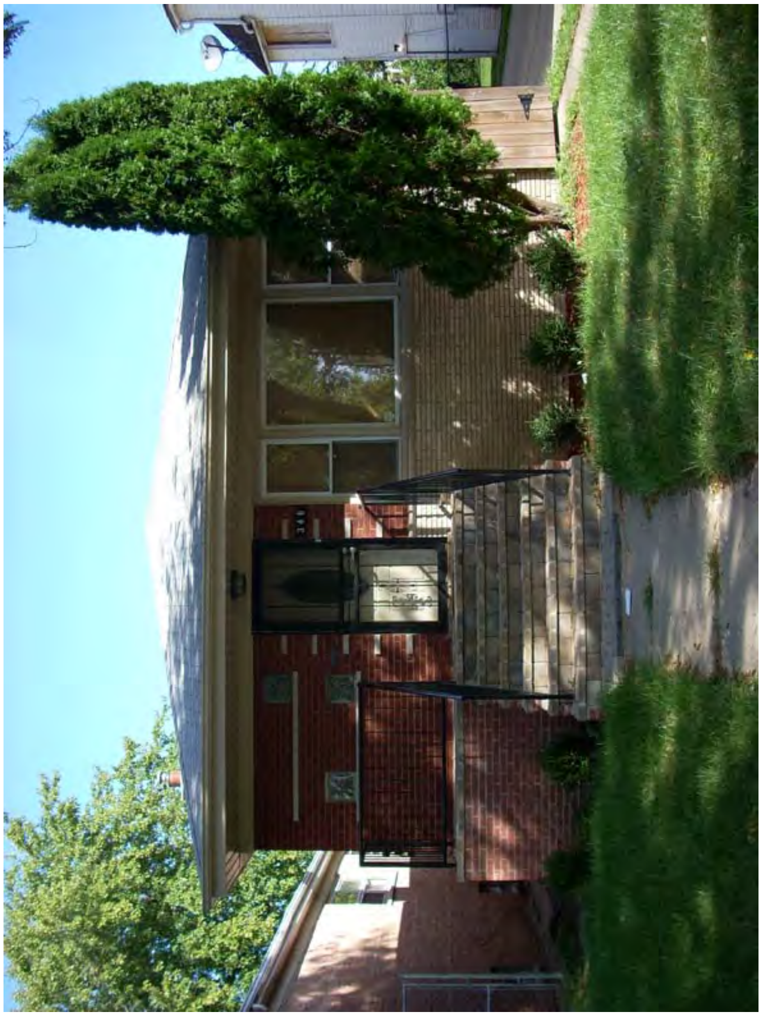
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 16 October 2012

Photos with Captions:
South façade of a brick, one-story, single family residence.



Property Description: **Stories:** 1

This one-story house in the Roseland community is situated on a raised basement with glass block windows and has a hip roof covered with asphalt shingles. Its front elevation is clad with red brick on one side and buff brick on the other, has an off-center hollow core metal door, concrete steps with metal railings, and a picture window flanked by one-over-one aluminum-sash windows. Detailing includes three decorative glass blocks and concrete inserts flanking the front door. This house lacks distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
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Marengo, Illinois 60152
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Structural Survey

Integrity: [✓ Unaltered] Slight Modification Major Alteration			**Additional Notes/Descriptions**
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Hip	
Ornamental Architectural Details Decorative glass blocks, concrete inserts at entrance			**Windows** Double-hung, fixed-pane, glass blcok
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

351 W 106th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1898

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

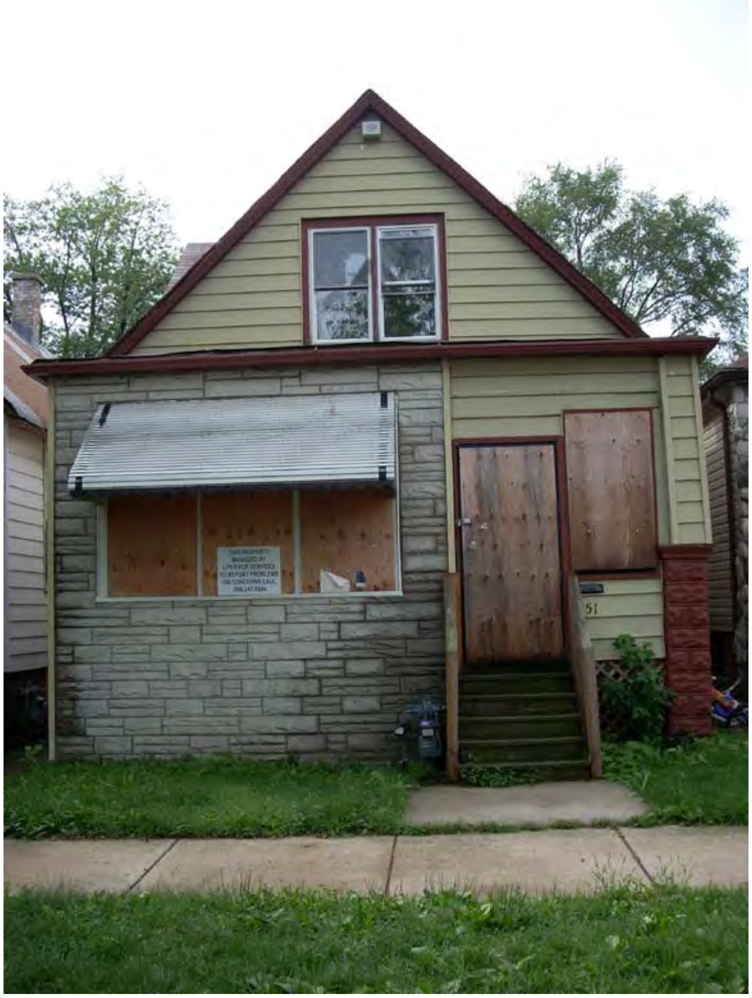
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: Steve Katz

Date: 24 September 2012

Photos with Captions:
North façade of a one story, single-family residence.



Property Description: **Stories:** 1

This one story home in Roseland has a front gable roof with asphalt shingles. Its front façade is clad in both vinyl and faux stone siding; it has a flat-roofed enclosed porch with an off-center entrance covered with plywood. The two first floor window openings are in-filled with wood and the gable features a pair of one-over-one aluminum-sash windows. This structure lacks integrity and architectural distinction and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity:			**Additional Notes/Descriptions**
Unaltered	[✓ Slight Modification]	Major Alteration	Replacement doors, windows, cladding
Condition:			
Excellent	[✓ Good]	Poor	
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Vinyl, faux stone	
Roof Material Asphalt	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung, in-filled
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

353 W 106th Street
Alternate: 355 W 106th Street, per Assessor

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1924

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

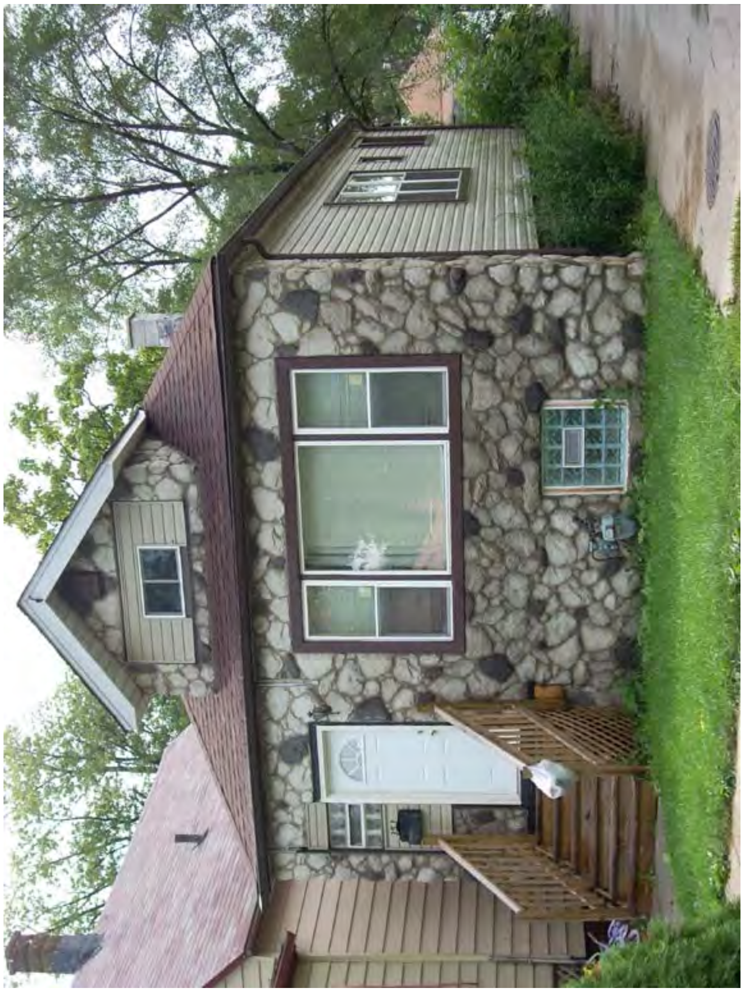
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: Steve Katz

Date: 24 September 2012

Photos with Captions:
North façade of vinyl and stone, one-story single-family residence.



Property Description: **Stories:** 1

This one-story home in Roseland is situated on a raised basement. It has a hip roof with asphalt shingles and a gable-roofed dormer with sliding glass windows. Its front elevation is clad in synthetic stone and features an off-center hollow metal paneled door with fanlight, accessed via a short flight of wood steps with wood railings. Its strip of three windows features a picture window flanked by one-over-one windows. The side elevations are clad in vinyl siding. Alterations include the installation of siding and replacement windows. This structure lacks integrity and architectural distinction and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement doors, windows, cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Vinyl (sides and rear), Faux stone (façade)	
Roof Material Asphalt	**Roof Features** Gabled dormer	**Roof Type** Hip	
Ornamental Architectural Details None			**Windows** Double-hung, fixed-pane, sliding
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

332 W. 107th Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1949

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

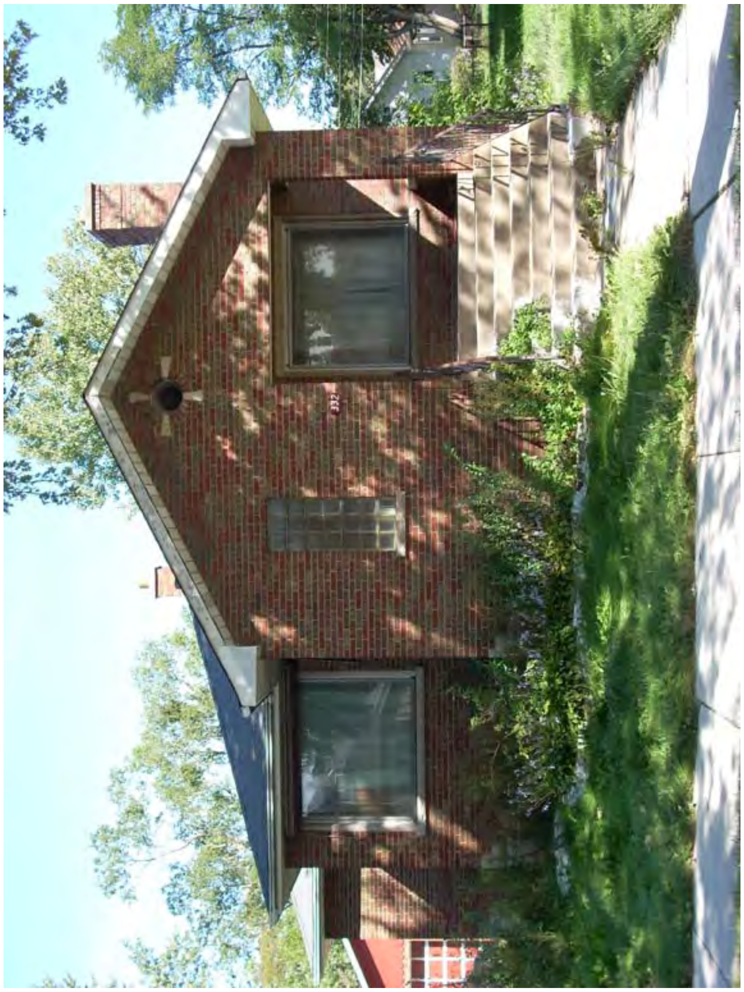
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 16 October 2012

Photos with Captions:
South façade of a brick, one-story, single family residence.



Property Description: **Stories:** 1

This one-story, brick-clad house in the Roseland community sits on a raised basement with glass block windows. The building has a hip roof covered with asphalt shingles, overhanging eaves, and a large hip-roofed rear wing. Its projecting gable-roofed front wing has a recessed corner porch with low brick walls, a brick corner pier, concrete steps with metal railings, and a door tucked into the side of the living room bay. Its front elevation features two large picture windows, a glass block window, and a bulls-eye window in the gable. Other windows are non-original double-hung. Detailing includes faux stonework at the corners of the basement, concrete sills, glass blocks, and keystone-like blocks surrounding the bulls-eye window. This house lacks integrity and distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

<table>
<tr><td colspan="3">Integrity:
Unaltered [✓ Slight Modification] Major Alteration</td><td>Additional Notes/Descriptions
Replacement windows</td></tr>
<tr><td colspan="3">Condition:
[✓ Excellent] Good Poor</td><td></td></tr>
<tr><td colspan="3">Additional Alterations</td><td></td></tr>
<tr><td colspan="2">Structure Usage
Current: NA
Historic: NA</td><td>Exterior Wall Surface
Brick</td><td></td></tr>
<tr><td>Roof Material
Asphalt shingles</td><td>Roof Features
None</td><td>Roof Type
Hip</td><td></td></tr>
<tr><td colspan="3">Ornamental Architectural Details
Stonework at corners, concrete sills, bull’s eye window with stone accents</td><td>Windows
Double-hung, fixed-pane, glass block</td></tr>
<tr><td colspan="4">Outbuildings (<i>Number and Description</i>)
Detached three car garage.</td></tr>
</table>

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

333 W. 107th Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1924

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

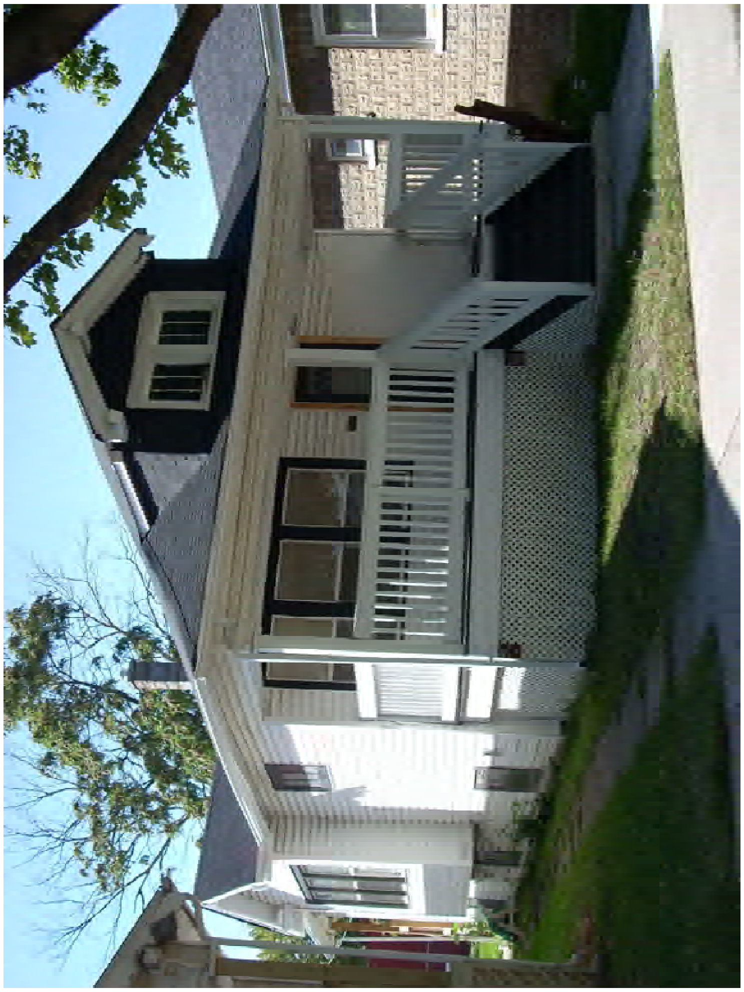
Craftsman

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 16 October 2012

Photos with Captions:
North façade of a one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story bungalow in the Roseland community is situated on a raised brick basement with glass block windows and is clad with synthetic siding. The building has a hip roof covered with asphalt shingles, overhanging eaves, and a hip dormer with a pair of original wood casement windows and decorative rafters. Its roof overhangs to shelter a full-width wood porch with straight railings and posts. The front elevation has an off-center non-original hollow-core metal door and a strip of three non-original one-over-one aluminum-sash windows. This house lacks integrity and distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

<table>
<tr><td colspan="4">Integrity:
Unaltered [✓ Slight Modification] Major Alteration</td><td>Additional Notes/Descriptions
Replacement door, windows, and cladding</td></tr>
<tr><td colspan="4">Condition:
[✓ Excellent] Good Poor</td><td></td></tr>
<tr><td colspan="4">Additional Alterations</td><td></td></tr>
<tr><td colspan="2">Structure Usage
Current: NA
Historic: NA</td><td colspan="2">Exterior Wall Surface
Synthetic siding</td><td></td></tr>
<tr><td>Roof Material
Asphalt shingles</td><td>Roof Features
Dormer</td><td colspan="2">Roof Type
Hip</td><td></td></tr>
<tr><td colspan="4">Ornamental Architectural Details
None</td><td>Windows
Double-hung, casement, glass block</td></tr>
<tr><td colspan="5">Outbuildings (<i>Number and Description</i>)
None</td></tr>
</table>

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

346 W. 106th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1964

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

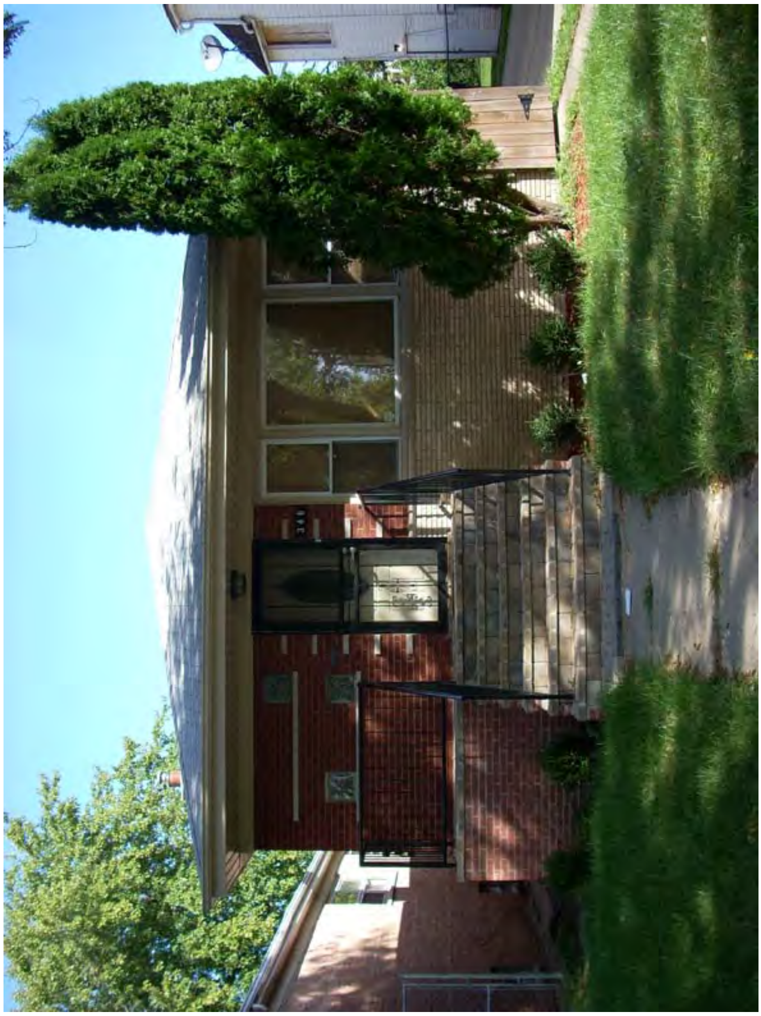
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 16 October 2012

Photos with Captions:
South façade of a brick, one-story, single family residence.



Property Description: **Stories:** 1

This one-story house in the Roseland community is situated on a raised basement with glass block windows and has a hip roof covered with asphalt shingles. Its front elevation is clad with red brick on one side and buff brick on the other, has an off-center hollow core metal door, concrete steps with metal railings, and a picture window flanked by one-over-one aluminum-sash windows. Detailing includes three decorative glass blocks and concrete inserts flanking the front door. This house lacks distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: [✓ Unaltered] Slight Modification Major Alteration			**Additional Notes/Descriptions**
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Hip	
Ornamental Architectural Details Decorative glass blocks, concrete inserts at entrance			**Windows** Double-hung, fixed-pane, glass blcok
Outbuildings (*Number and Description*) None			

Local Landmark	**Y [✓ N]**	
National Register Historic Places	**Y [✓ N]**	
National Register Historic District	**Y [✓ N]**	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

335 W. 107th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1899

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

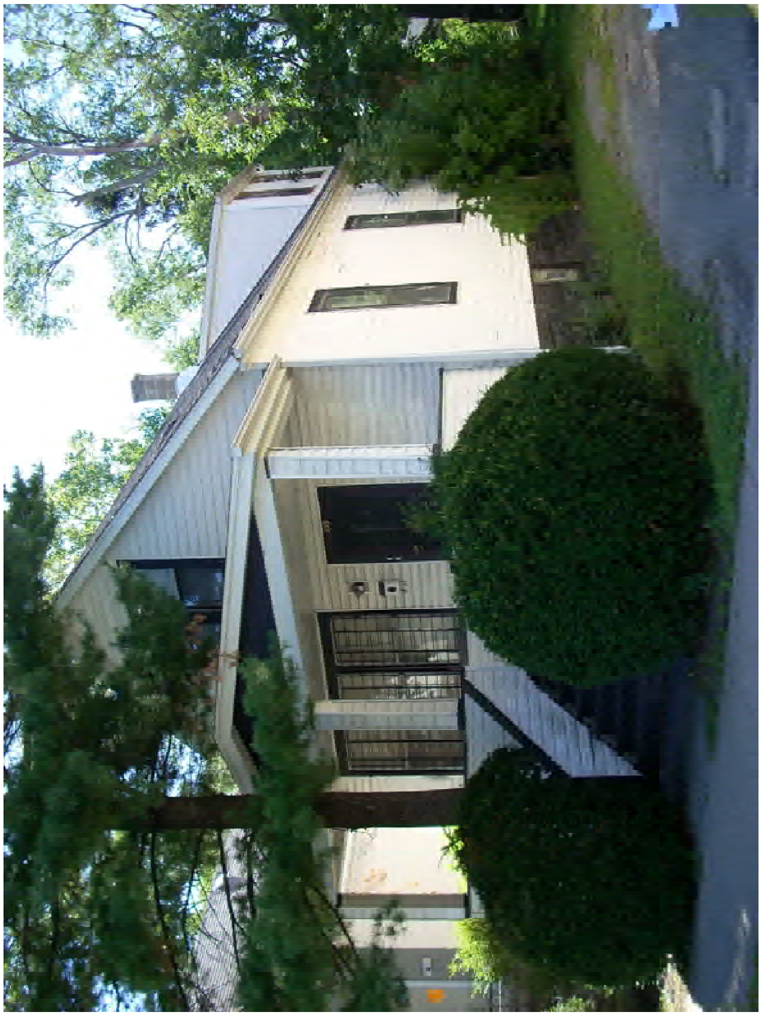
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 16 October 2012

Photos with Captions:
North façade of a one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story home in the Roseland community is situated on a raised concrete block basement and is clad with synthetic siding. The building has a front gable roof covered with asphalt shingles and a shed dormer along its west elevation. It has a full-width, gable-roof, wood porch with low walls and three boxed supports all covered with aluminum siding. The front elevation has an off-center door with a metal storm door, a strip of three windows on the first floor and a pair of windows in the attic, all of which are non-original one-over-one aluminum-sash. This house lacks integrity and distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows and cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingles	**Roof Features** Dormer	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung
Outbuildings (*Number and Description*) Garage			

Local Landmark	**Y [✓ N]**	
National Register Historic Places	**Y [✓ N]**	
National Register Historic District	**Y [✓ N]**	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

400 W 107th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Industrial

Current: Industrial

Date of Construction: 1929

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

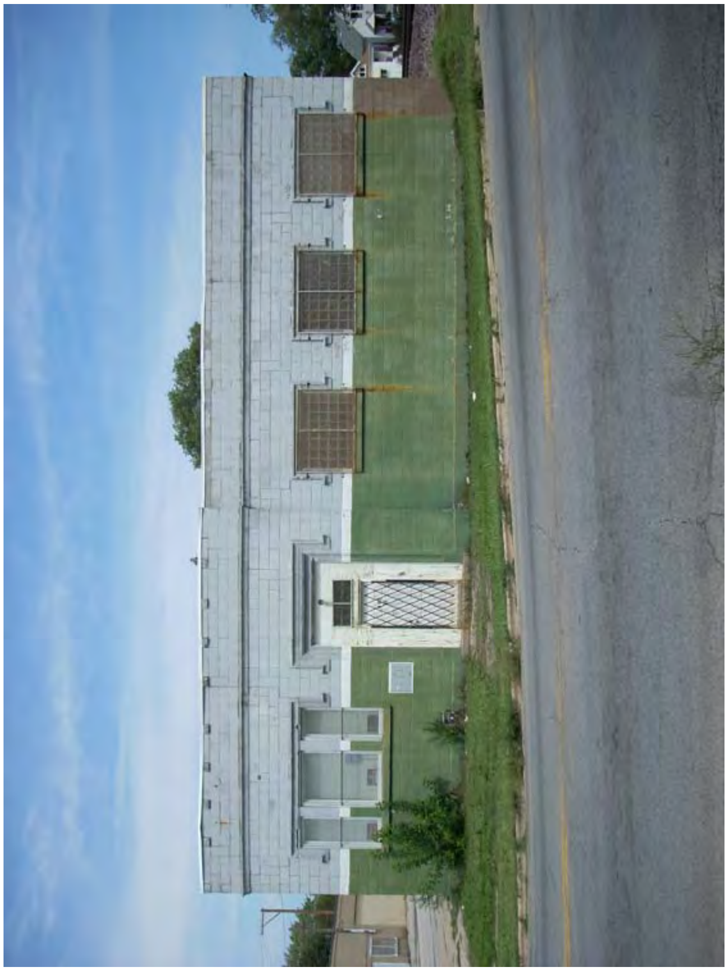
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: Steve Katz

Date: 25 September 2012

Photos with Captions:
South façade of a one-story, concrete block, light industrial building.



Property Description: **Stories:** 1

This one-story, concrete block, light industrial building has a flat roof with parapet. Its front elevation has an off-center entrance with a non-original metal core door with surround and transom, a strip of one-over-one windows, and three glass block windows. Detailing includes drip molds above the entrance and windows. This building lacks architectural distinction and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
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Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement door
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Concrete block	
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details Drip molds above entrance and windows			**Windows** Glass block, double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

415 W. 107th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Commercial

Current: Commercial

Date of Construction: 1920

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

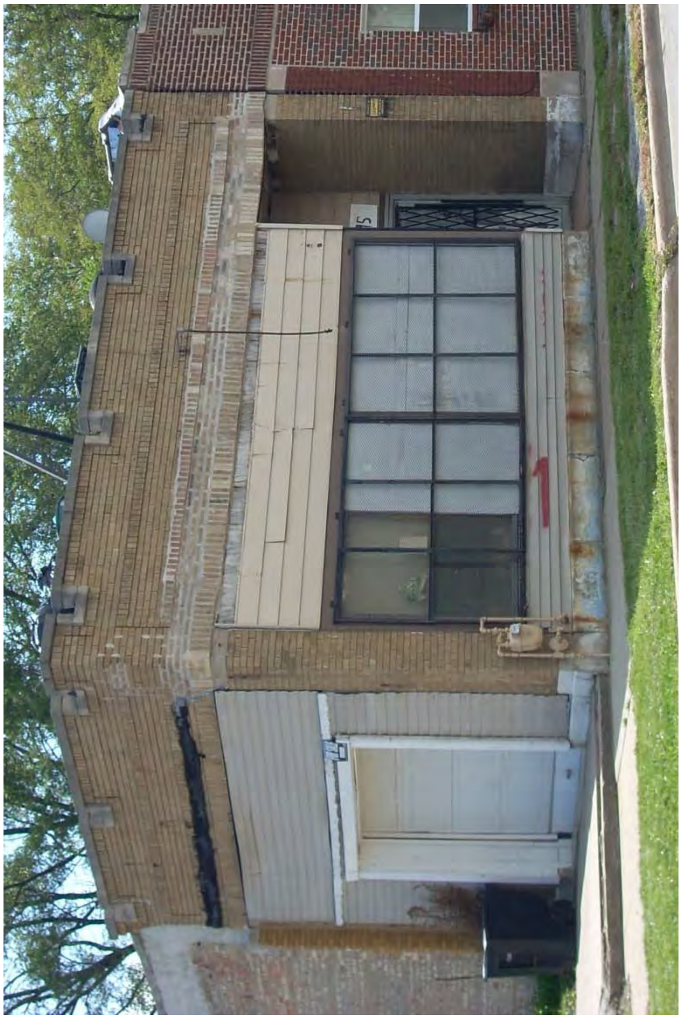
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 12 October 2012

Photos with Captions:
North and east façades of a brick, one story, commercial building.



Property Description: **Stories:** 1

This one-story commercial building in the Roseland community has a flat roof, castellated parapet, a brick panel at the cornice line, and concrete coping. Its front elevation is clad in yellow face brick and has a recessed, off-center hollow core metal door that is non-original. Aluminum siding has replaced this door’s original transom and its original storefront has been in-filled with a strip of fixed pane windows with aluminum siding above and below. The north portion of its east elevation is also clad in yellow face brick and has been altered with the insertion of an overhead metal door that is surrounded by aluminum siding. This building lacks integrity and distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered Slight Modification [✓ Major Alteration]			**Additional Notes/Descriptions** Replacement doors, windows, and cladding
Condition: Excellent Good [✓ Poor]			
Additional Alterations Garage door opening inserted on east facade			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick (main), Synthetic siding (infill)	
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details Brick panel			**Windows** Fixed-pane
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

432 W. 107th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1962

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

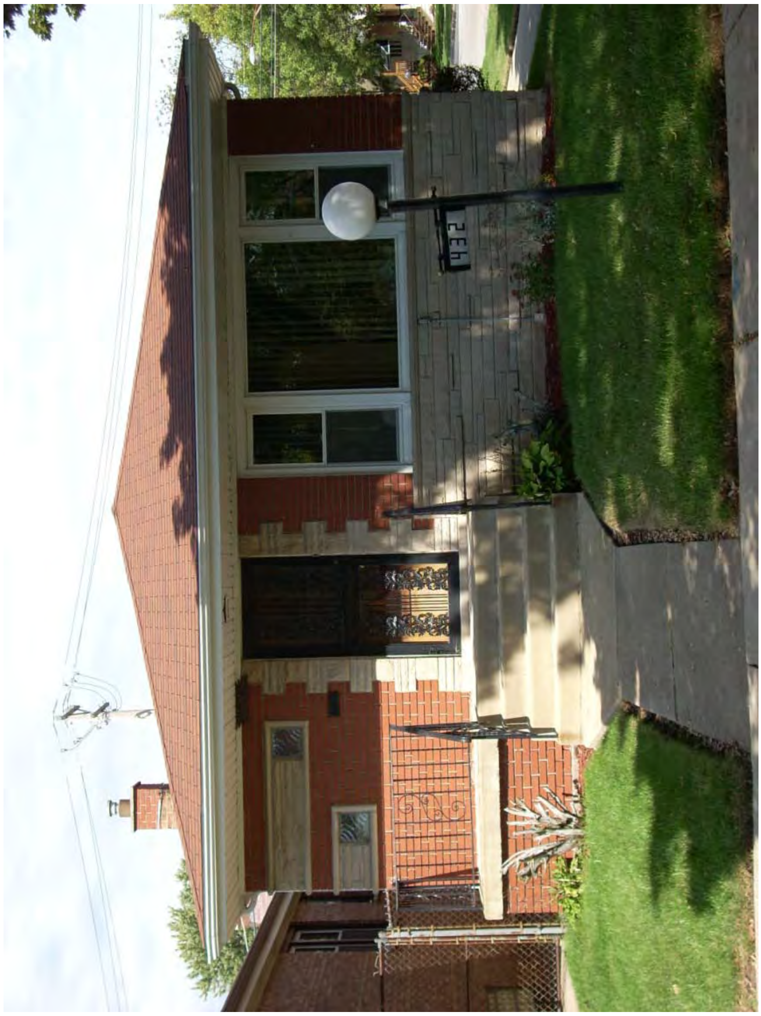
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 12 October 2012

Photos with Captions:
South façade of a masonry, one-story, single family residence.



Property Description: **Stories:** 1

This one-story home at the northwest corner of 107th Street and Eggleston Avenue in the Roseland community is situated on a raised brick basement. The building has a hip roof covered with asphalt shingles and overhanging eaves. The front elevation is clad with faux stone below the sill line and red brick above. The building has an off-center door behind a metal storm, concrete steps with metal railings, and a picture window flanked by one-over-one aluminum-sash windows. Detailing includes faux stone blocks flanking the front door and two horizontal strips of faux stone, each with a glass block, on the front elevation. The side (Eggleston) elevation is clad in red brick and has two pairs of four-over-one windows. It does not feature distinguishing architectural elements and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: [✓ Unaltered] Slight Modification Major Alteration	**Additional Notes/Descriptions**
Condition: [✓ Excellent] Good Poor	
Additional Alterations	
Structure Usage Current: NA Historic: NA — **Exterior Wall Surface** Brick (main), Faux stone (below sill)	
Roof Material Asphalt shingle — **Roof Features** None — **Roof Type** Hip	
Ornamental Architectural Details Stone panels with glass blocks, stone surround at entrance	**Windows** Double-hung, fixed-pane, glass block
Outbuildings (*Number and Description*) None	

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

744 W. 107th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1957

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

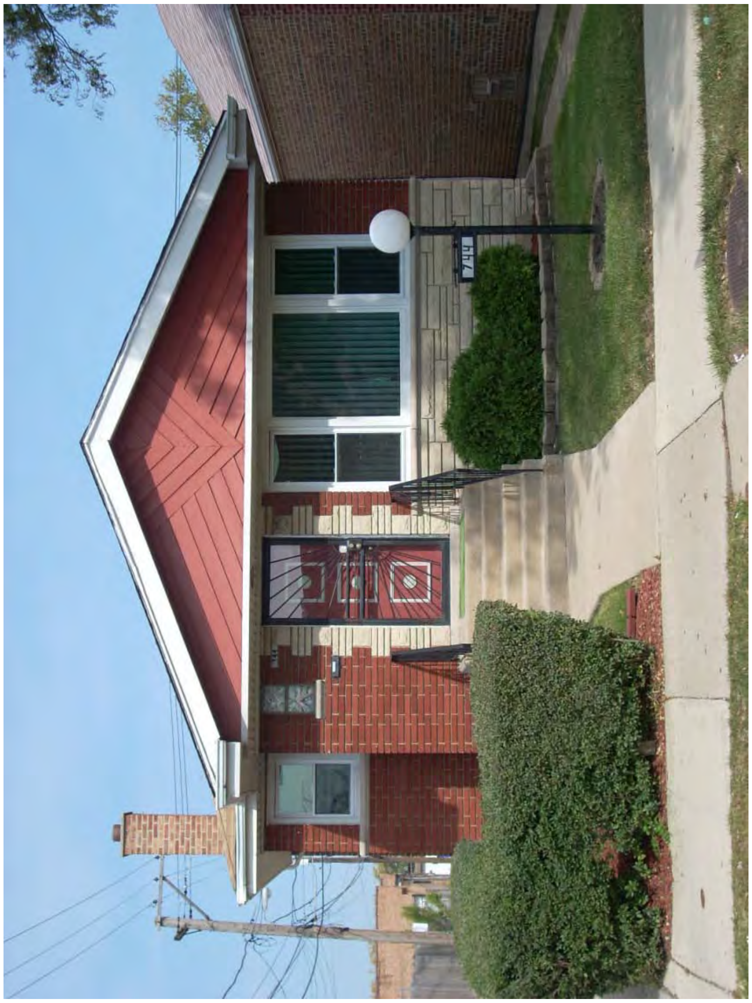
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 23 October 2012

Photos with Captions:
South façade of a one-story, single family, brick residence.



Property Description: **Stories:** 1

This one-story brick-clad house in the Roseland community is situated on a raised basement with glass block windows. The building has a hip roof covered with asphalt shingles, overhanging eaves, and a projecting, gable-front pavilion that spans nearly the entire width of the front elevation. The front elevation is clad with orange brick with stone below the sill line and synthetic siding in the gable end. The gabled pavilion has a metal storm door, concrete steps with metal railings, and a non-original picture window flanked by one-over-one aluminum-sash windows. A single one-over-one aluminum-sash window is situated in the recessed corner of the front elevation. Detailing includes decorative faux stones flanking the door and two adjacent glass blocks. It does not feature distinguishing architectural elements and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows and cladding in gable
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick (main), faux stone (below sill), synthetic (gable end)	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Hip	
Ornamental Architectural Details Decorative glass blocks, stone surround at entrance			**Windows** Double-hung, fixed-pane, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

300 W. 108th Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1908

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

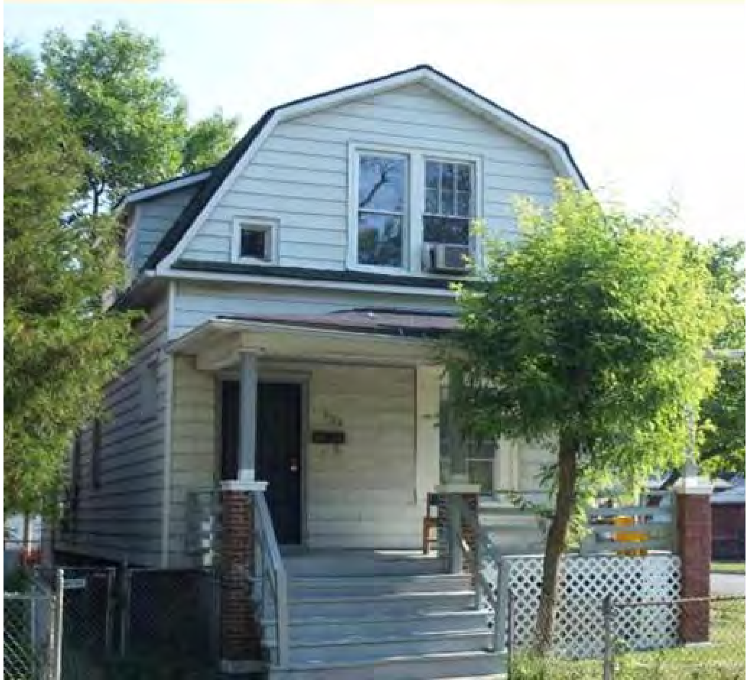
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz (too much foliage), Cook County Assessor (2007)

Date: 17 October 2012

Photos with Captions:
South façade of a 1.5-story, single family, frame residence.



Property Description: **Stories:** 1.5

This 1.5-story house at the northwest corner of 108th Street and Princeton Avenue in the Roseland community is situated on a raised brick basement and is clad with synthetic siding. The building has a gambrel roof covered with asphalt shingles. Its front (108th Street) elevation has a full-width, hip-roofed, wood porch with frieze band and supports consisting of three brick piers topped by squat wood posts. The building has an off-center door and a single double-hung window on the first floor. A pair of double-hung windows and a small casement window provide light to the attic space. Its Princeton Avenue elevation has a three-sided window bay. This house lacks integrity and distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity:			**Additional Notes/Descriptions**
Unaltered	[✓ Slight Modification]	Major Alteration	Replacement door and cladding; possibly some of the windows
Condition:			
Excellent	[✓ Good]	Poor	
Additional Alterations			
Structure Usage		**Exterior Wall Surface**	
Current: NA Historic: NA		Synthetic siding	
Roof Material	**Roof Features**	**Roof Type**	
Asphalt	Dormer	gambrel	
Ornamental Architectural Details			**Windows**
Frieze band			Double-hung, glass block, casement
Outbuildings (*Number and Description*)			
None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

313 W. 108th Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1918

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

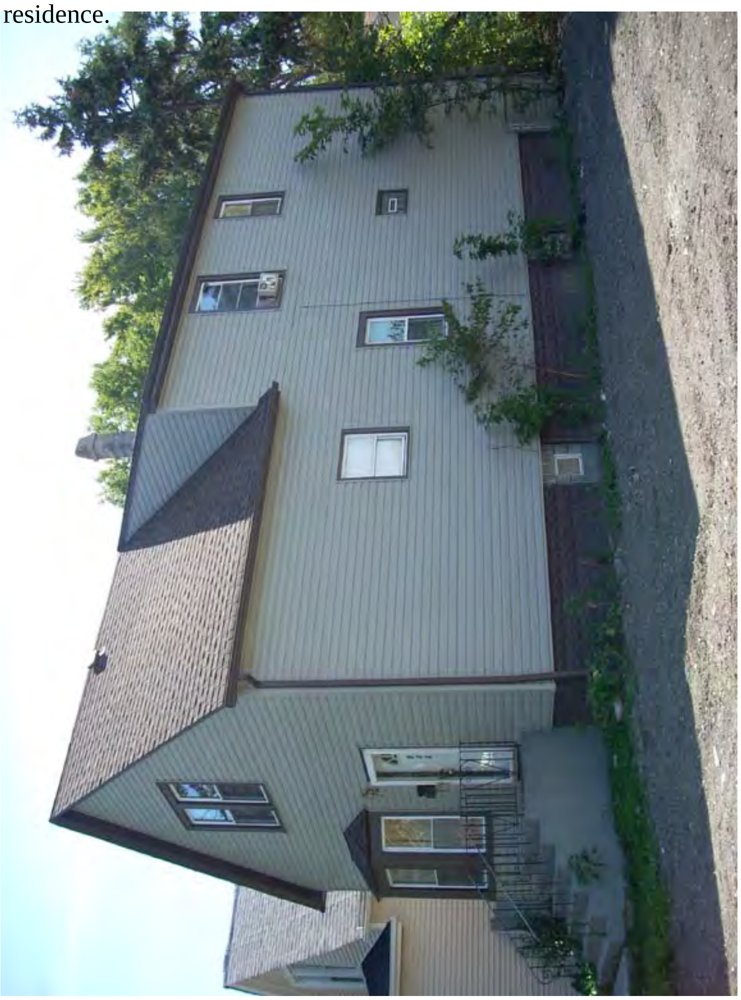
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 17 October 2012

Photos with Captions:
North and west façades of a 1.5-story, single family, frame residence.



Property Description: **Stories:** 1.5

This one-and-a-half-story house in the Roseland community is situated on a raised concrete block basement with glass block windows and is clad with synthetic siding. The building has a gable roof covered with asphalt shingles. Its front elevation features an off-center non-original hollow core metal door, concrete steps with metal railings, a three-sided window bay on the first floor, and a pair of windows in the gable. Windows are non-original one-over-one aluminum-sash. The house has a shed-roofed second story addition at the rear of its west elevation and a gable dormer along its east elevation. This house lacks integrity and distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement door, windows, cladding, steps, and railing
Condition: [✓ Excellent] Good Poor			
Additional Alterations Second story shed roof addition			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** Dormer	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y [✓ N]**	
National Register Historic Places	**Y [✓ N]**	
National Register Historic District	**Y [✓ N]**	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

348 W 108th Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1928

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

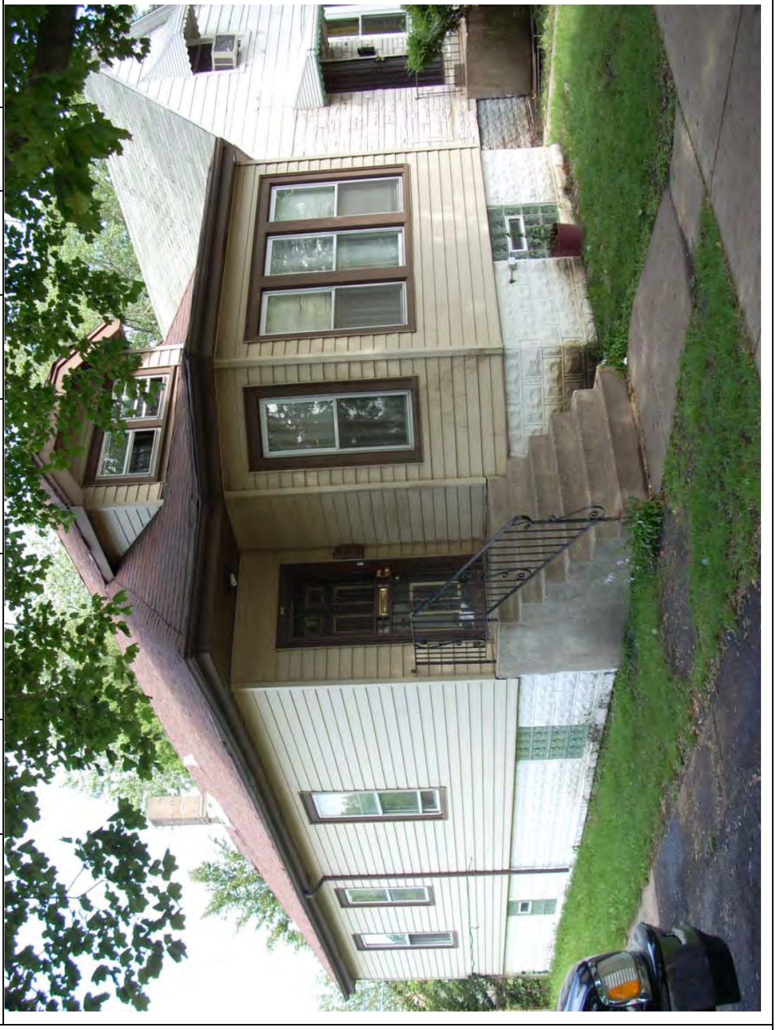
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 5 September 2012

Photos with Captions:
South and west façades of one-story, frame, single family residence.



Property Description: **Stories:** 1

This one-story, frame home in the Roseland community is situated on a raised basement and clad with synthetic siding. It has a hip roof covered with asphalt shingles and a dormer with two one-over-one windows. Its front elevation has a projecting living room bay with replacement one-over-one windows, an off-center hollow metal door, and concrete steps with metal railing. This building lacks architectural distinction and is not individually eligible for listing on the National Register.

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Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered	[✓ Slight Modification]		Major Alteration	**Additional Notes/Descriptions** Some replacement windows
Condition: [✓ Excellent]	Good		Poor	
Additional Alterations				
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding		
Roof Material Asphalt shingle	**Roof Features** Dormer	**Roof Type** Hip		
Ornamental Architectural Details None				**Windows** Double-hung
Outbuildings (*Number and Description*) None				

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
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Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

349 W. 108th Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1909

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

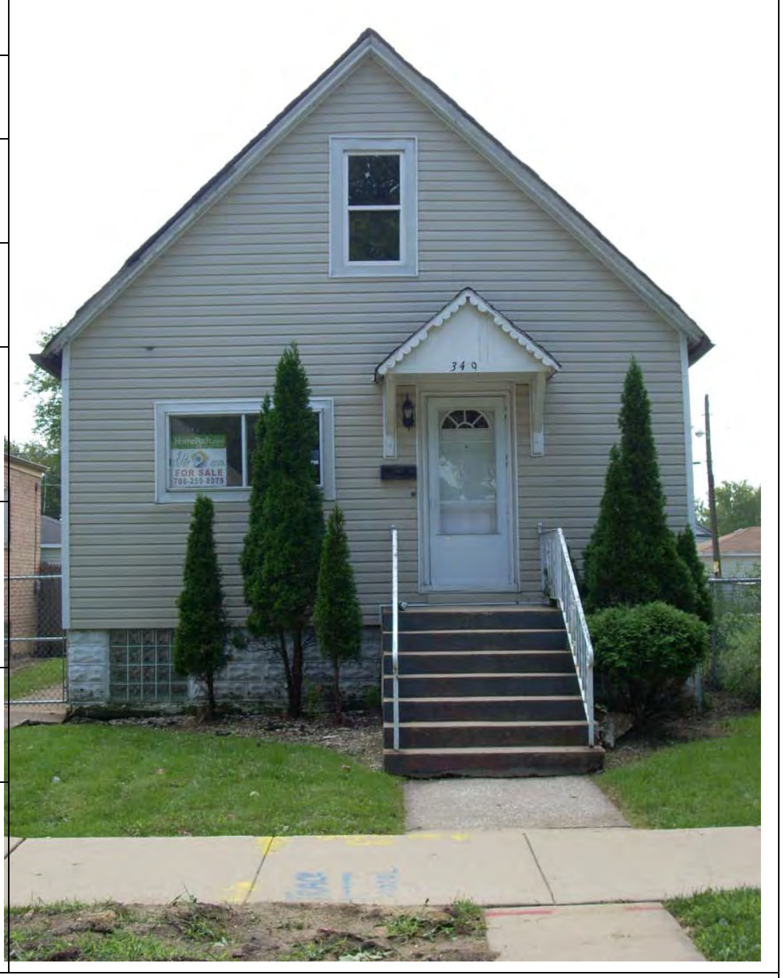
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 5 September 2012

Photos with Captions:
North façade of 1 story, frame, single family residence.



Property Description: **Stories:** 1

This one story home in the Roseland community is situated on a raised concrete block basement, is clad with aluminum siding, and has a front-gabled roof covered with asphalt shingles. Glass blocks in-fill the window openings in the basement. The front elevation of the residence features an off-center hollow metal door topped by a bracketed gabled hood and concrete steps with metal railings. It also features paired, non-original, sliding glass windows on the first floor and a one-over-one, non-original window in the gable. This home lacks integrity and architectural distinction and is not individually eligible for listing on the National Register.

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Structural Survey

Integrity: Unaltered	[✓ Slight Modification]	Major Alteration	**Additional Notes/Descriptions** Replacement siding, windows, and doors
Condition: [✓ Excellent]	Good	Poor	
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details Bracketed gabled hood			**Windows** Double-hung, sliding, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Roseland Christian School

Common/Current: Roseland Christian School

Property Address:

234 W. 108th Street
Alternate: 314 W 108th St.

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Roseland Christian School

Property Use

Historic: Education

Current: Education

Date of Construction: 1928

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

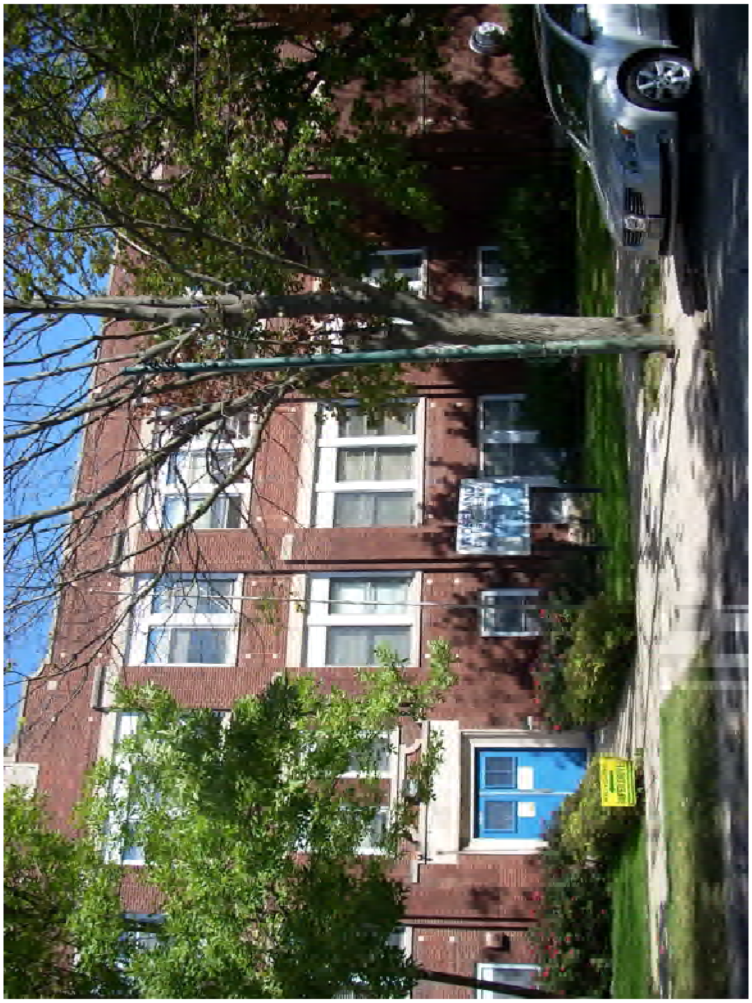
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 17 October 2012

Photos with Captions:
South façade of a brick, three-story school.



Property Description: **Stories:** 3

This three-story school in the Roseland community is clad in brown face brick. The building has a flat roof, shaped parapet with concrete coping, and corner pavilions. Full height brick pilasters divide the front elevation into a series of bays, each of which contains a strip of three one-over-one windows. The main entrance features a pair of non-original hollow core metal doors topped by a stone sign plate inscribed with the words, “Roseland Christian School.” Detailing includes decorative brick panels in the spandrels, concrete sills and lintels. This school lacks distinguishing architectural features and is not individually eligible for listing on the National Register.

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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement doors
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details Parapet with concrete coping, corner pavilions, brick pilasters, stone sign, brick panels, concrete sills and lintels			**Windows** Double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
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Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

301 W. 109th Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Vacant

Property Use

Historic: Single family residence

Current: Multi-family residence

Date of Construction: 1905

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

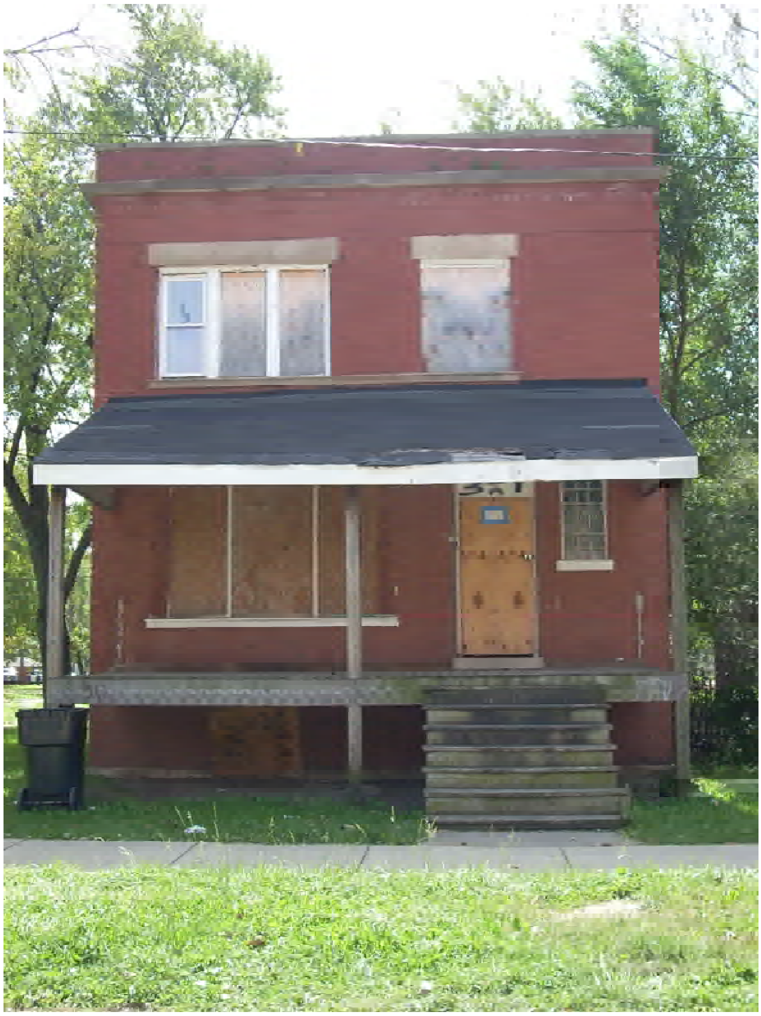
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 17 October 2012

Photos with Captions:
North façade of a brick, two-story, multi-family residence.



Property Description: **Stories:** 2

This two-flat residential building in the Roseland community is situated on a raised basement and is clad in red brick. The building has a flat roof and parapet. The front elevation has a full-width shed-roofed porch with wood posts and steps but no railings, an off-center door, an adjacent glass block window, and a group of three windows on the first floor. The second floor of the front elevation has a group of three windows and a single window. Nearly all windows are covered with plywood, with the exception of two non-original one-over-one aluminum-sash windows. The east elevation has a full-height window bay pavilion. Detailing includes stone sills, lintels, coping, and cornice. This building lacks integrity and distinguishing architectural features and is not individually eligible for listing on the National Register.

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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows
Condition: Excellent Good [✓ Poor]			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details Stone sills, lintels, coping, and cornice			**Windows** Double-hung, glass block, covered
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

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Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

340 W. 109th Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1925

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

Craftsman

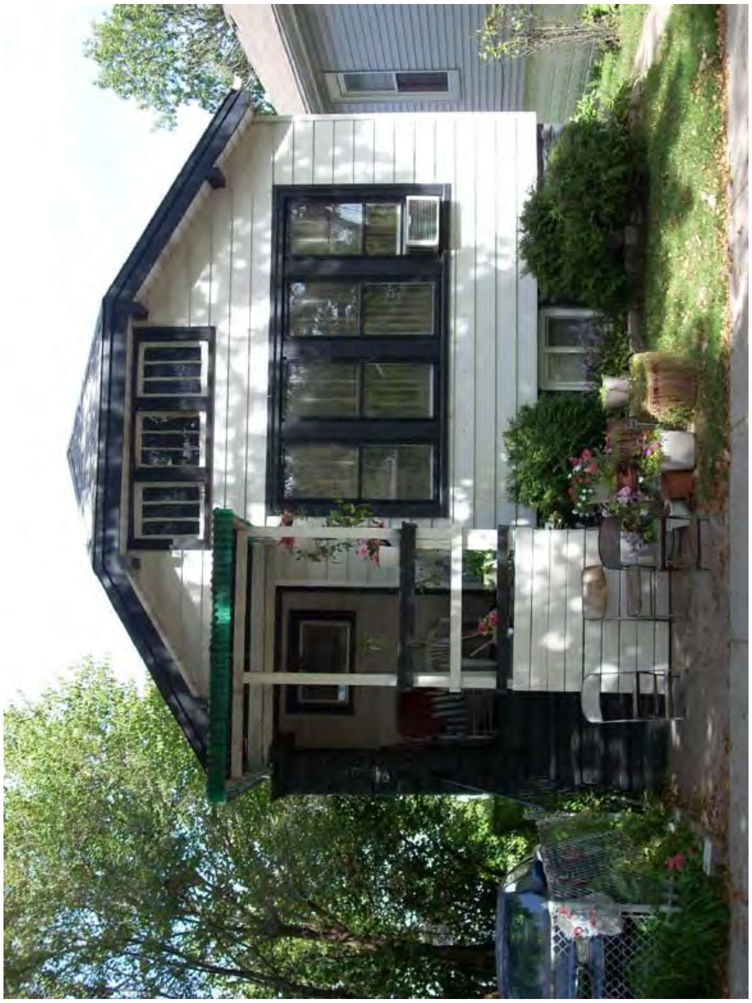
Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 17 October 2012

Photos with Captions:

South façade of a one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story house in the Roseland community is situated on a raised concrete block basement and is covered with synthetic siding. The building has a hip-on-gable roof covered with asphalt shingles, overhanging eaves, and decorative rafters. It has a recessed corner porch with a door tucked into the side, a faux stone corner pier, and wood steps with metal railings sheltered by a flat-roofed metal canopy supported by two wood posts. Its front elevation features a casement window within the recessed porch, a strip of four double-hung wood-sash windows on the first floor, and a strip of three wood casement windows in the attic. This house lacks distinguishing architectural features and is not individually eligible for listing on the National Register.

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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement siding
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt	**Roof Features** None	**Roof Type** Hip-on-gable	
Ornamental Architectural Details Exposed rafters			**Windows** Double-hung, casement
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

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Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

341 W. 109th Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1883

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

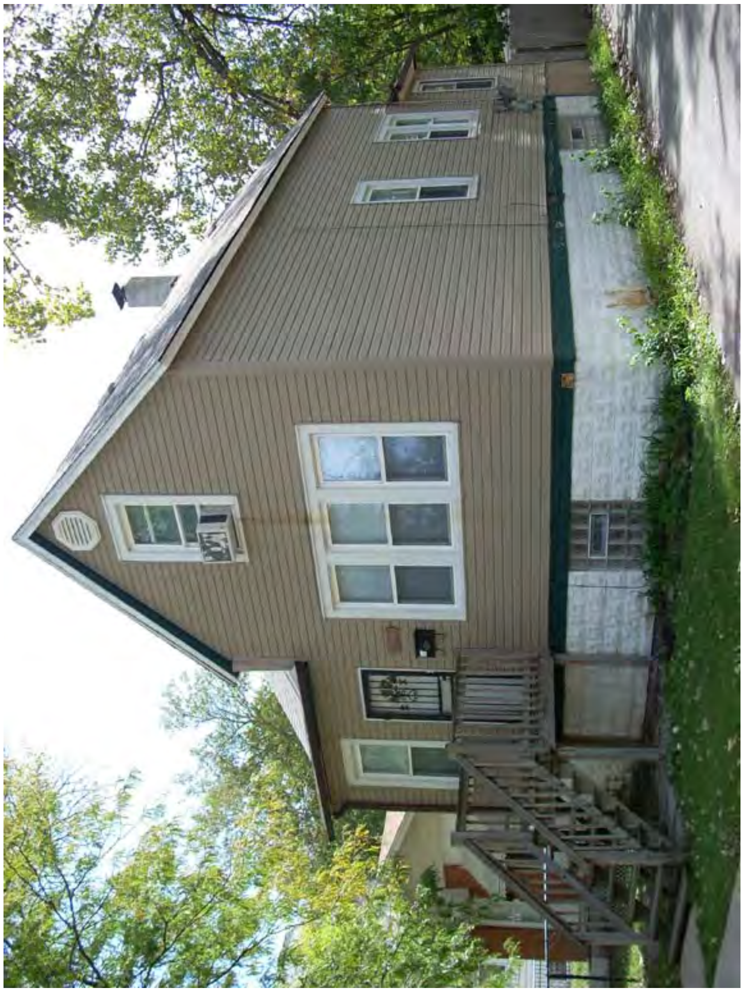
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 17 October 2012

Photos with Captions:
North façade of a 1.5- story, single family, frame residence.



Property Description: **Stories:** 1.5

This one-and-a-half-story frame house in the Roseland community is situated on a raised concrete block basement with glass block windows and is covered with synthetic siding. The building has a cross-gable roof covered with asphalt shingles. The front elevation has an off-center door behind a metal storm door, non-original wood steps and railings, and five non-original one-over-one aluminum-sash windows: four on the first floor and one in the gable. Review of the 1938 Sanborn and the assessor’s 2007 photograph suggests that while the front and rear porches are original to the house, a second story was added to the residence between 1938 and 2007. This house lacks integrity and distinguishing architectural features and is not individually eligible for listing on the National Register.

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement door, windows, cladding, and railings
Condition: Excellent [✓ Good] Poor			
Additional Alterations Second story added			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Cross-gable	
Ornamental Architectural Details None			**Windows** Double-hung, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y [✓ N]**	
National Register Historic Places	**Y [✓ N]**	
National Register Historic District	**Y [✓ N]**	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Sanborn map 4228.

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Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

348 W. 109th Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1930

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

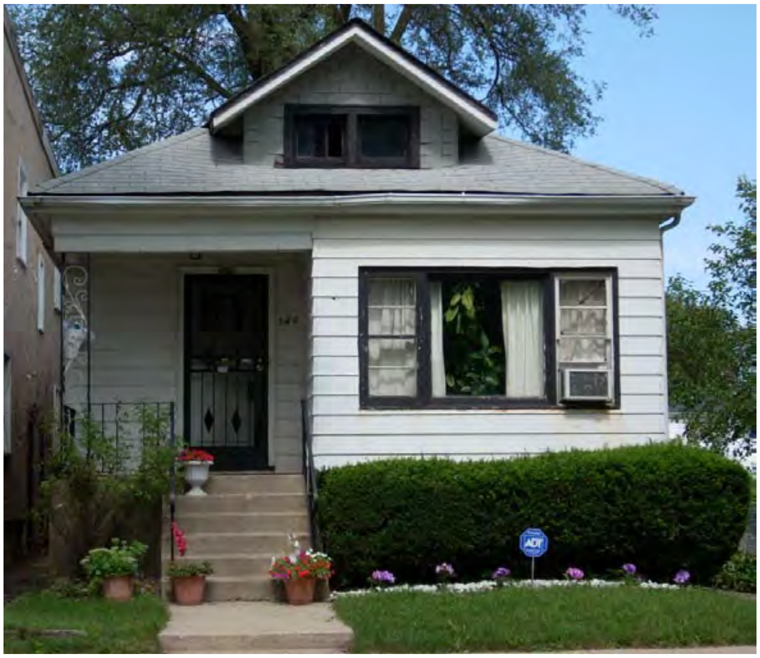
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 5 September 2012

Photos with Captions:
South façade of one-story, frame, single family residence.



Property Description: **Stories:** 1

This one-story home in the Roseland community is clad with synthetic siding. It has a hip roof covered with asphalt shingles and a gabled dormer with two windows that appear to be casements. Its front façade features an off-center door within a recessed porch with concrete steps, metal railings and corner support, and a picture window flanked by double-hung windows. This home lacks integrity and architectural distinction and is not individually eligible for listing on the National Register.

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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement siding
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** Dormer	**Roof Type** Hip	
Ornamental Architectural Details None			**Windows** Fixed-pane, double-hung, casement
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

350 W. 109th Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Multi-family residence

Date of Construction: 1908

Architect's Name: Unknown

Builder/Contractor: Unknown

Architectural Style:

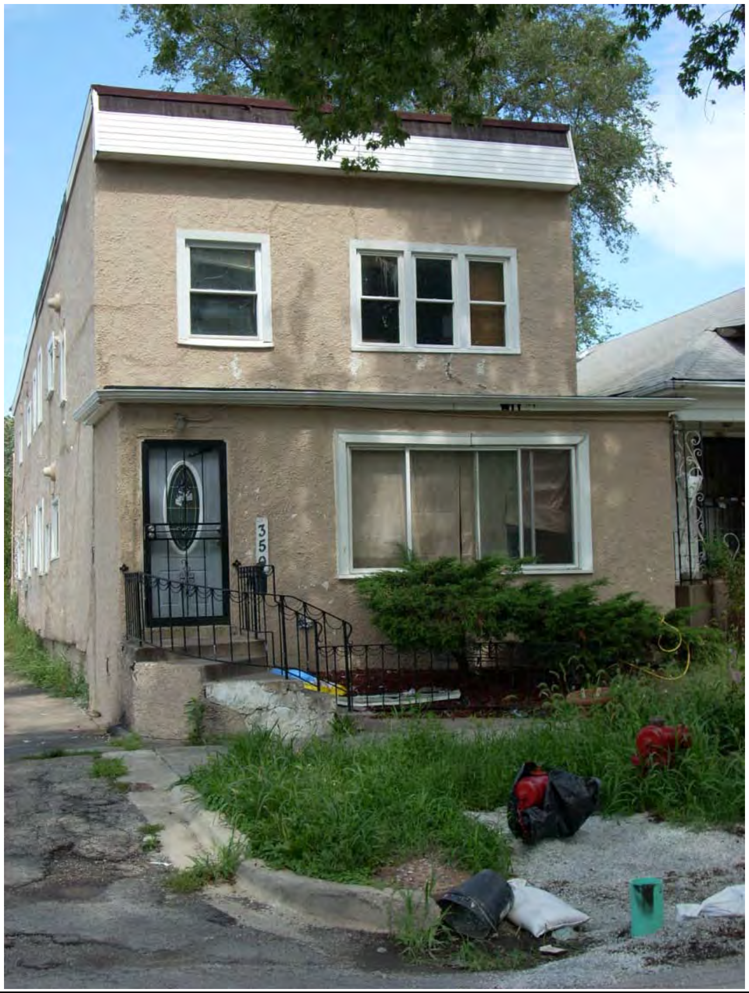
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 5 September 2012

Photos with Captions:
South façade of two-story multi-family residence.



Property Description: **Stories:** 2

This two-story home in the Roseland community has “cemented” cladding material, which is original per the 1911 Sanborn map. Its front elevation has an enclosed, full-façade, flat-roofed porch with an off-center metal core door, concrete steps and metal railings, and a strip of four windows that appear to be sliding windows. The second floor of the front elevation has four one-over-one windows. This home lacks integrity and architectural distinction and is not individually eligible for listing on the National Register.

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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows, porch enclosed
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Cement	
Roof Material None	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details None			**Windows** Sliding, double hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

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Marengo, Illinois 60152
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Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

351 W. 109th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1889

Architect's Name: Unknown

Builder/Contractor: Unknown

Architectural Style:

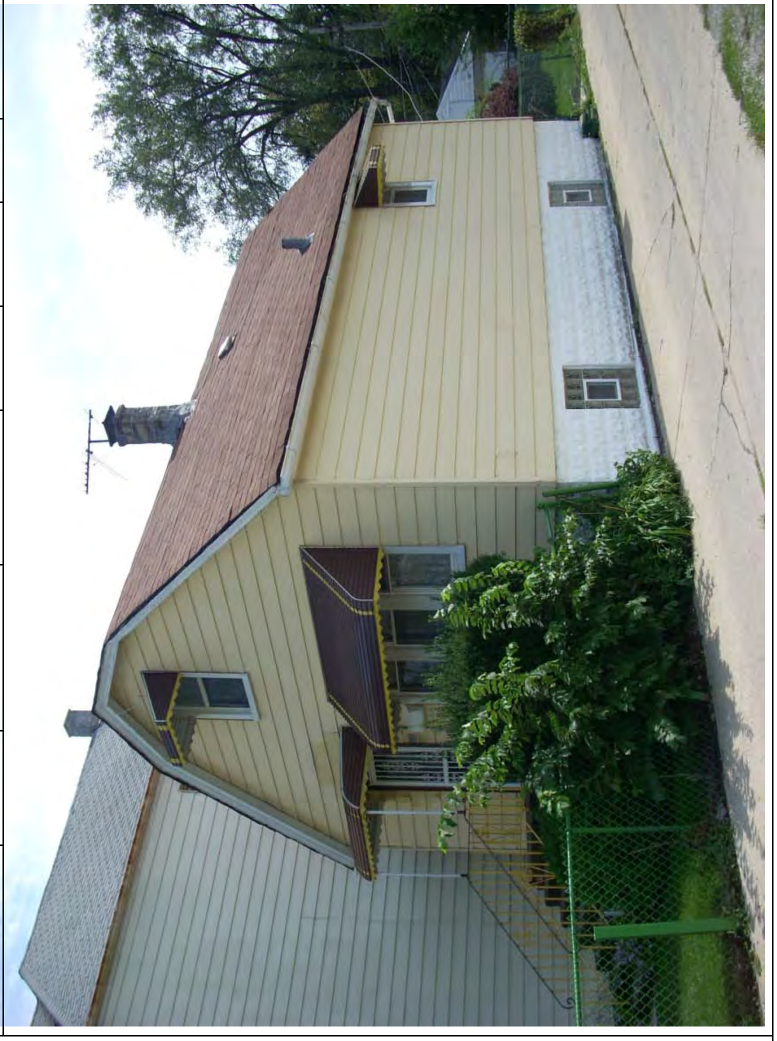
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 5 September 2012

Photos with Captions:
North and west façades of 1-story, frame, single family residence.



Property Description: **Stories:** 1

This one story home in the Roseland community is clad with aluminum siding, has a gambrel roof covered with asphalt shingles, and rests on a concrete block foundation. Its front elevation features an off-center door and porch with concrete steps, metal railings and supports, a metal awning roof, and a strip of three one-over-one windows on the first floor and a one-over-one window above. Window openings in the basement are filled with glass blocks surrounding a central, casement window. This home lacks integrity and architectural distinction and is not individually eligible for listing on the National Register.

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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows, doors, and cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gambrel	
Ornamental Architectural Details None			**Windows** Double-hung, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

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Historical Resource Recordation Form

Property Name

Historic: Not labeled, no in CHRS

Common/Current: Unknown

Property Address:

354 W. 109th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1894

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

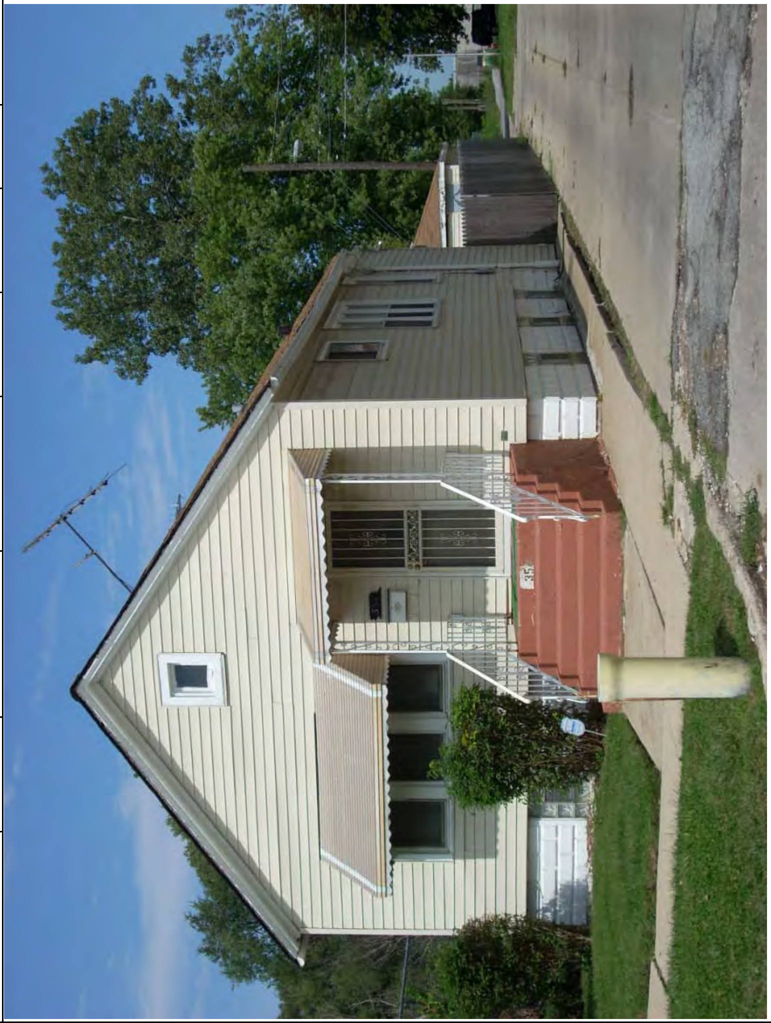
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 5 September 2012

Photos with Captions:
South and east façades of 1 -story, frame, single family residence.



Property Description: **Stories:** 1

This one story home in the Roseland community is clad with synthetic siding, has has a front-gabled roof covered with asphalt shingles, and rests on a concrete block foundation. Its front elevation features an off-center door and porch with concrete steps, metal railings and supports, and metal awning roof. It has a strip of three one-over-one windows on the first floor and a small single-pane window in the gable. Glass blocks with a central casement infill the basement window openings. This home lacks integrity and architectural distinction and is not individually eligible for listing on the National Register.

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Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement siding and windows in basement
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Fixed-pane, double-hung, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
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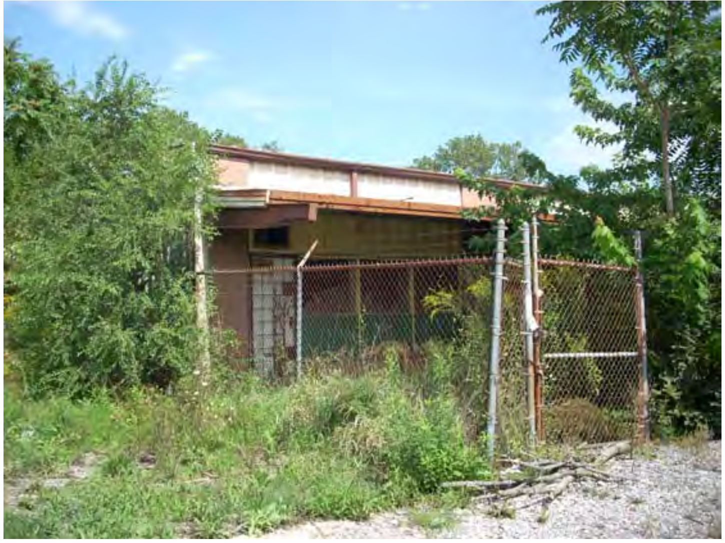
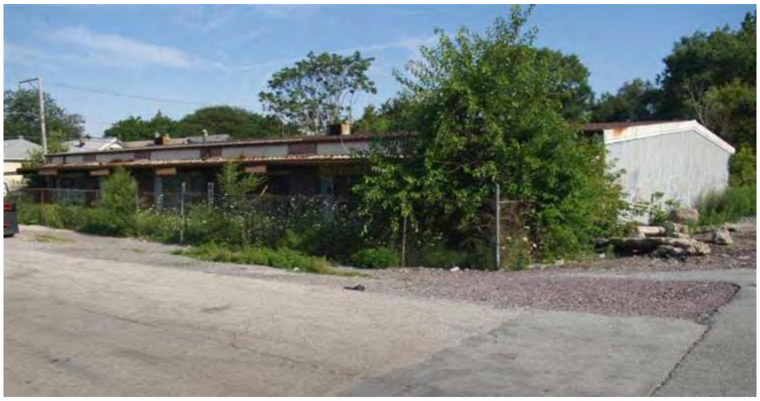
Historical Resource Recordation Form

Property Name **Historic:** South Shore Iron Works **Common/Current:** South Shore Iron Works	**Photos with Captions:** East façade of industrial, brick and metal storage shed.  South and east façades of industrial, brick and metal storage shed. 
Property Address: 404-410 W. 109th Street	
HAARGIS Number: Not in database	
Present Owner and /or Occupant: Vacant	
Property Use **Historic:** Industrial **Current:** Industrial	
Date of Construction: 1965 **Architect's Name:** Not in CHRS **Builder/Contractor:** Not in CHRS	
Architectural Style: Vernacular	
Prepared By: C. Tolmie, M. C. Bird, J. Guarino **Photo By:** S. Katz (top photo, photo pg. 3), CCA (bottom photo) **Date:** 5 September 2012	

Property Description: **Stories:** 1

This one-story, side-gabled, metal shed on the vacated South Shore Iron Works property is partially obscured by foliage. The front elevation is clad in buff brick and contains a series of hollow metal doors, each flanked by three windows to one side; many are covered with plywood. A full width metal canopy is present on the front façade. The gable ends and rear elevation are clad in corrugated sheet metal. This building lacks architectural distinction and is not individually eligible for listing on the National Register.

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Structural Survey

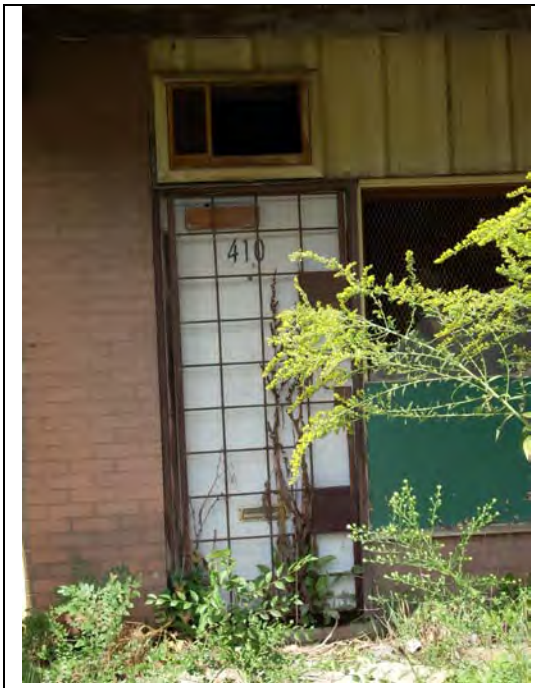
Integrity: Unaltered	[✓ Slight Modification]	Major Alteration	**Additional Notes/Descriptions** Window openings covered with boards
Condition: Excellent	Good	[✓ Poor]	Abandoned, overgrown, and rusting
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick (façade), metal (rear)	
Roof Material Metal	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Unknown
Outbuildings (*Number and Description*) None			

Local Landmark	**Y [✓ N]**	
National Register Historic Places	**Y [✓ N]**	
National Register Historic District	**Y [✓ N]**	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Detail photo of door:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680



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Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

407-409 W 109th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

South Shore Iron Works

Property Use

Historic: Industrial

Current: Industrial

Date of Construction: 1956

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

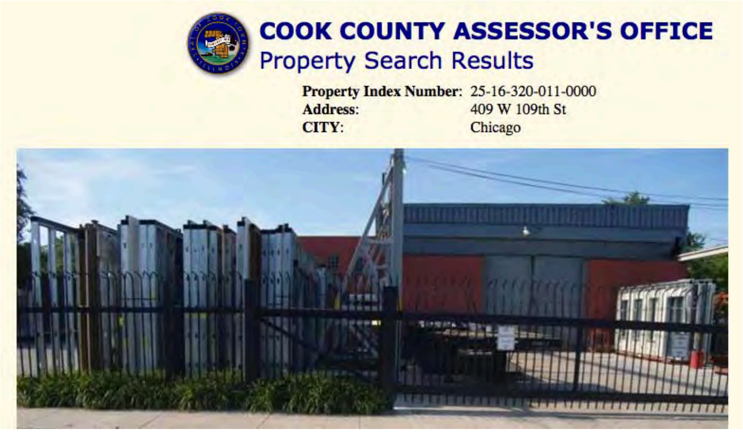
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz, Cook County Assessor

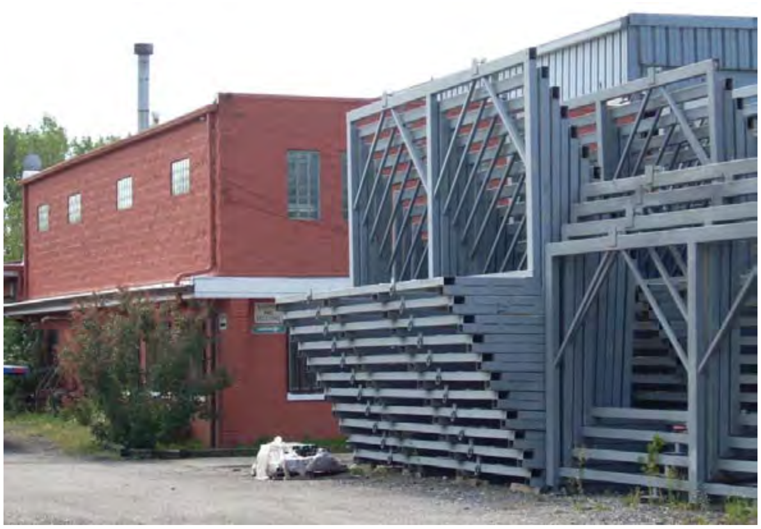
Date: 5 September 2012

Photos with Captions:
North and east façades of metal sheds and concrete block building.



COOK COUNTY ASSESSOR'S OFFICE
Property Search Results

Property Index Number: 25-16-320-011-0000
Address: 409 W 109th St
CITY: Chicago



Property Description: **Stories:** 2

This property includes a two story, flat-roofed concrete block building associated with South Shore Iron Works, manufacturers of structural steel. The building is difficult to see from the public right-of-way. The first floor has one-over-one windows below a metal awning and the second floor has glass block windows. Portion of the building has had its roof raised, creating more height for the interior workspace. The Cook County Assessor’s photo shows large sliding metal doors on the warehouse façade. This structure lacks architectural distinction and is not individually eligible for listing on the National Register.

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Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity:

Unaltered [✓ Slight Modification] Major Alteration

Additional Notes/Descriptions

Roof height raised

Condition:

[✓ Excellent] Good Poor

Additional Alterations

Structure Usage	**Exterior Wall Surface**
Current: NA Historic: NA	Concrete block

Roof Material	**Roof Features**	**Roof Type**
Metal	None	Flat

Ornamental Architectural Details

None

Windows

Double-hung, glass block

Outbuildings (*Number and Description*)

Sheet metal storage shed

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

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Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

743 W. 109th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1954

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

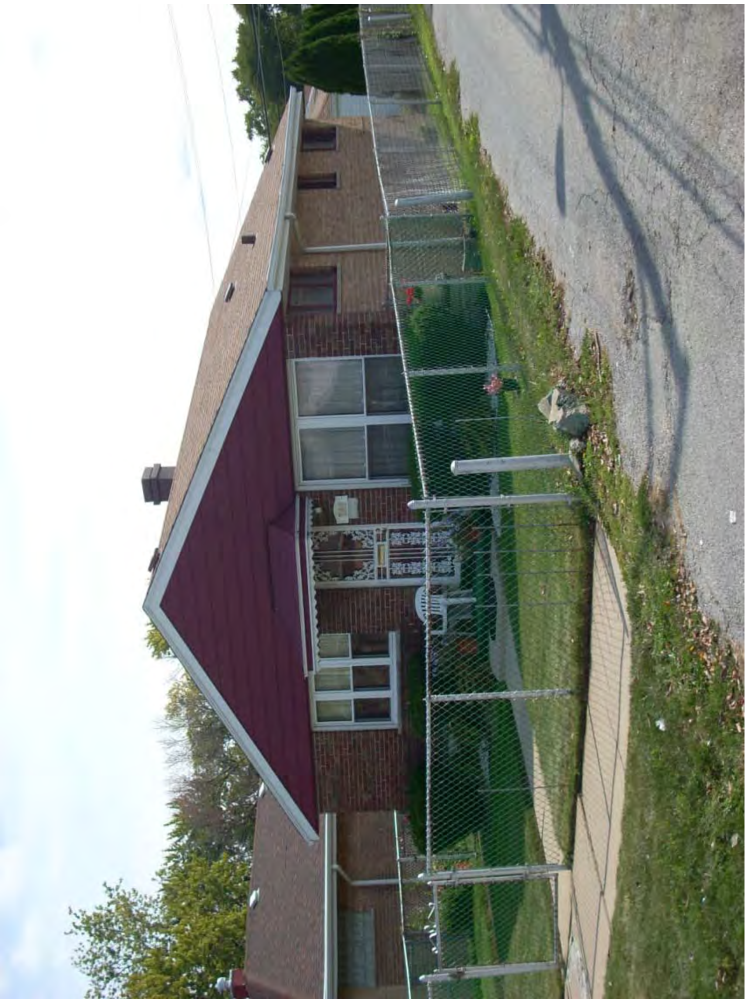
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 23 October 2012

Photos with Captions:
North façade of a one-story, single family, brick residence.



Property Description: **Stories:** 1

This one-story house in the Roseland community has a front gable roof covered with asphalt shingles. Its front elevation is clad with brown brick and has a synthetic-clad gable, a central metal storm door with metal awning and concrete stoop. The door is flanked on either side by a pair of large windows and a strip of three smaller windows, all of which are non-original one-over-one aluminum-sash. It does not feature distinguishing architectural elements and is not individually eligible for listing on the National Register.

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Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows and gable cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick (main), Synthetic siding (gable)	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

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505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

332 W. 110th Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1899

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

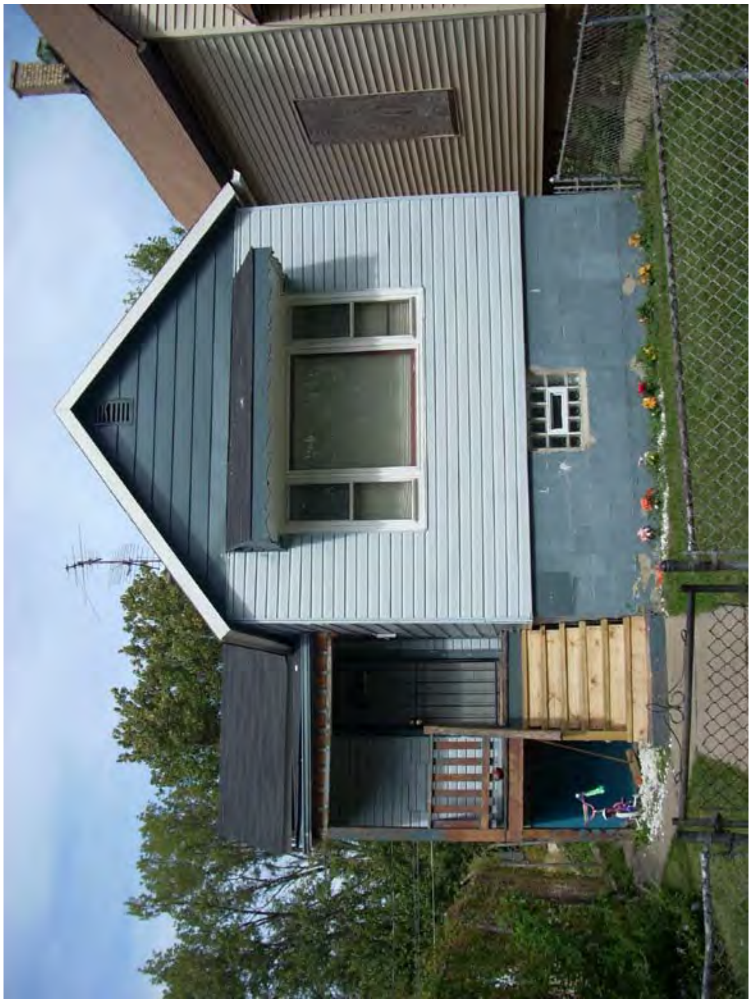
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 17 October 2012

Photos with Captions:
South façade of a one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story house in the Roseland community is situated on a raised concrete block basement with glass block windows and is covered with synthetic siding. The building has a cross-gable roof covered with asphalt shingles. The front elevation has an off-center non-original hollow core metal door, a partial width, flat-roofed wood corner porch, and a non-original picture window flanked by double-hung windows. This house lacks integrity and distinguishing architectural features and is not individually eligible for listing on the National Register.

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Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity:	Unaltered	[✓ Slight Modification]	Major Alteration	**Additional Notes/Descriptions** Replacement door, windows, cladding, porch rails and steps
Condition:	Excellent	[✓ Good]	Poor	
Additional Alterations				
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding		
Roof Material Asphalt	**Roof Features** None	**Roof Type** Cross-gable		
Ornamental Architectural Details None				**Windows** Double-hung, fixed-pane, glass block
Outbuildings (*Number and Description*) None				

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

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Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

341 W. 110th Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1916

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

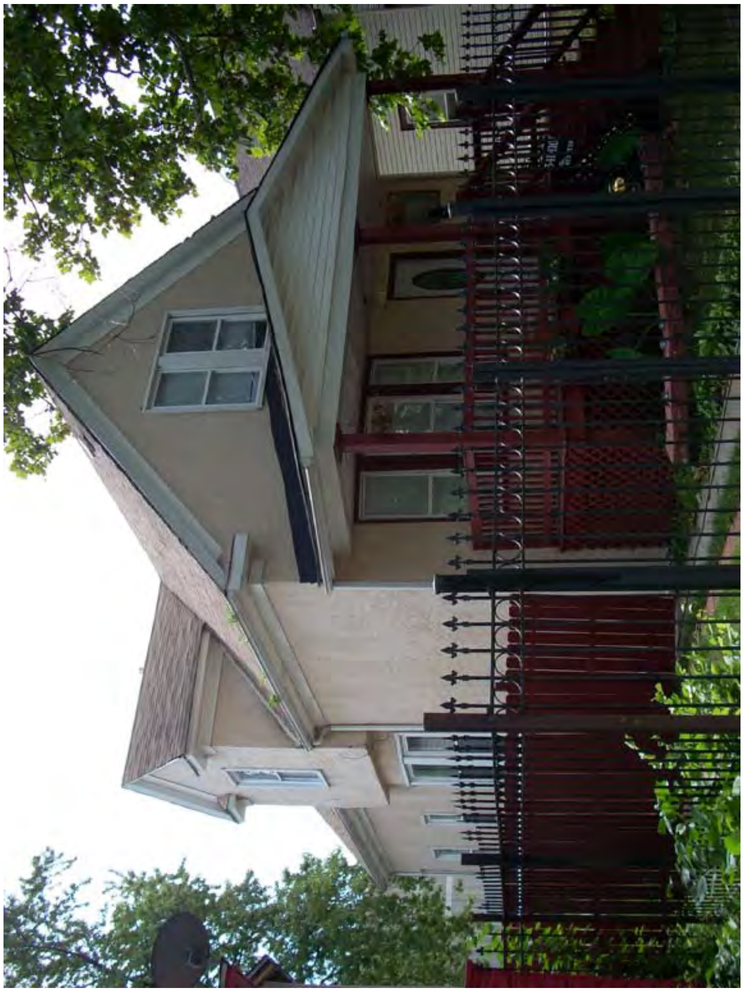
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 17 October 2012

Photos with Captions:
North façade of a one-story, single family, stucco residence.



Property Description: **Stories:** 1

This one-story house in the Roseland community is situated on a raised basement and is covered with stucco. The building has a gable roof with cornice returns and is covered with asphalt shingles. Its front elevation has a gable-roofed wood porch, an off-center hollow core metal door, a glass block window and a rounded window bay on the first floor, and a pair of windows in the gable end, all of which are one-over-one vinyl-sash. The east elevation has a rounded window bay and gable wall dormer. This house lacks distinguishing architectural features and is not individually eligible for listing on the National Register.

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Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement door and windows
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Stucco	
Roof Material Asphalt shingle	**Roof Features** Dormers	**Roof Type** Gable	
Ornamental Architectural Details Cornice returns			**Windows** Double-hung, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y [✓ N]**	
National Register Historic Places	**Y [✓ N]**	
National Register Historic District	**Y [✓ N]**	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

347 W. 110th Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1892

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

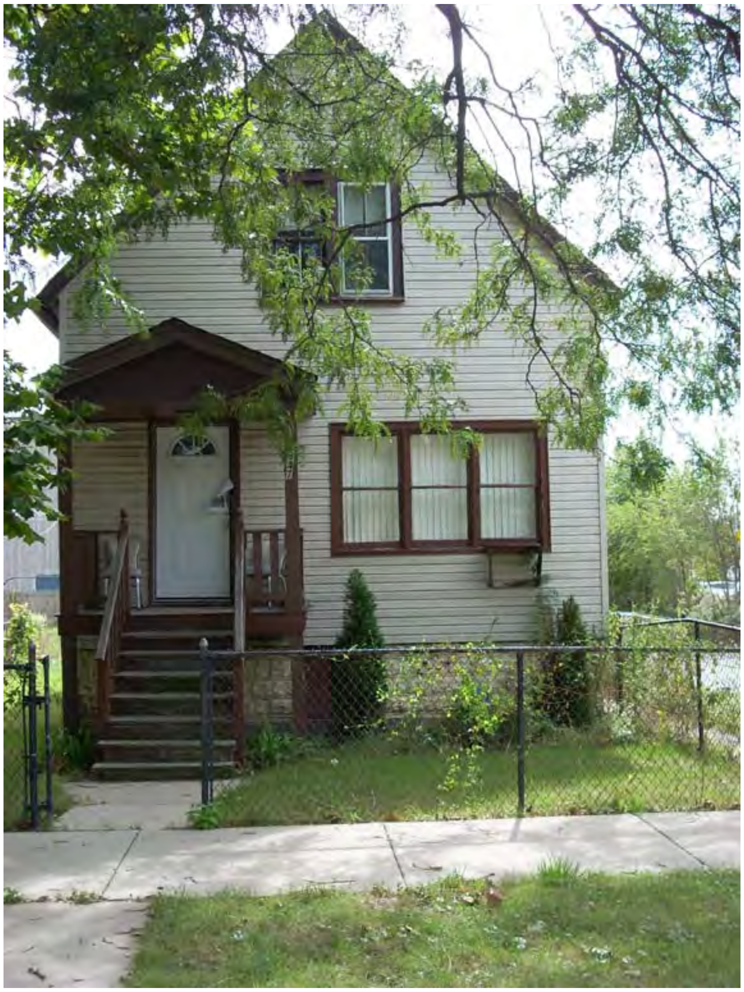
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 17 October 2012

Photos with Captions:
North façade of a 1.5- story, single family, frame residence.



Property Description: **Stories:** 1.5

This one-and-a-half-story house in the Roseland community is situated on a raised concrete block basement and is covered with synthetic siding. The building has a front gable roof covered with asphalt shingles. Its front elevation has an off-center hollow core metal door with partial-width, gable-roofed, wood porch. There is a strip of three one-over-one wood-sash windows on the first floor and a pair of two-over-two wood-sash windows in the gable. This house lacks integrity and distinguishing architectural features and is not individually eligible for listing on the National Register.

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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement door and cladding
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y [✓ N]**	
National Register Historic Places	**Y [✓ N]**	
National Register Historic District	**Y [✓ N]**	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
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Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

301 W. 110th Street
Alternate: 11010 S Princeton Ave

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1903

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

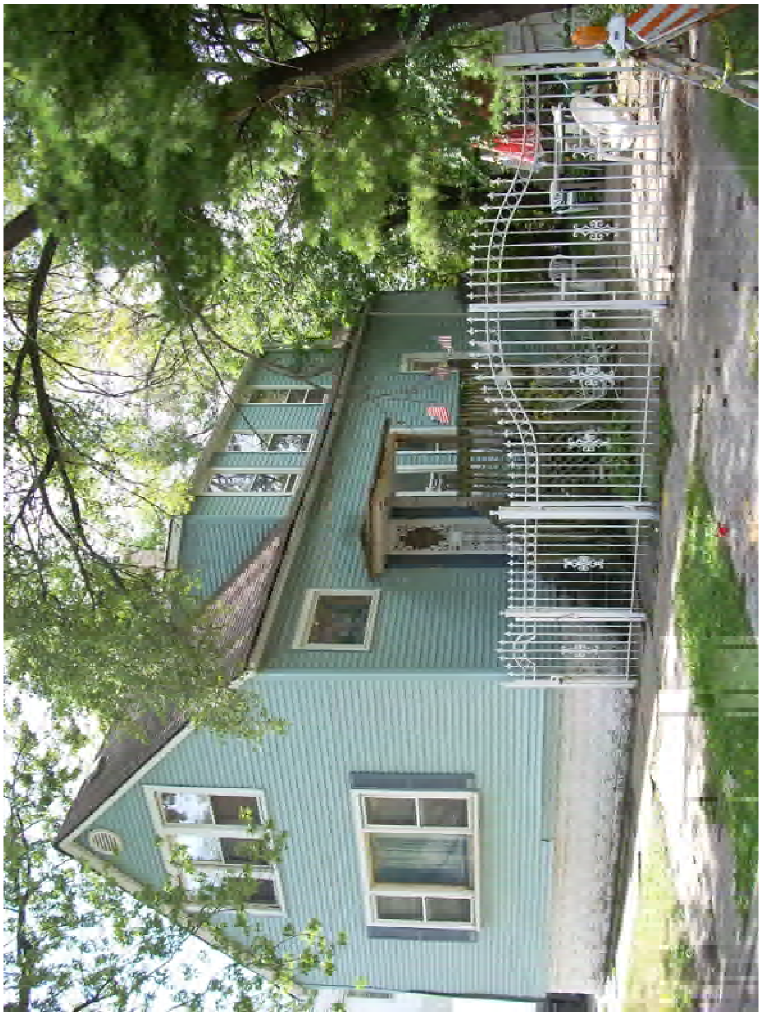
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 17 October 2012

Photos with Captions:
South façade of a one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story frame house in the Roseland community is situated on a raised concrete block basement with glass block windows and is covered with synthetic siding. The building has a gable roof covered with asphalt shingles. Both side elevations have wide shed dormers, each of which features three non-original one-over-one aluminum-sash windows. The front elevation has a group of three windows on both the first and second floors, all of which are non-original one-over-one aluminum-sash with the exception of the central window on the first floor. The front door is situated along the west elevation, which has wood steps and railings. This house lacks integrity and distinguishing architectural features and is not individually eligible for listing on the National Register.

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Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered	[✓ Slight Modification]	Major Alteration	**Additional Notes/Descriptions** Replacement windows and cladding
Condition: [✓ Excellent]	Good	Poor	
Additional Alterations Dormers may be a later addition			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** Dormers	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung, fixed pane, casement, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

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Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

331 W. 110th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1909

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

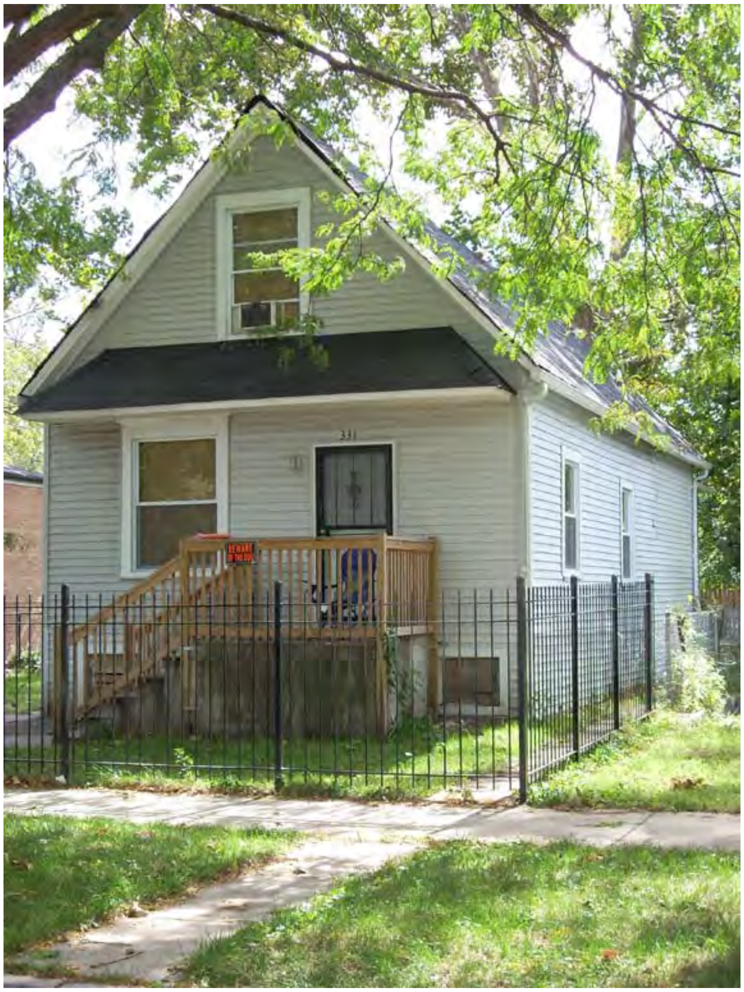
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 17 October 2012

Photos with Captions:
North façade of a one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story frame house in the Roseland community is situated on a raised basement with glass block windows and is covered with synthetic siding. The building has a front gable roof covered with asphalt shingles. The front elevation has a pent roof, off-center door, wood steps with wood railings, and single windows on the first floor and in the attic, both of which are non-original one-over-one aluminum-sash. The east elevation has a three-sided window bay with a gable wall dormer above. This house lacks integrity and distinguishing architectural features and is not individually eligible for listing on the National Register.

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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows and cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** Dormers	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

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Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

340 W. 110th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Multi-family residence

Date of Construction: 1909

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

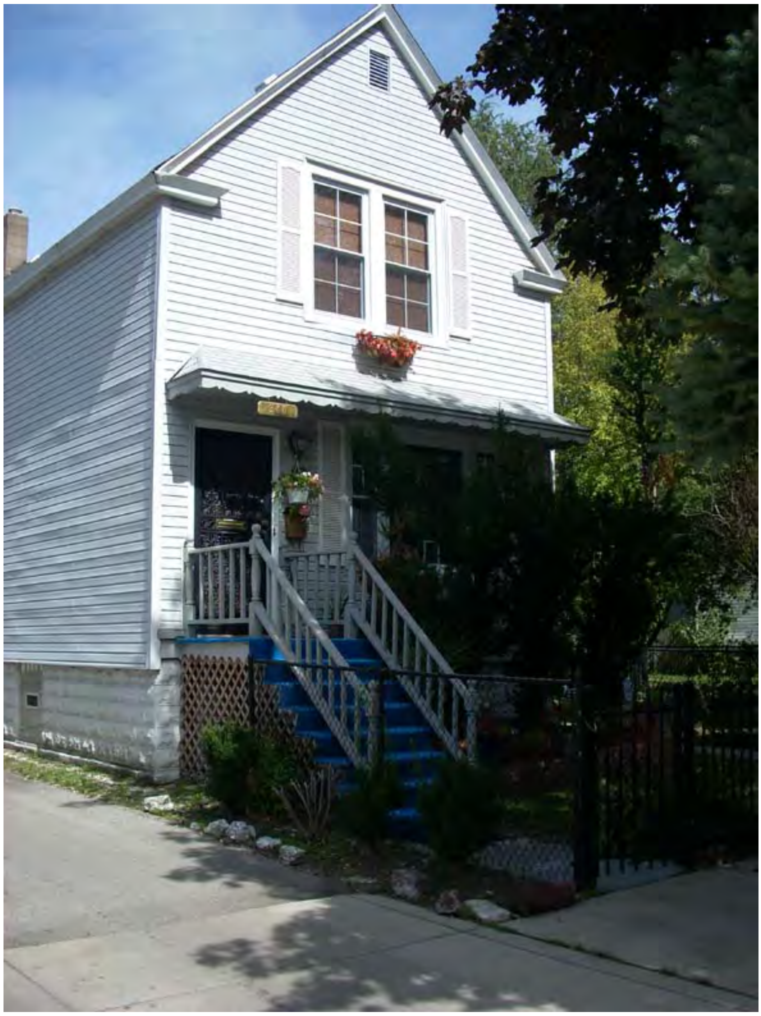
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 17 October 2012

Photos with Captions:
South façade of a 1.5- story, multi-family, frame residence.



Property Description: **Stories:** 1.5

This one-and-a-half story frame house in the Roseland community is situated on a raised concrete block basement with glass block windows and is covered with synthetic siding. The building has a gable roof with cornice returns and is covered with asphalt shingles. The front elevation has a pent roof with scalloped trim, an off-center door, and wood steps with wood railings. There is a group of windows on the first floor (fixed-pane flanked by four-over-four), and a pair of non-original four-over-four windows in the gable end. This house lacks integrity and distinguishing architectural features and is not individually eligible for listing on the National Register.

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Marengo, Illinois 60152
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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows and cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details Cornice returns, scalloped trim			**Windows** Double-hung, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

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Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

Two W. 111th Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Apartment building

Current: Apartment building

Date of Construction: 1922

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

Vernacular

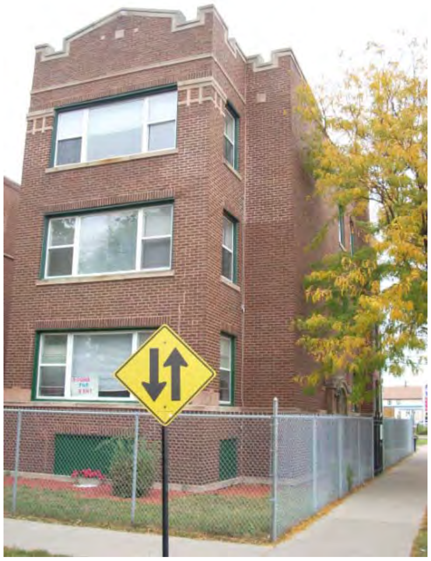
Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

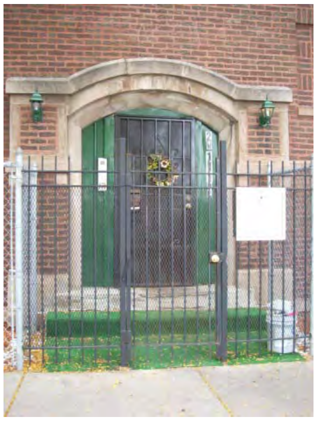
Date: 30 October 2012

Photos with Captions:

South and east façades of a brick, three-story apartment building.



Detail of stone surround on east façade.



Property Description: **Stories:** 3

This three-story apartment building at the northwest corner of 111th Place and State Street in the Roseland community is situated on a raised basement and is clad with brown face brick on its two street elevations. The building has a flat roof and a shaped parapet above the three-story enclosed full-height sun porch pavilion along its south (111th Place) elevation. Each floor on this elevation has a window group comprising a picture window flanked by one-over-one windows. The front (State Street) elevation has a hollow core metal door with a stone surround; each floor has a series of single one-over-one aluminum-sash windows. The door and windows are non-original. Detailing includes concrete sills, sill courses, insert blocks, and coping. This building lacks distinctive architectural features and is not individually eligible for listing on the National Register.

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement door and windows
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details Concrete sills, sill courses, coping, insert blocks, stone door surround			**Windows** Double-hung, fixed-pane
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

3 W. 111th Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1934

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

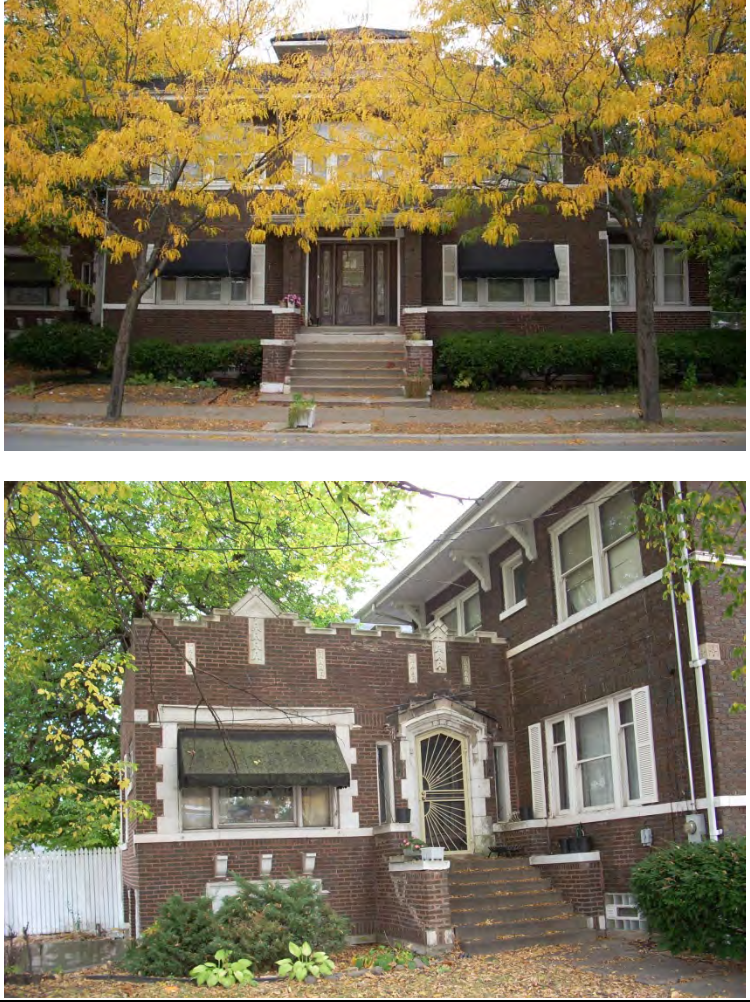
Craftsman, Gothic Revival wing

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 30 October 2012, 8 March 2013

Photos with Captions:
East façade of a brick, two-story, single family residence (above) and one-story wing (below).



Property Description: **Stories:** 2

This Craftsman house at the southwest corner of 111th Place and State Street in the Roseland community sits on a raised basement and is clad with brown face brick. The building has a hip roof covered with asphalt shingles, overhanging eaves with knee braces, and a hip dormer along the 111th Place elevation. The main block of the house has two additions: a one-story Gothic Revival style east wing with a flat roof and battlemented parapet and a one-story hipped-roof sun porch to the west that is surrounded by double-hung windows. Both wings are also clad in brown face brick. The home's front elevation (111th Place) has a centrally-located single-light wood door with sidelights, brick piers, concrete steps with low brick sidewalls, and a flat-roofed wood canopy. The front entrance is flanked on either side by a group of three windows: a picture window flanked by double-hung windows. The second floor of the front elevation features a series of double-hung windows. The front elevation of the Gothic Revival style wing has an off-center metal storm door with slit windows on either side, as well as a picture window flanked by double-hung windows. The door and window group have stone quoins and drip molding. Detailing also includes stone insert blocks.

residence is recommended as individually eligible for National Register listing under Criterion B due to its association with Reverend Harry J. Hager (1899-1983), a pioneer in media evangelism in Chicago during the mid-twentieth-century. Rev. Hager served as pastor of the adjacent Bethany Reformed Church for 44 years (1929-1975). He was a pioneer in the emerging media ministry, beginning in 1933 with the weekly Bethany Bible Broadcast on the FM station WHIP. Starting in 1944, Rev. Hager's preaching reached a national audience when Chicago's high-powered AM station WCFL began broadcasting his Sunday evening services across America.

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions**
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingle	**Roof Features** Dormer	**Roof Type** Hip	
Ornamental Architectural Details Knee braces, battlemented parapet; stone quoins, inserts, and drip molding			**Windows** Double-hung, fixed-pane, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? Yes	**A** [✓ **B**] **C**	**Significance:** Associated with Rev. Harry J. Hager, a pioneer in media evangelism in Chicago during the Mid-Century.

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

340 W. 111th Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Multi-family residence

Date of Construction: 1908

Architect's Name: Not in CHRS database

Builder/Contractor: Not in CHRS database

Architectural Style:

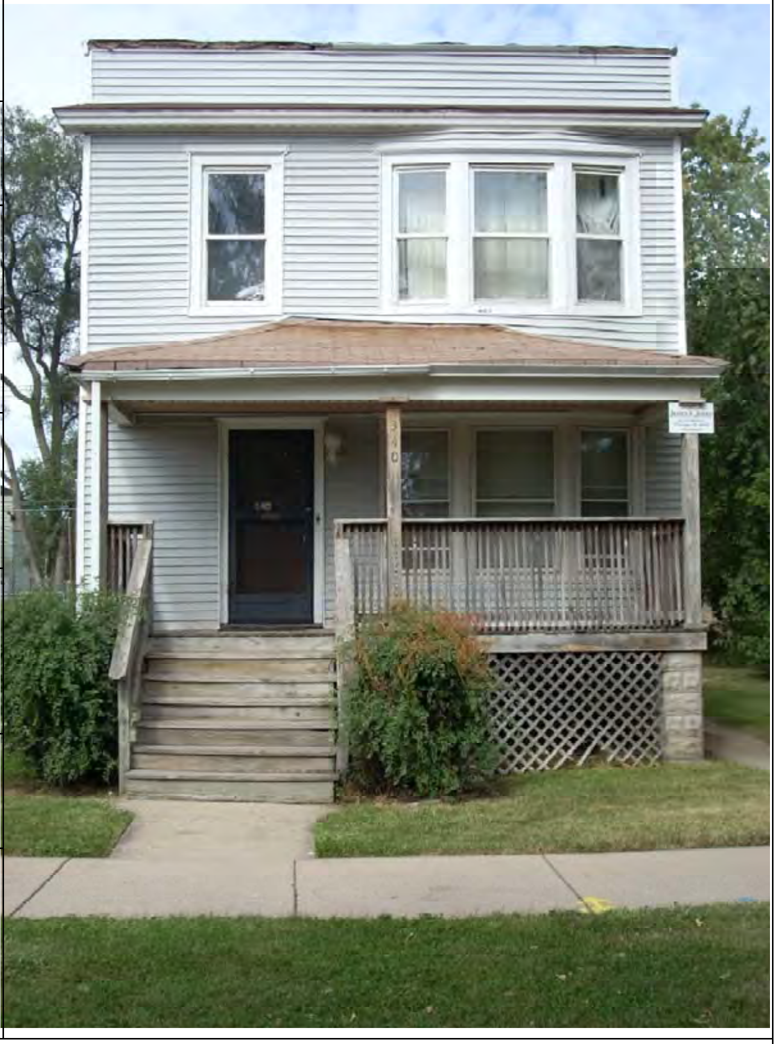
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 16 September 2012

Photos with Captions:
South façade of two-story, multi-family, frame residence.



Property Description: **Stories:** 2

This two-story house in the Roseland community is situated on a raised concrete block basement with glass block windows and is covered with synthetic siding. The building has a flat roof and parapet. Its front elevation has a full-width hipped-roof wood porch with square wood posts and a straight railing balustrade. The porch sits atop piers of rusticated concrete block. The porch also features an off-center door with a metal storm door. There are two slightly rounded window bays—one on the first floor and one on the second—and an additional single window on the second floor. Windows are non-original one-over-one aluminum sash. Detailing includes an aluminum-covered cornice. This house lacks integrity and distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered	[✓ Slight Modification]	Major Alteration	**Additional Notes/Descriptions** Replacement windows, cladding, and porch rails, posts, and steps
Condition: Excellent	[✓ Good]	Poor	
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details Cornice			**Windows** Double-hung, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y [✓ N]**	
National Register Historic Places	**Y [✓ N]**	
National Register Historic District	**Y [✓ N]**	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

344 W 111th Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1913

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

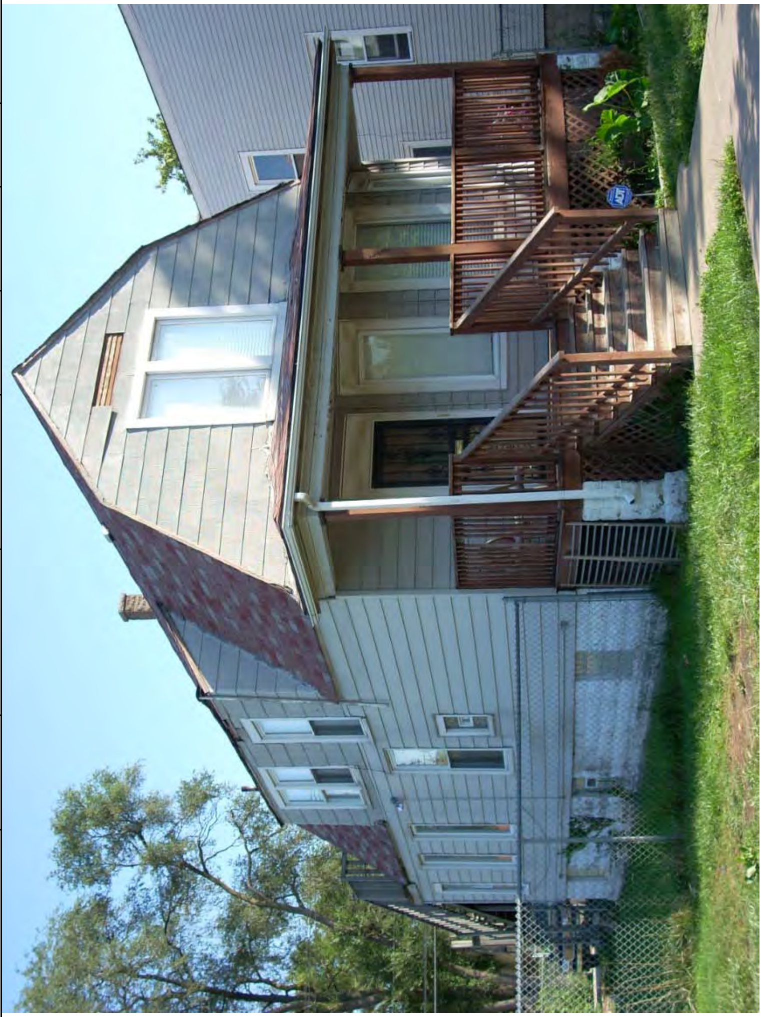
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 6 September 2012

Photos with Captions:
South and east façades of one-story, frame, single family residence.



Property Description: **Stories:** 1

This one story home in the Roseland community is situated on a raised basement, is clad with synthetic siding, and has a gambrel roof covered with asphalt shingles with wall dormers. Its front elevation features a non-original, flat-roofed, full-façade wood porch with straight railings and posts. The home also features an off-center door, a three-sided window bay on the first floor, and paired casement windows on the second floor. This home lacks integrity and architectural distinction and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows, doors, siding, and porch
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt Shingles	**Roof Features** Dormers	**Roof Type** Gambrel	
Ornamental Architectural Details None			**Windows** Double-hung, casement
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

303 W. 111th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1923

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

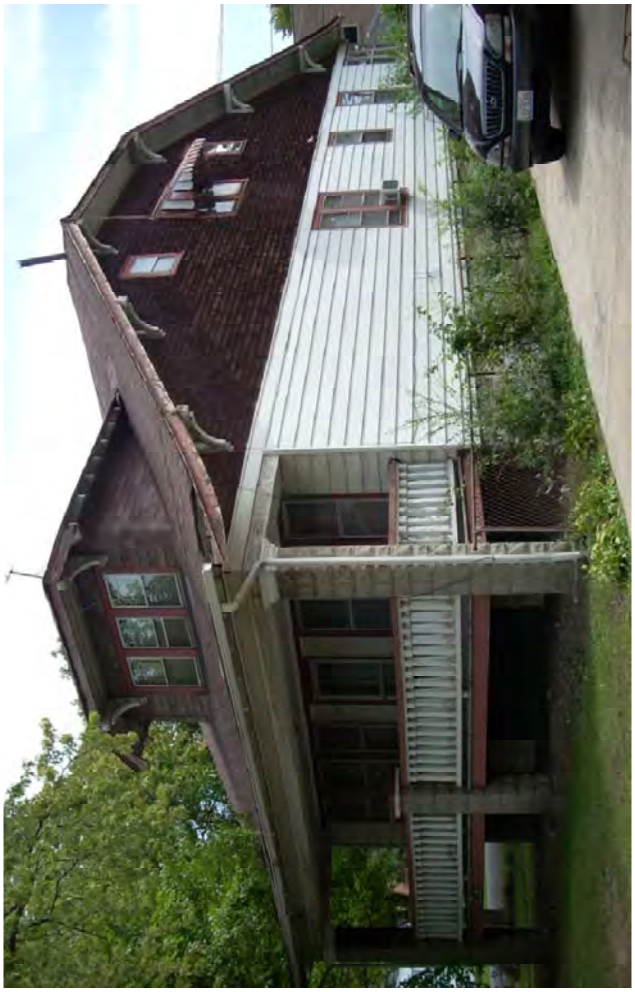
Craftsman

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 22 October 2012

Photos with Captions:
North and west façades of a one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story Craftsman style house in the Roseland community is situated on a raised concrete block basement and is covered with synthetic siding and wood shingles. The building has a side hip-on-gable roof, overhanging eaves. There are decorative wood brackets and a hip-on-gable dormer with bracketed, overhanging eaves. There are three double-hung wood-sash windows with aluminum storms in the gable. Asphalt shingles clad the roof and the dormer. The roof has a wide overhang that serves as the roof for a full-width wood porch that has faux stone piers and wood railings, but no steps. The front elevation has a centrally located door that appears to be oak with a glass pane, which is flanked by three windows on either side, all of which are double-hung wood-sash with aluminum storms. This house lacks distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Aluminum storms added, replacement siding on lower level
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding (lower), Wood shingles (upper), Asphalt shingles (dormer)	
Roof Material Asphalt shingle	**Roof Features** Dormer	**Roof Type** Side hip-on-gable	
Ornamental Architectural Details Bracketed eaves			**Windows** Double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

316 W. 111th St.

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Vacant

Property Use

Historic: Single family residence

Current: Multi-family residence

Date of Construction: 1893

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

Vernacular

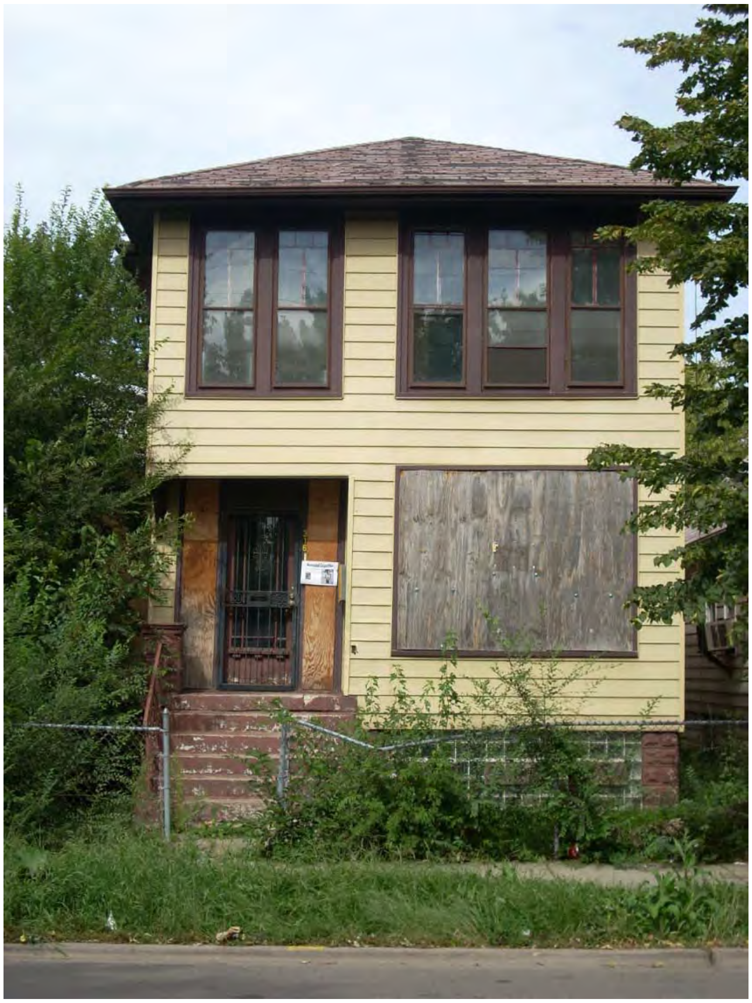
Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 17 October 2012

Photos with Captions:

South façade of a two-story, multi-family, frame residence.



Property Description: **Stories:** 2

This two-story house in the Roseland community is situated on a raised concrete block basement and is covered with synthetic siding. The building has a hip roof covered with asphalt shingles and overhanging eaves. Its front elevation has an off-center entrance with metal storm door and concrete steps with metal railing. Sidelights and a window group on the first floor are covered with plywood. There are five double-hung windows on the second floor, arranged in a pair and in a group of three. This house lacks integrity and distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement cladding, steps and railing
Condition: Excellent Good [✓ Poor]			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Hip	
Ornamental Architectural Details None			**Windows** Double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: St. Mary Church of Prayer

Property Address:

339-341 W. 111th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

St. Mary Church of Prayer

Property Use

Historic: Commercial (Tin Shop, 1938)

Current: Mixed-Use

Date of Construction: 1924

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

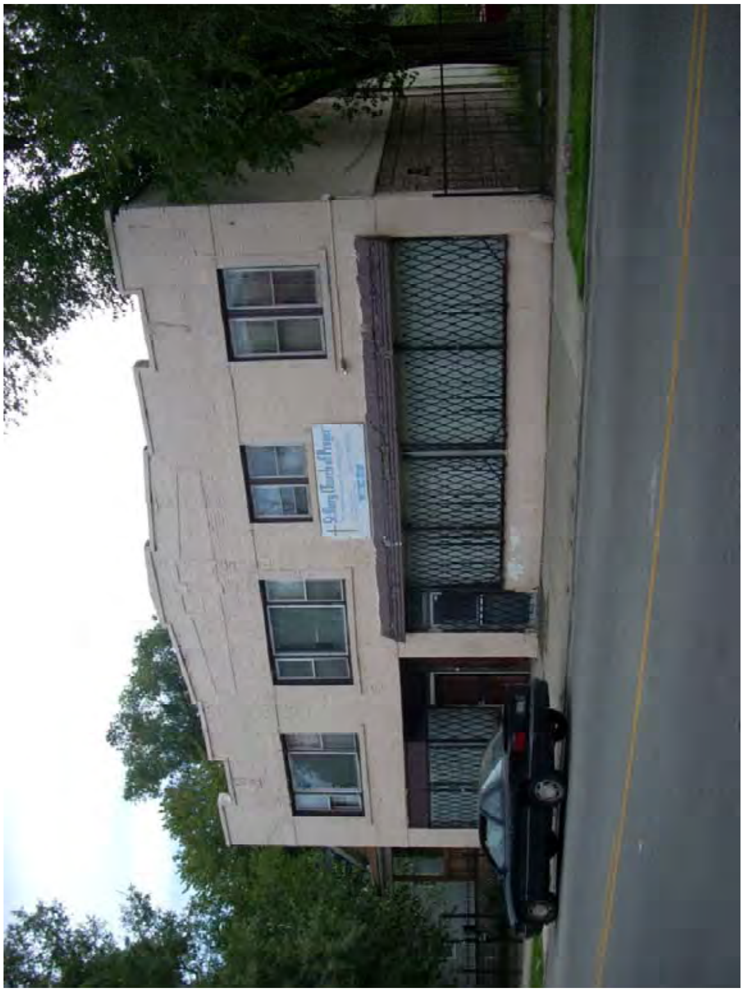
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 17 October 2012

Photos with Captions:
North façade of a brick, two-story, mixed-use building.



Property Description: **Stories:** 2

This two-story former commercial building (now a storefront church) in the Roseland community is clad with painted brick and has a flat roof and a stepped parapet. The first floor of the front elevation has two storefronts with strips of single-pane windows and non-original doors with transoms. The second floor has two groups of picture windows flanked by one-over-one windows and two pairs of one-over-one aluminum-sash windows. Detailing includes concrete coping and sills, a brick stringcourse, and a brick panel along the cornice line. This building lacks integrity and distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

<table>
<tr><td colspan="3">Integrity:
Unaltered [✓ Slight Modification] Major Alteration</td><td>Additional Notes/Descriptions
Replacement windows and doors</td></tr>
<tr><td colspan="3">Condition:
Excellent [✓ Good] Poor</td><td></td></tr>
<tr><td colspan="3">Additional Alterations</td><td></td></tr>
<tr><td colspan="2">Structure Usage
Current: NA
Historic: NA</td><td>Exterior Wall Surface
Brick</td><td></td></tr>
<tr><td>Roof Material
Unknown</td><td>Roof Features
Parapet</td><td>Roof Type
Flat</td><td></td></tr>
<tr><td colspan="3">Ornamental Architectural Details
Concrete sills and coping, brick stringcourse, brick panel</td><td>Windows
Double-hung, fixed pane</td></tr>
<tr><td colspan="4">Outbuildings (<i>Number and Description</i>)
None</td></tr>
</table>

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

349 W 111th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Flat

Current: Flat

Date of Construction: 1917

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

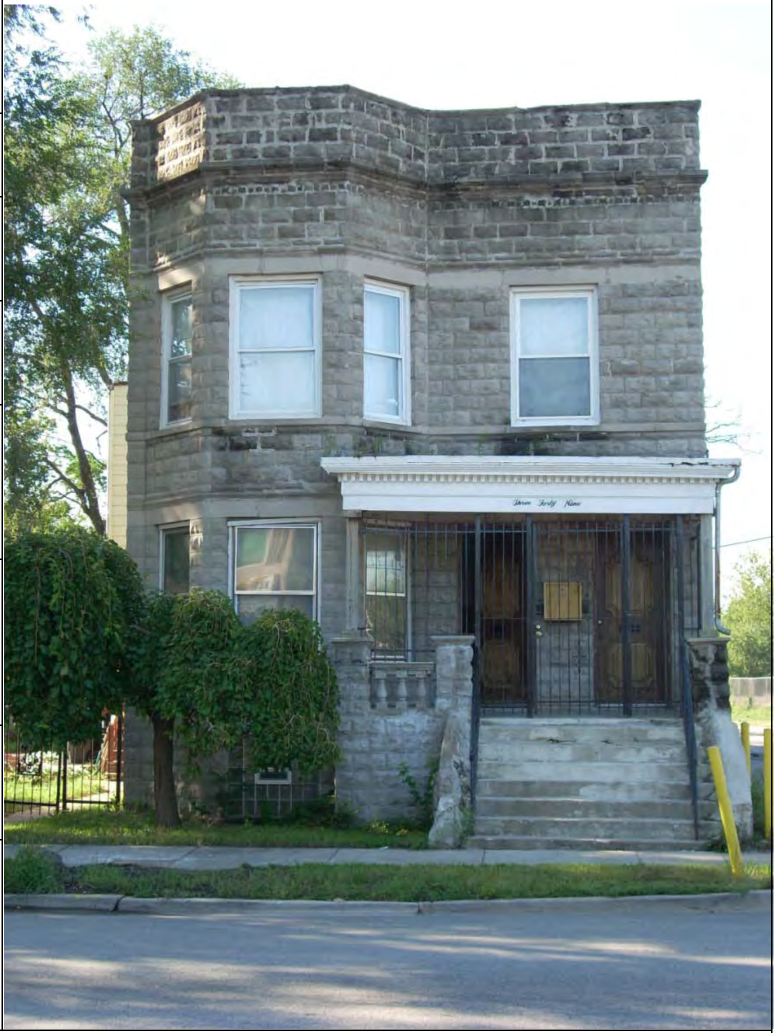
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 6 September 2012

Photos with Captions:
South façade of two-flat greystone residential building.



Property Description: **Stories:** 2

This two-flat greystone residential building in the Roseland community has a flat roof and parapet. Its front elevation features a full-height window bay pavilion with fenestration comprised of one-over-one replacement windows. It has an off-center porch with two entrances that feature non-original wood doors, stone steps, metal and stone railings, and wood columns supporting a flat wood roof with dentil molding. Detailing includes a stone sill courses, lintels, beltcourses, and cornice.

The City of Chicago has recognized this building type through its Historic Greystone Initiative, which promotes the preservation of Chicago’s ornate, limestone-clad homes by offering technical assistance and financial resources to property owners. Although this is an example of the greystone residential building type, it does not possess sufficient distinguishing architectural characteristics to qualify as individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered	[✓ Slight Modification]		Major Alteration	**Additional Notes/Descriptions** Replacement windows
Condition: Excellent	[✓ Good]		Poor	
Additional Alterations				
Structure Usage Current: NA Historic: NA			**Exterior Wall Surface** Stone	
Roof Material Unknown	**Roof Features** None		**Roof Type** Flat	
Ornamental Architectural Details Stone sill courses, lintels, beltcourses, cornice, and railings				**Windows** Double hung
Outbuildings (*Number and Description*) None				

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

401 W 111th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Roseland Tune-Up Center

Property Use

Historic: Commercial

Current: Commercial

Date of Construction: 1964

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

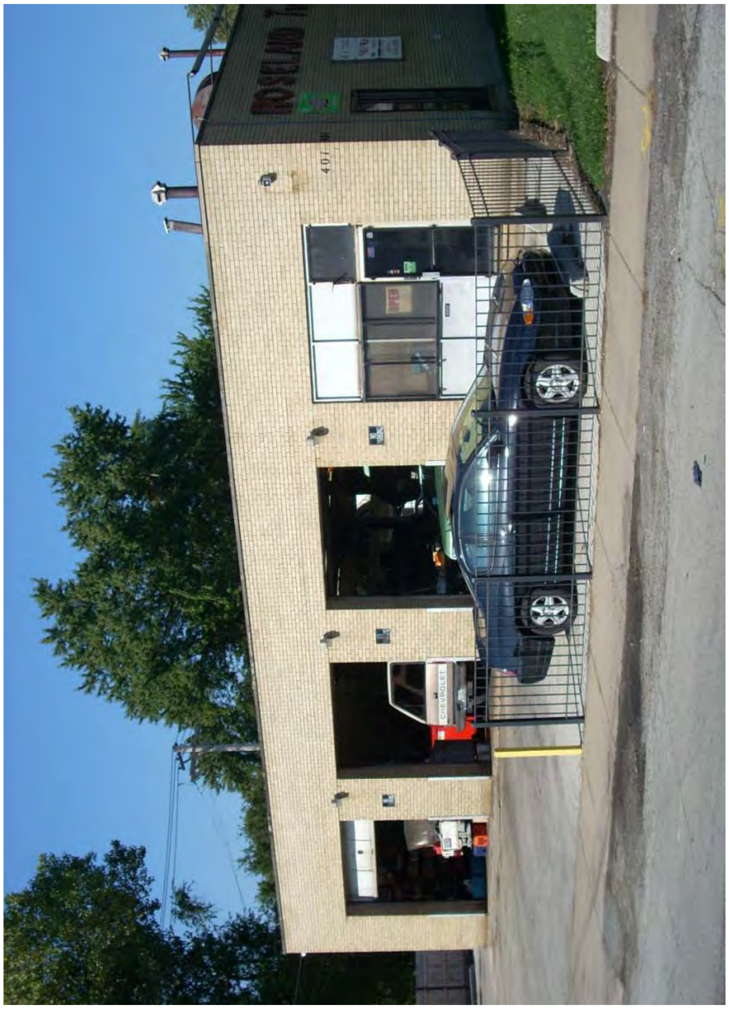
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 6 September 2012

Photos with Captions:
South and east façades of one-story, brick garage.



Property Description: **Stories:** 1

This one-story, brick-clad garage in the Roseland neighborhood has a flat roof and a front elevation that features three garage door openings with metal overhead doors. The fourth bay features an off-center plate glass door with transom in-filled with wood and flanking single-pane windows. This building does not feature sufficient distinguishing architectural features to qualify as individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Transom in-filled with wood
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Unknown	**Roof Features** None	**Roof Type** Flat	
Ornamental Architectural Details None			**Windows** Fixed-pane
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

428 W. 111th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1960

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

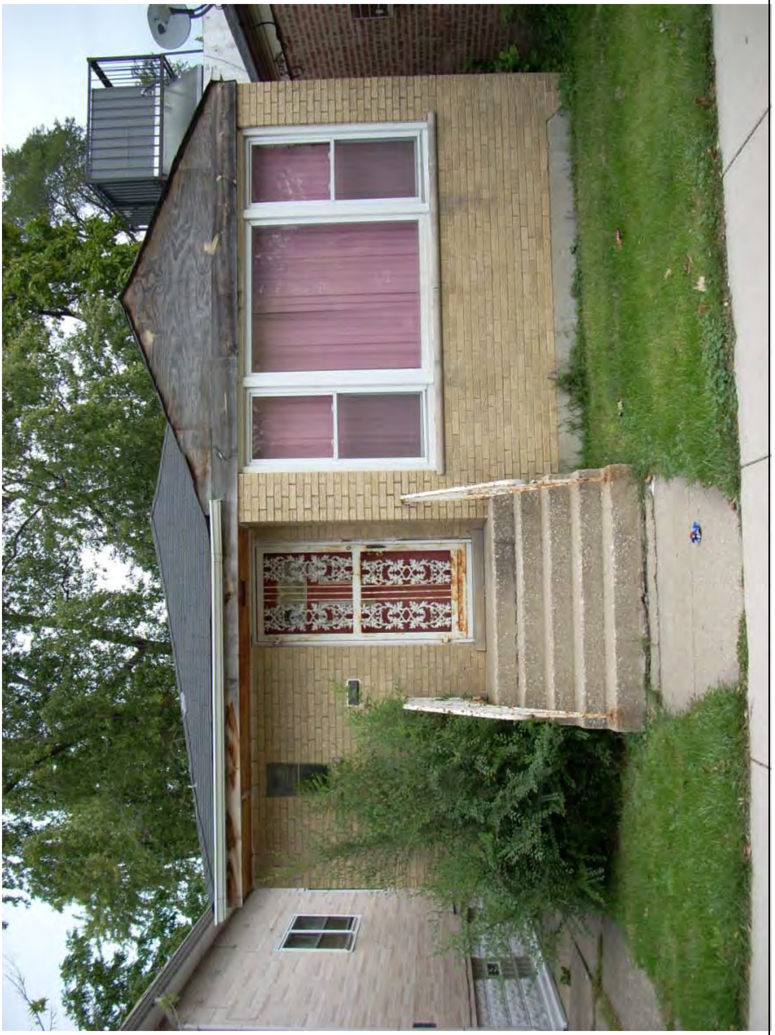
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 16 September 2012

Photos with Captions:
South façade of one-story, brick, single family residence.



Property Description: **Stories:** 1

This one-story house in the Roseland community is clad with buff brick on its front elevation and common brick on its side and rear elevations. The building has a raised basement and a hip roof covered with asphalt shingles. Its front elevation has a projecting three-sided living room bay with a picture window flanked by one-over-one aluminum-sash windows, an off-center entrance with a metal storm door, and concrete steps with metal railings. The gable's cladding material has been removed. Detailing includes two decorative glass blocks adjacent to the front door. It does not display distinctive architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration	**Additional Notes/Descriptions** Replacement windows; cladding removed from the gable
Condition: Excellent [✓ Good] Poor	
Additional Alterations	
Structure Usage Current: NA Historic: NA — **Exterior Wall Surface** Brick	
Roof Material Asphalt shingle — **Roof Features** None — **Roof Type** Hip	
Ornamental Architectural Details Decorative glass blocks	**Windows** Double-hung, fixed-pane

Outbuildings (*Number and Description*)

None

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

256 W. 112th Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single-family residence

Current: Single-family residence

Date of Construction: 1888

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

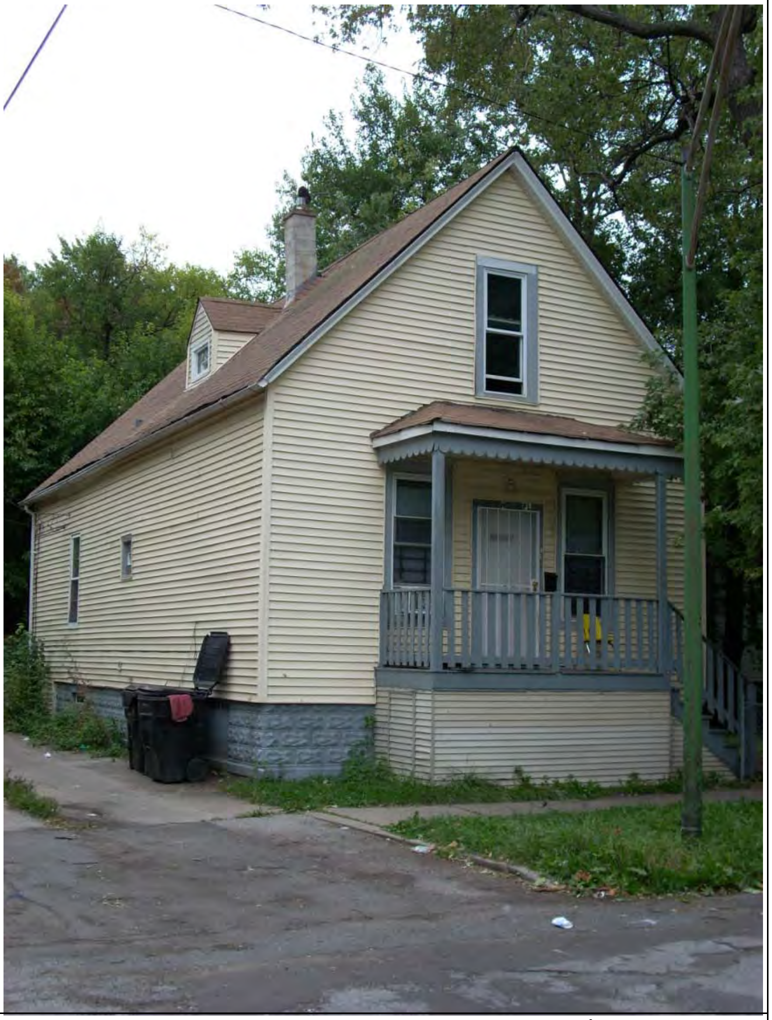
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 16 September 2012

Photos with Captions:
South and west façades of single-family, 1.5-story, frame residence.



Property Description: **Stories:** 1.5

This one-and-a-half-story house in the Roseland community is situated on a raised concrete block basement with glass block windows and is covered with synthetic siding. The building has a front gable roof with asphalt shingles and a small dormer. The front elevation has a centrally located, partial-width, hipped-roof porch with scallop detailing at the roofline, an aluminum-clad base, straight wood posts and railings (non-original), and steps on the side. It has a centrally located entrance with a metal storm door flanked by a window on either side and has a single window in the gable. Windows are non-original one-over-one aluminum-sash. This house lacks integrity and distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Some replacement windows, cladding, and porch rails and posts
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** Dormer	**Roof Type** Gable	
Ornamental Architectural Details Scallop detailing on porch roofline			**Windows** Double-hung, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

303 W. 112th Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single-family residence

Current: Single-family residence

Date of Construction: 1909

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

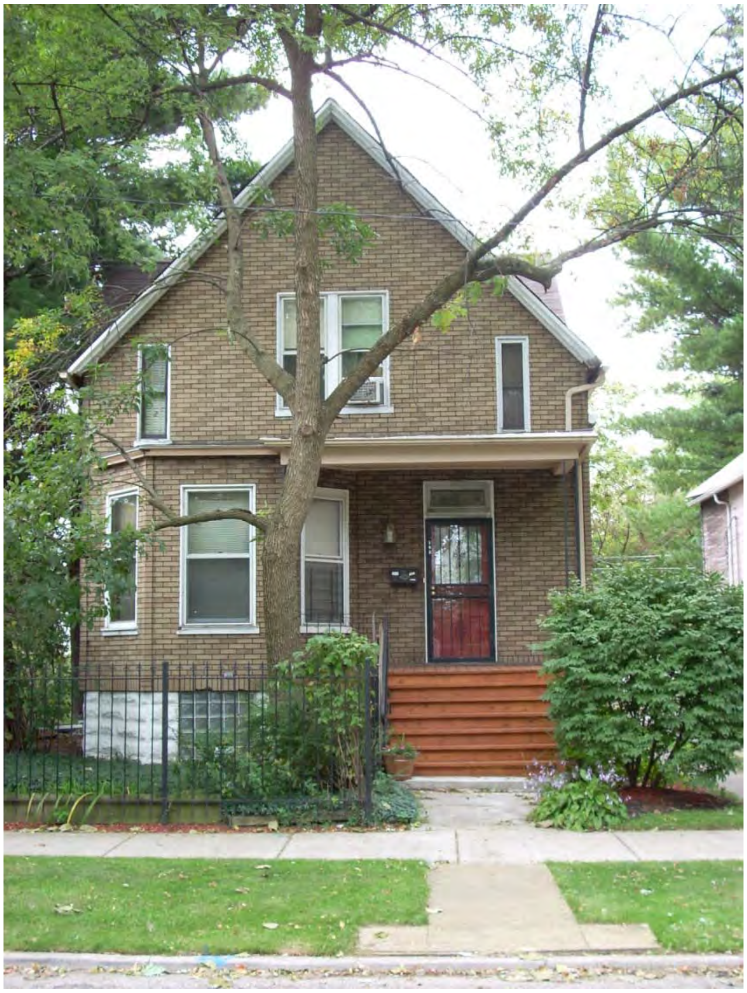
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 16 September 2012

Photos with Captions:
North façade of 1.5-story, single-family, brick residence.



Property Description: **Stories:** 1.5

This one-and-a-half-story house at the southwest corner of 112th Place and Princeton Avenue is situated on a raised concrete block basement with glass block windows and is clad with light brown face brick. The building has a front gable roof covered with asphalt shingles. Its front elevation has a partial-width, flat-roofed porch with wood steps and open metal railings, an off-center door with transom, and a three sided bay window on the first floor. The upper floor of the front elevation has a pair of windows and two single windows. Windows are non-original one-over-one aluminum-sash. The home's east elevation has a three-sided, full-height window bay pavilion and its west elevation has a gable wall dormer. This house lacks distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingle	**Roof Features** Dormer	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung, glass block
Outbuildings (*Number and Description*) Two garages			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

312 W. 112th Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Vacant

Property Use

Historic: Single-family residence

Current: Single family residence

Date of Construction: 1914

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

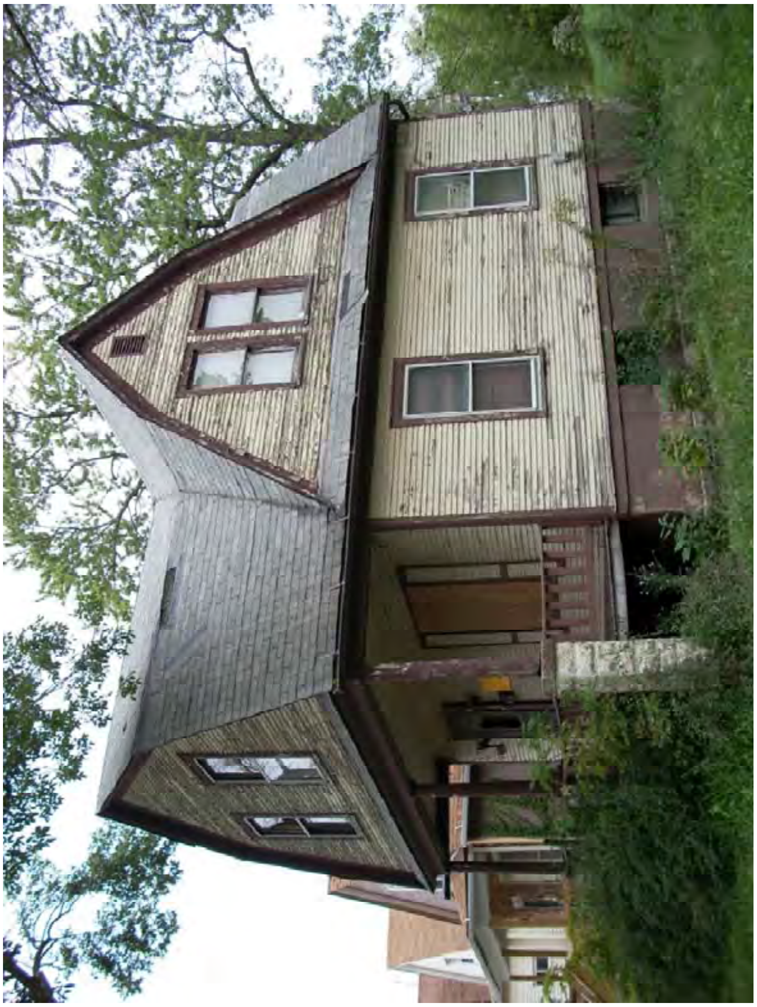
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S .Katz

Date: 16 September 2012

Photos with Captions:
South and east façades of single story, single-family, frame residence.



Property Description: **Stories:** 1

This one-story house in the Roseland community is situated on a raised concrete block basement with casement windows. The building has original wood clapboard siding and a cross-gambrel roof with asphalt shingles. The roof extends forward to serve as the roof over the full-façade wood porch with supports consisting of faux stone piers topped by wood columns. The front elevation has an off-center wood door and a window covered with plywood on the first floor. There are two one-over-one windows on the second floor. Above the basement, windows are one-over-one, some with aluminum storms. This house lacks distinguishing architectural features and is not individually eligible for listing on the National Register.

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Some windows have aluminum storms
Condition: Excellent Good [✓ Poor]			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Wood siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Cross-gambrel	
Ornamental Architectural Details None			**Windows** Double-hung, casement
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

319 W. 112th Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Multi-family residence

Date of Construction: 1914

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

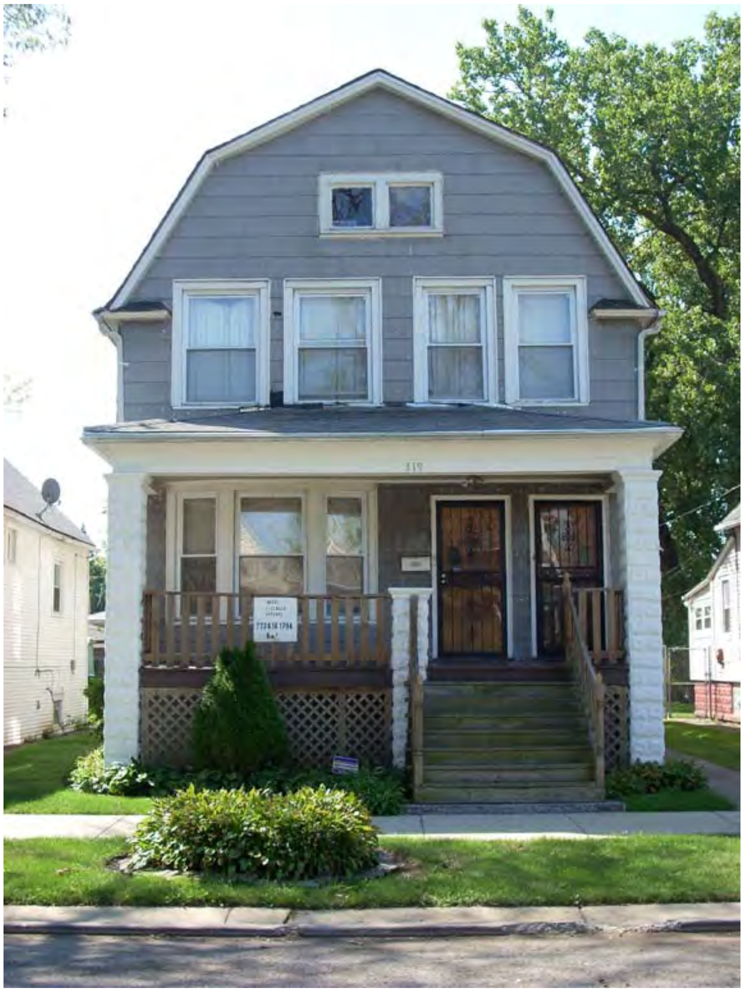
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 26 September 2012

Photos with Captions:
North façade of a two-story, multi-family, frame residence.



Property Description: **Stories:** 2

This two-story, multi-family home in the Roseland community is situated on a raised concrete block basement with a glass block window. It is clad with synthetic siding and has a gambrel roof with cornice returns, covered with asphalt shingles. Its full-width hip-roof wood porch has cast concrete pier supports. The first floor has two doors and a three-sided bay with non-original one-over-one windows. The second floor has four one-over-one windows and the attic level has a pair of single-pane windows that may be casements. This home lacks integrity and does not have sufficient distinguishing architectural features to qualify as individually eligible for listing on the National Register.

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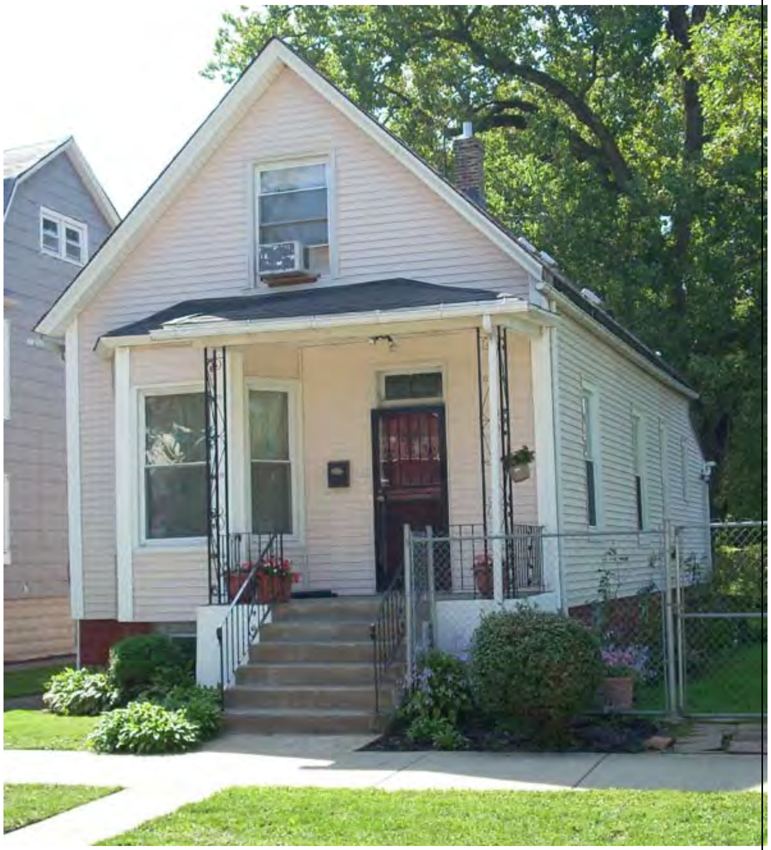
Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows & cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations Conversion from single family to multi-family residence after 1939 (Sanborn)			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt	**Roof Features** None	**Roof Type** Gambrel	
Ornamental Architectural Details Cornice returns			**Windows** Double-hung, casement, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y [✓ N]**	
National Register Historic Places	**Y [✓ N]**	
National Register Historic District	**Y [✓ N]**	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Historical Resource Recordation Form

Property Name **Historic:** Bldg. not labeled, not in CHRS **Common/Current:** Unknown	**Photos with Captions:** North façade of one-story, single family, frame residence. 
Property Address: 325 W 112th Place	
HAARGIS Number: Not in database	
Present Owner and /or Occupant: Unknown	
Property Use **Historic:** Single family residence **Current:** Single family residence	
Date of Construction: 1899 **Architect's Name:** Not in CHRS **Builder/Contractor:** Not in CHRS	
Architectural Style: Vernacular	
Prepared By: J. Martinez, M. C. Bird, J. Guarino **Photo By:** S. Katz **Date:** 26 September 2012	

Property Description: **Stories:** 1

This one-story home in the Roseland community is situated on a raised basement with glass block windows. It is clad with aluminum siding and has a gable roof covered with asphalt shingles. The front elevation has a partial-width hip roof concrete porch with metal railings and open metal supports. An off-center door with transom and a three-sided bay comprised of non-original one-over-one windows are also included on the front elevation. A single one-over-one window is situated in the gable. This building does not have sufficient distinguishing architectural features to qualify as individually eligible for listing on the National Register.

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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows, door, cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

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Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

328 W. 112th Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1963

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

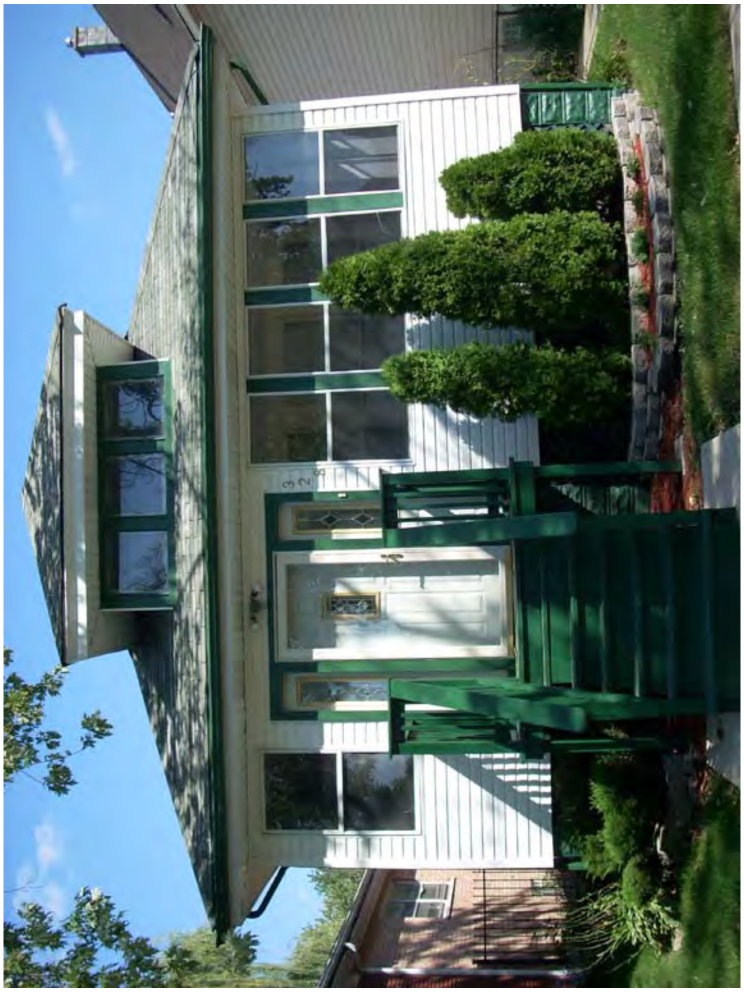
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 26 September 2012

Photos with Captions:
South façade of one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story house in the Roseland community is situated on a raised concrete block basement and clad with aluminum siding above. It has a hip roof covered with asphalt shingles and a hip dormer with three, single-pane, casement windows. Glass block windows provide light for the basement. The front elevation has an off-center hollow metal panel door with sidelights, wood steps and railings, and four one-over-one windows. This building does not feature sufficient distinguishing architectural features to qualify as individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
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Phone (815) 568- 0680

Structural Survey

Integrity: [✓ Unaltered] Slight Modification Major Alteration			**Additional Notes/Descriptions**
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt	**Roof Features** Hipped dormer	**Roof Type** Hip	
Ornamental Architectural Details None			**Windows** Double-hung, casement, fixed-pane, glass block
Outbuildings (*Number and Description*)			

Local Landmark	**Y [✓ N]**	
National Register Historic Places	**Y [✓ N]**	
National Register Historic District	**Y [✓ N]**	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

339 W. 112th Place
Alternate: 341 W. 112th Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Industrial

Current: Industrial

Date of Construction: 1908/post 1939

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

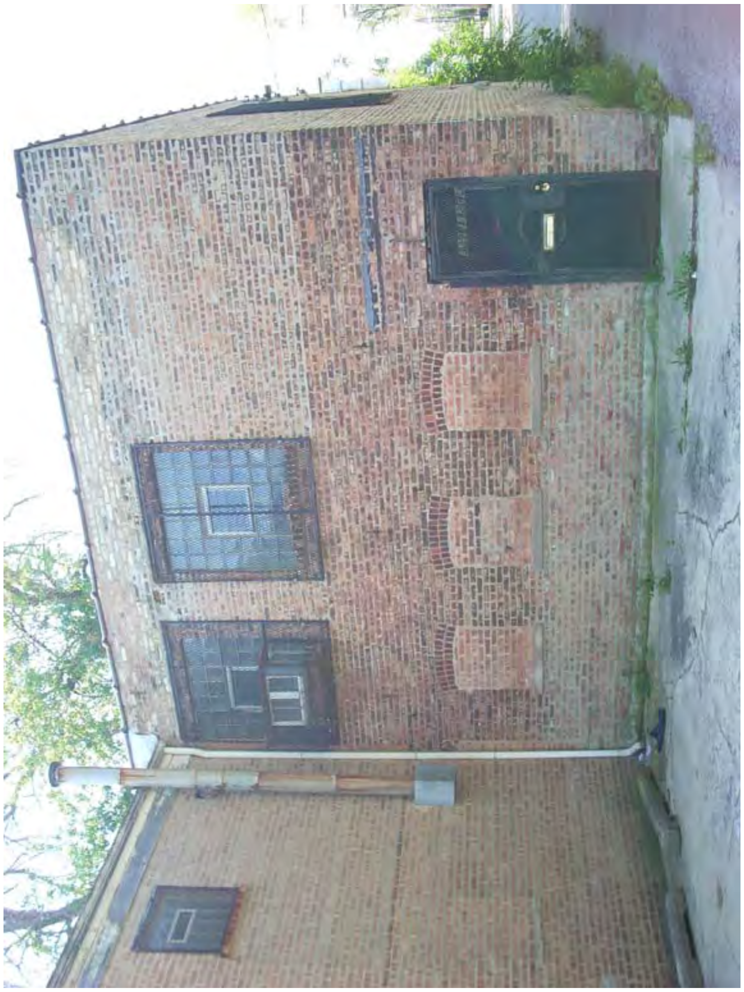
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 26 September 2012

Photos with Captions:
North façade of a brick, two-story industrial building.



Property Description: **Stories:** 2

This two-story, brick-clad, light industrial building in the Roseland community has a flat roof, parapet with coping, and a T-shaped footprint. The front segment of the building was a one-story building erected in 1908. Sometime after 1939, a second story and a rear wing were added. The original segment has an off-center door and the outline of three former window openings (with brick arched lintels and stone sills) that have been in-filled with brick. The second floor and the rear wing have glass block window openings with small ventilating louvers. This building lacks integrity and distinguishing architectural features; it is not individually eligible for listing on the National Register.

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Structural Survey

Integrity:			**Additional Notes/Descriptions**
Unaltered	Slight Modification	[✓ Major Alteration]	Windows in-filled with brick (front segment)
Condition:			
[✓ Excellent]	Good	Poor	
Additional Alterations			
Addition to rear and second story added after 1939			
Structure Usage		**Exterior Wall Surface**	
Current: NA Historic: NA		Brick	
Roof Material	**Roof Features**	**Roof Type**	
Unknown	Parapet	Flat	
Ornamental Architectural Details			**Windows**
Brick arched lintels			Glass-block with central casement
Outbuildings (*Number and Description*)			
None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

Ten E. 112th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Vacant

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1883

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

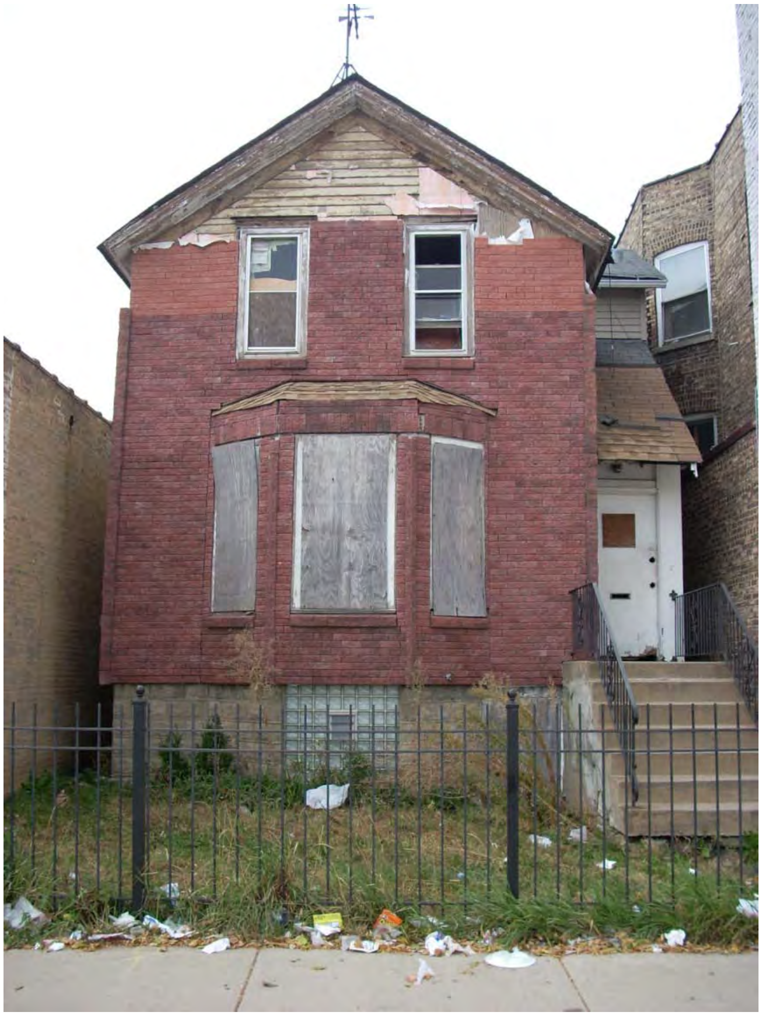
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 30 October 2012

Photos with Captions:
South façade of a two-story, single family, frame residence.



Property Description: **Stories:** 2

This vacant, two-story house in the Roseland community is situated on a raised concrete block basement with glass block windows. The building has a front gable roof covered with asphalt shingles. Its front elevation is largely faced with faux brick over original wood clapboard siding, which is visible near the apex of the gable. Other portions are also clad in clapboard siding. The front elevation features a three-sided window bay on the first floor; window openings are covered with plywood. Two non-original one-over-one windows are present on the second floor. This elevation also has a non-original front door with a shed-roofed canopy that is situated in a recessed, side-gabled, full-height pavilion. The front door is accessed via concrete steps with metal railings. This building lacks integrity and distinctive architectural features and is not individually eligible for listing on the National Register.

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Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered	[✓ Slight Modification]	Major Alteration	**Additional Notes/Descriptions** Replacement cladding, windows, door, and rails
Condition: Excellent	Good	[✓ Poor]	
Additional Alterations Hoods over second story windows removed.			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding over wood clapboards	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung, glass block, covered
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

20 E. 112th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Classic Cuts Beauty & Barber Shop Salon

Property Use

Historic: Commercial

Current: Mixed-Use

Date of Construction: 1926

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

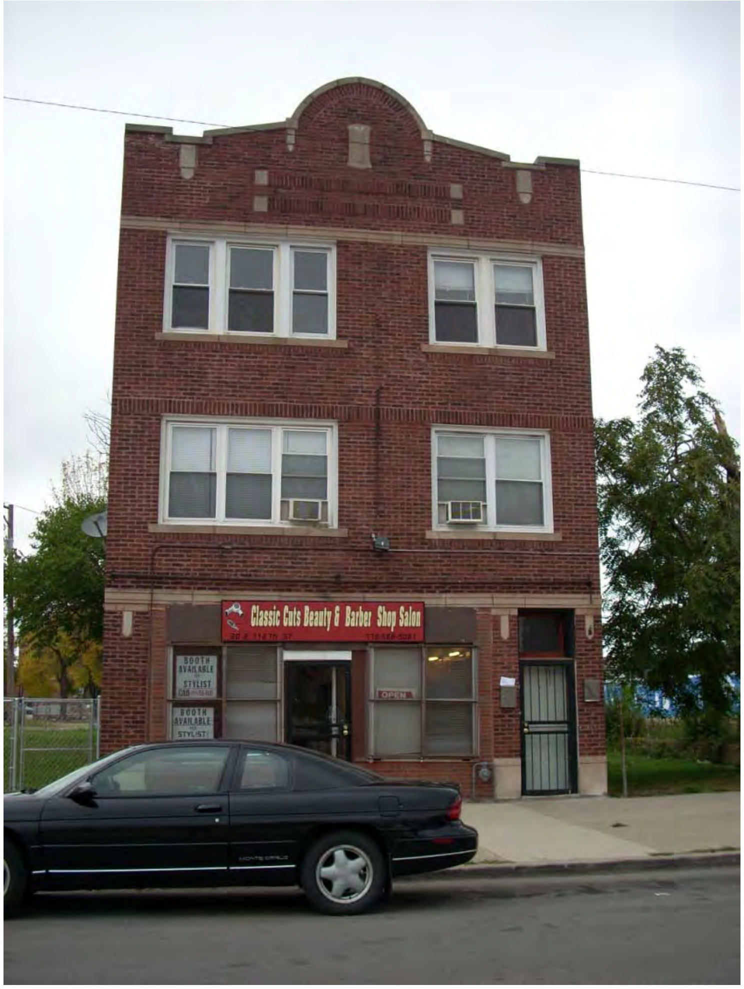
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 30 October 2012

Photos with Captions:
South façade of a brick, three-story mixed-use, building.


Classic Cuts Beauty & Barber Shop Salon
BOOTH AVAILABLE FOR STYLIST
BOOTH AVAILABLE FOR STYLIST
OPEN

Property Description: **Stories:** 3

This three-story commercial building in the Roseland community is clad with face brick on its front elevation and common brick along its side and rear elevations. The building has a flat roof and a parapet that is rounded at the center. The front elevation has a non-original storefront comprised of a metal storm door flanked by paired one-over-one windows, as well as an off-center hollow core metal door with a transom that provides access to the upper floors. The second and third floors each feature five non-original one-over-one aluminum sash windows, arranged on each floor in a group of three and in pairs. Detailing includes concrete sills, belt courses, and decorative insert blocks at the parapet level. This building lacks integrity and distinctive architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
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Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration	**Additional Notes/Descriptions** Replacement doors and windows
Condition: [✓ Excellent] Good Poor	
Additional Alterations	
Structure Usage Current: NA Historic: NA — **Exterior Wall Surface** Brick	
Roof Material Unknown — **Roof Features** Parapet — **Roof Type** Flat	
Ornamental Architectural Details Concrete sills, belt courses, insert blocks, and coping	**Windows** Double-hung
Outbuildings (*Number and Description*) None	

Local Landmark	**Y [✓ N]**	
National Register Historic Places	**Y [✓ N]**	
National Register Historic District	**Y [✓ N]**	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

303 W. 112th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single-family residence

Current: Single-family residence

Date of Construction: 1908

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

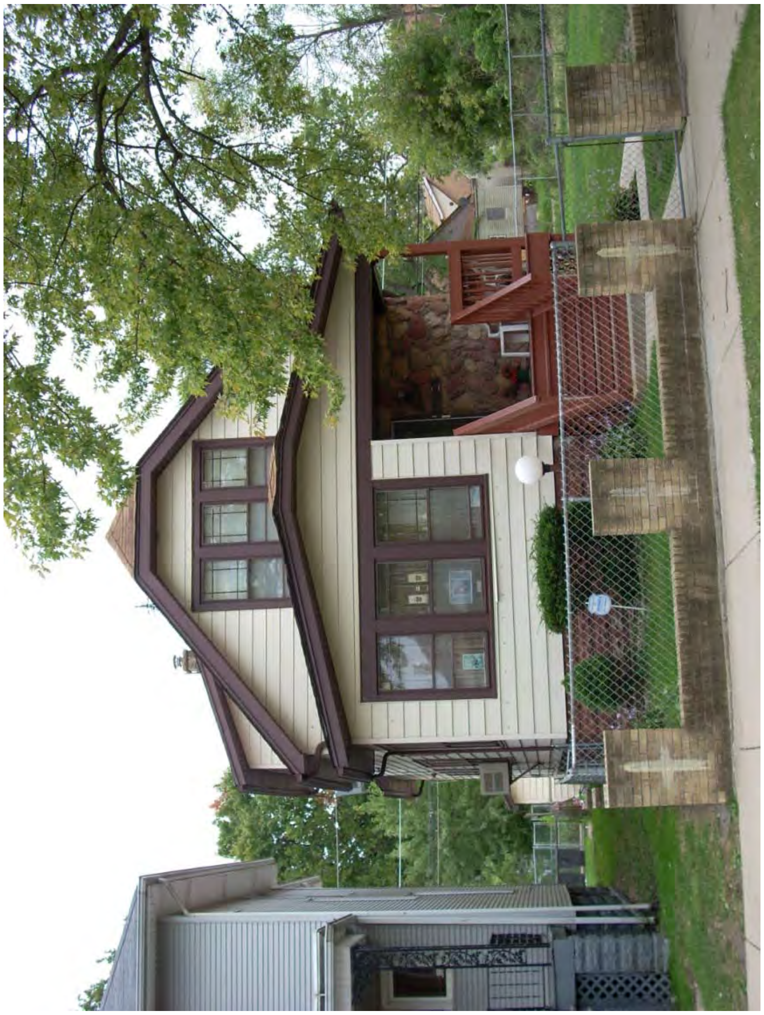
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 16 September 2012

Photos with Captions:
North façade of 1.5-story, single-family, frame residence.



Property Description: **Stories:** 1.5

This one-and-a-half-story house in the Roseland community is situated on a raised concrete block basement with glass block windows and is covered with synthetic siding. The building has a hip-on-gable roof with asphalt shingles. The front elevation has a gable-roofed full-width porch, half of which is enclosed, covered with synthetic siding, and surrounded by non-original multi-paned aluminum-sash windows with some original wood-sash windows. The open corner of the porch has a wood post, wood steps and railings (non-original), and an entrance with a metal storm door that is surrounded by faux stone siding. The hip-gable area has a strip of three double-hung windows. Both side elevations have shed-roofed wall dormers. This house lacks integrity and distinguishing architectural features and is not individually eligible for listing on the National Register.

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505 North State Street
Marengo, Illinois 60152
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Structural Survey

<table>
<tr><td colspan="3">Integrity:
Unaltered [✓ Slight Modification] Major Alteration</td><td>Additional Notes/Descriptions
Some replacement windows & cladding</td></tr>
<tr><td colspan="3">Condition:
[✓ Excellent] Good Poor</td><td></td></tr>
<tr><td colspan="3">Additional Alterations</td><td></td></tr>
<tr><td colspan="2">Structure Usage
Current: NA
Historic: NA</td><td>Exterior Wall Surface
Synthetic siding, faux stone</td><td></td></tr>
<tr><td>Roof Material
Asphalt shingle</td><td>Roof Features
Dormers</td><td>Roof Type
Hip-on-gable</td><td></td></tr>
<tr><td colspan="3">Ornamental Architectural Details
None</td><td>Windows
Double-hung, glass block</td></tr>
<tr><td colspan="4">Outbuildings (<i>Number and Description</i>)
Detached two-car garage</td></tr>
</table>

Local Landmark	**Y [✓ N]**	
National Register Historic Places	**Y [✓ N]**	
National Register Historic District	**Y [✓ N]**	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

334 W. 112th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single-family residence

Current: Single-family residence

Date of Construction: 1912

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

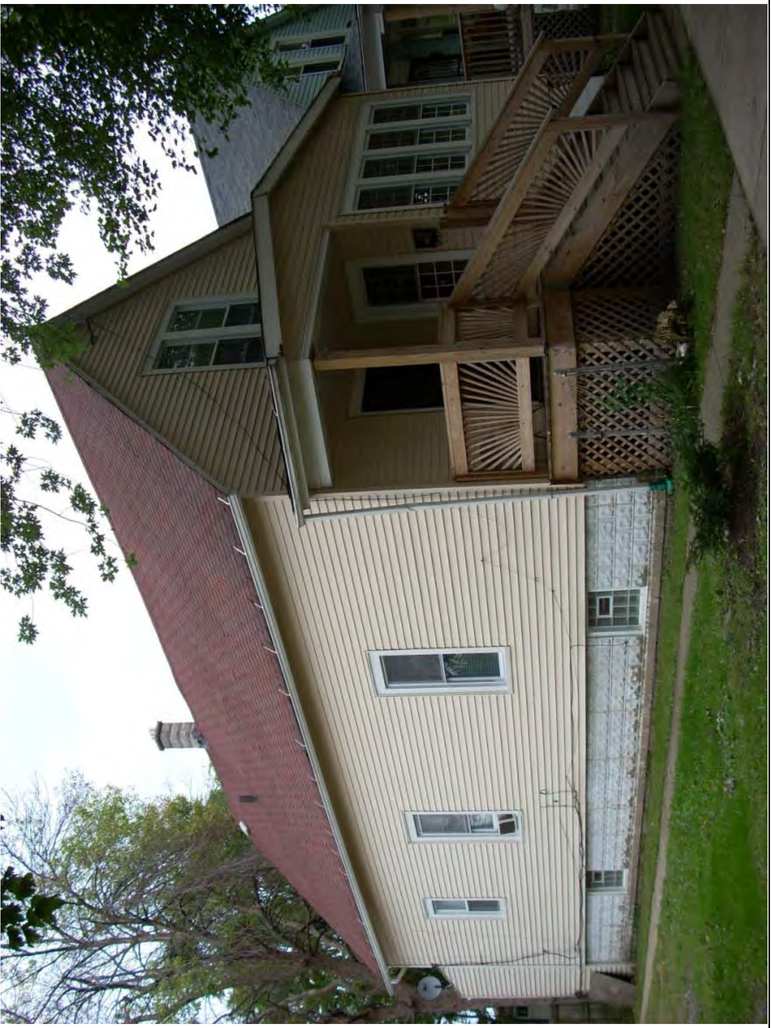
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 16 September 2012

Photos with Captions:
South and west façades of 1.5-story, single-family, frame residence.



Property Description: **Stories:** 1.5

This one-and-a-half story house in the Roseland community is situated on a raised concrete block basement with glass block windows and is covered with synthetic siding. The building has a front gable roof with asphalt shingles. The front elevation has a gable-roofed full-width porch, half of which has been enclosed with synthetic siding and is surrounded by non-original multi-paned aluminum-sash windows. The open corner of the porch has a wood post, wood steps and railings (non-original), and an entrance with a metal storm door. There is a pair of non-original one-over-one aluminum-sash windows in the gable. This house lacks integrity and distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows, cladding, and porch posts, rails, and steps
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current:N/A Historic: N/A		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

340 W. 112th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Vacant

Property Use

Historic: Flat

Current: Flat

Date of Construction: 1964

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

Vernacular

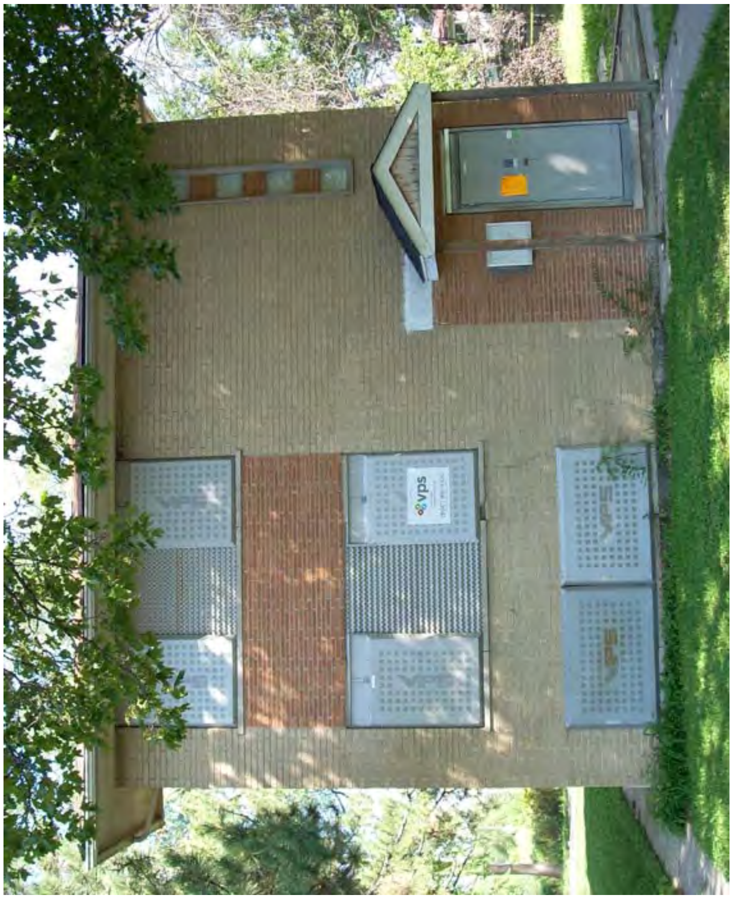
Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 26 September 2012

Photos with Captions:

South façade of a brick, two-story, multi-family residence.



Property Description: **Stories:** 2

This two-flat apartment building is situated on a raised basement and has a hip roof covered with asphalt shingles. Its front façade is clad in buff brick and has an off-center metal door, a vertical strip of decorative glass blocks above the porch hood, and six window openings: two each in the basement, first, and second floors. All window openings are covered with metal panels. This building does not feature sufficient distinguishing architectural features to qualify as individually eligible for listing on the National Register.

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Structural Survey

Integrity: Unaltered	[✓ Slight Modification]	Major Alteration	**Additional Notes/Descriptions** Opening covered with metal panels
Condition: Excellent	[✓ Good]	Poor	
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt	**Roof Features** None	**Roof Type** Hip	
Ornamental Architectural Details Contrasting colored brick panels			**Windows** NA
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

410 W. 112th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1929

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

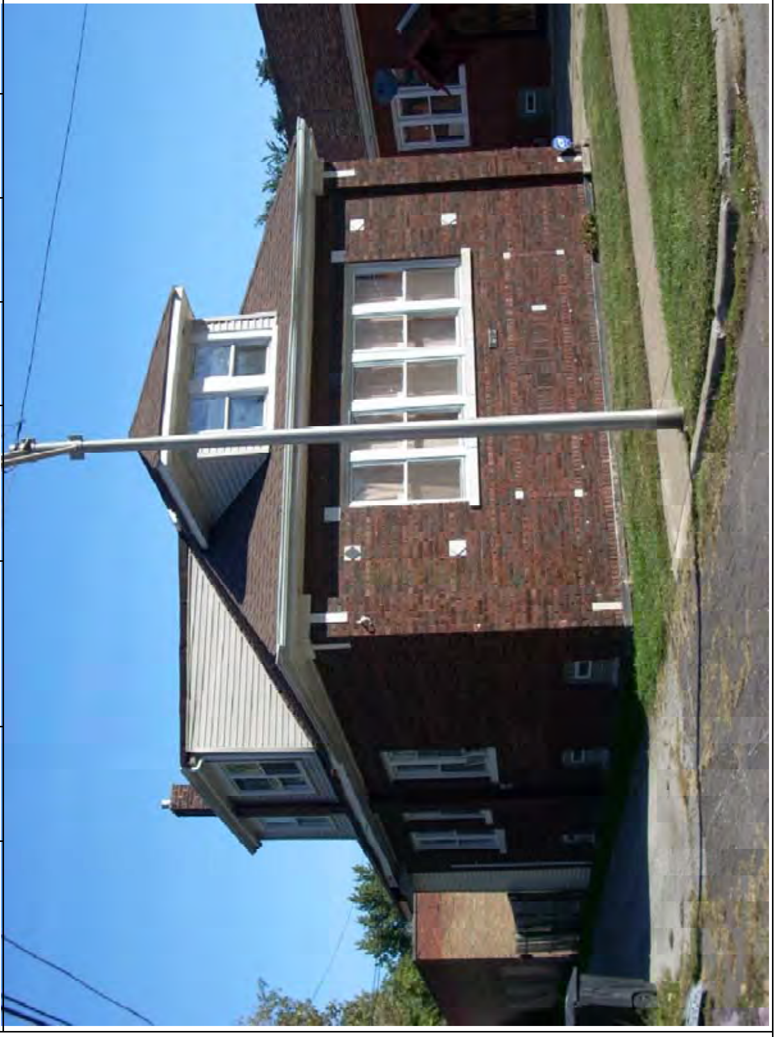
Chicago Bungalow

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 16 September 2012

Photos with Captions:
South and west façades of one-story, brick, single family residence.



Property Description: **Stories:** 1

This one-story brick bungalow in the Roseland community is situated on a raised basement with glass block windows and is clad with brown face brick. The building has a hip roof covered with asphalt shingles, a hip dormer with two windows on its front elevation, and a shed dormer with three windows on its west elevation. Both dormers are covered with synthetic siding. The front elevation has a strip of five windows. Windows throughout the house are non-original one-over-one aluminum-sash of varying sizes with the exception of a casement window along the east elevation. The main entrance is situated along the east elevation and consists of a hollow core metal door topped by a bracketed wood gabled hood. Detailing includes brick corner pilasters, concrete sills, and decorative square insert blocks. This house lacks distinctive architectural features and is not individually eligible for listing on the National Register.

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Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows and doors
Condition: [✓ Excellent] Good Poor			
Additional Alterations Shed dormer is a later addition			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick (main), Synthetic siding (shed dormer)	
Roof Material Asphalt shingle	**Roof Features** Dormer	**Roof Type** Hip	
Ornamental Architectural Details Bracketed hood, brick corner pilasters, concrete sills and insert blocks			**Windows** Double-hung, glass block, casement
Outbuildings (*Number and Description*) Garage			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

139 W. 113th Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Vacant

Property Use

Historic: Flat

Current: Flat

Date of Construction: 1923

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

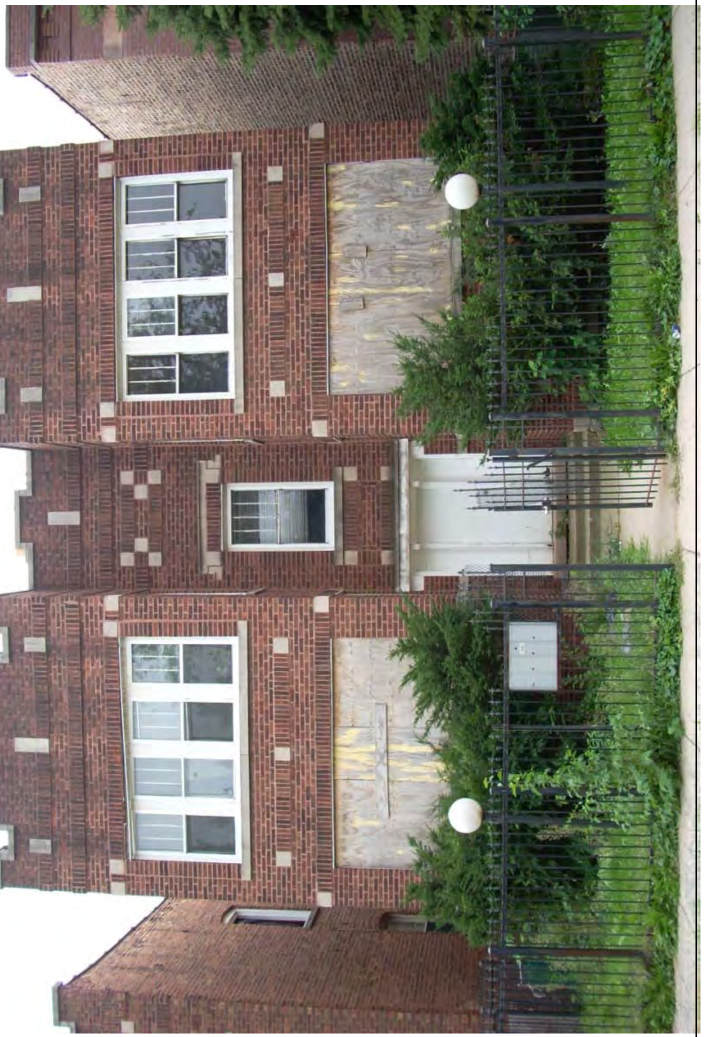
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 16 September 2012

Photos with Captions:
North façade of two-story, brick, four-flat residence.



Property Description: **Stories:** 2

This two-story four-flat apartment building in the Roseland community has a flat roof and castellated parapet with concrete coping. The front elevation is clad with brown face brick, has two full-height enclosed sun porch pavilions, and a centrally located entrance with sidelights that have been boarded over. The first floor windows have been covered with plywood. Second floor fenestration features two strips of three-over-one wood-sash windows. An additional three-over-one wood-sash window is situated above the entrance. Detailing includes brick soldier courses with stone coping and insert blocks. This building lacks sufficient distinguishing architectural features to qualify as individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: [✓ Unaltered] Slight Modification Major Alteration			**Additional Notes/Descriptions**
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details Stone coping and insert blocks, brick soldier courses			**Windows** Double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y [✓ N]**	
National Register Historic Places	**Y [✓ N]**	
National Register Historic District	**Y [✓ N]**	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

228 W. 113th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Vacant

Property Use

Historic: Single-family residence

Current: Single family residence

Date of Construction: 1890

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

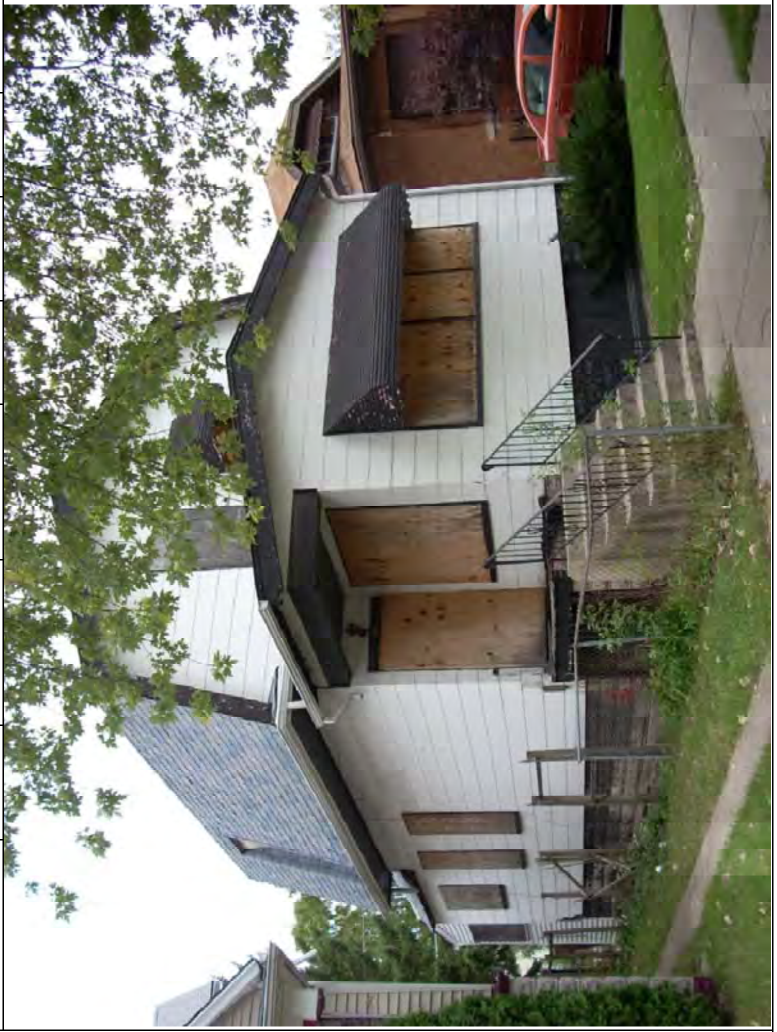
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 16 September 2012

Photos with Captions:
South façade of 1.5-story, single-family, frame residence.



Property Description: **Stories:** 1.5

This one-and-a-half-story frame house in the Roseland community is situated on a raised concrete block basement and is covered with synthetic siding. The building has a gambrel roof covered with asphalt shingles that overhangs the side elevations. The front elevation has a gable-roofed full-width porch, most of which is enclosed and covered with synthetic siding. Windows on all three sides of the house are covered with plywood. The off-center door is also covered with plywood and accessed via concrete steps with metal railings. There is a synthetic-clad addition on the rear elevation. This house lacks integrity and distinguishing architectural features and is not individually eligible for listing on the National Register.

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Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement cladding
Condition: Excellent [✓ Good] Poor			
Additional Alterations Porch enclosed, rear addition			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gambrel	
Ornamental Architectural Details None			**Windows** Covered
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

235 W. 113th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1905

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

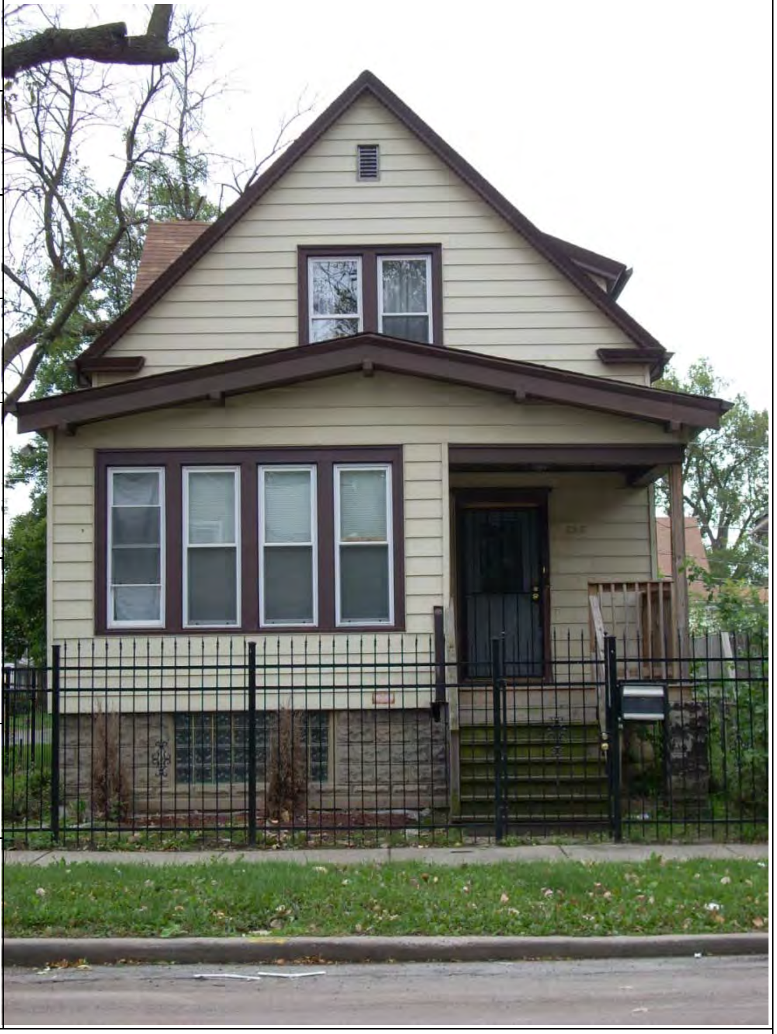
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 16 September 2012

Photos with Captions:
North façade of 1.5-story, single-family, frame residence.



Property Description: **Stories:** 1.5

This one-and-a-half-story frame house at the southwest corner of 113th Street and Yale Avenue in the Roseland community is situated on a raised concrete block basement with glass block windows and is covered with synthetic siding. The building has a front gable roof with asphalt shingles. The front elevation has a gable-roofed full-width porch, most of which is enclosed with synthetic siding and surrounded on all three sides by one-over-one aluminum-sash windows. The off-center entrance with metal storm door is set within the open corner of the porch. The open part of the porch has a non-original wood support, steps and railings. A pair of windows is situated in the gable. Windows throughout the house are non-original one-over-one aluminum sash. The east elevation has a first floor window bay and both shed and gable wall dormers. The west elevation has a shed wall dormer. This house lacks integrity and distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement door, windows, cladding, and porch rails
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** Dormers	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

303 W. 113th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1919

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

Vernacular

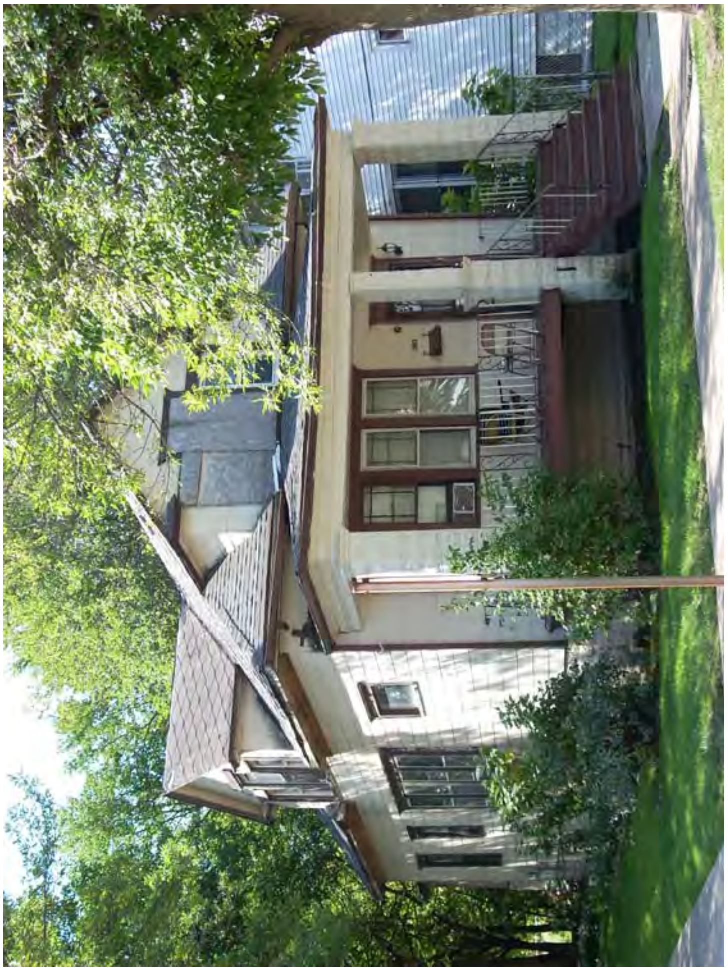
Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 26 September 2012

Photos with Captions:

North façade of a one-story, single-family, frame residence.



Property Description: **Stories:** 1

This one-story home in the Roseland community is situated on a raised concrete block basement and clad with wood siding. It has a hip roof covered with asphalt shingles and gable dormers. It has a full-width, hip-roof, wood porch with metal railings, an unadorned frieze band, and supports consisting of two faux stone corner piers and one low faux stone pedestal topped by a square wood pier. Its front façade has an off-center door and a strip of three non-original double-hung windows. Both the front and side dormers each feature a strip of three windows, although those on the front façade dormer are covered with plywood. This home lacks integrity and does not have sufficient distinguishing architectural features to qualify as individually eligible for listing on the National Register.

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Structural Survey

Integrity:			**Additional Notes/Descriptions**
Unaltered	[✓ Slight Modification]	Major Alteration	Replacement windows, some in-filled with plywood
Condition:			
Excellent	[✓ Good]	Poor	
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Wood	
Roof Material Asphalt	**Roof Features** Gable dormers	**Roof Type** Hip	
Ornamental Architectural Details None			**Windows** Double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

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505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

307 W. 113th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Multi-family residence

Date of Construction: 1917

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

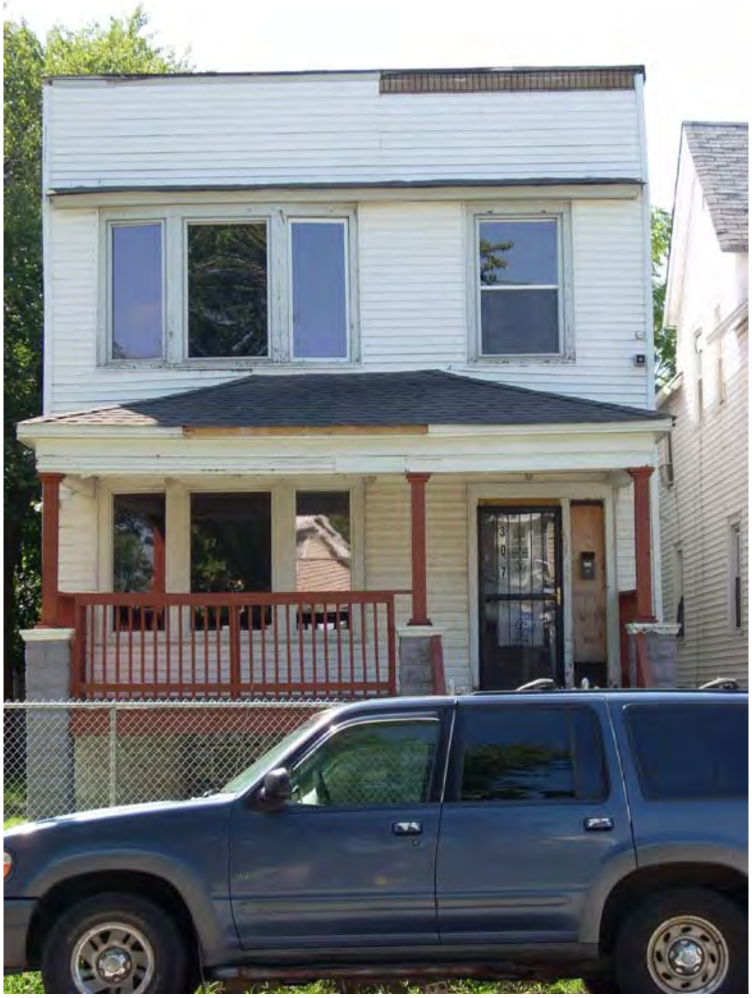
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 26 September 2012

Photos with Captions:
North façade a two-story, multi-family, frame residence.



Property Description: **Stories:** 2

This multi-family residential building in the Roseland community is clad with synthetic siding and has a flat roof and parapet. Its front façade has an off-center door with a sidelight in-filled with plywood. It has strips of three, non-original, single-pane windows on the first and second floors that appear to be casements and a single one-over-one window on the second floor, directly above the entrance. Doric columns support the hip roof of the porch. The wood rails and steps do not appear to be original. A plain wood cornice is situated directly above the second floor windows. This home lacks integrity and does not have sufficient distinguishing architectural features to qualify as individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
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Marengo, Illinois 60152
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Structural Survey

Integrity:			**Additional Notes/Descriptions** Replacement door, cladding, and windows
Unaltered	[✓ Slight Modification]	Major Alteration	
Condition:			
Excellent	[✓ Good]	Poor	
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details Doric columns on porch			**Windows** Double-hung, casement
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

309 W. 113th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Multi-family residence

Date of Construction: 1904

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

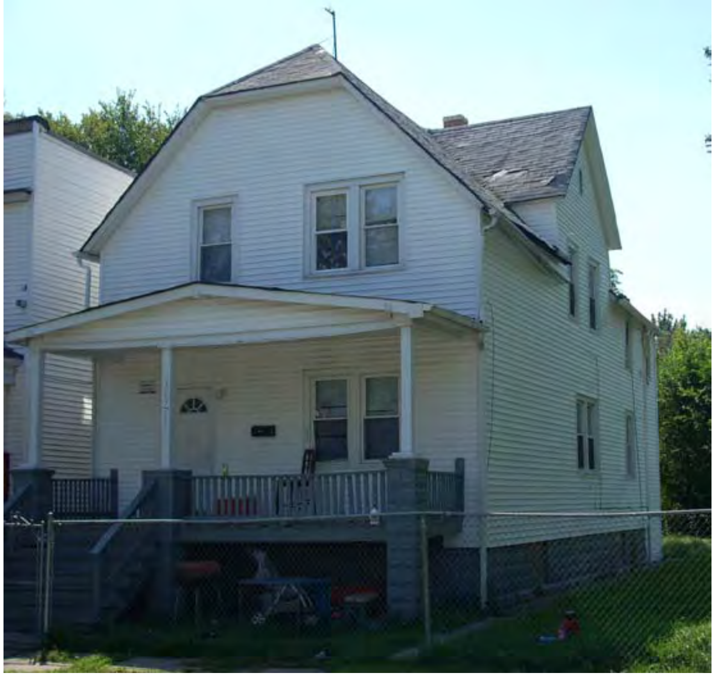
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 26 September 2012

Photos with Captions:
North façade a two-story, multi-family, frame residence.



Property Description: **Stories:** 2

This two-story house in the Roseland community is clad with synthetic siding. It has a hip-on-gable roof covered with asphalt shingles and side elevations with gable wall dormers. It has a full-width, gabled-roof wood porch with supports consisting of wood posts atop faux stone pedestals. The front elevation has an off-center non-original, hollow core, paneled, metal door with fanlight. There are a pair of non-original one-over-one windows on the first floor and three non-original one-over-one windows on the second floor, including two that are paired. This home lacks integrity and does not have sufficient distinguishing architectural features to qualify as individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement door, windows, cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt	**Roof Features** Dormer	**Roof Type** Hipped gable	
Ornamental Architectural Details None			**Windows** Double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

310 W. 113th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Vacant

Property Use

Historic: Single family residence

Current: Multi-family residence

Date of Construction: 1904

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

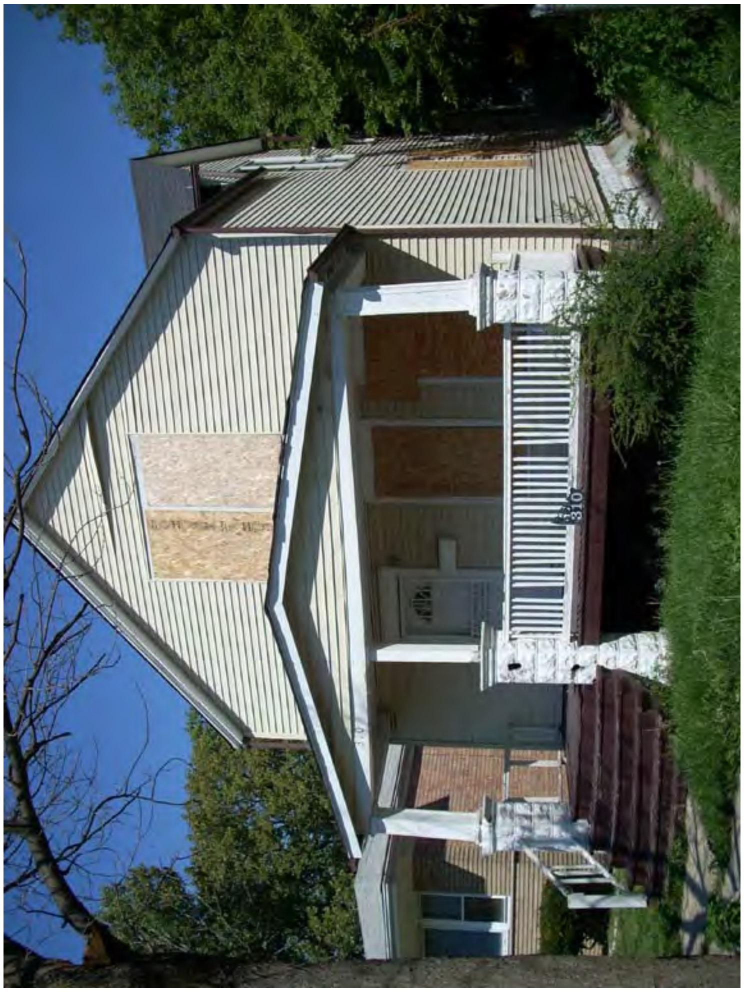
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 26 September 2012

Photos with Captions:
South façade of 1.5 -story, multi-family, frame residence.



Property Description: **Stories:** 1.5

This one and a half-story house in the Roseland community is clad with synthetic siding and has a cross-gabled roof covered with asphalt shingles. It has a full-width, gable-roofed, wood porch with supports consisting of low faux stone pedestals topped by square wood piers. The front elevation also features an off-center hollow core paneled metal door with fanlight, two window openings on the first floor and paired windows on the second floor. All front elevation window openings have been covered with plywood. This home is in deteriorated condition, lacks integrity, and does not have sufficient distinguishing architectural features to qualify as individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement door & cladding, windows covered with plywood
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt	**Roof Features** None	**Roof Type** Cross-Gable	
Ornamental Architectural Details None			**Windows** Unknown
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

312 W 113th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1962

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

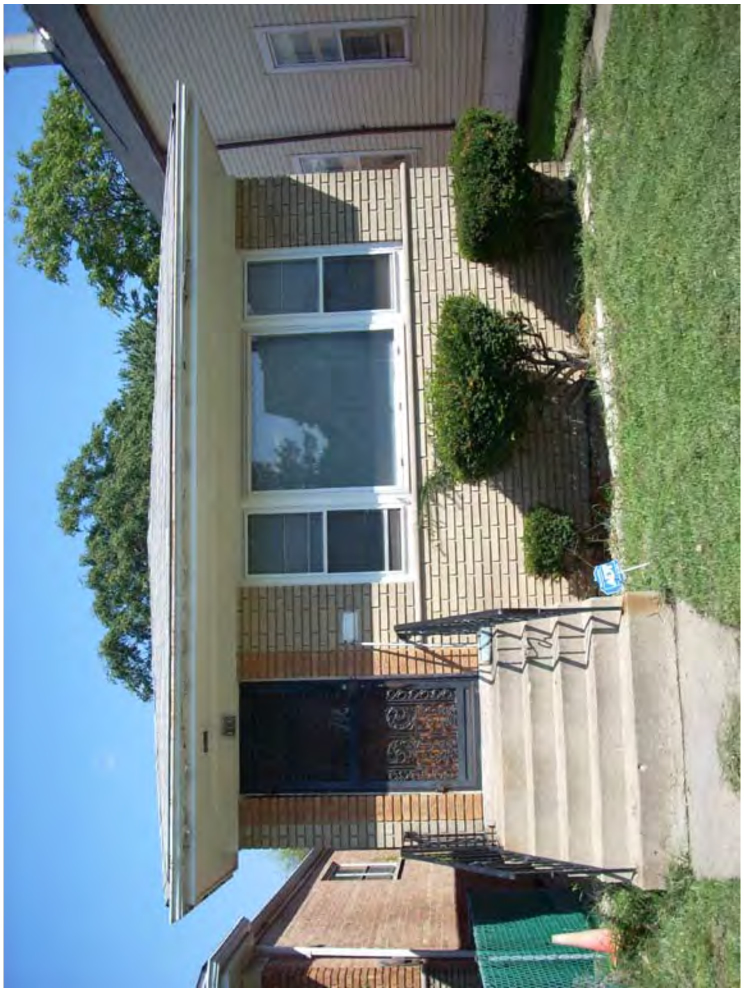
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 26 September 2012

Photos with Captions:
South façade of a brick, one-story, single family residence.



Property Description: **Stories:** 1

This one-story house in the Roseland community is situated on a raised basement and has a hip roof covered with asphalt shingles and a front overhang. Its front elevation is clad in buff brick, has an off-center door with concrete steps and metal railings, and features a picture window flanked by one-over-one windows. Glass block windows provide light to the basement. Contrasting orange-colored brick trims the entrance. This building does not feature sufficient distinguishing architectural features to qualify as individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: [✓ Unaltered] Slight Modification Major Alteration			**Additional Notes/Descriptions**
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt	**Roof Features** None	**Roof Type** Hip	
Ornamental Architectural Details None			**Windows** Double-hung, fixed-pane, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

316 W 113th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1962

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

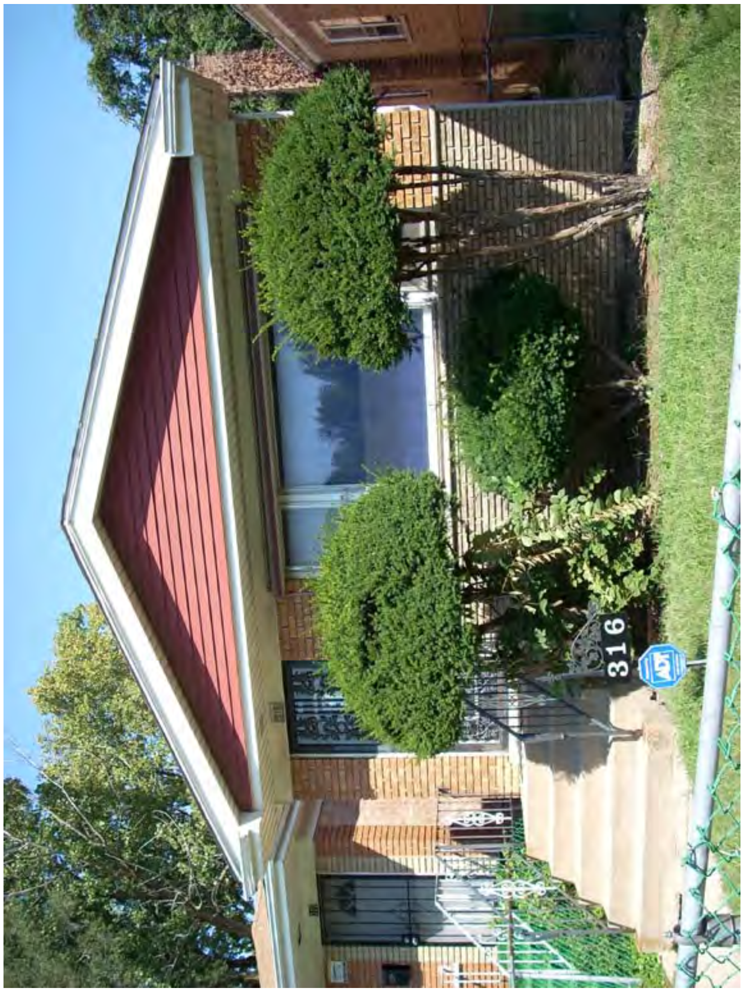
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 26 September 2012

Photos with Captions:
South façade of a brick, one-story, single family residence.



Property Description: **Stories:** 1

This one-story house in the Roseland community is situated on a raised basement, has a front gable roof covered with asphalt shingles, and a front overhang. Its front elevation is clad in buff brick below the sill line and orange brick above. It has an off-center door with concrete steps and metal railings and a picture window flanked by one-over-one windows. This building does not feature sufficient distinguishing architectural features to qualify as individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: [✓ Unaltered] Slight Modification Major Alteration			**Additional Notes/Descriptions**
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung, fixed-pane
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

320 W 113th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1962

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

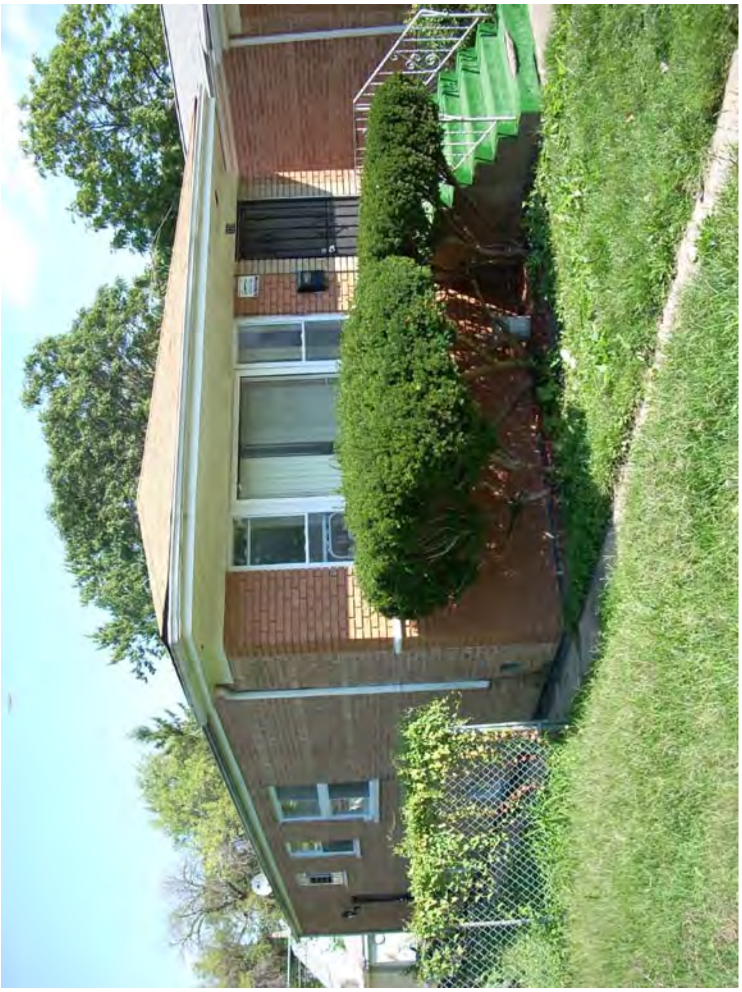
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 26 September 2012

Photos with Captions:
South façade of a brick, one-story, single family residence.



Property Description: **Stories:** 1

This one-story house in the Roseland community is situated on a raised basement and has a hip roof covered with asphalt shingles and a front overhang. Its front elevation is clad with orange face brick, has an off-center door with concrete steps and metal railings, and a picture window flanked by one-over-one windows. This building does not feature sufficient distinguishing architectural features to qualify as individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

<table>
<tr><td colspan="3">Integrity:
[✓ Unaltered] Slight Modification Major Alteration</td><td>Additional Notes/Descriptions</td></tr>
<tr><td colspan="3">Condition:
[✓ Excellent] Good Poor</td><td></td></tr>
<tr><td colspan="3">Additional Alterations</td><td></td></tr>
<tr><td colspan="2">Structure Usage
Current: NA
Historic: NA</td><td>Exterior Wall Surface
Brick</td><td></td></tr>
<tr><td>Roof Material
Asphalt</td><td>Roof Features
None</td><td>Roof Type
Hip</td><td></td></tr>
<tr><td colspan="3">Ornamental Architectural Details
None</td><td>Windows
Double-hung, fixed-pane</td></tr>
<tr><td colspan="4">Outbuildings (<i>Number and Description</i>)
None</td></tr>
</table>

Local Landmark	**Y [✓ N]**	
National Register Historic Places	**Y [✓ N]**	
National Register Historic District	**Y [✓ N]**	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

337 W. 113th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1910

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

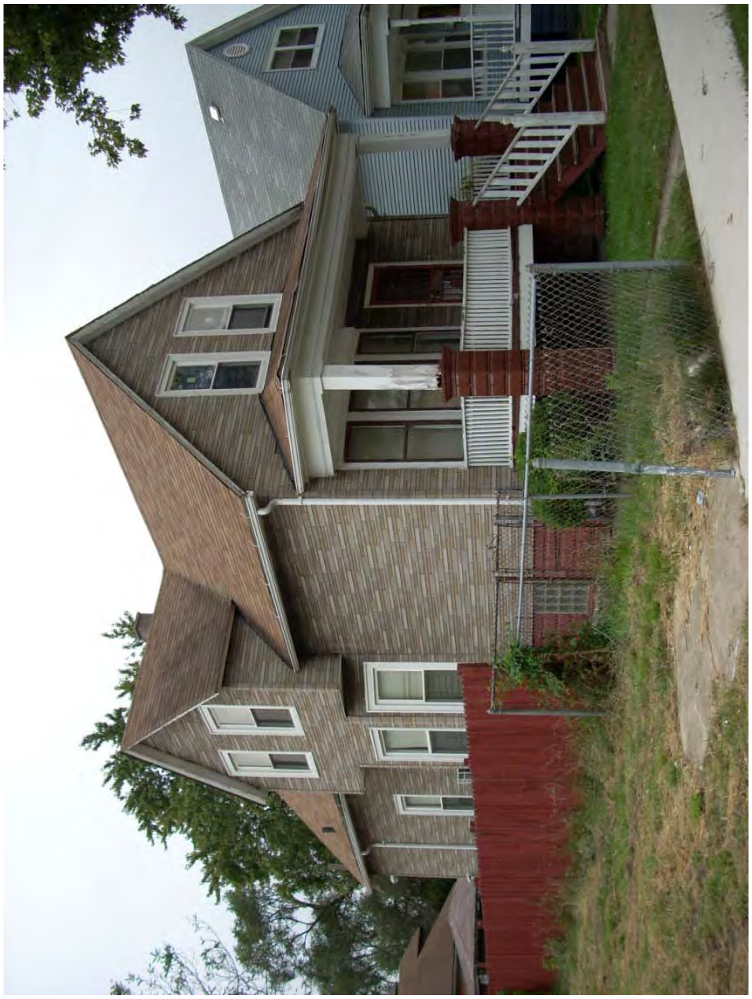
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 16 September 2012

Photos with Captions:
North and east façades of 1.5-story, frame, single-family residence.



Property Description: **Stories:** 1.5

This one-and-a-half-story house in the Roseland community is situated on a raised concrete block basement with glass block windows and is clad with synthetic siding. The building has a gable roof covered with asphalt shingles. The front elevation has a hip-roof, full-width porch with faux stone piers topped by squat squared wood column supports, wood steps and straight wood railings. It also has an off-center entrance with a metal storm door, a strip of three windows on the first floor, and two windows on the second. Windows throughout the house are non-original one-over-one aluminum-sash. The east elevation has a three-sided bay window on the first floor with a gable wall dormer above. This house lacks integrity and distinctive architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows and cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** Dormer	**Roof Type** Gable	
Ornamental Architectural Details Squat, square columns on porch			**Windows** Double-hung, glass block
Outbuildings (*Number and Description*) Garage			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

340 W. 113th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Commercial (Sanborn, 1939)

Current: Multi-family residence

Date of Construction: 1924

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

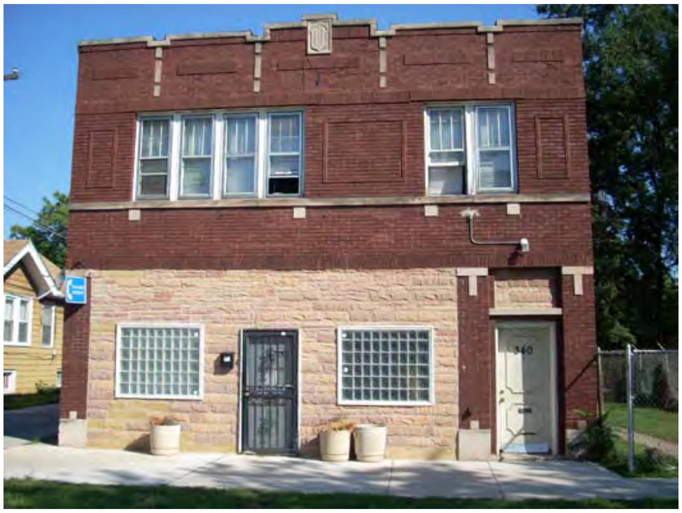
Vernacular

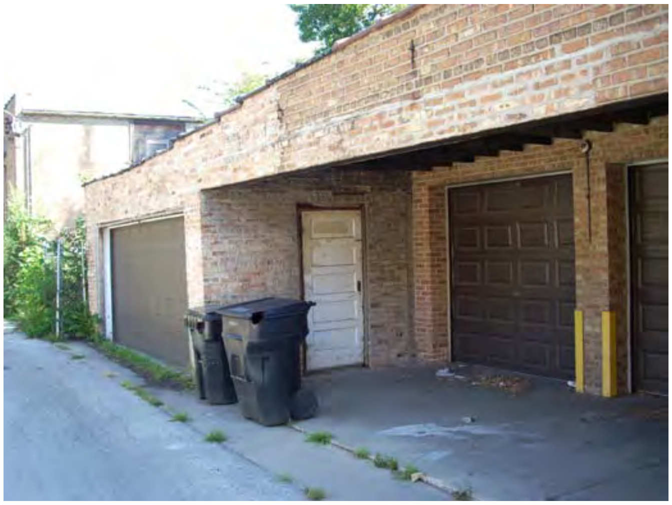
Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 26 September 2012

Photos with Captions:
South façade of a brick, two-story, multi-family residence (above), outbuilding (garage) below.





Property Description: **Stories:** 2

This two-story residential building in the Roseland community has a flat roof and crenellated parapet with concrete coping. Its front elevation is clad in brown face brick and its side elevations are clad in common brick. The front elevation features two hollow core metal doors, the outline of a former storefront that has been in-filled with faux stone and two glass block windows, and six three-over-one wood-sash windows on the second floor. The original off-center entrance that provides access to the second floor apartment has a transom that is in-filled with faux stone. Detailing includes a concrete sill course, inset brick panels, and a parapet that features small decorative concrete insert blocks and a centrally located stone panel with shield. This building lacks integrity and does not have sufficient distinguishing architectural features to qualify as individually eligible for listing on the National Register.

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505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement door, storefront windows in-filled, transom in-filled
Condition: [✓ Excellent] Good Poor			
Additional Alterations None			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details Concrete sill course, insert blocks and stone panel with shield on parapet			**Windows** Double-hung, fixed-pane, glass block
Outbuildings (*Number and Description*) One-story brick garage with parapet (tile coping)			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

345 W. 113th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1911

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

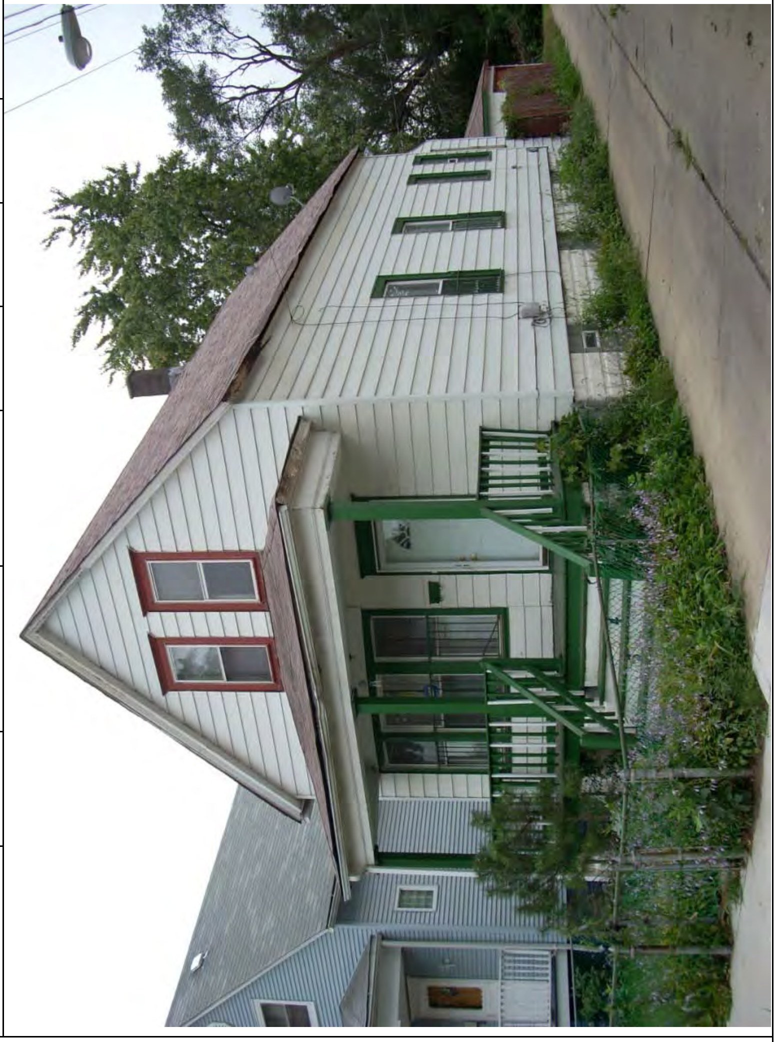
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 16 September 2012

Photos with Captions:
North and west façades of 1.5-story, single family, frame residence.



Property Description: **Stories:** 1.5

This one-and-a-half-story house in the Roseland community is situated on a raised concrete block basement with glass block windows and is clad with synthetic siding. The building has a front gable roof covered with asphalt shingles. The front elevation has a hip-roof full-width porch with faux stone piers beneath the wood deck, squared wood column supports, wood steps, and straight wood railings. There is an off-center non-original hollow core metal door, a strip of three windows on the first floor, and two windows on the second. Windows are non-original one-over-one aluminum-sash. This house lacks integrity and distinctive architectural features and is not individually eligible for listing on the National Register.

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505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows, cladding, porch rails and supports
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung, glass block
Outbuildings (*Number and Description*) Garage			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

41 W. 114th Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1889

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

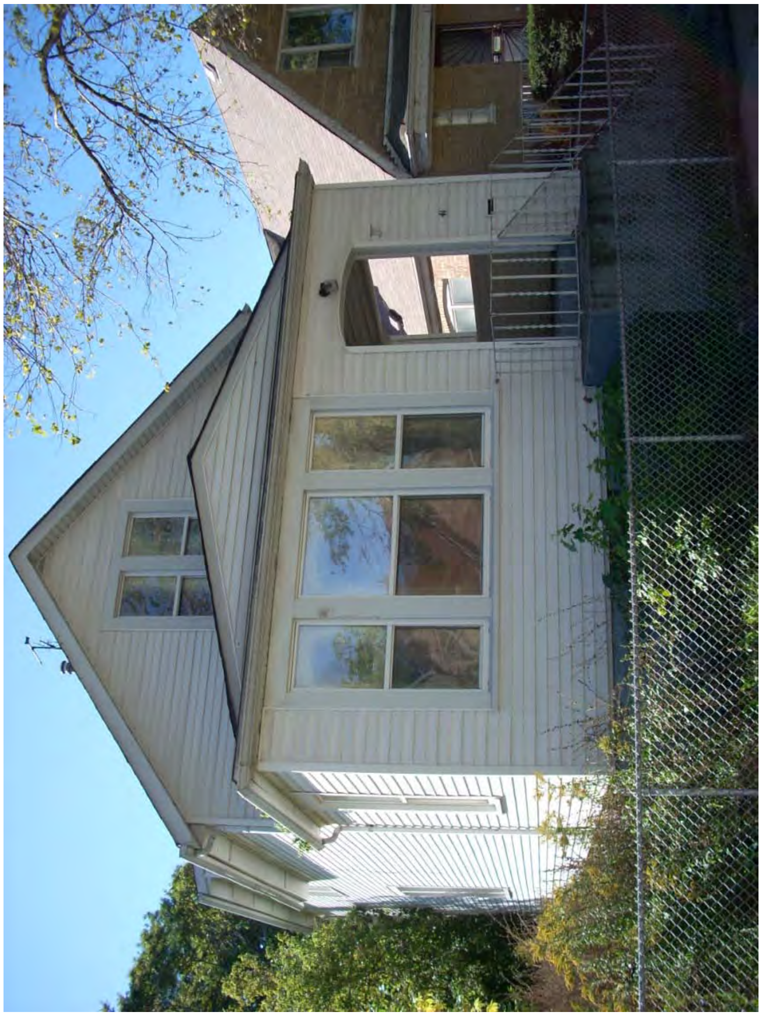
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 22 October 2012

Photos with Captions:
North façade of a 1.5-story, single family, frame residence.



Property Description: **Stories:** 1.5

This one-and-a-half-story frame house in the Roseland community is situated on a raised concrete block basement and is covered with synthetic siding. The building has a front gable roof covered with asphalt shingles and a second story rear shed-roof addition. It has a full-width, gable-roof sun porch, half of which is enclosed and has three non-original one-over-one aluminum-sash windows on the front elevation. The open half of the porch is accessed via concrete steps with metal railings. A pair of non-original one-over-one aluminum-sash windows is situated in the gable. This house lacks integrity and distinctive architectural features and is not individually eligible for listing on the National Register.

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505 North State Street
Marengo, Illinois 60152
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Structural Survey

<table>
<tr><td colspan="3">Integrity:
Unaltered [✓ Slight Modification] Major Alteration</td><td>Additional Notes/Descriptions
Replacement windows, cladding, and porch rails</td></tr>
<tr><td colspan="3">Condition:
Excellent [✓ Good] Poor</td><td></td></tr>
<tr><td colspan="3">Additional Alterations
Shed roof addition to rear of building.</td><td></td></tr>
<tr><td colspan="2">Structure Usage
Current: NA
Historic: NA</td><td>Exterior Wall Surface
Synthetic siding</td><td></td></tr>
<tr><td>Roof Material
Asphalt shingle</td><td>Roof Features
None</td><td>Roof Type
Gable</td><td></td></tr>
<tr><td colspan="3">Ornamental Architectural Details
None</td><td>Windows
Double-hung</td></tr>
<tr><td colspan="4">Outbuildings (<i>Number and Description</i>)
None</td></tr>
</table>

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

62 W. 114th Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Vacant

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction:

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

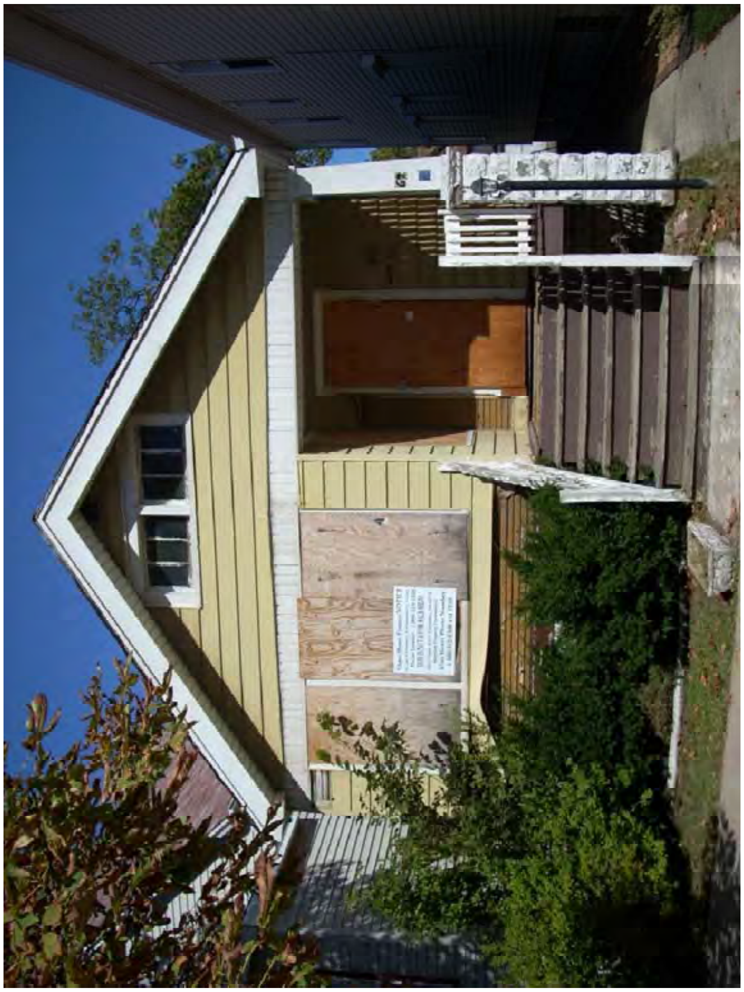
Craftsman

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 22 October 2012

Photos with Captions:
South façade of a one-story, single family, frame residence.



Property Description: **Stories:** 1

This vacant one-story, frame bungalow in the Roseland community is situated on a raised concrete block basement and is covered with synthetic siding. The building has a front gable roof covered with asphalt shingles. The front elevation has a recessed wood corner porch with a faux stone corner pier topped by a squat, squared wood column. the door and first floor windows are covered with plywood. There are two original wood casement windows in the attic. This house lacks integrity and distinctive architectural features and is not individually eligible for listing on the National Register.

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505 North State Street
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Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement cladding
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingles	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details Squat, square columns			**Windows** Casement, covered
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
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Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

131 W. 114th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1903

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

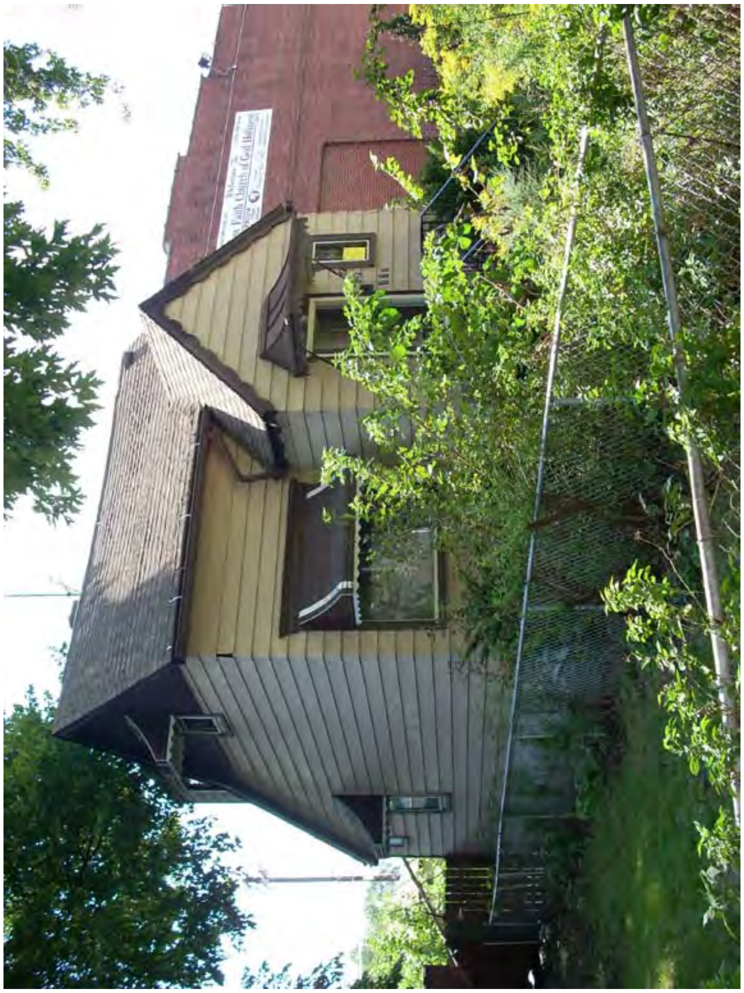
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 1 October 2012

Photos with Captions:
North façade of one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story home in the Roseland community is situated on a raised concrete block basement, is clad in synthetic siding, and has a side gable roof covered with asphalt shingles. The peaks of the side gables are clad in wood board-and-batten. The front façade of the home has a projecting gabled entrance vestibule with a small casement window, concrete steps with metal railings, and a larger window opening that is partially obscured by a low metal awning. Non-original double-hung windows are used elsewhere. Scalloped verge boards frame the projecting gable. A rear, dormer addition is visible from the street. This building lacks sufficient integrity and distinguishing architectural features to qualify as individually eligible for listing on the National Register.

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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement siding and windows
Condition: Excellent [✓ Good] Poor			
Additional Alterations Rear dormer addition			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt	**Roof Features** Dormer	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung, fixed-pane, casement
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

135 W. 114th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Now Faith Church of God Holiness

Property Use

Historic: Industrial

Current: Religious

Date of Construction: circa 1922

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

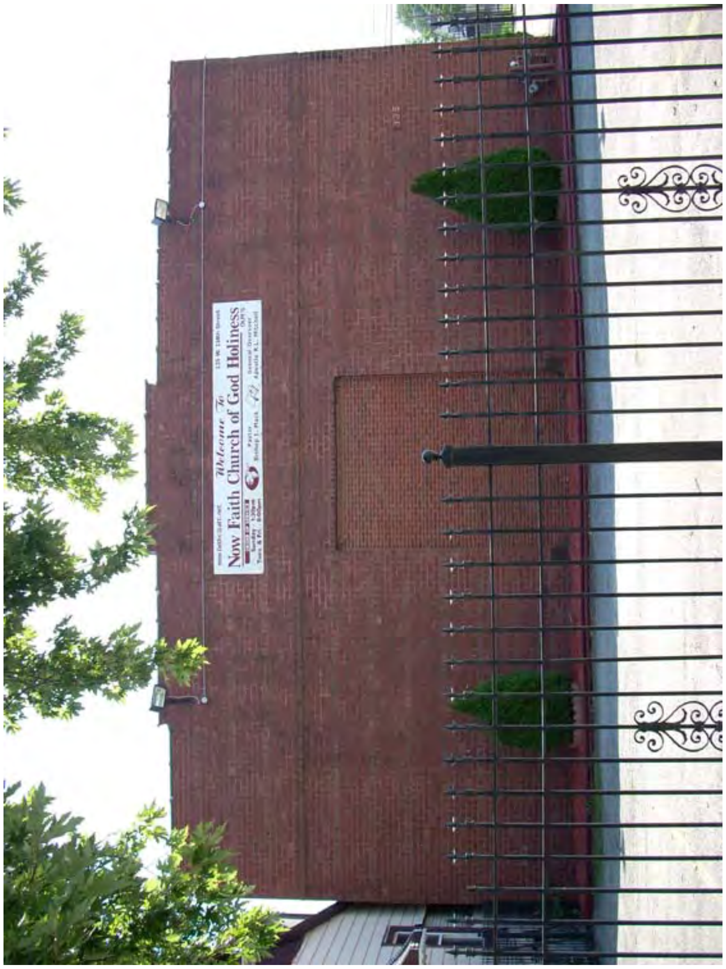
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 1 October 2012

Photos with Captions:
North façade of one-story religious building.



Property Description: **Stories:** 1

This one-story, brick-clad, former industrial building in the Roseland community has a flat roof and a stepped parapet with tile coping. The front façade displays the outline of a former overhead door opening that has been in-filled with brick. One of the side elevations features three metal core doors that provide access to the Now Faith of God Holiness Church, the building’s current occupant. Decorative details include brick stringcourses. This building lacks sufficient integrity and distinguishing architectural features to qualify as individually eligible for listing on the National Register.

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Marengo, Illinois 60152
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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Brick in-fills old service garage entrance
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details Stepped parapet with tile coping, brick stringcourses.			**Windows** NA
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
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Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

138 W. 114th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1909

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

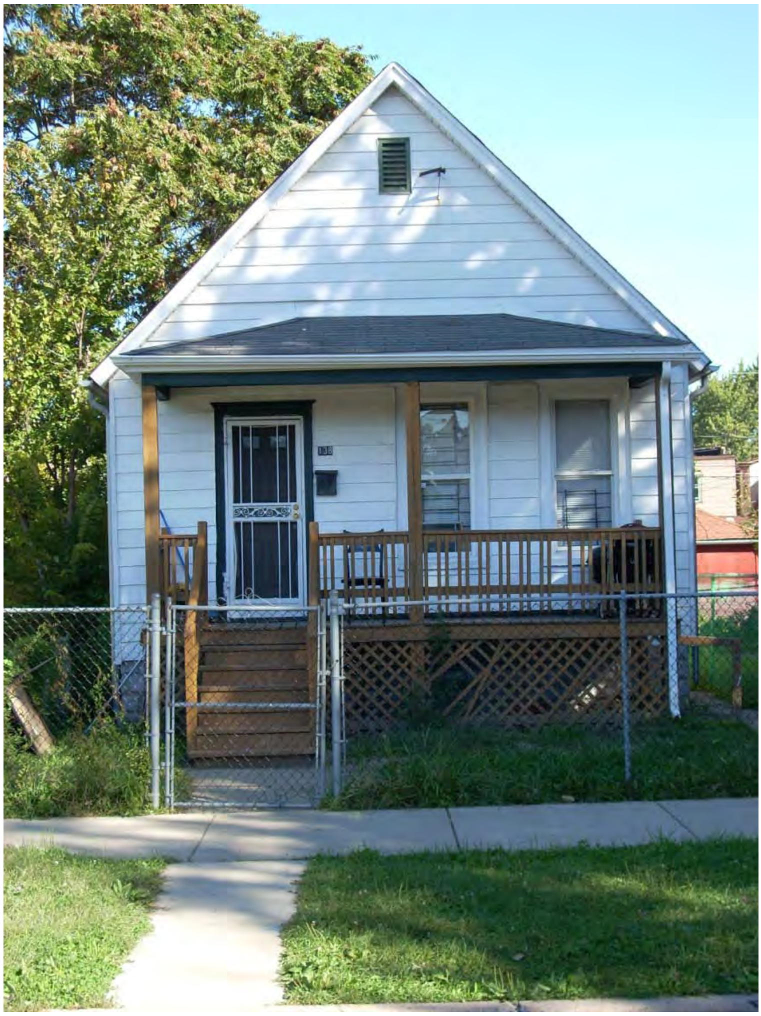
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 22 October 2012

Photos with Captions:
South façade of a one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story house in the Roseland community is situated on a raised concrete block basement and is covered with synthetic siding. The building has a front gable roof covered with asphalt shingles. Its front elevation has a full-width hip-roof wood porch with non-original straight posts and railings, an off-center entrance with a metal storm door, and two non-original one-over-one aluminum-sash windows. A small ventilating louver is situated in the attic gable. This house lacks integrity and distinctive architectural features and is not individually eligible for listing on the National Register.

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows, cladding, and porch rails and posts
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
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Marengo, Illinois 60152
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Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

235 W. 114th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1964

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

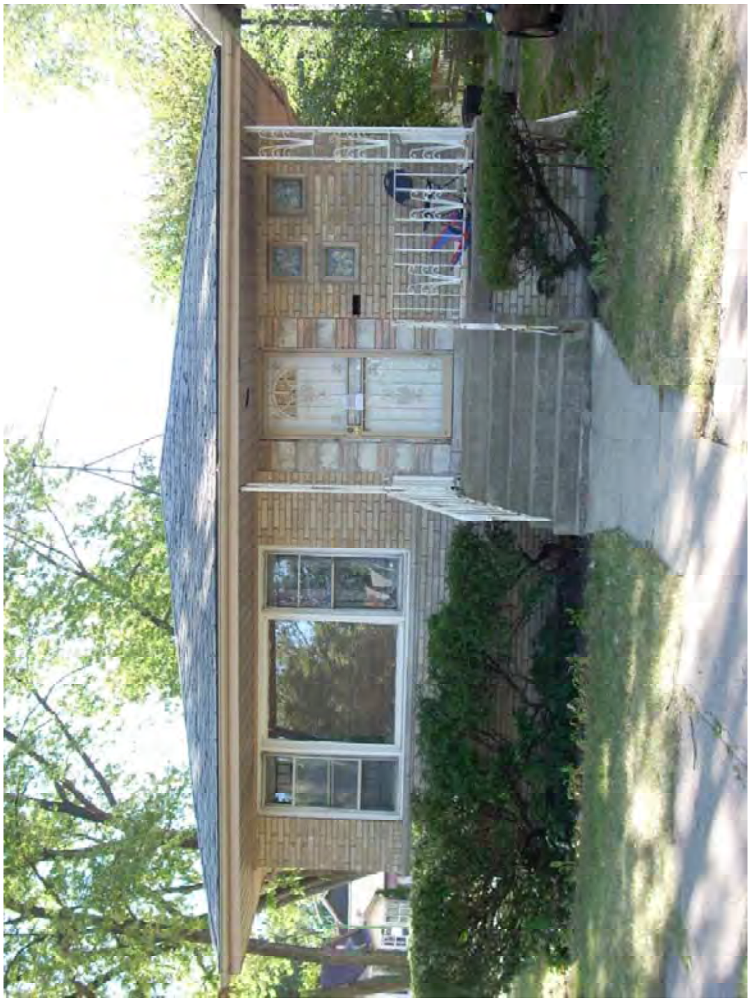
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 22 October 2012

Photos with Captions:
North façade of a brick, one-story, single family residence.



Property Description: **Stories:** 1

This one-story house at the southwest corner of 114th Street and Yale Avenue in the Roseland community is situated on a raised brick basement and is clad with yellow face brick along its street elevations. The building has a hip roof covered with asphalt shingles and overhanging eaves. The front elevation has a picture window flanked by one-over-one aluminum-sash windows and an off-center door. This elevation also has a partial-width porch with open metal posts covered by the wide roof overhang, concrete steps, and metal railings. Detailing includes stones flanking the front door and decorative glass blocks on both street elevations. This house lacks distinctive architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: [✓ Unaltered] Slight Modification Major Alteration			**Additional Notes/Descriptions**
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Hip	
Ornamental Architectural Details Decorative glass blocks, stone flanking entrance			**Windows** Double-hung, fixed-pane, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y [✓ N]**	
National Register Historic Places	**Y [✓ N]**	
National Register Historic District	**Y [✓ N]**	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

324 W. 114th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Multi-family residence

Date of Construction: 1907

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

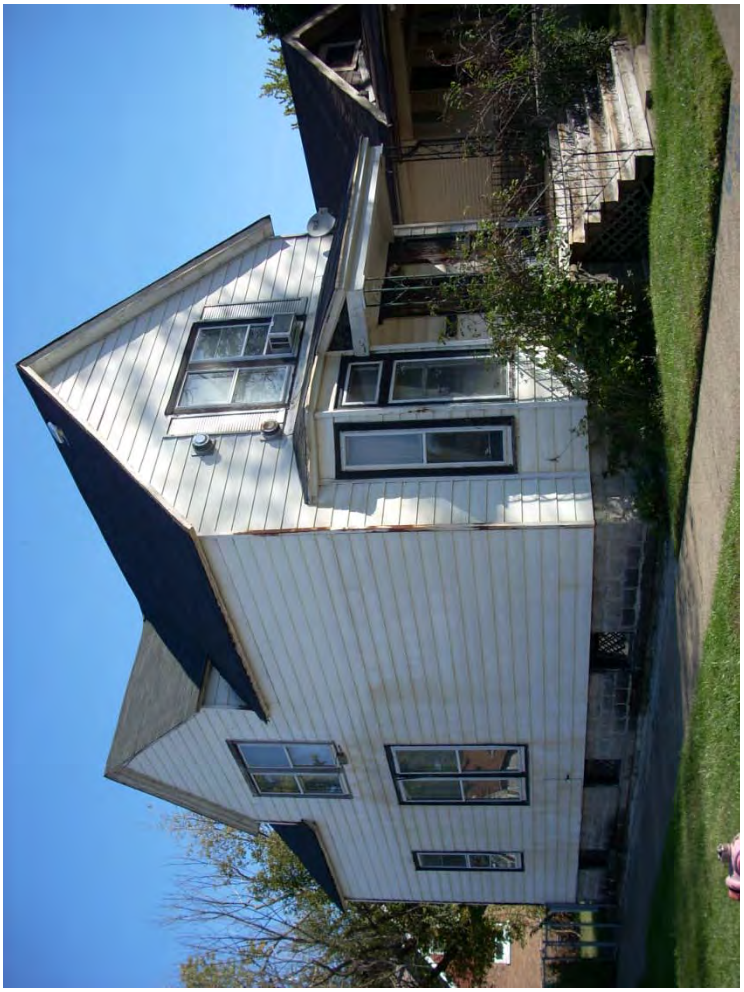
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 22 October 2012

Photos with Captions:
South and west façades of a 1.5-story, multi-family, frame residence.



Property Description: **Stories:** 1.5

This one-and-a-half-story house in the Roseland community is situated on a raised concrete block basement with casement windows and is covered with synthetic siding. The building has a cross-gable roof covered with asphalt shingles. Its front elevation has two off-center doors and a partial-width shed-roof porch with wood steps, metal railings and open metal supports. It also has a three-sided bay window on the first floor and a pair of windows in the gable. Windows are non-original one-over-one aluminum-sash. The central window of the bay features a transom. This house lacks integrity and distinctive architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity:

Unaltered [✓ Slight Modification] Major Alteration

Additional Notes/Descriptions

Replacement doors, windows, and cladding

Condition:

Excellent [✓ Good] Poor

Additional Alterations

Converted from single family to multi-family after 1938 (Sanborn).

Structure Usage	**Exterior Wall Surface**
Current: NA Historic: NA	Synthetic siding

Roof Material	**Roof Features**	**Roof Type**
Asphalt shingle	None	Cross-gable roof

Ornamental Architectural Details

None

Windows

Double-hung, fixed-pane (transom), casement

Outbuildings (*Number and Description*)

None

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

One W. 115th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Commercial

Current: Mixed-Use

Date of Construction: 1907

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

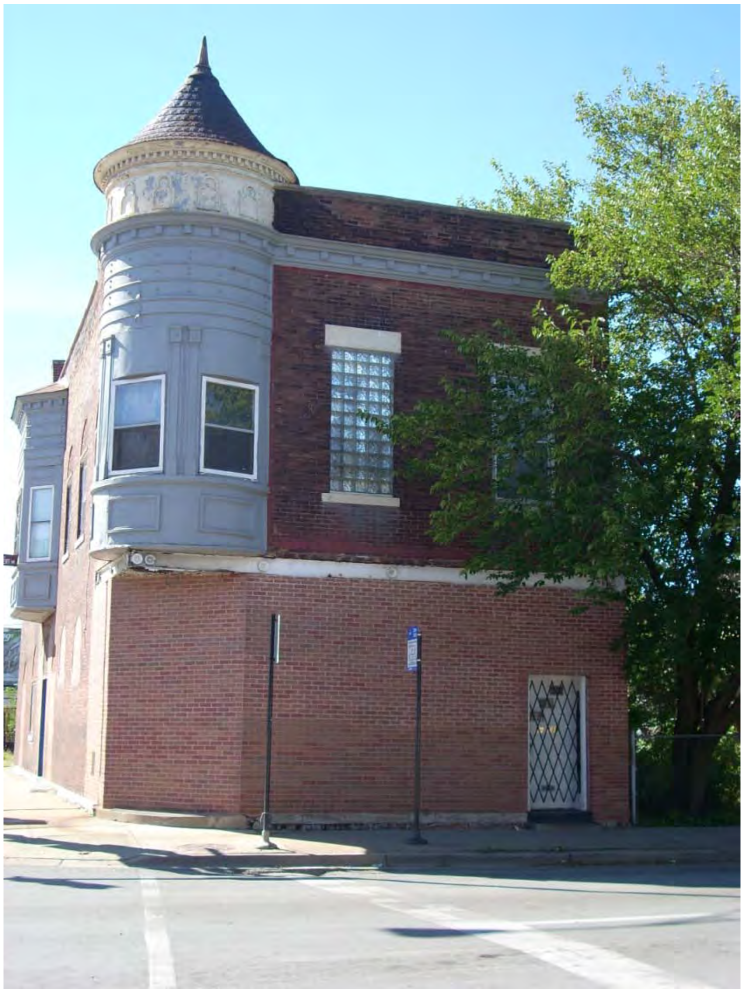
Queen Anne

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 22 October 2012

Photos with Captions:
North façade of a brick, two-story, mixed-use building.



Property Description: **Stories:** 2

This two-story Queen Anne style commercial building at the southwest corner of 115th and State streets in the West Pullman community is clad with brick and has a flat roof and parapet. The first floor of both street elevations has been drastically altered by the removal of the corner storefront and the infill of virtually all door, window, and round-arch transom openings with brick. The first floor of the front (115th Street) elevation currently features a single, non-original, off-center hollow core metal door. The first floor of the State Street elevation has a centrally-located non-original hollow core metal door and a single non-original one-over-one aluminum-sash window. The second floor, however, retains its original metal corner turret with conical roof and a three-sided metal window bay on the State Street elevation. Both bays have rectangular panels at their bases and dentil molding, and the turret features decorative pilasters. However, the windows in both the bay and turret are non-original. The second floor of the 115th street elevation has a non-original glass block window and an aluminum-sash window, both of which have stone sills and lintels. The second floor of the State Street elevation has a series of non-original one-over-one aluminum-sash windows with rounded transoms that have been in-filled with brick. This building lacks integrity and is not

individually eligible for listing on the National Register.

Structural Survey

Integrity: Unaltered	[✓ Slight Modification]	Major Alteration	**Additional Notes/Descriptions** Replacement windows, storefronts, openings in-filled
Condition: Excellent	[✓ Good]	Poor	
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details Metal turret with conical roof and pilasters, metal bays with panels and dentil molding, stone lintels and sills, cornice			**Windows** Double-hung, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

8 W. 115th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Flat

Date of Construction: 1903

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

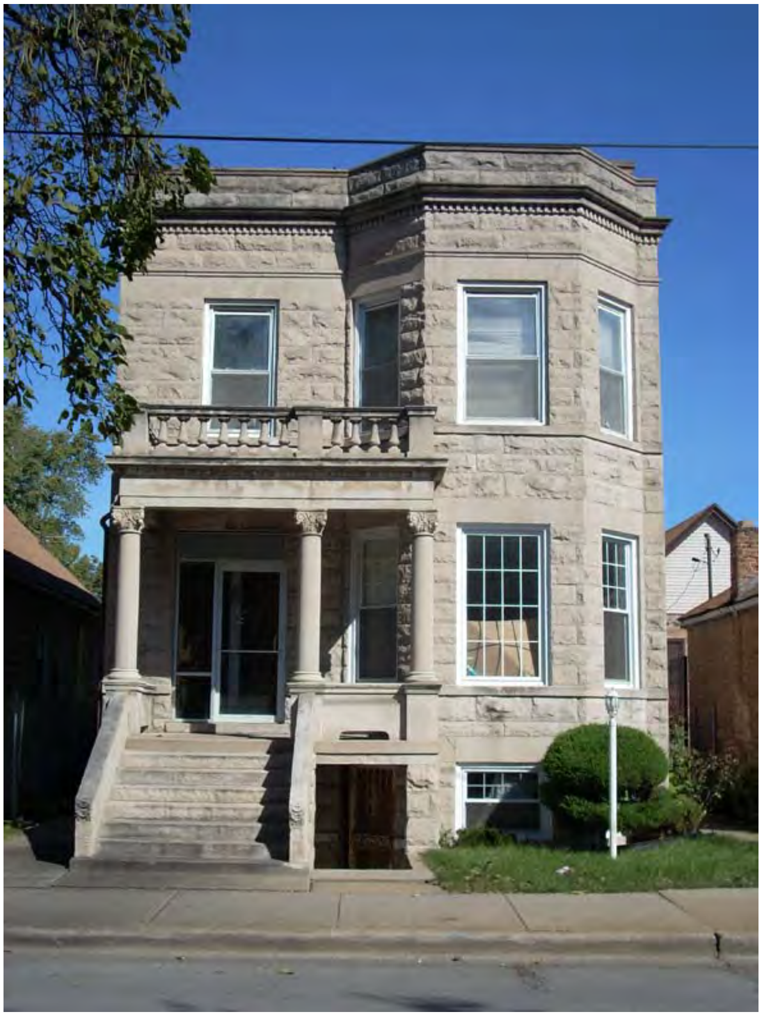
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 22 October 2012

Photos with Captions:
South façade of a greystone, two-flat residence.



Property Description: **Stories:** 2

This two-flat residential building in the Roseland community is situated on a raised basement and is clad with rusticated limestone on its front elevation and common brick along its side and rear elevations. The building has a flat roof and parapet. Its front elevation has a full-height three-sided window bay pavilion, a partial-width stone porch with Corinthian columns and balustrade, and an off-center entrance with metal storm door. There is a secondary entrance to the lower level. The first floor window bay has a non-original central fixed-pane window with multiple lights and flanking nine-over-one windows. The second floor of the front elevation has four non-original one-over-one aluminum-sash windows—three on the bay and one above the entrance. Casement windows provide light to the basement. Detailing includes smooth stone sill courses, belt courses, and a cornice with dentil molding.

This is an example of a greystone, a building type that the City of Chicago has recognized through its Historic Greystone Initiative. However, there are thousands of greystone residential buildings in Chicago and this particular example does not stand out among the city’s stock of this residential building type. As a result, it does not qualify as

individually eligible for listing on the National Register.

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration	**Additional Notes/Descriptions** Replacement windows & door
Condition: [✓ Excellent] Good Poor	
Additional Alterations	

Structure Usage	**Exterior Wall Surface**
Current: NA Historic: NA	Stone (façade), Brick (sides and rear)

Roof Material	**Roof Features**	**Roof Type**
Unknown	Parapet	Flat

Ornamental Architectural Details	**Windows**
Corinthian columns and stone balustrade, stone sill courses, belt courses, and cornice with dentils	Double-hung, fixed-pane

Outbuildings (*Number and Description*)

None

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

17 W. 115th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Flat

Date of Construction: 1897

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

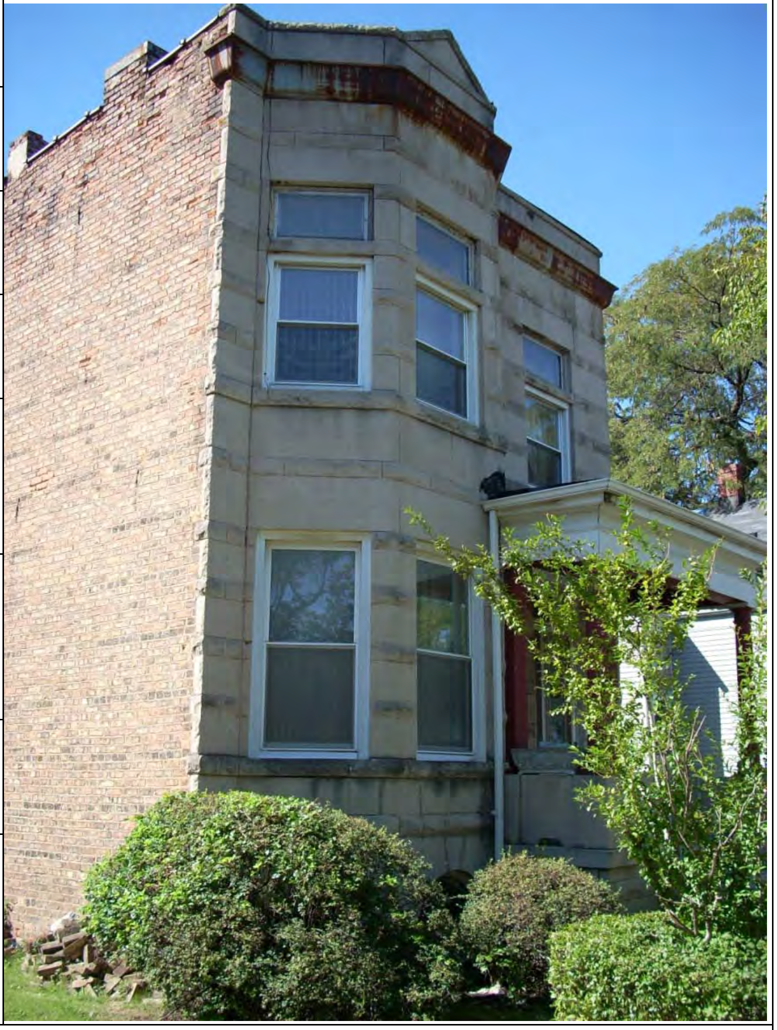
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 10 September 2012

Photos with Captions:
North and east façades of two-flat greystone residence.



Property Description: **Stories:** 2

This two-flat residential building in the West Pullman community is situated on a raised basement and has a front façade clad with limestone; common brick cover both the sides and rear. The building has a full-height three-sided window bay pavilion, flat roof, and a shaped parapet with a pediment above the bay. Its off-center, flat-roofed porch has concrete steps, metal railings, Doric columns, and a non-original metal door with transom. Windows are non-original one-over-one and those on the second floor feature transoms. Detailing includes continuous banding in rusticated limestone and a metal cornice.

This is an example of a greystone, a popular historic residential building type that the City of Chicago has recognized through its Historic Greystone Initiative, which offers technical assistance and financial resources to property owners to encourage their preservation. This building does not possess sufficient distinguishing architectural characteristics to qualify for individual listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement door and windows
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Stone (façade), Brick (sides and rear)	
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details Metal cornice, stone banding, Doric columns on porch			**Windows** Double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

23 W. 115th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Vacant

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1883

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

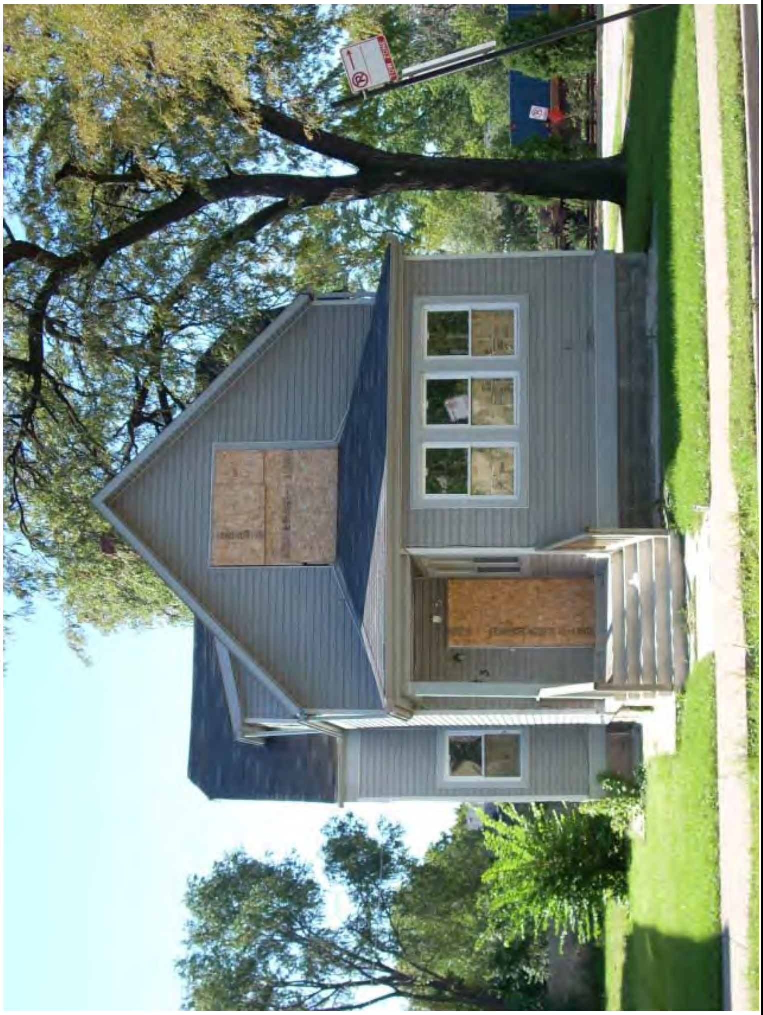
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 10 September 2012

Photos with Captions:
North façade of a 1.5-story, single family, frame residence.



Property Description: **Stories:** 1.5

This one-and-a-half-story house in the West Pullman community is clad with synthetic siding, has a limestone foundation, and has a gable front roof crossed by hip-on-gable sides. The front elevation has a full-width hip roof porch, a portion of which is enclosed. A shed roof dormer is visible on a side elevation. The open portion of the porch has wood steps and railings, a wood post, and a door opening covered with plywood. Windows are one-over-one aluminum-sash, some of which are covered with plywood. This house does not feature sufficient integrity or distinguishing architectural features to qualify as individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement siding and windows, enclosed porch
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** Dormer	**Roof Type** Gable/Hipped gable	
Ornamental Architectural Details None			**Windows** Double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

35 W. 115th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Donald's Auto Repairs

Property Use

Historic: Commercial

Current: Commercial

Date of Construction: 1936

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

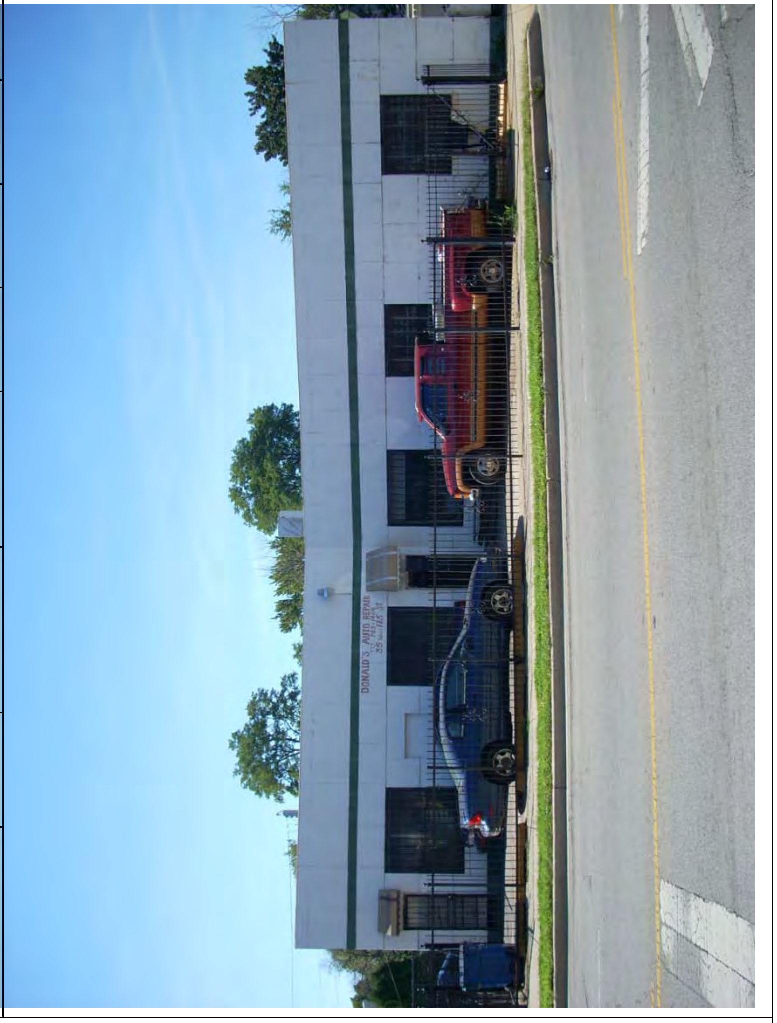
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 10 September 2012

Photos with Captions:
North façade of one-story, sheet metal and brick clad, commercial building.



Property Description: **Stories:** 1

This one-story auto repair building at the corner of 115th Street and Lafayette Avenue in the West Pullman community has a flat roof and a V-shaped footprint. Its street elevations are clad with white sheet metal and its rear elevations are clad in common brick. Overhead metal garage doors are situated on either end of the building while the bent front elevation along 115th Street features two metal doors and a series of fixed-pane steel sash windows. Windows along the rear of the building are covered with corrugated metal. This building does not feature sufficient distinguishing architectural features to qualify as individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement doors; rear windows covered
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Metal (front and sides), Brick (rear)	
Roof Material Unknown	**Roof Features** None	**Roof Type** Flat	
Ornamental Architectural Details None			**Windows** Fixed-pane
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: None

Property Address:

40 W. 115th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Commercial

Current: Multi-family residence

Date of Construction: 1894

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

Vernacular

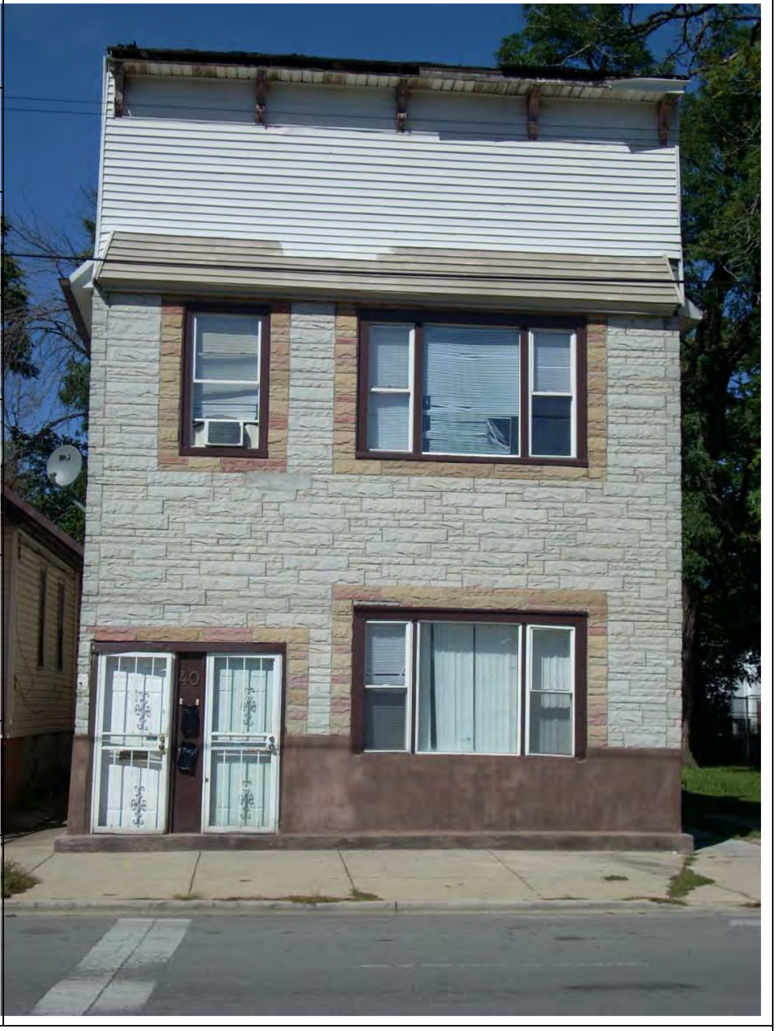
Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 10 September 2012

Photos with Captions

South façade of two-story, multi-family, frame residence (former commercial building).



Property Description: **Stories:** 2

This two-story residential building in the Roseland community has a flat roof and parapet. Its front façade is mostly clad in synthetic faux stone siding with contrasting colors around the doors and windows. The lowest portion of the façade is covered in stucco; the upper portion is clad in synthetic siding. The front elevation has two hollow metal core doors, Chicago-style windows on the first and second floors, and a single one-over-one window on the second floor. A pent roof is situated above the second floor windows and a bracketed wood cornice is situated at the parapet level. This building lacks integrity, does not have sufficient distinguishing architectural features, and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Alterations] Major Alterations			**Additional Notes/Descriptions** Replacement doors, windows, and cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations Converted from commercial building to residential use			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding, faux stone, stucco	
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details Bracketed cornice			**Windows** Double-hung, fixed-pane
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

42 W. 115th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1899

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

Vernacular

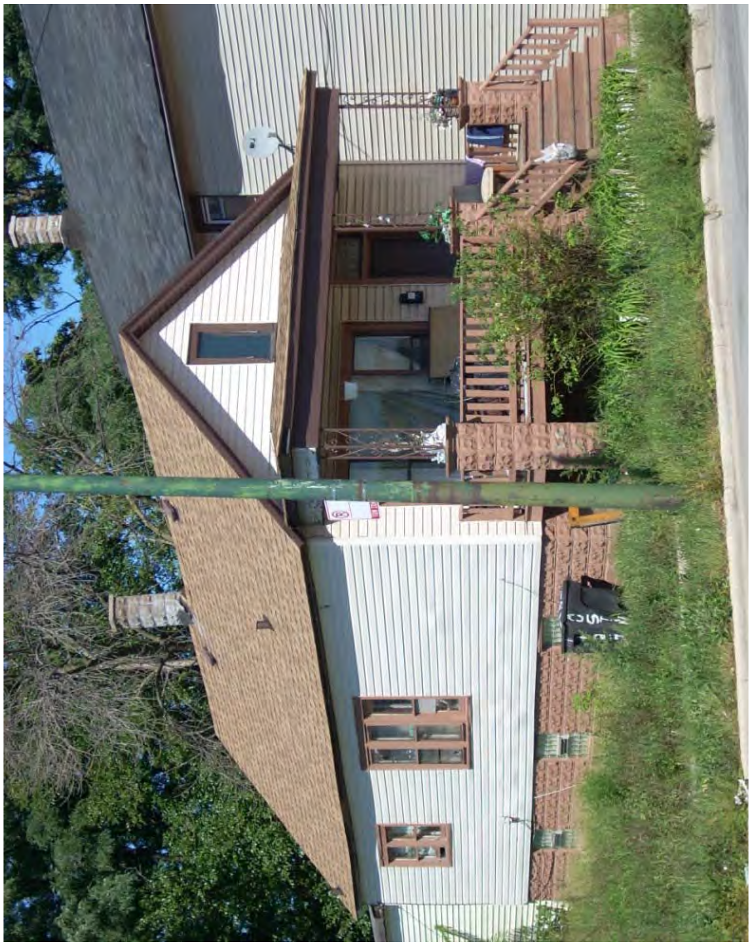
Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 10 September 2012

Photos with Captions

South and west façades of one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story home in the Roseland community is situated on a raised concrete block basement with glass block windows. The home is clad with synthetic siding and has a front gable roof covered with asphalt shingles. It has a full-width hip-roof wood porch with wood slat railings, and supports consisting of three concrete block piers topped by open metal posts. Its front façade has an off-center door with transom, a picture window flanked by one-over-one windows, and a single-pane window in the dormer. This home lacks integrity, does not have distinguishing architectural features, and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Alterations] Major Alterations			**Additional Notes/Descriptions** New porch columns & rails, replacement cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung, fixed-pane, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

112 W. 115th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Industrial

Current: Industrial

Date of Construction: 1927

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

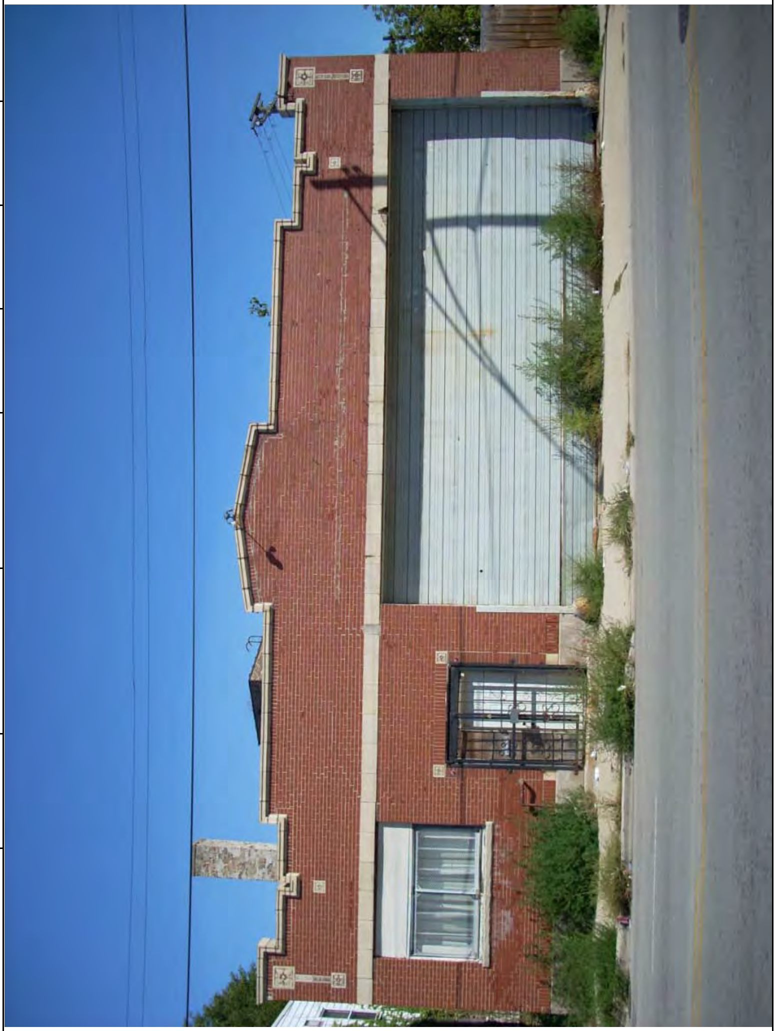
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 10 September 2012

Photos with Captions:
South façade of one-story, brick industrial building.



Property Description: **Stories:** 1

This one-story industrial building in the Roseland community has a flat roof and stepped parapet. Its front elevation is clad with red face brick and has a concrete water table, a wide overhead metal garage door, entrance that has been replaced with a non-original hollow core metal door and plywood, and a window opening that has been covered with plywood and replacement windows. Detailing in cream-colored terra cotta includes coping and geometric panels on either end of the parapet that feature foliate motifs. This building does not feature sufficient integrity or distinguishing architectural features to qualify as individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows and garage door; openings in-filled
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details Stepped parapet with terra-cotta coping and decorative panels.			**Windows** Fixed-pane
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

116 W. 115th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Multi-family residence

Date of Construction: 1904

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

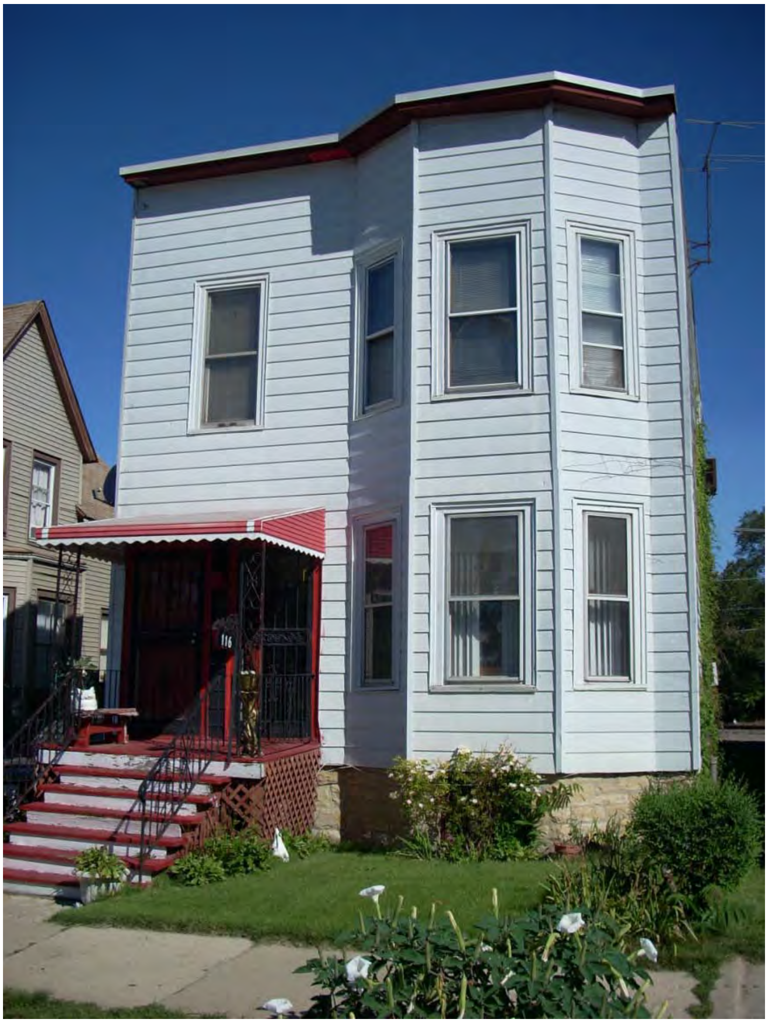
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 10 September 2012

Photos with Captions:
South façade of multi-family, frame residence.



Property Description: **Stories:** 2

This two-story, multi-family residential building in the Roseland community is clad with synthetic siding, is situated on a raised limestone foundation, and has a flat roof with an overhanging eave. Its front elevation features a non-original, partial width wood porch with metal railings, open metal supports, and a metal awning roof. It has a full-height three-sided pavilion with non-original one-over-one windows and a single, non-original, one-over-one window on the second floor directly above the entrance. This building lacks sufficient integrity and distinguishing architectural features to qualify as individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

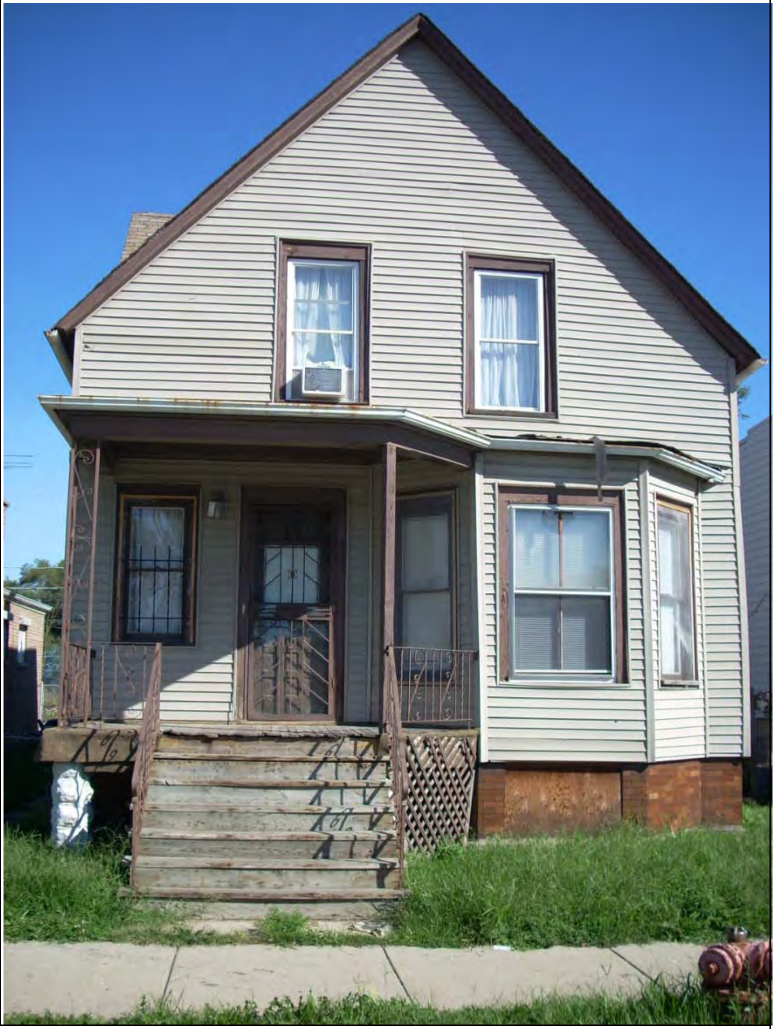
Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows and siding
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: N A Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Unknown	**Roof Features** None	**Roof Type** Flat	
Ornamental Architectural Details None			**Windows** Double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Historical Resource Recordation Form

Property Name **Historic:** Not labeled, not in CHRS **Common/Current:** Unknown	**Photos with Captions:** South façade of 1.5-story, single family, frame residence. 
Property Address: 120 W. 115th Street	
HAARGIS Number: Not in database	
Present Owner and /or Occupant: Unknown	
Property Use **Historic:** Single family residence **Current:** Single family residence	
Date of Construction: 1899 **Architect's Name:** Not in CHRS **Builder/Contractor:** Not in CHRS	
Architectural Style: Vernacular	
Prepared By: C. Tolmie, M. C. Bird, J. Guarino **Photo By:** S. Katz **Date:** 10 September 2012	

Property Description: **Stories:** 1.5

This one-and-half-story home in the Roseland community is situated on a raised brick basement, clad with synthetic siding, and has a gable roof covered with asphalt shingles. The front façade has a partial-width flat-roofed porch with non-original metal railings open metal supports and an off-center door. Windows are non-original one-over-one: there is a three-sided bay on the first floor and are two additional windows centered on the second floor. One of the side elevations has a three-sided bay window and gable wall dormer above. This building lacks sufficient integrity and distinguishing architectural features to qualify as individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity:			**Additional Notes/Descriptions**
Unaltered	[✓ Slight Modification]	Major Alteration	Replacement windows, porch, & cladding
Condition:			
Excellent	[✓ Good]	Poor	
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** Dormer	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

143 W. 115th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1911

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

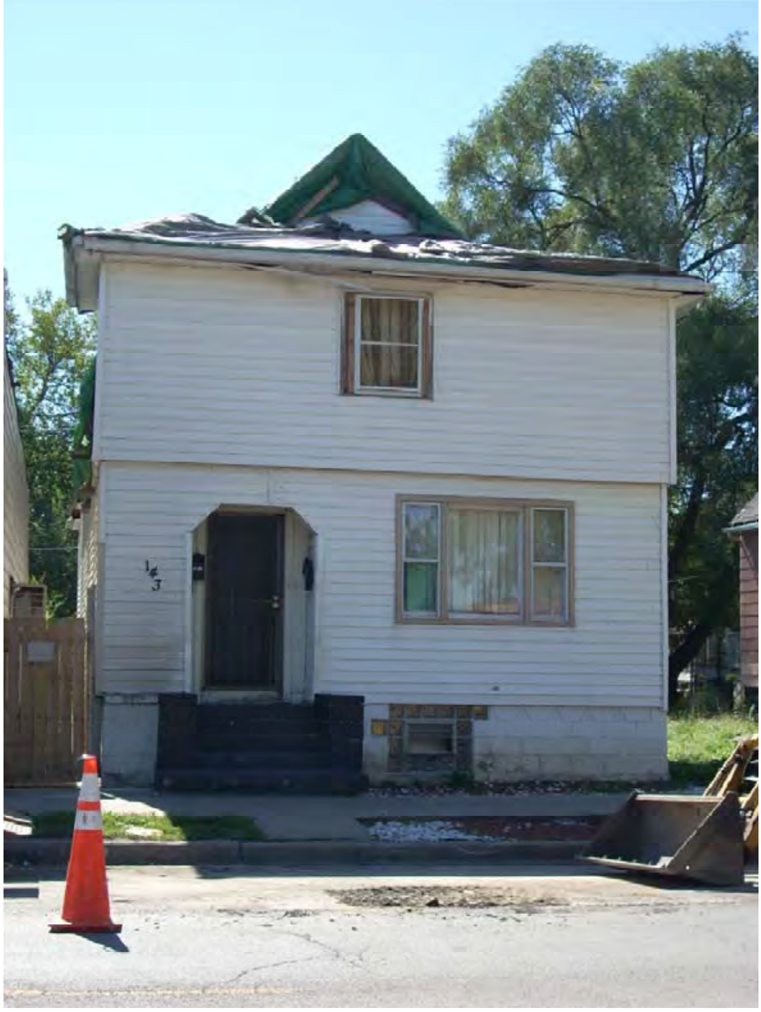
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 22 October 2012

Photos with Captions:
North façade of a two-story, single family, frame residence.



Property Description: **Stories:** 2

This two-story house in the West Pullman community is situated on a raised concrete block basement with glass block windows and is covered with synthetic siding. The building has a front gable roof with a wall dormer on the side elevation. The house has a two-story hip-roof front addition. The front elevation has an off-center recessed entrance with a metal storm door, a non-original picture window flanked by one-over-one aluminum-sash windows on the first floor, and a single non-original one-over-one aluminum-sash window on the second floor addition. This house lacks integrity and distinctive architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered	Slight Modification	[✓ Major Alteration]	**Additional Notes/Descriptions** Replacement door, windows, and cladding
Condition: Excellent	[✓ Good]	Poor	
Additional Alterations Addition to front of building			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt	**Roof Features** Dormer	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung, fixed-pane, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

738 W. 116th Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1925

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

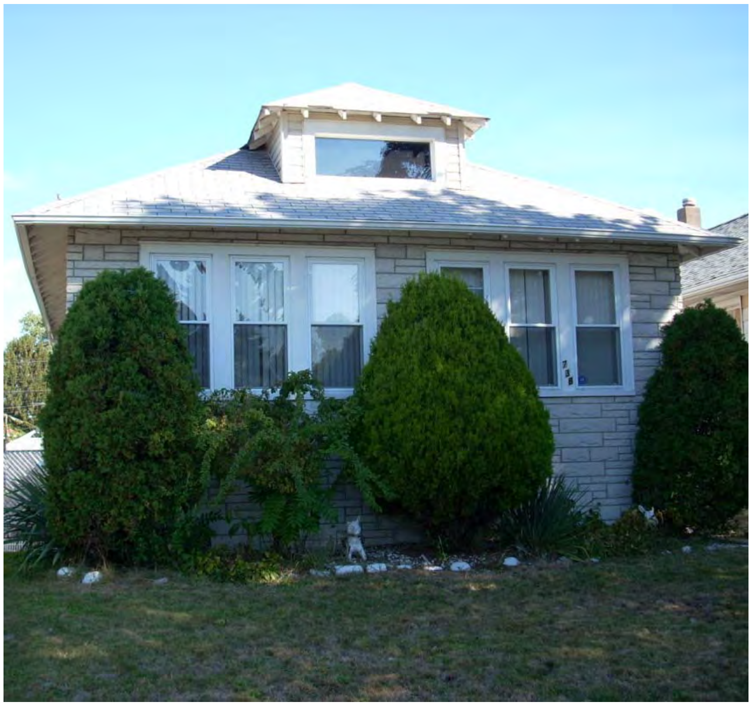
Craftsman

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 24 October 2012

Photos with Captions:
South façade of a one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story frame bungalow in the West Pullman community has a hip roof covered with asphalt shingles, overhanging eaves with exposed rafters, and a hip dormer with a single-pane window. Its front elevation is clad with a stone veneer and has six non-original one-over-one aluminum-sash windows, arranged in two groups of three. Synthetic siding clads the sides and rear of the building. The front door is located along one of the side elevations. This home lacks integrity and distinguishing architectural features and is not individually eligible for listing on the National Register.

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Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Faux stone (façade), Synthetic siding (sides and rear)	
Roof Material Asphalt shingle	**Roof Features** Dormer	**Roof Type** Hip	
Ornamental Architectural Details Exposed rafters			**Windows** Double-hung, fixed-pane
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

8 E. 116th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1908

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

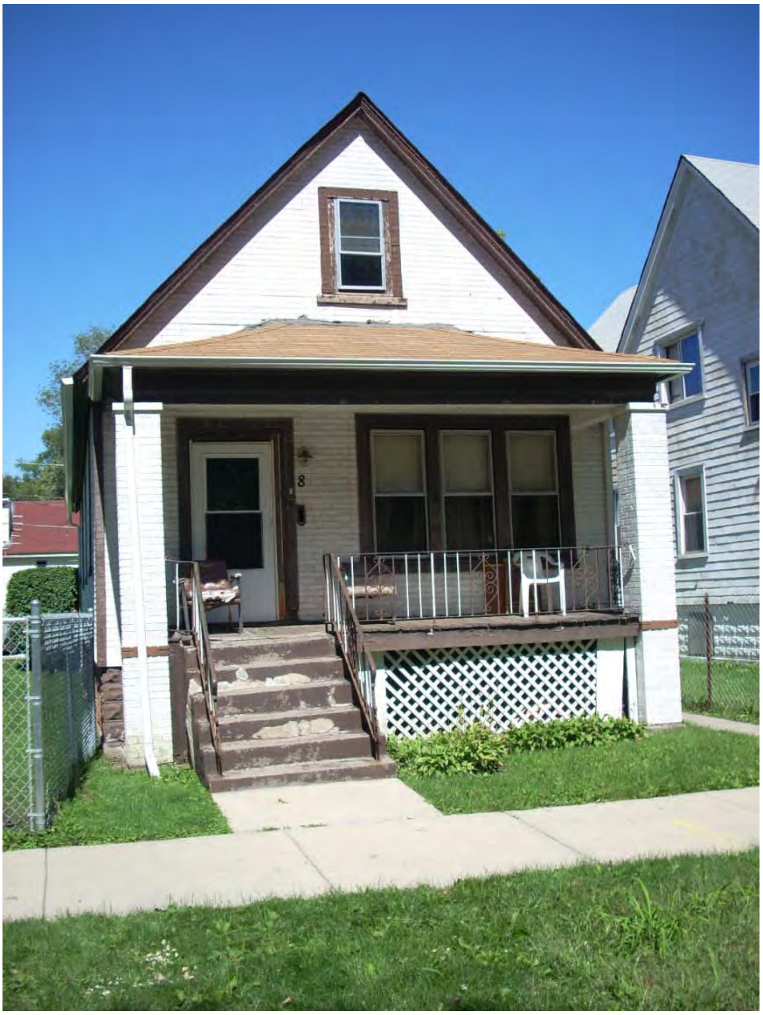
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 10 September 2012

Photos with Captions:
North façade of one-story, single-family, frame residence.



Property Description: **Stories:** 1

This one-story house in the West Pullman community is situated on a raised concrete block basement that features multi-pane casement windows. It is clad with brick painted white and has a gable roof covered with asphalt shingles. It front elevation features a full-width, hip roof, wood porch with concrete steps, metal railings, and brick pier supports. It has an off-center door and one-over-one windows with aluminum storms: a strip of three on the first floor and one in the gable. This house lacks sufficient distinguishing architectural features to qualify as individually eligible for listing on the National Register.

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Structural Survey

Integrity:			**Additional Notes/Descriptions** Aluminum storms
Unaltered	[✓ Slight Modification]	Major Alterations	
Condition:			
[✓ Excellent]	Good	Poor	
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details			**Windows** Double-hung, casement
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

12 E. 116th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Multi-family residence

Date of Construction: 1913

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

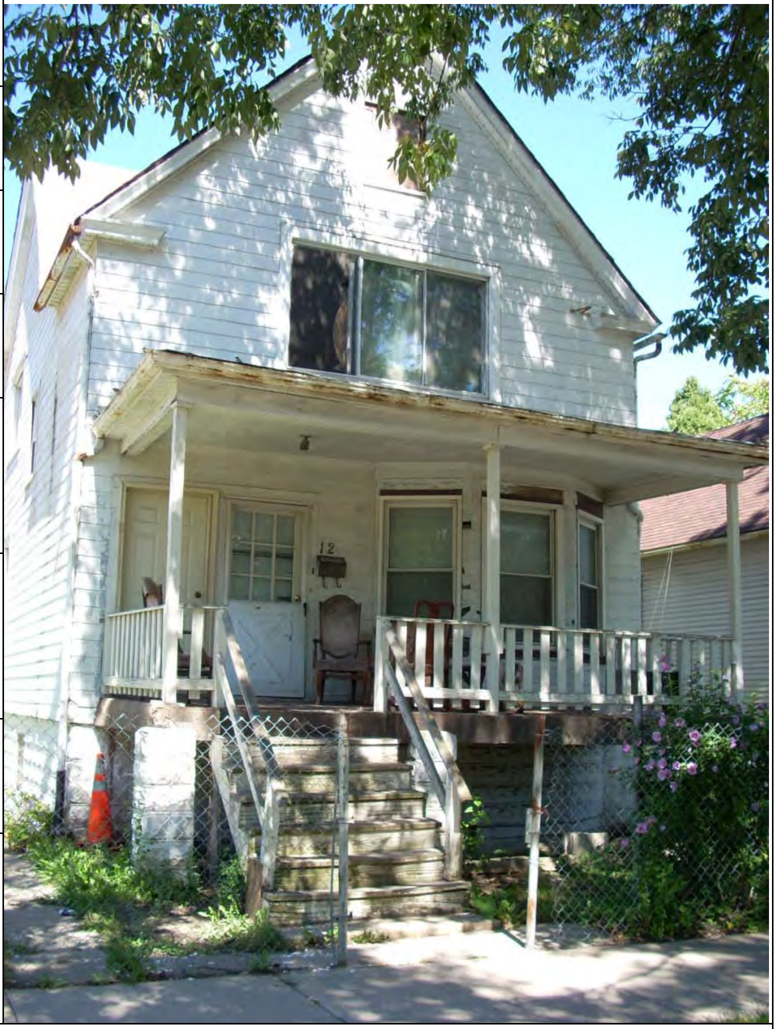
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 10 September 2012

Photos with Captions:
North façade of two-story, multi-family, frame residence.



Property Description: **Stories:** 2

This two-story house in the West Pullman community is situated on a raised concrete block basement, is clad with synthetic siding, and has cornice returns and a cross-gable roof covered with asphalt shingles. It front elevation features a full-width, flat roof, wood porch with non-original slat railing, thin wood posts, and an off-center door. There is a three-sided bay with one-over-one double-hung windows on the first floor and a strip of three single-pane windows on the second floor that may be sliding glass. This house lacks sufficient integrity or distinguishing architectural features to qualify as individually eligible for listing on the National Register.

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Phone (815) 568- 0680

Structural Survey

<table>
<tr><td colspan="3">Integrity:
Unaltered [✓ Slight Modification] Major Alterations</td><td>Additional Notes/Descriptions
Replacement windows, door, cladding</td></tr>
<tr><td colspan="3">Condition:
[✓ Excellent] Good Poor</td><td></td></tr>
<tr><td colspan="3">Additional Alterations</td><td></td></tr>
<tr><td colspan="2">Structure Usage
Current: NA
Historic: NA</td><td>Exterior Wall Surface
Synthetic siding</td><td></td></tr>
<tr><td>Roof Material
Asphalt shingle</td><td>Roof Features
None</td><td>Roof Type
Gable</td><td></td></tr>
<tr><td colspan="3">Ornamental Architectural Details
Cornice returns</td><td>Windows
Double-hung, sliding</td></tr>
<tr><td colspan="4">Outbuildings (<i>Number and Description</i>)
None</td></tr>
</table>

Local Landmark	**Y [✓ N]**	
National Register Historic Places	**Y [✓ N]**	
National Register Historic District	**Y [✓ N]**	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

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Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

16 E. 116th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1902

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

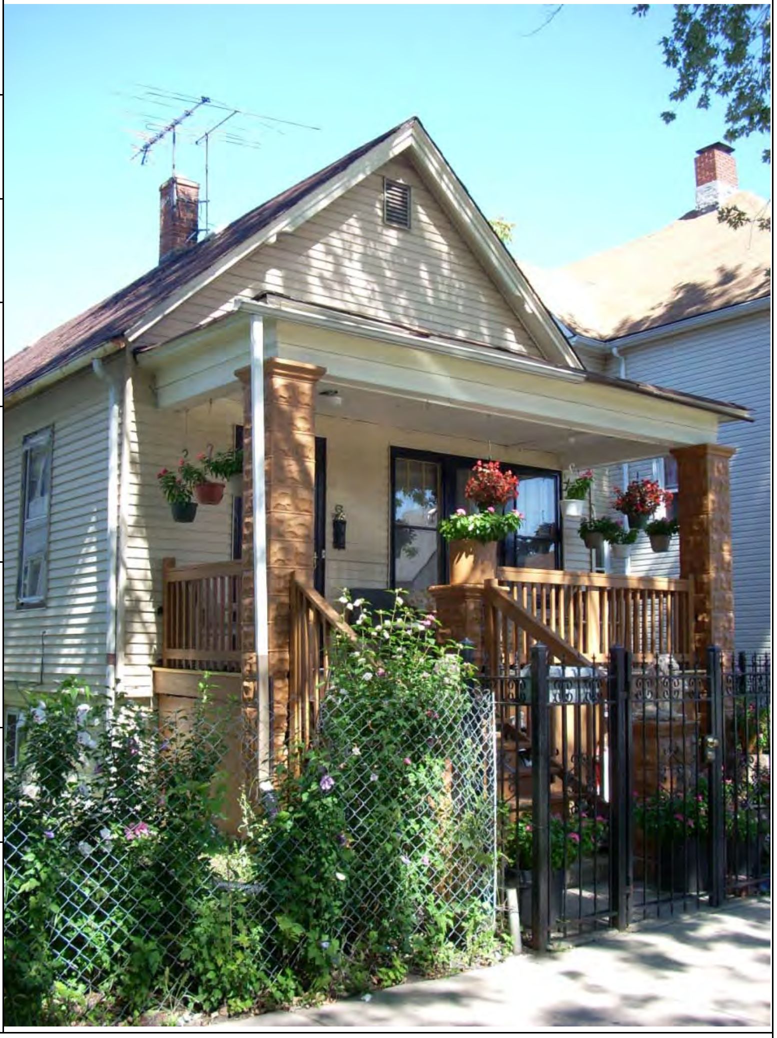
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 10 September 2012

Photos with Captions:
North façade of one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story house in the West Pullman community is situated on a raised concrete block basement, is clad with synthetic siding, and has a gable roof covered with asphalt shingles. Its front elevation features a full-width, hip roof, wood porch with faux stone pier supports and replacement wood railing. The front also has an off-center front door and a strip of three one-over-one windows. This house lacks sufficient integrity and distinguishing architectural features to qualify as individually eligible for listing on the National Register.

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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alterations			**Additional Notes/Descriptions** Replacement door, new porch rails, cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung
Outbuildings (*Number and Description*) Garage behind residence			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

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Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

20 E. 116th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1893

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

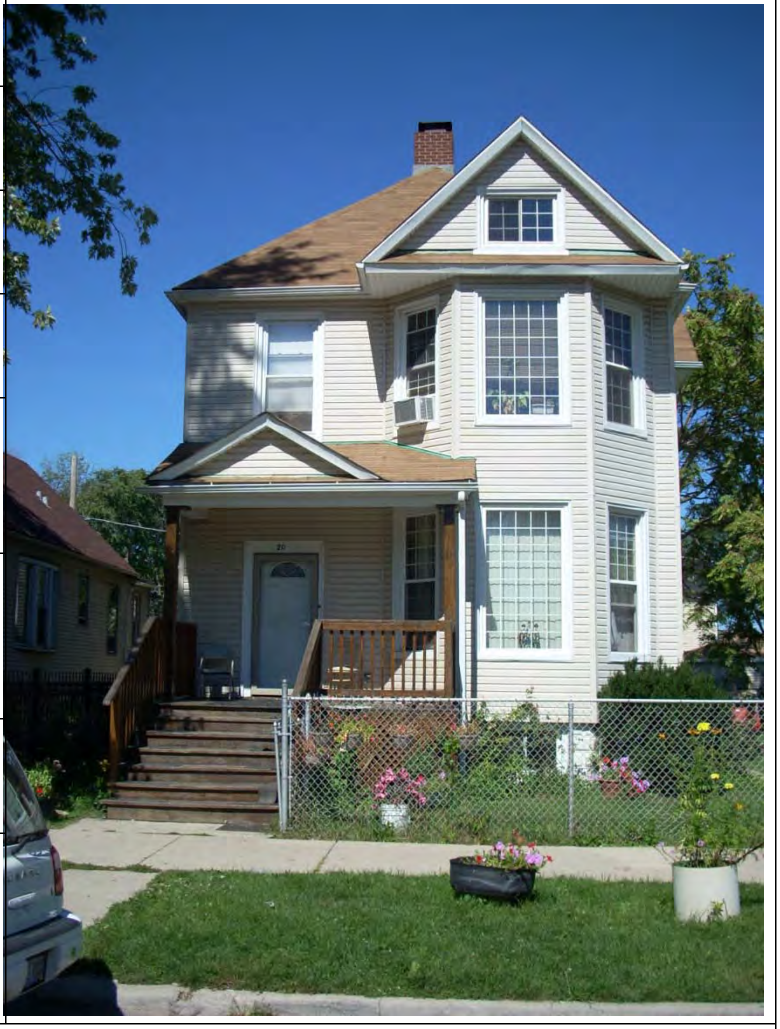
Queen Anne

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 10 September 2012

Photos with Captions:
North façade of two-story, single-family, frame residence.



Property Description: **Stories:** 2

This two-story Queen Anne style house in the West Pullman community is situated on a raised concrete block basement, is clad with synthetic siding, has full-height window bay pavilions with pediment and gable dormers on its front elevation and side elevations, and has a hip roof covered with asphalt shingles. The front elevation has a shed-roofed partial-width wood porch with pediment and metal hollow core paneled door. Fenestration is non-original on the front elevation bays and features fixed-pane windows with multiple lights, multi-paned double-hung windows, and a single one-over-one window on the second floor, directly above the porch. This house lacks sufficient integrity and distinguishing architectural features to qualify as individually eligible for listing on the National Register.

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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alterations			**Additional Notes/Descriptions** Replacement windows, door, and cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** Dormer	**Roof Type** Hipped	
Ornamental Architectural Details Pediments at gables			**Windows** Double-hung, fixed-pane
Outbuildings (*Number and Description*) None			

Local Landmark	**Y [✓ N]**	
National Register Historic Places	**Y [✓ N]**	
National Register Historic District	**Y [✓ N]**	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

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Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

32 E. 116th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Garage

Current: Garage

Date of Construction: 1922

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

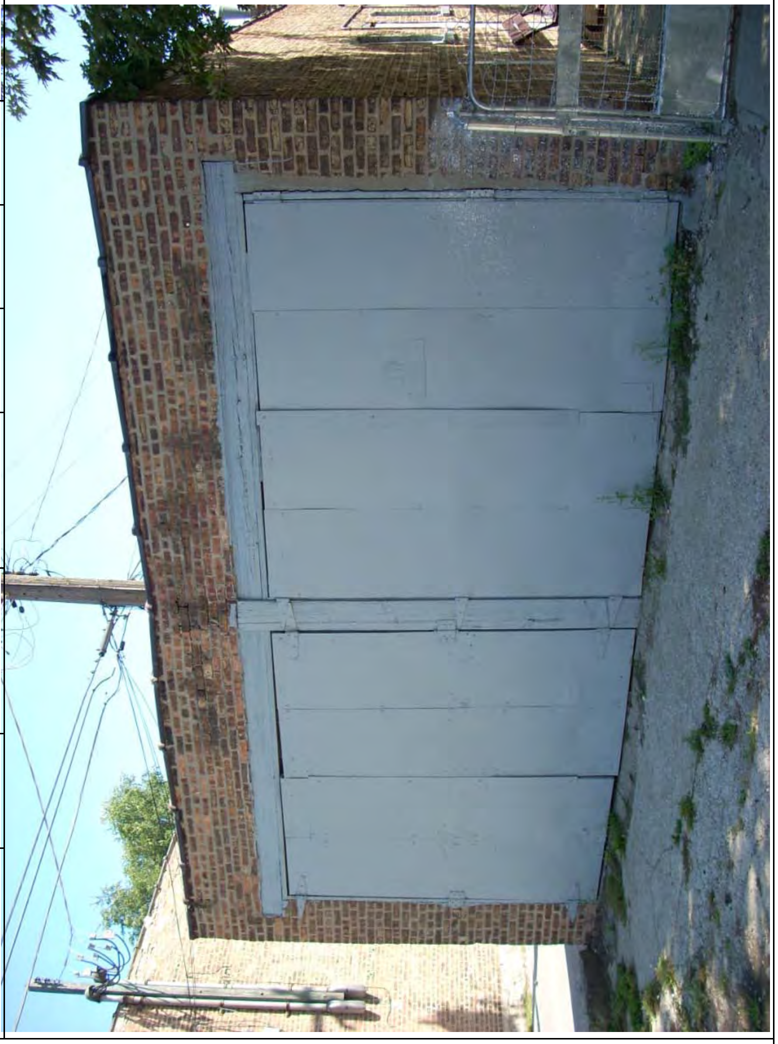
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 10 September 2012

Photos with Captions:
North façade of one-story brick garage.



Property Description: **Stories:** 1

This one-story, four-car garage building in the West Pullman community is clad in common brick and features two pairs of hinged metal garage doors with a continuous wooden lintel along its front elevation. A side (alley) elevation displays the outlines of dormer door openings that have been in-filled with brick as well as a hinged metal garage door. This building does not feature sufficient integrity or distinguishing architectural features to qualify as individually eligible for listing on the National Register.

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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alterations			**Additional Notes/Descriptions** Windows in-filled, metal doors
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Unknown	**Roof Features** None	**Roof Type** Flat	
Ornamental Architectural Details None			**Windows** NA
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

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505 North State Street
Marengo, Illinois 60152
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Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

36 E. 116th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Flat

Current: Flat

Date of Construction: 1918

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

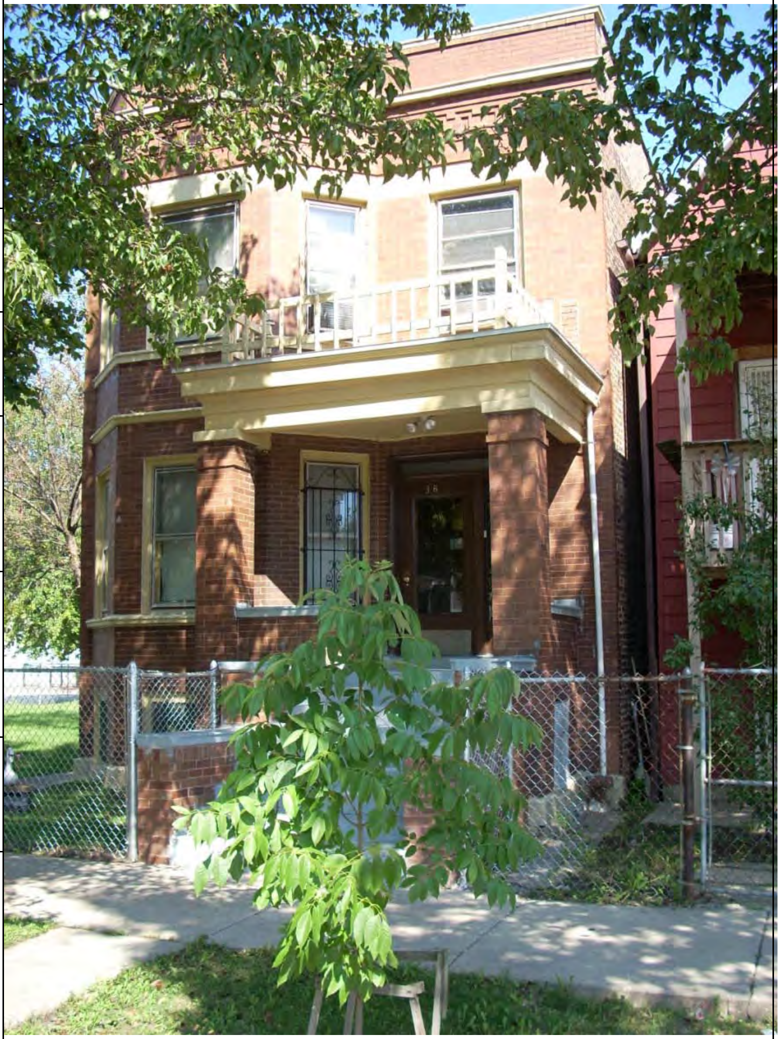
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 10 September 2012

Photos with Captions:
East façade of brick, two-flat residence.



Property Description: **Stories:** 2

This two-flat residential building in the West Pullman community is situated on a raised basement and has a front façade clad with orange face brick. It has a full-height three-sided window bay pavilion, flat roof, and parapet. Its off-center flat-roofed porch has concrete steps, brick piers, and a single-light oak door with sidelight. Fenestration is comprised of one-over-one windows. Detailing includes stone sill courses, beltcourse, a cornice, as well as decorative brickwork on the parapet. This building does not feature sufficient distinguishing architectural features to qualify as individually eligible for listing on the National Register.

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Structural Survey

Integrity: [✓ Unaltered] Slight Modification Major Alteration			**Additional Notes/Descriptions**
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details Stone sill courses, beltcourse, cornice, decorative brickwork on cornice			**Windows** Double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

38 E. 116th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Multi-family residence

Current: Multi-family residence

Date of Construction: 1888

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

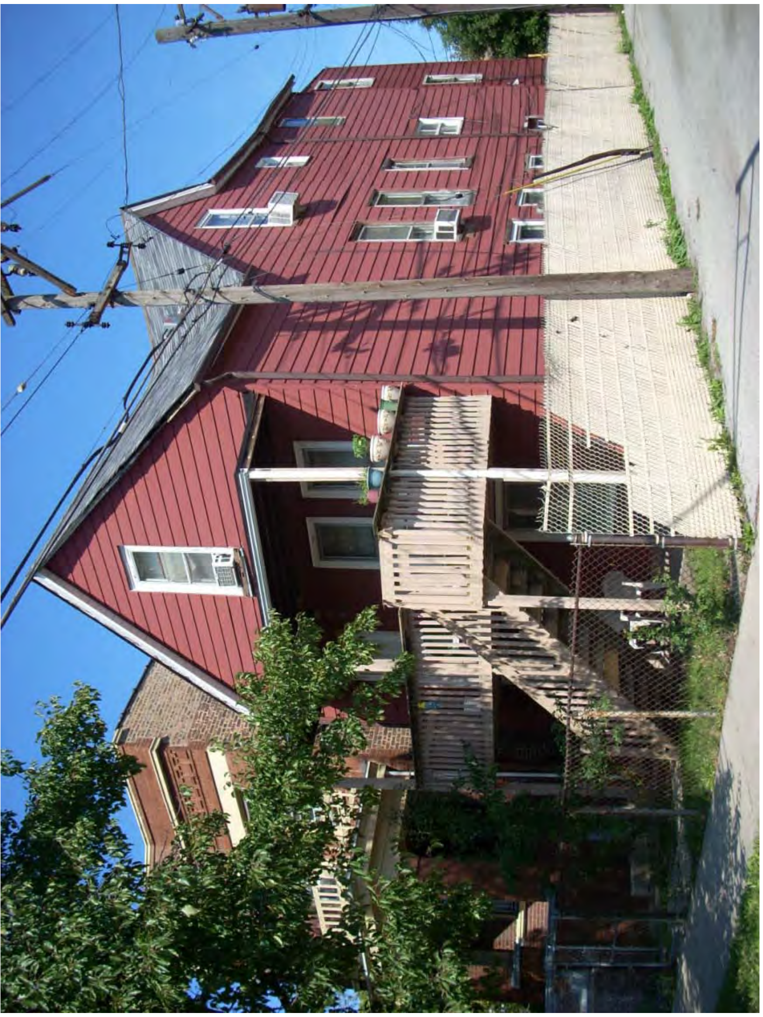
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 10 September 2012

Photos with Captions:
South and east façades of 2.5-story, multi-family, frame residence.



Property Description: **Stories:** 2.5

This two-and-a-half-story, multi-family house in the West Pullman community is clad with synthetic siding and has a cross gable roof covered with asphalt shingles. Its front elevation has off-center doors on the first and second floors and an elevated, flat-roofed, full-width, non-original wood porch with straight railings and posts. Fenestration on the front and side elevations is comprised of one-over-one windows. This house does not feature sufficient integrity or distinguishing architectural features to qualify as individually eligible for listing on the National Register.

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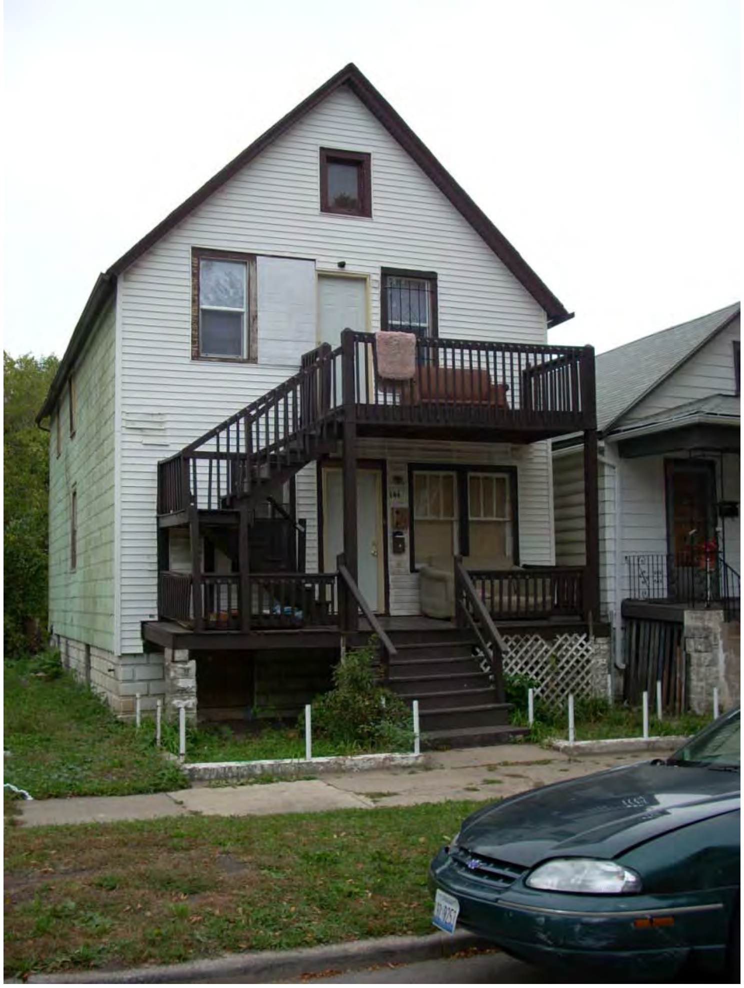
Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alterations			**Additional Notes/Descriptions** Replacement windows, doors, porch, & cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Cross Gable	
Ornamental Architectural Details None			**Windows** Double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Historical Resource Recordation Form

Property Name **Historic:** Bldg. not labeled, not in CHRS **Common/Current:** Unknown	**Photos with Captions:** South façade of a two-story, single family, frame residence. 
Property Address: 144 E. 116th Street	
HAARGIS Number: Not in database	
Present Owner and /or Occupant: Unknown	
Property Use **Historic:** Single family residence **Current:** Single family residence	
Date of Construction: 1888 **Architect's Name:** Not in CHRS **Builder/Contractor:** Not in CHRS	
Architectural Style: Vernacular	
Prepared By: J. Martinez, M. C. Bird, J. Guarino **Photo By:** S. Katz **Date:** 30 October 2012	

Property Description: **Stories:** 2

This two-story frame residential building in the West Pullman community is situated on a raised concrete block basement and is covered with synthetic siding. The building has a front gable roof covered with asphalt shingles. Both floors of the front elevation are partially obscured by a full-width wood porch with exterior steps leading to a second floor balcony. Both floors also have a hollow core metal door and non-original double-hung windows: three on the first floor and two on the second. A third window on the second floor has been in-filled. There is a single-pane window in the gable. This house lacks integrity and distinguishing architectural features and is not individually eligible for listing on the National Register.

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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement doors, windows, and cladding
Condition: Excellent [✓ Good] Poor			
Additional Alterations Exterior stairs are not original			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung, fixed-pane
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
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Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

150 E. 116th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1891

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

Vernacular

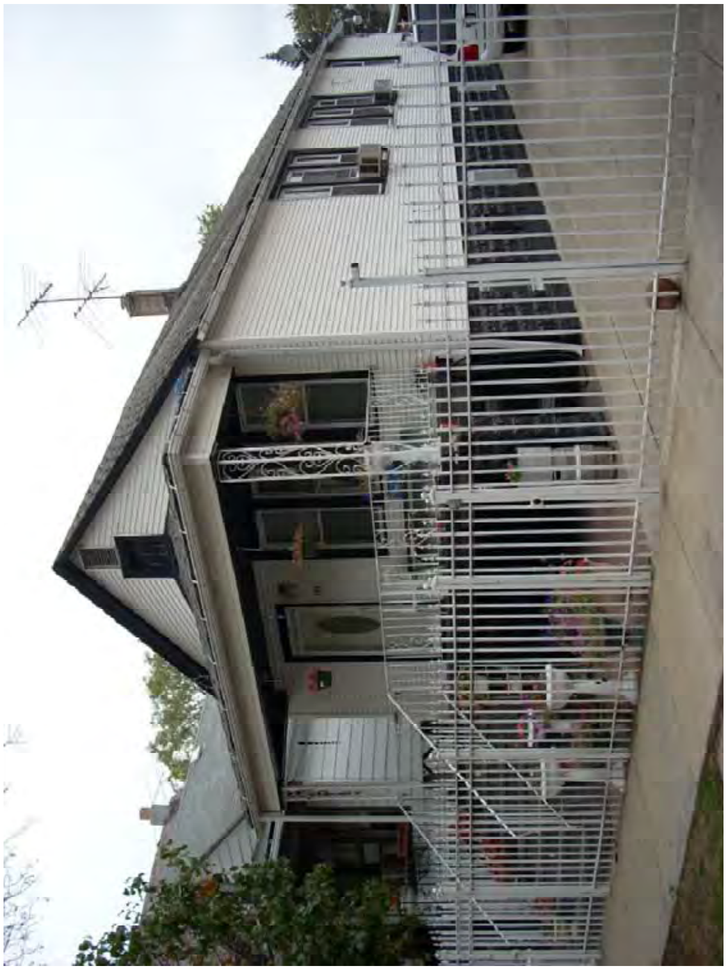
Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 30 October 2012

Photos with Captions:

South and east façades of a one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story frame cottage in the West Pullman community sits on a raised concrete block basement and is covered with synthetic siding. The building has a front gable roof covered with asphalt shingles. The front elevation has a full-width hip-roof porch with wood steps, metal railings, and open metal posts. The off-center hollow core metal door is non-original as is the strip of three one-over-one windows on the first floor. There is an in-filled window opening in the attic, above which is a small ventilating louver. This house lacks integrity and distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
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Marengo, Illinois 60152
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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement door, windows, cladding, and porch rails
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y [✓ N]**	
National Register Historic Places	**Y [✓ N]**	
National Register Historic District	**Y [✓ N]**	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
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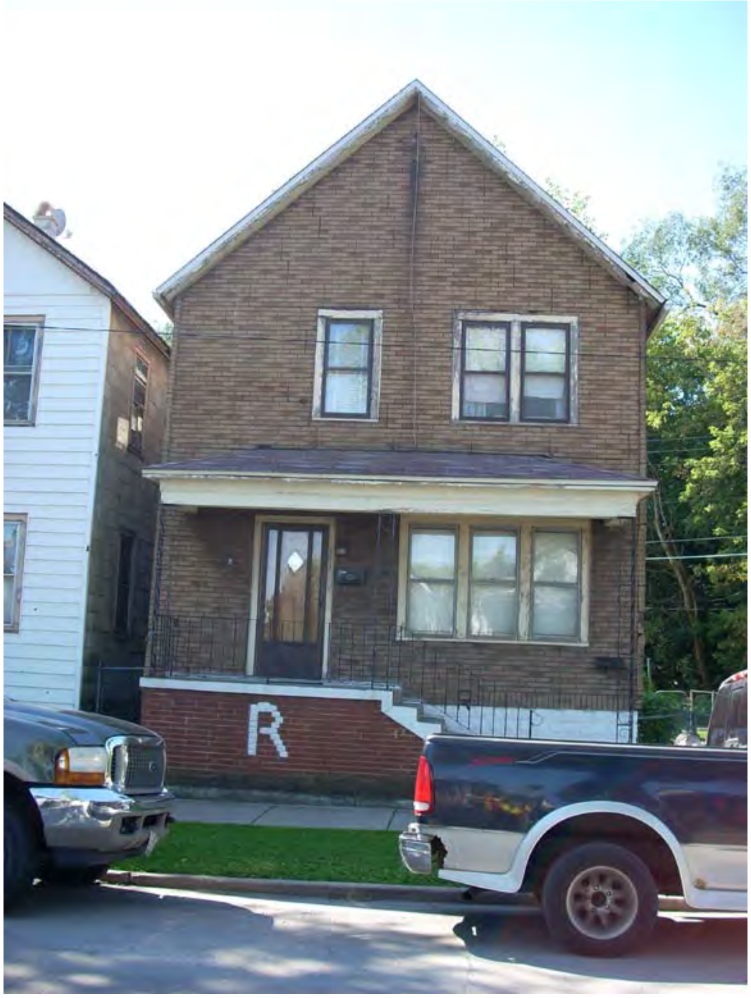
Historical Resource Recordation Form

Property Name **Historic:** Bldg. not labeled, not in CHRS **Common/Current:** Unknown	**Photos with Captions:** North façade of a two-story, multi-family, frame residence. 
Property Address: 151 E. 116th Street	
HAARGIS Number: Not in database	
Present Owner and /or Occupant: Unknown	
Property Use **Historic:** Single family residence **Current:** Multi-family residence	
Date of Construction: 1898 **Architect's Name:** Not in CHRS **Builder/Contractor:** Not in CHRS	
Architectural Style: Vernacular	
Prepared By: J. Martinez, M. C. Bird, J. Guarino **Photo By:** S. Katz **Date:** 1 October 2012	

Property Description: **Stories:** 2

This two-story frame house in the West Pullman community is on a raised concrete block basement and is clad with rolled asphalt shingle siding. The building has a front gable roof covered with asphalt shingles. The front elevation has a hip roof porch with concrete steps, metal railings and open metal posts. It also features an off-center non-original door and one-over-one windows: three each on the first and second floors. This house lacks integrity, does not have distinguishing architectural features, and is not individually eligible for listing on the National Register.

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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement door and cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Asphalt shingle siding	
Roof Material Asphalt	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y [✓ N]**	
National Register Historic Places	**Y [✓ N]**	
National Register Historic District	**Y [✓ N]**	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

153 E. 116th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Multi-family residence

Date of Construction: 1898

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

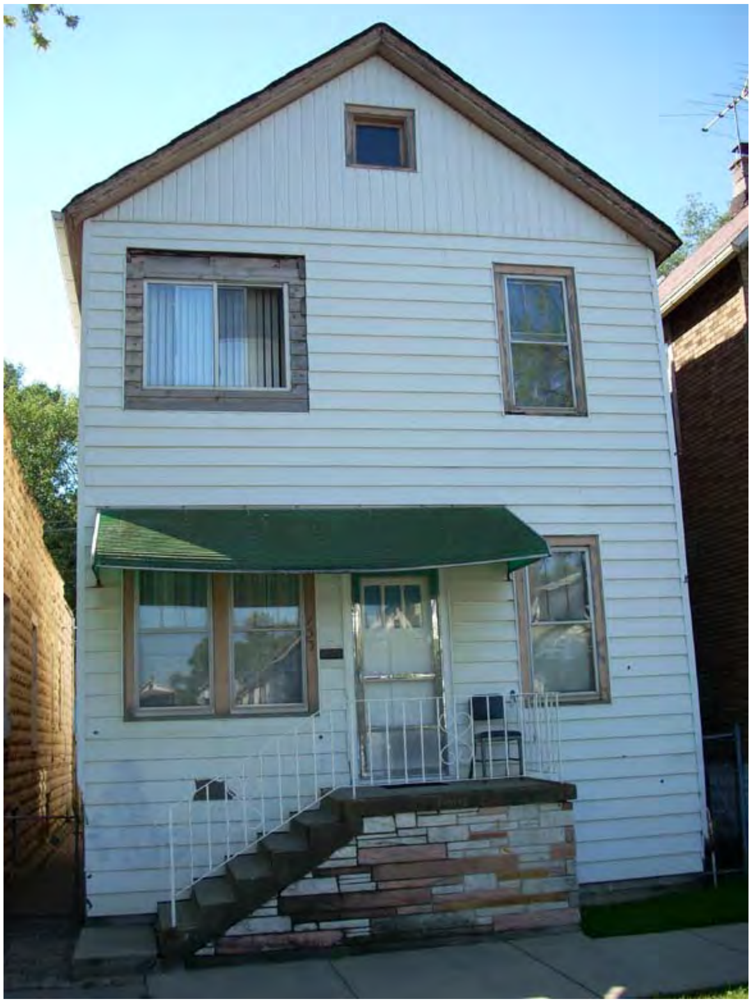
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 1 October 2012

Photos with Captions:
North façade of a two-story, multi-family, frame residence.



Property Description: **Stories:** 2

This two-story frame house in the West Pullman community is clad with synthetic siding and has a front gable roof covered with asphalt shingles. Its front elevation has a centrally located door with concrete steps and metal railings. It has non-original three-over-one windows: three on the first floor and one on the second, plus an additional pair of sliding glass windows on the second floor and a small single-pane window in the gable. This house lacks integrity, does not have distinguishing architectural features, and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

<table>
<tr><td colspan="3">Integrity:
Unaltered [✓ Slight Modification] Major Alteration</td><td>Additional Notes/Descriptions
Replacement siding and windows</td></tr>
<tr><td colspan="3">Condition:
Excellent [✓ Good] Poor</td><td></td></tr>
<tr><td colspan="3">Additional Alterations</td><td></td></tr>
<tr><td colspan="2">Structure Usage
Current: NA
Historic: NA</td><td>Exterior Wall Surface
Synthetic siding</td><td></td></tr>
<tr><td>Roof Material
Asphalt</td><td>Roof Features
None</td><td>Roof Type
Gable</td><td></td></tr>
<tr><td colspan="3">Ornamental Architectural Details
None</td><td>Windows
Double-hung, casement, sliding</td></tr>
<tr><td colspan="4">Outbuildings (<i>Number and Description</i>)
None</td></tr>
</table>

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

155 E. 116th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1903

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

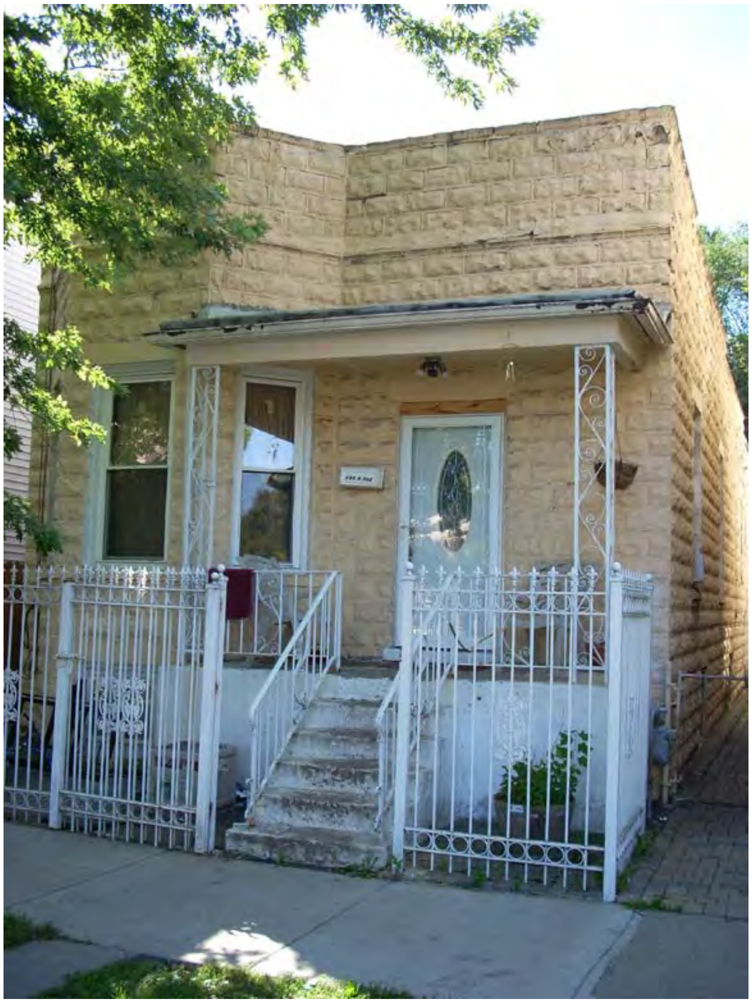
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 1 October 2012

Photos with Captions:
North façade of a one-story, single-family, concrete block residence.



Property Description: **Stories:** 1

This one-story house in the West Pullman community is clad with rusticated concrete block and has a flat roof and parapet with a stringcourse along the cornice. Its front elevation features a three-sided bay with non-original one-over-one windows and a flat-roof, partial width porch with concrete steps, metal railings, and open metal posts. The hollow core metal door is non-original. This house lacks integrity, does not have distinguishing architectural features, and is not individually eligible for listing on the National Register.

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505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement door and windows
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Concrete block	
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details Stringcourse			**Windows** Double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

157 E. 116th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Multi-family residence

Date of Construction: 1898

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

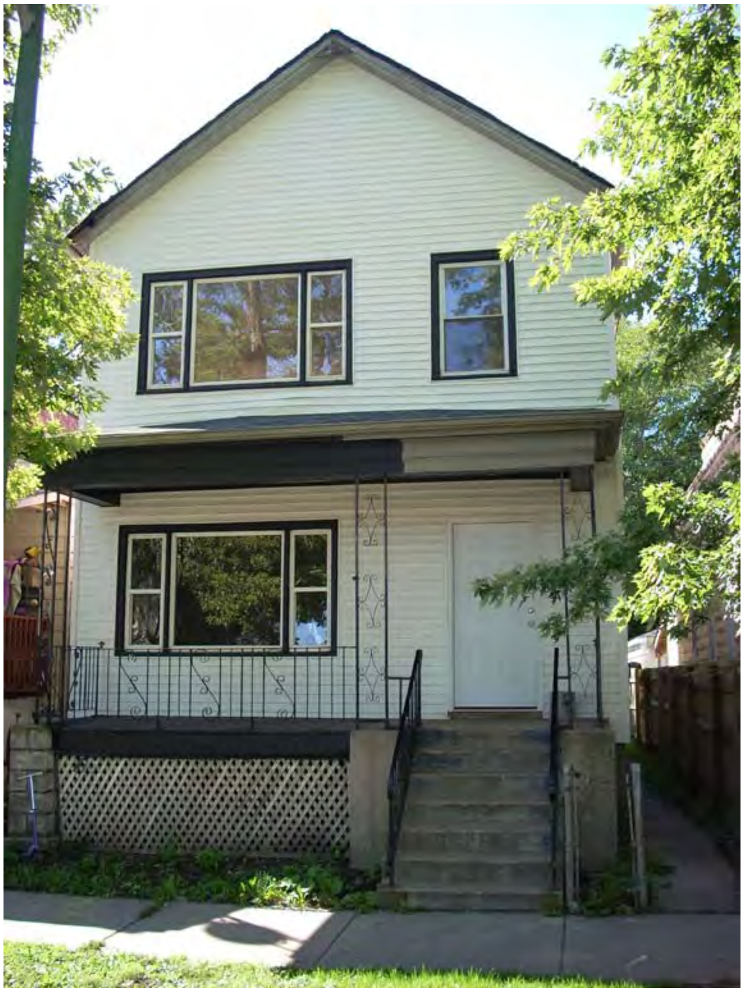
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 1 October 2012

Photos with Captions:
North façade of a two-story, multi-family, frame residence.



Property Description: **Stories:** 2

This two-story frame house in the West Pullman community is clad with synthetic siding and has a front gable roof covered with asphalt shingles. The front elevation has a flat-roofed, full-width porch with concrete steps, metal railings, and open metal posts. It also has an off-center hollow metal core door, two non-original Chicago-style windows (one on each floor), and an additional one-over-one window on the second floor. This house lacks integrity, does not have distinguishing architectural features, and is not individually eligible for listing on the National Register.

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Marengo, Illinois 60152
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Structural Survey

<table>
<tr><td colspan="3">Integrity:
Unaltered [✓ Slight Modification] Major Alteration</td><td>Additional Notes/Descriptions
Replacement door, windows, and siding</td></tr>
<tr><td colspan="3">Condition:
[✓ Excellent] Good Poor</td><td></td></tr>
<tr><td colspan="3">Additional Alterations</td><td></td></tr>
<tr><td colspan="2">Structure Usage
Current: NA
Historic: NA</td><td>Exterior Wall Surface
Synthetic siding</td><td></td></tr>
<tr><td>Roof Material
Asphalt</td><td>Roof Features
None</td><td>Roof Type
Gable</td><td></td></tr>
<tr><td colspan="3">Ornamental Architectural Details
None</td><td>Windows
Double-hung, fixed-pane</td></tr>
<tr><td colspan="4">Outbuildings (<i>Number and Description</i>)
None</td></tr>
</table>

Local Landmark	**Y [✓ N]**	
National Register Historic Places	**Y [✓ N]**	
National Register Historic District	**Y [✓ N]**	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
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Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

159 E. 116th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1903

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

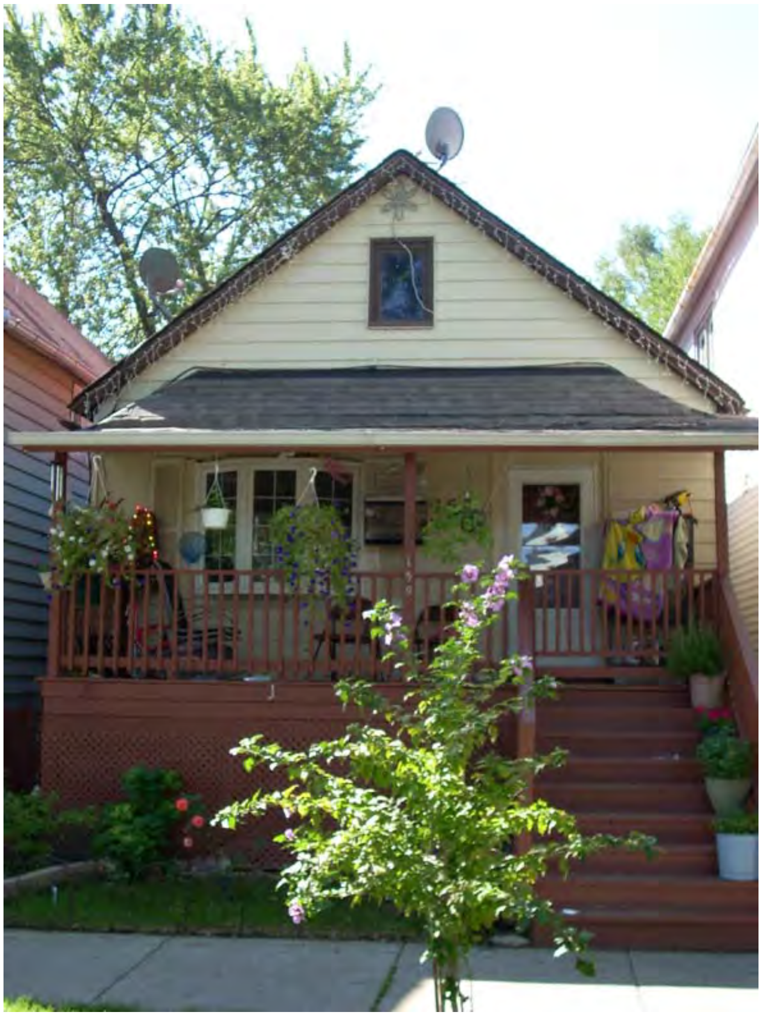
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 1 October 2012

Photos with Captions:
North façade of a one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story house in the West Pullman community is situated on a raised concrete block basement, is clad with synthetic siding, and has a front gable roof covered with asphalt shingles. Its front elevation features a full-width hipped-roof wood porch, a three-sided bow window with non-original casements, and an off-center door. This house lacks integrity, does not have distinguishing architectural features, and is not individually eligible for listing on the National Register.

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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows, cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Casement
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

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Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

163 E. 116th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Multi-family residence

Date of Construction: 1898

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

Vernacular

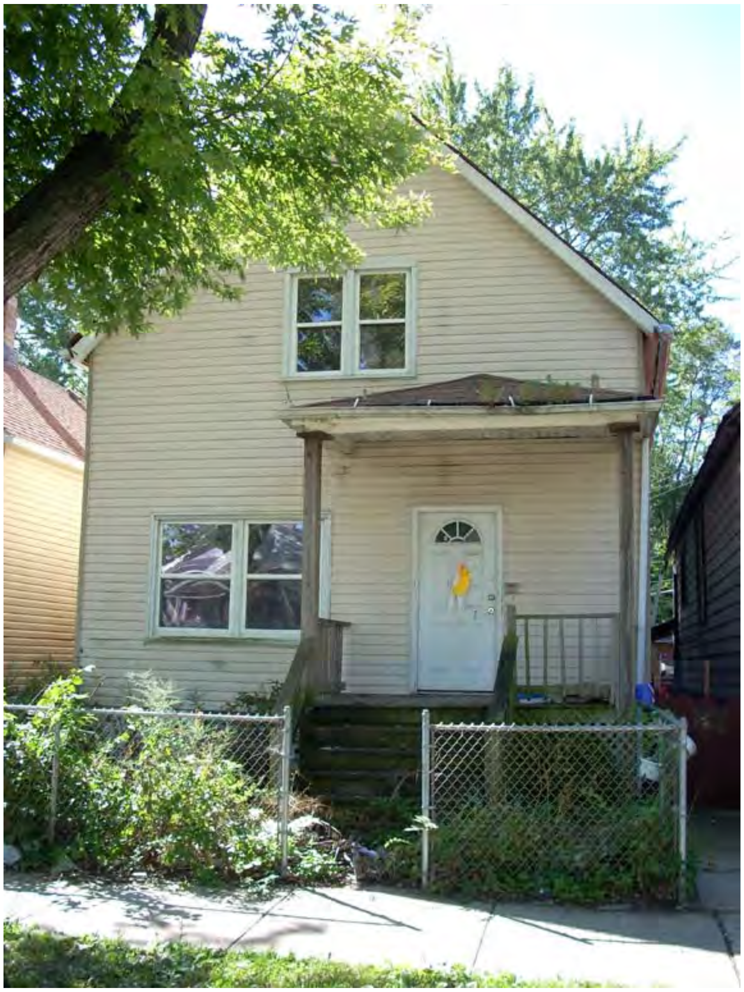
Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 1 October 2012

Photos with Captions:

North façade of a 1.5-story, multi-family, frame residence.



Property Description: **Stories:** 1.5

This one-and-one-half-story frame house in the West Pullman community is clad with synthetic siding and has a gable roof covered with asphalt shingles. The front elevation has a hip-roofed partial-width wood porch with wood posts and railings. It has an off-center non-original hollow metal core door and a pair of non-original one-over-one windows on both the first and second floors. This house lacks integrity, does not have distinguishing architectural features, and is not individually eligible for listing on the National Register.

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Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

<table>
<tr><td colspan="3">Integrity:
Unaltered [✓ Slight Modification] Major Alteration</td><td>Additional Notes/Descriptions
Replacement door, windows, cladding</td></tr>
<tr><td colspan="3">Condition:
[✓ Excellent] Good Poor</td><td></td></tr>
<tr><td colspan="3">Additional Alterations</td><td></td></tr>
<tr><td colspan="2">Structure Usage
Current: NA
Historic: NA</td><td>Exterior Wall Surface
Synthetic siding</td><td></td></tr>
<tr><td>Roof Material
Asphalt</td><td>Roof Features
None</td><td>Roof Type
Gable</td><td></td></tr>
<tr><td colspan="3">Ornamental Architectural Details
None</td><td>Windows
Double-hung</td></tr>
<tr><td colspan="4">Outbuildings (<i>Number and Description</i>)
None</td></tr>
</table>

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

165 E 116th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1898

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

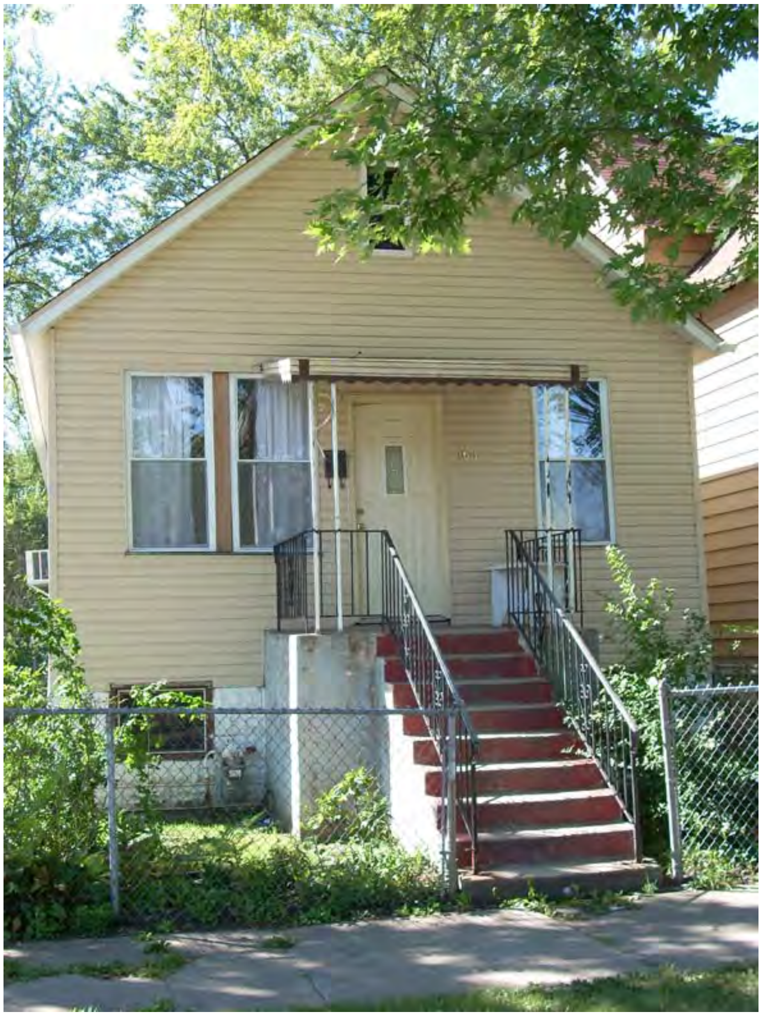
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 1 October 2012

Photos with Captions:
North façade of a one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story house in the West Pullman community is situated on a raised concrete block basement, is clad with synthetic siding, and has a gable roof covered with asphalt shingles. Its front elevation features a partial-width porch with concrete steps, metal railings, and open metal posts supporting a metal canopy roof. It has a centrally located door and four non-original one-over-one windows: three on the first floor and one in the gable. This house lacks integrity, does not have distinguishing architectural features, and is not individually eligible for listing on the National Register.

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Structural Survey

<table>
<tr><td colspan="3">Integrity:
Unaltered [✓ Slight Modification] Major Alteration</td><td>Additional Notes/Descriptions
Replacement door, windows, cladding</td></tr>
<tr><td colspan="3">Condition:
[✓ Excellent] Good Poor</td><td></td></tr>
<tr><td colspan="3">Additional Alterations</td><td></td></tr>
<tr><td colspan="2">Structure Usage
Current: NA
Historic: NA</td><td>Exterior Wall Surface
Synthetic siding</td><td></td></tr>
<tr><td>Roof Material
Asphalt</td><td>Roof Features
None</td><td>Roof Type
Gable</td><td></td></tr>
<tr><td colspan="3">Ornamental Architectural Details
None</td><td>Windows
Double-hung</td></tr>
<tr><td colspan="4">Outbuildings (<i>Number and Description</i>)
None</td></tr>
</table>

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

207 E. 116th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Multi-family residence

Date of Construction: 1888

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

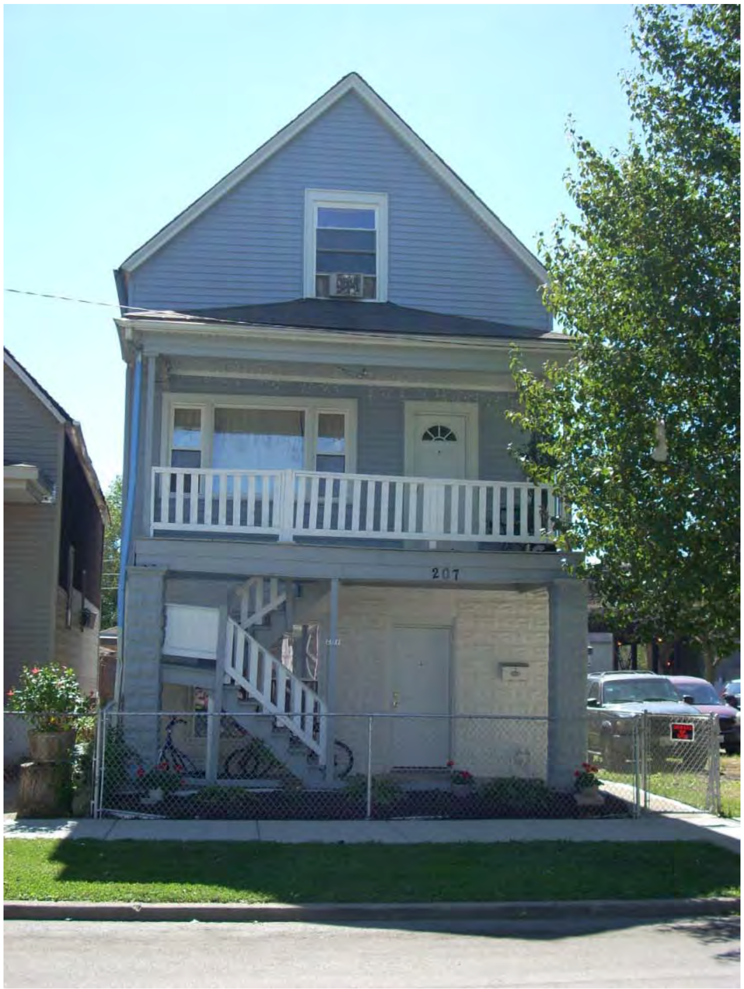
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S.Katz

Date: 22 October 2012

Photos with Captions:
North façade of a 2.5-story, multi-family, frame residence.



Property Description: **Stories:** 2.5

This two-and-a-half-story frame house in the West Pullman community is clad in rusticated concrete bock on the first floor and in synthetic siding above. The building has a front gable roof with asphalt shingles. It has a two-story full-width, hip-roof wood porch/balcony with faux stone piers and wood posts as supports on the first and second floors, respectively. A non-original stairway leads to the second floor balcony. Both first and second floors have off-center non-original hollow core metal doors. Windows on the front elevation are non-original and include one on the first floor that is obscured by the staircase, a picture window flanked by one-over-one aluminum-sash windows on the second floor, and a single one-over-one aluminum-sash window in the gable. This house lacks integrity and distinctive architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement doors, windows, and cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations External stairway added during conversion from single family home.			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Concrete block (lower), Synthetic siding (upper)	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung, fixed-pane
Outbuildings (*Number and Description*) None			

Local Landmark	**Y [✓ N]**	
National Register Historic Places	**Y [✓ N]**	
National Register Historic District	**Y [✓ N]**	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

742 W. 116th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1919

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

Vernacular

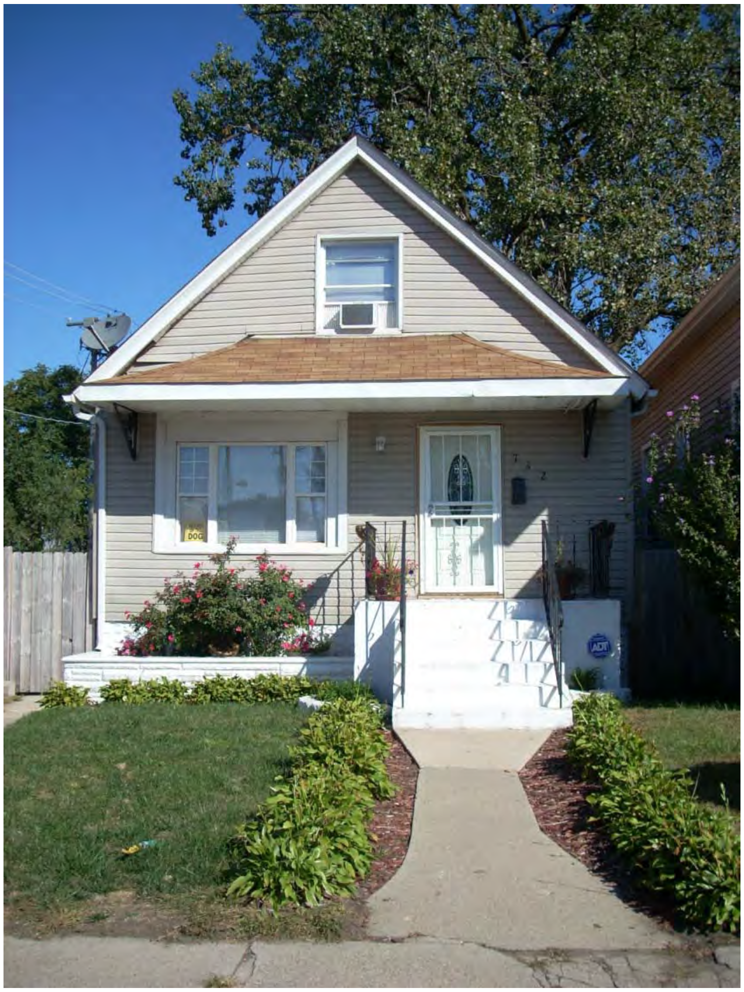
Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 24 October 2012

Photos with Captions:

South façade of a one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story frame house in the West Pullman community is covered with synthetic siding and has a front gable roof covered with asphalt shingles. Its front elevation has a bracketed pent roof, an off-center hollow core metal door, concrete steps with metal railings. Windows are non-original and include a picture window flanked by six-over-one aluminum-sash windows and a one-over-one aluminum-sash window in the gable. This home lacks integrity and distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
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Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

<table>
<tr><td colspan="4">Integrity:
Unaltered [✓ Slight Modification] Major Alteration</td><td>Additional Notes/Descriptions
Replacement door, windows, and cladding</td></tr>
<tr><td colspan="4">Condition:
[✓ Excellent] Good Poor</td><td></td></tr>
<tr><td colspan="4">Additional Alterations</td><td></td></tr>
<tr><td colspan="2">Structure Usage
Current: NA
Historic: NA</td><td colspan="2">Exterior Wall Surface
Synthetic siding</td><td></td></tr>
<tr><td>Roof Material
Asphalt shingle</td><td>Roof Features
None</td><td colspan="2">Roof Type
Gable</td><td></td></tr>
<tr><td colspan="4">Ornamental Architectural Details
None</td><td>Windows
Double-hung, fixed-pane</td></tr>
<tr><td colspan="5">Outbuildings (<i>Number and Description</i>)
None</td></tr>
</table>

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

120 E. 117th Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1908

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

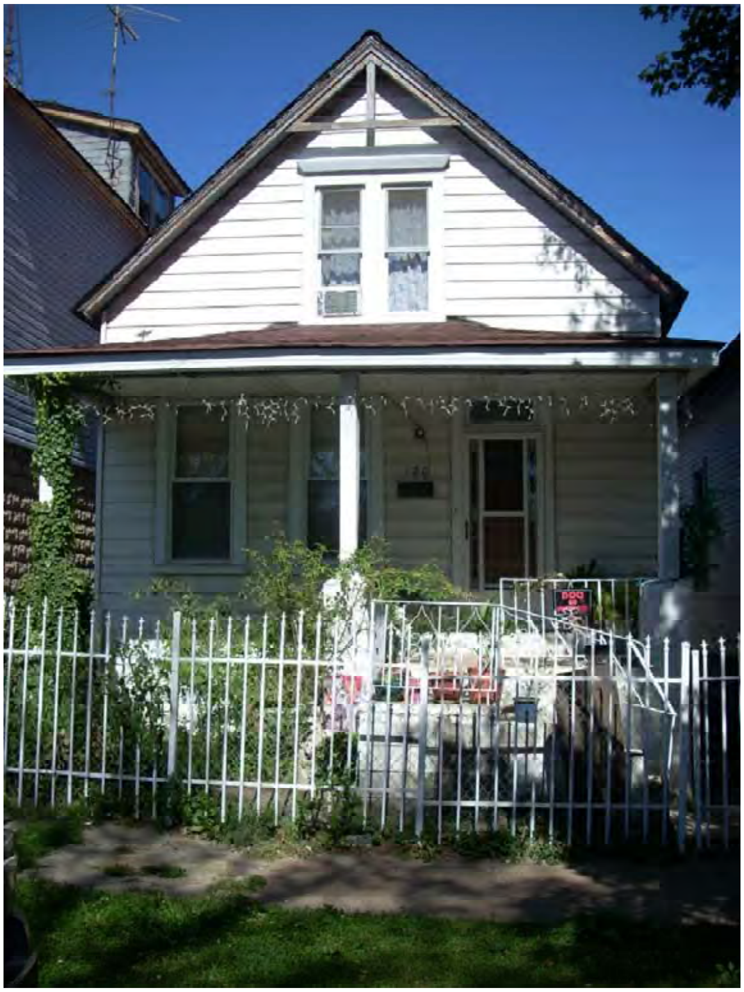
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 22 October 2012

Photos with Captions:
South facade of a 1.5-story, single family, frame residence.



Property Description: **Stories:** 1.5

This one-and-a-half-story frame cottage in the West Pullman community is situated on a raised concrete block basement and is covered with synthetic siding. The building has a front gable roof covered with asphalt shingles. Its front elevation has a full-width hip-roof wood porch with straight posts and an off-center entrance with a metal storm door. It has two windows on the first floor and a pair of windows in the gable, all of which are non-original one-over-one aluminum sash. A decorative wood truss is situated in the gable. This house lacks integrity and distinctive architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
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Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity:

Unaltered [✓ Slight Modification] Major Alteration

Additional Notes/Descriptions

Replacement windows and cladding

Condition:

[✓ Excellent] Good Poor

Additional Alterations

Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable

Ornamental Architectural Details

Wood truss

Windows

Double-hung

Outbuildings (*Number and Description*)

None

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

736 W. 117th Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1946

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

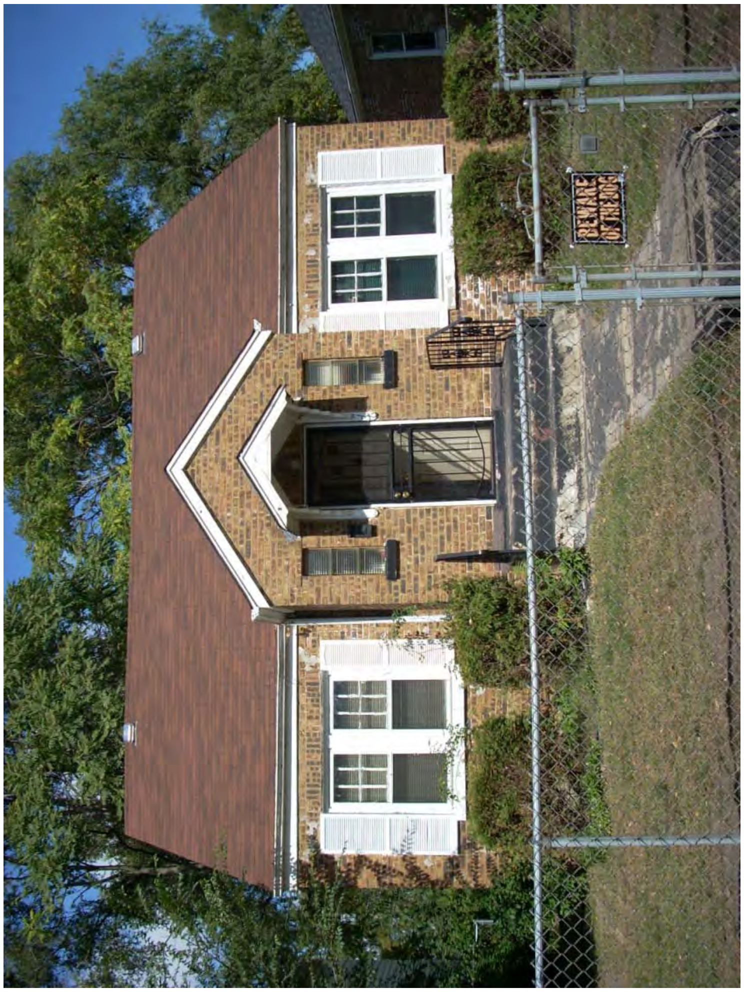
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 24 October 2012

Photos with Captions:
South façade of a one-story, single family, brick residence.



Property Description: **Stories:** 1

This one-story brick-clad cottage in the West Pullman community has a side-gabled roof covered with asphalt shingles. Its front elevation has a central, gabled, brick-clad vestibule with a non-original hollow core metal door topped by a bracketed gabled hood and concrete steps with metal railings. There are two pairs of six-over-one wood sash windows. Detailing includes a vertical strip of three glass blocks on either side of the front door. It does not display distinguishing architectural features and is not individually eligible for listing on the National Register.

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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement door
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details Bracketed hood, decorative glass blocks			**Windows** Double-hung, glass block
Outbuildings (*Number and Description*) Detached, two-car, frame garage			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

126 E. 117th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Multi-family residence

Date of Construction: 1898

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

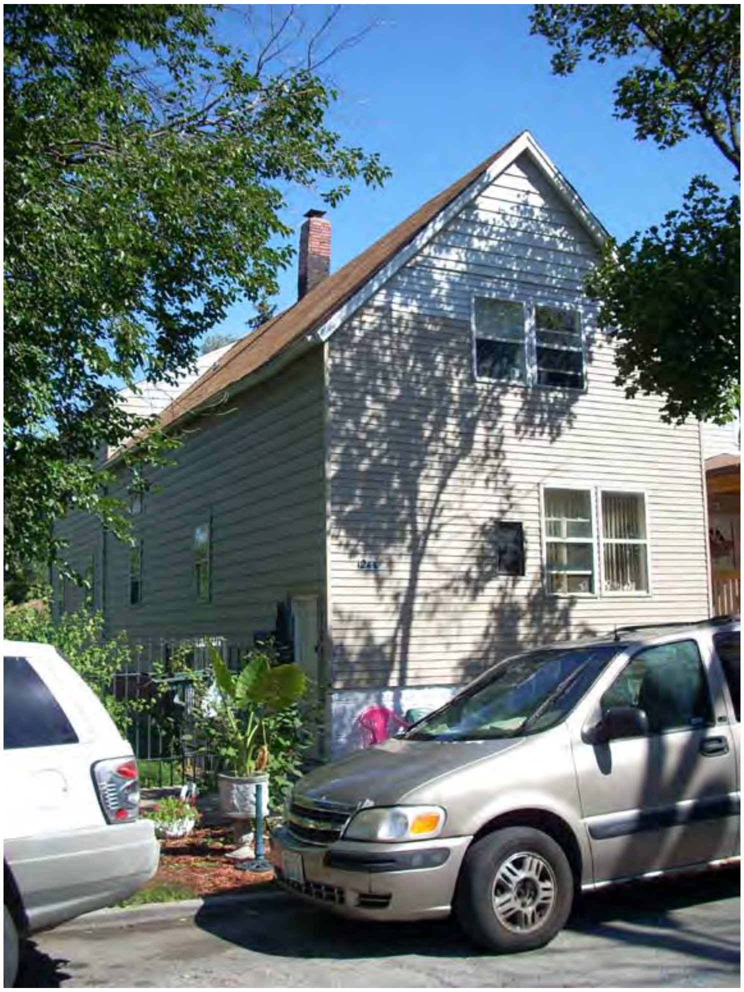
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 2 October 2012

Photos with Captions:
South façade of a 1.5-story, multi-family, frame residence.



Property Description: **Stories:** 1.5

This one-and-a-half-story frame house in the West Pullman community is situated on a raised concrete block basement with glass block windows. It is clad with synthetic materials and has a gable roof covered with asphalt shingles and gable dormers along the side elevations. The front elevation has a strip of three windows on the first floor and one in the gable, all of which are non-original one-over-one aluminum-sash. The front door has been moved to the side elevation. This house lacks integrity, does not have distinguishing architectural features, and is not individually eligible for listing on the National Register.

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement front door and windows
Condition: [✓ Excellent] Good Poor			
Additional Alterations Entrance moved to side elevation			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt	**Roof Features** Dormers	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

128 E 117th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1908

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

Vernacular

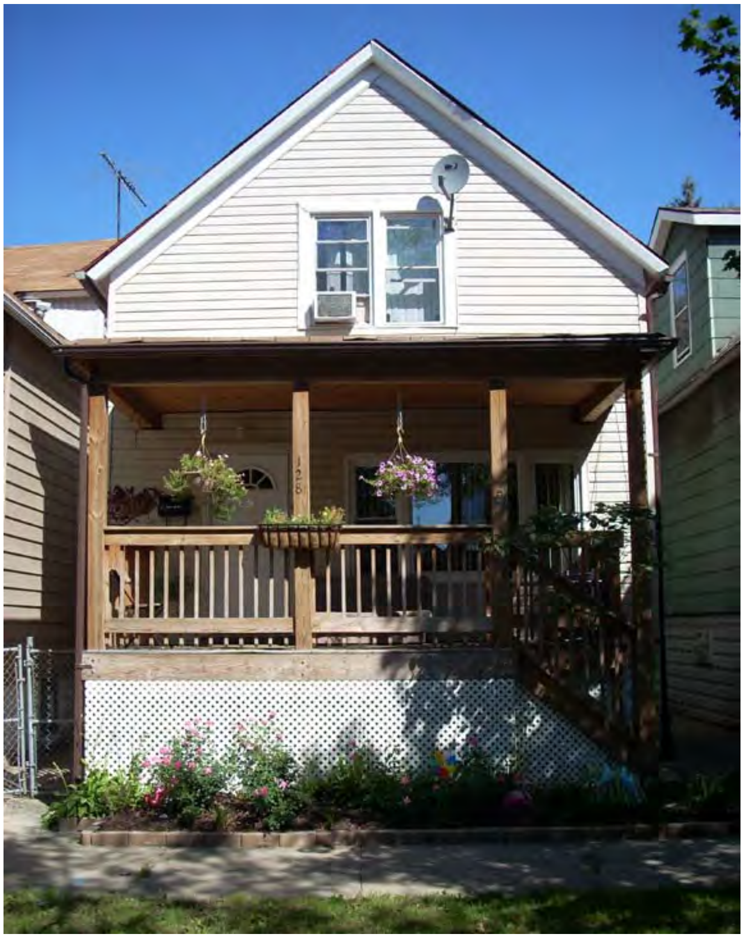
Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 2 October 2012

Photos with Captions:

South façade of a one-and-a-half-story, single family, frame residence.



Property Description: **Stories:** 1.5

This one-and-a-half-story frame house in the West Pullman community is situated on a raised concrete block basement, is clad with synthetic siding, and has a front gable roof covered with asphalt shingles. The front elevation has a non-original, full-width, flat-roofed, wood porch and a non-original off-center hollow core metal panel door with a fanlight. There is a large non-original picture window flanked by double-hung windows on the first floor and a pair of non-original one-over-one aluminum-sash windows in the gable. This house lacks integrity, does not have any distinguishing architectural features, and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement door, windows, porch, and cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt	**Roof Features** Dormer	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung, fixed-pane
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

132 E. 117th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1908

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

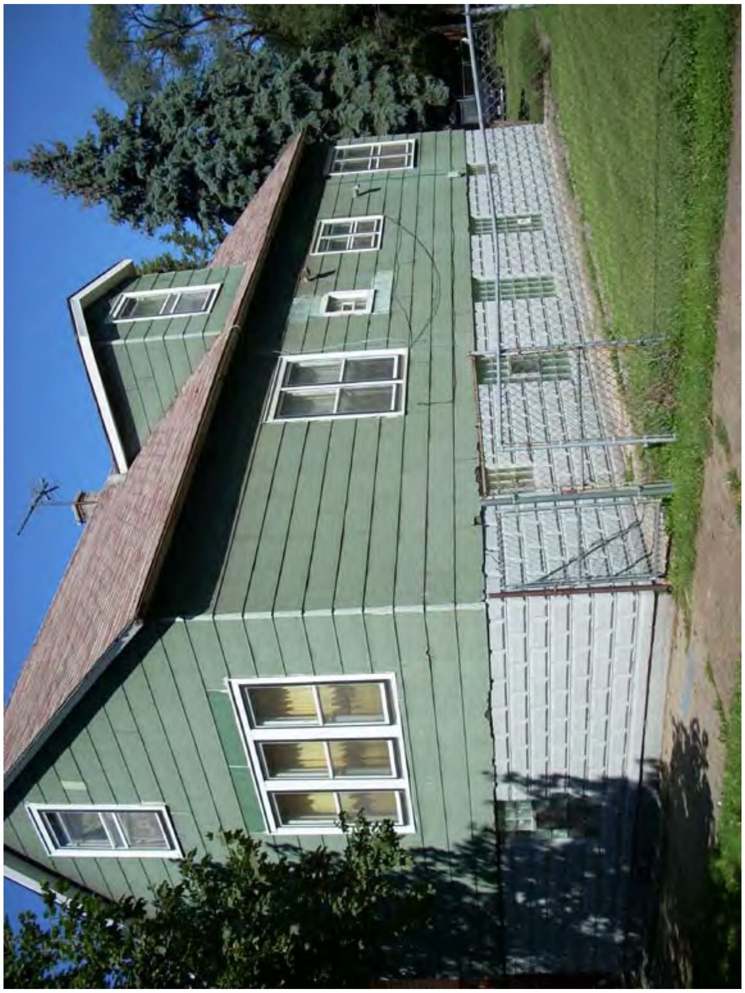
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guairno

Photo By: S. Katz

Date: 2 October 2012

Photos with Captions:
South and east façades of a one-story, single-family, frame residence.



Property Description: **Stories:** 1

This one-story frame house in the West Pullman community is on a raised concrete block basement with glass block windows, is clad with synthetic materials (possibly fiberboard), has a gable roof covered with asphalt shingles, and has gable dormers along the side elevations. The front elevation has a strip of three windows on the first floor and one in the gable, all of which are non-original one-over-one aluminum-sash. The front door has been moved to the side elevation. This house lacks integrity, does not have distinguishing architectural features, and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity:

Unaltered [✓ Slight Modification] Major Alteration

Additional Notes/Descriptions

Replacement windows and siding

Condition:

Excellent [✓ Good] Poor

Additional Alterations

Entrance relocated to side elevation

Structure Usage	**Exterior Wall Surface**
Current: NA Historic: NA	Synthetic siding (possibly fiberboard)

Roof Material	**Roof Features**	**Roof Type**
Asphalt	Dormers	Gable

Ornamental Architectural Details

None

Windows

Double-hung, glass block

Outbuildings (*Number and Description*)

None

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

149 E. 117th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1908

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

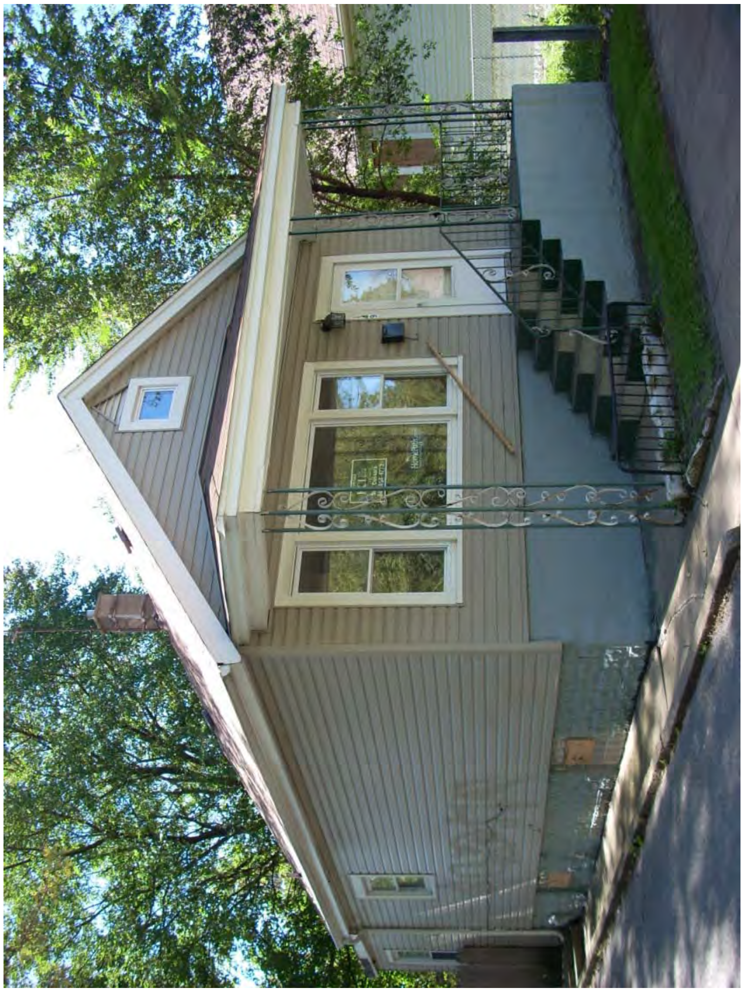
Craftsman

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 22 October 2012

Photos with Captions:
North façade of a one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story house in the West Pullman community is situated on a raised concrete block basement with glass block windows and is covered with synthetic siding. The building has a front gable roof covered with asphalt shingles. Its front elevation has a full-width hip-roof porch with side-facing concrete steps, metal railings, and open metal posts. This elevation also has an off-center metal storm door, a non-original picture window flanked by one-over-one aluminum-sash windows on the first floor, and a single-pane window in the attic. This house lacks integrity and distinctive architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement door, windows, and cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung, fixed-pane, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

312 E. 117th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1891

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

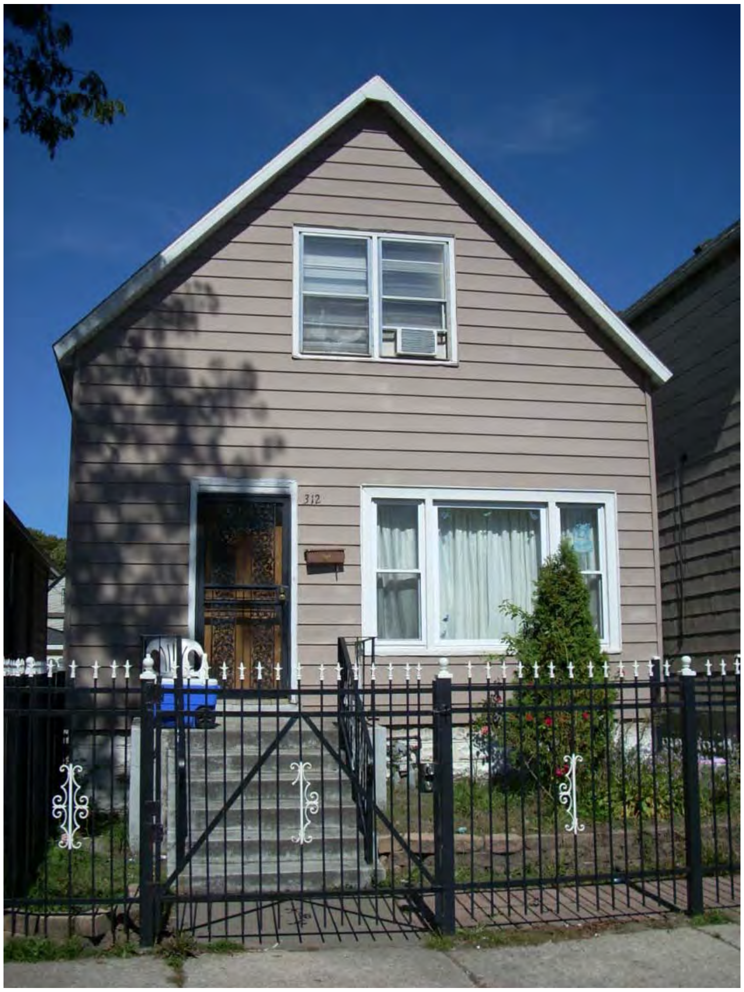
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 22 October 2012

Photos with Captions:
South façade of a 1.5-story, single family, frame residence.



Property Description: **Stories:** 1.5

This one-and-a-half-story frame cottage in the West Pullman community sits on a raised concrete block basement and is covered with synthetic siding. The building has a front gable roof covered with asphalt shingles. Its front elevation has an off-center metal storm door, concrete steps with metal railings, a picture window flanked by one-over-one aluminum-sash windows on the first floor, and a pair of one-over-one aluminum-sash windows in the gable, all of which are non-original. This house lacks integrity and distinctive architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration	**Additional Notes/Descriptions** Replacement windows, cladding, and porch rails
Condition: [✓ Excellent] Good Poor	
Additional Alterations	
Structure Usage Current: NA Historic: NA — **Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle — **Roof Features** None — **Roof Type** Gable	
Ornamental Architectural Details None	**Windows** Double-hung, fixed-pane
Outbuildings (*Number and Description*) None	

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

322 E. 117th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1878

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

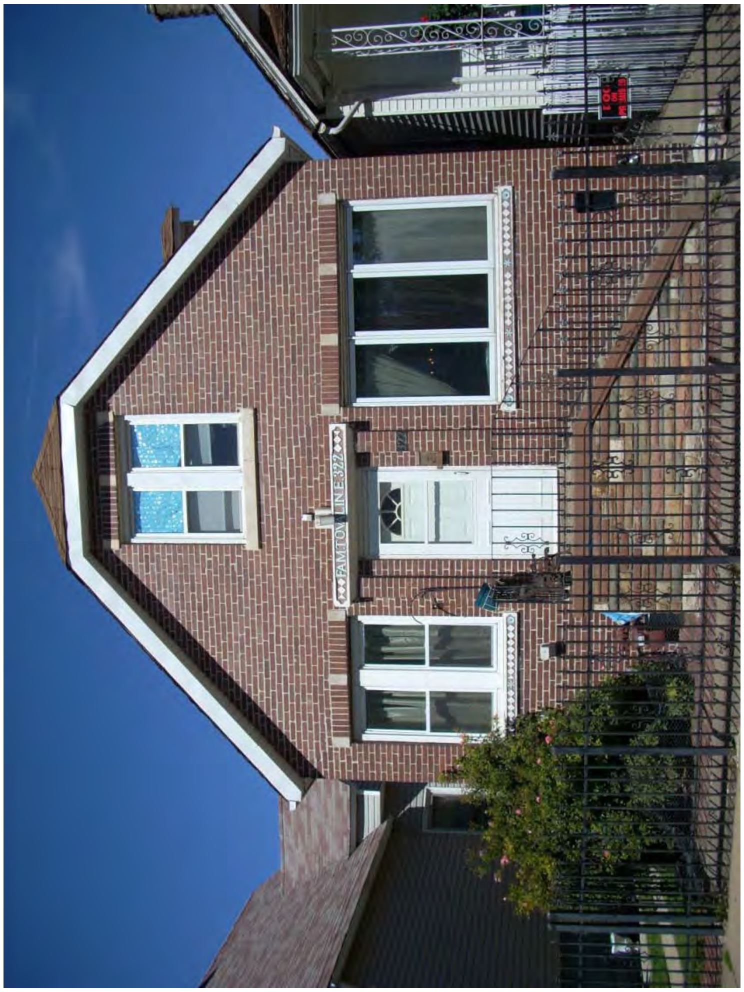
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 22 October 2012

Photos with Captions:
South façade of a brick, one-story, single family residence.



Property Description: **Stories:** 1

This one-story cottage in the West Pullman community is situated on a raised brick basement and has a hip-on-gable roof covered with asphalt shingles. Its front elevation is clad with brown face brick and has a central hollow core metal door flanked by a pair of one-over-one aluminum sash windows on one side and a strip of three casement windows on the other. The gable has a pair of one-over-one aluminum-sash windows. This elevation also has side-facing concrete steps faced with faux stone and metal railings. Detailing includes brick pilasters flanking the door, concrete sills, flat arch window lintels with square stone inserts, and a lintel above the door that reads: "FAM.TOVALIN.E.322." This house lacks distinctive architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

<table>
<tr><td colspan="3">Integrity:
Unaltered [✓ Slight Modification] Major Alteration</td><td>Additional Notes/Descriptions
Replacement door and windows</td></tr>
<tr><td colspan="3">Condition:
[✓ Excellent] Good Poor</td><td></td></tr>
<tr><td colspan="3">Additional Alterations</td><td></td></tr>
<tr><td colspan="2">Structure Usage
Current: NA
Historic: NA</td><td>Exterior Wall Surface
Brick</td><td></td></tr>
<tr><td>Roof Material
Asphalt shingle</td><td>Roof Features
Dormers</td><td>Roof Type
Hip-on-gable</td><td></td></tr>
<tr><td colspan="3">Ornamental Architectural Details
Brick pilasters, concrete sills, flat arch window lintels with stone inserts, inscribed lintel above entrance</td><td>Windows
Double-hung, casement</td></tr>
<tr><td colspan="4">Outbuildings (<i>Number and Description</i>)
None</td></tr>
</table>

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

345 E. 117th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1903

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

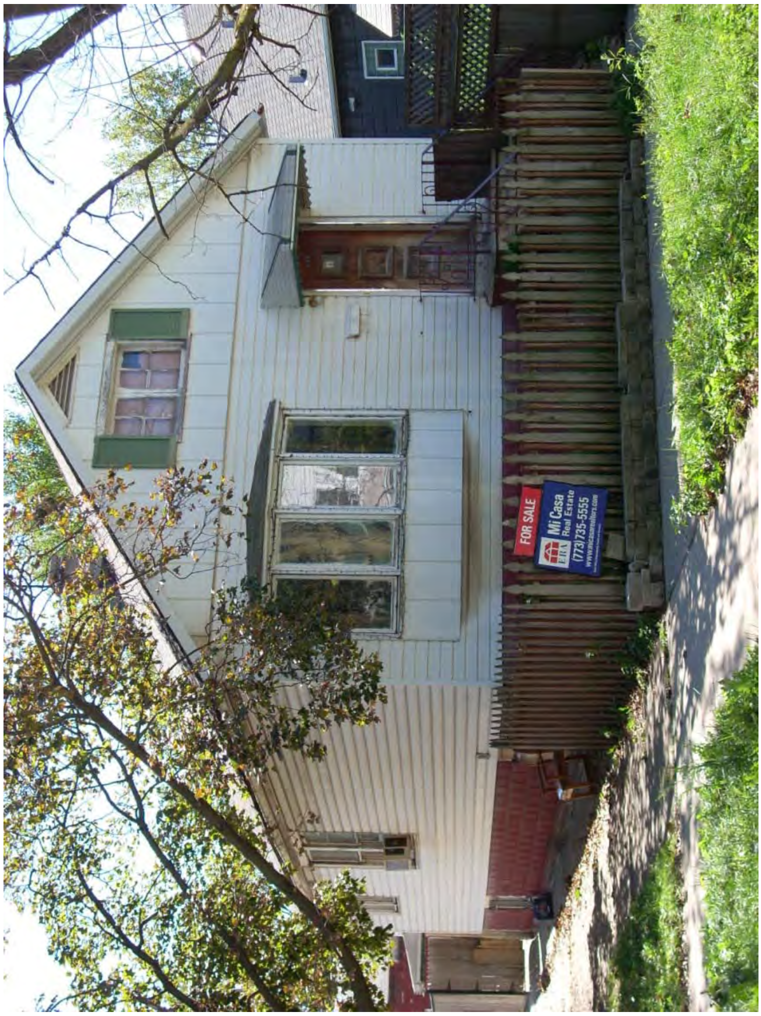
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 23 October 2012

Photos with Captions:
North façade of a one-story, single family, frame residece.



Property Description: **Stories:** 1

This one-story frame cottage in the West Pullman community is situated on a raised concrete block basement and is covered with synthetic siding. The building has a front gable roof covered with asphalt shingles. Its front elevation has an off-center wood door with wood steps, metal railings, and a metal awning. This elevation also has a rounded bow window with four casements on the first floor and a pair of small casement windows in the attic, each with four lights. A small triangular ventilating louver is located at the apex of the gable. This house lacks integrity and distinctive architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement cladding
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Casement
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

742 W. 117th Street
Alternate: 722 W. 117th Street (per CCA)

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1925

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

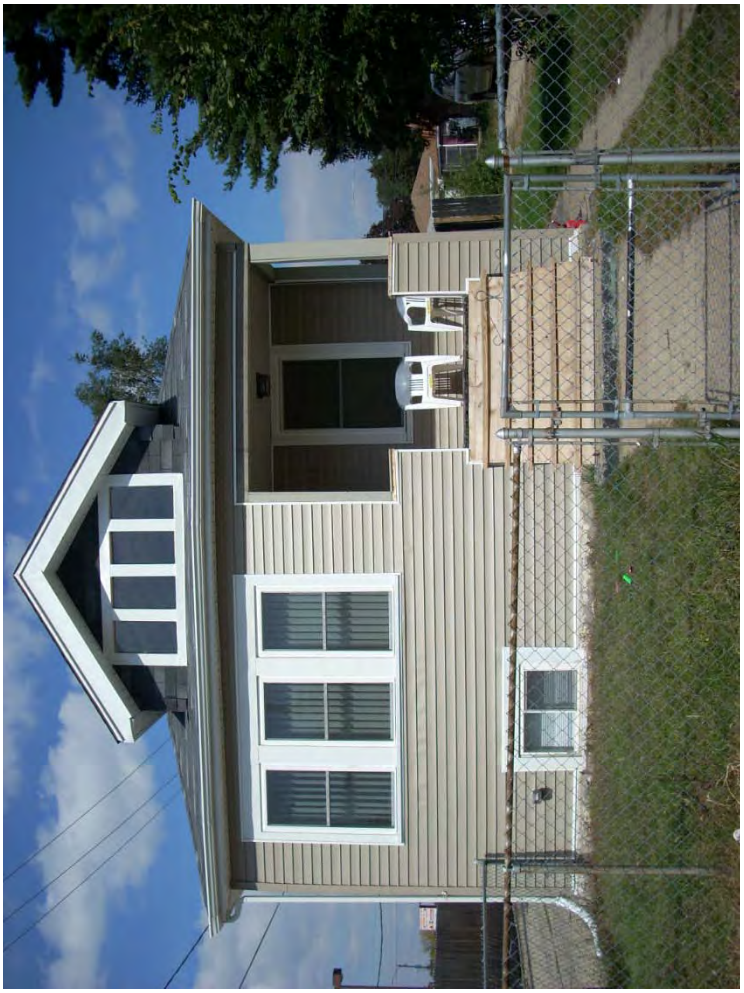
Craftsman

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 24 October 2012

Photos with Captions:
South façade of a one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story frame bungalow in the West Pullman community sits on a raised concrete block basement with sliding windows and is covered with synthetic siding. The building has a hip roof covered with asphalt shingles, a gable dormer, and overhanging eaves. The front elevation has a recessed corner porch with low synthetic-clad sidewalls, a squat wood post supporting the corner, and wood steps. The front door is on the west wall of the living room bay. Windows on the front elevation are non-original and include four one-over-one aluminum-sash—a strip of three in the living room bay and one in the recessed porch—and a strip of four single-pane windows in the gable dormer. The east elevation has a gabled through-the-cornice wall dormer. This house lacks integrity and distinctive architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement door, windows, and cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** Dormers	**Roof Type** Hip	
Ornamental Architectural Details None			**Windows** Double-hung, casement, sliding
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

306 E. 118th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1898

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

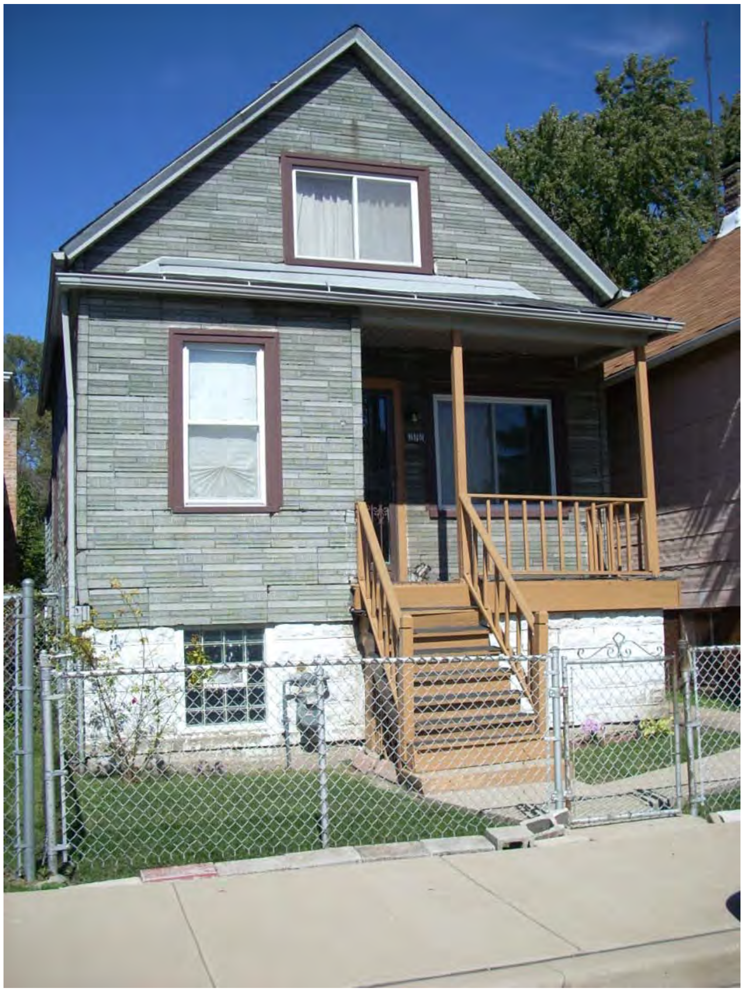
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 23 October 2012

Photos with Captions:
South façade of a one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story frame cottage in the West Pullman community is situated on a raised concrete block basement with glass block windows and is covered with synthetic siding. The building has a front gable roof covered with asphalt shingles. It has a full-width flat-roof porch, half of which is enclosed and features a single one-over-one aluminum-sash window. The open portion of the porch has a door, a pair of non-original sliding windows, wood posts, steps, and railings. This house lacks integrity and distinctive architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows, cladding, and porch rails
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung, glass block, sliding
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

354 E. 118th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1886

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

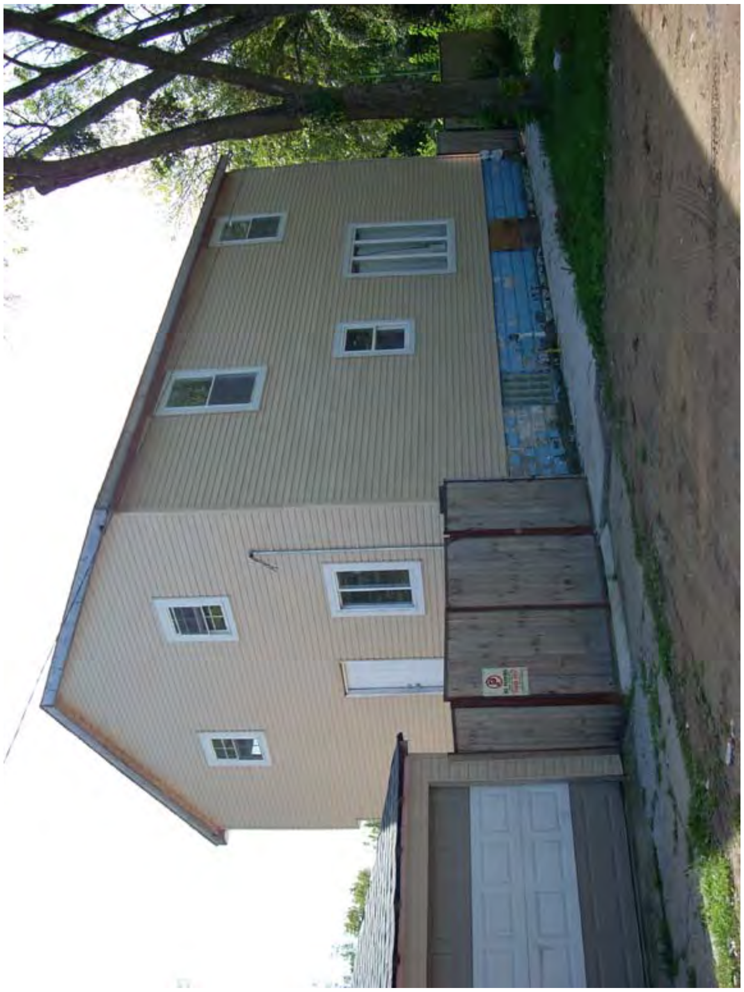
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: Steve Katz

Date: 2 October 2012

Photos with Captions:
North and west façades of two-story, single-family, frame residence.



Property Description: **Stories:** 2

This two-story frame house in the West Pullman community is situated on a raised concrete block basement with glass block windows, is clad with synthetic siding, and has a gable roof with asphalt shingles. The fenestration pattern has been altered with the moving of the main entrance from the 118th Street elevation and the windows, which feature non-original casements and one-over-one non-original aluminum varieties on both the first and second floors. This house lacks integrity, does not have visible distinguishing architectural features, and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration	**Additional Notes/Descriptions** Replacement door, windows, and siding
Condition: [✓ Excellent] Good Poor	
Additional Alterations	
Structure Usage Current: NA Historic: NA — **Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt — **Roof Features** None — **Roof Type** Gable	
Ornamental Architectural Details None	**Windows** Double-hung, casement
Outbuildings (*Number and Description*) Detached two-car garage with pyramidal roof and vinyl siding.	

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

737 W. 118th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Multi-family residence

Date of Construction: 1897

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

Vernacular

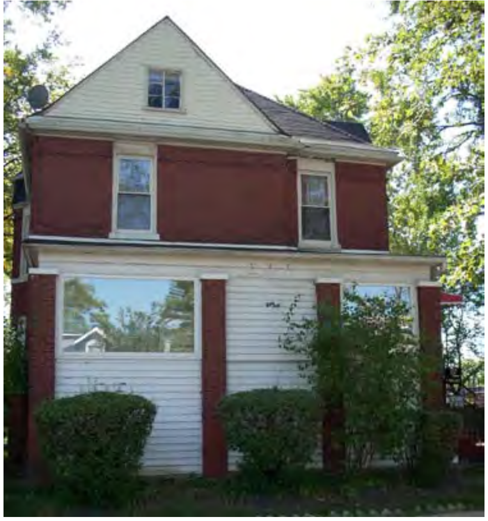
Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

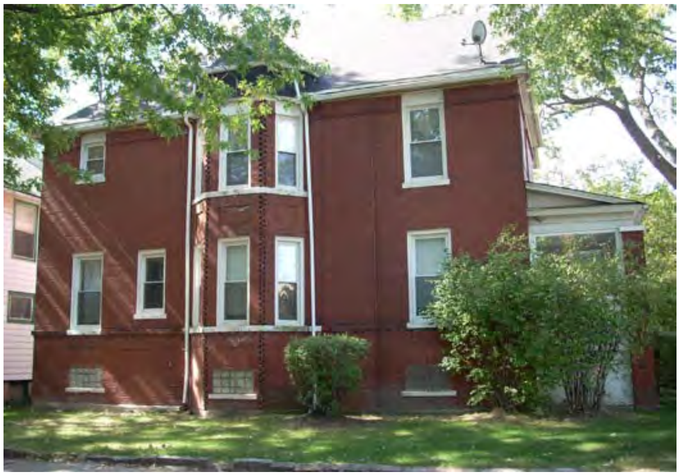
Date: 24 October 2012

Photos with Captions:

North (118th) façade of a brick, two story, multi-family residence.



East (Emerald) façade of the residence.



Property Description: **Stories:** 2

This two-story house at the southwest corner of 118th Street and Emerald Avenue in the West Pullman community is clad with orange-brown face brick and is situated on a raised basement with glass block windows. The building has a gable-on-hip roof covered with asphalt shingles. Its front elevation has a full-width shed-roof porch with brick piers. The areas between the piers have been in-filled with synthetic siding and non-original single-pane windows. A non-original hollow core metal door with metal awning is located on the wood-covered north side of this porch and accessed via concrete steps. The second floor of the front elevation has two one-over-one windows and an additional window is located in the synthetic-clad gable. The east elevation has a full-height rounded window bay pavilion topped by a conical roof. Side elevation windows are non-original one-over-one aluminum-sash. A stringcourse with brick dentils is situated near the roofline and extends around the building. This house lacks integrity and distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement door and windows; porch enclosed
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick, synthetic (gable)	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable-on-hip	
Ornamental Architectural Details Bay pavilion with conical roof, brick stringcourse with dentils			**Windows** Double-hung, fixed pane, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

834 W. 118th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1909

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

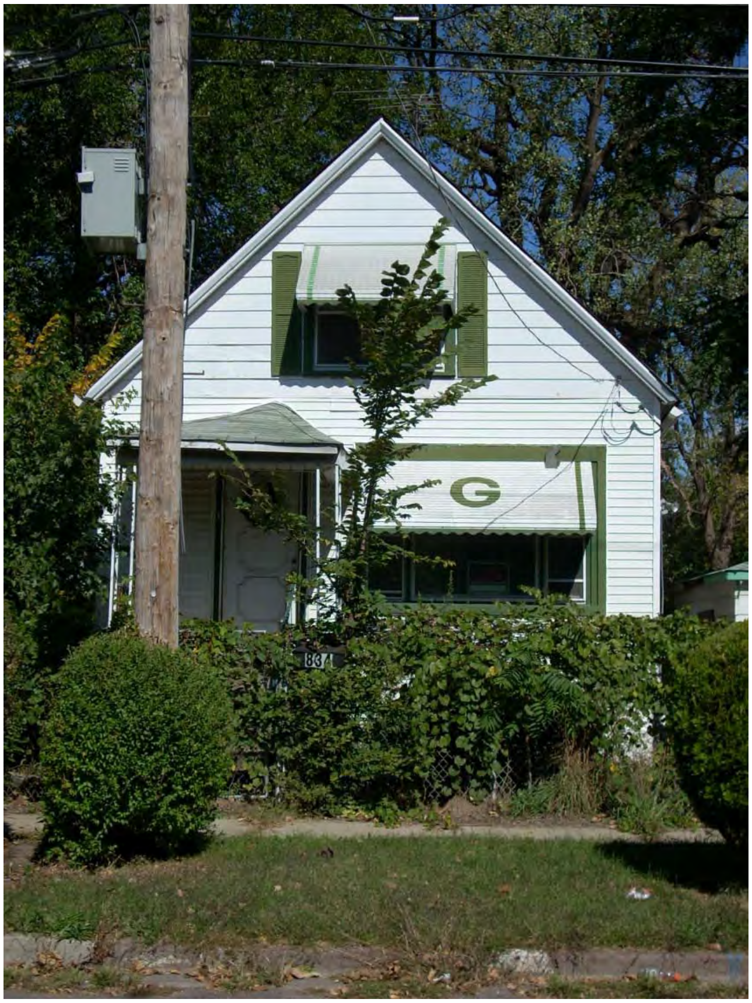
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 24 October 2012

Photos with Captions:
South façade of a one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story house in the West Pullman community is covered with synthetic siding and has a gable roof covered with asphalt shingles. Its front elevation has a partial-width hip-roof porch with metal posts and a hollow core metal door. Windows are non-original and include a picture window flanked by one-over-one aluminum-sash windows on the first floor, and a pair of one-over-one aluminum-sash windows in the gable. Both sets of windows are partially obscured by low metal awnings. The porch steps and railings are obscured by foliage. This house lacks integrity and distinguishing architectural features and is not individually eligible for listing on the National Register.

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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows and cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung, fixed-pane
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

738 W. 119th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Commercial

Current: Multi-family residence

Date of Construction: 1893

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

Vernacular

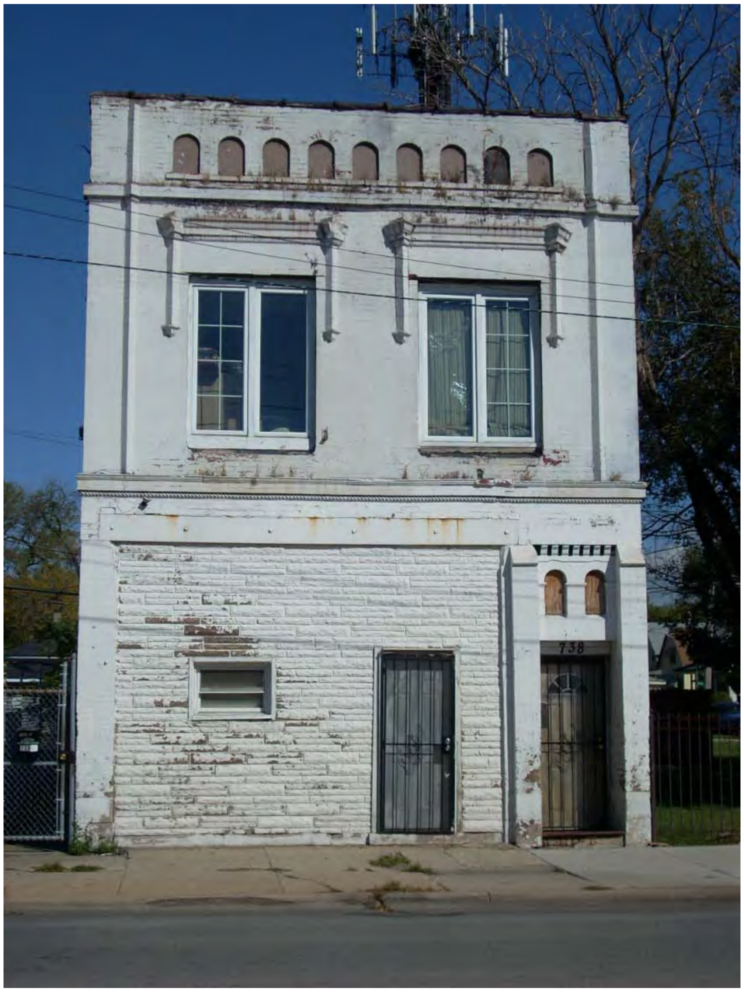
Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 24 October 2012

Photos with Captions:

South façade of a brick, two-story building.



Property Description: **Stories:** 2

This two-story brick-clad building in the West Pullman community has a flat roof and parapet. Its storefront area has been in-filled with faux stone, a non-original door, and a small window. A secondary off-center non-original hollow core metal door that provides access to the second floor apartments is flanked by original buttresses and topped by small arches, the interiors of which have been in-filled with wood. The second floor has two pairs of windows that appear to be casements. Detailing includes a belt course, cornice, finial-like molding flanking the second story windows, and a continuous arcade across the parapet level, the openings of which have been in-filled with wood. This building lacks integrity and distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
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Phone (815) 568- 0680

Structural Survey

Integrity:

Unaltered [✓ Slight Modification] Major Alteration

Additional Notes/Descriptions

Replacement door and windows; storefronts and arcades in-filled with wood

Condition:

Excellent [✓ Good] Poor

Additional Alterations

Converted from commercial to apartments after 1938 (Sanborn).

Structure Usage	**Exterior Wall Surface**
Current: NA Historic: NA	Brick (main), Faux stone (storefront)

Roof Material	**Roof Features**	**Roof Type**
Unknown	Parapet	Flat

Ornamental Architectural Details

Buttresses, arches, arcade, belt course, cornice, finial-like molding

Windows

Double-hung, casement

Outbuildings (*Number and Description*)

None

Local Landmark	**Y [✓ N]**	
National Register Historic Places	**Y [✓ N]**	
National Register Historic District	**Y [✓ N]**	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

846 W. 119th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Weinberg Plumbing Co. Inc.

Property Use

Historic: Industrial (Steam Laundry, 1938)

Current: Industrial

Date of Construction: 1915

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

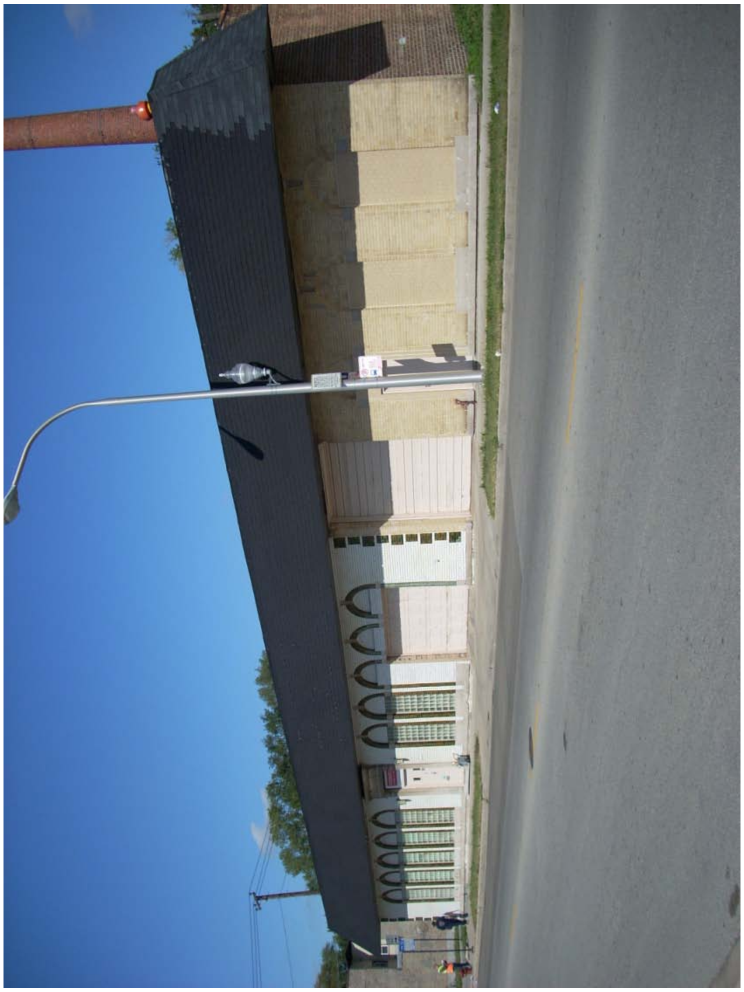
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 24 October 2012

Photos with Captions:
South façade of a brick, one-story, industrial building.



Property Description: **Stories:** 1

This one-story commercial building in the West Pullman community has a flat roof, parapet, and a pent roof across the length of the front elevation. The front façade is clad with white glazed brick on its east side and in pale yellow brick on its west side. The front elevation features a series of tall windows that are trimmed in green brick and have been in-filled, some with glass block and some with brick. The windows are topped by decorative round-arches of green bricks with stone keystones. The building has a hollow core metal double-door with a Classical stone surround comprising fluted pilasters and entablature. Two non-original overhead garage doors have also been inserted into the front elevation, one of which has replaced two window openings. This building lacks integrity and distinguishing architectural features and is not individually eligible for listing on the National Register.

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Structural Survey

<table>
<tr><td colspan="3">**Integrity:**
Unaltered [✓ Slight Modification] Major Alteration</td><td>**Additional Notes/Descriptions**
In-filled windows</td></tr>
<tr><td colspan="3">**Condition:**
Excellent [✓ Good] Poor</td><td></td></tr>
<tr><td colspan="3">**Additional Alterations**</td><td></td></tr>
<tr><td colspan="2">**Structure Usage**
Current: NA
Historic: NA</td><td>**Exterior Wall Surface**
Brick</td><td></td></tr>
<tr><td>**Roof Material**
Asphalt</td><td>**Roof Features**
None</td><td>**Roof Type**
Flat</td><td></td></tr>
<tr><td colspan="3">**Ornamental Architectural Details**
Green brick trim on arches, keystones, Classical surround at entrance</td><td>**Windows**
Glass block</td></tr>
<tr><td colspan="4">**Outbuildings (*Number and Description*)**
None</td></tr>
</table>

Local Landmark	**Y [✓ N]**	
National Register Historic Places	**Y [✓ N]**	
National Register Historic District	**Y [✓ N]**	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

918 W. 119th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Commercial

Current: Multi-family residence

Date of Construction: 1925

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

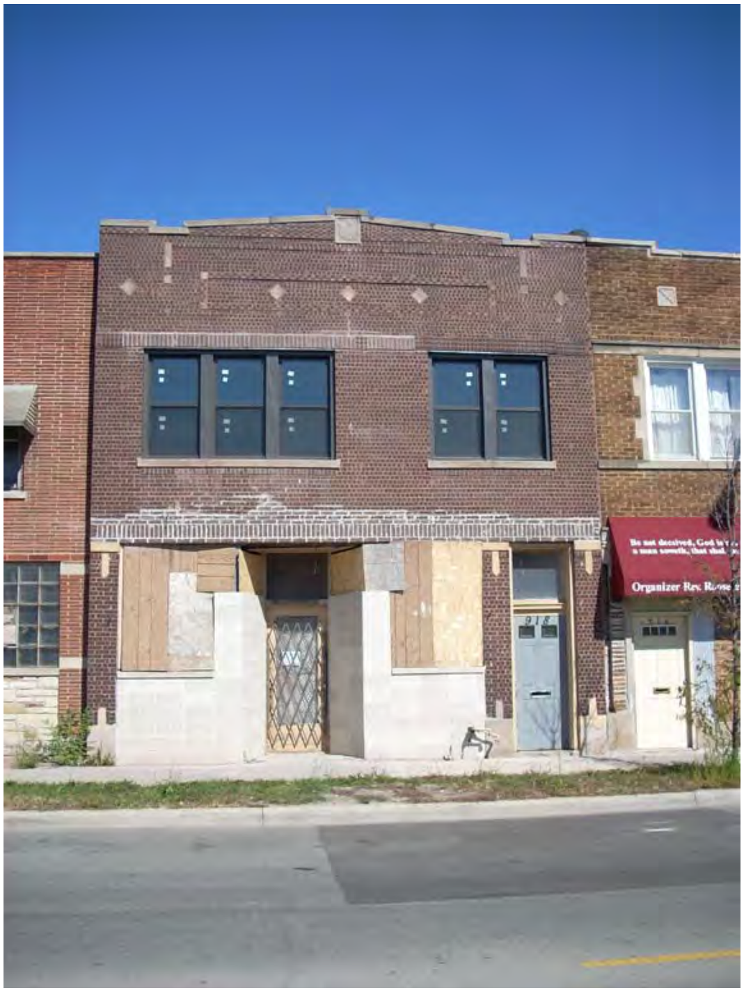
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 24 October 2012

Photos with Captions:
South façade of a brick, two-story, multi-family residence.



Property Description: **Stories:** 2

This two-story former commercial building in the West Pullman community has a front elevation that is clad with brown face brick. The building includes a concrete water table, flat roof, and a shaped parapet with concrete coping. Its former storefront has a recessed door with an in-filled transom, and its flanking windows and wall area have been covered with wood boards and tile, respectively. Original first floor cladding is extant in the corner piers, including those with stone coping that flank the off-center entrance. The entrance has an aluminum-core metal door and transom that provides access to the upper level apartment. The second floor has non-original one-over-one aluminum-sash windows arranged in a group of three and in a pair. Detailing includes concrete sills, coping, panel and diamond-shaped insert blocks at the parapet level, brick panels and soldier course lintels. This building lacks integrity and distinguishing architectural features and is not individually eligible for listing on the National Register.

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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration	**Additional Notes/Descriptions** Replacement doors, windows, cladding (1st floor)
Condition: Excellent [✓ Good] [✓ Poor]	
Additional Alterations Converted from commercial to residential post 1938 (Sanborn); ongoing remodeling as well.	
Structure Usage Current: NA Historic: NA	**Exterior Wall Surface** Brick, tile
Roof Material Unknown	**Roof Features** Parapet
Roof Type Flat	
Ornamental Architectural Details Concrete coping, piers with stone coping, panel, and insert blocks, concrete sills; brick panels and soldier course lintels	**Windows** Double-hung
Outbuildings (*Number and Description*) None	

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
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Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: First Holy Miracle Mt. Zion Baptist Church

Property Address:

956 W. 119th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

First Holy Miracle Mt. Zion Baptist Church

Property Use

Historic: Industrial

Current: Religious

Date of Construction: 1906

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

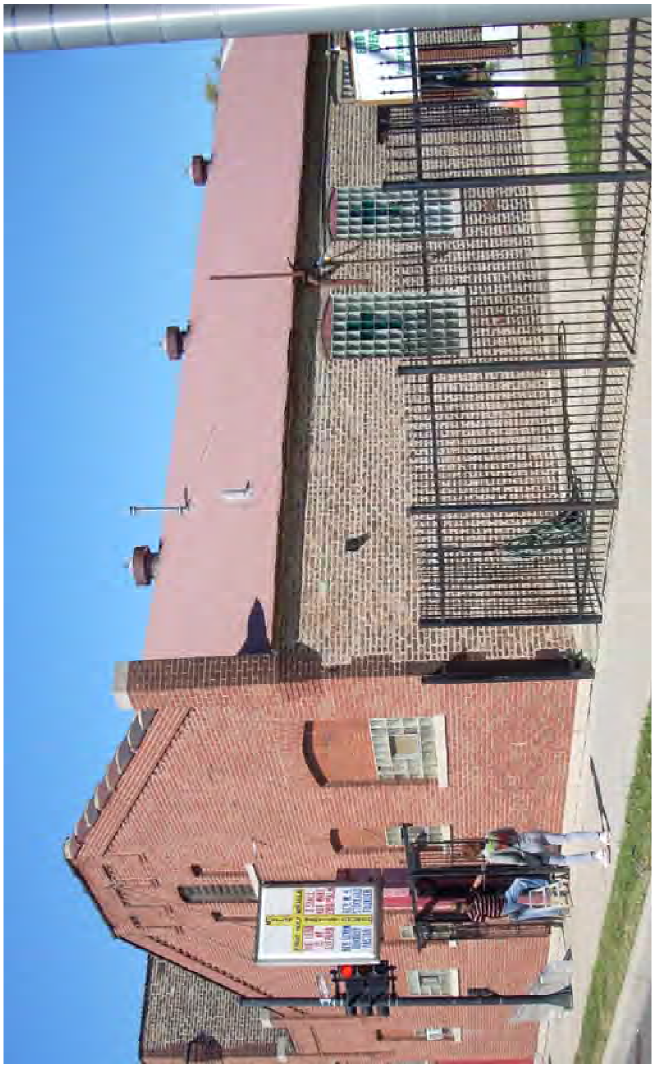
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 24 October 2012

Photos with Captions:
South and east facades of a brick, two-story, religious building.



Property Description: **Stories:** 2

This two-story former light industrial building in the West Pullman community is clad with face brick on its front elevation and common brick on its side and rear elevations. The building has a gable roof. The front elevation has a raised, truncated-gabled parapet with clay tile coping and corbelling. It features a centrally located pair of glass double doors and five segmental-arched window openings that have been in-filled with glass block and brick. The second floor of the front elevation has a group of three window openings that feature wood louvers and brick infill. The parapet level features decorative brickwork while brick piers flank the building’s façade. Side elevation windows are in-filled with glass block. This building lacks sufficient integrity and distinguishing architectural features to qualify for individual listing on the National Register.

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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows and infill
Condition: Excellent [✓ Good] Poor			
Additional Alterations Converted from industrial production to religious services.			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt	**Roof Features** Parapet	**Roof Type** Gable	
Ornamental Architectural Details Clay tile coping, segmental arched windows, decorative brickwork including corbelling and piers			**Windows** Glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Fire Department

Common/Current: Fire Department Engine House 115 (Sanborn, 1911)

Property Address:

931 W. 120th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Chicago Fire Department

Property Use

Historic: Public

Current: Public

Date of Construction: 1897-1911

Architect's Name: Not in CHRS database

Builder/Contractor: Not in CHRS database

Architectural Style:

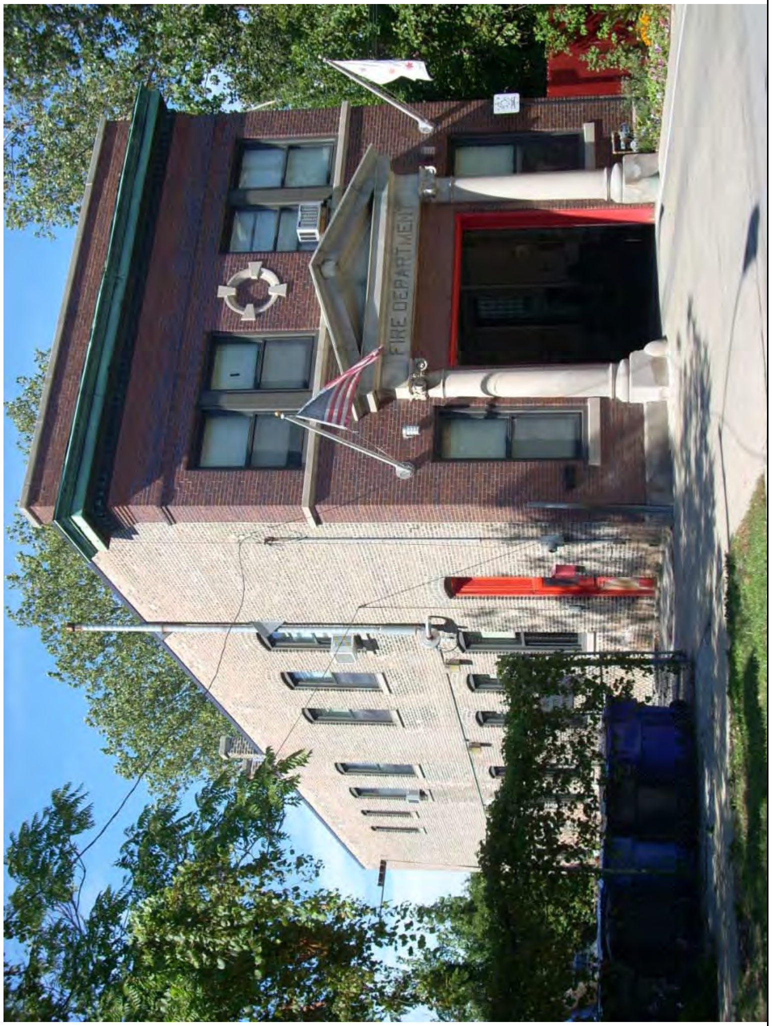
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 13 September 2012

Photos with Captions:
South façade of two-story, brick fire house.



Property Description: **Stories:** 2

This two-story firehouse in the West Pullman community has a flat roof and parapet. Its front elevation is clad in brown face brick and has a centrally located overhead metal door flanked by single one-over-one windows on the first floor. Four one-over-one windows (non-original) are situated on the second floor. The overhead opening for the station's fire truck features a Classical stone surround with Ionic columns atop low pedestals, a frieze band incised with the words "Fire Department," and a pediment. Detailing includes a circular motif in stone, stone sills, sill courses, and a metal cornice. This is an excellent example of a neighborhood fire station that still functions in its original use and has very good integrity. It is individually eligible for listing on the National Register.

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505 North State Street
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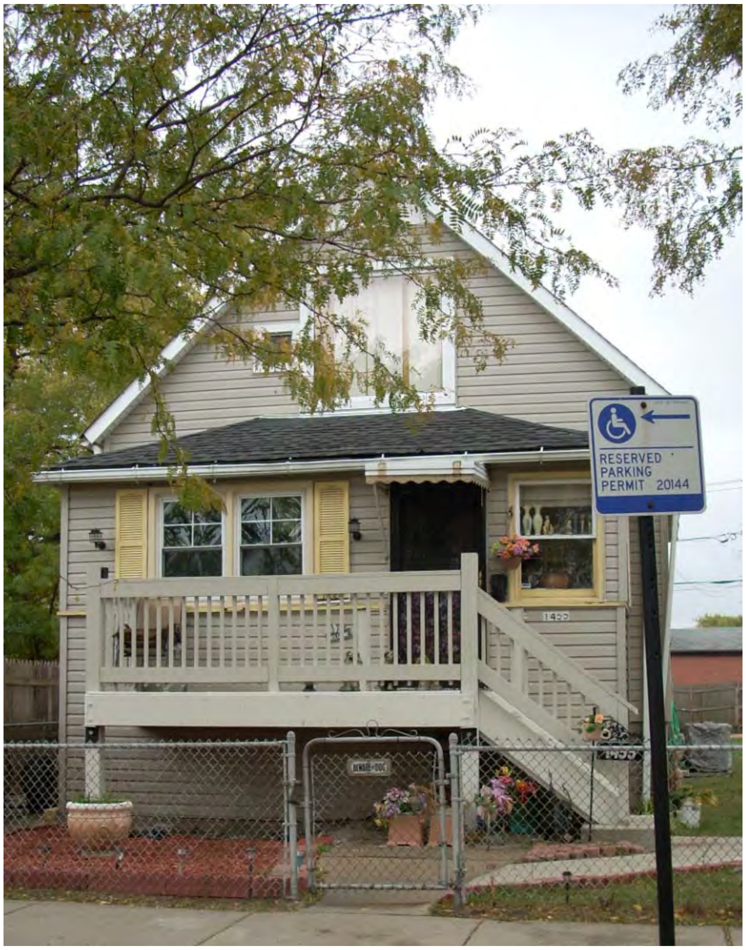
Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick, stone	
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details Stone circular motif, sills, sill courses; metal cornice, pediment, columns, frieze band reading “Fire Department”			**Windows** Double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? Yes	**A B** [✓ **C**]	**Significance:** This building has excellent integrity and is a rare surviving example of an early 20th century fire station in West Pullman.

Additional Comments:

Historical Resource Recordation Form

Property Name **Historic:** Bldg. not labeled, not in CHRS **Common/Current:** Unknown	**Photos with Captions:** North façade of a 1.5-story, single family, frame residence. 
Property Address: 1455 W. 120th Street	
HAARGIS Number: Not in database	
Present Owner and /or Occupant: Unknown	
Property Use **Historic:** Single family residence **Current:** Single family residence	
Date of Construction: 1919 **Architect's Name:** Not in CHRS **Builder/Contractor:** Not in CHRS	
Architectural Style: Vernacular	
Prepared By: J. Martinez, M. C. Bird, J. Guarino **Photo By:** S. Katz **Date:** 30 October 2012	

Property Description: **Stories:** 1.5

This one-and-a-half-story frame cottage in the West Pullman community is situated on a raised concrete block basement and is covered with synthetic siding. The building has a front gable roof covered with asphalt shingles. Its front elevation has a full-width, hip roof, synthetic-clad enclosed porch with a metal storm door, wood steps and railings, and three non-original double-hung aluminum-sash windows. Two non-original windows are located in the gable—a large picture window and an adjacent small single-pane window. This house lacks integrity and distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
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Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows, cladding, and porch rails
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingles	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung, fixed pane
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

738 W. 129th Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1951

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

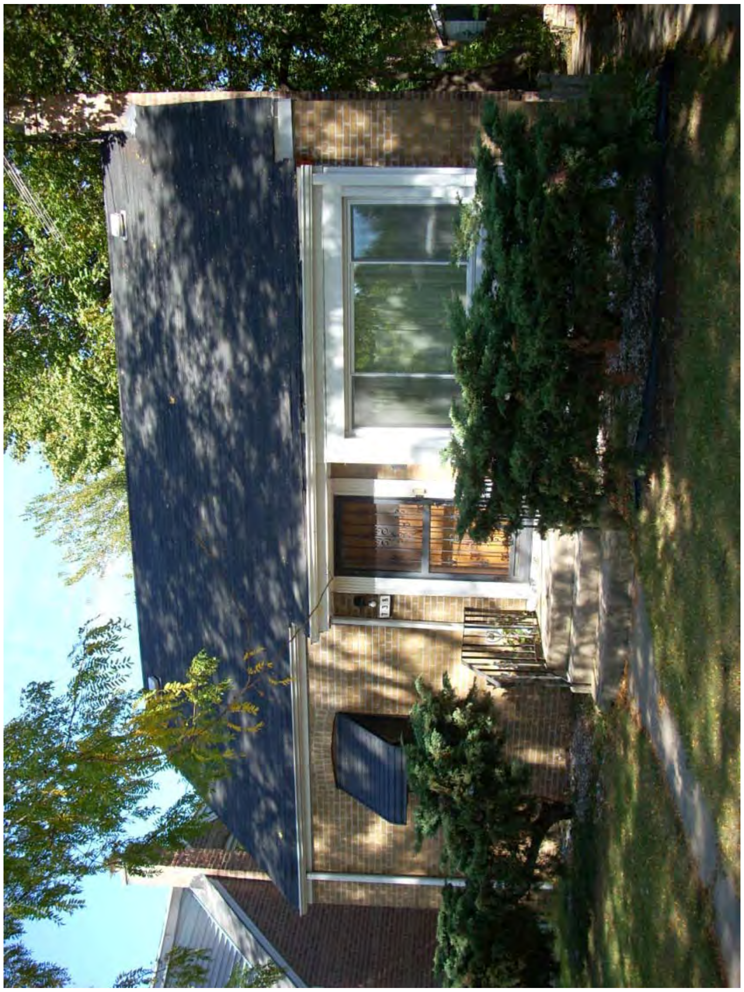
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 29 October 2012

Photos with Captions:
South façade of a one-story, brick, single story residence.



Property Description: **Stories:** 1

This one-story house in the West Pullman community is clad with tan face brick on its front elevation and common brick on its side and rear elevations. The building has a side-gabled roof covered with asphalt shingles. The front elevation has a centrally located metal storm door with a concrete surround, concrete steps with metal railings, and a projecting living room bay. The façade includes a picture window flanked by casements, and a single window that is obscured by a low metal awning and shrubs. A pent roof spans the door and living room bay. It does not feature distinguishing architectural elements and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: [✓ Unaltered] Slight Modification Major Alteration			**Additional Notes/Descriptions**
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details Concrete door surround			**Windows** Fixed-pane, casement
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

743 W. 129th Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1952

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

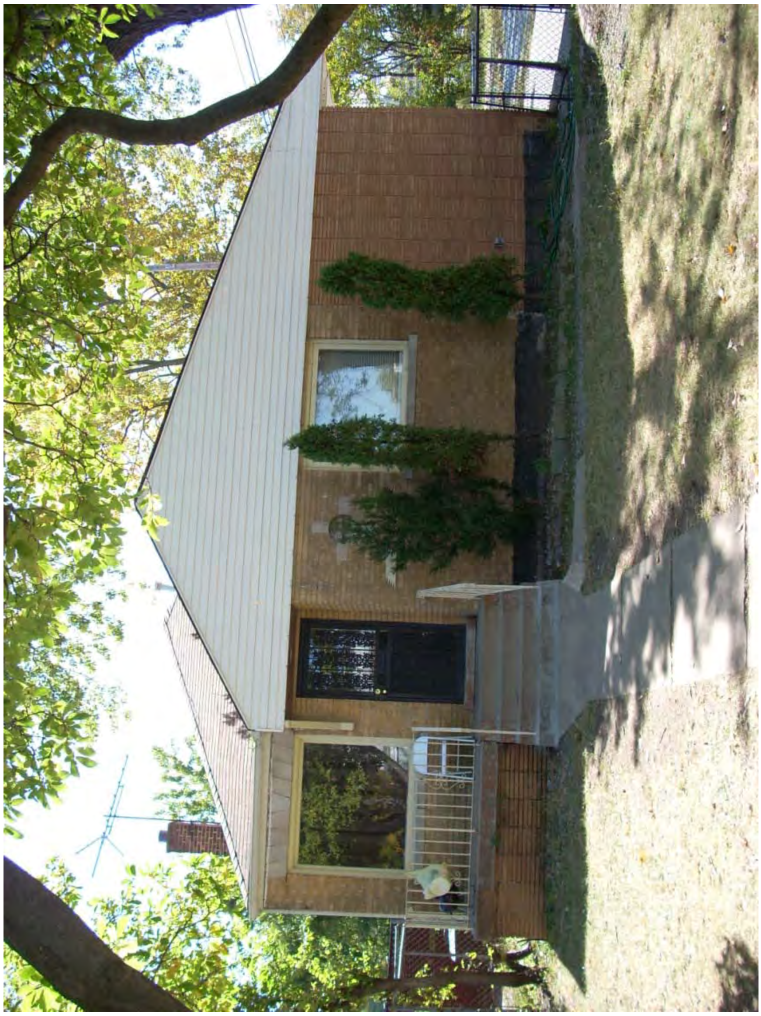
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 29 October 2012

Photos with Captions:
North façade of a one-story, single family, brick residence.



Property Description: **Stories:** 1

This one-story house in the West Pullman community sits on a raised basement and is clad with tan brick on its front elevation and common brick on its side and rear elevations. The building has a hip roof covered with asphalt shingles and overhanging eaves. A one-story addition extends the living room to the west. The front elevation has an off-center metal storm door, a concrete porch with metal railings, two picture windows (one with a stone lintel), and a bulls-eye window with stone accents. The projecting living room bay has a synthetic-clad front-facing gable that extends over adjacent the living room bay addition. It does not feature sufficient integrity or distinguishing architectural features to be individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered	[✓ Slight Modification]	Major Alteration	**Additional Notes/Descriptions** Replacement cladding (gable end)
Condition: [✓ Excellent]	Good	Poor	
Additional Alterations Living room addition			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick (main), Synthetic siding (gable end)	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Hip	
Ornamental Architectural Details Bulls eye window with stone accents, stone lintel			**Windows** Double-hung, fixed-pane
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

814 W. 129th Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1953

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

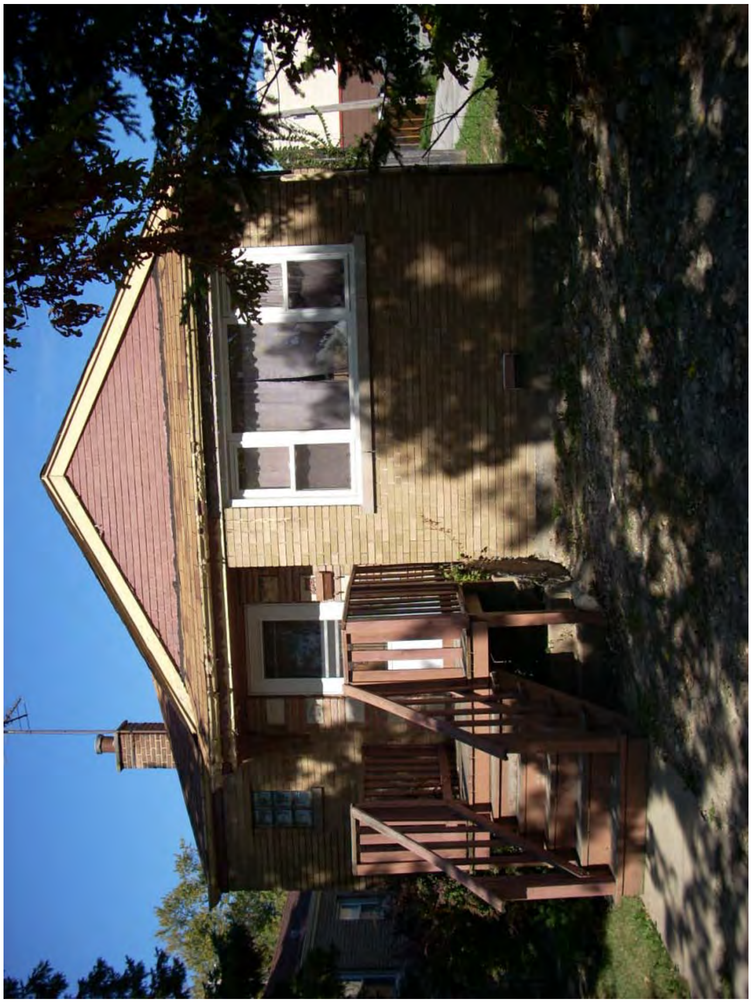
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 29 October 2012

Photos with Captions:
South façade of a one-story, single family, brick residence.



Property Description: **Stories:** 1

This one-story house in the West Pullman community is clad with tan brick on its front elevation and common brick on its side and rear elevations. The building has a gable-on-hip roof covered with asphalt shingles and a projecting living room bay. The front elevation has an off-center metal storm door, an adjacent glass block window, wood steps with straight wood railings, and a picture window flanked by one-over-one wood-sash windows. A pent roof spans the door and living room bay and decorative stones flank the door. Bricks in the gable end are painted. It does not feature distinguishing architectural elements and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity:			**Additional Notes/Descriptions**
[✓ Unaltered]	Slight Modification	Major Alteration	
Condition:			
Excellent	[✓ Good]	Poor	
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable-on-hip	
Ornamental Architectural Details Decorative stones at entrance			**Windows** Double-hung, fixed-pane, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
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Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

817 W. 129th Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1956

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

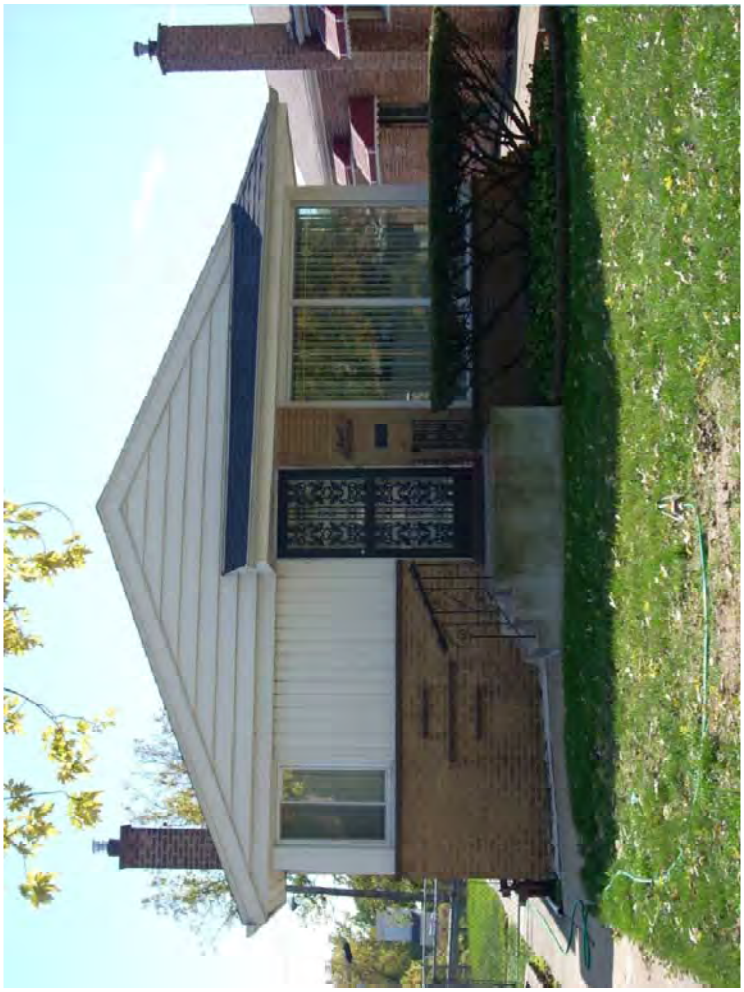
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 29 October 2012

Photos with Captions:
North façade of a one-story, single family, brick residence.



Property Description: **Stories:** 1

This one-story house in the West Pullman community is clad with tan brick and synthetic siding on its front elevation and common brick on its side and rear elevations. The building has a front gable roof covered with asphalt shingles and overhanging eaves along its side elevations. The front elevation has a partial-width pent roof, a centrally located metal storm door, concrete steps with metal railings, a pair of casement windows in one corner, and a pair of two vertically-oriented picture windows in the other. The residence does not display distinguishing architectural features and is not individually eligible for listing on the National Register.

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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick (main), synthetic siding (gable end and partial façade)	
Roof Material Asphalt shingles	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Casement, fixed pane
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
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Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

12015 S. Bishop Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1914

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

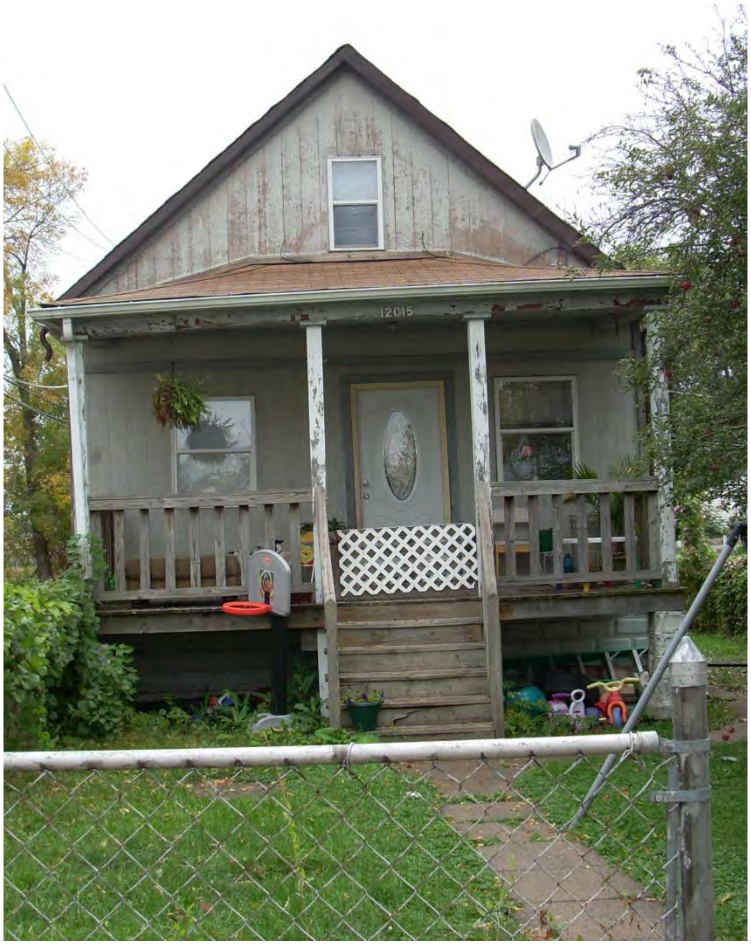
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 30 October 2012

Photos with Captions:
West façade of a single story, single family, frame residence.



Property Description: **Stories:** 1

This one- story cottage in the West Pullman community is situated on a raised concrete block basement and is clad with wood boards laid vertically. The building has a front gable roof covered with asphalt shingles. The front elevation has a full-width, hip-roof wood porch with straight railings and squared posts, a hollow core metal door, and three non-original one-over-one aluminum-sash windows—two on the first floor and one in the gable. This house lacks distinguishing architectural features and is not individually eligible for listing on the National Register.

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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement door, windows, cladding, and porch
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Wood siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y [✓ N]**	
National Register Historic Places	**Y [✓ N]**	
National Register Historic District	**Y [✓ N]**	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

12050 S. Bishop Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1889

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

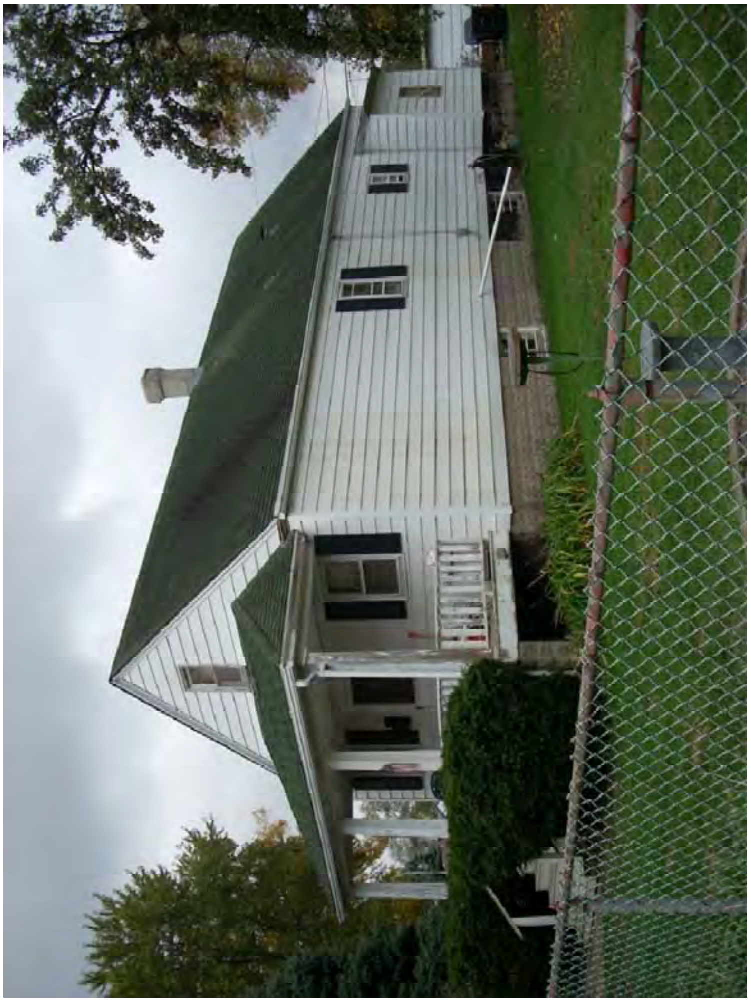
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 30 October 2012

Photos with Captions:
East and north façades of a one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story frame cottage in the West Pullman community sits on a raised concrete block basement and is covered with synthetic siding. The building has a front gable roof covered with asphalt shingles. The front elevation has a full-width hip-roof porch with four squared column supports, straight wood railings, a metal storm door, and three non-original one-over-one windows: two on the first floor and one in the gable. This house lacks integrity and distinguishing architectural features and is not individually eligible for listing on the National Register.

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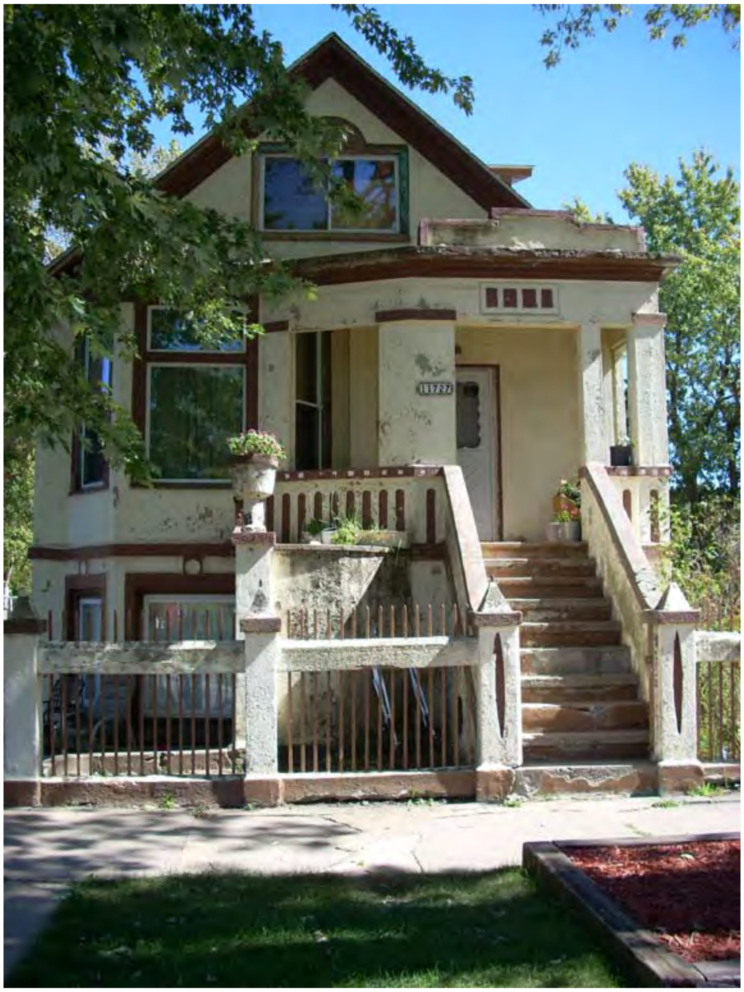
Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement door, windows, and cladding
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Historical Resource Recordation Form

Property Name **Historic:** Bldg. not labeled, not in CHRS **Common/Current:** Unknown	**Photos with Captions:** West façade of a one-story, single family, stucco residence. 
Property Address: 11727 S. Calumet Avenue	
HAARGIS Number: Not in database	
Present Owner and /or Occupant: Unknown	
Property Use **Historic:** Single family residence **Current:** Single family residence	
Date of Construction: 1893 **Architect's Name:** Not in CHRS **Builder/Contractor:** Not in CHRS	
Architectural Style: Vernacular	
Prepared By: J. Martinez, M. C. Bird, J. Guarino **Photo By:** S. Katz **Date:** 23 October 2012	

Property Description: **Stories:** 1

This one-story frame cottage in the West Pullman community is situated on a raised basement and is covered with stucco. The building has a front gable roof covered with asphalt shingles and a gable dormer along its south elevation. It has a partial-width flat-roofed porch that appears to be concrete, with solid sidewalls, straight posts, and a stepped parapet. Its front elevation has an off-center non-original hollow core metal door and a three-sided window bay with single-pane window and transom in the center flanked by one-over-one aluminum-sash windows. There is a pair of sliding aluminum-sash windows in the gable with a lunette fixed-pane window above. Windows are modern replacements. While the stucco cladding is somewhat unusual for this community's housing stock, this particular house lacks integrity as well as architectural features that are distinctive enough to merit individual inclusion on the National Register.

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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement door and windows
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Stucco	
Roof Material Asphalt shingle	**Roof Features** Dormer	**Roof Type** Gable	
Ornamental Architectural Details Lunette window, stepped parapet, decorative accent blocks			**Windows** Double-hung, fixed-pane, sliding
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

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Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

9824 S. Eggleston Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1965

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

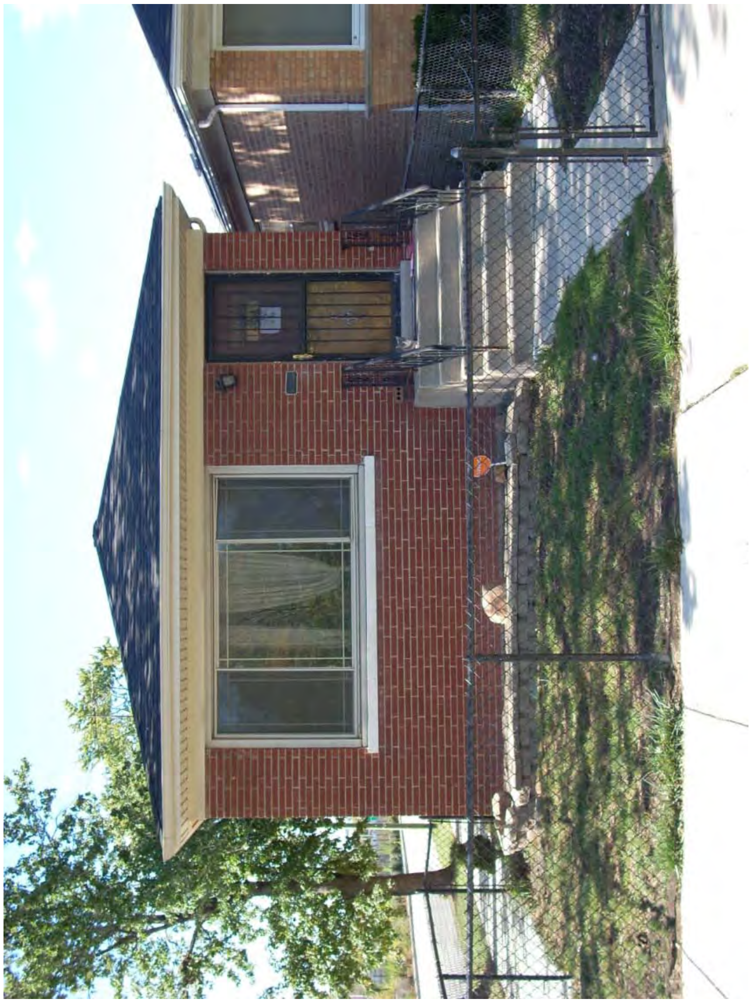
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 31 October 2012

Photos with Captions:
East façade of a brick, one-story, single family residence.



Property Description: **Stories:** 1

This one-story house at the northwest corner of Eggleston Avenue and Fernwood Parkway in the Washington Heights community is situated on a raised basement and is clad with red face brick on its two street elevations. The building has a hip roof covered with asphalt shingles and overhanging eaves. The front (Eggleston) elevation has an off-center metal storm door, concrete steps with metal railings, and a picture window flanked by casements. The Fernwood Parkway elevation has both casements and glass block windows. It lacks distinguishing architectural features and is not individually eligible for listing on the National Register.

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Structural Survey

Integrity: [✓ Unaltered] Slight Modification Major Alteration			**Additional Notes/Descriptions**
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Hip	
Ornamental Architectural Details None			**Windows** Casements, fixed-pane, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
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Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

10024 S. Eggleston Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1943

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

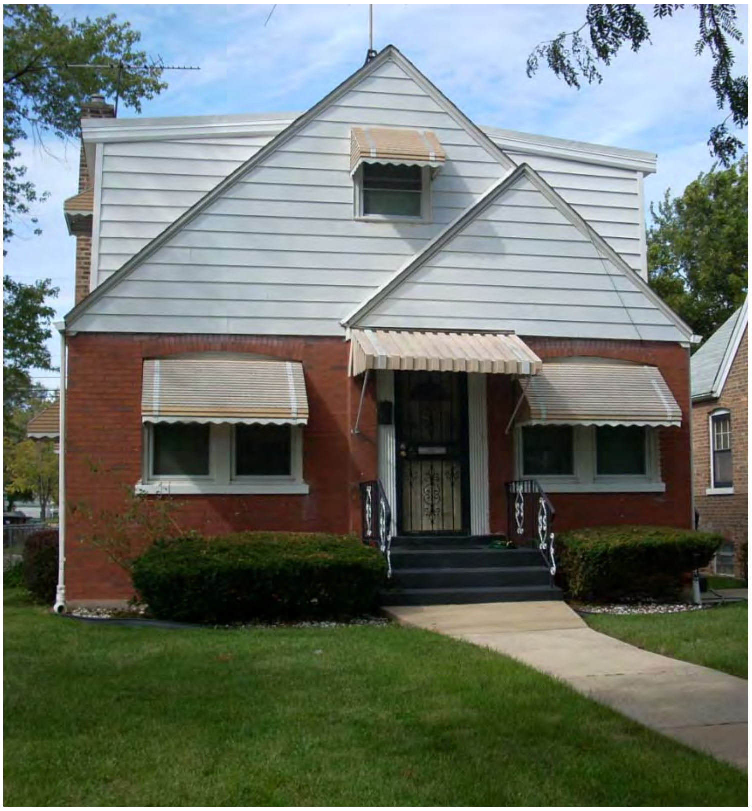
Vernacular

Prepared By: J. Martinez, M. C. Bird

Photo By: S. Katz

Date: 10 October 2012

Photos with Captions:
East façade of a two-story, brick and frame, single family residence.



Property Description: **Stories:** 2

This two-story cottage in the Washington Heights community has a gable roof covered with asphalt shingles and large, non-original, flat-roofed, aluminum-clad dormers on both side elevations transforming the original one-story building into a two-story residence. The front elevation is clad with orange face brick, the gables are clad with aluminum siding, and the lower side elevations are clad with common brick. The front elevation has a centrally located hollow core metal paneled door with fanlight, three concrete steps with metal railings, two pairs of windows on the first floor and a single window in the gable. Windows are non-original one-over-one aluminum sash. The front door and windows are sheltered by metal awnings. Detailing includes concrete sills and brick lintel arches. This house does not feature distinguishing architectural elements or sufficient integrity to be individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered Slight Modification [✓ Major Alteration]			**Additional Notes/Descriptions** Replacement front door and windows
Condition: [✓ Excellent] Good Poor			
Additional Alterations Dormers added to expand the home into two stories			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick (lower), synthetic siding (gable ends and dormers)	
Roof Material Asphalt	**Roof Features** Dormers	**Roof Type** Flat, gable	
Ornamental Architectural Details Concrete sills, brick lintel arches			**Windows** Double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

10058 S. Eggleston Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Chicago Style Bungalow

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1930

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

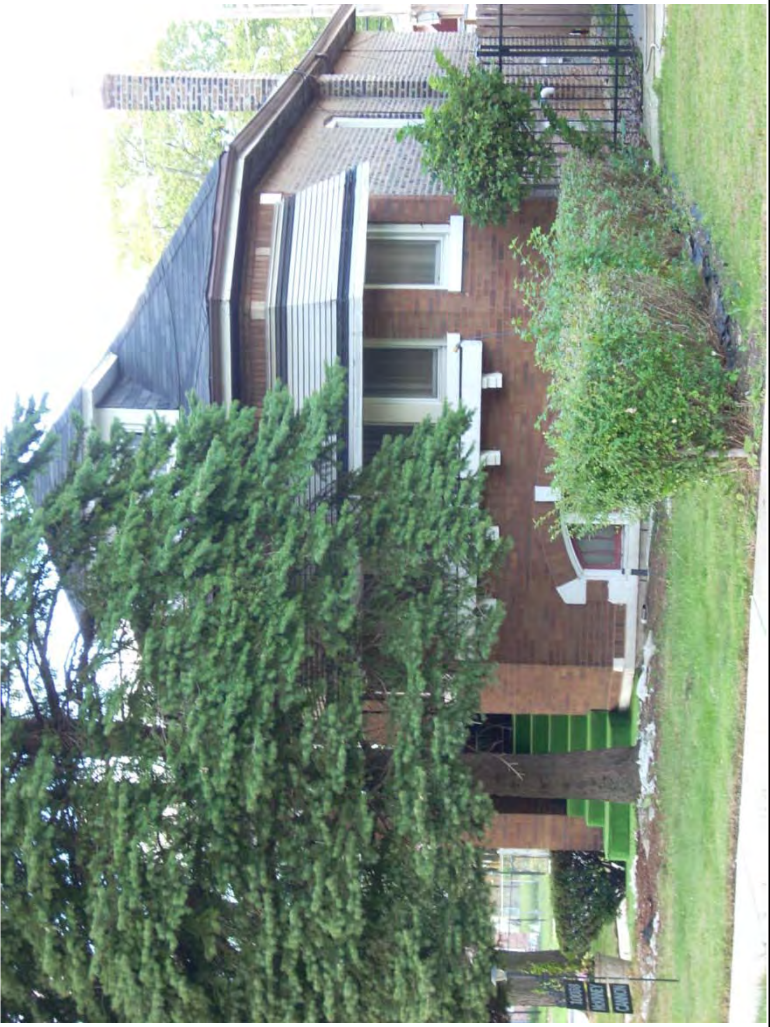
Chicago Bungalow

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 16 September 2012

Photos with Captions:
East façade of one-story, brick, single-family residence.



Property Description: **Stories:** 1

This one-story bungalow at the northwest corner of Eggleston and 101st Street in the Washington Heights community is situated on a raised basement and is clad with brown face brick along its two street elevations. It has a hip roof covered with asphalt shingles and hip dormers along both its front and rear elevations. Its front elevation has a curved window group in the basement level with frosted glass casement windows. It has a recessed corner porch with carpeted concrete steps and corner brick pier support, a metal storm door, and a projecting living room bay with one-over-one windows that are partially obscured by a low metal awning. Detailing includes stone block inserts and a planter box. Its 101st Street elevation has glass block basement windows and one-over-one windows on the first floor. This house does not have sufficient distinguishing features to qualify as individually eligible for listing on the National Register.

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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows in basement
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingle	**Roof Features** Dormers	**Roof Type** Hip	
Ornamental Architectural Details Stone block inserts, planter box with brackets			**Windows** Casement, glass block
Outbuildings (*Number and Description*) Garage			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

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Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

10100 S. Eggleston Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1894

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

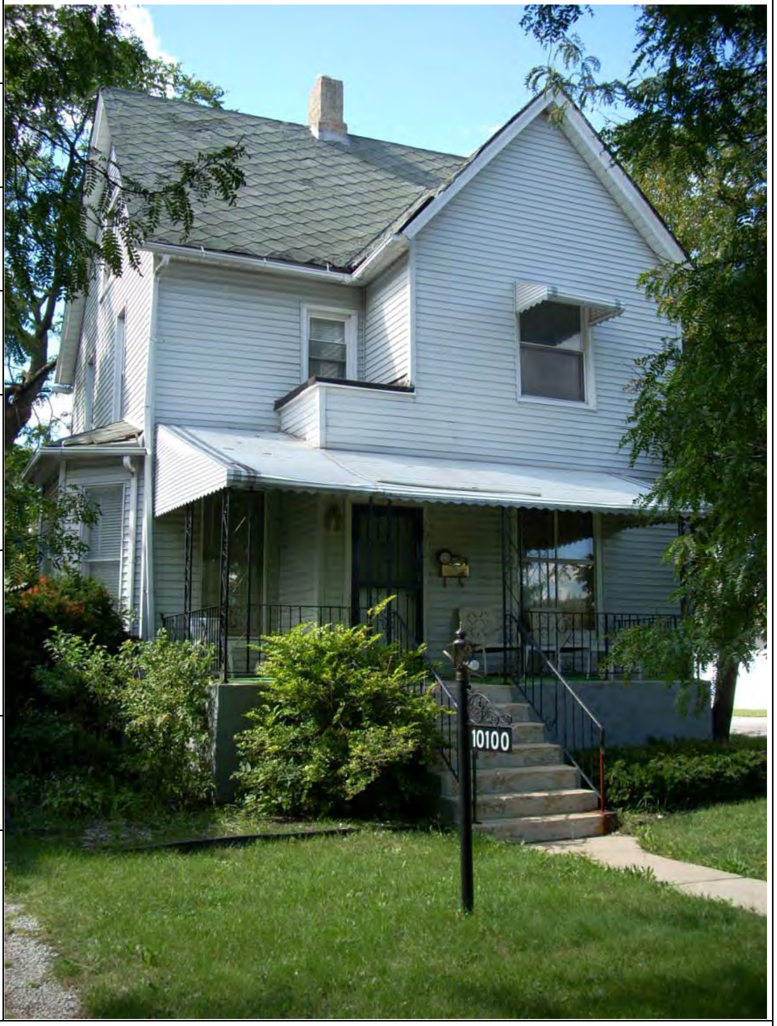
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 16 September 2012

Photos with Captions:
East façade of two-story, single family, frame residence.



Property Description: **Stories:** 2

This two-story frame house at the southwest corner of Eggleston and 101st Street in the Washington Heights community is situated on a raised stone block basement with glass block windows. It is clad with synthetic siding and has a cross-gable roof covered with asphalt shingles. Its front elevation has a metal storm door and a partial-width porch with concrete steps, metal railings, and open metal posts supporting a metal awning roof. Windows are non-original double-hung and come in varying sizes. Both side elevations feature window bays. This house does not have sufficient integrity or distinguishing features to qualify as individually eligible for listing on the National Register.

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Marengo, Illinois 60152
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Structural Survey

Integrity: Unaltered	[✓ Slight Modification]	Major Alteration	**Additional Notes/Descriptions** Replacement windows, door, siding, and porch
Condition: Excellent	[✓ Good]	Poor	
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Cross gable	
Ornamental Architectural Details None			**Windows** Double-hung, glass block
Outbuildings (*Number and Description*) Garage			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

10104 S. Eggleston Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1904

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

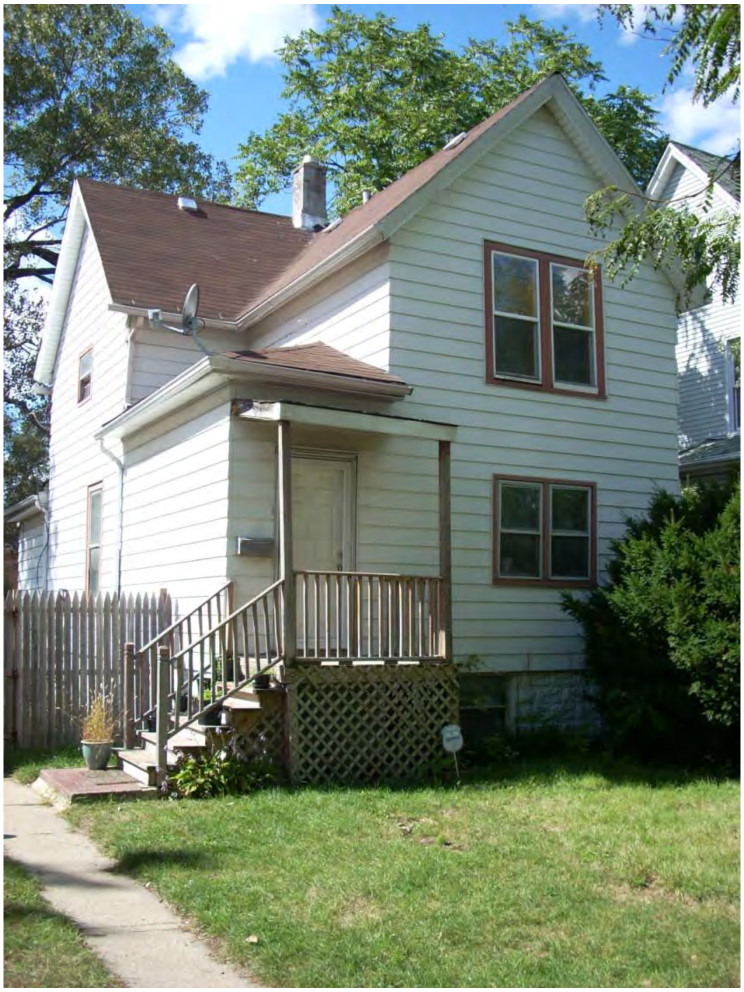
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 9 October 2012

Photos with Captions:
East façade of a two-story, frame, single family residence.



Property Description: **Stories:** 2

This two-story frame house in the Washington Heights community is situated on a raised concrete block basement, is clad with synthetic siding, and has a cross-gabled roof covered with asphalt shingles. The front elevation has a hip-roofed, enclosed corner vestibule at its south end with a hollow core metal door. It also has a non-original shed-roofed wood porch with straight railings and posts and two pairs of non-original one-over-one aluminum-sash windows: one on the first floor and one on the second. This house does not have sufficient integrity or distinguishing features to qualify as individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

<table>
<tr><td colspan="3">Integrity:
Unaltered
[✓ Slight Modification]
Major Alteration</td><td>Additional Notes/Descriptions
Replacement windows, door, porch, and cladding</td></tr>
<tr><td colspan="3">Condition:
[✓ Excellent]
Good
Poor</td><td></td></tr>
<tr><td colspan="3">Additional Alterations</td><td></td></tr>
<tr><td colspan="2">Structure Usage
Current: NA
Historic: NA</td><td>Exterior Wall Surface
Synthetic siding</td><td></td></tr>
<tr><td>Roof Material
Asphalt shingles</td><td>Roof Features
None</td><td>Roof Type
Cross-gabled</td><td></td></tr>
<tr><td colspan="3">Ornamental Architectural Details
None</td><td>Windows
Double-hung</td></tr>
<tr><td colspan="4">Outbuildings (<i>Number and Description</i>)
None</td></tr>
</table>

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

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505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

10142 S. Eggleston Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1948

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

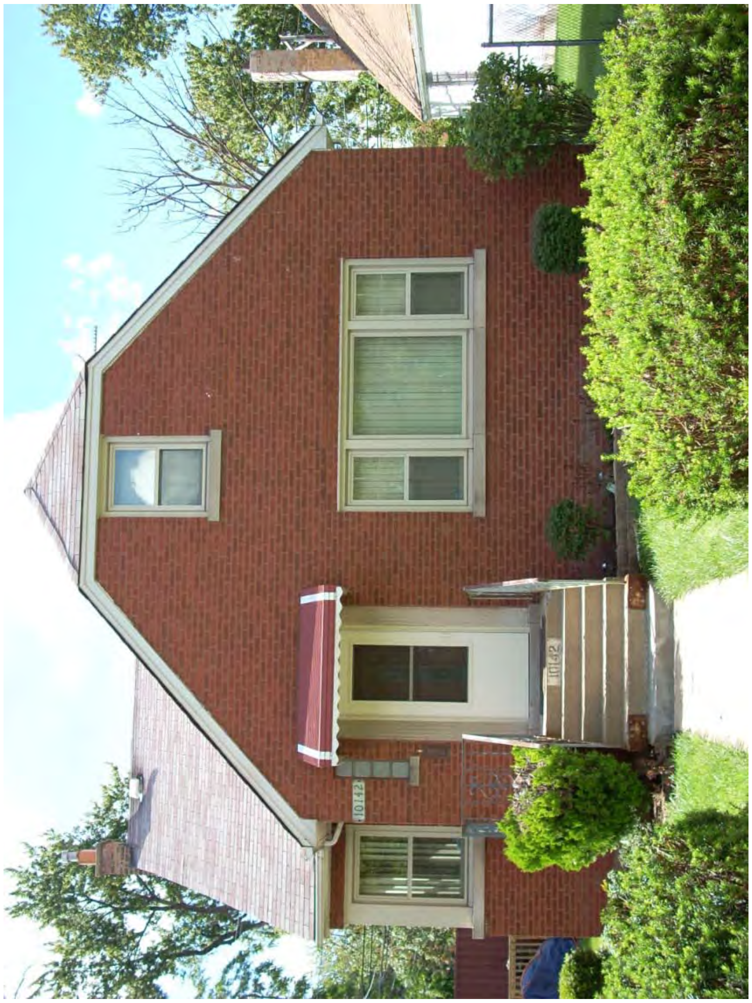
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 9 October 2012

Photos with Captions:
East façade of a brick, one-story, single family residence.



Property Description: **Stories:** 1

This one-story house in the Washington Heights community is situated on a raised brick basement with glass block windows. It has a cross-gable roof with asphalt shingles; the front wing features a hip-on-gable. The front elevation is clad with red face brick and the side elevations are clad with common brick. The first floor of the front elevation has an off-center entrance with a metal storm door, metal awning, concrete steps and railings. The first floor also has a one-over-one window and a picture window flanked by one-over-one windows. A single one-over-one window is situated in the gable. All double-hung windows are non-original aluminum-sash. Detailing features concrete sills and a vertical strip of four glass blocks adjacent to the front door. This house does not have sufficient integrity or distinguishing features to qualify as individually eligible for listing on the National Register.

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505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered	[✓ Slight Modification]	Major Alteration	**Additional Notes/Descriptions** Replacement windows
Condition: [✓ Excellent]	Good	Poor	
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt	**Roof Features** Hip-on-gable	**Roof Type** Cross gable,	
Ornamental Architectural Details Decorative glass blocks, concrete sills			**Windows** Double-hung, fixed-pane, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

10148 S. Eggleston Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1919

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

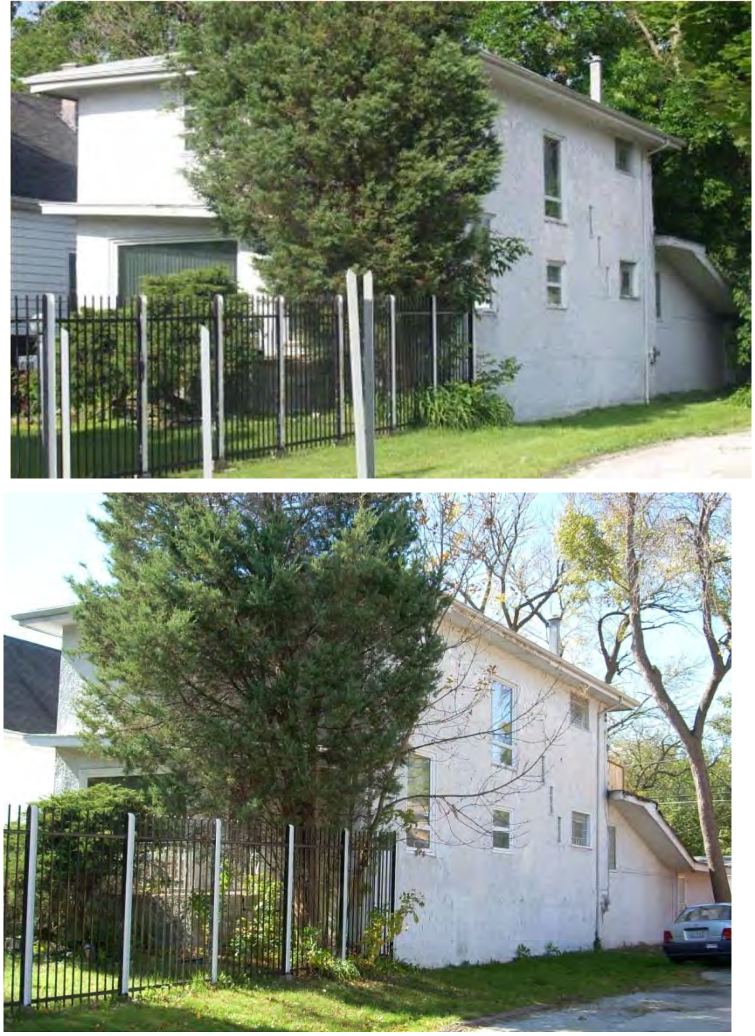
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz (lower); CCA (upper 2007)

Date: 31 October 2012

Photos with Captions:
East and north façades of a two-story, single family residence.



Property Description: **Stories:** 2

This two-story house in the Washington Heights community is clad with stucco and has a hip roof covered in asphalt shingles with overhanging eaves. Its front elevation has a large picture window, an off-center door with concrete steps, and a pair of windows on the second floor. Glass block and non-original double-hung windows are visible on the side elevation. The second story and rear one-story addition with a shed roof represent later additions. This house lacks integrity and distinctive architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows
Condition: [✓ Excellent] Good Poor			
Additional Alterations Second story added after 1938 (Sanborn). Rear addition also post-dates 1938.			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Stucco	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Hip	
Ornamental Architectural Details None			**Windows** Double-hung, fixed-pane, glass block
Outbuildings (*Number and Description*) Detached garage.			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

10200 S. Eggleston Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1888

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

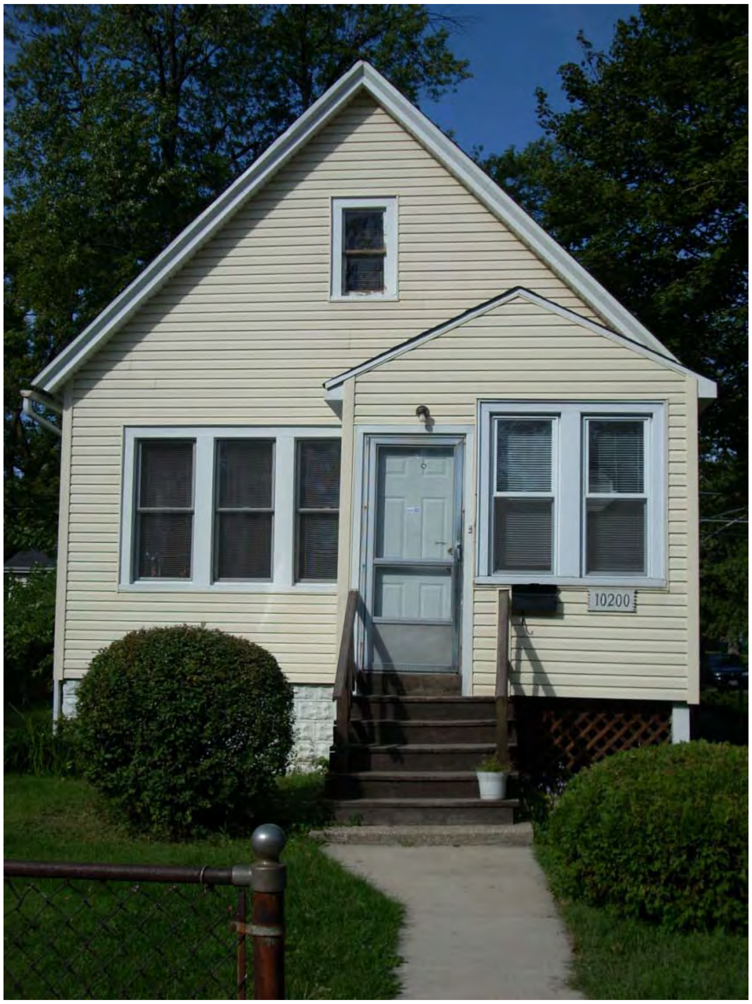
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: Steve Katz

Date: 10 October 2012

Photos with Captions:
East façade of a one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story frame house on the southwest corner of Eggleston and 102nd Street in the Washington Heights community is situated on a raised concrete block basement with glass block windows. It is clad with synthetic siding and has a front gable roof covered with asphalt shingles. Its front elevation has a gabled roof, enclosed porch with a hollow core metal core, wood steps and railings, five windows on the first floor and one in the gable, all of which are non-original one-over-one aluminum-sash. This house lacks integrity, does not feature distinguishing architectural elements, and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity:			**Additional Notes/Descriptions**
Unaltered	[✓ Slight Modification]	Major Alteration	Replacement door, windows, and cladding
Condition:			
[✓ Excellent]	Good	Poor	
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingles	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

10236 S. Eggleston Ave.

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1913

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

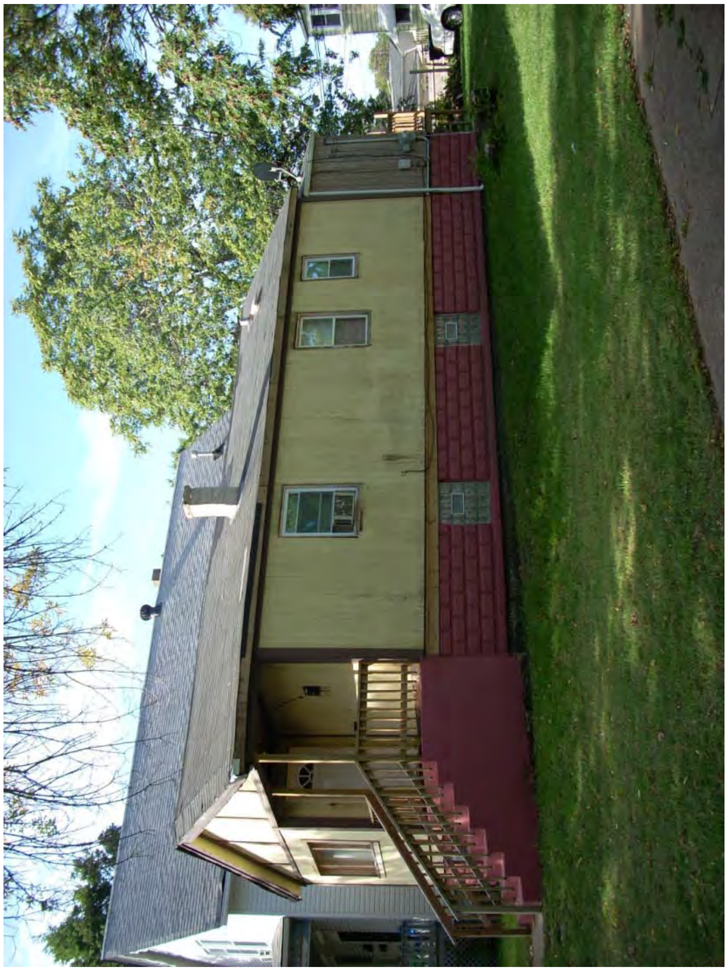
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 10 October 2012

Photos with Captions:
East façade of a one-story, frame, single family residence.



Property Description: **Stories:** 1

This one-story frame cottage in the Washington Heights community is situated on a raised concrete block basement with glass block windows. It is clad with wood boards laid vertically and has a gable roof covered with asphalt shingles. There is decorative vertical stickwork in the gable. The residence has a recessed corner porch with a hollow-core metal paneled door, concrete steps, and non-original wood railings and posts. A picture window is on the front elevation and one-over-one aluminum-sash windows on the side elevations (non-original). This house does not feature distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement door, windows, siding, and porch railing
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Wood siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details Stickwork above porch			**Windows** Double-hung, fixed-pane, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

10415 S. Eggleston Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1927

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

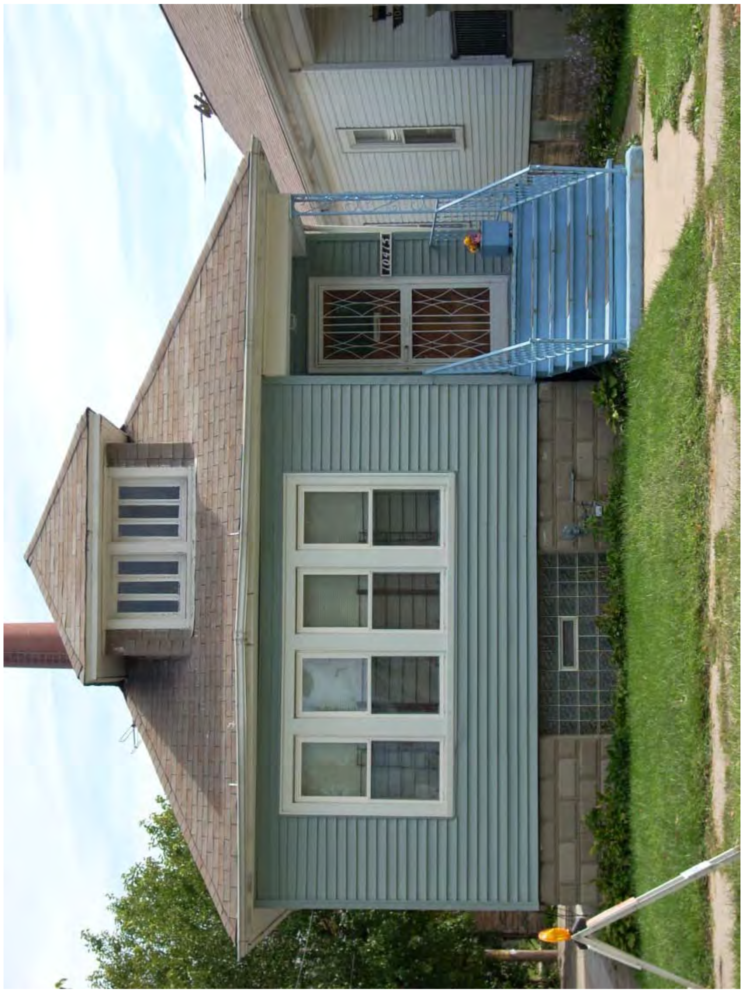
Craftsman

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 10 October 2012

Photos with Captions:
West façade of a one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story frame bungalow in the Roseland community is situated on a raised concrete block basement with glass block windows. It is clad with synthetic siding and has a hip roof covered with asphalt shingles and a hip dormer with two windows that appear to be casements. The front elevation has a strip of four non-original one-over-one aluminum-sash windows and a recessed corner porch with a metal storm door, wood steps, metal railings, and an open metal corner post. This house does not have sufficient integrity or distinguishing architectural features to qualify as individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows and cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** Dormer	**Roof Type** Hip	
Ornamental Architectural Details None			**Windows** Double-hung, casement, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

10531 S. Eggleston Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1940

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

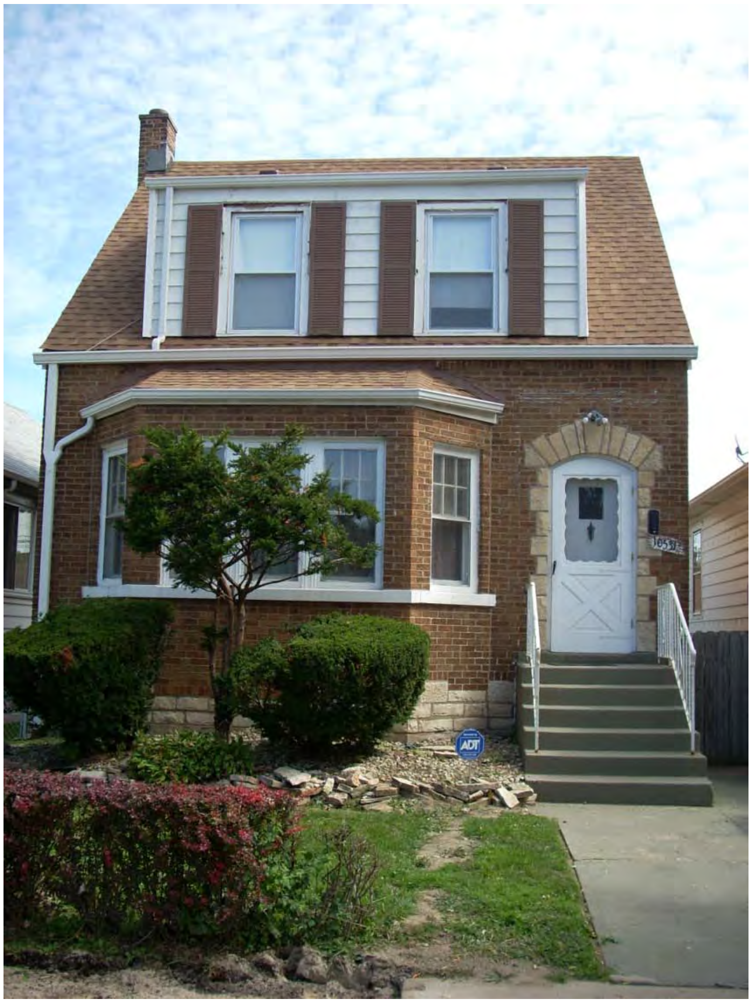
Minimal Traditional

Prepared By: J. Martinez, M. C. Bird, J. Gaurino

Photo By: S. Katz

Date: 12 October 2012

Photos with Captions:
West façade of a brick, one-story, single family residence.



Property Description: **Stories:** 1

This one-story, brick-clad cottage in the Roseland community is situated on a raised brick basement and has a side gable roof covered with asphalt shingles. It has and a non-original flat-roofed aluminum-clad dormer with two non-original one-over-one aluminum-sash windows. The front elevation has an off-center entrance with a metal storm door, concrete steps with metal railings, and a hip-roof living room bay with six-over-one wood-sash windows. Detailing includes decorative stone at the basement level and surrounding the front door. This building does not have sufficient distinguishing architectural features to qualify as individually eligible for listing on the National Register.

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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Some replacement windows
Condition: [✓ Excellent] Good Poor			
Additional Alterations Dormer added			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingle	**Roof Features** Dormer	**Roof Type** Side gable	
Ornamental Architectural Details Stone accents at basement level and around entrance			**Windows** Double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

10558 S. Eggleston Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1924

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

Craftsman

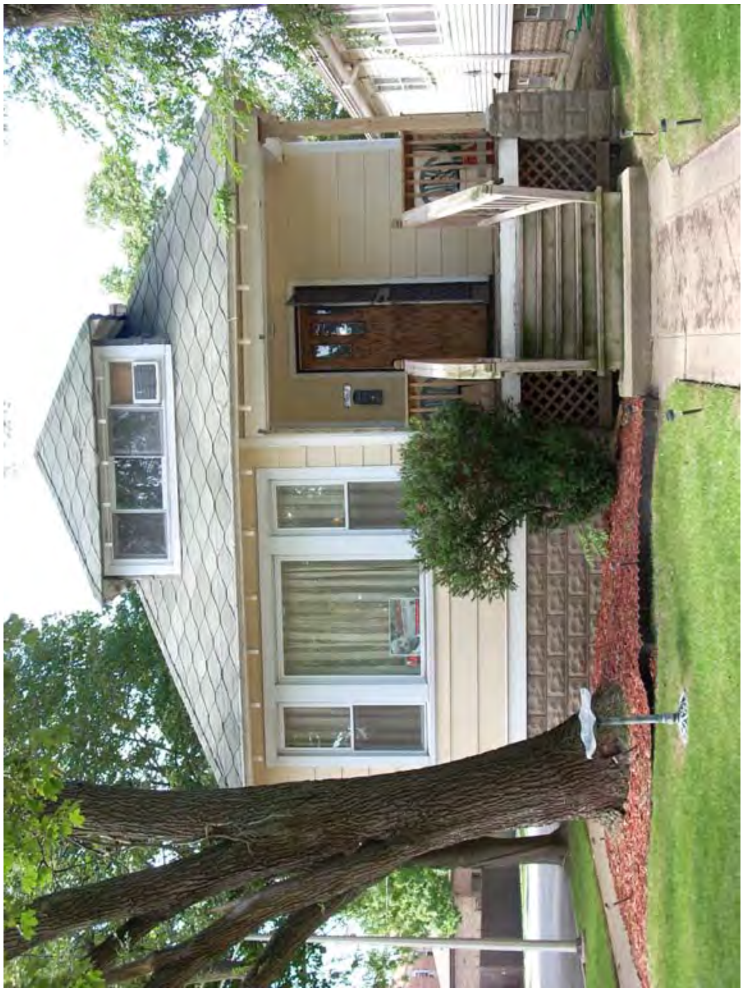
Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 12 October 2012

Photos with Captions:

East faced of a one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story Craftsman bungalow at the northwest corner of Eggleston Avenue and 106th Street in the Roseland community is situated on a raised concrete block basement with glass block windows and is clad with synthetic siding. The building has a hip roof covered with asphalt shingles, overhanging eaves, decorative rafters, and a hip dormer. The residence has a recessed corner porch with a wood door, wood steps and railings, and a corner support consisting of a faux stone pedestal topped by a Doric column. The front (Eggleston) elevation has a picture window flanked by one-over-one aluminum-sash windows (non-original). The hip dormer has sliding windows, one of which is partially enclosed by plywood. The 106th Street elevation has a gabled pavilion, non-original one-over-one aluminum-sash windows, and a single casement window. This building does not have sufficient distinguishing architectural features or integrity to qualify as individually eligible for listing on the National Register.

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement door, windows, and cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** Dormer	**Roof Type** Hip	
Ornamental Architectural Details Exposed rafters, Doric column			**Windows** Double-hung, sliding, fixed-pane, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

10601 S. Eggleston Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1929

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

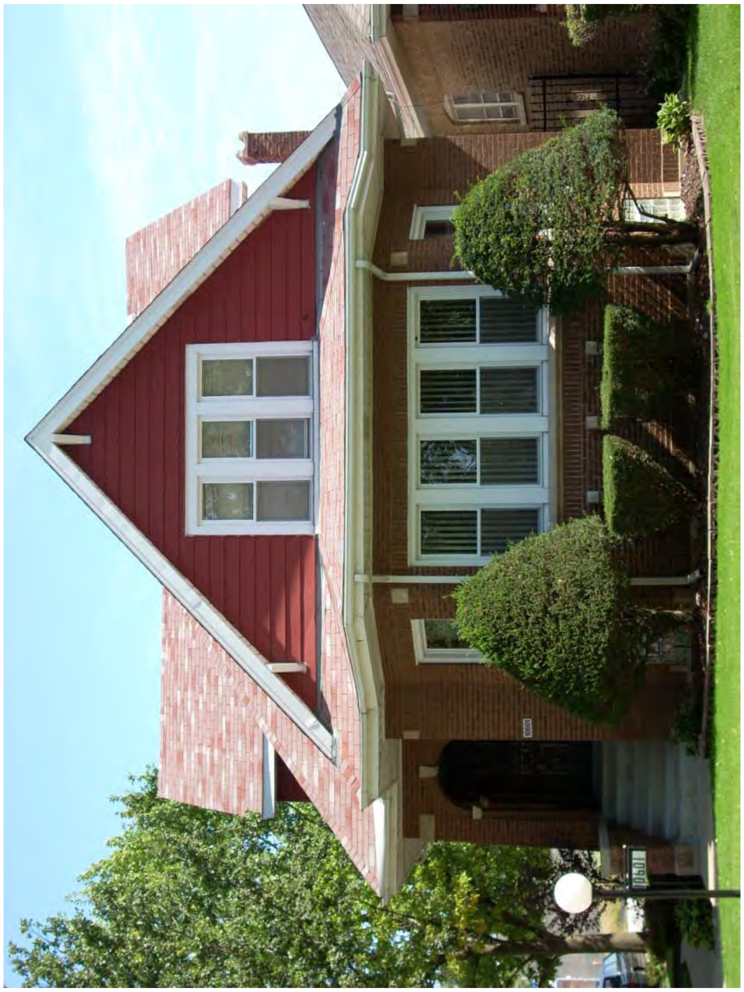
Chicago Style Bungalow

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 12 October 2012

Photos with Captions:
West façade of a one-story, brick, single family residence.



Property Description: **Stories:** 1

This one-story bungalow in the Roseland community is situated on a raised basement with glass block windows. The building is clad in brown brick, has a hip roof covered with asphalt shingles, and has overhanging eaves. The front and both side elevations feature large gable dormers and the rear elevation has a shed dormer, all of which are clad with aluminum siding. The house features a recessed corner porch with a metal storm door, concrete steps, low brick sidewalls, a brick corner pier, and arched front and side openings. The front elevation’s three-sided living room bay has six windows and the front gable dormer has three windows, all of which are non-original one-over-one aluminum-sash. Detailing includes brick soldier courses above and below the living room bay windows, decorative stone insert blocks, and concrete sills. This house does not feature distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
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Structural Survey

Integrity:

Unaltered [✓ Slight Modification] Major Alteration

Additional Notes/Descriptions

Replacement windows, cladding in dormers

Condition:

[✓ Excellent] Good Poor

Additional Alterations

Dormers may have been a later addition.

Structure Usage	**Exterior Wall Surface**
Current: NA Historic: NA	Brick (main), Aluminum siding (dormers)

Roof Material	**Roof Features**	**Roof Type**
Asphalt shingles	Dormer	Hip

Ornamental Architectural Details

Concrete sills and insert blocks, brick soldier courses

Windows

Double-hung, fixed-pane, stained glass

Outbuildings (*Number and Description*)

Detached two-car garage with pyramidal roof behind residence.

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

10612 S. Eggleston Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1947

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

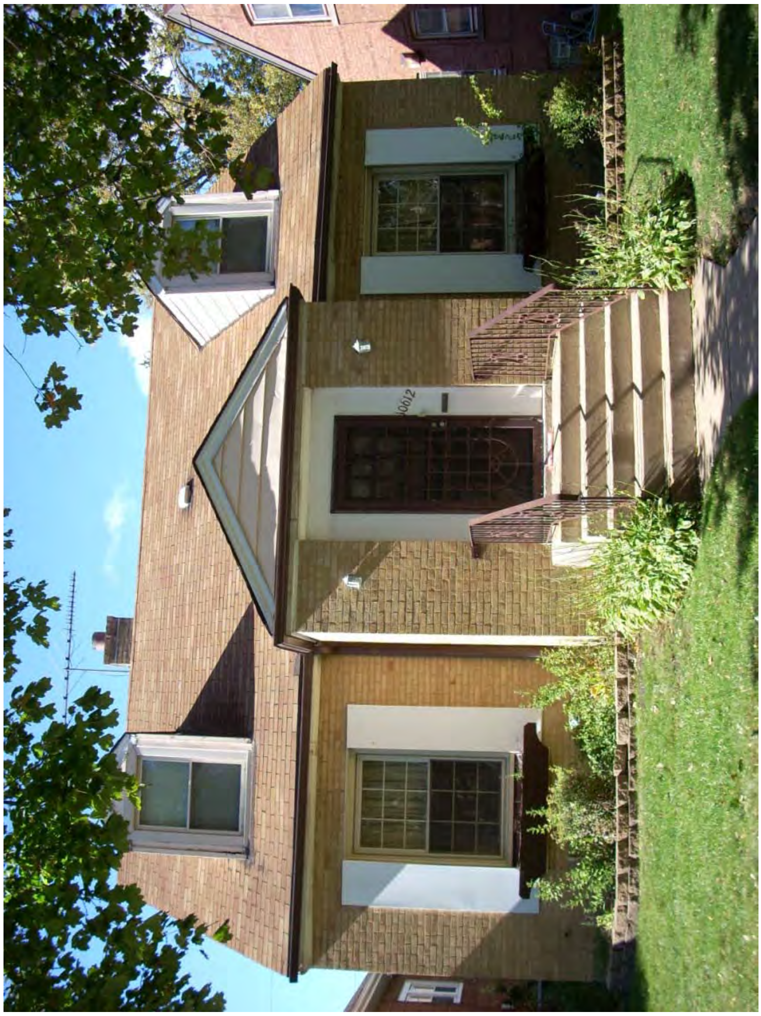
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 30 October 2012

Photos with Captions:
East façade of a one-story, single family, brick residence.



Property Description: **Stories:** 1

This one-story house in the Roseland community area is clad with tan face brick on its front elevation and common brick on its side elevations. The building has a steeply-pitched side-gable roof covered with asphalt shingles and two synthetic-clad gable dormers with one-over-one windows. Its front elevation has a centrally located, gabled, brick-clad entrance vestibule, a metal storm door with an unadorned wood surround, concrete steps with metal railings, and two nine-over-nine windows. It lacks distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: [✓ Unaltered] Slight Modification Major Alteration	**Additional Notes/Descriptions**
Condition: [✓ Excellent] Good Poor	
Additional Alterations	
Structure Usage Current: NA Historic: NA **Exterior Wall Surface** Brick (main); Synthetic siding (dormers)	
Roof Material Asphalt shingle **Roof Features** Dormers **Roof Type** Gable	
Ornamental Architectural Details None	**Windows** Double-hung
Outbuildings (*Number and Description*) None	

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

10720 S. Eggleston Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Vacant

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1924

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

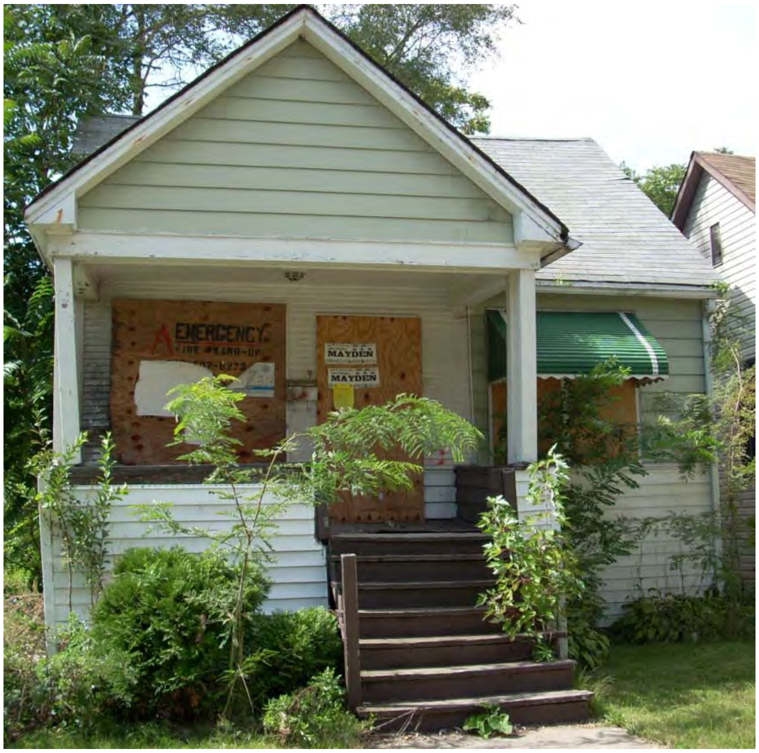
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 12 October 2012

Photos with Captions:
East façade of a one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story house in the Roseland community is clad with synthetic siding and has a cross-gable roof covered with asphalt shingles. The front elevation has a partial-width porch with gable roof, aluminum-clad sidewalls, and wood posts, steps, and railings. Its front door and flanking windows are covered with plywood. This house lacks integrity and distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement cladding
Condition: Excellent Good [✓ Poor]			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Cross gable	
Ornamental Architectural Details One tapered wood column			**Windows** Covered
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

10757 S. Eggleston Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Vacant

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1923

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

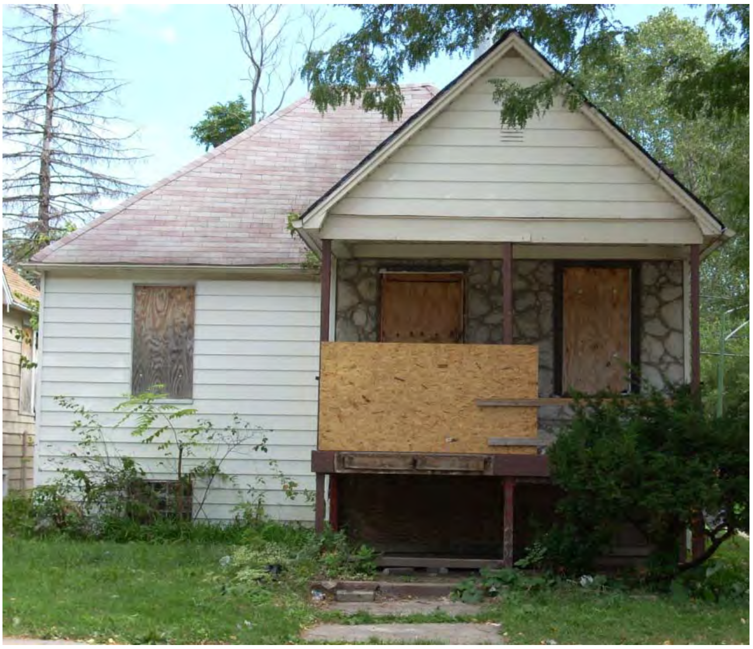
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 12 October 2012

Photos with Captions:
West façade of a one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story house at the northwest corner of Eggleston Avenue and 108th Street in the Roseland community is situated on a raised basement, is clad with synthetic siding, and has a hip roof covered with asphalt shingles. Its front elevation is partially clad with faux stone siding and has a partial-width porch with gable roof, wood deck, and post supports. The porch steps and railings have been removed; the front door and all window openings are covered with plywood. This house lacks integrity and distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement siding, steps removed
Condition: Excellent Good [✓ Poor]			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding (main), Faux stone (entrance)	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Hip	
Ornamental Architectural Details None			**Windows** Covered
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

10904 S. Eggleston Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1927

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

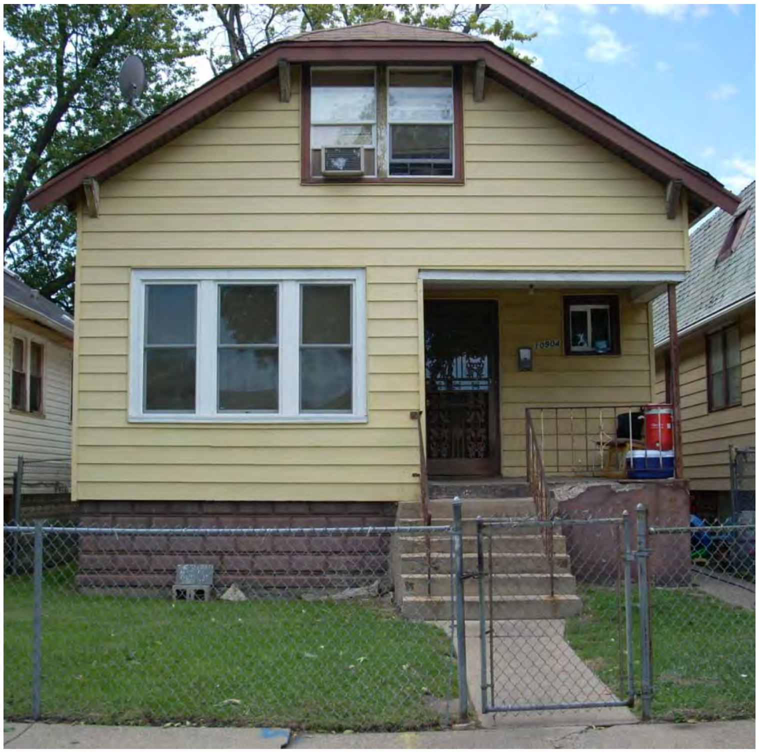
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 12 October 2012

Photos with Captions:
East façade of a one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story house in the Roseland community is situated on a raised concrete block basement and clad with synthetic siding. The building has a hip-on-gable roof covered with asphalt shingles and overhanging eaves with wood brackets. The front elevation has a recessed corner porch with concrete steps, metal railings, a single wood corner post, and an entrance with a metal storm door. Windows are non-original and include a small casement window adjacent to the front door, a strip of three one-over-one windows on the first floor, and a pair of one-over-one aluminum-sash windows in the attic. This house lacks integrity and distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows and cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingles	**Roof Features** None	**Roof Type** Hip on Gable	
Ornamental Architectural Details None			**Windows** Double-hung, casement
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

10953 S. Eggleston Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1960

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

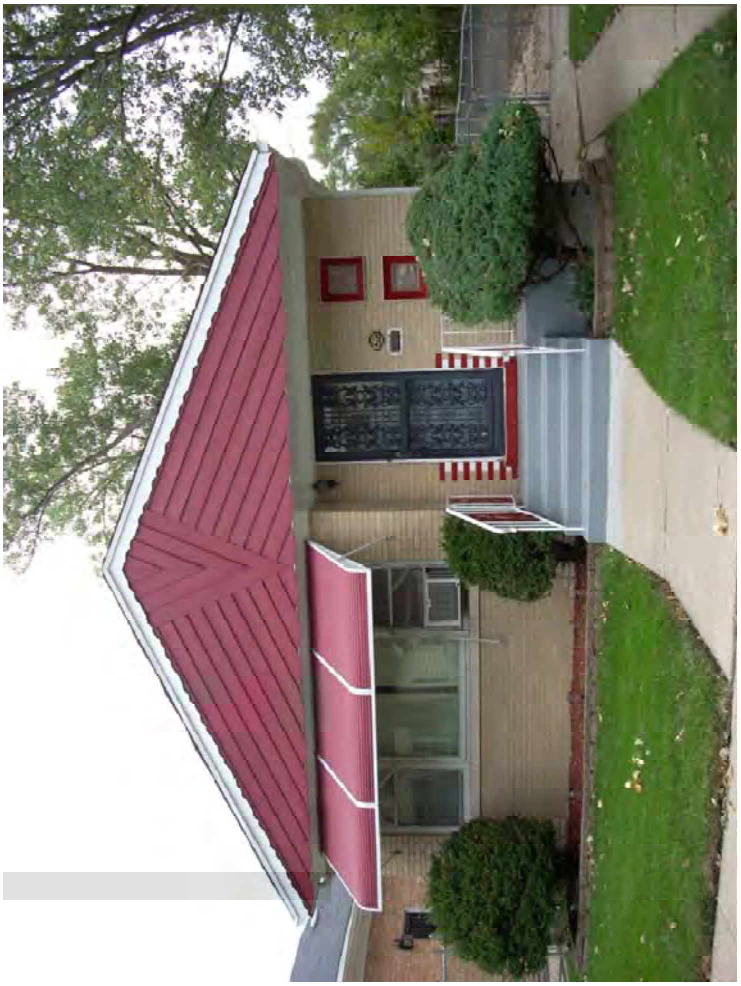
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 16 September 2012

Photos with Captions:
West façade one-story, brick, single-family residence.



Property Description: **Stories:** 1

This one-story house in the Roseland community with a raised basement is clad with buff brick on its front elevation and common brick on its side and rear elevations. The building has a front gable roof covered with asphalt shingles and has overhanging eaves. Its front elevation has a projecting three-sided living room bay with a picture window flanked by one-over-one aluminum-sash windows that are sheltered by a metal awning. The residence has an off-center entrance with a metal storm door, concrete steps with metal railings, and an wood-clad gable laid in diagonal patterns. Detailing includes two decorative glass blocks adjacent to the front door and scalloped trim around the gable. It does not feature distinctive architectural elements and is not individually eligible for listing on the National Register.

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Phone (815) 568- 0680

Structural Survey

Integrity: [✓ Unaltered] Slight Modification Major Alteration			**Additional Notes/Descriptions**
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick (main), Wood (gable end)	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details Glass block detail near entrance, diagonal pattern for gable clapboards			**Windows** Double-hung
Outbuildings (*Number and Description*) Detached, one-car, frame garage			

Local Landmark	**Y [✓ N]**	
National Register Historic Places	**Y [✓ N]**	
National Register Historic District	**Y [✓ N]**	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

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Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

11130 S. Eggleston Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Flat

Current: Flat

Date of Construction: 1914

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

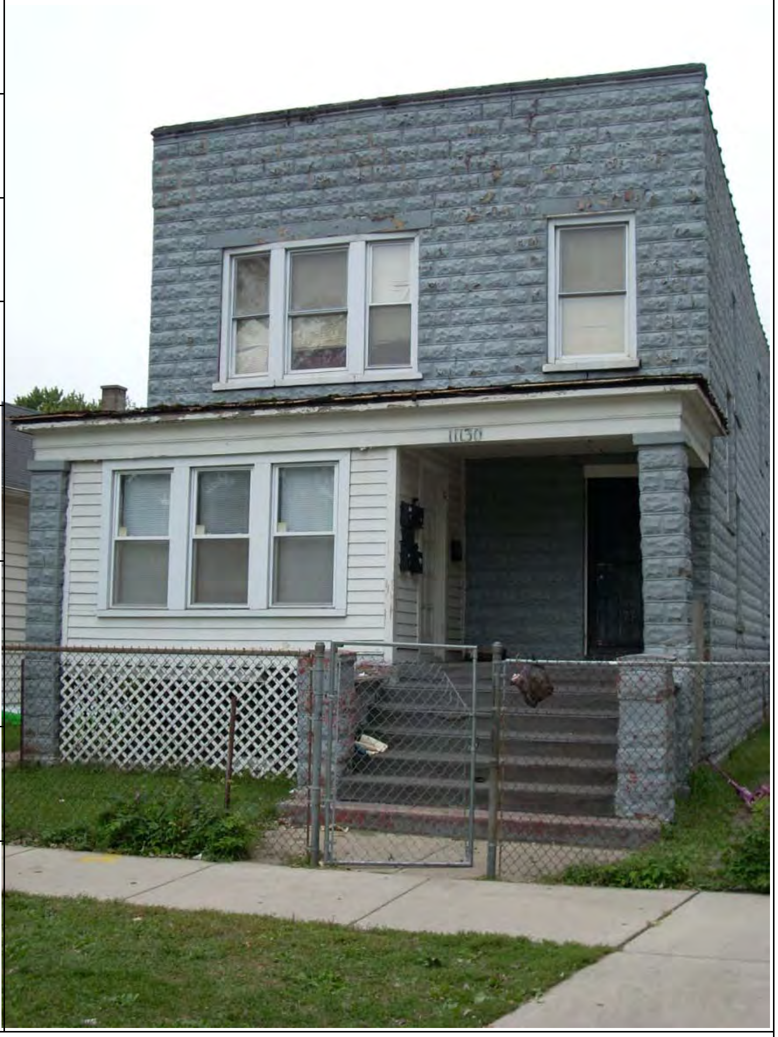
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 16 September 2012

Photos with Captions:
East façade of two-story, concrete block, two-flat residence.



Property Description: **Stories:** 2

This two-flat residential building in the Roseland community is situated on a raised basement and made of rusticated concrete block. The building has a flat roof and parapet. It features a flat-roofed full-width porch, half of which is enclosed and covered with aluminum siding. The enclosed porch has a strip of three non-original one-over-one aluminum-sash windows on its front elevation. The open half of the porch has an entrance with metal storm door, a faux stone corner support, and wood steps flanked by concrete block half-walls. The second floor of the front elevation has a strip of three windows and a single window, which are non-original one-over-one aluminum-sash and have stone sills and lintels. This house lacks integrity and distinctive architectural features and is not individually eligible for listing on the National Register.

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Structural Survey

Integrity:			**Additional Notes/Descriptions**
Unaltered	[✓ Slight Modification]	Major Alteration	Replacement windows
Condition:			
Excellent	[✓ Good]	Poor	
Additional Alterations Porch partially enclosed after 1938 (Sanborn).			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Concrete block	
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details Stone sills and lintels			**Windows** Double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

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Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

11133 S. Eggleston Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1888

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

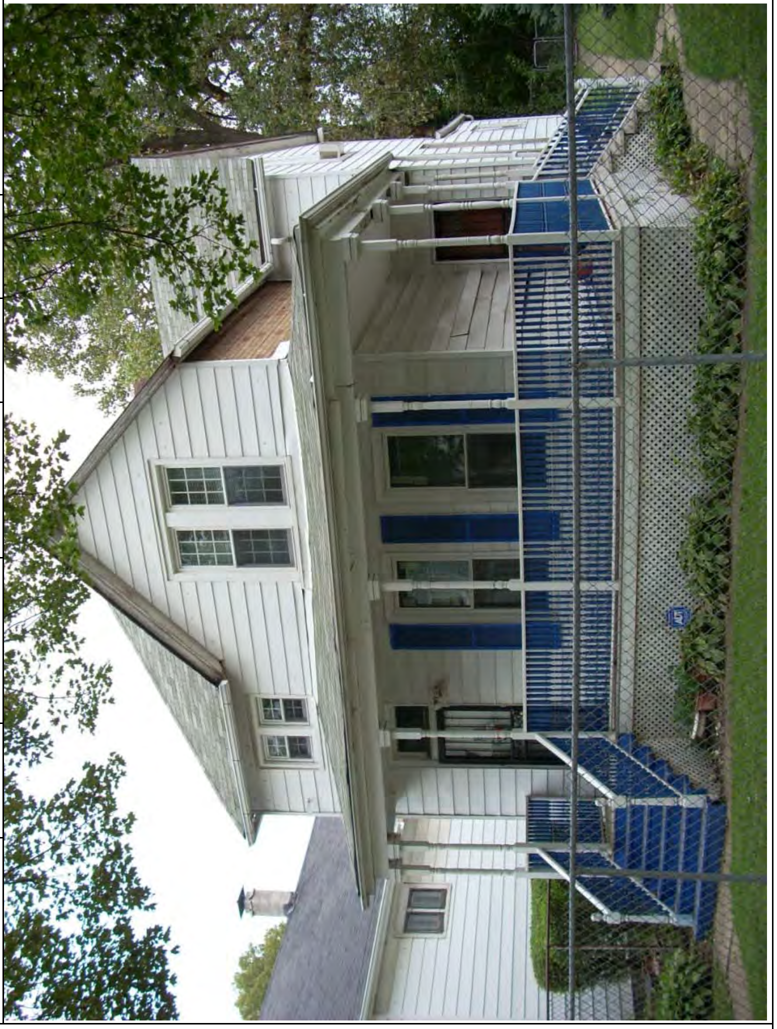
Vernacular

Prepared By: C. Tolmie

Photo By: S. Katz

Date: 16 September 2012

Photos with Captions:
West façade of 1.5-story, single-family, frame residence.



Property Description: **Stories:** 1.5

This 1.5-story frame house in the Roseland community is situated on a raised basement and is covered with synthetic siding. The building has an original, full-width, hip-roofed wrap-around wood porch with turned posts and straight railings. It has a cross-gable-on-hip roof covered with asphalt shingles. Its front elevation has an off-center door with transom and two one-over-one windows. The second floor of the front elevation has two pairs of double-hung windows, one of which features nine-over-nine sashes. Windows are modern replacements. This house lacks integrity and distinctive architectural features and is not individually eligible for listing on the National Register.

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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows and cladding
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details Turned columns on porch			**Windows** Double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y [✓ N]**	
National Register Historic Places	**Y [✓ N]**	
National Register Historic District	**Y [✓ N]**	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

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Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

11139 S. Eggleston Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1915

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

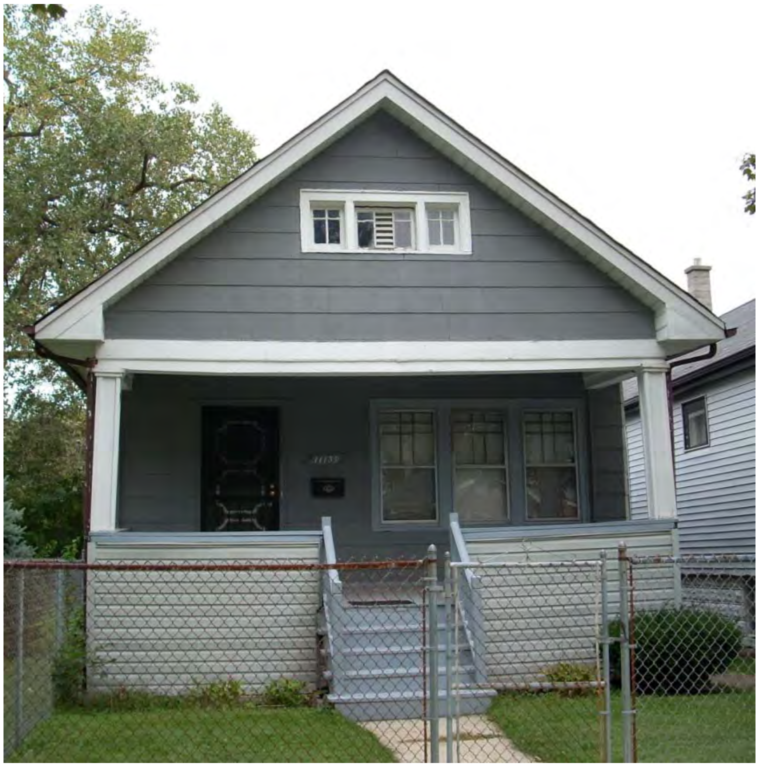
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 16 September 2012

Photos with Captions:
West façade of one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story frame house in the Roseland community is situated on a raised brick basement with glass block windows and is covered with synthetic siding. The building has a front gable roof covered with asphalt shingles. The front elevation has a full-width porch with low, aluminum-covered sidewalls and squat squared wood column supports. The entrance is off-center and has a metal storm door. There is a strip of three non-original double-hung windows on the first floor and a strip of three original wood casement windows in the gable. This house lacks integrity and distinctive architectural features and is not individually eligible for listing on the National Register.

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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement cladding and first floor windows
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details Squat, square columns			**Windows** Double-hung, casement, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
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Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11211 S. Eggleston Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Vacant

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1922

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

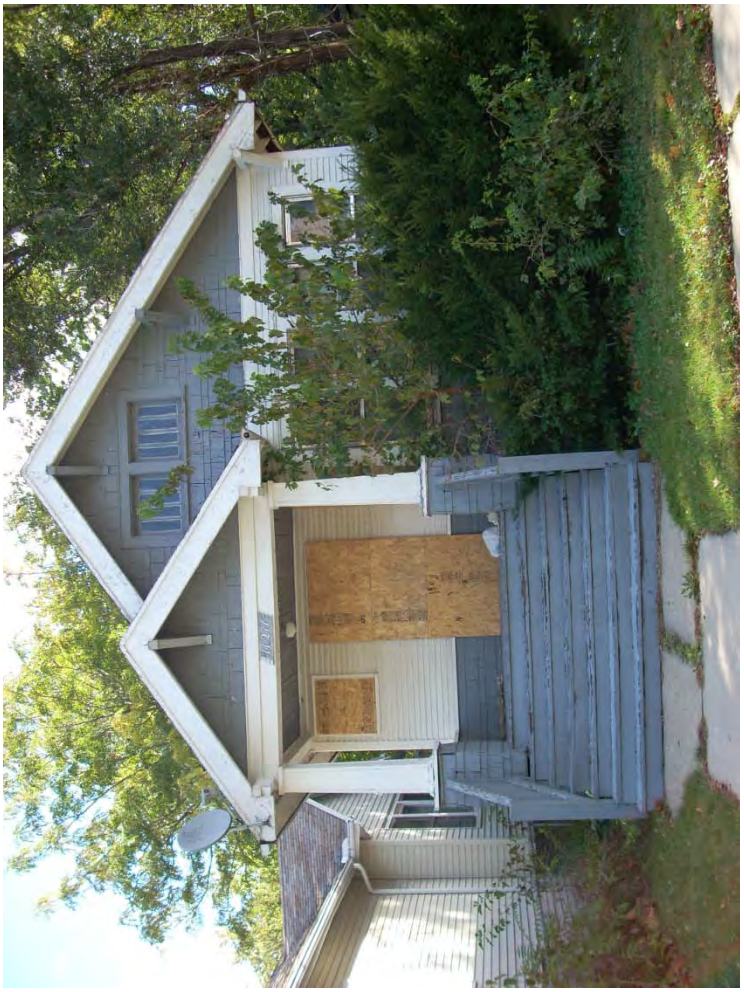
Craftsman

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 30 October 2012

Photos with Captions:
West façade of a one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story Craftsman style bungalow in the Roseland community is situated on a raised brick basement and is clad with wood clapboards with wood shingles in the gabled ends. The building has a front gable roof covered with asphalt shingles and overhanging eaves with exposed rafters and decorative knee braces. The front elevation features a partial-width, front-gable, wood porch with squat, squared Doric columns and a boxed cornice. The porch door and adjacent window opening are covered with plywood. There is a group of four one-over-one windows on the first floor and a pair of original wood casement windows in the attic. This is an example of a Craftsman bungalow, an exceedingly common style during the 1910s and 1920s but lacks distinctive architectural features and is not individually eligible for listing on the National Register.

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Structural Survey

Integrity:

Unaltered [✓ Slight Modification] Major Alteration

Additional Notes/Descriptions

Replacement windows (first floor)

Condition:

[✓ Excellent] Good Poor

Additional Alterations

Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Wood siding and shingles
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable

Ornamental Architectural Details

Knee braces, exposed rafters, squared columns

Windows

Double-hung, casement

Outbuildings (*Number and Description*)

None

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

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Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11257 S. Eggleston Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1908

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

Vernacular

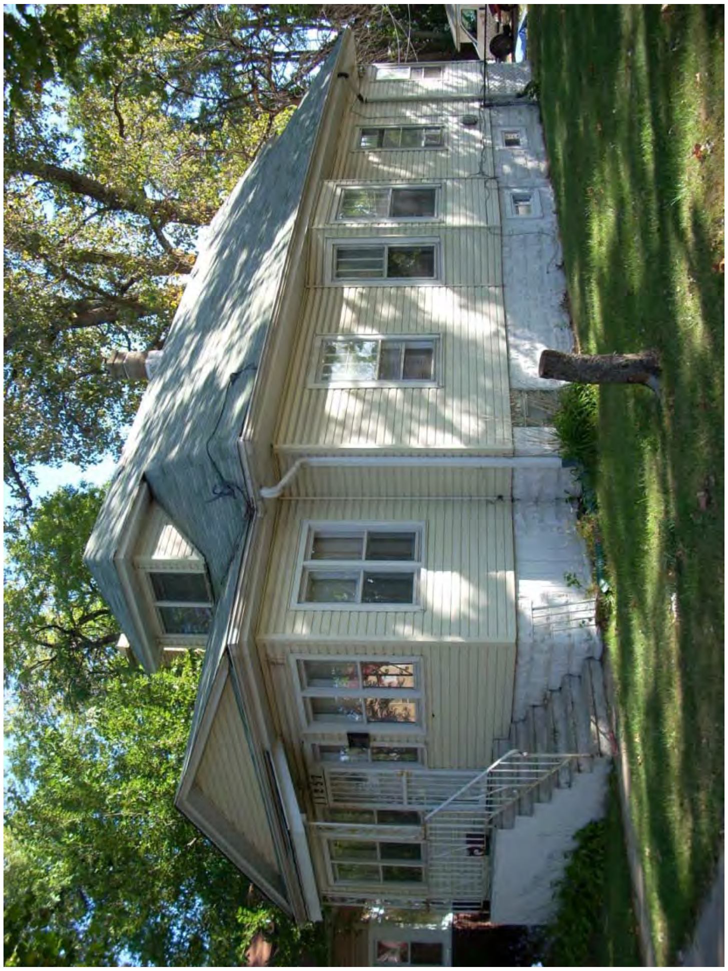
Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 22 October 2012

Photos with Captions:

West and south façades of a one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story house in the Roseland community is situated on a raised concrete block basement with glass block windows and is covered with synthetic siding. The building has a hip roof covered with asphalt shingles, and a hip dormer with two casement windows. The front elevation features a full-width, gable-roof, synthetic-clad sun porch surrounded by non-original one-over-one aluminum-sash windows and a centrally located door with sidelights. There is also an open shed-roof porch with concrete steps, metal railings, and open metal posts. This house lacks integrity and distinctive architectural features and is not individually eligible for listing on the National Register.

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Structural Survey

Integrity:

Unaltered [✓ Slight Modification] Major Alteration

Additional Notes/Descriptions

Replacement windows and cladding

Condition:

[✓ Excellent] Good Poor

Additional Alterations

Structure Usage	**Exterior Wall Surface**
Current: NA Historic: NA	Synthetic siding

Roof Material	**Roof Features**	**Roof Type**
Asphalt shingle	Dormer	Hip

Ornamental Architectural Details

None

Windows

Double-hung, glass block, casement

Outbuildings (*Number and Description*)

None

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
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Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

9818 S. Emerald Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1899

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

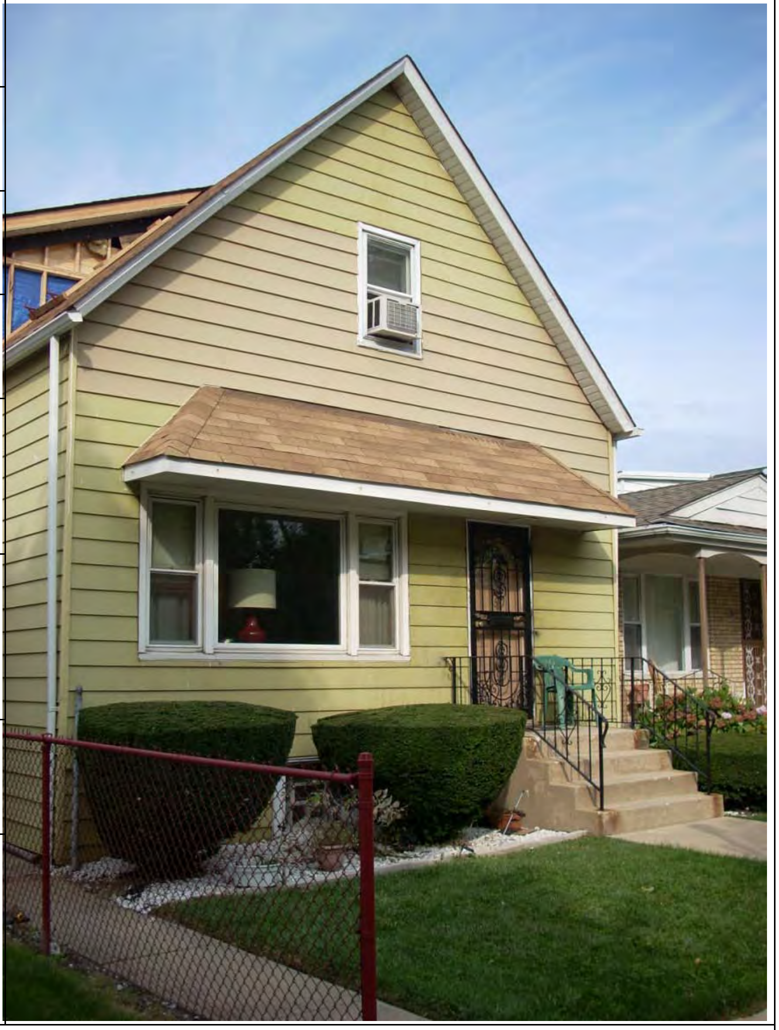
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: September 2012

Photos with Captions:
East façade of 1.5-story, single family, frame residence.



Property Description: **Stories:** 1.5

This one-and-a-half-story frame house in the Washington Heights community sits on a raised basement and is clad with synthetic siding. The building has a front gable roof covered with asphalt shingles and an upper story shed-roofed addition along its south elevation. Its front elevation has a pent roof, an off-center hollow core metal door, concrete steps with metal railings, a picture window flanked by one-over-one aluminum-sash windows on the first floor, and a single one-over-one aluminum-sash window in the gable. The door, windows, cladding, and stair rails are non-original. This house lacks integrity and distinctive architectural features and is not individually eligible for listing on the National Register.

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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows, doors, and cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations Shed-roofed addition under construction.			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung, fixed-pane
Outbuildings (*Number and Description*) Garage			

Local Landmark	**Y [✓ N]**	
National Register Historic Places	**Y [✓ N]**	
National Register Historic District	**Y [✓ N]**	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

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Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

9823 S. Emerald Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1944

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

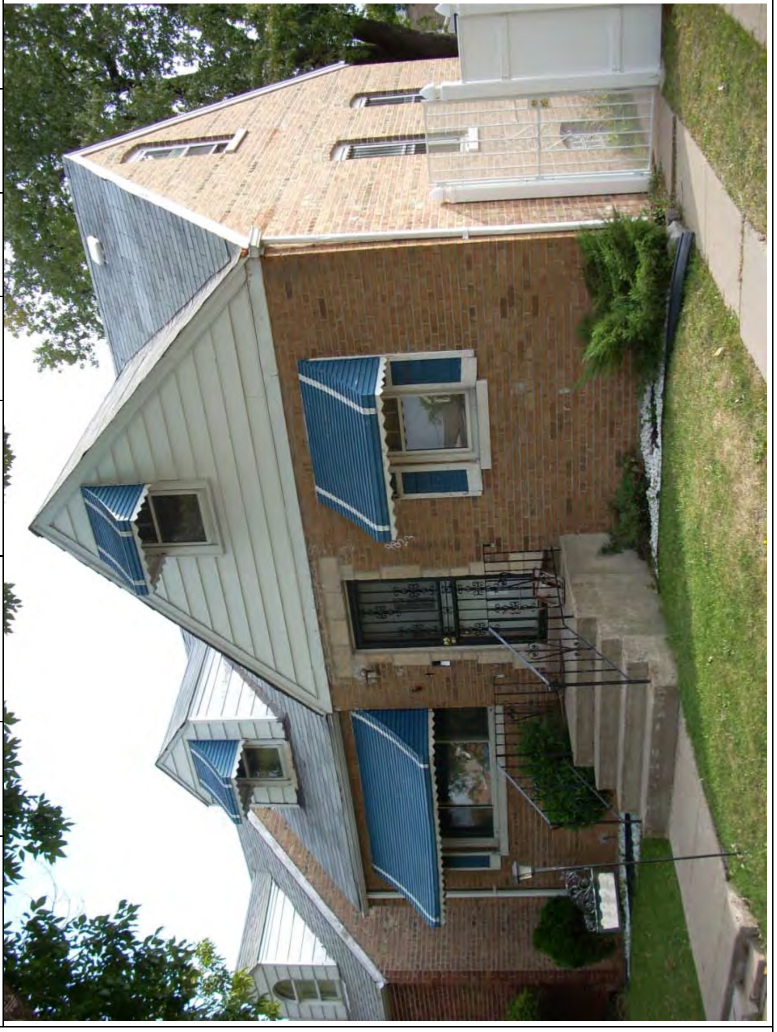
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: September 2012

Photos with Captions:
West façade of one-story, single family, brick residence.



Property Description: **Stories:** 1

This one-story house in the Washington Heights community is clad with light brown face brick and has a side-gable roof covered with asphalt shingles. Its front elevation has a partial-width gable pavilion with a synthetic-sided gable, a synthetic-clad gable dormer, a central hollow core metal door surrounded by stone, and concrete steps with metal railings. There is a picture window on the first floor and three non-original double-hung aluminum sash windows: one on the first floor and one each in the gable pavilion and gable dormer. All front elevation windows have metal awnings. This house lacks distinctive architectural features and is not individually eligible for listing on the National Register.

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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement door and windows.
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingle	**Roof Features** Dormer	**Roof Type** Gable	
Ornamental Architectural Details Stone surrounding the entrance			**Windows** Double-hung
Outbuildings (*Number and Description*) Garage			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

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Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

9900 S. Emerald Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1947

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

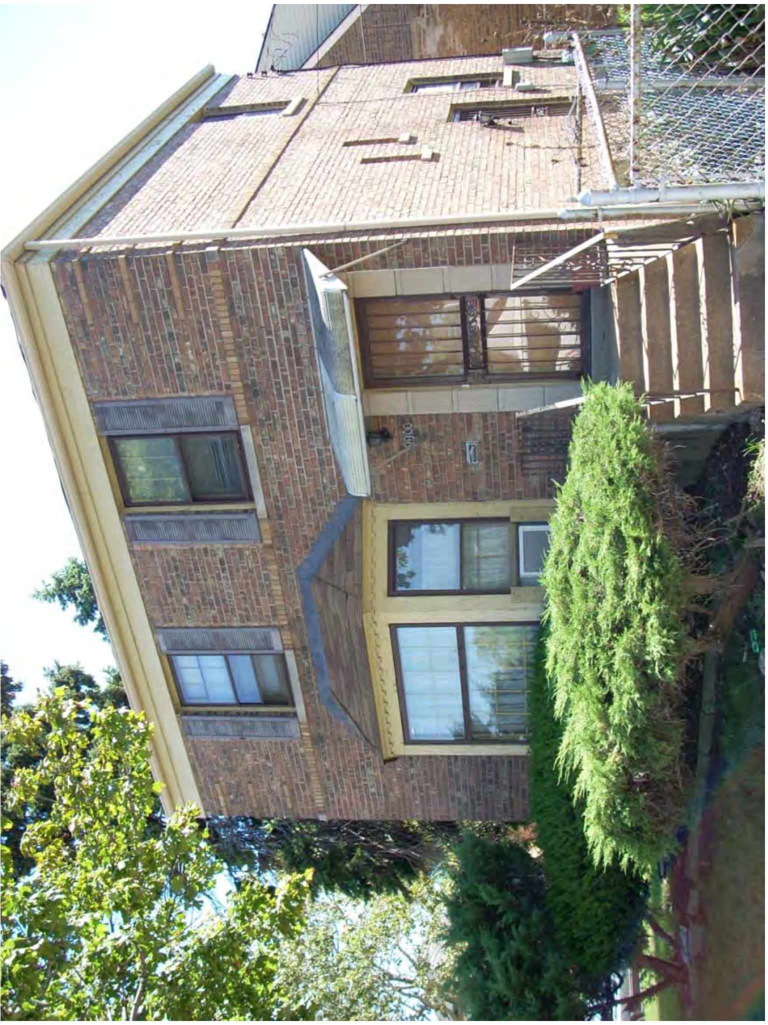
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 11 September 2012

Photos with Captions:
North and west façades of brick, two-story, single family residence.



Property Description: **Stories:** 2

This two-story brick-clad house in the Washington Heights community has a hip roof covered with asphalt shingles. Its front façade has an off-center door with concrete steps and metal railings, a three-sided bay window with hip roof on the first floor, and two six-over-one windows on the second floor. Details include concrete sills, a concrete door surround, brick stringcourses, and a scalloped wood panel above the windows in the bay. This is a standard post-World War II era and does not feature distinguishing architectural elements. Therefore, it is not individually eligible for listing on the National Register.

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Structural Survey

Integrity: [✓ Unaltered] Slight Modification Major Alteration			**Additional Notes/Descriptions**
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Pyramid	
Ornamental Architectural Details Brick stringcourses, concrete sills and door surround, scalloped wood panel above windows in bay			**Windows** Double-hung
Outbuildings (*Number and Description*) Storage shed			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

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505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

9906 S. Emerald Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1942

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

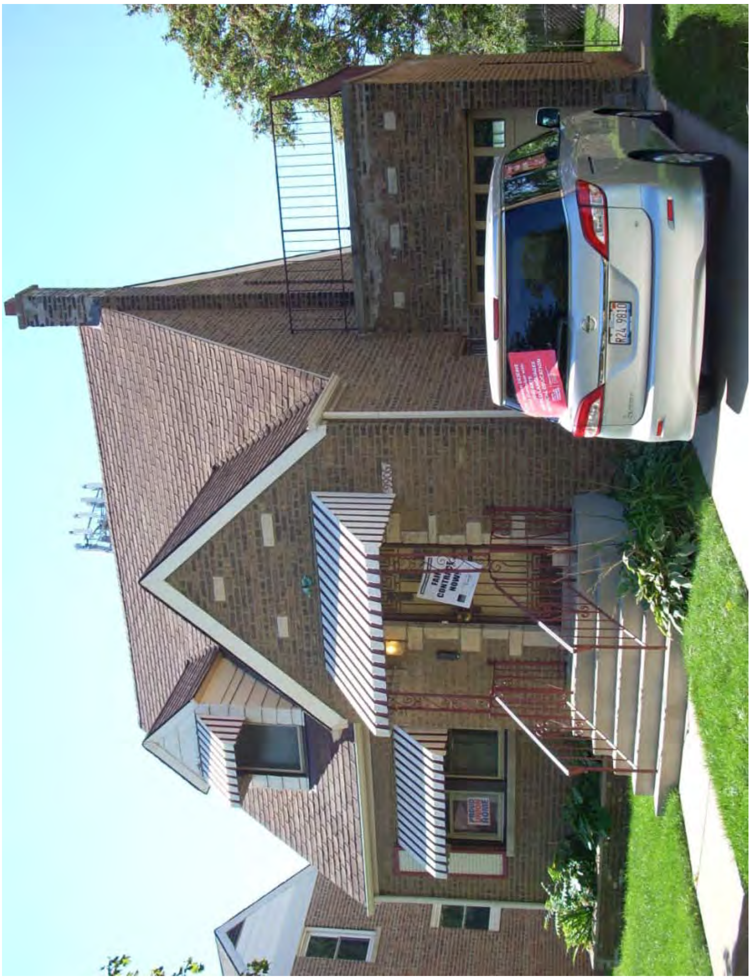
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 11 September 2012

Photos with Captions:
North and west façade of 1.5-story, brick, single-family residence.



Property Description: **Stories:** 1.5

This one-and-a-half-story brick-clad house in the Washington Heights community has a side gable roof covered with asphalt shingles, gable dormer, and an attached flat-roofed one-car garage with a rooftop balcony. Its front façade has a gable wall dormer and a porch with concrete steps, metal railings, and open metal posts supporting a metal canopy roof. The front elevation also features an off-center door surrounded by decorative stones and a pair of one-over-one windows. Stones also decorate the wall dormer and the garage cornice line. This post-World War II era home does not feature distinguishing architectural elements and is not individually eligible for listing on the National Register.

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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingle	**Roof Features** Dormer	**Roof Type** Gable	
Ornamental Architectural Details Stone around door, stone inserts on garage and wall dormer.			**Windows** Double-hung
Outbuildings (*Number and Description*)			

Local Landmark	**Y [✓ N]**	
National Register Historic Places	**Y [✓ N]**	
National Register Historic District	**Y [✓ N]**	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

9909 S. Emerald Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1944

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

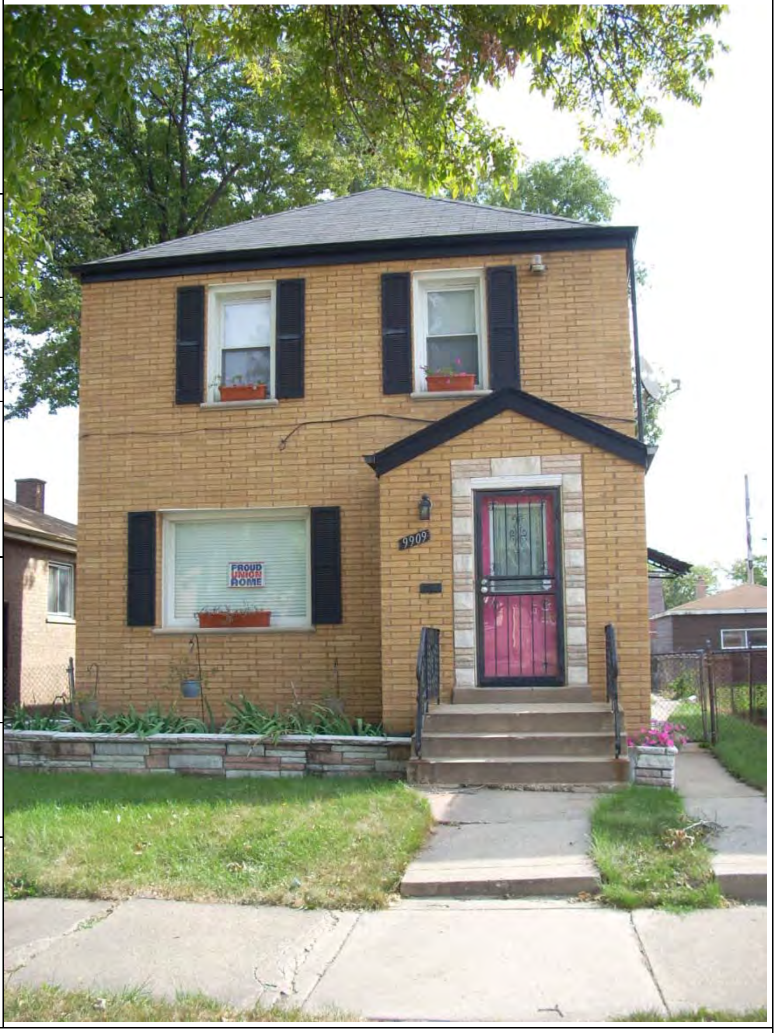
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: September 2012

Photos with Captions:
East façade of two-story, brick, single-family residence.



Property Description: **Stories:** 2

This two-story house in the Washington Heights community is situated on a raised basement and is clad with light orange face brick on its front elevation and in common brick along its side and rear elevations. The building has a hip roof covered with asphalt shingles. Its front elevation has a partial-width, gable-roof, enclosed porch with a hollow core metal door, concrete steps, and metal railings. There is a picture window on the first floor and two one-over-one aluminum-sash windows on the second floor. The front door and windows are non-original. Detailing includes a decorative brick and stone door surround and concrete sills. It does not display distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows and doors
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Hip	
Ornamental Architectural Details Decorative door surround, concrete sills			**Windows** Double-hung, fixed-pane
Outbuildings (*Number and Description*) Garage			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

9936 S. Emerald Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1955

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

Modernist

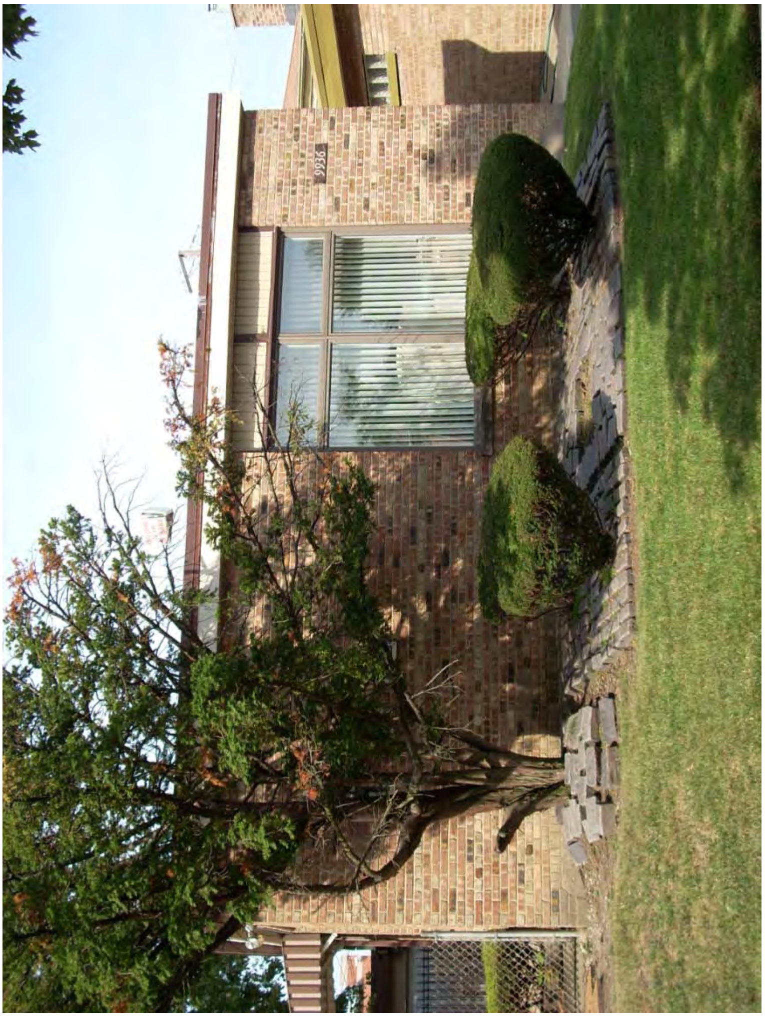
Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: September 2012

Photos with Captions:

West façade of one-story, brick, single-family residence.



Property Description: **Stories:** 1

This one-story, brick-clad, Modernist style house in the Washington Heights community has a flat roof and a pair of single-pane windows with transoms on the front elevation. The south elevation features a centrally located door and a small porch with concrete steps, metal railings, and two open metal posts supporting a metal awning roof. There are three groups of windows, including a strip of three casements. This house lacks distinctive architectural features and is not individually eligible for listing on the National Register.

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Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: [✓ Unaltered] Slight Modification Major Alteration			**Additional Notes/Descriptions**
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Unknown	**Roof Features** None	**Roof Type** Flat	
Ornamental Architectural Details None			**Windows** Casement, fixed-pane
Outbuildings (*Number and Description*) Garage			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

10004 S. Emerald Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Flat

Date of Construction: 1909

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

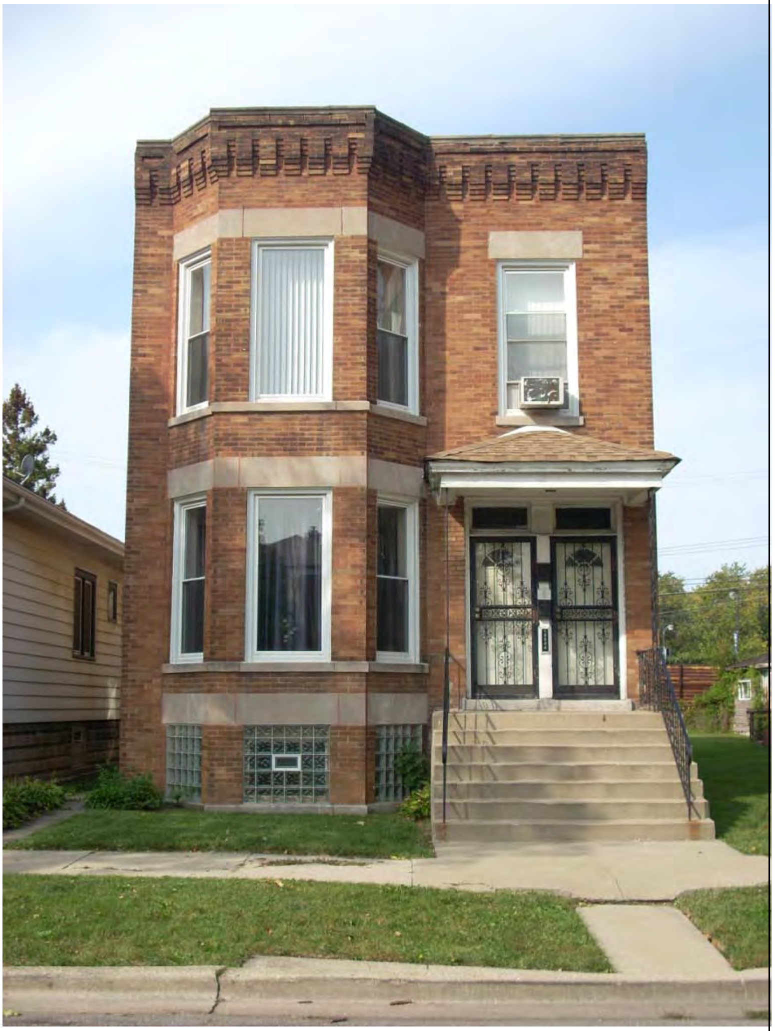
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: September 2012

Photos with Captions:
East façade of brick two-flat.



Property Description: **Stories:** 2

This two-flat residential building in the Washington Heights community is situated on a raised basement with glass block windows and is clad with brown/orange face brick on its front elevation and with common brick along its side and rear elevations. The building has a full-height, three-sided window bay pavilion, a flat roof, and parapet. Its front elevation features a pair of off-center non-original hollow core metal doors and a hip-roof porch with concrete steps, metal railings, and open metal supports. The pavilion's central windows are single-pane, while the remaining windows in the pavilion and the single window above the entrance are one-over-one aluminum-sash. Windows are modern replacements. Detailing includes concrete sills, lintels, and brick corbelling at the parapet level. This two-flat lacks distinctive architectural features and is not individually eligible for listing on the National Register.

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Phone (815) 568- 0680

Structural Survey

Integrity:			**Additional Notes/Descriptions** Replacement windows, doors, and porch rails
Unaltered	[✓ Slight Modification]	Major Alteration	
Condition:			
[✓ Excellent]	Good	Poor	
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details Corbelling, concrete sills and lintels			**Windows** Double-hung, fixed-pane, glass block
Outbuildings (*Number and Description*) Garage			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

10100 S. Emerald Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1940

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

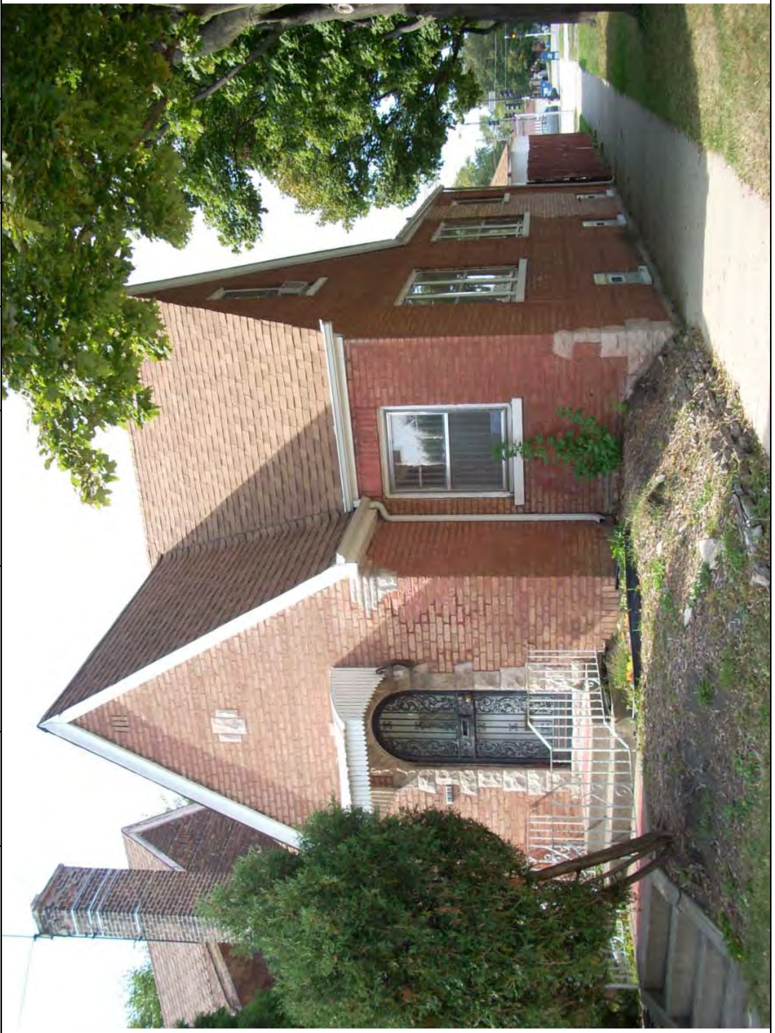
Neo-Tudor

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: September 2012

Photos with Captions:
West and north façades of one-story, brick, single-family residence.



Property Description: **Stories:** 1

This one-story, brick-clad, Neo-Tudor style house at the southwest corner of Emerald Avenue and 101st Street in the Washington Heights community is situated on a raised basement and has a steeply pitched cross-gable roof covered with asphalt shingles. The front elevation has a round-arched door, concrete steps with metal railings, and a non-original one-over-one aluminum-sash window. Detailing includes rusticated stone surrounding the door and at the corners of the house, concrete sills, and a stone insert in the gable end. This house lacks distinctive architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

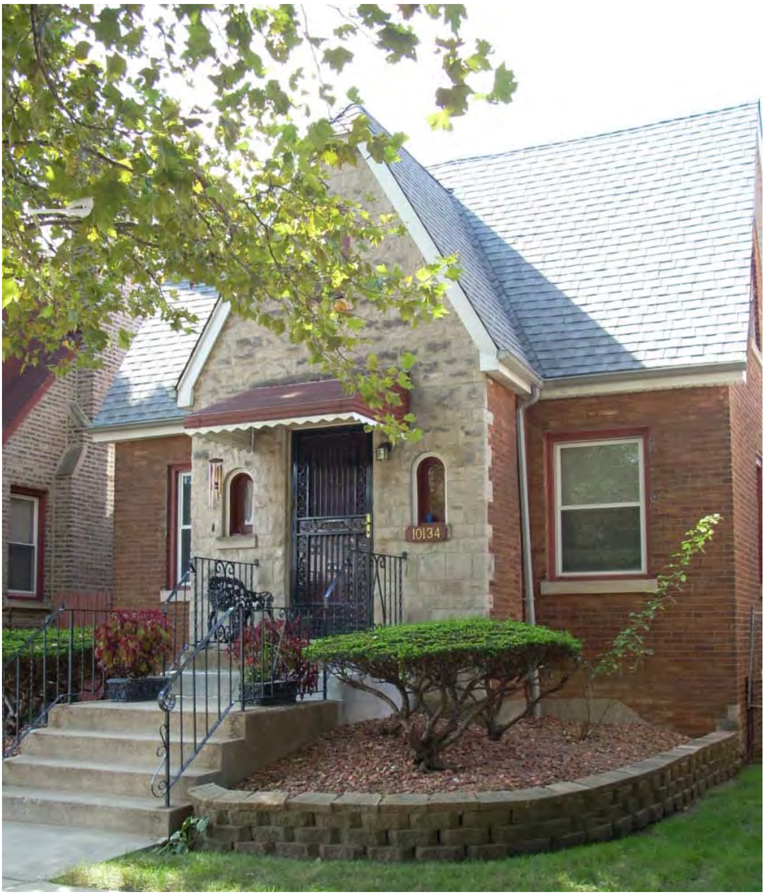
Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement door and windows
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Cross-gable	
Ornamental Architectural Details Rusticated stone at entrance and corners of house, concrete sills and inserts			**Windows** Double-hung
Outbuildings (*Number and Description*) Garage			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name **Historic:** Not labeled, not in CHRS **Common/Current:** Unknown	**Photos with Captions:** West façade of one-story, brick, single-family residence. 
Property address: 10134 S. Emerald Avenue	
HAARGIS Number: Not in database	
Present Owner and /or Occupant: Unknown	
Property Use **Historic:** Single family residence **Current:** Single family residence	
Date of Construction: 1939 **Architect's Name:** Not in CHRS **Builder/Contractor:** Not in CHRS	
Architectural Style: Minimal Traditional	
Prepared By: C. Tolmie, M. C. Bird, J. Guarino **Photo By:** S. Katz **Date:** September 2012	

Property Description: **Stories:** 1

This one-story brick-clad cottage in the Washington Heights community has a side-gable roof covered with asphalt shingles. Its front elevation has a partial-width gable pavilion with stone cladding, a round arch window in the gable, and a central metal storm door topped by a metal canopy. The door is flanked by two additional small, round-arch fixed-pane windows. There are concrete steps with metal railings and two non-original one-over-one aluminum sash windows with concrete sills. This house lacks integrity and distinctive architectural features and is not individually eligible for listing on the National Register.

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Structural Survey

Integrity: Unaltered [✓ Slight modifications] Major Alteration			**Additional Notes/Descriptions** Replacement windows
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick (main), Stone (pavilion)	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details Stone pavilion, round arch windows, concrete sills			**Windows** Double-hung, fixed-pane
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Common/Current: Unknown

Property address:

10216 S. Emerald Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1956

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

Vernacular

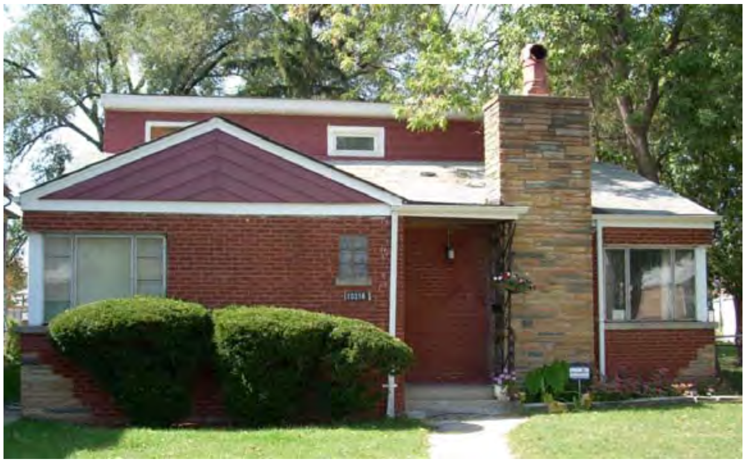
Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

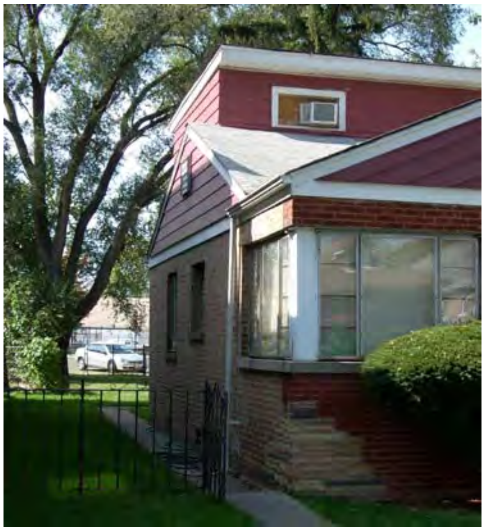
Date: September 2012

Photos with Captions:

West façade of one-story, brick, single-family residence.



North façade of the residence showing the addition.



Property Description: **Stories:** 1

This one-story brick-clad house in the Washington Heights community has a side gable roof covered with asphalt shingles. The front door is tucked into the side of the projecting gable-roof living room bay with synthetic-clad pediment. A shed-roofed addition to the rear portion of the residence rises above the living room. The front elevation has two groups of single pane windows flanked by casements on each corner and a small glass block window. The porch includes a concrete stoop and open metal post. A stone-clad exterior chimney fronts Emerald. The rear addition has two small, single-pane, casement windows along its front elevation. Detailing includes decorative stonework at the corners of the house and concrete sills. This house lacks integrity and distinctive architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered Slight Modifications [✓ Major Alteration]			**Additional Notes/Descriptions** Replacement cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations Addition to rear roofline			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick (main), synthetic siding (gable ends and addition)	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable (main), shed (addition)	
Ornamental Architectural Details Decorative stonework, concrete sills			**Windows** Casement, fixed-pane, glass block
Outbuildings (*Number and Description*) Garage			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional comments

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

10316 S. Emerald Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1919

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

Craftsman

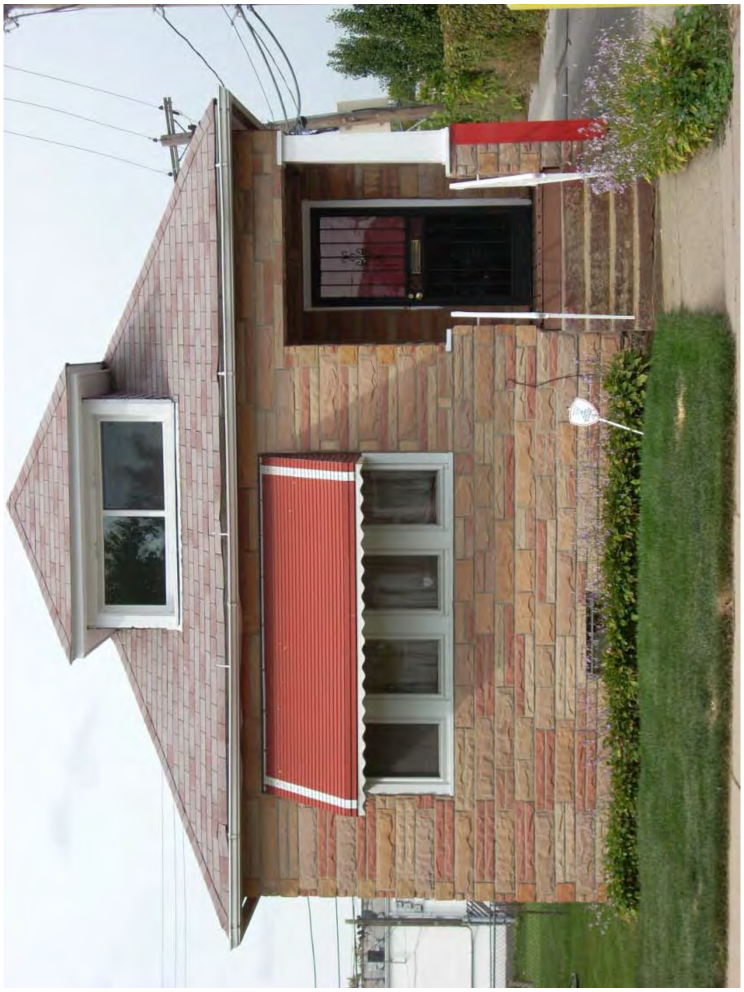
Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 23 October 2012

Photos with Captions:

East façade of a one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story Craftsman bungalow in the Roseland community has aluminum-covered side elevations, a faux stone-clad front elevation, a hip roof covered with asphalt shingles, and a hip dormer with a pair of single-pane sliding windows. The front elevation has a recessed corner porch with a squat, squared wood column support at the corner, a metal storm door, concrete steps with metal railings, and a living room bay featuring a strip of non-original one-over-one aluminum-sash windows that are partially obscured by a metal awning. This house lacks integrity and distinctive architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

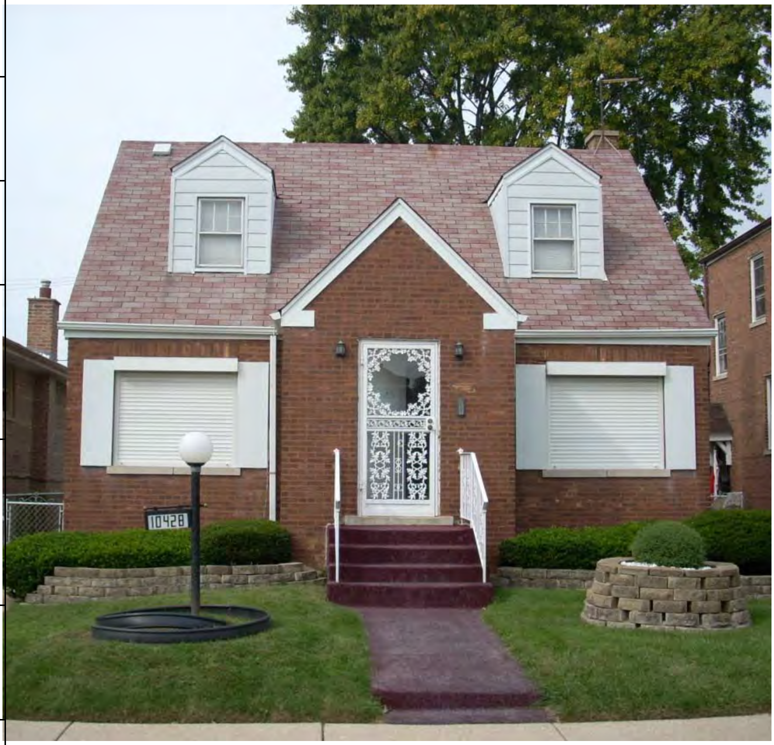
<table>
<tr><td colspan="3">Integrity:
Unaltered [✓ Slight Modification] Major Alteration</td><td>Additional Notes/Descriptions
Replacement windows and cladding</td></tr>
<tr><td colspan="3">Condition:
[✓ Excellent] Good Poor</td><td></td></tr>
<tr><td colspan="3">Additional Alterations</td><td></td></tr>
<tr><td colspan="2">Structure Usage
Current: NA
Historic: NA</td><td>Exterior Wall Surface
Faux stone (façade), Synthetic siding (sides and rear)</td><td></td></tr>
<tr><td>Roof Material
Asphalt shingle</td><td>Roof Features
Dormer</td><td>Roof Type
Hip</td><td></td></tr>
<tr><td colspan="3">Ornamental Architectural Details
Squat column on porch</td><td>Windows
Double-hung, sliding</td></tr>
<tr><td colspan="4">Outbuildings (<i>Number and Description</i>)
None</td></tr>
</table>

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name **Historic:** Bldg. not labeled, not in CHRS **Common/Current:** Unknown	**Photos with Captions:** East façade of a one-story, single family, brick residence. 
Property Address: 10428 S. Emerald Avenue	
HAARGIS Number: Not in database	
Present Owner and /or Occupant: Unknown	
Property Use **Historic:** Single family residence **Current:** Single family residence	
Date of Construction: 1941 **Architect's Name:** Not in CHRS **Builder/Contractor:** Not in CHRS	
Architectural Style: Vernacular	
Prepared By: J. Martinez, M. C. Bird, J. Guarino **Photo By:** S. Katz **Date:** 23 October 2012	

Property Description: **Stories:** 1

This one-story brick-clad house in the Roseland community has a side-gabled roof covered with asphalt shingles and has two gable dormers with non-original aluminum siding, each with a six-over-one window. The front elevation has a centrally located, gabled, brick-clad projecting vestibule with a metal storm door, concrete steps, and metal railings. It is flanked by a window group on either side, both of which are obscured by metal shades. It does not feature distinguishing architectural elements and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered	[✓ Slight Modification]	Major Alteration	**Additional Notes/Descriptions** Replacement windows and cladding
Condition: [✓ Excellent]	Good	Poor	
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingle	**Roof Features** Dormers	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung, covered
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

10554 S. Emerald Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1962

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

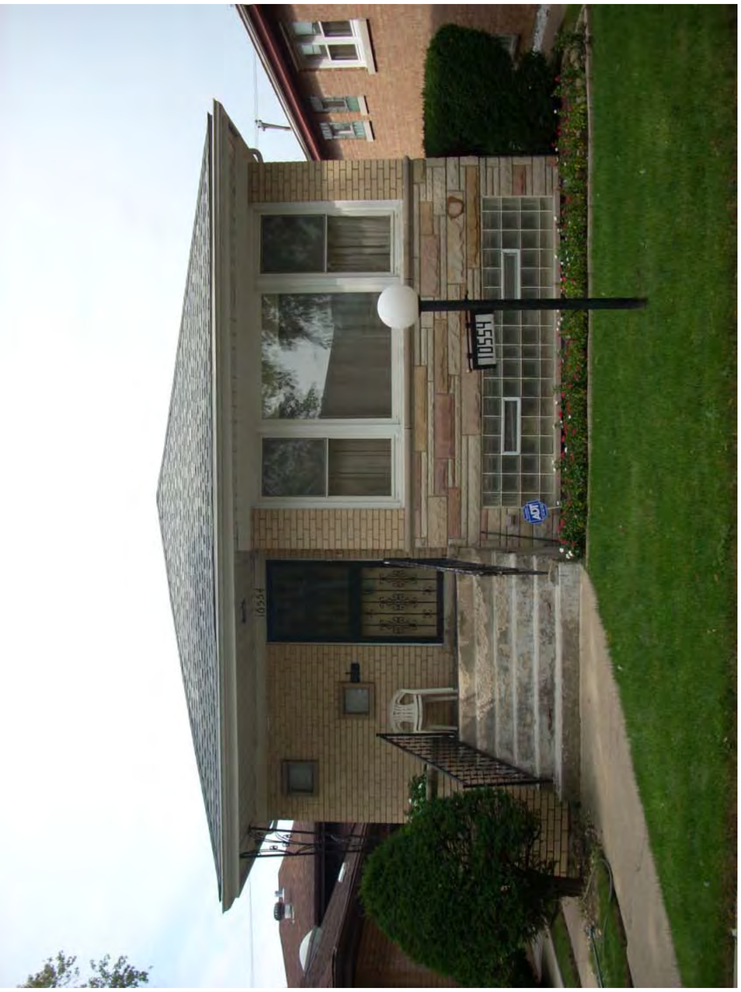
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 23 October 2012

Photos with Captions:
East façade of a one-story, single family, brick residence.



Property Description: **Stories:** 1

This one-story house in the Roseland community is situated on a raised basement with glass block windows. The building has a hip roof covered with asphalt shingles and overhanging eaves. The front elevation is clad with buff brick and in faux stone below the sill line. The south half of the front elevation is recessed and has a metal storm door, concrete steps with metal railings, and an open metal corner support. The living room bay has a picture window flanked by one-over-one aluminum-sash windows. Detailing includes two decorative glass blocks adjacent to the front door. It does not feature distinguishing architectural elements and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

<table>
<tr><td colspan="4">Integrity:
[✓ Unaltered] Slight Modification Major Alteration</td><td>Additional Notes/Descriptions
Aluminum sashes may be original</td></tr>
<tr><td colspan="4">Condition:
[✓ Excellent] Good Poor</td><td></td></tr>
<tr><td colspan="4">Additional Alterations</td><td></td></tr>
<tr><td colspan="2">Structure Usage
Current: NA
Historic: NA</td><td colspan="2">Exterior Wall Surface
Brick (main),
Faux stone (below sill)</td><td></td></tr>
<tr><td>Roof Material
Asphalt shingle</td><td>Roof Features
None</td><td colspan="2">Roof Type
Hip</td><td></td></tr>
<tr><td colspan="4">Ornamental Architectural Details
Decorative glass blocks</td><td>Windows
Double-hung, fixed-pane, glass block</td></tr>
<tr><td colspan="5">Outbuildings (<i>Number and Description</i>)
None</td></tr>
</table>

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Historical Resource Recordation Form

<table>
<tr><td>

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

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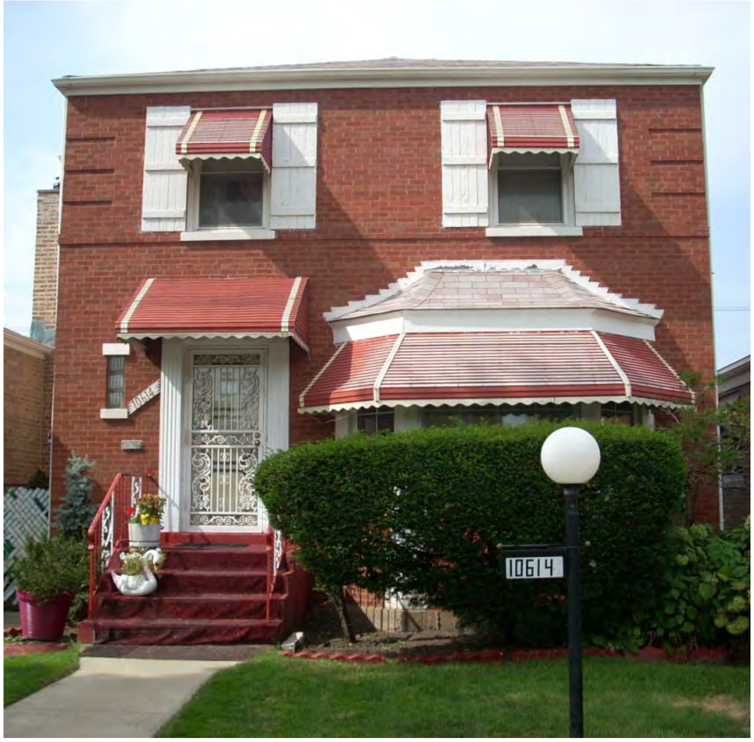
Photos with Captions:
East façade of a brick, two-story, single family residence.



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<tr><td>

Property Address:

10614 S. Emerald Avenue

</td></tr>
<tr><td>

HAARGIS Number:

Not in database

</td></tr>
<tr><td>

Present Owner and /or Occupant:

Unknown

</td></tr>
<tr><td>

Property Use

Historic: Single family residence

Current: Single family residence

</td></tr>
<tr><td>

Date of Construction: 1948

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

</td></tr>
<tr><td>

Architectural Style:

Minimal Traditional

</td></tr>
<tr><td>

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 23 October 2012

</td></tr>
<tr><td colspan="2">

Property Description: **Stories:** 2

This two-story house in the Roseland community has a hip roof covered with asphalt shingles. Its front elevation is clad in orange-brown face brick. It has an off-center metal storm door with fluted pilasters, concrete steps with metal railings, a three-sided window bay obscured by tall bushes and a low metal awning, and two non-original one-over-one aluminum-sash windows with metal awnings and wood shutters on the second floor. Detailing includes a vertical strip of three glass blocks adjacent to the door, concrete sills, and a brick stringcourse. It does not feature distinguishing architectural elements and is not individually eligible for listing on the National Register.

</td></tr>
</table>

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity:			**Additional Notes/Descriptions**
Unaltered	[✓ Slight Modification]	Major Alteration	Replacement windows; windows in bay obscured
Condition:			
[✓ Excellent]	Good	Poor	
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Hip	
Ornamental Architectural Details Fluted pilasters, decorative glass blocks, concrete sills, brick stringcourses			**Windows** Double-hung, fixed-pane, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

10750 S. Emerald Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1956

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

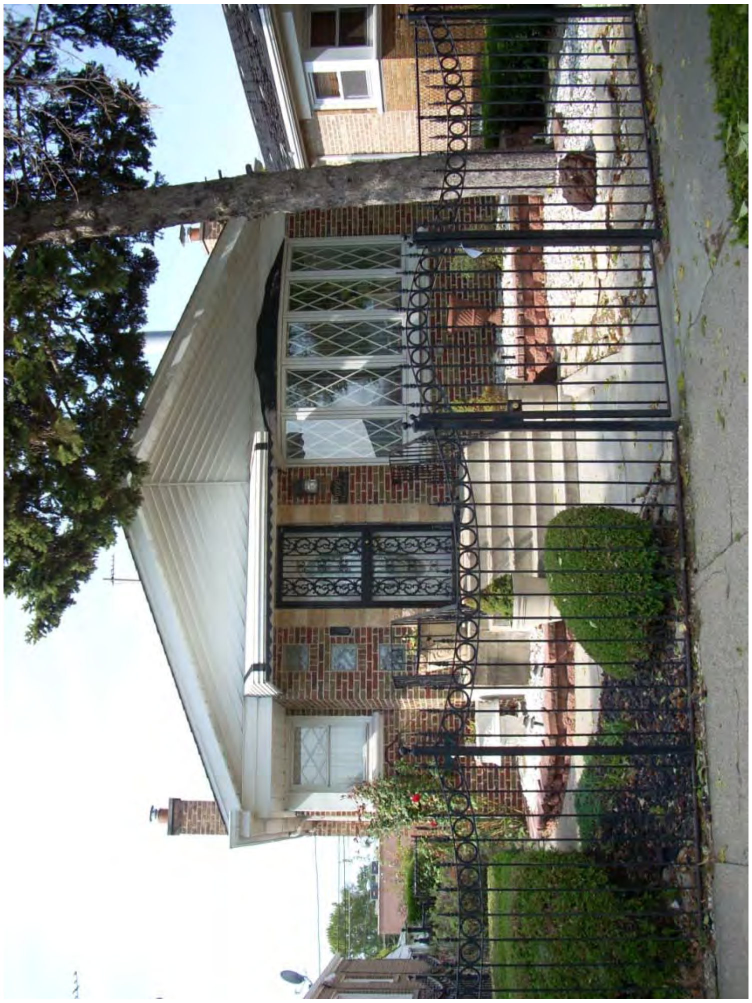
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 23 October 2012

Photos with Captions:
East façade of a one-story, single family, brick residence.



Property Description: **Stories:** 1

This one-story brick-clad house in the Roseland community has a gable roof covered with asphalt shingles, a metal storm door, concrete steps with metal railings, a five-paned bow window with casements, and a double-hung window in its recessed corner. Detailing includes decorative faux stone flanking the entrance and three adjacent glass blocks. It does not display distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: [✓ Unaltered] Slight Modification Major Alteration			**Additional Notes/Descriptions**
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick, Synthetic siding (gable)	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details Stone around entrance, decorative glass blocks			**Windows** Double-hung, casement, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

10824 S. Emerald Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1955

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

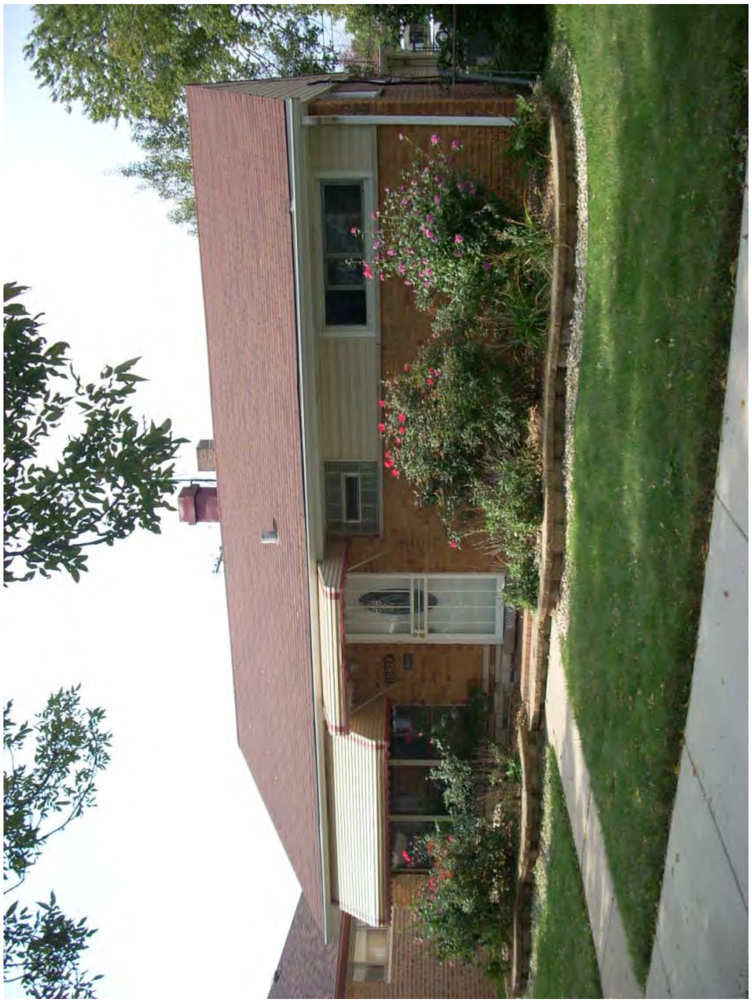
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 23 October 2012

Photos with Captions:
East façade of a one-story, single family, brick residence.



Property Description: **Stories:** 1

This one-story house in the Roseland community has a side gable roof, is clad with orange brick, and features synthetic cladding in the gabled ends and above the sill line of the front elevation. The front elevation has an off-center hollow core metal door, a strip of three windows largely obscured by tall bushes and a low, metal awning, a glass block window, and a pair of rectangular sliding glass windows. It does not feature distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

<table>
<tr><td colspan="3">Integrity:
Unaltered [✓ Slight Modification] Major Alteration</td><td>Additional Notes/Descriptions
Replacement cladding</td></tr>
<tr><td colspan="3">Condition:
[✓ Excellent] Good Poor</td><td></td></tr>
<tr><td colspan="3">Additional Alterations</td><td></td></tr>
<tr><td colspan="2">Structure Usage
Current: NA
Historic: NA</td><td>Exterior Wall Surface
Brick (main), synthetic siding (gable ends and above sill)</td><td></td></tr>
<tr><td>Roof Material
Asphalt shingle</td><td>Roof Features
None</td><td>Roof Type
Gable</td><td></td></tr>
<tr><td colspan="3">Ornamental Architectural Details
None</td><td>Windows
Sliding, glass block</td></tr>
<tr><td colspan="4">Outbuildings (<i>Number and Description</i>)
None</td></tr>
</table>

Local Landmark	**Y [✓ N]**	
National Register Historic Places	**Y [✓ N]**	
National Register Historic District	**Y [✓ N]**	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

10952 S. Emerald Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1962

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

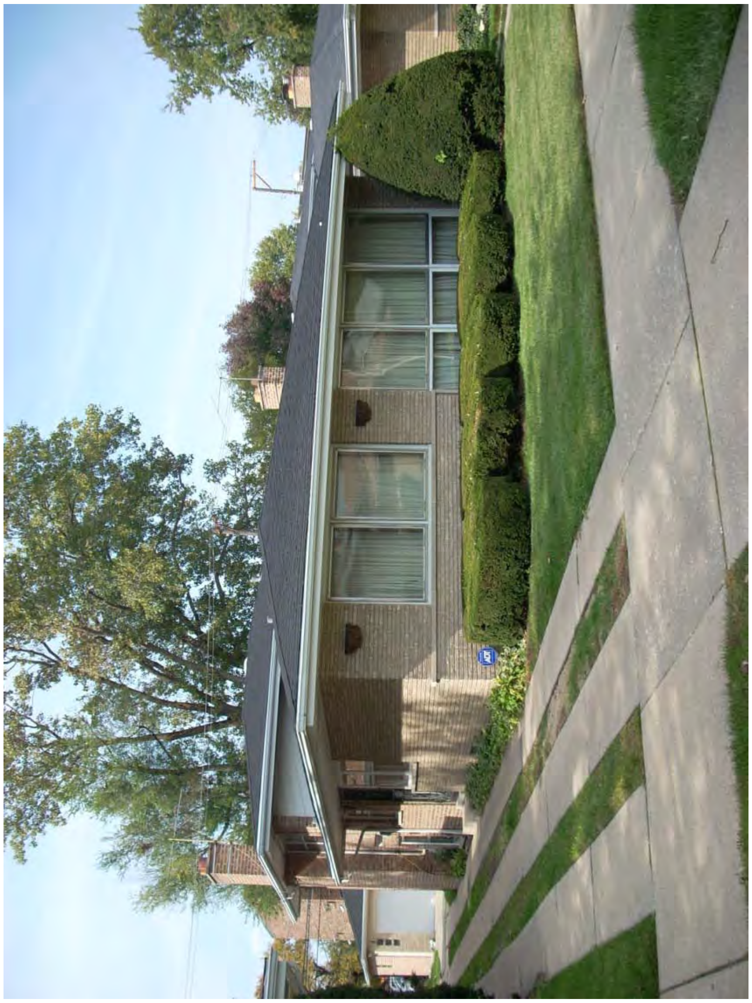
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 23 October 2012

Photos with Captions:
East façade of a split-level, single family, brick residence.



Property Description: **Stories:** Split-level

This back-split house in the Roseland community is clad with buff brick; the front elevation of the back portion of the split is covered with synthetic siding. Both portions of the house have hip roofs covered with asphalt shingles and have wide, overhanging eaves. The front elevation has five large single-pane windows, three of which have matching single pane windows below the sill line, creating floor-to-ceiling glazing. The front door is situated along the south elevation, which has an exterior buff brick chimney and one-over-one aluminum-sash windows. It does not display distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: [✓ Unaltered] Slight Modification Major Alteration			**Additional Notes/Descriptions**
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick (front section façade), synthetic siding (rear section)	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Hip	
Ornamental Architectural Details Sill line			**Windows** Double-hung, fixed-pane
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11034 S. Emerald Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1924

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

Vernacular

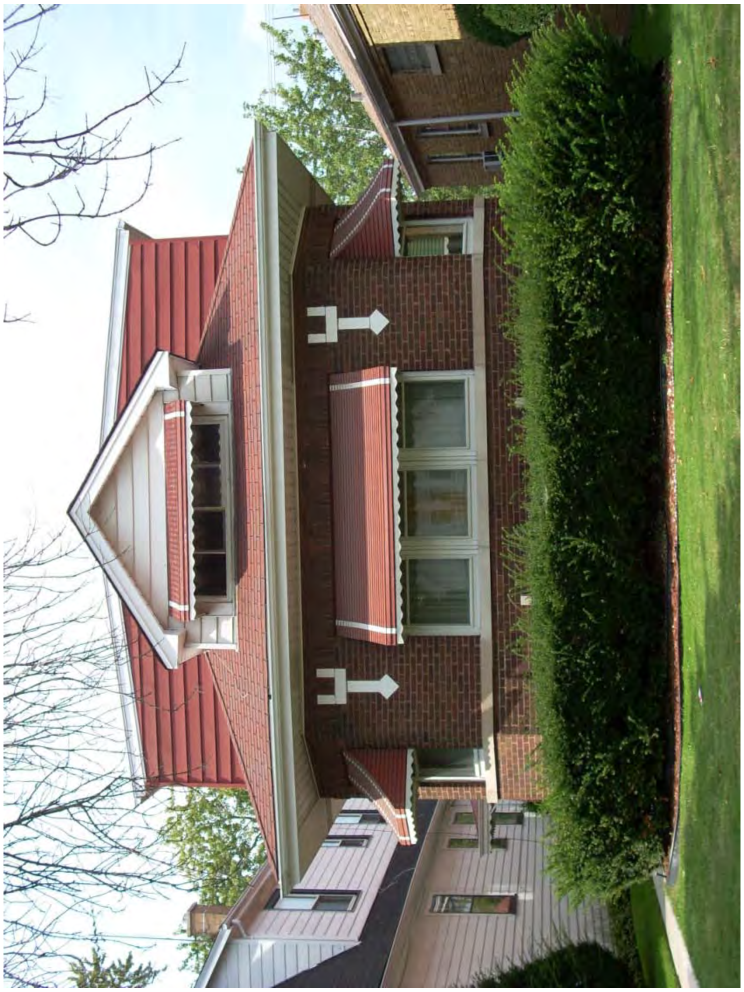
Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 23 October 2012

Photos with Captions:

East façade of a two-story, single family, brick residence.



Property Description: **Stories:** 2

This two-story brick-clad bungalow in the Roseland community is situated on a raised basement. The building has a hip roof covered with asphalt shingles, overhanging eaves, an aluminum-clad gable dormer with a strip of single-pane sliding windows partially covered by a metal awning. A two-story aluminum-clad gable-roof second story addition is visible. The three-sided front elevation encompasses the living room bay and features a central strip of three windows and flanking single windows, all of which are non-original one-over-one aluminum sash. The front door is situated along the south elevation and has a metal awning. Detailing includes concrete sills, sill courses, and decorative insert blocks flanking the central strip of windows. This is an example of a Chicago bungalow, a building type that the City of Chicago has recognized through its Historic Chicago Bungalow Initiative. However, this house has been modified with the second story addition, lacks distinctive architectural features, and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

<table>
<tr><td colspan="3">Integrity:
Unaltered [✓ Slight Modification] Major Alteration</td><td>Additional Notes/Descriptions
Replacement windows and dormer cladding</td></tr>
<tr><td colspan="3">Condition:
[✓ Excellent] Good Poor</td><td></td></tr>
<tr><td colspan="3">Additional Alterations
Second story added.</td><td></td></tr>
<tr><td colspan="2">Structure Usage
Current: NA
Historic: NA</td><td>Exterior Wall Surface
Brick (original section), synthetic siding (dormer and addition)</td><td></td></tr>
<tr><td>Roof Material
Asphalt shingle</td><td>Roof Features
Dormer</td><td>Roof Type
Hip, gable</td><td></td></tr>
<tr><td colspan="3">Ornamental Architectural Details
Concrete sills and sill courses, decorative insert blocks</td><td>Windows
Double-hung, sliding</td></tr>
<tr><td colspan="4">Outbuildings (<i>Number and Description</i>)
None</td></tr>
</table>

Local Landmark	**Y [✓ N]**	
National Register Historic Places	**Y [✓ N]**	
National Register Historic District	**Y [✓ N]**	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11104 S. Emerald Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1951

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

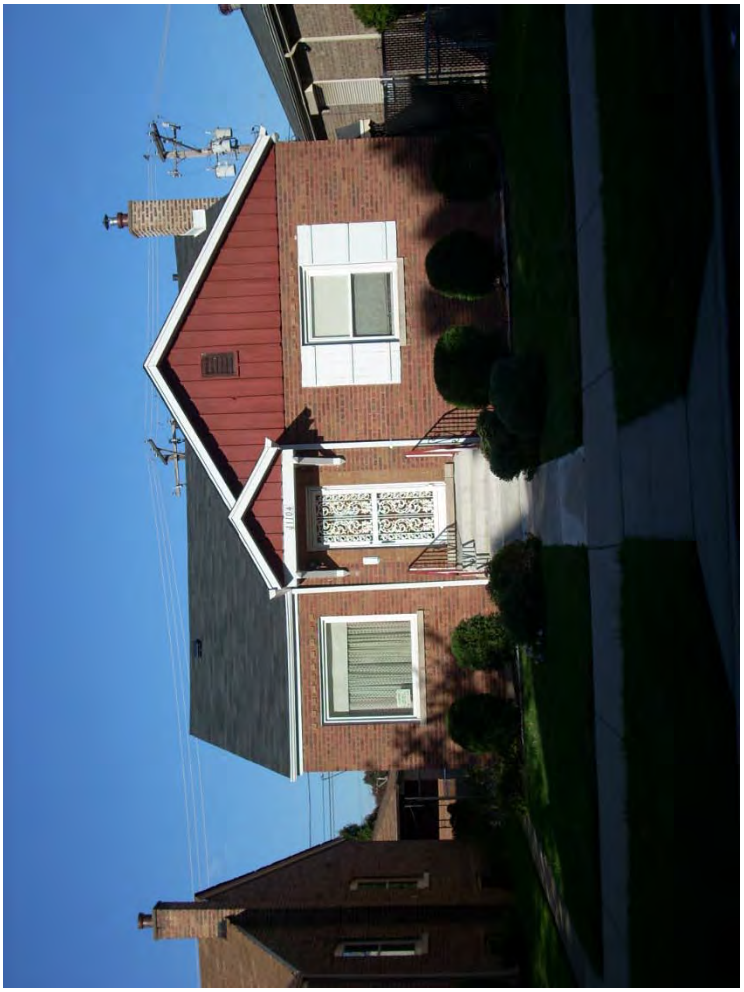
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 24 October 2012

Photos with Captions:
East façade of a one-story, single family, brick residence.



Property Description: **Stories:** 1

This one-story brick-clad house in the Roseland community has a side-gabled roof covered with asphalt shingles and a front-facing projecting gabled pavilion with non-original aluminum siding in the gable. It sits atop a raised basement. The front elevation has a metal storm door with a bracketed gable hood and concrete steps with metal railings. There are two windows, both non-original: a picture window and a one-over-one aluminum-sash window both with concrete sills. It does not feature distinguishing architectural characteristics and is not individually eligible for listing on the National Register.

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505 North State Street
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Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows and gable cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick (main), synthetic siding (gable end)	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details Bracketed gable hood, concrete sills			**Windows** Double-hung, fixedpane
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11212 S. Emerald Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1951

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

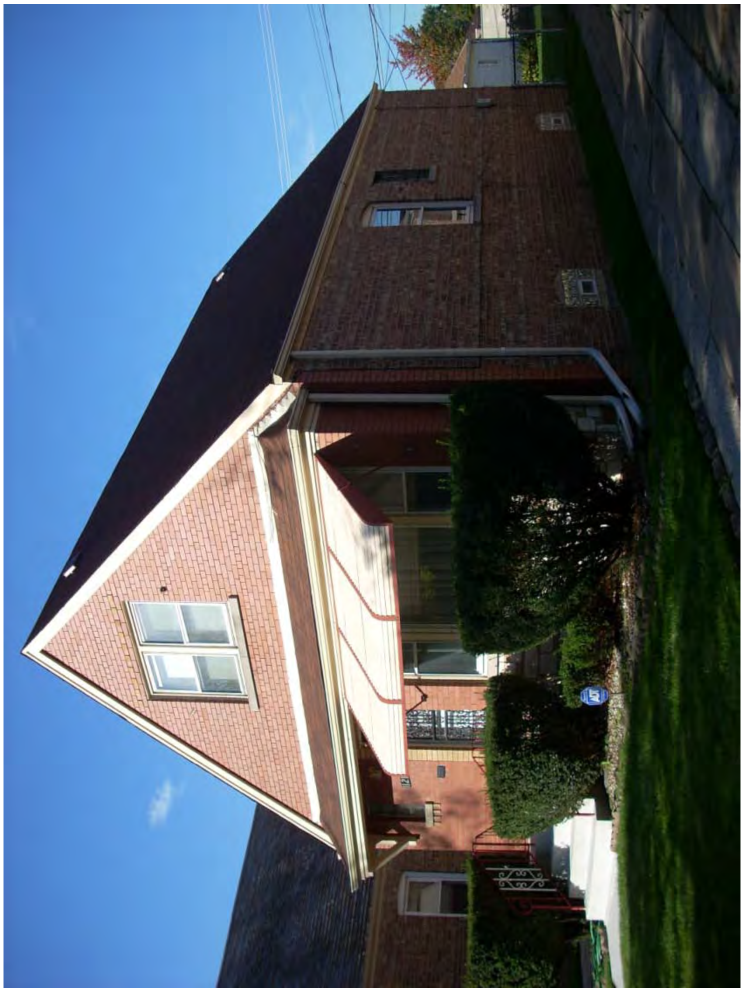
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 24 October 2012

Photos with Captions:
East and north façades of a one-story, single family, brick residence.



Property Description: **Stories:** 1

This one-story cottage in the Roseland community is situated on a raised basement with glass block windows and is clad with orange brick on the front elevation and common brick on the side and rear elevations. The building has a steeply pitched front gable roof covered with asphalt shingles. The front elevation has a pent roof, an off-center metal storm door surrounded by yellow brick, concrete steps with metal railings, and an adjacent glass block window. The projecting living room bay features a non-original picture window flanked by one-over-one aluminum-sash windows that are partially obscured by a low metal awning. This bay is clad in faux stone below the sill line. A pair of non-original one-over-one aluminum-sash windows is situated in the gable, and all windows have concrete sills. This house lacks distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick (main), Faux stone (below sill line)	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details Concrete sills, contrasting brick around entrance			**Windows** Double-hung, fixed-pane, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: CAR-LA HSE

Property Address:

11310 S. Emerald Avenue

HAARGIS Number:

140613

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1928

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

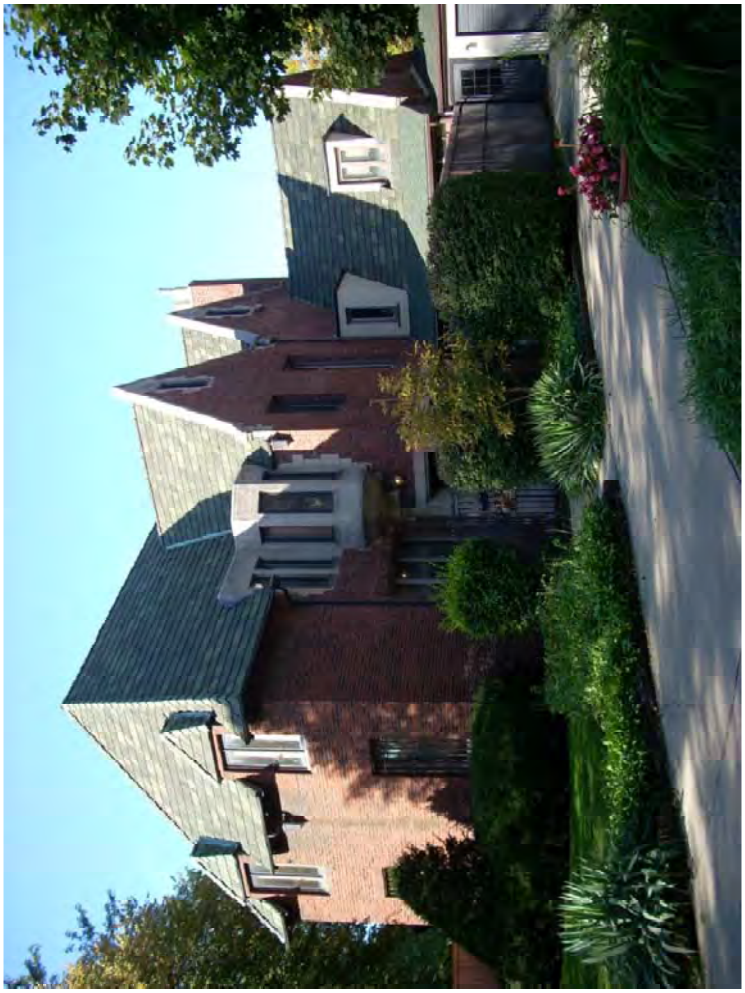
French Eclectic

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 24 October 2012

Photos with Captions:
North and east façades of a brick, two-story single family residence.



Property Description: **Stories:** 2

This two-story asymmetrical French Eclectic style house in the Roseland community was built for Stuart Colman. It is clad with brownish-orange face brick. The building has a steeply pitched roof covered with slate, a pair of gabled pavilions along its north elevation, and an L-shaped footprint with a one-story side-gabled wing that features two flat-roofed dormers. The front elevation of the main block has two windows on the first floor that are obscured by metal grates and two through-the-cornice wall dormers with paired casement windows. The recessed front door has a smooth stone surround and a stone-clad upper story oriel is situated at the juncture between the front wing and its adjacent gabled pavilion. Attic windows in the paired gable pavilions are surrounded by stone quoins. Fenestration appears to be mainly casement windows. This is an unusual example of a French Eclectic style home in Roseland and stands as a visual landmark among the predominant building stock of cottages and bungalows. Although windows appear to be replacements, overall it has very good integrity and is recommended as individually eligible for National Register listing.

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Slate	**Roof Features** Dormers	**Roof Type** Gable	
Ornamental Architectural Details Stone oriel, stone quoins, surround			**Windows** Casement
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? Yes	**A B** [✓ **C**]	**Significance:** Unusual example of a French Eclectic house and visual landmark among the cottage and bungalow housing stock in Roseland.

Additional Comments:

CHRS coded orange: property possesses some architectural feature or historical association that made it potentially significant in the context of the surrounding community.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11456 S. Emerald Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1951

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

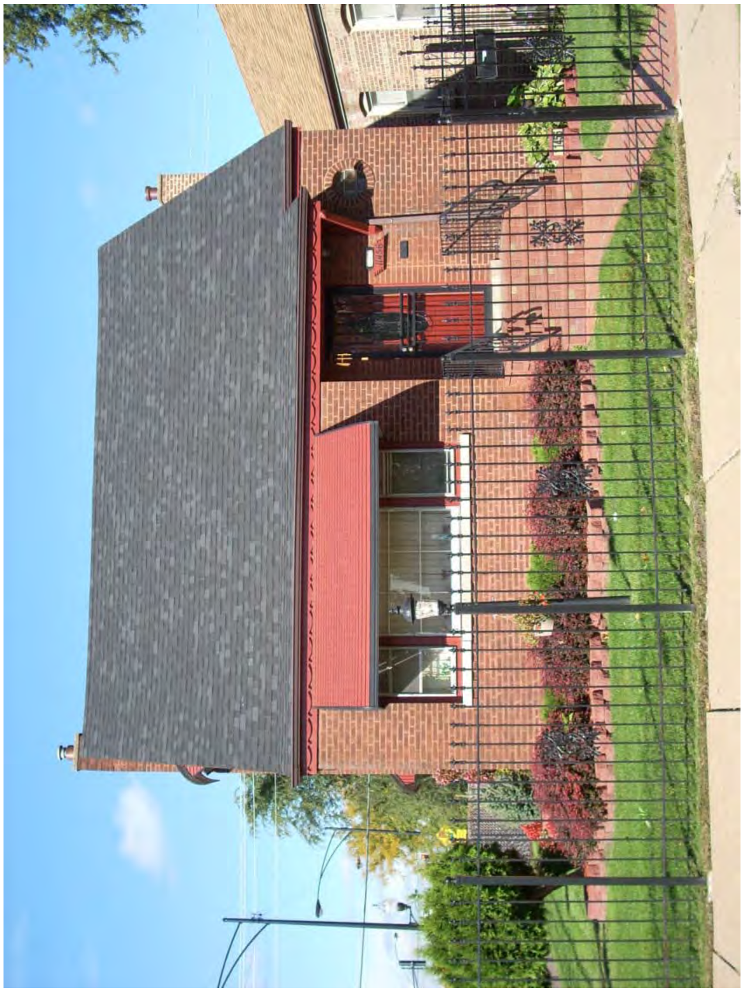
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 24 October 2012

Photos with Captions:
East façade of a one-story, single family, brick residence.



Property Description: **Stories:** 1

This one-story brick-clad cottage at the northwest corner of Emerald Avenue and 115th Street in the Roseland community has a side gable roof covered with asphalt shingles and a rear gabled wing. The front elevation has a projecting living room bay with a multi-light window flanked by adjacent non-original one-over-one aluminum sash windows, an off-center hollow core metal door, ceramic tile steps with metal railings, and a bulls-eye window. A pent roof spans the living room bay and front door. This house does not feature distinguishing architectural elements and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

<table>
<tr><td colspan="3">Integrity:
Unaltered [✓ Slight Modification] Major Alteration</td><td>Additional Notes/Descriptions
Replacement door and windows</td></tr>
<tr><td colspan="3">Condition:
[✓ Excellent] Good Poor</td><td></td></tr>
<tr><td colspan="3">Additional Alterations</td><td></td></tr>
<tr><td colspan="2">Structure Usage
Current: NA
Historic: NA</td><td>Exterior Wall Surface
Brick</td><td></td></tr>
<tr><td>Roof Material
Asphalt shingle</td><td>Roof Features
None</td><td>Roof Type
Gable</td><td></td></tr>
<tr><td colspan="3">Ornamental Architectural Details
Bulls-eye window</td><td>Windows
Double-hung, fixed-pane</td></tr>
<tr><td colspan="4">Outbuildings (<i>Number and Description</i>)
None</td></tr>
</table>

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11824 S. Emerald Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Multi-family residence

Date of Construction: 1927

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

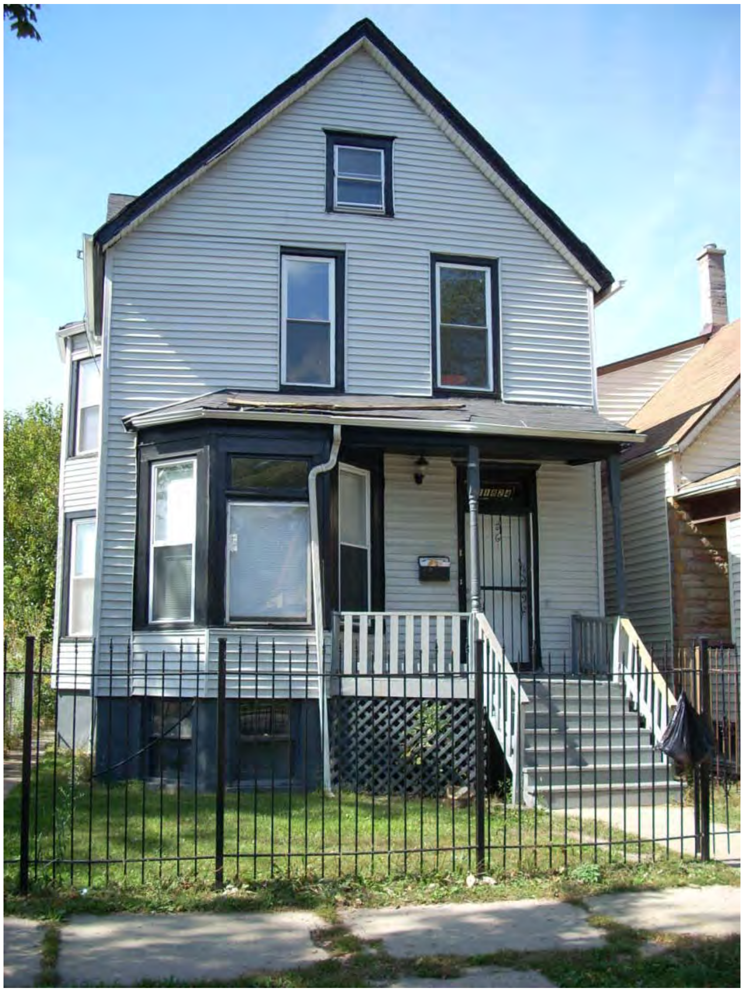
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 24 October 2012

Photos with Captions:
East façade of a two-story, multi-family, frame residence.



Property Description: **Stories:** 2

This two-story frame house in the West Pullman neighborhood is situated on a raised brick basement that has been covered with concrete. Above, the house is covered with synthetic siding. The building has a cross-gable roof covered with asphalt shingles. Its front elevation has a partial-width wood porch; its hipped-roof of which spans the full façade to also shelter the adjacent three-sided window bay, which has a central non-original fixed-pane window with transom flanked by non-original one-over-one aluminum-sash windows. The porch has an off-center non-original hollow core metal door with a transom, wood posts, steps and straight railings. There are two windows on the second floor of the front elevation and one in the gable, all of which are non-original one-over-one aluminum-sash. The south elevation has a two-story three-sided window bay. This house lacks integrity and distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement door, windows, and cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung, fixed-pane
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

12012 S. Emerald Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Multi-family residence

Date of Construction: 1904

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

Vernacular

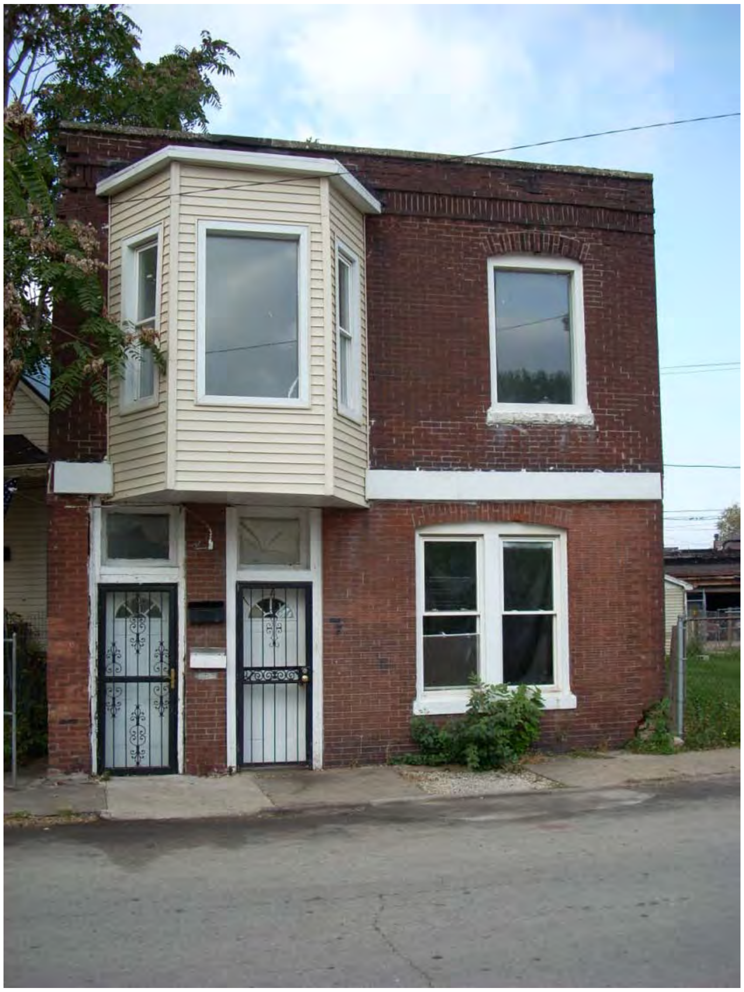
Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 24 October 2012

Photos with Captions:

East façade of a two-story, brick, multi-family residence.



Property Description: **Stories:** 2

This two-story, brick-clad residential building in the West Pullman community has a flat roof and parapet. Its front elevation has an off-center pair of non-original hollow core metal doors, each with a transom. Windows are non-original and include a pair of one-over-one aluminum-sash windows on the first floor, a three-sided aluminum-clad window bay on the second floor with a central fixed-pane window and two one-over-one aluminum-sash windows, and a single fixed-pane window on the second floor. Detailing includes concrete sill courses, soldier course arched lintels, and decorative brickwork along the cornice. This building lacks integrity and distinctive architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement doors and windows
Condition: [✓ Excellent] Good Poor			
Additional Alterations Second story bay added after 1938 (Sanborn).			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick (main), Synthetic siding (window bay)	
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details Decorative brickwork including lintels and cornice line, concrete sills			**Windows** Double-hung, fixed-pane
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

12110 S. Emerald Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1949

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

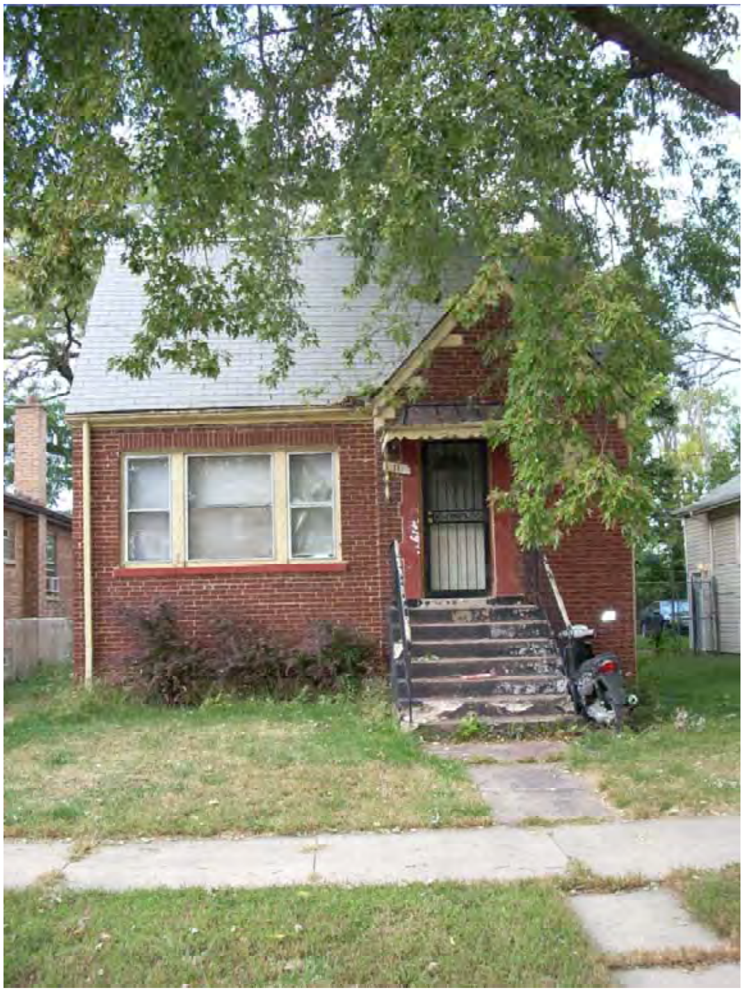
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 24 October 2012

Photos with Captions:
East facade of a one-story, brick, single family residence.



Property Description: **Stories:** 1

This one-story house in the West Pullman community is clad with orange-brown face brick on its front elevation and common brick on its side and rear elevations. The building has a side-gable roof covered with asphalt shingles and a gabled one-story rear wing. The front elevation has an off-center, brick-clad, gabled vestibule with a hollow core metal door with a smooth surround, a bracketed metal awning, concrete steps with metal railings, a small glass block window, and a strip of three one-over-one windows. Detailing includes inserts at the gabled roof of the vestibule, a soldier course lintel, and concrete sills. It does not display distinguishing architectural features and is not individually eligible for listing on the National Register.

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Phone (815) 568- 0680

Structural Survey

Integrity:

Unaltered [✓ Slight Modification] Major Alteration

Additional Notes/Descriptions

Replacement door

Condition:

[✓ Excellent] Good Poor

Additional Alterations

The rear wing appears to be original.

Structure Usage	**Exterior Wall Surface**
Current: NA Historic: NA	Brick

Roof Material	**Roof Features**	**Roof Type**
Asphalt shingle	None	Gable

Ornamental Architectural Details

Inserts under the gable end of the vestibule, soldier course lintels, concrete sills, surround

Windows

Double-hung, glass block

Outbuildings (*Number and Description*)

None

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

12206 S. Emerald Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Vacant

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1923

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

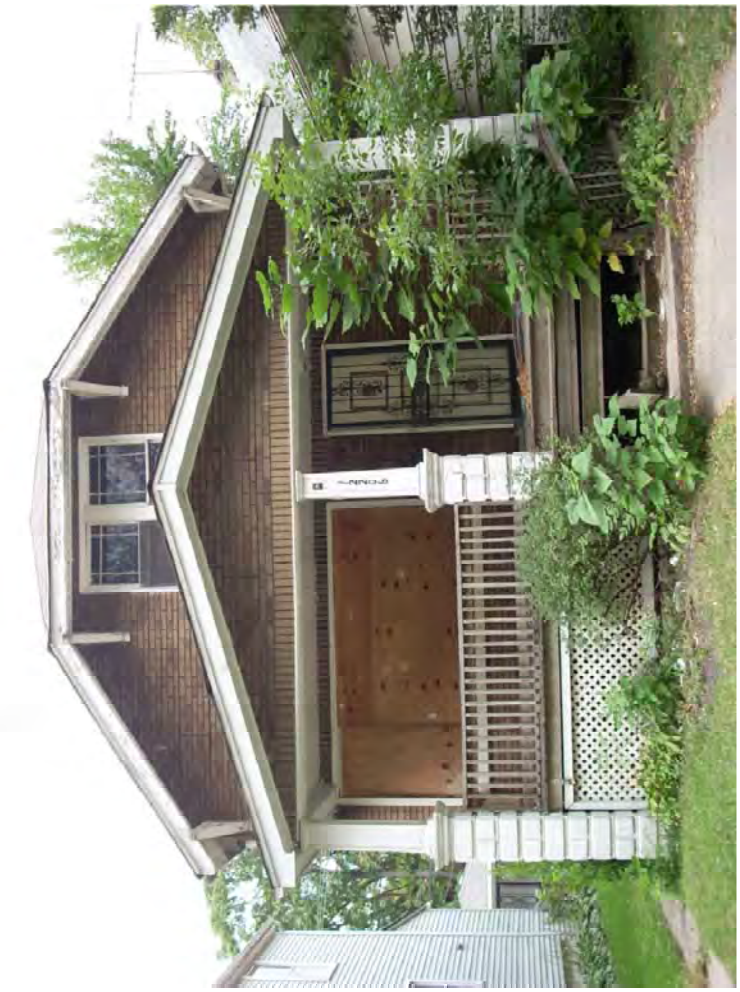
Craftsman

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 29 October 2012

Photos with Captions:
East façade of a 1.5-story, single family, frame residence.



Property Description: **Stories:** 1.5

This one-and-a-half-story Craftsman bungalow in the West Pullman community is situated on a raised concrete block basement with glass block windows and is covered with synthetic siding. The building has a hip-on-gable roof covered with asphalt shingles and overhanging eaves with knee braces. The front elevation has a full-width, gable-roofed wood porch with straight railings and faux stone piers supports topped by squat wood columns. The porch shelters an off-center door, a large window group and a small window opening on the first floor that are covered with plywood. There is a pair of double-hung wood-sash windows in the gable. Side elevation window openings are covered with plywood. This house lacks integrity and distinctive architectural features and is not individually eligible for listing on the National Register.

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505 North State Street
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Phone (815) 568- 0680

Structural Survey

Integrity:			**Additional Notes/Descriptions**
[✓ Unaltered]	Slight Modification	Major Alteration	
Condition:			
Excellent	[✓ Good]	Poor	
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic (asphalt shingles)	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Hip-on-gable	
Ornamental Architectural Details Knee braces			**Windows** Double-hung, glass block, covered
Outbuildings (*Number and Description*) None			

Local Landmark	**Y [✓ N]**	
National Register Historic Places	**Y [✓ N]**	
National Register Historic District	**Y [✓ N]**	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

12254 S. Emerald Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Multi-family residence

Date of Construction: 1904

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

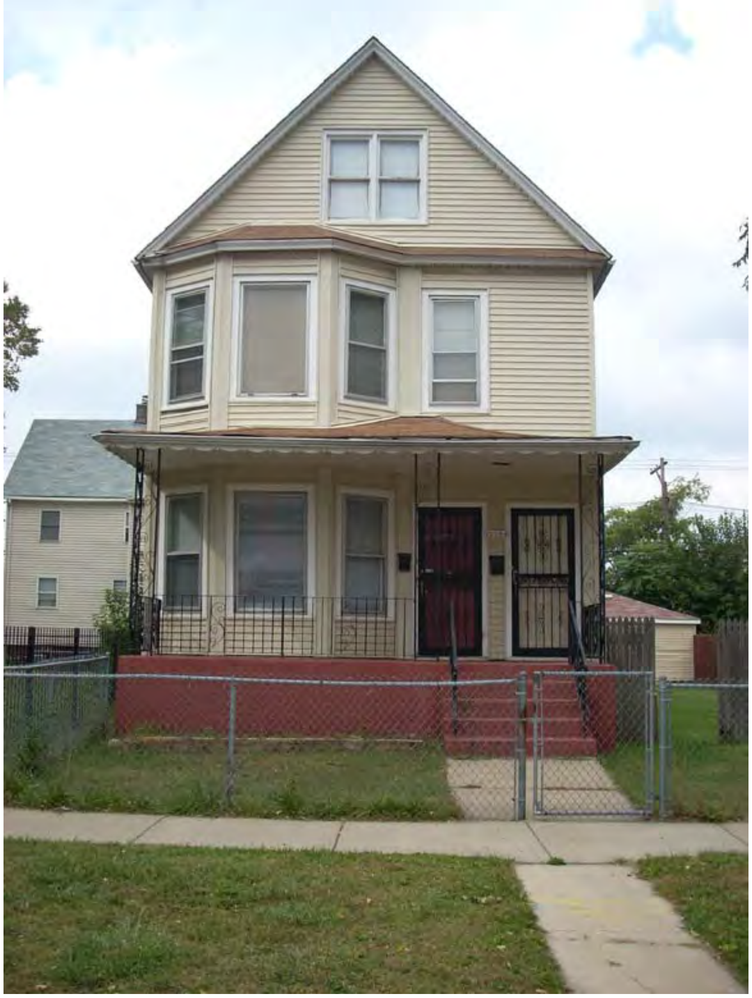
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 29 October 2012

Photos with Captions:
East façade of a two-story, multi-family, frame residence.



Property Description: **Stories:** 2

This two-story multi-family residential building in the West Pullman community is situated on a raised concrete block basement with glass block windows and is covered with synthetic siding. The building has a front gable roof covered with asphalt shingles. The front elevation has a full-width, hip-roof porch with a concrete deck and steps, metal railings, and open metal posts. It also contains a pair of off-center doors and a two-story hip-roof window bay pavilion. There are three windows in the first floor bay, four windows on the second floor, including three in the window bay, and a pair of windows in the gable. Windows throughout the house are non-original one-over-one aluminum sash with the exception of the two central windows in the two-story window bay, which are fixed-pane, and the glass block in the basement. This building lacks integrity and distinctive architectural features and is not individually eligible for listing on the National Register.

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Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration	**Additional Notes/Descriptions** Replacement door, windows, cladding, and porch rails
Condition: [✓ Excellent] Good Poor	
Additional Alterations	
Structure Usage Current: NA Historic: NA — **Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle — **Roof Features** None — **Roof Type** Gable	
Ornamental Architectural Details None	**Windows** Double-hung, fixed-pane, glass block
Outbuildings (*Number and Description*) Detached two-car frame car with hip roof.	

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

12300 S. Emerald Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Cards, Gifts & Things, The Crowning Glory Barber & Beauty Salon

Property Use

Historic: Commercial

Current: Mixed Use

Date of Construction: 1915

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

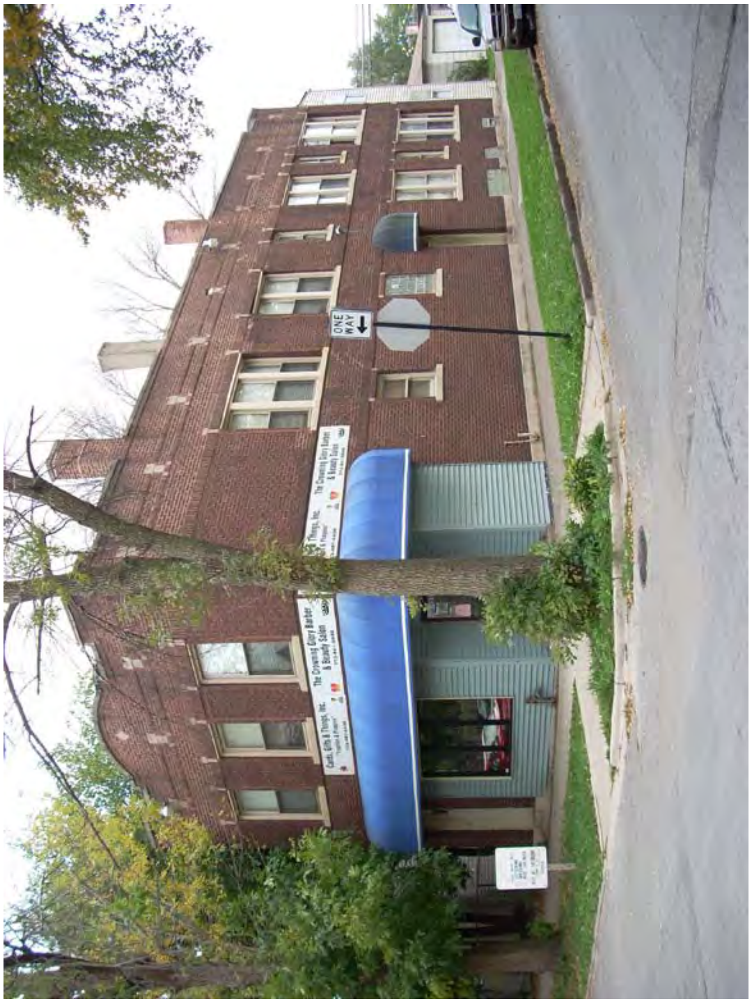
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 29 October 2012

Photos with Captions:
North and east facades of a brick, two-story, mixed-use building.



Property Description: **Stories:** 2

This two-story mixed-use building at the southwest corner of Emerald Avenue and 123rd Street in the West Pullman community is clad with brown face brick along its two street elevations. The building has a flat roof and a parapet that is rounded at the center of the Emerald Avenue elevation. The building has a non-original corner storefront with synthetic siding, a strip of three fixed-pane windows, and a mirrored glass corner door in the recessed corner entrance vestibule. The Emerald Avenue elevation has an off-center doorway with a non-original door that provides access to the second floor. An additional entrance with a non-original hollow core metal door is situated along the 123rd Street elevation. The first floor of the 123rd Street elevation and the building's second floor features one-over-one wood-sash windows arranged by themselves, in pairs, and in groups of three. One of these openings on the first floor has been in-filled with glass block. Detailing includes concrete sills, decorative square insert blocks at the parapet level, and brick stringcourses. This building lacks integrity and distinctive architectural features and is not individually eligible for listing on the National Register.

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Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement doors, windows, and storefronts
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick (main), synthetic siding (corner storefront)	
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details Concrete sill and insert blocks, brick stringcourses			**Windows** Double-hung, fixed-pane, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

12350 S. Emerald Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1931

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

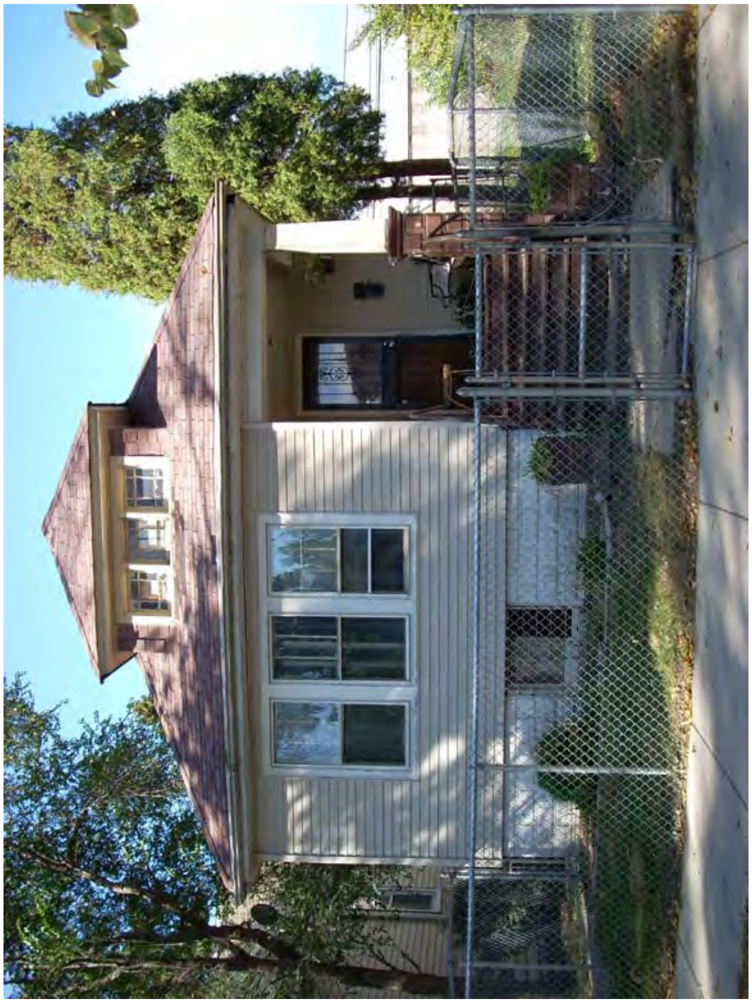
Craftsman

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 29 October 2012

Photos with Captions:
East façade of a one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story Craftsman bungalow in the West Pullman community is situated on a raised concrete block basement with casement windows and is covered with synthetic siding. The building has a hip roof covered with asphalt shingles, overhanging eaves, and a hip dormer with a strip of three wood casement windows. The front elevation has a recessed corner porch with a corner support consisting of a faux stone pier topped by a squat wood column. The porch has wood steps with metal railings, an off-center metal storm door, and a strip of three non-original double-hung windows. This house lacks integrity and distinctive architectural features and is not individually eligible for listing on the National Register.

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Marengo, Illinois 60152
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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Some windows replaced
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingles	**Roof Features** Dormer	**Roof Type** Hip	
Ornamental Architectural Details Squat column			**Windows** Double-hung, casement
Outbuildings (*Number and Description*) Two-car, detached, frame garage with hip roof			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

12400 S. Emerald Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1924

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

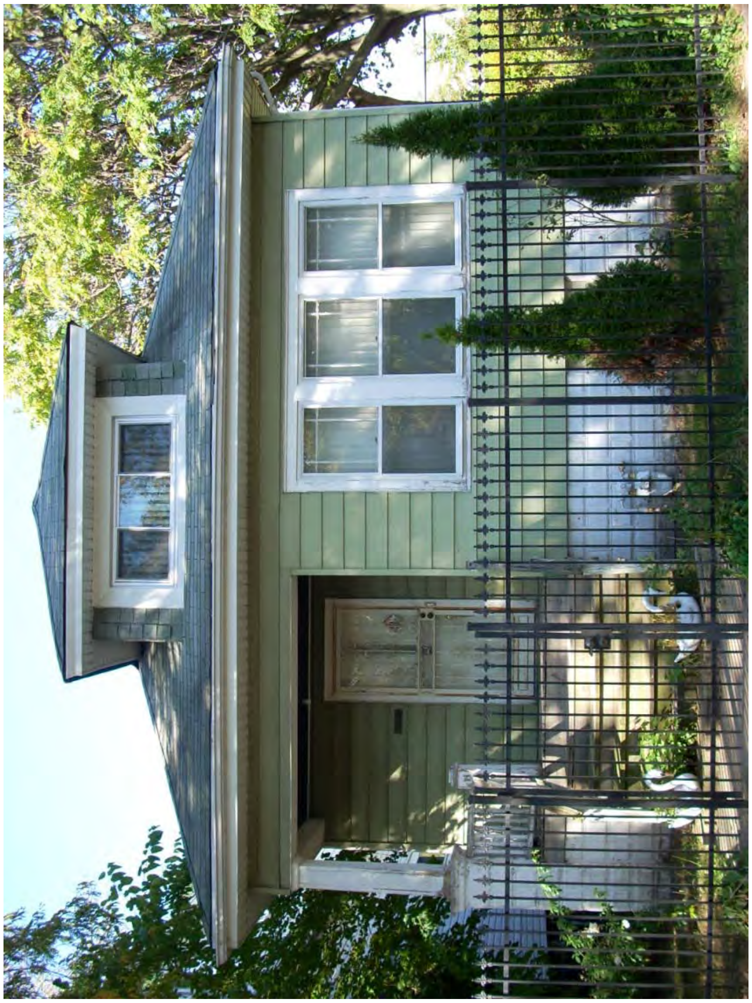
Craftsman

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 29 October 2012

Photos with Captions:
East façade of a one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story Craftsman bungalow in the West Pullman community is situated on a raised concrete block basement and is covered with synthetic siding. The building has a hip roof covered with asphalt shingles, overhanging eaves, and a hip dormer with a strip of three single-pane sliding windows. The front elevation has a recessed corner porch with corner support consisting of a faux stone pier topped by a squat wood column, wood steps with straight wood railings, and an off-center hollow core metal door. There is also a strip of three double-hung wood-sash windows. This house lacks integrity and distinctive architectural features and is not individually eligible for listing on the National Register.

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505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingles	**Roof Features** Dormer	**Roof Type** Hip	
Ornamental Architectural Details Square column on porch			**Windows** Double-hung, sliding
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

12446 S. Emerald Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1950

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

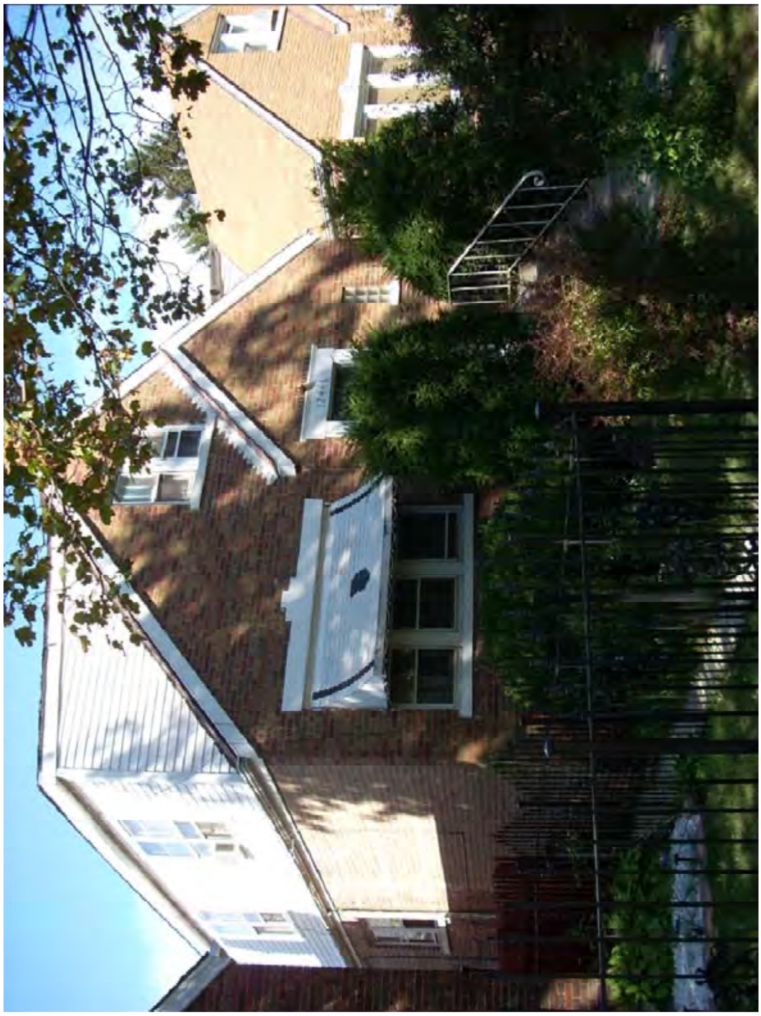
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 29 October 2012

Photos with Captions:
East and south façades of a 1.5- story, single family, brick residence.



Property Description: **Stories:** 1.5

This one-and-a-half-story in the West Pullman community is situated on a raised basement and is clad with face brick on its front elevation and common brick on its side and rear elevations. The building has a front gable roof covered with asphalt shingles and a wide, shed-roofed, synthetic-clad dormer addition along the south slope of the roof. The front elevation has a slightly projecting gabled entrance vestibule with a non-original hollow core metal door and a Classical wood surround consisting of fluted pilasters and cornice. The building also includes concrete steps with metal railings, a strip of three double-hung windows with metal awning and a lintel on the first floor, and a pair of three-over-one wood-sash windows in the gable. Windows feature concrete sills. This house lacks distinctive architectural features and is not individually eligible for listing on the National Register.

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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement door, addition
Condition: [✓ Excellent] Good Poor			
Additional Alterations Dormer addition on south side of roof			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick (main), Synthetic siding (addition)	
Roof Material Asphalt shingles	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details Fluted pilasters and cornice at entrance, concrete sills, lintel			**Windows** Double-hung, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y [✓ N]**	
National Register Historic Places	**Y [✓ N]**	
National Register Historic District	**Y [✓ N]**	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

12552 S. Emerald Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1942

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

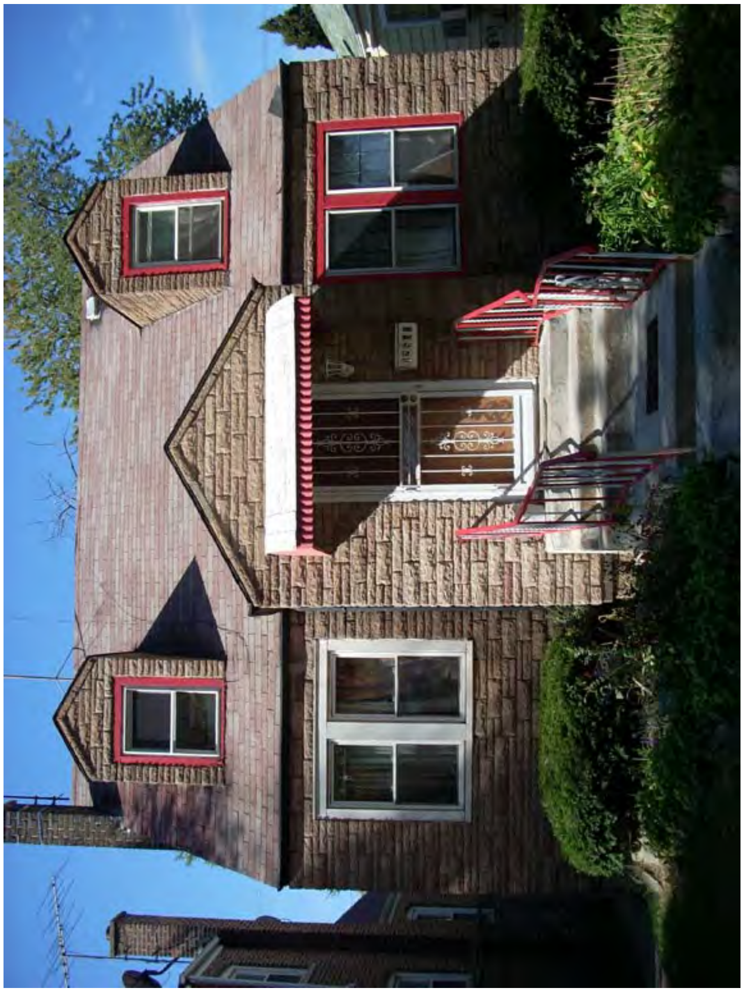
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 29 October 2012

Photos with Captions:
East façade of a one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story home in the West Pullman community is clad with a stone veneer on the front elevation with asbestos or wood shingles on the other elevations. The building has a side-gabled roof covered with asphalt shingles and two gable dormers, each of which has a non-original one-over-one aluminum-sash window. The front elevation has a centrally located gabled vestibule with a metal storm door, concrete steps with metal railings, and paired windows on either side. One pair features original six-over-one wood-sash windows and the other has non-original one-over-one aluminum sash. It does not feature distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

<table>
<tr><td colspan="4">Integrity:
Unaltered [✓ Slight Modification] Major Alteration</td><td>Additional Notes/Descriptions
Some replacement windows; possible non-original cladding</td></tr>
<tr><td colspan="4">Condition:
[✓ Excellent] Good Poor</td><td></td></tr>
<tr><td colspan="4">Additional Alterations</td><td></td></tr>
<tr><td colspan="2">Structure Usage
Current: NA
Historic: NA</td><td colspan="2">Exterior Wall Surface
Faux stone (façade), wood or asbestos shingles (sides and rear)</td><td></td></tr>
<tr><td>Roof Material
Asphalt shingles</td><td>Roof Features
Dormers</td><td colspan="2">Roof Type
Gable</td><td></td></tr>
<tr><td colspan="4">Ornamental Architectural Details
None</td><td>Windows
Double-hung</td></tr>
<tr><td colspan="5">Outbuildings (<i>Number and Description</i>)
None</td></tr>
</table>

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

12608 S. Emerald Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1925

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

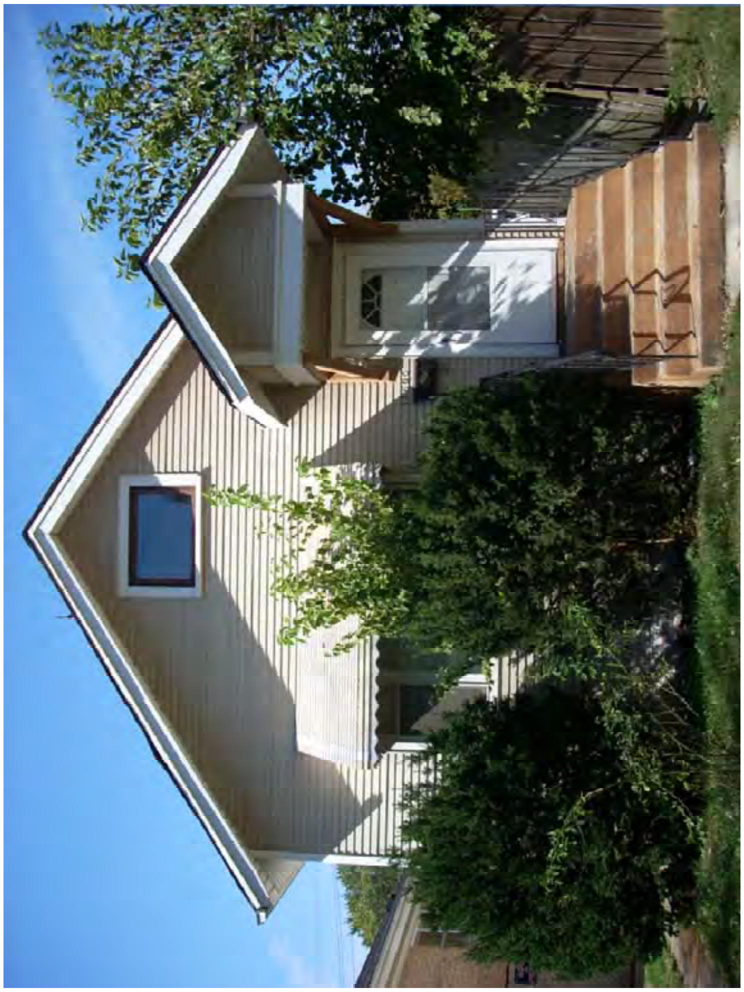
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 29 October 2012

Photos with Captions:
East façade of a 1.5-story, single family, frame residence.



Property Description: **Stories:** 1.5

This one-and-a-half-story frame cottage in the West Pullman community is situated on a raised concrete block basement and is covered with synthetic siding. The building has a front gable roof covered with asphalt shingles. The front elevation has an off-center hollow core metal door with a wood bracketed boxed gable hood, and concrete steps with metal railings. There is a group of three windows on the first floor (fixed-pane flanked by double-hung sashes) and a single pane window in the gable. This house lacks integrity and distinctive architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement door, windows, and brackets on hooded entrance
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details Brackets on hood			**Windows** Double-hung, fixed-pane
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

12650 S. Emerald Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1943

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

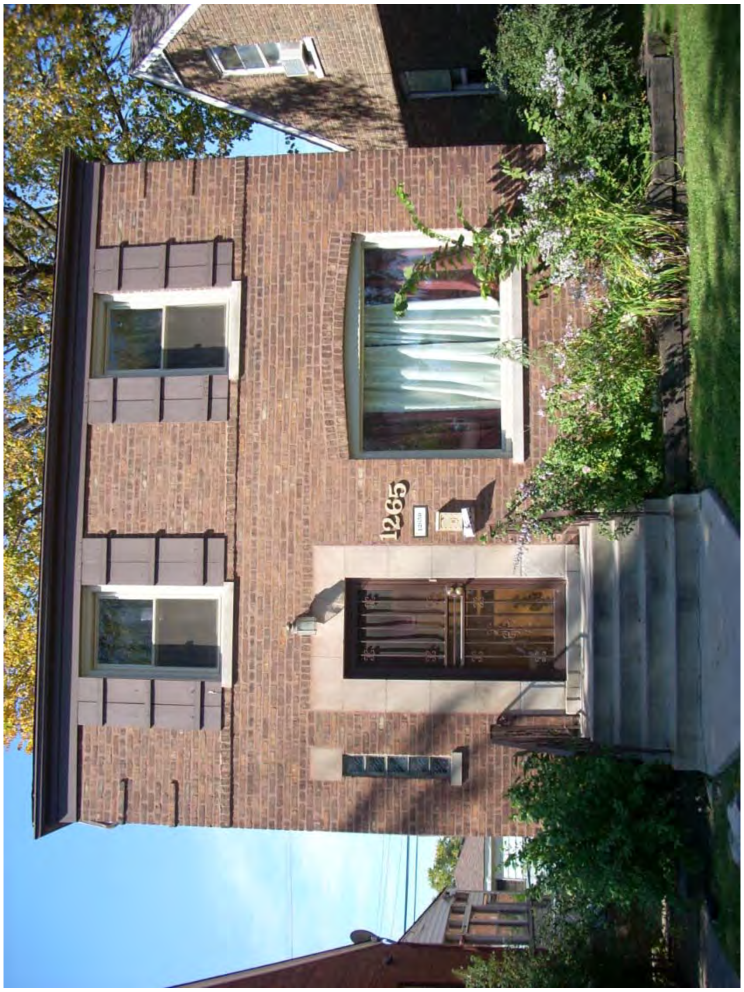
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 29 October 2012

Photos with Captions:
East façade of a brick, two-story, single family residence.



Property Description: **Stories:** 2

This two-story house in the West Pullman community is situated on a raised basement and is clad with face brick on its front elevation and common brick on its side and rear elevations. The building has a hip roof covered with asphalt shingles. The front elevation has an off-center metal storm door, concrete steps with metal railings, a picture window on the first floor, and two one-over-one windows on the second floor. Detailing includes a concrete door surround, a vertical strip of three glass blocks adjacent to the door, brick lintels, a brick stringcourse, and concrete sills. This house lacks distinctive architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

<table>
<tr><td colspan="3">Integrity:
[✓ Unaltered] Slight Modification Major Alteration</td><td>Additional Notes/Descriptions</td></tr>
<tr><td colspan="3">Condition:
[✓ Excellent] Good Poor</td><td></td></tr>
<tr><td colspan="3">Additional Alterations</td><td></td></tr>
<tr><td colspan="2">Structure Usage
Current: NA
Historic: NA</td><td>Exterior Wall Surface
Brick</td><td></td></tr>
<tr><td>Roof Material
Asphalt shingles</td><td>Roof Features
None</td><td>Roof Type
Hip</td><td></td></tr>
<tr><td colspan="3">Ornamental Architectural Details
Decorative glass blocks, brick stringcourses, concrete sills, brick lintels</td><td>Windows
Double-hung, fixed-pane, glass block</td></tr>
<tr><td colspan="4">Outbuildings (<i>Number and Description</i>)
None</td></tr>
</table>

Local Landmark	**Y [✓ N]**	
National Register Historic Places	**Y [✓ N]**	
National Register Historic District	**Y [✓ N]**	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

12706 S. Emerald Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1957

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

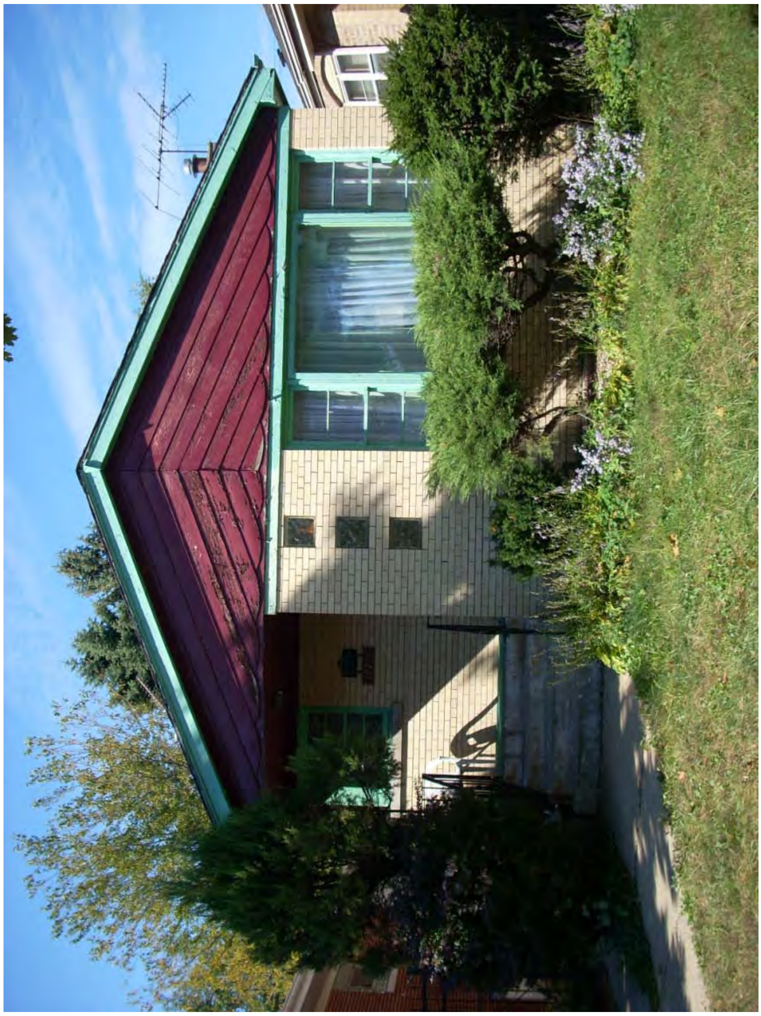
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 29 October 2012

Photos with Captions:
East façade of a one-story, single family, brick residence.



Property Description: **Stories:** 1

This one-story house in the West Pullman community is situated on a raised basement and is clad with buff brick on its front elevation and common brick on its side and rear elevations. The building has a front gable roof covered with asphalt shingles and a wood-clad gabled end. The front elevation has a recessed corner porch with a door tucked into the side of the living room bay, a corner window, concrete steps with metal railings, and a non-original picture window flanked by one-over-one aluminum-sash windows. Detailing includes three decorative glass blocks on the living room bay and concrete sills. It does not feature distinguishing architectural elements and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick (main), Wood (gable end)	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details Decorative glass block, concrete sills			**Windows** Double-hung, fixed-pane, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

12814 S. Emerald Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1952

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

Vernacular

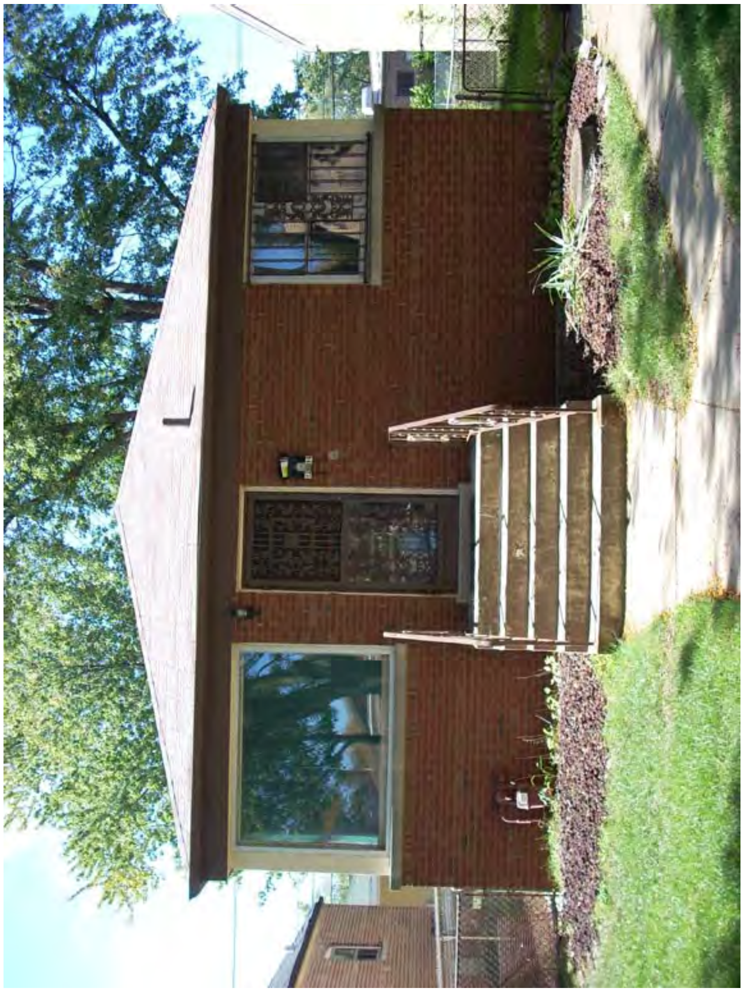
Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 29 October 2012

Photos with Captions:

East façade of a one-story, single family, brick residence.



Property Description: **Stories:** 1

This one-story house in the West Pullman community is situated on a raised basement and is clad with face brick on its front elevation and common brick on its side and rear elevations. The building has a hip roof covered with asphalt shingles. The front elevation has a centrally-located metal storm door, concrete steps with metal railings, a large picture window in one corner, and a pair of one-over-one aluminum-sash windows in the other corner. All windows have concrete sills. The house does not feature distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

<table>
<tr><td colspan="3">Integrity:
[✓ Unaltered] Slight Modification Major Alteration</td><td>Additional Notes/Descriptions</td></tr>
<tr><td colspan="3">Condition:
[✓ Excellent] Good Poor</td><td></td></tr>
<tr><td colspan="3">Additional Alterations</td><td></td></tr>
<tr><td colspan="2">Structure Usage
Current: NA
Historic: NA</td><td>Exterior Wall Surface
Brick</td><td></td></tr>
<tr><td>Roof Material
Asphalt shingles</td><td>Roof Features
None</td><td>Roof Type
Hip</td><td></td></tr>
<tr><td colspan="3">Ornamental Architectural Details
Concrete sills</td><td>Windows
Double-hung, fixed pane</td></tr>
<tr><td colspan="4">Outbuildings (<i>Number and Description</i>)
None</td></tr>
</table>

Local Landmark	**Y [✓ N]**	
National Register Historic Places	**Y [✓ N]**	
National Register Historic District	**Y [✓ N]**	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

12842 S. Emerald Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1954

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

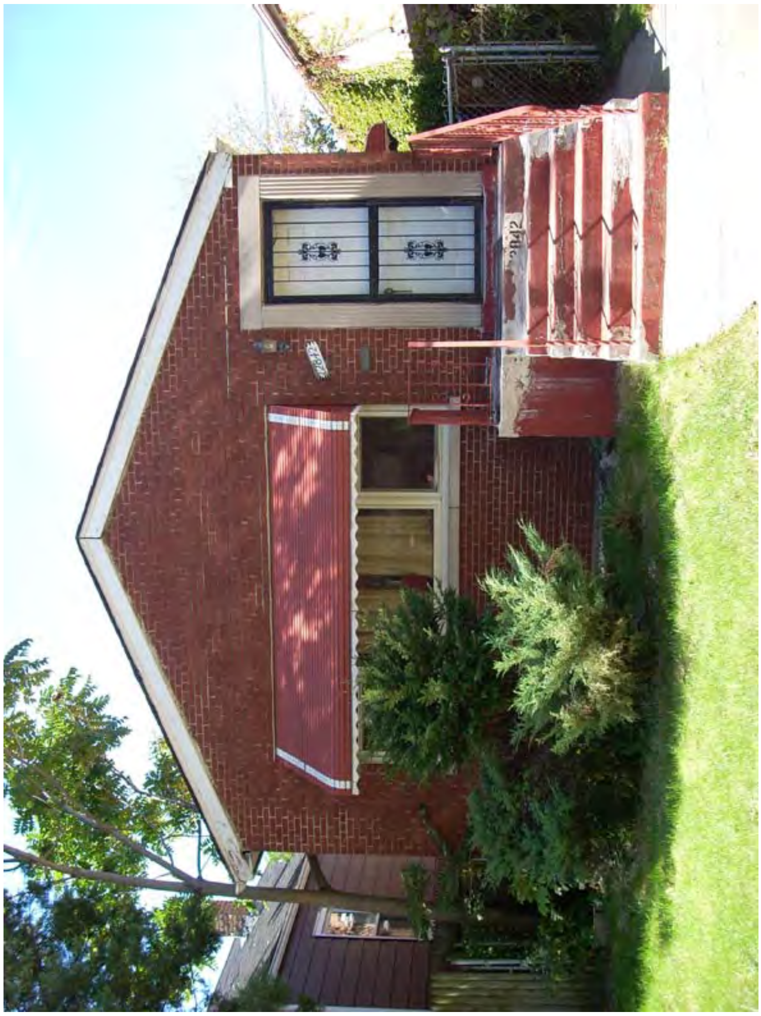
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 29 October 2012

Photos with Captions:
East façade of a one-story, brick, single family residence.



Property Description: **Stories:** 1

This one-story house in the West Pullman community is situated on a raised basement and is clad with orange face brick on its front elevation and common brick on its side and rear elevations. The building has a front gable roof covered with asphalt shingles. The front elevation has an off-center hollow core metal door with a concrete surround, concrete steps with metal railings, and a non-original picture window flanked by one-over-one aluminum-sash windows over a concrete sill. It does not feature distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement door and windows
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details Concrete door surround, concrete sills			**Windows** Double-hung, fixed-pane
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

12904 S. Emerald Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1955

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

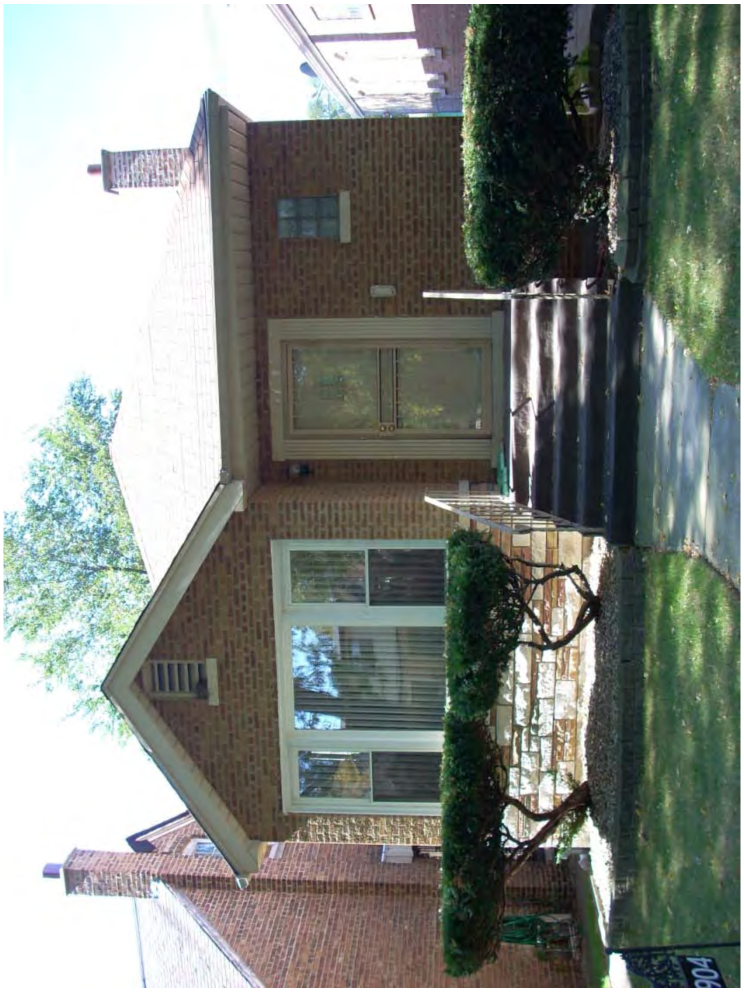
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 29 October 2012

Photos with Captions:
East façade of a one-story, brick, single family residence.



Property Description: **Stories:** 1

This one-story house in the West Pullman community is situated on a raised basement with glass block windows and is clad with face brick on its front elevation and common brick on its side and rear elevations. The building has a hip roof covered with asphalt shingles and has a projecting gabled living room bay. One-half of the front elevation is recessed beneath the overhanging eaves and has a hollow core metal door with concrete surround, concrete steps with metal railings, and a small adjacent glass block window. The gabled living room bay has a non-original picture window flanked by one-over-one aluminum-sash windows and is clad with a stone veneer beneath the sill line of this window group. The residence has a ventilating louver in the gable. It does not feature distinguishing architectural elements and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

<table>
<tr><td colspan="3">Integrity:
Unaltered [✓ Slight Modification] Major Alteration</td><td>Additional Notes/Descriptions
Replacement windows</td></tr>
<tr><td colspan="3">Condition:
[✓ Excellent] Good Poor</td><td></td></tr>
<tr><td colspan="3">Additional Alterations</td><td></td></tr>
<tr><td colspan="2">Structure Usage
Current: NA
Historic: NA</td><td>Exterior Wall Surface
Brick (main), stone veneer (façade below sill)</td><td></td></tr>
<tr><td>Roof Material
Asphalt shingles</td><td>Roof Features
None</td><td>Roof Type
Hip</td><td></td></tr>
<tr><td colspan="3">Ornamental Architectural Details
Concrete door surround, sill line</td><td>Windows
Double-hung, fixed-pane, glass block</td></tr>
<tr><td colspan="4">Outbuildings (<i>Number and Description</i>)
None</td></tr>
</table>

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11730-11736 S. Front Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Industrial

Current: Industrial

Date of Construction: 1952-1962

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

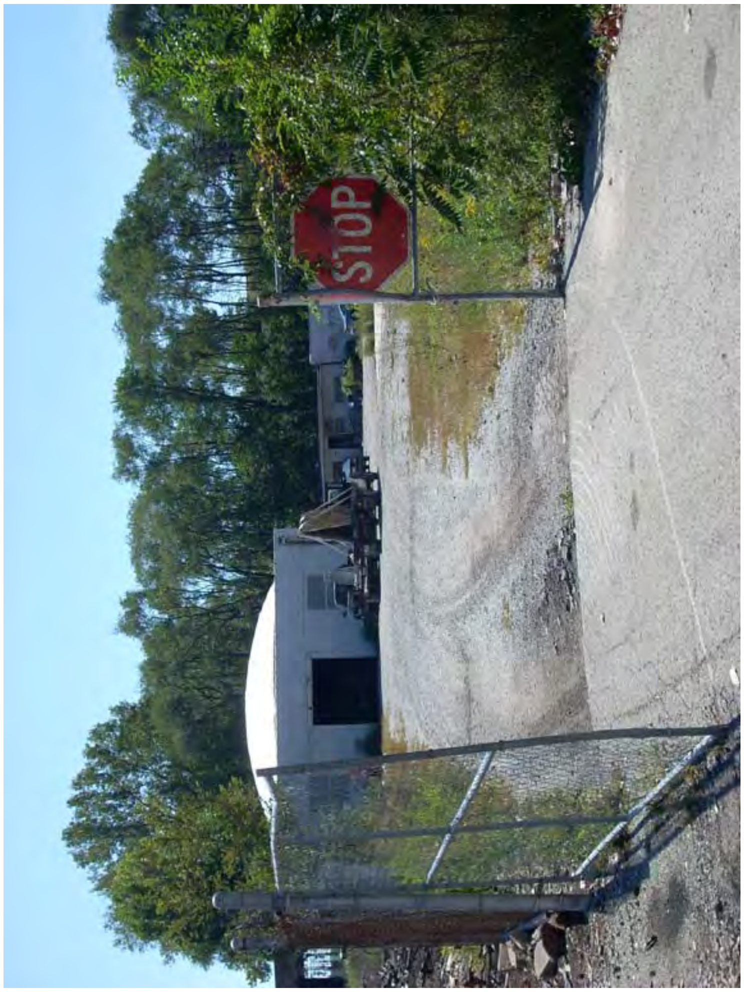
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 2 October 2012

Photos with Captions:
Looking south at light industrial complex.



Property Description: **Stories:** 1

This concrete block, Quonset utility outbuilding in the West Pullman community is set back from the public right-of-way and has a front elevation with a centrally located garage door opening flanked by a one-over-one window on either side. The 1962 aerial photograph shows two buildings on the property, the extant Quonset and a larger building. The larger building was razed between 2007 and 2012. A one-story building and a trailer standing on the remaining concrete slab from the larger, razed building are also part of this complex but too far from the road for evaluation. Windows appear to be fixed-pane on all buildings within the complex. This building complex does not have distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

<table>
<tr><td colspan="3">Integrity:
[✓ Unaltered] Slight Modification Major Alteration</td><td>Additional Notes/Descriptions
Extant buildings that are visible from the public ROW remain unchanged</td></tr>
<tr><td colspan="3">Condition:
Excellent [✓ Good] Poor</td><td></td></tr>
<tr><td colspan="3">Additional Alterations</td><td></td></tr>
<tr><td colspan="2">Structure Usage
Current: NA
Historic: NA</td><td>Exterior Wall Surface
Concrete block</td><td></td></tr>
<tr><td>Roof Material
Asphalt</td><td>Roof Features
None</td><td>Roof Type
Barrel</td><td></td></tr>
<tr><td colspan="3">Ornamental Architectural Details
None</td><td>Windows
Fixed-pane</td></tr>
<tr><td colspan="4">Outbuildings (<i>Number and Description</i>)
None</td></tr>
</table>

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

9909 S. Green Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1929

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

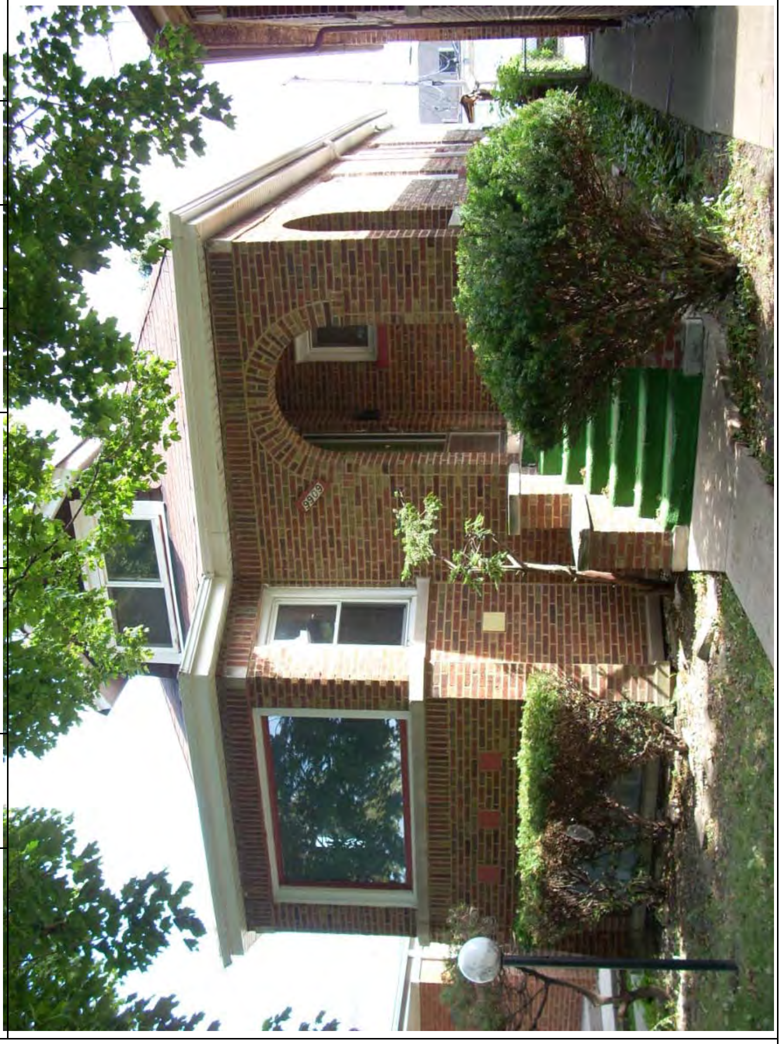
Chicago Style Bungalow

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: September 2012

Photos with Captions:
West façade of brick, one-story, single-family residence.



Property Description: **Stories:** 1

This one-story brick-clad bungalow in the Washington Heights community sits on a raised basement. The building has a hip roof covered with asphalt shingles, overhanging eaves, and a gable dormer with a pair of single-pane windows. The door is tucked into one side of the three-sided living room bay, which has a non-original central picture window flanked by one-over-one aluminum-sash windows. Its front elevation also has a recessed corner porch with two round-arch openings, concrete steps with low brick sidewalls, and a casement window. Details include an archway on the porch, decorative brickwork, and stone inserts above and below the window bay.

This is an example of a brick “Chicago Style Bungalow,” a building type that the City of Chicago has recognized through its Historic Chicago Bungalow Initiative. However, this house lacks distinctive architecture features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modifications] Major Alteration			**Additional Notes/Descriptions** Replacement windows
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingle	**Roof Features** Dormer	**Roof Type** Hip	
Ornamental Architectural Details Soldier brick archway, stone inserts			**Windows** Fixed pane, double-hung, casement
Outbuildings (*Number and Description*) Garage			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, note in CHRS

Common/Current: Unknown

Property address:

9957 S. Green Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1952

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

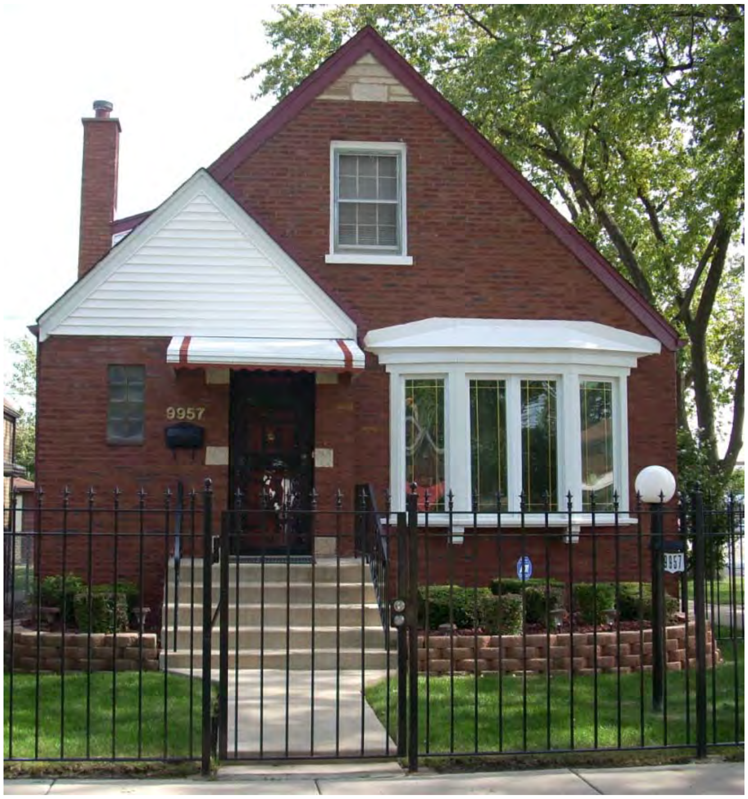
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: September 2012

Photos with Captions:
West façade of one-story, brick, single-family residence.



Property Description: **Stories:** 1

This one-story brick-clad cottage at the northeast corner of Green and 100th streets in the Washington Heights community is situated on a raised basement and has a front gable roof covered with asphalt shingles. Its front elevation has a brick-clad gable entrance vestibule with a metal storm door topped by a metal awning and concrete steps with metal railings. Windows include a small glass block window by the door, a bow window with four casements on the first floor, and a single six-over-six window in the gable. Detailing includes decorative stones flanking the door and at the apex of the gable. The side (100th Street) elevation includes a flat-roof wall dormer with a small glass block window, a side door with a metal storm door, a concrete stoop with metal railings, and a metal awning. This house lacks distinctive architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: [✓ Unaltered] Slight modifications Major Alteration			**Additional Notes/Descriptions**
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick, Synthetic siding (gable)	
Roof Material Asphalt shingle	**Roof Features** Dormer	**Roof Type** Gable	
Ornamental Architectural Details Stones at entrance and at gable			**Windows** Casement, double-hung, glass block
Outbuildings (*Number and Description*) Garage			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

100051 S. Green Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1928

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

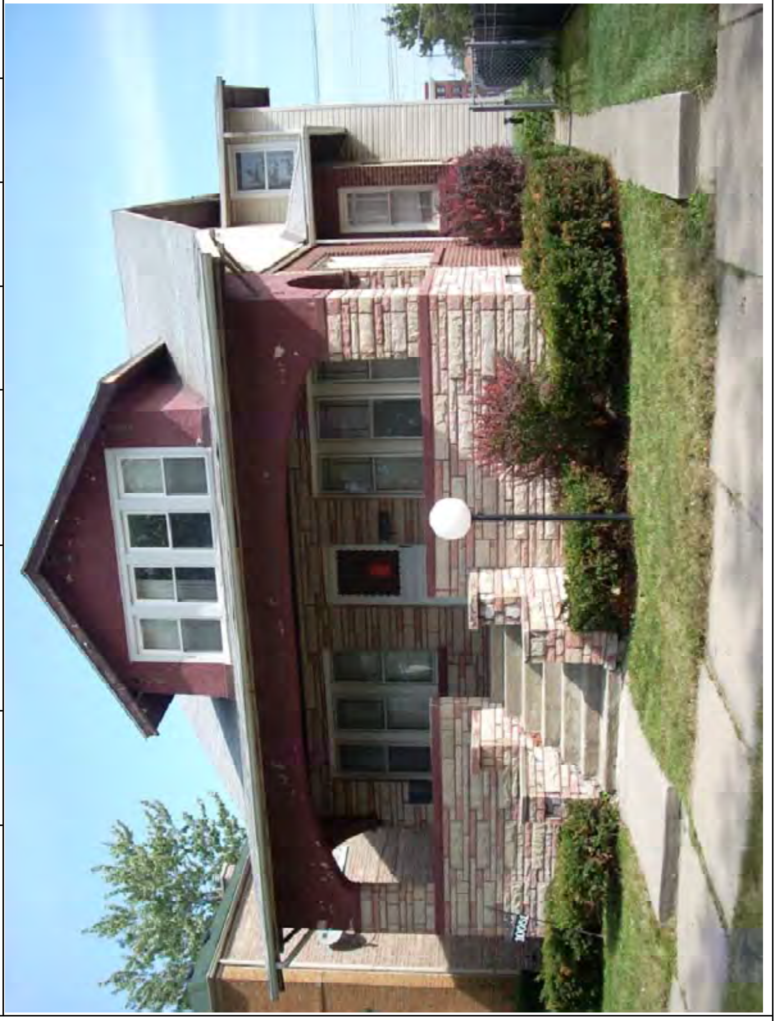
Craftsman

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: September 2012

Photos with Captions:
West façade of one-story, masonry, single family residence.



Property Description: **Stories:** 1

This single story Craftsman bungalow in the Washington Heights community is situated on a raised basement and is clad in faux stone, brick, stucco, and synthetic siding. The building has a side-gable roof with asphalt shingles, overhanging eaves with the brackets removed, and a front-gable dormer with a strip of non-original one-over-one aluminum-sash windows. The front elevation is clad with faux stone and stucco. The roof extends forward to shelter a full-width porch that has faux stone corner piers, low sidewalls, and concrete steps. The centrally located front door is flanked by a strip of three double-hung non-original windows on either side. The side elevations are clad in brown brick and have stucco-covered gables. The south elevation has an original hip-roof living room bay, behind which is a synthetic-clad, two-story addition. This house lacks integrity and distinctive architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity:

Unaltered [✓ Slight Modifications] Major Alteration

Additional Notes/Descriptions

Replacement windows, door, and cladding on the two-story bay extension

Condition:

Excellent [✓ Good] Poor

Additional Alterations

Structure Usage	**Exterior Wall Surface**
Current: NA Historic: NA	Stucco (upper façade), faux stone (lower façade), brick (sides), synthetic siding (2-story bay)

Roof Material	**Roof Features**	**Roof Type**
Asphalt shingle	Dormer	Gable

Ornamental Architectural Details

Brackets removed from under eaves of dormer.

Windows

Double-hung

Outbuildings (*Number and Description*)

None

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

10157 S. Green Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1957

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

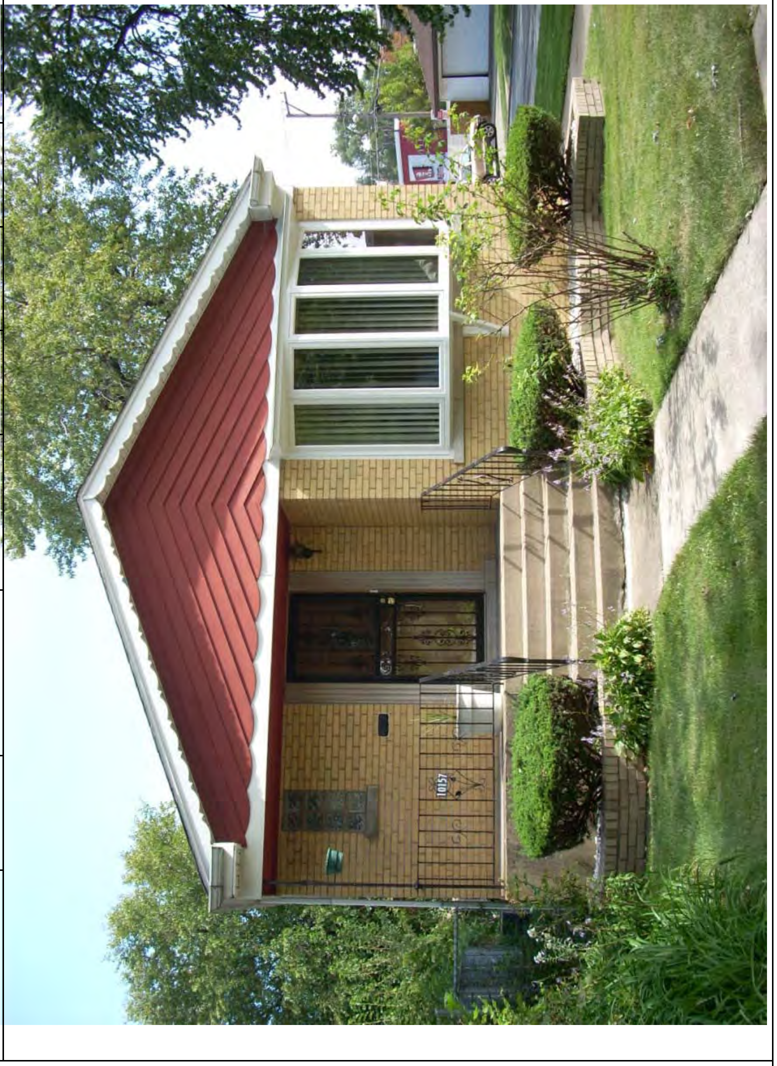
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: September 2012

Photos with Captions:
West facade of brick, one-story, single-family residence.



Property Description: **Stories:** 1

This one-story house at the northeast corner of Green and 102nd streets in the Washington Heights community is situated on a raised basement with glass block windows and is clad in yellow brick on its two street elevations. The building has a front gable clad in diagonally installed synthetic siding and framed by scalloped verge boards; asphalt shingles cover the roof. Its front elevation has a projecting living room bay with a bow window comprising four casements. It has a metal storm door with a stone surround, a small glass block window, and a partial-width porch with concrete steps, metal railings and open metal supports. It does not feature distinguishing architectural elements and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

<table>
<tr><td colspan="3">Integrity:
Unaltered [✓ Slight Modifications] Major Alteration</td><td>Additional Notes/Descriptions
Replacement windows</td></tr>
<tr><td colspan="3">Condition:
[✓ Excellent] Good Poor</td><td></td></tr>
<tr><td colspan="3">Additional Alterations</td><td></td></tr>
<tr><td colspan="2">Structure Usage
Current: NA
Historic: NA</td><td>Exterior Wall Surface
Brick (main),
Synthetic cladding (gable end)</td><td></td></tr>
<tr><td>Roof Material
Asphalt shingle</td><td>Roof Features
None</td><td>Roof Type
Gable</td><td></td></tr>
<tr><td colspan="3">Ornamental Architectural Details
Stone surround at entrance, scalloped verge boards</td><td>Windows
Casement, glass block</td></tr>
<tr><td colspan="4">Outbuildings (<i>Number and Description</i>)
Garage</td></tr>
</table>

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional comments

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS.

Common/Current: Unknown

Property address:

10201 S. Green Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1926

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

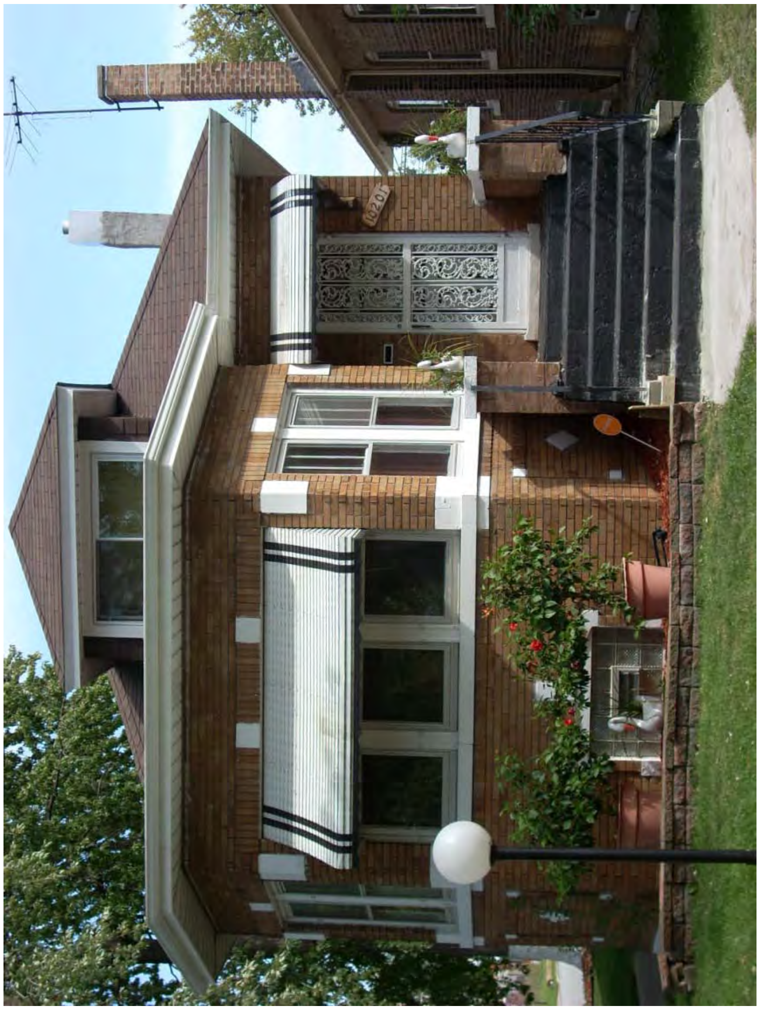
Chicago Style Bungalow

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S .Katz

Date: September 2012

Photos with Captions:
West facade of one-story, brick, single-family residence.



Property Description: **Stories:** 1

This one-story brick-clad bungalow at the southeast corner of Green and 102nd streets in the Washington Heights community is situated on a raised basement with glass block windows. The building has a hip roof with asphalt shingles, overhanging eaves, and hip dormers with paired non-original single-pane sliding windows along its front and north elevations. The front elevation has a flat roof projecting living room bay surrounded by non-original double-hung windows, the central grouping of which is partially covered by a metal awning. It also has a decorative off-center metal storm door with a metal awning, concrete steps with low brick sidewalls, and metal railings. Detailing includes brick panels along the base of the living room bay, soldier brick lintels, and square concrete insert blocks used as decorative accents. This is an example of a Chicago Style Bungalow, a building type that the City of Chicago has recognized through its Historic Chicago Bungalow Initiative. However, this house lacks distinctive architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered	[✓ Slight Modifications]	Major Alteration	**Additional Notes/Descriptions** Replacement windows
Condition: [✓ Excellent]	Good	Poor	
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingle	**Roof Features** Dormers	**Roof Type** Hip	
Ornamental Architectural Details Concrete sills and inserts, brick panels and soldier course lintel			**Windows** Double-hung, sliding, glass block
Outbuildings (*Number and Description*) Garage			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

10237 S. Green Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1926

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

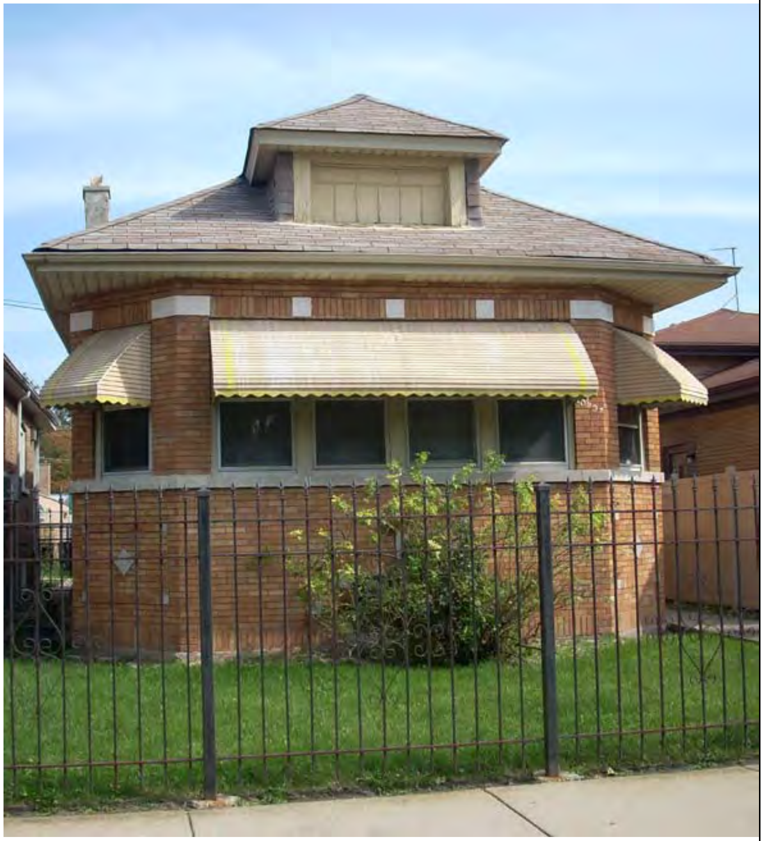
Chicago Style Bungalow

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: September 2012

Photos with Captions:
West façade of one-story, brick, single-family residence.



Property Description: **Stories:** 1

This one-story brick-clad bungalow in the Washington Heights community is situated on a raised basement with glass block windows. The building has a hip roof with asphalt shingles, overhanging eaves, and hip dormers with infilled openings along its front and rear elevations. The three-sided front elevation is surrounded by non-original double-hung windows that are partially covered by metal awnings. The front door is located along the south elevation. Detailing includes brick panels along the base of the living room bay, a soldier brick course, and square concrete insert blocks used as decorative accents. This is an example of a Chicago Style Bungalow, a building type that the City of Chicago has recognized through its Historic Chicago Bungalow Initiative. However, this house lacks distinctive architectural features and is not individually eligible for listing on the National Register.

Structural Survey

Integrity: Unaltered [✓ Slight Modifications] Major Alteration			**Additional Notes/Descriptions** Replacement windows, dormer window in-filled
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingle	**Roof Features** Dormers	**Roof Type** Hip	
Ornamental Architectural Details Brick panels, soldier brick course, concrete insert blocks			**Windows** Double-hung, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

10345 S. Green Street
Alternate: 10345 S. Alpine Drive

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1919

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

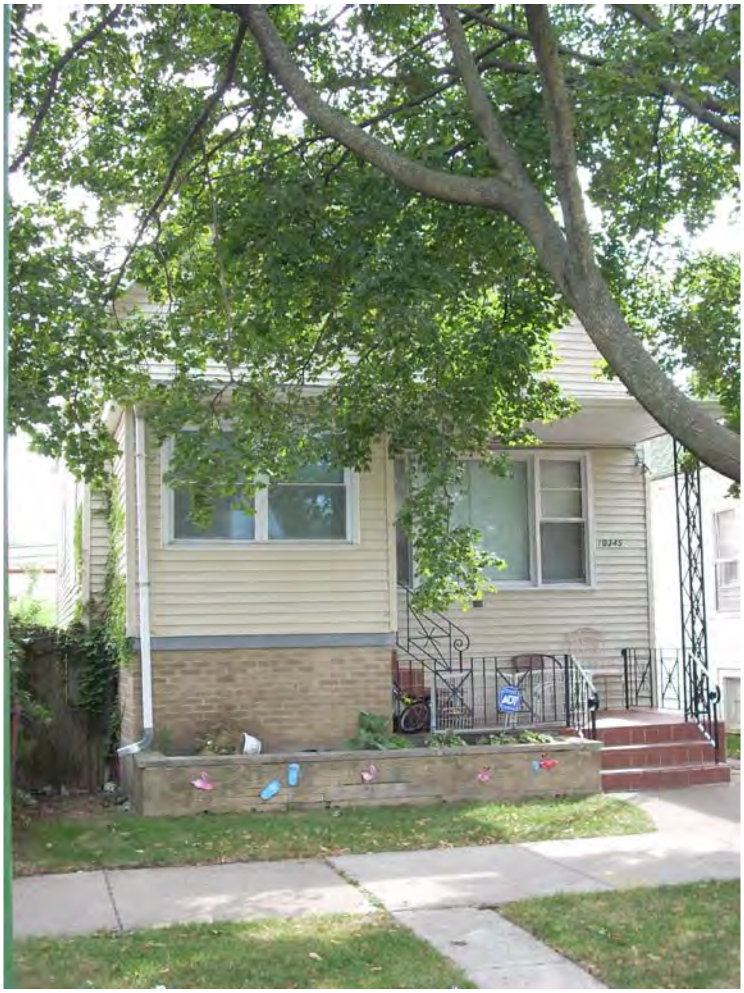
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 24 October 2012

Photos with Captions:
West façade of a 1.5-story, single family, frame residence.



Property Description: **Stories:** 1.5

This one-and-a-half-story frame house in the Washington Heights community is situated on a raised brick basement and is covered with synthetic siding. The building has a hip-on-gable roof with a dormer. The front elevation has a full-width, flat-roofed porch, half of which is enclosed as a sunroom with a door tucked into its side. The open half of the porch has a metal corner support, metal railings and a clay tile deck with two steps. Fenestration on the front elevation includes a pair of non-original one-over-one aluminum-sash windows and a non-original picture window flanked by one-over-one aluminum-sash windows. A low, light brown colored brick planter stretches across the width of the sun porch. This house lacks integrity and distinctive architectural features and is not individually eligible for listing on the National Register.

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Phone (815) 568- 0680

Structural Survey

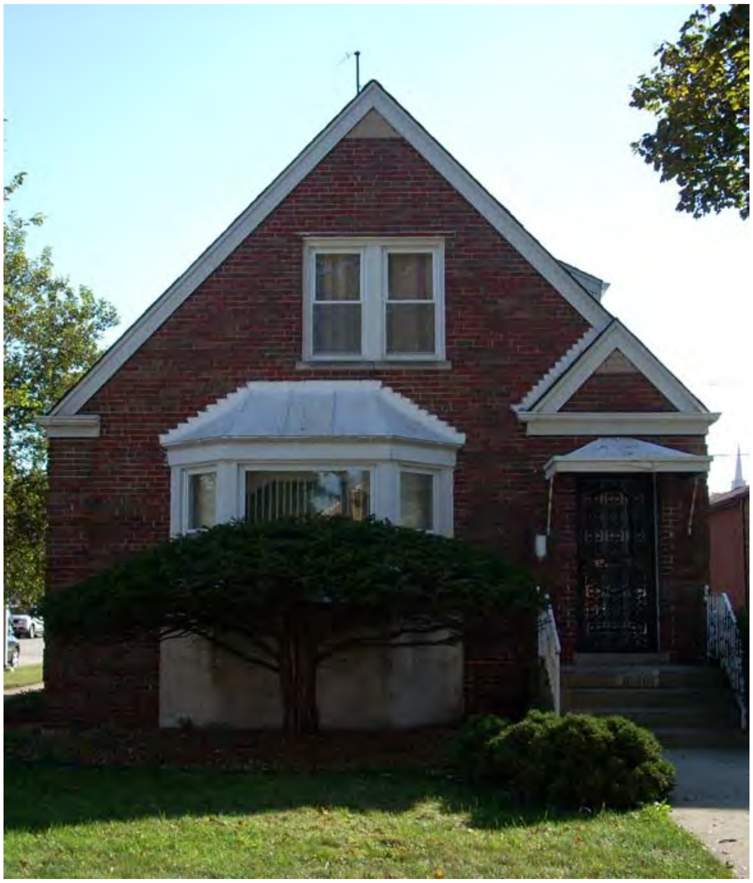
Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows and porch rails
Condition: [✓ Excellent] Good Poor			
Additional Alterations Porch partially enclosed after 1938 (Sanborn).			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** Dormer	**Roof Type** Hip on gable	
Ornamental Architectural Details Brick planter			**Windows** Double-hung, fixed-pane
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name **Historic:** Bldg. not labeled, not in CHRS **Common/Current:** Unknown	**Photos with Captions:** West façade of a one-story, single family, brick residence. 
Property Address: 10401 S. Green Street	
HAARGIS Number: Not in database	
Present Owner and /or Occupant: Unknown	
Property Use **Historic:** Single family residence **Current:** Single family residence	
Date of Construction: 1949 **Architect's Name:** Not in CHRS **Builder/Contractor:** Not in CHRS	
Architectural Style: Minimal Traditional	
Prepared By: J. Martinez, M. C. Bird, J. Guarino **Photo By:** S. Katz **Date:** 23 October 2012	

Property Description: **Stories:** 1

This one-story brick-clad house at the southeast corner of Green and 104th streets in the Washington Heights community is situated on a raised basement with glass block windows. The building has a steeply pitched front gable roof with asphalt shingles and a shed dormer along its south elevation. Its front elevation has a slightly projecting off-center entrance vestibule topped by a pediment. The vestibule has a metal storm door, concrete steps and railings, and bracketed metal awning. The first floor has a three-sided window bay with a central picture window flanked by non-original one-over-one aluminum-sash windows and a smooth stone base. A pair of non-original one-over-one aluminum-sash windows is situated in the gable. Detailing includes decorative brickwork at the corners and concrete sills. This house lacks distinctive architectural features and is not individually eligible for listing on the National Register.

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement door and windows
Condition: [✓ Excellent] Good Poor			
Additional Alterations Shed dormer may be a later addition			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt	**Roof Features** Dormer	**Roof Type** Gable	
Ornamental Architectural Details Entrance with pediment and bracketed awning, concrete sills, stone base under bay, decorative brickwork			**Windows** Double-hung, fixed-pane, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

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Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

10457 S. Green Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1956

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

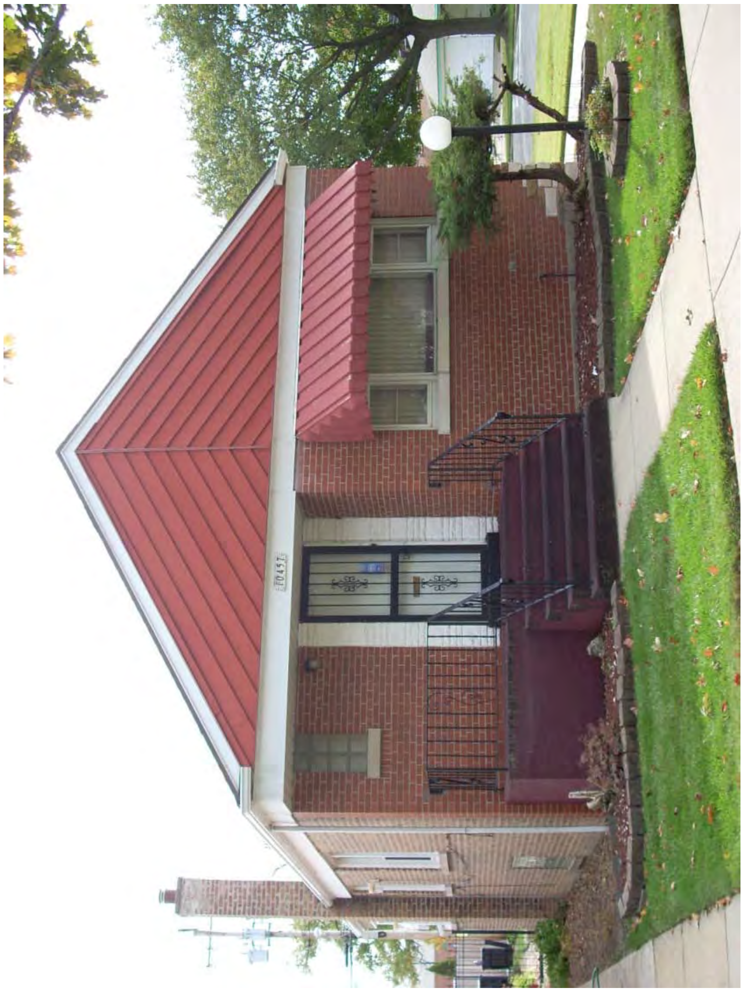
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 23 October 2012

Photos with Captions:
West façade of a one-story, single family, brick residence.



Property Description: **Stories:** 1

This one-story brick-clad house at the northeast corner of Green and 105th streets in the Washington Heights community is situated on a raised basement. The building has a front gable roof covered with asphalt shingles. The north half of the front elevation is recessed and has a metal storm door, concrete steps with metal railings, and a small glass block window. The living room bay has a non-original picture window flanked by one-over-one aluminum-sash windows that are partially obscured by a metal awning. Detailing includes concrete sills below both windows and stone inserts at the basement corner. The front elevation's gable is clad with synthetic siding. This standard home does not display distinguishing architectural features and is not individually eligible for listing on the National Register.

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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows and cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick, synthetic (gable end)	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details concrete sills, stone inserts at corner			**Windows** Double-hung, fixed-pane, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

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Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

10541 S. Green Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1962

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

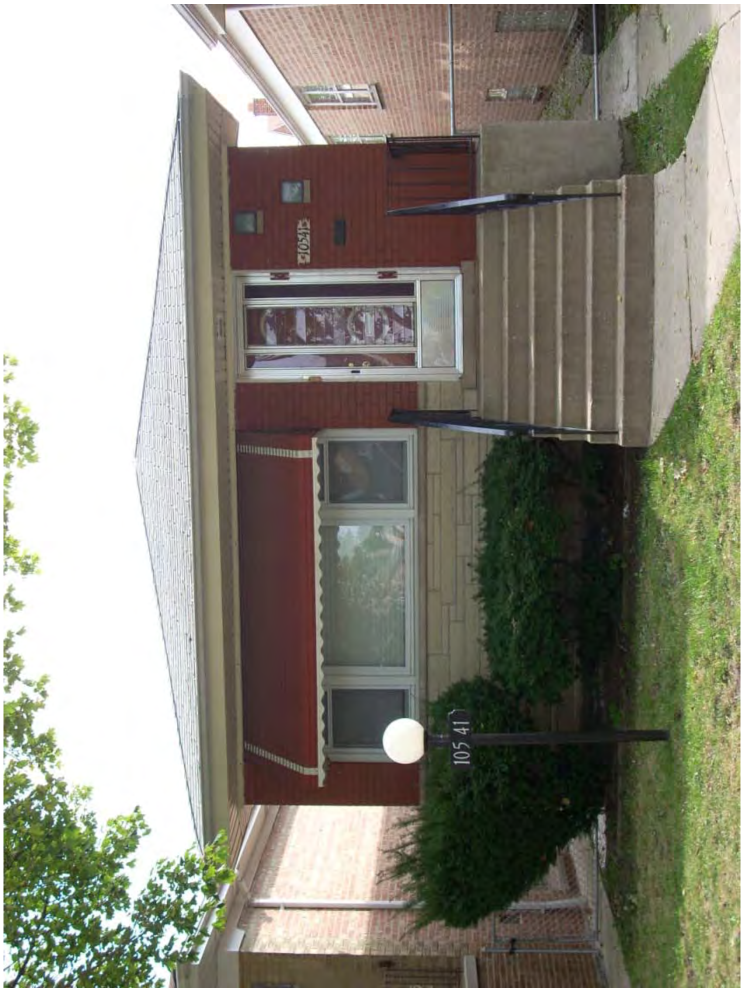
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 23 October 2012

Photos with Captions:
West façade of a one-story, single family, brick residence.



Property Description: **Stories:** 1

This one-story brick-clad house in the Washington Heights community sits on a raised basement with glass block window. The building has a hip roof covered with asphalt shingles and overhanging eaves. The front elevation is clad in orange face brick and in faux stone below the sill line. It has an off-center metal storm door, concrete steps with metal railings, and a picture window flanked by one-over-one aluminum-sash windows that are partially obscured by a metal awning. Detailing includes two decorative glass blocks adjacent to the front door. It does not display distinguishing architectural features and is not individually eligible for listing on the National Register.

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505 North State Street
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Structural Survey

<table>
<tr><td colspan="3">Integrity:
[✓ Unaltered] Slight Modification Major Alteration</td><td>Additional Notes/Descriptions
Aluminum sashes may be original</td></tr>
<tr><td colspan="3">Condition:
[✓ Excellent] Good Poor</td><td></td></tr>
<tr><td colspan="3">Additional Alterations</td><td></td></tr>
<tr><td colspan="2">Structure Usage
Current: NA
Historic: NA</td><td>Exterior Wall Surface
Brick,
Faux stone (below sill)</td><td></td></tr>
<tr><td>Roof Material
Asphalt shingle</td><td>Roof Features
None</td><td>Roof Type
Hip</td><td></td></tr>
<tr><td colspan="3">Ornamental Architectural Details
Decorative glass blocks</td><td>Windows
Double-hung, fixed-pane, glass block</td></tr>
<tr><td colspan="4">Outbuildings (<i>Number and Description</i>)
None</td></tr>
</table>

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

10601 S. Green Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1954

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

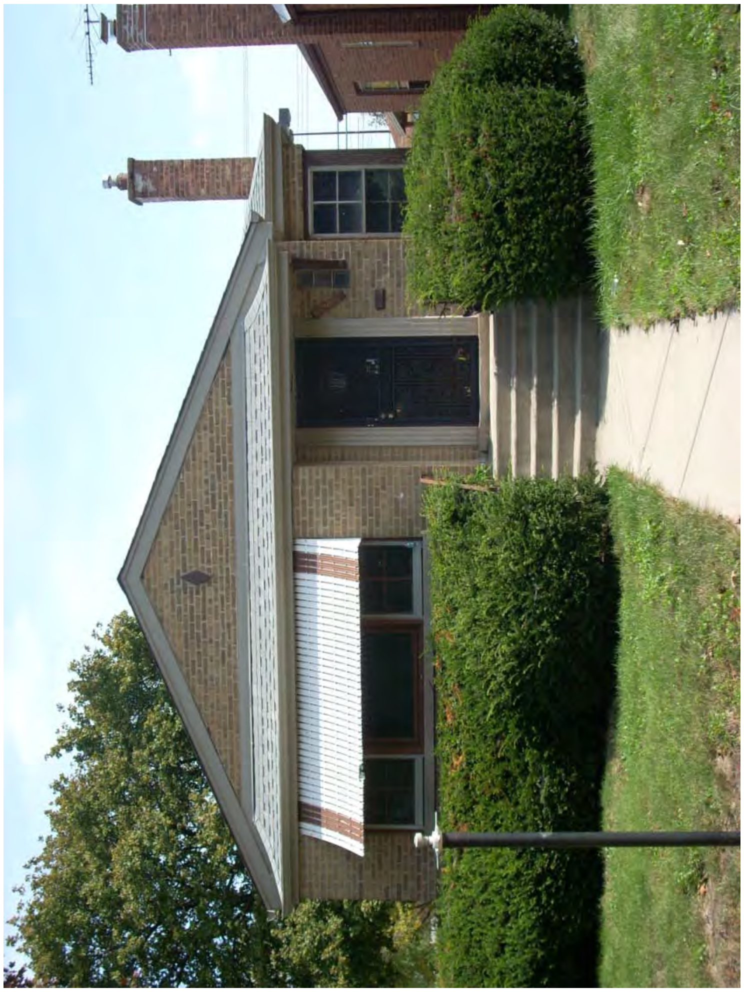
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 23 October 2012

Photos with Captions:
West façade of a one-story, single family, brick residence.



Property Description: **Stories:** 1

This one-story house in the Washington Heights community is situated on a raised basement with glass block windows and is clad with tan-brown brick. The building has a front gable roof covered with asphalt shingles. The front elevation has a projecting living room bay with a non-original picture window flanked by one-over-one aluminum-sash windows that are partially obscured by a low, metal awning. The residence includes an off-center metal storm door flanked by fluted concrete molding, concrete steps with metal railings, and a single four-over-four corner window. A pent roof spans the living room bay and front door. It does not display distinguishing architectural features and is not individually eligible for listing on the National Register.

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Structural Survey

Integrity: [✓ Unaltered] Slight Modification Major Alteration			**Additional Notes/Descriptions**
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details Fluted concrete molding around door			**Windows** Double-hung, fixed-pane, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

10701 S. Green Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1950

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

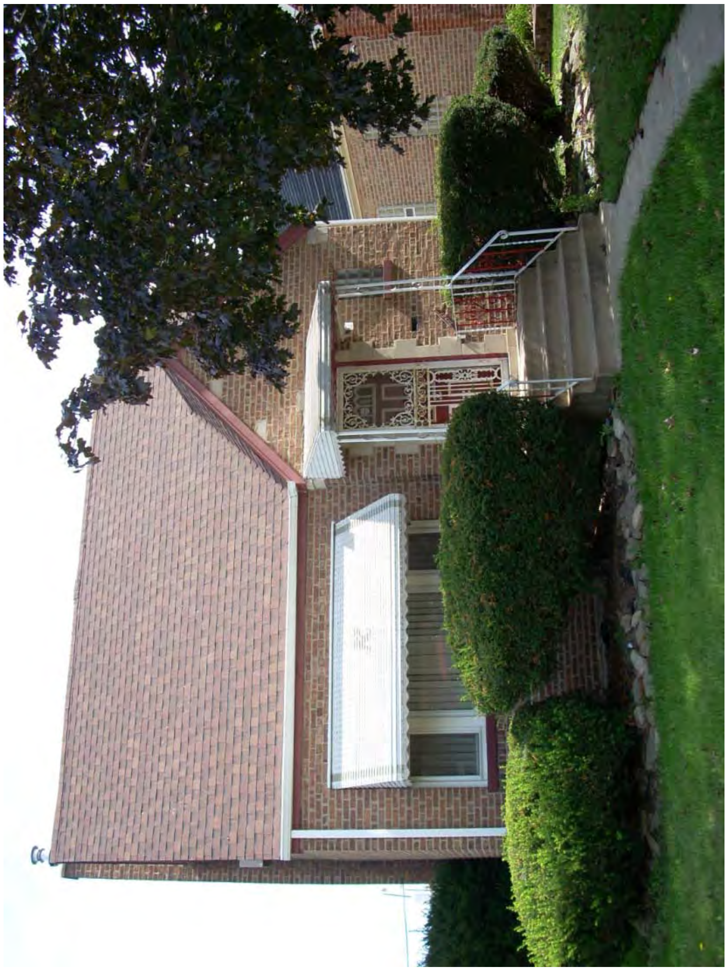
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 23 October 2012

Photos with Captions:
West façade of a one-story, single family, brick residence.



Property Description: **Stories:** 1

This one-story brick-clad cottage in the Morgan Park community is situated on a raised basement with glass block windows and has a steeply pitched side-gable roof. Its front elevation has a slightly projecting brick-clad gabled entrance vestibule with a metal storm door and a small adjacent glass block window. The porch has concrete steps, metal railings, open metal supports and metal awning roof. This elevation has a picture window flanked by double-hung windows that are partially obscured by a low, metal awning. Detailing includes decorative stone flanking the door and used as accents on the entrance vestibule. It does not display distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
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Marengo, Illinois 60152
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Structural Survey

Integrity: [✓ Unaltered] Slight Modification Major Alteration			**Additional Notes/Descriptions**
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details Stone at entrance and as accents			**Windows** Double-hung, fixed-pane, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

10757 S. Green Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1947

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

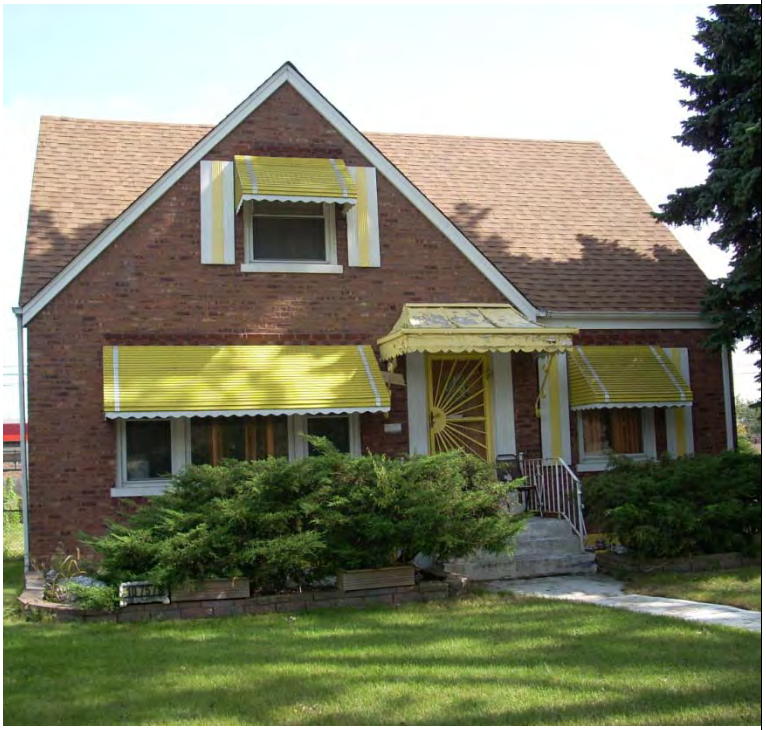
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 23 October 2012

Photos with Captions:
West façade of a one-story, single family, brick residence.



Property Description: **Stories:** 1

This one-story brick-clad cottage in the Morgan Park community has a cross-gable roof covered with asphalt shingles. The front elevation has metal storm door with sunburst motif and bracketed metal awning, concrete steps with metal railings, a picture window flanked by one-over-one windows, and a single one-over-one window. An additional one-over-one window is situated in the gable. All windows are non-original and have metal awnings. It does not feature distinguishing architectural elements and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Cross-gable	
Ornamental Architectural Details None			**Windows** Double-hung, fixed-pane
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

10829 S. Green Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1948

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

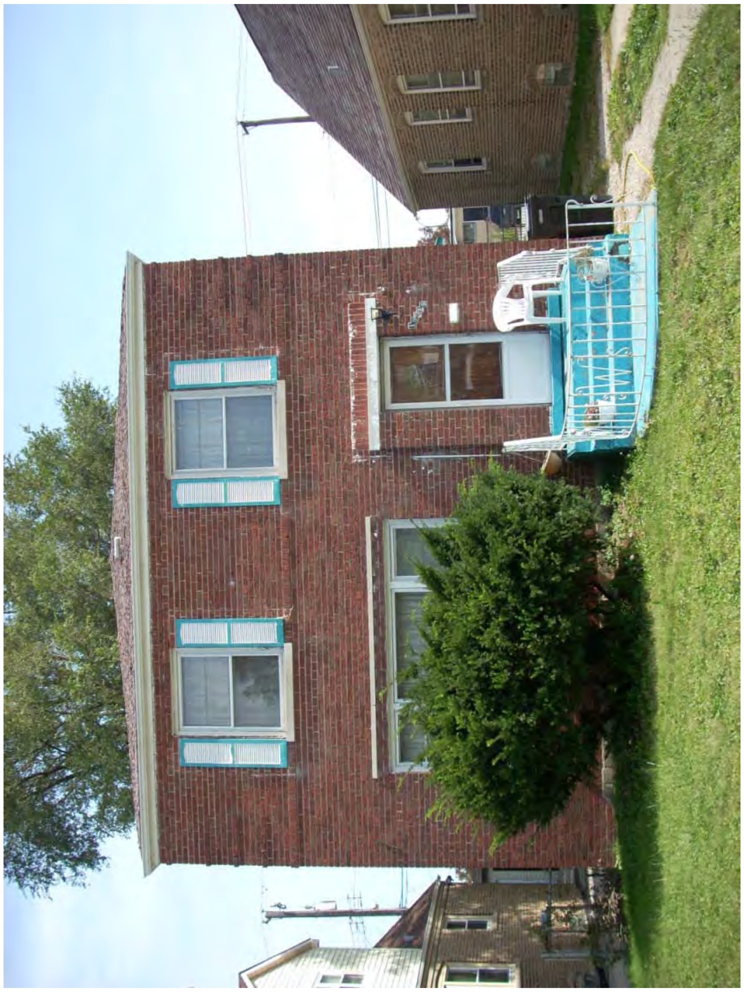
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 23 October 2012

Photos with Captions:
West façade of a brick, two-story, single family residence.



Property Description: **Stories:** 2

This two-story house is situated on a raised basement in the Morgan Park community and is clad with faced brick on its front elevation and common brick on its side and rear elevations. The building has a hip roof covered with asphalt shingles. Its front elevation has a slightly projecting off-center entrance with a metal storm door, concrete steps, and metal railings. Windows on the front elevation are non-original and include a picture window flanked by one-over-one aluminum-sash windows on the first floor and two one-over-one aluminum-sash windows on the second floor. Detailing includes brick stringcourses with soldier course lintels and concrete sills. It does not display distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
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Marengo, Illinois 60152
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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows
Condition: Excellent [✓ Good] Poor			
Additional Alterations Tack strips, that once secured awnings, remain above the windows.			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Hip	
Ornamental Architectural Details Brick stringcourses, soldier course lintels, concrete sills			**Windows** Double-hung, fixed-pane
Outbuildings (*Number and Description*) None			

Local Landmark	**Y [✓ N]**	
National Register Historic Places	**Y [✓ N]**	
National Register Historic District	**Y [✓ N]**	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

10901 S. Green Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1948

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

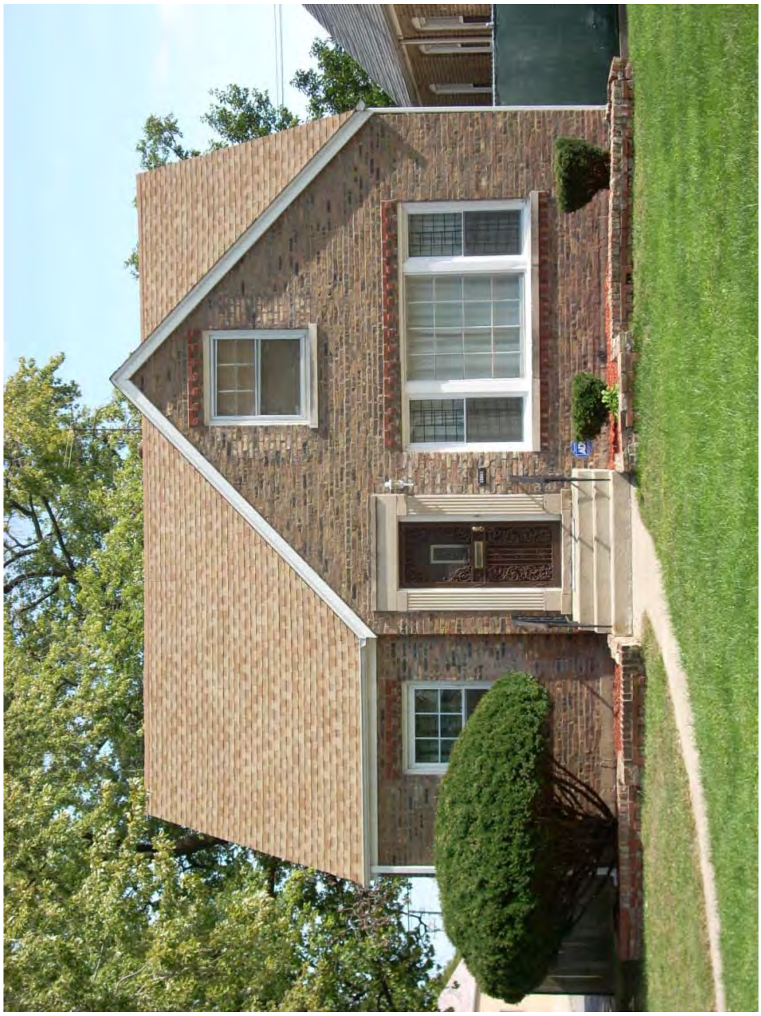
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 23 October 2012

Photos with Captions:
West façade of a single story, single family, brick residence.



Property Description: **Stories:** 1

This one-story brick-clad cottage in the Morgan Park community is situated on a raised basement and has a cross-gable roof covered with asphalt shingles. The front elevation has a metal storm door with a concrete surround consisting of fluted pilasters and a smooth lintel, concrete steps with metal railings, a sixteen-light window flanked by one-over-one aluminum-sash windows, and two six-over-one aluminum-sash windows: one on the first floor and one in the gable. Windows are modern replacements. Detailing includes decorative brickwork above the windows, concrete sills, and faux stone at the water table. It does not feature distinguishing architectural characteristics and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Cross-gable	
Ornamental Architectural Details Stone lintel at entrance, fluted pilasters, decorative brickwork above windows, concrete sills, faux stone at water table			**Windows** Double-hung, fixed-pane
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11001 S. Green Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1942

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

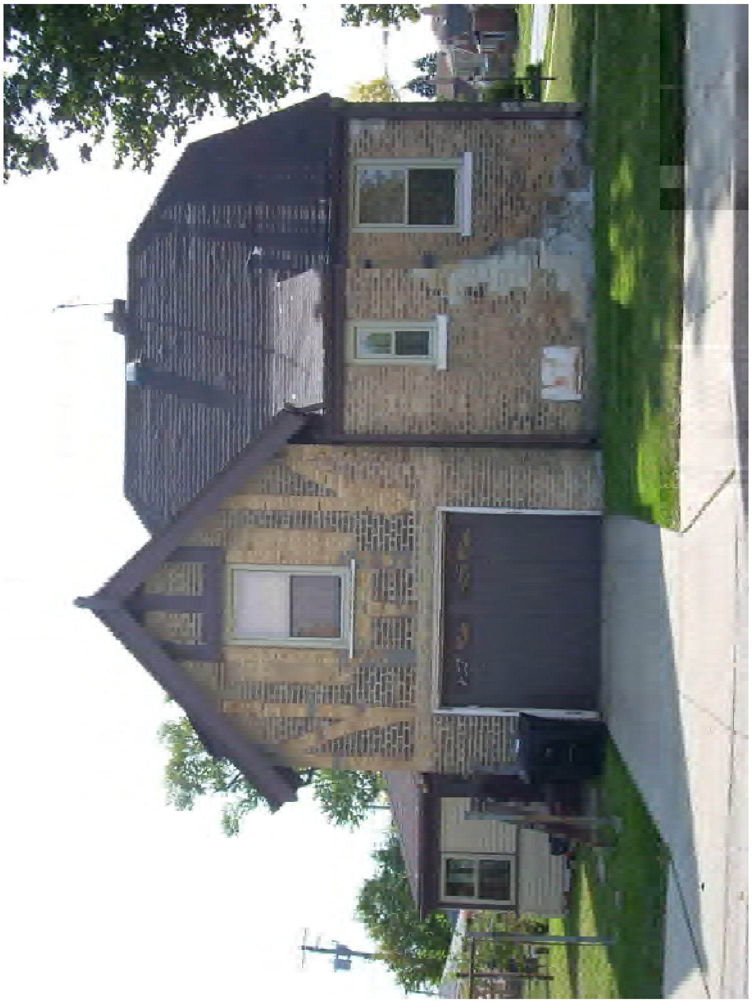
Neo-Tudor

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 23 October 2012

Photos with Captions:
West façade of a one-story single family, brick residence.



Property Description: **Stories:** 1

This one-story, brick clad house in the Morgan Park community is situated on a raised basement with glass block windows. The building has a hip-on-gable roof with a gable garage facing the street. The house’s front entrance is located within a vestibule that is topped by a shed-roof, is brick-clad, and is located in the ell created by the main section of the house and the gable garage. It has a hollow core metal door, concrete steps, and metal railings. The front elevation has a non-original aluminum-clad first floor bay window and two additional pairs of non-original aluminum-sash windows: one on the first floor and one in the gable. The north elevation has an overhead garage door and a one-over-one aluminum-sash window. Detailing includes decorative stonework at the corners of the house, vertical half-timbering in the north gable (much of which has been removed), and concrete sills. This house does not feature sufficient distinguishing architectural features to qualify as individually eligible for listing on the National Register.

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Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration	**Additional Notes/Descriptions** Replacement windows
Condition: [✓ Excellent] Good Poor	
Additional Alterations Ghost lines on the garage suggest that window shutters and other trim may have been removed.	

Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	

Ornamental Architectural Details Decorative brickwork, stonework, half-timbering, concrete sills	**Windows** Double-hung
Outbuildings (*Number and Description*) None	

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11039 S. Green Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1942

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

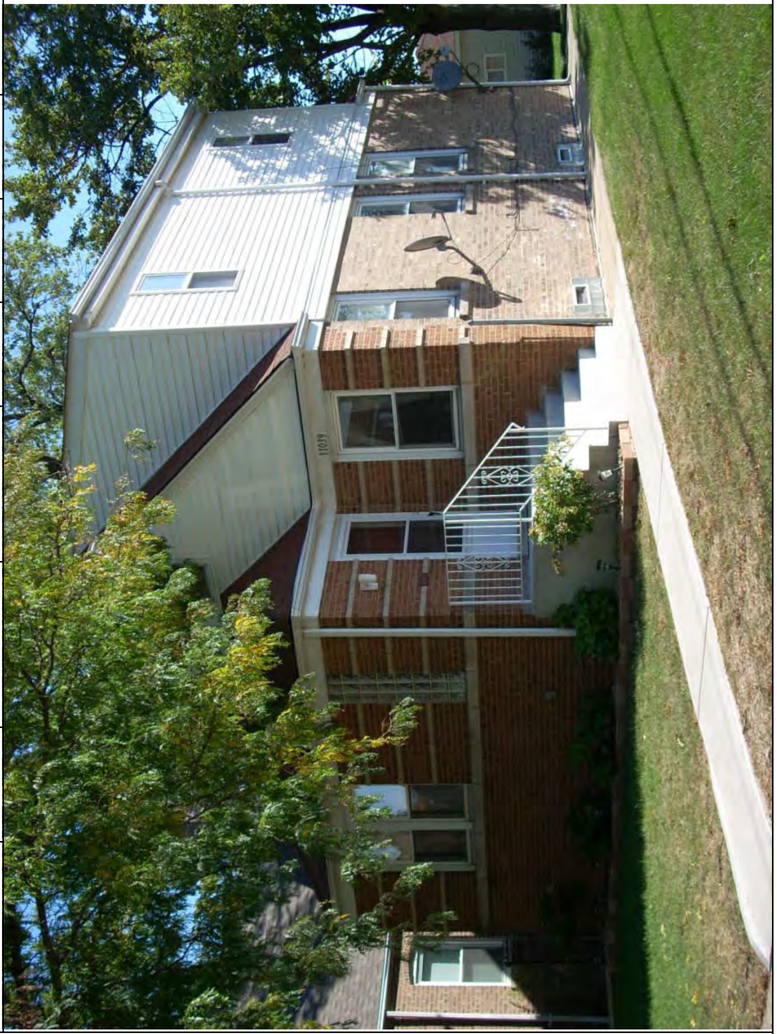
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 13 September 2012

Photos with Captions:
West and south façades of two-story, brick and frame, single-family residence.



Property Description: **Stories:** 2

This two-story house in the Morgan Park community has a brick-clad first floor, a synthetic-clad second floor, and a gable roof covered with asphalt shingles. The front elevation has a hip-roofed enclosed front porch with a side entrance door, concrete steps, and metal railing. There are three one-over-one aluminum-sash windows and one glass block window on the first floor front façade and a single one-over-one on the second. Detailing includes a stone sill course and buff brick stringcourses. The second floor on this house is a later addition. This home does not feature sufficient integrity or distinguishing features to qualify as eligible for individual listing on the National Register.

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Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered Slight Modification [✓ Major Alteration]			**Additional Notes/Descriptions** Replacement windows, roof raised
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick (lower), Synthetic siding (upper)	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details Stone sill course, brick stringcourses			**Windows** Double hung
Outbuildings (*Number and Description*) Garage			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11121 S. Green Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Multi-family residence

Current: Multi-family residence

Date of Construction: 1959

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

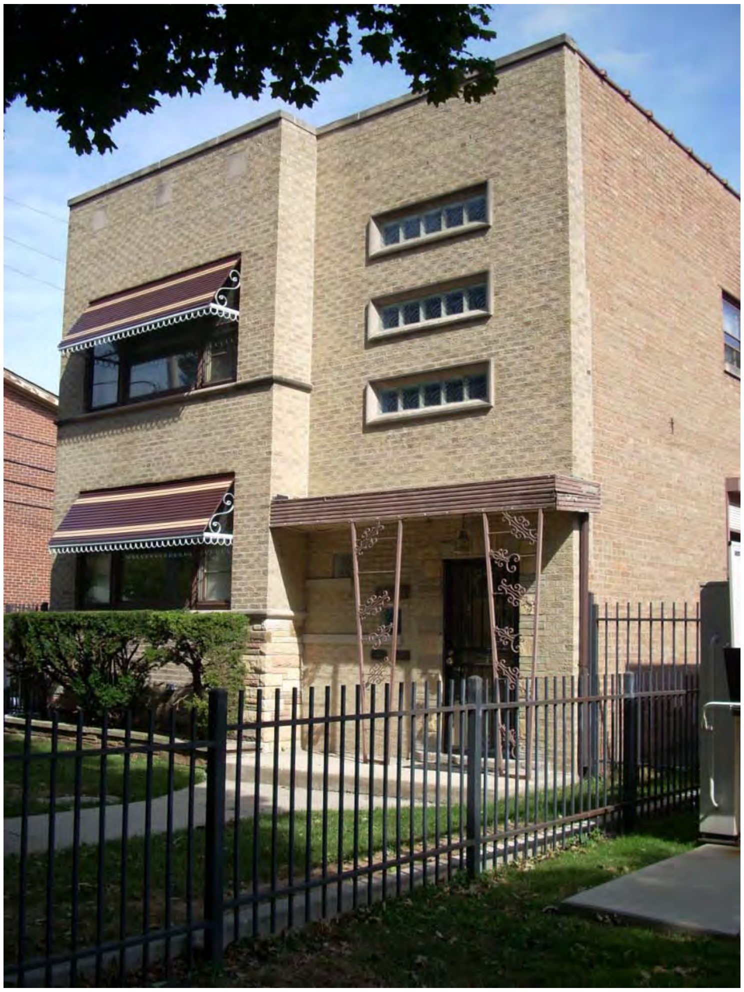
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 23 October 2012

Photos with Captions:
West façade of a two-story, brick, multi-family residence.



Property Description: **Stories:** 2

This two-story residential building in the Morgan Park community is situated on a raised basement with glass block windows and is clad with buff brick along the front elevation and with common brick along the side and rear elevations. The building has a flat roof and parapet. The north half of the front elevation has a full-height rectangular pavilion, both floors of which feature a window group comprised of a picture window flanked by one-over-one aluminum-sash windows with metal awnings. The south half of the front elevation has an off-center hollow core metal door, a flat-roofed canopy with two open metal supports, and a concrete stoop. Detailing includes decorative glass blocks adjacent to the door and three horizontal strips of glass blocks on the second floor, above the entrance. This building lacks distinguishing architectural features and is not individually eligible for listing on the National Register.

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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement door; windows may be original
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details Decorative glass blocks			**Windows** Double-hung, fixed-pane, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

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Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11247 S. Green Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1950

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

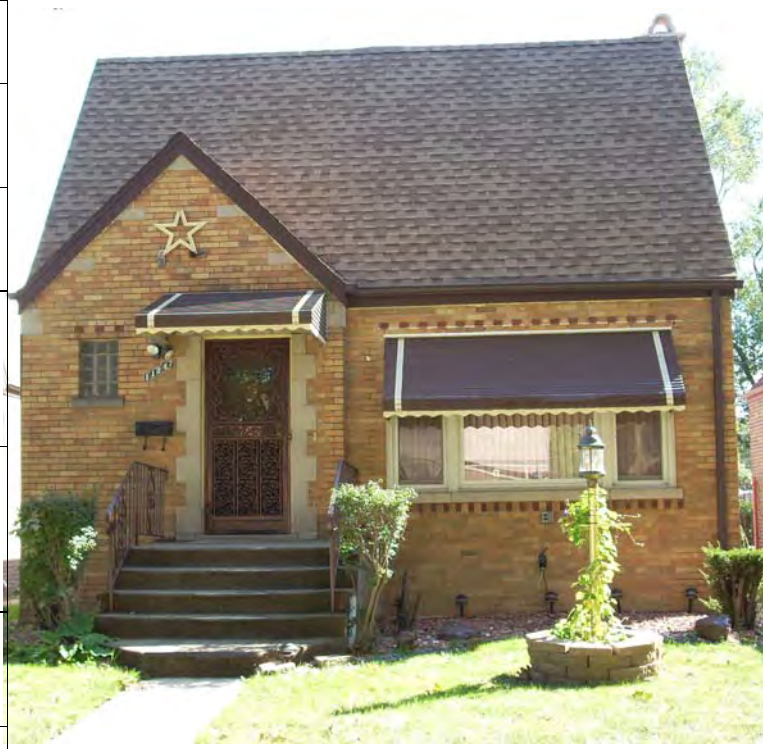
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 24 October 2012

Photos with Captions:
West façade of a one-story, single family, brick residence.



Property Description: **Stories:** 1

This one-story brick-clad cottage in the Morgan Park community has a side gable roof covered with asphalt shingles and a rear gabled wing. The residence is on a raised basement. The front elevation has a slightly projecting gabled brick-clad vestibule with a metal storm door surrounded by stone quoins, a metal awning, a small adjacent glass block window, and concrete steps with metal railings. The living room bay has a picture window flanked by one-over-one aluminum sash windows that are partially obscured by a metal awning. Detailing included decorative brick above and below the windows. This house lacks distinguishing architectural features and is not individually eligible for listing on the National Register.

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Structural Survey

Integrity: [✓ Unaltered] Slight Modification Major Alteration			**Additional Notes/Descriptions**
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details Stone surrounding the entrance, decorative brick around windows			**Windows** Double-hung, fixed-pane, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

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505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11359 S. Green Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1951

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

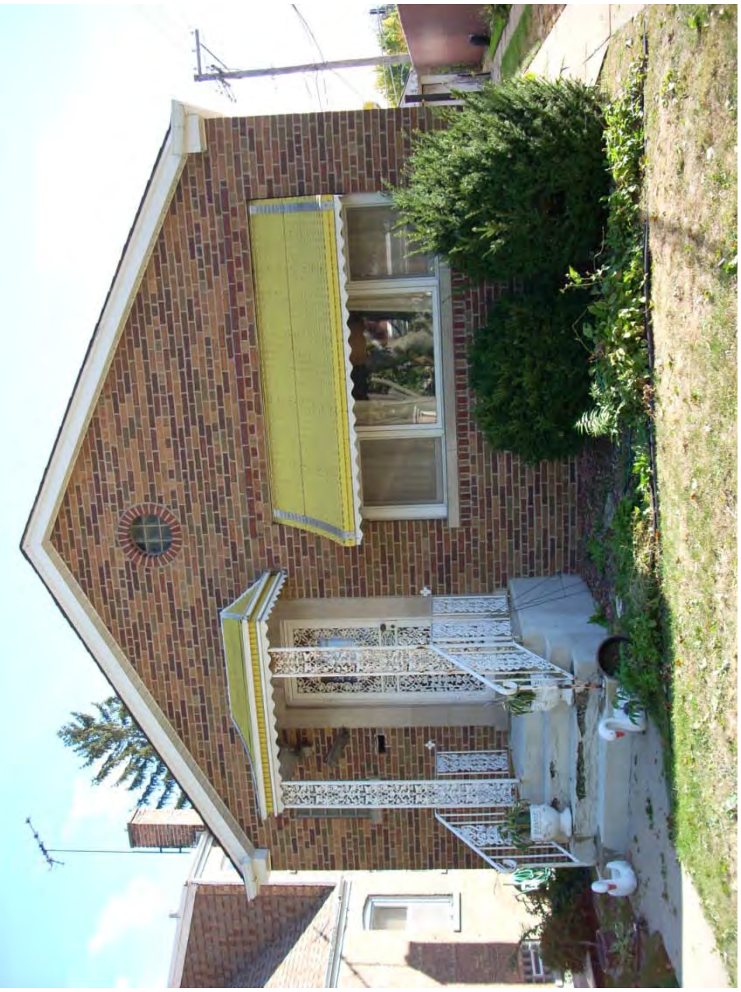
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 24 October 2012

Photos with Captions:
West façade of a brick, one-story, single family residence.



Property Description: **Stories:** 1

This one-story brick-clad house in the Morgan Park community has a front gable roof covered with asphalt shingles. Its front elevation features an off-center metal storm door with a concrete surround and a porch with concrete steps, metal railings, two open metal supports, and a metal awning roof. It has a small glass block window and a picture window flanked by non-original one-over-one aluminum-sash windows. A small bulls-eye window is situated in the attic gable. Detailing includes contrasting brick around the bulls-eye window and both above and below the other window group. It does not display distinguishing architectural features and is not individually eligible for listing on the National Register.

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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details Contrasting brick around the windows, bulls-eye window			**Windows** Double-hung, fixed-pane, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

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505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

12143 S. Green Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Flat

Current: Flat

Date of Construction: 1909

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

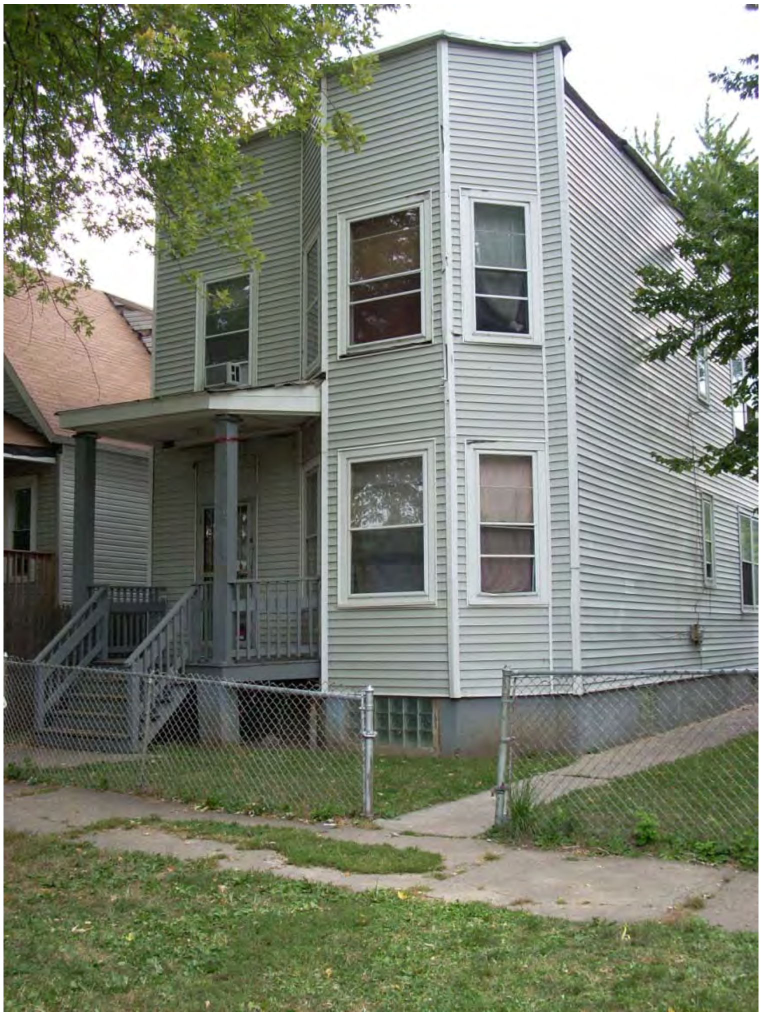
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 26 October 2012

Photos with Captions:
West façade of a two-story, two-flat, frame residence.



Property Description: **Stories:** 2

This two-flat residential building in the West Pullman community sits on a raised concrete block basement with glass block windows and is covered with synthetic siding. The building has a flat roof with parapet. The front elevation has a partial-width, flat-roofed, wood porch with an off-center door, straight railings and posts, and a full-height three-sided window bay pavilion with six non-original one-over-one aluminum-sash windows: three on the first floor and three on the second floor. The second floor also has a single non-original one-over-one aluminum-sash window above the porch. This building lacks integrity and distinctive architectural features and is not individually eligible for listing on the National Register.

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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement door, windows, and cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details None			**Windows** Double-hung, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
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Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

12257 S. Green Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1911

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

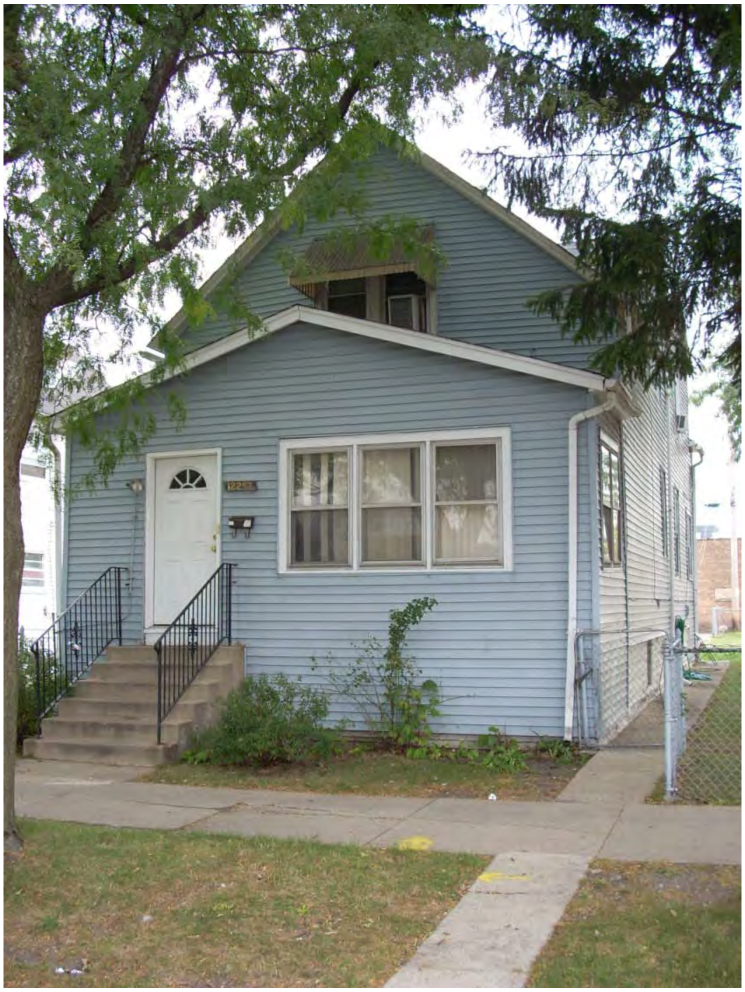
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 26 October 2012

Photos with Captions:
West façade of a 1.5-story, single family, frame residence.



Property Description: **Stories:** 1.5

This one-and-a-half-story frame cottage in the West Pullman community is situated on a raised concrete block basement with glass block windows and is covered with synthetic siding. The building has a front gable roof covered with asphalt shingles. The front elevation has a non-original, full-width, gable-roofed, enclosed porch covered with synthetic siding. The porch has an off-center hollow core metal door, concrete steps with metal railings, and a strip of three non-original one-over-one aluminum-sash windows. A pair of double-hung windows is situated in the gable. This house lacks integrity and distinctive architectural features and is not individually eligible for listing on the National Register.

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Marengo, Illinois 60152
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Structural Survey

<table>
<tr><td colspan="3">Integrity:
Unaltered
[✓ Slight Modification]
Major Alteration</td><td>Additional Notes/Descriptions
Replacement door, windows, and cladding</td></tr>
<tr><td colspan="3">Condition:
[✓ Excellent]
Good
Poor</td><td></td></tr>
<tr><td colspan="3">Additional Alterations
Porch enclosed</td><td></td></tr>
<tr><td colspan="2">Structure Usage
Current: NA
Historic: NA</td><td>Exterior Wall Surface
Synthetic siding</td><td></td></tr>
<tr><td>Roof Material
Asphalt shingle</td><td>Roof Features
None</td><td>Roof Type
Gable</td><td></td></tr>
<tr><td colspan="3">Ornamental Architectural Details
None</td><td>Windows
Double-hung, glass block</td></tr>
<tr><td colspan="4">Outbuildings (<i>Number and Description</i>)
None</td></tr>
</table>

Local Landmark	**Y [✓ N]**	
National Register Historic Places	**Y [✓ N]**	
National Register Historic District	**Y [✓ N]**	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

12317 S. Green Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1907

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

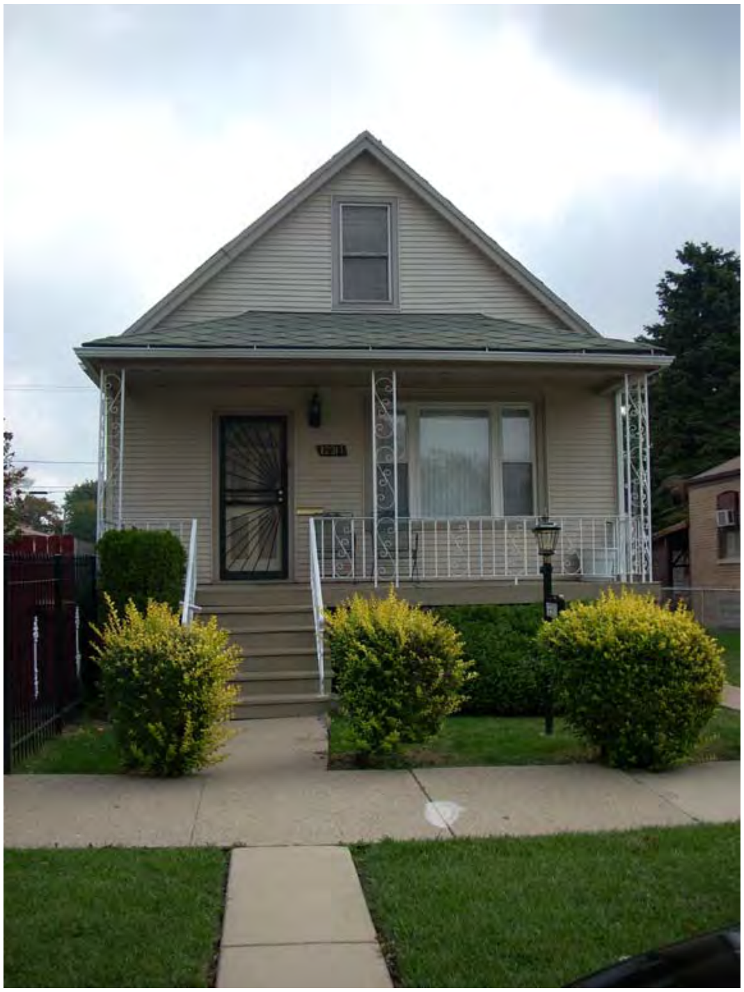
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 26 October 2012

Photos with Captions:
West façade of a one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story frame cottage in Calumet Park is situated on a raised concrete block basement with glass block windows and is covered with synthetic siding. The building has a front gable roof with asphalt shingles. The front elevation has a full-width, hip-roof wood porch with metal railings and open metal supports, an off-center metal storm door, a picture window flanked by one-over-one aluminum-sash windows, and a single one-over-one aluminum-sash window in the gable. Windows are modern replacements. This house lacks integrity and distinctive architectural features; therefore, it is not individually eligible for listing on the National Register.

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Structural Survey

Integrity: Unaltered	[✓ Slight Modification]		Major Alteration	**Additional Notes/Descriptions** Replacement door, windows, cladding, and porch rails
Condition: [✓ Excellent]	Good		Poor	
Additional Alterations				
Structure Usage Current: NA Historic: NA			**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingles	**Roof Features** None		**Roof Type** Gable	
Ornamental Architectural Details None				**Windows** Double-hung, fixed-pane, glass block
Outbuildings (*Number and Description*) None				

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

12359 S. Green Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1949

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

Vernacular

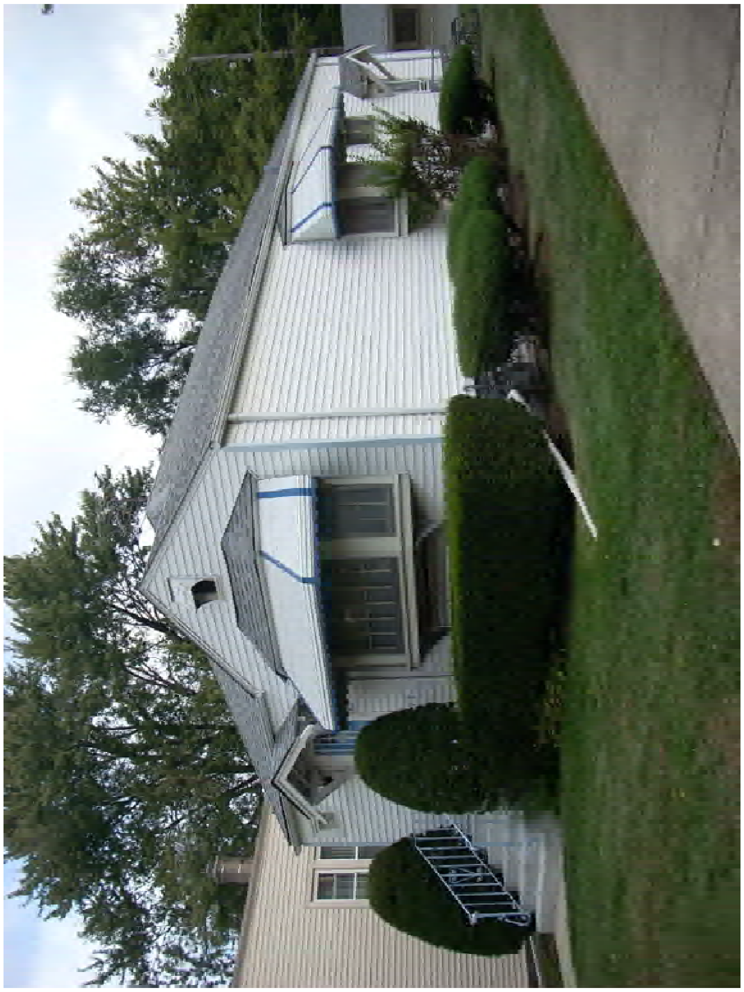
Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 26 October 2012

Photos with Captions:

West and south façades of a one-story, single family residence



Property Description: **Stories:** 1

This one-story frame bungalow at the northeast corner of Green and 124th streets in Calumet Park is situated on a raised concrete block basement and is covered with synthetic siding. The building has a hip roof covered with asphalt shingles. Its front (Green Street) elevation has an off-center door with a bracketed gabled hood, concrete steps with metal railings, and a small casement window adjacent to the door. The elevation also has a gabled projecting living room bay with a bracketed, hip-roofed, three-sided bay window with multi-light glazing that is partially obscured by a low metal awning. There is a small window with a metal awning in the gable. The side elevation (124th Street) also has a bracketed, hip-roofed, three-sided bay window with multi-light glazing that is partially obscured by a low metal awning and a side entrance door with bracketed gabled hood. This house lacks distinctive architectural features and is not individually eligible for listing on the National Register.

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Marengo, Illinois 60152
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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Hip	
Ornamental Architectural Details Bracketed gable hoods, brackets under the bays			**Windows** Casement, fixed-pane
Outbuildings (*Number and Description*) Detached, two-car, frame garage			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

12409 S. Green Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1925

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

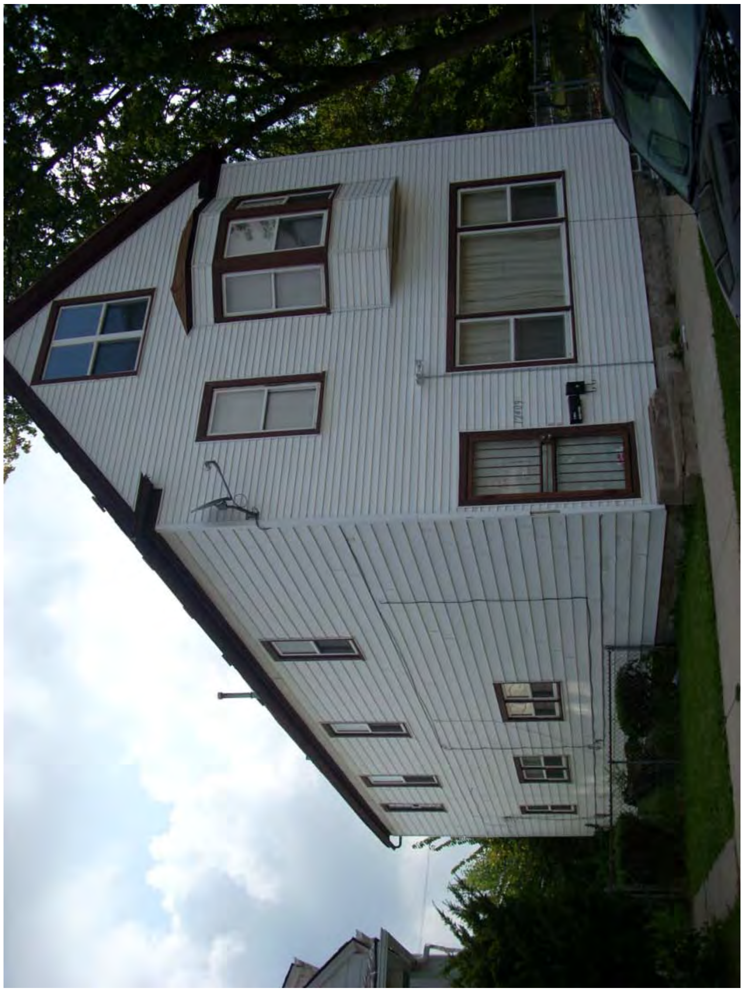
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 26 October 2012

Photos with Captions:
West and north façades of a two-story, single family residence.



Property Description: **Stories:** 2

This two-story frame house in Calumet Park is covered with synthetic siding and has a front gable roof covered with asphalt shingles. Its front elevation has an off-center non-original hollow core metal door with a concrete stoop and a picture window flanked by one-over-one aluminum-sash windows on the first floor. There is a three-sided bay window and a single window on the second floor and a pair of windows in the gable; these windows are all non-original one-over-one aluminum-sash. This house lacks integrity and distinctive architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered	[✓ Slight Modification]	Major Alteration	**Additional Notes/Descriptions** Replacement door, windows, and cladding
Condition: [✓ Excellent]	Good	Poor	
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung, fixed-pane
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

12713 S. Green Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1953

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

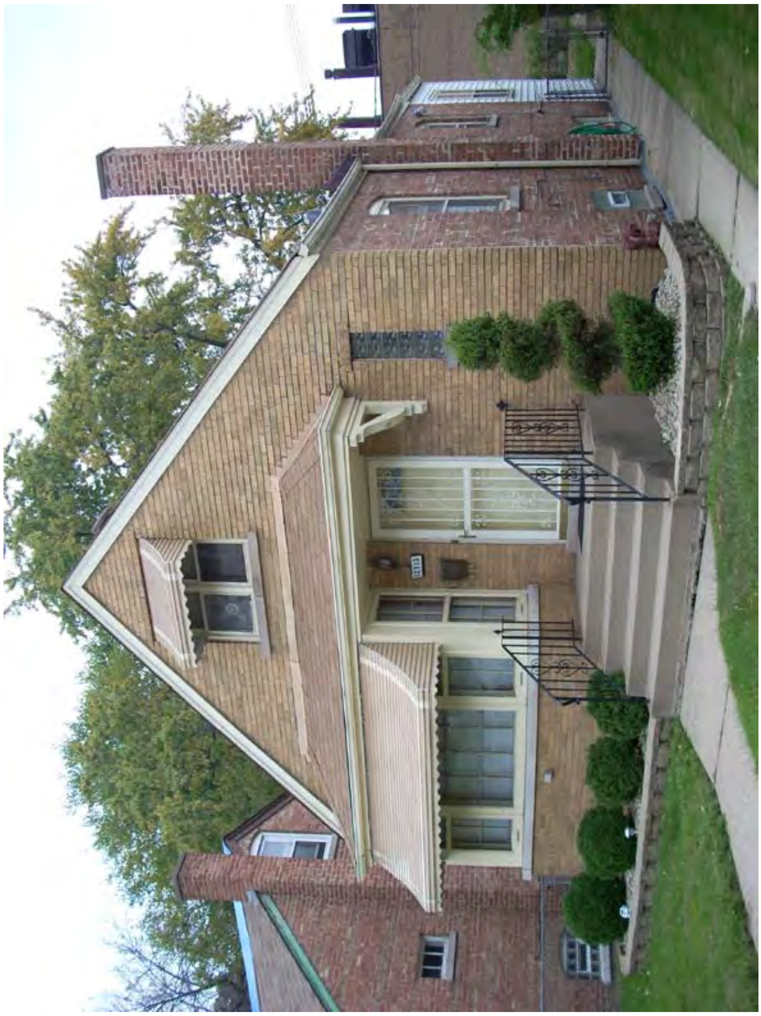
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 29 October 2012

Photos with Captions:
West façade of a one-story, brick, single family residence.



Property Description: **Stories:** 1

This one-story cottage in the West Pullman community is situated on a raised basement with glass block windows and is clad with face brick on the front elevation and common brick on the side and rear elevations. The building has a front gable roof covered with asphalt shingles. The front elevation has a hollow core metal door, concrete steps with metal railings, a small glass block window, and a projecting living room bay surrounded on three sides by multi-paned windows, the central group of which is partially obscured by a low metal awning. A pair of one-over-one windows with metal awning is situated in the gable. All windows have concrete sills. A bracketed pent roof spans the door and living room bay. It does not feature any distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement door
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingles	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details Bracketed pent roof, concrete sills			**Windows** Double-hung, fixed-pane, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

12817 S. Green Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1952

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

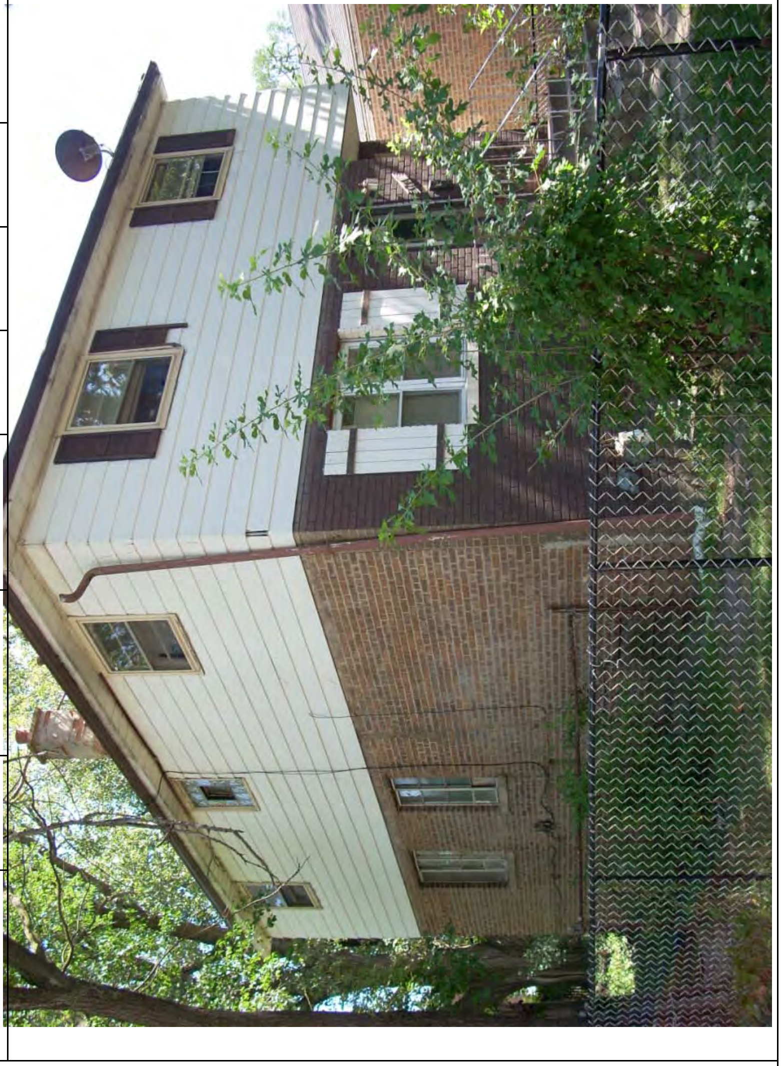
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 13 September 2012

Photos with Captions:
East façade of two-story brick and frame single-family residence.



Property Description:

Stories: 2

This two-story house in the West Pullman community is clad with brick on the first floor and synthetic siding on the second floor. It has a hip roof covered with asphalt shingles. Its front façade has a centrally located front door, concrete steps with metal railings, two pairs of one-over one windows on the first floor, and two one-over-one-windows on the second floor. This house does not feature distinguishing features and is not eligible for individual listing on the National Register.

Midwest Archaeological Research Services, Inc.
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Phone (815) 568- 0680

Structural Survey

Integrity:

Unaltered [✓ Slight Modification] Major Alteration

Additional Notes/Descriptions

Replacement siding

Condition:

Excellent [✓ Good] Poor

Additional Alterations

Structure Usage	**Exterior Wall Surface**
Current: NA Historic: NA	Brick (lower), Synthetic siding (upper)

Roof Material	**Roof Features**	**Roof Type**
Asphalt shingle	None	Hipped

Ornamental Architectural Details

None

Windows

Double-hung

Outbuildings (*Number and Description*)

None

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

12819 S. Green Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1952

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

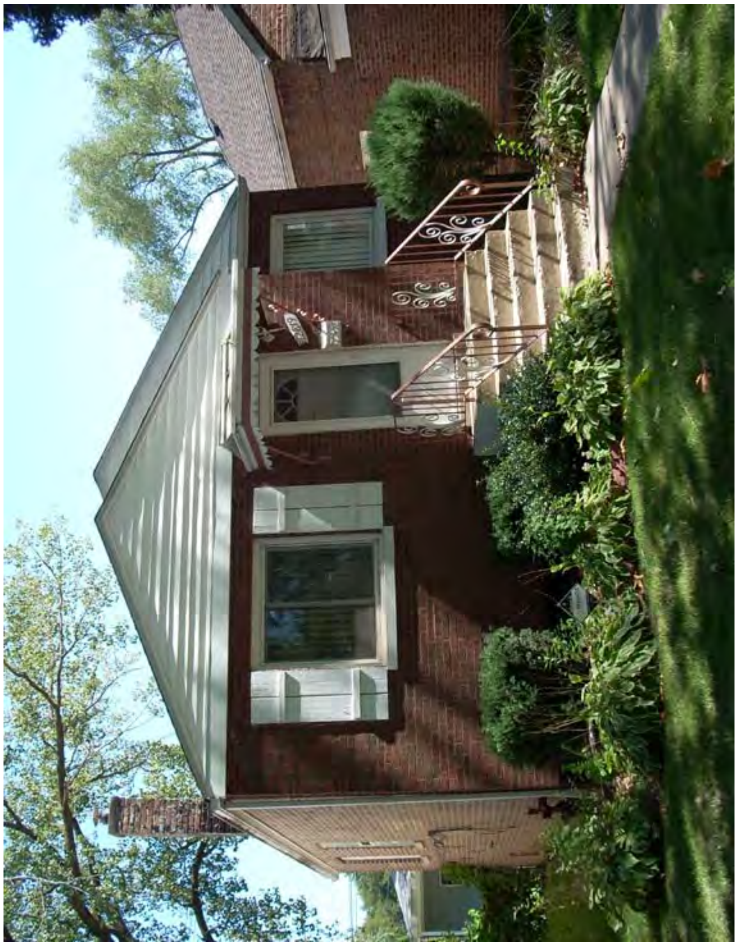
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 3 October 2012

Photos with Captions:
West façade of a brick, one-story, single family residence.



Property Description: **Stories:** 1

This one-story brick-clad house in the West Pullman community has a front gable roof covered with asphalt shingles. Its front façade is clad with face brick; it has a gabled projecting living room, a hollow metal paneled door, a pair of non-original windows, and a picture window. It does not feature distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

<table>
<tr><td colspan="3">Integrity:
Unaltered [✓ Slight Modification] Major Alteration</td><td>Additional Notes/Descriptions
Replacement door and windows</td></tr>
<tr><td colspan="3">Condition:
[✓ Excellent] Good Poor</td><td></td></tr>
<tr><td colspan="3">Additional Alterations</td><td></td></tr>
<tr><td colspan="2">Structure Usage
Current: NA
Historic: NA</td><td>Exterior Wall Surface
Brick (lower),
Synthetic siding (gable end)</td><td></td></tr>
<tr><td>Roof Material
Asphalt shingle</td><td>Roof Features
None</td><td>Roof Type
Gable</td><td></td></tr>
<tr><td colspan="3">Ornamental Architectural Details
None</td><td>Windows
Sliding or casement</td></tr>
<tr><td colspan="4">Outbuildings (<i>Number and Description</i>)
None</td></tr>
</table>

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

12823 S. Green Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1952

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

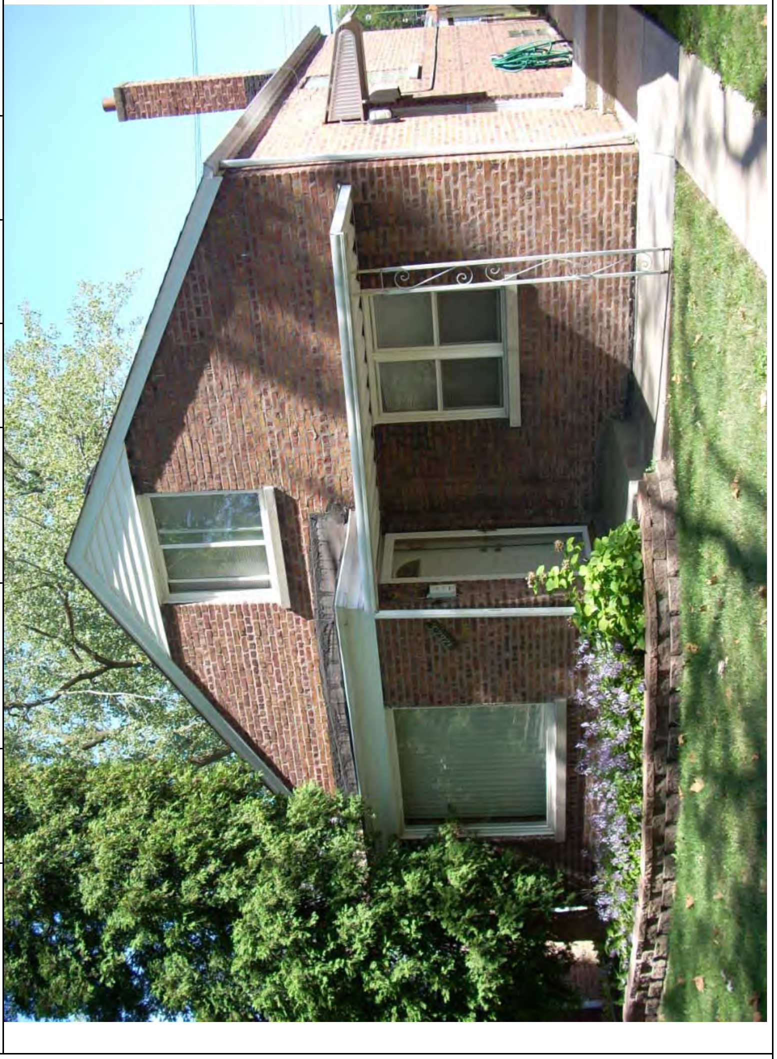
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 13 September 2012

Photos with Captions:
East and south façades of one-story, brick, single-family residence.



Property Description: **Stories:** 1

This one-story brick-clad house in the West Pullman community has a front gable roof covered with asphalt shingles. Its front façade is clad with face brick and has a hollow metal door on one side of a flat-roofed projection of the living room. It also has a picture window and a pair of one-over-one windows on the first floor, and a pair of sliding glass windows in the gable, all of which are non-original. It does not feature distinguishing architectural features and is not individually eligible for listing on the National Register.

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Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

<table>
<tr><td colspan="3">Integrity:
Unaltered [✓ Slight Modification] Major Alteration</td><td>Additional Notes/Descriptions
Replacement windows and door</td></tr>
<tr><td colspan="3">Condition:
[✓ Excellent] Good Poor</td><td></td></tr>
<tr><td colspan="3">Additional Alterations</td><td></td></tr>
<tr><td colspan="2">Structure Usage
Current: NA
Historic: NA</td><td>Exterior Wall Surface
Brick</td><td></td></tr>
<tr><td>Roof Material
Asphalt shingle</td><td>Roof Features
None</td><td>Roof Type
Gable</td><td></td></tr>
<tr><td colspan="3">Ornamental Architectural Details
None</td><td>Windows
Fixed-pane, double-hung, sliding</td></tr>
<tr><td colspan="4">Outbuildings (<i>Number and Description</i>)
Garage</td></tr>
</table>

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

12825 S. Green Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1952

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

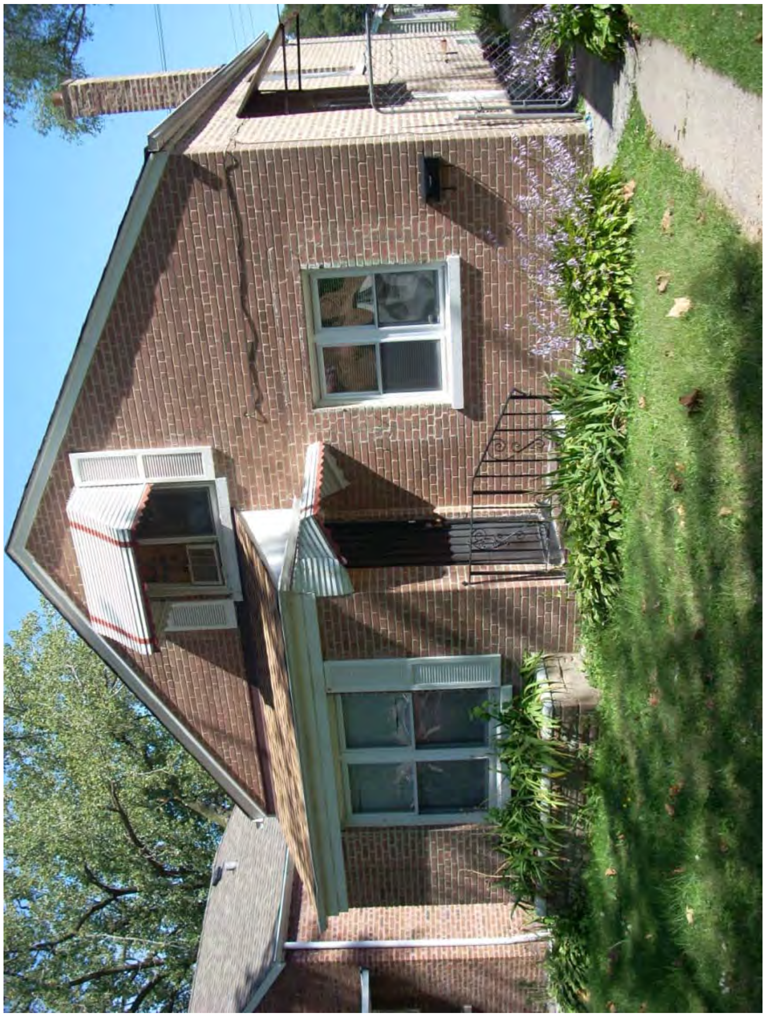
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 13 September 2012

Photos with Captions:
East and south façades of 1.5-story, brick, single family residence.



Property Description: **Stories:** 1.5

This one-and-a-half-story brick-clad house in the West Pullman community has a front gable roof covered with asphalt shingles. Its front façade is clad with face brick. It has a hollow metal door on one side of a shed-roofed projection of the living room, two pairs of one-over-one windows on the first floor, and a pair of sliding glass windows in the gable (all non-original). It does not feature distinguishing architectural features and is not individually eligible for listing on the National Register.

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Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung, sliding
Outbuildings (*Number and Description*) Garage			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

12829 S. Green Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1952

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

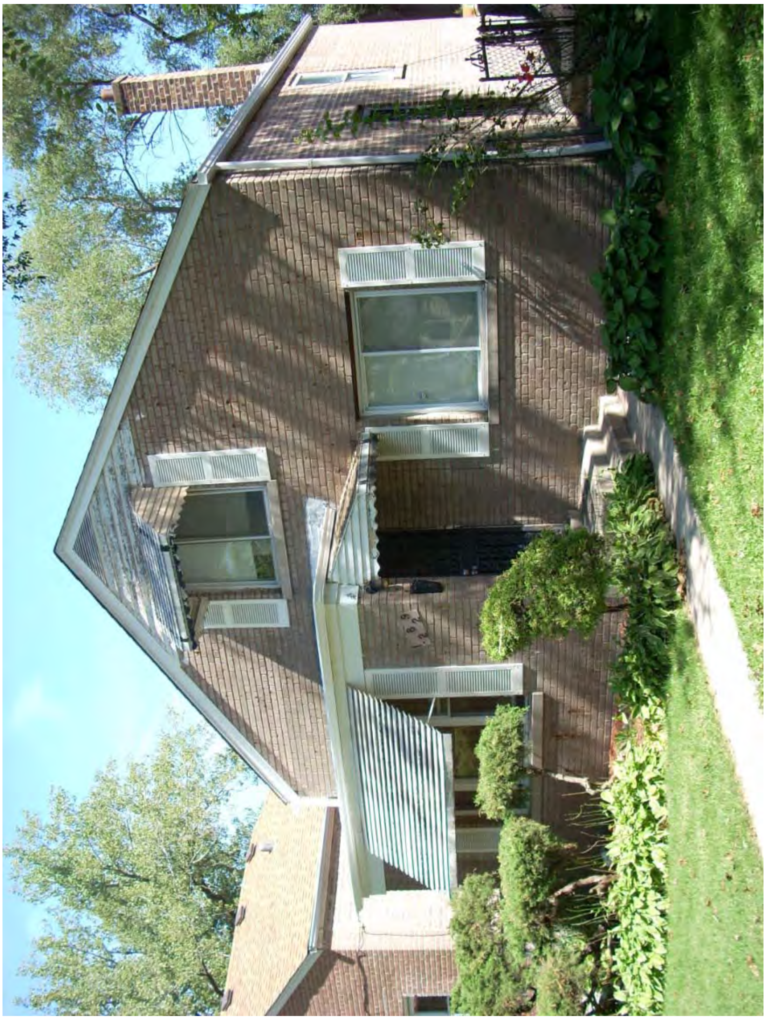
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 13 September 2012

Photos with Captions:
East and south façades of 1.5 story, brick single-family residence.



Property Description: **Stories:** 1.5

This 1.5 story, brick clad house in the West Pullman community has a front gable roof covered with asphalt shingles. Its front façade is clad with face brick, has a hollow metal door on one side of a flat-roofed projection of the living room. It has two sets of windows on the first floor—a fixed-pane flanked by double-hung windows and a pair of sliding glass windows. An additional pair of sliding glass windows is situated in the gable. It does not feature distinguishing architectural elements and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: [✓ Unaltered] Slight Modification Major Alteration			**Additional Notes/Descriptions**
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Fixed-pane, double-hung, sliding
Outbuildings (*Number and Description*) Garage			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

12831 S. Green Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1952

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

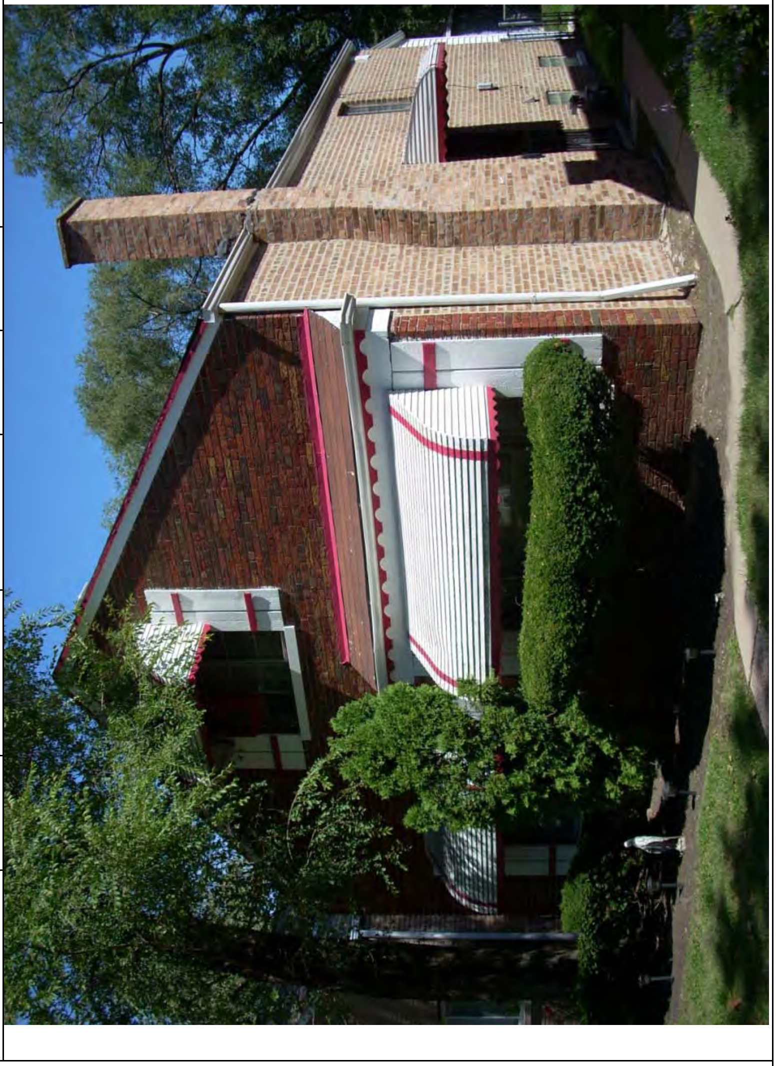
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 13 September 2012

Photos with Captions:
East and south façades of 1.5-story, brick, single-family residence.



Property Description: **Stories:** 1.5

This 1.5-story brick-clad house in the West Pullman community has a front gable roof covered with asphalt shingles. Its front elevation is clad with brown face brick and has two strips of windows on the first floor, one of which is situated within a shed-roofed window bay, plus a single window in the gable. The windows are located below low metal awnings but appear to be casement. The door is situated along the north side of the house. It does not feature distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
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Structural Survey

Integrity:

Unaltered [✓ Slight Modification] Major Alteration

Additional Notes/Descriptions

Windows may be replacements

Condition:

[✓ Excellent] Good Poor

Additional Alterations

Structure Usage	**Exterior Wall Surface**
Current: NA Historic: NA	Brick

Roof Material	**Roof Features**	**Roof Type**
Asphalt shingle	None	Gable

Ornamental Architectural Details

None

Windows

Casement

Outbuildings (*Number and Description*)

Garage

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

12835 S. Green Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1952

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

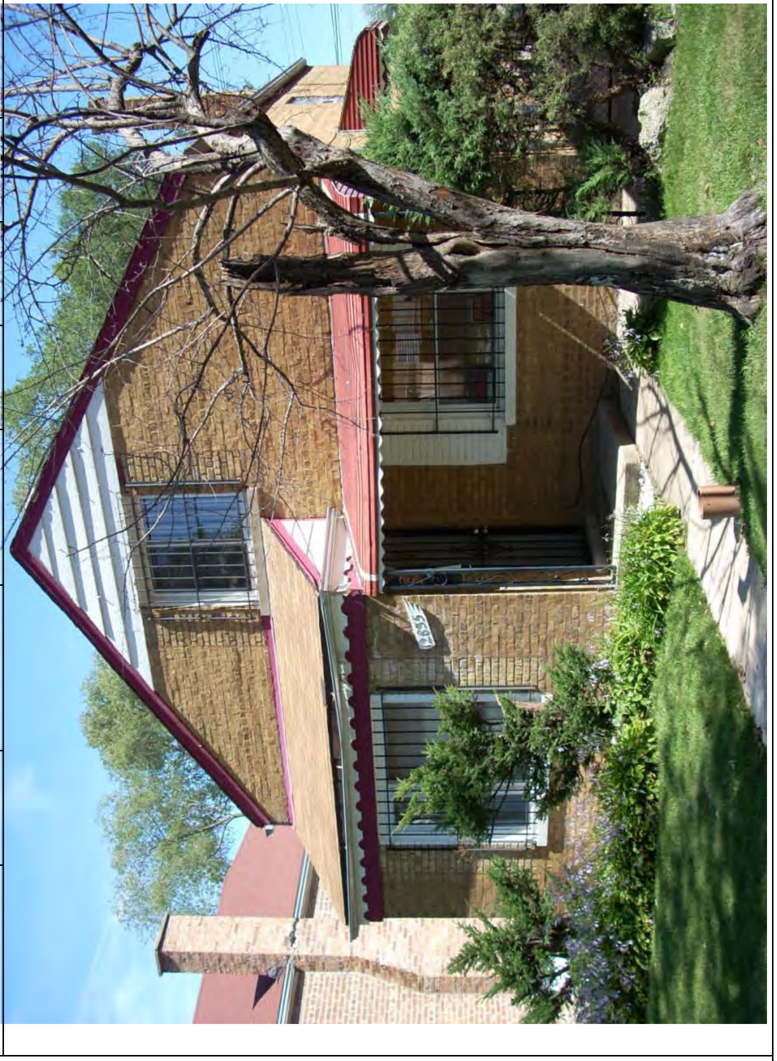
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 13 September 2012

Photos with Captions:
East and south façades of 1.5-story, brick, single family residence.



Property Description: **Stories:** 1.5

This one-and-a-half-story brick-clad house in the West Pullman community has a gable roof covered with asphalt shingles. Its front façade is clad with face brick and has a hollow metal door on one side of a shed-roofed projection of the living room. A fixed-pane window and two one-over-one windows occupy the first floor and there is a pair of one-over-one windows in the gable. Detailing includes the use of contrasting-colored brick around the windows. It does not contain distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: [✓ Unaltered] Slight Modification Major Alteration			**Additional Notes/Descriptions**
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details Buff-colored brick frame windows			**Windows** Fixed-pane, double-hung
Outbuildings (*Number and Description*) Garage			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

12837 S. Green Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1952

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

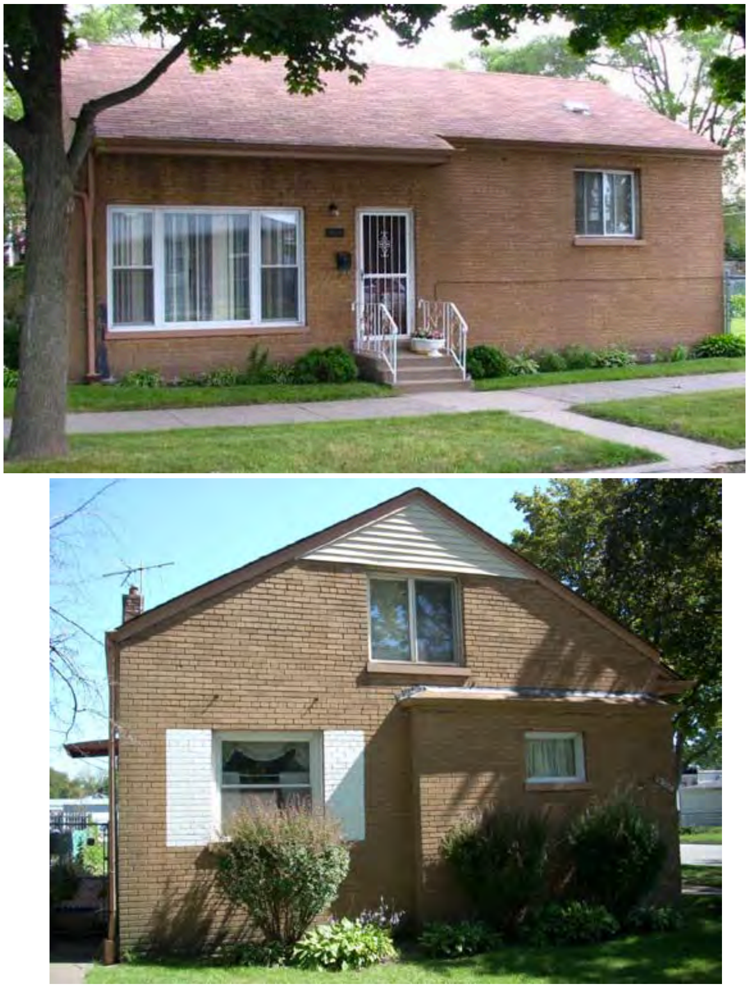
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz and CCA

Date: 13 September 2012

Photos with Captions:
North and east façades of one-story, brick single family residence (top and bottom, respectively).



Property Description: **Stories:** 1

This one-story brick-clad house in the West Pullman community has a side gable roof covered with asphalt shingles. The front façade has a centrally located door and an asymmetrical array of windows—a sliding window on one side with a picture window flanked by one-over-one sashes on the other side. Fenestration on the side elevation is comprised of a one-over-one window, a single-pane window, and sliding windows in the gable. This standard post-WWII home does not feature any distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: [✓ Unaltered] Slight Modification Major Alteration			**Additional Notes/Descriptions**
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Fixed-pane, double-hung
Outbuildings (*Number and Description*) Garage			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

12851 S. Green Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1951

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

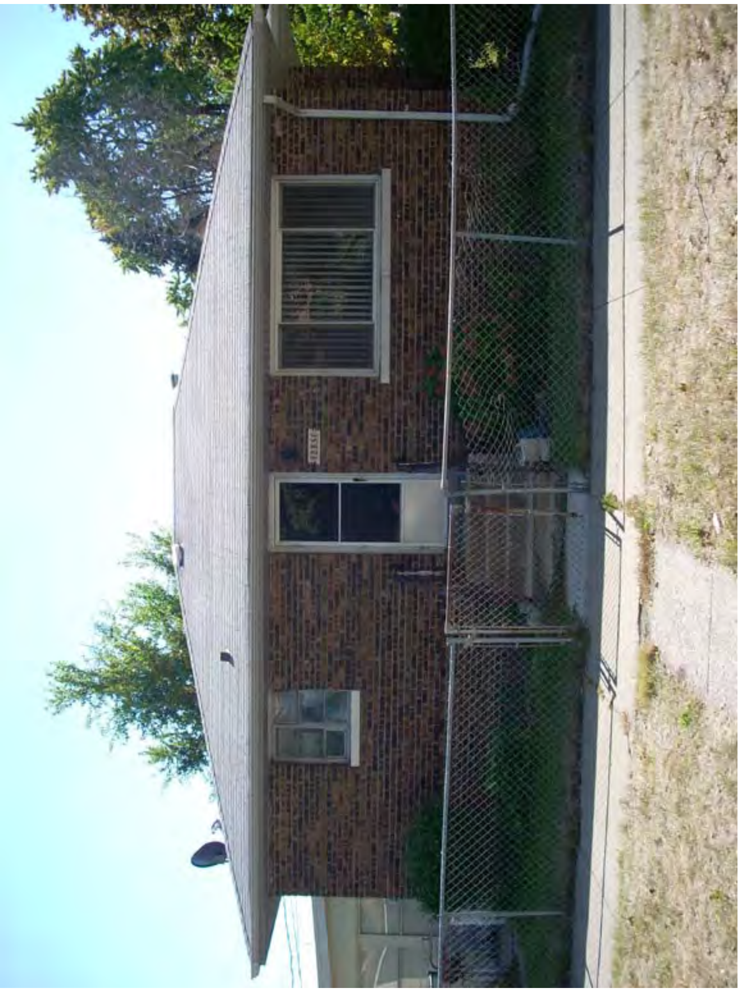
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 29 October 2012

Photos with Captions:
West façade of a one-story, single family, brick residence.



Property Description: **Stories:** 1

This one-story brick-clad house at the southeast corner of Green Street and 128th Place in the West Pullman community has a hip roof with overhanging eaves and asphalt shingles. The front (128th Place) elevation has a centrally-located metal storm door, concrete steps with metal railings, a pair of windows that appear to be casements, and a non-original picture window flanked by one-over-one aluminum-sash windows. The Green Street elevation has a projecting brick bay and two pairs of casement windows. All windows have concrete sills. It does not feature distinguishing architectural elements and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Hip	
Ornamental Architectural Details Concrete sills			**Windows** Casement, fixed-pane, double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
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Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

12877 S. Green Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1952

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

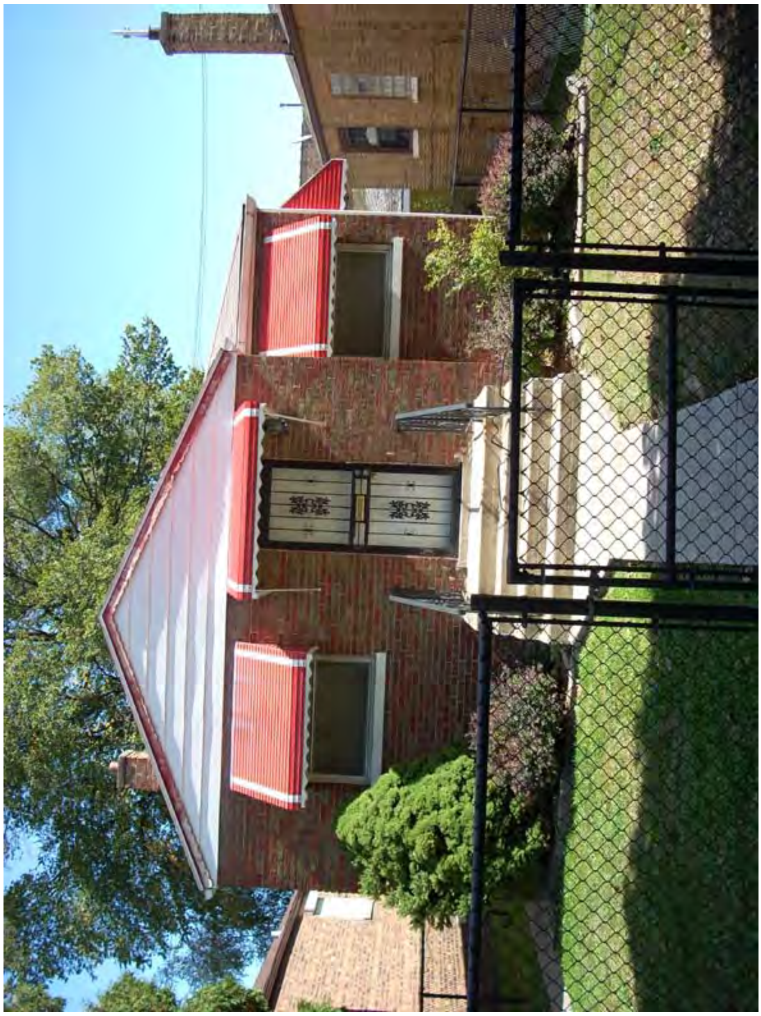
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 29 October 2012

Photos with Captions:
West façade of a one-story, single family, brick residence.



Property Description: **Stories:** 1

This one-story house in the West Pullman community sits on a raised basement; it is clad with face brick on its front elevation and common brick on its side and rear elevations. The hip roofed building has a front-facing gabled pavilion with synthetic-clad gable and scalloped verge boards. The front elevation has a centrally located metal storm door, concrete steps with metal railings, and two non-original one-over-one aluminum-sash windows with concrete sills. It does not feature distinguishing architectural characteristics and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows and cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick (main), Synthetic siding (gable end)	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Hip	
Ornamental Architectural Details Scalloped verge boards, concrete sills			**Windows** Double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Bell Bros. Cleaners

Property address:

10004 S. Halsted Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Bell Bros. Cleaning

Property Use

Historic: Commercial

Current: Commercial

Date of Construction: 1957

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

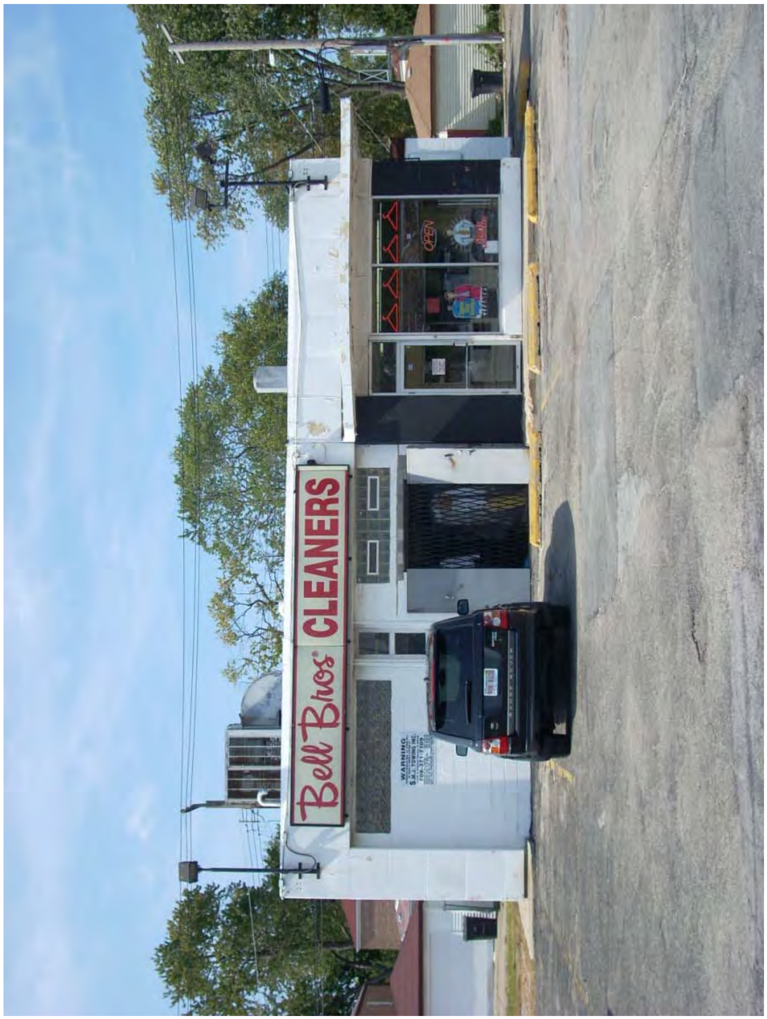
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: September 2012

Photos with Captions:
West and north façades of one-story, commercial property.



Property Description: **Stories:** 1

This one-story, flat-roofed, metal-clad, concrete block commercial building at the corner of Halsted and 100th streets in the Washington Heights community has a plate glass door and large display windows. There are also metal double doors and glass block windows. This building lacks distinctive architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: [✓ Unaltered] Slight Modification Major Alteration			**Additional Notes/Descriptions**
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Metal-clad concrete block	
Roof Material Unknown	**Roof Features** None	**Roof Type** Flat	
Ornamental Architectural Details None			**Windows** Fixed-pane, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y [✓ N]**	
National Register Historic Places	**Y [✓ N]**	
National Register Historic District	**Y [✓ N]**	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

10114 S. Halsted Street

HAARGIS Number:

None

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Multi-family residence

Date of Construction: 1903

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

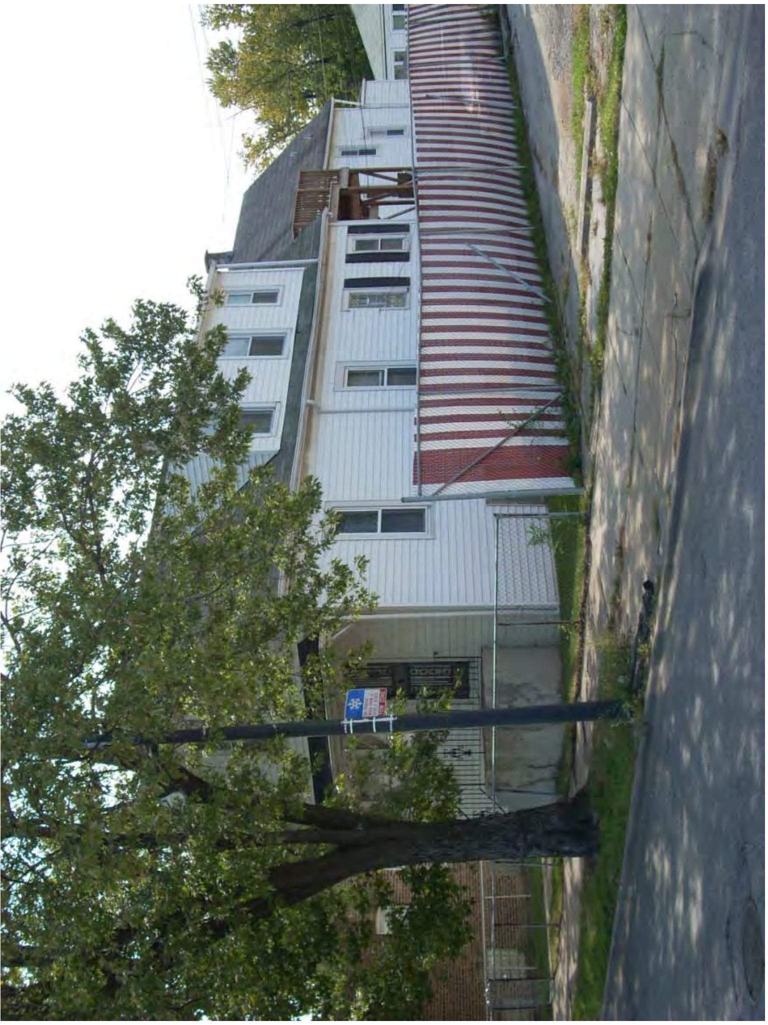
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: September 2012

Photos with Captions:
East and north façades of one-story, multi-family, frame residence.



Property Description: **Stories:** 1

This one-story frame house in the Washington Heights community is situated on a raised basement and is covered with synthetic siding. The building has a front gable roof covered with asphalt shingles. The front elevation has a pent roof, an off-center metal storm door, and concrete side-facing steps with metal railings. There is a picture window flanked by one-over-one aluminum-sash windows on the first floor and a single one-over-one aluminum-sash window in the gable, all of which are non-original. The north elevation has a wide aluminum-clad shed dormer with windows. Windows on the side elevations are non-original one-over-one sash of varying sizes. This house lacks integrity and distinctive architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modifications] Major Alteration			**Additional Notes/Descriptions** Replacement windows and cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations Conversion from single family residence after 1938 (Sanborn)			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** Dormer	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

10116 S. Halsted Street

HAARGIS Number:

None

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Mixed use

Current: Multi-family residence

Date of Construction: 1937

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

Vernacular

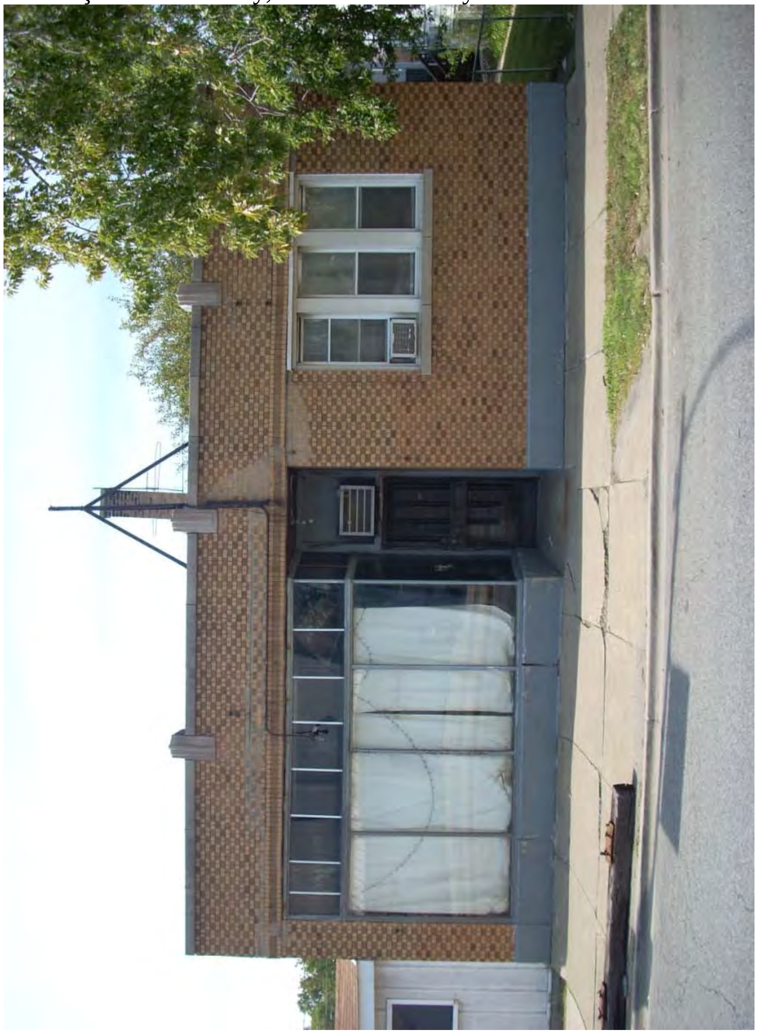
Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: September 2012

Photos with Captions:

East façade of one-story, brick multi-family residence



Property Description: **Stories:** 1

This one-story brick-clad building in the Washington Heights community has been converted from a commercial structure to a multi-family residence. It has a concrete water table, flat roof, and parapet with concrete coping and inserts. Brick stringcourses traverse the cornice. Its front elevation has a centrally located recessed metal door with an in-filled transom, a strip of storefront display windows to the south, and a strip of non-original one-over-one aluminum-sash windows to the north. This building lacks integrity and distinctive architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modifications] Major Alteration			**Additional Notes/Descriptions** Replacement windows
Condition: Excellent [✓ Good] Poor			
Additional Alterations Converted to multi-family residence			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details Patterned brickwork, brick stringcourses, concrete coping and inserts			**Windows** Double-hung, fixed-pane
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional comments

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Rehoboth Apostolic Worship Church

Property address:

10159 S. Halsted Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Rehoboth Apostolic Worship Church

Property Use

Historic: Religious building

Current: Religious building

Date of Construction: circa 1952-62

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

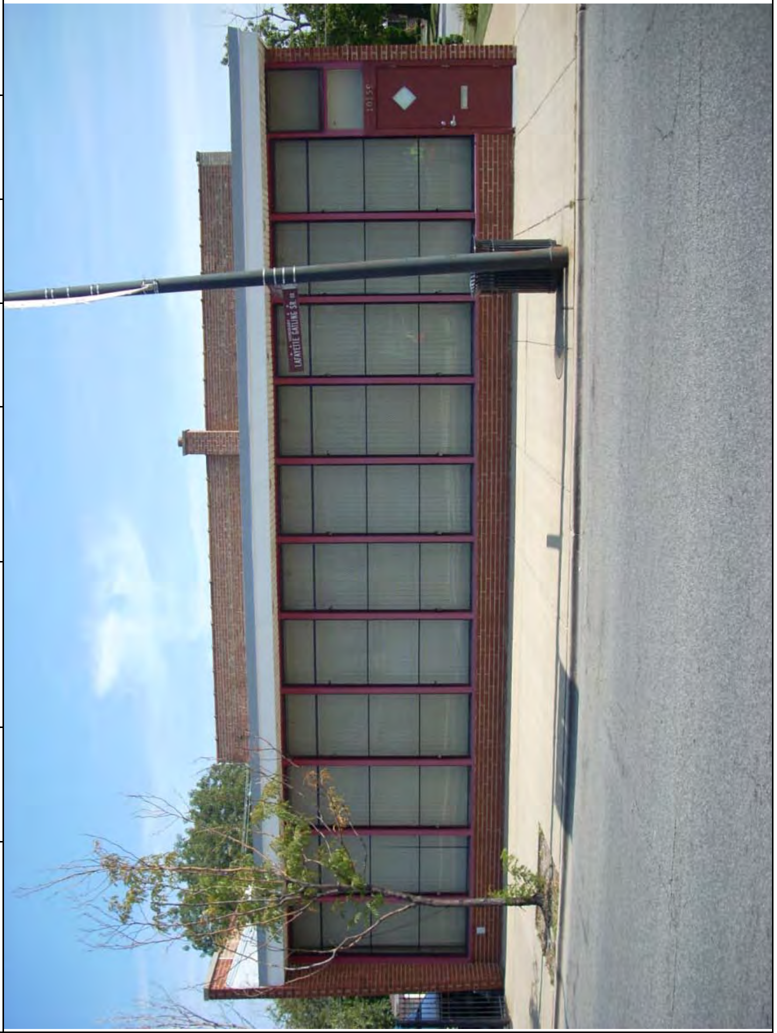
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: September 2012

Photos with Captions:
West façade of one-story, brick, religious building.



Property Description: **Stories:** 1

This one-story brick-clad church building at the northeast corner of Halsted and 102nd streets in the Washington Heights community has a flat roof and a tall, protruding brick sidewall that rises above the roofline. The front (Halsted) elevation is glazed with a continuous series of tall windows and has an off-center hollow core metal door. Detailing is limited to an insert block. This building lacks distinctive architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
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Phone (815) 568- 0680

Structural Survey

Integrity: [✓ Unaltered] [✓ Slight Modifications] Major Alteration			**Additional Notes/Descriptions** Replacement door
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Tar	**Roof Features** None	**Roof Type** Flat	
Ornamental Architectural Details Insert block			**Windows** Fixed-pane
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional comments

Midwest Archaeological Research Services, Inc.
505 North State Street
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Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: CITY OF CHICAGO DEP'T OF GAS & ELECTRICITY

Common/Current: Southwest Substation

Property address:

10227 S. Halsted Street

HAARGIS Number:

142827

Present Owner and /or Occupant:

Vacant

Property Use

Historic: Industrial

Current: Industrial

Date of Construction: 1919-1920

Architect's Name: Charles W. Kallal

Builder/Contractor: Unknown

Architectural Style:

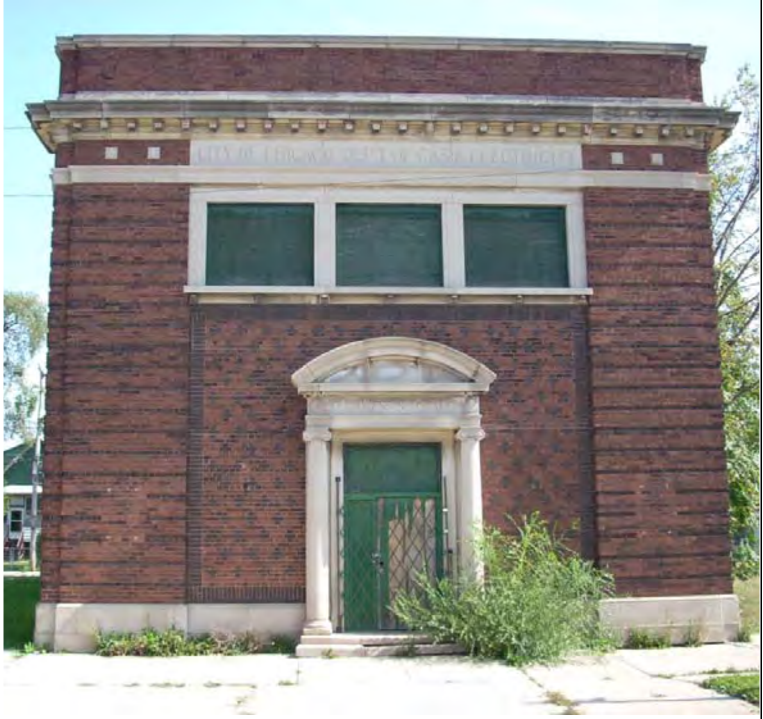
Classical Revival

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: September 2012

Photos with Captions:
West façade of two-story, brick substation.



Property Description: **Stories:** 2

This vacant, two-story, Classical Revival style substation building in the Washington Heights community has a stone water table and a flat roof with parapet. The front façade is clad with dark brown-colored brick that accents the façade with stringcourses, soldier courses, and cruciform patterns against the reddish brown-colored brick. The sides and rear feature common brick. The front elevation features a centrally located entrance with a Classical surround that includes Ionic columns and an entablature with a segmental pediment and frieze band with incised lettering that reads, "Southwest Substation." The original door, sidelight and transom have been removed and their openings covered with plywood. Directly above the entrance is a strip of three plywood-covered window openings with stone casing. Decorative detailing includes full-height brick corner pilasters, a stone belt course above the windows, and a stone cornice with widely spaced dentils. Directly beneath the cornice is a stone panel with incised lettering that reads, "City of Chicago Dep't of Gas & Electricity." Nearly all of the side elevation window openings are covered with plywood. This is a rare extant example of a Classical Revival substation building in the Washington Heights community. It has retained its decorative detailing, and it is possible that original windows may be extant behind the wood covering. Assuming that the interior has retained interior fabric, this building is recommended as individually eligible for listing on the National Register under Criterion C for architecture.

Structural Survey

Integrity:			**Additional Notes/Descriptions**
[✓ Unaltered]	Slight modifications	Major Alteration	Visible elements are unaltered
Condition:			
[✓ Excellent]	Good	Poor	
Additional Alterations Openings covered with plywood.			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details Classical surround at entrance, stone casings, corner pilasters, stone belt course, stone cornice with dentils, inscribed stone panel, decorative brickwork utilizing contrasting colored bricks			**Windows** covered
Outbuildings (*Number and Description*) None			

Local Landmark	**Y [✓ N]**	
National Register Historic Places	**Y [✓ N]**	
National Register Historic District	**Y [✓ N]**	**Name:**
Individually Eligible? Yes	**[✓ A] B [✓ C]**	**Significance:** Rare example of an intact Classical Revival substation in the community

Additional comments

CHRS coded orange: property possesses some architectural feature or historical association that made it potentially significant in the context of the surrounding community.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

10238-10240 S. Halsted Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Trinity African Hair Braiding

Property Use

Historic: Commercial

Current: Mixed-Use

Date of Construction: 1938

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

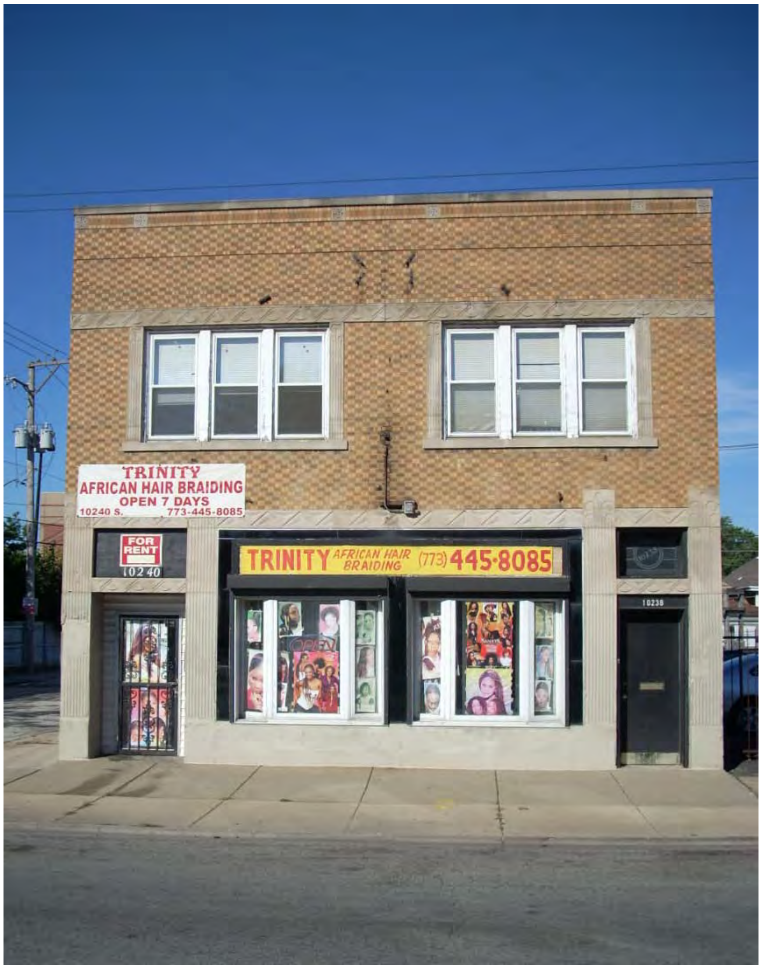
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 13 September 2012

Photos with Captions:
East façade of two-story, mixed-use, brick building.



Property Description: **Stories:** 2

This two-story, flat-roofed, mixed-use building in the Washington Heights community has a front façade clad with limestone on the first floor and light brown and orange-colored face brick above. The first floor has two non-original large central display windows and doors on either end. The second floor has two strips of three non-original one-over-one windows with stone casing. Art Deco detailing includes limestone banding with chevron and zigzag patterns on the first and second floors and fluted pilasters that terminate in scrolls flanking the two doors. This building does not feature sufficient distinguishing features to qualify eligible for individual listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details Limestone banding, fluted pilasters with scrolls, brick stringcourse along cornice			**Windows** Double-hung, fixed-pane
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

10241 S. Halsted Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1894

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

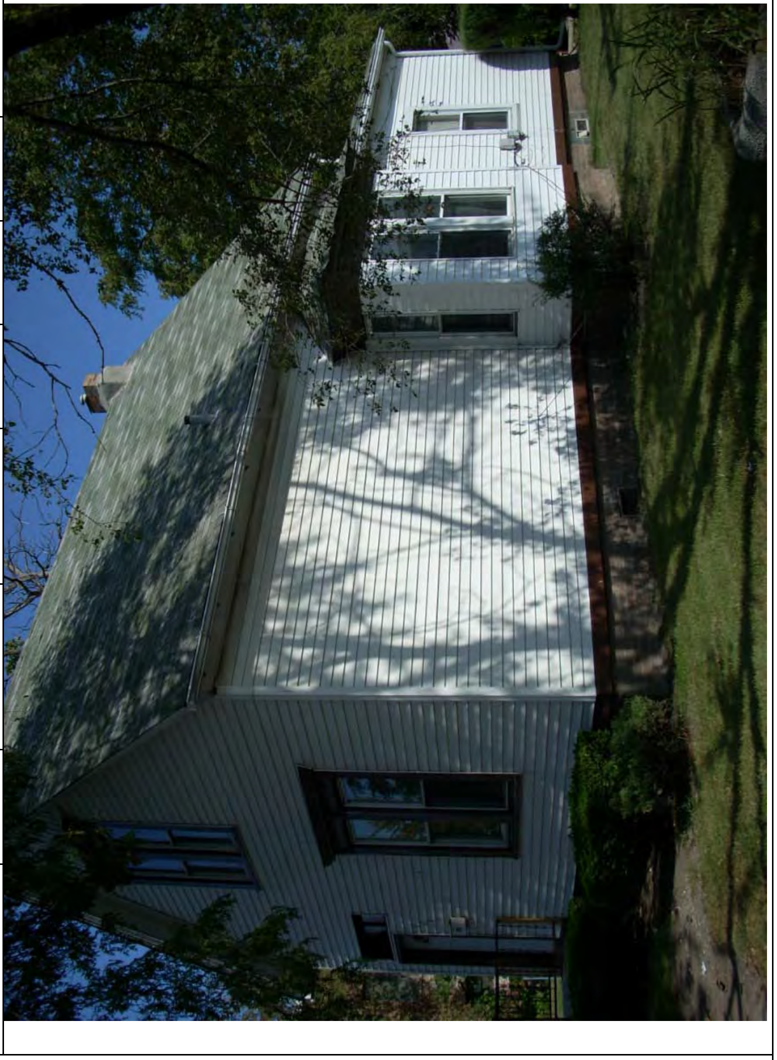
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: September 2012

Photos with Captions:
West and south façades of 1.5-story, single-family, frame residence.



Property Description: **Stories:** 1.5

This one-and-a-half-story frame house in the Washington Heights community is covered with synthetic siding and has a front gable roof covered with asphalt shingles. The front elevation has an off-center non-original hollow core metal door with a non-original horizontal window strip above; there are tall, paired, non-original one-over-one windows, each with a cornice, on the first floor and in the gable. New wood steps and metal rails provide access to the residence. The north elevation has a hip-roof three-sided window bay with double-hung, non-original aluminum sashes. This house lacks integrity and distinctive architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight modifications] Major Alteration			**Additional Notes/Descriptions** Replacement door, windows, cladding, and porch rails
Condition: [✓ Excellent] Good Poor			
Additional Alterations One-story segment at rear is original according to the Sanborn maps.			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details Cornice above windows			**Windows** Double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

10326 S. Halsted Street
(10328 S. Halsted CCA)

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

House of Derrion

Property Use

Historic: Mixed-Use

Current: Mixed Use

Date of Construction: circa 1940s or 1950s

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

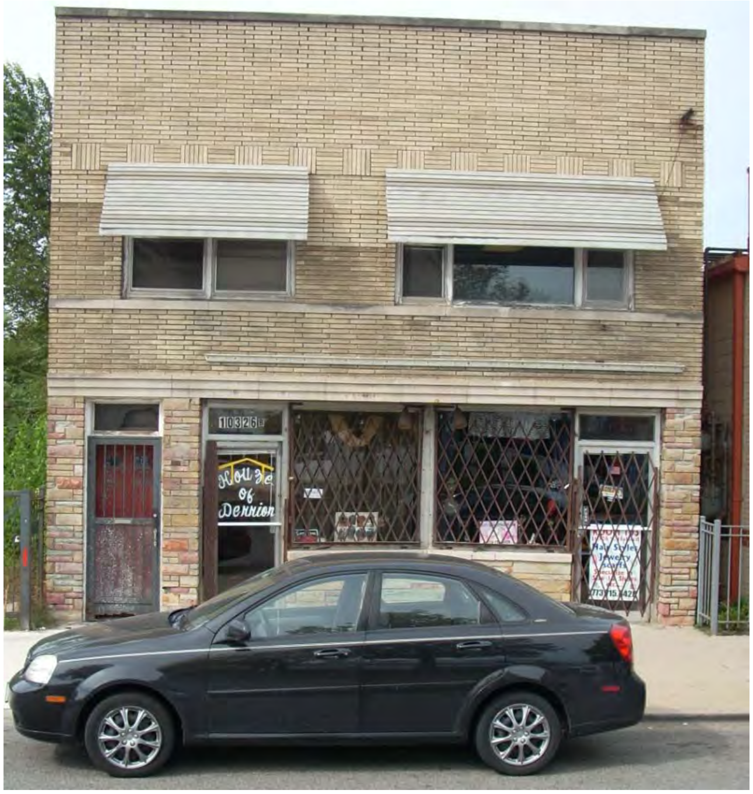
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 23 October 2012

Photos with Captions:
East façade of a brick, two-story, mixed-use building.



Property Description: **Stories:** 2

This two-story commercial building in the Washington Heights community has a flat roof and parapet with concrete coping. Its front elevation is covered with a stone veneer on the first floor and in patterned buff brick above. It has two storefronts with angled display windows flanked by plate glass doors with glass transoms. A third hollow core metal door with glass transom provides access to the second floor space. The second floor has two window groups: a pair of non-original one-over-one aluminum-sash windows and a non-original picture window flanked by one-over-one aluminum-sash windows, both of which are partially obscured by metal awnings. This building lacks distinctive architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement commercial doors and second floor windows
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick (upper) Faux stone (lower)	
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details Patterned brickwork			**Windows** Double-hung, fixed-pane
Outbuildings (*Number and Description*) None			

Local Landmark	**Y [✓ N]**	
National Register Historic Places	**Y [✓ N]**	
National Register Historic District	**Y [✓ N]**	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

10401-10419 S. Halsted Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

The Way Of Holiness Mission Ministries

Property Use

Historic: Commercial

Current: Religious

Date of Construction: 1957

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

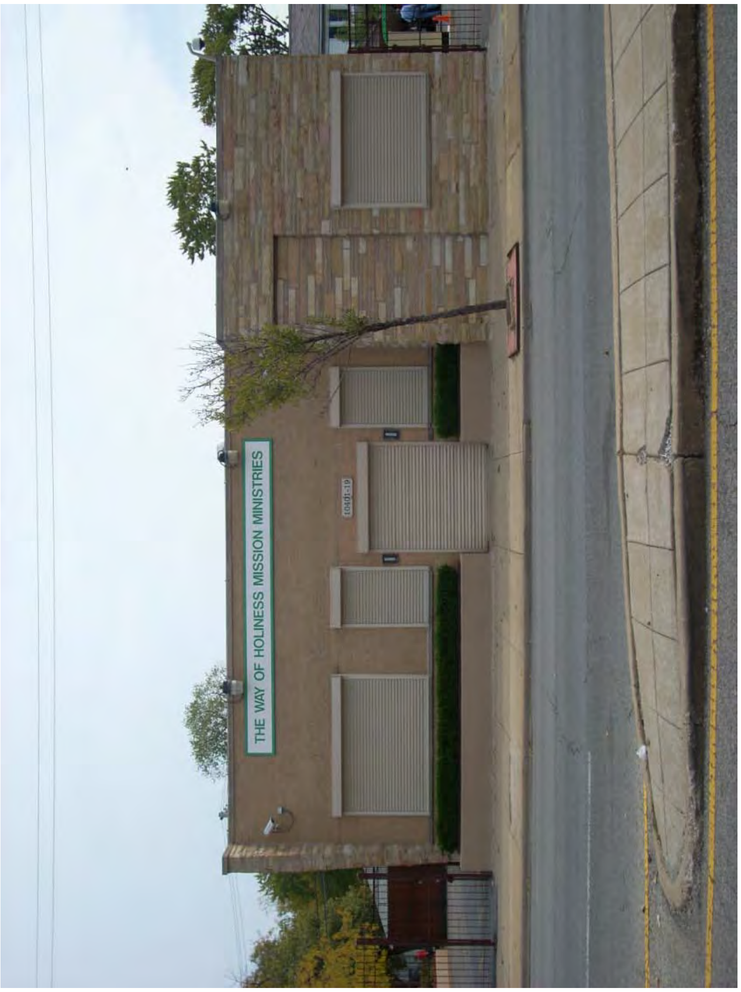
Mid-Century Modern

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 23 October 2012

Photos with Captions:
West façade of a brick, one-story, religious building.



Property Description: **Stories:** 1

This one-story flat-roofed building in the Roseland community has a front elevation that is clad with buff brick and has a projecting corner bay and an angled corner pier that are covered with a stone veneer. It has a wide door opening and four windows, all of which are covered with metal shades. This Mid-Century modern building lacks distinctive architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: [✓ Unaltered] Slight Modification Major Alteration			**Additional Notes/Descriptions**
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick (façade), faux stone (corner pier and bay)	
Roof Material Unknown	**Roof Features** None	**Roof Type** Flat	
Ornamental Architectural Details None			**Windows** Covered
Outbuildings (*Number and Description*) None			

Local Landmark	**Y [✓ N]**	
National Register Historic Places	**Y [✓ N]**	
National Register Historic District	**Y [✓ N]**	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

10506 S. Halsted Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

J & R Fashion

Property Use

Historic: Commercial

Current: Commercial

Date of Construction: 1955

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

Vernacular

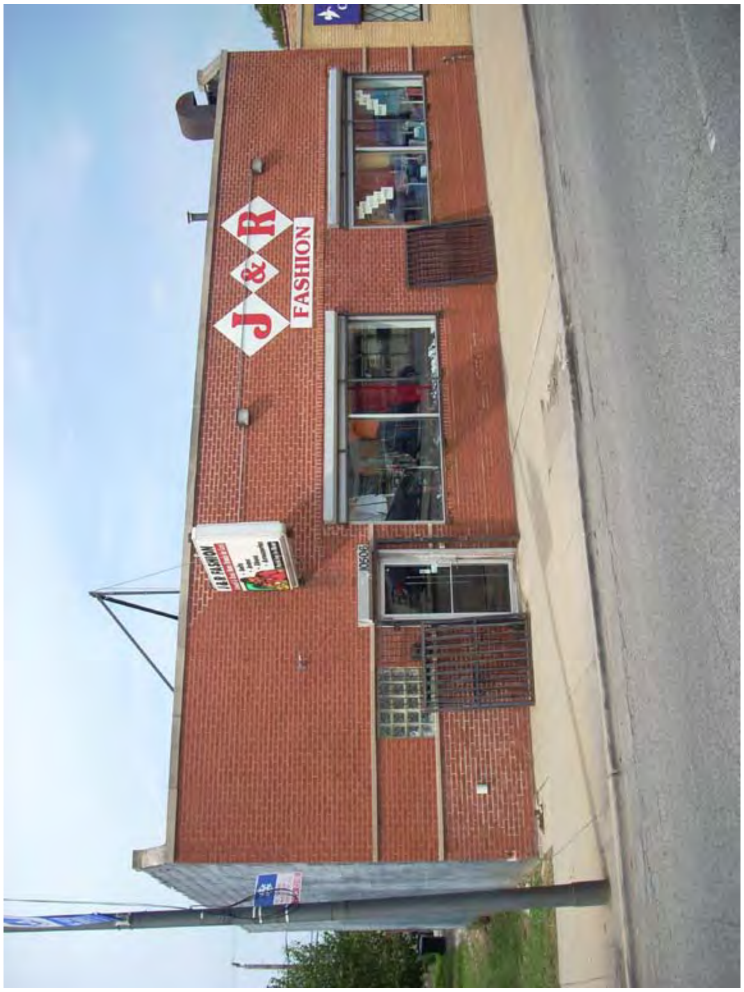
Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 23 October 2012

Photos with Captions:

East façade of a brick, one-story, commercial building.



Property Description: **Stories:** 1

This one-story concrete-block commercial building in the Washington Heights community has a flat roof and parapet. Its front elevation is clad with orange brick, has an off-center plate glass door, an adjacent glass block window, and two strips of display windows. Endwalls extend above the roofline. Detailing includes concrete banding and coping. This building lacks distinctive architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: [✓ Unaltered] Slight Modification Major Alteration			**Additional Notes/Descriptions**
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details Concrete banding and coping			**Windows** Fixed-pane, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

10615 S. Halsted Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

D&P Jones Insurance Agency Inc., Safeco

Property Use

Historic: Commercial

Current: Commercial

Date of Construction: 1954

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

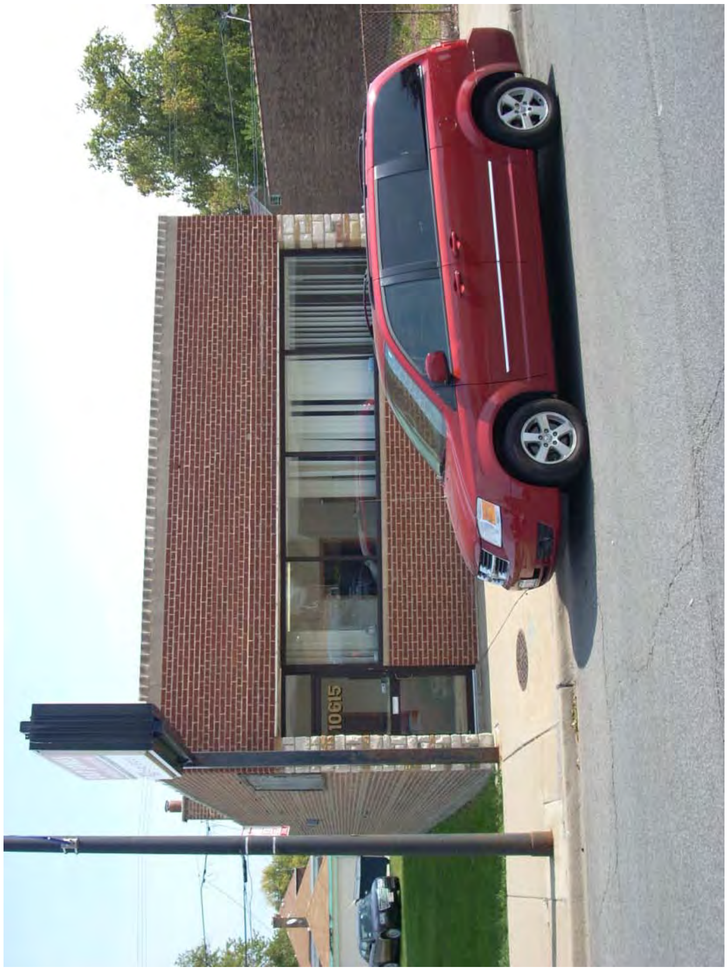
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 23 October 2012

Photos with Captions:
West façade of a one-story, brick, commercial building.



Property Description: **Stories:** 1

This one-story commercial building in the Roseland community has a flat roof and parapet. Its front elevation is clad with red brick and has faux stone corner piers, an off-center plate glass door, a horizontal strip of four single-pane windows, and concrete coping. The side and rear elevations are clad with common brick. This building does not feature distinguishing architectural elements and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: [✓ Unaltered] Slight Modification Major Alteration			**Additional Notes/Descriptions**
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details Faux stone corner piers, concrete coping			**Windows** Fixed-pane
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Hot Spot

Property Address:

10861 S. Halsted St.

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Hot Spot

Property Use

Historic: Commercial

Current: Commercial

Date of Construction: 1954

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

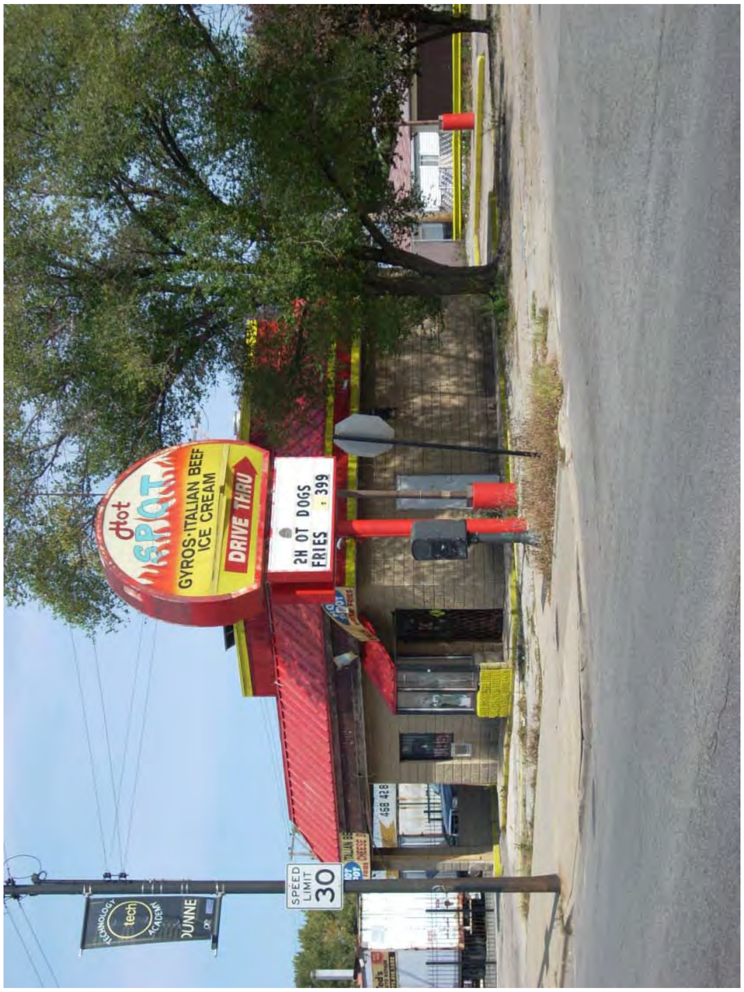
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 23 October 2012

Photos with Captions:
South and east façades of a one-story, commercial building.



Property Description: **Stories:** 1

This one-story concrete block fast food restaurant in the Roseland community has a flat roof with a flared metal boxed parapet, hollow core metal doors, and single-pane windows. The roof extends to the north to serve as a flat-roofed canopy for the drive-through that is supported by two boxed piers. This building does not feature distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity:			**Additional Notes/Descriptions**
[✓ Unaltered]	Slight Modification	Major Alteration	
Condition:			
Excellent	[✓ Good]	Poor	
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Concrete block	
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details None			**Windows** Fixed-pane
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11011 S. Halsted Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Vacant

Property Use

Historic: Commercial

Current: Commercial

Date of Construction: 1961

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

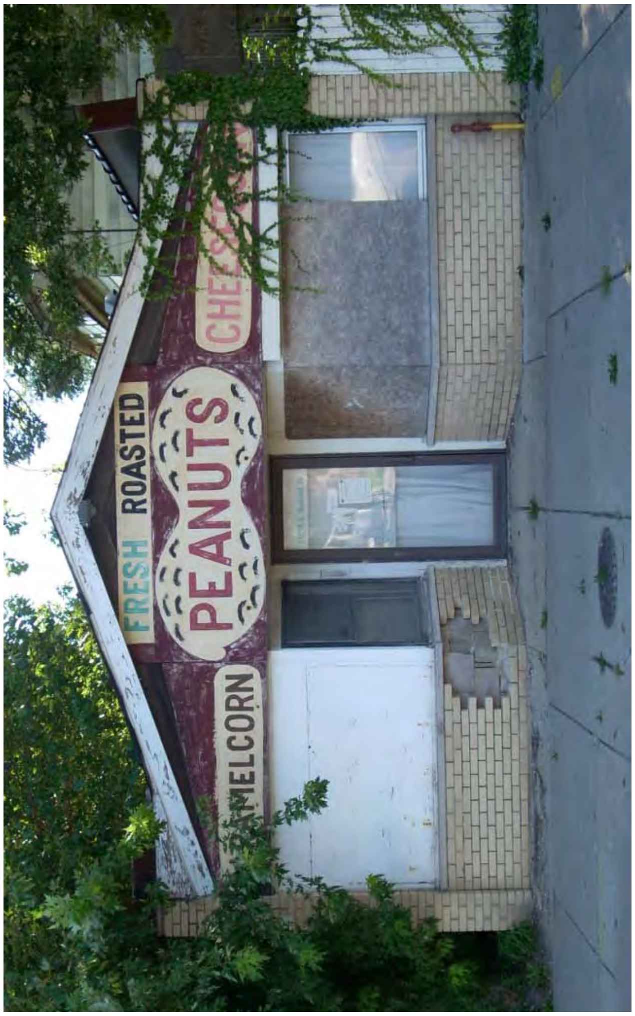
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 13 September 2012

Photos with Captions:
West façade of one-story, concrete block, commercial property.



Property Description: **Stories:** 1

This one-story gable-roofed commercial building in the Roseland community has a front elevation that is clad in buff brick, a centrally located recessed glass door, and flanking display windows that are largely covered with plywood. The gable includes a large wood signboard. The two non-gable elevations are painted concrete block and extend above the roofline. The lower portions of the roofline have been built up along the non-gable sides. A rear addition is present. This building does not feature sufficient integrity or distinguishing features to qualify as eligible for individual listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

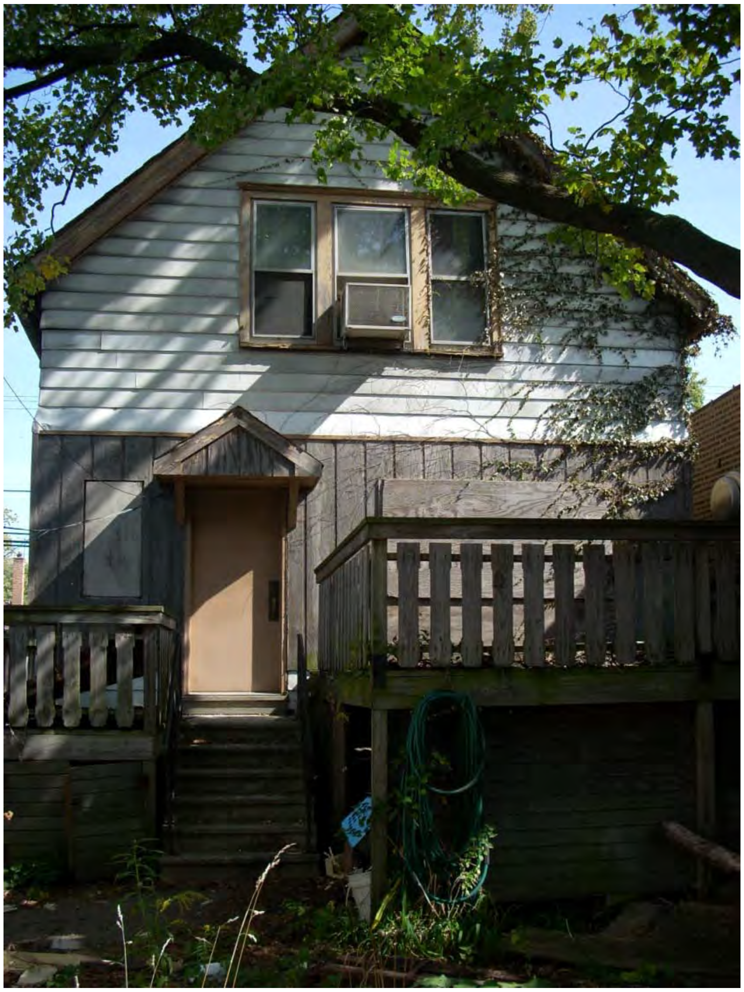
<table>
<tr><td colspan="3">Integrity:
Unaltered Slight Modification [✓ Major Alteration]</td><td>Additional Notes/Descriptions
Boarded-up, conditions unknown</td></tr>
<tr><td colspan="3">Condition:
Excellent Good [✓ Poor]</td><td>Brick cladding falling off</td></tr>
<tr><td colspan="3">Additional Alterations</td><td></td></tr>
<tr><td colspan="2">Structure Usage
Current: NA
Historic: NA</td><td>Exterior Wall Surface
Brick</td><td></td></tr>
<tr><td>Roof Material
Asphalt shingles</td><td>Roof Features
None</td><td>Roof Type
Gable</td><td></td></tr>
<tr><td colspan="3">Ornamental Architectural Details
None</td><td>Windows
Fixed-pane</td></tr>
<tr><td colspan="4">Outbuildings (<i>Number and Description</i>)
None</td></tr>
</table>

Local Landmark	**Y [✓ N]**	
National Register Historic Places	**Y [✓ N]**	
National Register Historic District	**Y [✓ N]**	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name **Historic:** Bldg. not labeled, not in CHRS **Common/Current:** Unknown	**Photos with Captions:** West façade of 1.5-story, frame, multi-family residence. 
Property Address: 11013 S. Halsted Street	
HAARGIS Number: Not in database	
Present Owner and /or Occupant: Unknown	
Property Use **Historic:** Single family residence **Current:** Multi-family residence	
Date of Construction: 1879 **Architect's Name:** Not in CHRS **Builder/Contractor:** Not in CHRS	
Architectural Style: Vernacular	
Prepared By: J. Martinez, M. C. Bird, J. Guarino **Photo By:** S. Katz **Date:** 23 October 2012	

Property Description: **Stories:** 1.5

This one-and-a-half-story house in the Roseland community is situated on a raised concrete block basement with casement windows and is clad with wood boards laid vertically on the first floor and synthetic siding on the second floor. The building has a front gable roof covered with asphalt shingles. Its front elevation has an off-center non-original hollow core metal door beneath a gabled wooden hood, wood steps with railings, a raised wood deck (non-original), and two window openings on the first floor, both of which are covered with plywood. There is a strip of non-original one-over-one windows in the gable and a wide, shed-roofed wall dormer on the north elevation. This house lacks integrity and distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement doors, windows, and cladding
Condition: Excellent Good [✓ Poor]			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Wood, synthetic siding	
Roof Material Asphalt shingle	**Roof Features** Dormer	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung, casement, covered
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Professional Dental Building

Common/Current: Professional Dental Building

Property Address:

11139 S. Halsted Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Professional Dental Building

Property Use

Historic: Commercial

Current: Commercial

Date of Construction: 1957

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

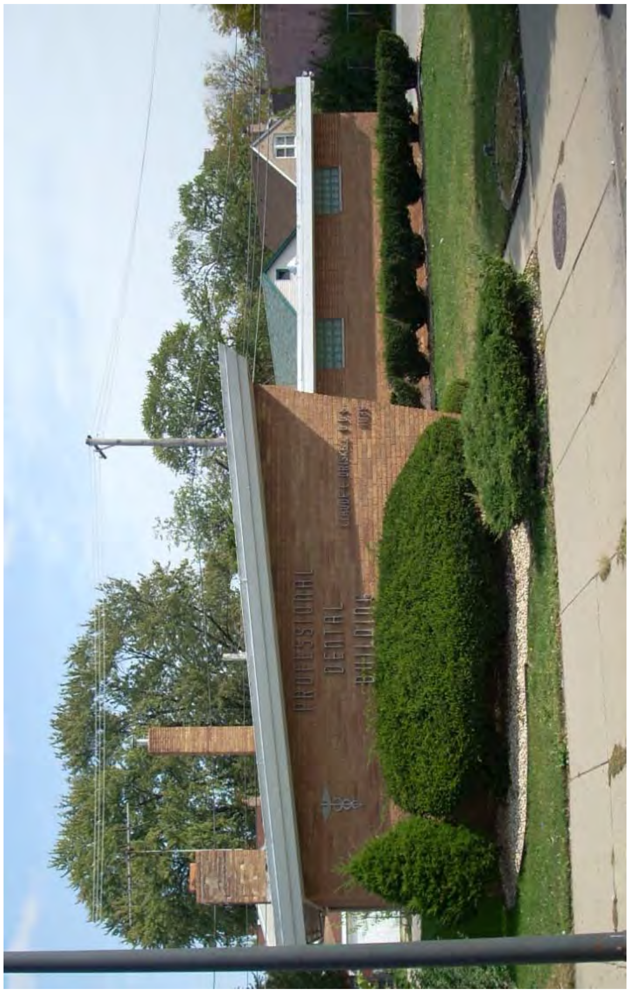
Modernistic

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 24 October 2012

Photos with Captions:
West façade of a brick, one-story, commercial building.



Property Description: **Stories:** 1

This one-story, Mid-Century Modern office building at the Roseland community is clad with light orange face brick and has an L-shaped footprint with a shed-roofed front wing and a flat-roofed rear wing. The Halsted elevation of the rear wing has three rectangular glass block windows while the south elevation of the front wing has an off-center door and floor-to-ceiling windows covered with large metal shades. This building lacks distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
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Phone (815) 568- 0680

Structural Survey

Integrity: [✓ Unaltered] Slight Modification Major Alteration			**Additional Notes/Descriptions**
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Unknown	**Roof Features** None	**Roof Type** Flat	
Ornamental Architectural Details None			**Windows** Glass-block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y [✓ N]**	
National Register Historic Places	**Y [✓ N]**	
National Register Historic District	**Y [✓ N]**	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11200 S. Halsted Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Morgan Park Auto Service

Property Use

Historic: Commercial

Current: Commercial

Date of Construction: 1925

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

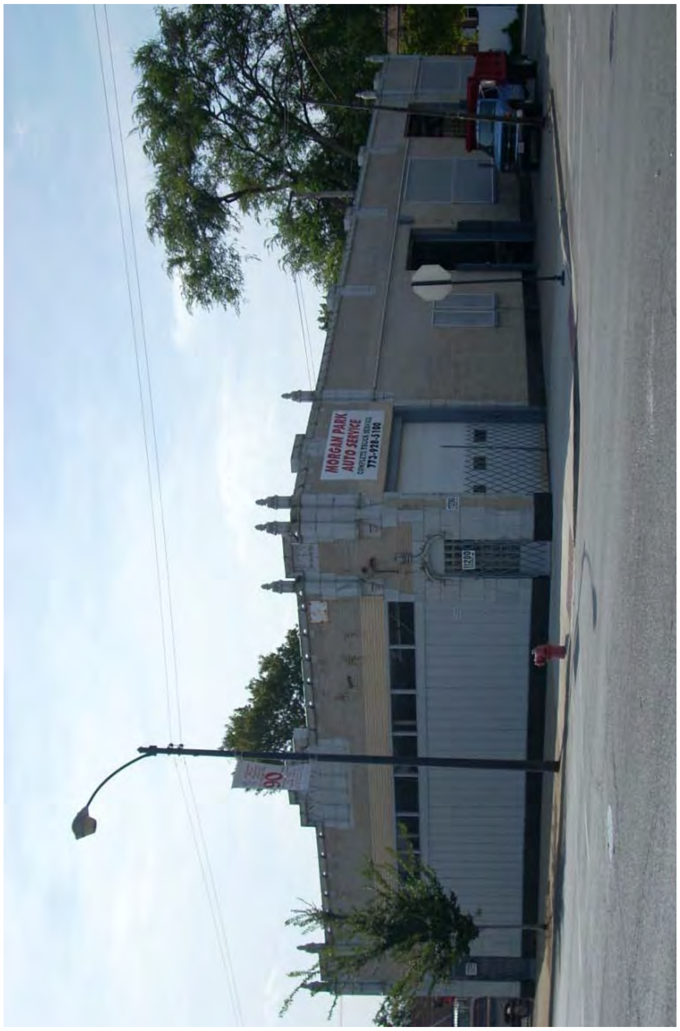
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 24 October 2012

Photos with Captions:
North and east façades of a brick, one-story, commercial building.



Property Description: **Stories:** 1

This one-story commercial building at the southwest corner of Halsted and 112th streets in the Morgan Park community is clad with yellow brick along its two street elevations. The building has a granite water table, a flat roof, and a crenellated parapet with terra cotta coping. The central section of the Halsted elevation is covered with wood boards laid vertically and spanned by a horizontal strip of rectangular single-pane windows. This elevation has doors on either end that are surrounded by cream-colored terra cotta and topped by ogee arches. The 112th Street elevation has three garage door openings and glass block windows. The storefronts have been completely altered and in-filled. Detailing includes terra cotta finals, decorative panels, and banding at the parapet level. This building lacks integrity and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered	[✓ Slight Modification]	Major Alteration	**Additional Notes/Descriptions** Remodeled storefronts, openings in-filled
Condition: Excellent	[✓ Good]	Poor	
Additional Alterations			

Structure Usage	**Exterior Wall Surface**
Current: NA Historic: NA	Brick (main), granite (water table), terra cotta (accents)

Roof Material	**Roof Features**	**Roof Type**
Unknown	Parapet	Flat

Ornamental Architectural Details	**Windows**
Crenellated parapet, terra cotta coping, finials, ogee arches, banding, and panels	Fixed-pane, glass block

Outbuildings (*Number and Description*)

None

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11320-11322 S. Halsted Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Mixed-Use

Current: Mixed-Use

Date of Construction: 1962

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

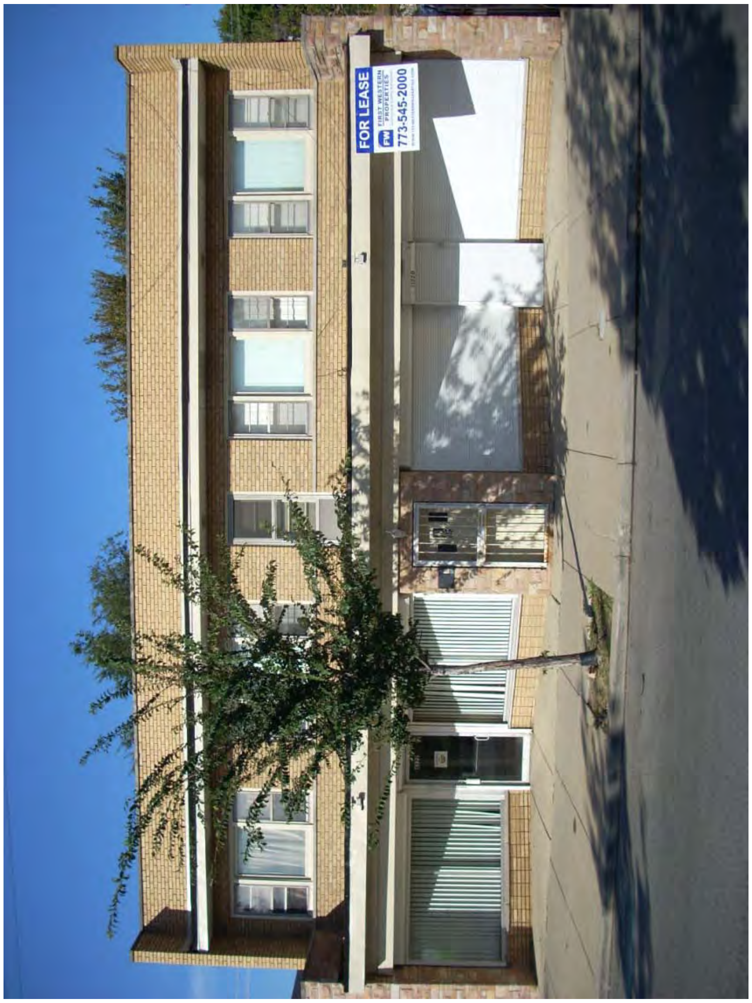
Modernistic

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 24 October 2012

Photos with Captions:
East façade of a brick, two-story, mixed-use building.



Property Description: **Stories:** 2

This two-story commercial building in the Morgan Park community has a flat roof, parapet, concrete banding, and projecting corner piers covered with faux stone on the first floor and yellow brick above. Its front elevation is clad with yellow face brick and has a central hollow core metal door flanked by two storefronts, each with central doors and angled display windows. The recessed second floor has a central door and four groups of windows, each of which is comprised of a picture window and flanking one-over-one aluminum-sash windows. Although an example of a Mid-Century Modern commercial building, it does not feature sufficient distinguishing architectural features to qualify as individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: [✓ Unaltered] Slight Modification Major Alteration			**Additional Notes/Descriptions**
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick (main), faux stone (piers)	
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details Concrete banding, projecting piers			**Windows** Double-hung, fixed pane
Outbuildings (*Number and Description*) None			

Local Landmark	**Y [✓ N]**	
National Register Historic Places	**Y [✓ N]**	
National Register Historic District	**Y [✓ N]**	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11600 S. Halsted Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Karastan Rugs & Carpets

Property Use

Historic: Commercial

Current: Commercial

Date of Construction: 1962

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

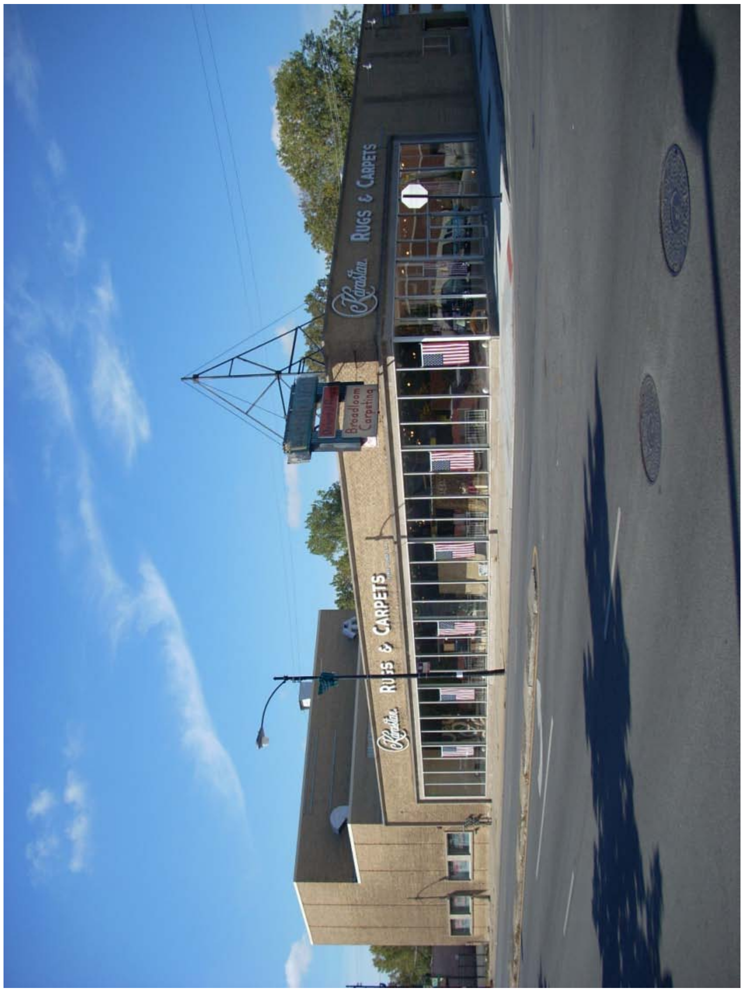
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 24 October 2012

Photos with Captions:
North and east façades of a brick, one-story, commercial building



Property Description: **Stories:** 1-2

This one-story retail commercial building at the corner of Halsted and 116th streets in the West Pullman community has a flat roof and parapet; it is clad with light brown face brick. The two street elevations feature a series of tall plate glass display windows that span nearly the entire length of the Halsted Street elevation. A two-story flat-roofed wing situated at the south end of its Halsted Street elevation is clad with the same light brown face brick and has four single-pane windows on the first floor. This building lacks distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: [✓ Unaltered] Slight Modification Major Alteration	**Additional Notes/Descriptions**
Condition: [✓ Excellent] Good Poor	
Additional Alterations	

Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details None			**Windows** Fixed pane
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11642 S. Halsted Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1925

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

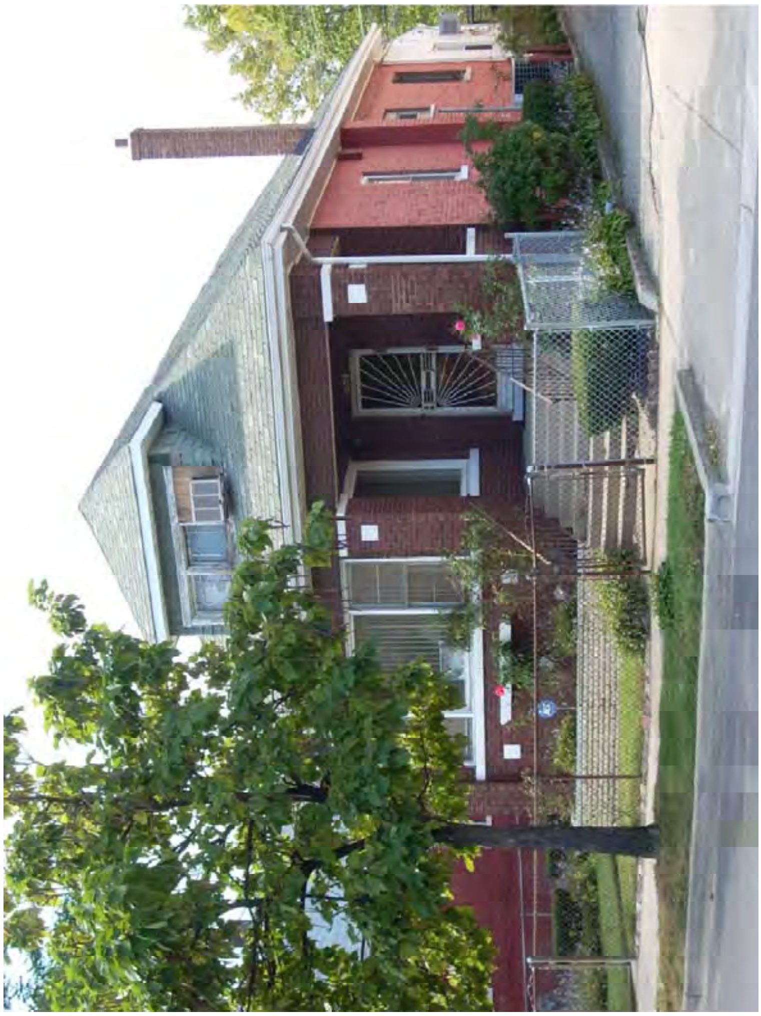
Chicago Bungalow

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 24 October 2012

Photos with Captions:
East façade of a brick, one-story, single family residence.



Property Description: **Stories:** 1

This one-story brick-clad bungalow in the West Pullman community is situated on a raised basement and has a hip roof covered with asphalt shingles, a hip dormer, and overhanging eaves. The front elevation has a recessed corner porch with a metal storm door, low brick sidewalls, a corner brick pier support, and concrete steps with metal railings. Windows on the front elevation include a non-original picture window flanked by one-over-one aluminum-sash windows in the living room bay, and a strip of three window openings in the dormer. The house has a synthetic-clad addition at the rear. Detailing includes square insert blocks used as decorative accents and concrete sills. This is an example of a Chicago bungalow, a building type that the City of Chicago has recognized through its Historic Chicago Bungalow Initiative. However, this house lacks distinctive architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

<table>
<tr><td colspan="3">Integrity:
Unaltered [✓ Slight Modification] Major Alteration</td><td>Additional Notes/Descriptions
Replacement windows</td></tr>
<tr><td colspan="3">Condition:
[✓ Excellent] Good Poor</td><td></td></tr>
<tr><td colspan="3">Additional Alterations
Addition at rear</td><td></td></tr>
<tr><td colspan="2">Structure Usage
Current: NA
Historic: NA</td><td>Exterior Wall Surface
Brick</td><td></td></tr>
<tr><td>Roof Material
Asphalt shingle</td><td>Roof Features
Dormer</td><td>Roof Type
Hip</td><td></td></tr>
<tr><td colspan="3">Ornamental Architectural Details
Insert blocks, concrete sills</td><td>Windows
Double-hung, sliding or casement</td></tr>
<tr><td colspan="4">Outbuildings (<i>Number and Description</i>)
None</td></tr>
</table>

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11753 S. Halsted Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1914

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

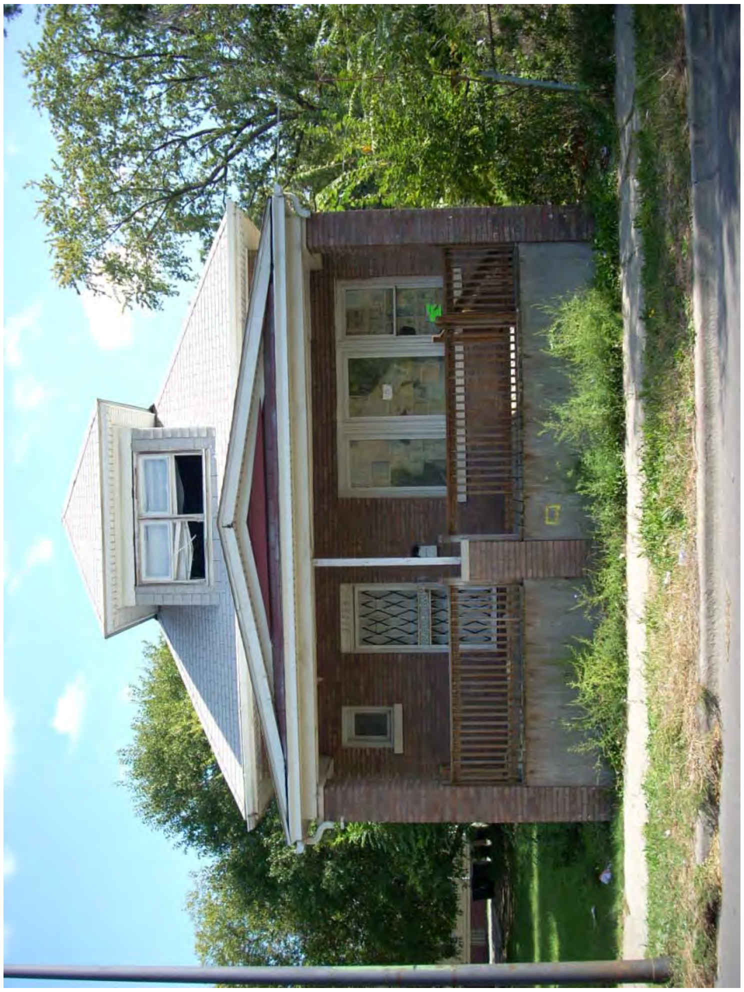
Craftsman

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 24 October 2012

Photos with Captions:
West façade of a one-story, single family, brick residence.



Property Description: **Stories:** 1

This vacant one-story brick-clad house in the West Pullman community is situated on a raised basement. The building has a hip roof covered with asphalt shingles, a hip dormer with a pair of window openings that only retain their upper sashes, and overhanging eaves. The front elevation has a full-width gabled wood porch with brick pier supports, an off-center hollow core metal door, a small casement window, and a strip of three non-original windows that include two with single panes and one that is double-hung. This house lacks integrity and distinctive architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement door and windows
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingle	**Roof Features** Dormer	**Roof Type** Hip	
Ornamental Architectural Details None			**Windows** Double-hung, casement
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Flagstone Veneer Stone Galloy &Van Etten Inc. Cut Stone Contractors

Property Address:

11756 S. Halsted Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Flagstone Veneer Stone Galloy &Van Etten Inc. Cut Stone Contractors

Property Use

Historic: Industrial

Current: Industrial

Date of Construction: 1931

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

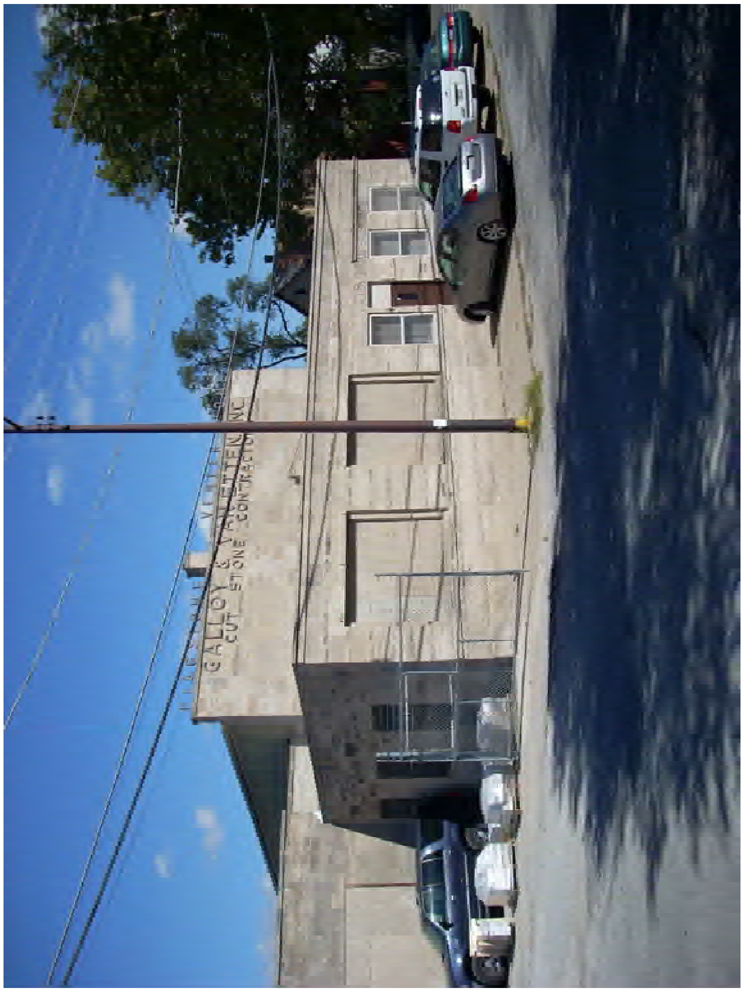
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: Steve Katz

Date: 24 October 2012

Photos with Captions:
South façade of a masonry, two-story, industrial building.



Property Description: **Stories:** 2

This two-story concrete block light industrial building in the West Pullman community has a one-story wing at its south end; both the main building and wing have flat roofs. A line of buttresses divide the building's long Halsted Street elevation into a series of thirteen bays; large windows have all been in-filled with synthetic materials. One of these bays features an overhead garage door. The front (south) elevation of the one-story office wing has a hollow core metal door with an in-filled transom, three non-original one-over-one aluminum-sash windows, and two large window openings in-filled with concrete block. An additional flat-roofed one-and-a-half-story wing is situated along the rear of the main building block. Its west elevation features a series of windows and overhead doors. Detailing includes concrete stringcourses and applied letters.

This industrial building is recommended for National Register listing under Criterion A for Industry. Dutch immigrant

Abram Van Etten and his partner George Galloy established the stone fabricating company in 1899. Located in a community that experienced a collapse of its industrial base in the 1970s and considerable disinvestment since that time, the building serves as an important, and rare, example of an early twentieth-century industrial building in West Pullman that retains its original use and ownership. It retains the majority of its original materials with the exception of fenestration along Halsted Street, where it appears that the windows have either been covered or removed.

Structural Survey

Integrity: Unaltered	[✓ Slight Modification]	Major Alteration	**Additional Notes/Descriptions** Replacement windows, some openings in-filled
Condition: [✓ Excellent]	Good	Poor	
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Concrete block	
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details Buttresses, stringcourses, lettering			**Windows** Double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? Yes	[✓ **A**] **B** **C**	**Significance:** An important and rare example of an early twentieth century industrial building in West Pullman that retains its original use and ownership.

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11763 S. Halsted Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Multi-family residence

Date of Construction: 1904

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

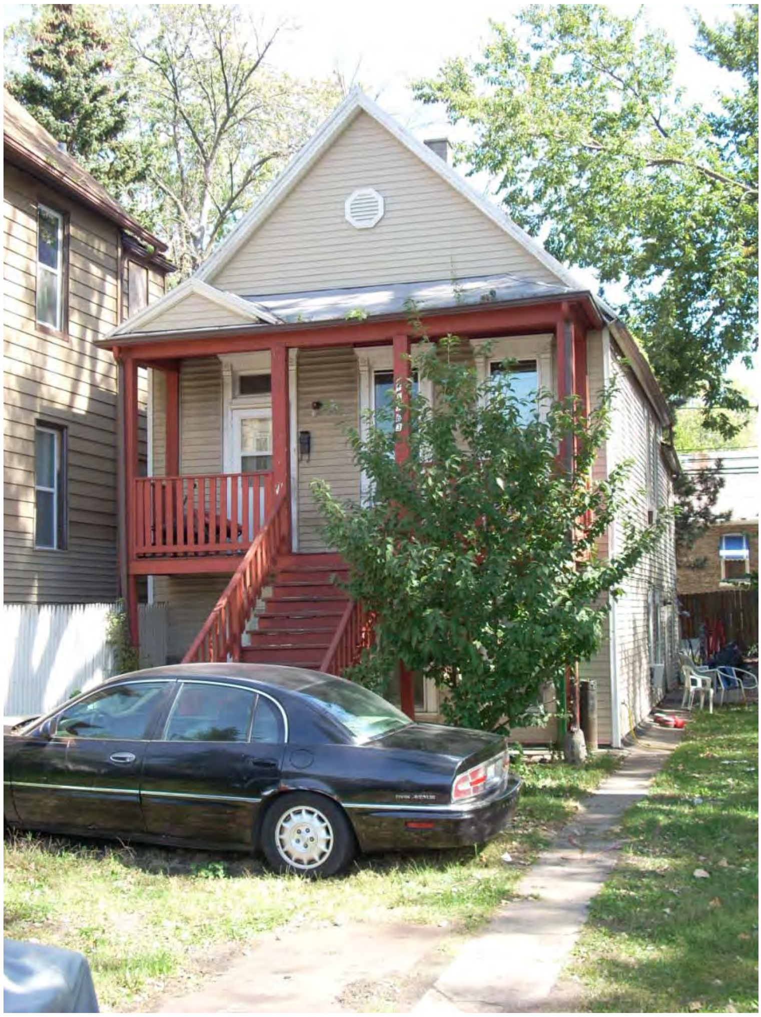
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 24 October 2012

Photos with Captions:
West façade of a one-story, multi-family residence.



Property Description: **Stories:** 1

This one-story frame house in the West Pullman community has a raised brick basement and is covered with synthetic siding. The building has a front gable roof covered with asphalt shingles. Its front elevation has a full-width hip-roof wood porch that contains a gable accent above the door. The porch roof is supported with straight posts and railings, and an off-center door and two one-over-one windows on both the raised basement and the first floor levels. The first floor door has a transom: both the door and first floor windows retain their original wood casings with pilasters and cornices. An octagonal ventilating louver is situated in the gable. This house lacks integrity and distinguishing architectural features and is not individually eligible for listing on the National Register.

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505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

<table>
<tr><td colspan="3">Integrity:
Unaltered [✓ Slight Modification] Major Alteration</td><td>Additional Notes/Descriptions
Replacement cladding and porch rails</td></tr>
<tr><td colspan="3">Condition:
[✓ Excellent] Good Poor</td><td></td></tr>
<tr><td colspan="3">Additional Alterations</td><td></td></tr>
<tr><td colspan="2">Structure Usage
Current: NA
Historic: NA</td><td>Exterior Wall Surface
Synthetic siding</td><td></td></tr>
<tr><td>Roof Material
Asphalt shingle</td><td>Roof Features
None</td><td>Roof Type
Gable</td><td></td></tr>
<tr><td colspan="3">Ornamental Architectural Details
Gable accent on porch roof, window pilasters and cornices</td><td>Windows
Double-hung</td></tr>
<tr><td colspan="4">Outbuildings (<i>Number and Description</i>)
None</td></tr>
</table>

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11800 S. Halsted St.

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Commercial (Oils & Misc. Storage at Coal Yard, 1939)

Current: Commercial

Date of Construction: 1922

Architect's Name: Not in CHRS database

Builder/Contractor: Not in CHRS database

Architectural Style:

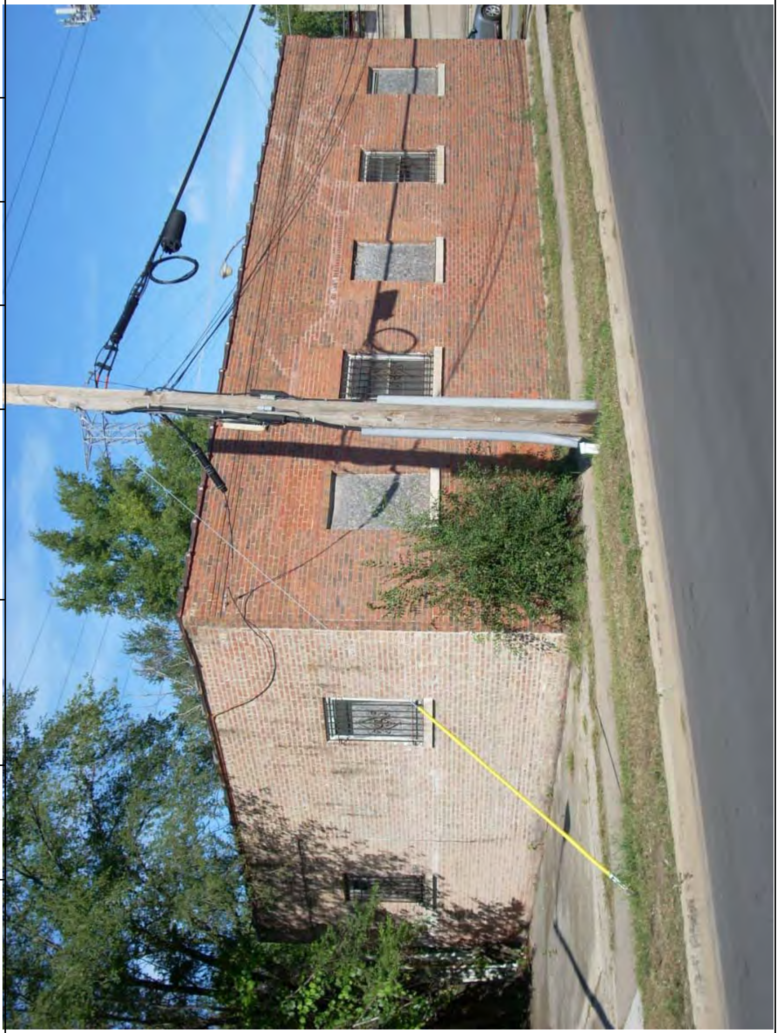
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 13 September 2012

Photos with Captions:
South and east façades of one-story, brick, commercial building.



Property Description: **Stories:** 1

This one-story brick-clad flat-roofed commercial building at the southwest corner of Halsted and 118th streets in the West Pullman community has a metal door, a glass block window, and a pair of windows along its front (Halsted) elevation, and five window openings along its 118th Street elevation. Fenestration is comprised of one-over-one-windows, three of which are covered with plywood. Both street elevations feature brick corbelling. This building does not feature sufficient integrity or distinguishing features to qualify as eligible for individual listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions**
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Unknown	**Roof Features** None	**Roof Type** Flat	
Ornamental Architectural Details Corbelling			**Windows** Double-hung, some boarded up
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Converted from commercial to residential according to the Sanborn map and CCA records

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11932 S. Halsted Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Currency Exchange

Property Use

Historic: Commercial

Current: Commercial

Date of Construction: 1893

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

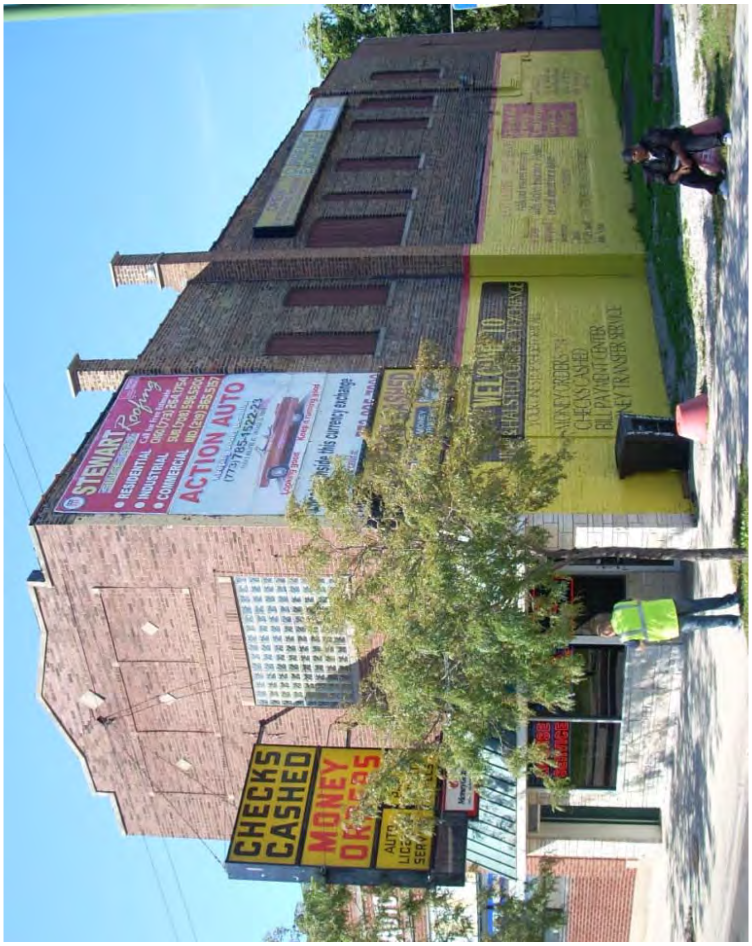
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 13 September 2012

Photos with Captions:
East and north façades of two-story, brick commercial building.



Property Description: **Stories:** 2

This two-story commercial building in the West Pullman community has a flat roof and shaped parapet. The first floor of its front elevation is clad in faux stone and has two centrally located display windows and two non-original doors, one at either end: one is glass and the other is metal. The storefront level is topped by a full-width wood signboard and the upper level is clad in brown face brick and has two windows, one of which is in-filled with glass blocks. Detailing includes concrete sills, flat arches, and diamond-shaped stone inserts at the parapet level. All side elevation windows are covered with wood. This building does not feature sufficient integrity or distinguishing features to qualify as eligible for individual listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity:

Unaltered [✓ Slight Modification] Major Alteration

Additional Notes/Descriptions

Replacement storefront, replacement or bricked windows

Condition:

[✓ Excellent] Good Poor

Additional Alterations

Structure Usage	**Exterior Wall Surface**
Current: NA Historic: NA	Brick

Roof Material	**Roof Features**	**Roof Type**
Unknown	Parapet	Flat

Ornamental Architectural Details

Stepped parapet, concrete sills, flat arches, stone inserts

Windows

Fixed-pane, glass block

Outbuildings (*Number and Description*)

None

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Garage (Sanborn, 1939)

Common/Current: Action Auto Collision Center

Property Address:

11934-11938 S. Halsted Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Action Auto Collision Center

Property Use

Historic: Commercial

Current: Commercial

Date of Construction: 1926

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

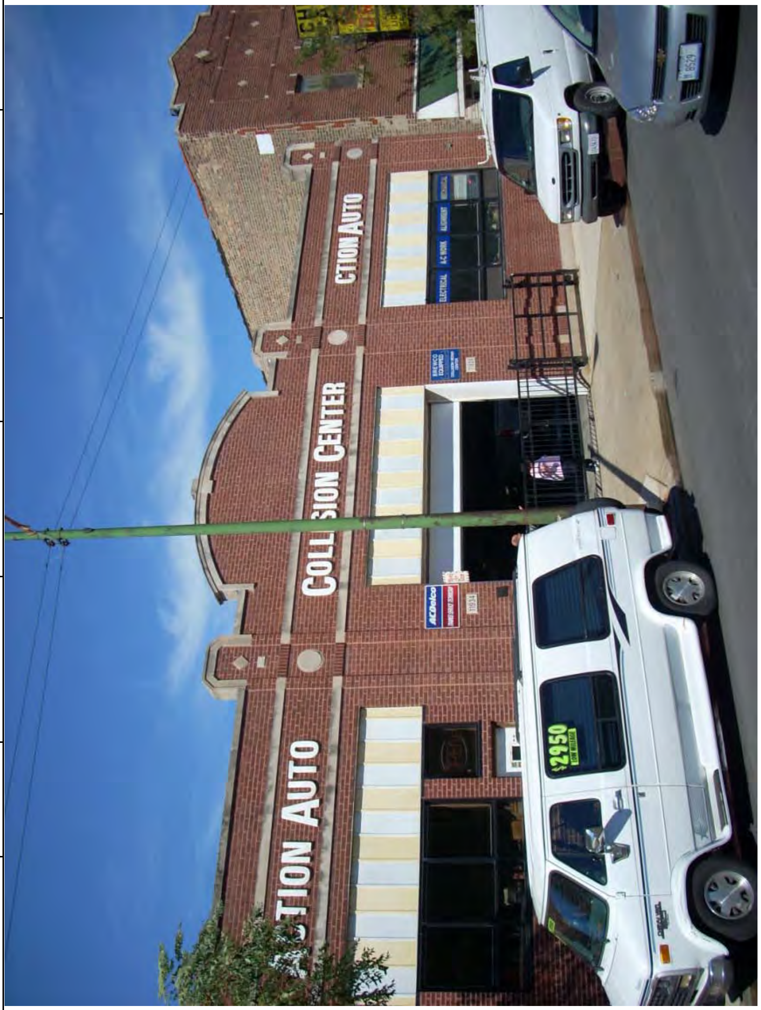
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 13 September 2012

Photos with Captions:
East façade of one-story, brick commercial building.



Property Description: **Stories:** 1

This one-story auto repair shop in the West Pullman community has a flat roof and a shaped parapet that is rounded in the center. Its three-bay façade is clad with brown face brick and has an overhead metal garage door in the center and strips of fixed-pane windows on its flanking bays. The south bay also has a metal door with transom. All three bays feature metal signboards. Detailing includes concrete banding, coping, and inserts. This building does not feature sufficient integrity or distinguishing features to qualify as eligible for individual listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered	[✓ Slight Modification]	Major Alteration	**Additional Notes/Descriptions** Replacement windows and garage doors
Condition: [✓ Excellent]	Good	Poor	
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details Shaped parapet, concrete banding, coping, and inserts			**Windows** Fixed-pane
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11944 S. Halsted Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Commercial

Current: Mixed-Use

Date of Construction: 1926

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

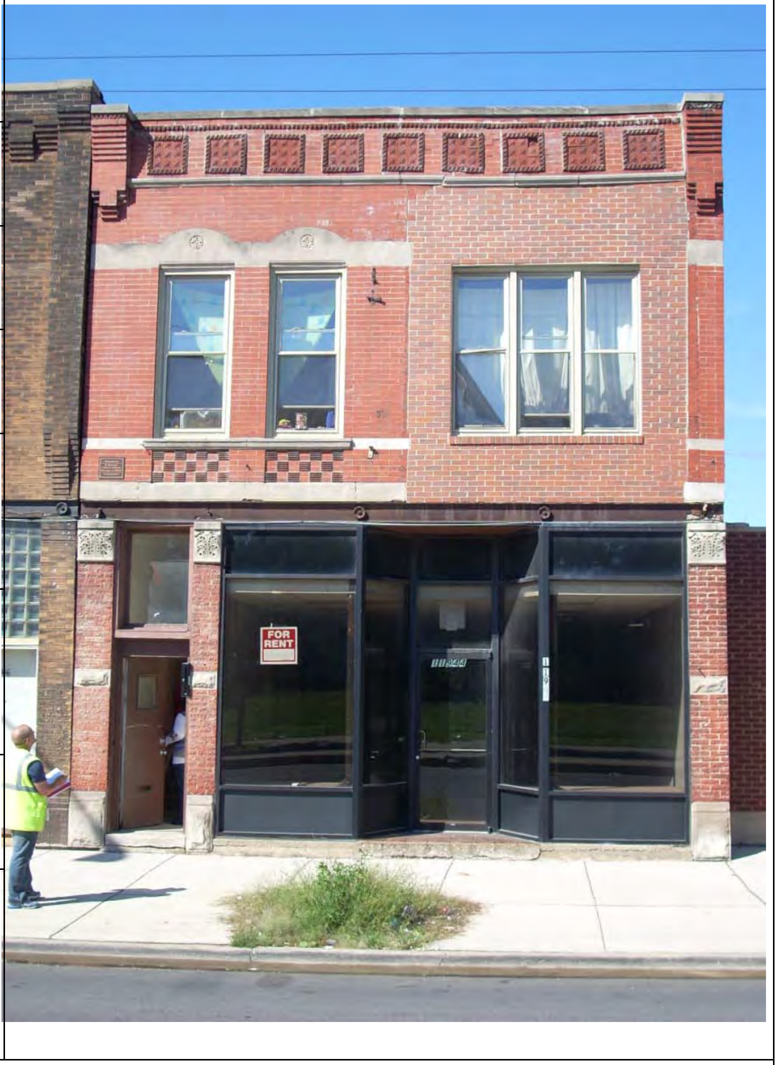
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 13 September 2012

Photos with Captions:
East façade of mixed-use, two-story, brick building.



Property Description: **Stories:** 2

This two-story mixed-use building in the West Pullman community has a flat roof and parapet. Its front elevation is clad in red face brick and has an off-center metal door with transom. The storefront has maintained its original design with recessed door and flanking display windows. The second floor has five non-original one-over-one aluminum-sash windows. Detailing includes stone coping with foliate motifs atop first floor brick piers, two spandrel panels with decorative brickwork, stone banding on one-half of the second floor, and a parapet with decorative square terra cotta panels and corner brick panels with corbelling. One-half of the brickwork on the second floor of the front elevation is non-original. This building does not feature sufficient integrity to qualify as eligible for individual listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
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Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Modifications to half of the second story brickwork
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details Stone coping, brick piers, terra cotta panels, corbelling			**Windows** Fixed-pane, double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11946 S Halsted Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Commercial

Current: Commercial

Date of Construction: 1926

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

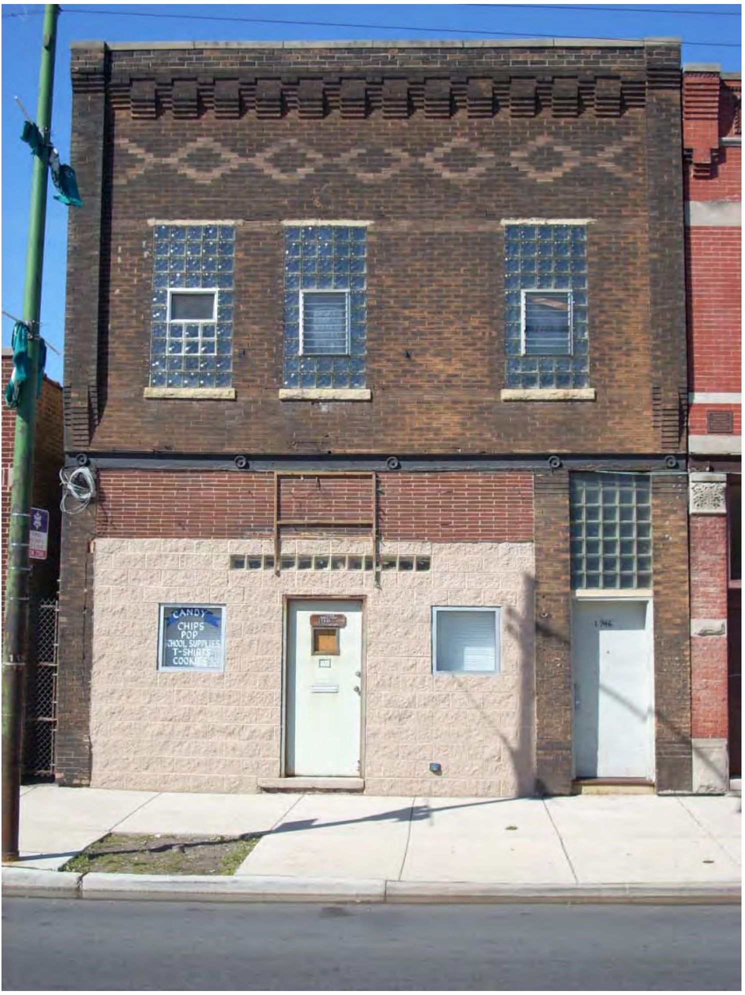
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 13 September 2012

Photos with Captions:
East façade of two-story, brick-clad, commercial building.



Property Description: **Stories:** 2

This two-story commercial building in the West Pullman community has a flat roof and parapet, and is clad with brown face brick. The building's former storefront has been in-filled with concrete block and brick and has a hollow metal door and two non-original square single-pane windows. An off-center entrance that provides access to the second floor has a non-original hollow metal door and its transom has been in-filled with glass blocks. The three window openings on the second floor have been in-filled with glass blocks and ventilating louvers and feature stone sills. Detailing includes corner pilasters with corbelling on the second floor level, buff brickwork arranged in a diamond pattern above the second floor windows, and brick corbelling at the parapet level. This building has experienced a loss of integrity and does not feature sufficient distinctive architectural features to qualify as eligible for individual listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

<table>
<tr><td colspan="3">Integrity:
Unaltered Slight Modification [✓ Major Alteration]</td><td>Additional Notes/Descriptions
Original storefront in-filled with; new doors; window openings in-filled</td></tr>
<tr><td colspan="3">Condition:
Excellent [✓ Good] Poor</td><td></td></tr>
<tr><td colspan="3">Additional Alterations</td><td></td></tr>
<tr><td colspan="2">Structure Usage
Current: NA
Historic: NA</td><td>Exterior Wall Surface
Brick</td><td></td></tr>
<tr><td>Roof Material
Unknown</td><td>Roof Features
Parapet</td><td>Roof Type
Flat</td><td></td></tr>
<tr><td colspan="3">Ornamental Architectural Details
Corner pilasters with corbelling, buff brickwork, corbelling</td><td>Windows
Fixed-pane, glass-block</td></tr>
<tr><td colspan="4">Outbuildings (<i>Number and Description</i>)
None</td></tr>
</table>

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Feed store (Sanborn, 1939)

Common/Current: Action Auto Rebuilder

Property Address:

11948-11950 S. Halsted Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Action Auto Rebuilder

Property Use

Historic: Commercial

Current: Commercial

Date of Construction: 1926

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

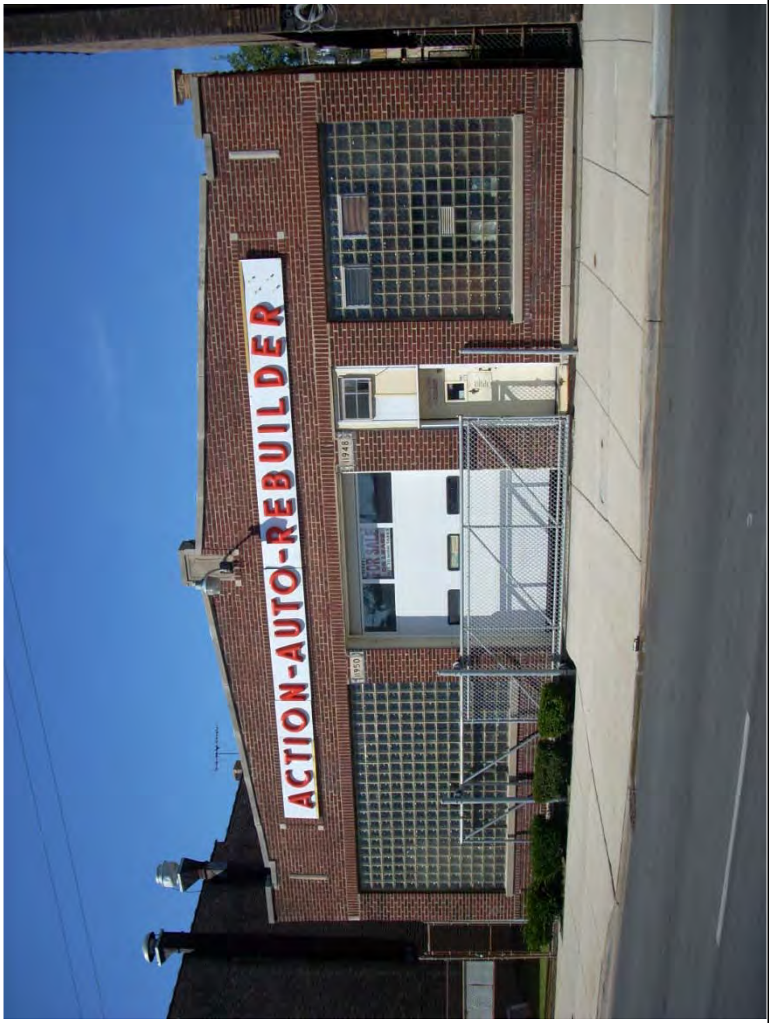
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 13 September 2012

Photos with Captions:
East façade of one-story, brick, commercial building.



Property Description: **Stories:** 1

This one-story auto-repair shop in the West Pullman community has a flat roof and triangular shaped parapet with concrete coping. Its front elevation is clad in brown brick and has a centrally located metal overhead garage door, an adjacent metal door with transom, and large flanking window openings that have been in-filled with glass blocks. Detailing includes concrete sills, coping, insert blocks, brick banding, and a panel displaying the business name. This building does not feature sufficient integrity or distinguishing features to qualify as eligible for individual listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement doors, windows
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details Shaped parapet with concrete coping, concrete inserts, sills, concrete panel in parapet, brick banding, panel displaying the business name			**Windows** Fixed-pane, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11958 S. Halsted Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Commercial

Current: Mixed-use

Date of Construction: 1894

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

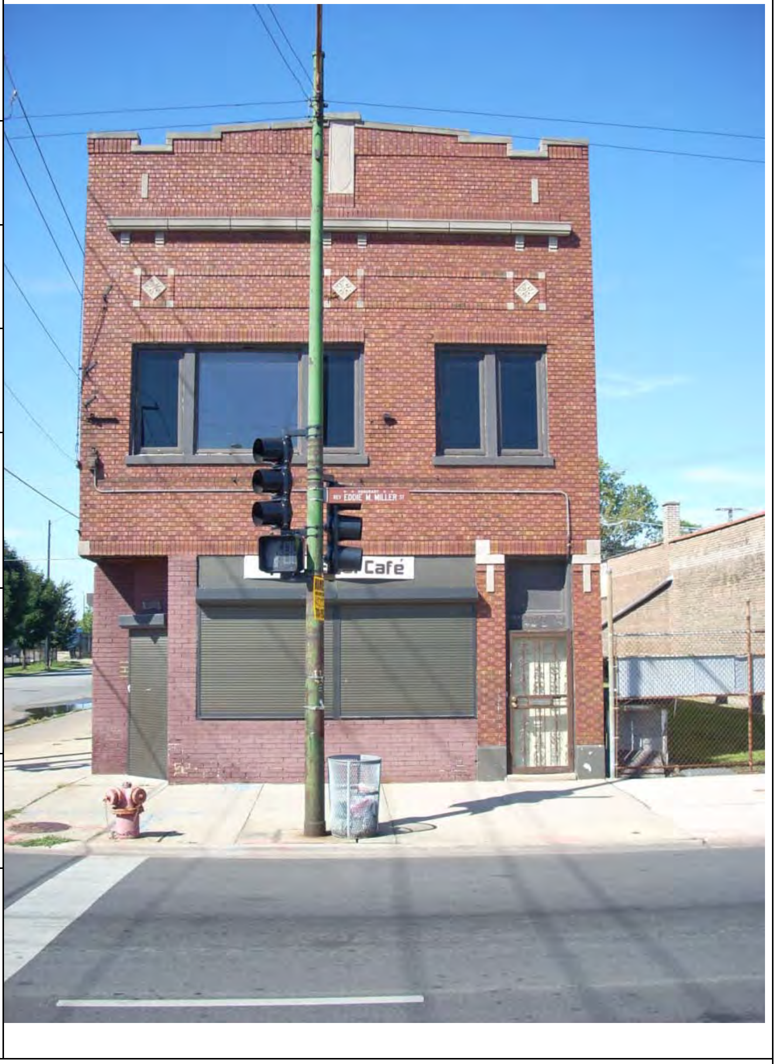
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 13 September 2012

Photos with Captions:
East façade of two-story, brick mixed-use building.



Property Description: **Stories:** 2

This two-story mixed-use building at the northwest corner of Halsted and 120th streets in the West Pullman community has a flat roof and shaped parapet with stone inserts and brick stringcourses. The building fabric at the street corner of the first floor has been removed so that the non-original corner door, which is covered in metal, is deeply recessed. A secondary entrance at the opposite end of the front elevation features a hollow core metal door and transom in-filled with wood and is flanked by original brown brick cladding. The remainder of the first floor along both street elevations features non-original brick cladding. The second floor of the front elevation features a large fixed-pane window flanked by casements and a separate pair of casements, all of which are non-original. Windows and door openings along the 120th Street elevation have been altered and the second floor of this elevation features a series of one-over-one windows. One of these windows is in-filled with glass block. This building does not feature sufficient integrity or distinguishing features to qualify as eligible for individual listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows and doors, altered first floor
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details Shaped parapet, stone inserts, and brick stringcourses			**Windows** Double-hung, casement
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

12000 S. Halsted Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Sure-Way Missionary Baptist Church

Property Use

Historic: Commercial

Current: Religious

Date of Construction: 1939

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

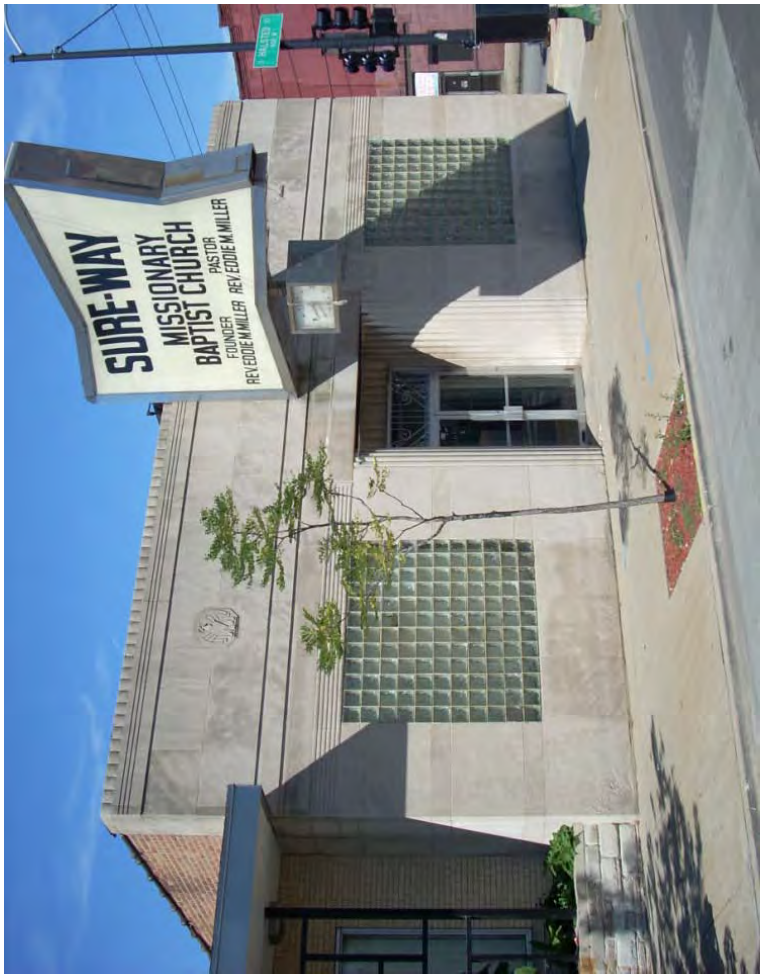
Art Deco

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 13 September 2012

Photos with Captions:
East façade of one-story, masonry religious building.



Property Description: **Stories:** 1

This Art Deco style one-story church at the southwest corner of Halsted and 120th streets in the West Pullman community has a flat roof and parapet. Its front elevation is clad in smooth limestone and has a centrally located recessed entrance with glass double-doors, a transom, and fluted side walls. The entrance is flanked by two large glass block windows. Detailing includes two flattened stone reliefs featuring eagle motifs, dentils, and banding at the parapet level. A mid-century modern, one-story, flat-roofed wing clad in faux stone and buff brick is situated along the south side of the original building (bottom of photo). It features three large picture windows along its front elevation and wide roof overhangs.

This is a nice example of a stripped down Art Deco façade and a mid-century modern wing. However, the alternation of the two large window openings with glass block infill compromises the integrity of this small building, which no longer serves it original use. As a result, this building does not qualify as eligible for individual listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration	**Additional Notes/Descriptions** Replacement windows
Condition: [✓ Excellent] Good Poor	
Additional Alterations Post WWII addition on south side	

Structure Usage Current: NA Historic: NA	**Exterior Wall Surface** Stone (façade), Brick (sides and rear)	

Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	

Ornamental Architectural Details Eagles in relief, fluted side walls and parapet with dentils and banding	**Windows** Glass block

Outbuildings (*Number and Description*)

None

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: C. J. Butler’s Auto Repair

Property Address:

12001-12003 S. Halsted Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

C. J. Butler’s Auto Repair

Property Use

Historic: Commercial

Current: Commercial

Date of Construction: 1894

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

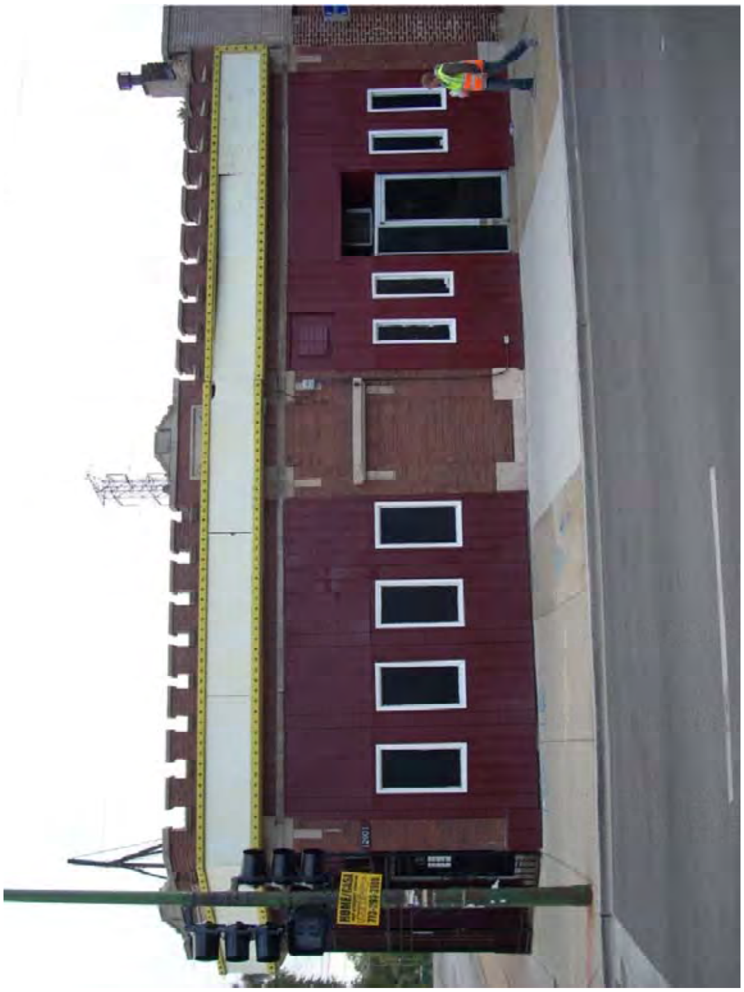
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 24 October 2012

Photos with Captions:
West façade of a one-story, brick, commercial building.



Property Description: **Stories:** 1

This one-story commercial building in the West Pullman community is clad with orange-brown face brick on its 120th Street elevation and synthetic siding on its Halsted elevation. The building has a flat roof and a crenellated parapet with concrete coping. The parapet is obscured by a continuous metal sign plate. The recessed corner entrance has a non-original plate glass door with an in-filled transom. The Halsted Street elevation has been altered with installation of a series of fixed-pane windows and an off-center glass door. However, this elevation retains four original brick piers with stone coping and geometric motifs as well as a portion of original brick cladding in the center, which includes a stone lintel above the outline of a former door opening now in-filled with brick. The 120th Street elevation includes two non-original doors, three double-hung wood-sash windows, and brick corbelling at the roofline. This building lacks integrity and distinctive architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered	[✓ Slight Modification]	Major Alteration	**Additional Notes/Descriptions** Replacement doors, cladding & windows; openings in-filled
Condition: [✓ Excellent]	Good	Poor	
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick, synthetic siding	
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details Crenellated parapet, concrete coping, brick piers with stone coping and geometric motifs, stone lintel, brick corbelling			**Windows** Fixed pane, double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

12018 S. Halsted Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Commercial

Current: Mixed-Use

Date of Construction: 1916

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

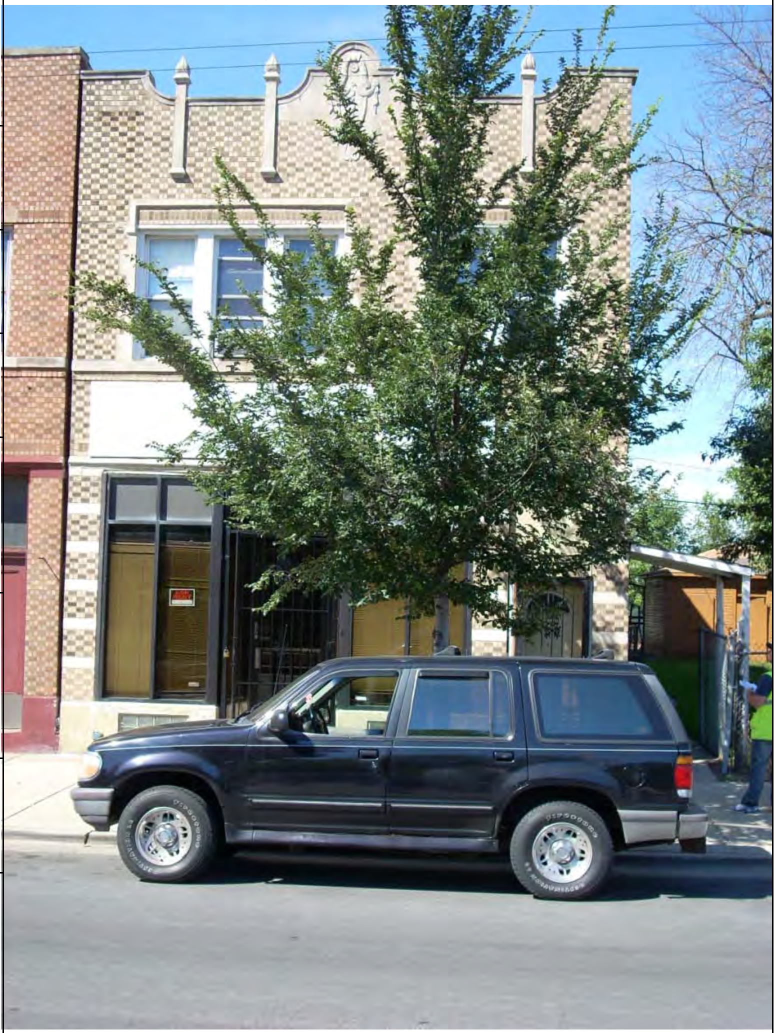
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 13 September 2012

Photos with Captions:
East façade of two-story, mixed-use, brick building.



Property Description: **Stories:** 2

This two-story mixed-use building in the West Pullman community has a flat roof and shaped parapet. Its front elevation is clad in brown and buff-colored face brick and has a storefront with recessed glass door flanked by display windows with transoms that are in-filled. A secondary entrance has a non-original hollow metal door and provides access to the upper level apartment. The second floor of the front elevation has five non-original one-over-one aluminum-sash windows. Detailing includes flat arches, stick-like molding in stone at the parapet level and a stone panel with decorative shield and swags motif. This building does not feature sufficient integrity or distinguishing features to qualify as eligible for individual listing on the National Register.

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Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered	[✓ Slight Modification]	Major Alteration	**Additional Notes/Descriptions** Replacement window and doors
Condition: [✓ Excellent]	Good	Poor	
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details Shaped parapet, flat arches, stone molding, stone panel with shield and swags, stone inserts			**Windows** Fixed-pane, double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

12022 S. Halsted Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Pick-a-Tool Rentals

Property Use

Historic: Commercial

Current: Mixed-Use

Date of Construction: 1898

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

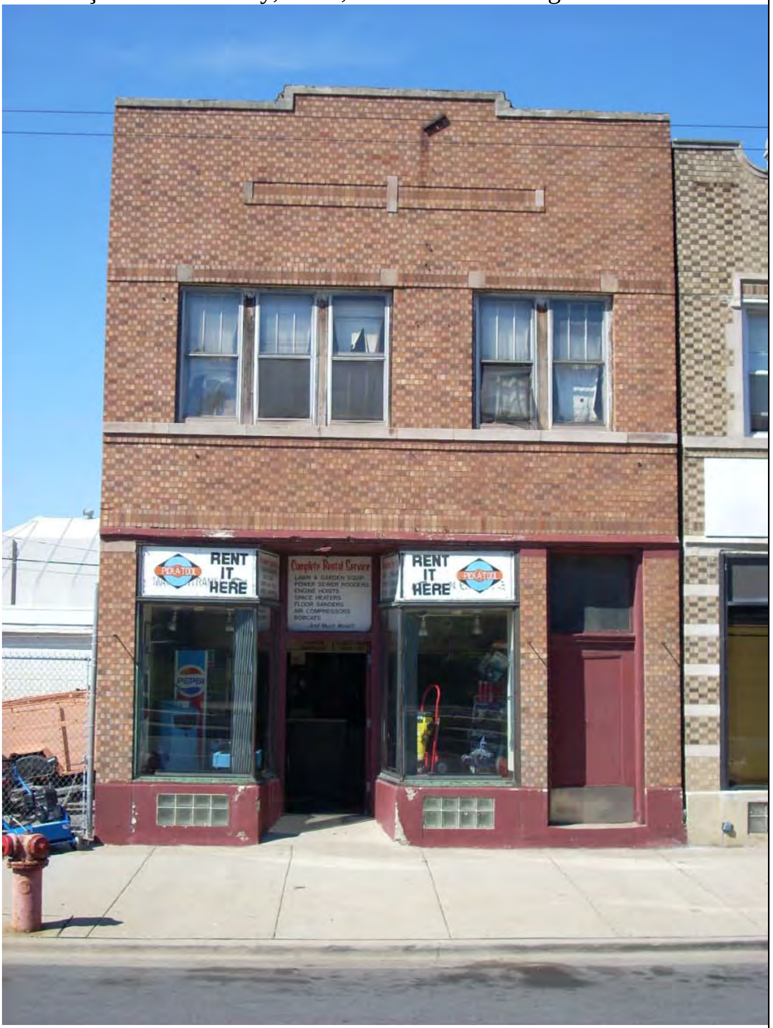
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 13 September 2012

Photos with Captions:
East façade of two-story, brick, mixed-use building.



Property Description: **Stories:** 2

This two-story mixed-use building in the West Pullman community has a flat roof and shaped parapet. Its front elevation is clad in brown and orange-colored brick and has a storefront with a recessed glass door flanked by display windows and transoms covered with signage. A secondary entrance with wood door and transom provides access to the upper level apartment. This door's original glass has been replaced with wood. The second floor of the front elevation has five three-over-one wood-sash windows. Detailing includes rows of vertical bricks, stone sills, and concrete coping. This building does not feature sufficient distinguishing features to quality as eligible for individual listing on the National Register.

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Structural Survey

Integrity: [✓ Unaltered] Slight Modification Major Alteration			**Additional Notes/Descriptions**
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details Stone sills, inserts, coping, and brick stringcourses			**Windows** Fixed-pane, double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
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Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

12033 S. Halsted Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Flat

Current: Multi-family residence

Date of Construction: 1914

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

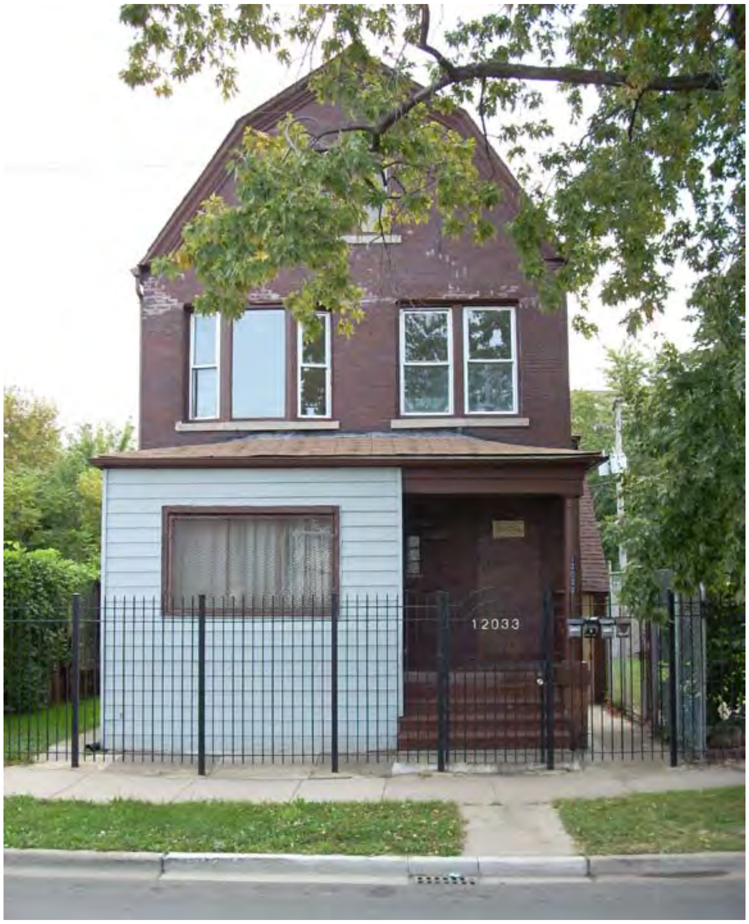
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 24 October 2012

Photos with Captions:
West façade of a brick, two-story, multi-family residence.



Property Description: **Stories:** 2

This two-story residence in the West Pullman community is situated on a raised basement and is clad with brown face brick on the front elevation and common brick on the side and rear elevations. The building has a gambrel roof covered with asphalt shingles. The front elevation has a full-width hip-roofed wood porch, one-half of which has been enclosed with synthetic siding and has a picture window. The open half of the porch has an off-center doorway that has been in-filled with brick, wood steps, and a corner tapered wood column at the corner. The entrance into the home is through the enclosed porch. The second floor of the front elevation has a bay with a picture window flanked by one-over-one aluminum-sash windows and a pair of one-over-one aluminum-sash windows. The attic level has a pair of windows. The side elevations feature one-over-one aluminum-sash windows of varying sizes and a small dormer. All windows are modern replacements. This house lacks integrity and distinctive architectural features and is not individually eligible for listing on the National Register.

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Structural Survey

Integrity:	Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows and door
Condition:	[✓ Excellent] Good Poor			
Additional Alterations	Front porch enclosed			
Structure Usage	Current: NA Historic: NA	**Exterior Wall Surface**	Brick (main) Synthetic siding (porch)	
Roof Material Asphalt shingle	**Roof Features** Dormer	**Roof Type**	Gambrel	
Ornamental Architectural Details	None			**Windows** Double-hung, fixed-pane
Outbuildings (*Number and Description*)	None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

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Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

12048 S. Halsted Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Commercial

Current: Mixed-Use

Date of Construction: 1901

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

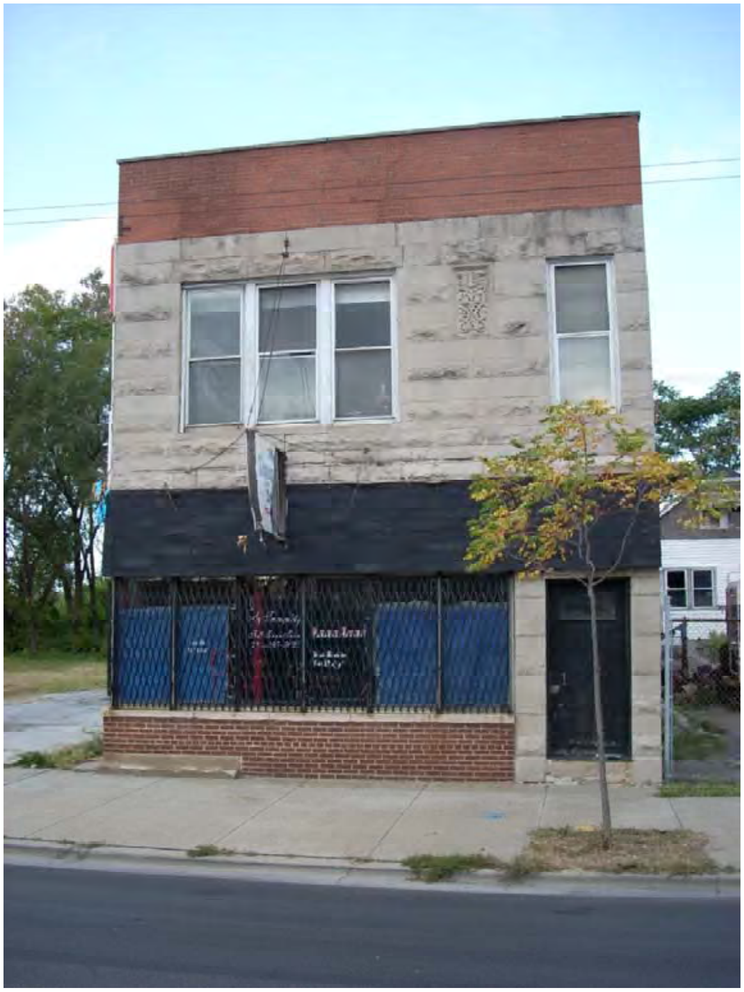
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 24 October 2012

Photos with Captions:
East façade of a two-story, masonry, mixed-use building.



Property Description: **Stories:** 2

This two-story mixed-use building in the West Pullman community has a flat roof and parapet. Its front elevation is clad with non-original brick below the display windows, rusticated limestone up to the parapet level, and orange brick above. The side and rear elevations are clad in orange brick. The front elevation has a pent roof, a strip of display windows, a non-original off-center door on the first floor, and four non-original one-over-one aluminum-sash windows, three of which are grouped together, on the second floor. Detailing includes a stone panel with foliate motif on the second floor. The south elevation has first floor windows that are in-filled with glass block and a series of one-over-one wood-sash windows on the second floor. This building lacks integrity and distinctive architectural features and is not individually eligible for listing on the National Register.

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Structural Survey

Integrity: Unaltered	[✓ Slight Modification]	Major Alteration	**Additional Notes/Descriptions** Replacement door, windows, and cladding; some openings infilled
Condition: Excellent	[✓ Good]	Poor	
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick (main), Stone (partial façade)	
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details Stone panel with foliate motif			**Windows** Double-hung, fixed-pane, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

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Marengo, Illinois 60152
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Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

12142 S. Halsted Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1942

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

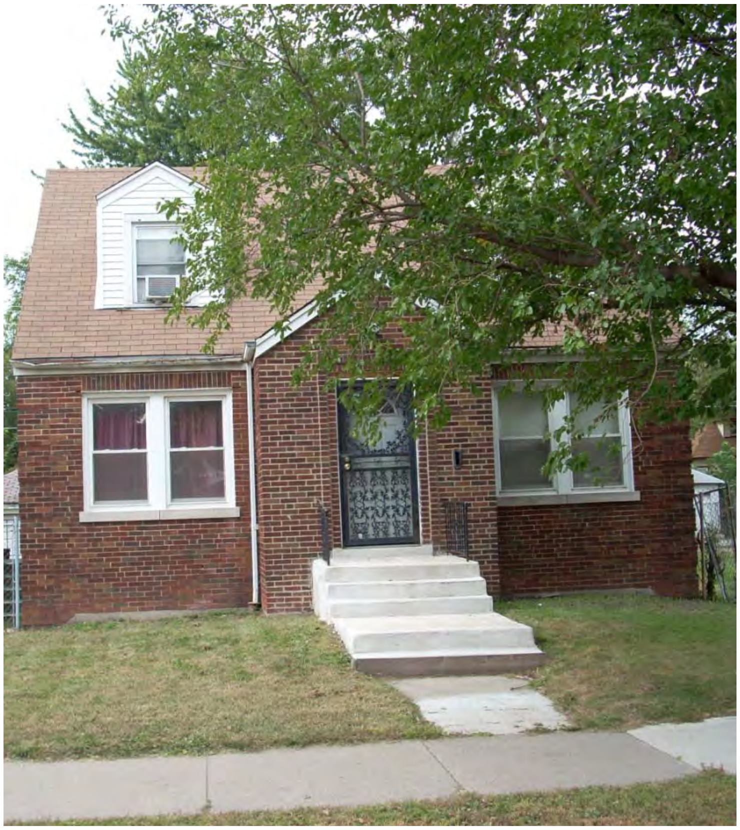
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 24 October 2012

Photos with Captions:
East façade of a one-story single family residence.



Property Description: **Stories:** 1

This one-story home in the West Pullman community sits atop a raised basement and is clad with face brick on the front elevation and common brick on the side and rear elevations. The building has a side-gabled roof covered with asphalt shingles and two synthetic-clad gable dormers, each of which has a non-original one-over-one aluminum-sash window. Its front elevation has a gabled, brick-clad vestibule with a metal storm door and concrete steps with metal railings. The vestibule is flanked by paired non-original one-over-one aluminum-sash windows on either side. Detailing includes soldier course lintels and a brick door surround. The residence does not display distinguishing architectural features and is not individually eligible for listing on the National Register

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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows and cladding (dormers)
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick (main), Synthetic siding (dormers)	
Roof Material Asphalt shingle	**Roof Features** Dormers	**Roof Type** Gable	
Ornamental Architectural Details Lintels, surround			**Windows** Double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

12155 S. Halsted Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Multi-family residence

Date of Construction: 1920

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

Vernacular

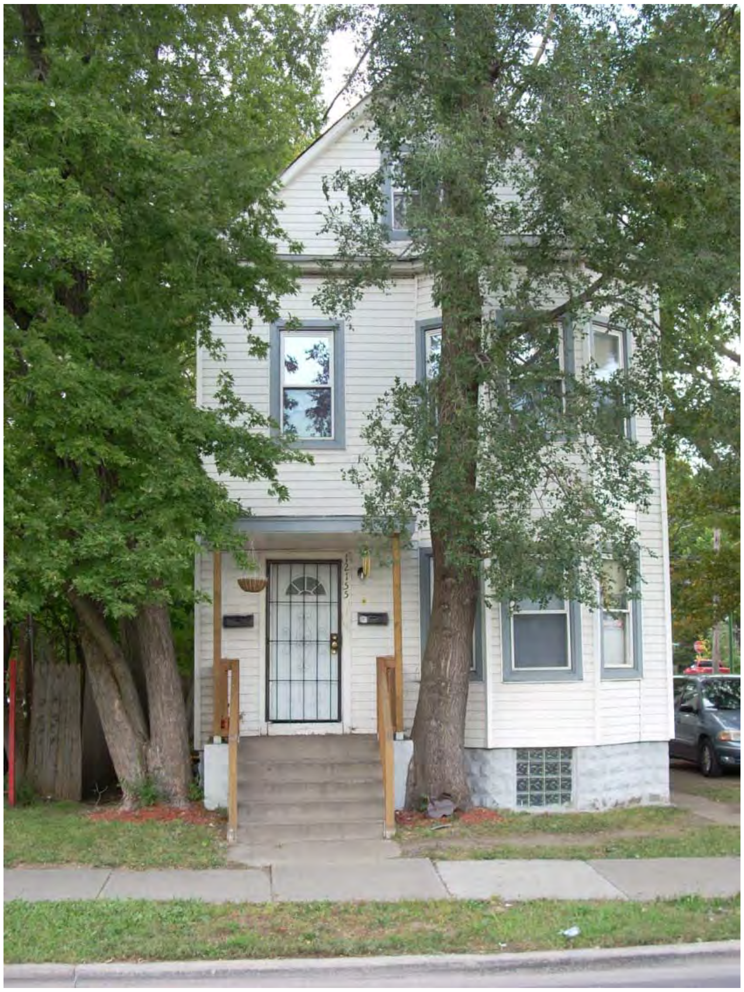
Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 24 October 2012

Photos with Captions:

West façade of a two-story, multi-family, frame residence.



Property Description: **Stories:** 2

This two-story frame house in the West Pullman community is situated on a raised concrete block basement with glass block windows and is covered with synthetic siding. The building has a front gable roof covered with asphalt shingles. Its front elevation has an off-center hollow core metal door, a partial-width flat-roofed porch with wood posts and railings, and concrete steps. The building also has a two-story, three-sided window bay pavilion and a single window on the second floor, and one window in the gable. The cladding, doors, railings, and windows non-original; above the basement, windows are one-over-one aluminum-sash. This building lacks integrity and distinctive architectural features and is not individually eligible for listing on the National Register.

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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement door, windows, cladding, and porch rails
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
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Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

12156 S. Halsted Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Battery Sales Inc.

Property Use

Historic: Commercial

Current: Commercial

Date of Construction: 1937

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

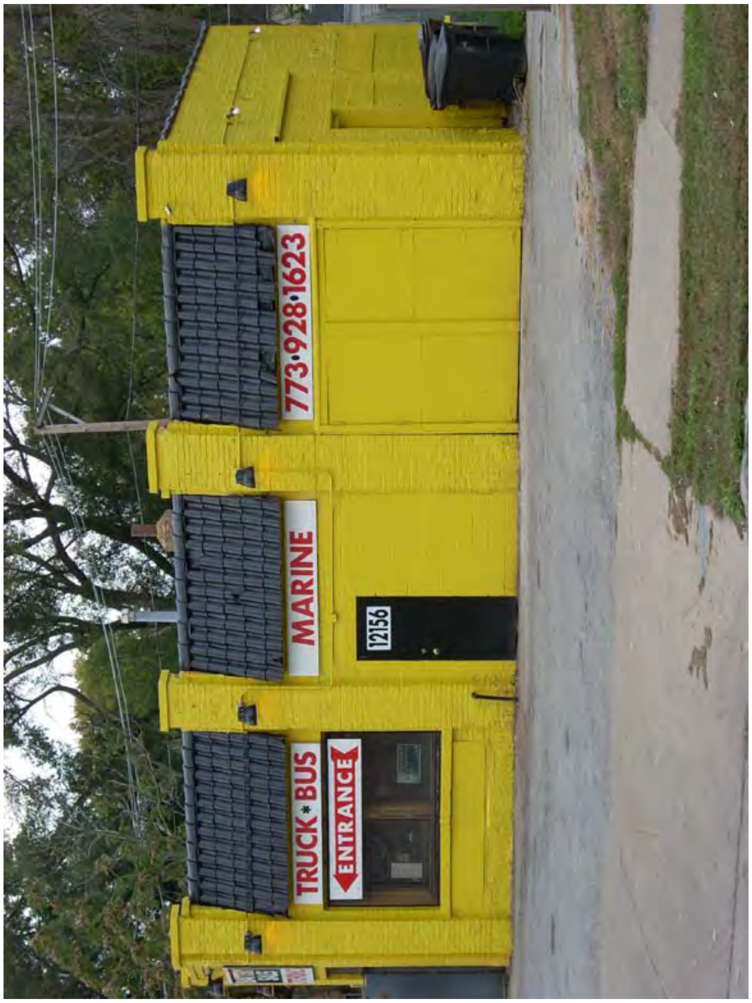
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 24 October 2012

Photos with Captions:
East faced of a one-story, brick, commercial building.



Property Description: **Stories:** 1

This one-story flat-roofed commercial building in the West Pullman community has a three-bay front elevation with four brick piers and a clay tile parapet. The central bay is in-filled with concrete block and has a hollow core metal door. The flanking bay to the south has two single-pane windows. The bay to the north has a pair of wood doors. Other window openings along the side elevations have been in-filled with concrete block. This building lacks integrity and distinctive architectural features and is not individually eligible for listing on the National Register.

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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** In-filled window openings
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details None			**Windows** Fixed-pane
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

12212-12220 S. Halsted Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

FWC Fabricating and Welding Co.

Property Use

Historic: Commercial

Current: Commercial

Date of Construction: 1955

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

Vernacular

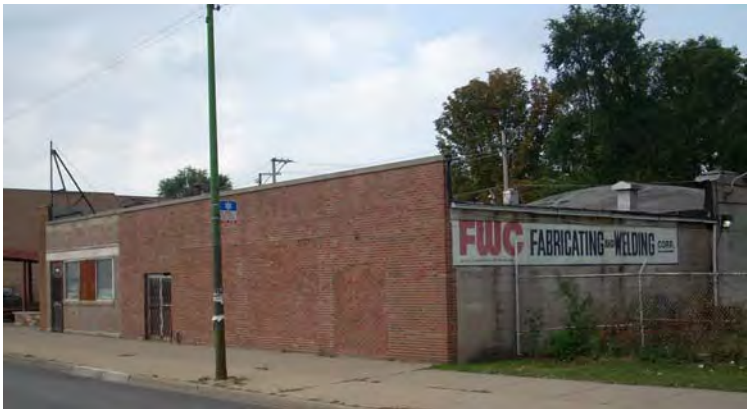
Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

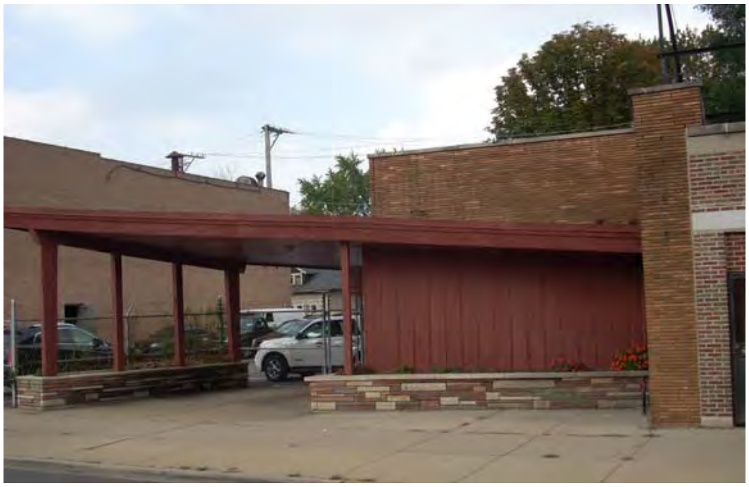
Date: 24 October 2012

Photos with Captions:

East and north façades of the one-story, brick, commercial buildings at 11212 (left) and 11216 (right).



East façade of the one-story, brick, commercial building at 11220.



Property Description: **Stories:** 1

This address consists of three commercial buildings in the West Pullman community that share common party walls. The 12212 building is a one-story, flat-roofed, concrete block building with brick laid in a running bond on its Halsted elevation; it features a pair of plate-glass double doors and the outlines of two former window openings and a door opening that have been in-filled with brick. The 12216 building is a one-story flat-roofed building with a brick front, an off-center door, a strip of three window openings (one in-filled and two fixed pane), and concrete banding above the windows and at the roofline. The 12220 building is a one-story flat-roofed building that is set back from the sidewalk; it has a south-facing front elevation with a pair of plate-glass double doors and a Mid-Century modern shed-roofed canopy supported by wood posts embedded in faux stone planters. The lower portion of 12220's east (Halsted) and south elevations are faced with wood boards that are vertically laid. These buildings lack distinctive architectural features and are not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Some window openings in-filled with brick
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick, Concrete block	
Roof Material Unknown	**Roof Features** None	**Roof Type** Flat	
Ornamental Architectural Details Concrete banding (12216), canopy (12220)			**Windows** Fixed pane
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

12217 S. Halsted Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Magnolias Sports Bar

Property Use

Historic: Commercial

Current: Mixed-Use

Date of Construction: 1928

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

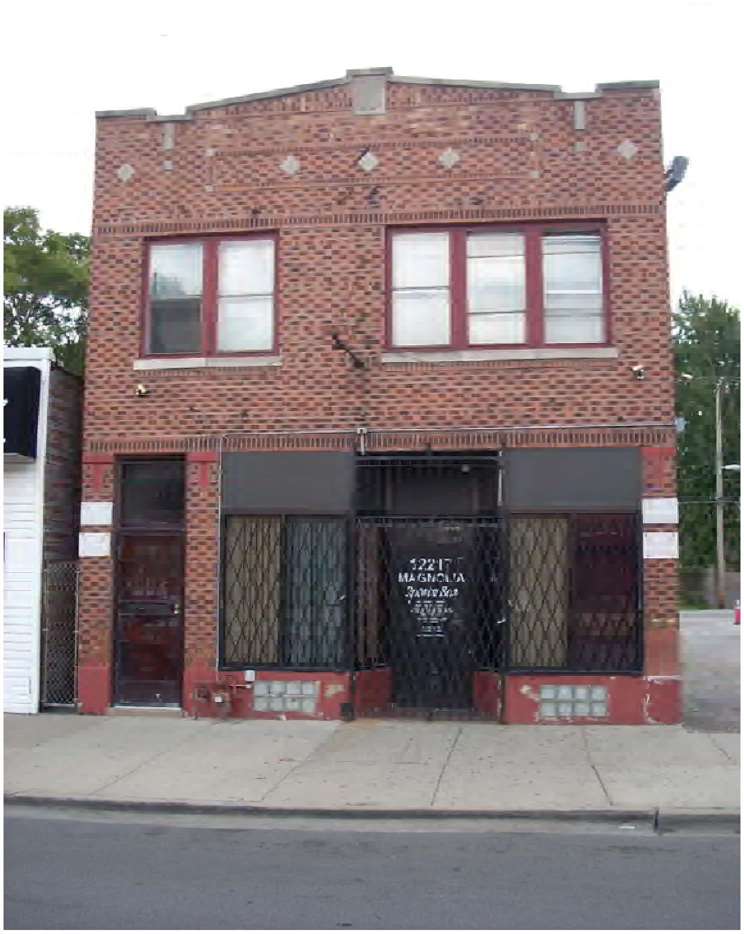
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 24 October 2012

Photos with Captions:
West façade of a brick, two-story, mixed-use building.



Property Description: **Stories:** 2

This two-story mixed-use building in the West Pullman neighborhood is clad with multi-colored face brick (laid in a pattern) on the front elevation and common brick along the side and rear elevations. The building has a flat roof and shaped parapet. The front elevation has a concrete water table with decorative glass blocks, a storefront with recessed central entrance and flanking display windows, and an off-center door that provides access to the second floor. Transoms above storefront windows and the off-center entry have been in-filled. Second floor windows include five non-original one-over-one aluminum-sash windows arranged in a pair and in a group of three. Detailing includes insert blocks, a concrete panel with shield motif, coping, brick stringcourse, brick recessed panel, and concrete sills. Additional detailing includes concrete inserts along the storefront façade. This building lacks integrity and distinctive architectural features and is not individually eligible for listing on the National Register.

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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement door and windows
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details Concrete insert blocks, panel, coping, patterned bricks, panels, stringcourse, concrete sills, glass blocks			**Windows** Double-hung, fixed pane
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Structural Steel Shop

Common/Current: Fabricating & Welding Corp.

Property Address:

12246 S. Halsted Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Fabricating & Welding Corp.

Property Use

Historic: Industrial

Current: Industrial

Date of Construction: 1929

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

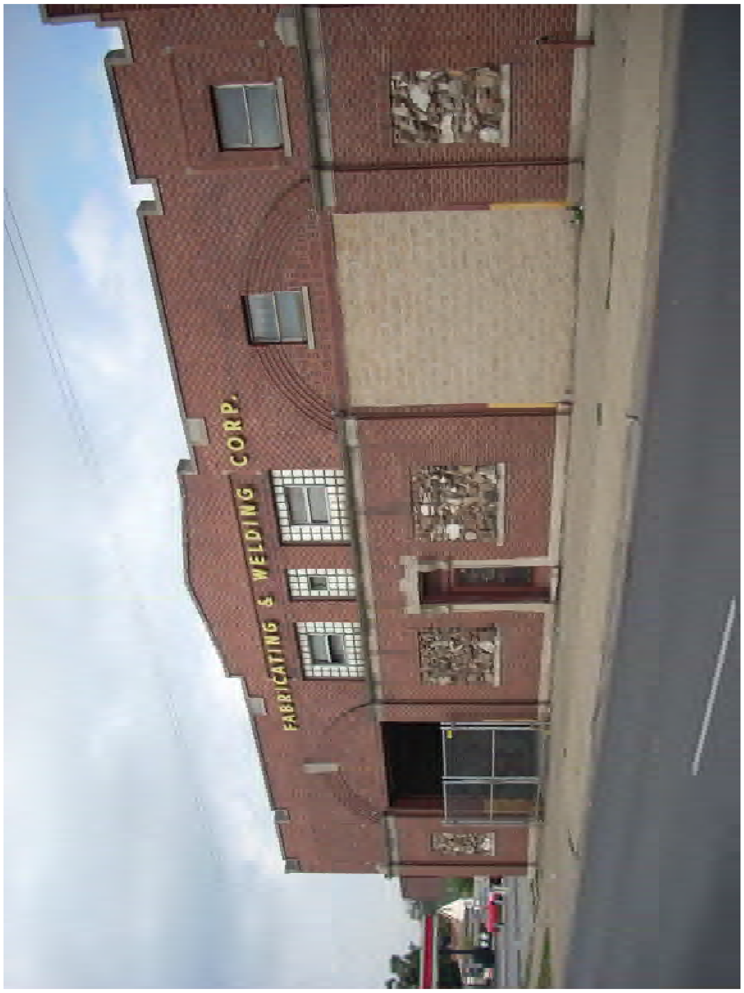
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 24 October 2012

Photos with Captions:
East façade of a brick, two-story, industrial building.



Property Description: **Stories:** 2

The industrial building in the West Pullman community is clad with face brick along the Halsted elevation. It features a shaped parapet, symmetrical façade, and central entrance with a concrete surround featuring scrolled brackets and a lintel with curvilinear motifs. The building includes two garage door openings with brick arches and stone keystones; one of the garage bays is in-filled with concrete block. Detailing includes four brick pilasters, a concrete belt course, concrete panels, a brick arch with keystone spanning the width of the garage door opening, and concrete coping and sills. Former window openings on the first floor are in-filled with decorative stone. Three of the five second-floor window openings are in-filled with glass block, two are double-hung aluminum sash. This building lacks integrity and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
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Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Door and window openings infilled with concrete block and stone
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details Brick pilasters, concrete belt courses, brick arches, keystone, concrete coping, sills, and panels, concrete surround at entrance, lintels, brick panels			**Windows** Double-hung, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

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Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

12308 S. Halsted Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Commercial

Current: Commercial

Date of Construction: 1950

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

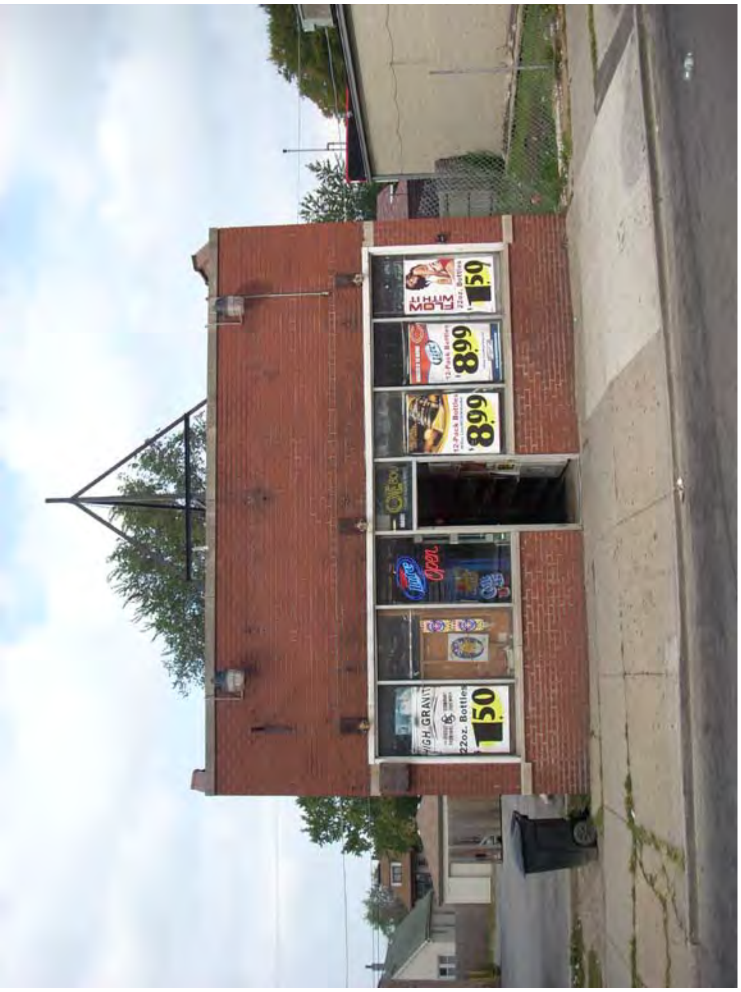
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 24 October 2012

Photos with Captions:
East façade of a brick, one-story, commercial building.



Property Description: **Stories:** 1

This one-story, flat-roofed, commercial building in Calumet Park is clad with orange face brick along its Halsted Street elevation and with common brick along its side and rear elevations. Its front elevation has a central plate glass door flanked by strips of three single-pane windows on either side. Detailing is limited to concrete coping, sills, and inserts blocks. Brackets and shadows on the façade suggest that a sign plate has been removed. This building lacks distinctive architectural features and is not individually eligible for listing on the National Register.

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Structural Survey

Integrity: [✓ Unaltered] Slight Modification Major Alteration	**Additional Notes/Descriptions**
Condition: Excellent [✓ Good] Poor	
Additional Alterations Sign plate may have been present.	
Structure Usage Current: NA Historic: NA / **Exterior Wall Surface** Brick	
Roof Material Unknown / **Roof Features** Parapet / **Roof Type** Flat	
Ornamental Architectural Details Concrete coping, sills, and insert blocks	**Windows** Fixed-pane
Outbuildings (*Number and Description*) None	

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

12309 S. Halsted Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

AAMCO Transmissions

Property Use

Historic: Commercial

Current: Commercial

Date of Construction: 1953

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

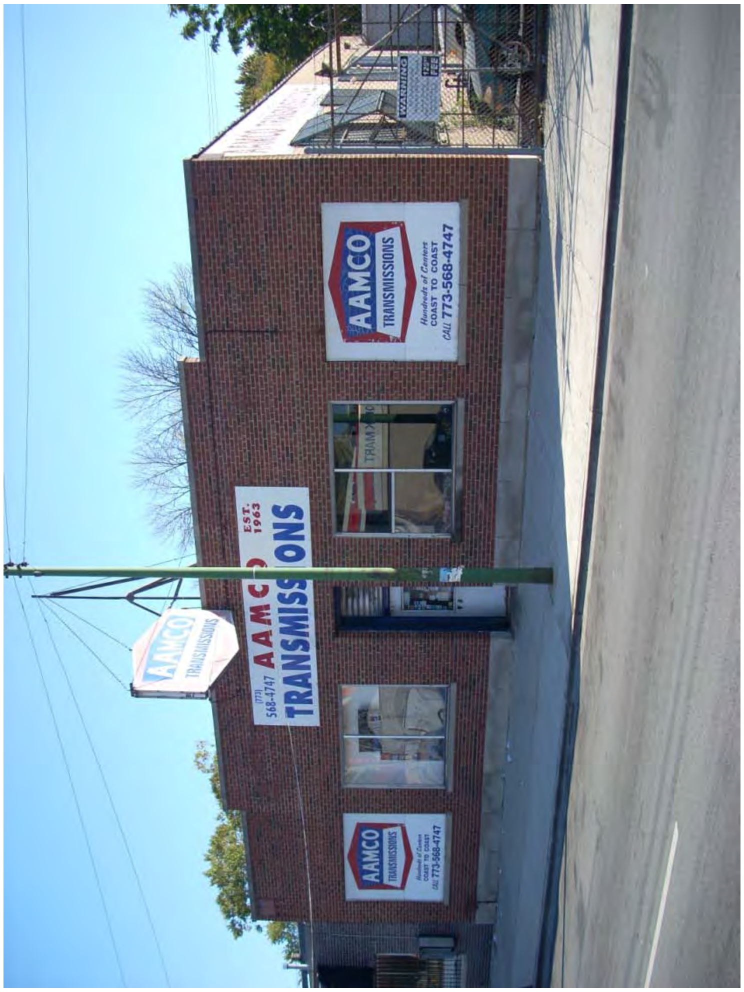
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 29 October 2012

Photos with Captions:
West façade of a brick, one-story, commercial building.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Property Description: **Stories:** 1

This one-story flat-roofed commercial building in the West Pullman community is clad with brown face brick on its front elevation and common brick along its side and rear elevations. The front elevation has a concrete water table and a recessed, centrally located hollow core metal door with an in-filled transom. There are four large window openings with concrete sills, two of which are in-filled and two of which are fixed-pane. It has a stepped parapet with concrete coping. This building lacks distinctive architectural features and is not individually eligible for listing on the National Register.

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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Some windows in-filled
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details Concrete coping, sills			**Windows** Fixed-pane
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

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Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

12338 S. Halsted Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Chicago South Community Development Organization

Property Use

Historic: Commercial

Current: Public

Date of Construction: 1938-1952

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

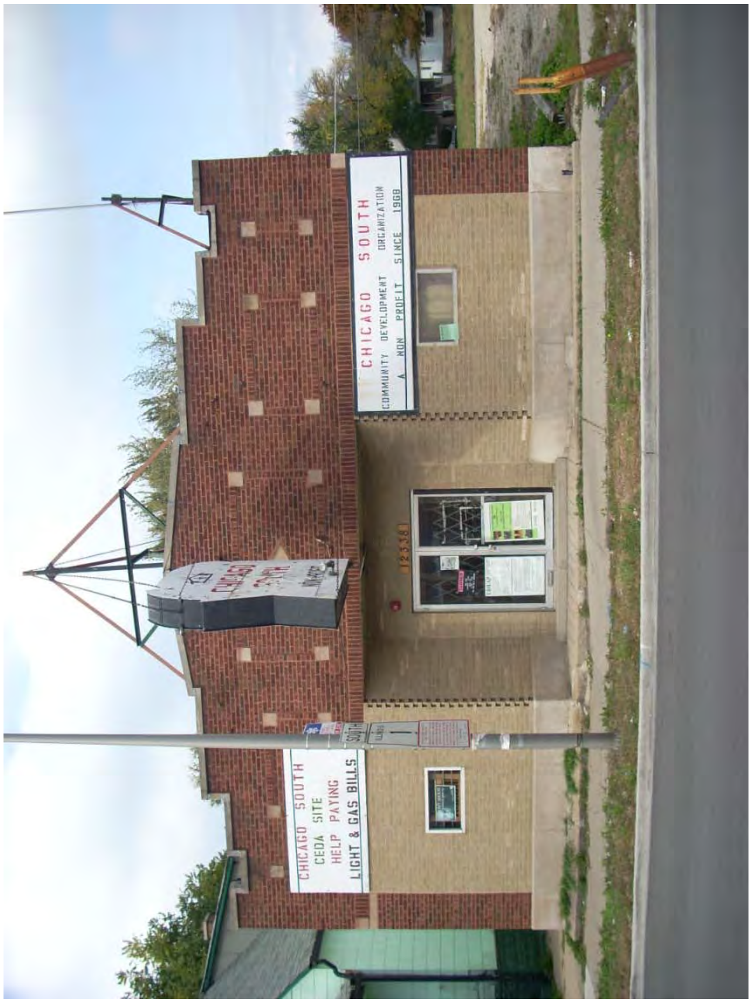
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 26 October 2012

Photos with Captions:
East façade of a brick, one-story, public building.



Property Description: **Stories:** 1

This one-story brick building in Calumet Park has a concrete water table, flat roof, and stepped parapet with concrete coping. The storefront level has been altered with the installation of non-original buff brick cladding. The alteration has replaced original windows and doors; there are now plate glass double-doors in the centrally-located recessed entrance vestibule and two small single-pane windows. The parapet features decorative brickwork and square insert blocks. This building lacks distinctive architectural features and is not individually eligible for listing on the National Register.

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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement storefront façade, windows, doors
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details Stepped parapet with concrete coping, decorative panels, insert blocks, soldier course, concrete water table			**Windows** Fixed pane
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

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Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: The New Halsted Bowl

Property Address:

12345 S. Halsted Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

The New Halsted Bowl

Property Use

Historic: Commercial

Current: Commercial

Date of Construction: 1959

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

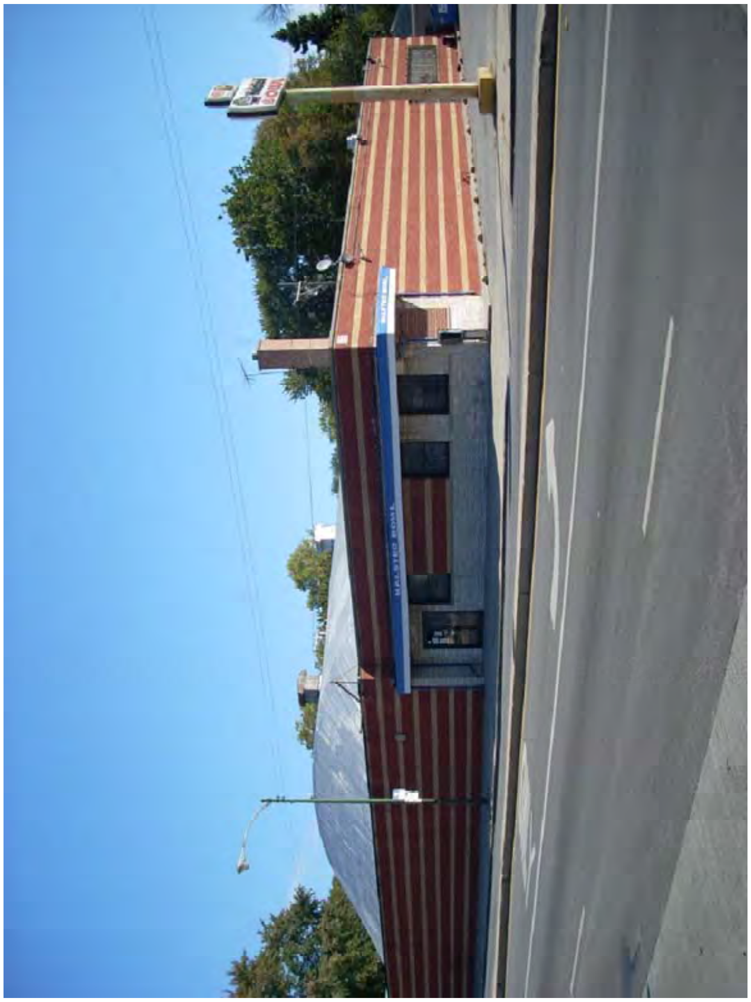
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 29 October 2012

Photos with Captions:
West and south facades if a one-story, brick, commercial building.



Property Description: **Stories:** 1

This one-story bowling alley at the northeast corner of Halsted and 124th streets in the West Pullman community has a flat roof with a shallow domed area on its north side. Both street elevations are clad with alternating bands of yellow and orange colored face brick and are largely unadorned, except for the south end of the Halsted Street elevation, which is clad with a stone veneer and has glass double-doors and three double-hung windows. The stone veneer turns the corner to cover a small portion of the 124th Street elevation, which is pierced by an in-filled window opening. This building lacks distinctive architectural features and is not individually eligible for listing on the National Register.

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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** One in-filled window opening
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick (main), Faux stone (entrance)	
Roof Material Unknown	**Roof Features** None	**Roof Type** Flat, domed	
Ornamental Architectural Details Banded brick colors			**Windows** Double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y [✓ N]**	
National Register Historic Places	**Y [✓ N]**	
National Register Historic District	**Y [✓ N]**	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

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Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

12352 S. Halsted Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1924

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

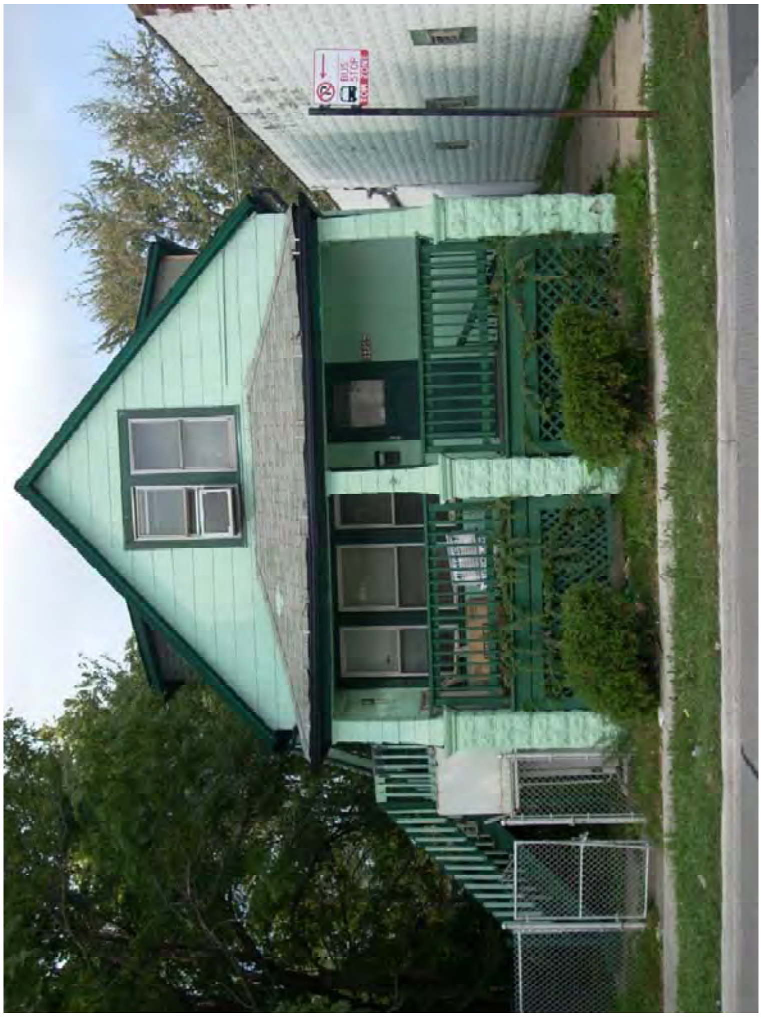
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 26 October 2012

Photos with Captions:
East façade of a 1.5-story, single family, frame residence.



Property Description: **Stories:** 1.5

This one-and-a-half-story frame cottage in Calumet Park is situated on a raised concrete block basement with glass block windows and is covered with synthetic siding. The building has a front gable roof covered with asphalt shingles and shed dormers along its side elevations. The front elevation has a full-width, hip-roof wood porch with supports made of faux stone piers topped by squat boxed columns. The porch shelters an off-center door and three non-original one-over-one aluminum-sash windows. There are two non-original one-over-one aluminum-sash windows in the gable. This house lacks distinctive architectural features and is not individually eligible for listing on the National Register.

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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** Dormers	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

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Marengo, Illinois 60152
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Historical Resource Recordation Form

Property Name

Historic: S.S. Peter and Paul Church

Common/Current: S.S. Peter and Paul Church

Property Address:

12433-12439 S. Halsted Street

HAARGIS Number:

Not in database

Present Owner and/or Occupant:

S.S. Peter & Paul Roman Catholic Church and Rectory

Property Use

Historic: Religious

Current: Religious

Date of Construction: 1958-1959

Architect's Name: Fox & Fox

Builder/Contractor: Not in CHRS

Architectural Style:

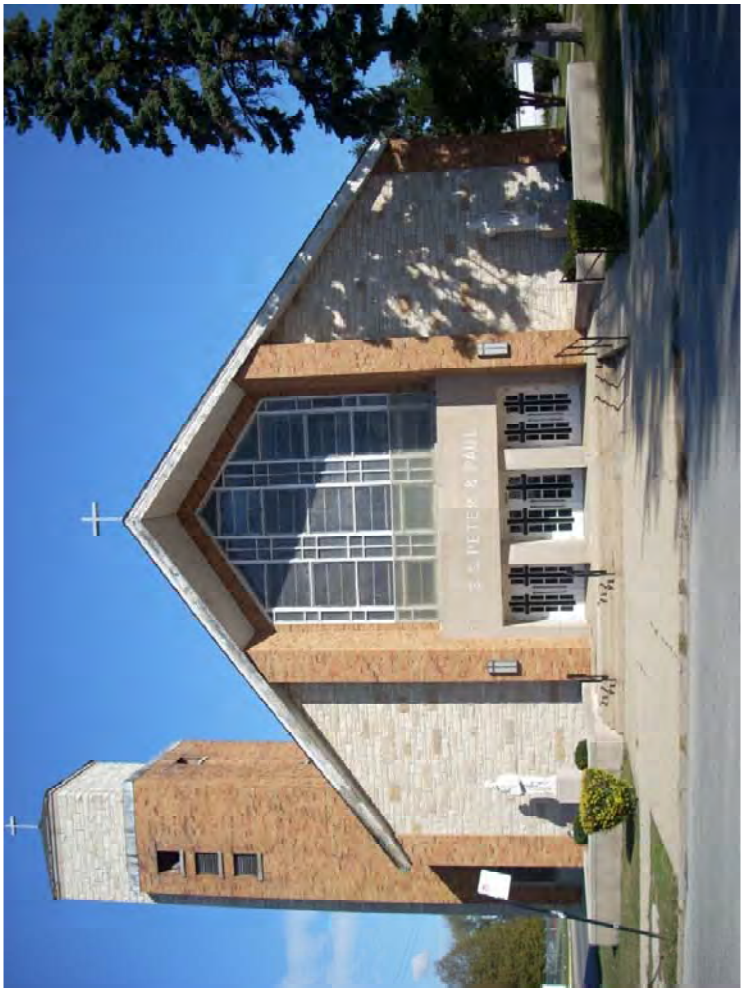
Modernistic

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 29 October 2012

Photos with Captions:
South façade of brick, one-story, religious building.



Property Description: **Stories:** 1

This Mid-Century Modern church at the northeast corner of Halsted and 125th streets in the West Pullman community was built for the parish of Saints Peter and Paul. The church is clad with orange face brick and stone veneer, has a steeply pitched front gable roof, deep roof overhangs along the front elevation, and a square hip-roof corner tower with a vertical strip of leaded glass windows. The front elevation has a central pavilion flanked by projecting full-height brick piers, three sets of original double doors divided by concrete piers and topped with a concrete spandrel with incised lettering that reads “S.S. Peter and Paul,” and features an expansive area above which is glazed with leaded glass. The side elevations feature a series of narrow windows that appear to be double-hung. This building is recommended as individually eligible for National Register listing under Criterion C for architecture as an excellent and rare example of a Mid-Century Modern church in West Pullman.

Structural Survey

Integrity: [✓ Unaltered] Slight Modification Major Alteration			**Additional Notes/Descriptions**
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick (main), Stone veneer (façade)	
Roof Material Asphalt	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details Tower, brick piers, concrete piers and spandrel, incised lettering			**Windows** Fixed-pane, casement, double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? Yes	**A B** [✓ **C**]	**Significance:** An excellent and rare example of a Mid-Century Modern church in West Pullman.

Additional Comments:

Historical Resource Recordation Form

Property Name

Historic: Cedar Park Cemetery

Common/Current: Cedar Park Cemetery

Property address:

12540 S. Halsted Street

HAARGIS Number:

NA

Present Owner and /or Occupant:

Cedar Park Cemetery

Property Use

Historic: Cemetery

Current: Cemetery

Date of Construction: 1923

Architect's Name: Unknown

Builder/Contractor: Unknown

Architectural Style:

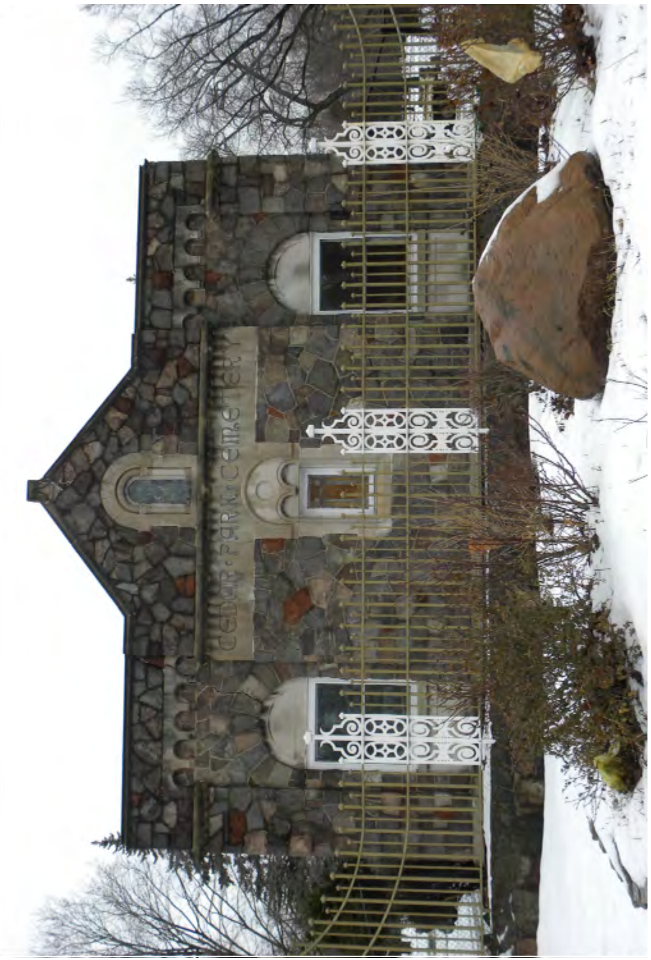
Romanesque Revival

Prepared By: M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 28 February 2013

Photos with Captions:
East façade of cemetery entrance showing office/gatehouse.



Property Description: **Stories:** 1

Cedar Park Cemetery, founded in the early twentieth century, comprises a formal landscape on 94.5 acres at 12540 S. Halsted Street. Plantings include large deciduous shade trees as well as ornamental shrubs and mowed lawn. Grave markers are mounted flush with the lawn. The landscape is not exceptional nor does it contain any distinctive design features and does not warrant listing on the National Register of Historic Places.

Extant buildings and structures include the office/gatehouse with ornamental gate and fence, an obelisk, three mausoleums, and a cinder block building. Cedar Park Cemetery's one-story Romanesque Revival style gatehouse is located at its Halsted Street entrance. The entrance features two pairs of massive stone gateposts and metal entrance gates. Original metal fencing extends along the length of the cemetery's Halsted Street boundary, which also features several stone piers. The gatehouse, gateposts, and piers are built of grey, brown, and pink stones that are randomly laid. The building and piers have excellent integrity and were likely installed circa 1923, along with the metal entrance gates and fencing along Halsted Street, when the Cedar Park Cemetery Association purchased its original 53-acre site. The building, piers, and gates are locally eligible for National Register listing under Criterion C for architecture due to their high quality craftsmanship and unusual stonework.

The gatehouse has a flat roof, parapet, and stone cornice. All windows have stone sills and stone lintels with a type of scallop shell motif. The Halsted Street elevation has four windows: a small stained glass window in its projecting bay, a single window with round-arched transoms on either side of the bay, and a small, round-arched window flanked by slender colonettes in the parapet gable. The Halsted elevation bay is topped with stone banding incised with the words “Cedar Park Cemetery.” The north elevation has a centrally located pair of wood French doors and six wood-sash windows: three each on either side of the entrance. The south elevation has a centrally located multi-paned wood door with sidelights flanked by slender engaged columns. The south elevation’s four windows include a single one-over-one window on one side of the door and a group of three windows—a single pane flanked by one-over-one windows—on the other. Doors on both the north and south elevations are topped by flat stone lintels and accessed via concrete steps flanked by stone piers. The rear elevation has five one-over-one windows: a single, centrally-located window with a pair of windows on either side.

The three granite-clad mausoleums (the location of one is obscured by trees) appear to date from the middle to late twentieth-century. One of them features a chapel, which hosts non-denominational funeral services. The cinder block building, accessed by a secondary entrance just north of 125th Street, is utilitarian in nature and may serve as a maintenance building and/or as a crematorium. Neither the mausoleums nor the cinder block building appear to be eligible for inclusion on the National Register of Historic Places.

Structural Survey

Integrity: [✓ Unaltered]	Slight modifications	Major Alteration	**Additional Notes/Descriptions**
Condition: Excellent	[✓ Good]	Poor	
Additional Alterations			
Structure Usage Current: Metal gates, obelisk Historic: Metal gates, obelisk		**Exterior Wall Surface** Stone	
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details Stone sills and lintels with shell motif, arched windows, colonettes, French doors, incised stone banding “Cedar Park Cemetery,” engaged columns			**Windows** Art glass, double-hung, fixed-pane
Outbuildings (*Number and Description*) Three mausoleums (granite-clad) and cinder block building			

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505 North State Street
Marengo, Illinois 60152
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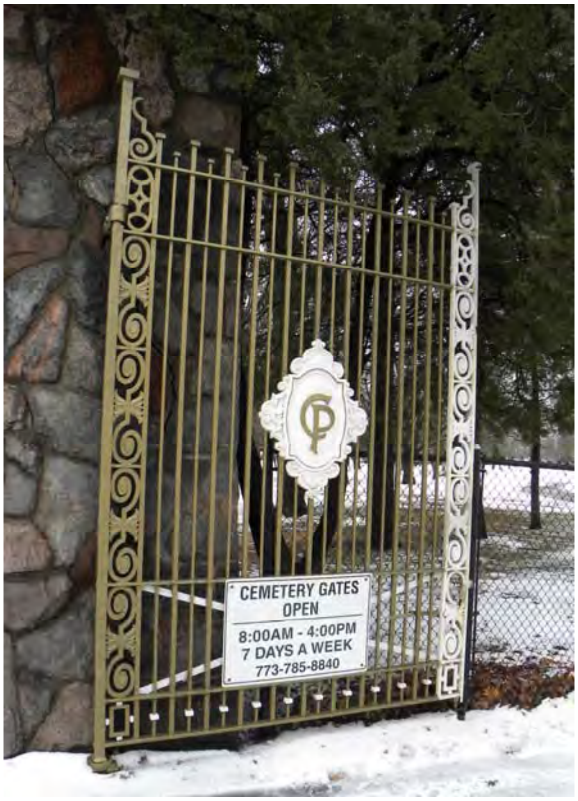
Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? Yes	**A** **B** [✓ **C**]	**Significance:** The building, piers, and gates are eligible for architecture due to their high quality craftsmanship and unusual stonework.

Additional comments

Additional photographs: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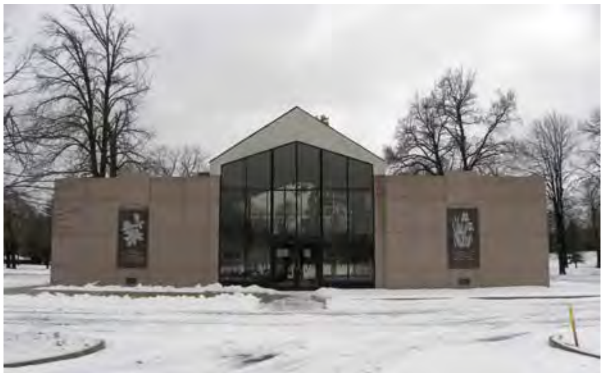

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Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Jack's Lounge

Property Address:

12717 S. Halsted Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Jack's Lounge

Property Use

Historic: Mixed-Use

Current: Mixed-Use

Date of Construction: 1952

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

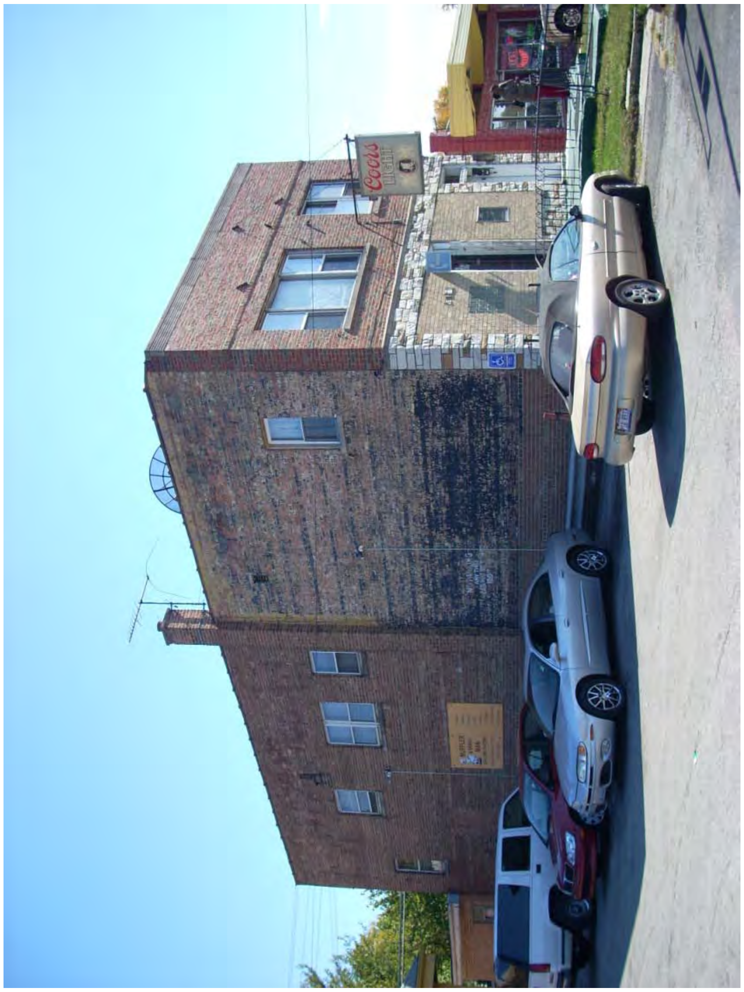
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 29 October 2012

Photos with Captions:
West and north façades of a brick, two-story, mixed-use building.



Property Description: **Stories:** 2

This two-story building in the West Pullman community has a flat roof and parapet. The first floor of its front elevation is surrounded with a stone veneer and has two non-original doors with transoms. The two former display window areas have been in-filled with buff brick and small windows. The second floor is clad with face brick and has two window groups: a picture window flanked by one-over-one windows and a pair of one-over-one windows. The side and rear elevations are clad with common brick. Detailing includes a fluted concrete cornice, concrete sills, and a brick stringcourse. This building lacks integrity and distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** storefront in-filled
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick, faux stone	
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details Fluted concrete cornice, concrete sills, brick stringcourse			**Windows** Double-hung, fixed pane, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Although the building looks older than 1952, review of the aerial photographs supports the date.

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Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Christ Spiritual Way of Truth Universal Church

Property Address:

12730 S. Halsted Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Christ Spiritual Way of Truth Universal

Property Use

Historic: Commercial

Current: Religious

Date of Construction: 1957

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

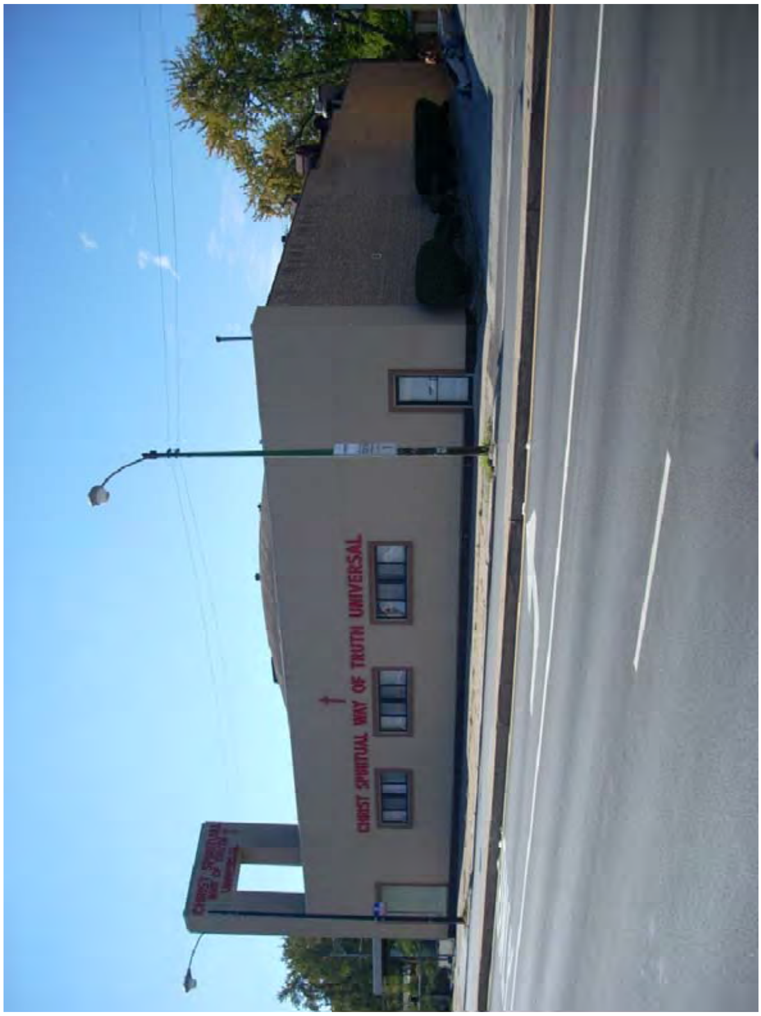
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 29 October 2012

Photos with Captions:
North and east façades of a one-story, brick religious building.



Property Description: **Stories:** 1

This one-story brick-clad church building in the West Pullman community has a roof that is mainly flat with a shallow domed area and is covered with a smooth material that appears to be shotcrete along its east (Halsted) and south elevations. The Halsted elevation has three strips of four single-pane windows, a plate glass door at its north end, and a large single-pane window at its south end. The building's front entrance is along the south elevation, facing its parking lot, and has a pair of double doors at its east end that are sheltered by a flat-roofed metal canopy supported by two metal posts. A tall sign that signified the church's name is situated at the southeast corner of the building. This building does not feature distinguishing architectural elements and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

<table>
<tr><td colspan="3">Integrity:
Unaltered [✓ Slight Modification] Major Alteration</td><td>Additional Notes/Descriptions</td></tr>
<tr><td colspan="3">Condition:
[✓ Excellent] Good Poor</td><td></td></tr>
<tr><td colspan="3">Additional Alterations</td><td></td></tr>
<tr><td colspan="2">Structure Usage
Current: NA
Historic: NA</td><td>Exterior Wall Surface
Shotcrete (façade)
Brick (secondary elevations)</td><td></td></tr>
<tr><td>Roof Material
Unknown</td><td>Roof Features
None</td><td>Roof Type
Flat, Dome</td><td></td></tr>
<tr><td colspan="3">Ornamental Architectural Details
None</td><td>Windows
Fixed-pane</td></tr>
<tr><td colspan="4">Outbuildings (<i>Number and Description</i>)
None</td></tr>
</table>

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

12746-12804 S. Halsted Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

King Food & Grocery, Lowe’s Barbers, Olnia’s Soul Food, World of Suds

Property Use

Historic: Commercial

Current: Commercial

Date of Construction: 1952

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

Vernacular

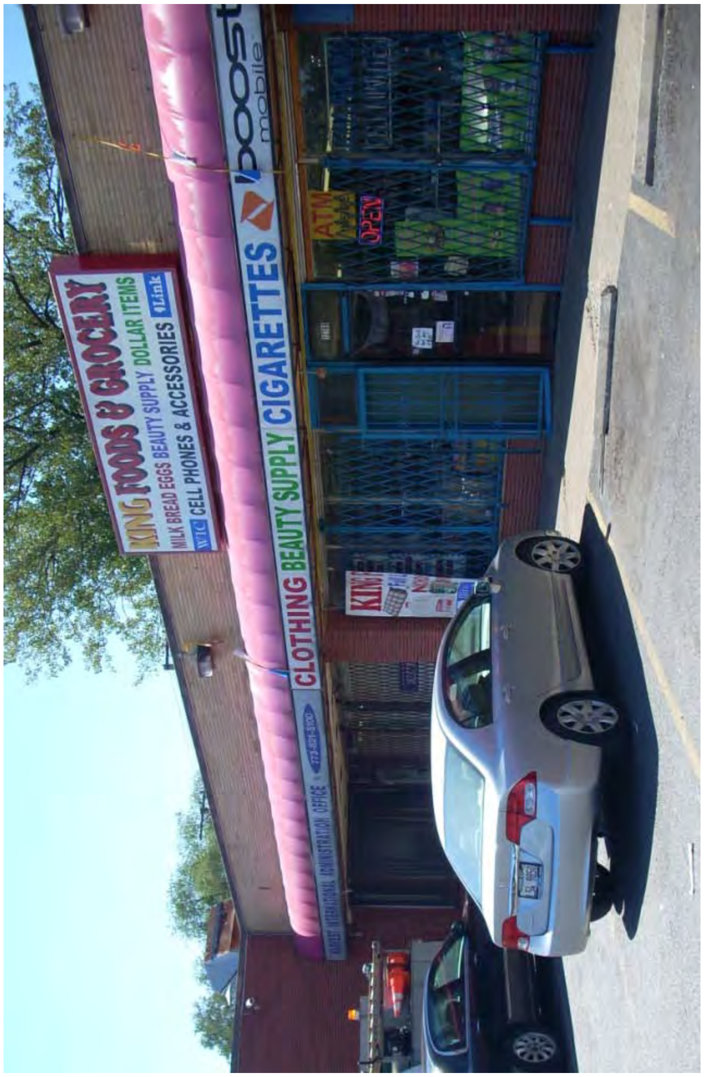
Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 13 September 2012

Photos with Captions:

East façade of one-story, brick commercial building.


KING FOODS & GROCERY
MILK BREAD EGGS BEAUTY SUPPLY DOLLAR ITEMS
Link
WIC CELL PHONES & ACCESSORIES
boost mobile
CIGARETTES
CLOTHING BEAUTY SUPPLY
ATM
OPEN

Property Description: **Stories:** 1

This one-story brick-clad strip mall in the West Pullman community has a flat-roof, parapet, and an L-shaped footprint. It is set back from the street, allowing for parking in front. Its Halsted Street elevation features a series of storefronts with glass doors and display windows, some of which are vacant and covered with plywood. This building does not feature any distinguishing features to qualify as eligible for individual listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Some storefronts covered with plywood
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details None			**Windows** Fixed-pane
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
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Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

12801-12811 S. Halsted Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Children’s Center Day Care

Property Use

Historic: Commercial

Current: Commercial

Date of Construction: 1957

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

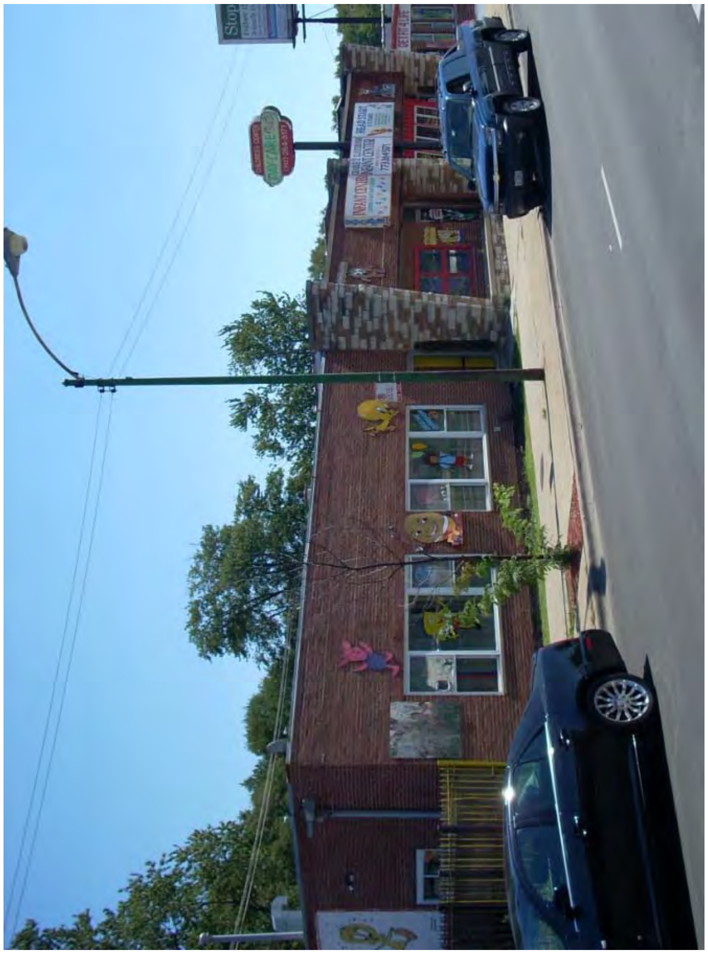
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 13 September 2012

Photos with Captions:
West façade of one-story, brick commercial building.



Property Description: **Stories:** 1

This one-story brick-clad building in the West Pullman community, which accommodates a day care center, has a flat roof and parapet. Its front elevation features faux stone piers, three of which are projecting and rise above the roofline, dividing the front (Halsted) elevation into five bays that feature glass doors and fenestration that includes picture windows and double-hung windows of varying shapes and sizes. This building does not feature distinguishing architectural elements to qualify as eligible for individual listing on the National Register.

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Structural Survey

Integrity: [✓ Unaltered] Slight Modification Major Alteration			**Additional Notes/Descriptions**
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details Faux stone piers			**Windows** Fixed-pane, double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

12841 S. Halsted Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Commercial

Current: Commercial

Date of Construction: 1955

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

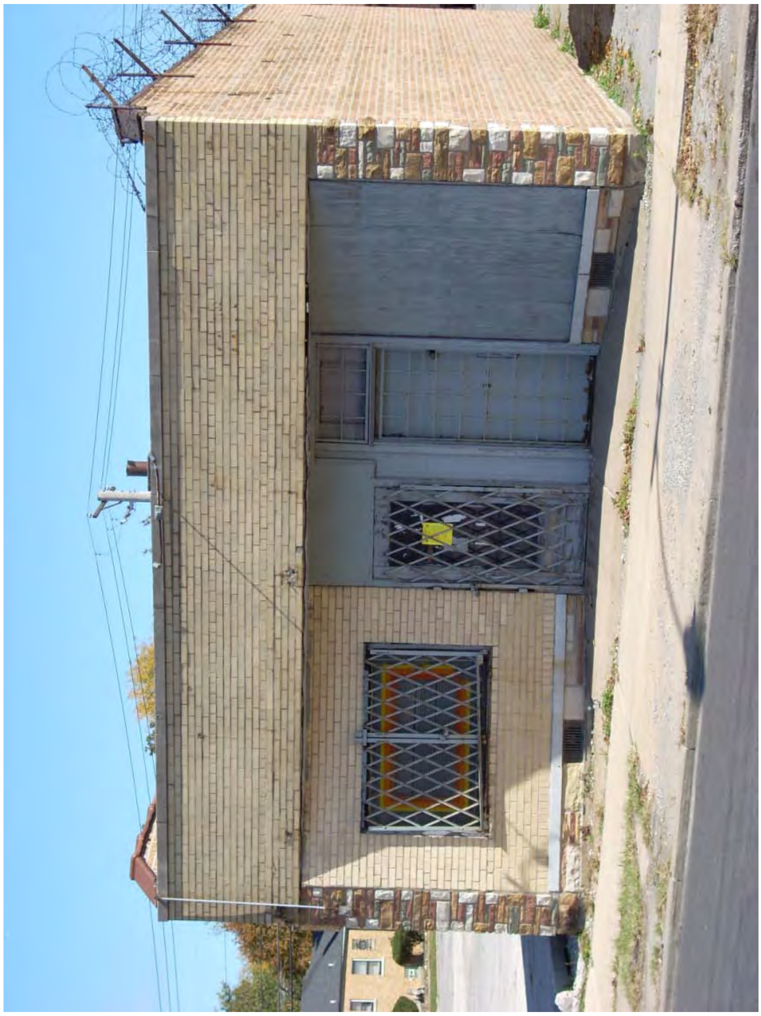
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 29 October 2012

Photos with Captions:
West façade of a one-story, brick, commercial building.



Property Description: **Stories:** 1

This one-story commercial building in the West Pullman community has a flat roof and parapet. The front elevation has a buff brick parapet, corner piers clad with a stone veneer, and two central doors with in-filled transoms. One of its former display windows has been in-filled with wood boards while the other has been in-filled with buff brick and a rectangular window. The side and rear elevations are clad with common brick. This building lacks integrity and distinctive architectural features and is not individually eligible for listing on the National Register.

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Structural Survey

Integrity: Unaltered Slight Modification [✓ Major Alteration]			**Additional Notes/Descriptions** Replacement storefront
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details Faux stone in piers			**Windows** Fixed-pane
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: New Creation Binding and Loosing Ministries

Property Address:

12856-12900 S. Halsted Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

New Creation Binding and Loosing Ministries

Property Use

Historic: Commercial

Current: Religious

Date of Construction: 1952-1962

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

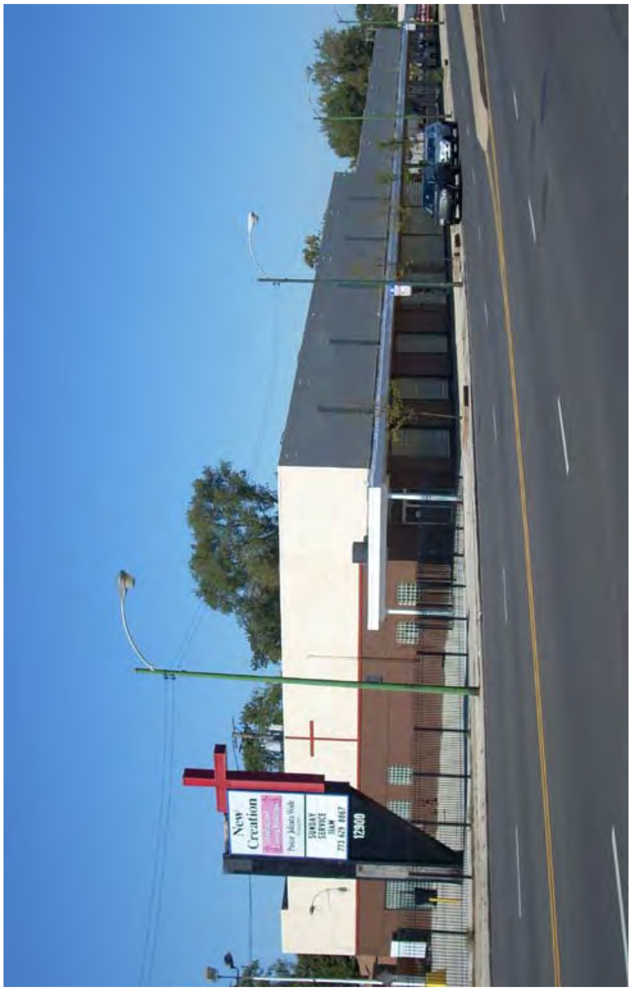
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 29 October 2012

Photos with Captions:
North and east façades of a two-story, brick religious building.



Property Description: **Stories:** 2

This expansive two-story, flat-roofed, brick-clad building has a one-story wing to the north. The building appears to have been built as a chain store or supermarket, but now serves as a church. A flat-roofed canopy extends along the entire length of the building's front (Halsted) elevation and shelters a pair of plate glass double-doors with transom and a continuous series of nearly floor-to-ceiling window openings that are in-filled with glass blocks and separated by wood cladding that is vertically laid. The second floor of the front elevation's two-story block has a series of narrow glass block windows. The front elevation of the one-story north wing is clad with wood that is vertically laid and a pair of wood double-doors but no windows. The building's south elevation has a pair of plate-glass double-doors with transom at its eastern end and a series of glass block windows. It does not feature distinguishing architectural features and is not individually eligible for listing on the National Register.

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Marengo, Illinois 60152
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Structural Survey

<table>
<tr><td colspan="3">Integrity:
Unaltered [✓ Slight Modification] Major Alteration</td><td>Additional Notes/Descriptions
Replacement windows</td></tr>
<tr><td colspan="3">Condition:
[✓ Excellent] Good Poor</td><td></td></tr>
<tr><td colspan="3">Additional Alterations</td><td></td></tr>
<tr><td colspan="2">Structure Usage
Current: NA
Historic: NA</td><td>Exterior Wall Surface
Brick (main), wood boards</td><td></td></tr>
<tr><td>Roof Material
Unknown</td><td>Roof Features
None</td><td>Roof Type
Flat</td><td></td></tr>
<tr><td colspan="3">Ornamental Architectural Details
None</td><td>Windows
Glass block</td></tr>
<tr><td colspan="4">Outbuildings (<i>Number and Description</i>)
None</td></tr>
</table>

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

9820 S. Harvard Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1959

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

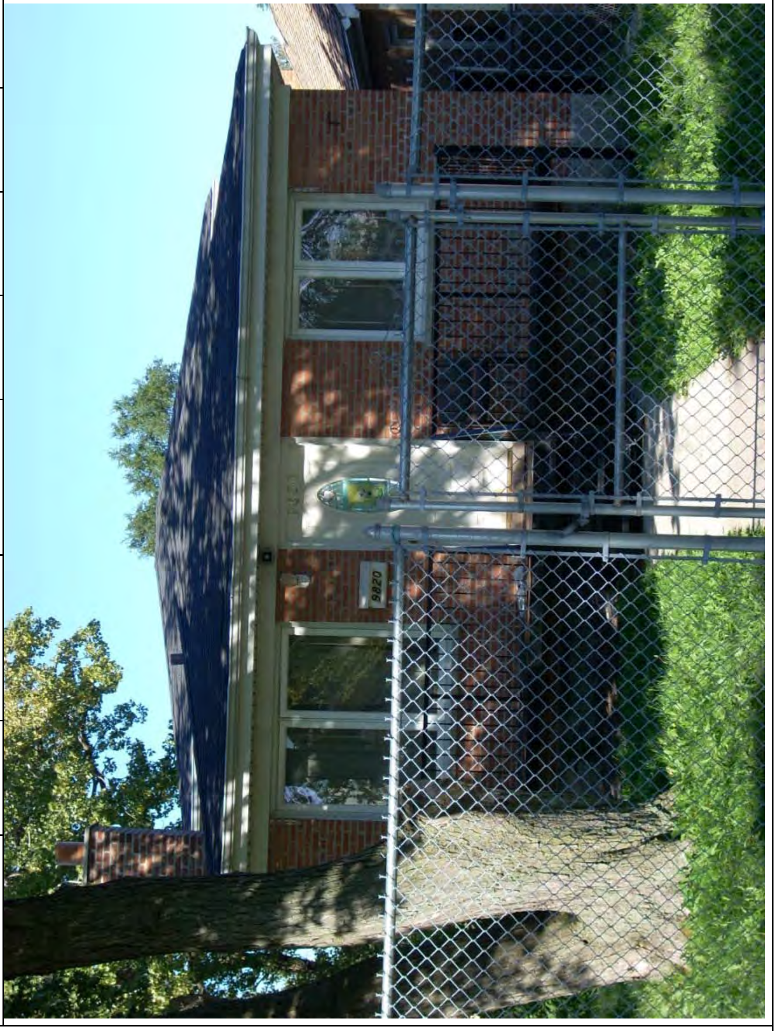
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 16 September 2012

Photos with Captions:
East façade of split-level, brick, single family residence.



Property Description: **Stories:** Split-level

This back-split home in the Roseland community has a hip roof on both levels that are covered with asphalt shingles. The front elevation is clad with orange face brick and has a centrally located hollow core metal door, two pairs of casement windows, and metal steps and railings. It does not feature distinguishing architectural elements and is not individually eligible for listing on the National Register.

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Marengo, Illinois 60152
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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement door
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingles	**Roof Features** None	**Roof Type** Hip	
Ornamental Architectural Details None			**Windows** Casement
Outbuildings (*Number and Description*) Detached two-car garage			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

9823 S. Harvard Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1915

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

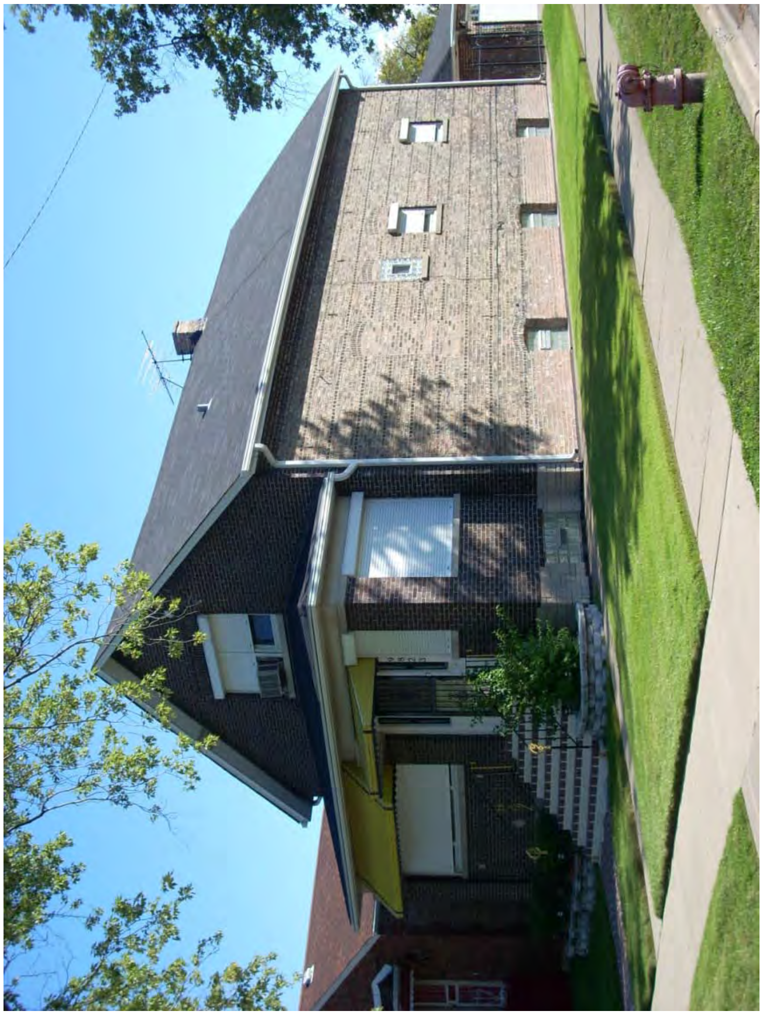
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 16 September 2012

Photos with Captions:
East and north façades, of 1.5-story, single family, brick residence.



Property Description: **Stories:** 1.5

This 1.5-story home in the Roseland community is situated on a raised brick basement with glass block windows and has a front gable roof covered with asphalt shingles. Its front elevation is clad with brown face brick, as is its enclosed, full-width, hip roof porch that has concrete lintels and sills. The front elevation has an off-center door with sidelights, metal steps and railings, and two first-floor window groups that are covered with metal screens, as were the paired windows in the gable. Some windows on the side elevation are in-filled with brick and glass block. This home lacks integrity and does not feature sufficient distinguishing features to qualify as eligible for individual listing on the National Register.

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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement door, enclosed porch, metal storm shutters, window openings in-filled
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingles	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details Concrete lintels and sills			**Windows** Glass block, covered
Outbuildings (*Number and Description*) Garage			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

11314 S. Harvard Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Vacant

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1926

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

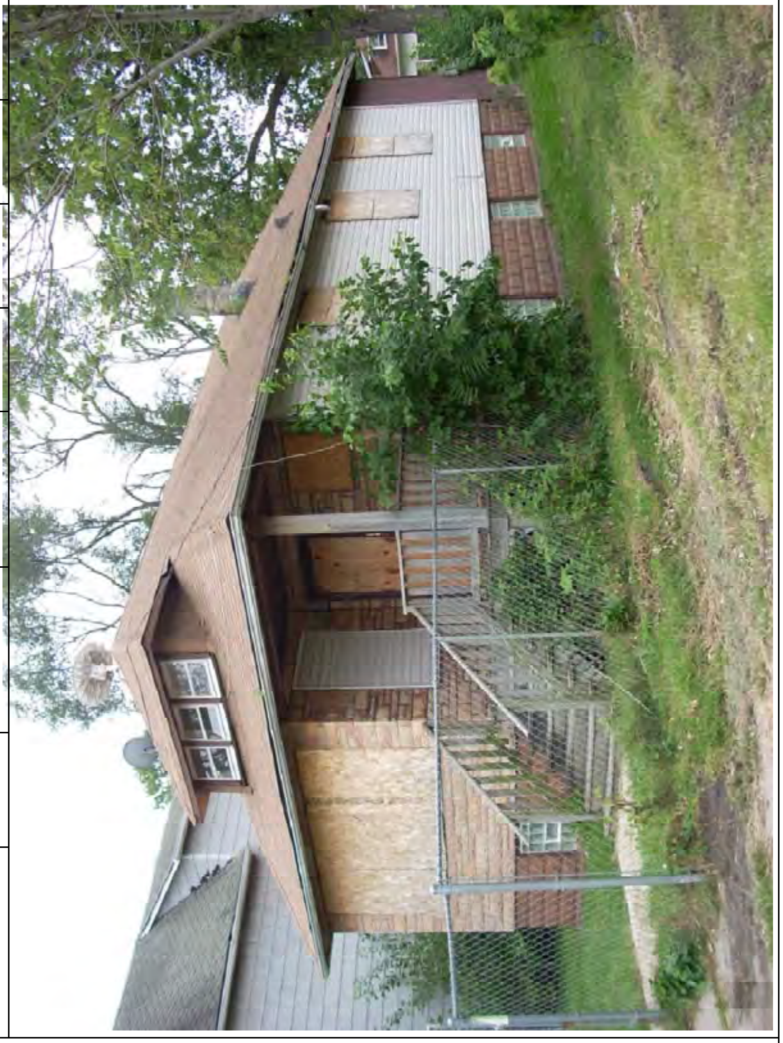
Craftsman

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 16 September 2012

Photos with Captions:
East and north façades of one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story frame bungalow in the Roseland community is situated on a raised concrete block basement with glass block windows and is clad with faux stone on the front elevation. The building has a hip roof covered with asphalt shingles and a hip dormer with three small non-original one-over-one aluminum-sash windows. The front elevation has a recessed corner porch with wood steps, railings, and a corner post. The front door and all first floor windows have been covered with plywood. This house lacks integrity and distinctive architectural features and is not individually eligible for listing on the National Register.

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505 North State Street
Marengo, Illinois 60152
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Structural Survey

Integrity:			**Additional Notes/Descriptions**
Unaltered	[✓ Slight Modification]	Major Alteration	Replacement windows and cladding
Condition:			
Excellent	[✓ Good]	Poor	
Additional Alterations			
Structure Usage		**Exterior Wall Surface**	
Current: NA Historic: NA		Faux stone (front) Synthetic siding (sides)	
Roof Material	**Roof Features**	**Roof Type**	
Asphalt shingle	Dormer	Hip	
Ornamental Architectural Details			**Windows**
None			Double-hung, glass block
Outbuildings (*Number and Description*)			
Garage			

Local Landmark	**Y [✓ N]**	
National Register Historic Places	**Y [✓ N]**	
National Register Historic District	**Y [✓ N]**	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
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Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11356 S. Harvard Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Vacant

Property Use

Historic: Commercial (1938 Sanborn)

Current: Multi-family residence

Date of Construction: 1916

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

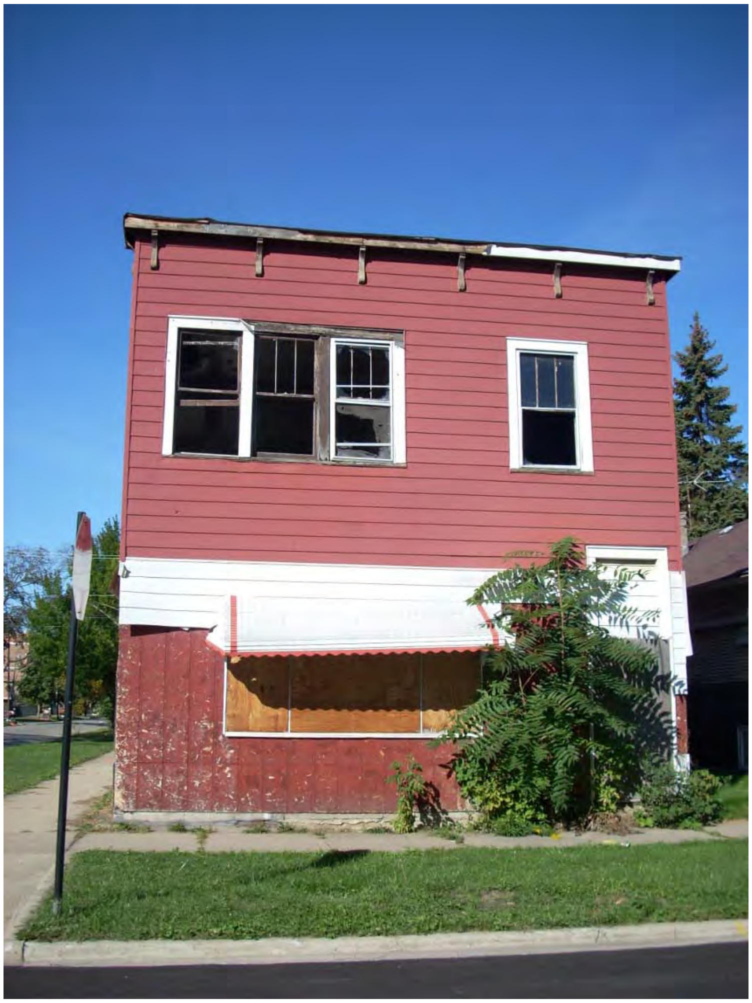
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 22 October 2012

Photos with Captions:
East façade of a two-story, multi-family, frame residence.



Property Description: **Stories:** 2

This two-story building at the northwest corner of Harvard Avenue and 114th Street in the Roseland community is clad with wood board vertically laid on the first floor and with synthetic siding on the second floor. The building has a flat roof and parapet. The front (Harvard Avenue) elevation has an off-center door and a group of three first floor windows that have been covered with plywood and are sheltered by a metal awning. The second floor of the front elevation has four windows—a group of three and a single window—that were formerly three-over-one wood-sash, although most of the glass panes are now gone. The front elevation is topped by a bracketed unadorned wood cornice. The windows on the 114th Street elevation have been covered with plywood on the first floor and have missing glass panes on the second floor. This former commercial building lacks integrity and distinctive architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
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Structural Survey

<table>
<tr><td colspan="3">Integrity:
Unaltered [✓ Slight Modification] Major Alteration</td><td>Additional Notes/Descriptions
Replacement cladding</td></tr>
<tr><td colspan="3">Condition:
Excellent Good [✓ Poor]</td><td></td></tr>
<tr><td colspan="3">Additional Alterations
Converted from commercial to residential after 1938 (Sanborn).</td><td></td></tr>
<tr><td colspan="2">Structure Usage
Current: NA
Historic: NA</td><td>Exterior Wall Surface
Synthetic siding (upper),
Wood (lower)</td><td></td></tr>
<tr><td>Roof Material
Unknown</td><td>Roof Features
Parapet</td><td>Roof Type
Flat</td><td></td></tr>
<tr><td colspan="3">Ornamental Architectural Details
Bracketed cornice</td><td>Windows
Double-hung</td></tr>
<tr><td colspan="4">Outbuildings (<i>Number and Description</i>)
None</td></tr>
</table>

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11415 S. Harvard Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Vacant

Property Use

Historic: Flat

Current: Flat

Date of Construction: 1898

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

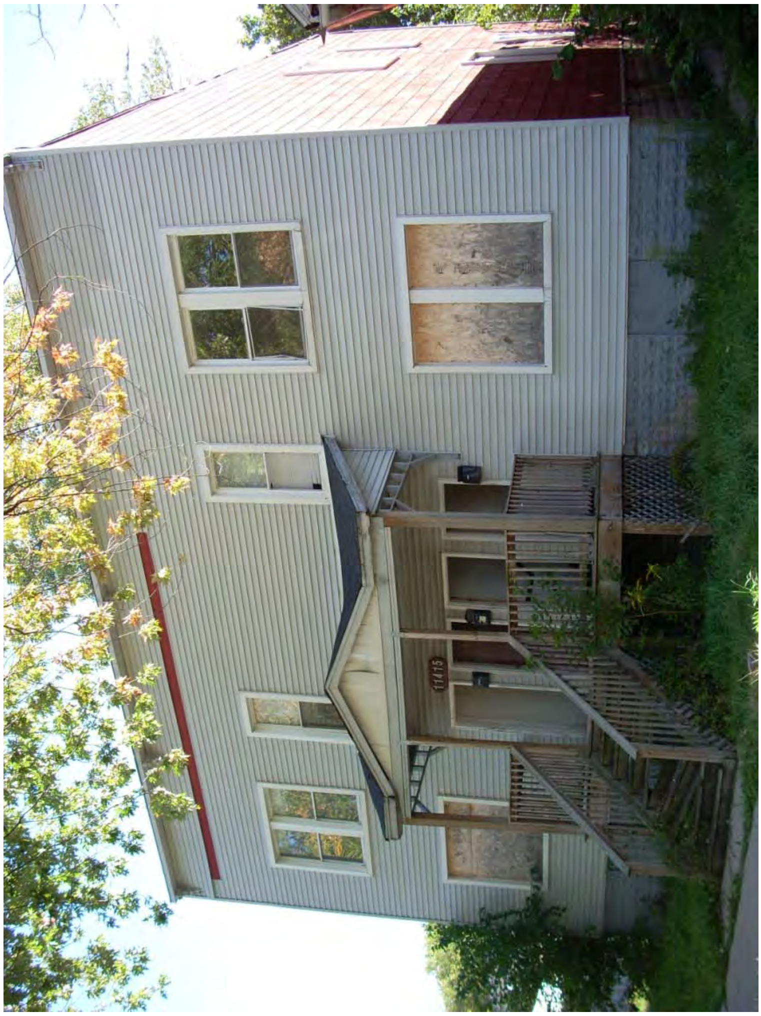
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 22 October 2012

Photos with Captions:
West façade of a two-story, four-flat, frame residence.



Property Description: **Stories:** 2

This two-story four-flat building in the Roseland community is situated on a raised concrete block basement and is covered with synthetic siding. The building has a flat roof and parapet. Its front elevation has four centrally located doorways that lack doors, a partial-width wood porch with a gable-on-shed roof, non-original straight posts and railings. There are two window groups on the first floor that are covered with plywood and six non-original one-over-one aluminum-sash windows on the second floor. The parapet level features a bracketed unadorned cornice. This building lacks integrity and distinctive architectural features and is not individually eligible for listing on the National Register.

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Structural Survey

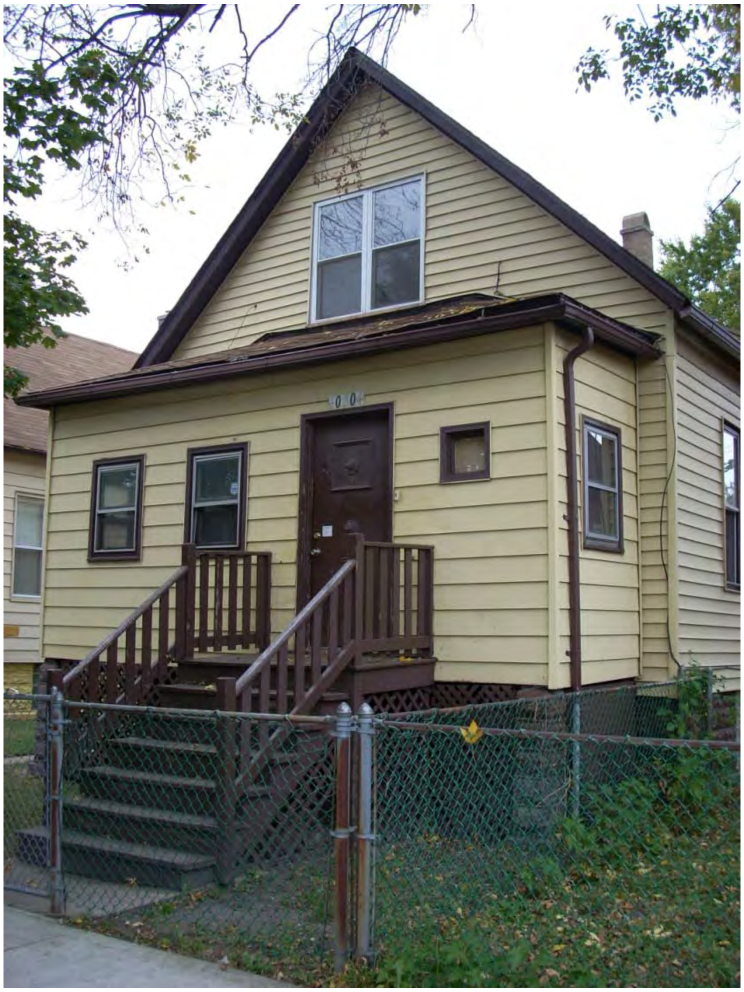
Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows, cladding, and porch rails
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details Bracketed cornice			**Windows** Double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name **Historic:** Bldg. not labeled, not in CHRS **Common/Current:** Unknown	**Photos with Captions:** East façade of a single story, single family, frame residence. 
Property Address: 10204 S. Indiana Avenue	
HAARGIS Number: Not in database	
Present Owner and /or Occupant: Unknown	
Property Use **Historic:** Single family residence **Current:** Single family residence	
Date of Construction: 1903 **Architect's Name:** Not in CHRS **Builder/Contractor:** Not in CHRS	
Architectural Style: Vernacular	
Prepared By: J. Martinez, M. C. Bird, J. Guarino **Photo By:** S. Katz **Date:** 30 October 2012	

Property Description: **Stories:** 1

This one-story frame cottage in the Roseland neighborhood is situated on a raised concrete block basement with glass block windows and is covered with synthetic siding. The building has a front gable roof covered with asphalt shingles. The front elevation has a full-width, hip roof, synthetic-clad porch with an off-center door, wood steps with straight wood railings, and three non-original windows—two one-over-one aluminum-sash and one small single-pane. A pair of non-original one-over-one aluminum-sash windows is situated in the gable. The south elevation has a three-sided bay window topped by a through-the-cornice gabled wall dormer. The north elevation has a shed dormer. This house lacks integrity and distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

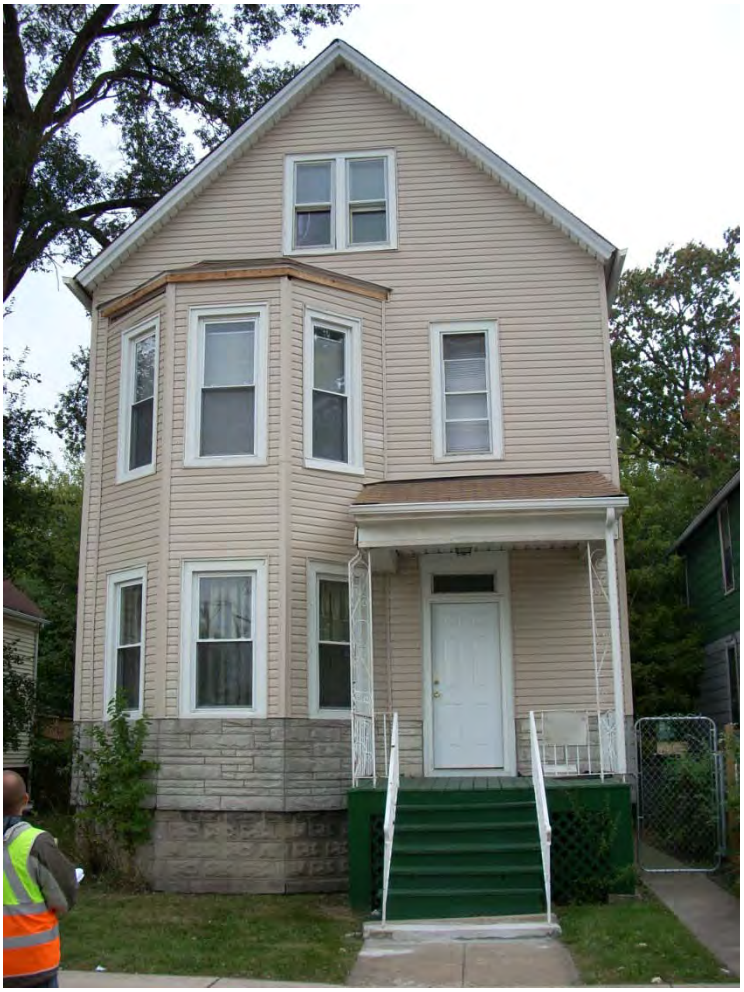
Structural Survey

Integrity: Unaltered	[✓ Slight Modification]	Major Alteration	**Additional Notes/Descriptions** Replacement windows and cladding
Condition: [✓ Excellent]	Good	Poor	
Additional Alterations Enclosed porch			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** Dormers	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung, fixed pane, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Historical Resource Recordation Form

Property Name **Historic:** Bldg. not labeled, not in CHRS **Common/Current:** Unknown	**Photos with Captions:** East façade of a two-story, multi-family, frame residence. 
Property Address: 10242 S. Indiana Avenue	
HAARGIS Number: Not in database	
Present Owner and /or Occupant: Unknown	
Property Use **Historic:** Single family residence **Current:** Multi-family residence	
Date of Construction: 1906 **Architect's Name:** Not in CHRS **Builder/Contractor:** Not in CHRS	
Architectural Style: Vernacular	
Prepared By: J. Martinez, M. C. Bird, J. Guarino **Photo By:** S. Katz **Date:** 30 October 2012	

Property Description: **Stories:** 2

This two-story frame house in the Roseland community is situated on a raised concrete block basement with glass block windows and is covered with synthetic siding. The building has a front gable roof covered with asphalt shingles. The front elevation has a two-story window bay pavilion and a partial-width, shed-roof porch. The porch has a non-original hollow core metal door with a transom, wood steps, metal railings, and two open metal supports. There are three windows in the first floor bay, four windows on the second floor, including three in the bay, and a pair of windows in the gable, all of which are non-original one-over-one aluminum-sash. This house lacks integrity and distinguishing architectural features and is not individually eligible for listing on the National Register.

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement door, windows, cladding, porch rails and supports
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding, including faux stone below with bay sill	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11708 S. Indiana Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Multi-family residence

Date of Construction: 1908

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

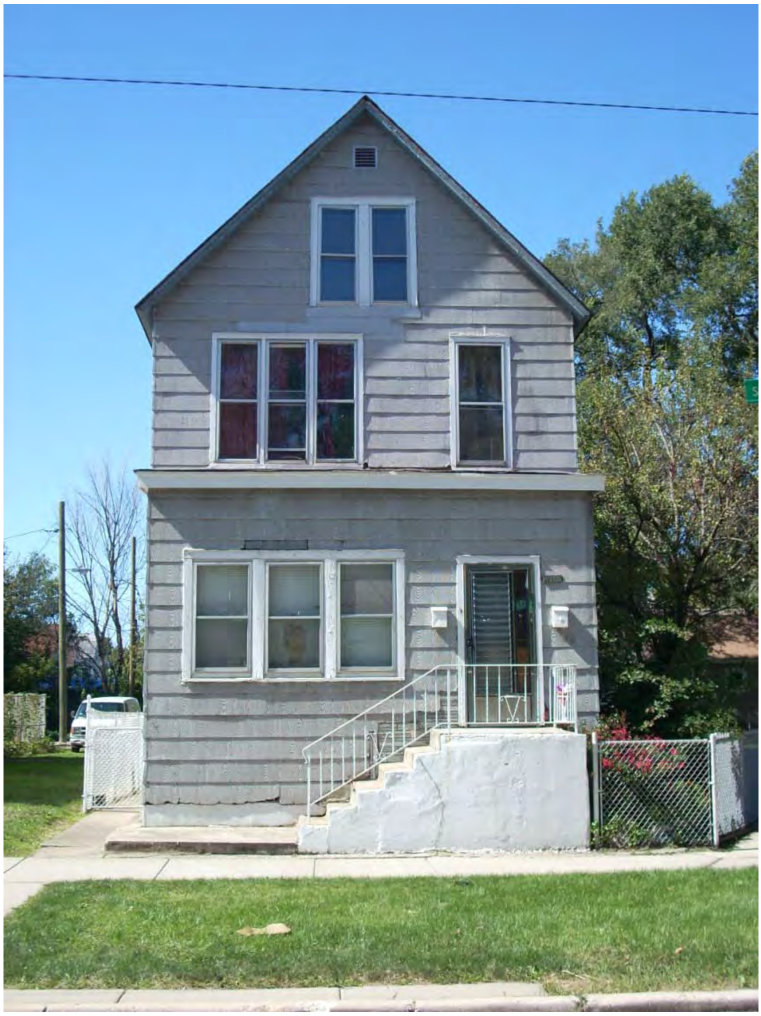
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 22 October 2012

Photos with Captions:
East façade of a two-story, multi-family, frame residence.



Property Description: **Stories:** 2

This two-story frame house at the southwest corner of Indiana Avenue and 117th Street in the West Pullman community is situated on a raised concrete block basement with glass block windows and is covered with synthetic siding. The building has a front gable roof covered with asphalt shingles. Its front elevation has a full-width, flat-roof, enclosed sun porch with an off-center metal storm door, concrete steps with metal railings (non-original), and a strip of three windows on the first floor. The second floor of the front elevation has a strip of three windows and a single window, and the attic level has a pair of windows. Windows are non-original one-over-one aluminum-sash. This house lacks integrity and distinctive architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows, cladding, and porch rails
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y [✓ N]**	
National Register Historic Places	**Y [✓ N]**	
National Register Historic District	**Y [✓ N]**	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11709 S. Indiana Ave.

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1908

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

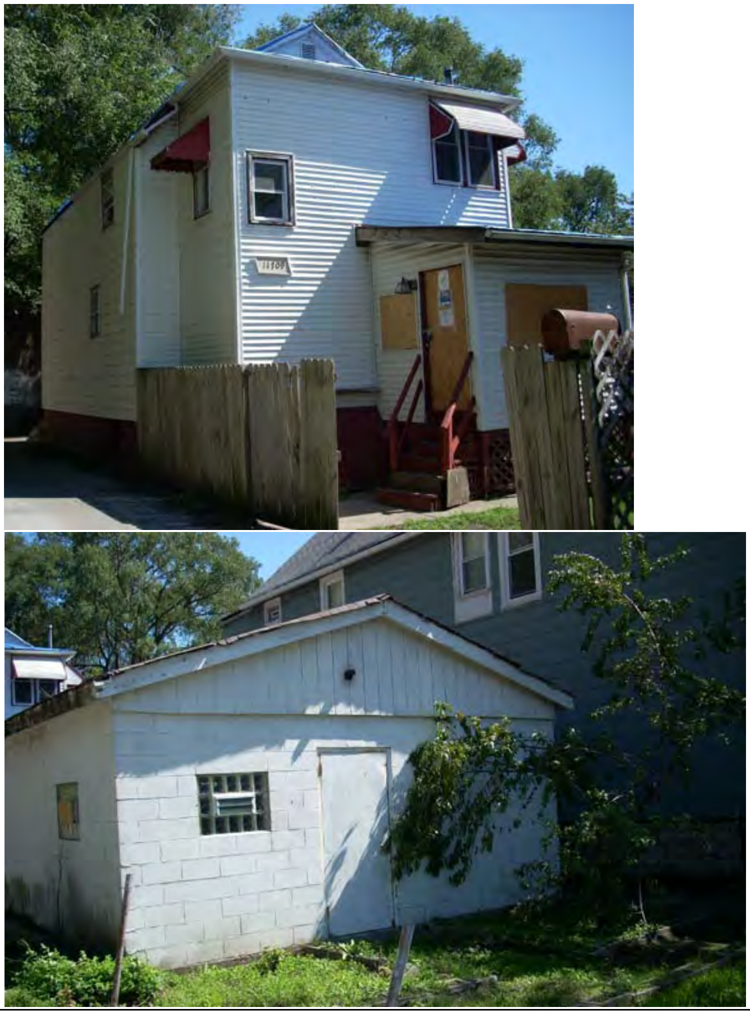
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 2 October 2012

Photos with Captions:
North and west façades of two story, single family residence (above), concrete block outbuilding (below)



Property Description: **Stories:** 2

This two-story frame house in the West Pullman community is situated on a raised concrete block basement, is clad with synthetic siding, and has a gable roof with asphalt shingles. The front elevation features a two-story flat-roofed addition and a single story, shed-roofed, enclosed porch. Fenestration is comprised of non-original one-over-one aluminum-sash windows, many of which are covered with plywood. This house lacks integrity, does not have distinguishing architectural features, and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered Slight Modification [✓ Major Alteration]			**Additional Notes/Descriptions** Replacement doors, cladding and windows
Condition: Excellent [✓ Good] Poor			
Additional Alterations Addition on front façade, enclosed porch			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt	**Roof Features** None	**Roof Type** Gable, Flat	
Ornamental Architectural Details None			**Windows** Double-hung
Outbuildings (*Number and Description*) Two-car, gable-roofed, concrete block garage with glass block and louvered windows, and asphalt shingles			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11715 S. Indiana Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Multi-family residence

Date of Construction: 1908

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

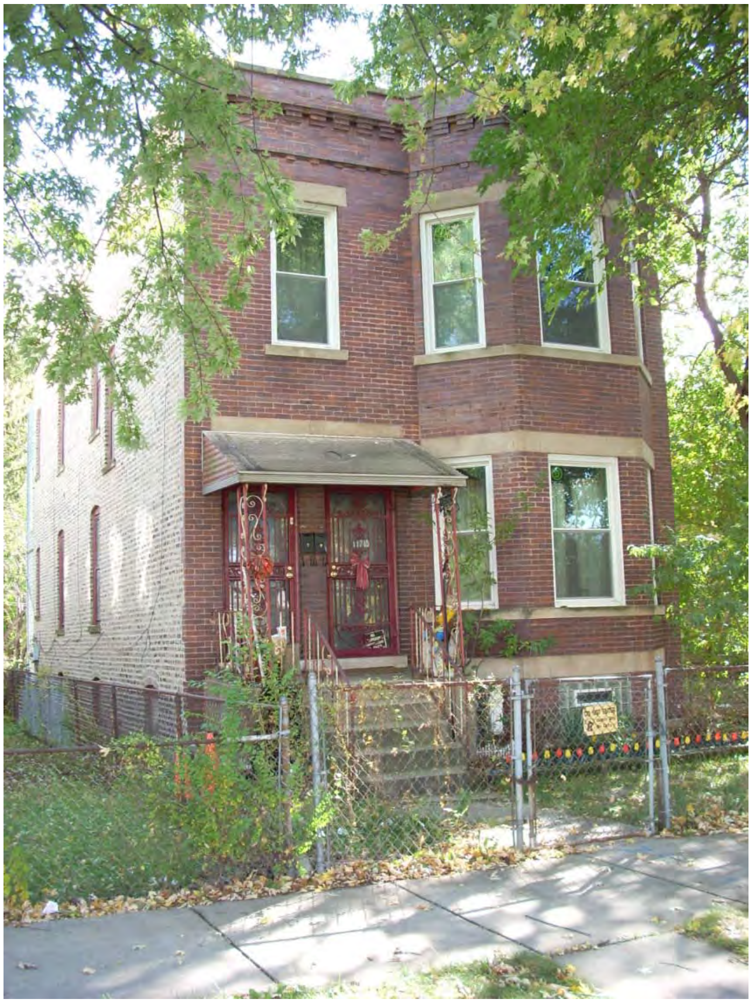
Vernacular

Prepared By: J. Martinez, M. C. Bird, J.Guarino

Photo By: S. Katz

Date: 30 October 2012

Photos with Captions:
West façade of a brick, two-story, multi-family residence.



Property Description: **Stories:** 2

This two-flat, multi-family residential building in the West Pullman community is situated on a raised basement with glass block windows and is clad with face brick on the front elevation and common brick on the side and rear elevations. The building has a full-height window bay pavilion, a flat roof, and parapet. The front elevation has a partial-width porch with concrete steps and open metal posts supporting a metal shed-roof. A pair of off-center storm doors is located under the porch roof. There are seven non-original one-over-one windows: three on the first floor bay and four on the second floor, including three on its window bay. Detailing includes concrete sills, belt courses, brick cornice with corbelling, and brick dentils. This building lacks distinctive architectural features and is not individually eligible for listing on the National Register.

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505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details Concrete sills and belt courses; brick cornice with corbelling, brick dentils			**Windows** Double-hung, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11740 S. Indiana Ave

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Vacant

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1888

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

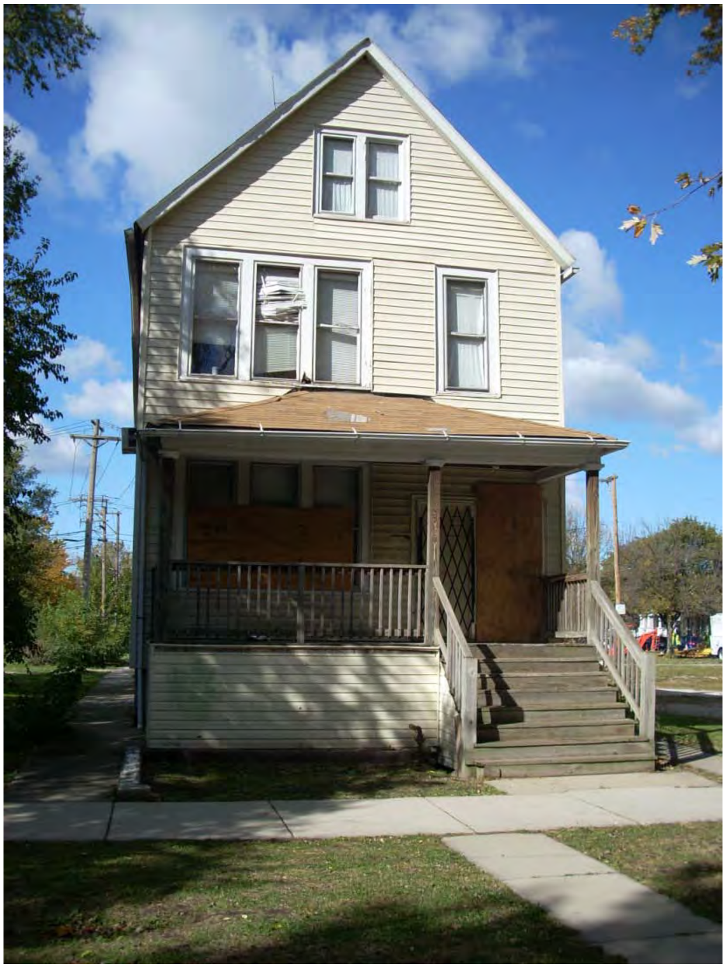
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 30 October 2012

Photos with Captions:
East façade of a two-story, single family, frame residence.



Property Description: **Stories:** 2

This two-story frame house in the West Pullman community is situated on a raised concrete block basement with glass block windows and is covered with synthetic siding. The building has a front gable roof covered with what appears to be roofing paper. The front elevation has a full-width, hip-roof, wood porch with a synthetic-clad base, straight wood railings and posts, and an off-center door. A group of three windows on the first floor are partially obscured by plywood. There are four windows on the second floor (three of which are grouped together) and a pair of windows in the gable. Above the basement, windows are non-original one-over-one aluminum-sash. This house lacks integrity and distinctive architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

<table>
<tr><td colspan="3">Integrity:
Unaltered [✓ Slight Modification] Major Alteration</td><td>Additional Notes/Descriptions
Replacement door, windows, cladding, and porch rails</td></tr>
<tr><td colspan="3">Condition:
Excellent [✓ Good] Poor</td><td></td></tr>
<tr><td colspan="3">Additional Alterations</td><td></td></tr>
<tr><td colspan="2">Structure Usage
Current: NA
Historic: NA</td><td>Exterior Wall Surface
Synthetic siding</td><td></td></tr>
<tr><td>Roof Material
Roofing paper</td><td>Roof Features
None</td><td>Roof Type
Gable</td><td></td></tr>
<tr><td colspan="3">Ornamental Architectural Details
None</td><td>Windows
Double-hung, glass block</td></tr>
<tr><td colspan="4">Outbuildings (<i>Number and Description</i>)
None</td></tr>
</table>

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

112 E. Kensington Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Flat

Current: Flat

Date of Construction: 1900

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

Vernacular

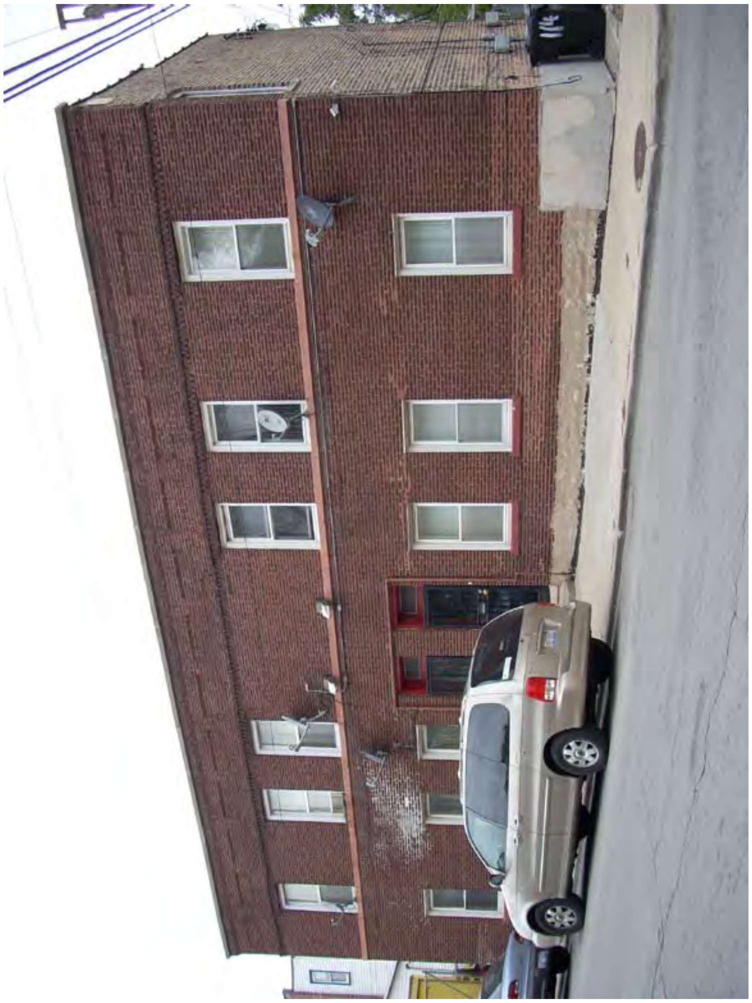
Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 30 October 2012

Photos with Captions:

South façade of a brick, two-story, multi-family (Flat) residence.



Property Description: **Stories:** 2

This two-story brick-clad flat residential building in the West Pullman community has a flat roof and parapet. Its front elevation is clad with face brick, has two centrally-located plate glass doors with transoms, and twelve non-original one-over-one aluminum-sash windows: six on the first floor and six on the second. Detailing includes recessed brick panels with dentils at the parapet level, concrete sills, coping, and a concrete stringcourse. This building lacks integrity and distinctive architectural features and is not individually eligible for listing on the National Register.

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details Recessed brick panels with dentils; concrete stringcourse, coping, and sills			**Windows** Double-hung, fixed pane
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

121 E. Kensington Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Flat

Current: Flat

Date of Construction: 1888

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

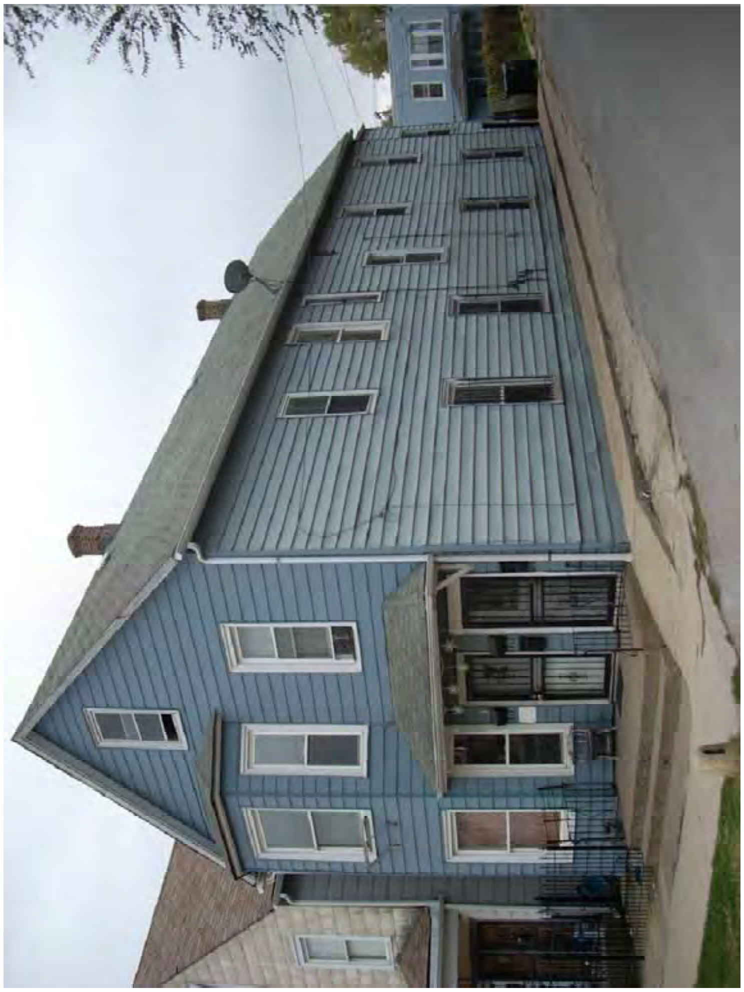
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 30 October 2012

Photos with Captions:
North façade of a two-story, multi-family, frame residence.



Property Description: **Stories:** 2

This two-story, frame, two-flat residential building in the West Pullman community is covered with synthetic siding. The building has a two-story, three-sided window bay pavilion on its front elevation and a front gable roof covered with asphalt shingles. The front elevation has an off-center pair of hollow core metal doors topped by a bracketed pent roof. There are three windows on the first floor, four windows on the second floor, and a single window in the gable. All windows are non-original one-over-one aluminum-sash. This building lacks integrity and distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement doors, windows, and cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details Bracketed pent roof			**Windows** Double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

121 ½ E. Kensington Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Multi-family residence

Date of Construction: 1888

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

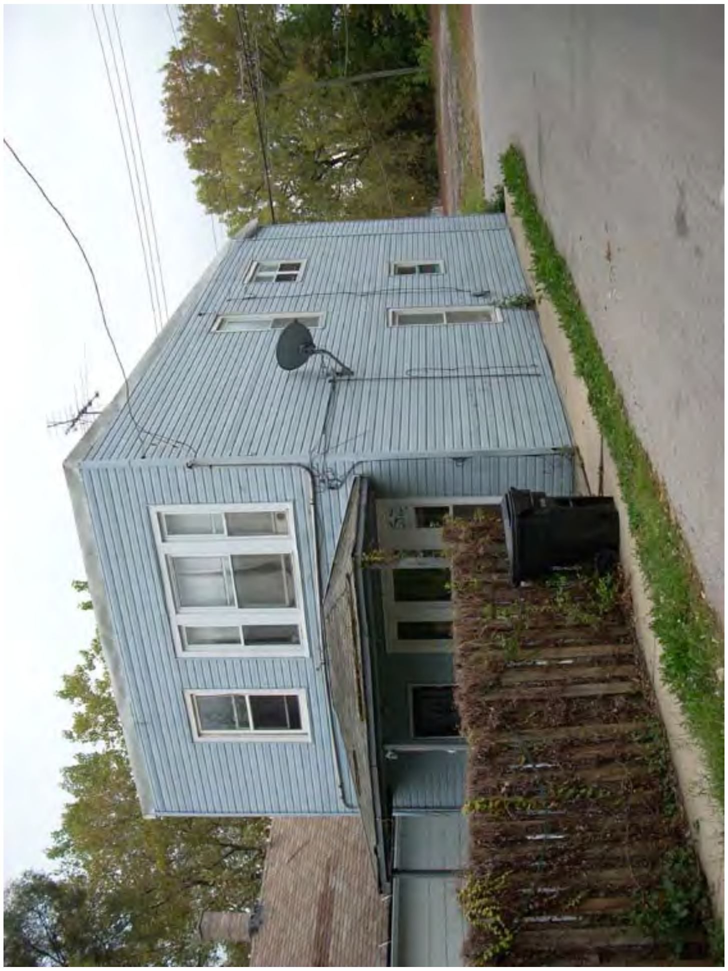
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 30 October 2012

Photos with Captions:
North and west façade of a two-story, multi-family, frame residence.



Property Description: **Stories:** 2

This two-story residential building in the West Pullman community is clad with synthetic siding and has a flat roof and parapet. The first floor of its front elevation has an off-center storm door and a group of three windows sheltered by a full-width hip roof that is supported by three wood posts. The second floor of the front elevation has four windows, three of which are grouped together. Windows are non-original one-over-one aluminum sash. This house lacks integrity and distinctive architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered	[✓ Slight Modification]	Major Alteration	**Additional Notes/Descriptions** Replacement windows and cladding
Condition: Excellent	[✓ Good]	Poor	
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details None			**Windows** Double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Venetian Hall (Sanborn 1938)

Common/Current: Unknown

Property Address:

133-139 E .Kensington Avenue
(137 E. Kensington CCA)

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Miracle Temple Faith Church

Property Use

Historic: Commercial

Current: Religious Building

Date of Construction: 1924-1926

Architect's Name: Arthur F Hughes

Builder/Contractor: Not in CHRS

Architectural Style:

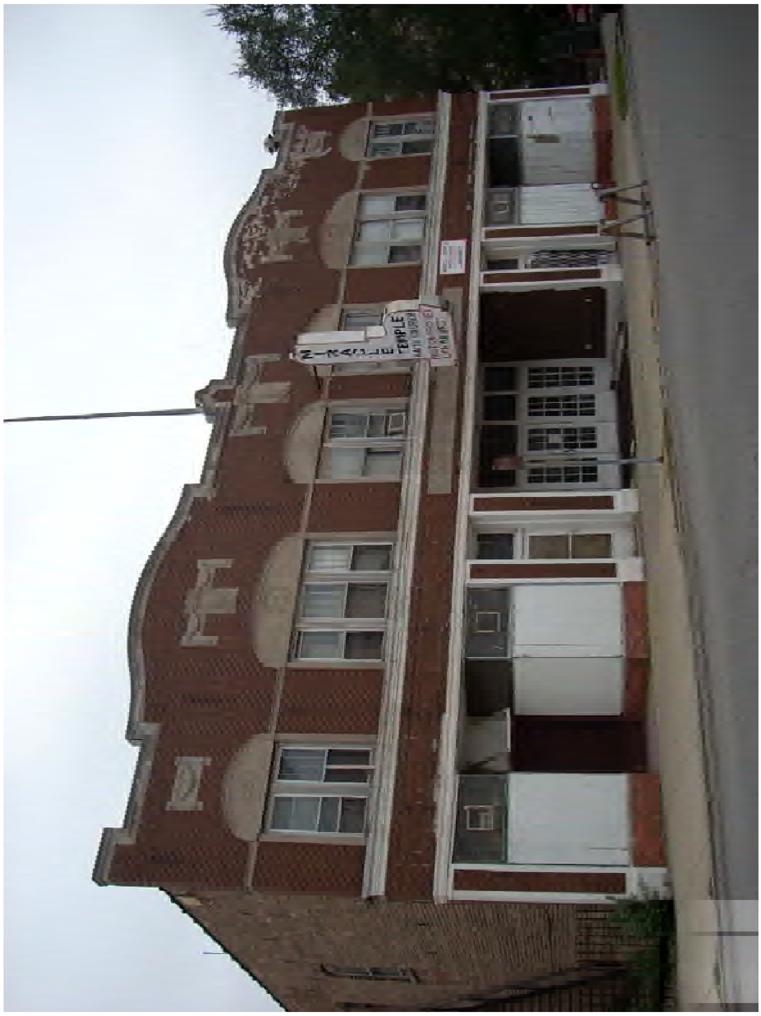
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 30 October 2012

Photos with Captions:
North façade of a brick, two-story, religious building.



Property Description: **Stories:** 2

This two-story building in the West Pullman community (formerly part of Kensington) was originally called "Venetian Hall." The performance hall was built for a cultural/recreational purpose, although it has long since been repurposed as a church. The 1938 Sanborn shows the hall with a stage, balcony, and place for storage of scenery. The street entrance was flanked by two storefronts in 1938, as it is now.

The building is clad with face brick on its front elevation and common brick on its side and rear elevations. The building has a flat roof and a shaped parapet with concrete coping. The first floor of the front elevation has a recessed centrally located bay with three pairs of multi-light wood doors and in-filled transoms. This central bay is flanked by two original storefronts with central recessed doors and flanking display windows that are covered with wood and topped by transoms that have been in-filled with glass block. Separating the central bay from the two flanking storefronts are two doors with transoms that provide access to the second floor. The spandrel area directly above the central entrance bay has a concrete sign plate with incised lettering that reads: “Venetian Hall.” Fenestration on the second floor features six-over-one and three-over-one wood-sash windows arranged in pairs and in groups of three, topped by round-arch stone lintels with rosette motifs. The parapet features a series of Classical shields and swags.

The exterior of this building has good overall integrity, although elements of the original storefronts materials are no longer extant. However, it does not display sufficient distinguishing architectural features to qualify as individually eligible for listing on the National Register for its architecture. Instead, is recommended for individual listing under Criterion A for its original use as a social venue for area residents in the early twentieth century. Local theater houses, such as the Venetian Hall, were jewels within the local communities. It's rare to see an early twentieth century neighborhood social hall that retains its original storefronts and is set within a residential area comprised of worker’s housing, rather than along a commercial thoroughfare. The opening of Illinois Terra Cotta works in the first half of the twentieth century brought Italians to Kensington; the area gradually became a center of South Side Italian-American life with the establishment of Venetian Hall and the nearby San Antonio de Padua (patron saint of Venice) Roman Catholic Church.

Structural Survey

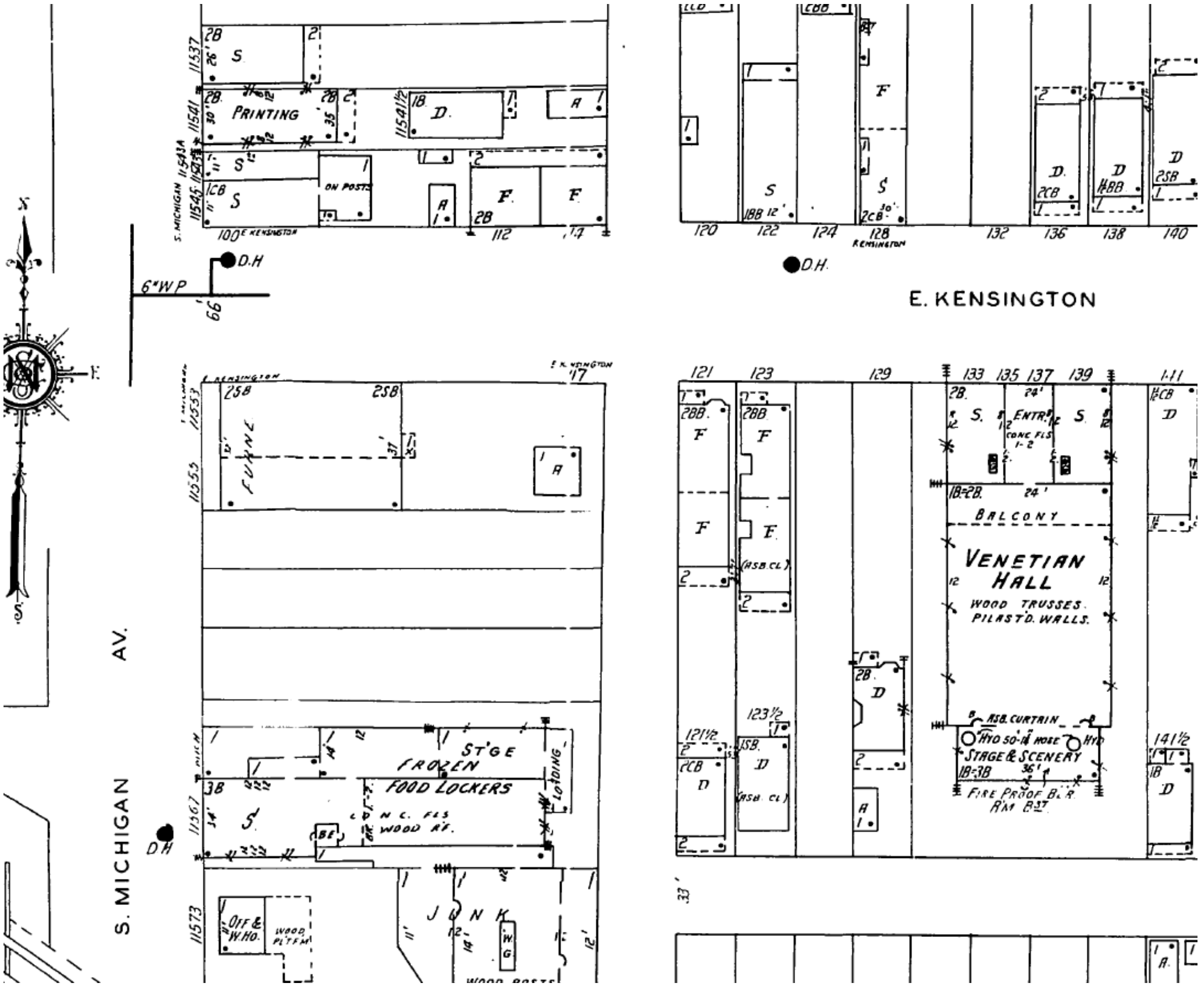
<table>
<tr><td colspan="3">Integrity:
Unaltered [✓ Slight Modification] Major Alteration</td><td>Additional Notes/Descriptions
Some original storefront materials no longer extant</td></tr>
<tr><td colspan="3">Condition:
Excellent [✓ Good] Poor</td><td></td></tr>
<tr><td colspan="3">Additional Alterations
Converted to use as a church.</td><td></td></tr>
<tr><td colspan="2">Structure Usage
Current: NA
Historic: NA</td><td>Exterior Wall Surface
Brick</td><td></td></tr>
<tr><td>Roof Material
Unknown</td><td>Roof Features
Parapet</td><td>Roof Type
Flat</td><td></td></tr>
<tr><td colspan="3">Ornamental Architectural Details
Concrete coping, incised name plate, stone lintels, Classical shields and swags</td><td>Windows
Double-hung, glass block</td></tr>
<tr><td colspan="4">Outbuildings (<i>Number and Description</i>)
None</td></tr>
</table>

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? Yes	[✓ **A**] **B** **C**	**Significance:** Good overall integrity and important social gathering place for Italian-American residents of Kensington in the early twentieth century.

Additional Comments:

“Venetian Hall” in 1938 Sanborn.


E. KENSINGTON
S. MICHIGAN AV.
VENETIAN HALL
WOOD TRUSSES. PILASTD. WALLS.
BALCONY
STAGE & SCENERY
FIRE PROOF B. R. RM BST.
ASB. CURTAIN
PRINTING
FROZEN FOOD LOCKERS
ST'GE
LOADING
JUNK
OFF & W.HO.
6"WP
D.H
120
122
124
128
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136
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121
123
129
133
135
137
139
141
121½
123½
141½
100
112
114
117
11537
11541
11541½
11553
11555
11567
11573

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

9723 S. La Salle Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1955

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

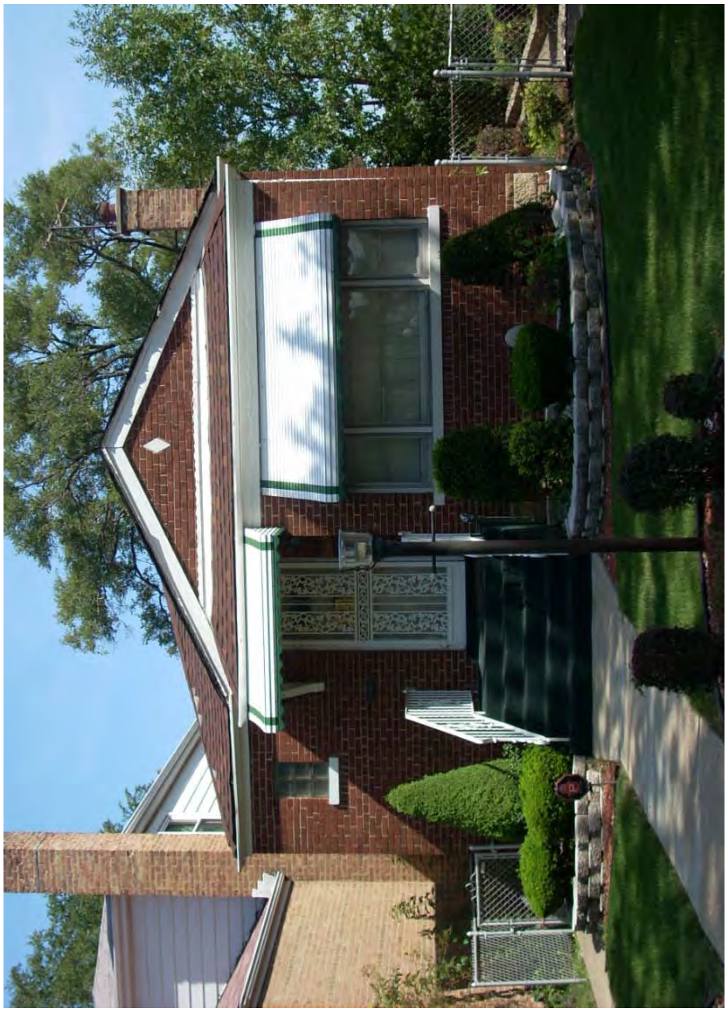
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 8 October 2012

Photos with Captions:
West façade of a brick, one-story, single family residence.



Property Description: **Stories:** 1

This one-story home in the Roseland community is situated on a raised brick basement with casement windows and has a gable-on-hip roof clad with asphalt shingles. The front elevation has a pent roof, an off-center door, concrete steps with metal railings, a small glass block window, and a picture window flanked by casements. This window group is partially obscured by a low metal awning. Detailing includes a diamond-shaped tile insert in the gable end, stone quoins near the base of the residence, concrete sills, and scalloped boards above and below the pent roof. It does not feature distinguishing architectural elements and is not individually eligible for listing on the National Register.

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Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: [✓ Unaltered] Slight Modification Major Alteration			**Additional Notes/Descriptions**
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt	**Roof Features** None	**Roof Type** Gable-on-hip	
Ornamental Architectural Details Diamond-shaped tile insert, stone quoins, concrete sills, and scalloped boards			**Windows** Fixed-pane, glass block, casement
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

9738 S. La Salle Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1964

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

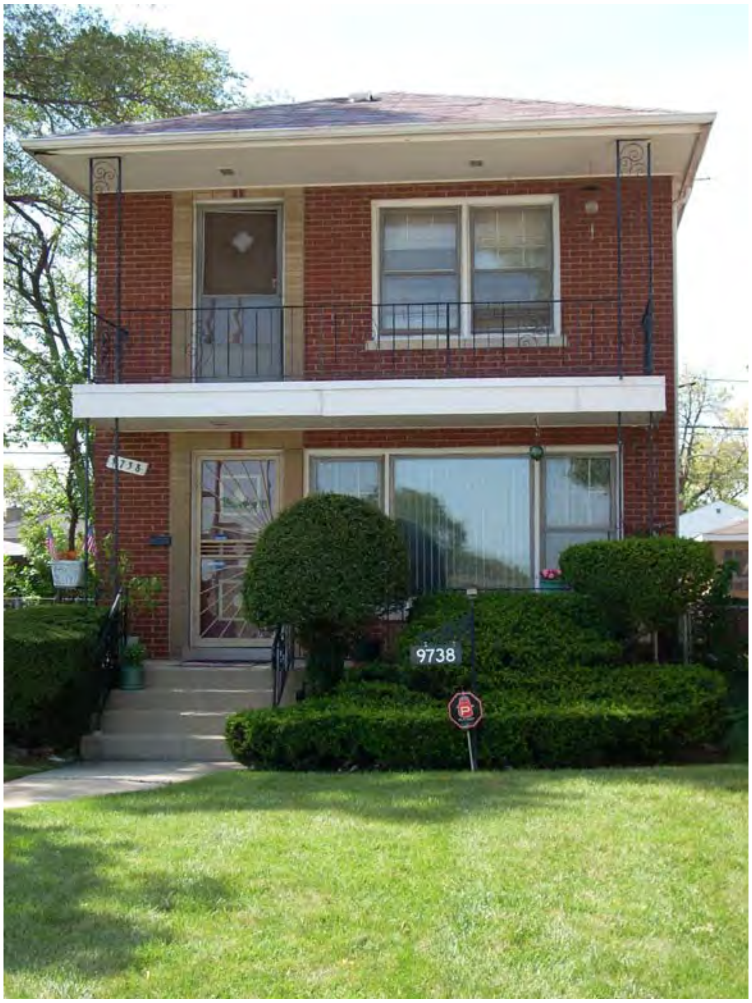
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 8 October 2012

Photos with Captions:
East façade of a brick, two-story, single family residence.



Property Description: **Stories:** 2

This home in the Roseland community is clad with orange face brick and has a hip roof covered with asphalt shingles. The hip roof extends beyond the front elevation to serve as the roof of the second floor balcony, which is situated above the flat-roofed full-façade porch. Both levels feature open metal supports and railings. The porch has concrete steps. The front elevation features off-center doors trimmed with stone on both floors, a picture window flanked by double-hung windows on the first floor, and a pair of double-hung windows on the second floor. This building does not feature distinguishing architectural features and is not individually eligible for listing on the National Register.

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Phone (815) 568- 0680

Structural Survey

Integrity: [✓ Unaltered] Slight Modification Major Alteration			**Additional Notes/Descriptions**
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt	**Roof Features** None	**Roof Type** Hip	
Ornamental Architectural Details Stone at entrances.			**Windows** Double-hung, fixed-pane
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

9902 S. La Salle Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1919

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

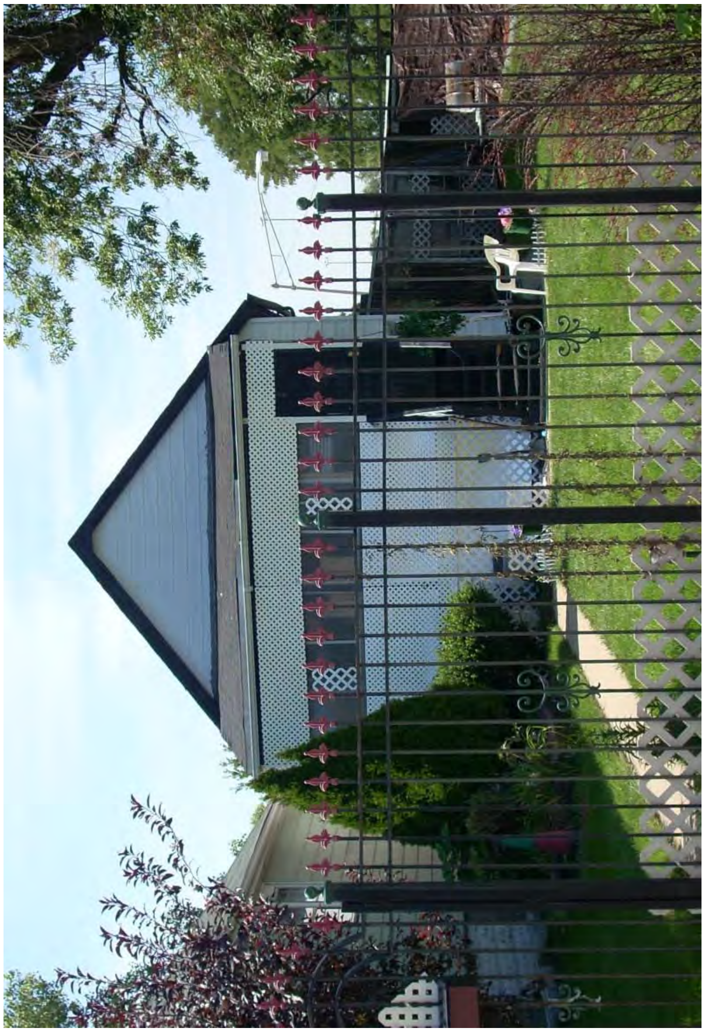
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 8 October 2012

Photos with Captions:
East façade of a one-story, frame, single family residence.



Property Description: **Stories:** 1

This one-story cottage in the Roseland community is situated on a raised brick basement with glass block windows, is clad with aluminum siding, and has a front gable roof covered with asphalt shingles. A non-original, full-width, enclosed front porch covered with lattice obscures the original front elevation of the house. The porch has a horizontal strip of square, non-original windows and an off-center door. The side elevations have one-over-one windows. This home does not have sufficient integrity or distinguishing features to qualify as eligible for individual listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered Slight Modification [✓ Major Alteration]			**Additional Notes/Descriptions** Replacement windows, cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations Addition to front façade			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung, fixed-pane, glass block
Outbuildings (*Number and Description*)			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

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Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

9706 S. Lafayette Avenue
Alternate: 9708 S Perry Ave.

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1957

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

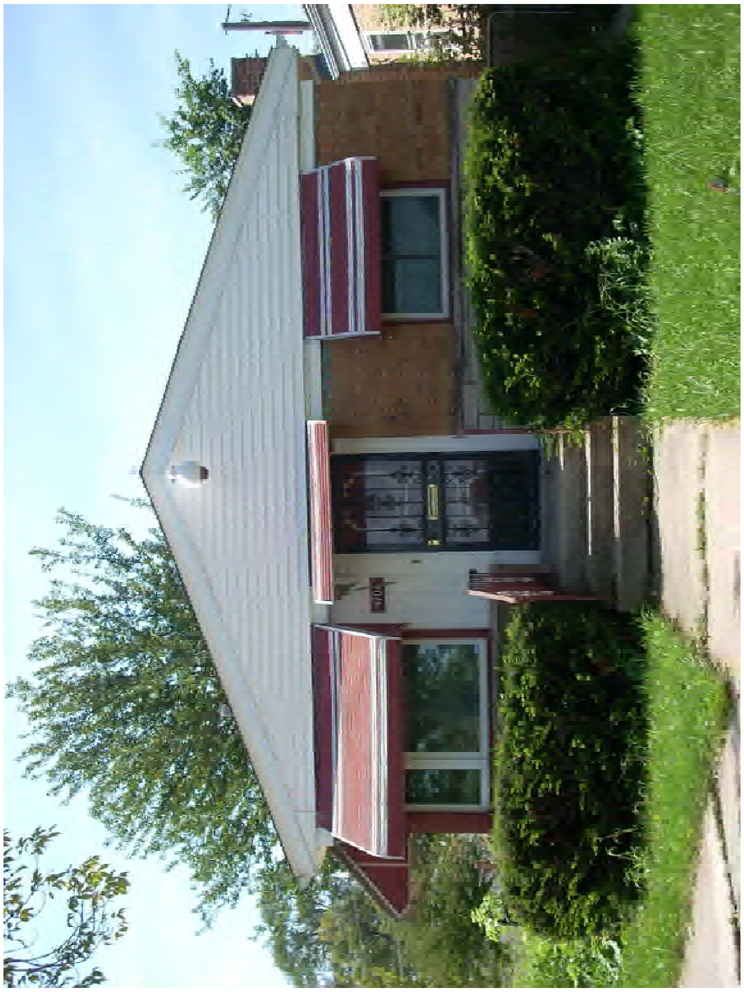
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 8 October 2012

Photos with Captions:
East façade of a brick, one-story, single family residence.



Property Description: **Stories:** 1

This one-story home in the Roseland community is situated on a raised brick basement and has a front gable roof covered with asphalt shingles. Its front elevation is clad with faux stone below the sill line, orange face brick above, and synthetic siding in the gable. It has a centrally-located door, concrete steps with metal railings, a single-pane window flanked by a casement, and what appears to be a pair of casement windows. Windows are partially obscured by low metal awnings. This standard 1950s era house does not display distinguishing architectural features and is not individually eligible for listing on the National Register.

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505 North State Street
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Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick (main), Synthetic siding (gable end)	
Roof Material Asphalt	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Casement, fixed-pane, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11528 S. Lafayette Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1889

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

Vernacular

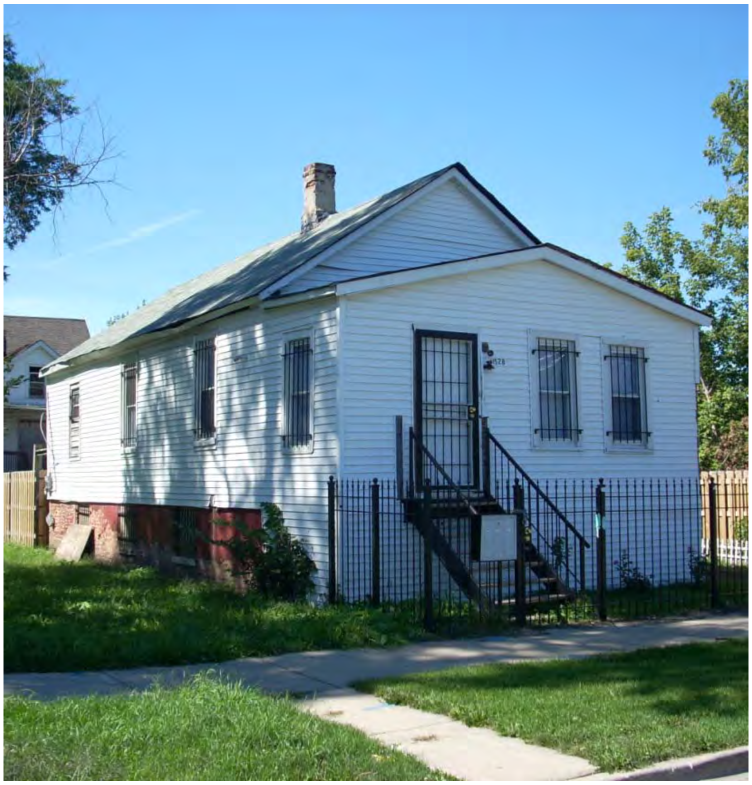
Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 10 September 2012

Photos with Captions

East and south façades of one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story house in the West Pullman community is situated on a raised brick basement, is clad with aluminum siding, and has a front gable roof covered with asphalt shingles. Its front elevation features a gable-roofed, full-width, enclosed porch with an off-center door, metal steps and railings, and two non-original one-over-one windows. This house lacks sufficient integrity and distinguishing architectural features to qualify as individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
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Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Alterations] Major Alterations			**Additional Notes/Descriptions** Replacement windows, door, and cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

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Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11532 S. Lafayette Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1888

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

Vernacular

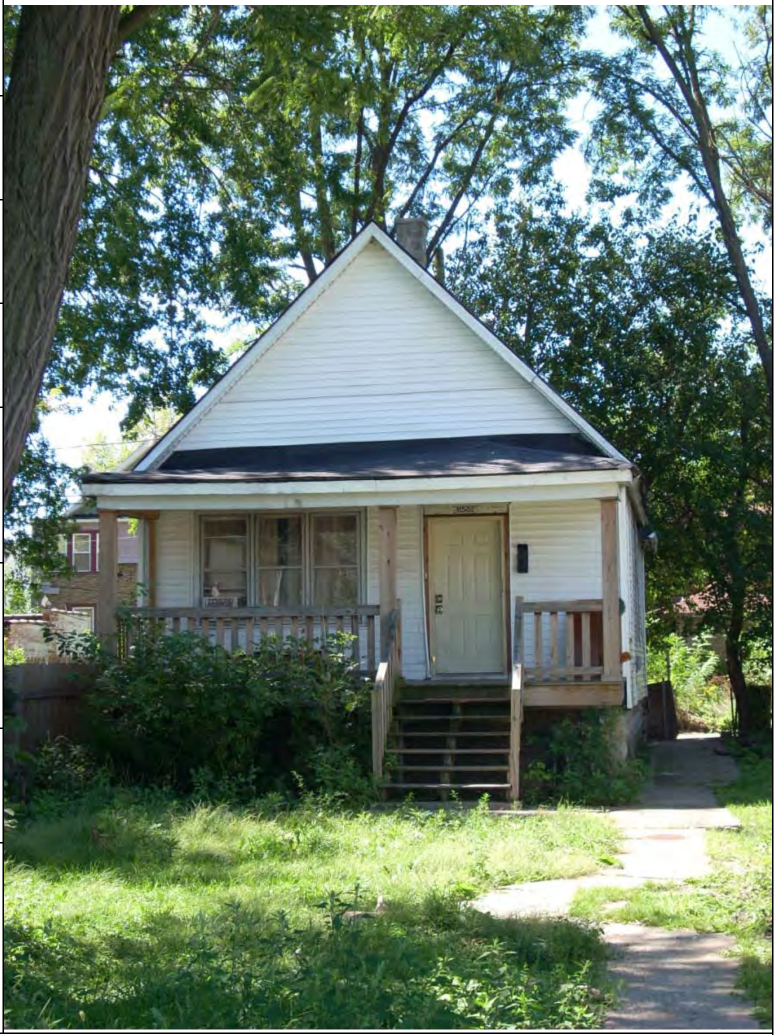
Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 10 September 2012

Photos with Captions

East façade of one-story, single-family, frame residence.



Property Description: **Stories:** 1

This one-story house in the West Pullman community is situated on a raised concrete block basement, is clad with synthetic siding, and has a gable roof covered with asphalt shingles. Its front elevation features a flat-roofed, full-width, wood porch with wood slats and posts. It also has an off-center hollow core metal door and a strip of three non-original one-over-one aluminum sash windows. This house lacks sufficient integrity and distinguishing architectural features to qualify as individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Alterations] Major Alterations			**Additional Notes/Descriptions** Replacement door, windows, cladding, and porch
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11557 S. Lafayette Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Multi-family residence

Date of Construction: 1883

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

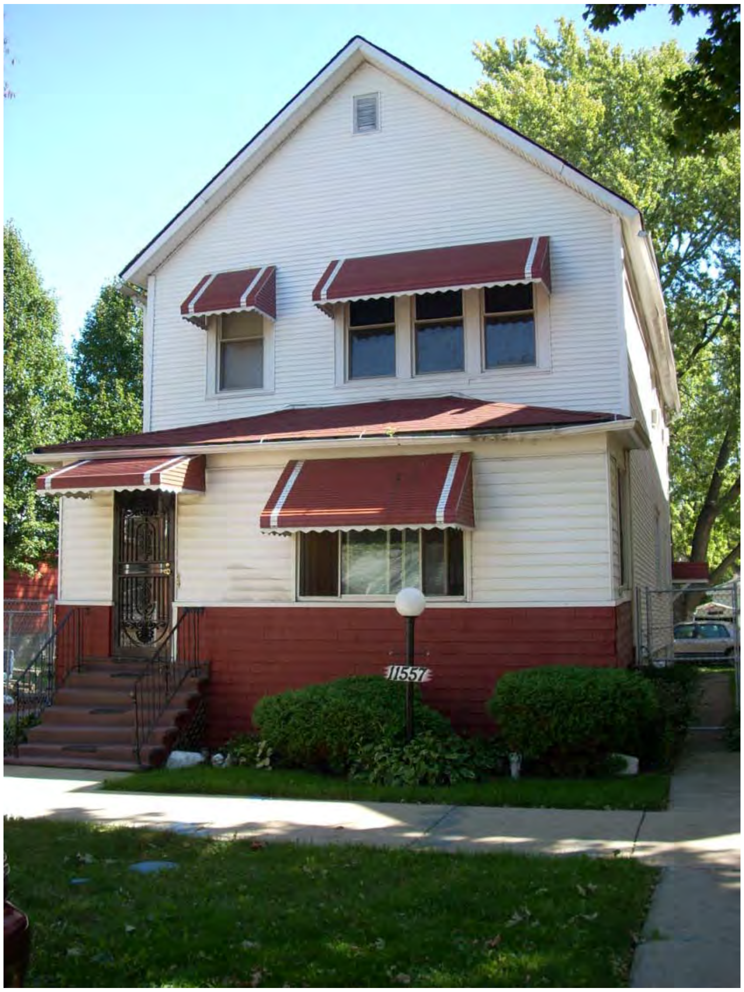
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 22 October 2012

Photos with Captions:
West façade of a two-story, multi-family, frame residence.



Property Description: **Stories:** 2

This two-story house in the West Pullman community is situated on a raised concrete block basement with glass block windows and is covered with synthetic siding. The building has a front gable roof covered with asphalt shingles. Its front elevation has a full-width, hip-roof, enclosed porch with non-original synthetic siding, an off-center entrance with metal storm door and metal awning, and a first floor group of sliding windows that is partially obscured by a metal awning. The second floor of the front elevation has a strip of three windows and a single window, all of which are non-original one-over-one aluminum-sash with metal awnings. This house lacks integrity and distinctive architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

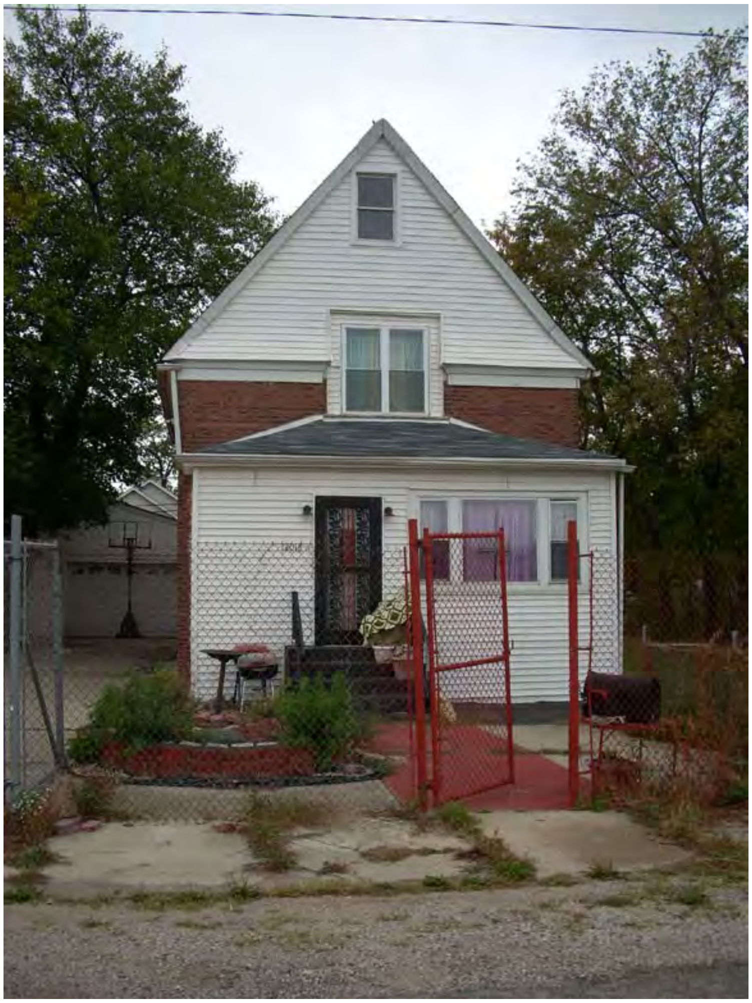
Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows and cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung, glass block, sliding
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Historical Resource Recordation Form

Property Name **Historic:** Bldg. not labeled, not in CHRS **Common/Current:** Unknown	**Photos with Captions:** East façade of a 1.5-story, single family, brick residence. 
Property Address: 12018 S. Loomis Street	
HAARGIS Number: Not in database	
Present Owner and /or Occupant: Unknown	
Property Use **Historic:** Single family residence **Current:** Single family residence	
Date of Construction: 1904 **Architect's Name:** Not in CHRS **Builder/Contractor:** Not in CHRS	
Architectural Style: Vernacular	
Prepared By: J. Martinez, M. C. Bird, J. Guarino **Photo By:** S. Katz **Date:** 30 October 2012	

Property Description: **Stories:** 1.5

This one-and-a-half-story house in the West Pullman community is situated on a raised basement and is clad with red face brick and synthetic siding. The building has a steeply pitched front gable roof with front-facing synthetic-clad gable. Its front elevation has a full-width, hip roof, synthetic-clad, enclosed porch with a metal storm door, concrete steps with metal railings, and a picture window flanked by one-over-one windows. The second floor of the front elevation has a pair of one-over-one windows that extend through the cornice into the synthetic-clad gable. A single one-over-one window is situated at the apex of the gable. All windows are modern replacements with aluminum sashes. The south elevation has a through-the-cornice shed dormer. This house lacks integrity and distinguishing architectural features and is not individually eligible for listing on the National Register.

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Structural Survey

Integrity: Unaltered	[✓ Slight Modification]	Major Alteration	**Additional Notes/Descriptions** Replacement windows and cladding
Condition: [✓ Excellent]	Good	Poor	
Additional Alterations Porch enclosed			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick (main), Synthetic siding (gable end and porch)	
Roof Material Asphalt shingles	**Roof Features** Dormer	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung, fixed-pane
Outbuildings (*Number and Description*) Detached, two-car, frame garage			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

9906 S. Lowe Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1904

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

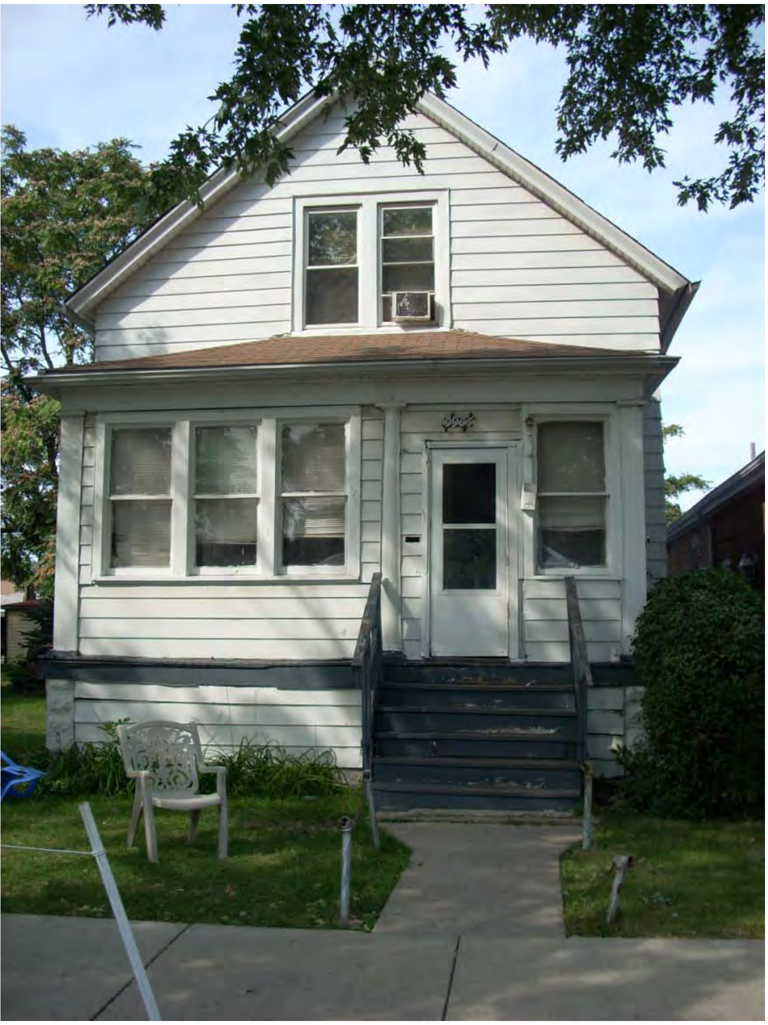
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: September 2012

Photos with Captions:
East façade of 1.5-story, single-family, frame residence.



Property Description: **Stories:** 1.5

This one-and-a-half-story frame house in the Washington Heights community is situated on a raised basement and is covered with synthetic siding. The building has a front gable roof covered with asphalt shingles. Its front elevation has a full-width, hip-roof, enclosed porch with an off-center door, four non-original one-over-one aluminum-sash windows, wood steps, and metal railings. A pair of non-original one-over-one aluminum-sash windows is situated in the gable. Detailing includes corner porch pilasters and an engaged Doric column flanking the door. This house lacks integrity and distinctive architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

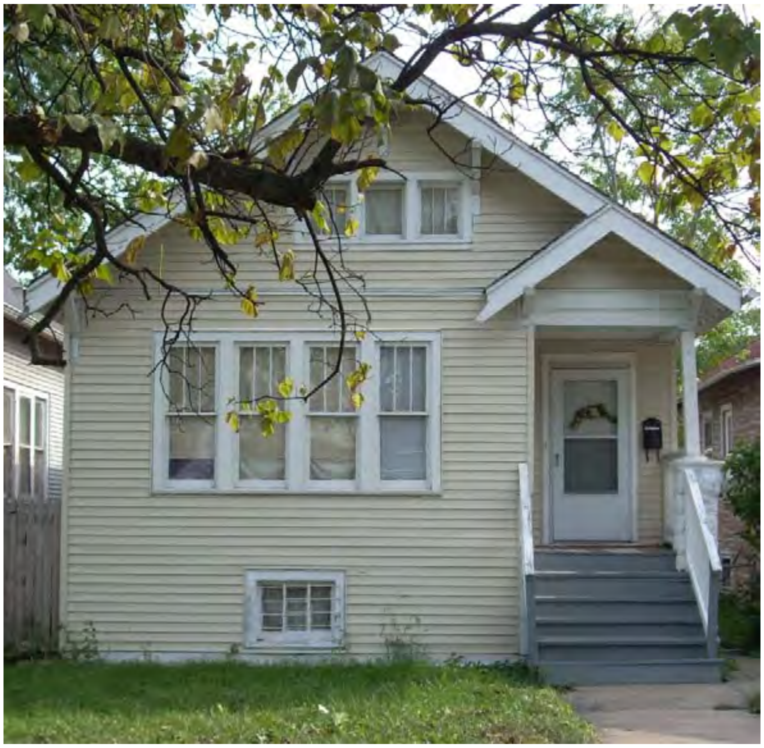
Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Enclosed porch, replacement windows and cladding
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: N/A Historic: N/A		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details Pilasters, Doric column			**Windows** Double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name **Historic:** Not labeled, not in CHRS **Common/Current:** Unknown	**Photos with Captions:** West façade of one-story, single-family, frame residence. 
Property address: 9907 S. Lowe Avenue	
HAARGIS Number: Not in database	
Present Owner and /or Occupant: Unknown	
Property Use **Historic:** Single family residence **Current:** Single family residence	
Date of Construction: 1926 **Architect's Name:** Not in CHRS **Builder/Contractor:** Not in CHRS	
Architectural Style: Vernacular	
Prepared By: C. Tolmie, M. C. Bird, J. Guarino **Photo By:** S. Katz **Date:** September 2012	

Property Description: **Stories:** 1

This one-story frame cottage in the Washington Heights community is situated on a raised basement and is covered with synthetic siding. The building has a bracketed front gable roof covered with asphalt shingles and overhanging eaves with decorative rafters and brackets. The front elevation has a recessed corner porch with hollow core metal door, wood steps and railings, a faux stone corner pier support topped by a squat wood column, and bracketed gable hood. Windows include a strip of three-over-one original wood-sash windows on the first floor and a strip of three casement windows in the gable. This house lacks distinctive architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement door and cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details Brackets under eaves and hood			**Windows** Double-hung, casement
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

10159 S. Michigan Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1918

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

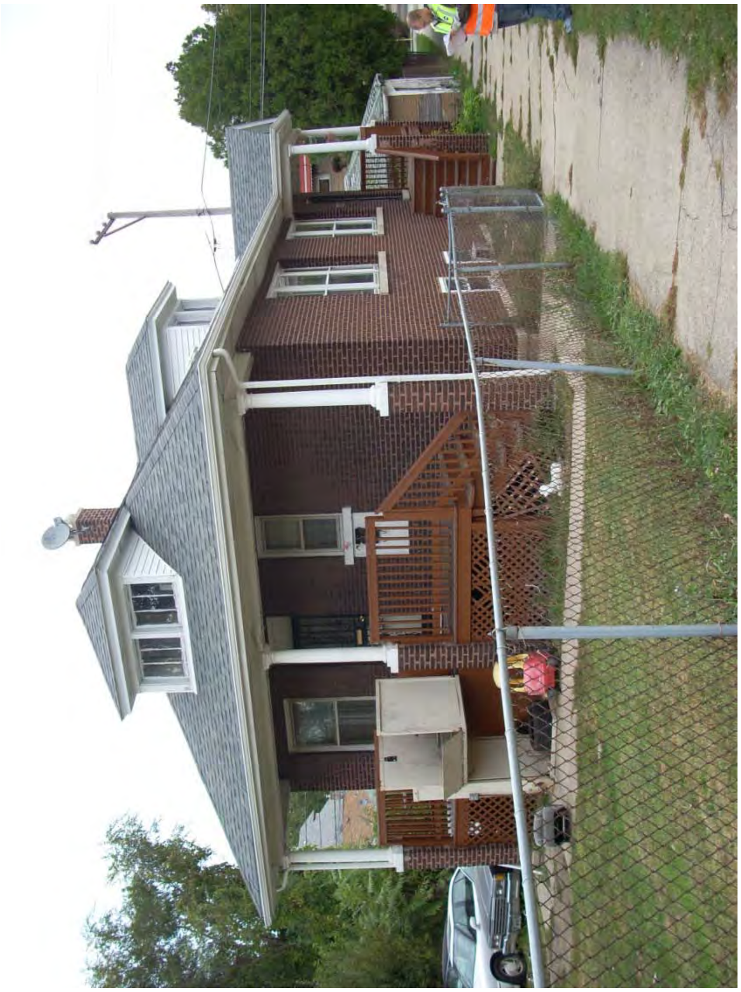
Craftsman

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 30 October 2012

Photos with Captions:
West façade of a one-story single family residence.



Property Description: **Stories:** 1

This one-story brick-clad Craftsman bungalow at the northeast corner of Michigan Avenue and 102nd Street in the Roseland community has a hip roof with asphalt shingles, overhanging eaves, and three hip dormers with original paired wood casement windows. The front elevation wide roof overhang shelters the full-façade porch, which has a wood deck, side-facing wood steps with straight railings, and supports comprised of three brick piers topped by squat Doric columns. The front elevation features a metal storm door flanked by a single non-original one-over-one aluminum-sash window on either side. The 102nd Street elevation has two groups of three non-original one-over-one aluminum-sash windows and a gabled porch at its eastern end. This porch has a wood deck, side-facing wood steps with straight railings, and supports comprised of two brick piers topped by squat Doric columns. This house lacks distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingles	**Roof Features** Dormers	**Roof Type** Hip	
Ornamental Architectural Details Doric columns			**Windows** Double-hung, casement
Outbuildings (*Number and Description*) None			

Local Landmark	**Y [✓ N]**	
National Register Historic Places	**Y [✓ N]**	
National Register Historic District	**Y [✓ N]**	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

10213 S. Michigan Ave.

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Residence

Date of Construction: 1888

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

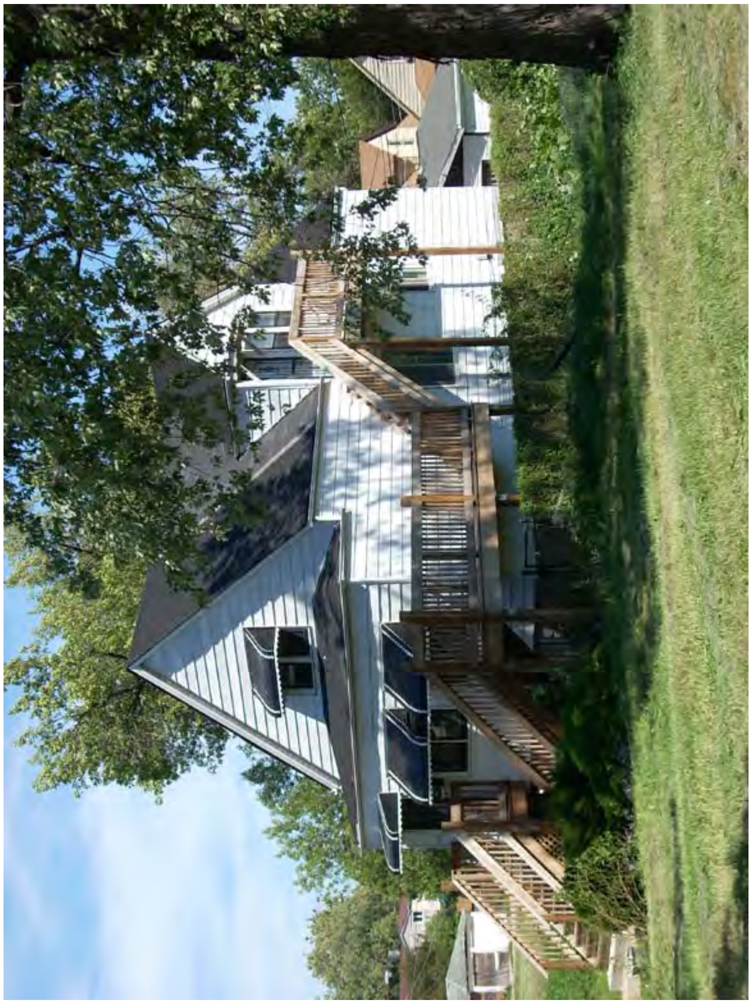
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 3 October 2012

Photos with Captions:
South and west façades of 1.5- story, frame residence.



Property Description: **Stories:** 1.5

This one-and-one-half-story house in the Roseland community is situated on a raised foundation and clad with synthetic siding. It has a gable roof covered with asphalt shingles and gable wall dormers on its side elevations. Its front elevation features an enclosed hip-roofed porch with an off-center door, wood steps, and railings. There are two pairs of windows on the first floor and one pair of windows on the second; windows are modern replacements, including one-over-one, sliding glass, and glass block windows of varying sizes. An exterior wood staircase leads to a non-original door situated in the gable wall dormer of the south elevation. This house does not feature distinguishing architectural features and is not individually eligible for listing on the National Register.

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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows and siding
Condition: [✓ Excellent] Good Poor			
Additional Alterations External staircase added			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** Dormer	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung, glass block, sliding
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

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Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

10259 S. Michigan Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Hill-Top Liquors

Property Use

Historic: Commercial

Current: Commercial

Date of Construction: 1888

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

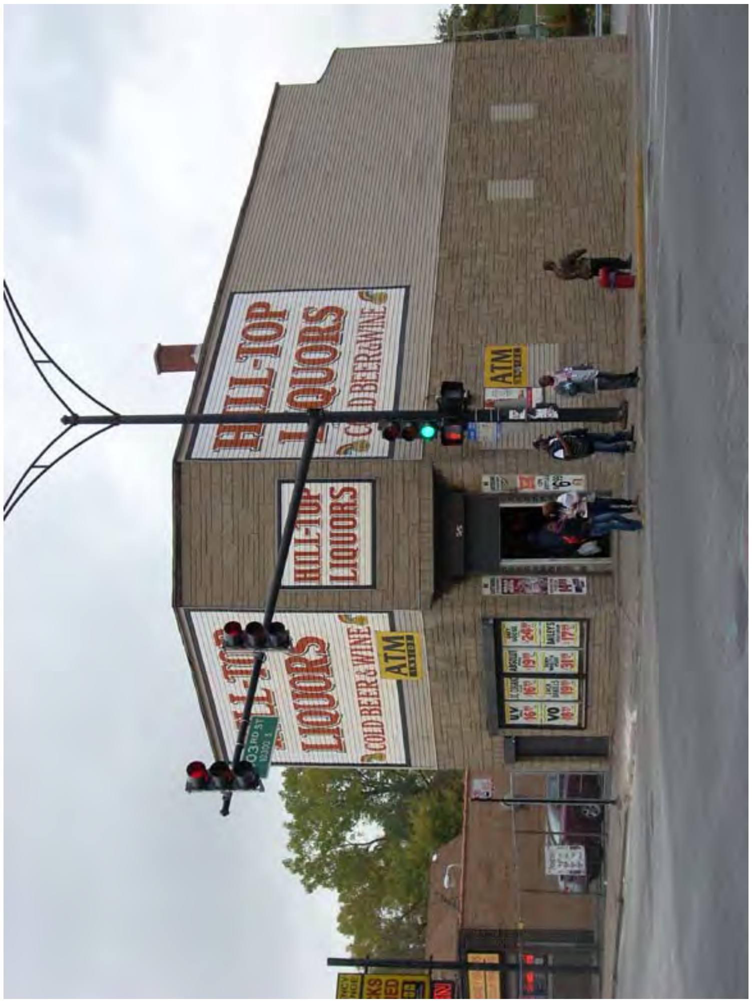
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 30 October 2012

Photos with Captions:
South and west facades of a brick, two-story, commercial building.



Property Description: **Stories:** 2

This two-story commercial building at the northeast corner of Michigan Avenue and 103rd Street in the Roseland community is clad with a stone veneer (lower) and synthetic siding (upper) along both street elevations. The building has a flat roof, a corner entrance door, an off-center door along its Michigan Avenue elevation, and window openings along the first floor of both street elevations. All openings are secured with rolling, corrugated metal blinds. This building lacks integrity and distinguishing architectural features and is not individually eligible for listing on the National Register.

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Security blinds added, cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations Second story covered by signs; first floor windows covered with siding.			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Stone veneer, synthetic siding	
Roof Material Unknown	**Roof Features** None	**Roof Type** Flat	
Ornamental Architectural Details None			**Windows** Glass block, covered
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
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Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11156 S. Michigan Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Taurus Flavors, Fashion Corner

Property Use

Historic: Commercial

Current: Commercial

Date of Construction: 1923

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

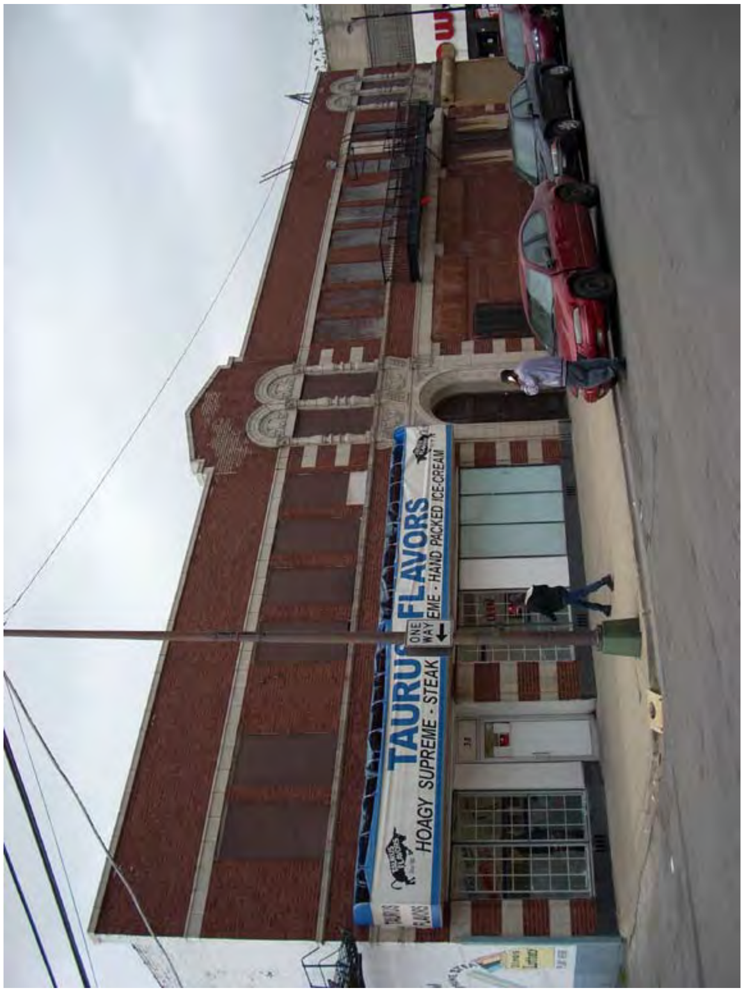
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 30 October 2012

Photos with Captions:
East façade of a brick, two-story, commercial building.



Property Description: **Stories:** 2

This two-story commercial building at the northwest corner of Michigan Avenue and 112th Street in the Roseland community is clad with brown face brick on its front elevation and common brick on its side elevations. The building has a flat roof and parapet. The front elevation features a centrally located entrance pavilion with a round-arch entrance and paired windows directly above surrounded by terra cotta with Classical motifs, including pilasters, shields, and swags. The entrance features original single-light wood double doors with round-arch transom. A pair of windows on the north end of the front elevation is also surrounded by terra cotta with Classical motifs, including scrolled brackets, shields, and swags. The first floor's original storefront configuration is visible but most storefront bays, which are separated by brick and tile pilasters, have either been retrofitted with non-original doors and windows or in-filled with brick. The southernmost entrance is flanked by multi-light, fixed-pane windows. The nineteen window openings that stretch across the second story front elevation have all been covered with plywood. Other detailing includes terra cotta belt courses. Although this building has retained some nice terra cotta detailing, it does not feature sufficient overall integrity to qualify as individually eligible for listing on the National Register.

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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement doors and windows
Condition: Excellent [✓ Good] Poor			
Additional Alterations Some openings covered with plywood and others in-filled with brick.			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details Terra cotta pilasters, brackets, shields, belt courses, and swags, brick pilasters, surround			**Windows** Fixed-pane, covered
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

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Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11200-11206 S. Michigan Avenue

HAARGIS Number:

140649

Present Owner and /or Occupant:

Fashion Gear, Top Gold, Gucci Foot Mart, Beyond Urban Art Gallery

Property Use

Historic: Commercial

Current: Mixed-Use

Date of Construction: 1904

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

Vernacular (11200), Queen Anne (11206)

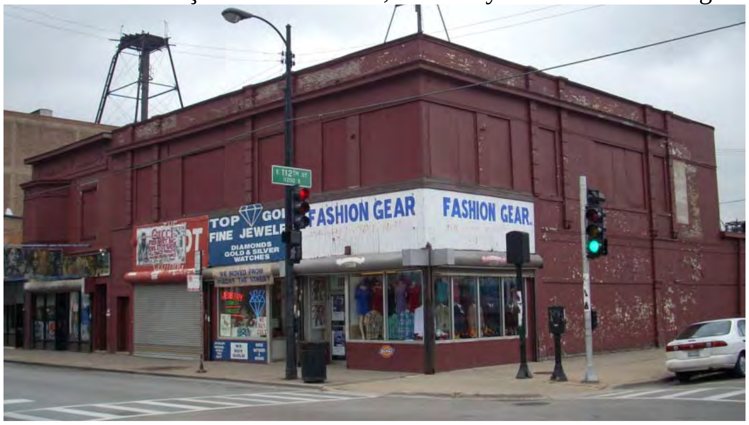
Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

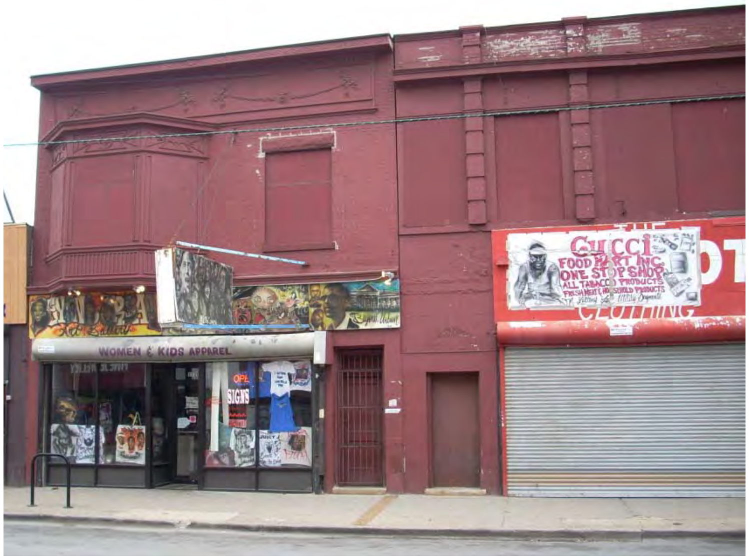
Date: 30 October 2012

Photos with Captions:

North and east façades of two brick, two-story mixed-use buildings.



East façade of southern end of buildings.



Property Description: **Stories:** 2

This address comprises two conjoined buildings. The building at 11200 (top photo) is a two-story brick-clad, flat-roofed commercial building at the southwest corner of Michigan Avenue and 112th Street in the Roseland community. The first floor has three non-original Michigan Avenue storefronts, including one at the corner, which has plate glass display windows and plate-glass double-doors. The middle storefront has plate glass display windows and a plate glass door. The southernmost storefront is hidden behind a roll-down corrugated metal covering. The second floor window openings on both street elevations of this building are in-filled with what appears to be wood. Detailing includes second floor pilasters, brick stringcourses, and a metal cornice.

The building at 11206 is the adjacent two-story, brick-clad, flat-roofed Queen Anne style commercial building to the south. Its non-original storefront has a recessed plate glass door and flanking plate glass display windows. An off-center wood paneled door with a transom provides access to the second floor, which has a three-sided metal bay and a single window; all window openings on the second floor have been in-filled with wood. Detailing includes swags at the parapet level and a metal cornice with dentil molding with decorative designs above the bay as well. These two buildings lack integrity and distinguishing architectural features and are not individually eligible for listing on the National Register.

Structural Survey

Integrity: Unaltered	[✓ Slight Modification]	Major Alteration	**Additional Notes/Descriptions** Replacement doors, windows
Condition: Excellent	[✓ Good]	Poor	
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details Pilasters, metal cornice, brick stringcourses, swags and geometric designs, dentil molding			**Windows** Fixed-pane, covered
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

CHRS coded orange: 11206 S Michigan Ave property possesses some architectural feature or historical association that made it potentially significant in the context of the surrounding community.

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Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11563-11565 S. Michigan Ave

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Industrial

Current: Industrial

Date of Construction: 1900 (1962 addition)

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

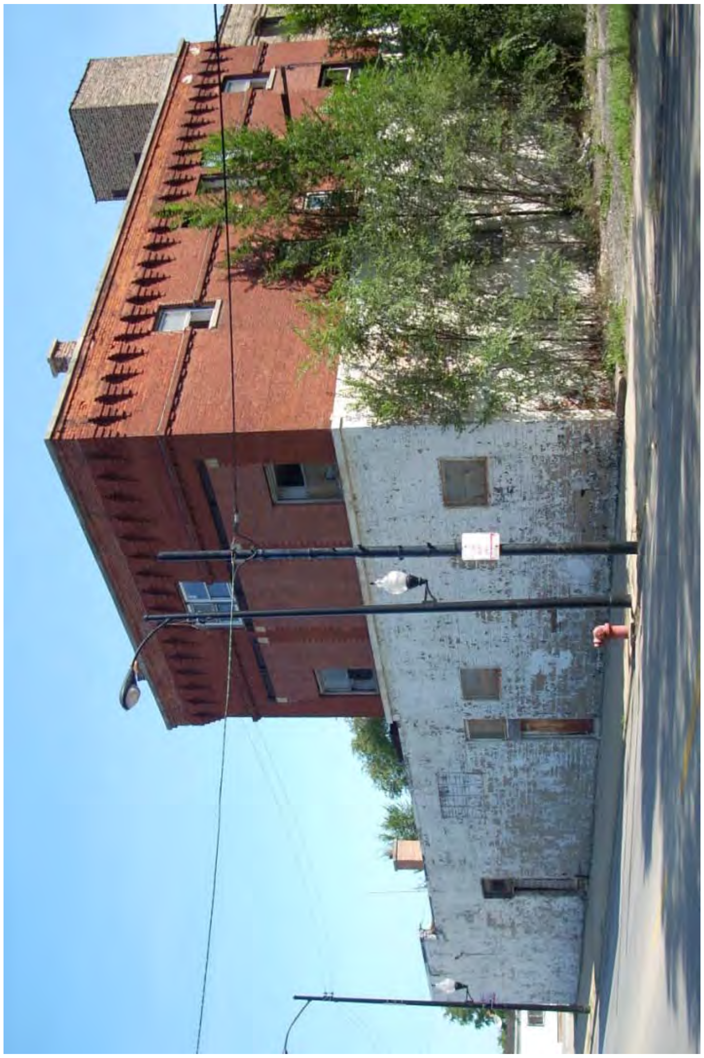
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 10 September 2012

Photos with Captions:
North and east façades of two-story, brick, industrial building.



Property Description:

Stories: 2

This two-story industrial building in West Pullman has a flat roof and parapet. A one-story, flat-roofed north wing is a later addition (1962). The original building has been drastically altered with new brick cladding on the first floor and the removal of original doors and windows on the front elevation. The first floor of the front elevation currently features two small non-original windows. The original window openings on the second floor of the front elevation have been in-filled with brick. Two one-over-one windows have been installed on either side. Window openings on the side elevations have all been altered as well. The parapet retains original decorative brick corbelling along the front and side elevations. This building does not feature sufficient integrity or distinguishing architectural features to qualify as individually eligible for listing on the National Register.

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Structural Survey

Integrity:			**Additional Notes/Descriptions**
Unaltered	Slight Modification	[✓ Major Alteration]	Replacement windows, openings in-filled, later addition
Condition:			
Excellent	[✓ Good]	Poor	
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details Brick corbelling			**Windows** Double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
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Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11592 S. Michigan Ave.

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

EZ Phone

Property Use

Historic: Mixed-use

Current: Mixed-use

Date of Construction: 1888

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

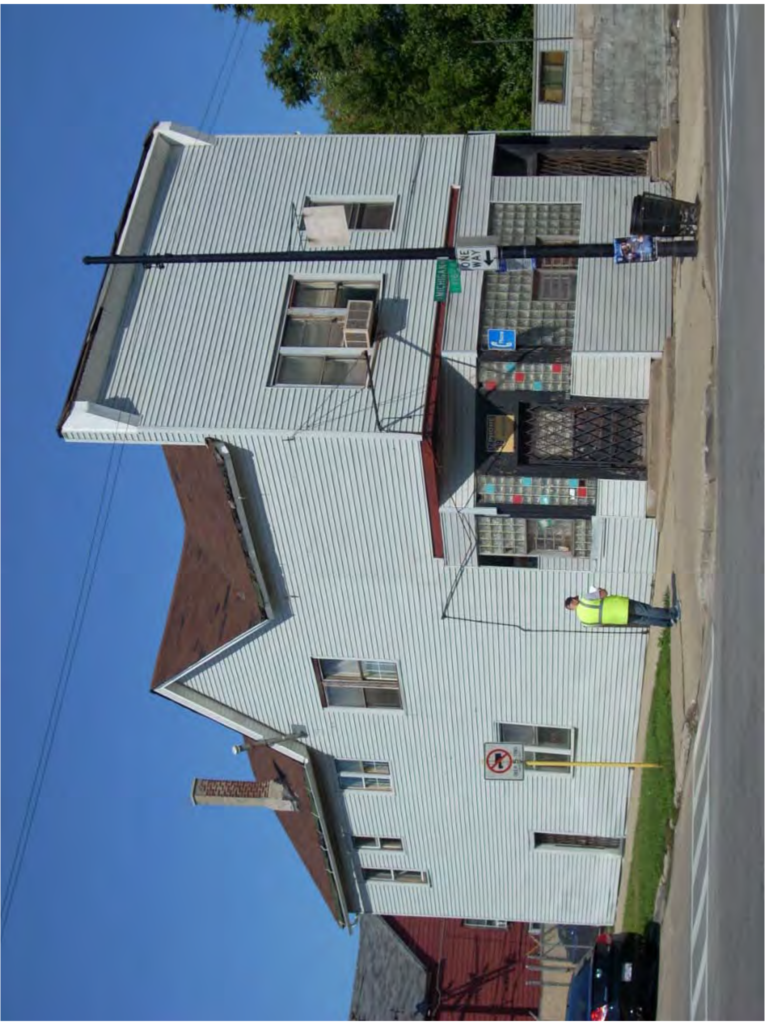
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 10 September 2012

Photos with Captions:
East and south façades of two-story, frame building.



Property Description: **Stories:** 2

This two-story frame building at the northwest corner of Michigan Avenue and 116th Street in the West Pullman community is clad with synthetic siding and has a cross-gable roof covered with asphalt shingles. Its front (Michigan Avenue) elevation features a tall false front, a recessed corner storefront entrance flanked by non-original glass block windows, an off-center metal door with transom that provides access to second floor apartments, and four one-over-one windows. Fenestration along the 116th Street elevation is also comprised of one-over-one windows. This building does not feature sufficient integrity or distinguishing architectural features to qualify as individually eligible for listing on the National Register.

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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows & cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** Parapet	**Roof Type** Cross-Gable	
Ornamental Architectural Details None			**Windows** Double-hung, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
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Marengo, Illinois 60152
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Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11593 S Michigan Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Step of Faith

Property Use

Historic: Commercial (Upholstery, 1938)

Current: Mixed-Use

Date of Construction: 1883

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

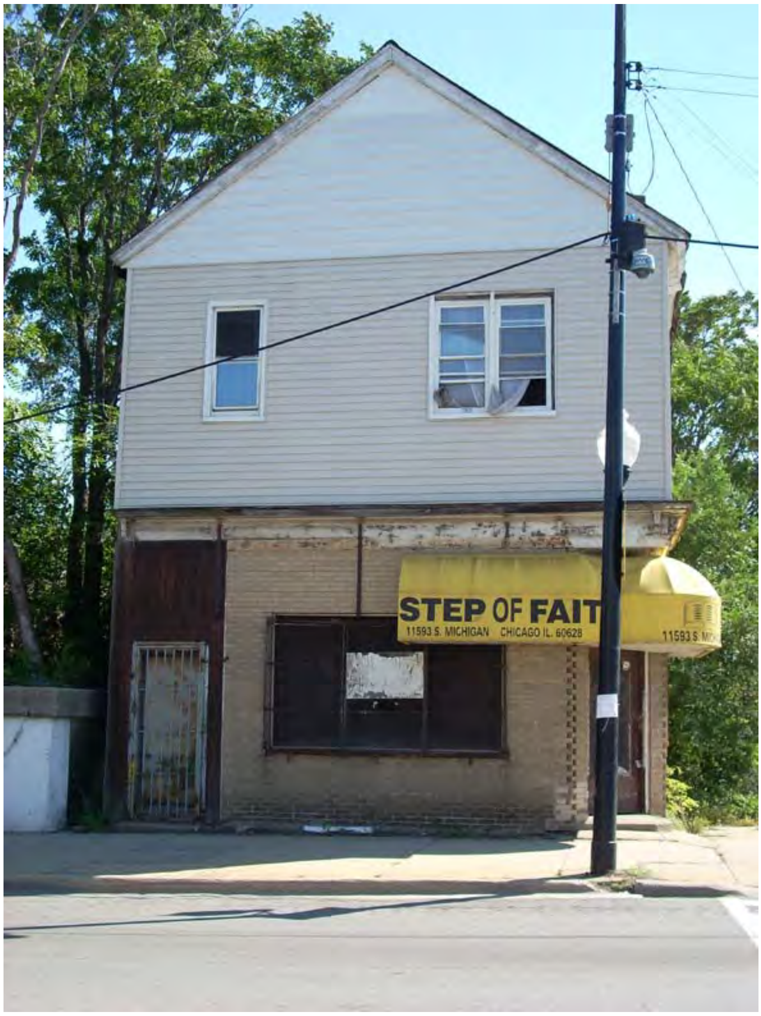
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 2 October 2012

Photos with Captions:
West façade of two-story, mixed-use building.



Property Description: **Stories:** 2

This two-story, frame, mixed-use building at the northeast corner of Michigan Ave. and 116th Street in the West Pullman community is clad with synthetic siding (upper) and brick (lower) and has a front gable roof with asphalt shingles. The front elevation has a recessed brick storefront with an entrance at corner and one at the opposite end, which is covered with plywood. Neither the doors nor the windows appear to be original. The cornice above the first floor includes wood brackets. The second floor on both street elevations features non-original one-over-one aluminum-sash windows. This building lacks integrity, does not have distinguishing architectural features, and is not individually eligible for listing on the National Register.

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Structural Survey

Integrity: Unaltered	Slight Modification	[✓ Major Alteration]	**Additional Notes/Descriptions** Replacement windows, doors, and cladding
Condition: Excellent	[✓ Good]	Poor	
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding (upper), Brick (lower)	
Roof Material Asphalt	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details Wood brackets along first floor cornice line			**Windows** Double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11611 S. Michigan Ave.

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Multi-family residence

Date of Construction: 1888

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

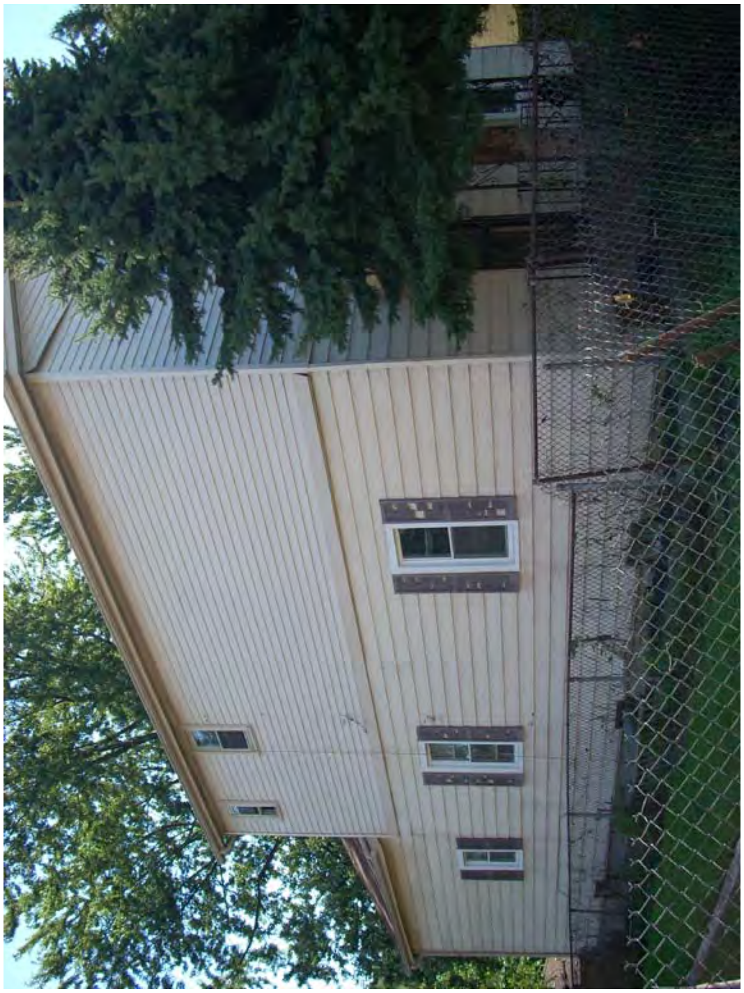
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 2 October 2012

Photos with Captions:
West and north façades of two-story, multi-family, frame building.



Property Description: **Stories:** 2

This two-story frame house in the West Pullman community is clad with synthetic siding and has a front gable roof with asphalt shingles. Its front elevation features an off-center non-original hollow core metal door fronted by a concrete stoop with metal railings and open metal posts supporting a metal canopy. There are two windows on the first floor and two on the second, all of which are non-original one-over-one aluminum sash.

The 1938 Sanborn shows this residence as a 1.5-story building with a round bay pavilion. Subsequent alterations, including the addition of a full second floor have heavily altered this building. This house lacks integrity, does not have distinguishing architectural features, and is not individually eligible for listing on the National Register.

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Structural Survey

Integrity: Unaltered Slight Modification [✓ Major Alteration]			**Additional Notes/Descriptions** Replacement windows and siding, removal of bay pavilion, addition of a second floor
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

9822 S. Normal Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1947

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

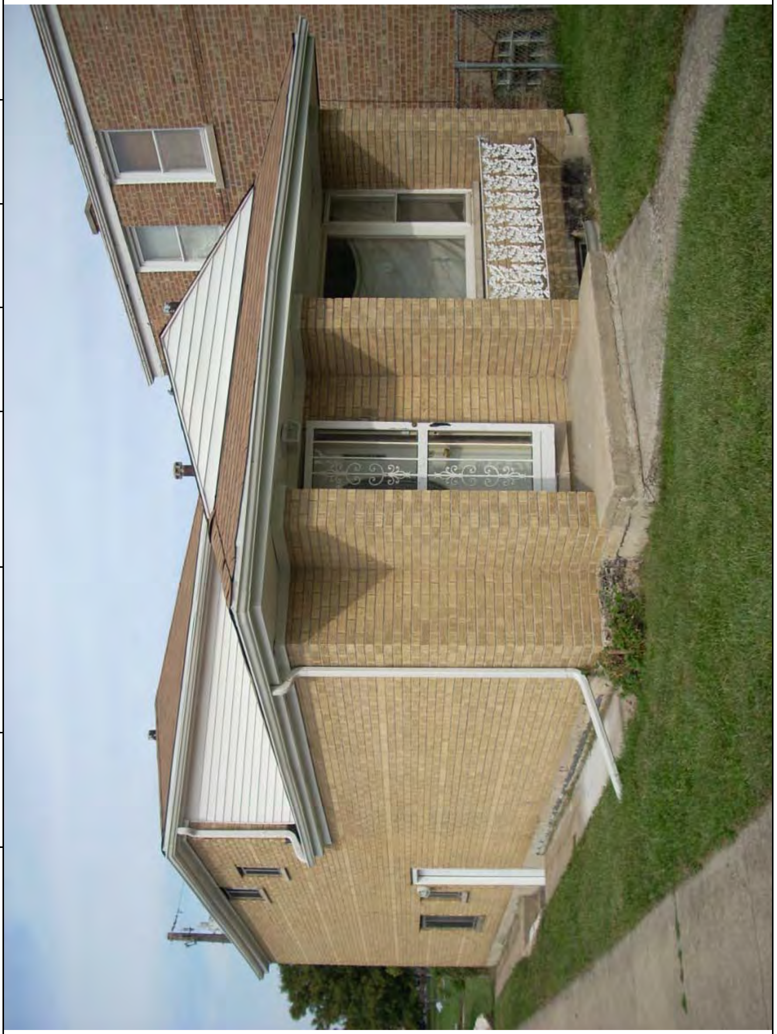
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: September 2012

Photos with Captions:
East and south façades of split-level, brick, single family residence.



Property Description: **Stories:** Split-level

This back-split house at the northwest corner of Normal Avenue and 98th Place in the Washington Heights community is clad with buff brick, while the front façade of the split is covered with synthetic siding. The rear portion of the house has a hip roof, while the front portion has a gable-on-hip roof with a synthetic-covered gable. The front elevation has an off-center hollow core metal door, a picture window flanked by non-original one-over-one aluminum-sash windows with a decorative lacey metal panel beneath, and a wide overhang supported by three brick piers. It does not display distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows and doors
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick (main), Synthetic siding (upper)	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Hip/Gable	
Ornamental Architectural Details Decorative panels			**Windows** Double-hung, fixed-pane
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

9900 S. Normal Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1953

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

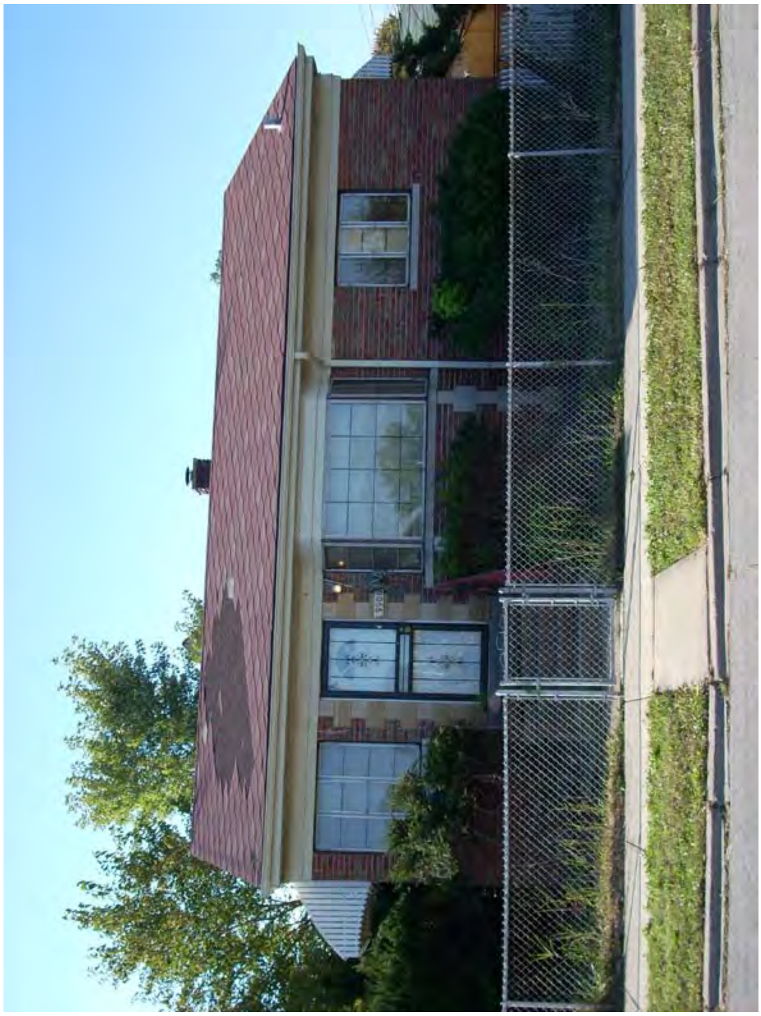
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 29 October 2012

Photos with Captions:
East façade of a brick, one-story, single family residence.



Property Description: **Stories:** 1

This one-story home at the southwest corner of Normal Avenue and 99th Street in the Washington Heights community sits on a raised basement and is clad with face brick. The building has a side-gabled roof covered with asphalt shingles and synthetic-clad gabled ends. The front elevation has an off-center hollow core metal door, concrete steps with metal railings, a centrally located three-sided multi-light window bay, and two strips of three casement windows. Detailing includes stone quoins at the base of the window bay, decorative buff brick flanking the door, and concrete sills. This house lacks distinctive architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

<table>
<tr><td colspan="3">Integrity:
Unaltered [✓ Slight Modification] Major Alteration</td><td>Additional Notes/Descriptions
Replacement cladding in gable end</td></tr>
<tr><td colspan="3">Condition:
[✓ Excellent] Good Poor</td><td></td></tr>
<tr><td colspan="3">Additional Alterations</td><td></td></tr>
<tr><td colspan="2">Structure Usage
Current: NA
Historic: NA</td><td>Exterior Wall Surface
Brick (main),
Synthetic siding (gable)</td><td></td></tr>
<tr><td>Roof Material
Asphalt</td><td>Roof Features
None</td><td>Roof Type
Gable</td><td></td></tr>
<tr><td colspan="3">Ornamental Architectural Details
Stone quoins, brick at entrance, and concrete sills</td><td>Windows
Fixed-pane, casement</td></tr>
<tr><td colspan="4">Outbuildings (<i>Number and Description</i>)
None</td></tr>
</table>

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

9925 S. Normal Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1946

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

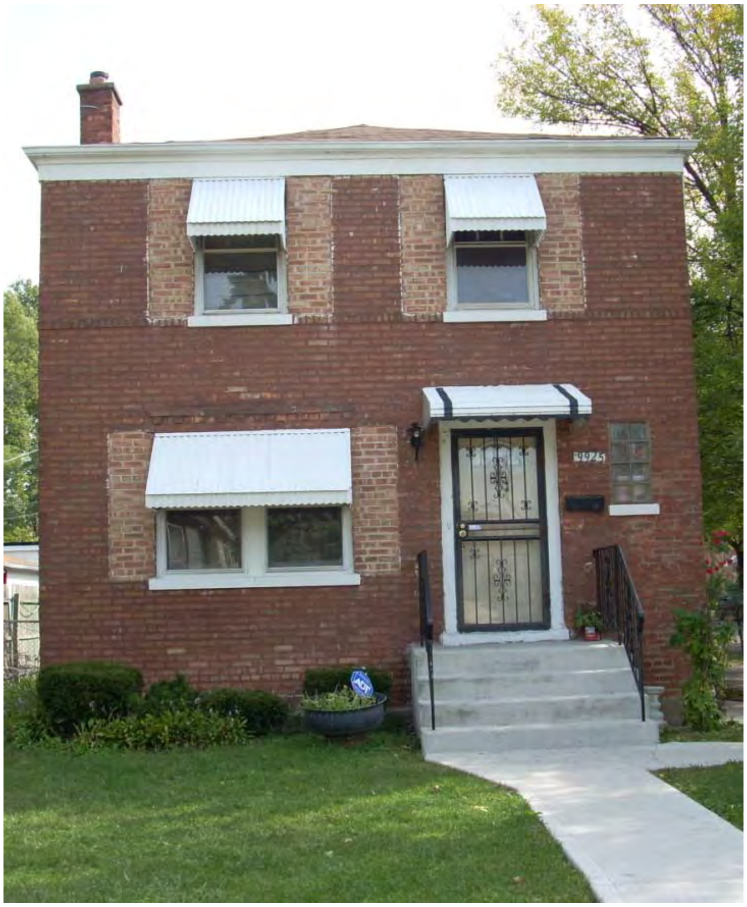
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: September 2012

Photos with Captions:
West façade of two-story, brick, single-family residence.



Property Description: **Stories:** 2

This two-story brick-clad house at the southeast corner of Normal Avenue and 99th Place in the Washington Heights community is situated on a raised basement with glass block windows. The building has a hip roof covered with asphalt shingles. Its front elevation has an off-center non-original hollow core metal door, a small adjacent glass block window, concrete steps with metal railings, a pair of non-original double-hung windows on the first floor, and two non-original double-hung windows on the second floor. The door and all front elevation windows have metal awnings. Details include a brick stringcourse and corbelling above first floor window. The difference in the brick colors relates to the removal of shutters. It does not display distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Hip	
Ornamental Architectural Details Brick stringcourse and corbelling, decorative glass block			**Windows** Double-hung, glass block
Outbuildings (*Number and Description*) Garage			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

9939 S. Normal Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1939

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

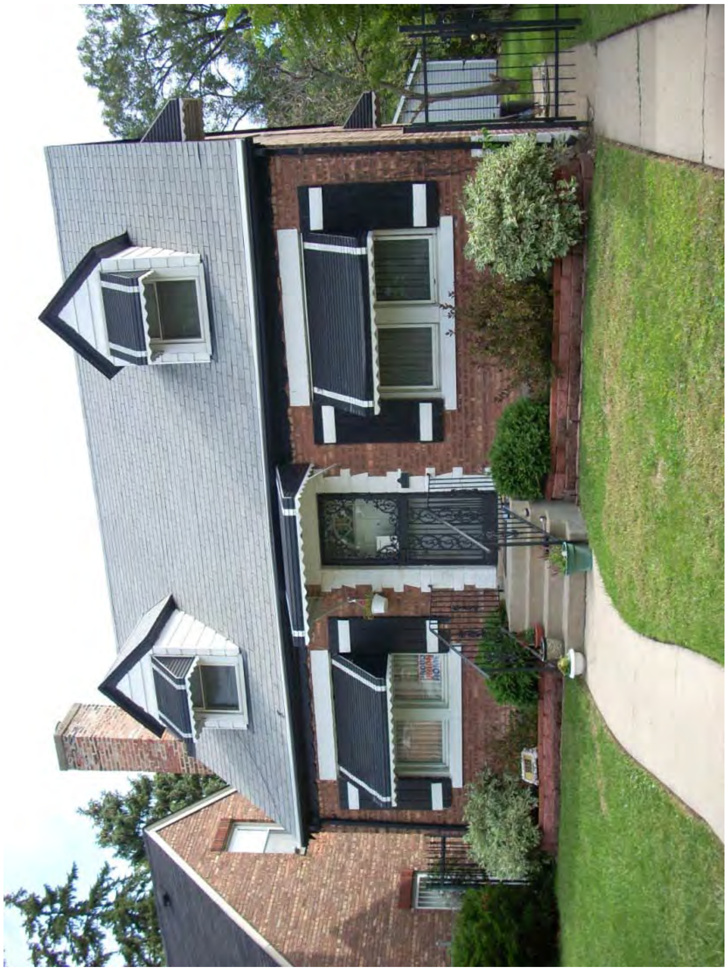
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 10 October 2012

Photos with Captions:
West façade of a brick, one-story, single family residence.



Property Description: **Stories:** 1

This one-story brick-clad house in the Washington Heights community is situated on a raised brick basement with glass block windows. It has a side-gabled roof covered with asphalt shingles. Its front elevation has a centrally located hollow metal paneled door with fanlight, concrete steps with metal railings, two sets of paired windows, and two aluminum-clad gabled dormers, each of which has one window. Windows are non-original one-over-one aluminum-sash. All front elevation windows and the front door feature metal awnings. Detailing includes concrete sills, lintels, and quoins surrounding the door. This house does not feature sufficient distinguishing architectural features to qualify as individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

<table>
<tr><td colspan="3">Integrity:
Unaltered [✓ Slight Modification] Major Alteration</td><td>Additional Notes/Descriptions
Replacement door, windows, and siding on dormers</td></tr>
<tr><td colspan="3">Condition:
[✓ Excellent] Good Poor</td><td></td></tr>
<tr><td colspan="3">Additional Alterations
Dormers may be a later addition</td><td></td></tr>
<tr><td colspan="2">Structure Usage
Current: NA
Historic: NA</td><td>Exterior Wall Surface
Brick</td><td></td></tr>
<tr><td>Roof Material
Asphalt shingles</td><td>Roof Features
Dormers</td><td>Roof Type
Side gable</td><td></td></tr>
<tr><td colspan="3">Ornamental Architectural Details
Quoins at entrance, concrete sills and lintels</td><td>Windows
Double-hung, glass block</td></tr>
<tr><td colspan="4">Outbuildings (<i>Number and Description</i>)
None</td></tr>
</table>

Local Landmark	**Y [✓ N]**	
National Register Historic Places	**Y [✓ N]**	
National Register Historic District	**Y [✓ N]**	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

10457 S. Normal Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1927

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

Dutch Colonial

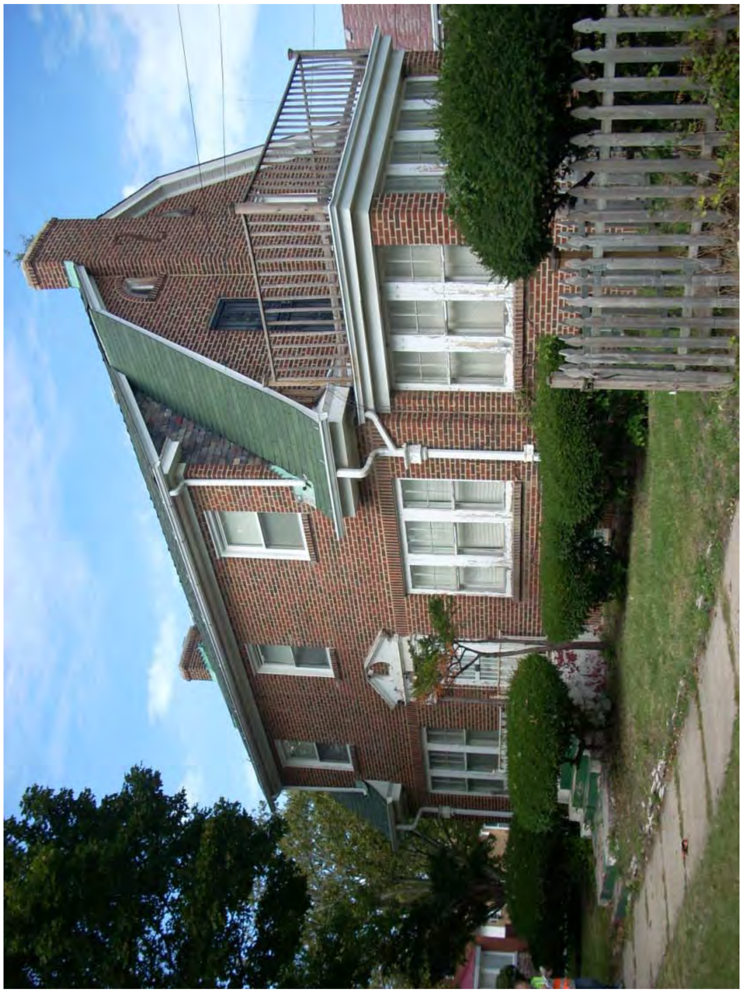
Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 12 October 2012

Photos with Captions:

South and west façades of a brick, two-story, single family residence.



Property Description: **Stories:** 2

This two-story Dutch Colonial style house at the northeast corner of Normal Avenue and 105th Street in the Roseland community is situated on a raised basement and is clad with red face brick. The building has a side-gambrel roof covered with asphalt shingles, a one-story flat-roofed enclosed sun porch surrounded by four-over-one wood-sash windows along its east elevation, and exterior chimneys on both side elevations. The front (105th Street) elevation has a centrally located non-original hollow core metal paneled door, concrete steps, and metal railings. The door was once flanked by fluted pilasters with geometric capitals. The shaft of one of these pilasters has been removed as has the base of the extant pilaster. The door is topped by an unadorned frieze band and a broken pediment and is flanked by strips of three six-over-one and four-over-one wood-sash windows on either side. The shed-roofed second floor of the front elevation has three non-original one-over-one aluminum-sash windows. This house does not have sufficient distinguishing architectural features to qualify as individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

<table>
<tr><td colspan="3">Integrity:
Unaltered [✓ Slight Modification] Major Alteration</td><td>Additional Notes/Descriptions
Replacement door and some windows; pilasters compromised</td></tr>
<tr><td colspan="3">Condition:
[✓ Excellent] Good Poor</td><td></td></tr>
<tr><td colspan="3">Additional Alterations</td><td></td></tr>
<tr><td colspan="2">Structure Usage
Current: NA
Historic: NA</td><td>Exterior Wall Surface
Brick</td><td></td></tr>
<tr><td>Roof Material
Asphalt shingle</td><td>Roof Features
Dormers</td><td>Roof Type
Side-gambrel</td><td></td></tr>
<tr><td colspan="3">Ornamental Architectural Details
Door surround (frieze band, pediment, pilasters)</td><td>Windows
Double-hung, glass block</td></tr>
<tr><td colspan="4">Outbuildings (<i>Number and Description</i>)
None</td></tr>
</table>

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

10511 S. Normal Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1949

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

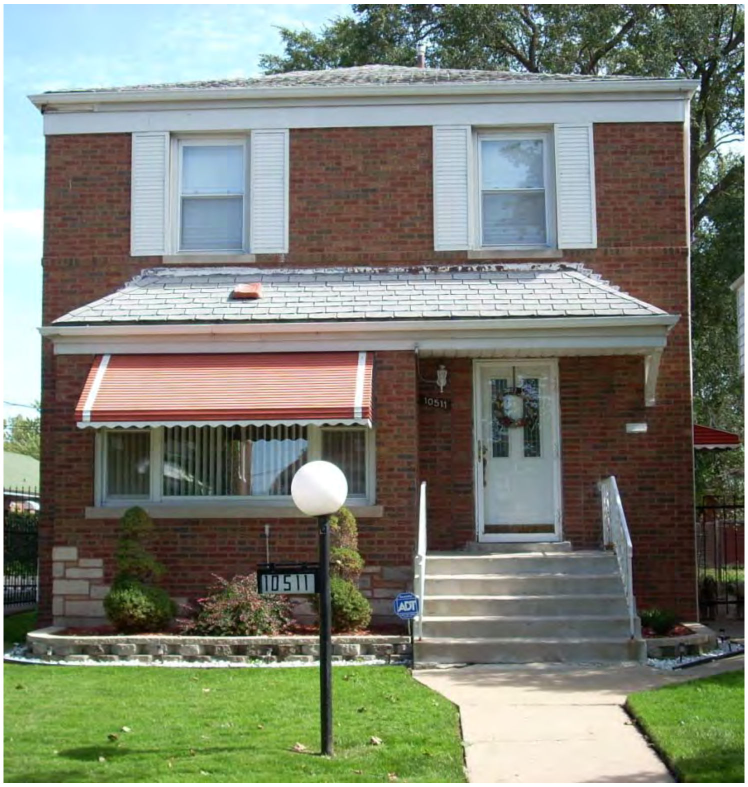
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 12 October 2012

Photos with Captions:
West façade of a brick, two-story, single family residence.



Property Description: **Stories:** 2

This two-story brick-clad house in the Roseland community is situated on a raised basement with glass block windows and has a hip roof covered with asphalt shingles. Its front elevation features a pent roof that spans the three-sided living room bay and an off-center hollow core metal door that is accessed by concrete steps with metal railings. The living room bay features a picture window flanked by non-original one-over-one aluminum-sash windows that are sheltered by a metal awning. The second floor of the front elevation has two non-original one-over-one aluminum-sash windows. Detailing includes concrete sills and decorative stones at the basement level. It does not feature distinguishing architectural features nor does it retain sufficient integrity, therefore, is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement door and windows
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Hip	
Ornamental Architectural Details Stone accents at basement level, concrete sills			**Windows** Double-hung, fixed-pane, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

10641 S. Normal Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1925

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

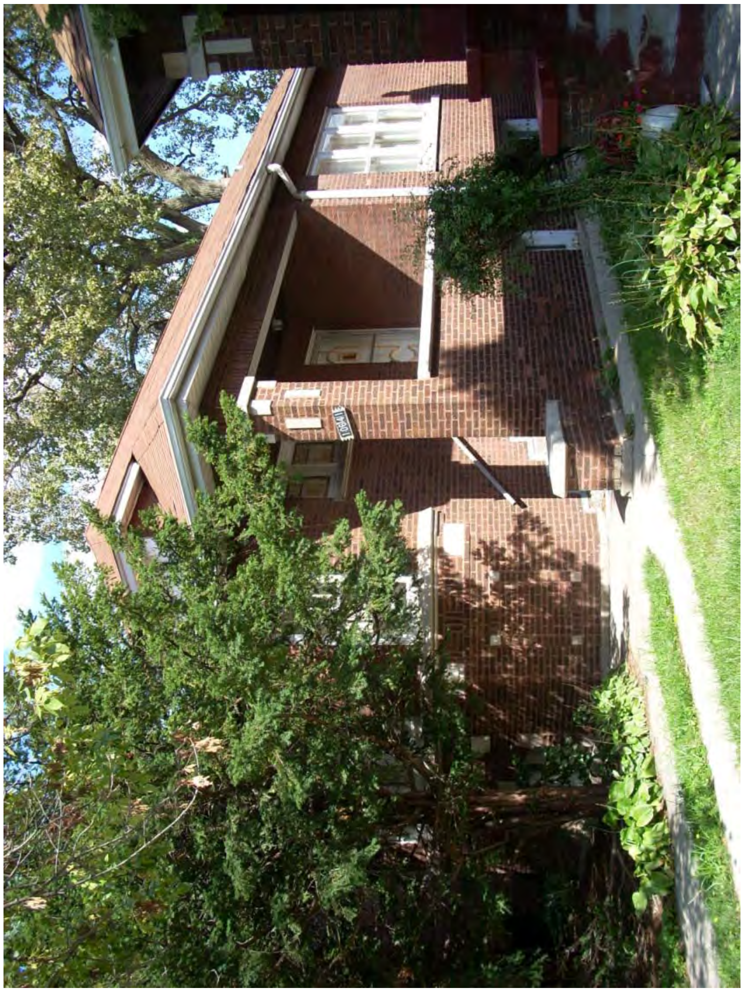
Chicago Style Bungalow

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 15 October 2012

Photos with Captions:
West façade of a brick, one-story, single family residence.



Property Description: **Stories:** 1

This one-story bungalow in the Roseland community is situated on a raised basement with glass block windows and clad with brown brick. The building has a hip roof covered with asphalt shingles, overhanging eaves, and a hip dormer, the windows of which were obscured by foliage. The house features a recessed corner porch with a hollow core metal door, concrete steps, low brick sidewalls, and a brick corner pier. The front elevation’s projecting living room bay has a series of double-hung windows, a decorative brick soldier course, stone insert blocks, and concrete sills. This house does not display distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: [✓ Unaltered] Slight Modification Major Alteration			**Additional Notes/Descriptions**
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingle	**Roof Features** Dormer	**Roof Type** Hip	
Ornamental Architectural Details Brick soldier course, stone insert blocks, concrete sills			**Windows** Double-hung, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

10701 S. Normal Avenue
Alternate: 459 W. 107th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1955

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

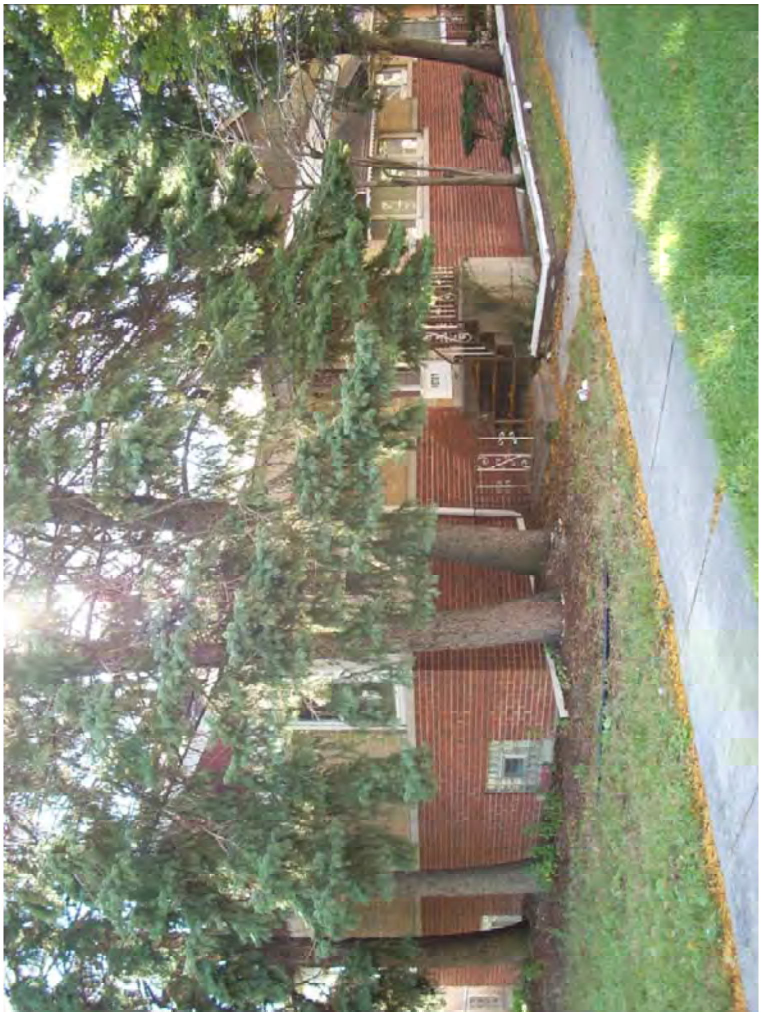
Ranch

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 30 October 2012

Photos with Captions:
West façade of a brick, one-story, single family residence.



Property Description: **Stories:** 1

This one-story Ranch house at the corner of Normal Avenue and 107th Street in the Roseland community is situated on a raised basement and is clad with orange face brick below the sill line and buff brick above. The building has a cross-gable roof covered with asphalt shingles; gable ends are clad in synthetic siding. A gabled rear wing contains an attached two-car garage. The front (Normal Ave.) elevation has an off-center metal storm door sheltered by a roof overhang supported by a corner open metal post, concrete steps with metal railings, two pairs of non-original one-over-one aluminum-sash windows, and a non-original picture window flanked by one-over-one aluminum-sash windows on the main block. The front elevation of the rear wing has an off-center metal storm door, a roof overhang supported by two open metal posts, and a large glass block window. The side (107th Street) elevation has corner windows that are obscured by foliage but appear to be casements. This house lacks distinctive architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

<table>
<tr><td colspan="3">Integrity:
Unaltered [✓ Slight Modification] Major Alteration</td><td>Additional Notes/Descriptions
Replacement windows</td></tr>
<tr><td colspan="3">Condition:
[✓ Excellent] Good Poor</td><td></td></tr>
<tr><td colspan="3">Additional Alterations</td><td></td></tr>
<tr><td colspan="2">Structure Usage
Current: NA
Historic: NA</td><td>Exterior Wall Surface
Brick (main)
Synthetic siding (gable ends)</td><td></td></tr>
<tr><td>Roof Material
Asphalt shingle</td><td>Roof Features
None</td><td>Roof Type
Cross-gable</td><td></td></tr>
<tr><td colspan="3">Ornamental Architectural Details
None</td><td>Windows
Double-hung, fixed-pane, glass block, casement</td></tr>
<tr><td colspan="4">Outbuildings (<i>Number and Description</i>)
Attached two-car garage.</td></tr>
</table>

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

10747 S. Normal Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1928

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

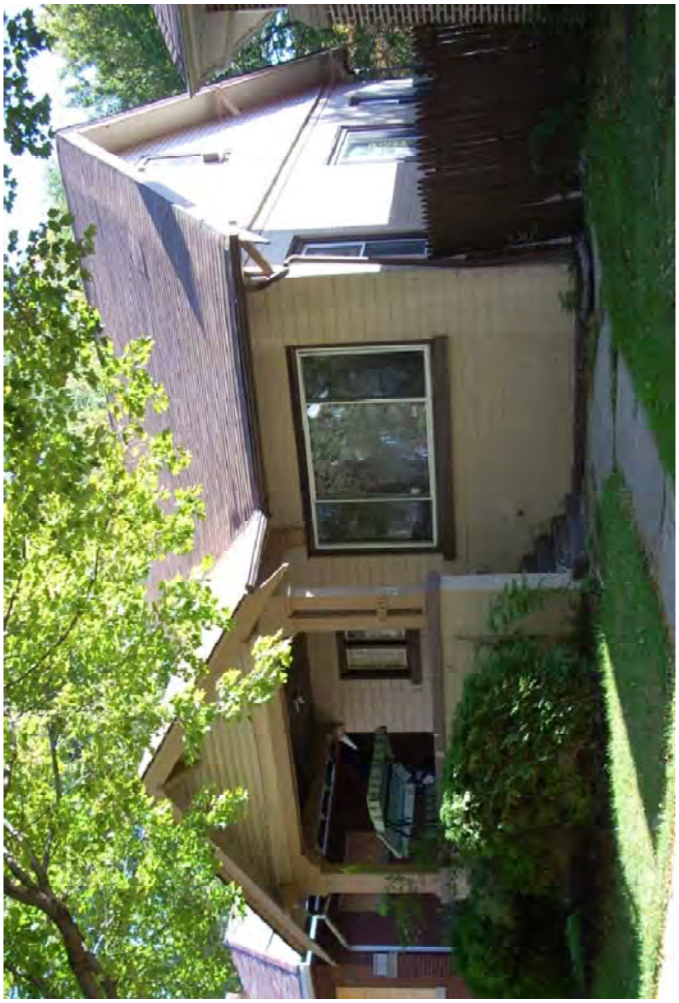
Craftsman

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 30 October 2012

Photos with Captions:
South and east façades of a one-story, single family residence.



Property Description: **Stories:** 1

This one-story Craftsman cottage in the Roseland community has a side-gable roof with overhanging eaves and decorative knee braces. The building is made of masonry units with aluminum siding in its gabled ends. Its front elevation has a recessed corner porch with overhanging gable roof with rafter tails, low walls, and squat, squared wood column supports. The building features a front door tucked into the side of the living room bay, a strip of three casements, and a picture window flanked by what appear to be casements. All windows on the front elevation feature concrete sills. Side elevation windows appear to be non-original one-over-one aluminum-sash. This house lacks distinctive architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows and cladding
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Masonry (main), Synthetic siding (gable ends)	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details Knee braces, rafter tails, squared columns, concrete sills			**Windows** Double-hung, casement, double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

10853 S. Normal Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1929

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

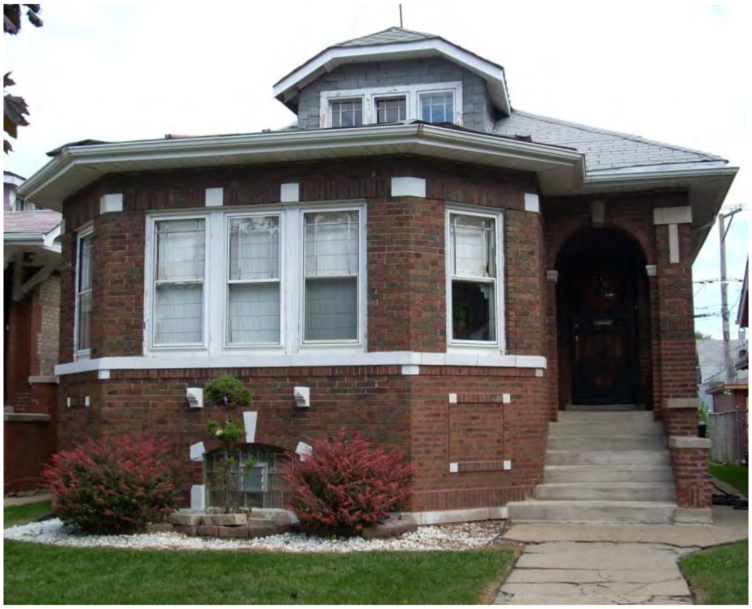
Chicago Style Bungalow

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 12 October 2012

Photos with Captions:
West façade of a brick, one-story, single family residence.



Property Description: **Stories:** 1

This one-story house in the Roseland community is situated on a raised basement with glass block windows and is clad with brown brick. The building has a hip roof covered with asphalt shingles, overhanging eaves, and a hip-on-gable dormer with three original wood casement windows. The house features a recessed corner porch with a metal storm door, concrete steps, low brick sidewalls, a brick corner pier, and arched front and side openings. The front elevation’s projecting living room bay has a series of double-hung windows, a decorative brick soldier course, stone insert blocks, and concrete sills. This house does not feature distinguishing architectural elements and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: [✓ Unaltered] Slight Modification Major Alteration			**Additional Notes/Descriptions**
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingles	**Roof Features** Dormer	**Roof Type** Hip	
Ornamental Architectural Details Brick soldier courses, stone insert blocks, concrete sills			**Windows** Double-hung, casement, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

10959 S. Normal Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1938

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

Minimal Traditional

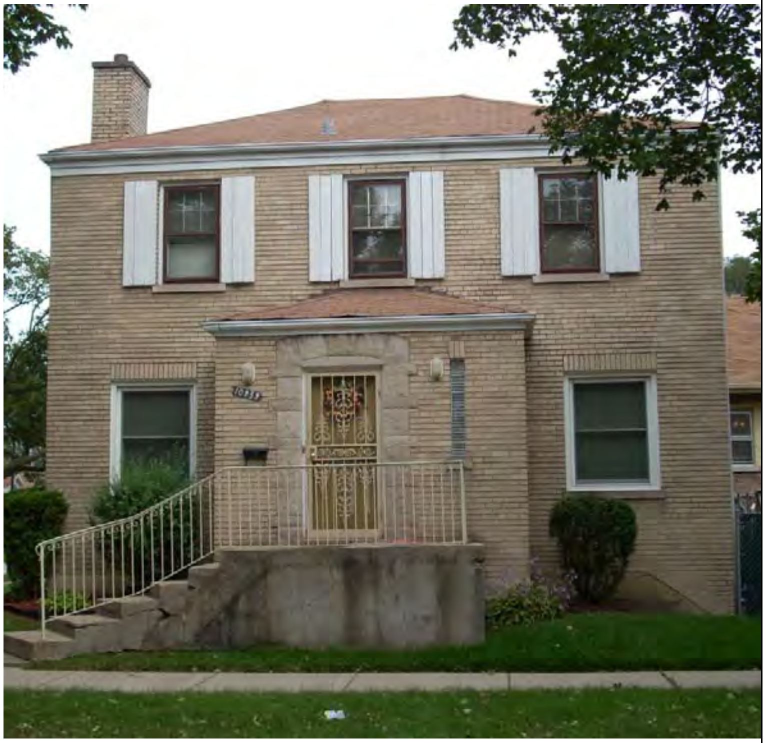
Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 16 September 2012

Photos with Captions:

South façade of two-story, brick single-family residence.



Property Description: **Stories:** 2

This two-story house at the corner of Normal Avenue and 110th Street in the Roseland community is clad with buff brick and has a hip roof covered with asphalt shingles, an exterior buff brick chimney, and a raised basement. Its front elevation features a centrally located hipped-roof entrance vestibule with a door that is surrounded by decorative stones. A vertical strip of glass blocks adjacent to the door accents the façade. Concrete steps and metal railings lead to the entrance. There are five windows—two on the first floor and three on the second. The first floor windows are non-original one-over-one aluminum-sash while the second floor windows are six-over-one. Detailing includes concrete sills and brick flat arch window lintels. This house lacks sufficient distinguishing architectural features to qualify as individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingles	**Roof Features** None	**Roof Type** Hip	
Ornamental Architectural Details Stone around entrance, concrete sills, brick flat arch window lintels			**Windows** Double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

11001 S. Normal Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: circa 1938

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

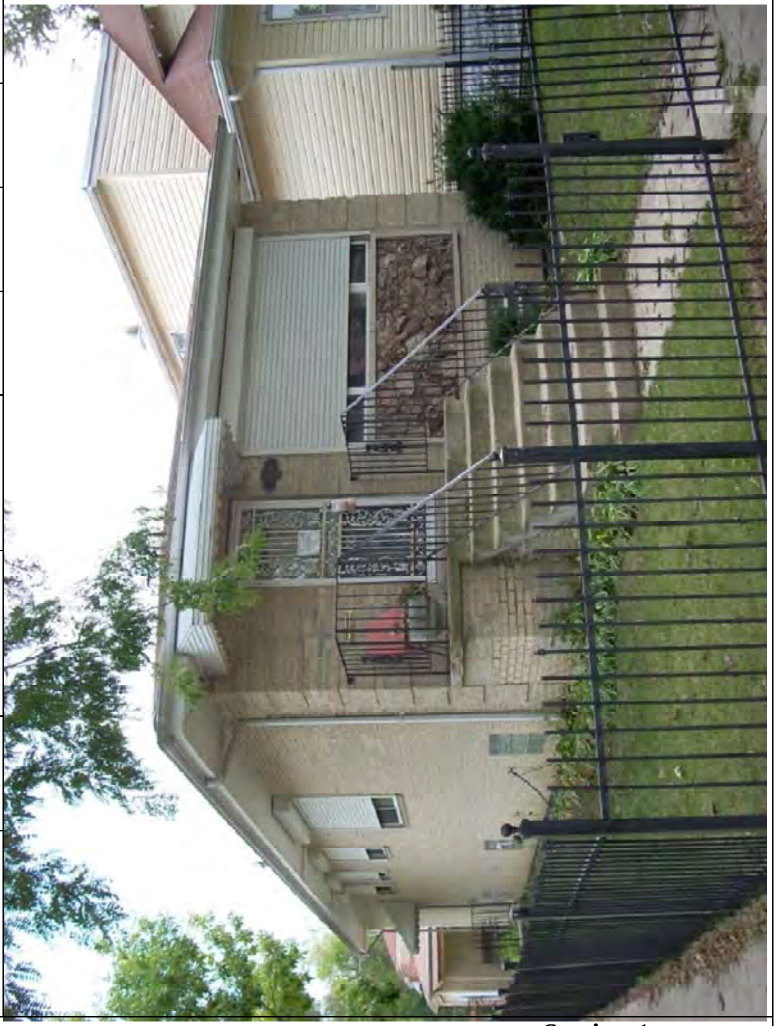
Vernacular

Prepared By: C. Tolmie

Photo By: S. Katz

Date: 16 September 2012

Photos with Captions:
West façade of one-story, brick single-family residence.



Property Description: **Stories:** 1

This one-story house in the Roseland community is situated on a raised basement with glass block windows. The building has a front elevation clad with buff face brick, a hip roof covered with asphalt shingles, and overhanging eaves. Its front elevation has an off-center entrance with a metal storm door sheltered by a metal awning, concrete steps with metal railings, and a window group with a large decorative faux stone panel beneath. This house lacks sufficient distinguishing architectural features to qualify as individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions**
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Hip	
Ornamental Architectural Details Faux stone panel			**Windows** Glass block, covered
Outbuildings (*Number and Description*) Garage			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

11035 S. Normal Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1924

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

Vernacular

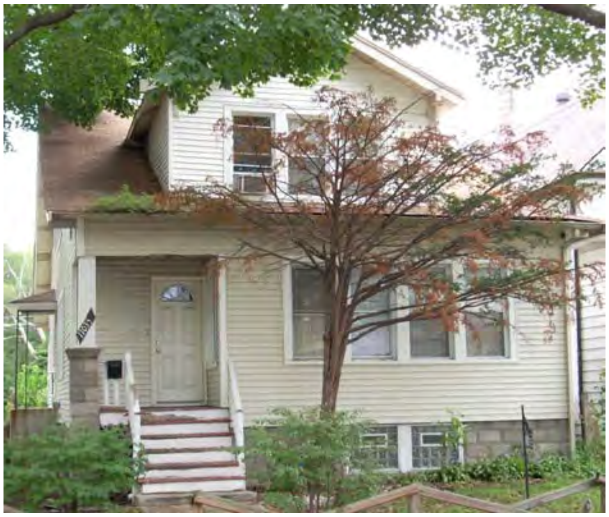
Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

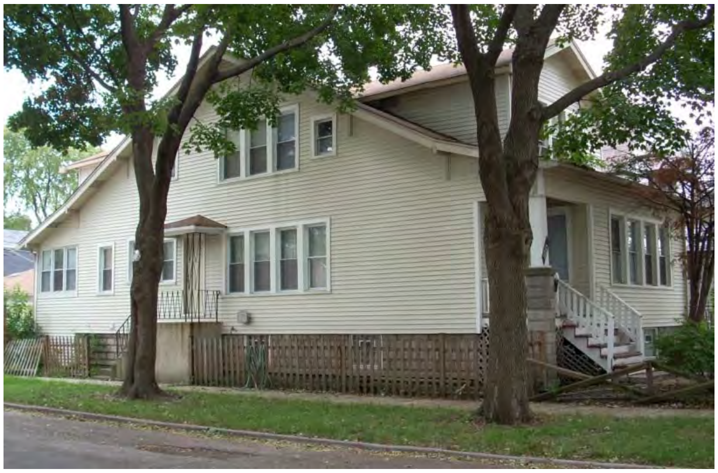
Date: 16 September 2012

Photos with Captions:

West façade of one-story, single family, frame residence.



West and north façades of residence.



Property Description: **Stories:** 1

This single story frame house at the southeast corner of Normal Avenue and 110th Place in the Roseland community is situated on a raised concrete block basement with glass block windows and is covered with synthetic siding. The building has a side gable roof covered with asphalt shingles and flared, bracketed, overhanging eaves. It features both front and rear gable dormers. It has a recessed corner porch with non-original hollow core metal door, a faux stone corner pier topped by a squat squared wood column, and wood steps and railings. The front elevation has a strip of four windows on the first floor and three in the gable. Above the basement, windows are non-original one-over-one aluminum-sash. A small hip-roofed porch is situated along the 110th Place elevation with hollow core metal door (non-original), concrete steps with metal railings, and open metal supports. This house lacks integrity and distinctive architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
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Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration				**Additional Notes/Descriptions** Replacement doors, windows, and cladding
Condition: [✓ Excellent] Good Poor				
Additional Alterations				
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding		
Roof Material Asphalt shingle	**Roof Features** Dormers	**Roof Type** Gable		
Ornamental Architectural Details Squat, square column, bracketed eaves				**Windows** Double-hung, glass block
Outbuildings (*Number and Description*) Garage				

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

9821 S. Parnell Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1961

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

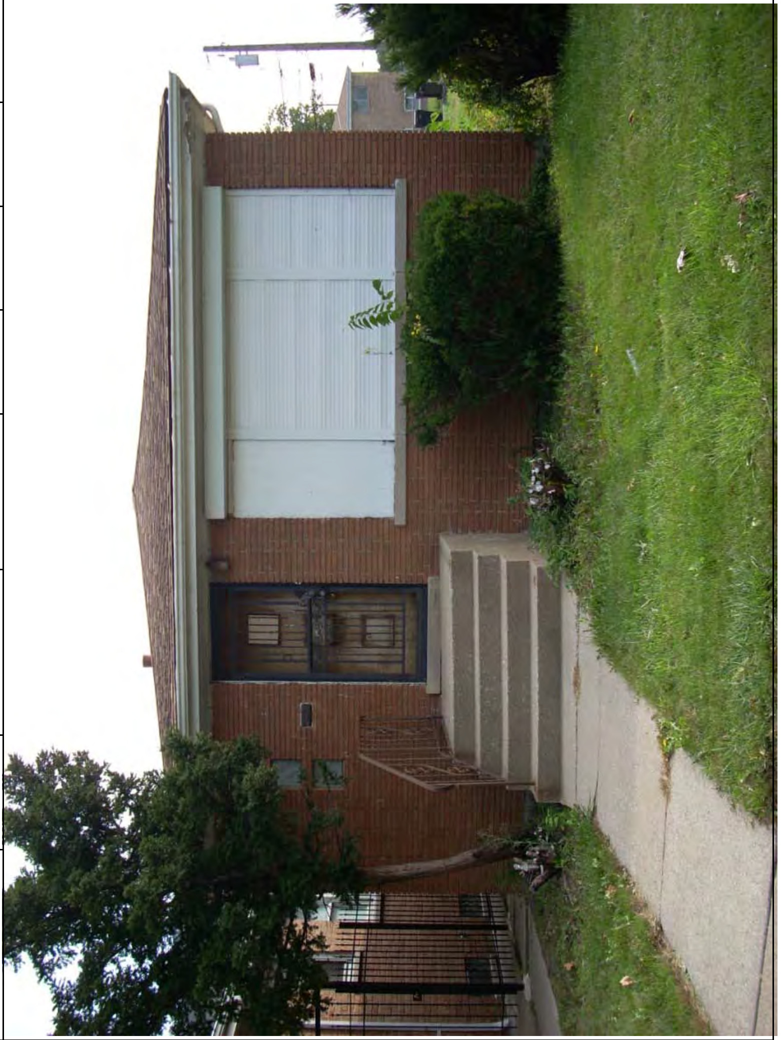
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: September 2012

Photos with Captions:
West façade of one-story, brick, single family residence.



Property Description: **Stories:** 1

This one-story house in the Washington Heights community is situated on a raised basement and is clad with orange face brick on its front elevation and in common brick along its side and rear elevations. The building has a hip roof covered with asphalt shingles. Its front elevation has an off-center wood door, concrete steps with metal railing, and a window group that is covered by a metal shade. Detailing includes a concrete sill and three decorative glass blocks. The side elevation windows are covered with plywood. It does not feature distinguishing architectural elements and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
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Phone (815) 568- 0680

Structural Survey

Integrity:			**Additional Notes/Descriptions**
Unaltered	[✓ Slight Modification]	Major Alteration	Metal shades added, windows not visible
Condition:			
Excellent	[✓ Good]	Poor	
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Hip	
Ornamental Architectural Details Concrete sill, decorative glass blocks			**Windows** covered
Outbuildings (*Number and Description*) Garage			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

9900 S. Parnell Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1950

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

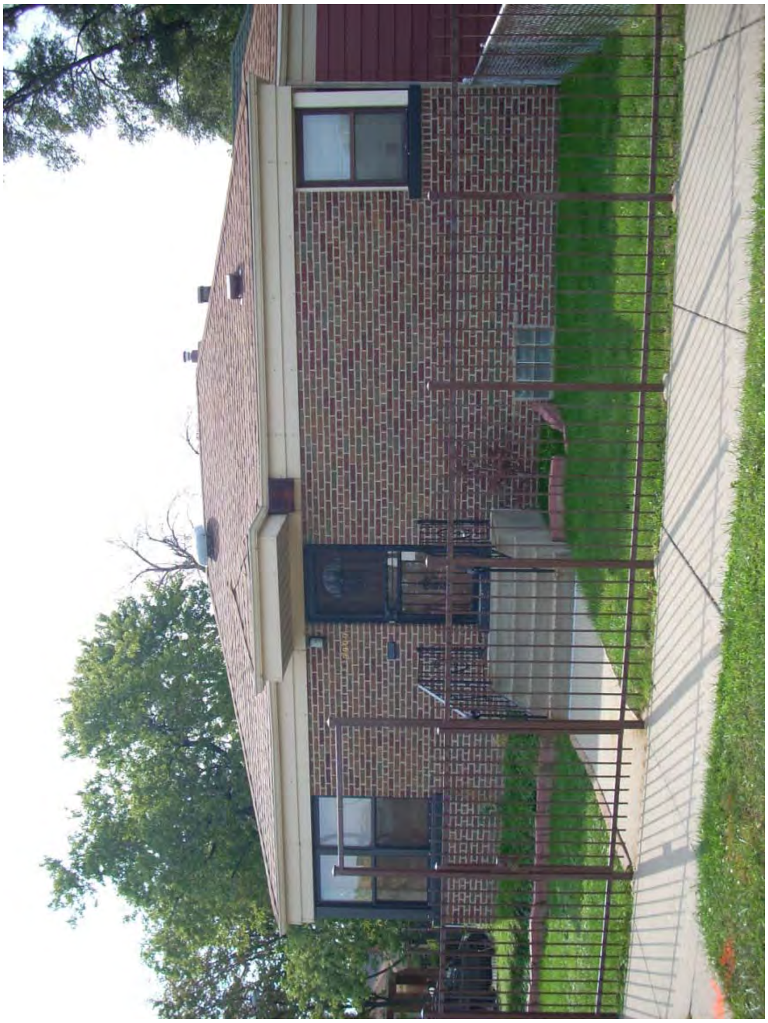
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: September 2012

Photos with Captions:
North façade of one-story, brick, single-family residence.



Property Description: **Stories:** 1

This one-story brick-clad house at the southwest corner of Parnell Avenue and 99th Street in the Washington Heights community has a raised basement and a hip roof covered with asphalt shingles. The front elevation has a centrally located non-original hollow core metal door and three non-original one-over-one aluminum-sash windows—a pair on its south end and one on its north end. Access to the door, which is sheltered by a hipped porch hood, is by concrete steps with a metal rail. Its 99th Street elevation has two picture windows—one on either end. This house lacks distinctive architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Hip	
Ornamental Architectural Details None			**Windows** Double-hung, fixed-pane
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

9901 S. Parnell Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1966

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

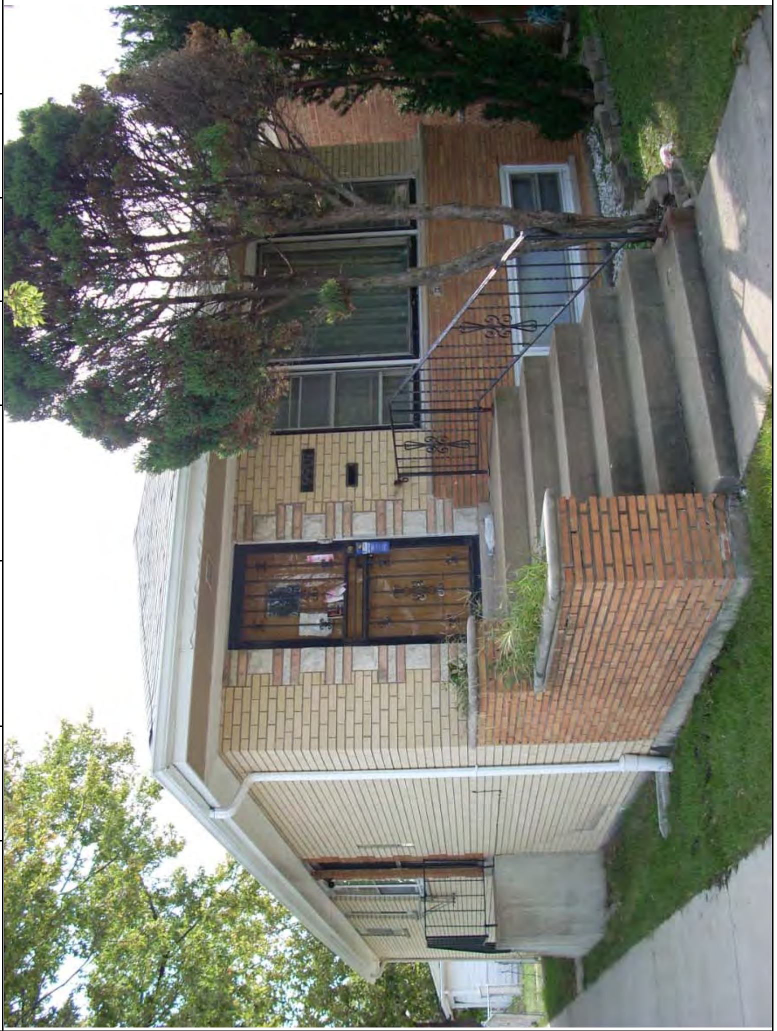
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: September 2012

Photos with Captions:
West façade of one-story, single-family, brick residence.



Property Description: **Stories:** 1

The one-story house at the southeast corner of Parnell Avenue and 99th Street in the Washington Heights community is situated on a raised basement and has a hip roof covered with asphalt shingles. The front elevation is clad with orange brick below the sill line and in buff brick above with decorative stone around the entrance. The front elevation has a wide roof overhang, an off-center wood door, concrete steps with a metal railing, and a picture window flanked by one-over-one aluminum-sash windows. The side (99th Street) elevation is clad with buff brick, has an off-center wood door with concrete steps and metal railings, and four one-over-one aluminum-sash windows of varying sizes. This standard type of home does not feature distinguishing architectural elements and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
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Structural Survey

Integrity: [✓ Unaltered] Slight Modification Major Alteration			**Additional Notes/Descriptions**
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Hip	
Ornamental Architectural Details Stone surround at entrance			**Windows** Double-hung, fixed-pane
Outbuildings (*Number and Description*) Garage			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11701 S. Peoria Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Multi-family residence

Date of Construction: 1904

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

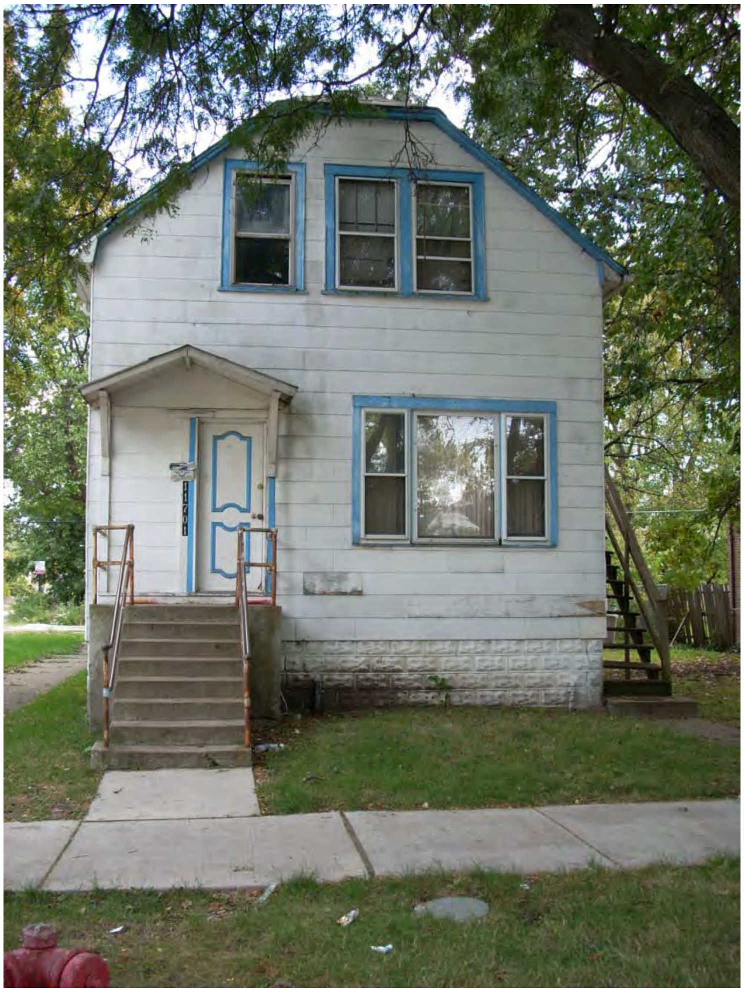
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 24 October 2012

Photos with Captions:
West façade of a 1.5-story, multi-family, frame residence.



Property Description:

Stories: 1.5

This one-and-a-half-story house at the southeast corner of Peoria and 117th streets in the West Pullman community sits on a raised concrete block basement and is clad with synthetic siding. The building has a hip-on-gable roof covered with asphalt shingles. Its front elevation has an off-center non-original hollow core metal door with a bracketed gabled hood and concrete steps with metal pipe railings. Windows are non-original and include a picture window flanked by double-hung windows on the first floor and three double-hung windows on the second floor. This house lacks integrity and distinctive architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement door, windows, and cladding
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Hip-on-gable	
Ornamental Architectural Details Bracketed hood			**Windows** Double-hung, fixed-pane
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11805 S. Peoria Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Flat

Current: Flat

Date of Construction: 1913

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

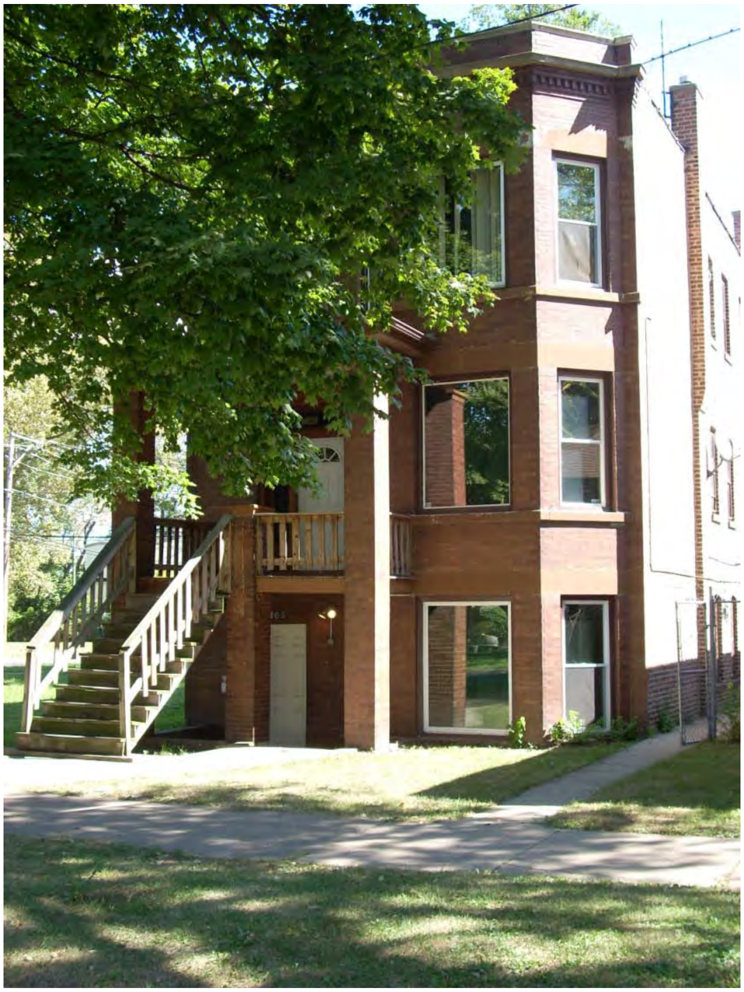
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 24 October 2012

Photos with Captions:
West façade of a brick, two story, three-flat residence.



Property Description: **Stories:** 2

This three-flat residential building in the West Pullman community has flat roof and parapet. Its front elevation is clad with brown face brick and has a full-height three-sided window bay pavilion. The building also includes a hollow core metal door on both the garden apartment and the first floor above. A hip-roof porch with two brick piers, and a wood deck, steps, and railings shelter the entrance. Each floor of the window bay pavilion has a central, single-pane mirrored glass window flanked by one-over-one aluminum sash windows (non-original). Detailing includes concrete sill courses and belt courses, a stone cornice with brick dentil molding, and concrete coping. This building lacks integrity and distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement doors and windows
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details Concrete sill and belt courses, stone cornice with brick dentil molding, concrete coping			**Windows** Double-hung, fixed-pane
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11842 S. Peoria Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1890

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

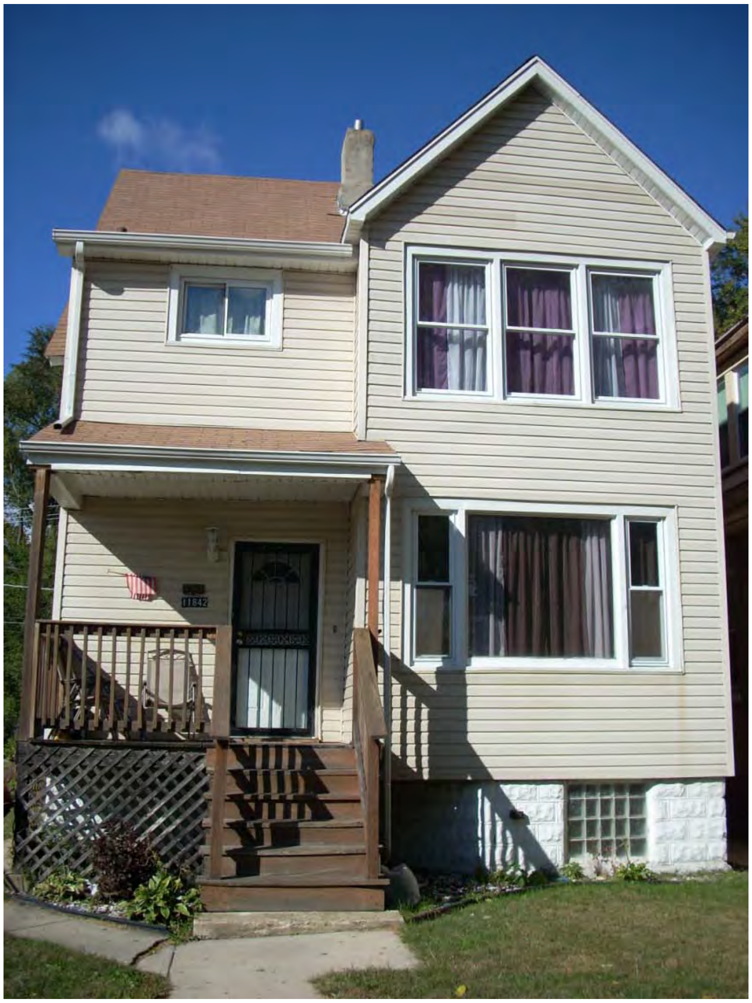
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 24 October 2012

Photos with Captions:
East façade of a two-story, frame, single family residence.



Property Description: **Stories:** 2

This two-story house in the West Pullman community is situated on a raised concrete block basement with glass block windows and is covered with synthetic siding. The building has a cross-gable roof covered with asphalt shingles. The front elevation has a non-original partial-width shed-roofed porch with wood steps and straight railings and posts. Windows are non-original; the first floor of the front elevation has a picture window flanked by one-over-one aluminum-sash windows and the second floor has five: a group of three one-over-one aluminum-sash windows and a pair of casements. This house lacks integrity and distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement door, windows, and cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Cross-gable	
Ornamental Architectural Details None			**Windows** Double-hung, fixed-pane, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

12139 S. Peoria Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Vacant

Property Use

Historic: Industrial

Current: Industrial

Date of Construction: 1951

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

Vernacular

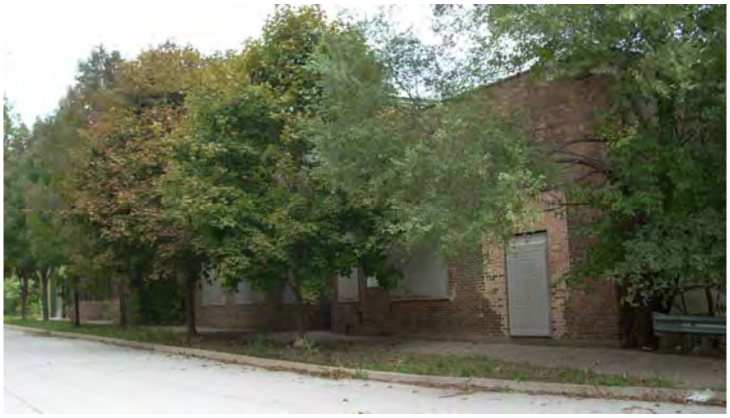
Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz (2012), CCA (2007)

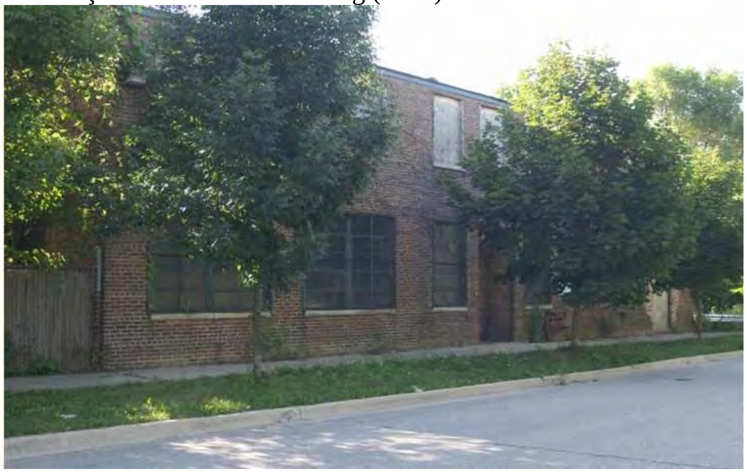
Date: 26 October 2012

Photos with Captions:

West façade of a one-story industrial building (2012).



West façade of industrial building (2007).



Property Description: **Stories:** 1

This one-story flat-roofed commercial building in the West Pullman community has a street elevation clad with face brick. It features a series of window and door openings that are covered with metal security shades. The 2007 photo from the Cook County Assessor shows multi-pane, steel frame windows. This building lacks distinctive architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Openings covered with security shades
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Unknown	**Roof Features** None	**Roof Type** Flat	
Ornamental Architectural Details None			**Windows** covered
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11426 S. Perry Ave.

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

R. E. Russell Paint Company

Property Use

Historic: Industrial

Current: Industrial

Date of Construction: circa 1920s

Architect's Name: Not in CHRS database

Builder/Contractor: Not in CHRS database

Architectural Style:

Vernacular

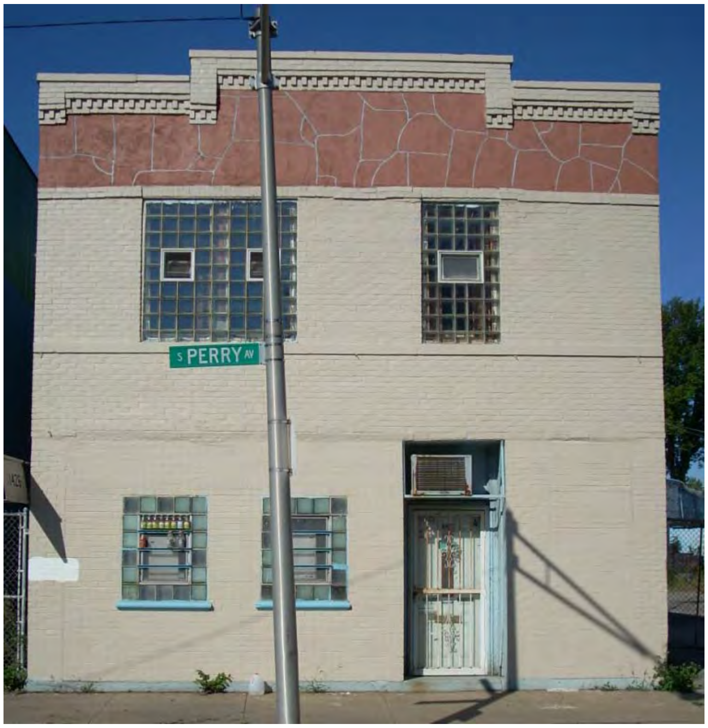
Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 11 September 2012

Photos with Captions

East façades of brick building in industrial complex.



Property Description: **Stories:** 2

This two-story industrial building in the Roseland community has a flat roof and parapet. It sits within an industrial complex bounded by South Perry Avenue, an alley, and the Union Pacific Railroad line. Its front elevation is clad in painted brick. It has a hollow core metal door with in-filled transom and window openings on the first and second floors that are in-filled with glass block with louvered or casement insets. Most of the face brick at the parapet level has been replaced by a stucco-like material. The uppermost portion of the stepped parapet has bricks arranged as decorative dentils. Other buildings within the paint company complex include one-story sheet metal and brick buildings. These buildings lack integrity, do not have distinguishing architectural features, and are not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Alterations] Major Alterations			**Additional Notes/Descriptions** Replacement windows and doors
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: N A Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details Dentils along cornice			**Windows** Glass block, louvered or casement
Outbuildings (*Number and Description)* Sheet metal warehouse on Perry Avenue, paint production plant and storage areas along railroad.			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

In CCA database, age give as 26 years, which was when partial improvements occurred. Structure probably dates to 1900-1930, based on style. Buildings shown on following page are part of the industrial complex.

Brick and sheet metal industrial buildings within complex.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11439 S. Perry Avenue
Alternate: 11439 Pippin Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Industrial

Current: Industrial

Date of Construction: 1892

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

Vernacular

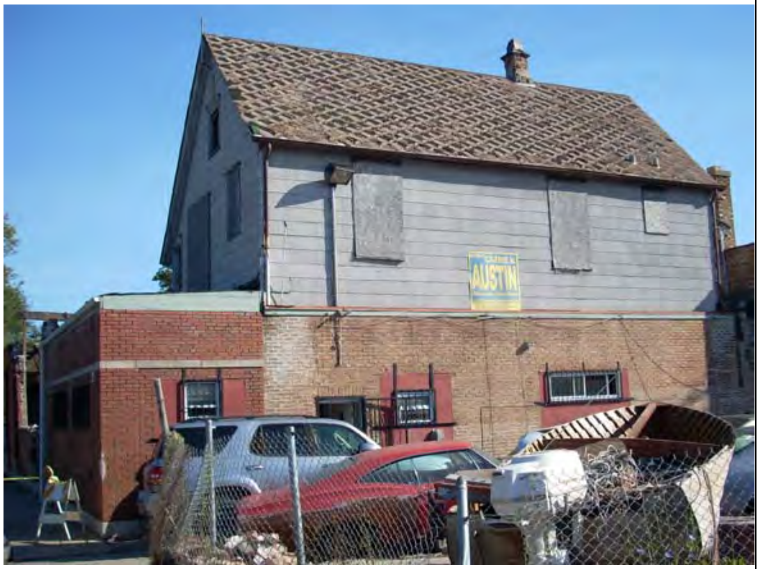
Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 11 September 2012

Photos with Captions

South façade of "building A" in a set of three joined industrial buildings. (Additional photographs appended).



Property Description: **Stories:** various

This industrial complex of buildings in the Roseland community includes three conjoined brick buildings: a two-story gable-roofed building (A, photo above), a collapsed brick building (B, photos on page 3), and a two-story flat-roofed brick building (C, photos on page 3). Building A has first floor clad in brick with a one-story, flat-roofed, brick commercial wing in front. The upper half of this building is clad in synthetic siding covering clapboards. It is vacant, deteriorated, and many of its window openings have been covered with particle board. Windows along the south side on the first floor are sliding or double-hung. Building B has collapsed. Building C at the far north has a parapet and is clad with red face brick and common brick. The windows with arched lintels have been in-filled with wood and brick. A new door pierces the façade. This complex of building lacks integrity, does not have any distinguishing architectural features, and is not individually eligible for listing on the National Register.

Structural Survey

Integrity: Unaltered Slight Alterations [✓ Major Alterations]			**Additional Notes/Descriptions** In-filled windows, replacement garage doors and siding, new door added, collapsed walls
Condition: Excellent Good [✓ Poor]			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details None			**Windows** Sliding, double-hung
Outbuildings (*Number and Description)* None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Additional photos:
Two photos at left: west façade of middle section (Building B), struck by lightning
Right photo: north façade of Building C

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11515 S. Perry Ave.

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1965

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

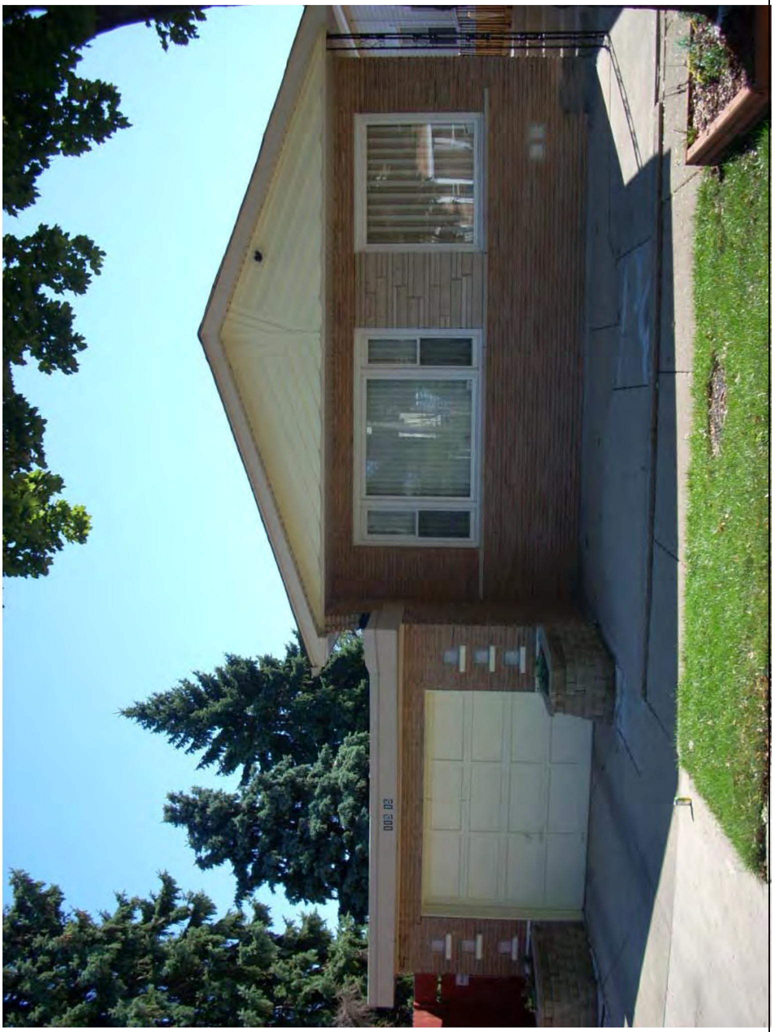
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 10 September 2012

Photos with Captions:
West façade of one-story, brick, single family residence.



Property Description: **Stories:** 1

This one-story house in the West Pullman community has a gable roof covered with asphalt shingles, overhanging eaves, and a flat-roofed attached one-car garage. Glass blocks with stone sills and brick planter boxes decorate the front of the garage. The front elevation of the house is clad with light orange face brick and features two picture windows, one of which is flanked by narrow one-over-one windows. A stone panel separates the two picture windows. The front gable is clad with synthetic siding in a decorative pattern. The entrance is located along the side elevation and accessed via a flight of concrete steps with metal railings. This house does not feature distinguishing architectural features and is not individually eligible for listing on the National Register.

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Structural Survey

Integrity: [✓ Unaltered] Slight Modification Major Alteration			**Additional Notes/Descriptions**
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingles	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details Stone panel, glass block with stone sills, brick planter boxes, clapboards in gable			**Windows** Fixed-pane, glass block, double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

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Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11516 S. Perry Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1913

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

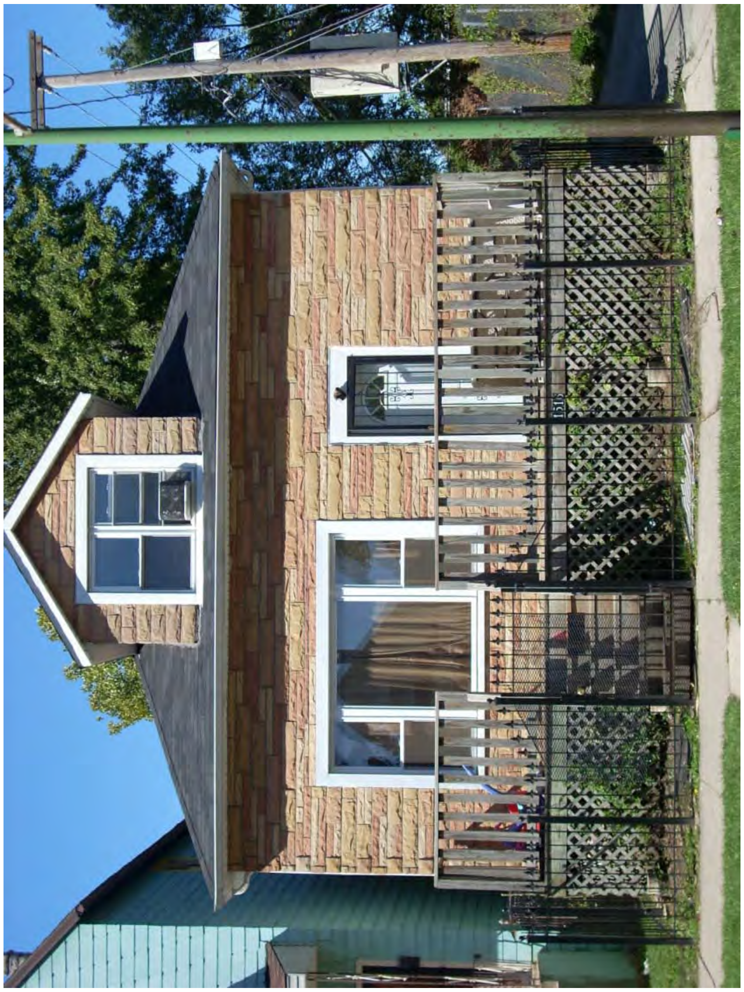
Craftsman

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 22 October 2012

Photos with Captions:
East façade of a one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story bungalow in the West Pullman community is situated on a raised concrete block basement and is covered with faux stone siding. The building has a hip roof covered with asphalt shingles and a gable dormer with a pair of non-original one-over-one aluminum-sash windows. The front elevation has a full-width porch with a wood deck, steps, and straight railings. This elevation has an off-center hollow core metal door, and a non-original picture window flanked by one-over-one aluminum-sash windows. This house lacks integrity and distinctive architectural features and is not individually eligible for listing on the National Register.

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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement door, windows, and cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Faux stone	
Roof Material Asphalt shingles	**Roof Features** Dormer	**Roof Type** Hip	
Ornamental Architectural Details None			**Windows** Double-hung, fixed-pane
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

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Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11521 S. Perry Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Multi-family residence

Date of Construction: 1879

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

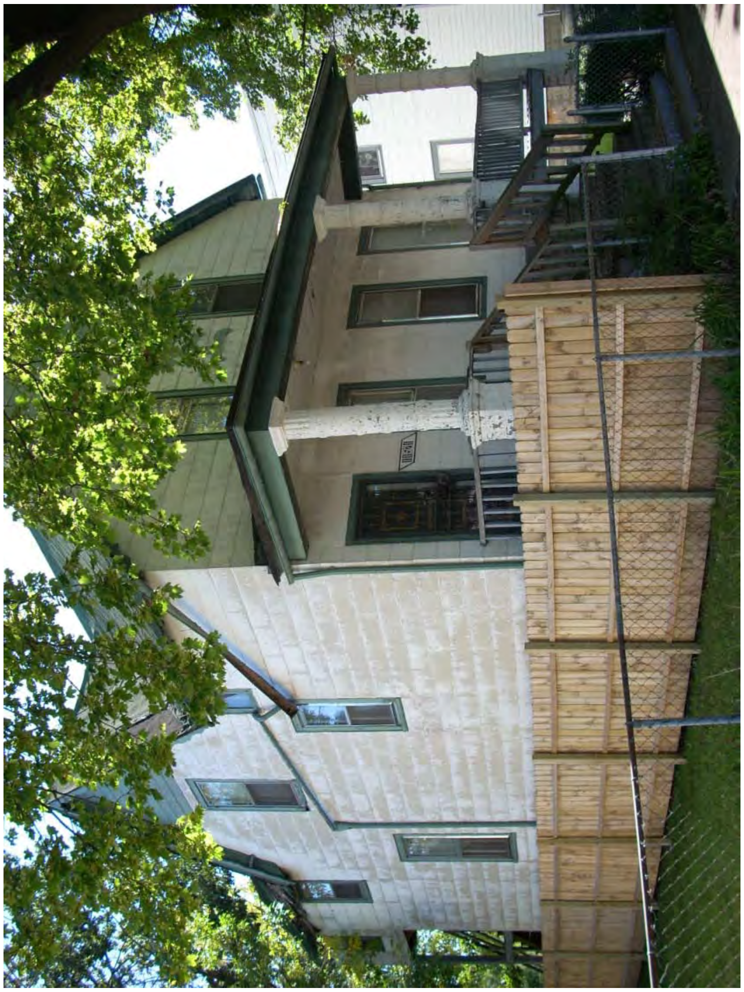
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 22 October 2012

Photos with Captions:
West façade of a 1.5-story, multi-family, frame residence.



Property Description: **Stories:** 1.5

This one-and-a-half-story house in the West Pullman community is situated on a raised concrete block basement and is clad with synthetic siding. The building has a cross-gable roof covered with asphalt shingles. The front elevation has a full-width wood porch with a flat roof that is supported by faux stone piers topped by short Doric columns. The façade features an off-center non-original hollow core metal door and five non-original one-over-one aluminum-sash windows: three on the first floor and two on the second. This house lacks integrity and distinctive architectural features and is not individually eligible for listing on the National Register.

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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement door, windows, and cladding
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Cross-gable	
Ornamental Architectural Details Doric columns on porch			**Windows** Double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11630 S. Prairie Ave

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1898

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

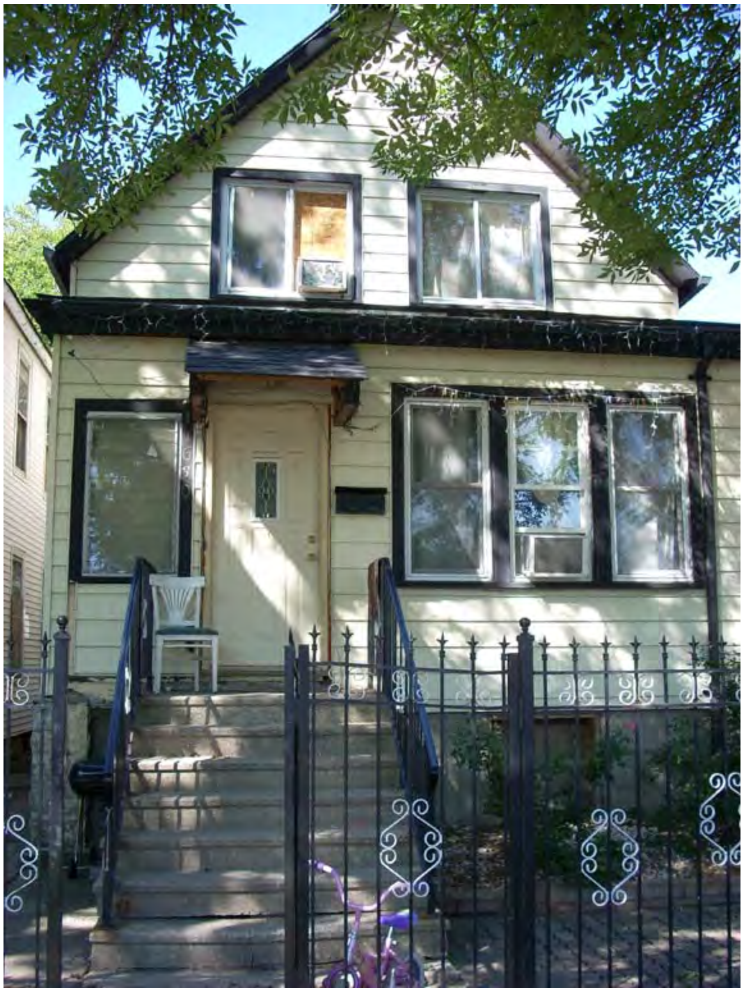
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 1 October 2012

Photos with Captions:
East façade of one-and-a-half-story, single family, frame residence.



Property Description: **Stories:** 1.5

This one-and-a-half-story frame house in the West Pullman community is situated on a raised brick basement, is clad with synthetic siding, and has a front gable roof with asphalt shingles. Its front elevation features a flat-roofed enclosed porch with concrete steps with metal railings. It also has a hollow metal core door, four non-original windows on the first floor—one casement and a strip of three one-over-one windows—and two paired windows on the second floor, one of which is in-filled with plywood. This house lacks integrity, does not have distinguishing architectural features, and is not individually eligible for listing on the National Register.

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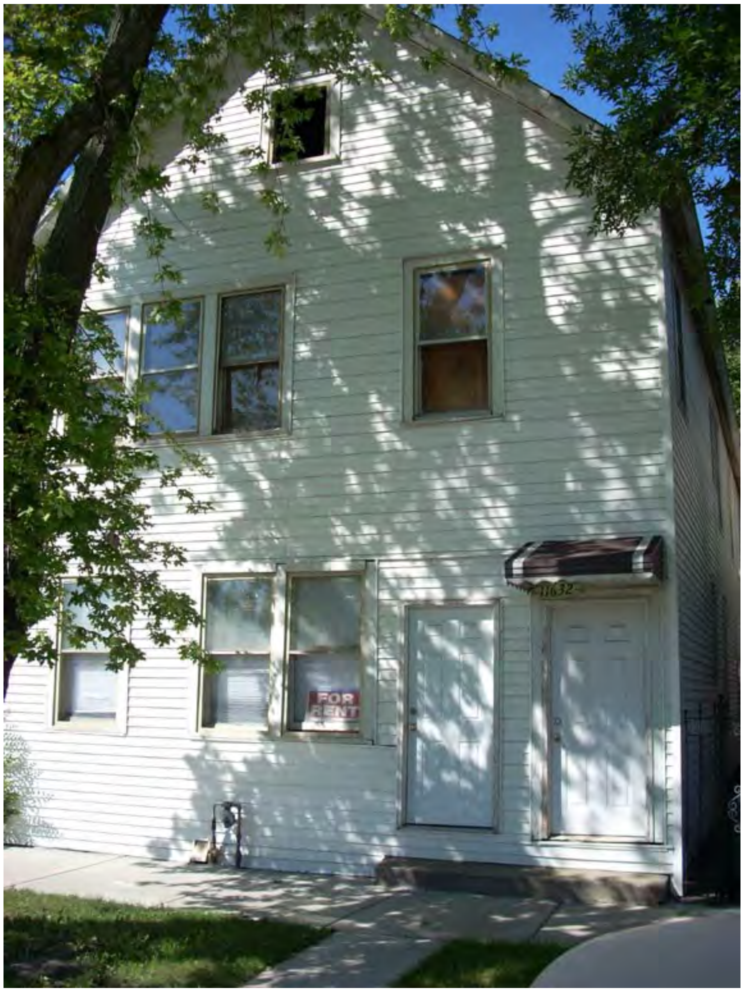
Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement front door, windows, and siding
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung, sliding
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Historical Resource Recordation Form

Property Name **Historic:** Bldg. not labeled, not in CHRS **Common/Current:** Unknown	**Photos with Captions:** East façade of a two-story, multi-family, frame residence. 
Property Address: 11632 S. Prairie Ave.	
HAARGIS Number: Not in database	
Present Owner and /or Occupant: Unknown	
Property Use **Historic:** Multi-family **Current:** Multi-family	
Date of Construction: 1888 **Architect's Name:** Not in CHRS **Builder/Contractor:** Not in CHRS	
Architectural Style: Vernacular	
Prepared By: J. Martinez, M. C. Bird, J. Guarino **Photo By:** S. Katz **Date:** 1 October 2012	

Property Description: **Stories:** 2

This two-story, frame, multi-family residential building in the West Pullman community is clad with synthetic siding and has a front gable roof with asphalt shingles. Its front elevation features two off-center non-original hollow core metal doors, three windows on the first floor and four windows on the second floor, all of which are non-original one-over-one aluminum sash. A small single-pane window is situated in the gable. This building lacks integrity, does not have distinguishing architectural features, and is not individually eligible for listing on the National Register.

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Structural Survey

Integrity:			**Additional Notes/Descriptions**
Unaltered	[✓ Slight Modification]	Major Alteration	Replacement doors, windows, and siding
Condition:			
Excellent	[✓ Good]	Poor	
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung, casement
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

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Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11634 S. Prairie Ave.

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Multi-family residence

Date of Construction: 1927

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

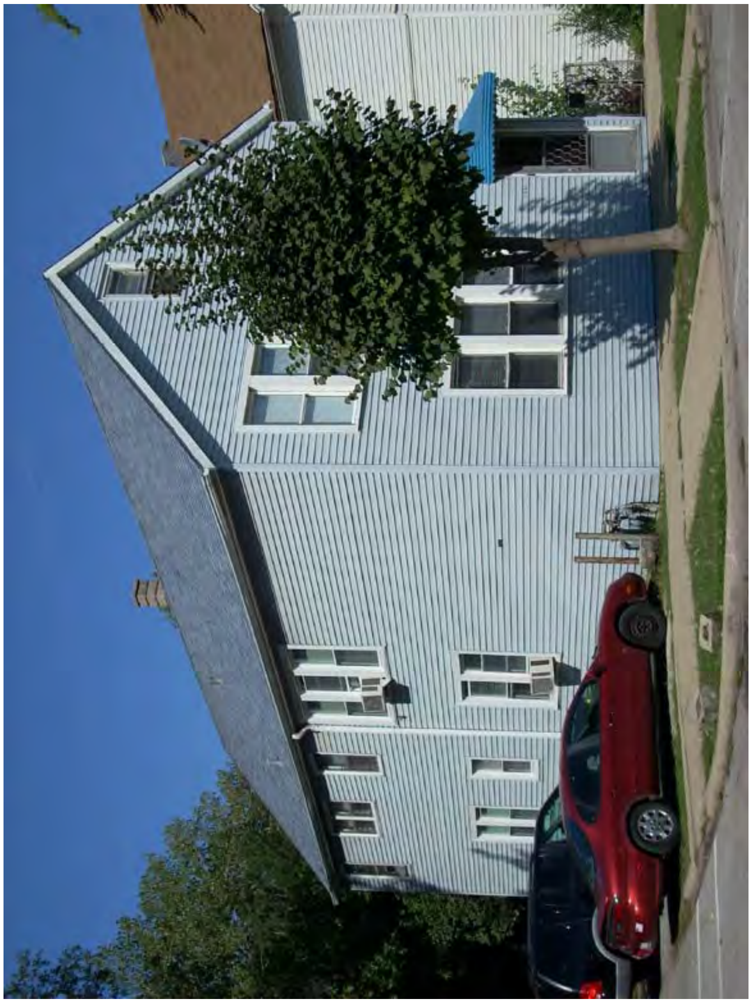
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 1 October 2012

Photos with Captions:
East and south façades of a two-story, multi-family, frame residence.



Property Description: **Stories:** 2

This two-story frame house in the West Pullman community is clad with synthetic siding and has a front gable roof with asphalt shingles. Its front elevation features an off-center, non-original, hollow core metal door, three windows on the first floor, five windows on the second floor, and one in the gable, all of which are non-original one-over-one aluminum sash. This house lacks integrity, does not have distinguishing architectural features, and is not individually eligible for listing on the National Register.

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505 North State Street
Marengo, Illinois 60152
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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement door, windows, and siding
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

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Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11718 S. Prairie Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1885

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

Vernacular

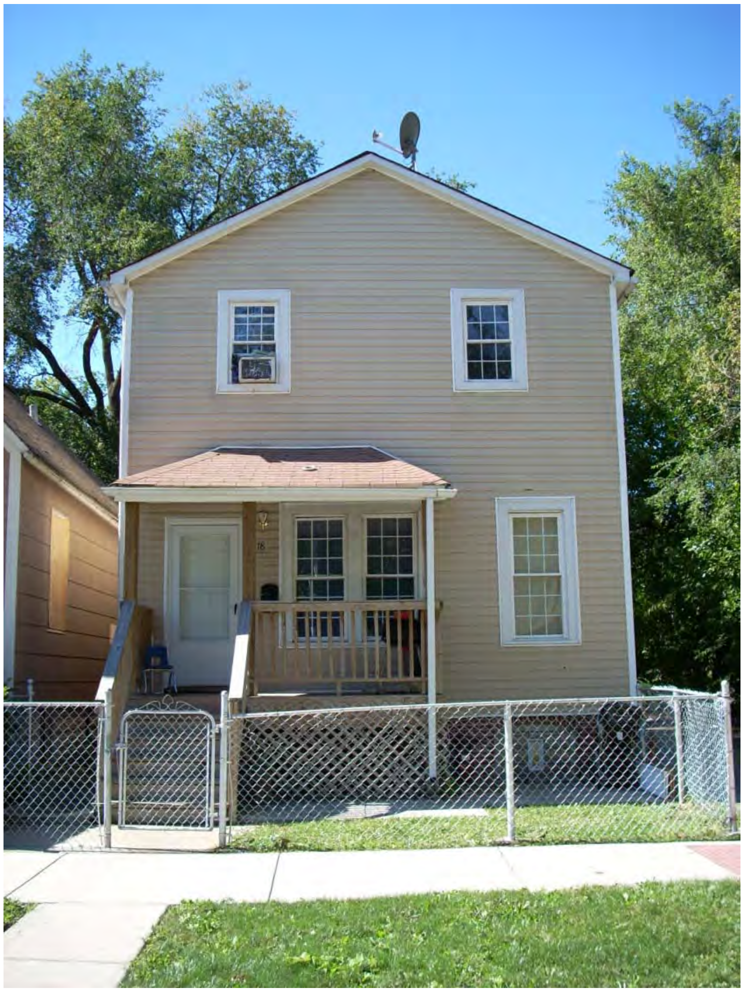
Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 23 October 2012

Photos with Captions:

East façade of a two-story, single family, frame residence.



Property Description: **Stories:** 2

This two-story house in the West Pullman community is situated on a raised brick basement and is covered with synthetic siding. The building has a front gable roof covered with asphalt shingles. The second story was added in the last few years. Its front elevation has a partial-width, hip-roof wood porch with straight posts and railings, an off-center non-original hollow core metal door, and five multi-paned double-hung windows: three on the first floor and two on the second, all non-original. This house lacks integrity and distinctive architectural features and is not individually eligible for listing on the National Register.

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Structural Survey

Integrity: Unaltered Slight Modification [✓ Major Alteration]			**Additional Notes/Descriptions** Replacement door, windows, and cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations Second story added after 2007			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

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Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11814 S. Prairie Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Vacant

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1926

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

Chicago Style Bungalow

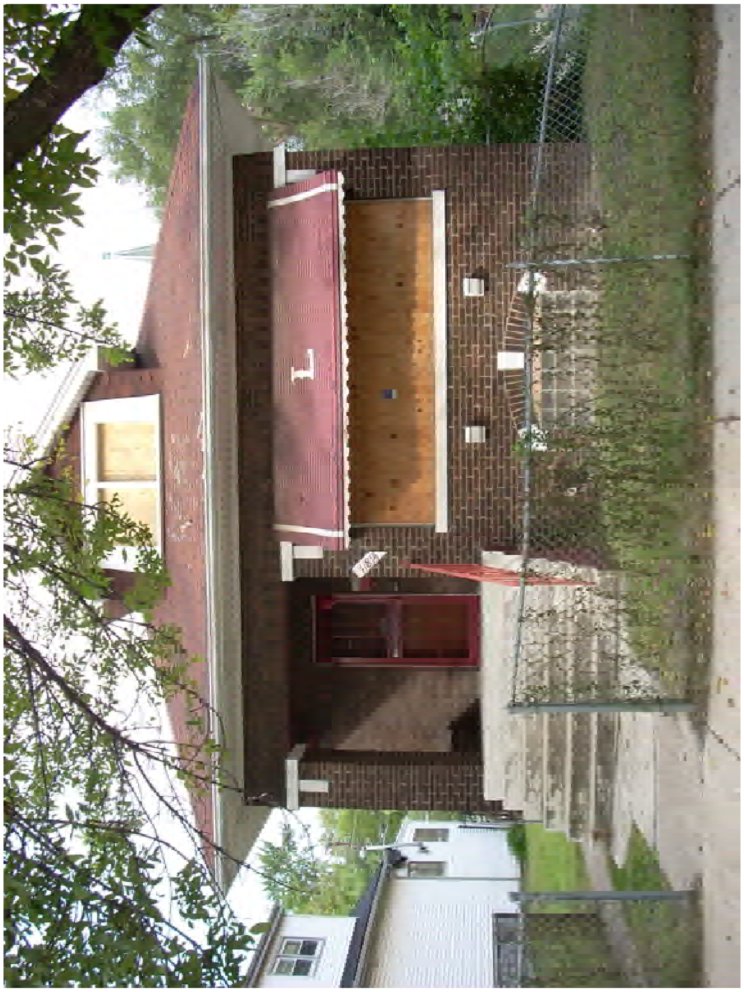
Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 23 October 2012

Photos with Captions:

East façade of a one-story, single family, brick residence.



Property Description: **Stories:** 1

This one-story brick-clad bungalow in the West Pullman community is situated on a raised basement with glass block windows. The building has a hip roof covered with asphalt shingles, overhanging eaves, and gable dormers along its front and rear elevations. The front elevation has a recessed corner porch with a brick pier support at the corner, concrete steps, and a metal railing. Above the basement, windows have been covered with plywood. Detailing includes soldier brick lintels, concrete sills, and concrete insert blocks used as decorative accents. This is an example of a Chicago bungalow, a building type that the City of Chicago has recognized through its Historic Chicago Bungalow Initiative. However, this house lacks distinctive architectural features and is not individually eligible for listing on the National Register.

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Structural Survey

Integrity: [✓ Unaltered] Slight Modification Major Alteration			**Additional Notes/Descriptions**
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingle	**Roof Features** Dormers	**Roof Type** Hip	
Ornamental Architectural Details Brick lintels, concrete sills and insert blocks			**Windows** Glass block, covered
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

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505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

9815 S. Princeton Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1963

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

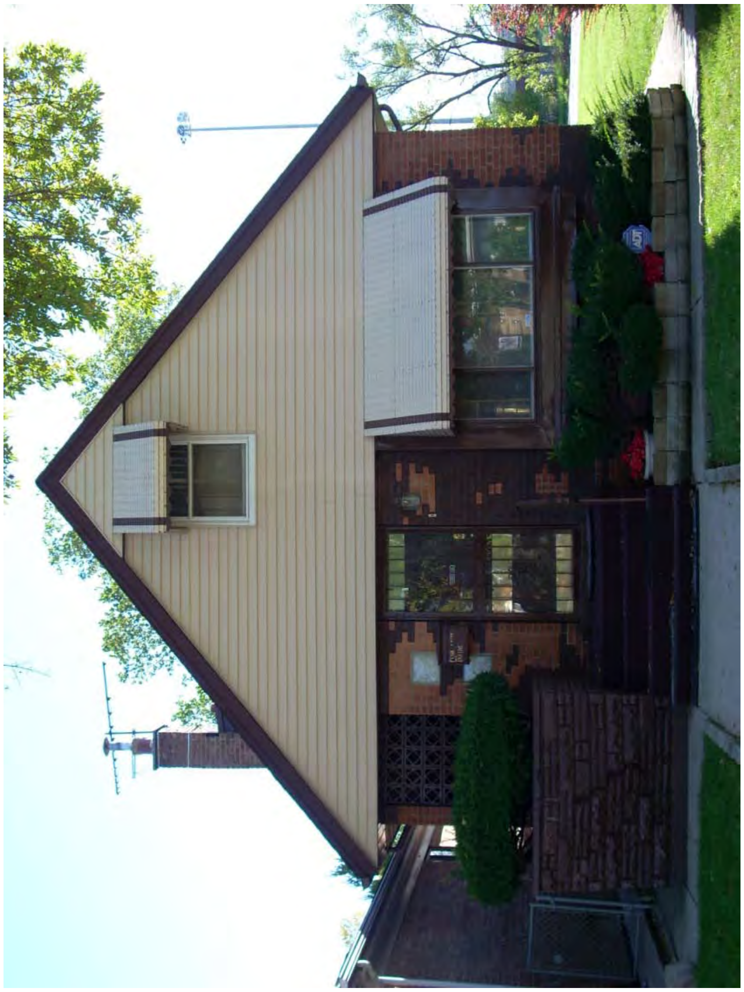
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 9 October 2012

Photos with Captions:
West façade of a brick, one-story, single family residence.



Property Description: **Stories:** 1

This one-story house in the Roseland community has a steeply pitched front gable roof covered with asphalt shingles. Its front elevation is clad with brown and orange face brick on the first floor and synthetic siding in the gable. It has an off-center door, concrete steps with metal railings, a decorative perforated screen, a picture window flanked by one-over-one aluminum-sash windows on the first floor, and a one-over-one aluminum-sash window in the gable. This house does not feature distinguishing architectural features and is not individually eligible for listing on the National Register.

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Structural Survey

Integrity: [✓ Unaltered] Slight Modification Major Alteration			**Additional Notes/Descriptions**
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick, synthetic siding	
Roof Material Asphalt	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details Perforated screen			**Windows** Double-hung, fixed-pane
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

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Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

9818 S. Princeton Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1964

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

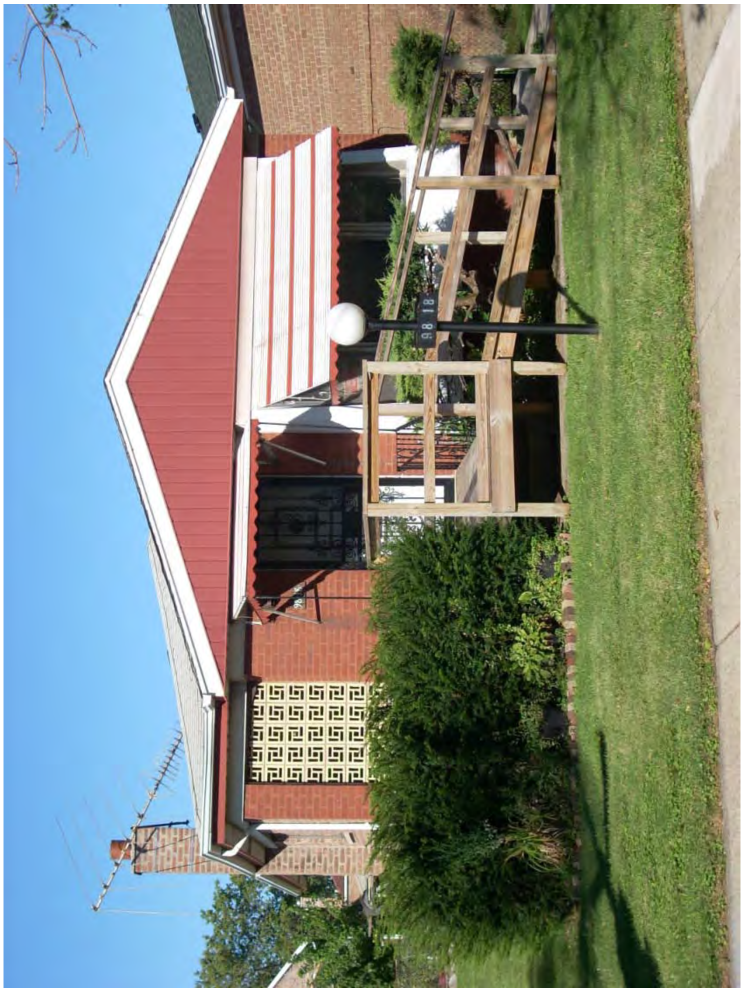
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 9 October 2012

Photos with Captions:
East façade of a brick, one-story, single family residence.



Property Description: **Stories:** 1

This one-story home in the Roseland community has a gable-on-hip roof clad with asphalt shingles. The front elevation is clad with red face brick on the first floor and synthetic siding in the gable. It has a centrally located door, a decorative perforated screen, and a picture window flanked by what appear to be casements. This window group is partially obscured by a low metal awning. The wood ramp is non-original. It does not feature distinguishing architectural elements and is not individually eligible for listing on the National Register.

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Structural Survey

Integrity: [✓ Unaltered] Slight Modification Major Alteration				**Additional Notes/Descriptions**
Condition: [✓ Excellent] Good Poor				
Additional Alterations Wood ramp appended to residence but has not altered the building.				
Structure Usage Current: NA Historic: NA			**Exterior Wall Surface** Brick, synthetic siding	
Roof Material Asphalt	**Roof Features** None		**Roof Type** Hip	
Ornamental Architectural Details Perforated screen				**Windows** Casement, fixed-pane
Outbuildings (*Number and Description*) None				

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

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Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

9915 S. Princeton Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1964

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

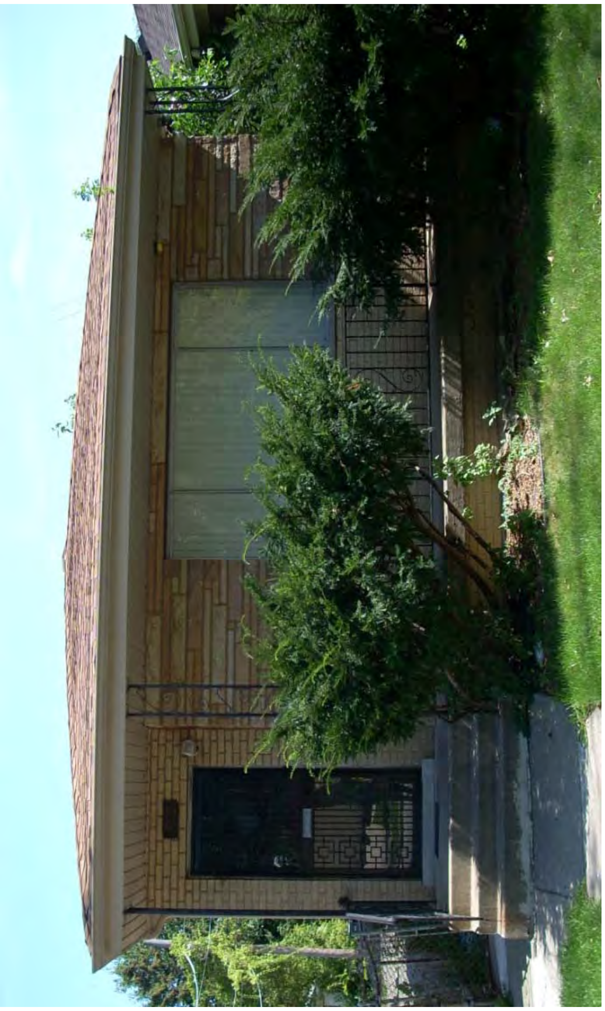
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 8 October 2012

Photos with Captions:
West façade of a one-story, masonry, single family residence.



Property Description: **Stories:** 1

This one-story home in the Roseland neighborhood has a hip roof covered with asphalt shingles that extends beyond the front elevation to serve as the roof of the low porch, which is supported by open metal posts and has three concrete steps and metal railings. The front elevation is clad with buff face brick and faux stone. It has an off-center door and a large single pane window flanked by smaller panes of glass. Double-hung windows are utilized on the side elevations. It does not feature distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: [✓ Unaltered] Slight Modification Major Alteration			**Additional Notes/Descriptions**
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick, faux stone	
Roof Material Asphalt	**Roof Features** None	**Roof Type** Hip	
Ornamental Architectural Details None			**Windows** Double-hung, fixed-pane
Outbuildings (*Number and Description*) None			

Local Landmark	**Y [✓ N]**	
National Register Historic Places	**Y [✓ N]**	
National Register Historic District	**Y [✓ N]**	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

10054 S. Princeton Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Multi-family residence

Current: Multi-family residence

Date of Construction: 1934

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

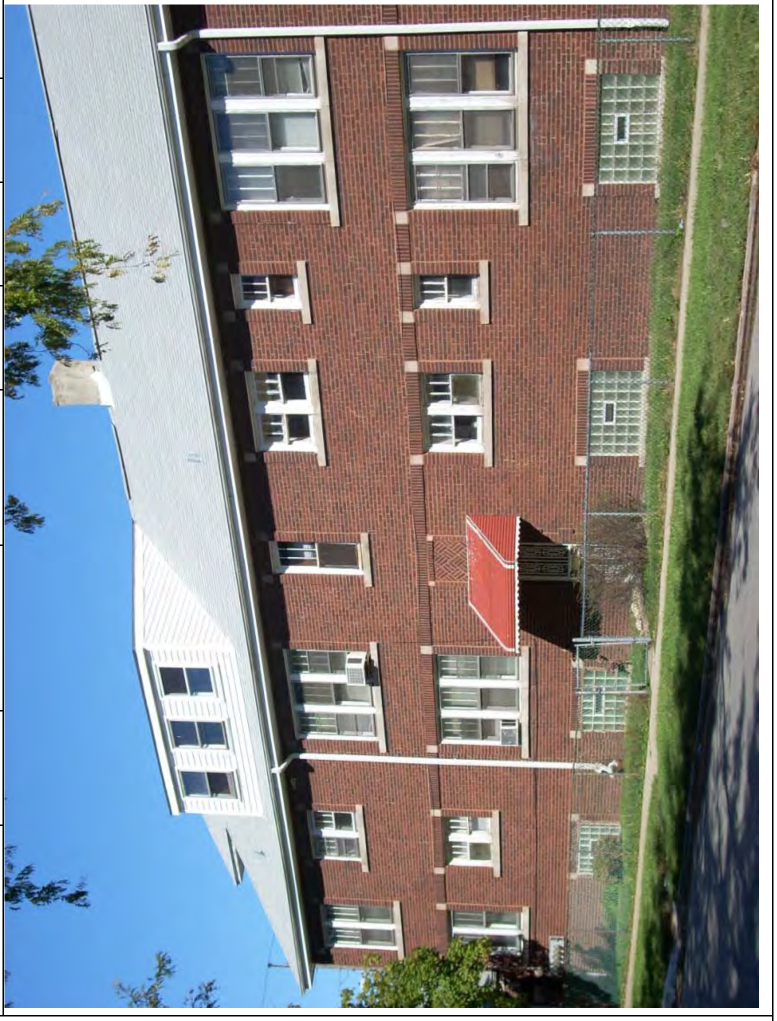
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 16 September 2012

Photos with Captions:
South façade of two-story, multi-family residence.



Property Description: **Stories:** 2

This two-story multi-family building at the northwest corner of 100th Street and Princeton Avenue in the Roseland community is clad with brown face brick along its two street elevations. It has a raised brick basement with glass block windows, a hip roof covered with asphalt shingles with overhanging eaves, a shed dormer along its 100th Street elevation, and a hip dormer along its rear elevation. The front elevation has an off-center hollow core metal door with two strips of three windows—one on the first floor and one on the second—along with an additional window on the second floor. Fenestration along both street elevations is comprised of three-over-one wood-sash windows. Detailing includes concrete sills, window surrounds with soldier bricks and square concrete insert blocks, and a course of soldier bricks above the first floor windows that spans both street elevations. The brick panels above both the front and side doors feature the same decorative basketweave pattern. This building does not feature sufficient distinguishing architectural features to qualify as individually eligible for listing on the National Register.

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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Dormer appears to be a later addition
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingles	**Roof Features** Dormer	**Roof Type** Hip	
Ornamental Architectural Details Concrete sills, soldier bricks, concrete insert blocks, brick panels			**Windows** Double hung, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
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Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

10136 S Princeton Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Vacant

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1954

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

Vernacular

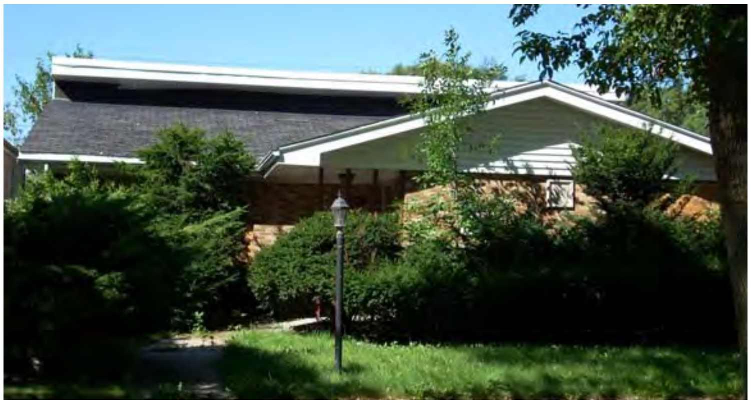
Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

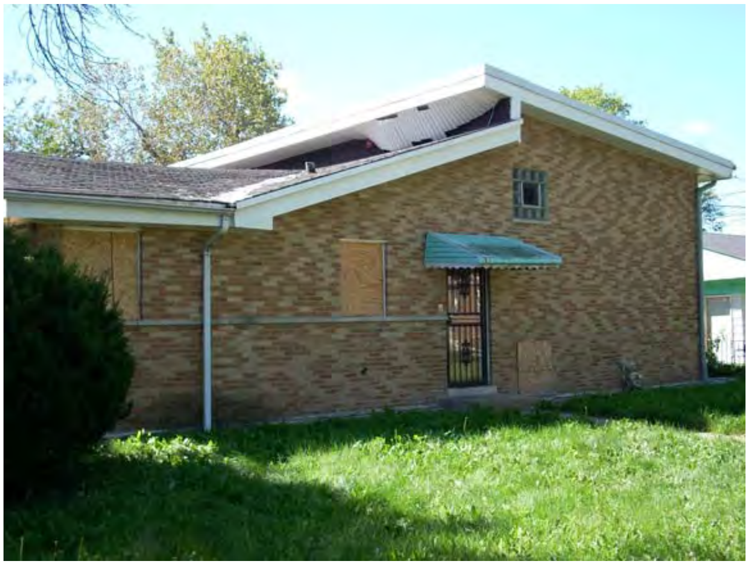
Date: 16 September 2012

Photos with Captions:

East façade of split-level, brick single family residence.



North façade of split-level showing roofline.



Property Description: **Stories:** 1

This split-level home in the Roseland community has a cross-gabled roof covered with asphalt shingles and is clad with buff and orange face brick. The front elevation's gable is clad with aluminum and has a deep overhang that is supported by two open metal posts. The roofline exhibits an overhanging shed roof along the ridgeline, running the width of the house. The eave of this overhang is clad in vinyl siding. The front elevation's windows and door are obscured by high foliage. Three of the four side elevation windows are covered with plywood. This house does not feature distinguishing architectural features and is not individually eligible for listing on the National Register.

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Structural Survey

Integrity:

Unaltered [✓ Slight Modification] Major Alteration

Additional Notes/Descriptions

Condition:

Excellent [✓ Good] Poor

Additional Alterations

Structure Usage	**Exterior Wall Surface**
Current: NA Historic: NA	Brick

Roof Material	**Roof Features**	**Roof Type**
Asphalt shingle	None	Cross-gabled

Ornamental Architectural Details

None

Windows

Covered

Outbuildings (*Number and Description*)

Garage

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
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Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

10224 S. Princeton Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1930

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

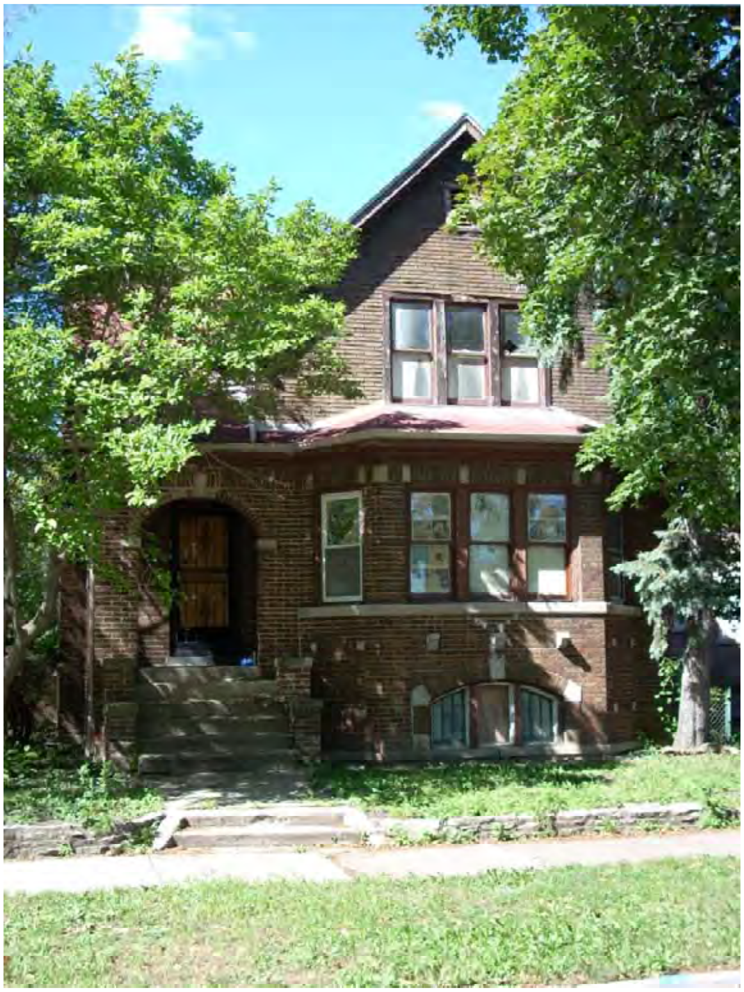
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: Steve Katz

Date: 9 October 2012

Photos with Captions:
East façade of a brick, two-story, single family residence.



Property Description: **Stories:** 2

This two-story house in the Roseland community is situated on a raised brick basement. It is clad with brown face brick and has a cross-gable roof covered with asphalt shingles. Its front elevation has an arched basement window group, an off-center door with a metal storm, a corner recessed porch with concrete steps and metal railings, a projecting three-sided hip-roofed living room bay with five double hung sash windows, and a strip of three one-over-one windows on the second floor. Detailing includes a stone sill course and a decorative soldier course with stone insert blocks above the living room bay windows, decorative scrolled stone brackets below the living room bay windows, and a porch archway with stone keystone. The side elevation has a shed-roofed window bay with large glass block window opening. The rear elevation's original roofline has been raised with a shed-roofed addition. This house does not feature sufficient integrity or distinguishing architectural features to qualify as individually eligible for listing on the National Register.

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Marengo, Illinois 60152
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Structural Survey

<table>
<tr><td colspan="3">Integrity:
Unaltered [✓ Slight Modification] Major Alteration</td><td>Additional Notes/Descriptions
Rear elevation roofline raised</td></tr>
<tr><td colspan="3">Condition:
Excellent [✓ Good] Poor</td><td></td></tr>
<tr><td colspan="3">Additional Alterations</td><td></td></tr>
<tr><td colspan="2">Structure Usage
Current: NA
Historic: NA</td><td>Exterior Wall Surface
Brick</td><td></td></tr>
<tr><td>Roof Material
Asphalt shingle</td><td>Roof Features
None</td><td>Roof Type
Cross-gable, shed</td><td></td></tr>
<tr><td colspan="3">Ornamental Architectural Details
Stone sill course, brick soldier course with stone insert blocks, scrolled stone brackets, archway with stone keystone, arched basement window group</td><td>Windows
Double-hung, casement, glass block</td></tr>
<tr><td colspan="4">Outbuildings (<i>Number and Description</i>)
None</td></tr>
</table>

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: First Christian Reform Church of Roseland

Common/Current: Mary Magdalene Missionary Baptist Church

Property Address:

10920 S. Princeton Avenue
Alternate: 10914 S. Princeton Ave.
Alternate: 318 W 109th Place

HAARGIS Number:

140670

Present Owner and /or Occupant:

Mary Magdalene Missionary Baptist Church

Property Use

Historic: Religious

Current: Religious

Date of Construction: 1916

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

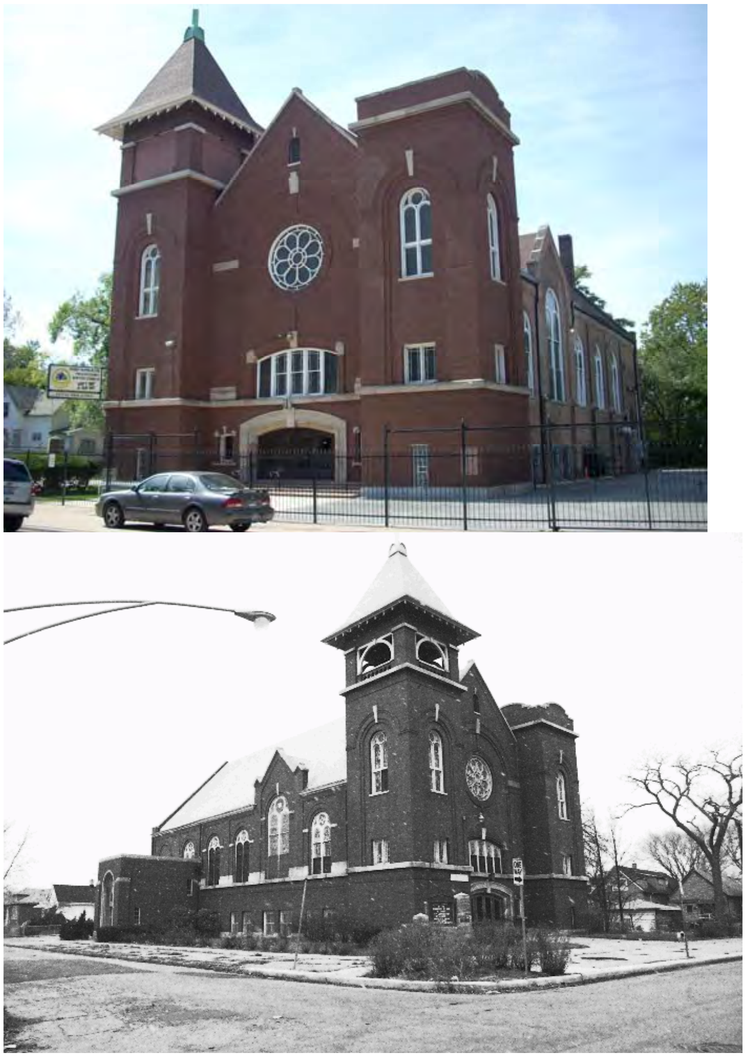
Romanesque Revival

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 17 October 2012

Photos with Captions:
East façade of two-story religious building (above), south and east facades from HAARGIS (below).



Property Description: **Stories:** 2

This Romanesque Revival style church in the Roseland community has a front elevation and two flanking towers clad with brown face brick, while the remainder of the side elevation and the rear elevation are clad with common brick. It has a gable roof covered with asphalt shingles and gable wall dormers with shaped parapets on both side elevations. The east tower has a flat roof and a shaped parapet while the west tower has a peaked roof with overhanging eaves and exposed rafters and is topped by a finial. The central bay of the front elevation has a broad, round-arched entrance with stone surround and two sets of single-light oak double-doors. The central bay also contains a strip of double-hung windows situated within a broad arch and a rose window with tracery. Fenestration on the both towers and along the side elevations comprises round-arch windows with tracery. It is unknown whether the original stained glass for all of these windows is extant inside the church. Both towers also feature paired casement windows. Window openings at the top of the west tower have been boarded-over. Detailing includes stone sills, belt courses, brick pilasters and keystones. A one-story brick-clad entrance vestibule is situated along the rear of the west elevation. Built as the First Reformed Church of Roseland, this church is recommended as individually eligible for National Register listing under Criterion A for its association with the community's once-dominant Dutch population and under Criterion C as fine example of a Romanesque Revival style church in Roseland.

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Square tower brick infilled
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingle	**Roof Features** Parapet, Towers, Dormers	**Roof Type** Gable	
Ornamental Architectural Details Stone sills, belt courses, brick pilasters, and keystones, shaped parapet, rose window			**Windows** Double-hung, fixed-pane, glass block (raised basement)
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? Yes	[✓ **A**] **B** [✓ **C**]	**Significance:** A fine example of a Romanesque Revival style church in the Roseland community associated with the community's once-dominant Dutch population

Additional comments

CHRS coded orange: property possesses some architectural feature or historical association that made it potentially significant in the context of the surrounding community.

Midwest Archaeological Research Services, Inc.
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Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11122 S. Princeton Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Apartment building

Current: Apartment building

Date of Construction: 1922

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

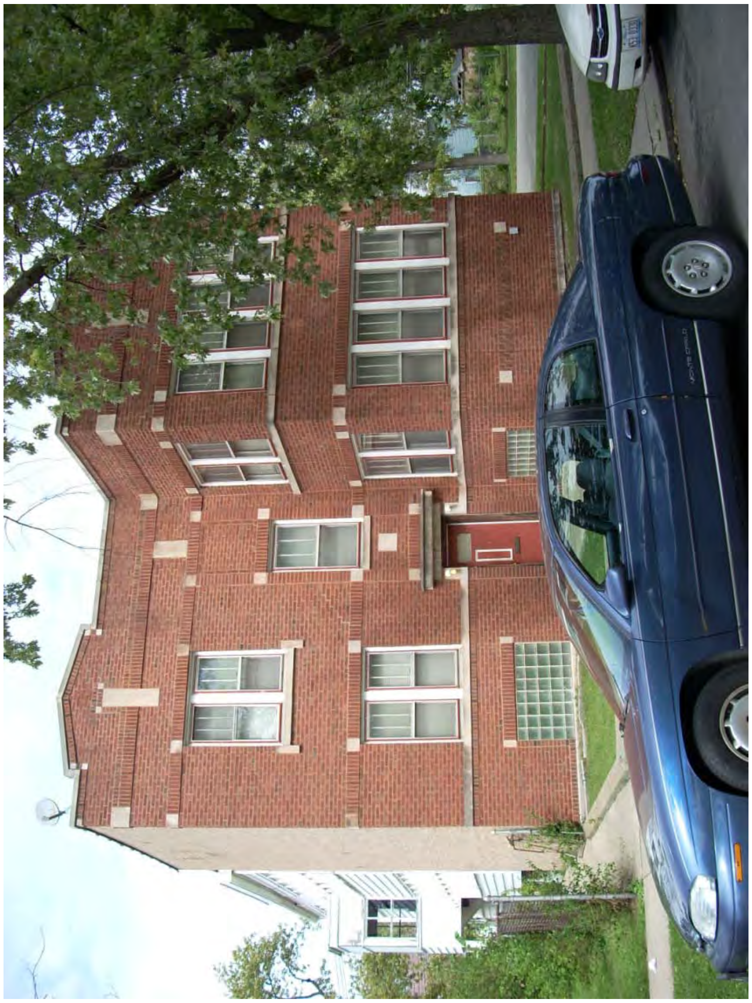
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 22 October 2012

Photos with Captions:
South façade of a brick, two-story, apartment building.



Property Description: **Stories:** 2

This two-story apartment building at the northwest corner of Princeton Avenue and 111th Place in the Roseland community is situated on a raised basement with glass block windows and is clad with brown face brick on its two street elevations. The building has a flat roof and shaped parapet with concrete coping. Windows are original three-over-one wood-sash windows arranged singly, in pairs, or in groups of four. The Princeton Avenue elevation also features four leaded glass casement windows. Each street elevation has an entrance with a non-original hollow core metal door. Detailing includes concrete sills and brick soldier courses with square stone inserts blocks. This building lacks sufficient distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Windows in garden apartments in-filled with glass blocks
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details Concrete coping and sills, stone insert blocks, brick soldier courses			**Windows** Double-hung, casement, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

11142 S. Princeton Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Flat (Single family, CCA)

Date of Construction: 1908

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

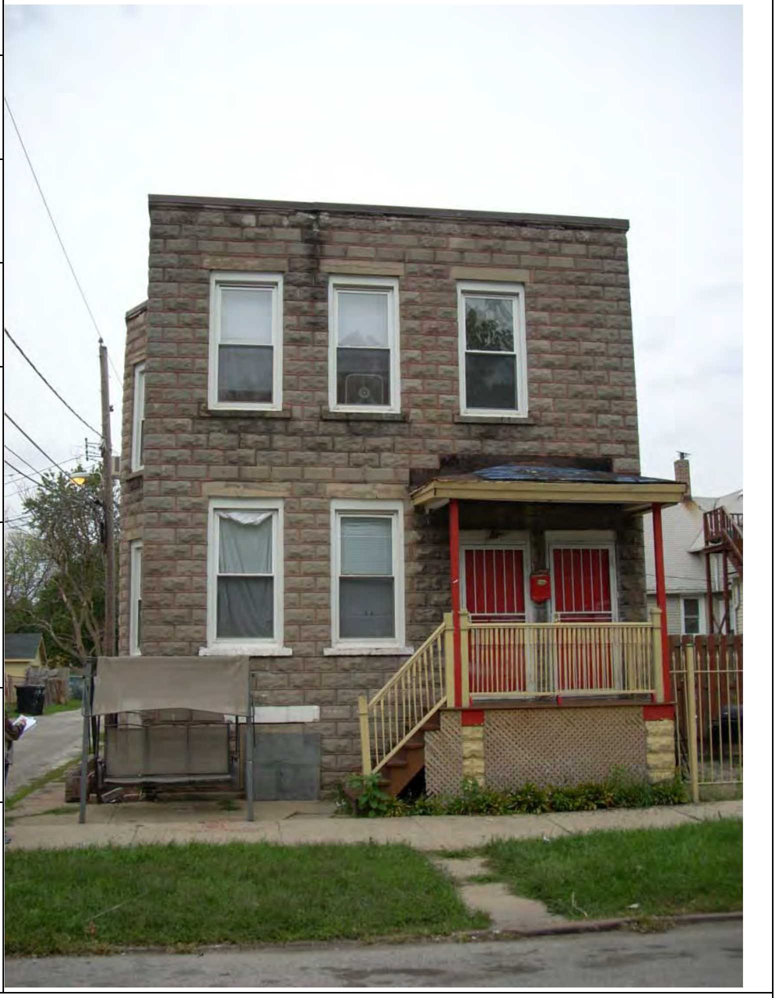
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 16 September 2012

Photos with Captions:
North façade of concrete block, two-flat residence.



Property Description: **Stories:** 2

This two-flat rusticated concrete block residential building in the Roseland community is situated on a raised basement. The building has a flat roof and parapet. Its front elevation has a pair of off-center hollow core metal doors, a partial-width hipped-roof wood porch with straight posts and railings, and five non-original one-over-one aluminum-sash windows: two on the first floor and three on the second. Detailing includes stone sills and lintels. The south (alley) elevation has a full-height window bay pavilion. This building lacks integrity and distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Concrete block	
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details Stone sills and lintels			**Windows** Double-hung, covered
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11319 S Princeton Ave

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1916

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

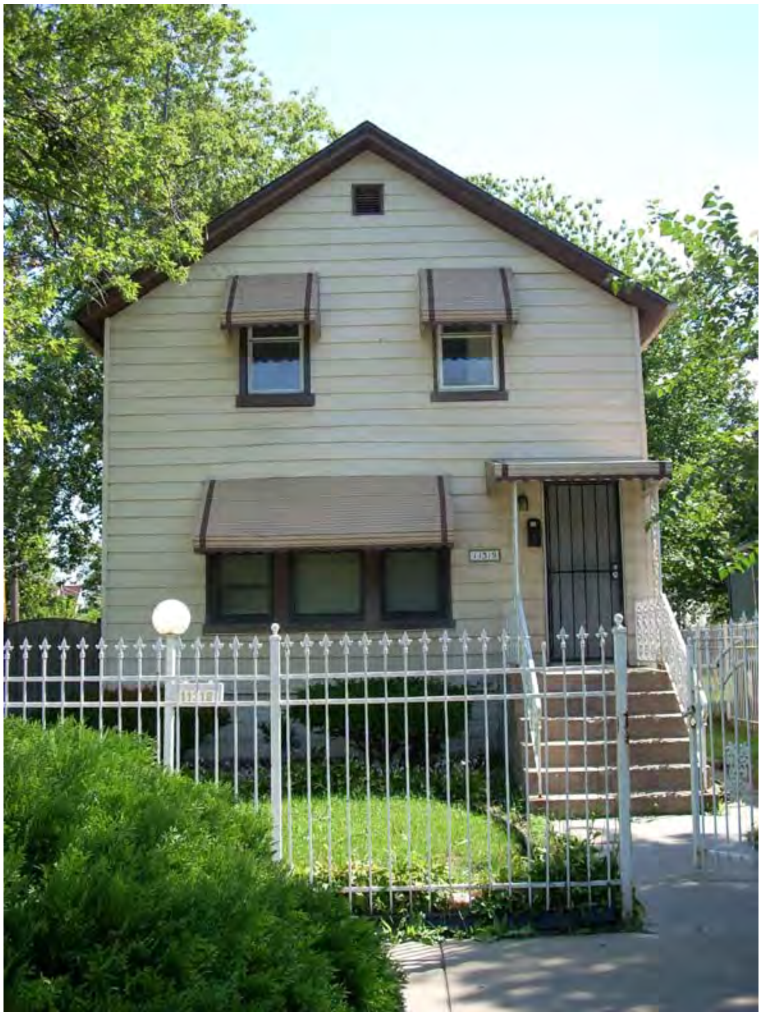
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 1 October 2012

Photos with Captions:
West façade two-story, single family, frame residence.



Property Description: **Stories:** 2

This two-story home in the Roseland community is clad with synthetic siding, has a gable roof covered with asphalt shingles, and is situated on a raised concrete block basement. Its front façade has an off-center, non-original, hollow metal paneled door and a porch with concrete steps, metal railings, and metal supports with a metal canopy roof. Fenestration is comprised of non-original one-over-one windows: a strip of three on the first floor and two on the second floor. One of the side elevations has a three-sided window bay on the first floor. This home lacks integrity and distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

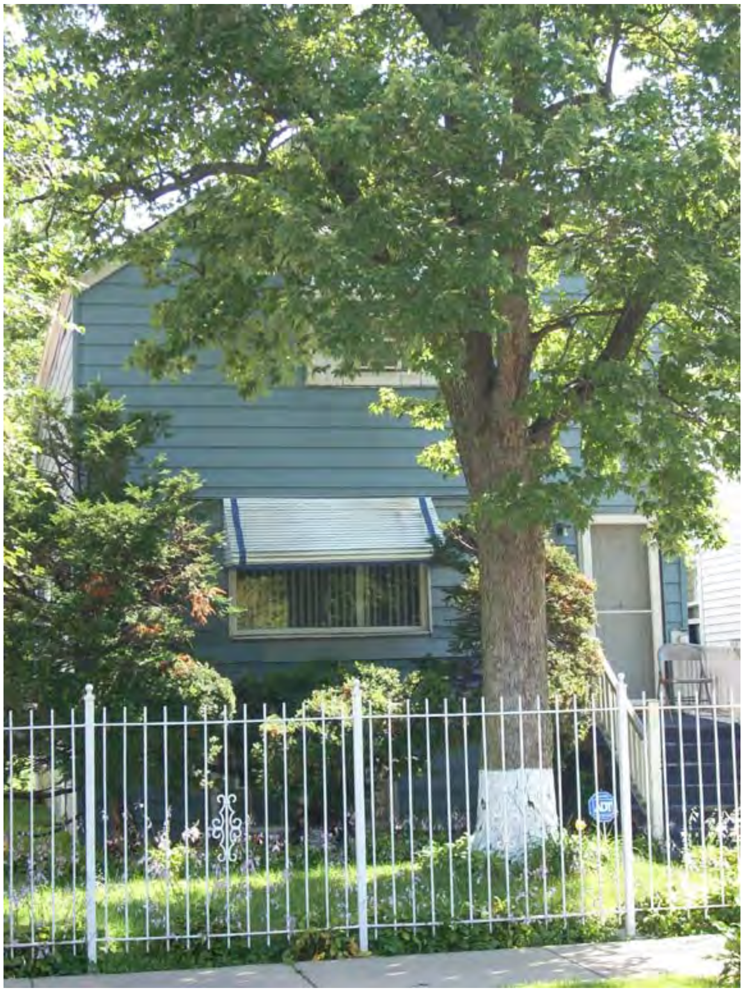
Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement front door, windows, cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung, fixed-pane
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Historical Resource Recordation Form

Property Name **Historic:** Bldg. not labeled, not in CHRS **Common/Current:** Unknown	**Photos with Captions:** West façade two-story, single family, frame residence. 
Property Address: 11321 S Princeton Ave	
HAARGIS Number: Not in database	
Present Owner and /or Occupant: Unknown	
Property Use **Historic:** Single family residence **Current:** Single family residence	
Date of Construction: 1903 **Architect's Name:** Not in CHRS **Builder/Contractor:** Not in CHRS	
Architectural Style: Vernacular	
Prepared By: J. Martinez, M. C. Bird, J. Guarino **Photo By:** S. Katz **Date:** 1 October 2012	

Property Description: **Stories:** 2

This two-story home in the Roseland community is clad with synthetic siding, has a gable roof covered with asphalt shingles, and is situated on a raised basement. Its front façade has an off-center hollow metal paneled door and a porch with wood steps and straight wood railings. The first floor of the front façade has a large picture window and the second floor has paired, double-hung windows. This home lacks integrity and distinguishing architectural features; therefore, it is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement door & cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung, fixed-pane
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11325 S. Princeton Ave

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1903

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

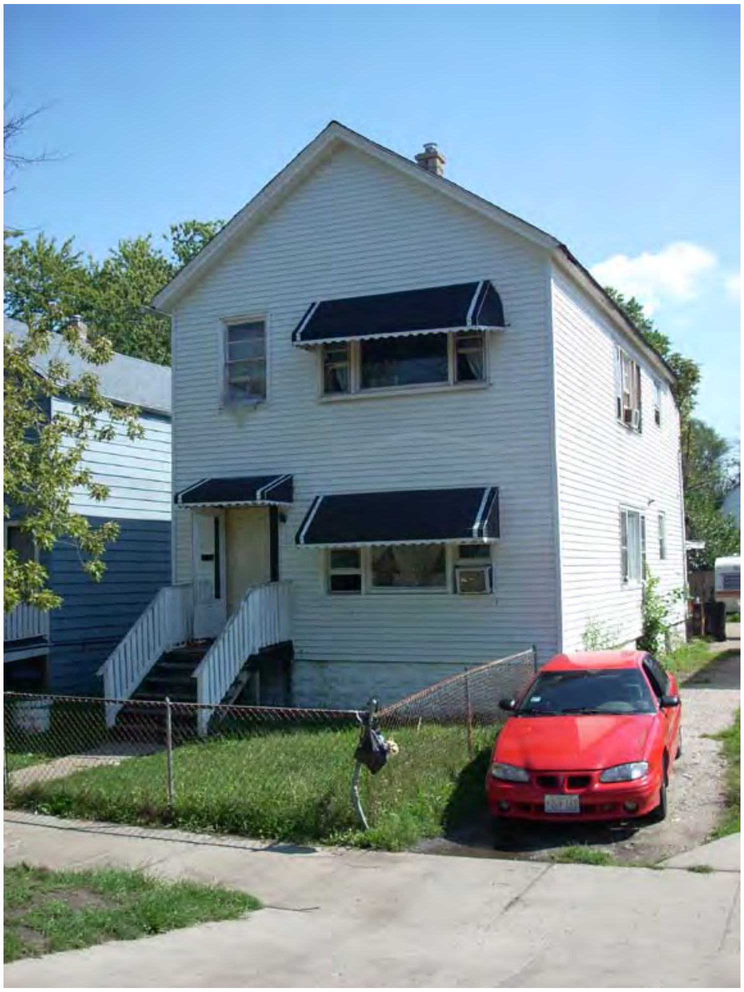
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 1 October 2012

Photos with Captions:
West façade two-story, single family, frame residence.



Property Description: **Stories:** 2

This two-story home in the Roseland community is clad with synthetic siding, has a gable roof covered with asphalt shingles, and is situated on a raised concrete block basement. Its front façade has an off-center, non-original, hollow, metal paneled door and a porch with wood steps and straight wood railings. Both the first and second floors of the front façade feature a large picture window flanked by one-over-one windows. The second floor has an additional one-over-one window situated directly above the entrance. This home lacks integrity and distinguishing architectural features; therefore, it is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement door & cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung, fixed-pane
Outbuildings (*Number and Description*) None			

Local Landmark	**Y [✓ N]**	
National Register Historic Places	**Y [✓ N]**	
National Register Historic District	**Y [✓ N]**	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11327 S Princeton Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1903

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

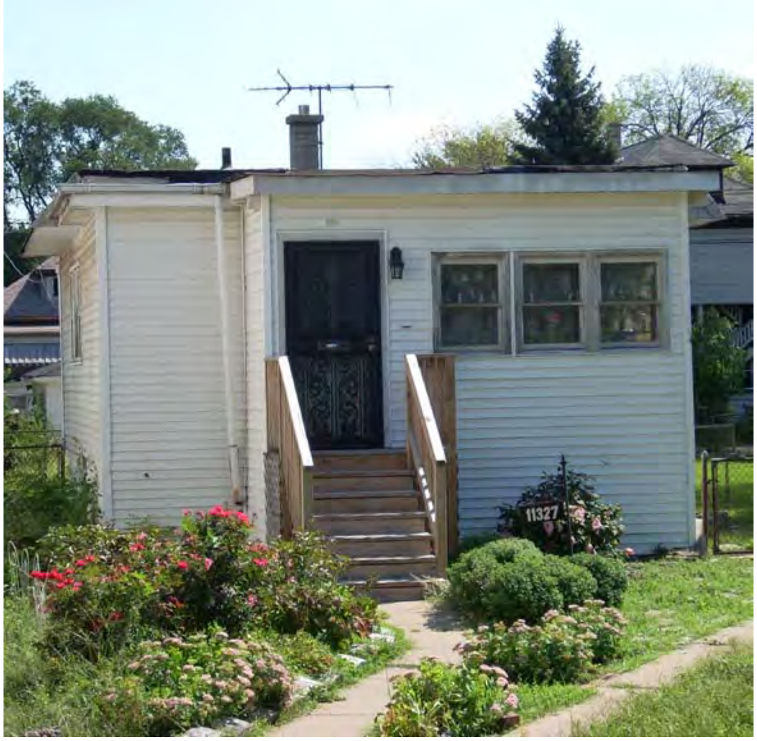
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 26 September 2012

Photos with Captions:
West façade one-story, single family, frame residence



Property Description: **Stories:** 1

The one-story home in the Roseland community is clad with synthetic siding and has a flat roof. Its front façade has an off-center door, wood steps and railings, and a strip of three, non-original one-over-one windows. It lacks integrity and any distinguishing architectural features; therefore, it is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered Slight Modification [✓ Major Alteration]			**Additional Notes/Descriptions** Replacement door, windows, and cladding
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt	**Roof Features** None	**Roof Type** Flat	
Ornamental Architectural Details None			**Windows** Double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11340 S. Princeton Ave

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1948

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

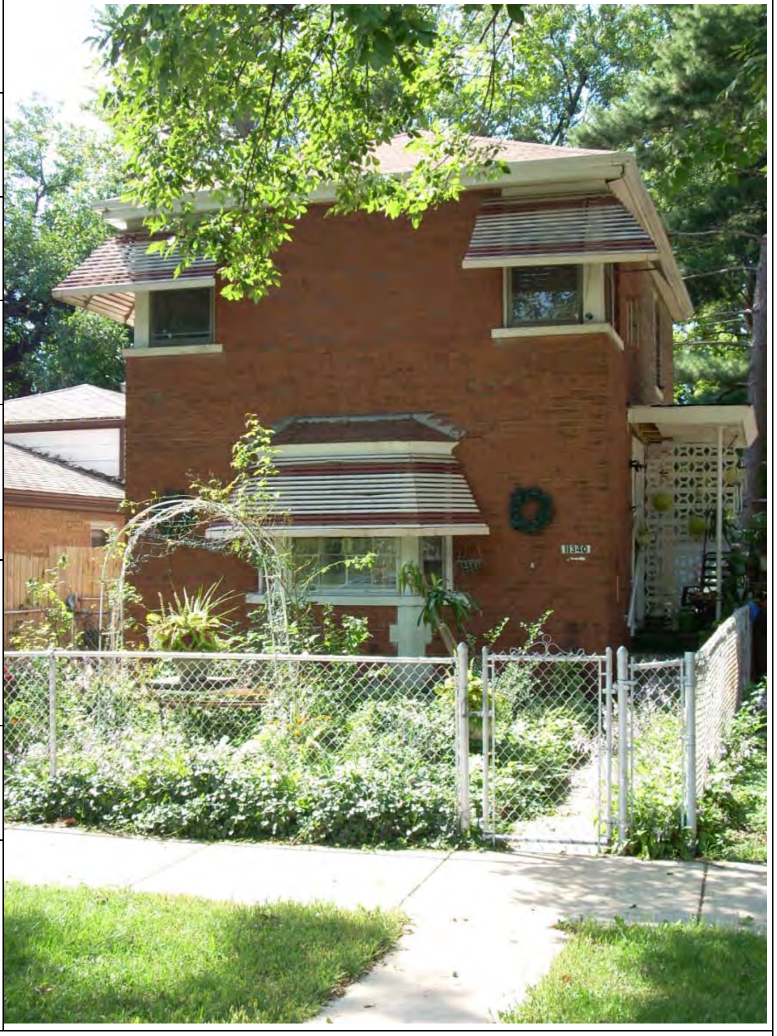
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 6 September 2012

Photos with Captions:
East façade of two-story, brick, single family residence.



Property Description: **Stories:** 2

This two-story home in the Roseland community is clad with face brick and common brick on the front and side elevations, respectively, and has a hip roof covered with asphalt shingles. The front façade has a three-sided bay window on the first floor and casement windows at each corner of the second floor, each topped by an awning. Details include concrete quoins on the bay and concrete sills. The main entrance is located along the side elevation, which contains an entryway porch topped by a flat roof supported by metal pole. Decorative lattice is present at the entrance. This building lacks sufficient distinguishing architectural features to qualify as individually eligible for listing on the National Register.

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Phone (815) 568- 0680

Structural Survey

Integrity: [✓ Unaltered] Slight Modification Major Alteration			**Additional Notes/Descriptions**
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Hipped	
Ornamental Architectural Details Concrete quoins and sills, lattice at entry			**Windows** Fixed-pane, casement
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11801 S. Sangamon Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Redeeming Grace Evangelistic

Property Use

Historic: Industrial

Current: Religious

Date of Construction: 1909

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

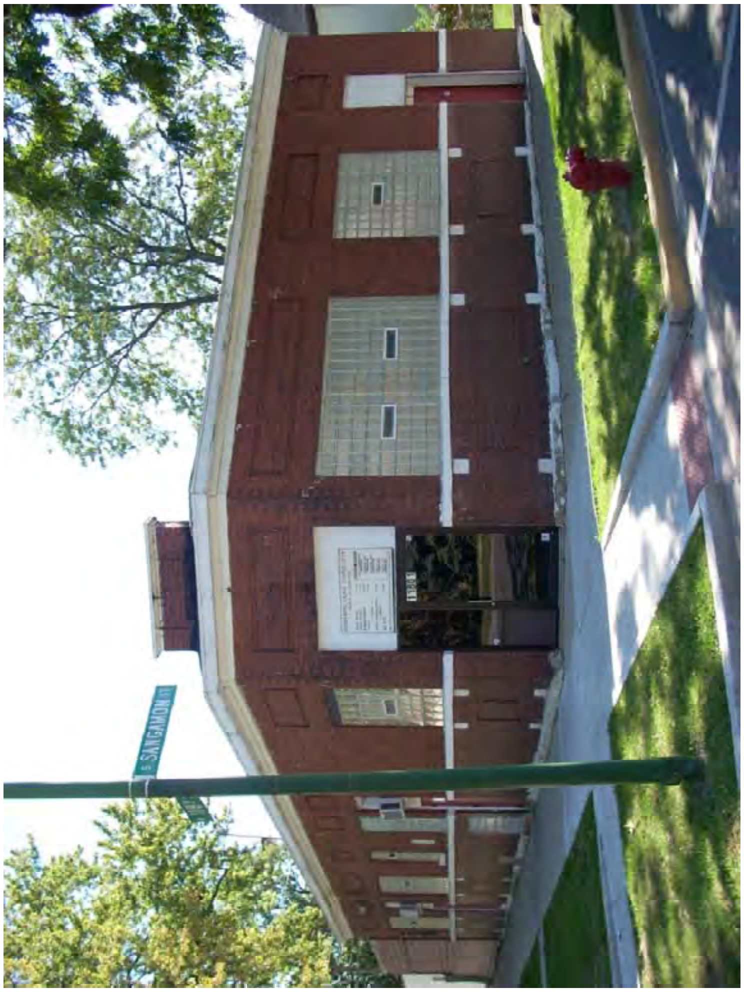
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 24 October 2012

Photos with Captions:
North and west façade of a brick, one-story, former commercial building.



Property Description: **Stories:** 1

This one-story, former industrial building at the corner of Sangamon and 118th streets in the West Pullman community is clad with brown face brick along its two street elevations and has a flat roof and parapet with brick pediment. The corner entrance has a non-original plate glass door with sidelight and a transom that has been in-filled with wood. The window openings along both street elevations have been in-filled with glass block. The Sangamon Street elevation has an off-center hollow core metal door and a transom that has been in-filled with wood. Detailing along both street elevations includes square insert blocks used as decorative accents, rectangular brick panels at the base and parapet level, concrete sill course, and a metal cornice. This building lacks integrity and distinguishing architectural features and is not individually eligible for listing on the National Register.

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Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration	**Additional Notes/Descriptions** Replacement door, window openings in-filled
Condition: Excellent [✓ Good] Poor	
Additional Alterations	

Structure Usage	**Exterior Wall Surface**
Current: NA Historic: NA	Brick

Roof Material	**Roof Features**	**Roof Type**
Unknown	Parapet	Flat

Ornamental Architectural Details	**Windows**
Insert blocks, brick panels, concrete sill course and coping, metal cornice, brick pediment	Glass block

Outbuildings (*Number and Description*)

None

Local Landmark	**Y [✓ N]**	
National Register Historic Places	**Y [✓ N]**	
National Register Historic District	**Y [✓ N]**	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11820 S. Sangamon Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Multi-family residence

Date of Construction: 1904

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

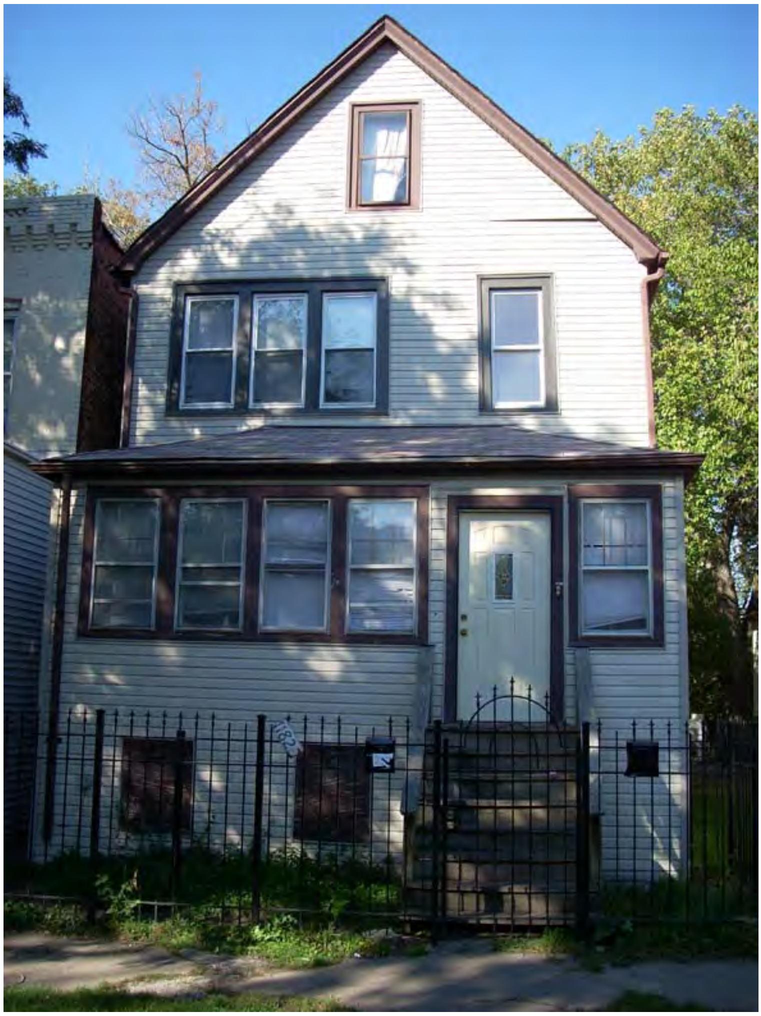
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 29 October 2012

Photos with Captions:
East façade of a two-story, multi-family, frame residence.



Property Description: **Stories:** 2

This two-story frame house in the West Pullman community is situated on a raised brick basement and is covered with synthetic siding. The building has a front gable roof covered with asphalt shingles. The front elevation has a non-original, full-width, hip-roofed, synthetic-clad, enclosed porch with an off-center hollow core metal door, wood steps with straight wood railings, and five non-original double-hung windows. There are four windows on the second floor of the front elevation and one in the gable, all of which are non-original one-over-one aluminum-sash. This house lacks integrity and distinctive architectural features and is not individually eligible for listing on the National Register.

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Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement door, windows, and cladding
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingles	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Presbyterian Church of Roseland

Common/Current: Cornerstone Presbyterian Church

Property Address:

11210 S. State Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Cornerstone Presbyterian Church

Property Use

Historic: Religious

Current: Religious

Date of Construction: 1910, 1936

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

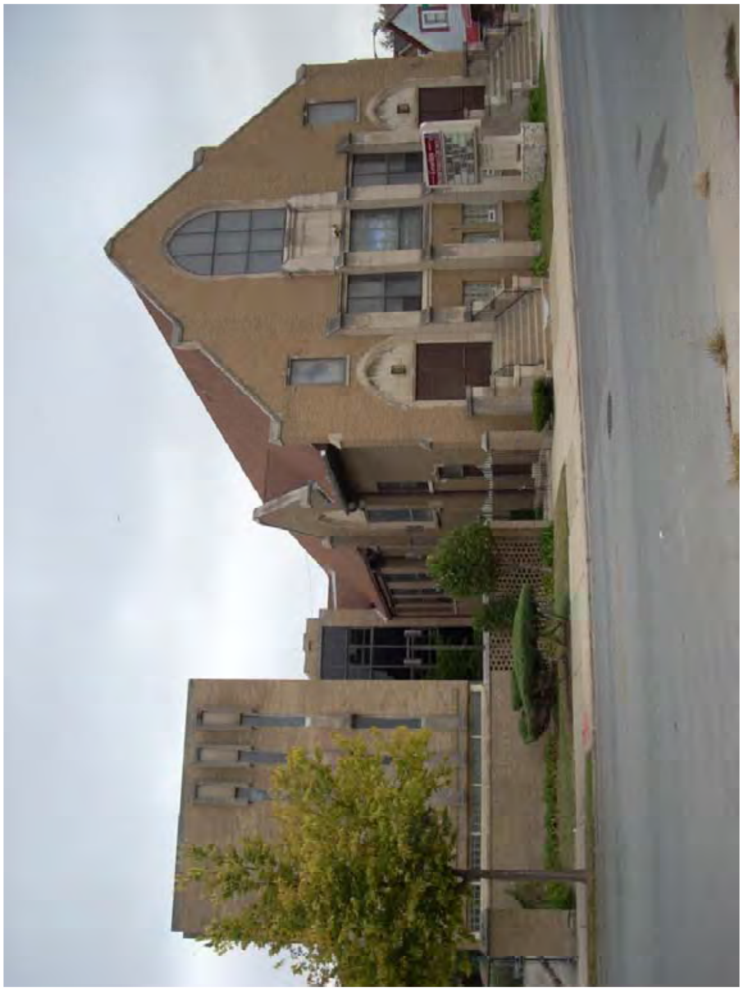
Gothic Revival

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 30 October 2012

Photos with Captions:
East façade of a two-story, brick religious building.



Property Description: **Stories:** 2

This 1910 Gothic Revival style church at the southwest corner of State and 112th streets in the Roseland community is situated on a raised basement with glass block windows and is clad with tan face brick on its front elevation and common brick on its side and rear elevations. The church has a gable roof covered with asphalt shingles and a parapet with concrete coping. The gable front elevation has brick corner buttresses. A pair of wood double-doors each topped by a stone tympanum is located at either end of the gable front. The doors are accessed by concrete steps with low stone sidewalls. Windows at the gable end include a central bay with three large windows separated by stone buttresses and topped by a large stained glass window with pointed arch. Single windows are also situated above both front entrances. Most of the gable fenestration appears to be stained glass. The side elevations feature through-the-cornice gabled wall dormers with brick buttresses flanked by a series of double-hung windows. Additional detailing includes stone window hoods and sills, stone door surrounds with foliate motif, stone buttresses, and a panel inscribed “Presbyterian Church of Roseland.” The church is attached via a flat-roofed wing to a 1936 three-story flat-roofed school. The front (State Street) elevation of the school is clad with tan face brick and has vertical slit windows on the second and third floors and concrete spandrels. The school's first floor elevation is obscured by a brick wall. This building does not stand out as one of the best examples of a Gothic Revival church in Roseland; other churches in this style that are more distinctive in terms of their architectural features, craftsmanship and detailing are is the area. As a result, this church is not recommended as eligible for individual listing on the National Register.

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions**
Condition: [✓ Excellent] Good Poor			
Additional Alterations 1936 wing added			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingle	**Roof Features** Parapet	**Roof Type** Gable (church), flat (school)	
Ornamental Architectural Details Brick buttresses, parapet with concrete coping; stone buttresses, hoods, sills, panels, and door surrounds			**Windows** Fixed pane, stained glass, glass block. double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11546 S. State Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1901

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

Vernacular

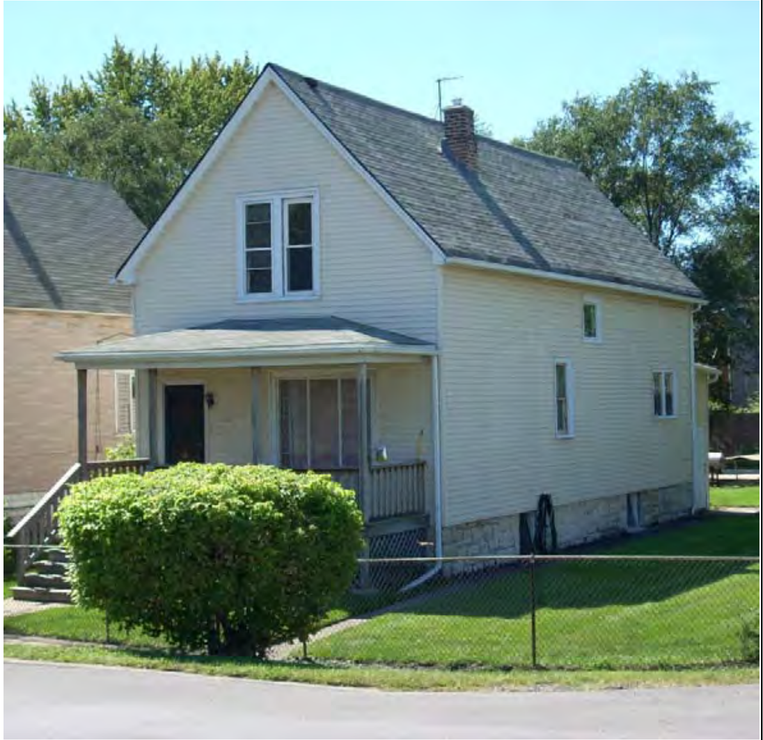
Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 10 September 2012

Photos with Captions

West and north façades of 1.5-story, single family, frame residence.



Property Description: **Stories:** 1.5

This one-and-a-half-story house in the West Pullman community is situated on a raised concrete block basement, is clad with synthetic siding, and has a gable roof covered with asphalt shingles. Its front elevation features a full-width, hip-roof, wood porch with wood slat railings and wood posts. It also has an off-center door, a multi-light fixed-pane window on the first floor, and a pair of non-original one-over-one windows in the gable. This house lacks sufficient integrity and distinguishing architectural features to qualify as individually eligible for listing on the National Register.

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Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Alterations] Major Alterations			**Additional Notes/Descriptions** Replacement cladding, door, and windows in gable
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung, fixed-pane
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Not in CHRS

Property Address:

11548 S. State Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1889

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

Vernacular

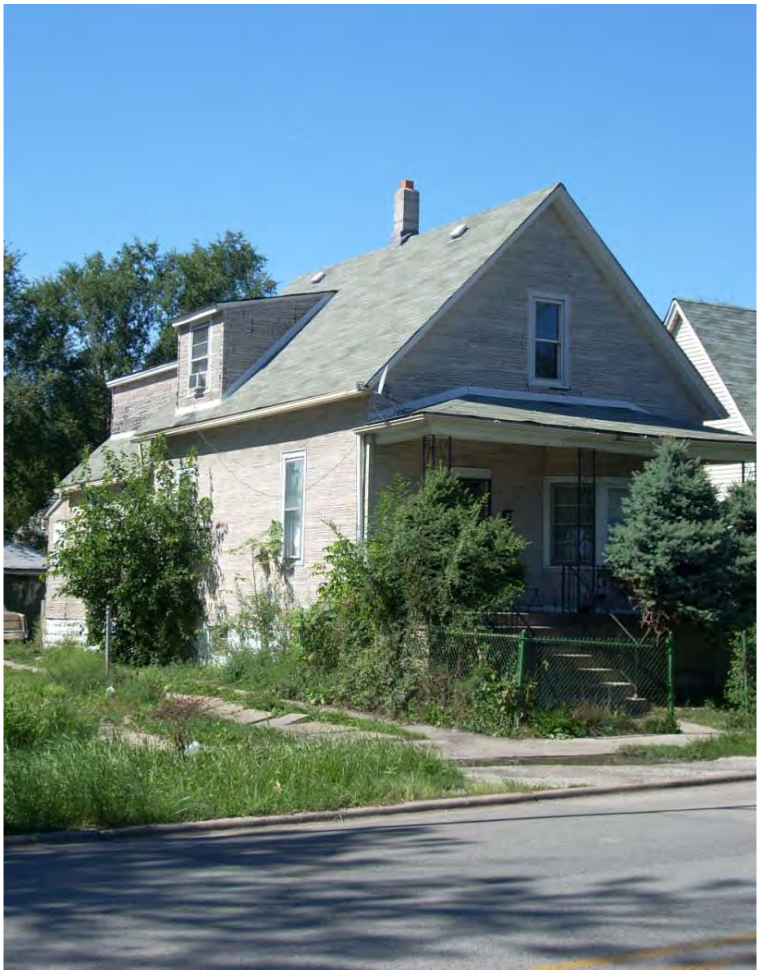
Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 10 September 2012

Photos with Captions

West and south façades of one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story house in the West Pullman community is situated on a raised concrete block basement and is clad with synthetic siding. It has a gable roof covered with asphalt shingles and a shed roof dormer on its south elevation. Its front elevation features a full-width, hip-roof, wood porch with open metal railings and posts, an off-center door, a bay window on the first floor, and a single non-original one-over-one window in the gable. This house lacks sufficient integrity and distinguishing architectural features to qualify as individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
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Structural Survey

Integrity: Unaltered [✓ Slight Alterations] Major Alterations			**Additional Notes/Descriptions** Replacement windows, doors, and siding
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** Dormer	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Not in CHRS

Property Address:

11567 S. State Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Vacant

Property Use

Historic: Single family residence

Current: Multi-family residence

Date of Construction: 1908

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

Vernacular

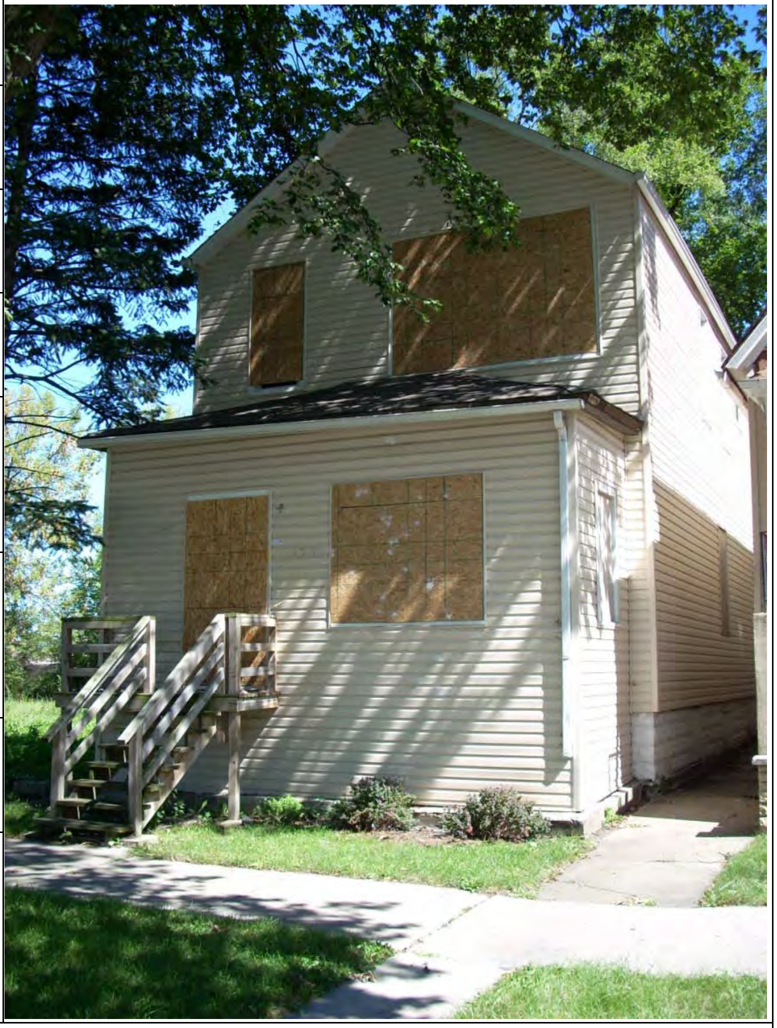
Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 10 September 2012

Photos with Captions

West façade of two-story, multi-family, frame residence.



Property Description: **Stories:** 2

This two-story house in the West Pullman community is situated on a raised concrete block basement and is clad with synthetic siding. It has a front gable roof covered with asphalt shingles and an enclosed hip roof porch. The front door and all window openings are covered with plywood. This house lacks sufficient integrity and distinguishing architectural features to qualify as individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alterations			**Additional Notes/Descriptions** Windows and doors covered with plywood, replacement cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** NA
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11569 S. State Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1898

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

Vernacular

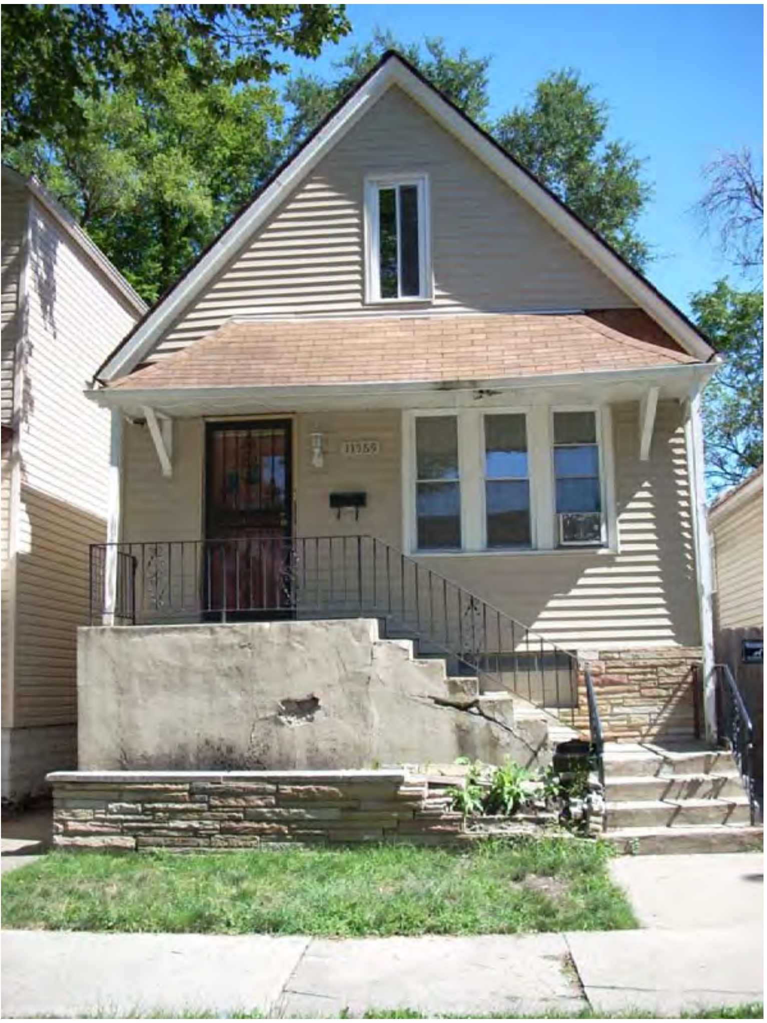
Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 10 September 2012

Photos with Captions

West façade of one-story, single-family, frame residence.



Property Description: **Stories:** 1

This one-story house in the West Pullman community is situated on a raised concrete block basement with a stone veneer. Above, it is clad with aluminum siding and has a gable roof covered with asphalt shingles. Its front elevation features a pent roof with decorative knee braces, an off-center door, concrete steps with metal railings and a strip of three non-original one-over-one windows. The window opening in the gable contains a pair of narrow casements. This house lacks sufficient integrity and distinguishing architectural features to qualify as individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alterations			**Additional Notes/Descriptions** Replacement windows and cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details Knee braces supporting porch roof			**Windows** Double-hung, casement
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11571 S. State Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1898

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

Vernacular

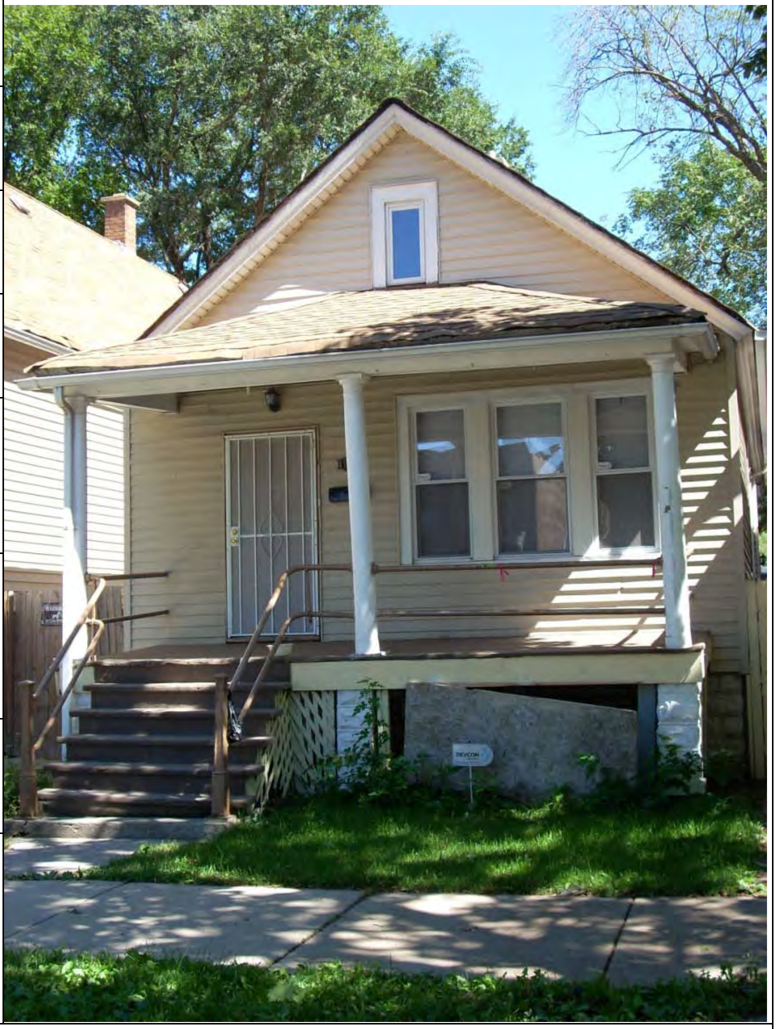
Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 10 September 2012

Photos with Captions

West façade of one-story, single-family, frame residence.



Property Description: **Stories:** 1

This one-story house in the West Pullman community is situated on a raised concrete block basement, is clad with synthetic siding, and has a front gable roof covered with asphalt shingles. Its front elevation features a full-width, hip-roof, wood porch with Doric columns and metal pipe railings. It also has an off-center door, a strip of three non-original one-over-one windows, and a single-pane window in the gable. This house lacks sufficient integrity and distinguishing architectural features to qualify as individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alterations			**Additional Notes/Descriptions** Replacement windows and cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Fixed-pane, double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11573 S. State Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1908

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

Vernacular

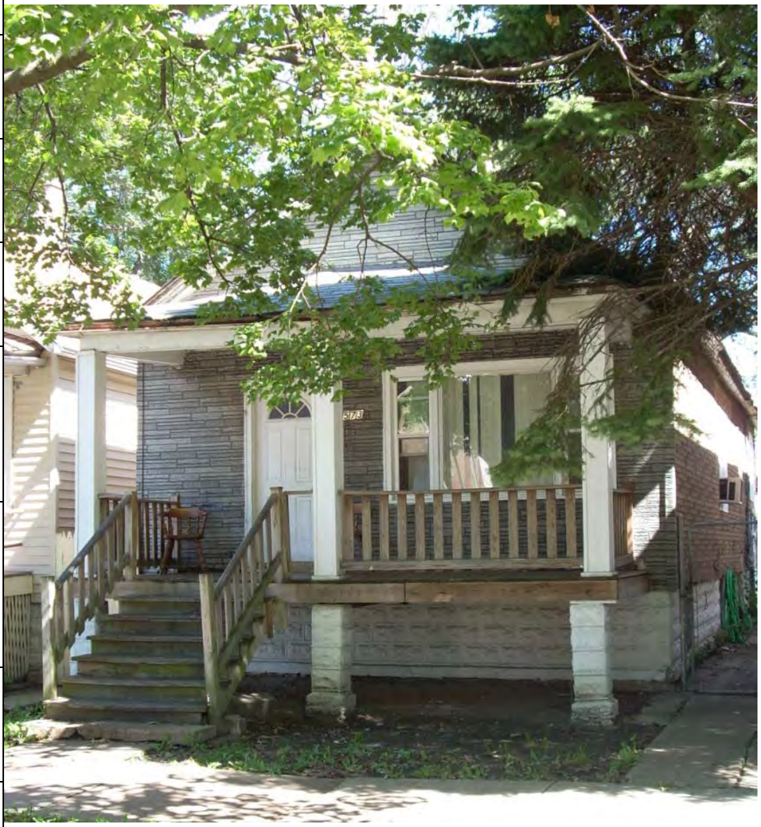
Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 10 September 2012

Photos with Captions

West façade of one-story, single-family frame residence.



Property Description: **Stories:** 1

This one-story house in the West Pullman community is situated on a raised concrete block basement, is clad with synthetic siding, and has a gable roof covered with asphalt shingles. Its front elevation features a full-width, hip-roof, wood porch with square porch supports and non-original railings. It has an off-center metal hollow core paneled door with fanlight and a picture window flanked by non-original one-over-one windows. This house lacks sufficient integrity and distinguishing architectural features to qualify as individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alterations			**Additional Notes/Descriptions** Replacement windows and siding
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Fixed-pane, double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y [✓ N]**	
National Register Historic Places	**Y [✓ N]**	
National Register Historic District	**Y [✓ N]**	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11575 S. State Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Vacant

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1908

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

Vernacular

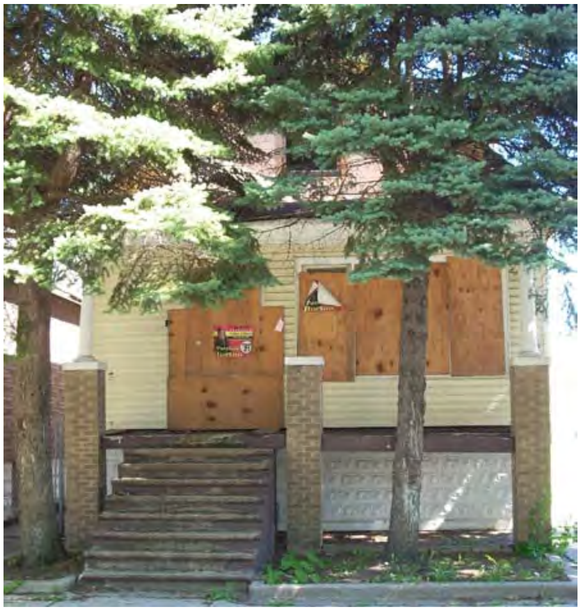
Prepared By: C. Tolmie, M. C. Bird, J. Guarino

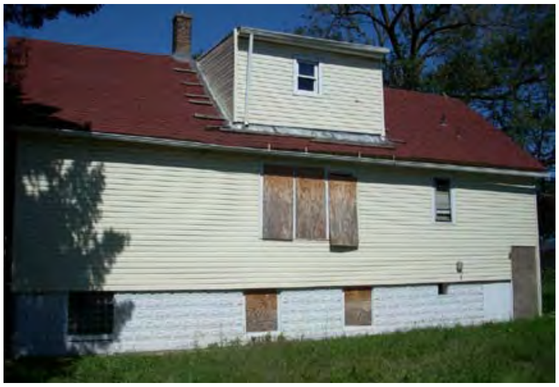
Photo By: S. Katz

Date: 10 September 2012

Photos with Captions

South façade of one-story, single-family frame residence.





Property Description: **Stories:** 1

This one-story house in the West Pullman community is situated on a raised concrete block basement and is clad with synthetic siding. It has a front gable roof covered with asphalt shingles and a flat-roofed dormer along one of its side elevations. Its front elevation features a full-width porch with wood steps and support consisting of brick piers topped by squat Doric columns. The porch deck and railings have been removed and the door and all windows openings are covered with plywood. This house lacks sufficient integrity and distinguishing architectural features to qualify as individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered	[✓ Slight Modification]	Major Alterations	**Additional Notes/Descriptions** Windows and doors covered, replacement cladding
Condition: Excellent	Good	[✓ Poor]	
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** Dormer	**Roof Type** Gable	
Ornamental Architectural Details Doric columns on porch			**Windows** Unknown
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11583 S. State Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1926

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

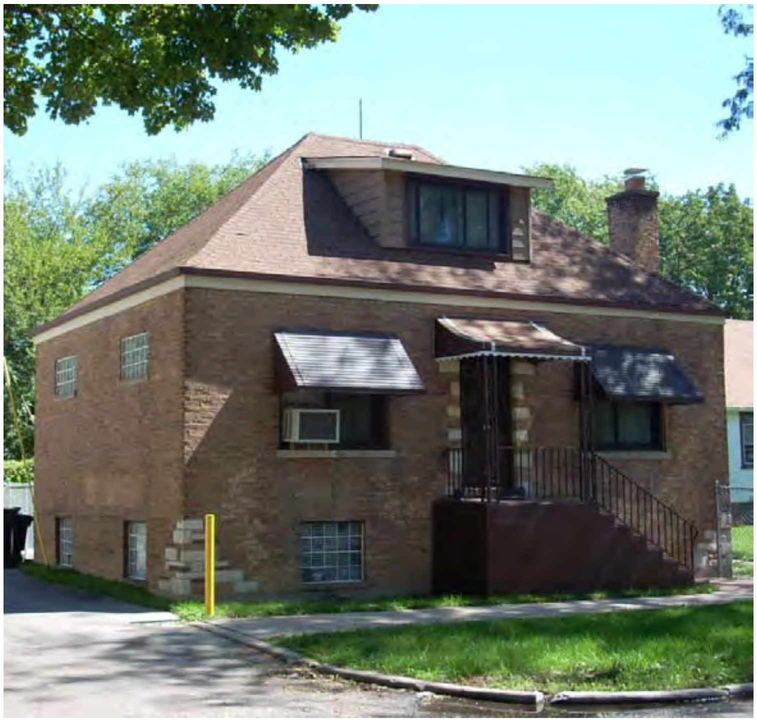
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 10 September 2012

Photos with Captions:
South and east façades of single family, brick residence.



Property Description: **Stories:** 1

This one-story house in the West Pullman community is situated on a raised basement with glass block windows and is clad with common brick. It has a steeply pitched hip roof covered with asphalt shingles and a shed dormer with sliding glass windows. Its front elevation features a centrally located hollow metal paneled door (non-original) flanked by paired, double-hung windows. The porch has concrete steps, metal railings and supports, and a metal canopy roof. Detailing includes rusticated stonework at the basement corners and around the door. This house does not feature sufficient distinguishing architectural features to qualify as individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alterations			**Additional Notes/Descriptions** Replacement windows and door
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingle	**Roof Features** Dormer	**Roof Type** Hipped	
Ornamental Architectural Details Rusticated stonework at corners and around the entrance			**Windows** Double-hung, sliding, glass block
Outbuildings (*Number and Description*) None.			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Trinity Italian Reformed Church (1938)

Common/Current: New Christian Joy F.G.B.C.

Property Address:

11594 S. State Street
Alternate: 11588 S State Street (per CCA)

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

New Christian Joy F.G.B.C.

Property Use

Historic: Religious

Current: Religious

Date of Construction: 1924

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

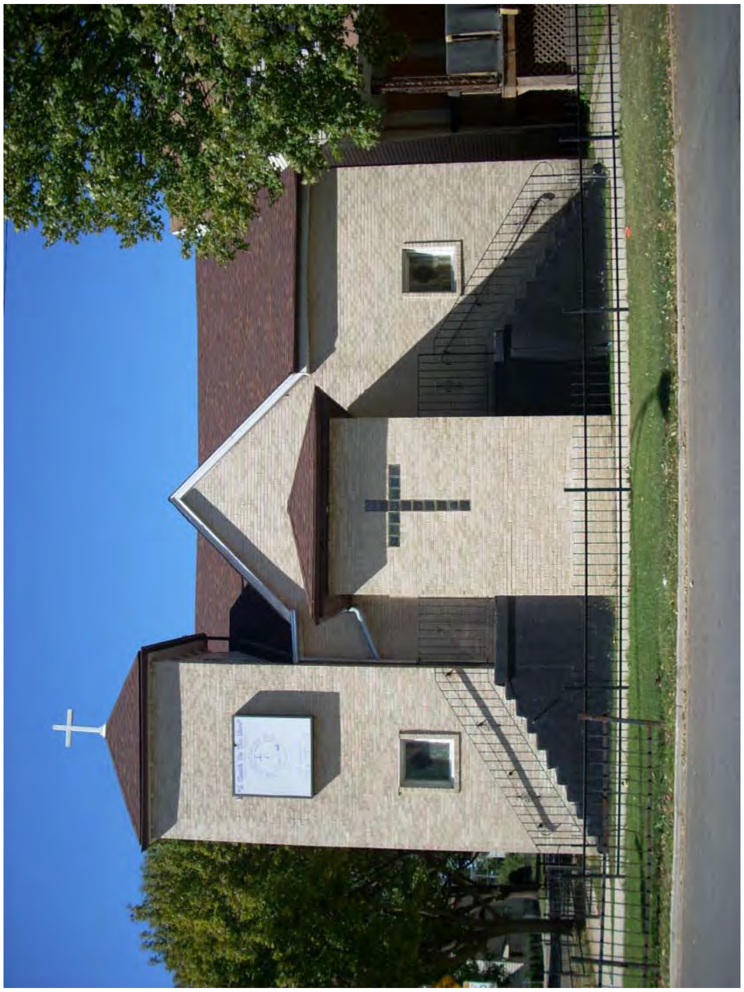
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 22 October 2012

Photos with Captions:
East façade of a brick, 1.5-story religious building.



Property Description: **Stories:** 1.5

This church at the corner of State and 116th streets is clad in buff face brick on a concrete block foundation. The building has a raised basement, gable roof covered with asphalt shingles, and a square corner tower with a hip roof. Its front (State Street) elevation has a centrally located hip-roof entrance pavilion with metal stairs on both sides and a gable wall dormer above. The pavilion features a cross of glass blocks and the flanking walls each have a single square leaded glass window. The side (116th Street) elevation features one large and two small pointed arch windows. This church lacks sufficient distinctive architectural features to qualify as individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: [✓ Unaltered] Slight Modification Major Alteration			**Additional Notes/Descriptions**
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingle	**Roof Features** Dormer	**Roof Type** Gable	
Ornamental Architectural Details Square tower, cruciform-shaped glass blocks, pointed windows, leaded glass			**Windows** Fixed-pane
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11118 S. Stewart Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Benson & Son Construction Contractor

Property Use

Historic: Industrial (Sash & Screen Door Factory, 1939)

Current: Garage

Date of Construction: 1922

Architect's Name: Unknown

Builder/Contractor: Unknown

Architectural Style:

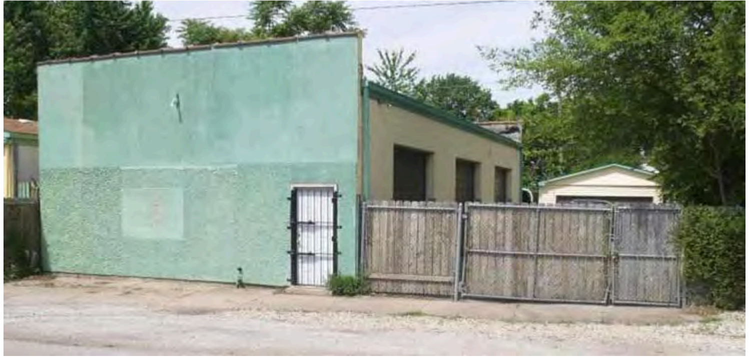
Vernacular

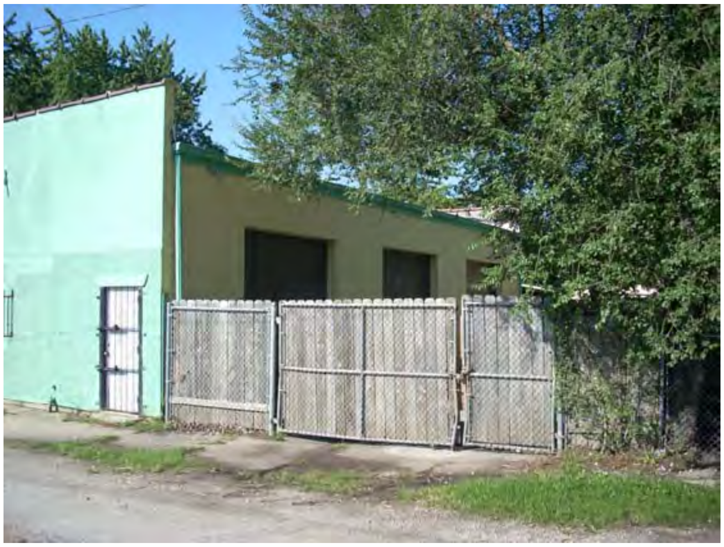
Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz, CCA

Date: 6 September 2012

Photos with Captions:
East and north facades of a one-story, concrete block garage.
Cook County Assessor's photo (top), MARS, Inc. photo (bottom):





Property Description: **Stories:** 1

This one-story concrete block garage has a flat roof and parapet. Its front elevation has been covered with what appears to be shotcrete and has an off-center hollow metal door. The structure has a series of overhead garage door openings along one of its side elevations. This structure lacks architectural distinction and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration				**Additional Notes/Descriptions** Re-clad with shotcrete
Condition: [✓ Excellent] Good Poor				
Additional Alterations				
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Concrete block		
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat		
Ornamental Architectural Details None				**Windows** NA
Outbuildings (*Number and Description*) None				

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Business office attached (11124 S. Stewart Ave.)

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11130 S Stewart Ave.

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1914

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

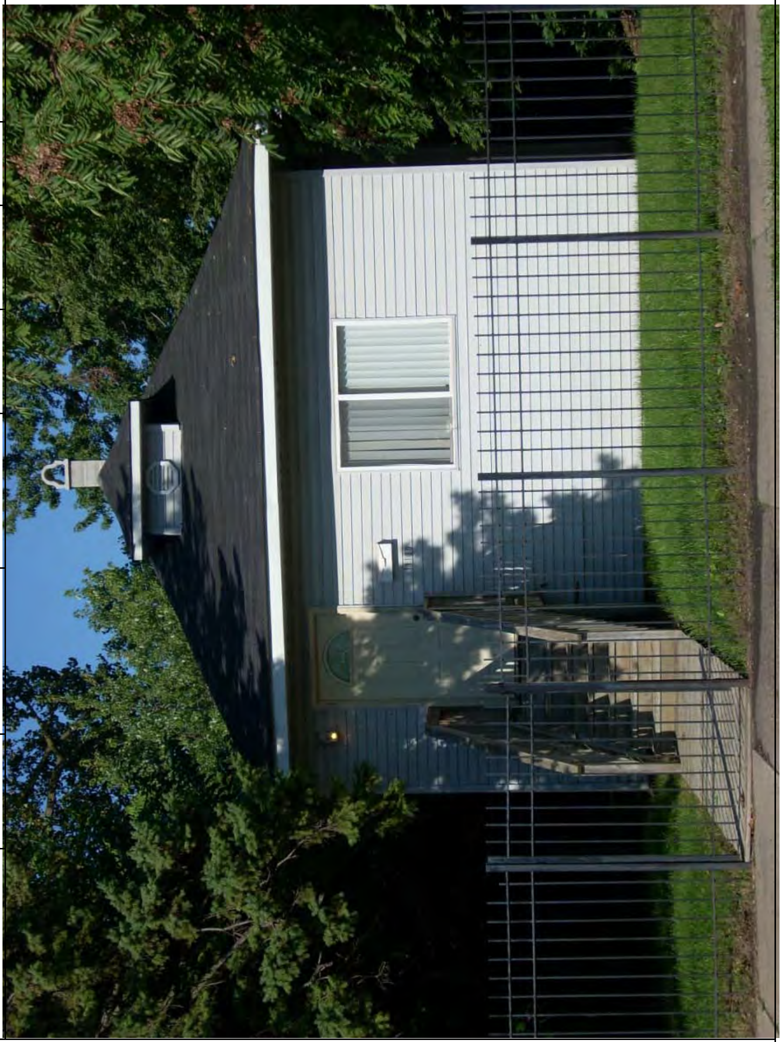
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 6 September 2012

Photos with Captions:
East façade of one-story, frame, single family residence.



Property Description: **Stories:** 1

This one-story home in the Roseland community is clad with synthetic siding; it has a hip roof covered with asphalt shingles and a hipped roof dormer with louver. The front elevation has an off-center door, wood steps and railings, and a pair of windows that appear to be casements. This home lacks integrity and architectural distinction and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows and cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** Dormer	**Roof Type** Hip	
Ornamental Architectural Details None			**Windows** Casement
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11142 S. Stewart Ave

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Vacant

Property Use

Historic: Industrial

Current: Industrial

Date of Construction: circa 1950

Architect's Name: Unknown

Builder/Contractor: Unknown

Architectural Style:

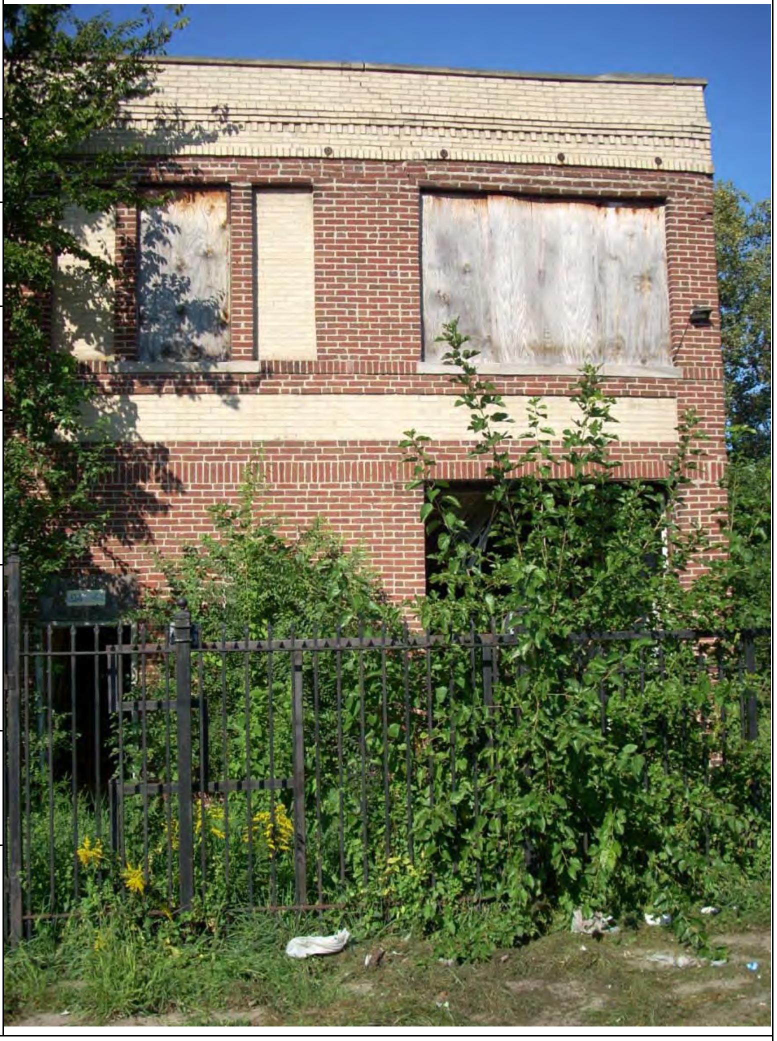
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 6 September 2012

Photos with Captions:
East façade two-story, brick light industrial building.



Property Description: **Stories:** 2

This two-story light industrial building is clad with face brick and common brick along its front and side elevations, respectively, and has a flat roof and parapet. The front elevation has an off-center entrance with no door, a large window opening on the first floor that is obscured by foliage, and window openings on the second floor that have been in-filled with both wood and brick. The buff brick between the first and second floors and at the parapet level contrasts with the red brick cladding of the front elevation and may be non-original. Detailing includes dentil molding on the parapet, banding in brick, and stone sills. Side elevation windows are in-filled with glass block. This building lacks integrity and architectural distinction and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** In-filled windows and doors
Condition: Excellent Good [✓ Poor]			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details Parapet with dentil molding, banding, sills			**Windows** NA
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

11224 S. Stewart Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1923

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

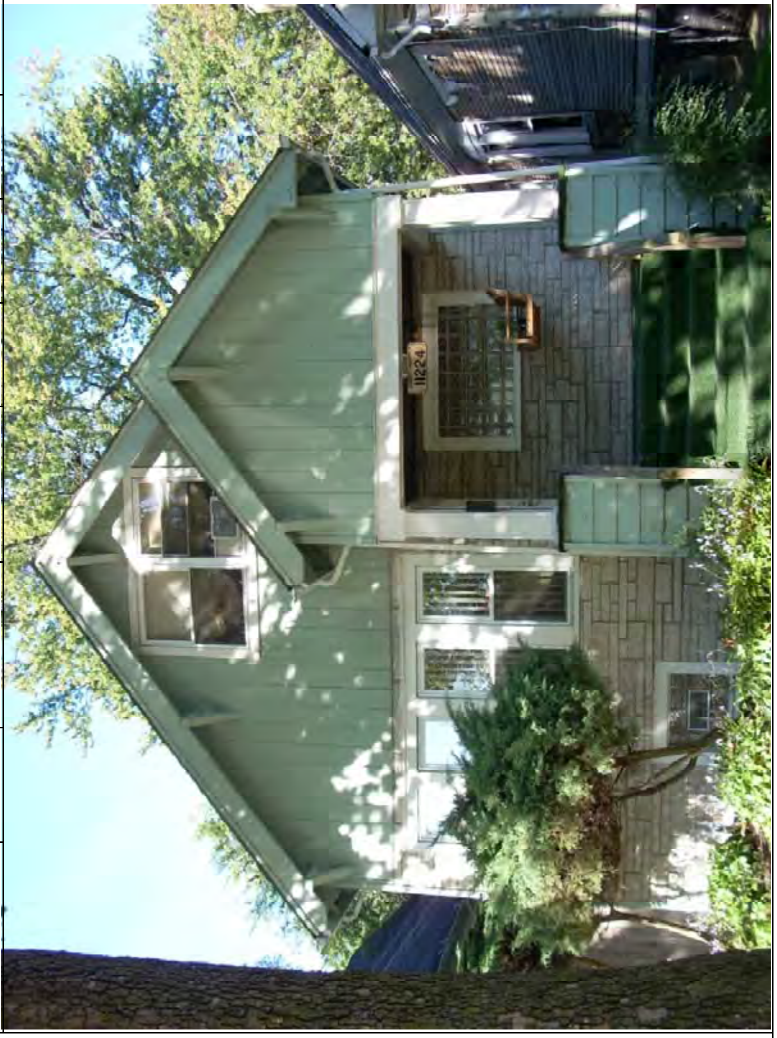
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 16 September 2012

Photos with Captions:
East façade of 1.5-story, frame, single family residence.



Property Description: **Stories:** 1.5

This 1.5-story house in the Roseland community is situated on a raised brick basement with glass block windows. The building has a front gable roof covered with asphalt shingles and overhanging eaves with decorative knee braces. The front elevation is covered with faux stone to the top of the first floor windows and in vertical synthetic siding above. It has a partially recessed gable-roofed corner porch with sidewalls covered with synthetic siding, two low squared wood column supports, and wood steps. A glass block window and hollow core metal door are tucked into one side of the porch. A strip of four windows on the first floor and a pair of windows in the gable are non-original one-over-one aluminum-sash. This house lacks integrity and distinctive architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity:			**Additional Notes/Descriptions** Replacement windows, door, and cladding
Unaltered	[✓ Slight Modification]	Major Alteration	
Condition:			
[✓ Excellent]	Good	Poor	
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding (including faux stone)	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details Knee braces, square column on porch			**Windows** Double-hung, glass block
Outbuildings (*Number and Description*) Garage			

Local Landmark	**Y [✓ N]**	
National Register Historic Places	**Y [✓ N]**	
National Register Historic District	**Y [✓ N]**	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11229 S. Stewart Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1924

Architect's Name: Unknown

Builder/Contractor: Unknown

Architectural Style:

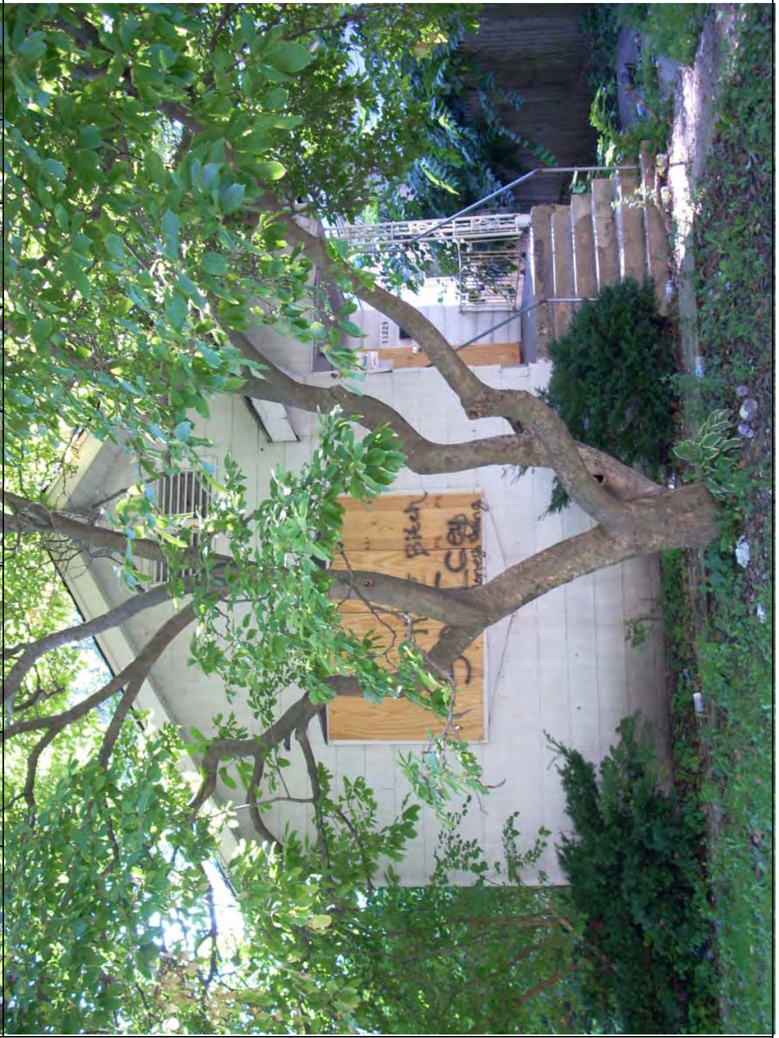
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 6 September 2012

Photos with Captions:
West façade of one-story, single family frame residence.



Property Description: **Stories:** 1

This one-story frame home in the Roseland community is clad with synthetic siding and has a front-gabled roof covered with asphalt shingles. Its off-center recessed porch with gabled hood has concrete steps, metal railings, and a corner support, plus a door opening that has been covered with plywood. The bow window on the front elevation and window openings along the side elevations have all been covered with plywood. This home lacks integrity and architectural distinction and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered	[✓ Slight Modification]	Major Alteration	**Additional Notes/Descriptions** Replacement siding, covered window and door openings
Condition: Excellent	Good	[✓ Poor]	
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details Gabled hood at entrance			**Windows** Unknown
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11231 S. Stewart Ave.

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1925

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

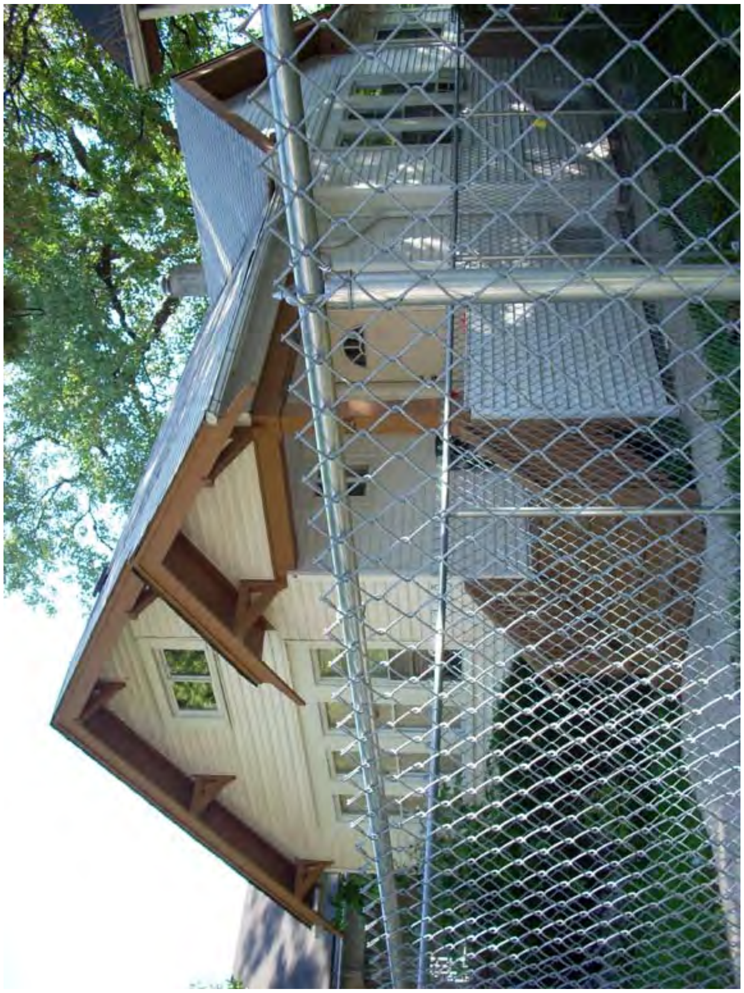
Craftsman

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 26 September 2012

Photos with Captions:
West façade of one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story Craftsman style bungalow in the Roseland neighborhood is clad with aluminum siding. It has a cross-gable roof covered with asphalt shingles, overhanging eaves, extended rafter ends, and decorative knee brace supports. Its recessed corner porch features wood steps, a wood post, a paneled hollow core metal door with fanlight, and a decorative gable hood with knee brace supports. Its front façade has a strip of four one-over-one windows and a pair of single-pane windows in the attic gable that may be casements. This home does not feature sufficient integrity or distinguishing architectural features to qualify as individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity:

Unaltered [✓ Slight Modification] Major Alteration

Additional Notes/Descriptions

Replacement door

Condition:

[✓ Excellent] Good Poor

Additional Alterations

Structure Usage	**Exterior Wall Surface**
Current: NA Historic: NA	Synthetic siding

Roof Material	**Roof Features**	**Roof Type**
Asphalt	None	Cross-gable

Ornamental Architectural Details

Extended rafters, knee braces

Windows

Double-hung, casement

Outbuildings (*Number and Description*)

None

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

9819 S. Union Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1962

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

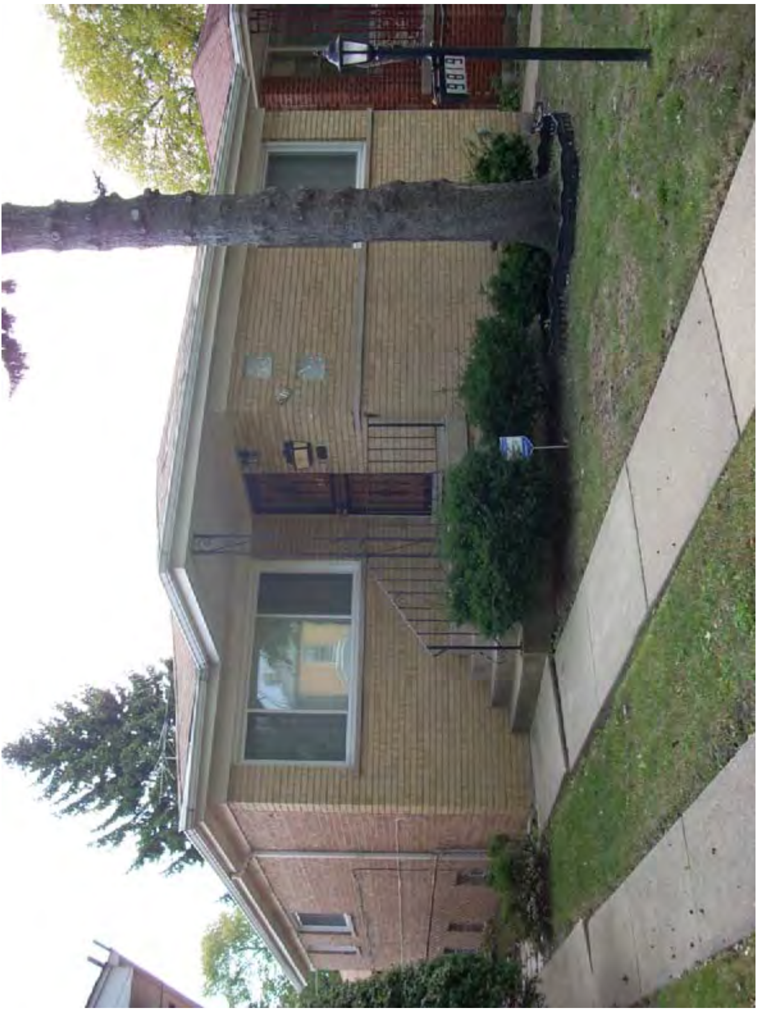
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: September 2012

Photos with Captions:
West façade of one-story, single family, brick residence.



Property Description: **Stories:** 1

This one-story house in the Washington Heights community is situated on a raised basement and is clad with yellow face brick on its front elevation and in common brick along its side and rear elevations. The building has a hip roof covered with asphalt shingles. Its front elevation has a door tucked into the side of the projecting living room bay and a partial-width porch with concrete steps, metal railings and an open metal post that is sheltered by the wide roof overhang. Front elevation fenestration consists of a picture window flanked by casements and a pair of windows that are either sliding glass or casement. Detailing includes a concrete sill course and two decorative glass blocks. It does not feature distinguishing architectural elements and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: [✓ Unaltered] Slight Modification Major Alteration			**Additional Notes/Descriptions**
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Hip	
Ornamental Architectural Details Decorative glass block, concrete sills			**Windows** Fixed-pane, casement, sliding?
Outbuildings (*Number and Description*) Garage			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

9822 S. Union Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1944

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

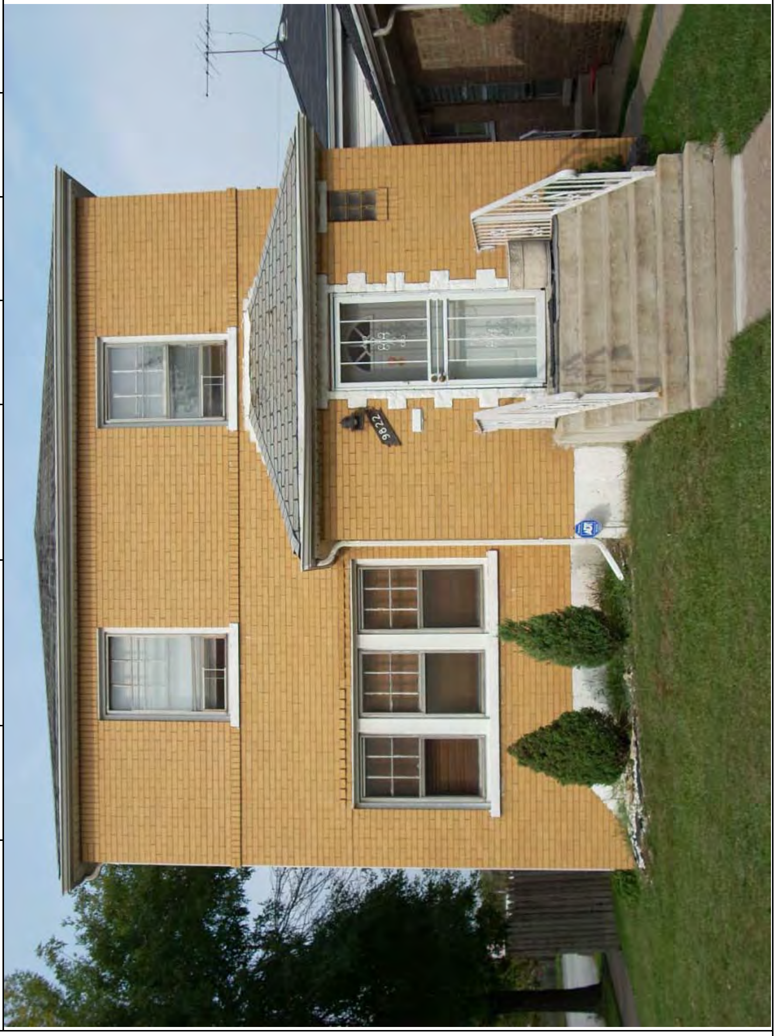
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: September 2012

Photos with Captions:
East façade of two-story, brick, single family residence.



Property Description: **Stories:** 2

This two-story house at the northwest corner of Union Avenue and 98th Place in the Washington Heights community is situated on a raised basement and is clad with yellow face brick on its front elevation and in common brick along its side and rear elevations. The building has a hip roof covered with asphalt shingles. Its front elevation has a partial-width, hip-roof, enclosed porch with a non-original hollow core metal door, concrete steps with metal railings, and five six-over-one original wood-sash windows: a strip of three on the first floor and two on the second floor. Detailing includes decorative stone flanking the front door, a small glass block window, brick banding, and concrete sills. This is a standard type of home that was produced during the post-World War II era. It does not feature distinguishing architectural elements and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement door
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Hip	
Ornamental Architectural Details Stone around the entrance, concrete sills, brick banding			**Windows** Double-hung, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

9901 S. Union Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1948

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

Minimal Traditional

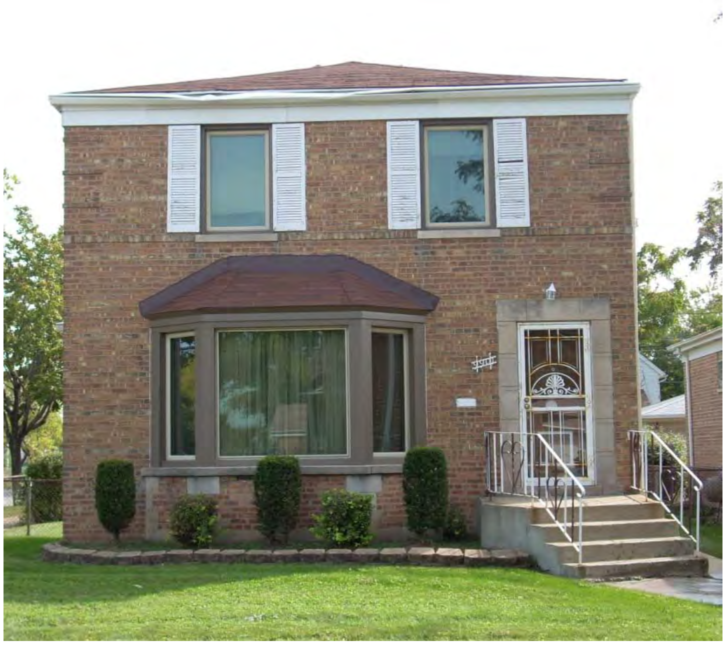
Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: September 2012

Photos with Captions:

East façade of two-story, brick single-family residence.



Property Description: **Stories:** 2

This two-story brick-clad house in the Washington Heights community is situated on a raised basement with glass block windows. The building has a hip roof covered with asphalt shingles. Its front elevation has an off-center non-original hollow core metal door, concrete steps and metal railings, and a three-sided window bay comprised of a picture window flanked by casements on the first floor. There are two casement windows on the second floor. Detailing includes a smooth stone door surround, concrete sills, and decorative stones beneath the bay. It does not feature distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement door
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Hip	
Ornamental Architectural Details Stone door surround, concrete sills, decorative stones under bay			**Windows** Fixed-pane, casement
Outbuildings (*Number and Description*) Garage			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

9906 S. Union Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1957

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

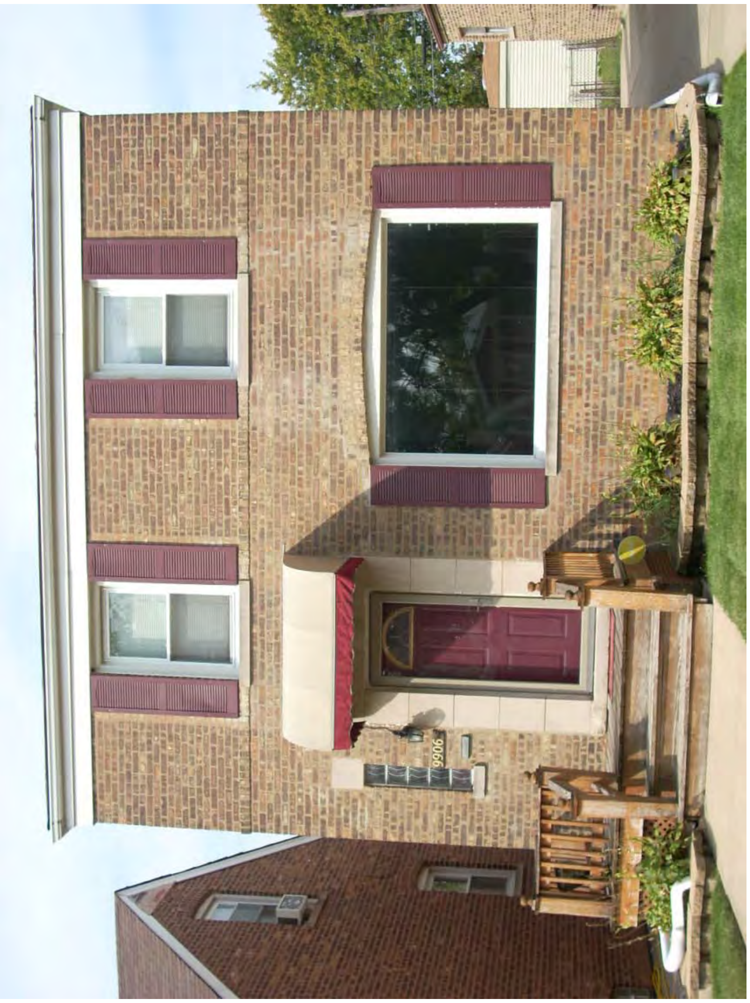
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: September 2012

Photos with Captions:
West façade of two-story, brick, single-family residence.



Property Description: **Stories:** 2

This two-story brick-clad house in the Washington Heights community has a hip roof covered with asphalt shingles. Its front elevation has an off-center hollow core metal door, woods steps and railings, a picture window on the first floor, and two one-over-one aluminum-sash windows on the second floor. Windows and the front door are non-original. Detailing includes a smooth stone door surround, a vertical strip of five glass blocks, brick banding, and concrete sills. It does not feature distinguishing architectural elements and is not individually eligible for listing on the National Register.

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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows and doors
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Hip	
Ornamental Architectural Details Decorative glass blocks, concrete sills			**Windows** Double-hung, fixed-pane, glass block
Outbuildings (*Number and Description*) Garage			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

741 W. Vermont Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1954

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

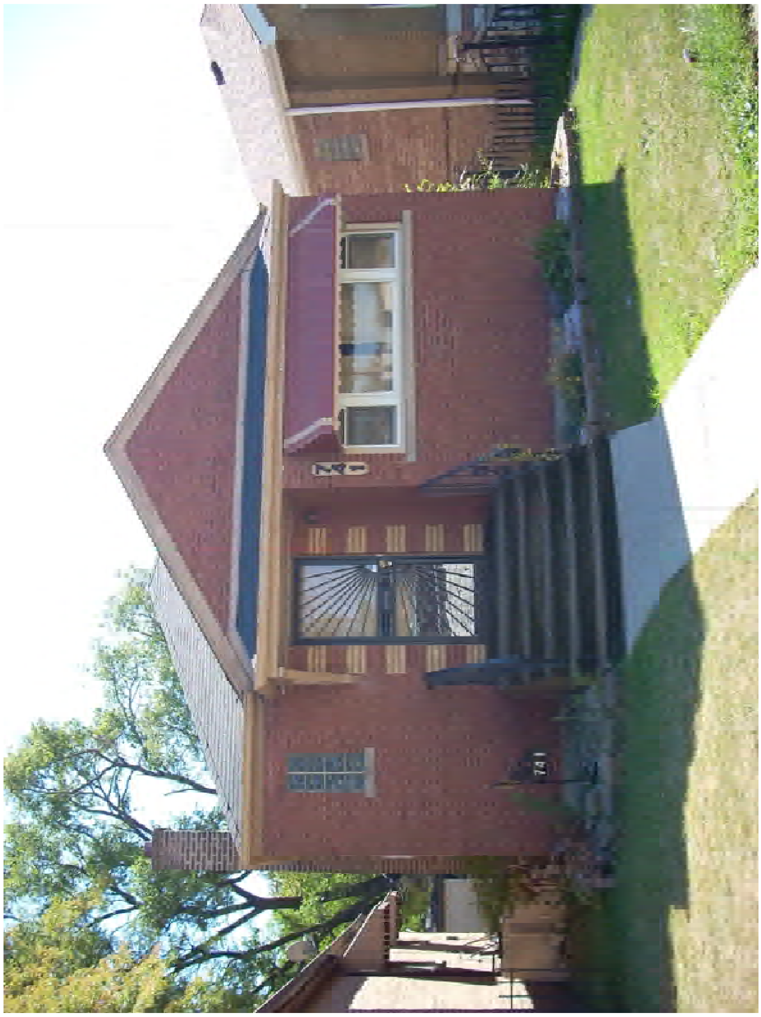
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 29 October 2012

Photos with Captions:
North façade of a one-story, brick, single family residence.



Property Description: **Stories:** 1

This one-story house in the West Pullman community is situated on a raised basement and is clad with face brick on the front elevation and common brick on the side and rear elevations. The building has a hip roof covered with asphalt shingles and a front-facing gabled pediment with bracket. The front elevation has a metal storm door flanked by decorative yellow bricks, concrete steps with metal railings, and a small glass block window. There is a projecting living room bay with a non-original picture window flanked by one-over-one aluminum-sash windows. All windows have concrete sills. A pent roof spans the door and living room bay. The house does not feature any distinguishing architectural features and is not individually eligible for listing on the National Register.

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Structural Survey

Integrity: Unaltered	[✓ Slight Modification]	Major Alteration	**Additional Notes/Descriptions** Replacement windows
Condition: [✓ Excellent]	Good	Poor	
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingles	**Roof Features** None	**Roof Type** Hip	
Ornamental Architectural Details Contrasting brick at entrance, concrete sills, bracket			**Windows** Double-hung, fixed-pane, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

814 W. Vermont Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1953

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

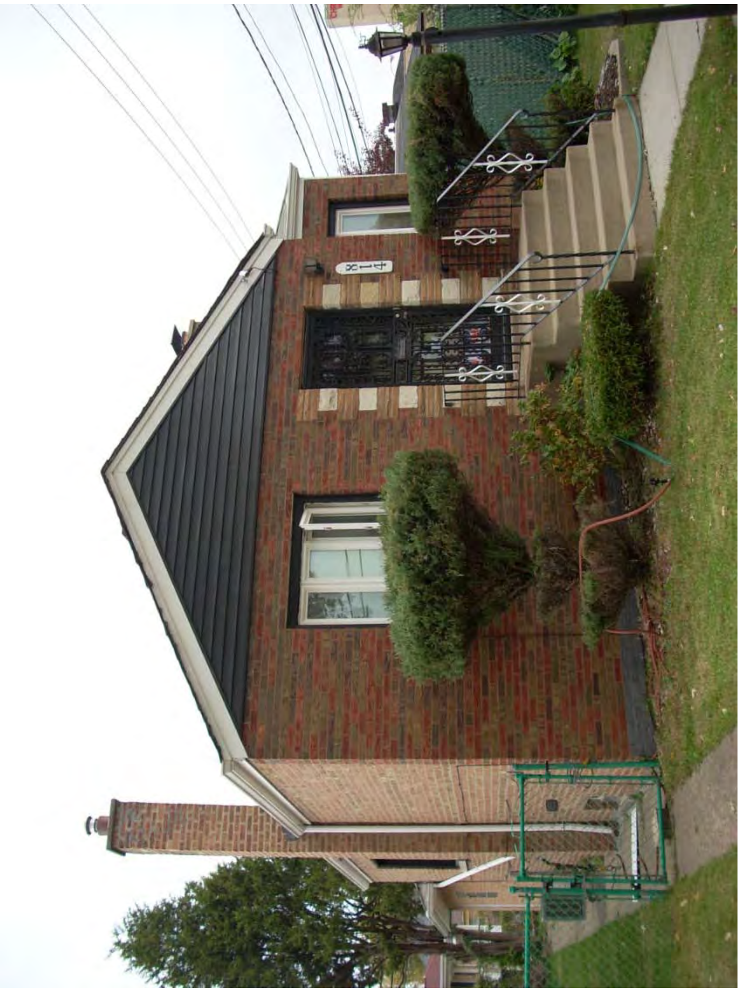
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 29 October 2012

Photos with Captions:
South façade of a one-story, brick, single family residence.



Property Description: **Stories:** 1

This one-story house in the West Pullman community is clad with face brick on the front elevation and common brick on the side and rear elevations. The building has a hip roof with asphalt shingles, and a partial-width projecting front pavilion with a synthetic-clad gable. The front elevation has a centrally located metal storm door flanked by decorative faux stones, concrete steps with metal railings, and two groups of three non-original casement windows. This house does not display distinguishing architectural features and is not individually eligible for listing on the National Register.

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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick (main), synthetic siding (gable end)	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Hip	
Ornamental Architectural Details Stone surrounding entrance			**Windows** Casement
Outbuildings (*Number and Description*) None			

Local Landmark	**Y [✓ N]**	
National Register Historic Places	**Y [✓ N]**	
National Register Historic District	**Y [✓ N]**	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

817 W. Vermont Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1956

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

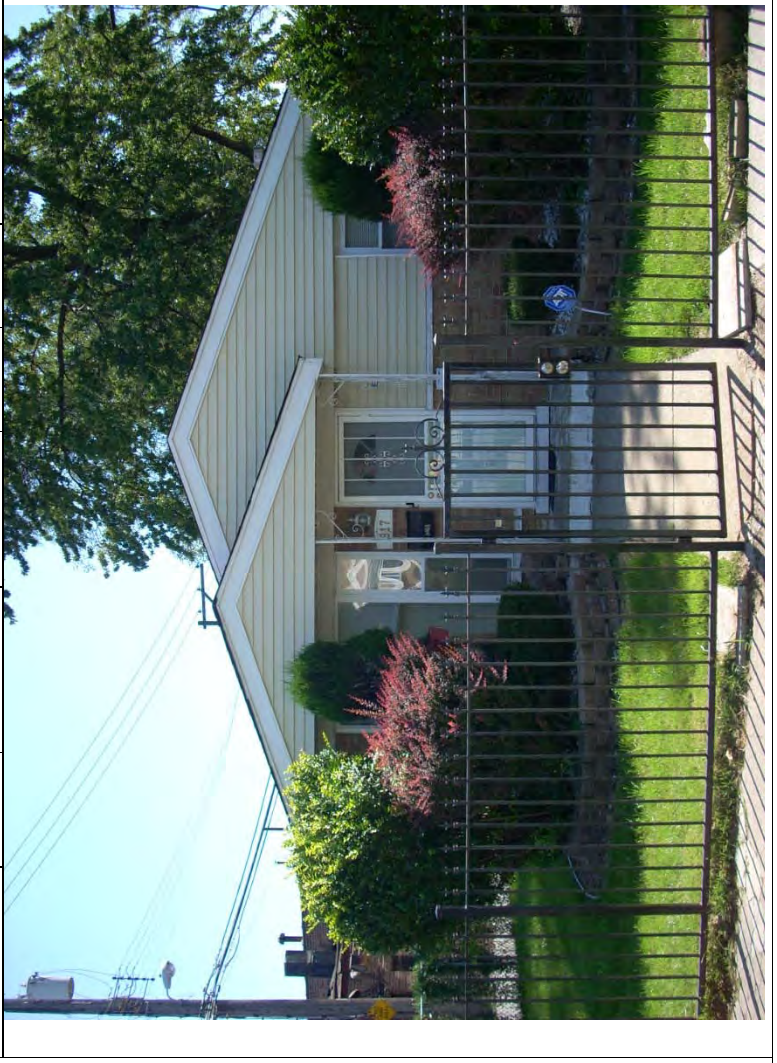
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 13 September 2012

Photos with Captions:
North façade of one-story single-family residence.



Property Description: **Stories:** 1

This one-story brick-clad house in the West Pullman community has a front gable roof covered with asphalt shingles. Its front façade is clad with face brick and non-original synthetic siding. It has a gable canopy supported by open metal posts, a hollow metal paneled door, and non-original one-over-one windows. It does not feature any distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows and cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick (lower), Synthetic siding (upper)	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung
Outbuildings (*Number and Description*) Storage shed			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
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Marengo, Illinois 60152
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Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

821 W. Vermont Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1956

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

Vernacular

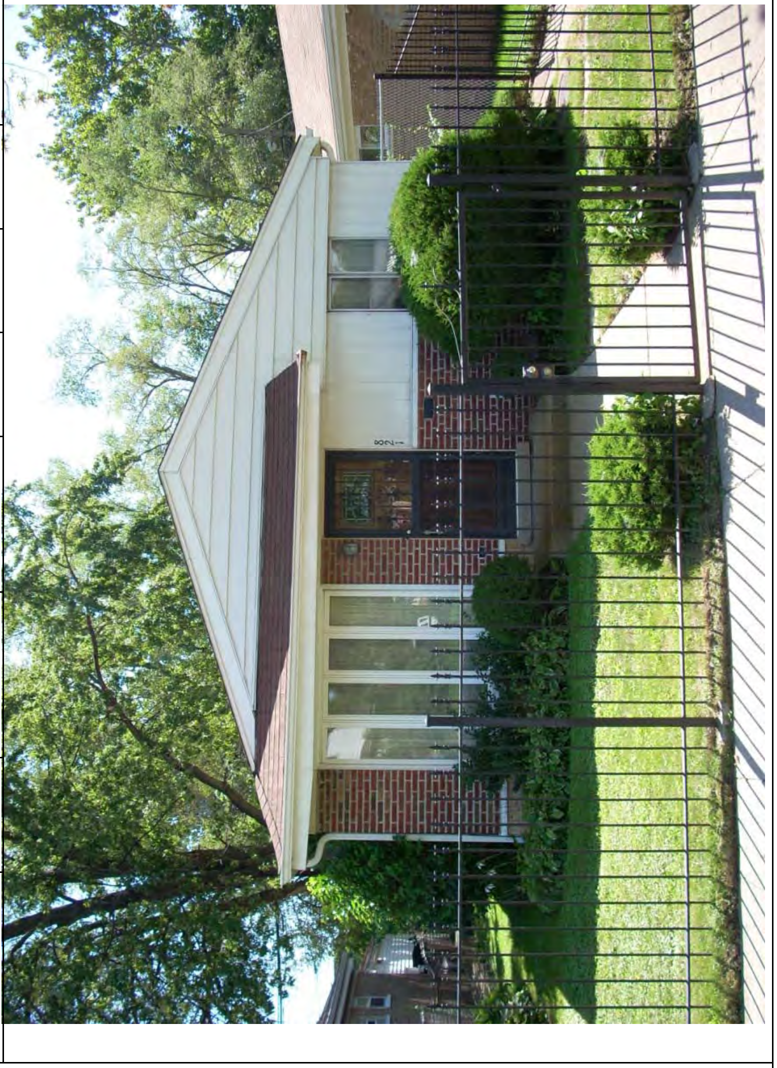
Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 13 September 2012

Photos with Captions:

North façade of one-story, brick, single-family residence.



Property Description: **Stories:** 1

This one-story brick-clad house in the West Pullman community has a front gable roof covered with asphalt shingles. Its front façade is clad with face brick and synthetic siding and has a shed-roofed canopy sheltering the entrance, a hollow metal paneled door, and casement windows. It does not feature distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement siding
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick (main), synthetic siding (gable end)	
Roof Material Asphalt shingles	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Casement
Outbuildings (*Number and Description*) None			

Local Landmark	**Y [✓ N]**	
National Register Historic Places	**Y [✓ N]**	
National Register Historic District	**Y [✓ N]**	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

825 W. Vermont Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1956

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

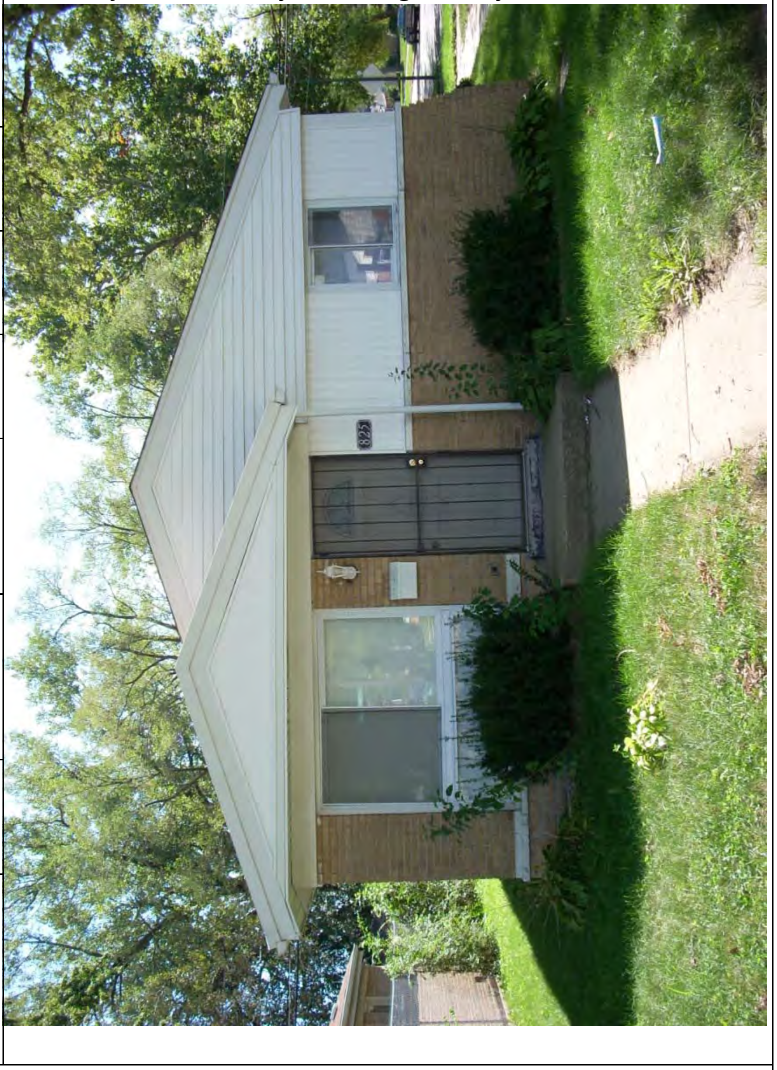
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 13 September 2012

Photos with Captions:
North façade of one-story, brick single-family residence.



Property Description:

Stories: 1

This one-story brick-clad house in the West Pullman community has a front gable roof covered with asphalt shingles. Its front façade is clad with face brick and synthetic siding. It has a gable canopy sheltering the entrance, a hollow metal paneled door, and two pairs of non-original windows that are either sliding glass or casements. It does not feature distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
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Marengo, Illinois 60152
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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement siding
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick (main), synthetic siding (gable end and trim)	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Casement or sliding
Outbuildings (*Number and Description*) Garage			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11572 S. Wabash Ave.

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Multi-family residence

Date of Construction: 1903

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

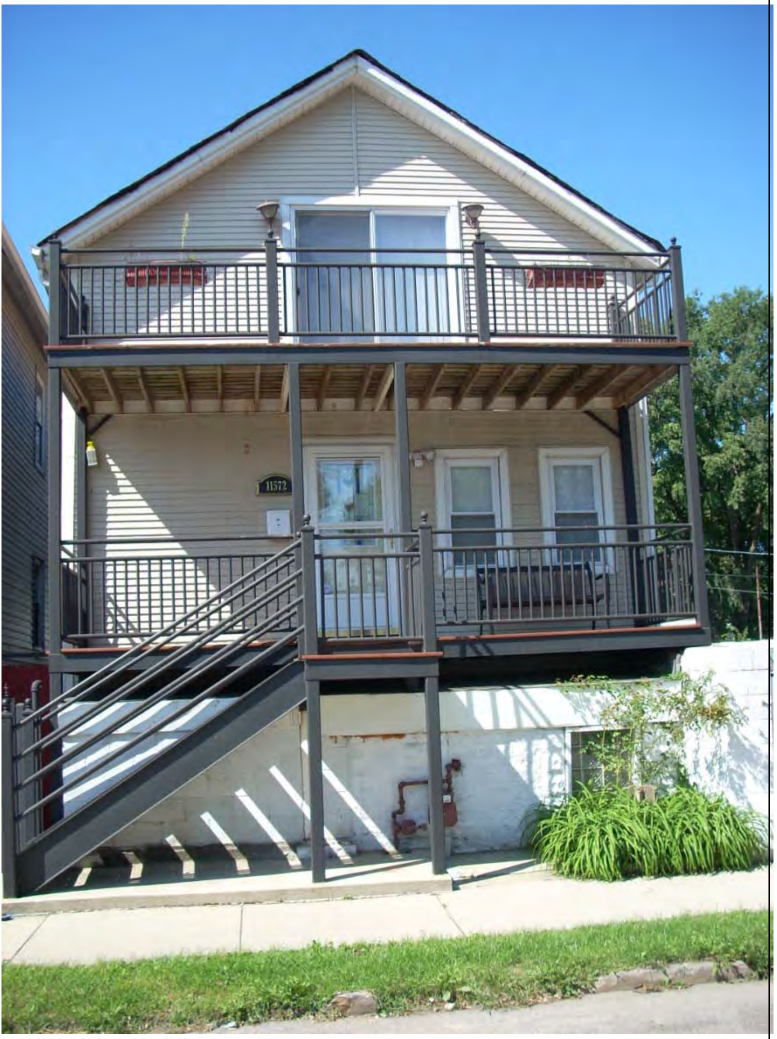
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 10 September 2012

Photos with Captions:
East façade of 1.5-story, multi-family, frame residence.



Property Description: **Stories:** 1.5

This one-and-half-story house in the West Pullman community is situated on a raised concrete block basement, is clad with synthetic siding, and has a gable roof covered with asphalt shingles. Its front elevation has a metal core door and two one-over-one windows on the first floor and sliding glass doors on the second floor. All doors and windows are non-original. The metal stairway and balconies are non-original. This house does not feature sufficient integrity or distinguishing architectural features to qualify as individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
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Structural Survey

<table>
<tr><td colspan="3">Integrity:
Unaltered [✓ Slight Modification] Major Alteration</td><td>Additional Notes/Descriptions
Replacement windows, doors, & cladding</td></tr>
<tr><td colspan="3">Condition:
[✓ Excellent] Good Poor</td><td></td></tr>
<tr><td colspan="3">Additional Alterations
Metal stairway and balconies added</td><td></td></tr>
<tr><td colspan="2">Structure Usage
Current: NA
Historic: NA</td><td>Exterior Wall Surface
Synthetic siding</td><td></td></tr>
<tr><td>Roof Material
Asphalt shingle</td><td>Roof Features
None</td><td>Roof Type
Gable</td><td></td></tr>
<tr><td colspan="3">Ornamental Architectural Details
None</td><td>Windows
Double-hung</td></tr>
<tr><td colspan="4">Outbuildings (<i>Number and Description</i>)
Garage and storage shed behind residence.</td></tr>
</table>

Local Landmark	**Y [✓ N]**	
National Register Historic Places	**Y [✓ N]**	
National Register Historic District	**Y [✓ N]**	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11573 S. Wabash Ave.

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

XOXXOX Charter Bus, Inc.

Property Use

Historic: Warehouse (Sanborn, 1938)

Current: Garage

Date of Construction: 1910

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

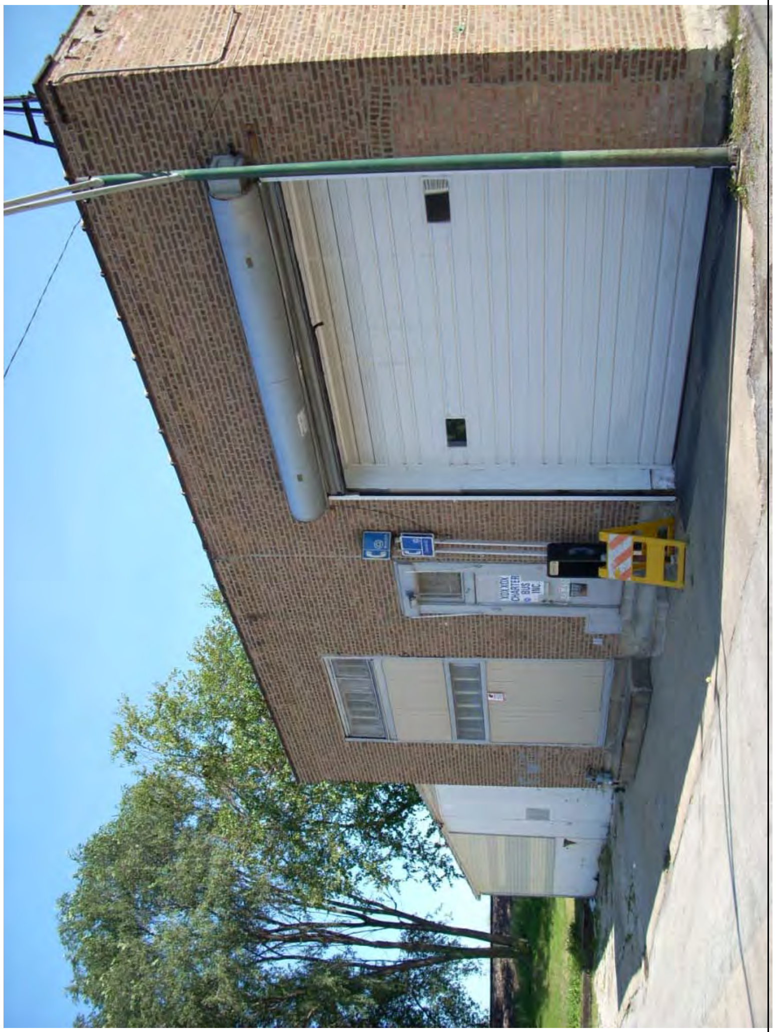
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 10 September 2012

Photos with Captions:
East façade of brick bus garage building.



Property Description: **Stories:** 1

This one-story former warehouse in the West Pullman community is clad with common brick and has a flat roof, parapet, and a shed-roofed frame wing. Its front façade features the outline of an original door opening that has been in-filled with brick, a non-original overhead metal door, a metal door with transom, and a former door opening that has been in-filled with wood panels and two horizontal strips of small fixed-pane windows. One of the side elevations displays the outlines of former window openings that have been in-filled with brick while the other features an overhead metal garage door. This building does not feature sufficient integrity or distinguishing architectural features to qualify as individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alterations			**Additional Notes/Descriptions** Windows and door openings in-filled, small addition
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details None			**Windows** Fixed-pane
Outbuildings (*Number and Description*) None			

Local Landmark	**Y [✓ N]**	
National Register Historic Places	**Y [✓ N]**	
National Register Historic District	**Y [✓ N]**	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11574 S. Wabash Ave.

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Multi-family residence

Date of Construction: 1922

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

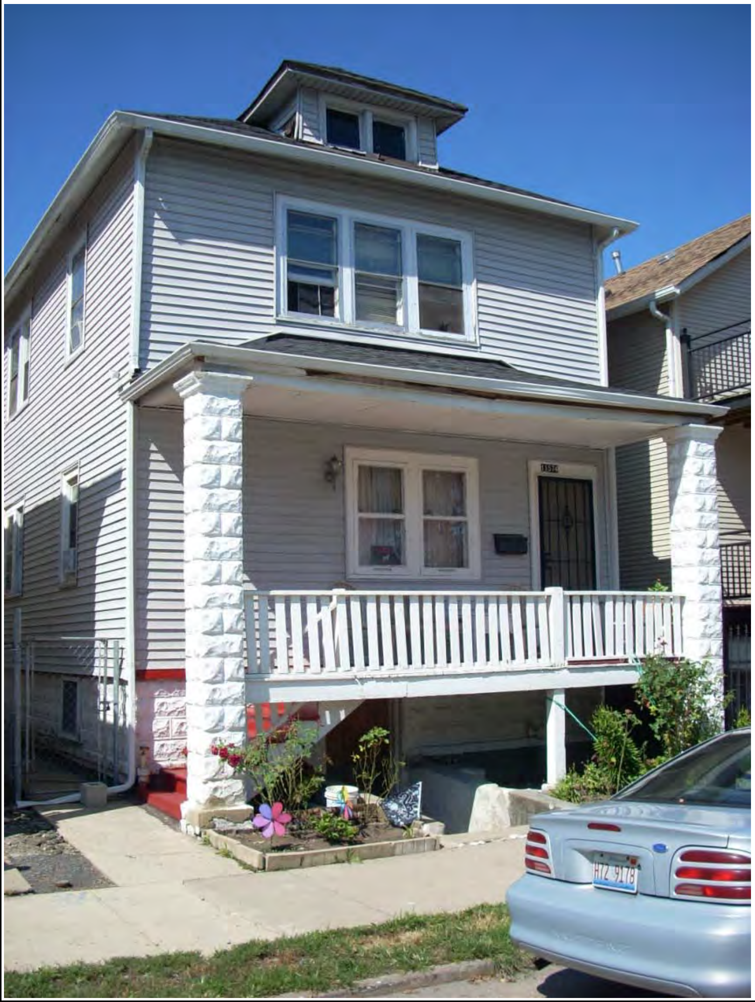
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 10 September 2012

Photos with Captions:
East and south façades of two-story, multi-family, frame residence.



Property Description: **Stories:** 2

This two-story house in the West Pullman community is situated on a raised basement and clad with synthetic siding. It has a hip roof covered with asphalt shingles and a hip dormer with a pair of single-pane casement windows. The front elevation features a full-width, hip roof wood porch with faux stone pier supports, an off-center door, and non-original one-over-one windows arranged in strips of two and three on the first and second floors, respectively. This house does not feature sufficient integrity or distinguishing architectural features to qualify as individually eligible for listing on the National Register.

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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alterations			**Additional Notes/Descriptions** Replacement door, windows, cladding, porch railing
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** Dormer	**Roof Type** Hipped	
Ornamental Architectural Details None			**Windows** Double-hung, casement
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11578 S. Wabash Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Multi-family residence

Date of Construction: 1893

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

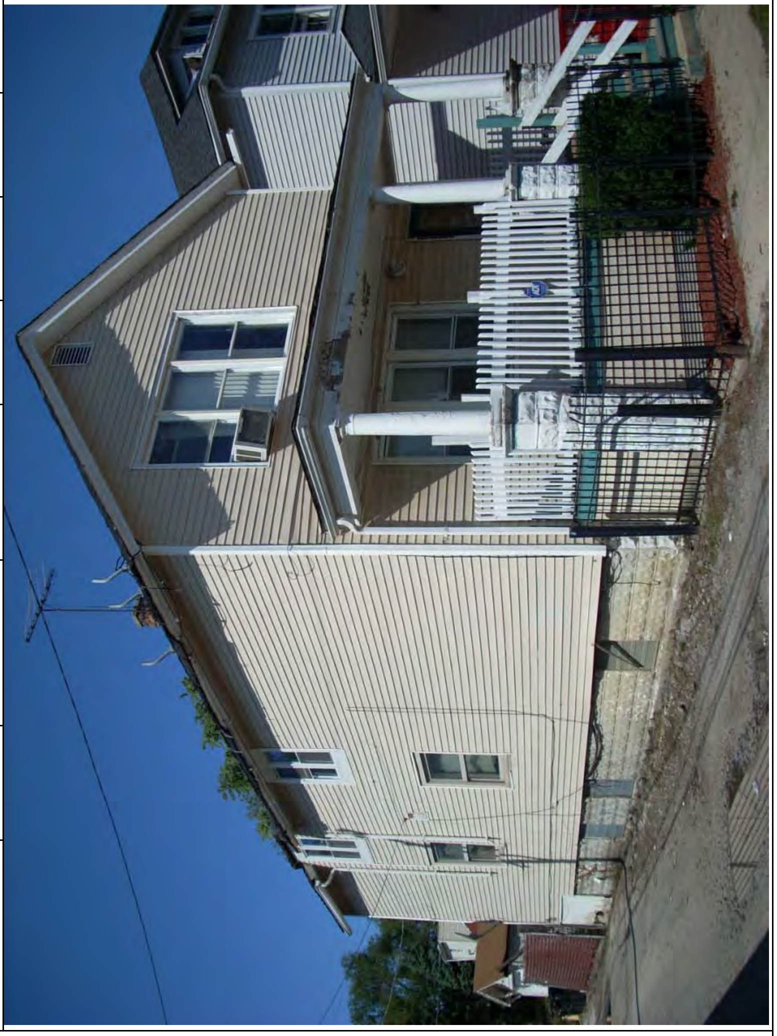
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 10 September 2012

Photos with Captions:
East and south façades of 1.5-story, multi-family, frame residence.



Property Description: **Stories:** 1.5

This one-and-one-half-story house in the West Pullman community is situated on a raised concrete block basement with glass block windows. It is clad with synthetic siding and has a gable roof covered with asphalt shingles. The front elevation features a full-width flat-roofed wood porch with supports consisting of low faux stone pedestals topped by wood Doric columns, an off-center wood paneled door, and strips of three one-over-one non-original windows on both the first and second floors. This house does not feature sufficient integrity or distinguishing architectural features to qualify as individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

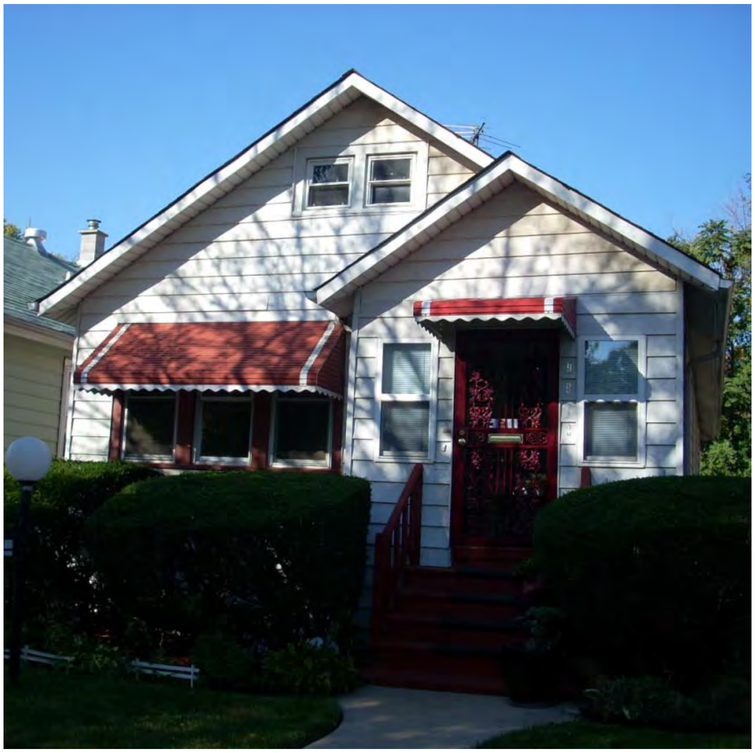
Integrity: Unaltered [✓ Slight Modification] Major Alterations			**Additional Notes/Descriptions** Replacement door, windows, cladding, and porch railings
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details Doric columns on porch			**Windows** Double-hung, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name **Historic:** Bldg. not labeled, not in CHRS **Common/Current:** Unknown	**Photos with Captions:** East façade of a one-story, single family, frame residence. 
Property Address: 9912 S. Wallace Street	
HAARGIS Number: Not in database	
Present Owner and /or Occupant: Unknown	
Property Use **Historic:** Single family residence **Current:** Single family residence	
Date of Construction: 1922 **Architect's Name:** Not in CHRS **Builder/Contractor:** Not in CHRS	
Architectural Style: Vernacular	
Prepared By: J. Martinez, M. C. Bird, J. Guarino **Photo By:** S. Katz **Date:** 29 October 2012	

Property Description: **Stories:** 1

This one-story cottage in the Washington Heights community is covered with synthetic siding and has a front gable roof covered with asphalt shingles and overhanging eaves. The front elevation has a partial-width, synthetic-clad, gabled entrance vestibule with a metal storm door topped by a metal awning and wood steps with straight wood railings. There are five non-original one-over-one aluminum-sash windows, including a strip of three in the living room that are partially obscured by a metal awning, and one each flanking the door. There is a pair of one-over-one aluminum-sash windows in the gable. This house lacks integrity and distinctive architectural features and is not individually eligible for listing on the National Register.

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505 North State Street
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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows and cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

9745 S. Wentworth Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1964

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

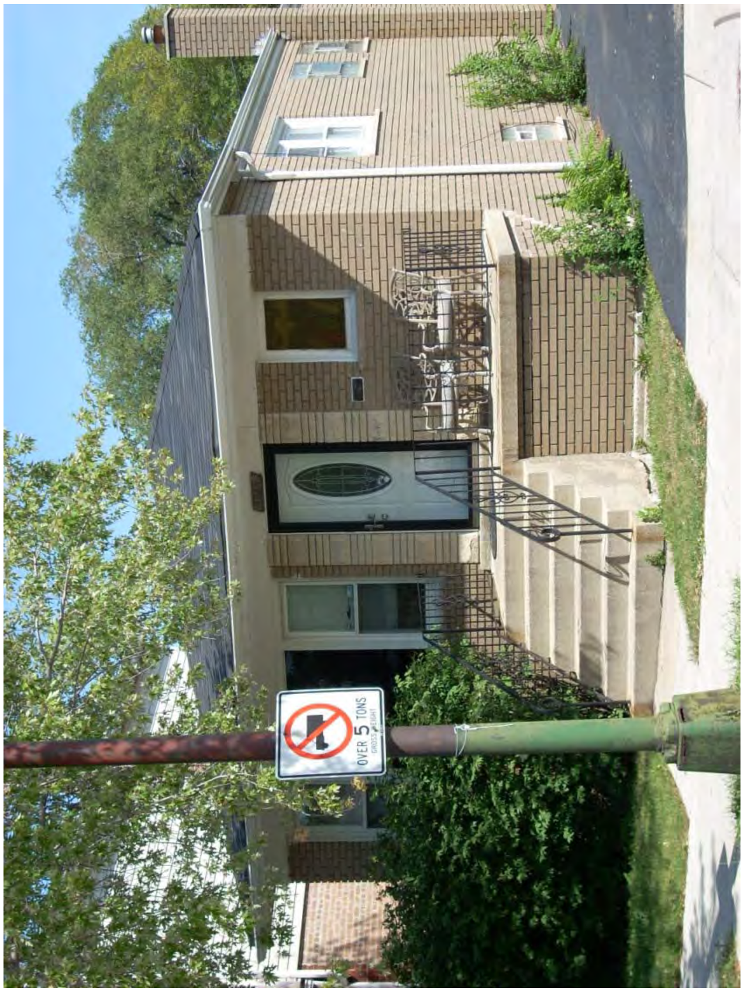
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 9 October 2012

Photos with Captions:
West façade of a brick, one-story, single family residence.



Property Description: **Stories:** 1

This one-story home in the Roseland community is situated on a raised brick basement with glass block windows. It is clad with buff brick and has a hip roof covered with asphalt shingles. Its front elevation has an off-center hollow core metal door, a casement window, a picture window flanked by one-over-one aluminum-sash windows, concrete steps with metal railings and a small patio area. It does not feature distinguishing architectural elements and is not individually eligible for listing on the National Register.

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Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement door
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt	**Roof Features** None	**Roof Type** Hip	
Ornamental Architectural Details None			**Windows** Double-hung, fixed-pane, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not in CHRS database.

Common/Current: Not in CHRS database

Property address:

11321 S. Wentworth Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

A Little Bit of Heaven

Property Use

Historic: Apartment building

Current: Public

Date of Construction: circa 1924-1938

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

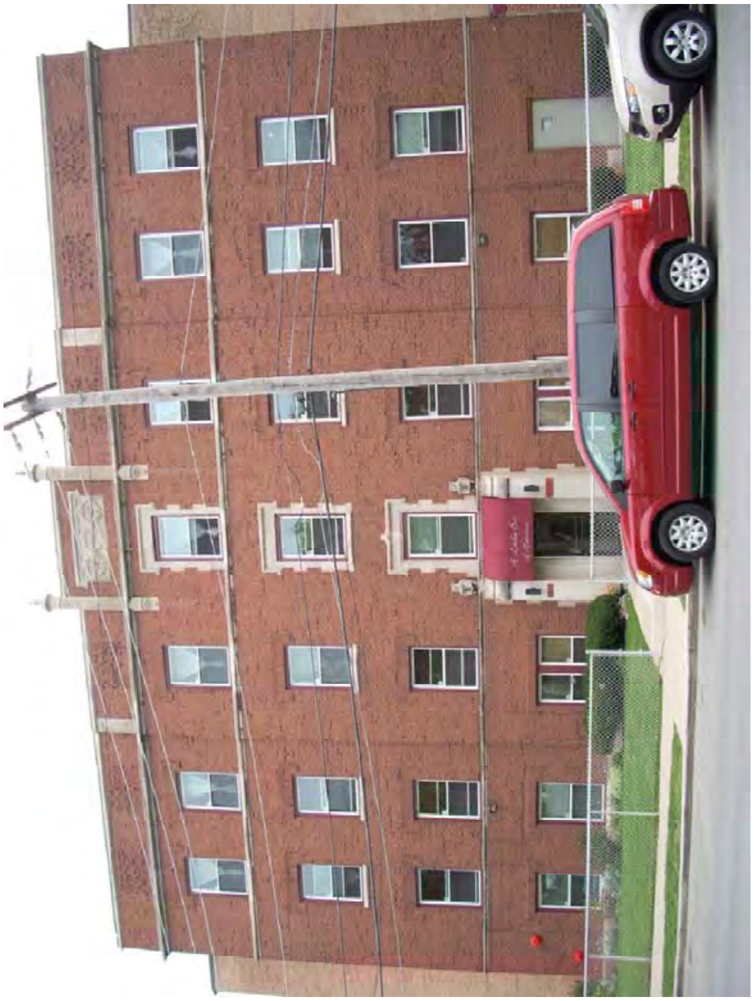
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 16 September 2012

Photos with Captions:
West façade of the four-story, brick building



Property Description: **Stories:** 4

This four-story building at the northeast corner of Wentworth Avenue and 113th Place in the Roseland community has a flat roof and parapet. Its symmetrical front (Wentworth Avenue) elevation is clad with brown face brick and has a centrally located entrance with a glass door and stone surround topped by two stone owls holding books. Windows are non-original one-over-one aluminum-sash; those directly above the entrance have stone casings. Detailing includes stone sills, coping, insert blocks, sill courses, cornice, panels, and pinnacles at the parapet level.

This building is recommended locally significant for National Register listing under Criterion A for Education. Formerly the Roseland Community Hospital Nurses Home, it was built by the hospital as a dormitory and educational facility for its nurses. Closely affiliated with Roseland Community Hospital, which has served as an important institution in the Roseland area since its establishment in 1924, the Nurses Home is an excellent example of this building type on Chicago's South Side. The exterior of the building has very good integrity and the interior—which now functions as a homeless shelter—appears to retain classrooms and other spaces associated with its original use.

Midwest Archaeological Research Services, Inc.
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Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows and doors
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details Stone casings, sills, cornice, panels, inserts, and pinnacles; stone surround with owls at entrance			**Windows** Double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y [✓ N]**	
National Register Historic Places	**Y [✓ N]**	
National Register Historic District	**Y [✓ N]**	**Name:**
Individually Eligible? Yes	**[✓ A] B C**	**Significance:** Built as a dormitory for Roseland Community Hospital nurses and served as an important educational facility for women training in this profession.

Additional Comments:

Midwest Archaeological Research Services, Inc.
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Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

11334 S. Wentworth Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1906

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

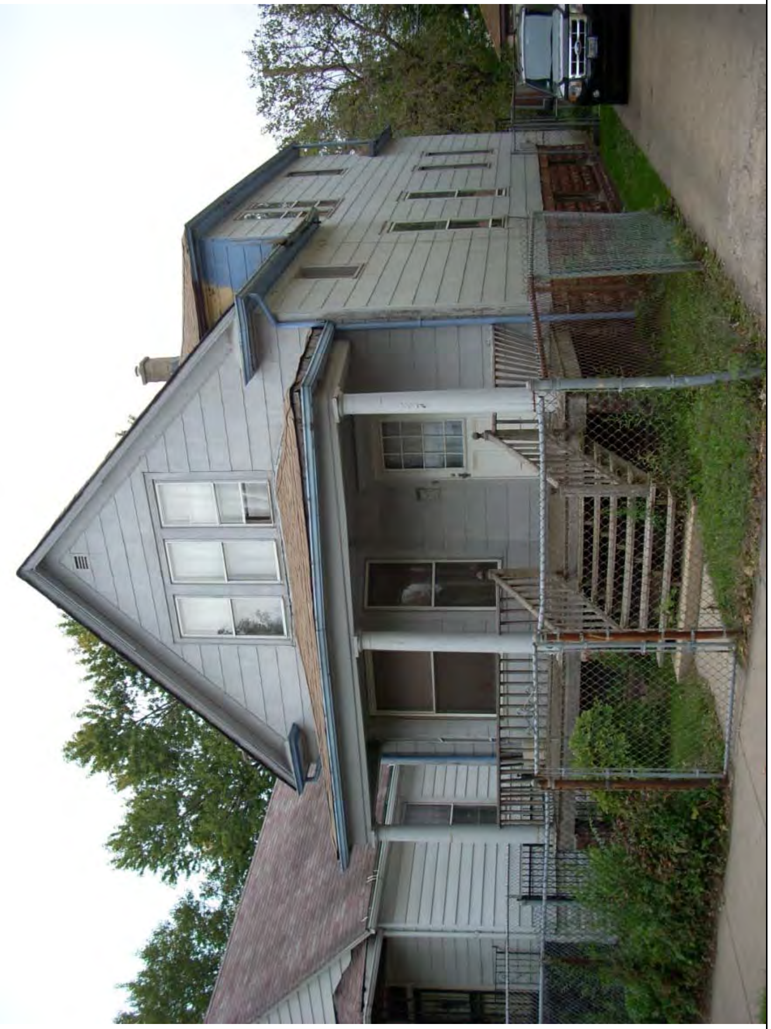
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 16 September 2012

Photos with Captions:
East and north façades of 1.5-story, single family, frame residence.



Property Description: **Stories:** 1.5

This one-and-a-half-story frame cottage in the Roseland community is situated on a raised concrete block basement with casement windows and is covered with synthetic siding. The building has a gable roof with asphalt shingles. The front elevation has a hipped-roof wood porch with Doric columns, an off-center entrance with a hollow core metal panel door, a three-sided bay window on the first floor, and a strip of three windows in the gable. With the exception of the basement, windows are non-original one-over-one aluminum-sash. The north elevation has a hipped-roof wall dormer. This house lacks integrity and distinguishing architectural features and is not individually eligible for listing on the National Register.

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Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows, door, & cladding
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** Dormer	**Roof Type** Gable	
Ornamental Architectural Details Doric columns			**Windows** Double-hung, casement
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11352 S. Wentworth Ave

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1897

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

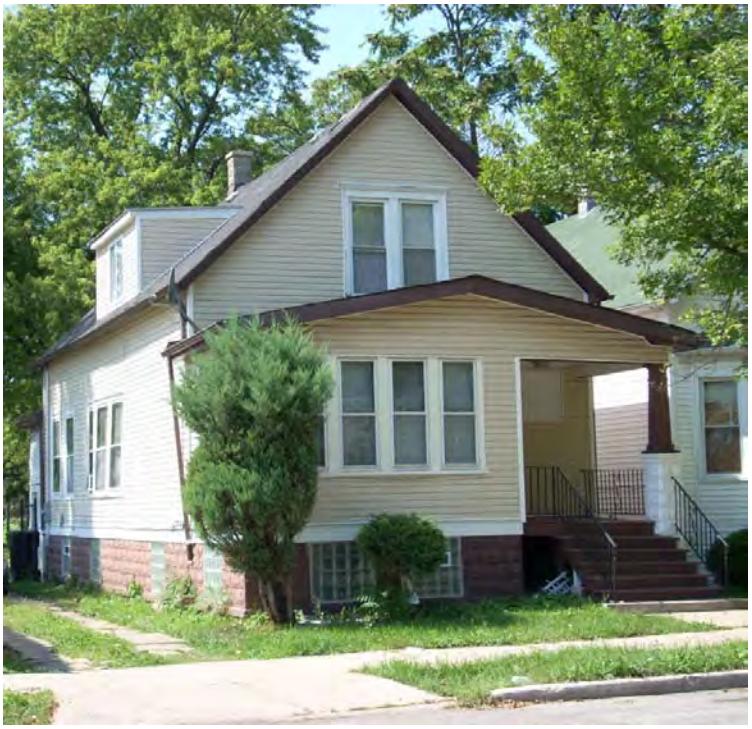
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 6 September 2012

Photos with Captions:
East façade of 1.5-story, single family, frame residence.



Property Description: **Stories:** 1.5

This one-and-a-half-story home in the Roseland community is clad with synthetic siding, has a gable roof covered with asphalt shingles, has a flat-roofed dormer along one of its side elevations, and is situated on a raised concrete block basement with glass block windows. Its front elevation has a full-width gable roof porch, a portion of which is enclosed with synthetic siding and features a strip of non-original one-over-one windows. The open portion of the porch has a corner support consisting of a low faux stone pedestal topped by a wood Doric column, a window opening that has been covered, wood steps, and metal railings. A pair of non-original one-over-one windows with original wood casing is situated in the gable. This building lacks sufficient integrity and distinguishing architectural features to qualify as individually eligible for listing on the National Register.

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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration				**Additional Notes/Descriptions** Replacement windows & cladding
Condition: [✓ Excellent] Good Poor				
Additional Alterations Dormer and rear addition may be non-original				
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding		
Roof Material Asphalt shingle	**Roof Features** Dormer	**Roof Type** Gable		
Ornamental Architectural Details Doric column on porch				**Windows** Double-hung, glass block
Outbuildings (*Number and Description*) None				

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11428 S. Wentworth Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Vacant

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1908

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

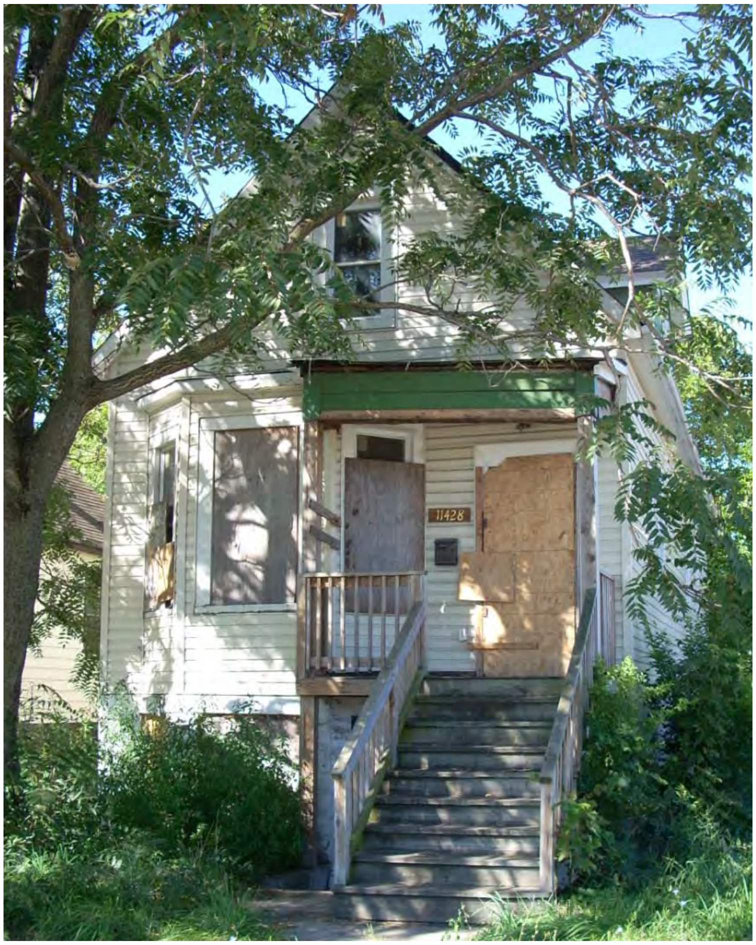
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S.Katz

Date: 22 October 2012

Photos with Captions:
East façade of a 1.5- story, single family, frame residence.



Property Description: **Stories:** 1.5

This one-and-a-half-story cottage in the Roseland community is situated on a raised concrete block basement and is covered with synthetic siding. The building has a front gable roof with asphalt shingles. Its front elevation has a three-sided bay with plywood-covered windows, a partial-width shed-roofed porch with straight wood railings and posts, and a plywood-covered door. A single non-original one-over-one aluminum-sash window is situated in the gable. The north elevation has a synthetic-clad gable dormer with a single window. Side elevation windows are non-original one-over-one aluminum sash. This house lacks integrity and distinctive architectural features and is not individually eligible for listing on the National Register.

Structural Survey

Integrity: Unaltered	[✓ Slight Modification]	Major Alteration	**Additional Notes/Descriptions** Replacement windows, cladding, and porch rails
Condition: Excellent	Good	[✓ Poor]	
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** Dormer	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

9808 S. Yale Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1963

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

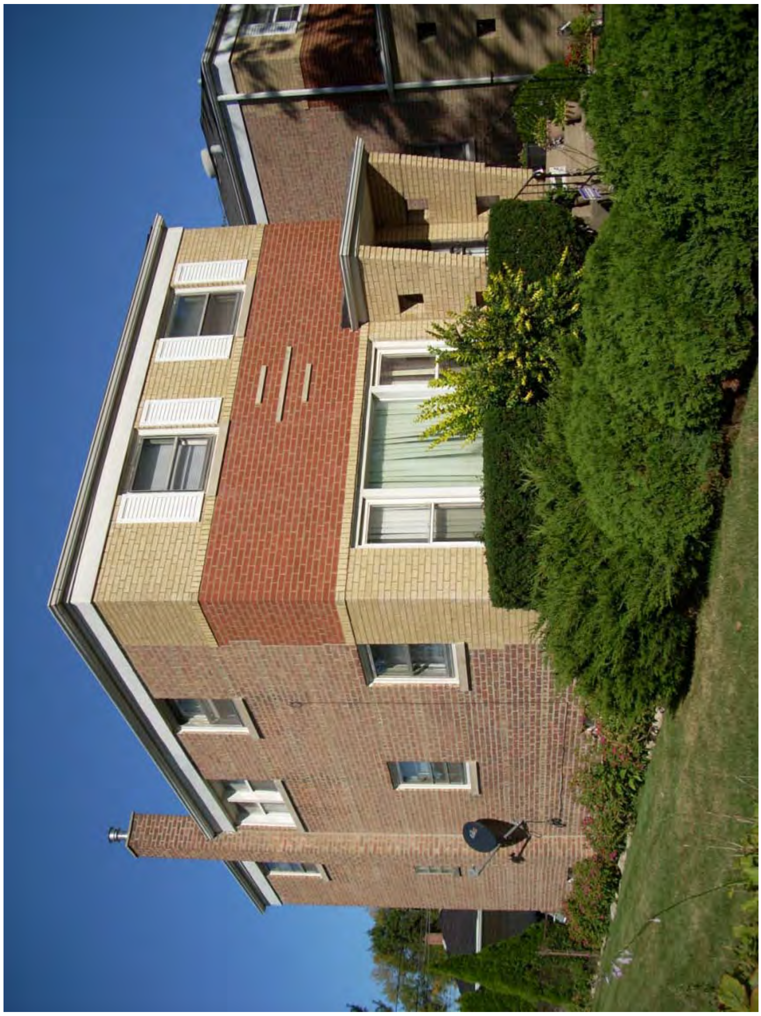
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 9 October 2012

Photos with Captions:
East façade of a brick, two story, single family residence.



Property Description: **Stories:** 2

This two-story home in the Roseland community is situated on a raised brick basement and has a hip roof covered with asphalt shingles. Its front elevation is clad with buff and orange brick with linear concrete inserts and sills. It has an off-center door, a flat-roofed partial-width porch with brick sidewalls, concrete steps and metal railings. It has a picture window flanked by one-over-one aluminum-sash windows on the first floor and two one-over-one aluminum-sash windows on the second floor. It does not feature distinguishing architectural elements and is not individually eligible for listing on the National Register.

<table>
<tr><td colspan="3">Integrity:
[✓ Unaltered] Slight Modification Major Alteration</td><td>Additional Notes/Descriptions</td></tr>
<tr><td colspan="3">Condition:
[✓ Excellent] Good Poor</td><td></td></tr>
<tr><td colspan="3">Additional Alterations</td><td></td></tr>
<tr><td colspan="2">Structure Usage
Current: NA
Historic: NA</td><td>Exterior Wall Surface
Brick</td><td></td></tr>
<tr><td>Roof Material
Asphalt</td><td>Roof Features
None</td><td>Roof Type
Hip</td><td></td></tr>
<tr><td colspan="3">Ornamental Architectural Details
Brick banding, concrete inserts and sills</td><td>Windows
Double-hung, fixed-pane</td></tr>
<tr><td colspan="4">Outbuildings (<i>Number and Description</i>)
None</td></tr>
</table>

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

9904 S Yale Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1923

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

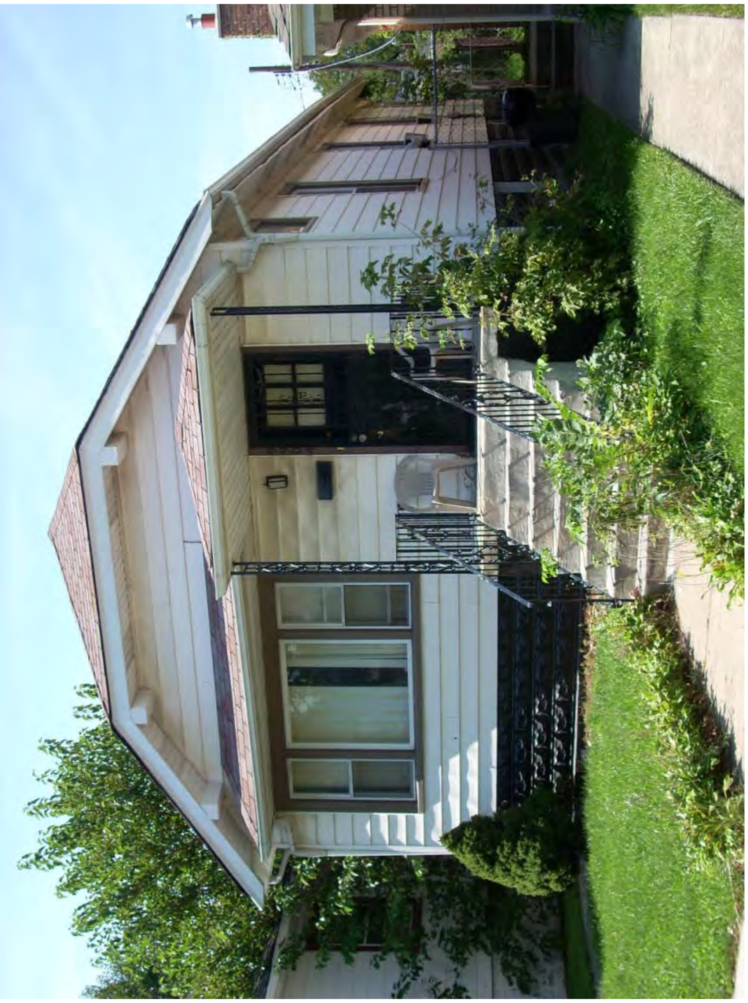
Craftsman

Prepared By: J. Martinez, M. C. Bird

Photo By: S. Katz

Date: 8 October 2012

Photos with Captions:
East façade of a one-story, frame, single family residence.



Property Description: **Stories:** 1

This one-story frame house in the Roseland community is situated on a raised concrete block basement, is clad with synthetic siding, and has a hip-on-gable roof covered with asphalt shingles with overhanging eaves and exposed rafters. The front elevation has a pent roof that extends forward above the front windows and door, and is supported by open metal posts. The porch has concrete steps and metal railings. The front elevation also features an off-center door and a picture window flanked by non-original one-over-one aluminum-sash windows on either side. This home does not feature sufficient distinguishing features to qualify as eligible for individual listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows and siding
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt	**Roof Features** Pent roof	**Roof Type** Hip-on-gable	
Ornamental Architectural Details Exposed rafters			**Windows** Double-hung, fixed-pane
Outbuildings (*Number and Description*) None			

Local Landmark	**Y [✓ N]**	
National Register Historic Places	**Y [✓ N]**	
National Register Historic District	**Y [✓ N]**	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

9905 S. Yale Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1924

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

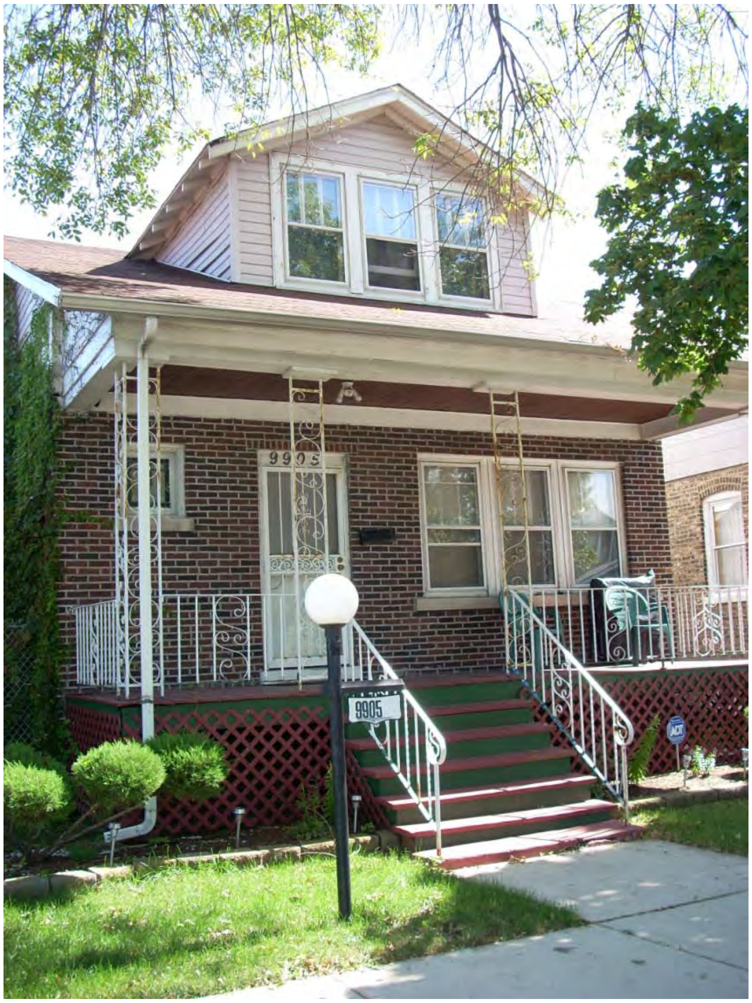
Craftsman

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 8 October 2012

Photos with Captions:
West façade of a brick, one-story, single family residence.



Property Description: **Stories:** 1

This one-story Craftsman style bungalow in the Roseland community is situated on a raised basement, is clad with brick, and has a side-gabled roof covered with asphalt shingles and overhanging eaves. Its side-gabled elevations are clad with synthetic siding, as is the gable dormer along the front elevation. The roof extends beyond the front elevation to serve as the roof of the porch, which is supported by open metal posts and has metal railings, a wooden deck, and wooden steps. The front elevation features an off-center hollow core metal door, a leaded glass casement window, and two strips of non-original double-hung aluminum-sash windows: one on the first floor and one in the dormer. This home does not feature sufficient distinguishing features to qualify as eligible for individual listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows and siding
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick (main), synthetic siding (gable ends and dormers)	
Roof Material Asphalt	**Roof Features** Dormer	**Roof Type** Side-gabled	
Ornamental Architectural Details None			**Windows** Double-hung, casement
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

11319 S. Yale Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Vacant

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1909

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

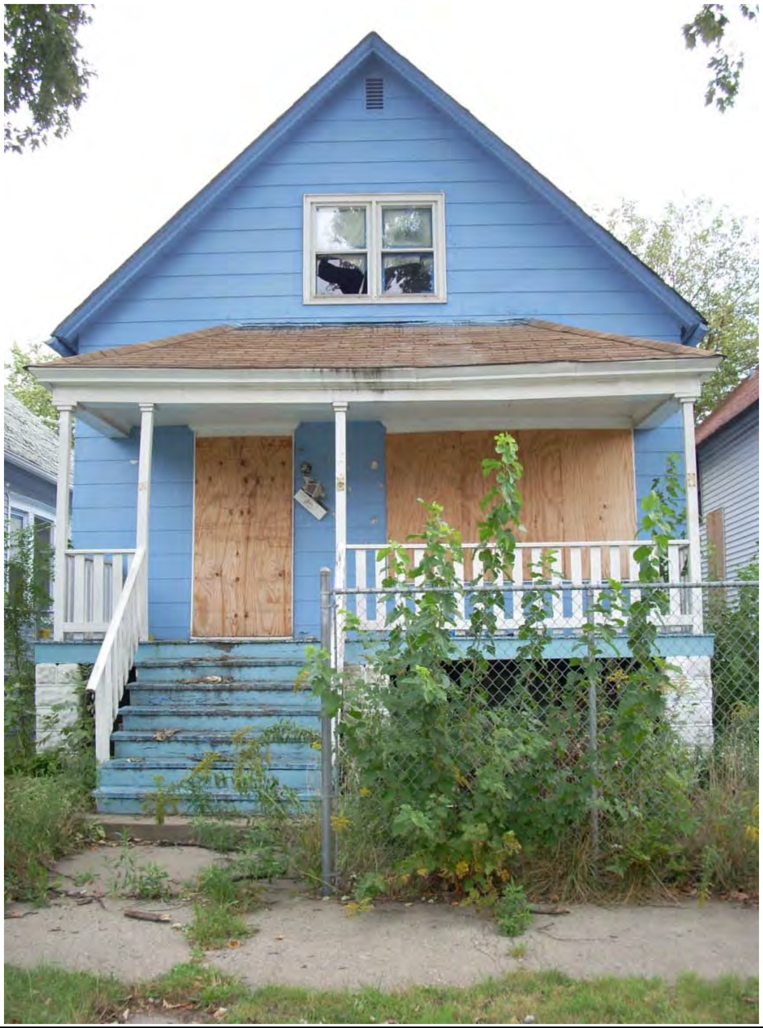
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 16 September 2012

Photos with Captions:
West façade of one-story, single-family, frame residence.



Property Description: **Stories:** 1

This one-story frame house in the Roseland community is situated on a raised concrete block basement with glass block windows and is covered with synthetic siding. The building has a front gable roof with asphalt shingles. It has a hip-roofed, full-width porch with faux stone supports beneath the deck, wood columns, railings, and steps. The front elevation's off-center door and first floor window group are covered with plywood; paired windows in the gable are non-original one-over-one aluminum-sash. The south elevation has a shed dormer. This house lacks integrity and distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

<table>
<tr><td colspan="3">Integrity:
Unaltered [✓ Slight Modification] Major Alteration</td><td>Additional Notes/Descriptions
Replacement windows and cladding</td></tr>
<tr><td colspan="3">Condition:
Excellent [✓ Good] Poor</td><td></td></tr>
<tr><td colspan="3">Additional Alterations</td><td></td></tr>
<tr><td colspan="2">Structure Usage
Current :NA
Historic: NA</td><td>Exterior Wall Surface
Synthetic siding</td><td></td></tr>
<tr><td>Roof Material
Asphalt shingle</td><td>Roof Features
Dormer</td><td>Roof Type
Gable</td><td></td></tr>
<tr><td colspan="3">Ornamental Architectural Details
None</td><td>Windows
Double-hung, covered</td></tr>
<tr><td colspan="4">Outbuildings (<i>Number and Description</i>)
None</td></tr>
</table>

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11330 S. Yale Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1916

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

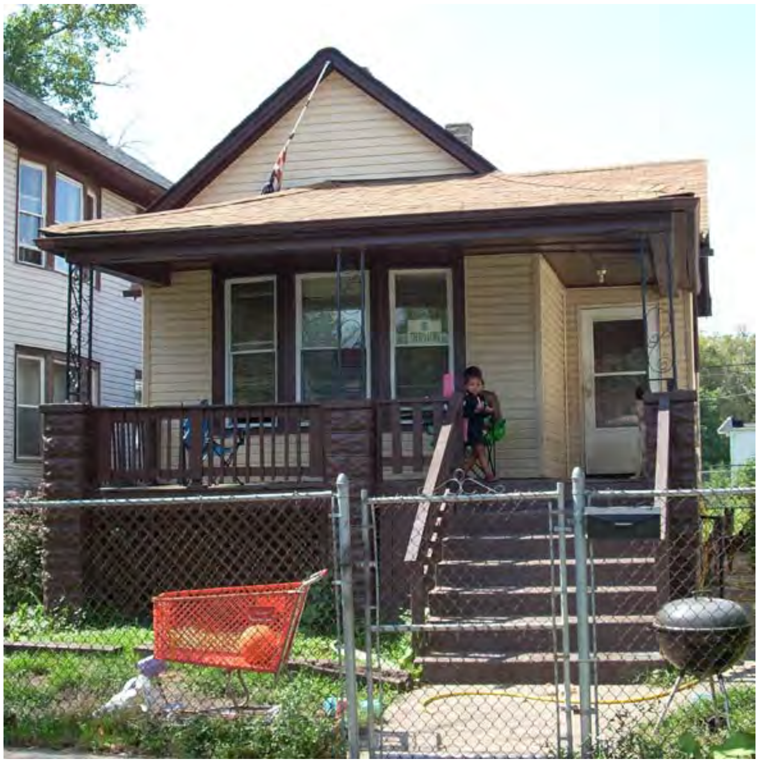
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 1 October 2012

Photos with Captions:
East façade of one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story home in the Roseland community is clad in synthetic siding and has a cross-gable roof covered with asphalt shingles. Its front façade has a three-sided window bay comprised of non-original one-over-one windows, a recessed front door, and a full-width hipped-roof wood porch with supports consisting of low faux stone pedestals topped by open metal posts. This building lacks sufficient integrity and distinguishing architectural features to qualify as individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows and siding
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11334 S Yale Ave

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Multi-family residence

Date of Construction: 1922

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

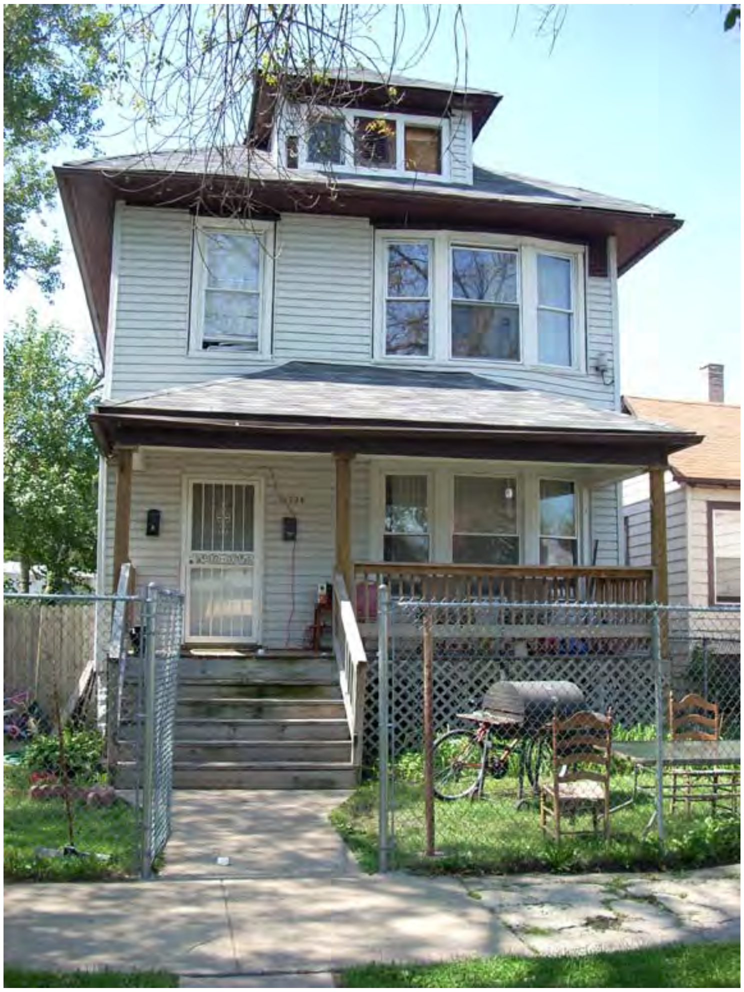
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 1 October 2012

Photos with Captions:
East façade of two-story, multi-family, frame residence.



Property Description: **Stories:** 2

This two-story home in the Roseland community is situated on a raised basement, clad in synthetic siding, has a hip roof covered with asphalt shingles and overhanging eaves. It features a full-width, hip-roof, wood porch. The front façade has an off-center door, three-sided window bays on the first and second floors comprised of non-original one-over-one windows, and a single one-over-one window on the second floor directly above the door. Its hip dormer has three window openings: two comprised of single-pane windows and a third that is covered with plywood. This building lacks sufficient integrity and distinguishing architectural features to qualify as individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement door, windows, cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt	**Roof Features** Dormer	**Roof Type** Hip	
Ornamental Architectural Details None			**Windows** Double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11336 S. Yale Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1894

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

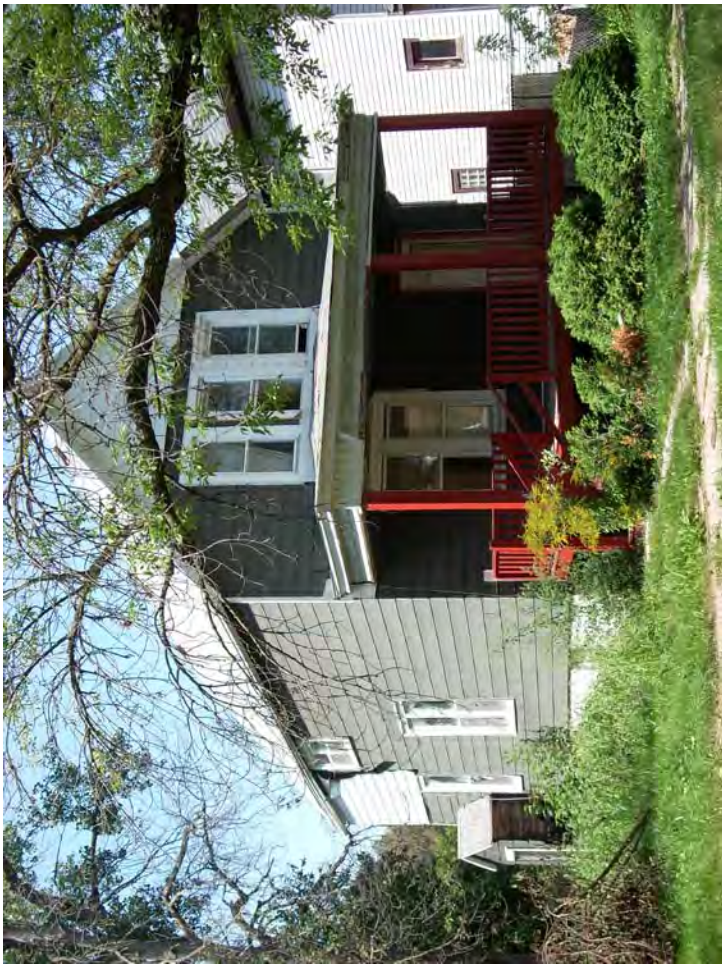
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 1 October 2012

Photos with Captions:
East façade of 1.5-story, single family, frame residence.



Property Description: **Stories:** 1.5

This one-and-one-half-story home in the Roseland community is situated on a raised basement and clad in two layers of synthetic siding. It has a gable roof covered with asphalt shingles and a full-width, hip-roof wood porch with non-original, wooden, square columns and rails. The front façade has an off-center, non-original, hollow metal core panel door with fanlight. It also has a three-sided window bay on the first floor comprised of non-original one-over-one windows and a strip of three, non-original one-over-one windows on the second floor. One of the side elevations has a three-sided bay window and gable wall dormer above. This building lacks sufficient integrity and distinguishing architectural features to qualify as individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered	[✓ Slight Modification]	Major Alteration	**Additional Notes/Descriptions** Replacement door, windows, and siding
Condition: Excellent	[✓ Good]	Poor	
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt	**Roof Features** Dormer	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11343 S. Yale Ave

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Vacant

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1914

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

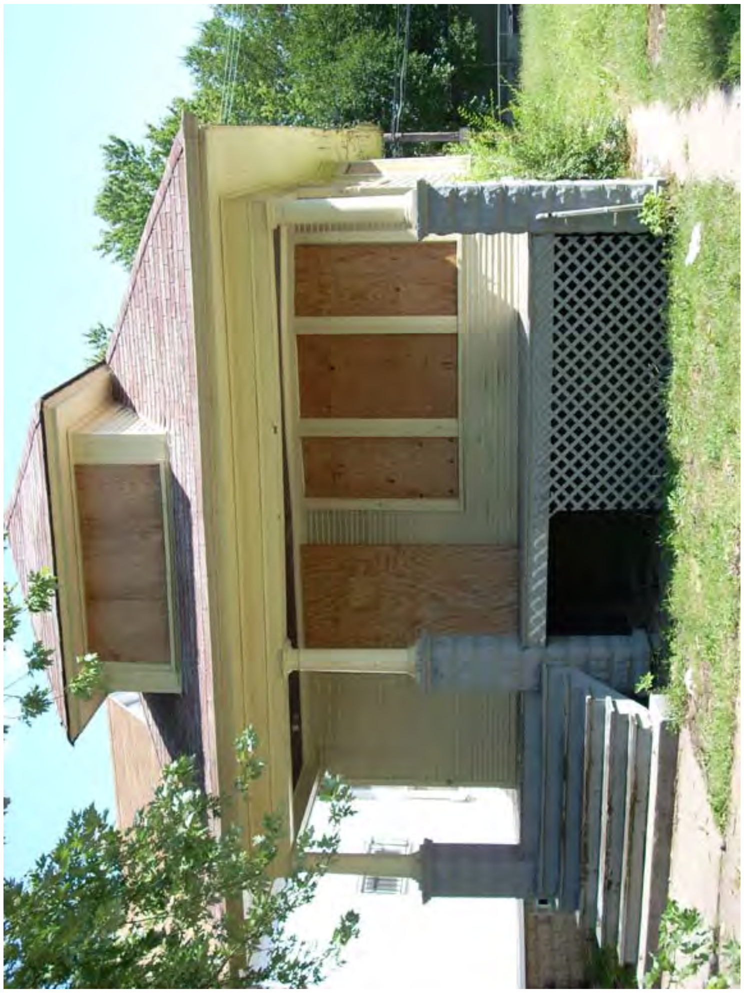
Craftsman

Prepared By: Jay Martinez, M. C. Bird, J. Guarino

Photo By: Steve Katz

Date: 1 October 2012

Photos with Captions:
West façade of a one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story Craftsman bungalow in the Roseland community is situated on a raised concrete block basement with glass block windows. Above, it is clad with synthetic siding on the sides and clapboards on the front. It has a hip roof covered with asphalt shingles, overhanging eaves, and a hip dormer. The roofline extends forward to shelter the full-width, hipped-roof, wood porch that is supported by low faux stone pedestals topped by squat wood Doric columns. The front elevation has an off-center door opening and a three-sided window bay. The door and all window openings have been covered with plywood. This building does not have sufficient integrity or distinguishing architectural features to qualify as individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Openings covered with plywood, synthetic siding on sides
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Clapboard (front), Synthetic siding (sides)	
Roof Material Asphalt	**Roof Features** Dormer	**Roof Type** Hip	
Ornamental Architectural Details Doric columns on porch			**Windows** Unknown
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11413 S. Yale Ave.

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1920

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

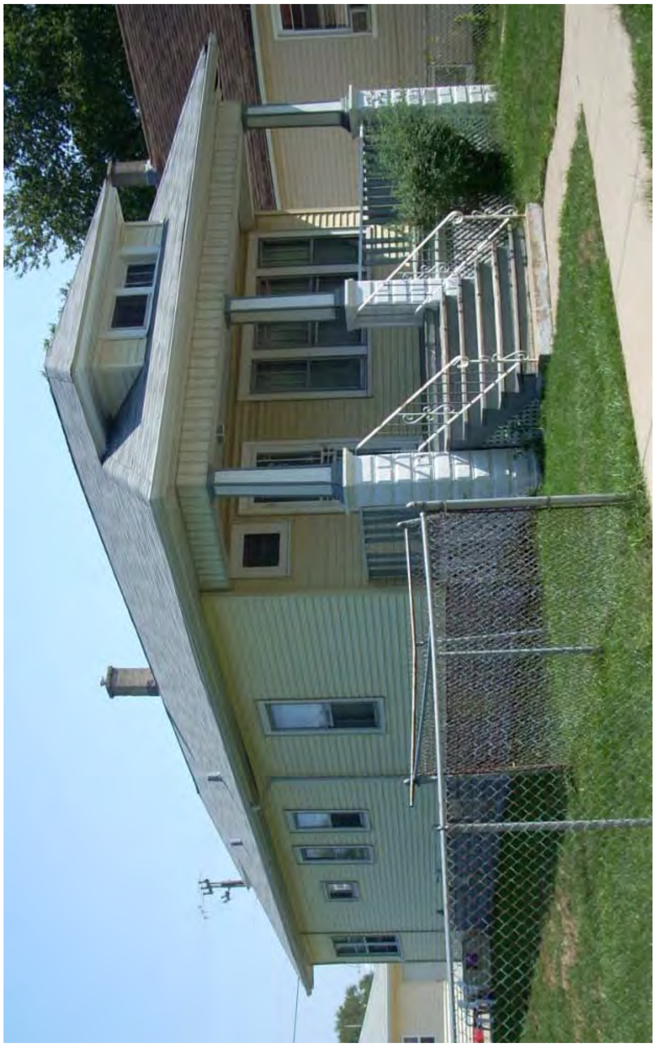
Craftsman

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 6 September 2012

Photos with Captions:
West and south façades of single family, frame residence.



Property Description: **Stories:** 1

This one-story Craftsman style bungalow in the Roseland community is situated on a raised concrete block basement and is clad with synthetic siding. It has a hip roof covered with asphalt shingles and a hip dormer with a pair of single-pane or sliding windows. Its roof overhangs to shelter the full-width wood porch with supports consisting of faux stone pedestals topped by squared wood columns. The front façade has an off-center front door, an adjacent single-pane window, and a strip of four double-hung windows. Windows appear to be original wood-sash. This building lacks sufficient integrity and distinguishing architectural features to qualify as individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** Dormer	**Roof Type** Hipped	
Ornamental Architectural Details Square pillars on porch			**Windows** Double-hung, fixed-pane or sliding
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11417 S. Yale Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1914

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

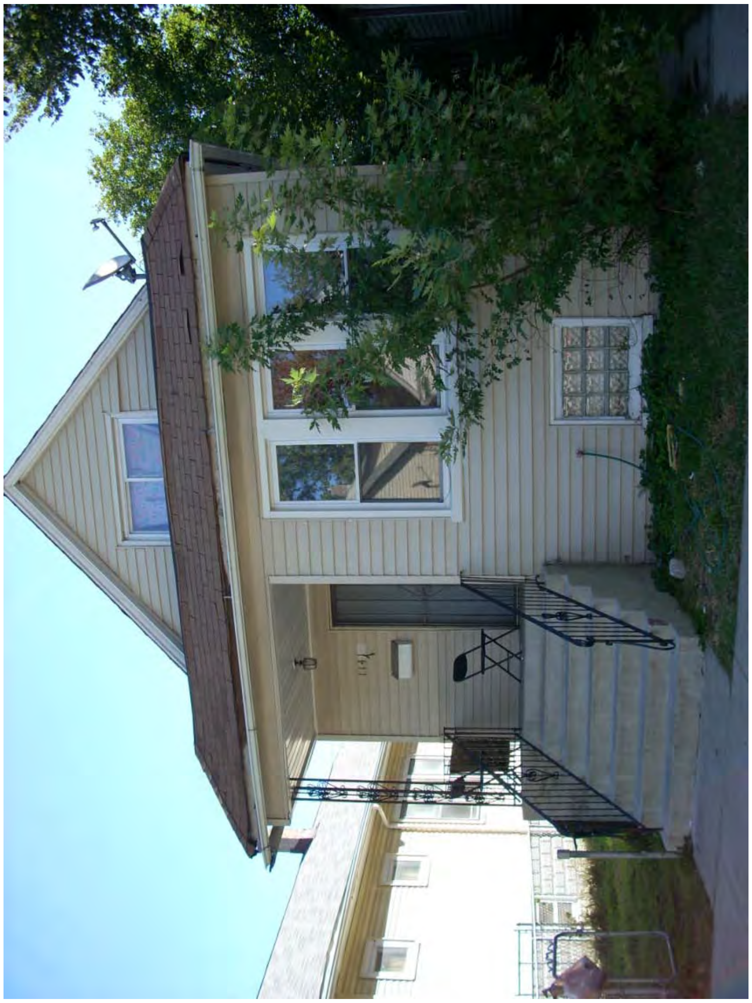
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 22 October 2012

Photos with Captions:
West façade of a one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story cottage in the Roseland community is situated on a raised brick basement with glass block windows and is covered with synthetic siding. The building has a front gable roof covered with asphalt shingles. Its front elevation has a full-width porch with a mansard-like roof that is partially enclosed and covered with synthetic siding. This elevation of the porch also has a strip of three non-original one-over-one aluminum sash windows. The open portion of the porch has a metal storm door, concrete steps with metal railings, and an open metal corner post. A pair of non-original one-over-one aluminum-sash windows is situated in the gable. This house lacks integrity and distinctive architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement door, windows, and cladding.
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Appendix C
Consultation and Correspondence

RLE Mailing List for S106 Consulting Parties

Accept	AGENCY	CONTACT	ADDRESS	EMAIL
X	Illinois Historic Preservation Agency (SHPO)	Anne Haaker	One Old State Capitol Plaza Springfield, IL 62701	anne.haaker@illinois.gov
X	Chicago Historic Preservation Div. Dept of Housing & Economic Development	Terry Tatum	33 N. La Salle Street, #1600 Chicago, IL 60602	ttatum@cityofchicago.org
X	Preservation Chicago	Jonathan Fine, Executive Director	4410 N. Ravenswood Chicago, IL 60640	jfine@preservationchicago.org
X	Landmarks Illinois	Bonnie McDonald or L. DiChiera	53 W. Jackson Blvd., # 1315 Chicago, IL 60604	DiChieraL@lpci.org
X	Ridge Historical Society	Jennifer Kenny	9927 S Longwood Dr. Chicago, IL 60643	jennifer.kenny@mindspring.com
X	Rosemoor Community Association	Gloria Cosey, President	10205 S. King Drive Chicago, IL 60628	rosemoorchicago@yahoo.com
X	Friends of the Park	Erma Tranter, President Tim Jeffries	17 N State Street, #1450 Chicago, IL 60602-3315	trantere@fotp.org jeffriest@fotp.org
X	Chicago Neighborhood Initiatives	Angelica Marks	1000 E 111th Street - 10th Floor Chicago, IL 60628	amarks@cnigroup.org
X	Neighborhood Housing Services of Chicago Citywide office	Matt Cole	1279 N. Milwaukee Avenue, 5th Floor Chicago, Illinois 60622	MCole@nhschicago.org
X	Peoria Tribe of Indians of Oklahoma	Frank Hecksher	P.O. Box 1527 Miami, OK 74355	
X	Forest County Potawatomi	Melissa Cook, THPO	P. O. Box 340 Crandon, WI 54520	Melissa.Cook@fcpotawatomi-nsn.gov
X	Miami Tribe of Oklahoma	George Strack, THPO	202 S. Eight Tribes Trail Miami, OK 74354	gstrack@miamination.com
PARTIES ADDED LATER				
X	DCP	Gwendolyn Rice Executive Director	212 E 95th Street Chicago, IL 60619-7208	gmrice@dcpchicago.com

MEETING NOTES

RE: **Section 106 Kick-off Meeting**
Red Line Extension EIS

DATE: **October 24, 2012**

LOCATION: **Conference Call/Webinar**

TO: **Distribution and All Attendees**

ATTENDEES:

Name	Organization
Sonali Tandon	CTA
Reggie Arkell	FTA
Anne Haaker	IHPA (SHPO)
Jonathan Fine	Preservation Chicago
Terry Tatum	Chicago Historic Preservation Division
Lisa DiChiera	Landmarks Illinois
Erma Tranter	Friends of the Park
Helene Kornblatt	CWC Transit Group
John Mettille	CWC Transit Group
Rebecca Thompson	CWC Transit Group
Robert Ball	CWC Transit Group

PREPARED BY: Rebecca Thompson

ISSUE DATE: October 24, 2012

Meeting called to order at 1:00 pm CT

Objective: Red Link Extension Kickoff Meeting for Section 106 Consultation

Item No.	*Item Description*	*Responsibility*	*Due Date*
1	**Welcome/Intro** Sonali welcomed attendees and callers introduced themselves.		
2	**Overview of Section 106 Process** John Mettille provided an overview of the four-step Section 106 process. Reggie Arkell explained that FTA is overseeing the consultation process, working in conjunction with CTA. FTA will make determinations regarding eligibility and effects, referencing recommendations prepared by the consultant and considering input from consulting parties, including the SHPO. John discussed the roles of consulting parties and identified ground rules to ensure everyone has a fair chance to provide meaningful input.		

Item No.	*Item Description*	*Responsibility*	*Due Date*
3	**Project Info & Alternatives** Sonali provided a brief overview of the project area, the No Build alternative, and the three Build alternatives that are being considered: UPRR rail, Halsted rail, and Bus Rapid Transit. John presented the Area of Potential Effects (APE), which defines the geographic boundary where the analysis of historic resources will occur. A larger scale APE map is attached to the meeting summary.		
4	**Schedule/Next Steps** John explained the next steps in the process. Work is underway to identify potential historic properties. We are tentatively planning to hold a meeting to discuss the eligibility of resources in December. A meeting to discuss effects will occur in early 2013.		
5	**Question/Answer** - Jonathan: Is the purple segment on the alternatives map new or existing? It would be a new structure in the median of the expressway. - Reggie: What is the pier spacing for the Halsted Alternative? Spans between piers would typically be 60 to 100 feet, and as long as 140 feet. Span length would be based on site conditions, geometrics, and clearance requirements. - Jonathan: What advantages does the Halsted Alternative offer over the No Build Alternative? Halsted would extend the red line south to serve additional transit markets. The No Build Alternative includes improvements at the 95th Street station which are currently being planned but would not include an extension of the route or other improvements. - Jonathan: Which alternative has the least impacts on historic resources? That is part of what we will determine through this process. - Lisa: Is documentation of the previous study available online? Yes, the project website is http://www.transitchicago.com/redeis Please use following links to access specific materials: Locally Preferred Alternative Report and Scoping Report (http://www.transitchicago.com/Redeis/documents.aspx); Alternatives Analysis Materials (http://www.transitchicago.com/news_initiatives/planning/redextend.aspx) - Lisa: If we have additional information about resources, should we send it to the team? Yes, please direct it to Sonali at STandon@transitchicago.com. - Erma: Are parks covered in the 106 process too? Parks are protected under Section 4(f) regulation, which is a separate law; they will be addressed in the project EIS. The Section 106 process will deal with historic resources; if any parks in the area or park facilities are determined to be historic, they will be considered during the 106 process. If any historic resources are used by the project, they will be addressed under Section 4(f) as well. Parks that are not historic are subject to the 4(f).		

Please notify the author of the minutes of any corrections and/or clarifications within five (5) business days.

As requested, contact information for participants is below:

Name	Organization	Email
Sonali Tandon	CTA	STandon@transitchicago.com
Reggie Arkell	FTA	Reginald.Arkell@dot.gov
Anne Haaker	IHPA (SHPO)	Anne.Haaker@Illinois.gov
Jonathan Fine	Preservation Chicago	JFine@preservationchicago.org
Terry Tatum	Chicago Historic Preservation Division	TTatum@cityofchicago.org
Lisa DiChiera	Landmarks Illinois	DiChieraL@lpci.org
Erma Tranter	Friends of the Park	TranterE@FOTP.org
Helene Kornblatt	CWC Transit Group	KornblattHK@cdmsmith.com
John Mettille	CWC Transit Group	MettilleJL@cdmsmith.com
Rebecca Thompson	CWC Transit Group	ThompsonRD@cdmsmith.com
Robert Ball	CWC Transit Group	BallRW@cdmsmith.com

cc: Attendees

MEETING NOTES

RE: **Section 106 Eligibility Meeting**
Red Line Extension EIS

DATE: **January 30, 2013**

LOCATION: **CTA/Conference Call**

TO: **Distribution and All Attendees**

ATTENDEES:

Name	Organization
Sonali Tandon	CTA
George Coleman	CTA
Joseph Iacobucci	CTA
Reggie Arkell	FTA
Mark Assam	FTA
David Halpin	IHPA
Jonathan Fine	Preservation Chicago
Terry Tatum	Historic Preservation Division, Dept. of Housing and Economic Development
Lisa DiChiera	Landmarks Illinois
Erma Tranter	Friends of the Park
Jennifer Kenny	Ridge Historical Society
Gloria Cosey	Rosemoor Community Association
Angelica Marks	Chicago Neighborhood Initiatives
Matt Cole	Neighborhood Housing Services of Chicago, Inc.
Gwendolyn Rice	DCP
Rev. Mitchell Johnson	DCP
Phyllis Palmer	DCP
Helene Kornblatt	CWC Transit Group
John Mettille	CWC Transit Group
Rebecca Thompson	CWC Transit Group
Robert Ball	CWC Transit Group
Jean Guarino	CWC Transit Group

PREPARED BY: Rebecca Thompson

ISSUE DATE: January 31, 2013

Meeting called to order at 10:30 am CT

Objective: Red Link Extension Eligibility Meeting for Section 106 Consultation

Item No.	*Item Description*	*Responsibility*	*Due Date*
1	**Welcome/Intro** Sonali welcomed attendees. Reggie Arkell explained FTA's oversight role on the project. John Mettille reviewed the agenda.		
2	**Background & Regulations** John Mettille provided an overview of the four-step Section 106 process, which is intended to assess historic resources and their eligibility for listing on the National Register of Historic Places (NRHP). John identified ground rules to ensure everyone has a fair chance to provide meaningful input.		
3	**Review of Area of Potential Effects (APE)** John presented the APE, which defines the geographic boundary where the analysis of historic resources will occur. The area includes over 1,400 acres and 7,000 buildings.		
4	**Methodology for Identification of Historic Properties** The team developed historic contexts for each community in the APE to frame the evaluation of historic properties. The team also conducted field surveys and archival research for over 500 individual properties within the APE. The survey sample included all buildings that would be demolished by one or more alternatives and a sample of other properties; sample properties were concentrated in areas that are likely to experience greater effects. Based on this, eligibility recommendations were developed for individual properties. - Q: Did you look at properties less than 50 years in age that could be significant to the community? A: We primarily examined properties over 50, but we did look for overall significant properties as well as potential historic districts. - Q: Are Chicago Historic Resources Survey (CHRS) red/orange properties shown? A: They are noted in the summary table in section 3 of the handout packet. - Q: What research was done on the social history of the area? For example, what about identifying community meeting places or locations significant in the lives of civil rights leaders? Of the 7,000 buildings in the APE, it is concerning that only 10 are identified as eligible.		

Item No.	*Item Description*	*Responsibility*	*Due Date*
	A: The team developed historic contexts for each of the communities represented in the APE but these focused primarily on the built environment. Part of the intent of the consultation process is to gather your input about what additional resources are out there, particularly from organizations more familiar with the immediately vicinity and social history. If you have information about potentially significant resources, please let us know during the comment period.		
5	**Overview of Surveyed Properties** Nine properties were recommended eligible for NRHP listing. - Residence at 444 W 100th Place - Former substation at 10227 S Halsted Street (gas & electric for the city) - Fire Department at 324 W 104th Street - Roseland Pumping Station (still in use) - Residence at 11310 S Emerald Avenue - Church at 10920 S Princeton Avenue (currently Mary Magdalena Missionary Baptist Church) - Fire Department at 931 W 120th Street - Church at 12433-12439 S Halsted Street - Venetian Hall at 133-139 E Kensington Avenue (currently used as church and shelter) *Note: the address is correct but the property lies in the West Pullman community.* In addition, Altgeld Gardens was determined NRHP eligible in 1992 independent of the project. - Q: How do you account for the fact that the community is under surveyed and underserved? Underrepresentation undercuts the intention of the project. A: The team prepared historic contexts for each community, consistent with the state of the practice. Beyond that, we rely on your input. Once you provide your comments, the team will establish a strategy to move forward. We will respond to comments received and keep you informed. - Q: Does the list of surveyed properties fully cover the area to be considered in the historic/social context? (DCP agreed that it does not.) A: The APE covers the area that could be impacted by the project; it forms the limits for our analysis. - Q: Is there a separate involvement process for Section 4(f)? A: There is a public involvement element if these resources are affected. It isn't a committee, but there is a mechanism to gather input from agencies and others. - Kensington Park along the UPRR corridor should be added to the table on slide 29. *Note: information for Fernwood Parkway was included in the table although the name was mistakenly presented as "Fernwood Park" instead. Wendell-Smith Park is presented as "Smith Playlot" in the table, consistent with the Chicago Parks Department naming convention.*	CWC	3/1

Item No.	***Item Description***	***Responsibility***	***Due Date***
6	**Schedule & Next Steps** John Mettille reviewed the schedule and next steps. - Q: Can you describe the effects for each eligible property? A: We will cover this in the next phase of the process, probably in Spring 2013. - Q: What is the third alternative shown? A: The Halsted Alternative was added during the scoping process to look for options to minimize the impacts on parks and other 4(f) resources. The UPRR Alternative is the locally preferred alternative; we will define a National Environmental Policy Act (NEPA) preferred alternative as part of the NEPA process. - Q: Can the UPRR alternative fall anywhere inside the APE boundary? A: No, it will follow or run adjacent to the existing UPRR alignment. The APE includes a buffer to account for visual, noise, and other indirect effects. - Q: What source did you use for the architects and construction dates? A: CHRS and the County Assessor website. - Two of the photos on slide 26 could be considered contributing within a district. There are enough "Ranchalows" that they could be considered a housing style. The team will provide a full survey map and consulting party list as requested by attendees. Materials will be revised to clarify that properties referenced in Riverdale lie in the Riverdale Community in Chicago rather than Riverdale, Illinois. Please submit written comments on the eligibility materials by February 18.	CWC/CTA	2/6

Following the morning presentation, a number of attendees participated in a driving tour of the project area. Please notify Sonali Tandon of the minutes of any corrections and/or clarifications within five (5) business days.

cc: Attendees

Red Line Extension (RLE) Summary of Eligibility Comments received from Consulting Parties and Responses from Project Team

The following paragraphs briefly summarize comments received from the consulting parties on the eligibility of historic resources for the RLE Project and corresponding responses from the project team. Under the Section 106 consultation process, CTA undertook an extensive data collection and analysis effort during Fall 2012 to identify historic resources located within the Area of Potential Effect (APE) for the three built alternatives that are under evaluation in the RLE Draft Environmental Impact Statement (EIS). This analysis culminated in recommendations regarding the potential eligibility of historic resources pursuant to the National Historic Preservation Act of 1966. These recommendations were presented to the ten consulting parties, including the Illinois Historic Preservation Agency (SHPO), during a meeting on January 30, 2013. Participants were asked to provide relevant information from their perspective that may supplement the National Register of Historic Places (NRHP) evaluations contained within the RLE Draft EIS. Written comments were received from the following six organizations:

- Anne Haaker, Illinois Historic Preservation Agency
- Jennifer Kenny, Ridge Historical Society
- Jonathan Fine, Preservation Chicago
- Lisa DiChiera, Landmarks Illinois
- Matt Cole, Neighborhood Housing Services of Chicago
- Terry Tatum, Chicago Historic Preservation Division, Department of Housing and Economic Development

Based on local knowledge and input from the consulting parties, additional analysis was undertaken regarding historic resources within the APE. The original recommendations presented in January will be revised as described below and presented in the RLE Draft EIS. In addition to the written comments received by CTA, comments from the January 30 meeting will also be incorporated into the Draft EIS to provide additional clarification. Comments and responses are presented by general topic below.

Comments requesting additional surveys:
Several comments requested that the team evaluate additional sites for NRHP eligibility. These additional sites and their evaluations are summarized below, including both individual properties (Comments #1-6) and potential districts (Comments #7-12).

1. American Ideal Cleaning Building at 10343 South Michigan Avenue
   This building falls beyond the APE boundaries.
2. Lilydale Progressive Missionary Baptist Church at 10716 South Michigan Avenue
   This building falls beyond the APE boundaries.
3. Greystone building at 11445-11447 South Michigan Avenue
   This building falls beyond the APE boundaries.
4. Entrance gate and structure at Cedar Park Cemetery at 12584 South Halsted Street
   These structures were field surveyed in February 2013 and are recommended eligible for the NRHP under Criterion C for the high quality craftsmanship and unusual stonework. A site form is attached.

5. Kensington Park
   The Park was field surveyed and, following archival research is not recommended eligible for the NRHP. Purchased by the City in 1942, Kensington Park has been updated throughout the decades and currently contains a number of contemporary recreational amenities that give it a recent appearance: a mid-twentieth century field house that is no longer in use, playground equipment, a splash pad, a paved basketball court, a horseshoe pit, and baseball fields. Although the field house is over 50 years in age, it lacks distinguishing architectural features. As a publicly-owned park, Kensington Park will be addressed in the NEPA document as a Section 4(f) resource.
6. Two-story commercial building at 11206 South Michigan Avenue
   The building was surveyed and is not recommended eligible for the NRHP due to its lack of integrity and distinguishing architectural features. The site form is included on the Eligibility CD as 11200-11206 S Michigan Avenue.

Note: A number of sources consulted during the archival research phase – including the City of Chicago GIS database, Illinois Historic Preservation Agency's HARGIS database, County Assessor Records, and others – present building addresses inconsistently. Street numbers may differ by several addresses: the church at 12433-12439 South Halsted Street is called 12427 South Halsted Street by a different agency, though both refer to the same building. To aid comparisons, the summary table notes alternate addresses for several properties when these inconsistencies were identified during the eligibility assessments.

7. Potential historic district/grouping of cast stone-faced residences on South Eggleston Avenue between 111th & 112th Streets
   Numerous buildings in this location were surveyed as part of the representative sample set, including one cast stone-faced residence on South Eggleston Avenue (11130 South Eggleston Avenue). Individually, this building was not recommended eligible for the NRHP due to its lack of integrity and distinguishing architectural features. Along South Eggleston Avenue near West 111th Street and West 112th Street, there appear to be only two cast stone-faced residences within the APE, which is not sufficient for these properties to be considered as a potential historic district or multiple property grouping.
8. Could groupings of ranchelows contribute to a future NRHP district (between 103rd St, 104th Pl, UPRR, and Princeton Ave)?
   A number of raised ranches were surveyed as part of the representative sample set; none were found to merit individual listing for the NRHP. Although the area (between 103rd St, 104th Pl, UPRR line, and Princeton Ave) contains numerous residences with similar architectural styles, massing, setbacks, and construction dates, architectural historians confirmed that these properties do not retain sufficient integrity for the NRHP as a district due to contemporary -alterations (e.g., replacement siding, porches, windows, and doors). Numerous vacant lots and recent construction, such as the post-1980 Langston Hughes Elementary School that encompasses an entire city block, disrupts the visual cohesiveness of this area.
9. Potential district of Residential Railroad Suburbs or Historic Streetcar Communities, e.g. along the Chicago & Eastern Illinois RR; the Chicago & Great Eastern RR; the Illinois Central RR 121st Street spur; or streetcars along Michigan Ave, 103rd St, 111th St, 115th St, and 119th St.
   After additional fieldwork, no cohesive groupings of historic commercial buildings or community centers were identified along the primary thoroughfares that supported streetcar lines, railroad

lines, or spurs. Therefore, the suggested areas are not recommended as a district or multiple property group.

10. Potential district/group of properties associated with the former Village of Fernwood, generally located between 90th St, 103rd St, Stewart Ave, and Morgan/Halsted Street
    As part of the original fieldwork effort, a handful of these resources were surveyed within the APE. As noted in the letter, many have integrity issues. Many of Fernwood's signature buildings are located outside the APE or have been demolished. Further, the amount of contemporary infill has compromised the historic setting of the residential suburb. Therefore, this area is not recommended as a district or multiple property group.
11. Potential district/group of historic automobile-related buildings along major thoroughfares (e.g. Halsted and Michigan Ave)
    Although a number of auto-related resources were surveyed within the APE, none exhibited sufficient historic integrity to qualify as eligible for the NRHP either individually or as a contributing resource within a multiple property group. All of the surveyed automotive service buildings exhibit contemporary alterations.
12. Chicago Georgian and Raised Ranch Historic Districts
    The Ridge Historical Society and other consulting parties suggested these styles be considered as part of the eligibility discussions for the Section 106 process. Review by architectural historians confirmed that a cluster of these properties exists along an approximately five block area on the east side of Green Street between 104th Street and 109th Street. The streetscape has a cohesive grouping of vernacular homes that is representative of residences that were constructed in the outlying areas of Chicago during the post-World War II era. Although such neighborhoods are common throughout the city, these five blocks include hipped-roof ranch homes, front-gabled cottages, and Chicago Georgian style homes with little to no contemporary infill. The residences date from the 1950s and 1960s with consistent setbacks and similar brick cladding; they appear to be well-maintained. Therefore, the portion of Green Street between 104th Street and 109th Street is recommended as eligible for the NRHP as a historic district for architecture (Criterion C).

Comments requesting reconsideration of surveyed properties:
Several comments requested that the team reconsider properties that were surveyed but recommended not eligible for NRHP listing at the January meeting. These additional properties and their evaluations are summarized below.

13. Sure-Way M.B. Church at the southwest corner of Halsted Street and 120th Street
    The building is not recommended eligible for the NRHP due to lack of integrity and because it no longer serves its original use. The site form is included on the Eligibility CD as 12000 S Halsted Street.
14. Fernwood Parkway
    Fernwood Parkway was evaluated against NRHP criteria and is recommended not eligible for NRHP listing. However, as a publicly-owned park, it will be addressed in the NEPA document as a Section 4(f) resource.
15. Roseland Auto Sales & Service at 11200 South Halsted Street
    The building is not recommended eligible for the NRHP due to its lack of integrity. The setting is compromised by contemporary infill and the exterior has been clad in modern materials. The site form is included on the Eligibility CD as 11200 S Halsted Street.

16. Bethany Reformed Church Manse at Three West 111th Place
    The building was not originally recommended eligible due to its lack of distinguishing architectural features. However, as a result of additional information provided by Ridge Historical Society, the resource is recommended eligible for the NRHP under Criterion B due to its association with Reverend Harry J. Hager (1899-1983), a pioneer in media evangelism in Chicago during the mid-twentieth century. A revised site form is attached.
17. Pridjian & Co Building at 11600 South Halsted Street
    The building is not recommended eligible due to its lack of distinguishing architectural features. While the Pridjian & Company business has been in operation for decades, the property does not reach the level of significance required by the NRHP. The site form is included on the Eligibility CD as 11600 S Halsted Street.
18. Roseland Community Hospital Nurse's Home at 11321 South Wentworth Avenue
    The building was surveyed and was not originally recommended eligible due to its lack of distinguishing architectural features. However, as a result of additional information provided by Ridge Historical Society during the eligibility discussions for the Section 106 process, the resource could be considered locally significant under Criterion A for Education based on its use as a dormitory for its nurses and as an important nurse training facility. A revised site form is attached.
19. Galloy & Van Etten Cut Stone Contractors Building at 11756 South Halsted Street
    The building was not originally recommended eligible under Criterion C due to its lack of integrity and distinguishing architectural features. However, as a result of additional information provided by Ridge Historical Society during the eligibility discussions for the Section 106 process, the resource could be considered locally significant under Criterion A for its longstanding association with the local construction industry as a 113-year old stone contracting company. A revised site form is attached.
20. Would the substation at 10227 South Halsted Street be eligible under Criterion A as well?
    Yes: the substation is recommended eligible under Criterion A for its association with utilities infrastructure within the city of Chicago. At the January 2013 meeting, it was recommended as NRHP eligible under Criterion C. A revised site form is attached indicating this building as eligible both under Criterion A and Criterion C.
21. Although noted architect Murray Hetherington designed the house at 11001 S Green Street, the resource was only evaluated based on its integrity.
    Numerous residences designed by Hetherington that exhibit greater integrity exist today, including 2078 West Hopkins Place, 8918 South Hamilton Avenue, and 8929 South Hamilton Avenue. Due to the compromised integrity of the Green Street property, it is not recommended as NRHP eligible. The site form is included on the Eligibility CD as 11001 S Green St.

Comments regarding assessment of effects:

The following comments expressed concern about the assessment of effects, which will be covered in the next phase of the consultation process. Noted below, these will be considered in the next phase of the analysis.

22. We object to historic properties being purchased and demolished for construction staging.
23. The proposed BRT route would affect the fewest cultural resources. The UPRR route will affect fewer resources than the proposed Halsted line.

24. Building an elevated rail line down Halsted Street would have negative consequences for the tranquil and bucolic atmosphere of the Cedar Park Cemetery.

Comments requesting minor amendments to the summary table and/or site forms:
The following comments identified minor amendments to the summary table and/or site forms for individual properties. None of these modifications change the NRHP eligibility recommendations. Noted below, these edits will be incorporated; revised materials will be provided along with the effects materials prior to the next phase of the consultation process.

25. The Fire Department Engine Co. 93 building at 324 West 104th Street (alternate address: 328-330 W. 104th St.) is CHRS Orange
26. The Roseland Pumping Station at 351 West 104th Street is CHRS Orange
27. The French Eclectic style house at 11310 South Emerald Avenue was listed as a “local landmark” but is not designated; it is CHRS Orange.
28. The Romanesque Revival style Church at 10920 South Princeton Street is CHRS Orange
29. The two-story commercial building at 11206 South Michigan Avenue is CHRS Orange
30. The architectural firm of Fox & Fox designed the church at 12433-1439 South Halsted Street, which was built in 1958-1959.
31. The Venetian Hall at 133-139 East Kensington Avenue was built in 1925-1926 and designed by Arthur F Hughes.
32. The house at 11310 South Emerald Avenue was built 1927-1928 for Stuart Colman. Inventory form should specify this resource is individually eligible.
33. Property listed as 748 East 103rd Street should be 748 West 103rd Street.
34. The substation at 10227 South Halsted Street was built in 1919-1920.

Other Comments:
Additional comments received are discussed below.

35. There should be a separate category in the spreadsheet for Chicago properties rated as “orange” on the Chicago Historic Resources Survey (CHRS).
    CHRS Orange properties were noted in the summary table provided to consulting parties on January 5, 2013. These properties will be discussed separately within the project’s Environmental Impact Statement.
36. We [SHPO] generally concur with the findings of the architectural surveys. It is expected that additional resources suggested will be considered once the final route is selected.
    Comment noted.
37. While we agree that the house at 444 West 100th Place is NRHP eligible, we disagree about the Neo-Traditional style description and are concerned that the replacement of the original tile roof jeopardizes integrity.
    Based on the ornamentation (Neo-Gothic castellated porch roof, Classical colonettes, and arched lintels), the house was identified as an early example of the Neo-Traditional style. It is recommended as NRHP eligible and will be assessed for effects in the next phase of the consultation process.
38. Use of catch-all architectural style descriptors was inconsistent and difficult to sort/review.
    Many of the residential resources are stripped-down brick and frame bungalows and cottages representing the predominant building stock for the study area. Likewise, commercial resources

contain little ornamentation or detailing. The broad term “vernacular” was used whenever a resource did not exhibit a particular architectural style. This approach is consistent with the current state-of-the-practice.

39. Historic functions should match NRHP categories.
While official NRHP functions were not used on the survey forms, easily identifiable equivalent terms were used to improve comprehension for a broader audience. This approach is consistent with the current state-of-the-practice.
40. Construction dates listed in the Cook County Assessor Records are less reliable than dates listed in building permit records.
Numerous varied sources were used to establish and cross-check construction dates: County Assessor records, GIS database layers provided by the City of Chicago, the HARGIS database maintained by the Illinois Historic Preservation Agency, Sanborn mapping, etc. This approach is consistent with the current state-of-the-practice.
41. The church at 10920 South Princeton Avenue is currently called Mary Magdalene Missionary Baptist Church.
The church at 10920 South Princeton Avenue was identified by both its historic name (First Christian Reform Church of Roseland) and its current name (Mary Magdalene Missionary Baptist Church) on the inventory form. The property is eligible for the NRHP due in part to its association with early Dutch settlement in the area, so the historic name was referenced in the presentation.

Illinois Historic Preservation Agency

1 Old State Capitol Plaza • Springfield, Illinois 62701-1512 • www.illinois-history.gov

Cook County PLEASE REFER TO: IHPA LOG #001010713
Chicago
From Existing 95th Street Station to Approximately 130th St. and Halsted St.

CTA
Red Line Extension

February 4, 2013

Sonali Tandon
Chicago Transit Authority
567 W. Lake St.
Chicago, IL 60661-1498

Dear Ms. Tandon:

Thank you for requesting comments from our office concerning the possible effects of the referenced project on cultural resources. Our comments are required by Section 106 of the National Historic Preservation Act of 1966, as amended, and its implementing regulations, 36 CFR 800: "Protection of Historic Properties".

We appreciated information provided during the meeting at the CTA on January 30, 2013, and the tour that augmented the architectural surveys and introduced the three routes proposed by the CTA. In general we concur with the findings of the architectural surveys submitted to this office prior to the meeting and tour, but during the tour is was noted that resources identified on the Chicago Historic Resources Survey were not identified and that structures such as those located within Cedar Park Cemetery were excluded from the sample. It is likely that our preservation partners present at the meeting will have additional resources that they would like to see included in the survey. It is expected that these additional resources will be considered once a final route has been selected.

In our opinion, the proposed expansion of the BRT route will affect the least amount of cultural resources located within its APE. We also believe the UPRR route that is often adjacent to existing railroad tracks will affect fewer resources than the line proposed on Halsted Street.

We look forward to reviewing the final historic resources report once the comments of our preservation partners have been considered.

If you have questions please contact David J. Halpin, Cultural Resources Manger, at 217-785-4998.

Sincerely,

Anne E. Haaker

Anne E. Haaker
Deputy State Historic
Preservation Officer
AEH:DJH

cc: Marisol R. Simon, U.S. Department of Transportation
Lisa DiChiera, Landmarks Illinois
Terry Tatum, City of Chicago, Illinois

From: Tandon, Sonali [STandon@transitchicago.com]
Sent: Friday, February 15, 2013 4:33 PM
To: Thompson, Rebecca D.; Kornblatt, Helene B.; Lea, Claudia
Cc: 'Bojan, Sharon'
Subject: FW: Red LIne Extension Section 106 - comments on historic resource identification
Attachments: Michigan 11206 S_CHRS orange_dataform.pdf; Michigan 11206 S_CHRS orange.xps

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From: Tatum, Terry [mailto:Terry.Tatum@cityofchicago.org]
Sent: Friday, February 15, 2013 3:13 PM
To: Tandon, Sonali
Subject: Red LIne Extension Section 106 - comments on historic resource identification

Dear Ms. Tandon:

Thank you for the opportunity to comment on historic resource identification efforts for the Red Line Extension Project as part of the ongoing Section 106 consultation process for this project. Our office appreciates the scale and importance of this undertaking, and we commend the CTA's efforts to incorporate historic preservation issues and concerns into its larger planning efforts. We hope to work with you to minimize the effect of the Red Line Extension Project on historic properties.

As part of the Section 106 process, we wish to bring to your attention both general observations on this historic resource identification effort, as well as comments on specific properties that may be impacted by the project.

Chicago Historic Resources Survey red- and orange-rated properties

With the help of your consultant team, you have preliminarily identified properties that are eligible for NR listing. These properties have been listed in the "RLE Draft Eligibility Findings for Surveyed Properties" spreadsheet.

Our office believes that there should be a separate category in the spreadsheet for Chicago properties rated as "orange" on the Chicago Historic Resources Survey. (There are no CHRS "red-rated" buildings in the Red Line Extension's APEs.) Conducted between 1983 and 1995, this city-wide survey identified properties constructed prior to 1940 that were perceived to have, within at least the context of their neighborhoods, some historic significance to these neighborhoods. These buildings were either color-coded red or orange, depending upon the level of their historical and architectural significance as known at the time of the survey.

Although not designated Chicago Landmarks, these CHRS "red" and "orange"-rated properties are covered by the City's Demolition-Delay Ordinance, enacted by City Council in 2003, which allows for an up-to-90-day hold on building permit applications for demolition by the Department of Housing and Economic Development (DHED) for these properties. (More information on this ordinance can be found at http://www.cityofchicago.org/city/en/depts/dcd/supp_info/demolition_delay.html.) Even where such properties have also been determined eligible for National Register listing, we believe that it is prudent of the CTA to separately identify all CHRS orange-rated properties within the APEs on the historic resources spreadsheet. The effect of the Red Line Extension Project on these "orange" properties can then be determined and, if necessary, mitigated through direct discussions with DHED as early in the project as possible.

Observations concerning individual properties located in the APEs

1. Several buildings identified as "orange-rated" in the Chicago Historic Resources Survey (CHRS) were sampled by the CTA's historic resources consultants.

The **Classical Revival substation** at 10227 S. Halsted St. (Map 7) was determined eligible for National Register listing. It is a CHRS “orange-rated” building and was noted as such on the spreadsheet.

The **Fire Department Engine Co. 93 building** at 324 W. 104th St. (alternate: 328-330 W. 104th St.) (Map 30) was preliminarily determined eligible for National Register listing. It is a CHRS “orange-rated” building, but was not noted as such on the spreadsheet. It should be so noted.

The **Roseland Pumping Station** at 351 W. 104th St. (Map 30) was preliminarily determined eligible for National Register listing. It is a CHRS “orange-rated” building, but was not noted as such on the spreadsheet. It should be so noted.

The **French Eclectic style house** at 11310 S. Emerald Ave. (Map 12) was listed as a “local landmark” and preliminarily determined eligible of NR listing. However, it is not a designated Chicago Landmark. Instead, it is an “orange-rated” building in the CHRS, but was not noted as such on the spreadsheet It should be so noted.

The **Romanesque Revival style Church** at 10920 S. Princeton St. (Map 34) was preliminarily determined eligible for National Register listing. It is a CHRS “orange-rated” building, but was not noted as such on the spreadsheet. It should be so noted.

2. In addition, one building identified as “orange-rated” on the CHRS and located within the APE for the BRT option was not identified and sampled. The **two-story commercial building** at 11206 S. Michigan Ave. (listed as 11208 S. Michigan on Map 45) was not sampled by the historic resource survey. It is an “orange-rated” building in the CHRS (CHRS data form and Google Earth photo attached) and should be noted as such on the spreadsheet. It should also be separately evaluated for National Register eligibility.

I would be pleased to assist the CTA’s consultant team as they gather additional information on historic resources within the APEs for this project.

Sincerely,

Terry

Terry Tatum
Coordinating Planner I
Historic Preservation Division, Dept. of Housing and Economic Development
33 N. LaSalle St., Room 1600
Chicago, IL 60602
312-744-9147
312-744-9140 (fax)
ttatum@cityofchicago.org

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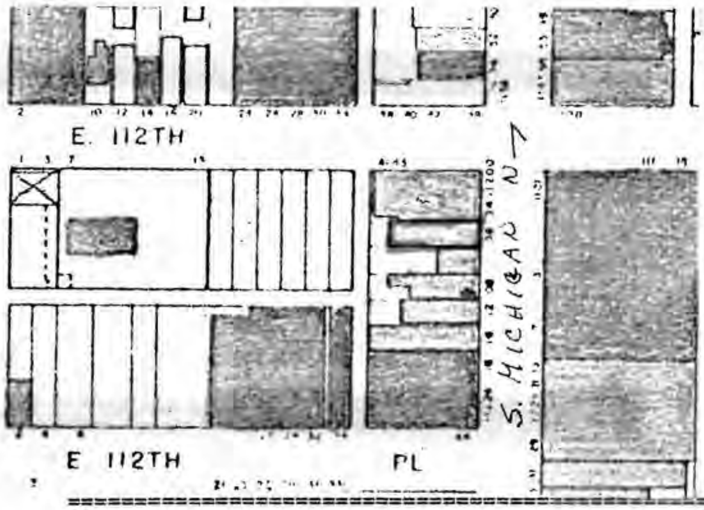
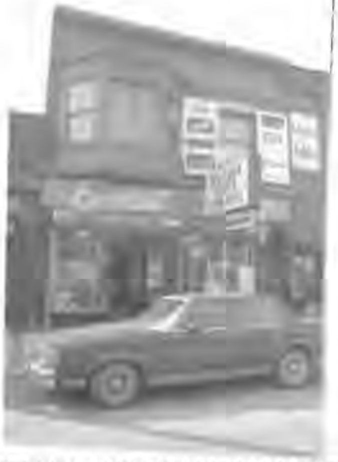


PHOTOGRAPH:



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orientation: E
photographer: TW
date: 9-28-83

Address: 11206 S Michigan AV
0893
Color Coded: Orange

COMMISSION ON CHICAGO HISTORICAL AND ARCHITECTURAL LANDMARKS
INDIVIDUAL RESOURCE FORM

Common Name (or major tenant): Excellent fashions for Men
Historic Name:
Orientation: (circle) N S [✓ E] W NE SE NW SW
Classification: ☑ Building ☐ Site ☐ Structure ☐ Object
☐ Other:

Evaluation: Potential

	N/I	N/D	C/I	C/D	I/I
F	☐	☐	☐	☐	☐
A	☐	☐	☐	☐	☐
H	☐	☐	☐	☐	☐

Building Type: Commercial, Residential
Style: overall: N/A
details: CLASSICAL
Roof Type: N/V
Stories: TWO
Approximate dimensions 25 feet (W) x 88 feet (D).
Original Use: Commercial, Residential
Present Use: Commercial, Residential

Approximate Period of Construction:

☐ pre-1870 ☐ 1910-1919
☐ 1871-1879 ☐ 1920-1929
☐ 1880-1889 ☐ 1930-1939
☑ 1890-1899 ☐ post-1940
☐ 1900-1909

Materials (including color):
foundation: N/V
walls: BRICK (Red)
trim: Stone (Gray) Metal/Painted (Mustard yellow) wood/Painted (mustard yellow)
roof: N/V
porches: N/A
other: N/A

Physical Condition:

	E	G	F	P	NV
foundation:	☐	☐	☐	☐	☑
walls:	☐	☑	☐	☐	☐
roof:	☐	☐	☐	☐	☑
porches:	☐	☐	☐	☐	☐
other:					
BAY	☐	☑	☐	☐	☐
	☐	☐	☐	☐	☐
overall:	☐	☑	☐	☐	☐

Alterations, Additions:
One bay window covered w/ wood
Modern 1950s 1st Floor storefront alterations

Noteworthy Features of Resource/Site:
metal dentil cornice w/ garland motif above metal fascia w/ garland and masks. Metal 3-sided bay

Rationale for Landmark Potential:
Noteworthy because of the intricate detailing on the fascia

Relation to Streetscape(s):
Flanked to the S. by modern one story & altered historic 2 story commercial bldg. Flanked to the north by contemporary 2 story commercial bldg and to the east by 1 story modern commercial bldg on a heavily trafficed Street.

Field notes:

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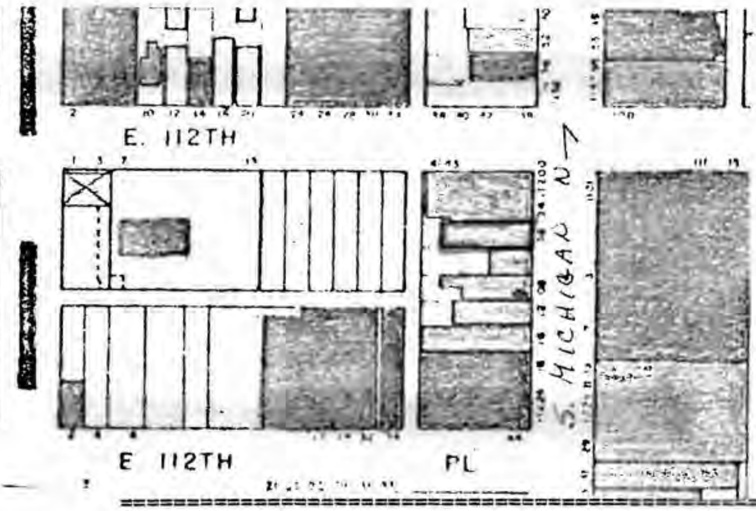
49/1
No. Cont. Sheets:
Surveyors: TW/CR
Date: 9-28-83



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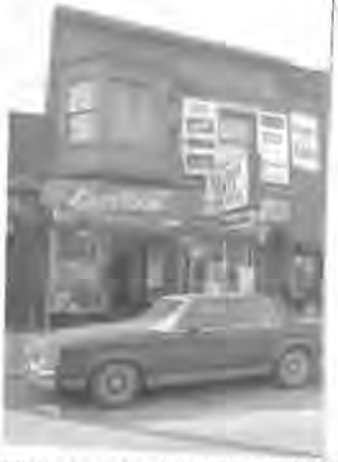

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frame no. 3
orientation: W
photographer: TW
date: 9-28-83

Address: 11206 S Michigan AV
3873
Color Coded: Orange
District Form No: ___-___-___
Form No: 49-9-21-019
47//
No. Cont. Sheets: ___
Surveyors: TW/CR
Date: 9-28-83

COMMISSION ON CHICAGO HISTORICAL AND ARCHITECTURAL LANDMARKS
INDIVIDUAL RESOURCE FORM

Common Name (or major tenant): Excellent fashions for Men
Historic Name:
Orientation: (circle) N S [✓ E] W NE SE NW SW
Classification: [✓] Building [ ] Site [ ] Structure [ ] Object
[ ] Other:

Evaluation: Potential

	N/I	N/D	C/I	C/D	I/I
F	[ ]	[ ]	[ ]	[ ]	[ ]
A	[ ]	[ ]	[ ]	[ ]	[ ]
H	[ ]	[ ]	[ ]	[ ]	[ ]

Building Type: Commercial, Residential
Style: overall: N/A
details: CLASSICAL
Roof Type: N/V
Stories: TWO
Approximate dimensions 25 feet (W) x 88 feet (D).
Original Use: Commercial, Residential
Present Use: Commercial, Residential

Approximate Period of Construction:

- [ ] pre-1870
- [ ] 1871-1879
- [ ] 1880-1889
- [✓] 1890-1899
- [ ] 1900-1909
- [ ] 1910-1919
- [ ] 1920-1929
- [ ] 1930-1939
- [ ] post-1940

Materials (including color):
foundation: N/V
walls: BRICK (Red)
trim: Stone (Gray) Metal/Painted (Mustard yellow) wood/Painted mustard yellow
roof: N/V
porches: N/A
other: N/A

Physical Condition:

	E	G	F	P	NV
foundation:	[ ]	[ ]	[ ]	[ ]	[✓]
walls:	[ ]	[✓]	[ ]	[ ]	[ ]
roof:	[ ]	[ ]	[ ]	[ ]	[✓]
porches:	[ ]	[ ]	[ ]	[ ]	[ ]
other:					
BAy	[ ]	[✓]	[ ]	[ ]	[ ]
	[ ]	[ ]	[ ]	[ ]	[ ]
overall:	[ ]	[✓]	[ ]	[ ]	[ ]

Alterations, Additions:
One bay window covered w/ wood
Modern 1950s 1st Floor storefront alterations

Noteworthy Features of Resource/Site:
metal dentil cornice w/ garland motif above metal fascia w/ garland and masks.
Metal 3-sided bay

Rationale for Landmark Potential:
Noteworthy because of the intricate detailing on the fascia

Relation to Streetscape(s):
Flanked to the S. by modern one story & altered historic 2 story commercial bldg. Flanked to the north by contemporary 2 story commercial bldg and to the east by 1 story modern commercial bldg on a heavily traficed Street.

Field notes:

[redacted] [redacted]

IDENTIFICATION ON EXISTING SURVEYS:

Date:	Survey:	Listing:
[11/2/83]	[ ] Chicago Landmark (CL).	
[11/2/83]	[ ] Potential CL	
[11/2/83]	[ ] National Register (NR)	
[11/2/83]	[ ] NR Eligible	
[11/2/83]	[ ] Illinois Register.	
[11/2/83]	[ ] State Survey	
[/ /]	[ ] HABS	
[/ /]	[ ] HAER.	
[/ /]	[ ] LPCI Inventory.	
[/ /]	[ ] Federal Agency Inventory	
[/ /]	[ ] Other:	
[/ /]	[ ]	
[/ /]	[ ]	

LEGAL DESCRIPTION:

TAX NUMBER: 25.22.105.029.0000
ZONING DESIGNATION: B3-3

AREAS OF SIGNIFICANCE:

BUILDING HISTORY:

[ ] Original Site
[ ] Moved
Date:
Source No(s):
Original Location:
Prepared by:
Source No(s):
Date:

(1) Permit No. NW944
File No.
Book No. Pg.

Date: 10-8-1901
COST: $4800 (2)

SUNDRY. Permit # 112337 File # 276521 8-17-33(?)

HISTORICAL SIGNIFICANCE:

Original Owner: D BASS
Source No(s): 2

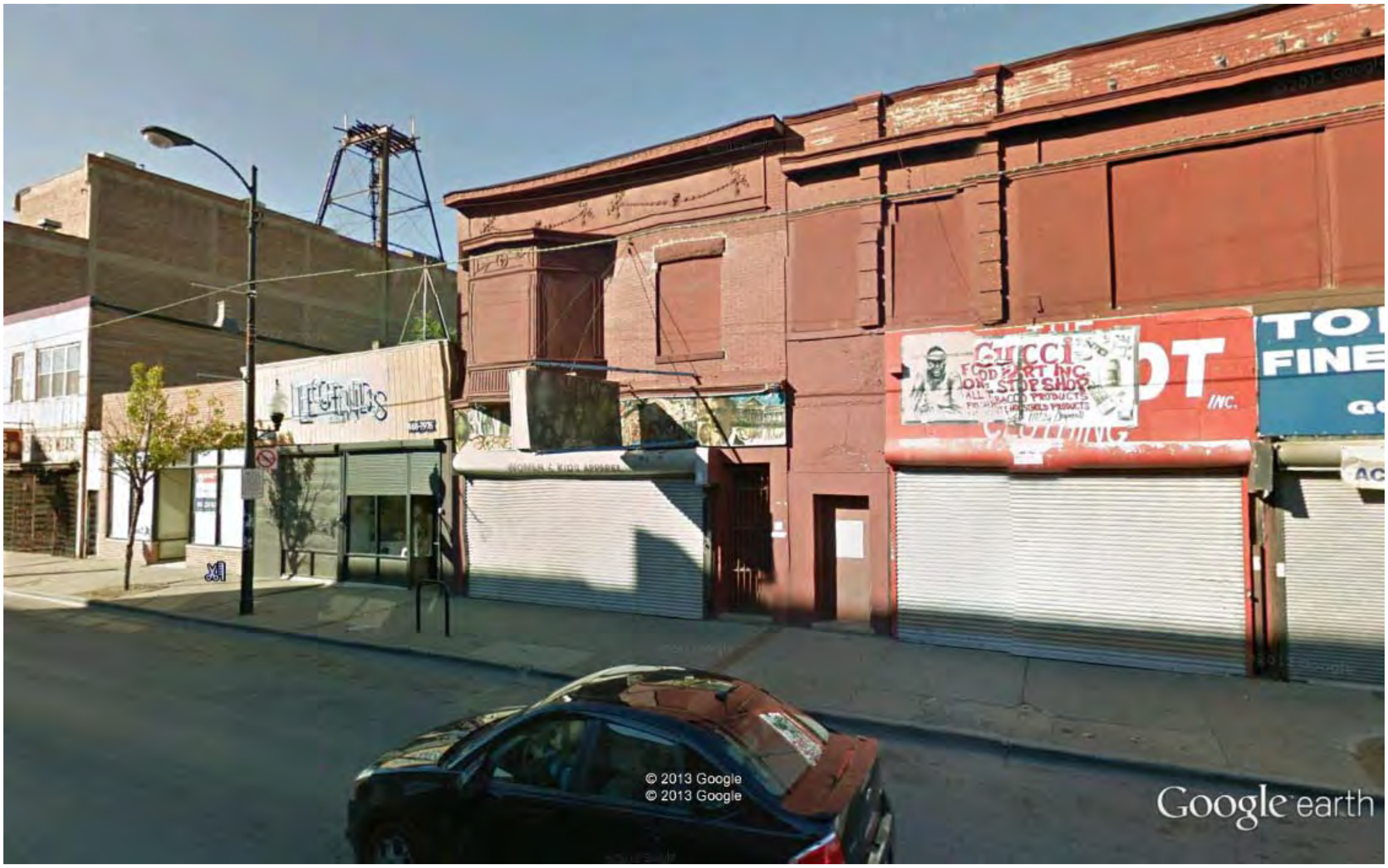
Prepared by:
Source No(s):
Date:

ARCHITECTURAL/ENGINEERING SIGNIFICANCE:

Architect:	Source No.
Builder: WILLIAM C WOOD	Source No. 2
Engineer:	Source No.
Other:	Source No.
	Source No.
Date of Construction:	Source No. –
Structural system: BRICK	Source No. 2

Prepared by:
Source No(s):
Date:

SOURCES:
1 "Ancient Permit File Index," Department of Inspectional Services, City Hall, Chicago.
2 "Permit Ledgers," Department of Inspectional Services, City Hall, Chicago.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LANDMARKS
ILLINOIS

FOUNDED IN 1971

February 18, 2013

Sonali Tandon, Project Manager
Strategic Planning & Policy
Chicago Transit Authority
567 W. Lake St
Chicago, IL 60661

RE: Red Line Extension– NR eligible properties in APE

Dear Ms. Tandon,

As requested, we have reviewed the APE boundaries and the properties identified within the APE that are listed in or "eligible" for listing in the National Register of Historic Places by the Red Line Extension project team.

We are very pleased to see the numerous properties identified and acknowledged as historic. However we have the following observations:

- We recommend including all properties that are orange-rated in the Chicago Historic Resources Survey (CHRS) in a separate category due to the fact that they will require an additional mitigation process through the city's demolition delay ordinance.
- During the driving tour of the preferred Red Line Extension routes, I took note of the following properties that were not included in the project team's list of eligible properties that looked as if they could be of possible architectural significance.
    - The American Ideal Cleaning Building at 10343 S. Michigan – a mid-century commercial building
    - The Lilydale Progressive M.B. Church at 10716 S. Michigan
    - City Sports store commercial block at 11102 S. Michigan
    - 11445-47 S. Michigan – Commercial/residential side by side Greystone – rated orange in CHRS
    - 11451 S. Michigan – one story commercial Art Deco building – rated orange in CHRS
    - Sure-Way Missionary Baptist Church at S.W. corner of Halsted and 120th. Art Deco corner building with a mid-century addition on the south side
    - Entrance gates and structure to Cedar Park Cemetery, 12584 S. Halsted
- Based on precedent with the Brown Line renovation project, we object to historic properties being purchased and demolished to make way for construction staging. We hope the team will specifically identify historic properties in the areas where construction staging may be planned to help identify alternative locations.

Thank you for the opportunity to review the findings by your team for this project. Please let me know if we can be of further assistance before the next consultation.

Sincerely,

Lisa DiChiera

Lisa DiChiera
Director of Advocacy

cc: Anne Haaker, IHPA
Jonathan Fine, Preservation Chicago
Terry Tatum, Historic Preservation Division, HED, City of Chicago
Matt Cole, NHS

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NHS

February 19, 2013

Ms. Sonali Tandon
Project Manager
Strategic Planning & Policy
Chicago Transit Authority
567 West Lake Street
Chicago, IL 60661

RE: Red Line Extension – National Register eligible properties in APE

Dear Ms. Tandon,

As a housing and community development organization with longstanding ties to the greater Roseland area, we appreciate CTA inviting Neighborhood Housing Services of Chicago, Inc. (NHS) to participate in the Section 106 review for the proposed Red Line Extension routes. NHS believes the Red Line Extension project will ultimately enhance the livability and well-being of Roseland and surrounding neighborhoods by increasing transit access for residents. At the same time, we wish to ensure that the project minimizes any undue impacts on the existing residential, community, and historic buildings that make these neighborhoods great and that our experience has shown can be important community-building and engagement assets. Therefore, NHS would like to submit the following comments regarding the National Register eligible properties surveyed by the Red Line Extension project team in the APE:

- We recommend re-evaluating the exclusion of raised ranches – colloquially referred to "ranchelows" for looking like a cross between a Chicago bungalow and a ranch-style home – from the survey. While currently not a formally recognized form of Chicago vernacular architecture, these homes define the look and character of large stretches of the APE adjacent to UPRR right-of-way. We would encourage the CTA project team to determine if groupings of "ranchelows" in the APE could contribute to a future National Register district.
- During the van tour of the preferred Red Line Extension routes on January 30th, we also took note of the following areas that warrant additional surveying/review by the project team:
    - 111th & 112th South Eggleston: A few cast stone-faced residences were observed on or adjacent to these blocks, including one home immediately adjacent to the UPRR right-of-way. These buildings, which look similar to Chicago greystones, are relatively rare and should be evaluated for National Register eligibility.
    - 103rd Street to 104th Place between the UPRR and Princeton Avenue: This area includes the previously identified, National Register-eligible Roseland Pumping Station and Roseland Fire Station properties. However, the blocks also include a largely intact and well-maintained grouping of Chicago bungalows and frame

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cottages. We would encourage the project team to conduct a more detailed survey of these blocks to determine if these residential properties could contribute to a future National Register district.

- Though not directly applicable to the survey of National Register-eligible properties, we encourage the project team to carefully evaluate the potential impact of the Red Line Extension on the Fernwood Parkway that runs immediately west of the existing UPRR right-of-way. Albeit simply landscaped, the parkway provides a nice amenity to homes along Eggleston Avneue between 99th and 104th Streets.

In addition to these observations, we fully concur with the recommendations from Lisa DiChiera, Director of Advocacy, at Landmarks Illinois regarding specifically calling out "orange-rated" properties listed on the Chicago Historic Resources Survey; the additional commercial, religious, and community buildings that should be evaluated on Michigan Avenue and Halsted Street; and avoiding the demolition of any historic properties to make way for construction staging.

Thank you again for inviting NHS to participate in the Section 106 review for the Red Line Extension project. Please let us know if we can be of further assistance before the next scheduled consultation.

Best,

Matt Cole
Project Coordinator
Neighborhood Housing Services of Chicago, Inc.

CC: Ed Jacob, NHS
Deborah Moore, NHS
Robert Tucker, NHS
Christopher Smith, NHS
Anne Hacker, IHPA
Lisa DiChiera, Landmarks Illinois
Jonathan Fine, Preservation Chicago
Terry Tatum, Historic Preservation Division, HED, City of Chicago

Preservation Chicago

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February 20, 2013

Sonali Tandon, Project Manager
Strategic Planning & Policy
CTA
567 West Lake Street
Chicago, IL 60661

Re: Red Line Extension – Possible negative effects to historic properties with in the proposed APE

Dear Ms. Tandon,

Thank you for facilitating the recent driving tour of the three proposed routes for the Red Line extension. I am writing in response to concerns our organization has regarding possible destruction of historic buildings or landscapes with the APE.

I have had a chance to review the comments being submitted by Landmarks Illinois and we agree with and support all of their concerns.

In addition, we are concerned about the negative consequences that building an elevated rail line down the middle of South Halsted Street would have on the tranquil and bucolic atmosphere of Cedar Park Cemetery.

Thank you for your consideration. We look forward to continuing our partnership on this exciting project.

Sincerely,

Jonathan Fine

Jonathan Fine
Executive Director
Preservation Chicago

cc: Anne Haaker, IHPA
Terry Tatum, Historic Preservation Division, DHED
Lisa DiChiera, Landmarks Illinois
Matt Cole, NHS

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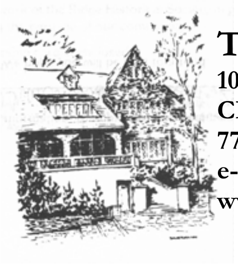

THE RIDGE HISTORICAL SOCIETY
10621 SOUTH SEELEY AVENUE
CHICAGO, IL 60643
773-881-1675
e-mail: ridgehistory@hotmail.com
www.ridgehistoricalsociety.org

February 20, 2013

Sonali Tandon
Chicago Transit Authority
567 West Lake Street, 10th Floor
Chicago, IL 60661

Dear Sonali,

Thanks for the opportunity to be a consulting party to the CTA's Red Line Extension (RLE) Section 106 eligibility process.

The Ridge Historical Society (RHS) serves the Beverly, Morgan Park and Washington Heights community areas on Chicago's south side. For this reason, we are particularly interested in the RLE impact upon historic properties in the APE situated within the Morgan Park and Washington Heights community areas. Both the Halsted Street and Union Pacific Railroad APE are located at the easternmost boundary of our service area. Please note that we do maintain an archival collection that reaches beyond our service area since our history does overlap with nearby areas, including West Pullman and Roseland. We reserve the right to comment on historic resources in other community areas just outside of our service area.

I have reviewed the materials and inventory forms submitted by the consulting team and offer the following comments.

IDENTIFIED NR ELIGIBLE PROPERTIES

The Ridge Historical Society agrees with the National Register (NR) eligibility of the two properties identified by the study in the Washington Heights community areas (our service area) – 10227 S. Halsted Street and 444 West 100th Place. Unfortunately, the team did not identify any NR eligible properties in the Morgan Park community area.

1. We agree that the City of Chicago Department of Gas and Electricity, Southwest Substation, at **10227 South Halsted Street** is NR eligible under C for its architecture, as a rare remaining example of a city government public works building. As stated on the study's inventory form, it is an orange rated building in the Chicago Historic Resource Survey (CHRS). The CHRS did supply a date of construction, 1919-20, that does not appear on the inventory form. I am wondering if this public works building is also NR eligible under A.
2. We agree that the single family dwelling at **444 West 100th Place**, built 1931, is potentially NR eligible under C for its architecture, as a rare brick Bungalow in

Washington Heights with striking Tudor Revival and Mediterranean Revival detailing. The Bungalow sports a handsome crenellated entry, decorative arches, and colonettes. I would not call this building Neo-Traditional, which is an architectural style reserved for late 20th-century buildings. I am concerned that this home once had a clay tile roof, perhaps jeopardizing its integrity. A similar house, designed by architect John Hoche, can be found in Beverly at 1762 W. 94th Street.

Additionally, I am providing architectural and historic info on other properties in the APE flagged as NR eligible by the team:

- The architectural firm of Fox and Fox designed S. S. Peter and Paul Church, **12433-12439 S. Halsted Street**, 1958-59. Architect John J. Fox, Jr. was a longtime resident of Beverly-Morgan Park and a noted local Roman Catholic church designer. He died in 2003.
- Venetian Hall, **133-139 E. Kensington Avenue**, was built in 1925-26 and designed by architect Arthur F. Hughes. Hughes is a local architect who designed a number of striking historic revival style homes in Beverly-Morgan Park.
- **11310 South Emerald Avenue** was built in 1927-28 for owner Stuart Colman. Note: the Individually Eligible category on page 2 of the inventory form says No when it should say Yes.

ADDITIONAL INDIVIDUAL PROPERTIES THAT MAY BE POTENTIALLY ELIGIBLE FOR THE NATIONAL REGISTER OF HISTORIC PLACES

The Ridge Historical Society would like the team to consider the following buildings for NR eligibility:

Roseland Auto Sales and Service Building (Allinone Auto Sales Building)
11200 South Halsted Street (Morgan Park)
Built 1927 for Henry T. Vollmer
Doerr, Lindquist and Doerr, architects

Potentially eligible under Criterion C for architecture as a rare remaining example of a garage and auto sales building from the early 20th-century in Morgan Park. Both Beverly-Morgan Park and Roseland were once major centers of auto sales on Chicago's south side, with dealerships along major area thoroughfares. Building is best known historically as a satellite salesroom for Roseland Auto Sales, featuring Studebakers. Additionally, Midland Terra Cotta Company provided the handsome terra cotta ornament for the one-story brick store building. Its integrity was likely questioned by its wood paneled storefront, but the original storefront may be behind the vertical boards If not individually eligible, perhaps eligible as part of a multiple property listing (see below).

Bethany Reformed Church Manse
3 West 111th Place
Craftsman-style single family residence
Built 1923-24
Purchased by church and addition built in 1928

Potentially eligible under criterion B for its historic associations with Reverend Harry J. Hager, pastor of Bethany Reformed Church from 1929-1975. Hager was a pioneer in media evangelism in Chicago during the mid 20th-century through his Sunday radio ministry broadcasts on local stations WHIP and WCFL. This church-related residence in the Craftsman style retains a high degree of architectural integrity, including a Gothic Revival style entry porch that likely dates to Hager's residency.

K. A. Pridjian and Company Building
11600 South Halsted Street
Built 1960

Potentially eligible under Criterion A for its historic associations with longtime local business, K. A. Pridjian and Company, Rug Cleaning and Sales. Established in 1924 in Roseland, Pridjian first operated at 54 West 111th Street. Owner K. A. Pridjian (d. May 6, 1965) had the facility built specially for his rug operation. Building retains much of its integrity in its mid-century storefront design, materials, and signage. (side note: Almost everyone in Beverly-Morgan Park has their rugs cleaned by Pridjian!)

Roseland Community Hospital Nurses Home
11321 South Wentworth Avenue
Built 1923-24
E. Hall, architect.

Potentially eligible under Criterion C for its architecture as a rare remaining example of a unique education-related building type in Chicago, a hospital-affiliated nurses' home. The three-story brick, Roseland Community Hospital Nurses' Home provided housing and educational opportunities for women training in the nursing profession. The interior may still reflect dormitory rooms, classrooms, and other spaces essential for nurses' training during the early 20th-century. Not sure how many of these building types are left in Chicago, but might be one of the only on the south side.

Galloy and Van Etten Cut Stone Contractors Building
11756 South Halsted Street
Built over time – 1921, 1928, 1946 and 1950

Potentially eligible under Criteria C for its associations with the Van Etten family, prominent local builders on Chicago's south side. Galloy and Van Etten, a longtime cut stone contracting business near the Panhandle railroad tracks, has operated continuously at this site from at least 1909. The cut stone exterior of the buildings within the complex reflects its occupant's trade. Founder Abe Van Etten was the brother of Simon and Henry Van Etten, whose contracting firm known as Van Etten Brothers built monumental residences and religious buildings on the south side. Galloy and Van Etten likely provided the cut stone used in many of these buildings.

NR ELIGIBLE CONTIGUOUS HISTORIC DISTRICTS OR MULTIPLE PROPERTIES

The Ridge Historical Society urges the team to revisit any groupings of historic properties that may be potentially NR eligible as contiguous districts or as multiple property listings The APE is located in a section on Chicago's south side that has been under surveyed in the past, and as a result, little data is available and very few historic resources have been proactively designated as local landmarks or listed in the National Register of Historic Places. Perhaps our community areas need a different approach in this type of study, especially when conducting cultural resource surveys. For example, surveyors could relax harsh integrity standards or look at broader patterns that might lead to multiple property nominations.

Here are some suggestions:

1. Would any of the Historic Residential Railroad Suburbs or Historic Streetcar Communities in the APE be NR eligible as multiple property listings? Since suburban development was extensive outside of nineteenth-century Chicago, perhaps the team could take a second look at the communities that were stimulated and developed along the area's railroads and streetcars in 19th-century Calumet Township and Chicago's early 20th-century neighborhoods. Especially important are those along the Chicago and Eastern Illinois, which came through in 1880-81 (UPRR APE); the Chicago and Great Eastern Railroad, an early subsidiary of the Pittsburgh, Cleveland, Chicago and St. Louis Railway who constructed tracks in 1865 (Halsted APE); and the Illinois Central Railroad who operated an east-west spur at 121st Street. Streetcars were operating along Michigan Avenue, 103rd Street, 111th Street, 115th Street and 119th Street, and stimulating residential and commercial development.

   Properties Associated with the former suburban Village of Fernwood. Fernwood is now part of the Washington Heights community area and within the RHS service area.

   Fernwood, a station stop on the Chicago and Eastern Indiana Railroad was first incorporated as a village in 1886 and annexed to the City of Chicago in Spring of 1891. Focused on a station at the 103rd Street crossing (then Tracy Avenue), Fernwood was mostly a residential district, with a few locally serving commercial buildings. Its boundaries ran from 90th Street on the north, 103rd Street on the south, Stewart Avenue on the East, and Morgan and Halsted on the west. Developers E. L. Gillette and Henry L. Hill, along with S. Montgomery Smith, laid out Fernwood in 1883 for residential development with an adjacent public park, approximately 75 feet wide along the tracks from 99th Street to 103rd Street. This park, now known as Fernwood Parkway, played a significant role in the development of this railroad suburb. This landscape feature marks the importance of open space, trees, and grassy public space to a growing residential suburb. Within the APE, a number of frame homes on suburban size lots remain, particularly along Eggleston Avenue, representing this period of development. Yet, these residences may have integrity issues (see 10100 South Eggleston Avenue), and many of Fernwood's signature buildings are either outside of the APE (including churches and a public school) or have been demolished (such as the Fernwood Station and Gillette Hall).

2. **Historic automobile-related buildings along major thoroughfares, including service stations, garages and car sales dealerships**. In reviewing the inventory forms in the APE, the team recorded a large number of auto-related buildings, although not contiguous. Halsted Street and Michigan Avenue were both major thoroughfares for the area, and as stated above, both Beverly-Morgan Park and Roseland were once major centers of auto sales on Chicago's south side. Could these buildings be NR eligible as a multiple property nomination?

3. **Chicago Georgian and Raised Ranch Historic Districts**. Just like the Chicago Bungalow Multiple Property Listing and subsequent NR districts, perhaps a multiple property listing is imminent for neighborhoods of Chicago Georgians and Raised Ranches. Both are mid 20th-century vernacular types which evolved from the earlier designs and plans of the American Foursquare and Bungalow respectively. Rows of raised ranches (also known as Bungalow Ranches) are found in the Halsted APE.

GENERAL COMMENTS AND CORRECTIONS:

1. Usage of catch-all architectural styles and types. Most every building I reviewed was labeled vernacular. Architectural styles, when used, were inconsistent. Using catch all categories makes it quite difficult to sort, review and compare important architectural specimens. Upon request, I can provide corrections to architectural styles and types in the Washington Heights and Morgan Park community areas.
2. Historic and current functions and uses should match National Register categories.
3. Construction dates for historic buildings in the APE came from an unreliable source– Cook County Assessor lists. A better primary source, such as City of Chicago building permit records, should be used for those properties determined NR eligible. It is disappointing that the team did not conduct basic research on the very small number of buildings (9) determined eligible in the study under NR Criterion C for architecture. Construction dates, owners, architects and builders would surely add to the historic context and story.

4. 748 E. 103rd Street (Washington Heights) should be **748 W. 103rd Street**.
5. Noted Beverly-Morgan Park architect Murray Hetherington designed the Tudor Revival-style residence at **11001 South Green Street** (Morgan Park), built 1940-41. Although a handsome, small scale Tudor Revival house, strict integrity standards were applied by the team.

Please contact me with further questions.

Sincerely,

Jennifer R. Kenny
Architectural Historian, Ridge Historical Society
773-429-9831
jennifer.kenny@mindspring.com

MEETING NOTES

RE: **Section 106 Effects Meeting**
Red Line Extension Environmental Impact Statement (EIS)

DATE: **May 8, 2014**

LOCATION: **CTA**

TO: **Distribution and All Attendees**

ATTENDEES:

Name	**Organization**
Sonali Tandon	CTA
Mike Connelly	CTA
Marlise Fratinardo	CTA
Kevin O'Malley	CTA
Gerald Nichols	CTA
Tony Greep	FTA
Mark Assam	FTA
Anne Haaker	IHPA (by phone)
David Halpin	IHPA
Ward Miller	Preservation Chicago
Terry Tatum	Historic Preservation Division, Dept. of Housing and Economic Development
Lisa DiChiera	Landmarks Illinois
Matt Cole	Neighborhood Housing Services of Chicago, Inc.
Jenifer Palmer	CWC Transit Group
John Mettille	CWC Transit Group
Rebecca Thompson	CWC Transit Group
Robert Ball	CWC Transit Group
Virginia Jackson	CWC Transit Group
Erika Sellke	Chicago Park District
Sylvia Jones	Friends of the Parks
Maria Stone	Friends of the Parks

PREPARED BY: Rebecca Thompson

ISSUE DATE: June 6, 2014

Meeting called to order at 10:00 am CT

Objective: Red Line Extension Effects Meeting for Section 106 Consultation

Item No.	***Item Description***
1	**Welcome/Intro** Mike Connelly welcomed attendees. JM reviewed the agenda and informed attendees that a public Open House is scheduled for May 13.
2	**Review of Project and Previous Section 106 Tasks** ST explained the overall purpose of the project and alternatives. JM provided an overview of the four-step Section 106 process, which is intended to assess project effects on historic resources (those previously identified as eligible for National Register of Historic Places [NRHP] listing). JM identified ground rules and reviewed previous coordination efforts undertaken to date as part of the Project. In response to comments received after the eligibility consultation in January 2013, Kensington Park was surveyed but was not recommended as eligible. Six potential historic districts were suggested; Green Street is recommended as eligible. Nine individual resources were suggested for reconsiderations. Of these, four resources are recommended as eligible based on supplemental information.
3	**Overview of Alternatives** JM presented an overview of the four alternatives that will be evaluated in the EIS: No Action, Bus Rapid Transit (BRT) along Michigan Avenue, the Union Pacific Railroad (UPRR) Rail Alternative, and the Halsted Rail Alternative. - Q: Is the BRT park-and-ride lot on the north side of 130th Street? A: Yes. - Q: Why are the garages shown as three levels? As shown, it looks like a huge impact on Altgeld Gardens. A: Preliminary ridership analysis indicates park-and-ride demand, which is why we are proposing such large structures. As we fine tune the design moving forward, we'll re-evaluate the garage sizes and incorporate some urban design elements to mitigate the impact. - Q: How many properties would be removed along the Halsted route? A: We'll discuss this at the individual community meetings and Open House. The focus of this meeting is effects on historic resources. - Q: Are the piers for the Halsted line in the sidewalk or street? A: That will be determined in future engineering phases. The straddle bent piers could encroach into the parking lane. - Q: Would the Halsted piers have a similar placement to the structure at the Morgan/Lake? A: Halsted Street has two travel lanes and a parking lane in each direction and is wider than the configuration at Lake Street. The pier type chosen will make a difference on placement too. There could be impacts on parking spaces. *Follow up note: All traffic impacts would be covered in the Transportation section of the Draft EIS.* - Q: How high is the structure along Halsted? A: It varies – roughly 23-30 feet above ground level; the necessary height is determined based on the street clearance requirements. - Comment: In talking with business owners at Galloy & Van Etten Stone Contractors, they are worried about their large trucks being able to access their sites.
4	**Section 106 Effects on National Register of Historic Places Eligible Resources** The team developed effects recommendations based on the conceptual alternatives described previously. JM stepped through each resource. The criteria for determining effects are defined in 36 CFR 800.5. For the three options of Union Pacific Railroad (UPRR) Alternative, the team examined the option that is closest to the historic resource, to represent the worst case analysis. - Q: Will you be sending a copy of the slides? A: The Effects Report provides general information and distances and CTA will have additional

Item No.	***Item Description***
	boards at the Open House, which will also be posted on CTA website. The effects slides contain preliminary deliberative materials so CTA will not be circulating copies. - Comment: The Cottage/Bungalow District that Neighborhood Housing Services of Chicago (NHS) commented on in the eligibility comments shows up in the map near the Pump Station. - WM: How close is the East Option UPRR track structure to the Pumping Station? A: It is close and almost adjacent– we'll have to look it up. *Follow-up note: Horizontally, it is about 8.8 feet between the pump station and track structure in the UPRR East Option. However this distance is based on conceptual engineering and can change slightly as additional detailed engineering is performed.* - Comment: If there is a future expansion along the UPRR line, we want to be sure that there is ample room to accommodate it. It would be good if the alternative were further from the building; I question whether it is actually a "No Effect" as shown. Response: It is a tight site at the Pumping Station. We are required to be outside of UPRR right-of-way. - Q: Does the analysis include staging areas as well? A: Yes. These are included in the footprints. - Q: How tall is the BRT garage by the Venetian Hall? A: 2 stories *Correction: it is 3 stories with some space for retail and community facilities at ground floor.* - Q: Are there any buildings in the footprint of the proposed garage? A: We looked at all the potential displacements associated with each alternative. There are no structures within the garage footprint that would be displaced. - Q: Is it a possibility to adopt/restore the Venetian Hall as part of the adjacent garage? Or incorporate similar elements in the garage design? A: If there is an adverse effect, we will try to mitigate that. We will look at improving the view of the garage and making it more street friendly. CTA can take this under consideration. - Q: NHS' eligibility comments included the cast masonry structures, one of which appears immediately south of the Venetian Hall. What was the determination there? A: Those were determined non-eligible; several were surveyed and lacked integrity and/or distinguishing architectural features. There wasn't a cohesive grouping either. - Q: What is the building across from the garage, next to Altgeld Gardens? A: There is a park; the buildings next to the park may be part of Golden Gate. - Q: What is the station like for UPRR at the west option? A: Trains stop, unload/load, and turn back. There is no yard or additional tracks at this location – the yard is proposed further north at 120th Street. - Comment: The garage could have a visual impact. Nothing else nearby is built at that scale/height. There may be an impact on the Altgeld Garden Historic District, which will likely gain historic significance into the future due to its association with President Obama. CTA should consider a more modest garage design. - Comment: Several parties would like to see a view of the West Terminal station option from directly across 130th Street at Altgeld. Response: Early communications with community members indicated a local preference for the South Station option, which would have an entrance south of 130th Street. - Comment: Both 130th UPRR station options need further study – there will be impacts to transportation, people's homes, etc. *Follow-up note: All other impacts will be discussed in the Draft EIS.* - Q: How difficult is it to cross from the south station to Altgeld or Philip Homes? A: 130th Street is on a viaduct that allows the tracks and platforms to extend under 130th Street. You wouldn't have to cross 130th Street to get to the Station, only a local street. - Q: Are the viaducts safe for travel?

Item No.	***Item Description***
	A: Vehicles travel on the 130th Street viaduct today. - Q: Will a station include CTA/CDOT landscaping improvements to link to Altgeld? A: Definitely. A study was conducted focusing on access and connectivity at 130th Street Station. CTA has coordinated and will continue to coordinate with CHA to integrate plans. - Comment: At the Green Street Historic District, track structure will certainly be visible and audible. - Q: What level of noise impacts are anticipated along Green Street? A: Noise mitigation measures (e.g. noise walls, closed deck, etc.) have been incorporated into preliminary designs to mitigate impacts. *Follow-up: Based on the general level noise analysis conducted per FTA guidance, the Green Street Historic District lies at the edge of the moderate noise impact zone, assuming the project includes 3-4 foot high noise barriers and a closed deck structure. Historic experts will reexamine potential effects on the Green Street Historic District.* - Comment: I think property owners who live within the Green Street Historic District would be adversely affected by the Halsted Alternative. Response: That will definitely be looked at as part of the National Environment Policy Act (NEPA) analysis. - Comment: As you look at this more, it would be nice to have a rendering showing how close the tracks are and what the relationship will look like between the Halsted line and Green Street district. - Comment: The former substation is city-owned and vacant. Consider incorporating it into the station. Maybe it could be an entry point. This provides a good opportunity to give back to the community by adopting some of the Chicago Historic Resources Survey Orange buildings, similar to measures at the Wilson station. - Comment: The French Eclectic House would experience the same impacts as Green Street. There are several nice homes within this block, possibly nicer than the resources along Green Street, though they lack the consistency of Green Street. Scale and noise will be issues. These areas could be negatively impacted, driving people to move out of the area. - Comment: Galloy and van Etten is a family business and has been in the area since 1899. Photos show the building dating to 1909; it is a huge resource for the area. The business owner feels like they would be so adversely affected by the Halsted Alternative that they would have to relocate. It is a fourth generation family-owned business and provides a lot of employment. They are also concerned about the proximity to the 119th Street yard. - Comment: A lot of businesses are within the 119th Street yard. It used to feed all of Roseland with jobs. Many of the buildings have been demolished but some are left and could be negatively impacted. Response: CTA is coordinating with Far South Community Development Corporation regarding potential impacts on businesses. - Comment: Several consulting parties requested renderings for the four adversely affected resources along Halsted. - Q: What about impacts on the rest of the cemetery? A: Only the gatehouse/entryway is considered eligible. Comment: The impacts on the cemetery will be assessed as part of NEPA analysis. - Q: Is the fire station within the rail yard still accessible? A: Yes. - Comment: By placing the tracks so close to the resource, are you precluding future viability of the resource to function? This is an issue at the fire station and the St. Peter & Paul Church in particular. TT: The fire station’s current location isn’t particularly viable as it is today. Perhaps relocating this building should be a consideration as part of mitigation, although we don’t typically like to

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	move structures. The fire station would be more viable on an arterial. The trend city-wide has been to close a number of these smaller structures. - Comment: We've heard some good ideas regarding mitigation, but there are a few steps between now and then. We still have to have a selected alternative before developing detailed mitigation measures.
5	**Schedule and Next Steps** There is an open house next week. A Draft EIS is being prepared, which will include additional analyses and public involvement opportunities. - Q: When would a single preferred alternative be selected? A: The Final EIS would be prepared on a single alternative. - Q: Is there a way to understand whether any of the resources we identified in the eligibility phase that were not determined eligible would be affected? A: They were not examined as part of this analysis since we evaluated only eligible buildings or districts for Effects determination. - Comment: Please resend the responses to eligibility comments.

Please notify ST of any corrections and/or clarifications to the minutes within five (5) business days.

cc: Attendees

Red Line Extension (RLE) Summary of Effects Comments received from the Consulting Parties and Responses from the Project Team

The following paragraphs briefly summarize comments received from the consulting parties regarding the project effects on historic resources for the RLE Project and corresponding responses from the project team. Under the Section 106 consultation process, the Chicago Transit Authority (CTA) undertook an extensive data collection and analysis effort during fall 2012 to identify historic resources located within the Area of Potential Effect (APE) for the three build alternatives that are under evaluation in the RLE Draft Environmental Impact Statement (EIS). This analysis culminated in recommendations regarding the potential eligibility of historic resources pursuant to the National Historic Preservation Act of 1966. These recommendations were presented to the ten consulting parties, including the Illinois Historic Preservation Agency (IHPA), during a meeting on January 30, 2013. Input from consulting parties was considered throughout 2013, resulting in 13 individual properties and two historic districts being identified as eligible under the National Register of Historic Places (NRHP) criteria.

Following this step in the consultation process, CTA undertook an analysis of effects on NRHP-eligible historic properties in accordance with criteria established in 36 CFR 800.5. This analysis culminated in recommendations regarding the potential effects on historic resources, which were mailed to consulting parties on April 18, 2014, requesting any written comments by May 23, 2014. An in-person meeting was conducted on May 8, 2014 to discuss these recommendations. Participants were asked to provide relevant information from their perspective that may supplement the effects recommendations summarized in the April 18 packet. Written comments were received from the following four organizations:

- Anne Haaker, Illinois Historic Preservation Agency (IHPA)
- Lisa DiChiera, Landmarks Illinois
- Matt Cole, Neighborhood Housing Services of Chicago
- Terry Tatum, City of Chicago, Department of Planning and Development, Historic Preservation Division

Comments and responses are presented by general topic below. Based on local knowledge and input from the consulting parties, additional analysis was undertaken regarding historic resources within the APE. The original recommendations presented in April/May 2014 will be revised as described below and presented in the RLE Draft EIS.

The CTA announced on August 10, 2014 that as part of its planning process to extend rail service to 130th Street on the far South Side, it has narrowed down the alternatives to two preliminary options for the proposed RLE Project. Based on feedback received from the public this spring and summer via community meetings and comments provided to the agency, the CTA is now focusing on one “preferred alternative” with two possible variations from the three build alternatives that have been under consideration. The CTA believes these options would best serve communities and residents on the Far South Side:

- Union Pacific Railroad Rail (UPRR) Alternative, East Option. Under this option, CTA tracks would be placed immediately east of the Union Pacific railroad right-of-way from 99th Street to 118th Street

- UPRR Alternative, West Option. Under this option, CTA tracks would be placed immediately west of Union Pacific's right-of-way from 99th Street to north of 118th Street.

The proposed alignment of the rapid transit line would be the same for the two East and West options north of 99th Street and south of 118th Street.

Eligibility Reconsideration Requests

1. Resurvey the grouping of Chicago bungalows and frame cottages at 103rd Street to 104th Place between the UPRR line and Princeton Avenue.
   Nine resources (Chicago bungalows and frame cottages) were surveyed as part of the representative sample of surveys. Although the area contains numerous residences with similar architectural styles, massing, setbacks, and construction dates, architectural historians verified that these properties do not retain sufficient integrity for the NRHP as a district due to contemporary alterations (e.g., replacement siding, porches, windows, and doors). None were found to merit individual listing for the NRHP due to their integrity. Numerous vacant lots disrupt the visual cohesiveness of this area. Despite the general consistency in property types, the collection of bungalows and frame cottages is broadly representative of residential areas on the South Side, lacking the distinguishing elements to qualify as NRHP eligible. Please refer to forms 301, 306, 321, or 326 W 103rd Place; 262, 328, or 335 W 104th Place; or 310 or 325 W 104th Street on the Eligibility DVD provided to consulting parties on January 4, 2013 for specific examples.

2. Reconsider eligibility determinations for cast stone-faced residences adjacent to the UPRR right-of-way, including the property adjacent to the Venetian Hall.
   The properties adjacent to the Venetian Hall are a brick two-flat (129 E Kensington Ave on southwest side) and a vinyl-clad multi-residence (141 E Kensington Ave on the east side). Neither building exhibits distinctive architectural features or sufficient integrity for inclusion on the NRHP. Likewise, the two cast stone-faced houses facing the Venetian Hall (122 and 136 E Kensington Ave) do not feature distinctive architectural elements or sufficient integrity for inclusion on the NRHP. Architectural historians verified that these properties do not retain sufficient integrity for the NRHP due to contemporary alterations (e.g., replacement porch, windows, and doors), compromising the historic materials and workmanship. No cohesive set of similar properties has been identified in the vicinity that would merit consideration as a potential historic district or multiple property grouping.

3. Reassess the area around 111th Street at Emerald Avenue for a potential district.
   CTA has narrowed down the alternatives for the RLE Project and the Halsted Alternative is no longer being pursued. The area around 111th Street at Emerald Avenue is distant from the UPRR Alterative corridor and would not be affected by the RLE Project.

Effects Reconsideration Requests

4. Reevaluate the visual, noise, and economic effects of the Halsted Alternative on the Green Street Historic District, which could have a significant impact on the quality of life without proper mitigation.
   CTA has narrowed down the alternatives for the RLE Project and the Halsted Alternative is no longer being pursued. The Green Street Historic District is distant from the UPRR Alterative

corridor and would not be affected by the RLE Project.

5. Reassess No Effect finding for the Altgeld Gardens Historic District based on the UPRR Alternative. The proposed station and garage would alter the landscape; a rendering should be developed.
   Altgeld Gardens Historic District is eligible for NRHP listing under Criterion A (i.e., events that have made a significant contribution to the broad patterns of American history on a local, state, and/or national level) based on its association with community development, planning, and social history. As defined by 36 CFR 800.5, an adverse effect on this resource would be an "alteration to the characteristics of a historic property qualifying it for inclusion in or eligibility for the NRHP." While the UPRR Rail Alternative would increase transportation choices and improve access for this geographically isolated area, none of the proposed infrastructure improvements in the vicinity would significantly alter the characteristics that qualify the district as eligible for NRHP listing. As part of the UPRR Rail Alternative, an at-grade station and parking facilities would be constructed in one of two locations to provide access to the Altgeld Gardens Housing Project: a South Station Option or a West Station Option. Either station location option is separated from Altgeld Gardens Historic District by a multi-lane street (i.e., E. 130th Street and/or E. 130th Place). Preliminary plans for each terminal station option would include parking for 2,300 vehicles through a combination of a parking structure and surface parking lots.

   The South Station Option parking structure for the UPRR 130th Street Station is approximately 800 feet from Altgeld Gardens Historic District at its closest point; the parking structure would not be visible from within the historic district and would not adversely affect the historic district.

   The West Station Option parking structure for the UPRR 130th Street Station is approximately 400 feet from Altgeld Gardens Historic District at its closest point and would only be visible from the outer line of buildings on the north side of the Altgeld Gardens development. This outer row of buildings would obstruct the view of the parking structure from interior buildings and streets. The construction of the West Station Option would not adversely affect the characteristics that qualify the district as eligible for NRHP listing, i.e. its association with community development, planning, and social history.

   As the project would not adversely affect the integrity of the district or its association with community development, planning, and social history, any visual simulation rendering and any appropriate mitigation measures identified would occur independent of the formal Section 106 consultation process for this resource.

   The UPRR Alternative has been selected as the National Environmental Policy Act (NEPA) Preferred Alternative, and an additional rendering of the station will be developed and presented as part of the Draft EIS to assist local stakeholders in understanding the extent of visual impacts created by the project.

6. Reassess No Effect finding for the Roseland Pumping Station based on the UPRR Alternative.
   For the UPRR East Option, the track structure is approximately 8.8 feet from the side of the building at its nearest point. It should be noted that an existing at-grade freight line runs in close proximity to this location. The pumping station would not be displaced or directly affected by the UPRR Rail Alternative. The changes in the setting (e.g., visual, noise, vibration, etc.) would

not adversely affect the characteristics that qualify the resource as eligible for NRHP listing, i.e. its architecture.

The UPRR West Option would also not affect the characteristics that qualify the resource as eligible for NRHP listing.

7. CTA should develop appropriate renderings for all properties in the APE where there was a finding of No Adverse Effect or Adverse Effect.
   CTA will develop additional visual simulation renderings, for inclusion in the Draft EIS, of the UPRR Alternative, which has been selected as the NEPA Preferred Alternative. Renderings are particularly helpful in understanding the extent of visual impacts and in developing appropriate mitigation measures for any adversely affected historic resources.

   At the current stage of Effects consultation, additional renderings would not change the effects findings for NRHP-eligible resources. Justification for effects findings was provided in the effects report mailed to consulting parties and additional justification is included in this document. As a reminder, the key consideration is whether the project would alter the specific characteristics that qualify a resource as eligible for the NRHP.

   In addition to the Historic impacts, the Draft EIS will also include a discussion of the potential visual impacts of the RLE Project alternatives, including general renderings of the alternatives that were prepared to assess those impacts. Some of those renderings were also presented at the May 13th CTA open house and the exhibit boards can be viewed at http://www.transitchicago.com/assets/1/red_ahead/MS_CWC_CL_RLE_Exhibit_Boards_lowres_FINAL_20140515.pdf

8. Renderings should be developed for any NRHP or Chicago Historic Resources Survey (CHRS) Orange properties potentially impacted by the close proximity of the proposed elevated track structures.
   See Response #7.

9. The property owner of the Galloy and Van Etten Stone Contractors business is concerned about their access and viability if the Halsted Alternative is built.
   CTA has narrowed down the alternatives for the RLE Project and the Halsted Alternative is no longer being pursued. The Galloy and Van Etten Stone Contractors business is distant from the UPRR Alternative corridor and would not be impacted.

10. Noise studies should be undertaken to demonstrate that the introduction of the elevated rail structure on Halsted would not adversely affect historic resources within the APE of that route.
    CTA has narrowed down the alternatives for the RLE Project and the Halsted Alternative is no longer being pursued. Noise analysis has been conducted per Federal Transit Administration (FTA) guidance and mitigation measures have been identified, which will be presented in the Draft EIS.

11. The French Eclectic House would experience the same impacts as Green Street. Scale and noise would be issues. These areas could be negatively impacted, driving people to move out of the area.

CTA has narrowed down the alternatives for the RLE Project and the Halsted Alternative is no longer being pursued. The French Eclectic House is distant from the UPRR Alterative corridor and would not be affected by the RLE Project.

Other Comments

12. In general, we [IHPA] concur with the findings concerning historic architectural resources presented in the draft report. The Bus Rapid Transit (BRT) Alternative would have the least impacts, followed by the UPRR Alternative.

13. The potential to encounter archaeological resources needs to be addressed. If the potential for undisturbed archaeological resources exists, a survey will be required.
    No previously recorded archaeological sites fall within the RLE APE and therefore the project would produce no effect on known archaeological resources. The need for and extent of further archaeological investigations will be determined in consultation with IHPA.

14. CTA should consider incorporating the city-owned, vacant historic substation (10227 S. Halsted Street) into plans for the nearby station.
    CTA has narrowed down the alternatives for the RLE Project and the Halsted Alternative is no longer being pursued; the vacant historic substation would not be affected by the RLE Project.

Illinois Historic
Preservation Agency

FAX (217) 524-7525

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Cook County
Chicago
Red Line Extension
From Existing 95th Street Station to Approximately 130th St. and Halsted St.
IHPA Log #001010713

May 22, 2014

Sonali Tandon
Chicago Transit Authority
567 W. Lake St.
Chicago, IL 60661-1498

Dear Ms. Tandon:

Thank you for requesting comments from our office concerning the possible effects of the referenced project on cultural resources. Our comments are required by Section 106 of the National Historic Preservation Act of 1966, as amended, and its implementing regulations, 36 CFR 800: "Protection of Historic Properties".

We are in receipt of the 2014 *Draft Effects Report*, and appreciated the opportunity to participate in the May 8, 2014 meeting at the CTA where your findings were presented. In general we concur with the findings concerning historic architectural resources presented in the draft report. However, the report indicates that noise walls will reduce the amount of noise that resources such as the proposed Green Street Historic District will experience. Noise studies that include current conditions will need to be undertaken to demonstrate that the introduction of the elevated rail structure on Halstead will not adversely affect historic resources located within the APE of that route.

It was noted in the report that archaeological resources may be uncovered during construction activities and that they would be investigated once found. At a minimum, the potential to encounter archaeological resources needs to be addressed and the results need to be presented to this office for review. If the potential for undisturbed archaeological resources exists within the areas of potential effect, a survey will be required.

As previously stated, it is our opinion that the proposed BRT route will affect the least amount of cultural resources located within its APE. We also believe the UPRR route that is often adjacent to existing railroad tracks will affect fewer resources than the elevated line proposed on Halsted Street.

We look forward to reviewing the final historic resources report once the preferred alternative has been selected and all cultural resource surveys have been completed.

If you have questions please contact David J. Halpin, Cultural Resources Manager, at 217-785-4998.

Sincerely,

Anne E. Haaker

Anne E. Haaker
Deputy State Historic
Preservation Officer

c: Lisa DiChiera, Landmarks Illinois
Terry Tatum, City of Chicago, Illinois
Marisol R. Simon, U.S. Department of Transportation
Mark Assam, U.S. Department of Transportation
Marlise Fratinardo, Chicago Transit Authority
Ward Miller, Preservation Chicago

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May 22, 2014

Sonali Tandon, Project Manager
Strategic Planning & Policy
Chicago Transit Authority
567 W. Lake St
Chicago, IL 60661

RE: Red Line Extension – Potential Effects Consultation Comments

Dear Ms. Tandon,

Thank you for the opportunity to review on May 8th the Red Line Extension team's findings and recommendations regarding historic properties in the APE. We are pleased to see some additions made to the list of National Register-eligible properties and the identification of orange-rated buildings in the Chicago Historic Resources Survey (CHRS) based on our February 18, 2013 letter.

From the May 8th meeting, we have the following comments:

- We strongly recommend that better renderings are produced to illustrate the potential impact of a UPRR West Station and four-story parking garage on 130th Street and the adjacent Altgeld Gardens Historic District.
- We agree with comments made during the meeting that the "No Effect" determination made for the Roseland Pumping Station, 351 W. 104th St., and Altgeld Gardens Housing Project Historic District, under the UPRR Rail scenario, should be reassessed as potentially having an "Adverse Effect" determination.
- We recommend producing renderings that will illustrate the "Adverse Effect" on National Register-eligible properties in the Halsted Rail scenario. This is particularly important if the proximity of rail tracks could potentially make these properties less viable in the future. These properties include:
    - The Former Classic Revival Substation, 10227 S. Halsted St.
    - The S.S. Peter & Paul Catholic Church at 12433-12439 S. Halsted St.
    - Cedar Park Cemetery Entryway and Gatehouse, 12540 S. Halsted St.
    - Fire Department Engine Company 115, 931 W. 120th St.
- While we understand that the design phase of a Halsted Rail scenario, if selected, will be some time later, we would like consideration to be made of incorporating the city-owned and vacant historic substation at 10227 S. Halsted St. into plans for a station that was indicated would be built in that vicinity.
- Lastly, we support the reassessments suggested by Matt Cole of Neighborhood Housing Services in his May 14, 2014 letter.

Again, thank you for the opportunity to review the findings by your team for this project.

Sincerely,

Lisa Di Chiera

Lisa DiChiera
Director of Advocacy

cc: Anne Haaker, IHPA
David Halpin, IHPA
Ward Miller, Preservation Chicago
Terry Tatum, Historic Preservation Division, HED, City of Chicago
Matt Cole, NHS

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NHS

May 14, 2014

Ms. Sonali Tandon
Project Manager
Strategic Planning & Policy
Chicago Transit Authority
567 West Lake Street
Chicago, IL 60661

RE: Red Line Extension – Potential Impacts to National Register Eligible Properties in APE

Dear Ms. Tandon,

Thank you again for inviting NHS to participate in the Section 106 review process for the Red Line Extension project. We believe that extending the Red Line will ultimately enhance the livability and well-being of the greater Roseland-area. At the same time, as an organization rooted in the use of asset-based community development strategies, we wish to ensure that the project minimizes any undue impacts on the existing residential, community, and historic buildings that make these neighborhoods great and that our experience has shown can be important community-building and engagement assets. Therefore, based on the information presented in the May 9th Effects Meeting, we recommend that the following additional actions be undertaken by the project team before any mitigation planning is undertaken:

- Develop appropriate and assessable renderings for all properties in the APE where there was a finding of No Adverse Effect or Adverse Effect. This currently includes the Former Venetian Hall, the Green Street Historic District, the Former Classical Revival Substation, Galloy and Van Etten Stone Contractors, S.S. Peter & Paul Catholic Church, Cedar Park Cemetary Entryway and Gatehouse, and Fire Department Engine Company 115. We also believe that such renderings should be created, as necessary, based on our recommendations below (e.g, re: Altgeld Garden Historic District).

- Re-Survey 103rd Street to 104th Place between the UPRR and Princeton Avenue: This area includes the previously identified, National Register-eligible Roseland Pumping Station and Roseland Fire Station properties. However, the blocks also include a largely intact and well-maintained grouping of Chicago bungalows and frame cottages. We would encourage the project team re-survey these blocks to determine if these residential properties could contribute to a future National Register district, as well as any potential impact that a UPRR-located elevated train line would have on such a district.

- Reassess Determination that Cast Stone-faced Residences in APE are not National Register Eligible: Several of these buildings, which look similar to Chicago Greystones and are relatively rare, were observed adjacent to the UPRR right-of-way. This includes the 2-flat on Kensington Avenue immediately east of the Former Venetian Hall.

- Reassess Finding of No Adverse Effect on Potential Green Street Historic District: Re-evaluate visual, noise, and economic effects of a Halsted-located elevated train line on homes along Green

Street. While such train lines do run through other residential areas of Chicago (e.g., Pink Line), this corridor would be new and could have a significant impact on the quality of life of the area without proper mitigation.

- Reassess Area Around 111th Street and Emerald Avenue for Potential Historic District: Re-survey area around 11310 South Emerald (Emerald, Union, and Wallace Avenues) for eligibility as a historic district. If determined eligible, assess effect of a Halsted-located elevated train line on the district.

- Reassess Finding of No Effect of a UPRR West Station on Altgeld Gardens Historic District: The proposed station, station house, and four-story parking garage would be located immediately to the north of Altgeld Gardens. The height of the parking garage would be taller than any other properties in the area and would likely loom above the landscaped tree line of 130th Street. The existing rendering of the proposed station developed by project team is inadequate to assess the effect of the station due to its oblique view from the west.

Thank you again for inviting NHS to participate in the Section 106 review for the Red Line Extension project. Please let us know if we can be of further assistance before the next scheduled consultation.

Best,

Matt Cole
Project Coordinator
Neighborhood Housing Services of Chicago, Inc.

CC: Ed Jacob, NHS
Deborah Moore, NHS
Robert Tucker, NHS
Phillip Snorden, NHS
Anne Hacker, IHPA
Lisa DiChiera, Landmarks Illinois
Ward Miller, Preservation Chicago
Terry Tatum, Historic Preservation Division, HED, City of Chicago

From: Tatum, Terry [mailto:Terry.Tatum@cityofchicago.org]
Sent: Tuesday, May 20, 2014 4:16 PM
To: Tandon, Sonali
Cc: Halpin, David
Subject: Red Line Extension Historic Properties Consultation

Dear Ms. Tandon,

Thank you for hosting the consulting parties meeting held at CTA headquarters on May 8, 2014 for the Red Line Extension Historic Properties Consultation. We appreciate the opportunity to comment on the draft effects to historic properties that were discussed at that meeting.

Based on information provided, our comments are as follows:

1. Properties determined to be historic and/or color coded orange in the Chicago Historic Resources Survey and that would be potentially impacted by close proximity of elevated tracks under any of the alternative routes being considered should have photo renderings executed to show the effect of such close proximity of tracks. This would mainly include properties along the Halsted St. alternative, but would also include the UPRR east alternative route as it would affect the Roseland Pumping Station.

Our office looks forward to continuing to work with you on this exciting undertaking.

Sincerely,

Terry Tatum
Coordinating Planner I
Historic Preservation Division
Department of Planning and Development
City Hall, 121 N. LaSalle St., Room 1101
Chicago, IL 60602
312-744-9147 (phone)
312-744-9140 (fax)
Terry.Tatum@cityofchicago.org

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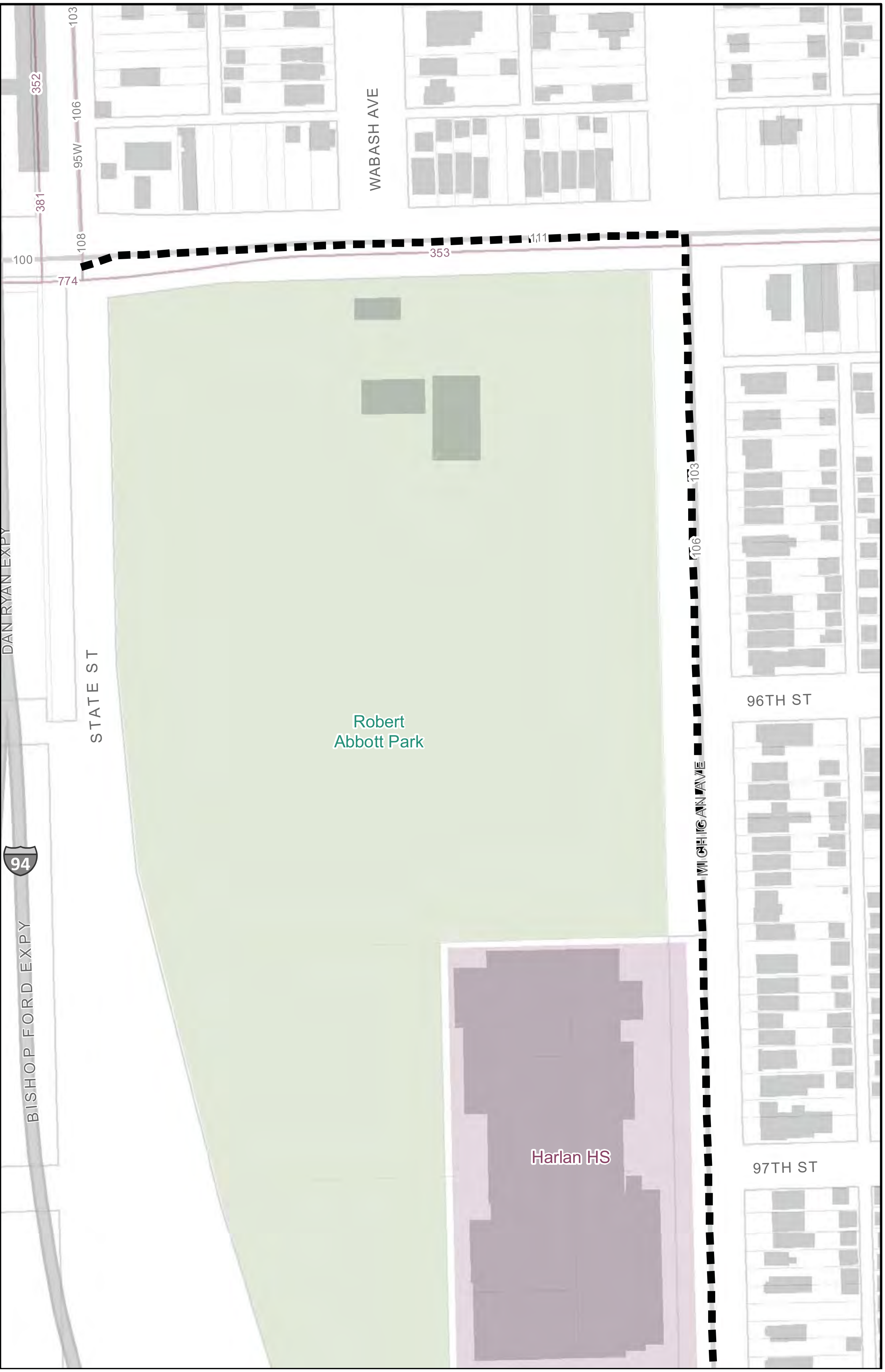
Appendix D
Displacement Maps

***Note:** The displacement maps for the East and West Option in this appendix have been superseced by the maps included in Appendix I of the Displacements and Relocation of Existing Uses Technical Memorandum.*


103
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Robert Abbott Park
MICHIGAN AVE
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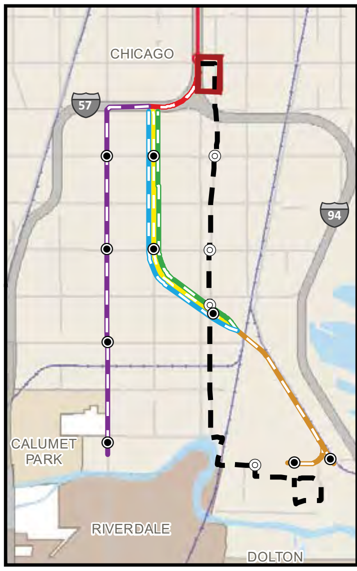
97TH ST

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

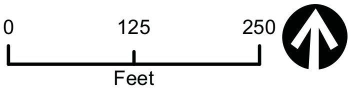
Legend

BRT Alternative

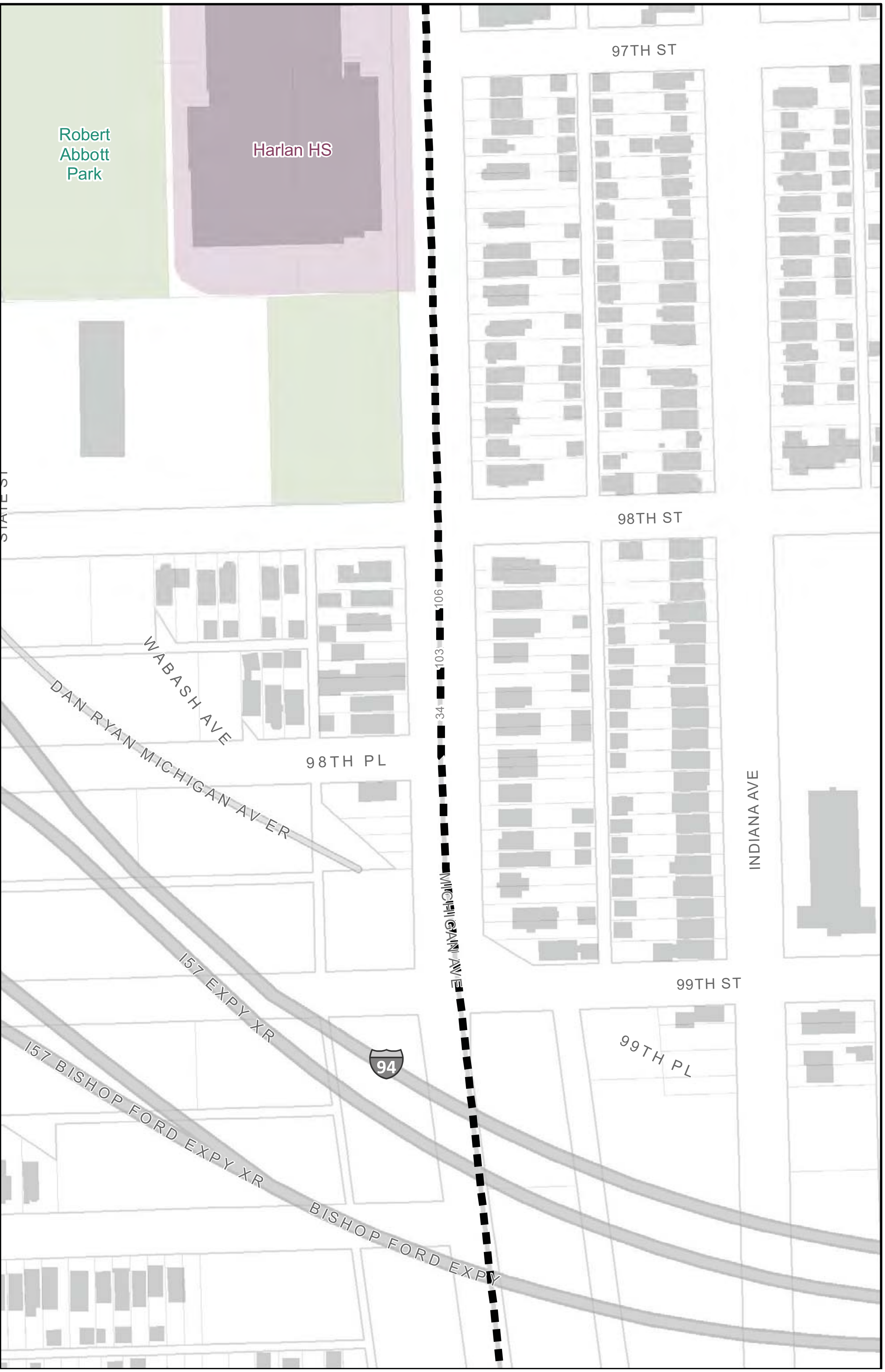
Sheet 1 of 20

- ▬ ▬ BRT Alternative
- ▨ Proposed Permanent Envelope
- 🟫 Parcel Affected by Proposed Permanent Envelope
- 🟥 Building Displacement
- ⬜ Building Footprint
- ☐ Parcels
- 🟩 Parks
- 🟪 Schools
- Freight Rail
- 49 CTA Bus
- 290 Pace Bus

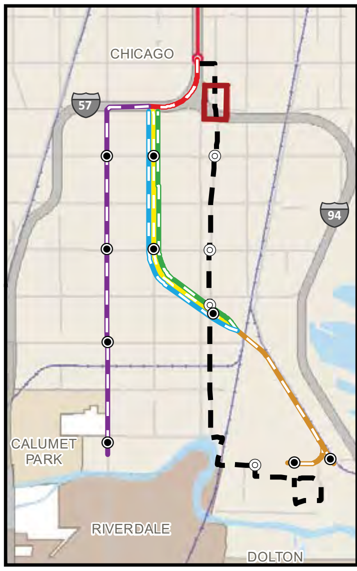
Scale


0
125
250
Feet

map id: 03_08.1


97TH ST
Robert Abbott Park
Harlan HS
STATE ST
98TH ST
WABASH AVE
DAN RYAN MICHIGAN AV ER
98TH PL
106
103
34
MICHIGAN AV E
INDIANA AVE
99TH ST
99TH PL
I57 EXPY XR
94
I57 BISHOP FORD EXPY XR
BISHOP FORD EXPY

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

BRT Alternative

Sheet 2 of 20

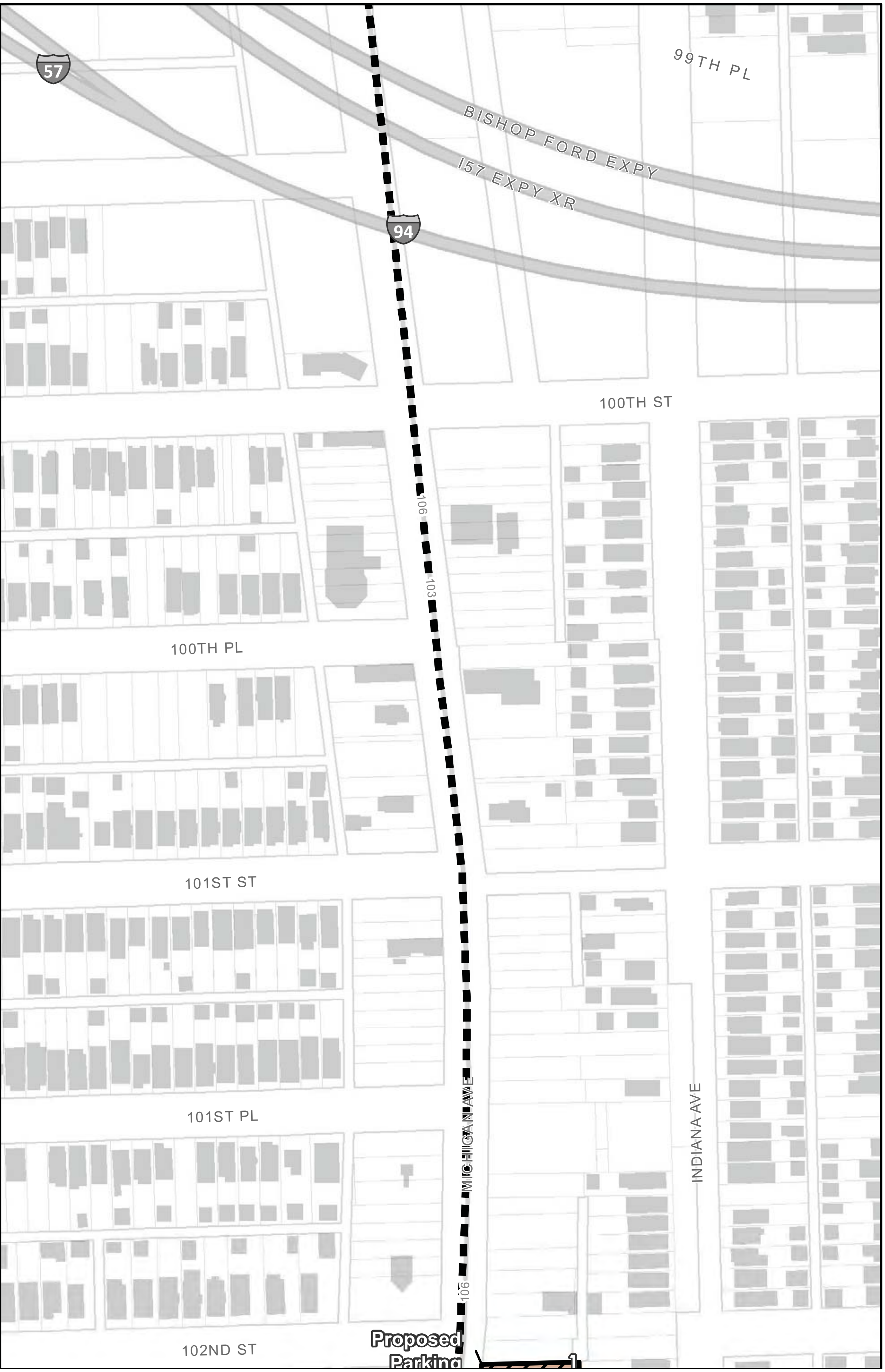
- ▬ ▬ BRT Alternative
- ▨ Proposed Permanent Envelope
- 🟫 Parcel Affected by Proposed Permanent Envelope
- 🟥 Building Displacement
- ⬜ Building Footprint
- ☐ Parcels
- 🟩 Parks
- 🟪 Schools
- -+-+- Freight Rail
- —49— CTA Bus
- —290— Pace Bus

Scale

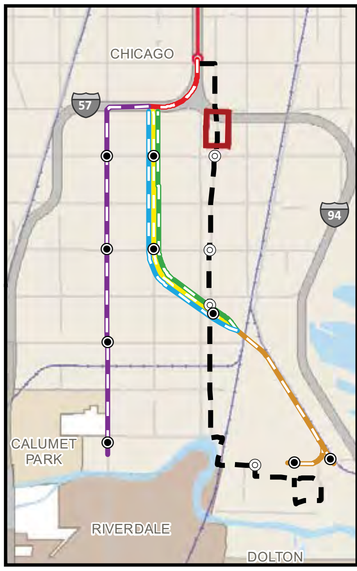
0 125 250

Feet

map id: 03_08.2


57
99TH PL
BISHOP FORD EXPY
I57 EXPY XR
94
100TH ST
106
103
100TH PL
101ST ST
101ST PL
MICHIGAN AVE
INDIANA AVE
106
102ND ST
Proposed Parking
1

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

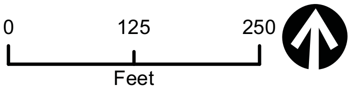
Legend

BRT Alternative

Sheet 3 of 20

- ▬ ▬ BRT Alternative
- ▨ Proposed Permanent Envelope
- 🟫 Parcel Affected by Proposed Permanent Envelope
- 🟥 Building Displacement
- ⬜ Building Footprint
- □ Parcels
- 🟩 Parks
- 🟪 Schools
- Freight Rail
- 49 CTA Bus
- 290 Pace Bus

Scale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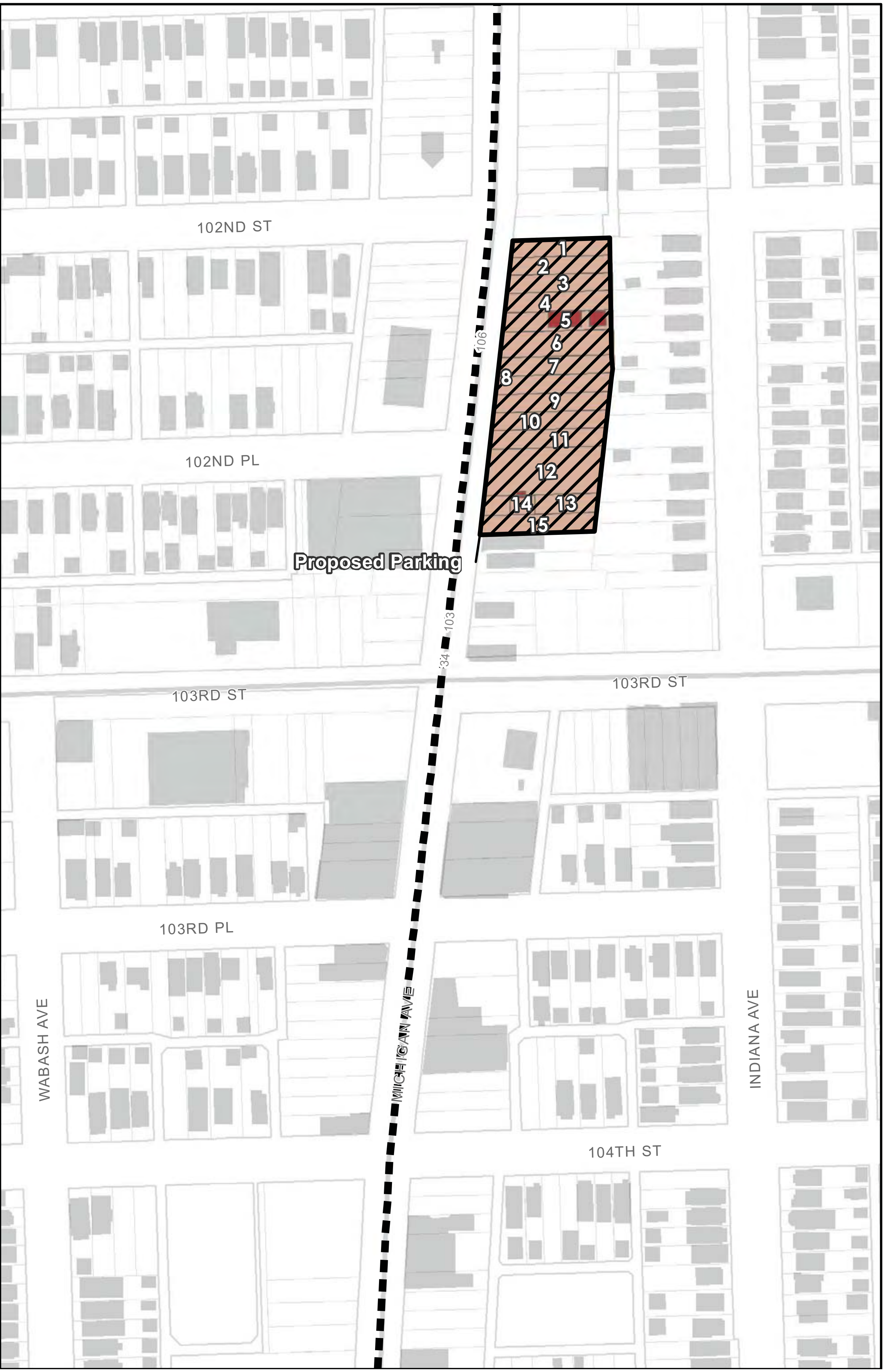
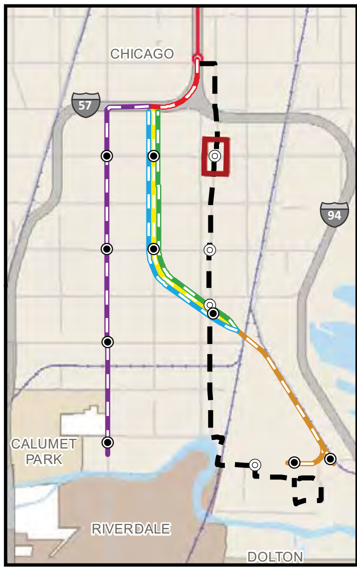
125
250
Feet

map id: 03_08.3


102ND ST
102ND PL
103RD ST
103RD ST
103RD PL
104TH ST
WABASH AVE
MICHIGAN AVE
INDIANA AVE
106
103
34
Proposed Parking
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

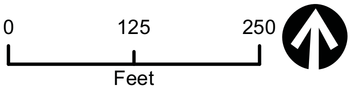
Legend

BRT Alternative

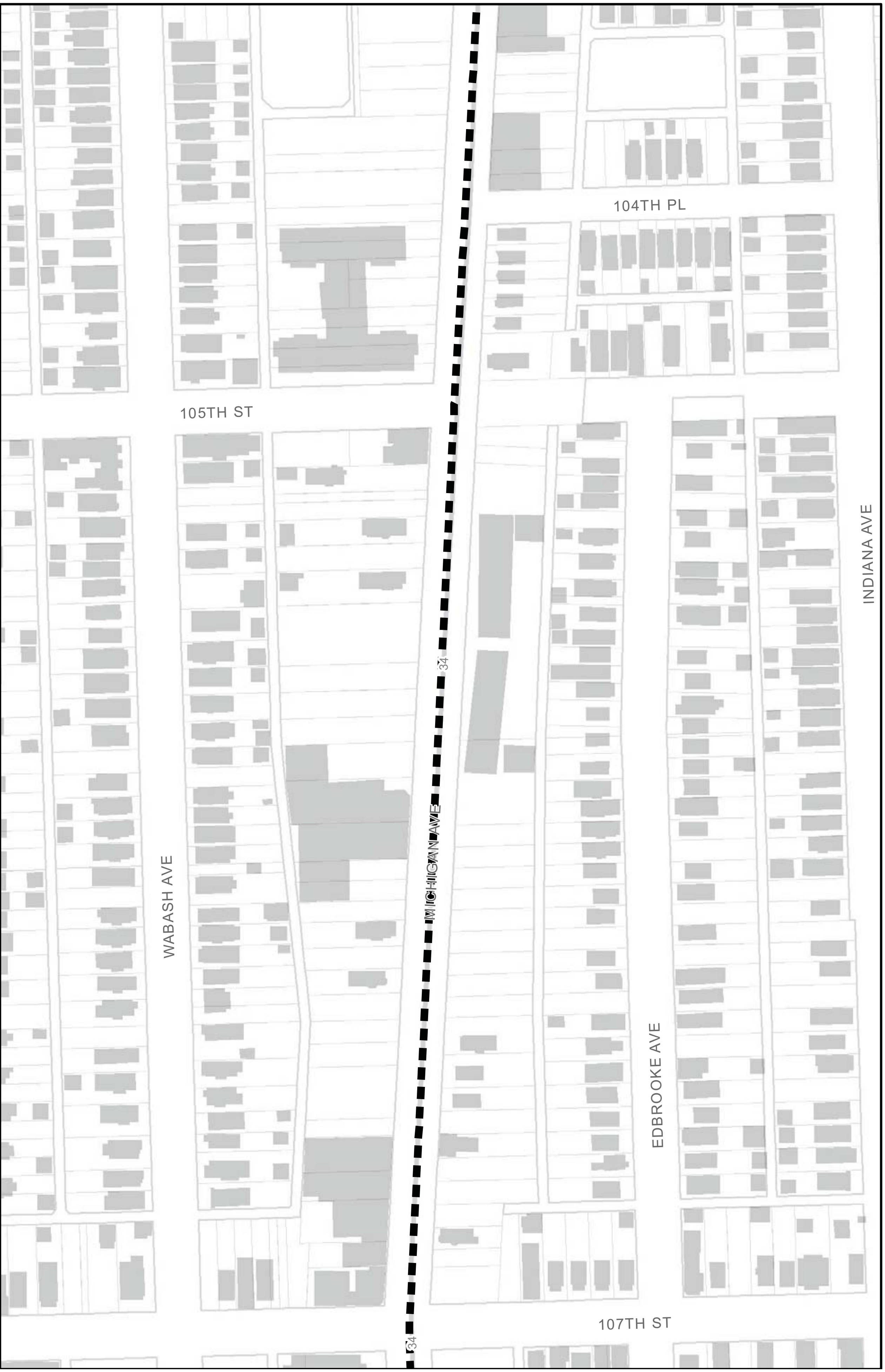
Sheet 4 of 20

- ▬ ▬ BRT Alternative
- ▨ Proposed Permanent Envelope
- 🟫 Parcel Affected by Proposed Permanent Envelope
- 🟥 Building Displacement
- ⬜ Building Footprint
- ☐ Parcels
- 🟩 Parks
- 🟪 Schools
- Freight Rail
- 49 CTA Bus
- 290 Pace Bus

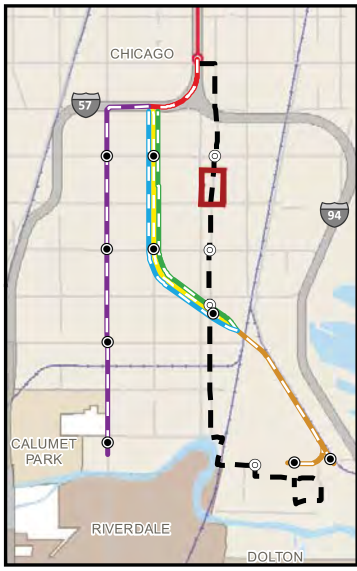
Scale


0
125
250
Feet

map id: 03_08.4


104TH PL
105TH ST
INDIANA AVE
34
MICHIGAN AVE
WABASH AVE
EDBROOKE AVE
107TH ST
34

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

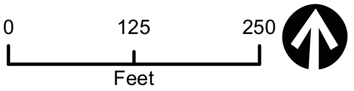
Legend

BRT Alternative

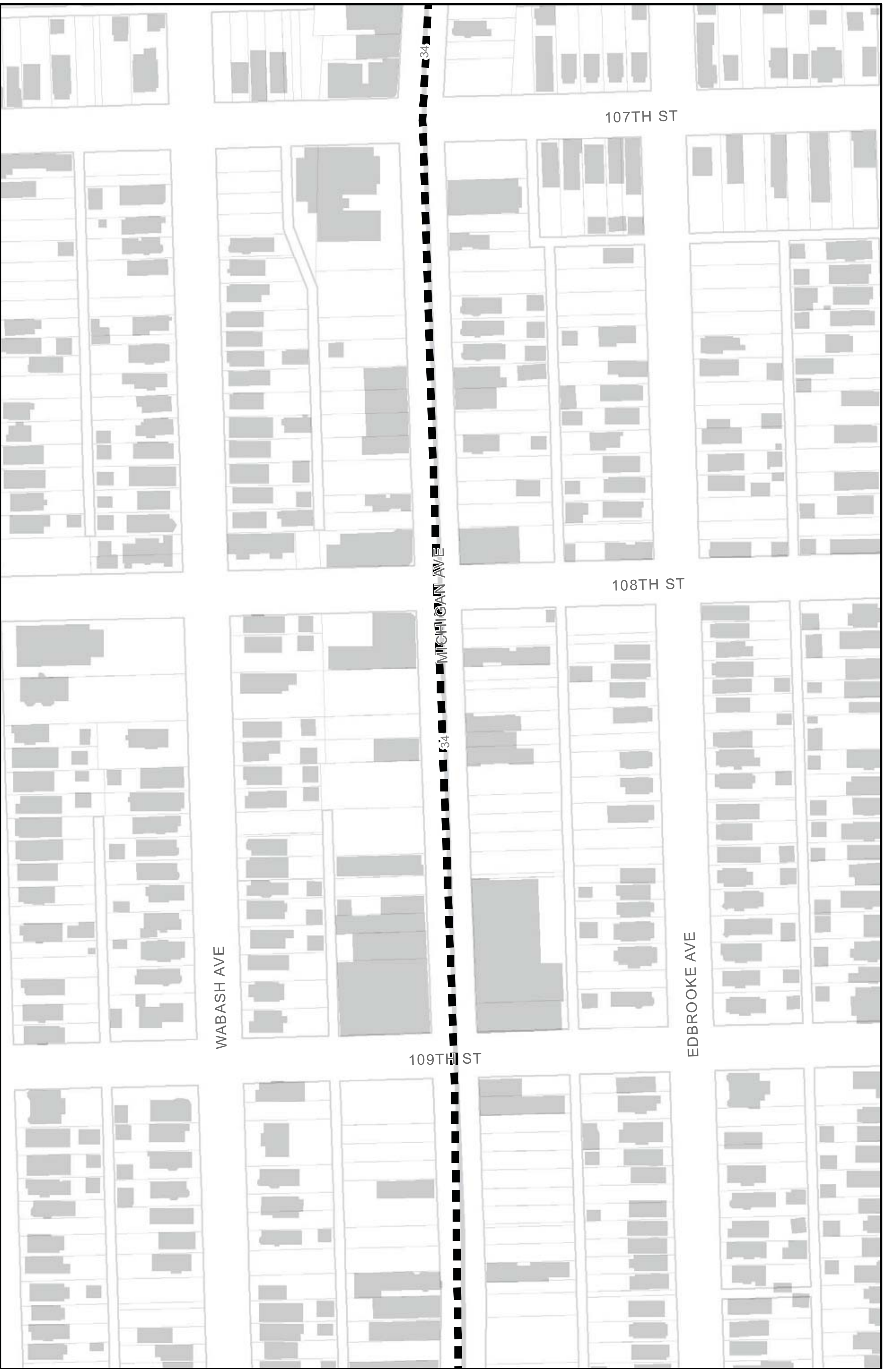
Sheet 5 of 20

- ▬ ▬ BRT Alternative
- ▨ Proposed Permanent Envelope
- 🟫 Parcel Affected by Proposed Permanent Envelope
- 🟥 Building Displacement
- ⬜ Building Footprint
- □ Parcels
- 🟩 Parks
- 🟪 Schools
- -+-+- Freight Rail
- -49- CTA Bus
- -290- Pace Bus

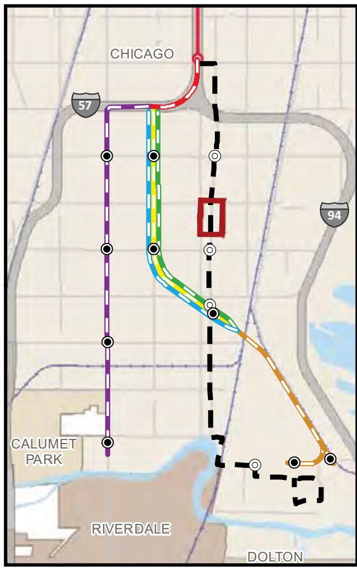
Scale


0
125
250
Feet

map id: 03_08.5


34
107TH ST
108TH ST
MICHIGAN AVE
34
WABASH AVE
109TH ST
EDBROOKE AVE

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

BRT Alternative

Sheet 6 of 20

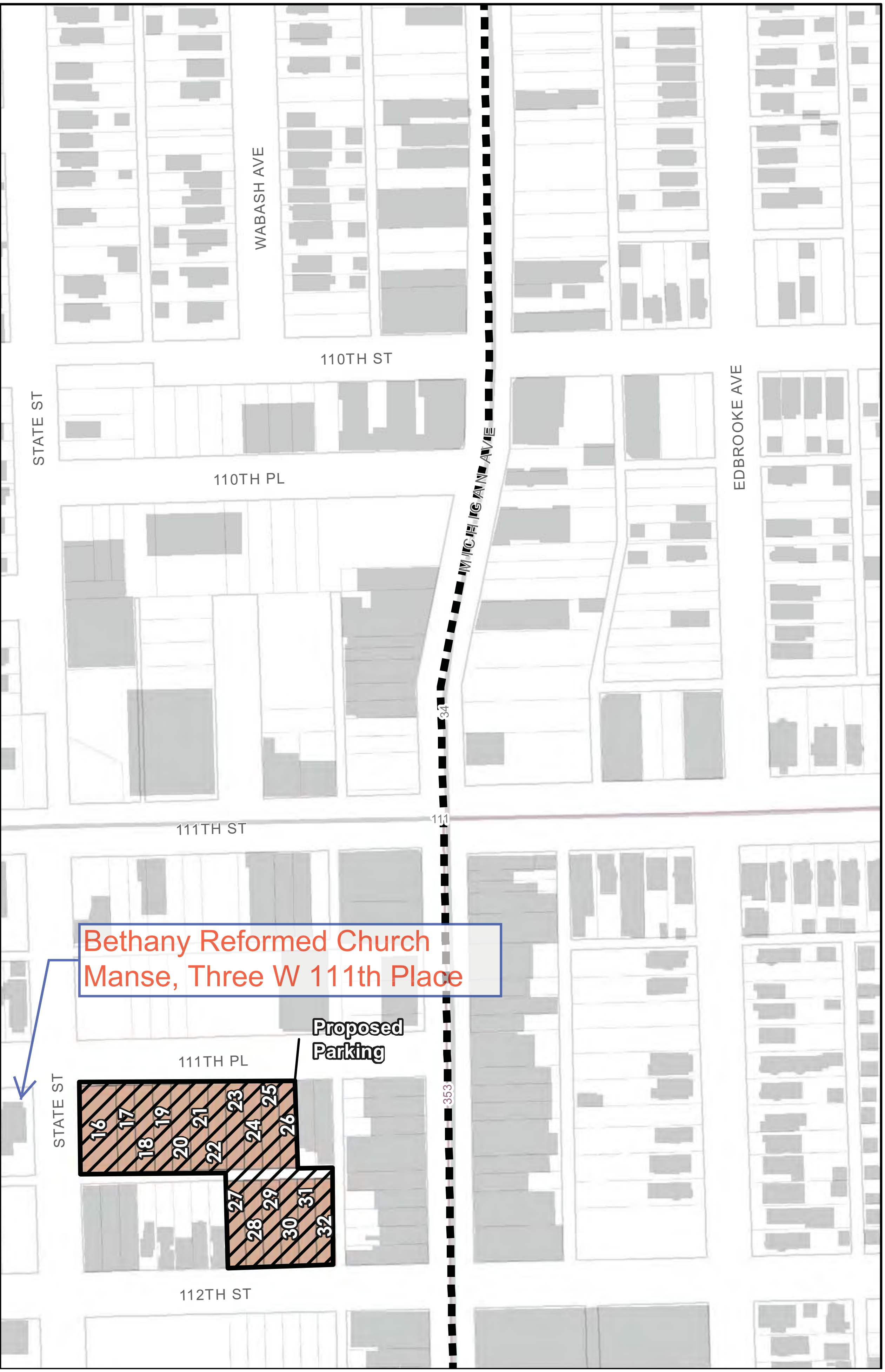
- ▬ ▬ BRT Alternative
- ▨ Proposed Permanent Envelope
- 🟫 Parcel Affected by Proposed Permanent Envelope
- 🟥 Building Displacement
- ⬜ Building Footprint
- ☐ Parcels
- 🟩 Parks
- 🟪 Schools
- ┼┼ Freight Rail
- —49— CTA Bus
- —290— Pace Bus

Scale

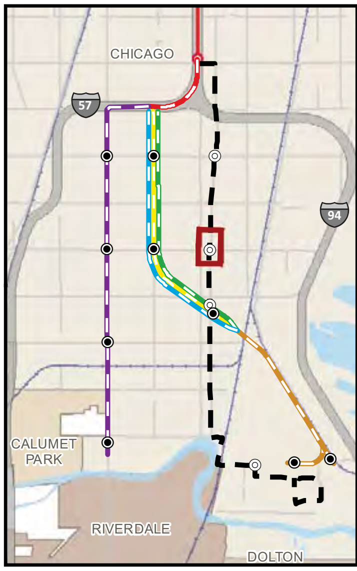
0 125 250

Feet

map id: 03_08.6


WABASH AVE
110TH ST
STATE ST
110TH PL
MICHIGAN AVE
EDBROOKE AVE
34
111TH ST
111
Bethany Reformed Church Manse, Three W 111th Place
Proposed Parking
111TH PL
STATE ST
353
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
112TH ST

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

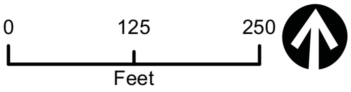
Legend

BRT Alternative

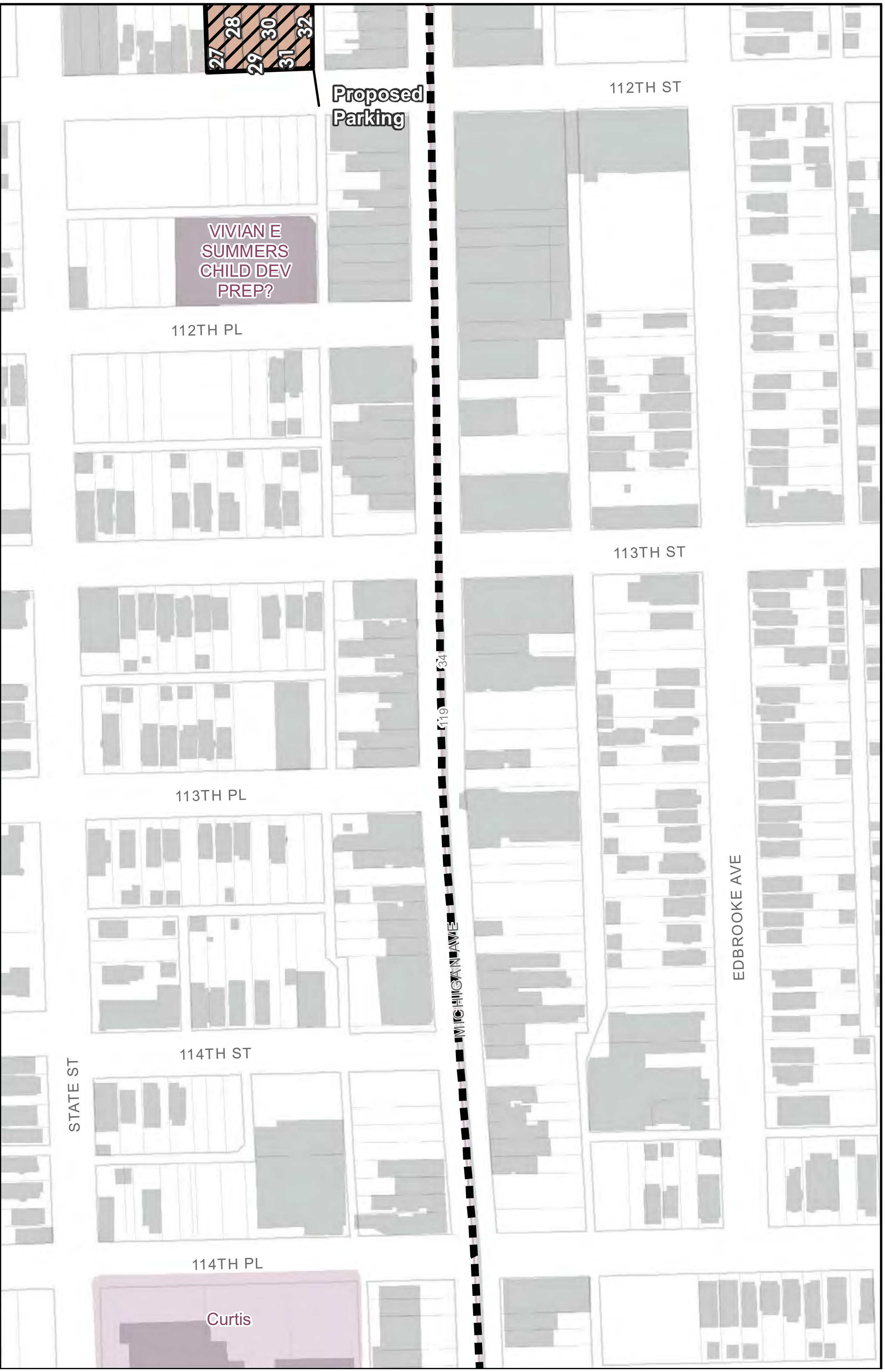
Sheet 7 of 20

▬ ▬ BRT Alternative
▨ Proposed Permanent Envelope
🟫 Parcel Affected by Proposed Permanent Envelope
🟥 Building Displacement
⬜ Building Footprint
□ Parcels
🟩 Parks
🟪 Schools
-+- Freight Rail
-49- CTA Bus
-290- Pace Bus

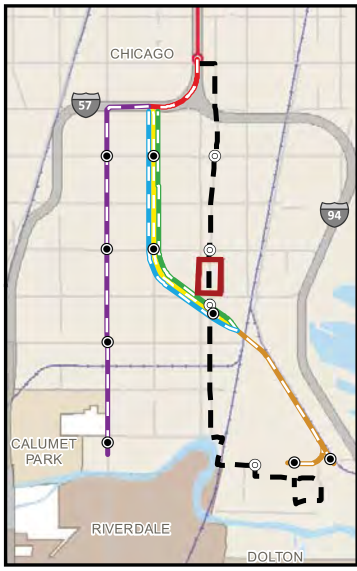
Scale


0
125
250
Feet

map id: 03_08.7


27
28
29
30
31
32
Proposed Parking
112TH ST
VIVIAN E SUMMERS CHILD DEV PREP?
112TH PL
113TH ST
34
119
113TH PL
MICHIGAN AVE
EDBROOKE AVE
114TH ST
STATE ST
114TH PL
Curtis

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

BRT Alternative

Sheet 8 of 20

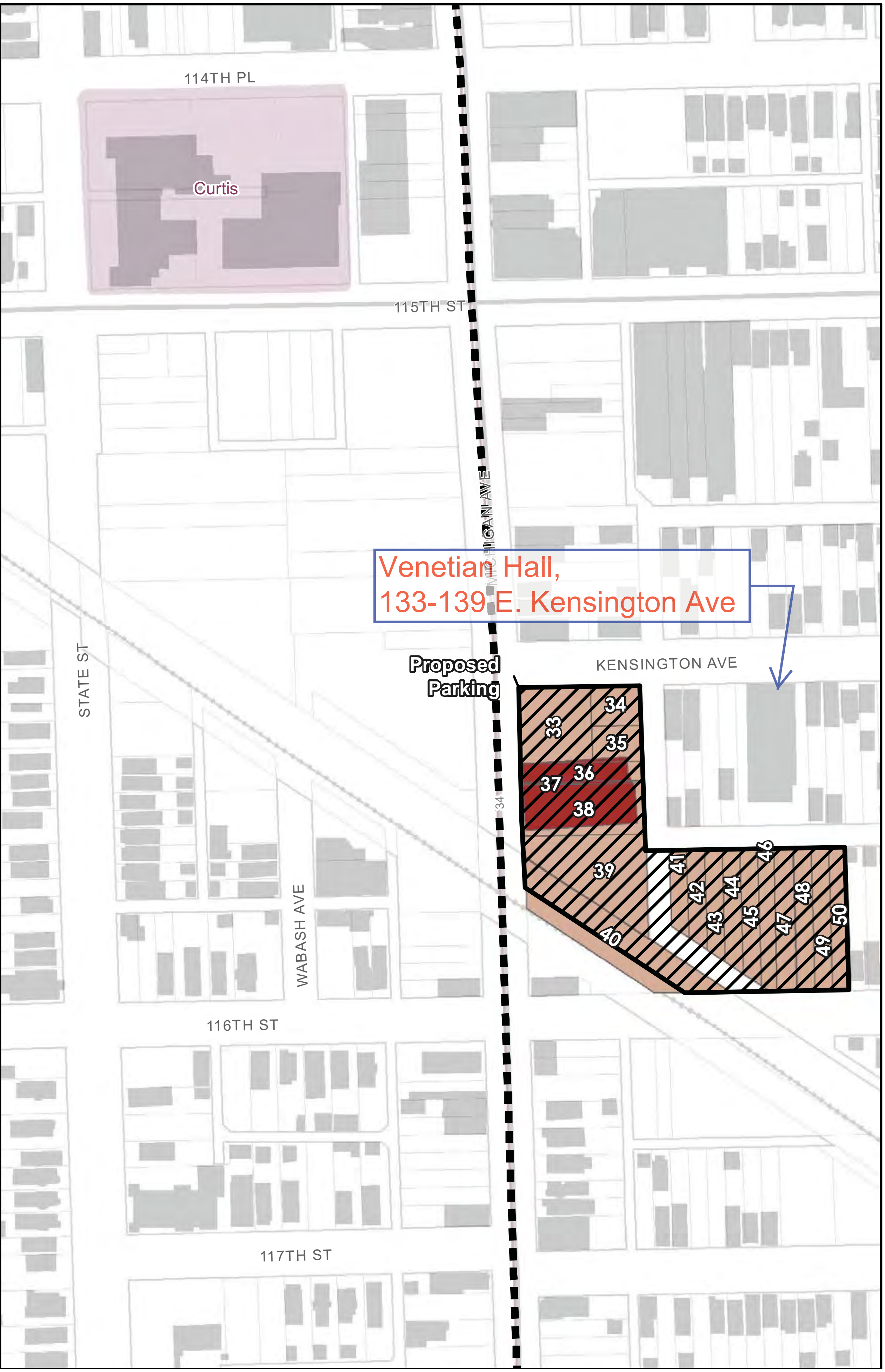
- ▬ ▬ BRT Alternative
- ▨ Proposed Permanent Envelope
- 🟫 Parcel Affected by Proposed Permanent Envelope
- 🟥 Building Displacement
- ⬜ Building Footprint
- ☐ Parcels
- 🟩 Parks
- 🟪 Schools
- -+-+- Freight Rail
- –49– CTA Bus
- –290– Pace Bus

Scale

0 125 250

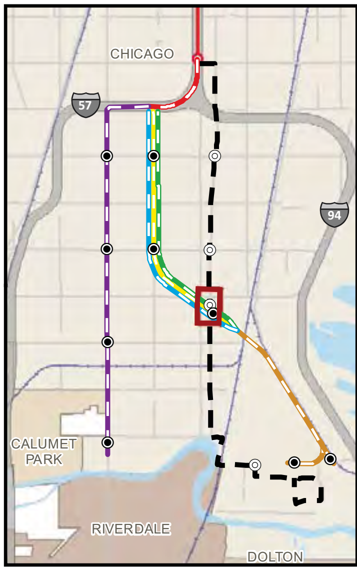
Feet

map id: 03_08.8



114TH PL
Curtis
115TH ST
MICHIGAN AVE
Venetian Hall,
133-139 E. Kensington Ave
Proposed
Parking
KENSINGTON AVE
STATE ST
WABASH AVE
34
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
116TH ST
117TH ST

Inset



CHICAGO
57
94
CALUMET
PARK
RIVERDALE
DOLTON

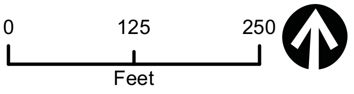
Legend

BRT Alternative

Sheet 9 of 20

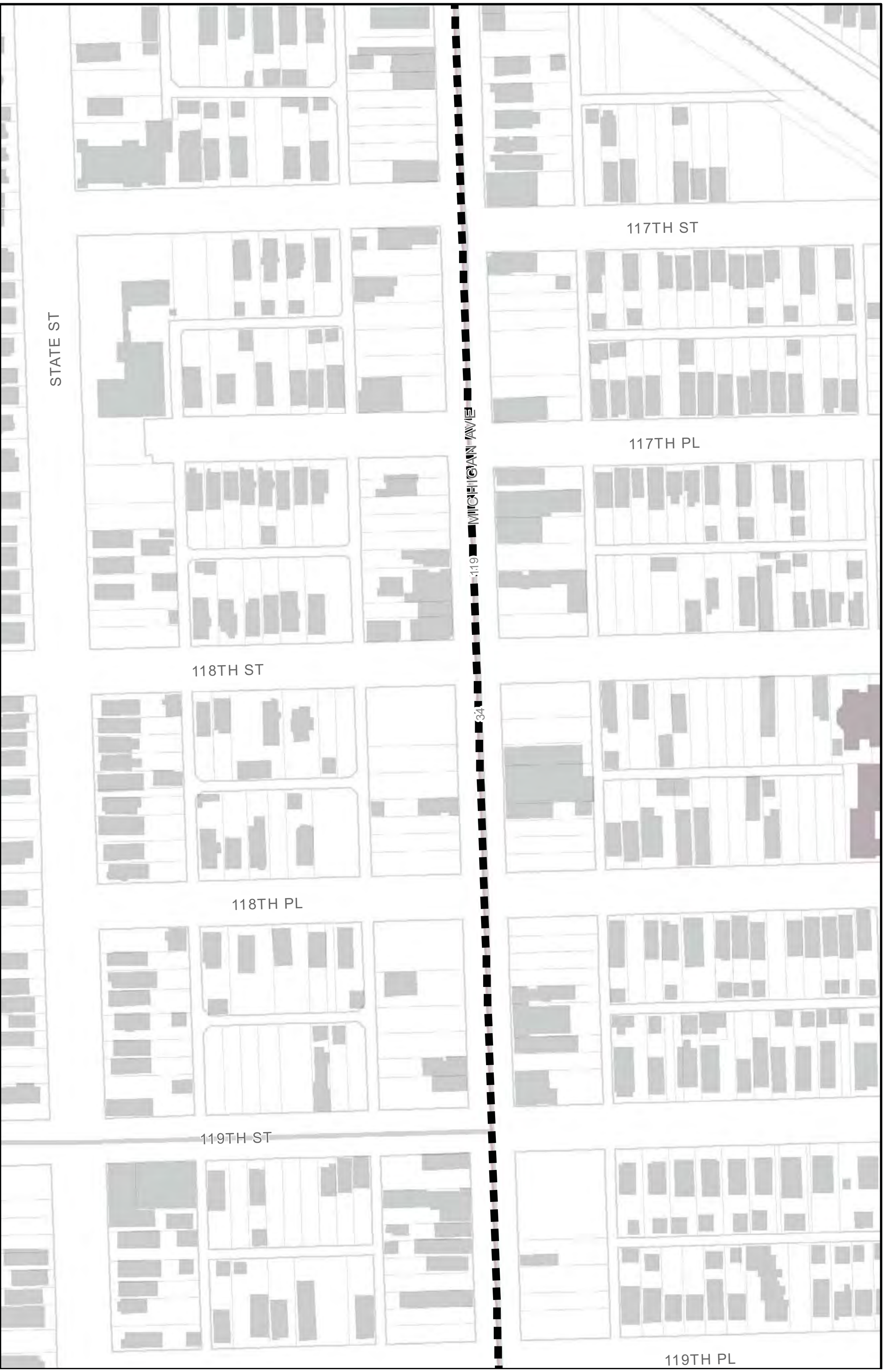
- ▬ ▬ BRT Alternative
- ▨ Proposed Permanent Envelope
- 🟫 Parcel Affected by Proposed Permanent Envelope
- 🟥 Building Displacement
- ⬜ Building Footprint
- ☐ Parcels
- 🟩 Parks
- 🟪 Schools
- ‒+‒ Freight Rail
- ‒49‒ CTA Bus
- ‒290‒ Pace Bus

Scale

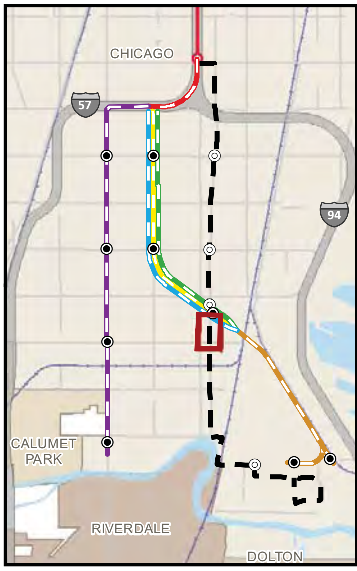


0
125
250
Feet

map id: 03_08.9


117TH ST
117TH PL
STATE ST
MICHIGAN AVE
119
34
118TH ST
118TH PL
119TH ST
119TH PL

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

BRT Alternative

Sheet 10 of 20

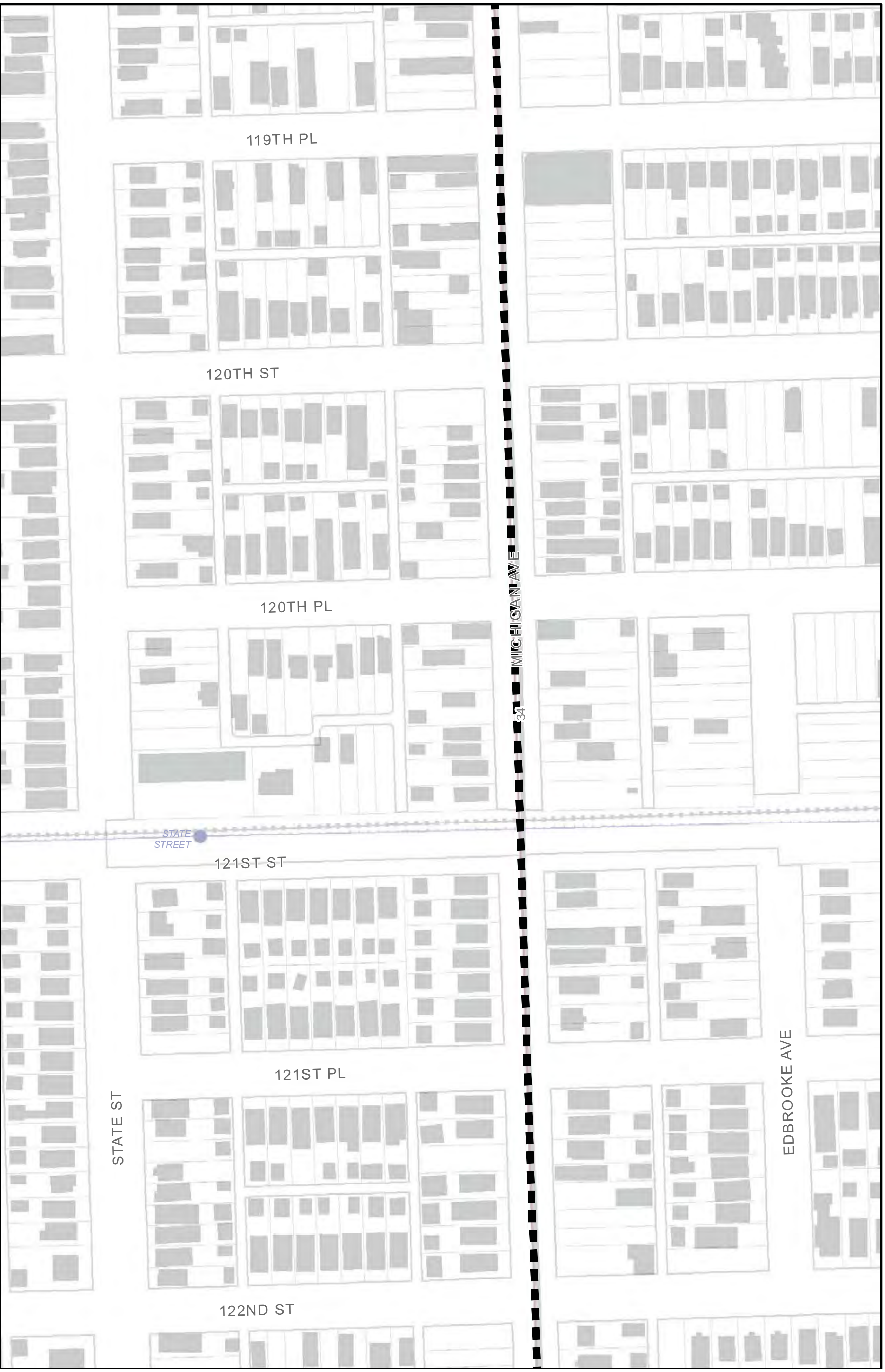
▬ ▬	BRT Alternative
▨	Proposed Permanent Envelope
🟫	Parcel Affected by Proposed Permanent Envelope
🟥	Building Displacement
⬜	Building Footprint
☐	Parcels
🟩	Parks
🟪	Schools
-+-+-	Freight Rail
-49-	CTA Bus
-290-	Pace Bus

Scale

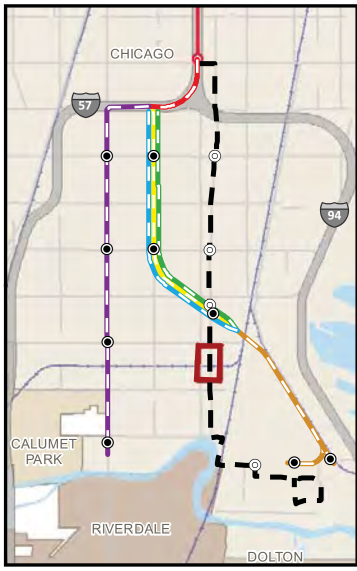
0 125 250

Feet

map id: 03_08.10


119TH PL
120TH ST
120TH PL
MICHIGAN AVE
34
STATE STREET
121ST ST
121ST PL
STATE ST
EDBROOKE AVE
122ND ST

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

BRT Alternative

Sheet 11 of 20

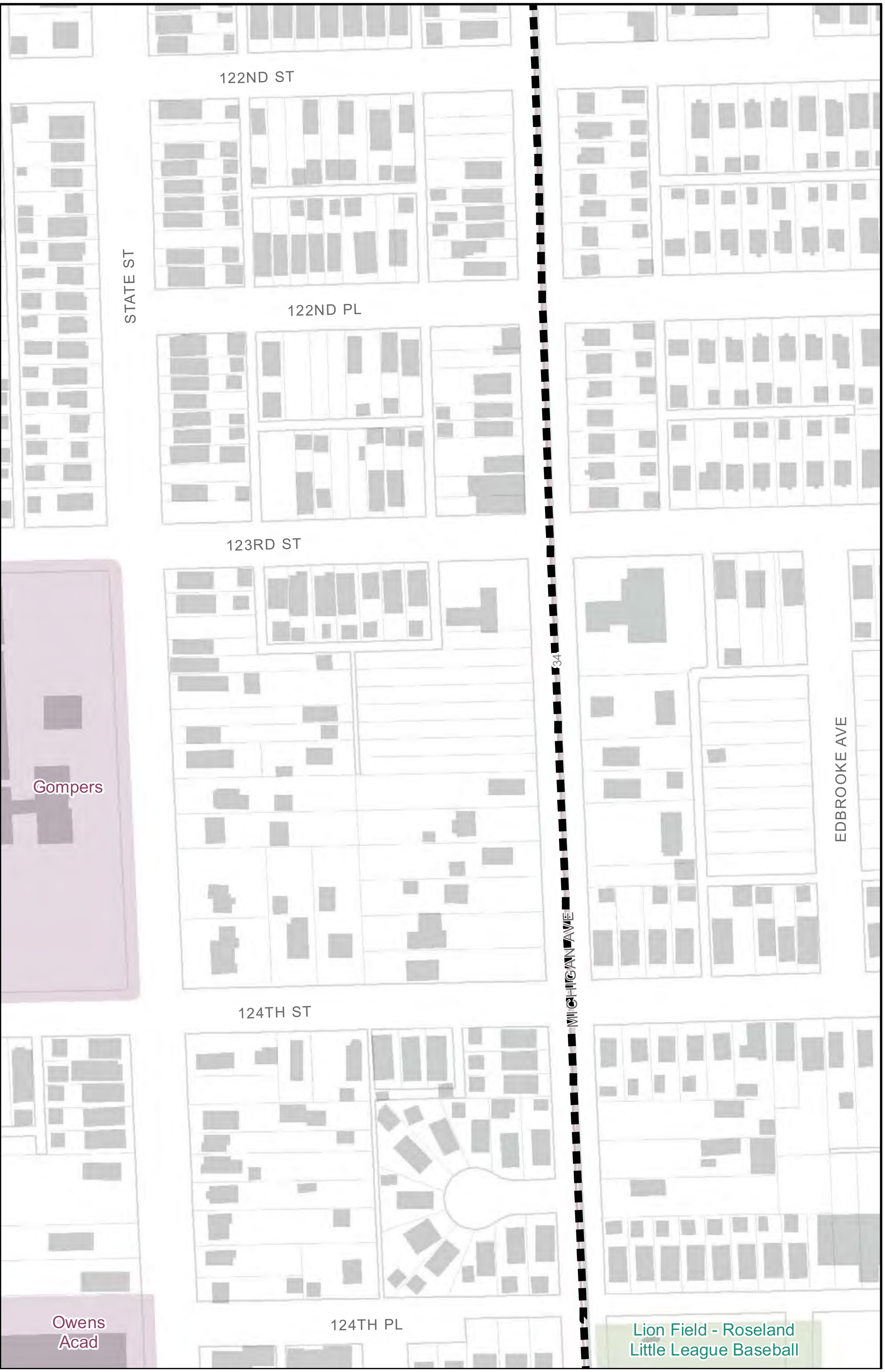
- ▬ ▬ BRT Alternative
- ▨ Proposed Permanent Envelope
- 🟫 Parcel Affected by Proposed Permanent Envelope
- 🟥 Building Displacement
- ⬜ Building Footprint
- ☐ Parcels
- 🟩 Parks
- 🟪 Schools
- ┼┼ Freight Rail
- —49— CTA Bus
- —290— Pace Bus

Scale

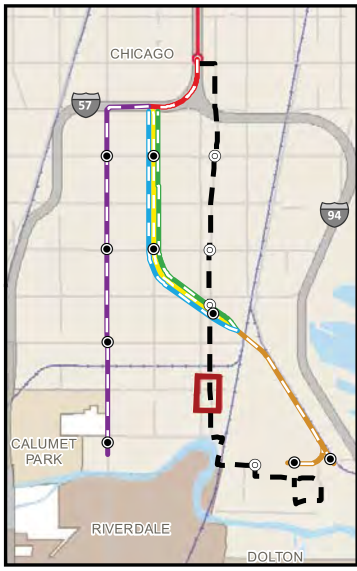
0 125 250

Feet

map id: 03_08.11


122ND ST
STATE ST
122ND PL
123RD ST
Gompers
34
MICHIGAN AVE
EDBROOKE AVE
124TH ST
124TH PL
Owens Acad
Lion Field - Roseland Little League Baseball

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

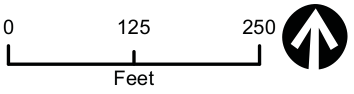
Legend

BRT Alternative

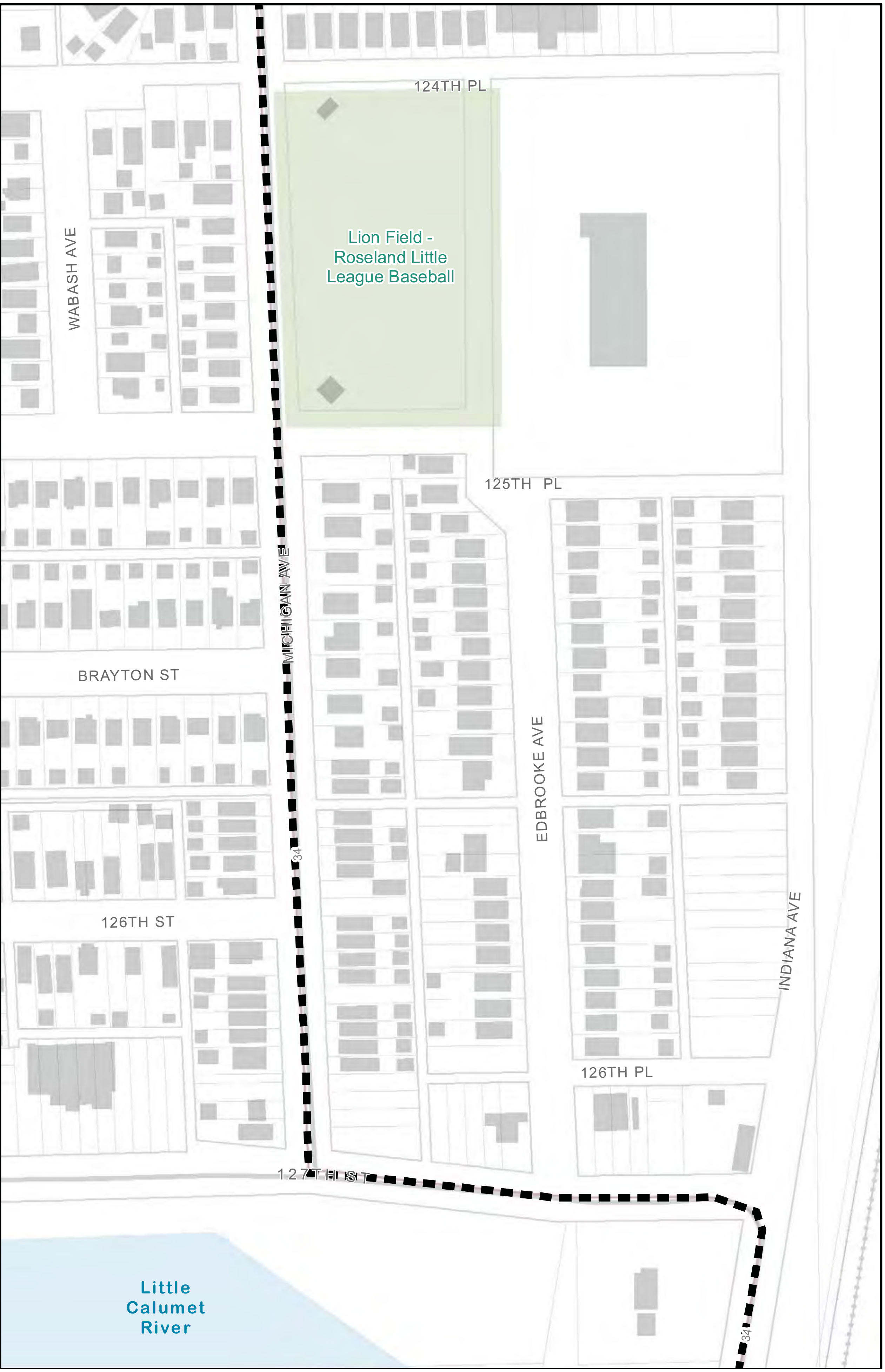
Sheet 12 of 20

- ▬ ▬ BRT Alternative
- ▨ Proposed Permanent Envelope
- 🟫 Parcel Affected by Proposed Permanent Envelope
- 🟥 Building Displacement
- ⬜ Building Footprint
- ☐ Parcels
- 🟩 Parks
- 🟪 Schools
- -+-+- Freight Rail
- –49– CTA Bus
- –290– Pace Bus

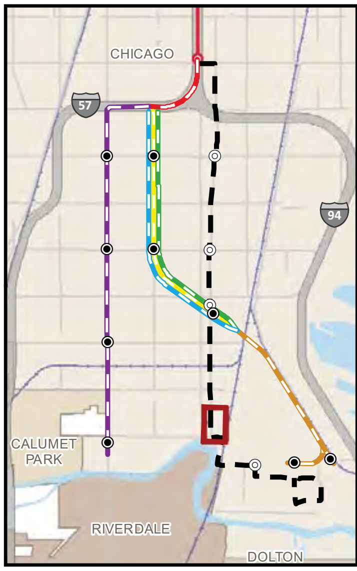
Scale


0
125
250
Feet

map id: 03_08.12


124TH PL
Lion Field - Roseland Little League Baseball
WABASH AVE
125TH PL
MICHIGAN AVE
BRAYTON ST
EDBROOKE AVE
34
126TH ST
INDIANA AVE
126TH PL
127TH ST
34
Little Calumet River

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

BRT Alternative

Sheet 13 of 20

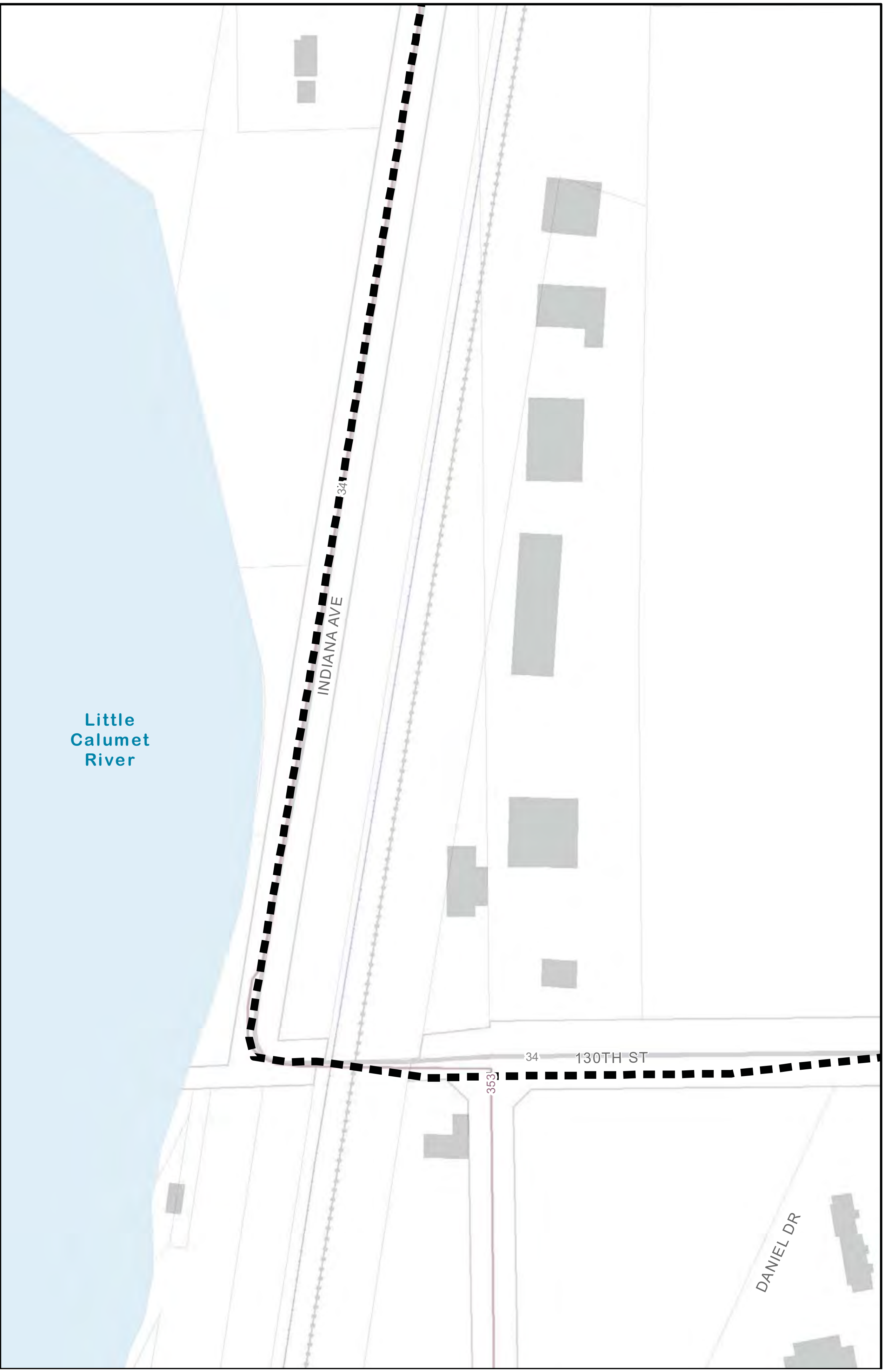
- ▬ ▬ BRT Alternative
- ▨ Proposed Permanent Envelope
- 🟫 Parcel Affected by Proposed Permanent Envelope
- 🟥 Building Displacement
- ⬜ Building Footprint
- ☐ Parcels
- 🟩 Parks
- 🟪 Schools
- Freight Rail
- 49 CTA Bus
- 290 Pace Bus

Scale

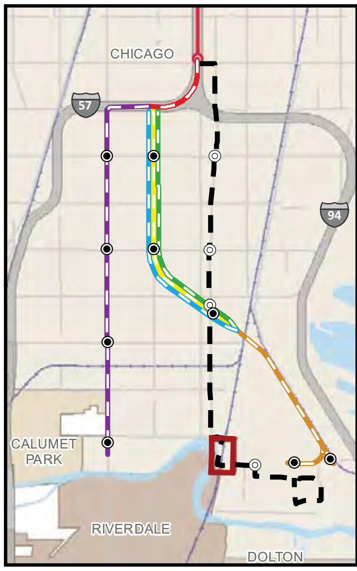
0 125 250

Feet

map id: 03_08.13


Little Calumet River
INDIANA AVE
34
130TH ST
34
353
DANIEL DR

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

BRT Alternative

Sheet 14 of 20

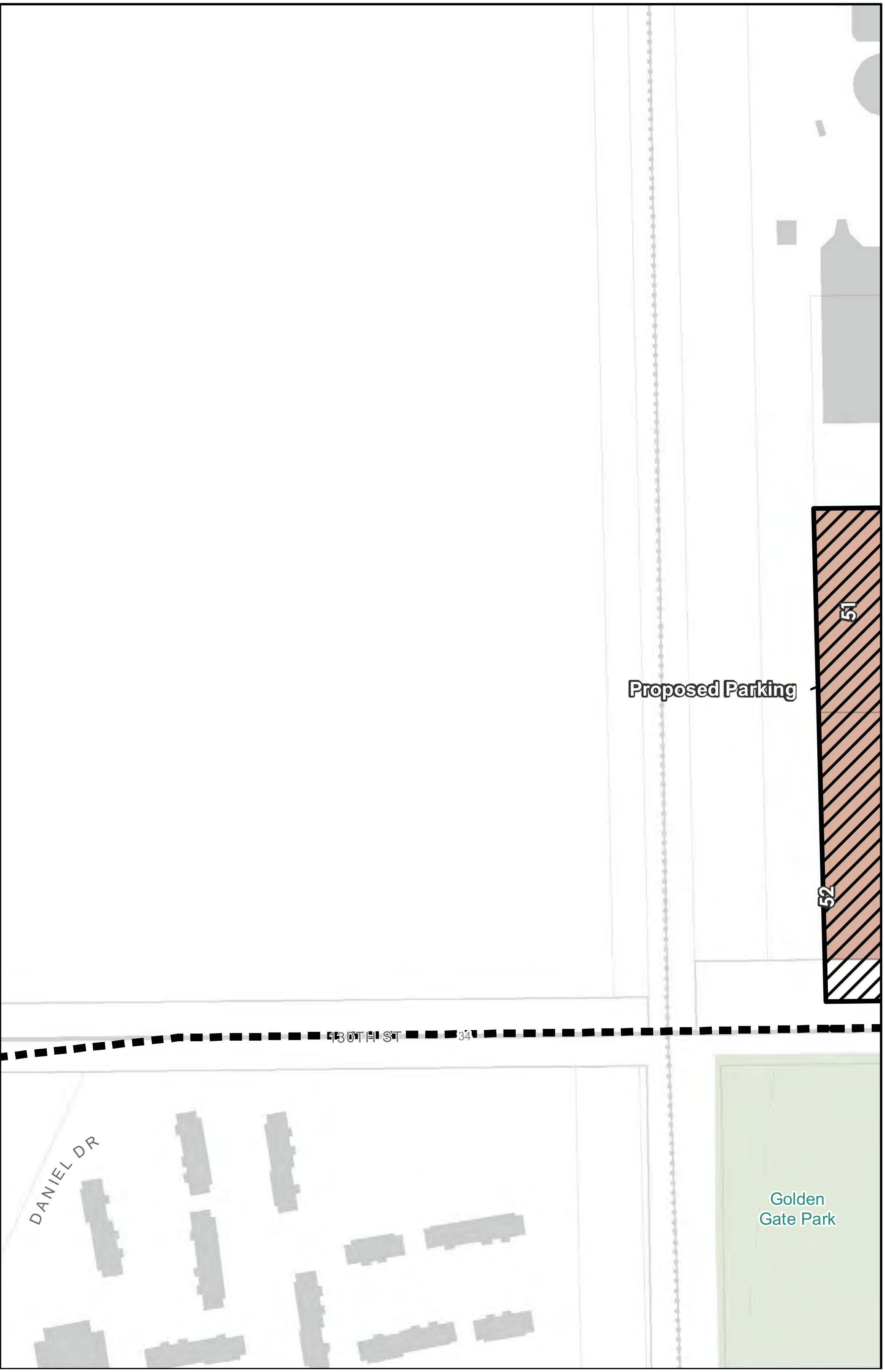
- ▪ ▪ BRT Alternative
- ▨ Proposed Permanent Envelope
- 🟫 Parcel Affected by Proposed Permanent Envelope
- 🟥 Building Displacement
- ⬜ Building Footprint
- ☐ Parcels
- 🟩 Parks
- 🟪 Schools
- -+-+- Freight Rail
- -49- CTA Bus
- -290- Pace Bus

Scale

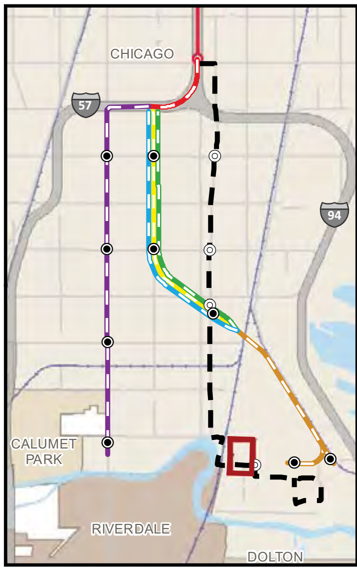
0 125 250

Feet

map id: 03_08.14


Proposed Parking
51
52
130TH ST
34
DANIEL DR
Golden Gate Park

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

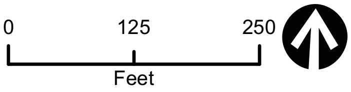
Legend

BRT Alternative

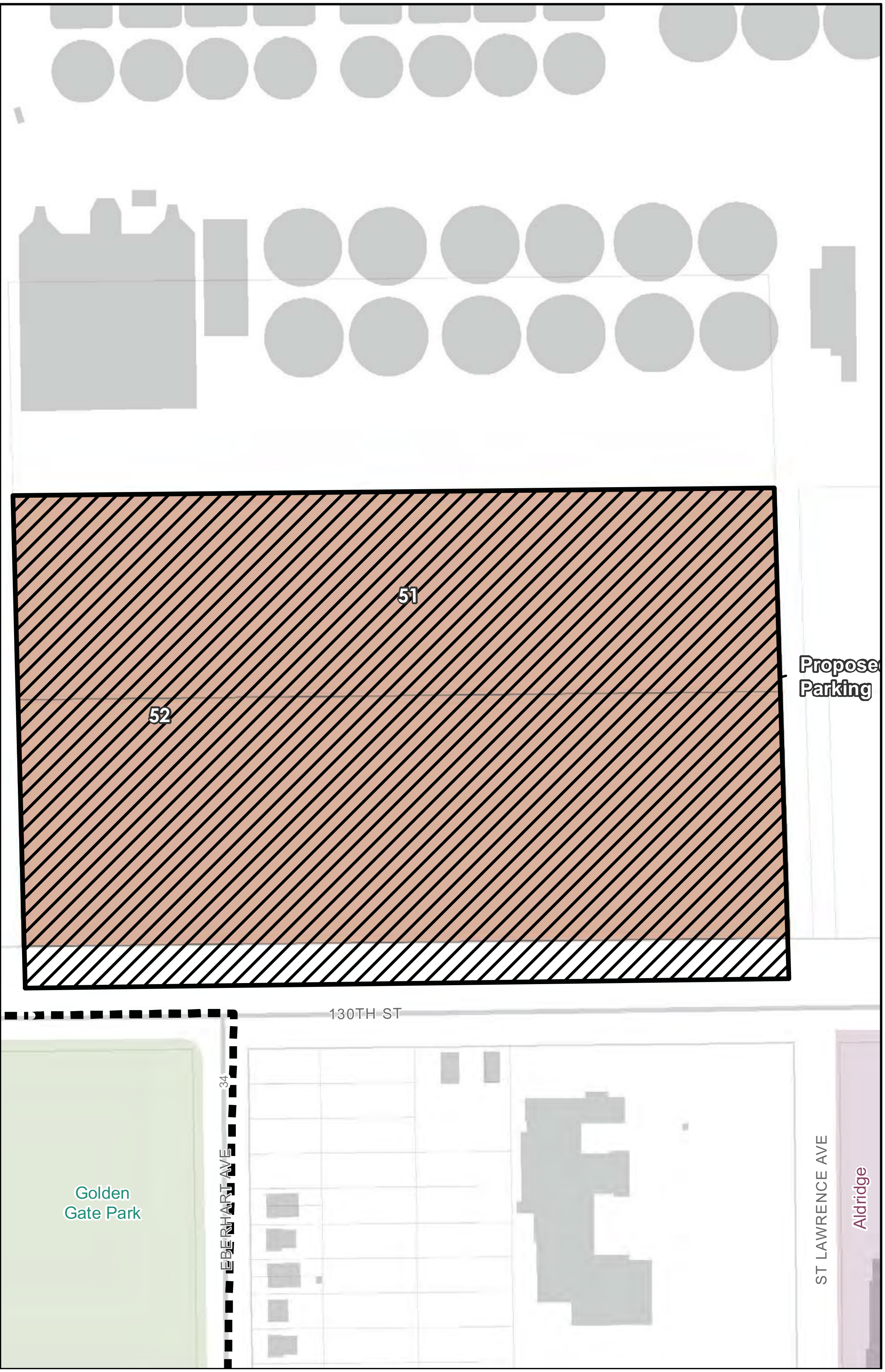
Sheet 15 of 20

- ▬ ▬ BRT Alternative
- ▨ Proposed Permanent Envelope
- 🟫 Parcel Affected by Proposed Permanent Envelope
- 🟥 Building Displacement
- ⬜ Building Footprint
- ☐ Parcels
- 🟩 Parks
- 🟪 Schools
- ┼┼ Freight Rail
- –49– CTA Bus
- –290– Pace Bus

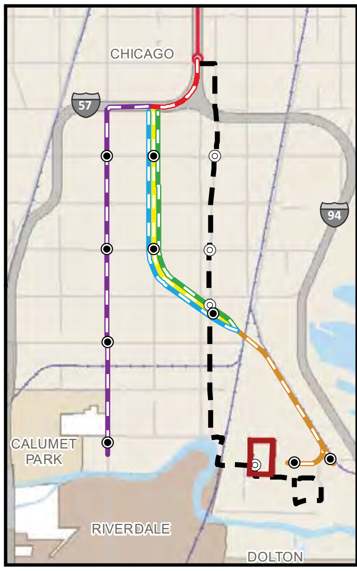
Scale


0
125
250
Feet

map id: 03_08.15


51
52
Proposed Parking
130TH ST
34
EBERHART AVE
Golden Gate Park
ST LAWRENCE AVE
Aldridge

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

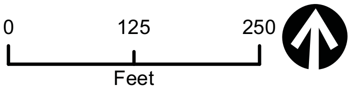
Legend

BRT Alternative

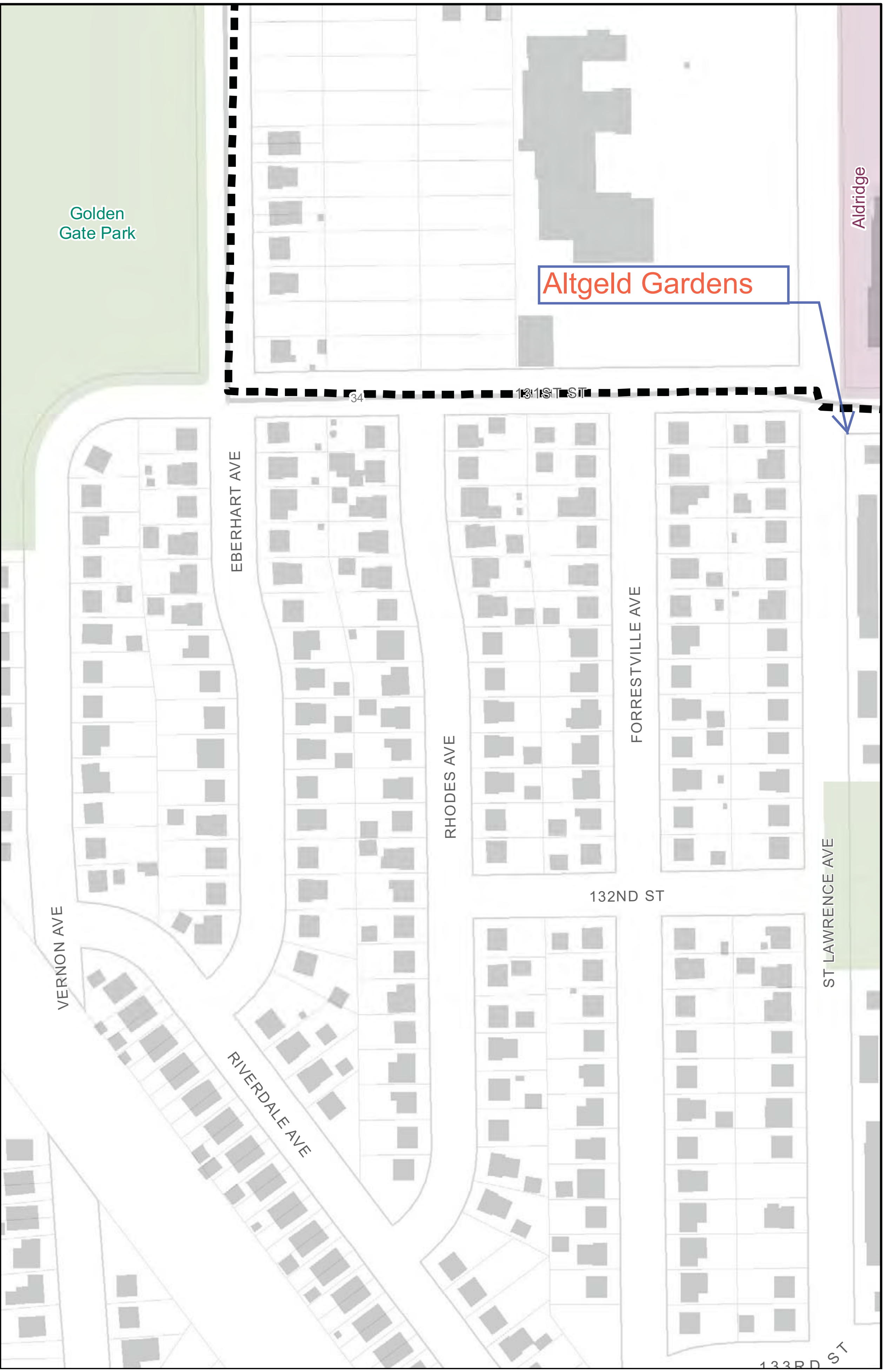
Sheet 16 of 20

- ▬ ▬ BRT Alternative
- ▨ Proposed Permanent Envelope
- 🟫 Parcel Affected by Proposed Permanent Envelope
- 🟥 Building Displacement
- ⬜ Building Footprint
- ☐ Parcels
- 🟩 Parks
- 🟪 Schools
- ┼┼ Freight Rail
- 49 CTA Bus
- 290 Pace Bus

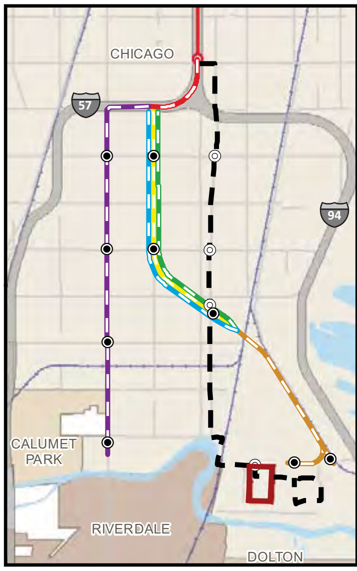
Scale


0
125
250
Feet

map id: 03_08.16


Golden Gate Park
Altgeld Gardens
Aldridge
131ST ST
34
EBERHART AVE
RHODES AVE
FORRESTVILLE AVE
ST LAWRENCE AVE
132ND ST
VERNON AVE
RIVERDALE AVE
133RD ST

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

BRT Alternative

Sheet 17 of 20

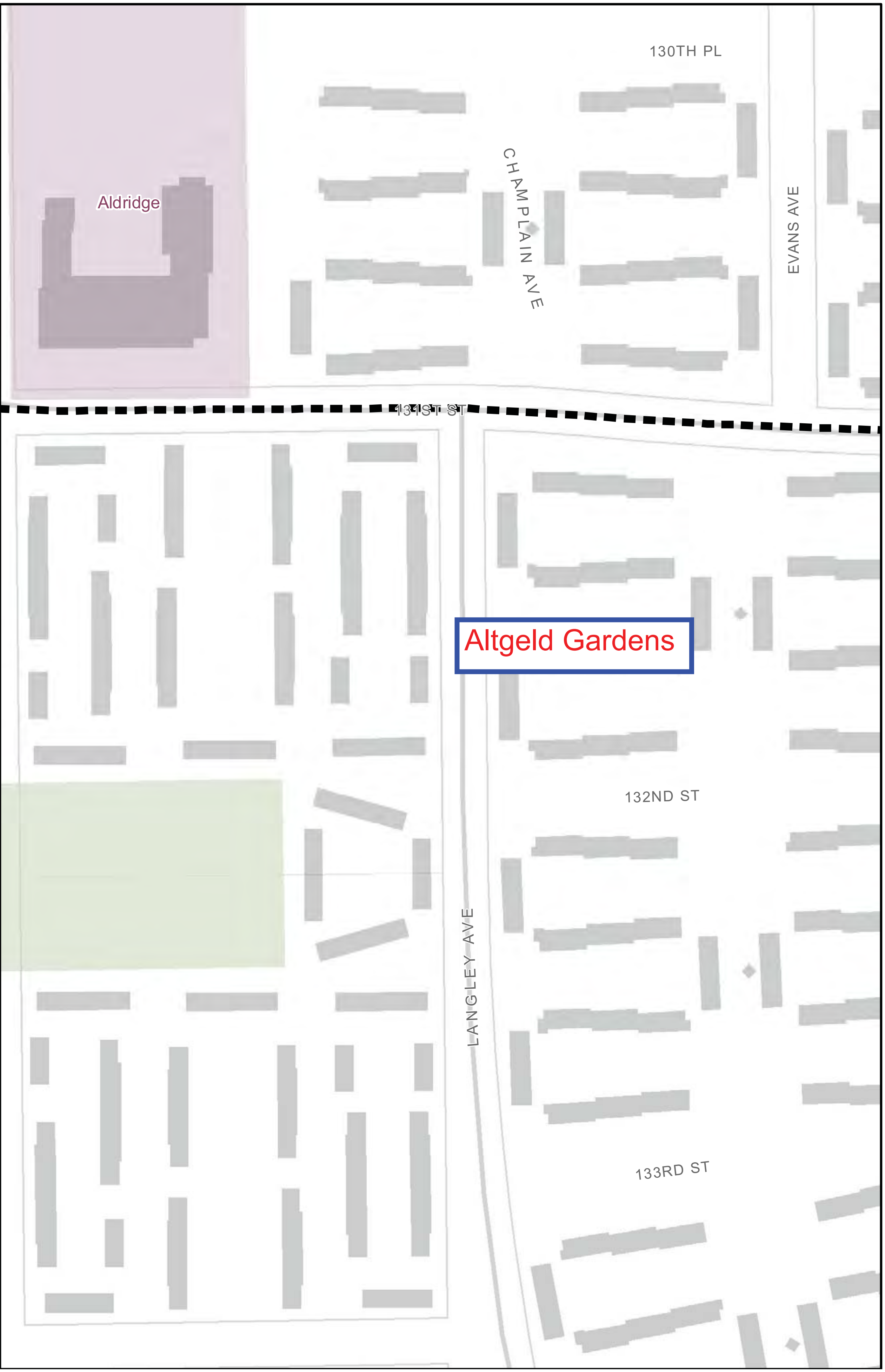
- ▬ ▬ BRT Alternative
- ▨ Proposed Permanent Envelope
- 🟫 Parcel Affected by Proposed Permanent Envelope
- 🟥 Building Displacement
- ▩ Building Footprint
- ☐ Parcels
- 🟩 Parks
- 🟪 Schools
- ┼ Freight Rail
- 49 CTA Bus
- 290 Pace Bus

Scale

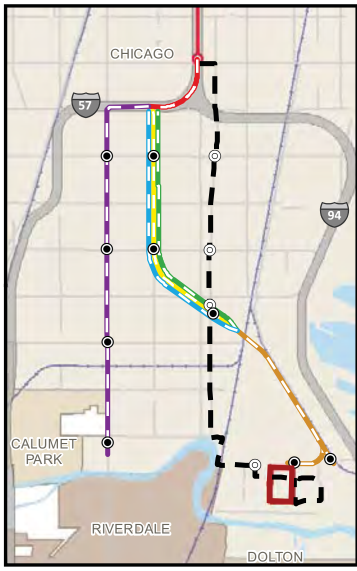
0 125 250

Feet

map id: 03_08.17


130TH PL
CHAMPLAIN AVE
EVANS AVE
Aldridge
131ST ST
Altgeld Gardens
132ND ST
LANGLEY AVE
133RD ST

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

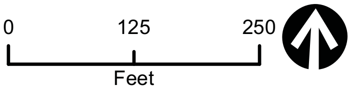
Legend

BRT Alternative

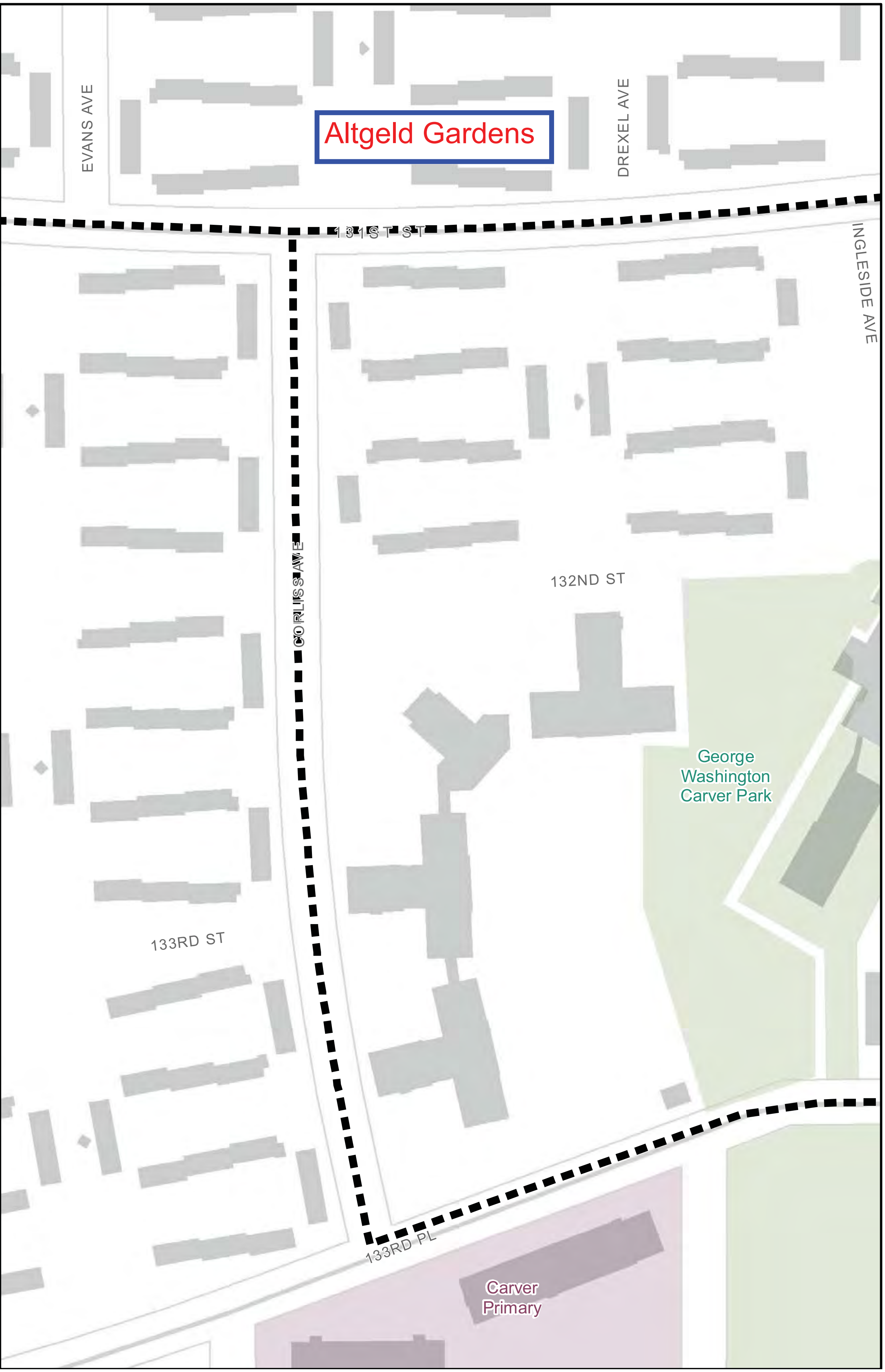
Sheet 18 of 20

- ▬ ▬ BRT Alternative
- ▨ Proposed Permanent Envelope
- 🟫 Parcel Affected by Proposed Permanent Envelope
- 🟥 Building Displacement
- ⬜ Building Footprint
- ☐ Parcels
- 🟩 Parks
- 🟪 Schools
- -+-+- Freight Rail
- –49– CTA Bus
- –290– Pace Bus

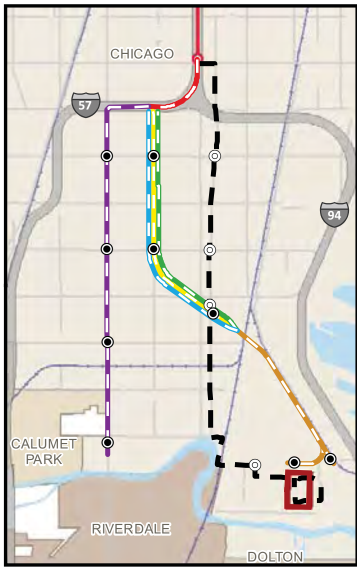
Scale


0
125
250
Feet

map id: 03_08.18


EVANS AVE
Altgeld Gardens
DREXEL AVE
131ST ST
INGLESIDE AVE
CORLISS AVE
132ND ST
George Washington Carver Park
133RD ST
133RD PL
Carver Primary

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

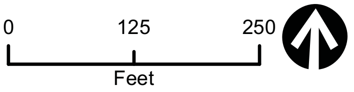
Legend

BRT Alternative

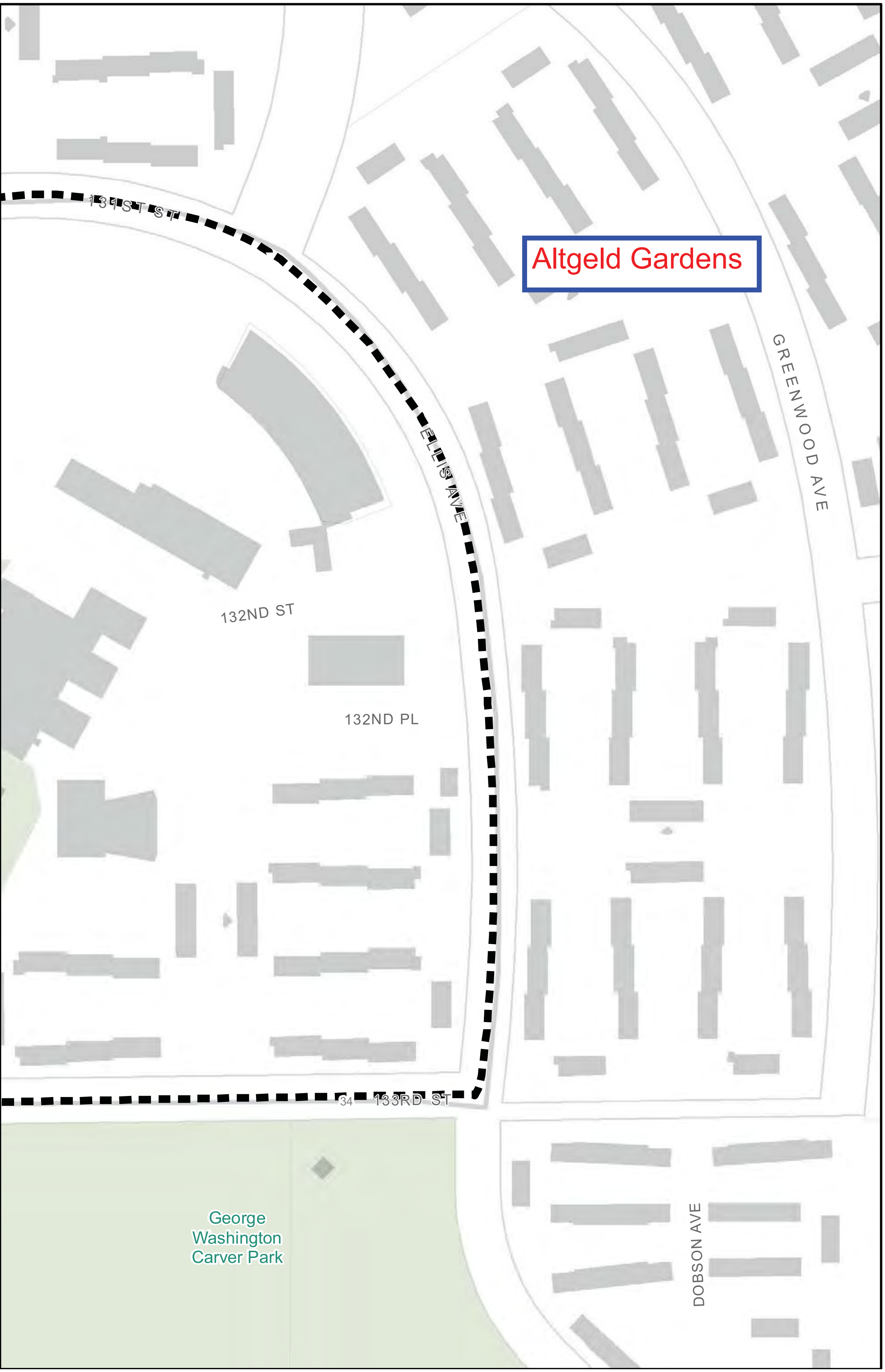
Sheet 19 of 20

- ▬ ▬ BRT Alternative
- ▨ Proposed Permanent Envelope
- 🟫 Parcel Affected by Proposed Permanent Envelope
- 🟥 Building Displacement
- ▢ Building Footprint
- ☐ Parcels
- 🟩 Parks
- 🟪 Schools
- -+-+- Freight Rail
- –49– CTA Bus
- –290– Pace Bus

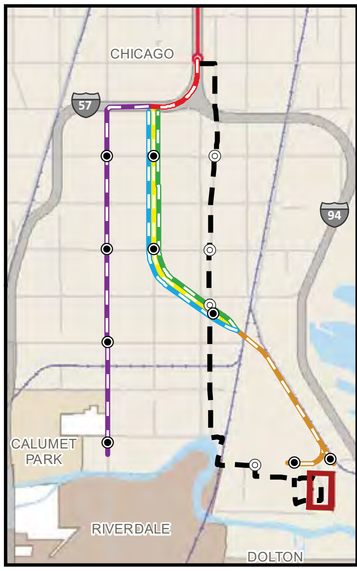
Scale


0
125
250
Feet

map id: 03_08.19


131ST ST
Altgeld Gardens
GREENWOOD AVE
ELLIS AVE
132ND ST
132ND PL
34
133RD ST
George Washington Carver Park
DOBSON AVE

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

BRT Alternative

Sheet 20 of 20

- ▬ ▬ BRT Alternative
- ▨ Proposed Permanent Envelope
- 🟫 Parcel Affected by Proposed Permanent Envelope
- 🟥 Building Displacement
- ⬜ Building Footprint
- ☐ Parcels
- 🟩 Parks
- 🟪 Schools
- -+-+- Freight Rail
- —49— CTA Bus
- —290— Pace Bus

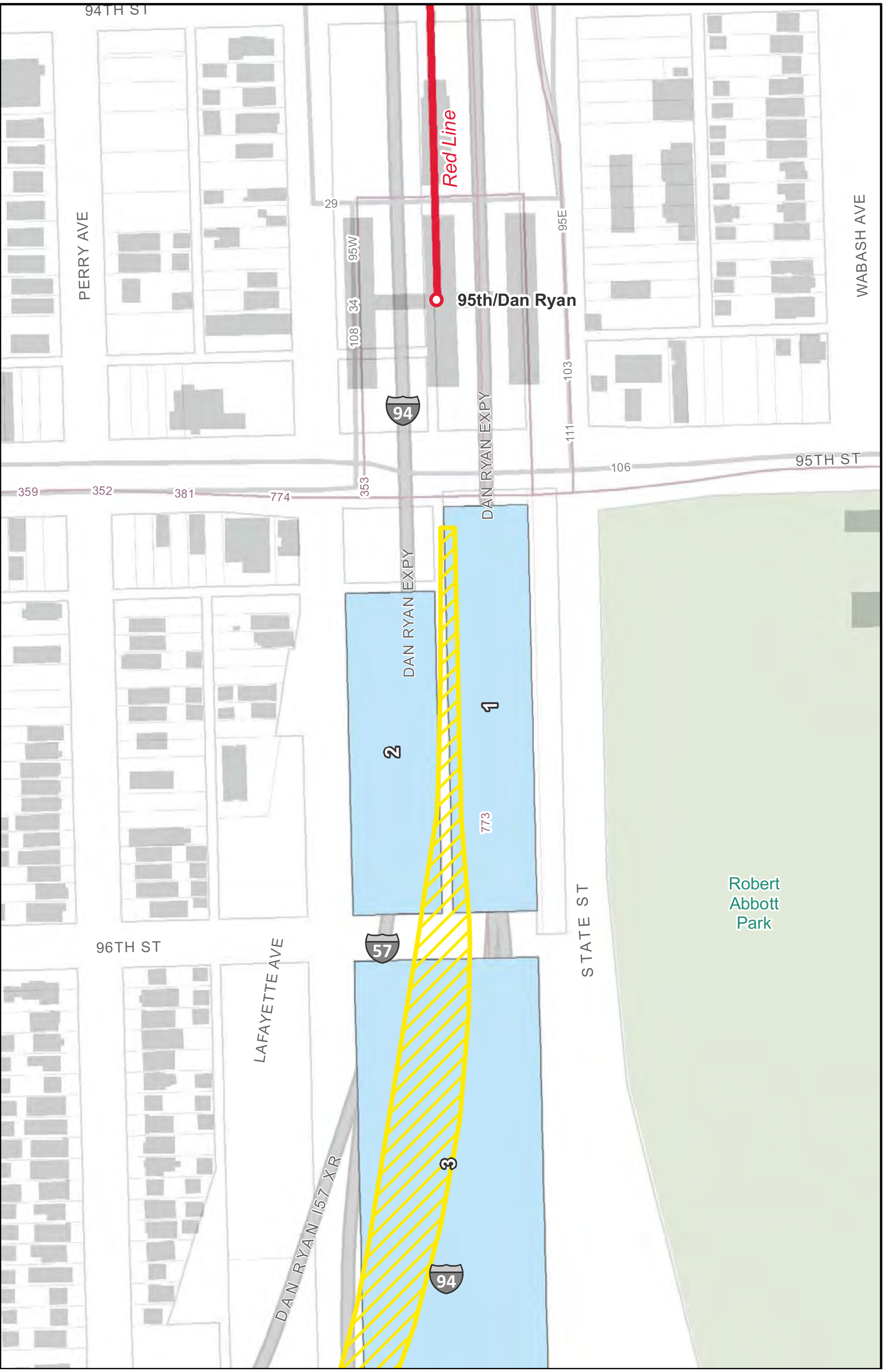
Scale

0 125 250

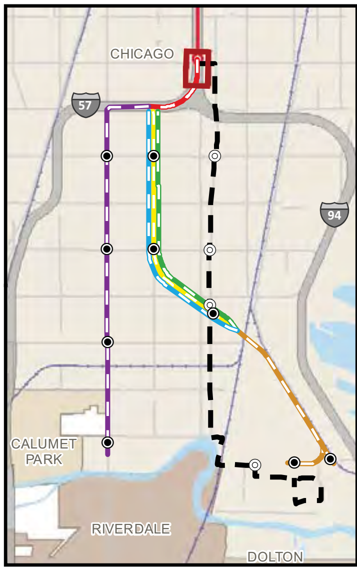
Feet

map id: 03_08.20

Appendix D-2:
UPRR ROW Option Displacement Maps


94TH ST
PERRY AVE
Red Line
29
95W
34
108
95th/Dan Ryan
95E
103
111
WABASH AVE
94
DAN RYAN EXPY
106
95TH ST
359
352
381
774
353
DAN RYAN EXPY
2
1
773
STATE ST
Robert Abbott Park
57
96TH ST
LAFAYETTE AVE
DAN RYAN I57 X R
3
94

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

UPRR Rail Alternative ROW Option

Sheet 1 of 15

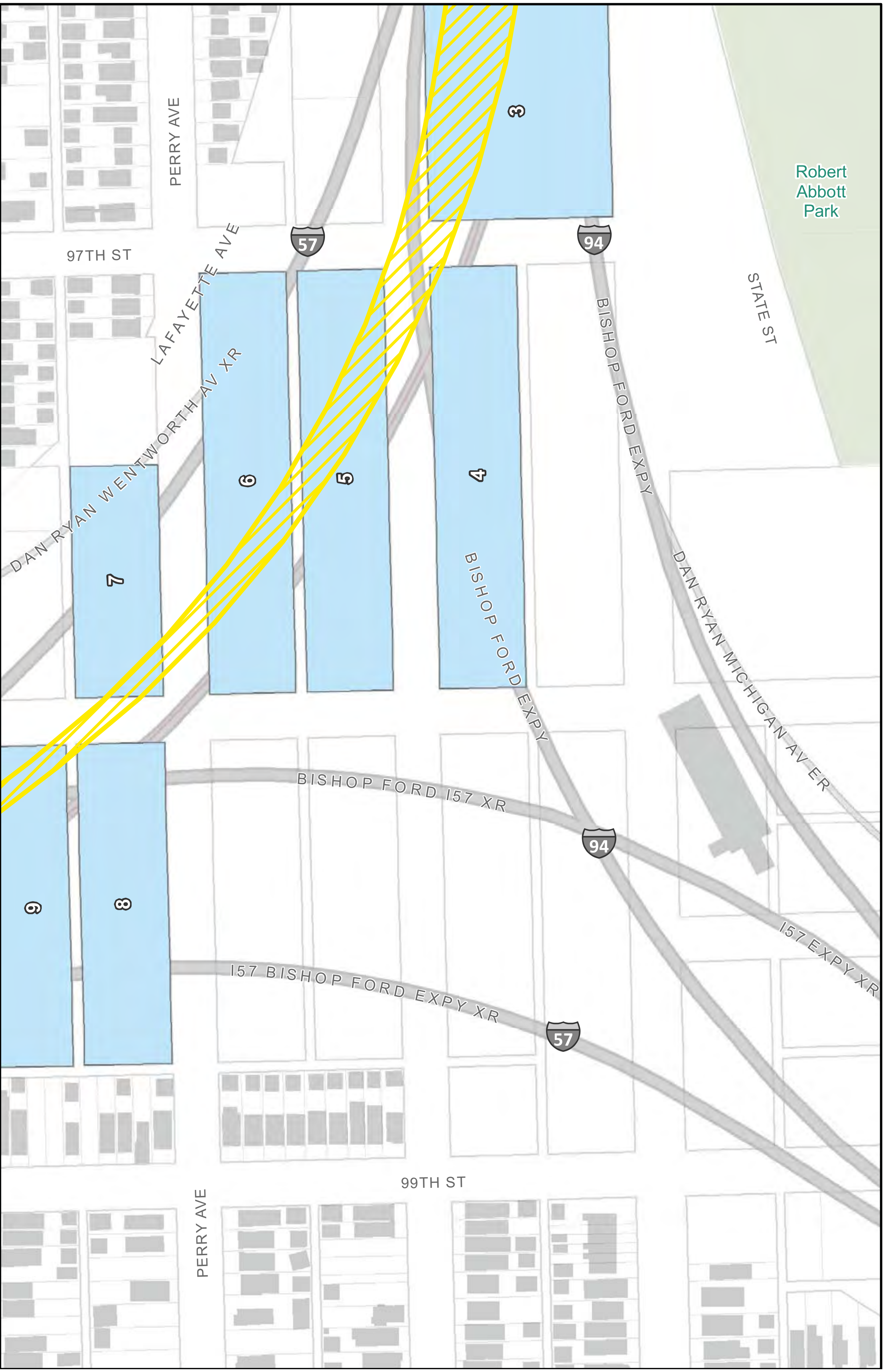
▨	Proposed Permanent Envelope
🟦	Easement
🟫	Parcel Affected by Proposed Permanent Envelope
🟥	Building Displacement
⬜	Building Footprint
☐	Parcels
🟩	Parks
🟪	Schools
-+-+-	Freight Rail
-49-	CTA Bus
-290-	Pace Bus

Scale

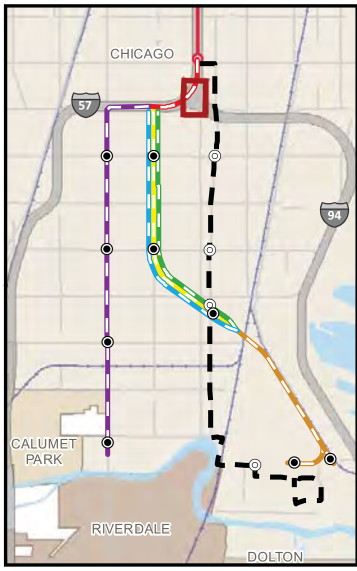
0 125 250

Feet

map id: 03_03.1


PERRY AVE
97TH ST
LAFAYETTE AVE
57
94
3
Robert Abbott Park
STATE ST
BISHOP FORD EXPY
DAN RYAN WENTWORTH AV XR
6
5
4
7
BISHOP FORD EXPY
DAN RYAN MICHIGAN AV ER
BISHOP FORD I57 XR
94
I57 EXPY XR
9
8
I57 BISHOP FORD EXPY XR
57
99TH ST
PERRY AVE

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

UPRR Rail Alternative ROW Option

Sheet 2 of 15

▨ Proposed Permanent Envelope

🟦 Easement

🟫 Parcel Affected by Proposed Permanent Envelope

🟥 Building Displacement

⬜ Building Footprint

□ Parcels

🟩 Parks

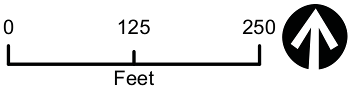
🟪 Schools

-+- Freight Rail

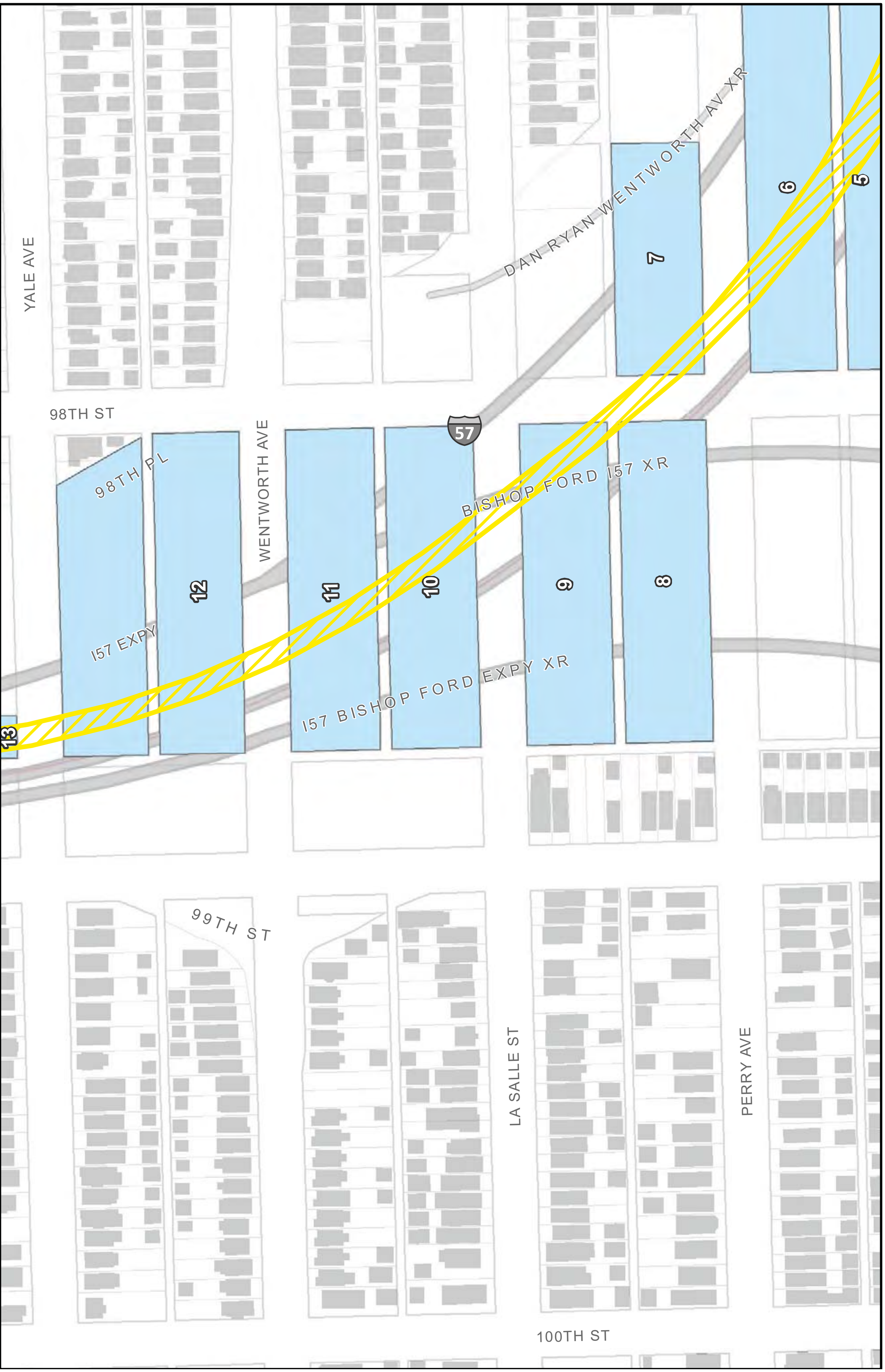
-49- CTA Bus

-290- Pace Bus

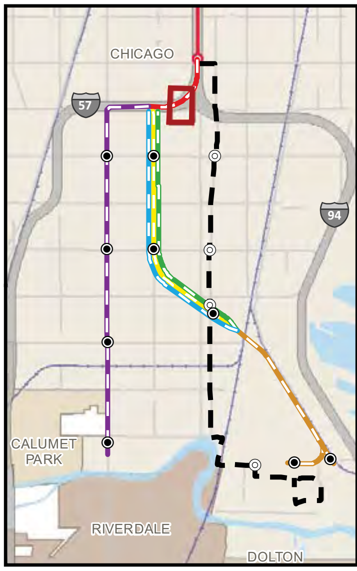
Scale


0
125
250
Feet

map id: 03_03.2


YALE AVE
98TH ST
98TH PL
WENTWORTH AVE
DAN RYAN WENTWORTH AV XR
57
BISHOP FORD I57 XR
I57 EXPY
I57 BISHOP FORD EXPY XR
99TH ST
LA SALLE ST
PERRY AVE
100TH ST
5
6
7
8
9
10
11
12
13

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

UPRR Rail Alternative ROW Option

Sheet 3 of 15

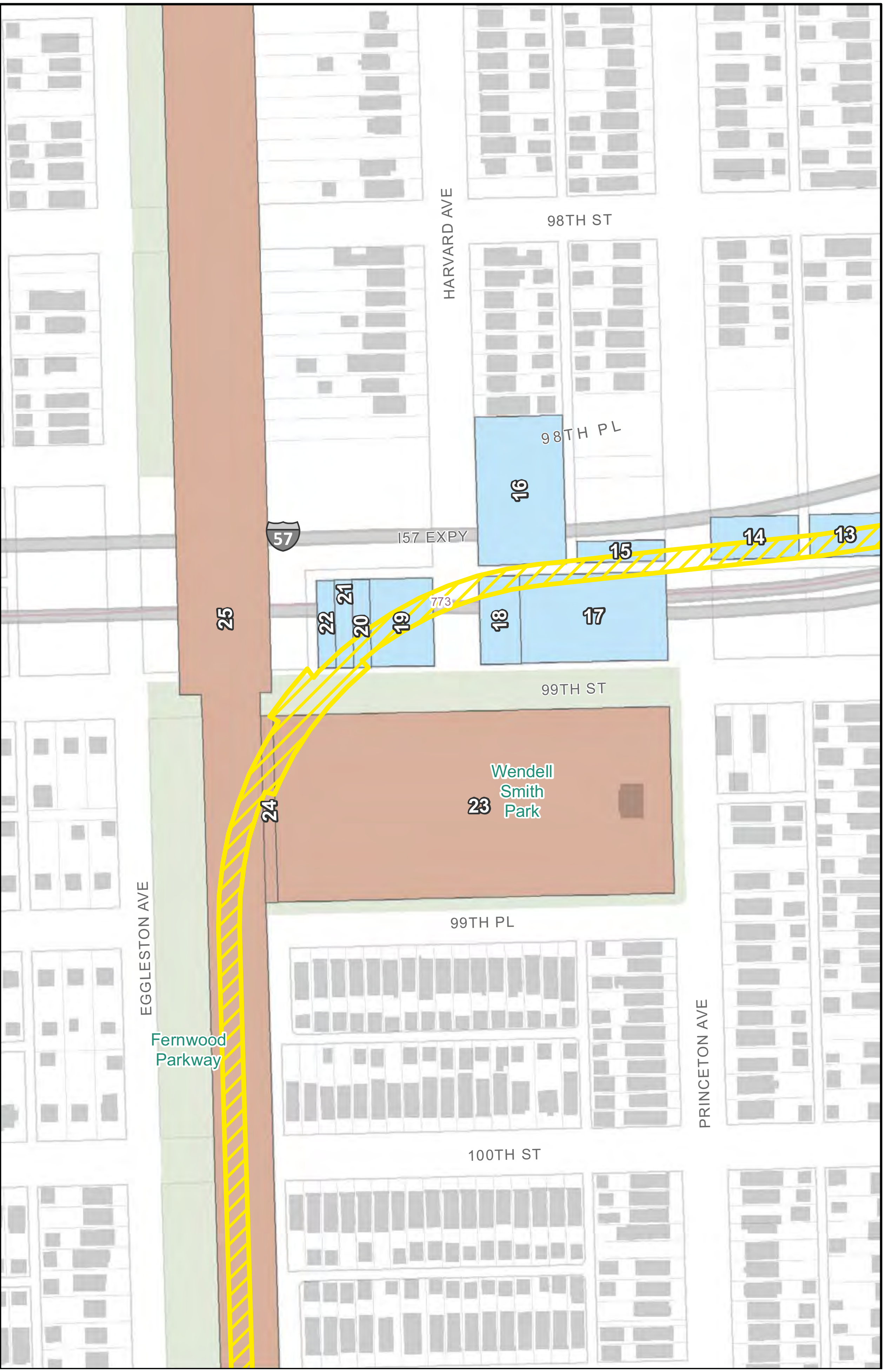
- ▨ Proposed Permanent Envelope
- 🟦 Easement
- 🟫 Parcel Affected by Proposed Permanent Envelope
- 🟥 Building Displacement
- ⬜ Building Footprint
- □ Parcels
- 🟩 Parks
- 🟪 Schools
- -+-+- Freight Rail
- —49— CTA Bus
- —290— Pace Bus

Scale

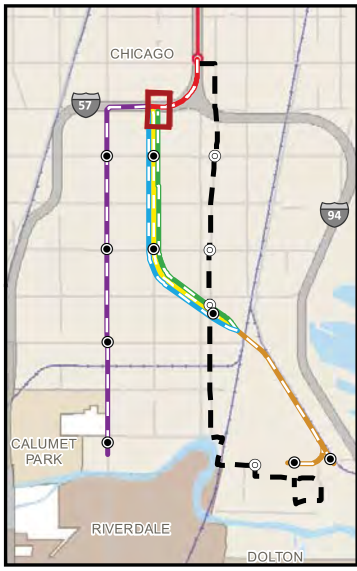
0 125 250

Feet

map id: 03_03.3


98TH ST
HARVARD AVE
98TH PL
I57 EXPY
57
773
99TH ST
Wendell Smith Park
99TH PL
EGGLESTON AVE
Fernwood Parkway
PRINCETON AVE
100TH ST
13
14
15
16
17
18
19
20
21
22
23
24
25

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

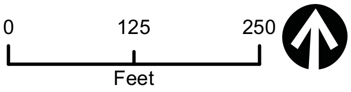
Legend

UPRR Rail Alternative ROW Option

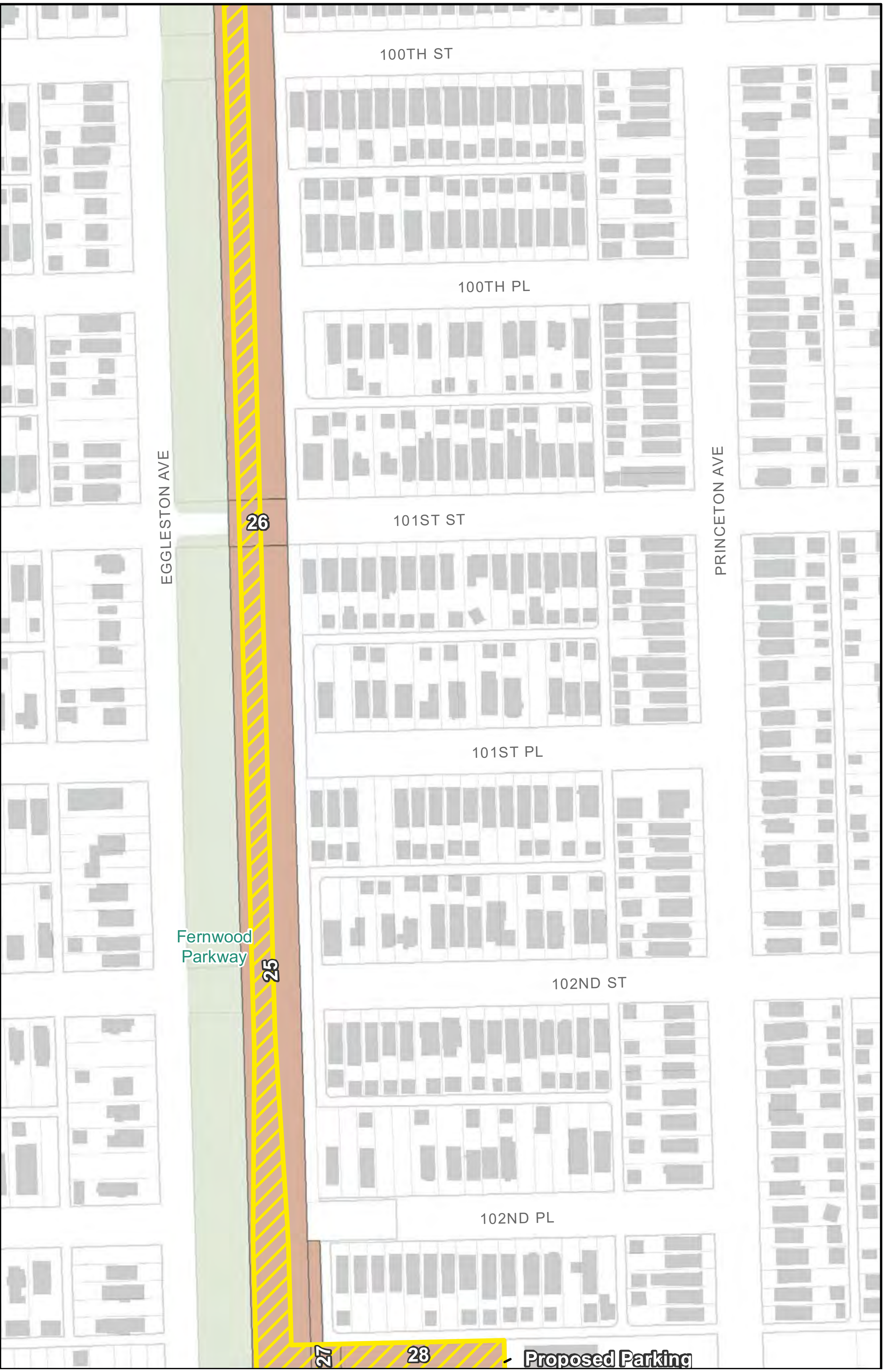
Sheet 4 of 15

▨	Proposed Permanent Envelope
🟦	Easement
🟫	Parcel Affected by Proposed Permanent Envelope
🟥	Building Displacement
⬜	Building Footprint
☐	Parcels
🟩	Parks
🟪	Schools
-+-+-	Freight Rail
—49—	CTA Bus
—290—	Pace Bus

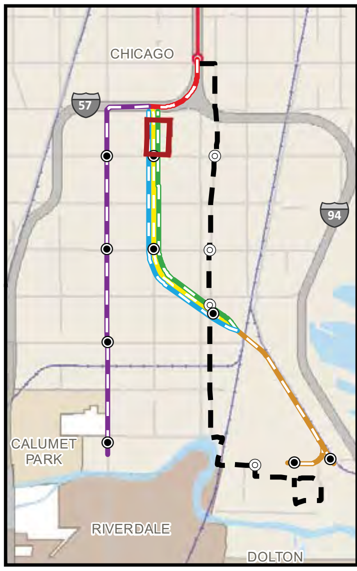
Scale


0
125
250
Feet

map id: 03_03.4


100TH ST
100TH PL
101ST ST
101ST PL
102ND ST
102ND PL
EGGLESTON AVE
PRINCETON AVE
Fernwood Parkway
26
25
27
28
Proposed Parking

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

UPRR Rail Alternative ROW Option

Sheet 5 of 15

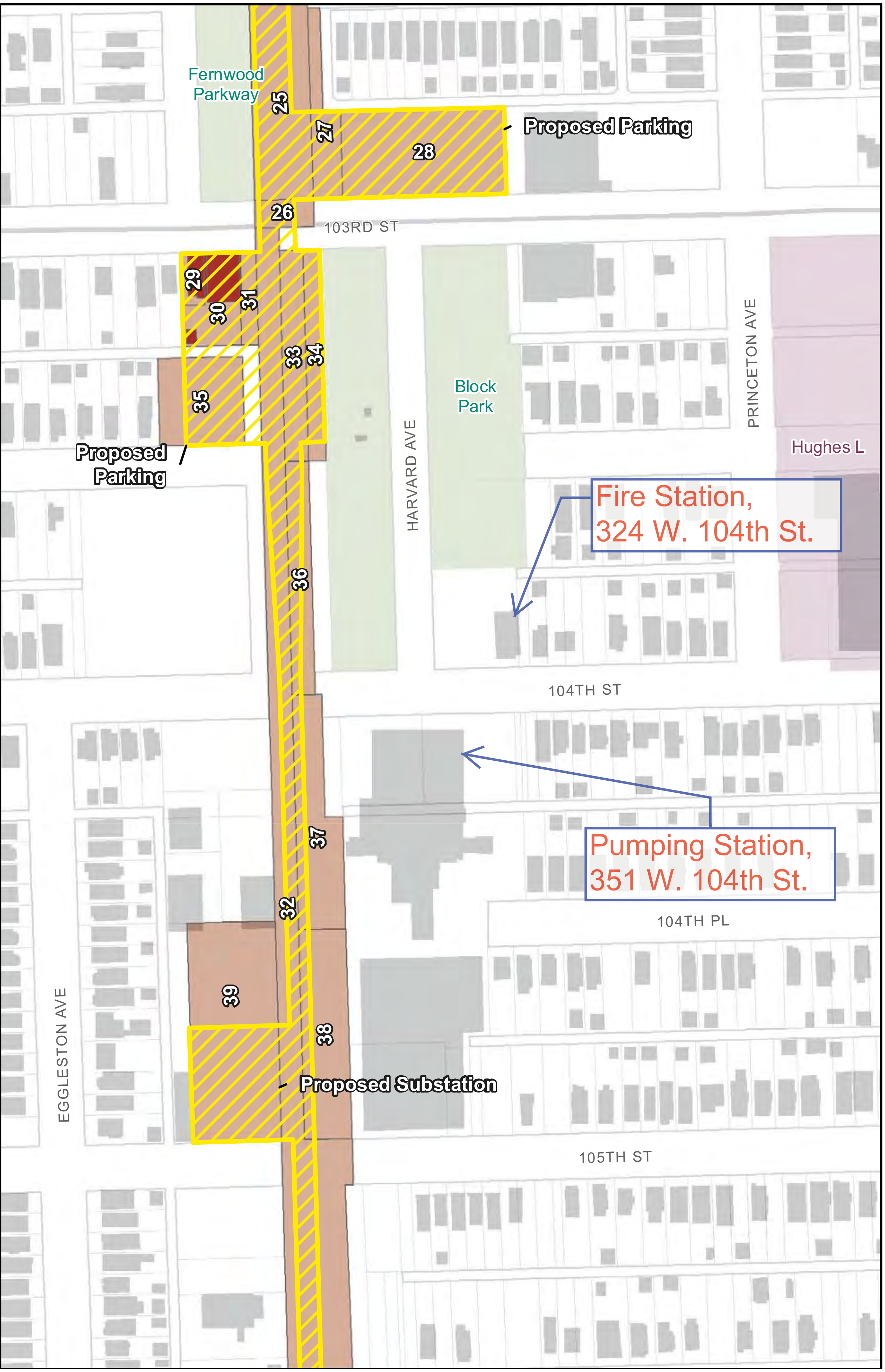
▨	Proposed Permanent Envelope
🟦	Easement
🟫	Parcel Affected by Proposed Permanent Envelope
🟥	Building Displacement
⬜	Building Footprint
☐	Parcels
🟩	Parks
🟪	Schools
-+-+-	Freight Rail
–49–	CTA Bus
–290–	Pace Bus

Scale

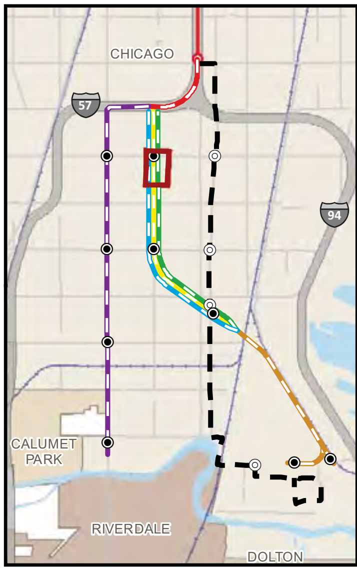
0 125 250

Feet

map id: 03_03.5


Fernwood Parkway
25
27
28
Proposed Parking
26
103RD ST
29
30
31
33
34
35
Proposed Parking
Block Park
HARVARD AVE
PRINCETON AVE
Hughes L
Fire Station, 324 W. 104th St.
36
104TH ST
Pumping Station, 351 W. 104th St.
37
32
104TH PL
39
38
EGGLESTON AVE
Proposed Substation
105TH ST

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

UPRR Rail Alternative ROW Option

Sheet 6 of 15

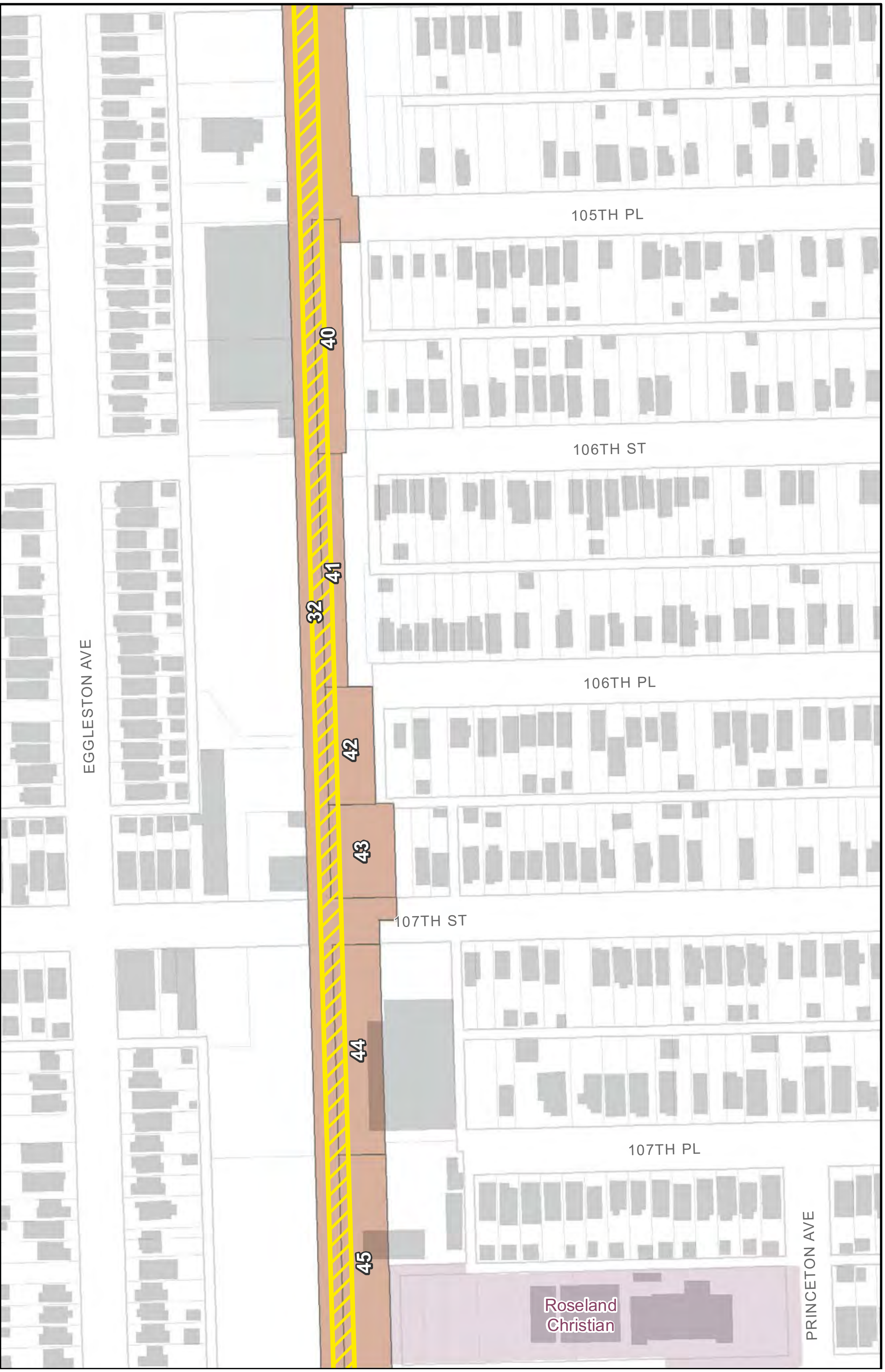
- ▨ Proposed Permanent Envelope
- 🟦 Easement
- 🟫 Parcel Affected by Proposed Permanent Envelope
- 🟥 Building Displacement
- ⬜ Building Footprint
- □ Parcels
- 🟩 Parks
- 🟪 Schools
- -+- Freight Rail
- —49— CTA Bus
- —290— Pace Bus

Scale

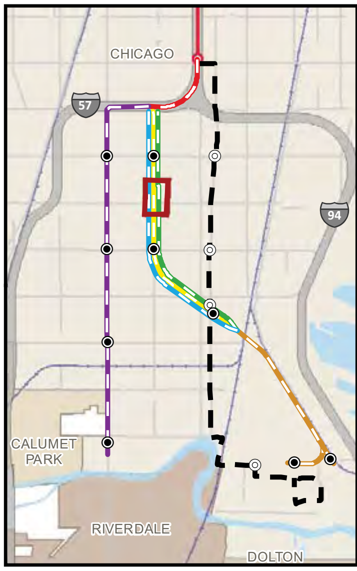
0 125 250

Feet

map id: 03_03.6


105TH PL
40
106TH ST
41
32
106TH PL
EGGLESTON AVE
42
43
107TH ST
44
107TH PL
45
Roseland Christian
PRINCETON AVE

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

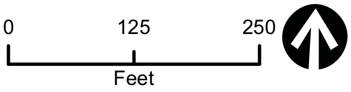
Legend

UPRR Rail Alternative ROW Option

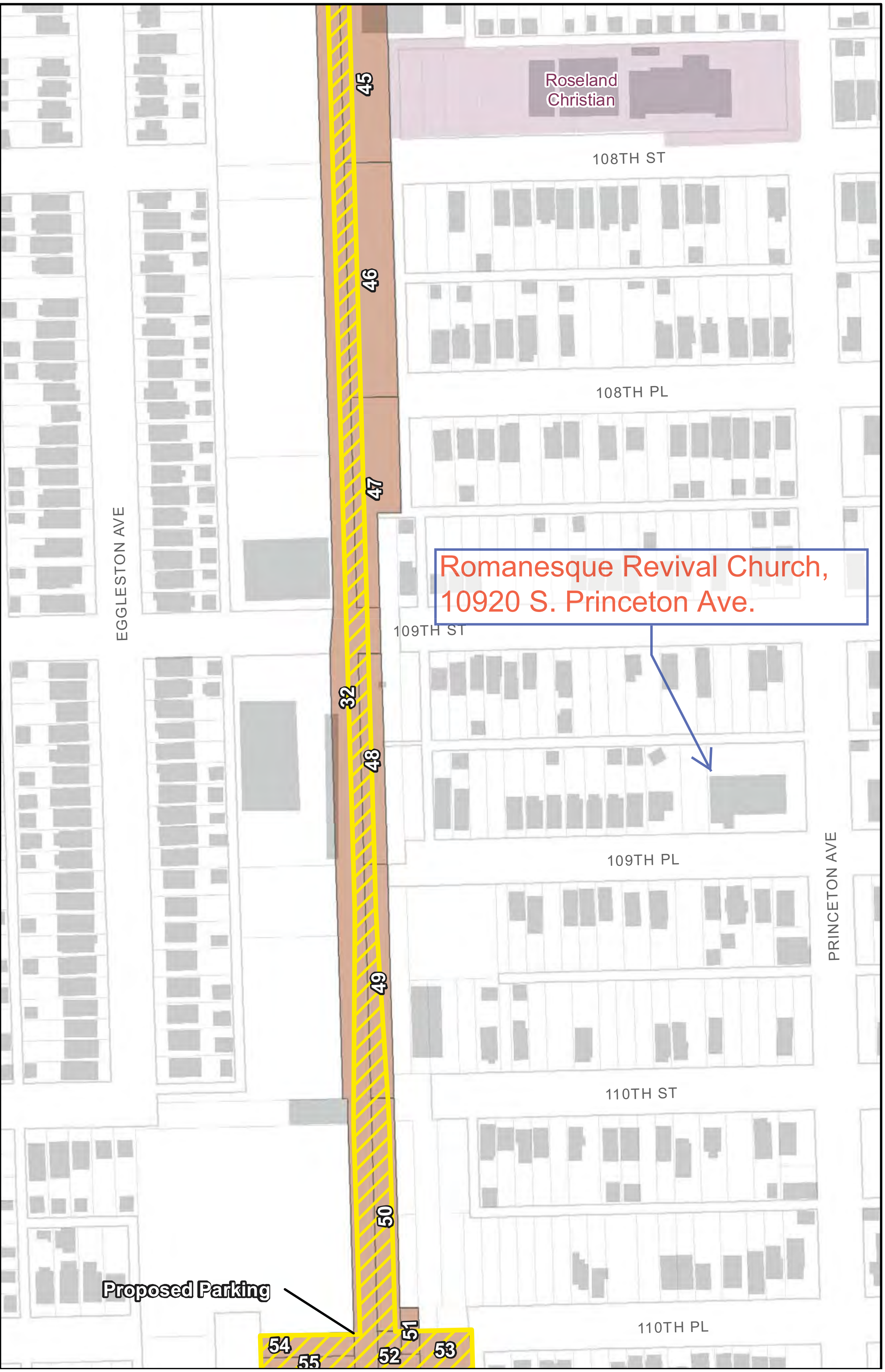
Sheet 7 of 15

▨ Proposed Permanent Envelope
🟦 Easement
🟫 Parcel Affected by Proposed Permanent Envelope
🟥 Building Displacement
⬜ Building Footprint
⬜ Parcels
🟩 Parks
🟪 Schools
-+-+- Freight Rail
-49- CTA Bus
-290- Pace Bus

Scale

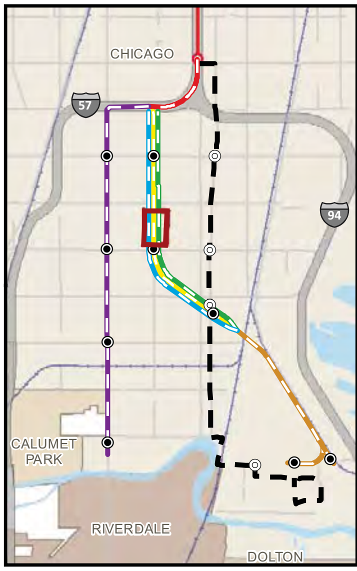

0
125
250
Feet

map id: 03_03.7


Roseland
Christian
45
108TH ST
46
108TH PL
47
EGGLESTON AVE
109TH ST
32
48
109TH PL
PRINCETON AVE
49
110TH ST
50
Proposed Parking
51
110TH PL
54
55
52
53

Romanesque Revival Church, 10920 S. Princeton Ave.

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

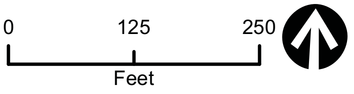
Legend

UPRR Rail Alternative ROW Option

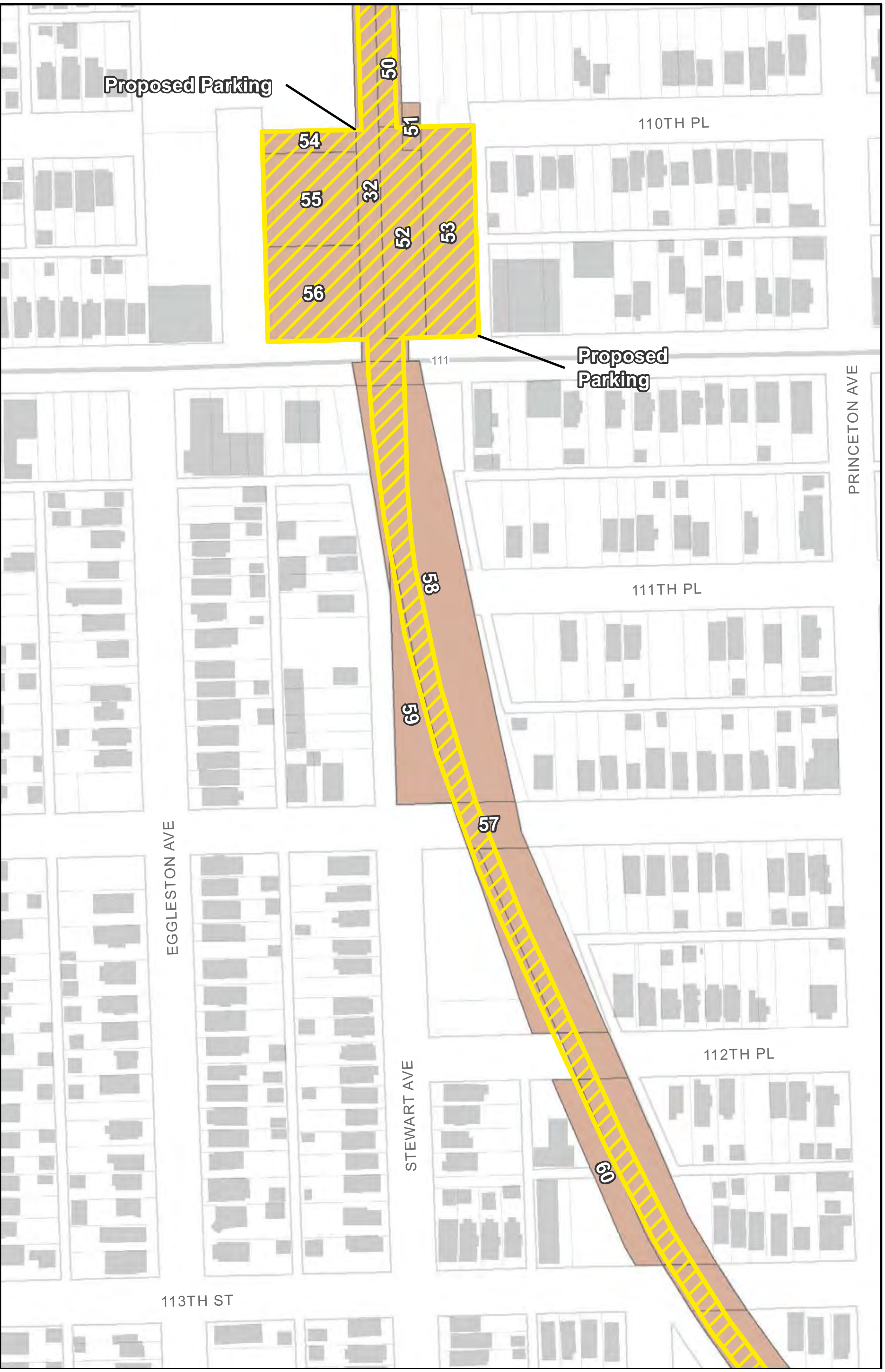
Sheet 8 of 15

▨	Proposed Permanent Envelope
🟦	Easement
🟫	Parcel Affected by Proposed Permanent Envelope
🟥	Building Displacement
⬜	Building Footprint
□	Parcels
🟩	Parks
🟪	Schools
-+-+-	Freight Rail
—49—	CTA Bus
—290—	Pace Bus

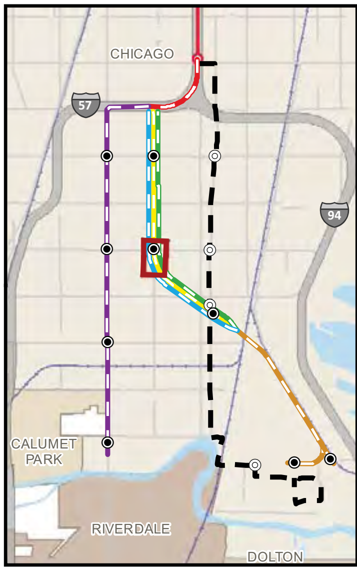
Scale


0
125
250
Feet

map id: 03_03.8


Proposed Parking
50
51
54
55
32
52
53
56
110TH PL
111
Proposed Parking
PRINCETON AVE
58
111TH PL
59
57
EGGLESTON AVE
112TH PL
STEWART AVE
60
113TH ST

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

UPRR Rail Alternative ROW Option

Sheet 9 of 15

▨ Proposed Permanent Envelope

🟦 Easement

🟫 Parcel Affected by Proposed Permanent Envelope

🟥 Building Displacement

⬜ Building Footprint

☐ Parcels

🟩 Parks

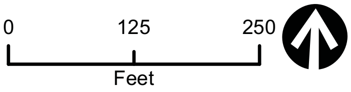
🟪 Schools

-+-+- Freight Rail

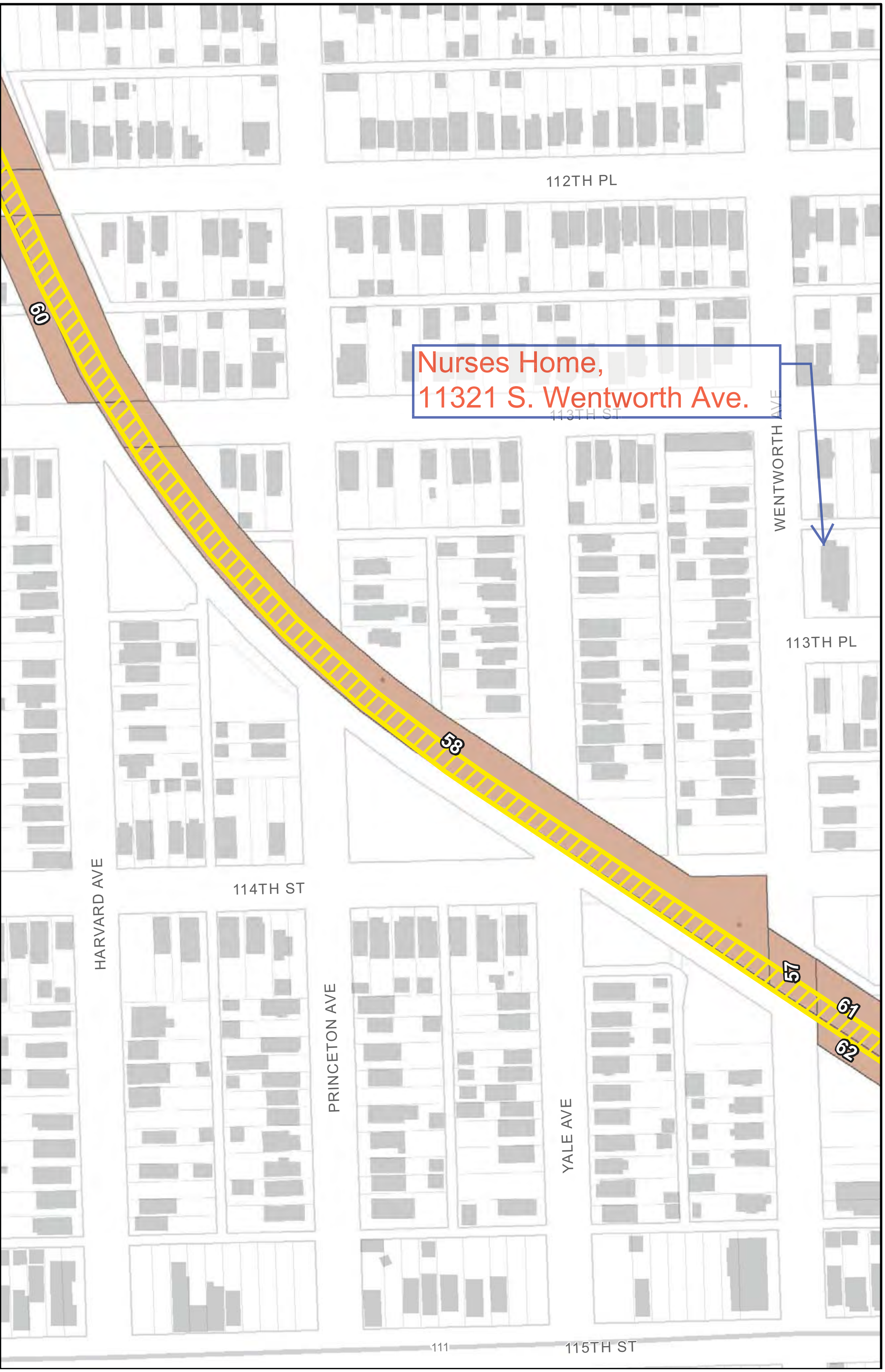
-49- CTA Bus

-290- Pace Bus

Scale

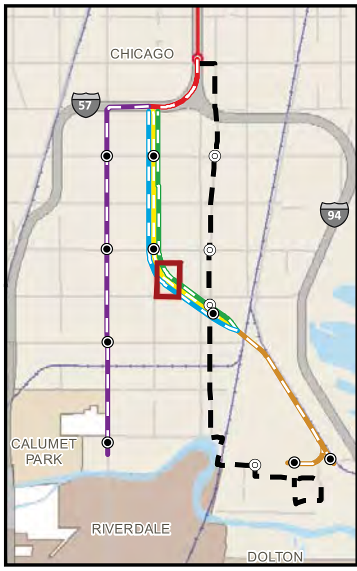

0
125
250
Feet

map id: 03_03.9


112TH PL
60
113TH ST
WENTWORTH AVE
113TH PL
58
114TH ST
HARVARD AVE
PRINCETON AVE
YALE AVE
57
61
62
111
115TH ST

Nurses Home,
11321 S. Wentworth Ave.

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

UPRR Rail Alternative ROW Option

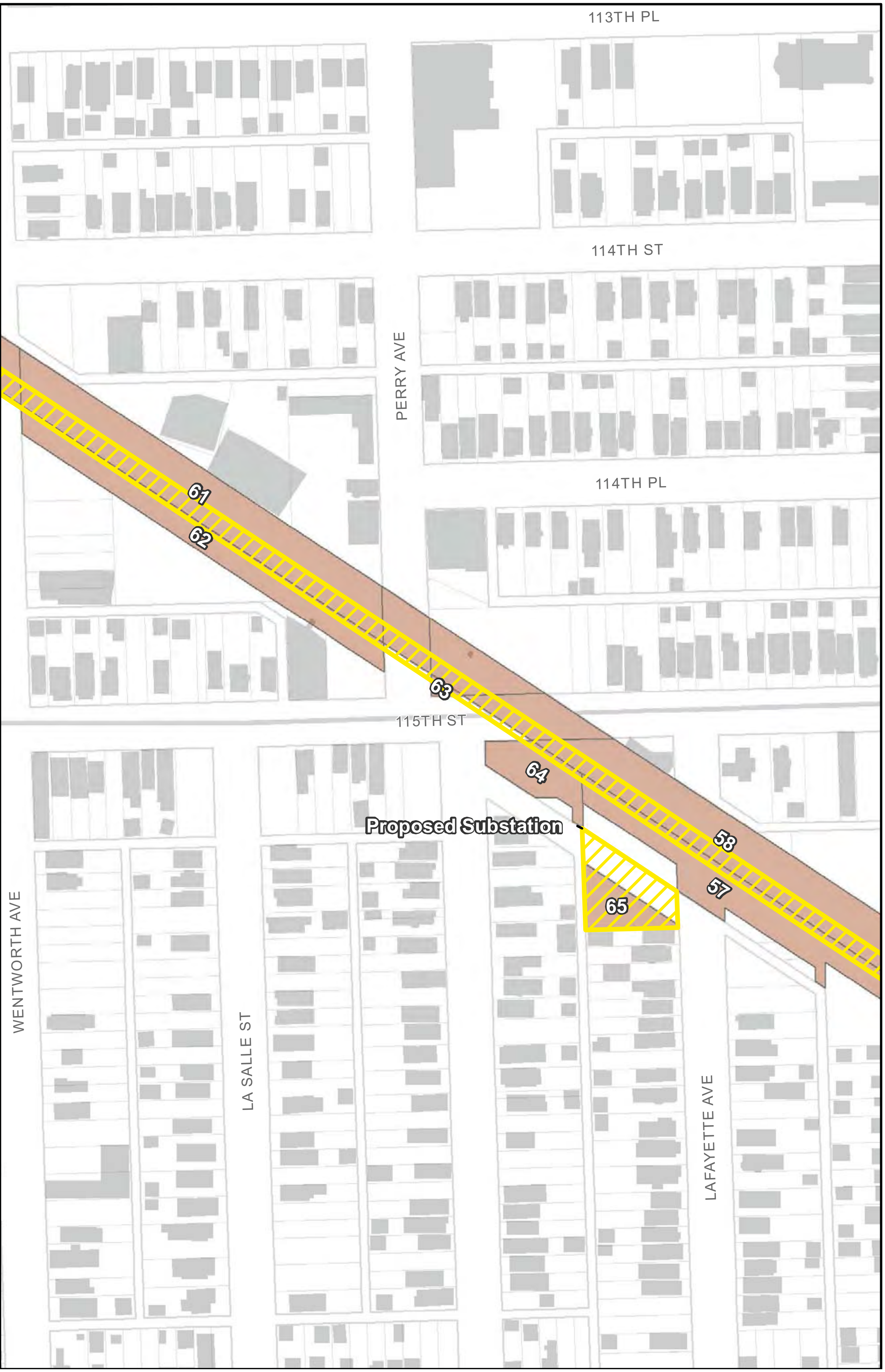
Sheet 10 of 15

- ▨ Proposed Permanent Envelope
- 🟦 Easement
- 🟫 Parcel Affected by Proposed Permanent Envelope
- 🟥 Building Displacement
- ⬜ Building Footprint
- ☐ Parcels
- 🟩 Parks
- 🟪 Schools
- ‑+‑+‑ Freight Rail
- ‑49‑ CTA Bus
- ‑290‑ Pace Bus

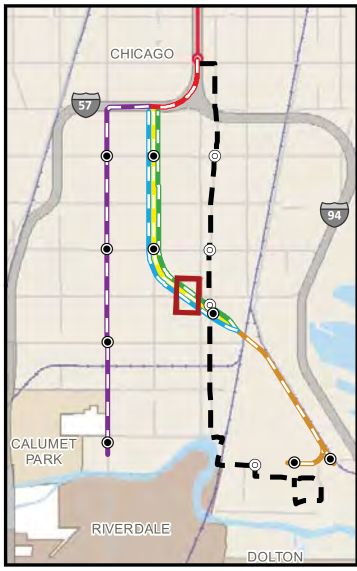
Scale

0 125 250
Feet

map id: 03_03.10


113TH PL
114TH ST
114TH PL
115TH ST
PERRY AVE
WENTWORTH AVE
LA SALLE ST
LAFAYETTE AVE
61
62
63
64
58
57
65
Proposed Substation

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

UPRR Rail Alternative ROW Option

Sheet 11 of 15

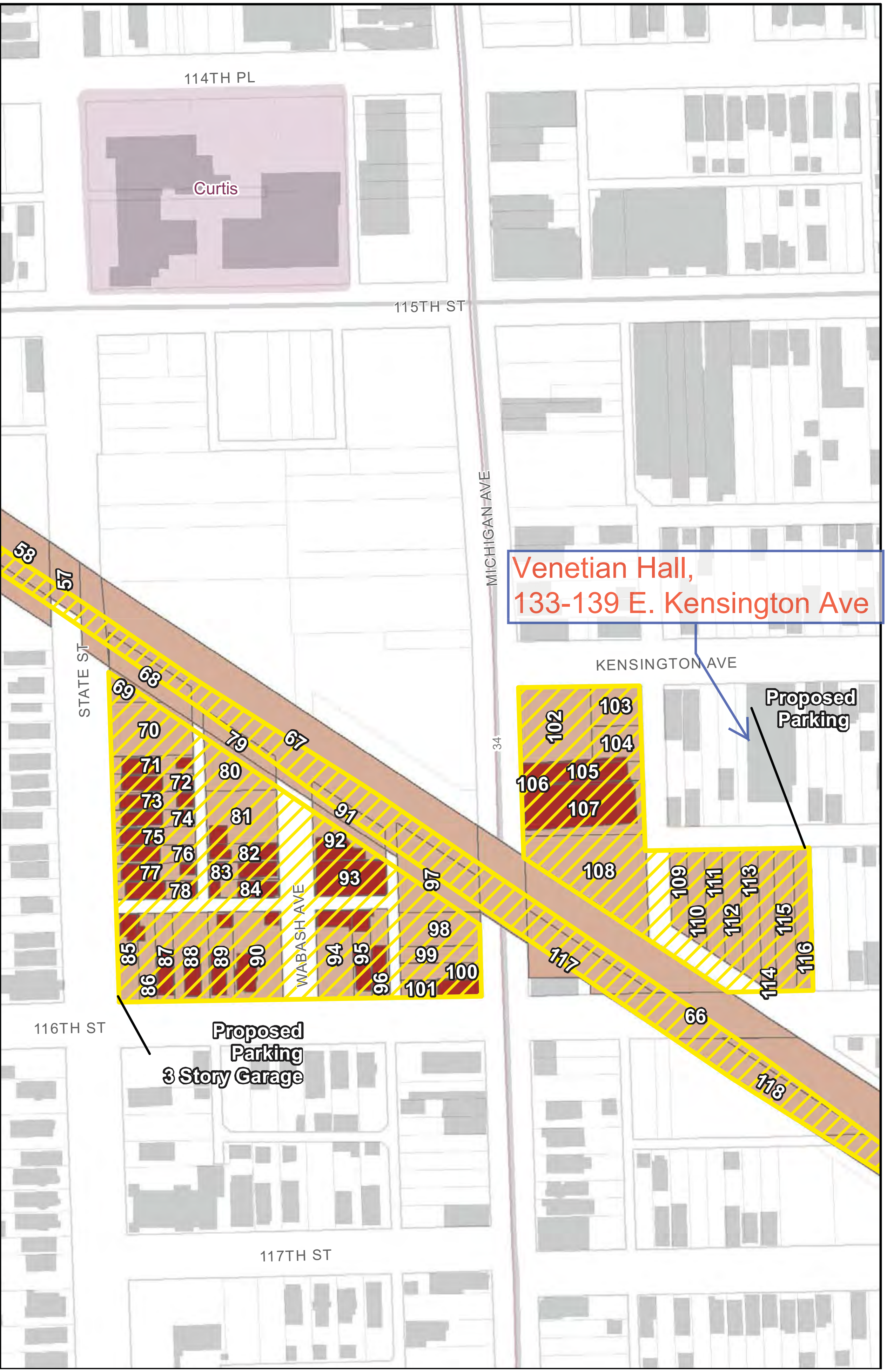
- ▨ Proposed Permanent Envelope
- 🟦 Easement
- 🟫 Parcel Affected by Proposed Permanent Envelope
- 🟥 Building Displacement
- ⬜ Building Footprint
- ☐ Parcels
- 🟩 Parks
- 🟪 Schools
- -+-+- Freight Rail
- –49– CTA Bus
- –290– Pace Bus

Scale

0 125 250

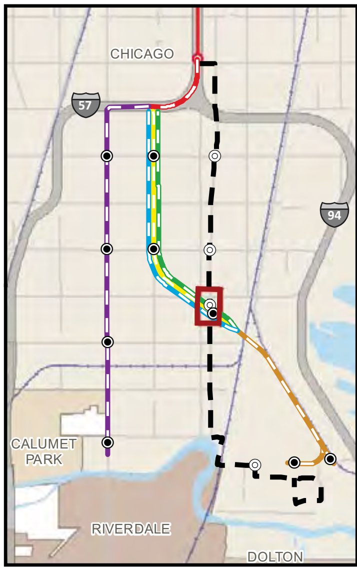
Feet

map id: 03_03.11


114TH PL
Curtis
115TH ST
MICHIGAN AVE
34
STATE ST
WABASH AVE
KENSINGTON AVE
116TH ST
117TH ST
58
57
68
69
70
71
72
73
74
75
76
77
78
79
80
81
82
83
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
99
100
101
67
102
103
104
105
106
107
108
109
110
111
112
113
114
115
116
117
66
118
Proposed Parking
Proposed Parking 3 Story Garage

Venetian Hall,
133-139 E. Kensington Ave

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

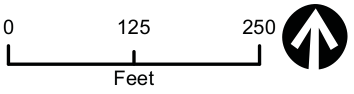
Legend

UPRR Rail Alternative ROW Option

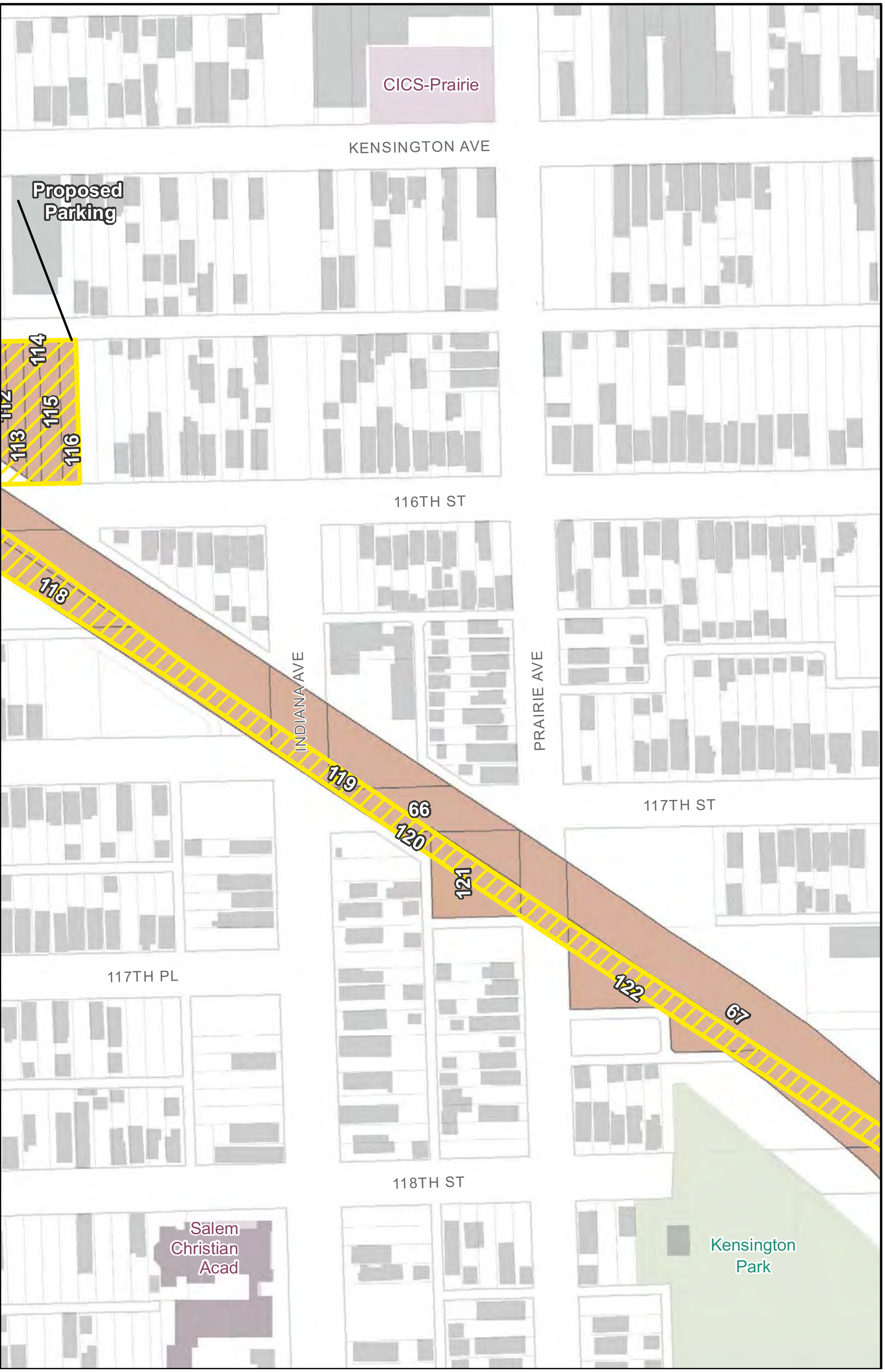
Sheet 12 of 15

- ▨ Proposed Permanent Envelope
- 🟦 Easement
- 🟫 Parcel Affected by Proposed Permanent Envelope
- 🟥 Building Displacement
- ⬜ Building Footprint
- □ Parcels
- 🟩 Parks
- 🟪 Schools
- -+-+- Freight Rail
- —49— CTA Bus
- —290— Pace Bus

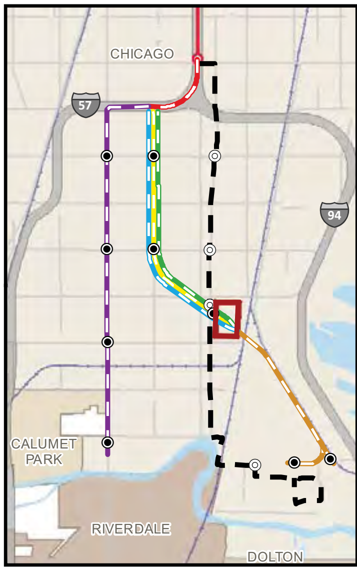
Scale


0
125
250
Feet

map id: 03_03.12


CICS-Prairie
KENSINGTON AVE
Proposed Parking
112
113
114
115
116
116TH ST
118
INDIANA AVE
PRAIRIE AVE
119
66
120
121
117TH ST
117TH PL
122
67
118TH ST
Salem Christian Acad
Kensington Park

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

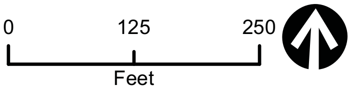
Legend

UPRR Rail Alternative ROW Option

Sheet 13 of 15

▨	Proposed Permanent Envelope
🟦	Easement
🟫	Parcel Affected by Proposed Permanent Envelope
🟥	Building Displacement
⬜	Building Footprint
☐	Parcels
🟩	Parks
🟪	Schools
-+-+-	Freight Rail
-49-	CTA Bus
-290-	Pace Bus

Scale


0
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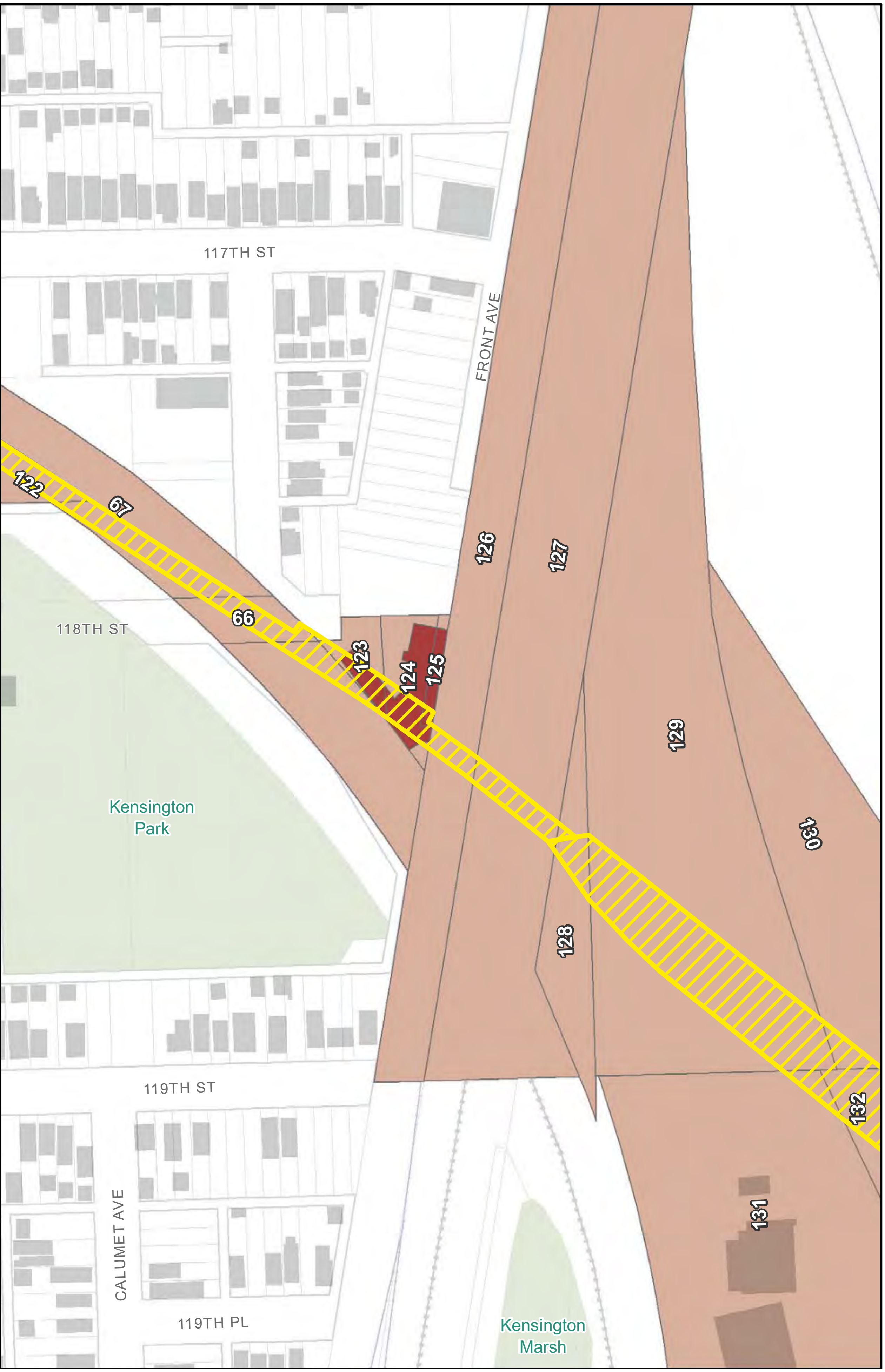
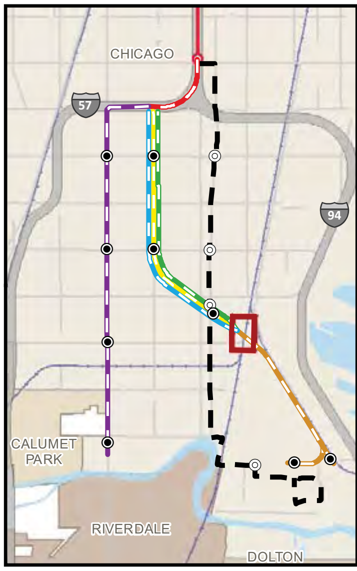
250
Feet

map id: 03_03.13


117TH ST
FRONT AVE
118TH ST
119TH ST
119TH PL
CALUMET AVE
Kensington Park
Kensington Marsh
122
67
66
123
124
125
126
127
128
129
130
131
132

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

UPRR Rail Alternative ROW Option

Sheet 14 of 15

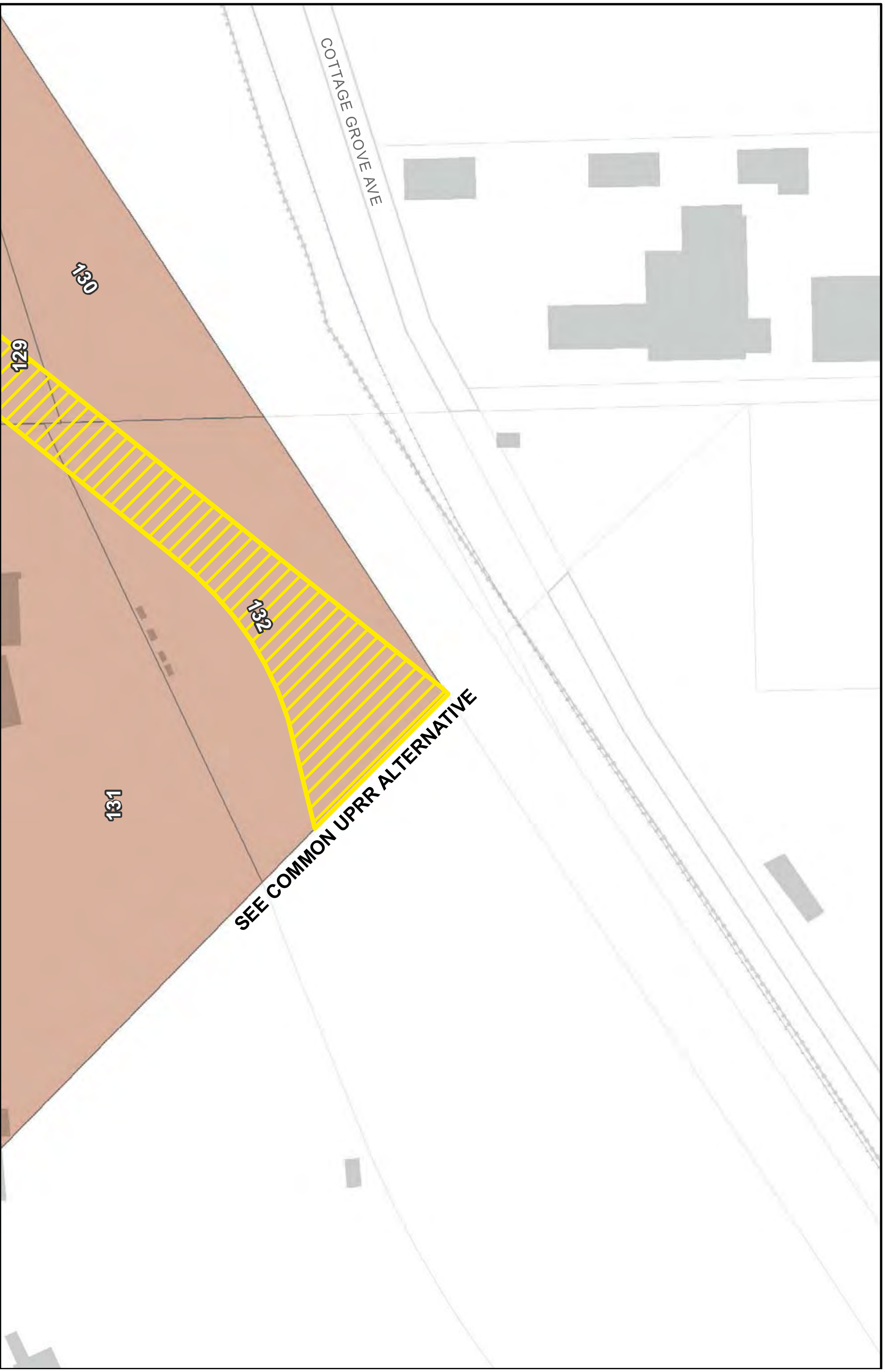
- ▨ Proposed Permanent Envelope
- 🟦 Easement
- 🟫 Parcel Affected by Proposed Permanent Envelope
- 🟥 Building Displacement
- ⬜ Building Footprint
- ☐ Parcels
- 🟩 Parks
- 🟪 Schools
- -+-+- Freight Rail
- -49- CTA Bus
- -290- Pace Bus

Scale

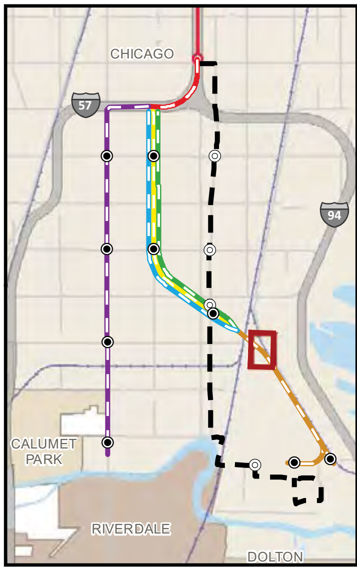
0 125 250

Feet

map id: 03_03.14


COTTAGE GROVE AVE
130
129
132
131
SEE COMMON UPRR ALTERNATIVE

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

UPRR Rail Alternative ROW Option

Sheet 15 of 15

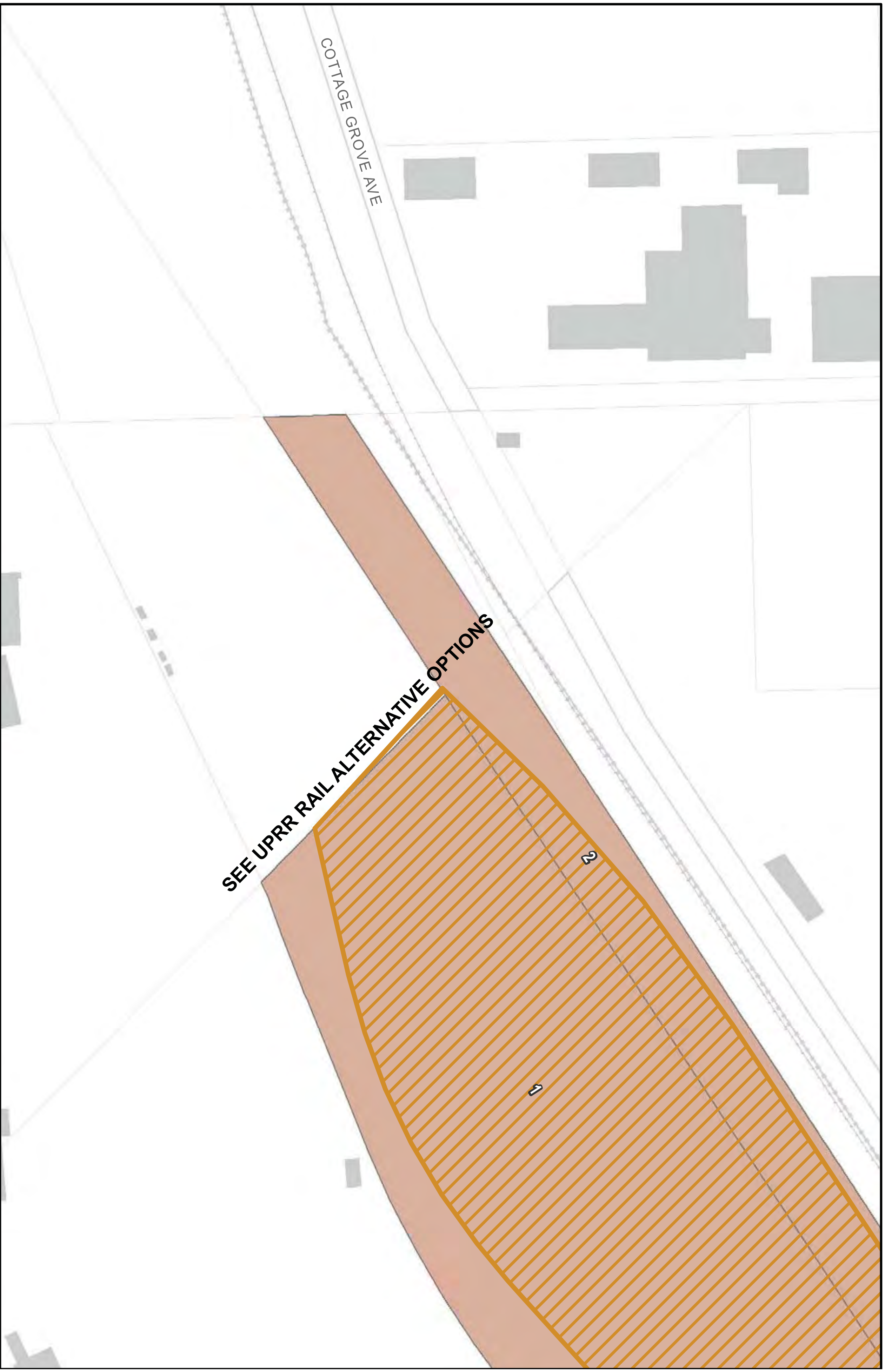
- ▨ Proposed Permanent Envelope
- 🟦 Easement
- 🟫 Parcel Affected by Proposed Permanent Envelope
- 🟥 Building Displacement
- ⬜ Building Footprint
- ☐ Parcels
- 🟩 Parks
- 🟪 Schools
- -+- Freight Rail
- -49- CTA Bus
- -290- Pace Bus

Scale

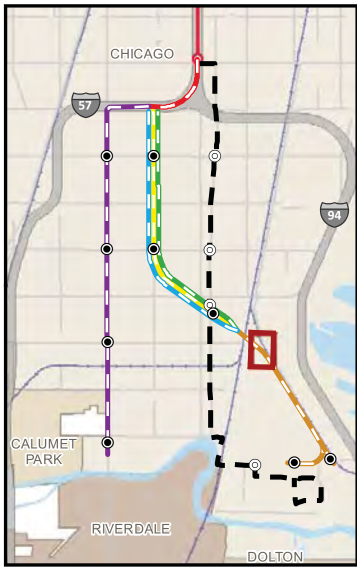
0 125 250

Feet

map id: 03_03.15


COTTAGE GROVE AVE
SEE UPRR RAIL ALTERNATIVE OPTIONS
2
1

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

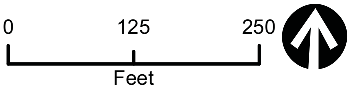
Legend

Common UPRR Rail Alternative

Sheet 1 of 5

- ▨ Proposed Permanent Envelope
- 🟫 Parcel Affected by Proposed Permanent Envelope
- 🟥 Building Displacement
- ⬜ Building Footprint
- ☐ Parcels
- 🟩 Parks
- 🟪 Schools
- -+-+- Freight Rail
- –49– CTA Bus
- –290– Pace Bus

Scale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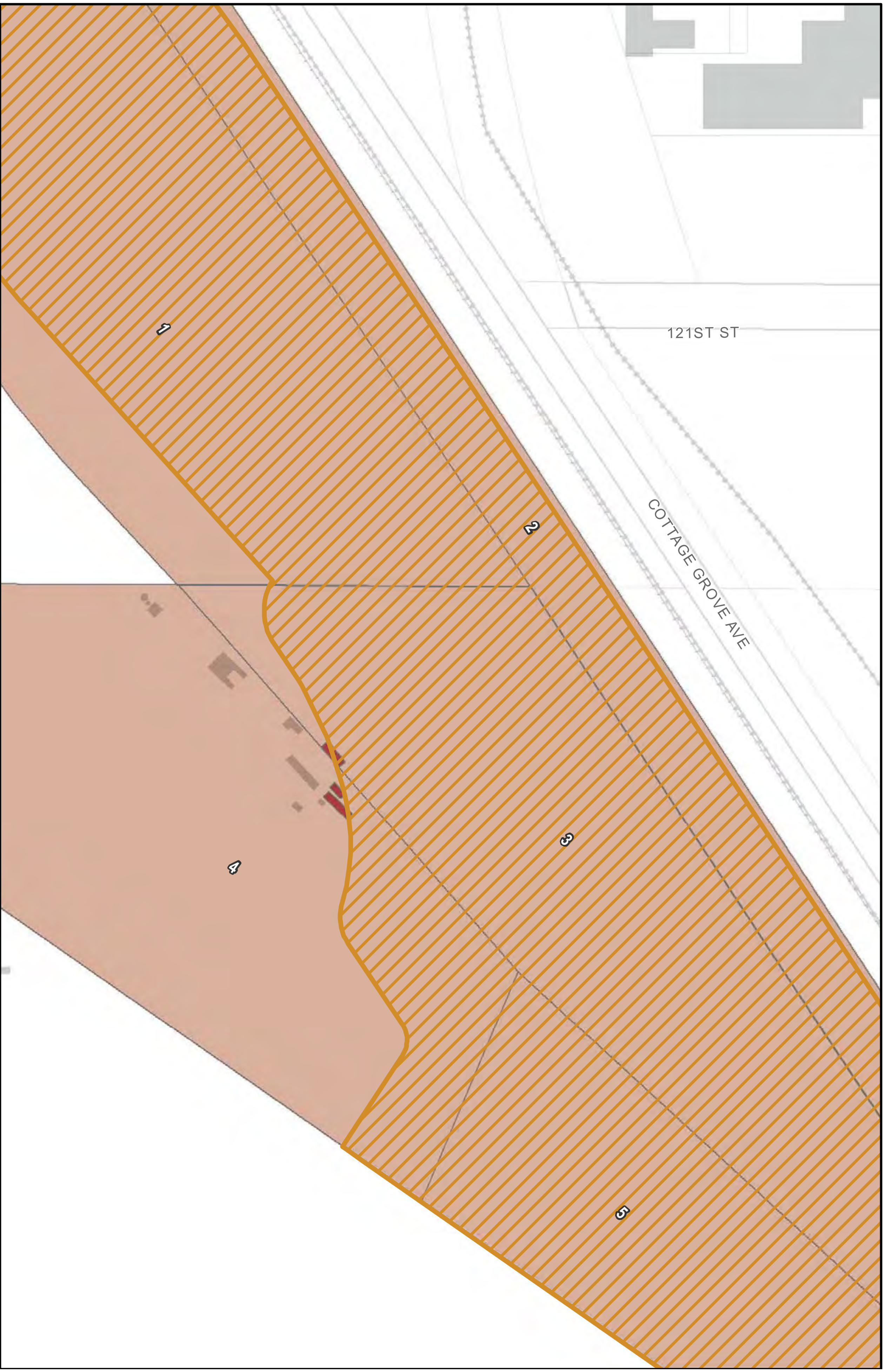
Feet

map id: 03_04.1


1
121ST ST
2
COTTAGE GROVE AVE
3
4
5

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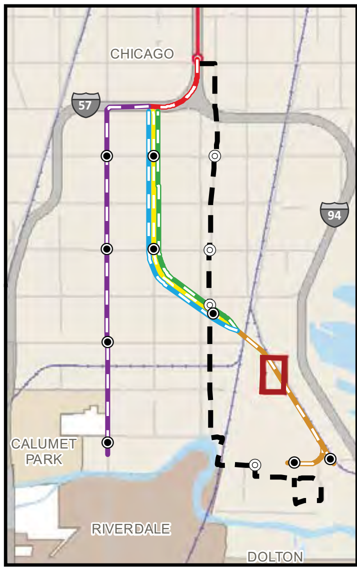

CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

Common UPRR Rail Alternative

Sheet 2 of 5

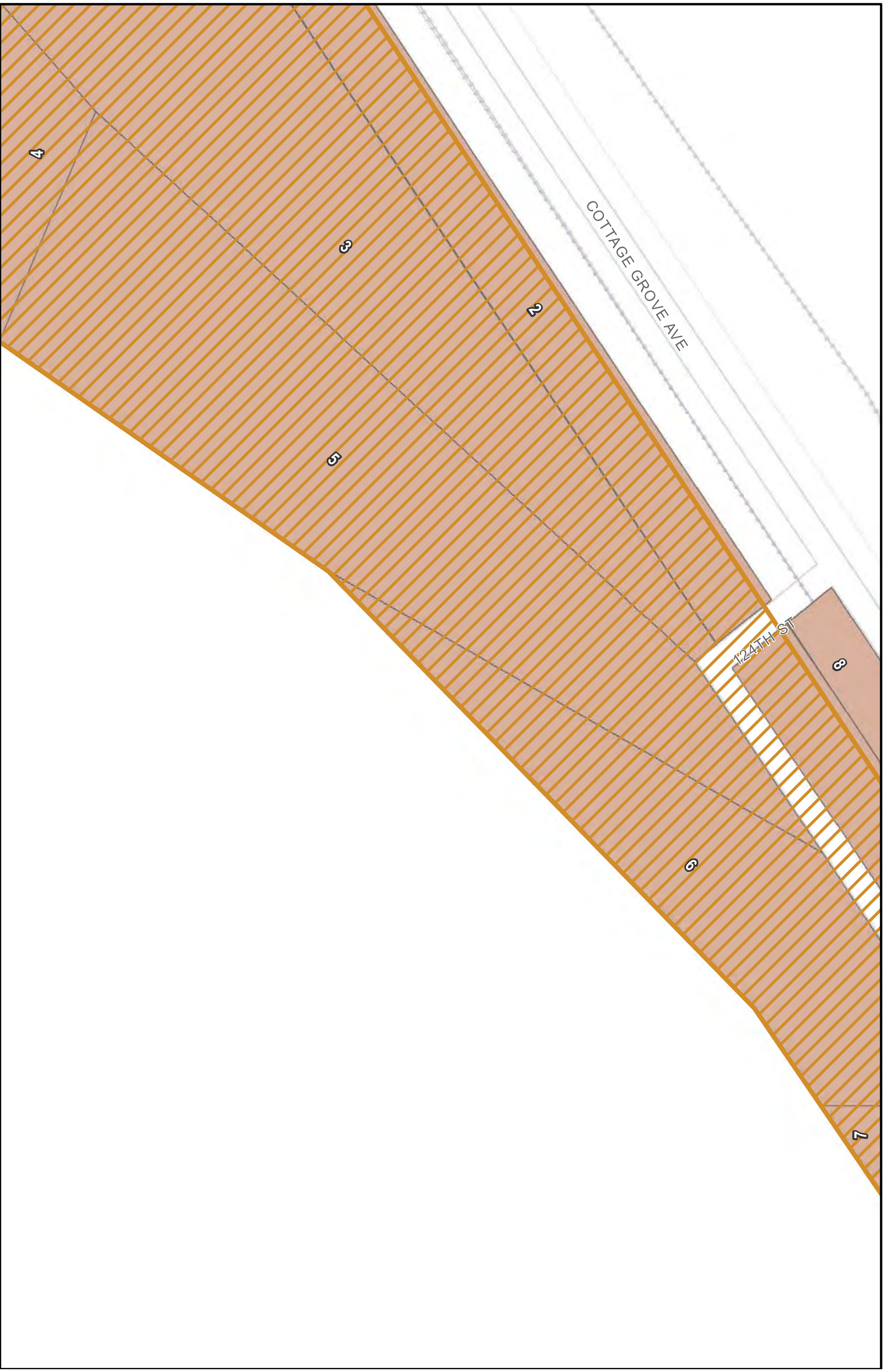
- ▨ Proposed Permanent Envelope
- ■ Parcel Affected by Proposed Permanent Envelope
- 🟥 Building Displacement
- ■ Building Footprint
- □ Parcels
- 🟩 Parks
- 🟪 Schools
- -+- Freight Rail
- —49— CTA Bus
- —290— Pace Bus

Scale

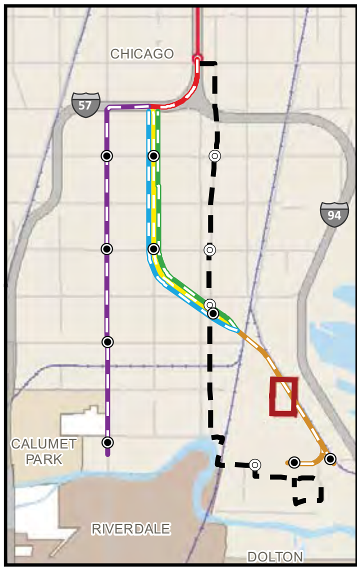
0 125 250

Feet

map id: 03_04.2


4
3
2
5
6
7
8
COTTAGE GROVE AVE
124TH ST

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

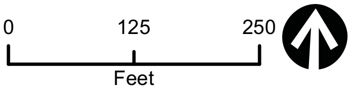
Legend

Common UPRR Rail Alternative

Sheet 3 of 5

- ▨ Proposed Permanent Envelope
- ■ Parcel Affected by Proposed Permanent Envelope
- 🟥 Building Displacement
- ■ Building Footprint
- □ Parcels
- 🟩 Parks
- ■ Schools
- -+-+- Freight Rail
- —49— CTA Bus
- —290— Pace Bus

Scale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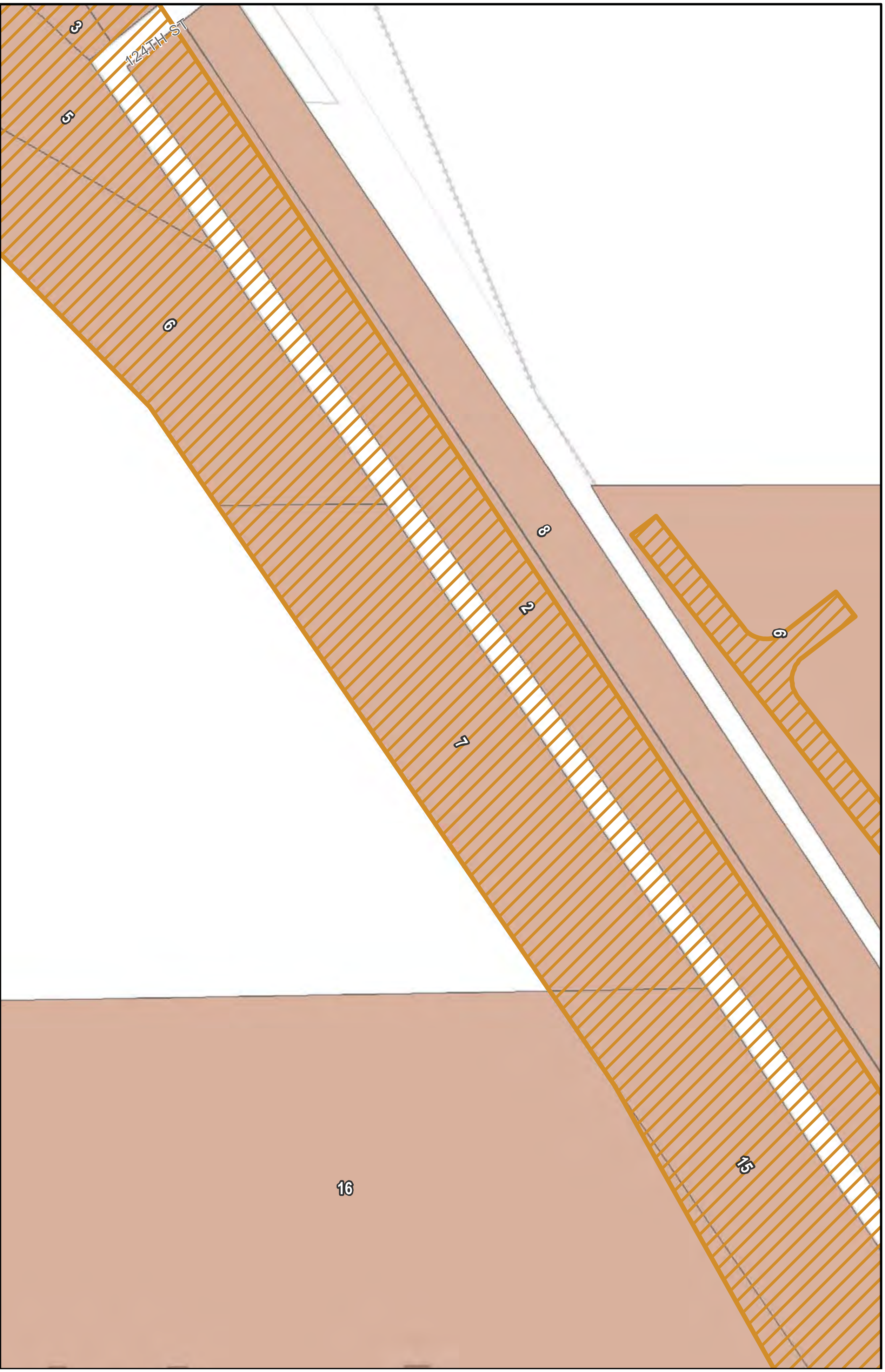
250
Feet

map id: 03_04.3


3
124TH ST
5
6
8
2
9
7
15
16

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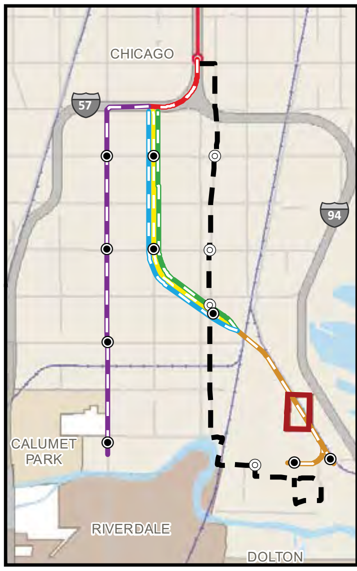

CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

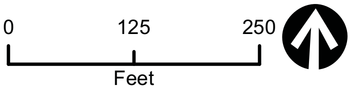
Legend

Common UPRR Rail Alternative

Sheet 4 of 5

▨	Proposed Permanent Envelope
🟫	Parcel Affected by Proposed Permanent Envelope
🟥	Building Displacement
⬜	Building Footprint
☐	Parcels
🟩	Parks
🟪	Schools
-+-+-	Freight Rail
—49—	CTA Bus
—290—	Pace Bus

Scale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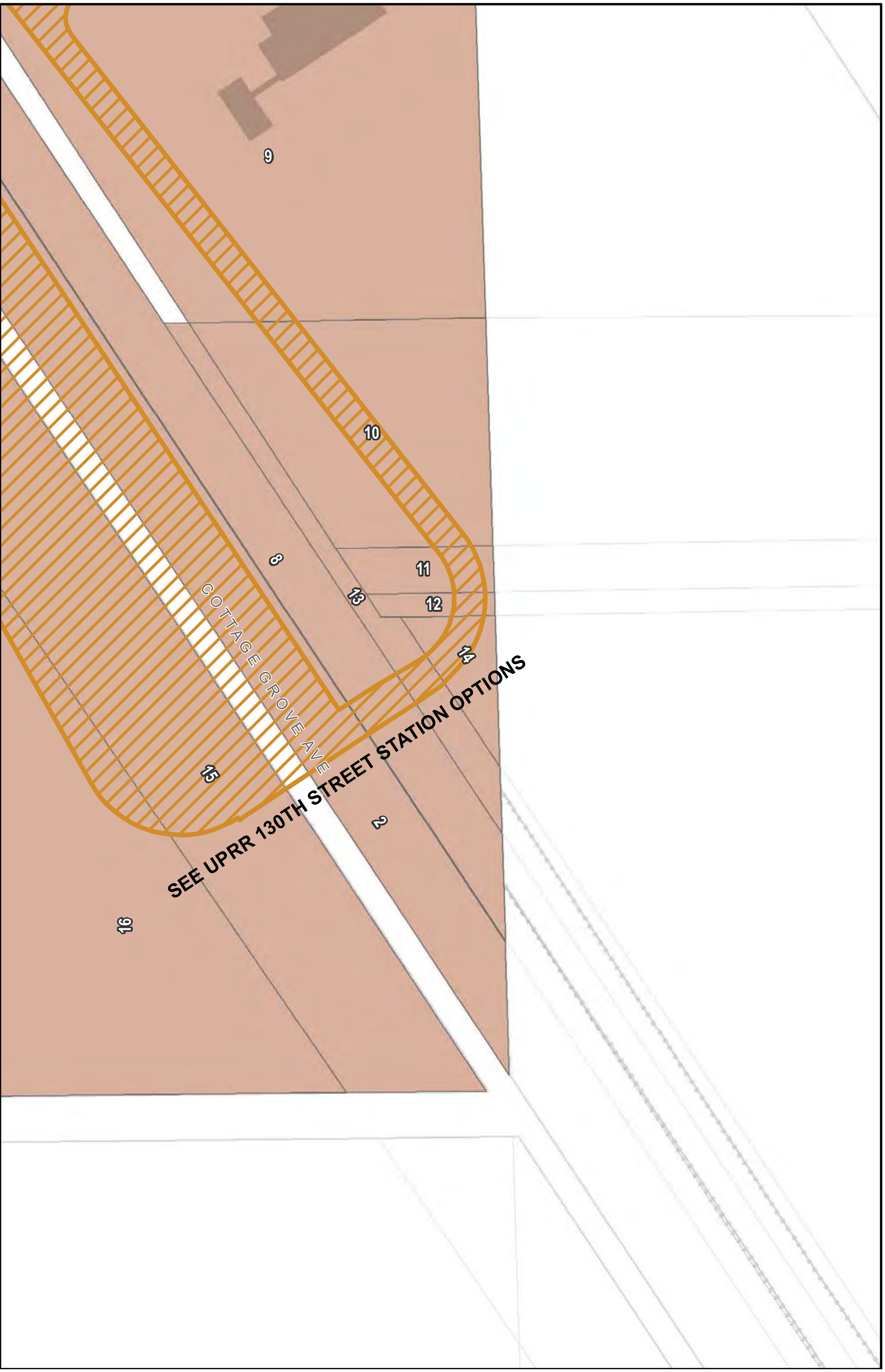
125
250
Feet

map id: 03_04.4


9
10
8
11
13
12
14
COTTAGE GROVE AVE
SEE UPRR 130TH STREET STATION OPTIONS
15
2
16

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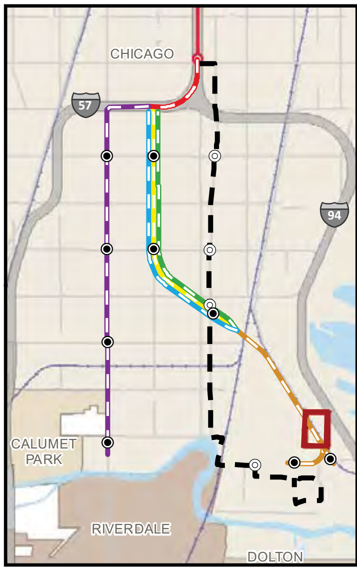

CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

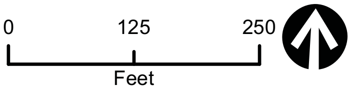
Legend

Common UPRR Rail Alternative

Sheet 5 of 5

▨ Proposed Permanent Envelope
🟫 Parcel Affected by Proposed Permanent Envelope
🟥 Building Displacement
⬜ Building Footprint
☐ Parcels
🟩 Parks
🟪 Schools
-+-+- Freight Rail
—49— CTA Bus
—290— Pace Bus

Scale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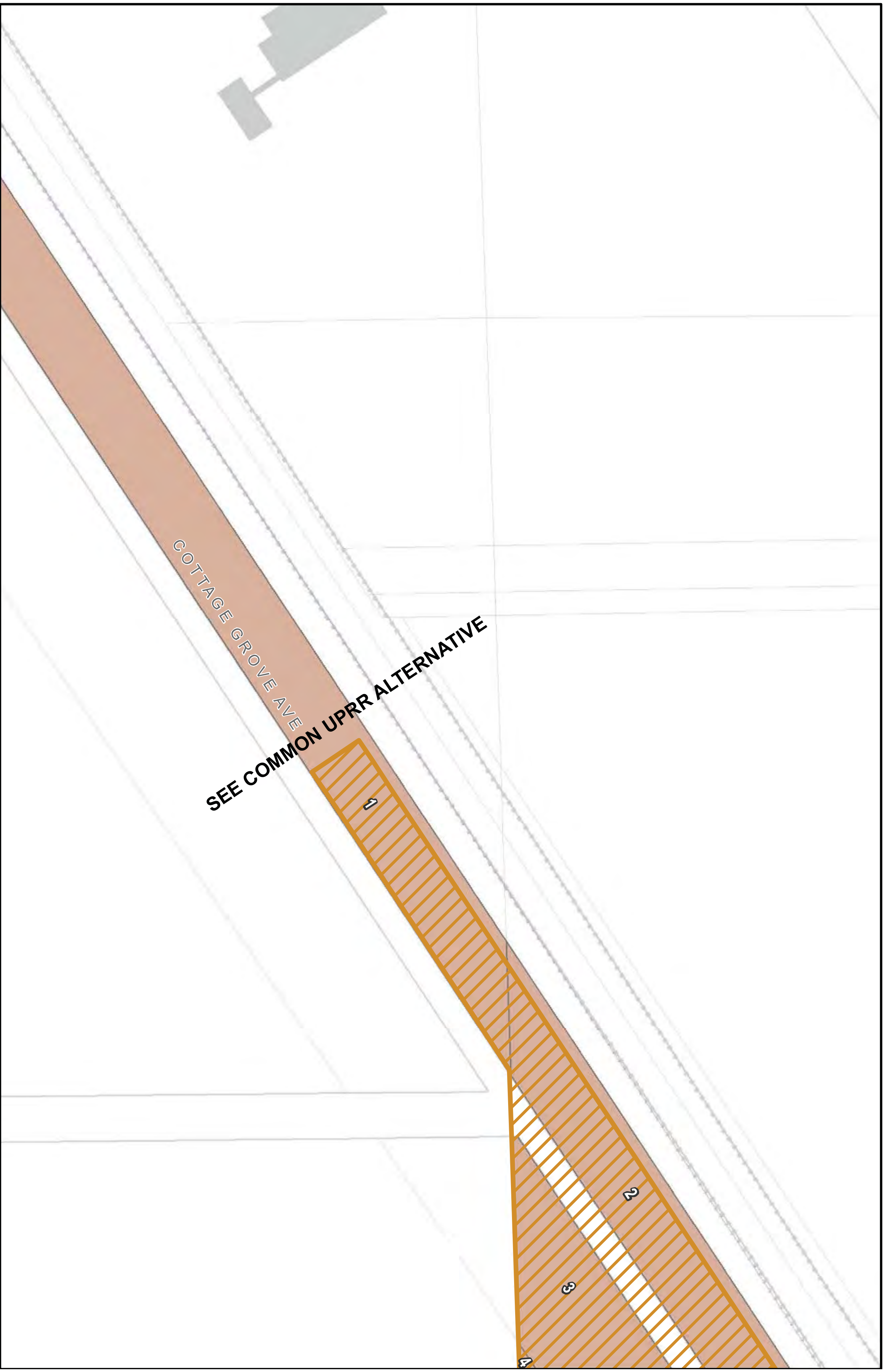
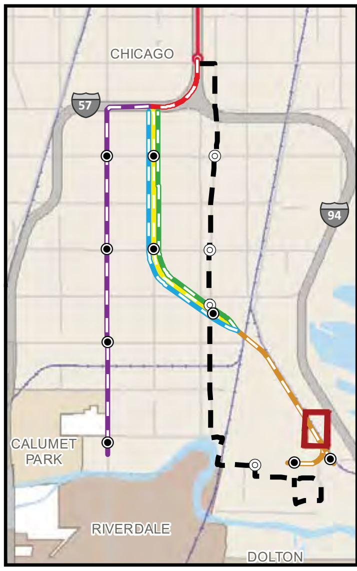
125
250
Feet

map id: 03_04.5


COTTAGE GROVE AVE
SEE COMMON UPRR ALTERNATIVE
1
2
3
4

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

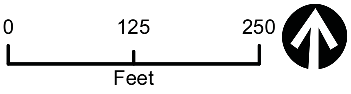
Legend

UPRR Rail Alternative 130th Street Station South Option

Sheet 1 of 3

▨	Proposed Permanent Envelope
🟫	Parcel Affected by Proposed Permanent Envelope
🟥	Building Displacement
⬜	Building Footprint
□	Parcels
🟩	Parks
🟪	Schools
-+-+-	Freight Rail
-49-	CTA Bus
-290-	Pace Bus

Scale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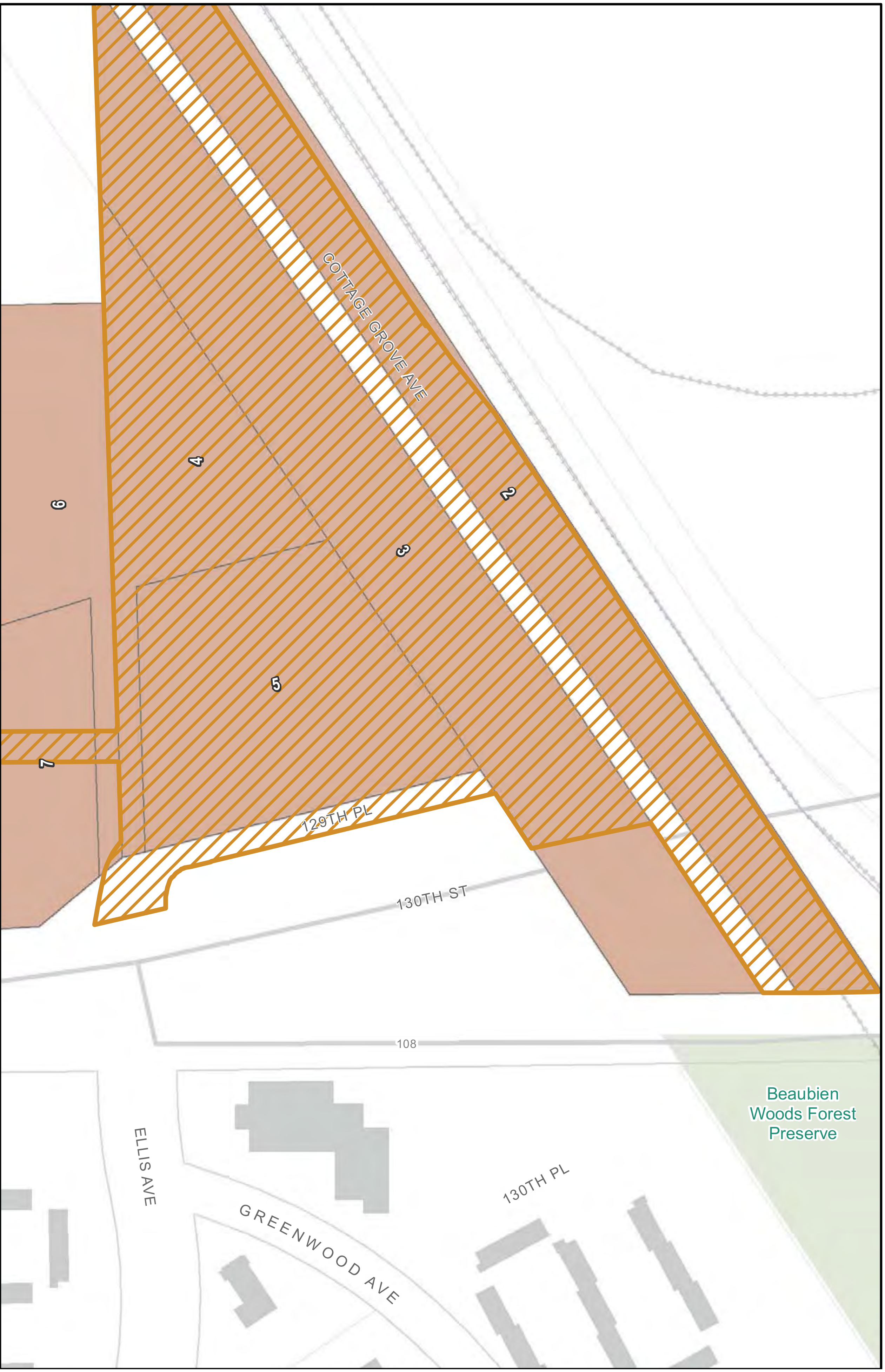
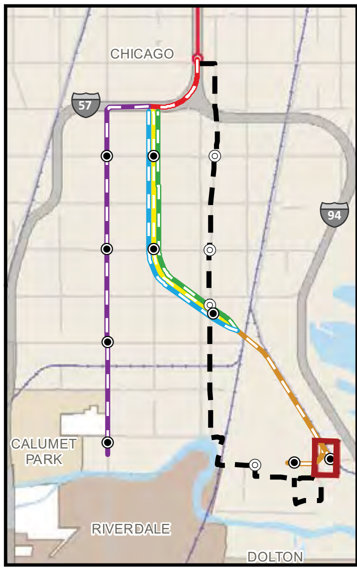
250
Feet

map id: 03_05.1


COTTAGE GROVE AVE
2
3
4
5
6
7
129TH PL
130TH ST
108
ELLIS AVE
GREENWOOD AVE
130TH PL
Beaubien Woods Forest Preserve

Inset

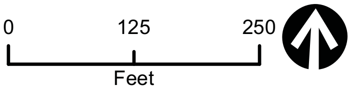

CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

UPRR Rail Alternative
130th Street Station
South Option
Sheet 2 of 3

▨	Proposed Permanent Envelope
■	Parcel Affected by Proposed Permanent Envelope
🟥	Building Displacement
■	Building Footprint
☐	Parcels
🟩	Parks
■	Schools
-+-+-	Freight Rail
—49—	CTA Bus
—290—	Pace Bus

Scale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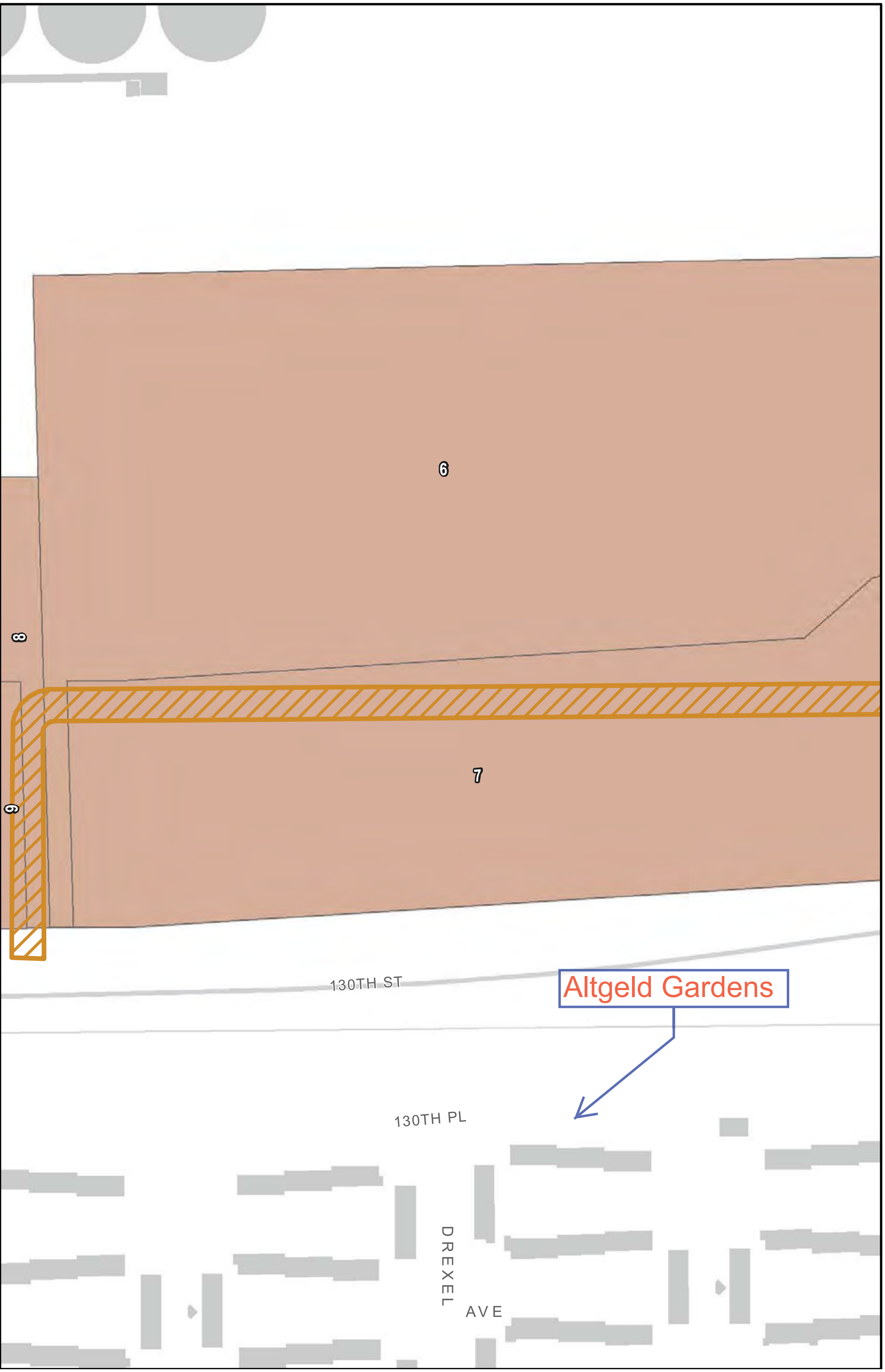
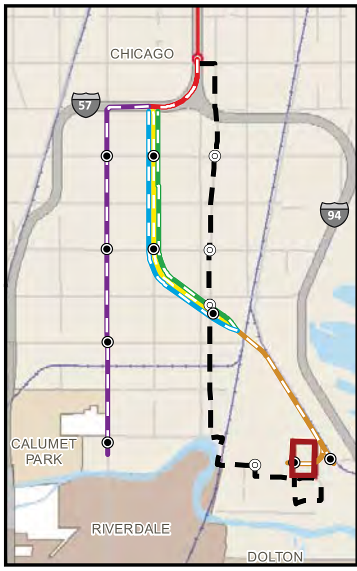
250
Feet

map id: 03_05.2


6
8
7
9
130TH ST
Altgeld Gardens
130TH PL
DREXEL AVE

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

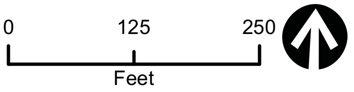
Legend

UPRR Rail Alternative
130th Street Station
South Option

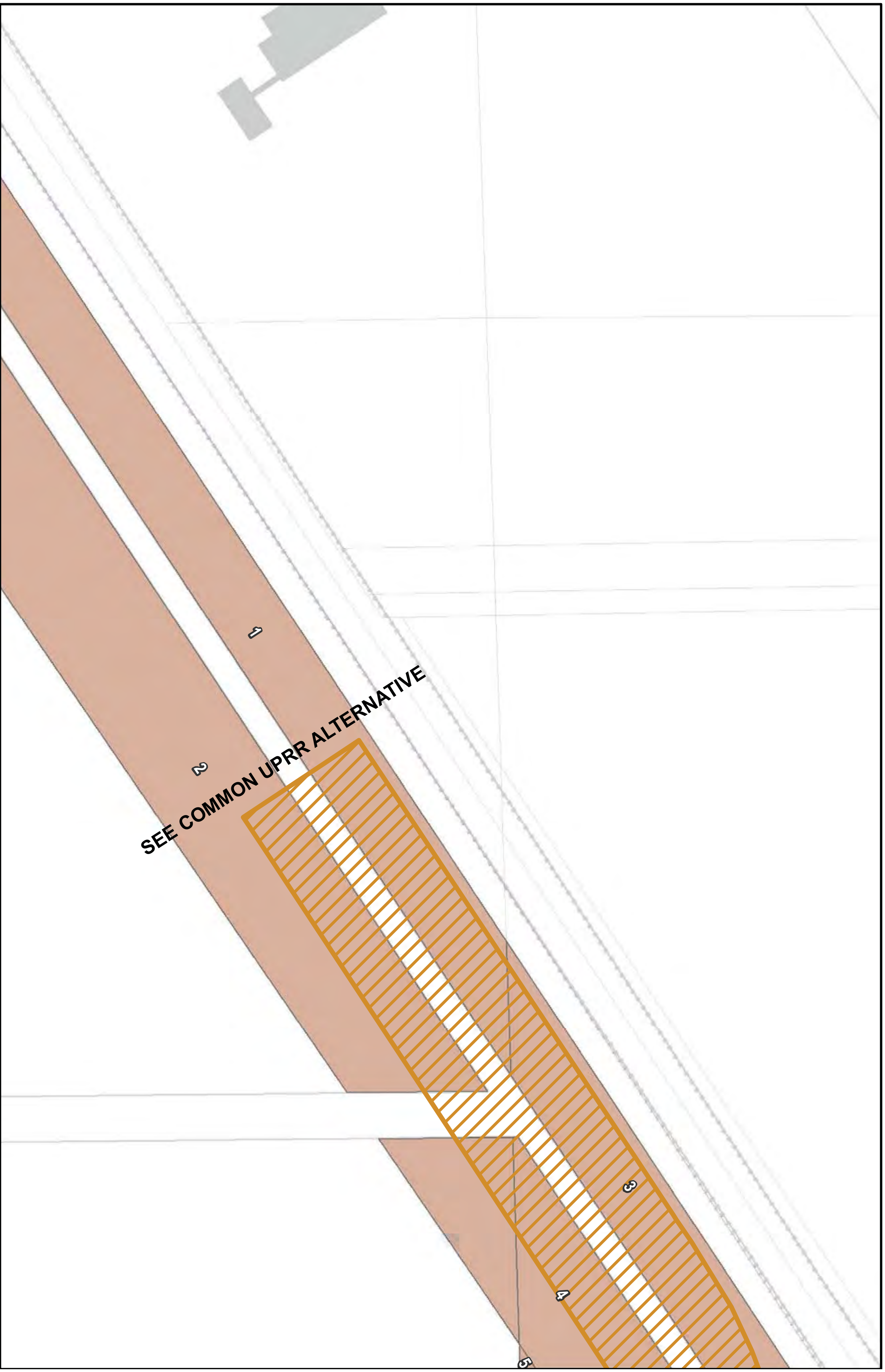
Sheet 3 of 3

▨	Proposed Permanent Envelope
■	Parcel Affected by Proposed Permanent Envelope
🟥	Building Displacement
■	Building Footprint
□	Parcels
🟩	Parks
■	Schools
-•-•-	Freight Rail
—49—	CTA Bus
—290—	Pace Bus

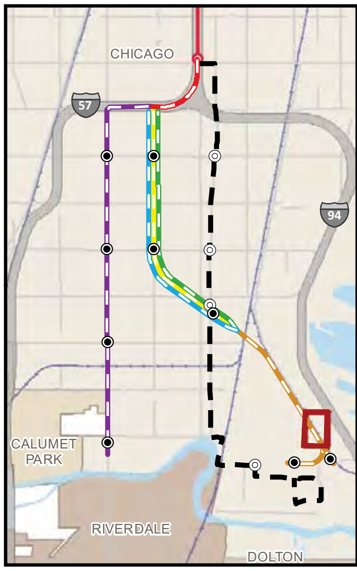
Scale


0
125
250
Feet

map id: 03_05.3


SEE COMMON UPRR ALTERNATIVE
1
2
3
4
5

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

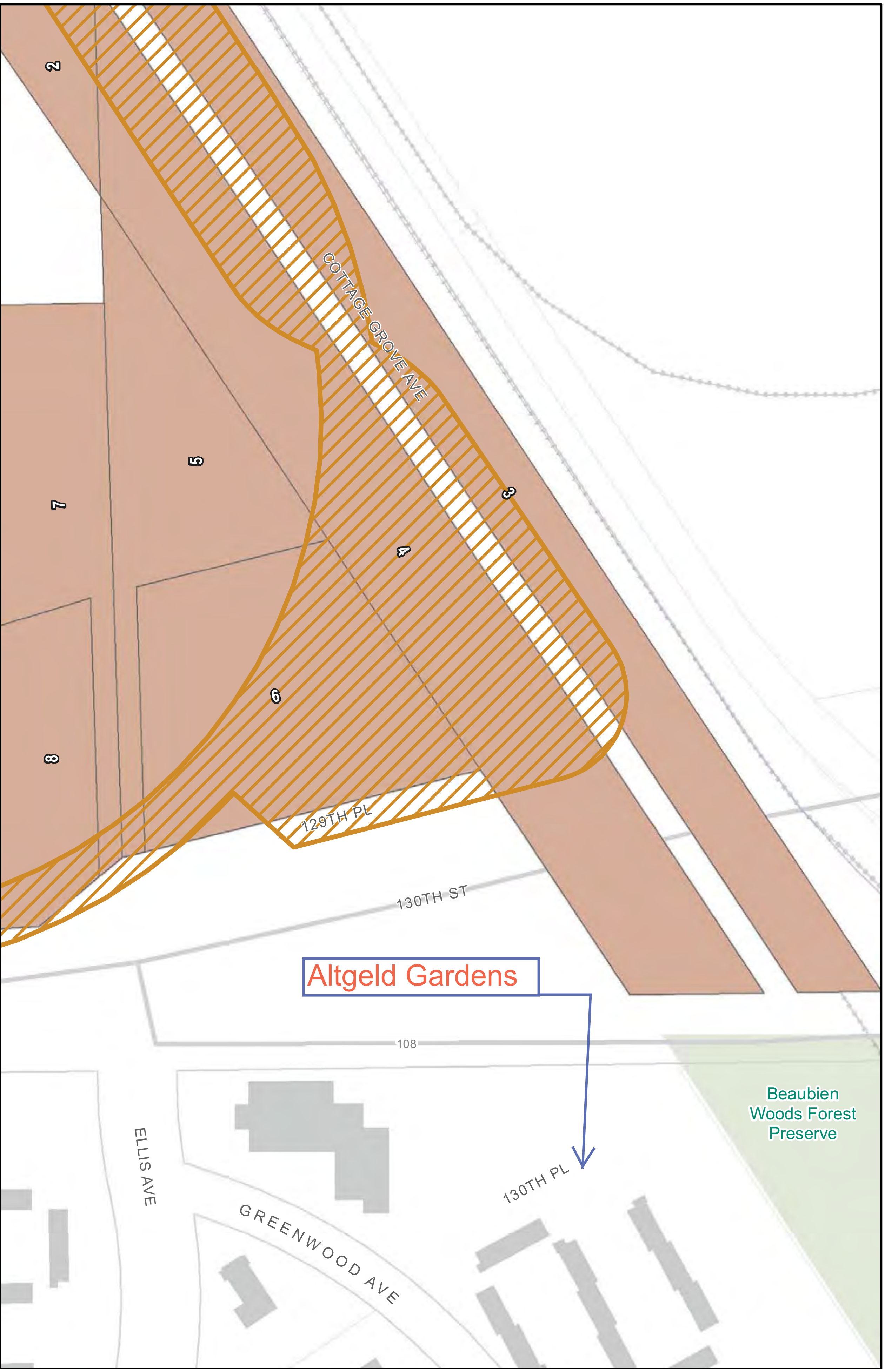
UPRR Rail Alternative
130th Street Station
West Option
Sheet 1 of 4

- ▨ Proposed Permanent Envelope
- ■ Parcel Affected by Proposed Permanent Envelope
- 🟥 Building Displacement
- ■ Building Footprint
- □ Parcels
- 🟩 Parks
- 🟪 Schools
- -+-+- Freight Rail
- —49— CTA Bus
- —290— Pace Bus

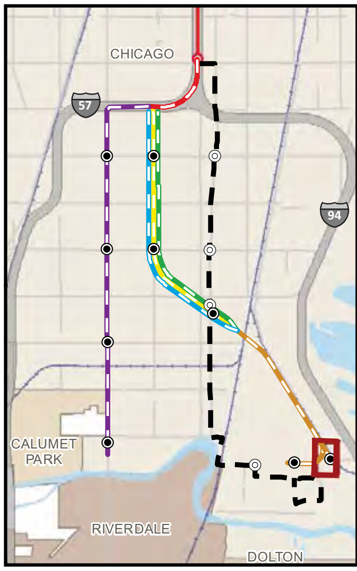
Scale

0 125 250
Feet

map id: 03_06.1


2
COTTAGE GROVE AVE
5
7
3
4
6
8
129TH PL
130TH ST
Altgeld Gardens
108
Beaubien Woods Forest Preserve
ELLIS AVE
130TH PL
GREENWOOD AVE

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

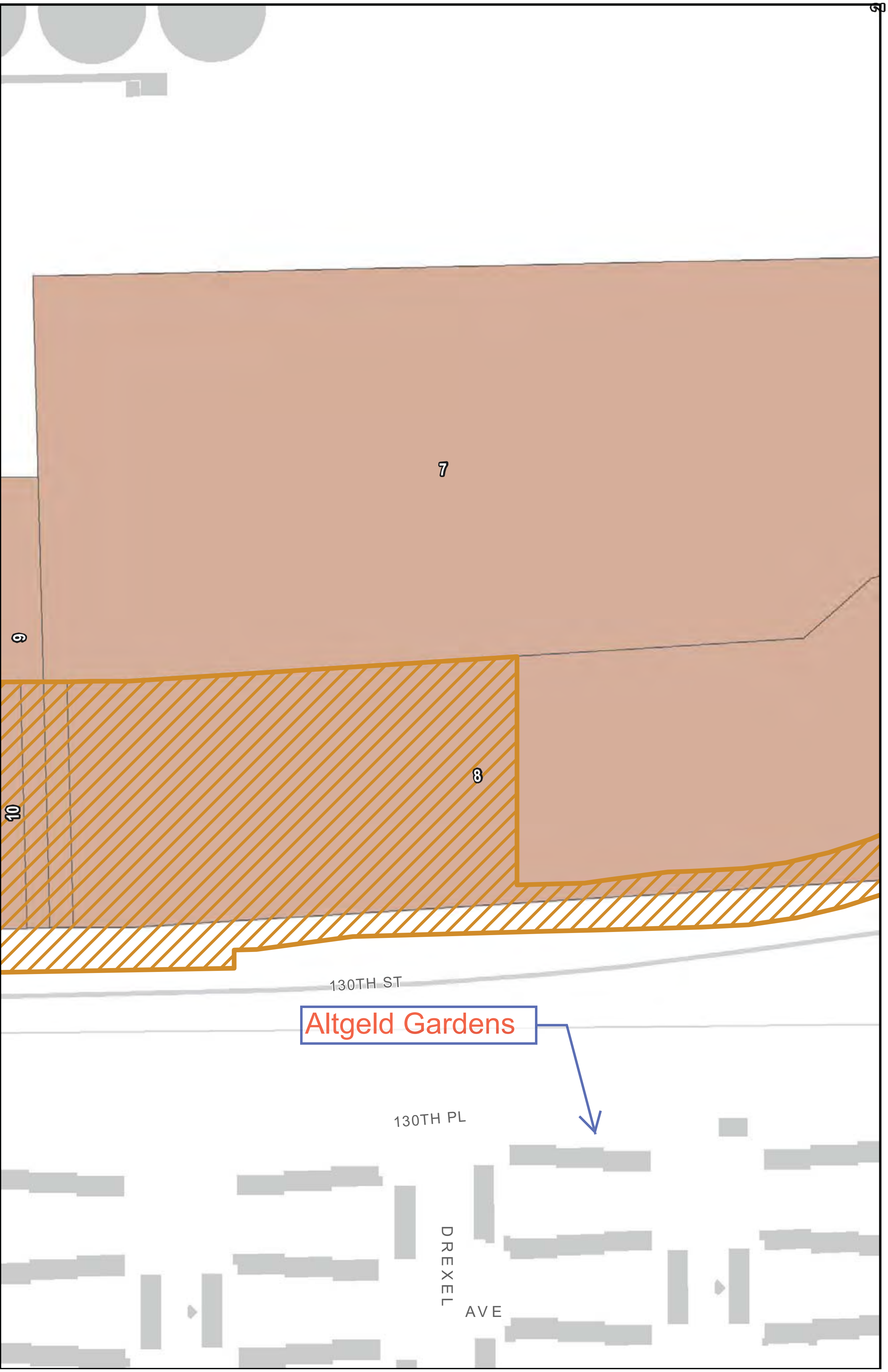
UPRR Rail Alternative
130th Street Station
West Option
Sheet 2 of 4

▨	Proposed Permanent Envelope
🟫	Parcel Affected by Proposed Permanent Envelope
🟥	Building Displacement
⬜	Building Footprint
□	Parcels
🟩	Parks
🟪	Schools
-+-	Freight Rail
-49-	CTA Bus
-290-	Pace Bus

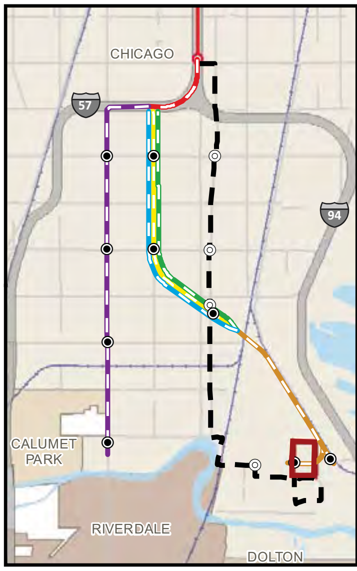
Scale

0 125 250
Feet

map id: 03_06.2


7
9
8
10
130TH ST
Altgeld Gardens
130TH PL
DREXEL AVE

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

UPRR Rail Alternative 130th Street Station West Option

Sheet 3 of 4

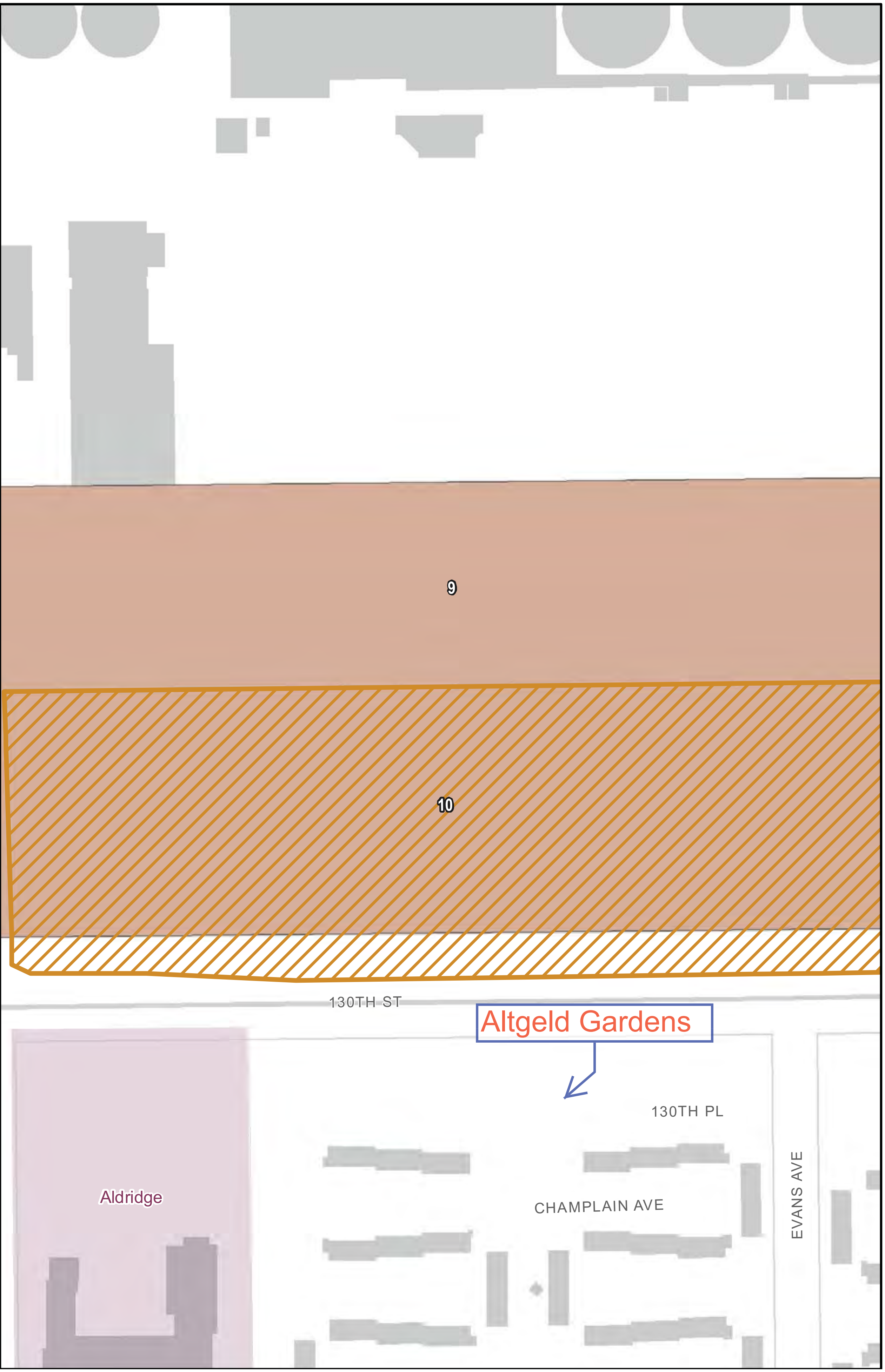
▨	Proposed Permanent Envelope
🟫	Parcel Affected by Proposed Permanent Envelope
🟥	Building Displacement
⬜	Building Footprint
☐	Parcels
🟩	Parks
🟪	Schools
-+-+-	Freight Rail
-49-	CTA Bus
-290-	Pace Bus

Scale

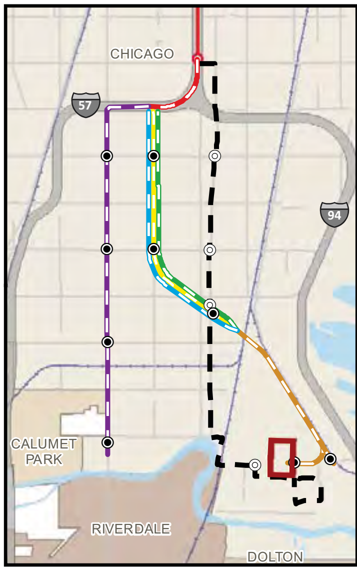
0 125 250

Feet

map id: 03_06.3


9
10
130TH ST
Altgeld Gardens
130TH PL
Aldridge
CHAMPLAIN AVE
EVANS AVE

Inset

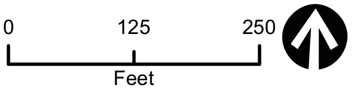

CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

UPRR Rail Alternative
130th Street Station
West Option
Sheet 4 of 4

- ▨ Proposed Permanent Envelope
- 🟫 Parcel Affected by Proposed Permanent Envelope
- 🟥 Building Displacement
- ⬜ Building Footprint
- □ Parcels
- 🟩 Parks
- 🟪 Schools
- -+- Freight Rail
- -49- CTA Bus
- -290- Pace Bus

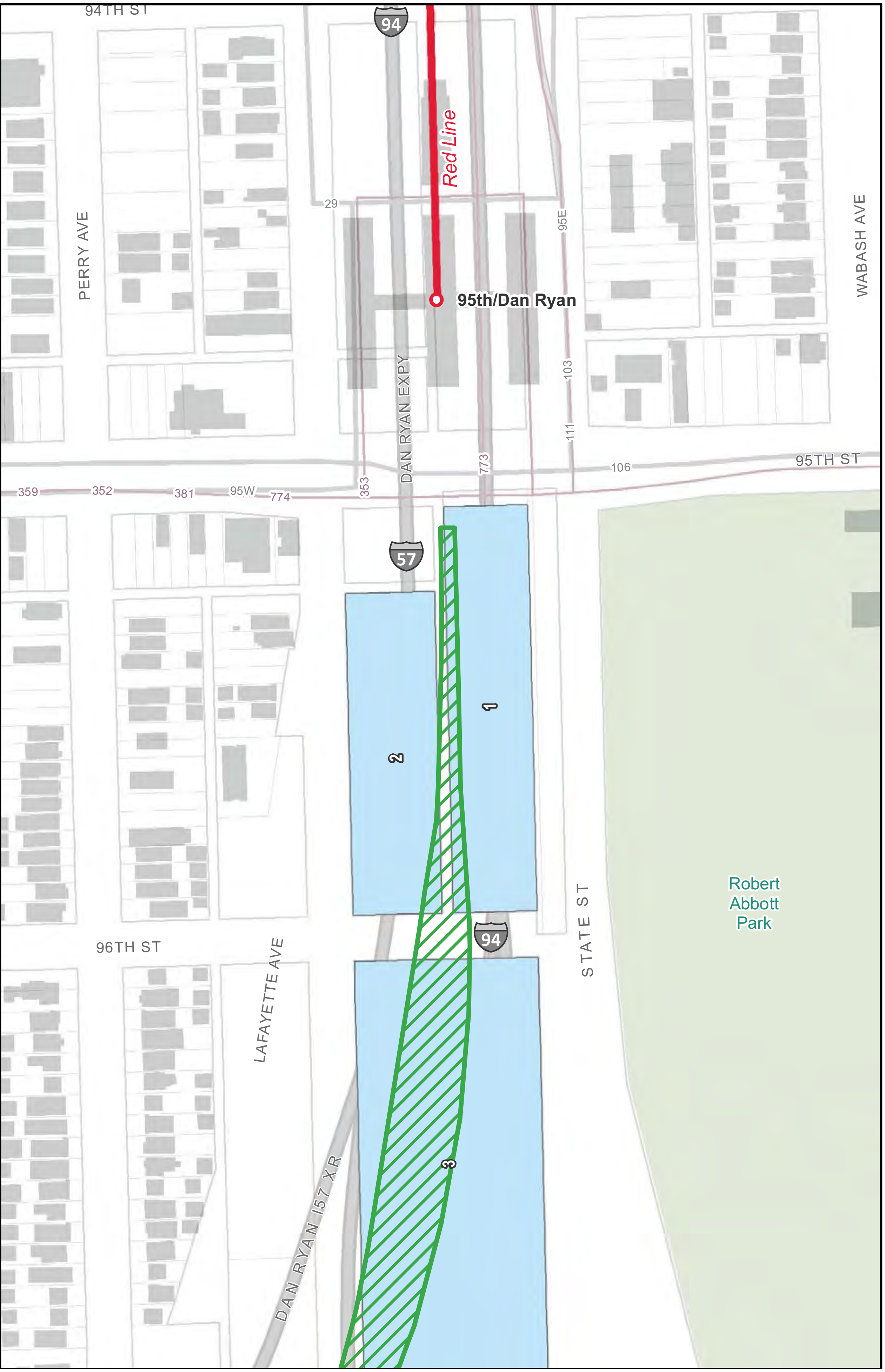
Scale


0
125
250
Feet

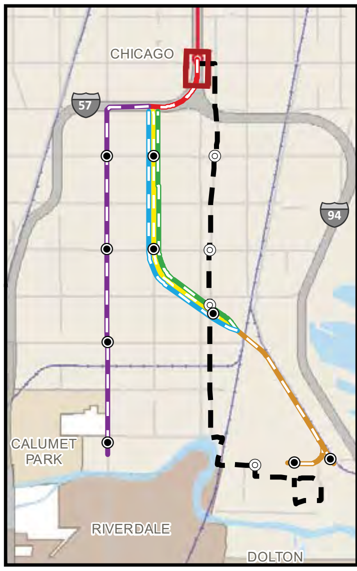
map id: 03_06.4

Appendix D-3:
UPRR East Option Displacement Maps

Note: *The displacement maps for the East and West Option in this appendix have been superseced by the maps included in Appendix I of the Displacements and Relocation of Existing Uses Technical Memorandum.*


94TH ST
94
Red Line
29
95E
WABASH AVE
PERRY AVE
95th/Dan Ryan
DAN RYAN EXPY
103
111
773
353
106
95TH ST
359
352
381
95W
774
57
1
2
96TH ST
LAFAYETTE AVE
94
STATE ST
Robert Abbott Park
3
DAN RYAN I57 XR

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

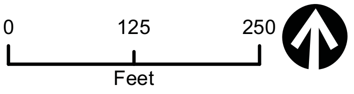
Legend

UPRR Rail Alternative East Option

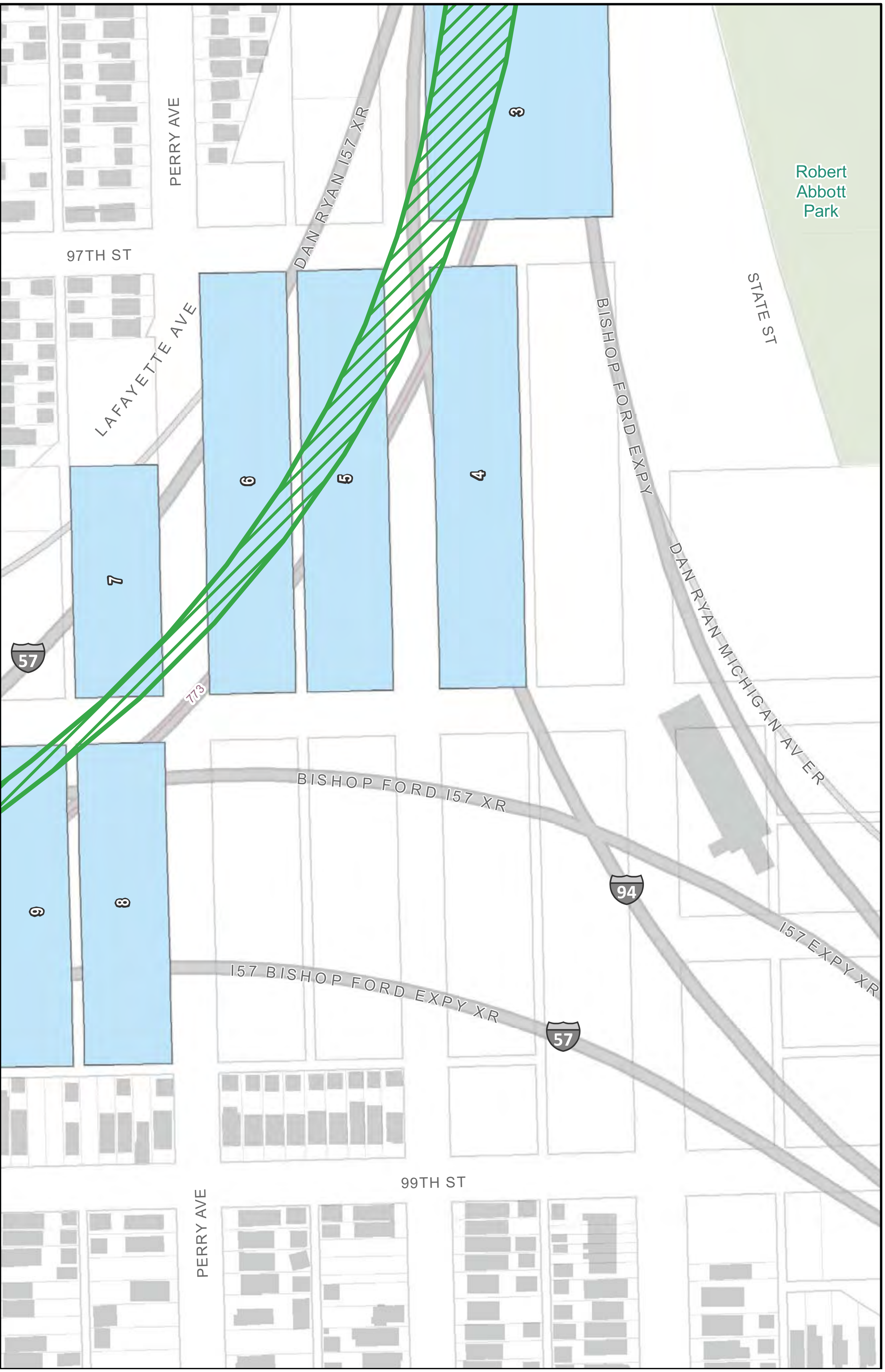
Sheet 1 of 15

- ▨ Proposed Permanent Envelope
- 🟦 Parcel Easement
- 🟫 Parcel Affected by Proposed Permanent Envelope
- 🟥 Building Displacement
- ▒ Building Footprint
- ⬜ Parcels
- 🟩 Parks
- 🟪 Schools
- -+- Freight Rail
- —49— CTA Bus
- —290— Pace Bus

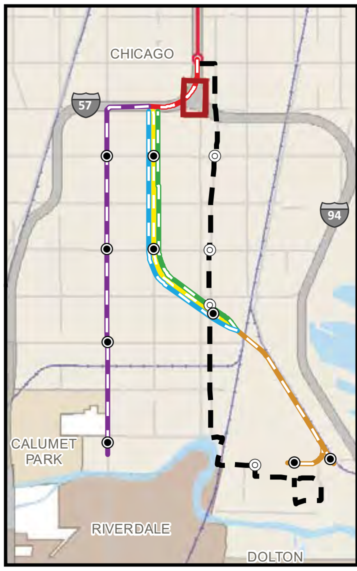
Scale


0
125
250
Feet

map id: 03_01.1


PERRY AVE
DAN RYAN I57 XR
3
Robert Abbott Park
97TH ST
LAFAYETTE AVE
STATE ST
BISHOP FORD EXPY
7
6
5
4
DAN RYAN MICHIGAN AV ER
57
773
BISHOP FORD I57 XR
9
8
94
I57 EXPY XR
I57 BISHOP FORD EXPY XR
57
99TH ST
PERRY AVE

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

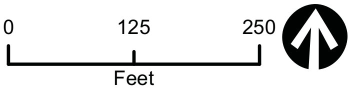
Legend

UPRR Rail Alternative East Option

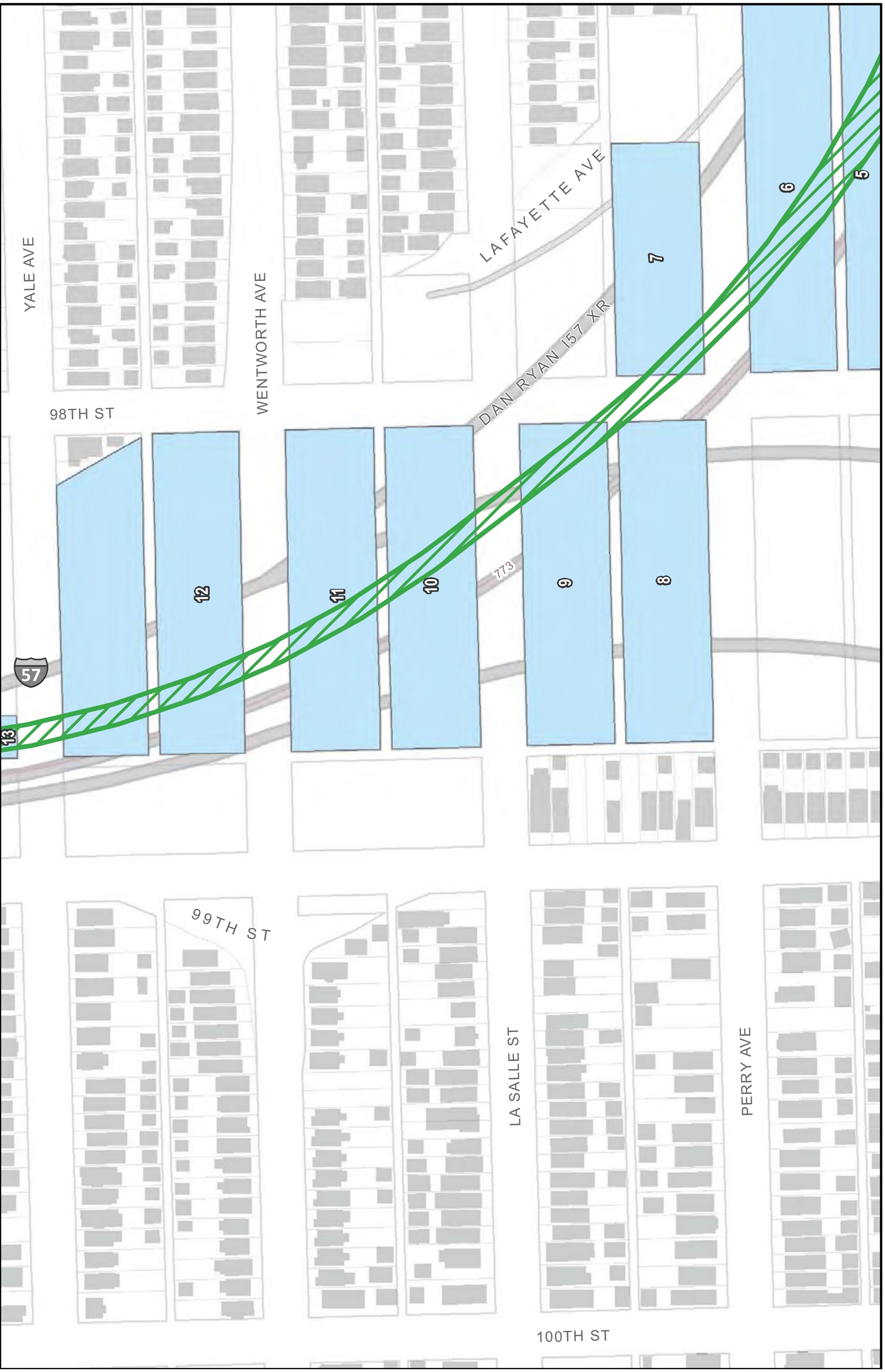
Sheet 2 of 15

▨ Proposed Permanent Envelope
🟦 Parcel Easement
🟫 Parcel Affected by Proposed Permanent Envelope
🟥 Building Displacement
▩ Building Footprint
☐ Parcels
🟩 Parks
🟪 Schools
-+-+- Freight Rail
-49- CTA Bus
-290- Pace Bus

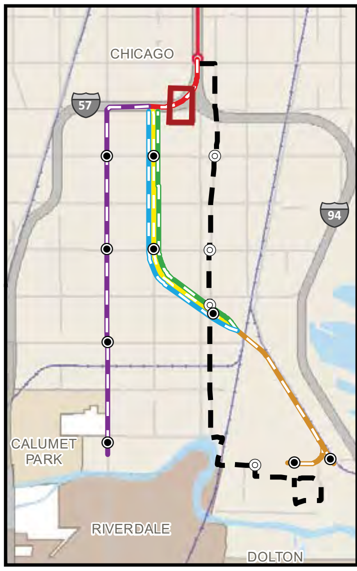
Scale


0
125
250
Feet

map id: 03_01.2


YALE AVE
WENTWORTH AVE
LAFAYETTE AVE
DAN RYAN I57 XR
98TH ST
99TH ST
100TH ST
LA SALLE ST
PERRY AVE
57
773
5
6
7
8
9
10
11
12
13

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

UPRR Rail Alternative East Option

Sheet 3 of 15

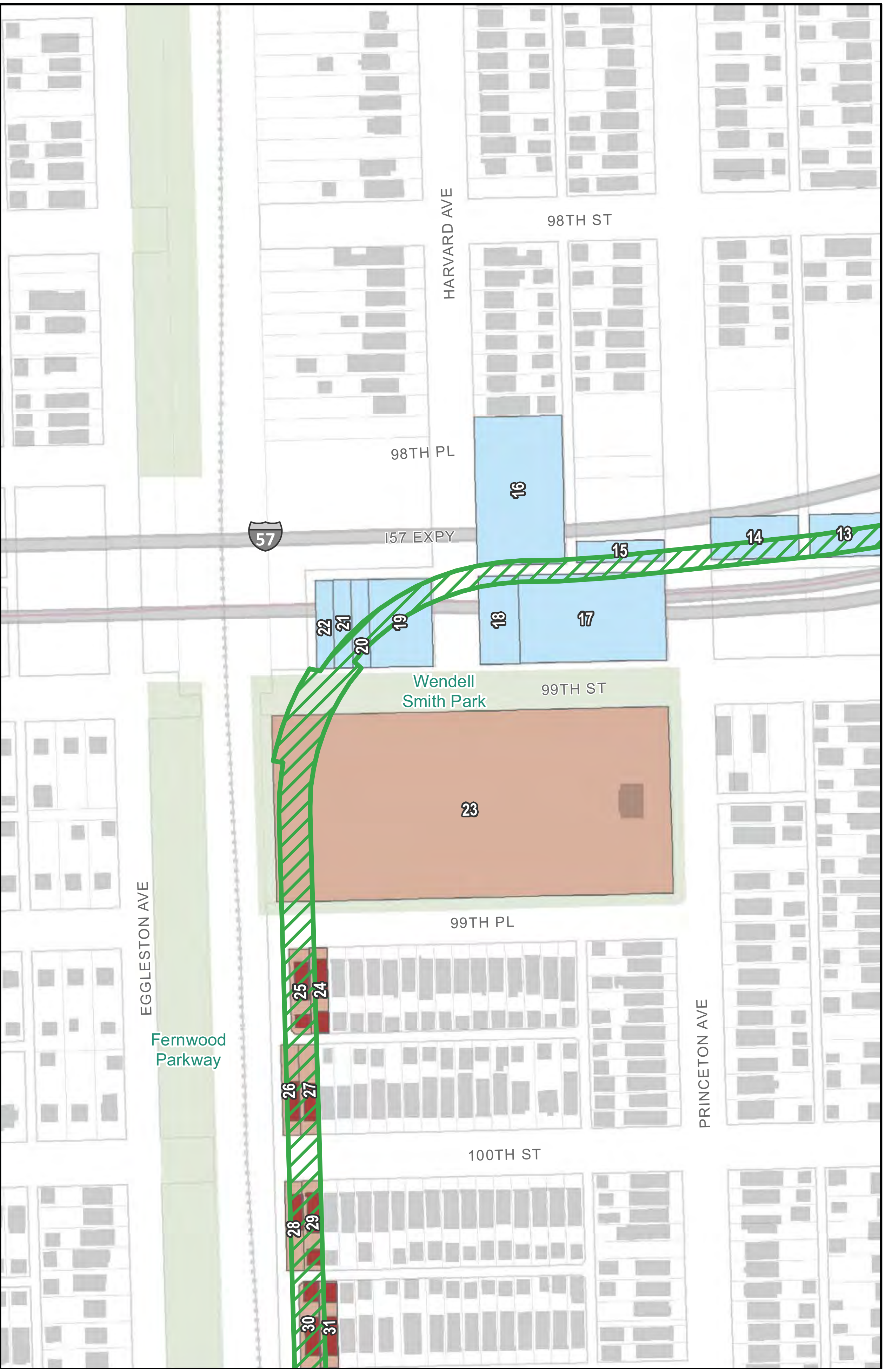
- ▨ Proposed Permanent Envelope
- 🟦 Parcel Easement
- 🟫 Parcel Affected by Proposed Permanent Envelope
- 🟥 Building Displacement
- ⬜ Building Footprint
- ☐ Parcels
- 🟩 Parks
- 🟪 Schools
- Freight Rail
- 49 CTA Bus
- 290 Pace Bus

Scale

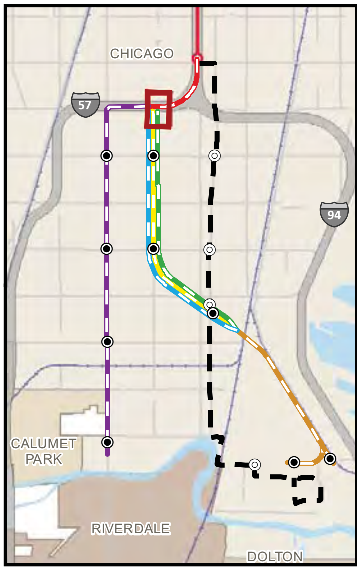
0 125 250

Feet

map id: 03_01.3


HARVARD AVE
98TH ST
98TH PL
57
I57 EXPY
16
15
14
13
22
21
20
19
18
17
Wendell
Smith Park
99TH ST
23
EGGLESTON AVE
99TH PL
25
24
Fernwood
Parkway
26
27
PRINCETON AVE
100TH ST
28
29
30
31

Inset


CHICAGO
57
94
CALUMET
PARK
RIVERDALE
DOLTON

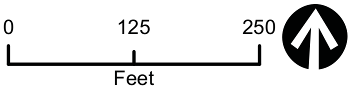
Legend

UPRR Rail Alternative
East Option

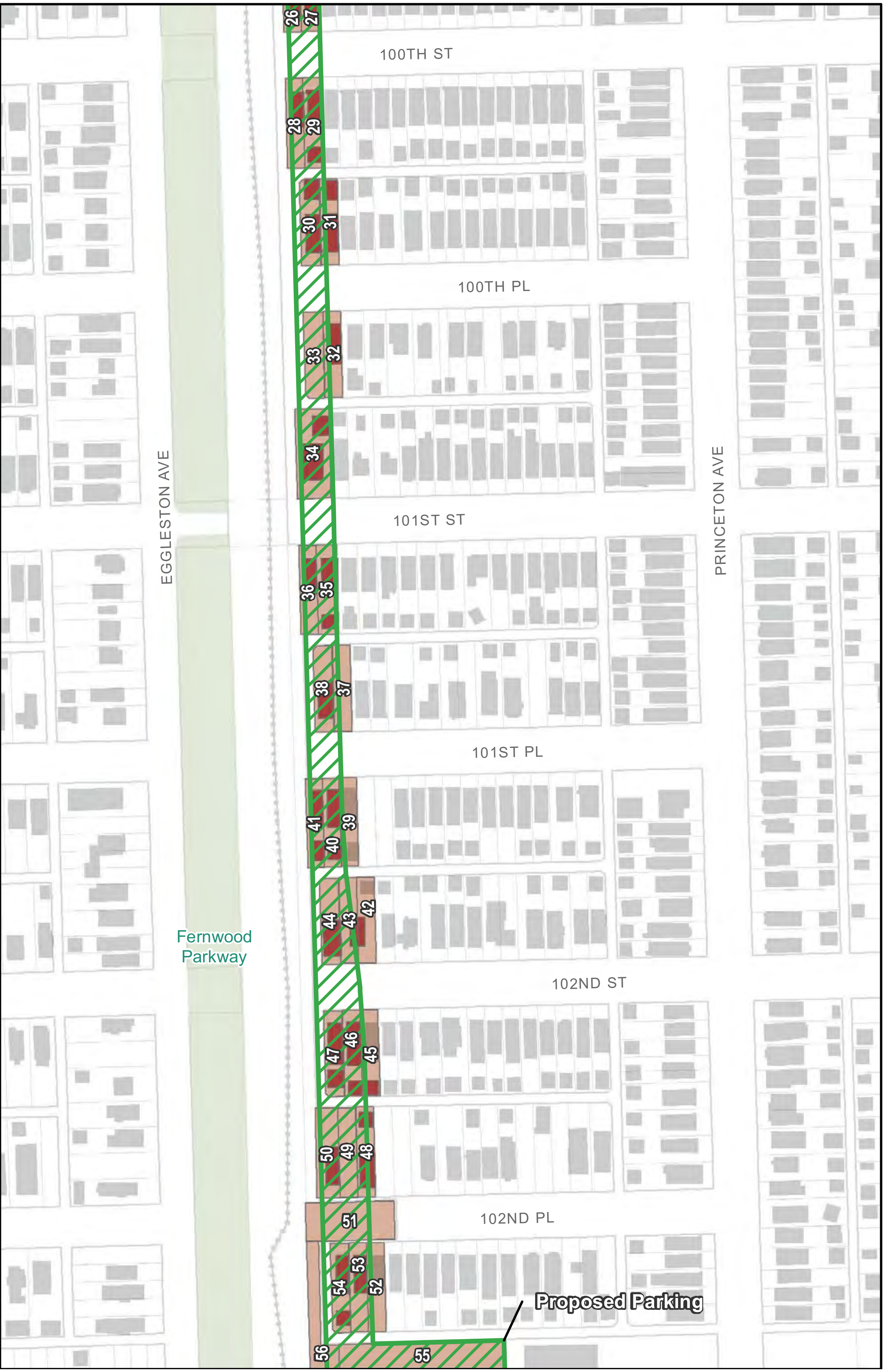
Sheet 4 of 15

- ▨ Proposed Permanent Envelope
- 🟦 Parcel Easement
- 🟫 Parcel Affected by Proposed Permanent Envelope
- 🟥 Building Displacement
- ⬜ Building Footprint
- ☐ Parcels
- 🟩 Parks
- 🟪 Schools
- -+-+- Freight Rail
- -49- CTA Bus
- -290- Pace Bus

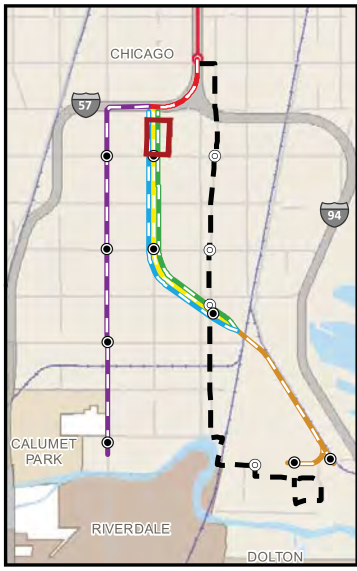
Scale


0
125
250
Feet

map id: 03_01.4


100TH ST
100TH PL
101ST ST
101ST PL
102ND ST
102ND PL
EGGLESTON AVE
PRINCETON AVE
Fernwood Parkway
Proposed Parking
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

UPRR Rail Alternative East Option

Sheet 5 of 15

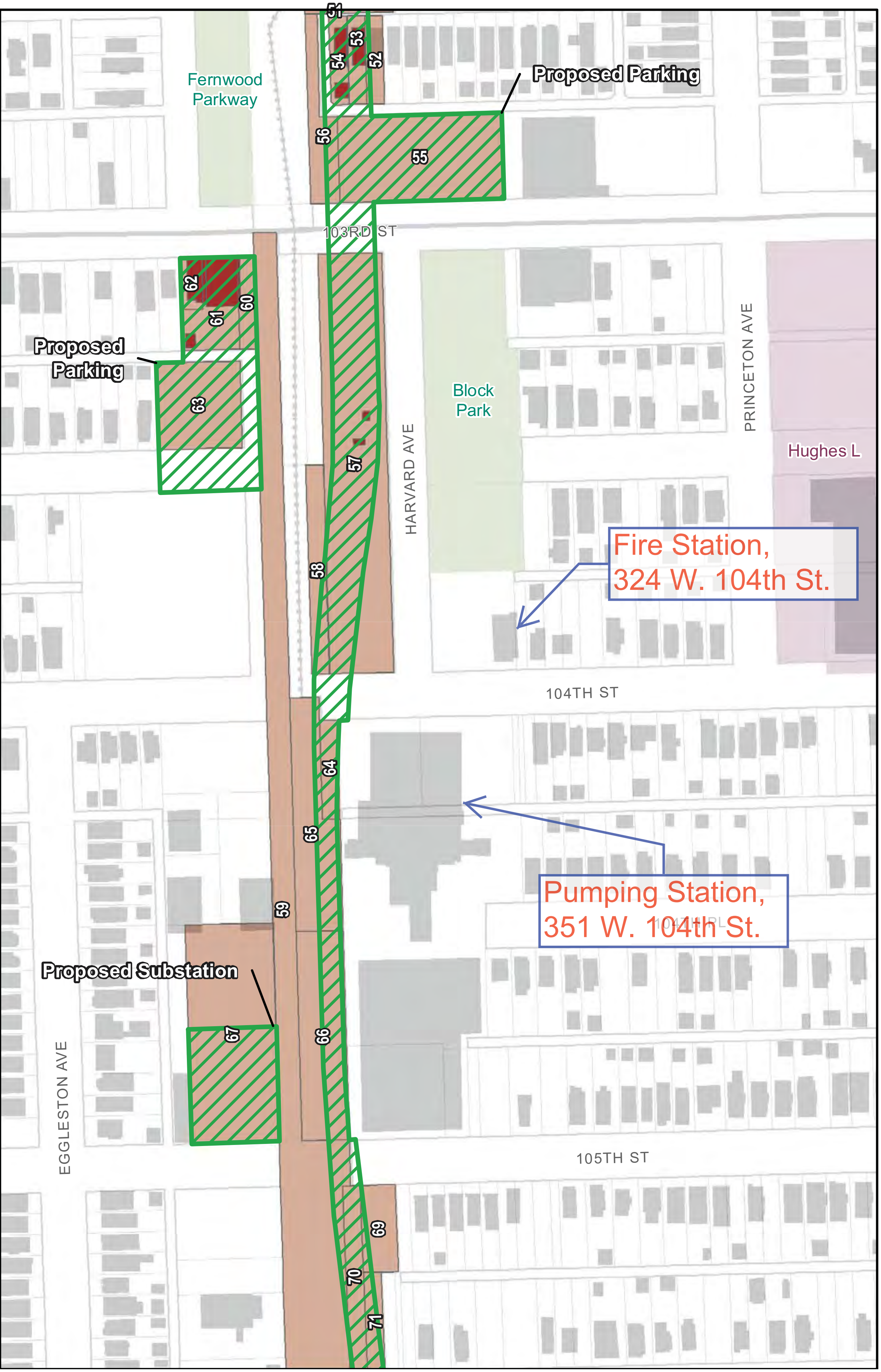
- ▨ Proposed Permanent Envelope
- 🟦 Parcel Easement
- 🟫 Parcel Affected by Proposed Permanent Envelope
- 🟥 Building Displacement
- ⬜ Building Footprint
- ☐ Parcels
- 🟩 Parks
- 🟪 Schools
- -+-+- Freight Rail
- —49— CTA Bus
- —290— Pace Bus

Scale

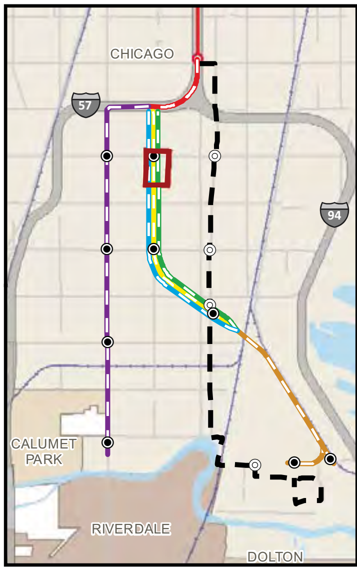
0 125 250

Feet

map id: 03_01.5


51
53
54
52
Fernwood Parkway
Proposed Parking
56
55
103RD ST
62
60
61
Proposed Parking
63
Block Park
HARVARD AVE
PRINCETON AVE
Hughes L
57
58
Fire Station, 324 W. 104th St.
104TH ST
64
65
Pumping Station, 351 W. 104th St.
104TH PL
59
Proposed Substation
67
66
EGGLESTON AVE
105TH ST
69
70
71

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

UPRR Rail Alternative East Option

Sheet 6 of 15

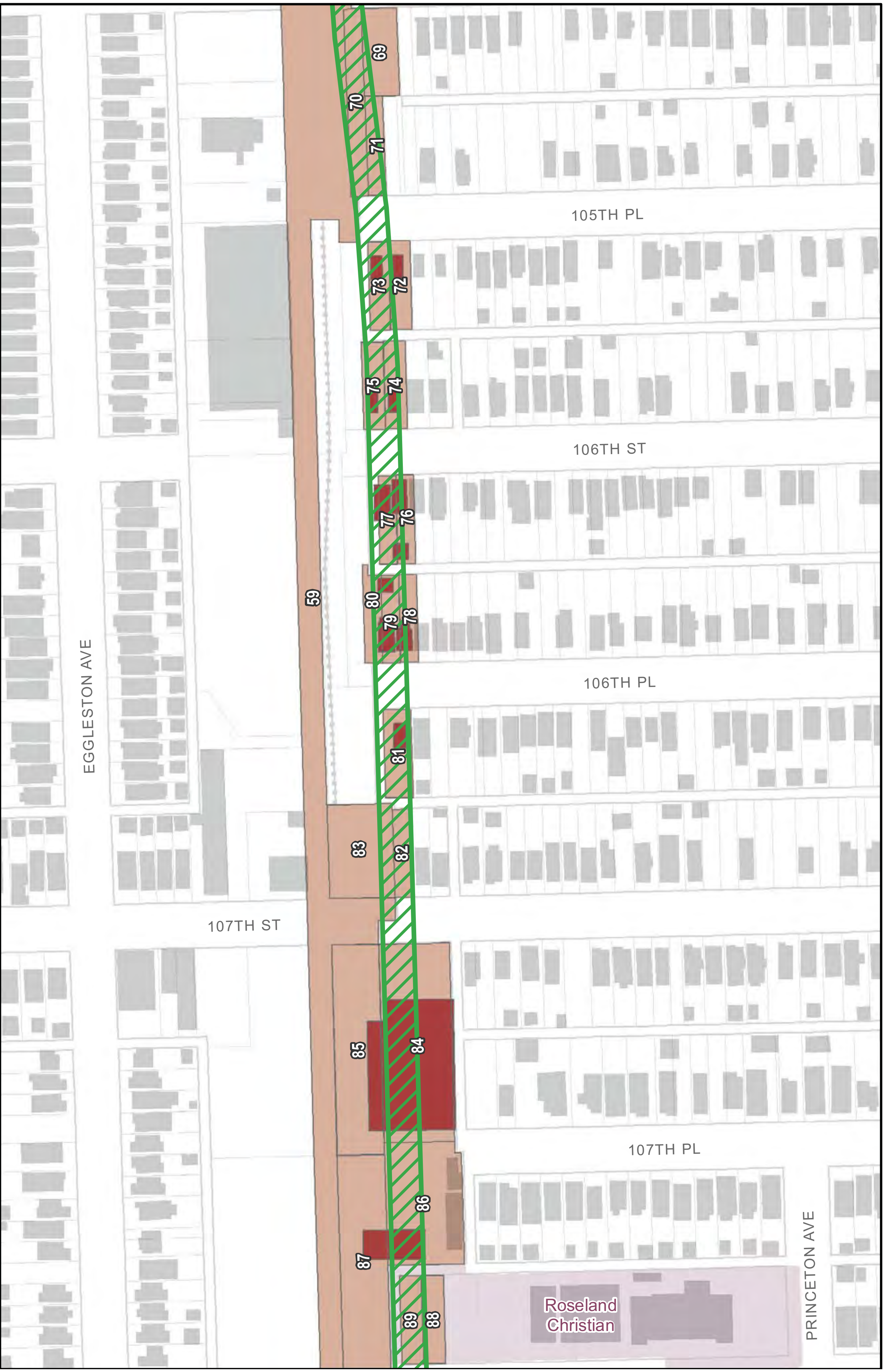
- ▨ Proposed Permanent Envelope
- 🟦 Parcel Easement
- 🟫 Parcel Affected by Proposed Permanent Envelope
- 🟥 Building Displacement
- ⬜ Building Footprint
- ☐ Parcels
- 🟩 Parks
- 🟪 Schools
- Freight Rail
- 49 CTA Bus
- 290 Pace Bus

Scale

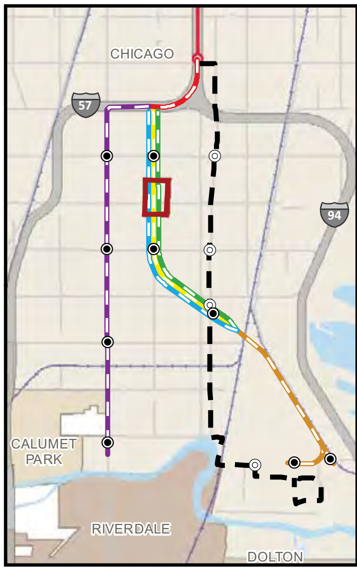
0 125 250

Feet

map id: 03_01.6


69
70
71
105TH PL
73
72
75
74
106TH ST
77
76
59
80
79
78
106TH PL
EGGLESTON AVE
81
83
82
107TH ST
85
84
107TH PL
86
87
PRINCETON AVE
89
88
Roseland Christian

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

UPRR Rail Alternative East Option

Sheet 7 of 15

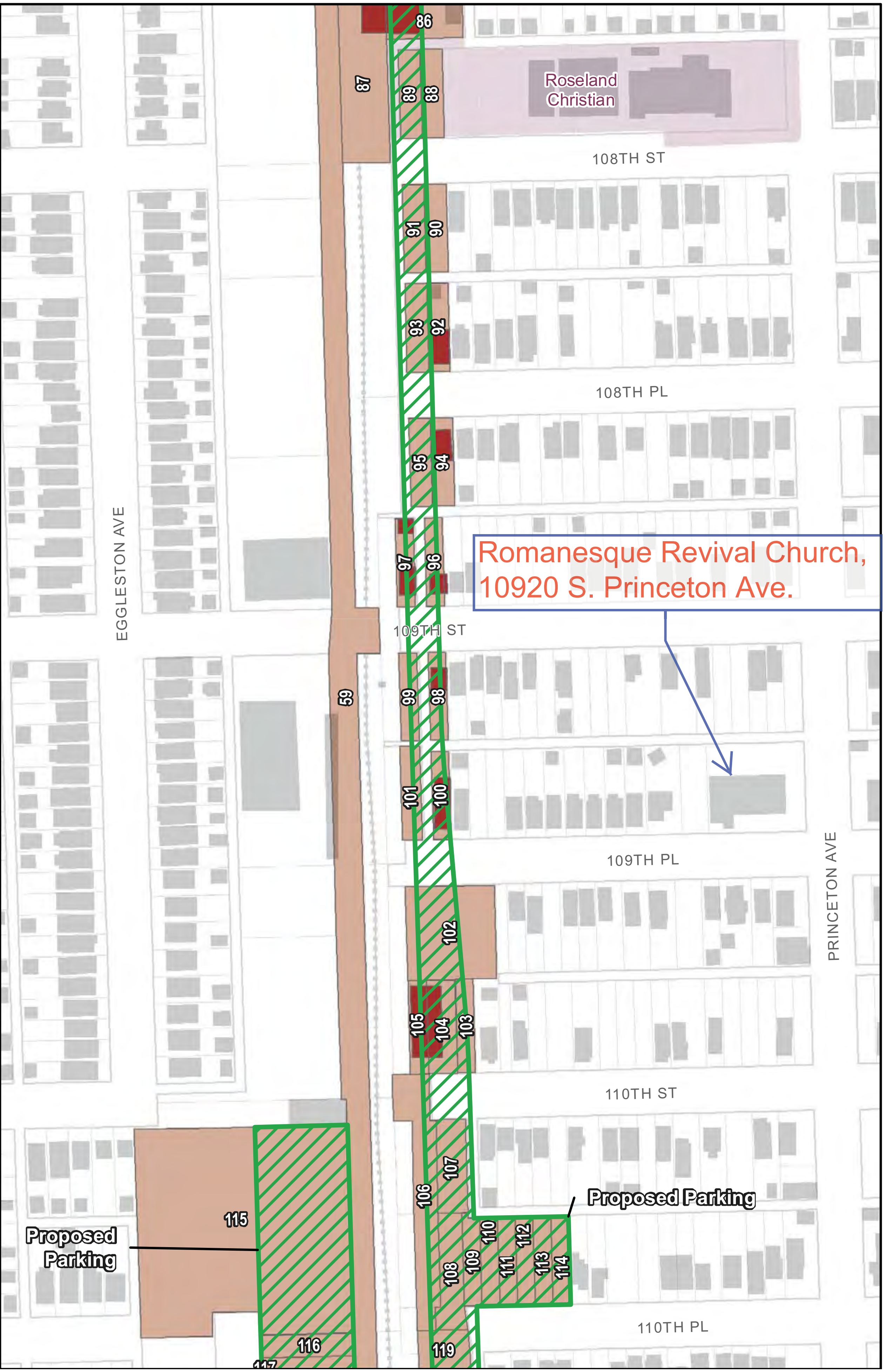
- ▨ Proposed Permanent Envelope
- 🟦 Parcel Easement
- 🟫 Parcel Affected by Proposed Permanent Envelope
- 🟥 Building Displacement
- ⬜ Building Footprint
- ☐ Parcels
- 🟩 Parks
- 🟪 Schools
- -+- Freight Rail
- -49- CTA Bus
- -290- Pace Bus

Scale

0 125 250

Feet

map id: 03_01.7

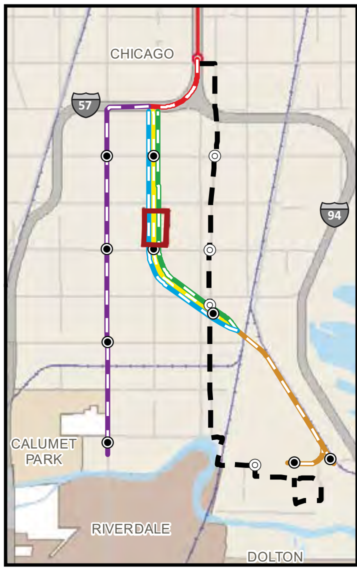

86
87
88
89
Roseland Christian
108TH ST
90
91
92
93
108TH PL
94
95
96
97
EGGLESTON AVE
109TH ST
59
98
99
100
101
109TH PL
PRINCETON AVE
102
103
104
105
110TH ST
106
107
108
109
110
111
112
113
114
115
116
117
119
110TH PL

Romanesque Revival Church,
10920 S. Princeton Ave.

Proposed Parking

Proposed Parking

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

UPRR Rail Alternative East Option

Sheet 8 of 15

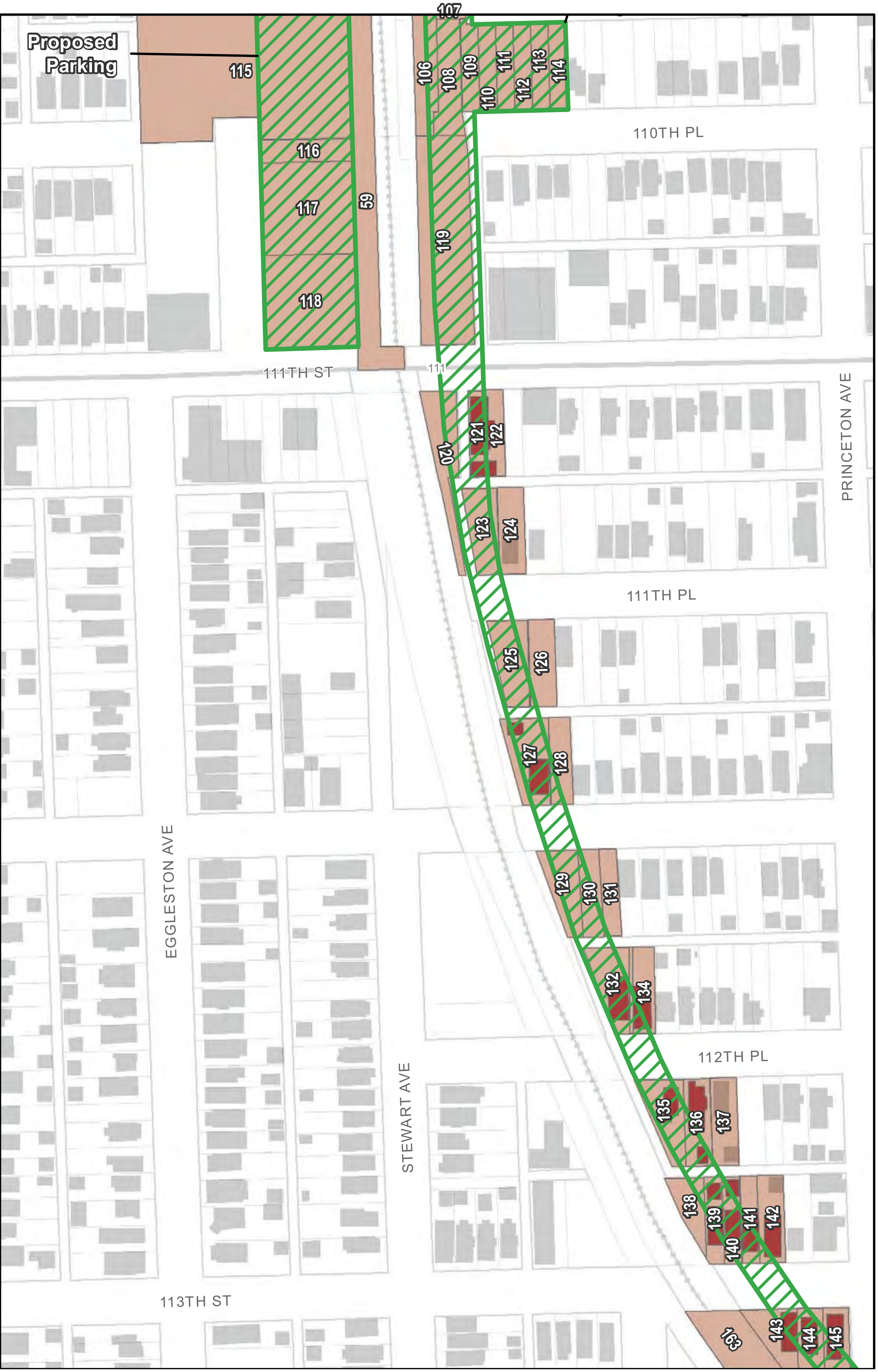
- ▨ Proposed Permanent Envelope
- 🟦 Parcel Easement
- 🟫 Parcel Affected by Proposed Permanent Envelope
- 🟥 Building Displacement
- ⬜ Building Footprint
- ⬜ Parcels
- 🟩 Parks
- 🟪 Schools
- -+- Freight Rail
- -49- CTA Bus
- -290- Pace Bus

Scale

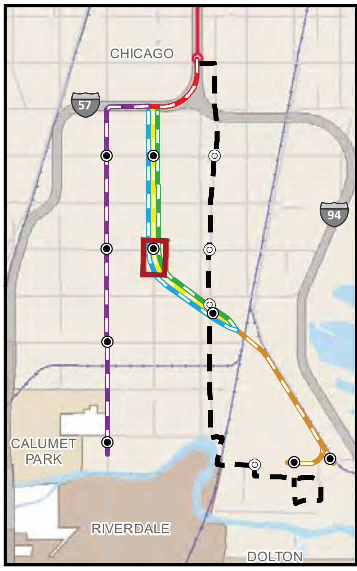
0 125 250

Feet

map id: 03_01.8


Proposed Parking
107
106
108
109
110
111
112
113
114
115
116
117
118
59
119
110TH PL
111TH ST
111
120
121
122
123
124
111TH PL
125
126
127
128
129
130
131
132
134
112TH PL
135
136
137
138
139
140
141
142
143
144
145
63
PRINCETON AVE
EGGLESTON AVE
STEWART AVE
113TH ST

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

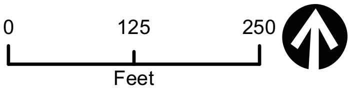
Legend

UPRR Rail Alternative East Option

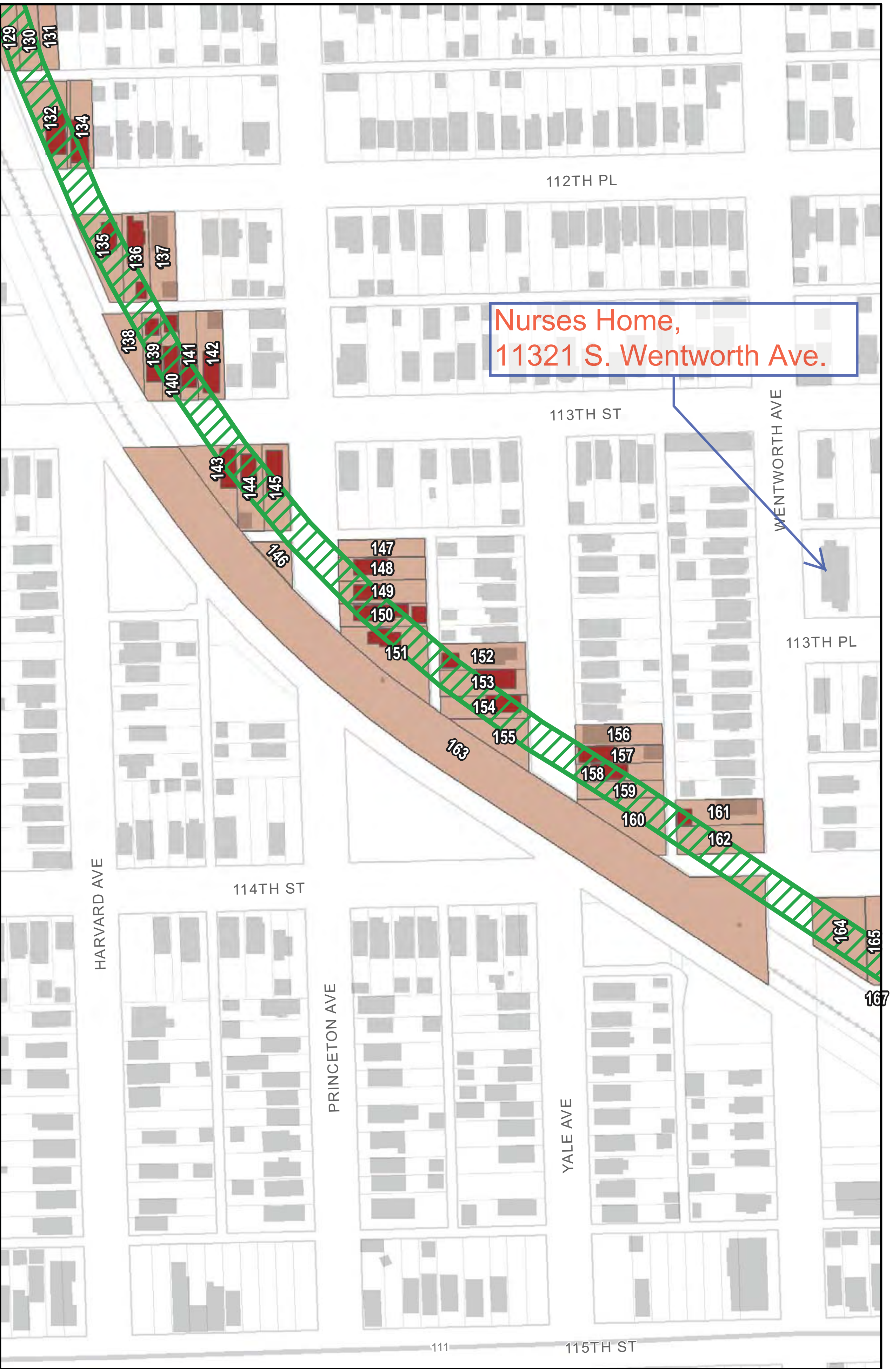
Sheet 9 of 15

- ▨ Proposed Permanent Envelope
- 🟦 Parcel Easement
- 🟫 Parcel Affected by Proposed Permanent Envelope
- 🟥 Building Displacement
- ⬜ Building Footprint
- ☐ Parcels
- 🟩 Parks
- 🟪 Schools
- -+-+- Freight Rail
- -49- CTA Bus
- -290- Pace Bus

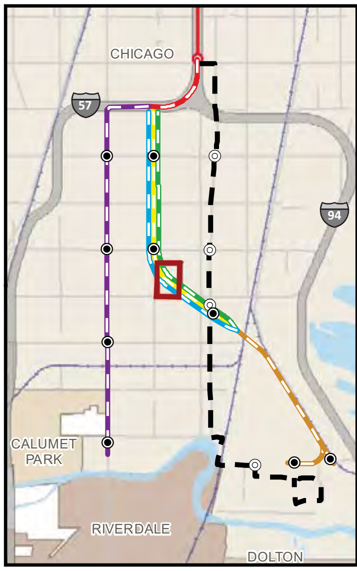
Scale


0
125
250
Feet

map id: 03_01.9


Nurses Home,
11321 S. Wentworth Ave.
112TH PL
113TH ST
113TH PL
114TH ST
115TH ST
111
HARVARD AVE
PRINCETON AVE
YALE AVE
WENTWORTH AVE
129
130
131
132
134
135
136
137
138
139
140
141
142
143
144
145
146
147
148
149
150
151
152
153
154
155
156
157
158
159
160
161
162
163
164
165
167

Inset


CHICAGO
57
94
CALUMET
PARK
RIVERDALE
DOLTON

Legend

UPRR Rail Alternative East Option

Sheet 10 of 15

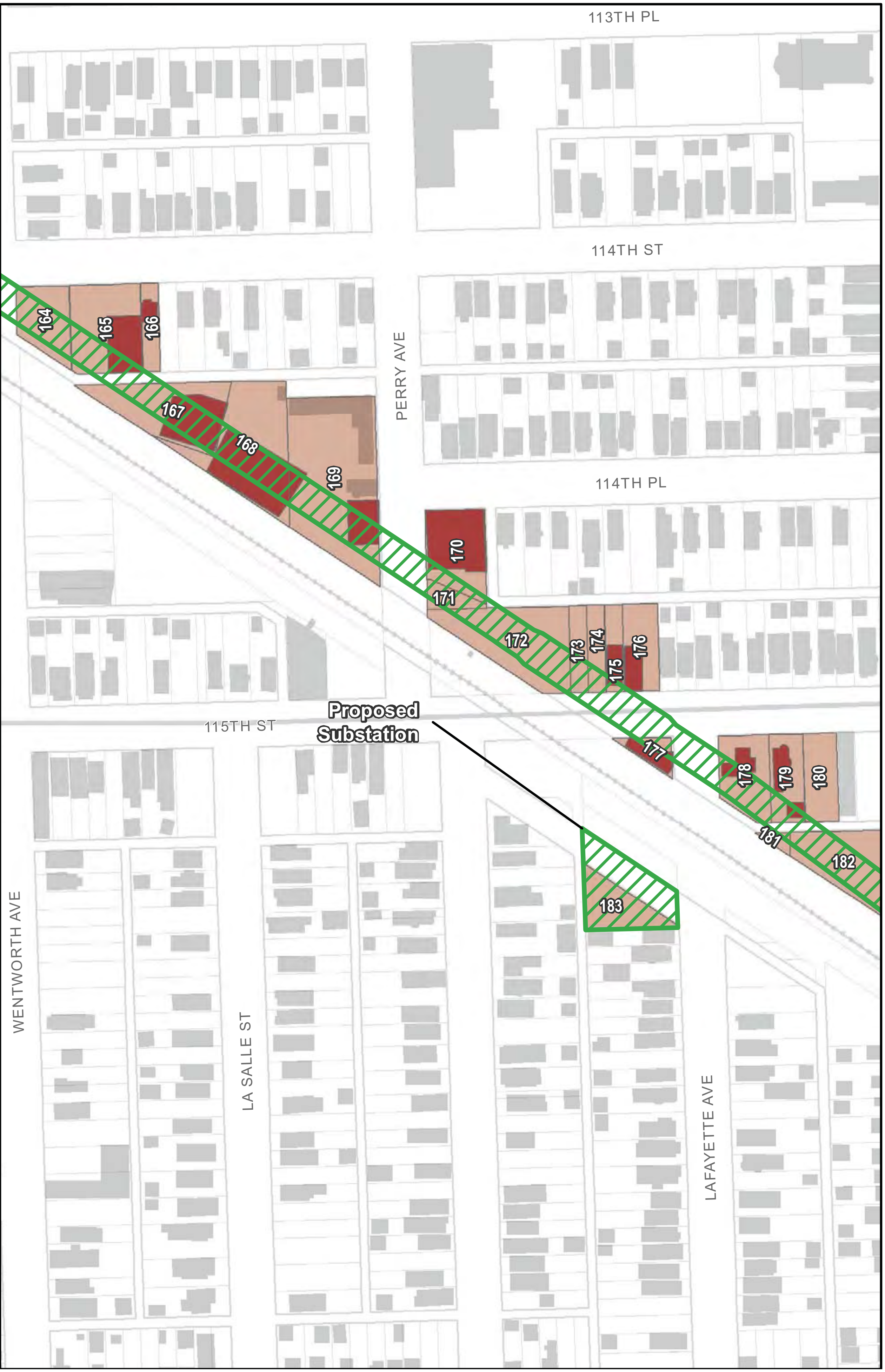
▨	Proposed Permanent Envelope
🟦	Parcel Easement
🟫	Parcel Affected by Proposed Permanent Envelope
🟥	Building Displacement
⬜	Building Footprint
⬜	Parcels
🟩	Parks
🟪	Schools
┼	Freight Rail
49	CTA Bus
290	Pace Bus

Scale

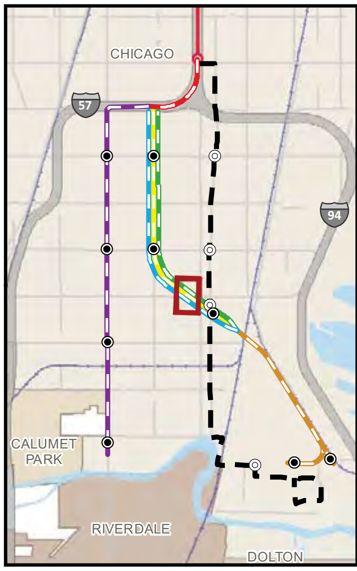
0 125 250

Feet

map id: 03_01.10


113TH PL
114TH ST
114TH PL
115TH ST
PERRY AVE
WENTWORTH AVE
LA SALLE ST
LAFAYETTE AVE
164
165
166
167
168
169
170
171
172
173
174
175
176
177
178
179
180
181
182
183
Proposed Substation

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

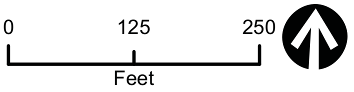
Legend

UPRR Rail Alternative East Option

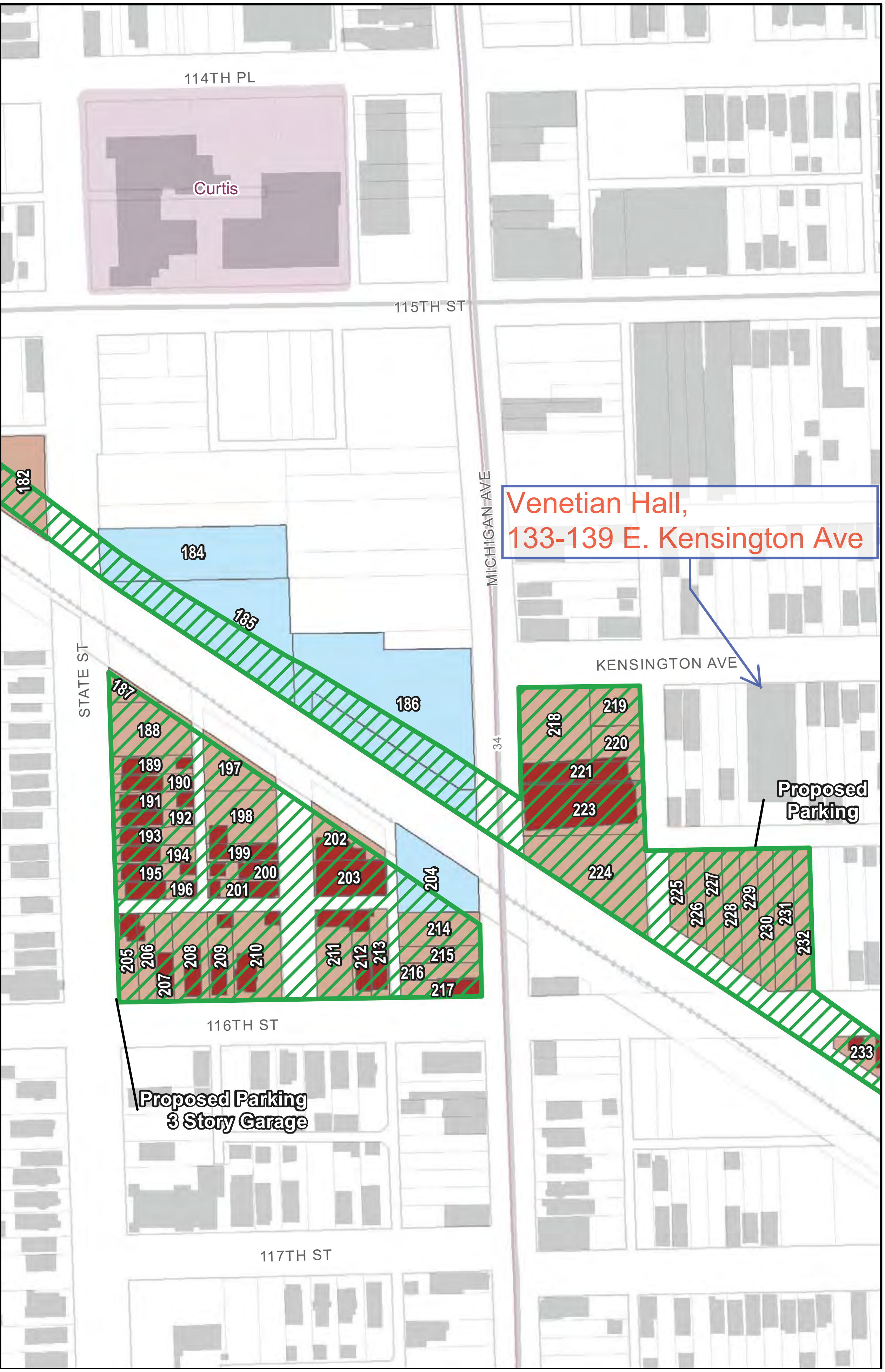
Sheet 11 of 15

- ▨ Proposed Permanent Envelope
- 🟦 Parcel Easement
- 🟫 Parcel Affected by Proposed Permanent Envelope
- 🟥 Building Displacement
- ⬜ Building Footprint
- ☐ Parcels
- 🟩 Parks
- 🟪 Schools
- Freight Rail
- 49 CTA Bus
- 290 Pace Bus

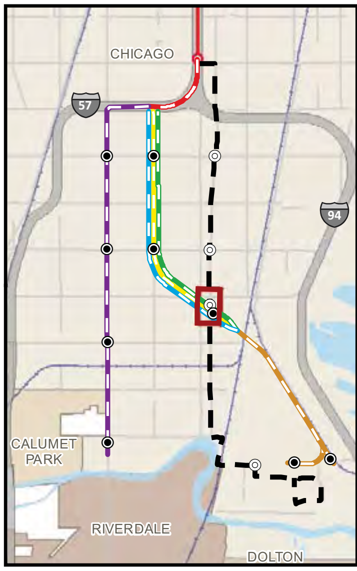
Scale


0
125
250
Feet

map id: 03_01.11


114TH PL
Curtis
115TH ST
MICHIGAN AVE
STATE ST
KENSINGTON AVE
116TH ST
117TH ST
34
Venetian Hall,
133-139 E. Kensington Ave
Proposed Parking
Proposed Parking
3 Story Garage
182
184
185
186
187
188
189
190
191
192
193
194
195
196
197
198
199
200
201
202
203
204
205
206
207
208
209
210
211
212
213
214
215
216
217
218
219
220
221
223
224
225
226
227
228
229
230
231
232
233

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

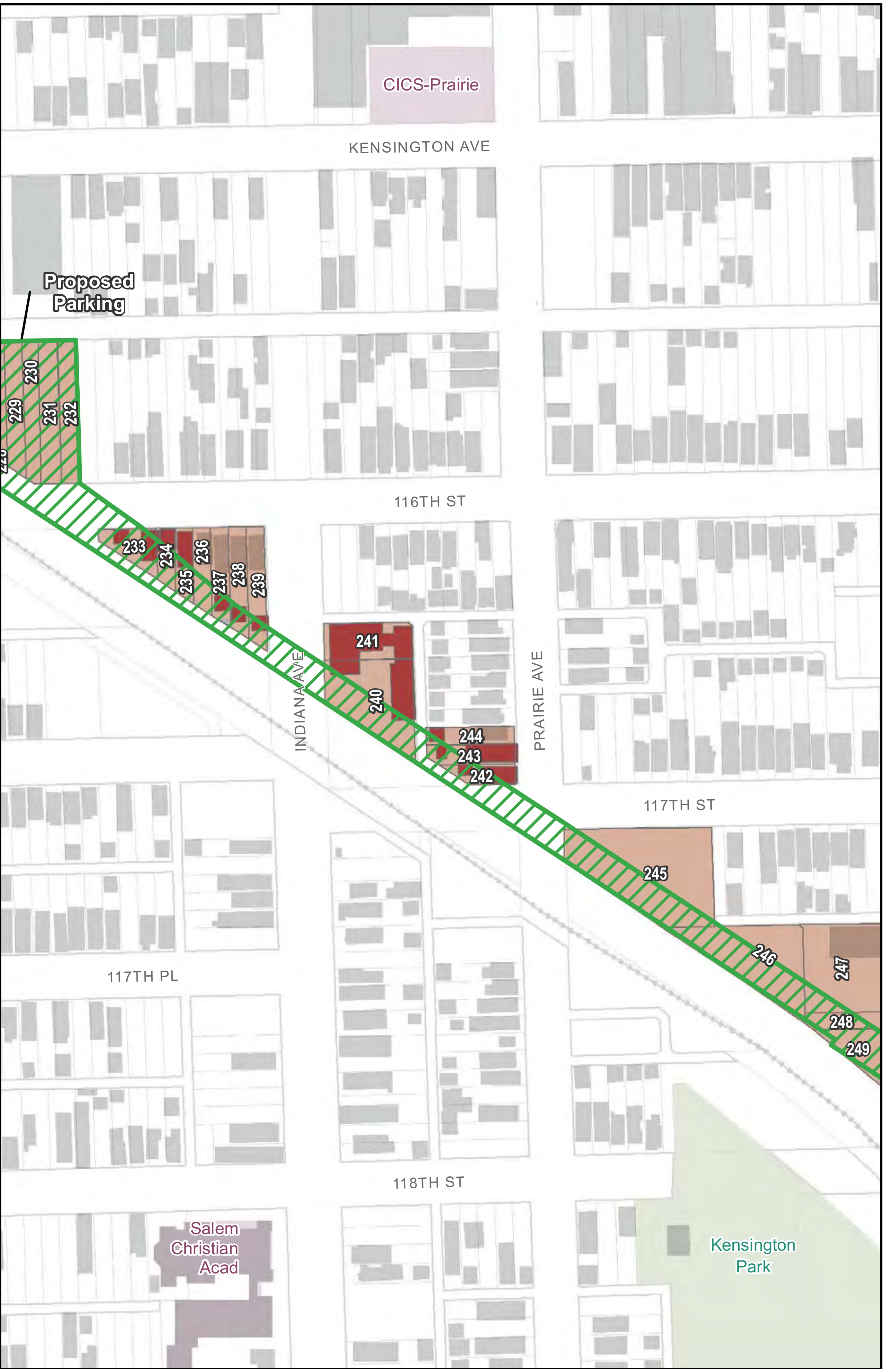
UPRR Rail Alternative
East Option
Sheet 12 of 15

▨ Proposed Permanent Envelope
🟦 Parcel Easement
🟫 Parcel Affected by Proposed Permanent Envelope
🟥 Building Displacement
⬜ Building Footprint
☐ Parcels
🟩 Parks
🟪 Schools
-+-+- Freight Rail
-49- CTA Bus
-290- Pace Bus

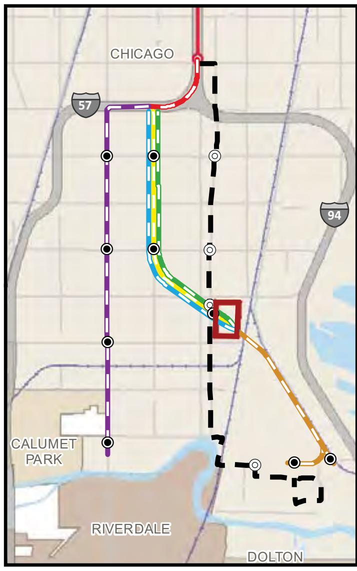
Scale

0 125 250
Feet

map id: 03_01.12


CICS-Prairie
KENSINGTON AVE
Proposed Parking
230
229
231
232
116TH ST
233
234
235
236
237
238
239
241
240
INDIANA AVE
PRAIRIE AVE
244
243
242
117TH ST
245
246
247
248
249
117TH PL
118TH ST
Salem Christian Acad
Kensington Park

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

UPRR Rail Alternative East Option

Sheet 13 of 15

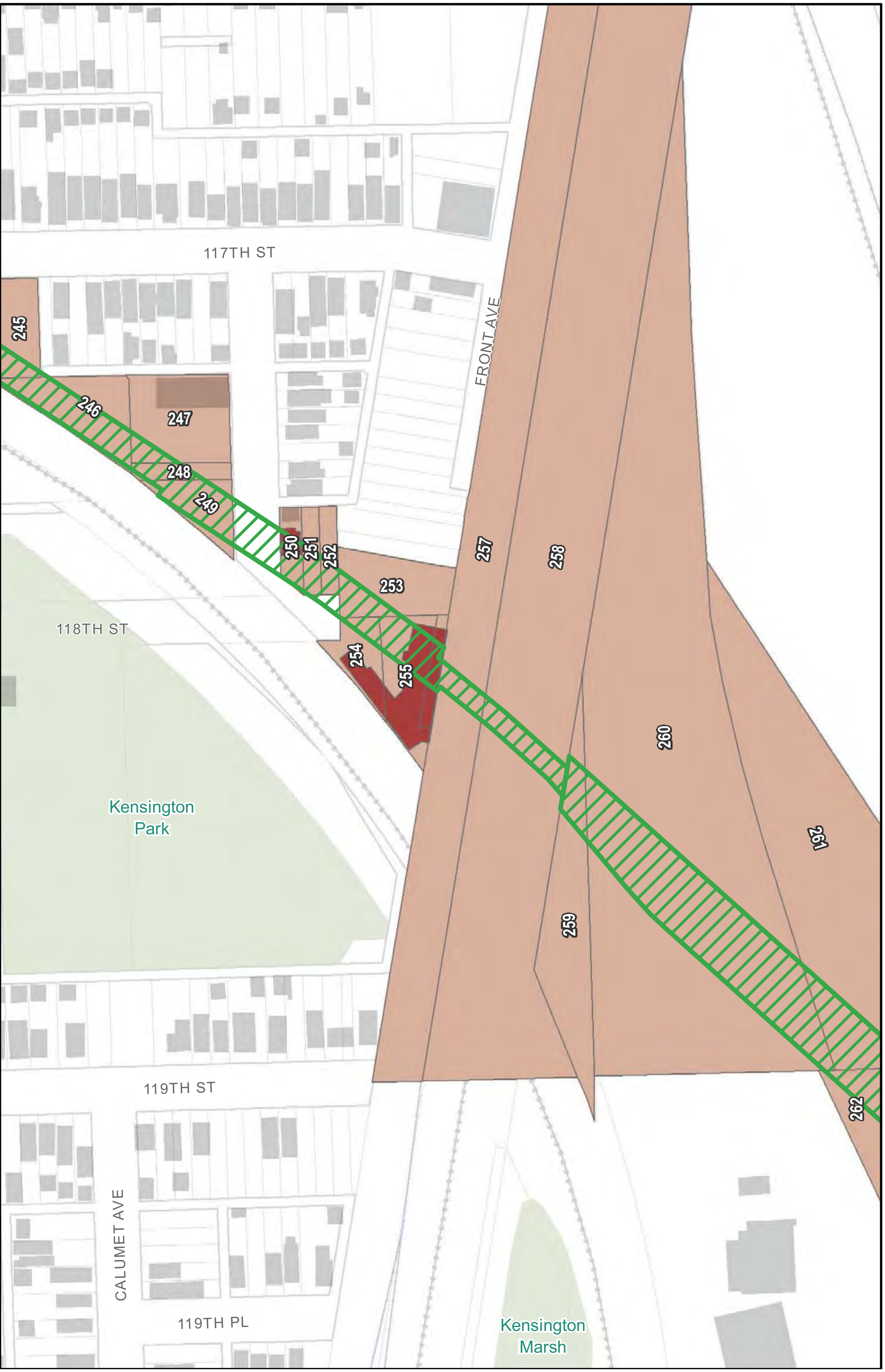
- ▨ Proposed Permanent Envelope
- 🟦 Parcel Easement
- 🟫 Parcel Affected by Proposed Permanent Envelope
- 🟥 Building Displacement
- ⬜ Building Footprint
- ⬜ Parcels
- 🟩 Parks
- 🟪 Schools
- -+- Freight Rail
- -49- CTA Bus
- -290- Pace Bus

Scale

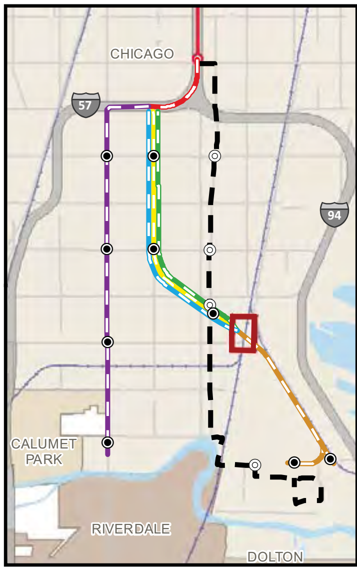
0 125 250

Feet

map id: 03_01.13


117TH ST
FRONT AVE
118TH ST
119TH ST
119TH PL
CALUMET AVE
Kensington Park
Kensington Marsh
245
246
247
248
249
250
251
252
253
254
255
257
258
259
260
261
262

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

UPRR Rail Alternative East Option

Sheet 14 of 15

▨ Proposed Permanent Envelope

🟦 Parcel Easement

🟫 Parcel Affected by Proposed Permanent Envelope

🟥 Building Displacement

⬜ Building Footprint

☐ Parcels

🟩 Parks

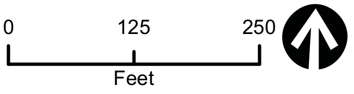
🟪 Schools

-+-+- Freight Rail

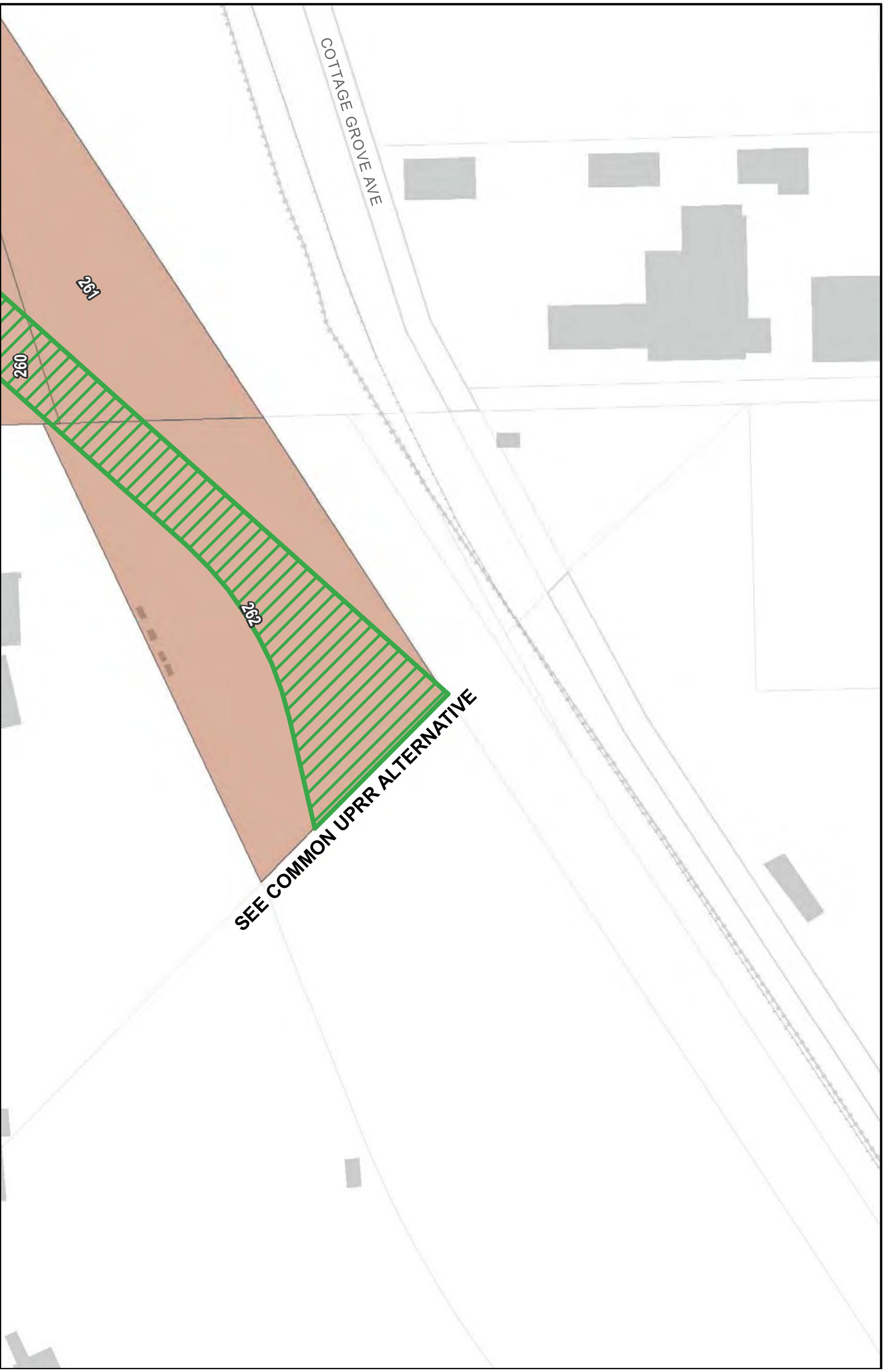
—49— CTA Bus

—290— Pace Bus

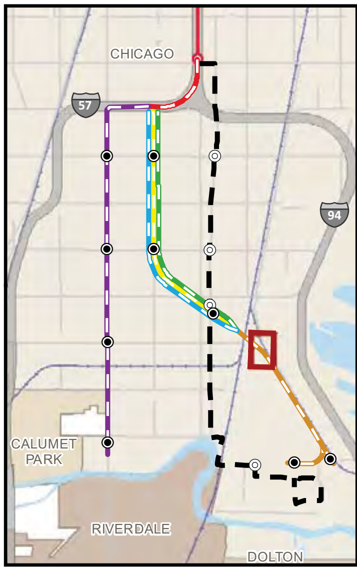
Scale


0
125
250
Feet

map id: 03_01.14


COTTAGE GROVE AVE
261
260
262
SEE COMMON UPRR ALTERNATIVE

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

UPRR Rail Alternative East Option

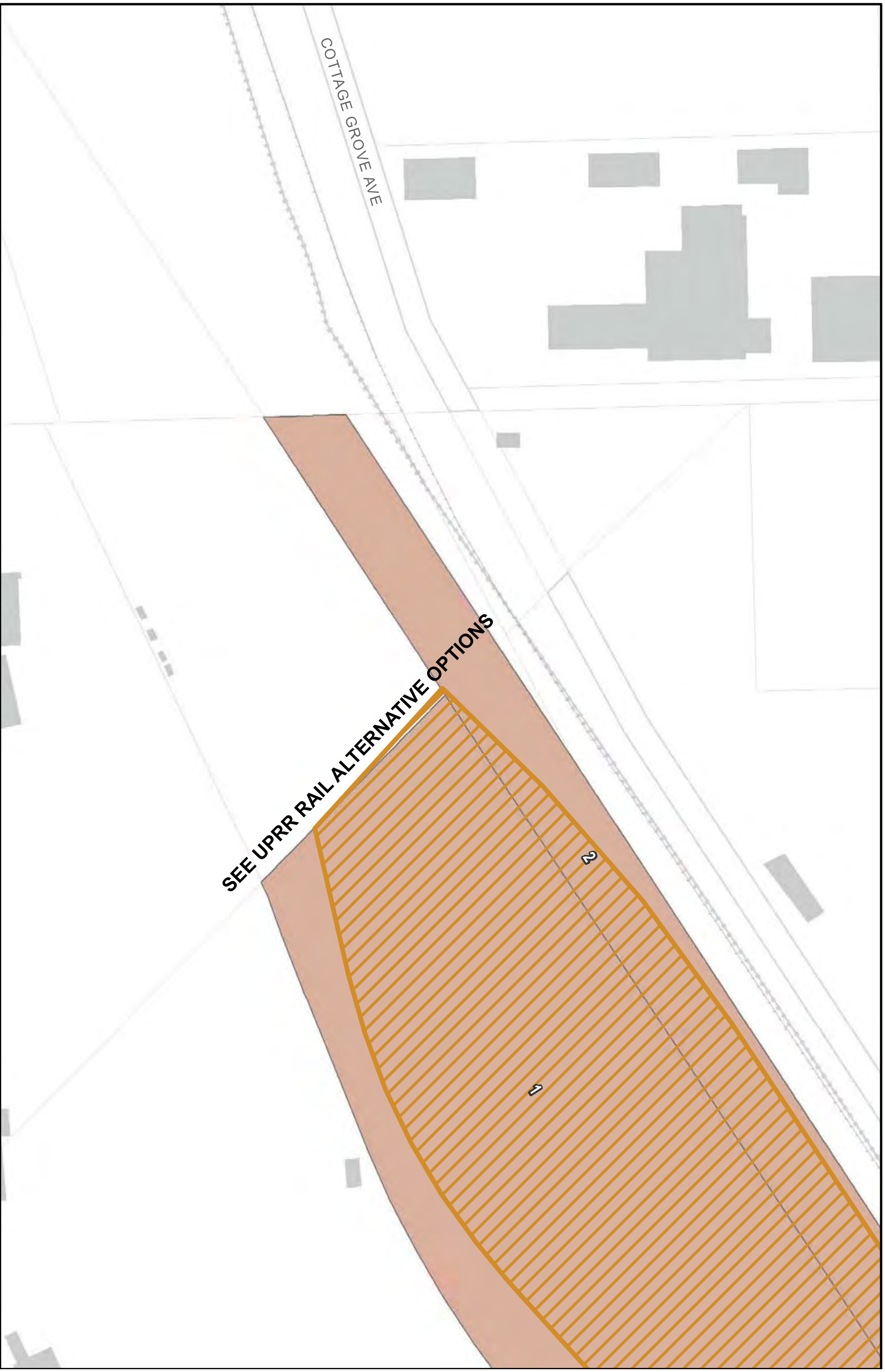
Sheet 15 of 15

▨ Proposed Permanent Envelope
🟦 Parcel Easement
🟫 Parcel Affected by Proposed Permanent Envelope
🟥 Building Displacement
⬜ Building Footprint
□ Parcels
🟩 Parks
🟪 Schools
-+-+- Freight Rail
—49— CTA Bus
—290— Pace Bus

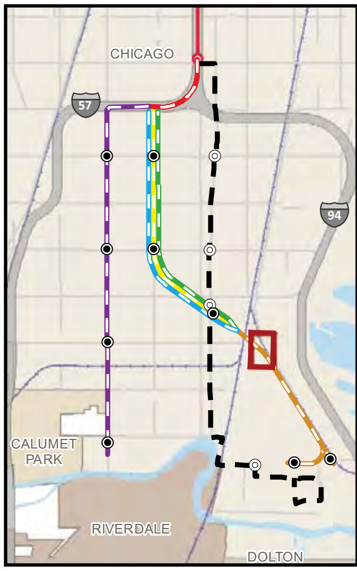
Scale

0 125 250
Feet

map id: 03_01.15


COTTAGE GROVE AVE
SEE UPRR RAIL ALTERNATIVE OPTIONS
2
1

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

Common UPRR Rail Alternative

Sheet 1 of 5

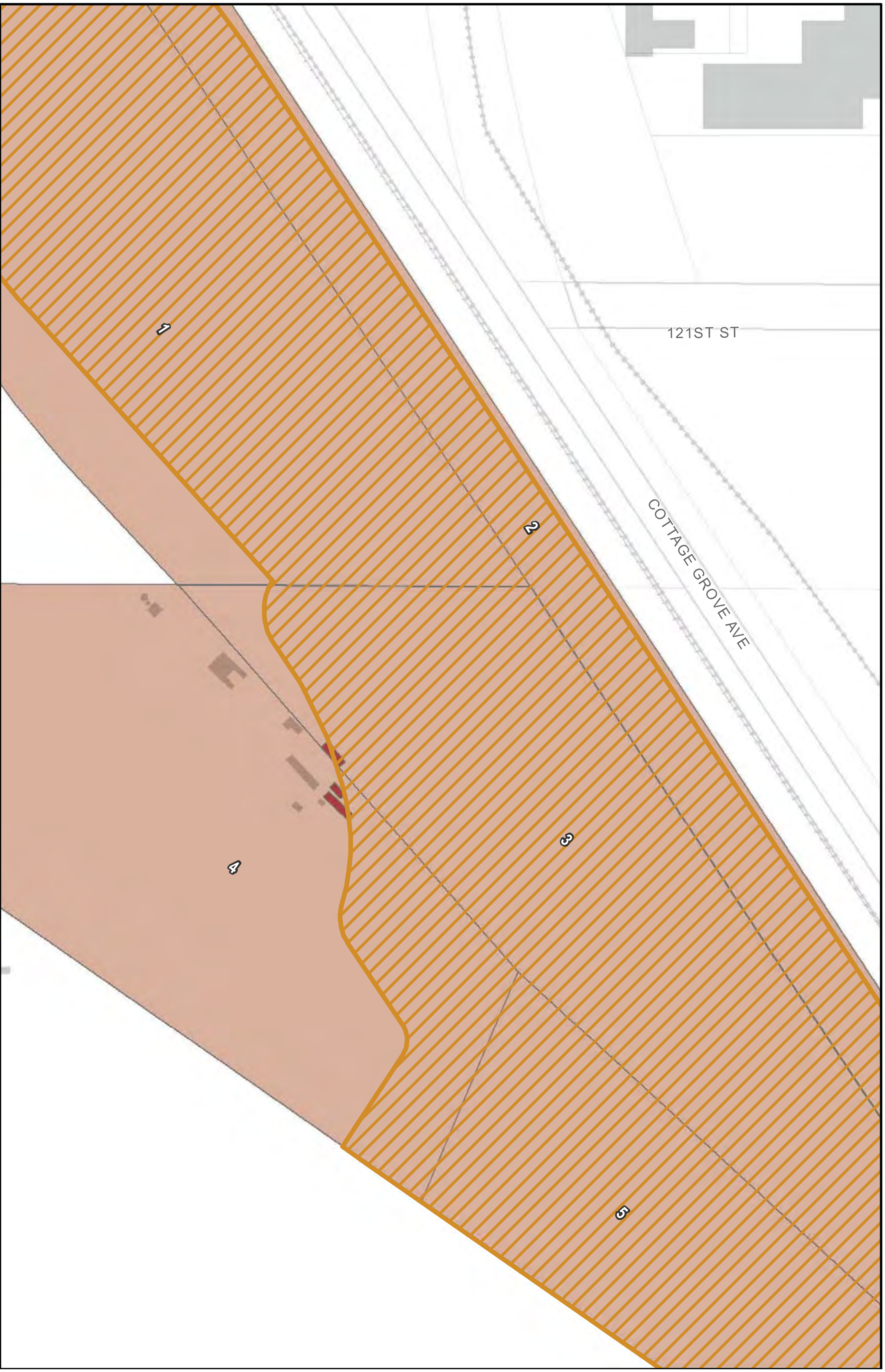
▨	Proposed Permanent Envelope
■	Parcel Affected by Proposed Permanent Envelope
🟥	Building Displacement
■	Building Footprint
□	Parcels
🟩	Parks
■	Schools
-+-+-	Freight Rail
-49-	CTA Bus
-290-	Pace Bus

Scale

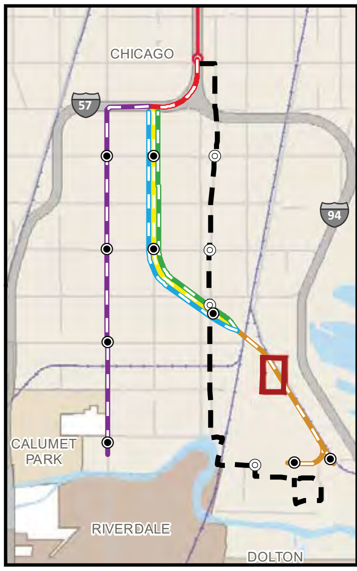
0 125 250

Feet

map id: 03_04.1


1
2
3
4
5
121ST ST
COTTAGE GROVE AVE

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

Common UPRR Rail Alternative

Sheet 2 of 5

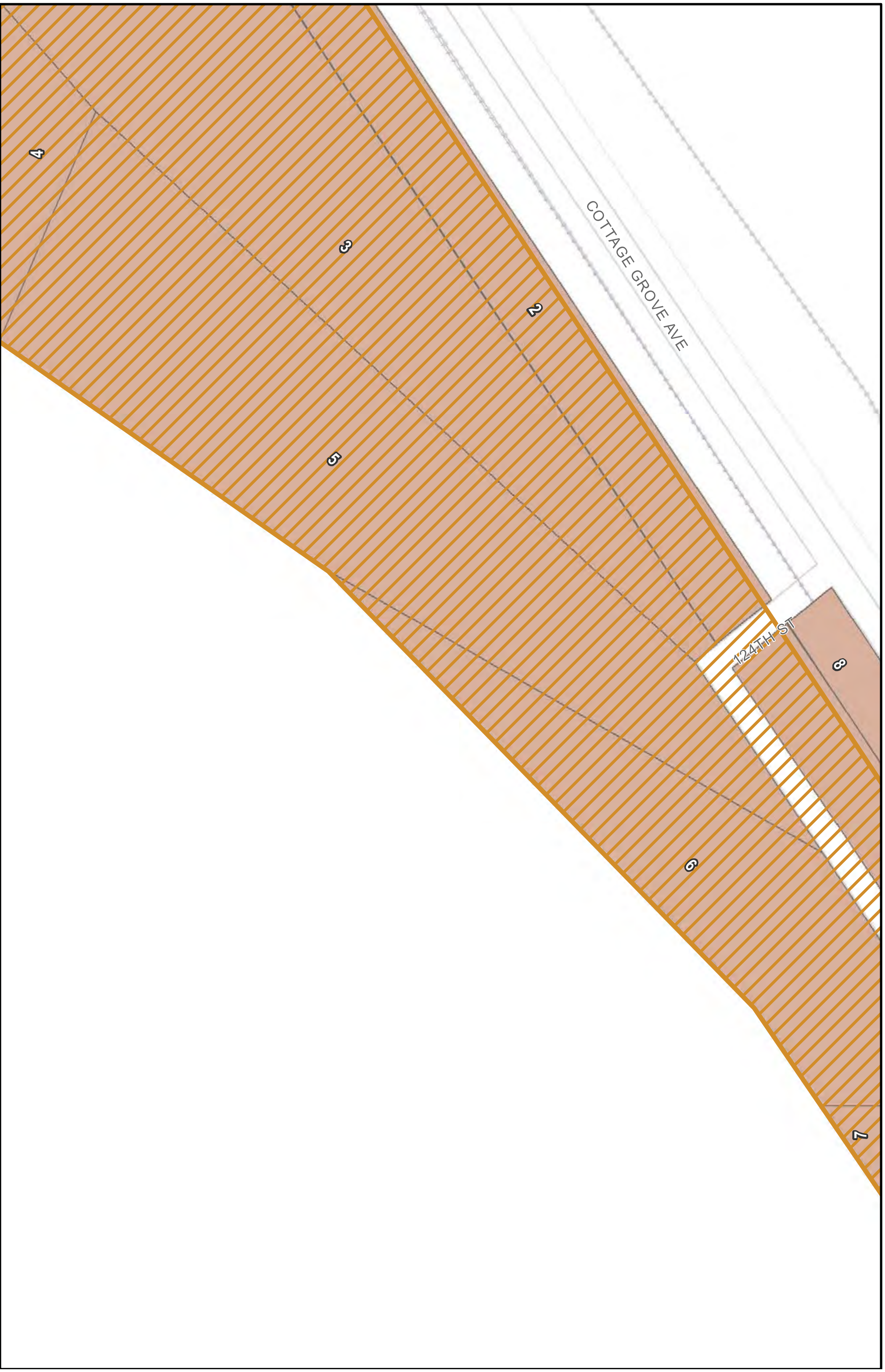
- ▨ Proposed Permanent Envelope
- 🟫 Parcel Affected by Proposed Permanent Envelope
- 🟥 Building Displacement
- ⬜ Building Footprint
- ☐ Parcels
- 🟩 Parks
- 🟪 Schools
- Freight Rail
- 49 CTA Bus
- 290 Pace Bus

Scale

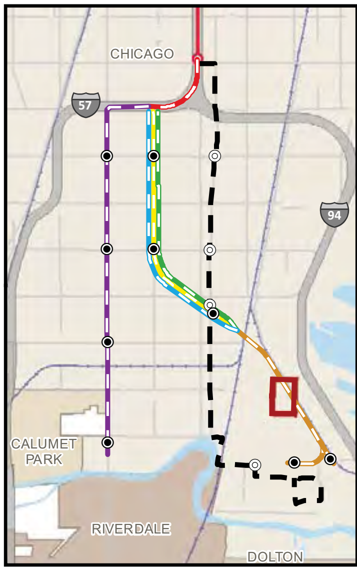
0 125 250

Feet

map id: 03_04.2


4
3
2
COTTAGE GROVE AVE
5
124TH ST
8
6
7

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

Common UPRR Rail Alternative

Sheet 3 of 5

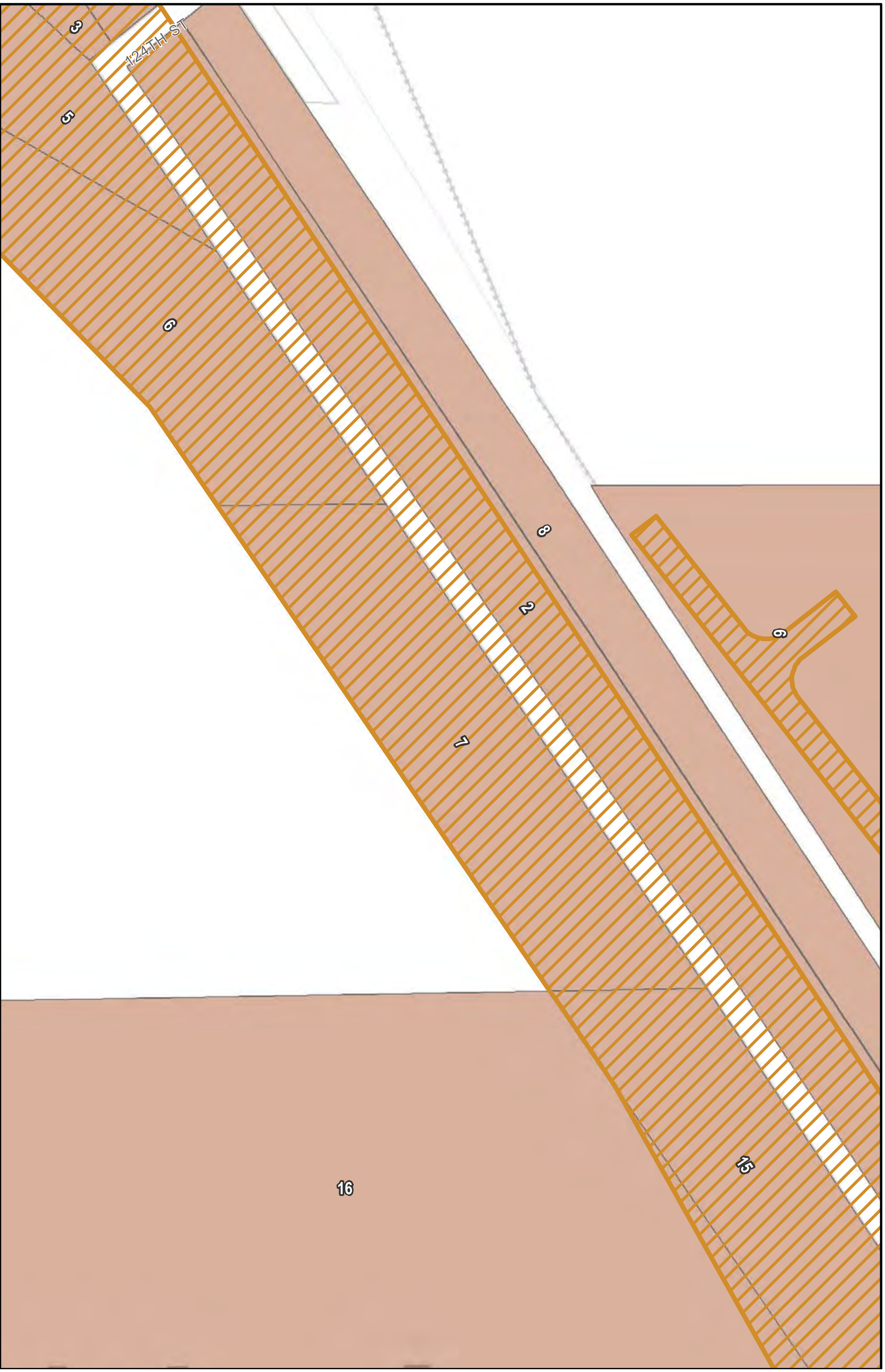
- ▨ Proposed Permanent Envelope
- ■ Parcel Affected by Proposed Permanent Envelope
- 🟥 Building Displacement
- ■ Building Footprint
- □ Parcels
- 🟩 Parks
- ■ Schools
- Freight Rail
- 49 CTA Bus
- 290 Pace Bus

Scale

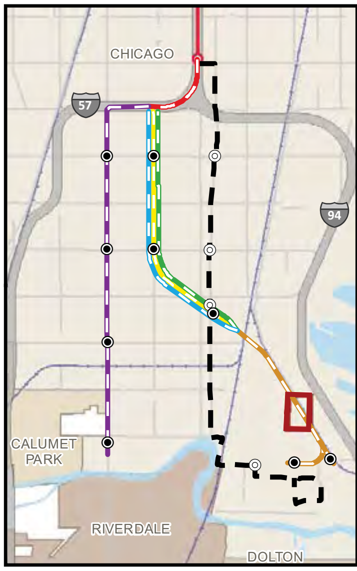
0 125 250

Feet

map id: 03_04.3


3
5
124TH ST
6
8
2
9
7
15
16

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

Common UPRR Rail Alternative

Sheet 4 of 5

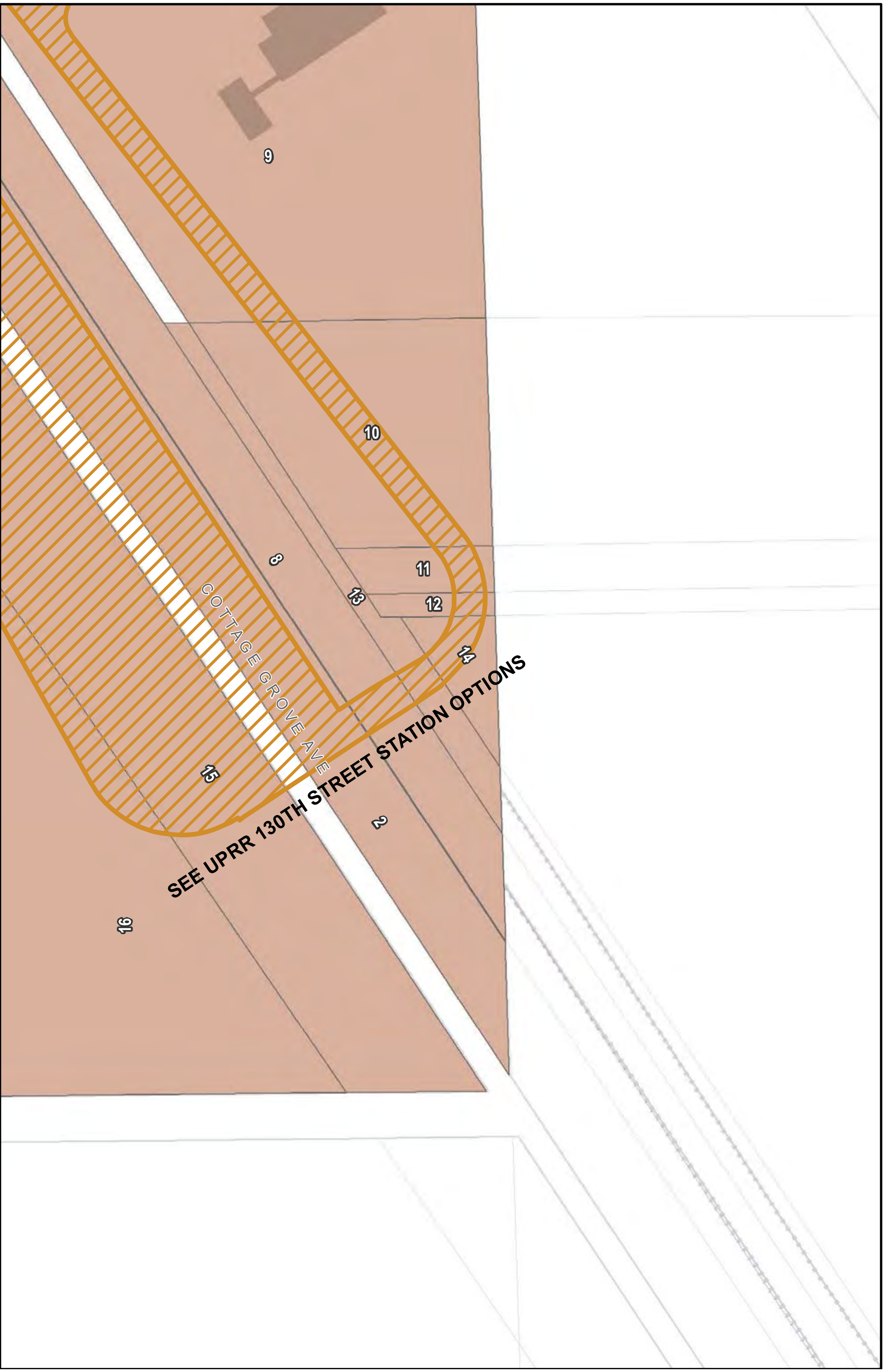
- ▨ Proposed Permanent Envelope
- 🟫 Parcel Affected by Proposed Permanent Envelope
- 🟥 Building Displacement
- ⬜ Building Footprint
- ⬜ Parcels
- 🟩 Parks
- 🟪 Schools
- Freight Rail
- 49 CTA Bus
- 290 Pace Bus

Scale

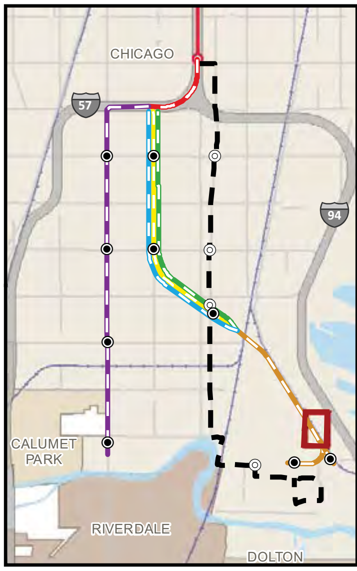
0 125 250

Feet

map id: 03_04.4


9
10
8
11
13
12
14
15
2
16
COTTAGE GROVE AVE
SEE UPRR 130TH STREET STATION OPTIONS

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

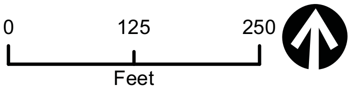
Legend

Common UPRR Rail Alternative

Sheet 5 of 5

▨	Proposed Permanent Envelope
■	Parcel Affected by Proposed Permanent Envelope
🟥	Building Displacement
■	Building Footprint
□	Parcels
🟩	Parks
■	Schools
-+-+-	Freight Rail
-49-	CTA Bus
-290-	Pace Bus

Scale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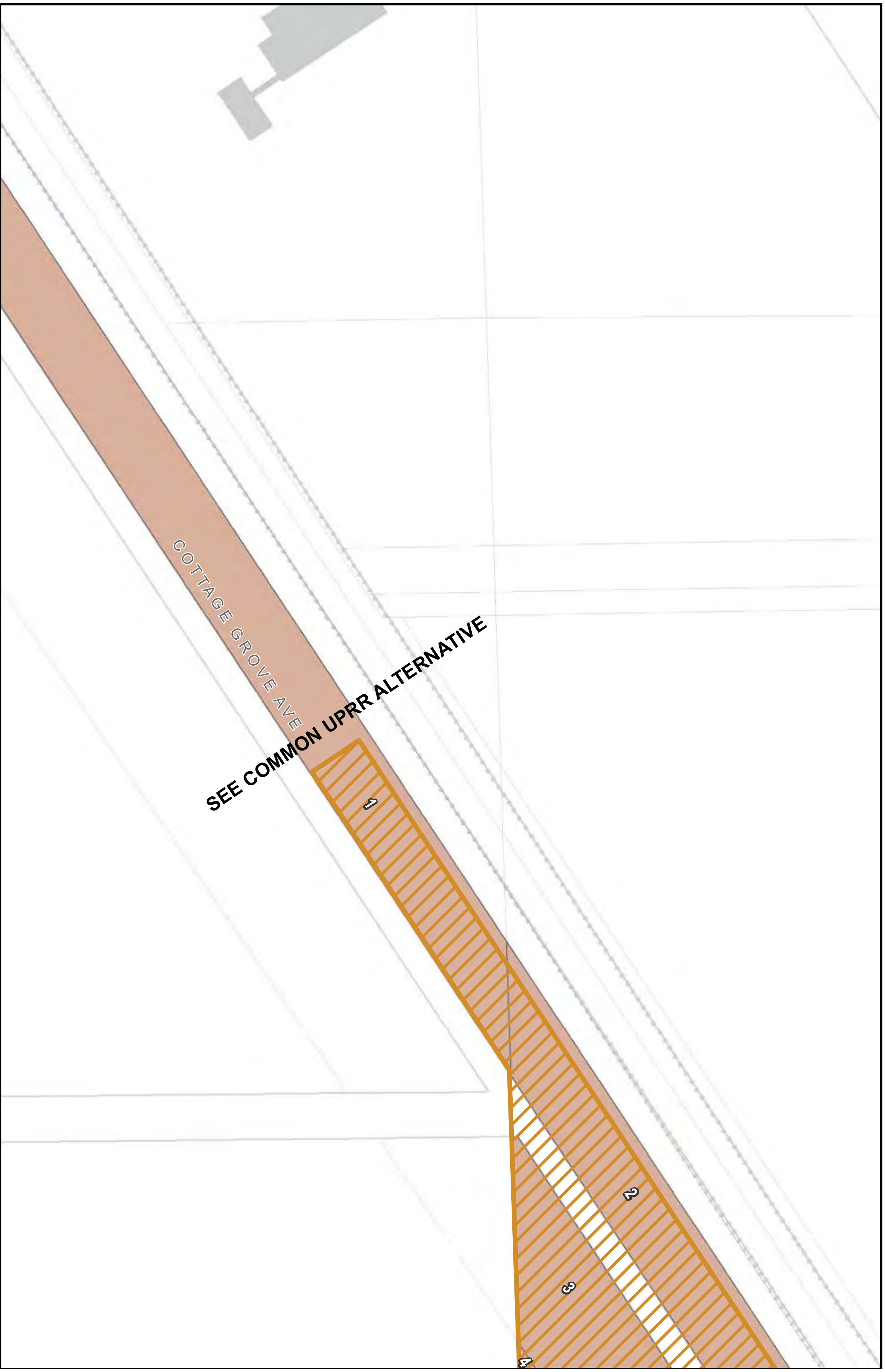
125
250
Feet

map id: 03_04.5


COTTAGE GROVE AVE
SEE COMMON UPRR ALTERNATIVE
1
2
3
4

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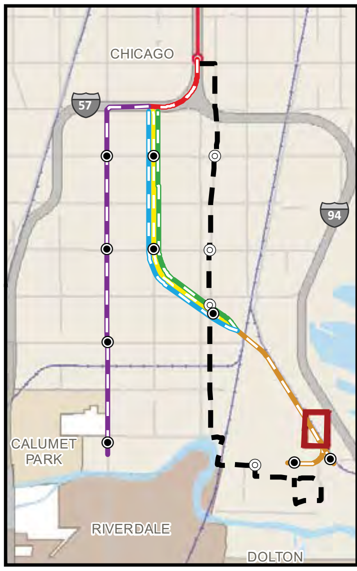

CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

UPRR Rail Alternative 130th Street Station South Option

Sheet 1 of 3

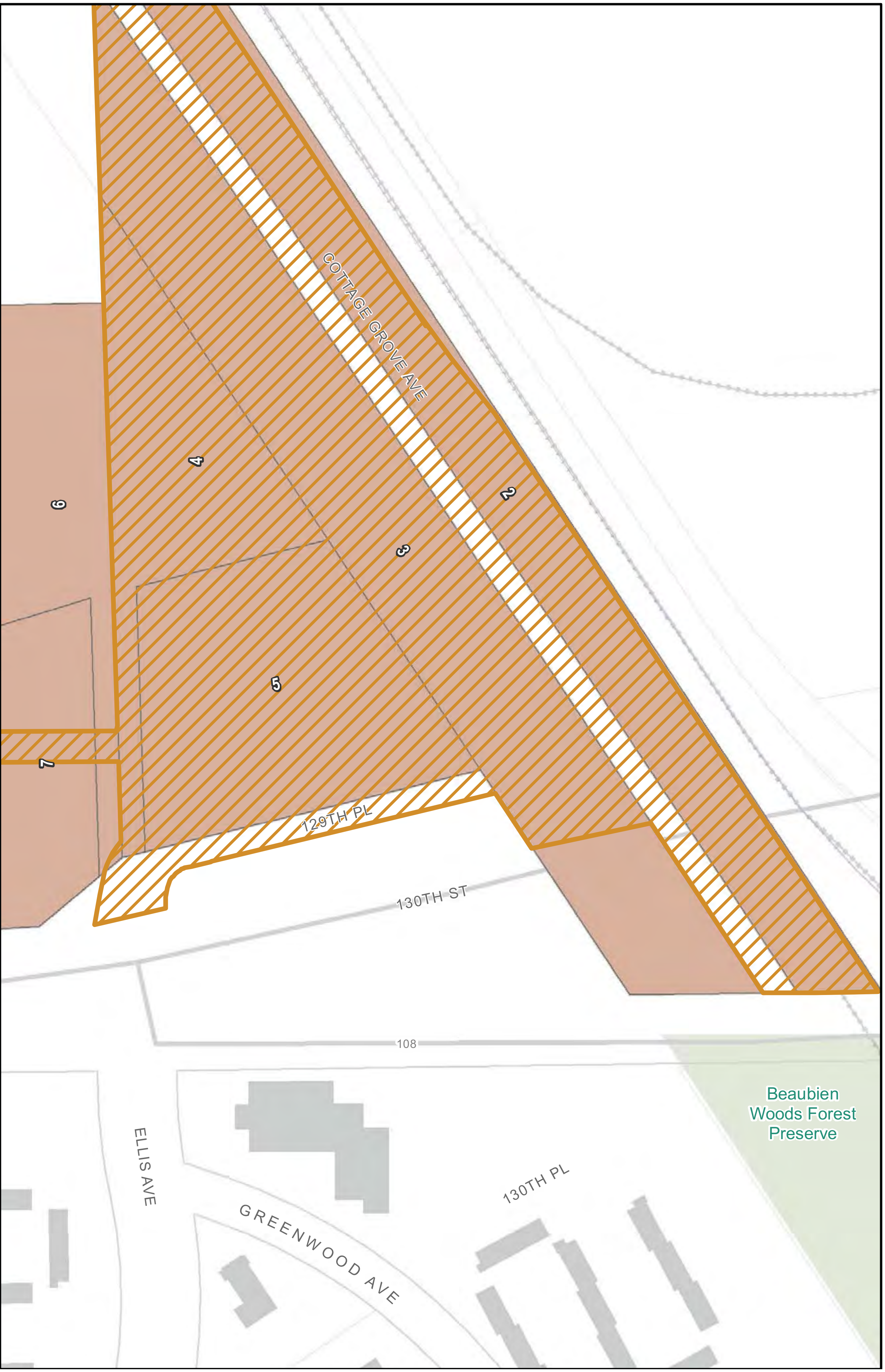
- ▨ Proposed Permanent Envelope
- 🟫 Parcel Affected by Proposed Permanent Envelope
- 🟥 Building Displacement
- ⬜ Building Footprint
- ☐ Parcels
- 🟩 Parks
- 🟪 Schools
- Freight Rail
- 49 CTA Bus
- 290 Pace Bus

Scale

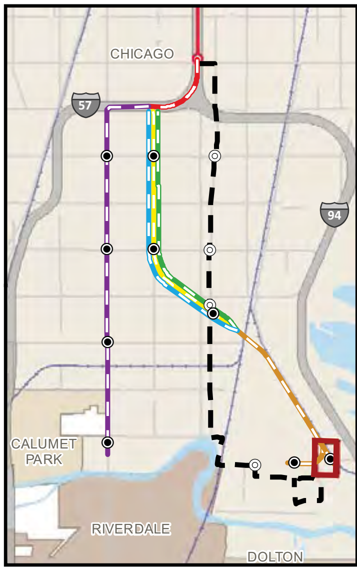
0 125 250

Feet

map id: 03_05.1


COTTAGE GROVE AVE
2
3
4
5
6
7
129TH PL
130TH ST
108
Beaubien Woods Forest Preserve
ELLIS AVE
130TH PL
GREENWOOD AVE

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

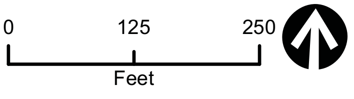
Legend

UPRR Rail Alternative
130th Street Station
South Option

Sheet 2 of 3

- ▨ Proposed Permanent Envelope
- 🟫 Parcel Affected by Proposed Permanent Envelope
- 🟥 Building Displacement
- ■ Building Footprint
- □ Parcels
- 🟩 Parks
- 🟪 Schools
- -+-+- Freight Rail
- —49— CTA Bus
- —290— Pace Bus

Scale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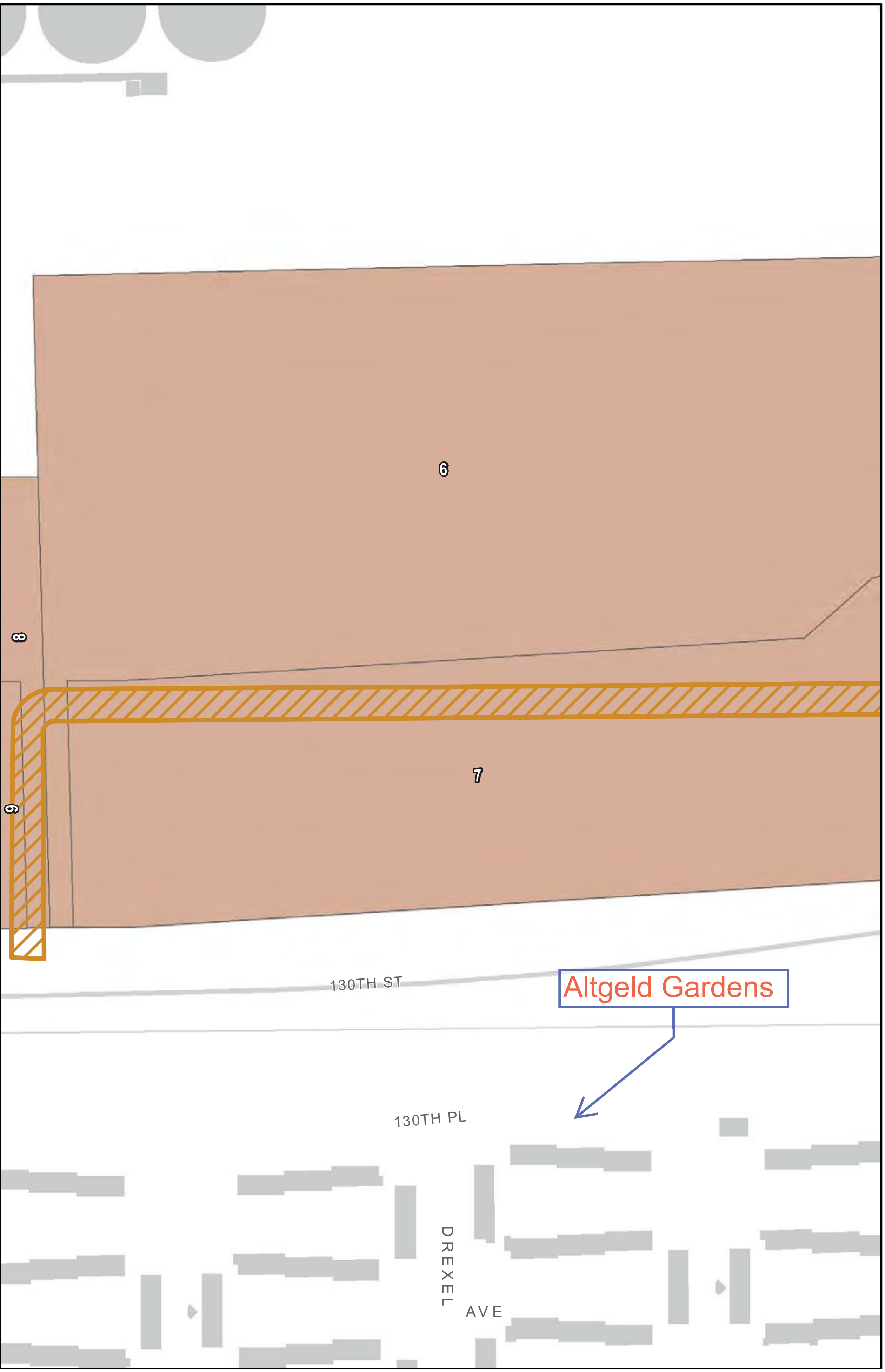
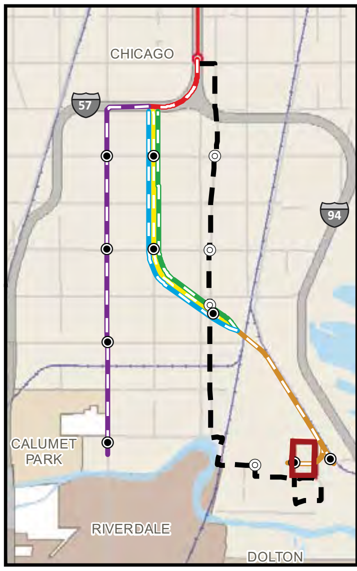
125
250
Feet

map id: 03_05.2


6
8
7
9
130TH ST
Altgeld Gardens
130TH PL
DREXEL AVE

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

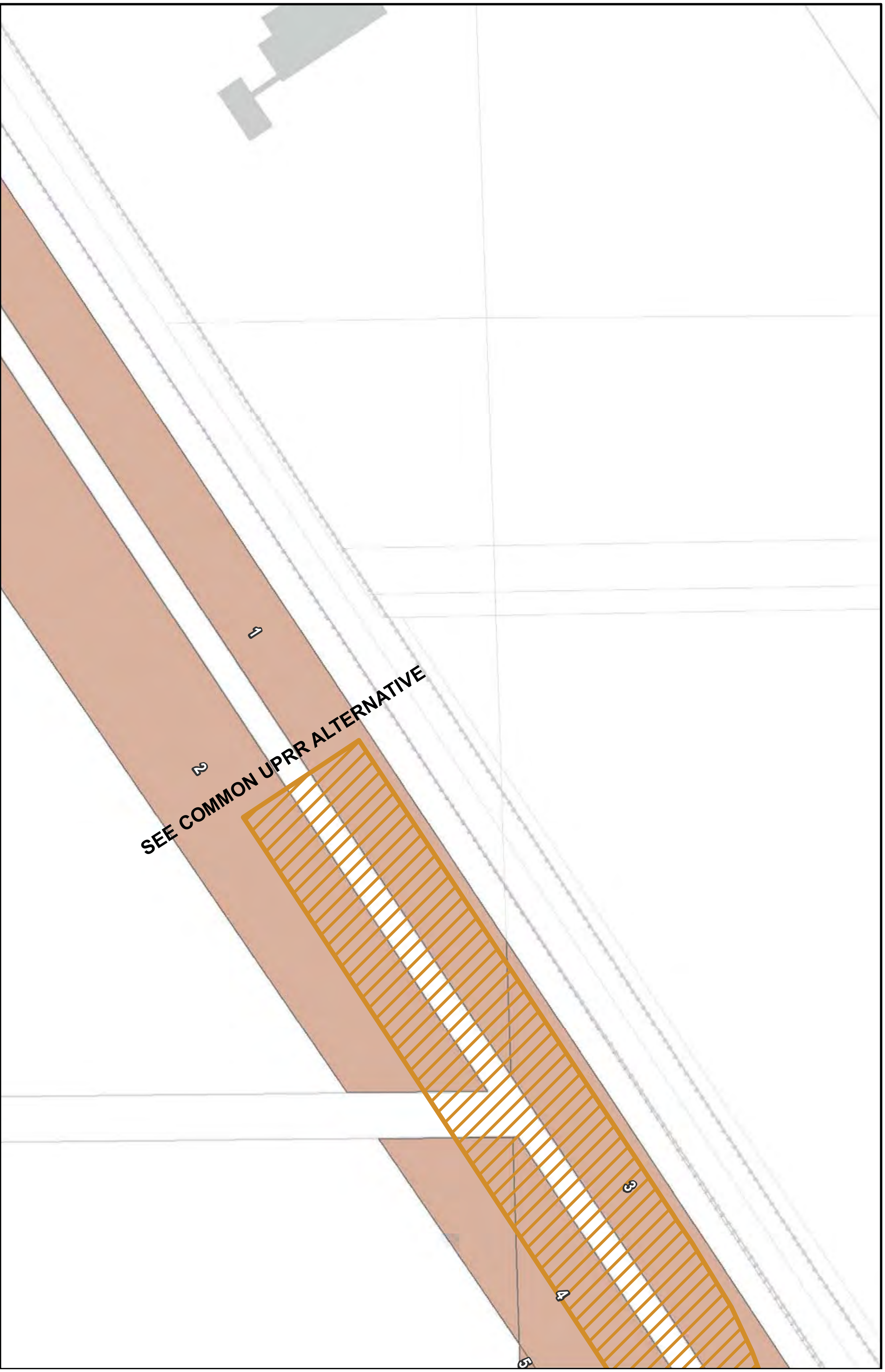
UPRR Rail Alternative
130th Street Station
South Option
Sheet 3 of 3

▨	Proposed Permanent Envelope
🟫	Parcel Affected by Proposed Permanent Envelope
🟥	Building Displacement
⬜	Building Footprint
□	Parcels
🟩	Parks
🟪	Schools
-+-+-	Freight Rail
-49-	CTA Bus
-290-	Pace Bus

Scale

0 125 250
Feet

map id: 03_05.3


SEE COMMON UPRR ALTERNATIVE
1
2
3
4
5

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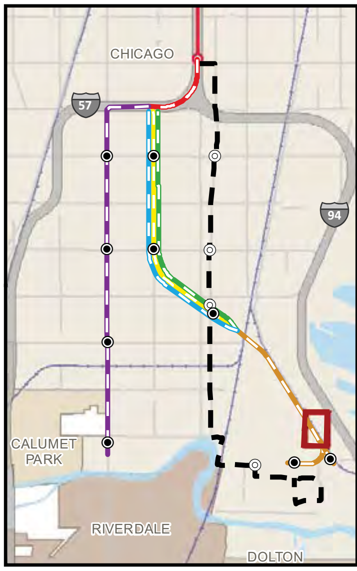

CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

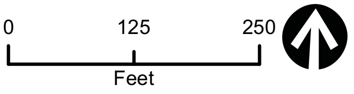
Legend

UPRR Rail Alternative
130th Street Station
West Option

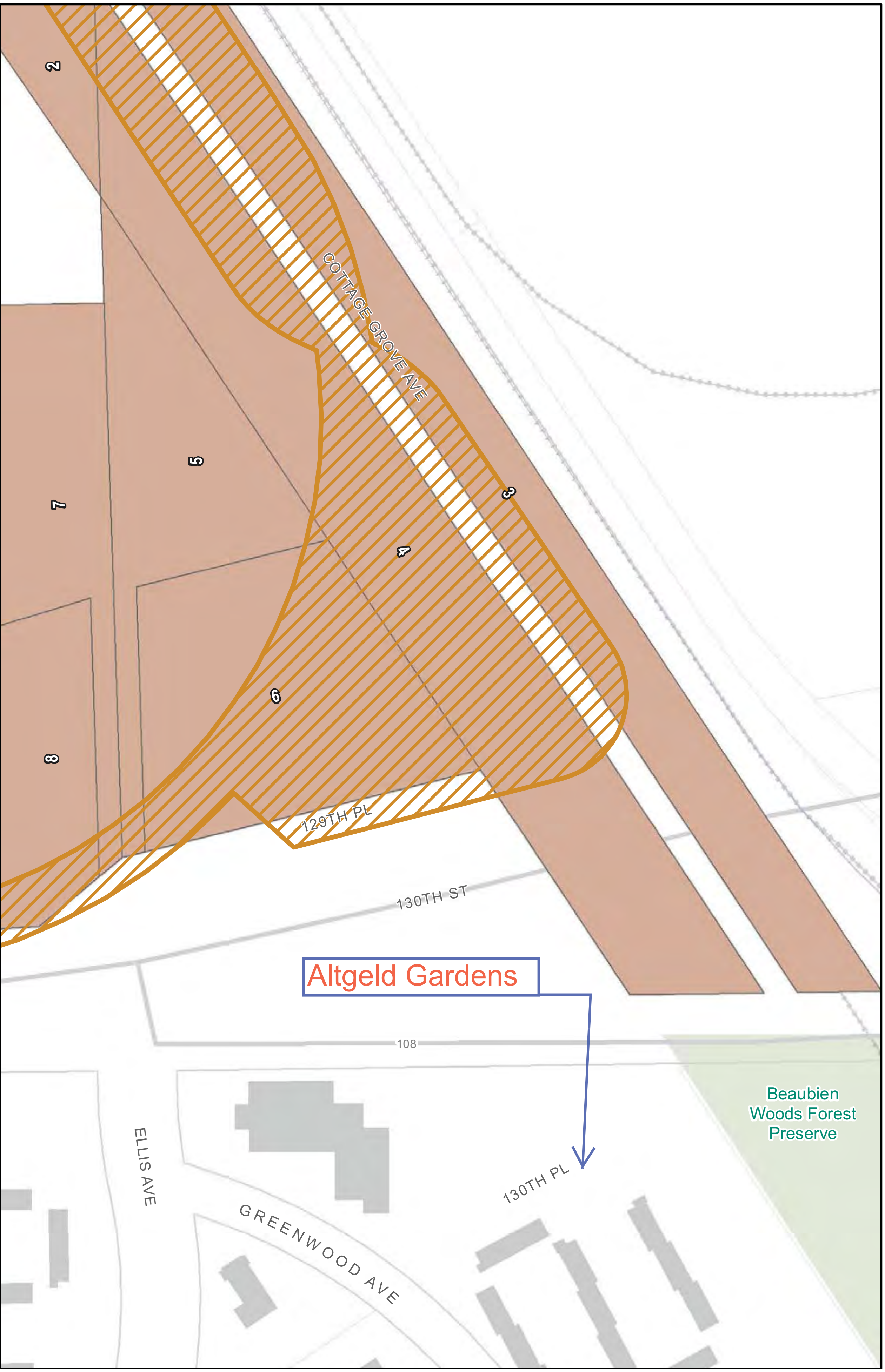
Sheet 1 of 4

- ▨ Proposed Permanent Envelope
- 🟫 Parcel Affected by Proposed Permanent Envelope
- 🟥 Building Displacement
- ⬜ Building Footprint
- ☐ Parcels
- 🟩 Parks
- 🟪 Schools
- -+-+- Freight Rail
- -49- CTA Bus
- -290- Pace Bus

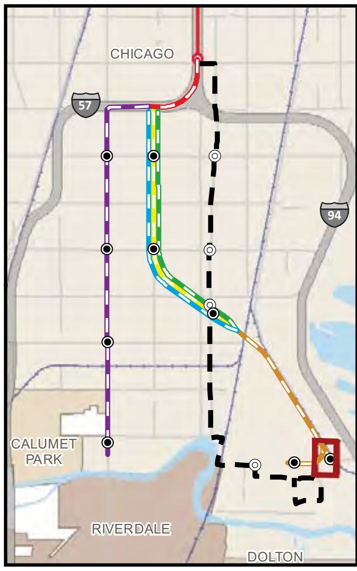
Scale


0
125
250
Feet

map id: 03_06.1


2
7
5
3
4
6
8
COTTAGE GROVE AVE
129TH PL
130TH ST
Altgeld Gardens
108
ELLIS AVE
GREENWOOD AVE
130TH PL
Beaubien Woods Forest Preserve

Inset

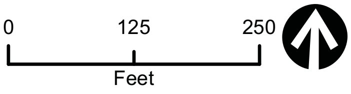

CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

UPRR Rail Alternative
130th Street Station
West Option
Sheet 2 of 4

▨ Proposed Permanent Envelope
🟫 Parcel Affected by Proposed Permanent Envelope
🟥 Building Displacement
⬜ Building Footprint
□ Parcels
🟩 Parks
🟪 Schools
-+- Freight Rail
-49- CTA Bus
-290- Pace Bus

Scale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125
250
Feet

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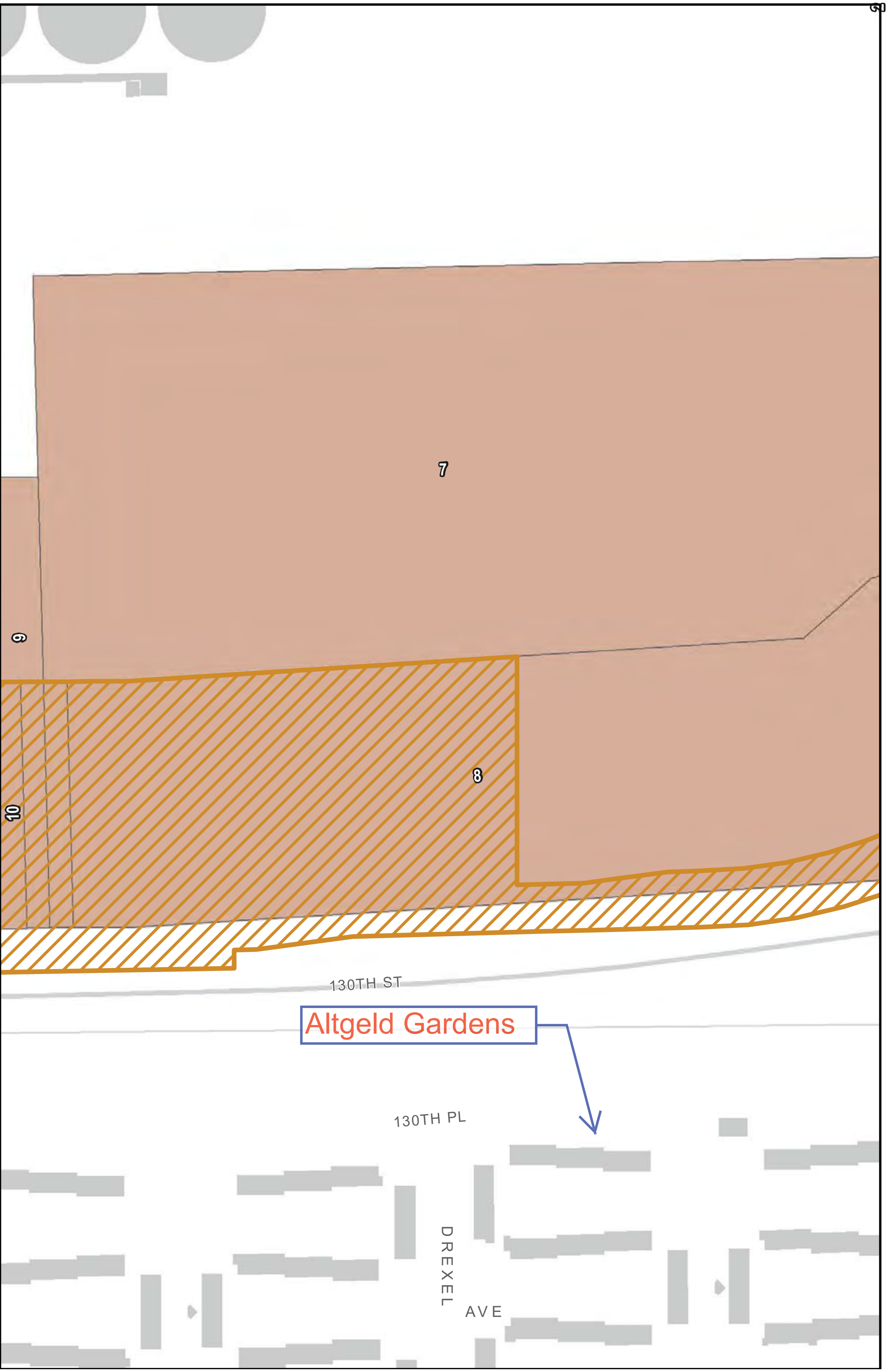
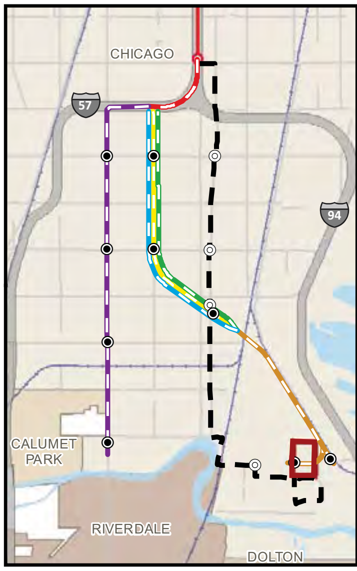

7
9
8
10
130TH ST
Altgeld Gardens
130TH PL
DREXEL AVE

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

UPRR Rail Alternative
130th Street Station
West Option

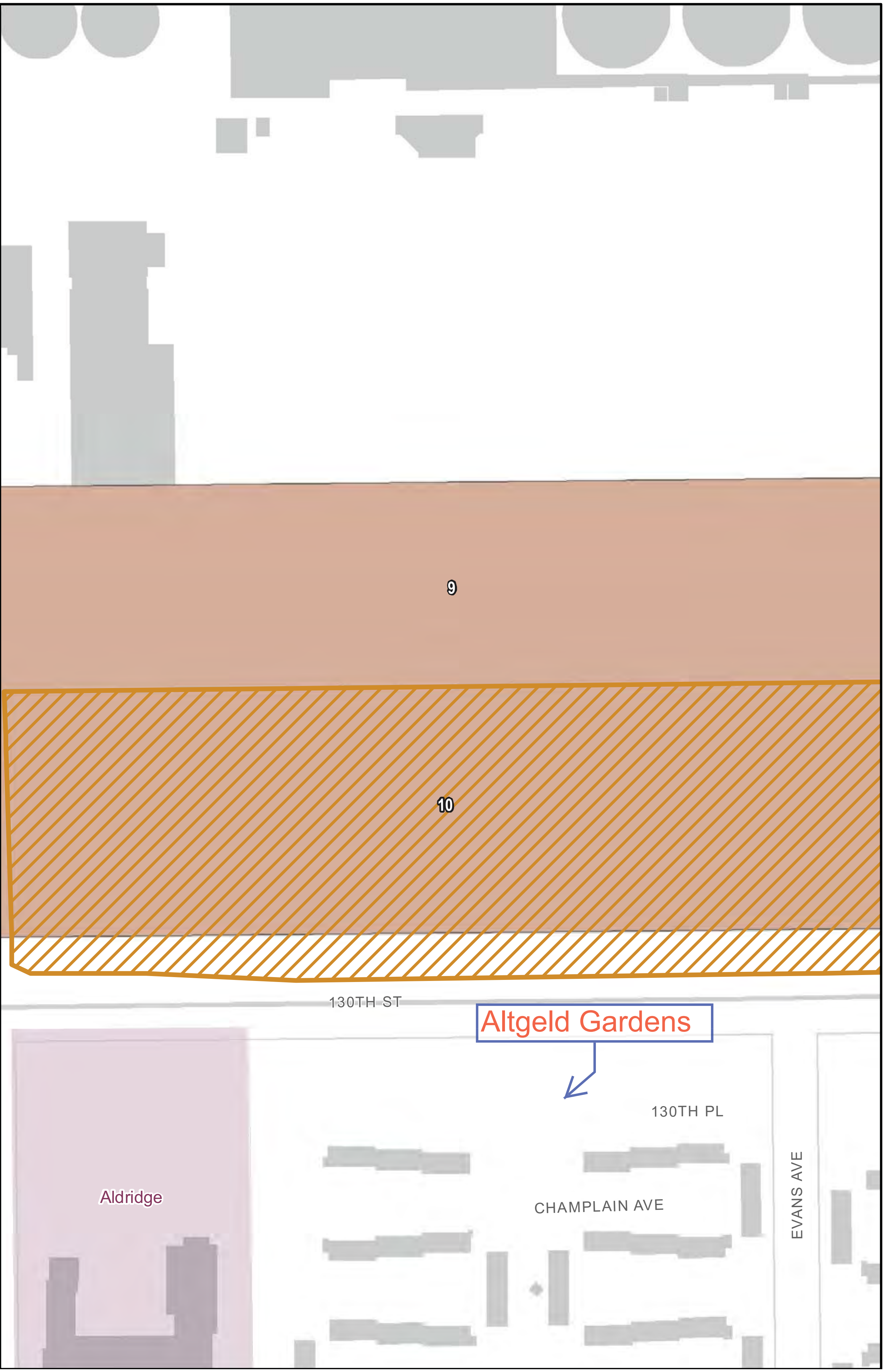
Sheet 3 of 4

▨	Proposed Permanent Envelope
■	Parcel Affected by Proposed Permanent Envelope
🟥	Building Displacement
■	Building Footprint
□	Parcels
🟩	Parks
■	Schools
-+-+-	Freight Rail
-49-	CTA Bus
-290-	Pace Bus

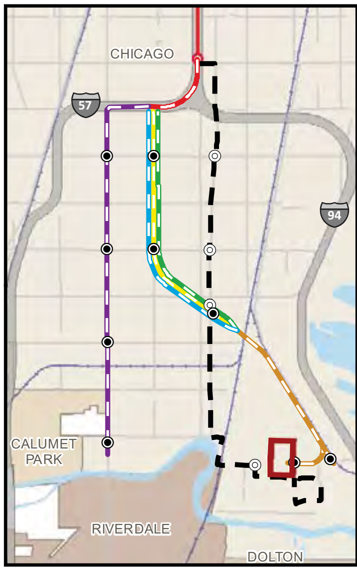
Scale

0 125 250
Feet

map id: 03_06.3


9
10
130TH ST
Altgeld Gardens
130TH PL
CHAMPLAIN AVE
EVANS AVE
Aldridge

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

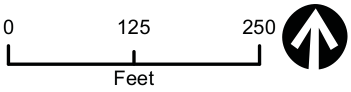
Legend

UPRR Rail Alternative
130th Street Station
West Option

Sheet 4 of 4

▨	Proposed Permanent Envelope
🟫	Parcel Affected by Proposed Permanent Envelope
🟥	Building Displacement
⬜	Building Footprint
☐	Parcels
🟩	Parks
🟪	Schools
-+-+-	Freight Rail
–49–	CTA Bus
–290–	Pace Bus

Scale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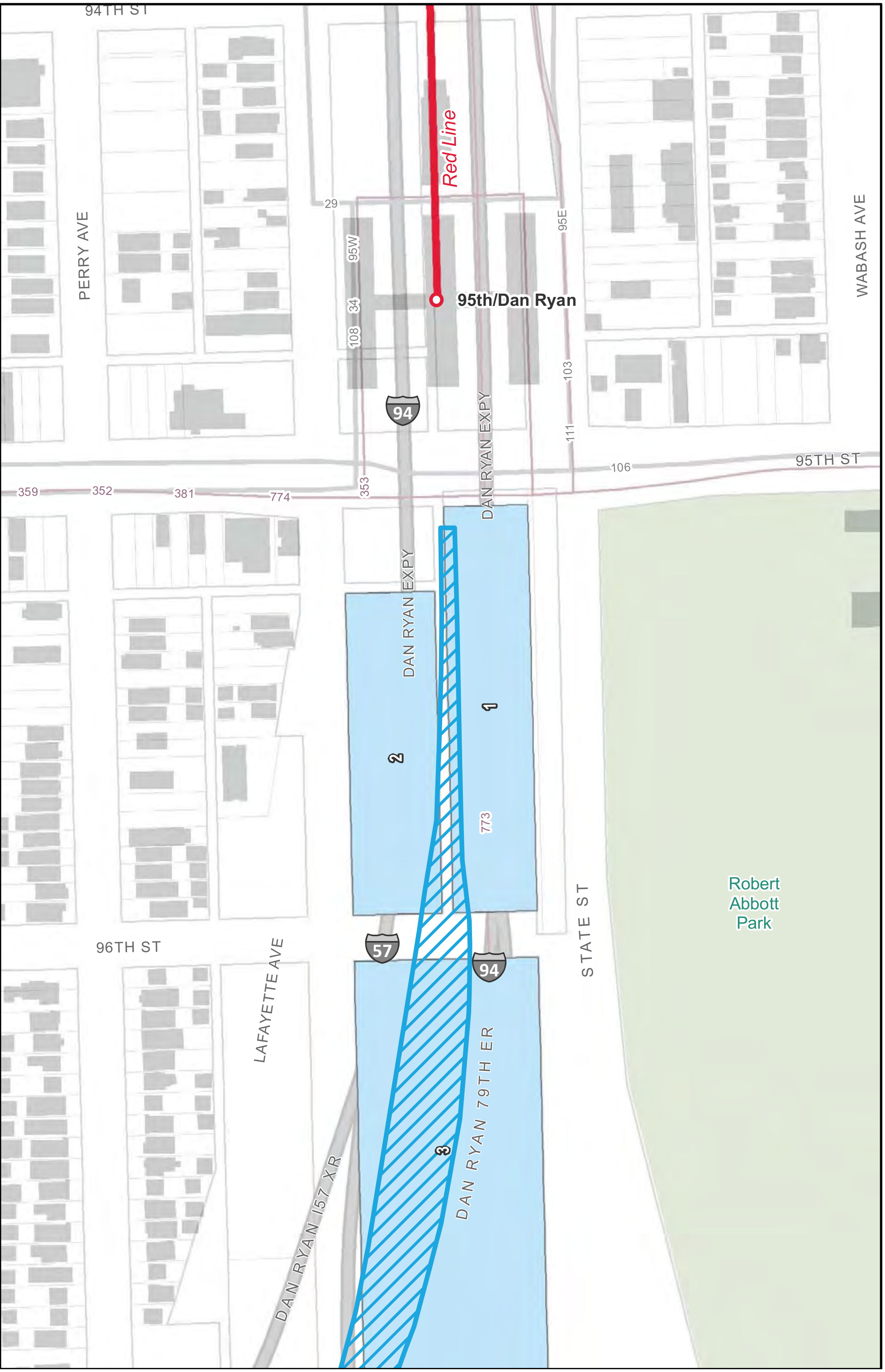
125
250
Feet

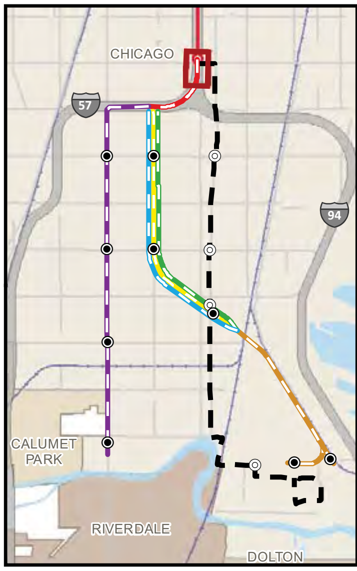
map id: 03_06.4

Appendix D-4:
UPRR West Option Displacement Maps

Note: *The displacement maps for the East and West Option in this appendix have been superseced by the maps included in Appendix I of the Displacements and Relocation of Existing Uses Technical Memorandum.*


94TH ST
Red Line
29
95W
95E
34
108
95th/Dan Ryan
PERRY AVE
WABASH AVE
94
DAN RYAN EXPY
103
111
106
95TH ST
359
352
381
774
353
DAN RYAN EXPY
1
2
773
STATE ST
Robert Abbott Park
96TH ST
57
94
LAFAYETTE AVE
3
DAN RYAN 79TH ER
DAN RYAN I57 XR

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

UPRR Rail Alternative West Option

Sheet 1 of 15

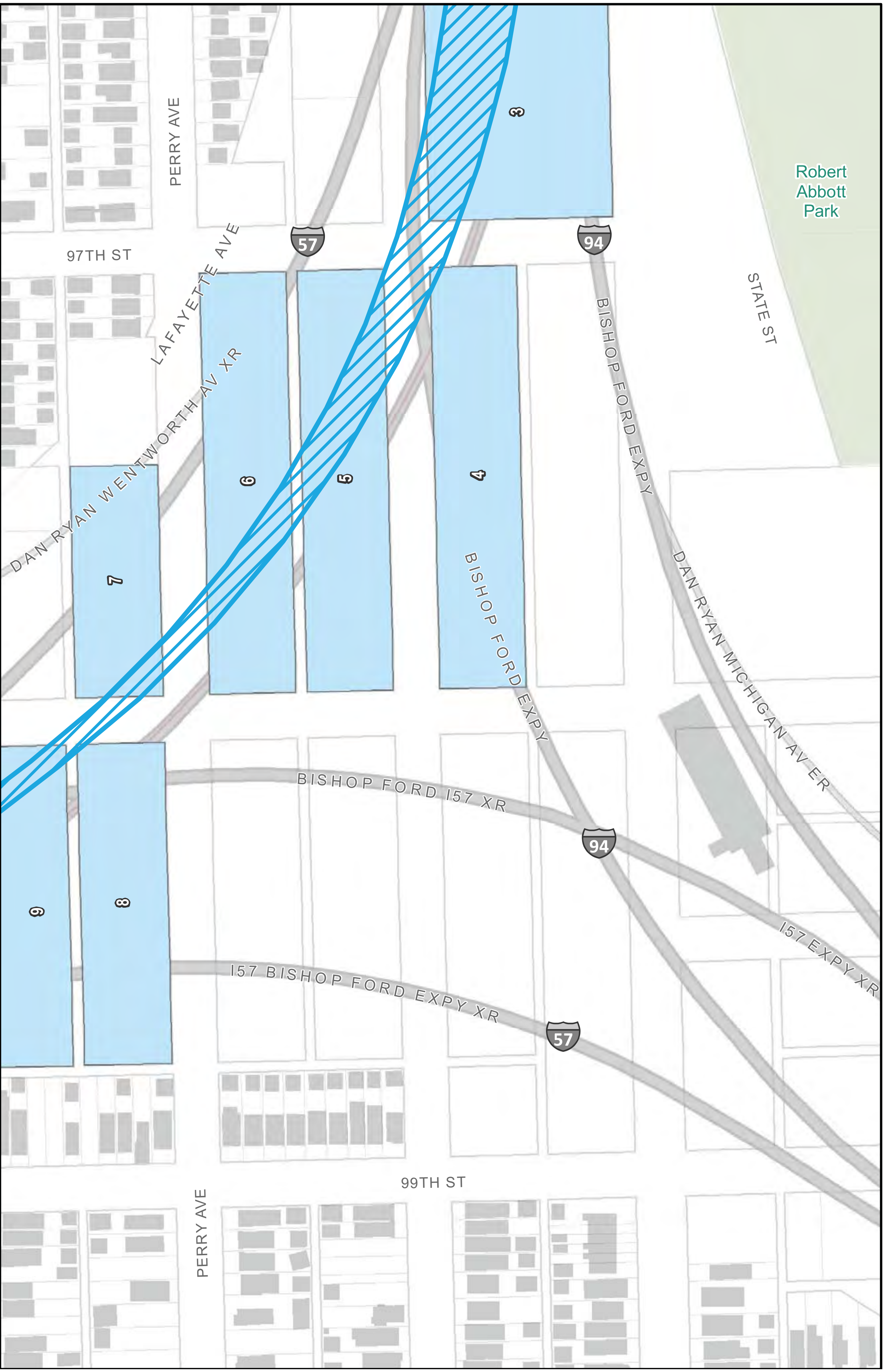
- ▨ Proposed Permanent Envelope
- 🟦 Parcel Easement
- 🟫 Parcel Affected by Proposed Permanent Envelope
- 🟥 Building Displacement
- ⬜ Building Footprint
- ☐ Parcels
- 🟩 Parks
- 🟪 Schools
- -+-+- Freight Rail
- —49— CTA Bus
- —290— Pace Bus

Scale

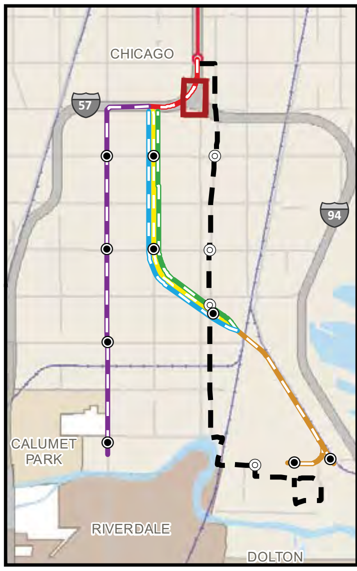
0 125 250

Feet

map id: 03_02.1


PERRY AVE
3
Robert Abbott Park
97TH ST
LAFAYETTE AVE
57
94
STATE ST
DAN RYAN WENTWORTH AV XR
6
5
4
BISHOP FORD EXPY
7
BISHOP FORD EXPY
DAN RYAN MICHIGAN AV ER
BISHOP FORD I57 XR
94
9
8
I57 EXPY XR
I57 BISHOP FORD EXPY XR
57
99TH ST
PERRY AVE

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

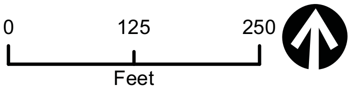
Legend

UPRR Rail Alternative West Option

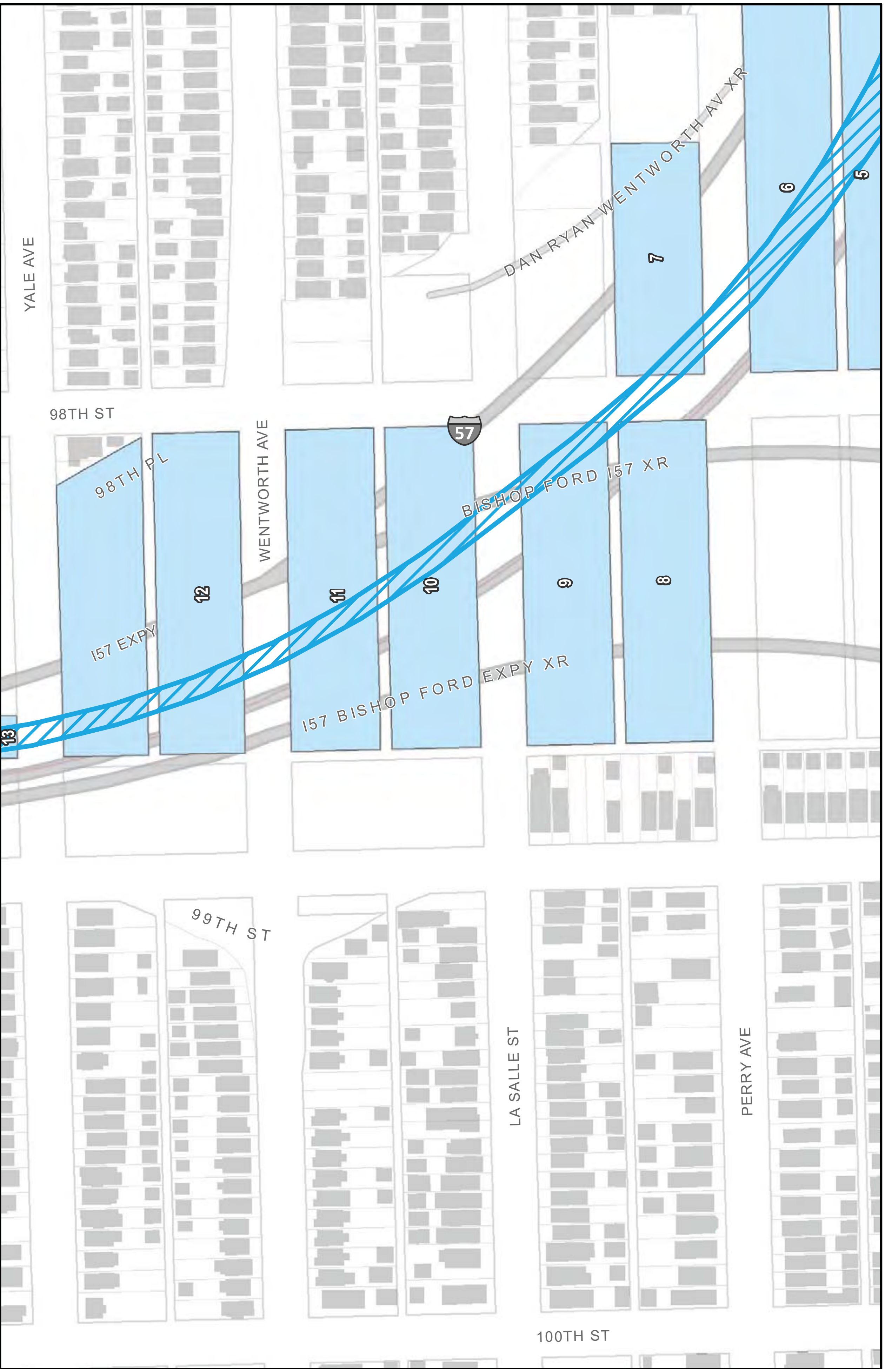
Sheet 2 of 15

- ▨ Proposed Permanent Envelope
- ■ Parcel Easement
- ■ Parcel Affected by Proposed Permanent Envelope
- ■ Building Displacement
- ■ Building Footprint
- ☐ Parcels
- ■ Parks
- ■ Schools
- Freight Rail
- 49 CTA Bus
- 290 Pace Bus

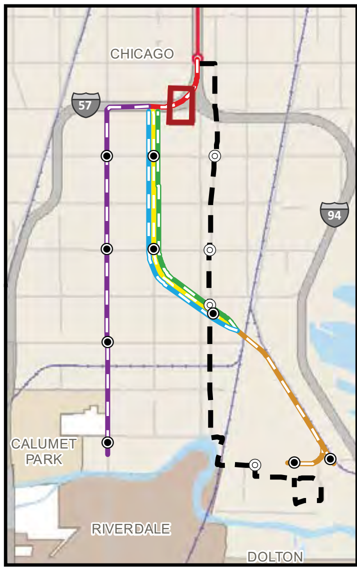
Scale


0
125
250
Feet

map id: 03_02.2


YALE AVE
98TH ST
98TH PL
WENTWORTH AVE
DAN RYAN WENTWORTH AV XR
57
BISHOP FORD I57 XR
I57 EXPY
I57 BISHOP FORD EXPY XR
99TH ST
LA SALLE ST
PERRY AVE
100TH ST
5
6
7
8
9
10
11
12
13

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

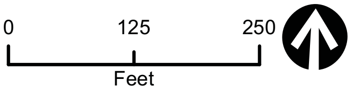
Legend

UPRR Rail Alternative West Option

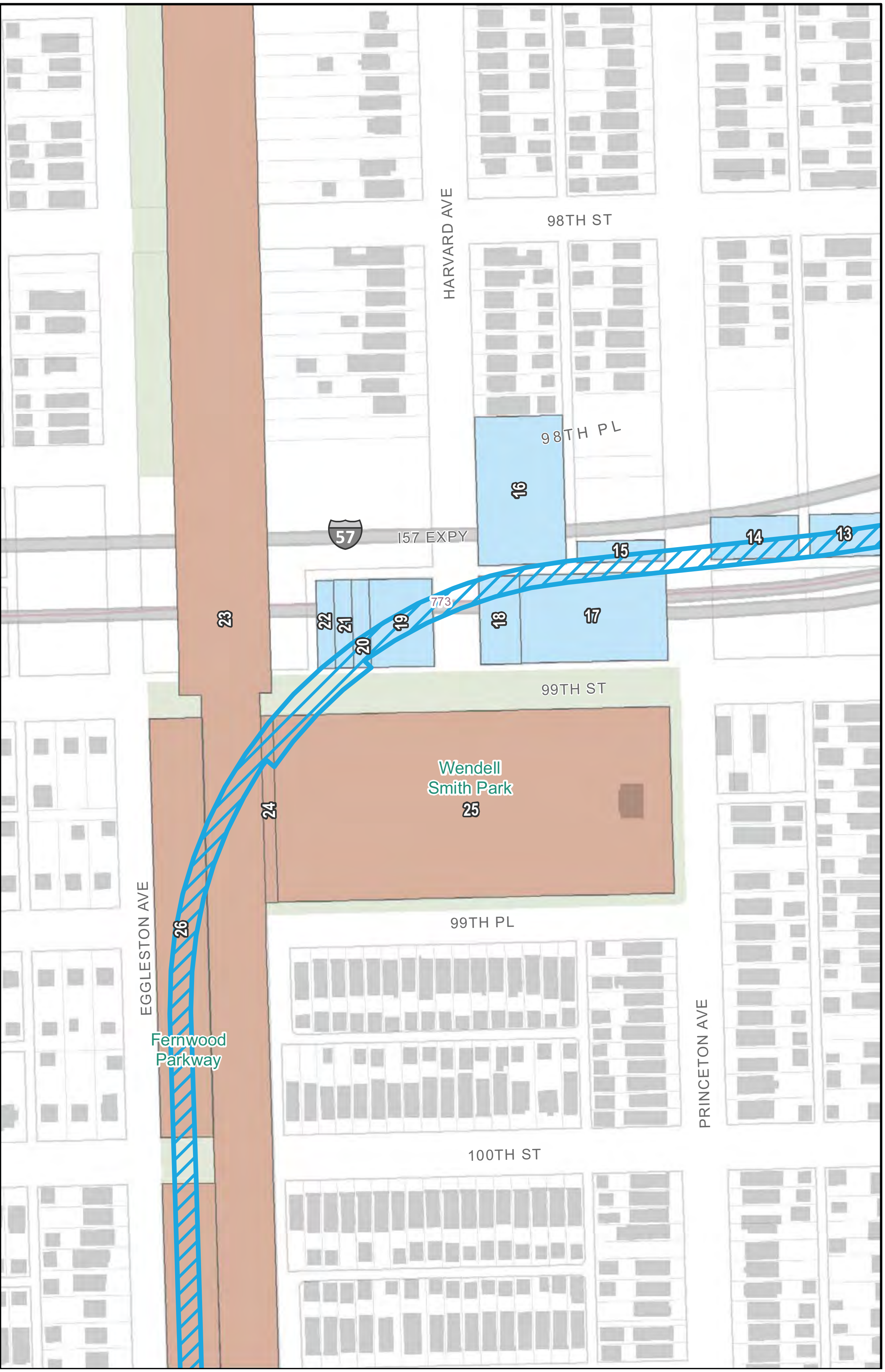
Sheet 3 of 15

- ▨ Proposed Permanent Envelope
- 🟦 Parcel Easement
- 🟫 Parcel Affected by Proposed Permanent Envelope
- 🟥 Building Displacement
- ⬜ Building Footprint
- ⬜ Parcels
- 🟩 Parks
- 🟪 Schools
- ┼ Freight Rail
- —49— CTA Bus
- —290— Pace Bus

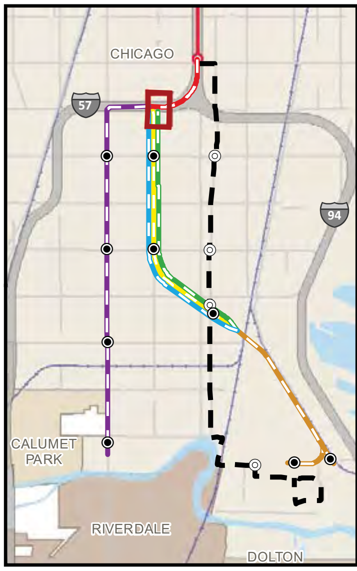
Scale


0
125
250
Feet

map id: 03_02.3


98TH ST
HARVARD AVE
98TH PL
16
57
I57 EXPY
15
14
13
773
22
21
20
19
18
17
23
99TH ST
Wendell Smith Park
25
24
99TH PL
EGGLESTON AVE
26
Fernwood Parkway
PRINCETON AVE
100TH ST

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

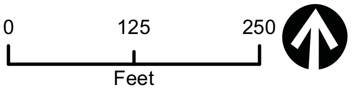
Legend

UPRR Rail Alternative West Option

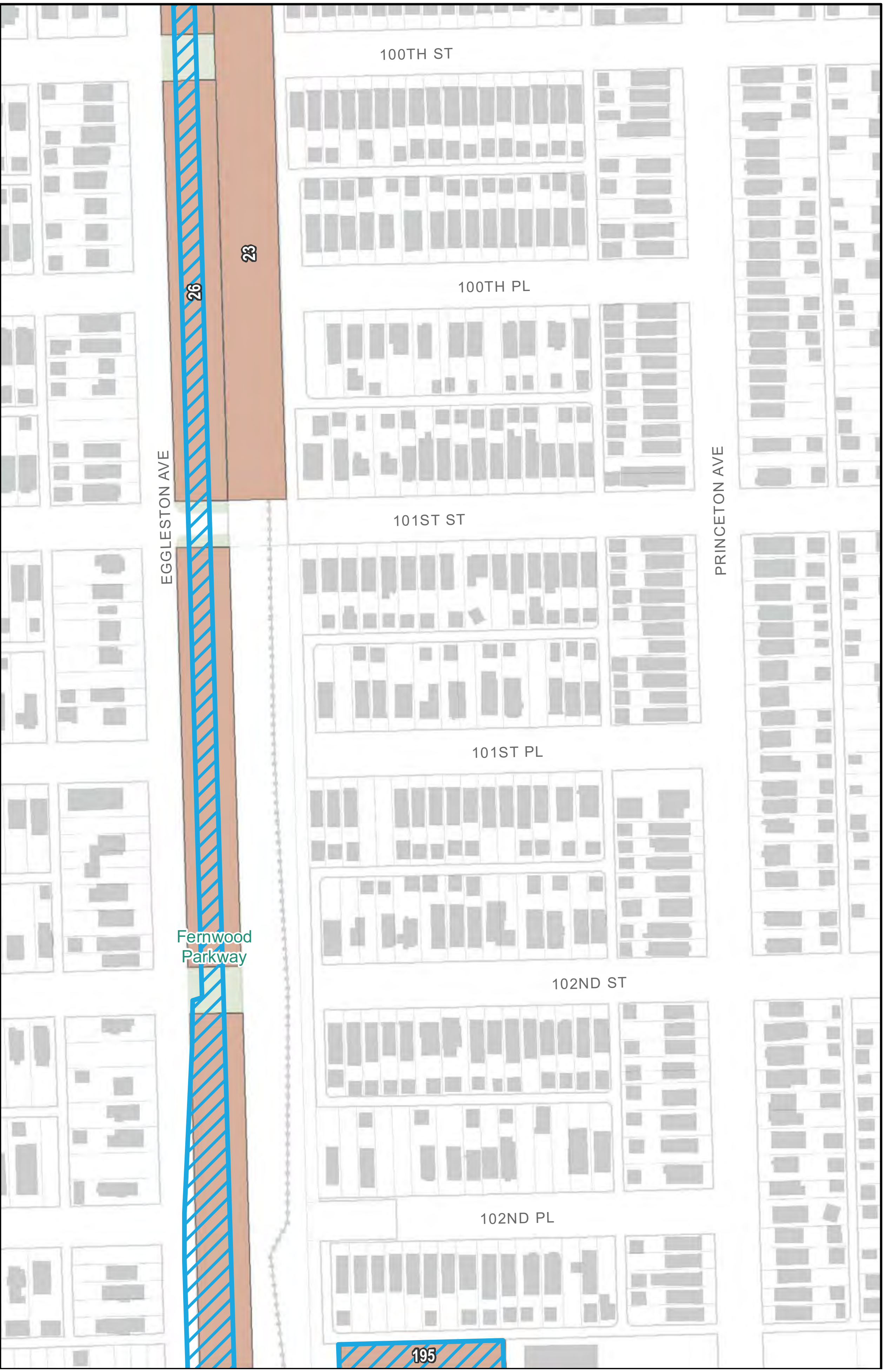
Sheet 4 of 15

- ▨ Proposed Permanent Envelope
- ▭ Parcel Easement
- ▭ Parcel Affected by Proposed Permanent Envelope
- ■ Building Displacement
- ▭ Building Footprint
- ▭ Parcels
- ▭ Parks
- ▭ Schools
- ┼┼ Freight Rail
- —49— CTA Bus
- —290— Pace Bus

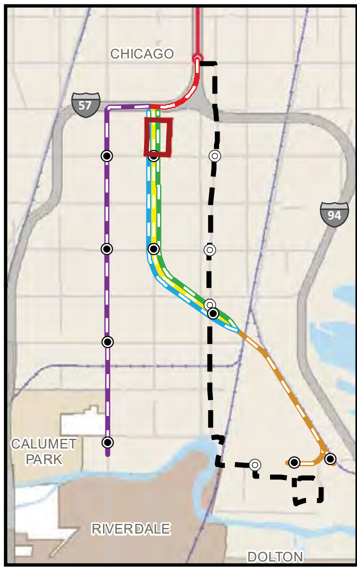
Scale


0
125
250
Feet

map id: 03_02.4


100TH ST
100TH PL
23
26
EGGLESTON AVE
PRINCETON AVE
101ST ST
101ST PL
Fernwood Parkway
102ND ST
102ND PL
195

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

UPRR Rail Alternative West Option

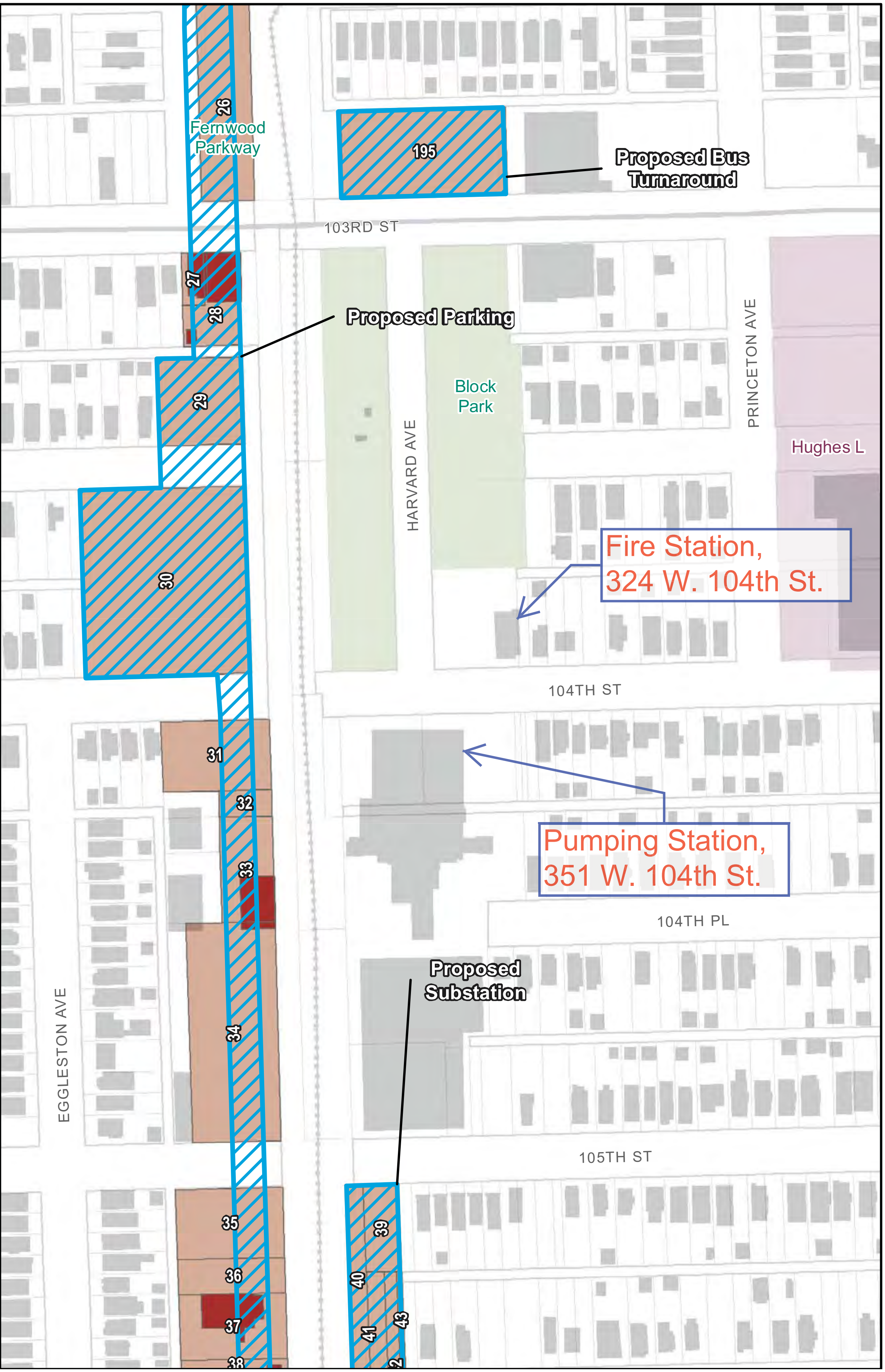
Sheet 5 of 15

▨ Proposed Permanent Envelope
🟦 Parcel Easement
🟫 Parcel Affected by Proposed Permanent Envelope
🟥 Building Displacement
⬜ Building Footprint
□ Parcels
🟩 Parks
🟪 Schools
-+-+- Freight Rail
—49— CTA Bus
—290— Pace Bus

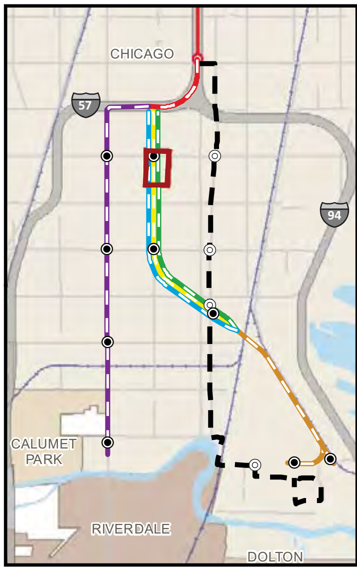
Scale

0 125 250
Feet

map id: 03_02.5


26
Fernwood Parkway
195
Proposed Bus Turnaround
103RD ST
27
28
Proposed Parking
Block Park
HARVARD AVE
PRINCETON AVE
Hughes L
29
30
Fire Station,
324 W. 104th St.
104TH ST
31
32
33
Pumping Station,
351 W. 104th St.
104TH PL
34
EGGLESTON AVE
Proposed Substation
105TH ST
35
36
37
38
39
40
41
43
2

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

UPRR Rail Alternative
West Option

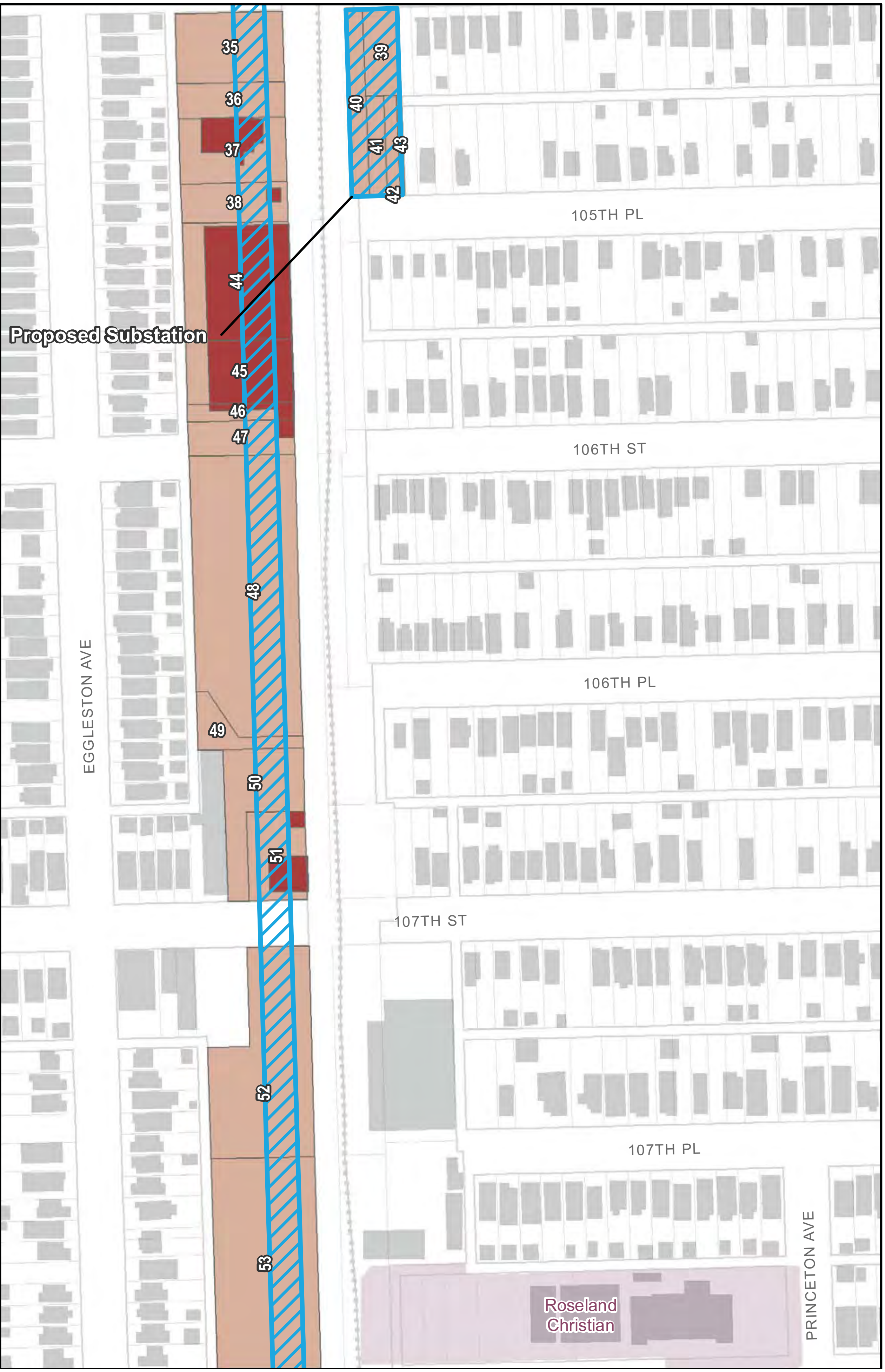
Sheet 6 of 15

▨	Proposed Permanent Envelope
■	Parcel Easement
■	Parcel Affected by Proposed Permanent Envelope
🟥	Building Displacement
■	Building Footprint
☐	Parcels
🟩	Parks
■	Schools
-+-+-	Freight Rail
—49—	CTA Bus
—290—	Pace Bus

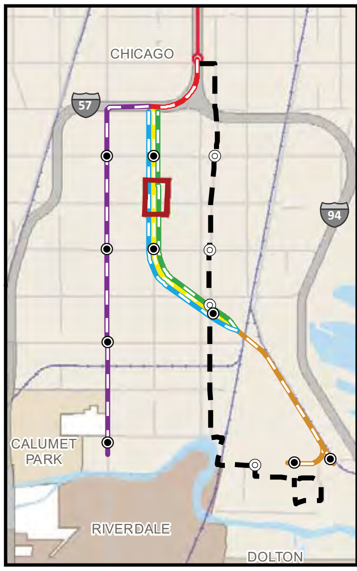
Scale

0 125 250
Feet

map id: 03_02.6


35
36
37
38
39
40
41
42
43
44
Proposed Substation
45
46
47
48
49
50
51
52
53
105TH PL
106TH ST
106TH PL
107TH ST
107TH PL
EGGLESTON AVE
PRINCETON AVE
Roseland Christian

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

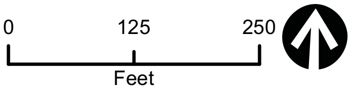
Legend

UPRR Rail Alternative West Option

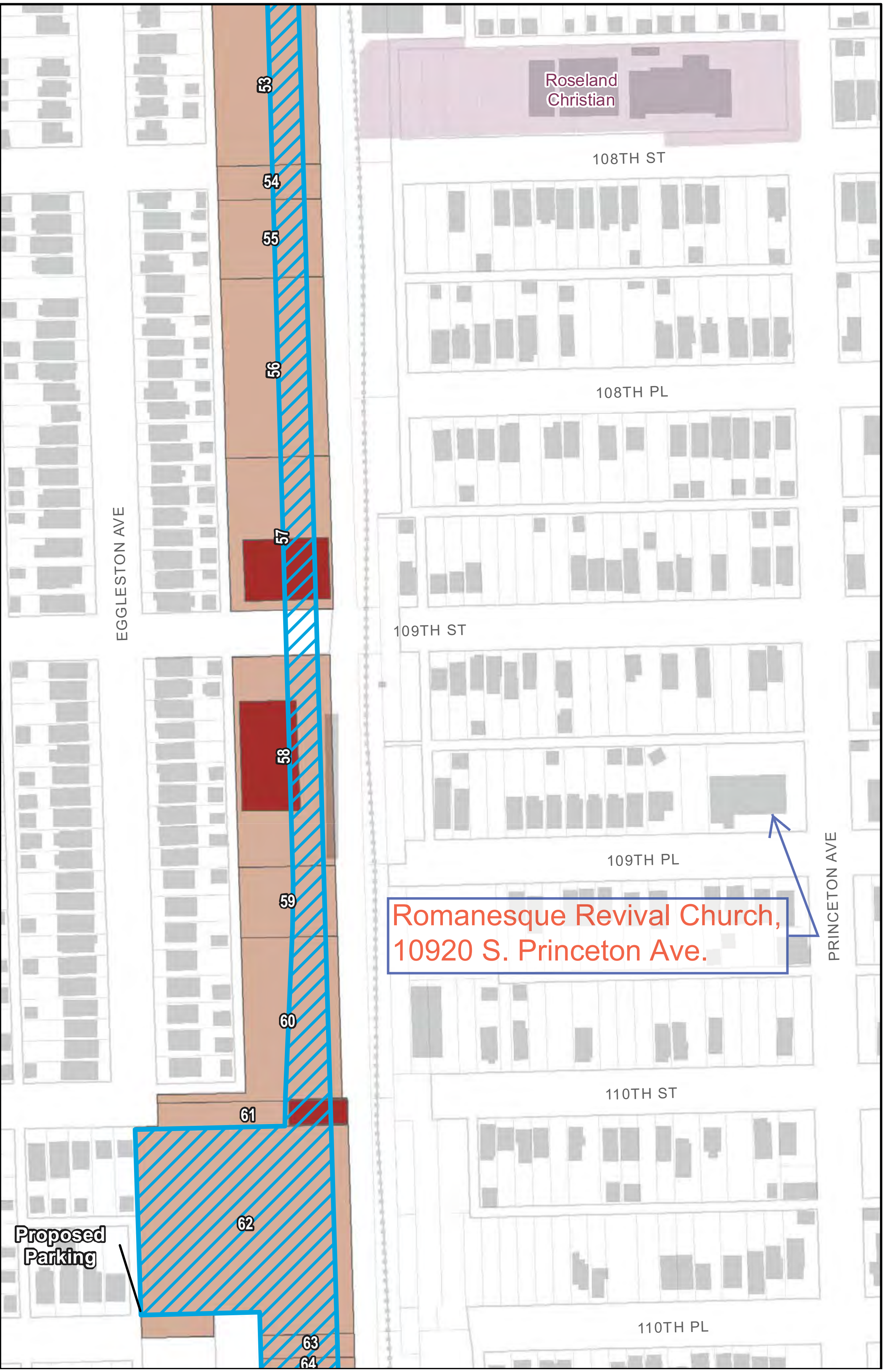
Sheet 7 of 15

▨ Proposed Permanent Envelope
🟦 Parcel Easement
🟫 Parcel Affected by Proposed Permanent Envelope
🟥 Building Displacement
⬜ Building Footprint
☐ Parcels
🟩 Parks
🟪 Schools
-+-+- Freight Rail
—49— CTA Bus
—290— Pace Bus

Scale

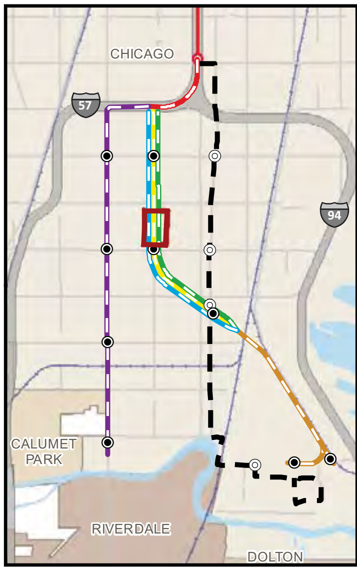

0
125
250
Feet

map id: 03_02.7


Roseland Christian
108TH ST
108TH PL
109TH ST
109TH PL
110TH ST
110TH PL
EGGLESTON AVE
PRINCETON AVE
53
54
55
56
57
58
59
60
61
62
63
64
Proposed Parking

Romanesque Revival Church, 10920 S. Princeton Ave.

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

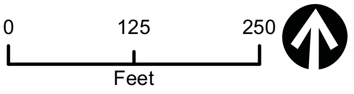
Legend

UPRR Rail Alternative
West Option

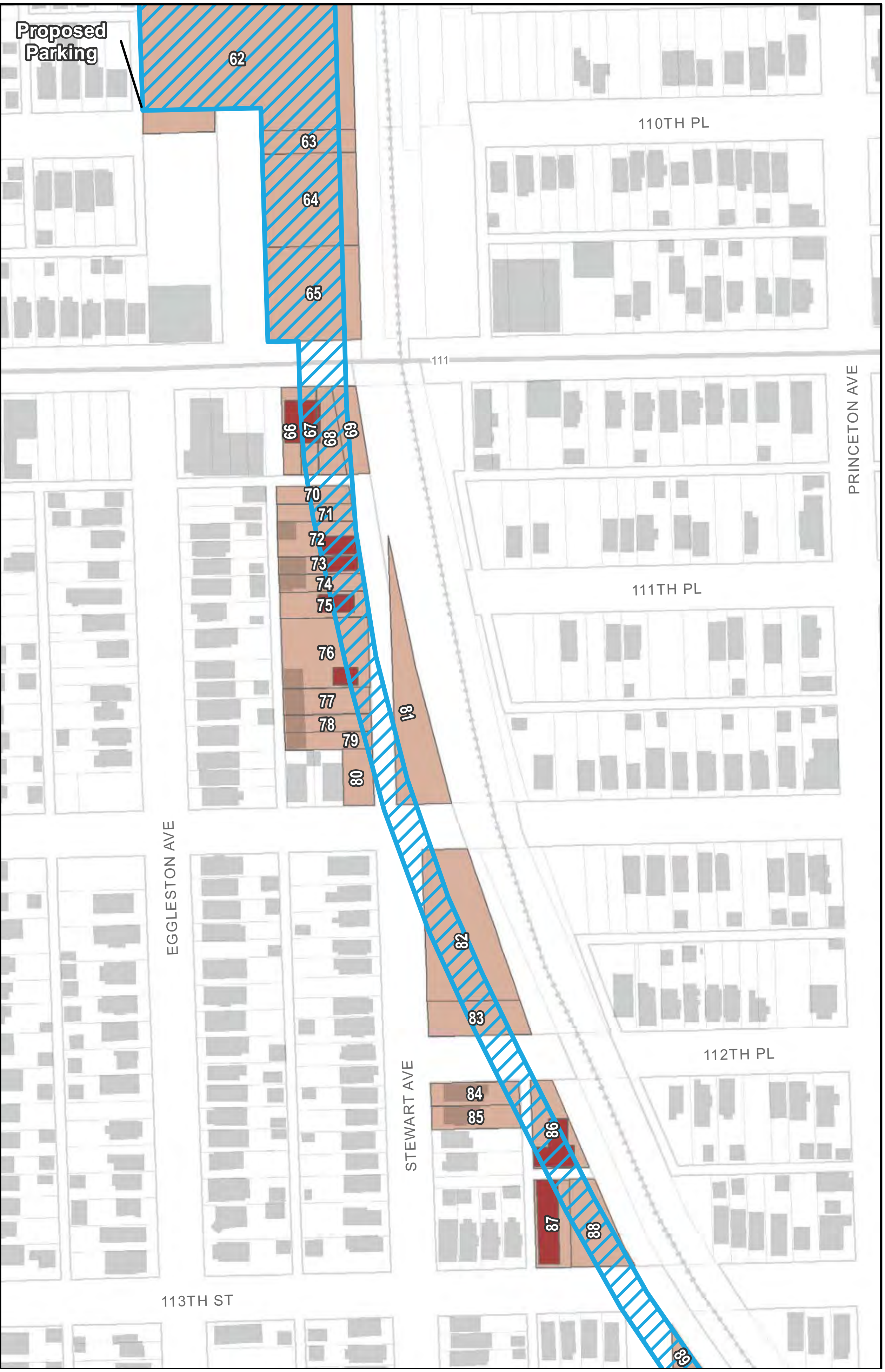
Sheet 8 of 15

- ▨ Proposed Permanent Envelope
- 🟦 Parcel Easement
- 🟫 Parcel Affected by Proposed Permanent Envelope
- 🟥 Building Displacement
- ⬜ Building Footprint
- ☐ Parcels
- 🟩 Parks
- 🟪 Schools
- -+-+- Freight Rail
- —49— CTA Bus
- —290— Pace Bus

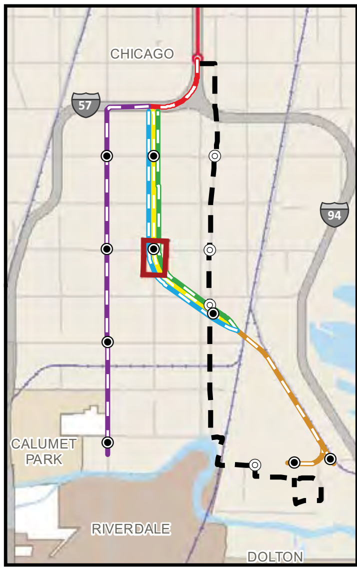
Scale


0
125
250
Feet

map id: 03_02.8


Proposed Parking
62
63
64
65
111
66
67
68
69
70
71
72
73
74
75
76
77
78
79
80
81
82
83
84
85
86
87
88
89
110TH PL
111TH PL
112TH PL
113TH ST
PRINCETON AVE
EGGLESTON AVE
STEWART AVE

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

UPRR Rail Alternative West Option

Sheet 9 of 15

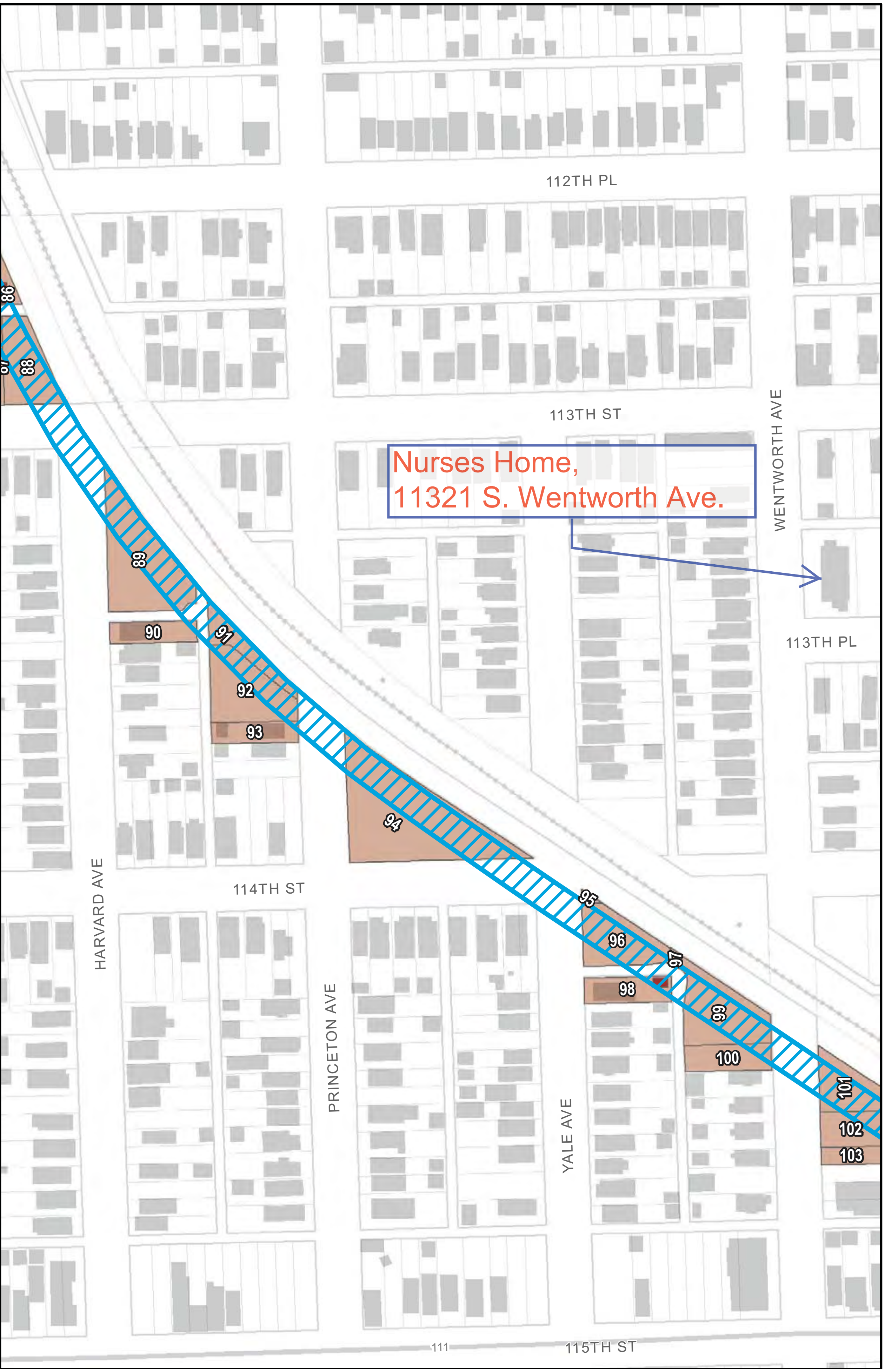
▨	Proposed Permanent Envelope
🟦	Parcel Easement
🟫	Parcel Affected by Proposed Permanent Envelope
🟥	Building Displacement
■	Building Footprint
□	Parcels
🟩	Parks
🟪	Schools
-+-+-	Freight Rail
—49—	CTA Bus
—290—	Pace Bus

Scale

0 125 250

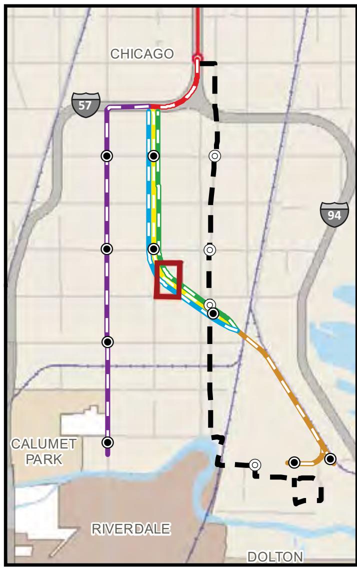
Feet

map id: 03_02.9


112TH PL
113TH ST
WENTWORTH AVE
113TH PL
HARVARD AVE
114TH ST
PRINCETON AVE
YALE AVE
115TH ST
111
86
88
89
90
91
92
93
94
95
96
97
98
99
100
101
102
103

Nurses Home,
11321 S. Wentworth Ave.

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

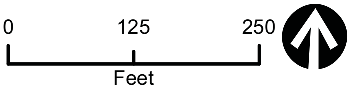
Legend

UPRR Rail Alternative West Option

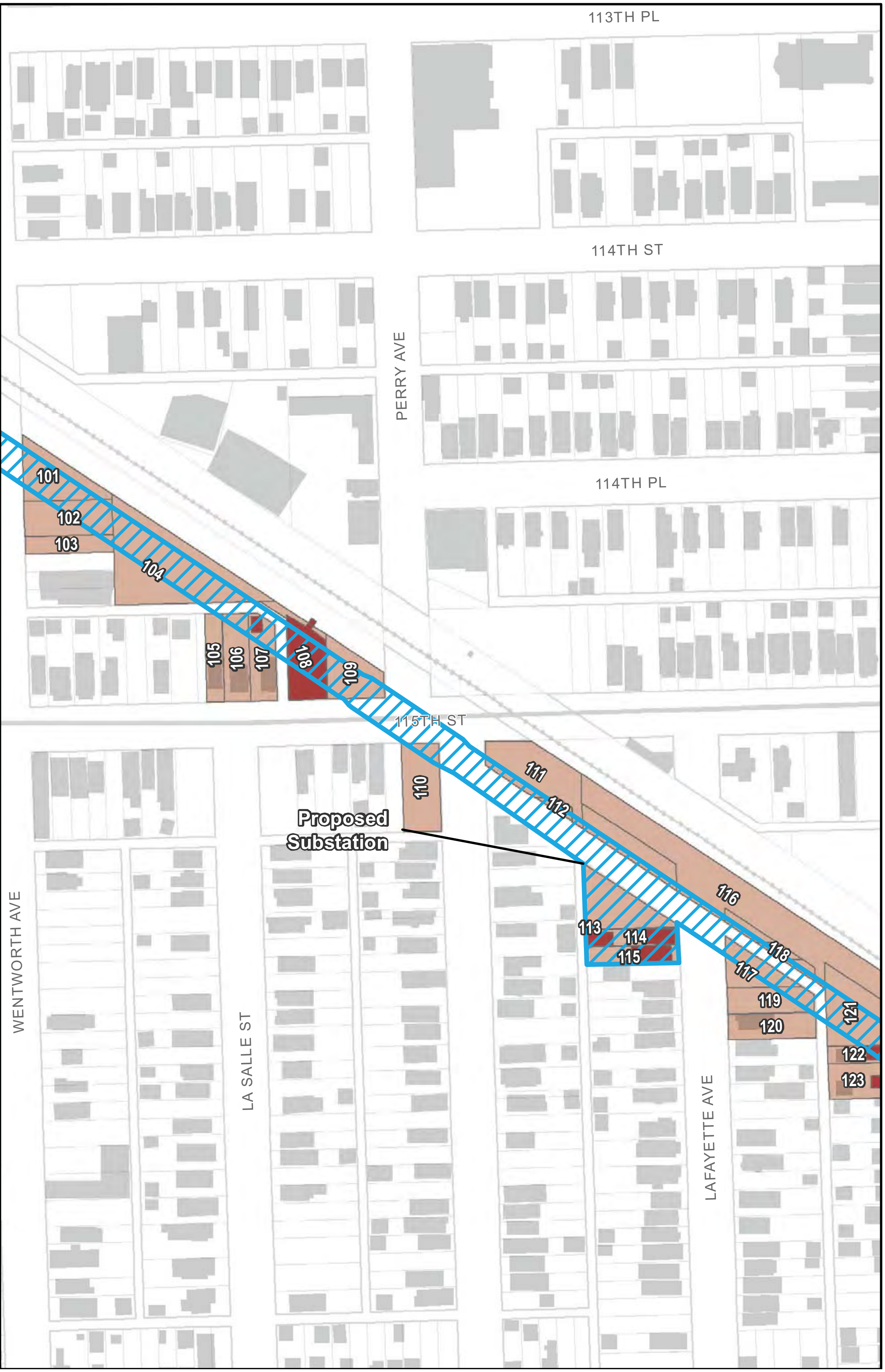
Sheet 10 of 15

▨	Proposed Permanent Envelope
🟦	Parcel Easement
🟫	Parcel Affected by Proposed Permanent Envelope
🟥	Building Displacement
⬜	Building Footprint
□	Parcels
🟩	Parks
🟪	Schools
-+-+-	Freight Rail
—49—	CTA Bus
—290—	Pace Bus

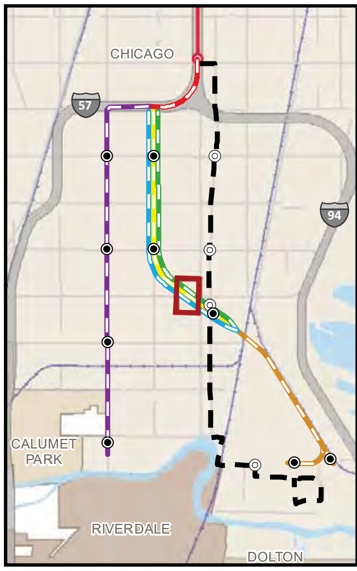
Scale


0
125
250
Feet

map id: 03_02.10


113TH PL
114TH ST
114TH PL
115TH ST
PERRY AVE
WENTWORTH AVE
LA SALLE ST
LAFAYETTE AVE
101
102
103
104
105
106
107
108
109
110
111
112
113
114
115
116
117
118
119
120
121
122
123
Proposed Substation

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

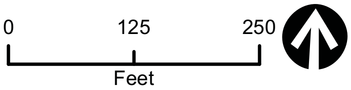
Legend

UPRR Rail Alternative West Option

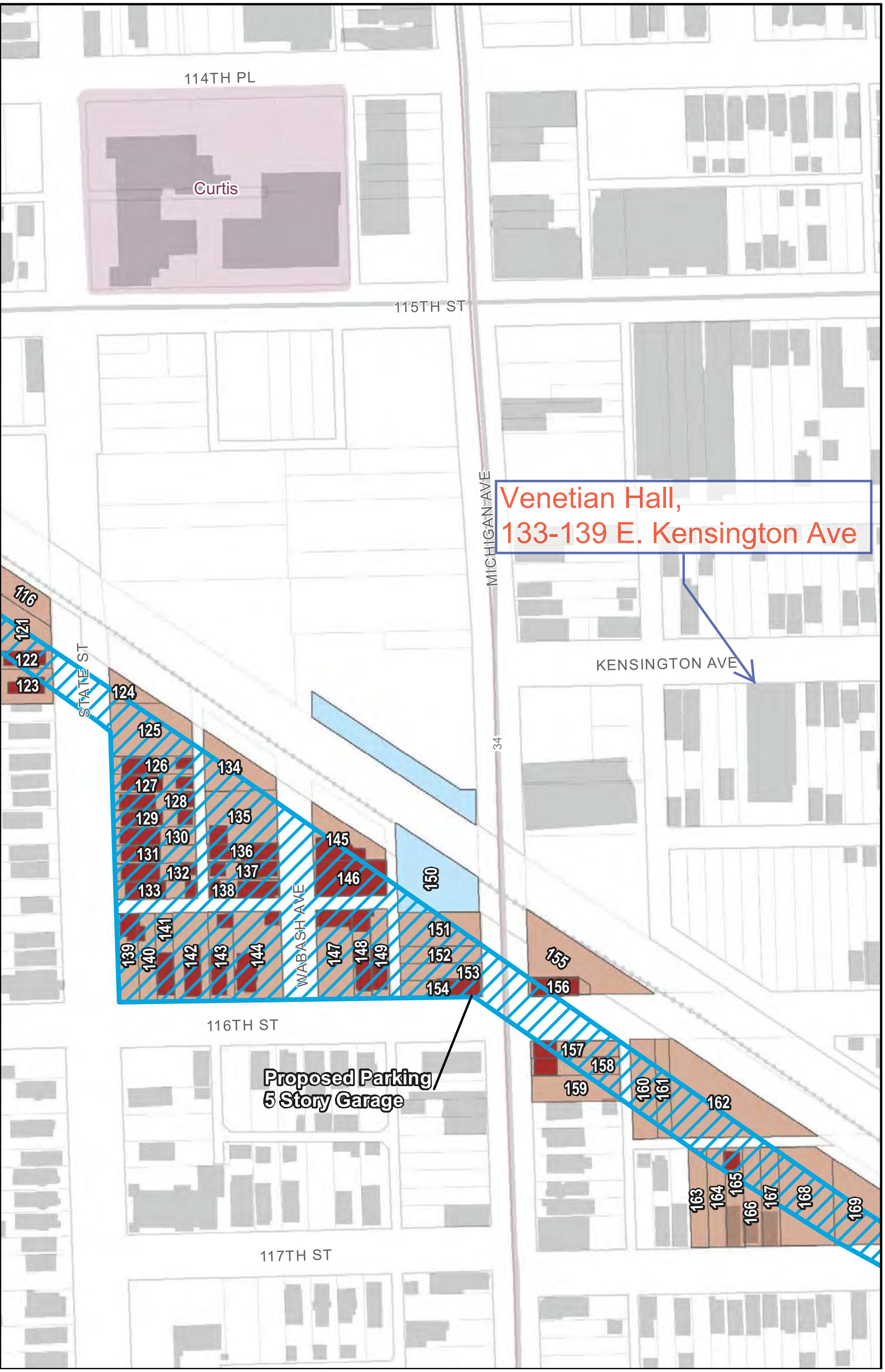
Sheet 11 of 15

▨	Proposed Permanent Envelope
▭	Parcel Easement
▭	Parcel Affected by Proposed Permanent Envelope
🟥	Building Displacement
▭	Building Footprint
▭	Parcels
🟩	Parks
▭	Schools
-+-+-	Freight Rail
-49-	CTA Bus
-290-	Pace Bus

Scale


0
125
250
Feet

map id: 03_02.11


114TH PL
Curtis
115TH ST
MICHIGAN AVE
Venetian Hall,
133-139 E. Kensington Ave
KENSINGTON AVE
STATE ST
WABASH AVE
34
116TH ST
117TH ST
Proposed Parking
5 Story Garage
116
121
122
123
124
125
126
127
128
129
130
131
132
133
134
135
136
137
138
139
140
141
142
143
144
145
146
147
148
149
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169

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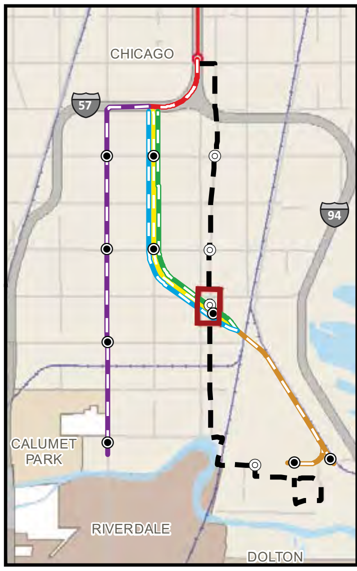

CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

UPRR Rail Alternative West Option

Sheet 12 of 15

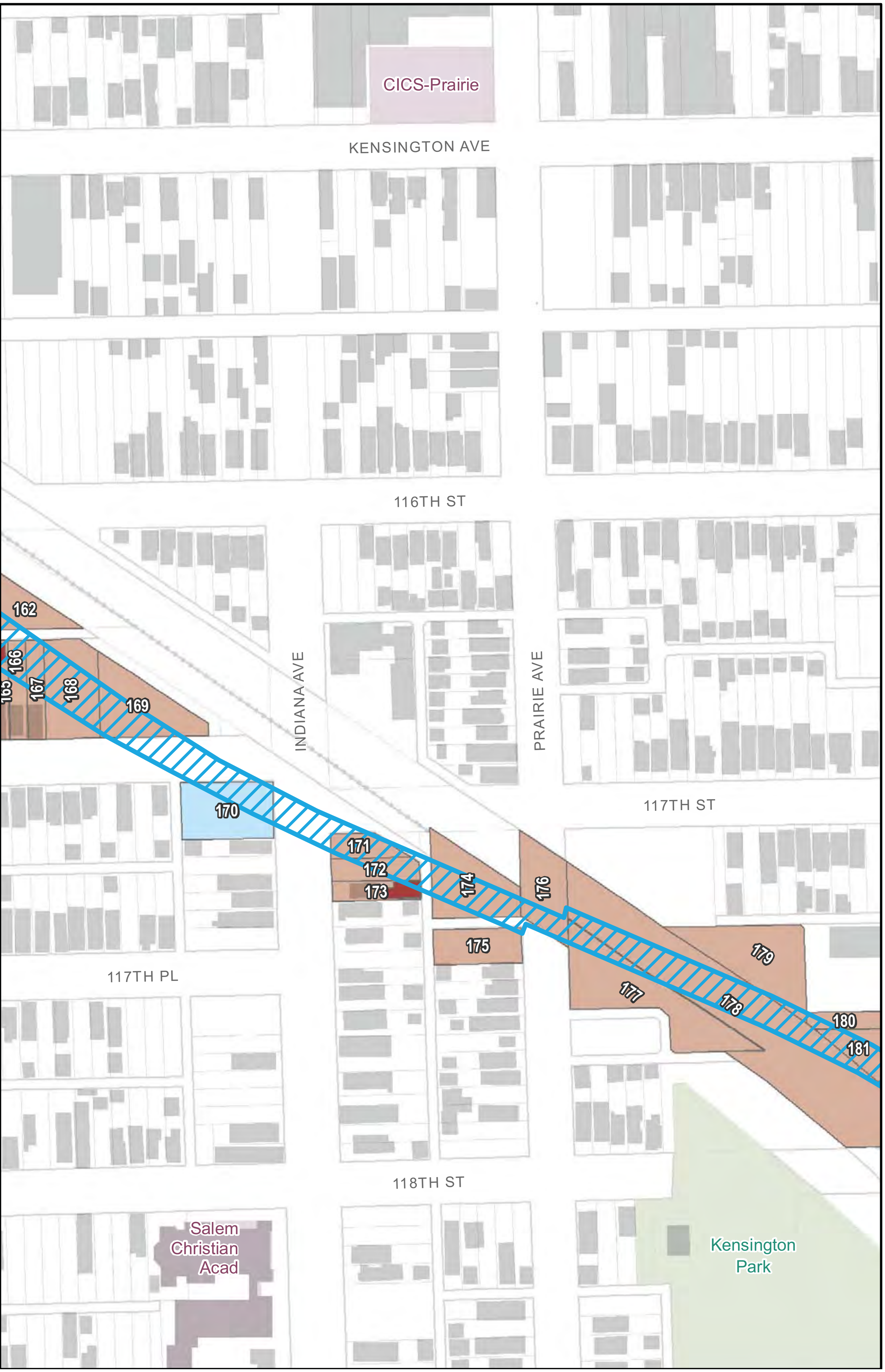
▨	Proposed Permanent Envelope
■	Parcel Easement
■	Parcel Affected by Proposed Permanent Envelope
🟥	Building Displacement
■	Building Footprint
☐	Parcels
🟩	Parks
■	Schools
-+-+-	Freight Rail
—49—	CTA Bus
—290—	Pace Bus

Scale

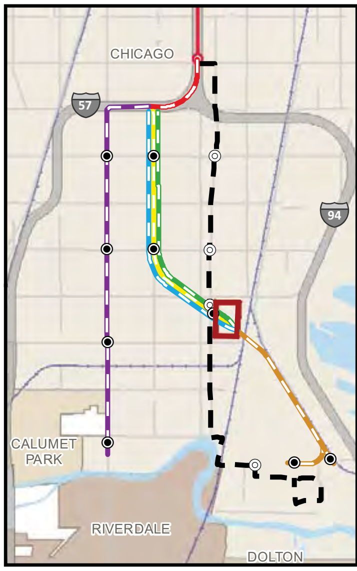
0 125 250

Feet

map id: 03_02.12


CICS-Prairie
KENSINGTON AVE
116TH ST
INDIANA AVE
PRAIRIE AVE
117TH ST
117TH PL
118TH ST
Salem Christian Acad
Kensington Park
162
166
167
168
169
170
171
172
173
174
175
176
177
178
179
180
181

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

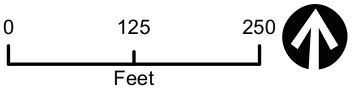
Legend

UPRR Rail Alternative West Option

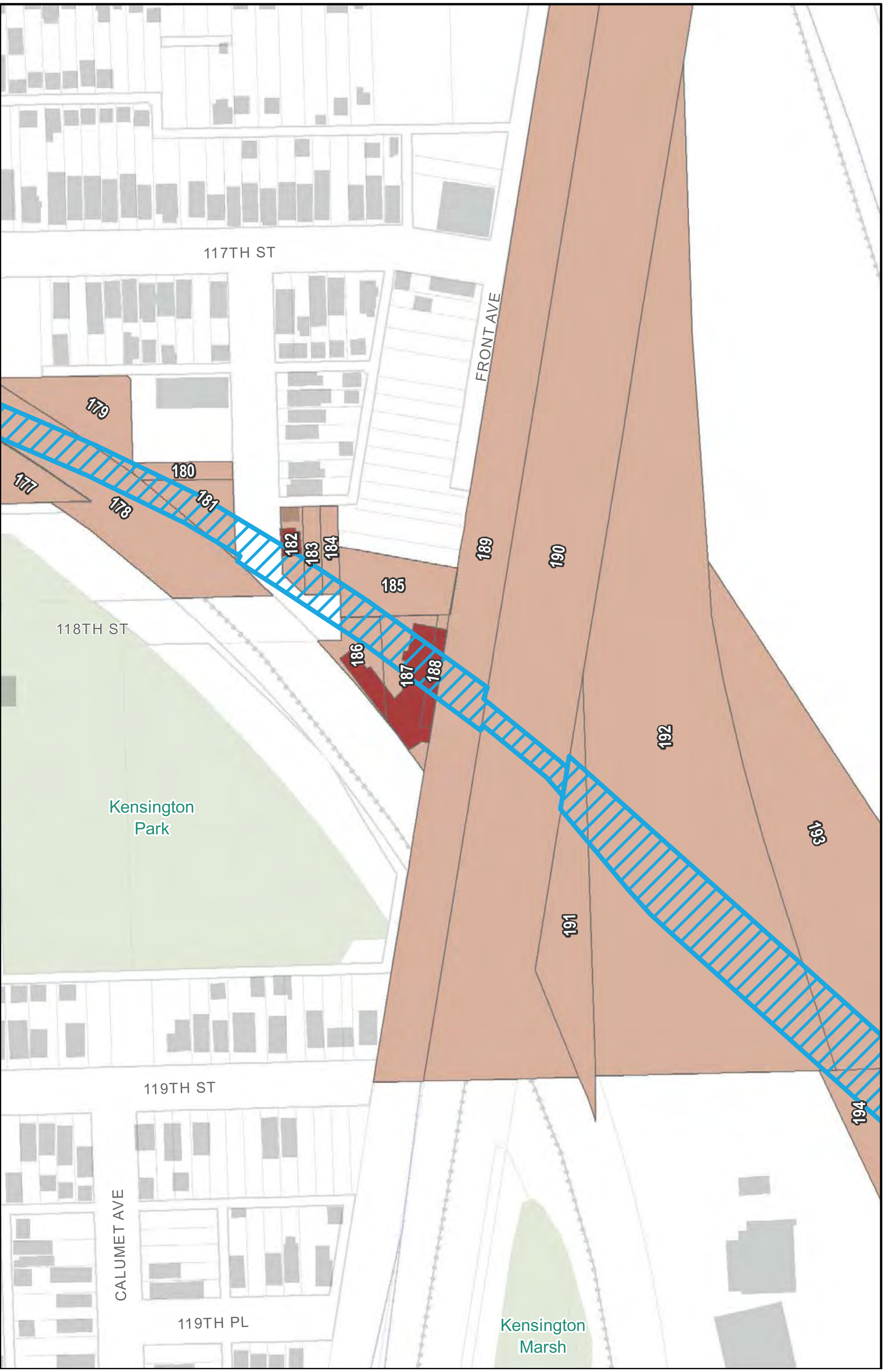
Sheet 13 of 15

- ▨ Proposed Permanent Envelope
- 🟦 Parcel Easement
- 🟫 Parcel Affected by Proposed Permanent Envelope
- 🟥 Building Displacement
- ⬜ Building Footprint
- ☐ Parcels
- 🟩 Parks
- 🟪 Schools
- -+- Freight Rail
- -49- CTA Bus
- -290- Pace Bus

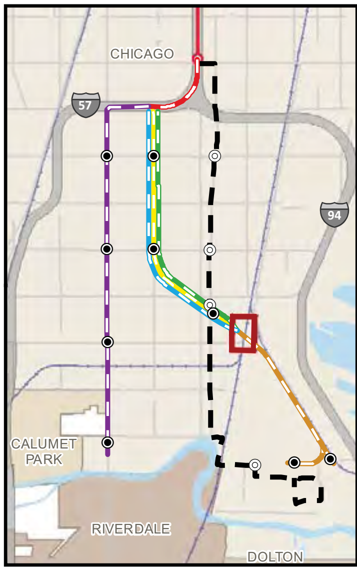
Scale


0
125
250
Feet

map id: 03_02.13


117TH ST
FRONT AVE
118TH ST
119TH ST
119TH PL
CALUMET AVE
Kensington Park
Kensington Marsh
177
178
179
180
181
182
183
184
185
186
187
188
189
190
191
192
193
194

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

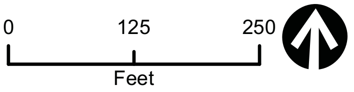
Legend

UPRR Rail Alternative West Option

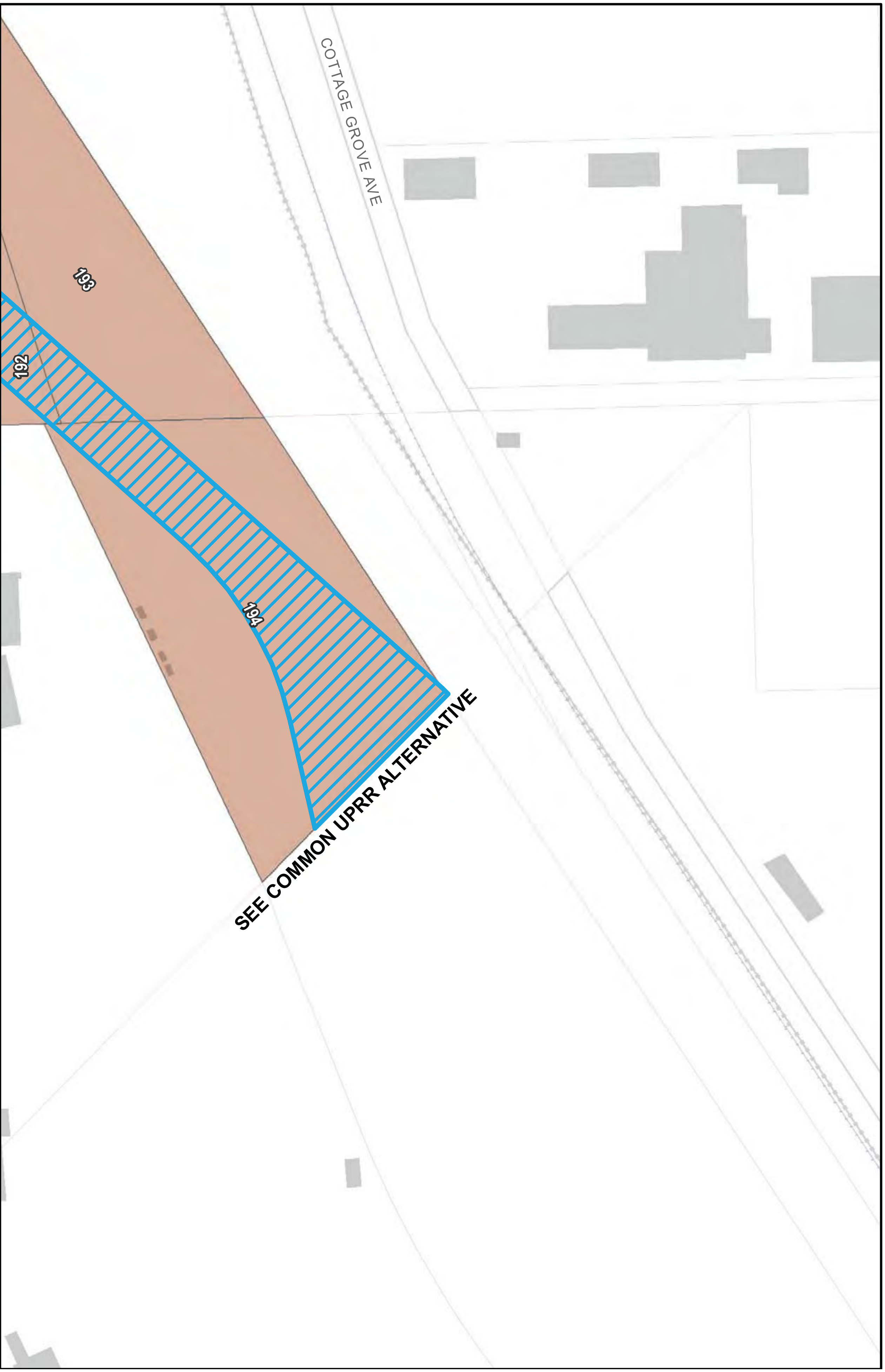
Sheet 14 of 15

▨ Proposed Permanent Envelope
🟦 Parcel Easement
🟫 Parcel Affected by Proposed Permanent Envelope
🟥 Building Displacement
⬜ Building Footprint
☐ Parcels
🟩 Parks
🟪 Schools
-+-+- Freight Rail
-49- CTA Bus
-290- Pace Bus

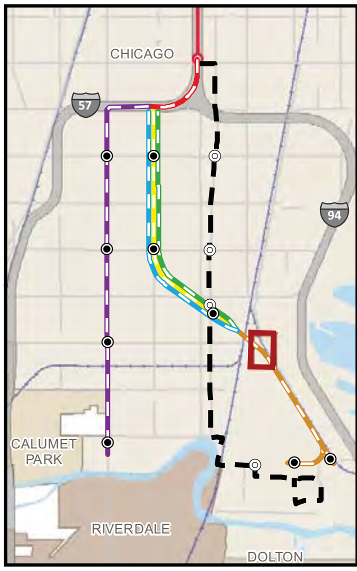
Scale


0
125
250
Feet

map id: 03_02.14


COTTAGE GROVE AVE
193
192
194
SEE COMMON UPRR ALTERNATIVE

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

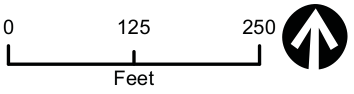
Legend

UPRR Rail Alternative West Option

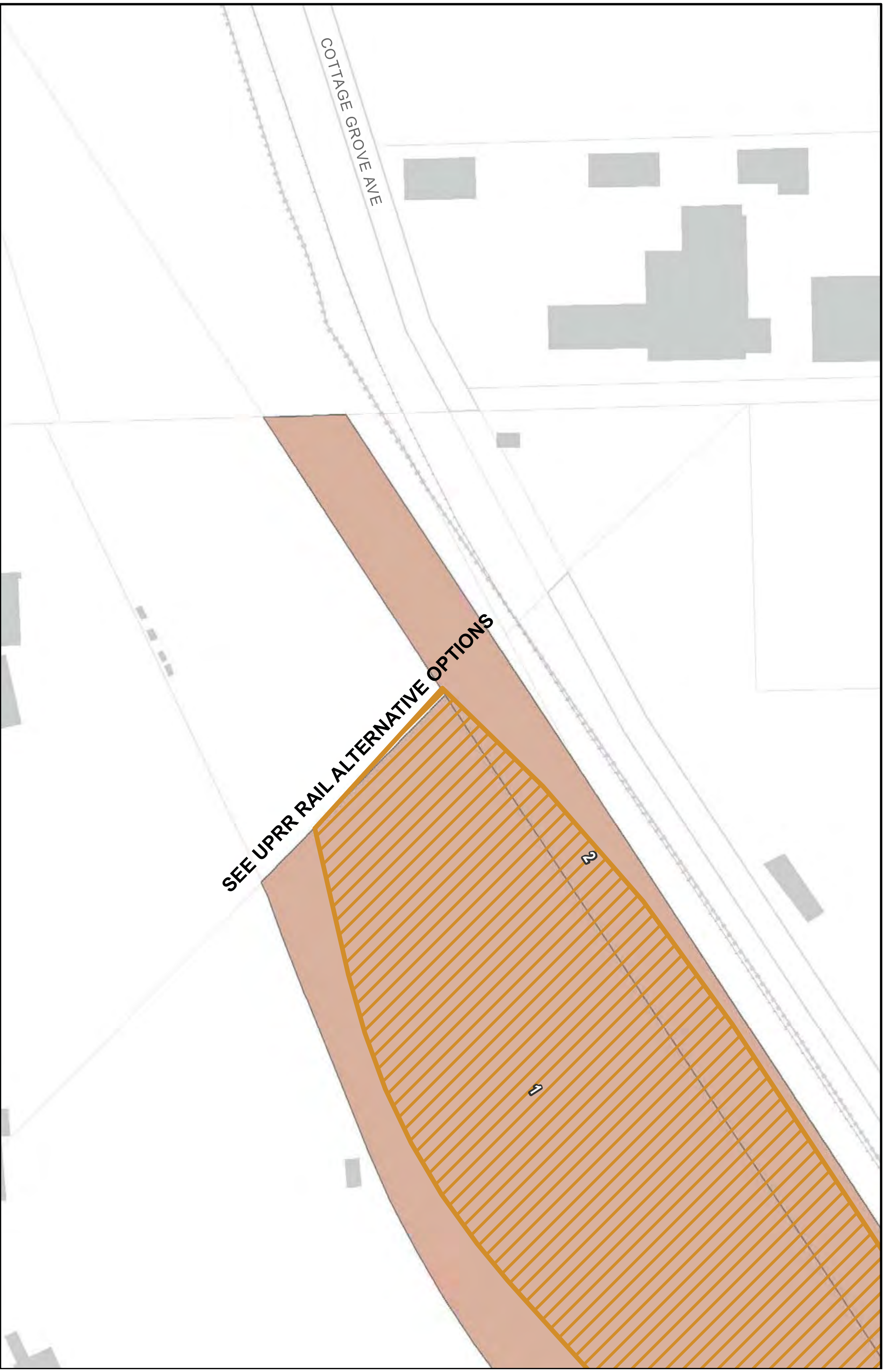
Sheet 15 of 15

- ▨ Proposed Permanent Envelope
- 🟦 Parcel Easement
- 🟫 Parcel Affected by Proposed Permanent Envelope
- 🟥 Building Displacement
- ⬜ Building Footprint
- ☐ Parcels
- 🟩 Parks
- 🟪 Schools
- -+- Freight Rail
- -49- CTA Bus
- -290- Pace Bus

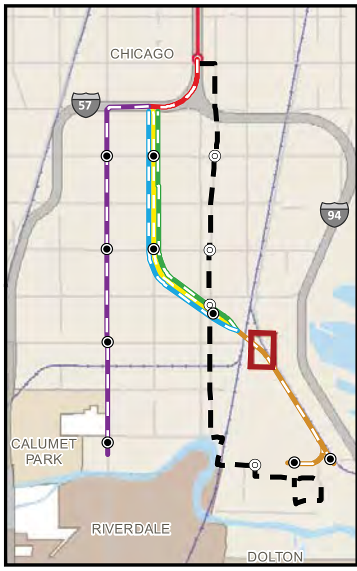
Scale


0
125
250
Feet

map id: 03_02.15


COTTAGE GROVE AVE
SEE UPRR RAIL ALTERNATIVE OPTIONS
2
1

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

Common UPRR Rail Alternative

Sheet 1 of 5

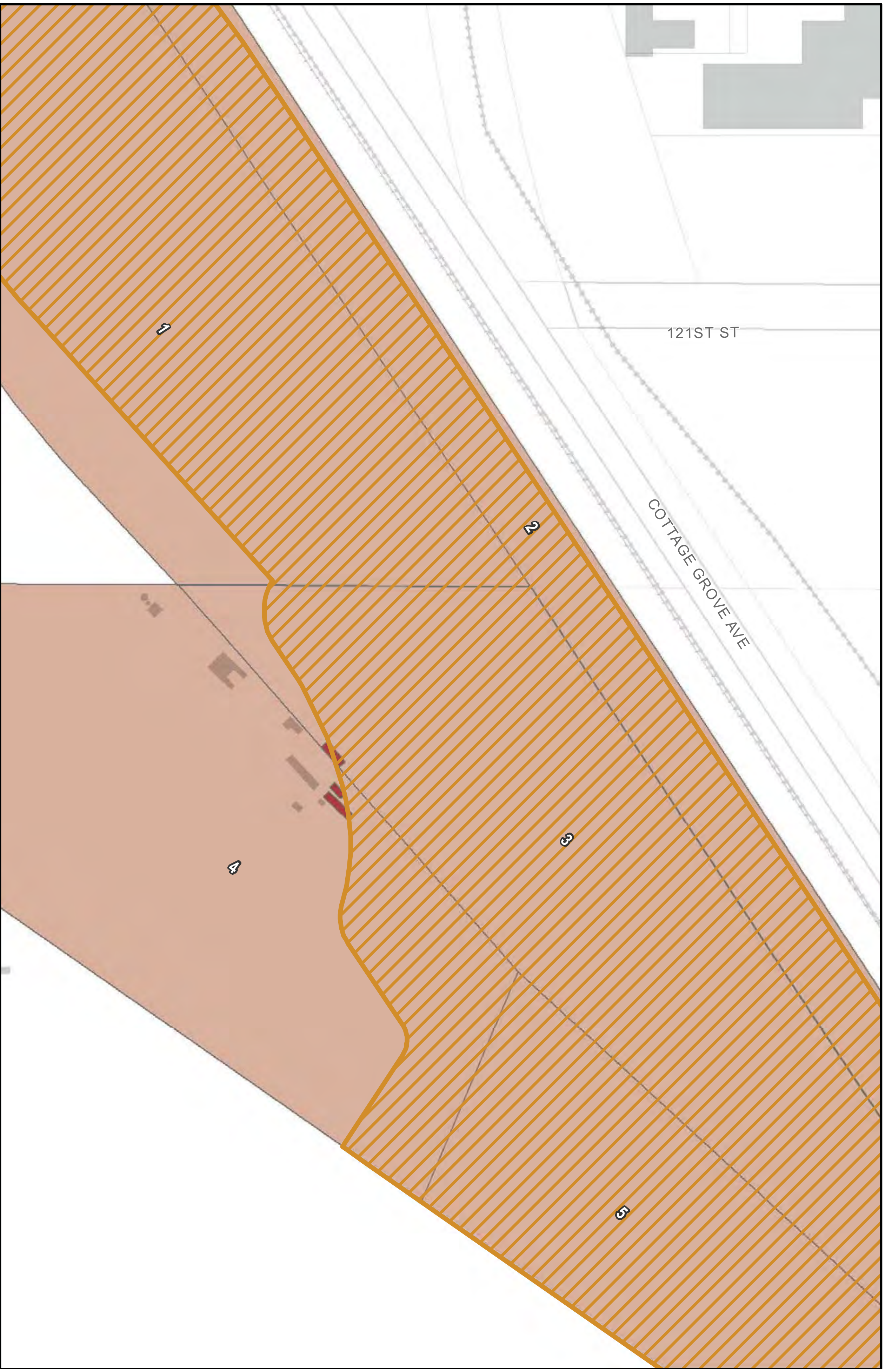
▨	Proposed Permanent Envelope
■	Parcel Affected by Proposed Permanent Envelope
🟥	Building Displacement
■	Building Footprint
☐	Parcels
🟩	Parks
■	Schools
-+-+-	Freight Rail
–49–	CTA Bus
–290–	Pace Bus

Scale

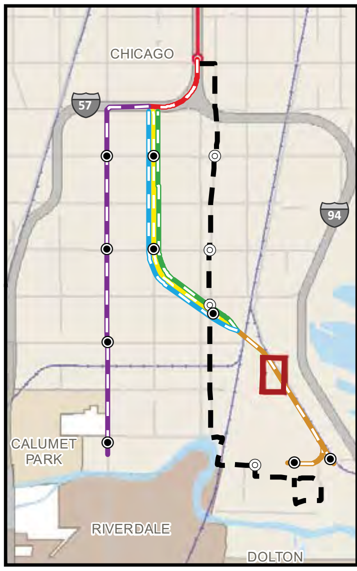
0 125 250

Feet

map id: 03_04.1


1
2
3
4
5
121ST ST
COTTAGE GROVE AVE

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

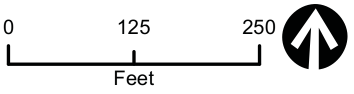
Legend

Common UPRR Rail Alternative

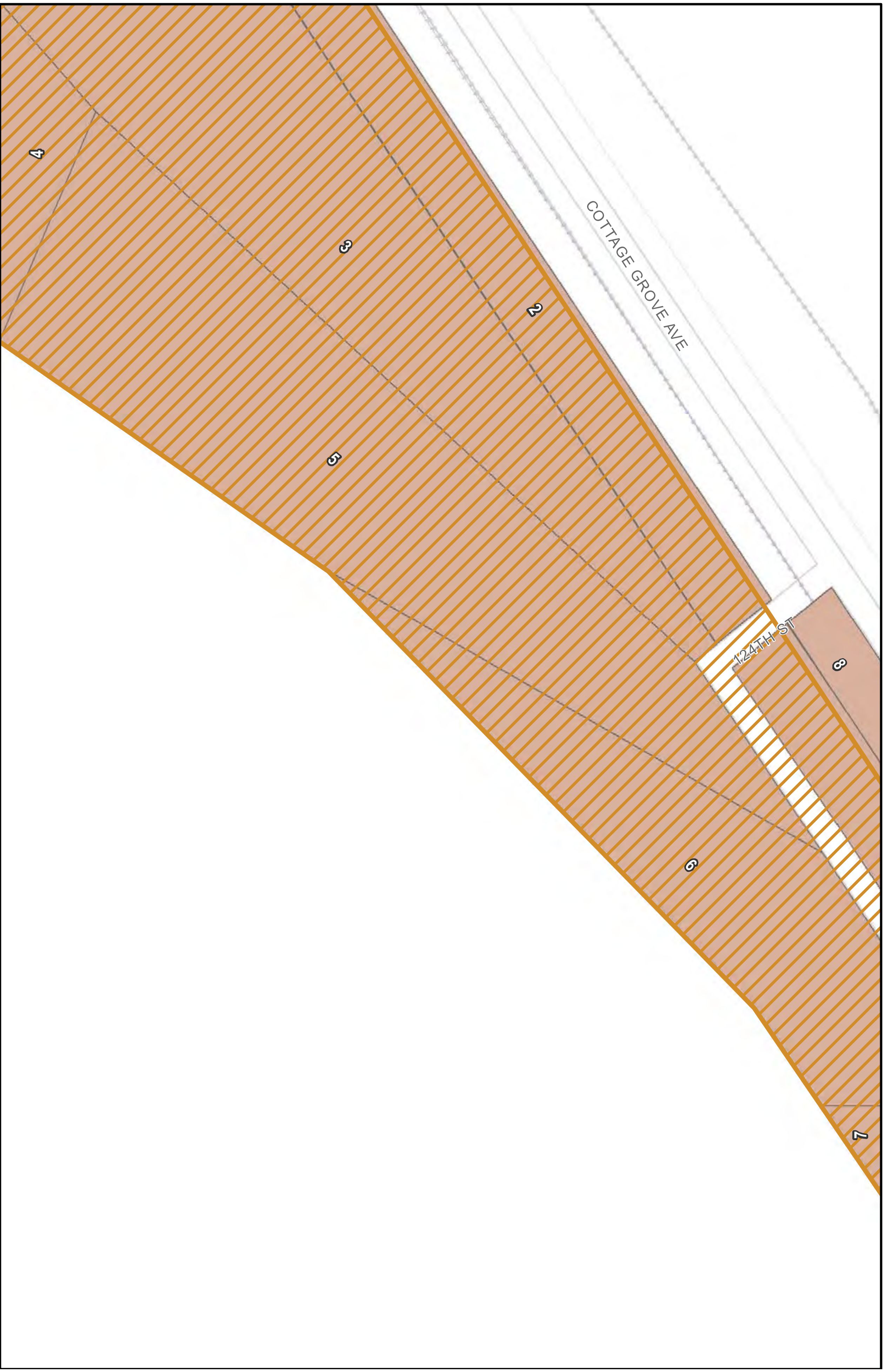
Sheet 2 of 5

▨	Proposed Permanent Envelope
■	Parcel Affected by Proposed Permanent Envelope
🟥	Building Displacement
■	Building Footprint
☐	Parcels
🟩	Parks
■	Schools
-+-	Freight Rail
-49-	CTA Bus
-290-	Pace Bus

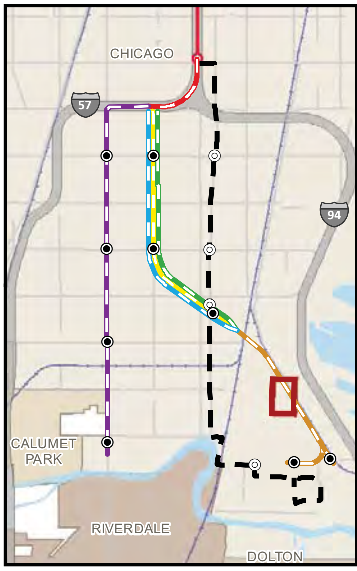
Scale


0
125
250
Feet

map id: 03_04.2


COTTAGE GROVE AVE
124TH ST
2
3
4
5
6
7
8

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

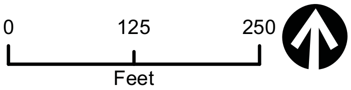
Legend

Common UPRR Rail Alternative

Sheet 3 of 5

▨	Proposed Permanent Envelope
🟫	Parcel Affected by Proposed Permanent Envelope
🟥	Building Displacement
⬜	Building Footprint
☐	Parcels
🟩	Parks
🟪	Schools
-+-	Freight Rail
–49–	CTA Bus
–290–	Pace Bus

Scale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125
250
Feet

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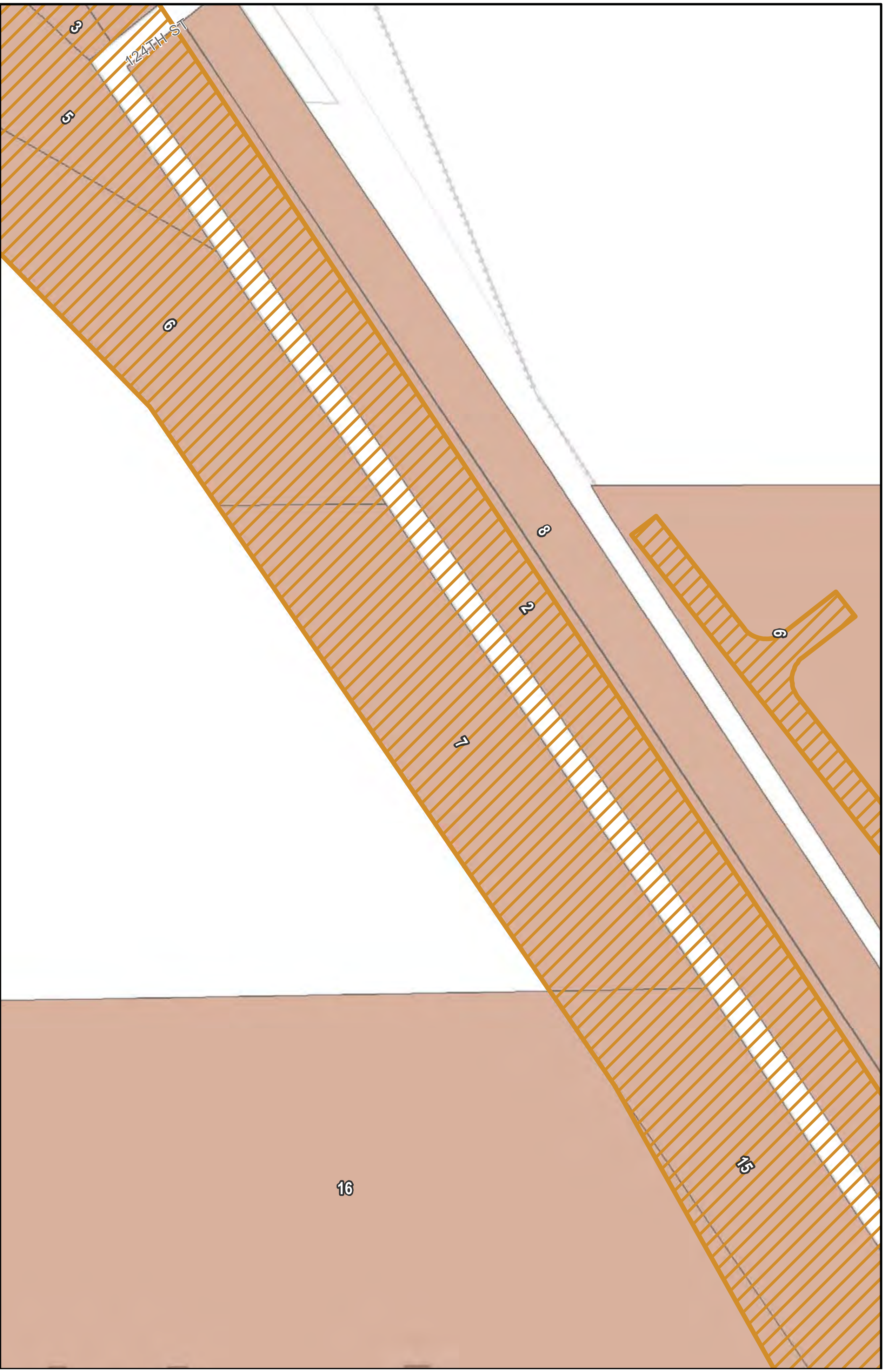
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124TH ST
5
6
8
2
9
7
15
16

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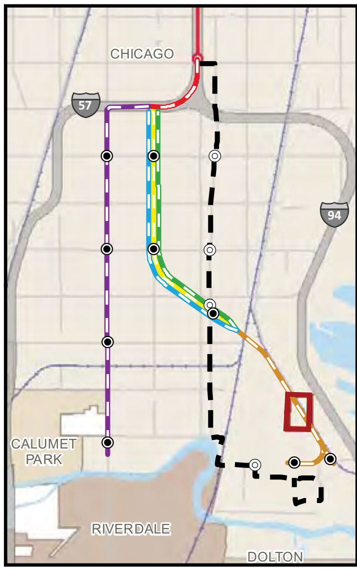

CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

Common UPRR Rail Alternative

Sheet 4 of 5

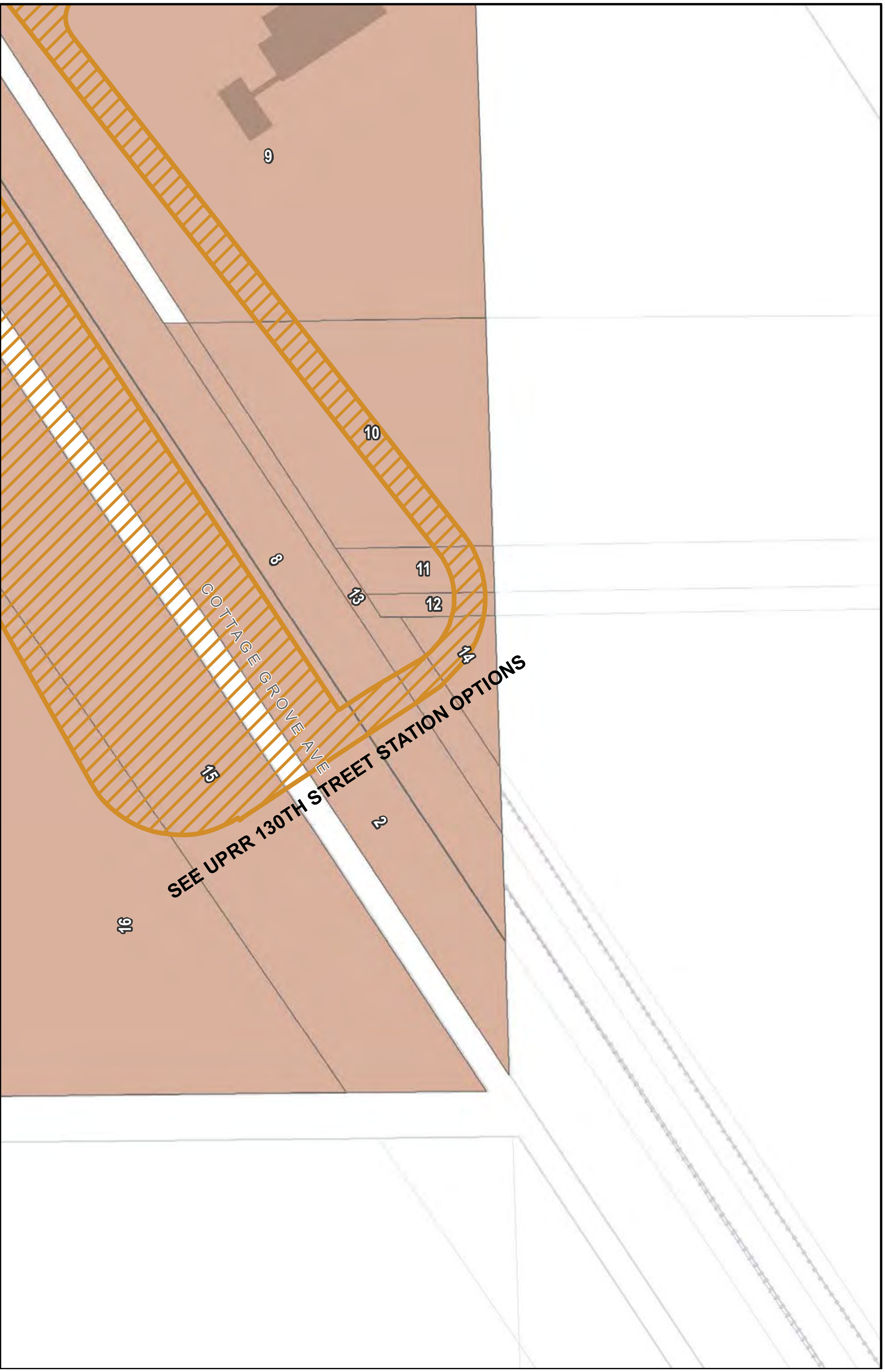
▨	Proposed Permanent Envelope
🟫	Parcel Affected by Proposed Permanent Envelope
🟥	Building Displacement
⬜	Building Footprint
⬜	Parcels
🟩	Parks
🟪	Schools
-+-+-	Freight Rail
–49–	CTA Bus
–290–	Pace Bus

Scale

0 125 250

Feet

map id: 03_04.4


9
10
8
11
12
13
14
COTTAGE GROVE AVE
15
2
16
SEE UPRR 130TH STREET STATION OPTIONS

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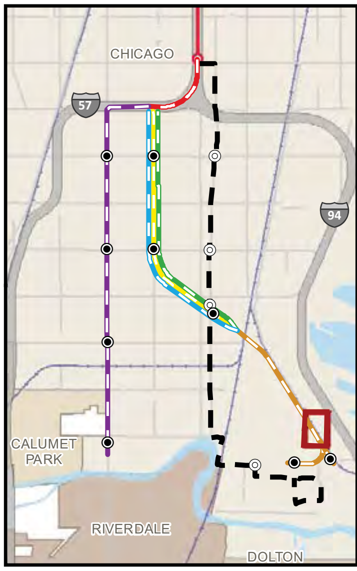

CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

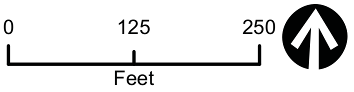
Legend

Common UPRR Rail Alternative

Sheet 5 of 5

▨	Proposed Permanent Envelope
🟫	Parcel Affected by Proposed Permanent Envelope
🟥	Building Displacement
⬜	Building Footprint
☐	Parcels
🟩	Parks
🟪	Schools
-+-+-	Freight Rail
-49-	CTA Bus
-290-	Pace Bus

Scale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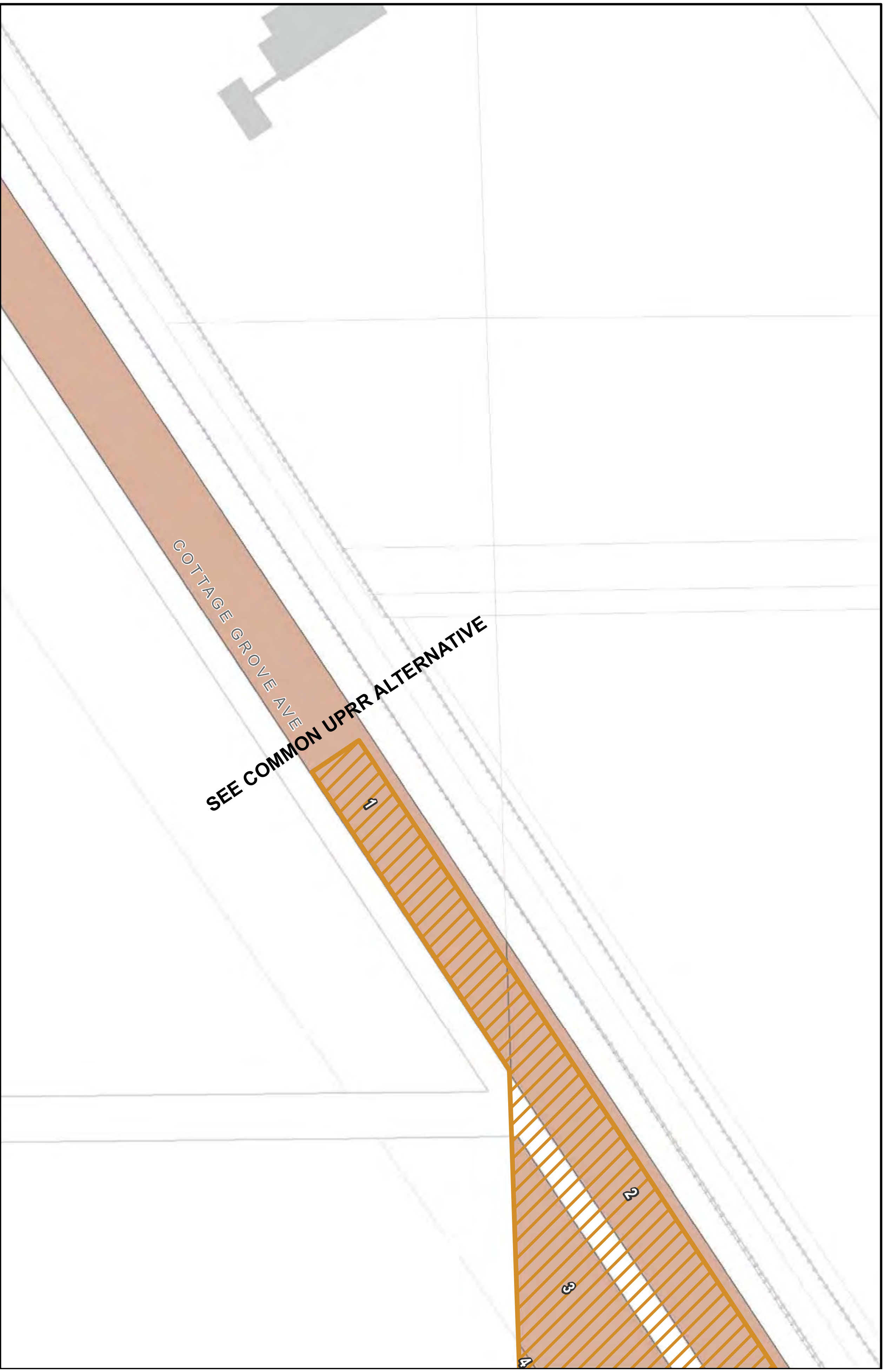
COTTAGE GROVE AVE
SEE COMMON UPRR ALTERNATIVE
1
2
3
4

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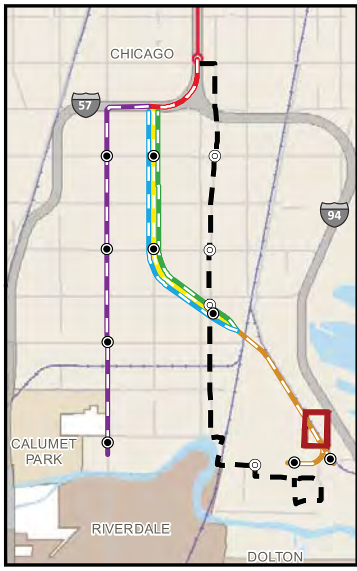

CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

UPRR Rail Alternative 130th Street Station South Option

Sheet 1 of 3

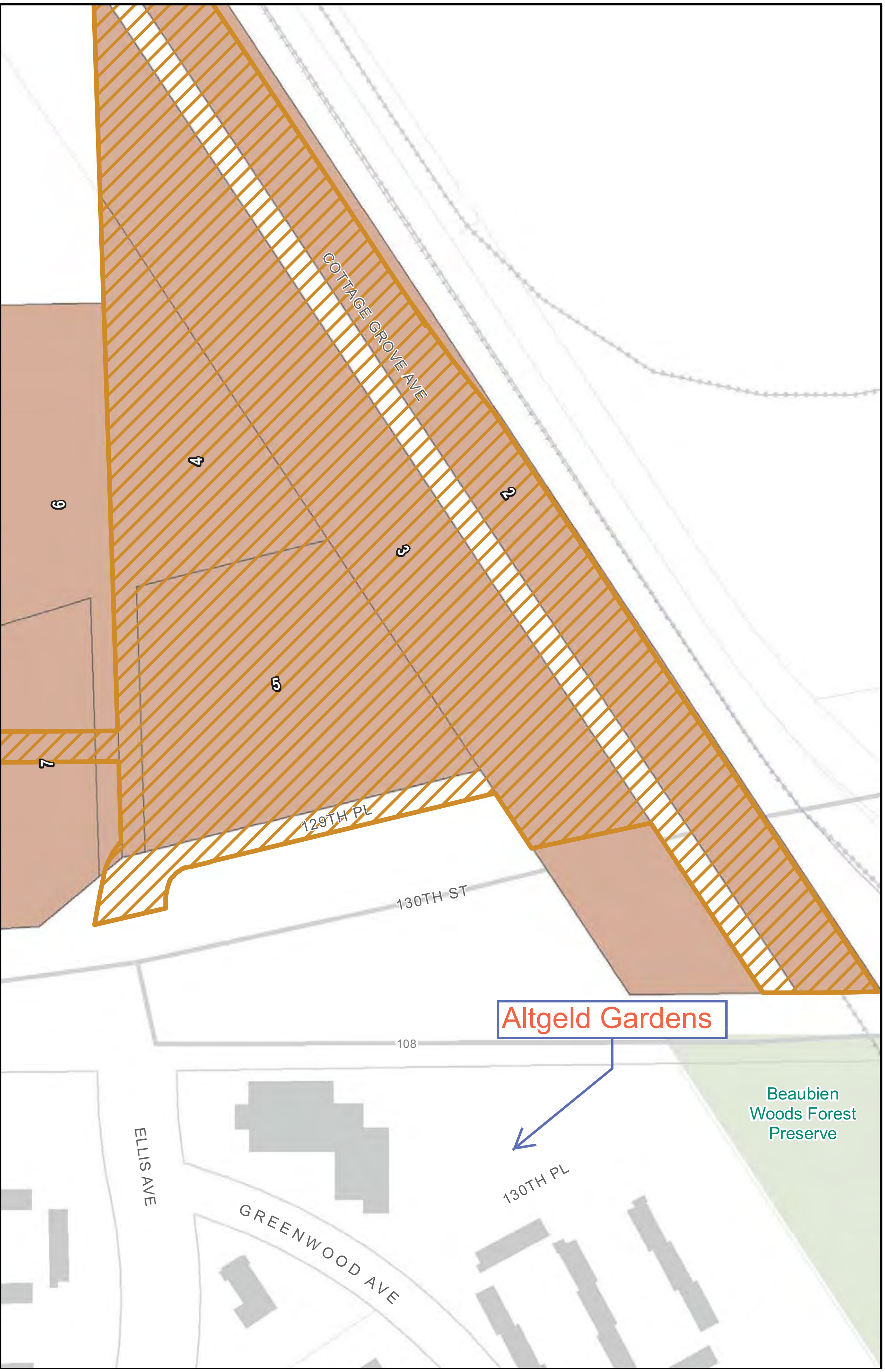
▨	Proposed Permanent Envelope
■	Parcel Affected by Proposed Permanent Envelope
🟥	Building Displacement
■	Building Footprint
□	Parcels
🟩	Parks
■	Schools
-+-+-	Freight Rail
—49—	CTA Bus
—290—	Pace Bus

Scale

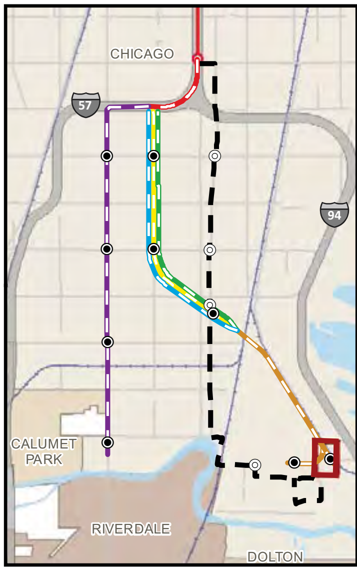
0 125 250

Feet

map id: 03_05.1


COTTAGE GROVE AVE
2
3
4
5
6
7
129TH PL
130TH ST
Altgeld Gardens
108
Beaubien Woods Forest Preserve
ELLIS AVE
GREENWOOD AVE
130TH PL

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

UPRR Rail Alternative
130th Street Station
South Option

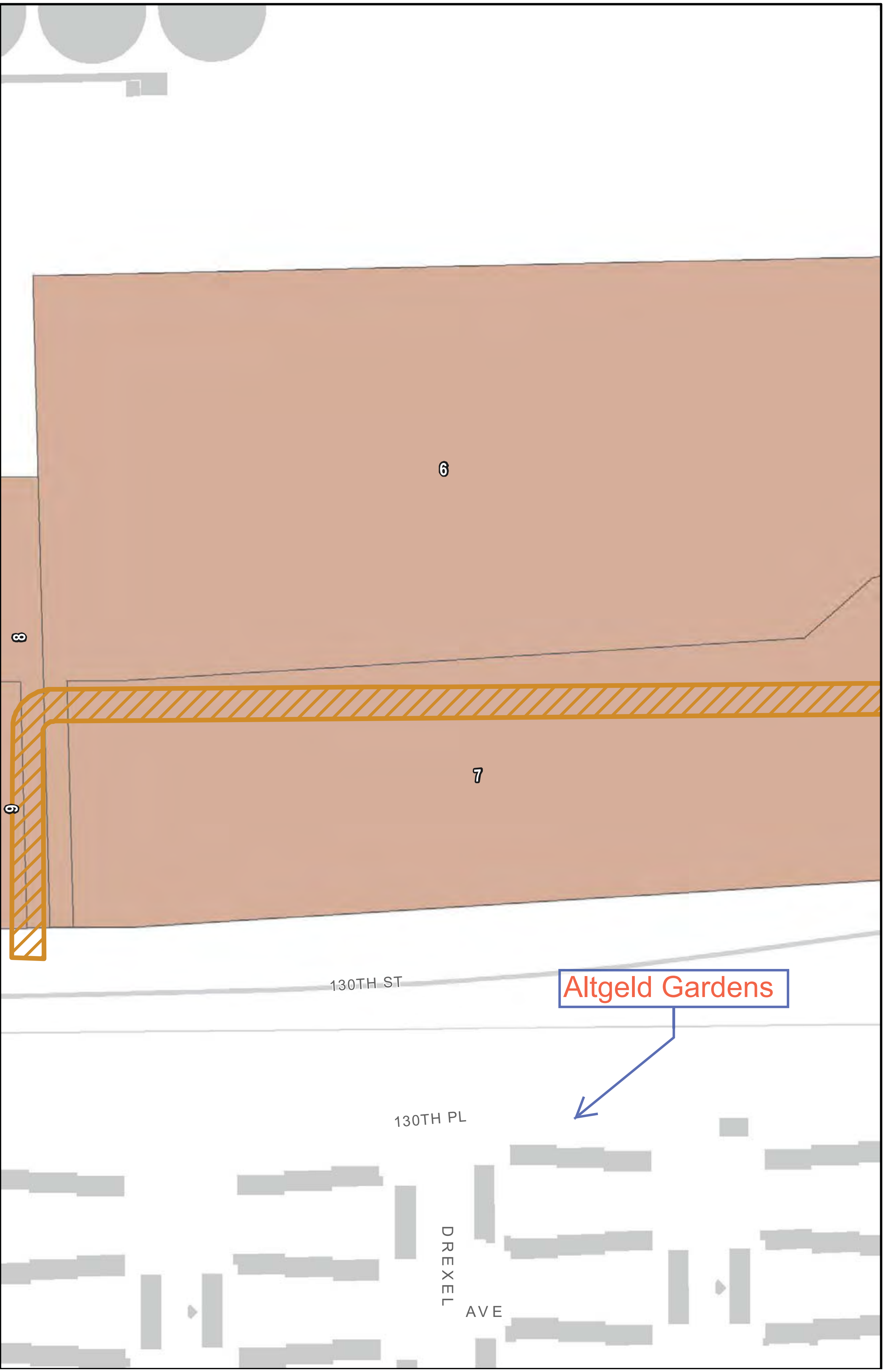
Sheet 2 of 3

- ▨ Proposed Permanent Envelope
- 🟫 Parcel Affected by Proposed Permanent Envelope
- 🟥 Building Displacement
- ⬜ Building Footprint
- ☐ Parcels
- 🟩 Parks
- 🟪 Schools
- -+-+- Freight Rail
- -49- CTA Bus
- -290- Pace Bus

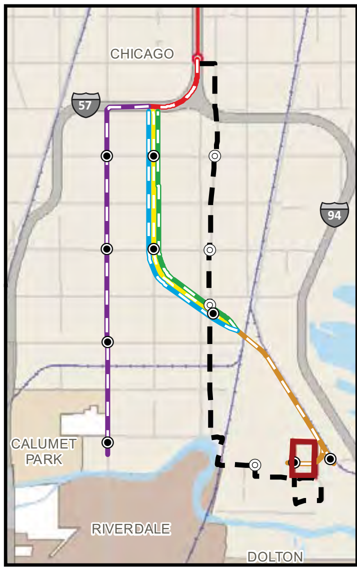
Scale

0 125 250
Feet

map id: 03_05.2


6
8
7
9
130TH ST
Altgeld Gardens
130TH PL
DREXEL AVE

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

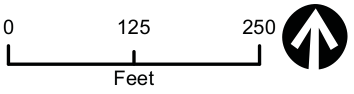
Legend

**UPRR Rail Alternative
130th Street Station
South Option**

Sheet 3 of 3

▨ Proposed Permanent Envelope
■ Parcel Affected by Proposed Permanent Envelope
🟥 Building Displacement
■ Building Footprint
□ Parcels
🟩 Parks
■ Schools
-•-•- Freight Rail
—49— CTA Bus
—290— Pace Bus

Scale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250
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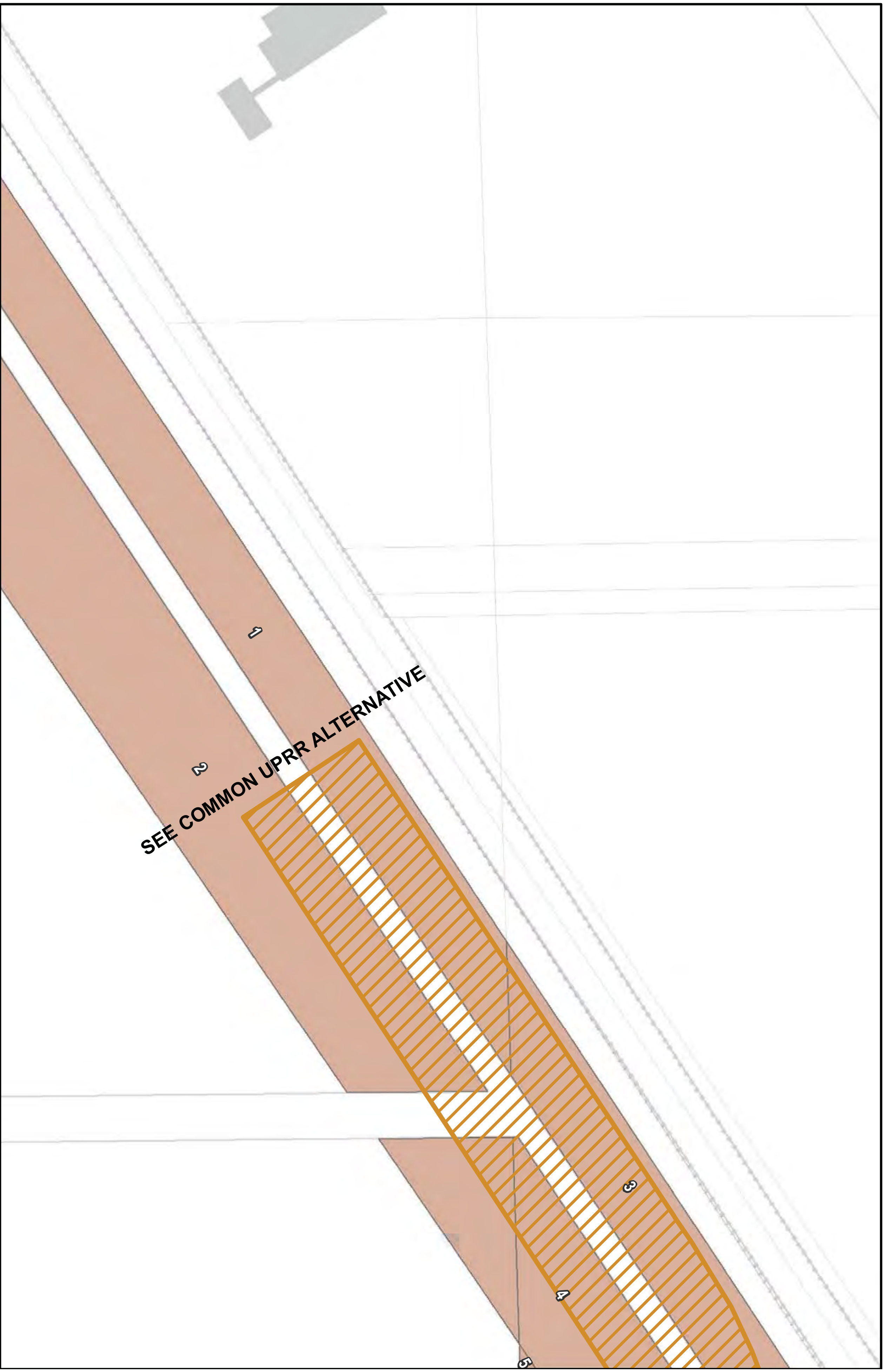
1
2
SEE COMMON UPRR ALTERNATIVE
3
4
5

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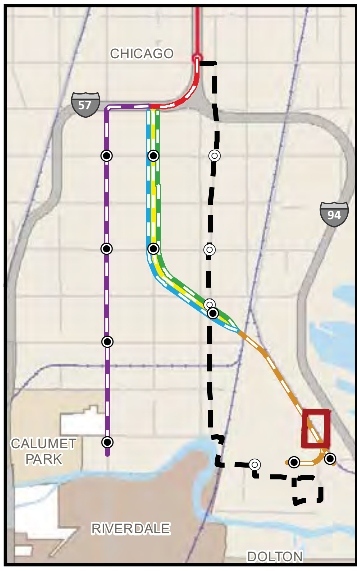

CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

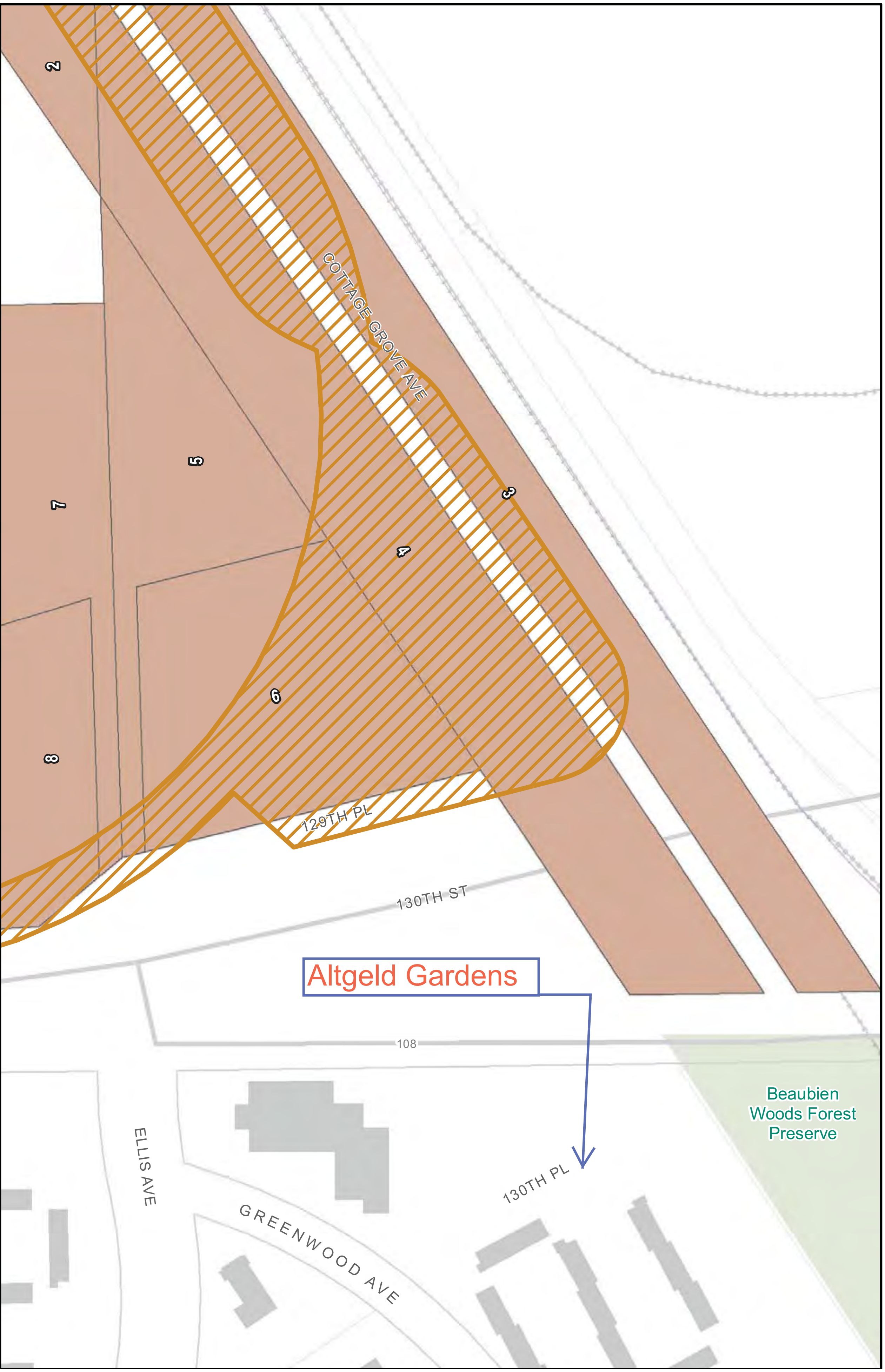
UPRR Rail Alternative
130th Street Station
West Option
Sheet 1 of 4

▨	Proposed Permanent Envelope
■	Parcel Affected by Proposed Permanent Envelope
■	Building Displacement
■	Building Footprint
□	Parcels
■	Parks
■	Schools
-+-	Freight Rail
-49-	CTA Bus
-290-	Pace Bus

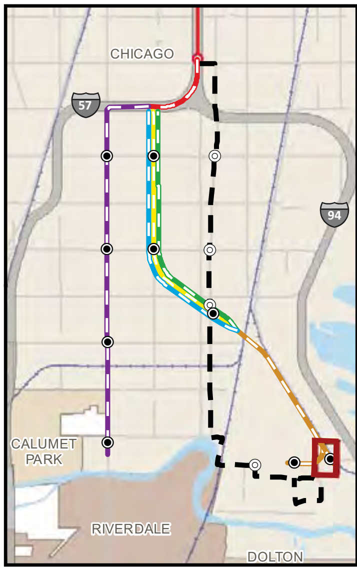
Scale

0 125 250
Feet

map id: 03_06.1


2
7
5
3
4
6
8
COTTAGE GROVE AVE
129TH PL
130TH ST
Altgeld Gardens
108
ELLIS AVE
GREENWOOD AVE
130TH PL
Beaubien Woods Forest Preserve

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

UPRR Rail Alternative
130th Street Station
West Option

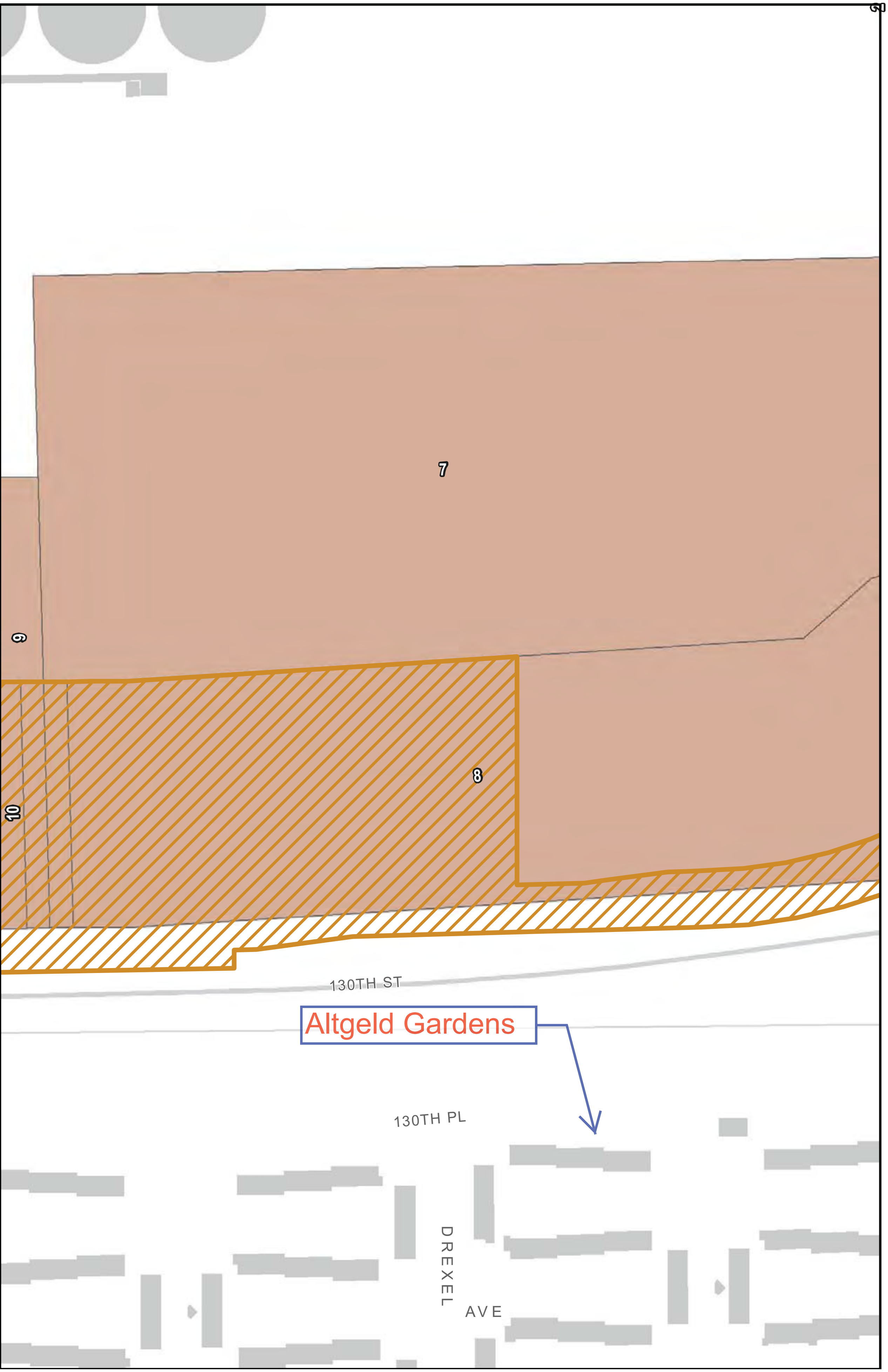
Sheet 2 of 4

- ▨ Proposed Permanent Envelope
- 🟫 Parcel Affected by Proposed Permanent Envelope
- 🟥 Building Displacement
- ⬜ Building Footprint
- ☐ Parcels
- 🟩 Parks
- 🟪 Schools
- Freight Rail
- 49 CTA Bus
- 290 Pace Bus

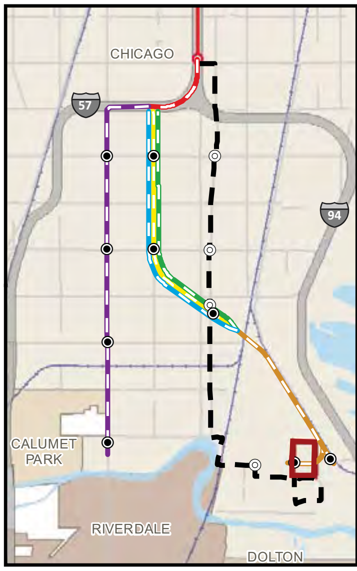
Scale

0 125 250
Feet

map id: 03_06.2


6
7
9
8
10
130TH ST
Altgeld Gardens
130TH PL
DREXEL AVE

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

UPRR Rail Alternative
130th Street Station
West Option

Sheet 3 of 4

▨ Proposed Permanent Envelope

■ Parcel Affected by Proposed Permanent Envelope

■ Building Displacement

■ Building Footprint

□ Parcels

■ Parks

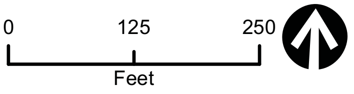
■ Schools

-+-+- Freight Rail

—49— CTA Bus

—290— Pace Bus

Scale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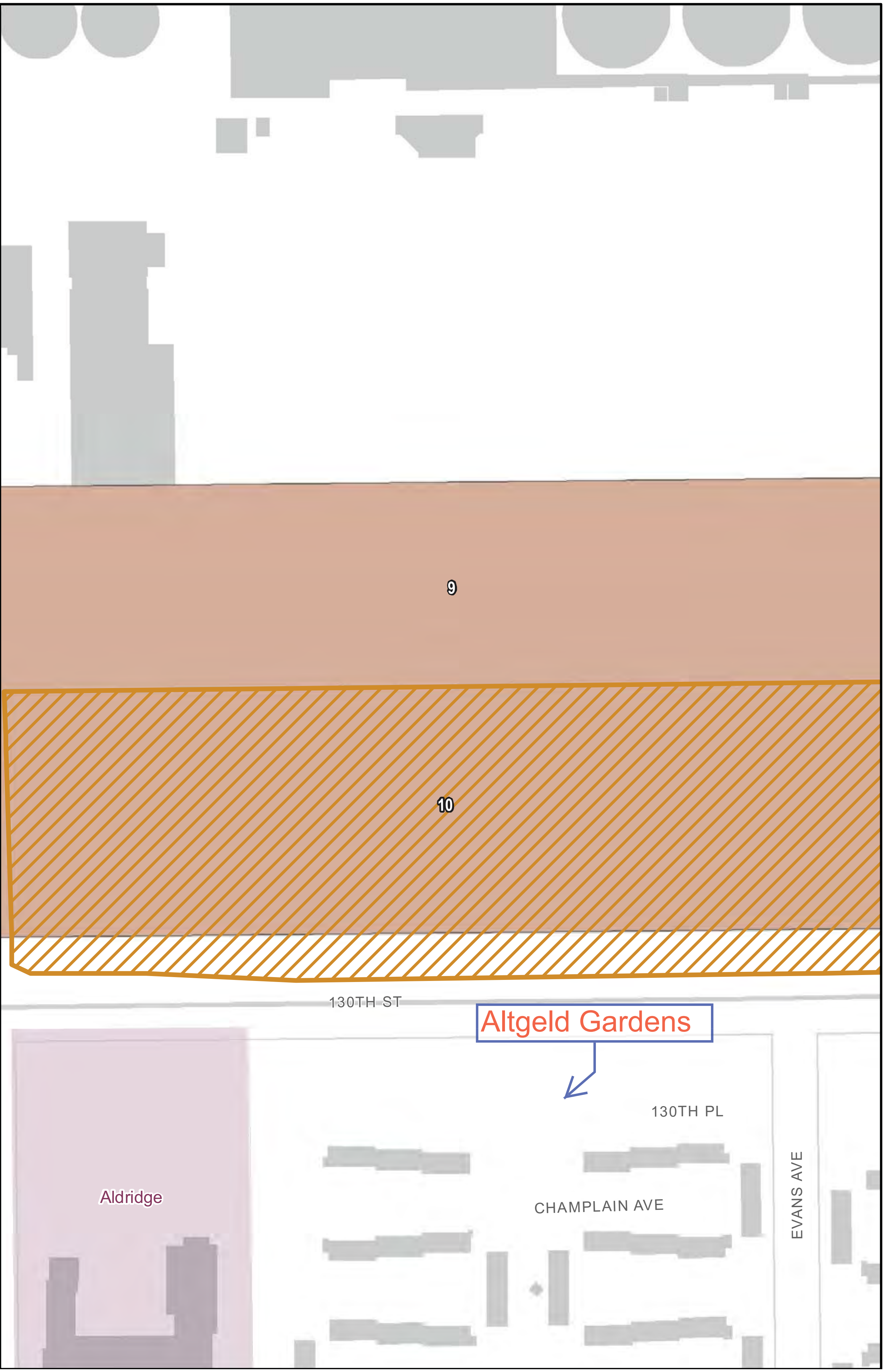
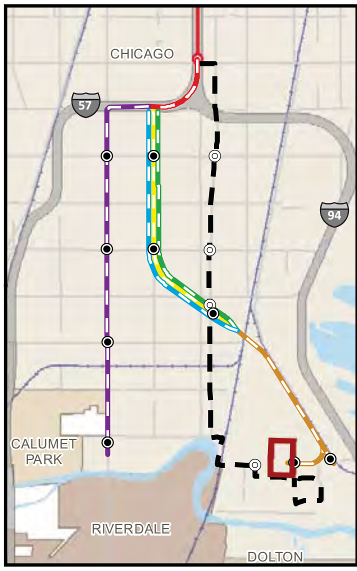
125
250
Feet

map id: 03_06.3


9
10
130TH ST
Altgeld Gardens
130TH PL
Aldridge
CHAMPLAIN AVE
EVANS AVE

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

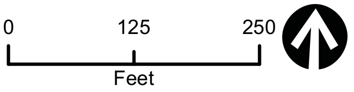
Legend

UPRR Rail Alternative 130th Street Station West Option

Sheet 4 of 4

- ▨ Proposed Permanent Envelope
- 🟫 Parcel Affected by Proposed Permanent Envelope
- 🟥 Building Displacement
- ⬜ Building Footprint
- ⬜ Parcels
- 🟩 Parks
- 🟪 Schools
- — Freight Rail
- 49 CTA Bus
- 290 Pace Bus

Scale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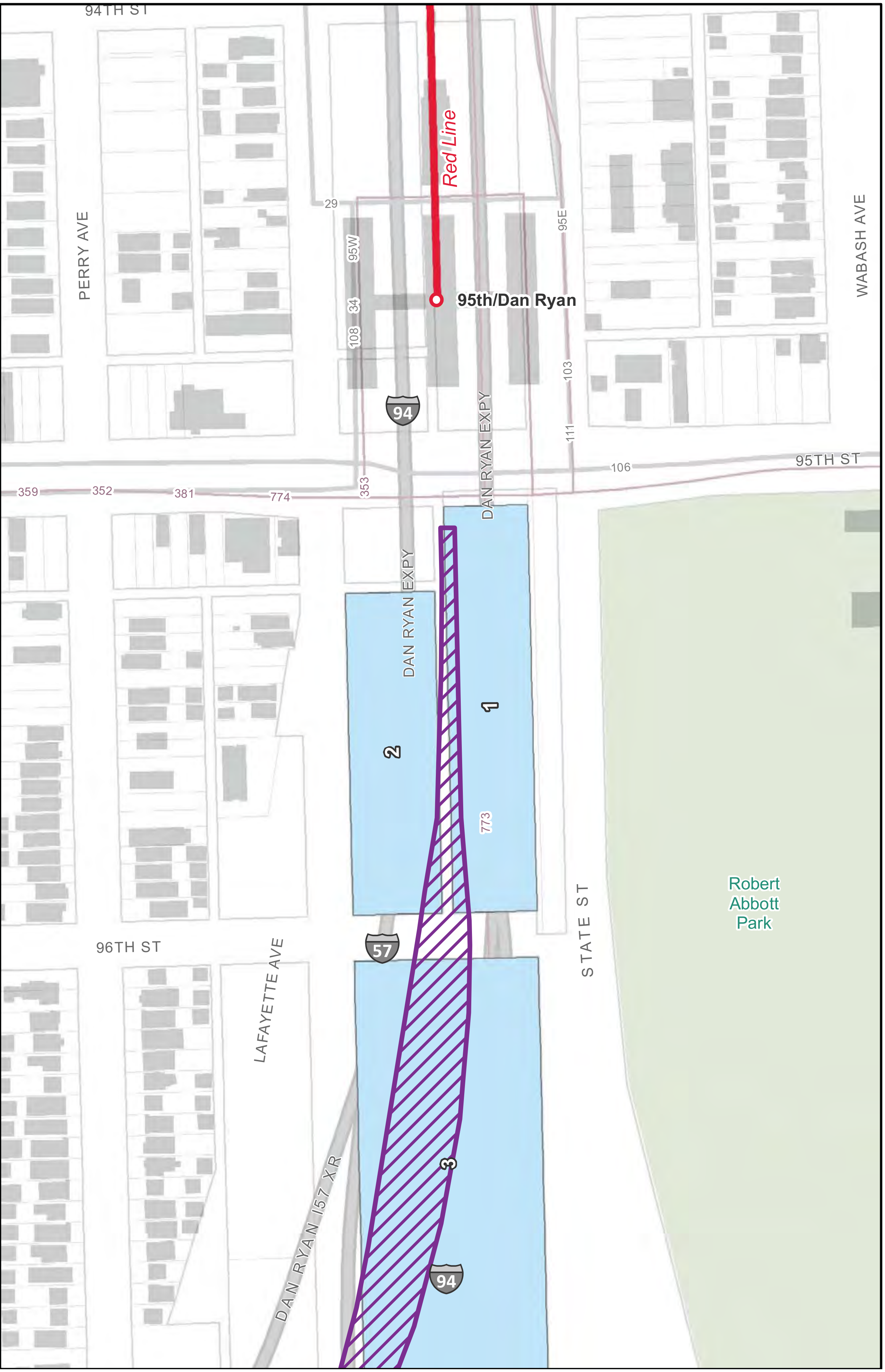
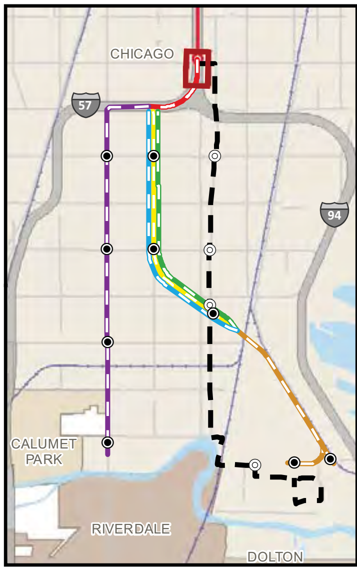
250
Feet

map id: 03_06.4

Appendix D-5:
Halsted Rail Displacement Maps


94TH ST
PERRY AVE
Red Line
29
95W
34
108
95th/Dan Ryan
95E
103
111
WABASH AVE
94
DAN RYAN EXPY
106
95TH ST
359
352
381
774
353
DAN RYAN EXPY
1
2
773
96TH ST
57
LAFAYETTE AVE
STATE ST
Robert Abbott Park
3
DAN RYAN I57 XR
94

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

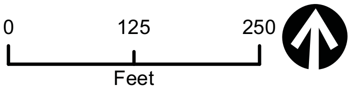
Legend

Halsted Rail Alternative

Sheet 1 of 21

▨	Proposed Permanent Envelope
🟦	Easement
🟫	Parcel Affected by Proposed Permanent Envelope
🟥	Building Displacement
⬜	Building Footprint
☐	Parcels
🟩	Parks
⬜	Schools
-+-+-	Freight Rail
—49—	CTA Bus
—290—	Pace Bus

Scale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250
Feet

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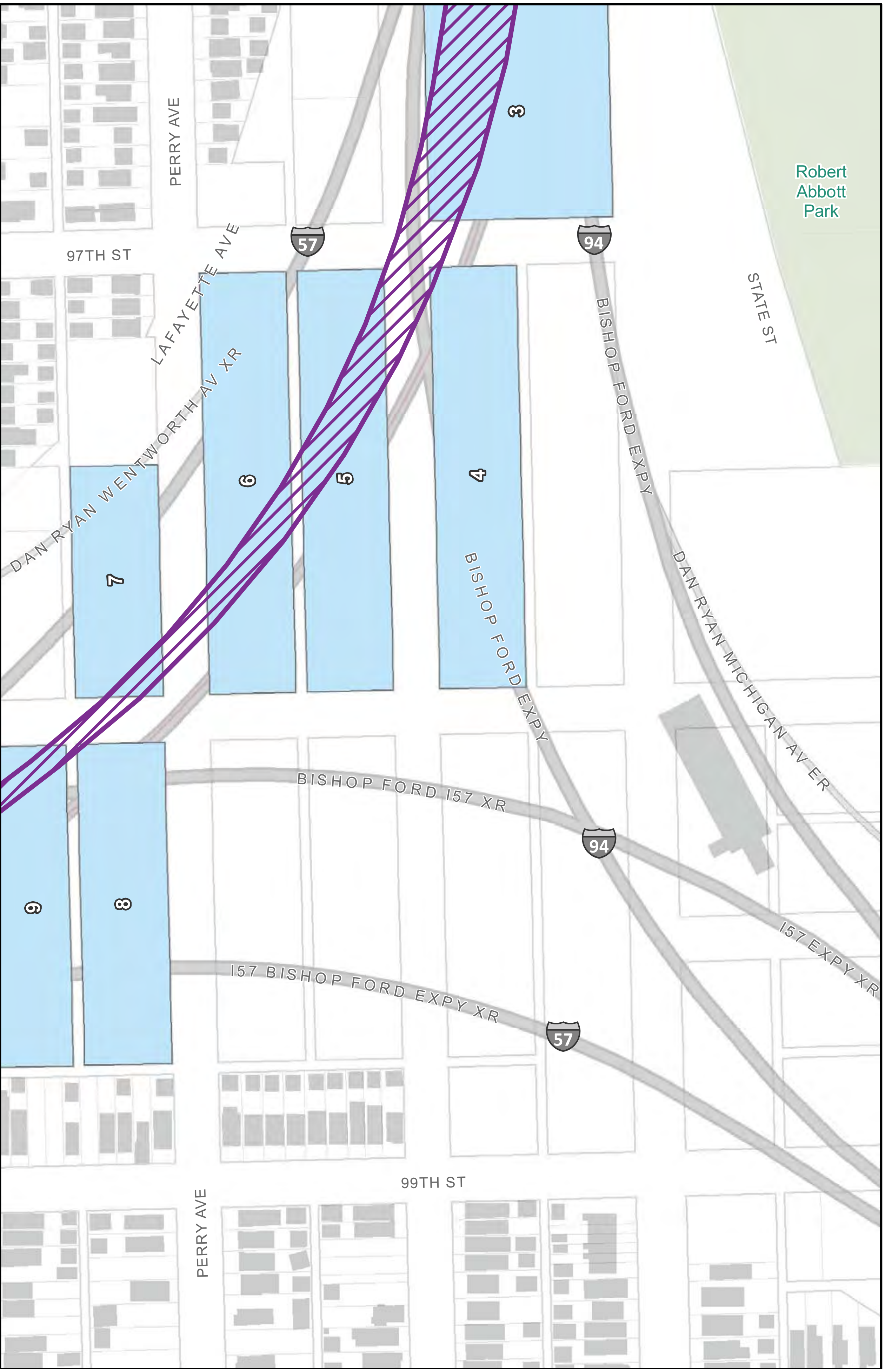
PERRY AVE
3
Robert Abbott Park
97TH ST
LAFAYETTE AVE
57
94
STATE ST
DAN RYAN WENTWORTH AV XR
BISHOP FORD EXPY
6
5
4
7
DAN RYAN MICHIGAN AV ER
BISHOP FORD EXPY
BISHOP FORD I57 XR
94
9
8
I57 EXPY XR
I57 BISHOP FORD EXPY XR
57
99TH ST
PERRY AVE

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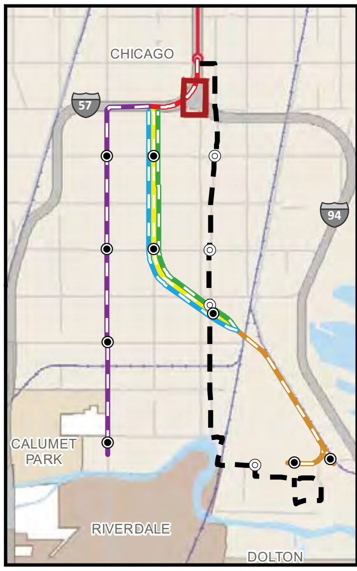

CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

Halsted Rail Alternative

Sheet 2 of 21

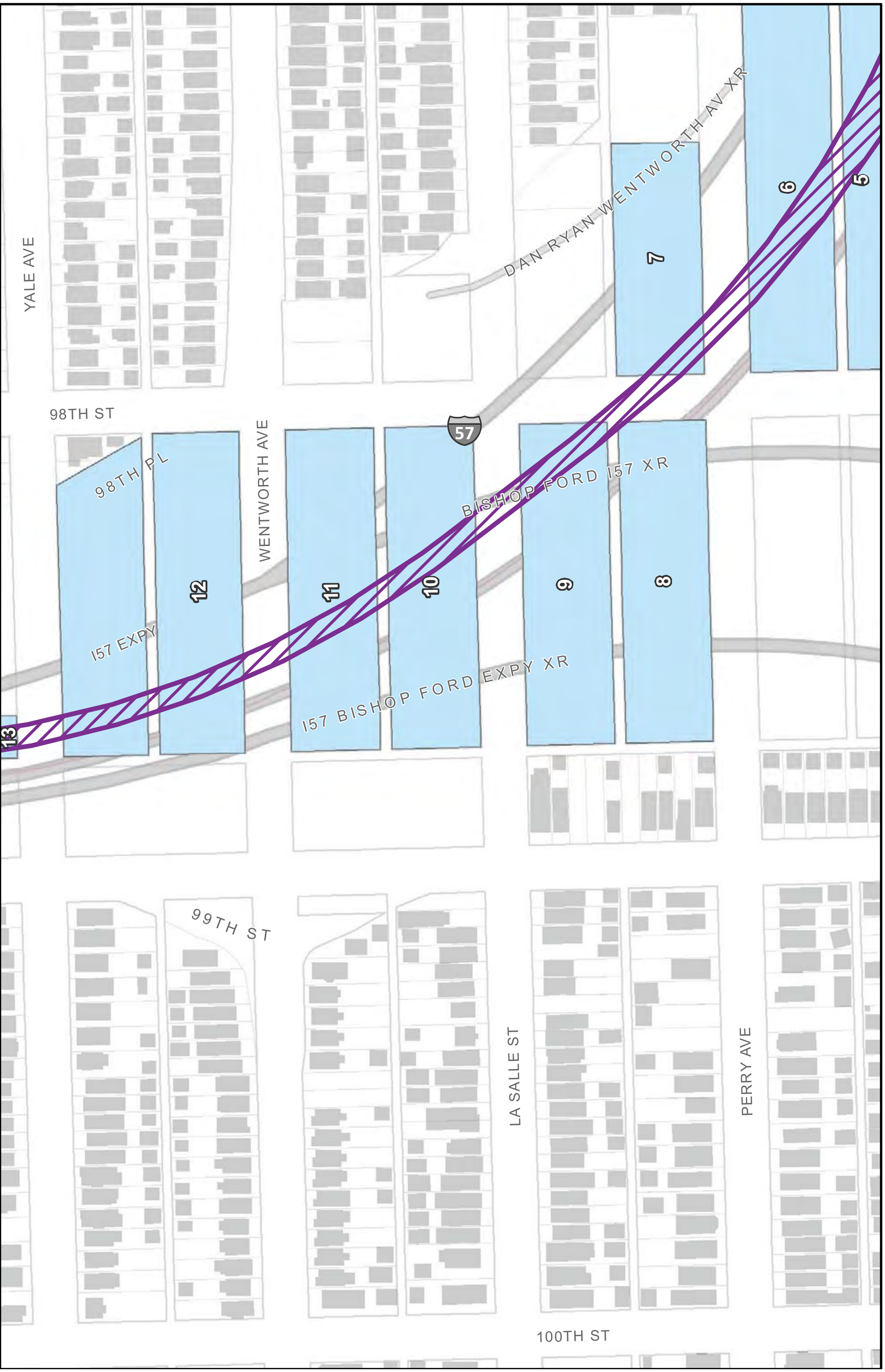
- ▨ Proposed Permanent Envelope
- 🟦 Easement
- 🟫 Parcel Affected by Proposed Permanent Envelope
- 🟥 Building Displacement
- ⬜ Building Footprint
- ⬜ Parcels
- 🟩 Parks
- 🟪 Schools
- Freight Rail
- —49— CTA Bus
- —290— Pace Bus

Scale

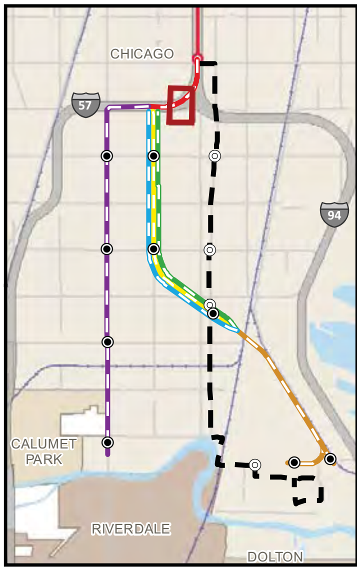
0 125 250

Feet

map id: 03_07.2


YALE AVE
DAN RYAN WENTWORTH AV XR
98TH ST
98TH PL
WENTWORTH AVE
57
BISHOP FORD I57 XR
I57 EXPY
I57 BISHOP FORD EXPY XR
99TH ST
LA SALLE ST
PERRY AVE
100TH ST
5
6
7
8
9
10
11
12
13

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

Halsted Rail Alternative

Sheet 3 of 21

▨ Proposed Permanent Envelope

🟦 Easement

🟫 Parcel Affected by Proposed Permanent Envelope

🟥 Building Displacement

⬜ Building Footprint

⬜ Parcels

🟩 Parks

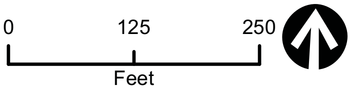
🟪 Schools

Freight Rail

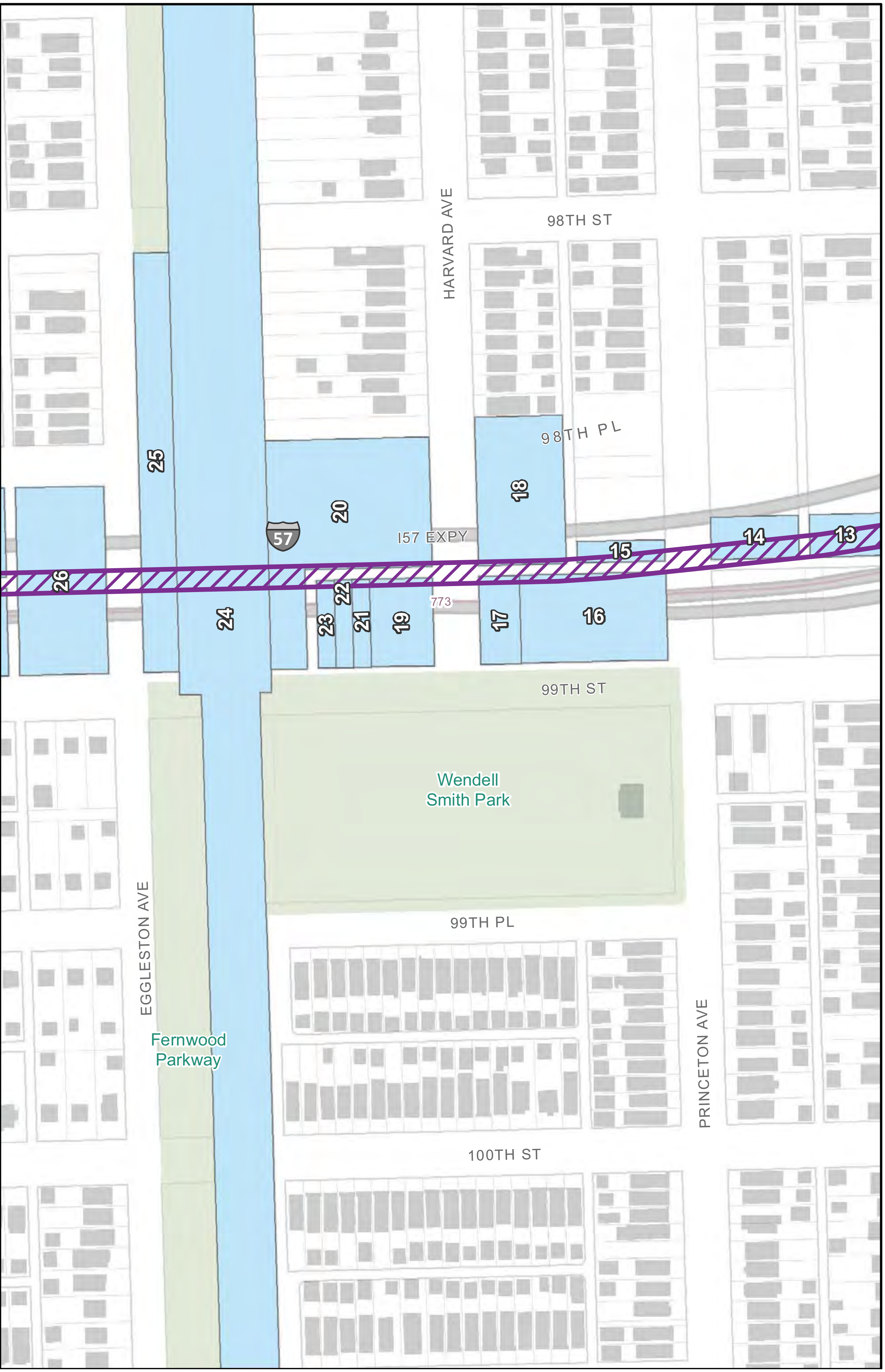
49 CTA Bus

290 Pace Bus

Scale


0
125
250
Feet

map id: 03_07.3


98TH ST
HARVARD AVE
98TH PL
I57 EXPY
57
773
99TH ST
Wendell Smith Park
99TH PL
EGGLESTON AVE
Fernwood Parkway
PRINCETON AVE
100TH ST
13
14
15
16
17
18
19
20
21
22
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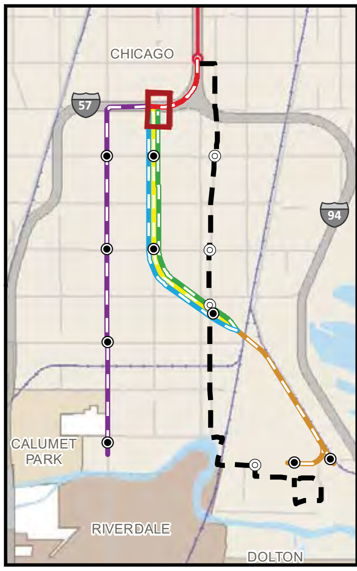
24
25
26

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

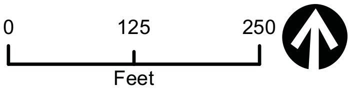
Legend

Halsted Rail Alternative

Sheet 4 of 21

- ▨ Proposed Permanent Envelope
- 🟦 Easement
- 🟫 Parcel Affected by Proposed Permanent Envelope
- 🟥 Building Displacement
- ⬜ Building Footprint
- ☐ Parcels
- 🟩 Parks
- 🟪 Schools
- -+-+- Freight Rail
- —49— CTA Bus
- —290— Pace Bus

Scale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Feet

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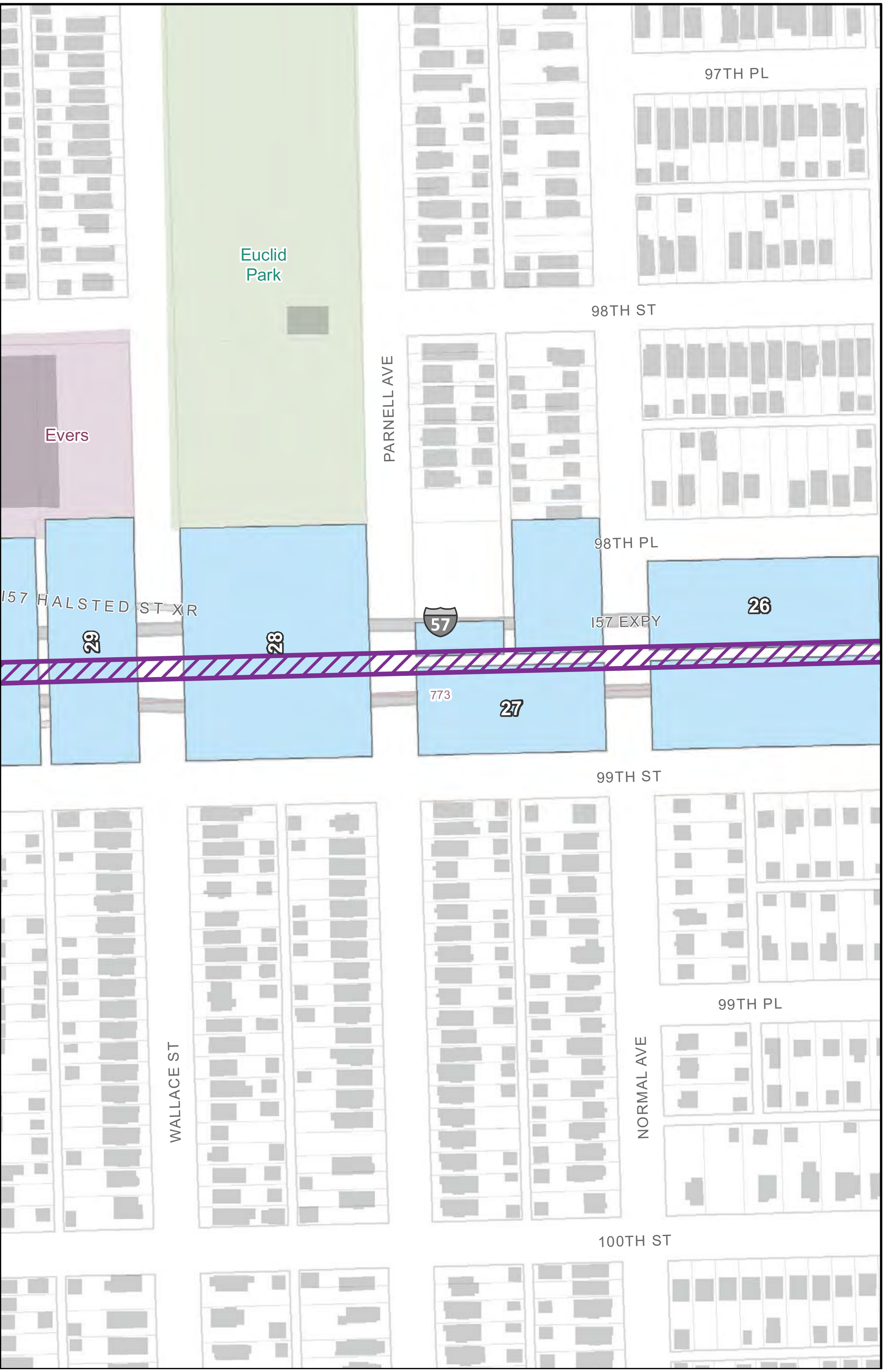
97TH PL
Euclid Park
98TH ST
PARNELL AVE
Evers
98TH PL
I57 HALSTED ST XR
57
I57 EXPY
26
29
28
773
27
99TH ST
99TH PL
WALLACE ST
NORMAL AVE
100TH ST

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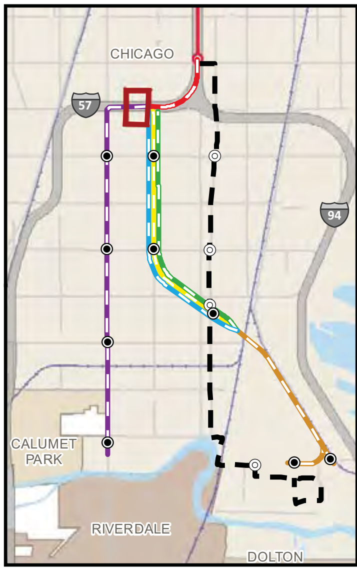

CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

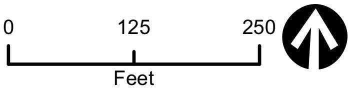
Legend

Halsted Rail Alternative

Sheet 5 of 21

▨ Proposed Permanent Envelope
🟦 Easement
🟫 Parcel Affected by Proposed Permanent Envelope
🟥 Building Displacement
⬜ Building Footprint
☐ Parcels
🟩 Parks
🟪 Schools
-+- Freight Rail
—49— CTA Bus
—290— Pace Bus

Scale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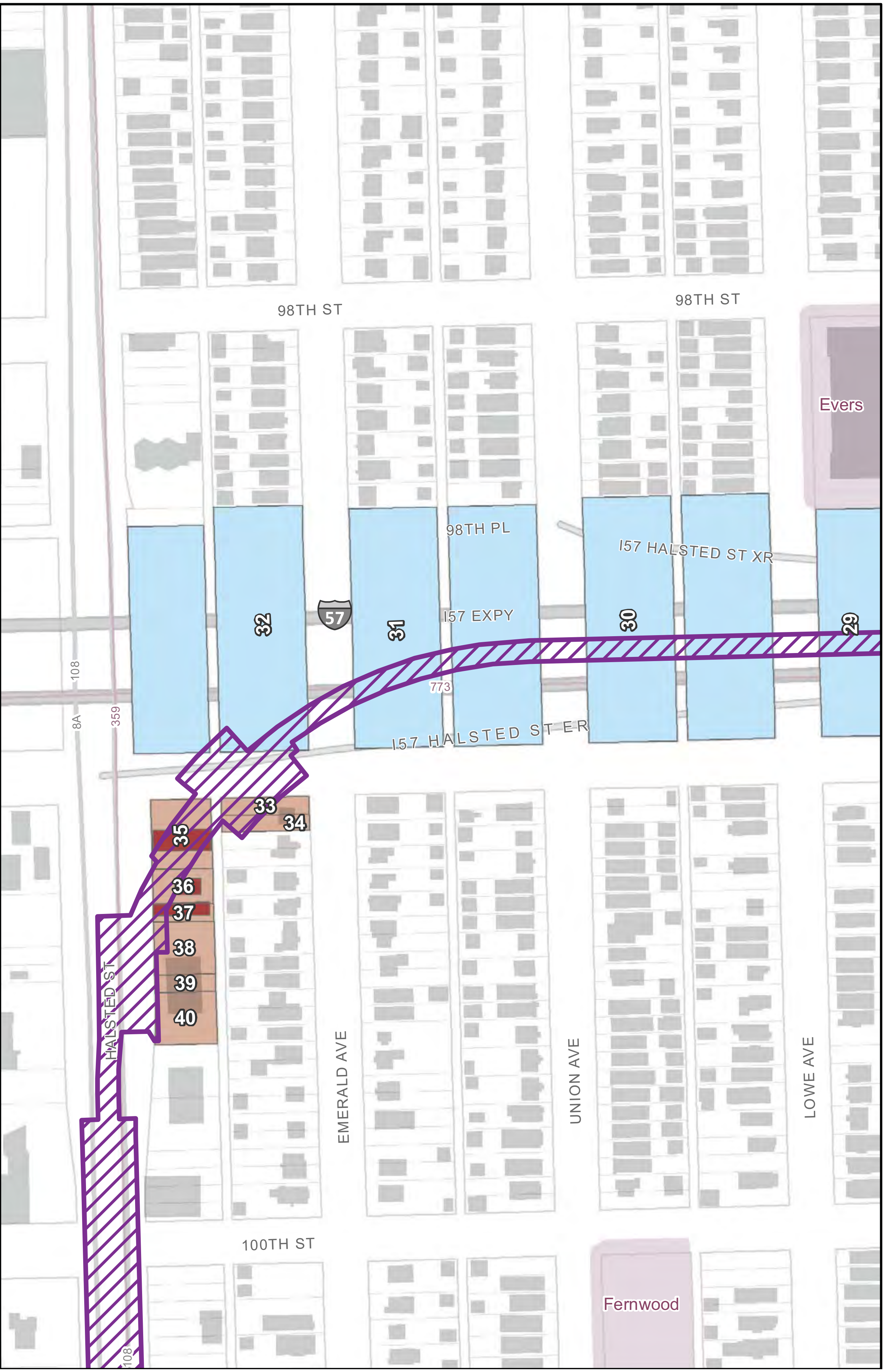
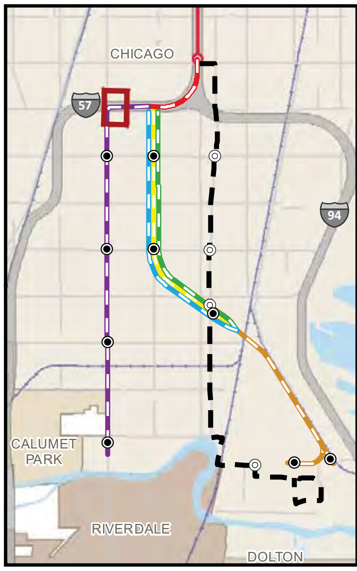
125
250
Feet

map id: 03_07.5


98TH ST
98TH ST
Evers
98TH PL
I57 HALSTED ST XR
57
I57 EXPY
773
I57 HALSTED ST ER
32
31
30
29
33
34
35
36
37
38
39
40
108
8A
359
HALSTED ST
EMERALD AVE
UNION AVE
LOWE AVE
100TH ST
Fernwood
108

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

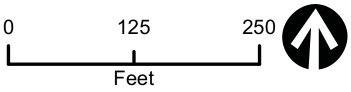
Legend

Halsted Rail Alternative

Sheet 6 of 21

▨ Proposed Permanent Envelope
🟦 Easement
🟫 Parcel Affected by Proposed Permanent Envelope
🟥 Building Displacement
⬜ Building Footprint
□ Parcels
🟩 Parks
🟪 Schools
—+— Freight Rail
—49— CTA Bus
—290— Pace Bus

Scale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125
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Feet

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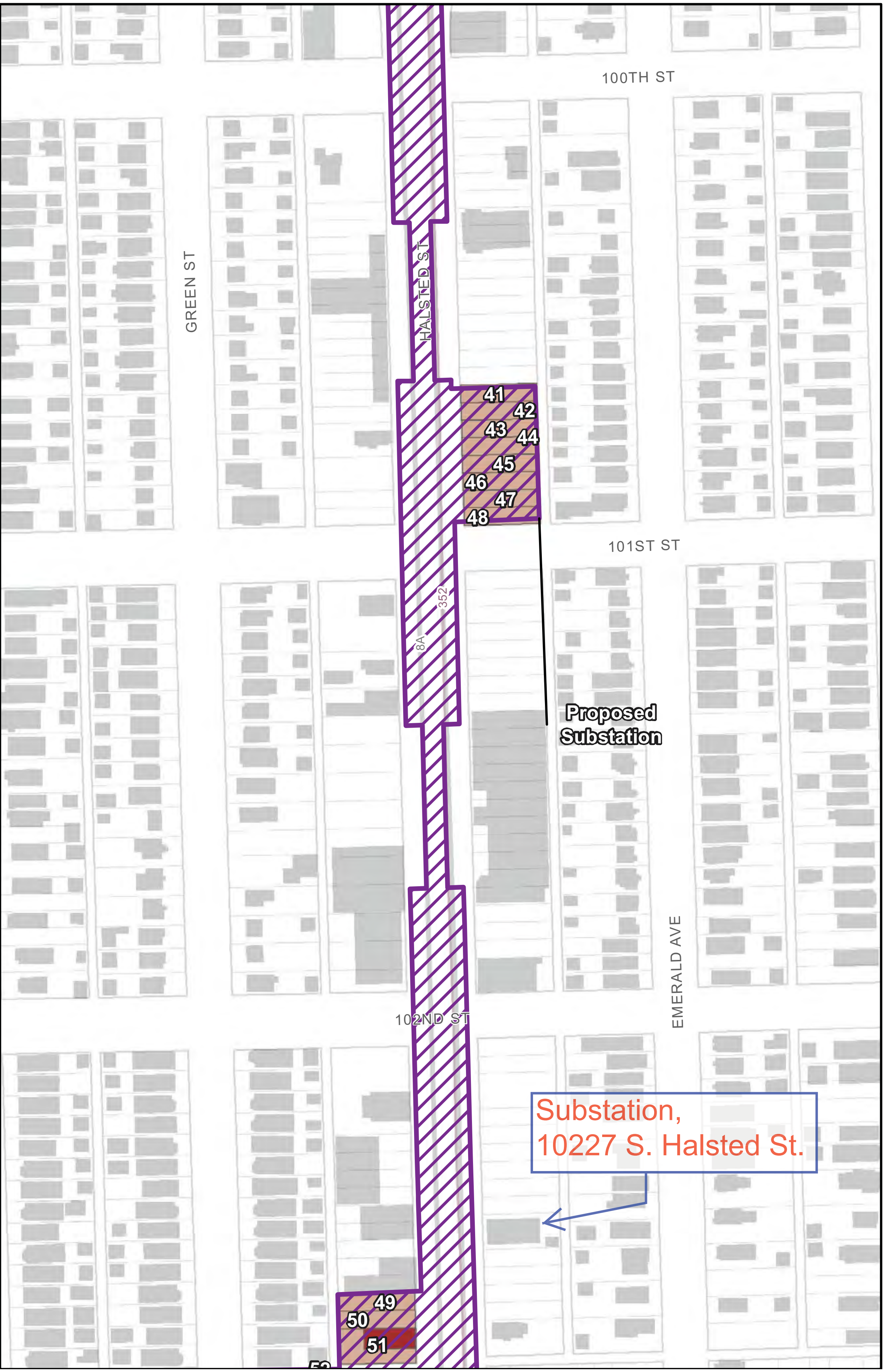
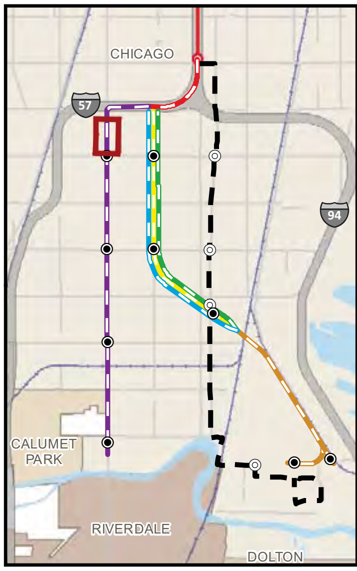

100TH ST
GREEN ST
HALSTED ST
41
42
43
44
45
46
47
48
101ST ST
352
8A
Proposed Substation
EMERALD AVE
102ND ST
49
50
51
52

Substation,
10227 S. Halsted St.

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

Halsted Rail Alternative

Sheet 7 of 21

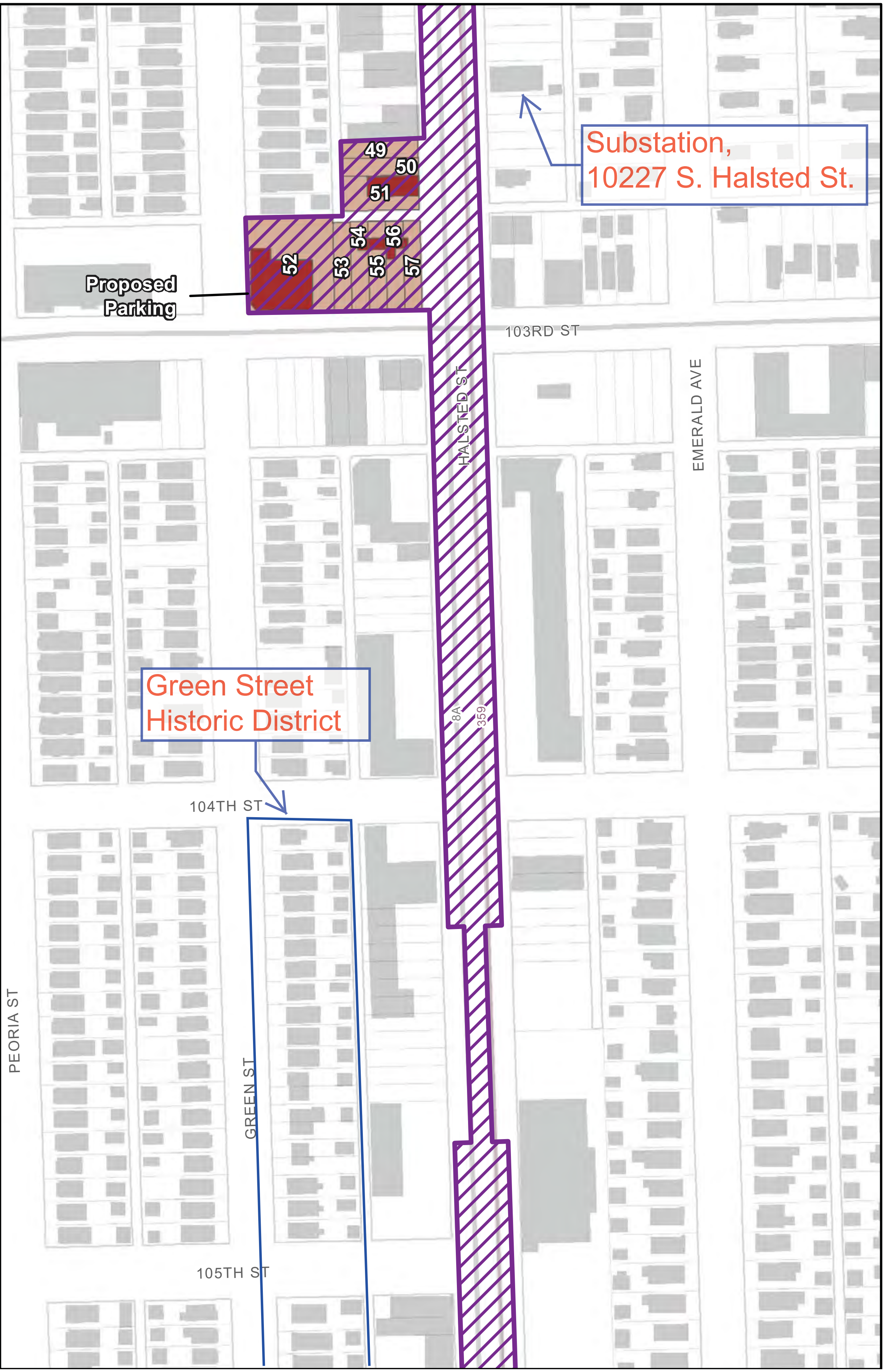
- ▨ Proposed Permanent Envelope
- 🟦 Easement
- 🟫 Parcel Affected by Proposed Permanent Envelope
- 🟥 Building Displacement
- ⬜ Building Footprint
- ☐ Parcels
- 🟩 Parks
- ▨ Schools
- Freight Rail
- —49— CTA Bus
- —290— Pace Bus

Scale

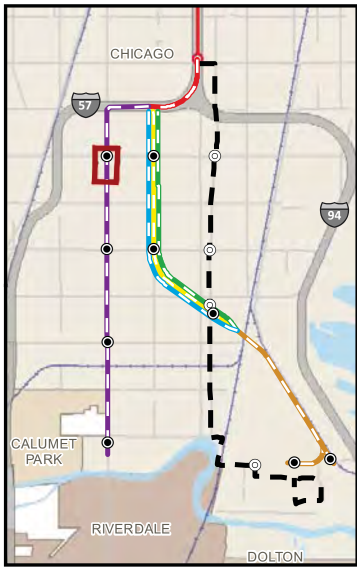
0 125 250

Feet

map id: 03_07.7


49
50
51
52
53
54
55
56
57
Proposed Parking
Substation,
10227 S. Halsted St.
103RD ST
HALSTED ST
EMERALD AVE
Green Street
Historic District
104TH ST
8A
359
PEORIA ST
GREEN ST
105TH ST

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

Halsted Rail Alternative

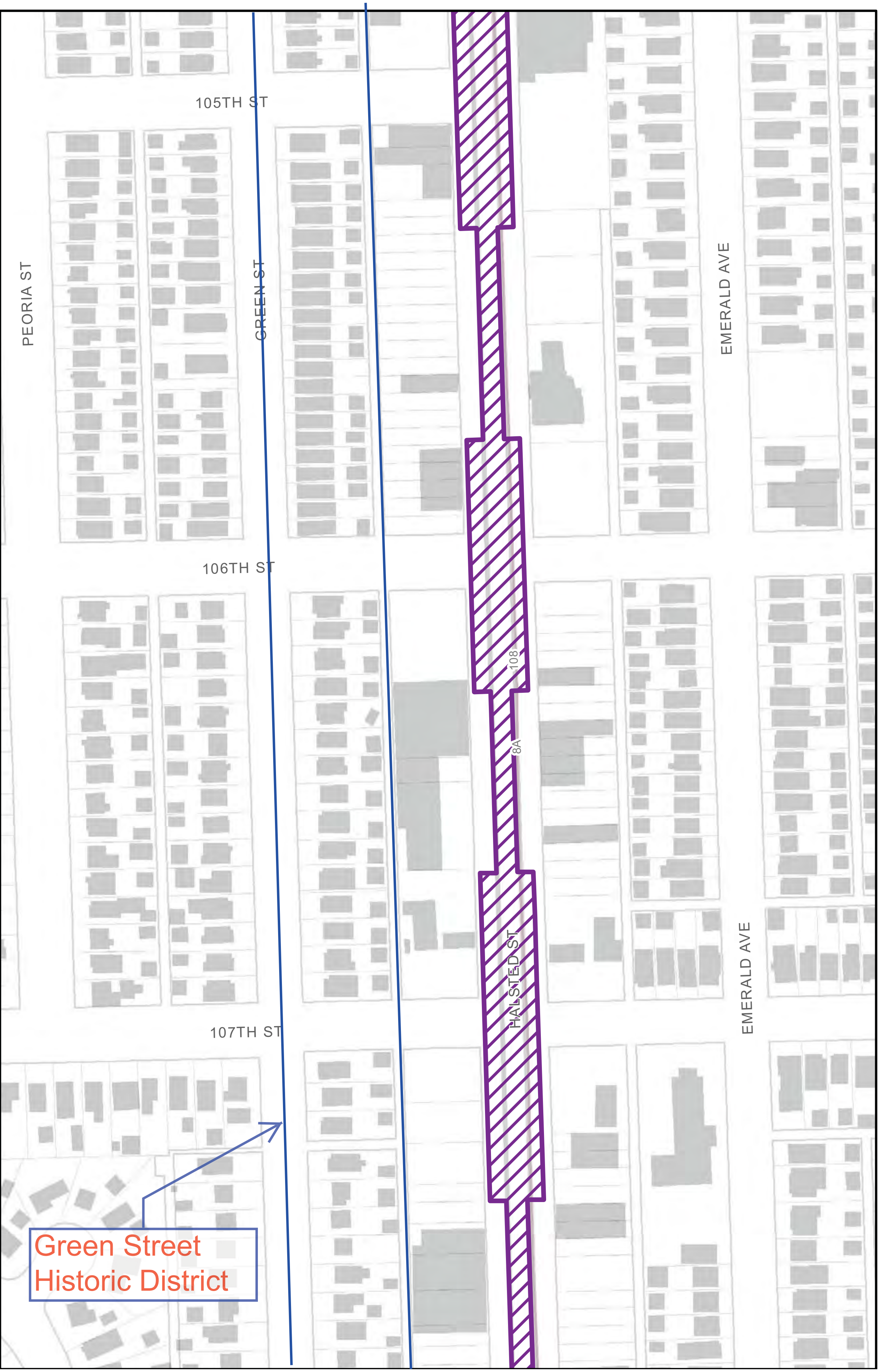
Sheet 8 of 21

- ▨ Proposed Permanent Envelope
- 🟦 Easement
- 🟫 Parcel Affected by Proposed Permanent Envelope
- 🟥 Building Displacement
- ⬜ Building Footprint
- ☐ Parcels
- 🟩 Parks
- 🟪 Schools
- -+-+- Freight Rail
- —49— CTA Bus
- —290— Pace Bus

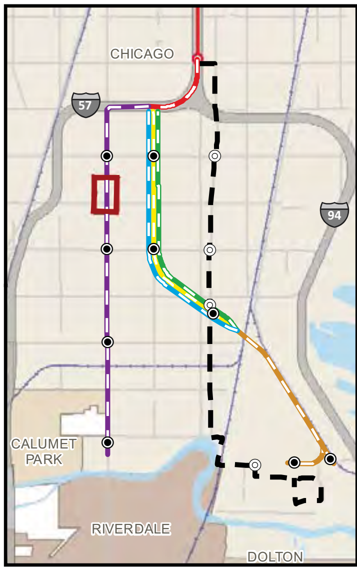
Scale

0 125 250
Feet

map id: 03_07.8


105TH ST
PEORIA ST
GREEN ST
EMERALD AVE
106TH ST
108
8A
HALSTED ST
EMERALD AVE
107TH ST
Green Street
Historic District

Inset


CHICAGO
57
94
CALUMET
PARK
RIVERDALE
DOLTON

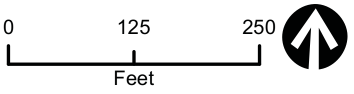
Legend

Halsted Rail Alternative

Sheet 9 of 21

▨	Proposed Permanent Envelope
🟦	Easement
🟫	Parcel Affected by Proposed Permanent Envelope
🟥	Building Displacement
⬜	Building Footprint
□	Parcels
🟩	Parks
🟪	Schools
-+-+-	Freight Rail
–49–	CTA Bus
–290–	Pace Bus

Scale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125
250
Feet

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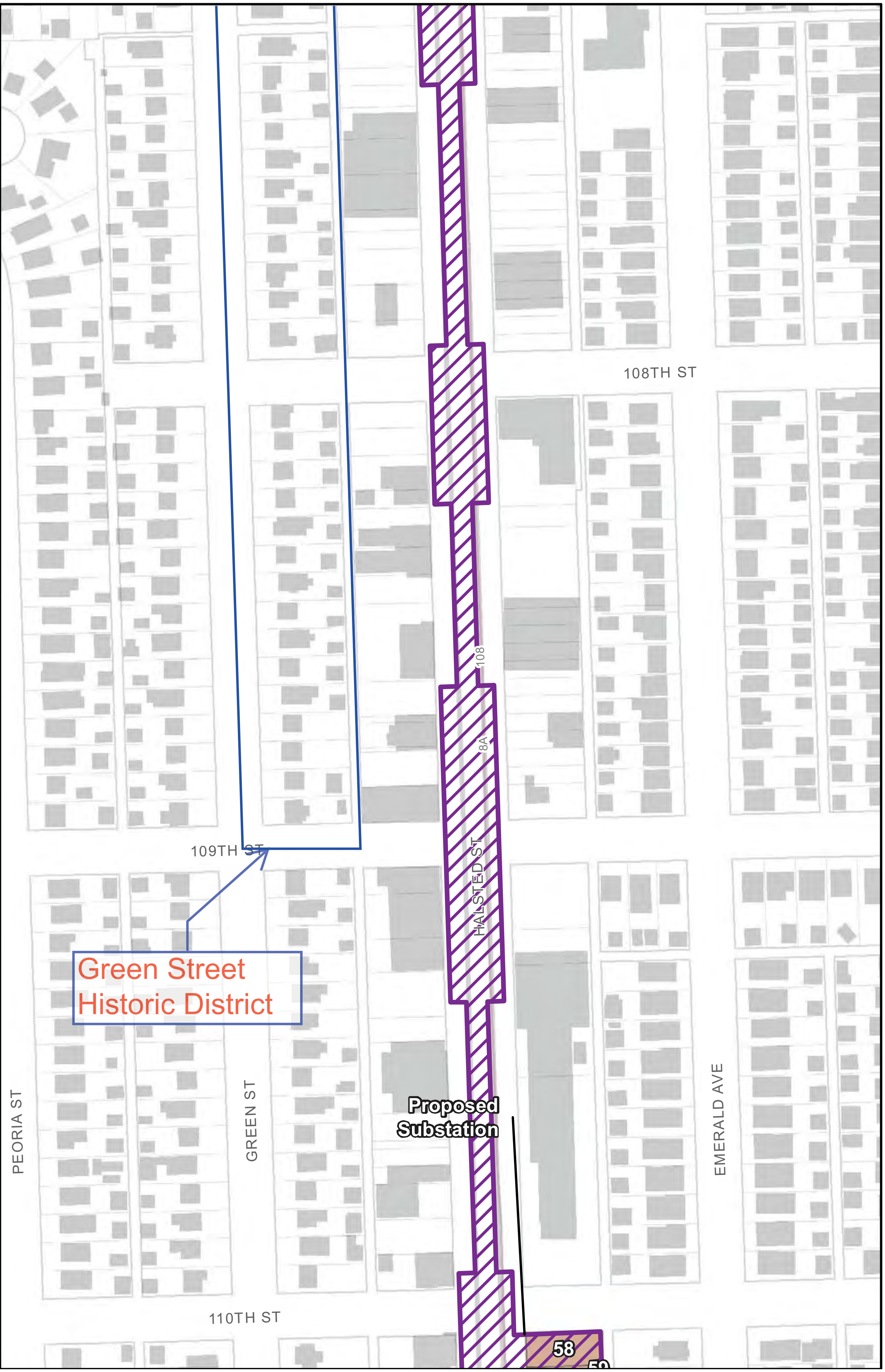
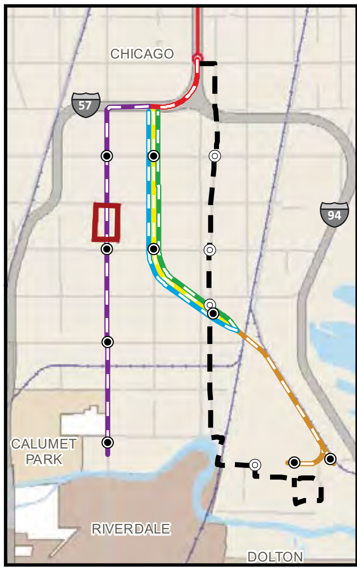

108TH ST
109TH ST
110TH ST
HALSTED ST
108
8A
Green Street Historic District
Proposed Substation
58
PEORIA ST
GREEN ST
EMERALD AVE

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

Halsted Rail Alternative

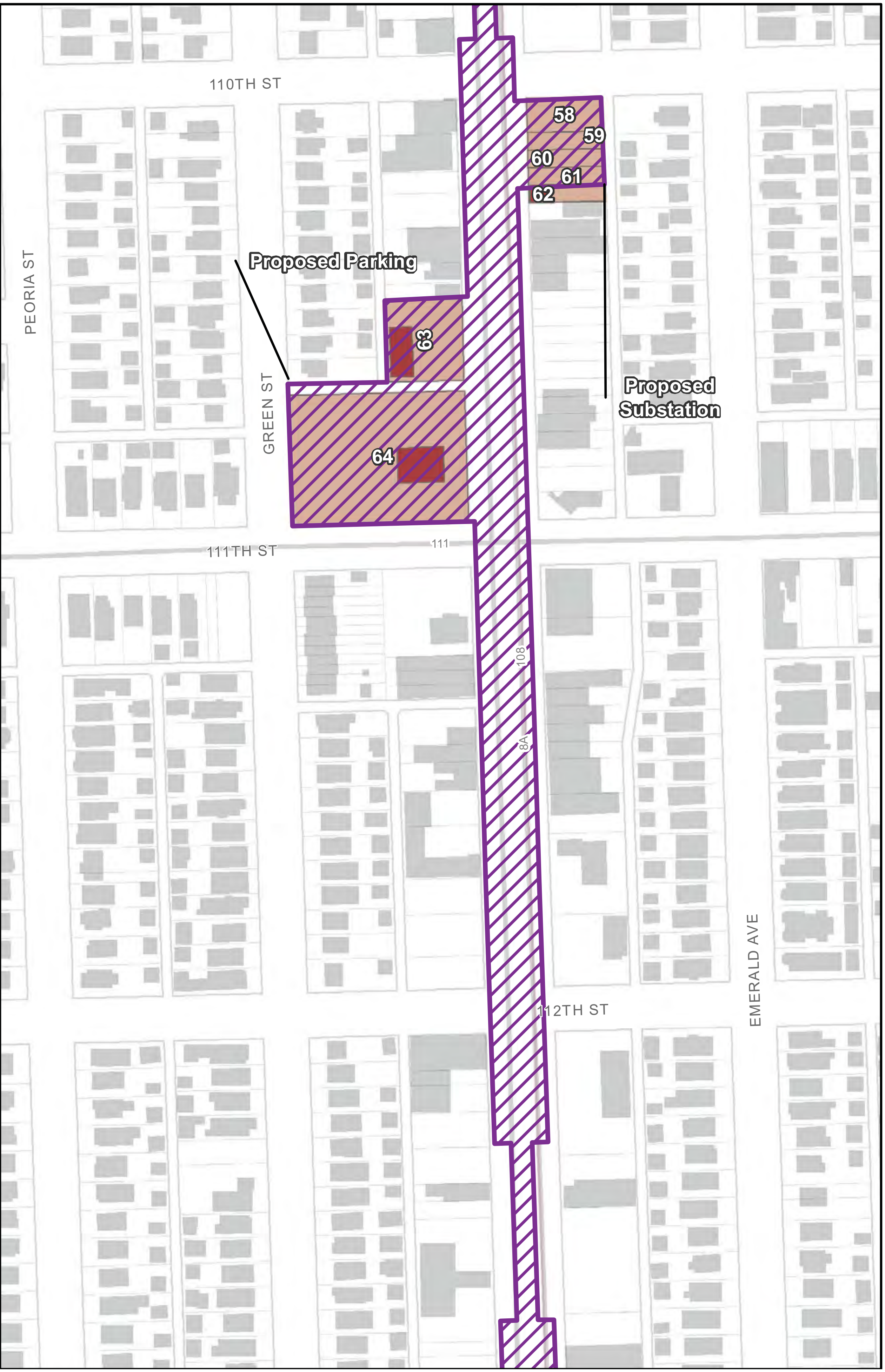
Sheet 10 of 21

▨ Proposed Permanent Envelope
🟦 Easement
🟫 Parcel Affected by Proposed Permanent Envelope
🟥 Building Displacement
⬜ Building Footprint
☐ Parcels
🟩 Parks
🟪 Schools
-+-+- Freight Rail
—49— CTA Bus
—290— Pace Bus

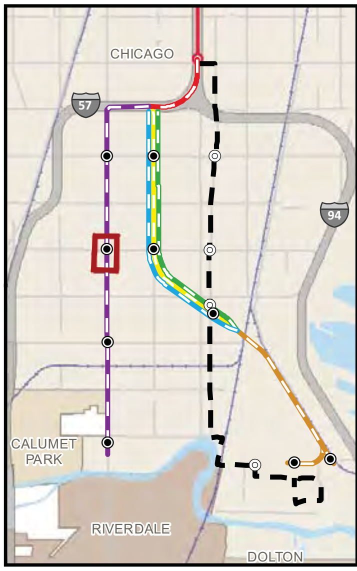
Scale

0 125 250
Feet

map id: 03_07.10


110TH ST
58
59
60
61
62
Proposed Parking
PEORIA ST
63
GREEN ST
Proposed Substation
64
111TH ST
111
108
8A
112TH ST
EMERALD AVE

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

Halsted Rail Alternative

Sheet 11 of 21

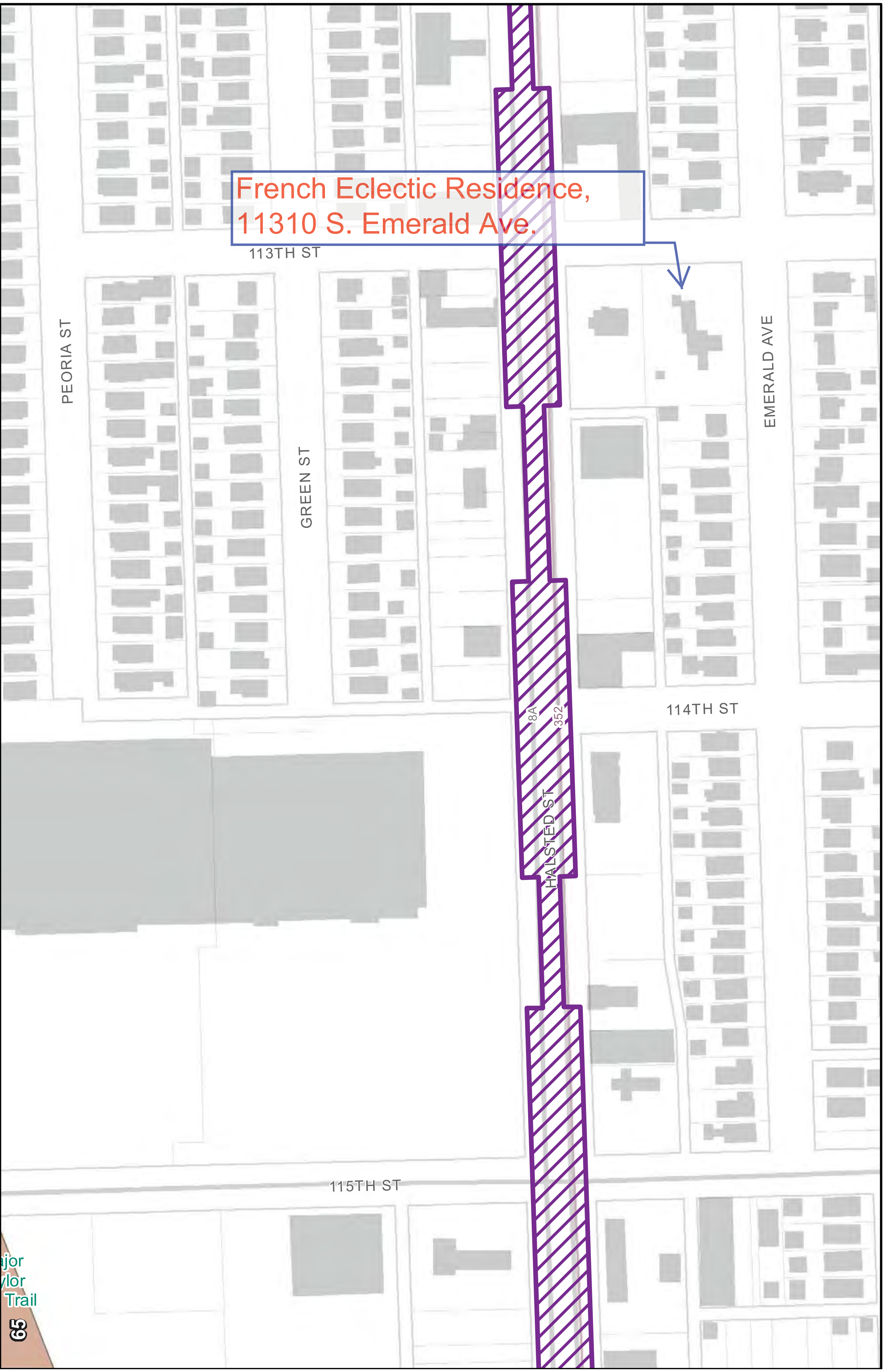
▨	Proposed Permanent Envelope
🟦	Easement
🟫	Parcel Affected by Proposed Permanent Envelope
🟥	Building Displacement
⬜	Building Footprint
☐	Parcels
🟩	Parks
🟪	Schools
-+-+-	Freight Rail
-49-	CTA Bus
-290-	Pace Bus

Scale

0 125 250

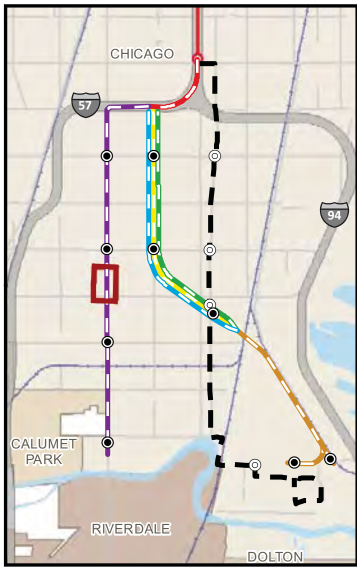
Feet

map id: 03_07.11


113TH ST
PEORIA ST
GREEN ST
EMERALD AVE
114TH ST
8A
352
HALSTED ST
115TH ST
jor
ylor
Trail
65

French Eclectic Residence,
11310 S. Emerald Ave.

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

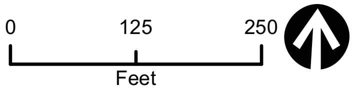
Legend

Halsted Rail Alternative

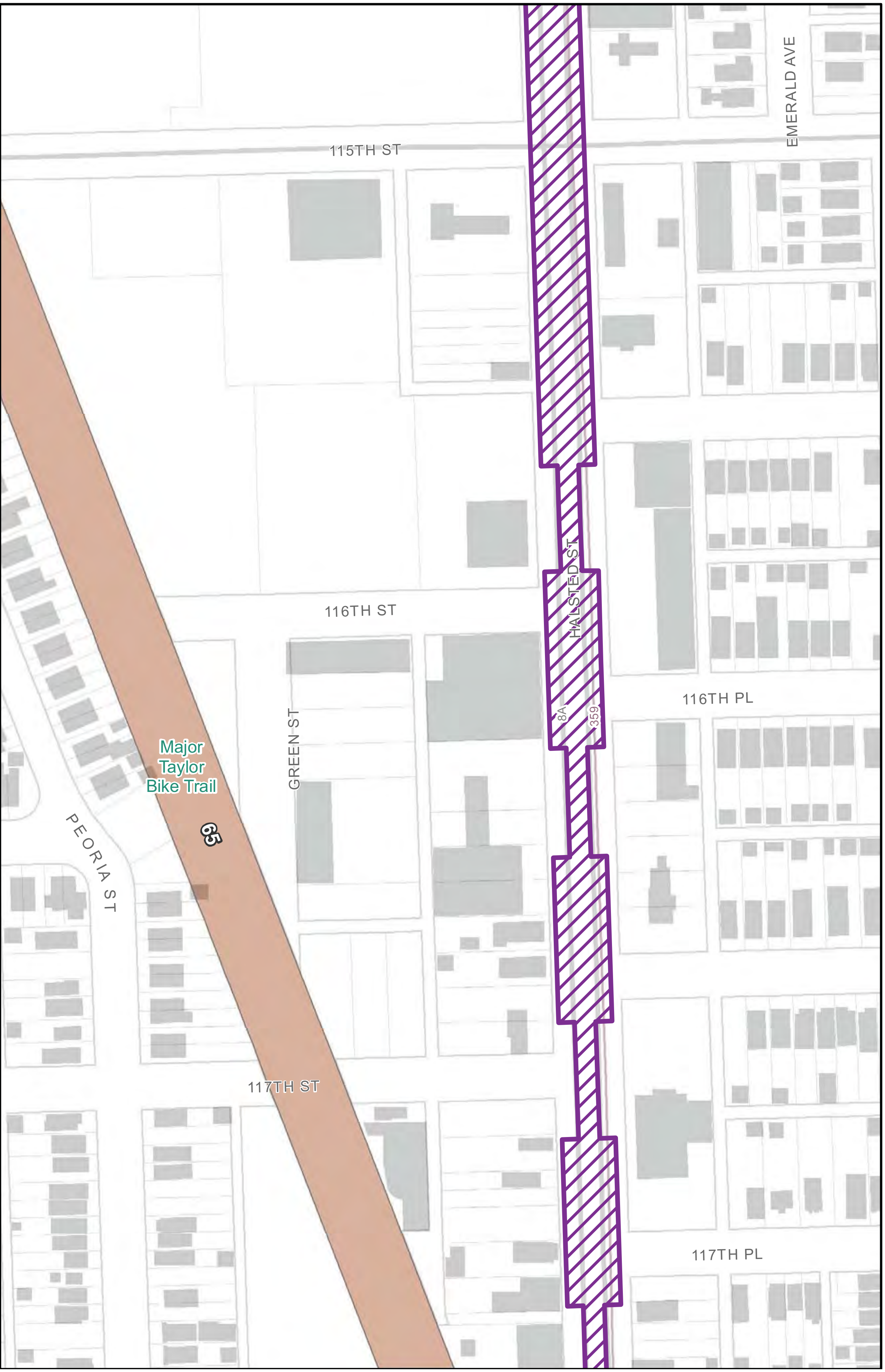
Sheet 12 of 21

▨	Proposed Permanent Envelope
🟦	Easement
🟫	Parcel Affected by Proposed Permanent Envelope
🟥	Building Displacement
⬜	Building Footprint
□	Parcels
🟩	Parks
🟪	Schools
-+-+-	Freight Rail
—49—	CTA Bus
—290—	Pace Bus

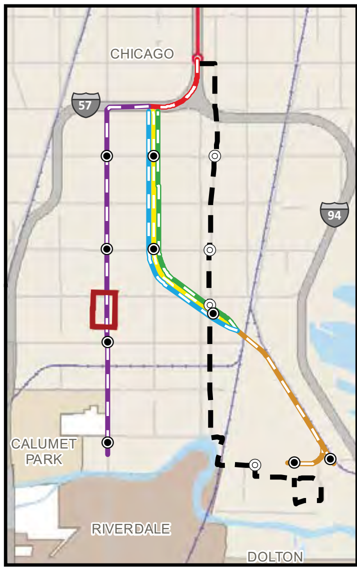
Scale


0
125
250
Feet

map id: 03_07.12


115TH ST
EMERALD AVE
116TH ST
HALSTED ST
116TH PL
8A
359
Major Taylor Bike Trail
65
GREEN ST
PEORIA ST
117TH ST
117TH PL

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

Halsted Rail Alternative

Sheet 13 of 21

▨ Proposed Permanent Envelope

🟦 Easement

🟫 Parcel Affected by Proposed Permanent Envelope

🟥 Building Displacement

⬜ Building Footprint

⬜ Parcels

🟩 Parks

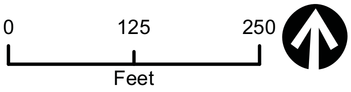
🟪 Schools

-+-+- Freight Rail

—49— CTA Bus

—290— Pace Bus

Scale


0
125
250
Feet

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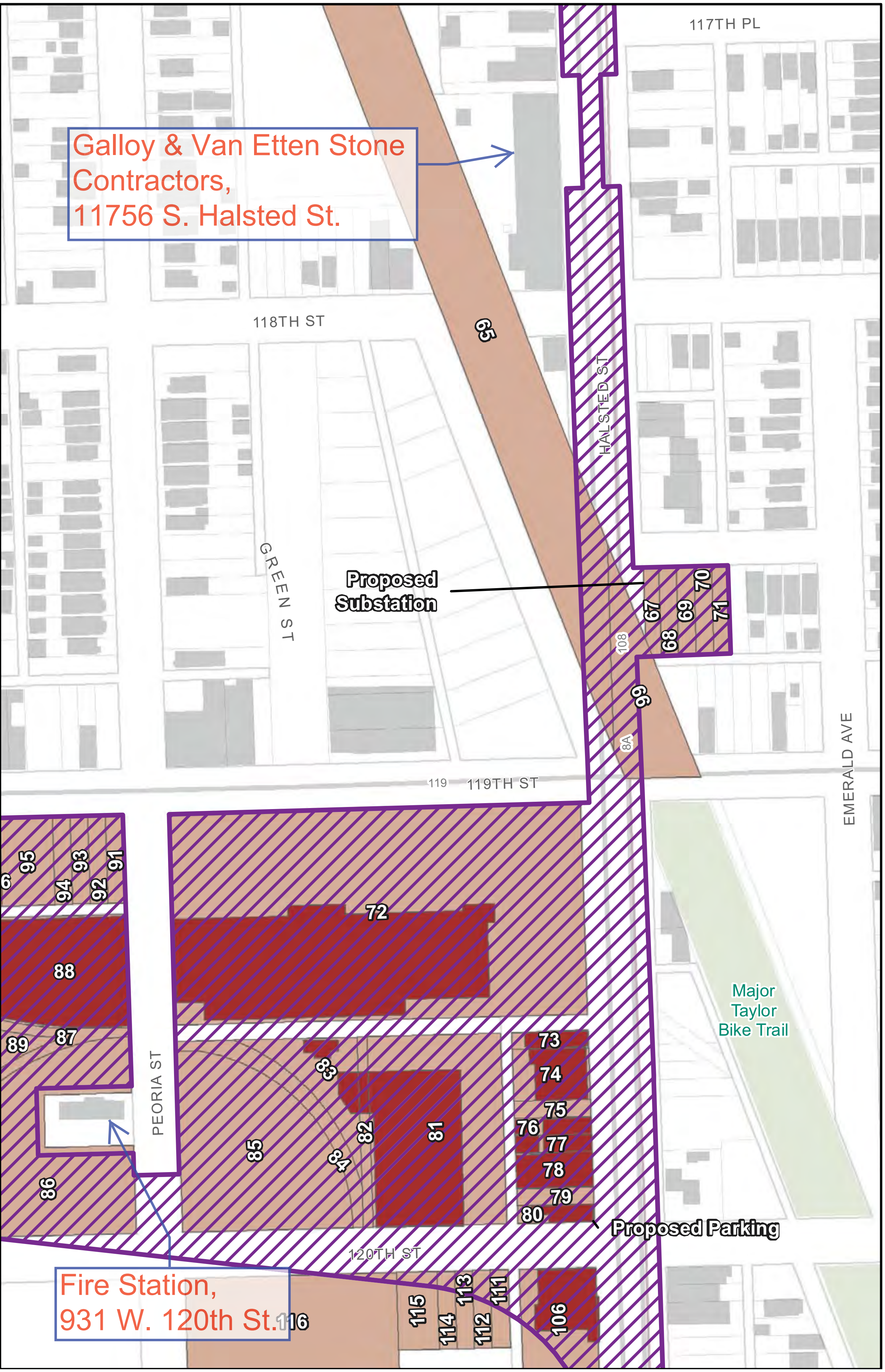
117TH PL
118TH ST
65
HALSTED ST
GREEN ST
Proposed Substation
67
68
69
70
71
108
66
8A
119
119TH ST
EMERALD AVE
6
95
94
93
92
91
72
88
89
87
PEORIA ST
83
82
81
84
85
86
73
74
75
76
77
78
79
80
Proposed Parking
Major Taylor Bike Trail
120TH ST
115
114
113
112
111
106
116

Galloy & Van Etten Stone Contractors, 11756 S. Halsted St.

Fire Station, 931 W. 120th St.

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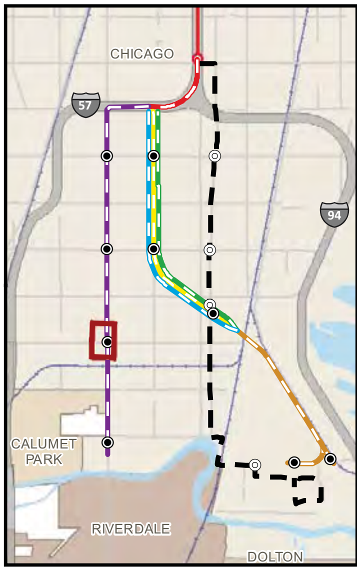

CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

Halsted Rail Alternative

Sheet 14 of 21

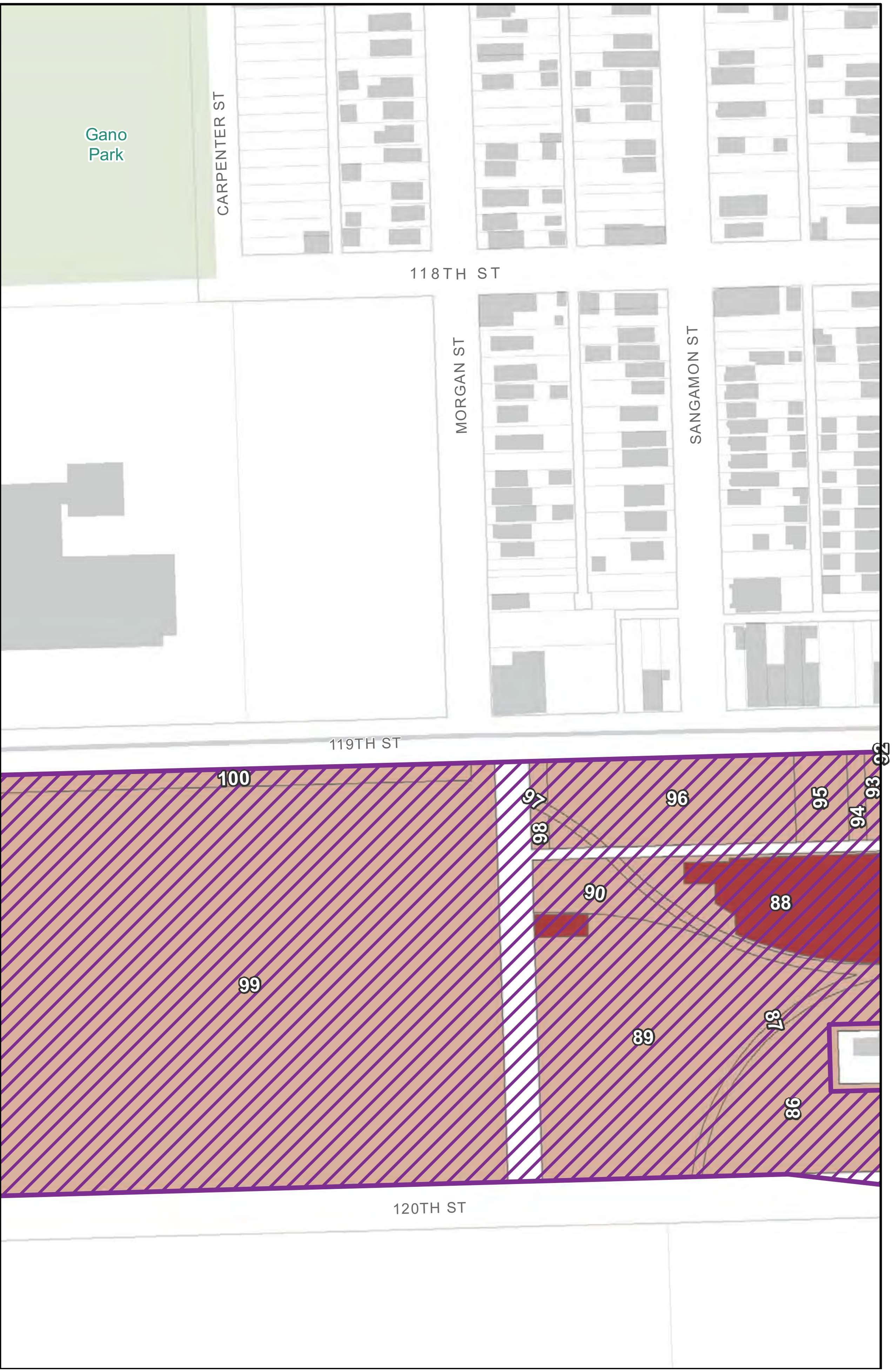
- ▨ Proposed Permanent Envelope
- 🟦 Easement
- 🟫 Parcel Affected by Proposed Permanent Envelope
- 🟥 Building Displacement
- ⬜ Building Footprint
- ☐ Parcels
- 🟩 Parks
- 🟪 Schools
- -+-+- Freight Rail
- -49- CTA Bus
- -290- Pace Bus

Scale

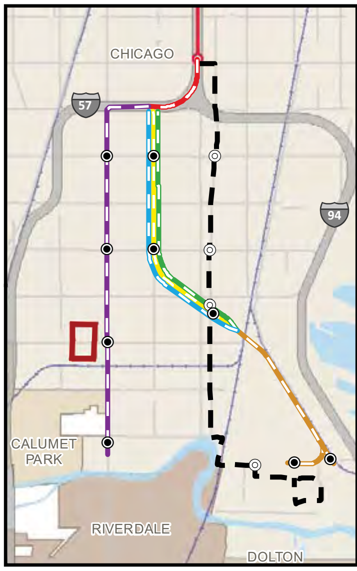
0 125 250
Feet

N

map id: 03_07.14


Gano Park
CARPENTER ST
118TH ST
MORGAN ST
SANGAMON ST
119TH ST
120TH ST
100
97
96
95
94
93
92
98
90
88
99
89
87
86

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

Halsted Rail Alternative

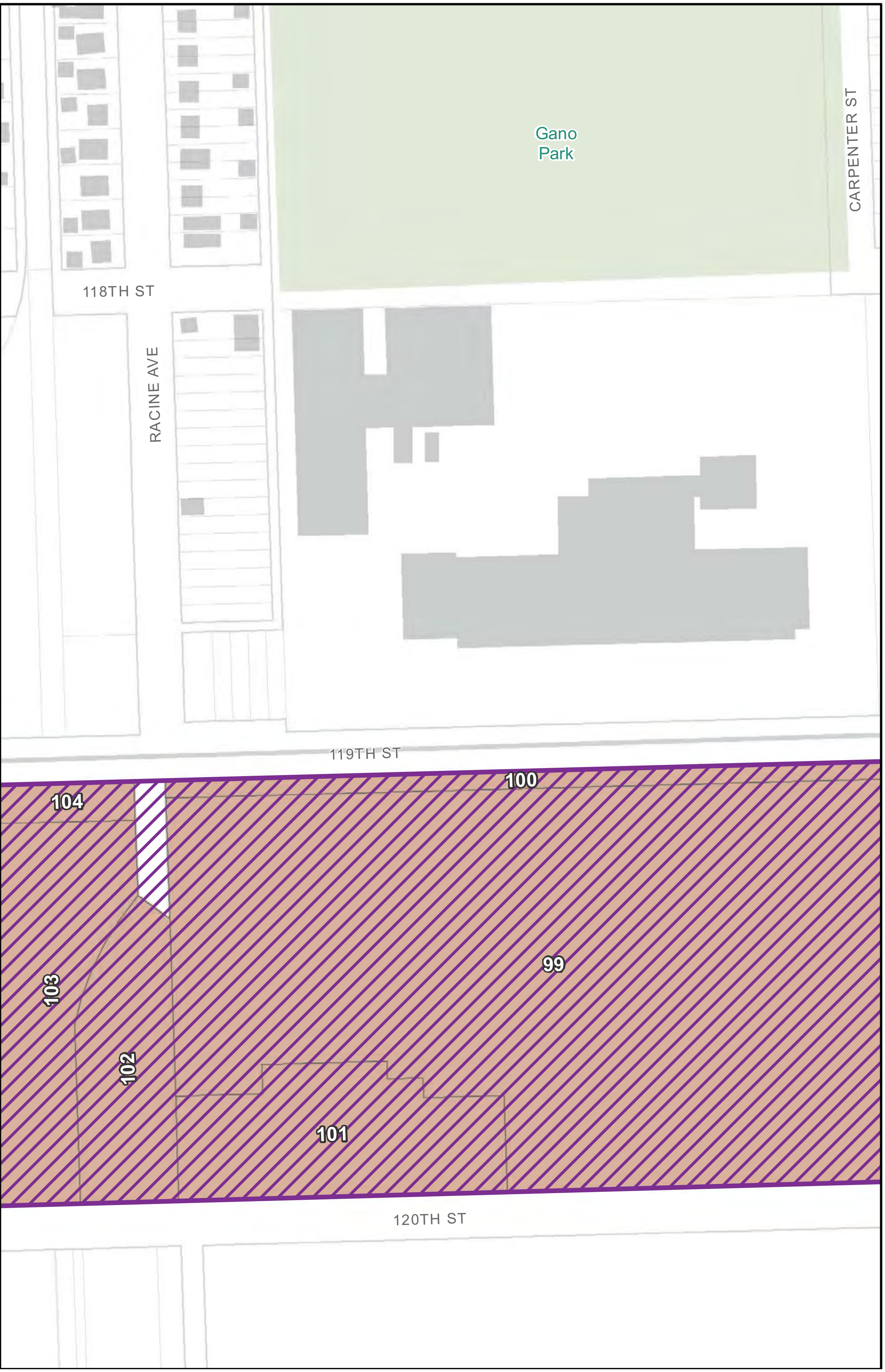
Sheet 15 of 21

- ▨ Proposed Permanent Envelope
- 🟦 Easement
- 🟫 Parcel Affected by Proposed Permanent Envelope
- 🟥 Building Displacement
- ⬜ Building Footprint
- ⬜ Parcels
- 🟩 Parks
- 🟪 Schools
- -+-+- Freight Rail
- -49- CTA Bus
- -290- Pace Bus

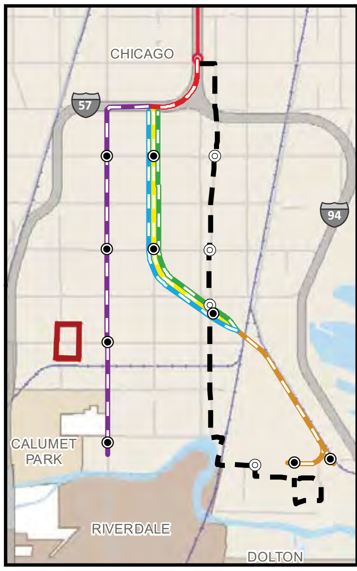
Scale

0 125 250
Feet

map id: 03_07.15


Gano
Park
CARPENTER ST
118TH ST
RACINE AVE
119TH ST
100
104
103
102
99
101
120TH ST

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

Halsted Rail Alternative

Sheet 16 of 21

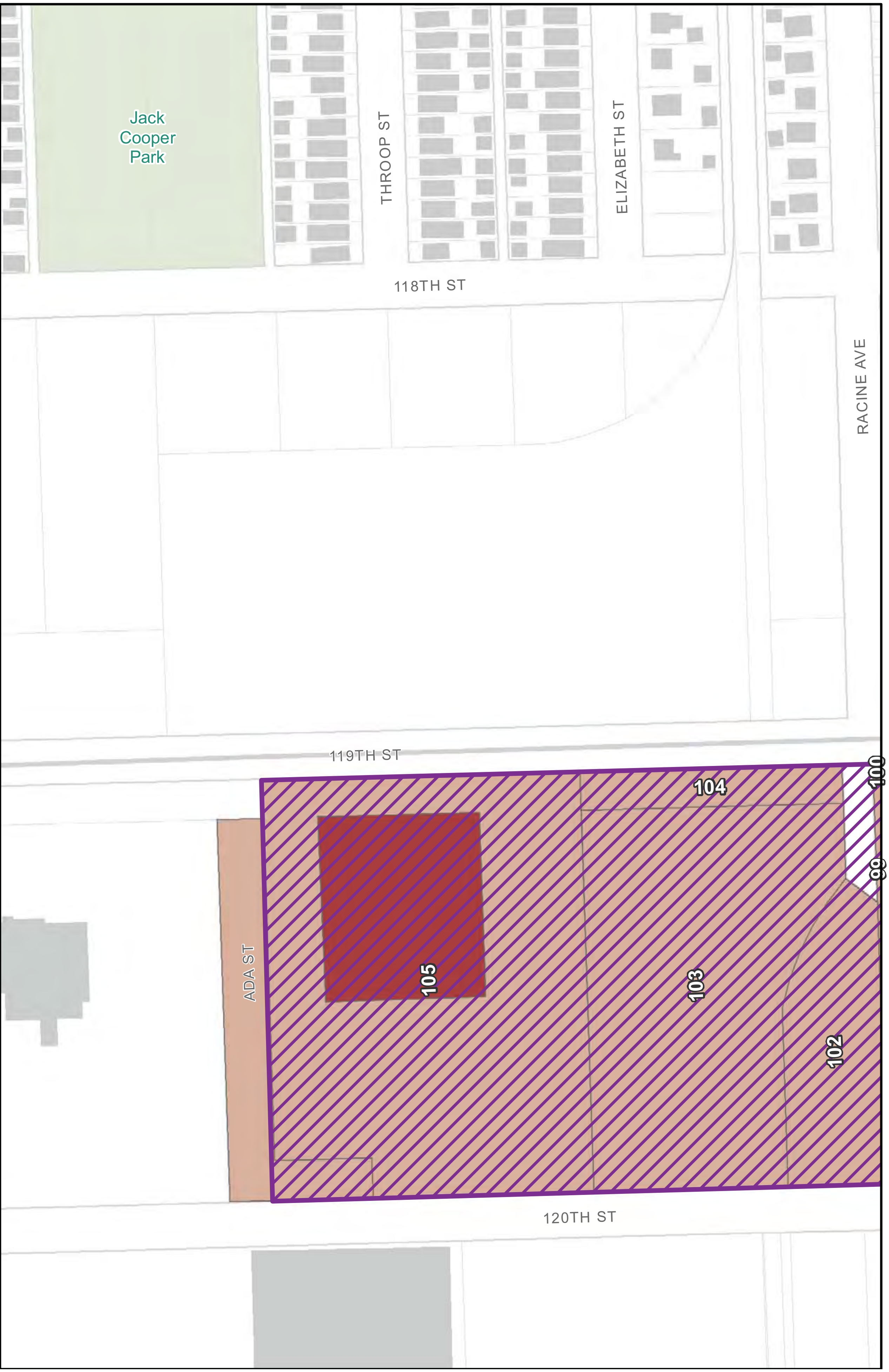
- ▨ Proposed Permanent Envelope
- 🟦 Easement
- 🟫 Parcel Affected by Proposed Permanent Envelope
- 🟥 Building Displacement
- ⬜ Building Footprint
- ☐ Parcels
- 🟩 Parks
- ⬜ Schools
- -+-+- Freight Rail
- —49— CTA Bus
- —290— Pace Bus

Scale

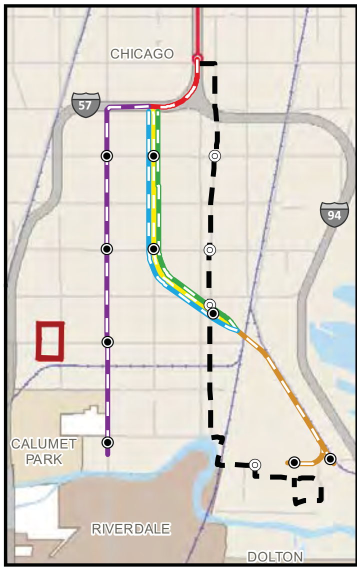
0 125 250

Feet

map id: 03_07.16


Jack Cooper Park
THROOP ST
ELIZABETH ST
118TH ST
RACINE AVE
119TH ST
104
100
99
105
103
102
ADA ST
120TH ST

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

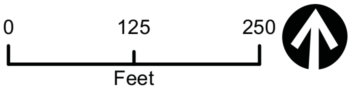
Legend

Halsted Rail Alternative

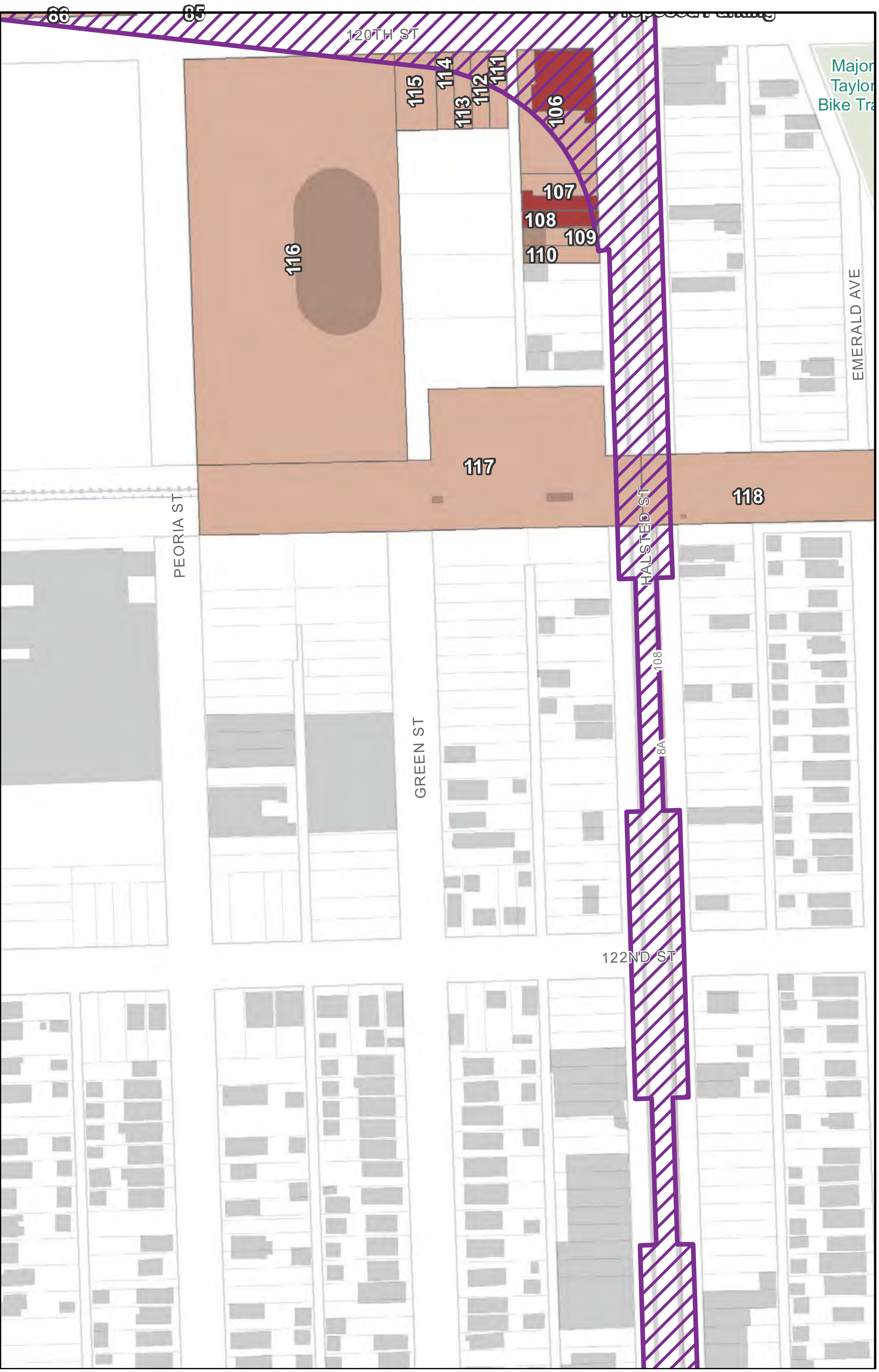
Sheet 17 of 21

▨	Proposed Permanent Envelope
🟦	Easement
🟫	Parcel Affected by Proposed Permanent Envelope
🟥	Building Displacement
⬜	Building Footprint
□	Parcels
🟩	Parks
🟪	Schools
-+-+-	Freight Rail
-49-	CTA Bus
-290-	Pace Bus

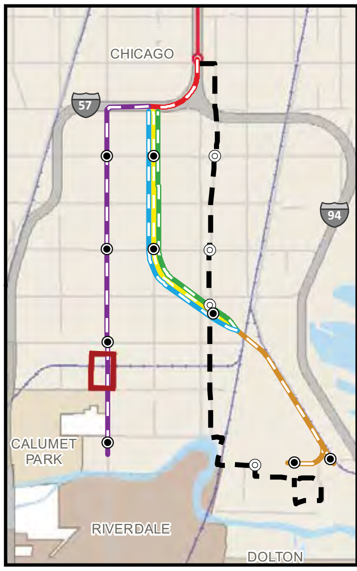
Scale


0
125
250
Feet

map id: 03_07.17


86
85
120TH ST
Major
Taylor
Bike Tra
115
114
113
112
111
106
107
108
109
110
116
117
118
EMERALD AVE
PEORIA ST
HALSTED ST
108
8A
GREEN ST
122ND ST

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

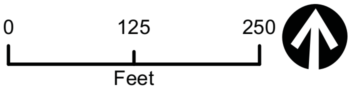
Legend

Halsted Rail Alternative

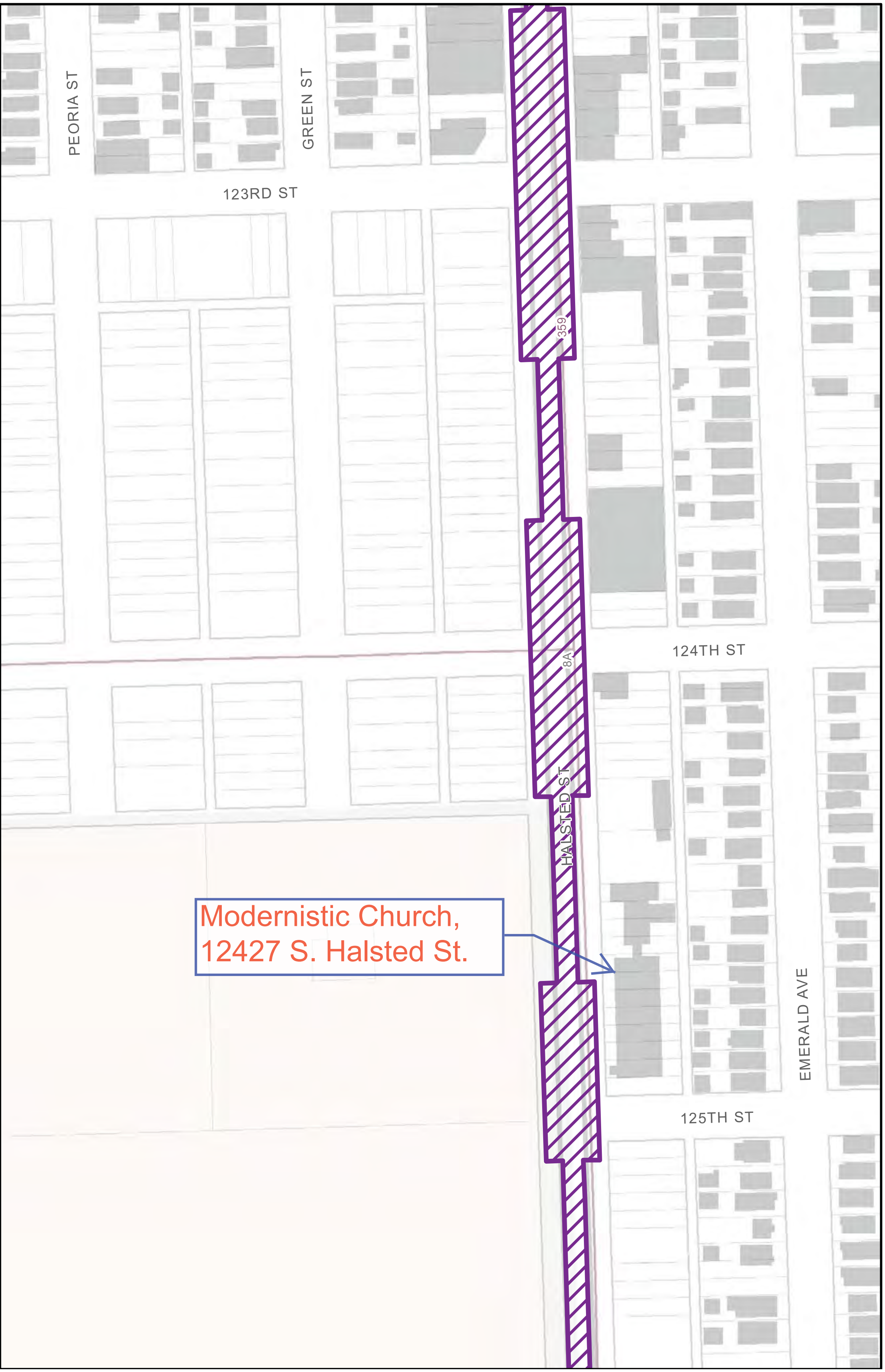
Sheet 18 of 21

- ▨ Proposed Permanent Envelope
- 🟦 Easement
- 🟫 Parcel Affected by Proposed Permanent Envelope
- 🟥 Building Displacement
- ⬜ Building Footprint
- ☐ Parcels
- 🟩 Parks
- ▩ Schools
- -+-+- Freight Rail
- -49- CTA Bus
- -290- Pace Bus

Scale

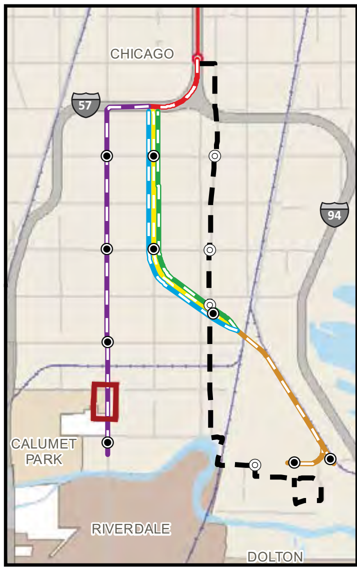

0
125
250
Feet

map id: 03_07.18


PEORIA ST
GREEN ST
123RD ST
359
124TH ST
8A
HALSTED ST
EMERALD AVE
125TH ST

Modernistic Church,
12427 S. Halsted St.

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

Halsted Rail Alternative

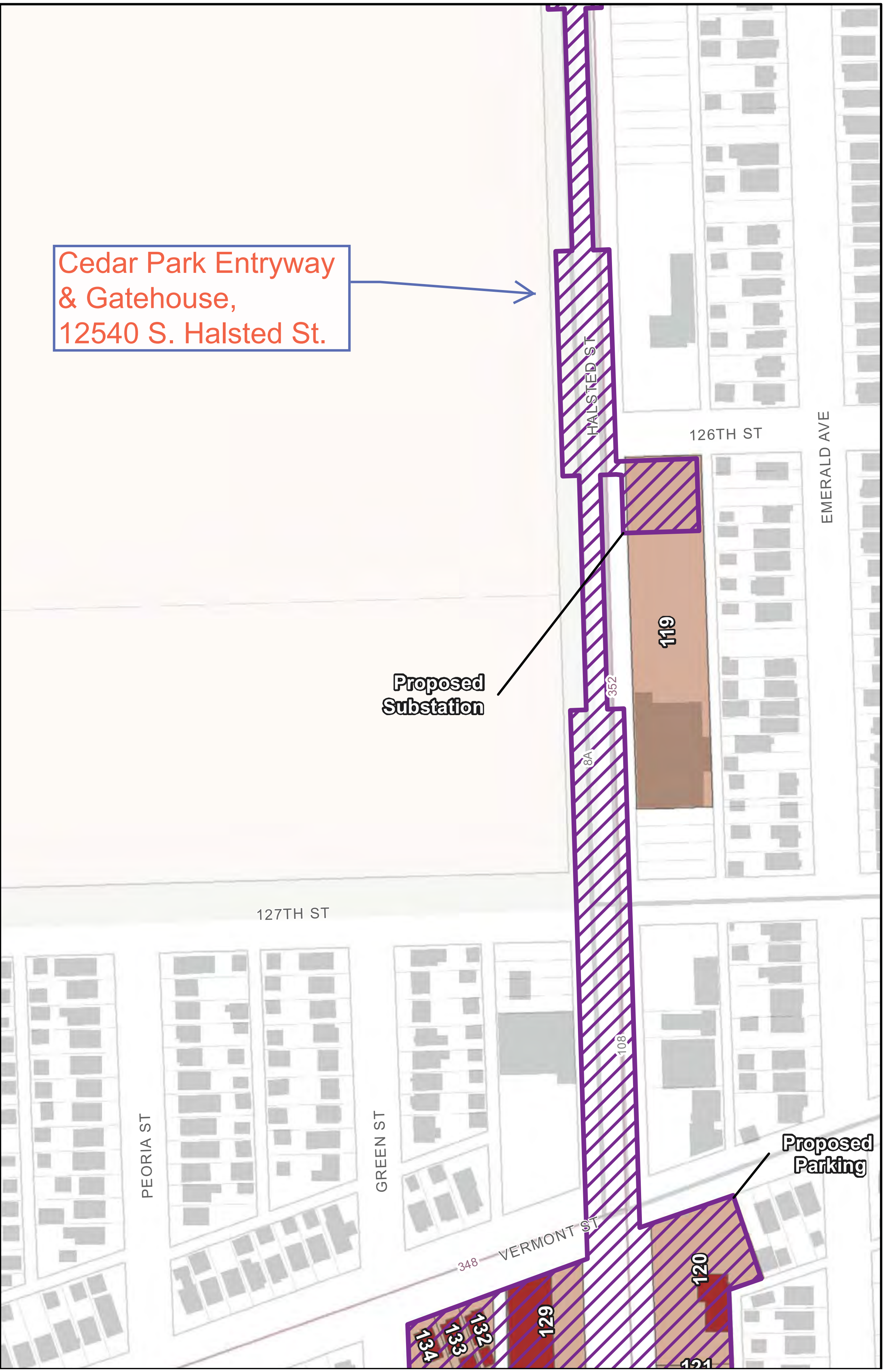
Sheet 19 of 21

- ▨ Proposed Permanent Envelope
- 🟦 Easement
- 🟫 Parcel Affected by Proposed Permanent Envelope
- 🟥 Building Displacement
- ⬜ Building Footprint
- ☐ Parcels
- 🟩 Parks
- 🟪 Schools
- -+-+- Freight Rail
- —49— CTA Bus
- —290— Pace Bus

Scale

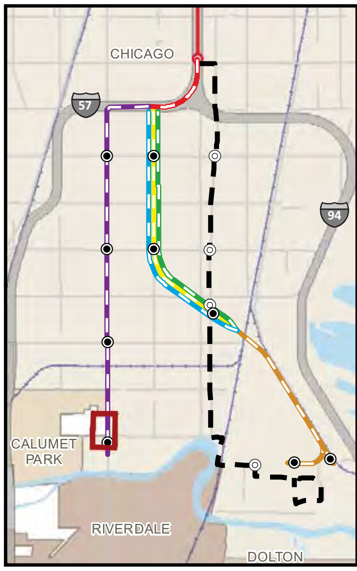
0 125 250
Feet

map id: 03_07.19


HALSTED ST
126TH ST
EMERALD AVE
119
352
8A
Proposed Substation
127TH ST
PEORIA ST
GREEN ST
108
VERMONT ST
348
Proposed Parking
120
129
132
133
134
121

Cedar Park Entryway & Gatehouse,
12540 S. Halsted St.

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

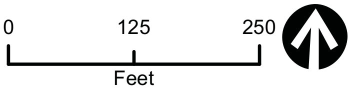
Legend

Halsted Rail Alternative

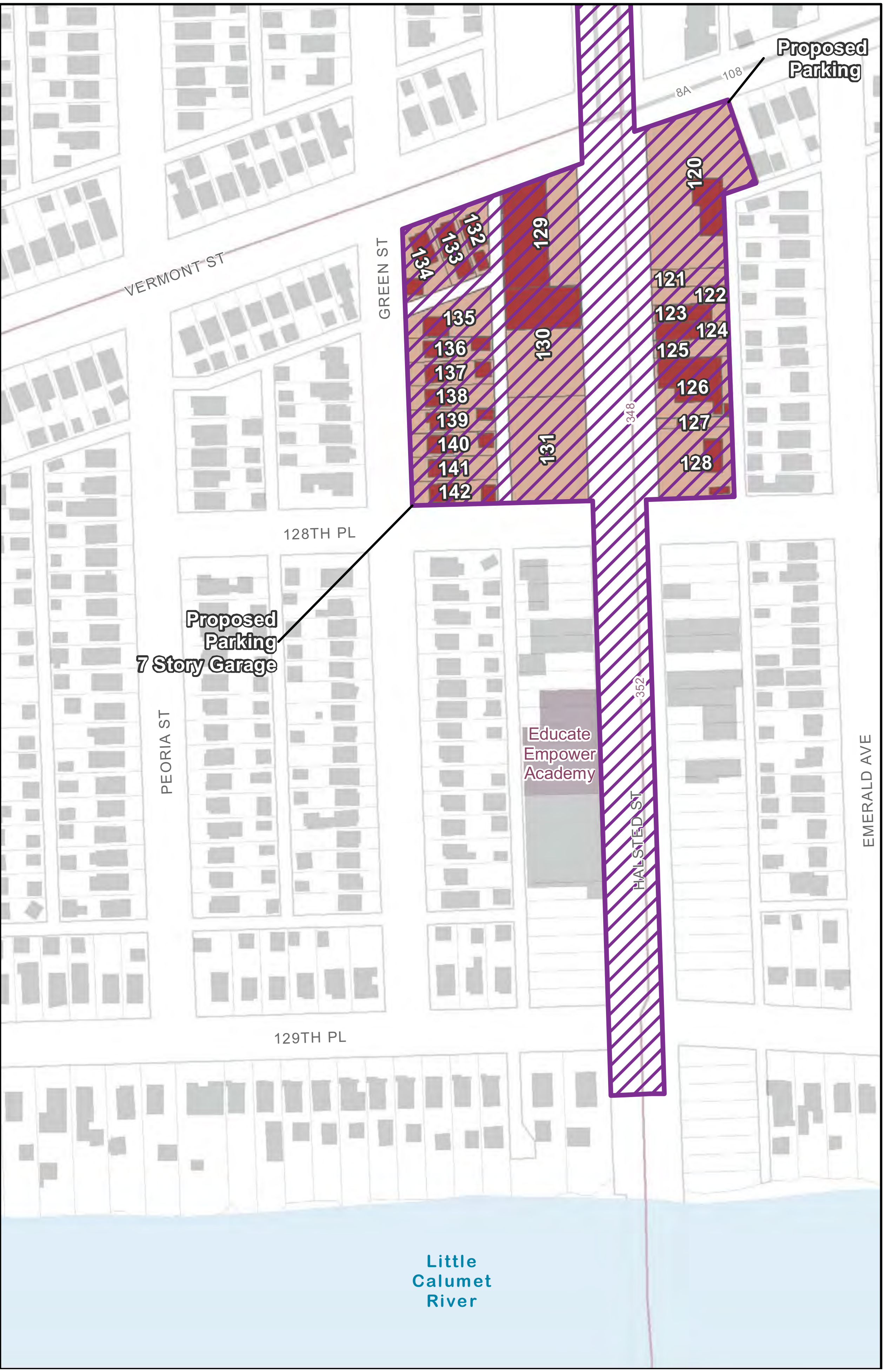
Sheet 20 of 21

▨	Proposed Permanent Envelope
🟦	Easement
🟫	Parcel Affected by Proposed Permanent Envelope
🟥	Building Displacement
⬜	Building Footprint
□	Parcels
🟩	Parks
🟪	Schools
-+-+-	Freight Rail
—49—	CTA Bus
—290—	Pace Bus

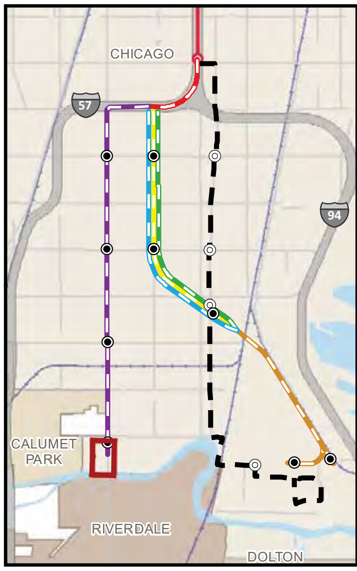
Scale


0
125
250
Feet

map id: 03_07.20


Proposed Parking
8A
108
120
129
132
133
134
VERMONT ST
GREEN ST
121
122
123
124
125
126
127
128
135
136
137
138
139
140
141
142
130
131
348
128TH PL
Proposed Parking
7 Story Garage
PEORIA ST
Educate Empower Academy
352
HALSTED ST
EMERALD AVE
129TH PL
Little Calumet River

Inset


CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON

Legend

Halsted Rail Alternative

Sheet 21 of 21

▨ Proposed Permanent Envelope
🟦 Easement
🟫 Parcel Affected by Proposed Permanent Envelope
🟥 Building Displacement
⬜ Building Footprint
□ Parcels
🟩 Parks
🟪 Schools
-+- Freight Rail
-49- CTA Bus
-290- Pace Bus

Scale

0 125 250
Feet

map id: 03_07.21

Appendix E
2014–2015 Red Line Extension Project Update

2014-2015 Red Line Extension Project Update

From 2012-2014, CTA evaluated benefits and impacts of four alternatives: the No Build Alternative, the Bus Rapid Transit Alternative (along Michigan Avenue), the Union Pacific Railroad (UPRR) Rail Alternative, and the Halsted Alternative. CTA evaluated three options of the UPRR Rail Alternative: Right-of-Way Option, East Option, and West Option. CTA also evaluated two options of the UPRR Rail Alternative 130th Street station: a South Station Option and a West Station Option. Based on the project description provided in Section 2 of this technical memorandum, CTA analyzed the impacts of these alternatives and station options. The benefits and impacts are included in the technical memoranda prepared in 2012-2014.

In August 2014, based on the technical analysis and public input, CTA announced the NEPA Preferred Alternative—the UPRR Rail Alternative. Additional conceptual engineering was conducted on the UPRR Rail Alternative to refine the East and West Option alignments. In addition, CTA is considering only the South Station Option of the 130th Street Station.

In late 2014 and early 2015, CTA conducted additional engineering and revised assumptions on the East and West Options to refine the alignments. The refinement of the East and West Options consisted of the following items:

- For the segment of the alignment along I-57, CTA shifted the proposed alignment from the median of I-57 to the north side of I-57 within the existing expressway right-of-way. The construction would be less complex, safer for construction workers, and have a shorter duration. The shift would also allow for fewer impacts to Wendell Smith Park for the East Option, and would allow for no permanent impacts to Wendell Smith Park for the West Option.

- CTA modified the curve speeds as the alignment heads south from I-57 along the UPRR tracks. The curve speed for both the East and West Options would be 35 mph.

- CTA shifted the East Option alignment near 103rd Street station to minimize impacts to Block Park and the Roseland Pumping Station.

- CTA modified the curves south of 103rd Street for both the East and West Options to 55 mph to maximize the train speed.

- CTA refined the layout of the 120th Street yard and shop to optimize yard operations. The refined layout of the yard would accommodate 340 train cars.

The refinement of the East and West Option alignments minimizes potential impacts to parks while providing flexibility for future design phases. The Draft Environmental Impact Statement contains the benefits and impacts of the refined East and West Option alignments and supersedes information presented in other chapters of this technical memorandum

Historic and Cultural Resources

The refined alignment did not create any additional or different effects on historic resources.

Based on feedback from Section 106 consulting parties, CTA prepared two additional photo simulations. **Figure 1** shows a photo simulation of the elevated track structure adjacent to the Roseland Pumping Station under the East Option.

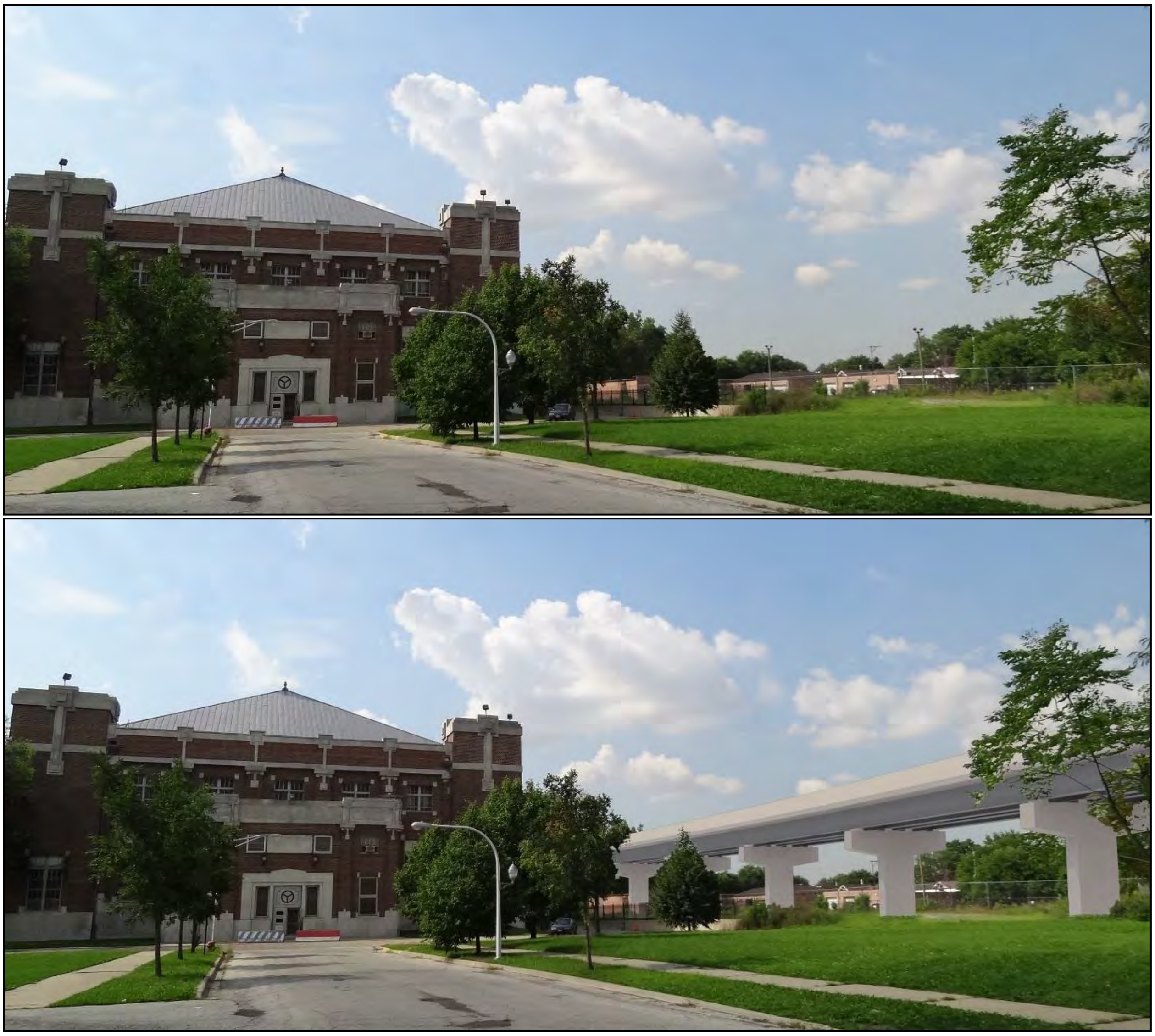
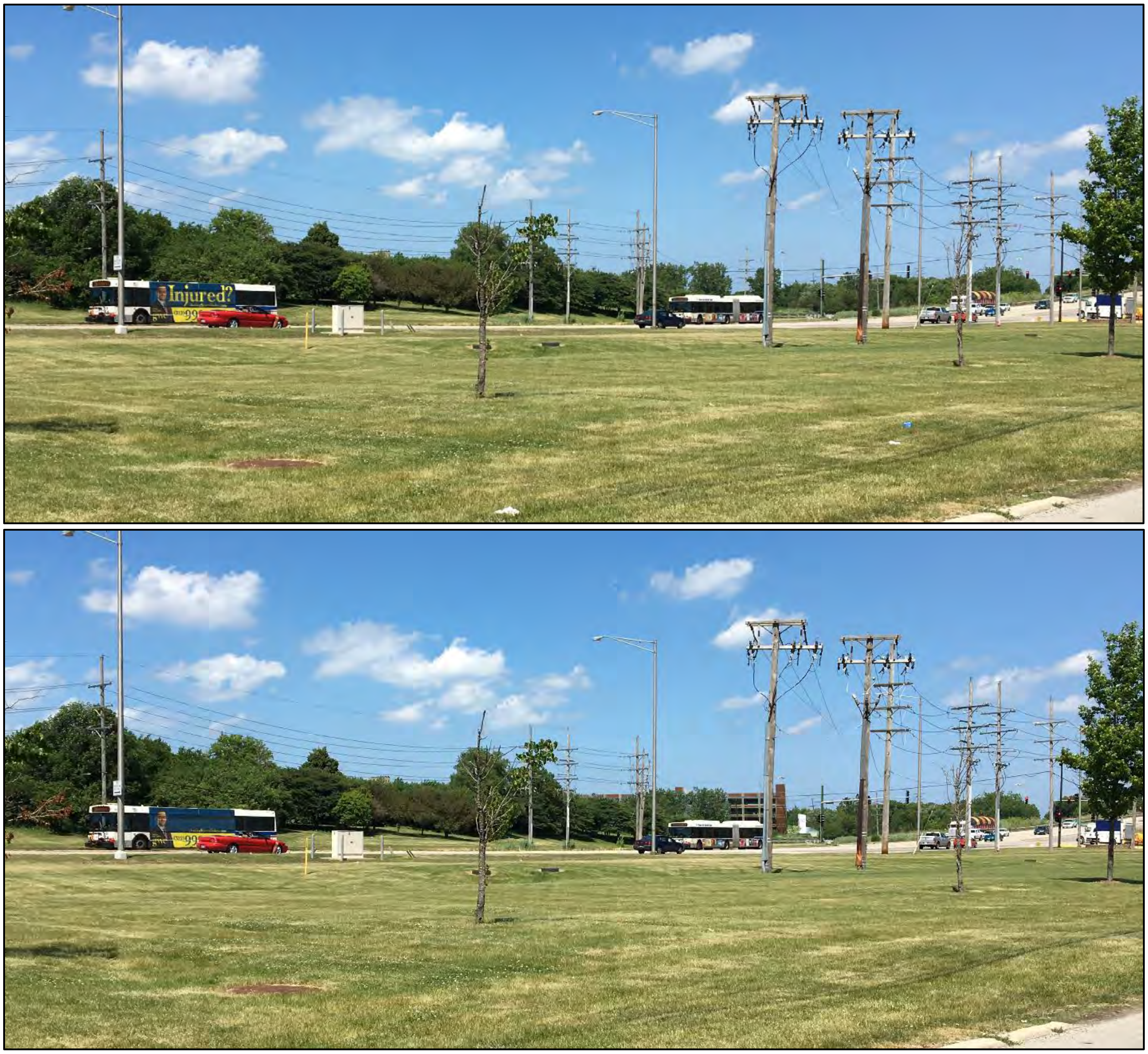


Figure 1: Photo of Existing Conditions and Photo Simulation of the Elevated Track Structure adjacent to the Roseland Pumping Station, Facing South on Harvard Avenue

CTA also prepared a photo simulation of the 130th Street Station and parking garage as viewed from Altgeld Gardens, included as **Figure 2**.



In addition, Appendix D-3 of the *Historic and Cultural Resources Technical Memorandum* includes displacement maps. Please see Appendix I of the *Displacements and Relocation of Existing Uses Technical Memorandum* for displacement maps for the refined alignment.

U.S. Department
of Transportation
**Federal Transit
Administration**

REGION V
Illinois, Indiana,
Michigan, Minnesota,
Ohio, Wisconsin

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September 21, 2016

Illinois Historic Preservation Agency
Attn: Dr. Rachel Leibowitz
Deputy State Historic Preservation Officer
1 Old State Capitol Plaza
Springfield, Illinois 62701-1507

**RE: CTA Red Line Extension Project, IHPA Log 001010713
FTA Section 106 Eligibility and Effects Determination**

Dear Dr. Leibowitz:

As part of its responsibilities under 36 C.F.R. § 800-Protection of Historic Properties, and the National Historic Preservation Act (NHPA), the Federal Transit Administration (FTA) is providing an update on the Section 106 consultation process for CTA's Red Line Extension (RLE) Project (Project) and requesting concurrence on determinations. The proposed Project will extend CTA's Red Line service an additional 5.3 miles from the Red Line's existing 95th Street Terminal to the vicinity of 130th Street. The extension would include three new intermediate stations with bus and parking facilities as well as a new terminal station. The Project is one part of CTA's Red Ahead Program to extend and enhance the entire Red Line.

FTA has previously determined that the Project will be a Federal undertaking as defined in § 800.16(y) and that it is a type of activity that has the potential to cause effects on historic properties. Over the past four years, FTA and CTA have conducted a Section 106 consultation process in coordination with the Illinois Historic Preservation Agency (IHPA) and other Consulting Parties. The following provides a chronology of these activities:

- 6/25/2012: FTA sent a letter to IHPA authorizing CTA to initiate the consultation process for the RLE Project.
- 7/20/2012: Conference call hosted by FTA and CTA with IHPA to introduce the Project, and discuss the Area of Potential Effects (APE), including a representative sampling methodology for surveying resources within the APE.
- 8/13/2012: FTA and CTA sent invitations to local organizations to become a Section 106 Consulting Party for the Project.
- 10/24/2012: FTA and CTA held a kickoff webinar with the Section 106 Consulting Parties. Items discussed included an overview of the Section 106 process, Consulting Parties' roles

in the process, general project information, the proposed Project APE, and Project alternatives.

- 1/30/2013: FTA and CTA held a Section 106 Eligibility Meeting with IHPA and Consulting Parties.
- 10/10/2013: FTA and CTA sent a Response to Comments to Consulting Parties and IHPA regarding findings on the eligibility of historic resources within the then current Project APE.
- 5/8/2014: FTA and CTA held a Section 106 Effects Meeting with IHPA and Consulting Parties to discuss the Draft Effects Report.
- 11/24/2014: FTA and CTA sent a Response to Comments to Consulting Parties and IHPA regarding findings on the effects on historic resources within the Project APE.

As part of the Project's National Environmental Policy Act (NEPA) Environmental Impact Statement (EIS) documentation, FTA and CTA have prepared the RLE Historic & Cultural Resources Eligibility and Effects Summary Report (the Summary Report) for the Project with appendices that include relevant materials from the Section 106 consultation process. A copy of the Summary Report is enclosed on a CD for your review.

In August 2014, based on the technical analysis, revised project Purpose and Need, and public input received to that point, CTA announced the NEPA Preferred Alternative—the UPRR Alternative, featuring an East and West Option. Eliminated from further review and analysis were the Bus Rapid Transit (BRT) Alternative, Union Pacific Railroad (UPRR) Alternative – Right-of-Way Option, and the Halsted Alternative, as well as the UPRR Alternative – West Station Option for the 130th Street station. As a result of these project changes, the APE has been revised to only incorporate the area around the UPRR Alternative (East and West Options). See Figure 2-4 in the Summary Report provided for the revised APE.

As described in the chronology above, on November 24, 2014, CTA provided responses to all comments received from the Consulting Parties in May of 2014. This comment response communication noted that the Project alternatives had been further narrowed, and that the UPRR Alternative (East and West Options) were proposed to move forward as the NEPA Preferred Alternative. Additional details on the Project alternatives development process and history, including the entirety of alternatives evaluated between 2012 and 2014 as part of the Section 106 consultation process for this project, are provided in Attachment 1 of the Summary Report.

Based on research conducted by CTA and documented in the Summary Report and its appendices, FTA has determined the following for the RLE Project:

280 resources over 50 years of age are located within the revised Project APE. Of these, 7 are eligible for the National Register of Historic Places (NRHP), including 6 individual buildings and 1 historic district. As summarized in the table below, of the 7 NRHP-eligible resources within the APE, 6 will experience **No Historic Properties Affected** and 1, the Roseland Pumping Station, will have **No Adverse Effect** as a result of the RLE Project.

ID	Description	Union Pacific Railroad Alternative East Option Effects Finding	Union Pacific Railroad Alternative West Option Effects Finding
1	Eclectic Neo-Traditional Home	No Historic Properties Affected	No Historic Properties Affected
2	Fire Department Engine Company 93	No Historic Properties Affected	No Historic Properties Affected
3	Roseland Pumping Station	No Adverse Effect	No Historic Properties Affected
4	Romanesque Revival-Style Church	No Historic Properties Affected	No Historic Properties Affected
5	Roseland Community Hospital Nurses Home	No Historic Properties Affected	No Historic Properties Affected
6	Former Venetian Hall	No Historic Properties Affected	No Historic Properties Affected
7	Altgeld Gardens Historic District	No Historic Properties Affected	No Historic Properties Affected

NRHP = National Register of Historic Places

As a result of these determinations, no mitigation measures would be required, and consultation with Consulting Parties is considered complete. Coordination with IHPA will continue through the remainder of the project.

Pursuant to the Section 106 implementing regulations at 36 C.F.R. § 800, FTA is seeking State Historic Preservation Officer (SHPO) concurrence with the revised APE, as well as the above eligibility and effects determinations, within 30 days of receipt of this letter.

If FTA can provide any assistance or additional information which would aid in your prompt reply, please feel free to contact Mark Assam, Environmental Protection Specialist at 312-353-4070. Thank you for your assistance.

Sincerely,

Jay M. Ciavarella
Director, Office of Planning & Program Development

Enclosure: RLE Historic & Cultural Resources Eligibility and Effects Summary Report

CC: Tony Greep, FTA
Mark Assam, FTA
Sonali Tandon, CTA
Carole Morey, CTA

Chicago Red Line Extension Project

Eligibility and Effects Summary Report

September 19, 2016

Prepared for:
Chicago Transit Authority
567 W. Lake Street
Chicago, IL 60661

Prepared by:
CWE Transit Group
125 S. Wacker Drive
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Section 1
Summary

This document summarizes information previously provided on the results of technical analysis on potential historic and cultural resources affected by the Chicago Transit Authority (CTA) Red Line Extension (RLE) Project and consultation conducted under Section 106 of the National Historic Preservation Act (NHPA). Because CTA narrowed the selection of alternatives under evaluation during project development (see **Attachment 1**) after Section 106 consultation had significantly progressed, this document has been developed to provide the Illinois Historic Preservation Agency (IHPA) with a streamlined and concise summary of the Area of Potential Effect (APE) for the project and eligibility and effects determinations made to date by the Federal Transit Administration (FTA). All Section 106 findings on alternatives considered that are presented in this document are consistent with previous correspondence and materials provided during the Section 106 consultation process.

1.1 Regulatory Framework

Cultural and historic resources are protected by various federal regulations; Section 106 of the National Historic Preservation Act (NHPA) requires federal agencies to consider effects on historic resources from their actions and to balance preservation needs with the need for the actions. As provided in 36 CFR § 800, the Section 106 process "seeks to accommodate historic preservation concerns with the needs of federal undertakings through consultation" (36 CFR § 800.1(a)). The goal of the consultation is to identify historic properties potentially affected by the undertaking, assess project effects, and seek ways to avoid, minimize, or mitigate any adverse effects on historic properties.

For the Section 106 assessment of historic and archaeological resources, FTA and CTA conducted a four-step process following requirements of 36 CFR § 800:

1. **Define the Area of Potential Effects** - FTA and CTA first determined an APE for cultural/historic resources. The APE is defined as the geographic area within which the project may cause alterations in the character or use of historic properties. Development of the APE involved site visits and a review of aerial photography images and conceptual engineering drawings for the alternative.

2. **Identify Historic and Archaeological Resources** - After an extensive records check, representative samples within the APE footprint were field-surveyed to identify any archaeological resources and historic resources that meet National Register of Historic Places (NRHP) criteria. Representative samples were used to determine effects on similar properties on a block-by-block basis. The properties included in the representative sample were determined using GIS databases provided by the City of Chicago, the Historic and Architectural Resources Geographic Information System, online mapping resources, State Historic Preservation Office (SHPO) records, and field visits. Additional details about the definition of the representative sample, and resources in it, are included in **Section 3** of

this report. NRHP criteria are defined in 36 CFR § 60.4 and apply to districts, sites, buildings, structures, or objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association with one or more of the following four criteria:

- Criterion A - Events that have made a significant contribution to the broad patterns of American history on a federal, state, and/or local level
- Criterion B - Lives of persons significant in the history of the city, state, and/or the United States
- Criterion C - Distinctive characteristics of a type, period, or method of construction, or the work of a master, or high artistic values, or a significant and distinguishable entity whose components may lack individual distinction
- Criterion D - Information important in prehistory or history

FTA and CTA identified properties listed on the NRHP, local landmarks, and Chicago Historic Resources Survey (CHRS) “Red” and “Orange”-rated[1] buildings (properties with locally designated historic importance). FTA and CTA conducted background research to assist this process, using the Historic and Architectural Resources Geographic Information System and city records, fire insurance and other historic maps, the CHRS, previous architectural studies in the area, and other relevant scholarly publications. No properties or districts currently listed on the NRHP are present in the APE.

3. **Assess Effects on Historic and Archaeological Resources** - FTA and CTA assessed effects for each evaluated resource that was listed in the NRHP or determined eligible for listing. The effects analysis included review of specific direct and indirect impacts that were evaluated for the project (for topics such as displacements, noise, and visual impacts) and focused on how the alternative might alter the characteristics that qualify properties for inclusion in the NRHP.

4. **Resolve any Adverse Effects** - FTA and CTA will develop any necessary mitigation measures through consultation with the SHPO and other consulting parties to address adverse effect determinations. Based on the results of the assessment of effects conducted, there would be no adverse effects to historic properties resulting from the project and no additional mitigation measures are proposed.

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[1] The CHRS is an inventory of architecturally and historically significant buildings in the City of Chicago that uses a color-coded ranking system used to identify historic and architectural significance relative to age, degree of external physical integrity, and level of possible significance. The two highest color codes are "Red" and "Orange." These types of local historic resources are subject to the City of Chicago’s Demolition-Delay Ordinance. “Red” or “Orange”-rated properties were identified as possessing some architectural feature or historical association that made them potentially significant in the context of the surrounding community.

1.2 Section 106 Consultation History and Evolution

In accordance with requirements for consultation established in Section 106 of the NHPA, three distinct rounds of coordination occurred during the RLE Project: initiation activities, identification of historic properties, and assessment of effects. In August 2012, FTA and CTA invited 11 Native American tribes and 19 state and local preservation interest groups to participate in the upcoming consultation process. At present, 11 groups are participating in the process. On October 24, 2012, FTA and CTA held a webinar on RLE historic properties to introduce the project and initiate the consultation process.

As part of the eligibility phase, CTA surveyed 541 potentially eligible resources within the APEs for all alternatives being studied at the time (Bus Rapid Transit [BRT], Union Pacific Railroad [UPRR], and Halsted Alternatives). FTA and CTA provided draft materials on the identification of NRHP-eligible properties to consulting parties on January 4, 2013 and followed it with an in-person meeting on January 30, 2013. As a result of the field investigations and comments received from consulting parties on potentially eligible resources, for all alternatives, 15 total resources were identified as eligible for inclusion on the NRHP, including 13 individual buildings and 2 historic districts.

FTA and CTA mailed a Draft Effects Report to consulting parties on April 18, 2014, requesting any written comments by May 23, 2014. On May 8, 2014, FTA and CTA met with consulting parties to discuss potential project effects on NRHP-eligible historic properties.

In August 2014, based on the technical analysis and public input, CTA announced the NEPA Preferred Alternative—the UPRR Alternative.

CTA had originally considered three alignment options for the UPRR Alternative: the Right-of-Way Option, the East Option, and the West Option. In 2014, the Right-of-Way Option was removed from consideration as it is no longer feasible. This option was added in 2012 in response to the CDOT feasibility study looking at moving UPRR freight operations out of the existing UPRR corridor before the RLE Project. The Right-of-Way Option would only be feasible if the separate project were implemented before implementation of the RLE Project. Coordination between local agencies and the railroads indicted that relocation of UPRR freight operations from this corridor presents considerable challenges; therefore, this option is no longer feasible. Because the Right-of-Way Option is not feasible, the Draft EIS evaluates only the East and West Options for the UPRR Alternative.

Additional conceptual engineering was conducted on the UPRR Alternative to refine the East and West Option alignments. In addition, CTA is now considering only the South Station Option of the 130th Street Station.

CTA provided responses to all consulting party comments received in May 2014 on November 23, 2014. Responses noted that the alternatives had been further narrowed and that the UPRR Alternative (East and West Options) were proposed to move forward as the NEPA Preferred Alternative.

1.3 Organization of this Report

The following sections of this report provide further details on development of the APE and eligibility and effects determinations made and presented during the Section 106 consultation process for this project.

Section 2 of this report provides a brief description of the No Build and Build Alternative (the UPRR Alternative) under consideration and details on identification of the APE.

Section 3 of this report provides a summary of the methodology undertaken to identify potentially affected historic and archaeological resources.

Section 4 of this report provides details on eligible historic and archaeological resources identified.

Section 5 provides details on the effects determinations for the East and West Options of the Build Alternative.

Section 6 summarizes the Section 106 consultation process conducted at each stage of the four-step Section 106 consultation process.

Section 2
Project Description and Area of Potential Effect

The RLE Project would extend the Red Line from the existing 95th Street Terminal to 130th Street. The proposed 5.3-mile extension would include four new stations near 103rd Street, 111th Street, Michigan Avenue, and 130th Street. Each new station would include bus and parking facilities.

The RLE Project would reduce commute times for residents, improve mobility and accessibility, and provide connection to other transportation modes. The RLE Project could also foster economic development, where new stations may serve as catalysts for neighborhood revitalization and help reverse decades of disinvestment in local business districts. The RLE Project would also provide a modern, efficient car storage yard and shop facility.

CTA undertook an extensive Alternatives Analysis process from 2006 to 2009 that considered multiple modes and corridor options for the RLE Project. The Chicago Transit Board designated the UPRR Alternative as the Locally Preferred Alternative on August 12, 2009. During 2012–2014 and as part of the Draft EIS analysis, CTA evaluated benefits and impacts of four alternatives: the No Build Alternative, the BRT Alternative (along Michigan Avenue), the UPRR Alternative, and the Halsted Alternative. CTA evaluated three options for the UPRR Alternative: the Right-of-Way Option, East Option, and West Option. CTA also evaluated two options of the UPRR Alternative 130th Street station: a South Station Option and a West Station Option. The Section 106 analysis and consultation was performed during 2012–2014,on all those alternatives and options. As further described in **Section 2.3**, CTA developed separate APEs for each alternative.

In August 2014, based on the technical analysis and public input until then, CTA announced the NEPA Preferred Alternative—the UPRR Alternative. While CTA had originally considered a UPRR Right-of-Way Option, this was subsequently removed as it is no longer feasible. This option was added in 2012 in response to the CDOT feasibility study looking at moving UPRR freight operations out of the existing UPRR corridor before the RLE Project. The Right-of-Way Option would only be feasible if the separate project were implemented before implementation of the RLE Project. Coordination between local agencies and the railroads indicted that relocation of UPRR freight operations from this corridor presents considerable challenges; therefore, this option is no longer feasible.

Because the Right-of-Way Option is not feasible, the Draft EIS evaluates only the East and West Options for the UPRR Alternative. CTA has chosen to move forward with the South Station Option at 130th Street based on technical analysis and public feedback. As further described in **Section 6**, the consulting parties were notified of the NEPA Preferred Alternative in November 2014 as part of the responses to consulting party comments on assessments of effect.

Additional details on the alternatives development process and history, including the entirety of alternatives evaluated between 2012 and 2014 as part of the Section 106 consultation process for this project, are provided in **Attachment 1**.

The Draft EIS focuses on the following alternatives, which emerged from the Alternatives Analysis, NEPA scoping process, and additional technical analysis and public input:

- No Build Alternative
- UPRR Alternative
    - East Option
    - West Option

2.1 No Build Alternative

The No Build Alternative is a required alternative as part of the NEPA environmental analysis and is used for comparison purposes to assess the relative benefits and impacts of implementing the UPRR Alternative.

The No Build Alternative represents future conditions if the UPRR Alternative were not implemented. The No Build Alternative includes all projects currently included in the fiscally constrained portion of the CMAP FY 2014–2019 Transportation Improvement Program (TIP). Projects in the TIP in the project area include renovation of the 95th Street Terminal, rail line maintenance and improvements, preservation of the North Pullman historic area, road resurfacing, coordination of traffic signal timing, and construction of a new bicycle/pedestrian facility. Impacts related to the construction and operation of the 95th Street Terminal are documented in the approved *95th Street Terminal Improvement Project Environmental Assessment* (CTA 2013b). FTA issued a Finding of No Significant Impact for the 95th Street Terminal Improvement Project in April 2013, and an Amended Finding of No Significant Impact in July 2013. FTA performed an Environmental Assessment Re-Evaluation in July 2016, which confirmed that the Amended Finding of No Significant Impact dated July 2013 remains valid. No new infrastructure would be built as part of the RLE Project under the No Build Alternative.

2.2 Build Alternative

The UPRR Alternative is shown in **Figure 2-1** and would extend the heavy rail Red Line 5.3 miles from the existing 95th Street Terminal to 130th Street. As noted above, the Chicago Transit Board designated the UPRR Alternative as the LPA at its August 12, 2009 board meeting. The UPRR Alternative would reduce transit travel times from the project area to points on the Red Line north of 95th Street (from 130th Street to 95th Street) from 28 minutes to approximately 14 minutes (CTA 2009). The following describe major aspects of the proposed alignment options under consideration, stations, park & ride facilities, 120th Street yard and shop, substations, and overview of the operations plan.

2.2.1 Alignment

Two alignment options adjacent to the UPRR are considered for this alternative: the East Option and the West Option. The CTA elevated structure would be located either east or west of the existing UPRR corridor. The alignment would follow the UPRR corridor to Prairie Avenue, where it would cross over the Canadian National/Metra Electric District (CN/ME) tracks near 119th Street. South of this point, the East and West Options would follow the same alignment southeast along the Northern Indiana Commuter Transportation District/Chicago South Shore & South Bend Railroad (NICTD/CSS & SBRR) right-of-way using a portion of the Norfolk Southern Railway and Consolidated Rail Corporation (Conrail) right-of-way to the terminus (end) of the RLE at 130th Street.

As described, two UPRR Alternative options for the segment of the proposed alignment between I-57 and the CN/ME tracks near 119th Street are studied in the Draft EIS:

- East Option - The CTA elevated structure would be placed immediately adjacent to the east side of the UPRR right-of-way.
- West Option - The CTA elevated structure would be placed immediately adjacent to the west side of the UPRR right-of-way.

In the UPRR Alternative, the tracks would be on a new elevated (aerial) track structure from the 95th Street Terminal through the CN/ME track crossing near 119th Street. South of this elevated crossing, the tracks would transition to an at-grade profile (they would continue at ground level).

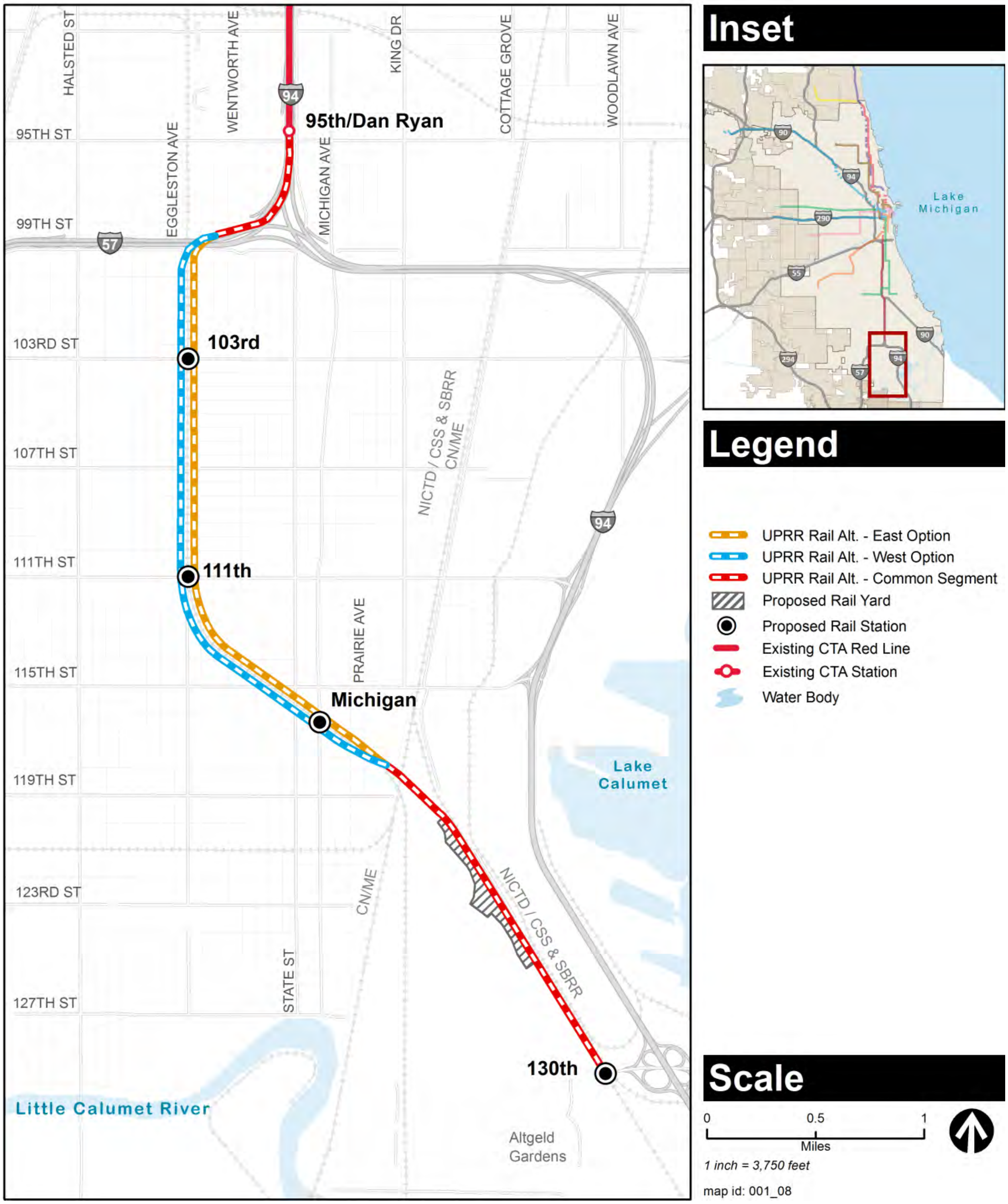

HALSTED ST
WENTWORTH AVE
KING DR
COTTAGE GROVE
WOODLAWN AVE
94
95th/Dan Ryan
95TH ST
EGGLESTON AVE
MICHIGAN AVE
99TH ST
57
103RD ST
103rd
107TH ST
NICTD / CSS & SBRR
CN/ME
94
111TH ST
111th
PRAIRIE AVE
115TH ST
Michigan
119TH ST
Lake Calumet
123RD ST
CN/ME
NICTD / CSS & SBRR
127TH ST
STATE ST
130th
Little Calumet River
Altgeld Gardens
Inset
90
94
Lake Michigan
290
55
90
294
57
94
Legend
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
UPRR Rail Alt. - Common Segment
Proposed Rail Yard
Proposed Rail Station
Existing CTA Red Line
Existing CTA Station
Water Body
Scale
0
0.5
1
Miles
1 inch = 3,750 feet
map id: 001_08

Figure 2-1: Red Line Extension Project Build Alternative

The proposed elevated structure would be a closed-deck, steel and concrete, aerial track structure with direct-fixation track and welded rail (welded at joints). With direct-fixation track, rails are mounted to specially designed concrete blocks fixed to the concrete deck. Noise barriers (approximately 4 feet in height, measured from the top surface of the concrete deck) are proposed for portions of the structure on both sides of the track deck to reduce noise transmission at and below track level. The structure would vary in height from 14 feet 9 inches to 40 feet above existing grade, depending on required clearances above existing roadways and railroads. The two tracks would have a spacing of 13 feet (13 feet between the track centerlines). The elevated deck, on which the tracks would run, would vary in width from approximately 30 feet to approximately 52 feet at stations

Figure 2-2 is a photo simulation of a typical proposed elevated structure above the UPRR right-of-way. The design shown is conceptual, and the actual design would vary based on further engineering and community input.

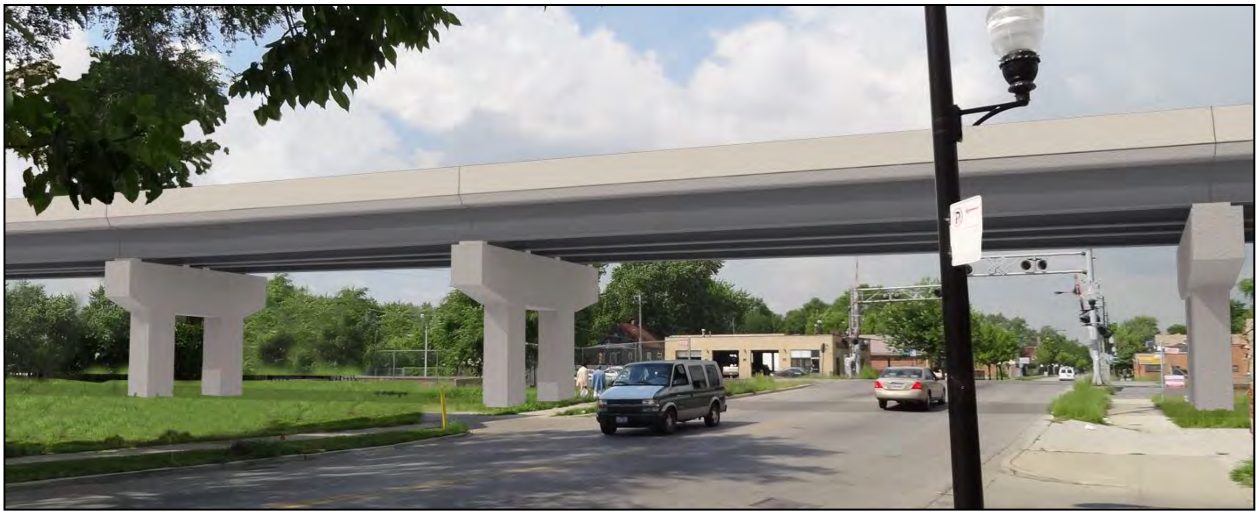


Figure 2-2: Photo Simulation of Union Pacific Railroad Alternative East Option at 111th Street Facing West - Typical Proposed Elevated Structure

2.2.2 Stations

As part of the UPRR Alternative, four new stations would be constructed at the following locations along the proposed alignment:

- 103rd Street (elevated station)
- 111th Street (elevated station)
- Michigan Avenue (elevated station)
- 130th Street (at-grade station)

Each station would have a center platform, approximately 26 feet wide and 520 feet long. Platforms would accommodate ten-car trains. Each station would be Americans with Disabilities

Act (ADA) accessible with elevators. Each station area would include areas for bus boarding, new crosswalks where needed to accommodate pedestrian traffic, and park & ride facilities. **Figure 2-3** is a photo simulation of a typical proposed station. The design shown is conceptual, and the actual design would vary based on further engineering and community input.

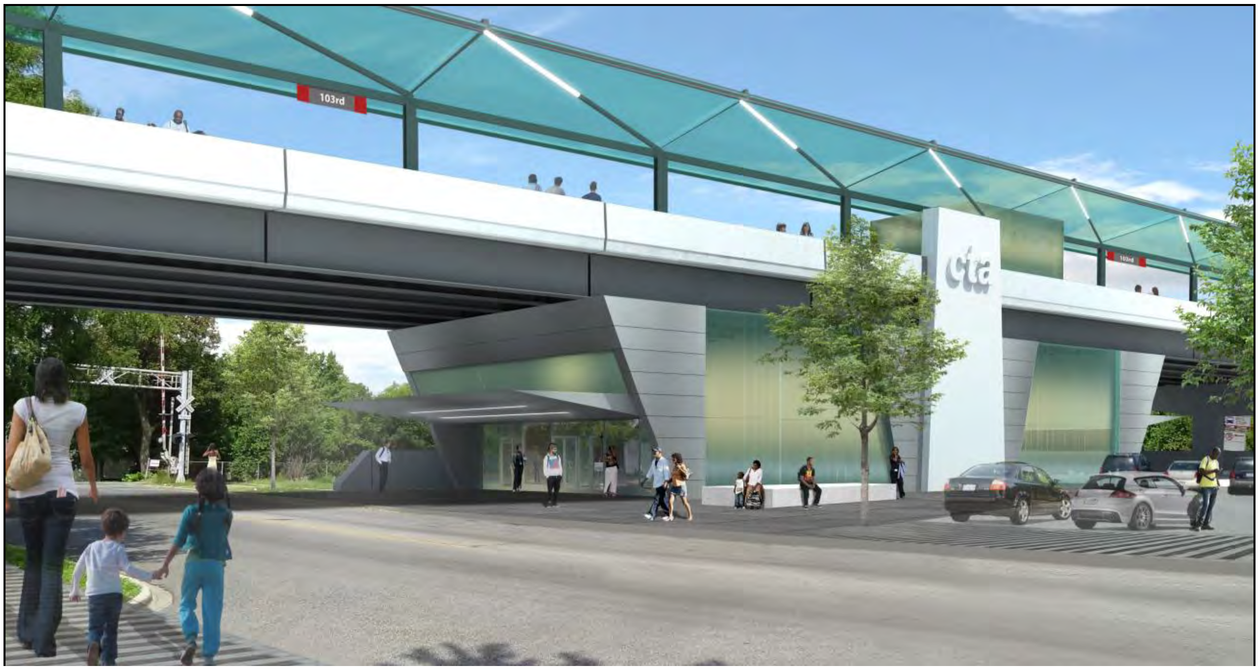


Figure 2-3: Photo Simulation of Union Pacific Railroad Alternative East Option at 103rd Street Facing Northwest - Typical Proposed Elevated Station

The 130th Street station would be located immediately west of the NICTD/CSS & SBRR right-of-way at 130th Street. Pedestrians from Altgeld Gardens would access the station from 130th Place. Pedestrians would not need to cross 130th Street to access the station because 130th Street goes over 130th Place and the railroad tracks.

2.2.3 Park & Ride Facilities

To accommodate passengers arriving at the UPRR Alternative stations by car, park & ride facilities would be constructed near each station, as described in **Table 2-1**. A total of 3,700 parking spaces would be available along the corridor. CTA estimated parking demand based on travel demand modeling performed in 2009. Bus turnarounds would be provided in the parking areas. The ground floor of the parking structure at the Michigan Avenue station would contain space for retail and community facilities.

Table 2-1: Summary of Park & Ride Facilities

Station	Number of Parking Spaces	Union Pacific Railroad Alternative East Option	Union Pacific Railroad Alternative West Option
103rd Street	200	Divided between two surface parking lots (one on the east side of the tracks and one on the west side of the tracks)	One surface parking lot
111th Street	200	Divided between two surface parking lots (one on the east side of the tracks and one on the west side of the tracks)	One surface parking lot
Michigan Avenue	1,000	Divided between a three-story parking structure and a surface parking lot (a surface parking lot on the east of the tracks and a parking structure on the west of the tracks)	Five-story parking structure
130th Street	2,300	Seven-story parking structure	

2.2.4 Yard and Shop

The 120th Street yard and shop, with a capacity of 340 train cars, would be sited on a combination of industrial and vacant land east of the CN/ME tracks and west of the NICTD/CSS & SBRR tracks near 120th Street and Cottage Grove Avenue. The yard would be entirely at grade. Parking spaces for CTA employees would be included at the yard.

2.2.5 Substations

Substations are buildings along the alignment that house equipment to regulate the flow of electricity to the third rail, which supplies power to the trains. Substations would be placed approximately 0.8 to 1 mile apart along the alignment. Six new and upgraded substation locations are proposed: 98th Street Yard and Shop, near 101st Street, near 107th Street, near Lafayette Avenue, within the 120th Street yard and shop area, and near the 130th Street station. CTA would confirm the need and location for substations during future design phases.

2.2.6 Operating Plan

The UPRR Alternative would operate 24 hours a day, each day of the year. Service frequency is anticipated to be the same as with the current service (April 2016) at 95th Street—approximately 6-minute headways during morning peak hours and approximately 3-minute headways during afternoon peak hours. Headways at night (between 1 AM and 4 AM) are approximately 13–15 minutes. Service frequency would be adjusted to accommodate demand once the RLE service has been implemented. Train frequencies would vary throughout the day (like existing Red Line service), and late night service would operate approximately every 15 minutes.

Train sets would be eight cars long. Stations and track alignment would accommodate ten-car trains to maintain the option of running ten-car trains in the future. With the extension of the Red Line, some existing bus routes would be rerouted to feed into the proposed stations.

2.3 Area of Potential Effect

In the context of Section 106, the APE is defined as “the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist” (36 CFR 800.16.d). The APE for the RLE Project was delineated after considering the location of the proposed alternative; the potential for ground disturbance, destruction, or property taking; locations from which the undertaking may be visible and/or audible; and the scale and setting of the project. The APE was developed in consultation with CTA, FTA, and IHPA.

Cultural resource specialists developed the APE boundaries for the BRT, UPRR, and Halsted Alternatives in 2012 after conducting site visits and reviewing the aerial maps and engineering details (such as alignment locations, elevation of the proposed rail line, expected right-of-way limits, and the locations of the yard, stations, and parking facilities) for the Build Alternatives. SHPO concurred on the APE boundaries on July 20, 2012.

Generally, the APEs for the UPRR and Halsted Alternatives contain parcels within one block of the centerline of the alignment. The APE widens to accommodate the locations of each park & ride and the proposed yard and shop beyond the one-block boundary. The APE for the BRT Alternative includes the area immediately surrounding park & ride facilities.

As described above, in August 2014, based on the technical analysis and public input until then, CTA announced the NEPA Preferred Alternative—the UPRR Alternative. In late 2014, CTA also conducted additional conceptual engineering on the UPRR Alternative to refine the East and West Option alignments. FTA and CTA revised the APE for the UPRR Alternative accordingly and as shown in **Figure 2-4**. The revised APE presents no new effects from the UPRR Alternative than what was presented during consultation. Because the BRT and Halsted Alternatives are no longer under consideration, those APEs are no longer discussed.

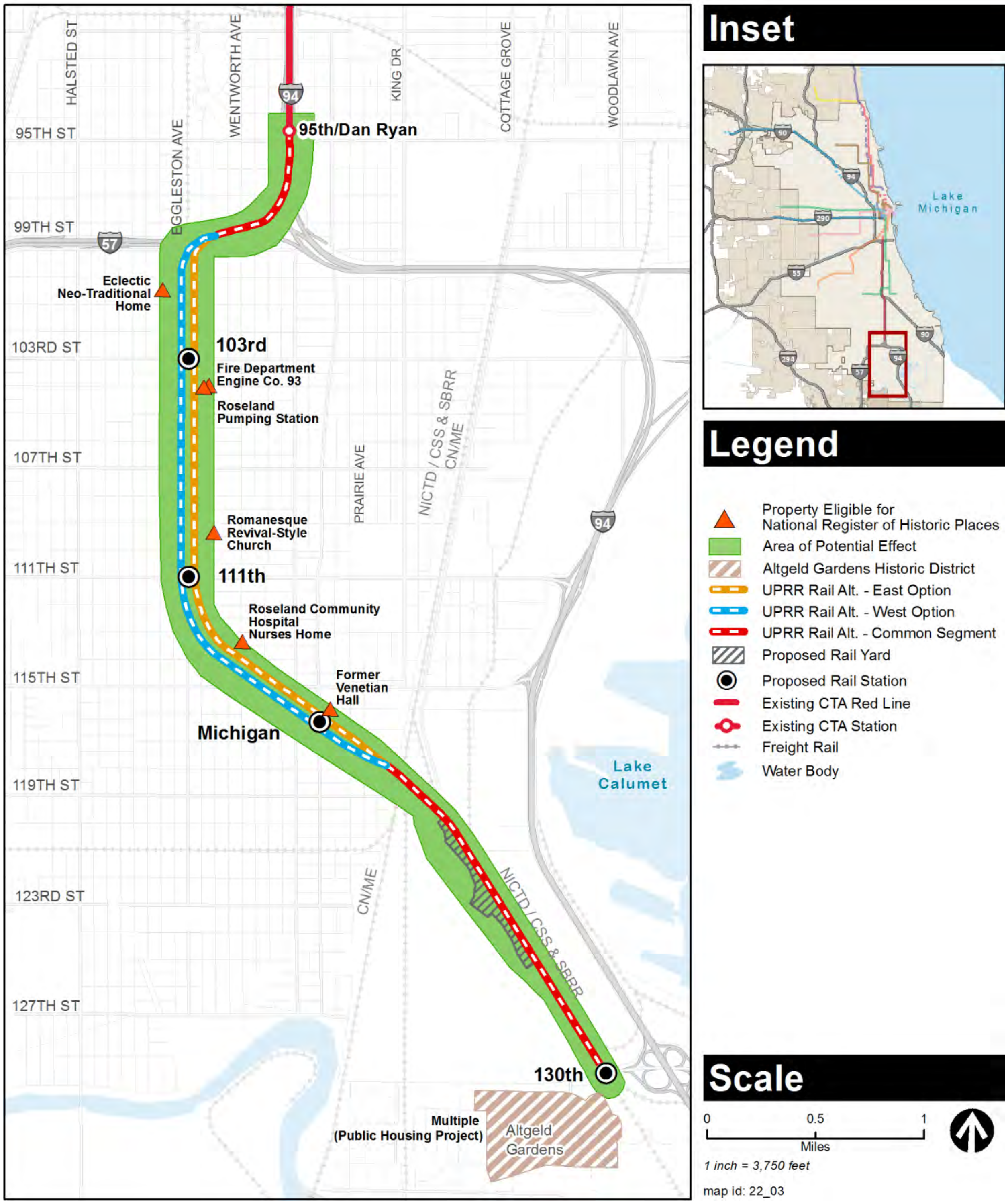

HALSTED ST
EGGLESTON AVE
WENTWORTH AVE
KING DR
COTTAGE GROVE
WOODLAWN AVE
94
95TH ST
95th/Dan Ryan
99TH ST
57
Eclectic Neo-Traditional Home
103RD ST
103rd
Fire Department Engine Co. 93
Roseland Pumping Station
107TH ST
NICTD / CSS & SBRR
CN/ME
PRAIRIE AVE
Romanesque Revival-Style Church
111TH ST
111th
Roseland Community Hospital Nurses Home
115TH ST
Former Venetian Hall
Michigan
119TH ST
Lake Calumet
123RD ST
CN/ME
NICTD / CSS & SBRR
127TH ST
130th
Multiple (Public Housing Project)
Altgeld Gardens
Inset
Lake Michigan
90
94
290
55
294
57
Legend
Property Eligible for National Register of Historic Places
Area of Potential Effect
Altgeld Gardens Historic District
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
UPRR Rail Alt. - Common Segment
Proposed Rail Yard
Proposed Rail Station
Existing CTA Red Line
Existing CTA Station
Freight Rail
Water Body
Scale
0
0.5
1
Miles
1 inch = 3,750 feet
map id: 22_03

Figure 2-4: RLE Project Area of Potential Effect

Section 3
Methodology for Identification of Resources

3.1 Identification of Historic Resources

3.1.1 Background Research/Historic Context

Background research was conducted to describe the historic context for the project area. Understanding the historic context is essential in establishing the significance of individual properties, and by extension, and NRHP eligibility for the built environment. The following resources were consulted in developing the historic context and identifying known sites:

- The Historic Architectural Resources Geographic Information System (**HARGIS) database** was created by the IHPA in 2003 to manage information about Illinois historic properties; this database documents the state's built environment. The HARGIS database includes data gathered as a result of three statewide survey projects: the Illinois Historic Structures Survey, the Illinois Historic Landmarks Survey, and the Illinois Rural Survey (conducted 1970–1987). The HARGIS database also includes properties identified as part of a NRHP nomination, surveys by local preservation groups, and information from the Illinois Department of Transportation's Bridge Survey. The database includes data forms, photographs, background documentation, and spatial information within a geographical context for each historic property and historic district within the dataset.

- The **CHRS** is an inventory of buildings that was compiled during 1983–1995. The Chicago Department of Housing and Economic Development published its findings in a report titled *Chicago Historic Resources Survey: An Inventory of Architecturally and Historically Significant Structures* in 1996. Organized according to Chicago's 77 neighborhoods, the inventory lists over 17,000 architecturally and historically significant buildings and structures that predate 1940. The information is also available online and is searchable by neighborhood, building address, decade of construction, architect's name, building style and type, survey ranking, and landmark status.

- **Sanborn Fire Insurance maps** contain a wealth of information on the built environment in urban areas. Originally created and maintained to assess fire insurance liability, the maps provide dated contexts in which to describe the development of neighborhoods as well as the compositional components and historical use of individual buildings. Data especially useful for this project include the building footprint, number of stories, foundation material, and cladding material. The Sanborn maps are available online through subscription.

- **NRHP nomination forms** for individually listed historic properties and districts provide a wealth of contextual information for the individual properties and the historic districts. They include construction dates for most historic properties discussed therein and identify the architect in most instances.

Architectural datasets at the local level were reviewed as well, including information from the Commission on Chicago Landmarks.

The Commission on Chicago Landmarks recommends individual buildings, sites, objects, or entire districts to the Mayor and City Council for designation as Chicago Landmarks. To be recommended by the Commission for landmark designation, these resources must meet at least two criteria: (1) being valuable as an example of city, state, or national heritage, and (2) being historically significant—the site of a significant historic event, association with a significant person, architecturally significant, the work of a significant architect or designer, association with a significant historic theme, or a having unique visual feature. In addition, the potential landmark must maintain integrity in light of its location, design, setting, materials, workmanship, and ability to express such historic, community, architectural, or aesthetic interest or value. The Commission reviews any proposed alteration, demolition, or new construction affecting individual landmarks or properties in landmark districts as part of the permit review process. The Commission produces two new publications each year, one for individual landmarks and landmark districts and another for Chicago listings on the NRHP.

Using information in HARGIS and the other sources listed above, a list of previously identified historic and archaeologically-sensitive properties within the RLE APE was compiled and mapped. This effort included the identification of NRHP-listed districts and structures, and any properties identified as local landmarks in Chicago.

3.1.2 Surveys of Historic Resources

After the development of the APE and historic contexts, cultural resources specialists conducted field surveys on two distinct categories of properties: properties that would likely be displaced or demolished as a result of one or more alternatives, and a representative sample of other properties within the APE.

For both categories of properties that were surveyed, cultural resource specialists conducted archival research and photo-documented the exterior of each structure from the public ROW. Each property was assessed for NRHP eligibility using the data gathered during the fieldwork and research phases of the investigation.

The following subsection identifies how the representative sample in the latter category was identified. Because of the developed urban environment and linear nature of the project, effects on properties would be similar for adjacent properties. This method is consistent with November 2011 guidance provided by the Advisory Council on Historic Preservation regarding the "Reasonable and Good Faith Identification Standard in Section 106 Review."

Defining the Representative Sample

To determine the properties to be included in the representative sample, the team's architectural historian relied on the GIS database provided by the City of Chicago, the HARGIS database, online mapping resources, SHPO records, and field reconnaissance. Examining the APE block by block, the historic character of each block was considered, including the following:

- What age are the buildings?
- What types of buildings are present?
- What function(s) do they serve?
- What architectural styles are apparent?
- How does the structure fit the context of the larger neighborhood?

In light of the neighborhood and block level contexts, analysts selected one or more properties per block to represent the range of buildings over 50 years in age throughout the area. In areas where the project would likely cause more substantial effects, a greater concentration of sample properties was selected. More sample properties were selected for heterogeneous blocks (e.g., blocks having a mix of property types and ages) than homogenous blocks. Where multiple similar buildings exist within the block, analysts selected the building with the greatest integrity or most distinguishing architectural features.

For example, block A contains only residential buildings, both Craftsman style bungalows and Minimal Traditional brick homes. Structures date to the 1920s and 1930s. The project would cause moderate effects on the adjacent block, but block A would be screened from the transit line by an existing row of buildings. Analysts therefore selected one bungalow and one Minimal Traditional house from this block. Alternatively, Block B contains a mix of residential and commercial properties, dating from 1902 through the 1950s, plus some modern infill. A mix of architectural styles is present. In this case, analysts selected five structures on this block to represent the cross-section of existing structures.

This process was repeated along the entire APE corridor.

3.2 Identification of Archaeological Resources

Cultural resource specialists conducted a records search to identify archaeological sites within the vicinity of the project area. The **Illinois State Archaeological Survey** (ISAS) GIS database and supporting documentation provides the most comprehensive source for archival background information on archaeological resources. The ISAS conducts multiple-scale field and laboratory research projects that concentrate on interpreting the archaeological heritage of Illinois. Data sources include the Illinois Department of Transportation Historic Bridge Survey and the Cultural Resource Management Archaeological Report Archive, as well as more detailed supporting information including archeological survey data.

This background research included review of artifacts collected by amateur archaeologists Albert Scharf, Oscar Biedes, and Ed Lace, as well as professional investigations completed by the Illinois State Archaeological Survey.

No known archaeological resources were identified within the project APE.

Section 4
Eligible Historic and Archaeological Resources

4.1 Historic Resources

4.1.1 NRHP-Eligible Resources

Figure 4-1 is a map of the APE and the seven identified NRHP-eligible resources. No properties or districts currently listed on the NRHP are present in the APE. **Table 4-1** summarizes historic resources within the APE. The following subsections provide further details on these historic properties. **Attachment 2** provides inventory sheets for NRHP-eligible properties.

Table 4-1: NRHP-Eligible Resources in the Area of Potential Effects

ID	Address	Description	NRHP Eligibility Criteria	Community Area
1	444 W. 100th Place	Eclectic Neo-Traditional Home (built 1930)	Criterion C	Washington Heights
2	324 W. 104th Street	Fire Department Engine Company 93 (built 1917)	Criterion C	Roseland
3	351 W. 104th Street	Roseland Pumping Station (built 1911)	Criterion C	Roseland
4	10920 S. Princeton Avenue	Romanesque Revival-Style Church (built 1916)	Criteria A and C	Roseland
5	11321 S. Wentworth Avenue	Roseland Community Hospital Nurses Home (built 1930s)	Criterion A	Roseland
6	133-139 E. Kensington Avenue	Former Venetian Hall (built 1925)	Criterion A	Riverdale
7	Multiple (Public Housing Project)	Altgeld Gardens Historic District (built 1945)	Criterion A	Riverdale

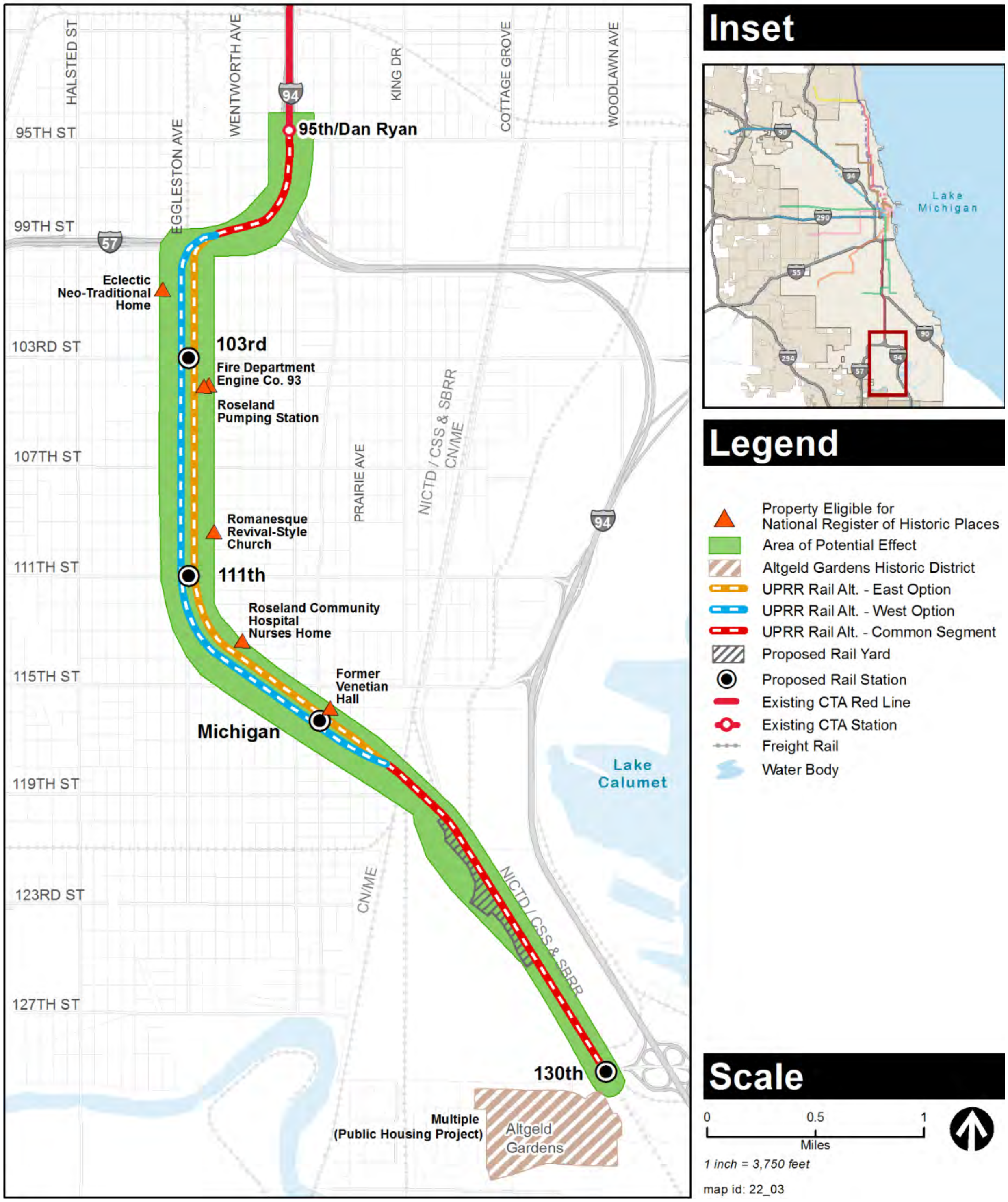

HALSTED ST
WENTWORTH AVE
KING DR
COTTAGE GROVE
WOODLAWN AVE
95TH ST
94
95th/Dan Ryan
EGGLESTON AVE
99TH ST
57
Eclectic Neo-Traditional Home
103RD ST
103rd
Fire Department Engine Co. 93
Roseland Pumping Station
107TH ST
NICTD / CSS & SBRR
CN/ME
PRAIRIE AVE
Romanesque Revival-Style Church
94
111TH ST
111th
Roseland Community Hospital Nurses Home
115TH ST
Former Venetian Hall
Michigan
119TH ST
Lake Calumet
123RD ST
CN/ME
NICTD / CSS & SBRR
127TH ST
130th
Multiple (Public Housing Project)
Altgeld Gardens
Inset
Lake Michigan
90
94
290
55
90
294
57
94
Legend
Property Eligible for National Register of Historic Places
Area of Potential Effect
Altgeld Gardens Historic District
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
UPRR Rail Alt. - Common Segment
Proposed Rail Yard
Proposed Rail Station
Existing CTA Red Line
Existing CTA Station
Freight Rail
Water Body
Scale
0
0.5
1
Miles
1 inch = 3,750 feet
map id: 22_03

Figure 4-1: NRHP-Eligible Resources in the Area of Potential Effects

Eclectic Neo-Traditional Home, 444 W. 100th Place

This one-story home in the Washington Heights community area rests on a raised basement as shown in **Figure 4-2**. Built in 1930, it is clad with polychromatic brick and has a side gabled roof covered with asphalt shingles. Its front elevation has a gabled living room bay pavilion with paired basement windows, a group of three non-original one-over-one windows with concrete sills, brick arch lintels, colonettes with acanthus leaf capitals, and a small round-arched window in the gable. The house has a recessed corner porch with a metal storm door, round-arch openings, a Neo-Gothic castellated top, concrete steps, and brick sidewalls. The integrity of its materials and detailing is very good. Its Eclectic Neo-Traditional ornamentation makes it stand out among the vernacular, stripped-down brick and frame bungalows and cottages that comprise the predominant building stock in the Washington Heights community area. As a result, it was identified as individually eligible for NRHP listing under Criterion C for its architecture.

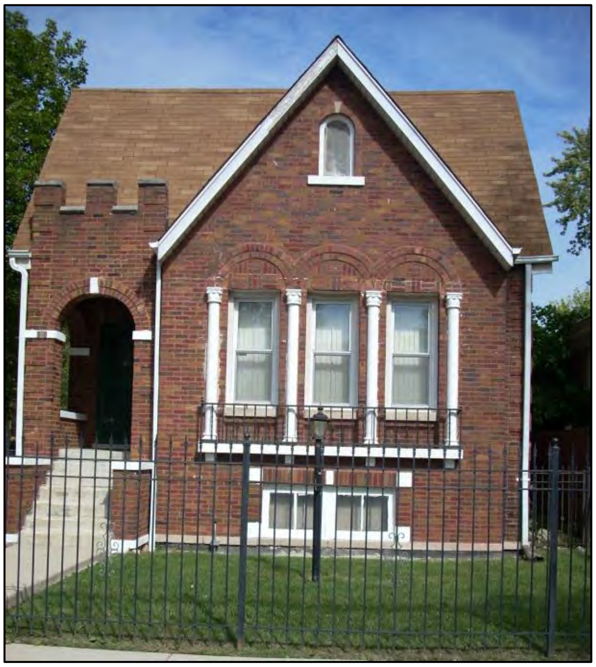


Figure 4-2: South Facade of the Eclectic Neo-Traditional Home at 444 W. 100th Place

Fire Department Engine Company 93, 324 W. 104th Street

This two-story firehouse in the Roseland community area is clad with light brown face brick, as shown in **Figure 4-3**. The building has a flat roof and a parapet with concrete coping. The front elevation has a two-story projecting pavilion, an overhead garage door, two window openings, an off-center, hollow-core metal door on the first floor, and a strip of three windows and a single window on the second floor. All windows are non-original, one-over-one aluminum sash. The spandrel area between the garage door and the windows above features a large stone sign plate inscribed with the words, “City of Chicago Fire Department.” The spandrel area between the corner door and window above has a metal plate identifying the 1917 construction date and the names of a series of people associated with the building’s construction, including the mayor, alderman, city architect (Charles W. Kallal), and contractor (Butler & Co.). Detailing includes stone door and window surrounds on the first floor, bracketed stone window lintels, concrete belt courses, and brick pilasters topped by stone panels with the City of Chicago’s “Y” emblem and decorative scrolls. The “Y” emblem is also repeated above the off-center door.

This building is eligible for individual listing on the NRHP under Criterion C for architecture. It is a rare extant example of an early 20th century neighborhood firehouse in Roseland, has largely retained its original building materials and detailing, and still functions as a firehouse.

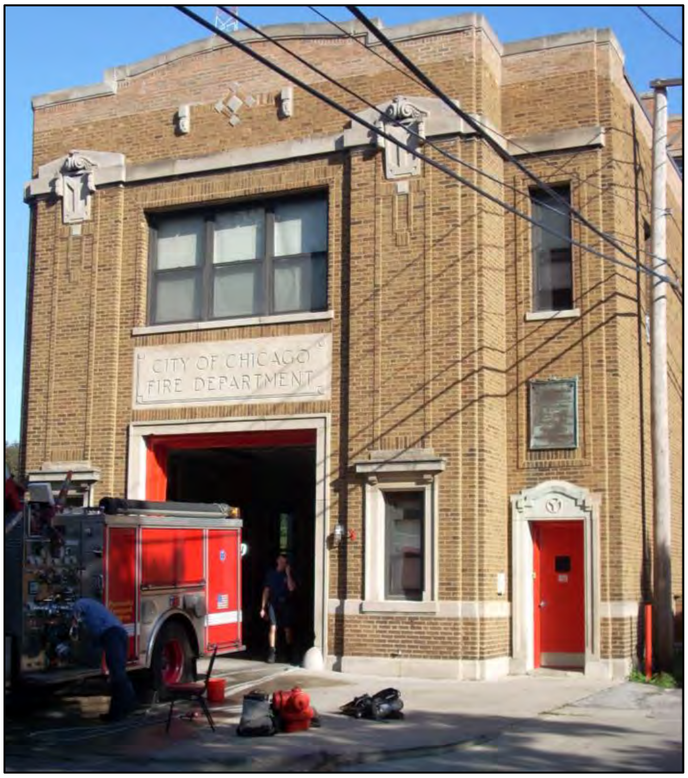


Figure 4-3: South Facade of Chicago Fire Department Engine Company 93

Roseland Pumping Station, 351 W. 104th Street

The two-story Prairie style Roseland Pumping Station, designed by architect William G. Kreig in 1911, is clad in brown brick, as shown in **Figure 4-4**. The building has a high limestone water table, a flat roof, parapet, and two square towers at the corners of the front elevation. The front elevation features a projecting, two-story, flat roofed entrance pavilion with a pair of centrally located glass double doors, sidelights, and a stone panel above that features the City of Chicago's "Y" emblem in metal. The entrance has a smooth stone surround. Above the entrance is a limestone panel incised with the words "City of Chicago Roseland Pumping Station." Detailing on the entrance pavilion includes brick pilasters with stone bases and coping and geometric motifs. The parapet is clad in limestone and features decorative geometric motifs. The building's fenestration is largely composed of multi-paned, steel-sash windows, some of which have transoms.

This is an excellent intact example of a neighborhood pumping station with fine integrity that still functions in its original use. It was identified as individually eligible for the NRHP under Criterion C for architecture, as it stands as an excellent, well-preserved example of a neighborhood pumping station designed in the Prairie style.

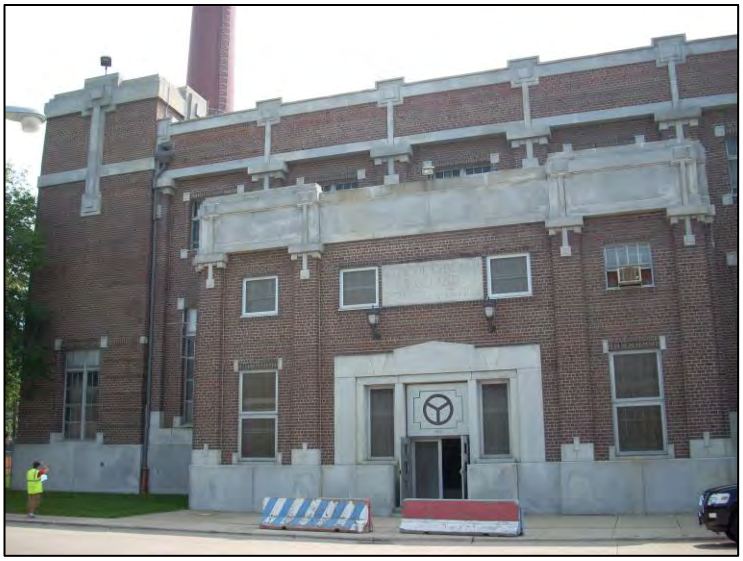


Figure 4-4: North Facade of the City of Chicago Roseland Pumping Station

Romanesque Revival Style Church, 10920 S. Princeton Avenue

This circa 1916 Romanesque Revival style church in the Roseland community area has a front elevation and two flanking towers clad with brown face brick, while the remainder of the side elevation and the rear elevation are clad with common brick. Shown in **Figure 4-5**, the church has a gable roof covered with asphalt shingles and gable wall dormers with shaped parapets on both side elevations. The east tower has a flat roof and a shaped parapet while the west tower has a peaked roof with overhanging eaves and exposed rafters and is topped by a finial. The central bay of the front elevation has a broad, round-arched entrance with a stone surround and two sets of single-light oak double doors. A strip of double-hung windows is within a broad arch and there is a rose window with tracery. Windows on both towers and along the side elevations include round-arch windows with tracery. It is unknown whether the original stained glass for all of these windows is extant inside the church. Both towers also feature paired casement windows. Window openings at the top of the west tower have been boarded over. Detailing includes stone sills, belt courses, brick pilasters, and keystones. A one-story, brick-clad entrance vestibule is along the rear of the west elevation.

Built as the First Reformed Church of Roseland, this church was identified as individually eligible for NRHP listing under Criterion A for its association with the community's once-dominant Dutch population and under Criterion C as a fine example of a Romanesque Revival style church in Roseland.

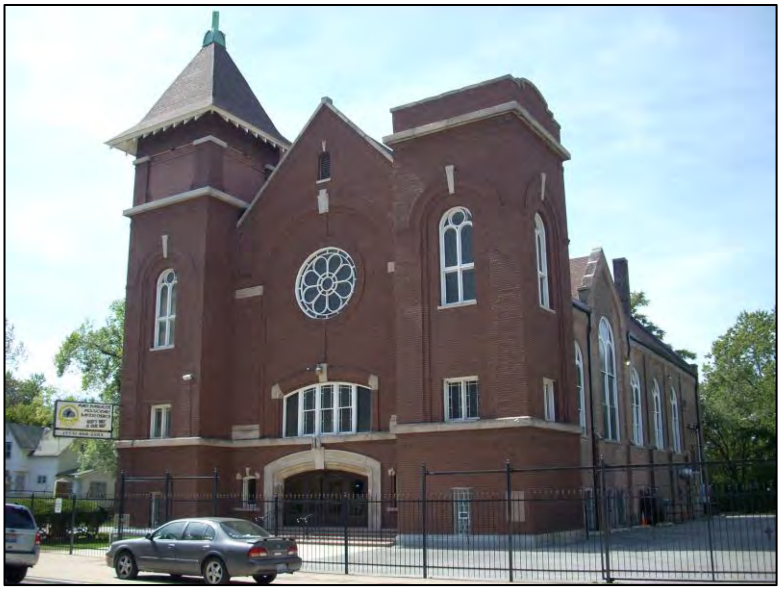


Figure 4-5: East and North Facades of Church at 10920 S. Princeton Avenue

Roseland Community Hospital Nurses Home, 11321 S. Wentworth Avenue

Shown in **Figure 4-6**, this four-story building has a flat roof and parapet. Its symmetrical front elevation is clad with brown face brick and has a centrally located entrance with a glass door and stone surround topped by two stone owls holding books. Windows are non-original one-over-one aluminum sash; those directly above the entrance have stone casings. Detailing includes stone sills, coping, insert blocks, sill courses, cornice, panels, and pinnacles at the parapet level.

This building is locally significant and eligible for NRHP listing under Criterion A for Education. Formerly the Roseland Community Hospital Nurses Home, it was built by the hospital as a dormitory and educational facility for its nurses. Closely affiliated with Roseland Community Hospital, which has served as an important institution in the Roseland area since its establishment in 1924, the Nurses Home is an excellent example of this building type on Chicago's South Side. The exterior of the building has very good integrity and the interior—which now functions as a homeless shelter—appears to retain classrooms and other spaces associated with its original use.

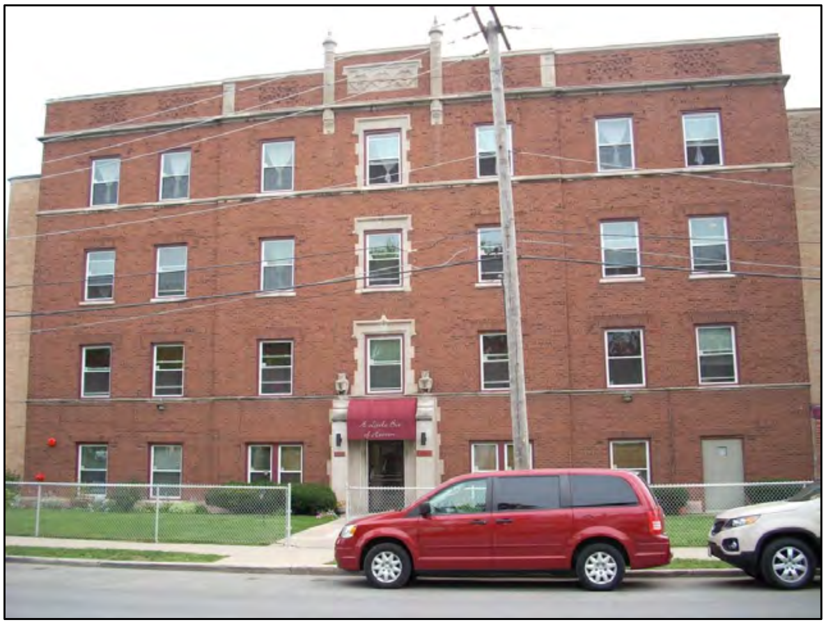


Figure 4-6: Front Facade of Nurses Home at 11321 S. Wentworth Avenue

Venetian Hall, 133–139 E. Kensington Avenue

The two-story performance hall was built for cultural and recreational purposes, although it has long since been repurposed as a church. The 1938 Sanborn map shows the hall with a stage, balcony, and place for storage of scenery. The street entrance was flanked by two storefronts in 1938, as it is today.

Shown in **Figure 4-7**, the 1925 building is clad with face brick on its front elevation and common brick on its side and rear elevations. The building has a flat roof and a shaped parapet with concrete coping. The first floor of the front elevation has a recessed, centrally located bay with three pairs of multi-light wood doors and in-filled transoms. This central bay is flanked by two original storefronts with central recessed doors and flanking display windows that are covered with wood and topped by transoms that have been filled in with glass block. Separating the central bay from the two flanking storefronts and providing access to the second floor are two doors with transoms. The spandrel area directly above the central entrance bay has a concrete sign plate with incised lettering that reads "Venetian Hall." Fenestration on the second floor features six-over-one and three-over-one wood-sash windows arranged in pairs and in groups of three, topped by round-arch stone lintels with rosette motifs. The parapet features a series of Classical shields and swags.

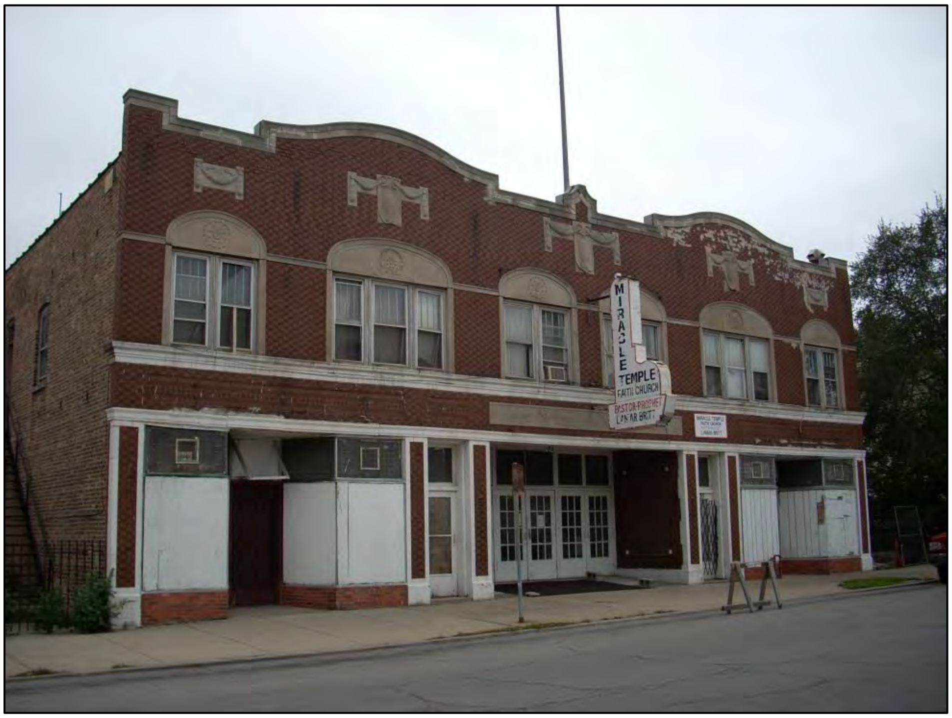


Figure 4-7: Front Facade of Venetian Hall

The exterior of this building has good overall integrity, although elements of the original storefront materials are no longer extant. It does not display sufficient distinguishing architectural features to qualify as individually eligible for listing on the NRHP for its architecture. Instead, it is recommended for individual listing under Criterion A for its original use as a social venue for area residents in the early 20th century. Local theater houses such as the Venetian Hall were jewels within the local communities. It is rare to see an early 20th century neighborhood social hall that retains its original storefronts and is set within a residential area of workers' housing, rather than along a commercial thoroughfare. The opening of Illinois Terra Cotta Works in the first half of the 20th century brought Italians to Kensington; the area gradually became a center of South Side Italian-American life with the establishment of Venetian Hall and the nearby San Antonio de Padua (patron saint of Venice) Roman Catholic Church.

Altgeld Gardens Historic District

This large public housing project was built between 1943–1945 and is shown in **Figure 4-8**. Designed by architects Naess & Murphy, it was originally comprised of 1,498 units located on over 190 acres. Altgeld Gardens is mainly comprised of two-story buildings that are topped with side gable roofs covered in asphalt shingles. The buildings are clad in brick with stepped parapet walls along the gable elevations. A series of single entry doors are located on the front facade. A combination of original and replacement windows are found throughout the complex. Groups of seven units are clustered around central courtyards.

This resource was determined eligible as a district in 1992 by IHPA under Criterion A for its association with community development, planning, and social history.

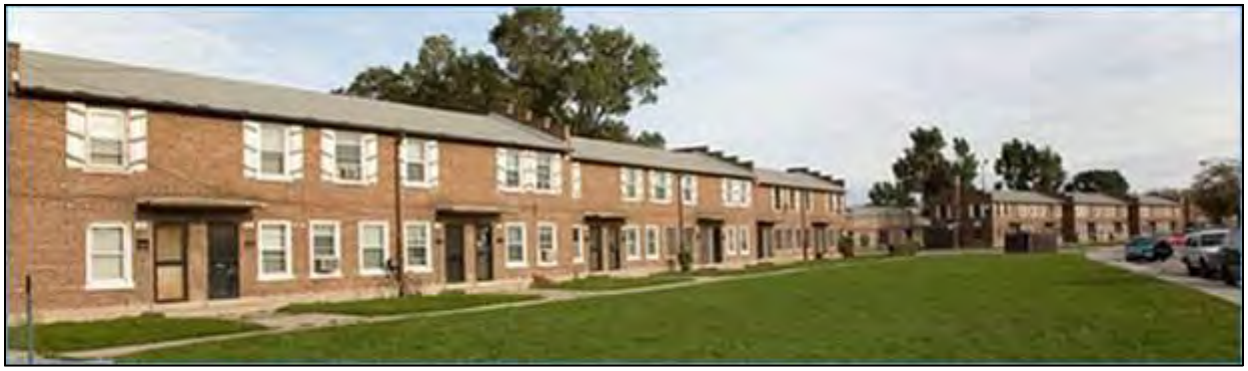


Figure 4-8: Photo of Altgeld Gardens

4.1.2 CHRS Orange-Rated Properties

Beyond the NRHP-eligible resources, four properties within the APE are identified as notable "Orange" in the CHRS, three of which have also been identified as NRHP-eligible:

- Fire Department Engine Company 93 at 324 W. 104th Street (NRHP-eligible, ID #3)
- Roseland Pumping Station at 351 W. 104th Street (NRHP-eligible, ID #4)
- Romanesque Revival-style church at 10920 S. Princeton Avenue (NRHP-eligible, ID #5)
- St. Salomea Church at 11800–11808 S. Indiana Avenue

These CHRS "Orange"-rated resources are protected by the City's 2003 Demolition-Delay Ordinance. As none of the CHRS "Orange"-rated resources are proposed for demolition under either the East or West Option, this ordinance is not discussed further.

4.2 Archaeological Resources

A records search was conducted by cultural resource specialists and no known archaeological sites exist within the APE. Although the landscape through which the transit lines would pass is developed, additional archaeological sites may remain undiscovered within protected locations such as parks and gardens. Once the project design has been further refined and before the Final EIS is published, archaeological investigations will occur within areas of ground disturbance for the selected option to determine whether potential resources are present. These investigations will follow the guidelines issued by the State of Illinois.

Section 5
Effects Determinations and Mitigation

5.1 Effect Analysis Thresholds

The NHPA establishes qualitative criteria that define whether a historic property would be subject to an adverse effect: when a project "may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association" (36 CFR 800.5.a). Based on this regulatory framework, an adverse effect finding will be applied to any historic property that would be subject to one or more of the following (36 CFR 800.5.a.2):

- Physical destruction or damage to all or part of the archaeological resource or historic property
- Alteration that is inconsistent with the Secretary of the Interior's *Standards for the Treatment of Historic Properties*
- Removal of the property from its historic location
- Introduction of visual, atmospheric, or audible elements that diminish the integrity of the property's significant features
- Change to the character of the property's use or the physical features within the property's setting that contribute to its significance
- Neglect of a property that causes deterioration
- Transfer, lease, or sale of property out of federal ownership or control without adequate and legally enforceable restrictions or conditions to ensure long-term preservation

Effects can be direct, indirect, or cumulative. If an adverse effect is found, the Federal Transit Administration (FTA) would consult with the Illinois Historic Preservation Agency (the SHPO for Illinois) and other interested parties to develop and evaluate alternatives or modifications to the undertaking that could avoid, minimize, or mitigate adverse effects on the resource (36 CFR 800.6.a).

Effects determinations from the No Build and Build Alternative are provided below.

5.2 No Build Alternative

No adverse effects on historic and cultural resources would result from implementation of the No Build Alternative; therefore, no mitigation measures would be required.

5.3 Build Alternative – UPRR Alternative

Table 5-1 summarizes the effects findings for each historic resource in the APE for both the East and West Options.

Table 5-1: NRHP-Eligible Resources in the Area of Potential Effects - Union Pacific Railroad Alternative East and West Options

ID	Description	Union Pacific Railroad Alternative East Option Effects Finding	Union Pacific Railroad Alternative West Option Effects Finding
1	Eclectic Neo-Traditional Home	No Historic Properties Affected	No Historic Properties Affected
2	Fire Department Engine Company 93	No Historic Properties Affected	No Historic Properties Affected
3	Roseland Pumping Station	No Adverse Effect	No Historic Properties Affected
4	Romanesque Revival-Style Church	No Historic Properties Affected	No Historic Properties Affected
5	Roseland Community Hospital Nurses Home	No Historic Properties Affected	No Historic Properties Affected
6	Former Venetian Hall	No Historic Properties Affected	No Historic Properties Affected
7	Altgeld Gardens Historic District	No Historic Properties Affected	No Historic Properties Affected

NRHP = National Register of Historic Places

5.3.1 East Option

The East Option would cause displacements and visual, noise, and other environmental effects within the APE, but none of these effects would alter the characteristics that qualify any of the identified historic resources for inclusion on the NRHP. No mitigation measures would be required. Because none of the NRHP-eligible resources in the APE would be directly affected (they would not be displaced), each resource was evaluated for potential visual effects from the aerial structure, stations, and parking facilities.

Figure 5-1 is a photo simulation of the East Option track structure adjacent to the Roseland Pumping Station. Although the track structure would be approximately 9 feet west of the Roseland Pumping Station at its nearest point, the East Option is anticipated to have no adverse effect. The pumping station would not be displaced or directly affected by the UPRR Alternative. The resource was recommended eligible under Criterion C for its architecture as an excellent example of a well-preserved community pumping station designed in the Prairie Style that still functions in its original use. The building retains much of its original design, materials, and workmanship, including its projecting two-story flat-roofed entrance pavilion with geometric limestone details and coping. The proposed project would not affect these characteristics and would preserve the property's entrance approach. The changes in setting and feeling brought on by the proposed project would not detract from the architectural aspects of the building that qualify the resource as eligible for NRHP listing. Pile-driving activities would be avoided in the vicinity of the pumping station.

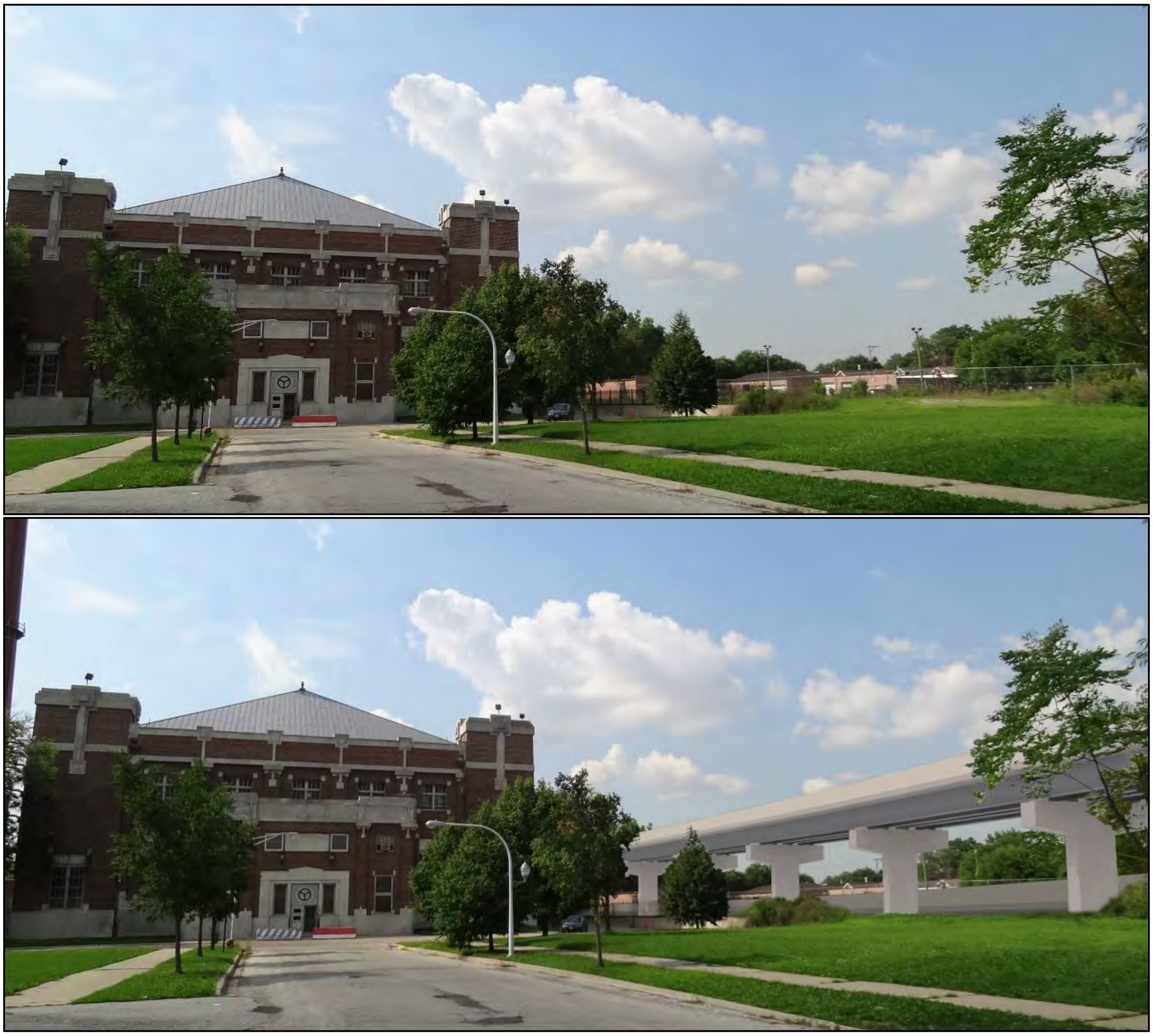


Figure 5-1: Photo of Existing Conditions and Photo Simulation of the Union Pacific Railroad Alternative East Option Elevated Track Structure adjacent to the Roseland Pumping Station, Facing South on Harvard Avenue

The 130th Street station would be approximately 800 feet from Altgeld Gardens Historic District at its closest point and the parking garage at the 130th Street station would be located at a distance away from Altgeld Gardens where the size of the structure would not create a visual impact; therefore, the 130th Street station and parking garage would not affect the Altgeld Gardens Historic District. **Figure 5-2** shows a view of the 130th Street station and parking structure from Altgeld Gardens.

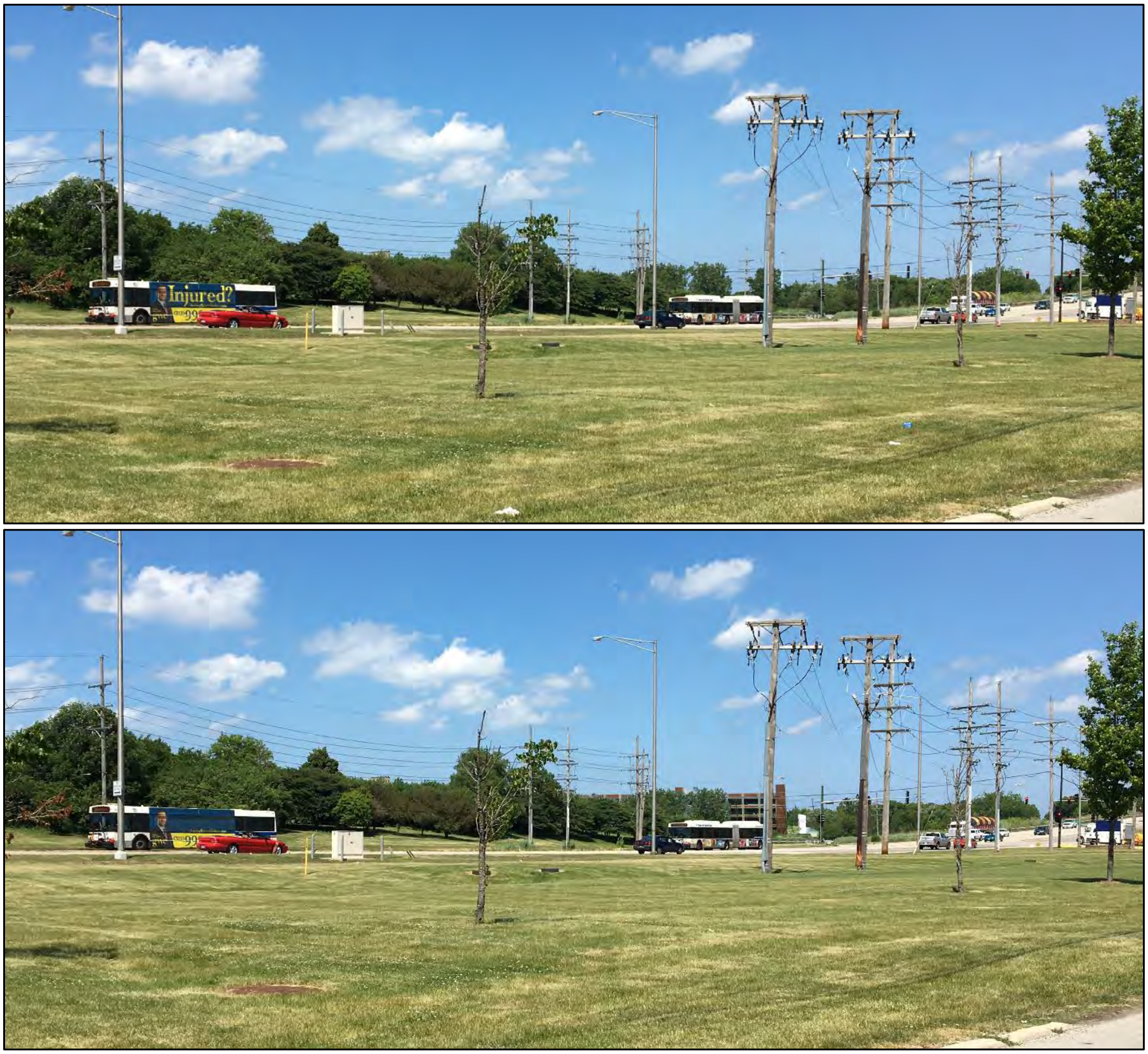


Figure 5-2: Photo of Existing Conditions and Photo Simulation of the 130th Street Station and Parking Garage, Facing Northeast on 130th Place

5.3.2 West Option

Like the East Option, the West Option would cause displacements and visual, noise, and other environmental effects within the APE, but none of these effects would alter the characteristics that qualify any of the identified historic resources for inclusion on the NRHP. No mitigation measures would be required.

Section 6
Consultation Process

In accordance with requirements for consultation established in Section 106 of the NHPA, three distinct rounds of coordination occurred during the RLE Project: initiation activities, identification of historic properties, and assessment of effects. Because there would be no adverse effects as a result of this project, no additional coordination for resolution of adverse effects was needed. Each outreach effort is described in the following sections. **Attachment 3** contains copies of meeting notes from each of these meetings, comments received from consulting parties, and responses to comments.

6.1 Initiation Activities

6.1.1 Invitations to Participate

In August 2012, FTA sent invitation letters to 11 Native American tribes to inform them of the process and request assistance in identifying areas with potential cultural and/or religious significance. Also in August 2012, CTA sent invitation letters to 19 state and local preservation interest groups to inform them of the project and invite them to participate in the upcoming consultation process. FTA and CTA sent invitation letters to the following recipients:

Native American Tribes

- Ho-Chunk Nation
- Miami Tribe of Oklahoma
- Peoria Tribe of Indians of Oklahoma
- Sac and Fox Nation of Oklahoma
- Pokagon Band of Potawatomi Indians
- Prairie Band of the Potawatomi Nation
- Citizen Potawatomi Nation
- Forest County Potawatomi Nation
- Potawatomi Nation
- Sac and Fox Nation of Mississippi in Iowa
- Sac and Fox Nation of Missouri

State and Local Preservation Groups

- SHPO
- Advisory Council on Historic Preservation
- Illinois State Museum
- Illinois State Archaeological Survey
- City of Chicago Department of Planning and Development's Historic Preservation Division
- Preservation Chicago
- Landmarks Illinois
- Chicago Historical Society
- Ridge Historical Society
- Beverly Area Planning Association
- East Beverly Association
- Rosemoor Community Association
- Cottage Grove Cottage Grove Heights Community Coalition
- Historic Pullman Foundation
- South Suburban Genealogical and Historical Society
- Chicago Neighborhood Initiatives
- Neighborhood Housing Services of Chicago
- Mercy Housing Lakefront
- Friends of the Parks

At present, 11 groups are participating in the process. The consulting parties include the SHPO, the City of Chicago Department of Planning and Development's Historic Preservation Division, Preservation Chicago, Landmarks Illinois, the Ridge Historical Society, the Rosemoor Community Association, Friends of the Parks, Chicago Neighborhood Initiatives, Neighborhood Housing Services of Chicago, DCP, and the Chicago Park District.

6.1.2 Section 106 Kickoff Webinar

On October 24, 2012, FTA and CTA held a webinar on RLE historic properties to introduce the project and initiate the consultation process. During the eligibility phase of consultation, properties and districts that were identified as eligible for listing on the NRHP were discussed. Properties over 50 years old in the APE were evaluated to determine whether they are NRHP-eligible under one of the four National Park Service Criteria for Evaluation.

6.2 Identification of Historic Properties

FTA and CTA provided draft materials on the identification of NRHP-eligible properties to consulting parties on January 4, 2013, in compliance with Section 106 of the NHPA. A 30-day comment period followed, with an in-person meeting on January 30, 2013 to facilitate discussion among consulting parties. The meeting was followed by an informal tour of the corridor that afternoon. As part of this phase of coordination, CTA received written comments from six consulting parties.

Comments received from consulting parties in regards to eligibility focused on requesting additional surveys of resources, potential districts that should be considered recommended as eligible, reconsideration of surveyed properties and their eligibility, and the importance of looking at resources in the historical/social context.

As part of the eligibility phase, CTA surveyed 541 potentially eligible resources within the APEs for all alternatives being studied at the time (BRT, UPRR, and Halsted Alternatives). As a result of the field investigations and comments received from consulting parties on potentially eligible resources, for all alternatives, 15 total resources were identified as eligible for inclusion on the NRHP, including 13 individual buildings and 2 historic districts.

Specifically for the UPRR Alternative, CTA surveyed 280 potentially eligible resources within the UPRR Alternative APE. As a result of the field investigations and comments received from consulting parties on potentially eligible resources, for the UPRR Alternative, 7 total resources were identified as eligible for inclusion on the NRHP, including 6 individual buildings and 1 historic district.

6.3 Assessment of Effects

FTA and CTA mailed a Draft Effects Report to consulting parties on April 18, 2014, requesting any written comments by May 23, 2014. On May 8, 2014, FTA and CTA met with consulting parties to discuss potential project effects on NRHP-eligible historic properties. CTA received written comments from four consulting parties.

Comments received from consulting parties in regards to assessments of effect included eligibility reconsiderations, effects reconsiderations, and requests for renderings for properties in the APE. Comments also related to effects associated with the Halsted Alternative and 130th Street West Station Option, both of which have been eliminated from further consideration.

As discussed above in Section 2, in August 2014, based on the technical analysis and public input, CTA announced the NEPA Preferred Alternative—the UPRR Alternative. Additional conceptual engineering was conducted on the UPRR Alternative to refine the East and West Option alignments. In addition, CTA is now considering only the South Station Option of the 130th Street Station. Further details on the alternatives evaluated and eliminated through the Draft EIS process are provided in **Attachment 1**.

CTA provided responses to all consulting party comments received in May 2014 on November 23, 2014. Responses noted that the alternatives had been further narrowed and that the UPRR Alternative (East and West Options) were proposed to move forward as the NEPA Preferred Alternative. The consulting parties requested renderings at the Roseland Pumping Station and the 130th Street station near Altgeld Gardens, which are included in the Draft EIS.

6.4 Resolution of Adverse Effects

Based on the assessment of effects and review of consulting party comments, CTA recommends that no adverse effects on historic resources would occur because of the RLE Project (East or West

Option); no mitigation measures would be required and therefore consultation with consulting parties is complete. Coordination with the SHPO will continue through the remainder of the project.

Attachments

Attachment 1: Alternatives Development Process

Attachment 2: Historic Survey Inventory Sheets

Attachment 3: Section 106 Consultation Supporting Documentation

Attachment 1
Alternatives Development Process

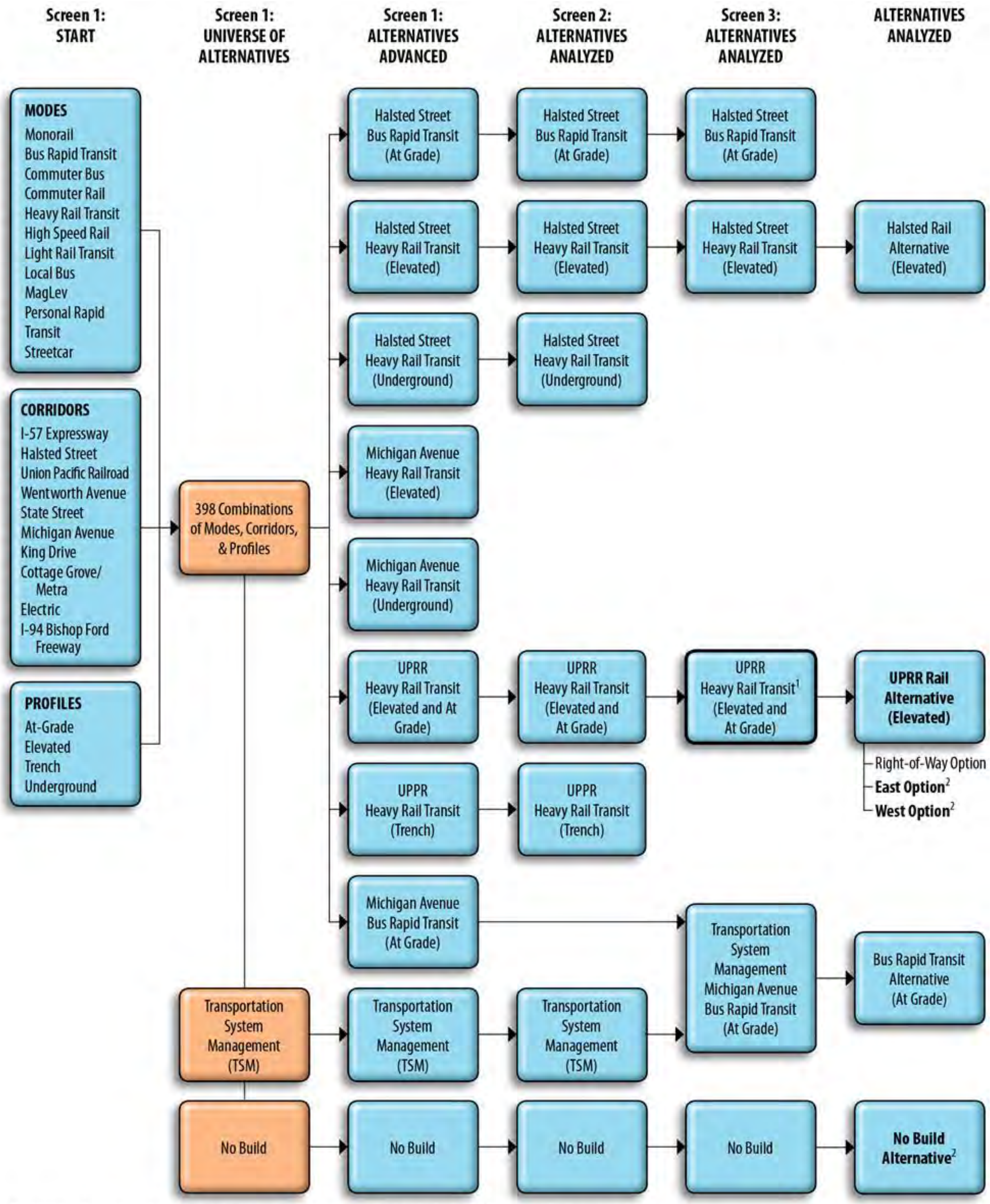
CTA began developing the alternatives studied in the Draft EIS during the Alternatives Analysis (AA), which took place during 2006–2009. Starting with multiple modes and corridor options, CTA developed and screened alternatives through a combination of conceptual engineering, public input (open house and stakeholder meetings), and preliminary analysis of potential impacts and costs. A three-level, detailed screening process was used to evaluate the alternatives and identify an LPA. The LPA Report provides detailed documentation of the Screen 1, Screen 2, and Screen 3 evaluations.

The Screen 1 evaluation began by identifying the universe of alternatives, which included a wide range of transit modes (such as bus, rail, or streetcar), project area corridors, and profiles (where the transit line is in relation to the ground). Combinations of 11 modes, 9 corridors, and 4 profiles were evaluated against the purpose and need. Based on this evaluation, the following alternatives were carried forward for further analysis in Screen 2: two bus rapid transit (BRT) alternatives along Halsted Street and Michigan Avenue; six heavy rail transit (HRT) alternatives along Halsted Street, the Union Pacific Railroad (UPRR), and Michigan Avenue; the No Build Alternative; and a “low cost” alternative (formerly required for FTA analyses known as the Transportation System Management [TSM] Alternative).

The alternatives carried through to the Screen 2 evaluation were more thoroughly defined to include mapping of a more defined alignment, identification of potential station locations, and preliminary service plans. Station spacing was determined by the type of alternative proposed, project area needs, and consistency with the purpose and need. The eight evaluation factors for the Screen 2 included a mix of qualitative and quantitative factors intended to further evaluate the performance of each alternative with respect to the project goals and objectives. Specific evaluation factors included physical constraints; right-of-way requirements; social and economic factors; demographics and employment; environmental factors; noise, visual, natural, and cultural resource impacts; transportation factors; and travel time, transit connectivity, and traffic.

Based on the results of the Screen 2 evaluation, a BRT alternative along Halsted Street (operating on dedicated lanes), two HRT alternatives along Halsted Street and the UPRR, the No Build Alternative, and the TSM Alternative were recommended for further evaluation in Screen 3. In addition to the alternatives carried forward from the Screen 2 evaluation and based on discussions with FTA, CTA combined the TSM Alternative with a BRT alternative (operating on existing right-of-way rather than dedicated lanes as proposed in Screen 2) along Michigan Avenue to form a single alternative (called the BRT Alternative) for evaluation in Screen 3. Because the Michigan Avenue BRT Alternative would operate in the existing right-of-way, it would require fewer property acquisitions than BRT on dedicated lanes. Screen 3 was a two-step evaluation process that included the further definition and refinement of alternatives, including conceptual design and the evaluation of these alternatives. Nine evaluation factors were used to evaluate the alternatives as part of Screen 3, including physical constraints, public support, social and economic factors, environmental factors, transportation factors, capital cost comparison, operating and maintenance cost comparison, ridership potential, and FTA's Cost Effectiveness Index. The result of the Screen 3 evaluation was a recommendation for the LPA: the UPRR Alternative.

Based on the results of the AA and considerable public support for the corridor, including a 2004 referendum where 38,000 residents in the 9th and 34th Wards supported the UPRR corridor for the RLE Project, the UPRR Alternative was recommended as the LPA, indicating that it is the alternative that would best meet the purpose and need of the project while addressing potential impacts and other potential constraints. The UPRR Alternative would provide access to the most densely populated portions of the study area, which are primarily residential and transit supportive. The Chicago Transit Board designated the UPRR Alternative as the LPA on August 12, 2009. **Figure 1** summarizes the AA process.


Screen 1: START
Screen 1: UNIVERSE OF ALTERNATIVES
Screen 1: ALTERNATIVES ADVANCED
Screen 2: ALTERNATIVES ANALYZED
Screen 3: ALTERNATIVES ANALYZED
ALTERNATIVES ANALYZED
MODES
Monorail
Bus Rapid Transit
Commuter Bus
Commuter Rail
Heavy Rail Transit
High Speed Rail
Light Rail Transit
Local Bus
MagLev
Personal Rapid Transit
Streetcar
CORRIDORS
I-57 Expressway
Halsted Street
Union Pacific Railroad
Wentworth Avenue
State Street
Michigan Avenue
King Drive
Cottage Grove/ Metra
Electric
I-94 Bishop Ford Freeway
PROFILES
At-Grade
Elevated
Trench
Underground
398 Combinations of Modes, Corridors, & Profiles
Transportation System Management (TSM)
No Build
Halsted Street Bus Rapid Transit (At Grade)
Halsted Street Heavy Rail Transit (Elevated)
Halsted Street Heavy Rail Transit (Underground)
Michigan Avenue Heavy Rail Transit (Elevated)
Michigan Avenue Heavy Rail Transit (Underground)
UPRR Heavy Rail Transit (Elevated and At Grade)
UPPR Heavy Rail Transit (Trench)
Michigan Avenue Bus Rapid Transit (At Grade)
Transportation System Management (TSM)
No Build
Halsted Street Bus Rapid Transit (At Grade)
Halsted Street Heavy Rail Transit (Elevated)
Halsted Street Heavy Rail Transit (Underground)
UPRR Heavy Rail Transit (Elevated and At Grade)
UPPR Heavy Rail Transit (Trench)
Transportation System Management (TSM)
No Build
Halsted Street Bus Rapid Transit (At Grade)
Halsted Street Heavy Rail Transit (Elevated)
UPRR Heavy Rail Transit¹ (Elevated and At Grade)
Transportation System Management Michigan Avenue Bus Rapid Transit (At Grade)
No Build
Halsted Rail Alternative (Elevated)
UPRR Rail Alternative (Elevated)
Right-of-Way Option
East Option²
West Option²
Bus Rapid Transit Alternative (At Grade)
No Build Alternative²

[1] The Chicago Transit Board designated the UPRR Rail Alternative as the Locally Preferred Alternative on August 12, 2009.
[2] This Draft EIS presents impacts of the No Build Alternative and two options of the UPRR Rail Alternative: the East Option and the West Option.

EIS = Environmental Impact Statement, UPRR = Union Pacific Railroad

Figure 1: Alternatives Development Summary

After the AA, CTA further refined the alternatives for presentation during the NEPA scoping process and study in the Draft EIS. At the conclusion of the AA process, the UPRR Alternative was anticipated to be located adjacent to the east or west edge of the UPRR right-of-way. In 2012, CTA learned of a Chicago Department of Transportation (CDOT) feasibility study looking at moving UPRR freight operations out of the existing UPRR corridor before the RLE Project. By moving UPRR freight operations out of the existing UPRR corridor, CTA could use the existing UPRR right-of-way for the RLE Project. CTA evaluated this new option of the UPRR Alternative, known as the Right-of-Way Option, in preparation of the Draft EIS. Subsequent coordination between local agencies and the railroads indicated that relocating UPRR freight operations from this corridor presents considerable challenges and would not be feasible.

During 2012–2014, CTA evaluated benefits and impacts of four alternatives: the No Build Alternative, the BRT Alternative (along Michigan Avenue), the UPRR Alternative, and the Halsted Alternative. CTA evaluated three options for the UPRR Alternative: the Right-of-Way Option, East Option, and West Option. CTA also evaluated two options for the UPRR Alternative 130th Street station: a South Station Option and a West Station Option.

In August 2014, based on the technical analysis and public input until then, CTA announced the NEPA Preferred Alternative—the UPRR Alternative. Because the Right-of-Way Option is not feasible, the Draft EIS evaluates only the East and West Options for the UPRR Alternative. CTA has chosen to move forward with the South Station Option at 130th Street based on technical analysis and public feedback. Additional information about the BRT Alternative, UPRR Right-of-Way Option, UPRR West Station Option for the 130th Street station, and Halsted Alternative is presented below in the discussion of alternatives considered but not pursued.

Alternatives Considered but Not Pursued

During development of the project, CTA fully evaluated the BRT Alternative, the Right-of-Way Option for the UPRR Alternative, and the Halsted Rail Alternative (Halsted Alternative). In addition, CTA fully evaluated a West Station Option for the 130th Street station. These alternatives and the station option were analyzed as part of the technical memoranda preparation for the Draft EIS, but are not included in the Draft EIS. They were eliminated from analysis based on public input, technical constraints, potential impacts, and the extent to which they met the project's purpose and need.

CTA also evaluated a variation of the UPRR Alternative where the tracks would be at grade rather than elevated, described below.

Bus Rapid Transit Alternative

CTA considered a BRT Alternative along Michigan Avenue between 95th Street Terminal and Altgeld Gardens. This limited-stop enhanced bus route along the existing #34 South Michigan Avenue bus route would have transit signal priority along Michigan Avenue. The alternative included four stops, each with park & ride facilities. Although the BRT Alternative was a lower-cost alternative than the UPRR Alternative, it was eliminated in August 2014 based on public feedback including the following concerns:

- The BRT Alternative would have minimal travel time improvements compared to the No Build Alternative (23 minutes from 130th Street to 95th Street under the BRT Alternative, compared to 28 minutes for existing conditions or 14 minutes for the UPRR Alternative over the same distance).
- Approximately 1 million riders per year were anticipated for the BRT Alternative (in comparison to 13 million riders per year anticipated for the UPRR Alternative).
- The BRT buses would not have traveled on a dedicated lane along Michigan Avenue because of limited right-of-way. Although transit signal priority was planned, additional travel time savings would not have been realized without dedicated lanes for BRT buses.

Union Pacific Railroad Alternative

The Draft EIS summarizes the benefits and impacts of the East and West Options. In preparation of the Draft EIS, CTA fully evaluated the Right-of-Way Option and the 130th Street Station West Station Option. CTA also considered an at-grade (rather than elevated) track structure for the UPRR Alternative.

Right-of-Way Option

As part of the UPRR Right-of-Way Option, the elevated CTA structure would have been placed in the UPRR right-of-way. This option was added in 2012 in response to the CDOT feasibility study looking at moving UPRR freight operations out of the existing UPRR corridor before the RLE Project. The Right-of-Way Option would only be feasible if the separate project were implemented before implementation of the RLE Project. Coordination between local agencies and the railroads indicted that relocation of UPRR freight operations from this corridor presents considerable challenges; therefore, this option is no longer feasible. Estimated travel times and ridership were the same for the Right-of-Way Option as for the East and West Options. Because the elevated CTA structure would have been placed in the UPRR right-of-way, the Right-of-Way Option would have resulted in fewer displaced properties than either the East or West Option.

130th Street Station - West Station Option

CTA initially considered two options for the 130th Street station: a South Station Option and a West Station Option. The South Station Option would be located immediately west of the

Northern Indiana Commuter Transportation District/Chicago South Shore & South Bend Railroad (NICTD/CSS & SBRR) right-of-way at 130th Street. The West Station Option would be located along the north side of 130th Street at Evans Avenue. Pedestrians from Altgeld Gardens would access the West Station Option through a pedestrian crosswalk on 130th Street. A traffic signal would be required at this intersection to allow pedestrians to safely cross 130th Street.

The South Station Option is supported by the community and the Chicago Housing Authority because it would be more accessible from Altgeld Gardens. The West Station Option would incur additional costs because it would require approximately 1,100 feet of additional track due to its location, and would require intersection improvements to allow pedestrians to safely cross the street. The South Station Option would provide the best opportunity for a future connection to NICTD, improving regional rail connections and linkages to other modes of public transportation. Based on public feedback and technical analysis, CTA is considering only the South Station Option for 130th Street station.

At-Grade Track Structure

CTA considered a variation of the UPRR Alternative in which the RLE tracks would run at grade along the UPRR rail corridor (between I-57 and Prairie Avenue). In this variation, the existing east-west roadways would run either above or below the new at-grade CTA tracks and the existing at-grade UPRR tracks. Like the proposed UPRR Alternative, this variation would be elevated from the 95th Street Terminal to south of I-57, then at grade from I-57 to Prairie Avenue, elevated to cross the Canadian National/Metra Electric District (CN/ME) tracks near 119th Street, then at grade near the proposed yard and shop and 130th Street station. CTA evaluated potential impacts and cost implications to run the east-west roadways both above (using overpasses) and below (using underpasses) the at-grade UPRR tracks and the proposed at-grade CTA tracks.

Roadway Overpasses

For an at-grade track structure, one option would be to use overpasses to carry roadways over the tracks. If roadway overpasses were used, they would need to be constructed at eight locations. More than 100 properties (primarily residential homes) would be displaced due to the overpass footprint, elimination of access to existing alleyways or driveways, and proximity of the embankment structure to the residential homes. The overpass structure and associated embankment could be as high as 30 feet, creating a substantial visual impact on the adjacent one-story residential buildings. In addition, permanent north-south residential street closures would be required where the streets would intersect with the embankment, which would disrupt neighborhood connectivity. Utilities that currently run within the street rights-of-way would have to be relocated. The potential construction cost savings between the elevated track structure and the at-grade structure would be insignificant when the cost of additional right-of-way acquisition and utility relocations is included. Roadway overpasses would also increase community impacts.

Roadway Underpasses

A second option for an at-grade track structure would be to use underpasses to carry roadways under the tracks. If underpasses were used, they would need to be constructed at eight locations. The underpass variation would have property displacements and community impacts similar to those of the roadway overpass option except a large retaining wall would be located in front of the residential homes. Because the cost of a roadway underpass structure may be as much as double the cost of an overpass structure, this variation would provide no additional cost savings over the elevated track structure alternative and would have significantly more community impacts and right-of-way costs.

Based on the property displacements and community impacts that would be created by grade-separating the roadways from the proposed CTA tracks (through either roadway overpasses or underpasses), CTA eliminated this variation from further consideration.

Halsted Alternative

CTA considered the Halsted Alternative, which would extend the Red Line from 95th Street Terminal along I-57, and south along Halsted Avenue to Vermont Avenue on a new elevated structure. The Halsted Alternative would run above Halsted Avenue with center piers, except at the station locations where the structures would span Halsted Avenue. The Halsted Alternative would result in travel times similar to those of the UPRR Alternative. The alternative included four stations, each with park & ride facilities. Construction costs for the Halsted Alternative were approximately 6 percent higher than for the UPRR Alternative. The Halsted Alternative was eliminated in August 2014 based on technical analysis and public feedback including the following concerns:

- The Halsted Alternative would not have the potential for a direct connection to other regional transit services[2] like the UPRR Alternative would; therefore, it would not meet the purpose and need for the project.
- The Halsted Alternative would affect four historic resources, resulting in adverse effects on historic properties, while the UPRR Alternative would not affect any historic resources.
- The proposed seven-story parking structure at Vermont Avenue would result in adverse visual impacts because of its location within a neighborhood with single-family homes.
- The Halsted Alternative would not directly serve as many affordable housing locations in the project area as the UPRR Alternative would serve, including Altgeld Gardens.
- The public expressed concern that implementation of the Halsted Alternative would be disruptive to the surrounding community and would increase shadows, crime, and noise along the Halsted Street.

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[2] Although the Halsted Alternative intersects the ME Blue Island branch, the southern terminus of that branch is less than 3 miles from the intersection at Halsted Street and is located just to the west of the project area. The northern terminus of the ME Blue Island branch is only two blocks from the Red Line in the Loop. Intersection with the ME Blue Island branch would not provide regional service.

- The Halsted Alternative did not receive the considerable public support before and during scoping in 2009 that the UPRR Alternative received.

Attachment 2
Historic Survey Inventory Sheets

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

418 W. 98th Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1931

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

Chicago Style Bungalow

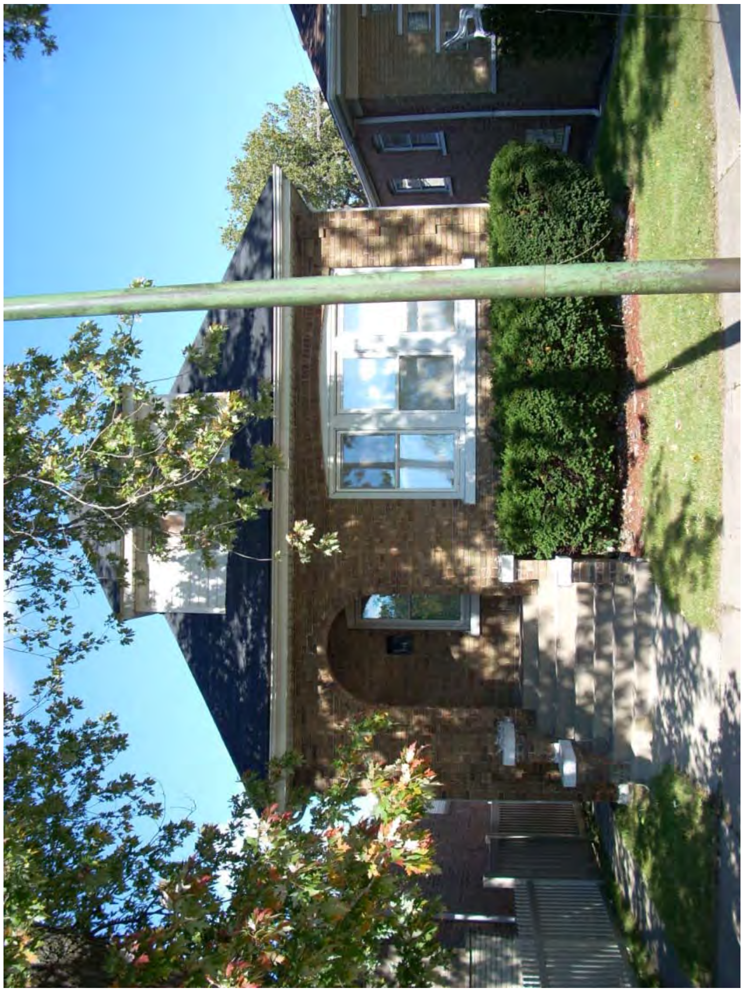
Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 31 October 2012

Photos with Captions:

South façade of a one-story, single family, brick residence.



Property Description: **Stories:** 1

This one-story brick bungalow in the Washington Heights community is clad with tan face brick on its front elevation, common brick on its side elevations, and synthetic siding on its rear elevation. It has a steeply pitched hip roof covered with asphalt shingles and synthetic-clad, hip roof dormers with paired one-over-one windows on both the front and rear elevations. The front elevation has a recessed corner porch with round-arch opening, low brick sidewalls, and concrete steps. The residence also includes a door tucked into the side of the living room bay and four one-over-one windows, three of which are grouped together under a segmental arch. All windows are modern replacements with aluminum sashes. This house lacks distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement cladding and windows
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick (main), Synthetic siding (rear)	
Roof Material Asphalt shingle	**Roof Features** Dormers	**Roof Type** Hip	
Ornamental Architectural Details Segmental arch, round arch porch opening			**Windows** Double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

221 W. 98th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1964

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

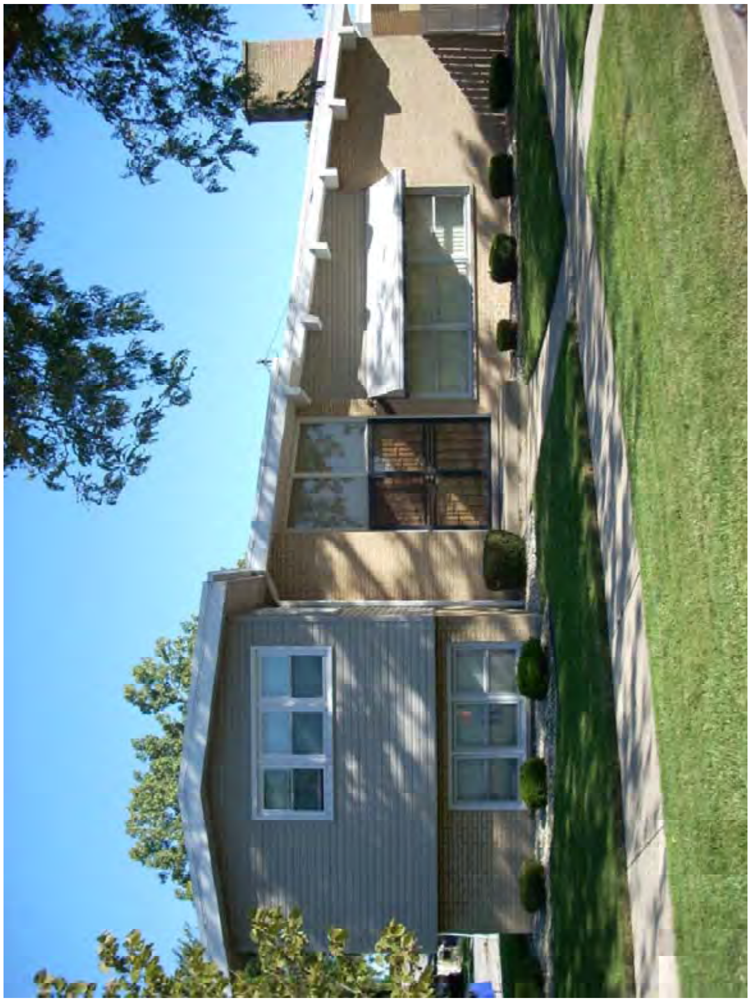
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 9 October 2012

Photos with Captions:
West façade of a brick, split-level, single family residence.



Property Description: **Stories:** Spilt-level

This split-level home in the Roseland community is clad with buff brick and synthetic siding, has a shed roof with exposed rafters above its one-story section and a gable roof above its two-story section. It has centrally located wood double-doors topped by two large fixed-pane windows; other windows are arranged in groups of three along its front elevation. Windows are one-over-one aluminum-sash. This split-level home does not have distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: [✓ Unaltered] Slight Modification Major Alteration			**Additional Notes/Descriptions**
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick, synthetic siding	
Roof Material Asphalt	**Roof Features** None	**Roof Type** Gable, shed	
Ornamental Architectural Details Exposed rafters			**Windows** Double-hung, fixed-pane
Outbuildings (*Number and Description*) None			

Local Landmark	**Y [✓ N]**	
National Register Historic Places	**Y [✓ N]**	
National Register Historic District	**Y [✓ N]**	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

124 W. 99th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1965

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

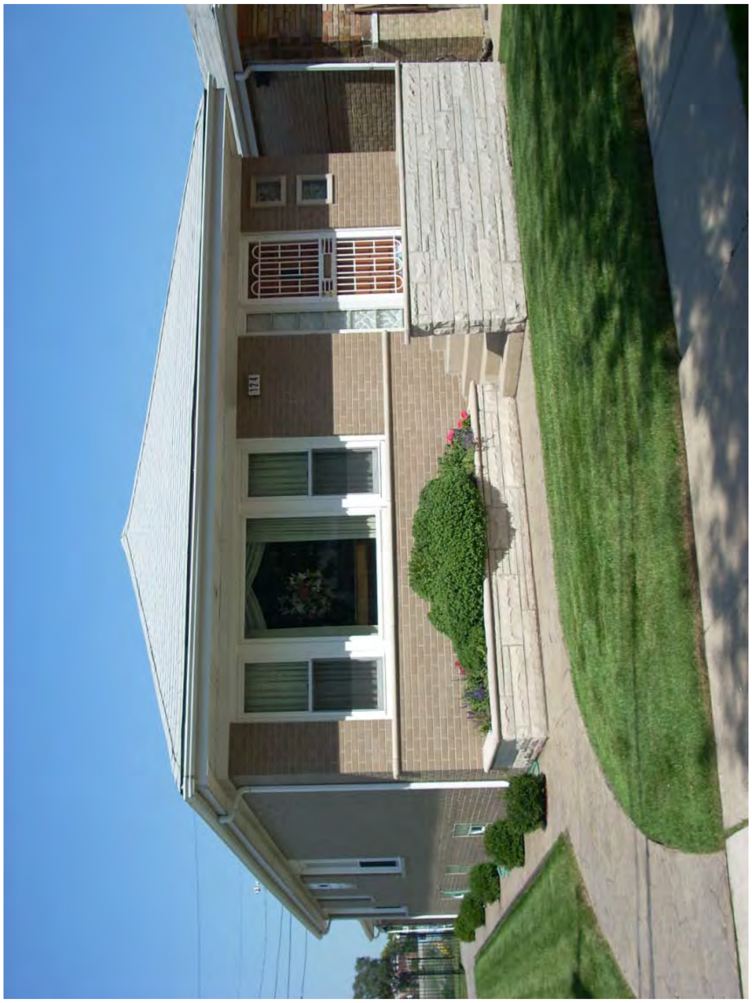
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 8 October 2012

Photos with Captions:
South façade of a brick, one-story, single family residence.



Property Description: **Stories:** 1

This one-story home in the Roseland community is situated on a raised brick basement with glass block windows, is clad with buff brick, and has a hip roof covered with asphalt shingles and overhanging eaves. Its front elevation is fronted by a faux stone planter. It has an off-center door and sidelight comprised of glass blocks, two decorative glass block inserts, a picture window flanked by one-over-one aluminum-sash windows, and concrete steps behind a low faux stone wall. An attached two-car hip roof garage clad in the same buff brick is situated along the home's rear elevation. It does not display distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: [✓ Unaltered] Slight Modification Major Alteration			**Additional Notes/Descriptions**
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt	**Roof Features** None	**Roof Type** Hip	
Ornamental Architectural Details Planter, glass block inserts, faux stone wall at entry			**Windows** Double-hung, fixed-pane, glass block
Outbuildings (*Number and Description*) Attached two-car garage.			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

401 W. 99th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1942

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

Vernacular

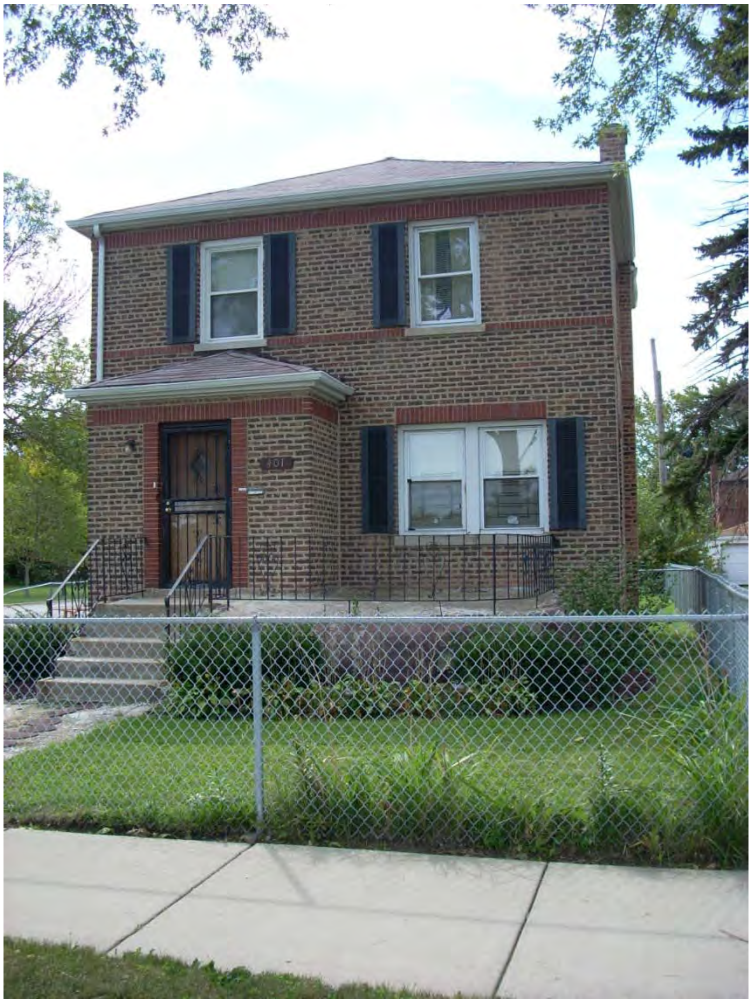
Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 10 October 2012

Photos with Captions:

North façade of a brick, two-story, single family residence



Property Description: **Stories:** 2

This two-story, brick clad house in the Washington Heights community is situated on a raised brick basement with glass block windows. The house has a hip roof covered with asphalt shingles. Its front elevation has a partial-width, hip roof, brick clad, enclosed porch with a metal storm door. It has concrete steps, metal railings, a pair of windows on the first floor and two single windows on the second floor. Windows throughout the house are non-original one-over-one aluminum-sash. Detailing includes concrete sills and orange brick banding that contrasts with the brown face brick cladding. It does not feature distinguishing architectural elements and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
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Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Hip	
Ornamental Architectural Details Brick banding, concrete sills			**Windows** Double-hung, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

314 W. 100th Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1965

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

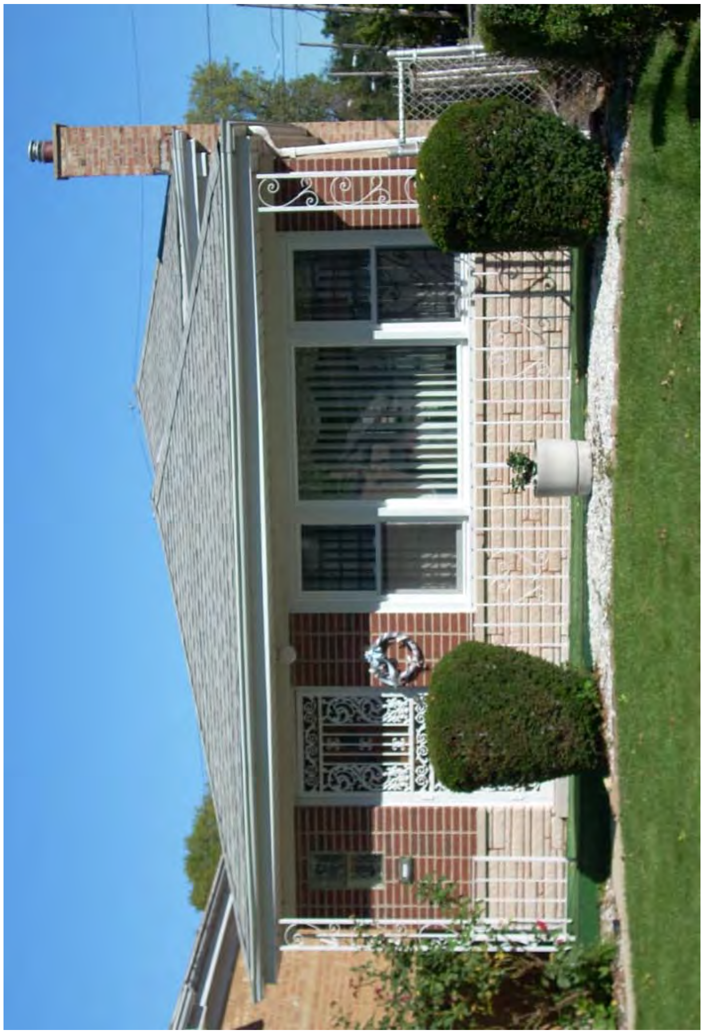
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 16 September 2012

Photos with Captions:
South façade of split-level, single-family residence.



Property Description: **Stories:** Split-level

This back-split home in the Roseland community has a hip roof on both levels covered with asphalt shingles. The front elevation is clad with faux stone below the concrete sill line and brown brick above. This elevation has an off-center hollow core metal door, a picture window flanked by one-over-one aluminum-sash windows, and two decorative glass block inserts. It does not feature distinguishing architectural elements and is not individually eligible for listing on the National Register.

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Phone (815) 568- 0680

Structural Survey

Integrity: [✓ Unaltered] Slight Modification Major Alteration			**Additional Notes/Descriptions**
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick (main), Faux stone (lower façade)	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Hip	
Ornamental Architectural Details Glass block inserts			**Windows** Double-hung, fixed-pane
Outbuildings (*Number and Description*) Garage			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

319 W. 100th Place

Alternate: 321 W. 100th Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1949

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

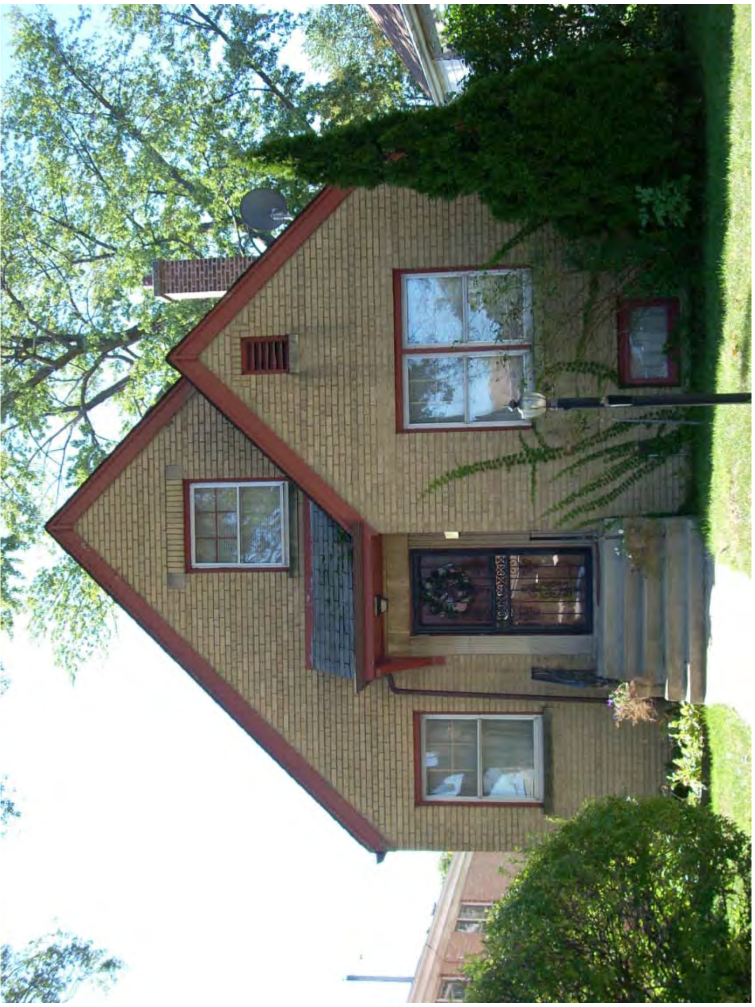
Vernacular

Prepared By: C. Tolmie, M. C. Bird

Photo By: S. Katz

Date: 16 September 2012

Photos with Captions:
North façade of one-story, single-family residence.



Property Description: **Stories:** 1

This one-story house in the Roseland community is situated on a raised brick basement and has a front gable roof covered with asphalt shingles. Its front elevation is clad with buff brick and has a projecting gabled living room bay. This elevation also has a centrally located entrance with a metal storm door, concrete steps, metal railings, a bracketed shed-roofed door hood, and four six-over-one windows: three on the first floor and one in the gable. This house lacks distinctive architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
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Phone (815) 568- 0680

Structural Survey

Integrity: [✓ Unaltered] Slight Modification Major Alteration			**Additional Notes/Descriptions**
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details Concrete sills			**Windows** Double-hung
Outbuildings (*Number and Description*) Garage			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

435 W. 100th Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1942

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

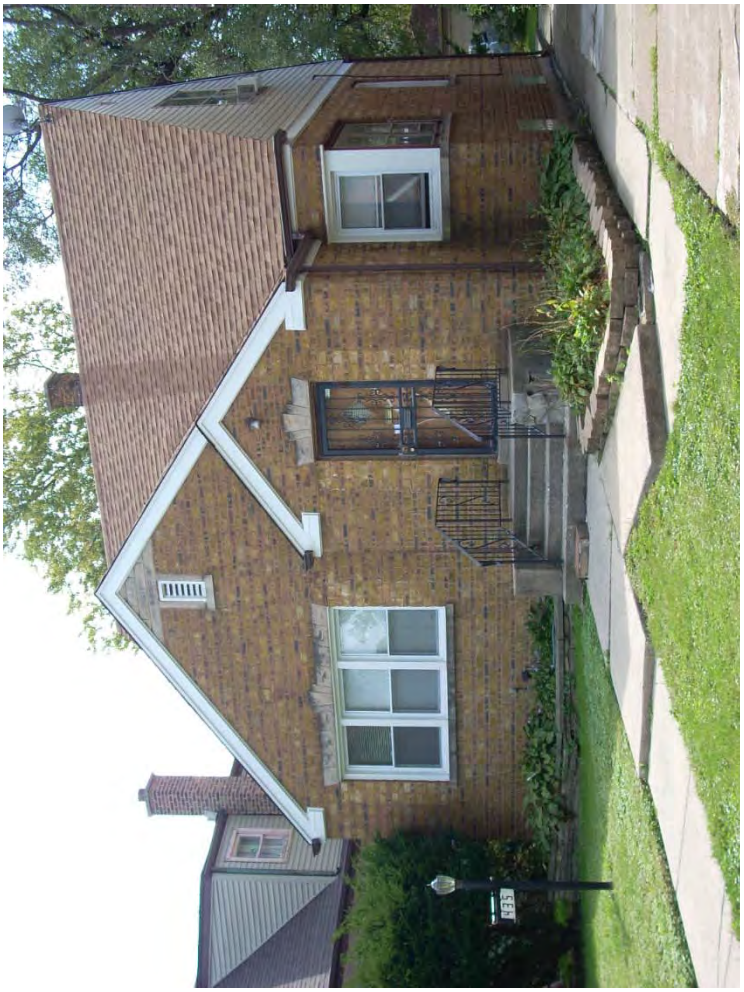
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 10 October 2012

Photos with Captions:
North façade of a brick, one-story, single family residence.



Property Description: **Stories:** 1

This one-story house in the Washington Heights community is clad with polychromatic brick and has a side-gabled roof covered with asphalt shingles. End gable walls are clad in aluminum siding. Its front elevation features a gabled pavilion with a strip of three non-original one-over-one aluminum-sash windows and a gabled entrance vestibule featuring a wood door with diamond pane window, concrete steps, and metal railings. A single non-original one-over-one aluminum-sash window is located in the corner of the front elevation. A small ventilating louver is situated in the gable. Detailing includes concrete sills and lintels with keystones. This house does not display distinguishing architectural features and is not individually eligible for listing on the National Register.

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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows and siding in gable ends
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick (main), Synthetic siding (gable ends)	
Roof Material Asphalt shingles	**Roof Features** None	**Roof Type** Side gable	
Ornamental Architectural Details Concrete sills and lintels with keystones			**Windows** Double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

444 W. 100th Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1930

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

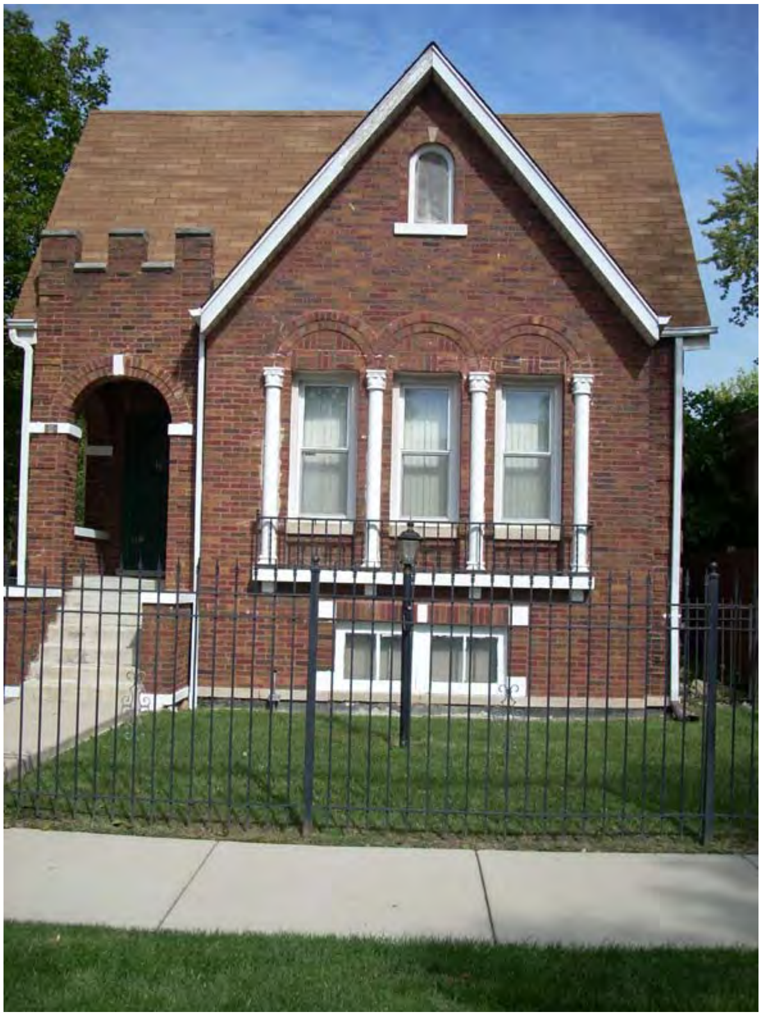
Eclectic Neo-Traditional

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 10 October 2012

Photos with Captions:
South façade of a brick one-story, brick, single family residence.



Property Description: **Stories:** 1

This one-story house in the Washington Heights community sits on a raised basement. It is clad with polychromatic brick and has a side gabled roof covered with asphalt shingles. Its front elevation has a gabled living room bay pavilion with paired basement windows that appear to be casements. There is a group of three non-original one-over-one windows with concrete sills and brick arch lintels that are separated by colonettes with acanthus leaf capitals. A small round-arched window is located in the gable. The house has a recessed corner porch with a metal storm door, round-arch openings, a Neo-Gothic castellated top, concrete steps, and brick sidewalls. This house has very good integrity in terms of its materials and detailing, and its Eclectic Neo-Traditional ornamentation makes it stand out among the vernacular, stripped-down brick and frame bungalows and cottages that comprise the predominant building stock in the Washington Heights community. As a result, it is recommended as individually eligible for National Register listing under Criterion C for architecture.

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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingle	**Roof Features** Castellated porch roofline	**Roof Type** Gable	
Ornamental Architectural Details Concrete sills, brick arched lintels, colonettes, arched window with keystone, stone insets, decorative brickwork, porch with castellated roofline			**Windows** Double-hung, fixed-pane, casement
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? Yes	**A B** [✓ **C**]	**Significance:** The Eclectic Neo-Traditional ornamentation stands out among the vernacular, stripped-down brick and frame residences that comprise the predominant building stock in the Washington Heights community.

Additional Comments:

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

318 W. 100th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1947

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

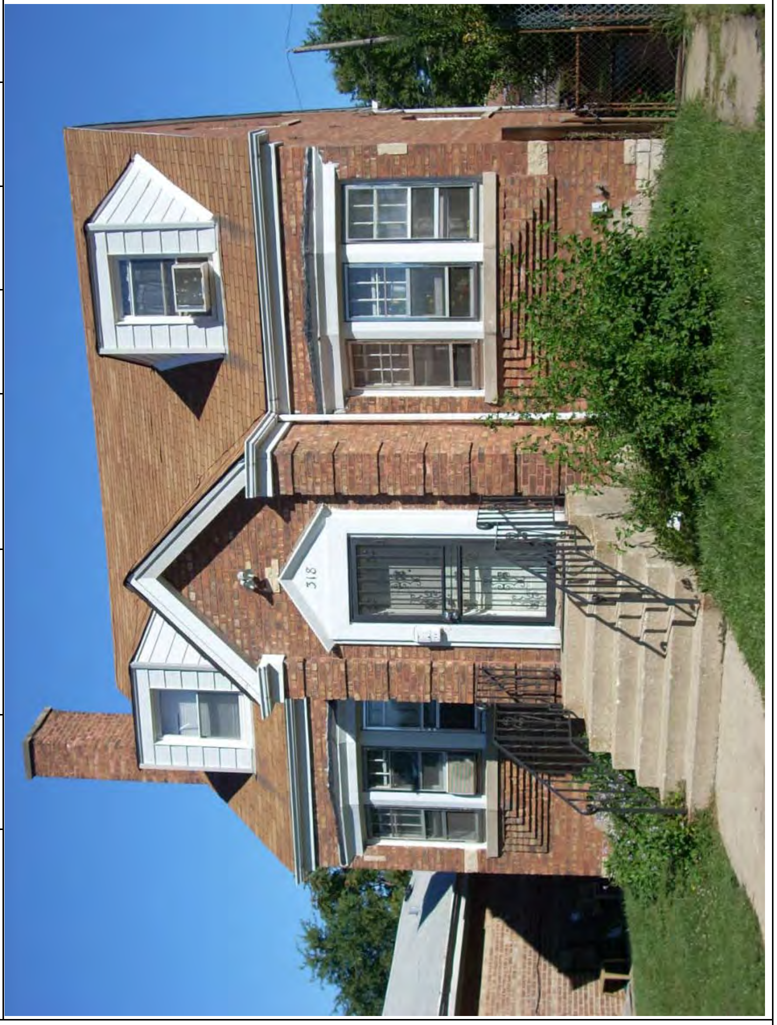
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 16 September 2012

Photos with Captions:
North façade of 1.5-story, brick, single family residence.



Property Description: **Stories:** 1.5

This one-and-a-half-story brick-clad home has a steeply pitched side gable roof covered with asphalt shingles, an exterior brick chimney, and two aluminum-clad shed dormers, each of which has a single one-over-one aluminum-sash window (non-original). Its front elevation has a centrally located gabled front vestibule with brick quoins, a door with wood surround and pediment, and concrete steps with metal railings. The entrance is flanked by three-sided window bays, which feature six-over-one windows with decorative brick corbelling beneath. It does not feature sufficient distinguishing architectural features to qualify as individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement door, dormer windows, and siding
Condition: [✓ Excellent] Good Poor			
Additional Alterations Dormers may be post-construction addition.			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingle	**Roof Features** Dormer	**Roof Type** Side gable	
Ornamental Architectural Details Brick quoins and corbelling; stone quoins and inserts			**Windows** Double-hung
Outbuildings (*Number and Description*) Garage			

Local Landmark	**Y [✓ N]**	
National Register Historic Places	**Y [✓ N]**	
National Register Historic District	**Y [✓ N]**	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

426 W. 100th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1943

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

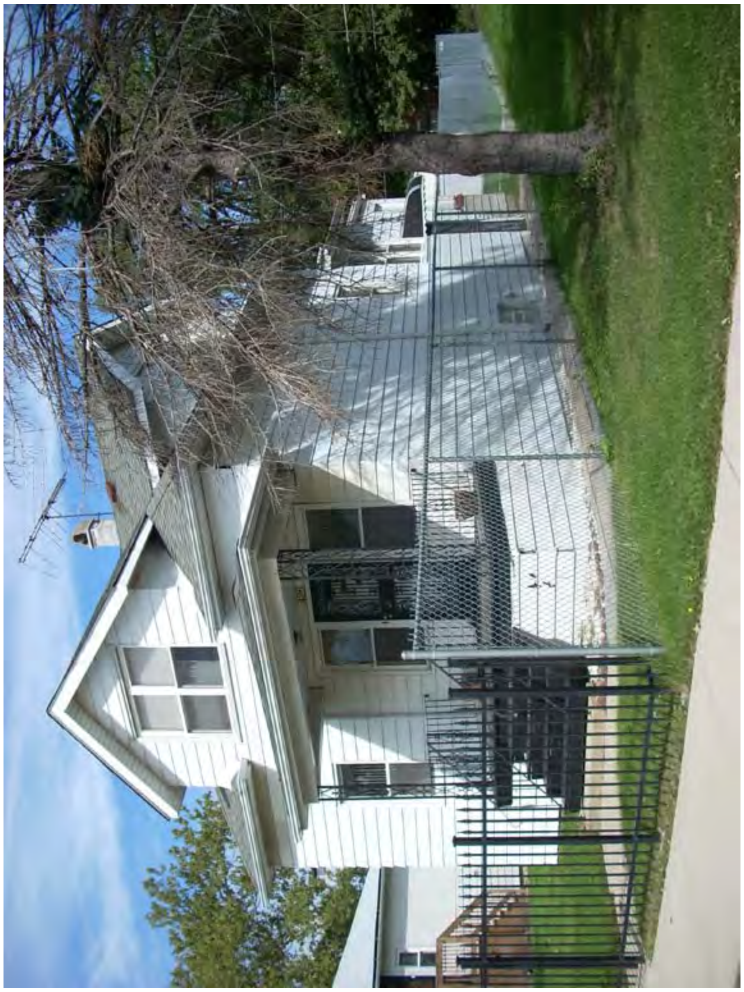
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 10 October 2012

Photos with Captions:
South and façades of a 1.5-story, single family, frame residence.



Property Description: **Stories:** 1.5

This one-and-a-half story house in the Washington Heights community is situated on a raised basement that is covered with siding and has glass block windows. The house is clad with synthetic siding and has a hip roof covered with asphalt shingles, overhanging eaves, and gable dormers on the front and side elevations. Its front elevation has an off-center hollow-core metal door and a partial-width hip-roof porch with wood steps and open metal supports. There are three windows on the first floor and two in its gabled wall dormer, all of which are non-original one-over-one aluminum-sash. This house lacks integrity, does not display distinguishing architectural features, and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered	[✓ Slight Modification]	Major Alteration	**Additional Notes/Descriptions** Replacement door, windows, and cladding
Condition: Excellent	[✓ Good]	Poor	
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** Dormers	**Roof Type** Hip	
Ornamental Architectural Details None			**Windows** Double-hung, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

430 W. 100th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1919

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

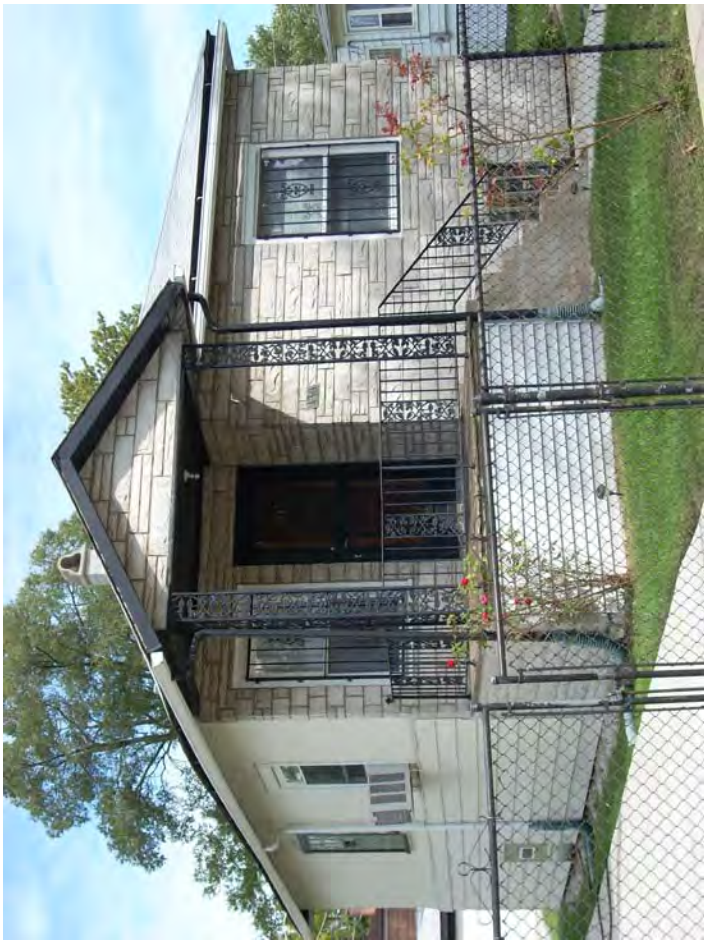
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 10 October 2012

Photos with Captions:
South and west façades of a one-story, single family residence.



Property Description: **Stories:** 1

This one-story cottage in the Washington Heights community sits on a raised basement with glass block windows. It has a hip roof covered with asphalt shingles. Its front elevation is clad with faux stone and its side and rear elevations are clad with synthetic siding and stucco. Its front elevation has a partial-width gabled porch with concrete steps and non-original open metal supports. It also has an off-center entrance with a metal storm door and two non-original one-over-one aluminum-sash windows. This house lacks integrity, does not feature distinguishing architectural elements, and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows, porch supports, and cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding (sides), faux stone (façade), stucco (sides)	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Hip	
Ornamental Architectural Details None			**Windows** Double-hung, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

334 W. 101st Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1949

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

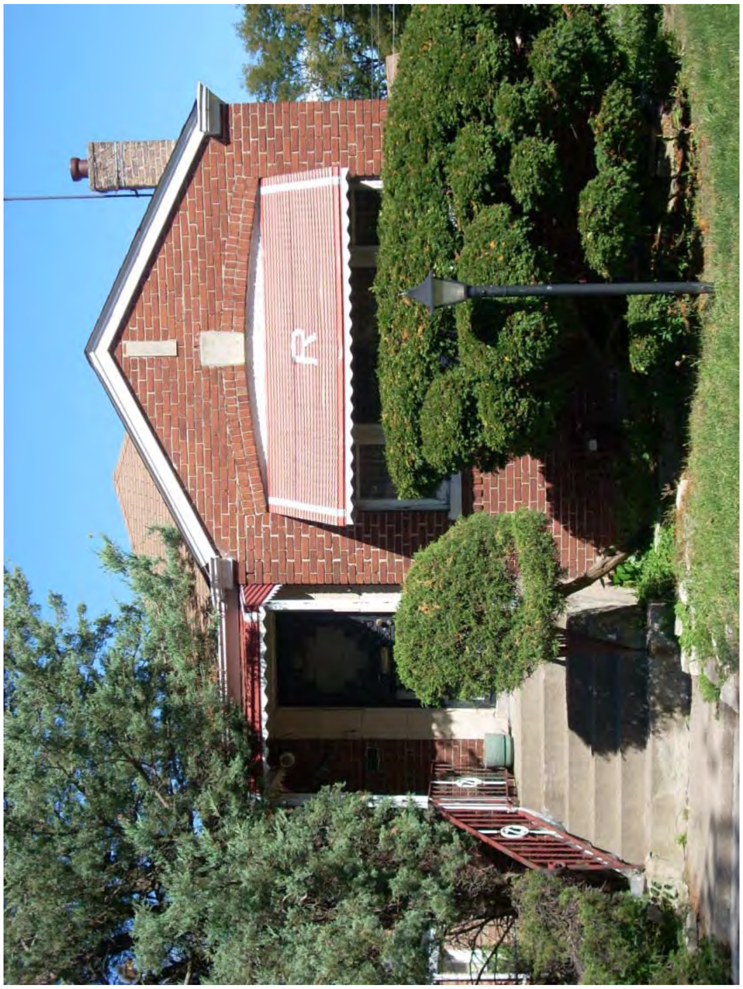
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 9 October 2012

Photos with Captions:
South façade of a brick, one-story, single family residence.



Property Description: **Stories:** 1

This one-story house in the Roseland community has a hip roof covered with asphalt shingles and a projecting gable-roofed living room. The front elevation is clad with brownish-orange face brick. Its off-center entrance features a metal storm door and a porch with concrete steps, metal railings and open metal posts supporting a metal awning. The front elevation has a window grouping that is partially obscured by a low metal canopy but appears to be a picture window flanked by double-hung windows. The side elevations are clad with common brick. Detailing includes a brick arch with stone keystone above the front elevation window group and stone blocks surrounding the door. This house does not feature sufficient distinguishing architectural elements to be individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
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Structural Survey

<table>
<tr><td colspan="3">Integrity:
[✓ Unaltered] Slight Modification Major Alteration</td><td>Additional Notes/Descriptions</td></tr>
<tr><td colspan="3">Condition:
[✓ Excellent] Good Poor</td><td></td></tr>
<tr><td colspan="3">Additional Alterations</td><td></td></tr>
<tr><td colspan="2">Structure Usage
Current: NA
Historic: NA</td><td>Exterior Wall Surface
Brick</td><td></td></tr>
<tr><td>Roof Material
Asphalt shingle</td><td>Roof Features
None</td><td>Roof Type
Hip</td><td></td></tr>
<tr><td colspan="3">Ornamental Architectural Details
Brick arch with stone keystone, stone blocks at entrance</td><td>Windows
Double-hung, fixed-pane</td></tr>
<tr><td colspan="4">Outbuildings (<i>Number and Description</i>)
None</td></tr>
</table>

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

349 W. 101st Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1965

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

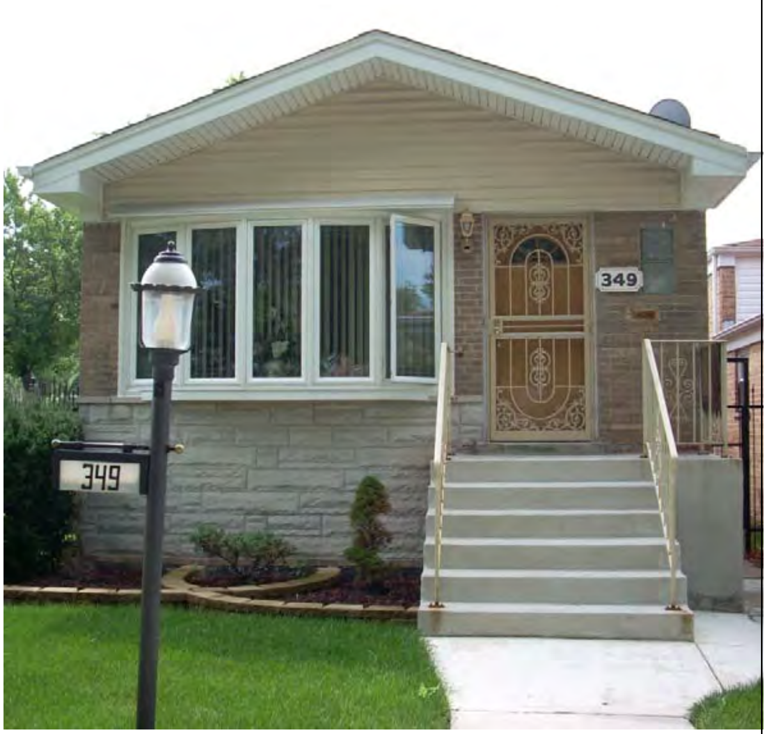
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 4 September 2012

Photos with Captions:
North façade of brick, single family residence.



Property Description: **Stories:** 1

This one-story house has gable front roof covered with asphalt shingles. Its front façade is sheltered by an overhang and is clad orange face brick, stone, and clapboards. A bow window with casements fronts the street façade. The off-center metal core door is accessed via a concrete stoop with metal hand rails. The side elevations are clad in common brick. This home does not have distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

<table>
<tr><td colspan="3">Integrity:
[✓ Unaltered] Slight Modification Major Alteration</td><td>Additional Notes/Descriptions</td></tr>
<tr><td colspan="3">Condition:
[✓ Excellent] Good Poor</td><td></td></tr>
<tr><td colspan="3">Additional Alterations</td><td></td></tr>
<tr><td colspan="2">Structure Usage
Current: NA
Historic: NA</td><td>Exterior Wall Surface
Brick and stone (façade), clapboard (gable end)</td><td></td></tr>
<tr><td>Roof Material
Asphalt shingle</td><td>Roof Features
None</td><td>Roof Type
Hip</td><td></td></tr>
<tr><td colspan="3">Ornamental Architectural Details
None</td><td>Windows
Casement</td></tr>
<tr><td colspan="4">Outbuildings (<i>Number and Description</i>)
Garage</td></tr>
</table>

Local Landmark	**Y [✓ N]**	
National Register Historic Places	**Y [✓ N]**	
National Register Historic District	**Y [✓ N]**	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

331 W. 101st Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1952

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

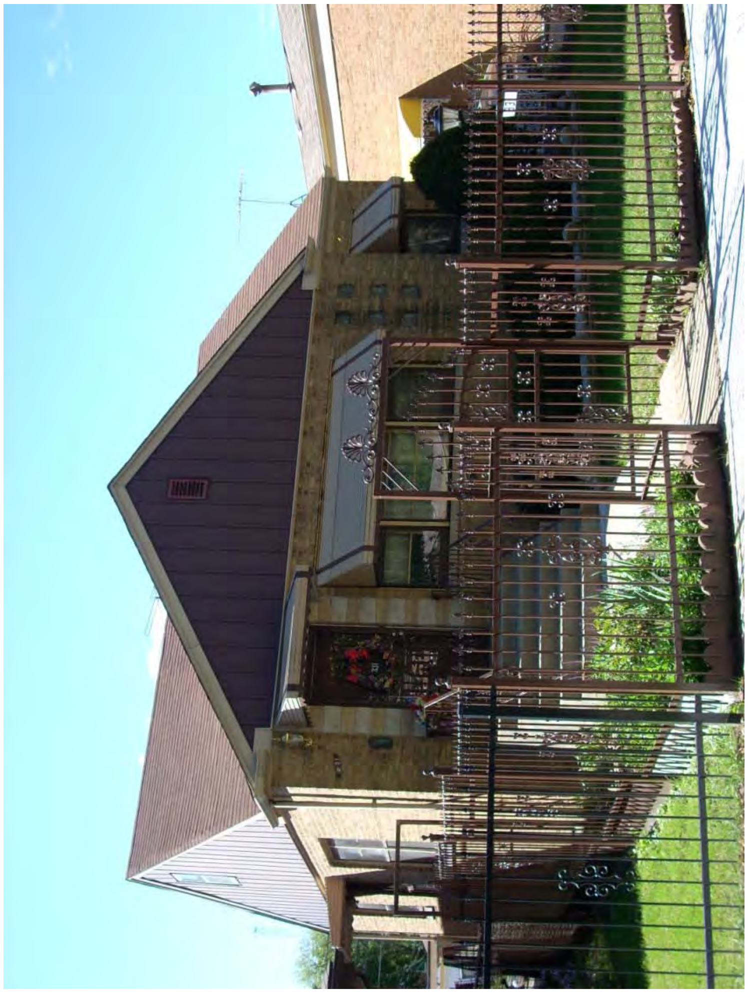
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 16 September 2012

Photos with Captions:
North façade of one-story, single family, brick residence.



Property Description: **Stories:** 1

This one-story house in the Roseland community has a side gable roof covered with asphalt shingles. It is clad with brick on the first floor and with synthetic siding in the gables. The front elevation has a gabled projecting living room, an off-center door with concrete steps and metal railings, a picture window flanked by non-original one-over-one aluminum-sash windows, and a single non-original one-over-one aluminum-sash window. Detailing includes stone insert blocks flanking the door and several decorative glass insert blocks. It does not display distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows on street elevation
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick (main), Synthetic siding (gable ends)	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Side-gable	
Ornamental Architectural Details Stone insert blocks around door, decorative glass insert blocks			**Windows** Double-hung, fixed-pane
Outbuildings (*Number and Description*) Storage shed			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

342 W. 101st Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1948

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

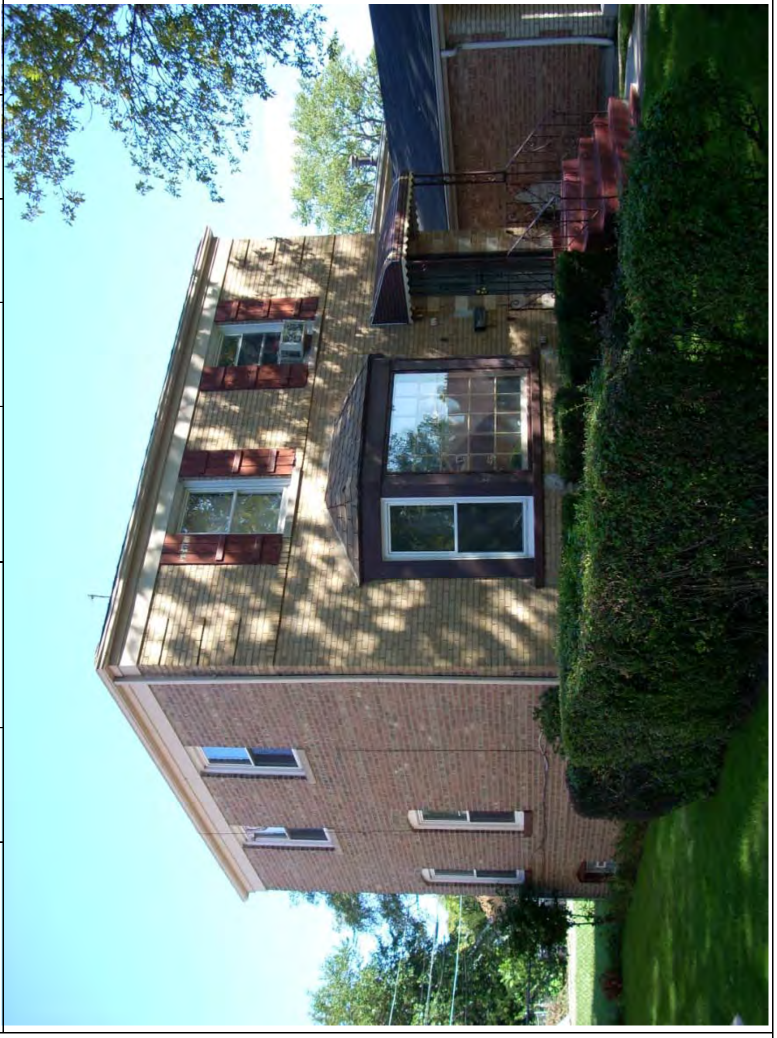
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 16 September 2012

Photos with Captions:
South and west façades of two-story, brick, single-family residence.



Property Description: **Stories:** 2

This two-story house in the Roseland community is situated on a raised brick basement and has a hip roof covered with asphalt shingles. Its front elevation is clad with buff brick. This elevation has an off-center hollow core metal door, a porch with concrete steps and metal railings, open metal supports, and a metal awning roof. It has a three-sided first floor bay with central multi-light fixed-pane window flanked by non-original one-over-one aluminum-sash windows and two non-original one-over-one aluminum-sash windows on the second floor. Detailing includes brick quoins and faux stone insert blocks flanking the door and beneath the window bay. It does not display distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity:

Unaltered [✓ Slight Modification] Major Alteration

Additional Notes/Descriptions

Replacement door and windows

Condition:

[✓ Excellent] Good Poor

Additional Alterations

Structure Usage	**Exterior Wall Surface**
Current: NA Historic: NA	Brick

Roof Material	**Roof Features**	**Roof Type**
Asphalt shingle	None	Hip

Ornamental Architectural Details

Brick quoins, faux stone insert blocks

Windows

Double hung, fixed-pane

Outbuildings (*Number and Description*)

Storage shed

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

349 W. 101st Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1930

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

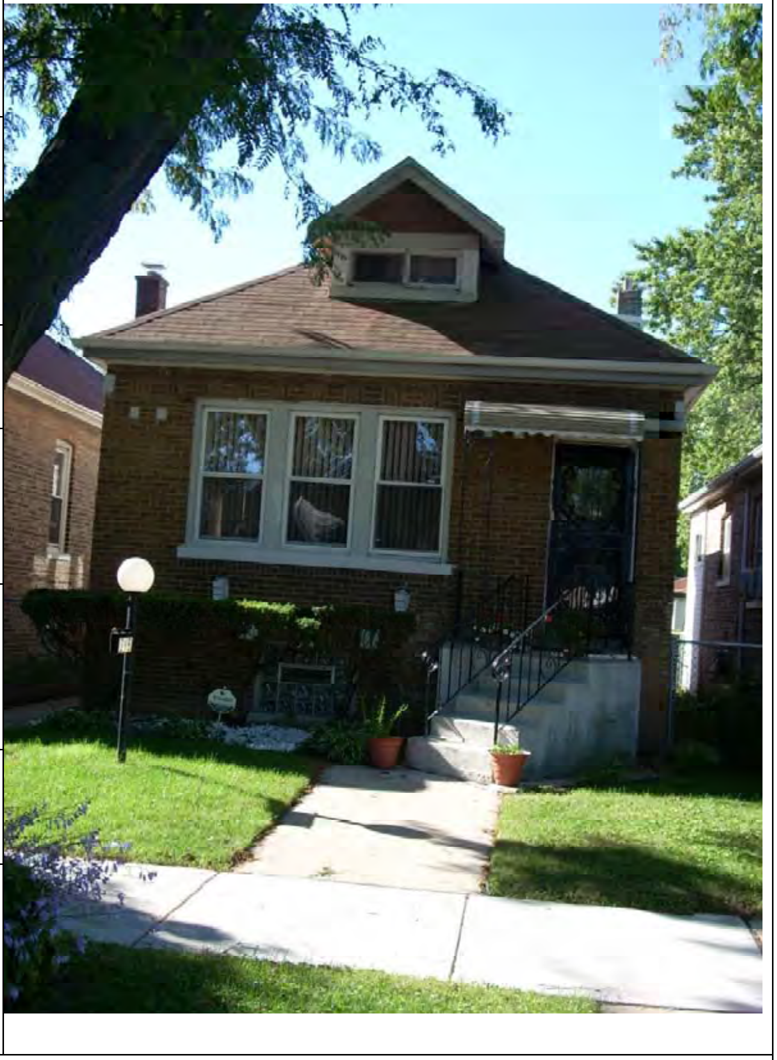
Chicago Bungalow

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 10 September 2012

Photos with Captions:
North façade of brick, single family residence.



Property Description: **Stories:** 1

This one-story home in the Roseland community is clad in brown face brick and common brick along its front and side elevations, respectively. It has a hip roof covered with asphalt shingles. Its front elevation has an off-center door and a porch with concrete steps, metal railings, open metal supports, and metal awning roof. The front façade features a strip of three non-original one-over-one windows with concrete sills and a gable dormer with two single-pane windows. Glass block windows provide light in the basement. This building lacks distinguishing architectural features and is not individually eligible for listing on the National Register.

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows and door
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingle	**Roof Features** Dormer	**Roof Type** Hip	
Ornamental Architectural Details Concrete sills			**Windows** Double-hung, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

351 W. 101st Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1930

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

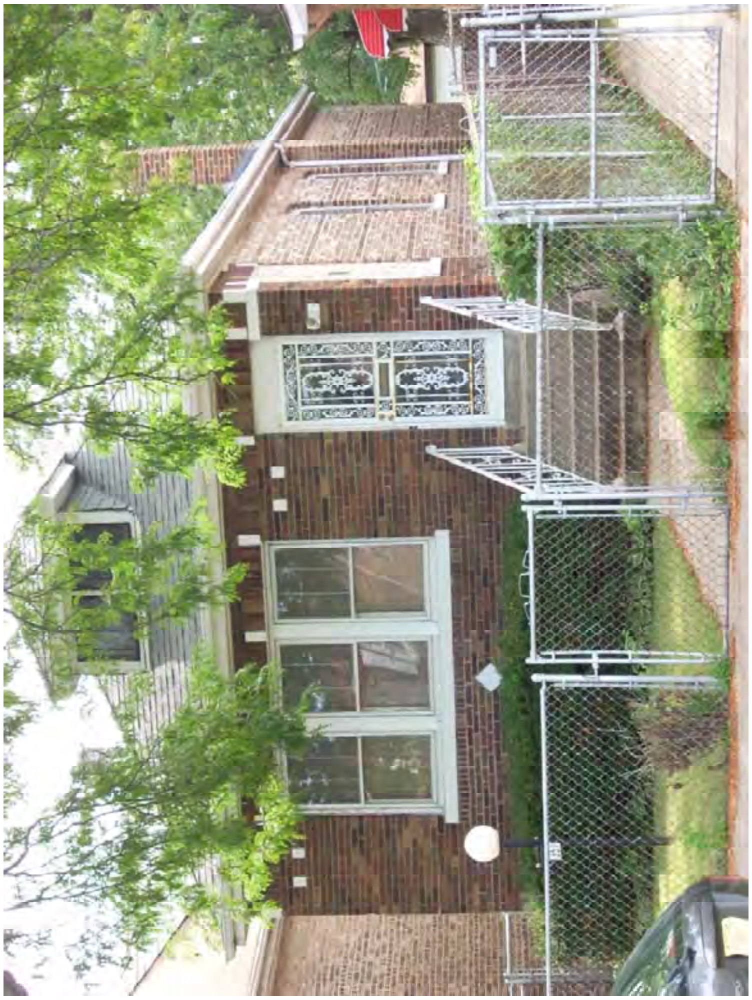
Chicago Bungalow

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S.Katz

Date: 4 September 2012

Photos with Captions:
North and west façades of a one-story, brick single family residence.



Property Description: **Stories:** 1

This one-story house is situated on a raised basement. It has a rectangular footprint, a hip roof covered with asphalt shingles, and a hip roof dormer with paired windows. Its front façade is clad in brown face brick with concrete block inserts and has a strip of three three-over-one windows. Its off-center metal core door is accessed via a short flight of concrete steps with metal railings. The side elevations are clad in common brick. This home does not have distinguishing architectural features and is not individually eligible for listing on the National Register.

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Structural Survey

Integrity: [✓ Unaltered] Slight Modification Major Alteration			**Additional Notes/Descriptions**
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingle	**Roof Features** Dormer	**Roof Type** Hip	
Ornamental Architectural Details Concrete block inserts			**Windows** Double-hung
Outbuildings (*Number and Description*) Garage			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

352 W. 101st Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1960

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

Vernacular

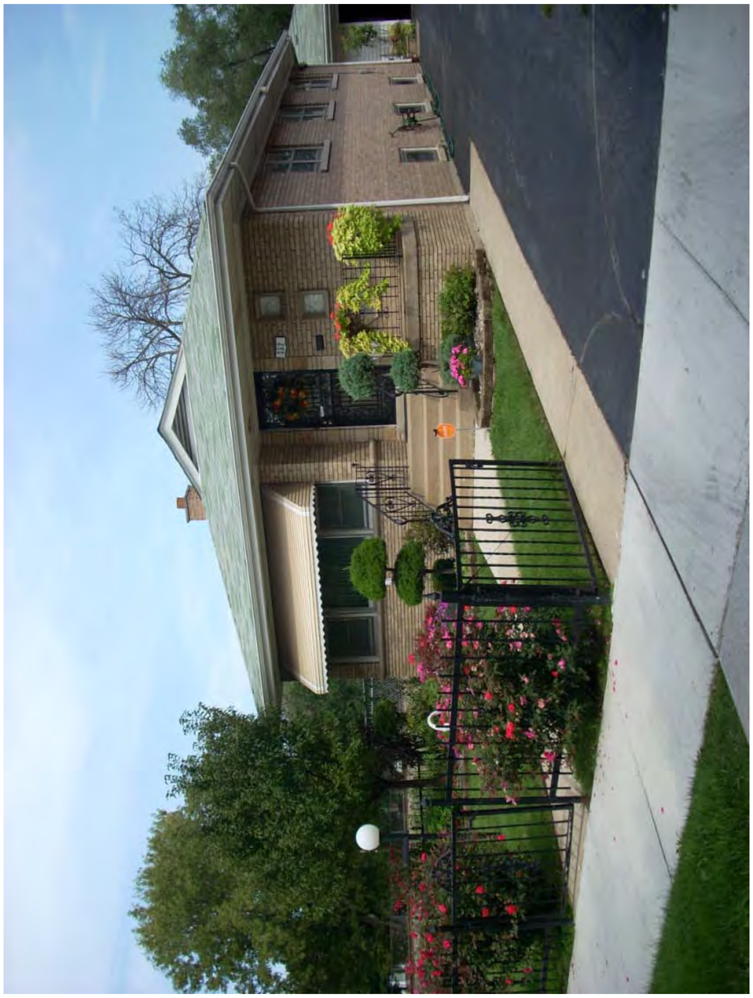
Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 4 September 2012

Photos with Captions:

South and east façades of one-story, brick story single family residence.



Property Description: **Stories:** 1

This one-story house is situated on a raised basement. It has a rectangular footprint, a hip roof covered with asphalt shingles, and overhanging eaves. Its front façade is clad in buff face brick and has a strip of three windows, which appears to be one large picture window flanked by double-hung windows, beneath a metal awing. The off-center metal core front door is accessed via a flight of concrete steps with metal railings. Two large decorative glass blocks are situated next to the door. The side elevations are clad in common brick. This home does not have distinguishing architectural features and is not individually eligible for listing on the National Register.

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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration				**Additional Notes/Descriptions**
Condition: [✓ Excellent] Good Poor				
Additional Alterations				
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick		
Roof Material Asphalt shingle	**Roof Features** Gablet	**Roof Type** Hip		
Ornamental Architectural Details None				**Windows** Fixed-pane, double-hung, glass block
Outbuildings (*Number and Description*) Garage				

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

330 W. 102nd Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1930

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

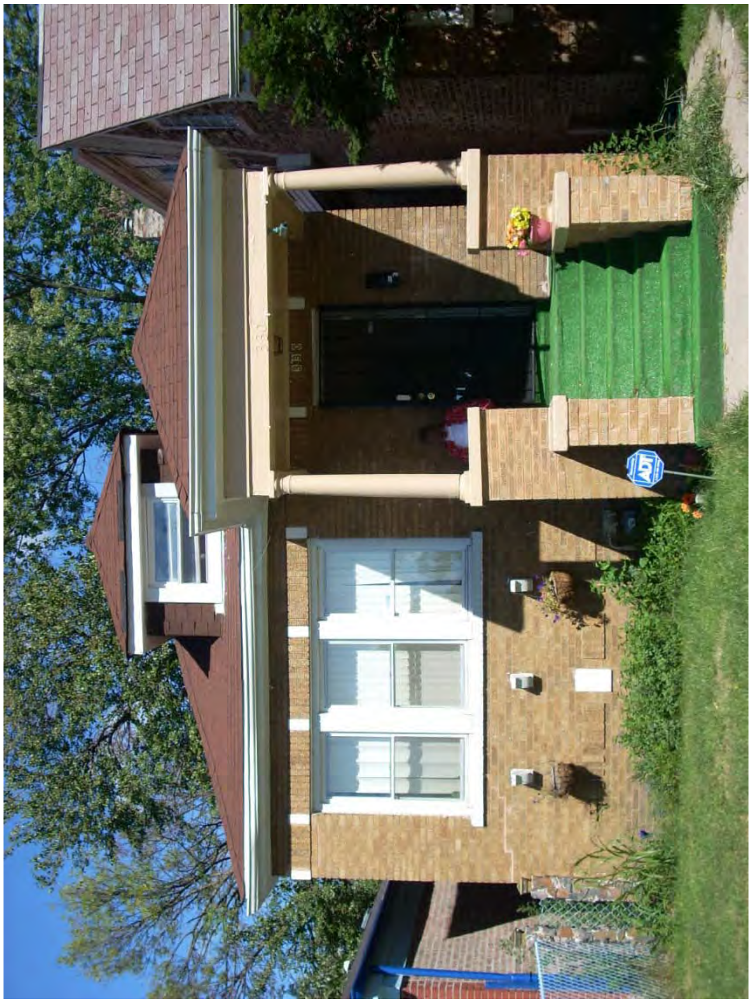
Chicago Style Bungalow

Prepared By: J. Martinez, M. C. Bird, J. Guairno

Photo By: S. Katz

Date: 9 October 2012

Photos with Captions:
South façade of a brick, one-story, single family residence.



Property Description: **Stories:** 1

This one-story bungalow in the Roseland community has a hip roof covered with asphalt shingles and a hip dormer with a non-original one-over-one aluminum-sash window. The front elevation is clad with light brown face brick and has a hip-roofed porch with brick sidewalls, concrete steps, short wood Doric columns and frieze band. This elevation also has a strip of three non-original one-over-one aluminum-sash windows. Detailing includes a stone sill course, a brick soldier course with stone insert blocks above the windows, and decorative scrolled stone brackets. This house does not feature sufficient distinguishing architectural features to qualify as individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingle	**Roof Features** Dormer	**Roof Type** Hip	
Ornamental Architectural Details Doric columns and frieze band, stone sill course, brick soldier course with stone insert block, stone brackets			**Windows** Double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

348 W 102nd Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1927

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

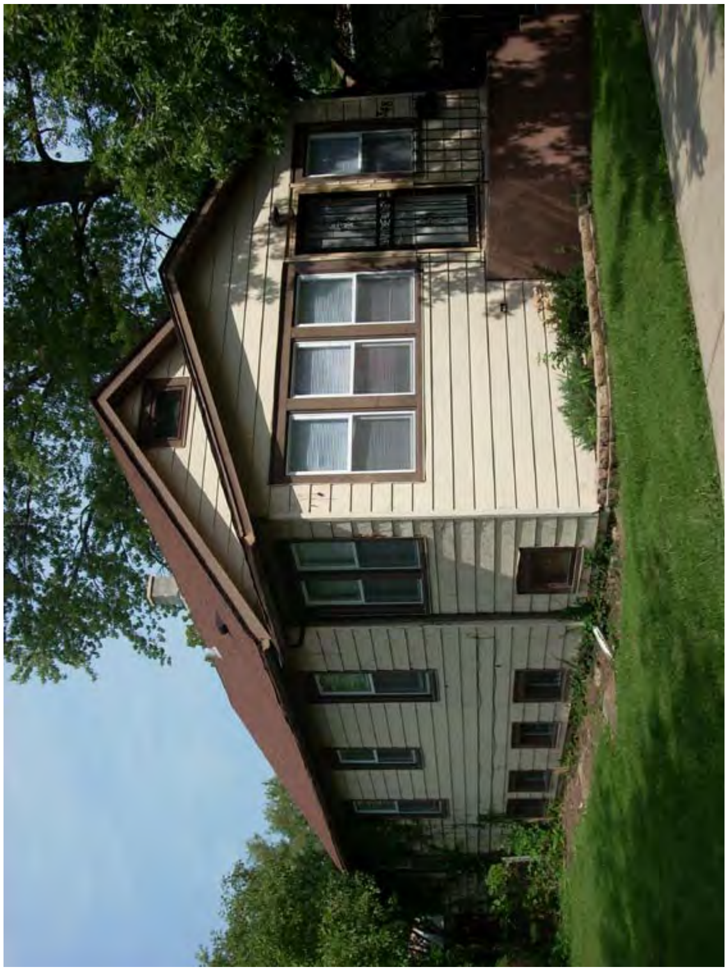
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: Steve Katz

Date: 21 September 2012

Photos with Captions:
South and west façades of one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story house in Roseland is clad in synthetic siding, sits atop a raised basement, and has a front gable roof covered with asphalt shingles. The front elevation features a projecting, enclosed, gable roofed sun porch also clad in synthetic siding with one-over-one windows and an off-center front door accessed by a flight of concrete steps with metal railings. This home does not have distinguishing architectural features and is covered with synthetic siding, both of which preclude it from individual listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement siding
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Vinyl siding	
Roof Material Asphalt	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

416 W. 102nd Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1929

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

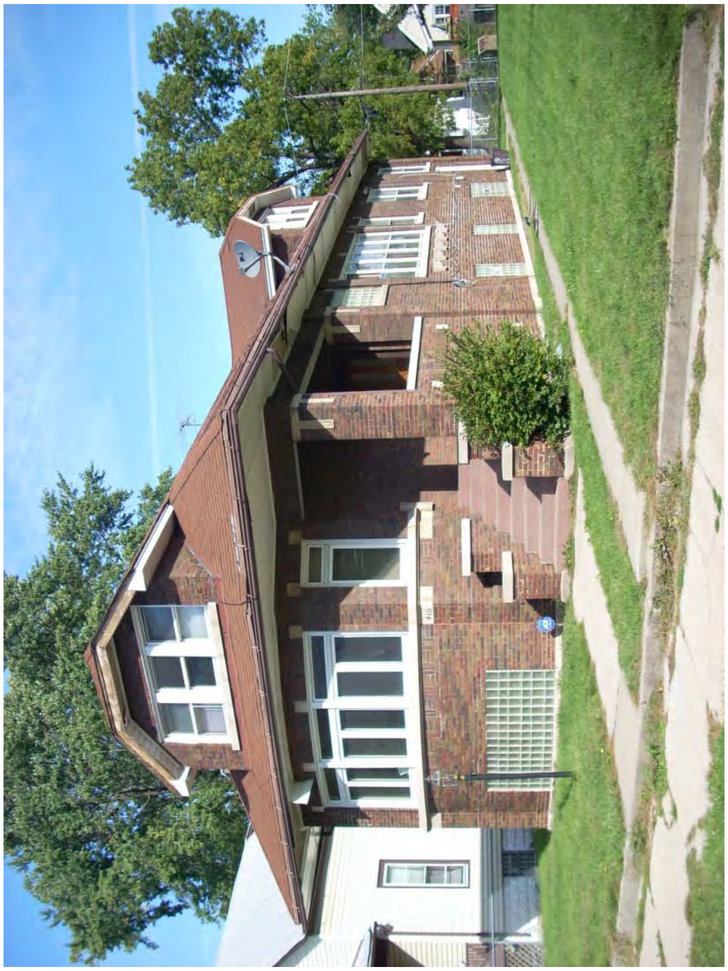
Chicago Style Bungalow

Prepared By: J. Martinez, M. C. Bird, J. Guairno

Photo By: S. Katz

Date: 10 October 2012

Photos with Captions:
South and east façades of a brick, one-story, single family residence.



Property Description: **Stories:** 1

This one-story house in the Washington Heights community is situated on a raised basement with glass block windows. It is clad with brown brick and has a hip roof covered with asphalt shingles and overhanging eaves. There are hip-on-gable dormers on the front and side elevations, each of which has a strip of non-original one-over-one aluminum-sash windows. The house features a recessed corner porch with a single-light oak door, concrete steps, low brick sidewalls, and a brick corner pier. The front elevation’s rounded living room bay has a series of casement windows and transoms. Detailing includes a brickwork soldier course above windows with decorative stone insert blocks and concrete sills. This is a good example of a brick Chicago Style Bungalow, a building type that was produced in the thousands throughout the city’s undeveloped areas and in nearby suburbs during the 1910s and 1920s. This house does not feature sufficient distinguishing architectural features to be individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingle	**Roof Features** Dormers	**Roof Type** Hip	
Ornamental Architectural Details Brick soldier courses above windows, stone insert blocks, concrete sills			**Windows** Double-hung, casement, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

320 W 102nd Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1929

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

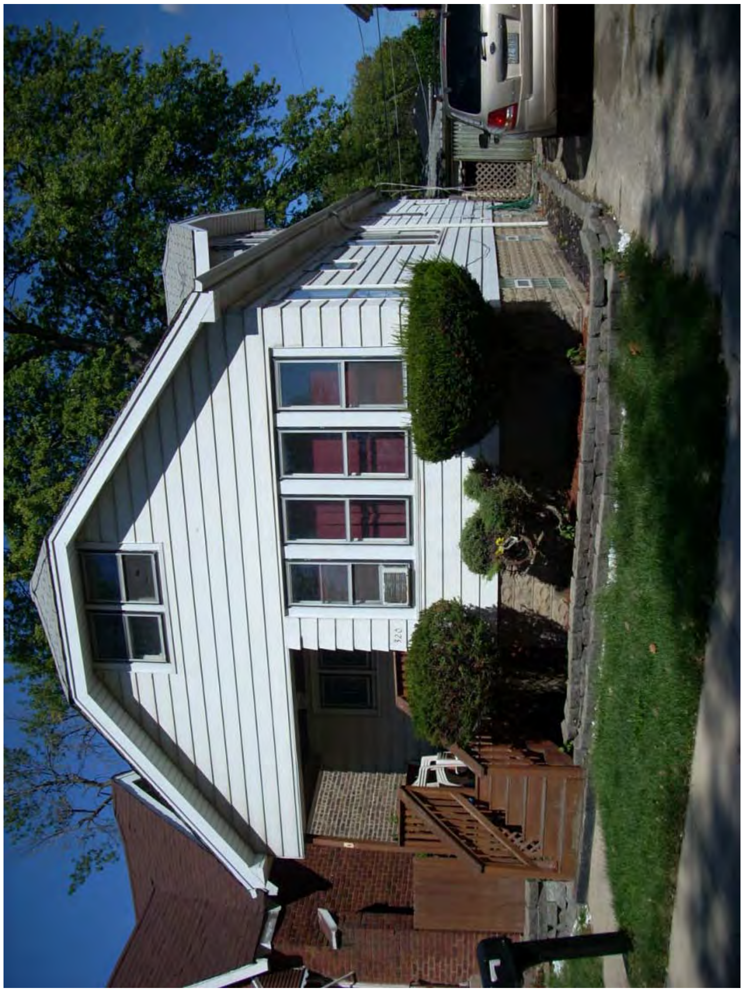
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 9 October 2012

Photos with Captions:
South façade of a one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story frame house in the Roseland community is situated on a raised concrete block basement with glass block windows. It is clad with synthetic siding, has a hip-on-gable roof covered with asphalt shingles, and has overhanging eaves in front with aluminum soffits. The front elevation features a recessed corner porch with wood steps, railings, and corner post. A pair of casement windows is located within the porch. There is a strip of four windows on the first floor and a pair of windows in the gable. All windows are non-original one-over-one aluminum-sash. This house does not feature sufficient integrity or distinguishing architectural features to qualify as individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
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Structural Survey

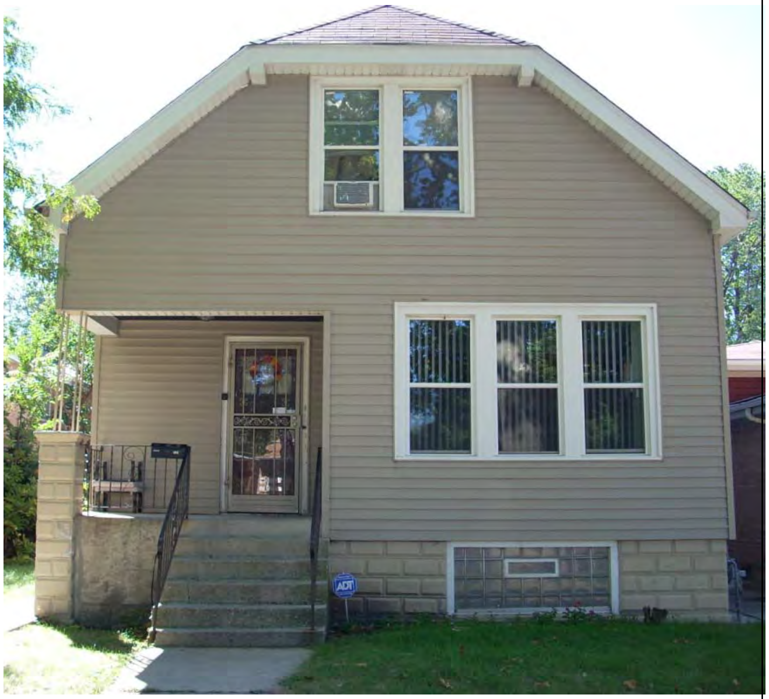
Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows and siding
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** Dormer	**Roof Type** Hip-on-gable	
Ornamental Architectural Details None			**Windows** Double-hung, glass block, casement
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name **Historic:** Bldg. not labeled, not in CHRS **Common/Current:** Unknown	**Photos with Captions:** North façade of a 1.5-story, single family, frame residence. 
Property Address: 337 W. 102nd Street	
HAARGIS Number: Not in database	
Present Owner and /or Occupant: Unknown	
Property Use **Historic:** Single family residence **Current:** Single family residence	
Date of Construction: 1930 **Architect's Name:** Not in CHRS **Builder/Contractor:** Not in CHRS	
Architectural Style: Vernacular	
Prepared By: J. Martinez, M. C. Bird, J. Guarino **Photo By:** S. Katz **Date:** 9 October 2012	

Property Description: **Stories:** 1.5

This one-and-a-half-story frame house in the Roseland community is situated on a raised concrete block basement with glass block windows. It is clad with synthetic siding and has a hip-on-gable roof covered with asphalt shingles. The front elevation features a recessed porch with concrete steps, metal railings, and a corner support consisting of a faux stone pier with open metal post above. This elevation also has overhanging eaves with aluminum soffits and decorative exposed rafters, an off-center recessed door with a metal storm door, and a strip of three windows on the first floor and a pair of windows in the gable, all of which are non-original one-over-one aluminum-sash. This residence does not feature sufficient integrity or distinguishing architectural features to qualify as individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
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Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** Dormer	**Roof Type** Hip-on-gable	
Ornamental Architectural Details Exposed rafters			**Windows** Double-hung, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

342 W. 102nd Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1940

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

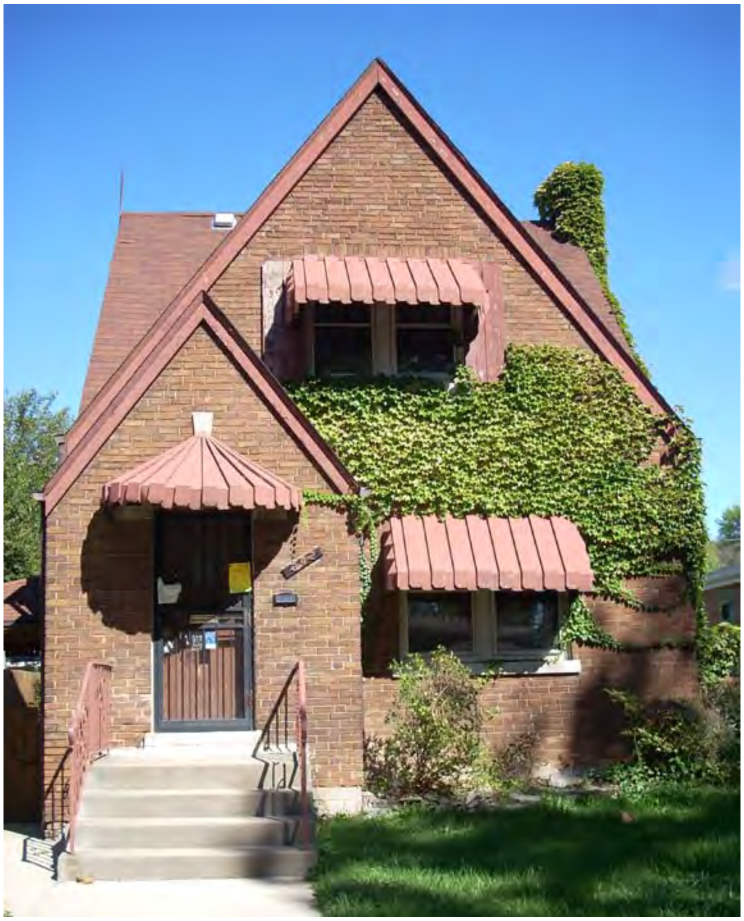
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 9 October 2012

Photos with Captions:
South façade of a brick, 1.5-story, single family residence.



Property Description: **Stories:** 1.5

This one-and-a-half-story house in the Roseland community has a cross-gable roof covered with asphalt shingles and is clad with brown face brick. Its front elevation has an off-center, gable roofed entrance vestibule with a metal storm door sheltered by a metal awning, concrete steps, metal railings, and paired double-hung windows on both the first and second floors that are partially obscured by low metal awnings. A one-story hip roof covered side entrance is situated along the west elevation. Detailing includes concrete sills, a keystone above the entrance, and brick soldier course lintels. This house does not feature sufficient distinguishing architectural features to qualify as individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: [✓ Unaltered] Slight Modification Major Alteration			**Additional Notes/Descriptions**
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingle	**Roof Features** Dormer	**Roof Type** Cross-gable	
Ornamental Architectural Details Concrete sills, keystone above the entrance, brick soldier course lintels			**Windows** Double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

348 W 102nd Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1939

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

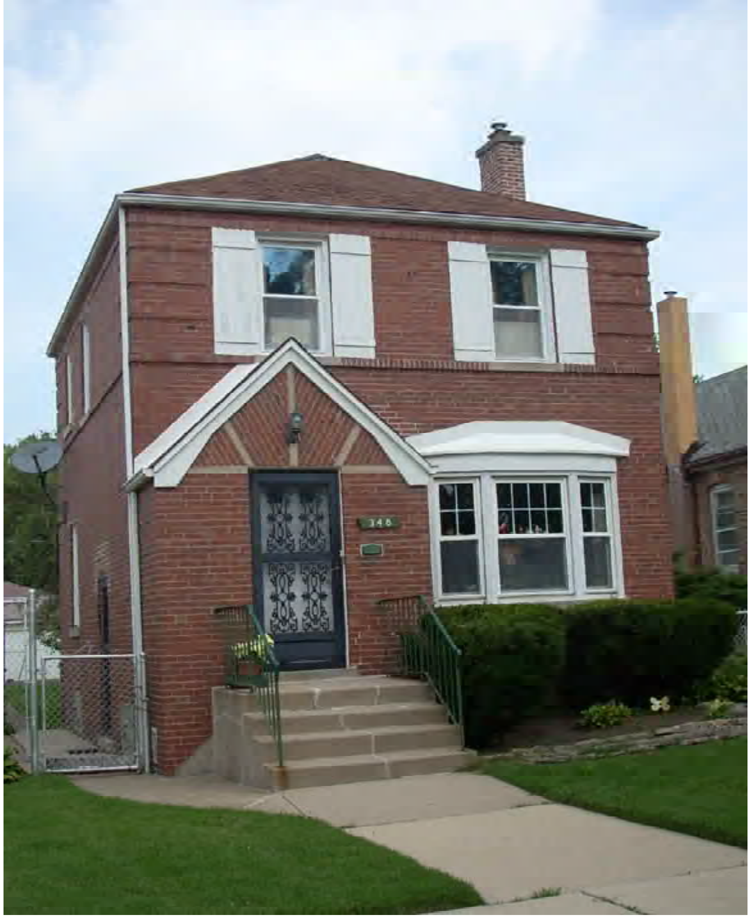
Minimal Traditional

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: J. Martinez

Date: September 2012

Photos with Captions:
South façade of brick, two-story, single family residence.



Property Description: **Stories:** 2

This two-story, brick-clad house in Roseland has a square footprint and a hip roof covered with asphalt shingles. An off-center, projecting, gable-roofed vestibule with front door is accessed via a short flight of concrete steps with metal railings. The front elevation has a three-sided bay with a central eight-over-one window flanked by four-over-one windows, and the second floor has two one-over-one windows with wood shutters. Windows are modern replacements. Detailing includes brick banding on the second floor and concrete bands in the vestibule gable meant to simulate half-timbering. This house lacks architectural distinction; as a result, it is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Unknown	**Roof Features** None	**Roof Type** Hip	
Ornamental Architectural Details Brick banding, concrete bands for half-timber look			**Windows** Double-hung
Outbuildings (*Number and Description*) Garage			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

352 W. 102nd St.

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1930

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

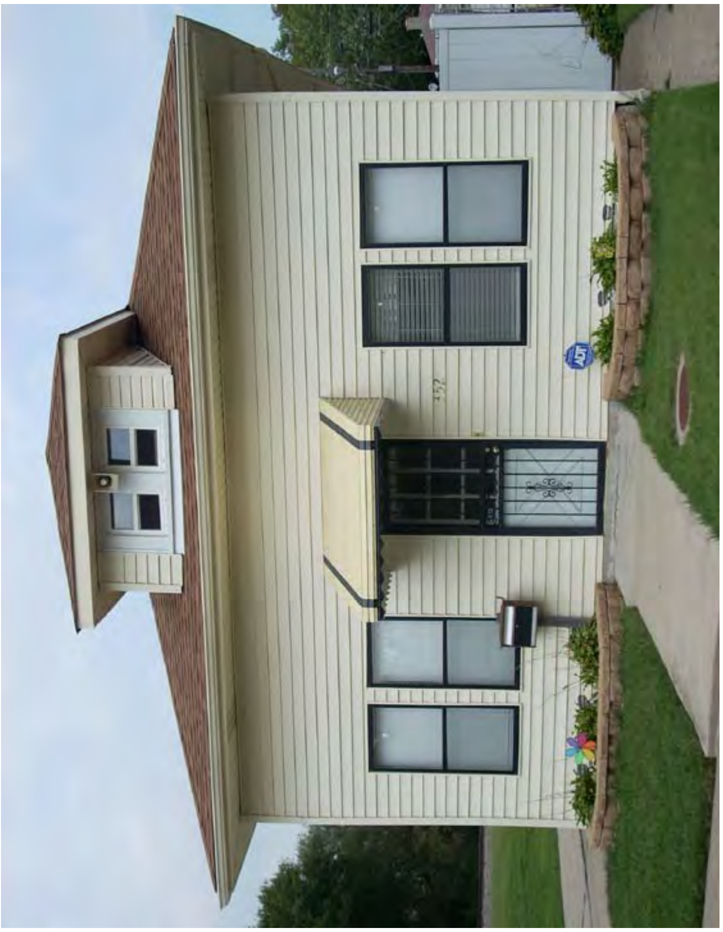
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: Steve Katz

Date: 21 September 2012

Photos with Captions:
South façade of one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story home in the Roseland community is clad in synthetic siding and has a hipped roof with asphalt shingles and overhanging eaves. The front elevation features a centrally located front door flanked by two one-over-one aluminum-sash windows and has a hipped roof dormer with paired one-over-one windows. Windows are modern replacements; replacement windows in the dormer are smaller than the original windows. This structure lacks integrity and architectural distinction and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
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Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows and cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Vinyl siding	
Roof Material Asphalt	**Roof Features** Dormer	**Roof Type** Hip	
Ornamental Architectural Details None			**Windows** Double-hung
Outbuildings (*Number and Description*) Garage			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

444 W. 102nd Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1913

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

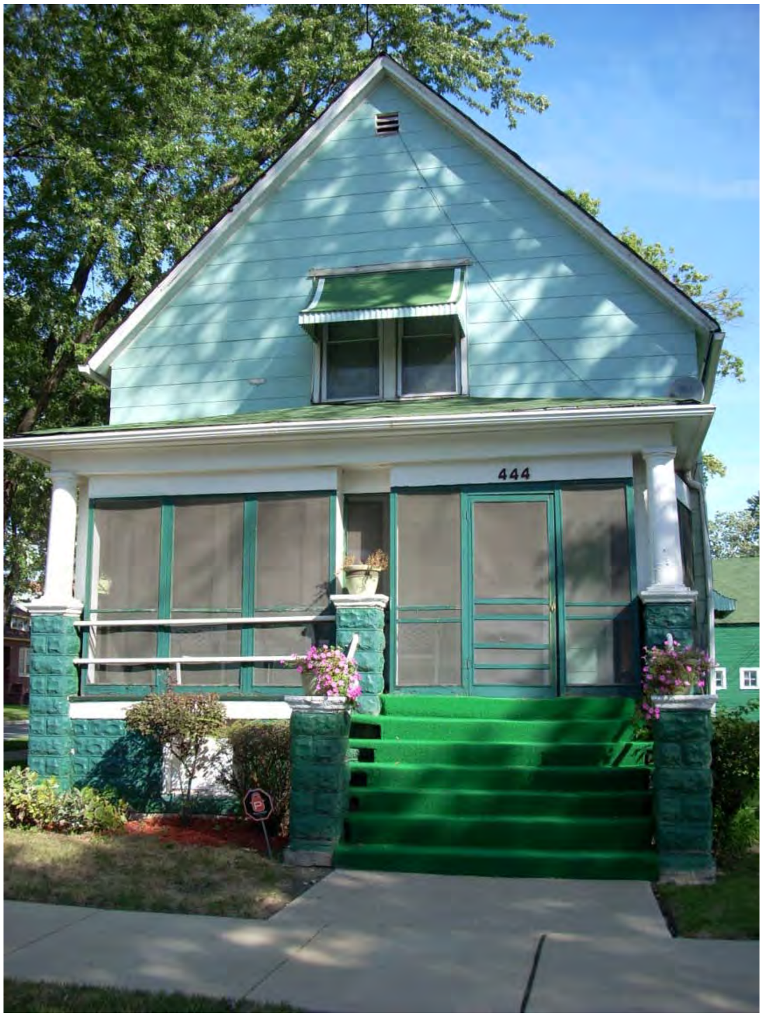
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 10 October 2012

Photos with Captions:
South façade of a 1.5-story, single family, frame residence.



Property Description: **Stories:** 1.5

This one-and-a-half-story frame house in the Washington Heights community is situated on a raised concrete block basement. It is clad with synthetic siding and has a gable roof covered with asphalt shingles. Its front elevation features a hip-roofed full-width screened-in porch with concrete steps, metal pipe railings, a faux stone base, and supports comprised of faux stone pedestals topped by squat Doric columns. A pair of windows sheltered by a metal awning is situated in the gable. A two-story, gable-roofed, bay pavilion is situated along one of the side elevations. Windows throughout the house are non-original one-over-one aluminum-sash. This house lacks integrity, does not display distinguishing architectural features, and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
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Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows and cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations Porch screened in			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y [✓ N]**	
National Register Historic Places	**Y [✓ N]**	
National Register Historic District	**Y [✓ N]**	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

301 W. 103rd Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1921

Architect's Name: Not in CHRS database

Builder/Contractor: Not in CHRS database

Architectural Style:

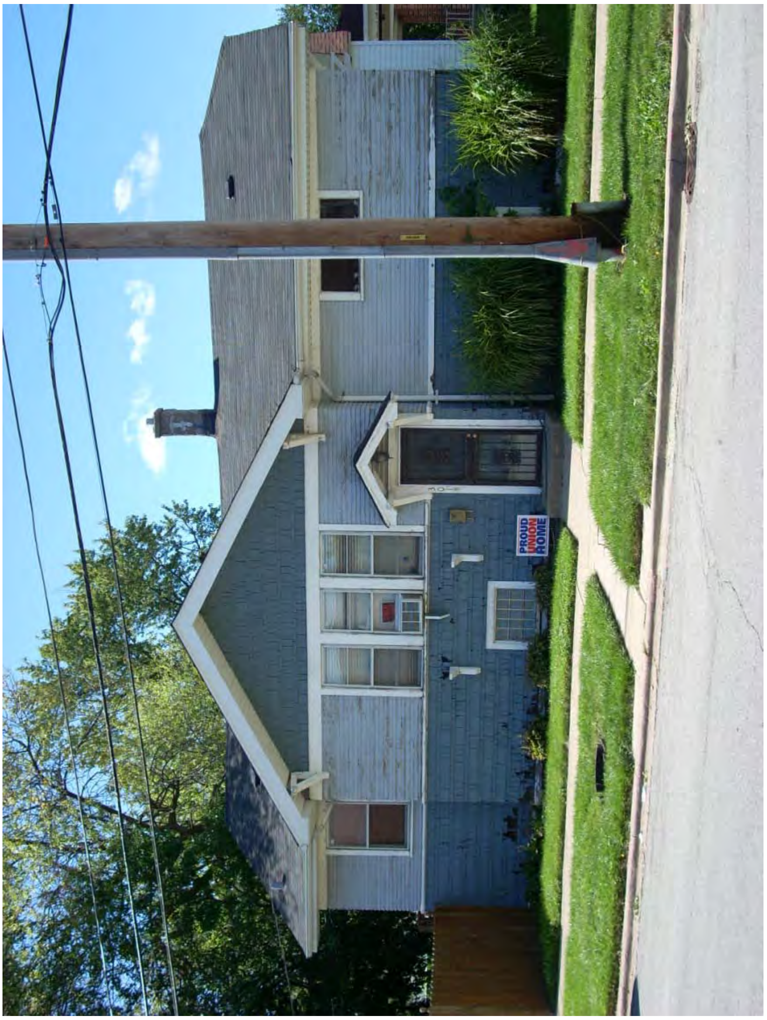
Craftsman

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 16 September 2012

Photos with Captions:
East (Princeton) façade of one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story Craftsman bungalow is situated at the southwest corner of 103rd Place and Princeton Avenue in the Roseland community. It has a hip-on-gable roof covered with asphalt shingles and overhanging eaves with decorative knee braces located on the front gable section of the roof. The central portion of the house retains its original wood clapboard siding; the areas above and below are clad with wood shingles. Its 103rd Place elevation has a strip of three one-over-one windows, a strip of three casements, and a strip of three windows in the gable that appear to be casements. Its Princeton Street elevation has a metal storm door topped by a gabled hood with two knee braces, glass block basement windows, a strip of three one-over-one windows, a single one-over-one window, and a pair of casements. This house does not have sufficient distinguishing features to qualify as individually eligible for listing on the National Register.

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Phone (815) 568- 0680

Structural Survey

Integrity: [✓ Unaltered] Slight Modification Major Alteration			**Additional Notes/Descriptions**
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Wood clapboards and shingles	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Hip-on-gable	
Ornamental Architectural Details Knee braces			**Windows** Double-hung, casement, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

306 W. 103rd Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Vacant

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1941

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

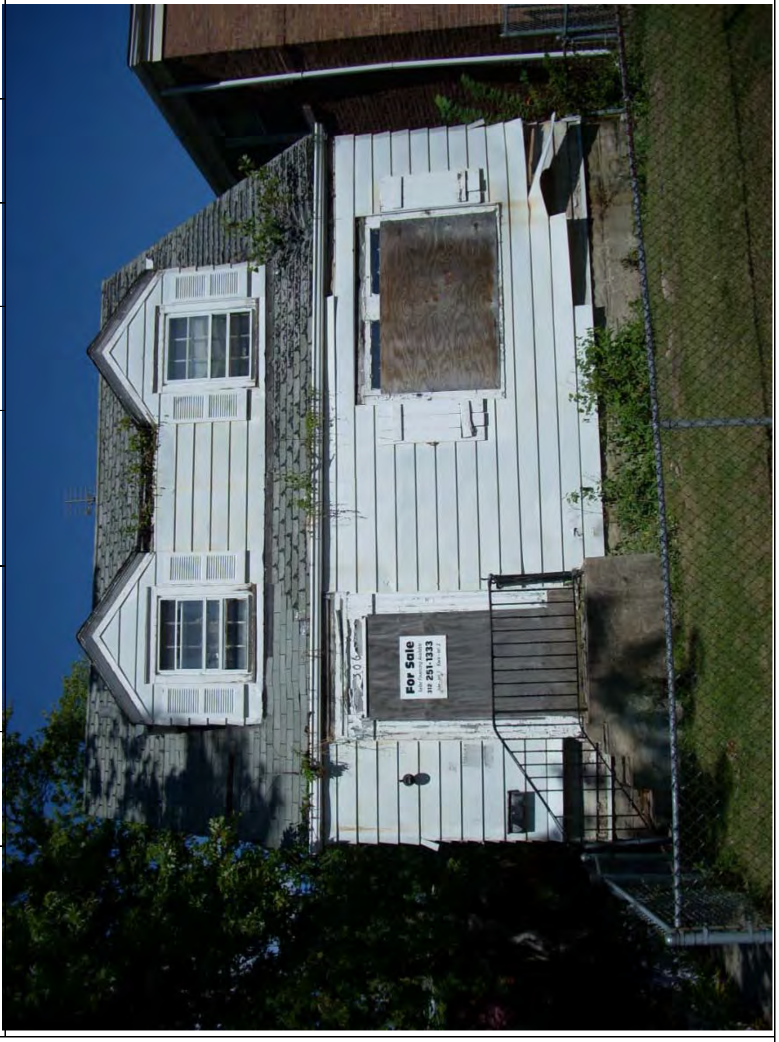
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 16 September 2012

Photos with Captions:
South façade of one-story, single-family, frame residence.



Property Description: **Stories:** 1

This one-story frame cottage in the Roseland community is clad with synthetic siding, has a side-gabled roof covered with asphalt shingles, and has two gable dormers with double-hung multi-sash windows that are visually connected with aluminum siding. The front elevation has an off-center door covered with plywood and a Classical surround consisting of simple wood pilasters and unadorned entablature. The front elevation also has concrete steps with metal railings and paired windows that are covered with plywood. This home does not have distinguishing features and is not individually eligible for listing on the National Register.

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Structural Survey

Integrity: Unaltered	[✓ Slight Modification]	Major Alteration	**Additional Notes/Descriptions** replacement siding and windows
Condition: Excellent	Good	[✓ Poor]	
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** Dormers	**Roof Type** Side-gable	
Ornamental Architectural Details Pilasters at surround			**Windows** Double-hung, covered
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

321 W. 103rd Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1924

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

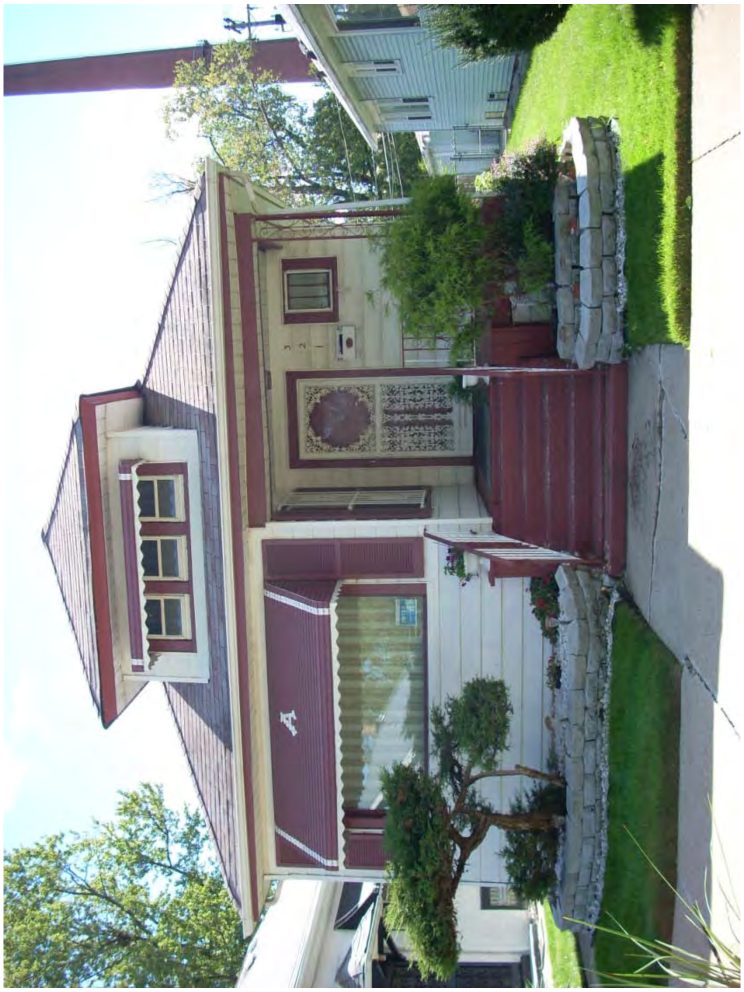
Craftsman

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 23 October 2012

Photos with Captions:
North façade of a one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story frame house in the Roseland community is clad with synthetic siding, has a hip roof covered with asphalt shingles, and a hip dormer with three one-over-one windows beneath a metal awning. The front elevation has a recessed corner porch with concrete steps, metal railings, and an open metal corner post. It also features an off-center entrance with metal storm door, a small casement window within the porch, and a large picture window beneath a metal awning. This house does not have sufficient integrity or distinguishing features to qualify as individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** Dormer	**Roof Type** Hip	
Ornamental Architectural Details None			**Windows** Double-hung, fixed pane, casement
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

326 W. 103rd Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Multi-family residence

Date of Construction: 1923

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

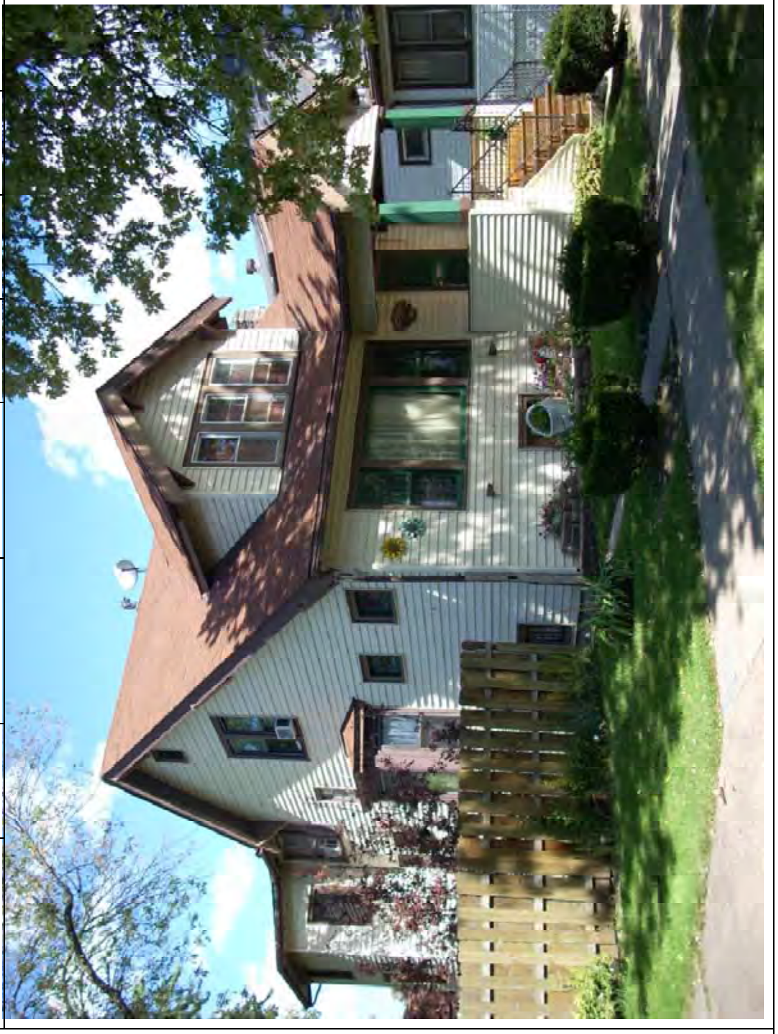
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 16 September 2012

Photos with Captions:
South and west façades of 1.5-story, multi-family, frame residence.



Property Description: **Stories:** 1.5

This one-and-a-half-story frame cottage in the Roseland community is situated on a raised brick basement with glass block windows. It is clad with aluminum siding and has a side-gabled roof covered with asphalt shingles. The house also has a gable dormer with a strip of one-over-one windows and decorative knee braces. Its front elevation has a partial-width, off-center, gable-roofed, wood porch with two squat Doric column supports atop aluminum-clad sidewalls, a door with metal storm, and a picture window flanked by one-over-one windows. Its western elevation has a three-sided window bay as well as a large shed roofed addition. This house does not have sufficient integrity or distinguishing features to qualify as individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement siding
Condition: [✓ Excellent] Good Poor			
Additional Alterations Shed roof addition			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** Dormer	**Roof Type** Side-gable	
Ornamental Architectural Details Doric columns, knee braces			**Windows** Double-hung, fixed-pane, glass block
Outbuildings (*Number and Description*) Two-car garage with hipped roof			

Local Landmark	**Y [✓ N]**	
National Register Historic Places	**Y [✓ N]**	
National Register Historic District	**Y [✓ N]**	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

426 W. 103rd Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1909

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

Vernacular

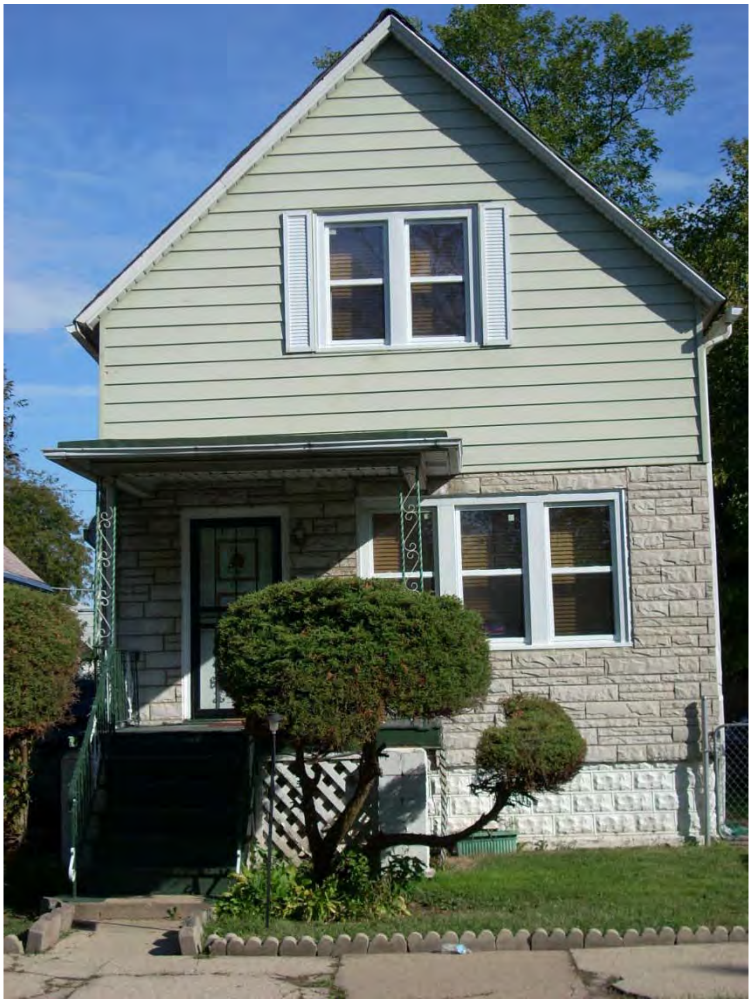
Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 10 October 2012

Photos with Captions:

South façade of a 1.5-story, single family, frame residence.



Property Description: **Stories:** 1.5

This one-and-one-half-story frame house in the Roseland community is situated on a raised concrete block basement with glass block windows. It is clad with faux stone and synthetic siding and has a front gable roof covered with asphalt shingles. Its front elevation has an off-center entrance with metal storm door and a flat-roofed, partial-width porch with a wood deck, wooden steps, metal railings, and open metal posts. There is a strip of three windows on the first floor and three on the second. All windows are non-original one-over-one aluminum sash. This house does not have sufficient integrity or distinguishing features to qualify as individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows, door, porch, and cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding, faux stone	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

427 W. 103rd Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Multi-family residence

Date of Construction: 1898

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

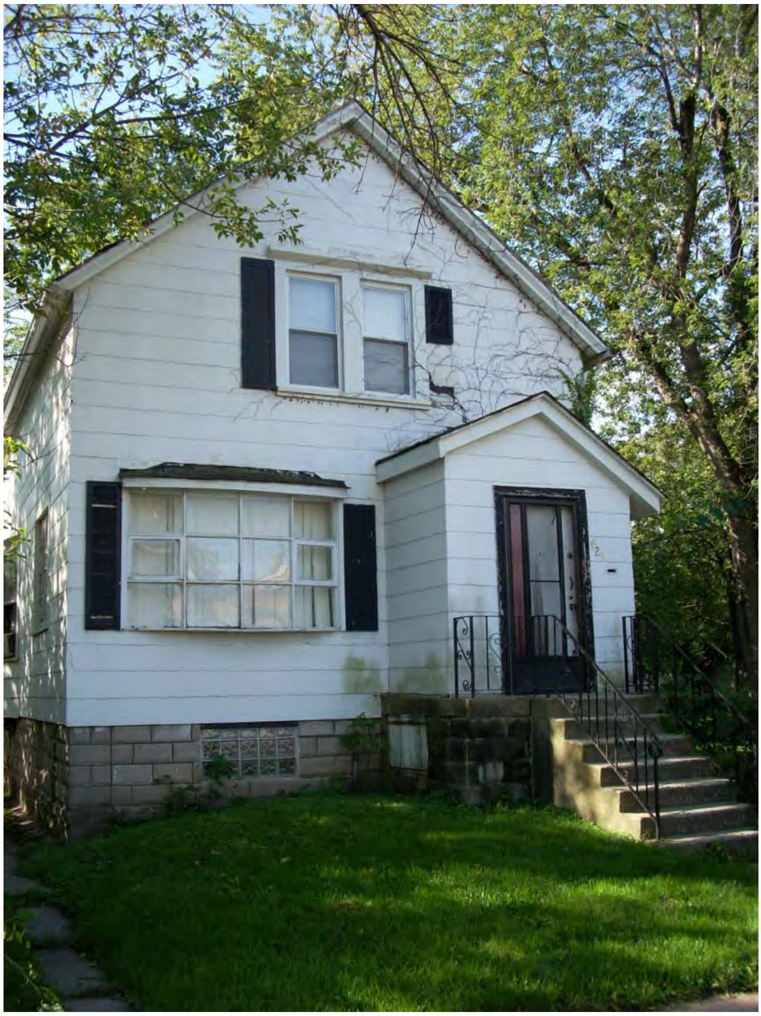
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 10 October 2012

Photos with Captions:
North façade of a 1.5-story, frame multi-family residence.



Property Description: **Stories:** 1.5

This one-and-a-half-story frame cottage in the Roseland community is situated on a raised concrete block basement with glass block windows. It is clad with synthetic siding and has a front gable roof covered with asphalt shingles. Its front elevation has an off-center, enclosed, gabled roof vestibule with a metal storm door and concrete steps with metal railings. There is a multi-paned bow window on the first floor and a pair of non-original one-over-one aluminum-sash windows in the gable. This house does not have sufficient integrity or distinguishing features to qualify as individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows and cladding
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung, fixed-pane, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

440 W. 103rd Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1893

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

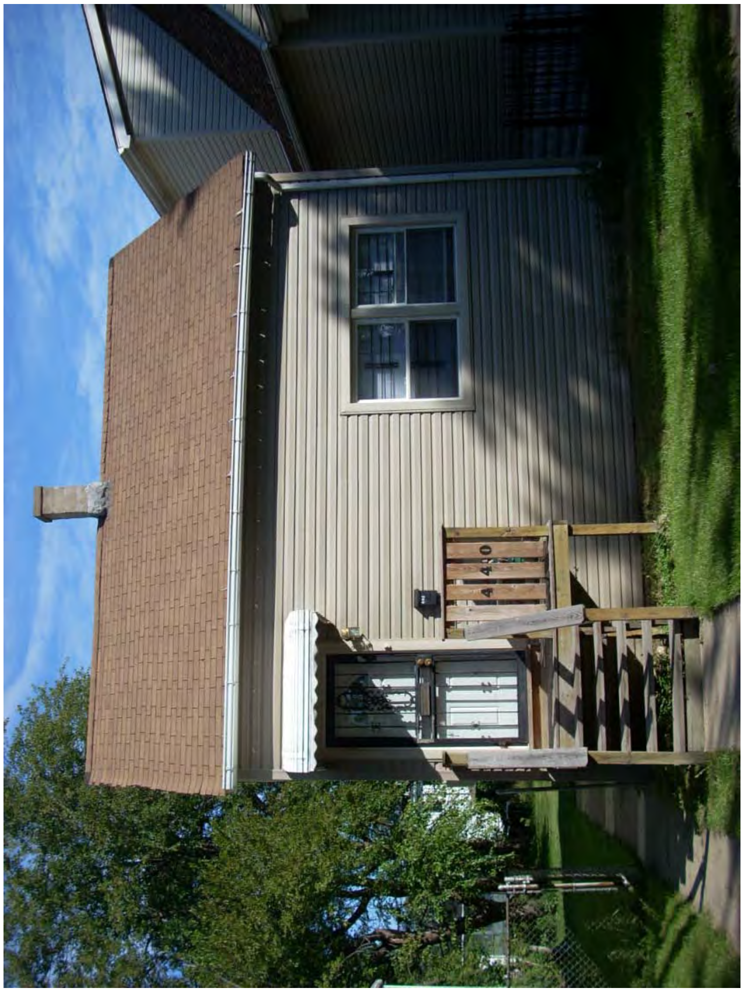
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 31 October 2012

Photos with Captions:
South façade of a one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story house in the Roseland community is situated on a raised concrete block basement and is covered with synthetic siding. The building has a side-gabled roof covered with asphalt shingles. The front elevation has an off-center metal storm door topped by a metal awning, non-original wood steps and railings, and a pair of non-original one-over-one aluminum-sash windows. This house lacks integrity and any distinguishing architectural features and is not eligible for individual listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement door, windows, and cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

455 W. 103rd Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1908

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

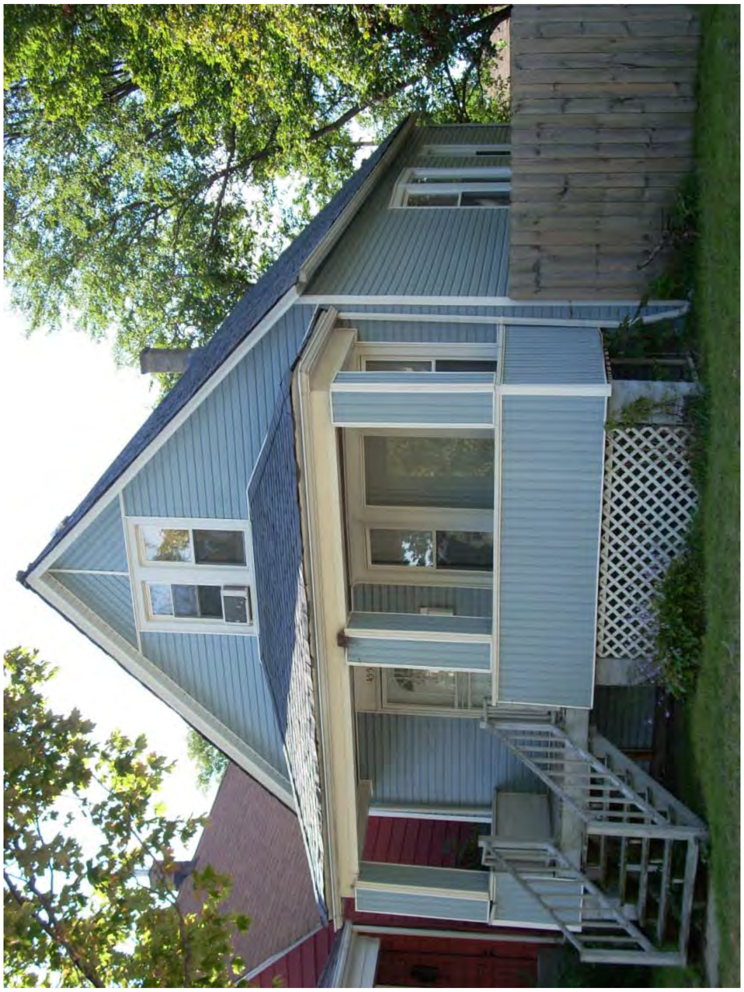
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 10 October 2012

Photos with Captions:
North façade of a one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story frame cottage in the Roseland community is situated on a raised concrete block basement with glass block windows. It is clad with synthetic siding and has a gable roof covered with asphalt shingles. Its front elevation has a full-width hip-roof porch with wood steps, boxed supports, and low aluminum-clad walls. This elevation also has an off-center hollow core metal paneled door with fanlight, a strip of three windows on the first floor, and a pair of windows in the gable. All windows above the raised basement are non-original one-over-one aluminum-sash. This house does not have sufficient integrity or distinguishing features to qualify as individually eligible for listing on the National Register.

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement door, windows, and cladding
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung, fixed-pane, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

316 W. 103rd Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Vacant

Property Use

Historic: Commercial

Current: Commercial

Date of Construction: 1962

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

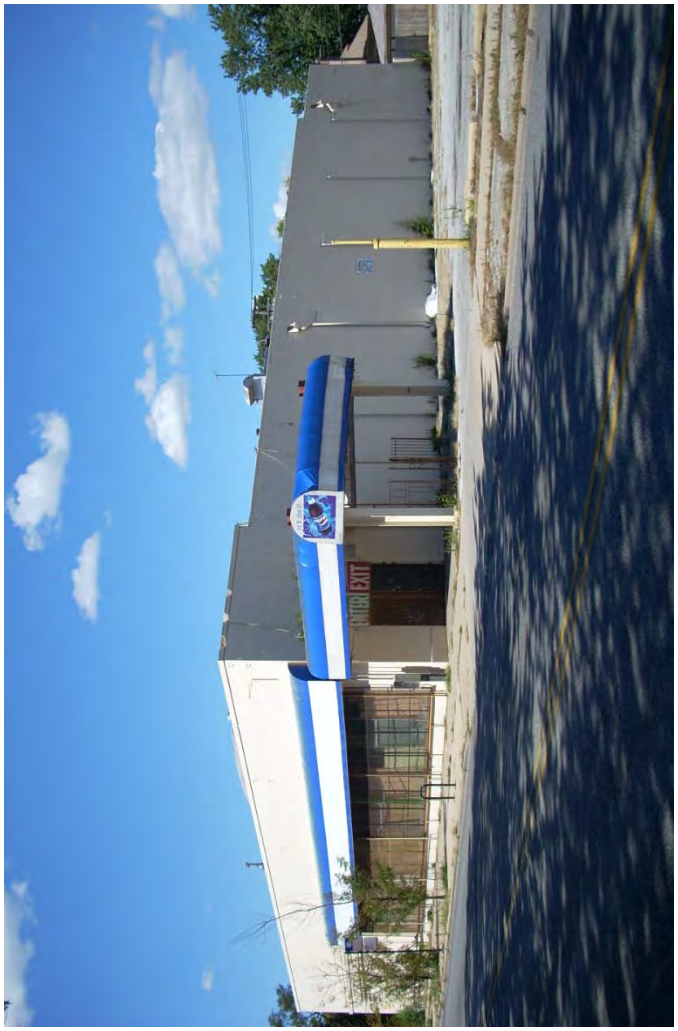
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 16 September 2012

Photos with Captions:
South and east façades of one-story, brick supermarket.



Property Description: **Stories:** 1

This one-story brick-clad former supermarket in the Roseland community has a flat roof, a parapet and a strip of large fixed-pane display windows along its 103rd Street elevation. It has a pair of doors along its east elevation, which are sheltered by a nylon canopy supported by two metal I-beam posts. This building does not have any distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
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Phone (815) 568- 0680

Structural Survey

Integrity: [✓ Unaltered] Slight Modification Major Alteration			**Additional Notes/Descriptions**
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details None			**Windows** Fixed-pane
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

319 W. 103rd Street
Alternate: 327 W. 103rd St

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Chazap Barber College

Property Use

Historic: Commercial

Current: Educational

Date of Construction: 1953

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

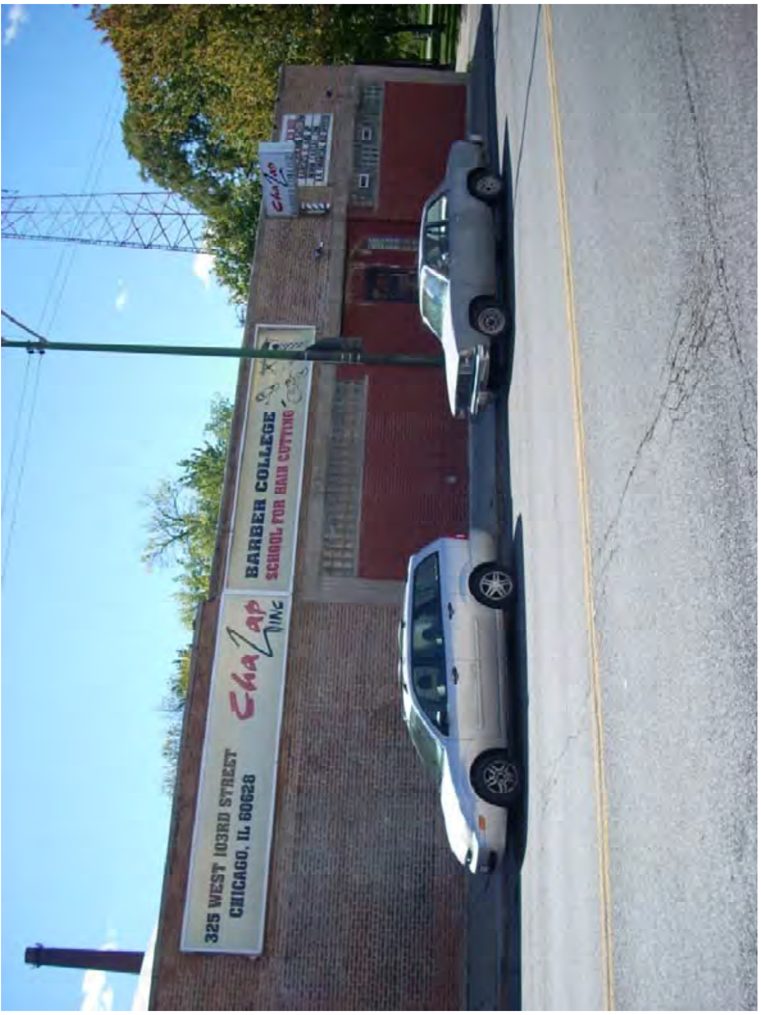
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 16 September 2012

Photos with Captions:
North façade of one-story, brick property



Property Description: **Stories:** 1

This one-story brick-clad barber college building in the Roseland community has a flat roof and parapet. A single course of limestone surrounds its former storefront area, which has been in-filled with red brick, a recessed entrance with metal door, and a continuous strip of glass block windows. The eastern end of the building's front elevation has a metal overhead door and a single glass door. This building does not feature sufficient integrity to be individually eligible for listing on the National Register.

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Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** In-filled windows, modified storefront
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Unknown	**Roof Features** None	**Roof Type** Flat	
Ornamental Architectural Details None			**Windows** Glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y [✓ N]**	
National Register Historic Places	**Y [✓ N]**	
National Register Historic District	**Y [✓ N]**	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Hay, Grain & Feed (1905)

Common/Current: Unknown

Property Address:

403-405 W. 103rd St.

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Vacant

Property Use

Historic: Commercial

Current: Commercial

Date of Construction: 1900

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

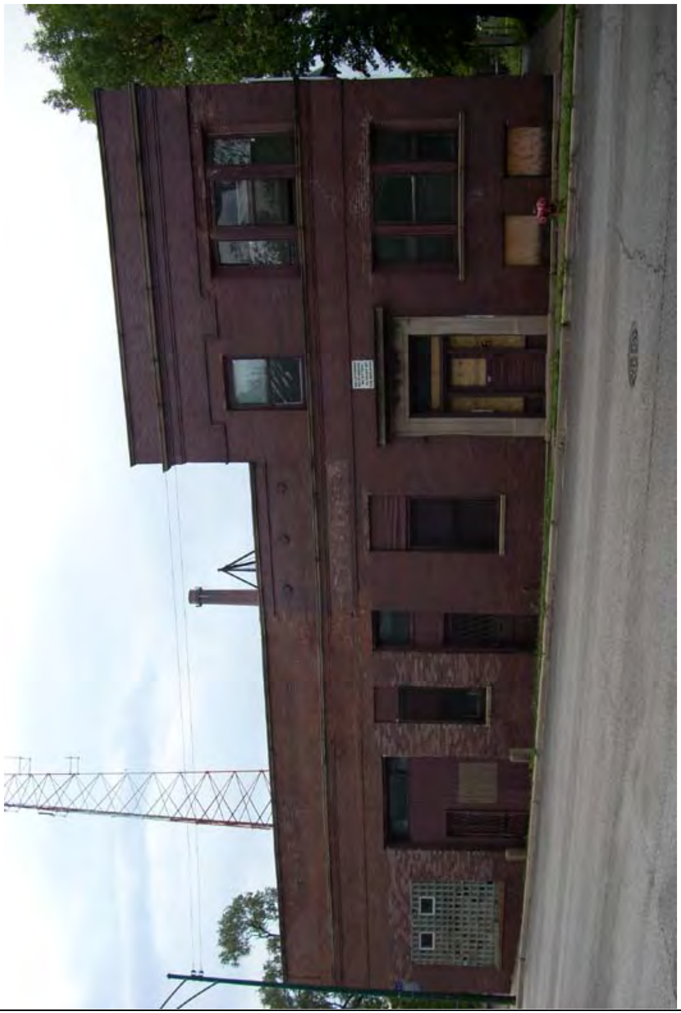
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: Steve Katz

Date: 24 September 2012

Photos with Captions:
North façade of a brick, commercial building.



Property Description: **Stories:** 2

The two-story commercial portion of this building is identified as a “Hay, Grain & Feed” shop in the 1905 Sanborn while the one-story portion is identified as used for related storage. The buildings were joined at a later date. Both are clad in brown face brick and have flat roofs and parapets. The two-story section has an off-center entrance with an original wood door, sidelights, transom, and a stone surround with cornice, as well as a metal cornice. The glass panes in the sidelights and door have been removed and their openings in-filled with wood. It has bay windows on the first and second floors and an additional window opening above the entrance bay. All windows are comprised of one-over-one wood-sash. Detailing includes brick banding and a stone cornice. The one-story part has altered door and window openings, including one large window opening that has been in-filled with glass blocks. Side elevations are clad in common brick. This structure lacks architectural distinction and is not individually eligible for listing on the National Register.

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Phone (815) 568- 0680

Structural Survey

Integrity:

Unaltered [✓ Slight Modification] Major Alteration

Additional Notes/Descriptions

Some window openings in-filled with wood and glass block

Condition:

Excellent Good [✓ Poor]

Additional Alterations

Two buildings connected after 1905

Structure Usage	**Exterior Wall Surface**
Current: NA Historic: NA	Brick

Roof Material	**Roof Features**	**Roof Type**
Unknown	Parapet	Flat

Ornamental Architectural Details

Stone cornice and surround at entrance, brick banding, metal cornice

Windows

Glass block, double hung

Outbuildings (*Number and Description*)

None

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

421 W. 103rd Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1899

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

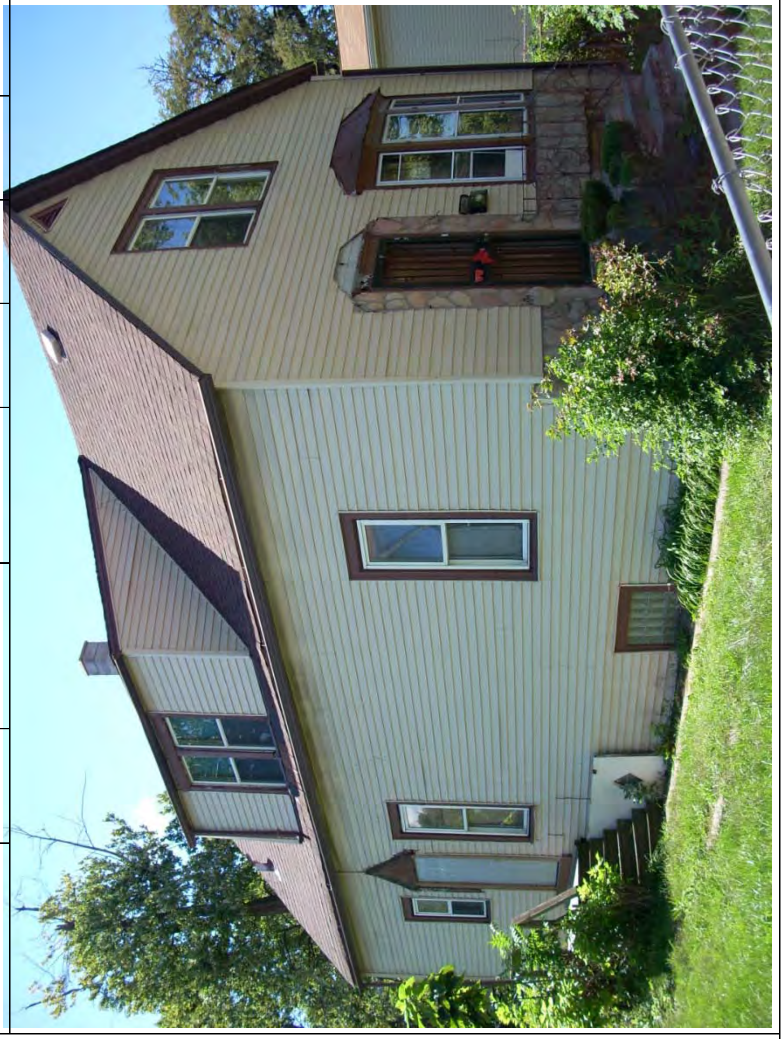
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 16 September 2012

Photos with Captions:
North and east façades of 1.5-story, single family, frame residence.



Property Description: **Stories:** 1.5

This one-and-a-half-story frame house in the Roseland community is situated on a raised basement with glass block windows. It is clad with synthetic siding and has a front gable roof covered with asphalt shingles. Its front elevation has an off-center door, concrete steps and metal railings, and faux stone cladding below the first floor sill line and surrounding the door. There is a three-sided window bay on the first floor and a pair of windows in the gable. Both side elevations feature shed-roofed dormers. Windows throughout the house are non-original one-over-one aluminum-sash. This house does not feature sufficient integrity to qualify as individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity:	Unaltered	[✓ Slight Modification]	Major Alteration	**Additional Notes/Descriptions** Replacement widows and siding
Condition:	Excellent	[✓ Good]	Poor	
Additional Alterations				
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding		
Roof Material Asphalt shingle	**Roof Features** Dormer	**Roof Type** Gable		
Ornamental Architectural Details None				**Windows** Double-hung
Outbuildings (*Number and Description*) None				

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

424 W. 103rd Street
Alternate: 440 W. 103rd Street (CCA)

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Loving Spirit M.B. Church

Property Use

Historic: Commercial

Current: Religious

Date of Construction: 1889

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

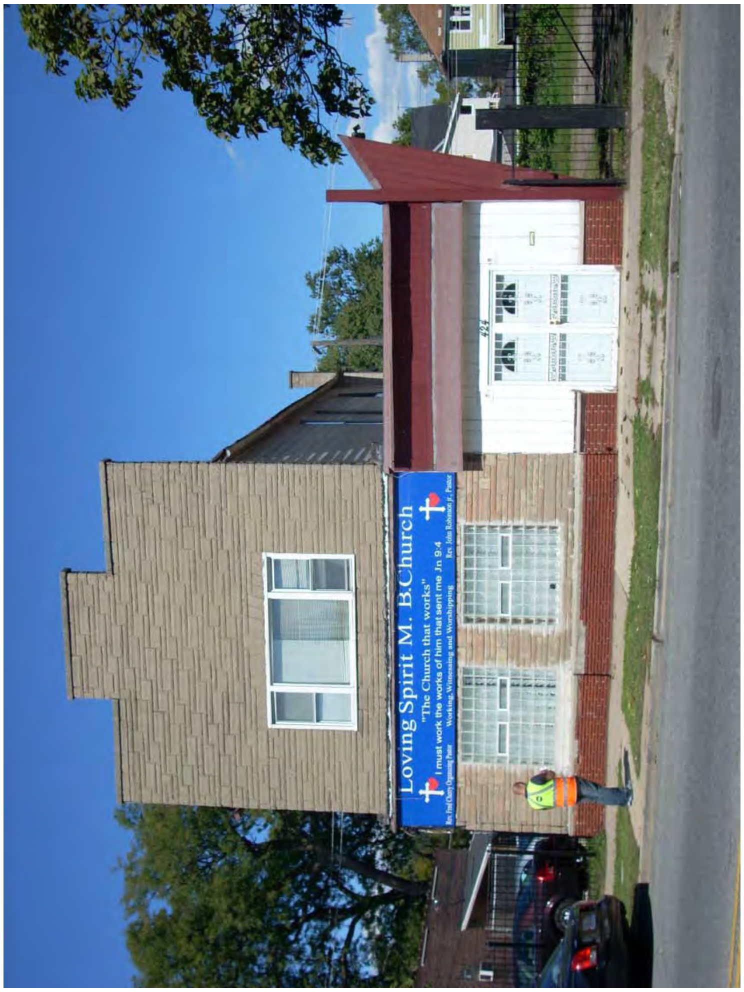
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 9 October 2012

Photos with Captions:
South façade of a two-story, frame, religious building.


Loving Spirit M. B.Church
"The Church that works"
I must work the works of him that sent me Jn 9:4
424

Property Description: **Stories:** 2

This two-story frame building in the Washington Heights community has a gable roof covered with asphalt shingles that is obscured by a false front with faux stone siding and high stepped parapet. The first floor has two large window openings that are in-filled with glass block. The second floor has a non-original picture window flanked by one-over-one aluminum-sash windows. The building has a one-story flat-roofed wing. The wing's front elevation is clad with vertically laid wood boards above a brick base. It has a pair of non-original hollow core metal paneled doors with fanlights. The wing also features decorative modern angled wood pylons at its corner and along its side elevation. This building does not feature sufficient integrity to qualify as individually eligible for listing on the National Register.

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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows, doors, and cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding, brick, faux stone	
Roof Material Asphalt shingle	**Roof Features** Parapet	**Roof Type** Gable, flat	
Ornamental Architectural Details Stepped parapet			**Windows** Double-hung, fixed-pane, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

453 W. 103rd Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1878

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

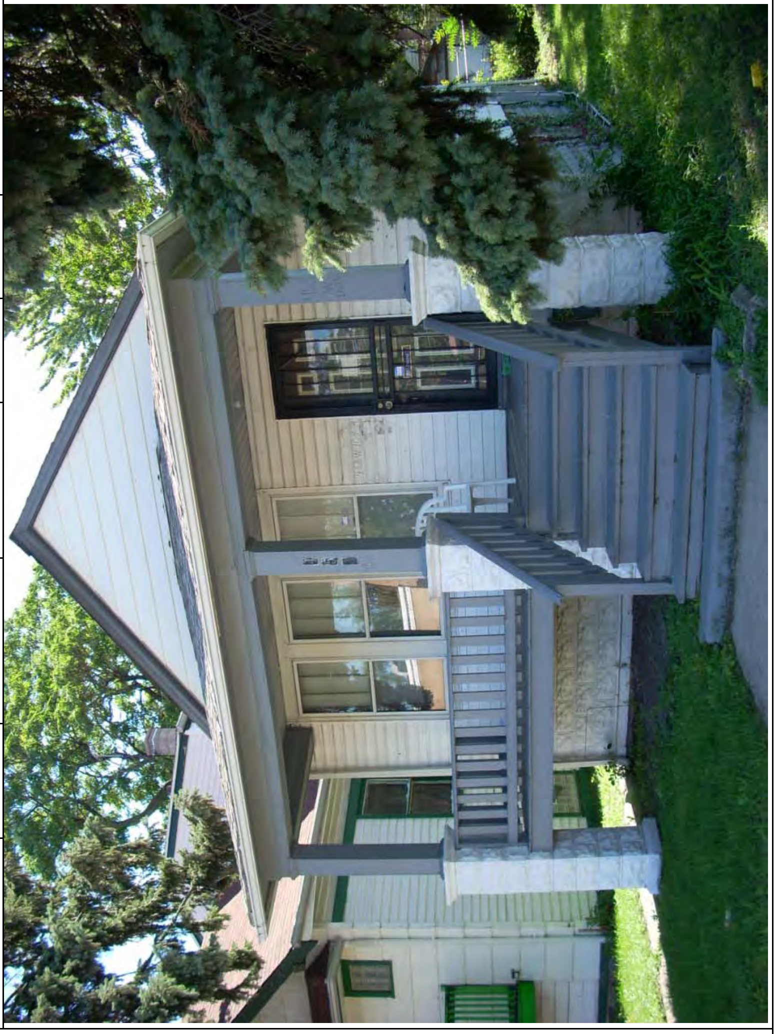
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 16 September 2012

Photos with Captions:
North façade of one-story, frame, single-family residence.



Property Description: **Stories:** 1

This one-story frame cottage in the Roseland community sits on a raised concrete block basement with glass block windows. It is clad with synthetic siding and has a gable roof covered with asphalt shingles. Its front elevation features a full-width wood porch with wooden steps, wooden railing, and supports consisting of faux stone piers topped by squat, square columns. It has an off-center hollow core metal door and a strip of three non-original three-over-one windows. This house does not display distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement door, windows, and cladding
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details Square columns			**Windows** Double-hung, glass block
Outbuildings (*Number and Description*) Garage			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

328 W. 104th Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1923

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

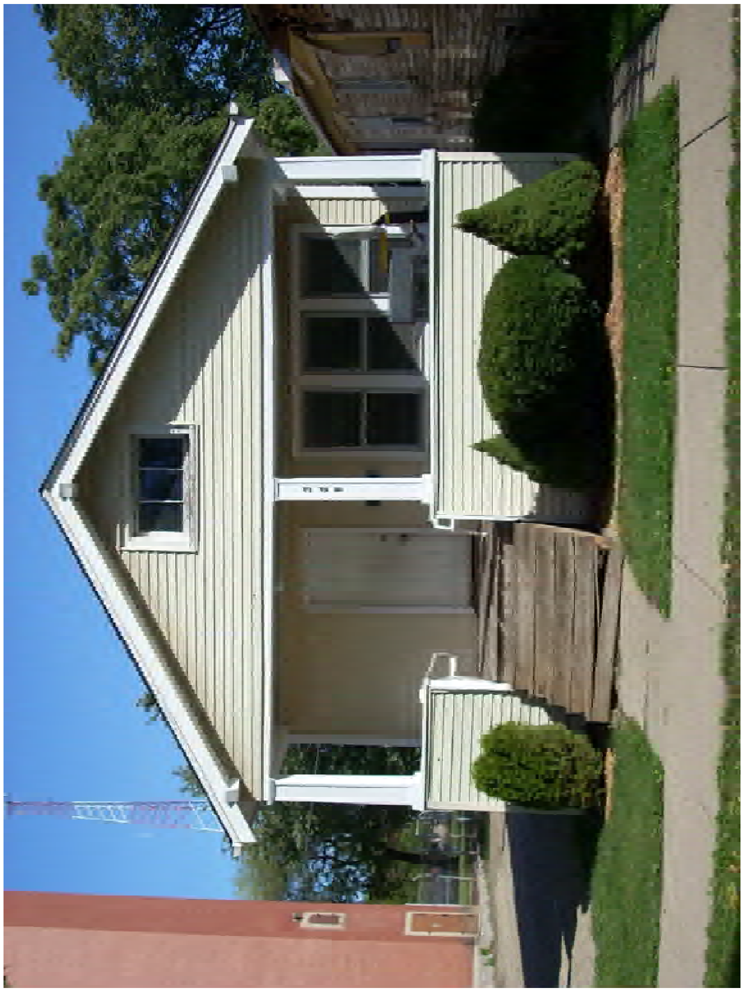
Craftsman

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 16 October 2012

Photos with Captions:
South façade of a one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story Craftsman style bungalow in the Roseland community is situated on a raised basement and clad with synthetic siding. The building has a front gable roof covered with asphalt shingles and overhanging eaves with decorative rafters. Its roof overhangs to shelter the full-width wood porch with supports consisting of low square wood columns atop synthetic-clad porch walls. The front elevation has an off-center non-original hollow core metal paneled door, a strip of three non-original double-hung windows, and an original wood casement window in the attic gable. This house lacks integrity and distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

<table>
<tr><td colspan="3">Integrity:
Unaltered [✓ Slight Modification] Major Alteration</td><td>Additional Notes/Descriptions
Replacement door and windows</td></tr>
<tr><td colspan="3">Condition:
Excellent [✓ Good] Poor</td><td></td></tr>
<tr><td colspan="3">Additional Alterations</td><td></td></tr>
<tr><td colspan="2">Structure Usage
Current: NA
Historic: NA</td><td>Exterior Wall Surface
Synthetic siding</td><td></td></tr>
<tr><td>Roof Material
Asphalt shingles</td><td>Roof Features
None</td><td>Roof Type
Gable</td><td></td></tr>
<tr><td colspan="3">Ornamental Architectural Details
Exposed rafters, square columns on porch</td><td>Windows
Double-hung, casement</td></tr>
<tr><td colspan="4">Outbuildings (<i>Number and Description</i>)
None</td></tr>
</table>

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

335 W 104th Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1919

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

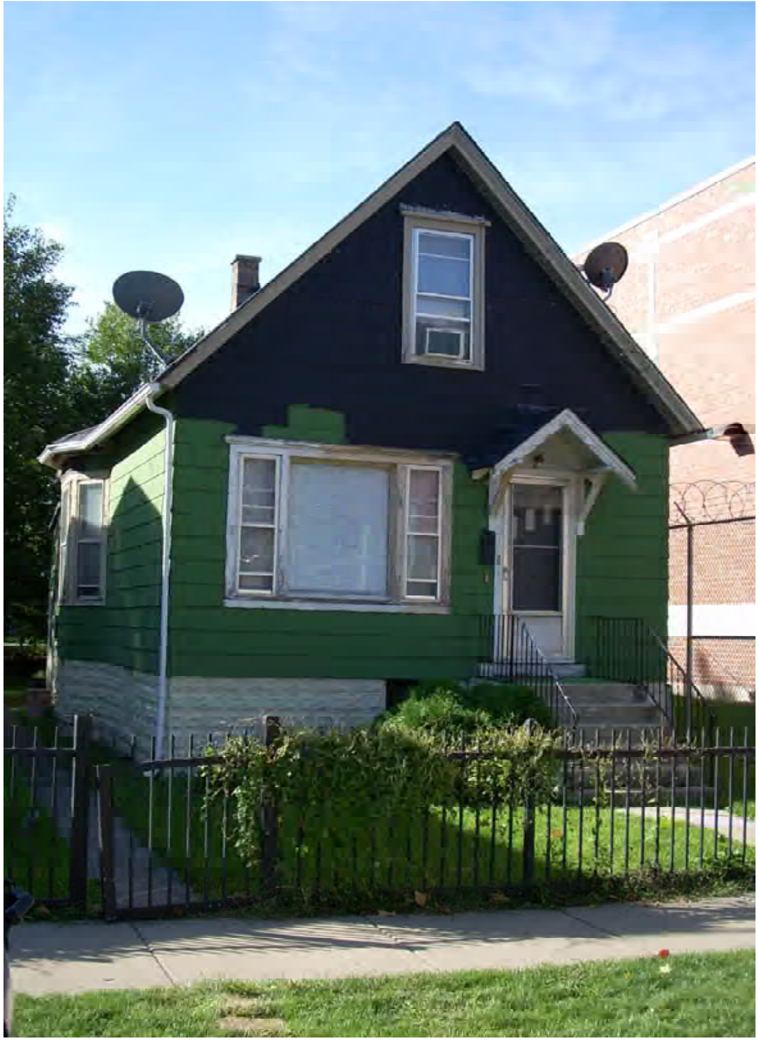
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 16 October 2012

Photos with Captions:
North façade of a one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story house in the Roseland community is situated on a raised concrete block basement with glass block windows and is clad with shingles. The building has a front gable roof covered with asphalt shingles. The front elevation has an off-center door with bracketed gable hood, concrete steps with metal railings, a picture window flanked by double-hung windows, and a non-original one-over-one window in the gable. The east elevation has a three-sided bay window. This house lacks integrity and distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
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Marengo, Illinois 60152
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Structural Survey

Integrity: [✓ Unaltered] Slight Modification Major Alteration			**Additional Notes/Descriptions**
Condition: Excellent [✓ Good] Poor			
Additional Alterations Some windows have aluminum storms			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Wood shingles	
Roof Material Asphalt	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details Bracketed hood above entrance			**Windows** Double-hung, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

310 W. 104th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1923

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

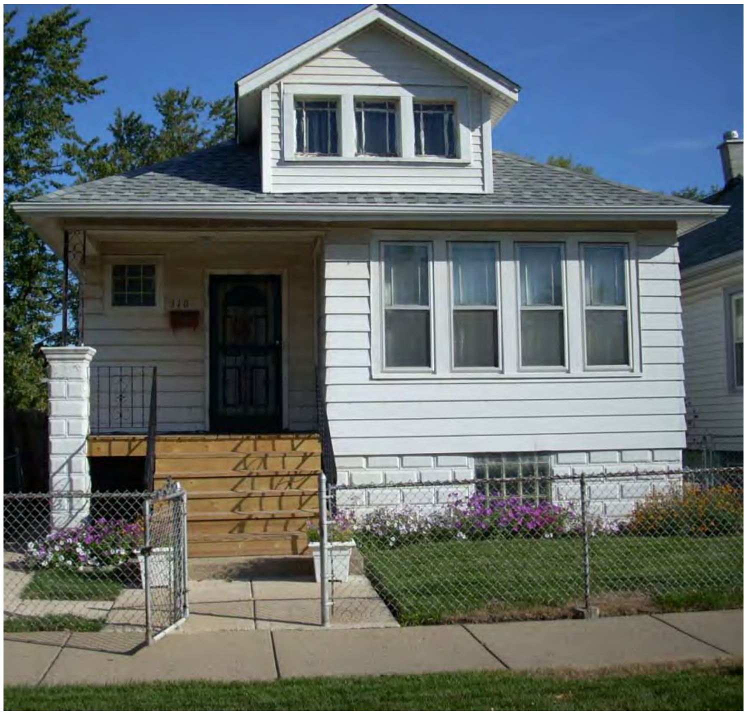
Craftsman

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 15 October 2012

Photos with Captions:
South façade of a one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story Craftsman bungalow in the Roseland community is situated on a raised concrete block basement with glass block windows. The residence is clad with synthetic siding, has a hip roof covered with asphalt shingles, overhanging eaves, and a gable dormer with three original wood casement windows. The front elevation features a strip of four one-over-one wood-sash windows and a recessed corner porch with a hollow core metal door, an adjacent casement window, wood steps, metal railings, and a corner support consisting of a low faux stone pier topped by a short open metal post. This house lacks integrity and distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
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Structural Survey

Integrity:			**Additional Notes/Descriptions**
Unaltered	[✓ Slight Modification]	Major Alteration	Replacement door and cladding
Condition:			
[✓ Excellent]	Good	Poor	
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** Dormer	**Roof Type** Hip	
Ornamental Architectural Details None			**Windows** Double-hung, casement, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Chicago Fire Department. Engine Company #93

Property Address:

324 W. 104th Street
Alternate: 328-330 W. 104th Street

HAARGIS Number:

140602

Present Owner and /or Occupant:

Chicago Fire Department

Property Use

Historic: Public

Current: Public

Date of Construction: 1917

Architect's Name: Charles W. Kallal

Builder/Contractor: Butler & Co. General Contractors

Architectural Style:

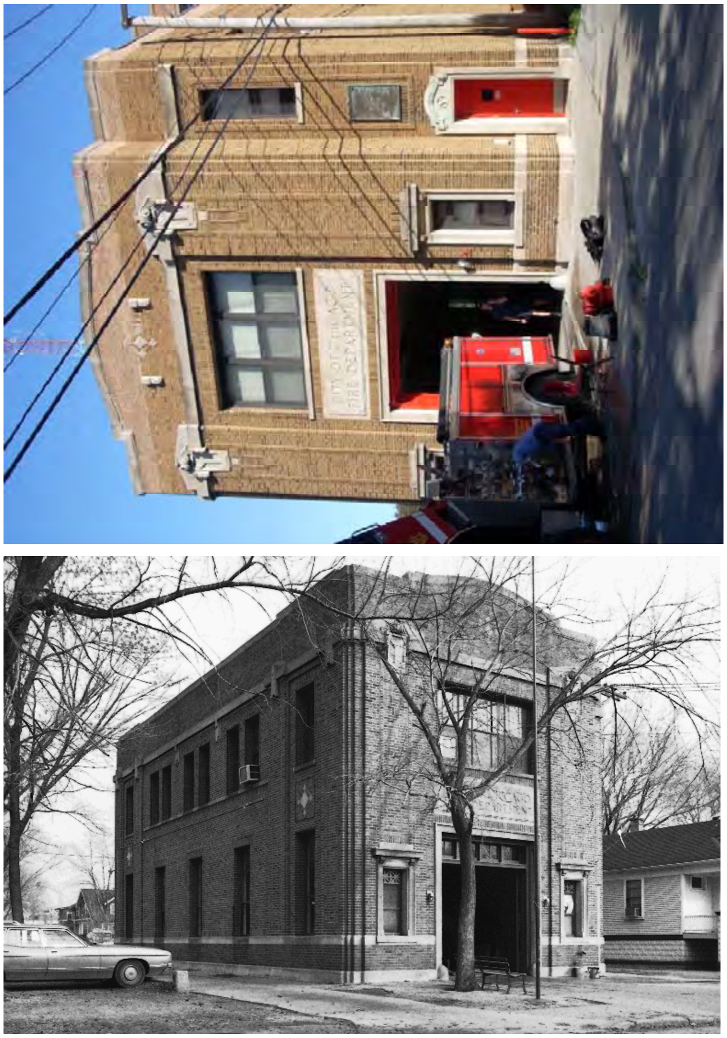
Classical Revival

Prepared By: J. Martinez, M. C. Bird, J. Gaurino

Photo By: S. Katz

Date: 15 October 2012

Photos with Captions:
South façade of a brick, two-story, fire station (above), HAARGIS (below)



Property Description: **Stories:** 2

This two-story firehouse in the Roseland community is clad with light brown face brick and has a flat roof and a parapet with concrete coping. Its front elevation has a two-story projecting pavilion, an overhead garage door, two window openings, an off-center hollow core metal door on the first floor, and a strip of three windows and a single window on the second floor. All windows are non-original one-over-one aluminum sash. The spandrel area between the garage door and the windows above features a large stone sign plate inscribed with the words, “City of Chicago Fire Department.” The spandrel area between the corner door and window above has a metal plate identifying the 1917 construction date and the names of a series of people associated with the building’s construction, including the mayor, alderman, city architect, and contractor. Detailing includes stone door and window surrounds on the first floor, bracketed stone window lintels, concrete belt courses, and brick pilasters topped by stone panels with the City of Chicago’s “Y” motif and decorative scrolls. The “Y” motif is also situated above the off-center door. This building is

recommended as eligible for individual listing on the National Register under Criterion C for architecture. It is a rare extant example of an early twentieth-century neighborhood firehouse in Roseland, has largely retained its original building materials and detailing, and still functions as a firehouse.

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement doors and windows
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details Concrete coping, stone sign plate, metal info plate, bracketed stone window lintels, concrete belt courses, brick pilasters with stone panels (including city motif and scrolls)			**Windows** Double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? Yes	**A B** [✓ **C**]	**Significance:** Rare example of an early twentieth century firehouse in Roseland.

Additional Comments:

CHRS coded orange: property possesses some architectural feature or historical association that made it potentially significant in the context of the surrounding community.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

325 W. 104th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1924

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

Vernacular

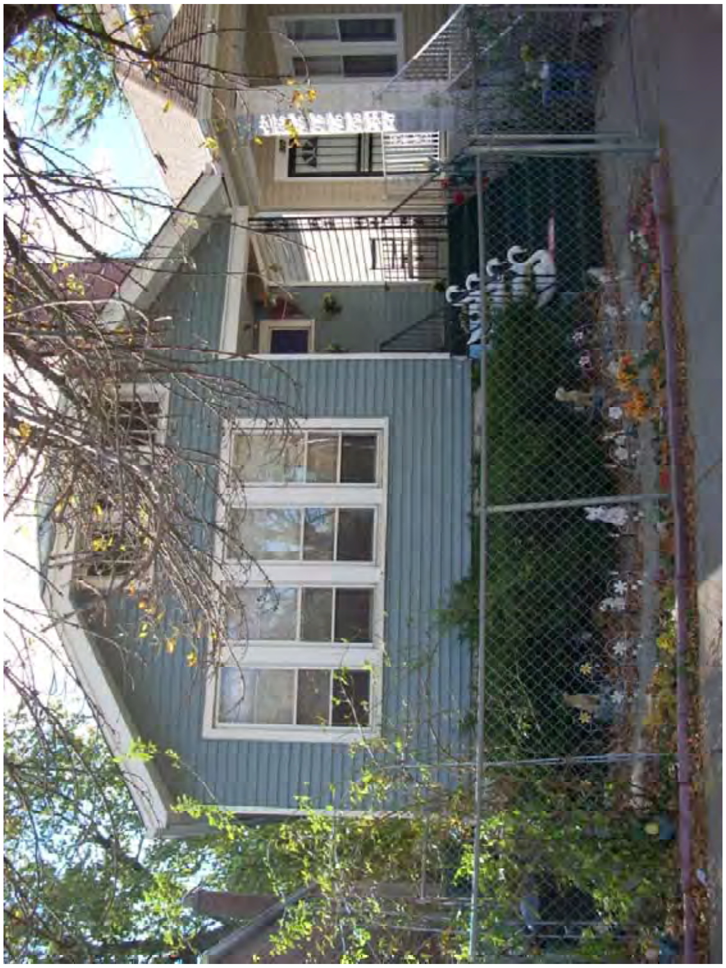
Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 30 October 2012

Photos with Captions:

North façade of a one-story, single family, frame residence



Property Description: **Stories:** 1

This one-story house in the Roseland community is situated on a raised concrete block basement and is clad with synthetic siding. The building has a hip-on-gable roof covered with asphalt shingles. The front elevation has a recessed corner porch with wood steps, metal railings, and an open metal corner post. Additional features include a front door tucked into the side of the living room bay, a casement window, a strip of four non-original one-over-one aluminum-sash windows on the first floor, and a strip of three single-pane casement windows in the gable. This house lacks distinctive architectural features and is not individually eligible for listing on the National Register.

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505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

<table>
<tr><td colspan="3">Integrity:
Unaltered [✓ Slight Modification] Major Alteration</td><td>Additional Notes/Descriptions
Replacement windows and cladding</td></tr>
<tr><td colspan="3">Condition:
[✓ Excellent] Good Poor</td><td></td></tr>
<tr><td colspan="3">Additional Alterations</td><td></td></tr>
<tr><td colspan="2">Structure Usage
Current: NA
Historic: NA</td><td>Exterior Wall Surface
Synthetic siding</td><td></td></tr>
<tr><td>Roof Material
Asphalt shingle</td><td>Roof Features
None</td><td>Roof Type
Hip-on-gable</td><td></td></tr>
<tr><td colspan="3">Ornamental Architectural Details
None</td><td>Windows
Double-hung, casement</td></tr>
<tr><td colspan="4">Outbuildings (<i>Number and Description</i>)
None</td></tr>
</table>

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Chicago Fire Department. Engine Company #93

Property Address:

324 W. 104th Street
Alternate: 328-330 W. 104th Street

HAARGIS Number:

140602

Present Owner and /or Occupant:

Chicago Fire Department

Property Use

Historic: Public

Current: Public

Date of Construction: 1917

Architect's Name: Charles W. Kallal

Builder/Contractor: Butler & Co. General Contractors

Architectural Style:

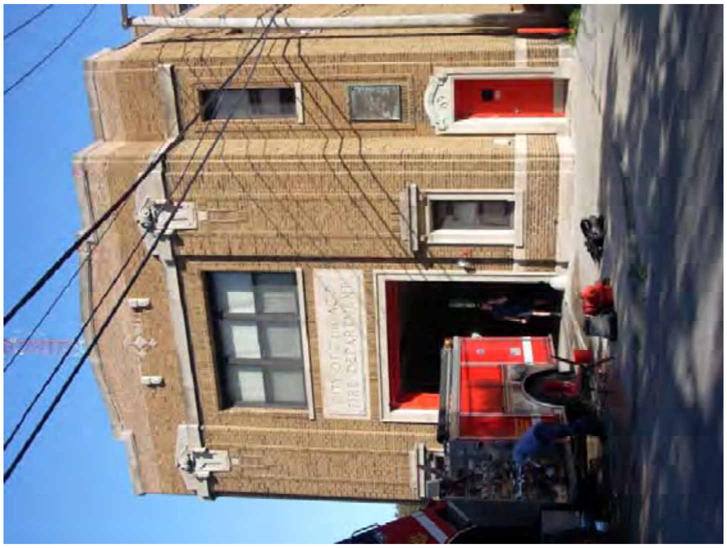
Classical Revival

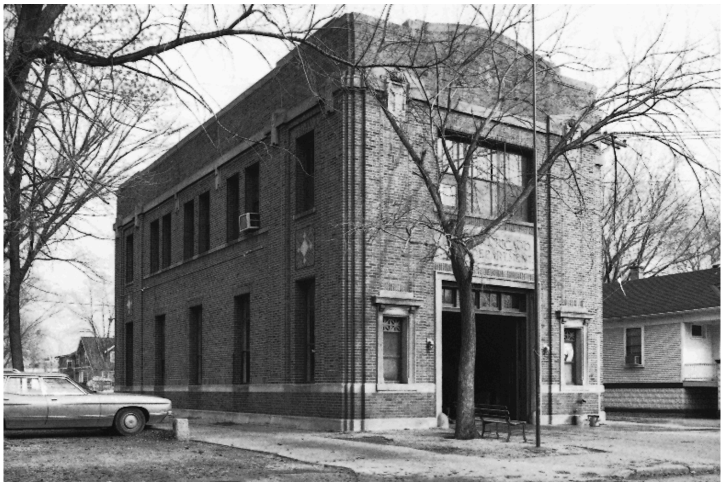
Prepared By: J. Martinez, M. C. Bird, J. Gaurino

Photo By: S. Katz

Date: 15 October 2012

Photos with Captions:
South façade of a brick, two-story, fire station (above), HAARGIS (below)





Property Description: **Stories:** 2

This two-story firehouse in the Roseland community is clad with light brown face brick and has a flat roof and a parapet with concrete coping. Its front elevation has a two-story projecting pavilion, an overhead garage door, two window openings, an off-center hollow core metal door on the first floor, and a strip of three windows and a single window on the second floor. All windows are non-original one-over-one aluminum sash. The spandrel area between the garage door and the windows above features a large stone sign plate inscribed with the words, “City of Chicago Fire Department.” The spandrel area between the corner door and window above has a metal plate identifying the 1917 construction date and the names of a series of people associated with the building’s construction, including the mayor, alderman, city architect, and contractor. Detailing includes stone door and window surrounds on the first floor, bracketed stone window lintels, concrete belt courses, and brick pilasters topped by stone panels with the City of Chicago’s “Y” motif and decorative scrolls. The “Y” motif is also situated above the off-center door. This building is

recommended as eligible for individual listing on the National Register under Criterion C for architecture. It is a rare extant example of an early twentieth-century neighborhood firehouse in Roseland, has largely retained its original building materials and detailing, and still functions as a firehouse.

Structural Survey

Integrity: Unaltered	[✓ Slight Modification]	Major Alteration	**Additional Notes/Descriptions** Replacement doors and windows
Condition: [✓ Excellent]	Good	Poor	
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details Concrete coping, stone sign plate, metal info plate, bracketed stone window lintels, concrete belt courses, brick pilasters with stone panels (including city motif and scrolls)			**Windows** Double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y [✓ N]**	
National Register Historic Places	**Y [✓ N]**	
National Register Historic District	**Y [✓ N]**	**Name:**
Individually Eligible? Yes	**A B [✓ C]**	**Significance:** Rare example of an early twentieth century firehouse in Roseland.

Additional Comments:

CHRS coded orange: property possesses some architectural feature or historical association that made it potentially significant in the context of the surrounding community.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Roseland Pumping Station

Common/Current: Roseland Pumping Station

Property Address:

351 W 104th Street

HAARGIS Number:

140603

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Industrial

Current: Industrial

Date of Construction: 1911

Architect's Name: William G. Krieg

Builder/Contractor: Not in CHRS

Architectural Style:

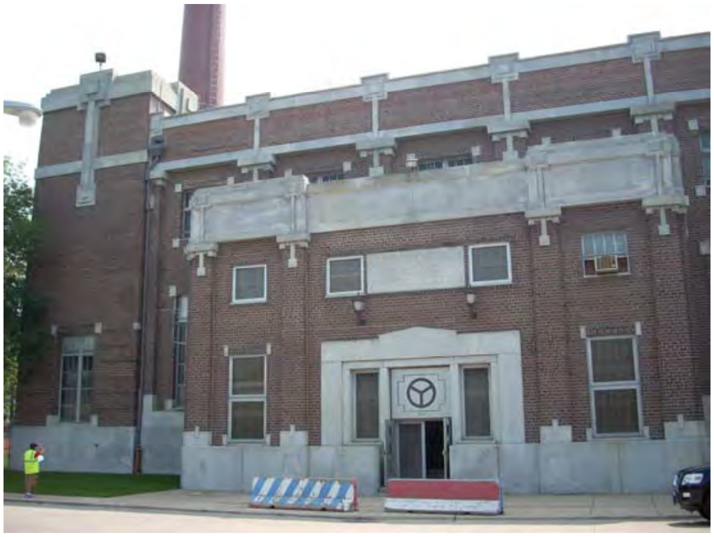
Prairie

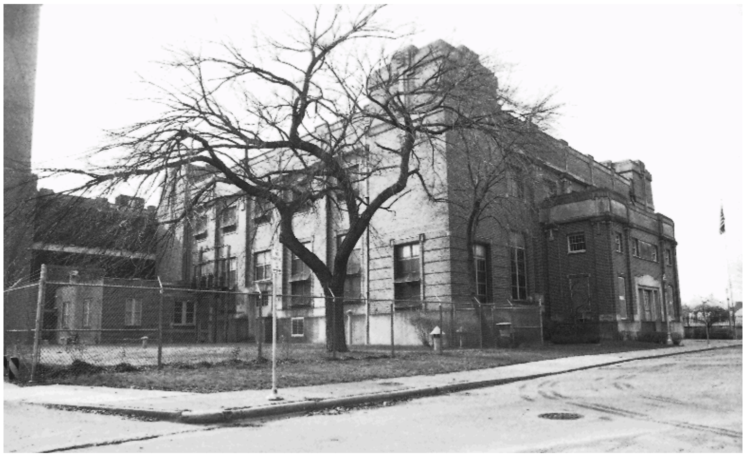
Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: Steve Katz, HAARGIS

Date: 24 September 2012

Photos with Captions:
North façade of brick pumping station (above), north and east facades of pumping station from HAARGIS (below).





Property Description: **Stories:** 2

The two-story Prairie style Roseland Pumping Station is clad in brown brick. It has a high limestone watertable, a flat roof, parapet, and two square towers at the corners of the front (Roseland) elevation. The front elevation features a projecting, two-story flat-roofed entrance pavilion with a pair of centrally located glass double-doors, sidelights, and a stone panel above that features the City of Chicago’s “Y” emblem in metal. The entrance has a smooth stone surround. Above the entrance is a limestone panel incised with the words: “City of Chicago Roseland Pumping Station.” Detailing on the entrance pavilion includes brick pilasters with stone bases, coping, and geometric motifs. The parapet is clad in limestone and features decorative geometric motifs. The building’s fenestration is largely comprised of multi-paned steel sash windows, some of which have transoms.

This is an excellent intact example of a community pumping station with fine integrity that still functions in its original use. It is recommended as individually eligible for the National Register under Criterion C for architecture as a well-preserved example of a community pumping station designed in the Prairie style.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** View of some windows obscured by aluminum storms; others are original steel sash
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details Entrance pavilion with brick pilasters; stone bases, coping, cornice, banding, and geometric motifs			**Windows** Fixed-pane, double-hung
Outbuildings (*Number and Description*)			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? Yes	**A B** [✓ **C**]	**Significance:** Excellent example of a well-preserved community pumping station designed in the Prairie style that still functions in its original use.

Additional Comments:

CHRS coded orange: property possesses some architectural feature or historical association that made it potentially significant in the context of the surrounding community.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

415 W. 104th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1923

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

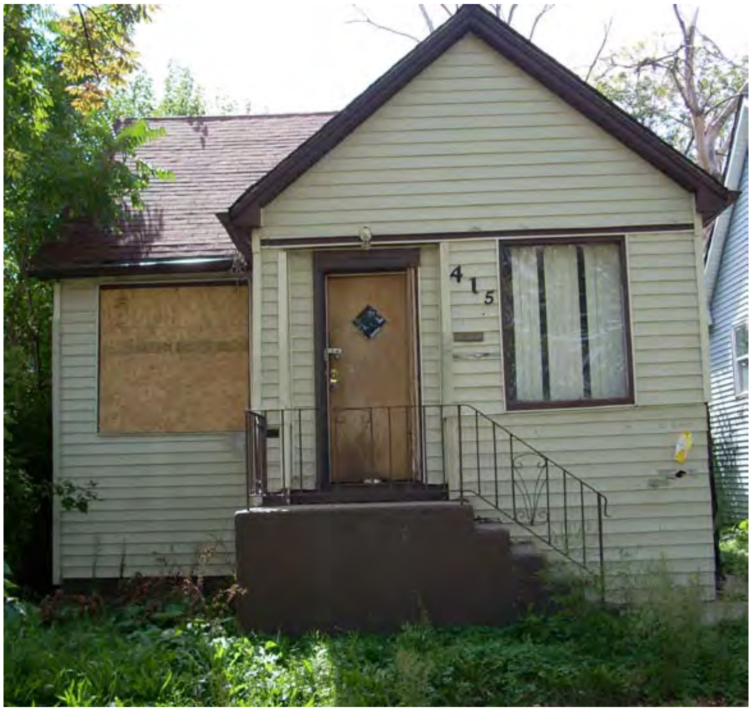
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 10 October 2012

Photos with Captions:
North façade of a one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story T-Plan house in the Roseland community is clad with synthetic siding and has a cross-gabled roof covered with asphalt shingles. Its front elevation has a centrally located wood door with a diamond-shaped window located in a projecting gable front bay with concrete steps with metal railings. There are two window openings on the front façade, one of which is covered with plywood. The other window is fixed-pane or casement. Side elevation window openings are also covered with plywood. This house lacks integrity, does not feature any distinguishing architectural features, and is not individually eligible for listing on the National Register.

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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration	**Additional Notes/Descriptions** Replacement windows and cladding
Condition: Excellent [✓ Good] Poor	
Additional Alterations	

Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingles	**Roof Features** None	**Roof Type** Cross-gable	

Ornamental Architectural Details None	**Windows** Fixed-pane or casement; others covered with plywood

Outbuildings (*Number and Description*)

None

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

430 W. 104th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1927

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

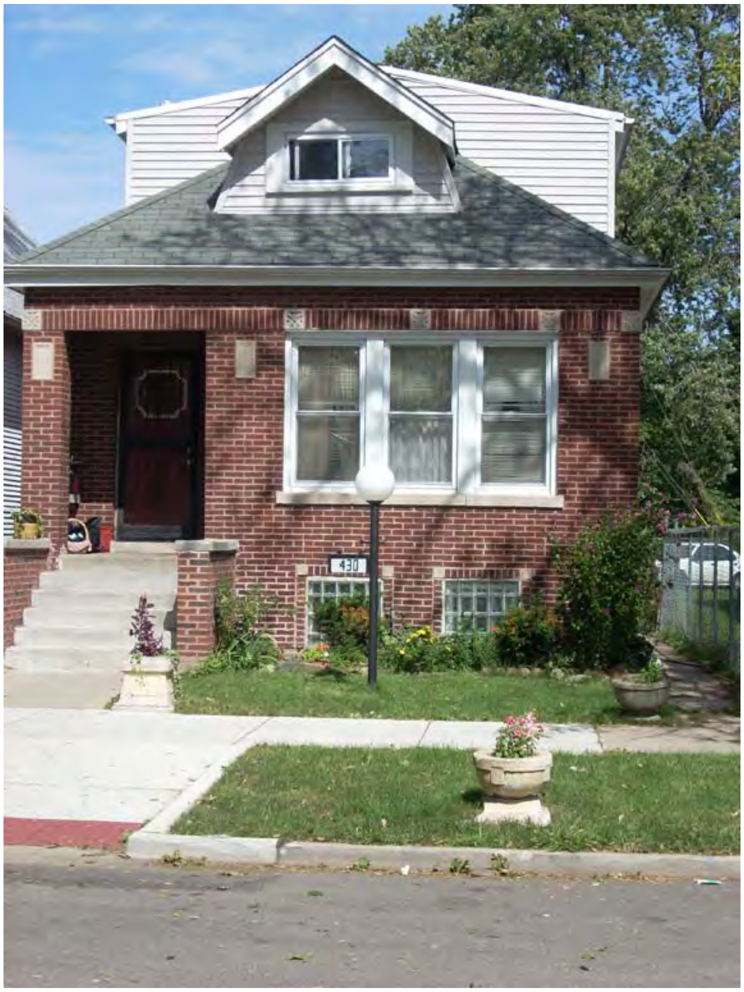
Chicago Style Bungalow

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: Steve Katz

Date: 10 October 2012

Photos with Captions:
South façade of a brick, one-story, single family residence.



Property Description: **Stories:** 1

This one-story, brick-clad house in the Roseland community is situated on a raised brick basement with glass block windows. It has a hip roof covered with asphalt shingles, an aluminum-clad front gable dormer with a pair of sliding glass windows, and a set-back synthetic-clad gable-roofed addition on the second story. The front elevation has a strip of three one-over-one aluminum-sash windows, a metal storm door, and a recessed corner porch with concrete steps, low brick side walls, and a brick corner pier support. Detailing includes decorative concrete block inserts. This house does not feature distinguishing architectural features, does not retain its integrity, and, therefore, is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows and new cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations Second story addition at rear			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick (main), synthetic siding (dormers)	
Roof Material Asphalt	**Roof Features** Dormer	**Roof Type** Hip, Gable	
Ornamental Architectural Details Concrete block inserts			**Windows** Double-hung, glass block, sliding
Outbuildings (*Number and Description*) None			

Local Landmark	**Y [✓ N]**	
National Register Historic Places	**Y [✓ N]**	
National Register Historic District	**Y [✓ N]**	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

457 W. 104th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1922

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

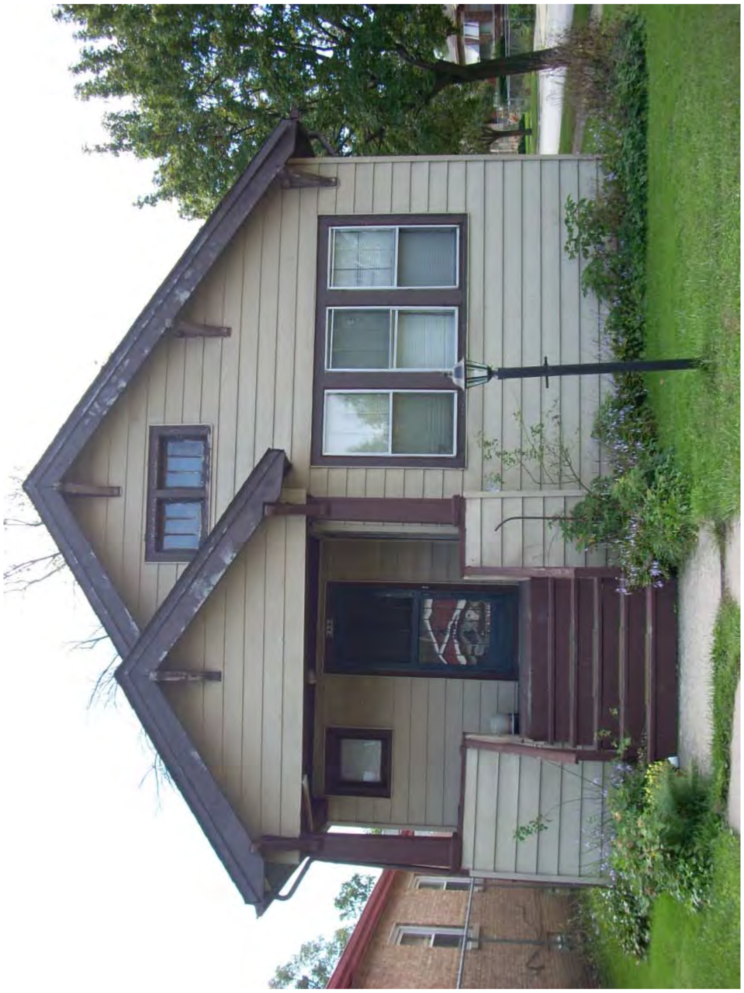
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 12 October 2012

Photos with Captions:
North façade of a one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story cottage in the Roseland community is clad with synthetic siding and has a front gable roof covered with asphalt shingles. The front elevation has a strip of three non-original one-over-one windows, a recessed corner porch with a metal storm door and adjacent casement window, wood steps, and low aluminum-clad sidewalls topped by two squat wood columns supporting the porch’s gabled roof. Decorative knee braces are situated beneath the eaves of the front elevation. The pair of windows in the gable appears to be casements. This house does not have sufficient integrity or distinguishing architectural features to qualify as individually eligible for listing on the National Register.

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505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement cladding and some windows
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details Brackets under eaves			**Windows** Double-hung, casement
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

344 W. 105th Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1925

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

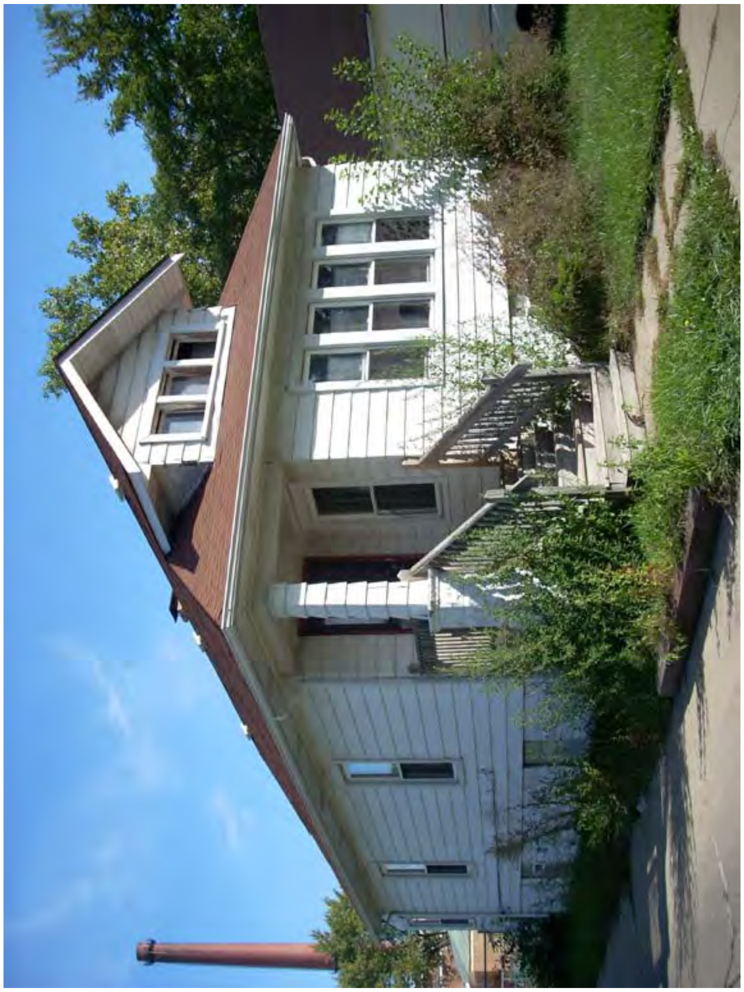
Craftsman

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 16 October 2012

Photos with Captions:
South façade of a one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story Craftsman bungalow in the Roseland community is situated on a raised concrete block basement with glass block windows and is clad with synthetic siding. The building has a hip roof covered with asphalt shingles, overhanging eaves, and a gable dormer with three small casement windows. Its front elevation features a strip of four non-original one-over-one aluminum-sash windows and a recessed corner porch with metal storm door, wood steps and railings, and a corner support consisting of a low faux stone pier topped by a short aluminum-clad post. This house lacks integrity and distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered	[✓ Slight Modification]	Major Alteration	**Additional Notes/Descriptions** Replacement windows and cladding
Condition: Excellent	[✓ Good]	Poor	
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingles	**Roof Features** Dormer	**Roof Type** Hip	
Ornamental Architectural Details None			**Windows** Double-hung, casement, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

416 W. 105th Street
Alternate: 410 W 105th St

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Vacant

Property Use

Historic: Commercial (Warehouse, 1938)

Current: Mixed-Use

Date of Construction: 1929

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

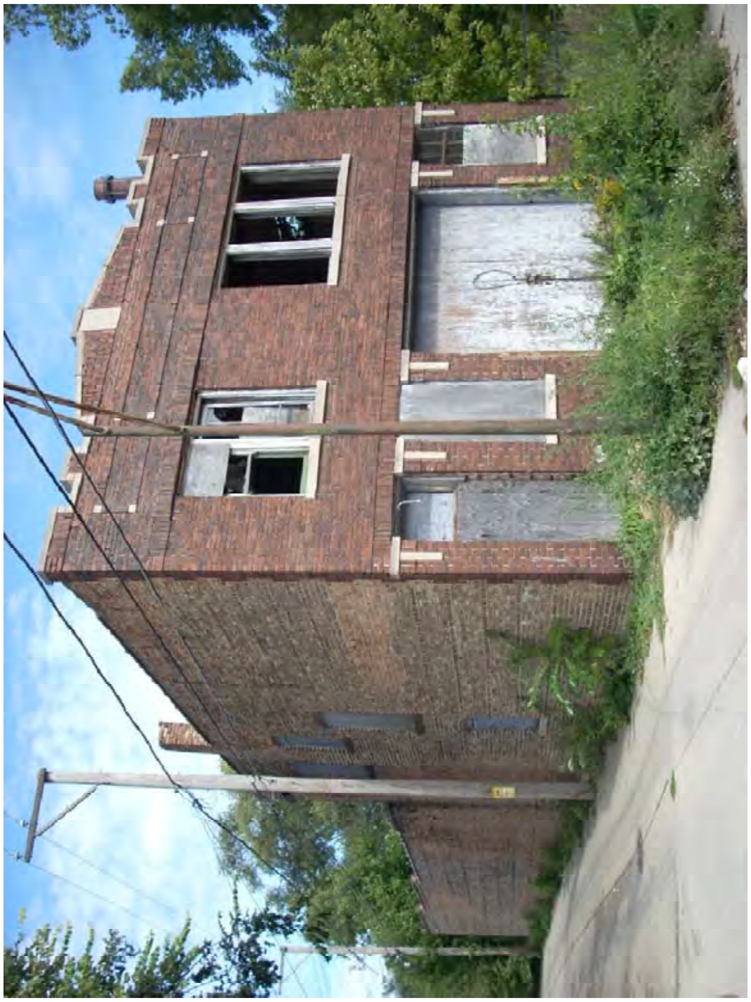
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 12 October 2012

Photos with Captions:
South façade of a brick, two-story, mixed-use building.



Property Description: **Stories:** 2

This two-story building in the Roseland community, a former warehouse later converted to residential use and now abandoned, has a flat roof and shaped parapet with concrete coping. Its front elevation is clad in brown face brick and its side and rear elevations are clad with common brick. The front elevation has an off-center door opening with transom, a garage door opening, and two window openings, all of which are covered with plywood. A portion of one of these window openings is visible and reveals a multi-paned upper sash. The second floor has a pair of window openings and a strip of three window openings, all of which have had their glass panes removed. Detailing includes concrete sills and insert blocks between the first floor openings, two brick soldier courses, and brick stringcourses at the parapet level. This building does not have sufficient integrity or distinguishing architectural features to qualify as individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Abandoned building with broken windows, partially secured with plywood
Condition: Excellent Good [✓ Poor]			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details Concrete sills and insert blocks, brick soldier courses, and brick stringcourses, shaped parapet			**Windows** Covered
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

411 W. 105th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

AT&T

Property Use

Historic: Industrial

Current: Industrial

Date of Construction: 1960/2005

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

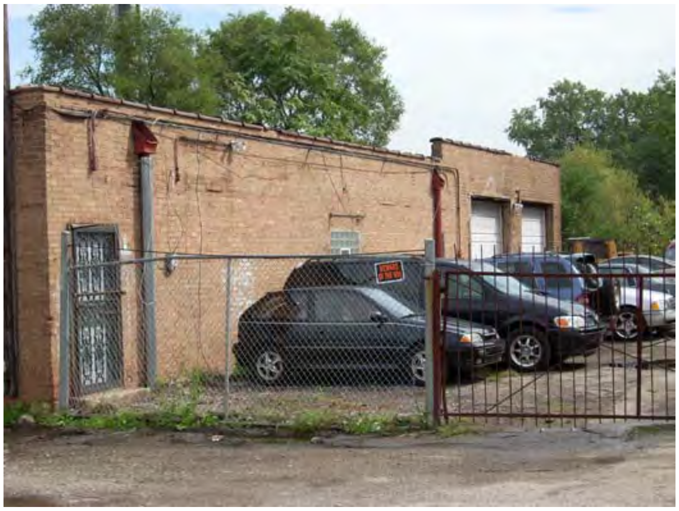
Vernacular

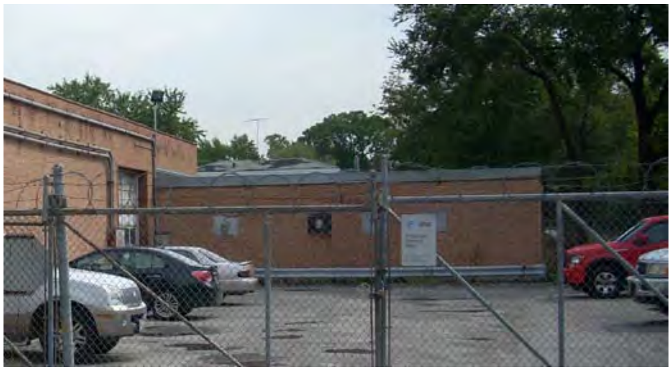
Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 25 September 2012

Photos with Captions:
South façade of two, brick, one-story light industrial buildings. The building dating to 1960 is shown in the top photo while the building dating to 2005 is shown in the bottom photo.





Property Description: **Stories:** 1

These one-story brick-clad flat-roofed light industrial buildings in Roseland have overhead garage doors and a hinged hollow metal door opening. The earlier building has a parapet with tile coping. Original window openings along the side elevations have been in-filled with brick or glass blocks with central casement windows. The newer building has a flat roof. These buildings lack any architectural distinction and are not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Bricked over windows
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details None			**Windows** Glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

338 W. 106th Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1913

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

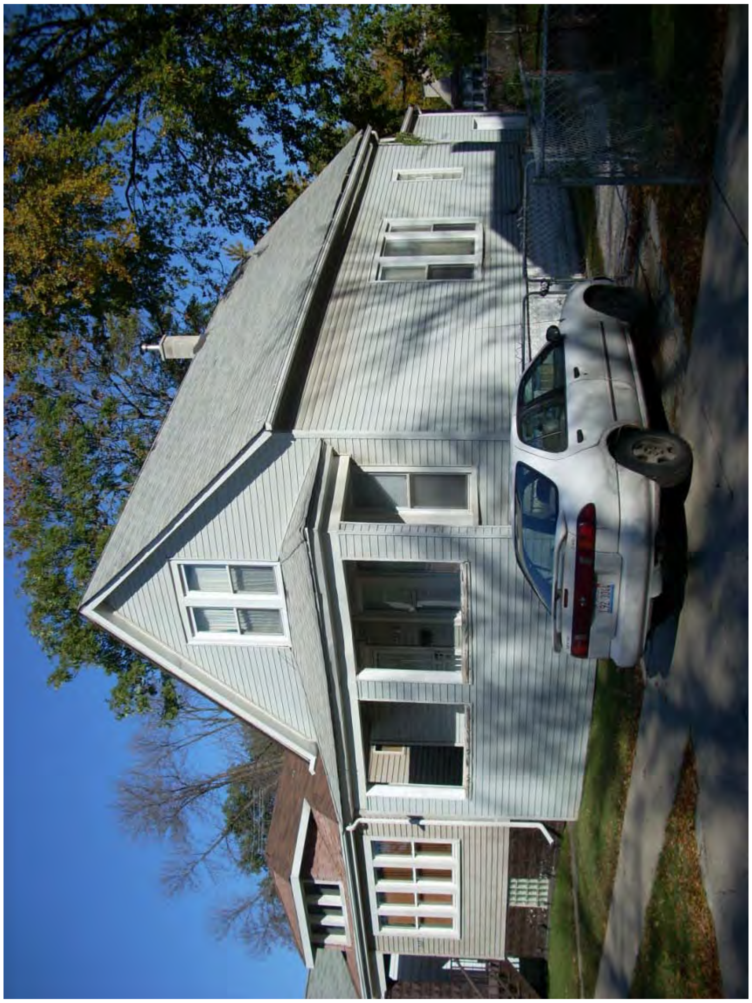
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 30 October 2012

Photos with Captions:
South and east façades of a 1.5-story, single family, frame residence.



Property Description: **Stories:** 1.5

This one-and-a-half-story frame house in the Roseland community is situated on a raised concrete block basement with glass block windows and is covered with synthetic siding. The building has a front gable roof covered with asphalt shingles. The front elevation has a full-width, hip-roof, wood porch with low, synthetic-clad walls, boxed supports, and side-facing steps. The residence also has an off-center metal storm door, a three-sided bay window on the first floor, and paired windows in the gable, all of which feature non-original one-over-one aluminum sashes. This house lacks integrity and distinctive architectural features and is not individually eligible for listing on the National Register.

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Structural Survey

Integrity:			**Additional Notes/Descriptions**
Unaltered	[✓ Slight Modification]	Major Alteration	Replacement windows and cladding
Condition:			
[✓ Excellent]	Good	Poor	
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

340 W. 106th Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1925

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

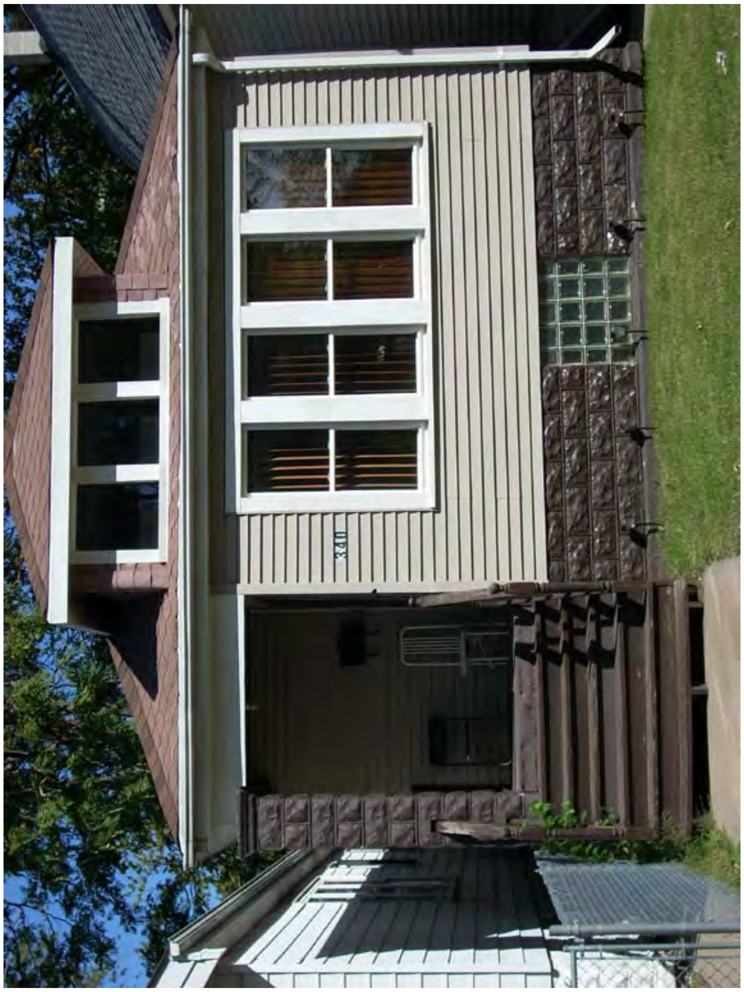
Craftsman

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 30 October 2012

Photos with Captions:
South façade of a one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story, Craftsman style, frame bungalow in the Roseland community is situated on a raised concrete block basement with glass block windows and is covered with synthetic siding. The building has a hip roof covered with asphalt shingles, overhanging eaves, and a hip dormer with three casement windows. The front elevation has a recessed corner porch with a concrete block corner pier, a front door tucked into the north side of the living room bay, wood steps with wood railings, and a strip of non-original one-over-one aluminum-sash windows. This is an example of a frame Craftsman bungalow, a residential building type that was produced during the 1910s and 1920s. This house does not feature distinguishing architectural elements and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows and cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingles	**Roof Features** Dormer	**Roof Type** Hip	
Ornamental Architectural Details None			**Windows** Double-hung, casement, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

349 W 106th Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1914

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

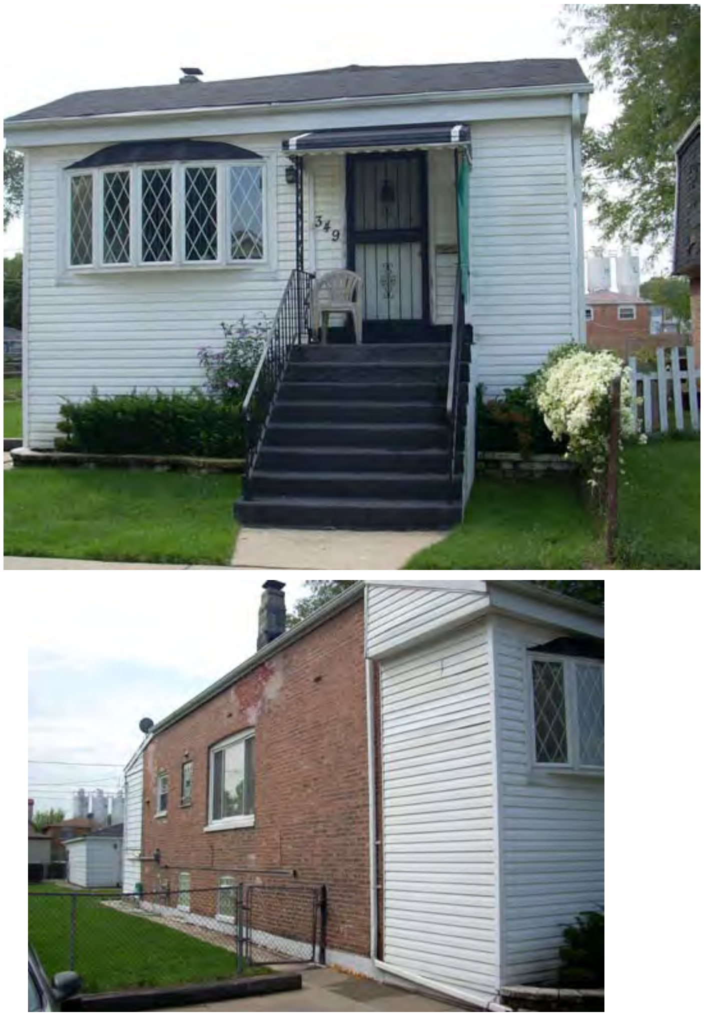
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: Steve Katz

Date: 25 September 2012

Photos with Captions:
North façade of a brick and vinyl, one-story, single family residence.



Property Description: **Stories:** 1

This building consists of a central, hipped-roof, brick clad structure on a raised basement that was constructed in 1914. Later, shed-roof, vinyl clad additions were constructed on the front and rear of the central brick portion. The front elevation features an off-center porch with concrete steps, metal railings and supports topped by a metal awning roof. It also has a hollow metal front door and a five-sided bow window. This home lacks both integrity and architectural distinction and is not individually eligible for listing on the National Register.

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Structural Survey

Integrity: Unaltered Slight Modification [✓ Major Alteration]			**Additional Notes/Descriptions** Replacement windows
Condition: Excellent [✓ Good] Poor			
Additional Alterations Additions to front and rear			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick (original part), Vinyl (front and rear additions)	
Roof Material Asphalt	**Roof Features** None	**Roof Type** Hip, shed	
Ornamental Architectural Details None			**Windows** Double-hung, fixed-pane, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

350 W 106th Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1908

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

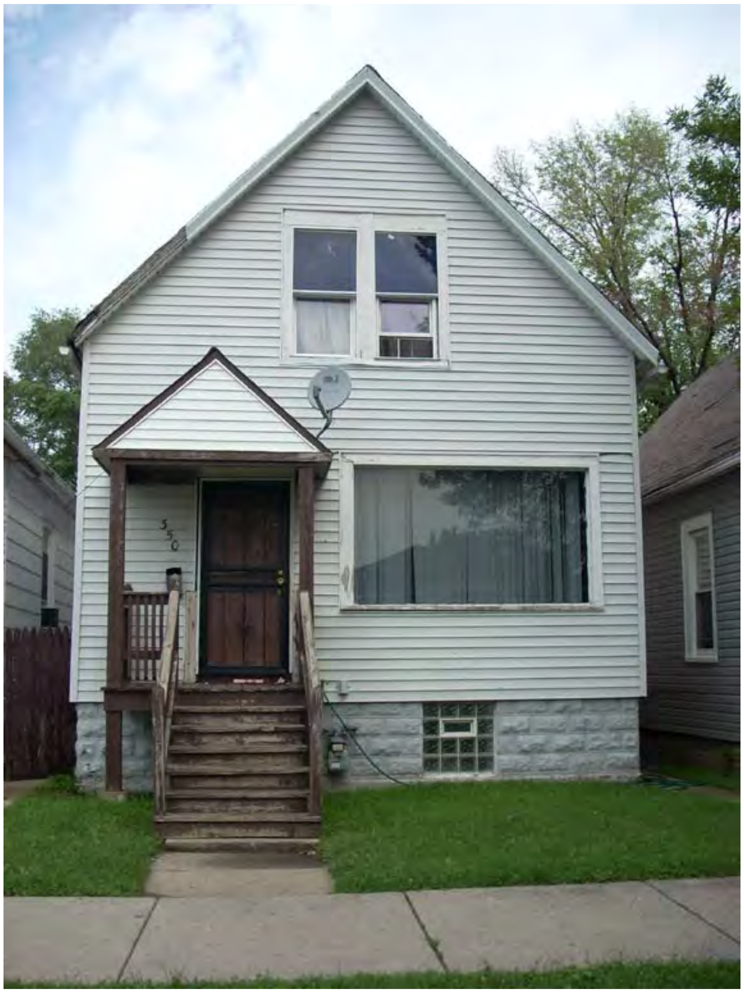
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: Steve Katz

Date: 25 September 2012

Photos with Captions:
South façade of vinyl-sided, one-and-a-half-story, single-family residence.



Property Description: **Stories:** 1.5

This one-and-a-half story home in the Roseland community is situated on a raised basement, is clad in aluminum siding, and has a front-gabled roof covered with asphalt shingles. Its front elevation features an off-center, gable-roofed porch with wood steps, railings, and posts. It has a front door that appears to be hollow metal, a picture window on the first floor, and paired one-over-one windows on the second floor. This home lacks both integrity and architectural distinction and is not individually eligible for listing on the National Register.

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505 North State Street
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Structural Survey

<table>
<tr><td colspan="3">Integrity:
Unaltered [✓ Slight Modification] Major Alteration</td><td>Additional Notes/Descriptions
Replacement siding and windows; new porch</td></tr>
<tr><td colspan="3">Condition:
Excellent [✓ Good] Poor</td><td></td></tr>
<tr><td colspan="3">Additional Alterations
Fixed-pane picture window replaces original windows</td><td></td></tr>
<tr><td colspan="2">Structure Usage
Current: NA
Historic: NA</td><td>Exterior Wall Surface
Synthetic siding</td><td></td></tr>
<tr><td>Roof Material
Asphalt</td><td>Roof Features
None</td><td>Roof Type
Gable</td><td></td></tr>
<tr><td colspan="3">Ornamental Architectural Details
None</td><td>Windows
Fixed- pane, double-hung, glass block</td></tr>
<tr><td colspan="4">Outbuildings (<i>Number and Description</i>)
None</td></tr>
</table>

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

352 W. 106th Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1924

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

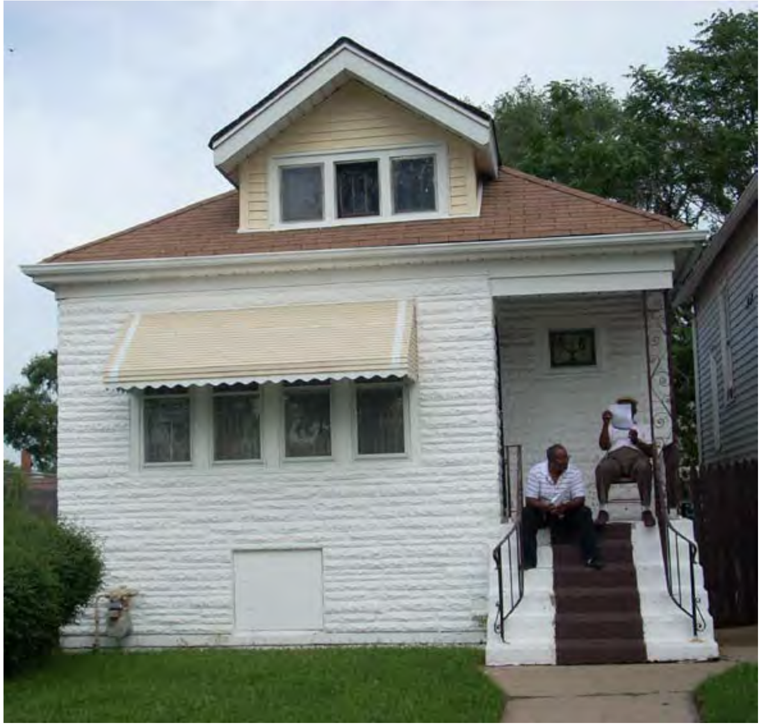
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 25 September 2012

Photos with Captions:
South façade of one-story, single family residence.



Property Description: **Stories:** 1

This one-story home in the Roseland community is situated on a raised basement and clad with stone (first floor) and synthetic siding (dormer). It has a hip roof covered with asphalt shingles and a gable-roofed dormer with three windows that appear to be casements. Its front façade features a recessed porch with concrete steps, metal railings, and a metal corner support; it also has a leaded glass casement window and a strip of four one-over-one windows. This home lacks both integrity and architectural distinction and is not individually eligible for listing on the National Register.

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Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement siding on dormer
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Stone, synthetic siding (dormer)	
Roof Material Asphalt	**Roof Features** Gabled dormer	**Roof Type** Hip	
Ornamental Architectural Details None			**Windows** Casement, double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

341 W. 106th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1903

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

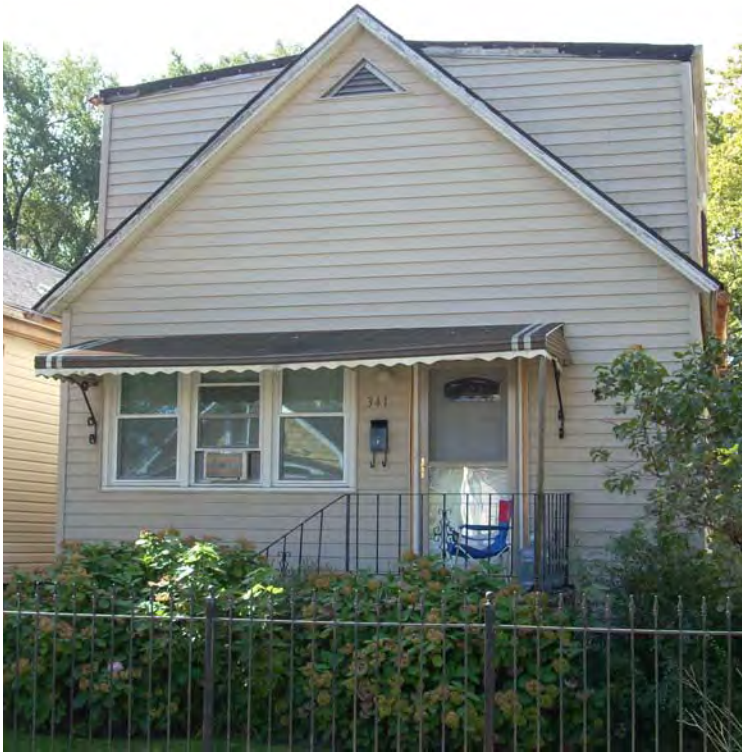
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 16 October 2012

Photos with Captions:
North façade of a one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story cottage in the Roseland community is situated on a raised concrete block basement and is clad with synthetic siding. The building has a front gable roof covered with asphalt shingles and two large non-original flat-roofed side elevation dormers with one-over-one aluminum-sash windows. The front elevation has an off-center non-original hollow core metal door, steps obscured by foliage with metal railings, and a strip of three non-original one-over-one aluminum-sash windows. This house lacks integrity and distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
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Structural Survey

Integrity: Unaltered Slight Modification [✓ Major Alteration]			**Additional Notes/Descriptions** Replacement door, windows, and cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations Side dormers added			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingles	**Roof Features** None	**Roof Type** Gable, flat	
Ornamental Architectural Details None			**Windows** Double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y [✓ N]**	
National Register Historic Places	**Y [✓ N]**	
National Register Historic District	**Y [✓ N]**	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

346 W. 106th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1964

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

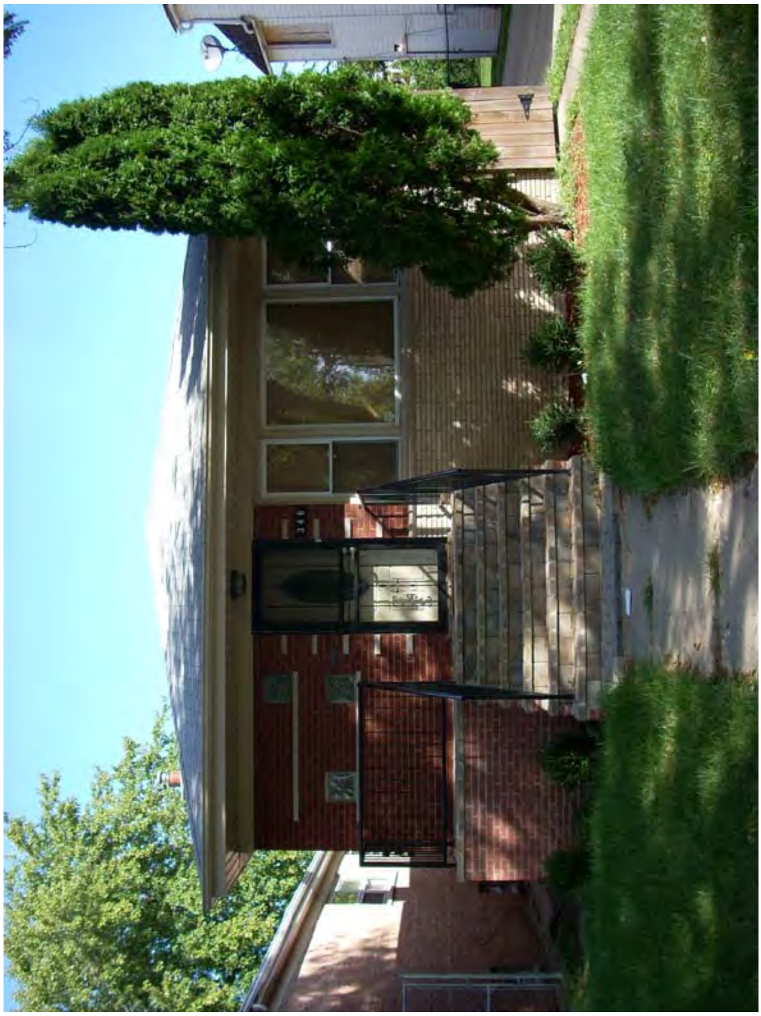
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 16 October 2012

Photos with Captions:
South façade of a brick, one-story, single family residence.



Property Description: **Stories:** 1

This one-story house in the Roseland community is situated on a raised basement with glass block windows and has a hip roof covered with asphalt shingles. Its front elevation is clad with red brick on one side and buff brick on the other, has an off-center hollow core metal door, concrete steps with metal railings, and a picture window flanked by one-over-one aluminum-sash windows. Detailing includes three decorative glass blocks and concrete inserts flanking the front door. This house lacks distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: [✓ Unaltered] Slight Modification Major Alteration			**Additional Notes/Descriptions**
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Hip	
Ornamental Architectural Details Decorative glass blocks, concrete inserts at entrance			**Windows** Double-hung, fixed-pane, glass blcok
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

351 W 106th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1898

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

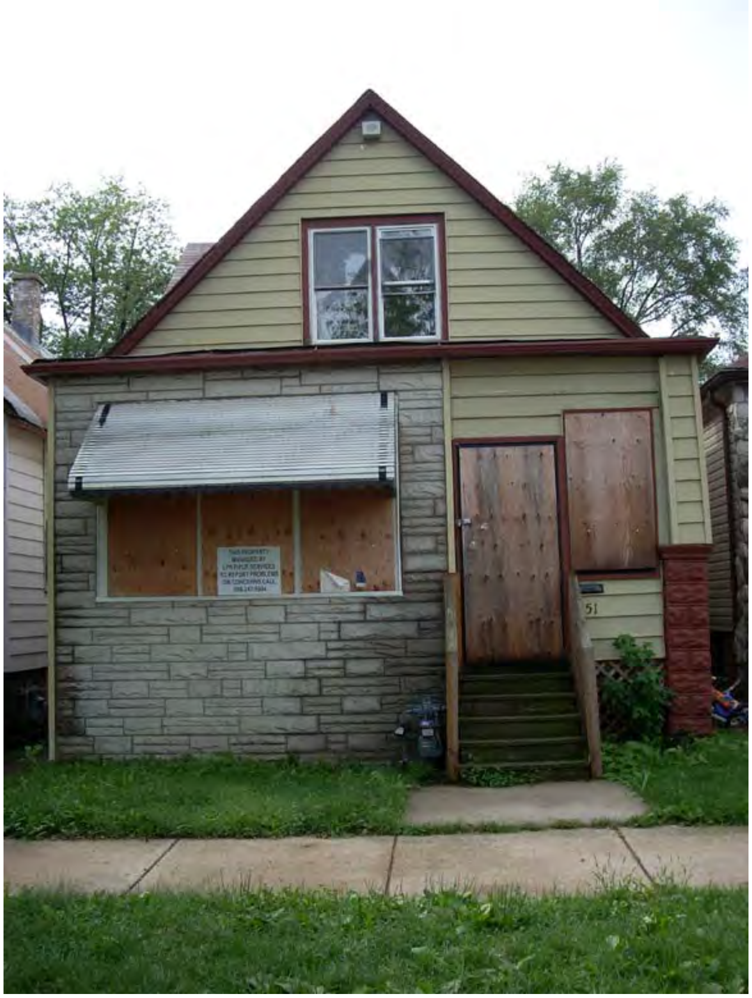
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: Steve Katz

Date: 24 September 2012

Photos with Captions:
North façade of a one story, single-family residence.



Property Description: **Stories:** 1

This one story home in Roseland has a front gable roof with asphalt shingles. Its front façade is clad in both vinyl and faux stone siding; it has a flat-roofed enclosed porch with an off-center entrance covered with plywood. The two first floor window openings are in-filled with wood and the gable features a pair of one-over-one aluminum-sash windows. This structure lacks integrity and architectural distinction and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement doors, windows, cladding
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Vinyl, faux stone	
Roof Material Asphalt	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung, in-filled
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

353 W 106th Street
Alternate: 355 W 106th Street, per Assessor

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1924

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

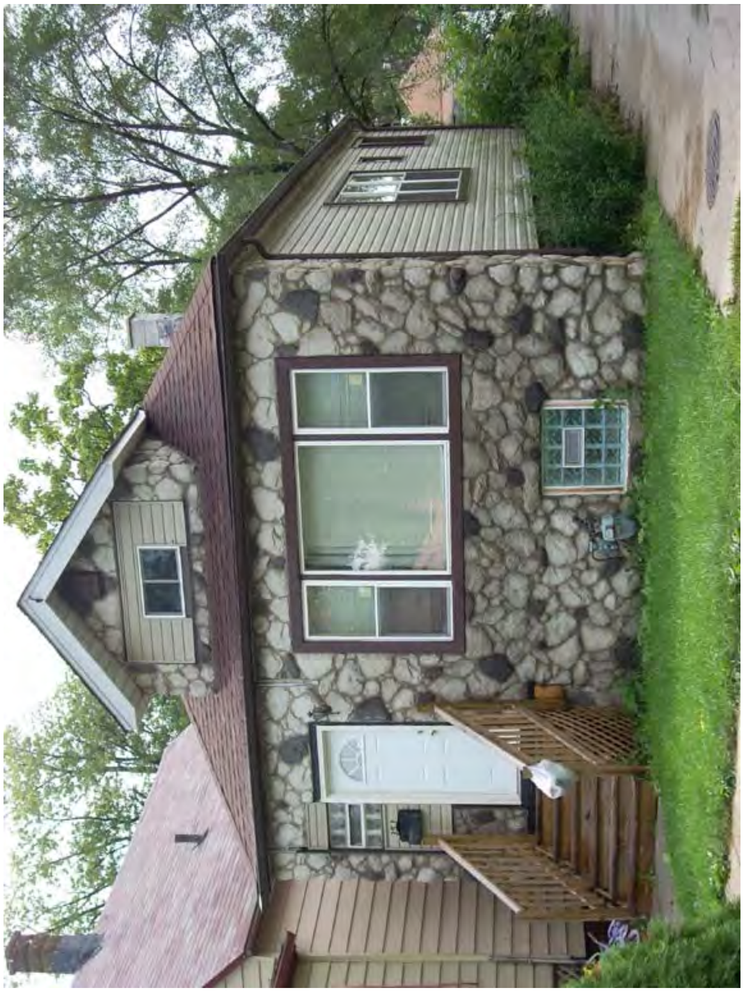
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: Steve Katz

Date: 24 September 2012

Photos with Captions:
North façade of vinyl and stone, one-story single-family residence.



Property Description: **Stories:** 1

This one-story home in Roseland is situated on a raised basement. It has a hip roof with asphalt shingles and a gable-roofed dormer with sliding glass windows. Its front elevation is clad in synthetic stone and features an off-center hollow metal paneled door with fanlight, accessed via a short flight of wood steps with wood railings. Its strip of three windows features a picture window flanked by one-over-one windows. The side elevations are clad in vinyl siding. Alterations include the installation of siding and replacement windows. This structure lacks integrity and architectural distinction and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity:			**Additional Notes/Descriptions**
Unaltered	[✓ Slight Modification]	Major Alteration	Replacement doors, windows, cladding
Condition:			
[✓ Excellent]	Good	Poor	
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Vinyl (sides and rear), Faux stone (façade)	
Roof Material Asphalt	**Roof Features** Gabled dormer	**Roof Type** Hip	
Ornamental Architectural Details None			**Windows** Double-hung, fixed-pane, sliding
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

332 W. 107th Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1949

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

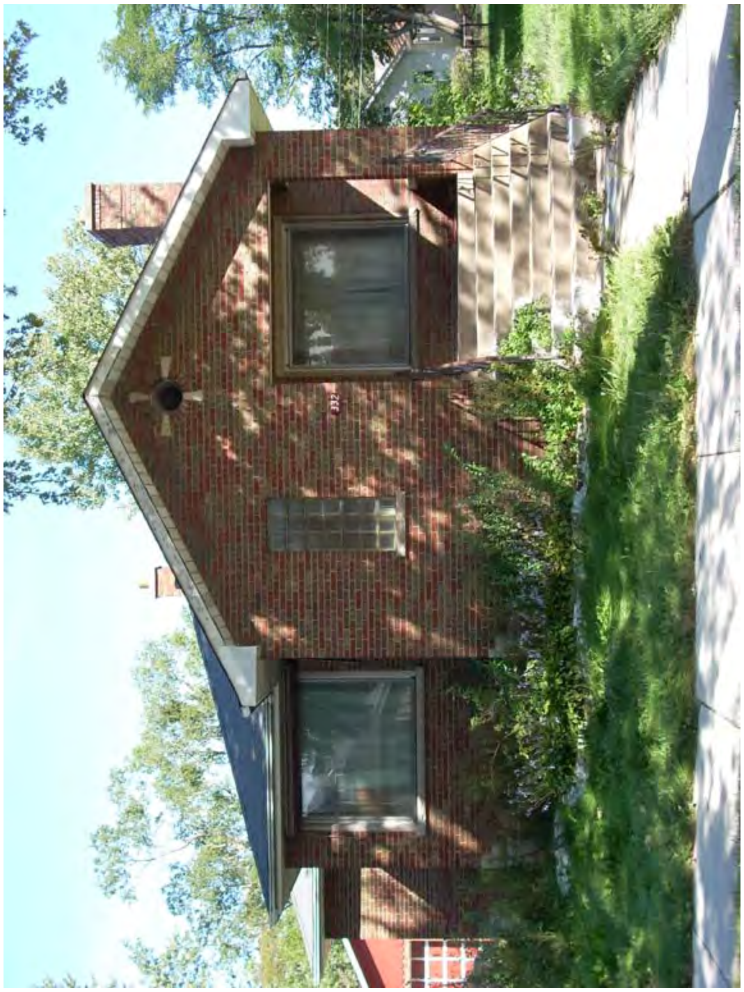
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 16 October 2012

Photos with Captions:
South façade of a brick, one-story, single family residence.



Property Description: **Stories:** 1

This one-story, brick-clad house in the Roseland community sits on a raised basement with glass block windows. The building has a hip roof covered with asphalt shingles, overhanging eaves, and a large hip-roofed rear wing. Its projecting gable-roofed front wing has a recessed corner porch with low brick walls, a brick corner pier, concrete steps with metal railings, and a door tucked into the side of the living room bay. Its front elevation features two large picture windows, a glass block window, and a bulls-eye window in the gable. Other windows are non-original double-hung. Detailing includes faux stonework at the corners of the basement, concrete sills, glass blocks, and keystone-like blocks surrounding the bulls-eye window. This house lacks integrity and distinguishing architectural features and is not individually eligible for listing on the National Register.

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingles	**Roof Features** None	**Roof Type** Hip	
Ornamental Architectural Details Stonework at corners, concrete sills, bull's eye window with stone accents			**Windows** Double-hung, fixed-pane, glass block
Outbuildings (*Number and Description*) Detached three car garage.			

Local Landmark	**Y [✓ N]**	
National Register Historic Places	**Y [✓ N]**	
National Register Historic District	**Y [✓ N]**	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

333 W. 107th Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1924

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

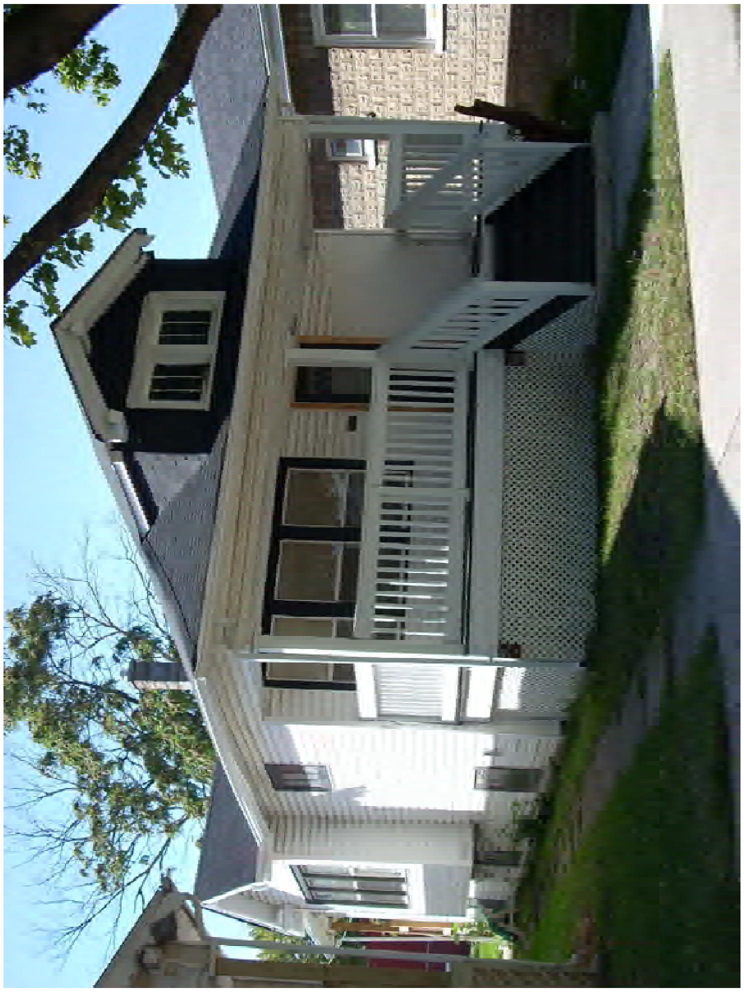
Craftsman

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 16 October 2012

Photos with Captions:
North façade of a one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story bungalow in the Roseland community is situated on a raised brick basement with glass block windows and is clad with synthetic siding. The building has a hip roof covered with asphalt shingles, overhanging eaves, and a hip dormer with a pair of original wood casement windows and decorative rafters. Its roof overhangs to shelter a full-width wood porch with straight railings and posts. The front elevation has an off-center non-original hollow-core metal door and a strip of three non-original one-over-one aluminum-sash windows. This house lacks integrity and distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement door, windows, and cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingles	**Roof Features** Dormer	**Roof Type** Hip	
Ornamental Architectural Details None			**Windows** Double-hung, casement, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

335 W. 107th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1899

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

Vernacular

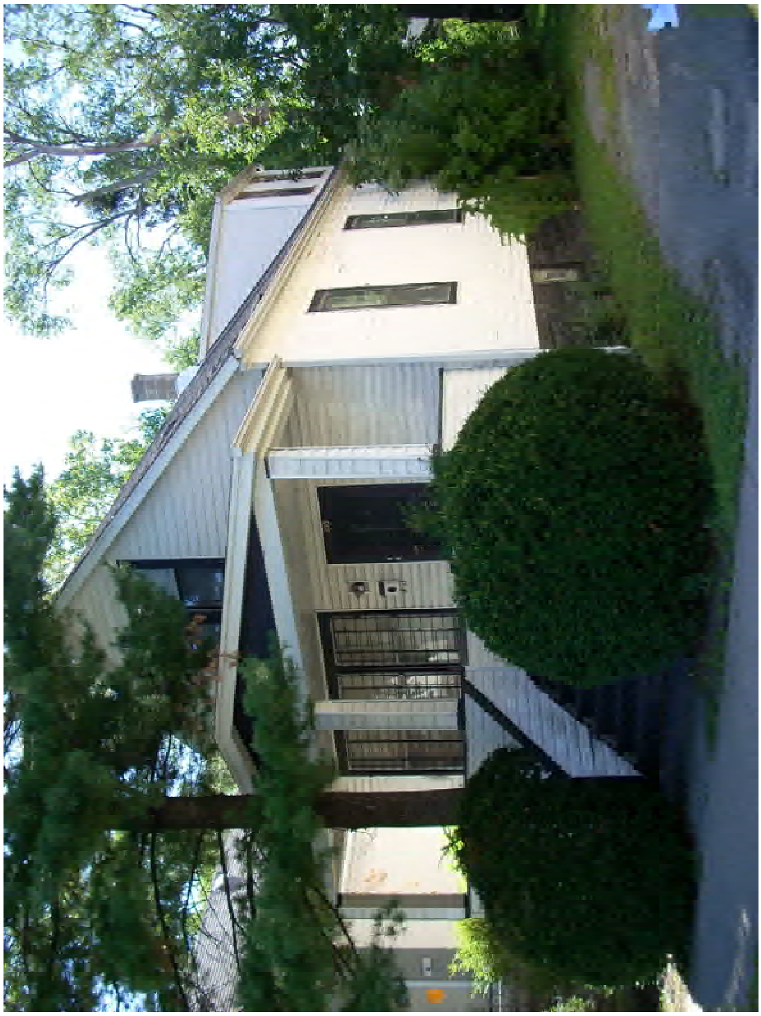
Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 16 October 2012

Photos with Captions:

North façade of a one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story home in the Roseland community is situated on a raised concrete block basement and is clad with synthetic siding. The building has a front gable roof covered with asphalt shingles and a shed dormer along its west elevation. It has a full-width, gable-roof, wood porch with low walls and three boxed supports all covered with aluminum siding. The front elevation has an off-center door with a metal storm door, a strip of three windows on the first floor and a pair of windows in the attic, all of which are non-original one-over-one aluminum-sash. This house lacks integrity and distinguishing architectural features and is not individually eligible for listing on the National Register.

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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows and cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingles	**Roof Features** Dormer	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung
Outbuildings (*Number and Description*) Garage			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

400 W 107th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Industrial

Current: Industrial

Date of Construction: 1929

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

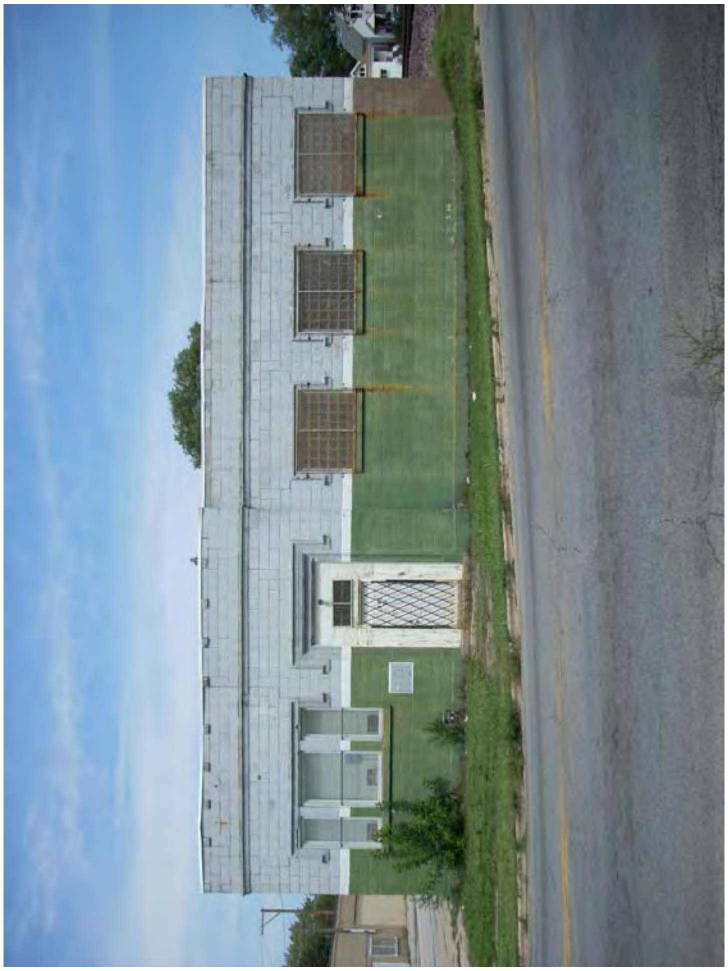
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: Steve Katz

Date: 25 September 2012

Photos with Captions:
South façade of a one-story, concrete block, light industrial building.



Property Description: **Stories:** 1

This one-story, concrete block, light industrial building has a flat roof with parapet. Its front elevation has an off-center entrance with a non-original metal core door with surround and transom, a strip of one-over-one windows, and three glass block windows. Detailing includes drip molds above the entrance and windows. This building lacks architectural distinction and is not individually eligible for listing on the National Register.

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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement door
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Concrete block	
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details Drip molds above entrance and windows			**Windows** Glass block, double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

415 W. 107th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Commercial

Current: Commercial

Date of Construction: 1920

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

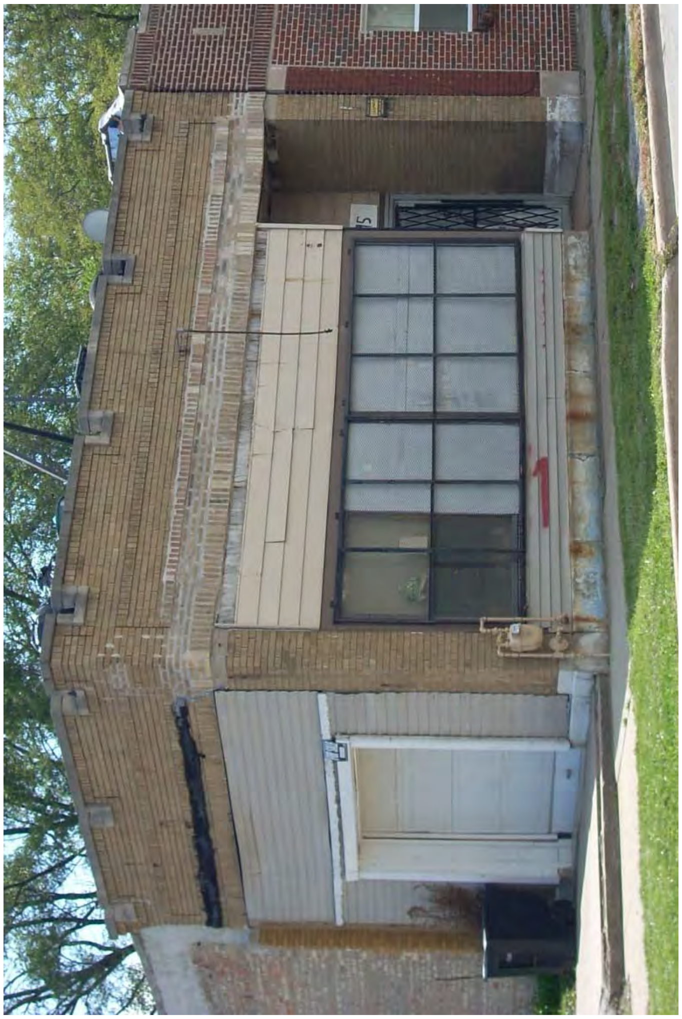
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 12 October 2012

Photos with Captions:
North and east façades of a brick, one story, commercial building.



Property Description: **Stories:** 1

This one-story commercial building in the Roseland community has a flat roof, castellated parapet, a brick panel at the cornice line, and concrete coping. Its front elevation is clad in yellow face brick and has a recessed, off-center hollow core metal door that is non-original. Aluminum siding has replaced this door’s original transom and its original storefront has been in-filled with a strip of fixed pane windows with aluminum siding above and below. The north portion of its east elevation is also clad in yellow face brick and has been altered with the insertion of an overhead metal door that is surrounded by aluminum siding. This building lacks integrity and distinguishing architectural features and is not individually eligible for listing on the National Register.

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Structural Survey

Integrity: Unaltered Slight Modification [✓ Major Alteration]			**Additional Notes/Descriptions** Replacement doors, windows, and cladding
Condition: Excellent Good [✓ Poor]			
Additional Alterations Garage door opening inserted on east facade			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick (main), Synthetic siding (infill)	
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details Brick panel			**Windows** Fixed-pane
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
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Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

432 W. 107th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1962

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

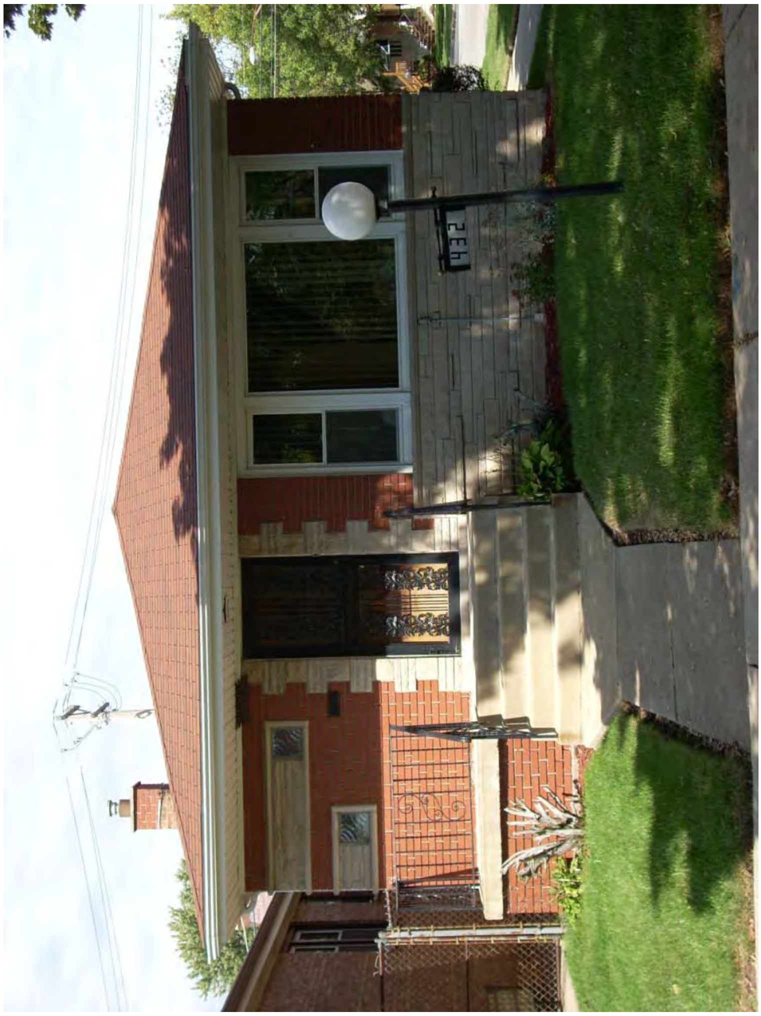
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 12 October 2012

Photos with Captions:
South façade of a masonry, one-story, single family residence.



Property Description: **Stories:** 1

This one-story home at the northwest corner of 107th Street and Eggleston Avenue in the Roseland community is situated on a raised brick basement. The building has a hip roof covered with asphalt shingles and overhanging eaves. The front elevation is clad with faux stone below the sill line and red brick above. The building has an off-center door behind a metal storm, concrete steps with metal railings, and a picture window flanked by one-over-one aluminum-sash windows. Detailing includes faux stone blocks flanking the front door and two horizontal strips of faux stone, each with a glass block, on the front elevation. The side (Eggleston) elevation is clad in red brick and has two pairs of four-over-one windows. It does not feature distinguishing architectural elements and is not individually eligible for listing on the National Register.

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Structural Survey

Integrity: [✓ Unaltered] Slight Modification Major Alteration			**Additional Notes/Descriptions**
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick (main), Faux stone (below sill)	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Hip	
Ornamental Architectural Details Stone panels with glass blocks, stone surround at entrance			**Windows** Double-hung, fixed-pane, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
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Marengo, Illinois 60152
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Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

300 W. 108th Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1908

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

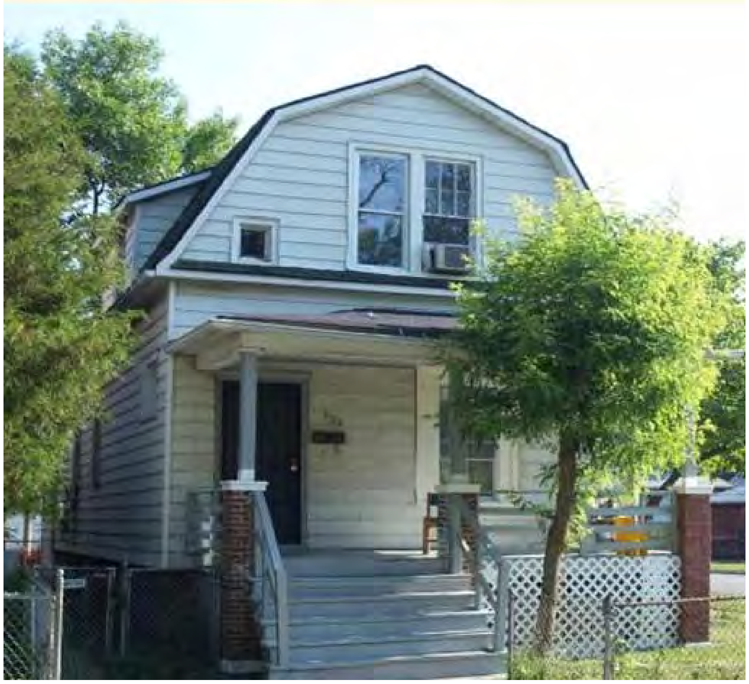
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz (too much foliage), Cook County Assessor (2007)

Date: 17 October 2012

Photos with Captions:
South façade of a 1.5-story, single family, frame residence.



Property Description: **Stories:** 1.5

This 1.5-story house at the northwest corner of 108th Street and Princeton Avenue in the Roseland community is situated on a raised brick basement and is clad with synthetic siding. The building has a gambrel roof covered with asphalt shingles. Its front (108th Street) elevation has a full-width, hip-roofed, wood porch with frieze band and supports consisting of three brick piers topped by squat wood posts. The building has an off-center door and a single double-hung window on the first floor. A pair of double-hung windows and a small casement window provide light to the attic space. Its Princeton Avenue elevation has a three-sided window bay. This house lacks integrity and distinguishing architectural features and is not individually eligible for listing on the National Register.

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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement door and cladding; possibly some of the windows
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt	**Roof Features** Dormer	**Roof Type** gambrel	
Ornamental Architectural Details Frieze band			**Windows** Double-hung, glass block, casement
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

313 W. 108th Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1918

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

Vernacular

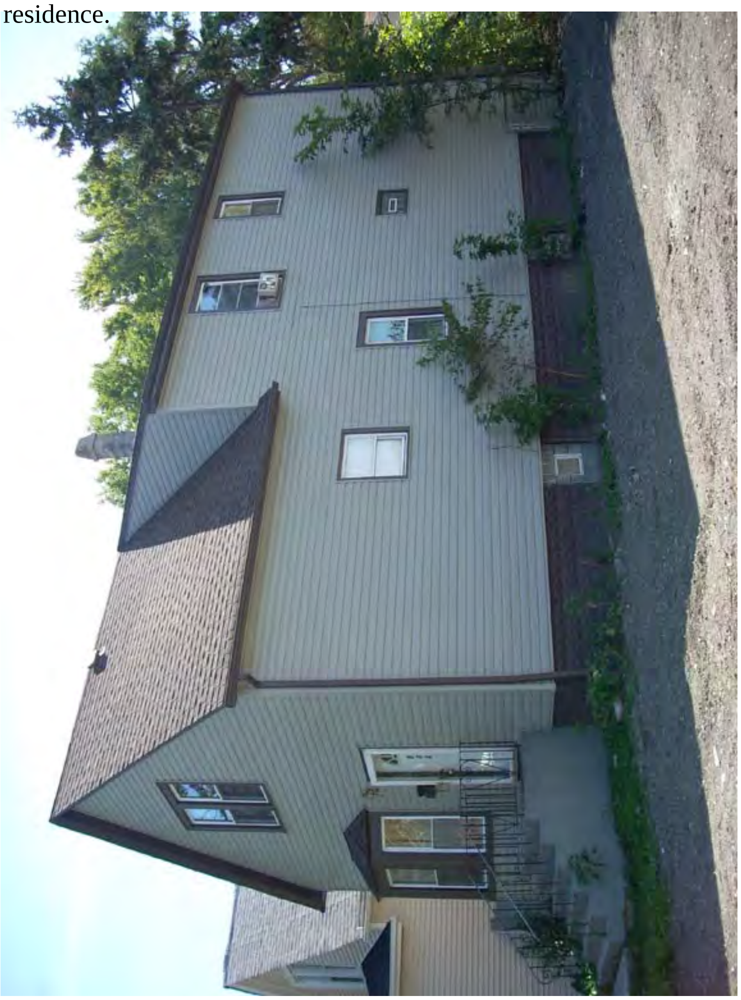
Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 17 October 2012

Photos with Captions:

North and west façades of a 1.5-story, single family, frame residence.



Property Description: **Stories:** 1.5

This one-and-a-half-story house in the Roseland community is situated on a raised concrete block basement with glass block windows and is clad with synthetic siding. The building has a gable roof covered with asphalt shingles. Its front elevation features an off-center non-original hollow core metal door, concrete steps with metal railings, a three-sided window bay on the first floor, and a pair of windows in the gable. Windows are non-original one-over-one aluminum-sash. The house has a shed-roofed second story addition at the rear of its west elevation and a gable dormer along its east elevation. This house lacks integrity and distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration	**Additional Notes/Descriptions** Replacement door, windows, cladding, steps, and railing
Condition: [✓ Excellent] Good Poor	
Additional Alterations Second story shed roof addition	
Structure Usage Current: NA Historic: NA — **Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle — **Roof Features** Dormer — **Roof Type** Gable	
Ornamental Architectural Details None	**Windows** Double-hung, glass block
Outbuildings (*Number and Description*) None	

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

348 W 108th Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1928

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

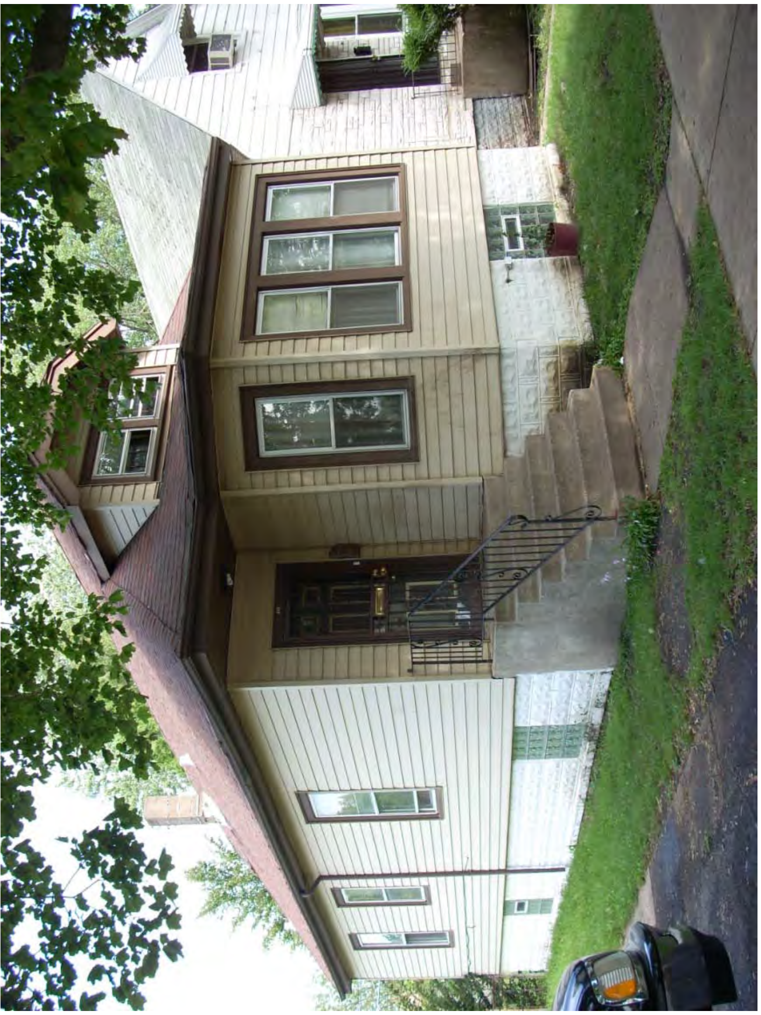
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 5 September 2012

Photos with Captions:
South and west façades of one-story, frame, single family residence.



Property Description: **Stories:** 1

This one-story, frame home in the Roseland community is situated on a raised basement and clad with synthetic siding. It has a hip roof covered with asphalt shingles and a dormer with two one-over-one windows. Its front elevation has a projecting living room bay with replacement one-over-one windows, an off-center hollow metal door, and concrete steps with metal railing. This building lacks architectural distinction and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Some replacement windows
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** Dormer	**Roof Type** Hip	
Ornamental Architectural Details None			**Windows** Double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

349 W. 108th Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1909

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

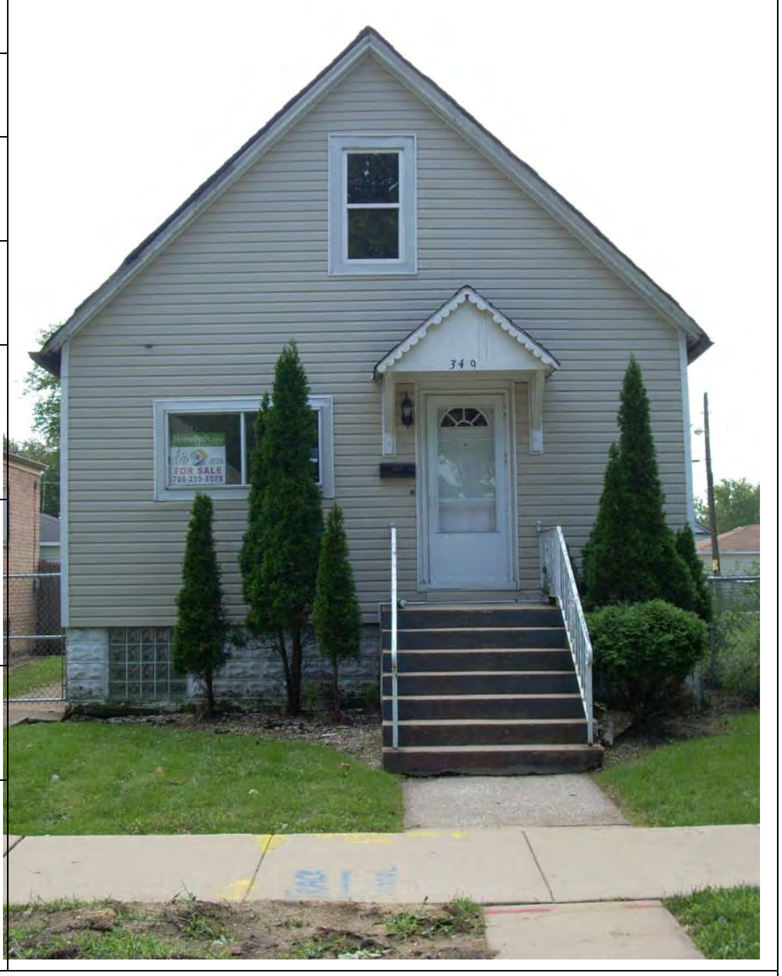
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 5 September 2012

Photos with Captions:
North façade of 1 story, frame, single family residence.



Property Description: **Stories:** 1

This one story home in the Roseland community is situated on a raised concrete block basement, is clad with aluminum siding, and has a front-gabled roof covered with asphalt shingles. Glass blocks in-fill the window openings in the basement. The front elevation of the residence features an off-center hollow metal door topped by a bracketed gabled hood and concrete steps with metal railings. It also features paired, non-original, sliding glass windows on the first floor and a one-over-one, non-original window in the gable. This home lacks integrity and architectural distinction and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement siding, windows, and doors
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details Bracketed gabled hood			**Windows** Double-hung, sliding, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Roseland Christian School

Common/Current: Roseland Christian School

Property Address:

234 W. 108th Street
Alternate: 314 W 108th St.

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Roseland Christian School

Property Use

Historic: Education

Current: Education

Date of Construction: 1928

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

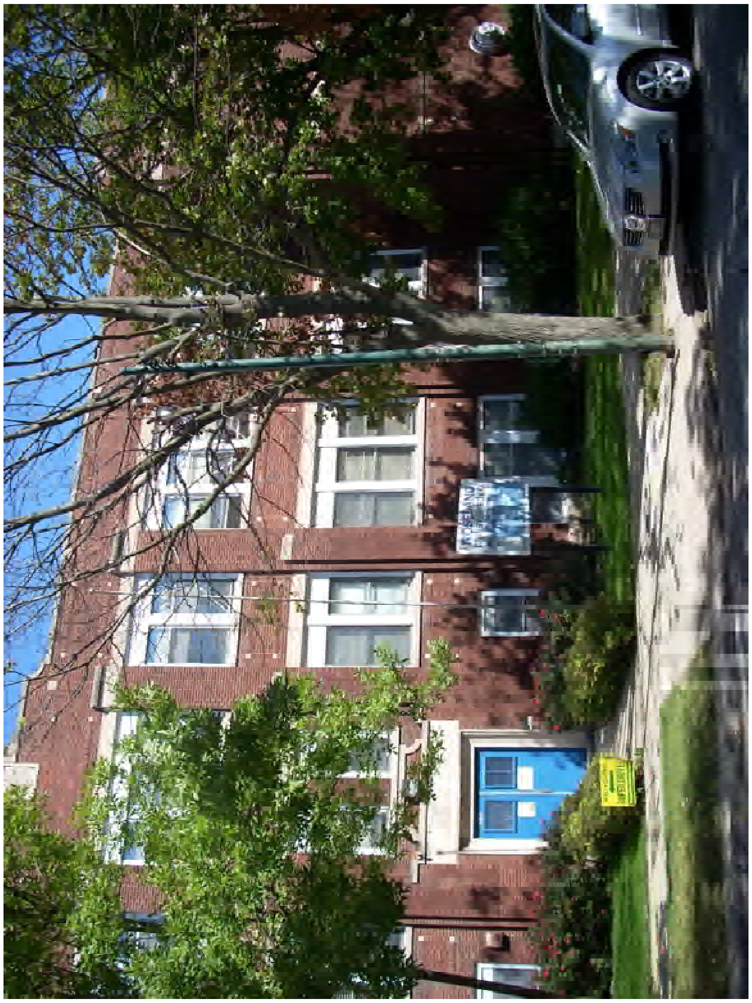
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 17 October 2012

Photos with Captions:
South façade of a brick, three-story school.



Property Description: **Stories:** 3

This three-story school in the Roseland community is clad in brown face brick. The building has a flat roof, shaped parapet with concrete coping, and corner pavilions. Full height brick pilasters divide the front elevation into a series of bays, each of which contains a strip of three one-over-one windows. The main entrance features a pair of non-original hollow core metal doors topped by a stone sign plate inscribed with the words, “Roseland Christian School.” Detailing includes decorative brick panels in the spandrels, concrete sills and lintels. This school lacks distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity:	Unaltered	[✓ Slight Modification]	Major Alteration	**Additional Notes/Descriptions** Replacement doors
Condition:	[✓ Excellent]	Good	Poor	
Additional Alterations				
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick		
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat		
Ornamental Architectural Details Parapet with concrete coping, corner pavilions, brick pilasters, stone sign, brick panels, concrete sills and lintels				**Windows** Double-hung
Outbuildings (*Number and Description*) None				

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
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Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

301 W. 109th Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Vacant

Property Use

Historic: Single family residence

Current: Multi-family residence

Date of Construction: 1905

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

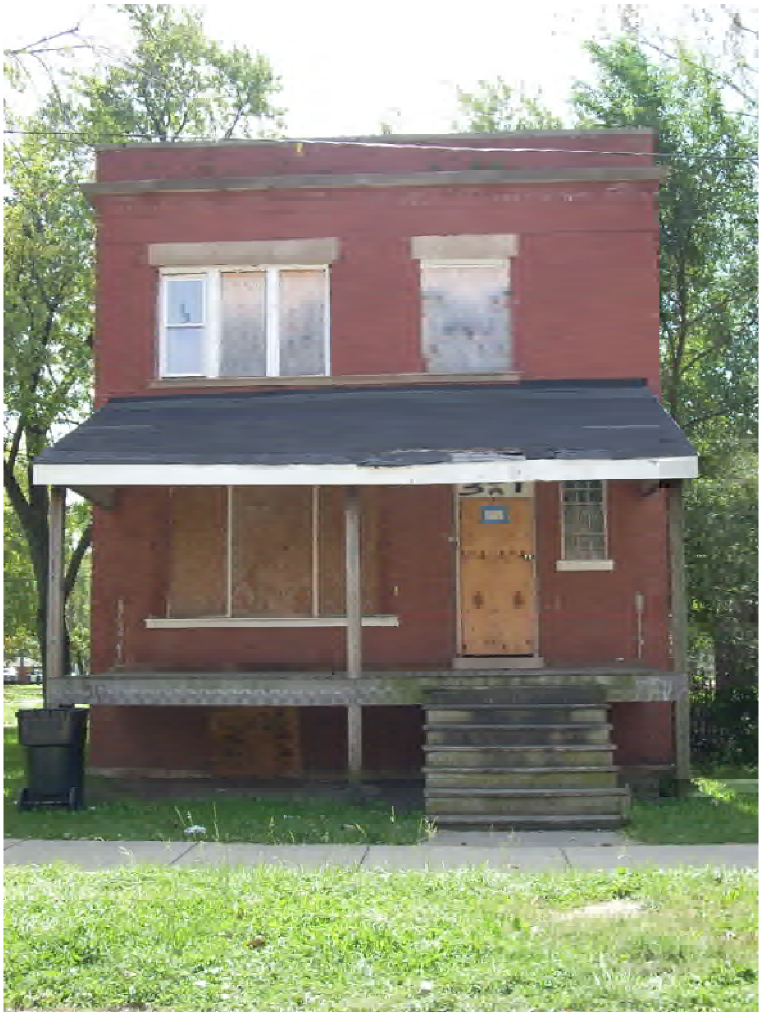
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 17 October 2012

Photos with Captions:
North façade of a brick, two-story, multi-family residence.



Property Description: **Stories:** 2

This two-flat residential building in the Roseland community is situated on a raised basement and is clad in red brick. The building has a flat roof and parapet. The front elevation has a full-width shed-roofed porch with wood posts and steps but no railings, an off-center door, an adjacent glass block window, and a group of three windows on the first floor. The second floor of the front elevation has a group of three windows and a single window. Nearly all windows are covered with plywood, with the exception of two non-original one-over-one aluminum-sash windows. The east elevation has a full-height window bay pavilion. Detailing includes stone sills, lintels, coping, and cornice. This building lacks integrity and distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows
Condition: Excellent Good [✓ Poor]			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details Stone sills, lintels, coping, and cornice			**Windows** Double-hung, glass block, covered
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

340 W. 109th Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1925

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

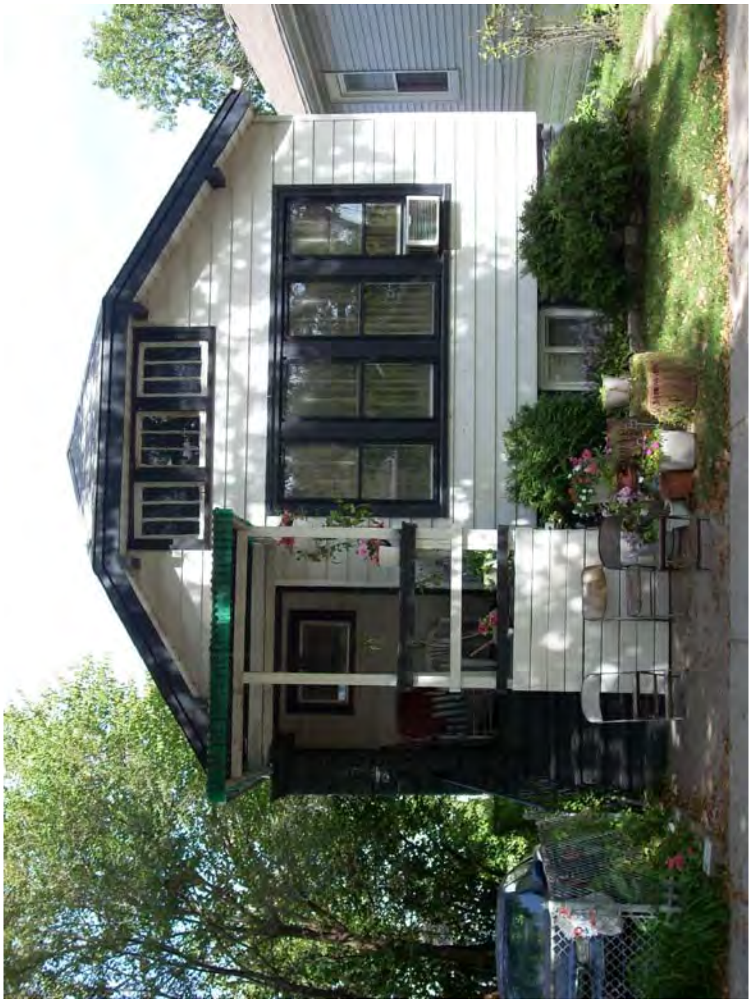
Craftsman

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 17 October 2012

Photos with Captions:
South façade of a one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story house in the Roseland community is situated on a raised concrete block basement and is covered with synthetic siding. The building has a hip-on-gable roof covered with asphalt shingles, overhanging eaves, and decorative rafters. It has a recessed corner porch with a door tucked into the side, a faux stone corner pier, and wood steps with metal railings sheltered by a flat-roofed metal canopy supported by two wood posts. Its front elevation features a casement window within the recessed porch, a strip of four double-hung wood-sash windows on the first floor, and a strip of three wood casement windows in the attic. This house lacks distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement siding
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt	**Roof Features** None	**Roof Type** Hip-on-gable	
Ornamental Architectural Details Exposed rafters			**Windows** Double-hung, casement
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

341 W. 109th Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1883

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

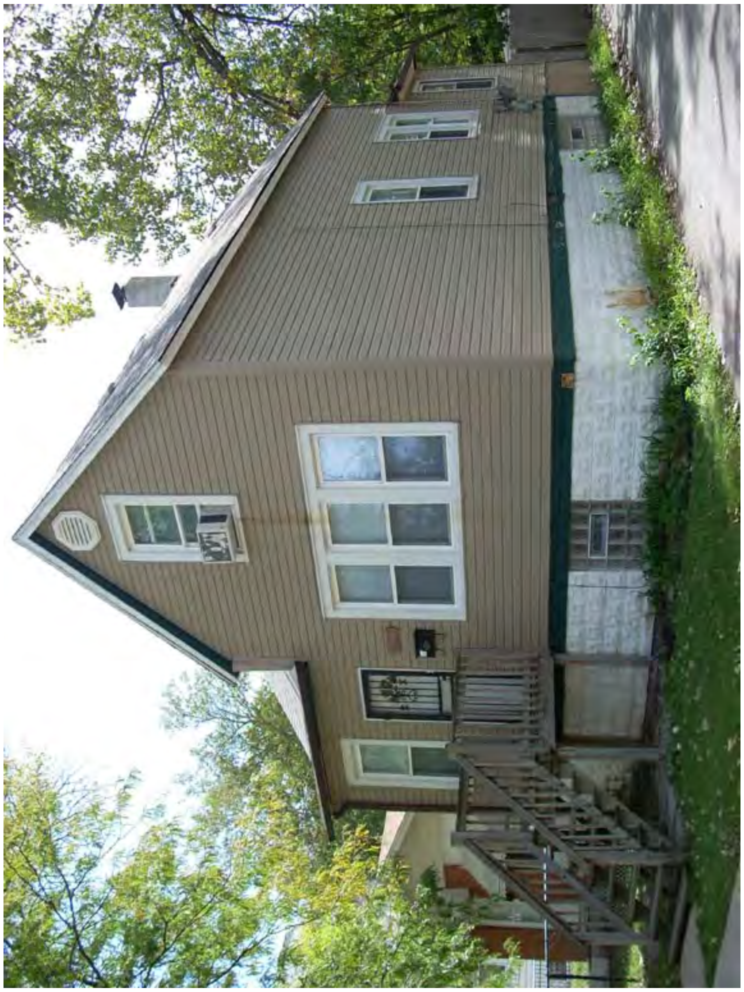
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 17 October 2012

Photos with Captions:
North façade of a 1.5- story, single family, frame residence.



Property Description: **Stories:** 1.5

This one-and-a-half-story frame house in the Roseland community is situated on a raised concrete block basement with glass block windows and is covered with synthetic siding. The building has a cross-gable roof covered with asphalt shingles. The front elevation has an off-center door behind a metal storm door, non-original wood steps and railings, and five non-original one-over-one aluminum-sash windows: four on the first floor and one in the gable. Review of the 1938 Sanborn and the assessor’s 2007 photograph suggests that while the front and rear porches are original to the house, a second story was added to the residence between 1938 and 2007. This house lacks integrity and distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity:

Unaltered [✓ Slight Modification] Major Alteration

Additional Notes/Descriptions

Replacement door, windows, cladding, and railings

Condition:

Excellent [✓ Good] Poor

Additional Alterations

Second story added

Structure Usage Current: NA Historic: NA	**Exterior Wall Surface** Synthetic siding

Roof Material	**Roof Features**	**Roof Type**
Asphalt shingle	None	Cross-gable

Ornamental Architectural Details

None

Windows

Double-hung, glass block

Outbuildings (*Number and Description*)

None

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Sanborn map 4228.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

348 W. 109th Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1930

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

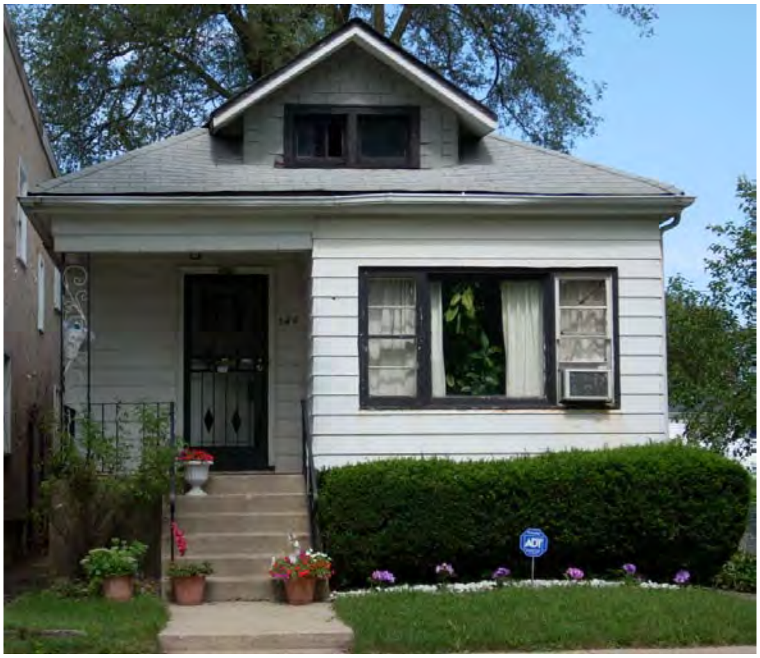
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 5 September 2012

Photos with Captions:
South façade of one-story, frame, single family residence.



Property Description: **Stories:** 1

This one-story home in the Roseland community is clad with synthetic siding. It has a hip roof covered with asphalt shingles and a gabled dormer with two windows that appear to be casements. Its front façade features an off-center door within a recessed porch with concrete steps, metal railings and corner support, and a picture window flanked by double-hung windows. This home lacks integrity and architectural distinction and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement siding
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** Dormer	**Roof Type** Hip	
Ornamental Architectural Details None			**Windows** Fixed-pane, double-hung, casement
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

350 W. 109th Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Multi-family residence

Date of Construction: 1908

Architect's Name: Unknown

Builder/Contractor: Unknown

Architectural Style:

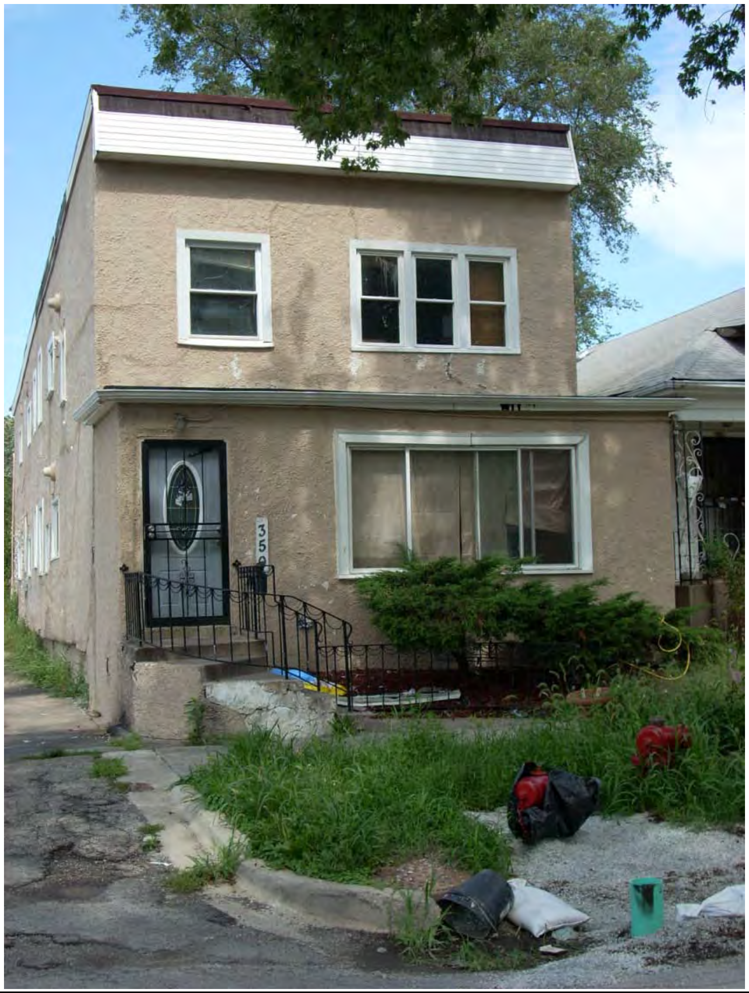
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 5 September 2012

Photos with Captions:
South façade of two-story multi-family residence.



Property Description: **Stories:** 2

This two-story home in the Roseland community has “cemented” cladding material, which is original per the 1911 Sanborn map. Its front elevation has an enclosed, full-façade, flat-roofed porch with an off-center metal core door, concrete steps and metal railings, and a strip of four windows that appear to be sliding windows. The second floor of the front elevation has four one-over-one windows. This home lacks integrity and architectural distinction and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity:

Unaltered [✓ Slight Modification] Major Alteration

Additional Notes/Descriptions

Replacement windows, porch enclosed

Condition:

Excellent [✓ Good] Poor

Additional Alterations

Structure Usage	**Exterior Wall Surface**
Current: NA Historic: NA	Cement

Roof Material	**Roof Features**	**Roof Type**
None	Parapet	Flat

Ornamental Architectural Details

None

Windows

Sliding, double hung

Outbuildings (*Number and Description*)

None

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

351 W. 109th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1889

Architect's Name: Unknown

Builder/Contractor: Unknown

Architectural Style:

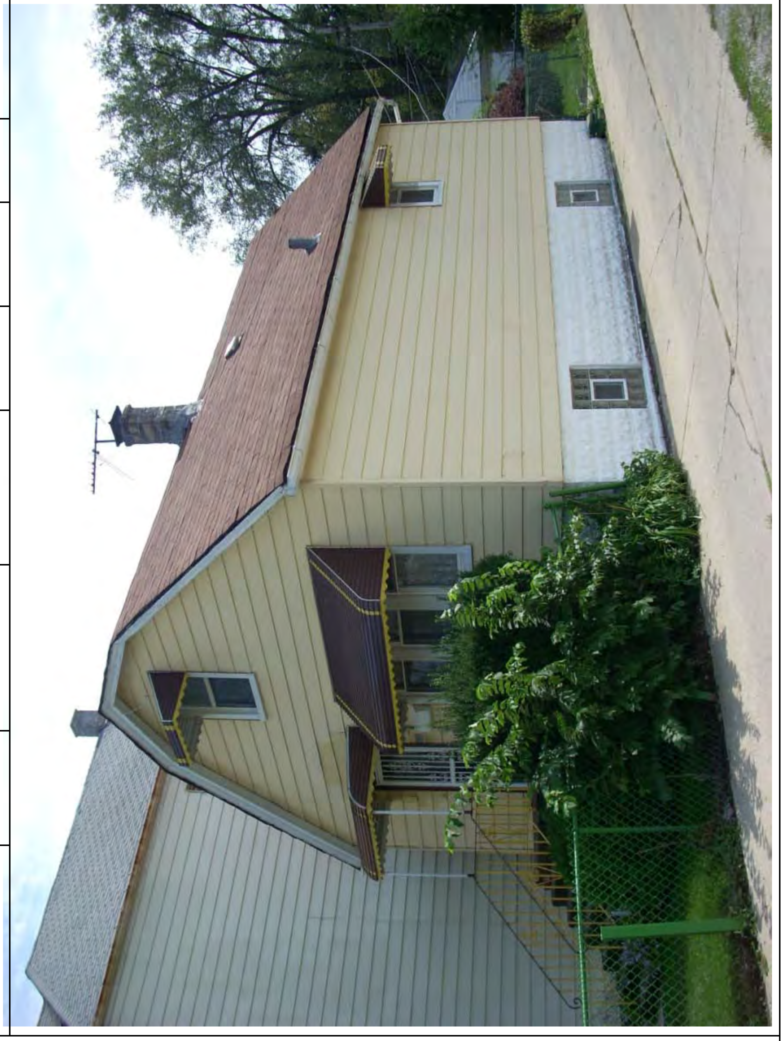
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 5 September 2012

Photos with Captions:
North and west façades of 1-story, frame, single family residence.



Property Description: **Stories:** 1

This one story home in the Roseland community is clad with aluminum siding, has a gambrel roof covered with asphalt shingles, and rests on a concrete block foundation. Its front elevation features an off-center door and porch with concrete steps, metal railings and supports, a metal awning roof, and a strip of three one-over-one windows on the first floor and a one-over-one window above. Window openings in the basement are filled with glass blocks surrounding a central, casement window. This home lacks integrity and architectural distinction and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
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Phone (815) 568- 0680

Structural Survey

Integrity:			**Additional Notes/Descriptions**
Unaltered	[✓ Slight Modification]	Major Alteration	Replacement windows, doors, and cladding
Condition:			
[✓ Excellent]	Good	Poor	
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gambrel	
Ornamental Architectural Details None			**Windows** Double-hung, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, no in CHRS

Common/Current: Unknown

Property Address:

354 W. 109th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1894

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

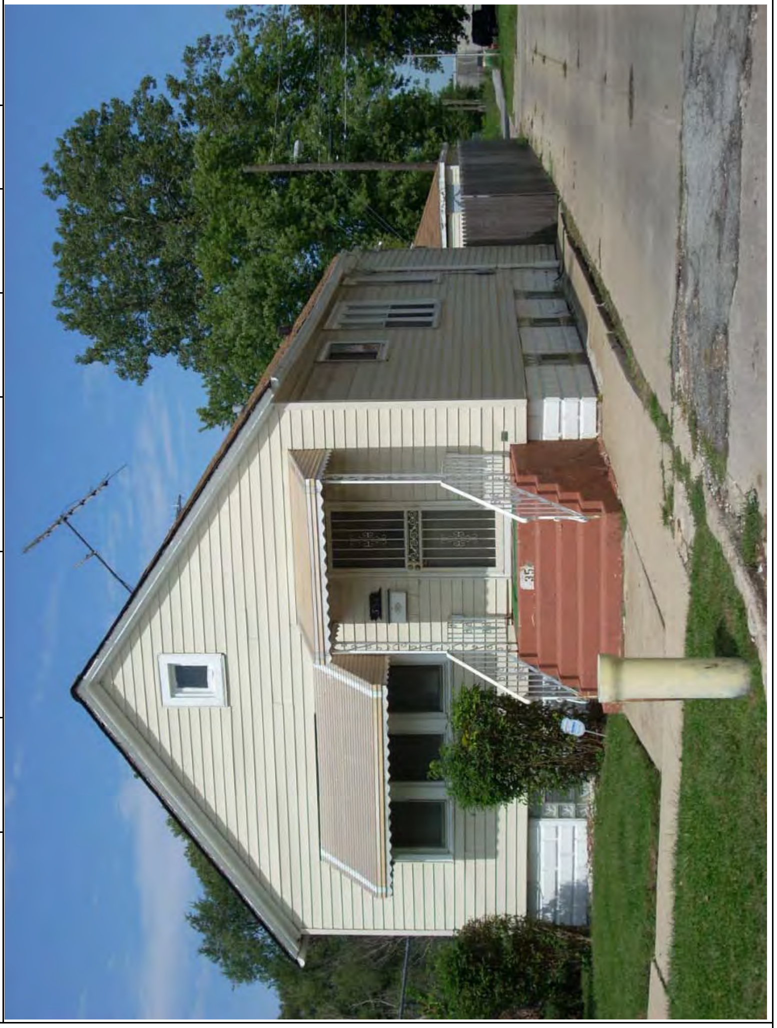
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 5 September 2012

Photos with Captions:
South and east façades of 1 -story, frame, single family residence.



Property Description: **Stories:** 1

This one story home in the Roseland community is clad with synthetic siding, has has a front-gabled roof covered with asphalt shingles, and rests on a concrete block foundation. Its front elevation features an off-center door and porch with concrete steps, metal railings and supports, and metal awning roof. It has a strip of three one-over-one windows on the first floor and a small single-pane window in the gable. Glass blocks with a central casement infill the basement window openings. This home lacks integrity and architectural distinction and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement siding and windows in basement
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Fixed-pane, double-hung, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: South Shore Iron Works

Common/Current: South Shore Iron Works

Property Address:

404-410 W. 109th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Vacant

Property Use

Historic: Industrial

Current: Industrial

Date of Construction: 1965

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

Vernacular

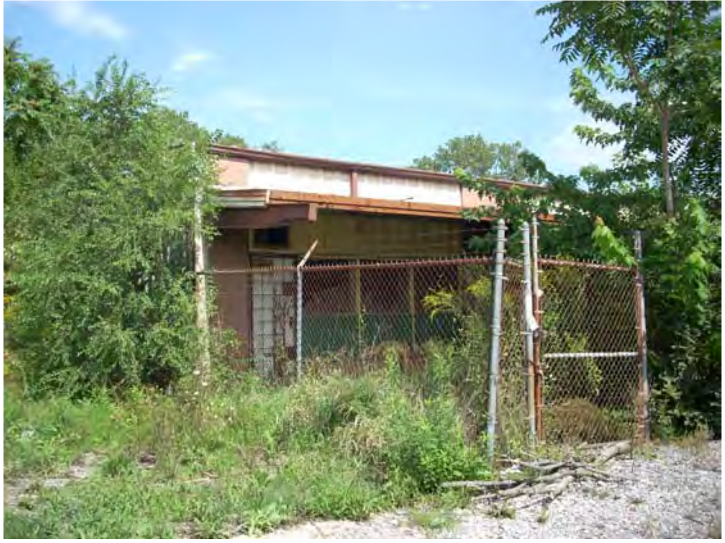
Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz (top photo, photo pg. 3), CCA (bottom photo)

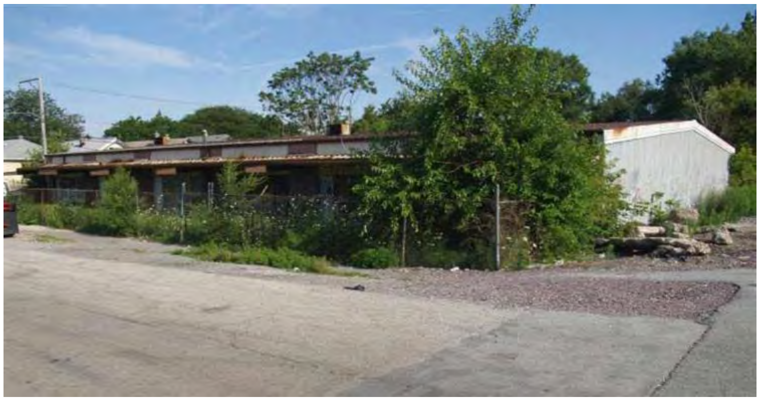
Date: 5 September 2012

Photos with Captions:

East façade of industrial, brick and metal storage shed.



South and east façades of industrial, brick and metal storage shed.



Property Description: **Stories:** 1

This one-story, side-gabled, metal shed on the vacated South Shore Iron Works property is partially obscured by foliage. The front elevation is clad in buff brick and contains a series of hollow metal doors, each flanked by three windows to one side; many are covered with plywood. A full width metal canopy is present on the front façade. The gable ends and rear elevation are clad in corrugated sheet metal. This building lacks architectural distinction and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

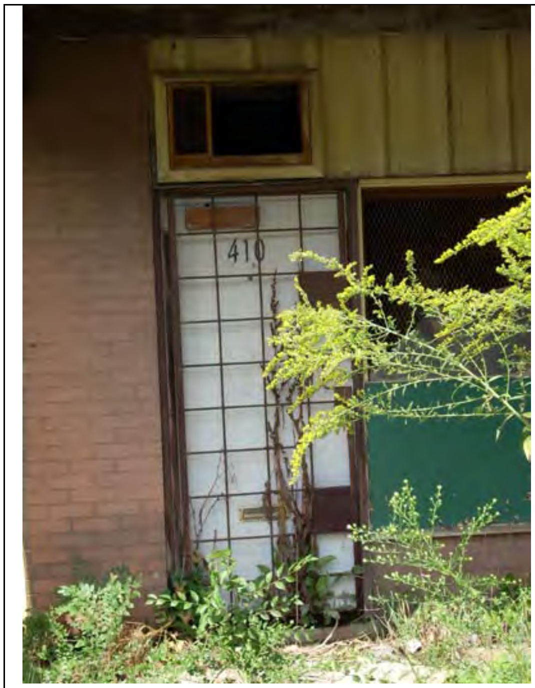
Structural Survey

Integrity: Unaltered	[✓ Slight Modification]	Major Alteration	**Additional Notes/Descriptions** Window openings covered with boards
Condition: Excellent	Good	[✓ Poor]	Abandoned, overgrown, and rusting
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick (façade), metal (rear)	
Roof Material Metal	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Unknown
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Detail photo of door:


410

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

407-409 W 109th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

South Shore Iron Works

Property Use

Historic: Industrial

Current: Industrial

Date of Construction: 1956

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

Vernacular

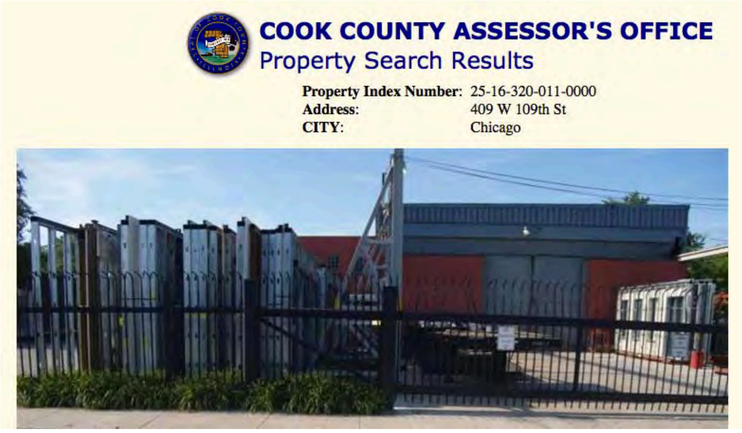
Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz, Cook County Assessor

Date: 5 September 2012

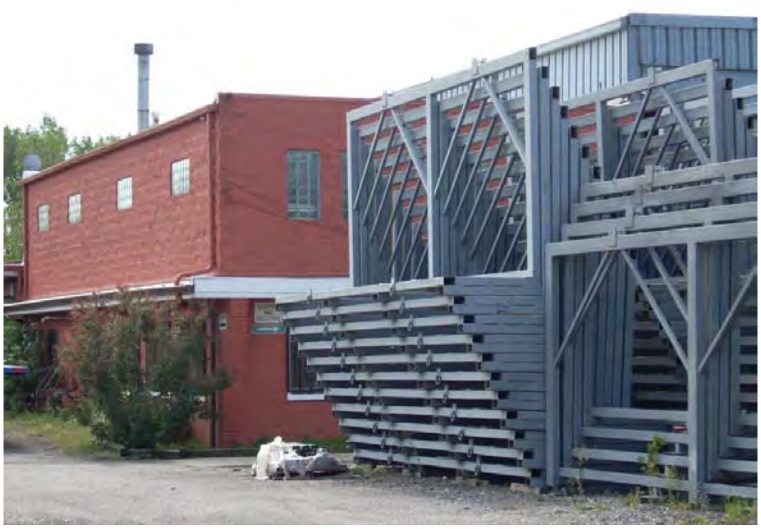
Photos with Captions:

North and east façades of metal sheds and concrete block building.



COOK COUNTY ASSESSOR'S OFFICE
Property Search Results

Property Index Number: 25-16-320-011-0000
Address: 409 W 109th St
CITY: Chicago



Property Description: **Stories:** 2

This property includes a two story, flat-roofed concrete block building associated with South Shore Iron Works, manufacturers of structural steel. The building is difficult to see from the public right-of-way. The first floor has one-over-one windows below a metal awning and the second floor has glass block windows. Portion of the building has had its roof raised, creating more height for the interior workspace. The Cook County Assessor's photo shows large sliding metal doors on the warehouse façade. This structure lacks architectural distinction and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity:

Unaltered [✓ Slight Modification] Major Alteration

Additional Notes/Descriptions

Roof height raised

Condition:

[✓ Excellent] Good Poor

Additional Alterations

Structure Usage	**Exterior Wall Surface**
Current: NA Historic: NA	Concrete block

Roof Material	**Roof Features**	**Roof Type**
Metal	None	Flat

Ornamental Architectural Details

None

Windows

Double-hung, glass block

Outbuildings (*Number and Description*)

Sheet metal storage shed

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

332 W. 110th Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1899

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

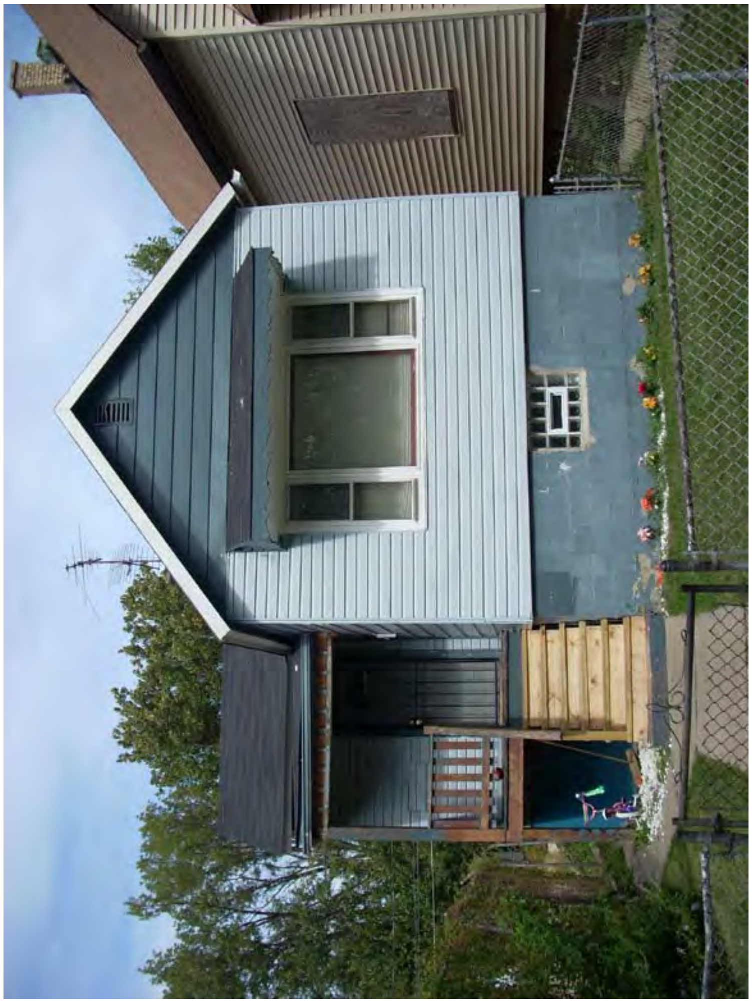
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 17 October 2012

Photos with Captions:
South façade of a one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story house in the Roseland community is situated on a raised concrete block basement with glass block windows and is covered with synthetic siding. The building has a cross-gable roof covered with asphalt shingles. The front elevation has an off-center non-original hollow core metal door, a partial width, flat-roofed wood corner porch, and a non-original picture window flanked by double-hung windows. This house lacks integrity and distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement door, windows, cladding, porch rails and steps
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt	**Roof Features** None	**Roof Type** Cross-gable	
Ornamental Architectural Details None			**Windows** Double-hung, fixed-pane, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

341 W. 110th Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1916

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

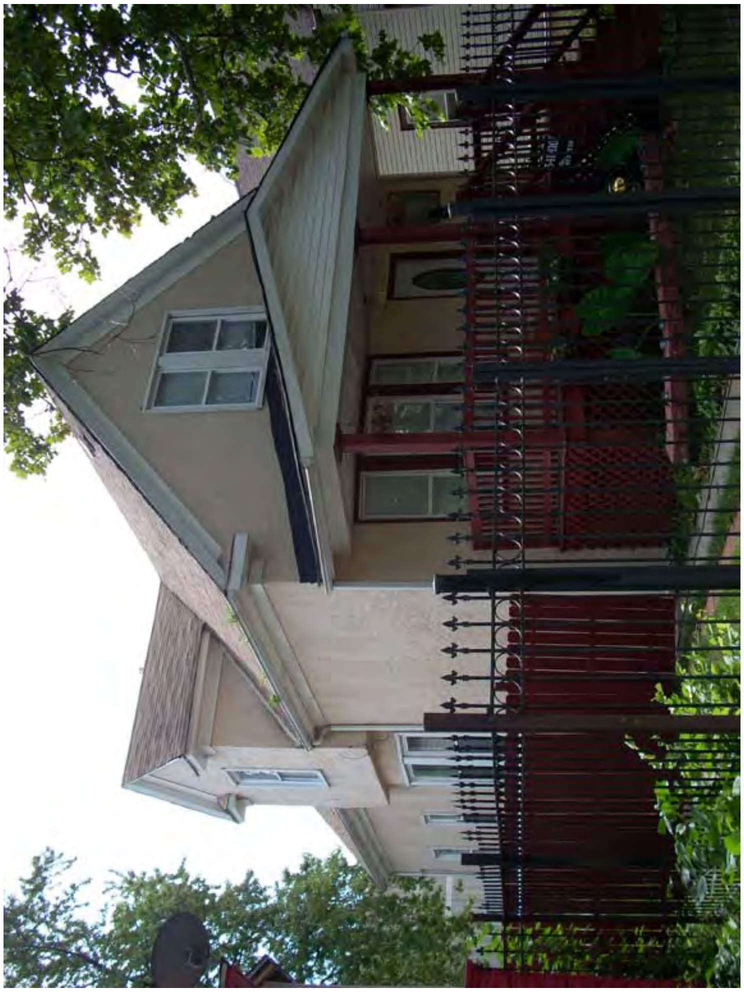
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 17 October 2012

Photos with Captions:
North façade of a one-story, single family, stucco residence.



Property Description: **Stories:** 1

This one-story house in the Roseland community is situated on a raised basement and is covered with stucco. The building has a gable roof with cornice returns and is covered with asphalt shingles. Its front elevation has a gable-roofed wood porch, an off-center hollow core metal door, a glass block window and a rounded window bay on the first floor, and a pair of windows in the gable end, all of which are one-over-one vinyl-sash. The east elevation has a rounded window bay and gable wall dormer. This house lacks distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement door and windows
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Stucco	
Roof Material Asphalt shingle	**Roof Features** Dormers	**Roof Type** Gable	
Ornamental Architectural Details Cornice returns			**Windows** Double-hung, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

347 W. 110th Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1892

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

Vernacular

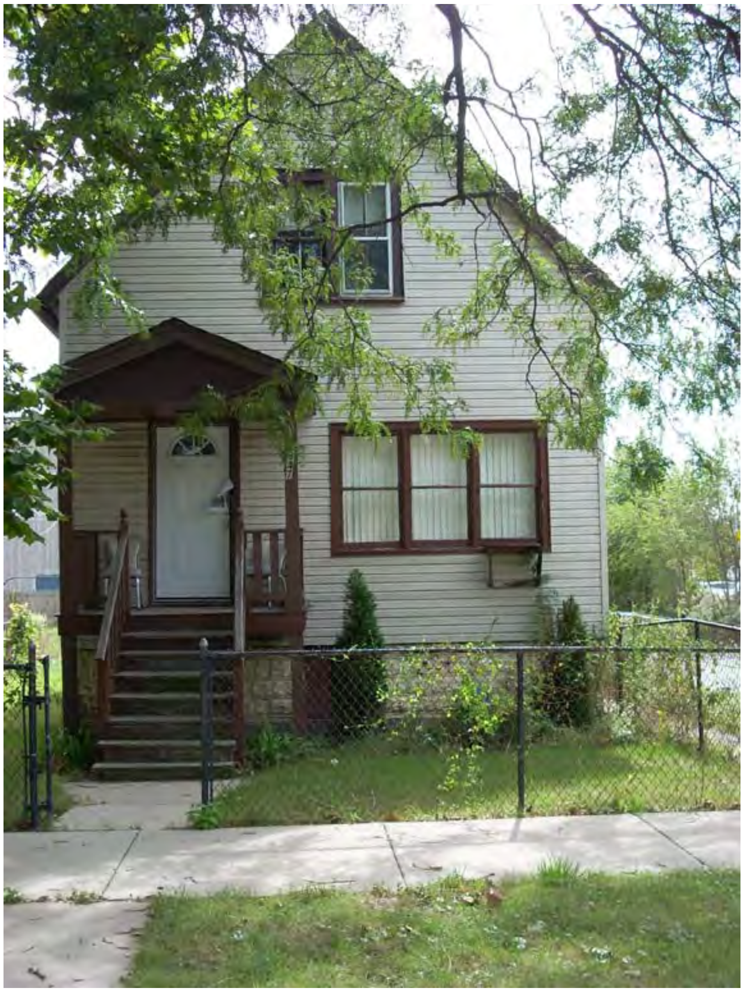
Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 17 October 2012

Photos with Captions:

North façade of a 1.5- story, single family, frame residence.



Property Description: **Stories:** 1.5

This one-and-a-half-story house in the Roseland community is situated on a raised concrete block basement and is covered with synthetic siding. The building has a front gable roof covered with asphalt shingles. Its front elevation has an off-center hollow core metal door with partial-width, gable-roofed, wood porch. There is a strip of three one-over-one wood-sash windows on the first floor and a pair of two-over-two wood-sash windows in the gable. This house lacks integrity and distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement door and cladding
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

331 W. 110th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1909

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

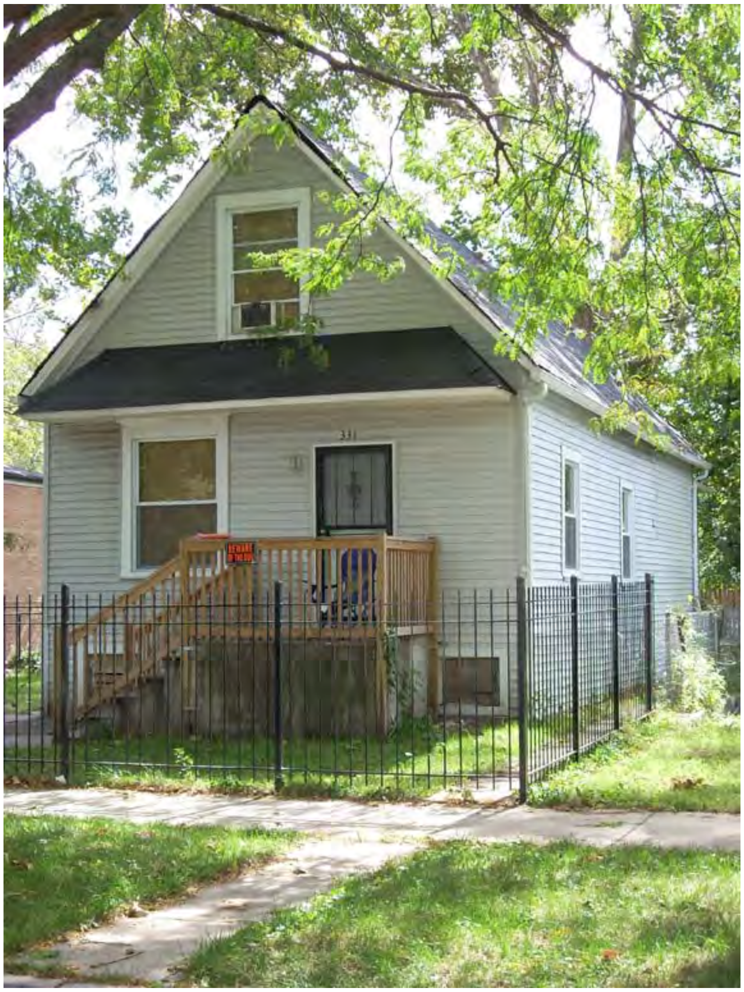
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 17 October 2012

Photos with Captions:
North façade of a one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story frame house in the Roseland community is situated on a raised basement with glass block windows and is covered with synthetic siding. The building has a front gable roof covered with asphalt shingles. The front elevation has a pent roof, off-center door, wood steps with wood railings, and single windows on the first floor and in the attic, both of which are non-original one-over-one aluminum-sash. The east elevation has a three-sided window bay with a gable wall dormer above. This house lacks integrity and distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows and cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** Dormers	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

340 W. 110th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Multi-family residence

Date of Construction: 1909

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

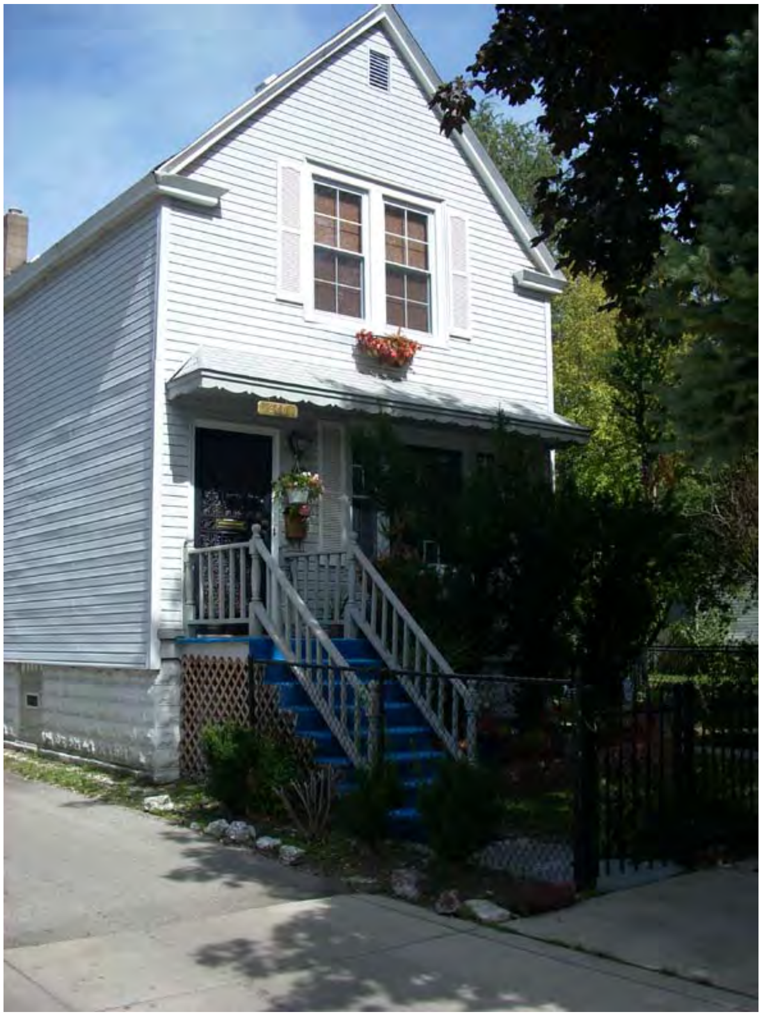
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 17 October 2012

Photos with Captions:
South façade of a 1.5- story, multi-family, frame residence.



Property Description: **Stories:** 1.5

This one-and-a-half story frame house in the Roseland community is situated on a raised concrete block basement with glass block windows and is covered with synthetic siding. The building has a gable roof with cornice returns and is covered with asphalt shingles. The front elevation has a pent roof with scalloped trim, an off-center door, and wood steps with wood railings. There is a group of windows on the first floor (fixed-pane flanked by four-over-four), and a pair of non-original four-over-four windows in the gable end. This house lacks integrity and distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows and cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details Cornice returns, scalloped trim			**Windows** Double-hung, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

340 W. 111th Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Multi-family residence

Date of Construction: 1908

Architect's Name: Not in CHRS database

Builder/Contractor: Not in CHRS database

Architectural Style:

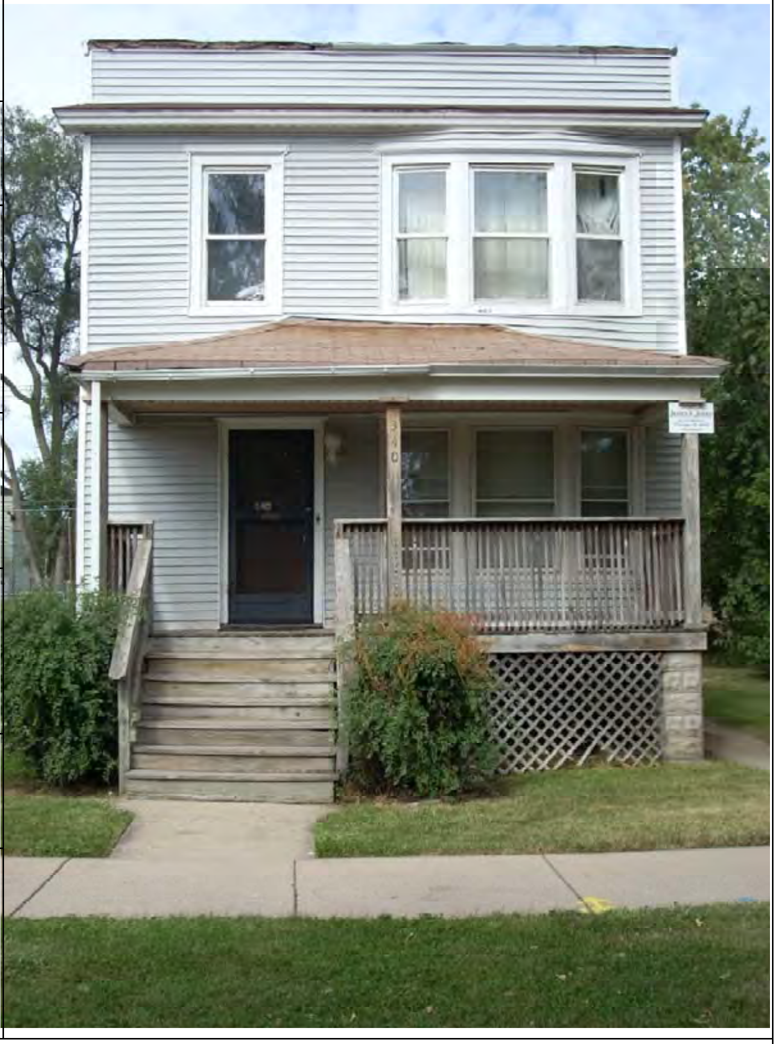
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 16 September 2012

Photos with Captions:
South façade of two-story, multi-family, frame residence.



Property Description: **Stories:** 2

This two-story house in the Roseland community is situated on a raised concrete block basement with glass block windows and is covered with synthetic siding. The building has a flat roof and parapet. Its front elevation has a full-width hipped-roof wood porch with square wood posts and a straight railing balustrade. The porch sits atop piers of rusticated concrete block. The porch also features an off-center door with a metal storm door. There are two slightly rounded window bays—one on the first floor and one on the second—and an additional single window on the second floor. Windows are non-original one-over-one aluminum sash. Detailing includes an aluminum-covered cornice. This house lacks integrity and distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows, cladding, and porch rails, posts, and steps
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details Cornice			**Windows** Double-hung, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y [✓ N]**	
National Register Historic Places	**Y [✓ N]**	
National Register Historic District	**Y [✓ N]**	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

344 W 111th Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1913

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

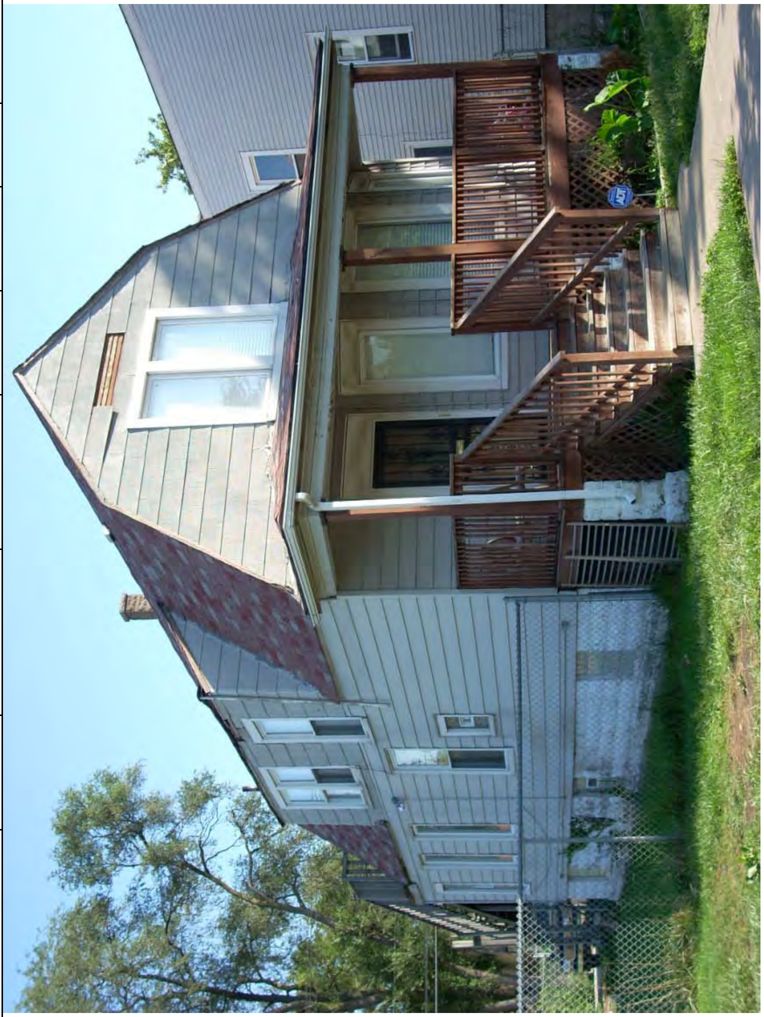
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 6 September 2012

Photos with Captions:
South and east façades of one-story, frame, single family residence.



Property Description: **Stories:** 1

This one story home in the Roseland community is situated on a raised basement, is clad with synthetic siding, and has a gambrel roof covered with asphalt shingles with wall dormers. Its front elevation features a non-original, flat-roofed, full-façade wood porch with straight railings and posts. The home also features an off-center door, a three-sided window bay on the first floor, and paired casement windows on the second floor. This home lacks integrity and architectural distinction and is not individually eligible for listing on the National Register.

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505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered	[✓ Slight Modification]	Major Alteration	**Additional Notes/Descriptions** Replacement windows, doors, siding, and porch
Condition: Excellent	[✓ Good]	Poor	
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt Shingles	**Roof Features** Dormers	**Roof Type** Gambrel	
Ornamental Architectural Details None			**Windows** Double-hung, casement
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

303 W. 111th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1923

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

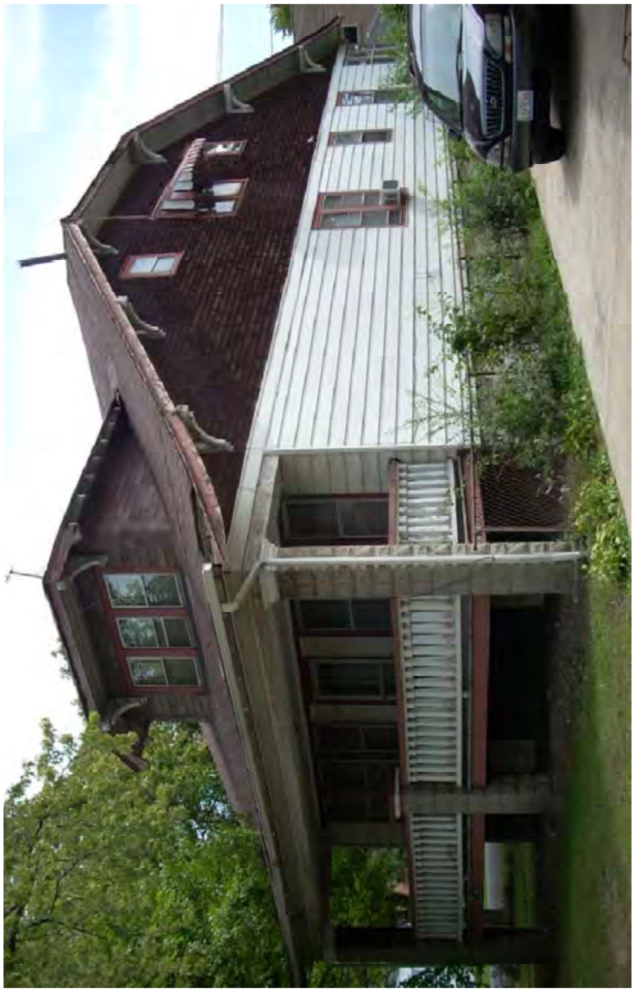
Craftsman

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 22 October 2012

Photos with Captions:
North and west façades of a one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story Craftsman style house in the Roseland community is situated on a raised concrete block basement and is covered with synthetic siding and wood shingles. The building has a side hip-on-gable roof, overhanging eaves. There are decorative wood brackets and a hip-on-gable dormer with bracketed, overhanging eaves. There are three double-hung wood-sash windows with aluminum storms in the gable. Asphalt shingles clad the roof and the dormer. The roof has a wide overhang that serves as the roof for a full-width wood porch that has faux stone piers and wood railings, but no steps. The front elevation has a centrally located door that appears to be oak with a glass pane, which is flanked by three windows on either side, all of which are double-hung wood-sash with aluminum storms. This house lacks distinguishing architectural features and is not individually eligible for listing on the National Register.

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Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered	[✓ Slight Modification]	Major Alteration	**Additional Notes/Descriptions** Aluminum storms added, replacement siding on lower level
Condition: Excellent	[✓ Good]	Poor	
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding (lower), Wood shingles (upper), Asphalt shingles (dormer)	
Roof Material Asphalt shingle	**Roof Features** Dormer	**Roof Type** Side hip-on-gable	
Ornamental Architectural Details Bracketed eaves			**Windows** Double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y [✓ N]**	
National Register Historic Places	**Y [✓ N]**	
National Register Historic District	**Y [✓ N]**	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: St. Mary Church of Prayer

Property Address:

339-341 W. 111th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

St. Mary Church of Prayer

Property Use

Historic: Commercial (Tin Shop, 1938)

Current: Mixed-Use

Date of Construction: 1924

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

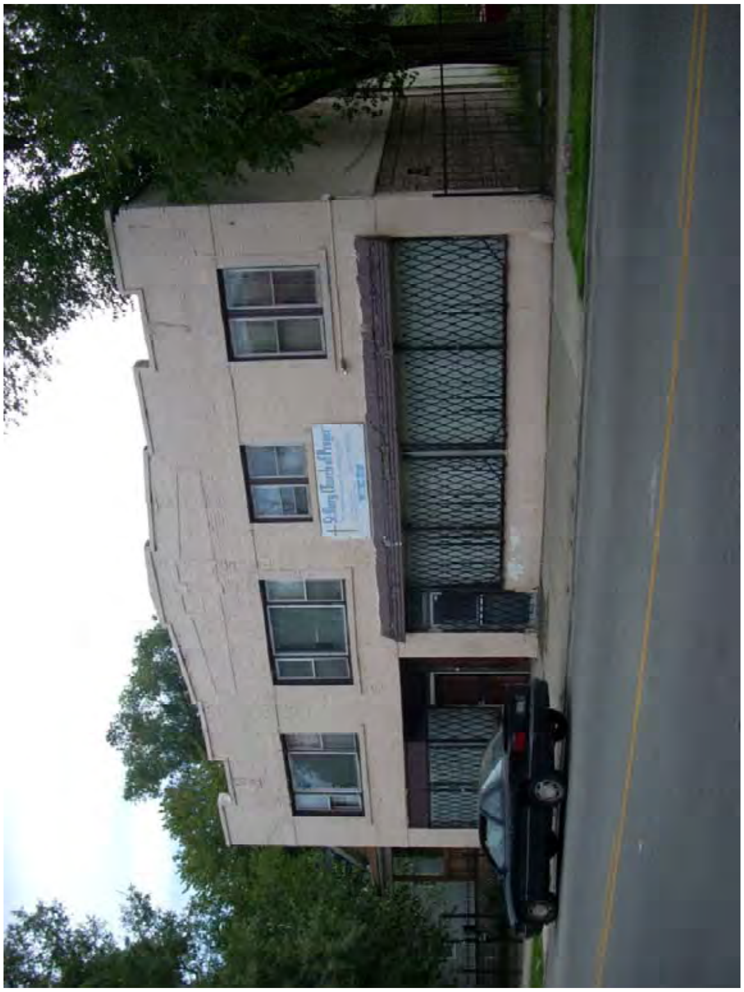
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 17 October 2012

Photos with Captions:
North façade of a brick, two-story, mixed-use building.



Property Description: **Stories:** 2

This two-story former commercial building (now a storefront church) in the Roseland community is clad with painted brick and has a flat roof and a stepped parapet. The first floor of the front elevation has two storefronts with strips of single-pane windows and non-original doors with transoms. The second floor has two groups of picture windows flanked by one-over-one windows and two pairs of one-over-one aluminum-sash windows. Detailing includes concrete coping and sills, a brick stringcourse, and a brick panel along the cornice line. This building lacks integrity and distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows and doors
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details Concrete sills and coping, brick stringcourse, brick panel			**Windows** Double-hung, fixed pane
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

349 W 111th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Flat

Current: Flat

Date of Construction: 1917

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

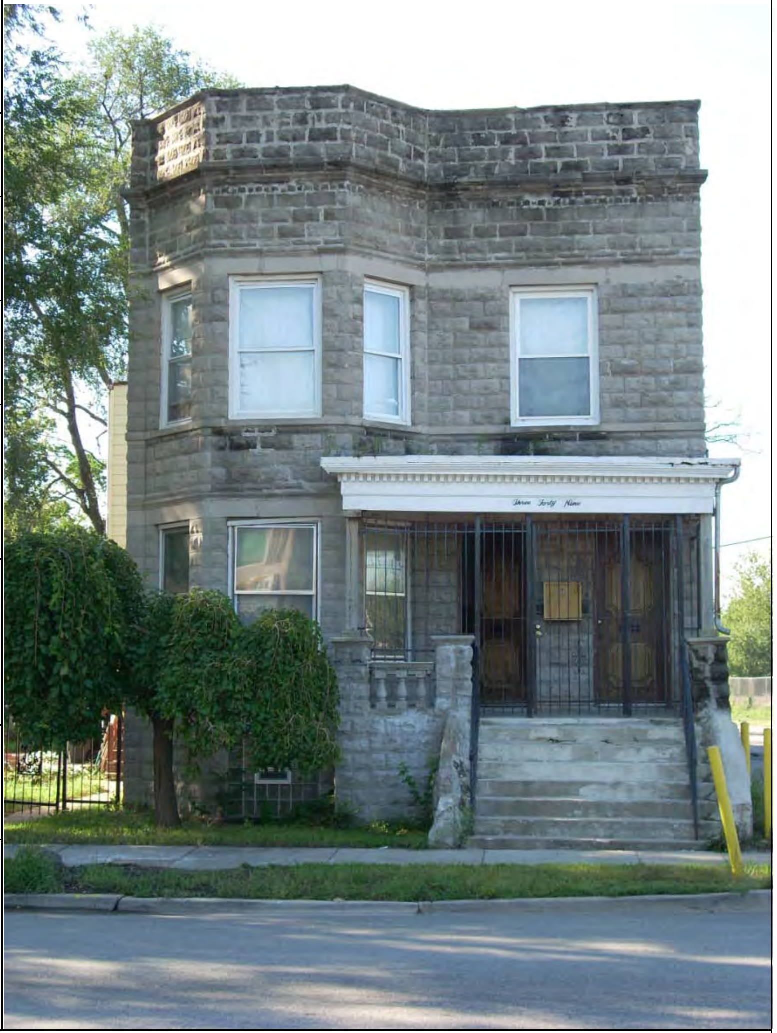
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 6 September 2012

Photos with Captions:
South façade of two-flat greystone residential building.



Property Description: **Stories:** 2

This two-flat greystone residential building in the Roseland community has a flat roof and parapet. Its front elevation features a full-height window bay pavilion with fenestration comprised of one-over-one replacement windows. It has an off-center porch with two entrances that feature non-original wood doors, stone steps, metal and stone railings, and wood columns supporting a flat wood roof with dentil molding. Detailing includes a stone sill courses, lintels, beltcourses, and cornice.

The City of Chicago has recognized this building type through its Historic Greystone Initiative, which promotes the preservation of Chicago’s ornate, limestone-clad homes by offering technical assistance and financial resources to property owners. Although this is an example of the greystone residential building type, it does not possess sufficient distinguishing architectural characteristics to qualify as individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Stone	
Roof Material Unknown	**Roof Features** None	**Roof Type** Flat	
Ornamental Architectural Details Stone sill courses, lintels, beltcourses, cornice, and railings			**Windows** Double hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

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Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

401 W 111th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Roseland Tune-Up Center

Property Use

Historic: Commercial

Current: Commercial

Date of Construction: 1964

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

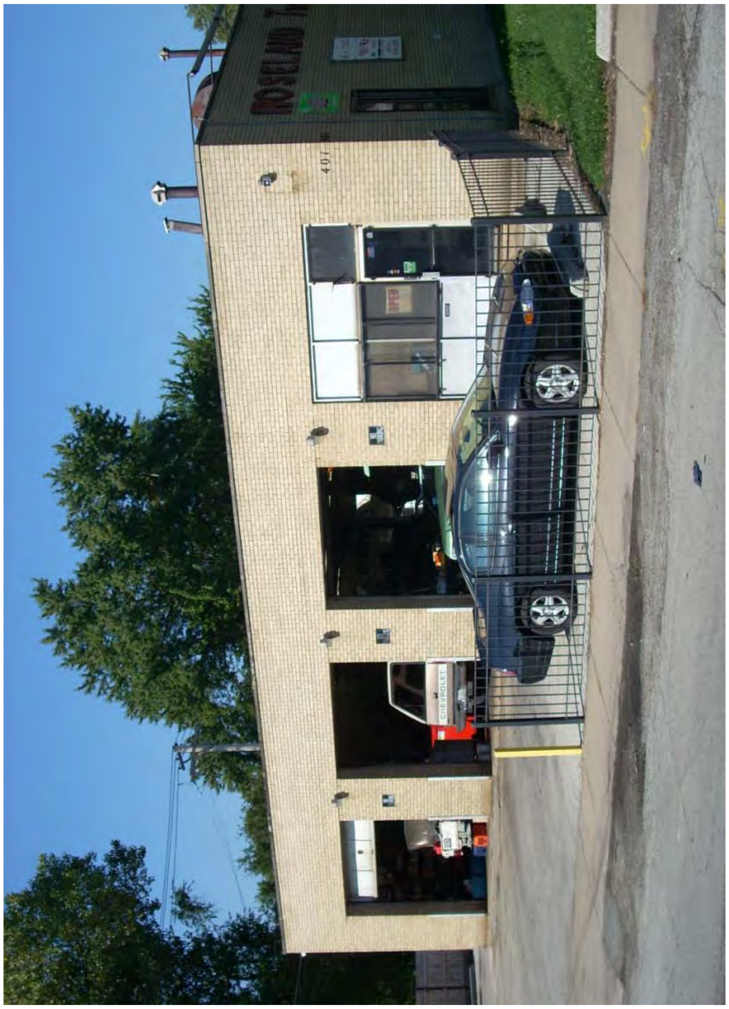
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 6 September 2012

Photos with Captions:
South and east façades of one-story, brick garage.



Property Description: **Stories:** 1

This one-story, brick-clad garage in the Roseland neighborhood has a flat roof and a front elevation that features three garage door openings with metal overhead doors. The fourth bay features an off-center plate glass door with transom in-filled with wood and flanking single-pane windows. This building does not feature sufficient distinguishing architectural features to qualify as individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

<table>
<tr><td colspan="3">Integrity:
Unaltered [✓ Slight Modification] Major Alteration</td><td>Additional Notes/Descriptions
Transom in-filled with wood</td></tr>
<tr><td colspan="3">Condition:
[✓ Excellent] Good Poor</td><td></td></tr>
<tr><td colspan="3">Additional Alterations</td><td></td></tr>
<tr><td colspan="2">Structure Usage
Current: NA
Historic: NA</td><td>Exterior Wall Surface
Brick</td><td></td></tr>
<tr><td>Roof Material
Unknown</td><td>Roof Features
None</td><td>Roof Type
Flat</td><td></td></tr>
<tr><td colspan="3">Ornamental Architectural Details
None</td><td>Windows
Fixed-pane</td></tr>
<tr><td colspan="4">Outbuildings (<i>Number and Description</i>)
None</td></tr>
</table>

Local Landmark	**Y [✓ N]**	
National Register Historic Places	**Y [✓ N]**	
National Register Historic District	**Y [✓ N]**	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

428 W. 111th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1960

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

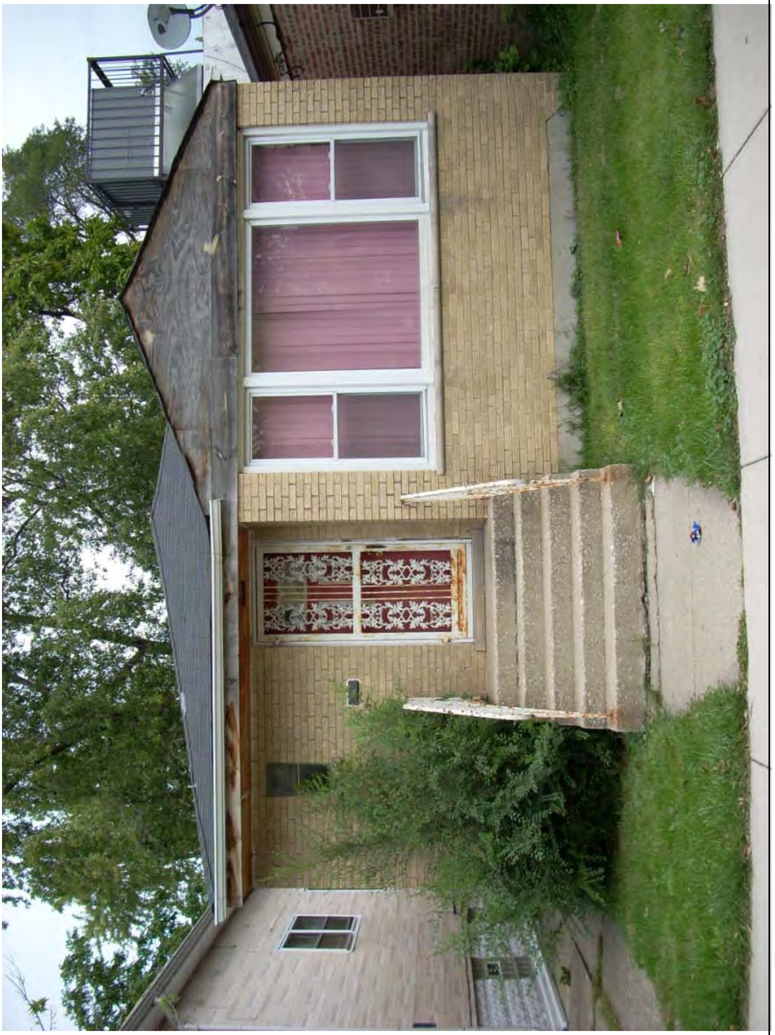
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 16 September 2012

Photos with Captions:
South façade of one-story, brick, single family residence.



Property Description: **Stories:** 1

This one-story house in the Roseland community is clad with buff brick on its front elevation and common brick on its side and rear elevations. The building has a raised basement and a hip roof covered with asphalt shingles. Its front elevation has a projecting three-sided living room bay with a picture window flanked by one-over-one aluminum-sash windows, an off-center entrance with a metal storm door, and concrete steps with metal railings. The gable’s cladding material has been removed. Detailing includes two decorative glass blocks adjacent to the front door. It does not display distinctive architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity:			**Additional Notes/Descriptions**
Unaltered	[✓ Slight Modification]	Major Alteration	Replacement windows; cladding removed from the gable
Condition:			
Excellent	[✓ Good]	Poor	
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Hip	
Ornamental Architectural Details Decorative glass blocks			**Windows** Double-hung, fixed-pane
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

256 W. 112th Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single-family residence

Current: Single-family residence

Date of Construction: 1888

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

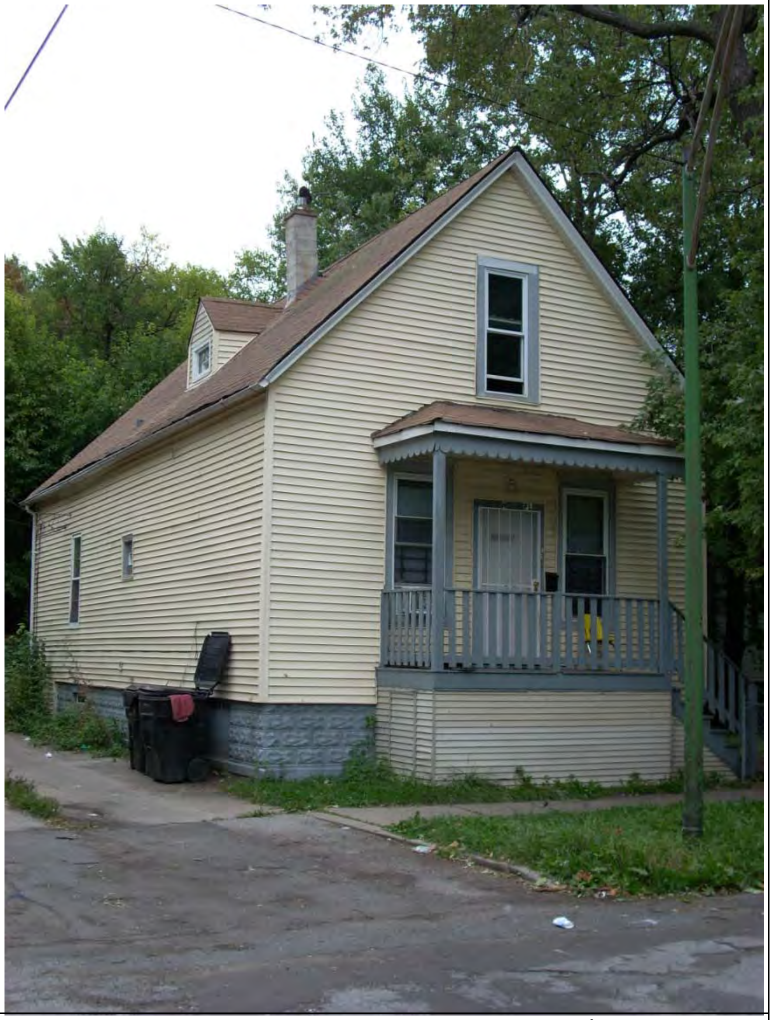
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 16 September 2012

Photos with Captions:
South and west façades of single-family, 1.5-story, frame residence.



Property Description: **Stories:** 1.5

This one-and-a-half-story house in the Roseland community is situated on a raised concrete block basement with glass block windows and is covered with synthetic siding. The building has a front gable roof with asphalt shingles and a small dormer. The front elevation has a centrally located, partial-width, hipped-roof porch with scallop detailing at the roofline, an aluminum-clad base, straight wood posts and railings (non-original), and steps on the side. It has a centrally located entrance with a metal storm door flanked by a window on either side and has a single window in the gable. Windows are non-original one-over-one aluminum-sash. This house lacks integrity and distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Some replacement windows, cladding, and porch rails and posts
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** Dormer	**Roof Type** Gable	
Ornamental Architectural Details Scallop detailing on porch roofline			**Windows** Double-hung, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

303 W. 112th Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single-family residence

Current: Single-family residence

Date of Construction: 1909

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

Vernacular

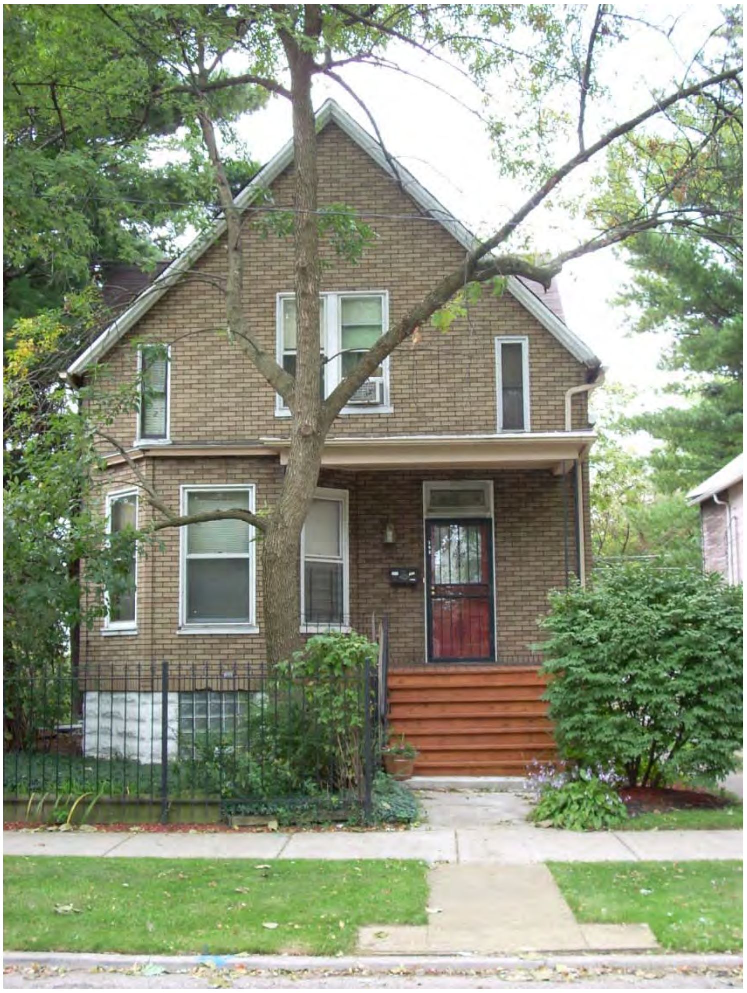
Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 16 September 2012

Photos with Captions:

North façade of 1.5-story, single-family, brick residence.



Property Description: **Stories:** 1.5

This one-and-a-half-story house at the southwest corner of 112th Place and Princeton Avenue is situated on a raised concrete block basement with glass block windows and is clad with light brown face brick. The building has a front gable roof covered with asphalt shingles. Its front elevation has a partial-width, flat-roofed porch with wood steps and open metal railings, an off-center door with transom, and a three sided bay window on the first floor. The upper floor of the front elevation has a pair of windows and two single windows. Windows are non-original one-over-one aluminum-sash. The home’s east elevation has a three-sided, full-height window bay pavilion and its west elevation has a gable wall dormer. This house lacks distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

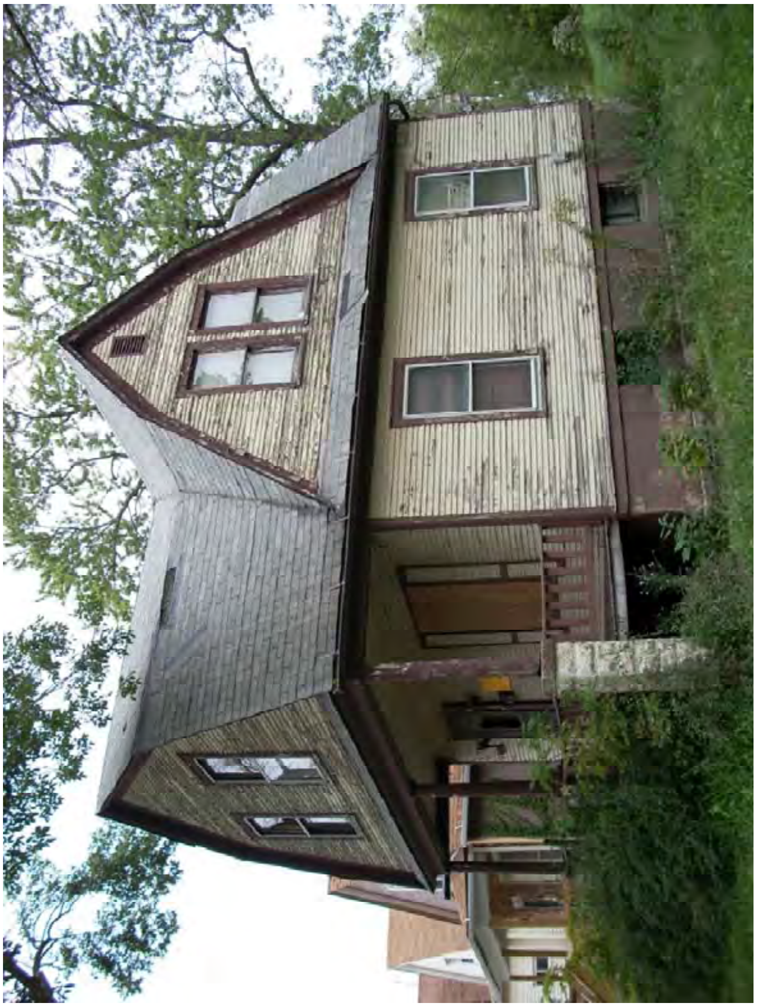
Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingle	**Roof Features** Dormer	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung, glass block
Outbuildings (***Number and Description***) Two garages			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name **Historic:** Not labeled, not in CHRS **Common/Current:** Unknown	**Photos with Captions:** South and east façades of single story, single-family, frame residence. 
Property address: 312 W. 112th Place	
HAARGIS Number: Not in database	
Present Owner and /or Occupant: Vacant	
Property Use **Historic:** Single-family residence **Current:** Single family residence	
Date of Construction: 1914 **Architect's Name:** Not in CHRS **Builder/Contractor:** Not in CHRS	
Architectural Style: Vernacular	
Prepared By: C. Tolmie, M. C. Bird, J. Guarino **Photo By:** S .Katz **Date:** 16 September 2012	

Property Description: **Stories:** 1

This one-story house in the Roseland community is situated on a raised concrete block basement with casement windows. The building has original wood clapboard siding and a cross-gambrel roof with asphalt shingles. The roof extends forward to serve as the roof over the full-façade wood porch with supports consisting of faux stone piers topped by wood columns. The front elevation has an off-center wood door and a window covered with plywood on the first floor. There are two one-over-one windows on the second floor. Above the basement, windows are one-over-one, some with aluminum storms. This house lacks distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Some windows have aluminum storms
Condition: Excellent Good [✓ Poor]			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Wood siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Cross-gambrel	
Ornamental Architectural Details None			**Windows** Double-hung, casement
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

319 W. 112th Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Multi-family residence

Date of Construction: 1914

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

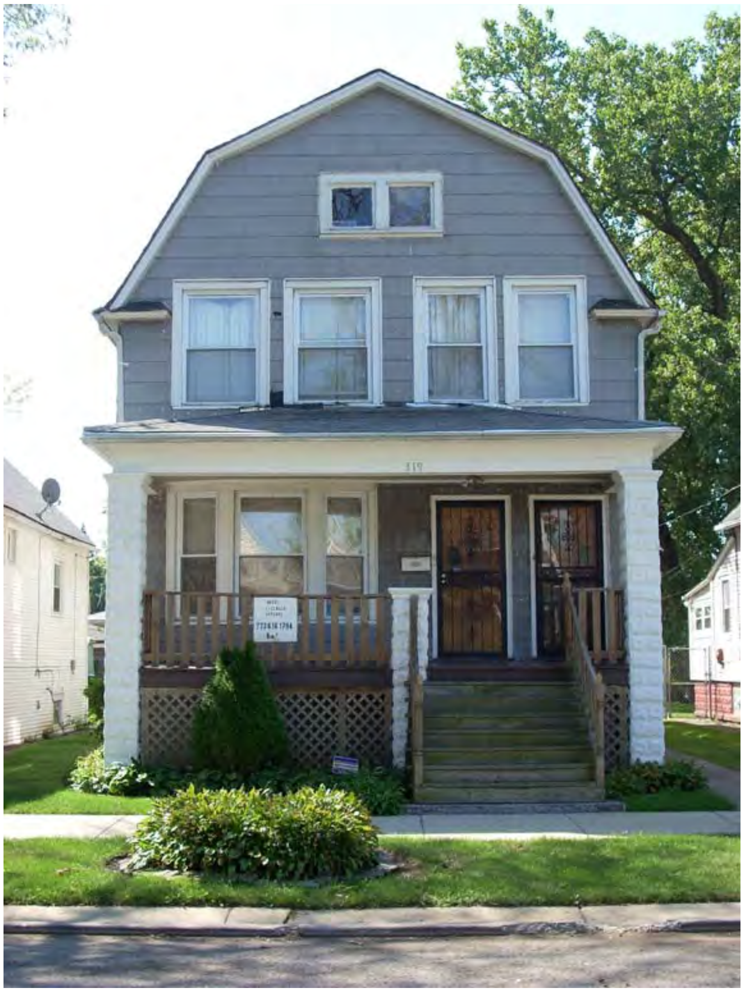
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 26 September 2012

Photos with Captions:
North façade of a two-story, multi-family, frame residence.



Property Description: **Stories:** 2

This two-story, multi-family home in the Roseland community is situated on a raised concrete block basement with a glass block window. It is clad with synthetic siding and has a gambrel roof with cornice returns, covered with asphalt shingles. Its full-width hip-roof wood porch has cast concrete pier supports. The first floor has two doors and a three-sided bay with non-original one-over-one windows. The second floor has four one-over-one windows and the attic level has a pair of single-pane windows that may be casements. This home lacks integrity and does not have sufficient distinguishing architectural features to qualify as individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows & cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations Conversion from single family to multi-family residence after 1939 (Sanborn)			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt	**Roof Features** None	**Roof Type** Gambrel	
Ornamental Architectural Details Cornice returns			**Windows** Double-hung, casement, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y [✓ N]**	
National Register Historic Places	**Y [✓ N]**	
National Register Historic District	**Y [✓ N]**	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

325 W 112th Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1899

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

Vernacular

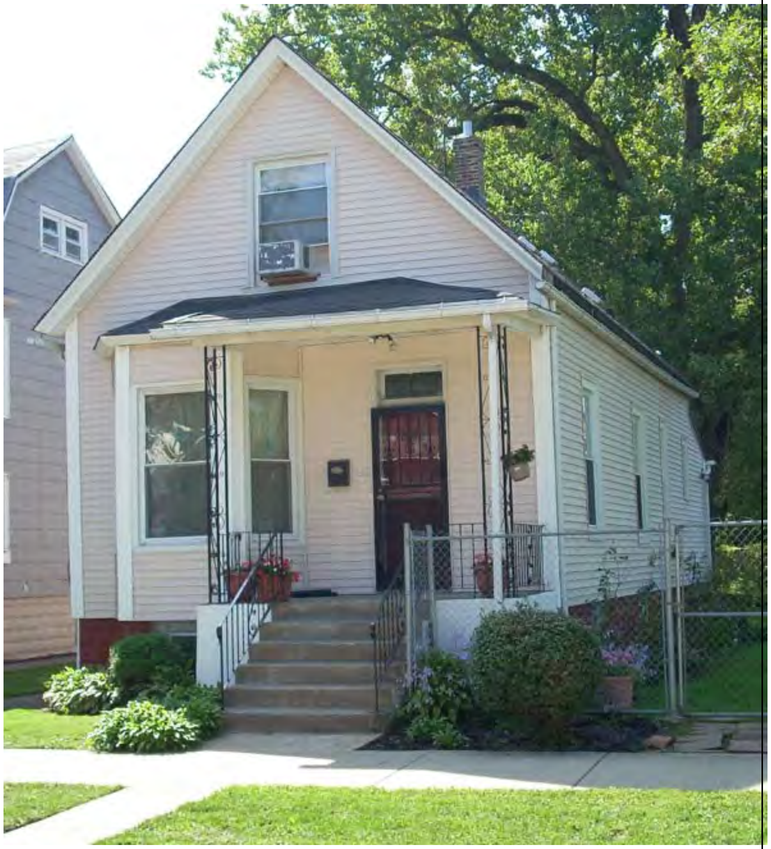
Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 26 September 2012

Photos with Captions:

North façade of one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story home in the Roseland community is situated on a raised basement with glass block windows. It is clad with aluminum siding and has a gable roof covered with asphalt shingles. The front elevation has a partial-width hip roof concrete porch with metal railings and open metal supports. An off-center door with transom and a three-sided bay comprised of non-original one-over-one windows are also included on the front elevation. A single one-over-one window is situated in the gable. This building does not have sufficient distinguishing architectural features to qualify as individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

<table>
<tr><td colspan="3">Integrity:
Unaltered [✓ Slight Modification] Major Alteration</td><td>Additional Notes/Descriptions
Replacement windows, door, cladding</td></tr>
<tr><td colspan="3">Condition:
[✓ Excellent] Good Poor</td><td></td></tr>
<tr><td colspan="3">Additional Alterations</td><td></td></tr>
<tr><td colspan="2">Structure Usage
Current: NA
Historic: NA</td><td>Exterior Wall Surface
Synthetic siding</td><td></td></tr>
<tr><td>Roof Material
Asphalt</td><td>Roof Features
None</td><td>Roof Type
Gable</td><td></td></tr>
<tr><td colspan="3">Ornamental Architectural Details
None</td><td>Windows
Double-hung</td></tr>
<tr><td colspan="4">Outbuildings (<i>Number and Description</i>)
None</td></tr>
</table>

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

328 W. 112th Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1963

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

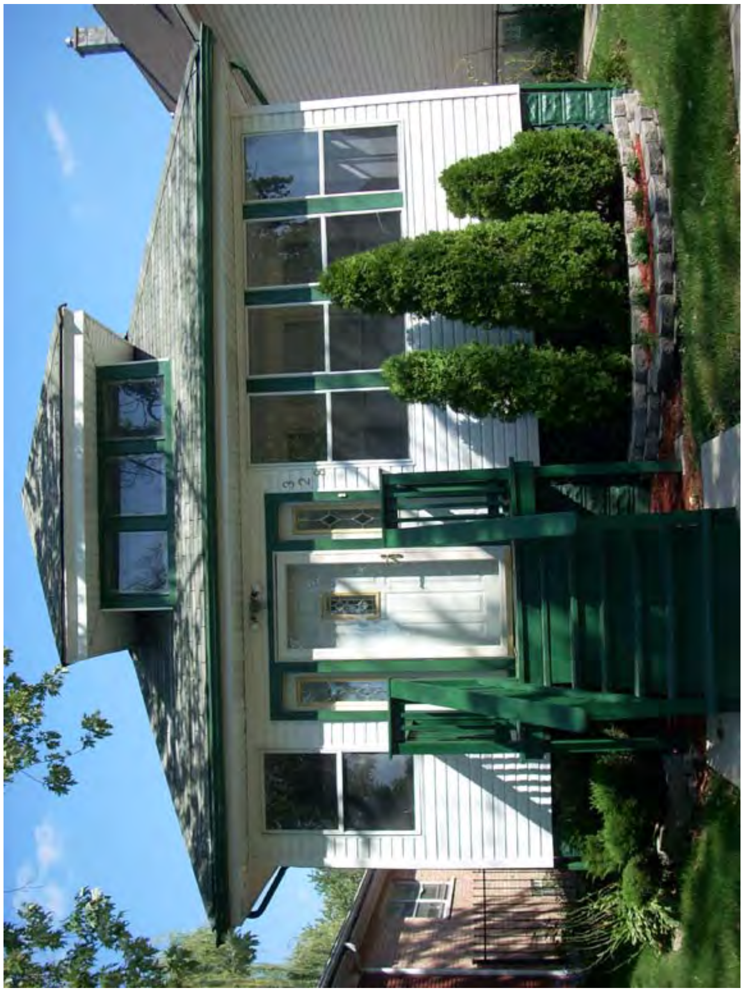
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 26 September 2012

Photos with Captions:
South façade of one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story house in the Roseland community is situated on a raised concrete block basement and clad with aluminum siding above. It has a hip roof covered with asphalt shingles and a hip dormer with three, single-pane, casement windows. Glass block windows provide light for the basement. The front elevation has an off-center hollow metal panel door with sidelights, wood steps and railings, and four one-over-one windows. This building does not feature sufficient distinguishing architectural features to qualify as individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
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Structural Survey

Integrity: [✓ Unaltered] Slight Modification Major Alteration			**Additional Notes/Descriptions**
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt	**Roof Features** Hipped dormer	**Roof Type** Hip	
Ornamental Architectural Details None			**Windows** Double-hung, casement, fixed-pane, glass block
Outbuildings (*Number and Description*)			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

339 W. 112th Place
Alternate: 341 W. 112th Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Industrial

Current: Industrial

Date of Construction: 1908/post 1939

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

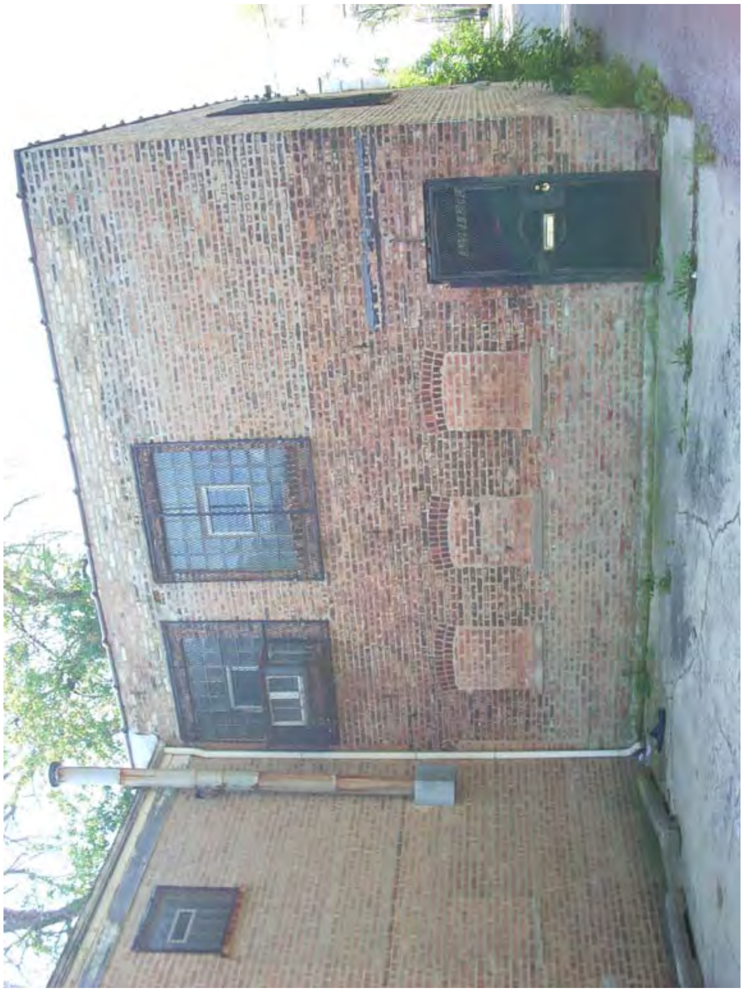
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 26 September 2012

Photos with Captions:
North façade of a brick, two-story industrial building.



Property Description: **Stories:** 2

This two-story, brick-clad, light industrial building in the Roseland community has a flat roof, parapet with coping, and a T-shaped footprint. The front segment of the building was a one-story building erected in 1908. Sometime after 1939, a second story and a rear wing were added. The original segment has an off-center door and the outline of three former window openings (with brick arched lintels and stone sills) that have been in-filled with brick. The second floor and the rear wing have glass block window openings with small ventilating louvers. This building lacks integrity and distinguishing architectural features; it is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered Slight Modification [✓ Major Alteration]			**Additional Notes/Descriptions** Windows in-filled with brick (front segment)
Condition: [✓ Excellent] Good Poor			
Additional Alterations Addition to rear and second story added after 1939			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details Brick arched lintels			**Windows** Glass-block with central casement
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

303 W. 112th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single-family residence

Current: Single-family residence

Date of Construction: 1908

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

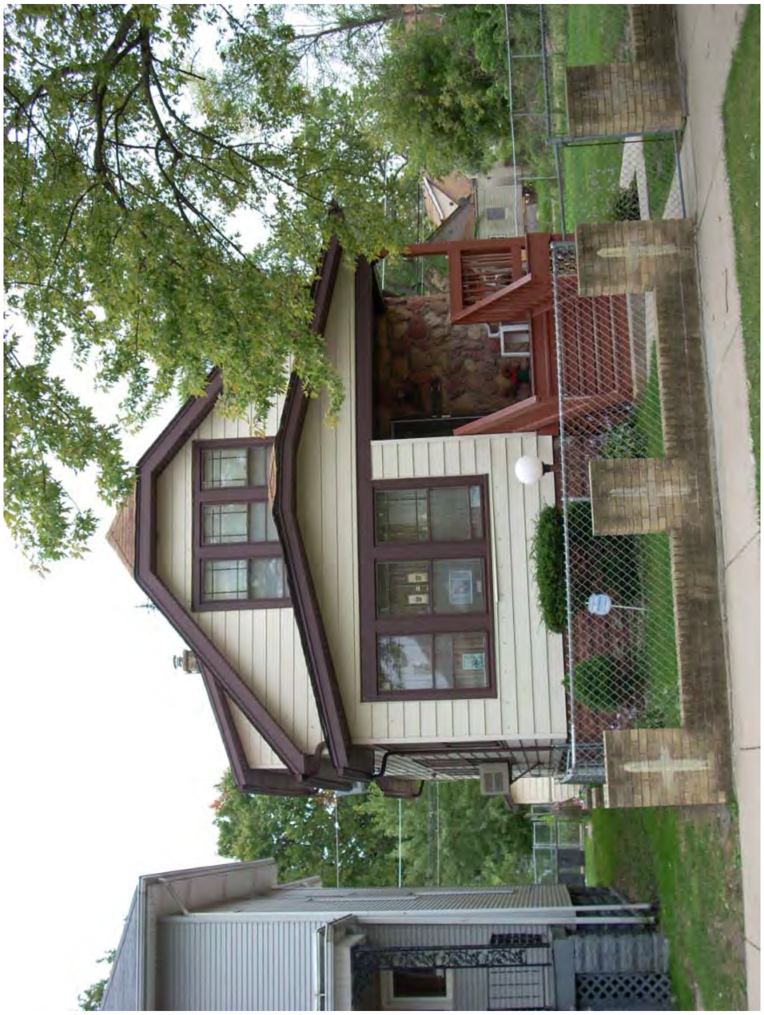
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 16 September 2012

Photos with Captions:
North façade of 1.5-story, single-family, frame residence.



Property Description: **Stories:** 1.5

This one-and-a-half-story house in the Roseland community is situated on a raised concrete block basement with glass block windows and is covered with synthetic siding. The building has a hip-on-gable roof with asphalt shingles. The front elevation has a gable-roofed full-width porch, half of which is enclosed, covered with synthetic siding, and surrounded by non-original multi-paned aluminum-sash windows with some original wood-sash windows. The open corner of the porch has a wood post, wood steps and railings (non-original), and an entrance with a metal storm door that is surrounded by faux stone siding. The hip-gable area has a strip of three double-hung windows. Both side elevations have shed-roofed wall dormers. This house lacks integrity and distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Some replacement windows & cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding, faux stone	
Roof Material Asphalt shingle	**Roof Features** Dormers	**Roof Type** Hip-on-gable	
Ornamental Architectural Details None			**Windows** Double-hung, glass block
Outbuildings (*Number and Description*) Detached two-car garage			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

334 W. 112th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single-family residence

Current: Single-family residence

Date of Construction: 1912

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

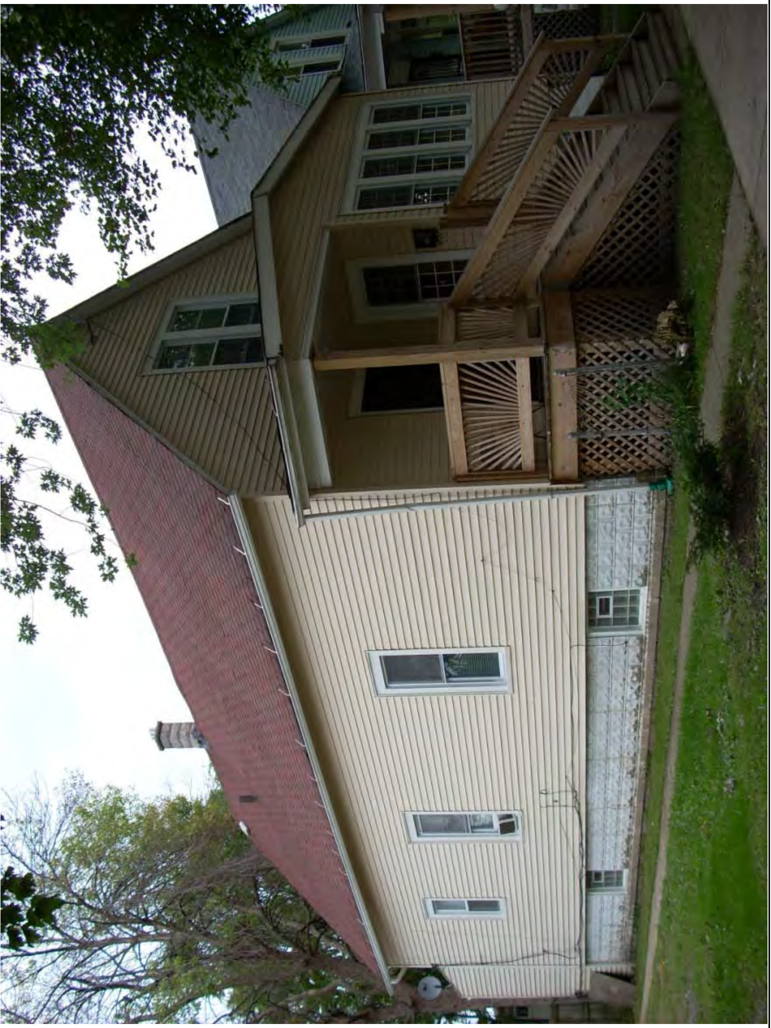
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 16 September 2012

Photos with Captions:
South and west façades of 1.5-story, single-family, frame residence.



Property Description: **Stories:** 1.5

This one-and-a-half story house in the Roseland community is situated on a raised concrete block basement with glass block windows and is covered with synthetic siding. The building has a front gable roof with asphalt shingles. The front elevation has a gable-roofed full-width porch, half of which has been enclosed with synthetic siding and is surrounded by non-original multi-paned aluminum-sash windows. The open corner of the porch has a wood post, wood steps and railings (non-original), and an entrance with a metal storm door. There is a pair of non-original one-over-one aluminum-sash windows in the gable. This house lacks integrity and distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered	[✓ Slight Modification]	Major Alteration	**Additional Notes/Descriptions** Replacement windows, cladding, and porch posts, rails, and steps
Condition: [✓ Excellent]	Good	Poor	
Additional Alterations			
Structure Usage Current:N/A Historic: N/A		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

340 W. 112th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Vacant

Property Use

Historic: Flat

Current: Flat

Date of Construction: 1964

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

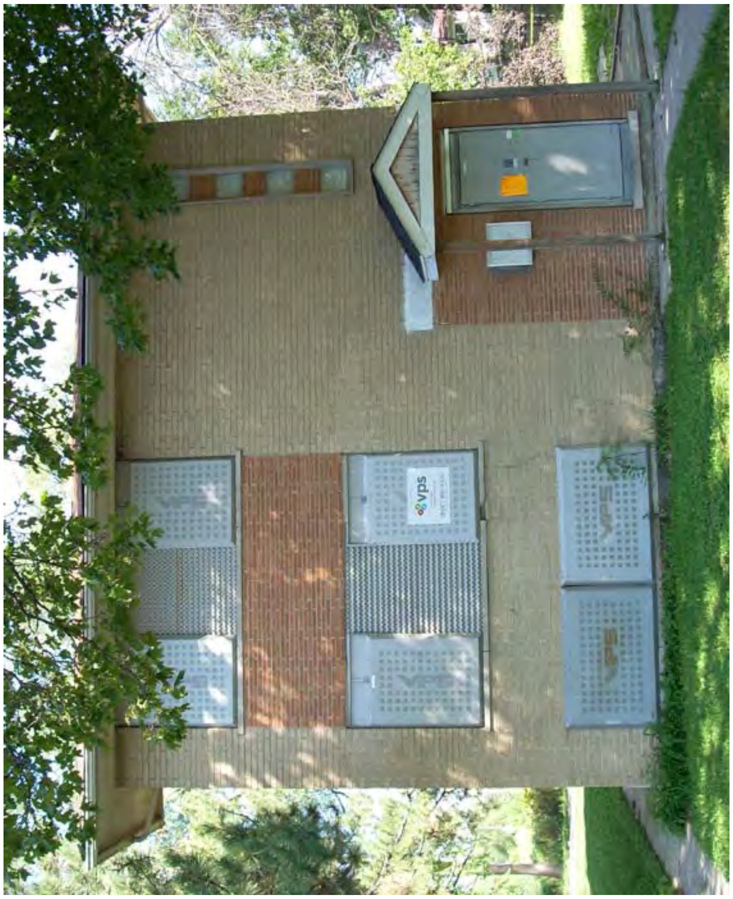
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 26 September 2012

Photos with Captions:
South façade of a brick, two-story, multi-family residence.



Property Description: **Stories:** 2

This two-flat apartment building is situated on a raised basement and has a hip roof covered with asphalt shingles. Its front façade is clad in buff brick and has an off-center metal door, a vertical strip of decorative glass blocks above the porch hood, and six window openings: two each in the basement, first, and second floors. All window openings are covered with metal panels. This building does not feature sufficient distinguishing architectural features to qualify as individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered	[✓ Slight Modification]	Major Alteration	**Additional Notes/Descriptions** Opening covered with metal panels
Condition: Excellent	[✓ Good]	Poor	
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt	**Roof Features** None	**Roof Type** Hip	
Ornamental Architectural Details Contrasting colored brick panels			**Windows** NA
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

410 W. 112th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1929

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

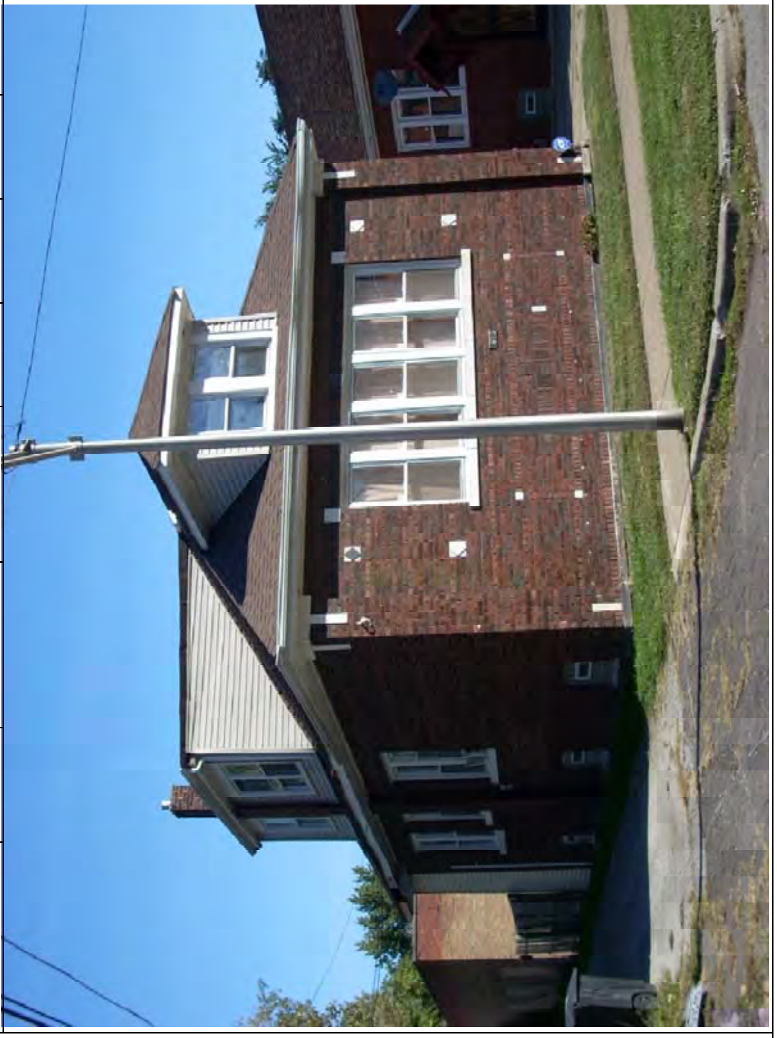
Chicago Bungalow

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 16 September 2012

Photos with Captions:
South and west façades of one-story, brick, single family residence.



Property Description: **Stories:** 1

This one-story brick bungalow in the Roseland community is situated on a raised basement with glass block windows and is clad with brown face brick. The building has a hip roof covered with asphalt shingles, a hip dormer with two windows on its front elevation, and a shed dormer with three windows on its west elevation. Both dormers are covered with synthetic siding. The front elevation has a strip of five windows. Windows throughout the house are non-original one-over-one aluminum-sash of varying sizes with the exception of a casement window along the east elevation. The main entrance is situated along the east elevation and consists of a hollow core metal door topped by a bracketed wood gabled hood. Detailing includes brick corner pilasters, concrete sills, and decorative square insert blocks. This house lacks distinctive architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity:

Unaltered [✓ Slight Modification] Major Alteration

Additional Notes/Descriptions

Replacement windows and doors

Condition:

[✓ Excellent] Good Poor

Additional Alterations

Shed dormer is a later addition

Structure Usage	**Exterior Wall Surface**
Current: NA Historic: NA	Brick (main), Synthetic siding (shed dormer)

Roof Material	**Roof Features**	**Roof Type**
Asphalt shingle	Dormer	Hip

Ornamental Architectural Details

Bracketed hood, brick corner pilasters, concrete sills and insert blocks

Windows

Double-hung, glass block, casement

Outbuildings (*Number and Description*)

Garage

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

139 W. 113th Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Vacant

Property Use

Historic: Flat

Current: Flat

Date of Construction: 1923

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

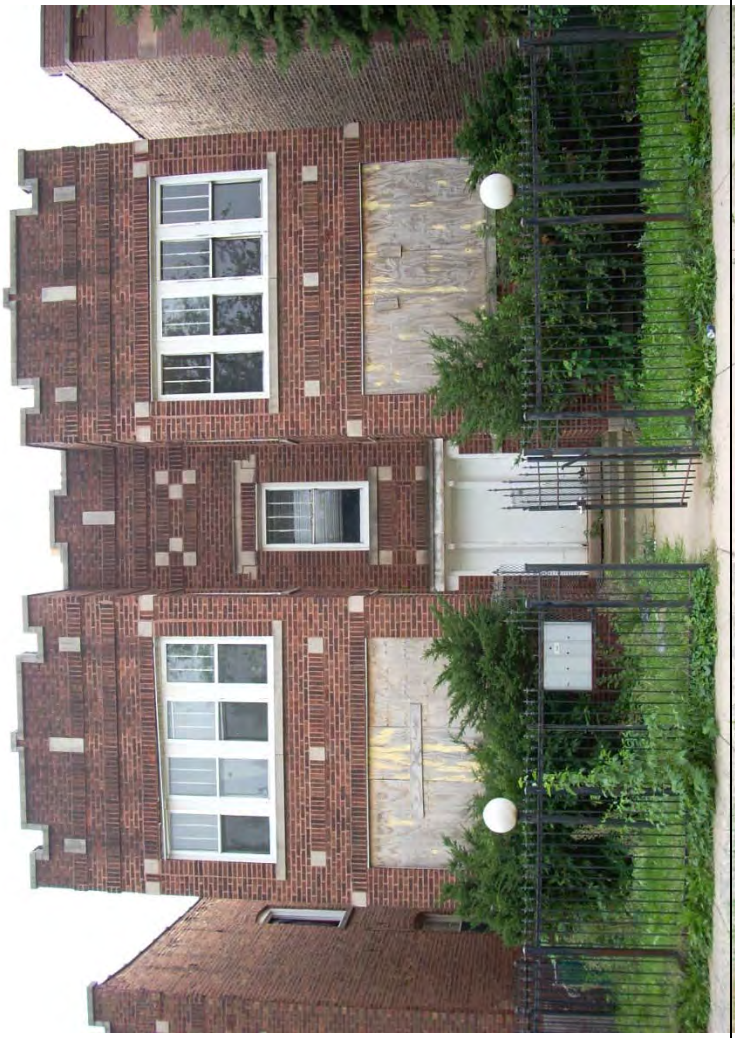
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 16 September 2012

Photos with Captions:
North façade of two-story, brick, four-flat residence.



Property Description: **Stories:** 2

This two-story four-flat apartment building in the Roseland community has a flat roof and castellated parapet with concrete coping. The front elevation is clad with brown face brick, has two full-height enclosed sun porch pavilions, and a centrally located entrance with sidelights that have been boarded over. The first floor windows have been covered with plywood. Second floor fenestration features two strips of three-over-one wood-sash windows. An additional three-over-one wood-sash window is situated above the entrance. Detailing includes brick soldier courses with stone coping and insert blocks. This building lacks sufficient distinguishing architectural features to qualify as individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: [✓ Unaltered] Slight Modification Major Alteration			**Additional Notes/Descriptions**
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details Stone coping and insert blocks, brick soldier courses			**Windows** Double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

228 W. 113th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Vacant

Property Use

Historic: Single-family residence

Current: Single family residence

Date of Construction: 1890

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

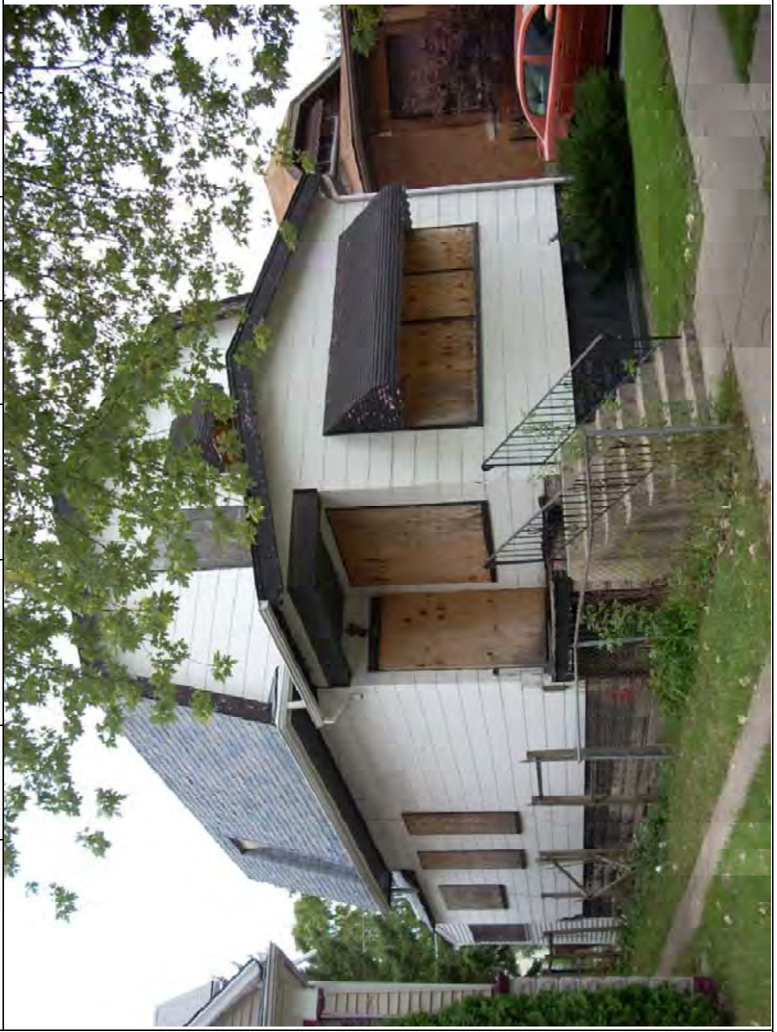
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 16 September 2012

Photos with Captions:
South façade of 1.5-story, single-family, frame residence.



Property Description: **Stories:** 1.5

This one-and-a-half-story frame house in the Roseland community is situated on a raised concrete block basement and is covered with synthetic siding. The building has a gambrel roof covered with asphalt shingles that overhangs the side elevations. The front elevation has a gable-roofed full-width porch, most of which is enclosed and covered with synthetic siding. Windows on all three sides of the house are covered with plywood. The off-center door is also covered with plywood and accessed via concrete steps with metal railings. There is a synthetic-clad addition on the rear elevation. This house lacks integrity and distinguishing architectural features and is not individually eligible for listing on the National Register.

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Structural Survey

Integrity:

Unaltered [✓ Slight Modification] Major Alteration

Additional Notes/Descriptions

Replacement cladding

Condition:

Excellent [✓ Good] Poor

Additional Alterations

Porch enclosed, rear addition

Structure Usage

Current: NA

Historic: NA

Exterior Wall Surface

Synthetic siding

Roof Material	**Roof Features**	**Roof Type**
Asphalt shingle	None	Gambrel

Ornamental Architectural Details

None

Windows

Covered

Outbuildings (*Number and Description*)

None

Local Landmark	**Y [✓ N]**	
National Register Historic Places	**Y [✓ N]**	
National Register Historic District	**Y [✓ N]**	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

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Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

235 W. 113th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1905

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

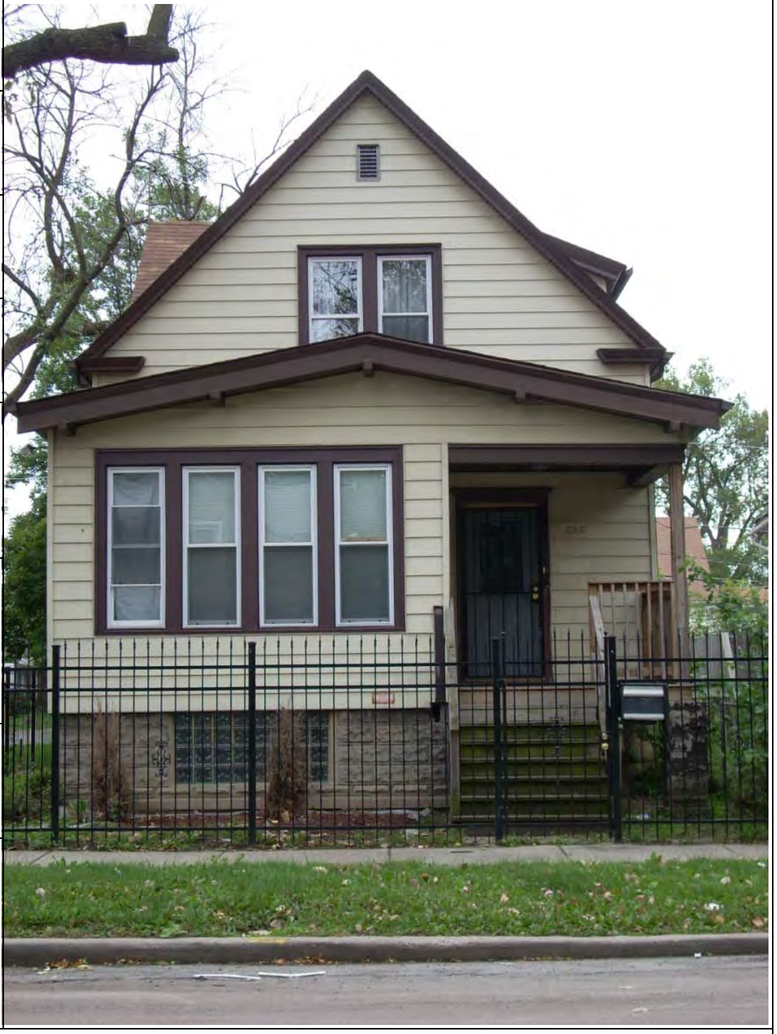
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 16 September 2012

Photos with Captions:
North façade of 1.5-story, single-family, frame residence.



Property Description: **Stories:** 1.5

This one-and-a-half-story frame house at the southwest corner of 113th Street and Yale Avenue in the Roseland community is situated on a raised concrete block basement with glass block windows and is covered with synthetic siding. The building has a front gable roof with asphalt shingles. The front elevation has a gable-roofed full-width porch, most of which is enclosed with synthetic siding and surrounded on all three sides by one-over-one aluminum-sash windows. The off-center entrance with metal storm door is set within the open corner of the porch. The open part of the porch has a non-original wood support, steps and railings. A pair of windows is situated in the gable. Windows throughout the house are non-original one-over-one aluminum sash. The east elevation has a first floor window bay and both shed and gable wall dormers. The west elevation has a shed wall dormer. This house lacks integrity and distinguishing architectural features and is not individually eligible for listing on the National Register.

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Structural Survey

<table>
<tr><td colspan="3">Integrity:
Unaltered [✓ Slight Modification] Major Alteration</td><td>Additional Notes/Descriptions
Replacement door, windows, cladding, and porch rails</td></tr>
<tr><td colspan="3">Condition:
Excellent [✓ Good] Poor</td><td></td></tr>
<tr><td colspan="3">Additional Alterations</td><td></td></tr>
<tr><td colspan="2">Structure Usage
Current: NA
Historic: NA</td><td>Exterior Wall Surface
Synthetic siding</td><td></td></tr>
<tr><td>Roof Material
Asphalt shingle</td><td>Roof Features
Dormers</td><td>Roof Type
Gable</td><td></td></tr>
<tr><td colspan="3">Ornamental Architectural Details
None</td><td>Windows
Double-hung, glass block</td></tr>
<tr><td colspan="4">Outbuildings (<i>Number and Description</i>)
None</td></tr>
</table>

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

303 W. 113th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1919

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

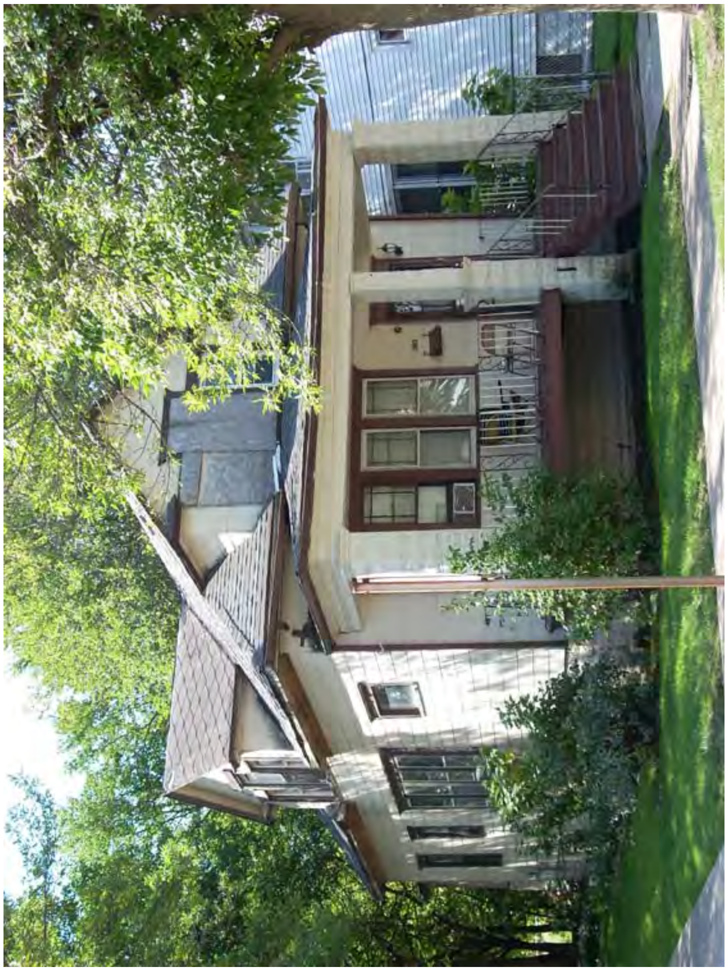
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 26 September 2012

Photos with Captions:
North façade of a one-story, single-family, frame residence.



Property Description: **Stories:** 1

This one-story home in the Roseland community is situated on a raised concrete block basement and clad with wood siding. It has a hip roof covered with asphalt shingles and gable dormers. It has a full-width, hip-roof, wood porch with metal railings, an unadorned frieze band, and supports consisting of two faux stone corner piers and one low faux stone pedestal topped by a square wood pier. Its front façade has an off-center door and a strip of three non-original double-hung windows. Both the front and side dormers each feature a strip of three windows, although those on the front façade dormer are covered with plywood. This home lacks integrity and does not have sufficient distinguishing architectural features to qualify as individually eligible for listing on the National Register.

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Structural Survey

<table>
<tr><td colspan="3">Integrity:
Unaltered [✓ Slight Modification] Major Alteration</td><td>Additional Notes/Descriptions
Replacement windows, some in-filled with plywood</td></tr>
<tr><td colspan="3">Condition:
Excellent [✓ Good] Poor</td><td></td></tr>
<tr><td colspan="3">Additional Alterations</td><td></td></tr>
<tr><td colspan="2">Structure Usage
Current: NA
Historic: NA</td><td>Exterior Wall Surface
Wood</td><td></td></tr>
<tr><td>Roof Material
Asphalt</td><td>Roof Features
Gable dormers</td><td>Roof Type
Hip</td><td></td></tr>
<tr><td colspan="3">Ornamental Architectural Details
None</td><td>Windows
Double-hung</td></tr>
<tr><td colspan="4">Outbuildings (<i>Number and Description</i>)
None</td></tr>
</table>

Local Landmark	**Y [✓ N]**	
National Register Historic Places	**Y [✓ N]**	
National Register Historic District	**Y [✓ N]**	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

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Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

307 W. 113th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Multi-family residence

Date of Construction: 1917

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

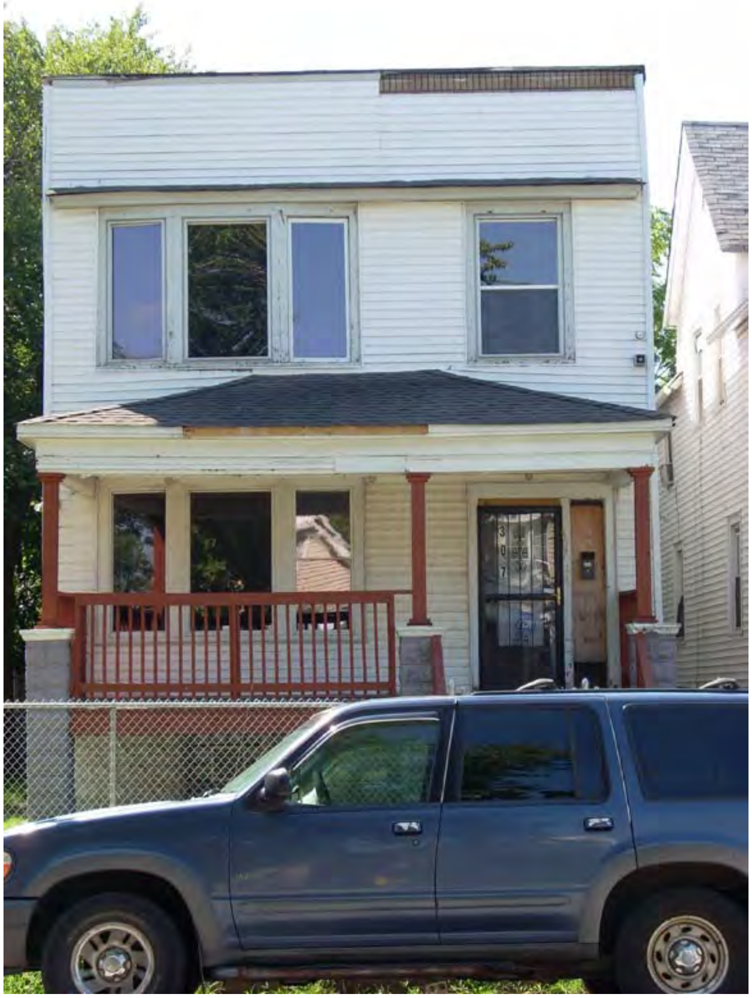
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 26 September 2012

Photos with Captions:
North façade a two-story, multi-family, frame residence.



Property Description: **Stories:** 2

This multi-family residential building in the Roseland community is clad with synthetic siding and has a flat roof and parapet. Its front façade has an off-center door with a sidelight in-filled with plywood. It has strips of three, non-original, single-pane windows on the first and second floors that appear to be casements and a single one-over-one window on the second floor, directly above the entrance. Doric columns support the hip roof of the porch. The wood rails and steps do not appear to be original. A plain wood cornice is situated directly above the second floor windows. This home lacks integrity and does not have sufficient distinguishing architectural features to qualify as individually eligible for listing on the National Register.

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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement door, cladding, and windows
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details Doric columns on porch			**Windows** Double-hung, casement
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

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Marengo, Illinois 60152
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Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

309 W. 113th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Multi-family residence

Date of Construction: 1904

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

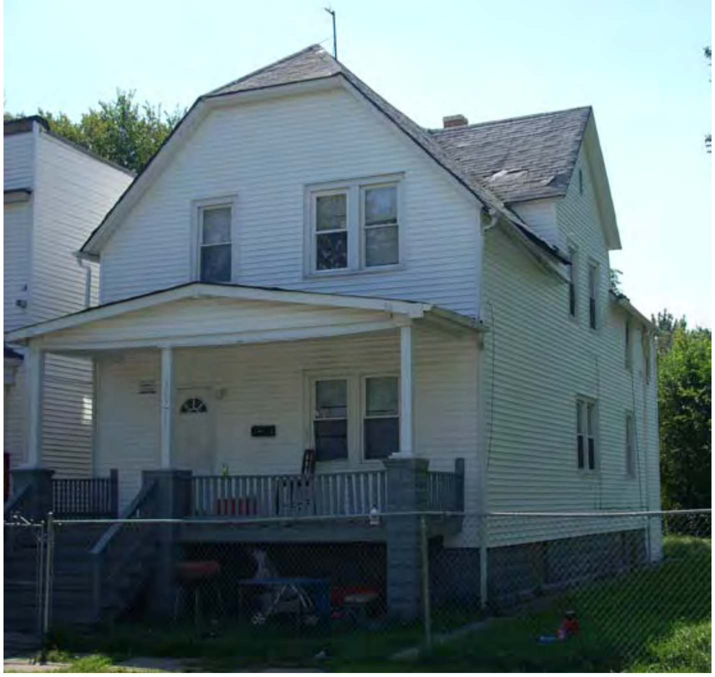
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 26 September 2012

Photos with Captions:
North façade a two-story, multi-family, frame residence.



Property Description: **Stories:** 2

This two-story house in the Roseland community is clad with synthetic siding. It has a hip-on-gable roof covered with asphalt shingles and side elevations with gable wall dormers. It has a full-width, gabled-roof wood porch with supports consisting of wood posts atop faux stone pedestals. The front elevation has an off-center non-original, hollow core, paneled, metal door with fanlight. There are a pair of non-original one-over-one windows on the first floor and three non-original one-over-one windows on the second floor, including two that are paired. This home lacks integrity and does not have sufficient distinguishing architectural features to qualify as individually eligible for listing on the National Register.

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Structural Survey

Integrity:

Unaltered [✓ Slight Modification] Major Alteration

Additional Notes/Descriptions

Replacement door, windows, cladding

Condition:

[✓ Excellent] Good Poor

Additional Alterations

Structure Usage	**Exterior Wall Surface**
Current: NA Historic: NA	Synthetic siding

Roof Material	**Roof Features**	**Roof Type**
Asphalt	Dormer	Hipped gable

Ornamental Architectural Details

None

Windows

Double-hung

Outbuildings (*Number and Description*)

None

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

310 W. 113th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Vacant

Property Use

Historic: Single family residence

Current: Multi-family residence

Date of Construction: 1904

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

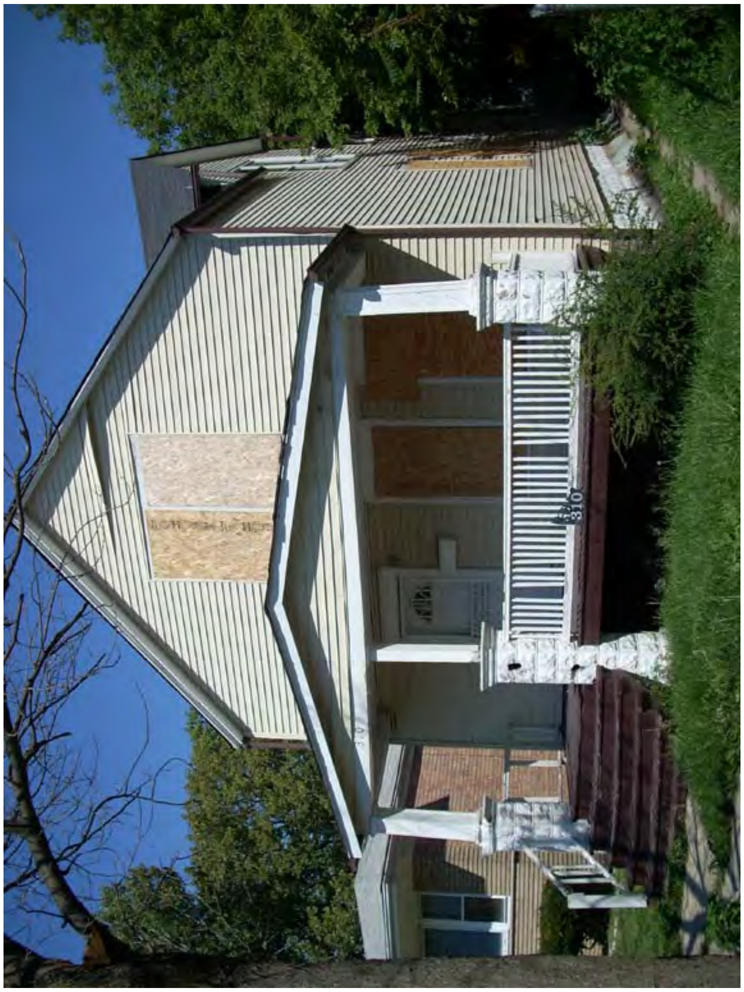
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 26 September 2012

Photos with Captions:
South façade of 1.5 -story, multi-family, frame residence.



Property Description: **Stories:** 1.5

This one and a half-story house in the Roseland community is clad with synthetic siding and has a cross-gabled roof covered with asphalt shingles. It has a full-width, gable-roofed, wood porch with supports consisting of low faux stone pedestals topped by square wood piers. The front elevation also features an off-center hollow core paneled metal door with fanlight, two window openings on the first floor and paired windows on the second floor. All front elevation window openings have been covered with plywood. This home is in deteriorated condition, lacks integrity, and does not have sufficient distinguishing architectural features to qualify as individually eligible for listing on the National Register.

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Structural Survey

Integrity:

Unaltered [✓ Slight Modification] Major Alteration

Additional Notes/Descriptions

Replacement door & cladding, windows covered with plywood

Condition:

[✓ Excellent] Good Poor

Additional Alterations

Structure Usage Current: NA Historic: NA	**Exterior Wall Surface** Synthetic siding

Roof Material Asphalt	**Roof Features** None	**Roof Type** Cross-Gable

Ornamental Architectural Details

None

Windows

Unknown

Outbuildings (*Number and Description*)

None

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
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Marengo, Illinois 60152
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Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

312 W 113th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1962

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

Vernacular

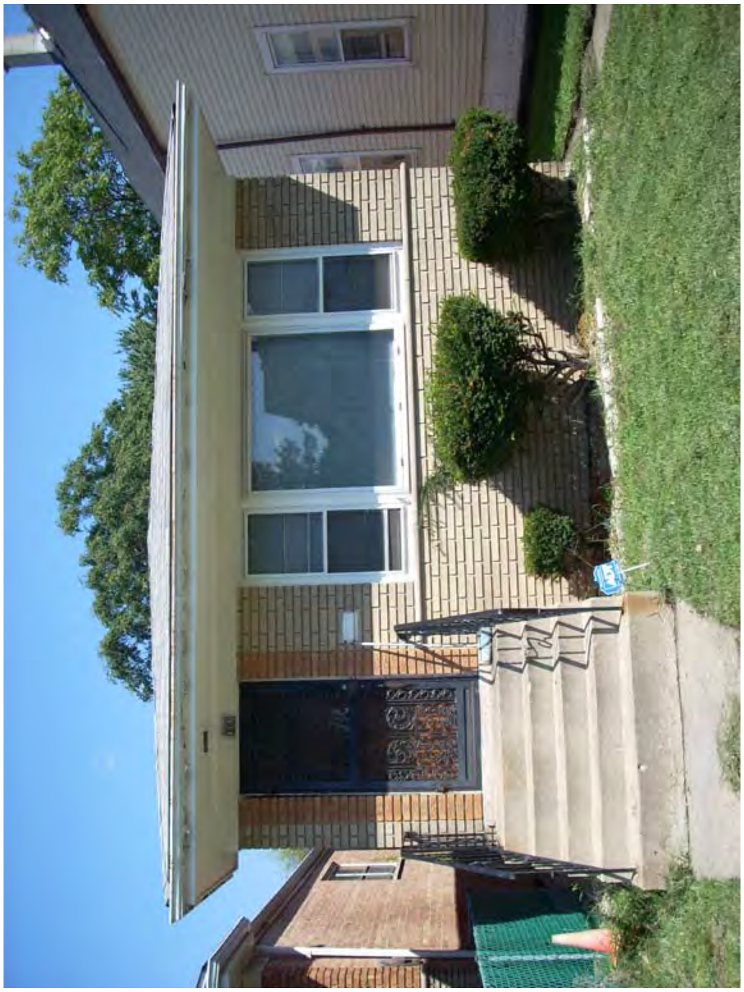
Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 26 September 2012

Photos with Captions:

South façade of a brick, one-story, single family residence.



Property Description: **Stories:** 1

This one-story house in the Roseland community is situated on a raised basement and has a hip roof covered with asphalt shingles and a front overhang. Its front elevation is clad in buff brick, has an off-center door with concrete steps and metal railings, and features a picture window flanked by one-over-one windows. Glass block windows provide light to the basement. Contrasting orange-colored brick trims the entrance. This building does not feature sufficient distinguishing architectural features to qualify as individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: [✓ Unaltered] Slight Modification Major Alteration			**Additional Notes/Descriptions**
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt	**Roof Features** None	**Roof Type** Hip	
Ornamental Architectural Details None			**Windows** Double-hung, fixed-pane, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
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Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

316 W 113th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1962

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

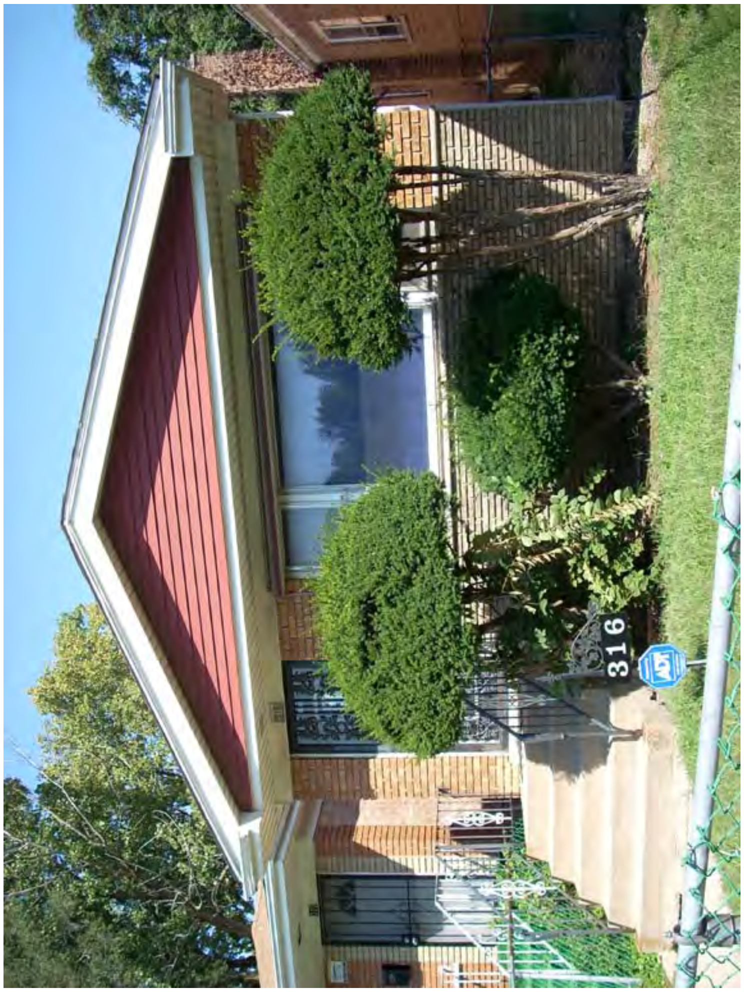
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 26 September 2012

Photos with Captions:
South façade of a brick, one-story, single family residence.



Property Description: **Stories:** 1

This one-story house in the Roseland community is situated on a raised basement, has a front gable roof covered with asphalt shingles, and a front overhang. Its front elevation is clad in buff brick below the sill line and orange brick above. It has an off-center door with concrete steps and metal railings and a picture window flanked by one-over-one windows. This building does not feature sufficient distinguishing architectural features to qualify as individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
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Structural Survey

Integrity: [✓ Unaltered] Slight Modification Major Alteration			**Additional Notes/Descriptions**
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung, fixed-pane
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

320 W 113th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1962

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

Vernacular

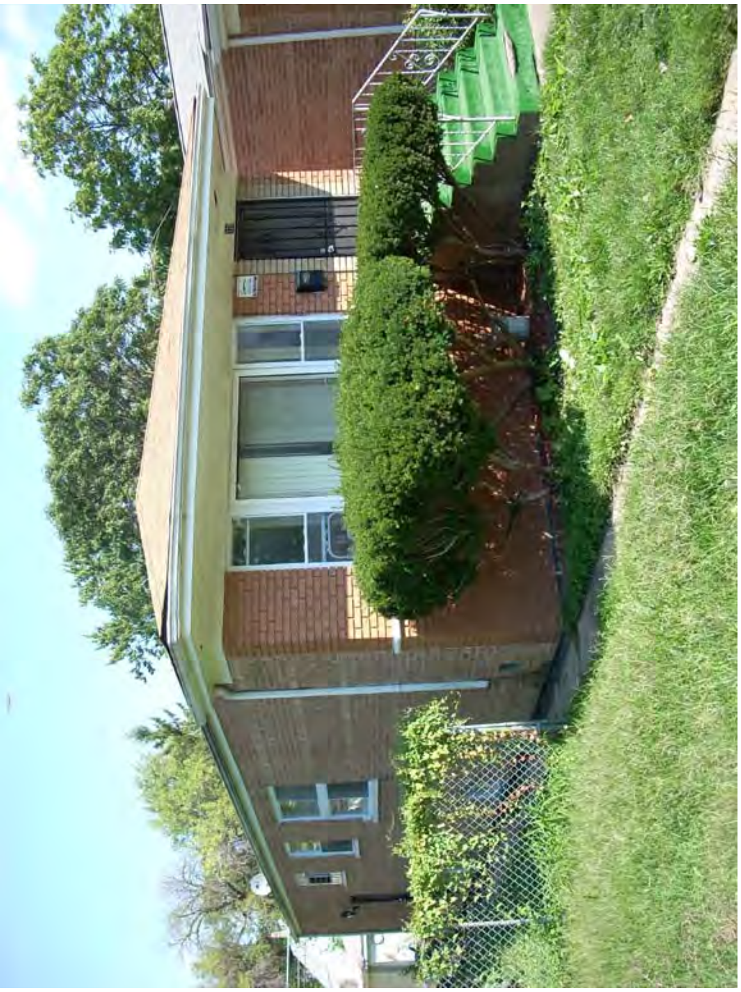
Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 26 September 2012

Photos with Captions:

South façade of a brick, one-story, single family residence.



Property Description: **Stories:** 1

This one-story house in the Roseland community is situated on a raised basement and has a hip roof covered with asphalt shingles and a front overhang. Its front elevation is clad with orange face brick, has an off-center door with concrete steps and metal railings, and a picture window flanked by one-over-one windows. This building does not feature sufficient distinguishing architectural features to qualify as individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
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Structural Survey

Integrity: [✓ Unaltered] Slight Modification Major Alteration			**Additional Notes/Descriptions**
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt	**Roof Features** None	**Roof Type** Hip	
Ornamental Architectural Details None			**Windows** Double-hung, fixed-pane
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

337 W. 113th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1910

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

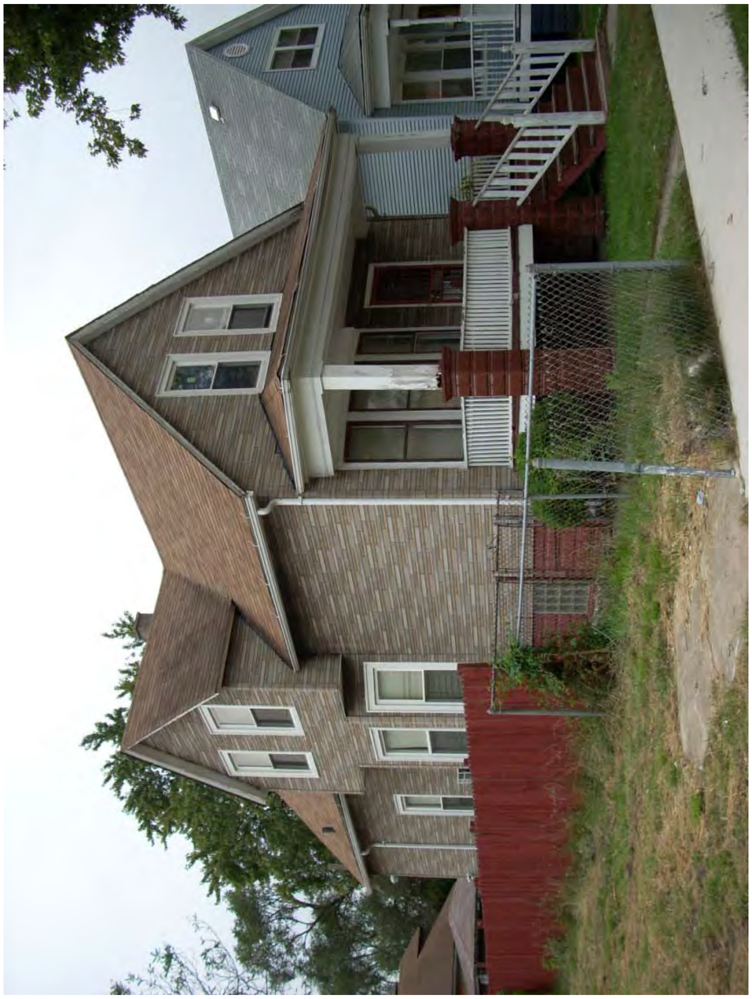
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 16 September 2012

Photos with Captions:
North and east façades of 1.5-story, frame, single-family residence.



Property Description: **Stories:** 1.5

This one-and-a-half-story house in the Roseland community is situated on a raised concrete block basement with glass block windows and is clad with synthetic siding. The building has a gable roof covered with asphalt shingles. The front elevation has a hip-roof, full-width porch with faux stone piers topped by squat squared wood column supports, wood steps and straight wood railings. It also has an off-center entrance with a metal storm door, a strip of three windows on the first floor, and two windows on the second. Windows throughout the house are non-original one-over-one aluminum-sash. The east elevation has a three-sided bay window on the first floor with a gable wall dormer above. This house lacks integrity and distinctive architectural features and is not individually eligible for listing on the National Register.

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Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows and cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** Dormer	**Roof Type** Gable	
Ornamental Architectural Details Squat, square columns on porch			**Windows** Double-hung, glass block
Outbuildings (*Number and Description*) Garage			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

340 W. 113th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Commercial (Sanborn, 1939)

Current: Multi-family residence

Date of Construction: 1924

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

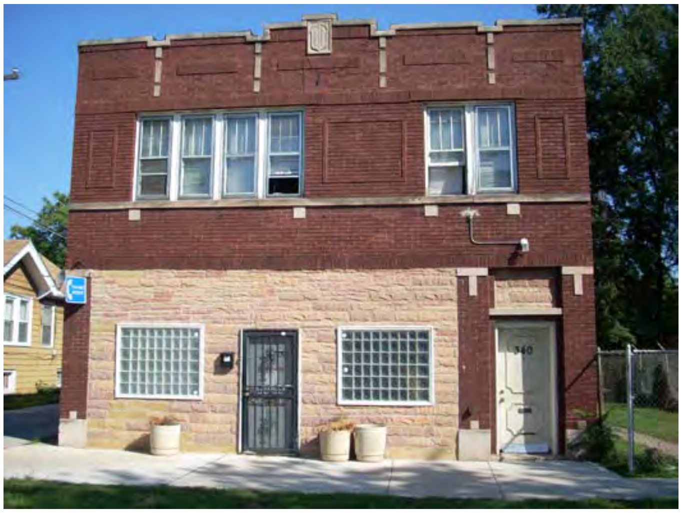
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 26 September 2012

Photos with Captions:
South façade of a brick, two-story, multi-family residence (above), outbuilding (garage) below.



Property Description: **Stories:** 2

This two-story residential building in the Roseland community has a flat roof and crenellated parapet with concrete coping. Its front elevation is clad in brown face brick and its side elevations are clad in common brick. The front elevation features two hollow core metal doors, the outline of a former storefront that has been in-filled with faux stone and two glass block windows, and six three-over-one wood-sash windows on the second floor. The original off-center entrance that provides access to the second floor apartment has a transom that is in-filled with faux stone. Detailing includes a concrete sill course, inset brick panels, and a parapet that features small decorative concrete insert blocks and a centrally located stone panel with shield. This building lacks integrity and does not have sufficient distinguishing architectural features to qualify as individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity:

Unaltered [✓ Slight Modification] Major Alteration

Additional Notes/Descriptions

Replacement door, storefront windows in-filled, transom in-filled

Condition:

[✓ Excellent] Good Poor

Additional Alterations

None

Structure Usage	**Exterior Wall Surface**
Current: NA Historic: NA	Brick

Roof Material	**Roof Features**	**Roof Type**
Unknown	Parapet	Flat

Ornamental Architectural Details

Concrete sill course, insert blocks and stone panel with shield on parapet

Windows

Double-hung, fixed-pane, glass block

Outbuildings (*Number and Description*)

One-story brick garage with parapet (tile coping)

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

345 W. 113th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1911

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

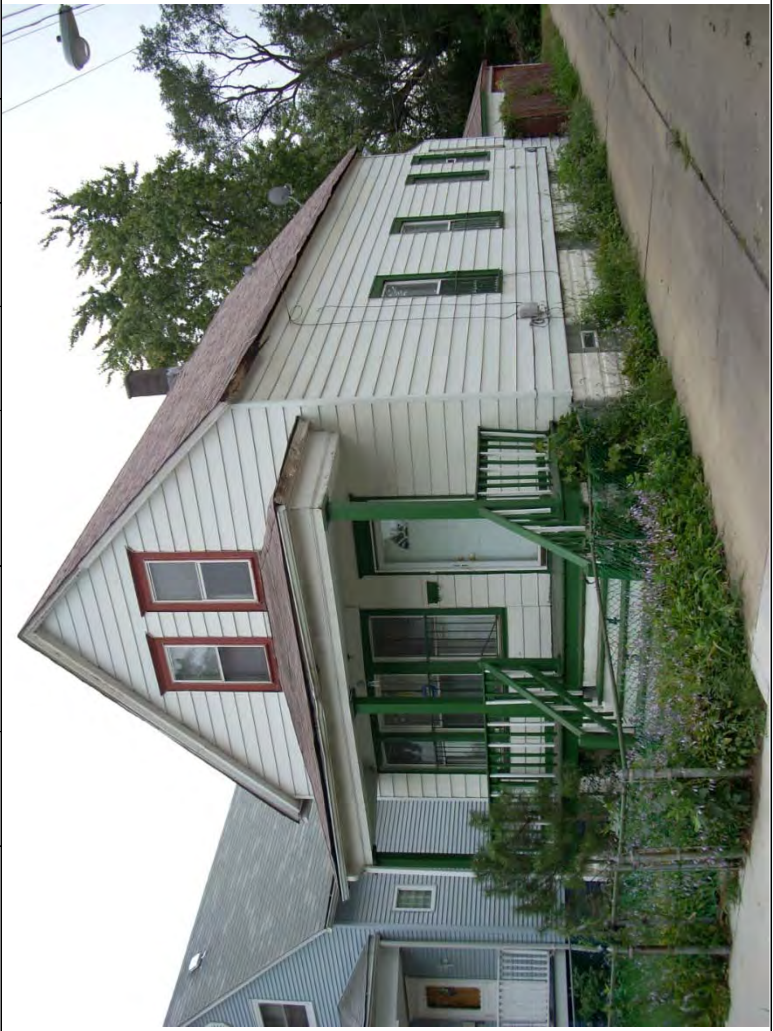
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 16 September 2012

Photos with Captions:
North and west façades of 1.5-story, single family, frame residence.



Property Description: **Stories:** 1.5

This one-and-a-half-story house in the Roseland community is situated on a raised concrete block basement with glass block windows and is clad with synthetic siding. The building has a front gable roof covered with asphalt shingles. The front elevation has a hip-roof full-width porch with faux stone piers beneath the wood deck, squared wood column supports, wood steps, and straight wood railings. There is an off-center non-original hollow core metal door, a strip of three windows on the first floor, and two windows on the second. Windows are non-original one-over-one aluminum-sash. This house lacks integrity and distinctive architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows, cladding, porch rails and supports
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung, glass block
Outbuildings (*Number and Description*) Garage			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

41 W. 114th Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1889

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

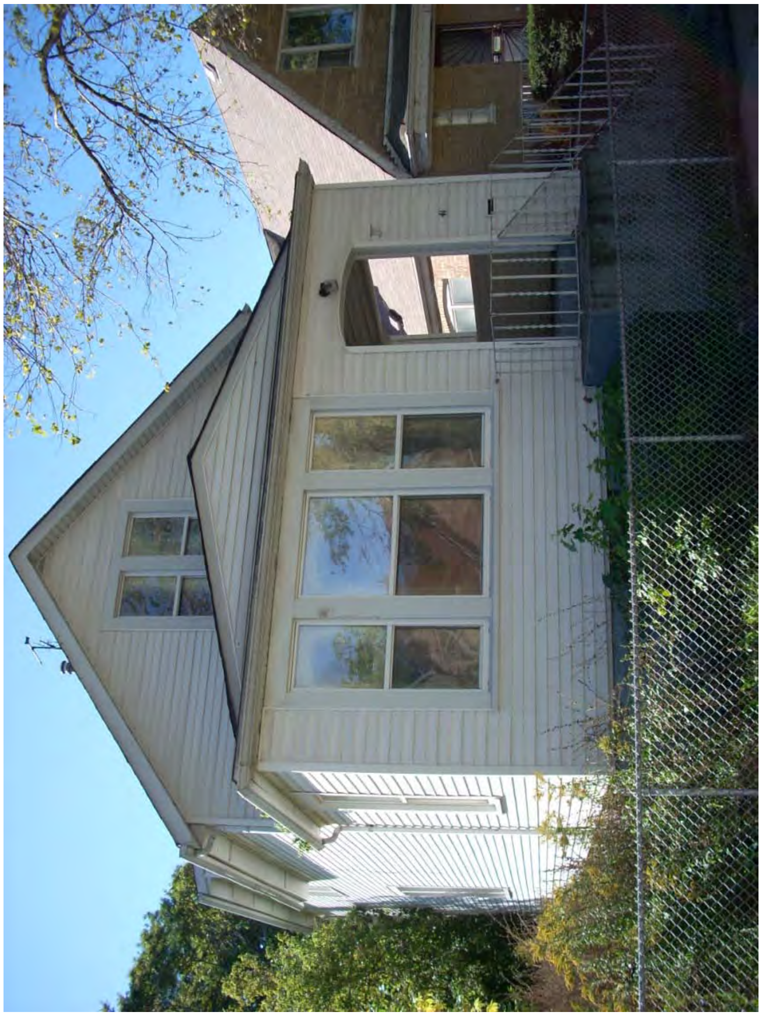
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 22 October 2012

Photos with Captions:
North façade of a 1.5-story, single family, frame residence.



Property Description: **Stories:** 1.5

This one-and-a-half-story frame house in the Roseland community is situated on a raised concrete block basement and is covered with synthetic siding. The building has a front gable roof covered with asphalt shingles and a second story rear shed-roof addition. It has a full-width, gable-roof sun porch, half of which is enclosed and has three non-original one-over-one aluminum-sash windows on the front elevation. The open half of the porch is accessed via concrete steps with metal railings. A pair of non-original one-over-one aluminum-sash windows is situated in the gable. This house lacks integrity and distinctive architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

<table>
<tr><td colspan="3">Integrity:
Unaltered [✓ Slight Modification] Major Alteration</td><td>Additional Notes/Descriptions
Replacement windows, cladding, and porch rails</td></tr>
<tr><td colspan="3">Condition:
Excellent [✓ Good] Poor</td><td></td></tr>
<tr><td colspan="3">Additional Alterations
Shed roof addition to rear of building.</td><td></td></tr>
<tr><td colspan="2">Structure Usage
Current: NA
Historic: NA</td><td>Exterior Wall Surface
Synthetic siding</td><td></td></tr>
<tr><td>Roof Material
Asphalt shingle</td><td>Roof Features
None</td><td>Roof Type
Gable</td><td></td></tr>
<tr><td colspan="3">Ornamental Architectural Details
None</td><td>Windows
Double-hung</td></tr>
<tr><td colspan="4">Outbuildings (<i>Number and Description</i>)
None</td></tr>
</table>

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

62 W. 114th Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Vacant

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction:

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

Craftsman

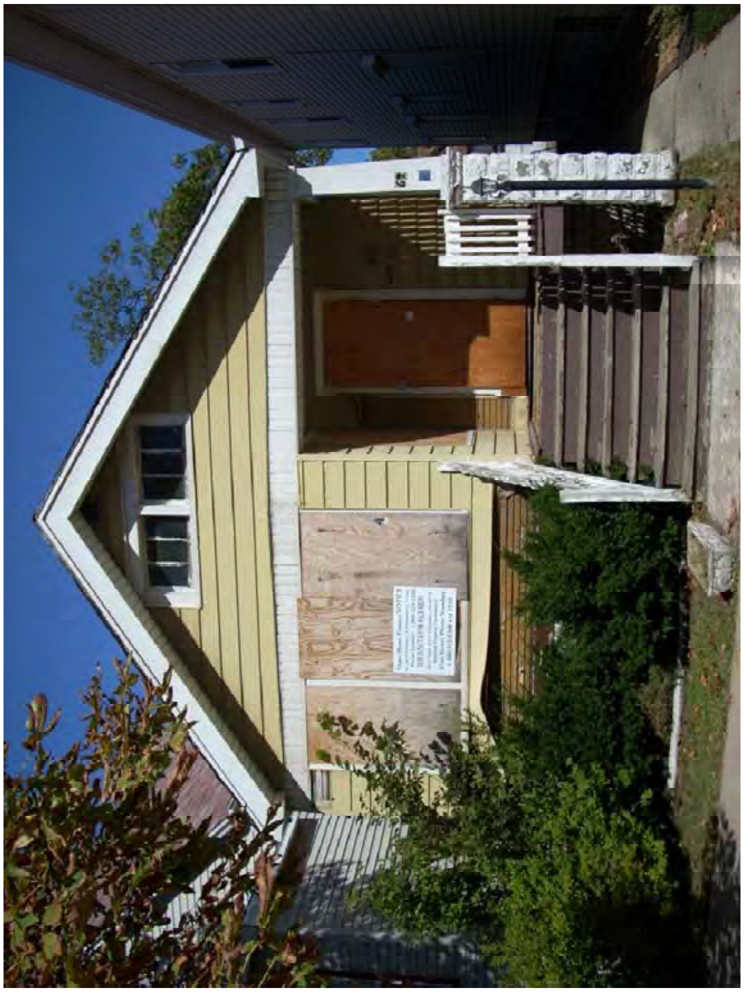
Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 22 October 2012

Photos with Captions:

South façade of a one-story, single family, frame residence.



Property Description: **Stories:** 1

This vacant one-story, frame bungalow in the Roseland community is situated on a raised concrete block basement and is covered with synthetic siding. The building has a front gable roof covered with asphalt shingles. The front elevation has a recessed wood corner porch with a faux stone corner pier topped by a squat, squared wood column. the door and first floor windows are covered with plywood. There are two original wood casement windows in the attic. This house lacks integrity and distinctive architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement cladding
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingles	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details Squat, square columns			**Windows** Casement, covered
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

131 W. 114th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1903

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

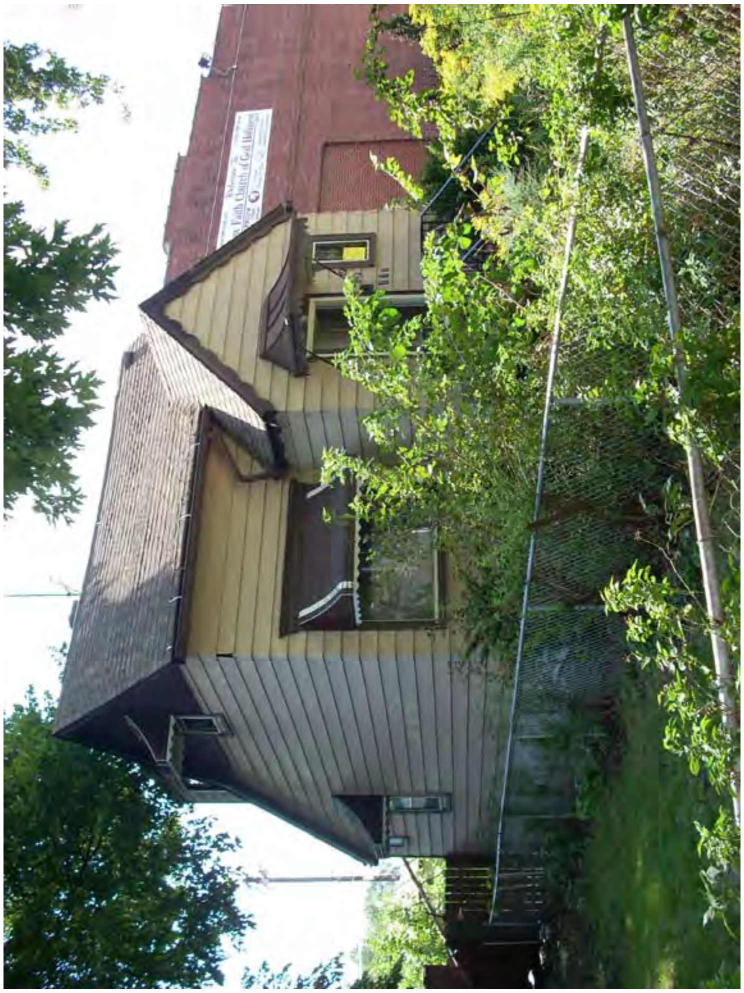
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 1 October 2012

Photos with Captions:
North façade of one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story home in the Roseland community is situated on a raised concrete block basement, is clad in synthetic siding, and has a side gable roof covered with asphalt shingles. The peaks of the side gables are clad in wood board-and-batten. The front façade of the home has a projecting gabled entrance vestibule with a small casement window, concrete steps with metal railings, and a larger window opening that is partially obscured by a low metal awning. Non-original double-hung windows are used elsewhere. Scalloped verge boards frame the projecting gable. A rear, dormer addition is visible from the street. This building lacks sufficient integrity and distinguishing architectural features to qualify as individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement siding and windows
Condition: Excellent [✓ Good] Poor			
Additional Alterations Rear dormer addition			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt	**Roof Features** Dormer	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung, fixed-pane, casement
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

135 W. 114th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Now Faith Church of God Holiness

Property Use

Historic: Industrial

Current: Religious

Date of Construction: circa 1922

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

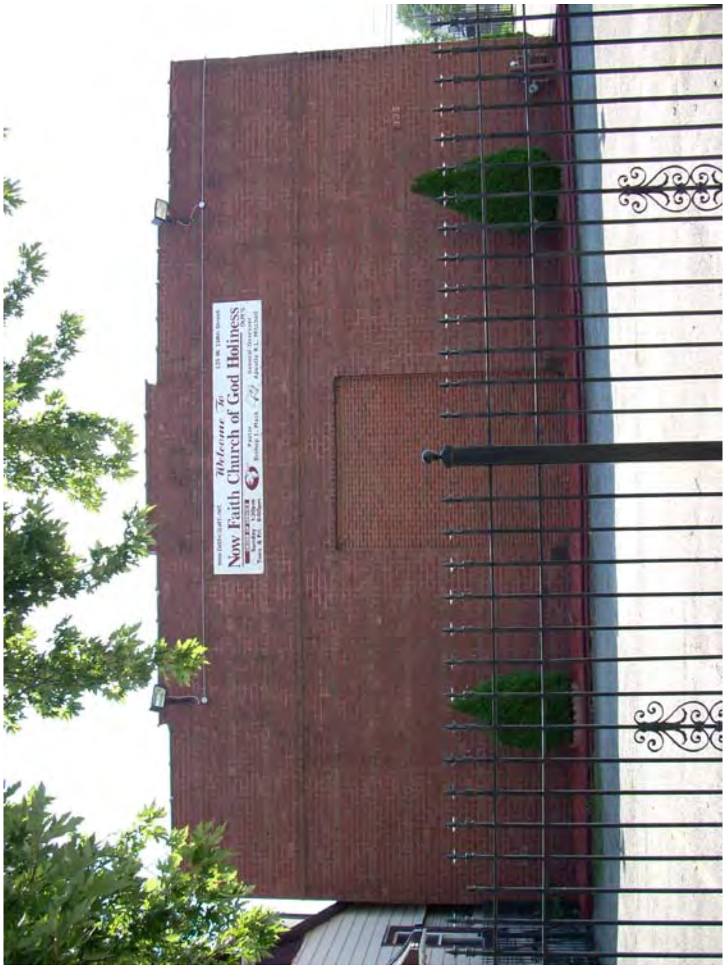
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 1 October 2012

Photos with Captions:
North façade of one-story religious building.



Property Description: **Stories:** 1

This one-story, brick-clad, former industrial building in the Roseland community has a flat roof and a stepped parapet with tile coping. The front façade displays the outline of a former overhead door opening that has been in-filled with brick. One of the side elevations features three metal core doors that provide access to the Now Faith of God Holiness Church, the building’s current occupant. Decorative details include brick stringcourses. This building lacks sufficient integrity and distinguishing architectural features to qualify as individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Brick in-fills old service garage entrance
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details Stepped parapet with tile coping, brick stringcourses.			**Windows** NA
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

138 W. 114th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1909

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

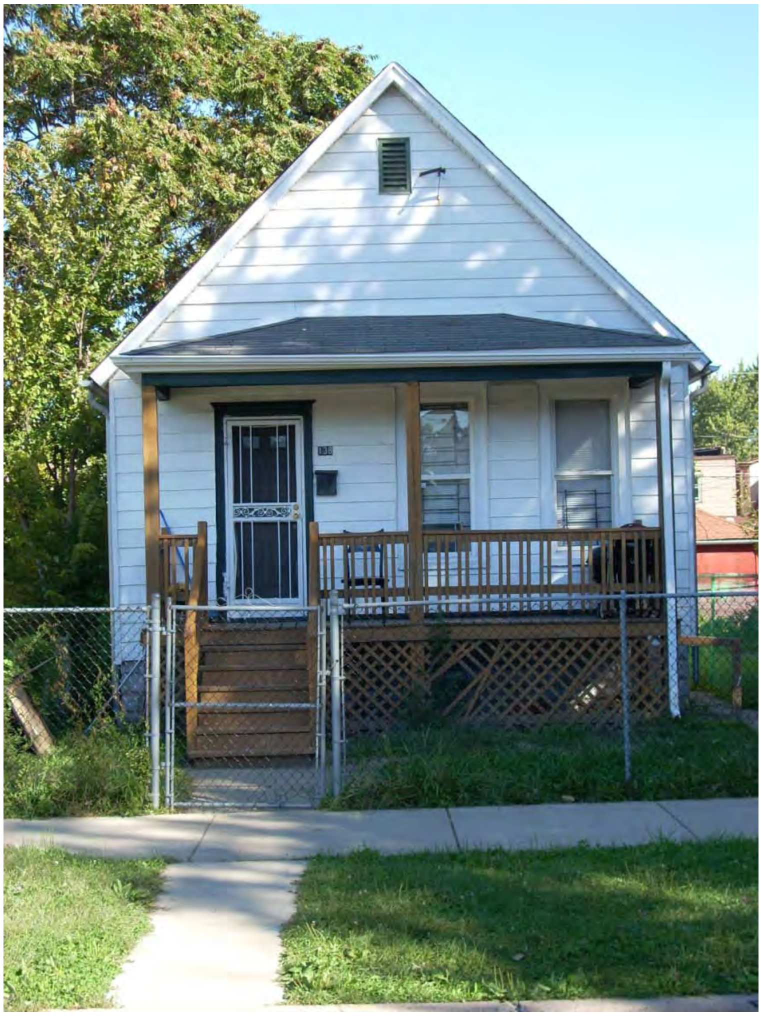
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 22 October 2012

Photos with Captions:
South façade of a one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story house in the Roseland community is situated on a raised concrete block basement and is covered with synthetic siding. The building has a front gable roof covered with asphalt shingles. Its front elevation has a full-width hip-roof wood porch with non-original straight posts and railings, an off-center entrance with a metal storm door, and two non-original one-over-one aluminum-sash windows. A small ventilating louver is situated in the attic gable. This house lacks integrity and distinctive architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows, cladding, and porch rails and posts
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

235 W. 114th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1964

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

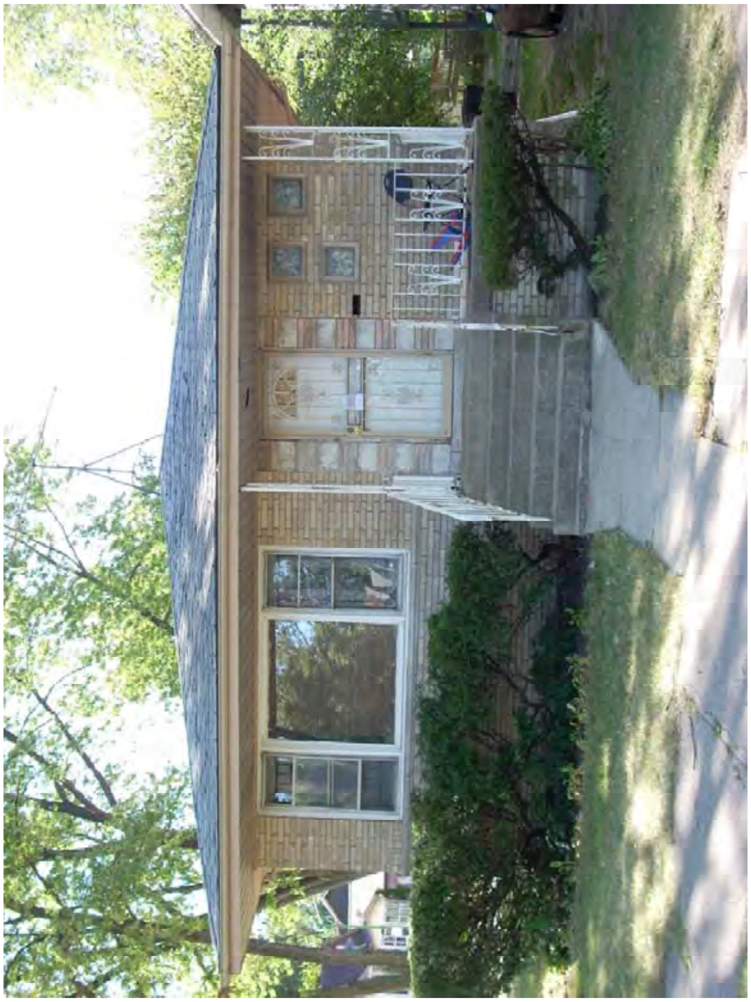
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 22 October 2012

Photos with Captions:
North façade of a brick, one-story, single family residence.



Property Description: **Stories:** 1

This one-story house at the southwest corner of 114th Street and Yale Avenue in the Roseland community is situated on a raised brick basement and is clad with yellow face brick along its street elevations. The building has a hip roof covered with asphalt shingles and overhanging eaves. The front elevation has a picture window flanked by one-over-one aluminum-sash windows and an off-center door. This elevation also has a partial-width porch with open metal posts covered by the wide roof overhang, concrete steps, and metal railings. Detailing includes stones flanking the front door and decorative glass blocks on both street elevations. This house lacks distinctive architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: [✓ Unaltered] Slight Modification Major Alteration			**Additional Notes/Descriptions**
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Hip	
Ornamental Architectural Details Decorative glass blocks, stone flanking entrance			**Windows** Double-hung, fixed-pane, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

324 W. 114th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Multi-family residence

Date of Construction: 1907

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

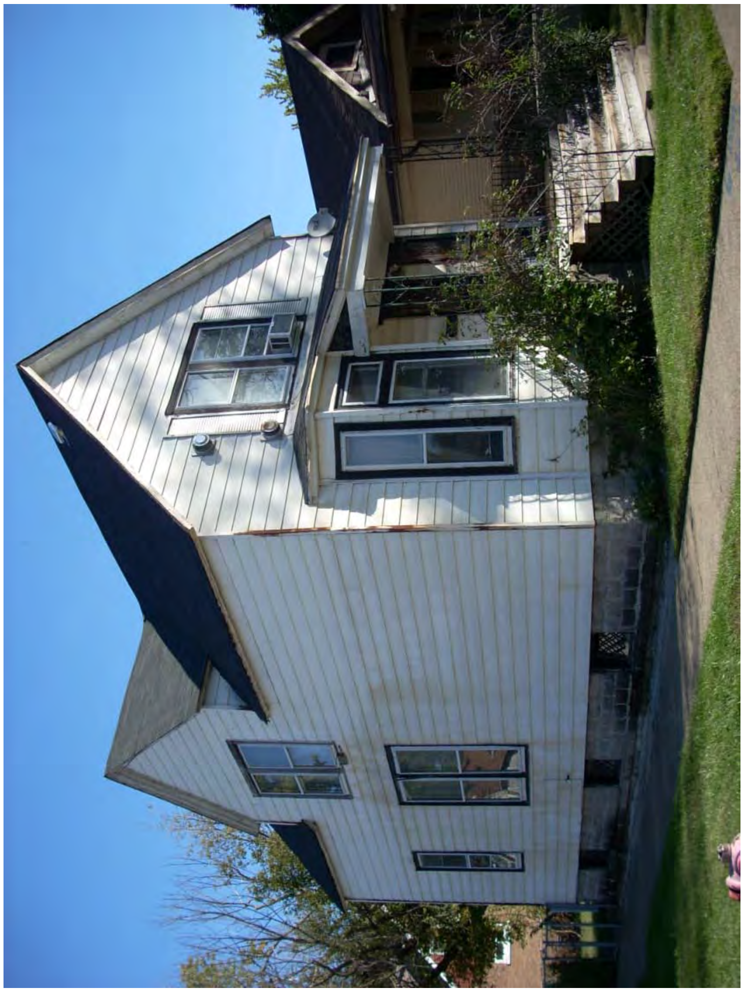
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 22 October 2012

Photos with Captions:
South and west façades of a 1.5-story, multi-family, frame residence.



Property Description: **Stories:** 1.5

This one-and-a-half-story house in the Roseland community is situated on a raised concrete block basement with casement windows and is covered with synthetic siding. The building has a cross-gable roof covered with asphalt shingles. Its front elevation has two off-center doors and a partial-width shed-roof porch with wood steps, metal railings and open metal supports. It also has a three-sided bay window on the first floor and a pair of windows in the gable. Windows are non-original one-over-one aluminum-sash. The central window of the bay features a transom. This house lacks integrity and distinctive architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration	**Additional Notes/Descriptions** Replacement doors, windows, and cladding
Condition: Excellent [✓ Good] Poor	
Additional Alterations Converted from single family to multi-family after 1938 (Sanborn).	

Structure Usage	**Exterior Wall Surface**
Current: NA Historic: NA	Synthetic siding

Roof Material	**Roof Features**	**Roof Type**
Asphalt shingle	None	Cross-gable roof

Ornamental Architectural Details	**Windows**
None	Double-hung, fixed-pane (transom), casement

Outbuildings (*Number and Description*)

None

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

One W. 115th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Commercial

Current: Mixed-Use

Date of Construction: 1907

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

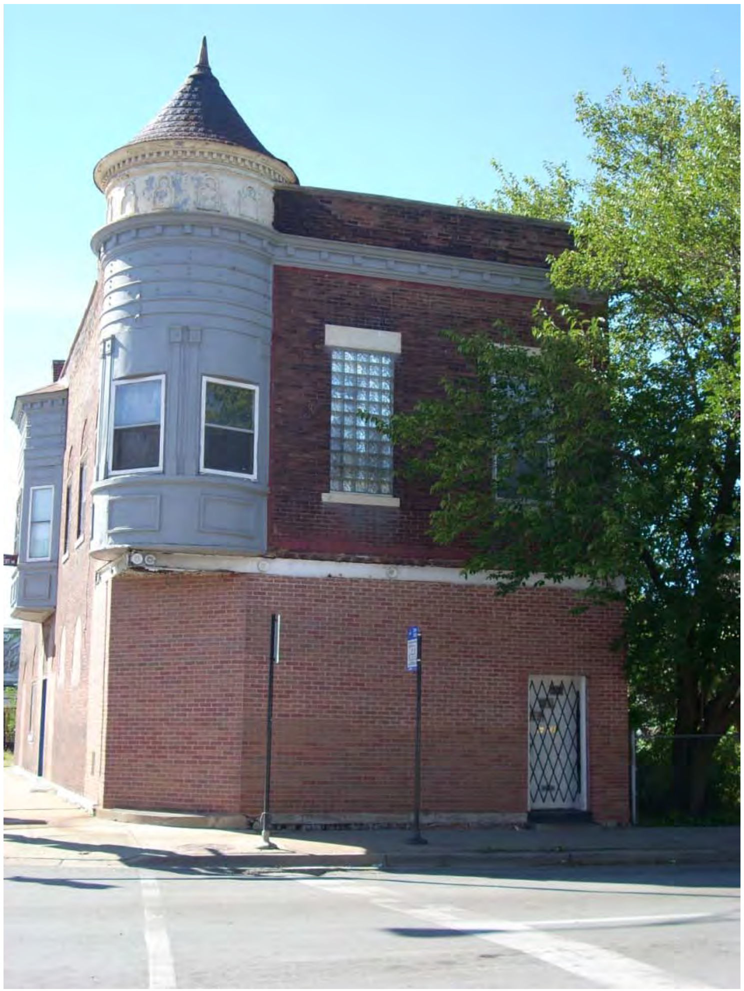
Queen Anne

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 22 October 2012

Photos with Captions:
North façade of a brick, two-story, mixed-use building.



Property Description: **Stories:** 2

This two-story Queen Anne style commercial building at the southwest corner of 115th and State streets in the West Pullman community is clad with brick and has a flat roof and parapet. The first floor of both street elevations has been drastically altered by the removal of the corner storefront and the infill of virtually all door, window, and round-arch transom openings with brick. The first floor of the front (115th Street) elevation currently features a single, non-original, off-center hollow core metal door. The first floor of the State Street elevation has a centrally-located non-original hollow core metal door and a single non-original one-over-one aluminum-sash window. The second floor, however, retains its original metal corner turret with conical roof and a three-sided metal window bay on the State Street elevation. Both bays have rectangular panels at their bases and dentil molding, and the turret features decorative pilasters. However, the windows in both the bay and turret are non-original. The second floor of the 115th street elevation has a non-original glass block window and an aluminum-sash window, both of which have stone sills and lintels. The second floor of the State Street elevation has a series of non-original one-over-one aluminum-sash windows with rounded transoms that have been in-filled with brick. This building lacks integrity and is not

individually eligible for listing on the National Register.

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows, storefronts, openings in-filled
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details Metal turret with conical roof and pilasters, metal bays with panels and dentil molding, stone lintels and sills, cornice			**Windows** Double-hung, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

8 W. 115th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Flat

Date of Construction: 1903

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

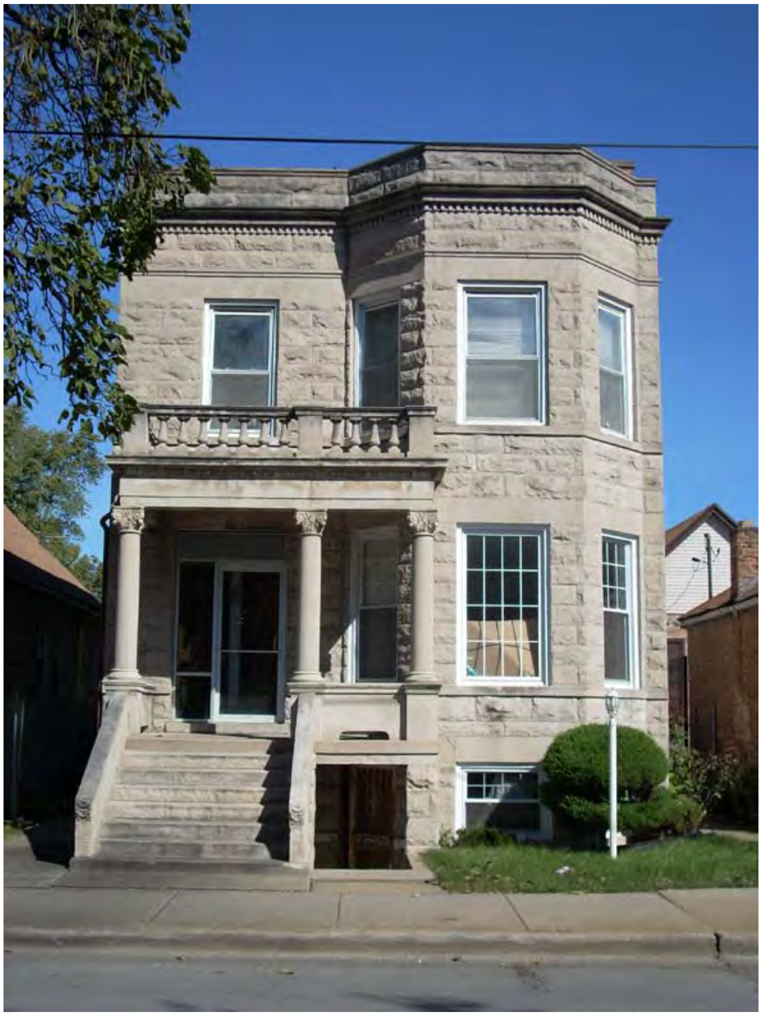
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 22 October 2012

Photos with Captions:
South façade of a greystone, two-flat residence.



Property Description: **Stories:** 2

This two-flat residential building in the Roseland community is situated on a raised basement and is clad with rusticated limestone on its front elevation and common brick along its side and rear elevations. The building has a flat roof and parapet. Its front elevation has a full-height three-sided window bay pavilion, a partial-width stone porch with Corinthian columns and balustrade, and an off-center entrance with metal storm door. There is a secondary entrance to the lower level. The first floor window bay has a non-original central fixed-pane window with multiple lights and flanking nine-over-one windows. The second floor of the front elevation has four non-original one-over-one aluminum-sash windows—three on the bay and one above the entrance. Casement windows provide light to the basement. Detailing includes smooth stone sill courses, belt courses, and a cornice with dentil molding.

This is an example of a greystone, a building type that the City of Chicago has recognized through its Historic Greystone Initiative. However, there are thousands of greystone residential buildings in Chicago and this particular example does not stand out among the city’s stock of this residential building type. As a result, it does not qualify as

individually eligible for listing on the National Register.

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows & door
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Stone (façade), Brick (sides and rear)	
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details Corinthian columns and stone balustrade, stone sill courses, belt courses, and cornice with dentils			**Windows** Double-hung, fixed-pane
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

17 W. 115th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Flat

Date of Construction: 1897

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

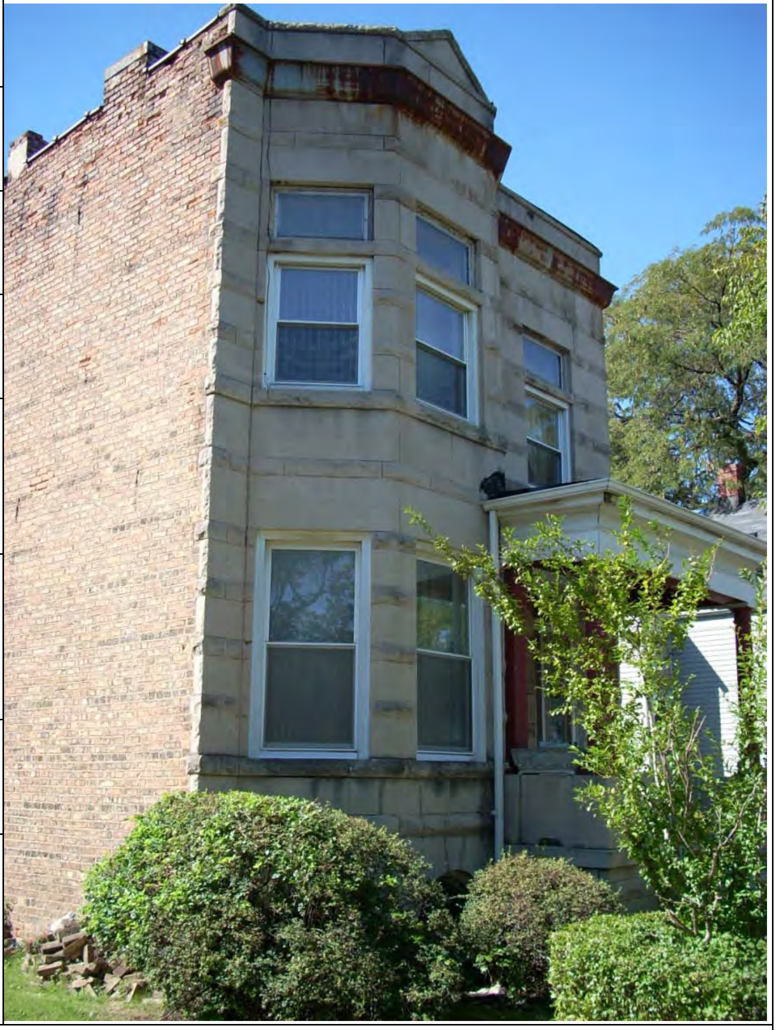
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 10 September 2012

Photos with Captions:
North and east façades of two-flat greystone residence.



Property Description: **Stories:** 2

This two-flat residential building in the West Pullman community is situated on a raised basement and has a front façade clad with limestone; common brick cover both the sides and rear. The building has a full-height three-sided window bay pavilion, flat roof, and a shaped parapet with a pediment above the bay. Its off-center, flat-roofed porch has concrete steps, metal railings, Doric columns, and a non-original metal door with transom. Windows are non-original one-over-one and those on the second floor feature transoms. Detailing includes continuous banding in rusticated limestone and a metal cornice.

This is an example of a greystone, a popular historic residential building type that the City of Chicago has recognized through its Historic Greystone Initiative, which offers technical assistance and financial resources to property owners to encourage their preservation. This building does not possess sufficient distinguishing architectural characteristics to qualify for individual listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement door and windows
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Stone (façade), Brick (sides and rear)	
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details Metal cornice, stone banding, Doric columns on porch			**Windows** Double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

23 W. 115th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Vacant

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1883

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

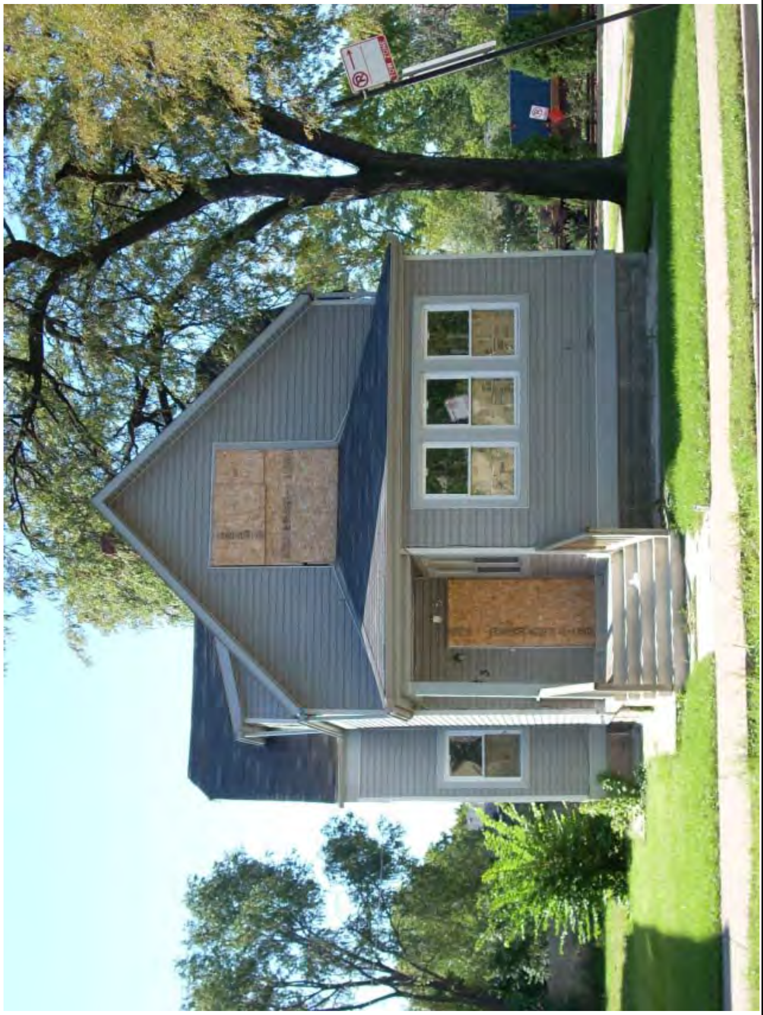
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 10 September 2012

Photos with Captions:
North façade of a 1.5-story, single family, frame residence.



Property Description: **Stories:** 1.5

This one-and-a-half-story house in the West Pullman community is clad with synthetic siding, has a limestone foundation, and has a gable front roof crossed by hip-on-gable sides. The front elevation has a full-width hip roof porch, a portion of which is enclosed. A shed roof dormer is visible on a side elevation. The open portion of the porch has wood steps and railings, a wood post, and a door opening covered with plywood. Windows are one-over-one aluminum-sash, some of which are covered with plywood. This house does not feature sufficient integrity or distinguishing architectural features to qualify as individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

<table>
<tr><td colspan="3">Integrity:
Unaltered [✓ Slight Modification] Major Alteration</td><td>Additional Notes/Descriptions
Replacement siding and windows, enclosed porch</td></tr>
<tr><td colspan="3">Condition:
[✓ Excellent] Good Poor</td><td></td></tr>
<tr><td colspan="3">Additional Alterations</td><td></td></tr>
<tr><td colspan="2">Structure Usage
Current: NA
Historic: NA</td><td>Exterior Wall Surface
Synthetic siding</td><td></td></tr>
<tr><td>Roof Material
Asphalt shingle</td><td>Roof Features
Dormer</td><td>Roof Type
Gable/Hipped gable</td><td></td></tr>
<tr><td colspan="3">Ornamental Architectural Details
None</td><td>Windows
Double-hung</td></tr>
<tr><td colspan="4">Outbuildings (<i>Number and Description</i>)
None</td></tr>
</table>

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

35 W. 115th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Donald's Auto Repairs

Property Use

Historic: Commercial

Current: Commercial

Date of Construction: 1936

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

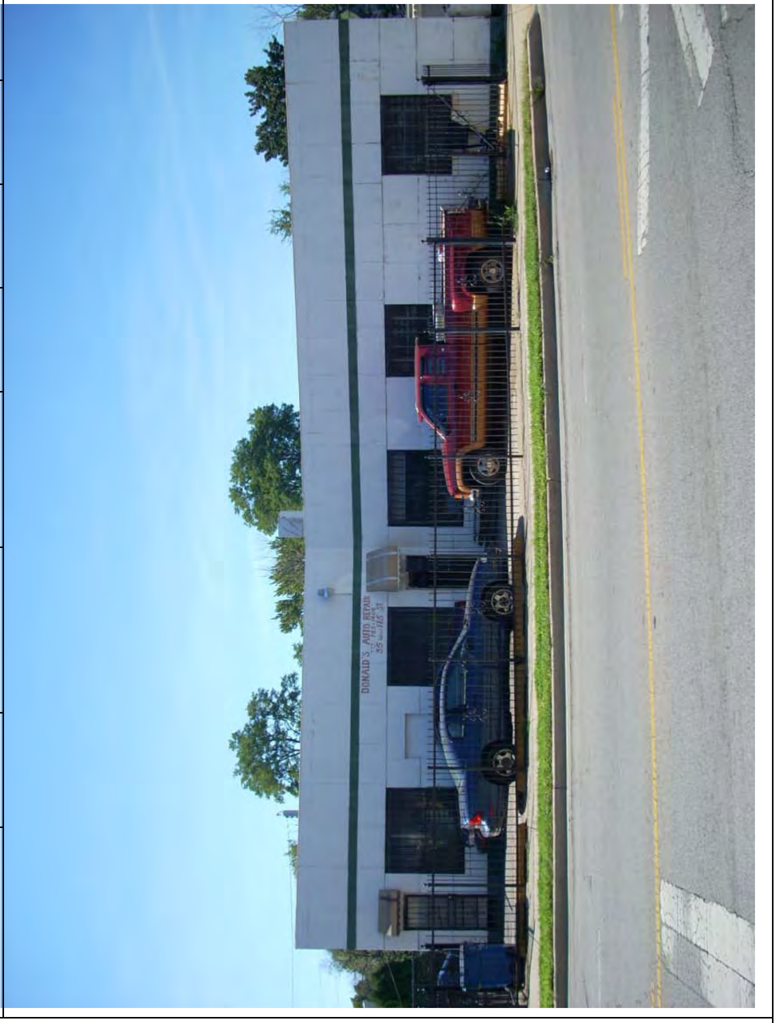
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 10 September 2012

Photos with Captions:
North façade of one-story, sheet metal and brick clad, commercial building.



Property Description: **Stories:** 1

This one-story auto repair building at the corner of 115th Street and Lafayette Avenue in the West Pullman community has a flat roof and a V-shaped footprint. Its street elevations are clad with white sheet metal and its rear elevations are clad in common brick. Overhead metal garage doors are situated on either end of the building while the bent front elevation along 115th Street features two metal doors and a series of fixed-pane steel sash windows. Windows along the rear of the building are covered with corrugated metal. This building does not feature sufficient distinguishing architectural features to qualify as individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement doors; rear windows covered
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Metal (front and sides), Brick (rear)	
Roof Material Unknown	**Roof Features** None	**Roof Type** Flat	
Ornamental Architectural Details None			**Windows** Fixed-pane
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: None

Property Address:

40 W. 115th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Commercial

Current: Multi-family residence

Date of Construction: 1894

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

Vernacular

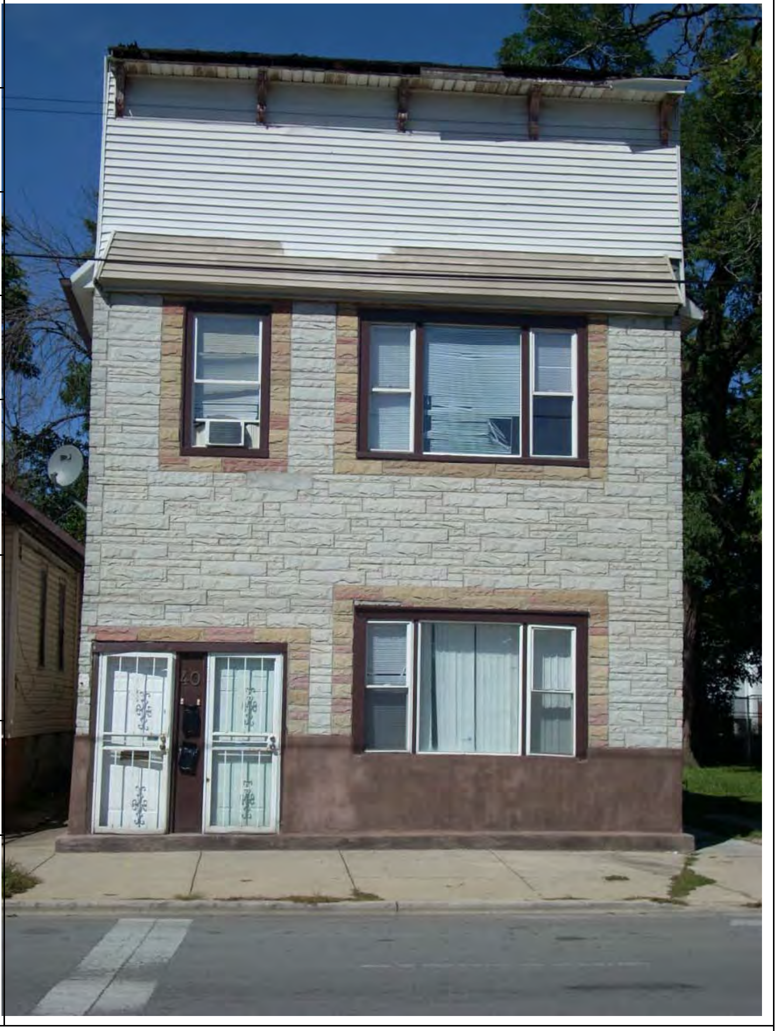
Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 10 September 2012

Photos with Captions

South façade of two-story, multi-family, frame residence (former commercial building).



Property Description: **Stories:** 2

This two-story residential building in the Roseland community has a flat roof and parapet. Its front façade is mostly clad in synthetic faux stone siding with contrasting colors around the doors and windows. The lowest portion of the façade is covered in stucco; the upper portion is clad in synthetic siding. The front elevation has two hollow metal core doors, Chicago-style windows on the first and second floors, and a single one-over-one window on the second floor. A pent roof is situated above the second floor windows and a bracketed wood cornice is situated at the parapet level. This building lacks integrity, does not have sufficient distinguishing architectural features, and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

<table>
<tr><td colspan="3">Integrity:
Unaltered [✓ Slight Alterations] Major Alterations</td><td>Additional Notes/Descriptions
Replacement doors, windows, and cladding</td></tr>
<tr><td colspan="3">Condition:
[✓ Excellent] Good Poor</td><td></td></tr>
<tr><td colspan="3">Additional Alterations
Converted from commercial building to residential use</td><td></td></tr>
<tr><td colspan="2">Structure Usage
Current: NA
Historic: NA</td><td>Exterior Wall Surface
Synthetic siding, faux stone, stucco</td><td></td></tr>
<tr><td>Roof Material
Unknown</td><td>Roof Features
Parapet</td><td>Roof Type
Flat</td><td></td></tr>
<tr><td colspan="3">Ornamental Architectural Details
Bracketed cornice</td><td>Windows
Double-hung, fixed-pane</td></tr>
<tr><td colspan="4">Outbuildings (<i>Number and Description</i>)
None</td></tr>
</table>

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

42 W. 115th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1899

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

Vernacular

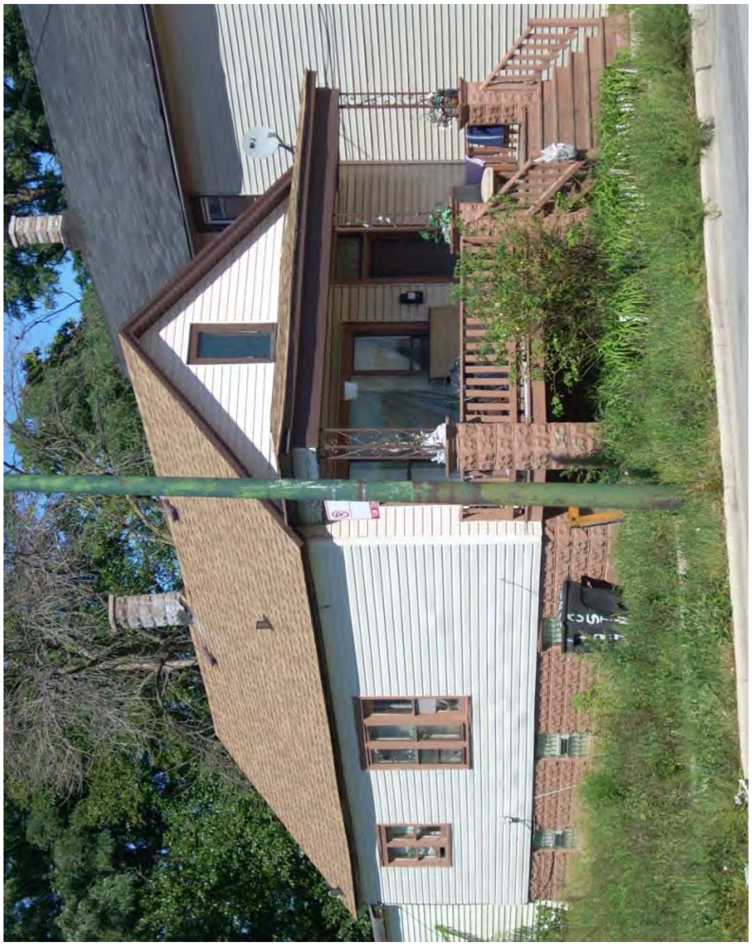
Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 10 September 2012

Photos with Captions

South and west façades of one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story home in the Roseland community is situated on a raised concrete block basement with glass block windows. The home is clad with synthetic siding and has a front gable roof covered with asphalt shingles. It has a full-width hip-roof wood porch with wood slat railings, and supports consisting of three concrete block piers topped by open metal posts. Its front façade has an off-center door with transom, a picture window flanked by one-over-one windows, and a single-pane window in the dormer. This home lacks integrity, does not have distinguishing architectural features, and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Alterations] Major Alterations			**Additional Notes/Descriptions** New porch columns & rails, replacement cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung, fixed-pane, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

112 W. 115th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Industrial

Current: Industrial

Date of Construction: 1927

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

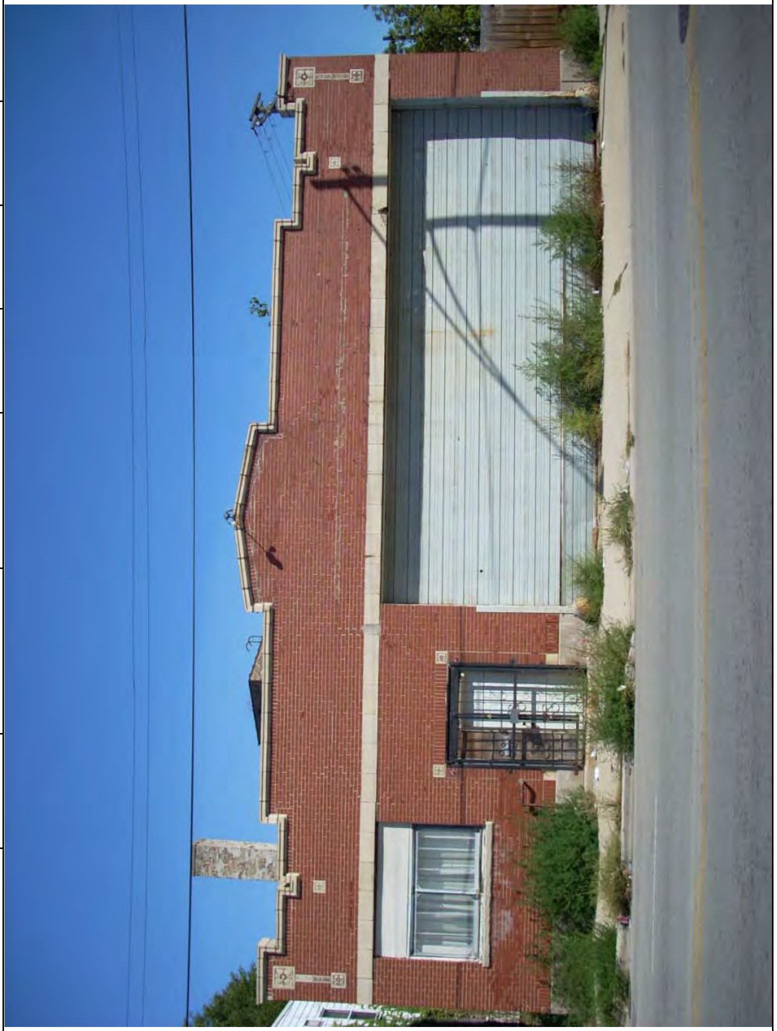
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 10 September 2012

Photos with Captions:
South façade of one-story, brick industrial building.



Property Description: **Stories:** 1

This one-story industrial building in the Roseland community has a flat roof and stepped parapet. Its front elevation is clad with red face brick and has a concrete water table, a wide overhead metal garage door, entrance that has been replaced with a non-original hollow core metal door and plywood, and a window opening that has been covered with plywood and replacement windows. Detailing in cream-colored terra cotta includes coping and geometric panels on either end of the parapet that feature foliate motifs. This building does not feature sufficient integrity or distinguishing architectural features to qualify as individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

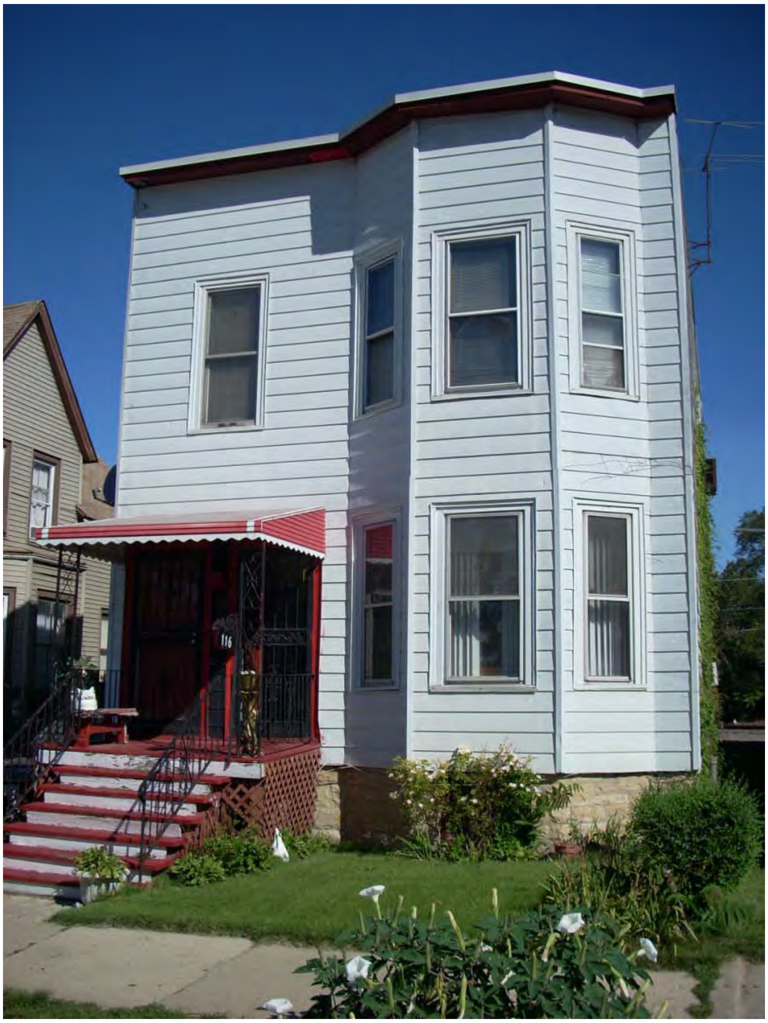
Structural Survey

Integrity:			**Additional Notes/Descriptions**
Unaltered	[✓ Slight Modification]	Major Alteration	Replacement windows and garage door; openings in-filled
Condition:			
Excellent	[✓ Good]	Poor	
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details Stepped parapet with terra-cotta coping and decorative panels.			**Windows** Fixed-pane
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Historical Resource Recordation Form

Property Name **Historic:** Not labeled, not in CHRS **Common/Current:** Unknown	**Photos with Captions:** South façade of multi-family, frame residence. 
Property Address: 116 W. 115th Street	
HAARGIS Number: Not in database	
Present Owner and /or Occupant: Unknown	
Property Use **Historic:** Single family residence **Current:** Multi-family residence	
Date of Construction: 1904 **Architect's Name:** Not in CHRS **Builder/Contractor:** Not in CHRS	
Architectural Style: Vernacular	
Prepared By: C. Tolmie, M. C. Bird, J. Guarino **Photo By:** S. Katz **Date:** 10 September 2012	

Property Description: **Stories:** 2

This two-story, multi-family residential building in the Roseland community is clad with synthetic siding, is situated on a raised limestone foundation, and has a flat roof with an overhanging eave. Its front elevation features a non-original, partial width wood porch with metal railings, open metal supports, and a metal awning roof. It has a full-height three-sided pavilion with non-original one-over-one windows and a single, non-original, one-over-one window on the second floor directly above the entrance. This building lacks sufficient integrity and distinguishing architectural features to qualify as individually eligible for listing on the National Register.

Structural Survey

Integrity:

Unaltered [✓ Slight Modification] Major Alteration

Additional Notes/Descriptions

Replacement windows and siding

Condition:

[✓ Excellent] Good Poor

Additional Alterations

Structure Usage	**Exterior Wall Surface**
Current: N A Historic: NA	Synthetic siding

Roof Material	**Roof Features**	**Roof Type**
Unknown	None	Flat

Ornamental Architectural Details

None

Windows

Double-hung

Outbuildings (*Number and Description*)

None

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

120 W. 115th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1899

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

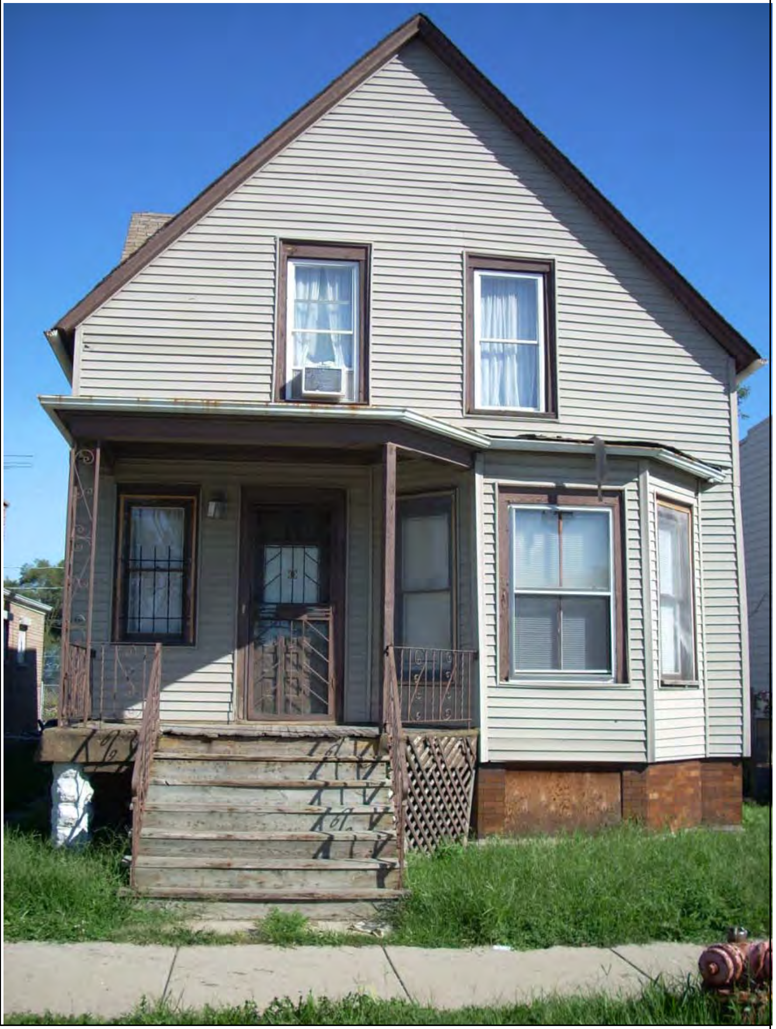
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 10 September 2012

Photos with Captions:
South façade of 1.5-story, single family, frame residence.



Property Description: **Stories:** 1.5

This one-and-half-story home in the Roseland community is situated on a raised brick basement, clad with synthetic siding, and has a gable roof covered with asphalt shingles. The front façade has a partial-width flat-roofed porch with non-original metal railings open metal supports and an off-center door. Windows are non-original one-over-one: there is a three-sided bay on the first floor and are two additional windows centered on the second floor. One of the side elevations has a three-sided bay window and gable wall dormer above. This building lacks sufficient integrity and distinguishing architectural features to qualify as individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows, porch, & cladding
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** Dormer	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

143 W. 115th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1911

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

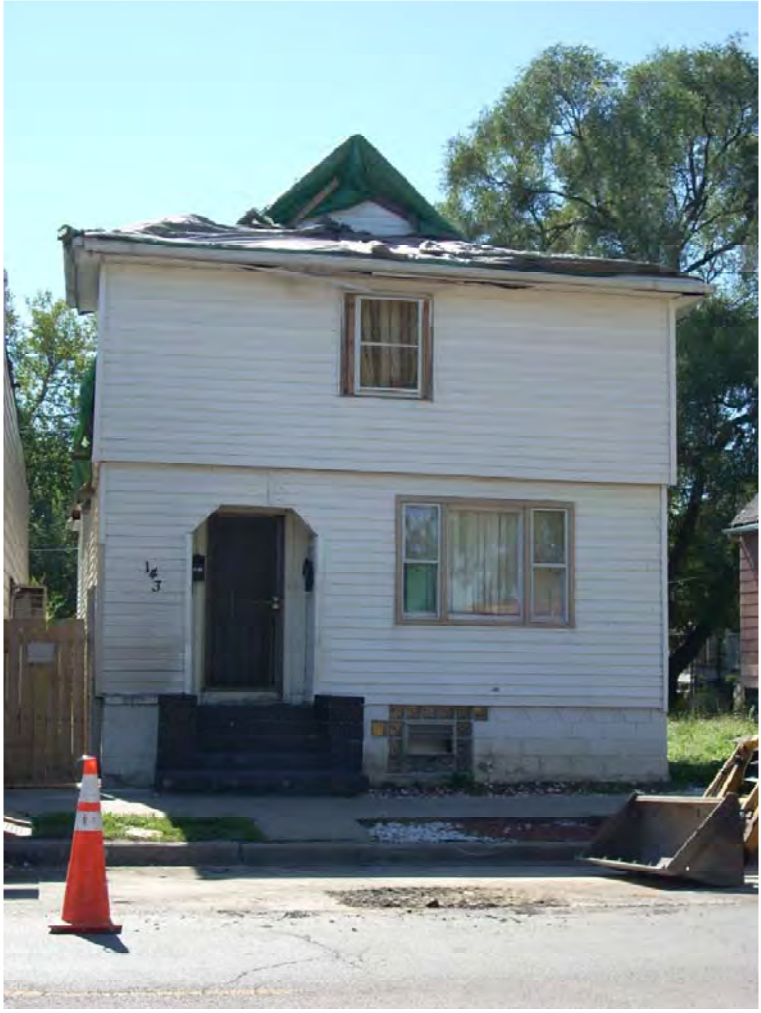
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 22 October 2012

Photos with Captions:
North façade of a two-story, single family, frame residence.



Property Description: **Stories:** 2

This two-story house in the West Pullman community is situated on a raised concrete block basement with glass block windows and is covered with synthetic siding. The building has a front gable roof with a wall dormer on the side elevation. The house has a two-story hip-roof front addition. The front elevation has an off-center recessed entrance with a metal storm door, a non-original picture window flanked by one-over-one aluminum-sash windows on the first floor, and a single non-original one-over-one aluminum-sash window on the second floor addition. This house lacks integrity and distinctive architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

<table>
<tr><td colspan="3">Integrity:
Unaltered
Slight Modification
[✓ Major Alteration]</td><td>Additional Notes/Descriptions
Replacement door, windows, and cladding</td></tr>
<tr><td colspan="3">Condition:
Excellent
[✓ Good]
Poor</td><td></td></tr>
<tr><td colspan="3">Additional Alterations
Addition to front of building</td><td></td></tr>
<tr><td colspan="2">Structure Usage
Current: NA
Historic: NA</td><td>Exterior Wall Surface
Synthetic siding</td><td></td></tr>
<tr><td>Roof Material
Asphalt</td><td>Roof Features
Dormer</td><td>Roof Type
Gable</td><td></td></tr>
<tr><td colspan="3">Ornamental Architectural Details
None</td><td>Windows
Double-hung, fixed-pane, glass block</td></tr>
<tr><td colspan="4">Outbuildings (<i>Number and Description</i>)
None</td></tr>
</table>

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

8 E. 116th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1908

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

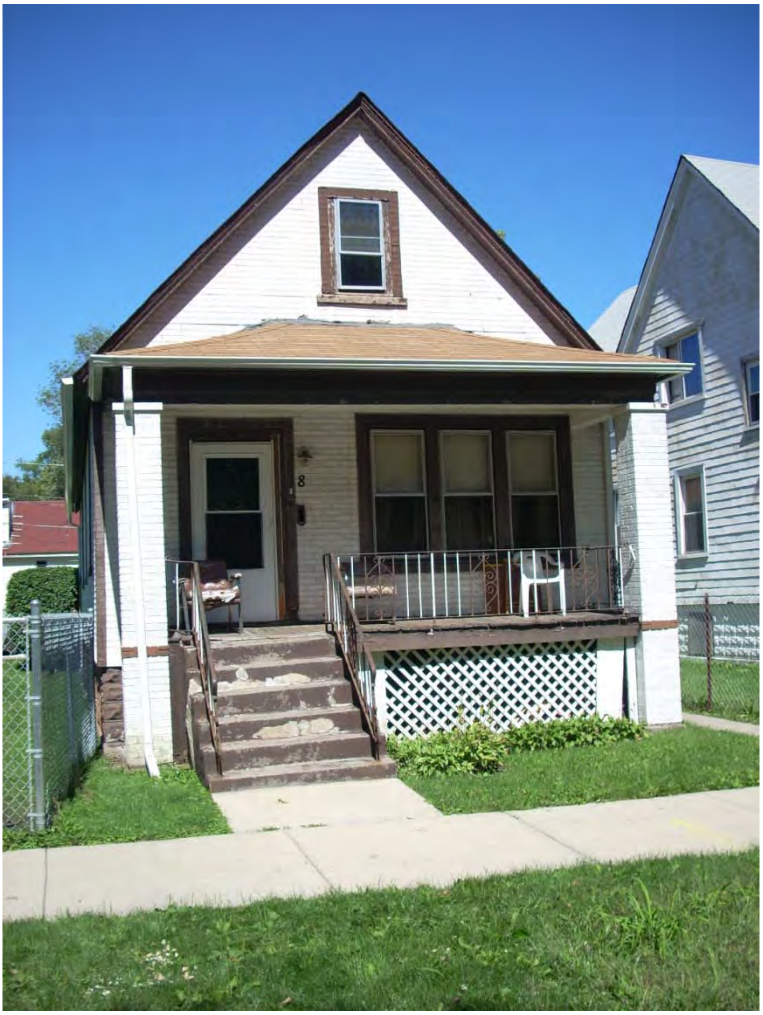
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 10 September 2012

Photos with Captions:
North façade of one-story, single-family, frame residence.



Property Description: **Stories:** 1

This one-story house in the West Pullman community is situated on a raised concrete block basement that features multi-pane casement windows. It is clad with brick painted white and has a gable roof covered with asphalt shingles. It front elevation features a full-width, hip roof, wood porch with concrete steps, metal railings, and brick pier supports. It has an off-center door and one-over-one windows with aluminum storms: a strip of three on the first floor and one in the gable. This house lacks sufficient distinguishing architectural features to qualify as individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alterations			**Additional Notes/Descriptions** Aluminum storms
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details			**Windows** Double-hung, casement
Outbuildings (*Number and Description*) None			

Local Landmark	**Y [✓ N]**	
National Register Historic Places	**Y [✓ N]**	
National Register Historic District	**Y [✓ N]**	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

12 E. 116th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Multi-family residence

Date of Construction: 1913

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

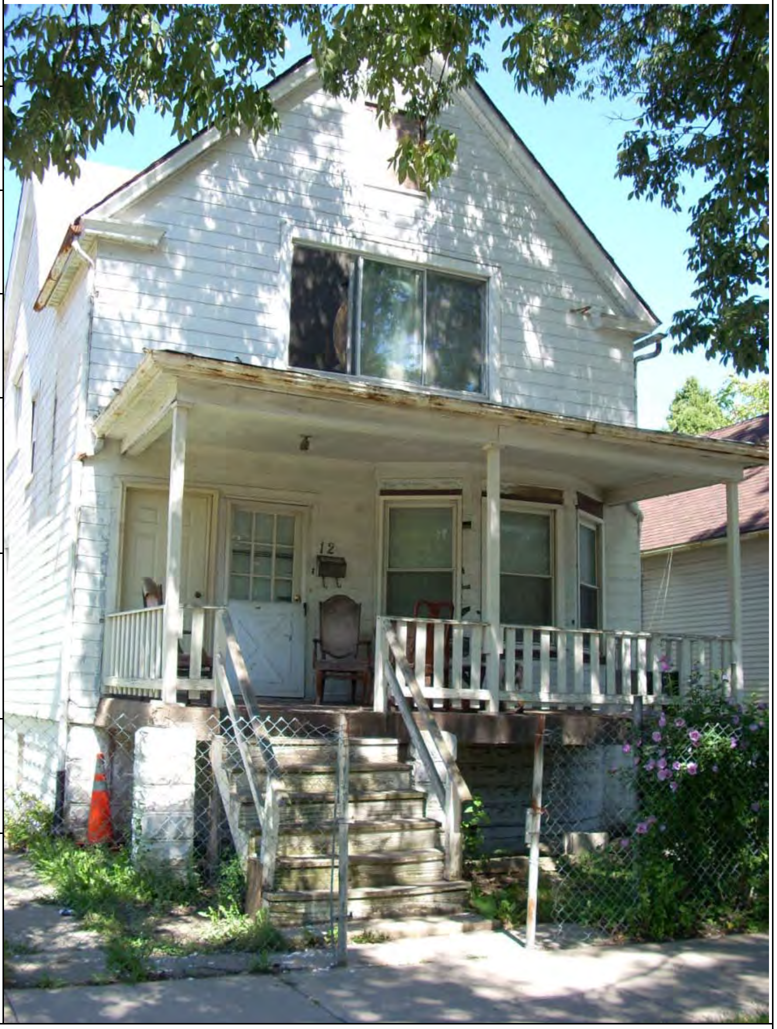
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 10 September 2012

Photos with Captions:
North façade of two-story, multi-family, frame residence.



Property Description: **Stories:** 2

This two-story house in the West Pullman community is situated on a raised concrete block basement, is clad with synthetic siding, and has cornice returns and a cross-gable roof covered with asphalt shingles. It front elevation features a full-width, flat roof, wood porch with non-original slat railing, thin wood posts, and an off-center door. There is a three-sided bay with one-over-one double-hung windows on the first floor and a strip of three single-pane windows on the second floor that may be sliding glass. This house lacks sufficient integrity or distinguishing architectural features to qualify as individually eligible for listing on the National Register.

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Structural Survey

<table>
<tr><td colspan="3">Integrity:
Unaltered [✓ Slight Modification] Major Alterations</td><td>Additional Notes/Descriptions
Replacement windows, door, cladding</td></tr>
<tr><td colspan="3">Condition:
[✓ Excellent] Good Poor</td><td></td></tr>
<tr><td colspan="3">Additional Alterations</td><td></td></tr>
<tr><td colspan="2">Structure Usage
Current: NA
Historic: NA</td><td>Exterior Wall Surface
Synthetic siding</td><td></td></tr>
<tr><td>Roof Material
Asphalt shingle</td><td>Roof Features
None</td><td>Roof Type
Gable</td><td></td></tr>
<tr><td colspan="3">Ornamental Architectural Details
Cornice returns</td><td>Windows
Double-hung, sliding</td></tr>
<tr><td colspan="4">Outbuildings (<i>Number and Description</i>)
None</td></tr>
</table>

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

16 E. 116th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1902

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

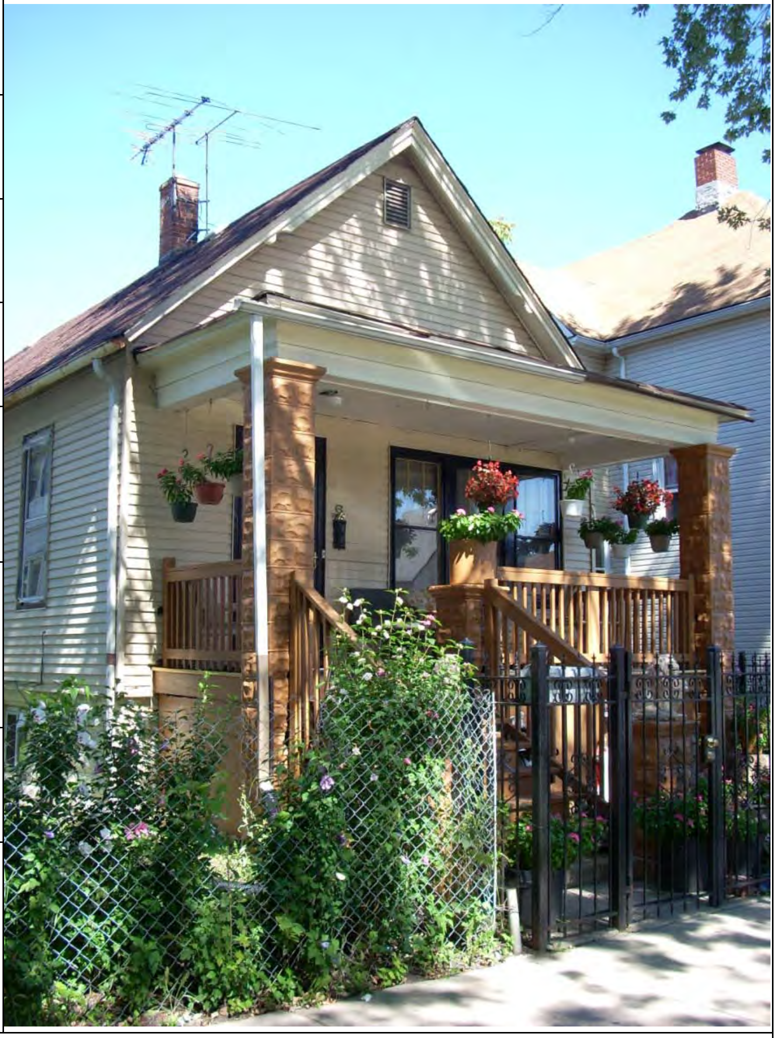
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 10 September 2012

Photos with Captions:
North façade of one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story house in the West Pullman community is situated on a raised concrete block basement, is clad with synthetic siding, and has a gable roof covered with asphalt shingles. Its front elevation features a full-width, hip roof, wood porch with faux stone pier supports and replacement wood railing. The front also has an off-center front door and a strip of three one-over-one windows. This house lacks sufficient integrity and distinguishing architectural features to qualify as individually eligible for listing on the National Register.

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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alterations			**Additional Notes/Descriptions** Replacement door, new porch rails, cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung
Outbuildings (*Number and Description*) Garage behind residence			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

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Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

20 E. 116th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1893

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

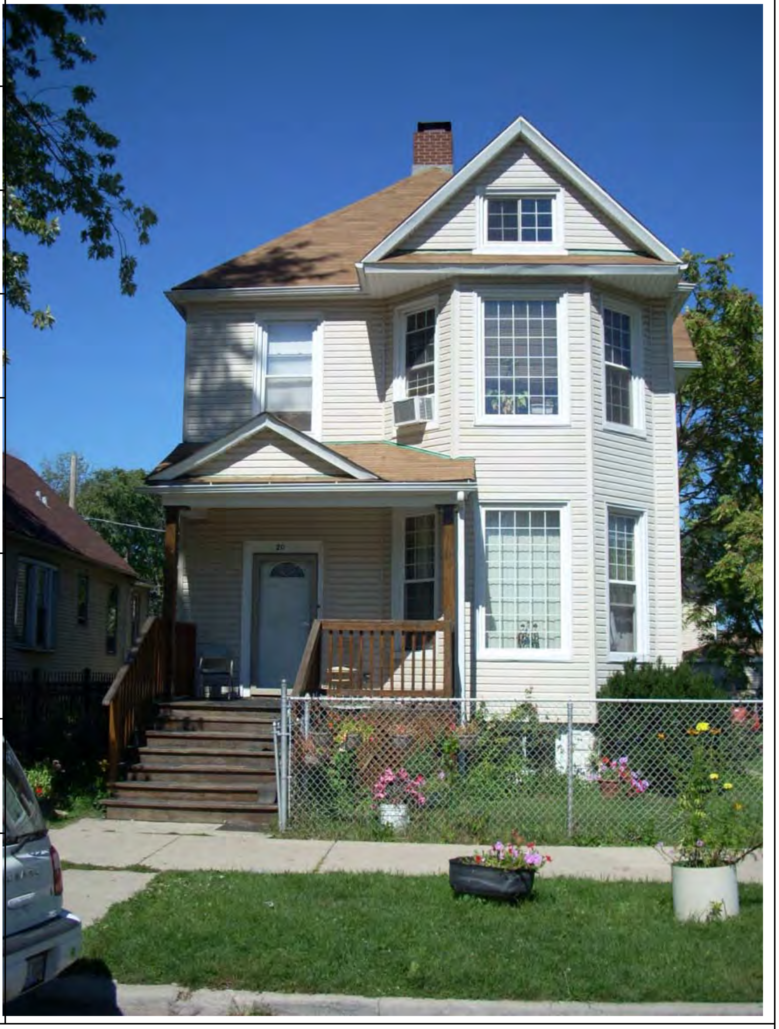
Queen Anne

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 10 September 2012

Photos with Captions:
North façade of two-story, single-family, frame residence.



Property Description: **Stories:** 2

This two-story Queen Anne style house in the West Pullman community is situated on a raised concrete block basement, is clad with synthetic siding, has full-height window bay pavilions with pediment and gable dormers on its front elevation and side elevations, and has a hip roof covered with asphalt shingles. The front elevation has a shed-roofed partial-width wood porch with pediment and metal hollow core paneled door. Fenestration is non-original on the front elevation bays and features fixed-pane windows with multiple lights, multi-paned double-hung windows, and a single one-over-one window on the second floor, directly above the porch. This house lacks sufficient integrity and distinguishing architectural features to qualify as individually eligible for listing on the National Register.

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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alterations			**Additional Notes/Descriptions** Replacement windows, door, and cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** Dormer	**Roof Type** Hipped	
Ornamental Architectural Details Pediments at gables			**Windows** Double-hung, fixed-pane
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

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Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

32 E. 116th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Garage

Current: Garage

Date of Construction: 1922

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

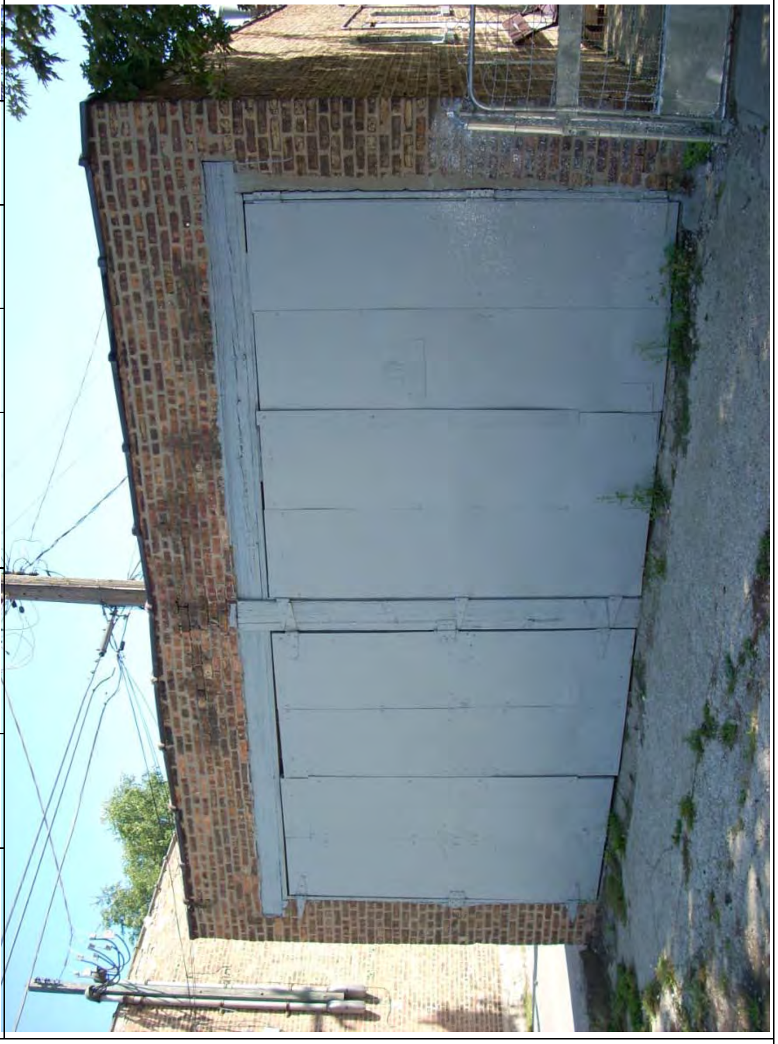
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 10 September 2012

Photos with Captions:
North façade of one-story brick garage.



Property Description: **Stories:** 1

This one-story, four-car garage building in the West Pullman community is clad in common brick and features two pairs of hinged metal garage doors with a continuous wooden lintel along its front elevation. A side (alley) elevation displays the outlines of dormer door openings that have been in-filled with brick as well as a hinged metal garage door. This building does not feature sufficient integrity or distinguishing architectural features to qualify as individually eligible for listing on the National Register.

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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alterations			**Additional Notes/Descriptions** Windows in-filled, metal doors
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Unknown	**Roof Features** None	**Roof Type** Flat	
Ornamental Architectural Details None			**Windows** NA
Outbuildings (*Number and Description*) None			

Local Landmark	**Y [✓ N]**	
National Register Historic Places	**Y [✓ N]**	
National Register Historic District	**Y [✓ N]**	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

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Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

36 E. 116th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Flat

Current: Flat

Date of Construction: 1918

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

Vernacular

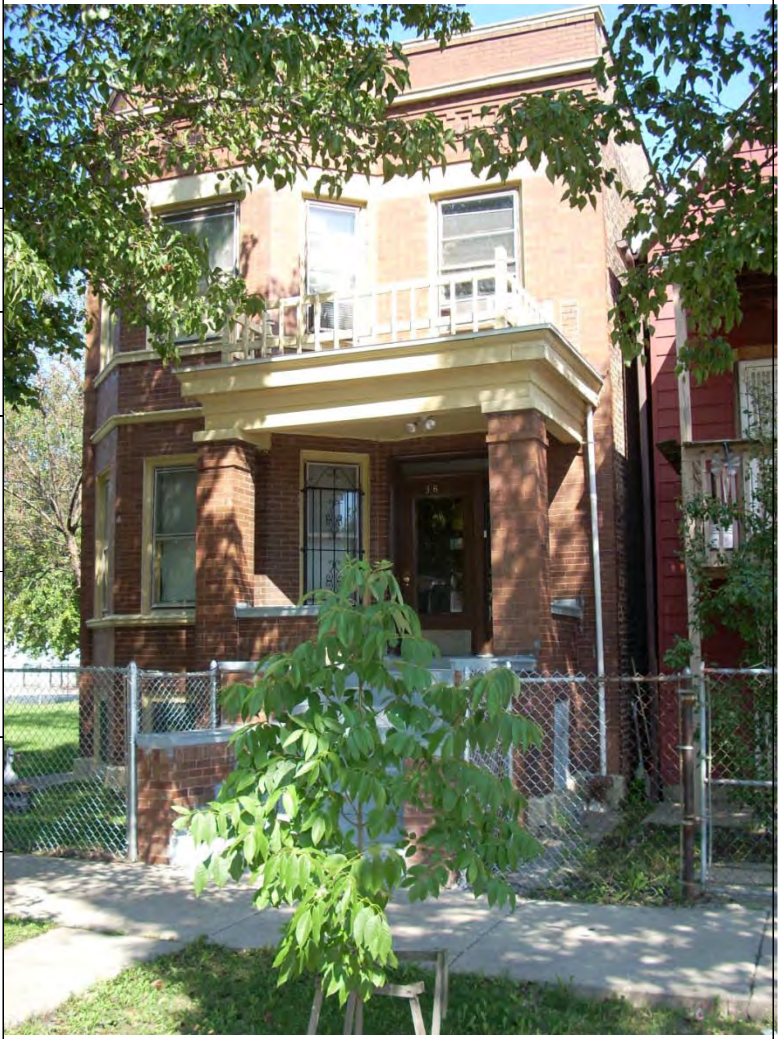
Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 10 September 2012

Photos with Captions:

East façade of brick, two-flat residence.



Property Description:

Stories: 2

This two-flat residential building in the West Pullman community is situated on a raised basement and has a front façade clad with orange face brick. It has a full-height three-sided window bay pavilion, flat roof, and parapet. Its off-center flat-roofed porch has concrete steps, brick piers, and a single-light oak door with sidelight. Fenestration is comprised of one-over-one windows. Detailing includes stone sill courses, beltcourse, a cornice, as well as decorative brickwork on the parapet. This building does not feature sufficient distinguishing architectural features to qualify as individually eligible for listing on the National Register.

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Structural Survey

Integrity: [✓ Unaltered] Slight Modification Major Alteration			**Additional Notes/Descriptions**
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details Stone sill courses, beltcourse, cornice, decorative brickwork on cornice			**Windows** Double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

38 E. 116th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Multi-family residence

Current: Multi-family residence

Date of Construction: 1888

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

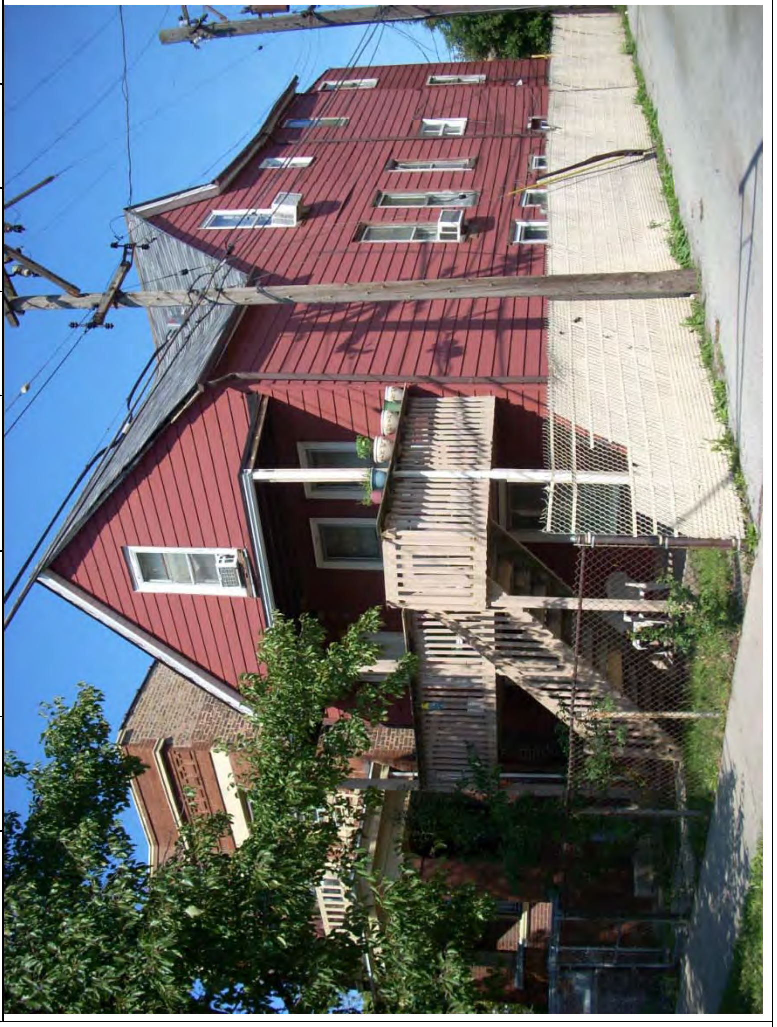
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 10 September 2012

Photos with Captions:
South and east façades of 2.5-story, multi-family, frame residence.



Property Description: **Stories:** 2.5

This two-and-a-half-story, multi-family house in the West Pullman community is clad with synthetic siding and has a cross gable roof covered with asphalt shingles. Its front elevation has off-center doors on the first and second floors and an elevated, flat-roofed, full-width, non-original wood porch with straight railings and posts. Fenestration on the front and side elevations is comprised of one-over-one windows. This house does not feature sufficient integrity or distinguishing architectural features to qualify as individually eligible for listing on the National Register.

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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alterations			**Additional Notes/Descriptions** Replacement windows, doors, porch, & cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Cross Gable	
Ornamental Architectural Details None			**Windows** Double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
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Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

144 E. 116th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1888

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

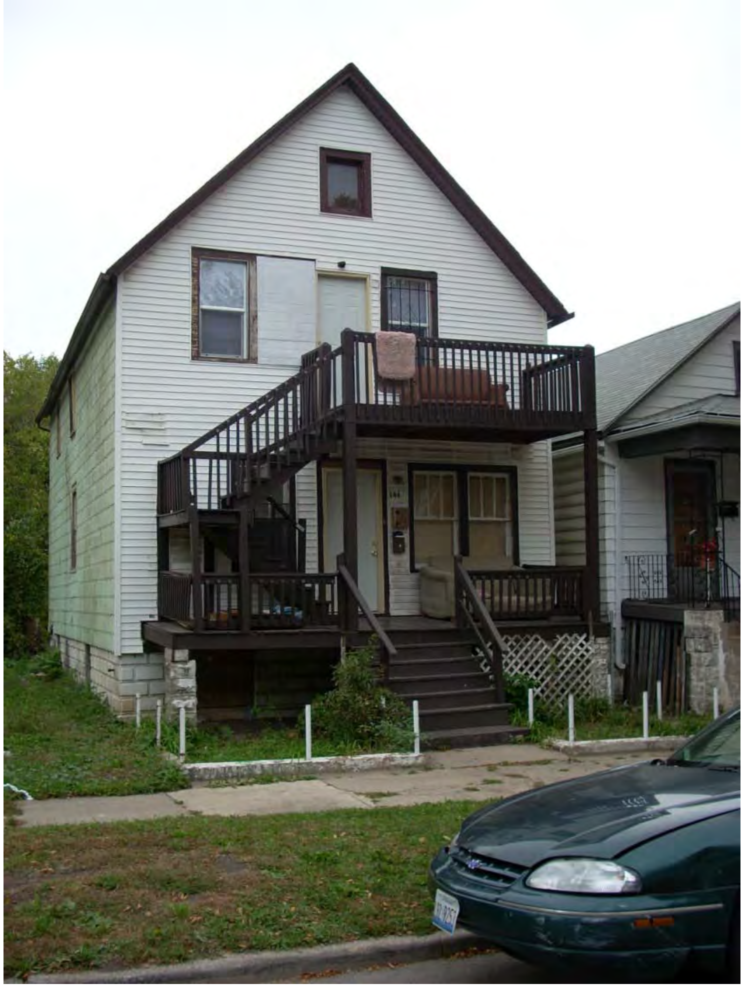
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 30 October 2012

Photos with Captions:
South façade of a two-story, single family, frame residence.



Property Description: **Stories:** 2

This two-story frame residential building in the West Pullman community is situated on a raised concrete block basement and is covered with synthetic siding. The building has a front gable roof covered with asphalt shingles. Both floors of the front elevation are partially obscured by a full-width wood porch with exterior steps leading to a second floor balcony. Both floors also have a hollow core metal door and non-original double-hung windows: three on the first floor and two on the second. A third window on the second floor has been in-filled. There is a single-pane window in the gable. This house lacks integrity and distinguishing architectural features and is not individually eligible for listing on the National Register.

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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement doors, windows, and cladding
Condition: Excellent [✓ Good] Poor			
Additional Alterations Exterior stairs are not original			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung, fixed-pane
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

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Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

150 E. 116th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1891

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

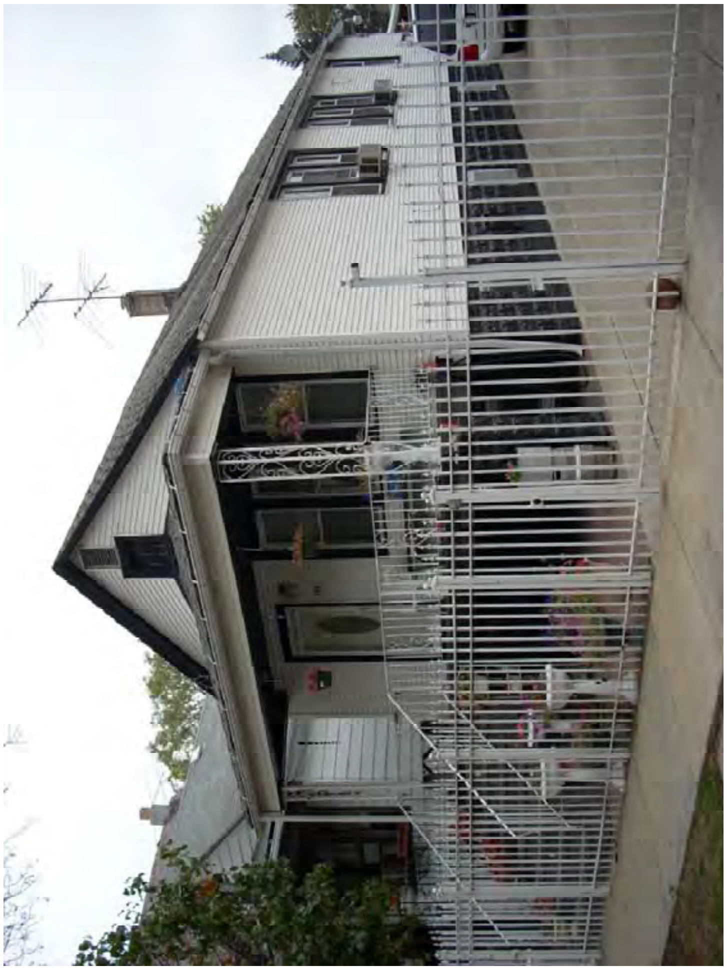
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 30 October 2012

Photos with Captions:
South and east façades of a one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story frame cottage in the West Pullman community sits on a raised concrete block basement and is covered with synthetic siding. The building has a front gable roof covered with asphalt shingles. The front elevation has a full-width hip-roof porch with wood steps, metal railings, and open metal posts. The off-center hollow core metal door is non-original as is the strip of three one-over-one windows on the first floor. There is an in-filled window opening in the attic, above which is a small ventilating louver. This house lacks integrity and distinguishing architectural features and is not individually eligible for listing on the National Register.

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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement door, windows, cladding, and porch rails
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
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Marengo, Illinois 60152
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Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

151 E. 116th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Multi-family residence

Date of Construction: 1898

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

Vernacular

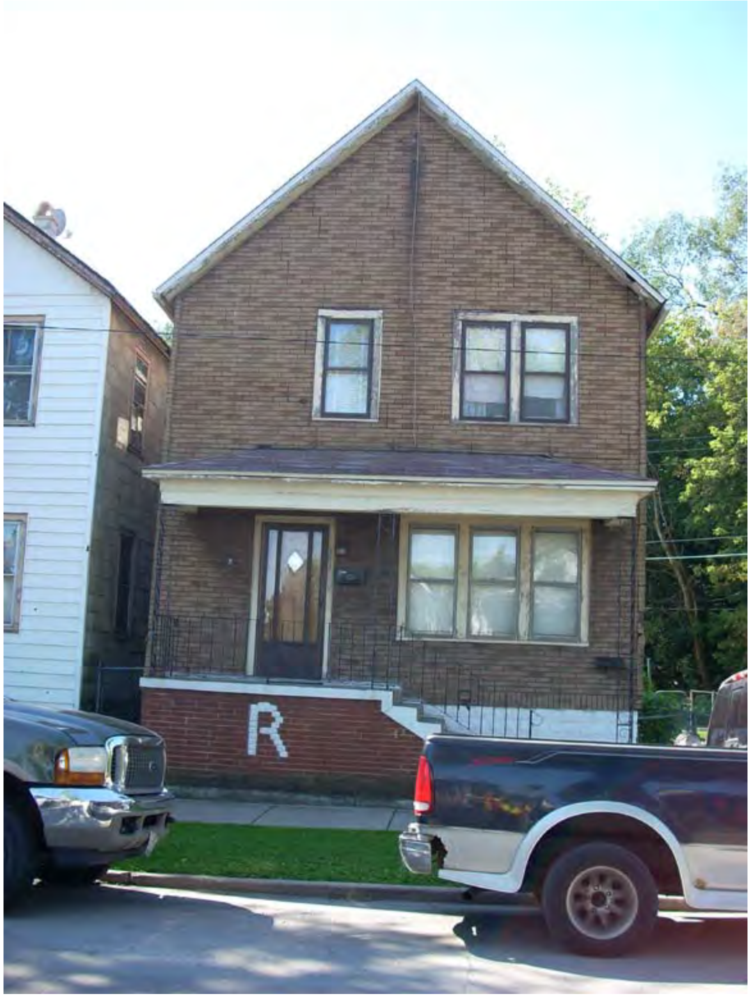
Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 1 October 2012

Photos with Captions:

North façade of a two-story, multi-family, frame residence.



Property Description: **Stories:** 2

This two-story frame house in the West Pullman community is on a raised concrete block basement and is clad with rolled asphalt shingle siding. The building has a front gable roof covered with asphalt shingles. The front elevation has a hip roof porch with concrete steps, metal railings and open metal posts. It also features an off-center non-original door and one-over-one windows: three each on the first and second floors. This house lacks integrity, does not have distinguishing architectural features, and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement door and cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Asphalt shingle siding	
Roof Material Asphalt	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

153 E. 116th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Multi-family residence

Date of Construction: 1898

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

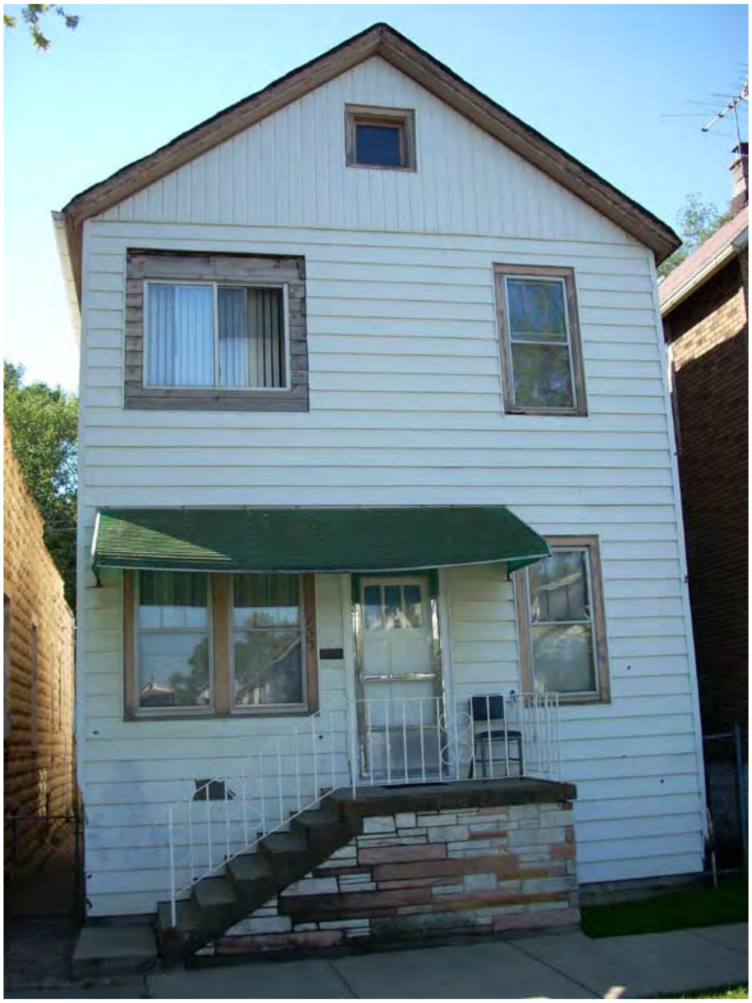
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 1 October 2012

Photos with Captions:
North façade of a two-story, multi-family, frame residence.



Property Description: **Stories:** 2

This two-story frame house in the West Pullman community is clad with synthetic siding and has a front gable roof covered with asphalt shingles. Its front elevation has a centrally located door with concrete steps and metal railings. It has non-original three-over-one windows: three on the first floor and one on the second, plus an additional pair of sliding glass windows on the second floor and a small single-pane window in the gable. This house lacks integrity, does not have distinguishing architectural features, and is not individually eligible for listing on the National Register.

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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement siding and windows
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung, casement, sliding
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

155 E. 116th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1903

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

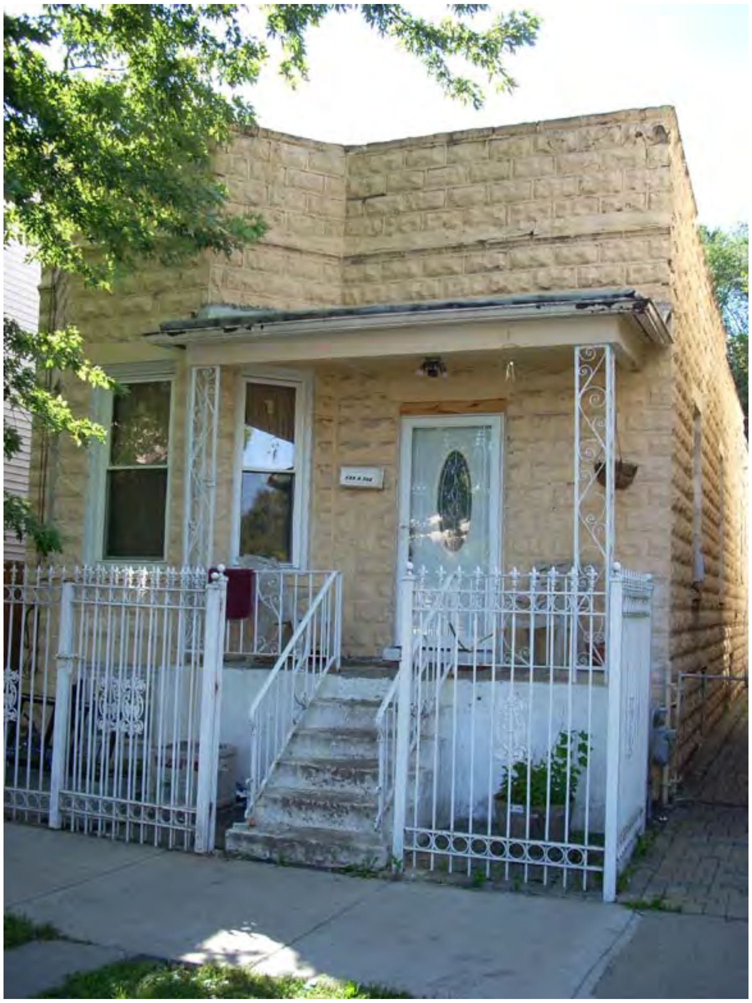
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 1 October 2012

Photos with Captions:
North façade of a one-story, single-family, concrete block residence.



Property Description: **Stories:** 1

This one-story house in the West Pullman community is clad with rusticated concrete block and has a flat roof and parapet with a stringcourse along the cornice. Its front elevation features a three-sided bay with non-original one-over-one windows and a flat-roof, partial width porch with concrete steps, metal railings, and open metal posts. The hollow core metal door is non-original. This house lacks integrity, does not have distinguishing architectural features, and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity:

Unaltered [✓ Slight Modification] Major Alteration

Condition:

[✓ Excellent] Good Poor

Additional Alterations

Additional Notes/Descriptions

Replacement door and windows

Structure Usage

Current: NA

Historic: NA

Exterior Wall Surface

Concrete block

Roof Material	**Roof Features**	**Roof Type**
Unknown	Parapet	Flat

Ornamental Architectural Details

Stringcourse

Windows

Double-hung

Outbuildings (*Number and Description*)

None

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

157 E. 116th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Multi-family residence

Date of Construction: 1898

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

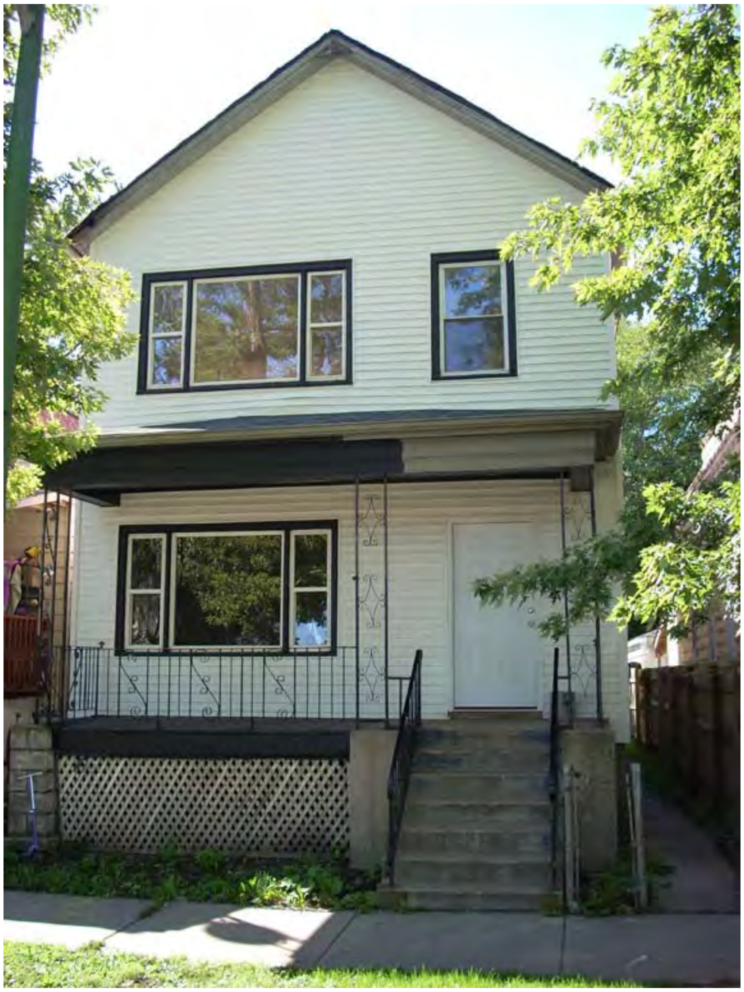
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 1 October 2012

Photos with Captions:
North façade of a two-story, multi-family, frame residence.



Property Description: **Stories:** 2

This two-story frame house in the West Pullman community is clad with synthetic siding and has a front gable roof covered with asphalt shingles. The front elevation has a flat-roofed, full-width porch with concrete steps, metal railings, and open metal posts. It also has an off-center hollow metal core door, two non-original Chicago-style windows (one on each floor), and an additional one-over-one window on the second floor. This house lacks integrity, does not have distinguishing architectural features, and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement door, windows, and siding
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung, fixed-pane
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

159 E. 116th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1903

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

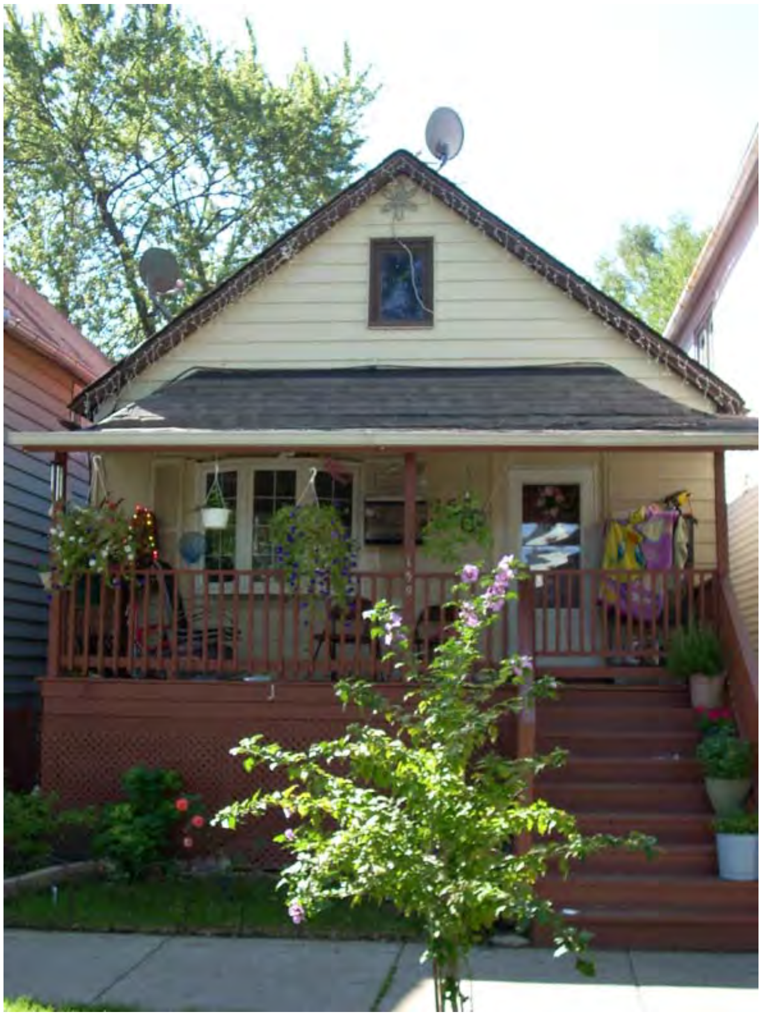
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 1 October 2012

Photos with Captions:
North façade of a one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story house in the West Pullman community is situated on a raised concrete block basement, is clad with synthetic siding, and has a front gable roof covered with asphalt shingles. Its front elevation features a full-width hipped-roof wood porch, a three-sided bow window with non-original casements, and an off-center door. This house lacks integrity, does not have distinguishing architectural features, and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows, cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Casement
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

163 E. 116th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Multi-family residence

Date of Construction: 1898

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

Vernacular

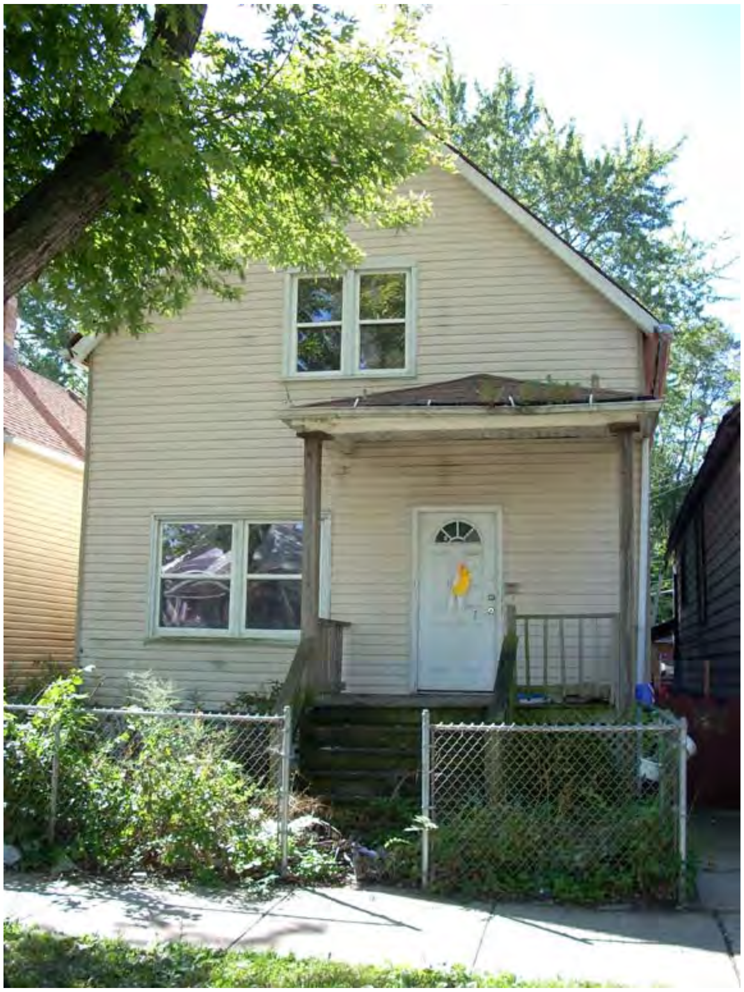
Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 1 October 2012

Photos with Captions:

North façade of a 1.5-story, multi-family, frame residence.



Property Description: **Stories:** 1.5

This one-and-one-half-story frame house in the West Pullman community is clad with synthetic siding and has a gable roof covered with asphalt shingles. The front elevation has a hip-roofed partial-width wood porch with wood posts and railings. It has an off-center non-original hollow metal core door and a pair of non-original one-over-one windows on both the first and second floors. This house lacks integrity, does not have distinguishing architectural features, and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity:

Unaltered [✓ Slight Modification] Major Alteration

Additional Notes/Descriptions

Replacement door, windows, cladding

Condition:

[✓ Excellent] Good Poor

Additional Alterations

Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt	**Roof Features** None	**Roof Type** Gable	

Ornamental Architectural Details

None

Windows

Double-hung

Outbuildings (*Number and Description*)

None

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

165 E 116th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1898

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

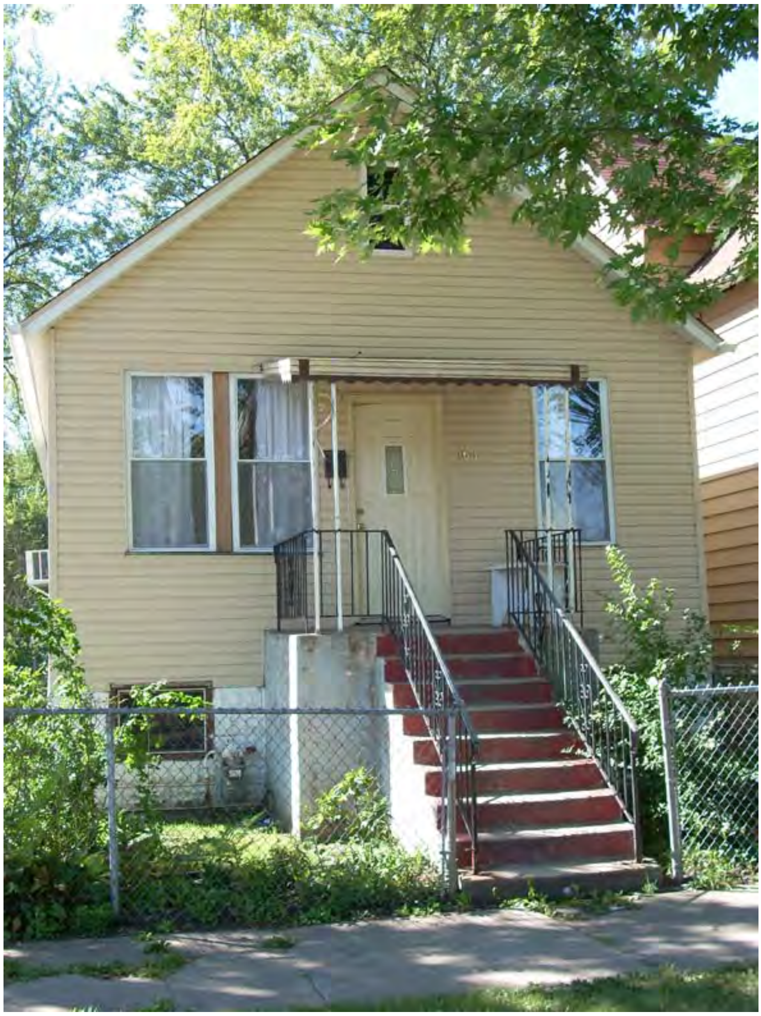
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 1 October 2012

Photos with Captions:
North façade of a one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story house in the West Pullman community is situated on a raised concrete block basement, is clad with synthetic siding, and has a gable roof covered with asphalt shingles. Its front elevation features a partial-width porch with concrete steps, metal railings, and open metal posts supporting a metal canopy roof. It has a centrally located door and four non-original one-over-one windows: three on the first floor and one in the gable. This house lacks integrity, does not have distinguishing architectural features, and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement door, windows, cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

207 E. 116th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Multi-family residence

Date of Construction: 1888

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

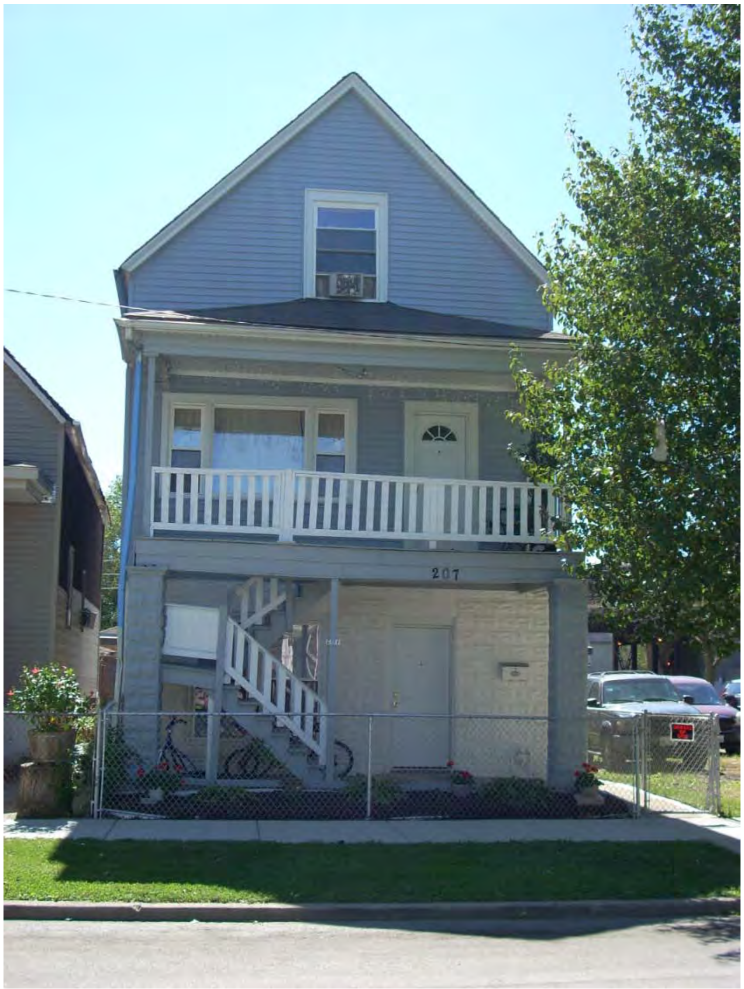
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S.Katz

Date: 22 October 2012

Photos with Captions:
North façade of a 2.5-story, multi-family, frame residence.



Property Description: **Stories:** 2.5

This two-and-a-half-story frame house in the West Pullman community is clad in rusticated concrete bock on the first floor and in synthetic siding above. The building has a front gable roof with asphalt shingles. It has a two-story full-width, hip-roof wood porch/balcony with faux stone piers and wood posts as supports on the first and second floors, respectively. A non-original stairway leads to the second floor balcony. Both first and second floors have off-center non-original hollow core metal doors. Windows on the front elevation are non-original and include one on the first floor that is obscured by the staircase, a picture window flanked by one-over-one aluminum-sash windows on the second floor, and a single one-over-one aluminum-sash window in the gable. This house lacks integrity and distinctive architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
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Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement doors, windows, and cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations External stairway added during conversion from single family home.			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Concrete block (lower), Synthetic siding (upper)	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung, fixed-pane
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

120 E. 117th Place

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1908

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

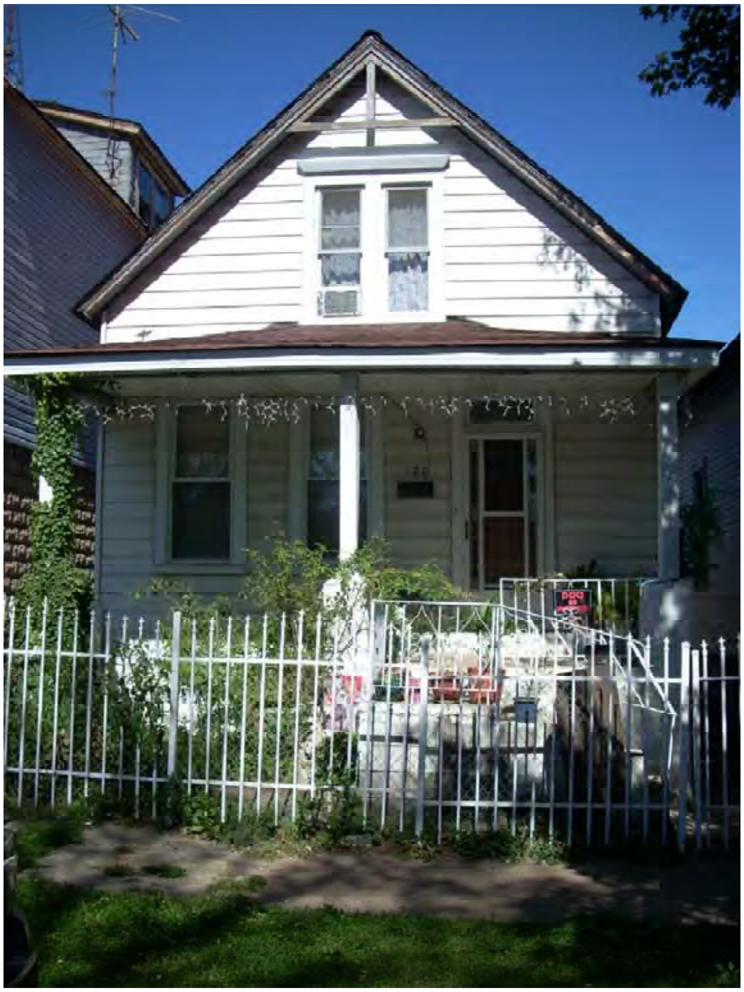
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 22 October 2012

Photos with Captions:
South facade of a 1.5-story, single family, frame residence.



Property Description: **Stories:** 1.5

This one-and-a-half-story frame cottage in the West Pullman community is situated on a raised concrete block basement and is covered with synthetic siding. The building has a front gable roof covered with asphalt shingles. Its front elevation has a full-width hip-roof wood porch with straight posts and an off-center entrance with a metal storm door. It has two windows on the first floor and a pair of windows in the gable, all of which are non-original one-over-one aluminum sash. A decorative wood truss is situated in the gable. This house lacks integrity and distinctive architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows and cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details Wood truss			**Windows** Double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

126 E. 117th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Multi-family residence

Date of Construction: 1898

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

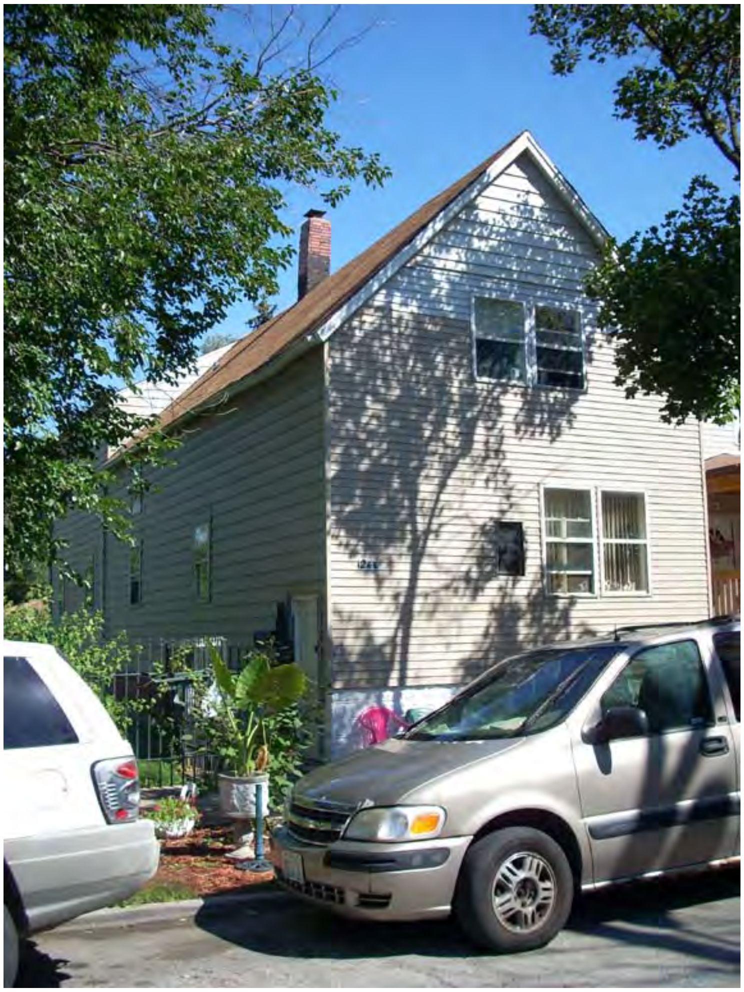
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 2 October 2012

Photos with Captions:
South façade of a 1.5-story, multi-family, frame residence.



Property Description: **Stories:** 1.5

This one-and-a-half-story frame house in the West Pullman community is situated on a raised concrete block basement with glass block windows. It is clad with synthetic materials and has a gable roof covered with asphalt shingles and gable dormers along the side elevations. The front elevation has a strip of three windows on the first floor and one in the gable, all of which are non-original one-over-one aluminum-sash. The front door has been moved to the side elevation. This house lacks integrity, does not have distinguishing architectural features, and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement front door and windows
Condition: [✓ Excellent] Good Poor			
Additional Alterations Entrance moved to side elevation			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt	**Roof Features** Dormers	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

128 E 117th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1908

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

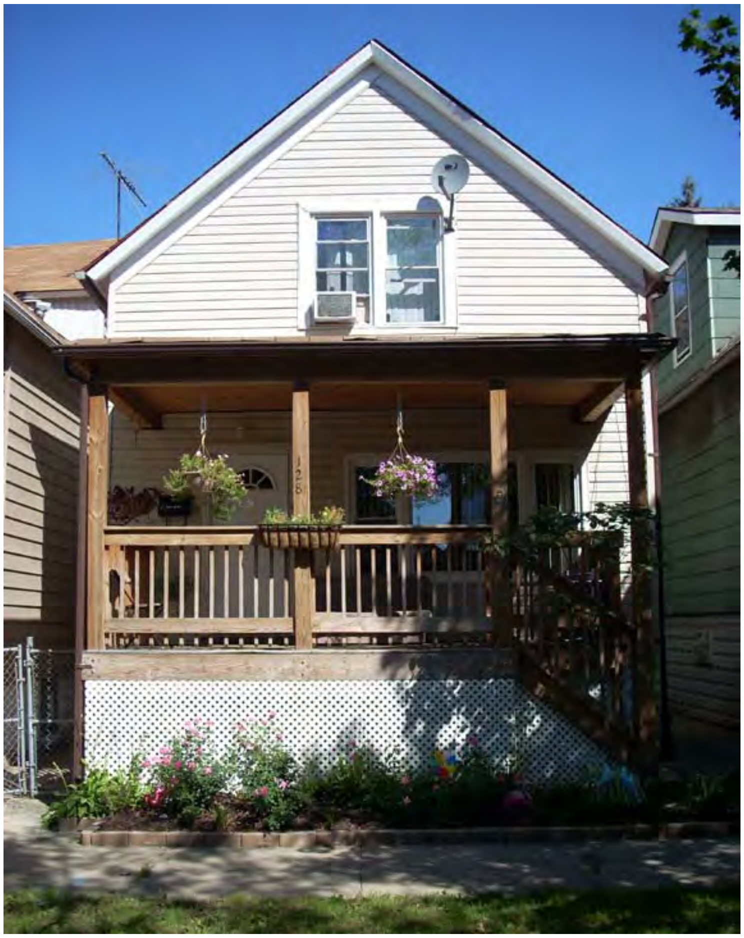
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 2 October 2012

Photos with Captions:
South façade of a one-and-a-half-story, single family, frame residence.



Property Description: **Stories:** 1.5

This one-and-a-half-story frame house in the West Pullman community is situated on a raised concrete block basement, is clad with synthetic siding, and has a front gable roof covered with asphalt shingles. The front elevation has a non-original, full-width, flat-roofed, wood porch and a non-original off-center hollow core metal panel door with a fanlight. There is a large non-original picture window flanked by double-hung windows on the first floor and a pair of non-original one-over-one aluminum-sash windows in the gable. This house lacks integrity, does not have any distinguishing architectural features, and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered	[✓ Slight Modification]	Major Alteration	**Additional Notes/Descriptions** Replacement door, windows, porch, and cladding
Condition: [✓ Excellent]	Good	Poor	
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt	**Roof Features** Dormer	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung, fixed-pane
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

132 E. 117th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1908

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

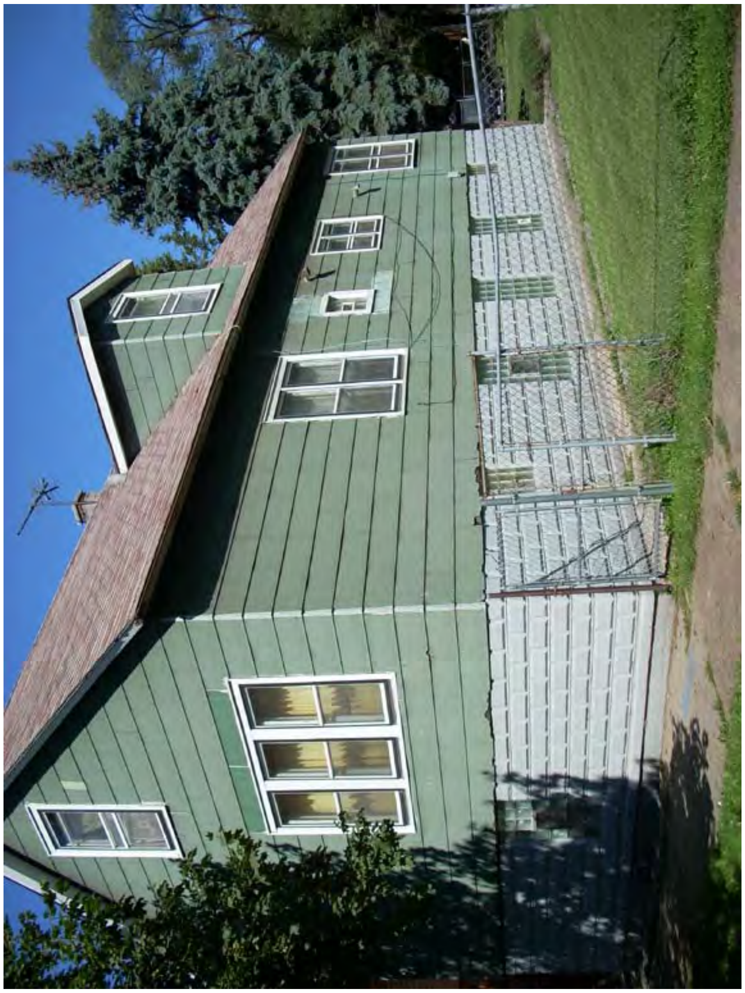
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guairno

Photo By: S. Katz

Date: 2 October 2012

Photos with Captions:
South and east façades of a one-story, single-family, frame residence.



Property Description: **Stories:** 1

This one-story frame house in the West Pullman community is on a raised concrete block basement with glass block windows, is clad with synthetic materials (possibly fiberboard), has a gable roof covered with asphalt shingles, and has gable dormers along the side elevations. The front elevation has a strip of three windows on the first floor and one in the gable, all of which are non-original one-over-one aluminum-sash. The front door has been moved to the side elevation. This house lacks integrity, does not have distinguishing architectural features, and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows and siding
Condition: Excellent [✓ Good] Poor			
Additional Alterations Entrance relocated to side elevation			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding (possibly fiberboard)	
Roof Material Asphalt	**Roof Features** Dormers	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

149 E. 117th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1908

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

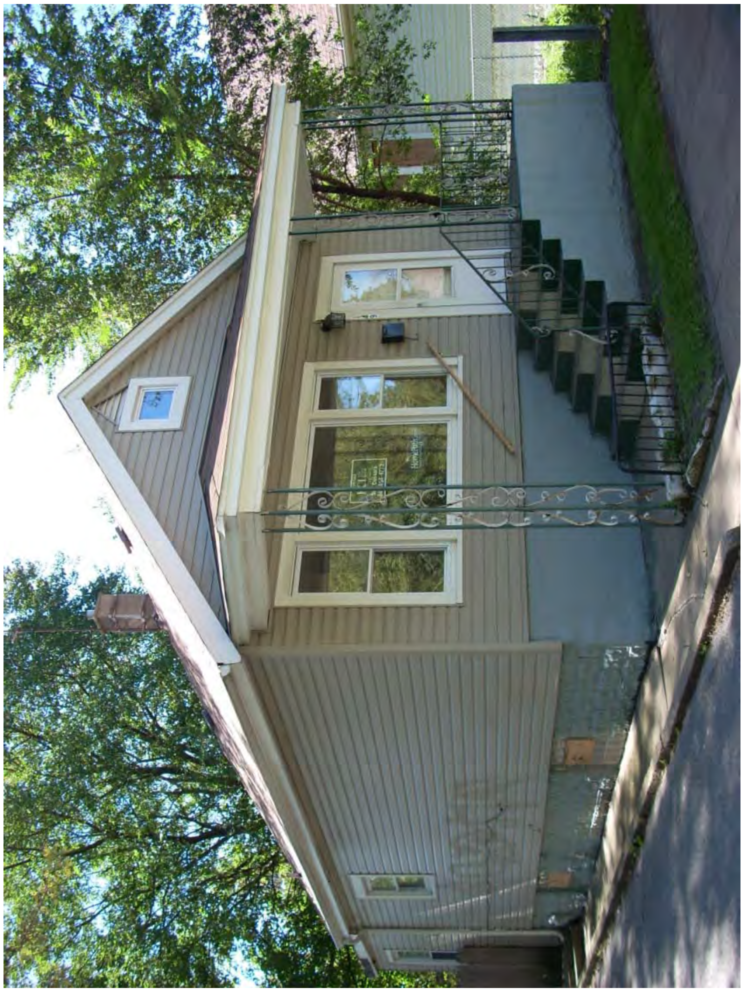
Craftsman

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 22 October 2012

Photos with Captions:
North façade of a one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story house in the West Pullman community is situated on a raised concrete block basement with glass block windows and is covered with synthetic siding. The building has a front gable roof covered with asphalt shingles. Its front elevation has a full-width hip-roof porch with side-facing concrete steps, metal railings, and open metal posts. This elevation also has an off-center metal storm door, a non-original picture window flanked by one-over-one aluminum-sash windows on the first floor, and a single-pane window in the attic. This house lacks integrity and distinctive architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement door, windows, and cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung, fixed-pane, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y [✓ N]**	
National Register Historic Places	**Y [✓ N]**	
National Register Historic District	**Y [✓ N]**	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

312 E. 117th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1891

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

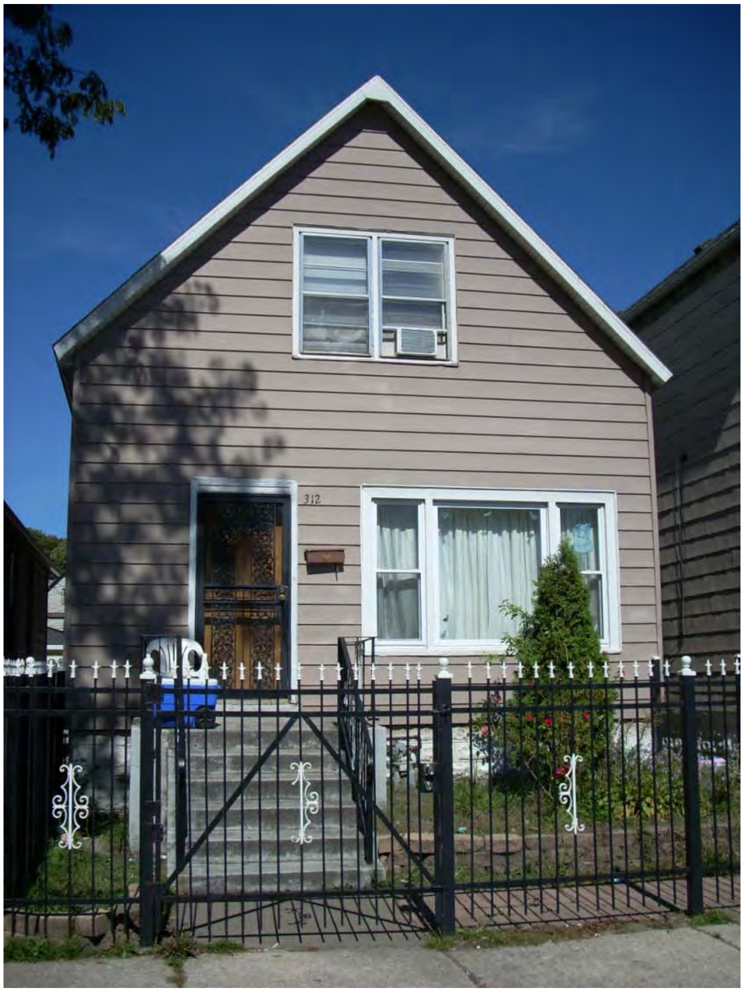
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 22 October 2012

Photos with Captions:
South façade of a 1.5-story, single family, frame residence.



Property Description: **Stories:** 1.5

This one-and-a-half-story frame cottage in the West Pullman community sits on a raised concrete block basement and is covered with synthetic siding. The building has a front gable roof covered with asphalt shingles. Its front elevation has an off-center metal storm door, concrete steps with metal railings, a picture window flanked by one-over-one aluminum-sash windows on the first floor, and a pair of one-over-one aluminum-sash windows in the gable, all of which are non-original. This house lacks integrity and distinctive architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity:			**Additional Notes/Descriptions** Replacement windows, cladding, and porch rails
Unaltered	[✓ Slight Modification]	Major Alteration	
Condition:			
[✓ Excellent]	Good	Poor	
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung, fixed-pane
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

322 E. 117th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1878

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

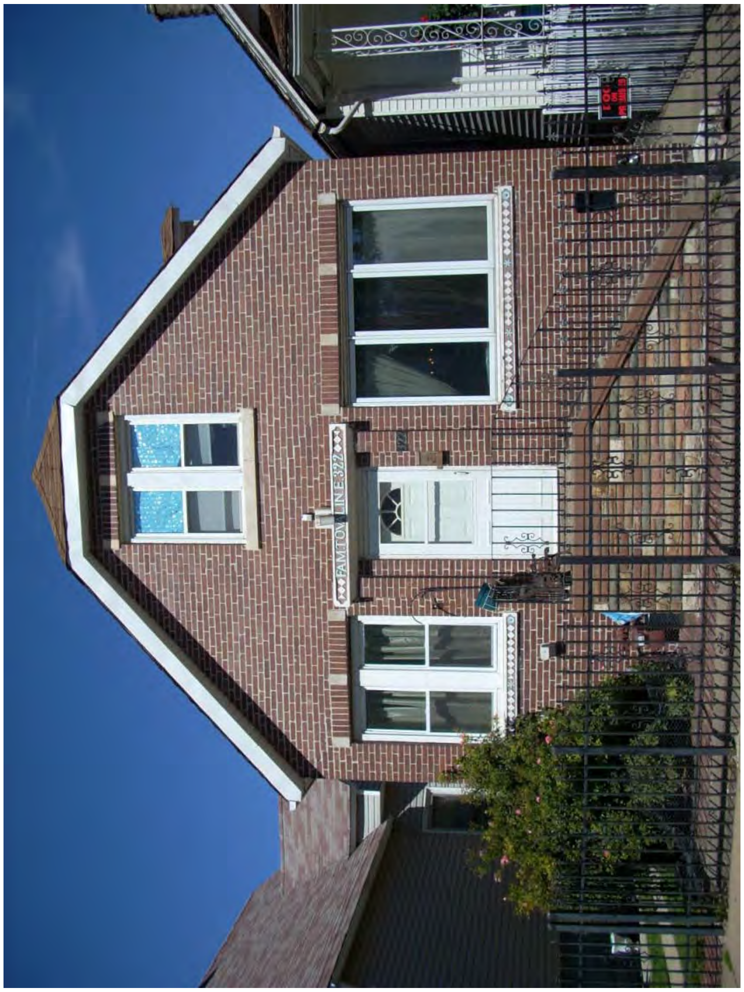
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 22 October 2012

Photos with Captions:
South façade of a brick, one-story, single family residence.



Property Description: **Stories:** 1

This one-story cottage in the West Pullman community is situated on a raised brick basement and has a hip-on-gable roof covered with asphalt shingles. Its front elevation is clad with brown face brick and has a central hollow core metal door flanked by a pair of one-over-one aluminum sash windows on one side and a strip of three casement windows on the other. The gable has a pair of one-over-one aluminum-sash windows. This elevation also has side-facing concrete steps faced with faux stone and metal railings. Detailing includes brick pilasters flanking the door, concrete sills, flat arch window lintels with square stone inserts, and a lintel above the door that reads: “FAM.TOVALIN.E.322.” This house lacks distinctive architectural features and is not individually eligible for listing on the National Register.

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505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement door and windows
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingle	**Roof Features** Dormers	**Roof Type** Hip-on-gable	
Ornamental Architectural Details Brick pilasters, concrete sills, flat arch window lintels with stone inserts, inscribed lintel above entrance			**Windows** Double-hung, casement
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

345 E. 117th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1903

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

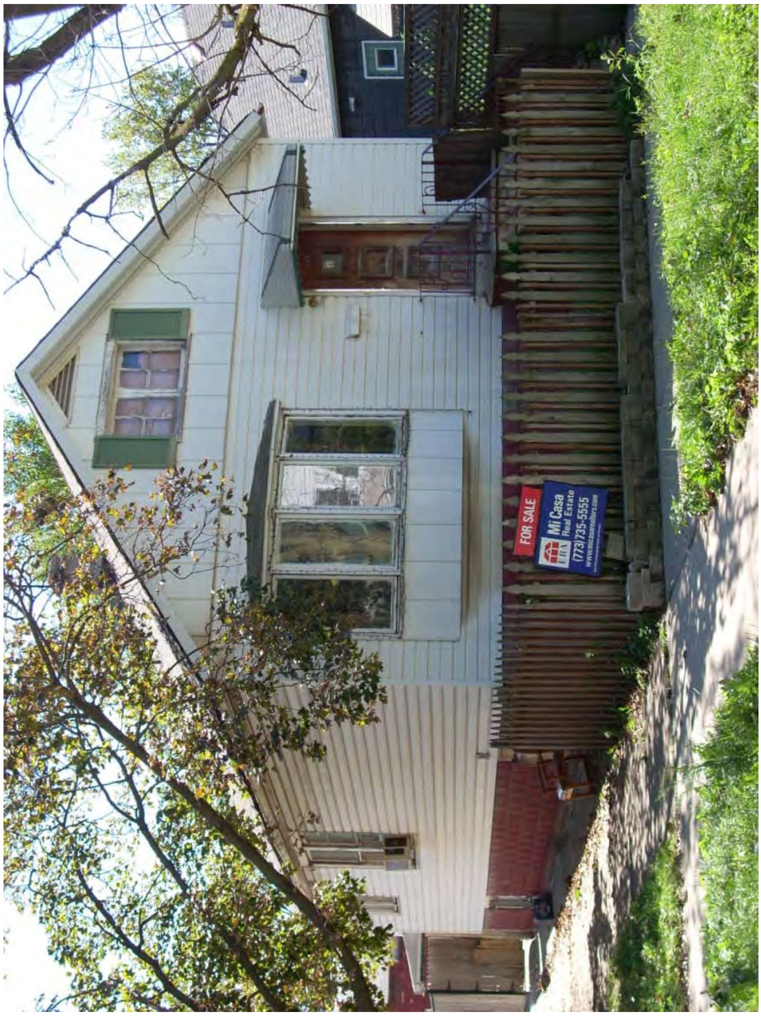
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 23 October 2012

Photos with Captions:
North façade of a one-story, single family, frame residece.



Property Description: **Stories:** 1

This one-story frame cottage in the West Pullman community is situated on a raised concrete block basement and is covered with synthetic siding. The building has a front gable roof covered with asphalt shingles. Its front elevation has an off-center wood door with wood steps, metal railings, and a metal awning. This elevation also has a rounded bow window with four casements on the first floor and a pair of small casement windows in the attic, each with four lights. A small triangular ventilating louver is located at the apex of the gable. This house lacks integrity and distinctive architectural features and is not individually eligible for listing on the National Register.

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505 North State Street
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Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement cladding
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Casement
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

306 E. 118th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1898

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

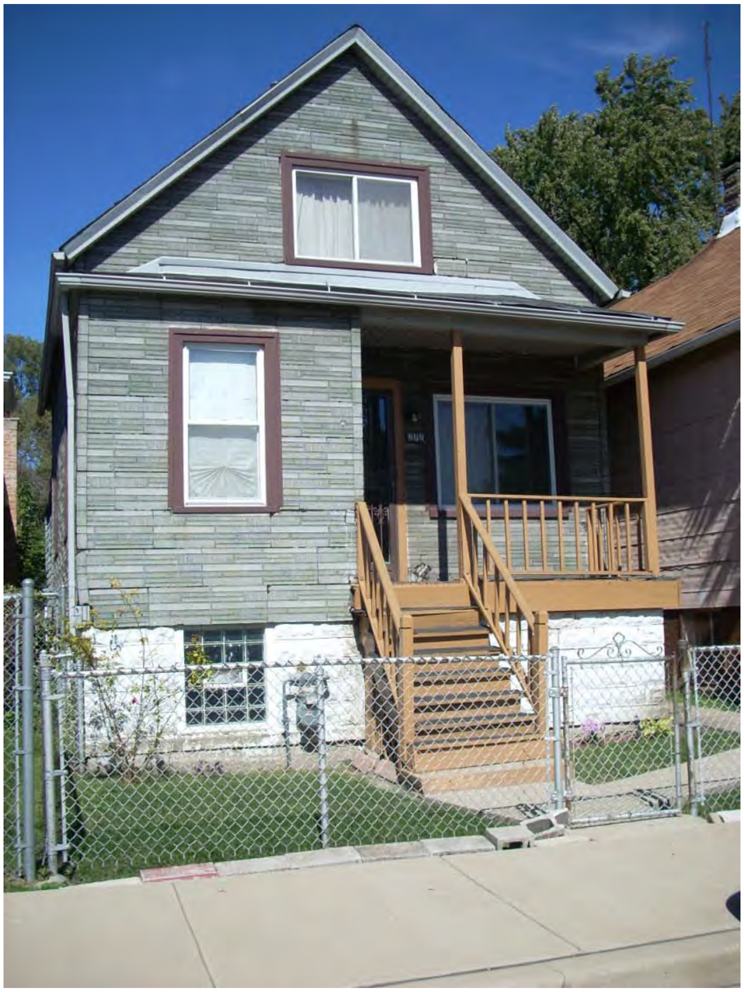
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 23 October 2012

Photos with Captions:
South façade of a one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story frame cottage in the West Pullman community is situated on a raised concrete block basement with glass block windows and is covered with synthetic siding. The building has a front gable roof covered with asphalt shingles. It has a full-width flat-roof porch, half of which is enclosed and features a single one-over-one aluminum-sash window. The open portion of the porch has a door, a pair of non-original sliding windows, wood posts, steps, and railings. This house lacks integrity and distinctive architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

<table>
<tr><td colspan="3">Integrity:
Unaltered [✓ Slight Modification] Major Alteration</td><td>Additional Notes/Descriptions
Replacement windows, cladding, and porch rails</td></tr>
<tr><td colspan="3">Condition:
Excellent [✓ Good] Poor</td><td></td></tr>
<tr><td colspan="3">Additional Alterations</td><td></td></tr>
<tr><td colspan="2">Structure Usage
Current: NA
Historic: NA</td><td>Exterior Wall Surface
Synthetic siding</td><td></td></tr>
<tr><td>Roof Material
Asphalt shingle</td><td>Roof Features
None</td><td>Roof Type
Gable</td><td></td></tr>
<tr><td colspan="3">Ornamental Architectural Details
None</td><td>Windows
Double-hung, glass block, sliding</td></tr>
<tr><td colspan="4">Outbuildings (<i>Number and Description</i>)
None</td></tr>
</table>

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

354 E. 118th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1886

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

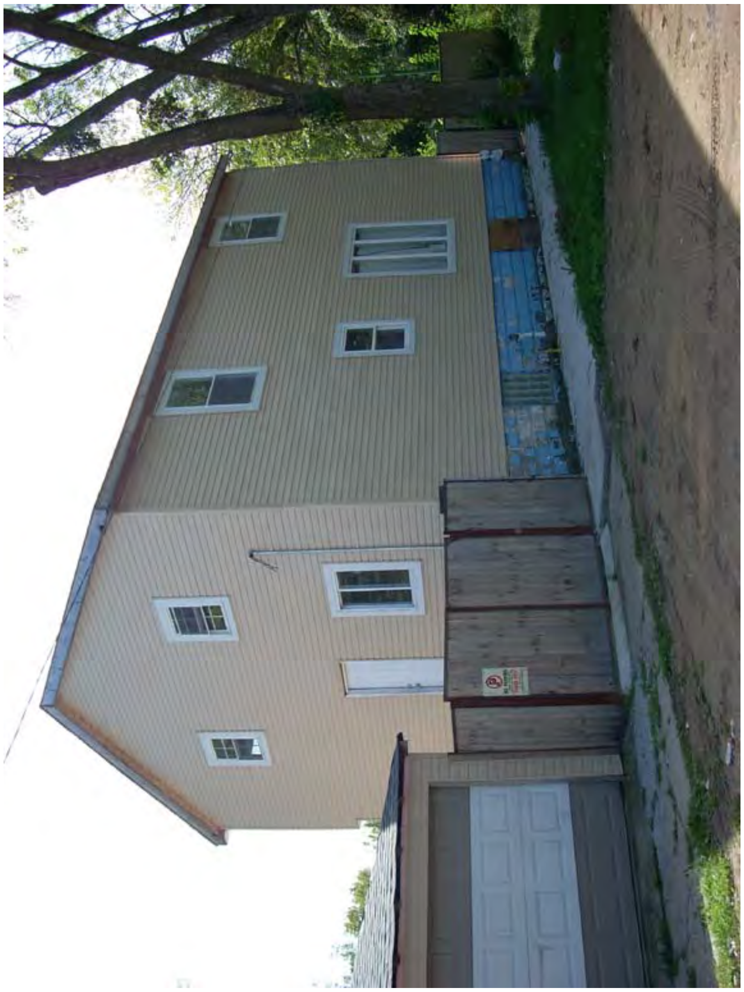
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: Steve Katz

Date: 2 October 2012

Photos with Captions:
North and west façades of two-story, single-family, frame residence.



Property Description: **Stories:** 2

This two-story frame house in the West Pullman community is situated on a raised concrete block basement with glass block windows, is clad with synthetic siding, and has a gable roof with asphalt shingles. The fenestration pattern has been altered with the moving of the main entrance from the 118th Street elevation and the windows, which feature non-original casements and one-over-one non-original aluminum varieties on both the first and second floors. This house lacks integrity, does not have visible distinguishing architectural features, and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
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Structural Survey

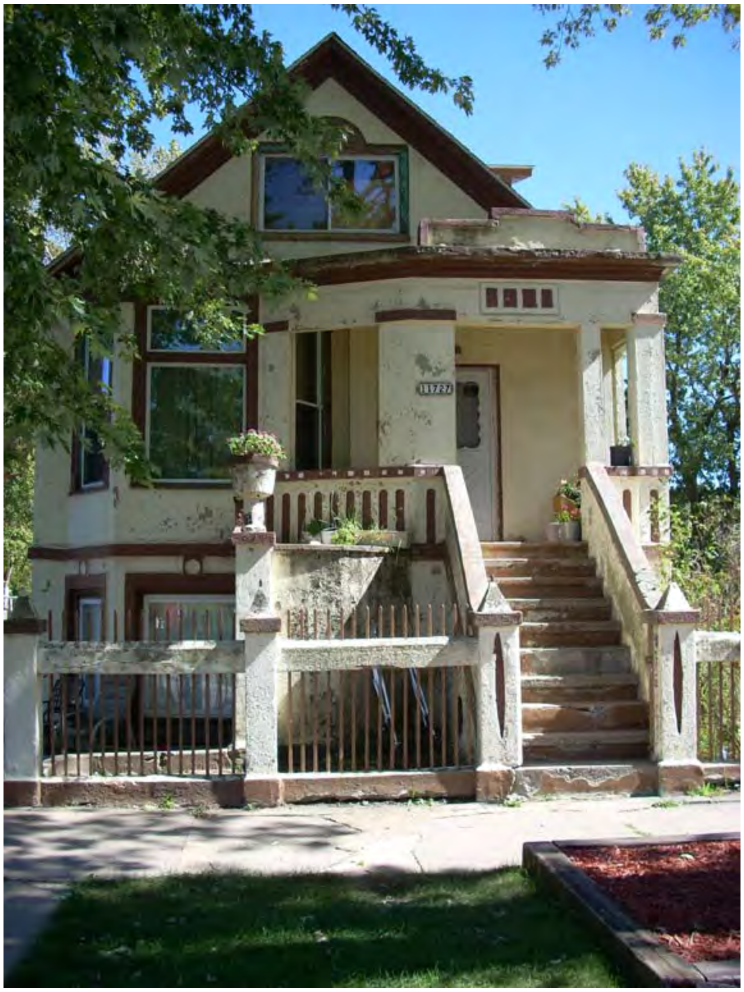
Integrity: Unaltered	[✓ Slight Modification]	Major Alteration	**Additional Notes/Descriptions** Replacement door, windows, and siding
Condition: [✓ Excellent]	Good	Poor	
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung, casement
Outbuildings (*Number and Description*) Detached two-car garage with pyramidal roof and vinyl siding.			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name **Historic:** Bldg. not labeled, not in CHRS **Common/Current:** Unknown	**Photos with Captions:** West façade of a one-story, single family, stucco residence. 
Property Address: 11727 S. Calumet Avenue	
HAARGIS Number: Not in database	
Present Owner and /or Occupant: Unknown	
Property Use **Historic:** Single family residence **Current:** Single family residence	
Date of Construction: 1893 **Architect's Name:** Not in CHRS **Builder/Contractor:** Not in CHRS	
Architectural Style: Vernacular	
Prepared By: J. Martinez, M. C. Bird, J. Guarino **Photo By:** S. Katz **Date:** 23 October 2012	

Property Description: **Stories:** 1

This one-story frame cottage in the West Pullman community is situated on a raised basement and is covered with stucco. The building has a front gable roof covered with asphalt shingles and a gable dormer along its south elevation. It has a partial-width flat-roofed porch that appears to be concrete, with solid sidewalls, straight posts, and a stepped parapet. Its front elevation has an off-center non-original hollow core metal door and a three-sided window bay with single-pane window and transom in the center flanked by one-over-one aluminum-sash windows. There is a pair of sliding aluminum-sash windows in the gable with a lunette fixed-pane window above. Windows are modern replacements. While the stucco cladding is somewhat unusual for this community's housing stock, this particular house lacks integrity as well as architectural features that are distinctive enough to merit individual inclusion on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

<table>
<tr><td colspan="3">Integrity:
Unaltered [✓ Slight Modification] Major Alteration</td><td>Additional Notes/Descriptions
Replacement door and windows</td></tr>
<tr><td colspan="3">Condition:
Excellent [✓ Good] Poor</td><td></td></tr>
<tr><td colspan="3">Additional Alterations</td><td></td></tr>
<tr><td colspan="2">Structure Usage
Current: NA
Historic: NA</td><td>Exterior Wall Surface
Stucco</td><td></td></tr>
<tr><td>Roof Material
Asphalt shingle</td><td>Roof Features
Dormer</td><td>Roof Type
Gable</td><td></td></tr>
<tr><td colspan="3">Ornamental Architectural Details
Lunette window, stepped parapet, decorative accent blocks</td><td>Windows
Double-hung, fixed-pane, sliding</td></tr>
<tr><td colspan="4">Outbuildings (<i>Number and Description</i>)
None</td></tr>
</table>

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

9824 S. Eggleston Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1965

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

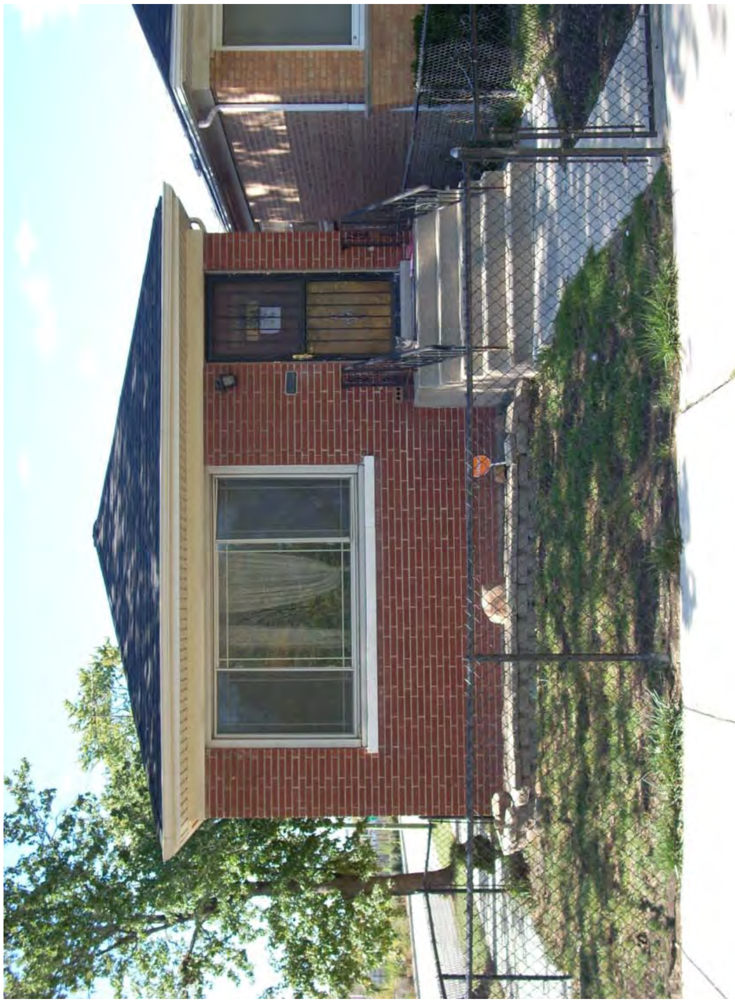
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 31 October 2012

Photos with Captions:
East façade of a brick, one-story, single family residence.



Property Description: **Stories:** 1

This one-story house at the northwest corner of Eggleston Avenue and Fernwood Parkway in the Washington Heights community is situated on a raised basement and is clad with red face brick on its two street elevations. The building has a hip roof covered with asphalt shingles and overhanging eaves. The front (Eggleston) elevation has an off-center metal storm door, concrete steps with metal railings, and a picture window flanked by casements. The Fernwood Parkway elevation has both casements and glass block windows. It lacks distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
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Structural Survey

Integrity: [✓ Unaltered] Slight Modification Major Alteration			**Additional Notes/Descriptions**
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Hip	
Ornamental Architectural Details None			**Windows** Casements, fixed-pane, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

10024 S. Eggleston Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1943

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

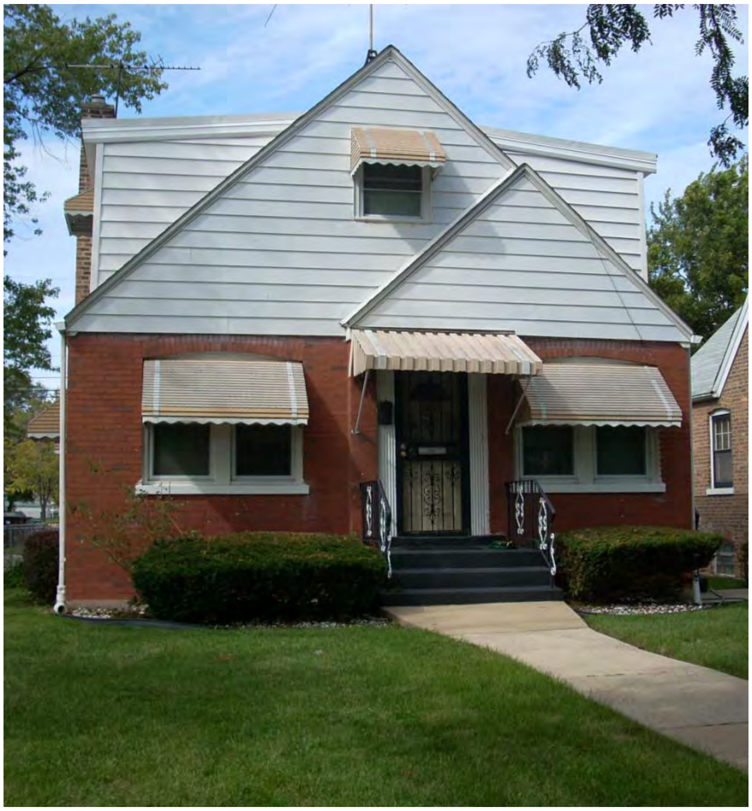
Vernacular

Prepared By: J. Martinez, M. C. Bird

Photo By: S. Katz

Date: 10 October 2012

Photos with Captions:
East façade of a two-story, brick and frame, single family residence.



Property Description: **Stories:** 2

This two-story cottage in the Washington Heights community has a gable roof covered with asphalt shingles and large, non-original, flat-roofed, aluminum-clad dormers on both side elevations transforming the original one-story building into a two-story residence. The front elevation is clad with orange face brick, the gables are clad with aluminum siding, and the lower side elevations are clad with common brick. The front elevation has a centrally located hollow core metal paneled door with fanlight, three concrete steps with metal railings, two pairs of windows on the first floor and a single window in the gable. Windows are non-original one-over-one aluminum sash. The front door and windows are sheltered by metal awnings. Detailing includes concrete sills and brick lintel arches. This house does not feature distinguishing architectural elements or sufficient integrity to be individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered Slight Modification [✓ Major Alteration]			**Additional Notes/Descriptions** Replacement front door and windows
Condition: [✓ Excellent] Good Poor			
Additional Alterations Dormers added to expand the home into two stories			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick (lower), synthetic siding (gable ends and dormers)	
Roof Material Asphalt	**Roof Features** Dormers	**Roof Type** Flat, gable	
Ornamental Architectural Details Concrete sills, brick lintel arches			**Windows** Double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y [✓ N]**	
National Register Historic Places	**Y [✓ N]**	
National Register Historic District	**Y [✓ N]**	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

10058 S. Eggleston Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Chicago Style Bungalow

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1930

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

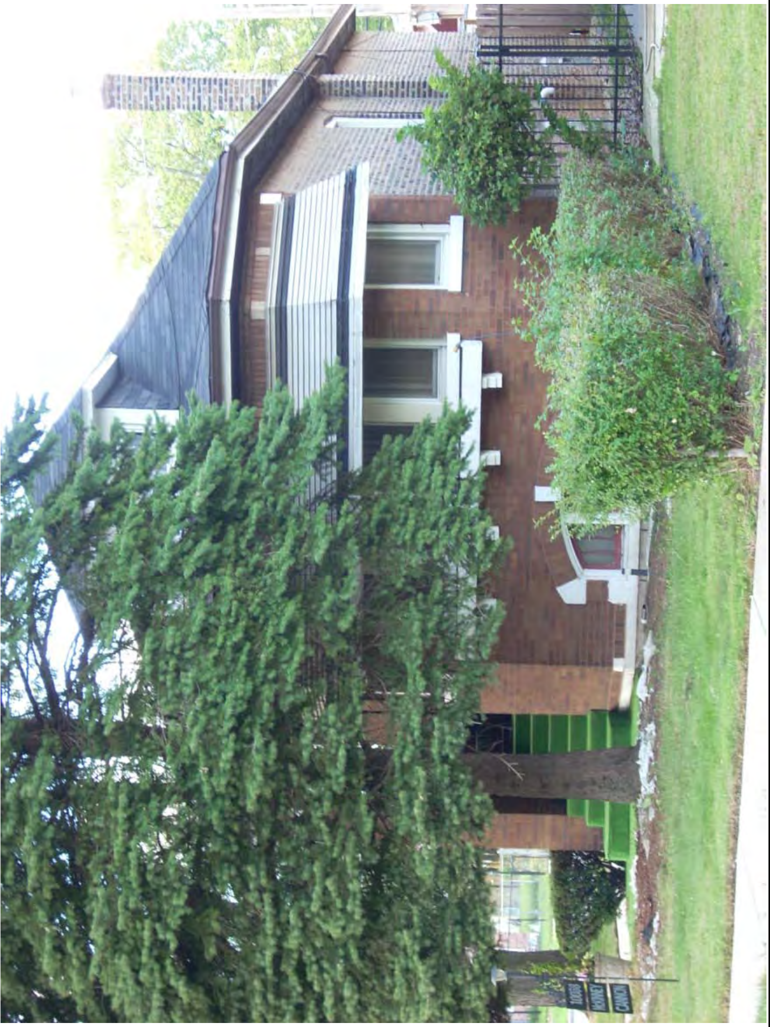
Chicago Bungalow

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 16 September 2012

Photos with Captions:
East façade of one-story, brick, single-family residence.



Property Description: **Stories:** 1

This one-story bungalow at the northwest corner of Eggleston and 101st Street in the Washington Heights community is situated on a raised basement and is clad with brown face brick along its two street elevations. It has a hip roof covered with asphalt shingles and hip dormers along both its front and rear elevations. Its front elevation has a curved window group in the basement level with frosted glass casement windows. It has a recessed corner porch with carpeted concrete steps and corner brick pier support, a metal storm door, and a projecting living room bay with one-over-one windows that are partially obscured by a low metal awning. Detailing includes stone block inserts and a planter box. Its 101st Street elevation has glass block basement windows and one-over-one windows on the first floor. This house does not have sufficient distinguishing features to qualify as individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows in basement
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingle	**Roof Features** Dormers	**Roof Type** Hip	
Ornamental Architectural Details Stone block inserts, planter box with brackets			**Windows** Casement, glass block
Outbuildings (*Number and Description*) Garage			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

10100 S. Eggleston Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1894

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

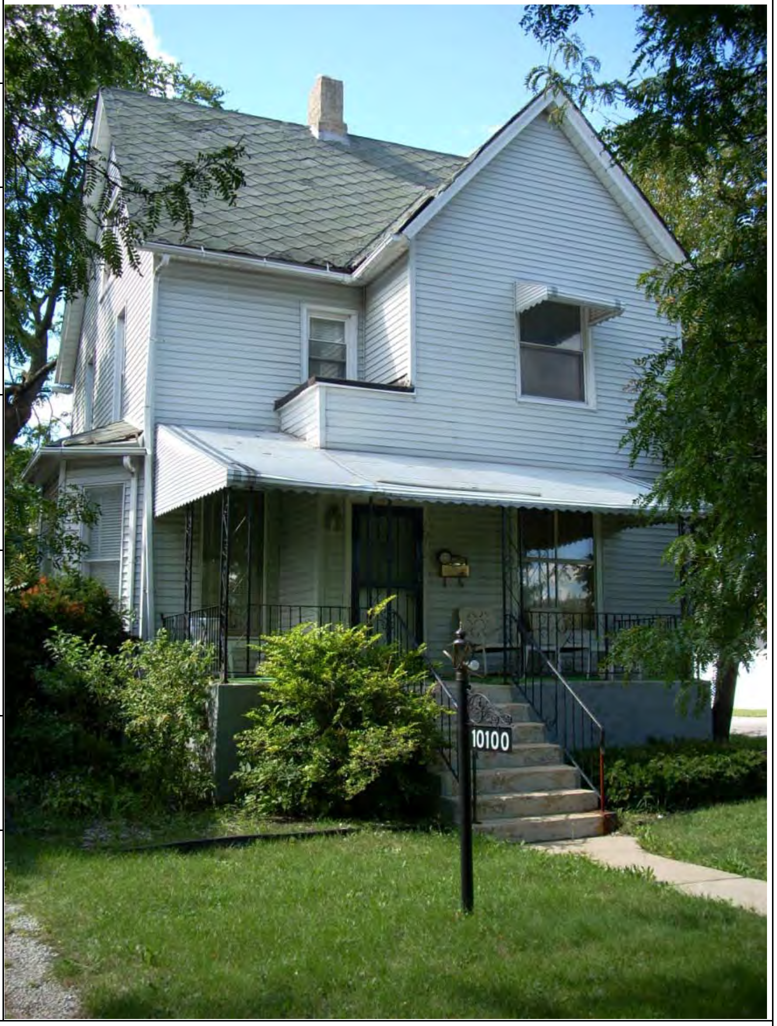
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 16 September 2012

Photos with Captions:
East façade of two-story, single family, frame residence.



Property Description: **Stories:** 2

This two-story frame house at the southwest corner of Eggleston and 101st Street in the Washington Heights community is situated on a raised stone block basement with glass block windows. It is clad with synthetic siding and has a cross-gable roof covered with asphalt shingles. Its front elevation has a metal storm door and a partial-width porch with concrete steps, metal railings, and open metal posts supporting a metal awning roof. Windows are non-original double-hung and come in varying sizes. Both side elevations feature window bays. This house does not have sufficient integrity or distinguishing features to qualify as individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
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Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows, door, siding, and porch
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Cross gable	
Ornamental Architectural Details None			**Windows** Double-hung, glass block
Outbuildings (*Number and Description*) Garage			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

10104 S. Eggleston Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1904

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

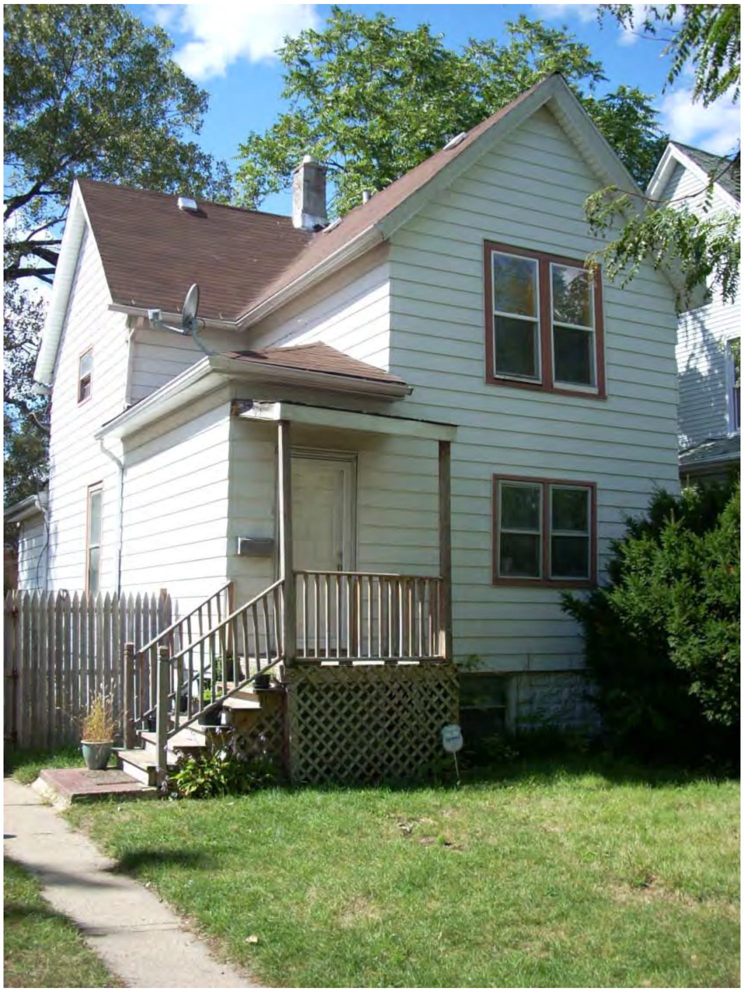
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 9 October 2012

Photos with Captions:
East façade of a two-story, frame, single family residence.



Property Description: **Stories:** 2

This two-story frame house in the Washington Heights community is situated on a raised concrete block basement, is clad with synthetic siding, and has a cross-gabled roof covered with asphalt shingles. The front elevation has a hip-roofed, enclosed corner vestibule at its south end with a hollow core metal door. It also has a non-original shed-roofed wood porch with straight railings and posts and two pairs of non-original one-over-one aluminum-sash windows: one on the first floor and one on the second. This house does not have sufficient integrity or distinguishing features to qualify as individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows, door, porch, and cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingles	**Roof Features** None	**Roof Type** Cross-gabled	
Ornamental Architectural Details None			**Windows** Double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

10142 S. Eggleston Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1948

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

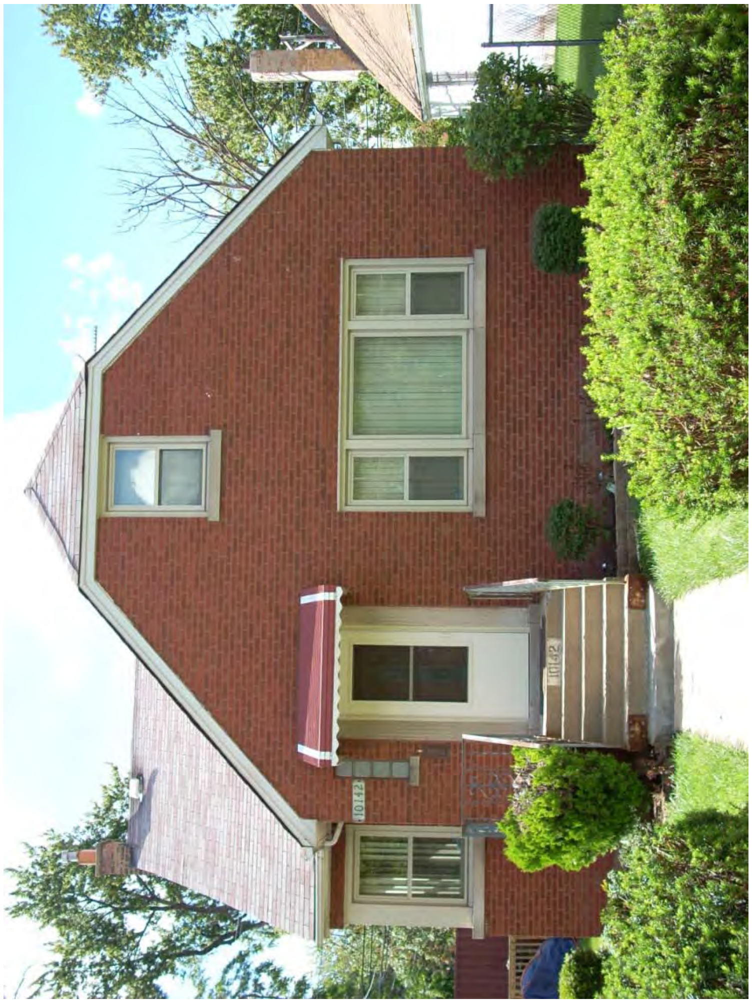
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 9 October 2012

Photos with Captions:
East façade of a brick, one-story, single family residence.



Property Description: **Stories:** 1

This one-story house in the Washington Heights community is situated on a raised brick basement with glass block windows. It has a cross-gable roof with asphalt shingles; the front wing features a hip-on-gable. The front elevation is clad with red face brick and the side elevations are clad with common brick. The first floor of the front elevation has an off-center entrance with a metal storm door, metal awning, concrete steps and railings. The first floor also has a one-over-one window and a picture window flanked by one-over-one windows. A single one-over-one window is situated in the gable. All double-hung windows are non-original aluminum-sash. Detailing features concrete sills and a vertical strip of four glass blocks adjacent to the front door. This house does not have sufficient integrity or distinguishing features to qualify as individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

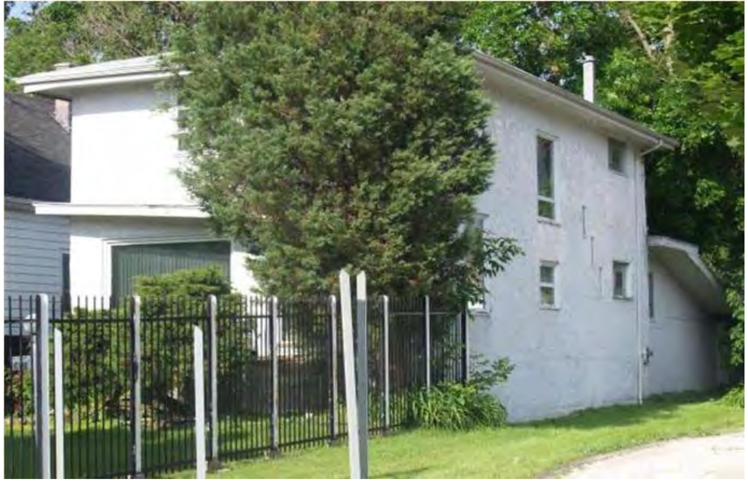
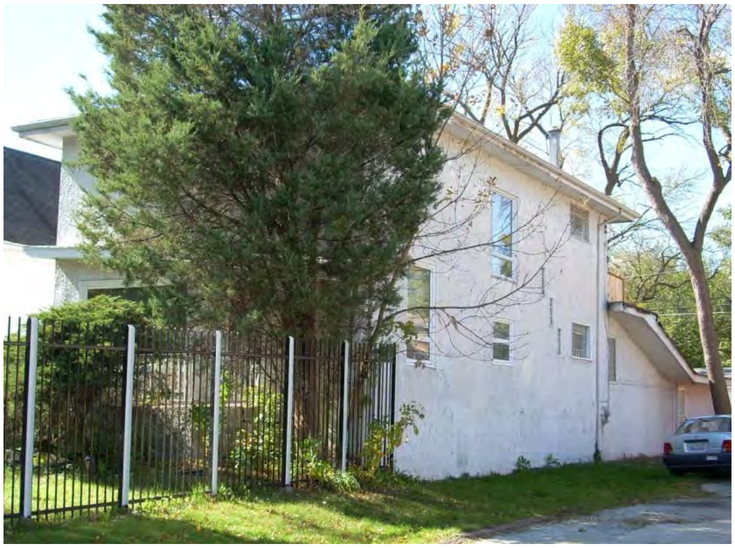
Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt	**Roof Features** Hip-on-gable	**Roof Type** Cross gable,	
Ornamental Architectural Details Decorative glass blocks, concrete sills			**Windows** Double-hung, fixed-pane, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name **Historic:** Bldg. not labeled, not in CHRS **Common/Current:** Unknown	**Photos with Captions:** East and north façades of a two-story, single family residence.  
Property Address: 10148 S. Eggleston Avenue	
HAARGIS Number: Not in database	
Present Owner and /or Occupant: Unknown	
Property Use **Historic:** Single family residence **Current:** Single family residence	
Date of Construction: 1919 **Architect's Name:** Not in CHRS **Builder/Contractor:** Not in CHRS	
Architectural Style: Vernacular	
Prepared By: J. Martinez, M. C. Bird, J. Guarino **Photo By:** S. Katz (lower); CCA (upper 2007) **Date:** 31 October 2012	

Property Description: **Stories:** 2

This two-story house in the Washington Heights community is clad with stucco and has a hip roof covered in asphalt shingles with overhanging eaves. Its front elevation has a large picture window, an off-center door with concrete steps, and a pair of windows on the second floor. Glass block and non-original double-hung windows are visible on the side elevation. The second story and rear one-story addition with a shed roof represent later additions. This house lacks integrity and distinctive architectural features and is not individually eligible for listing on the National Register.

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Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration	**Additional Notes/Descriptions** Replacement windows
Condition: [✓ Excellent] Good Poor	
Additional Alterations Second story added after 1938 (Sanborn). Rear addition also post-dates 1938.	
Structure Usage Current: NA Historic: NA	**Exterior Wall Surface** Stucco
Roof Material Asphalt shingle	**Roof Features** None
Roof Type Hip	
Ornamental Architectural Details None	**Windows** Double-hung, fixed-pane, glass block
Outbuildings (*Number and Description*) Detached garage.	

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

10200 S. Eggleston Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1888

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

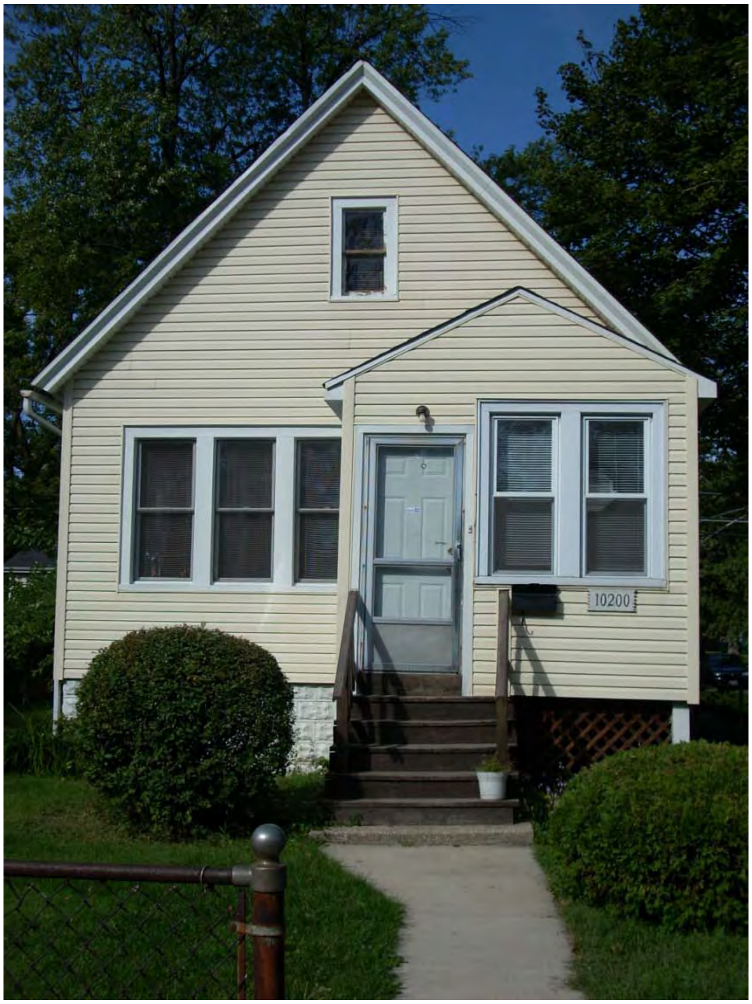
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: Steve Katz

Date: 10 October 2012

Photos with Captions:
East façade of a one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story frame house on the southwest corner of Eggleston and 102nd Street in the Washington Heights community is situated on a raised concrete block basement with glass block windows. It is clad with synthetic siding and has a front gable roof covered with asphalt shingles. Its front elevation has a gabled roof, enclosed porch with a hollow core metal core, wood steps and railings, five windows on the first floor and one in the gable, all of which are non-original one-over-one aluminum-sash. This house lacks integrity, does not feature distinguishing architectural elements, and is not individually eligible for listing on the National Register.

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Structural Survey

Integrity: Unaltered	[✓ Slight Modification]	Major Alteration	**Additional Notes/Descriptions** Replacement door, windows, and cladding
Condition: [✓ Excellent]	Good	Poor	
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingles	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

10236 S. Eggleston Ave.

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1913

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

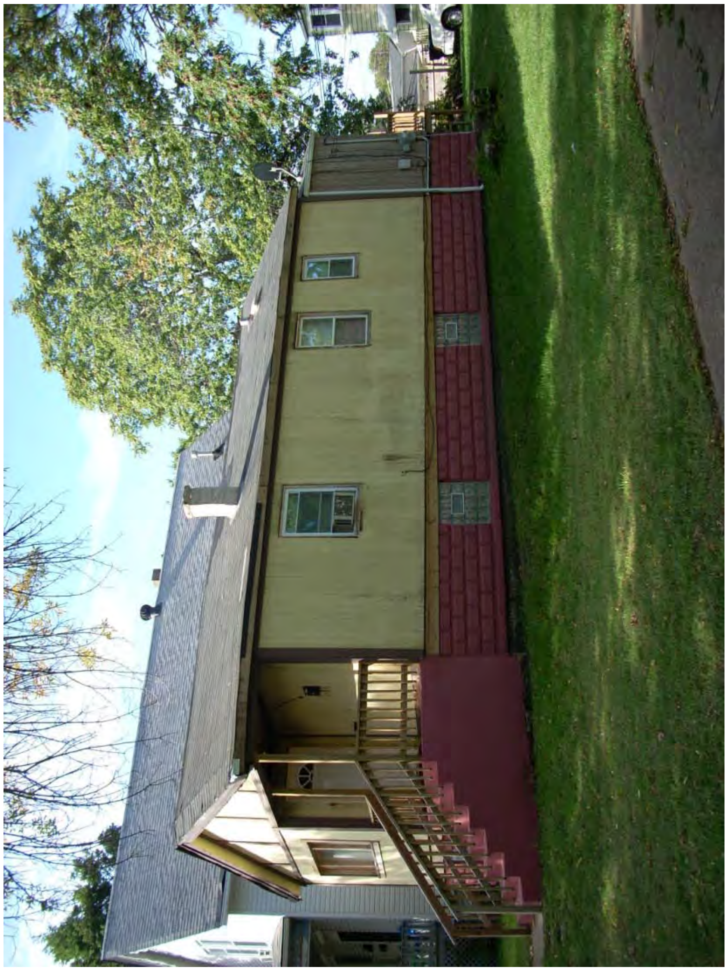
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 10 October 2012

Photos with Captions:
East façade of a one-story, frame, single family residence.



Property Description: **Stories:** 1

This one-story frame cottage in the Washington Heights community is situated on a raised concrete block basement with glass block windows. It is clad with wood boards laid vertically and has a gable roof covered with asphalt shingles. There is decorative vertical stickwork in the gable. The residence has a recessed corner porch with a hollow-core metal paneled door, concrete steps, and non-original wood railings and posts. A picture window is on the front elevation and one-over-one aluminum-sash windows on the side elevations (non-original). This house does not feature distinguishing architectural features and is not individually eligible for listing on the National Register.

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Marengo, Illinois 60152
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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement door, windows, siding, and porch railing
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Wood siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details Stickwork above porch			**Windows** Double-hung, fixed-pane, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

10415 S. Eggleston Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1927

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

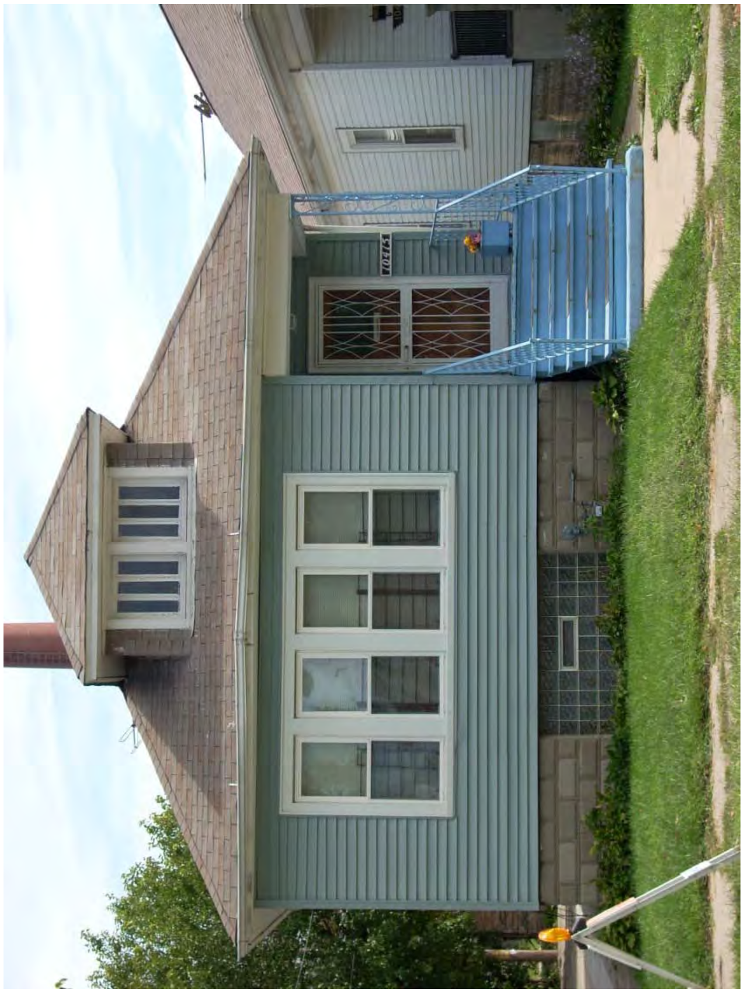
Craftsman

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 10 October 2012

Photos with Captions:
West façade of a one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story frame bungalow in the Roseland community is situated on a raised concrete block basement with glass block windows. It is clad with synthetic siding and has a hip roof covered with asphalt shingles and a hip dormer with two windows that appear to be casements. The front elevation has a strip of four non-original one-over-one aluminum-sash windows and a recessed corner porch with a metal storm door, wood steps, metal railings, and an open metal corner post. This house does not have sufficient integrity or distinguishing architectural features to qualify as individually eligible for listing on the National Register.

Structural Survey

Integrity: Unaltered	[✓ Slight Modification]	Major Alteration	**Additional Notes/Descriptions** Replacement windows and cladding
Condition: [✓ Excellent]	Good	Poor	
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** Dormer	**Roof Type** Hip	
Ornamental Architectural Details None			**Windows** Double-hung, casement, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

10531 S. Eggleston Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1940

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

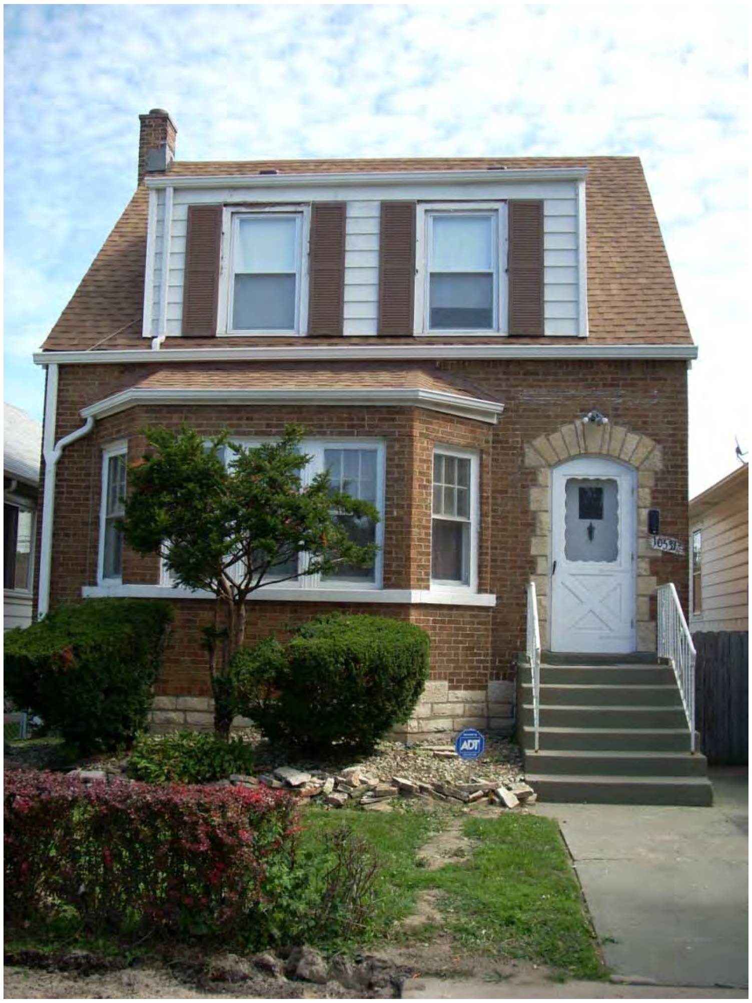
Minimal Traditional

Prepared By: J. Martinez, M. C. Bird, J. Gaurino

Photo By: S. Katz

Date: 12 October 2012

Photos with Captions:
West façade of a brick, one-story, single family residence.



Property Description: **Stories:** 1

This one-story, brick-clad cottage in the Roseland community is situated on a raised brick basement and has a side gable roof covered with asphalt shingles. It has and a non-original flat-roofed aluminum-clad dormer with two non-original one-over-one aluminum-sash windows. The front elevation has an off-center entrance with a metal storm door, concrete steps with metal railings, and a hip-roof living room bay with six-over-one wood-sash windows. Detailing includes decorative stone at the basement level and surrounding the front door. This building does not have sufficient distinguishing architectural features to qualify as individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Some replacement windows
Condition: [✓ Excellent] Good Poor			
Additional Alterations Dormer added			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingle	**Roof Features** Dormer	**Roof Type** Side gable	
Ornamental Architectural Details Stone accents at basement level and around entrance			**Windows** Double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y [✓ N]**	
National Register Historic Places	**Y [✓ N]**	
National Register Historic District	**Y [✓ N]**	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

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Marengo, Illinois 60152
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Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

10558 S. Eggleston Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1924

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

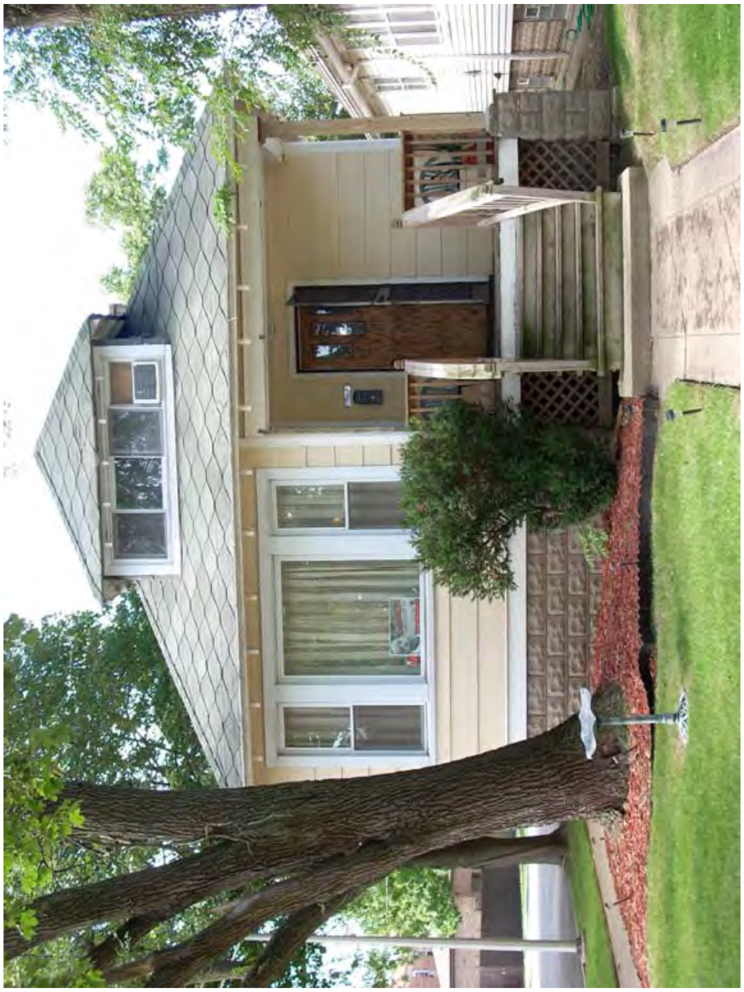
Craftsman

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 12 October 2012

Photos with Captions:
East faced of a one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story Craftsman bungalow at the northwest corner of Eggleston Avenue and 106th Street in the Roseland community is situated on a raised concrete block basement with glass block windows and is clad with synthetic siding. The building has a hip roof covered with asphalt shingles, overhanging eaves, decorative rafters, and a hip dormer. The residence has a recessed corner porch with a wood door, wood steps and railings, and a corner support consisting of a faux stone pedestal topped by a Doric column. The front (Eggleston) elevation has a picture window flanked by one-over-one aluminum-sash windows (non-original). The hip dormer has sliding windows, one of which is partially enclosed by plywood. The 106th Street elevation has a gabled pavilion, non-original one-over-one aluminum-sash windows, and a single casement window. This building does not have sufficient distinguishing architectural features or integrity to qualify as individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

<table>
<tr><td colspan="3">Integrity:
Unaltered [✓ Slight Modification] Major Alteration</td><td>Additional Notes/Descriptions
Replacement door, windows, and cladding</td></tr>
<tr><td colspan="3">Condition:
[✓ Excellent] Good Poor</td><td></td></tr>
<tr><td colspan="3">Additional Alterations</td><td></td></tr>
<tr><td colspan="2">Structure Usage
Current: NA
Historic: NA</td><td>Exterior Wall Surface
Synthetic siding</td><td></td></tr>
<tr><td>Roof Material
Asphalt shingle</td><td>Roof Features
Dormer</td><td>Roof Type
Hip</td><td></td></tr>
<tr><td colspan="3">Ornamental Architectural Details
Exposed rafters, Doric column</td><td>Windows
Double-hung, sliding, fixed-pane, glass block</td></tr>
<tr><td colspan="4">Outbuildings (<i>Number and Description</i>)
None</td></tr>
</table>

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

10601 S. Eggleston Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1929

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

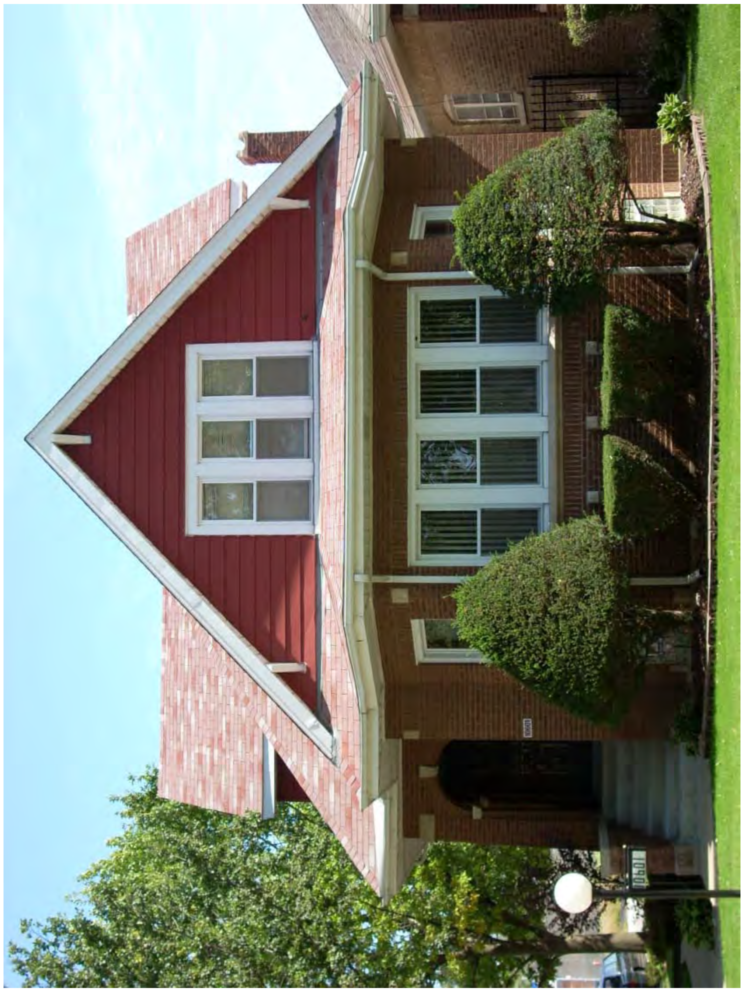
Chicago Style Bungalow

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 12 October 2012

Photos with Captions:
West façade of a one-story, brick, single family residence.



Property Description: **Stories:** 1

This one-story bungalow in the Roseland community is situated on a raised basement with glass block windows. The building is clad in brown brick, has a hip roof covered with asphalt shingles, and has overhanging eaves. The front and both side elevations feature large gable dormers and the rear elevation has a shed dormer, all of which are clad with aluminum siding. The house features a recessed corner porch with a metal storm door, concrete steps, low brick sidewalls, a brick corner pier, and arched front and side openings. The front elevation’s three-sided living room bay has six windows and the front gable dormer has three windows, all of which are non-original one-over-one aluminum-sash. Detailing includes brick soldier courses above and below the living room bay windows, decorative stone insert blocks, and concrete sills. This house does not feature distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows, cladding in dormers
Condition: [✓ Excellent] Good Poor			
Additional Alterations Dormers may have been a later addition.			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick (main), Aluminum siding (dormers)	
Roof Material Asphalt shingles	**Roof Features** Dormer	**Roof Type** Hip	
Ornamental Architectural Details Concrete sills and insert blocks, brick soldier courses			**Windows** Double-hung, fixed-pane, stained glass
Outbuildings (*Number and Description*) Detached two-car garage with pyramidal roof behind residence.			

Local Landmark	**Y [✓ N]**	
National Register Historic Places	**Y [✓ N]**	
National Register Historic District	**Y [✓ N]**	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

10612 S. Eggleston Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1947

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

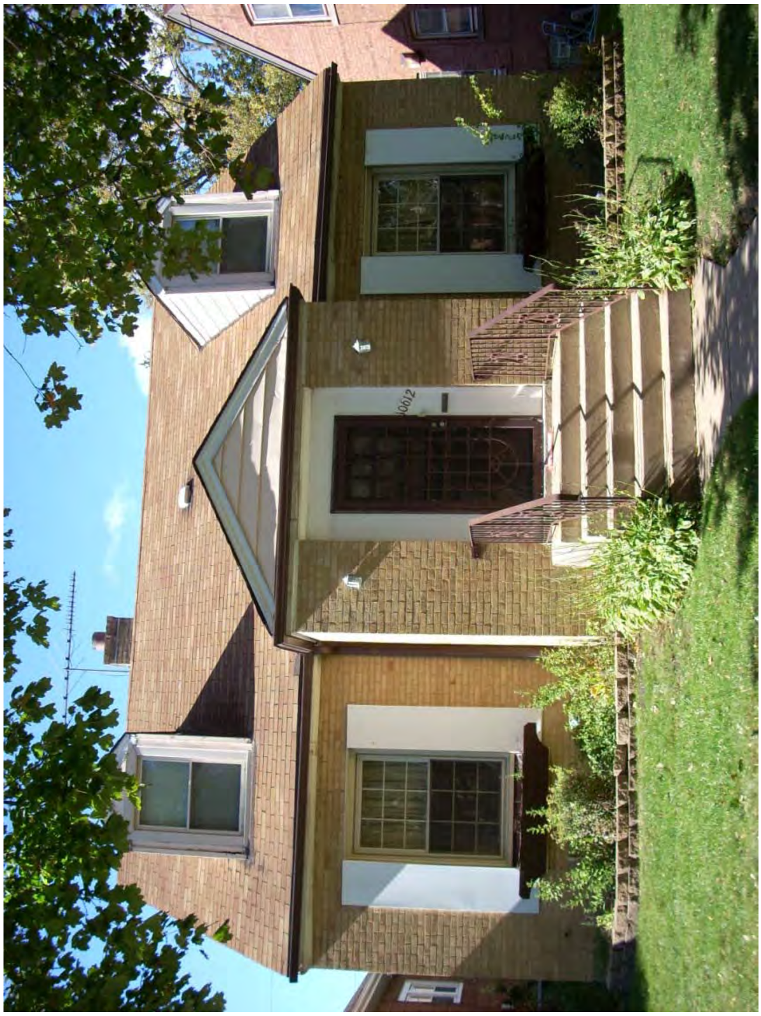
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 30 October 2012

Photos with Captions:
East façade of a one-story, single family, brick residence.



Property Description: **Stories:** 1

This one-story house in the Roseland community area is clad with tan face brick on its front elevation and common brick on its side elevations. The building has a steeply-pitched side-gable roof covered with asphalt shingles and two synthetic-clad gable dormers with one-over-one windows. Its front elevation has a centrally located, gabled, brick-clad entrance vestibule, a metal storm door with an unadorned wood surround, concrete steps with metal railings, and two nine-over-nine windows. It lacks distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: [✓ Unaltered] Slight Modification Major Alteration			**Additional Notes/Descriptions**
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick (main); Synthetic siding (dormers)	
Roof Material Asphalt shingle	**Roof Features** Dormers	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

10720 S. Eggleston Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Vacant

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1924

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

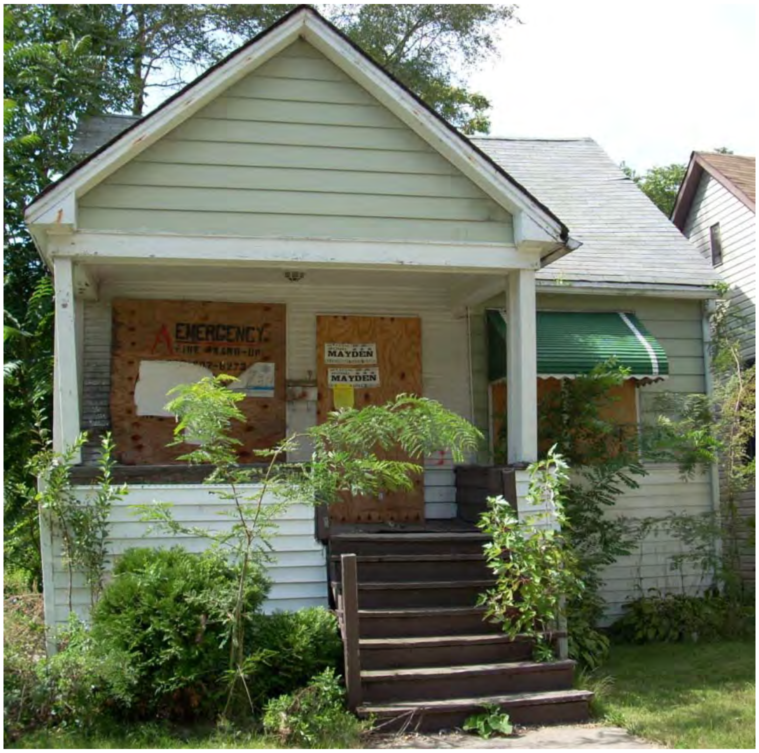
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 12 October 2012

Photos with Captions:
East façade of a one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story house in the Roseland community is clad with synthetic siding and has a cross-gable roof covered with asphalt shingles. The front elevation has a partial-width porch with gable roof, aluminum-clad sidewalls, and wood posts, steps, and railings. Its front door and flanking windows are covered with plywood. This house lacks integrity and distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement cladding
Condition: Excellent Good [✓ Poor]			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Cross gable	
Ornamental Architectural Details One tapered wood column			**Windows** Covered
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

10757 S. Eggleston Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Vacant

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1923

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

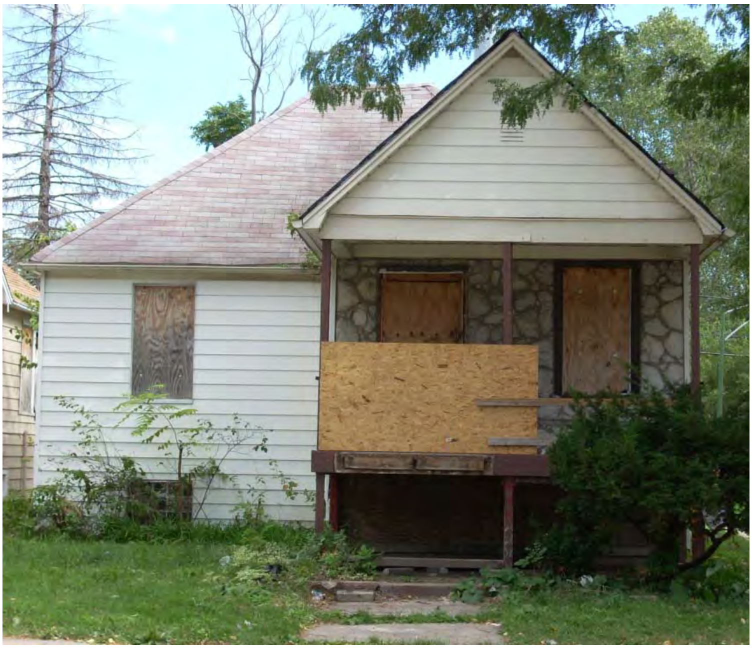
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 12 October 2012

Photos with Captions:
West façade of a one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story house at the northwest corner of Eggleston Avenue and 108th Street in the Roseland community is situated on a raised basement, is clad with synthetic siding, and has a hip roof covered with asphalt shingles. Its front elevation is partially clad with faux stone siding and has a partial-width porch with gable roof, wood deck, and post supports. The porch steps and railings have been removed; the front door and all window openings are covered with plywood. This house lacks integrity and distinguishing architectural features and is not individually eligible for listing on the National Register.

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Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement siding, steps removed
Condition: Excellent Good [✓ Poor]			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding (main), Faux stone (entrance)	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Hip	
Ornamental Architectural Details None			**Windows** Covered
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

10904 S. Eggleston Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1927

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

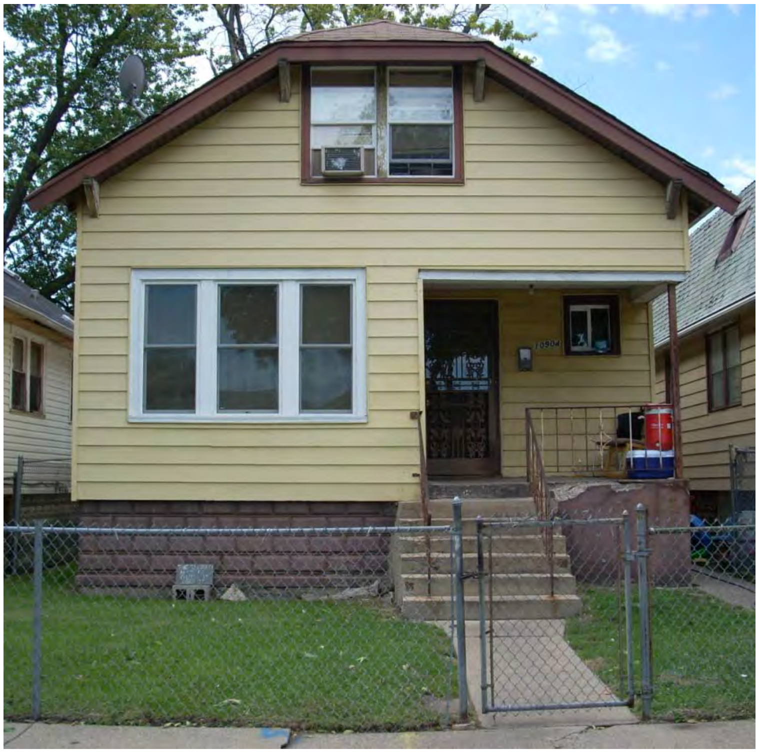
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 12 October 2012

Photos with Captions:
East façade of a one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story house in the Roseland community is situated on a raised concrete block basement and clad with synthetic siding. The building has a hip-on-gable roof covered with asphalt shingles and overhanging eaves with wood brackets. The front elevation has a recessed corner porch with concrete steps, metal railings, a single wood corner post, and an entrance with a metal storm door. Windows are non-original and include a small casement window adjacent to the front door, a strip of three one-over-one windows on the first floor, and a pair of one-over-one aluminum-sash windows in the attic. This house lacks integrity and distinguishing architectural features and is not individually eligible for listing on the National Register.

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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows and cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingles	**Roof Features** None	**Roof Type** Hip on Gable	
Ornamental Architectural Details None			**Windows** Double-hung, casement
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

10953 S. Eggleston Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1960

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

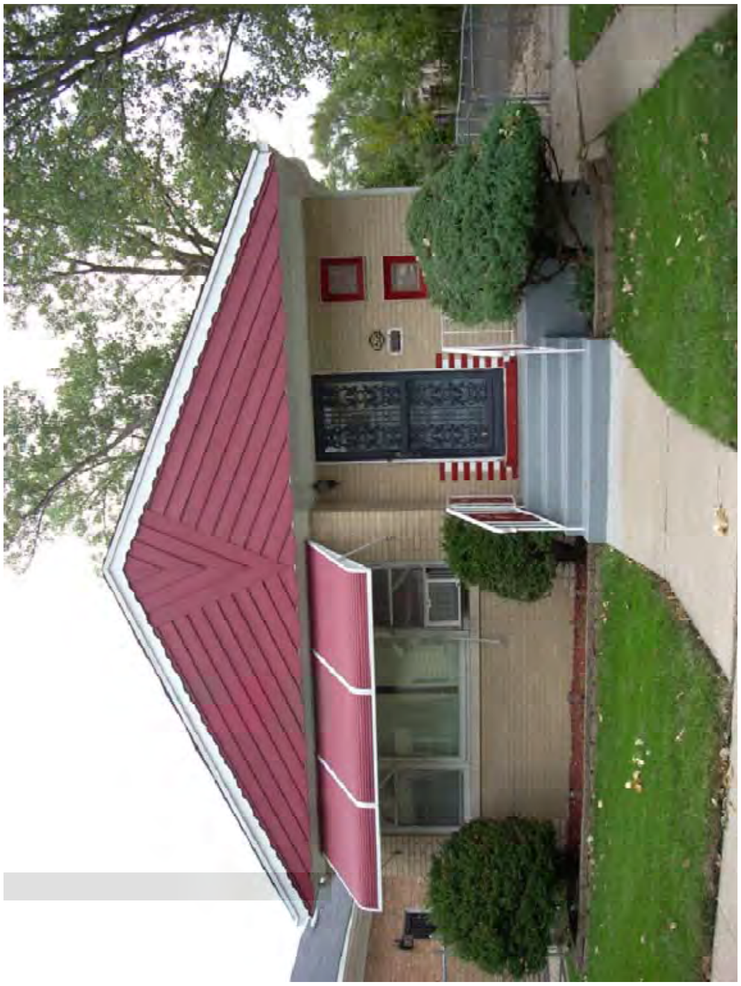
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 16 September 2012

Photos with Captions:
West façade one-story, brick, single-family residence.



Property Description: **Stories:** 1

This one-story house in the Roseland community with a raised basement is clad with buff brick on its front elevation and common brick on its side and rear elevations. The building has a front gable roof covered with asphalt shingles and has overhanging eaves. Its front elevation has a projecting three-sided living room bay with a picture window flanked by one-over-one aluminum-sash windows that are sheltered by a metal awning. The residence has an off-center entrance with a metal storm door, concrete steps with metal railings, and an wood-clad gable laid in diagonal patterns. Detailing includes two decorative glass blocks adjacent to the front door and scalloped trim around the gable. It does not feature distinctive architectural elements and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
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Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: [✓ Unaltered] Slight Modification Major Alteration			**Additional Notes/Descriptions**
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick (main), Wood (gable end)	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details Glass block detail near entrance, diagonal pattern for gable clapboards			**Windows** Double-hung
Outbuildings (*Number and Description*) Detached, one-car, frame garage			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

11130 S. Eggleston Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Flat

Current: Flat

Date of Construction: 1914

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

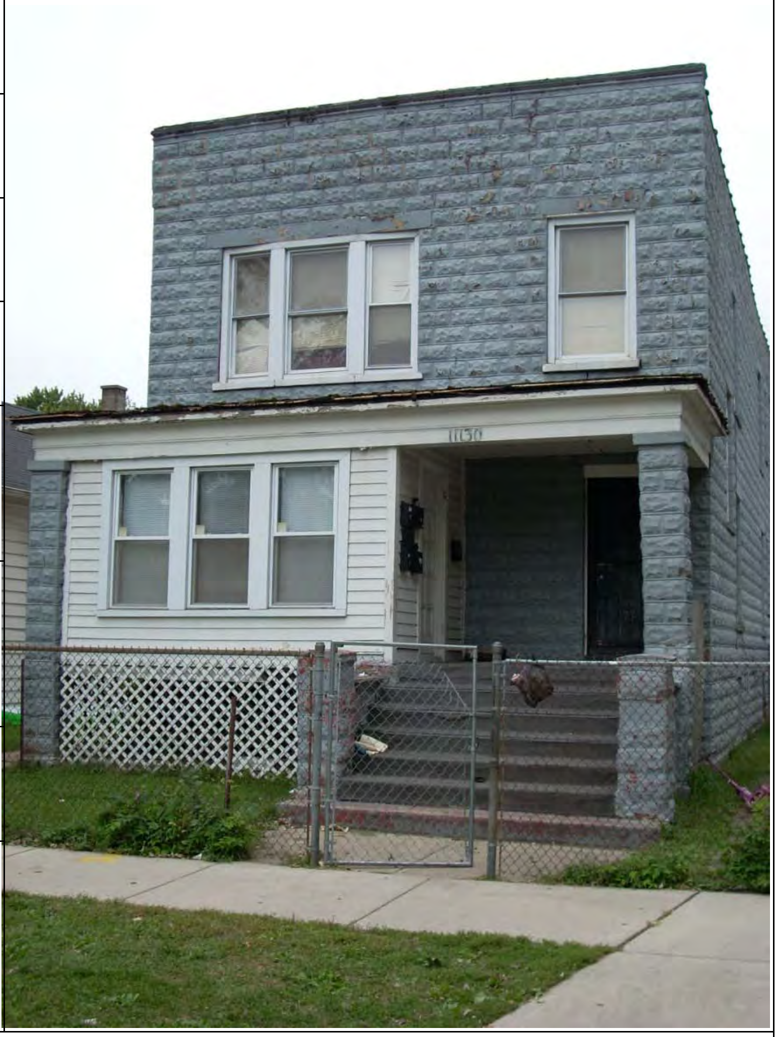
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 16 September 2012

Photos with Captions:
East façade of two-story, concrete block, two-flat residence.



Property Description: **Stories:** 2

This two-flat residential building in the Roseland community is situated on a raised basement and made of rusticated concrete block. The building has a flat roof and parapet. It features a flat-roofed full-width porch, half of which is enclosed and covered with aluminum siding. The enclosed porch has a strip of three non-original one-over-one aluminum-sash windows on its front elevation. The open half of the porch has an entrance with metal storm door, a faux stone corner support, and wood steps flanked by concrete block half-walls. The second floor of the front elevation has a strip of three windows and a single window, which are non-original one-over-one aluminum-sash and have stone sills and lintels. This house lacks integrity and distinctive architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

<table>
<tr><td colspan="4">Integrity:
Unaltered [✓ Slight Modification] Major Alteration</td><td>Additional Notes/Descriptions
Replacement windows</td></tr>
<tr><td colspan="4">Condition:
Excellent [✓ Good] Poor</td><td></td></tr>
<tr><td colspan="4">Additional Alterations
Porch partially enclosed after 1938 (Sanborn).</td><td></td></tr>
<tr><td colspan="2">Structure Usage
Current: NA
Historic: NA</td><td colspan="2">Exterior Wall Surface
Concrete block</td><td></td></tr>
<tr><td>Roof Material
Unknown</td><td>Roof Features
Parapet</td><td colspan="2">Roof Type
Flat</td><td></td></tr>
<tr><td colspan="4">Ornamental Architectural Details
Stone sills and lintels</td><td>Windows
Double-hung</td></tr>
<tr><td colspan="5">Outbuildings (<i>Number and Description</i>)
None</td></tr>
</table>

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

11133 S. Eggleston Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1888

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

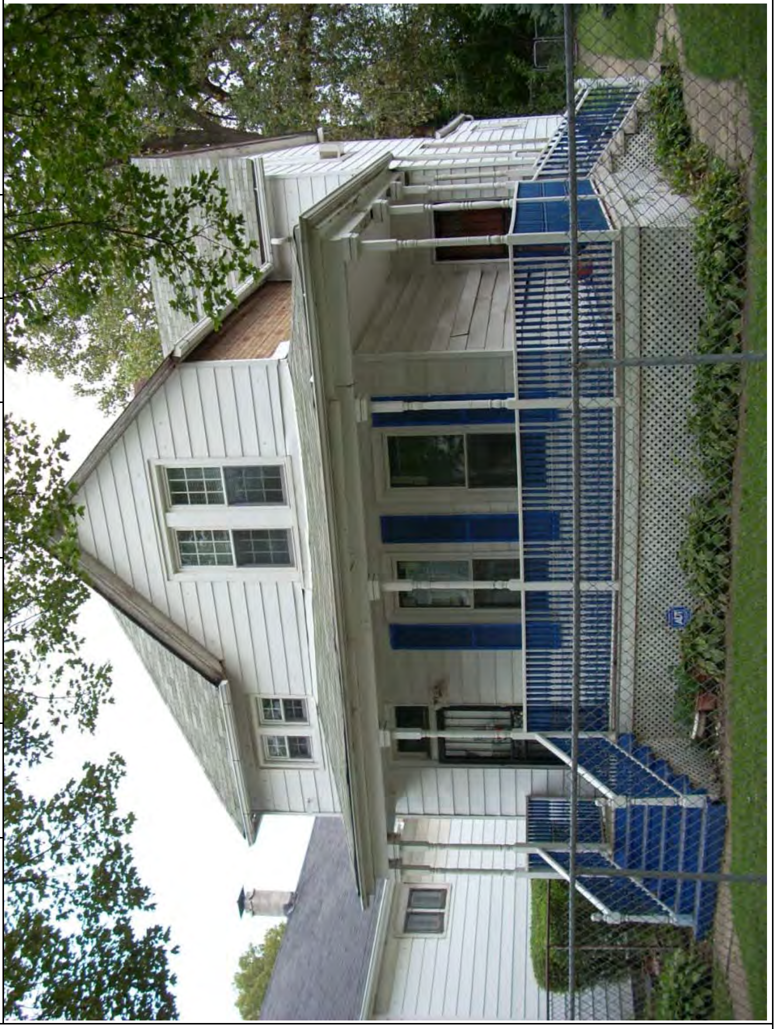
Vernacular

Prepared By: C. Tolmie

Photo By: S. Katz

Date: 16 September 2012

Photos with Captions:
West façade of 1.5-story, single-family, frame residence.



Property Description: **Stories:** 1.5

This 1.5-story frame house in the Roseland community is situated on a raised basement and is covered with synthetic siding. The building has an original, full-width, hip-roofed wrap-around wood porch with turned posts and straight railings. It has a cross-gable-on-hip roof covered with asphalt shingles. Its front elevation has an off-center door with transom and two one-over-one windows. The second floor of the front elevation has two pairs of double-hung windows, one of which features nine-over-nine sashes. Windows are modern replacements. This house lacks integrity and distinctive architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows and cladding
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details Turned columns on porch			**Windows** Double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y [✓ N]**	
National Register Historic Places	**Y [✓ N]**	
National Register Historic District	**Y [✓ N]**	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

11139 S. Eggleston Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1915

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

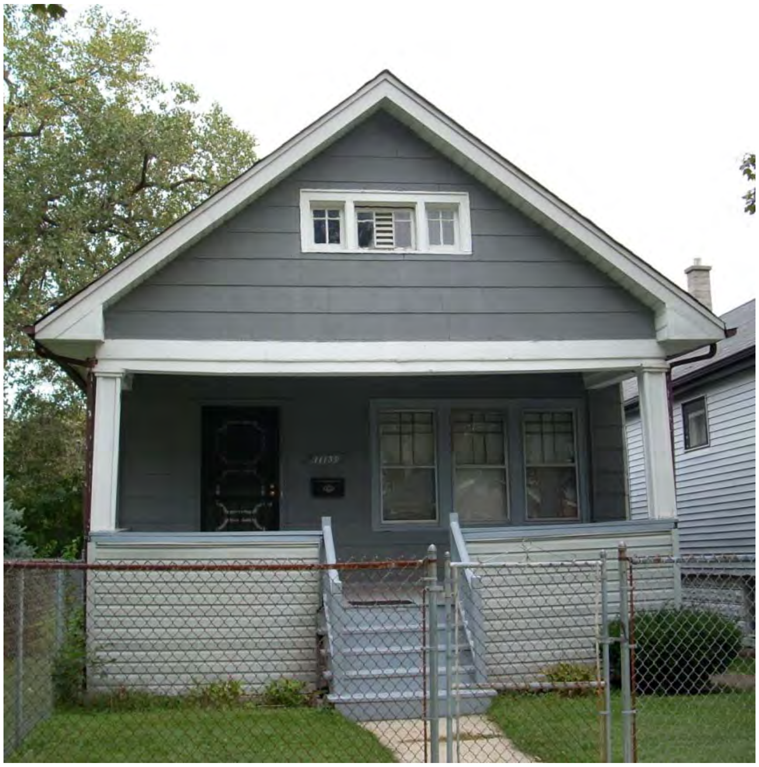
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 16 September 2012

Photos with Captions:
West façade of one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story frame house in the Roseland community is situated on a raised brick basement with glass block windows and is covered with synthetic siding. The building has a front gable roof covered with asphalt shingles. The front elevation has a full-width porch with low, aluminum-covered sidewalls and squat squared wood column supports. The entrance is off-center and has a metal storm door. There is a strip of three non-original double-hung windows on the first floor and a strip of three original wood casement windows in the gable. This house lacks integrity and distinctive architectural features and is not individually eligible for listing on the National Register.

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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement cladding and first floor windows
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details Squat, square columns			**Windows** Double-hung, casement, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11211 S. Eggleston Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Vacant

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1922

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

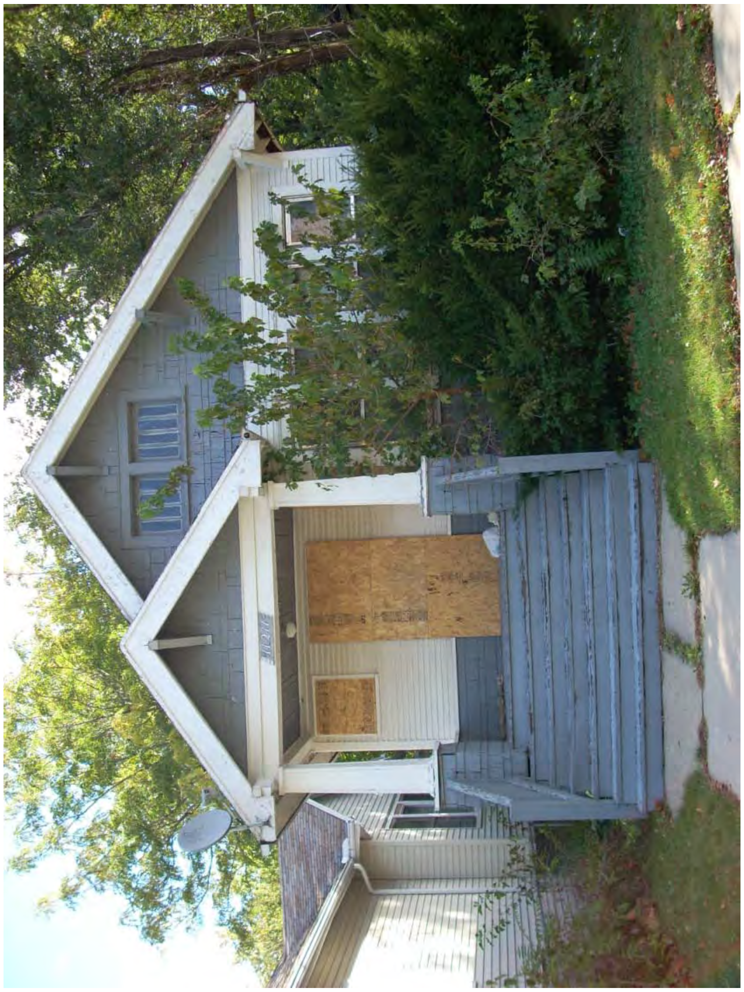
Craftsman

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 30 October 2012

Photos with Captions:
West façade of a one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story Craftsman style bungalow in the Roseland community is situated on a raised brick basement and is clad with wood clapboards with wood shingles in the gabled ends. The building has a front gable roof covered with asphalt shingles and overhanging eaves with exposed rafters and decorative knee braces. The front elevation features a partial-width, front-gable, wood porch with squat, squared Doric columns and a boxed cornice. The porch door and adjacent window opening are covered with plywood. There is a group of four one-over-one windows on the first floor and a pair of original wood casement windows in the attic. This is an example of a Craftsman bungalow, an exceedingly common style during the 1910s and 1920s but lacks distinctive architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows (first floor)
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Wood siding and shingles	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details Knee braces, exposed rafters, squared columns			**Windows** Double-hung, casement
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11257 S. Eggleston Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1908

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

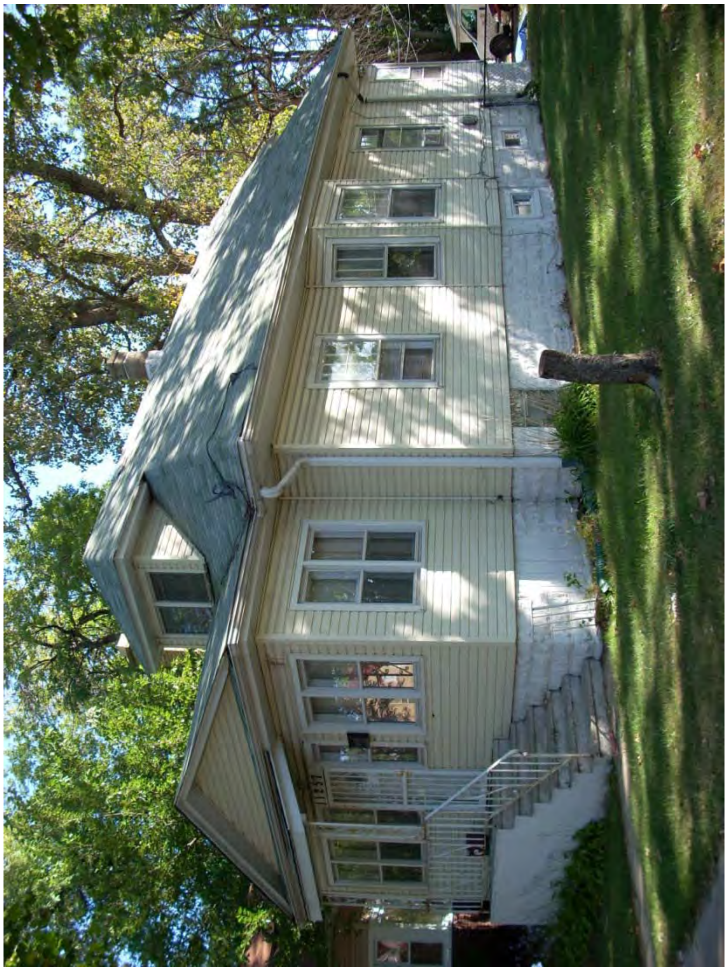
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 22 October 2012

Photos with Captions:
West and south façades of a one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story house in the Roseland community is situated on a raised concrete block basement with glass block windows and is covered with synthetic siding. The building has a hip roof covered with asphalt shingles, and a hip dormer with two casement windows. The front elevation features a full-width, gable-roof, synthetic-clad sun porch surrounded by non-original one-over-one aluminum-sash windows and a centrally located door with sidelights. There is also an open shed-roof porch with concrete steps, metal railings, and open metal posts. This house lacks integrity and distinctive architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
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Structural Survey

Integrity:			**Additional Notes/Descriptions**
Unaltered	[✓ Slight Modification]	Major Alteration	Replacement windows and cladding
Condition:			
[✓ Excellent]	Good	Poor	
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** Dormer	**Roof Type** Hip	
Ornamental Architectural Details None			**Windows** Double-hung, glass block, casement
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11730-11736 S. Front Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Industrial

Current: Industrial

Date of Construction: 1952-1962

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

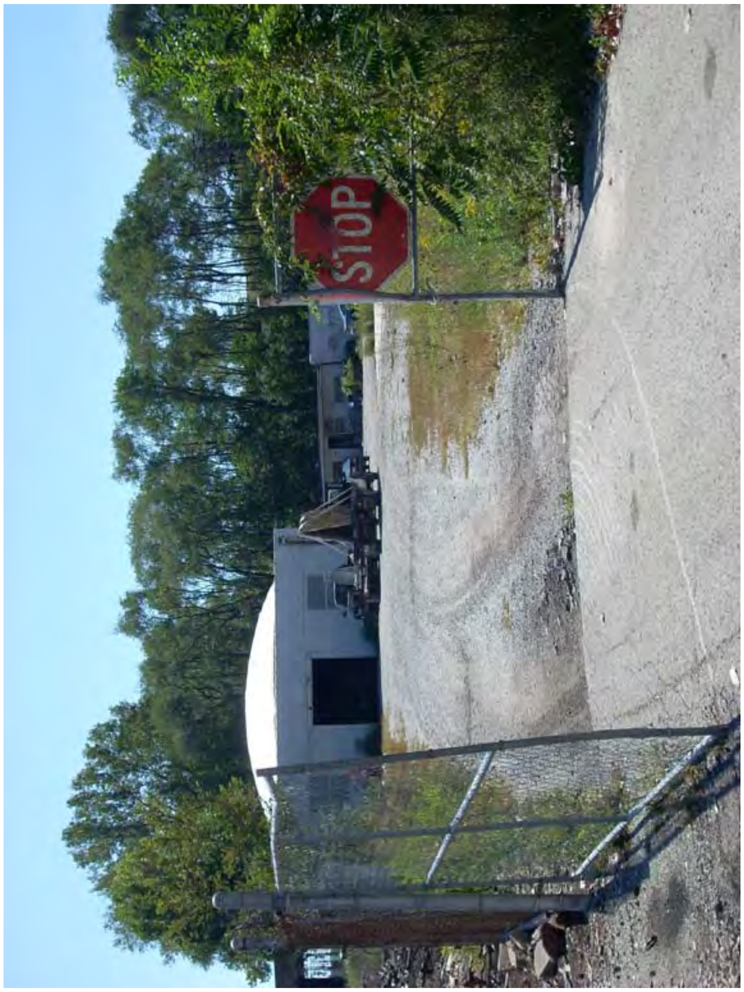
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 2 October 2012

Photos with Captions:
Looking south at light industrial complex.



Property Description: **Stories:** 1

This concrete block, Quonset utility outbuilding in the West Pullman community is set back from the public right-of-way and has a front elevation with a centrally located garage door opening flanked by a one-over-one window on either side. The 1962 aerial photograph shows two buildings on the property, the extant Quonset and a larger building. The larger building was razed between 2007 and 2012. A one-story building and a trailer standing on the remaining concrete slab from the larger, razed building are also part of this complex but too far from the road for evaluation. Windows appear to be fixed-pane on all buildings within the complex. This building complex does not have distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: [✓ Unaltered] Slight Modification Major Alteration	**Additional Notes/Descriptions** Extant buildings that are visible from the public ROW remain unchanged
Condition: Excellent [✓ Good] Poor	
Additional Alterations	

Structure Usage Current: NA Historic: NA	**Exterior Wall Surface** Concrete block	

Roof Material Asphalt	**Roof Features** None	**Roof Type** Barrel	

Ornamental Architectural Details None	**Windows** Fixed-pane

Outbuildings (*Number and Description*)

None

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

9820 S. Harvard Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1959

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

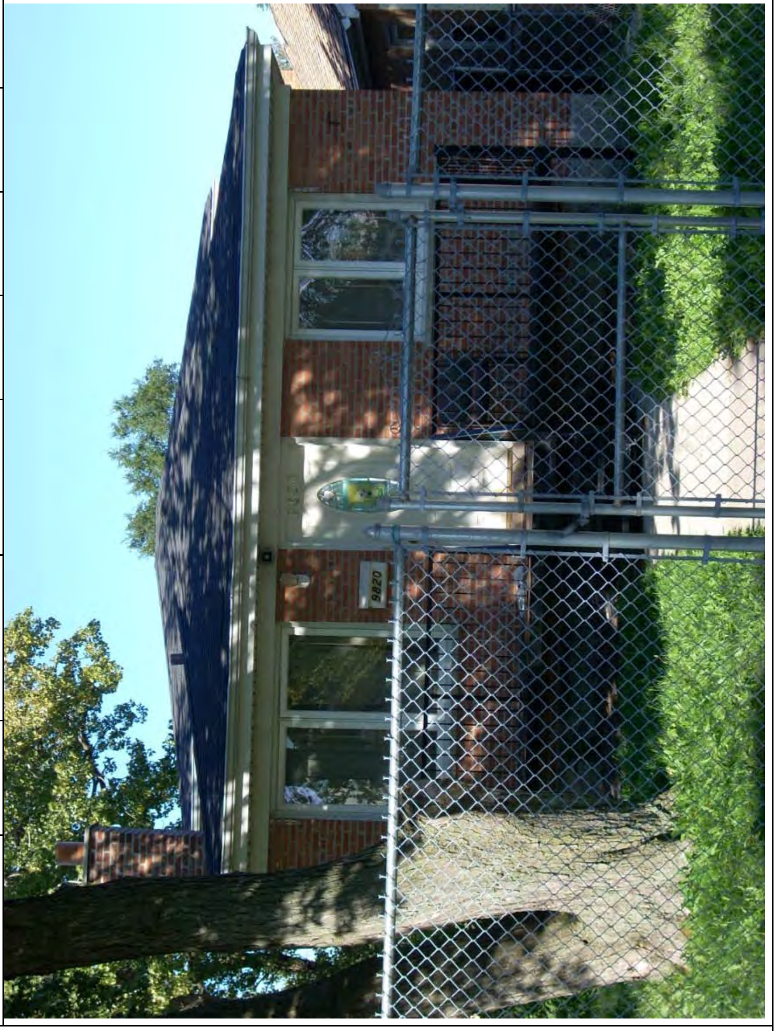
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 16 September 2012

Photos with Captions:
East façade of split-level, brick, single family residence.



Property Description:

Stories: Split-level

This back-split home in the Roseland community has a hip roof on both levels that are covered with asphalt shingles. The front elevation is clad with orange face brick and has a centrally located hollow core metal door, two pairs of casement windows, and metal steps and railings. It does not feature distinguishing architectural elements and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity:

Unaltered [✓ Slight Modification] Major Alteration

Additional Notes/Descriptions

Replacement door

Condition:

[✓ Excellent] Good Poor

Additional Alterations

Structure Usage Current: NA Historic: NA	**Exterior Wall Surface** Brick

Roof Material Asphalt shingles	**Roof Features** None	**Roof Type** Hip

Ornamental Architectural Details

None

Windows

Casement

Outbuildings (*Number and Description*)

Detached two-car garage

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

9823 S. Harvard Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1915

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

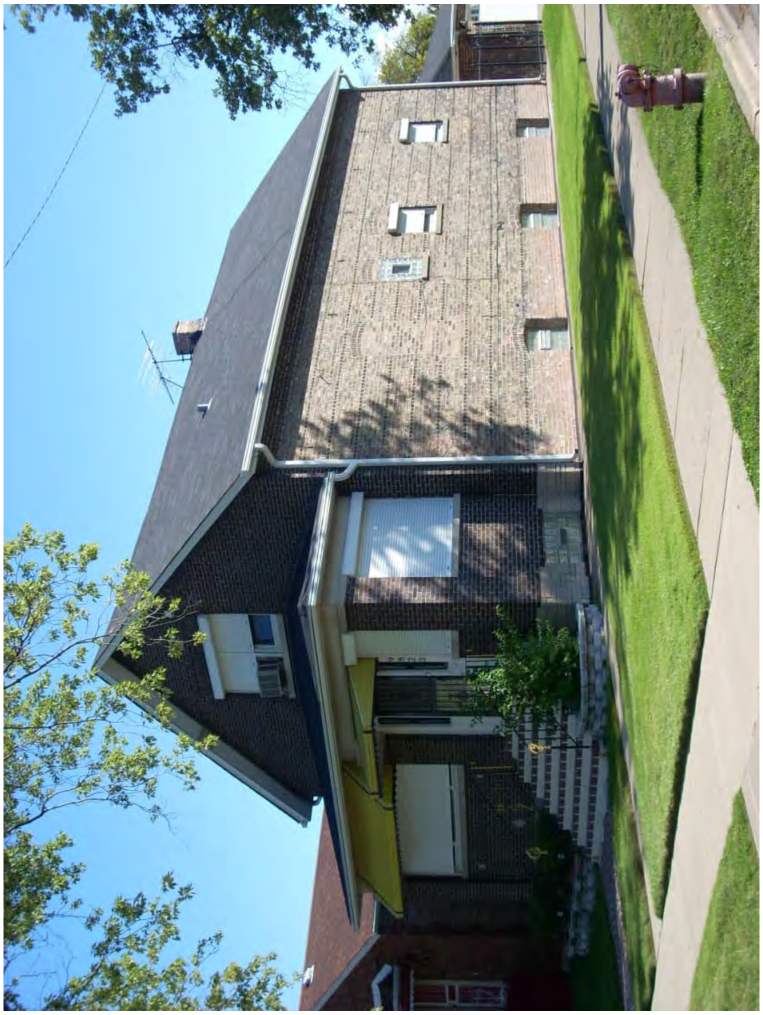
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 16 September 2012

Photos with Captions:
East and north façades, of 1.5-story, single family, brick residence.



Property Description: **Stories:** 1.5

This 1.5-story home in the Roseland community is situated on a raised brick basement with glass block windows and has a front gable roof covered with asphalt shingles. Its front elevation is clad with brown face brick, as is its enclosed, full-width, hip roof porch that has concrete lintels and sills. The front elevation has an off-center door with sidelights, metal steps and railings, and two first-floor window groups that are covered with metal screens, as were the paired windows in the gable. Some windows on the side elevation are in-filled with brick and glass block. This home lacks integrity and does not feature sufficient distinguishing features to qualify as eligible for individual listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered	[✓ Slight Modification]	Major Alteration	**Additional Notes/Descriptions** Replacement door, enclosed porch, metal storm shutters, window openings in-filled
Condition: [✓ Excellent]	Good	Poor	
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingles	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details Concrete lintels and sills			**Windows** Glass block, covered
Outbuildings (*Number and Description*) Garage			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

11314 S. Harvard Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Vacant

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1926

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

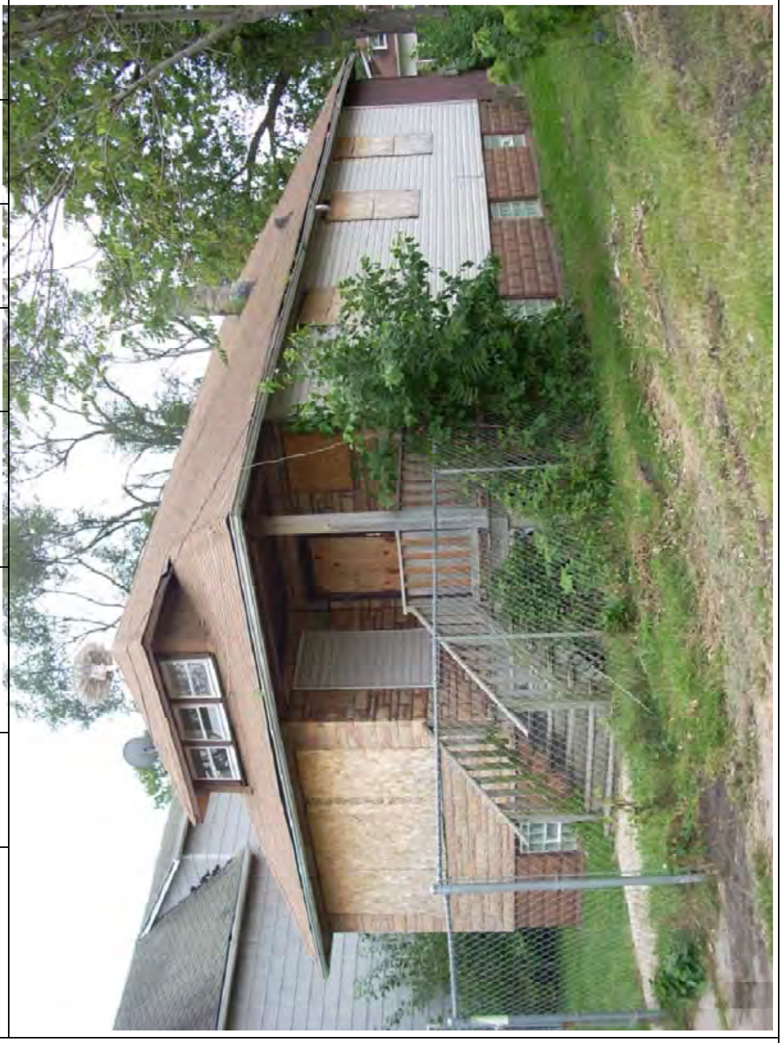
Craftsman

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 16 September 2012

Photos with Captions:
East and north façades of one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story frame bungalow in the Roseland community is situated on a raised concrete block basement with glass block windows and is clad with faux stone on the front elevation. The building has a hip roof covered with asphalt shingles and a hip dormer with three small non-original one-over-one aluminum-sash windows. The front elevation has a recessed corner porch with wood steps, railings, and a corner post. The front door and all first floor windows have been covered with plywood. This house lacks integrity and distinctive architectural features and is not individually eligible for listing on the National Register.

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505 North State Street
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Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows and cladding
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Faux stone (front) Synthetic siding (sides)	
Roof Material Asphalt shingle	**Roof Features** Dormer	**Roof Type** Hip	
Ornamental Architectural Details None			**Windows** Double-hung, glass block
Outbuildings (*Number and Description*) Garage			

Local Landmark	**Y [✓ N]**	
National Register Historic Places	**Y [✓ N]**	
National Register Historic District	**Y [✓ N]**	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11356 S. Harvard Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Vacant

Property Use

Historic: Commercial (1938 Sanborn)

Current: Multi-family residence

Date of Construction: 1916

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

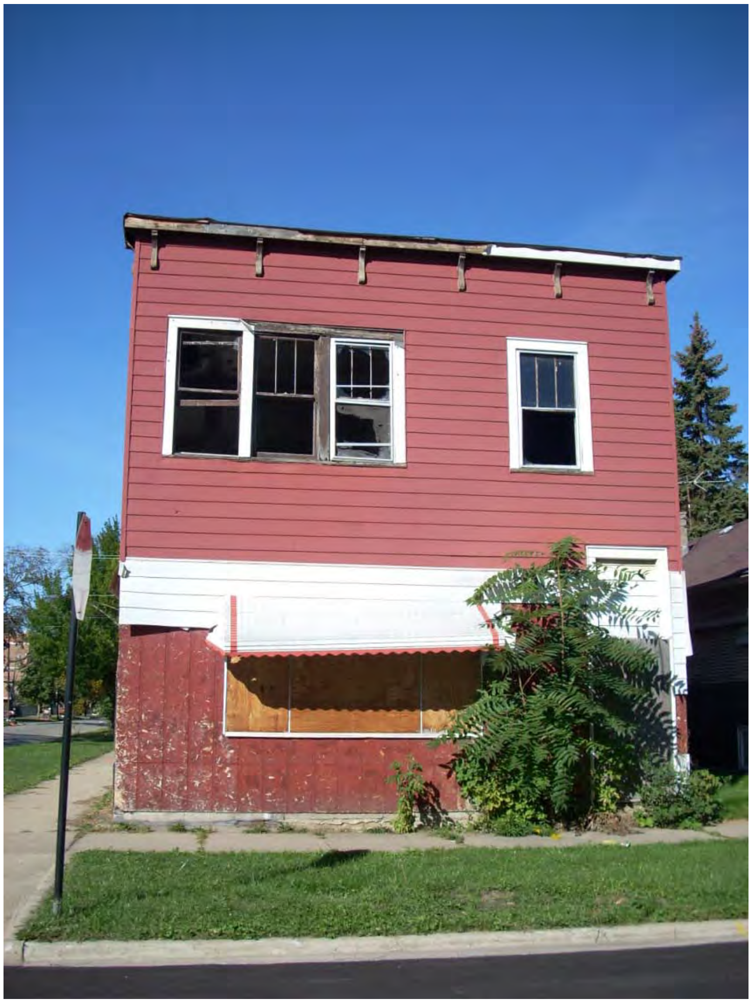
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 22 October 2012

Photos with Captions:
East façade of a two-story, multi-family, frame residence.



Property Description: **Stories:** 2

This two-story building at the northwest corner of Harvard Avenue and 114th Street in the Roseland community is clad with wood board vertically laid on the first floor and with synthetic siding on the second floor. The building has a flat roof and parapet. The front (Harvard Avenue) elevation has an off-center door and a group of three first floor windows that have been covered with plywood and are sheltered by a metal awning. The second floor of the front elevation has four windows—a group of three and a single window—that were formerly three-over-one wood-sash, although most of the glass panes are now gone. The front elevation is topped by a bracketed unadorned wood cornice. The windows on the 114th Street elevation have been covered with plywood on the first floor and have missing glass panes on the second floor. This former commercial building lacks integrity and distinctive architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
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Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration	**Additional Notes/Descriptions** Replacement cladding
Condition: Excellent Good [✓ Poor]	
Additional Alterations Converted from commercial to residential after 1938 (Sanborn).	

Structure Usage		**Exterior Wall Surface**	
Current: NA Historic: NA		Synthetic siding (upper), Wood (lower)	
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	

Ornamental Architectural Details Bracketed cornice	**Windows** Double-hung
Outbuildings (*Number and Description*) None	

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11415 S. Harvard Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Vacant

Property Use

Historic: Flat

Current: Flat

Date of Construction: 1898

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

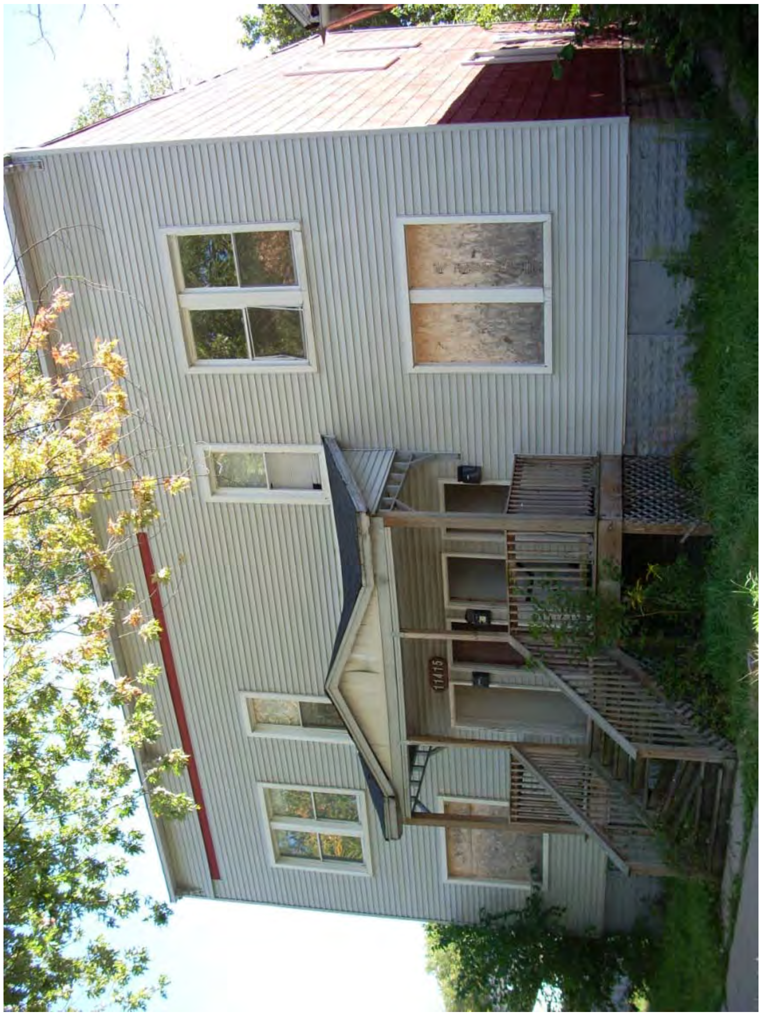
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 22 October 2012

Photos with Captions:
West façade of a two-story, four-flat, frame residence.



Property Description: **Stories:** 2

This two-story four-flat building in the Roseland community is situated on a raised concrete block basement and is covered with synthetic siding. The building has a flat roof and parapet. Its front elevation has four centrally located doorways that lack doors, a partial-width wood porch with a gable-on-shed roof, non-original straight posts and railings. There are two window groups on the first floor that are covered with plywood and six non-original one-over-one aluminum-sash windows on the second floor. The parapet level features a bracketed unadorned cornice. This building lacks integrity and distinctive architectural features and is not individually eligible for listing on the National Register.

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Structural Survey

Integrity: Unaltered	[✓ Slight Modification]	Major Alteration	**Additional Notes/Descriptions** Replacement windows, cladding, and porch rails
Condition: Excellent	[✓ Good]	Poor	
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details Bracketed cornice			**Windows** Double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11708 S. Indiana Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Multi-family residence

Date of Construction: 1908

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

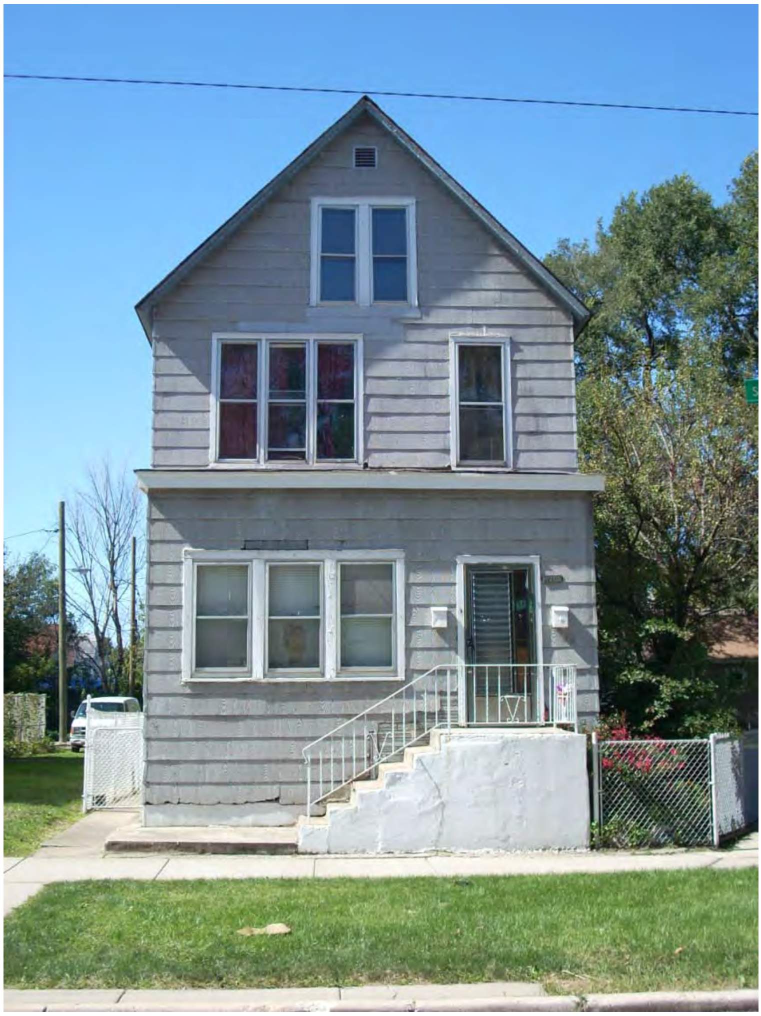
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 22 October 2012

Photos with Captions:
East façade of a two-story, multi-family, frame residence.



Property Description: **Stories:** 2

This two-story frame house at the southwest corner of Indiana Avenue and 117th Street in the West Pullman community is situated on a raised concrete block basement with glass block windows and is covered with synthetic siding. The building has a front gable roof covered with asphalt shingles. Its front elevation has a full-width, flat-roof, enclosed sun porch with an off-center metal storm door, concrete steps with metal railings (non-original), and a strip of three windows on the first floor. The second floor of the front elevation has a strip of three windows and a single window, and the attic level has a pair of windows. Windows are non-original one-over-one aluminum-sash. This house lacks integrity and distinctive architectural features and is not individually eligible for listing on the National Register.

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505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

<table>
<tr><td colspan="3">Integrity:
Unaltered
[✓ Slight Modification]
Major Alteration</td><td>Additional Notes/Descriptions
Replacement windows, cladding, and porch rails</td></tr>
<tr><td colspan="3">Condition:
Excellent
[✓ Good]
Poor</td><td></td></tr>
<tr><td colspan="3">Additional Alterations</td><td></td></tr>
<tr><td colspan="2">Structure Usage
Current: NA
Historic: NA</td><td>Exterior Wall Surface
Synthetic siding</td><td></td></tr>
<tr><td>Roof Material
Asphalt shingle</td><td>Roof Features
None</td><td>Roof Type
Gable</td><td></td></tr>
<tr><td colspan="3">Ornamental Architectural Details
None</td><td>Windows
Double-hung, glass block</td></tr>
<tr><td colspan="4">Outbuildings (<i>Number and Description</i>)
None</td></tr>
</table>

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11709 S. Indiana Ave.

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1908

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

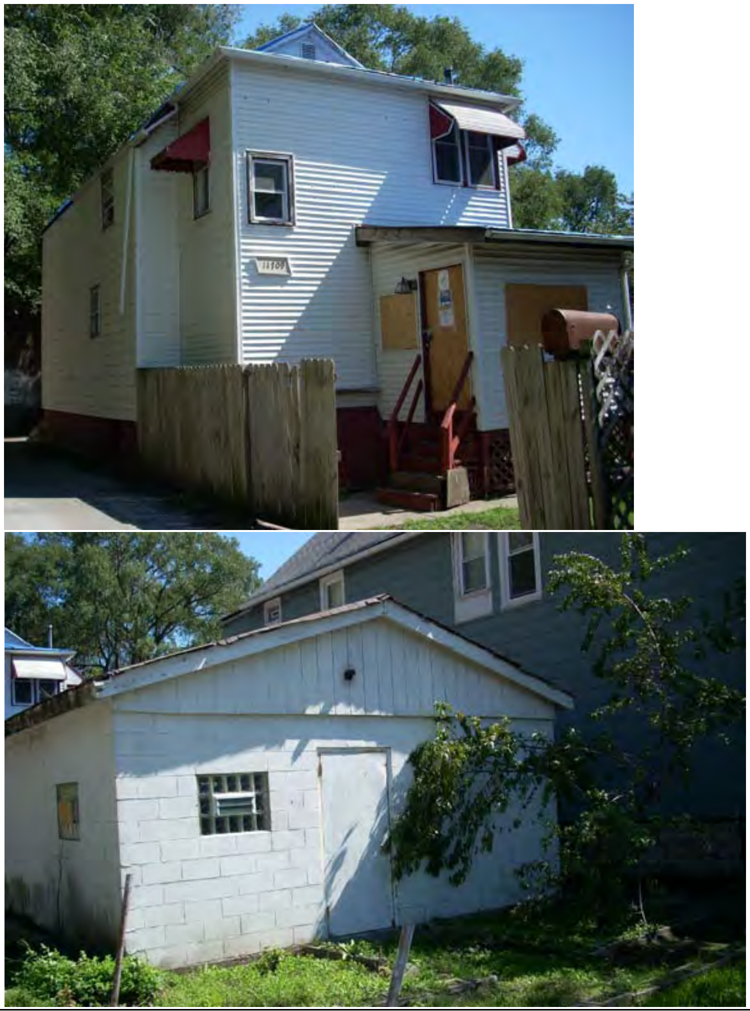
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 2 October 2012

Photos with Captions:
North and west façades of two story, single family residence (above), concrete block outbuilding (below)



Property Description: **Stories:** 2

This two-story frame house in the West Pullman community is situated on a raised concrete block basement, is clad with synthetic siding, and has a gable roof with asphalt shingles. The front elevation features a two-story flat-roofed addition and a single story, shed-roofed, enclosed porch. Fenestration is comprised of non-original one-over-one aluminum-sash windows, many of which are covered with plywood. This house lacks integrity, does not have distinguishing architectural features, and is not individually eligible for listing on the National Register.

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Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered Slight Modification [✓ Major Alteration]			**Additional Notes/Descriptions** Replacement doors, cladding and windows
Condition: Excellent [✓ Good] Poor			
Additional Alterations Addition on front façade, enclosed porch			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt	**Roof Features** None	**Roof Type** Gable, Flat	
Ornamental Architectural Details None			**Windows** Double-hung
Outbuildings (*Number and Description*) Two-car, gable-roofed, concrete block garage with glass block and louvered windows, and asphalt shingles			

Local Landmark	**Y [✓ N]**	
National Register Historic Places	**Y [✓ N]**	
National Register Historic District	**Y [✓ N]**	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11715 S. Indiana Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Multi-family residence

Date of Construction: 1908

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

Vernacular

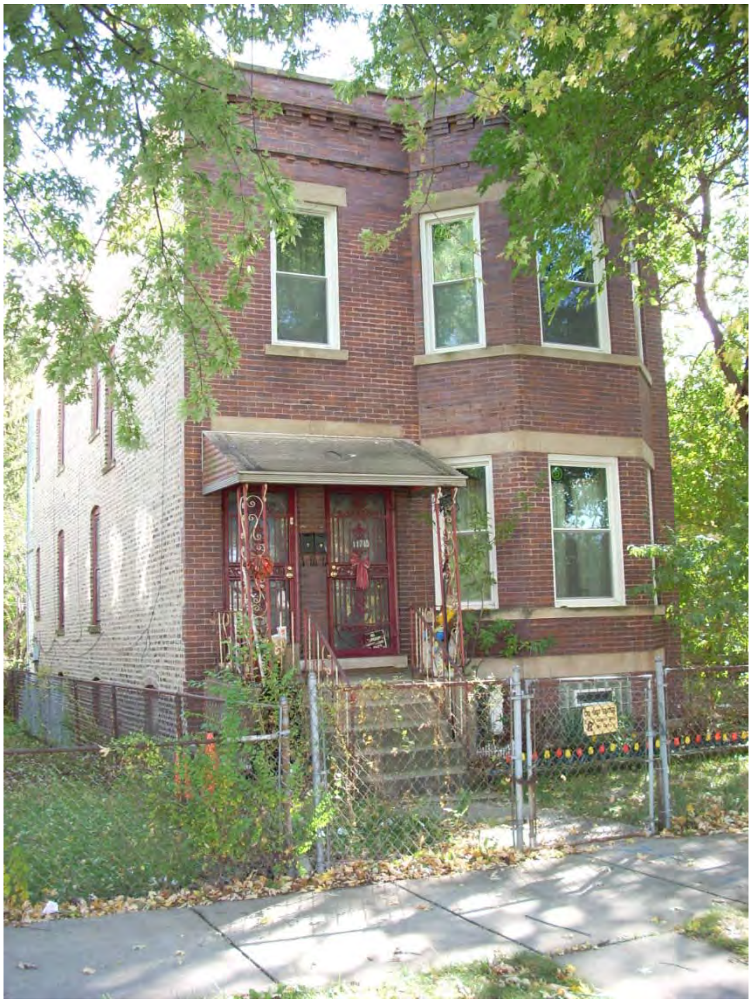
Prepared By: J. Martinez, M. C. Bird, J.Guarino

Photo By: S. Katz

Date: 30 October 2012

Photos with Captions:

West façade of a brick, two-story, multi-family residence.



Property Description: **Stories:** 2

This two-flat, multi-family residential building in the West Pullman community is situated on a raised basement with glass block windows and is clad with face brick on the front elevation and common brick on the side and rear elevations. The building has a full-height window bay pavilion, a flat roof, and parapet. The front elevation has a partial-width porch with concrete steps and open metal posts supporting a metal shed-roof. A pair of off-center storm doors is located under the porch roof. There are seven non-original one-over-one windows: three on the first floor bay and four on the second floor, including three on its window bay. Detailing includes concrete sills, belt courses, brick cornice with corbelling, and brick dentils. This building lacks distinctive architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
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Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details Concrete sills and belt courses; brick cornice with corbelling, brick dentils			**Windows** Double-hung, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11740 S. Indiana Ave

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Vacant

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1888

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

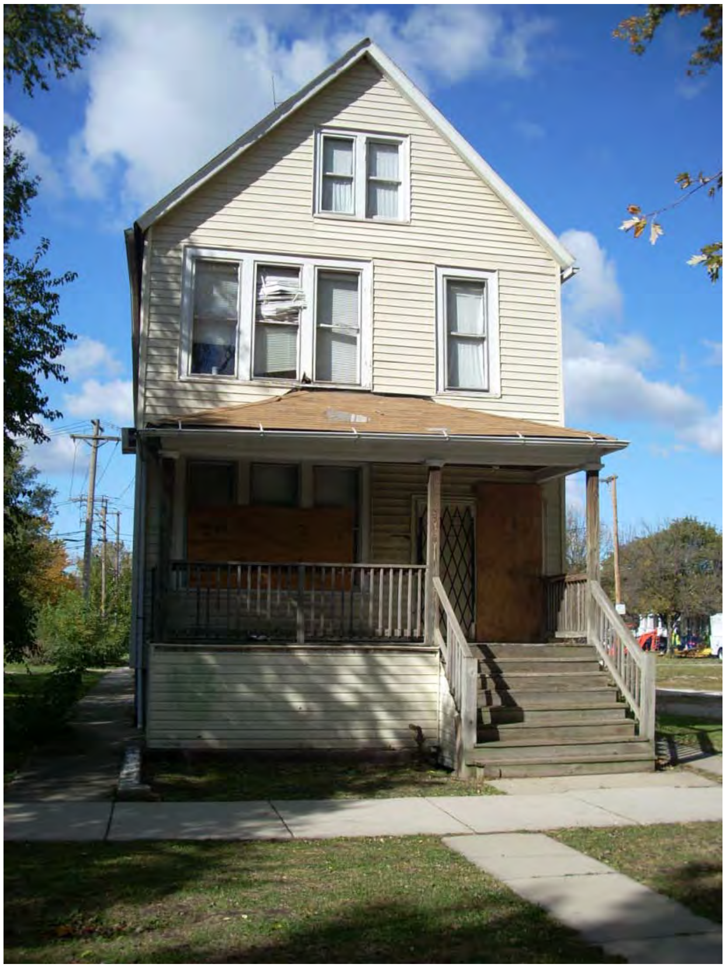
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 30 October 2012

Photos with Captions:
East façade of a two-story, single family, frame residence.



Property Description: **Stories:** 2

This two-story frame house in the West Pullman community is situated on a raised concrete block basement with glass block windows and is covered with synthetic siding. The building has a front gable roof covered with what appears to be roofing paper. The front elevation has a full-width, hip-roof, wood porch with a synthetic-clad base, straight wood railings and posts, and an off-center door. A group of three windows on the first floor are partially obscured by plywood. There are four windows on the second floor (three of which are grouped together) and a pair of windows in the gable. Above the basement, windows are non-original one-over-one aluminum-sash. This house lacks integrity and distinctive architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement door, windows, cladding, and porch rails
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Roofing paper	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

112 E. Kensington Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Flat

Current: Flat

Date of Construction: 1900

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

Vernacular

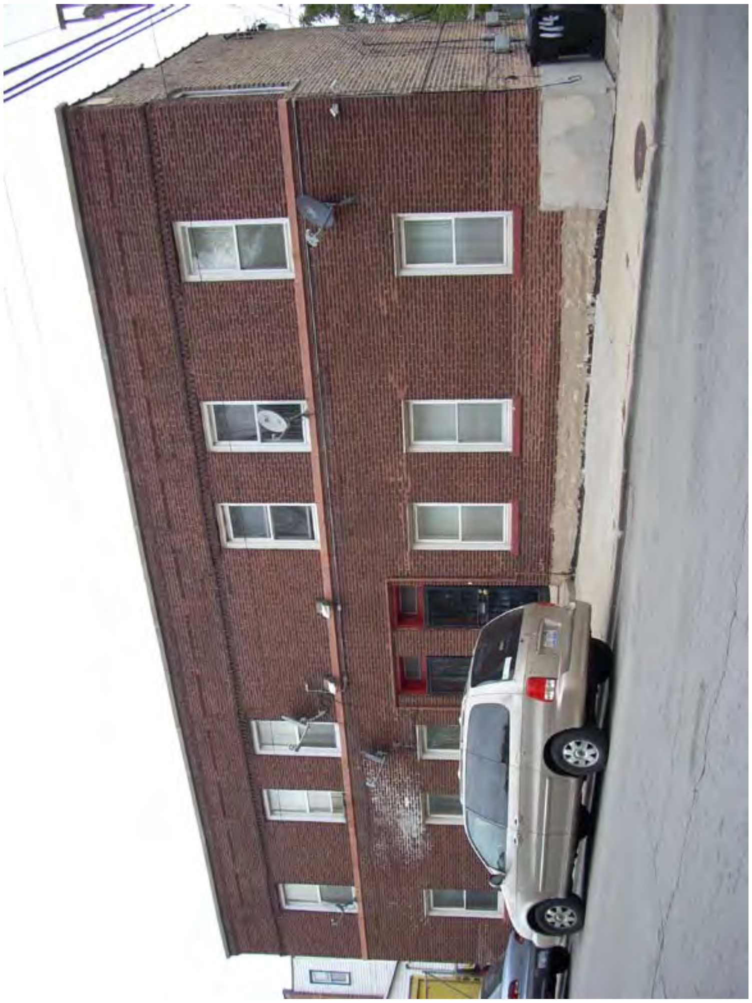
Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 30 October 2012

Photos with Captions:

South façade of a brick, two-story, multi-family (Flat) residence.



Property Description: **Stories:** 2

This two-story brick-clad flat residential building in the West Pullman community has a flat roof and parapet. Its front elevation is clad with face brick, has two centrally-located plate glass doors with transoms, and twelve non-original one-over-one aluminum-sash windows: six on the first floor and six on the second. Detailing includes recessed brick panels with dentils at the parapet level, concrete sills, coping, and a concrete stringcourse. This building lacks integrity and distinctive architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
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Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details Recessed brick panels with dentils; concrete stringcourse, coping, and sills			**Windows** Double-hung, fixed pane
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

121 E. Kensington Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Flat

Current: Flat

Date of Construction: 1888

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

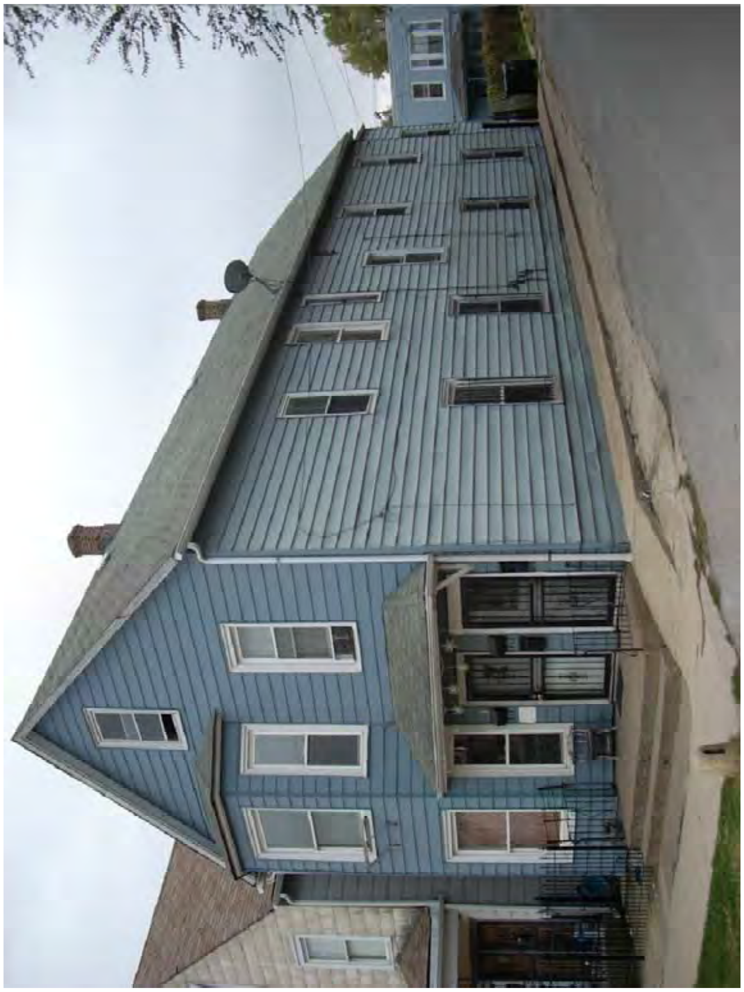
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 30 October 2012

Photos with Captions:
North façade of a two-story, multi-family, frame residence.



Property Description: **Stories:** 2

This two-story, frame, two-flat residential building in the West Pullman community is covered with synthetic siding. The building has a two-story, three-sided window bay pavilion on its front elevation and a front gable roof covered with asphalt shingles. The front elevation has an off-center pair of hollow core metal doors topped by a bracketed pent roof. There are three windows on the first floor, four windows on the second floor, and a single window in the gable. All windows are non-original one-over-one aluminum-sash. This building lacks integrity and distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered	[✓ Slight Modification]	Major Alteration	**Additional Notes/Descriptions** Replacement doors, windows, and cladding
Condition: [✓ Excellent]	Good	Poor	
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details Bracketed pent roof			**Windows** Double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

121 ½ E. Kensington Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Multi-family residence

Date of Construction: 1888

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

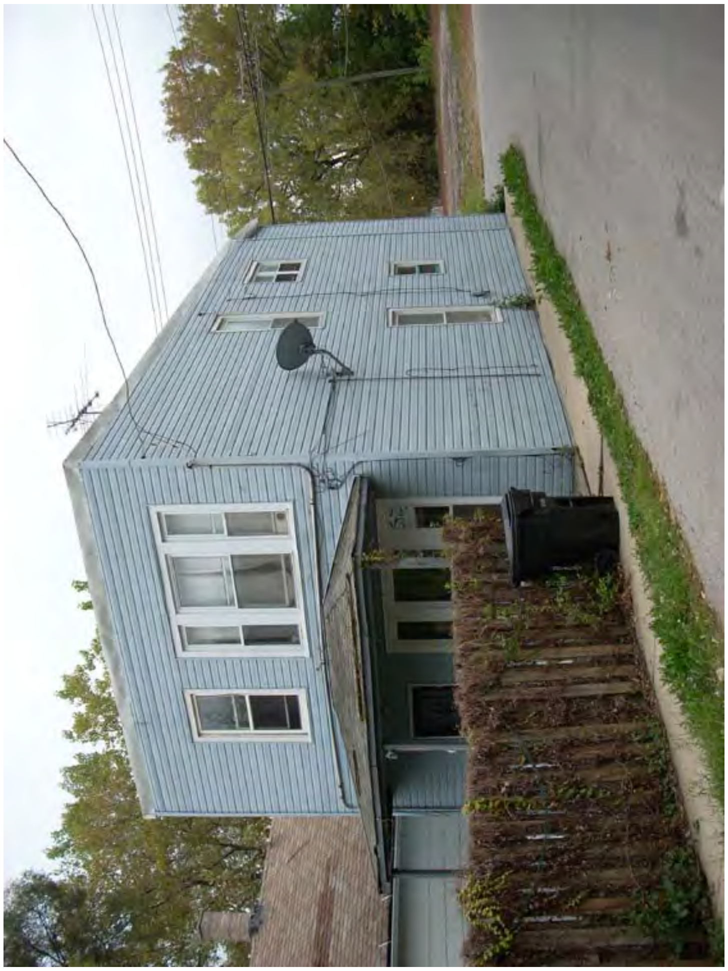
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 30 October 2012

Photos with Captions:
North and west façade of a two-story, multi-family, frame residence.



Property Description: **Stories:** 2

This two-story residential building in the West Pullman community is clad with synthetic siding and has a flat roof and parapet. The first floor of its front elevation has an off-center storm door and a group of three windows sheltered by a full-width hip roof that is supported by three wood posts. The second floor of the front elevation has four windows, three of which are grouped together. Windows are non-original one-over-one aluminum sash. This house lacks integrity and distinctive architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
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Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity:			**Additional Notes/Descriptions**
Unaltered	[✓ Slight Modification]	Major Alteration	Replacement windows and cladding
Condition:			
Excellent	[✓ Good]	Poor	
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details None			**Windows** Double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
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Historical Resource Recordation Form

Property Name

Historic: Venetian Hall (Sanborn 1938)

Common/Current: Unknown

Property Address:

133-139 E .Kensington Avenue
(137 E. Kensington CCA)

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Miracle Temple Faith Church

Property Use

Historic: Commercial

Current: Religious Building

Date of Construction: 1924-1926

Architect's Name: Arthur F Hughes

Builder/Contractor: Not in CHRS

Architectural Style:

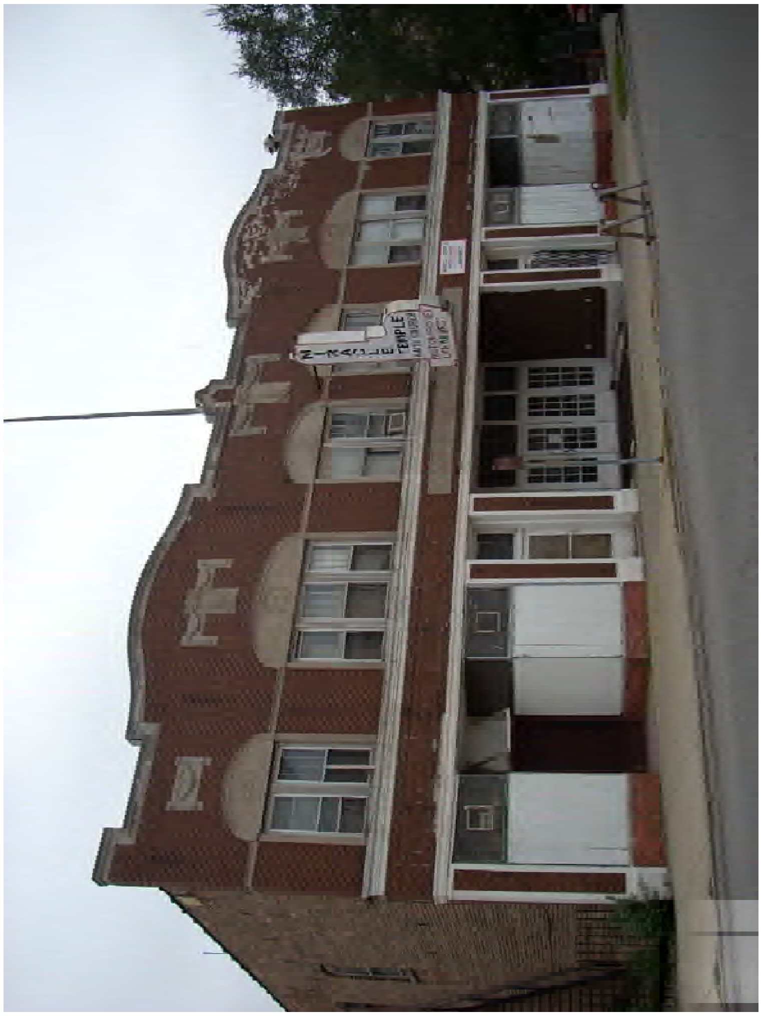
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 30 October 2012

Photos with Captions:
North façade of a brick, two-story, religious building.



Property Description: **Stories:** 2

This two-story building in the West Pullman community (formerly part of Kensington) was originally called "Venetian Hall." The performance hall was built for a cultural/recreational purpose, although it has long since been repurposed as a church. The 1938 Sanborn shows the hall with a stage, balcony, and place for storage of scenery. The street entrance was flanked by two storefronts in 1938, as it is now.

The building is clad with face brick on its front elevation and common brick on its side and rear elevations. The building has a flat roof and a shaped parapet with concrete coping. The first floor of the front elevation has a recessed centrally located bay with three pairs of multi-light wood doors and in-filled transoms. This central bay is flanked by two original storefronts with central recessed doors and flanking display windows that are covered with wood and topped by transoms that have been in-filled with glass block. Separating the central bay from the two flanking storefronts are two doors with transoms that provide access to the second floor. The spandrel area directly above the central entrance bay has a concrete sign plate with incised lettering that reads: “Venetian Hall.” Fenestration on the second floor features six-over-one and three-over-one wood-sash windows arranged in pairs and in groups of three, topped by round-arch stone lintels with rosette motifs. The parapet features a series of Classical shields and swags.

The exterior of this building has good overall integrity, although elements of the original storefronts materials are no longer extant. However, it does not display sufficient distinguishing architectural features to qualify as individually eligible for listing on the National Register for its architecture. Instead, is recommended for individual listing under Criterion A for its original use as a social venue for area residents in the early twentieth century. Local theater houses, such as the Venetian Hall, were jewels within the local communities. It's rare to see an early twentieth century neighborhood social hall that retains its original storefronts and is set within a residential area comprised of worker’s housing, rather than along a commercial thoroughfare. The opening of Illinois Terra Cotta works in the first half of the twentieth century brought Italians to Kensington; the area gradually became a center of South Side Italian-American life with the establishment of Venetian Hall and the nearby San Antonio de Padua (patron saint of Venice) Roman Catholic Church.

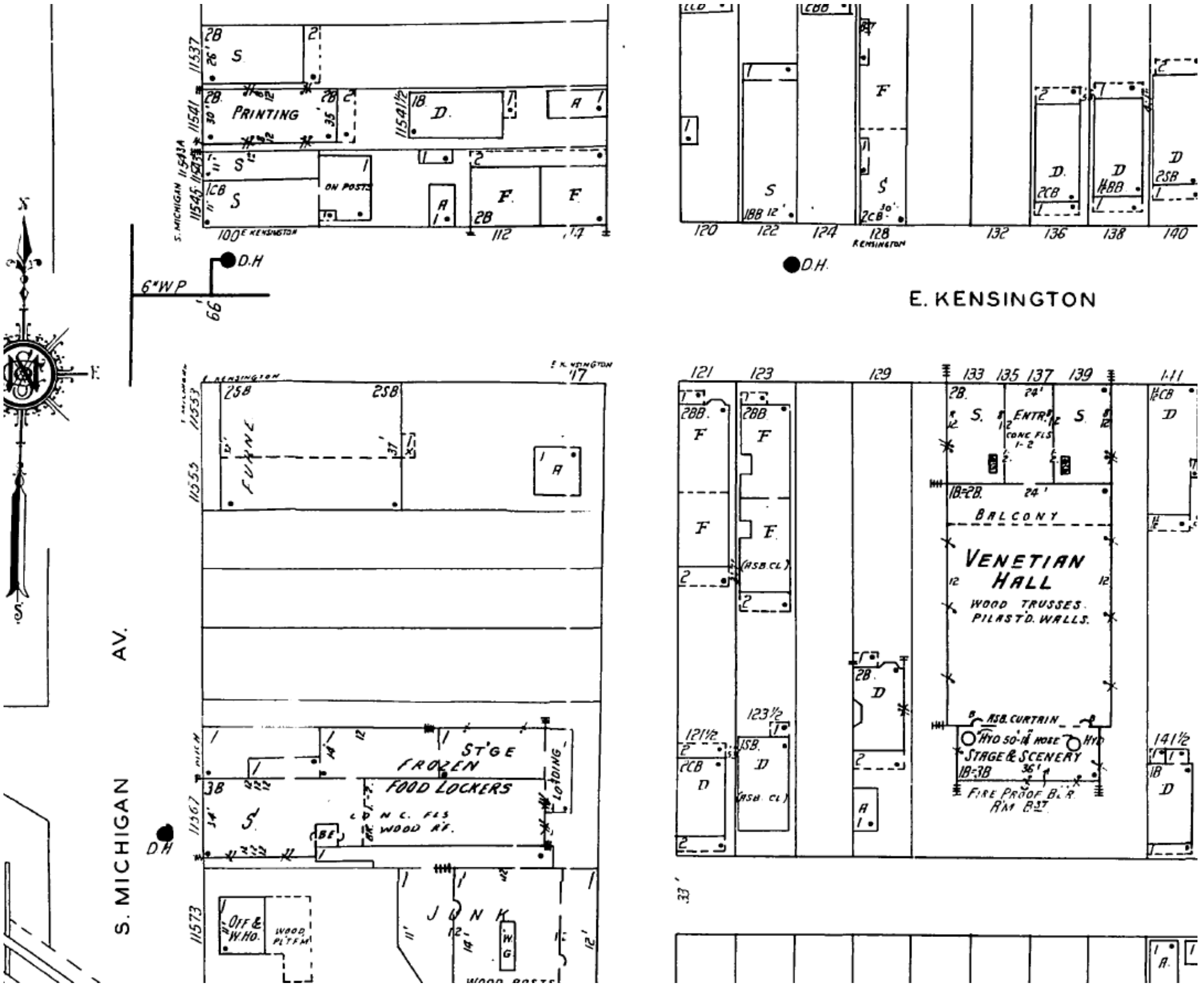
Structural Survey

<table>
<tr><td colspan="3">Integrity:
Unaltered [✓ Slight Modification] Major Alteration</td><td>Additional Notes/Descriptions
Some original storefront materials no longer extant</td></tr>
<tr><td colspan="3">Condition:
Excellent [✓ Good] Poor</td><td></td></tr>
<tr><td colspan="3">Additional Alterations
Converted to use as a church.</td><td></td></tr>
<tr><td colspan="2">Structure Usage
Current: NA
Historic: NA</td><td>Exterior Wall Surface
Brick</td><td></td></tr>
<tr><td>Roof Material
Unknown</td><td>Roof Features
Parapet</td><td>Roof Type
Flat</td><td></td></tr>
<tr><td colspan="3">Ornamental Architectural Details
Concrete coping, incised name plate, stone lintels, Classical shields and swags</td><td>Windows
Double-hung, glass block</td></tr>
<tr><td colspan="4">Outbuildings (<i>Number and Description</i>)
None</td></tr>
</table>

Local Landmark	Y [✓ **N**]	
National Register Historic Places	Y [✓ **N**]	
National Register Historic District	Y [✓ **N**]	**Name:**
Individually Eligible? Yes	[✓ **A**] **B** **C**	**Significance:** Good overall integrity and important social gathering place for Italian-American residents of Kensington in the early twentieth century.

Additional Comments:

“Venetian Hall” in 1938 Sanborn.


E. KENSINGTON
S. MICHIGAN AV.
VENETIAN HALL
WOOD TRUSSES
PILASTD. WALLS
BALCONY
ENTR.
STAGE & SCENERY
FIRE PROOF B.R. RM BST.
ASB. CURTAIN
PRINTING
FROZEN FOOD LOCKERS
ST'GE
LOADING
JUNK
OFF & W.HO.
6"WP
D.H
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123½
141½
100 E KENSINGTON
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114
117
11537
11541
11541½
11545
11553
11555
11567
11573

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

9723 S. La Salle Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1955

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

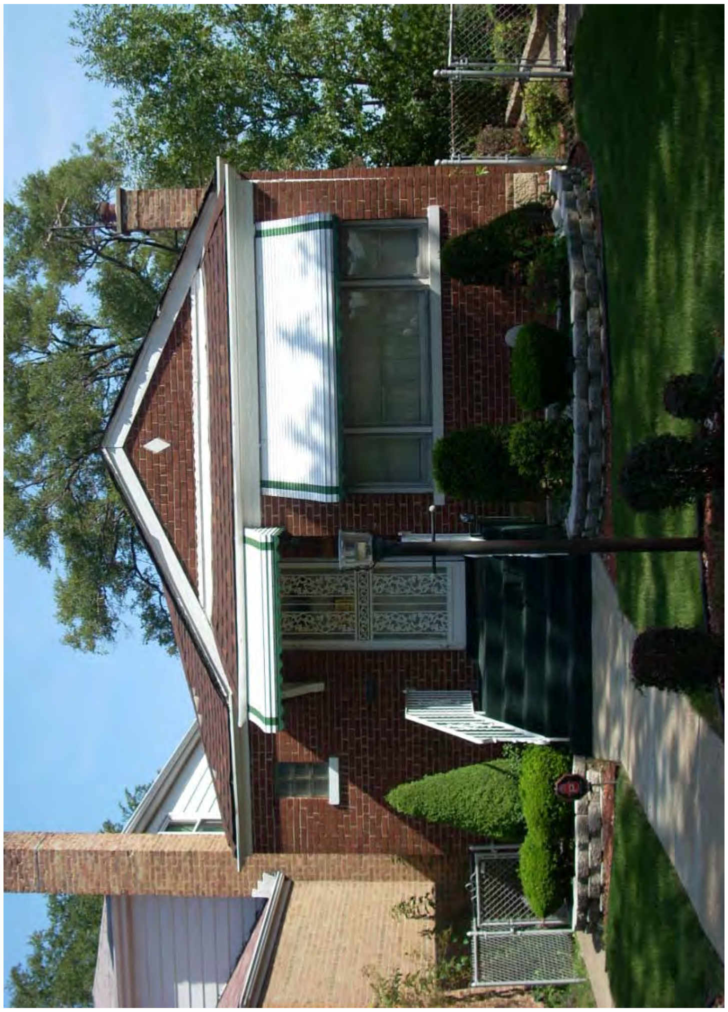
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 8 October 2012

Photos with Captions:
West façade of a brick, one-story, single family residence.



Property Description: **Stories:** 1

This one-story home in the Roseland community is situated on a raised brick basement with casement windows and has a gable-on-hip roof clad with asphalt shingles. The front elevation has a pent roof, an off-center door, concrete steps with metal railings, a small glass block window, and a picture window flanked by casements. This window group is partially obscured by a low metal awning. Detailing includes a diamond-shaped tile insert in the gable end, stone quoins near the base of the residence, concrete sills, and scalloped boards above and below the pent roof. It does not feature distinguishing architectural elements and is not individually eligible for listing on the National Register.

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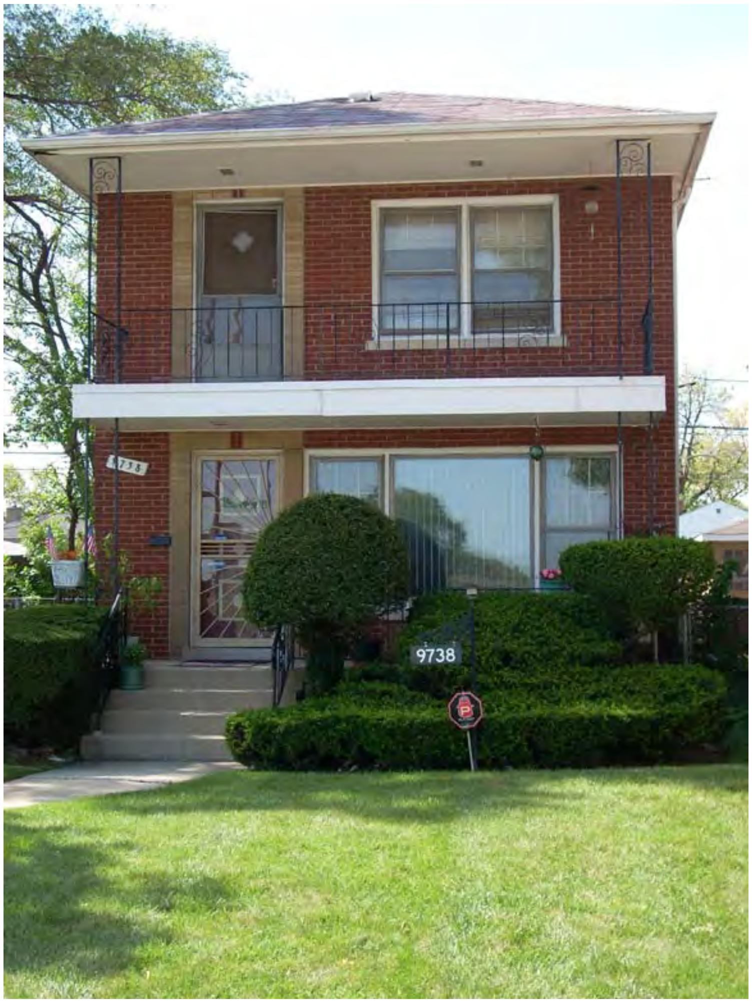
Structural Survey

Integrity: [✓ Unaltered] Slight Modification Major Alteration			**Additional Notes/Descriptions**
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt	**Roof Features** None	**Roof Type** Gable-on-hip	
Ornamental Architectural Details Diamond-shaped tile insert, stone quoins, concrete sills, and scalloped boards			**Windows** Fixed-pane, glass block, casement
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Historical Resource Recordation Form

Property Name **Historic:** Bldg. not labeled, not in CHRS **Common/Current:** Unknown	**Photos with Captions:** East façade of a brick, two-story, single family residence. 
Property Address: 9738 S. La Salle Street	
HAARGIS Number: Not in database	
Present Owner and /or Occupant: Unknown	
Property Use **Historic:** Single family residence **Current:** Single family residence	
Date of Construction: 1964 **Architect's Name:** Not in CHRS **Builder/Contractor:** Not in CHRS	
Architectural Style: Vernacular	
Prepared By: J. Martinez, M. C. Bird, J. Guarino **Photo By:** S. Katz **Date:** 8 October 2012	

Property Description: **Stories:** 2

This home in the Roseland community is clad with orange face brick and has a hip roof covered with asphalt shingles. The hip roof extends beyond the front elevation to serve as the roof of the second floor balcony, which is situated above the flat-roofed full-façade porch. Both levels feature open metal supports and railings. The porch has concrete steps. The front elevation features off-center doors trimmed with stone on both floors, a picture window flanked by double-hung windows on the first floor, and a pair of double-hung windows on the second floor. This building does not feature distinguishing architectural features and is not individually eligible for listing on the National Register.

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Structural Survey

Integrity: [✓ Unaltered] Slight Modification Major Alteration			**Additional Notes/Descriptions**
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt	**Roof Features** None	**Roof Type** Hip	
Ornamental Architectural Details Stone at entrances.			**Windows** Double-hung, fixed-pane
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

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Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

9902 S. La Salle Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1919

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

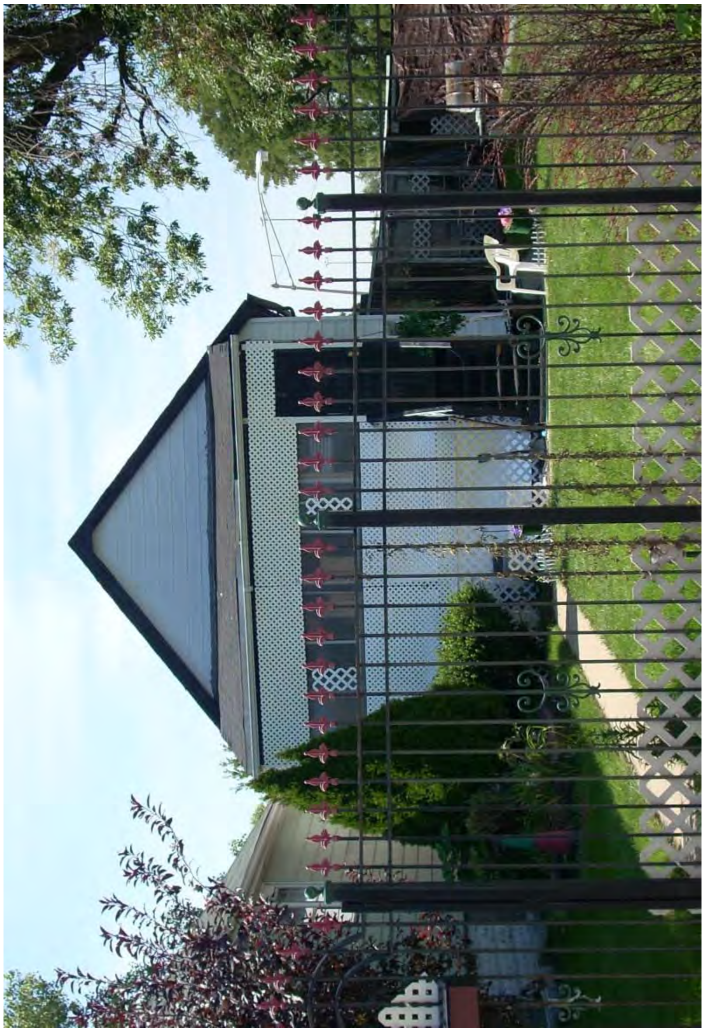
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 8 October 2012

Photos with Captions:
East façade of a one-story, frame, single family residence.



Property Description: **Stories:** 1

This one-story cottage in the Roseland community is situated on a raised brick basement with glass block windows, is clad with aluminum siding, and has a front gable roof covered with asphalt shingles. A non-original, full-width, enclosed front porch covered with lattice obscures the original front elevation of the house. The porch has a horizontal strip of square, non-original windows and an off-center door. The side elevations have one-over-one windows. This home does not have sufficient integrity or distinguishing features to qualify as eligible for individual listing on the National Register.

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Structural Survey

Integrity: Unaltered Slight Modification [✓ Major Alteration]			**Additional Notes/Descriptions** Replacement windows, cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations Addition to front façade			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung, fixed-pane, glass block
Outbuildings (*Number and Description*)			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

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Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

9706 S. Lafayette Avenue
Alternate: 9708 S Perry Ave.

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1957

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

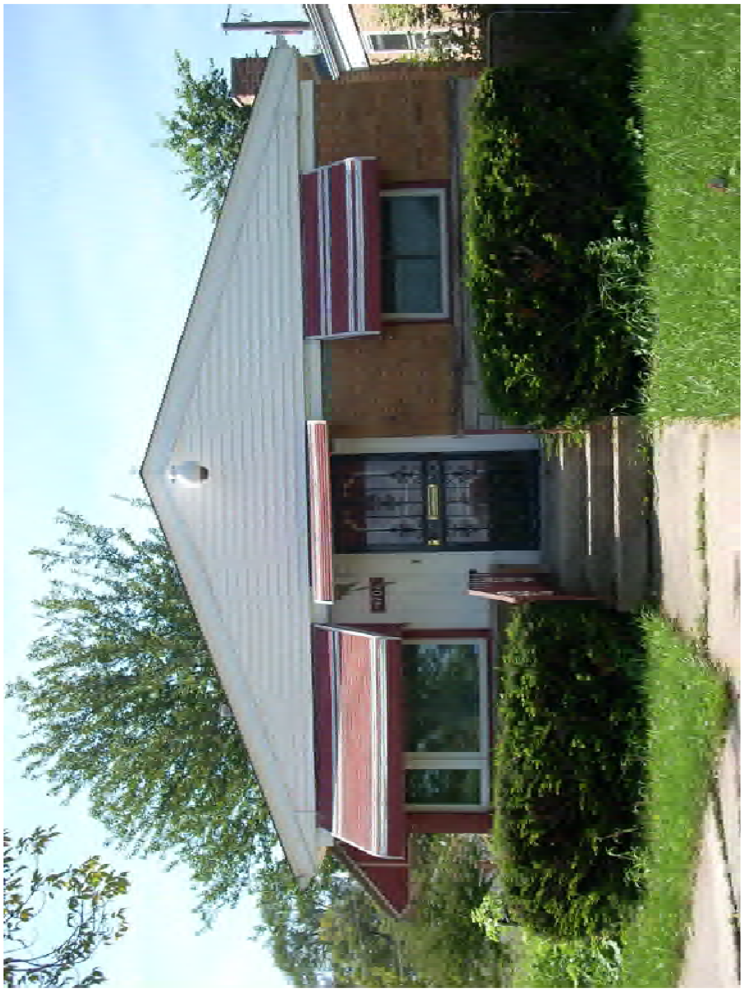
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 8 October 2012

Photos with Captions:
East façade of a brick, one-story, single family residence.



Property Description: **Stories:** 1

This one-story home in the Roseland community is situated on a raised brick basement and has a front gable roof covered with asphalt shingles. Its front elevation is clad with faux stone below the sill line, orange face brick above, and synthetic siding in the gable. It has a centrally-located door, concrete steps with metal railings, a single-pane window flanked by a casement, and what appears to be a pair of casement windows. Windows are partially obscured by low metal awnings. This standard 1950s era house does not display distinguishing architectural features and is not individually eligible for listing on the National Register.

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Structural Survey

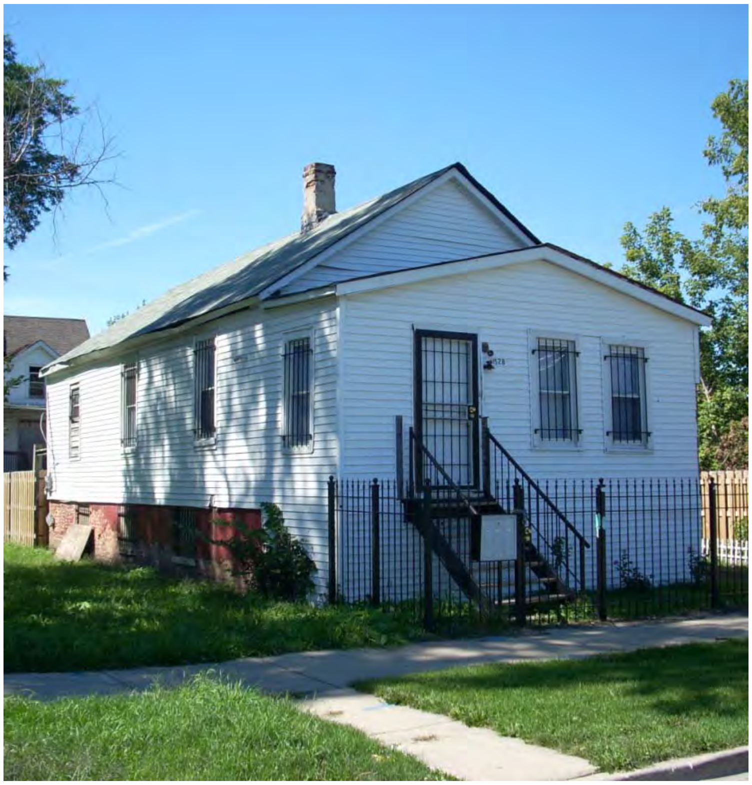
Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick (main), Synthetic siding (gable end)	
Roof Material Asphalt	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Casement, fixed-pane, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name **Historic:** Not labeled, not in CHRS **Common/Current:** Unknown	**Photos with Captions** East and south façades of one-story, single family, frame residence. 
Property Address: 11528 S. Lafayette Avenue	
HAARGIS Number: Not in database	
Present Owner and /or Occupant: Unknown	
Property Use **Historic:** Single family residence **Current:** Single family residence	
Date of Construction: 1889 **Architect's Name:** Not in CHRS **Builder/Contractor:** Not in CHRS	
Architectural Style: Vernacular	
Prepared By: C. Tolmie, M. C. Bird, J. Guarino **Photo By:** S. Katz **Date:** 10 September 2012	

Property Description: **Stories:** 1

This one-story house in the West Pullman community is situated on a raised brick basement, is clad with aluminum siding, and has a front gable roof covered with asphalt shingles. Its front elevation features a gable-roofed, full-width, enclosed porch with an off-center door, metal steps and railings, and two non-original one-over-one windows. This house lacks sufficient integrity and distinguishing architectural features to qualify as individually eligible for listing on the National Register.

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Structural Survey

Integrity: Unaltered	[✓ Slight Alterations]	Major Alterations	**Additional Notes/Descriptions** Replacement windows, door, and cladding
Condition: [✓ Excellent]	Good	Poor	
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11532 S. Lafayette Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1888

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

Vernacular

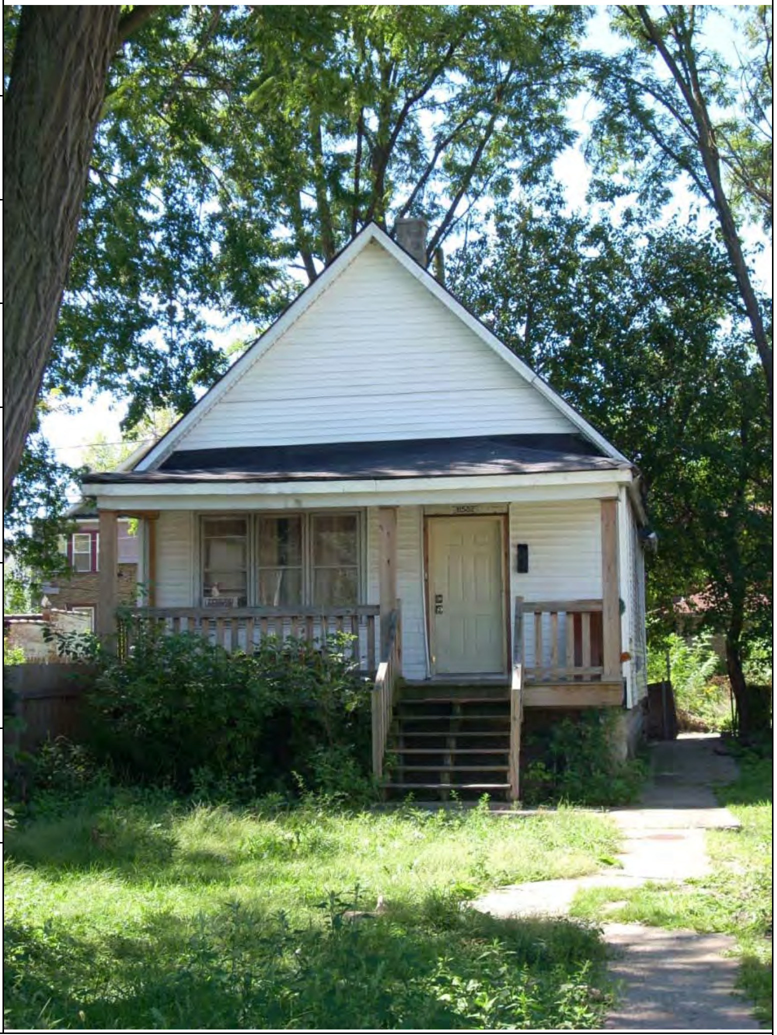
Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 10 September 2012

Photos with Captions

East façade of one-story, single-family, frame residence.



Property Description: **Stories:** 1

This one-story house in the West Pullman community is situated on a raised concrete block basement, is clad with synthetic siding, and has a gable roof covered with asphalt shingles. Its front elevation features a flat-roofed, full-width, wood porch with wood slats and posts. It also has an off-center hollow core metal door and a strip of three non-original one-over-one aluminum sash windows. This house lacks sufficient integrity and distinguishing architectural features to qualify as individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Alterations] Major Alterations			**Additional Notes/Descriptions** Replacement door, windows, cladding, and porch
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11557 S. Lafayette Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Multi-family residence

Date of Construction: 1883

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

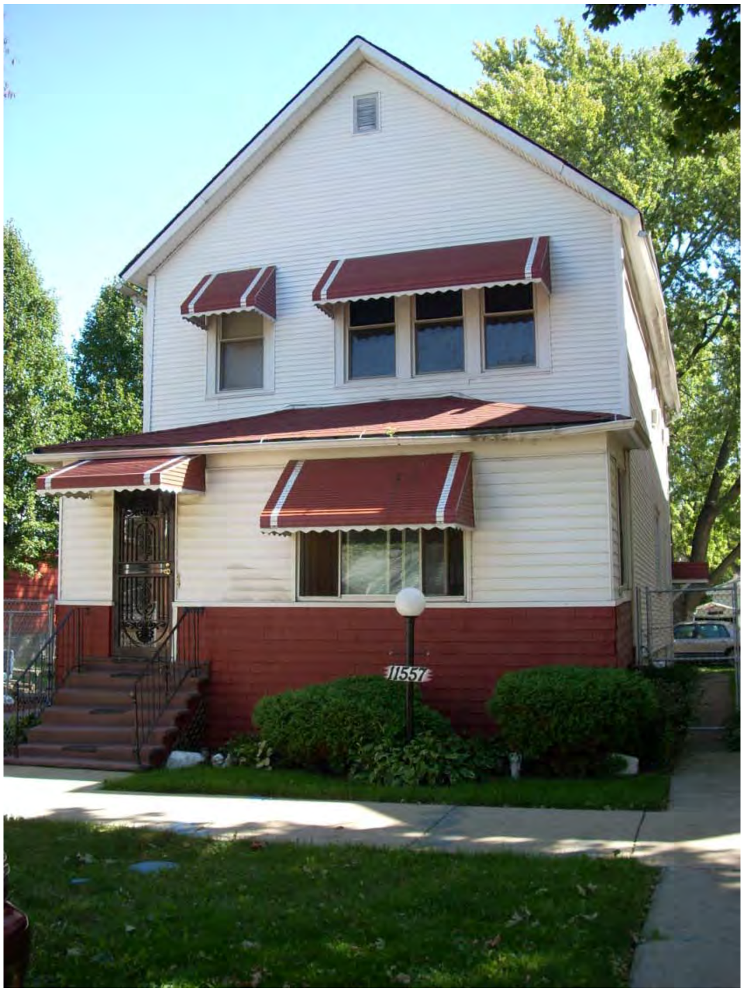
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 22 October 2012

Photos with Captions:
West façade of a two-story, multi-family, frame residence.



Property Description: **Stories:** 2

This two-story house in the West Pullman community is situated on a raised concrete block basement with glass block windows and is covered with synthetic siding. The building has a front gable roof covered with asphalt shingles. Its front elevation has a full-width, hip-roof, enclosed porch with non-original synthetic siding, an off-center entrance with metal storm door and metal awning, and a first floor group of sliding windows that is partially obscured by a metal awning. The second floor of the front elevation has a strip of three windows and a single window, all of which are non-original one-over-one aluminum-sash with metal awnings. This house lacks integrity and distinctive architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows and cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung, glass block, sliding
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11563-11565 S. Michigan Ave

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Industrial

Current: Industrial

Date of Construction: 1900 (1962 addition)

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

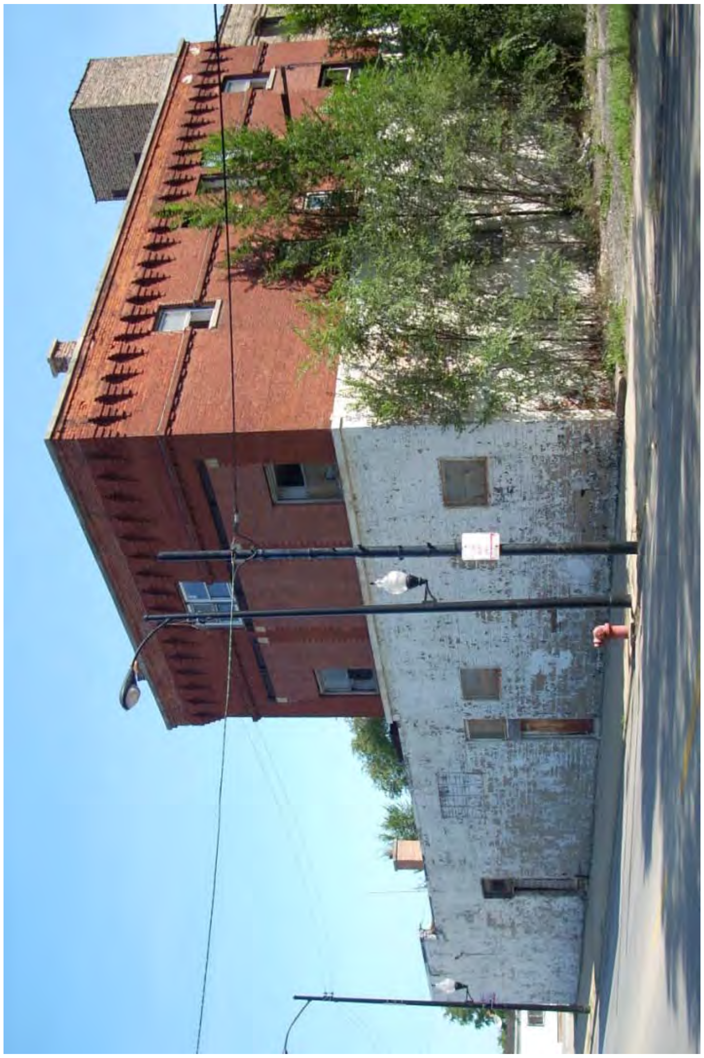
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 10 September 2012

Photos with Captions:
North and east façades of two-story, brick, industrial building.



Property Description: **Stories:** 2

This two-story industrial building in West Pullman has a flat roof and parapet. A one-story, flat-roofed north wing is a later addition (1962). The original building has been drastically altered with new brick cladding on the first floor and the removal of original doors and windows on the front elevation. The first floor of the front elevation currently features two small non-original windows. The original window openings on the second floor of the front elevation have been in-filled with brick. Two one-over-one windows have been installed on either side. Window openings on the side elevations have all been altered as well. The parapet retains original decorative brick corbelling along the front and side elevations. This building does not feature sufficient integrity or distinguishing architectural features to qualify as individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered Slight Modification [✓ Major Alteration]			**Additional Notes/Descriptions** Replacement windows, openings in-filled, later addition
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details Brick corbelling			**Windows** Double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11592 S. Michigan Ave.

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

EZ Phone

Property Use

Historic: Mixed-use

Current: Mixed-use

Date of Construction: 1888

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

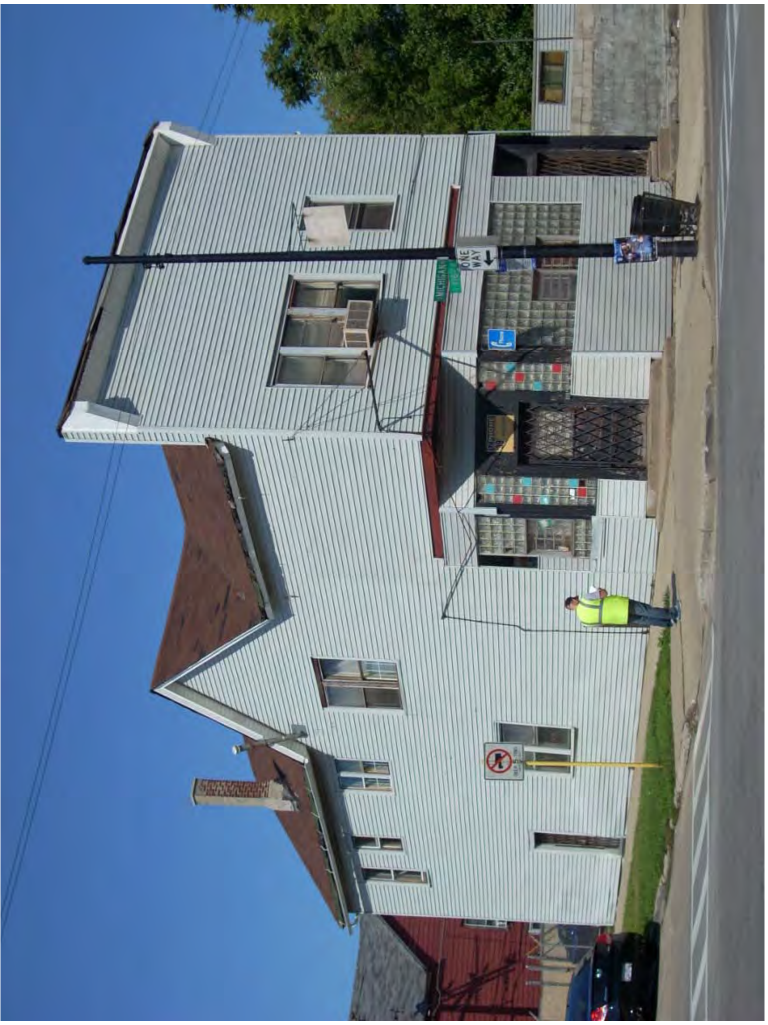
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 10 September 2012

Photos with Captions:
East and south façades of two-story, frame building.



Property Description: **Stories:** 2

This two-story frame building at the northwest corner of Michigan Avenue and 116th Street in the West Pullman community is clad with synthetic siding and has a cross-gable roof covered with asphalt shingles. Its front (Michigan Avenue) elevation features a tall false front, a recessed corner storefront entrance flanked by non-original glass block windows, an off-center metal door with transom that provides access to second floor apartments, and four one-over-one windows. Fenestration along the 116th Street elevation is also comprised of one-over-one windows. This building does not feature sufficient integrity or distinguishing architectural features to qualify as individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows & cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** Parapet	**Roof Type** Cross-Gable	
Ornamental Architectural Details None			**Windows** Double-hung, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11593 S Michigan Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Step of Faith

Property Use

Historic: Commercial (Upholstery, 1938)

Current: Mixed-Use

Date of Construction: 1883

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

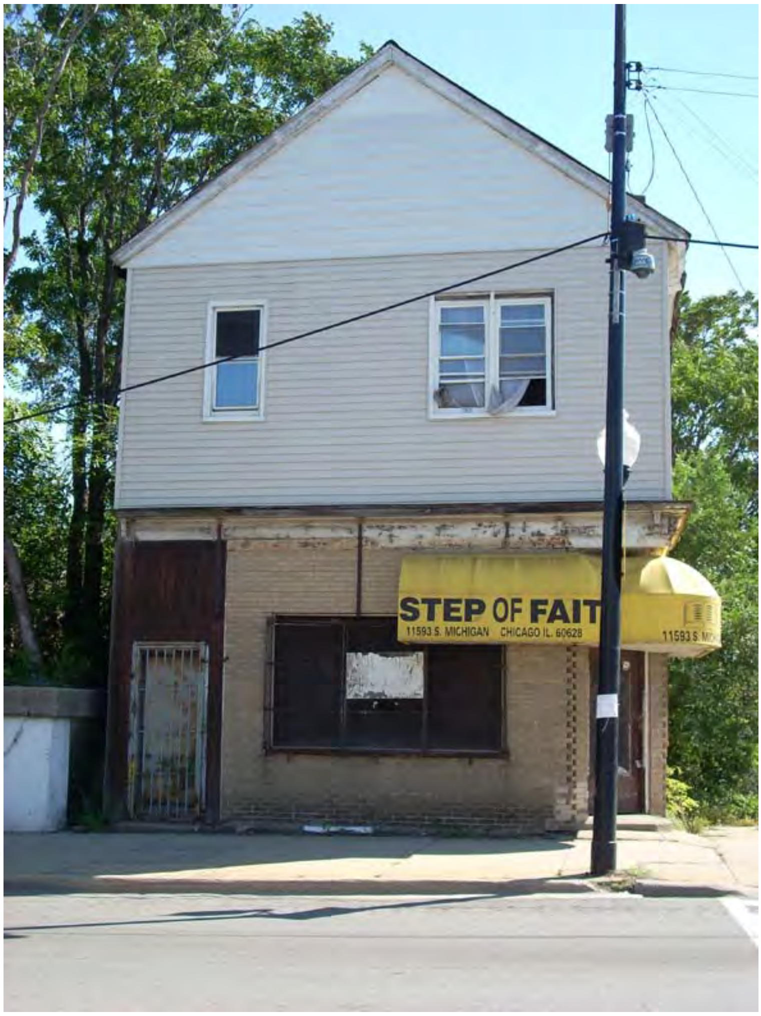
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 2 October 2012

Photos with Captions:
West façade of two-story, mixed-use building.



Property Description: **Stories:** 2

This two-story, frame, mixed-use building at the northeast corner of Michigan Ave. and 116th Street in the West Pullman community is clad with synthetic siding (upper) and brick (lower) and has a front gable roof with asphalt shingles. The front elevation has a recessed brick storefront with an entrance at corner and one at the opposite end, which is covered with plywood. Neither the doors nor the windows appear to be original. The cornice above the first floor includes wood brackets. The second floor on both street elevations features non-original one-over-one aluminum-sash windows. This building lacks integrity, does not have distinguishing architectural features, and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered Slight Modification [✓ Major Alteration]			**Additional Notes/Descriptions** Replacement windows, doors, and cladding
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding (upper), Brick (lower)	
Roof Material Asphalt	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details Wood brackets along first floor cornice line			**Windows** Double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11611 S. Michigan Ave.

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Multi-family residence

Date of Construction: 1888

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

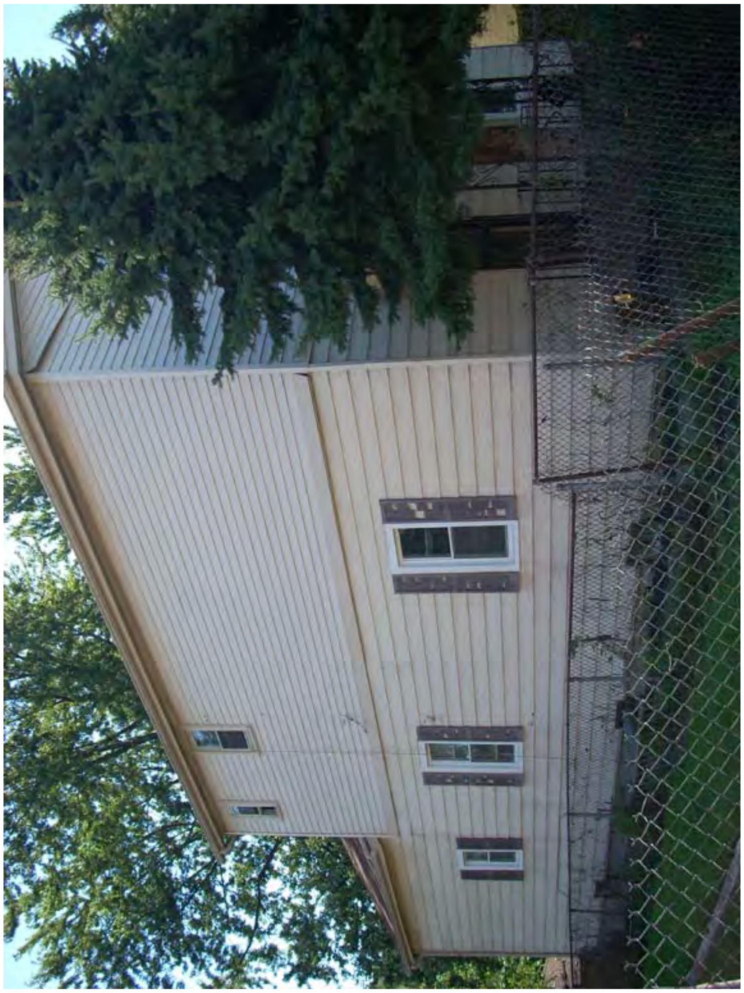
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 2 October 2012

Photos with Captions:
West and north façades of two-story, multi-family, frame building.



Property Description: **Stories:** 2

This two-story frame house in the West Pullman community is clad with synthetic siding and has a front gable roof with asphalt shingles. Its front elevation features an off-center non-original hollow core metal door fronted by a concrete stoop with metal railings and open metal posts supporting a metal canopy. There are two windows on the first floor and two on the second, all of which are non-original one-over-one aluminum sash.

The 1938 Sanborn shows this residence as a 1.5-story building with a round bay pavilion. Subsequent alterations, including the addition of a full second floor have heavily altered this building. This house lacks integrity, does not have distinguishing architectural features, and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered Slight Modification [✓ Major Alteration]			**Additional Notes/Descriptions** Replacement windows and siding, removal of bay pavilion, addition of a second floor
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

9925 S. Normal Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1946

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

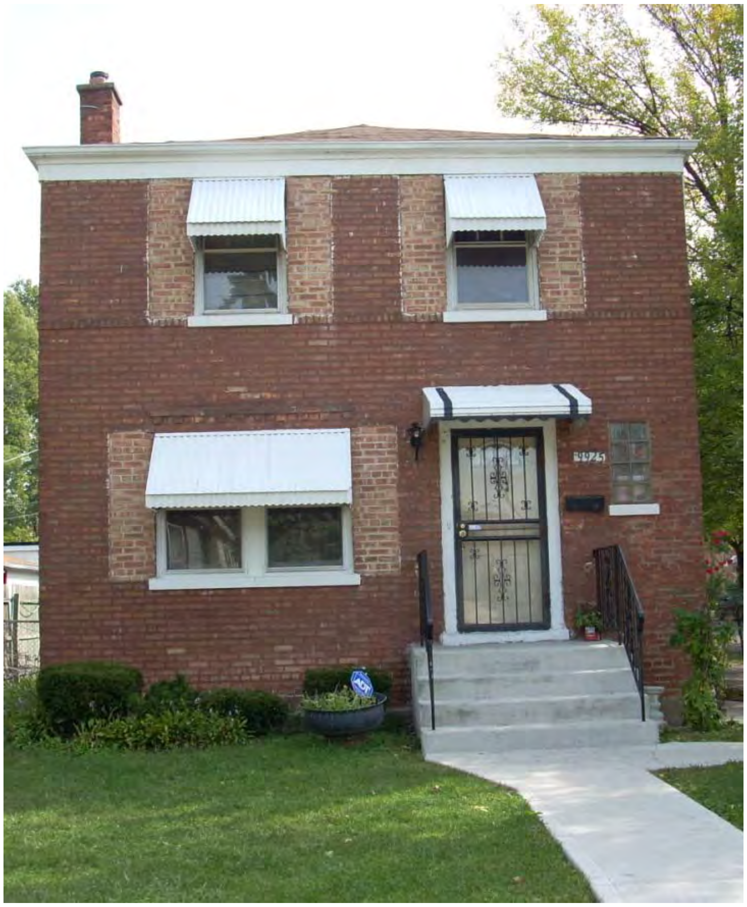
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: September 2012

Photos with Captions:
West façade of two-story, brick, single-family residence.



Property Description: **Stories:** 2

This two-story brick-clad house at the southeast corner of Normal Avenue and 99th Place in the Washington Heights community is situated on a raised basement with glass block windows. The building has a hip roof covered with asphalt shingles. Its front elevation has an off-center non-original hollow core metal door, a small adjacent glass block window, concrete steps with metal railings, a pair of non-original double-hung windows on the first floor, and two non-original double-hung windows on the second floor. The door and all front elevation windows have metal awnings. Details include a brick stringcourse and corbelling above first floor window. The difference in the brick colors relates to the removal of shutters. It does not display distinguishing architectural features and is not individually eligible for listing on the National Register.

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Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity:			**Additional Notes/Descriptions**
Unaltered	[✓ Slight Modification]	Major Alteration	Replacement windows
Condition:			
Excellent	[✓ Good]	Poor	
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Hip	
Ornamental Architectural Details Brick stringcourse and corbelling, decorative glass block			**Windows** Double-hung, glass block
Outbuildings (*Number and Description*) Garage			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

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505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

9939 S. Normal Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1939

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

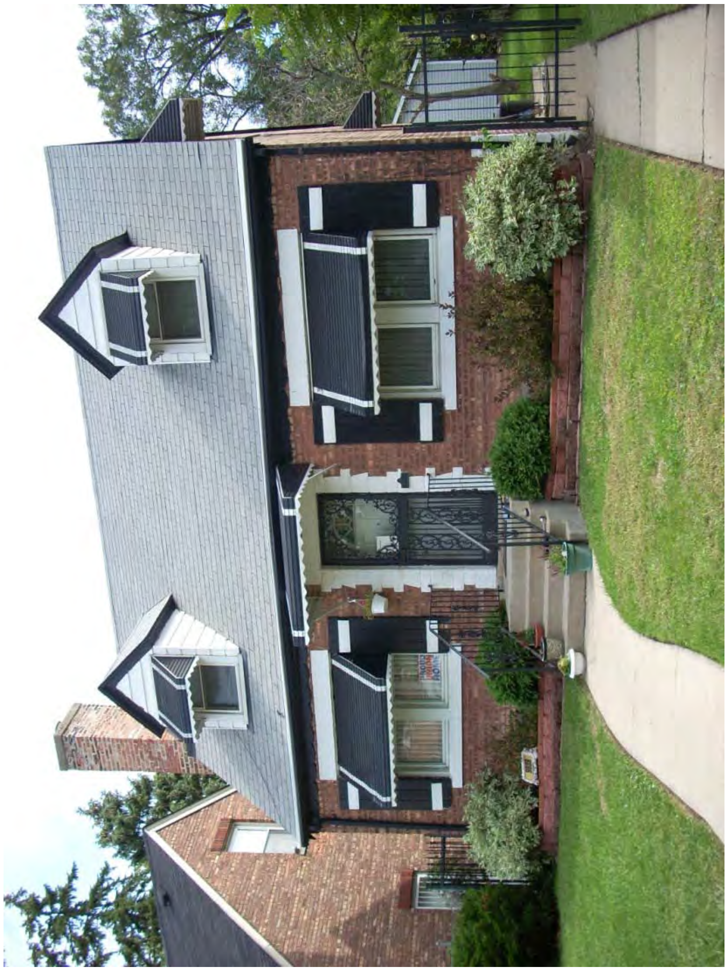
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 10 October 2012

Photos with Captions:
West façade of a brick, one-story, single family residence.



Property Description: **Stories:** 1

This one-story brick-clad house in the Washington Heights community is situated on a raised brick basement with glass block windows. It has a side-gabled roof covered with asphalt shingles. Its front elevation has a centrally located hollow metal paneled door with fanlight, concrete steps with metal railings, two sets of paired windows, and two aluminum-clad gabled dormers, each of which has one window. Windows are non-original one-over-one aluminum-sash. All front elevation windows and the front door feature metal awnings. Detailing includes concrete sills, lintels, and quoins surrounding the door. This house does not feature sufficient distinguishing architectural features to qualify as individually eligible for listing on the National Register.

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement door, windows, and siding on dormers
Condition: [✓ Excellent] Good Poor			
Additional Alterations Dormers may be a later addition			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingles	**Roof Features** Dormers	**Roof Type** Side gable	
Ornamental Architectural Details Quoins at entrance, concrete sills and lintels			**Windows** Double-hung, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

10457 S. Normal Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1927

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

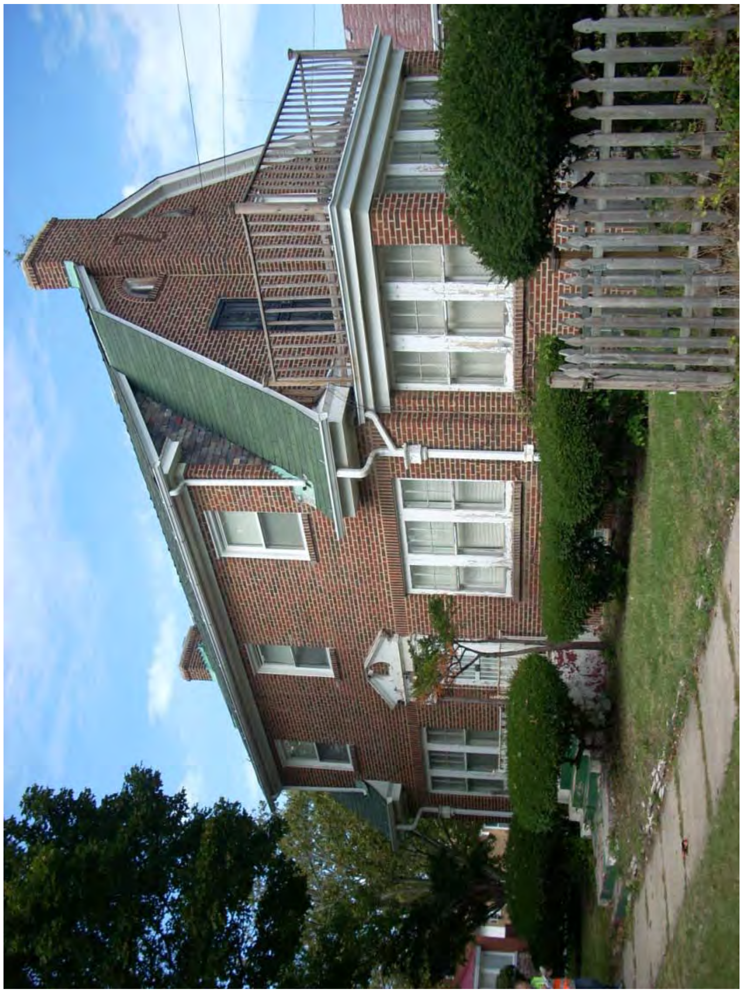
Dutch Colonial

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 12 October 2012

Photos with Captions:
South and west façades of a brick, two-story, single family residence.



Property Description: **Stories:** 2

This two-story Dutch Colonial style house at the northeast corner of Normal Avenue and 105th Street in the Roseland community is situated on a raised basement and is clad with red face brick. The building has a side-gambrel roof covered with asphalt shingles, a one-story flat-roofed enclosed sun porch surrounded by four-over-one wood-sash windows along its east elevation, and exterior chimneys on both side elevations. The front (105th Street) elevation has a centrally located non-original hollow core metal paneled door, concrete steps, and metal railings. The door was once flanked by fluted pilasters with geometric capitals. The shaft of one of these pilasters has been removed as has the base of the extant pilaster. The door is topped by an unadorned frieze band and a broken pediment and is flanked by strips of three six-over-one and four-over-one wood-sash windows on either side. The shed-roofed second floor of the front elevation has three non-original one-over-one aluminum-sash windows. This house does not have sufficient distinguishing architectural features to qualify as individually eligible for listing on the National Register.

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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement door and some windows; pilasters compromised
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingle	**Roof Features** Dormers	**Roof Type** Side-gambrel	
Ornamental Architectural Details Door surround (frieze band, pediment, pilasters)			**Windows** Double-hung, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

10511 S. Normal Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1949

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

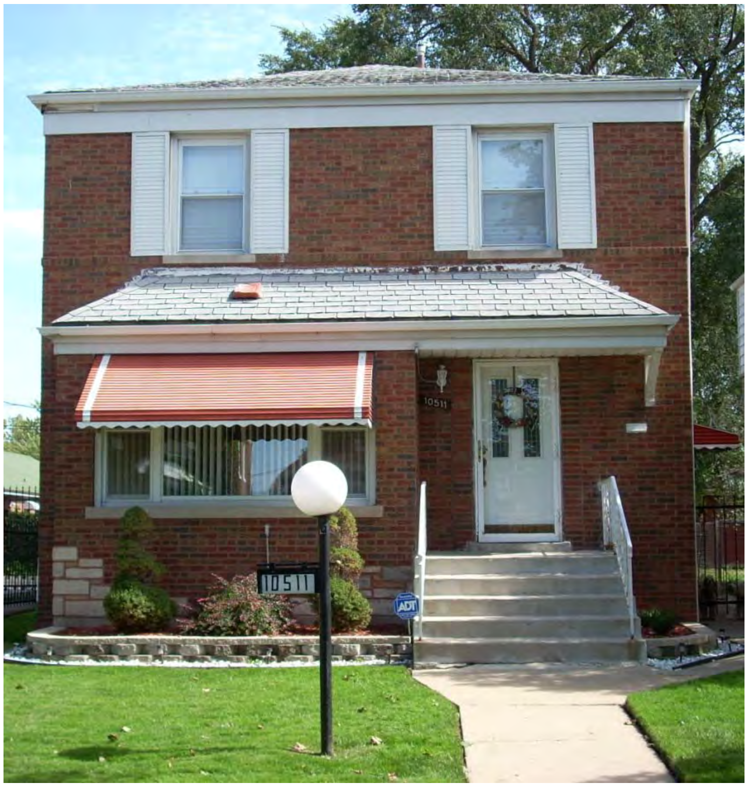
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 12 October 2012

Photos with Captions:
West façade of a brick, two-story, single family residence.



Property Description: **Stories:** 2

This two-story brick-clad house in the Roseland community is situated on a raised basement with glass block windows and has a hip roof covered with asphalt shingles. Its front elevation features a pent roof that spans the three-sided living room bay and an off-center hollow core metal door that is accessed by concrete steps with metal railings. The living room bay features a picture window flanked by non-original one-over-one aluminum-sash windows that are sheltered by a metal awning. The second floor of the front elevation has two non-original one-over-one aluminum-sash windows. Detailing includes concrete sills and decorative stones at the basement level. It does not feature distinguishing architectural features nor does it retain sufficient integrity, therefore, is not individually eligible for listing on the National Register.

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Marengo, Illinois 60152
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Structural Survey

Integrity:			**Additional Notes/Descriptions**
Unaltered	[✓ Slight Modification]	Major Alteration	Replacement door and windows
Condition:			
[✓ Excellent]	Good	Poor	
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Hip	
Ornamental Architectural Details Stone accents at basement level, concrete sills			**Windows** Double-hung, fixed-pane, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

10641 S. Normal Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1925

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

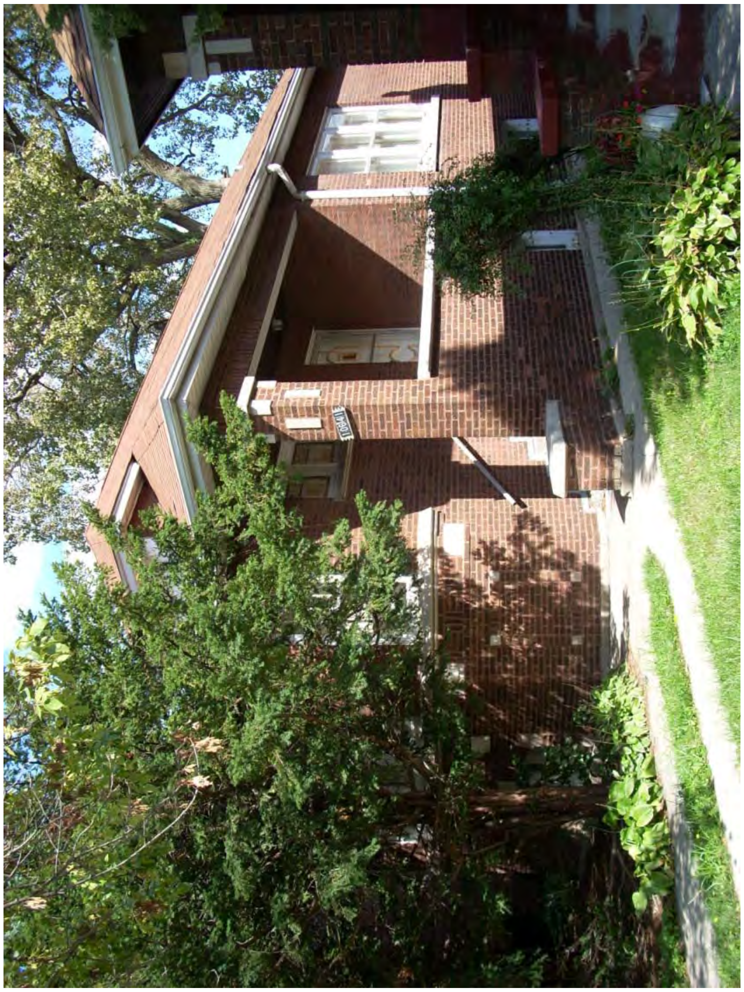
Chicago Style Bungalow

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 15 October 2012

Photos with Captions:
West façade of a brick, one-story, single family residence.



Property Description: **Stories:** 1

This one-story bungalow in the Roseland community is situated on a raised basement with glass block windows and clad with brown brick. The building has a hip roof covered with asphalt shingles, overhanging eaves, and a hip dormer, the windows of which were obscured by foliage. The house features a recessed corner porch with a hollow core metal door, concrete steps, low brick sidewalls, and a brick corner pier. The front elevation’s projecting living room bay has a series of double-hung windows, a decorative brick soldier course, stone insert blocks, and concrete sills. This house does not display distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
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Structural Survey

Integrity: [✓ Unaltered] Slight Modification Major Alteration			**Additional Notes/Descriptions**
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingle	**Roof Features** Dormer	**Roof Type** Hip	
Ornamental Architectural Details Brick soldier course, stone insert blocks, concrete sills			**Windows** Double-hung, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y [✓ N]**	
National Register Historic Places	**Y [✓ N]**	
National Register Historic District	**Y [✓ N]**	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

10701 S. Normal Avenue
Alternate: 459 W. 107th Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1955

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

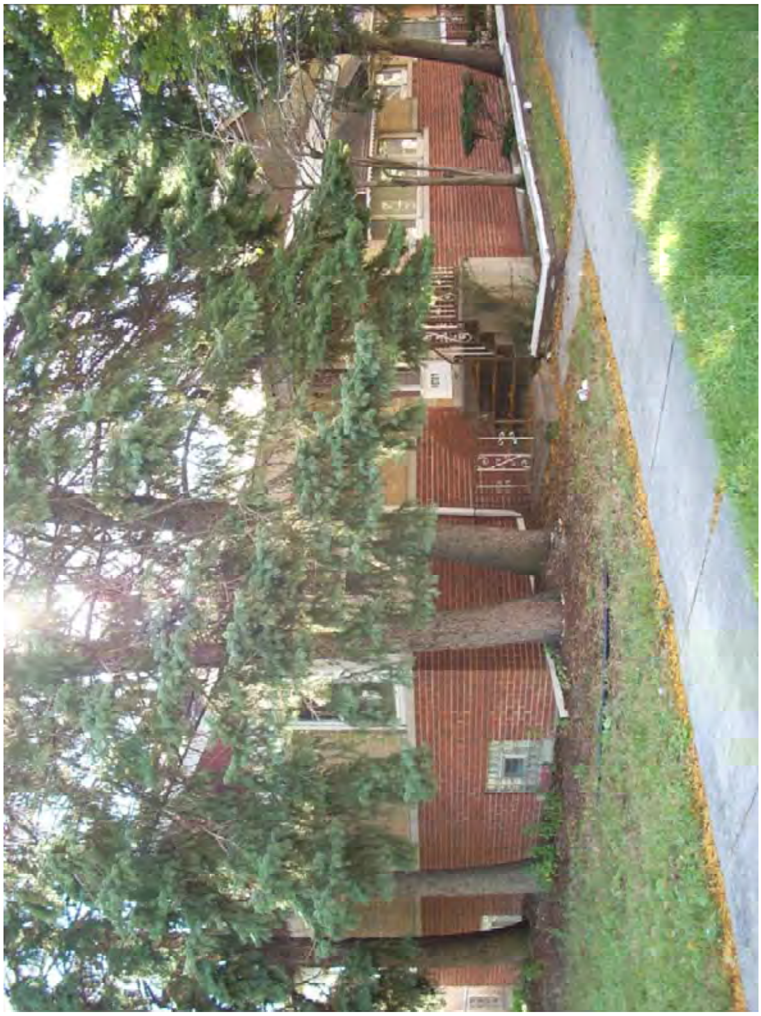
Ranch

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 30 October 2012

Photos with Captions:
West façade of a brick, one-story, single family residence.



Property Description: **Stories:** 1

This one-story Ranch house at the corner of Normal Avenue and 107th Street in the Roseland community is situated on a raised basement and is clad with orange face brick below the sill line and buff brick above. The building has a cross-gable roof covered with asphalt shingles; gable ends are clad in synthetic siding. A gabled rear wing contains an attached two-car garage. The front (Normal Ave.) elevation has an off-center metal storm door sheltered by a roof overhang supported by a corner open metal post, concrete steps with metal railings, two pairs of non-original one-over-one aluminum-sash windows, and a non-original picture window flanked by one-over-one aluminum-sash windows on the main block. The front elevation of the rear wing has an off-center metal storm door, a roof overhang supported by two open metal posts, and a large glass block window. The side (107th Street) elevation has corner windows that are obscured by foliage but appear to be casements. This house lacks distinctive architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
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Structural Survey

Integrity:

Unaltered [✓ Slight Modification] Major Alteration

Additional Notes/Descriptions

Replacement windows

Condition:

[✓ Excellent] Good Poor

Additional Alterations

Structure Usage	**Exterior Wall Surface**
Current: NA Historic: NA	Brick (main) Synthetic siding (gable ends)

Roof Material	**Roof Features**	**Roof Type**
Asphalt shingle	None	Cross-gable

Ornamental Architectural Details

None

Windows

Double-hung, fixed-pane, glass block, casement

Outbuildings (*Number and Description*)

Attached two-car garage.

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

10747 S. Normal Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1928

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

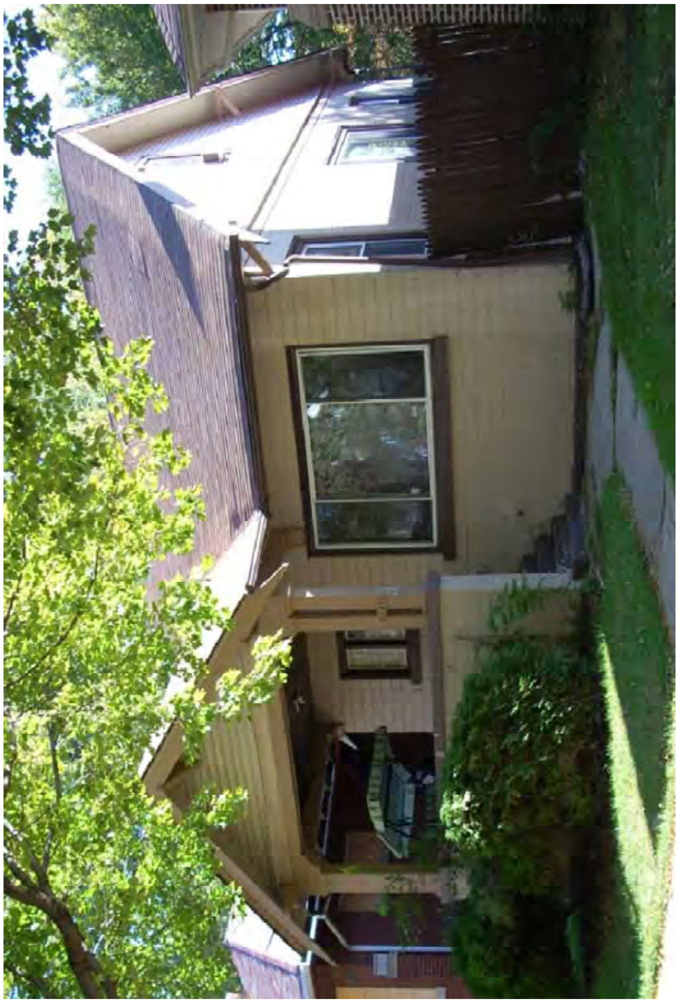
Craftsman

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 30 October 2012

Photos with Captions:
South and east façades of a one-story, single family residence.



Property Description: **Stories:** 1

This one-story Craftsman cottage in the Roseland community has a side-gable roof with overhanging eaves and decorative knee braces. The building is made of masonry units with aluminum siding in its gabled ends. Its front elevation has a recessed corner porch with overhanging gable roof with rafter tails, low walls, and squat, squared wood column supports. The building features a front door tucked into the side of the living room bay, a strip of three casements, and a picture window flanked by what appear to be casements. All windows on the front elevation feature concrete sills. Side elevation windows appear to be non-original one-over-one aluminum-sash. This house lacks distinctive architectural features and is not individually eligible for listing on the National Register.

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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows and cladding
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Masonry (main), Synthetic siding (gable ends)	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details Knee braces, rafter tails, squared columns, concrete sills			**Windows** Double-hung, casement, double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

10853 S. Normal Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1929

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

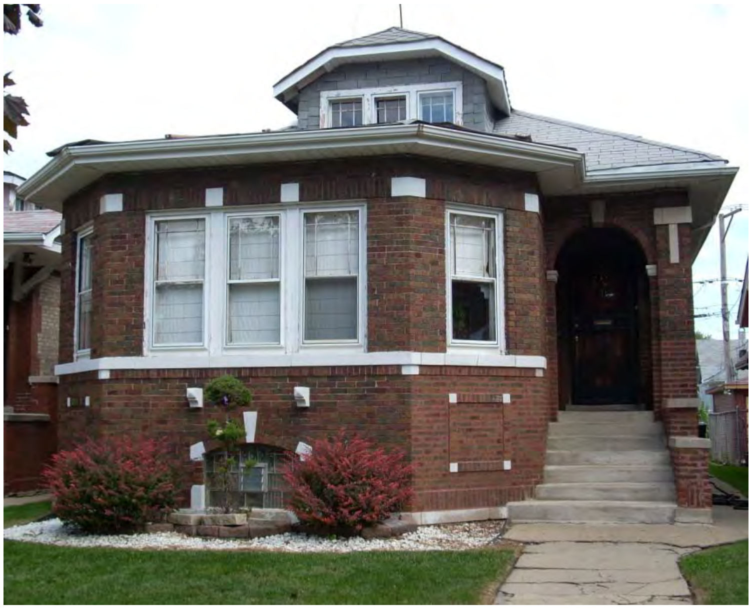
Chicago Style Bungalow

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 12 October 2012

Photos with Captions:
West façade of a brick, one-story, single family residence.



Property Description: **Stories:** 1

This one-story house in the Roseland community is situated on a raised basement with glass block windows and is clad with brown brick. The building has a hip roof covered with asphalt shingles, overhanging eaves, and a hip-on-gable dormer with three original wood casement windows. The house features a recessed corner porch with a metal storm door, concrete steps, low brick sidewalls, a brick corner pier, and arched front and side openings. The front elevation's projecting living room bay has a series of double-hung windows, a decorative brick soldier course, stone insert blocks, and concrete sills. This house does not feature distinguishing architectural elements and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: [✓ Unaltered] Slight Modification Major Alteration			**Additional Notes/Descriptions**
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingles	**Roof Features** Dormer	**Roof Type** Hip	
Ornamental Architectural Details Brick soldier courses, stone insert blocks, concrete sills			**Windows** Double-hung, casement, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

10959 S. Normal Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1938

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

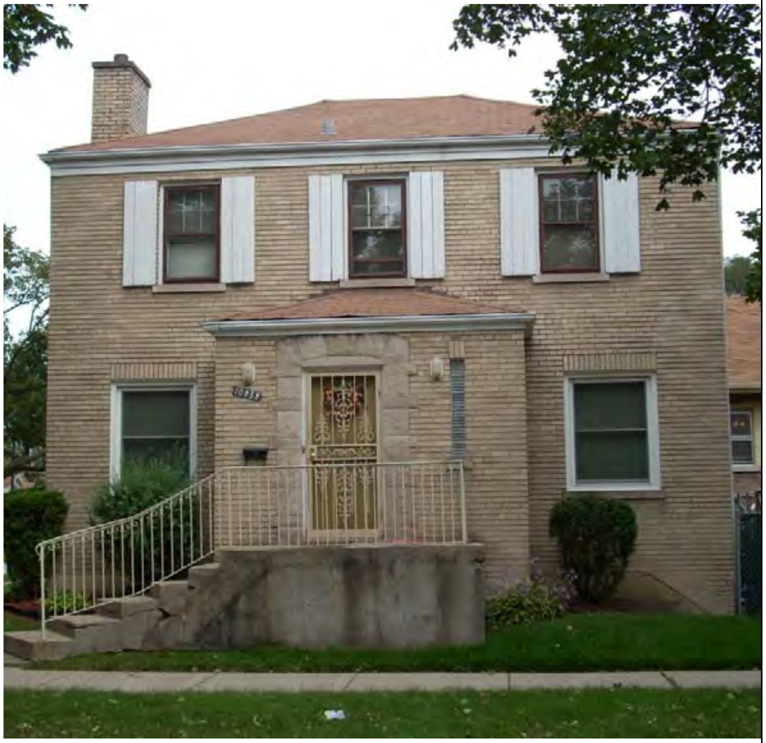
Minimal Traditional

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 16 September 2012

Photos with Captions:
South façade of two-story, brick single-family residence.



Property Description: **Stories:** 2

This two-story house at the corner of Normal Avenue and 110th Street in the Roseland community is clad with buff brick and has a hip roof covered with asphalt shingles, an exterior buff brick chimney, and a raised basement. Its front elevation features a centrally located hipped-roof entrance vestibule with a door that is surrounded by decorative stones. A vertical strip of glass blocks adjacent to the door accents the façade. Concrete steps and metal railings lead to the entrance. There are five windows—two on the first floor and three on the second. The first floor windows are non-original one-over-one aluminum-sash while the second floor windows are six-over-one. Detailing includes concrete sills and brick flat arch window lintels. This house lacks sufficient distinguishing architectural features to qualify as individually eligible for listing on the National Register.

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingles	**Roof Features** None	**Roof Type** Hip	
Ornamental Architectural Details Stone around entrance, concrete sills, brick flat arch window lintels			**Windows** Double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y [✓ N]**	
National Register Historic Places	**Y [✓ N]**	
National Register Historic District	**Y [✓ N]**	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
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Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

11001 S. Normal Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: circa 1938

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

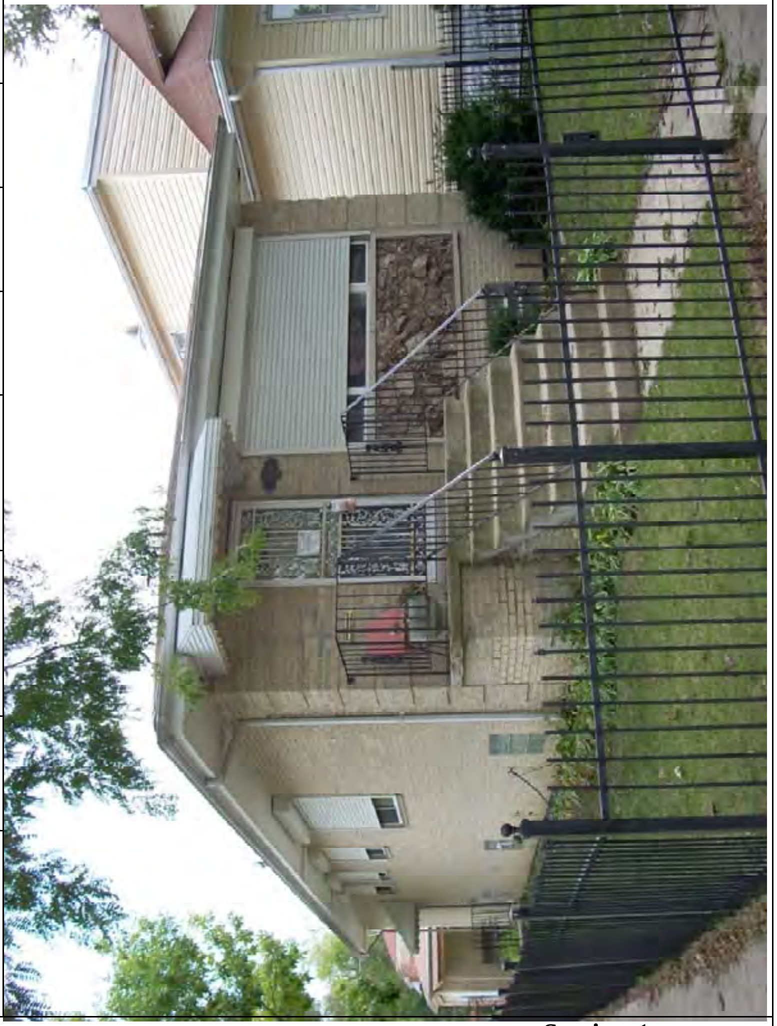
Vernacular

Prepared By: C. Tolmie

Photo By: S. Katz

Date: 16 September 2012

Photos with Captions:
West façade of one-story, brick single-family residence.



Property Description: **Stories:** 1

This one-story house in the Roseland community is situated on a raised basement with glass block windows. The building has a front elevation clad with buff face brick, a hip roof covered with asphalt shingles, and overhanging eaves. Its front elevation has an off-center entrance with a metal storm door sheltered by a metal awning, concrete steps with metal railings, and a window group with a large decorative faux stone panel beneath. This house lacks sufficient distinguishing architectural features to qualify as individually eligible for listing on the National Register.

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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions**
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Hip	
Ornamental Architectural Details Faux stone panel			**Windows** Glass block, covered
Outbuildings (*Number and Description*) Garage			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

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Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

11035 S. Normal Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1924

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

Vernacular

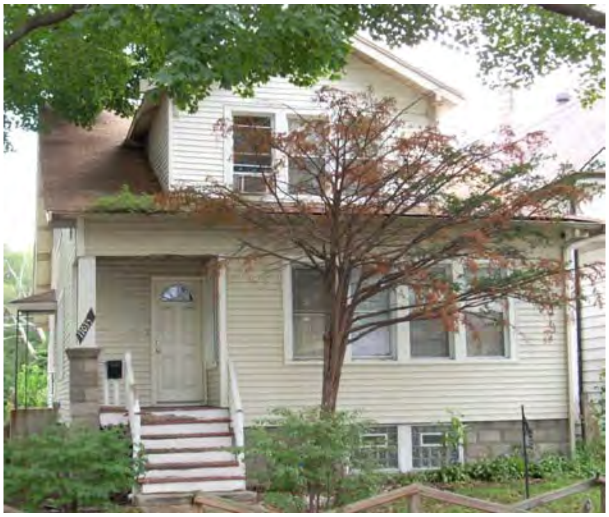
Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

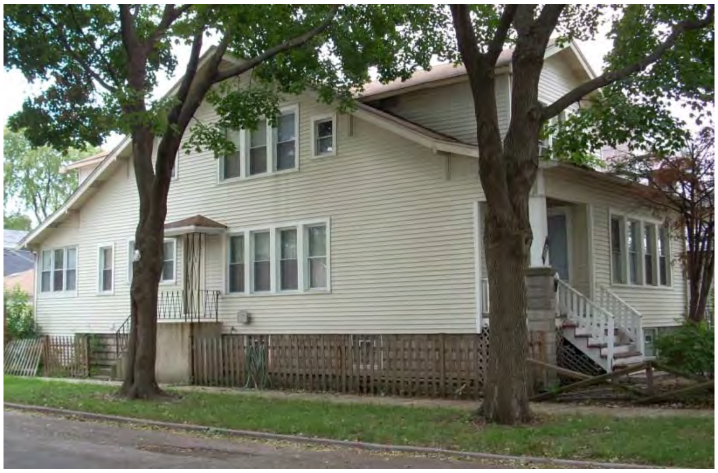
Date: 16 September 2012

Photos with Captions:

West façade of one-story, single family, frame residence.



West and north façades of residence.



Property Description: **Stories:** 1

This single story frame house at the southeast corner of Normal Avenue and 110th Place in the Roseland community is situated on a raised concrete block basement with glass block windows and is covered with synthetic siding. The building has a side gable roof covered with asphalt shingles and flared, bracketed, overhanging eaves. It features both front and rear gable dormers. It has a recessed corner porch with non-original hollow core metal door, a faux stone corner pier topped by a squat squared wood column, and wood steps and railings. The front elevation has a strip of four windows on the first floor and three in the gable. Above the basement, windows are non-original one-over-one aluminum-sash. A small hip-roofed porch is situated along the 110th Place elevation with hollow core metal door (non-original), concrete steps with metal railings, and open metal supports. This house lacks integrity and distinctive architectural features and is not individually eligible for listing on the National Register.

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Structural Survey

Integrity:			**Additional Notes/Descriptions** Replacement doors, windows, and cladding
Unaltered	[✓ Slight Modification]	Major Alteration	
Condition:			
[✓ Excellent]	Good	Poor	
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** Dormers	**Roof Type** Gable	
Ornamental Architectural Details Squat, square column, bracketed eaves			**Windows** Double-hung, glass block
Outbuildings (*Number and Description*) Garage			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

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Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11426 S. Perry Ave.

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

R. E. Russell Paint Company

Property Use

Historic: Industrial

Current: Industrial

Date of Construction: circa 1920s

Architect's Name: Not in CHRS database

Builder/Contractor: Not in CHRS database

Architectural Style:

Vernacular

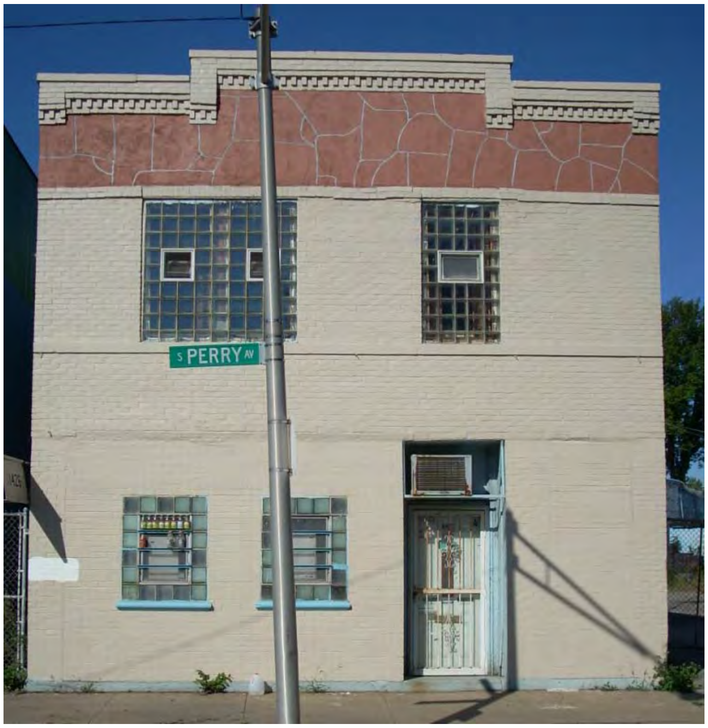
Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 11 September 2012

Photos with Captions

East façades of brick building in industrial complex.



Property Description: **Stories:** 2

This two-story industrial building in the Roseland community has a flat roof and parapet. It sits within an industrial complex bounded by South Perry Avenue, an alley, and the Union Pacific Railroad line. Its front elevation is clad in painted brick. It has a hollow core metal door with in-filled transom and window openings on the first and second floors that are in-filled with glass block with louvered or casement insets. Most of the face brick at the parapet level has been replaced by a stucco-like material. The uppermost portion of the stepped parapet has bricks arranged as decorative dentils. Other buildings within the paint company complex include one-story sheet metal and brick buildings. These buildings lack integrity, do not have distinguishing architectural features, and are not individually eligible for listing on the National Register.

Structural Survey

Integrity: Unaltered [✓ Slight Alterations] Major Alterations			**Additional Notes/Descriptions** Replacement windows and doors
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: N A Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details Dentils along cornice			**Windows** Glass block, louvered or casement
Outbuildings (*Number and Description)* Sheet metal warehouse on Perry Avenue, paint production plant and storage areas along railroad.			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

In CCA database, age give as 26 years, which was when partial improvements occurred. Structure probably dates to 1900-1930, based on style. Buildings shown on following page are part of the industrial complex.

Brick and sheet metal industrial buildings within complex.

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Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11439 S. Perry Avenue
Alternate: 11439 Pippin Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Industrial

Current: Industrial

Date of Construction: 1892

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

Vernacular

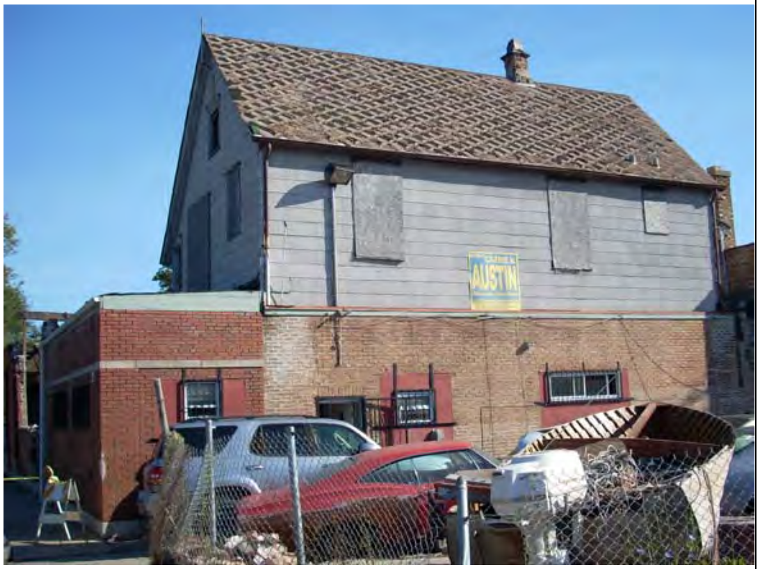
Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 11 September 2012

Photos with Captions

South façade of "building A" in a set of three joined industrial buildings. (Additional photographs appended).



Property Description: **Stories:** various

This industrial complex of buildings in the Roseland community includes three conjoined brick buildings: a two-story gable-roofed building (A, photo above), a collapsed brick building (B, photos on page 3), and a two-story flat-roofed brick building (C, photos on page 3). Building A has first floor clad in brick with a one-story, flat-roofed, brick commercial wing in front. The upper half of this building is clad in synthetic siding covering clapboards. It is vacant, deteriorated, and many of its window openings have been covered with particle board. Windows along the south side on the first floor are sliding or double-hung. Building B has collapsed. Building C at the far north has a parapet and is clad with red face brick and common brick. The windows with arched lintels have been in-filled with wood and brick. A new door pierces the façade. This complex of building lacks integrity, does not have any distinguishing architectural features, and is not individually eligible for listing on the National Register.

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Structural Survey

Integrity: Unaltered Slight Alterations [✓ Major Alterations]			**Additional Notes/Descriptions** In-filled windows, replacement garage doors and siding, new door added, collapsed walls
Condition: Excellent Good [✓ Poor]			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details None			**Windows** Sliding, double-hung
Outbuildings (*Number and Description)* None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Additional photos:
Two photos at left: west façade of middle section (Building B), struck by lightning
Right photo: north façade of Building C

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Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11515 S. Perry Ave.

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1965

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

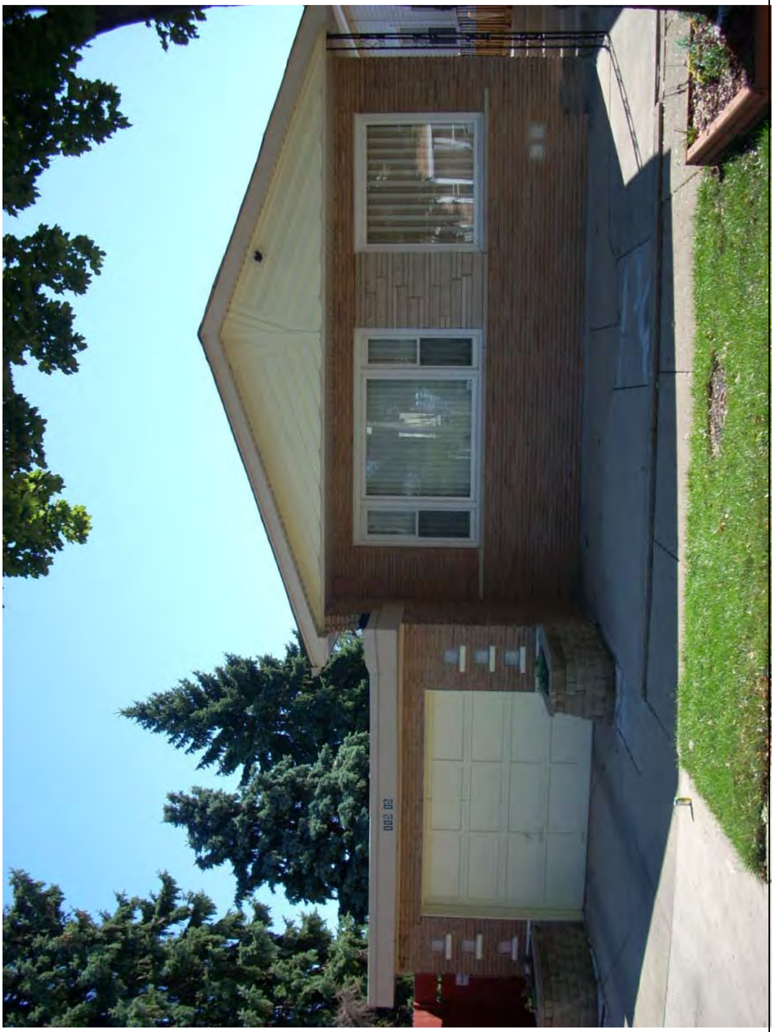
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 10 September 2012

Photos with Captions:
West façade of one-story, brick, single family residence.



Property Description: **Stories:** 1

This one-story house in the West Pullman community has a gable roof covered with asphalt shingles, overhanging eaves, and a flat-roofed attached one-car garage. Glass blocks with stone sills and brick planter boxes decorate the front of the garage. The front elevation of the house is clad with light orange face brick and features two picture windows, one of which is flanked by narrow one-over-one windows. A stone panel separates the two picture windows. The front gable is clad with synthetic siding in a decorative pattern. The entrance is located along the side elevation and accessed via a flight of concrete steps with metal railings. This house does not feature distinguishing architectural features and is not individually eligible for listing on the National Register.

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Structural Survey

Integrity: [✓ Unaltered] Slight Modification Major Alteration			**Additional Notes/Descriptions**
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingles	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details Stone panel, glass block with stone sills, brick planter boxes, clapboards in gable			**Windows** Fixed-pane, glass block, double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
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Marengo, Illinois 60152
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Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11516 S. Perry Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1913

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

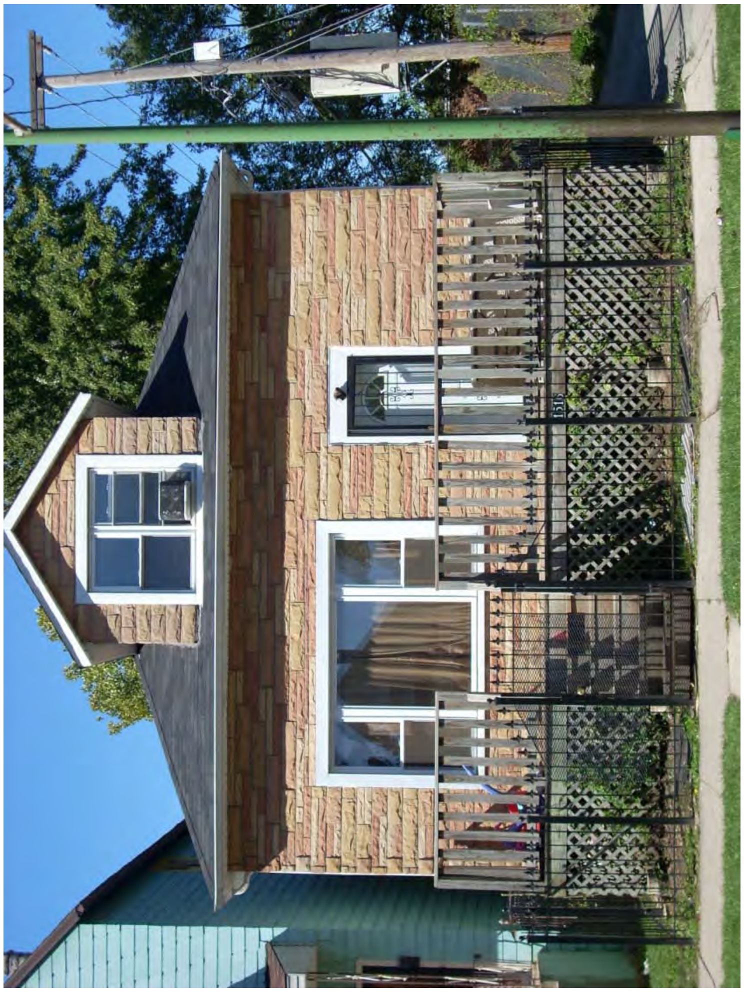
Craftsman

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 22 October 2012

Photos with Captions:
East façade of a one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story bungalow in the West Pullman community is situated on a raised concrete block basement and is covered with faux stone siding. The building has a hip roof covered with asphalt shingles and a gable dormer with a pair of non-original one-over-one aluminum-sash windows. The front elevation has a full-width porch with a wood deck, steps, and straight railings. This elevation has an off-center hollow core metal door, and a non-original picture window flanked by one-over-one aluminum-sash windows. This house lacks integrity and distinctive architectural features and is not individually eligible for listing on the National Register.

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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement door, windows, and cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Faux stone	
Roof Material Asphalt shingles	**Roof Features** Dormer	**Roof Type** Hip	
Ornamental Architectural Details None			**Windows** Double-hung, fixed-pane
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11521 S. Perry Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Multi-family residence

Date of Construction: 1879

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

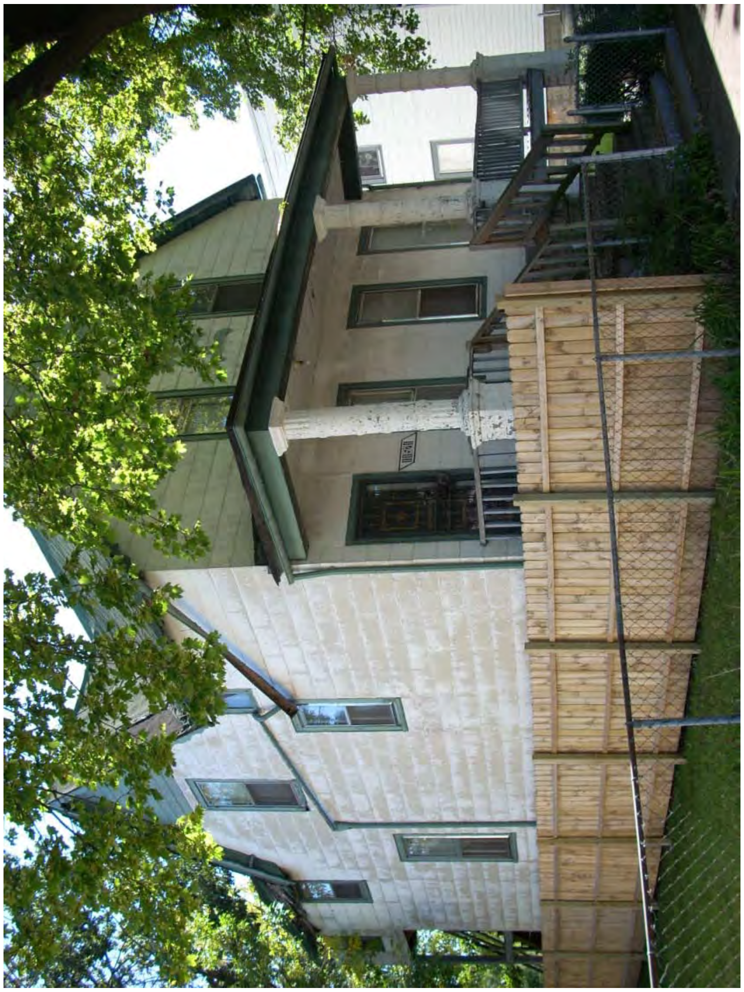
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 22 October 2012

Photos with Captions:
West façade of a 1.5-story, multi-family, frame residence.



Property Description: **Stories:** 1.5

This one-and-a-half-story house in the West Pullman community is situated on a raised concrete block basement and is clad with synthetic siding. The building has a cross-gable roof covered with asphalt shingles. The front elevation has a full-width wood porch with a flat roof that is supported by faux stone piers topped by short Doric columns. The façade features an off-center non-original hollow core metal door and five non-original one-over-one aluminum-sash windows: three on the first floor and two on the second. This house lacks integrity and distinctive architectural features and is not individually eligible for listing on the National Register.

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Structural Survey

<table>
<tr><td colspan="4">Integrity:
Unaltered [✓ Slight Modification] Major Alteration</td><td>Additional Notes/Descriptions
Replacement door, windows, and cladding</td></tr>
<tr><td colspan="4">Condition:
Excellent [✓ Good] Poor</td><td></td></tr>
<tr><td colspan="4">Additional Alterations</td><td></td></tr>
<tr><td colspan="2">Structure Usage
Current: NA
Historic: NA</td><td colspan="2">Exterior Wall Surface
Synthetic siding</td><td></td></tr>
<tr><td>Roof Material
Asphalt shingle</td><td>Roof Features
None</td><td colspan="2">Roof Type
Cross-gable</td><td></td></tr>
<tr><td colspan="4">Ornamental Architectural Details
Doric columns on porch</td><td>Windows
Double-hung</td></tr>
<tr><td colspan="5">Outbuildings (<i>Number and Description</i>)
None</td></tr>
</table>

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11630 S. Prairie Ave

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1898

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

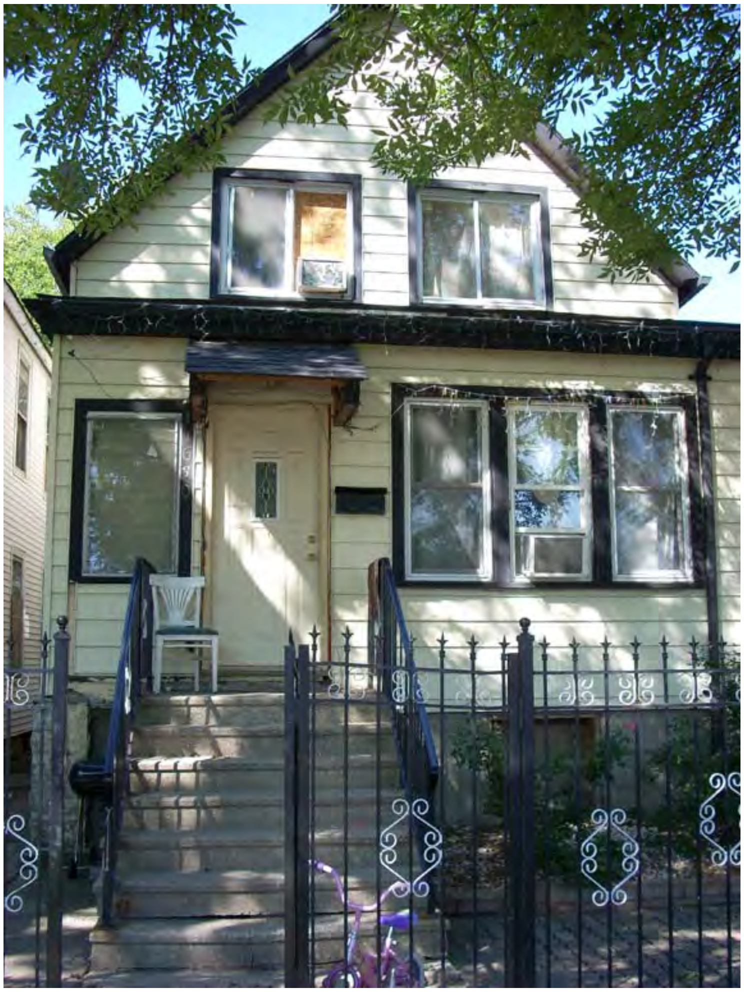
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 1 October 2012

Photos with Captions:
East façade of one-and-a-half-story, single family, frame residence.



Property Description: **Stories:** 1.5

This one-and-a-half-story frame house in the West Pullman community is situated on a raised brick basement, is clad with synthetic siding, and has a front gable roof with asphalt shingles. Its front elevation features a flat-roofed enclosed porch with concrete steps with metal railings. It also has a hollow metal core door, four non-original windows on the first floor—one casement and a strip of three one-over-one windows—and two paired windows on the second floor, one of which is in-filled with plywood. This house lacks integrity, does not have distinguishing architectural features, and is not individually eligible for listing on the National Register.

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Structural Survey

Integrity:

Unaltered [✓ Slight Modification] Major Alteration

Additional Notes/Descriptions

Replacement front door, windows, and siding

Condition:

[✓ Excellent] Good Poor

Additional Alterations

Structure Usage		**Exterior Wall Surface**
Current: NA Historic: NA		Synthetic siding
Roof Material	**Roof Features**	**Roof Type**
Asphalt	None	Gable

Ornamental Architectural Details

None

Windows

Double-hung, sliding

Outbuildings (*Number and Description*)

None

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11632 S. Prairie Ave.

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Multi-family

Current: Multi-family

Date of Construction: 1888

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

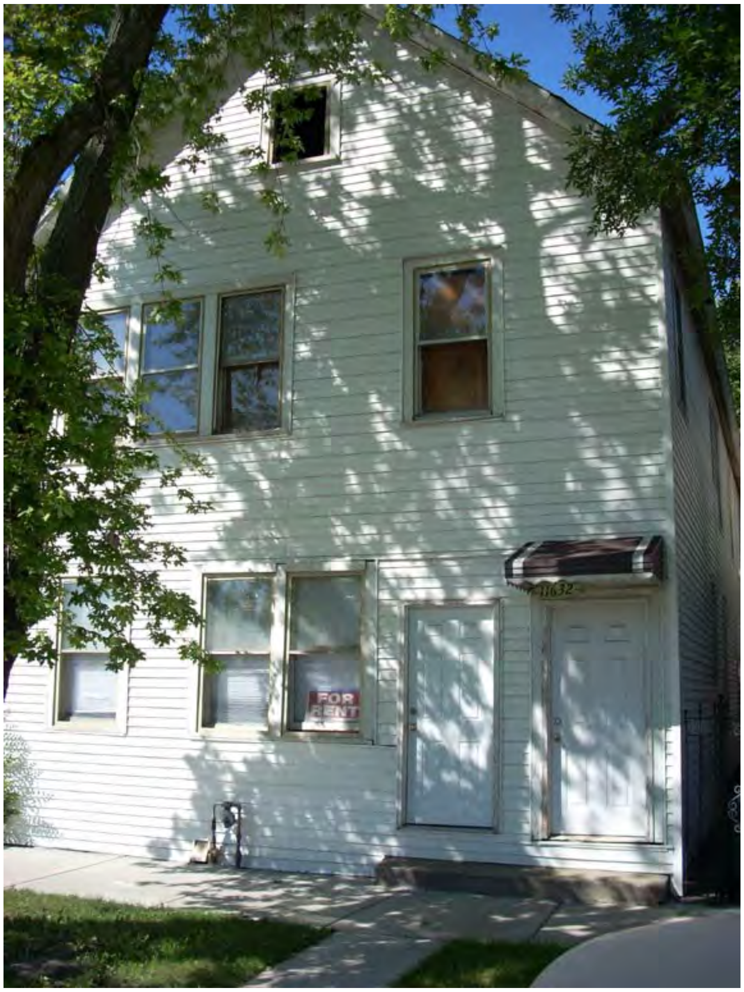
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 1 October 2012

Photos with Captions:
East façade of a two-story, multi-family, frame residence.



Property Description: **Stories:** 2

This two-story, frame, multi-family residential building in the West Pullman community is clad with synthetic siding and has a front gable roof with asphalt shingles. Its front elevation features two off-center non-original hollow core metal doors, three windows on the first floor and four windows on the second floor, all of which are non-original one-over-one aluminum sash. A small single-pane window is situated in the gable. This building lacks integrity, does not have distinguishing architectural features, and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity:			**Additional Notes/Descriptions**
Unaltered	[✓ Slight Modification]	Major Alteration	Replacement doors, windows, and siding
Condition:			
Excellent	[✓ Good]	Poor	
Additional Alterations			
Structure Usage		**Exterior Wall Surface**	
Current: NA		Synthetic siding	
Historic: NA			
Roof Material	**Roof Features**	**Roof Type**	
Asphalt	None	Gable	
Ornamental Architectural Details			**Windows**
None			Double-hung, casement
Outbuildings (*Number and Description*)			
None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11634 S. Prairie Ave.

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Multi-family residence

Date of Construction: 1927

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

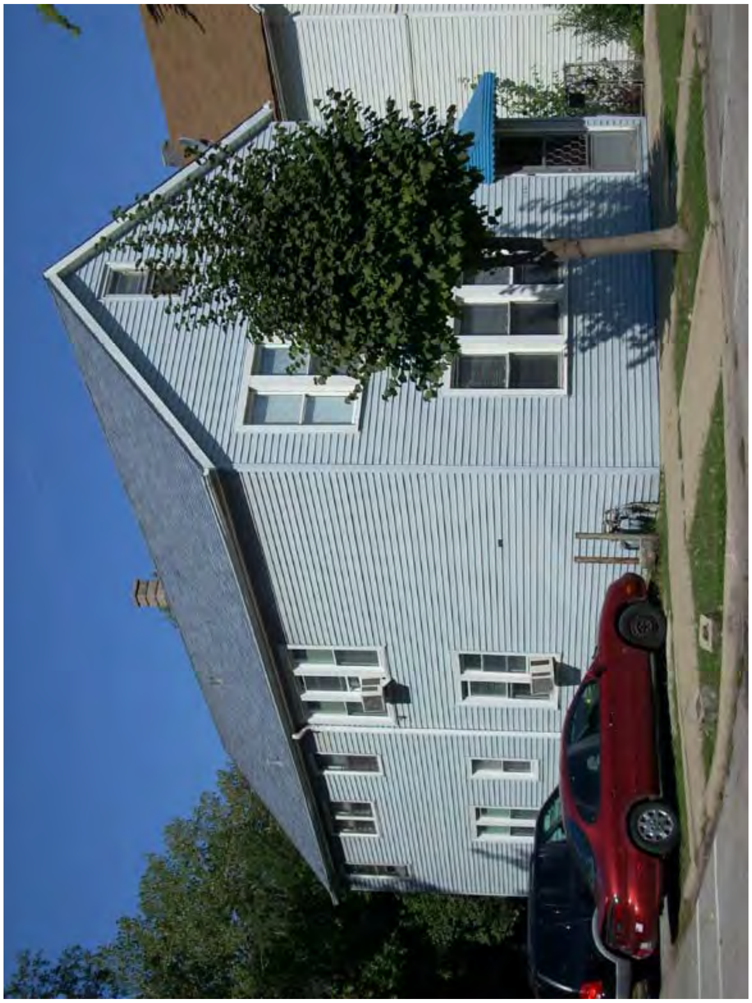
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 1 October 2012

Photos with Captions:
East and south façades of a two-story, multi-family, frame residence.



Property Description: **Stories:** 2

This two-story frame house in the West Pullman community is clad with synthetic siding and has a front gable roof with asphalt shingles. Its front elevation features an off-center, non-original, hollow core metal door, three windows on the first floor, five windows on the second floor, and one in the gable, all of which are non-original one-over-one aluminum sash. This house lacks integrity, does not have distinguishing architectural features, and is not individually eligible for listing on the National Register.

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement door, windows, and siding
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11718 S. Prairie Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1885

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

Vernacular

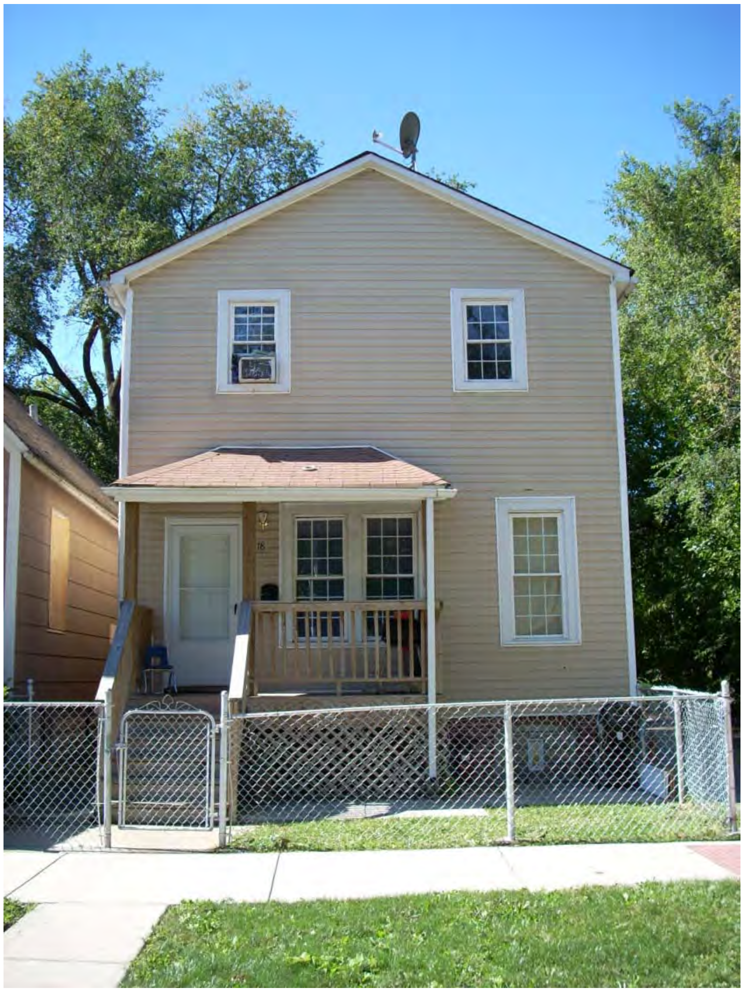
Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 23 October 2012

Photos with Captions:

East façade of a two-story, single family, frame residence.



Property Description: **Stories:** 2

This two-story house in the West Pullman community is situated on a raised brick basement and is covered with synthetic siding. The building has a front gable roof covered with asphalt shingles. The second story was added in the last few years. Its front elevation has a partial-width, hip-roof wood porch with straight posts and railings, an off-center non-original hollow core metal door, and five multi-paned double-hung windows: three on the first floor and two on the second, all non-original. This house lacks integrity and distinctive architectural features and is not individually eligible for listing on the National Register.

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Structural Survey

Integrity: Unaltered Slight Modification [✓ Major Alteration]			**Additional Notes/Descriptions** Replacement door, windows, and cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations Second story added after 2007			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y [✓ N]**	
National Register Historic Places	**Y [✓ N]**	
National Register Historic District	**Y [✓ N]**	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
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Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11814 S. Prairie Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Vacant

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1926

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

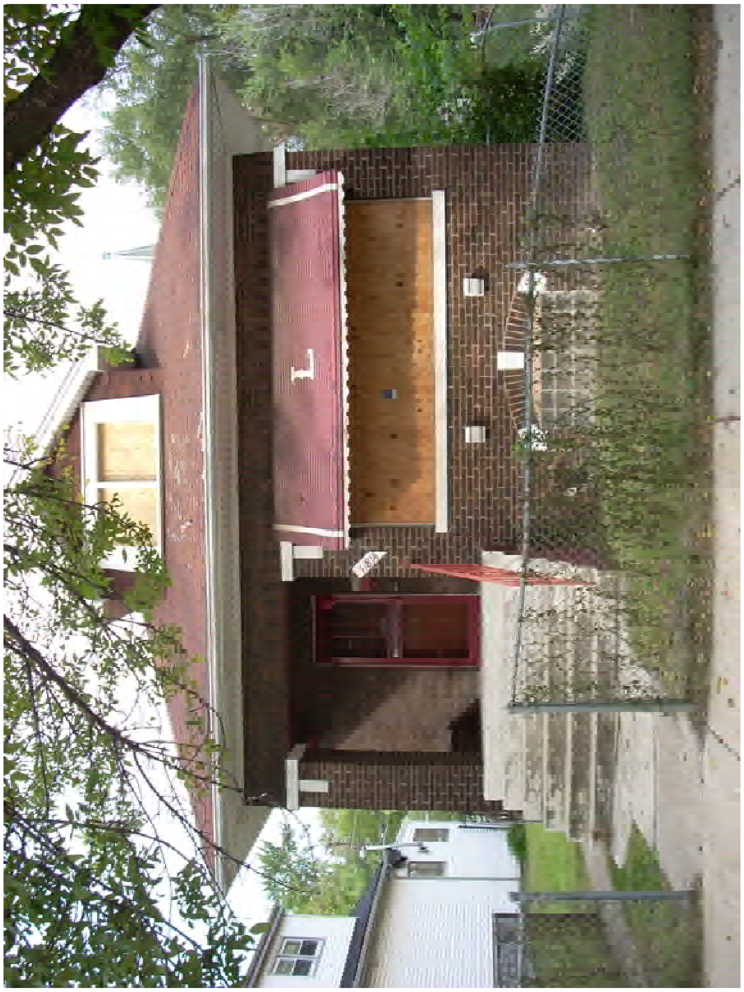
Chicago Style Bungalow

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 23 October 2012

Photos with Captions:
East façade of a one-story, single family, brick residence.



Property Description: **Stories:** 1

This one-story brick-clad bungalow in the West Pullman community is situated on a raised basement with glass block windows. The building has a hip roof covered with asphalt shingles, overhanging eaves, and gable dormers along its front and rear elevations. The front elevation has a recessed corner porch with a brick pier support at the corner, concrete steps, and a metal railing. Above the basement, windows have been covered with plywood. Detailing includes soldier brick lintels, concrete sills, and concrete insert blocks used as decorative accents. This is an example of a Chicago bungalow, a building type that the City of Chicago has recognized through its Historic Chicago Bungalow Initiative. However, this house lacks distinctive architectural features and is not individually eligible for listing on the National Register.

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Structural Survey

Integrity:

[✓ Unaltered] Slight Modification Major Alteration

Condition:

Excellent [✓ Good] Poor

Additional Alterations

Structure Usage	**Exterior Wall Surface**
Current: NA Historic: NA	Brick

Roof Material	**Roof Features**	**Roof Type**
Asphalt shingle	Dormers	Hip

Ornamental Architectural Details

Brick lintels, concrete sills and insert blocks

Additional Notes/Descriptions

Windows

Glass block, covered

Outbuildings (*Number and Description*)

None

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

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Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

9815 S. Princeton Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1963

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

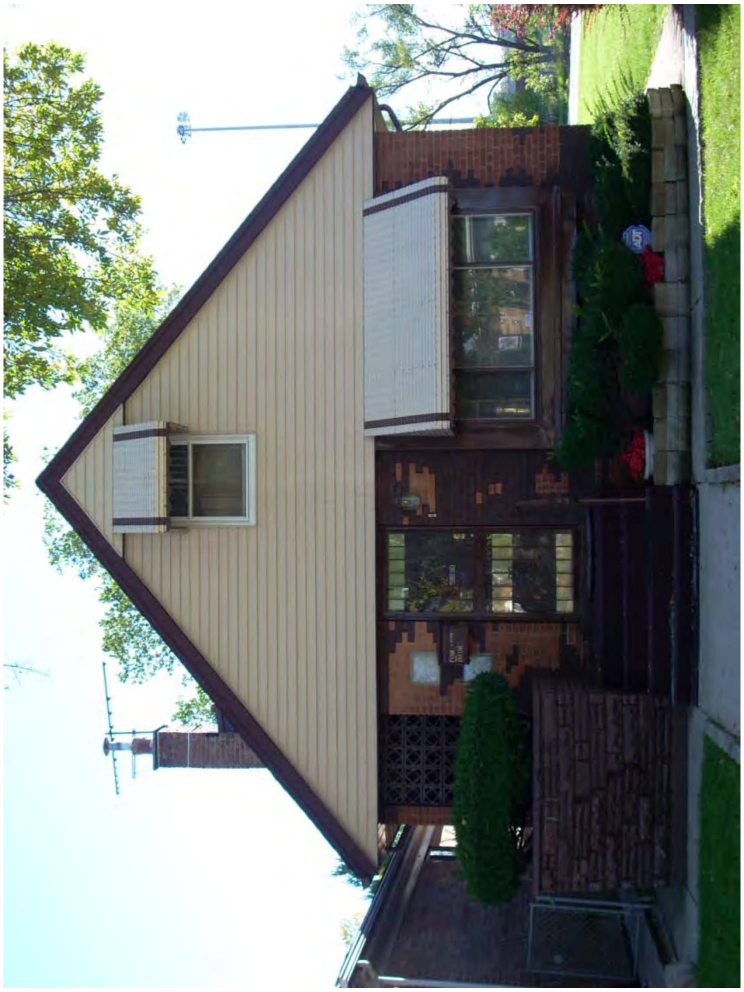
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 9 October 2012

Photos with Captions:
West façade of a brick, one-story, single family residence.



Property Description: **Stories:** 1

This one-story house in the Roseland community has a steeply pitched front gable roof covered with asphalt shingles. Its front elevation is clad with brown and orange face brick on the first floor and synthetic siding in the gable. It has an off-center door, concrete steps with metal railings, a decorative perforated screen, a picture window flanked by one-over-one aluminum-sash windows on the first floor, and a one-over-one aluminum-sash window in the gable. This house does not feature distinguishing architectural features and is not individually eligible for listing on the National Register.

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Marengo, Illinois 60152
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Structural Survey

<table>
<tr><td colspan="3">Integrity:
[✓ Unaltered] Slight Modification Major Alteration</td><td>Additional Notes/Descriptions</td></tr>
<tr><td colspan="3">Condition:
[✓ Excellent] Good Poor</td><td></td></tr>
<tr><td colspan="3">Additional Alterations</td><td></td></tr>
<tr><td colspan="2">Structure Usage
Current: NA
Historic: NA</td><td>Exterior Wall Surface
Brick, synthetic siding</td><td></td></tr>
<tr><td>Roof Material
Asphalt</td><td>Roof Features
None</td><td>Roof Type
Gable</td><td></td></tr>
<tr><td colspan="3">Ornamental Architectural Details
Perforated screen</td><td>Windows
Double-hung, fixed-pane</td></tr>
<tr><td colspan="4">Outbuildings (<i>Number and Description</i>)
None</td></tr>
</table>

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

9818 S. Princeton Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1964

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

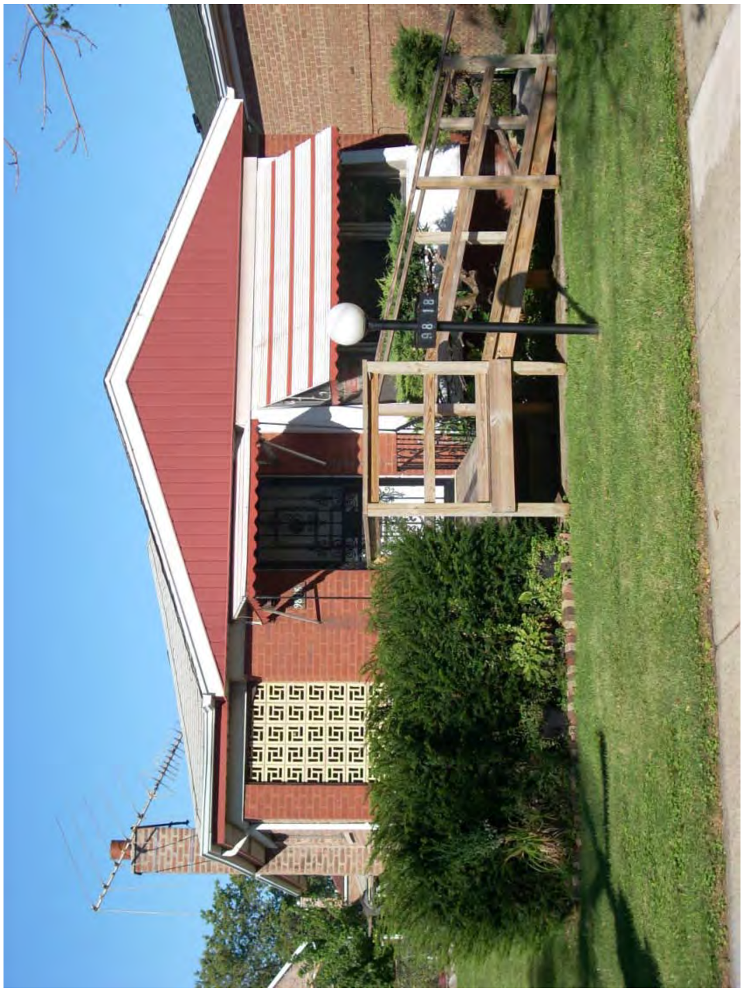
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 9 October 2012

Photos with Captions:
East façade of a brick, one-story, single family residence.



Property Description: **Stories:** 1

This one-story home in the Roseland community has a gable-on-hip roof clad with asphalt shingles. The front elevation is clad with red face brick on the first floor and synthetic siding in the gable. It has a centrally located door, a decorative perforated screen, and a picture window flanked by what appear to be casements. This window group is partially obscured by a low metal awning. The wood ramp is non-original. It does not feature distinguishing architectural elements and is not individually eligible for listing on the National Register.

Structural Survey

Integrity: [✓ Unaltered] Slight Modification Major Alteration			**Additional Notes/Descriptions**
Condition: [✓ Excellent] Good Poor			
Additional Alterations Wood ramp appended to residence but has not altered the building.			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick, synthetic siding	
Roof Material Asphalt	**Roof Features** None	**Roof Type** Hip	
Ornamental Architectural Details Perforated screen			**Windows** Casement, fixed-pane
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

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Marengo, Illinois 60152
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Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

10054 S. Princeton Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Multi-family residence

Current: Multi-family residence

Date of Construction: 1934

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

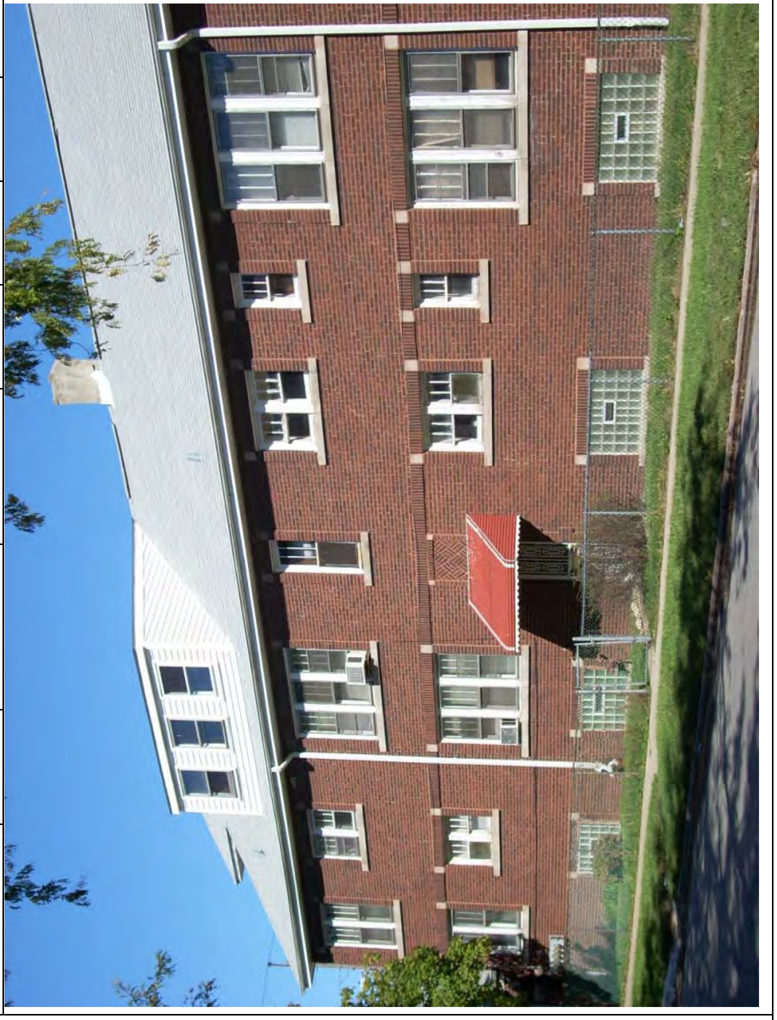
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 16 September 2012

Photos with Captions:
South façade of two-story, multi-family residence.



Property Description: **Stories:** 2

This two-story multi-family building at the northwest corner of 100th Street and Princeton Avenue in the Roseland community is clad with brown face brick along its two street elevations. It has a raised brick basement with glass block windows, a hip roof covered with asphalt shingles with overhanging eaves, a shed dormer along its 100th Street elevation, and a hip dormer along its rear elevation. The front elevation has an off-center hollow core metal door with two strips of three windows—one on the first floor and one on the second—along with an additional window on the second floor. Fenestration along both street elevations is comprised of three-over-one wood-sash windows. Detailing includes concrete sills, window surrounds with soldier bricks and square concrete insert blocks, and a course of soldier bricks above the first floor windows that spans both street elevations. The brick panels above both the front and side doors feature the same decorative basketweave pattern. This building does not feature sufficient distinguishing architectural features to qualify as individually eligible for listing on the National Register.

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505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered	[✓ Slight Modification]	Major Alteration	**Additional Notes/Descriptions** Dormer appears to be a later addition
Condition: [✓ Excellent]	Good	Poor	
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingles	**Roof Features** Dormer	**Roof Type** Hip	
Ornamental Architectural Details Concrete sills, soldier bricks, concrete insert blocks, brick panels			**Windows** Double hung, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

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Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

10136 S Princeton Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Vacant

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1954

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

Vernacular

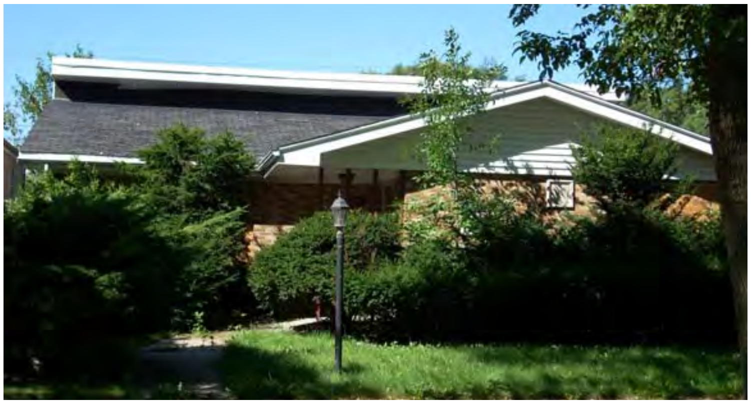
Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

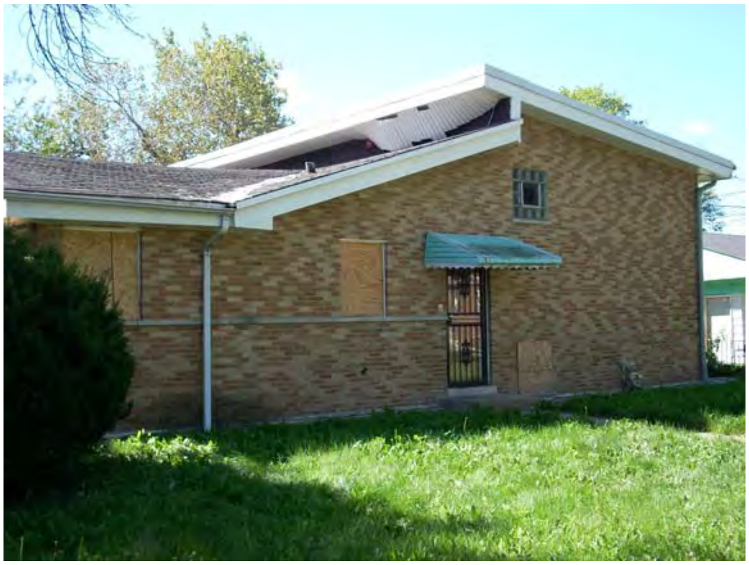
Date: 16 September 2012

Photos with Captions:

East façade of split-level, brick single family residence.



North façade of split-level showing roofline.



Property Description: **Stories:** 1

This split-level home in the Roseland community has a cross-gabled roof covered with asphalt shingles and is clad with buff and orange face brick. The front elevation’s gable is clad with aluminum and has a deep overhang that is supported by two open metal posts. The roofline exhibits an overhanging shed roof along the ridgeline, running the width of the house. The eave of this overhang is clad in vinyl siding. The front elevation’s windows and door are obscured by high foliage. Three of the four side elevation windows are covered with plywood. This house does not feature distinguishing architectural features and is not individually eligible for listing on the National Register.

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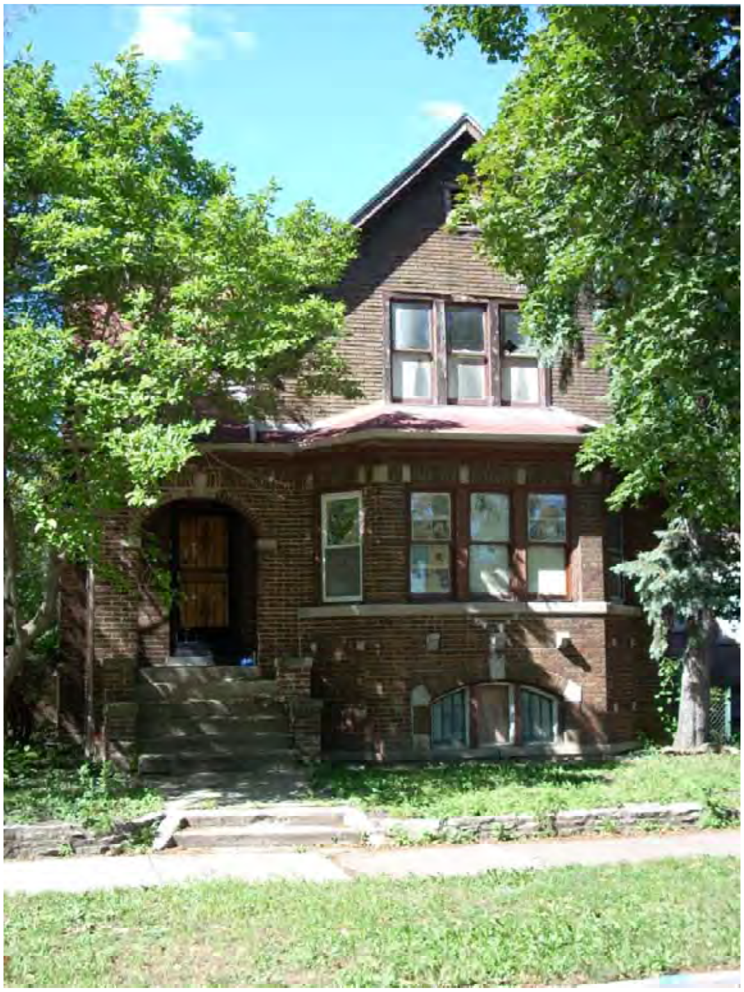
Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions**
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Cross-gabled	
Ornamental Architectural Details None			**Windows** Covered
Outbuildings (*Number and Description*) Garage			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Historical Resource Recordation Form

Property Name **Historic:** Bldg. not labeled, not in CHRS **Common/Current:** Unknown	**Photos with Captions:** East façade of a brick, two-story, single family residence. 
Property Address: 10224 S. Princeton Avenue	
HAARGIS Number: Not in database	
Present Owner and /or Occupant: Unknown	
Property Use **Historic:** Single family residence **Current:** Single family residence	
Date of Construction: 1930 **Architect's Name:** Not in CHRS **Builder/Contractor:** Not in CHRS	
Architectural Style: Vernacular	
Prepared By: J. Martinez, M. C. Bird, J. Guarino **Photo By:** Steve Katz **Date:** 9 October 2012	

Property Description: **Stories:** 2

This two-story house in the Roseland community is situated on a raised brick basement. It is clad with brown face brick and has a cross-gable roof covered with asphalt shingles. Its front elevation has an arched basement window group, an off-center door with a metal storm, a corner recessed porch with concrete steps and metal railings, a projecting three-sided hip-roofed living room bay with five double hung sash windows, and a strip of three one-over-one windows on the second floor. Detailing includes a stone sill course and a decorative soldier course with stone insert blocks above the living room bay windows, decorative scrolled stone brackets below the living room bay windows, and a porch archway with stone keystone. The side elevation has a shed-roofed window bay with large glass block window opening. The rear elevation's original roofline has been raised with a shed-roofed addition. This house does not feature sufficient integrity or distinguishing architectural features to qualify as individually eligible for listing on the National Register.

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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Rear elevation roofline raised
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Cross-gable, shed	
Ornamental Architectural Details Stone sill course, brick soldier course with stone insert blocks, scrolled stone brackets, archway with stone keystone, arched basement window group			**Windows** Double-hung, casement, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: First Christian Reform Church of Roseland

Common/Current: Mary Magdalene Missionary Baptist Church

Property Address:

10920 S. Princeton Avenue
Alternate: 10914 S. Princeton Ave.
Alternate: 318 W 109th Place

HAARGIS Number:

140670

Present Owner and /or Occupant:

Mary Magdalene Missionary Baptist Church

Property Use

Historic: Religious

Current: Religious

Date of Construction: 1916

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

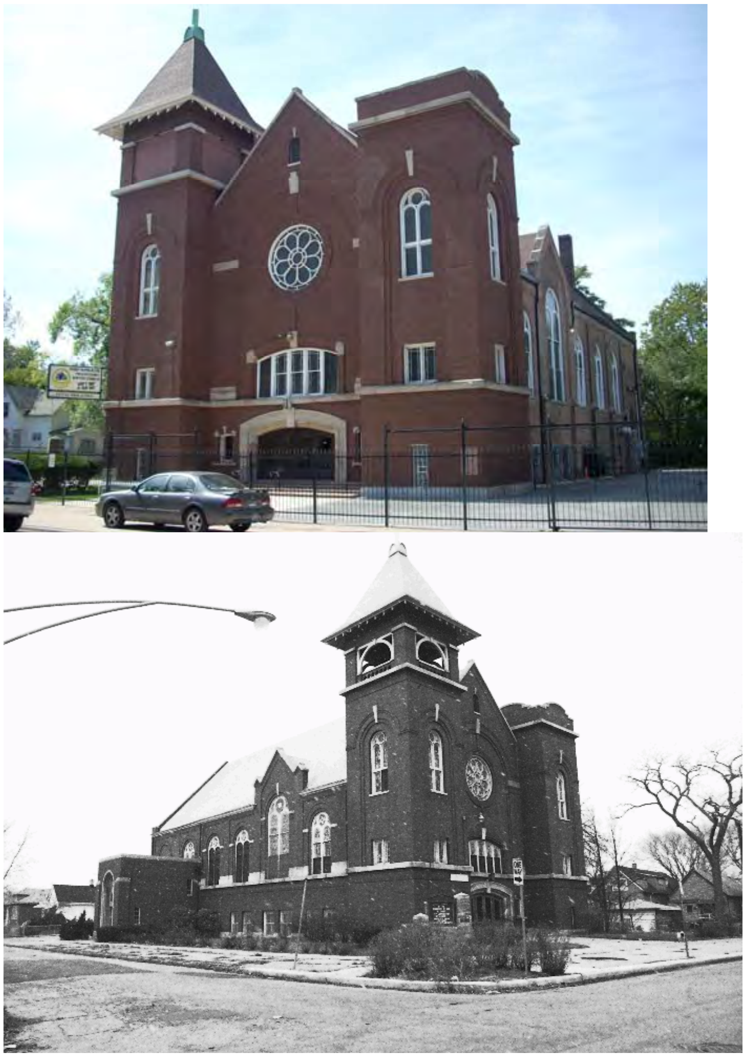
Romanesque Revival

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 17 October 2012

Photos with Captions:
East façade of two-story religious building (above), south and east facades from HAARGIS (below).



Property Description: **Stories:** 2

This Romanesque Revival style church in the Roseland community has a front elevation and two flanking towers clad with brown face brick, while the remainder of the side elevation and the rear elevation are clad with common brick. It has a gable roof covered with asphalt shingles and gable wall dormers with shaped parapets on both side elevations. The east tower has a flat roof and a shaped parapet while the west tower has a peaked roof with overhanging eaves and exposed rafters and is topped by a finial. The central bay of the front elevation has a broad, round-arched entrance with stone surround and two sets of single-light oak double-doors. The central bay also contains a strip of double-hung windows situated within a broad arch and a rose window with tracery. Fenestration on the both towers and along the side elevations comprises round-arch windows with tracery. It is unknown whether the original stained glass for all of these windows is extant inside the church. Both towers also feature paired casement windows. Window openings at the top of the west tower have been boarded-over. Detailing includes stone sills, belt courses, brick pilasters and keystones. A one-story brick-clad entrance vestibule is situated along the rear of the west elevation. Built as the First Reformed Church of Roseland, this church is recommended as individually eligible for National Register listing under Criterion A for its association with the community's once-dominant Dutch population and under Criterion C as fine example of a Romanesque Revival style church in Roseland.

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Square tower brick infilled
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingle	**Roof Features** Parapet, Towers, Dormers	**Roof Type** Gable	
Ornamental Architectural Details Stone sills, belt courses, brick pilasters, and keystones, shaped parapet, rose window			**Windows** Double-hung, fixed-pane, glass block (raised basement)
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? Yes	[✓ **A**] **B** [✓ **C**]	**Significance:** A fine example of a Romanesque Revival style church in the Roseland community associated with the community's once-dominant Dutch population

Additional comments

CHRS coded orange: property possesses some architectural feature or historical association that made it potentially significant in the context of the surrounding community.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
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Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11122 S. Princeton Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Apartment building

Current: Apartment building

Date of Construction: 1922

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

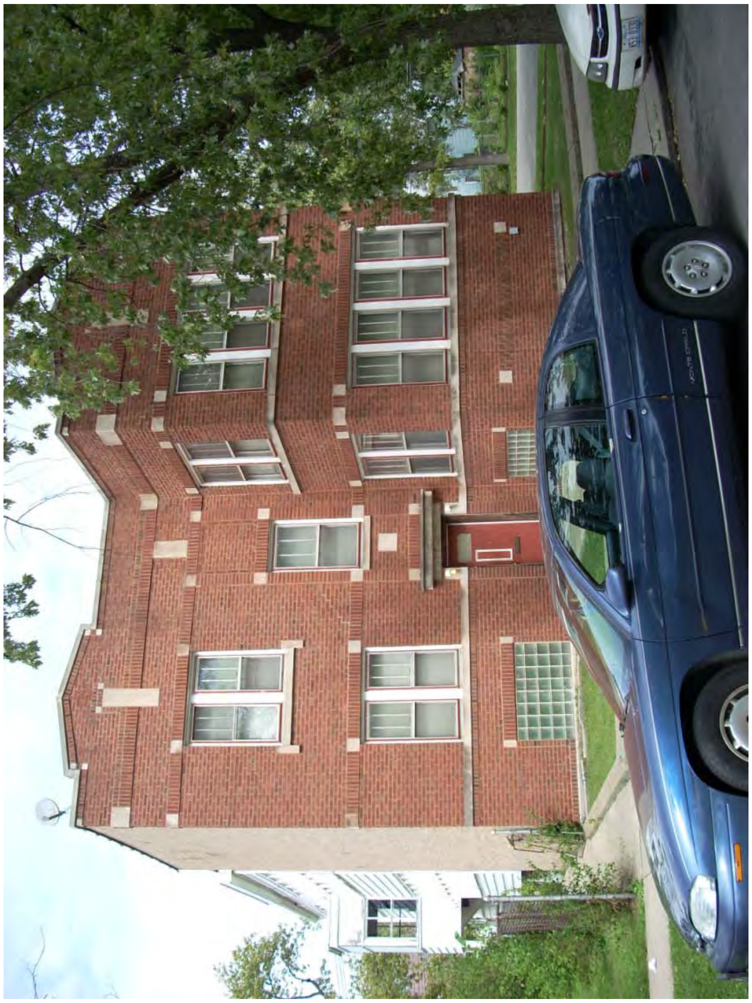
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 22 October 2012

Photos with Captions:
South façade of a brick, two-story, apartment building.



Property Description: **Stories:** 2

This two-story apartment building at the northwest corner of Princeton Avenue and 111th Place in the Roseland community is situated on a raised basement with glass block windows and is clad with brown face brick on its two street elevations. The building has a flat roof and shaped parapet with concrete coping. Windows are original three-over-one wood-sash windows arranged singly, in pairs, or in groups of four. The Princeton Avenue elevation also features four leaded glass casement windows. Each street elevation has an entrance with a non-original hollow core metal door. Detailing includes concrete sills and brick soldier courses with square stone inserts blocks. This building lacks sufficient distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Windows in garden apartments in-filled with glass blocks
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details Concrete coping and sills, stone insert blocks, brick soldier courses			**Windows** Double-hung, casement, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

11142 S. Princeton Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Flat (Single family, CCA)

Date of Construction: 1908

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

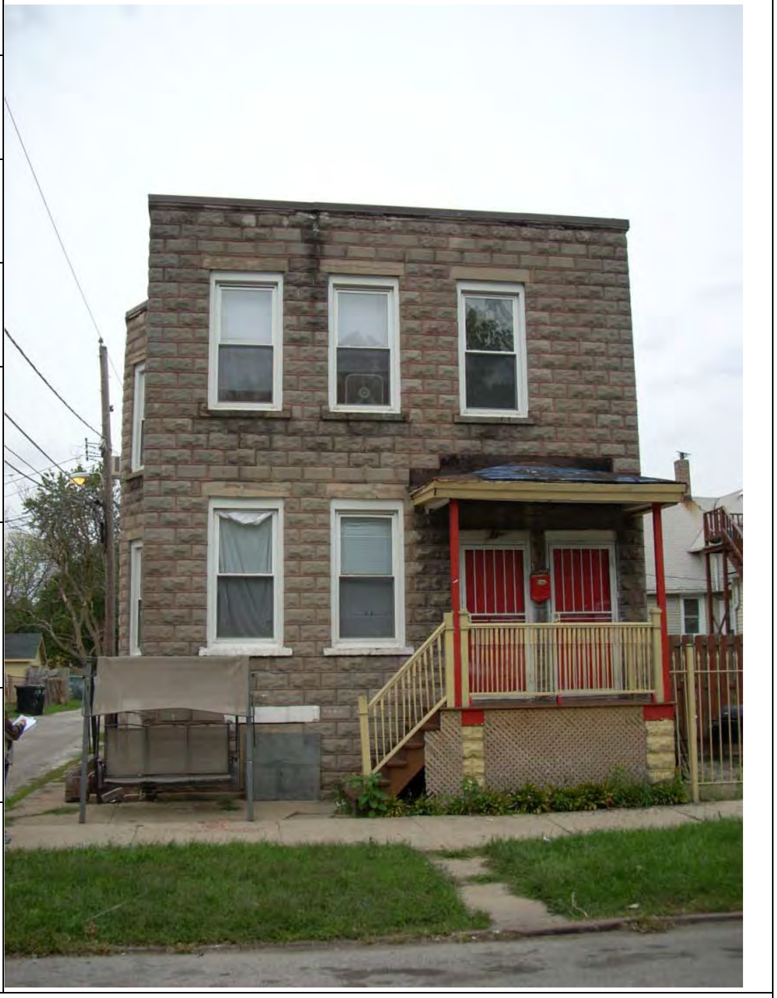
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 16 September 2012

Photos with Captions:
North façade of concrete block, two-flat residence.



Property Description: **Stories:** 2

This two-flat rusticated concrete block residential building in the Roseland community is situated on a raised basement. The building has a flat roof and parapet. Its front elevation has a pair of off-center hollow core metal doors, a partial-width hipped-roof wood porch with straight posts and railings, and five non-original one-over-one aluminum-sash windows: two on the first floor and three on the second. Detailing includes stone sills and lintels. The south (alley) elevation has a full-height window bay pavilion. This building lacks integrity and distinguishing architectural features and is not individually eligible for listing on the National Register.

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Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Concrete block	
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details Stone sills and lintels			**Windows** Double-hung, covered
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11319 S Princeton Ave

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1916

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

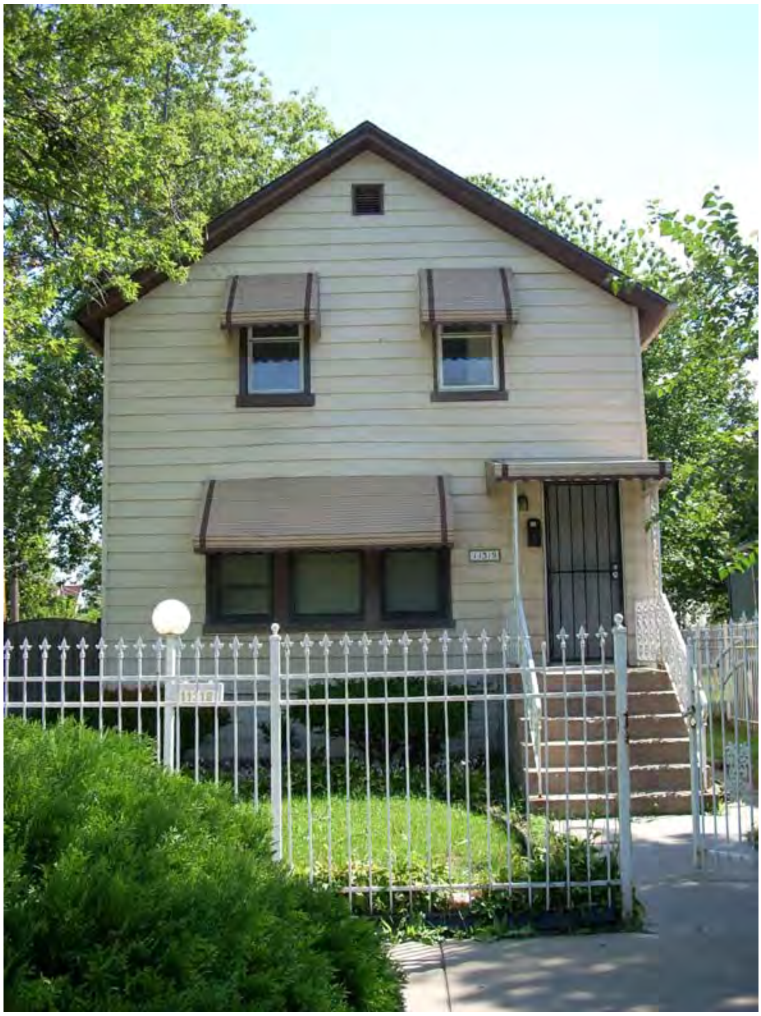
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 1 October 2012

Photos with Captions:
West façade two-story, single family, frame residence.



Property Description: **Stories:** 2

This two-story home in the Roseland community is clad with synthetic siding, has a gable roof covered with asphalt shingles, and is situated on a raised concrete block basement. Its front façade has an off-center, non-original, hollow metal paneled door and a porch with concrete steps, metal railings, and metal supports with a metal canopy roof. Fenestration is comprised of non-original one-over-one windows: a strip of three on the first floor and two on the second floor. One of the side elevations has a three-sided window bay on the first floor. This home lacks integrity and distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
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Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement front door, windows, cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung, fixed-pane
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11321 S Princeton Ave

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1903

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

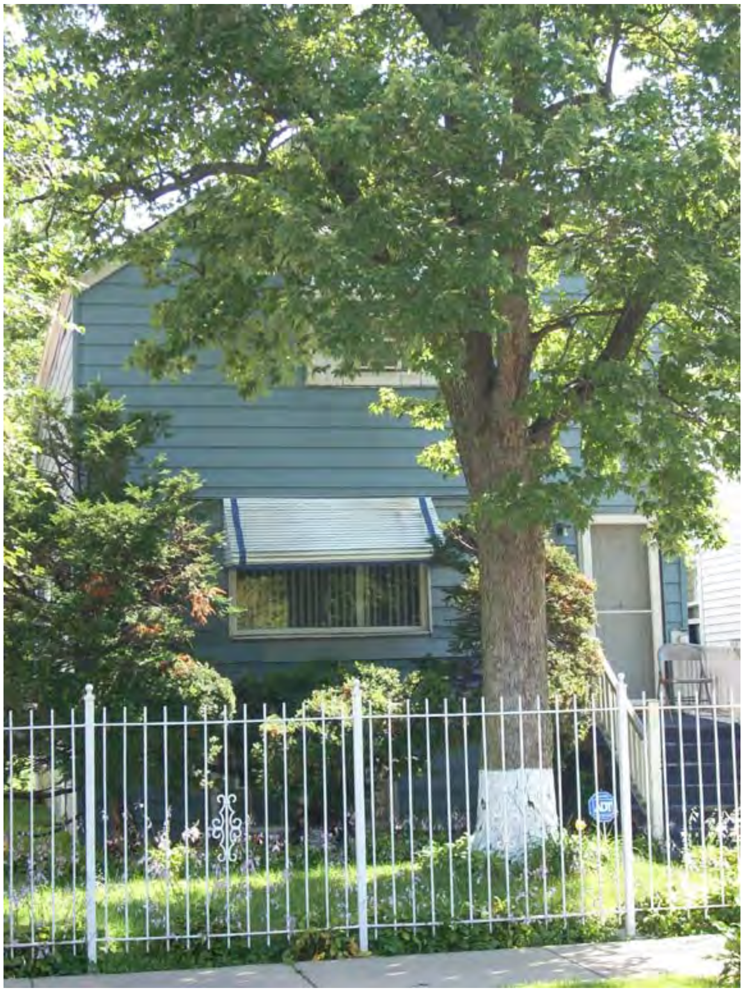
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 1 October 2012

Photos with Captions:
West façade two-story, single family, frame residence.



Property Description: **Stories:** 2

This two-story home in the Roseland community is clad with synthetic siding, has a gable roof covered with asphalt shingles, and is situated on a raised basement. Its front façade has an off-center hollow metal paneled door and a porch with wood steps and straight wood railings. The first floor of the front façade has a large picture window and the second floor has paired, double-hung windows. This home lacks integrity and distinguishing architectural features; therefore, it is not individually eligible for listing on the National Register.

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Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered	[✓ Slight Modification]	Major Alteration	**Additional Notes/Descriptions** Replacement door & cladding
Condition: [✓ Excellent]	Good	Poor	
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung, fixed-pane
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

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Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11325 S. Princeton Ave

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1903

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

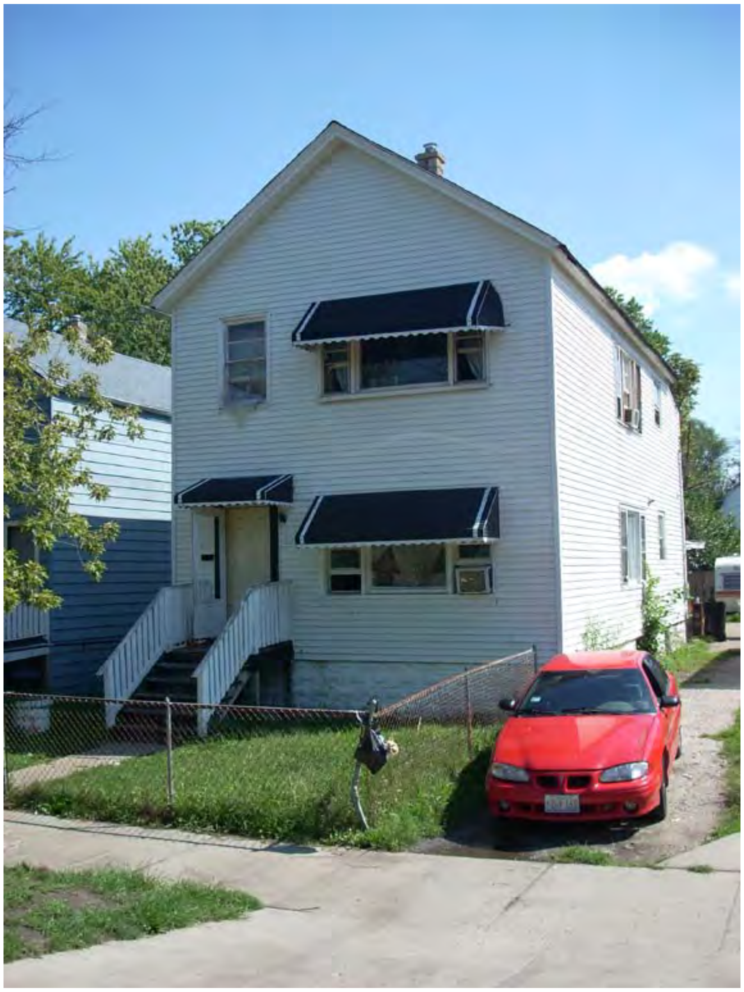
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 1 October 2012

Photos with Captions:
West façade two-story, single family, frame residence.



Property Description: **Stories:** 2

This two-story home in the Roseland community is clad with synthetic siding, has a gable roof covered with asphalt shingles, and is situated on a raised concrete block basement. Its front façade has an off-center, non-original, hollow, metal paneled door and a porch with wood steps and straight wood railings. Both the first and second floors of the front façade feature a large picture window flanked by one-over-one windows. The second floor has an additional one-over-one window situated directly above the entrance. This home lacks integrity and distinguishing architectural features; therefore, it is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement door & cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung, fixed-pane
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

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Marengo, Illinois 60152
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Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11327 S Princeton Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1903

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

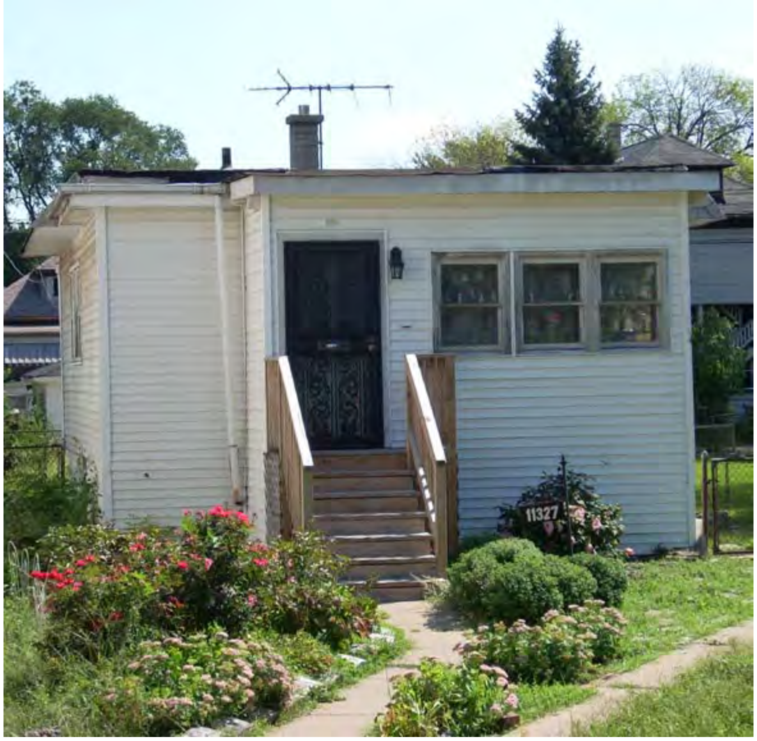
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 26 September 2012

Photos with Captions:
West façade one-story, single family, frame residence



Property Description: **Stories:** 1

The one-story home in the Roseland community is clad with synthetic siding and has a flat roof. Its front façade has an off-center door, wood steps and railings, and a strip of three, non-original one-over-one windows. It lacks integrity and any distinguishing architectural features; therefore, it is not individually eligible for listing on the National Register.

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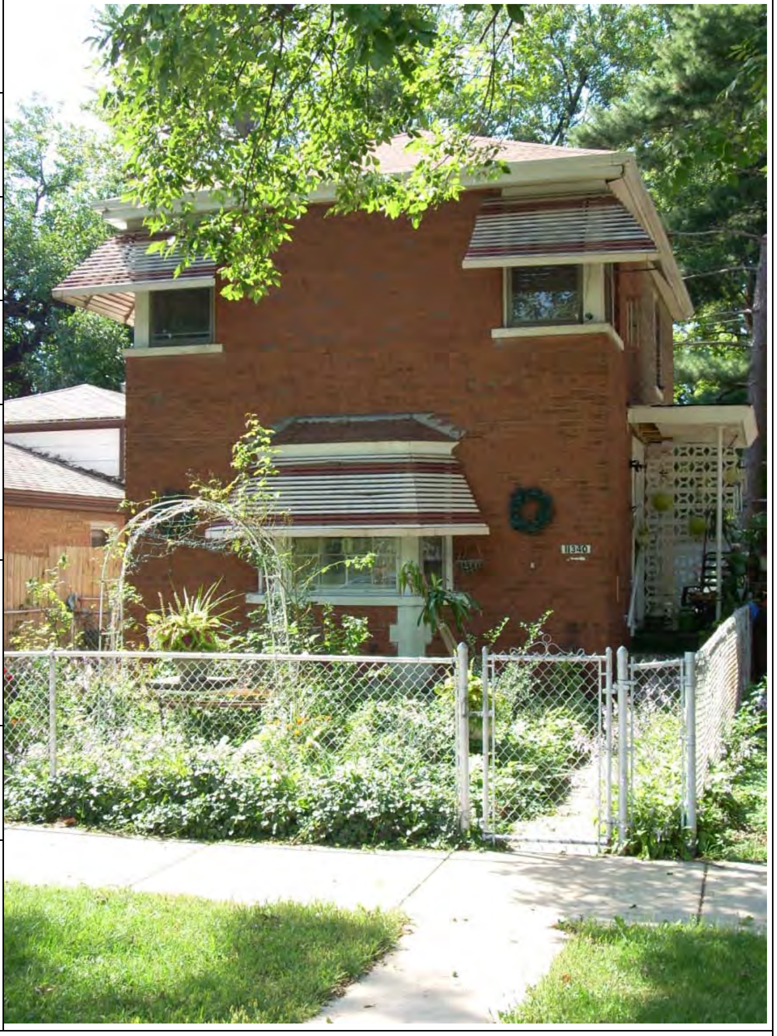
Structural Survey

Integrity:			**Additional Notes/Descriptions**
Unaltered	Slight Modification	[✓ Major Alteration]	Replacement door, windows, and cladding
Condition:			
Excellent	[✓ Good]	Poor	
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt	**Roof Features** None	**Roof Type** Flat	
Ornamental Architectural Details None			**Windows** Double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Historical Resource Recordation Form

Property Name **Historic:** Not labeled, not in CHRS **Common/Current:** Unknown	**Photos with Captions:** East façade of two-story, brick, single family residence. 
Property Address: 11340 S. Princeton Ave	
HAARGIS Number: Not in database	
Present Owner and /or Occupant: Unknown	
Property Use **Historic:** Single family residence **Current:** Single family residence	
Date of Construction: 1948 **Architect's Name:** Not in CHRS **Builder/Contractor:** Not in CHRS	
Architectural Style: Vernacular	
Prepared By: C. Tolmie, M. C. Bird, J. Guarino **Photo By:** S. Katz **Date:** 6 September 2012	

Property Description: **Stories:** 2

This two-story home in the Roseland community is clad with face brick and common brick on the front and side elevations, respectively, and has a hip roof covered with asphalt shingles. The front façade has a three-sided bay window on the first floor and casement windows at each corner of the second floor, each topped by an awning. Details include concrete quoins on the bay and concrete sills. The main entrance is located along the side elevation, which contains an entryway porch topped by a flat roof supported by metal pole. Decorative lattice is present at the entrance. This building lacks sufficient distinguishing architectural features to qualify as individually eligible for listing on the National Register.

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Structural Survey

Integrity: [✓ Unaltered] Slight Modification Major Alteration			**Additional Notes/Descriptions**
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Hipped	
Ornamental Architectural Details Concrete quoins and sills, lattice at entry			**Windows** Fixed-pane, casement
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

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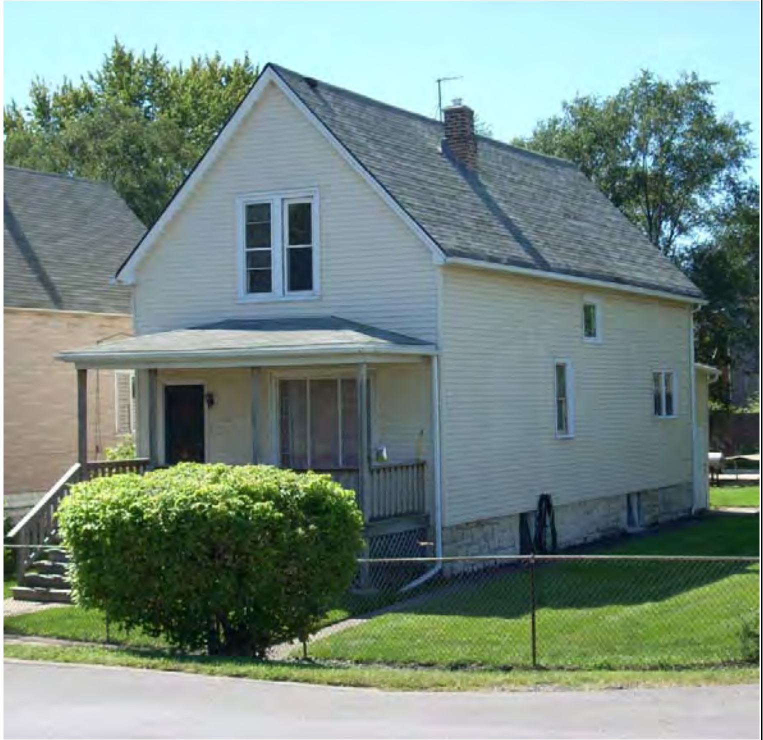
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name **Historic:** Not labeled, not in CHRS **Common/Current:** Unknown	**Photos with Captions** West and north façades of 1.5-story, single family, frame residence. 
Property Address: 11546 S. State Street	
HAARGIS Number: Not in database	
Present Owner and /or Occupant: Unknown	
Property Use **Historic:** Single family residence **Current:** Single family residence	
Date of Construction: 1901 **Architect's Name:** Not in CHRS **Builder/Contractor:** Not in CHRS	
Architectural Style: Vernacular	
Prepared By: C. Tolmie, M. C. Bird, J. Guarino **Photo By:** S. Katz **Date:** 10 September 2012	

Property Description: **Stories:** 1.5

This one-and-a-half-story house in the West Pullman community is situated on a raised concrete block basement, is clad with synthetic siding, and has a gable roof covered with asphalt shingles. Its front elevation features a full-width, hip-roof, wood porch with wood slat railings and wood posts. It also has an off-center door, a multi-light fixed-pane window on the first floor, and a pair of non-original one-over-one windows in the gable. This house lacks sufficient integrity and distinguishing architectural features to qualify as individually eligible for listing on the National Register.

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Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered	[✓ Slight Alterations]	Major Alterations	**Additional Notes/Descriptions** Replacement cladding, door, and windows in gable
Condition: [✓ Excellent]	Good	Poor	
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung, fixed-pane
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Not in CHRS

Property Address:

11548 S. State Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1889

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

Vernacular

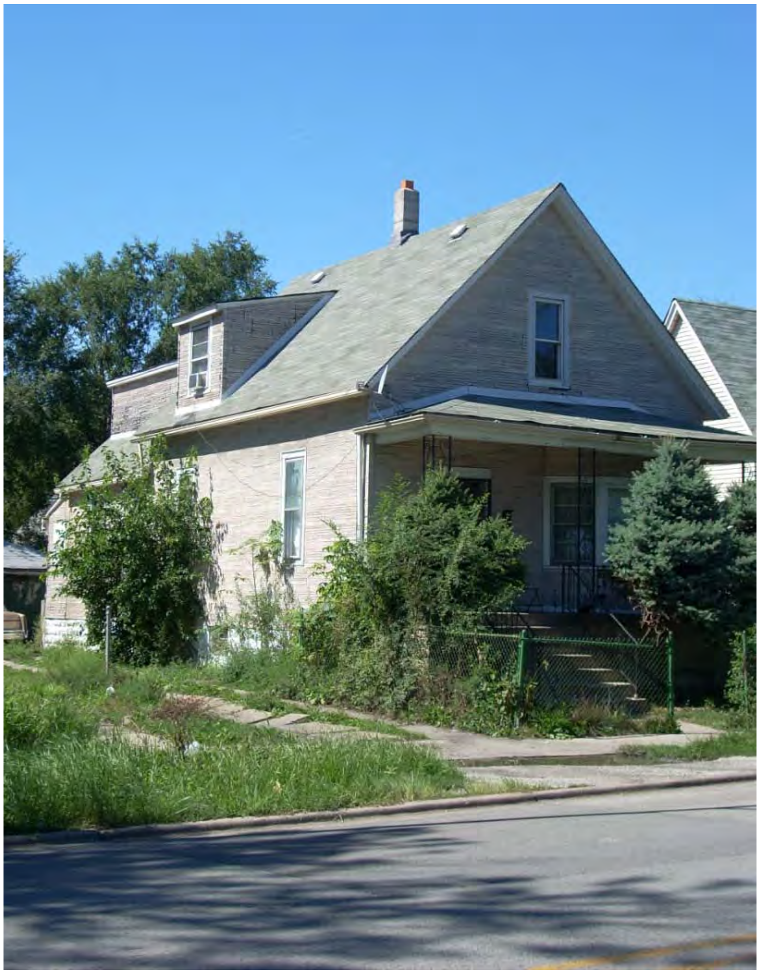
Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 10 September 2012

Photos with Captions

West and south façades of one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story house in the West Pullman community is situated on a raised concrete block basement and is clad with synthetic siding. It has a gable roof covered with asphalt shingles and a shed roof dormer on its south elevation. Its front elevation features a full-width, hip-roof, wood porch with open metal railings and posts, an off-center door, a bay window on the first floor, and a single non-original one-over-one window in the gable. This house lacks sufficient integrity and distinguishing architectural features to qualify as individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
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Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Alterations] Major Alterations			**Additional Notes/Descriptions** Replacement windows, doors, and siding
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** Dormer	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Not in CHRS

Property Address:

11567 S. State Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Vacant

Property Use

Historic: Single family residence

Current: Multi-family residence

Date of Construction: 1908

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

Vernacular

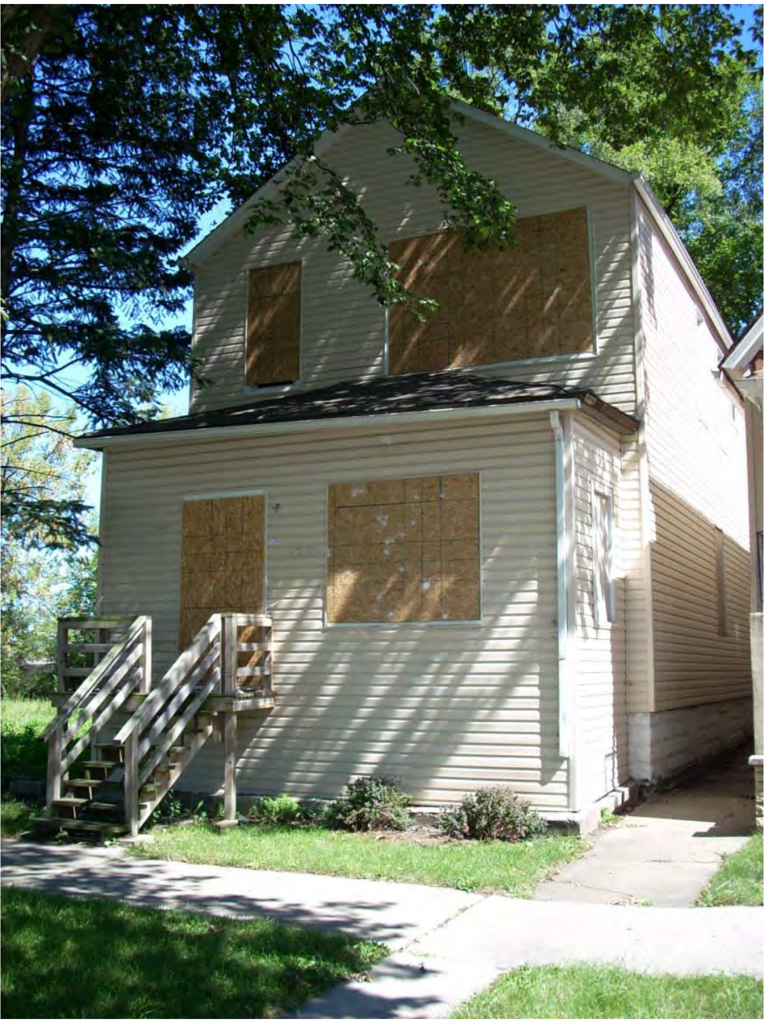
Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 10 September 2012

Photos with Captions

West façade of two-story, multi-family, frame residence.



Property Description: **Stories:** 2

This two-story house in the West Pullman community is situated on a raised concrete block basement and is clad with synthetic siding. It has a front gable roof covered with asphalt shingles and an enclosed hip roof porch. The front door and all window openings are covered with plywood. This house lacks sufficient integrity and distinguishing architectural features to qualify as individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

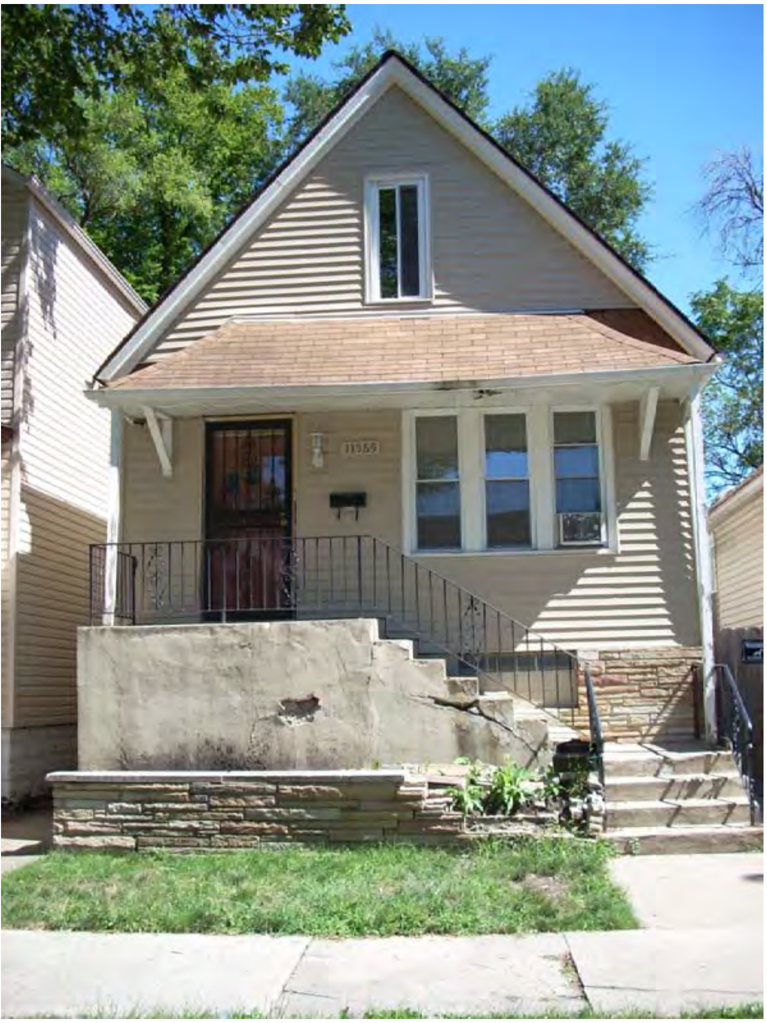
Integrity: Unaltered [✓ Slight Modification] Major Alterations			**Additional Notes/Descriptions** Windows and doors covered with plywood, replacement cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** NA
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name **Historic:** Not labeled, not in CHRS **Common/Current:** Unknown	**Photos with Captions** West façade of one-story, single-family, frame residence. 
Property Address: 11569 S. State Street	
HAARGIS Number: Not in database	
Present Owner and /or Occupant: Unknown	
Property Use **Historic:** Single family residence **Current:** Single family residence	
Date of Construction: 1898 **Architect's Name:** Not in CHRS **Builder/Contractor:** Not in CHRS	
Architectural Style: Vernacular	
Prepared By: C. Tolmie, M. C. Bird, J. Guarino **Photo By:** S. Katz **Date:** 10 September 2012	

Property Description: **Stories:** 1

This one-story house in the West Pullman community is situated on a raised concrete block basement with a stone veneer. Above, it is clad with aluminum siding and has a gable roof covered with asphalt shingles. Its front elevation features a pent roof with decorative knee braces, an off-center door, concrete steps with metal railings and a strip of three non-original one-over-one windows. The window opening in the gable contains a pair of narrow casements. This house lacks sufficient integrity and distinguishing architectural features to qualify as individually eligible for listing on the National Register.

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505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alterations			**Additional Notes/Descriptions** Replacement windows and cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details Knee braces supporting porch roof			**Windows** Double-hung, casement
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11571 S. State Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1898

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

Vernacular

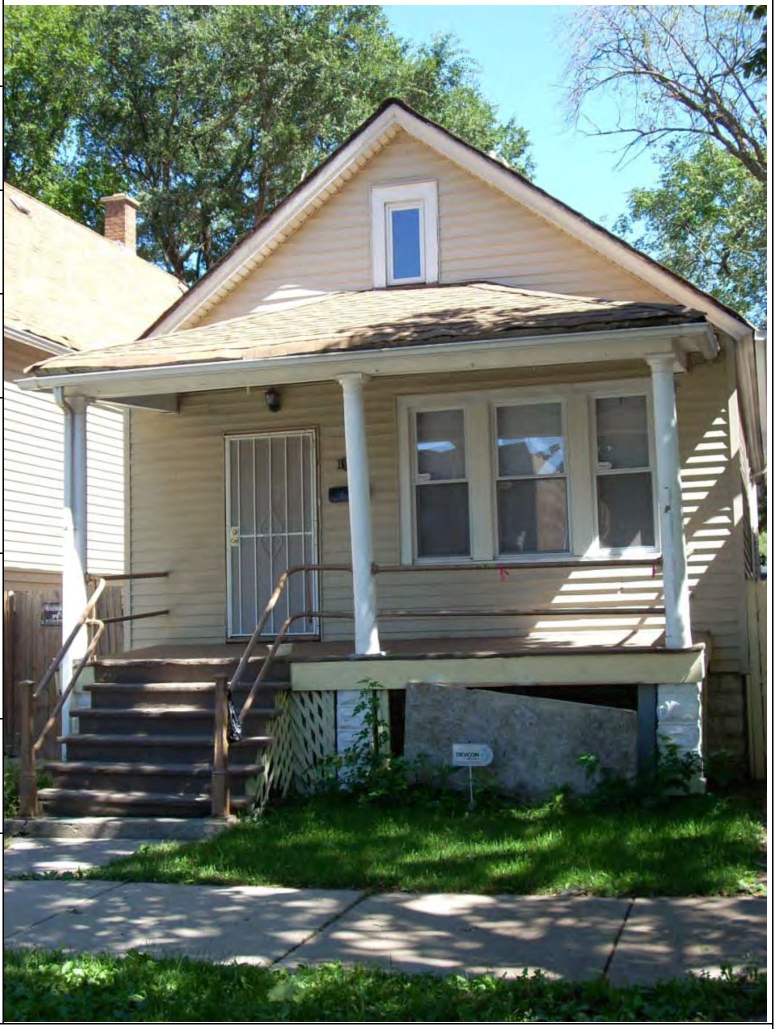
Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 10 September 2012

Photos with Captions

West façade of one-story, single-family, frame residence.



Property Description: **Stories:** 1

This one-story house in the West Pullman community is situated on a raised concrete block basement, is clad with synthetic siding, and has a front gable roof covered with asphalt shingles. Its front elevation features a full-width, hip-roof, wood porch with Doric columns and metal pipe railings. It also has an off-center door, a strip of three non-original one-over-one windows, and a single-pane window in the gable. This house lacks sufficient integrity and distinguishing architectural features to qualify as individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered	[✓ Slight Modification]	Major Alterations	**Additional Notes/Descriptions** Replacement windows and cladding
Condition: [✓ Excellent]	Good	Poor	
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Fixed-pane, double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y [✓ N]**	
National Register Historic Places	**Y [✓ N]**	
National Register Historic District	**Y [✓ N]**	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11573 S. State Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1908

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

Vernacular

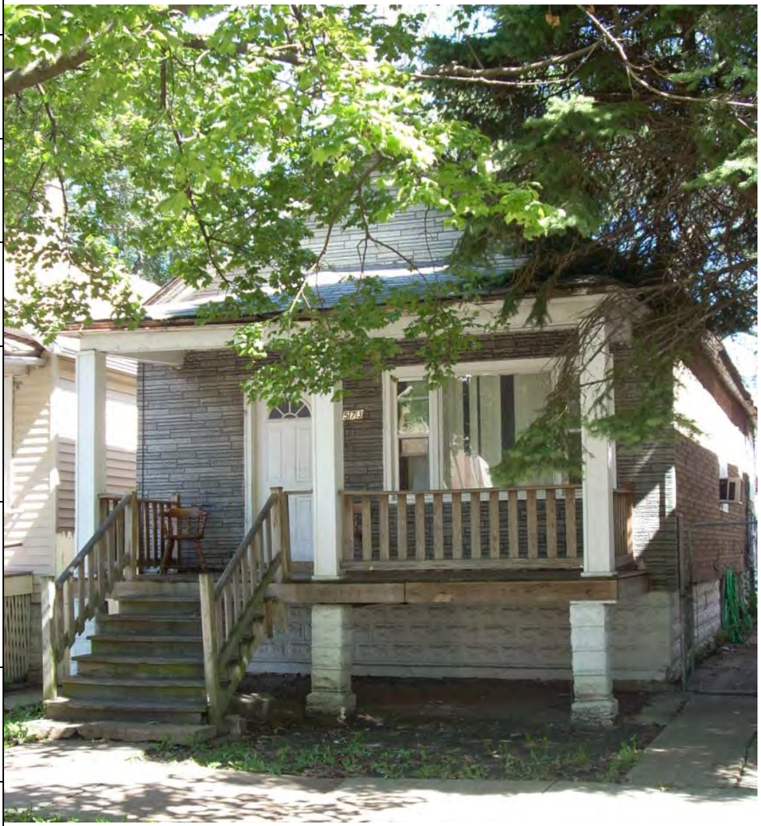
Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 10 September 2012

Photos with Captions

West façade of one-story, single-family frame residence.



Property Description: **Stories:** 1

This one-story house in the West Pullman community is situated on a raised concrete block basement, is clad with synthetic siding, and has a gable roof covered with asphalt shingles. Its front elevation features a full-width, hip-roof, wood porch with square porch supports and non-original railings. It has an off-center metal hollow core paneled door with fanlight and a picture window flanked by non-original one-over-one windows. This house lacks sufficient integrity and distinguishing architectural features to qualify as individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alterations			**Additional Notes/Descriptions** Replacement windows and siding
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Fixed-pane, double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11575 S. State Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Vacant

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1908

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

Vernacular

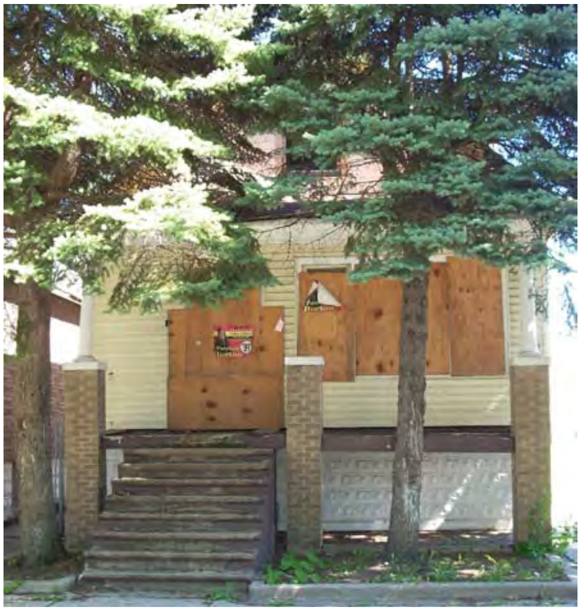
Prepared By: C. Tolmie, M. C. Bird, J. Guarino

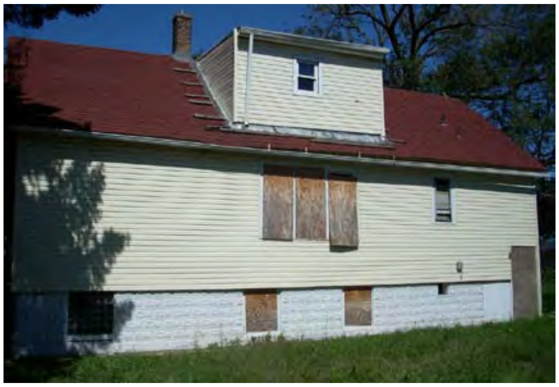
Photo By: S. Katz

Date: 10 September 2012

Photos with Captions

South façade of one-story, single-family frame residence.





Property Description: **Stories:** 1

This one-story house in the West Pullman community is situated on a raised concrete block basement and is clad with synthetic siding. It has a front gable roof covered with asphalt shingles and a flat-roofed dormer along one of its side elevations. Its front elevation features a full-width porch with wood steps and support consisting of brick piers topped by squat Doric columns. The porch deck and railings have been removed and the door and all windows openings are covered with plywood. This house lacks sufficient integrity and distinguishing architectural features to qualify as individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered	[✓ Slight Modification]	Major Alterations	**Additional Notes/Descriptions** Windows and doors covered, replacement cladding
Condition: Excellent	Good	[✓ Poor]	
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** Dormer	**Roof Type** Gable	
Ornamental Architectural Details Doric columns on porch			**Windows** Unknown
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11583 S. State Street

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1926

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

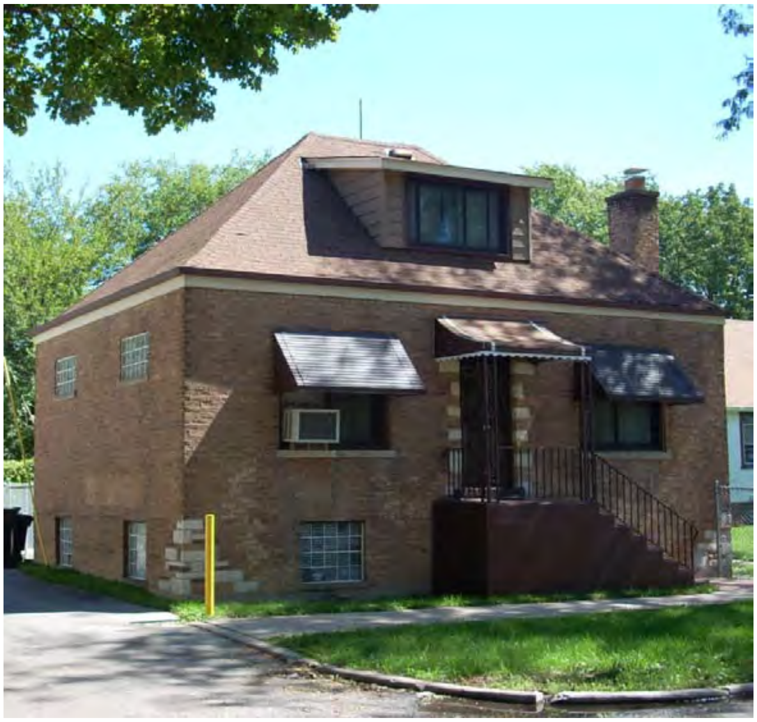
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 10 September 2012

Photos with Captions:
South and east façades of single family, brick residence.



Property Description: **Stories:** 1

This one-story house in the West Pullman community is situated on a raised basement with glass block windows and is clad with common brick. It has a steeply pitched hip roof covered with asphalt shingles and a shed dormer with sliding glass windows. Its front elevation features a centrally located hollow metal paneled door (non-original) flanked by paired, double-hung windows. The porch has concrete steps, metal railings and supports, and a metal canopy roof. Detailing includes rusticated stonework at the basement corners and around the door. This house does not feature sufficient distinguishing architectural features to qualify as individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alterations			**Additional Notes/Descriptions** Replacement windows and door
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingle	**Roof Features** Dormer	**Roof Type** Hipped	
Ornamental Architectural Details Rusticated stonework at corners and around the entrance			**Windows** Double-hung, sliding, glass block
Outbuildings (*Number and Description*) None.			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Trinity Italian Reformed Church (1938)

Common/Current: New Christian Joy F.G.B.C.

Property Address:

11594 S. State Street
Alternate: 11588 S State Street (per CCA)

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

New Christian Joy F.G.B.C.

Property Use

Historic: Religious

Current: Religious

Date of Construction: 1924

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

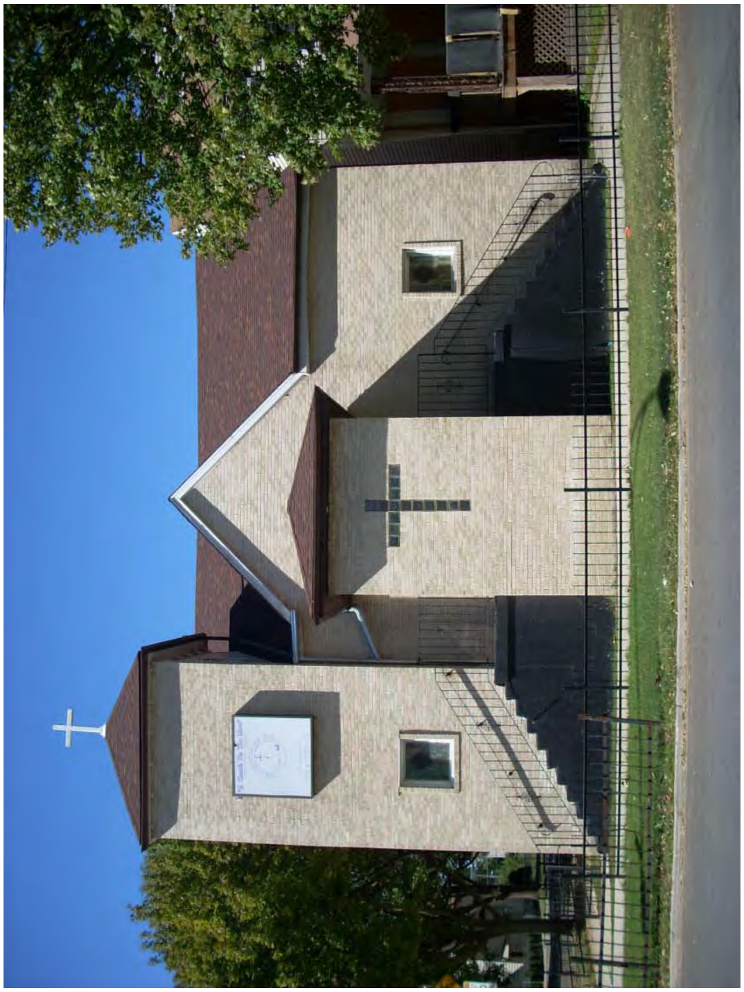
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 22 October 2012

Photos with Captions:
East façade of a brick, 1.5-story religious building.



Property Description: **Stories:** 1.5

This church at the corner of State and 116th streets is clad in buff face brick on a concrete block foundation. The building has a raised basement, gable roof covered with asphalt shingles, and a square corner tower with a hip roof. Its front (State Street) elevation has a centrally located hip-roof entrance pavilion with metal stairs on both sides and a gable wall dormer above. The pavilion features a cross of glass blocks and the flanking walls each have a single square leaded glass window. The side (116th Street) elevation features one large and two small pointed arch windows. This church lacks sufficient distinctive architectural features to qualify as individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: [✓ Unaltered] Slight Modification Major Alteration			**Additional Notes/Descriptions**
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt shingle	**Roof Features** Dormer	**Roof Type** Gable	
Ornamental Architectural Details Square tower, cruciform-shaped glass blocks, pointed windows, leaded glass			**Windows** Fixed-pane
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11118 S. Stewart Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Benson & Son Construction Contractor

Property Use

Historic: Industrial (Sash & Screen Door Factory, 1939)

Current: Garage

Date of Construction: 1922

Architect's Name: Unknown

Builder/Contractor: Unknown

Architectural Style:

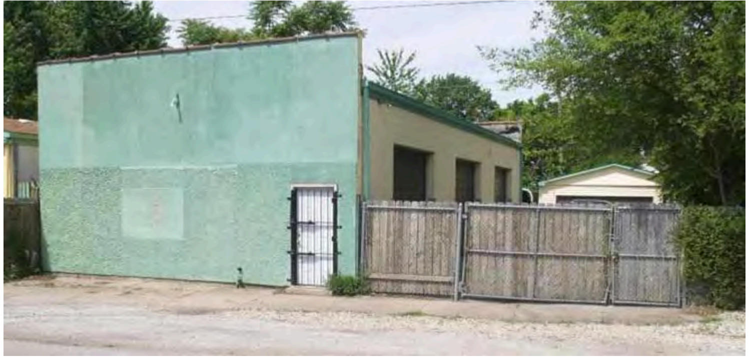
Vernacular

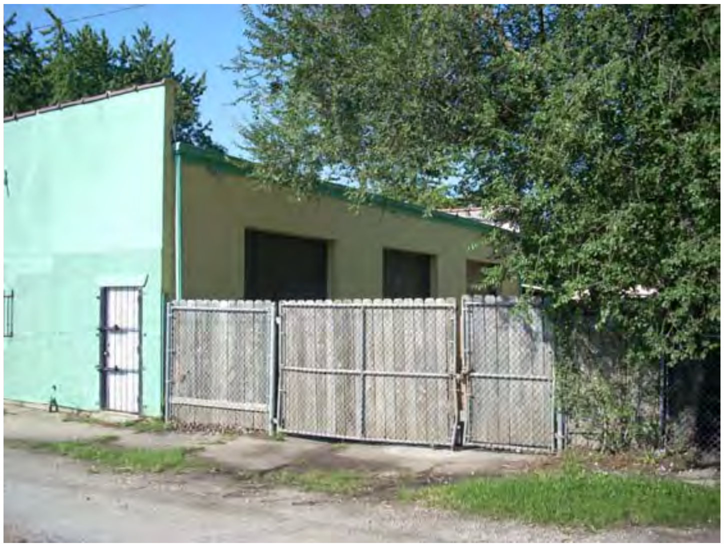
Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz, CCA

Date: 6 September 2012

Photos with Captions:
East and north facades of a one-story, concrete block garage.
Cook County Assessor's photo (top), MARS, Inc. photo (bottom):





Property Description: **Stories:** 1

This one-story concrete block garage has a flat roof and parapet. Its front elevation has been covered with what appears to be shotcrete and has an off-center hollow metal door. The structure has a series of overhead garage door openings along one of its side elevations. This structure lacks architectural distinction and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Re-clad with shotcrete
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Concrete block	
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details None			**Windows** NA
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Business office attached (11124 S. Stewart Ave.)

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11130 S Stewart Ave.

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1914

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

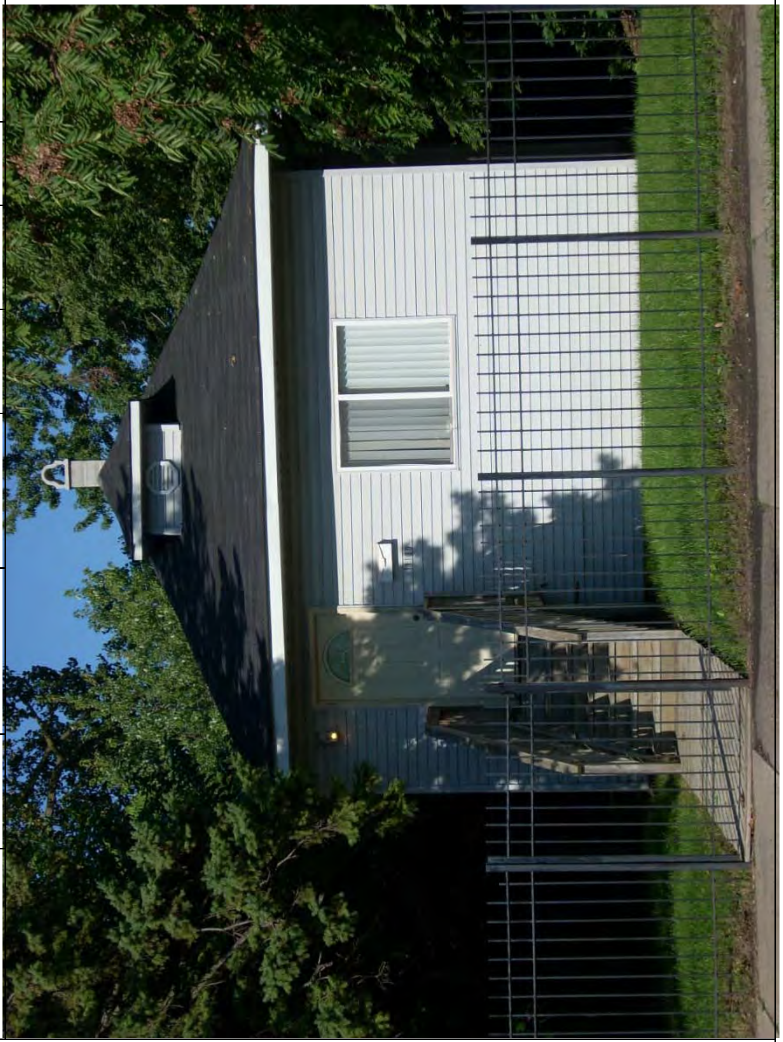
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 6 September 2012

Photos with Captions:
East façade of one-story, frame, single family residence.



Property Description: **Stories:** 1

This one-story home in the Roseland community is clad with synthetic siding; it has a hip roof covered with asphalt shingles and a hipped roof dormer with louver. The front elevation has an off-center door, wood steps and railings, and a pair of windows that appear to be casements. This home lacks integrity and architectural distinction and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows and cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** Dormer	**Roof Type** Hip	
Ornamental Architectural Details None			**Windows** Casement
Outbuildings (*Number and Description*) None			

Local Landmark	**Y [✓ N]**	
National Register Historic Places	**Y [✓ N]**	
National Register Historic District	**Y [✓ N]**	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11142 S. Stewart Ave

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Vacant

Property Use

Historic: Industrial

Current: Industrial

Date of Construction: circa 1950

Architect's Name: Unknown

Builder/Contractor: Unknown

Architectural Style:

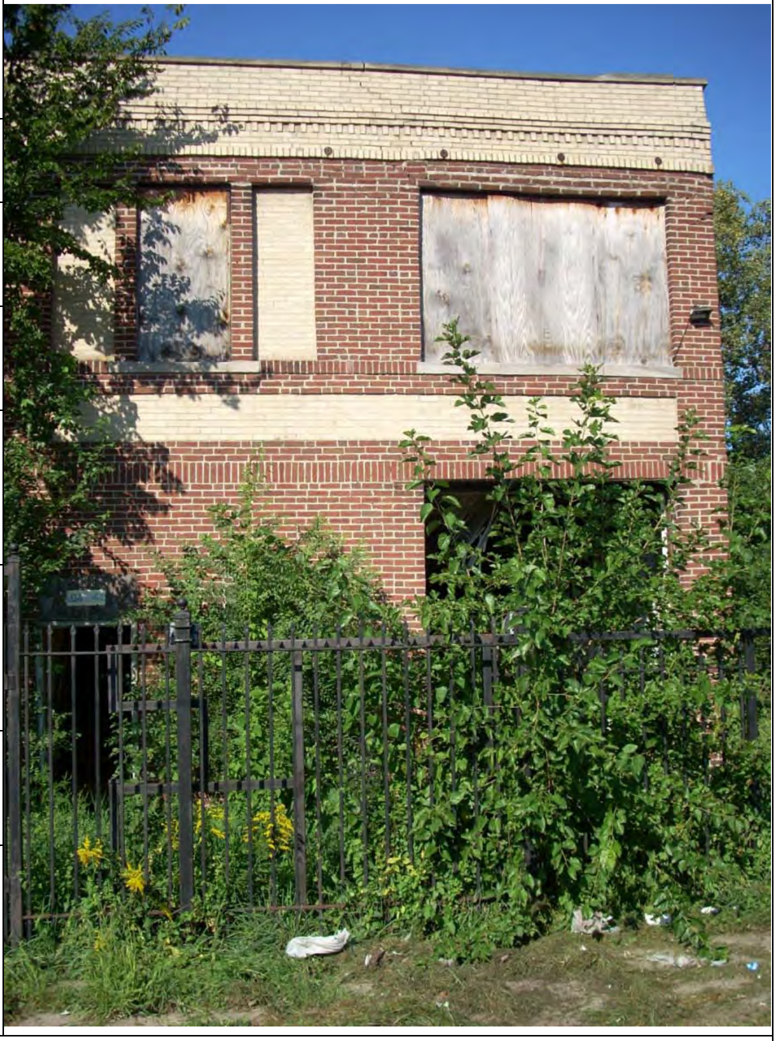
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 6 September 2012

Photos with Captions:
East façade two-story, brick light industrial building.



Property Description: **Stories:** 2

This two-story light industrial building is clad with face brick and common brick along its front and side elevations, respectively, and has a flat roof and parapet. The front elevation has an off-center entrance with no door, a large window opening on the first floor that is obscured by foliage, and window openings on the second floor that have been in-filled with both wood and brick. The buff brick between the first and second floors and at the parapet level contrasts with the red brick cladding of the front elevation and may be non-original. Detailing includes dentil molding on the parapet, banding in brick, and stone sills. Side elevation windows are in-filled with glass block. This building lacks integrity and architectural distinction and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity:			**Additional Notes/Descriptions** In-filled windows and doors
Unaltered	[✓ Slight Modification]	Major Alteration	
Condition:			
Excellent	Good	[✓ Poor]	
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details Parapet with dentil molding, banding, sills			**Windows** NA
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

11224 S. Stewart Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1923

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

Vernacular

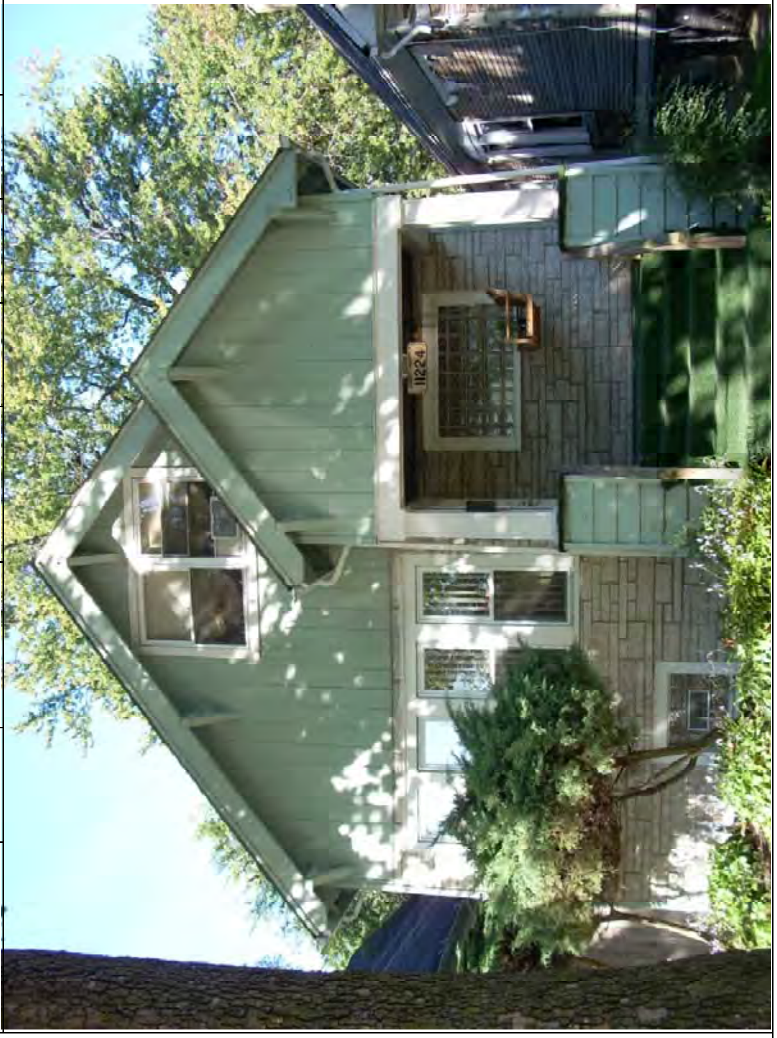
Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 16 September 2012

Photos with Captions:

East façade of 1.5-story, frame, single family residence.



Property Description: **Stories:** 1.5

This 1.5-story house in the Roseland community is situated on a raised brick basement with glass block windows. The building has a front gable roof covered with asphalt shingles and overhanging eaves with decorative knee braces. The front elevation is covered with faux stone to the top of the first floor windows and in vertical synthetic siding above. It has a partially recessed gable-roofed corner porch with sidewalls covered with synthetic siding, two low squared wood column supports, and wood steps. A glass block window and hollow core metal door are tucked into one side of the porch. A strip of four windows on the first floor and a pair of windows in the gable are non-original one-over-one aluminum-sash. This house lacks integrity and distinctive architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration				**Additional Notes/Descriptions** Replacement windows, door, and cladding
Condition: [✓ Excellent] Good Poor				
Additional Alterations				
Structure Usage Current: NA Historic: NA			**Exterior Wall Surface** Synthetic siding (including faux stone)	
Roof Material Asphalt shingle	**Roof Features** None		**Roof Type** Gable	
Ornamental Architectural Details Knee braces, square column on porch				**Windows** Double-hung, glass block
Outbuildings (*Number and Description*) Garage				

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11229 S. Stewart Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1924

Architect's Name: Unknown

Builder/Contractor: Unknown

Architectural Style:

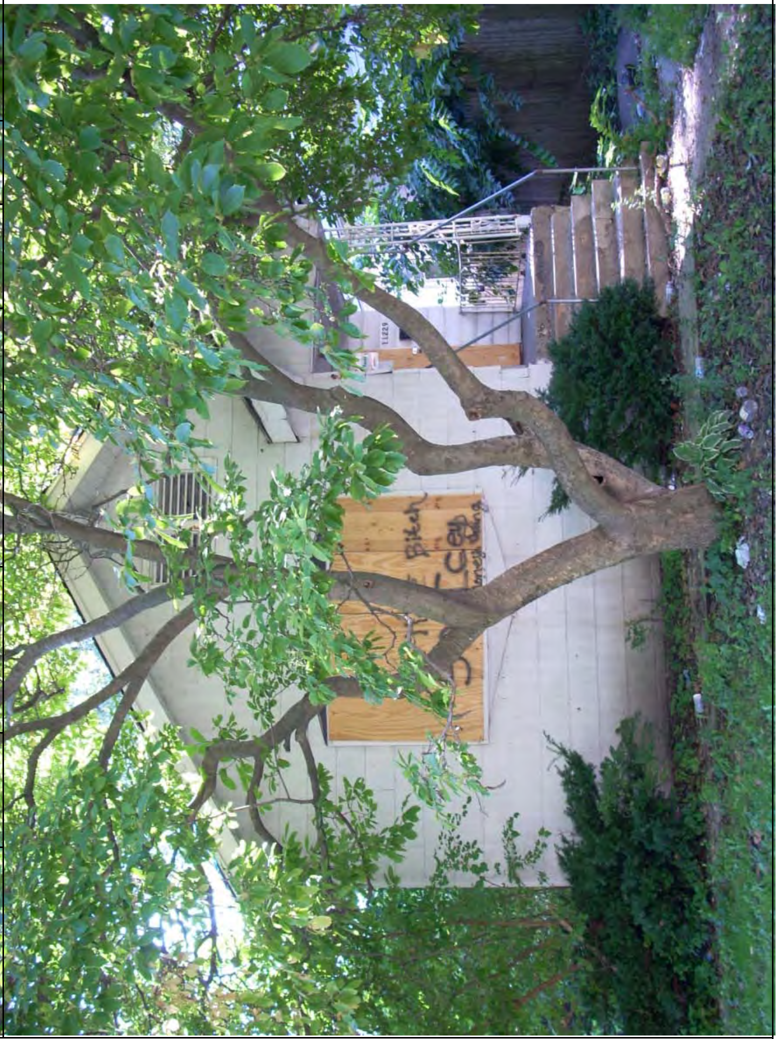
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 6 September 2012

Photos with Captions:
West façade of one-story, single family frame residence.



Property Description: **Stories:** 1

This one-story frame home in the Roseland community is clad with synthetic siding and has a front-gabled roof covered with asphalt shingles. Its off-center recessed porch with gabled hood has concrete steps, metal railings, and a corner support, plus a door opening that has been covered with plywood. The bow window on the front elevation and window openings along the side elevations have all been covered with plywood. This home lacks integrity and architectural distinction and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement siding, covered window and door openings
Condition: Excellent Good [✓ Poor]			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details Gabled hood at entrance			**Windows** Unknown
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11231 S. Stewart Ave.

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1925

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

Craftsman

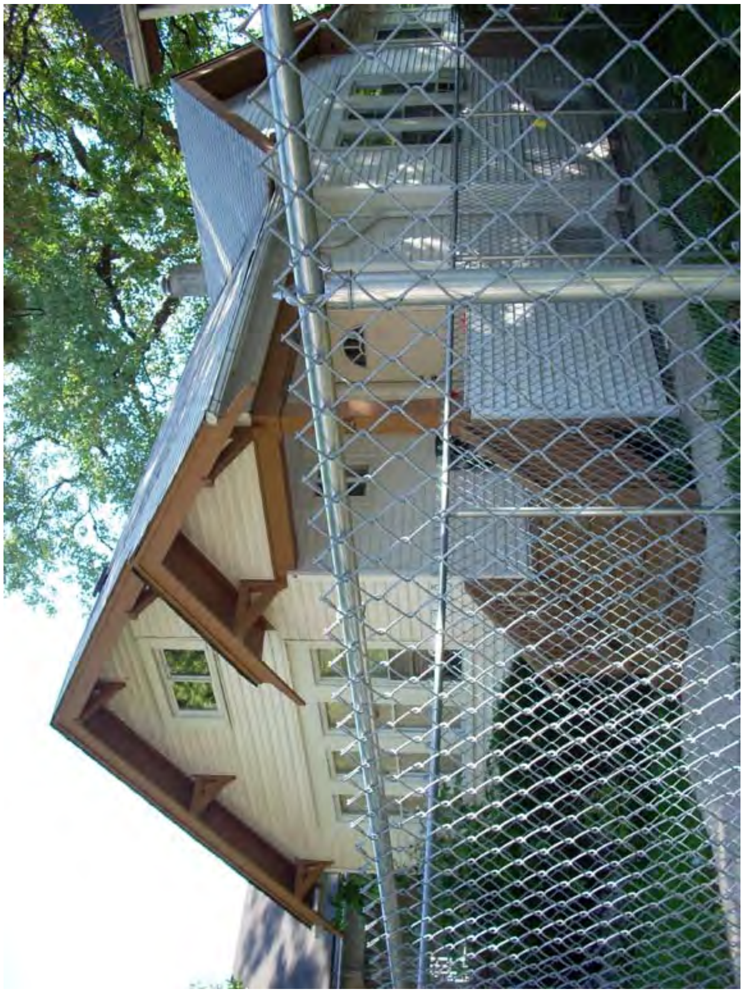
Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 26 September 2012

Photos with Captions:

West façade of one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story Craftsman style bungalow in the Roseland neighborhood is clad with aluminum siding. It has a cross-gable roof covered with asphalt shingles, overhanging eaves, extended rafter ends, and decorative knee brace supports. Its recessed corner porch features wood steps, a wood post, a paneled hollow core metal door with fanlight, and a decorative gable hood with knee brace supports. Its front façade has a strip of four one-over-one windows and a pair of single-pane windows in the attic gable that may be casements. This home does not feature sufficient integrity or distinguishing architectural features to qualify as individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement door
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt	**Roof Features** None	**Roof Type** Cross-gable	
Ornamental Architectural Details Extended rafters, knee braces			**Windows** Double-hung, casement
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11572 S. Wabash Ave.

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Multi-family residence

Date of Construction: 1903

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

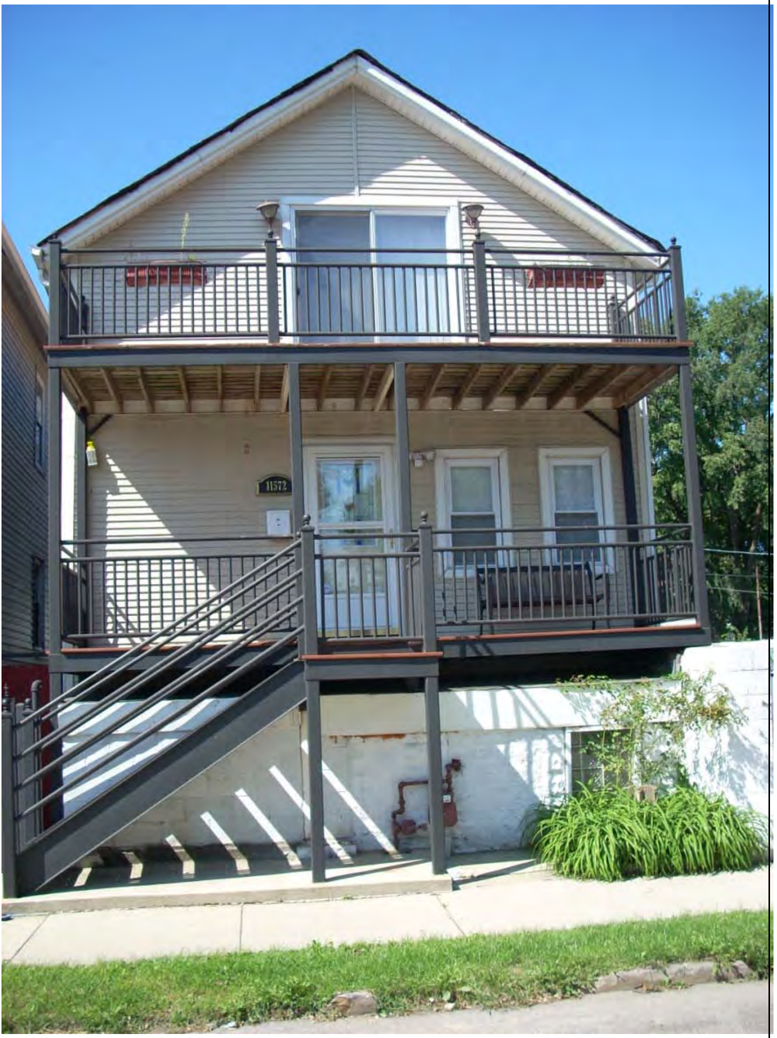
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 10 September 2012

Photos with Captions:
East façade of 1.5-story, multi-family, frame residence.



Property Description: **Stories:** 1.5

This one-and-half-story house in the West Pullman community is situated on a raised concrete block basement, is clad with synthetic siding, and has a gable roof covered with asphalt shingles. Its front elevation has a metal core door and two one-over-one windows on the first floor and sliding glass doors on the second floor. All doors and windows are non-original. The metal stairway and balconies are non-original. This house does not feature sufficient integrity or distinguishing architectural features to qualify as individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows, doors, & cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations Metal stairway and balconies added			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung
Outbuildings (*Number and Description*) Garage and storage shed behind residence.			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
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Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11573 S. Wabash Ave.

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

XOXXOX Charter Bus, Inc.

Property Use

Historic: Warehouse (Sanborn, 1938)

Current: Garage

Date of Construction: 1910

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

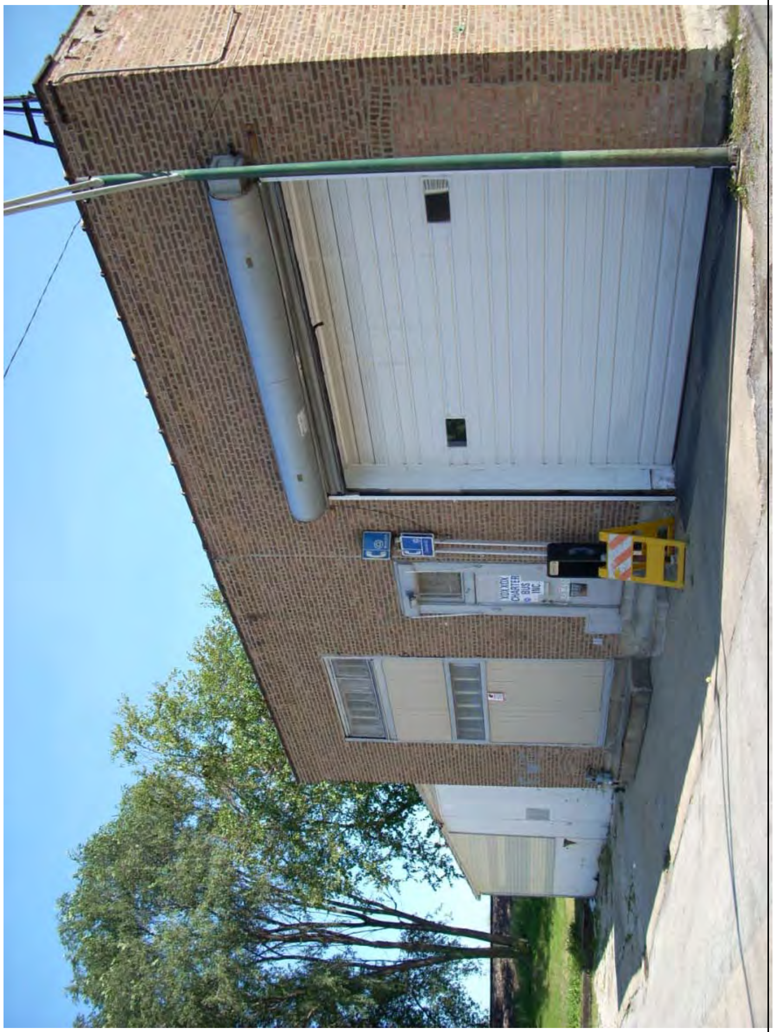
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 10 September 2012

Photos with Captions:
East façade of brick bus garage building.



Property Description: **Stories:** 1

This one-story former warehouse in the West Pullman community is clad with common brick and has a flat roof, parapet, and a shed-roofed frame wing. Its front façade features the outline of an original door opening that has been in-filled with brick, a non-original overhead metal door, a metal door with transom, and a former door opening that has been in-filled with wood panels and two horizontal strips of small fixed-pane windows. One of the side elevations displays the outlines of former window openings that have been in-filled with brick while the other features an overhead metal garage door. This building does not feature sufficient integrity or distinguishing architectural features to qualify as individually eligible for listing on the National Register.

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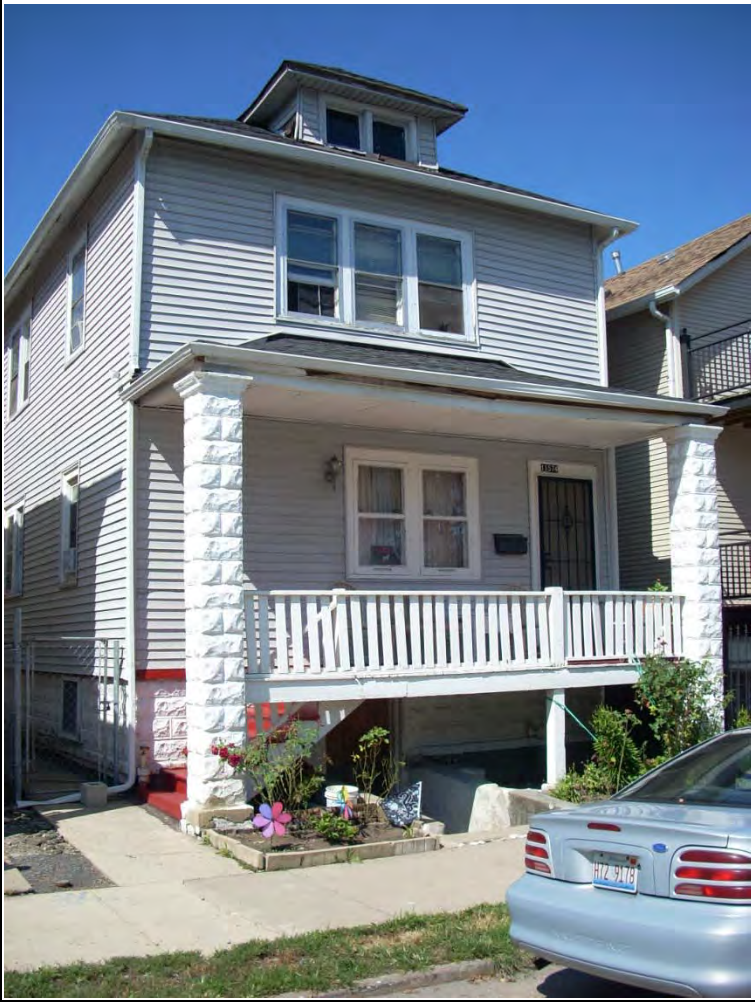
Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alterations			**Additional Notes/Descriptions** Windows and door openings in-filled, small addition
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details None			**Windows** Fixed-pane
Outbuildings (*Number and Description*) None			

Local Landmark	**Y [✓ N]**	
National Register Historic Places	**Y [✓ N]**	
National Register Historic District	**Y [✓ N]**	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Historical Resource Recordation Form

Property Name **Historic:** Not labeled, not in CHRS **Common/Current:** Unknown	**Photos with Captions:** East and south façades of two-story, multi-family, frame residence. 
Property Address: 11574 S. Wabash Ave.	
HAARGIS Number: Not in database	
Present Owner and /or Occupant: Unknown	
Property Use **Historic:** Single family residence **Current:** Multi-family residence	
Date of Construction: 1922 **Architect's Name:** Not in CHRS **Builder/Contractor:** Not in CHRS	
Architectural Style: Vernacular	
Prepared By: C. Tolmie, M. C. Bird, J. Guarino **Photo By:** S. Katz **Date:** 10 September 2012	

Property Description: **Stories:** 2

This two-story house in the West Pullman community is situated on a raised basement and clad with synthetic siding. It has a hip roof covered with asphalt shingles and a hip dormer with a pair of single-pane casement windows. The front elevation features a full-width, hip roof wood porch with faux stone pier supports, an off-center door, and non-original one-over-one windows arranged in strips of two and three on the first and second floors, respectively. This house does not feature sufficient integrity or distinguishing architectural features to qualify as individually eligible for listing on the National Register.

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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alterations			**Additional Notes/Descriptions** Replacement door, windows, cladding, porch railing
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** Dormer	**Roof Type** Hipped	
Ornamental Architectural Details None			**Windows** Double-hung, casement
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
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Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11578 S. Wabash Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Multi-family residence

Date of Construction: 1893

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

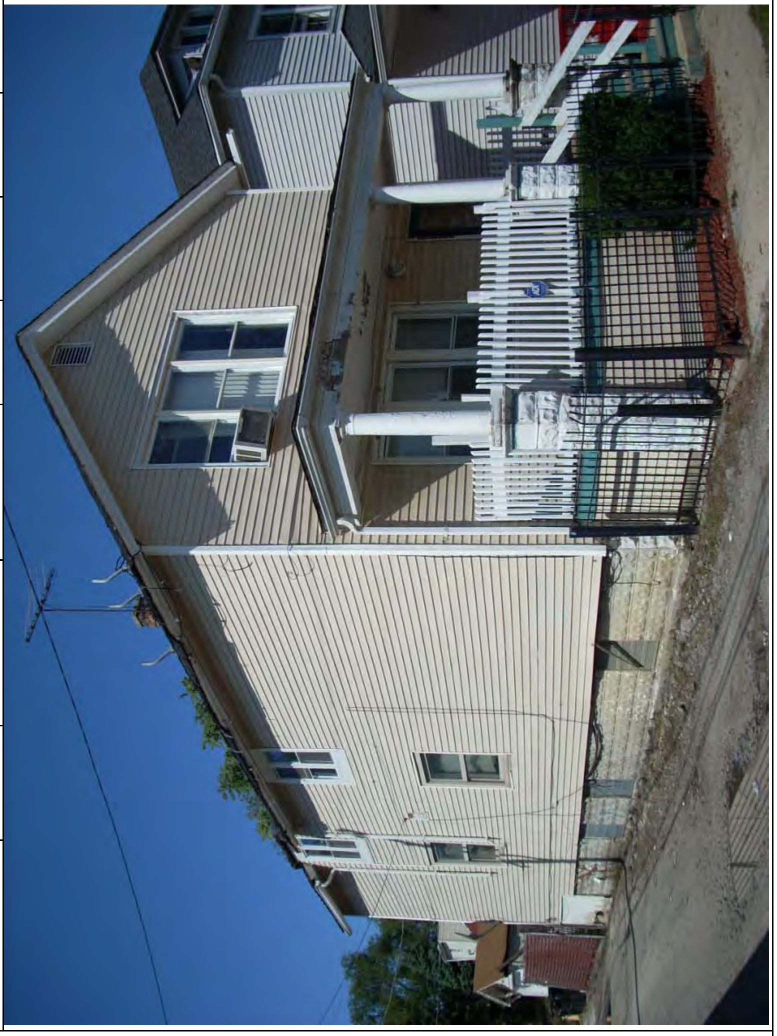
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 10 September 2012

Photos with Captions:
East and south façades of 1.5-story, multi-family, frame residence.



Property Description: **Stories:** 1.5

This one-and-one-half-story house in the West Pullman community is situated on a raised concrete block basement with glass block windows. It is clad with synthetic siding and has a gable roof covered with asphalt shingles. The front elevation features a full-width flat-roofed wood porch with supports consisting of low faux stone pedestals topped by wood Doric columns, an off-center wood paneled door, and strips of three one-over-one non-original windows on both the first and second floors. This house does not feature sufficient integrity or distinguishing architectural features to qualify as individually eligible for listing on the National Register.

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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alterations			**Additional Notes/Descriptions** Replacement door, windows, cladding, and porch railings
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details Doric columns on porch			**Windows** Double-hung, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

9745 S. Wentworth Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1964

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

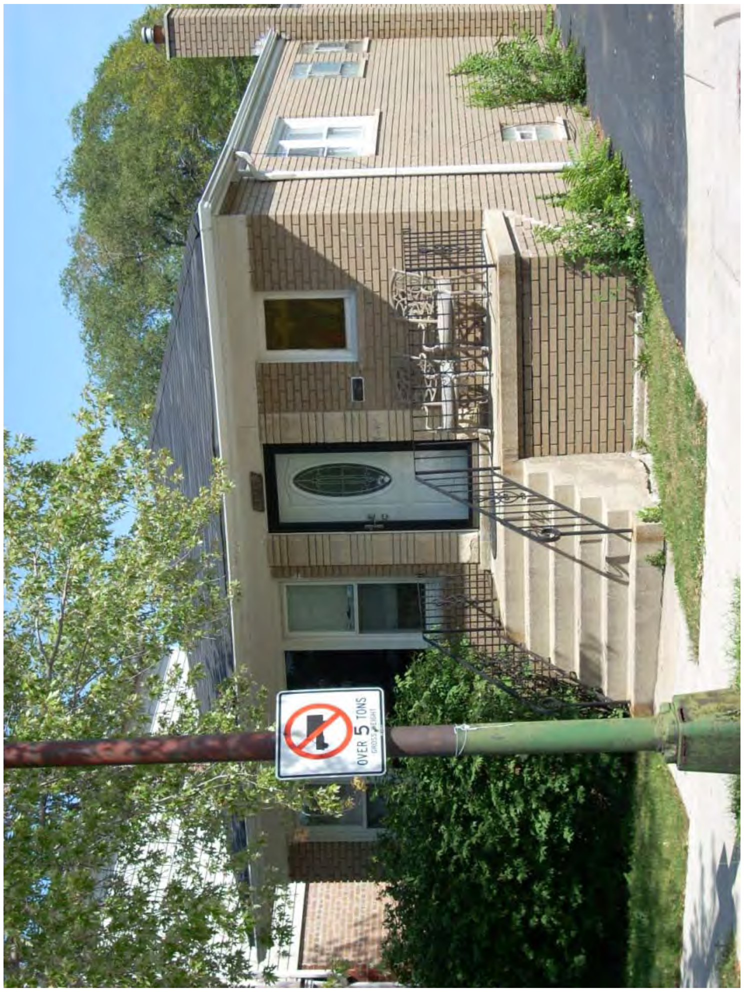
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 9 October 2012

Photos with Captions:
West façade of a brick, one-story, single family residence.



Property Description: **Stories:** 1

This one-story home in the Roseland community is situated on a raised brick basement with glass block windows. It is clad with buff brick and has a hip roof covered with asphalt shingles. Its front elevation has an off-center hollow core metal door, a casement window, a picture window flanked by one-over-one aluminum-sash windows, concrete steps with metal railings and a small patio area. It does not feature distinguishing architectural elements and is not individually eligible for listing on the National Register.

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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement door
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt	**Roof Features** None	**Roof Type** Hip	
Ornamental Architectural Details None			**Windows** Double-hung, fixed-pane, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y [✓ N]**	
National Register Historic Places	**Y [✓ N]**	
National Register Historic District	**Y [✓ N]**	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

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505 North State Street
Marengo, Illinois 60152
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Historical Resource Recordation Form

Property Name

Historic: Not in CHRS database.

Common/Current: Not in CHRS database

Property address:

11321 S. Wentworth Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

A Little Bit of Heaven

Property Use

Historic: Apartment building

Current: Public

Date of Construction: circa 1924-1938

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

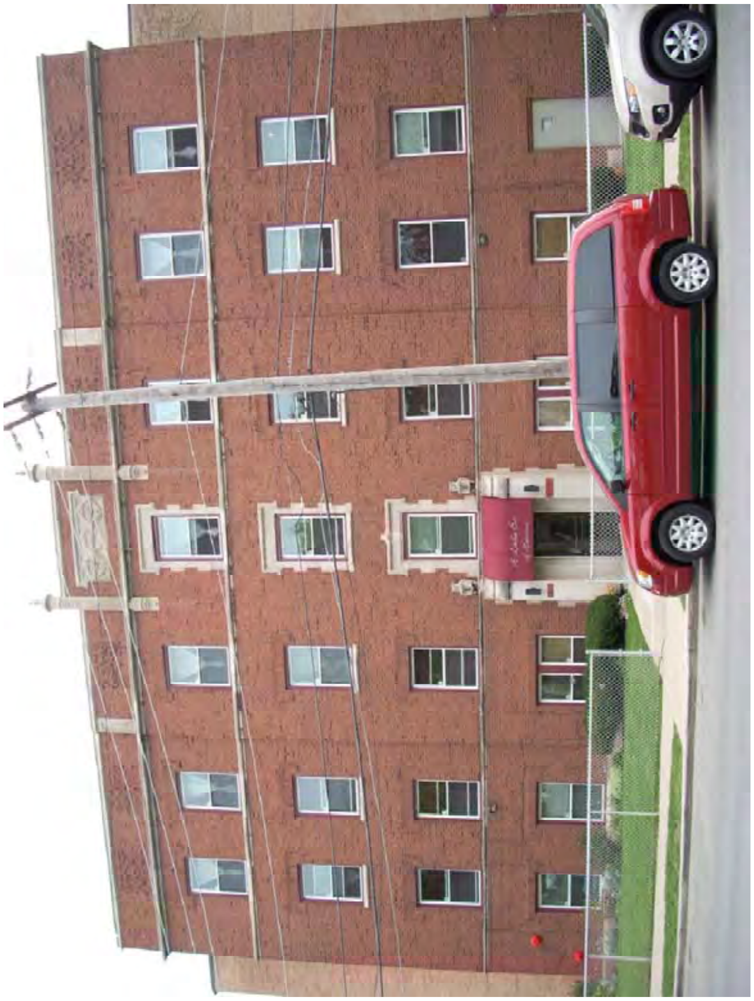
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 16 September 2012

Photos with Captions:
West façade of the four-story, brick building



Property Description: **Stories:** 4

This four-story building at the northeast corner of Wentworth Avenue and 113th Place in the Roseland community has a flat roof and parapet. Its symmetrical front (Wentworth Avenue) elevation is clad with brown face brick and has a centrally located entrance with a glass door and stone surround topped by two stone owls holding books. Windows are non-original one-over-one aluminum-sash; those directly above the entrance have stone casings. Detailing includes stone sills, coping, insert blocks, sill courses, cornice, panels, and pinnacles at the parapet level.

This building is recommended locally significant for National Register listing under Criterion A for Education. Formerly the Roseland Community Hospital Nurses Home, it was built by the hospital as a dormitory and educational facility for its nurses. Closely affiliated with Roseland Community Hospital, which has served as an important institution in the Roseland area since its establishment in 1924, the Nurses Home is an excellent example of this building type on Chicago's South Side. The exterior of the building has very good integrity and the interior—which now functions as a homeless shelter—appears to retain classrooms and other spaces associated with its original use.

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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows and doors
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Unknown	**Roof Features** Parapet	**Roof Type** Flat	
Ornamental Architectural Details Stone casings, sills, cornice, panels, inserts, and pinnacles; stone surround with owls at entrance			**Windows** Double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? Yes	[✓ **A**] **B** **C**	**Significance:** Built as a dormitory for Roseland Community Hospital nurses and served as an important educational facility for women training in this profession.

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
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Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

11334 S. Wentworth Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1906

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

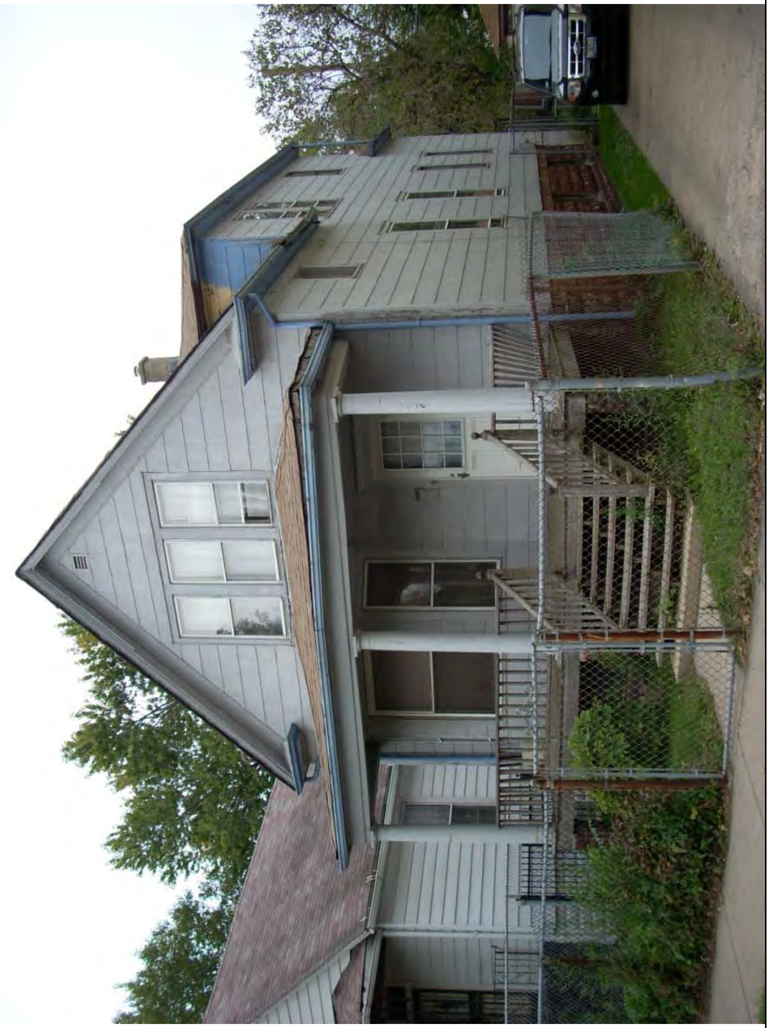
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 16 September 2012

Photos with Captions:
East and north façades of 1.5-story, single family, frame residence.



Property Description: **Stories:** 1.5

This one-and-a-half-story frame cottage in the Roseland community is situated on a raised concrete block basement with casement windows and is covered with synthetic siding. The building has a gable roof with asphalt shingles. The front elevation has a hipped-roof wood porch with Doric columns, an off-center entrance with a hollow core metal panel door, a three-sided bay window on the first floor, and a strip of three windows in the gable. With the exception of the basement, windows are non-original one-over-one aluminum-sash. The north elevation has a hipped-roof wall dormer. This house lacks integrity and distinguishing architectural features and is not individually eligible for listing on the National Register.

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Marengo, Illinois 60152
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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows, door, & cladding
Condition: Excellent [✓ Good] Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** Dormer	**Roof Type** Gable	
Ornamental Architectural Details Doric columns			**Windows** Double-hung, casement
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11352 S. Wentworth Ave

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1897

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

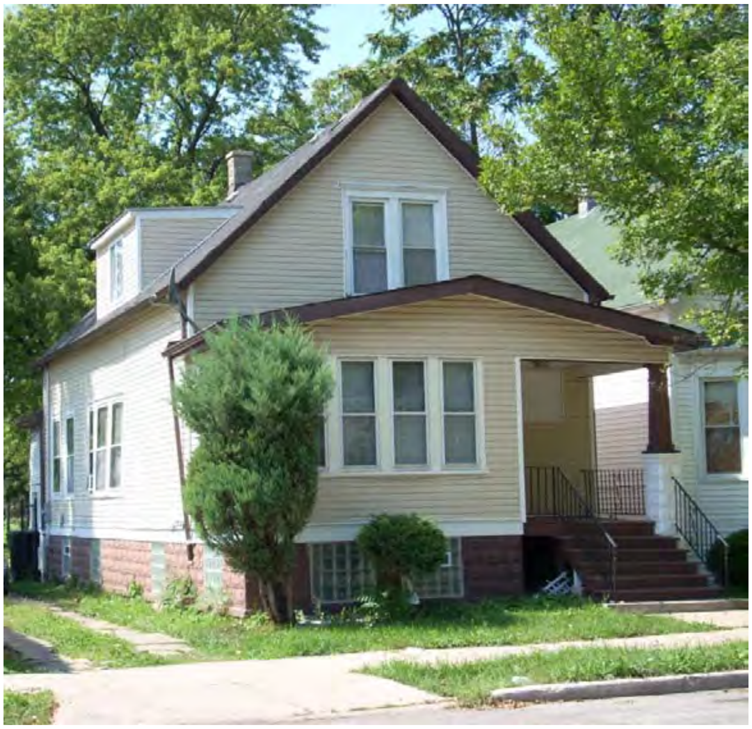
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 6 September 2012

Photos with Captions:
East façade of 1.5-story, single family, frame residence.



Property Description: **Stories:** 1.5

This one-and-a-half-story home in the Roseland community is clad with synthetic siding, has a gable roof covered with asphalt shingles, has a flat-roofed dormer along one of its side elevations, and is situated on a raised concrete block basement with glass block windows. Its front elevation has a full-width gable roof porch, a portion of which is enclosed with synthetic siding and features a strip of non-original one-over-one windows. The open portion of the porch has a corner support consisting of a low faux stone pedestal topped by a wood Doric column, a window opening that has been covered, wood steps, and metal railings. A pair of non-original one-over-one windows with original wood casing is situated in the gable. This building lacks sufficient integrity and distinguishing architectural features to qualify as individually eligible for listing on the National Register.

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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration	**Additional Notes/Descriptions** Replacement windows & cladding
Condition: [✓ Excellent] Good Poor	
Additional Alterations Dormer and rear addition may be non-original	

Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** Dormer	**Roof Type** Gable	

Ornamental Architectural Details Doric column on porch	**Windows** Double-hung, glass block

Outbuildings (*Number and Description*)

None

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
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Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11428 S. Wentworth Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Vacant

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1908

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

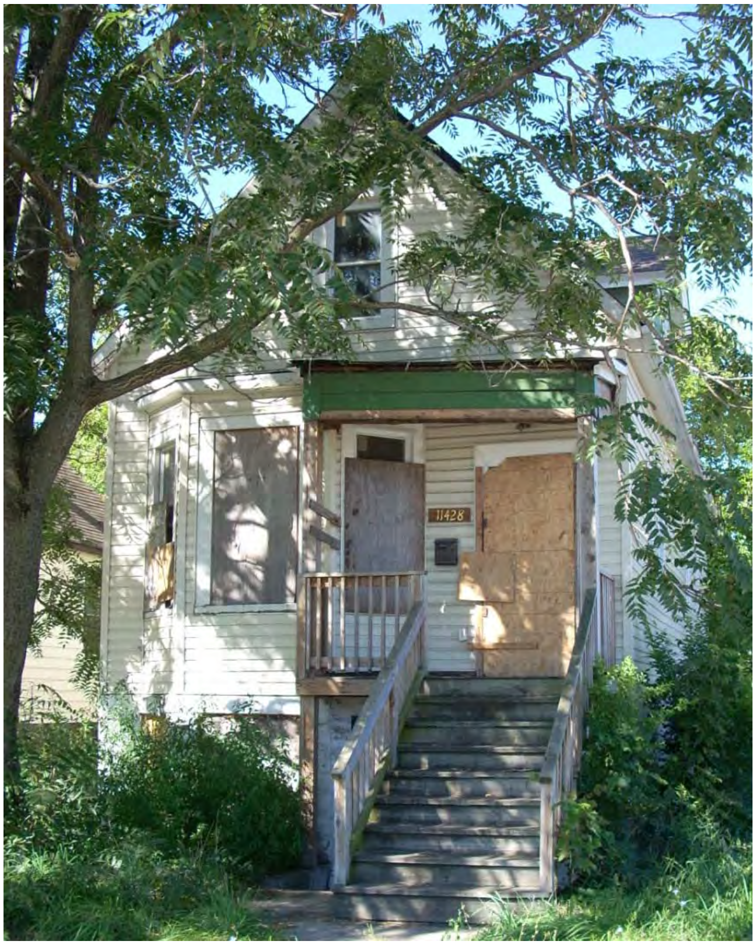
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S.Katz

Date: 22 October 2012

Photos with Captions:
East façade of a 1.5- story, single family, frame residence.



Property Description: **Stories:** 1.5

This one-and-a-half-story cottage in the Roseland community is situated on a raised concrete block basement and is covered with synthetic siding. The building has a front gable roof with asphalt shingles. Its front elevation has a three-sided bay with plywood-covered windows, a partial-width shed-roofed porch with straight wood railings and posts, and a plywood-covered door. A single non-original one-over-one aluminum-sash window is situated in the gable. The north elevation has a synthetic-clad gable dormer with a single window. Side elevation windows are non-original one-over-one aluminum sash. This house lacks integrity and distinctive architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
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Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement windows, cladding, and porch rails
Condition: Excellent Good [✓ Poor]			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** Dormer	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

9808 S. Yale Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1963

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

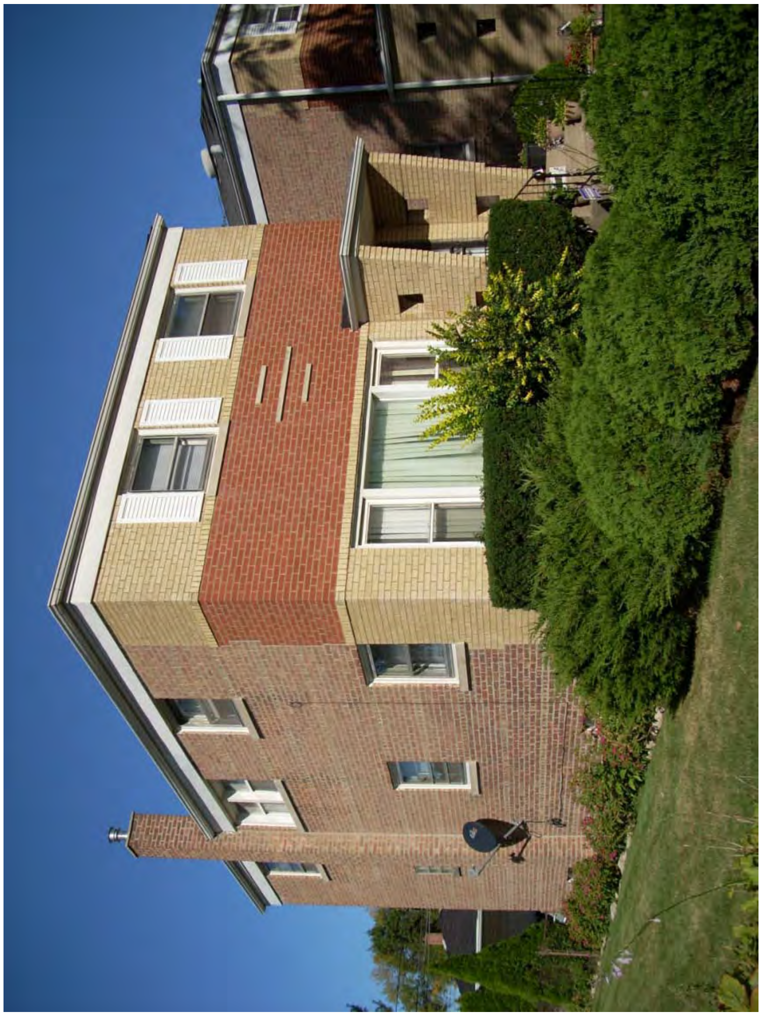
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 9 October 2012

Photos with Captions:
East façade of a brick, two story, single family residence.



Property Description: **Stories:** 2

This two-story home in the Roseland community is situated on a raised brick basement and has a hip roof covered with asphalt shingles. Its front elevation is clad with buff and orange brick with linear concrete inserts and sills. It has an off-center door, a flat-roofed partial-width porch with brick sidewalls, concrete steps and metal railings. It has a picture window flanked by one-over-one aluminum-sash windows on the first floor and two one-over-one aluminum-sash windows on the second floor. It does not feature distinguishing architectural elements and is not individually eligible for listing on the National Register.

Integrity: [✓ Unaltered] Slight Modification Major Alteration			**Additional Notes/Descriptions**
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Brick	
Roof Material Asphalt	**Roof Features** None	**Roof Type** Hip	
Ornamental Architectural Details Brick banding, concrete inserts and sills			**Windows** Double-hung, fixed-pane
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

9904 S Yale Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1923

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

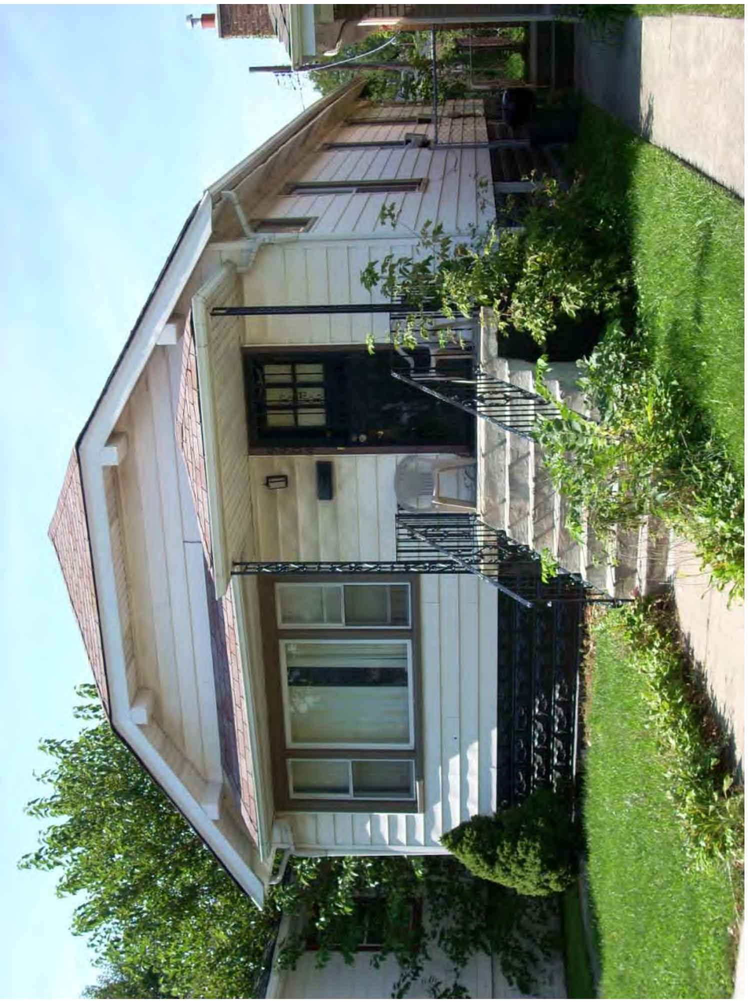
Craftsman

Prepared By: J. Martinez, M. C. Bird

Photo By: S. Katz

Date: 8 October 2012

Photos with Captions:
East façade of a one-story, frame, single family residence.



Property Description: **Stories:** 1

This one-story frame house in the Roseland community is situated on a raised concrete block basement, is clad with synthetic siding, and has a hip-on-gable roof covered with asphalt shingles with overhanging eaves and exposed rafters. The front elevation has a pent roof that extends forward above the front windows and door, and is supported by open metal posts. The porch has concrete steps and metal railings. The front elevation also features an off-center door and a picture window flanked by non-original one-over-one aluminum-sash windows on either side. This home does not feature sufficient distinguishing features to qualify as eligible for individual listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
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Structural Survey

<table>
<tr><td colspan="3">Integrity:
Unaltered [✓ Slight Modification] Major Alteration</td><td>Additional Notes/Descriptions
Replacement windows and siding</td></tr>
<tr><td colspan="3">Condition:
[✓ Excellent] Good Poor</td><td></td></tr>
<tr><td colspan="3">Additional Alterations</td><td></td></tr>
<tr><td colspan="2">Structure Usage
Current: NA
Historic: NA</td><td>Exterior Wall Surface
Synthetic siding</td><td></td></tr>
<tr><td>Roof Material
Asphalt</td><td>Roof Features
Pent roof</td><td>Roof Type
Hip-on-gable</td><td></td></tr>
<tr><td colspan="3">Ornamental Architectural Details
Exposed rafters</td><td>Windows
Double-hung, fixed-pane</td></tr>
<tr><td colspan="4">Outbuildings (<i>Number and Description</i>)
None</td></tr>
</table>

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

9905 S. Yale Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1924

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

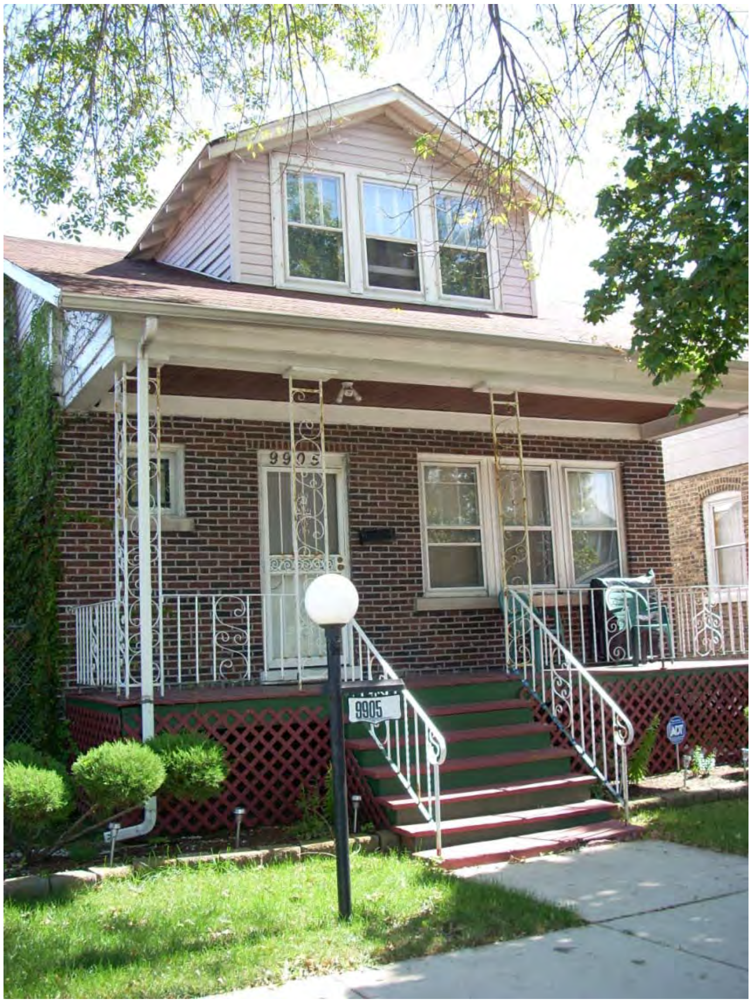
Craftsman

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 8 October 2012

Photos with Captions:
West façade of a brick, one-story, single family residence.



Property Description: **Stories:** 1

This one-story Craftsman style bungalow in the Roseland community is situated on a raised basement, is clad with brick, and has a side-gabled roof covered with asphalt shingles and overhanging eaves. Its side-gabled elevations are clad with synthetic siding, as is the gable dormer along the front elevation. The roof extends beyond the front elevation to serve as the roof of the porch, which is supported by open metal posts and has metal railings, a wooden deck, and wooden steps. The front elevation features an off-center hollow core metal door, a leaded glass casement window, and two strips of non-original double-hung aluminum-sash windows: one on the first floor and one in the dormer. This home does not feature sufficient distinguishing features to qualify as eligible for individual listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

<table>
<tr><td colspan="3">Integrity:
Unaltered [✓ Slight Modification] Major Alteration</td><td>Additional Notes/Descriptions
Replacement windows and siding</td></tr>
<tr><td colspan="3">Condition:
[✓ Excellent] Good Poor</td><td></td></tr>
<tr><td colspan="3">Additional Alterations</td><td></td></tr>
<tr><td colspan="2">Structure Usage
Current: NA
Historic: NA</td><td>Exterior Wall Surface
Brick (main), synthetic siding (gable ends and dormers)</td><td></td></tr>
<tr><td>Roof Material
Asphalt</td><td>Roof Features
Dormer</td><td>Roof Type
Side-gabled</td><td></td></tr>
<tr><td colspan="3">Ornamental Architectural Details
None</td><td>Windows
Double-hung, casement</td></tr>
<tr><td colspan="4">Outbuildings (<i>Number and Description</i>)
None</td></tr>
</table>

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property address:

11319 S. Yale Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Vacant

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1909

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

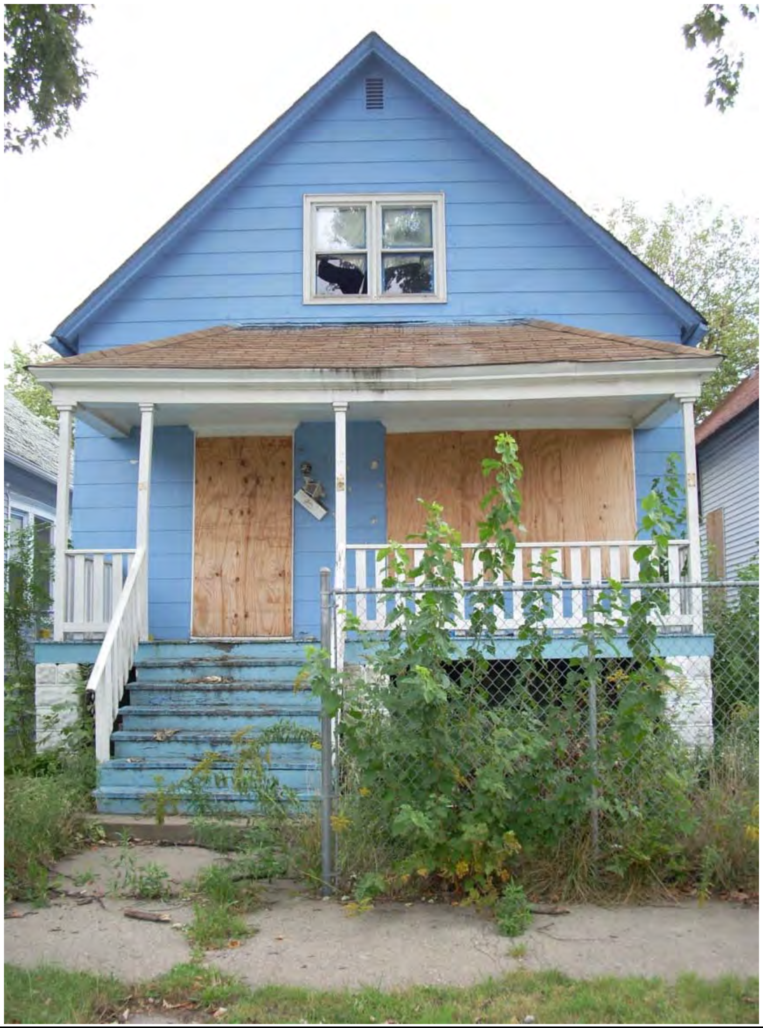
Vernacular

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 16 September 2012

Photos with Captions:
West façade of one-story, single-family, frame residence.



Property Description: **Stories:** 1

This one-story frame house in the Roseland community is situated on a raised concrete block basement with glass block windows and is covered with synthetic siding. The building has a front gable roof with asphalt shingles. It has a hip-roofed, full-width porch with faux stone supports beneath the deck, wood columns, railings, and steps. The front elevation’s off-center door and first floor window group are covered with plywood; paired windows in the gable are non-original one-over-one aluminum-sash. The south elevation has a shed dormer. This house lacks integrity and distinguishing architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

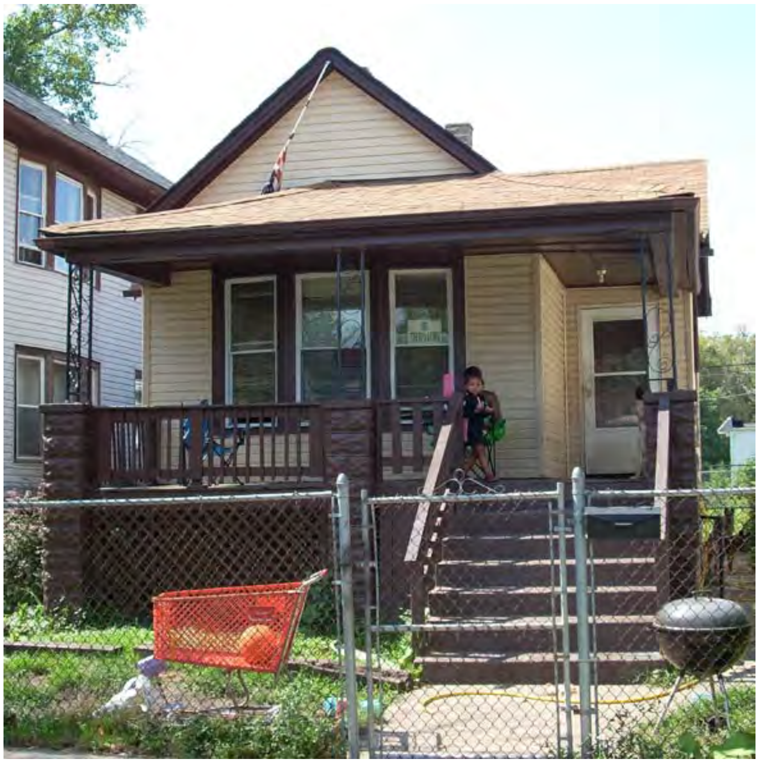
Structural Survey

Integrity:			**Additional Notes/Descriptions** Replacement windows and cladding
Unaltered	[✓ Slight Modification]	Major Alteration	
Condition:			
Excellent	[✓ Good]	Poor	
Additional Alterations			
Structure Usage Current :NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** Dormer	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung, covered
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Historical Resource Recordation Form

Property Name **Historic:** Bldg. not labeled, not in CHRS **Common/Current:** Unknown	**Photos with Captions:** East façade of one-story, single family, frame residence. 
Property Address: 11330 S. Yale Avenue	
HAARGIS Number: Not in database	
Present Owner and /or Occupant: Unknown	
Property Use **Historic:** Single family residence **Current:** Single family residence	
Date of Construction: 1916 **Architect's Name:** Not in CHRS **Builder/Contractor:** Not in CHRS	
Architectural Style: Vernacular	
Prepared By: J. Martinez, M. C. Bird, J. Guarino **Photo By:** S. Katz **Date:** 1 October 2012	

Property Description: **Stories:** 1

This one-story home in the Roseland community is clad in synthetic siding and has a cross-gable roof covered with asphalt shingles. Its front façade has a three-sided window bay comprised of non-original one-over-one windows, a recessed front door, and a full-width hipped-roof wood porch with supports consisting of low faux stone pedestals topped by open metal posts. This building lacks sufficient integrity and distinguishing architectural features to qualify as individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration	**Additional Notes/Descriptions** Replacement windows and siding
Condition: [✓ Excellent] Good Poor	
Additional Alterations	
Structure Usage Current: NA Historic: NA — **Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt — **Roof Features** None — **Roof Type** Gable	
Ornamental Architectural Details None	**Windows** Double-hung
Outbuildings (*Number and Description*) None	

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11334 S Yale Ave

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Multi-family residence

Date of Construction: 1922

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

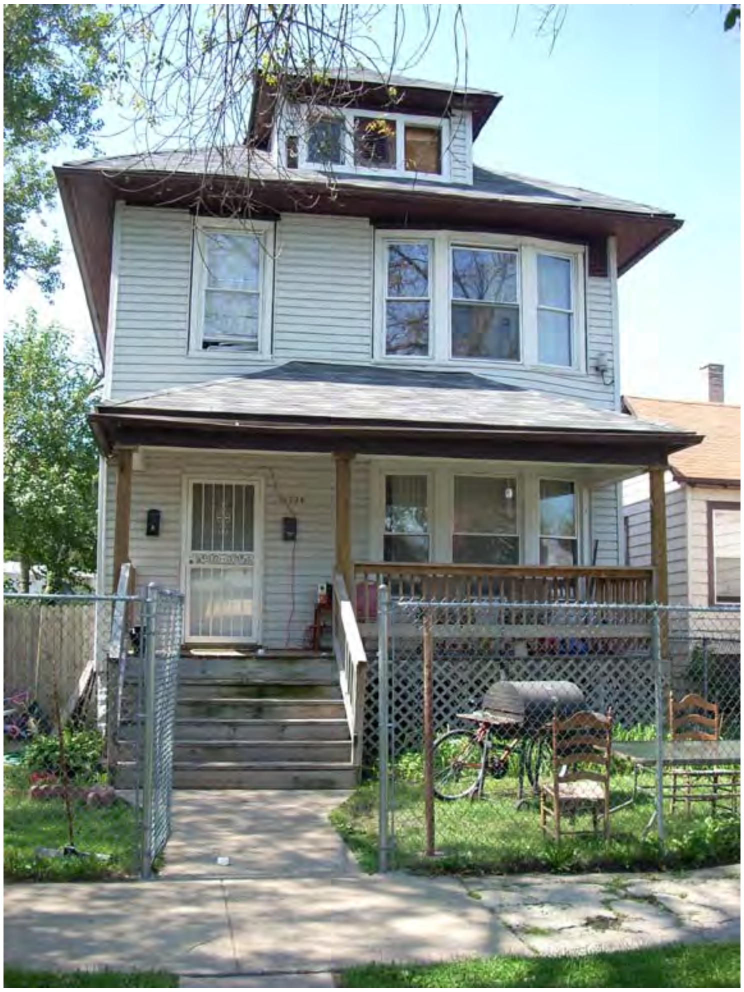
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 1 October 2012

Photos with Captions:
East façade of two-story, multi-family, frame residence.



Property Description: **Stories:** 2

This two-story home in the Roseland community is situated on a raised basement, clad in synthetic siding, has a hip roof covered with asphalt shingles and overhanging eaves. It features a full-width, hip-roof, wood porch. The front façade has an off-center door, three-sided window bays on the first and second floors comprised of non-original one-over-one windows, and a single one-over-one window on the second floor directly above the door. Its hip dormer has three window openings: two comprised of single-pane windows and a third that is covered with plywood. This building lacks sufficient integrity and distinguishing architectural features to qualify as individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement door, windows, cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt	**Roof Features** Dormer	**Roof Type** Hip	
Ornamental Architectural Details None			**Windows** Double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11336 S. Yale Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1894

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

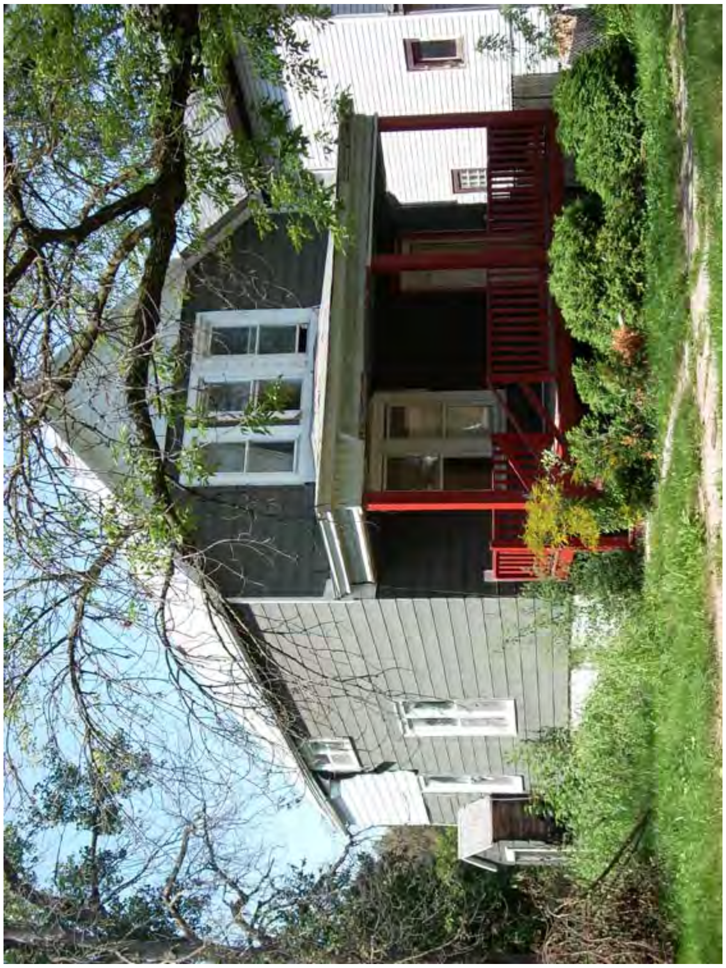
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 1 October 2012

Photos with Captions:
East façade of 1.5-story, single family, frame residence.



Property Description: **Stories:** 1.5

This one-and-one-half-story home in the Roseland community is situated on a raised basement and clad in two layers of synthetic siding. It has a gable roof covered with asphalt shingles and a full-width, hip-roof wood porch with non-original, wooden, square columns and rails. The front façade has an off-center, non-original, hollow metal core panel door with fanlight. It also has a three-sided window bay on the first floor comprised of non-original one-over-one windows and a strip of three, non-original one-over-one windows on the second floor. One of the side elevations has a three-sided bay window and gable wall dormer above. This building lacks sufficient integrity and distinguishing architectural features to qualify as individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity:			**Additional Notes/Descriptions** Replacement door, windows, and siding
Unaltered	[✓ Slight Modification]	Major Alteration	
Condition:			
Excellent	[✓ Good]	Poor	
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt	**Roof Features** Dormer	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11343 S. Yale Ave

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Vacant

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1914

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

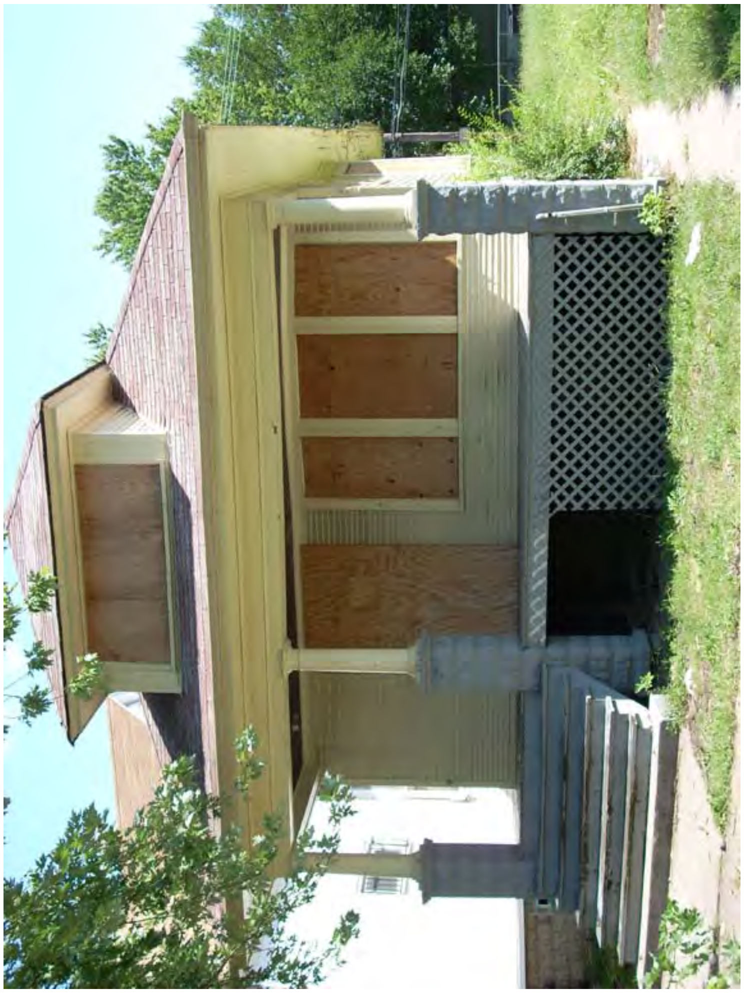
Craftsman

Prepared By: Jay Martinez, M. C. Bird, J. Guarino

Photo By: Steve Katz

Date: 1 October 2012

Photos with Captions:
West façade of a one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story Craftsman bungalow in the Roseland community is situated on a raised concrete block basement with glass block windows. Above, it is clad with synthetic siding on the sides and clapboards on the front. It has a hip roof covered with asphalt shingles, overhanging eaves, and a hip dormer. The roofline extends forward to shelter the full-width, hipped-roof, wood porch that is supported by low faux stone pedestals topped by squat wood Doric columns. The front elevation has an off-center door opening and a three-sided window bay. The door and all window openings have been covered with plywood. This building does not have sufficient integrity or distinguishing architectural features to qualify as individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Openings covered with plywood, synthetic siding on sides
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Clapboard (front), Synthetic siding (sides)	
Roof Material Asphalt	**Roof Features** Dormer	**Roof Type** Hip	
Ornamental Architectural Details Doric columns on porch			**Windows** Unknown
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11413 S. Yale Ave.

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1920

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

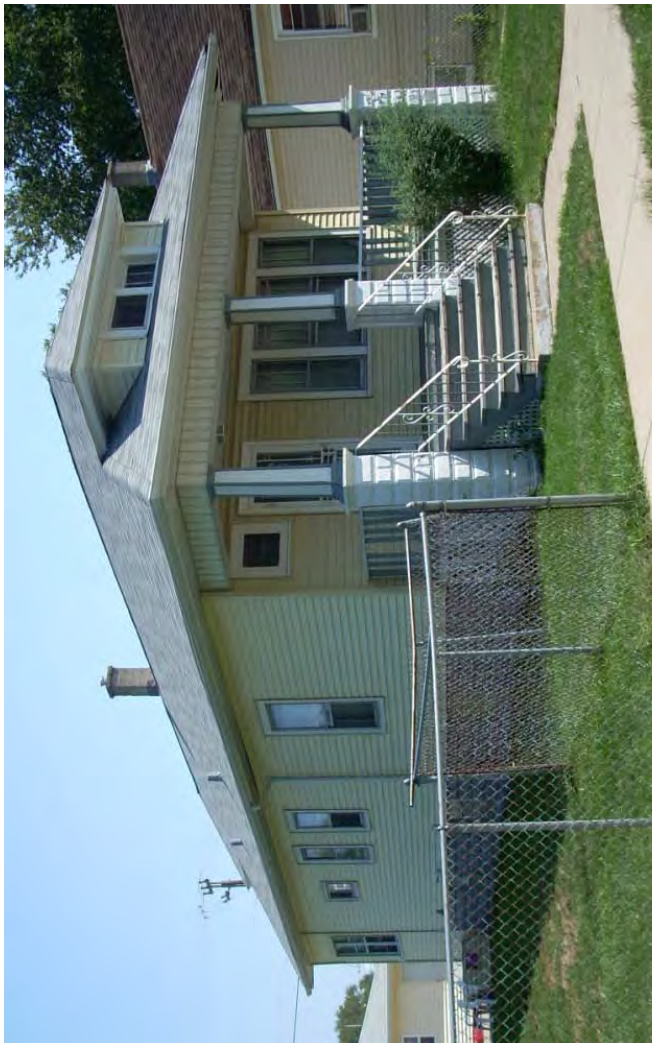
Craftsman

Prepared By: C. Tolmie, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 6 September 2012

Photos with Captions:
West and south façades of single family, frame residence.



Property Description: **Stories:** 1

This one-story Craftsman style bungalow in the Roseland community is situated on a raised concrete block basement and is clad with synthetic siding. It has a hip roof covered with asphalt shingles and a hip dormer with a pair of single-pane or sliding windows. Its roof overhangs to shelter the full-width wood porch with supports consisting of faux stone pedestals topped by squared wood columns. The front façade has an off-center front door, an adjacent single-pane window, and a strip of four double-hung windows. Windows appear to be original wood-sash. This building lacks sufficient integrity and distinguishing architectural features to qualify as individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered [✓ Slight Modification] Major Alteration			**Additional Notes/Descriptions** Replacement cladding
Condition: [✓ Excellent] Good Poor			
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** Dormer	**Roof Type** Hipped	
Ornamental Architectural Details Square pillars on porch			**Windows** Double-hung, fixed-pane or sliding
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Historical Resource Recordation Form

Property Name

Historic: Bldg. not labeled, not in CHRS

Common/Current: Unknown

Property Address:

11417 S. Yale Avenue

HAARGIS Number:

Not in database

Present Owner and /or Occupant:

Unknown

Property Use

Historic: Single family residence

Current: Single family residence

Date of Construction: 1914

Architect's Name: Not in CHRS

Builder/Contractor: Not in CHRS

Architectural Style:

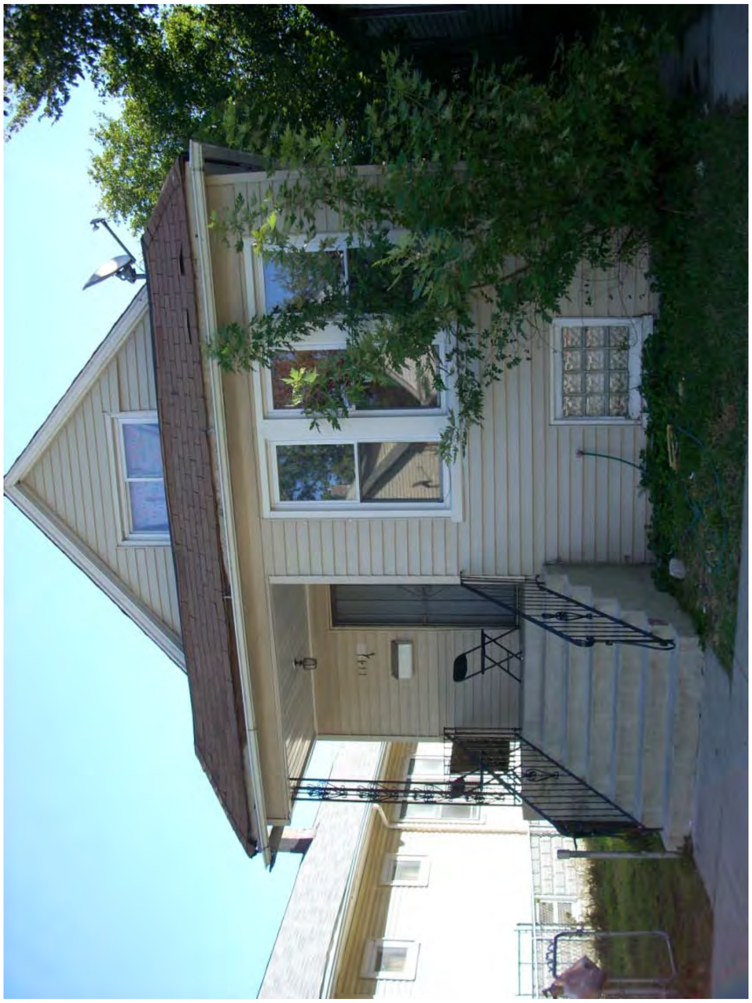
Vernacular

Prepared By: J. Martinez, M. C. Bird, J. Guarino

Photo By: S. Katz

Date: 22 October 2012

Photos with Captions:
West façade of a one-story, single family, frame residence.



Property Description: **Stories:** 1

This one-story cottage in the Roseland community is situated on a raised brick basement with glass block windows and is covered with synthetic siding. The building has a front gable roof covered with asphalt shingles. Its front elevation has a full-width porch with a mansard-like roof that is partially enclosed and covered with synthetic siding. This elevation of the porch also has a strip of three non-original one-over-one aluminum sash windows. The open portion of the porch has a metal storm door, concrete steps with metal railings, and an open metal corner post. A pair of non-original one-over-one aluminum-sash windows is situated in the gable. This house lacks integrity and distinctive architectural features and is not individually eligible for listing on the National Register.

Midwest Archaeological Research Services, Inc.
505 North State Street
Marengo, Illinois 60152
Phone (815) 568- 0680

Structural Survey

Integrity: Unaltered	[✓ Slight Modification]	Major Alteration	**Additional Notes/Descriptions** Replacement door, windows, and cladding.
Condition: [✓ Excellent]	Good	Poor	
Additional Alterations			
Structure Usage Current: NA Historic: NA		**Exterior Wall Surface** Synthetic siding	
Roof Material Asphalt shingle	**Roof Features** None	**Roof Type** Gable	
Ornamental Architectural Details None			**Windows** Double-hung, glass block
Outbuildings (*Number and Description*) None			

Local Landmark	**Y** [✓ **N**]	
National Register Historic Places	**Y** [✓ **N**]	
National Register Historic District	**Y** [✓ **N**]	**Name:**
Individually Eligible? No	**A B C**	**Significance:**

Additional Comments:

Attachment 3
Section 106 Consultation Supporting Documentation

RLE Mailing List for S106 Consulting Parties

Accept	AGENCY	CONTACT	ADDRESS	EMAIL
X	Illinois Historic Preservation Agency (SHPO)	Anne Haaker	One Old State Capitol Plaza Springfield, IL 62701	anne.haaker@illinois.gov
X	Chicago Historic Preservation Div. Dept of Housing & Economic Development	Terry Tatum	33 N. La Salle Street, #1600 Chicago, IL 60602	ttatum@cityofchicago.org
X	Preservation Chicago	Jonathan Fine, Executive Director	4410 N. Ravenswood Chicago, IL 60640	jfine@preservationchicago.org
X	Landmarks Illinois	Bonnie McDonald or L. DiChiera	53 W. Jackson Blvd., # 1315 Chicago, IL 60604	DiChieraL@lpci.org
X	Ridge Historical Society	Jennifer Kenny	9927 S Longwood Dr. Chicago, IL 60643	jennifer.kenny@mindspring.com
X	Rosemoor Community Association	Gloria Cosey, President	10205 S. King Drive Chicago, IL 60628	rosemoorchicago@yahoo.com
X	Friends of the Park	Erma Tranter, President Tim Jeffries	17 N State Street, #1450 Chicago, IL 60602-3315	trantere@fotp.org jeffriest@fotp.org
X	Chicago Neighborhood Initiatives	Angelica Marks	1000 E 111th Street - 10th Floor Chicago, IL 60628	amarks@cnigroup.org
X	Neighborhood Housing Services of Chicago Citywide office	Matt Cole	1279 N. Milwaukee Avenue, 5th Floor Chicago, Illinois 60622	MCole@nhschicago.org
X	Peoria Tribe of Indians of Oklahoma	Frank Hecksher	P.O. Box 1527 Miami, OK 74355	
X	Forest County Potawatomi	Melissa Cook, THPO	P. O. Box 340 Crandon, WI 54520	Melissa.Cook@fcpotawatomi-nsn.gov
X	Miami Tribe of Oklahoma	George Strack, THPO	202 S. Eight Tribes Trail Miami, OK 74354	gstrack@miamination.com
PARTIES ADDED LATER				
X	DCP	Gwendolyn Rice Executive Director	212 E 95th Street Chicago, IL 60619-7208	gmrice@dcpchicago.com

MEETING NOTES

RE: **Section 106 Kick-off Meeting**
Red Line Extension EIS

DATE: **October 24, 2012**

LOCATION: **Conference Call/Webinar**

TO: **Distribution and All Attendees**

ATTENDEES:

Name	**Organization**
Sonali Tandon	CTA
Reggie Arkell	FTA
Anne Haaker	IHPA (SHPO)
Jonathan Fine	Preservation Chicago
Terry Tatum	Chicago Historic Preservation Division
Lisa DiChiera	Landmarks Illinois
Erma Tranter	Friends of the Park
Helene Kornblatt	CWC Transit Group
John Mettille	CWC Transit Group
Rebecca Thompson	CWC Transit Group
Robert Ball	CWC Transit Group

PREPARED BY: Rebecca Thompson

ISSUE DATE: October 24, 2012

Meeting called to order at 1:00 pm CT

Objective: Red Link Extension Kickoff Meeting for Section 106 Consultation

Item No.	*Item Description*	*Responsibility*	*Due Date*
1	**Welcome/Intro** Sonali welcomed attendees and callers introduced themselves.		
2	**Overview of Section 106 Process** John Mettille provided an overview of the four-step Section 106 process. Reggie Arkell explained that FTA is overseeing the consultation process, working in conjunction with CTA. FTA will make determinations regarding eligibility and effects, referencing recommendations prepared by the consultant and considering input from consulting parties, including the SHPO. John discussed the roles of consulting parties and identified ground rules to ensure everyone has a fair chance to provide meaningful input.		

Item No.	*Item Description*	*Responsibility*	*Due Date*
3	**Project Info & Alternatives** Sonali provided a brief overview of the project area, the No Build alternative, and the three Build alternatives that are being considered: UPRR rail, Halsted rail, and Bus Rapid Transit. John presented the Area of Potential Effects (APE), which defines the geographic boundary where the analysis of historic resources will occur. A larger scale APE map is attached to the meeting summary.		
4	**Schedule/Next Steps** John explained the next steps in the process. Work is underway to identify potential historic properties. We are tentatively planning to hold a meeting to discuss the eligibility of resources in December. A meeting to discuss effects will occur in early 2013.		
5	**Question/Answer** - Jonathan: Is the purple segment on the alternatives map new or existing? It would be a new structure in the median of the expressway. - Reggie: What is the pier spacing for the Halsted Alternative? Spans between piers would typically be 60 to 100 feet, and as long as 140 feet. Span length would be based on site conditions, geometrics, and clearance requirements. - Jonathan: What advantages does the Halsted Alternative offer over the No Build Alternative? Halsted would extend the red line south to serve additional transit markets. The No Build Alternative includes improvements at the 95th Street station which are currently being planned but would not include an extension of the route or other improvements. - Jonathan: Which alternative has the least impacts on historic resources? That is part of what we will determine through this process. - Lisa: Is documentation of the previous study available online? Yes, the project website is http://www.transitchicago.com/redeis Please use following links to access specific materials: Locally Preferred Alternative Report and Scoping Report (http://www.transitchicago.com/Redeis/documents.aspx); Alternatives Analysis Materials (http://www.transitchicago.com/news_initiatives/planning/redextend.aspx) - Lisa: If we have additional information about resources, should we send it to the team? Yes, please direct it to Sonali at STandon@transitchicago.com. - Erma: Are parks covered in the 106 process too? Parks are protected under Section 4(f) regulation, which is a separate law; they will be addressed in the project EIS. The Section 106 process will deal with historic resources; if any parks in the area or park facilities are determined to be historic, they will be considered during the 106 process. If any historic resources are used by the project, they will be addressed under Section 4(f) as well. Parks that are not historic are subject to the 4(f).		

Please notify the author of the minutes of any corrections and/or clarifications within five (5) business days.

As requested, contact information for participants is below:

Name	Organization	Email
Sonali Tandon	CTA	STandon@transitchicago.com
Reggie Arkell	FTA	Reginald.Arkell@dot.gov
Anne Haaker	IHPA (SHPO)	Anne.Haaker@Illinois.gov
Jonathan Fine	Preservation Chicago	JFine@preservationchicago.org
Terry Tatum	Chicago Historic Preservation Division	TTatum@cityofchicago.org
Lisa DiChiera	Landmarks Illinois	DiChieraL@lpci.org
Erma Tranter	Friends of the Park	TranterE@FOTP.org
Helene Kornblatt	CWC Transit Group	KornblattHK@cdmsmith.com
John Mettille	CWC Transit Group	MettilleJL@cdmsmith.com
Rebecca Thompson	CWC Transit Group	ThompsonRD@cdmsmith.com
Robert Ball	CWC Transit Group	BallRW@cdmsmith.com

cc: Attendees

MEETING NOTES

RE: **Section 106 Eligibility Meeting**
Red Line Extension EIS

DATE: **January 30, 2013**

LOCATION: **CTA/Conference Call**

TO: **Distribution and All Attendees**

ATTENDEES:

Name	Organization
Sonali Tandon	CTA
George Coleman	CTA
Joseph Iacobucci	CTA
Reggie Arkell	FTA
Mark Assam	FTA
David Halpin	IHPA
Jonathan Fine	Preservation Chicago
Terry Tatum	Historic Preservation Division, Dept. of Housing and Economic Development
Lisa DiChiera	Landmarks Illinois
Erma Tranter	Friends of the Park
Jennifer Kenny	Ridge Historical Society
Gloria Cosey	Rosemoor Community Association
Angelica Marks	Chicago Neighborhood Initiatives
Matt Cole	Neighborhood Housing Services of Chicago, Inc.
Gwendolyn Rice	DCP
Rev. Mitchell Johnson	DCP
Phyllis Palmer	DCP
Helene Kornblatt	CWC Transit Group
John Mettille	CWC Transit Group
Rebecca Thompson	CWC Transit Group
Robert Ball	CWC Transit Group
Jean Guarino	CWC Transit Group

PREPARED BY: Rebecca Thompson

ISSUE DATE: January 31, 2013

Meeting called to order at 10:30 am CT

Objective: Red Link Extension Eligibility Meeting for Section 106 Consultation

Item No.	***Item Description***	***Responsibility***	***Due Date***
1	**Welcome/Intro** Sonali welcomed attendees. Reggie Arkell explained FTA's oversight role on the project. John Mettille reviewed the agenda.		
2	**Background & Regulations** John Mettille provided an overview of the four-step Section 106 process, which is intended to assess historic resources and their eligibility for listing on the National Register of Historic Places (NRHP). John identified ground rules to ensure everyone has a fair chance to provide meaningful input.		
3	**Review of Area of Potential Effects (APE)** John presented the APE, which defines the geographic boundary where the analysis of historic resources will occur. The area includes over 1,400 acres and 7,000 buildings.		
4	**Methodology for Identification of Historic Properties** The team developed historic contexts for each community in the APE to frame the evaluation of historic properties. The team also conducted field surveys and archival research for over 500 individual properties within the APE. The survey sample included all buildings that would be demolished by one or more alternatives and a sample of other properties; sample properties were concentrated in areas that are likely to experience greater effects. Based on this, eligibility recommendations were developed for individual properties. - Q: Did you look at properties less than 50 years in age that could be significant to the community? A: We primarily examined properties over 50, but we did look for overall significant properties as well as potential historic districts. - Q: Are Chicago Historic Resources Survey (CHRS) red/orange properties shown? A: They are noted in the summary table in section 3 of the handout packet. - Q: What research was done on the social history of the area? For example, what about identifying community meeting places or locations significant in the lives of civil rights leaders? Of the 7,000 buildings in the APE, it is concerning that only 10 are identified as eligible.		

Item No.	*Item Description*	*Responsibility*	*Due Date*
	A: The team developed historic contexts for each of the communities represented in the APE but these focused primarily on the built environment. Part of the intent of the consultation process is to gather your input about what additional resources are out there, particularly from organizations more familiar with the immediately vicinity and social history. If you have information about potentially significant resources, please let us know during the comment period.		
5	**Overview of Surveyed Properties** Nine properties were recommended eligible for NRHP listing. - Residence at 444 W 100th Place - Former substation at 10227 S Halsted Street (gas & electric for the city) - Fire Department at 324 W 104th Street - Roseland Pumping Station (still in use) - Residence at 11310 S Emerald Avenue - Church at 10920 S Princeton Avenue (currently Mary Magdalena Missionary Baptist Church) - Fire Department at 931 W 120th Street - Church at 12433-12439 S Halsted Street - Venetian Hall at 133-139 E Kensington Avenue (currently used as church and shelter) *Note: the address is correct but the property lies in the West Pullman community.* In addition, Altgeld Gardens was determined NRHP eligible in 1992 independent of the project. - Q: How do you account for the fact that the community is under surveyed and underserved? Underrepresentation undercuts the intention of the project. A: The team prepared historic contexts for each community, consistent with the state of the practice. Beyond that, we rely on your input. Once you provide your comments, the team will establish a strategy to move forward. We will respond to comments received and keep you informed. - Q: Does the list of surveyed properties fully cover the area to be considered in the historic/social context? (DCP agreed that it does not.) A: The APE covers the area that could be impacted by the project; it forms the limits for our analysis. - Q: Is there a separate involvement process for Section 4(f)? A: There is a public involvement element if these resources are affected. It isn't a committee, but there is a mechanism to gather input from agencies and others. - Kensington Park along the UPRR corridor should be added to the table on slide 29. *Note: information for Fernwood Parkway was included in the table although the name was mistakenly presented as "Fernwood Park" instead. Wendell-Smith Park is presented as "Smith Playlot" in the table, consistent with the Chicago Parks Department naming convention.*	CWC	3/1

Item No.	Item Description	Responsibility	Due Date
6	**Schedule & Next Steps** John Mettille reviewed the schedule and next steps. - Q: Can you describe the effects for each eligible property? A: We will cover this in the next phase of the process, probably in Spring 2013. - Q: What is the third alternative shown? A: The Halsted Alternative was added during the scoping process to look for options to minimize the impacts on parks and other 4(f) resources. The UPRR Alternative is the locally preferred alternative; we will define a National Environmental Policy Act (NEPA) preferred alternative as part of the NEPA process. - Q: Can the UPRR alternative fall anywhere inside the APE boundary? A: No, it will follow or run adjacent to the existing UPRR alignment. The APE includes a buffer to account for visual, noise, and other indirect effects. - Q: What source did you use for the architects and construction dates? A: CHRS and the County Assessor website. - Two of the photos on slide 26 could be considered contributing within a district. There are enough “Ranchalows” that they could be considered a housing style. The team will provide a full survey map and consulting party list as requested by attendees. Materials will be revised to clarify that properties referenced in Riverdale lie in the Riverdale Community in Chicago rather than Riverdale, Illinois. Please submit written comments on the eligibility materials by February 18.	CWC/CTA	2/6

Following the morning presentation, a number of attendees participated in a driving tour of the project area. Please notify Sonali Tandon of the minutes of any corrections and/or clarifications within five (5) business days.

cc: Attendees

Red Line Extension (RLE) Summary of Eligibility Comments received from Consulting Parties and Responses from Project Team

The following paragraphs briefly summarize comments received from the consulting parties on the eligibility of historic resources for the RLE Project and corresponding responses from the project team. Under the Section 106 consultation process, CTA undertook an extensive data collection and analysis effort during Fall 2012 to identify historic resources located within the Area of Potential Effect (APE) for the three built alternatives that are under evaluation in the RLE Draft Environmental Impact Statement (EIS). This analysis culminated in recommendations regarding the potential eligibility of historic resources pursuant to the National Historic Preservation Act of 1966. These recommendations were presented to the ten consulting parties, including the Illinois Historic Preservation Agency (SHPO), during a meeting on January 30, 2013. Participants were asked to provide relevant information from their perspective that may supplement the National Register of Historic Places (NRHP) evaluations contained within the RLE Draft EIS. Written comments were received from the following six organizations:

- Anne Haaker, Illinois Historic Preservation Agency
- Jennifer Kenny, Ridge Historical Society
- Jonathan Fine, Preservation Chicago
- Lisa DiChiera, Landmarks Illinois
- Matt Cole, Neighborhood Housing Services of Chicago
- Terry Tatum, Chicago Historic Preservation Division, Department of Housing and Economic Development

Based on local knowledge and input from the consulting parties, additional analysis was undertaken regarding historic resources within the APE. The original recommendations presented in January will be revised as described below and presented in the RLE Draft EIS. In addition to the written comments received by CTA, comments from the January 30 meeting will also be incorporated into the Draft EIS to provide additional clarification. Comments and responses are presented by general topic below.

Comments requesting additional surveys:

Several comments requested that the team evaluate additional sites for NRHP eligibility. These additional sites and their evaluations are summarized below, including both individual properties (Comments #1-6) and potential districts (Comments #7-12).

1. American Ideal Cleaning Building at 10343 South Michigan Avenue
   This building falls beyond the APE boundaries.
2. Lilydale Progressive Missionary Baptist Church at 10716 South Michigan Avenue
   This building falls beyond the APE boundaries.
3. Greystone building at 11445-11447 South Michigan Avenue
   This building falls beyond the APE boundaries.
4. Entrance gate and structure at Cedar Park Cemetery at 12584 South Halsted Street
   These structures were field surveyed in February 2013 and are recommended eligible for the NRHP under Criterion C for the high quality craftsmanship and unusual stonework. A site form is attached.

5. Kensington Park
   The Park was field surveyed and, following archival research is not recommended eligible for the NRHP. Purchased by the City in 1942, Kensington Park has been updated throughout the decades and currently contains a number of contemporary recreational amenities that give it a recent appearance: a mid-twentieth century field house that is no longer in use, playground equipment, a splash pad, a paved basketball court, a horseshoe pit, and baseball fields. Although the field house is over 50 years in age, it lacks distinguishing architectural features. As a publicly-owned park, Kensington Park will be addressed in the NEPA document as a Section 4(f) resource.
6. Two-story commercial building at 11206 South Michigan Avenue
   The building was surveyed and is not recommended eligible for the NRHP due to its lack of integrity and distinguishing architectural features. The site form is included on the Eligibility CD as 11200-11206 S Michigan Avenue.

Note: A number of sources consulted during the archival research phase – including the City of Chicago GIS database, Illinois Historic Preservation Agency's HARGIS database, County Assessor Records, and others – present building addresses inconsistently. Street numbers may differ by several addresses: the church at 12433-12439 South Halsted Street is called 12427 South Halsted Street by a different agency, though both refer to the same building. To aid comparisons, the summary table notes alternate addresses for several properties when these inconsistencies were identified during the eligibility assessments.

7. Potential historic district/grouping of cast stone-faced residences on South Eggleston Avenue between 111th & 112th Streets
   Numerous buildings in this location were surveyed as part of the representative sample set, including one cast stone-faced residence on South Eggleston Avenue (11130 South Eggleston Avenue). Individually, this building was not recommended eligible for the NRHP due to its lack of integrity and distinguishing architectural features. Along South Eggleston Avenue near West 111th Street and West 112th Street, there appear to be only two cast stone-faced residences within the APE, which is not sufficient for these properties to be considered as a potential historic district or multiple property grouping.
8. Could groupings of ranchelows contribute to a future NRHP district (between 103rd St, 104th Pl, UPRR, and Princeton Ave)?
   A number of raised ranches were surveyed as part of the representative sample set; none were found to merit individual listing for the NRHP. Although the area (between 103rd St, 104th Pl, UPRR line, and Princeton Ave) contains numerous residences with similar architectural styles, massing, setbacks, and construction dates, architectural historians confirmed that these properties do not retain sufficient integrity for the NRHP as a district due to contemporary - alterations (e.g., replacement siding, porches, windows, and doors). Numerous vacant lots and recent construction, such as the post-1980 Langston Hughes Elementary School that encompasses an entire city block, disrupts the visual cohesiveness of this area.
9. Potential district of Residential Railroad Suburbs or Historic Streetcar Communities, e.g. along the Chicago & Eastern Illinois RR; the Chicago & Great Eastern RR; the Illinois Central RR 121st Street spur; or streetcars along Michigan Ave, 103rd St, 111th St, 115th St, and 119th St.
   After additional fieldwork, no cohesive groupings of historic commercial buildings or community centers were identified along the primary thoroughfares that supported streetcar lines, railroad

lines, or spurs. Therefore, the suggested areas are not recommended as a district or multiple property group.

10. Potential district/group of properties associated with the former Village of Fernwood, generally located between 90th St, 103rd St, Stewart Ave, and Morgan/Halsted Street
    As part of the original fieldwork effort, a handful of these resources were surveyed within the APE. As noted in the letter, many have integrity issues. Many of Fernwood's signature buildings are located outside the APE or have been demolished. Further, the amount of contemporary infill has compromised the historic setting of the residential suburb. Therefore, this area is not recommended as a district or multiple property group.
11. Potential district/group of historic automobile-related buildings along major thoroughfares (e.g. Halsted and Michigan Ave)
    Although a number of auto-related resources were surveyed within the APE, none exhibited sufficient historic integrity to qualify as eligible for the NRHP either individually or as a contributing resource within a multiple property group. All of the surveyed automotive service buildings exhibit contemporary alterations.
12. Chicago Georgian and Raised Ranch Historic Districts
    The Ridge Historical Society and other consulting parties suggested these styles be considered as part of the eligibility discussions for the Section 106 process. Review by architectural historians confirmed that a cluster of these properties exists along an approximately five block area on the east side of Green Street between 104th Street and 109th Street. The streetscape has a cohesive grouping of vernacular homes that is representative of residences that were constructed in the outlying areas of Chicago during the post-World War II era. Although such neighborhoods are common throughout the city, these five blocks include hipped-roof ranch homes, front-gabled cottages, and Chicago Georgian style homes with little to no contemporary infill. The residences date from the 1950s and 1960s with consistent setbacks and similar brick cladding; they appear to be well-maintained. Therefore, the portion of Green Street between 104th Street and 109th Street is recommended as eligible for the NRHP as a historic district for architecture (Criterion C).

Comments requesting reconsideration of surveyed properties:

Several comments requested that the team reconsider properties that were surveyed but recommended not eligible for NRHP listing at the January meeting. These additional properties and their evaluations are summarized below.

13. Sure-Way M.B. Church at the southwest corner of Halsted Street and 120th Street
    The building is not recommended eligible for the NRHP due to lack of integrity and because it no longer serves its original use. The site form is included on the Eligibility CD as 12000 S Halsted Street.
14. Fernwood Parkway
    Fernwood Parkway was evaluated against NRHP criteria and is recommended not eligible for NRHP listing. However, as a publicly-owned park, it will be addressed in the NEPA document as a Section 4(f) resource.
15. Roseland Auto Sales & Service at 11200 South Halsted Street
    The building is not recommended eligible for the NRHP due to its lack of integrity. The setting is compromised by contemporary infill and the exterior has been clad in modern materials. The site form is included on the Eligibility CD as 11200 S Halsted Street.

16. Bethany Reformed Church Manse at Three West 111th Place
    The building was not originally recommended eligible due to its lack of distinguishing architectural features. However, as a result of additional information provided by Ridge Historical Society, the resource is recommended eligible for the NRHP under Criterion B due to its association with Reverend Harry J. Hager (1899-1983), a pioneer in media evangelism in Chicago during the mid-twentieth century. A revised site form is attached.
17. Pridjian & Co Building at 11600 South Halsted Street
    The building is not recommended eligible due to its lack of distinguishing architectural features. While the Pridjian & Company business has been in operation for decades, the property does not reach the level of significance required by the NRHP. The site form is included on the Eligibility CD as 11600 S Halsted Street.
18. Roseland Community Hospital Nurse's Home at 11321 South Wentworth Avenue
    The building was surveyed and was not originally recommended eligible due to its lack of distinguishing architectural features. However, as a result of additional information provided by Ridge Historical Society during the eligibility discussions for the Section 106 process, the resource could be considered locally significant under Criterion A for Education based on its use as a dormitory for its nurses and as an important nurse training facility. A revised site form is attached.
19. Galloy & Van Etten Cut Stone Contractors Building at 11756 South Halsted Street
    The building was not originally recommended eligible under Criterion C due to its lack of integrity and distinguishing architectural features. However, as a result of additional information provided by Ridge Historical Society during the eligibility discussions for the Section 106 process, the resource could be considered locally significant under Criterion A for its longstanding association with the local construction industry as a 113-year old stone contracting company. A revised site form is attached.
20. Would the substation at 10227 South Halsted Street be eligible under Criterion A as well?
    Yes: the substation is recommended eligible under Criterion A for its association with utilities infrastructure within the city of Chicago. At the January 2013 meeting, it was recommended as NRHP eligible under Criterion C. A revised site form is attached indicating this building as eligible both under Criterion A and Criterion C.
21. Although noted architect Murray Hetherington designed the house at 11001 S Green Street, the resource was only evaluated based on its integrity.
    Numerous residences designed by Hetherington that exhibit greater integrity exist today, including 2078 West Hopkins Place, 8918 South Hamilton Avenue, and 8929 South Hamilton Avenue. Due to the compromised integrity of the Green Street property, it is not recommended as NRHP eligible. The site form is included on the Eligibility CD as 11001 S Green St.

Comments regarding assessment of effects:

The following comments expressed concern about the assessment of effects, which will be covered in the next phase of the consultation process. Noted below, these will be considered in the next phase of the analysis.

22. We object to historic properties being purchased and demolished for construction staging.
23. The proposed BRT route would affect the fewest cultural resources. The UPRR route will affect fewer resources than the proposed Halsted line.

24. Building an elevated rail line down Halsted Street would have negative consequences for the tranquil and bucolic atmosphere of the Cedar Park Cemetery.

Comments requesting minor amendments to the summary table and/or site forms:
The following comments identified minor amendments to the summary table and/or site forms for individual properties. None of these modifications change the NRHP eligibility recommendations. Noted below, these edits will be incorporated; revised materials will be provided along with the effects materials prior to the next phase of the consultation process.

25. The Fire Department Engine Co. 93 building at 324 West 104th Street (alternate address: 328-330 W. 104th St.) is CHRS Orange
26. The Roseland Pumping Station at 351 West 104th Street is CHRS Orange
27. The French Eclectic style house at 11310 South Emerald Avenue was listed as a “local landmark” but is not designated; it is CHRS Orange.
28. The Romanesque Revival style Church at 10920 South Princeton Street is CHRS Orange
29. The two-story commercial building at 11206 South Michigan Avenue is CHRS Orange
30. The architectural firm of Fox & Fox designed the church at 12433-1439 South Halsted Street, which was built in 1958-1959.
31. The Venetian Hall at 133-139 East Kensington Avenue was built in 1925-1926 and designed by Arthur F Hughes.
32. The house at 11310 South Emerald Avenue was built 1927-1928 for Stuart Colman. Inventory form should specify this resource is individually eligible.
33. Property listed as 748 East 103rd Street should be 748 West 103rd Street.
34. The substation at 10227 South Halsted Street was built in 1919-1920.

Other Comments:
Additional comments received are discussed below.

35. There should be a separate category in the spreadsheet for Chicago properties rated as “orange” on the Chicago Historic Resources Survey (CHRS).
    CHRS Orange properties were noted in the summary table provided to consulting parties on January 5, 2013. These properties will be discussed separately within the project’s Environmental Impact Statement.
36. We [SHPO] generally concur with the findings of the architectural surveys. It is expected that additional resources suggested will be considered once the final route is selected.
    Comment noted.
37. While we agree that the house at 444 West 100th Place is NRHP eligible, we disagree about the Neo-Traditional style description and are concerned that the replacement of the original tile roof jeopardizes integrity.
    Based on the ornamentation (Neo-Gothic castellated porch roof, Classical colonettes, and arched lintels), the house was identified as an early example of the Neo-Traditional style. It is recommended as NRHP eligible and will be assessed for effects in the next phase of the consultation process.
38. Use of catch-all architectural style descriptors was inconsistent and difficult to sort/review.
    Many of the residential resources are stripped-down brick and frame bungalows and cottages representing the predominant building stock for the study area. Likewise, commercial resources

contain little ornamentation or detailing. The broad term “vernacular” was used whenever a resource did not exhibit a particular architectural style. This approach is consistent with the current state-of-the-practice.

39. Historic functions should match NRHP categories.
    While official NRHP functions were not used on the survey forms, easily identifiable equivalent terms were used to improve comprehension for a broader audience. This approach is consistent with the current state-of-the-practice.
40. Construction dates listed in the Cook County Assessor Records are less reliable than dates listed in building permit records.
    Numerous varied sources were used to establish and cross-check construction dates: County Assessor records, GIS database layers provided by the City of Chicago, the HARGIS database maintained by the Illinois Historic Preservation Agency, Sanborn mapping, etc. This approach is consistent with the current state-of-the-practice.
41. The church at 10920 South Princeton Avenue is currently called Mary Magdalene Missionary Baptist Church.
    The church at 10920 South Princeton Avenue was identified by both its historic name (First Christian Reform Church of Roseland) and its current name (Mary Magdalene Missionary Baptist Church) on the inventory form. The property is eligible for the NRHP due in part to its association with early Dutch settlement in the area, so the historic name was referenced in the presentation.

Illinois Historic
Preservation Agency
1 Old State Capitol Plaza • Springfield, Illinois 62701-1512 • www.illinois-history.gov

Cook County PLEASE REFER TO: IHPA LOG #001010713
Chicago
From Existing 95th Street Station to Approximately 130th St. and Halsted St.

CTA
Red Line Extension

February 4, 2013

Sonali Tandon
Chicago Transit Authority
567 W. Lake St.
Chicago, IL 60661-1498

Dear Ms. Tandon:

Thank you for requesting comments from our office concerning the possible effects of the referenced project on cultural resources. Our comments are required by Section 106 of the National Historic Preservation Act of 1966, as amended, and its implementing regulations, 36 CFR 800: "Protection of Historic Properties".

We appreciated information provided during the meeting at the CTA on January 30, 2013, and the tour that augmented the architectural surveys and introduced the three routes proposed by the CTA. In general we concur with the findings of the architectural surveys submitted to this office prior to the meeting and tour, but during the tour is was noted that resources identified on the Chicago Historic Resources Survey were not identified and that structures such as those located within Cedar Park Cemetery were excluded from the sample. It is likely that our preservation partners present at the meeting will have additional resources that they would like to see included in the survey. It is expected that these additional resources will be considered once a final route has been selected.

In our opinion, the proposed expansion of the BRT route will affect the least amount of cultural resources located within its APE. We also believe the UPRR route that is often adjacent to existing railroad tracks will affect fewer resources than the line proposed on Halsted Street.

We look forward to reviewing the final historic resources report once the comments of our preservation partners have been considered.

If you have questions please contact David J. Halpin, Cultural Resources Manger, at 217-785-4998.

Sincerely,

Anne E. Haaker

Anne E. Haaker
Deputy State Historic
Preservation Officer
AEH:DJH

cc: Marisol R. Simon, U.S. Department of Transportation
Lisa DiChiera, Landmarks Illinois
Terry Tatum, City of Chicago, Illinois

From: Tandon, Sonali [STandon@transitchicago.com]
Sent: Friday, February 15, 2013 4:33 PM
To: Thompson, Rebecca D.; Kornblatt, Helene B.; Lea, Claudia
Cc: 'Bojan, Sharon'
Subject: FW: Red LIne Extension Section 106 - comments on historic resource identification
Attachments: Michigan 11206 S_CHRS orange_dataform.pdf; Michigan 11206 S_CHRS orange.xps

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From: Tatum, Terry [mailto:Terry.Tatum@cityofchicago.org]
Sent: Friday, February 15, 2013 3:13 PM
To: Tandon, Sonali
Subject: Red LIne Extension Section 106 - comments on historic resource identification

Dear Ms. Tandon:

Thank you for the opportunity to comment on historic resource identification efforts for the Red Line Extension Project as part of the ongoing Section 106 consultation process for this project. Our office appreciates the scale and importance of this undertaking, and we commend the CTA’s efforts to incorporate historic preservation issues and concerns into its larger planning efforts. We hope to work with you to minimize the effect of the Red Line Extension Project on historic properties.

As part of the Section 106 process, we wish to bring to your attention both general observations on this historic resource identification effort, as well as comments on specific properties that may be impacted by the project.

Chicago Historic Resources Survey red- and orange-rated properties

With the help of your consultant team, you have preliminarily identified properties that are eligible for NR listing. These properties have been listed in the “RLE Draft Eligibility Findings for Surveyed Properties” spreadsheet.

Our office believes that there should be a separate category in the spreadsheet for Chicago properties rated as “orange” on the Chicago Historic Resources Survey. (There are no CHRS “red-rated” buildings in the Red Line Extension’s APEs.) Conducted between 1983 and 1995, this city-wide survey identified properties constructed prior to 1940 that were perceived to have, within at least the context of their neighborhoods, some historic significance to these neighborhoods. These buildings were either color-coded red or orange, depending upon the level of their historical and architectural significance as known at the time of the survey.

Although not designated Chicago Landmarks, these CHRS “red” and “orange”-rated properties are covered by the City’s Demolition-Delay Ordinance, enacted by City Council in 2003, which allows for an up-to-90-day hold on building permit applications for demolition by the Department of Housing and Economic Development (DHED) for these properties. (More information on this ordinance can be found at http://www.cityofchicago.org/city/en/depts/dcd/supp_info/demolition_delay.html.) Even where such properties have also been determined eligible for National Register listing, we believe that it is prudent of the CTA to separately identify all CHRS orange-rated properties within the APEs on the historic resources spreadsheet. The effect of the Red Line Extension Project on these “orange” properties can then be determined and, if necessary, mitigated through direct discussions with DHED as early in the project as possible.

Observations concerning individual properties located in the APEs

1. Several buildings identified as “orange-rated” in the Chicago Historic Resources Survey (CHRS) were sampled by the CTA’s historic resources consultants.

The **Classical Revival substation** at 10227 S. Halsted St. (Map 7) was determined eligible for National Register listing. It is a CHRS "orange-rated" building and was noted as such on the spreadsheet.

The **Fire Department Engine Co. 93 building** at 324 W. 104th St. (alternate: 328-330 W. 104th St.) (Map 30) was preliminarily determined eligible for National Register listing. It is a CHRS "orange-rated" building, but was not noted as such on the spreadsheet. It should be so noted.

The **Roseland Pumping Station** at 351 W. 104th St. (Map 30) was preliminarily determined eligible for National Register listing. It is a CHRS "orange-rated" building, but was not noted as such on the spreadsheet. It should be so noted.

The **French Eclectic style house** at 11310 S. Emerald Ave. (Map 12) was listed as a "local landmark" and preliminarily determined eligible of NR listing. However, it is not a designated Chicago Landmark. Instead, it is an "orange-rated" building in the CHRS, but was not noted as such on the spreadsheet It should be so noted.

The **Romanesque Revival style Church** at 10920 S. Princeton St. (Map 34) was preliminarily determined eligible for National Register listing. It is a CHRS "orange-rated" building, but was not noted as such on the spreadsheet. It should be so noted.

2. In addition, one building identified as "orange-rated" on the CHRS and located within the APE for the BRT option was not identified and sampled. The **two-story commercial building** at 11206 S. Michigan Ave. (listed as 11208 S. Michigan on Map 45) was not sampled by the historic resource survey. It is an "orange-rated" building in the CHRS (CHRS data form and Google Earth photo attached) and should be noted as such on the spreadsheet. It should also be separately evaluated for National Register eligibility.

I would be pleased to assist the CTA's consultant team as they gather additional information on historic resources within the APEs for this project.

Sincerely,

Terry

Terry Tatum
Coordinating Planner I
Historic Preservation Division, Dept. of Housing and Economic Development
33 N. LaSalle St., Room 1600
Chicago, IL 60602
312-744-9147
312-744-9140 (fax)
ttatum@cityofchicago.org

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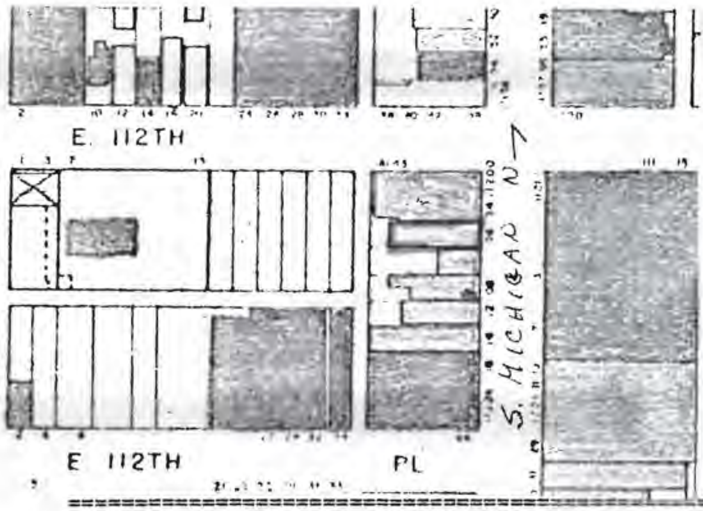
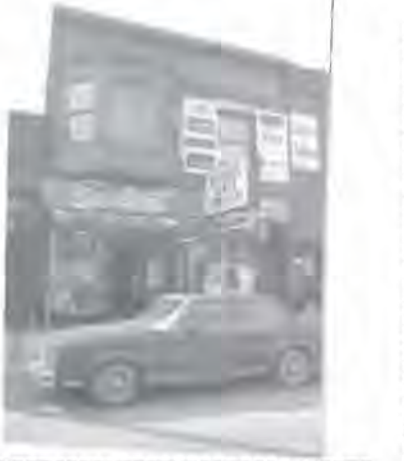


PHOTOGRAPH:

roll no. 9-R4
frame no. 3
orientation: E
photographer: TW
date: 9-28-83



C 893
Address: 11206 S Michigan AV
Color Coded: Orange
District Form No: _._._
Form No: 49.9.21.019
49/1
No. Cont. Sheets:
Surveyors: TW/CR
Date: 9-28-83

COMMISSION ON CHICAGO HISTORICAL AND ARCHITECTURAL LANDMARKS
INDIVIDUAL RESOURCE FORM

Common Name (or major tenant): Excellent Fashions for Men
Historic Name:
Orientation: (circle) N S [✓ E] W NE SE NW SW
Classification: ☑ Building ☐ Site ☐ Structure ☐ Object
☐ Other:

Evaluation: Potential

	N/I	N/D	C/I	C/D	I/I
F	☐	☐	☐	☐	☐
A	☐	☐	☐	☐	☐
H	☐	☐	☐	☐	☐

Building Type: Commercial, Residential
Style: overall: N/A
details: CLASSICAL
Roof Type: N/V
Stories: TWO
Approximate dimensions 25 feet (W) x 88 feet (D).
Original Use: Commercial, Residential
Present Use: Commercial, Residential

Approximate Period of Construction:

☐ pre-1870
☐ 1871-1879
☐ 1880-1889
☑ 1890-1899
☐ 1900-1909
☐ 1910-1919
☐ 1920-1929
☐ 1930-1939
☐ post-1940

Materials (including color):
foundation: N/V
walls: BRICK (Red)
trim: Stone (Gray) Metal/Painted (Mustard Yellow) wood/Painted (mustard yellow)
roof: N/V
porches: N/A
other: N/A

Physical Condition:

	E	G	F	P	NV
foundation:	☐	☐	☐	☐	☑
walls:	☐	☑	☐	☐	☐
roof:	☐	☐	☐	☐	☑
porches:	☐	☐	☐	☐	☐
other: BAY	☐	☑	☐	☐	☐
	☐	☐	☐	☐	☐
overall:	☐	☑	☐	☐	☐

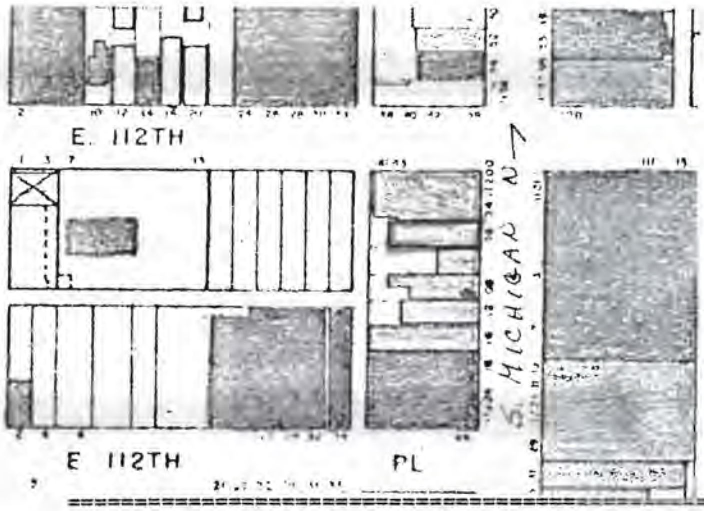
Alterations, Additions:
One bay window covered w/ wood
Modern 1950s 1st Floor storefront alterations

Noteworthy Features of Resource/Site:
metal dentil cornice w/ garland motif above metal fascia w/ garland and masks.
Metal 3-sided bay

Rationale for Landmark Potential:
Noteworthy because of the intricate detailing on the fascia

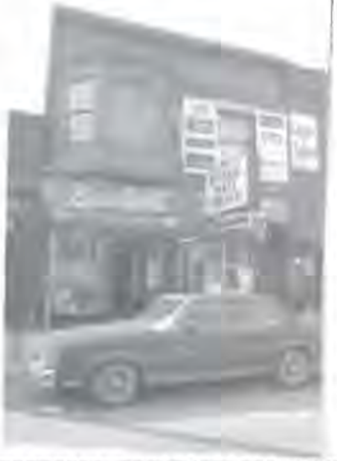
Relation to Streetscape(s):
Flanked to the S. by modern one story & altered historic 2 story commercial bldg. Flanked to the north by contemporary 2 story commercial bldg and to the east by 1 story modern commercial bldg on a heavily trafficed street.

Field notes:



PHOTOGRAPH:

roll no. 9-R4
frame no. 3
orientation: 2
photographer: TW
date: 9-28-83



Address: 11206 S Michigan AV 2873
Color Coded: Orange
District Form No: . .
Form No: 49-9-21-019 4771
No. Cont. Sheets:
Surveyors: TW/CR
Date: 9-28-83

COMMISSION ON CHICAGO HISTORICAL AND ARCHITECTURAL LANDMARKS
INDIVIDUAL RESOURCE FORM

Common Name (or major tenant): Excellent fashions for Men
Historic Name:
Orientation: (circle) N S [✓ E] W NE SE NW SW
Classification: [✓] Building [ ] Site [ ] Structure [ ] Object
[ ] Other:

Evaluation: Potential

	N/I	N/D	C/I	C/D	I/I
F	[ ]	[ ]	[ ]	[ ]	[ ]
A	[ ]	[ ]	[ ]	[ ]	[ ]
H	[ ]	[ ]	[ ]	[ ]	[ ]

Building Type: Commercial, Residential
Style: overall: N/A
details: CLASSICAL
Roof Type: N/V
Stories: TWO
Approximate dimensions 25 feet (W) x 88 feet (D).
Original Use: Commercial, Residential
Present Use: Commercial, Residential

Approximate Period of Construction:

[ ] pre-1870
[ ] 1871-1879
[ ] 1880-1889
[✓] 1890-1899
[ ] 1900-1909
[ ] 1910-1919
[ ] 1920-1929
[ ] 1930-1939
[ ] post-1940

Materials (including color):
foundation: N/V
walls: BRICK (Red)
trim: Stone (Gray) Metal/Painted (Mustard Yellow) wood/Painted (mustard yellow)
roof: N/V
porches: N/A
other: N/A

Physical Condition:

	E	G	F	P	NV
foundation:	[ ]	[ ]	[ ]	[ ]	[✓]
walls:	[ ]	[✓]	[ ]	[ ]	[ ]
roof:	[ ]	[ ]	[ ]	[ ]	[✓]
porches:	[ ]	[ ]	[ ]	[ ]	[ ]
other:					
BAY	[ ]	[✓]	[ ]	[ ]	[ ]
	[ ]	[ ]	[ ]	[ ]	[ ]
overall:	[ ]	[✓]	[ ]	[ ]	[ ]

Alterations, Additions:
One bay window covered w/ wood
Modern 1950s 1st Floor storefront alterations

Noteworthy Features of Resource/Site:
metal dentil cornice w/ garland motif above metal fascia w/ garland and masks.
Metal 3-sided bay

Rationale for Landmark Potential:
Noteworthy because of the intricate detailing on the fascia

Relation to Streetscape(s):
Flanked to the S. by modern one story & altered historic 2 story commercial bldg. Flanked to the north by contemporary 2 story commercial bldg and to the east by 1 story modern commercial bldg on a heavily trafficed street.

Field notes:

IDENTIFICATION ON EXISTING SURVEYS:

Date:	Survey:	Listing:
[11/2/83]	[ ] Chicago Landmark (CL).	
[11/2/83]	[ ] Potential CL	
[11/2/83]	[ ] National Register (NR)	
[11/2/83]	[ ] NR Eligible	
[11/2/83]	[ ] Illinois Register.	
[11/2/83]	[ ] State Survey	
[/ /]	[ ] HABS	
[/ /]	[ ] HAER	
[/ /]	[ ] LPCI Inventory.	
[/ /]	[ ] Federal Agency Inventory	
[/ /]	[ ] Other:	
[/ /]	[ ]	
[/ /]	[ ]	

LEGAL DESCRIPTION:

TAX NUMBER: 25.22.105.029.0000
ZONING DESIGNATION: B3-3

AREAS OF SIGNIFICANCE:

BUILDING HISTORY:

[ ] Original Site
[ ] Moved
Date:
Source No(s):
Original Location:
Prepared by:
Source No(s):
Date:
(1) Permit No. NW944 Date: 10-8-1901 SUNDRY. Permit # 112337 File # 276521 8-17-33(?)
File No.
Book No. Pg. COST: $4800 (2)

HISTORICAL SIGNIFICANCE:

Original Owner: D. BASS
Source No(s): 2

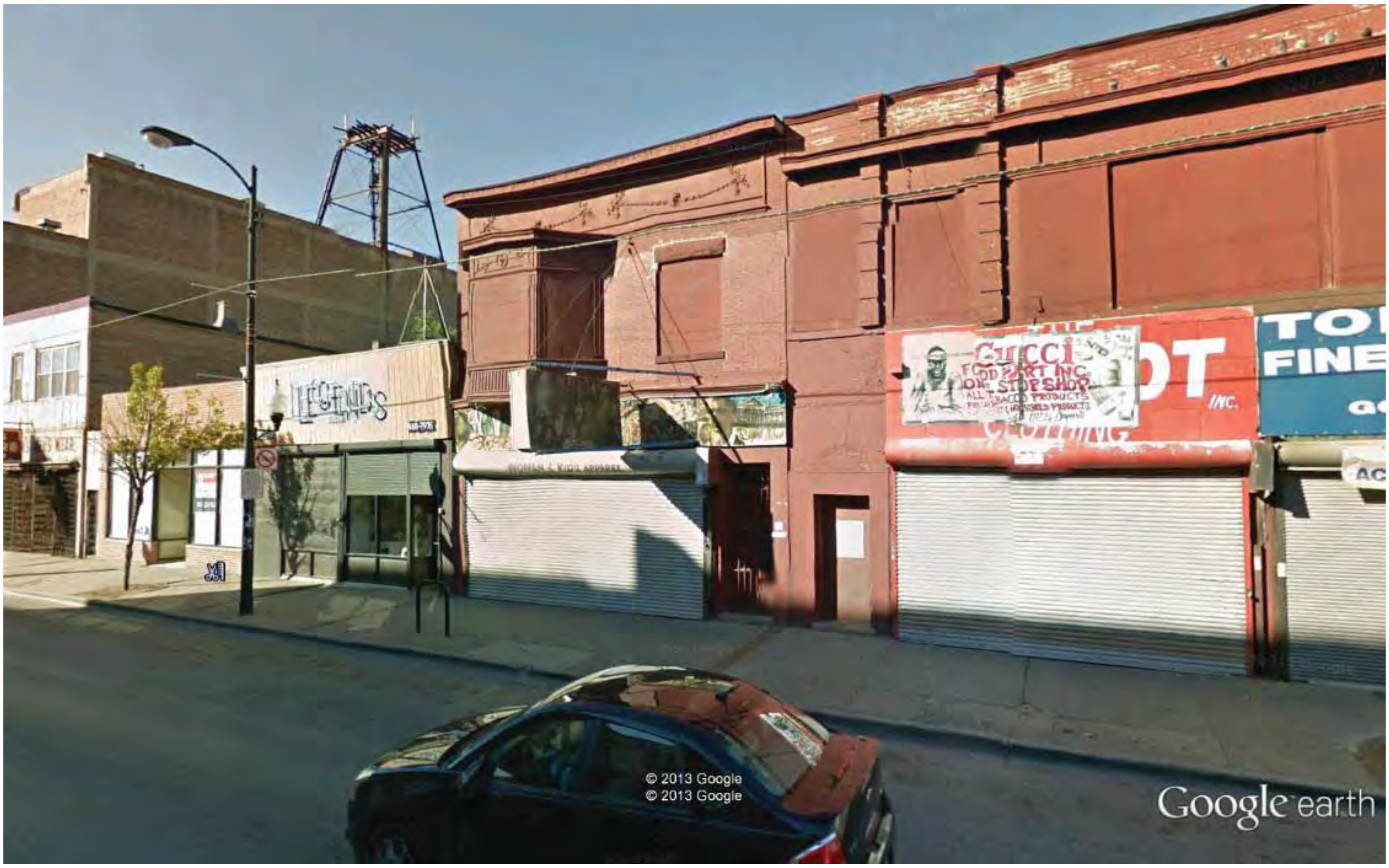
Prepared by:
Source No(s):
Date:

ARCHITECTURAL/ENGINEERING SIGNIFICANCE:

Architect:	Source No.
Builder: WILLIAM C WOOD	Source No. 2
Engineer:	Source No.
Other:	Source No.
	Source No.
Date of Construction:	Source No.
Structural system: BRICK	Source No. 2

Prepared by:
Source No(s):
Date:

SOURCES:
1 "Ancient Permit File Index," Department of Inspectional Services, City Hall, Chicago.
2 "Permit Ledgers," Department of Inspectional Services, City Hall, Chicago.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LANDMARKS ILLINOIS

FOUNDED IN 1971

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Chicago, Illinois 60604-3562
Tel: (312) 922-1742

February 18, 2013

Sonali Tandon, Project Manager
Strategic Planning & Policy
Chicago Transit Authority
567 W. Lake St
Chicago, IL 60661

RE: Red Line Extension– NR eligible properties in APE

Dear Ms. Tandon,

As requested, we have reviewed the APE boundaries and the properties identified within the APE that are listed in or "eligible" for listing in the National Register of Historic Places by the Red Line Extension project team.

We are very pleased to see the numerous properties identified and acknowledged as historic. However we have the following observations:

- We recommend including all properties that are orange-rated in the Chicago Historic Resources Survey (CHRS) in a separate category due to the fact that they will require an additional mitigation process through the city's demolition delay ordinance.
- During the driving tour of the preferred Red Line Extension routes, I took note of the following properties that were not included in the project team's list of eligible properties that looked as if they could be of possible architectural significance.
    - The American Ideal Cleaning Building at 10343 S. Michigan – a mid-century commercial building
    - The Lilydale Progressive M.B. Church at 10716 S. Michigan
    - City Sports store commercial block at 11102 S. Michigan
    - 11445-47 S. Michigan – Commercial/residential side by side Greystone – rated orange in CHRS
    - 11451 S. Michigan – one story commercial Art Deco building – rated orange in CHRS
    - Sure-Way Missionary Baptist Church at S.W. corner of Halsted and 120th. Art Deco corner building with a mid-century addition on the south side
    - Entrance gates and structure to Cedar Park Cemetery, 12584 S. Halsted
- Based on precedent with the Brown Line renovation project, we object to historic properties being purchased and demolished to make way for construction staging. We hope the team will specifically identify historic properties in the areas where construction staging may be planned to help identify alternative locations.

Thank you for the opportunity to review the findings by your team for this project. Please let me know if we can be of further assistance before the next consultation.

Sincerely,

Lisa DiChiera

Lisa DiChiera
Director of Advocacy

cc: Anne Haaker, IHPA
Jonathan Fine, Preservation Chicago
Terry Tatum, Historic Preservation Division, HED, City of Chicago
Matt Cole, NHS

NEIGHBORHOOD HOUSING SERVICES OF CHICAGO, INC.

Rebuilding Chicago's Neighborhoods

1279 N. Milwaukee Ave., 5th Floor
Chicago, Illinois 60622
773 329-4010
fax: 773-329-4120
www.nhschicago.org

NHS

February 19, 2013

Ms. Sonali Tandon
Project Manager
Strategic Planning & Policy
Chicago Transit Authority
567 West Lake Street
Chicago, IL 60661

RE: Red Line Extension – National Register eligible properties in APE

Dear Ms. Tandon,

As a housing and community development organization with longstanding ties to the greater Roseland area, we appreciate CTA inviting Neighborhood Housing Services of Chicago, Inc. (NHS) to participate in the Section 106 review for the proposed Red Line Extension routes. NHS believes the Red Line Extension project will ultimately enhance the livability and well-being of Roseland and surrounding neighborhoods by increasing transit access for residents. At the same time, we wish to ensure that the project minimizes any undue impacts on the existing residential, community, and historic buildings that make these neighborhoods great and that our experience has shown can be important community-building and engagement assets. Therefore, NHS would like to submit the following comments regarding the National Register eligible properties surveyed by the Red Line Extension project team in the APE:

- We recommend re-evaluating the exclusion of raised ranches – colloquially referred to "ranchelows" for looking like a cross between a Chicago bungalow and a ranch-style home – from the survey. While currently not a formally recognized form of Chicago vernacular architecture, these homes define the look and character of large stretches of the APE adjacent to UPRR right-of-way. We would encourage the CTA project team to determine if groupings of "ranchelows" in the APE could contribute to a future National Register district.
- During the van tour of the preferred Red Line Extension routes on January 30th, we also took note of the following areas that warrant additional surveying/review by the project team:
  - 111th & 112th South Eggleston: A few cast stone-faced residences were observed on or adjacent to these blocks, including one home immediately adjacent to the UPRR right-of-way. These buildings, which look similar to Chicago greystones, are relatively rare and should be evaluated for National Register eligibility.
  - 103rd Street to 104th Place between the UPRR and Princeton Avenue: This area includes the previously identified, National Register-eligible Roseland Pumping Station and Roseland Fire Station properties. However, the blocks also include a largely intact and well-maintained grouping of Chicago bungalows and frame

cottages. We would encourage the project team to conduct a more detailed survey of these blocks to determine if these residential properties could contribute to a future National Register district.

- Though not directly applicable to the survey of National Register-eligible properties, we encourage the project team to carefully evaluate the potential impact of the Red Line Extension on the Fernwood Parkway that runs immediately west of the existing UPRR right-of-way. Albeit simply landscaped, the parkway provides a nice amenity to homes along Eggleston Avneue between 99th and 104th Streets.

In addition to these observations, we fully concur with the recommendations from Lisa DiChiera, Director of Advocacy, at Landmarks Illinois regarding specifically calling out "orange-rated" properties listed on the Chicago Historic Resources Survey; the additional commercial, religious, and community buildings that should be evaluated on Michigan Avenue and Halsted Street; and avoiding the demolition of any historic properties to make way for construction staging.

Thank you again for inviting NHS to participate in the Section 106 review for the Red Line Extension project. Please let us know if we can be of further assistance before the next scheduled consultation.

Best,

Matt Cole
Project Coordinator
Neighborhood Housing Services of Chicago, Inc.

CC: Ed Jacob, NHS
Deborah Moore, NHS
Robert Tucker, NHS
Christopher Smith, NHS
Anne Hacker, IHPA
Lisa DiChiera, Landmarks Illinois
Jonathan Fine, Preservation Chicago
Terry Tatum, Historic Preservation Division, HED, City of Chicago

Preservation Chicago

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Jonathan Fine
Executive Director

Stacey Pfingsten
Communications Mgr.

February 20, 2013

Sonali Tandon, Project Manager
Strategic Planning & Policy
CTA
567 West Lake Street
Chicago, IL 60661

Re: Red Line Extension – Possible negative effects to historic properties with in the proposed APE

Dear Ms. Tandon,

Thank you for facilitating the recent driving tour of the three proposed routes for the Red Line extension. I am writing in response to concerns our organization has regarding possible destruction of historic buildings or landscapes with the APE.

I have had a chance to review the comments being submitted by Landmarks Illinois and we agree with and support all of their concerns.

In addition, we are concerned about the negative consequences that building an elevated rail line down the middle of South Halsted Street would have on the tranquil and bucolic atmosphere of Cedar Park Cemetery.

Thank you for your consideration. We look forward to continuing our partnership on this exciting project.

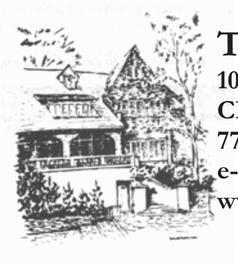
Sincerely,

Jonathan Fine

Jonathan Fine
Executive Director
Preservation Chicago

cc: Anne Haaker, IHPA
Terry Tatum, Historic Preservation Division, DHED
Lisa DiChiera, Landmarks Illinois
Matt Cole, NHS

4410 N. Ravenswood Ave., Chicago, IL 60640 773 334 8800 (O) 773 334 8803 (F)
www.preservationchicago.org



THE RIDGE HISTORICAL SOCIETY
10621 SOUTH SEELEY AVENUE
CHICAGO, IL 60643
773-881-1675
e-mail: ridgehistory@hotmail.com
www.ridgehistoricalsociety.org

February 20, 2013

Sonali Tandon
Chicago Transit Authority
567 West Lake Street, 10th Floor
Chicago, IL 60661

Dear Sonali,

Thanks for the opportunity to be a consulting party to the CTA's Red Line Extension (RLE) Section 106 eligibility process.

The Ridge Historical Society (RHS) serves the Beverly, Morgan Park and Washington Heights community areas on Chicago's south side. For this reason, we are particularly interested in the RLE impact upon historic properties in the APE situated within the Morgan Park and Washington Heights community areas. Both the Halsted Street and Union Pacific Railroad APE are located at the easternmost boundary of our service area. Please note that we do maintain an archival collection that reaches beyond our service area since our history does overlap with nearby areas, including West Pullman and Roseland. We reserve the right to comment on historic resources in other community areas just outside of our service area.

I have reviewed the materials and inventory forms submitted by the consulting team and offer the following comments.

IDENTIFIED NR ELIGIBLE PROPERTIES

The Ridge Historical Society agrees with the National Register (NR) eligibility of the two properties identified by the study in the Washington Heights community areas (our service area) – 10227 S. Halsted Street and 444 West 100th Place. Unfortunately, the team did not identify any NR eligible properties in the Morgan Park community area.

1. We agree that the City of Chicago Department of Gas and Electricity, Southwest Substation, at **10227 South Halsted Street** is NR eligible under C for its architecture, as a rare remaining example of a city government public works building. As stated on the study's inventory form, it is an orange rated building in the Chicago Historic Resource Survey (CHRS). The CHRS did supply a date of construction, 1919-20, that does not appear on the inventory form. I am wondering if this public works building is also NR eligible under A.
2. We agree that the single family dwelling at **444 West 100th Place**, built 1931, is potentially NR eligible under C for its architecture, as a rare brick Bungalow in

Washington Heights with striking Tudor Revival and Mediterranean Revival detailing. The Bungalow sports a handsome crenellated entry, decorative arches, and colonettes. I would not call this building Neo-Traditional, which is an architectural style reserved for late 20th-century buildings. I am concerned that this home once had a clay tile roof, perhaps jeopardizing its integrity. A similar house, designed by architect John Hoche, can be found in Beverly at 1762 W. 94th Street.

Additionally, I am providing architectural and historic info on other properties in the APE flagged as NR eligible by the team:

- The architectural firm of Fox and Fox designed S. S. Peter and Paul Church, **12433-12439 S. Halsted Street**, 1958-59. Architect John J. Fox, Jr. was a longtime resident of Beverly-Morgan Park and a noted local Roman Catholic church designer. He died in 2003.
- Venetian Hall, **133-139 E. Kensington Avenue**, was built in 1925-26 and designed by architect Arthur F. Hughes. Hughes is a local architect who designed a number of striking historic revival style homes in Beverly-Morgan Park.
- **11310 South Emerald Avenue** was built in 1927-28 for owner Stuart Colman. Note: the Individually Eligible category on page 2 of the inventory form says No when it should say Yes.

ADDITIONAL INDIVIDUAL PROPERTIES THAT MAY BE POTENTIALLY ELIGIBLE FOR THE NATIONAL REGISTER OF HISTORIC PLACES

The Ridge Historical Society would like the team to consider the following buildings for NR eligibility:

Roseland Auto Sales and Service Building (Allinone Auto Sales Building)
11200 South Halsted Street (Morgan Park)
Built 1927 for Henry T. Vollmer
Doerr, Lindquist and Doerr, architects

Potentially eligible under Criterion C for architecture as a rare remaining example of a garage and auto sales building from the early 20th-century in Morgan Park. Both Beverly-Morgan Park and Roseland were once major centers of auto sales on Chicago's south side, with dealerships along major area thoroughfares. Building is best known historically as a satellite salesroom for Roseland Auto Sales, featuring Studebakers. Additionally, Midland Terra Cotta Company provided the handsome terra cotta ornament for the one-story brick store building. Its integrity was likely questioned by its wood paneled storefront, but the original storefront may be behind the vertical boards If not individually eligible, perhaps eligible as part of a multiple property listing (see below).

Bethany Reformed Church Manse
3 West 111th Place
Craftsman-style single family residence
Built 1923-24
Purchased by church and addition built in 1928

Potentially eligible under criterion B for its historic associations with Reverend Harry J. Hager, pastor of Bethany Reformed Church from 1929-1975. Hager was a pioneer in media evangelism in Chicago during the mid 20th-century through his Sunday radio ministry broadcasts on local stations WHIP and WCFL. This church-related residence in the Craftsman style retains a high degree of architectural integrity, including a Gothic Revival style entry porch that likely dates to Hager's residency.

K. A. Pridjian and Company Building
11600 South Halsted Street
Built 1960

Potentially eligible under Criterion A for its historic associations with longtime local business, K. A. Pridjian and Company, Rug Cleaning and Sales. Established in 1924 in Roseland, Pridjian first operated at 54 West 111th Street. Owner K. A. Pridjian (d. May 6, 1965) had the facility built specially for his rug operation. Building retains much of its integrity in its mid-century storefront design, materials, and signage. (side note: Almost everyone in Beverly-Morgan Park has their rugs cleaned by Pridjian!)

Roseland Community Hospital Nurses Home
11321 South Wentworth Avenue
Built 1923-24
E. Hall, architect.

Potentially eligible under Criterion C for its architecture as a rare remaining example of a unique education-related building type in Chicago, a hospital-affiliated nurses' home. The three-story brick, Roseland Community Hospital Nurses' Home provided housing and educational opportunities for women training in the nursing profession. The interior may still reflect dormitory rooms, classrooms, and other spaces essential for nurses' training during the early 20th-century. Not sure how many of these building types are left in Chicago, but might be one of the only on the south side.

Galloy and Van Etten Cut Stone Contractors Building
11756 South Halsted Street
Built over time – 1921, 1928, 1946 and 1950

Potentially eligible under Criteria C for its associations with the Van Etten family, prominent local builders on Chicago's south side. Galloy and Van Etten, a longtime cut stone contracting business near the Panhandle railroad tracks, has operated continuously at this site from at least 1909. The cut stone exterior of the buildings within the complex reflects its occupant's trade. Founder Abe Van Etten was the brother of Simon and Henry Van Etten, whose contracting firm known as Van Etten Brothers built monumental residences and religious buildings on the south side. Galloy and Van Etten likely provided the cut stone used in many of these buildings.

NR ELIGIBLE CONTIGUOUS HISTORIC DISTRICTS OR MULTIPLE PROPERTIES

The Ridge Historical Society urges the team to revisit any groupings of historic properties that may be potentially NR eligible as contiguous districts or as multiple property listings The APE is located in a section on Chicago's south side that has been under surveyed in the past, and as a result, little data is available and very few historic resources have been proactively designated as local landmarks or listed in the National Register of Historic Places. Perhaps our community areas need a different approach in this type of study, especially when conducting cultural resource surveys. For example, surveyors could relax harsh integrity standards or look at broader patterns that might lead to multiple property nominations.

Here are some suggestions:

1. Would any of the Historic Residential Railroad Suburbs or Historic Streetcar Communities in the APE be NR eligible as multiple property listings? Since suburban development was extensive outside of nineteenth-century Chicago, perhaps the team could take a second look at the communities that were stimulated and developed along the area's railroads and streetcars in 19th-century Calumet Township and Chicago's early 20th-century neighborhoods. Especially important are those along the Chicago and Eastern Illinois, which came through in 1880-81 (UPRR APE); the Chicago and Great Eastern Railroad, an early subsidiary of the Pittsburgh, Cleveland, Chicago and St. Louis Railway who constructed tracks in 1865 (Halsted APE); and the Illinois Central Railroad who operated an east-west spur at 121st Street. Streetcars were operating along Michigan Avenue, 103rd Street, 111th Street, 115th Street and 119th Street, and stimulating residential and commercial development.

   Properties Associated with the former suburban Village of Fernwood. Fernwood is now part of the Washington Heights community area and within the RHS service area.

   Fernwood, a station stop on the Chicago and Eastern Indiana Railroad was first incorporated as a village in 1886 and annexed to the City of Chicago in Spring of 1891. Focused on a station at the 103rd Street crossing (then Tracy Avenue), Fernwood was mostly a residential district, with a few locally serving commercial buildings. Its boundaries ran from 90th Street on the north, 103rd Street on the south, Stewart Avenue on the East, and Morgan and Halsted on the west. Developers E. L. Gillette and Henry L. Hill, along with S. Montgomery Smith, laid out Fernwood in 1883 for residential development with an adjacent public park, approximately 75 feet wide along the tracks from 99th Street to 103rd Street. This park, now known as Fernwood Parkway, played a significant role in the development of this railroad suburb. This landscape feature marks the importance of open space, trees, and grassy public space to a growing residential suburb. Within the APE, a number of frame homes on suburban size lots remain, particularly along Eggleston Avenue, representing this period of development. Yet, these residences may have integrity issues (see 10100 South Eggleston Avenue), and many of Fernwood's signature buildings are either outside of the APE (including churches and a public school) or have been demolished (such as the Fernwood Station and Gillette Hall).

2. **Historic automobile-related buildings along major thoroughfares, including service stations, garages and car sales dealerships**. In reviewing the inventory forms in the APE, the team recorded a large number of auto-related buildings, although not contiguous. Halsted Street and Michigan Avenue were both major thoroughfares for the area, and as stated above, both Beverly-Morgan Park and Roseland were once major centers of auto sales on Chicago's south side. Could these buildings be NR eligible as a multiple property nomination?

3. **Chicago Georgian and Raised Ranch Historic Districts**. Just like the Chicago Bungalow Multiple Property Listing and subsequent NR districts, perhaps a multiple property listing is imminent for neighborhoods of Chicago Georgians and Raised Ranches. Both are mid 20th-century vernacular types which evolved from the earlier designs and plans of the American Foursquare and Bungalow respectively. Rows of raised ranches (also known as Bungalow Ranches) are found in the Halsted APE.

GENERAL COMMENTS AND CORRECTIONS:

1. Usage of catch-all architectural styles and types. Most every building I reviewed was labeled vernacular. Architectural styles, when used, were inconsistent. Using catch all categories makes it quite difficult to sort, review and compare important architectural specimens. Upon request, I can provide corrections to architectural styles and types in the Washington Heights and Morgan Park community areas.
2. Historic and current functions and uses should match National Register categories.
3. Construction dates for historic buildings in the APE came from an unreliable source– Cook County Assessor lists. A better primary source, such as City of Chicago building permit records, should be used for those properties determined NR eligible. It is disappointing that the team did not conduct basic research on the very small number of buildings (9) determined eligible in the study under NR Criterion C for architecture. Construction dates, owners, architects and builders would surely add to the historic context and story.

4. 748 E. 103rd Street (Washington Heights) should be **748 W. 103rd Street**.
5. Noted Beverly-Morgan Park architect Murray Hetherington designed the Tudor Revival-style residence at **11001 South Green Street** (Morgan Park), built 1940-41. Although a handsome, small scale Tudor Revival house, strict integrity standards were applied by the team.

Please contact me with further questions.

Sincerely,

Jennifer R. Kenny
Architectural Historian, Ridge Historical Society
773-429-9831
jennifer.kenny@mindspring.com

MEETING NOTES

RE: **Section 106 Effects Meeting**
Red Line Extension Environmental Impact Statement (EIS)

DATE: **May 8, 2014**

LOCATION: **CTA**

TO: **Distribution and All Attendees**

ATTENDEES:

Name	**Organization**
Sonali Tandon	CTA
Mike Connelly	CTA
Marlise Fratinardo	CTA
Kevin O'Malley	CTA
Gerald Nichols	CTA
Tony Greep	FTA
Mark Assam	FTA
Anne Haaker	IHPA (by phone)
David Halpin	IHPA
Ward Miller	Preservation Chicago
Terry Tatum	Historic Preservation Division, Dept. of Housing and Economic Development
Lisa DiChiera	Landmarks Illinois
Matt Cole	Neighborhood Housing Services of Chicago, Inc.
Jenifer Palmer	CWC Transit Group
John Mettille	CWC Transit Group
Rebecca Thompson	CWC Transit Group
Robert Ball	CWC Transit Group
Virginia Jackson	CWC Transit Group
Erika Sellke	Chicago Park District
Sylvia Jones	Friends of the Parks
Maria Stone	Friends of the Parks

PREPARED BY: Rebecca Thompson

ISSUE DATE: June 6, 2014

Meeting called to order at 10:00 am CT

Objective: Red Line Extension Effects Meeting for Section 106 Consultation

Item No.	*Item Description*
1	**Welcome/Intro** Mike Connelly welcomed attendees. JM reviewed the agenda and informed attendees that a public Open House is scheduled for May 13.
2	**Review of Project and Previous Section 106 Tasks** ST explained the overall purpose of the project and alternatives. JM provided an overview of the four-step Section 106 process, which is intended to assess project effects on historic resources (those previously identified as eligible for National Register of Historic Places [NRHP] listing). JM identified ground rules and reviewed previous coordination efforts undertaken to date as part of the Project. In response to comments received after the eligibility consultation in January 2013, Kensington Park was surveyed but was not recommended as eligible. Six potential historic districts were suggested; Green Street is recommended as eligible. Nine individual resources were suggested for reconsiderations. Of these, four resources are recommended as eligible based on supplemental information.
3	**Overview of Alternatives** JM presented an overview of the four alternatives that will be evaluated in the EIS: No Action, Bus Rapid Transit (BRT) along Michigan Avenue, the Union Pacific Railroad (UPRR) Rail Alternative, and the Halsted Rail Alternative. - Q: Is the BRT park-and-ride lot on the north side of 130th Street? A: Yes. - Q: Why are the garages shown as three levels? As shown, it looks like a huge impact on Altgeld Gardens. A: Preliminary ridership analysis indicates park-and-ride demand, which is why we are proposing such large structures. As we fine tune the design moving forward, we'll re-evaluate the garage sizes and incorporate some urban design elements to mitigate the impact. - Q: How many properties would be removed along the Halsted route? A: We'll discuss this at the individual community meetings and Open House. The focus of this meeting is effects on historic resources. - Q: Are the piers for the Halsted line in the sidewalk or street? A: That will be determined in future engineering phases. The straddle bent piers could encroach into the parking lane. - Q: Would the Halsted piers have a similar placement to the structure at the Morgan/Lake? A: Halsted Street has two travel lanes and a parking lane in each direction and is wider than the configuration at Lake Street. The pier type chosen will make a difference on placement too. There could be impacts on parking spaces. *Follow up note: All traffic impacts would be covered in the Transportation section of the Draft EIS.* - Q: How high is the structure along Halsted? A: It varies – roughly 23-30 feet above ground level; the necessary height is determined based on the street clearance requirements. - Comment: In talking with business owners at Galloy & Van Etten Stone Contractors, they are worried about their large trucks being able to access their sites.
4	**Section 106 Effects on National Register of Historic Places Eligible Resources** The team developed effects recommendations based on the conceptual alternatives described previously. JM stepped through each resource. The criteria for determining effects are defined in 36 CFR 800.5. For the three options of Union Pacific Railroad (UPRR) Alternative, the team examined the option that is closest to the historic resource, to represent the worst case analysis. - Q: Will you be sending a copy of the slides? A: The Effects Report provides general information and distances and CTA will have additional

Item No.	Item Description
	boards at the Open House, which will also be posted on CTA website. The effects slides contain preliminary deliberative materials so CTA will not be circulating copies. - Comment: The Cottage/Bungalow District that Neighborhood Housing Services of Chicago (NHS) commented on in the eligibility comments shows up in the map near the Pump Station. - WM: How close is the East Option UPRR track structure to the Pumping Station? A: It is close and almost adjacent– we'll have to look it up. *Follow-up note: Horizontally, it is about 8.8 feet between the pump station and track structure in the UPRR East Option. However this distance is based on conceptual engineering and can change slightly as additional detailed engineering is performed.* - Comment: If there is a future expansion along the UPRR line, we want to be sure that there is ample room to accommodate it. It would be good if the alternative were further from the building; I question whether it is actually a "No Effect" as shown. Response: It is a tight site at the Pumping Station. We are required to be outside of UPRR right-of-way. - Q: Does the analysis include staging areas as well? A: Yes. These are included in the footprints. - Q: How tall is the BRT garage by the Venetian Hall? A: 2 stories *Correction: it is 3 stories with some space for retail and community facilities at ground floor.* - Q: Are there any buildings in the footprint of the proposed garage? A: We looked at all the potential displacements associated with each alternative. There are no structures within the garage footprint that would be displaced. - Q: Is it a possibility to adopt/restore the Venetian Hall as part of the adjacent garage? Or incorporate similar elements in the garage design? A: If there is an adverse effect, we will try to mitigate that. We will look at improving the view of the garage and making it more street friendly. CTA can take this under consideration. - Q: NHS' eligibility comments included the cast masonry structures, one of which appears immediately south of the Venetian Hall. What was the determination there? A: Those were determined non-eligible; several were surveyed and lacked integrity and/or distinguishing architectural features. There wasn't a cohesive grouping either. - Q: What is the building across from the garage, next to Altgeld Gardens? A: There is a park; the buildings next to the park may be part of Golden Gate. - Q: What is the station like for UPRR at the west option? A: Trains stop, unload/load, and turn back. There is no yard or additional tracks at this location – the yard is proposed further north at 120th Street. - Comment: The garage could have a visual impact. Nothing else nearby is built at that scale/height. There may be an impact on the Altgeld Garden Historic District, which will likely gain historic significance into the future due to its association with President Obama. CTA should consider a more modest garage design. - Comment: Several parties would like to see a view of the West Terminal station option from directly across 130th Street at Altgeld. Response: Early communications with community members indicated a local preference for the South Station option, which would have an entrance south of 130th Street. - Comment: Both 130th UPRR station options need further study – there will be impacts to transportation, people's homes, etc. *Follow-up note: All other impacts will be discussed in the Draft EIS.* - Q: How difficult is it to cross from the south station to Altgeld or Philip Homes? A: 130th Street is on a viaduct that allows the tracks and platforms to extend under 130th Street. You wouldn't have to cross 130th Street to get to the Station, only a local street. - Q: Are the viaducts safe for travel?

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	A: Vehicles travel on the 130th Street viaduct today. - Q: Will a station include CTA/CDOT landscaping improvements to link to Altgeld? A: Definitely. A study was conducted focusing on access and connectivity at 130th Street Station. CTA has coordinated and will continue to coordinate with CHA to integrate plans. - Comment: At the Green Street Historic District, track structure will certainly be visible and audible. - Q: What level of noise impacts are anticipated along Green Street? A: Noise mitigation measures (e.g. noise walls, closed deck, etc.) have been incorporated into preliminary designs to mitigate impacts. *Follow-up: Based on the general level noise analysis conducted per FTA guidance, the Green Street Historic District lies at the edge of the moderate noise impact zone, assuming the project includes 3-4 foot high noise barriers and a closed deck structure. Historic experts will reexamine potential effects on the Green Street Historic District.* - Comment: I think property owners who live within the Green Street Historic District would be adversely affected by the Halsted Alternative. Response: That will definitely be looked at as part of the National Environment Policy Act (NEPA) analysis. - Comment: As you look at this more, it would be nice to have a rendering showing how close the tracks are and what the relationship will look like between the Halsted line and Green Street district. - Comment: The former substation is city-owned and vacant. Consider incorporating it into the station. Maybe it could be an entry point. This provides a good opportunity to give back to the community by adopting some of the Chicago Historic Resources Survey Orange buildings, similar to measures at the Wilson station. - Comment: The French Eclectic House would experience the same impacts as Green Street. There are several nice homes within this block, possibly nicer than the resources along Green Street, though they lack the consistency of Green Street. Scale and noise will be issues. These areas could be negatively impacted, driving people to move out of the area. - Comment: Galloy and van Etten is a family business and has been in the area since 1899. Photos show the building dating to 1909; it is a huge resource for the area. The business owner feels like they would be so adversely affected by the Halsted Alternative that they would have to relocate. It is a fourth generation family-owned business and provides a lot of employment. They are also concerned about the proximity to the 119th Street yard. - Comment: A lot of businesses are within the 119th Street yard. It used to feed all of Roseland with jobs. Many of the buildings have been demolished but some are left and could be negatively impacted. Response: CTA is coordinating with Far South Community Development Corporation regarding potential impacts on businesses. - Comment: Several consulting parties requested renderings for the four adversely affected resources along Halsted. - Q: What about impacts on the rest of the cemetery? A: Only the gatehouse/entryway is considered eligible. Comment: The impacts on the cemetery will be assessed as part of NEPA analysis. - Q: Is the fire station within the rail yard still accessible? A: Yes. - Comment: By placing the tracks so close to the resource, are you precluding future viability of the resource to function? This is an issue at the fire station and the St. Peter & Paul Church in particular. TT: The fire station’s current location isn’t particularly viable as it is today. Perhaps relocating this building should be a consideration as part of mitigation, although we don’t typically like to

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	move structures. The fire station would be more viable on an arterial. The trend city-wide has been to close a number of these smaller structures. - Comment: We've heard some good ideas regarding mitigation, but there are a few steps between now and then. We still have to have a selected alternative before developing detailed mitigation measures.
5	**Schedule and Next Steps** There is an open house next week. A Draft EIS is being prepared, which will include additional analyses and public involvement opportunities. - Q: When would a single preferred alternative be selected? A: The Final EIS would be prepared on a single alternative. - Q: Is there a way to understand whether any of the resources we identified in the eligibility phase that were not determined eligible would be affected? A: They were not examined as part of this analysis since we evaluated only eligible buildings or districts for Effects determination. - Comment: Please resend the responses to eligibility comments.

Please notify ST of any corrections and/or clarifications to the minutes within five (5) business days.

cc: Attendees

Red Line Extension (RLE) Summary of Effects Comments received from the Consulting Parties and Responses from the Project Team

The following paragraphs briefly summarize comments received from the consulting parties regarding the project effects on historic resources for the RLE Project and corresponding responses from the project team. Under the Section 106 consultation process, the Chicago Transit Authority (CTA) undertook an extensive data collection and analysis effort during fall 2012 to identify historic resources located within the Area of Potential Effect (APE) for the three build alternatives that are under evaluation in the RLE Draft Environmental Impact Statement (EIS). This analysis culminated in recommendations regarding the potential eligibility of historic resources pursuant to the National Historic Preservation Act of 1966. These recommendations were presented to the ten consulting parties, including the Illinois Historic Preservation Agency (IHPA), during a meeting on January 30, 2013. Input from consulting parties was considered throughout 2013, resulting in 13 individual properties and two historic districts being identified as eligible under the National Register of Historic Places (NRHP) criteria.

Following this step in the consultation process, CTA undertook an analysis of effects on NRHP-eligible historic properties in accordance with criteria established in 36 CFR 800.5. This analysis culminated in recommendations regarding the potential effects on historic resources, which were mailed to consulting parties on April 18, 2014, requesting any written comments by May 23, 2014. An in-person meeting was conducted on May 8, 2014 to discuss these recommendations. Participants were asked to provide relevant information from their perspective that may supplement the effects recommendations summarized in the April 18 packet. Written comments were received from the following four organizations:

- Anne Haaker, Illinois Historic Preservation Agency (IHPA)
- Lisa DiChiera, Landmarks Illinois
- Matt Cole, Neighborhood Housing Services of Chicago
- Terry Tatum, City of Chicago, Department of Planning and Development, Historic Preservation Division

Comments and responses are presented by general topic below. Based on local knowledge and input from the consulting parties, additional analysis was undertaken regarding historic resources within the APE. The original recommendations presented in April/May 2014 will be revised as described below and presented in the RLE Draft EIS.

The CTA announced on August 10, 2014 that as part of its planning process to extend rail service to 130th Street on the far South Side, it has narrowed down the alternatives to two preliminary options for the proposed RLE Project. Based on feedback received from the public this spring and summer via community meetings and comments provided to the agency, the CTA is now focusing on one “preferred alternative” with two possible variations from the three build alternatives that have been under consideration. The CTA believes these options would best serve communities and residents on the Far South Side:

≠ Union Pacific Railroad Rail (UPRR) Alternative, East Option. Under this option, CTA tracks would be placed immediately east of the Union Pacific railroad right-of-way from 99th Street to 118th Street

- ≠ UPRR Alternative, West Option. Under this option, CTA tracks would be placed immediately west of Union Pacific's right-of-way from 99th Street to north of 118th Street.

The proposed alignment of the rapid transit line would be the same for the two East and West options north of 99th Street and south of 118th Street.

Eligibility Reconsideration Requests

1. Resurvey the grouping of Chicago bungalows and frame cottages at 103rd Street to 104th Place between the UPRR line and Princeton Avenue.
   Nine resources (Chicago bungalows and frame cottages) were surveyed as part of the representative sample of surveys. Although the area contains numerous residences with similar architectural styles, massing, setbacks, and construction dates, architectural historians verified that these properties do not retain sufficient integrity for the NRHP as a district due to contemporary alterations (e.g., replacement siding, porches, windows, and doors). None were found to merit individual listing for the NRHP due to their integrity. Numerous vacant lots disrupt the visual cohesiveness of this area. Despite the general consistency in property types, the collection of bungalows and frame cottages is broadly representative of residential areas on the South Side, lacking the distinguishing elements to qualify as NRHP eligible. Please refer to forms 301, 306, 321, or 326 W 103rd Place; 262, 328, or 335 W 104th Place; or 310 or 325 W 104th Street on the Eligibility DVD provided to consulting parties on January 4, 2013 for specific examples.

2. Reconsider eligibility determinations for cast stone-faced residences adjacent to the UPRR right-of-way, including the property adjacent to the Venetian Hall.
   The properties adjacent to the Venetian Hall are a brick two-flat (129 E Kensington Ave on southwest side) and a vinyl-clad multi-residence (141 E Kensington Ave on the east side). Neither building exhibits distinctive architectural features or sufficient integrity for inclusion on the NRHP. Likewise, the two cast stone-faced houses facing the Venetian Hall (122 and 136 E Kensington Ave) do not feature distinctive architectural elements or sufficient integrity for inclusion on the NRHP. Architectural historians verified that these properties do not retain sufficient integrity for the NRHP due to contemporary alterations (e.g., replacement porch, windows, and doors), compromising the historic materials and workmanship. No cohesive set of similar properties has been identified in the vicinity that would merit consideration as a potential historic district or multiple property grouping.

3. Reassess the area around 111th Street at Emerald Avenue for a potential district.
   CTA has narrowed down the alternatives for the RLE Project and the Halsted Alternative is no longer being pursued. The area around 111th Street at Emerald Avenue is distant from the UPRR Alterative corridor and would not be affected by the RLE Project.

Effects Reconsideration Requests

4. Reevaluate the visual, noise, and economic effects of the Halsted Alternative on the Green Street Historic District, which could have a significant impact on the quality of life without proper mitigation.
   CTA has narrowed down the alternatives for the RLE Project and the Halsted Alternative is no longer being pursued. The Green Street Historic District is distant from the UPRR Alterative

corridor and would not be affected by the RLE Project.

5. Reassess No Effect finding for the Altgeld Gardens Historic District based on the UPRR Alternative. The proposed station and garage would alter the landscape; a rendering should be developed.
   Altgeld Gardens Historic District is eligible for NRHP listing under Criterion A (i.e., events that have made a significant contribution to the broad patterns of American history on a local, state, and/or national level) based on its association with community development, planning, and social history. As defined by 36 CFR 800.5, an adverse effect on this resource would be an "alteration to the characteristics of a historic property qualifying it for inclusion in or eligibility for the NRHP." While the UPRR Rail Alternative would increase transportation choices and improve access for this geographically isolated area, none of the proposed infrastructure improvements in the vicinity would significantly alter the characteristics that qualify the district as eligible for NRHP listing. As part of the UPRR Rail Alternative, an at-grade station and parking facilities would be constructed in one of two locations to provide access to the Altgeld Gardens Housing Project: a South Station Option or a West Station Option. Either station location option is separated from Altgeld Gardens Historic District by a multi-lane street (i.e., E. 130th Street and/or E. 130th Place). Preliminary plans for each terminal station option would include parking for 2,300 vehicles through a combination of a parking structure and surface parking lots.

   The South Station Option parking structure for the UPRR 130th Street Station is approximately 800 feet from Altgeld Gardens Historic District at its closest point; the parking structure would not be visible from within the historic district and would not adversely affect the historic district.

   The West Station Option parking structure for the UPRR 130th Street Station is approximately 400 feet from Altgeld Gardens Historic District at its closest point and would only be visible from the outer line of buildings on the north side of the Altgeld Gardens development. This outer row of buildings would obstruct the view of the parking structure from interior buildings and streets. The construction of the West Station Option would not adversely affect the characteristics that qualify the district as eligible for NRHP listing, i.e. its association with community development, planning, and social history.

   As the project would not adversely affect the integrity of the district or its association with community development, planning, and social history, any visual simulation rendering and any appropriate mitigation measures identified would occur independent of the formal Section 106 consultation process for this resource.

   The UPRR Alternative has been selected as the National Environmental Policy Act (NEPA) Preferred Alternative, and an additional rendering of the station will be developed and presented as part of the Draft EIS to assist local stakeholders in understanding the extent of visual impacts created by the project.

6. Reassess No Effect finding for the Roseland Pumping Station based on the UPRR Alternative.
   For the UPRR East Option, the track structure is approximately 8.8 feet from the side of the building at its nearest point. It should be noted that an existing at-grade freight line runs in close proximity to this location. The pumping station would not be displaced or directly affected by the UPRR Rail Alternative. The changes in the setting (e.g., visual, noise, vibration, etc.) would

not adversely affect the characteristics that qualify the resource as eligible for NRHP listing, i.e. its architecture.

The UPRR West Option would also not affect the characteristics that qualify the resource as eligible for NRHP listing.

7. CTA should develop appropriate renderings for all properties in the APE where there was a finding of No Adverse Effect or Adverse Effect.
   CTA will develop additional visual simulation renderings, for inclusion in the Draft EIS, of the UPRR Alternative, which has been selected as the NEPA Preferred Alternative. Renderings are particularly helpful in understanding the extent of visual impacts and in developing appropriate mitigation measures for any adversely affected historic resources.

   At the current stage of Effects consultation, additional renderings would not change the effects findings for NRHP-eligible resources. Justification for effects findings was provided in the effects report mailed to consulting parties and additional justification is included in this document. As a reminder, the key consideration is whether the project would alter the specific characteristics that qualify a resource as eligible for the NRHP.

   In addition to the Historic impacts, the Draft EIS will also include a discussion of the potential visual impacts of the RLE Project alternatives, including general renderings of the alternatives that were prepared to assess those impacts. Some of those renderings were also presented at the May 13th CTA open house and the exhibit boards can be viewed at http://www.transitchicago.com/assets/1/red_ahead/MS_CWC_CL_RLE_Exhibit_Boards_lowres_FINAL_20140515.pdf

8. Renderings should be developed for any NRHP or Chicago Historic Resources Survey (CHRS) Orange properties potentially impacted by the close proximity of the proposed elevated track structures.
   See Response #7.

9. The property owner of the Galloy and Van Etten Stone Contractors business is concerned about their access and viability if the Halsted Alternative is built.
   CTA has narrowed down the alternatives for the RLE Project and the Halsted Alternative is no longer being pursued. The Galloy and Van Etten Stone Contractors business is distant from the UPRR Alternative corridor and would not be impacted.

10. Noise studies should be undertaken to demonstrate that the introduction of the elevated rail structure on Halsted would not adversely affect historic resources within the APE of that route.
    CTA has narrowed down the alternatives for the RLE Project and the Halsted Alternative is no longer being pursued. Noise analysis has been conducted per Federal Transit Administration (FTA) guidance and mitigation measures have been identified, which will be presented in the Draft EIS.

11. The French Eclectic House would experience the same impacts as Green Street. Scale and noise would be issues. These areas could be negatively impacted, driving people to move out of the area.

CTA has narrowed down the alternatives for the RLE Project and the Halsted Alternative is no longer being pursued. The French Eclectic House is distant from the UPRR Alterative corridor and would not be affected by the RLE Project.

Other Comments

12. In general, we [IHPA] concur with the findings concerning historic architectural resources presented in the draft report. The Bus Rapid Transit (BRT) Alternative would have the least impacts, followed by the UPRR Alternative.

13. The potential to encounter archaeological resources needs to be addressed. If the potential for undisturbed archaeological resources exists, a survey will be required.
    No previously recorded archaeological sites fall within the RLE APE and therefore the project would produce no effect on known archaeological resources. The need for and extent of further archaeological investigations will be determined in consultation with IHPA.

14. CTA should consider incorporating the city-owned, vacant historic substation (10227 S. Halsted Street) into plans for the nearby station.
    CTA has narrowed down the alternatives for the RLE Project and the Halsted Alternative is no longer being pursued; the vacant historic substation would not be affected by the RLE Project.

Illinois Historic
Preservation Agency

FAX (217) 524-7525

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Cook County
Chicago
Red Line Extension
From Existing 95th Street Station to Approximately 130th St. and Halsted St.
IHPA Log #001010713

May 22, 2014

Sonali Tandon
Chicago Transit Authority
567 W. Lake St.
Chicago, IL 60661-1498

Dear Ms. Tandon:

Thank you for requesting comments from our office concerning the possible effects of the referenced project on cultural resources. Our comments are required by Section 106 of the National Historic Preservation Act of 1966, as amended, and its implementing regulations, 36 CFR 800: "Protection of Historic Properties".

We are in receipt of the 2014 *Draft Effects Report*, and appreciated the opportunity to participate in the May 8, 2014 meeting at the CTA where your findings were presented. In general we concur with the findings concerning historic architectural resources presented in the draft report. However, the report indicates that noise walls will reduce the amount of noise that resources such as the proposed Green Street Historic District will experience. Noise studies that include current conditions will need to be undertaken to demonstrate that the introduction of the elevated rail structure on Halstead will not adversely affect historic resources located within the APE of that route.

It was noted in the report that archaeological resources may be uncovered during construction activities and that they would be investigated once found. At a minimum, the potential to encounter archaeological resources needs to be addressed and the results need to be presented to this office for review. If the potential for undisturbed archaeological resources exists within the areas of potential effect, a survey will be required.

As previously stated, it is our opinion that the proposed BRT route will affect the least amount of cultural resources located within its APE. We also believe the UPRR route that is often adjacent to existing railroad tracks will affect fewer resources than the elevated line proposed on Halsted Street.

We look forward to reviewing the final historic resources report once the preferred alternative has been selected and all cultural resource surveys have been completed.

If you have questions please contact David J. Halpin, Cultural Resources Manager, at 217-785-4998.

Sincerely,

Anne E. Haaker

Anne E. Haaker
Deputy State Historic
Preservation Officer

c: Lisa DiChiera, Landmarks Illinois
Terry Tatum, City of Chicago, Illinois
Marisol R. Simon, U.S. Department of Transportation
Mark Assam, U.S. Department of Transportation
Marlise Fratinardo, Chicago Transit Authority
Ward Miller, Preservation Chicago

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May 22, 2014

Sonali Tandon, Project Manager
Strategic Planning & Policy
Chicago Transit Authority
567 W. Lake St
Chicago, IL 60661

RE: Red Line Extension – Potential Effects Consultation Comments

Dear Ms. Tandon,

Thank you for the opportunity to review on May 8th the Red Line Extension team's findings and recommendations regarding historic properties in the APE. We are pleased to see some additions made to the list of National Register-eligible properties and the identification of orange-rated buildings in the Chicago Historic Resources Survey (CHRS) based on our February 18, 2013 letter.

From the May 8th meeting, we have the following comments:

- We strongly recommend that better renderings are produced to illustrate the potential impact of a UPRR West Station and four-story parking garage on 130th Street and the adjacent Altgeld Gardens Historic District.
- We agree with comments made during the meeting that the "No Effect" determination made for the Roseland Pumping Station, 351 W. 104th St., and Altgeld Gardens Housing Project Historic District, under the UPRR Rail scenario, should be reassessed as potentially having an "Adverse Effect" determination.
- We recommend producing renderings that will illustrate the "Adverse Effect" on National Register-eligible properties in the Halsted Rail scenario. This is particularly important if the proximity of rail tracks could potentially make these properties less viable in the future. These properties include:
    - The Former Classic Revival Substation, 10227 S. Halsted St.
    - The S.S. Peter & Paul Catholic Church at 12433-12439 S. Halsted St.
    - Cedar Park Cemetery Entryway and Gatehouse, 12540 S. Halsted St.
    - Fire Department Engine Company 115, 931 W. 120th St.
- While we understand that the design phase of a Halsted Rail scenario, if selected, will be some time later, we would like consideration to be made of incorporating the city-owned and vacant historic substation at 10227 S. Halsted St. into plans for a station that was indicated would be built in that vicinity.
- Lastly, we support the reassessments suggested by Matt Cole of Neighborhood Housing Services in his May 14, 2014 letter.

Again, thank you for the opportunity to review the findings by your team for this project.

Sincerely,
Lisa Di Chiera
Lisa DiChiera
Director of Advocacy

cc: Anne Haaker, IHPA
David Halpin, IHPA
Ward Miller, Preservation Chicago
Terry Tatum, Historic Preservation Division, HED, City of Chicago
Matt Cole, NHS

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NHS

May 14, 2014

Ms. Sonali Tandon
Project Manager
Strategic Planning & Policy
Chicago Transit Authority
567 West Lake Street
Chicago, IL 60661

RE: Red Line Extension – Potential Impacts to National Register Eligible Properties in APE

Dear Ms. Tandon,

Thank you again for inviting NHS to participate in the Section 106 review process for the Red Line Extension project. We believe that extending the Red Line will ultimately enhance the livability and well-being of the greater Roseland-area. At the same time, as an organization rooted in the use of asset-based community development strategies, we wish to ensure that the project minimizes any undue impacts on the existing residential, community, and historic buildings that make these neighborhoods great and that our experience has shown can be important community-building and engagement assets. Therefore, based on the information presented in the May 9th Effects Meeting, we recommend that the following additional actions be undertaken by the project team before any mitigation planning is undertaken:

- Develop appropriate and assessable renderings for all properties in the APE where there was a finding of No Adverse Effect or Adverse Effect. This currently includes the Former Venetian Hall, the Green Street Historic District, the Former Classical Revival Substation, Galloy and Van Etten Stone Contractors, S.S. Peter & Paul Catholic Church, Cedar Park Cemetary Entryway and Gatehouse, and Fire Department Engine Company 115. We also believe that such renderings should be created, as necessary, based on our recommendations below (e.g, re: Altgeld Garden Historic District).
- Re-Survey 103rd Street to 104th Place between the UPRR and Princeton Avenue: This area includes the previously identified, National Register-eligible Roseland Pumping Station and Roseland Fire Station properties. However, the blocks also include a largely intact and well-maintained grouping of Chicago bungalows and frame cottages. We would encourage the project team re-survey these blocks to determine if these residential properties could contribute to a future National Register district, as well as any potential impact that a UPRR-located elevated train line would have on such a district.
- Reassess Determination that Cast Stone-faced Residences in APE are not National Register Eligible: Several of these buildings, which look similar to Chicago Greystones and are relatively rare, were observed adjacent to the UPRR right-of-way. This includes the 2-flat on Kensington Avenue immediately east of the Former Venetian Hall.
- Reassess Finding of No Adverse Effect on Potential Green Street Historic District: Re-evaluate visual, noise, and economic effects of a Halsted-located elevated train line on homes along Green

Street. While such train lines do run through other residential areas of Chicago (e.g., Pink Line), this corridor would be new and could have a significant impact on the quality of life of the area without proper mitigation.

- Reassess Area Around 111th Street and Emerald Avenue for Potential Historic District: Re-survey area around 11310 South Emerald (Emerald, Union, and Wallace Avenues) for eligibility as a historic district. If determined eligible, assess effect of a Halsted-located elevated train line on the district.
- Reassess Finding of No Effect of a UPRR West Station on Altgeld Gardens Historic District: The proposed station, station house, and four-story parking garage would be located immediately to the north of Altgeld Gardens. The height of the parking garage would be taller than any other properties in the area and would likely loom above the landscaped tree line of 130th Street. The existing rendering of the proposed station developed by project team is inadequate to assess the effect of the station due to its oblique view from the west.

Thank you again for inviting NHS to participate in the Section 106 review for the Red Line Extension project. Please let us know if we can be of further assistance before the next scheduled consultation.

Best,

Matt Cole
Project Coordinator
Neighborhood Housing Services of Chicago, Inc.

CC: Ed Jacob, NHS
Deborah Moore, NHS
Robert Tucker, NHS
Phillip Snorden, NHS
Anne Hacker, IHPA
Lisa DiChiera, Landmarks Illinois
Ward Miller, Preservation Chicago
Terry Tatum, Historic Preservation Division, HED, City of Chicago

From: Tatum, Terry [mailto:Terry.Tatum@cityofchicago.org]
Sent: Tuesday, May 20, 2014 4:16 PM
To: Tandon, Sonali
Cc: Halpin, David
Subject: Red Line Extension Historic Properties Consultation

Dear Ms. Tandon,

Thank you for hosting the consulting parties meeting held at CTA headquarters on May 8, 2014 for the Red Line Extension Historic Properties Consultation. We appreciate the opportunity to comment on the draft effects to historic properties that were discussed at that meeting.

Based on information provided, our comments are as follows:

1. Properties determined to be historic and/or color coded orange in the Chicago Historic Resources Survey and that would be potentially impacted by close proximity of elevated tracks under any of the alternative routes being considered should have photo renderings executed to show the effect of such close proximity of tracks. This would mainly include properties along the Halsted St. alternative, but would also include the UPRR east alternative route as it would affect the Roseland Pumping Station.

Our office looks forward to continuing to work with you on this exciting undertaking.

Sincerely,

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Appendix R
Hazardous Materials Technical Memorandum

Chicago Red Line Extension Project

Hazardous Materials

Technical Memorandum

August 21, 2013
Updated July 27, 2015

Prepared for:
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Abbreviations

BRT	Bus Rapid Transit
BTEX	benzene, toluene, ethylbenzene, and xylenes
CERC-NFRAP	Comprehensive Environmental Response, Compensation and Liability Information System -No Further Remediation Planned Sites
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CERCLIS	Comprehensive Environmental Response, Compensation and Liability Information System
CFR	Code of Federal Regulations
CTA	Chicago Transit Authority
DDD	dichlorodiphenyldichloroethane
E&E	Ecology & Environment
EDR	Environmental Data Resources, Inc.
EIS	Environmental Impact Statement
ERNS	Emergency Response Notification System
ENG CONTROLS	Engineered Barrier Site
ESA	Environmental Site Assessment
FOIA	Freedom of Information Act
Gabriel	Gabriel Environmental Services
FTA	Federal Transit Administration
HIG	Historical Information Gatherers, Inc.
HMT	Hazardous Materials Transportation Act
IAC	Illinois Administrative Code
IEPA	Illinois Environmental Protection Agency
IL DRYCLEANERS	Drycleaners License List
LUST	leaking underground storage tank
MWRD	Metropolitan Water Reclamation District
MGP	manufactured gas plant
NEPA	National Environmental Policy Act of 1969
NFR	No Further Remediation
NFRAP	No Further Remediation Planned
NIPC	Northeastern Illinois Planning Commission Active and Inactive Solid Waste Disposal Site Inventory
NPL	National Priority List
NICTD/CSS & SBRR	Northern Indiana Commuter Transportation District Chicago South Shore & South Bend Railroad
OSHA	Occupational Safety and Health Administration
PCB	polychlorinated biphenyl

PNA	polynuclear aromatic hydrocarbons
RCRA	Resource Conservation and Recovery Act
RCRA CESQ	RCRA Conditionally Exempt Hazardous Waste Generators
RCRA CORRACTS	RCRA Corrective Action
RCRA LQG	RCRA Large Quantity Hazardous Waste Generators
RCRA SQG	RCRA Small Quantity Hazardous Waste Generators
RCRA TSDF	RCRA Treatment, Storage, and Disposal
RLE	Red Line Extension
ROW	right-of-way
SARA	Superfund Amendments and Reauthorization Act
SPILLS	Spill Incident List
SRP	Site Remediation Program
SSU	Illinois State Sites Unit Listing
SVOC	semi-volatile organic compound
SWF/LF	Landfill or solid waste disposal
TACO	Tiered Approach to Corrective Action Objectives
Tetra Tech	Tetra Tech, Inc.
UPRR	Union Pacific Railroad
US BROWNFIEDS	Brownfields
US ENG CONTROLS	Engineering Controls
US INST CONTROL	Institutional Control
USDOT	U.S. Department of Transportation
USEPA	U.S. Environmental Protection Agency
UST	underground storage tanks
VOC	volatile organic compounds
Weston	Weston Solutions, Inc.
WIRA	West Pullman Industrial Redevelopment Area

Section 1
Summary

This technical memorandum analyzes the potential impacts of the Red Line Extension (RLE) Project with respect to hazardous materials, and presents the regulatory framework and evaluation methods used for the analysis.

1.1 Evaluation

The first step of the analysis was to identify potential or existing conditions that could result in hazardous material impacts. A general inspection field visit was performed. Analysis included a review of historical topographic maps, aerials, and fire insurance maps; a regulatory database search; and a review of agency files for a select number of sites. Identified sites were then ranked as No Concern, Low Concern, Moderate Concern, or High Concern, based on their potential to have impacts related to hazardous materials. The potential for encountering other sources of hazardous material impacts, such as urban fill, transformers, substations, and buildings constructed prior to 1978 or 1979 was also assessed.

1.2 Findings

1.2.1 Impacts

While no potential hazardous material impacts would occur as a result of the No Build Alternative, there would be the potential for permanent and construction hazardous material impacts as a result of the Bus Rapid Transit (BRT) Alternative, Union Pacific Railroad (UPRR) Rail Alternative, and the Halsted Rail Alternative.

1.2.1.1 Permanent Impacts

Operating BRT service would not result in changes to the existing types of hazardous materials used, stored, or transported; therefore, the BRT Alternative would not result in permanent impacts.

Operation of the UPRR Rail and Halsted Rail Alternatives has the potential to result in permanent hazardous material impacts from accidental spills or from maintenance activities that require earthmoving in contaminated areas. Spills are most likely to occur during activities such as equipment maintenance at the yards and shops and grounds maintenance along the tracks. Materials typically used for these activities include fuel, oil, paints, solvents, cleaning agents, herbicides, and pesticides. Examples of maintenance activities that could require earthmoving include at-grade track repair, underground utility work, and foundation repairs.

The UPRR Rail Alternative also has the potential for additional hazardous material impacts associated with the adjacent operating UPRR (with the East and West Options) or Northern Indiana Commuter Transportation District Chicago South Shore & South Bend Railroad ([NICTD/CSS & SBRR] with the ROW, East, and West Options). Due to the proximity of the UPRR and NICTD/CSS & SBRR to the UPRR Rail Alternative alignments, hazardous material spills or releases that occur along these railroads would have the potential to migrate and affect the UPRR Rail Alternative alignments. These materials potentially exist along the railroad currently, but the UPRR Rail Alternative would bring transit vehicles closer to them. Spills along the UPRR and NICTD/CSS & SBRR could occur from the use of chemicals for ground maintenance along the tracks. In addition, because these are freight lines, releases could occur from creosote used to preserve wood railroad ties; polynuclear aromatic (PNA) compound deposition from diesel exhaust; asbestos dust from brakes; and coal ash releases from engines. Freight lines might also transport hazardous material cargo, which could be released if there were a spill or accident.

Although there is the potential for impacts associated with the adjacent freight lines, these impacts would be reduced by the freight lines' adherence to federal hazardous material transport regulations (49 Code of Federal Regulations [CFR] Parts 171 to 180) that among other things, specify requirements for the safe transportation of hazardous materials by rail and require rail carriers to conduct a security and safety risk analysis, to develop a security and safety risk plan that includes measures to mitigate risk to population centers, and to select the safest route.

1.2.1.2 Construction Impacts

Construction impacts could occur when activities such as earthmoving and demolition encounter contaminated soil and/or groundwater. Hazardous materials typically involved with construction activities, such as paints, solvents, fuels and hydraulic fluids, could also be accidentally released during construction.

The affected environment evaluation described in Section 4 found that the potential to encounter hazardous materials during construction exists across the entire project area for the BRT, UPRR Rail, and Halsted Rail Alternatives. This potential is due to the urban setting of the project area, where the potential exists for the presence of fill materials previously deposited widespread across the entire project area. Typical urban fill materials contain elevated concentrations of polynuclear aromatic hydrocarbons and metals due to nearby roadways, railways, and industrial and commercial land uses. In addition, urban fill may include contaminated building demolition debris, which was commonly used as fill material in excavations, to increase elevations at sites during development.

Although there would be the potential to encounter hazardous materials during construction throughout the project area, the greatest potential for impacts would be from High Concern sites within the permanent envelope of an alternative. Table 1-1 presents a summary of High Concern sites within the permanent envelopes of alternatives, by segments.

Table 1-1: Summary of High Concern Sites Within the Permanent Envelope

Segment	Number of High Concern Sites Within Envelope	Figure 4-1 ID Numbers	Notes
Bus Rapid Transit Alternative			
Full Length	1	200	
Park & Ride Facilities*	1	200	
Union Pacific Railroad Rail Alternative Right–of-Way Option			
Segment UA	0	---	
Segment UB	4	122,151/162, 200, O4	
120th Street Yard and Shop	3	151/162, 200, O4	Includes one archived CERCLIS -No Further Remediation Planned site**
Union Pacific Railroad Rail Alternative East Option			
Segment UA	2	70, 104	
Segment UB	4	122, 151/162, 200, O4	Includes one archived CERCLIS-No Further Remediation Planned site**
120th Street Yard and Shop	3	151/162, 200, O4	Includes one archived CERCLIS-No Further Remediation Planned site**
Union Pacific Railroad Rail Alternative West Option			
Segment UA	2	51, 105	
Segment UB	4	122, 151/162, 200, O4	Includes one archived CERCLIS-No Further Remediation Planned site**
120th Street Yard and Shop	3	151/162, 200, O4	Includes one archived CERCLIS-No Further Remediation Planned site**
Halsted Rail Alternative			
Segment HA	1	18a	
Segment HB	0	---	
119th Street Yard and Shop	6	141, 144, 152a, 154, NL1, 152b	Includes one active CERCLIS and one CERCLIS-No Further Remediation Planned site **

Notes:

* Includes sites only within the proposed park & ride facilities.

** Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) sites typically come with increased risk of United States Environmental Protection Agency (USEPA) imposing liability and remediation obligations on potentially responsible parties (PRPs). Any owner can be considered a PRP and be required to pay for cleanup. Therefore, additional caution should be taken before acquiring ownership.

Other common sources of hazardous materials that may be present or that could affect the BRT, UPRR Rail, and Halsted Rail Alternatives during construction include transformers and substations within the project area that may contain hazardous materials including polychlorinated biphenyls (PCBs) and buildings and structures built before 1978–1979 that may likely contain lead-based paint or asbestos and releases could occur during their demolition. Hazardous materials typically involved with construction activities, such as paints, solvents, fuels, and hydraulic fluids, could also be accidentally released during construction.

1.2.2 Cumulative Impacts

For the No Build Alternative, no permanent adverse impacts, construction impacts, or cumulative impacts related to hazardous materials would be expected. Under the BRT, UPRR Rail, and Halsted Rail Alternatives, cumulative impacts could occur if there were a release of hazardous materials during ongoing and future projects in the area (described in the *Cumulative Impacts Technical Memorandum)*; however, compliance with local, state, and federal laws and regulations would result in these cumulative impacts being less than adverse.

1.2.3 Mitigation

Permanent mitigation measures for the BRT, UPRR Rail, and Halsted Rail Alternatives would include adherence to applicable federal, state, and local regulations, as well as Chicago Transit Authority's (CTA's) existing system-wide hazardous material usage, storage, and disposal plans and procedures.

Construction mitigation measures for the BRT, UPRR Rail, and Halsted Rail Alternatives would include compliance with federal, state, and local laws and regulations regarding hazardous materials, conducting focused site assessments for areas where earthmoving activities would occur, conducting asbestos, lead-based paint, and hazardous material surveys of buildings or structures that would be demolished. Mitigation measures would also include developing a contaminated material management plan; health and safety plans for construction activities; a spill prevention, control, and countermeasure plan; and a construction stormwater pollution prevention plan prior to construction. In addition, a Phase I Environmental Site Assessment (ESA) of any property to be acquired would be conducted as part of the Final Environmental Impact Statement (Final EIS) and prior to acquisition in order to identify recognized environmental conditions and assess and limit environmental liability. Based on the Phase I ESA findings, a Phase II ESA could also be required during the property acquisition phase and prior to purchasing a property.

1.2.4 Impacts Remaining After Mitigation

No adverse impacts would remain after mitigation for the BRT, UPRR Rail, and Halsted Rail Alternatives.

1.3 2014-2015 Red Line Extension Project Update

Updated July 27, 2015
In August 2014, based on the technical analysis and public input until then, CTA announced the NEPA Preferred Alternative—the UPRR Rail Alternative. CTA is considering two alignment (route) options of this alternative: the East Option and the West Option. At this time, CTA is also considering only the South Station Option of the 130th Street Station. In late 2014 and early 2015, CTA conducted additional engineering on the East and West Options to refine the East and West Option alignments. Appendix C of this technical memorandum summarizes the refined alignments and any additional or different impacts that would result. The information in Appendix C supersedes information presented in other chapters of this technical memorandum.

Section 2
Project Description

The Chicago Transit Authority (CTA) is proposing to extend the Red Line from the existing 95th Street Terminal to the vicinity of 130th Street, subject to the availability of funding. The proposed RLE would include four stations. Each station would include bus transfer and parking facilities. This project is one part of the Red Ahead Program to extend and enhance the entire Red Line. The CTA is also planning 95th Street Terminal improvements that are anticipated to be completed prior to the proposed RLE construction.

The project area is 11 miles south of the Chicago central business district (commonly referred to as the Loop) and encompasses approximately 20 square miles. The boundaries of the project area are 95th Street on the north, Ashland Avenue on the west, Stony Island Avenue on the east, and the Calumet-Sag Channel/Little Calumet River and 134th Street on the south. The I-57 Expressway and I-94 Bishop Ford Freeway cross the western and eastern edges of the project area, respectively. Lake Calumet is in the eastern portion of the project area. The project area encompasses parts of nine community areas in the City of Chicago and the eastern section of the Village of Calumet Park. Chicago community areas include Beverly, Washington Heights, Roseland, Morgan Park, Pullman, West Pullman, Riverdale, Hegewisch, and South Deering. The project area comprises residential (primarily single family), industrial (both existing and vacant), transportation (including freight), and commercial development.

The Draft EIS focuses on the following alternatives (shown in Figure 2-1), which emerged from the Alternatives Analysis and the National Environmental Policy Act (NEPA) scoping process:

- No Build Alternative
- BRT Alternative
- UPRR Rail Alternative
    - Right-of-Way (ROW) Option
    - East Option
    - West Option
- Halsted Rail Alternative

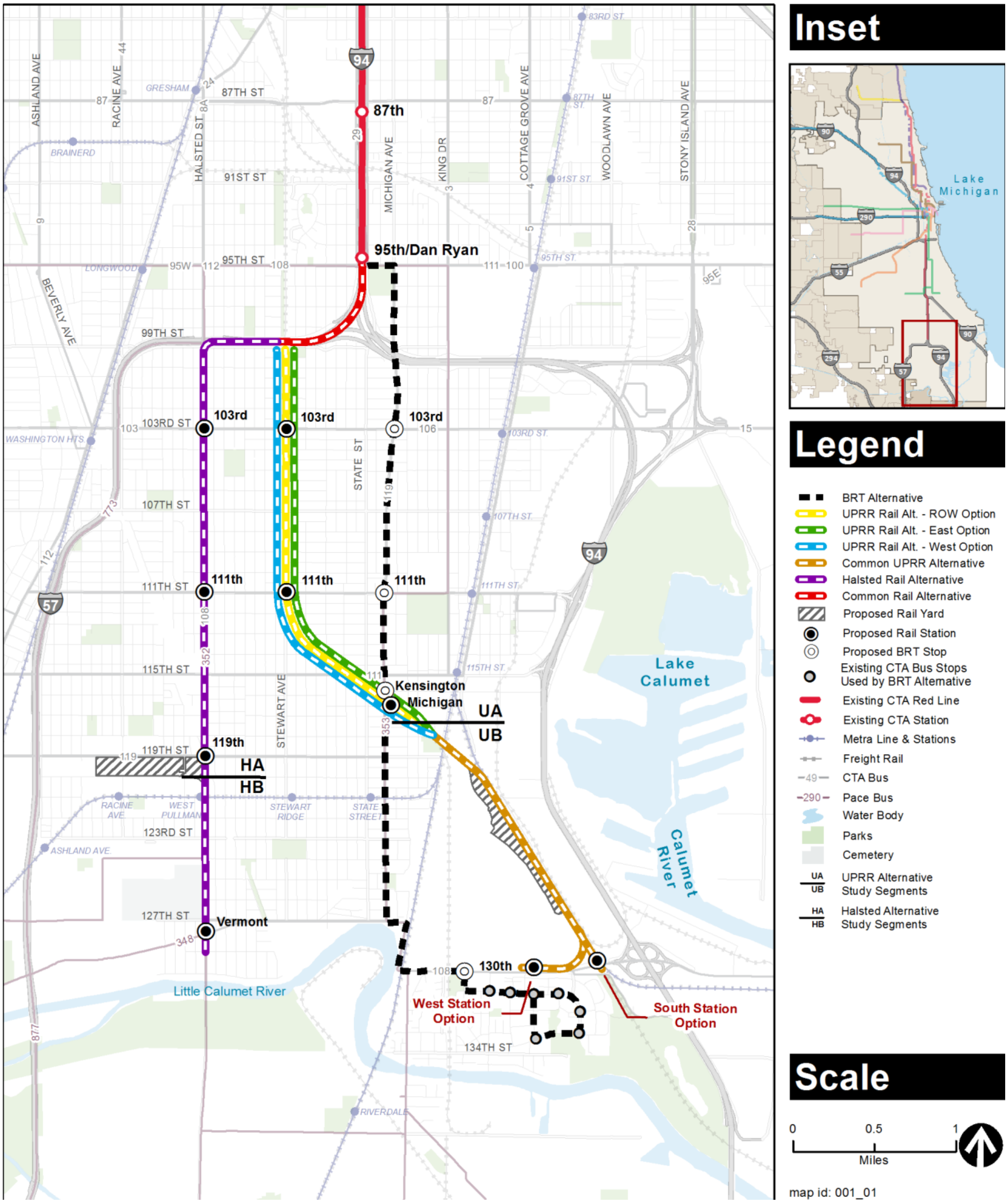

Inset
Lake Michigan
Legend
BRT Alternative
UPRR Rail Alt. - ROW Option
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
Common UPRR Alternative
Halsted Rail Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Proposed BRT Stop
Existing CTA Bus Stops Used by BRT Alternative
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
CTA Bus
Pace Bus
Water Body
Parks
Cemetery
UPRR Alternative Study Segments
Halsted Alternative Study Segments
Scale
0
0.5
1
Miles
map id: 001_01
87th
95th/Dan Ryan
103rd
111th
Kensington
Michigan
119th
Vermont
130th
UA
UB
HA
HB
West Station Option
South Station Option
87TH ST
91ST ST
95TH ST
99TH ST
103RD ST
107TH ST
111TH ST
115TH ST
119TH ST
123RD ST
127TH ST
134TH ST
ASHLAND AVE
RACINE AVE
HALSTED ST
MICHIGAN AVE
KING DR
COTTAGE GROVE AVE
WOODLAWN AVE
STONY ISLAND AVE
STATE ST
STEWART AVE
BEVERLY AVE
Lake Calumet
Calumet River
Little Calumet River
GRESHAM
BRAINERD
LONGWOOD
WASHINGTON HTS.
RACINE AVE
WEST PULLMAN
STEWART RIDGE
STATE STREET
ASHLAND AVE.
RIVERDALE
83RD ST
87TH ST
91ST ST
95TH ST
103RD ST
107TH ST
111TH ST
115TH ST
94
57

Figure 2-1: Red Line Extension Project Alternatives

The No Build Alternative is a required alternative as part of the NEPA environmental analysis and is used for comparison purposes to assess the relative benefits and impacts of extending the Red Line. The No Build Alternative is carried into the Draft EIS phase of the project development regardless of its performance versus the build alternatives under consideration. No new infrastructure would be constructed as part of the No Build Alternative other than committed transportation improvements that are already in the Chicago Metropolitan Agency for Planning (CMAP) Fiscal Year 2010–2015 Transportation Improvement Program (TIP) and the improvements to 95th Street Terminal. The TIP projects within the project area consist of four bridge reconstructions, several road improvement projects including resurfacing and coordination of signal timing on 95th Street, work on Metra's facilities, construction of a bicycle/pedestrian multi-use trail, and preservation of historic facilities. The No Build Alternative includes regular maintenance of existing track and structures, and bus transit service would be focused on the preservation of existing services and projects. All elements of the No Build Alternative are included in each of the other alternatives. Under this alternative, travel times would not improve from existing conditions.

The BRT Alternative (formerly referred to as the Transportation Systems Management Alternative) is a 5.0-mile, limited-stop, enhanced BRT route, which is assumed to operate 24 hours per day between the existing 95th Street Terminal and the intersection of 130th Street and Eberhart Avenue. No dedicated bus lanes would be provided for the BRT Alternative; however, parking lanes would be removed for some portions of the alignment and four stops with improved bus shelters and park & ride facilities would be created at 103rd Street and Michigan Avenue, 111th Street and Michigan Avenue, Kensington Avenue and Michigan Avenue, and 130th Street and Eberhart Avenue. Although BRT service elements would not continue south of the 130th Street stop, the bus route would continue through Altgeld Gardens along the existing route with six stops. The BRT Alternative would be consistent with bus routing changes that may occur as part of improvements to the 95th Street Terminal. Under this alternative, travel times between 130th Street and the Loop would improve over existing conditions.

The UPRR Rail Alternative is a 5.3-mile extension of the heavy rail transit Red Line from its existing 95th Street Terminal to 130th Street, just west of I-94. The Chicago Transit Board designated the UPRR Rail Alternative as the Locally Preferred Alternative at its August 12, 2009 board meeting. This alternative includes construction and operation of new heavy rail transit tracks, mostly in existing transportation corridors. The UPRR Rail Alternative has three options for alignment (ROW, East, and West), all of which would include operation on elevated structure from 95th Street to just past the Canadian National/Metra Electric District tracks near 119th Street. The alignment would then transition to at-grade through an industrial area with no public through streets, terminating at 130th Street in the vicinity of Altgeld Gardens. Four new stations would be constructed at 103rd Street, 111th Street, Michigan Avenue, and 130th Street. The 130th Street station would be the terminal station, with two options under evaluation: the South Station Option and the West Station Option. A new yard and shop facility would be sited near 120th Street and Cottage Grove Avenue. The bus routes in the vicinity of the UPRR Rail Alternative would be modified to enhance connectivity between the Red Line and the bus network. The hours of operation and service frequency for the UPRR Rail Alternative are assumed to be the same as

for the current Red Line. Under this alternative, travel times between 130th Street and the Loop would improve substantially over existing conditions.

The Halsted Rail Alternative is a 5.0-mile heavy rail transit extension of the existing Red Line. In this alternative, the Red Line would operate on an elevated structure running south from 95th Street along I-57 until Halsted Street. The alignment would then turn south and continue along Halsted Street to the intersection of Halsted Street and Vermont Avenue near 127th Street. This alternative would include four new stations at 103rd Street, 111th Street, 119th Street, and Vermont Avenue. The Vermont Avenue station would be the terminal station. A new yard and shop would be sited west of Halsted Street and between the 119th Street and Vermont Avenue stations. The bus routes in the vicinity of the Halsted Rail Alternative would be modified to enhance connectivity to the Red Line. The hours of operation and service frequency for the Halsted Rail Alternative are assumed to be the same as for the current Red Line. Under this alternative, travel times between 127th Street and the Loop would improve substantially over existing conditions. This alternative would not extend rail to Altgeld Gardens, which would be served by bus connecting to the Vermont terminal station.

Section 3
Methods for Impact Evaluation

This section describes the process used to conduct an analysis of potential permanent, construction, and cumulative hazardous material impacts that could result from the construction and operation of the alternatives analyzed in the EIS for the RLE Project. This analysis also identifies potential options to avoid, minimize, and mitigate adverse impacts.

3.1 Regulatory Framework

The following sections describe the regulatory framework applicable to the jurisdictions in the project area.

3.1.1 Federal

The U.S. Environmental Protection Agency (USEPA) is the lead federal agency responsible for enforcing federal regulations regarding hazardous materials. One exception is the transport of hazardous materials, which is regulated by the U.S. Department of Transportation (USDOT). The primary federal legislation governing hazardous materials includes the Resource Conservation and Recovery Act (RCRA), the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), the Superfund Amendments and Reauthorization Act (SARA) and the Hazardous Materials Transportation (HMT) Act.

3.1.1.1 Resource Conservation and Recovery Act

The RCRA regulates the generation, transportation, treatment, storage and disposal of hazardous waste through comprehensive life cycle or "cradle to grave" tracking requirements. These requirements include inspection logs of hazardous waste storage locations, records of quantities being generated and stored, and manifests of pick-ups and deliveries to licensed treatment/storage/disposal facilities. The RCRA also identifies standards for treatment, storage, and disposal.

3.1.1.2 Comprehensive Environmental Response, Compensation, and Liability Act

The CERCLA, also known as Superfund, created a tax on the chemical and petroleum industries to provide for response and cleanup of hazardous substances that may endanger public health or the environment. The CERCLA established requirements for abandoned hazardous waste sites and provided for liability of persons responsible for releases of hazardous waste at these sites.

3.1.1.3 Superfund Amendments and Reauthorization Act

The SARA amended CERCLA to increase state involvement and required Superfund actions to consider state environmental laws and regulations. The SARA also established a regulatory program for underground storage tanks (USTs) and the Emergency Planning and Community Right-to-Know Act.

3.1.1.4 Clean Air Act

The Clean Air Act regulates air emissions from stationary and mobile sources. Under Section 112 of the Clean Air Act, National Emissions Standards for Hazardous Air Pollutants were established to protect the public from exposure to airborne contaminants, such as asbestos, that are known to be hazardous to human health.

3.1.1.5 Toxic Substances Control Act

The Toxic Substances Control Act established the mechanisms by which USEPA tracks, screens, and tests industrial chemicals that are produced or imported into the United States and that may pose an environmental or human health hazard. The Toxic Substances Control Act addresses the production, importation, use, and disposal of specific chemicals including PCBs, asbestos, radon, and lead-based paint.

3.1.1.6 Federal Occupational Safety and Health Act

The Occupational Safety and Health Administration (OSHA) administers legislation that requires special training for handlers of hazardous materials, notification to employees who work in the vicinity of hazardous materials, acquisition from the manufacturer of material safety data sheets that describe the proper use of hazardous materials, and training of employees to remediate any hazardous material accidental releases. The OSHA legislation regulates lead and asbestos as it relates to employee safety through a set of requirements for notification and corrective action, warning signs and labels, controlled access, use of protective equipment, demolition/renovation procedures, housekeeping controls, training, and in certain cases, air monitoring and medical surveillance to reduce potential exposure.

3.1.1.7 Hazardous Materials Transportation Act

The HMT Act was published in 1975 and improved the regulatory and enforcement authority of the Secretary of Transportation. The purpose of the HMT Act was to provide protection against the risks associated with hazardous material transport in commerce. The Pipeline and Hazardous Materials Safety Administration, a part of the USDOT, is responsible for developing regulations and standards associated with the transport of hazardous materials. These regulations are provided in 49 CFR Parts 171 to 180 and are enforced by the respective mode administrations, such as the Federal Railroad Administration and Federal Highway Administration. Among other things, the regulations specify requirements for the safe transportation of hazardous materials including classification, handling, and packaging requirements. For rail transport, regulations require the carrier to conduct a security and safety risk analysis, develop a security and safety risk plan that includes measure to mitigate risk to population centers, and to select the safest route.

3.1.2 State

3.1.2.1 Illinois Environmental Protection Act

The Illinois Environmental Protection Act (the Act) is Illinois' primary statute for protecting and restoring the environment. The Illinois Pollution Control Board, an independent agency created by the Act, is responsible for adopting Illinois' environmental regulations and deciding contested environmental cases. In addition, the Act created the Illinois Environmental Protection Agency (IEPA), the primary state agency responsible for the regulation of hazardous materials in Illinois.

The IEPA's Bureau of Land is responsible for the protection and restoration of land and groundwater resources in the State of Illinois. It administers a broad variety of solid and hazardous waste management cleanup programs, including the Leaking Underground Storage Tanks (LUSTs) program, the Site Remediation Program and RCRA Part B Permits and Closure Plans. The IEPA's cleanup programs use IEPA's Tiered Approach to Corrective Action Objectives (TACO) (35 Illinois Administrative Code [IAC] Part 742).

The TACO provides procedures for evaluating the risk to human health posed by environmental conditions and developing remediation objectives that achieve acceptable risk levels in soil and groundwater. The first step of TACO is a Tier 1 evaluation, which compares concentrations of contaminants detected at a site to a standard set of objectives, known as the Tier 1 remediation objectives. The TACO process and Tier 1 objectives incorporate the results of a polynuclear aromatic hydrocarbon study conducted by the City of Chicago. This study determined background concentrations of polynuclear aromatic hydrocarbons within City of Chicago limits.

Effective August 27, 2012, the IEPA amended the Clean Construction or Demolition Debris Fill Operations (35 IAC Part 1100) to among other things, include standards for the maximum allowable concentrations of chemical constituents in uncontaminated soil generated during construction or demolition activities that can be used as fill material at Clean Construction or Demolition Debris facilities and uncontaminated soil fill operations.

3.1.2.2 Office of the State Fire Marshal

The Office of the State Fire Marshal also has responsibility regarding hazardous material regulation. The Office of the State Fire Marshal's Division of Petroleum & Chemical Safety manages the problems caused by the thousands of UST systems containing petroleum or hazardous chemicals. The division regulates petroleum and chemical storage tanks through registration to ensure the protection of public health and safety.

3.1.2.3 Illinois Occupational Safety and Health Program

At the state level, Illinois operates only a public sector occupational safety and health program under a plan approved by the U.S. Department of Labor. This program is administered by the Illinois Department of Labor and provides safety and health protections to state and local government employees within the state. Private sector workers in Illinois are covered by OSHA at the federal level.

3.1.3 Local

The following local jurisdictions and departments regulate and oversee issues related to hazardous materials within the project area:

- City of Chicago Fire Department, Hazardous Materials Unit

- City of Chicago, Department of Public Health, Environmental Permits & Regulation
- City of Chicago, Department of Fleet and Facility Management, Bureau of Environmental Management

3.2 Impact Analysis Thresholds

There are no specific NEPA thresholds for determining potential adverse impacts related to hazardous materials; however, the Federal Transit Administration's (FTA's) process for implementing NEPA (FTA 2012) does require an evaluation of potential impacts related to hazardous materials. The FTA's process for implementing NEPA requires an evaluation of potential impacts related to hazardous materials. Generally, projects that include the purchase of new ROWs, excavation, and/or structure demolition or modification require at least an initial site assessment to determine whether any known or potential hazardous material is present within the potential area of impact.

For the purpose of this impacts analysis, a hazardous material is any media such as soil, groundwater, or building materials that contain detectable concentrations of any state or federally regulated contaminant. An impact would be considered adverse if it would have the potential for the following:

- Harm to human health or the environment through the routine transport, use, or disposal of hazardous materials
- Harm to human health or the environment through the accidental release of hazardous materials into the environment

3.3 Area of Potential Impact

The area of potential impact for determining hazardous material impacts from regulated sites includes sites within an approximately 0.1- and 0.25-mile radius of the RLE Project alternative alignments, with the radius depending on the type of regulated site being evaluated (See Section 3. 4.1.1). The area of potential impact associated with the general historical land use includes parcels adjacent to and with the RLE Project alternatives.

3.4 Methods

The evaluation of potential impacts associated with hazardous materials began with a review of existing sources of data. The potential for construction and/or operation of each alternative to have hazardous material impacts was analyzed. The analysis concluded with an identification of proposed best management practices and mitigation measures to avoid, minimize, and compensate for potential adverse impacts. This analysis uses methods similar to those included in the Phase I ESA process (American Society for Testing and Materials 2005), which is typically used when acquiring properties to evaluate the historical and current use of a site and determine whether the potential exists for hazardous materials use and/or release. However, this *Hazardous Materials Technical Memorandum* does not meet the standards or nor constitute a Phase 1 ESA of the project area. A Phase I ESA of individual properties being acquired as part of this project would be conducted as part of the Final EIS and prior to acquisition in order to identify recognized environmental conditions and assess and limit environmental liability (See Section 5).

3.4.1 Existing Data Review

Potential impacts from hazardous materials were evaluated by gathering information from a variety of sources to identify potential or existing conditions that could pose environmental concerns.

3.4.1.1 Database Listings

A search of local, state, and federal regulatory databases was conducted by Environmental Data Resources, Inc. (EDR) to identify individual sites of concern. The search by EDR also included a list of orphan sites that was reviewed to identify sites that may be in the area of potential impact. Orphan sites are sites that cannot be mapped by EDR due to inadequate or incomplete address information. Search distances were either 0.1 or 0.25 mile from the RLE Project alternative alignments and included all area in between them. The search distance was based on the nature of the sites included in the database and the separation distance at which impacts become unlikely. Figure 3-1 depicts the maximum search area. Table 3-1 summarizes the databases searched and the corresponding search distance. Table 3-1 also defines abbreviations that are used hereafter in descriptions of sites.

3.4.1.2 Historical Records

Available historical fire insurance and topographic maps and aerial photographs were reviewed to identify previous land uses with a potential for hazardous material concerns. Sanborn fire insurance from 1897, 1911, 1938–39, 1950, 1975–76 and 1989 (EDR 2012a) were available. Topographic maps available included the Calumet Quadrangle from 1892, 1893, 1900, and 1901 (Historical Information Gatherers, Inc. [HIG] 2012b); the Calumet Lake Quadrangle from 1929 and 1953 (HIG 2012c); the Lake Calumet Quadrangle from 1960, 1965, 1973, 1977, 1991, and 1997 (HIG 2012d); and the Blue Island Quadrangle from 1929, 1953, 1963, 1973, 1978, and 1997 (HIG 2012e). Available aerial photographs of the project were available for the years 1938, 1952, 1962, 1973, 1974, 1983, 1984, 1998, 1999, and 2009 (HIGa).

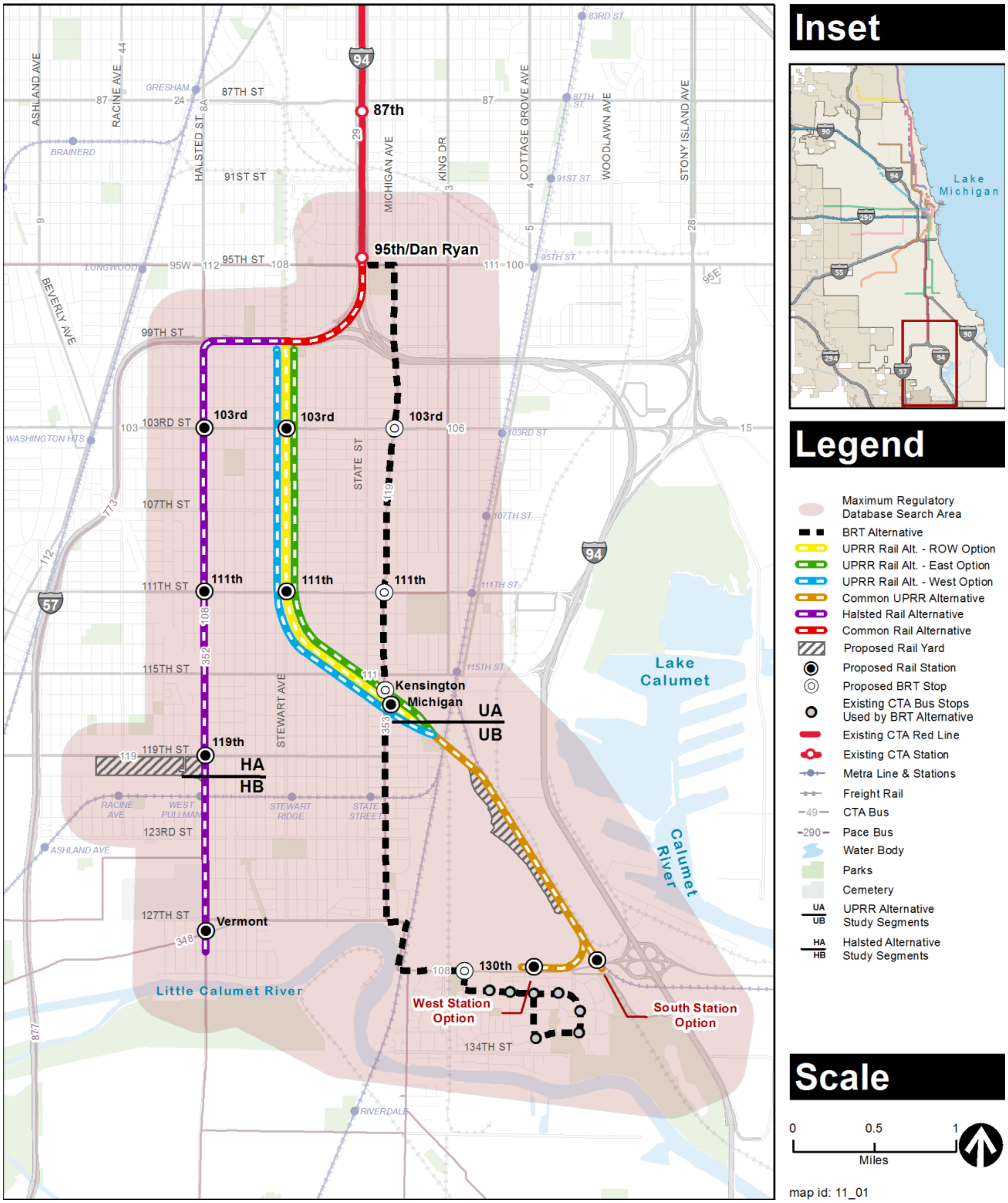

87th
95th/Dan Ryan
103rd
103rd
103rd
111th
111th
111th
119th
Kensington
Michigan
UA
UB
HA
HB
Vermont
130th
West Station Option
South Station Option
Lake Calumet
Calumet River
Little Calumet River
ASHLAND AVE
RACINE AVE
HALSTED ST
MICHIGAN AVE
KING DR
COTTAGE GROVE AVE
WOODLAWN AVE
STONY ISLAND AVE
STATE ST
STEWART AVE
BEVERLY AVE
87TH ST
91ST ST
95TH ST
99TH ST
103RD ST
107TH ST
111TH ST
115TH ST
119TH ST
123RD ST
127TH ST
134TH ST
GRESHAM
BRAINERD
LONGWOOD
WASHINGTON HTS
RACINE AVE
WEST PULLMAN
STEWART RIDGE
STATE STREET
ASHLAND AVE
RIVERDALE
94
57
Inset
Lake Michigan
Legend
Maximum Regulatory Database Search Area
BRT Alternative
UPRR Rail Alt. - ROW Option
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
Common UPRR Alternative
Halsted Rail Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Proposed BRT Stop
Existing CTA Bus Stops Used by BRT Alternative
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
CTA Bus
Pace Bus
Water Body
Parks
Cemetery
UPRR Alternative Study Segments
Halsted Alternative Study Segments
Scale
0
0.5
1
Miles
map id: 11_01

Figure 3-1: Maximum Regulatory Database Search Area

Based on the database listing and historical records evaluation, a review of files from the IEPA and USEPA was conducted for sites located within or adjacent to the RLE project alternative alignments and where hazardous materials were identified as a high level of concern. Files were reviewed for information on enforcement actions, results of previous investigations, and cleanup status.

3.4.2 Impact Analysis

The information gathered from the existing data review was evaluated to identify specific sites where hazardous materials are known or suspected to exist and to determine the potential for the other sources of hazardous materials to be present. The potential permanent and/or construction impacts that each alternative would have were evaluated. Permanent impacts could be associated with maintenance activities during operation if maintenance activities also require earthmoving in potentially contaminated areas or that require the use of hazardous substances or petroleum products. Examples of maintenance activities that could require earthmoving include at-grade track repair, underground utility work and foundation repairs. Construction impacts could occur when activities such as earthmoving encounter contaminated soil and/or groundwater.

Table 3-1: Environmental Databases and Distances Searched

Database Name		Search Distance from Project Limits (miles)
Federal Databases	National Priority List Sites (NPL)	0.25
	Delisted NPL Sites	0.25
	Comprehensive Environmental Response, Compensation and Liability Information System Sites (CERCLIS)	0.25
	CERCLIS-No Further Remediation Planned Sites (CERC-NFRAP)	0.25
	RCRA Corrective Action Sites (RCRA CORRACTS)	0.25
	RCRA Treatment, Storage, and Disposal Sites (RCRA TSDF)	0.25
	RCRA Large Quantity Hazardous Waste Generators (RCRA LQG)	0.25
	RCRA Small Quantity Hazardous Waste Generators (RCRA SQG)	0.10
	RCRA Conditionally Exempt Hazardous Waste Generators (RCRA CESQ)	0.10
	Engineering Controls Sites (US ENG CONTROLS)	0.10
	Institutional Control Sites (US INST CONTROL)	0.10
	Brownfield Sites (US BROWNFIEDS)	0.25
	Emergency Response Notification System (ERNS)	0.10

Database Name		Search Distance from Project Limits (miles)
State Databases	Illinois State Sites Unit Listing (SSU)	0.25
	Site Remediation Program (SRP)	0.25
	Engineered Barrier Site (ENG CONTROLS)	0.10
	Institutional Control Site (INST CONTROLS)	0.10
	Leaking Underground Storage Tank Sites (LUST)	0.10
	Underground Storage Tank Sites (USTs)	0.10
	Former Manufactured Gas Plant Sites (MGP)	0.25
	Brownfield Sites	0.25
	Landfill or Solid Waste Disposal Sites (SWF/LF)	0.25
	Northeastern Illinois Planning Commission Active and Inactive Solid Waste Disposal Site Inventory (NIPC)	0.25
	Spill Incident List (SPILLS)	0.10
	Drycleaners License List (IL DRYCLEANERS)	0.10

A determination was made regarding the level of concern associated with each of the specific sites identified in the existing data review, using the guidance discussed in Section 3.2 and based on the following criteria:

- **High Concern** - Sites with known/probable soil, groundwater, or soil gas contamination that have not been remediated, or where remediation was incomplete or undocumented and that are within close proximity to the project and the potential for off-site migration is high. High Concern sites typically result in the potential for an adverse impact.

- **Moderate Concern** - Sites with known/potential soil, groundwater, or soil gas contamination and where remediation is in progress, or contaminants do not appear to pose a concern for a project. Sites may also be considered a Moderate Concern based on the proximity to the project and type and intensity of former land use (e.g., chemical manufacturers, machine shops, gas stations), even if they did not otherwise have an environmental database listing. Moderate Concern sites may or may not present the potential for an adverse impact, depending on the proximity to the project and extent of contamination.

- **Low Concern** - Sites where hazardous materials or petroleum products may have been or are stored, but where there is no known contamination associated with the property based on all available information. These sites may include sites with permitted air toxic emissions or sites with spills or leaks that were subsequently remediated and have received case closure. The sites may also include sites that have known contamination, but are far enough away from the project to make impacts unlikely. Low Concern sites typically do not result in the potential for an adverse impact.

- **No Concern** - Sites that, based on the review of all available information and on the type of site and distance from the project, are not likely to pose a concern for the project. No Concern sites typically do not result in the potential for an adverse impact.

An evaluation was conducted of potential impacts associated with other sources of hazardous materials, including PCBs, buildings, or structures built before 1978 that may contain lead-based paint, and buildings or structures built before 1979 that may contain asbestos. The evaluation was limited to determining whether there was the potential for transformers and buildings constructed prior to 1978 or 1979 to be present. Recommendations for avoiding and minimizing potential hazardous impacts, as well as potential mitigation measures, were also developed.

As part of this analysis, other current and reasonably foreseeable projects and future actions identified as part of the indirect and cumulative impacts analysis were reviewed to determine whether there would be any potential indirect or cumulative impacts associated with hazardous material.

Section 4
Affected Environment

4.1 Physical Setting

Elevations in the project area range from approximately 590 to 615 feet above sea level. Lake Michigan is the dominant topographic feature in the region and is approximately 4.8 miles from the project area at its closest point near the UPRR Rail Alternative alignment. Lake Calumet is in the eastern portion of the project area, and the Little Calumet River flows along the southern boundary of the project area. Shallow soils in the area are predominately classified as urban, generally characterized as highly disturbed as a result of human activities. The soils have been altered through grading, paving, excavation, or infilling. Largely underlying the urban fill in the region is glacial till and thin deposits of silt, clay, and sand of the Equality Formation (Illinois State Geological Survey 1971).

Groundwater generally flows from areas of higher surface elevation to areas of lower surface elevation and toward the nearest surface water body. The dominant flow direction for groundwater underlying the site is assumed to be to the northeast towards Lake Michigan. Groundwater in the project area is part of the deep bedrock Cambrian-Ordovician aquifers. Wells drilled into this aquifer range from 800 to 1,500 feet deep. Shallow, perched groundwater identified in the Chicago area is not utilized as private or municipal drinking water sources as there is a City of Chicago groundwater ordinance prohibiting the installation of new potable water supply wells within the city. Further detail on the groundwater of the project area is presented in the *Water Resources Technical Memorandum.*

4.2 Historical Document Review

Historical aerial photographs, topographic maps, and fire insurance maps covering the potential area of impact were reviewed to determine the general historical land use. The review determined that portions of the project area have been developed since 1892 and that rail lines have been present in or near the corridor since that time. The following sections provide a summary of the review for each source.

4.2.1 Topographic Maps

Historic United States Geologic Survey topographic maps obtained from HIG were reviewed for the Calumet Quadrangle from 1892, 1893, 1900, and 1901 (HIG 2012b); for the Calumet Lake Quadrangle from 1929 and 1953 (HIG 2012c); for the Lake Calumet Quadrangle from 1960, 1965, 1973, 1977, 1991, and 1997 (HIG 2012d); and for the Blue Island Quadrangle from 1929, 1953, 1963, 1973, 1978, and 1997 (HIG 2012e). The maps are not generally at a scale that permits identification of individual sites of concern but they do show general land use over time. The density of streets increased considerably between 1889 and 1929, after which development was primarily limited to isolated areas throughout the project area. The Red Line currently in use is first depicted on the topographic maps starting in 1973 (Lake Calumet Quadrangle).

The UPRR, Canadian National/Metra Electric and South Shore Lines and their predecessors (Chicago and Eastern Illinois Railroad and the Illinois Central Railroad) were first depicted in 1892 (Calumet Quadrangle).

4.2.2 Aerial Photographs

Aerial photographs obtained from HIG (2012a) were reviewed for the years 1938, 1952, 1962, 1973, 1974, 1983, 1984, 1998, 1999, and 2009. Aerial photographs are not generally at a scale that permits identification of potential impacts associated with specific sites, but they provide information on changes in land use and development over time. The 1938 aerial photograph showed that the majority of the project area was already developed with notable exceptions being the area along Halsted Street between 107th and 115th Streets and south of 124th Street. The area along the current South Shore Line was undeveloped south of 115th Street.

Historical land use within the area of potential impact is primarily a mix of residential and commercial use, with pockets of industrial use. Two notable large areas of historical industrial use were noted. The first area is between 119th and 121st Streets west of Halsted Street. The second area is between 115th Street where the UPRR and South Shore Line meet and 130th Street. The greatest increase in development occurred between 1938 and 1952, particularly in the areas identified as undeveloped in the 1938 aerial photograph. Changes in land use in subsequent years did occur, but were generally limited to individual buildings and properties rather than change at a broad scale.

4.2.3 Sanborn Fire Insurance Maps

Historic Sanborn Fire Insurance Maps were requested from EDR for the areas within and adjacent to the UPRR and Halsted Rail Alternative alignments. For the BRT Alternative, only maps within and near the areas of proposed park & ride facilities at the 103rd, 111th, 115th, and 130th Street BRT stop locations were requested. Maps were provided for the years 1897, 1911, 1938-39, 1950, 1975–76 and 1989 (EDR 2012a) for three distinct areas: I-94 from 95th Street to 98th Street, Halsted Street from 98th Street to 130th Street, and UPRR from 98th Street to 130th Street. The UPRR area included coverage of the proposed park & ride facilities at the 115th Street and 130th Street stop locations. For the areas with no Sanborn coverage, aerial maps were used to identify changes in land use and development over time (See Section 4.2.2).

These maps were reviewed to identify past commercial or industrial activities and sources commonly associated with hazardous material use. The review identified uses typical of an urban setting throughout the corridor including coal yards, lumber yards, gas stations, auto repair shops, machine shops, manufacturing plants, USTs, a pump station, and substations. Sites that are considered a potential concern are summarized by alternative in the following sections.

4.2.3.1 BRT Alternative

By 1897, R.A. Viall, a feed mill with two coal sheds, and some residences were present within the area of the proposed park & ride facility for the 115th Street stop. By 1911, additional residences and Armour & Co., which had office, storage, and cooler areas, were also present in this area and R.A. Viall had an auto repair shop that was not present in 1897. By 1939, R.A. Viall was replaced with a junkyard and although not shown by name, Armour & Co. (or a different company with similar food cooling operations) was still present. By 1950, there were no significant changes from 1939. By 1975, the food cooling operation and junkyard were still present and a filling station had been built to the north of the food cooling operation. By 1989, the area of the proposed 115th Street park & ride facility was similar to 1975 with the exception of the junkyard, which was no longer depicted in the 1989 map.

The Metropolitan Water Reclamation District of Greater Chicago's (MWRD) Calumet Water Reclamation Plant, a wastewater treatment plant within the area of the proposed park & ride facility for the 130th Street stop, first appeared in Sanborn maps in 1950. The MWRD Calumet Water Reclamation Plant was depicted at 126th Street and extending at least two to three blocks south. Settling tanks, ash lagoons, and aerating tanks were shown in both 1950 and 1975. By 1989, the details regarding the type of operations at the MWRD Calumet Water Reclamation Plant were no longer provided but the limits of the operations appeared to extend to 130th Street, which is farther south than shown in previous years.

4.2.3.2 UPRR Rail Alternative

The Roseland Manufacturing Co. was present at 11010 S. Stewart Avenue in 1897. By 1911, the Roseland Pumping Station was constructed at 351 W. 104th Street. By 1938–39, Commonwealth Edison had a substation at 117th Street and Front Street. By 1950, Hoper Equipment Co. and Chicago Hydraulic Oil Co. were present at 116th Street and Front Street. By 1975, there was a paint factory at 11740 S. Calumet Avenue, a metal finishing shop at 11730 S. Front Street, the Aluminum Screen Co. at 116th Street and Front Street, and a transformer yard at 96th Street and Lafayette Avenue.

The proposed 120th Street yard and shop site south of 119th Street and north of 120th Street, the area along the UPRR easements, and the proposed UPRR Rail Alternative alignment have been developed with railroads and railroad yards dating back to 1897 with the Chicago & Eastern Illinois Railroad and the Chicago & Western Indiana. Heavy industry in and around the proposed 120th Street yard and shop area included the Michigan Central RR Transfer Elevators and Transfer House (121st Street and UPRR track), the J.H. Winterbotham & Sons Cooperage (120th Street and UPRR track), and the Pullman Brick Works (north of 119th Street). The MWRD wastewater treatment plant, which is within the area of the proposed South and West Station Options, is discussed in Section 4.2.3.1

4.2.3.3 Halsted Rail Alternative

Developments within the Halsted Rail Alternative alignment included the Southwest Substation at 10229 S. Halsted Street in 1938–39, the Commonwealth Edison 119th Street Substation at the southeast corner of 119th Street and Halsted Street in 1950, and a transformer yard at 96th Street and S. Lafayette Avenue in 1976.

The proposed 119th Street yard and shop, which would be primarily between 119th and 120th Streets west of Halsted Street, is part of what is known as the West Pullman Industrial Redevelopment Area (WIRA). The WIRA generally extends from 117th Street on the north to

122nd Street on the south, Loomis Street on the west and Halsted Street on the east (Chicago 2012). The first three blocks west of Halsted Street between 119th and 121st Streets have been developed with heavy industry dating back to 1897, including the West Pullman Lumber Yard (gas tank), the Burgland and Shead Packing Pail Factory, the Akron Mining & Manufacturing Co., the Smith & Jones Boot & Shoe Co., and the Carter White Lead Works (linseed oil tanks). By 1911, the lumberyard and Carter White Lead Works had expanded and the West Pullman Car Works (gas tank) was present, with additional coal yards west of Peoria Street. By 1938-39, the lumberyard had scaled back and the Neuswanger Coal Co. and West Pullman Iron & Metal Co. now took up a portion of its previous footprint, In addition, the West Pullman Car Works was replaced with an auto wrecking facility, Safety Vulcanizer Co. (foundry), and Louis E. Emerman & Co. and Carter White Lead Co. was now National Lead Co. The area west of Morgan Street was developed by Ingersoll Steel (oil tanks) and International Harvester. The Texas Company bulk oil storage area is at 12100 S. Green Street with 13 underground gasoline tanks and oil storage. By 1950, the area remained similar to 1938-39 with the exception of the auto wrecking area and Safety Vulcanizer Co. no longer labeled as such. By 1975, Neuswanger Coal Co. was a junkyard, Louis E. Emerman & Co. was renamed to Caine Steel Co., and the lumberyard was no longer depicted. By 1989, the area between 119th and 1120th Streets was similar to 1975 but the area between 120th and 121st Streets was depicted as empty.

4.3 Regulatory Agency Records Review

The purpose of the records review was to assess the potential for the presence of hazardous substance contamination within and/or adjacent to the project area as a result of activities conducted on properties within the area of potential impact. The state and federal database listings were searched by EDR, an independent information service, on August 10, 2012 (EDR 2012b). The EDR report in Appendix B provides a listing and description of the databases reviewed, search distances, and a map showing the approximate locations of listed sites and information contained within each database for each listed site.

Table 4-1 summarizes the databases searched and the number of sites found within the search distance for each database. Table 4-1 also defines abbreviations that are used in this document when referring to sites.

Table 4-1: Environmental Database Search Results Summary

	Database Name	Number of Sites within Search Distance*		
		BRT	UPRR Rail	Halsted Rail
Federal Databases*	National Priority List Sites (NPL)	0	0	0
	Delisted NPL Sites	0	0	0
	Comprehensive Environmental Response, Compensation, and Liability Information System Sites (CERCLIS)	2	4	4
	CERCLIS-No Further Remediation Planned Sites (CERC-NFRAP)	1	2	2
	RCRA Corrective Action Sites (RCRA CORRACTS)	0	2	1
	RCRA Treatment, Storage and Disposal Sites (RCRA TSDF)	0	1	0
	RCRA Large Quantity Hazardous Waste Generators (RCRA LQG)	0	3	0
	RCRA Small Quantity Hazardous Waste Generators (RCRA SQG)	10	23	31
	RCRA Conditionally Exempt Hazardous Waste Generators (RCRA CESQ)	10	13	7
	Engineering Controls Sites (US ENG CONTROLS)	0	0	0
	Institutional Control Sites (US INST CONTROL)	0	0	0
	Brownfield Sites (US BROWNFIELDS)	0	0	0
	Emergency Response Notification System (ERNS)	6	9	3
State Databases*	Illinois State Sites Unit Listing (SSU)	0	2	1
	Site Remediation Program (SRP)	4	4	19
	Engineered Barrier Site (ENG CONTROLS)	1	2	4
	Institutional Control Site (INST CONTROLS)	2	1	6
	Leaking Underground Storage Tank Sites (LUST)	22	24	29
	Underground Storage Tank Sites (USTs)	41	41	54
	Former Manufactured Gas Plant Sites (MGP)	0	0	0
	Brownfield Sites	0	0	1
	Landfill or solid waste disposal sites (SWF/LF)	0	1	0
	Northeastern Illinois Planning Commission Active and Inactive Solid Waste Disposal Site Inventory (NIPC)	0	0	0
	Spill Incident List (SPILLS)	22	33	21
	Drycleaners License List (IL DRYCLEANERS)	1	1	4

Notes

BRT = Bus Rapid Transit, UPRR = Union Pacific Railroad

* EDR searched additional databases besides those included in this table; however, based on the nature or type of these databases, they were not used in the evaluation of potential impacts and therefore are not listed here. EDR also identified a list of orphan sites (sites reported as potentially being in the project area but which could not be mapped due to inadequate or incomplete address information). These sites were also reviewed and when possible, sites were classified.

4.4 Regulatory File Review

The regulatory file review was limited to those sites that presented the greatest concern. The majority of sites identified in the database review are typical for a highly urban area with a history of commercial and industrial use; therefore, regulatory files were not reviewed for all sites.

Records were requested for certain sites due to their large size, proximity to the RLE Project, and potential environmental concerns associated with listings as a LUST, SRP, and/or CERCLIS site. The purpose of the request was to determine which, if any, records exist regarding known contamination from past activities at the sites and/or to confirm the exact location and property boundaries. In addition, the information was used to determine the level of concern associated with each site. Regulatory files were requested from the City of Chicago, the IEPA, and/or the USEPA depending on the type of site. Table 4-2 summarizes the regulatory file request. Records have been received for all requested sites. Summaries of the records and determination of the level of concern are provided in the following sections.

Table 4-2: Regulatory Records Request Summary

EDR Site ID	Figure 4-1 Site ID	Site Name	Address*	Chicago	IEPA	USEPA
BRT and UPRR Alternatives						
118	118	Clark Oil & Refining/0707 Clark Ser Station	11555 S. Michigan Avenue		x	
202	202a	Pullman Factory	130th Street and Indiana Avenue			x
NL2	NL2	Altgeld Gardens**	300 E. to 1100 East 130th Street; 100 E. to 1200 W. 131st Street; 1100–1200 E. 130th Place; 1000–1200 E. 129th Place		x	x
UPRR Rail Alternative						
45	45a	City of Chicago/Roseland Pumping Station	351 W. 104th Street		x	
51	51	Illinois Bell Telephone	413 W. 105th Street		x	
70	70	William Ransom Transportation/ William Transport/Ransom Transport Bus Garage	352 W. 110th Street		x	
94	94a	Marquette Bank/Vacant Building	135 to 139 W. 114th Street		x	
104	104	Triangle Transmission	35 W. 115th Street		x	
105	105	City of Chicago/Abandoned Service Station	11500 S. Perry Avenue	x	x	
122	122	Stuart Industrial Coatings, Inc.	11740 S. Front Street		x	
151, 162	151, 162	Keywell LLC	11900 Cottage Grove Avenue		x	
Orphan	O1	US Scrap	123rd and Cottage Grove Avenue			x
Orphan	O3	Metro Sanitary District #3	125th Street and Doty Avenue			x
Orphan	O2	Illinois Central RR Tracks	119th Street, East of Central Tracks			x

EDR Site ID	Figure 4-1 Site ID	Site Name	Address*	Chicago	IEPA	USEPA
Orphan	O4	Penn Central Corp	810 E. 124th Street		x	
		Lake Calumet Quad				x
Halsted Rail Alternative						
18	18a	Mobil Oil Corp. SS A8B	9901 S. Halsted Street		x	
NL	NL1	Carl Buddig	11954 Street Peoria Avenue	x	x	
130	130	West Pullman Study Area No. 6	11931 S. Loomis Street	x	x	
141	141	Omnitrax	11955 S. Morgan Street		x	
144	144	West Pullman Iron And Metal Co.	11954 S. Peoria Avenue			x
152	152a	WIRA Study Area 9	820 W. 120th Street	x	x	
152	152b	WIRA Study Area Number 14	815 to 825 W. 120th Street	x	x	
154	154	Ingersoll	1000 W. 120th Street	x		x
156	156a	Exelon Solar Plant/ Chicago Malleable Castings/Vacant Lot	1201 W. 120th Street	x		
159, 153	159, 153	Dutch Boy Paint	12000 and 12042 S. Peoria Avenue, 900 W. 120th Street	x		x

Notes:
IEPA = Illinois Environmental Protection Agency, USEPA = U.S. Environmental Protection Agency, FOIA = Freedom of Information Act
* All addresses are within Chicago.

4.4.1 BRT Alternative

4.4.1.1 Pullman Factory (130th Street and Indiana Avenue)

The Pullman Factory site (also known as the Pullman Sewage Farm) is approximately 90 feet from the proposed park & ride facility location at 130th Street. The site is listed under CERCLIS. The Expanded Site Inspection Final Report ([Final Report] Alternative Remedial Contracting Strategy 1994) summarized the activities completed at the site. According to the Final Report, the 140-acre site was used for land application of untreated industrial and domestic sewage from 1881 to 1907 and was later developed as a residential neighborhood. A preliminary assessment conducted by IEPA in 1987 indicated a medium priority with potential and alleged groundwater, surface water and soil contamination. A 1990 USEPA site inspection determined that site soils had low levels of volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), pesticides, and metals, indicating that portions of the site may have been impacted by the historic activities. Sampling conducted for the Final Report confirmed the presence of low levels of VOCs, SVOCs, pesticides, and metals in site soils. Available documentation for this site indicates that no remedial actions have been completed; however, because the level of contamination identified was low, this site is a Low Concern.

4.4.1.2 Clark Oil & Refining (11555 S. Michigan Avenue)

The former Clark Oil & Refining service station is adjacent to the proposed park & ride facility at 115th Street. The facility had one 7,500-gallon and two 6,000-gallon gasoline USTs removed in

1991. The surrounding soils were heavily impacted, resulting in the removal of 2,880 cubic yards of contaminated soil. Groundwater was not encountered. The 45-Day Report completed in 1992 for LUST Incident #912512 (O'Brien & Associates, Inc. 1992) indicated benzene exceedances along the west sidewalls of the excavation. Additional removal was not feasible due to the close proximity of the sidewalk to Michigan Avenue. The IEPA requested the installation of a passive soil vent system. There is no documentation indicating that the passive system was ever installed; however, IEPA issued a No Further Remediation (NFR) letter for this site on January 9, 1995. Although IEPA issued an NFR letter, this site is a Moderate Concern because residual contamination may still remain.

4.4.1.3 Altgeld Gardens (300 E. to 1100 East 130th Street; 100 E. to 1200 W. 131st Street; 1100-1200 E. 130th Place; 1000-1200 E. 129th Place)

Altgeld Gardens is across the street from the proposed park & ride facility at 130th Street. According to the Agency for Toxic Substances & Disease Registry website, USEPA conducted a site investigation at Altgeld Gardens in 1996 in response to community concerns. The investigation included the collection of ten surficial soil samples, taken across the entire community. Based on the 1996 findings, soil impacted with PCBs was remediated in the area from 940 to 975 E. 132nd Street. The Illinois Department of Public Health concluded that based on the limited information available, there was no public health hazard that exists from exposure to surface soil contamination; however, further assessment was recommended (Agency for Toxic Substances & Disease Registry 2012). This site is a Low Concern.

4.4.2 UPRR Rail Alternative

4.4.2.1 City of Chicago/Roseland Pumping Station (351 W. 104th Street)

The City of Chicago/Roseland Pumping Station is approximately 50 feet from the UPRR Rail Alternative ROW Option permanent envelope, adjacent to the East Option permanent envelope, and approximately 120 feet from the West Option permanent envelope. The facility was historically a hazardous waste generator of flammable waste liquids. A LUST incident was reported in 1994 (#942419) related to overfill and was identified during the removal of a 550-gallon diesel tank. The Site Classification Completion Report (United Environmental Consultants 1995) indicated no benzene, toluene, ethylbenzene, and xylenes (BTEX) or PNA compound exceedances and the IEPA issued an NFR letter dated September 19, 1995; therefore, this site is a Low Concern.

4.4.2.2 Illinois Bell Telephone (413 W. 105th Street)

The Illinois Bell Telephone site is adjacent to the UPRR Rail Alternative ROW Option permanent envelope, approximately 70 feet from the East Option permanent envelope, and within the West Option permanent envelope. The facility had four USTs that were removed in 1988: three fuel oil tanks and a waste oil tank. This site had one LUST incident (#880112) that appears to have been associated with the removal of a 5,000-gallon fuel oil UST on February 8, 1988 along the west side of the building. The remaining three USTs were removed from the north end of the building on March 24, 1988. Subsequent documentation (ATEC Associates, Inc. 1988) indicated the LUST Incident #880112 is also associated with these tanks.

A Corrective Action Completion Report for the LUST incident was submitted in 2004 (STS Consultants, Ltd. [STS] 2004) and the IEPA issued an NFR letter dated March 21, 2005. The site may have remaining contamination associated with the first UST; therefore, this site is a High Concern.

4.4.2.3 William Ransom Transportation (352 W. 110th Street)

The William Ransom Transportation site is adjacent to the UPRR Rail Alternative ROW Option permanent envelope, within the East Option permanent envelope, and approximately 110 feet from the West Option permanent envelope. A 6,000-gallon gasoline UST was removed in 1999 and was given LUST Incident #990399 due to odors in the backfill materials. A 45-Day Report was completed in March 1999, indicating that perched water was encountered and the assumed contamination was left in place (Environmental Management and Resource Consultants, Inc. 1999). No other documentation was available. Because contamination may still remain, this site is a High Concern.

4.4.2.4 Marquette Bank (135-139 W. 114th Street)

The Marquette Bank site is adjacent to the UPRR Rail Alternative ROW Option permanent envelope, within the East Option permanent envelope, and approximately 120 feet from the West Option permanent envelope. A 2,000-gallon gasoline UST was removed in 2001 and was given LUST Incident #20011638 due to piping failure. Seventy-five cubic yards of soil were removed and a Corrective Action Completion Report was completed in November 2001 (Aspen Environmental, Inc. 1991). Groundwater was not encountered and IEPA issued an NFR letter on January 25, 2002 with no restrictions, indicating that the remaining soil and groundwater concentrations were below Tier I residential remedial objectives; therefore, this site is a Low Concern.

4.4.2.5 Triangle Transmission (35 W. 115th Street)

The Triangle Transmission site is adjacent to the UPRR Rail Alternative ROW Option permanent envelope, within the East Option permanent envelope, and approximately 130 feet from the West Option permanent envelope. A 1,000-gallon gasoline UST was removed in 1999 and LUST Incident #992324 was assigned (Illinois Emergency Management Agency 1999). No other documentation was available. Because contamination may still remain, this site is a High Concern.

4.4.2.6 City of Chicago/Abandoned Service Station (11500 S. Perry Avenue)

The City of Chicago/Abandoned Service Station is 60 feet from the ROW Option permanent envelope, 160 feet from the East Option permanent envelope, and within the West Option permanent envelope. A Phase I ESA of the vacant site identified several environmental concerns, including the presence of urban soil/fill, historic presence of a filling station, UST removal and subsequent LUST Incident #20002342 (gasoline), historic presence of up to eight USTs on site, and a UST pump and piping distribution system (The Shaw Group 2011). The gasoline and waste oil USTs were removed on December 11, 2000 by the City of Chicago. No additional remediation was completed. The City of Chicago was exempt from further reporting or corrective actions as they were not the owner and/or operator of the USTs (IEPA 2001).

A Phase II ESA included a geophysical survey, ten soil borings, and three temporary groundwater wells. The soil analytical data indicated the presence of VOCs, mercury, and lead at concentrations exceeding one or more TACO Tier 1 remediation objectives (See Section 3.1.2.1). Groundwater samples identified benzene at a concentration exceeding both the Class I and Class II Groundwater Ingestion Standards in a sample taken along the eastern property boundary (The Shaw Group 2011). No documentation of remediation was available and because contamination may still remain, this site is a High Concern.

4.4.2.7 Clark Oil & Refining (11555 S. Michigan Avenue)

The former Clark Oil & Refining service station site is within the UPRR Rail Alternative ROW and East Option permanent envelope and approximately 240 feet from the West Option permanent envelope. This site is described in Section 4.4.1.2 and is a Moderate Concern.

4.4.2.8 Stuart Industrial Coatings, Inc. (11740 S. Front Street)

The Stuart Industrial Coatings site is within the permanent envelopes of all three UPRR Rail Alternative options. The facility had seven USTs that were removed in 1990: one 3,000-gallon toluene tank and six 1,000-gallon tanks containing xylene, Varnish Makers & Painter naphtha, methyl ethyl ketone, mineral spirits, ethylene acetate, and methyl isobutyl ketone (Best Environmental, Inc. 1991). The site was given LUST Incident #900054. Contaminated soil was removed and stockpiled. Additional information was requested by IEPA in 2001; however, no additional documentation was available. Because contamination may still remain, this site is a High Concern.

4.4.2.9 Keywell LLC (11900 S. Cottage Grove Avenue)

The Keywell LLC site is within the permanent envelopes of all three UPRR Rail Alternative options. Two 2,000-gallon gasoline tanks were removed in 1990, resulting in LUST Incident #902351. Samples indicated the remedial objectives were exceeded for BTEX. Approximately 240 cubic yards of impacted soil and 3,150 gallons of impacted rainwater were subsequently removed (RERC Environmental 1990). Additional soils were removed in 1994 as part of a new dock construction project (NTH Consultants, LTD 1994). The IEPA granted site-specific remedial objectives and the site was granted an NFR letter dated January 24, 1996. Although IEPA has issued an NFR, this site is a High Concern because this site has a long history of industrial use and is currently used as a scrap metal processing facility

4.4.2.10 Pullman Factory (130th and Indiana Avenue)

The Pullman Factory site is approximately 1,200 feet from the 130th Street South Station Option site and approximately 130 feet from the West Station Option site. This site is described in Section 4.4.1.1 and is a Low Concern.

4.4.2.11 Illinois Central Railroad Tracks (119th Street, East of Central Tracks)

The Illinois Central Railroad Tracks site is within the permanent envelopes of all three potential UPRR Rail Alternative Options. The site, which is listed as a CERCLIS-NFRAP site, lies along the tracks at 119th Street. A Site Inspection Report completed in 1987 (Ecology & Environment [E&E]

1987) indicated on-site drum storage from historic aerial photograph review; however, the actual site inspection did not identify drum storage or any additional concerns. Although railroads in general are a potential concern for hazardous material impacts (See Section 4.6), this specific database listing is a Low Concern because no reported release has occurred.

4.4.2.12 US Scrap (123rd and Cottage Grove Avenue)

The US Scrap site is a CERCLIS site approximately 1,000 feet from the permanent envelopes of all three UPRR Rail Alternative Options. It operated as an open dump in the 1960s and 1970s as part of a drum reclamation facility. A 1980 IEPA inspection discovered four hundred 55-gallon drums of waste, liquid wastes stored in eight concrete silos, scattered surficial deposits of wastes, several waste lagoons, and sludge in drainage swales (USEPA 2011). A Site Assessment prepared for the USEPA (STN Environmental JV 2007) determined that site soils were heavily contaminated with PCBs, chlorinated solvents, lead, and cadmium. Surface liquids showed high levels of vinyl chloride, BTEX, PNAs, pesticides, and PCBs.

A removal action completed in 2008 included the installation of sheet piling between the US Scrap and adjacent MWRD site; installation of interceptor trenches to remove liquid wastes; excavation and disposal of PCB-contaminated soils; geophysical survey for buried drums; and overpacking and disposal of drums (USEPA 2011). Although removal action has occurred, this site is a High Concern because extensive contamination still remains.

4.4.2.13 Penn Central Corp. and Lake Calumet Quad (810 E. 124th Street)

The Penn Central Corp. and Lake Calumet Quad sites are within the permanent envelopes of all three UPRR Rail Alternative Options. The Penn Central Corp. site is listed as an SSU site and Lake Calumet Quad is a CERCLIS-NFRAP site. Although these sites are have different names and are listed in separate databases, based on records reviewed, they appear to be the same site and associated with the same activities. The Penn Central Corp. site was identified on a map in a US Scrap report as a hazardous waste illegal dump site due to historic dumping operations (E&E 1990). Reports for both Penn Central Corp. and Lake Calumet Quad stated that over 400,000 gallons of liquid waste were pumped from the basement of on-site grain silos (STS 1982; E&E 1991). A slurry wall was proposed to contain the soils and groundwater impacted with BTEX and chlorinated solvents. There is no documentation that remediation has occurred or that the slurry wall was installed. Because contamination may still remain, this site is a High Concern.

4.4.2.14 Metro Sanitary District #3 (125th Street and Doty Avenue)

The Metro Sanitary District #3 site is approximately 350 feet from the permanent envelopes of all three UPRR Rail Alternative Options. The site is listed as a CERCLIS-NFRAP site and is within the MWRD Calumet Water Reclamation Plant site. A Site Inspection Report was completed in 1986 (E&E 1986), which indicated that the site included a partial, inactive landfill that was used for disposal of sand, gravel, and grit from sewage treatment by MWRD. Surface samples that were collected indicated the presence of PCBs, chloroform, chlorodane, chromium, lead, toluene, and 4,4-dichlorodiphenyldichloroethane (DDD). There were multiple seeps on the western property boundary from the adjacent US Scrap property. As no reported removal or cleanup has occurred, this site is a High Concern.

4.4.2.15 Altgeld Gardens (300 E. to 1100 East 130th Street; 100 E. to 1200 W. 131st Street; 1100-1200 E. 130th Place; 1000-1200 E. 129th Place)

This site is adjacent both the South Station and West Station Option sites for the 130th Street station and is described in Section 4.4.1.3. This site is a Low Concern.

4.4.3 Halsted Rail Alternative

4.4.3.1 Mobil Oil Corp. SS A8B (9901 S. Halsted Street)

This site is within the Halsted Street Rail Alternative permanent envelope. The facility has four active gasoline USTs and records for five additional USTs. The status of the five additional USTs is unknown. The 45-Day Report completed in 1998 for LUST Incident #980630 (Handex of Illinois, Inc. 1998) indicated elevated levels of BTEX in soil and groundwater. The site was classified as a high priority site by the IEPA in 1999. A Corrective Action Plan was rejected by the IEPA in 2009. The LUST incident is still open and contamination may still remain; therefore, this site is a High Concern.

4.4.3.2 Omnitrax (11955 S. Morgan Street)

This site is within the proposed 119th Street yard and shop area and within WIRA Study Area 8. The site is enrolled in the SRP. It is one of 17 study areas within the WIRA, an area of industrial land use dating back to the late 1800s that extends from 117th Street on the north to 122nd Street on the South, Loomis Street on the west and Halsted Street on the east. The WIRA study areas are in various stages of investigation, remediation, and redevelopment by the City of Chicago, private property owners and/or perspective owners and developers. The Comprehensive Site Investigation Report completed in 2007 (Gabriel Environmental Services [Gabriel] 2007) indicated the presence of undissolved (free) product, PNAs, arsenic, lead, hazardous lead, and PCBs. Certain areas were remediated and an engineered barrier was put in place. Additional investigation (Gabriel 2012) indicated the remaining portions of the property still contained elevated levels of PNAs, lead, and PCBs. In addition, the site still had soil with levels of lead that exceeded the hazardous waste disposal thresholds. Because contamination may still remain, this site is a High Concern.

4.4.3.3 West Pullman Iron and Metal Co. (11954 S. Peoria Street)

This site is within the proposed 119th Street yard and shop area and within WIRA Study Area 8. The facility was a scrap yard and was used to dismantle transformers. A 1990 Site Assessment identified PCB-impacted soils at (Weston Solutions, Inc. [Weston] 1990). There is no documentation that remediation has occurred; therefore, contamination may still remain on site and this site is a High Concern.

4.4.3.4 Carl Buddig (11954 S. Peoria Avenue)

This site is within the proposed 119th Street yard and shop area. This site is within the northern portion of WIRA Study Area 8 along the south side of 120th Street. The site is enrolled in the SRP. A Phase II ESA was completed in 2004 for this property, formerly operated by Carl Budding. The Phase II ESA indicated that 2,4-dinitrotoluene, 2,6-dinitrotoluene, and chromium exceed the TACO Soil migration to groundwater exposure route and lead exceeds the ingestion exposure route and has affected the groundwater at the site (Tetra Tech, Inc. [Tetra Tech] 2004a). Because contamination may still remain, this site is a High Concern.

4.4.3.5 WIRA Study Area No. 6 (11931 S. Loomis Street)

This site is within the proposed 119th Street yard and shop area and is also part of the WIRA (See Section 4.2.3.3). This site is enrolled in the SRP. A review of a Comprehensive Site Investigation Report for this site, which is referred to as the Christ Universal Temple Property (Former International Harvester Property) and WIRA Study Area 6, indicated elevated levels of arsenic. The average detected arsenic values were at levels below background (Tetra Tech 2000a). IEPA issued an NFR letter in 2005 restricting the use of the site to industrial/commercial. Because the NFR letter includes restrictions, this site is a Moderate Concern.

4.4.3.6 WIRA Study Area 9 (820 W. 120th Street)

The WIRA Study Area 9 is within the proposed 119th Street yard and shop area. The site is enrolled in the SRP. The WIRA Study Area 9 was most formerly occupied by West Pullman Car Works and is currently occupied by Abbey Metal Corporation. A Phase II ESA was completed for a portion of WIRA Study Area 9 at 11955 South Peoria Street (Tetra Tech 2004b). The Phase II ESA indicated that VOCs, SVOCs, metals, and PCBs are present in the soil, primarily from 0 to 3 feet below ground surface and that lead and nickel are present in the groundwater. Because contamination may still remain and is primarily within the top 3 feet, this site is a High Concern.

4.4.3.7 WIRA Study Area Number 14 (815 to 825 W. 120th Street)

WIRA Study Area Number 14 is within the proposed 119th Street yard and shop area; it is also part of the WIRA (See Section 4.4.3.1) and is known as The Steel Company site. The site is enrolled in the SRP. The contaminants identified at Study Area Number 14 are VOCs, SVOCs, and metals. The SVOC impacts appear to be localized in the areas of the former railroad tracks and machinery warehouse. In addition, SVOCs were not detected below 3 feet below ground surface. Lead is present at concentrations exceeding TACO Tier 1 remediation objectives throughout the central part of Study Area No. 14. The antimony and selenium concentrations in one soil boring sample exceeded the TACO Tier 1 remediation objective (Tetra Tech 2000b).

Free product is present near the former oil UST. Two groundwater samples contained concentrations exceeding TACO Tier 1 Class I remediation objectives, one with benzene and metals and another with metals (Tetra Tech 2000b). Because contamination may still remain, this site is a High Concern.

4.4.3.8 Ingersoll (1000 West 120th Street)

The Ingersoll site is within the proposed 119th Street yard and shop area and is a CERCLIS site. It is also part of the WIRA (See Section 4.2.3.3) and has been developed as an industrial site since the late 1800s. Multiple Phase I and II ESAs and remedial action have been completed. The current property has had all structures demolished with thousands of gallons of non-hazardous and impacted wastewater removed from the site along with asbestos and PCB debris. However, the site still has free product remaining on-site and soils impacted with PNAs, metals, and PCBs. In addition, it is considered an active CERCLIS site with USEPA enforcement actions (Tetra Tech

2005b; Tetra Tech 2007; Weston 2007). Because contamination may still remain, this site is a High Concern.

4.4.3.9 Exelon Solar Plant/Chicago Malleable Castings/Vacant Lot (1201 W. 120th Street)

This site is south of the proposed 119th Street yard and shop area and is part of the WIRA (See Section 4.2.3.3). This site is enrolled in the SRP and is also a LUST and UST site. It is also referred to as the Chicago Building Structure Site and WIRA Study Areas 10 and 11. The Comprehensive Site Investigation Report for this site identified exceedances of Tier 1 remedial objectives for SVOCs and various metals in soil and for lead in groundwater (Tetra Tech 2001a). The Comprehensive Site Investigation Report recommended averaging soil sample results or conducting a Tier 3 assessment to address these exceedances. Although IEPA has not issued this site an NFR letter, remediation has occurred and it was redeveloped in 2010 as part of the Exelon Corporation’s Exelon City Solar site, which now operates as a solar photovoltaic power plant (Exelon Corporation 2012; Mazza 2012). This site has not been issued an NFR letter from IEPA and although remediation has occurred, this site is a Moderate Concern because contamination may still remain.

4.4.3.10 Dutch Boy Paint (1200 and 12042 S. Peoria Avenue, 900 W. 120th Street)

The Dutch Boy Paint site (also identified as the National Lead site) is adjacent to the south of the proposed 119th Street yard and shop area. This site is listed as a CERCLIS site. Documentation indicated the presence of hazardous lead levels across the site. Hazardous lead levels were remediated according to a Consent Decree (Cook County 1999), the site was entered into the SRP. The 2009 Comprehensive Site Investigation Report identified PNAs, arsenic, lead, and PCBs above TACO Tier I remedial objectives for ingestion. Groundwater modeling indicated that lead had the potential to migrate off-site. In addition, the site still had soil with levels of lead that exceeded the hazardous waste disposal thresholds, as well as potential free product (Tetra Tech 2005a; Tetra Tech 2009; Tetra Tech 2010). Because contamination may still remain, this site is a High Concern.

4.5 Risk Classification

Using the impact analysis criteria described in Section 3.4.2 and results of the existing data review described in Sections 4.2, 4.3, and 4.4, the identified sites were classified as No, Low, Moderate or High Concern sites based on their potential to act as a source of contamination to each of the RLE Project alternatives. Figure 4-1 shows the sites identified in the database review and associated concern classification.

With the exception of certain sites associated with the UPRR Rail Alternative, each site was assigned one classification, based on its potential to have caused soil and/or groundwater contamination in the area and its proximity to the project area. For the UPRR Rail Alternative, if applicable, a site was assigned a unique classification for each of the three options (ROW, East, and West). The potential impacts associated with these sites may vary by alternative and are discussed in Section 5.0.

4.5.1 High Concern Sites

The review identified 36 High Concern sites, summarized in Table 4-3. The majority of these sites were classified as High Concerns due to both their proximity (typically inside or within 500 feet of an alternative's permanent envelope) and being listed as CERCLIS, CORRACTS, CERCLIS-NFRAP, SSU, and/or an open LUST or SRP site. Open LUST or SRP sites have not been issued an NFR letter from the IEPA, which indicates that a release has been identified but remediation is likely not complete. Two High Concern sites included in Table 4-3 were classified as high based on the use of the site (Metropolitan Water Reclamation District/Calumet Water Reclamation Plant, a wastewater treatment plant, Figure 4-1 Site ID 200) or information received from a regulatory file request that identified contamination (Carl Buddig, Figure 4-1 Site ID NL1).

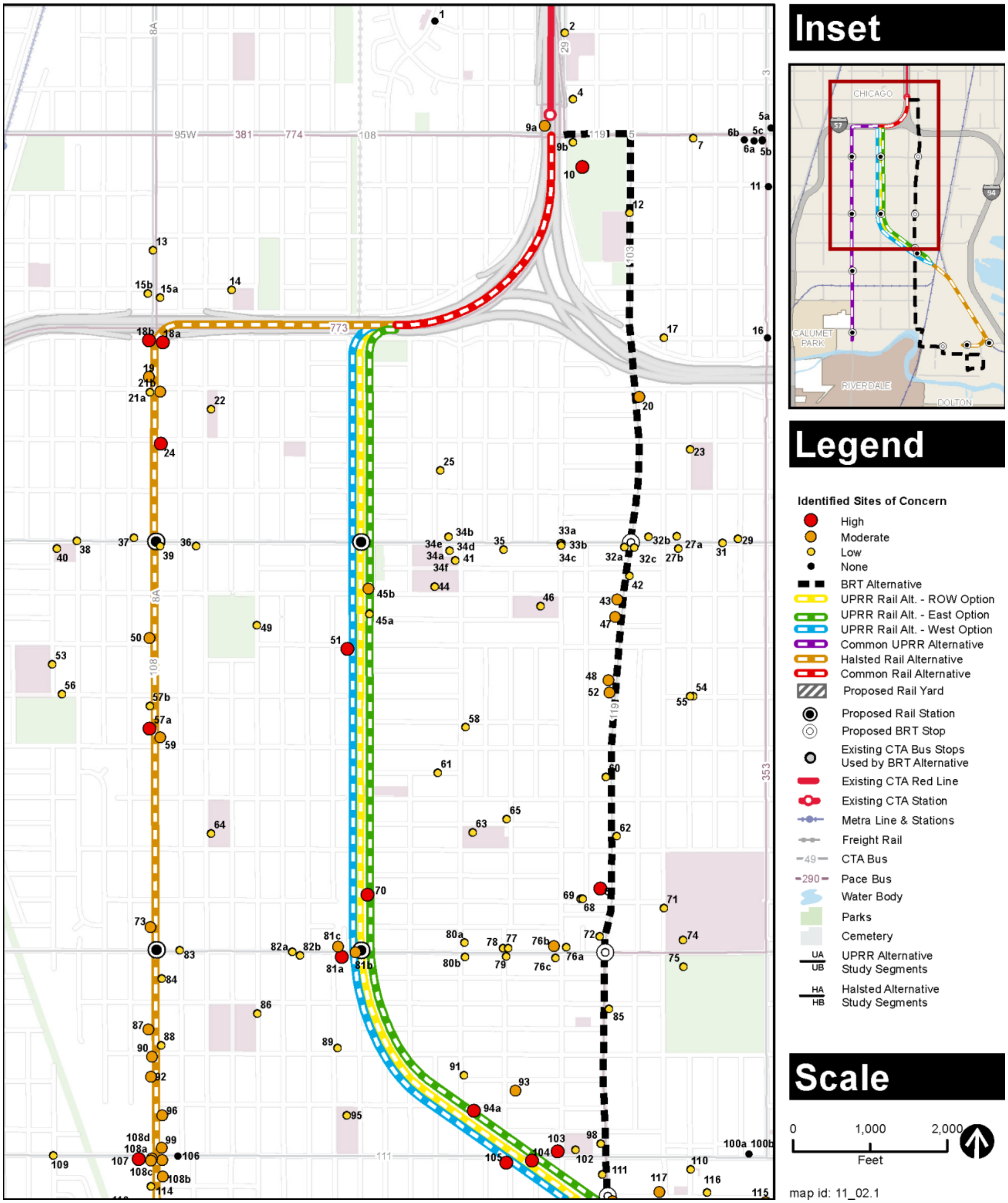
As shown in Table 4-3, several High Concern sites lie within the permanent envelope of the alternatives. These sites have the highest potential to affect the RLE Project (see Table 4-4 and Figures A-1 through A-7 in Appendix A).

4.5.2 Moderate Concern Sites

Fifty-six sites were classified as Moderate Concern sites. These sites were typically CERCLIS-NFRAP (archived) and UST sites with no identified releases adjacent to or within a proposed alternative's permanent envelope; LUST and SRP sites that have been issued NFR letters with restrictions (such as engineered barriers and/or instructional controls) and are adjacent to or within a proposed alternative's permanent envelope; open LUST and SRP sites between 300 and 500 feet from an RLE alternative alignment or feature; and CERCLIS, SWL/F and CORRACTS sites within 1,320 feet (0.25 mile) of an RLE alternative alignment or feature. At distances greater than these, the likelihood of contamination traveling from these types of sites and affecting the RLE Project is low. Table 4-5 contains a list of the Moderate Concern sites.

4.5.3 Low and No Concern Sites

Sites not identified as either a High or Moderate Concern were classified as either Low or No Concern. Low Concern sites typically included SQG and CESQG hazardous waste generators, USTs not adjacent to the RLE alternative alignments or features and LUST and SRP sites more than 0.1 mile away. Sites greater than 0.25 mile from any alternative alignment or feature were typically classified as No Concern sites.


Inset
CHICAGO
CALUMET PARK
RIVERDALE
DOLTON
Legend
Identified Sites of Concern
● High
● Moderate
● Low
● None
BRT Alternative
UPRR Rail Alt. - ROW Option
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
Common UPRR Alternative
Halsted Rail Alternative
Common Rail Alternative
▨ Proposed Rail Yard
Proposed Rail Station
Proposed BRT Stop
Existing CTA Bus Stops Used by BRT Alternative
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
49 CTA Bus
290 Pace Bus
Water Body
Parks
Cemetery
UA UB UPRR Alternative Study Segments
HA HB Halsted Alternative Study Segments
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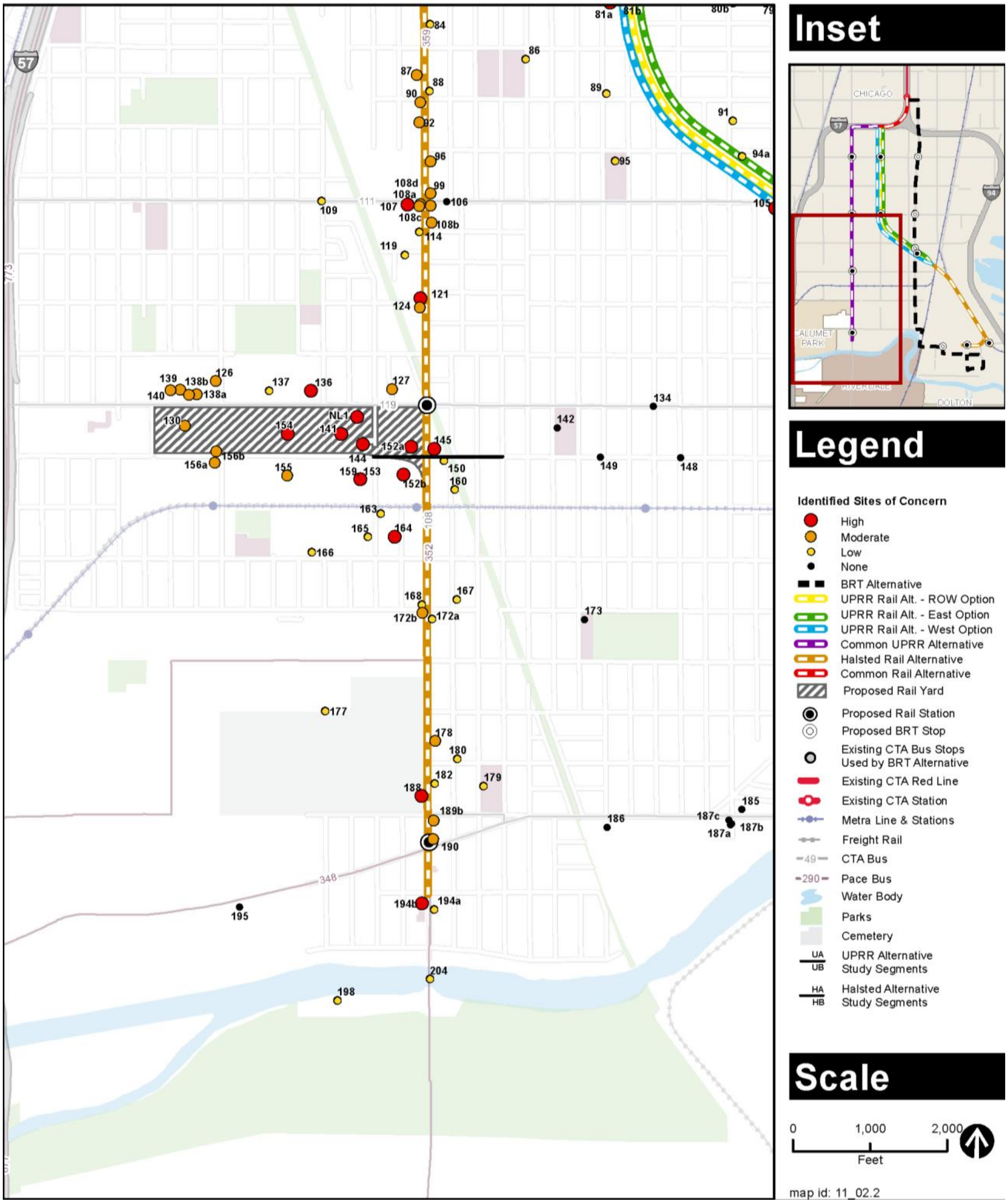
Feet
map id: 11_02.1

Figure 4-1: Identified Sites of Concern


Inset
CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON
Legend
Identified Sites of Concern
High
Moderate
Low
None
BRT Alternative
UPRR Rail Alt. - ROW Option
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
Common UPRR Alternative
Halsted Rail Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Proposed BRT Stop
Existing CTA Bus Stops Used by BRT Alternative
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
49
CTA Bus
290
Pace Bus
Water Body
Parks
Cemetery
UA
UB
UPRR Alternative Study Segments
HA
HB
Halsted Alternative Study Segments
Scale
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189b
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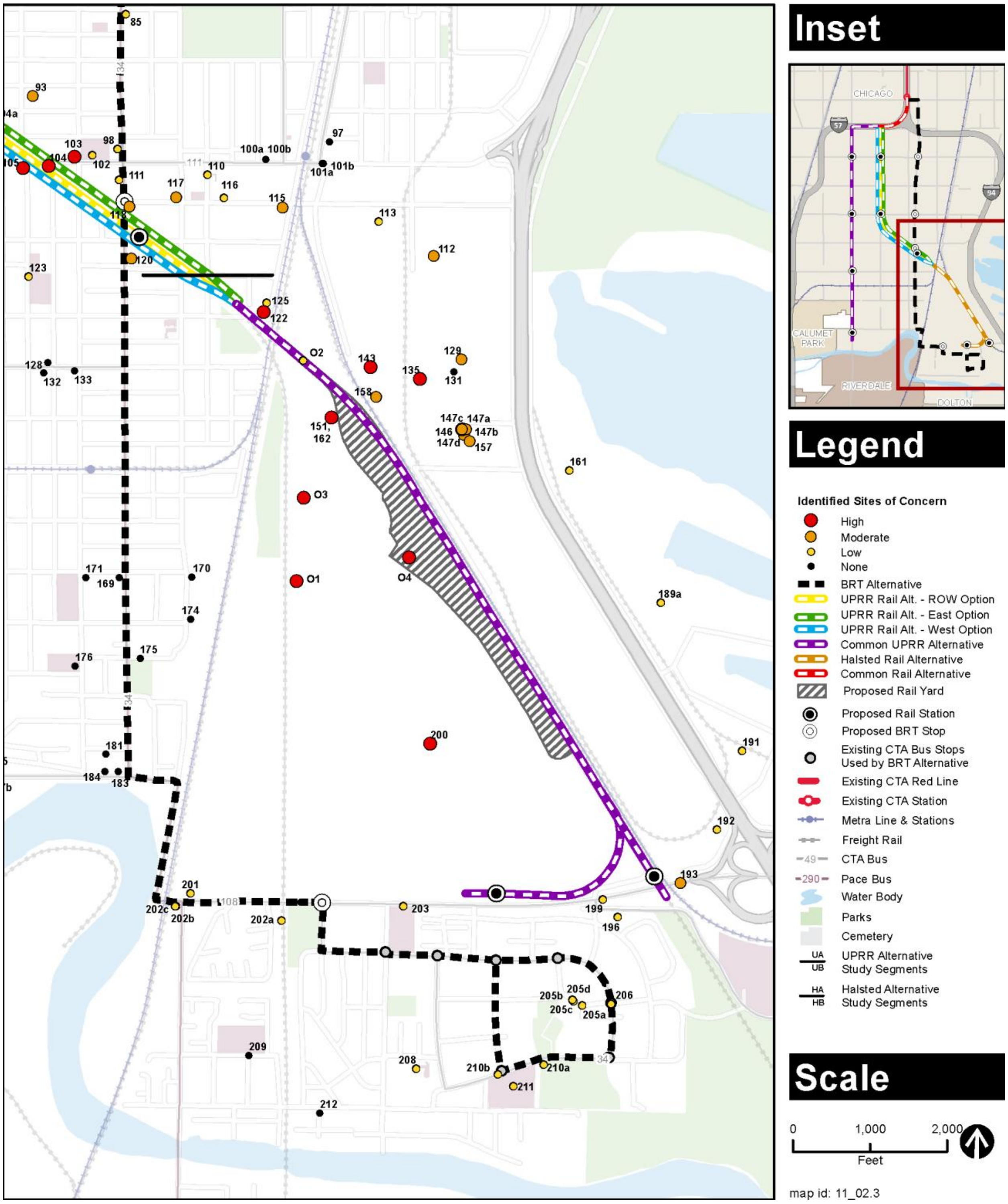
Figure 4-1 (continued): Identified Sites of Concern


Inset
CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON
Legend
Identified Sites of Concern
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● Moderate
● Low
● None
BRT Alternative
UPRR Rail Alt. - ROW Option
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
Common UPRR Alternative
Halsted Rail Alternative
Common Rail Alternative
▨ Proposed Rail Yard
◉ Proposed Rail Station
◎ Proposed BRT Stop
Existing CTA Bus Stops Used by BRT Alternative
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
49 CTA Bus
290 Pace Bus
Water Body
Parks
Cemetery
UA UB UPRR Alternative Study Segments
HA HB Halsted Alternative Study Segments
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O4
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202c
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205b
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210b
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34

Figure 4-1 (continued): Identified Sites of Concern

Table 4-3: Identified High Concern Sites

EDR Site ID*	Figure 4-1 Site ID	EDR Database Site Name	Address**	Approx. Separation Distance***	Databases****
Bus Rapid Transit Alternative					
67	67	109th Place Tear Gas	SG W. 109th Place	Exact location uncertain; likely near or adjacent, not within*	CERCLIS (not on NPL, referred to removal - NFRAP), PRP
200	200	MWRD Metropolitan Water Reclamation Di/ Calumet Water Reclamation Plant	400 E. 130th Street	Within	UST (3 in use), RCRA-CESQG
Union Pacific Railroad Rail Alternative - Segment UA					
8	8	Shell Oil Co.	4 E. 95th Street	250 feet (ROW, E, and W)	LUST (No. 871758 Non-LUST deter.), UST (3 in use)
10	10	Abbott Park Fieldhouse	49 E. 95th Street	200 feet (ROW, E, and W)	LUST (No. 932467 open; No. 932446 open), UST (removed), SPILLS
51	51	Illinois Bell Telephone	413 W.105th Street	Adjacent (ROW, E); Within (W);	LUST (No. 880112 NFR), UST (3 removed)
70	70	William Ransom Transportation/ Bus Garage	352 W. 110th Street	Adjacent (ROW); Within (E); 110 feet (W)	LUST (No. 990399 open), UST (removed), SPILLS, RCRA-CESQG, ERNS
81	81a	Pentecostal Temple Church Of God	415 to 419 W. 111th Street	175 feet (ROW); 85 feet (E); 75 feet (W)	LUST (No. 912233 open; No. 913417 open), SPILLS, RCRA-SQG
104	104	Triangle Transmission	35 W.115th Street	Adjacent (ROW); Within (E); 130 feet (W)	LUST (No. 992324 open), UST (2 exempt), SPILLS, RCRA-SQG
105	105	City of Chicago/ Abandoned Service Station	11500 S. Perry Avenue	60 feet (ROW); 160 feet (E); Within (W)	LUST (No. 20002342 non-LUST determination), UST (4 exempt)
Union Pacific Railroad Rail Alternative - Segment UB					
103	103	Cox, Donna	2 W. 115th Street	300 feet (ROW); 175 feet (E); n/a (W)	LUST (No. 980685 open; No. 201110008 open), UST (2 exempt), SPILLS
122	122	Stuart Industrial Coatings, Inc.	11740 S. Front Street	Within (ROW, E, and W)	LUST (No. 900054 open)
135	135	Lake Calumet Smelting	11901 S. Champlain Avenue	500 feet (ROW, E, and W)	CERCLIS (referred to removal - NFRAP)

EDR Site ID*	Figure 4-1 Site ID	EDR Database Site Name	Address**	Approx. Separation Distance***	Databases****
143	143	Bulkoa Inc./Schneider Tank Lines, Clean Harbors Env. Services/Bulkoa , Inc.	11861 S. Cottage Grove Avenue	290 feet (ROW, E, and W)	LUST (No. 971905 NFR), UST (4 removed, 3 exempt), RCRA-CESQG
147	147a	Quala Services, LLC	803 E.120th Street	325 feet (ROW, E, and W)	RCRA-LQG (violations), SPILLS
200	200	MWRD Metropolitan Water Reclamation Di/ Calumet Water Reclamation Plant	400 E.130th Street	Within (ROW, E, and W)	UST (3 in use), RCRA-CESQG
151, 162	151, 162	Keywell, LLC	11900 Cottage Grove Avenue	Within (ROW, E, and W)	LUST (No. 902351 NFR; No. 942202 non-LUST determination), UST (2 removed), SPILLS, RCRA-CESQG
Orphan	O1	US Scrap	123rd Street and Cottage Grove Avenue	1,000 feet (ROW, E, and W)	UST (3 in use), RCRA-CESQG
Orphan	O3	Metro Sanitary District #3	125th Street and Doty Avenue	350 feet (ROW, E, and W)	CERCLIS-NFRAP (archived)
Orphan	O4	Penn Central Corp	810 E.124th Street	Within (ROW, E, and W)	SSU (transferred to IEPA's Office of Site Evaluation)
		Lake Calumet Quad			CERCLIS-NFRAP (archived)
Halsted Rail Alternative - Segment HA					
8	8	Shell Oil Co.	4 E. 95th Street	300 feet	LUST (No. 871758 non-LUST determination), UST (3 in use)
10	10	Abbott Park Fieldhouse	49 E. 95th Street	200 feet	LUST (No. 932467 open; No. 932446 open), UST (removed), SPILLS
18	18a	Mobil Oil Corp. SS A8B	9901 S. Halsted Street	Within	LUST (No. 980630 open), UST (5 exempt, 4 in use), RCRA-SQG

EDR Site ID*	Figure 4-1 Site ID	EDR Database Site Name	Address**	Approx. Separation Distance***	Databases****
18	18b	Bhagats Amoco	9900 S. Halsted Street	150 feet	LUST (No. 941074 and No. 971752 non-LUST determination), UST (6 removed, 1 exempt, 3 in use), SRP (open), RCRA-SQG
24	24	Fernwood Towing & Tune-Ups/ Hester, Franny	10101 to 10103 S. Ashland Avenue	Adjacent	LUST (No. 991953 open), UST (3 exempt)
57	57a	Betty Brite Cleaners	10630 S. Halsted Street	Adjacent	SRP (open), DRYCLEANERS, RCRA-SQG
107	107	Chicago Housing Authority	833 W.115th Street	150 feet	LUST (No. 921830 NFR), UST (removed), SPILLS, SRP (open), RCRA-SQG
121	121	Mickey's Auto Service Center	11656 S. Halsted Avenue	Adjacent	LUST (No. 970068 open), SRP (open, not active)
136	136	WIRA East Ingersoll Property	920 W.119th Street	60 feet	SRP (open, not active)
141	141	Omnitrax	11955 S. Morgan Street	Within	SRP (open)
144	144	West Pullman Iron and Metal Co.	11954 S. Peoria Avenue	Within	CERCLIS-NFRAP, SRP (open, not active)
145	145	Sandhu Petroleum, Inc./Conoco Phillips 66	11957 and 11959 S. Halsted Street	Adjacent	LUST (No. 20041132 open; No. 20041362 open), UST (5 in use, 2 removed), SPILLS
152	152a	WIRA Study Area 9	820 W. 120th Street	Within	SRP (open, not active)
154	154	Ingersoll	1000 W. 120th Street	Within	CERCLIS (not on the NPL, removal only site, no site assessment work needed, enforcement action)
NL	NL1	Carl Buddig	11954 Street Peoria Avenue	Within	None
Halsted Rail Alternative - Segment HB					
152	152b	WIRA Study Area Number 14	815 to 825 W. 120th Street	Within	SRP (open, not active)
159, 153	159, 153	Dutch Boy Paint	12000 and 12042 S. Peoria Avenue, 900 West 120th Street	Adjacent	CERCLIS (Not on NPL, Referred to Removal - NFRAP), PRP, SSU (Transferred to another program), SRP (open), SPILLS, UST (9 removed)

EDR Site ID*	Figure 4-1 Site ID	EDR Database Site Name	Address**	Approx. Separation Distance***	Databases****
164	164	South Green Plating Shop	12130 S. Green Street	300 feet	CERCLIS (not on the NPL, removal only site, no site assessment work needed, enforcement action), PRP
188	188	Cedar Park Cemetery	12540 S. Halsted Street	Adjacent	LUST (No. 952568 open), UST (4 removed), RCRA-SQG
194	194b	Christ Church Baptist	12844 S. Halsted Street	Adjacent	LUST (No. 20000796 open), UST (1 exempt), SPILLS

Notes:

* Environmental Data Resources, Inc. (EDR) ID is the site ID number provided in the EDR database report (Appendix B). More than one site has the same EDR ID; therefore, each High Concern site was given a unique “Figure ID,” used in Figures 4-2 through 4-8.

** Addresses are in Chicago unless otherwise noted.

*** Separation distance is measured from the edge of the permanent envelope for an alternative. ‘Within’ means the site would be inside the permanent envelope. E=East Option, W=West Option, ROW=ROW Option, n/a = High Concern classification is not applicable to that option.

**** The Databases listed are those that contributed information relevant to the site’s designation as a High Concern site. See Tables 3-1 and 4-1 for distances evaluated, summaries, and definitions of abbreviations.

Table 4-4: Summary of High Concern Sites Within the Permanent Envelope

Segment	Total Number of High Sites Within Envelope	Site ID	Appendix A Figure Number
Bus Rapid Transit Alternative			
Full Length	1	200	A-5
Park & Ride Facilities*	1	200	A-5
Union Pacific Railroad Rail Alternative ROW Option			
Segment UA	0	---	---
Segment UB	4	122 151/162, 200, O4	A-4 A-5
120th Street Yard and Shop	3	151/162, 200, O4	A-5
Union Pacific Railroad Rail Alternative East Option			
Segment UA	2	70, 104	A-2 A-3
Segment UB	4	122 151/162, 200, O4	A-4 A-5
120th Street Yard and Shop	3	151/162, 200, O4	A-5
Union Pacific Railroad Rail Alternative West Option			
Segment UA	2	51 105	A-1 A-3
Segment UB	4	122 151/162, 200, O4	A-4 A-5
120th Street Yard and Shop	3	151/162, 200, O4	A-5

Segment	Total Number of High Sites Within Envelope	Site ID	Appendix A Figure Number
Halsted Rail Alternative			
Segment HA	1	18a	A-6
Segment HB	0	---	---
119th Street Yard and Shop	6	141, 144, 152a, 154, NL1, 152b	A-7

Notes:
* Includes sites only within the proposed park & ride facilities.

Table 4-5: Moderate Concern Sites

EDR Map ID*	Figure 4-1 ID	EDR Database Site Name	Address**	Approx. Separation Distance***	Databases****
Bus Rapid Transit Alternative					
8	8	Shell Oil Co.	4 E. 95th Street	Adjacent	LUST (No. 871758 non-LUST Determination), UST (3 in use)
10	10	Abbott Park Fieldhouse	49 E. 95th Street	Adjacent	LUST (No. 932467 open; Incident No. 932446 open), UST (removed), SPILLS
20	20	Sweis Ray Town and Country Mini Mart	10007 S. Michigan Avenue	Adjacent	LUST (No. 942453 open), UST (3 in use, 2 removed), RCRA-SQG
43	43	Roseland Place/Vacant Property	10400-10420 S. Michigan Avenue	Adjacent	SRP (NFR), INST CONTROL, UST (4 exempt)
47	47	Neighborhood Housing Services Redevelopment Corp./Vacant Property	10426 S. Michigan Avenue	Adjacent	LUST (No. 20100068 NFR), UST (2 exempt), SPILLS
48	48	Dairy Fresh Foods, Inc.	10450 S. Michigan Avenue	Adjacent	SRP (NFR), INST CONTROL, ENG CONTROLS, SPILLS
52	52	Michigan Avenue Collision/C&O Auto Rebuilders/Auto Repair Shop	10554 S. Michigan Avenue	Adjacent	LUST (No. 20071260 NFR), UST (2 exempt), RCRA-SQG, SPILLS
76	76b	BP Products North America	2 W. 111th Street	400 feet	LUST (No. 20080184 open), UST (3 in use), SPILLS
117	117	Kensington Serv Station	162 E. Kensington Avenue	350 feet	LUST (No. 960207 open), UST (3 removed), SPILLS
118	118	Clark Oil & Refining/0707 Clark Ser Station	11555 S. Michigan Avenue	Within	LUST (No. 912512 NFR), UST (3 removed)
120	120	Michigan Citgo	11600 S. Michigan Avenue	Adjacent	UST (4 in use)

EDR Map ID*	Figure 4-1 ID	EDR Database Site Name	Address**	Approx. Separation Distance***	Databases****
Union Pacific Railroad Rail Alternative - Segment UA					
9	9a	Amoco 15459	36 W. 95th Street and Lafayette Avenue	150 feet (ROW, E, and W)	RCRA-SQG, LUST (No. 971123 NFR), UST (3 removed), SPILLS
45	45b	Chicago Fire Department Engine #93	330 W. 104th Street	Adjacent (ROW); Within (E); 100 feet (W);	UST (1 exempt)
81	81b	Chicago Dept. of Env. (Spill)	11100 S. Stewart Avenue	Exact location unknown; likely adjacent or within	RCRA-LQG
81	81c	No Name	420 W. 111th Street	60 feet (ROW, E, and W)	SPILLS
93	93	Pullman Co./Illinois Bell Telephone	65 W. 113th Place	500 feet (ROW); 375 feet (E); 550 feet (W)	LUST (No. 903598 NFR), UST (1 removed, 1 exempt, 1 in use), SPILLS
103	103	Cox, Donna	2 W. 115th Street	n/a (ROW, E); 350 feet (W)	LUST (No. 980685 open; No. 201110008 open), UST (2 exempt), SPILLS
112	112	Sherwin Williams Co	11541 S. Champlain Avenue	1,300 feet (ROW, E, and W)	CERCLIS (not on the NPL), CORRACTS, RCRA-TSDF, RCRA-LQG
115	115	U.S. Scrap	391 E. Kensington Avenue	1,000 feet (ROW, E, and W)	SSU (transferred to USEPA), SWF/LF (unpermitted, closed with no final cover)
118	118	Clark Oil & Refining/0707 Clark Ser Station	11555 S. Michigan Avenue	Adjacent (W, ROW); Within (E)	LUST (No. 912512 NFR), UST (3 removed)
Union Pacific Railroad Rail Alternative - Segment UB					
117	117	Kensington Serv Station	162 E. Kensington Avenue	450 feet (ROW, E); n/a (W)	LUST (No. 960207 open), UST (3 removed), SPILLS
120	120	Michigan Citgo	11600 S. Michigan Avenue	n/a (ROW, E); 60 feet (W)	UST (4 in use)
129	129	Inland Metal Refining Company Incorporation	651 E. 119th Street	875 feet (ROW, E, and W)	CERCLIS-NFRAP (archived), CORRACTS, SSU (backlog), UST (removed)

EDR Map ID*	Figure 4-1 ID	EDR Database Site Name	Address**	Approx. Separation Distance***	Databases****
146	146	Bulkmatic Transport Co	12000 S. Doty Avenue	325 feet (ROW, E, and W)	RCRA-SQG
147	147b	Nortru, Inc. Transportation Group	801 E. 120th Street	325 feet (ROW, E, and W)	RCRA-SQG
147	147c	Allwaste Container Services	803 E. 120th Street	325 feet (ROW, E, and W)	UST (3 removed), SPILLS
147	147d	PSC Container Services, LLC	803 E. 120th Street	325 feet (ROW, E, and W)	LUST (No. 930641 open)
157	157	Praxair Distribution, Inc./Liquid Carbonic Corp	12054 Southwest Doty Avenue	325 feet (ROW, E, and W)	UST (removed), SPILLS, RCRA-CESQG
158	158	Tri City Tank Wash	11901 S. Cottage Grove Avenue	100 feet (ROW, E, and W)	UST (out of service)
193	193	Calumet Nu-Earth Dist. Center	North 130th Street and Doty Avenue	Exact location uncertain; could be adjacent*	CERCLIS-NFRAP (archived)
Halsted Rail Alternative - Segment HA					
9	9a	Amoco 15459	36 W. 95th Street and Lafayette Avenue	150 feet	LUST (No. 971123 NFR), UST, SPILLS, RCRA-SQG
19	19	#013611	9948 S. Halsted Street	Adjacent	UST (4 out of service)
21	21b	Joy Auto Service	10001 S. Halsted Street	Adjacent	UST (5 exempt), RCRA-SQG
50	50	Our #52-9652-105	Northwest Corner of Halsted Street & 105th Street	Adjacent	UST (4 exempt)
59	59	Shell Oil Co.	10655 S. Halsted Street	Adjacent	LUST (No. 880583 NFR), UST (4 removed, 3 in use)
73	73	Muffler & Brake Man, Inc.	11038 and 11048 S. Halsted Street	Within	UST (2 removed)
87	87	Longs Garden Center, Inc.	11226 S. Halsted Street	Adjacent	LUST (No. 980313 NFR), UST (1 removed), RCRA-SQG

EDR Map ID*	Figure 4-1 ID	EDR Database Site Name	Address**	Approx. Separation Distance***	Databases****
90	90	Devotion Unisex Beauty Salon	11300 S. Halsted Street	Adjacent	UST (1 exempt)
92	92	Whitmal Oil Ser Inc.	11328 S. Halsted Street	Adjacent	UST (2 removed)
96	96	McDonald's Corp.	11421 S. Halsted Street	Adjacent	UST (1 exempt)
99	99	Quality Muffler, First Cook Comm. Bank	11453 S. Halsted Street	Adjacent	LUST (No. 920332 NFR), SPILLS, UST (5 removed), RCRA-SQG
108	108a	Equilon Enterprises LLC	11501 S. Halsted Street	Adjacent	LUST (No. 990250 NFR), UST (3 removed, 3 in use)
108	108b	0415 Clark Ser Station	11525 S. Halsted Street	Adjacent	UST (3 removed)
108	108c	Former CHA Warehouse	901 W. 115th Street	Adjacent	UST (1 exempt)
108	108d	Amoco Oil Co. #5954	11500 S. Halsted Street	Adjacent	LUST (No. 923184 NFR), UST (3 in use)
124	124	Abandoned Service Station	11700 S. Halsted Street	Adjacent	UST (2 exempt)
126	126	WIRA Study Area Number 4	11801 S. Racine Avenue	60 feet	SRP (NFR), INST CONTROL
127	127	Sheldon Heights Church of Christ/Vacant Land	11819 to 11849 S. Green Street	60 feet	SRP (NFR), INST CONTROL, UST (removed)
130	130	West Pullman Study Area No. 6	11931 S. Loomis Street	Within	SRP (NFR)
138	138a	W.E. Davis Company*****	1220 to 1314 W. 119th Street	60 feet	SRP (NFR), INST CONTROL, ENG CONTROLS
138	138b	City of Chicago - Department of Environment/ Construction Site (Future RJKCCC) *****	1220 W. 119th Street	60 feet	LUST (No. 20100193 open; No. 20110956 open), SPILLS, UST (6 exempt)
139	139	Former Amforge Facility*****	1250 W. 119th Street	60 feet	BROWNFIELDS
140	140	Amforge*****	1324 W. 119th Street	60 feet	UST (4 exempt)

EDR Map ID*	Figure 4-1 ID	EDR Database Site Name	Address**	Approx. Separation Distance***	Databases****
Halsted Rail Alternative - Segment HB					
155	155	International Harvester Co., W P/ Former West Pullman Works	1015 W. 120th Street	60 feet	CERCLIS (Not on NPL, Referred to removal-NFRAP), CORRACTS, LUST (No. 20091219 NFR; No. 20091282 NFR), SPILLS, LUST, SRP (NFR), INST CONTROL, ENG CONTROLS, HWAR, UST (3 exempt)
156	156a	Exelon Solar Plant/Chicago Malleable Castings/Vacant Lot	1201 W. 120th Street	60 feet	LUST (No. 20091066 open), SRP (open, not active), SPILLS, UST (2 exempt), RCRA-CESQG
156	156b	Vacant Site	1210 W. 120th Street	Within	UST (2 exempt)
172	172b	Cal Gas, Inc.	12304 S. Halsted Street, Calumet Park	Adjacent	UST (2 in use)
178	178	Red's Checkpoint/Franklin George	12535 S. Halsted Street	Adjacent	LUST (No. 911261 NFR), UST (4 removed), SPILLS
189	189b	Amoco SS #18717 Facility #24277	12701 S. Halsted Street	Adjacent	UST (3 removed)
190	190	#008489	12731 S. Halsted Street	Adjacent	UST (3 exempt)

Notes:

* Environmental Data Resources, Inc. (EDR) ID is the site ID number provided in the EDR database report (Appendix B). More than one site has the same EDR ID; therefore, each High Concern site was given a unique "Figure ID," used in Figures 5-2 through 5-9.

** Addresses are in Chicago unless otherwise noted.

*** Separation distance is measured from the edge of the permanent envelope for an alternative. 'Within' means the site is inside the permanent envelope. E=East Option, W=West Option, ROW=ROW Option, n/a = Moderate Concern classification is not applicable to that option.

**** The Databases listed are those that contributed information relevant to the site's designation as a High Concern site. See Tables 3-1 and 4-1 for distances evaluated, summaries, and definitions of abbreviations.

***** These sites are all part of the former Amforge site, which has received and NFR and been redeveloped.

4.5.4 Summary

Table 4-6 presents a summary of the number of High and Moderate Concern sites associated with each alternative.

Table 4-6: Summary of High and Moderate Concern Sites

Segment	High Concern	Moderate Concern
Bus Rapid Transit Alternative		
Full Length	2	11
Park & Ride Facilities*	1	4
Union Pacific Railroad Rail Alternative ROW Option		
Segment UA	7	8
Segment UB	10	9
Union Pacific Railroad Rail Alternative East Option		
Segment UA	7	8
Segment UB	10	9
Union Pacific Railroad Rail Alternative West Option		
Segment UA	7	9
Segment UB	9	9
Halsted Rail Alternative		
Segment HA	15	23
Segment HB	5	7

*Includes Moderate and High Concern sites only within or near the proposed park & ride facilities.

4.6 Other Sources

Other common sources of hazardous materials that may be present or that could affect the project were considered. Review of the Certified Sanborn maps confirmed that substations have been present since at least 1938. Prior to 1979, when their production was banned, PCBs were commonly used as fluid in electrical equipment. Transformers and substations within the project area may contain PCBs. The historical review also confirmed that the majority of buildings and structures within the project area were built before 1978–1979. Therefore, the majority of these buildings and structures are likely to contain lead-based paint or asbestos.

The long-term operation and maintenance of the existing UPRR and the NICTD/CSS & SBRR corridors adjacent to and within the project area are also potential sources of hazardous material impacts (UPRR Rail Alternative). Maintenance activities typically require the use of fuel, oil, paints, solvents, and cleaning agents for equipment, and grounds maintenance that may have contaminated the soil and/or groundwater from the use of materials such as herbicides, and pesticides. Operation of both lines includes carrying freight traffic, which may include hazardous materials transport. In addition, other potential sources of hazardous material impacts from railroad operations could include creosote used to preserve wood railroad ties, polynuclear aromatic carbon deposition from diesel exhaust, asbestos dust from brakes, coal ash releases from engines, and hazardous material cargo. Although a search of the National Response Center Database, which provides reported oil and chemicals spill data for railroad incidents, did not identify any spills reported by UPRR, NICTD, CSS, or SBRR along the project area, the potential for impacts still exists. (National Response Center 2012)

Given the urban setting of the project area, the potential exists for the presence of typical urban fill throughout the entire project area. Typical urban fill materials contain elevated concentrations of polynuclear aromatic hydrocarbons and metals due to nearby roadways, railways, and industrial and commercial lands uses and activities. Industrial and commercial land uses and activities include coal yards, gas stations, auto repair shops, machine shops, manufacturing plants, dry cleaners, USTs, substations, and transformers. This type of contamination is not necessarily associated with a release from a specific site or source. In addition, urban fill may include contaminated building demolition debris, which was commonly used as fill material in excavations, to increase elevations at sites during development.

Section 5
Impacts and Mitigations

The evaluation of the affected environment found the potential to encounter hazardous materials across the entire project area during both construction and operation. This section analyzes and compares the hazardous material impacts of the RLE Project alternatives in one of three categories: permanent impacts, construction impacts, and cumulative impacts.

5.1 No Build Alternative

Under the No Build Alternative, there would be no construction other than that associated with already funded and committed projects in the corridor. For the No Build Alternative, no permanent adverse impacts, construction impacts, or cumulative impacts related to hazardous materials would be expected.

5.2 Bus Rapid Transit Alternative

5.2.1 Permanent Impacts and Mitigations - Bus Rapid Transit Alternative

Operating BRT service and park & ride facilities would not result in changes to the existing types of hazardous materials used, stored or transported. Therefore, no permanent adverse impacts related to hazardous materials would be associated with the BRT Alternative.

5.2.2 Construction Impacts and Mitigations - Bus Rapid Transit Alternative

5.2.2.1 Impacts

Subsurface excavation associated with the BRT Alternative would occur during construction of all four of the proposed park & ride facilities; however, excavated quantities would likely be greater at Kensington Avenue and 130th Street than at 103rd Street and 111th Street. This difference is because the Kensington Avenue and 130th Street facilities both would have garages, which would require more excavation to install their foundations and other support structures. Therefore, construction for this alternative would result in generation of a large quantity of soil that could contain contaminated materials requiring off-site disposal. The source of hazardous material impacts could be from sites identified in the database review or from the presence of urban fill. In addition there is the potential that groundwater encountered during construction may contain contaminated materials. As summarized in Table 4-4 and shown on Figure 4-6, one High Concern site (ID Number 200) was identified within or near a proposed park & ride facility site where the majority of subsurface excavation and potential adverse impacts would be likely to occur. This High Concern site is near the proposed 130th Street facility site and is an operating wastewater treatment plant. Sludge, a byproduct of the wastewater treatment process, typically contains heavy metals and other contaminants and may be present throughout the site, including within the footprint of the proposed park & ride facility at 130th Street.

In all areas besides the park & ride facilities, work would be limited to the surface and the potential for impacts to hazardous materials would be low.

Construction of park & ride facilities at 103rd Street and Kensington Avenue would include demolition of existing structures that were likely constructed before 1978–1979. These structures may contain asbestos-containing material and lead-based paint that could result in a release of asbestos fibers and lead dust during construction. Hazardous materials typically involved with construction activities, such as paints, solvents, fuels, and hydraulic fluids, could also be released accidentally during construction.

Implementation of the BRT Alternative could also result in beneficial impacts through the cleanup and/or removal of contaminated material (soil, groundwater, and/or asbestos and lead-based paint particles) during construction. Without this alternative, this cleanup and removal would occur either at a later date or not at all.

Indirect impacts could occur from the accidental release of hazardous materials during the transport of soil or other contaminated media to a disposal facility away from the project area.

5.2.2.2 Mitigation

Mitigation measures for the BRT Alternative would be used to avoid and minimize impacts prior to and during construction and would, at a minimum, include the following:

- Compliance with federal, state, and local laws and regulations regarding hazardous materials would be required.

- Focused site assessments would be required for areas where earth-moving activities would occur. The assessments would include characterization and evaluation of the potential for encountering hazardous materials and contaminated soils.

- Asbestos, lead-based paint, and hazardous material surveys of buildings or structures would be required prior to renovation or demolition, to identify any asbestos and lead-based paint particles and hazardous materials, such as PCB- or mercury-containing equipment. Any hazardous materials identified would be abated and disposed of in accordance with local, state and federal regulations.

- A Contaminated Material Management Plan that provides the procedures for identifying, characterizing, managing, storing, and disposing contaminated soil and groundwater encountered during construction activities would be required. This plan would cover the entire project area, as it is assumed that all material has at least some level of contamination associated with it. Contaminated material generated during construction would be disposed of at a nearby facility permitted to accept such material, such as the Veolia ES Zion Landfill, in Zion, Illinois (non-hazardous special waste) and the Menomonee Falls Treatment Storage and Disposal Facility in Menomonee Falls, Wisconsin (hazardous waste).

- Health and Safety Plans for construction activities would be developed by the contractors and read and signed by all workers prior to starting any work. The Health and Safety Plans would identify potential contaminants of concern, required personal protection equipment and procedures, and emergency response procedures.

- Spill Prevention, Control, and Countermeasure Plans to address the use, storage, and disposal of materials such as asphalt, fuel, paint, solvents, and cleaning agents would be required. The Spill Control and Prevention Plans would provide best management practices to limit the potential for accidental releases of potentially hazardous materials.

- Construction Stormwater Pollution Prevention Plans, which describe methods to prevent or minimize stormwater runoff from encountering contaminated soil or other hazardous materials, would be required.

In addition to the above, a Phase I ESA of any property to be purchased would be conducted as part of the Final EIS in order to identify recognized environmental conditions and assess and limit environmental liability. Based on the Phase I ESA findings, a Phase II ESA could also be required during the property acquisition phase and prior to purchasing a property.

5.2.3 Cumulative Impacts and Mitigations - Bus Rapid Transit Alternative

Under the BRT Alternative, cumulative impacts could occur if there were a release of hazardous materials during ongoing and future projects in the area (described in the *Cumulative Impacts Technical Memorandum)*; however, compliance with local, state, and federal laws and regulations would result in these cumulative impacts being less than adverse.

5.3 Union Pacific Railroad Rail Alternative

5.3.1 Permanent Impacts and Mitigations - Union Pacific Railroad Rail Alternative - Right-of-Way Option

5.3.1.1 Segment UA

5.3.1.1.1 Impacts

Operation of UPRR Rail Alternative ROW Option, a heavy rail transit line, would have the potential to result in the release of hazardous materials and/or petroleum products into the environment from accidental spills or from maintenance activities that require earthmoving in contaminated areas. Spills are most likely to occur during activities such as equipment maintenance at the yards and shops and grounds maintenance along the tracks. Materials typically used for these activities include fuel, oil, paints, solvents, cleaning agents, herbicides, and pesticides. Examples of maintenance activities that could require earthmoving include at-grade track repair, underground utility work, and foundation repairs.

5.3.1.1.2 Mitigation

During operation of the ROW Option, mitigation measures would include adherence to applicable federal, state, and local regulations, as well as CTA's existing system-wide hazardous material usage, storage, and disposal plans and procedures.

5.3.1.2 Segment UB

Permanent impacts and mitigation measures would be similar to those described for Segment UA in Section 5.3.1.1. However, there would be the potential for additional impacts associated with the NICTD/CSS & SBRR, which is an active railroad and is adjacent to Segment UB. Due to the proximity of NICTD/CSS & SBRR to Segment UB, hazardous material spills or releases that occur along the NICTD/CSS & SBRR during its operation and maintenance would have the potential to migrate affect the UPRR Rail Alternative alignment within this segment. Section 4.6 describes typical sources of hazardous material spills and releases that may be associated with NICTD/CSS & SBRR. Although there is the potential for impacts associated with the adjacent freight line, these impacts would be reduced by the freight lines' adherence to federal hazardous material transport regulations (49 CFR Parts 171 to 180), Among other things, these regulations specify requirements for the safe transportation of hazardous materials by rail, and they require rail carriers to conduct a security and safety risk analysis to develop a security and safety risk plan that includes measures to mitigate risk to population centers, and to select the safest route.

5.3.2 Construction Impacts and Mitigations - Union Pacific Railroad Rail Alternative - Right-of-Way Option

5.3.2.1 Segment UA

5.3.2.1.1 Impacts

Construction of Segment UA of the UPRR Rail Alternative ROW Option would involve approximately 130,100 cubic yards of soil or aggregate excavation. Therefore, there would be the potential to encounter hazardous materials, whether from the sites identified in the database review or from the presence of urban fill. In addition, unlike the East and West Options, the ROW Option would include construction within the UPRR corridor, which is potentially impacted because of the use of fuel, oil, paints, herbicides, and pesticides, creosote, polynuclear aromatic hydrocarbons and coal ash associated with the long-term operation as a railroad (See Section 4.6). In addition, groundwater encountered during construction may contain hazardous materials.

As shown in Table 4-4, no High Concern sites are within the permanent envelope of Segment UA of the UPRR Rail Alternative ROW Option.

This alternative would include the demolition of existing structures that were likely constructed before 1978 - 1979. Potential issues associated with these structures would be as described for the BRT Alternative in Section 5.2.2.1.

Construction of Segment UA could also result in beneficial impacts through the cleanup and/or removal of contaminated material, as described for the BRT Alternative in Section 5.2.2.1.

Indirect impacts could occur from accidental releases as described for the BRT Alternative in Section 5.2.2.1.

5.3.2.1.2 Mitigation

Proposed mitigation measures would be similar to those described for the BRT Alternative in Section 5.2.2.2.

5.3.2.2 Segment UB

5.3.2.2.1 Impacts

Construction of Segment UB of the UPRR Rail Alternative ROW Option would involve approximately 140,100 cubic yards of soil or aggregate excavation. Therefore, impacts would be similar to those described for Segment UA in Section 5.3.2.1. One exception is that Segment UB is not directly within a freight railroad corridor, but it is adjacent to the NICTD/CSS & SBRR and railroad spurs serving the Keywell property (ID Number 151/162), which carries freight trains and could still have potential hazardous material impacts. While there would be the potential for hazardous material impacts associated with construction adjacent to a railroad, they would likely be fewer than for construction directly within the footprint of a railroad.

Based on the historic aerials and Sanborn fire insurance maps, heavy industry has been present in and along this segment since at least 1897. As shown in Table 4-4 and Figures 4-5 and 4-6, three High Concern sites (ID Numbers 122, 200, and 151/162) are within the permanent envelope of Segment UB of the UPRR Rail Alternative ROW Option. One High Concern site is within both the areas for the South Station and West Station Options (ID Number 200, See Section 5.2.2.1). Four additional High Concern sites (ID Numbers O1, O2, O3, and O4) are potentially within the permanent envelope but not enough information is available at the time of this report to determine their exact location.

Of note within this segment is that there are two CERCLIS Archived sites potentially within the permanent envelope (O3 and O3). The CERCLIS sites typically come with increased risk of the USEPA imposing liability and remediation obligations on potentially responsible parties (PRPs). Any owner can be considered a PRP and be required to pay for cleanup. These sites have Archived status, which means that USEPA has completed its assessment of the site and has determined that no future action will be taken to list it on the National Priorities List and has removed it from its inventory of Superfund sites. However, this does not mean that a site is considered clean, and additional caution should be taken before acquiring ownership.

5.3.2.2.2 Mitigation

Permanent impacts and mitigation measures would be similar to those described for Segment UA in Section 5.3.2.1.

5.3.3 Cumulative Impacts and Mitigations - Union Pacific Railroad Rail Alternative - Right-of-Way Option

Cumulative impacts under the UPRR Rail Alternative ROW Option would be similar to those under the BRT Alternative, described in Section 5.2.3.

5.3.4 120th Street Yard and Shop

5.3.4.1 Permanent Impacts and Mitigations

Permanent impacts and mitigation measures for the 120th Street yard and shop would be similar in type to those described for the UPRR Rail Alternative ROW Option, Segment UA (Section 5.3.1.1); however, the quantities of materials used (including fuel, oil, paints, solvents, cleaning agents, herbicides, and pesticides) and therefore, the potential for spills to occur, would likely be greater at the yard and shop than along the rail line itself.

5.3.4.2 Construction Impacts and Mitigations

Construction of the 120th Street yard and shop would involve approximately 138,100 cubic yards of soil or aggregate excavation. Impacts and mitigation measures would be similar to those described for Segment UB in Section 5.3.2.2, with the exception of one less High Risk site (ID Number 122, a LUST site) within or potentially within the permanent envelope of the yard.

5.3.5 Permanent Impacts and Mitigations - Union Pacific Railroad Rail Alternative - East Option

5.3.5.1 Segment UA

5.3.5.1.1 Impacts

Permanent impacts under the UPRR Rail Alternative East Option would be similar to those for the UPRR Rail Alternative ROW Option, described in Section 5.3.1.1. However, there would be the potential for additional impacts associated with the operation of the adjacent active UPRR, which would remain in operation under the East Option. Given the proximity of the UPRR track to the alignment for the East Option, there would be the potential for impacts due to releases of hazardous materials being transported and from hazardous materials used in the routine operation and maintenance of the UPRR. Hazardous materials potentially exist along the railroad currently, but the UPRR Rail Alternative would bring transit vehicles closer to them. Although there is the potential for impacts associated with the adjacent freight line, these impacts would be reduced by the freight lines' adherence to federal hazardous material transport regulations (See Section 5.3.1.2).

5.3.5.1.2 Mitigation

Mitigation measures would be similar to those for the UPRR Rail Alternative Rail ROW Option, described in Section 5.3.1.1. It is presumed that in addition to the CTA, the UPRR would follow its own system-wide hazardous material usage, storage, and disposal plans and procedures. The UPRR would also adhere to federal hazardous material transport regulations (49 CFR Parts 171 to 180) that among other things, specify requirements for the safe transportation of hazardous materials by rail and require the rail carrier to conduct a security and safety risk analysis, develop a security and safety risk plan that includes measure to mitigate risk to population centers, and to select the safest route.

5.3.5.2 Segment UB

Permanent impacts and mitigation measures would be similar to those for Segment UA of the UPRR Rail Alternative East Option, described in Section 5.3.5.1; however, instead of potential impacts from the adjacent operating UPRR, Segment UB would have potential impacts from the adjacent operating NICTD/CSS & SBRR.

5.3.6 Construction Impacts and Mitigations - Union Pacific Railroad Rail Alternative - East Option

5.3.6.1 Segment UA

Construction of Segment UA of the UPRR Rail Alternative East Option would involve approximately 122,900 cubic yards of soil or aggregate excavation. Construction impacts and mitigation would be similar to those for Segment UA of the UPRR Rail Alternative ROW Option, described in Section 5.3.2.1. However, as shown in Table 4-4 and Figures 4-3 and 4-4, the East Option would include three High Concern Sites (ID Numbers 70, 94a and 104) within its permanent envelope compared to none in the ROW Option. These three sites are all LUST sites.

5.3.6.2 Segment UB

Construction impacts and mitigation would be similar to those for Segment UB of the UPRR Rail Alternative ROW Option, described in Section 5.3.2.2.

5.3.7 Cumulative Impacts and Mitigations - Union Pacific Railroad Rail Alternative - East Option

Cumulative impacts would be similar to those under the BRT Alternative, described in Section 5.2.3.

5.3.8 120th Street Yard and Shop

5.3.8.1 Permanent Impacts and Mitigations

Permanent impacts and mitigation measures would be similar to those described for the UPRR Rail ROW Alternative in Section 5.3.4.1.

5.3.8.2 Construction Impacts and Mitigations

Permanent impacts and mitigation measures would be similar to those described for the UPRR ROW Alternative in Section 5.3.4.2.

5.4 Union Pacific Railroad Rail Alternative - West Option

5.4.1 Permanent Impacts and Mitigations - Union Pacific Railroad Rail Alternative - West Option

5.4.1.1 Segment UA

Permanent impacts and mitigation measures would be similar to those described for the UPRR Rail Alternative East Option in Section 5.3.5.1.

5.4.1.2 Segment UB

Permanent impacts and mitigation measures would be similar to those described for the UPRR Rail Alternative East Option in Section 5.3.5.2.

5.4.2 Construction Impacts and Mitigations - Union Pacific Railroad Rail Alternative - West Option

5.4.2.1 Segment UA

Construction of Segment UA of the UPRR Rail Alternative West Option would involve approximately 129,400 cubic yards of soil or aggregate excavation. Construction impacts and mitigation would be similar to those for Segment UA of the UPRR Rail Alternative ROW Option, described in Section 5.3.2.1. However, as shown in Table 4-4 and Figures 4-2 and 4-4, the West Option would include two High Concern Sites (ID Numbers 51 and 105) within its permanent envelope, compared to none in the ROW Option and three in the East Option. These three sites are all LUST sites.

5.4.2.2 Segment UB

Construction impacts and mitigation would be similar to those for Segment UB of the UPRR Rail Alternative ROW Option, described in Section 5.3.2.2.

5.4.3 Cumulative Impacts and Mitigations - Union Pacific Railroad Rail Alternative - West Option

Cumulative impacts would be similar to those for the BRT Alternative, described in Section 5.2.3.

5.4.4 120th Street Yard and Shop

5.4.4.1 Permanent Impacts and Mitigations

Permanent impacts and mitigation measures would be similar to those described for the UPRR ROW Alternative in Section 5.3.4.1.

5.4.4.2 Construction Impacts and Mitigations

Construction impacts and mitigation measures would be similar to those described for the UPRR ROW Alternative in Section 5.3.4.2.

5.5 Halsted Rail Alternative

5.5.1 Permanent Impacts and Mitigations - Halsted Rail Alternative

5.5.1.1.1 Impacts

Operation of Halsted Rail Alternative, a heavy rail transit line, would have the potential to result in the release of hazardous materials and/or petroleum products into the environment from accidental spills. Spills are most likely to occur during activities such as equipment and grounds maintenance. Materials typically used for these activities include fuel, oil, paints, solvents, cleaning agents, herbicides, and pesticides.

5.5.1.1.2 Mitigation

During operation of the Halsted Rail Alternative, adherence to applicable federal, state, and local regulations, as well as CTA's existing system-wide hazardous material usage, storage, and disposal plans and procedures, would minimize the potential for impacts.

5.5.2 Construction Impacts and Mitigations - Halsted Rail Alternative

5.5.2.1 Segment HA

5.5.2.1.1 Impacts

Construction of Segment HA of the Halsted Rail Alternative would involve approximately 83,400 cubic yards of soil or aggregate excavation. Therefore, there would be the potential to encounter hazardous materials, whether from the sites identified in the database review or from the presence of urban fill. In addition, groundwater encountered during construction may contain hazardous materials.

As shown in Table 4-4 and Figure 4-7, there is one High Concern site (ID Number 18a) within the permanent envelope of Segment HA of the Halsted Rail Alternative: an open LUST site.

Construction of Segment HA would include the demolition of existing structures that were likely constructed before 1978 - 1979. Potential issues associated with these structures would be as described for the BRT Alternative in Section 5.2.2.1.

Construction of Segment HA could also result in beneficial impacts through the cleanup and/or removal of contaminated material, as described for the BRT Alternative in Section 5.2.2.1.

Indirect impacts could occur from accidental releases as described for the BRT Alternative in Section 5.2.2.1.

5.5.2.1.2 Mitigation

Proposed mitigation measures would be similar to those described for the BRT Alternative in Section 5.2.2.2.

5.5.2.2 Segment HB

5.5.2.2.1 Impacts

Construction of Segment HB of the Halsted Rail Alternative would involve approximately 57,900 cubic yards of soil or aggregate excavation and demolition of existing structures that were likely constructed before 1978-1979. Therefore, impacts would be similar those described for to Segment HA in Section 5.5.2.1.

As shown in Table 4-4, no High Concern sites are within the permanent envelope of Segment HB of the Halsted Rail Alternative. Potential beneficial impacts and indirect impacts would also be similar to those described for Segment HA in Section 5.5.2.1.

5.5.2.2.2 Mitigation

Permanent impacts and mitigation measures would be similar to those described for the BRT Alternative in Section 5.2.2.2.

5.5.3 Cumulative Impacts and Mitigations - Halsted Rail Alternative

Cumulative impacts under the Halsted Rail Alternative would be similar to those described for the BRT Alternative in Section 5.2.3.

5.5.4 119th Street Yard and Shop

5.5.4.1 Permanent Impacts and Mitigations

Permanent impacts and mitigation measures would be similar to those described for the 120th Street yard and shop in Section 5.3.4.1.

5.5.4.2 Construction Impacts and Mitigations

5.5.4.2.1 Impacts

Construction of the 119th Street yard and shop would involve approximately 129,100 cubic yards of soil or aggregate excavation. Therefore, there would be the potential to encounter hazardous materials, and impacts would be similar to those described for Segment HA in Section 5.5.2.1.

Based on the historic aerials and Sanborn fire insurance maps, industry has been present within the proposed yard permanent envelope since at least 1897. As shown in Table 4-4 and Figure 4-8, six High Concern sites (ID Numbers 141, 144, 152a, 154, NL1, and 152b) are within the permanent envelope of the 119th Street yard and shop.

Of note within this segment are the one CERCLIS site (Ingersoll, ID Number 154) and one CERCLIS-NFRAP site (West Pullman Iron and Metal Co., ID Number 144) within the permanent envelope. As discussed in Section 5.3.2.2, CERCLIS sites typically come with increased risk of the USEPA imposing liability and remediation obligations on PRPs. Any owner can be considered a PRP and be required to pay for cleanup. The Ingersoll site is of special concern given that there are free product and known USEPA enforcement actions at the site (See Section 4.4.3). The NFRAP status at the West Pullman Iron and Metal Co. site means that means that USEPA has completed its assessment of the site and determined that no future action will be taken to list it on the National Priorities List. However, this does not mean that a site is considered clean, and additional caution should be taken before acquiring ownership. In addition to the sites within the permanent envelope of the 119th Street yard and shop, there is also an active CERCLIS site, Dutch Boy (ID Number 159 and 153) adjacent to the south (See Figure 4-1) of the 119th Street yard and shop, which based on available information, has the potential for off-site migration of contamination.

Construction of the 119th Street yard and shop would include the demolition of existing structures that were constructed before 1978 and 1979. Potential issues associated with these structures would be as described for the BRT Alternative in Section 5.2.2.1.

Potential beneficial impacts and indirect impacts would be similar to those described for Segment HA in Section 5.5.2.1.

5.5.4.2.2 Mitigation

Proposed mitigation measures would be similar to those described for the BRT Alternative in Section 5.2.2.2.

Section 6
Impacts Remaining After Mitigation

6.1 No Build Alternative

No permanent impacts, construction impacts, or cumulative impacts related to hazardous materials would be expected to be associated with the No Build Alternative. Therefore, there would also be no impacts remaining after mitigation.

6.2 Bus Rapid Transit Alternative

No hazardous material impacts would remain after mitigation.

6.3 Union Pacific Railroad Rail Alternative - Right-of-Way Option

No hazardous material impacts would remain after mitigation.

6.3.1 Segment UA

No hazardous material impacts would remain after mitigation.

6.3.2 Segment UB

No hazardous material impacts would remain after mitigation.

6.3.3 120th Street Yard and Shop

No hazardous material impacts would remain after mitigation.

6.4 Union Pacific Railroad Rail Alternative - East Option

No hazardous material impacts would remain after mitigation.

6.4.1 Segment UA

No hazardous material impacts would remain after mitigation.

6.4.2 Segment UB

No hazardous material impacts would remain after mitigation.

6.4.3 120th Street Yard and Shop

No hazardous material impacts would remain after mitigation.

6.5 Union Pacific Railroad Rail Alternative - West Option

No hazardous material impacts would remain after mitigation.

6.5.1 Segment UA

No hazardous material impacts would remain after mitigation.

6.5.2 Segment UB

No hazardous material impacts would remain after mitigation.

6.5.3 120th Street Yard and Shop

No hazardous material impacts would remain after mitigation.

6.6 Halsted Rail Alternative

No hazardous material impacts would remain after mitigation.

6.6.1 Segment HA

No hazardous material impacts would remain after mitigation.

6.6.2 Segment HB

No hazardous material impacts would remain after mitigation.

6.6.3 119th Street Yard and Shop

No hazardous material impacts would remain after mitigation.

Section 7
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Appendix A
Figures of High Concern Sites Within Permanent Envelope

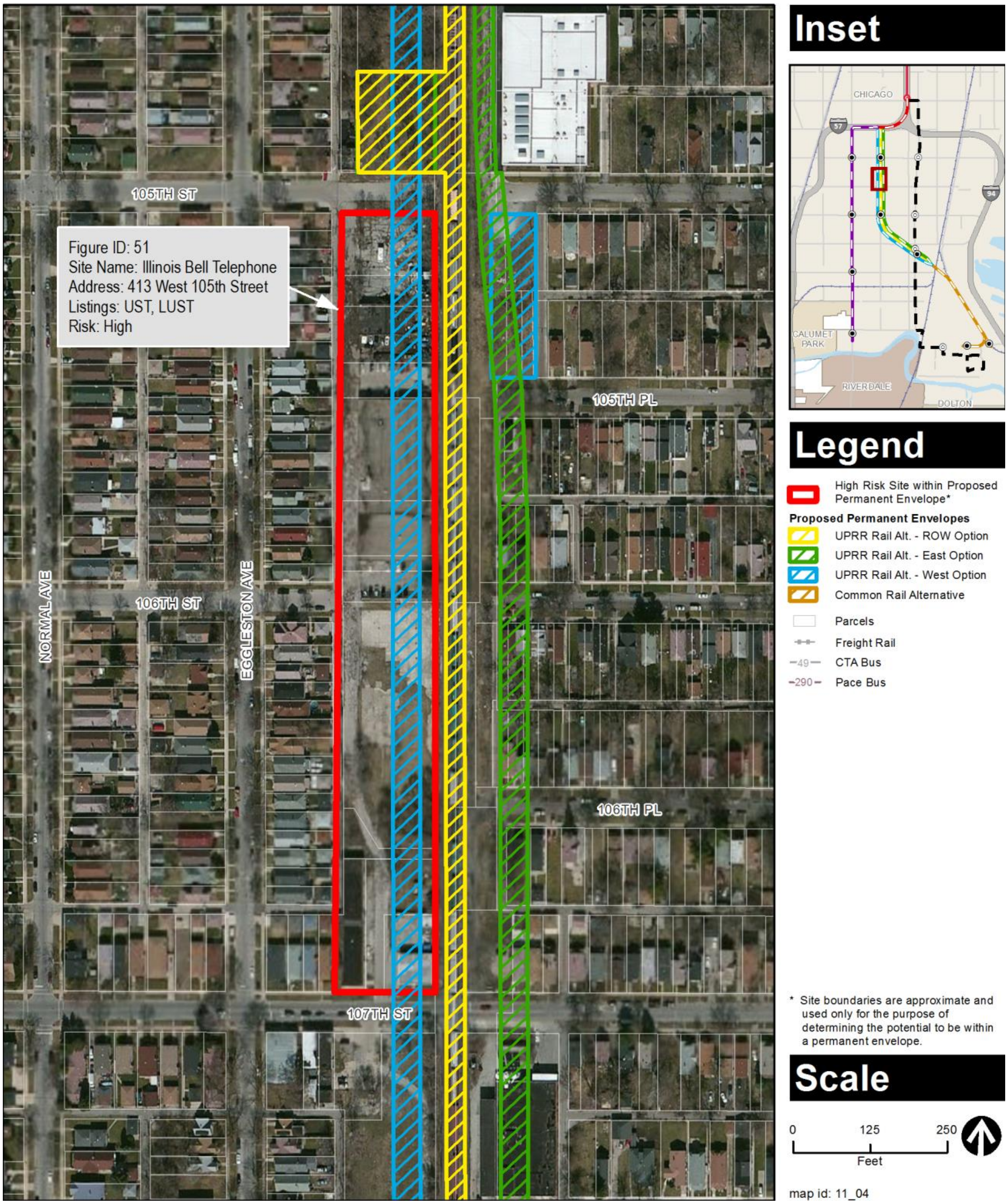
105TH ST
Figure ID: 51
Site Name: Illinois Bell Telephone
Address: 413 West 105th Street
Listings: UST, LUST
Risk: High
105TH PL
NORMAL AVE
EGGLESTON AVE
106TH ST
106TH PL
107TH ST
Inset
CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON
Legend
🟥 High Risk Site within Proposed Permanent Envelope*
Proposed Permanent Envelopes
▨ UPRR Rail Alt. - ROW Option
▨ UPRR Rail Alt. - East Option
▨ UPRR Rail Alt. - West Option
▨ Common Rail Alternative
☐ Parcels
Freight Rail
—49— CTA Bus
—290— Pace Bus
* Site boundaries are approximate and used only for the purpose of determining the potential to be within a permanent envelope.
Scale
0
125
250
Feet
map id: 11_04

Figure A-1: Union Pacific Railroad Rail Alternative, High Concern Site 51

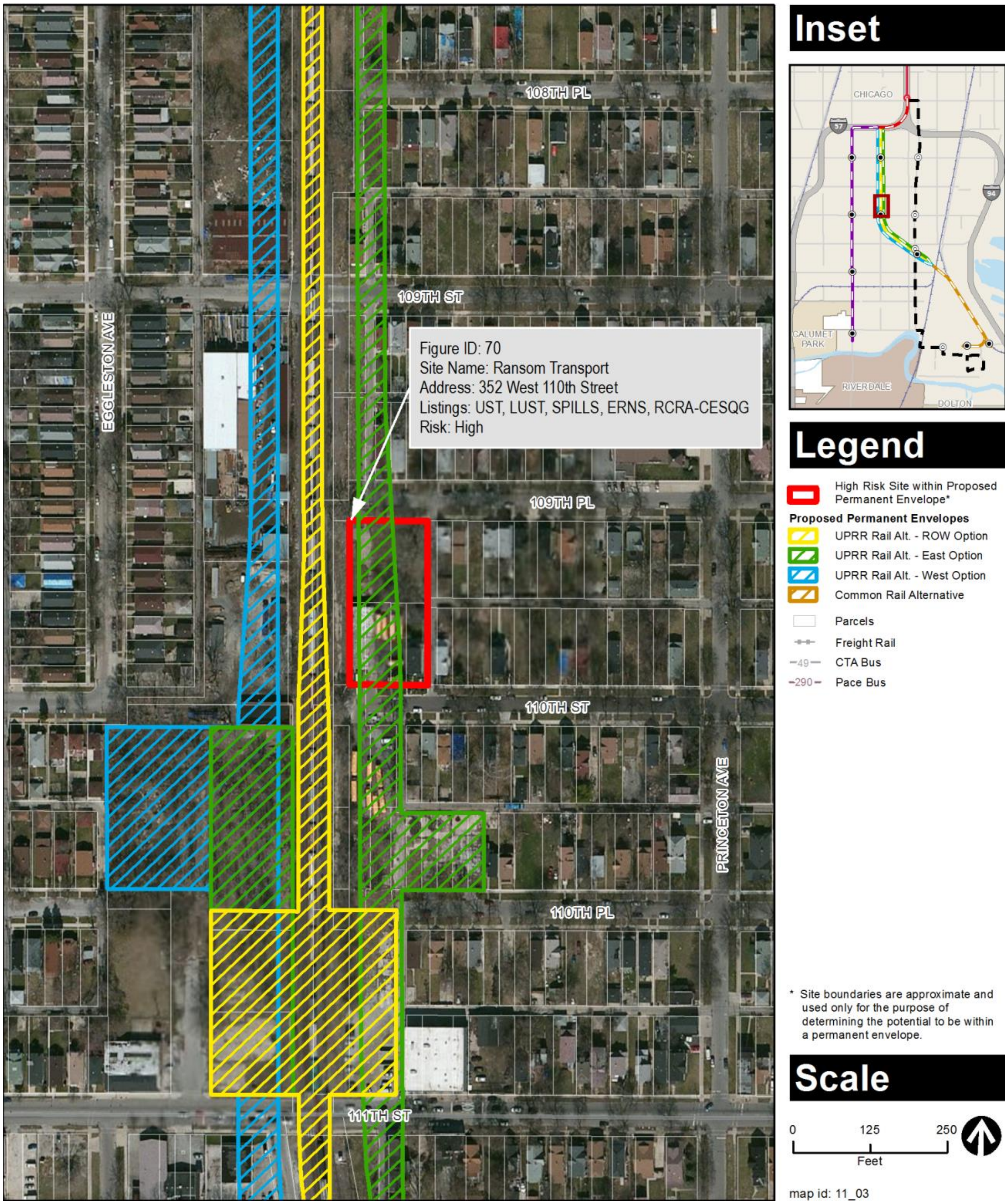

Figure ID: 70
Site Name: Ransom Transport
Address: 352 West 110th Street
Listings: UST, LUST, SPILLS, ERNS, RCRA-CESQG
Risk: High

108TH PL
109TH ST
109TH PL
110TH ST
110TH PL
111TH ST
EGGLESTON AVE
PRINCETON AVE
Inset
CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON
Legend
High Risk Site within Proposed Permanent Envelope*
Proposed Permanent Envelopes
UPRR Rail Alt. - ROW Option
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
Common Rail Alternative
Parcels
Freight Rail
49 CTA Bus
290 Pace Bus
Scale
0
125
250
Feet
map id: 11_03

* Site boundaries are approximate and used only for the purpose of determining the potential to be within a permanent envelope.

Figure A-2: Union Pacific Railroad Rail Alternative, High Concern Site 70

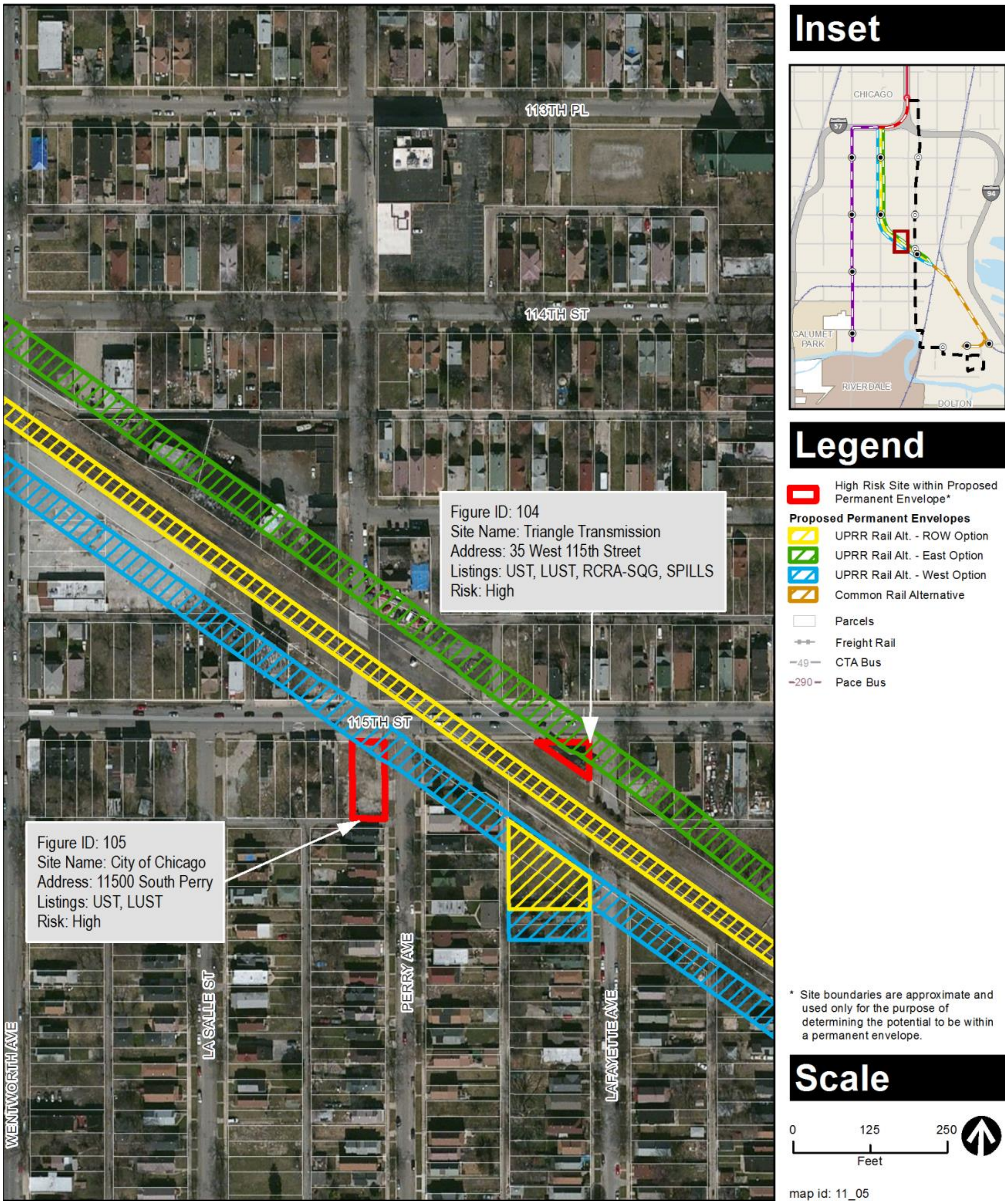
Figure ID: 104
Site Name: Triangle Transmission
Address: 35 West 115th Street
Listings: UST, LUST, RCRA-SQG, SPILLS
Risk: High

Figure ID: 105
Site Name: City of Chicago
Address: 11500 South Perry
Listings: UST, LUST
Risk: High

* Site boundaries are approximate and used only for the purpose of determining the potential to be within a permanent envelope.

map id: 11_05

113TH PL
114TH ST
115TH ST
WENTWORTH AVE
LA SALLE ST
PERRY AVE
LAFAYETTE AVE
Inset
CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON
Legend
🟥 High Risk Site within Proposed Permanent Envelope*
Proposed Permanent Envelopes
UPRR Rail Alt. - ROW Option
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
Common Rail Alternative
Parcels
Freight Rail
49 CTA Bus
290 Pace Bus
Scale
0
125
250
Feet

Figure A-3: Union Pacific Railroad Rail Alternative, High Concern Sites 94a, 104, and 105

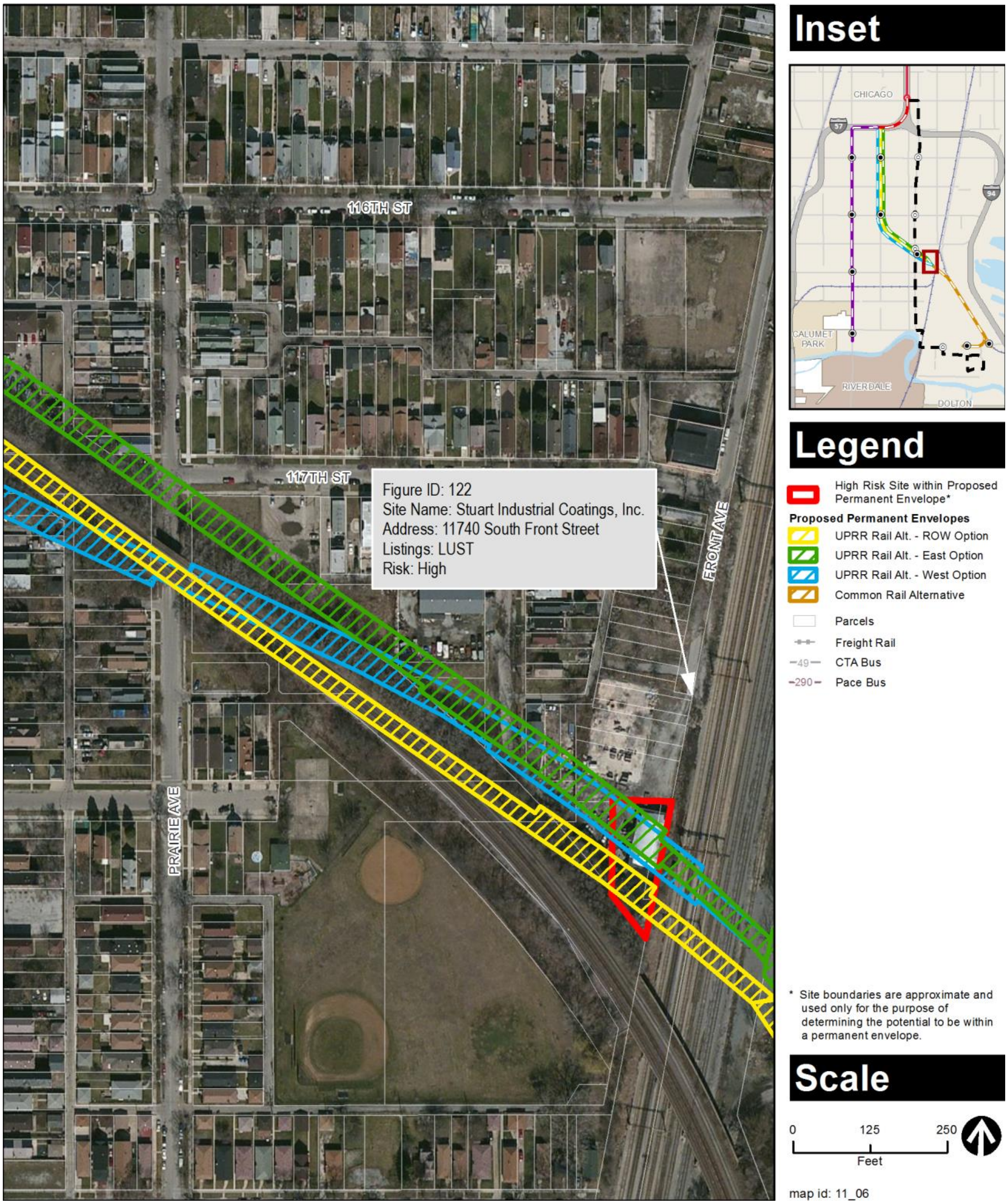
116TH ST
117TH ST
FRONT AVE
PRAIRIE AVE
Inset
CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON
Legend
High Risk Site within Proposed Permanent Envelope*
Proposed Permanent Envelopes
UPRR Rail Alt. - ROW Option
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
Common Rail Alternative
Parcels
Freight Rail
49 CTA Bus
290 Pace Bus
Scale
0
125
250
Feet
map id: 11_06

Figure ID: 122
Site Name: Stuart Industrial Coatings, Inc.
Address: 11740 South Front Street
Listings: LUST
Risk: High

* Site boundaries are approximate and used only for the purpose of determining the potential to be within a permanent envelope.

Figure A-4: Union Pacific Railroad Rail Alternative, High Concern Site 122

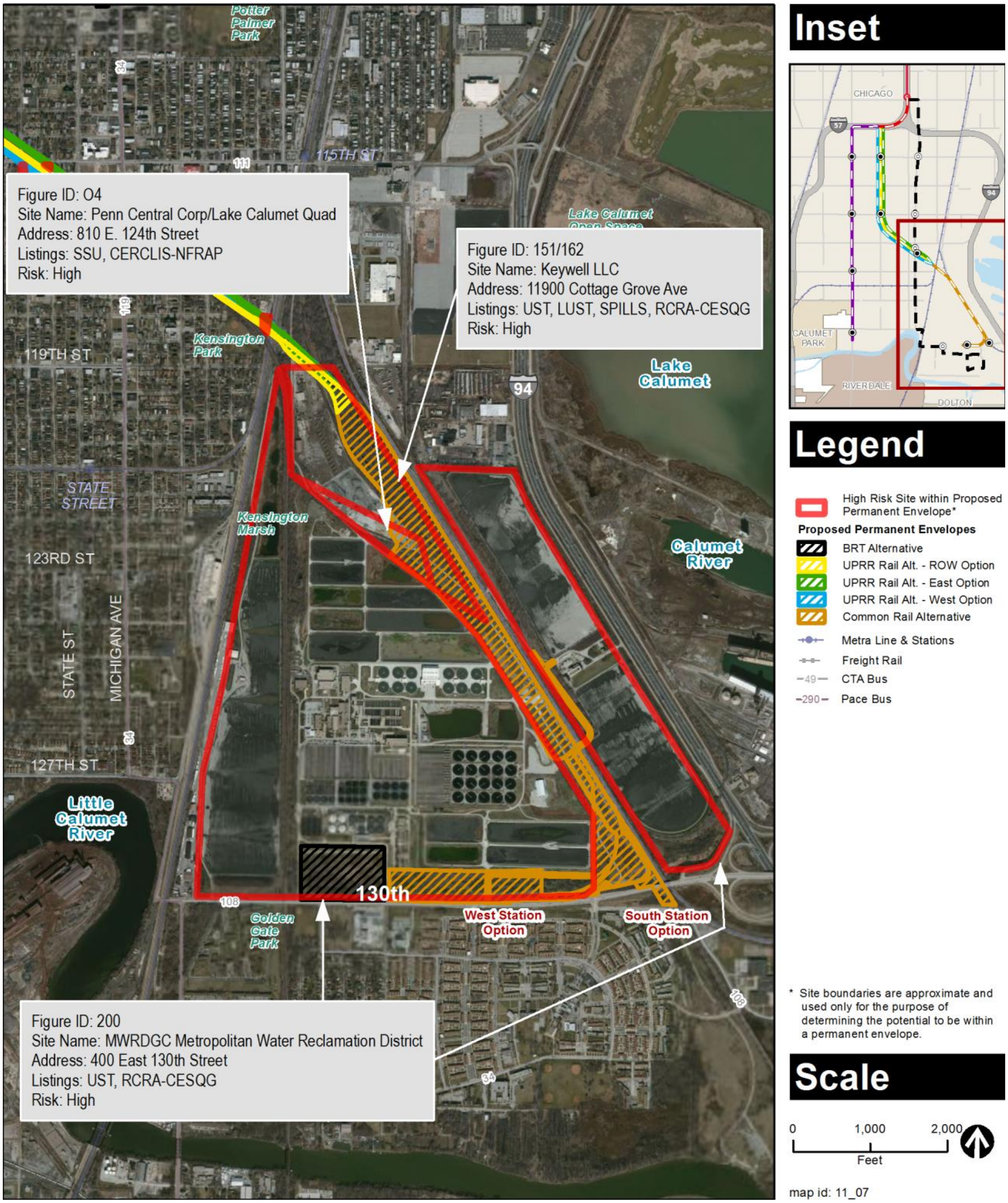

Figure ID: O4
Site Name: Penn Central Corp/Lake Calumet Quad
Address: 810 E. 124th Street
Listings: SSU, CERCLIS-NFRAP
Risk: High

Figure ID: 151/162
Site Name: Keywell LLC
Address: 11900 Cottage Grove Ave
Listings: UST, LUST, SPILLS, RCRA-CESQG
Risk: High

Figure ID: 200
Site Name: MWRDGC Metropolitan Water Reclamation District
Address: 400 East 130th Street
Listings: UST, RCRA-CESQG
Risk: High

Potter Palmer Park
115TH ST
111
Lake Calumet Open Space
119TH ST
Kensington Park
94
Lake Calumet
STATE STREET
Kensington Marsh
123RD ST
Calumet River
STATE ST
MICHIGAN AVE
34
127TH ST
Little Calumet River
130th
108
Golden Gate Park
West Station Option
South Station Option
Inset
CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON
Legend
🟥 High Risk Site within Proposed Permanent Envelope*
Proposed Permanent Envelopes
▨ BRT Alternative
▨ UPRR Rail Alt. - ROW Option
▨ UPRR Rail Alt. - East Option
▨ UPRR Rail Alt. - West Option
▨ Common Rail Alternative
Metra Line & Stations
Freight Rail
49 CTA Bus
290 Pace Bus
Scale
0
1,000
2,000
Feet

* Site boundaries are approximate and used only for the purpose of determining the potential to be within a permanent envelope.

map id: 11_07

Figure A-5: Bus Rapid Transit and Union Pacific Railroad Rail Alternatives, High Concern Sites 151/162, 200, and O4

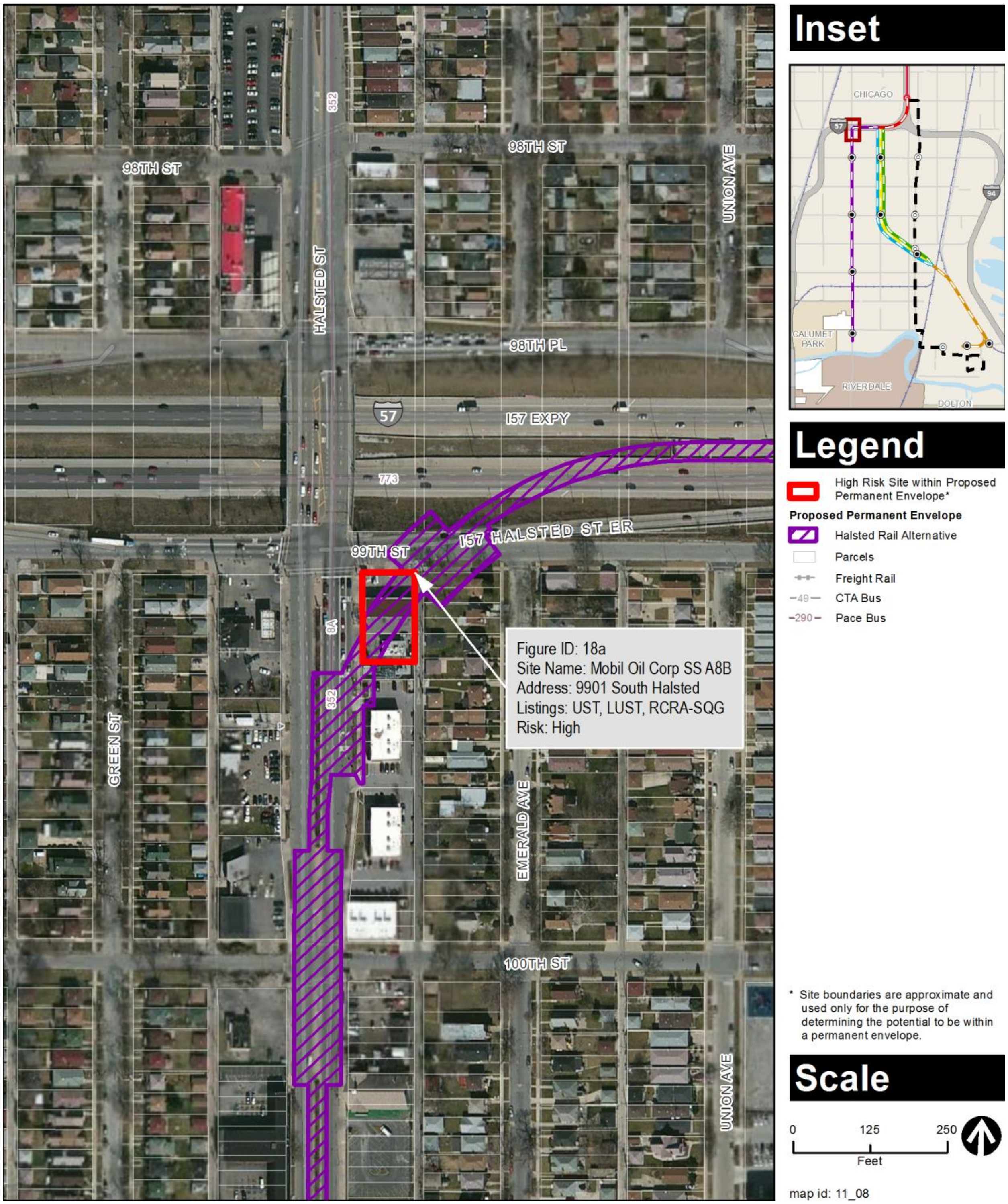
98TH ST
98TH ST
UNION AVE
HALSTED ST
98TH PL
57
I57 EXPY
773
99TH ST
I57 HALSTED ST ER
8A
352
GREEN ST
EMERALD AVE
100TH ST
UNION AVE
Inset
CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON
Legend
High Risk Site within Proposed Permanent Envelope*
Proposed Permanent Envelope
Halsted Rail Alternative
Parcels
Freight Rail
49 CTA Bus
290 Pace Bus
Scale
0
125
250
Feet
map id: 11_08

Figure ID: 18a
Site Name: Mobil Oil Corp SS A8B
Address: 9901 South Halsted
Listings: UST, LUST, RCRA-SQG
Risk: High

* Site boundaries are approximate and used only for the purpose of determining the potential to be within a permanent envelope.

Figure A-6: Halsted Rail Alternative, High Concern Site 18a

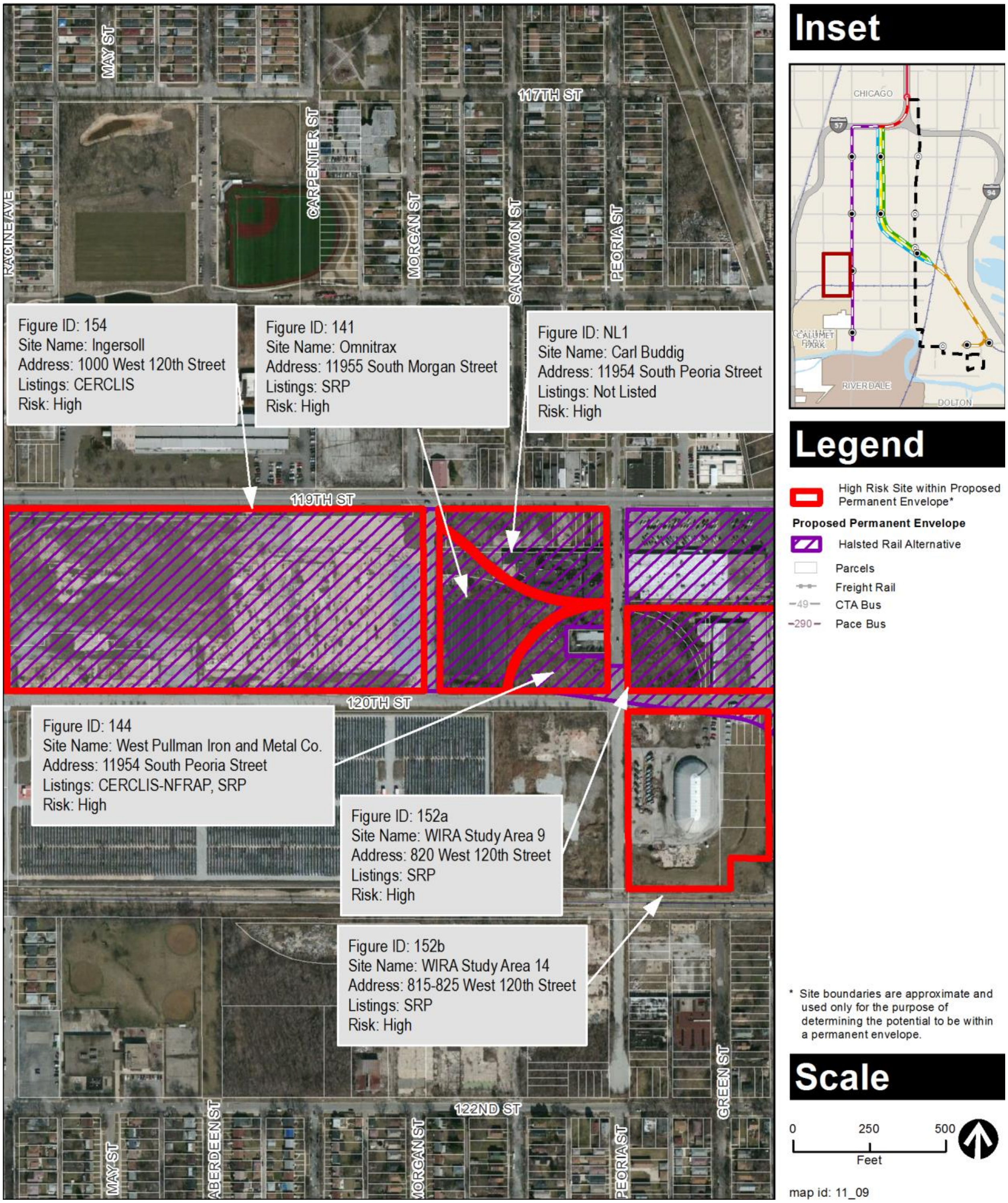
MAY ST
117TH ST
CARPENTER ST
RACINE AVE
MORGAN ST
SANGAMON ST
PEORIA ST
Figure ID: 154
Site Name: Ingersoll
Address: 1000 West 120th Street
Listings: CERCLIS
Risk: High
Figure ID: 141
Site Name: Omnitrax
Address: 11955 South Morgan Street
Listings: SRP
Risk: High
Figure ID: NL1
Site Name: Carl Buddig
Address: 11954 South Peoria Street
Listings: Not Listed
Risk: High
119TH ST
120TH ST
Figure ID: 144
Site Name: West Pullman Iron and Metal Co.
Address: 11954 South Peoria Street
Listings: CERCLIS-NFRAP, SRP
Risk: High
Figure ID: 152a
Site Name: WIRA Study Area 9
Address: 820 West 120th Street
Listings: SRP
Risk: High
Figure ID: 152b
Site Name: WIRA Study Area 14
Address: 815-825 West 120th Street
Listings: SRP
Risk: High
GREEN ST
122ND ST
MAY ST
ABERDEEN ST
MORGAN ST
PEORIA ST
Inset
CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON
Legend
High Risk Site within Proposed Permanent Envelope*
Proposed Permanent Envelope
Halsted Rail Alternative
Parcels
Freight Rail
49 CTA Bus
290 Pace Bus
* Site boundaries are approximate and used only for the purpose of determining the potential to be within a permanent envelope.
Scale
0
250
500
Feet
map id: 11_09

Figure A-7: Halsted Rail Alternative, High Concern Sites 154, 141, NL1, 144, 152a, and 152b

Appendix B
EDR Database Search Report

90786 CTC RLE Hazardous Materials
Cook, IL

Inquiry Number: 3385614.1s
August 10, 2012

EDR DataMap™ Environmental Atlas™

EDR® Environmental Data Resources Inc

440 Wheelers Farms Road
Milford, CT 06461
Toll Free: 800.352.0050
www.edrnet.com

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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FOCUS MAP SUMMARY

	Database	Total Plotted
FEDERAL RECORDS		
	Proposed NPL	0
	Delisted NPL	0
	CERCLIS	8
	CERC-NFRAP	5
	CORRACTS	4
	RCRA-TSDF	1
	RCRA-LQG	3
	RCRA-SQG	71
	RCRA-CESQG	29
	US ENG CONTROLS	0
	US INST CONTROL	0
	ERNS	17
	US BROWNFIELDS	1
STATE AND LOCAL RECORDS		
	IL SSU	3
	IL SWF/LF	1
	IL NIPC	0
	IL LUST	73
	IL UST	141
	WI MANIFEST	1
	NY MANIFEST	1
	IL SPILLS	79
	IL ENG CONTROLS	6
	IL INST CONTROL	9
	IL SRP	26
	IL DRYCLEANERS	5
	IL BROWNFIELDS	0
EDR PROPRIETARY RECORDS		
	Manufactured Gas Plants	0

NOTES:

Sites may be listed in more than one database

EXECUTIVE SUMMARY

TARGET PROPERTY INFORMATION

ADDRESS

COOK, IL
CHICAGO, IL 60628

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records within the requested search area for the following databases:

FEDERAL RECORDS

Proposed NPL	Proposed National Priority List Sites
Delisted NPL	National Priority List Deletions
US ENG CONTROLS	Engineering Controls Sites List
US INST CONTROL	Sites with Institutional Controls

STATE AND LOCAL RECORDS

IL NIPC	Solid Waste Landfill Inventory
IL BROWNFIELDS	Municipal Brownfields Redevelopment Grant Program Project Descriptions

EDR PROPRIETARY RECORDS

Manufactured Gas Plants	EDR Proprietary Manufactured Gas Plants

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified.

The Map ID column refers to the Map ID-Focus Map(s) of the listed site.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

FEDERAL RECORDS

CERCLIS: The Comprehensive Environmental Response, Compensation and Liability Information System contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL.

A review of the CERCLIS list, as provided by EDR, and dated 12/27/2011 has revealed that there are 8

EXECUTIVE SUMMARY

CERCLIS sites within the searched area.

Site	Address	Map ID
109TH PLACE TEAR GAS	SG WEST 109TH PLACE	67-7
SHERWIN WILLIAMS CO	***11541 S CHAMPLAIN AVE***	***112-7,8***
LAKE CALUMET SMELTING	11901 S. CHAMPLAIN AVE.	135-11,12
INGERSOLL	1000 WEST 120TH STREET	154-10
INTERNATIONAL HARVESTER CO W P	***1015 W 120TH ST***	***155-10***
DUTCH BOY	WEST PULLMAN 12042 SOUT	159-10
SOUTH GREEN PLATING SHOP	12130 SOUTH GREEN ST	164-10
PULLMAN FACTORY	130TH ST & INDIANA	202-15

CERC-NFRAP: Archived sites are sites that have been removed and archived from the inventory of CERCLIS sites. Archived status indicates that, to the best of EPA’s knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.

A review of the CERC-NFRAP list, as provided by EDR, and dated 12/28/2011 has revealed that there are 5 CERC-NFRAP sites within the searched area.

Site	Address	Map ID
SHERWIN WILLIAMS CO	***10909 S COTTAGE GROVE A***	***66-7***
INLAND METAL REFINING COMPANY	***651 EAST 119TH STREET***	***129-11,12***
WEST PULLMAN IRON AND METAL CO	11954 S PEORIA AVE	144-10
CALUMET NU-EARTH DIST CENTER	NORTH 130TH ST & DOTY A	193-12,16
CIZCAR ET AL/VACANT LOT	1137-1141 VERMONT AVE	195-14

CORRACTS: CORRACTS is a list of handlers with RCRA Corrective Action Activity. This report shows which nationally-defined corrective action core events have occurred for every handler that has had corrective action activity.

A review of the CORRACTS list, as provided by EDR, and dated 08/19/2011 has revealed that there are 4 CORRACTS sites within the searched area.

Site	Address	Map ID
SHERWIN WILLIAMS CO	***10909 S COTTAGE GROVE A***	***66-7***
SHERWIN WILLIAMS CO	***11541 S CHAMPLAIN AVE***	***112-7,8***
INLAND METAL REFINING COMPANY	***651 EAST 119TH STREET***	***129-11,12***
INTERNATIONAL HARVESTER CO W P	***1015 W 120TH ST***	***155-10***

EXECUTIVE SUMMARY

RCRA-TSDF: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

A review of the RCRA-TSDF list, as provided by EDR, and dated 03/15/2012 has revealed that there is 1 RCRA-TSDF site within the searched area.

Site	Address	Map ID
SHERWIN WILLIAMS CO	***11541 S CHAMPLAIN AVE***	***112-7,8***

RCRA-LQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

A review of the RCRA-LQG list, as provided by EDR, and dated 03/15/2012 has revealed that there are 3 RCRA-LQG sites within the searched area.

Site	Address	Map ID
CHICAGO DEPT OF ENV (SPILL)	11100 S STEWART AVE (SP	81-6
SHERWIN WILLIAMS CO	***11541 S CHAMPLAIN AVE***	***112-7,8***
QUALA SERVICES LLC	803 E 120TH ST	147-12

RCRA-SQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

A review of the RCRA-SQG list, as provided by EDR, and dated 03/15/2012 has revealed that there are 71 RCRA-SQG sites within the searched area.

Site	Address	Map ID
GILLESPIE SCH	9301 S STATE	2-2
CITY OF CHICAGO (ABANDONMENT)	9431 S VERNON	3-2
AMOCO 5921	400 E 95TH ST AND KING	5-2
AMOCO 15459	36 W 95TH AND LAFAYETTE	9-2
EVERS	9811 S LOWE	14-1,3
MOBIL OIL CORP SS A8B	9901 S HALSTED	18-3
BHAGATS AMOCO	9900 S HALSTED	18-3
SWEIS RAY TOWN AND COUNTRY MIN	10007 S MICHIGAN AVE	20-4
JOY AUTO REPAIR	10001 S HALSTED	21-3
BELL BROS 29 MIN CLEANERS INC	10000 S HALSTED ST	21-3
FERNWOOD	10041 S UNION	22-3
BENNETT	10115 S PRAIRIE AVE	23-4
WALGREENS NO 1069	319 E 103RD ST	31-4
WALGREENS STORE #5123	10300 S MICHIGAN	32-4

EXECUTIVE SUMMARY

Site	Address	Map ID
F & R QUALITY CLEANERS	201 W. 103RD ST.	34-4
HARDY CORP	***711 W 103RD ST***	***36-3***
DELITE CLEANERS	816 W 103RD ST	37-3
MCDONNELL CLEANERS	932 W 103RD ST	38-3
AMOCO 8614	10301 S HALSTED ST	39-3
GARVEY	10309 S MORGAN	40-3
AMERICAN IDEAL	10351 S MICHIGAN AVE	42-4
MICHIGAN AVENUE COLLISION	10554 S MICHIGAN	52-4
WALGREEN N0 2300	10620 S HALSTED ST	57-3
BETTY BRITE CLEANERS	10630 S HALSTED	57-3
GTE SERVICE CTR INC	10635 S WENTWORTH	58-4
RAYS CLEANERS	10738 S MICHIGAN AVE	60-4
VAN VLISSINGEN PETER SCHOOL	***137 W 108TH PL***	***63-4,7***
DUNNE	10845 S UNION	64-3,6
WALGREENS 2210	11040 S MICHIGAN AVE	72-7
SOUTH SIDE PREP ACADEMY	250 E 111TH ST	74-7
STAR CLEANERS	149 W 111TH ST	80-7
PENTECOSTAL TEMPLE CHURCH OF G	415 THRU 419 W 111TH ST	81-6
SEW CLEAN	519 W 111TH ST	82-6
JOHNS CLEANERS	11129 S HALSTED	84-6
LONGS GARDEN CENTER INC	***11226 S HALSTED***	***87-6***
KLEEN TOWNE CLEANERS	***11249 S HALSTED***	***88-6***
BRENAN SCHOOL	11411 EGGLESTON	95-6
GOODYEAR AUTO SERVICE CTR	11442 S MICHIGAN AVE	98-7
QUALITY MUFFLER	11453 S HALSTED	99-6
ILLINOIS CENTRAL RAILROAD	115TH & COTTAGE GROVE	101-7
TRIANGLE TRANSMISSION	***35 W 115TH ST***	***104-7***
CHICAGO HOSUING AUTHORITY	833 W 115TH ST	107-6
GONNELLA BAKING CO	318 E KENSINGTON	116-7
ROSELAND AUTO BODY	821 W 116TH ST	119-6
STUART INDUSTRIAL COATINGS INC	11740 S FRONT ST	125-7
SCHNEIDER TANK LINES	11861 SOUTH COTTAGE GRO	143-11
CLEAN HARBORS ENV SERVICES	11861 COTTAGE GROVE-BLD	143-11
BULKMATIC TRANSPORT CO	12000 S DOTY AVE	146-12
NORTRU INC TRANSPORTATION GROU	801 E 120TH ST	147-12
COMED-MANHOLE	120TH ST & PRINCETON	148-11
HARBOR TOOL MFG INC	12140 S PEORIA AVE	165-10
MODERN STEEL	1010 W 122RD ST	166-10
BIG MELS CLEANERS	12256 S HALSTED	168-10
METRA	12301 S INDIANA AVE	170-11
GOMPERS SCH	12302 S STATE	171-11
AAMCO	12307 S HALSTED	172-10
METCALFE SCHOOL	12339 S NORMAL	173-10
NANSEN SCHOOL	12607 S UNION	179-10
COM ED	48 E 127TH ST	183-11
NACME STEEL PROCESSING LLC	429 W 127TH ST	186-10
CEDAR PARK CEMETERY	***12540 S HALSTED ST***	***188-10***
METAL MANAGEMENT MIDWEST INC	12701 S DOTY AVE-B	189-12
YOUNGS AUTO SUPPLY INC	12853 S HALSTED	194-10,14
CHICAGO, CITY OF	1100 E 130TH PL	196-16
MOBILE STORAGE GROUP	1465 E 130TH ST	197-16
LAND & LAKES TRANSFER STATION	1258-1300 E 130TH ST	199-16
SMITH TIRE SERVICE	13004 S INDIANA	202-15
CARVER MILITARY ACADEMY	13100 S DOTY AVE	207-16
DUBOIS	330 E 133RD ST	209-15
CARVER PRIMARY	901 E 133RD PL	210-16

EXECUTIVE SUMMARY

Site	Address	Map ID
CARVER MIDDLE	801 E 133RD PL	211-16

RCRA-CESQG: RCRAInfo is EPA’s comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

A review of the RCRA-CESQG list, as provided by EDR, and dated 03/15/2012 has revealed that there are 29 RCRA-CESQG sites within the searched area.

Site	Address	Map ID
TURNER DREW LANGUAGE ACADEMY	9300 S PRINCETON AVE	1-2
HARLAN COMMUNITY ACADEMY HS	9652 S MICHIGAN AVE	12-2
SHEDD BRANCH SCHOOL	200 E 99TH ST	17-4
ABA NORGETOWN	437 E 103RD ST	26-4
HUGHES LANGSTON SCHOOL	226 W 104TH ST	44-4
KOHN SCHOOL	10414 S STATE ST	46-4
MOUNT VERNON ELEMENTARY	10540 S MORGAN ST	53-3
COM ED	10847 S MICHIGAN AVE	62-4,7
ROSELAND AUTO SALES INC	271 E 110TH ST	69-7
RANSOM TRANSPORT	352 W 110TH ST	70-6,7
PALMER PARK	201 E 111TH ST	75-7
FENGER SCH	11220 S WALLACE	86-6
CURTIS ELEMENTARY	32 E 115TH ST	102-7
BETTY BRITE CLEANERS	11518 S MICHIGAN AVE	111-7
PEP BOYS #891	11550 SO HALSTED	114-6
SONGHAI LEARNING INSTITUTE	11725 S PERRY AVE	123-7
AMERICAN CLYBOURN FINISHING CO	11730 S FRONT ST	125-7
US GEAR CORP/HEAT TREAT CORP	1020-1120 W 119TH ST	137-10
WEST PULLMAN SCHOOL	11941 S PARNELL AVE	142-10
KEYWELL LLC	11900 COTTAGE GROVE AVE	151-11
EXELON SOLAR PLANT	1201 W 120TH ST	156-10
PRAXAIR DISTRIBUTION INC	12054 SOUTHWEST DOTY AV	157-12
OWENS JESSE COMMUNITY ACADEMY	12450 S STATE ST	176-11
WALGREENS #0186	12635 S HALSTED	182-10
AIRGAS SPECIALTY GASES	12722 S WENTWORTH AVE	187-11
MWRDGC METROPOLITAN WATER RECL	***400 E 130TH ST***	***200-15***
CARVER PARK	939 E 132ND ST	205-16
ALTGELD GARDENS	977 E 132ND STREET	205-16
WHEATLEY PHYLLIS CENTER	902 E 133RD PL	210-16

ERNS: The Emergency Response Notification System records and stores information on reported releases of oil and hazardous substances. The source of this database is the U.S. EPA.

A review of the ERNS list, as provided by EDR, and dated 04/02/2012 has revealed that there are 17 ERNS sites within the searched area.

EXECUTIVE SUMMARY

Site	Address	Map ID
Not reported	GLISBEE SCHOOL, 9301 S.	2-2
Not reported	10135 SOUTH YALE ST	25-4
Not reported	240 EAST 106TH ST	54-4
Not reported	240 EAST 106 TH STREET	54-4
Not reported	CALUMET YARD 204 EAST 1	55-4
Not reported	1040 WEST 106TH ST	56-3
Not reported	352 WEST 110 ST	70-6,7
Not reported	11255 S EGGLESTON ST	89-6
Not reported	803 EAST 120TH ST.	147-12
Not reported	803 EAST 120TH ST.	147-12
Not reported	12000 SOUTH EMERALD	150-10
Not reported	12101 S. DOTY	161-12
Not reported	12101 SOUTH DOTY AVE DO	161-12
Not reported	25 EAST 126TH STREET	181-11
Not reported	633 EAST 130TH ST.	203-15,16
Not reported	941 E 132ND STREET	205-16
Not reported	13201 SOUTH ELLIS	206-16

US BROWNFIELDS: The EPA’s listing of Brownfields properties from the Cleanups in My Community program, which provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

A review of the US BROWNFIELDS list, as provided by EDR, and dated 06/27/2011 has revealed that there is 1 US BROWNFIELDS site within the searched area.

Site	Address	Map ID
FORMER AMFORGE FACILITY	1250 W. 119TH STREET	139-10

STATE AND LOCAL RECORDS

IL SSU: The State Response Action Program database identifies the status of all sites under the responsibility of the Illinois EPA’s State Sites Unit.

A review of the IL SSU list, as provided by EDR, and dated 07/10/2012 has revealed that there are 3 IL SSU sites within the searched area.

Site	Address	Map ID
U.S. SCRAP	391 EAST KENSINGTON	115-7
INLAND METAL REFINING COMPANY	***651 EAST 119TH STREET***	***129-11,12***
DUTCH BOY PAINT	12042 SOUTH PEORIA	159-10

EXECUTIVE SUMMARY

IL SWF/LF: The Solid Waste Facilities/Landfill Sites records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. The data come from the Illinois Environmental Protection Agency's Available Disposal for Solid Waste in Illinois--Solid Waste Landfills Subject to State Surcharge list.

A review of the IL SWF/LF list, as provided by EDR, and dated 12/31/2010 has revealed that there is 1 IL SWF/LF site within the searched area.

Site	Address	Map ID
US SCRAP	391 E KENSINGTON	115-7

IL LUST: The Leaking Underground Storage Tank Incident Reports contain an inventory of reported leaking underground storage tank incidents. The data come from the Illinois Environmental Protection Agency's LUST Incident Report.

A review of the IL LUST list, as provided by EDR, and dated 03/22/2012 has revealed that there are 73 IL LUST sites within the searched area.

Site	Address	Map ID
QUALITY CAR WASH	9417 SOUTH STATE ST.	4-2
NFA/NFR Letter: 04/08/1997		
BP	***400 EAST 95TH STREET***	***5-2***
SHELL OIL CO.	9500 SOUTH MARTIN LUTHE	5-2
NFA/NFR Letter: 05/27/2004		
S.W.C. 95TH & MLK LLC	347 EAST 95TH STREET	6-2
MEDLEY'S MOVING & STORAGE	251 EAST 95TH ST.	7-2
NFA/NFR Letter: 06/23/2011		
MEDLEY'S MOVING & STORAGE	251 EAST 95TH ST.-B	7-2
NFA/NFR Letter: 11/15/2000		
SHELL OIL CO.	4 EAST 95TH ST.	8-2
AMOCO SERVICE STATION #15459.	36 WEST 95TH ST.	9-2
NFA/NFR Letter: 05/07/2003		
ABBOTT	49 EAST 95TH ST.	10-2
ABBOTT	45 EAST 95TH ST.	10-2
EQUILON ENTERPRISES LLC	9811 HALSTED	15-1,3
NFA/NFR Letter: 09/14/2005		
SECRETARY OF STATE - DRIVER FA	9901 DR MARTIN LUTHER K	16-4
NFA/NFR Letter: 11/17/1995		
BP	***9900 SOUTH HALSTED STRE***	***18-3***
MOBIL OIL CO.	05A8B MOBILE ST./9901 S	18-3
AMOCO OIL CO. #15525	99TH & HALSTED	18-3
TOWN & COUNTRY GAS MART	10007 SOUTH MICHIGAN AV	20-4
NFA/NFR Letter: 01/27/2009		
HESTER, FRANNY	10101-03 SOUTH HALSTED	24-3
KADALIMATTON, SIBI	446 EAST 103RD ST.	26-4
VACANT JIFFY LUBE STORE 208	***350 EAST 103RD STREET***	***29-4***
AGUILAR, ABEL	415 EAST 103RD ST.	30-4
AMOCO OIL CO. #15991	10301 SOUTH STATE ST.	33-4
ONE HOUR MARTENIZING	201 WEST 103RD ST.	34-4
NFA/NFR Letter: 02/27/1991		
NFA/NFR Letter: 02/27/1991		

Site	Address	Map ID
VACANT LOT	***201-217 EAST 23RD STREE***	***34-4***
NFA/NFR Letter: 11/17/2004		
HARDY CORP	***711 W 103RD ST***	***36-3***
MUSTAFA, KHADIM	10301 SOUTH HALSTED	39-3
NFA/NFR Letter: 11/21/2008		
NFA/NFR Letter: 07/30/2008		
CHICAGO, CITY OF	351 WEST 104TH ST.	45-3
NFA/NFR Letter: 09/19/1995		
NEIGHBORHOOD HOUSING SERVICES	10426 SOUTH MICHIGAN AV	47-4
NFA/NFR Letter: 06/09/2010		
ILLINOIS BELL TELEPHONE	413 WEST 105TH STREET	51-3
NFA/NFR Letter: 03/21/2005		
C & O AUTO REBUILDERS	10554 SOUTH MICHIGAN AV	52-4
NFA/NFR Letter: 03/31/2008		
SHELL OIL CO.	10655 SOUTH HALSTED	59-3
NFA/NFR Letter: 09/07/1999		
WILLIAM RANSOM TRANSPORTATION	352 WEST 110TH ST.	70-6,7
SOUTHSIDE COLLEGE PREPATORY AC	***250 EAST 111TH ST.***	***74-7***
NFA/NFR Letter: 06/29/2000		
YMCA	4 EAST 111TH ST.	76-7
NFA/NFR Letter: 02/24/2009		
ROSELAND MARATHON	***2 WEST 111TH STREET***	***76-7***
ROSELAND MEDICAL CENTER	100-136 WEST 111TH STRE	78-7
NFA/NFR Letter: 01/25/2008		
PENTICOSTAL TEMPLE	419 WEST 111TH ST.	81-6
34 WARD OFFICE/CITY OF CHICAGO	***507 WEST 111TH STREET***	***82-6***
NFA/NFR Letter: 08/24/2004		
LONGS GARDEN CENTER INC	***11226 S HALSTED***	***87-6***
NFA/NFR Letter: 02/19/1999		
PULLMAN CO	***65 WEST 113TH PLACE***	***93-7***
NFA/NFR Letter: 05/04/2004		
MARQUETTE BANK	135-39 WEST 114TH ST.	94-7
TADROS, MUSA	11442 SOUTH MICHIGAN AV	98-7
NFA/NFR Letter: 01/27/1998		
FIRST COOK COMM. BANK	11453 SOUTH HALSTED ST.	99-6
NFA/NFR Letter: 08/18/1992		
FRIESON, PHYLLIS	342 EAST 115TH STREET	100-7
NFA/NFR Letter: 05/29/2007		
ABANDONED GAS STATION	***2 WEST 115TH STREET***	***103-7***
TRIANGLE TRANSMISSION	***35 W 115TH ST***	***104-7***
CHICAGO, CITY OF	11500 SOUTH PERRY	105-7
COMMUNITY HIGH SCHOOL DIST. #2	731 WEST 115TH ST.	106-6
NFA/NFR Letter: 10/18/1995		
CHICAGO HOUSING AUTHORITY	***833 WEST 115TH STREET***	***107-6***
NFA/NFR Letter: 11/01/2010		
AMOCO OIL	***11500 SOUTH HALSTED STR***	***108-6***
NFA/NFR Letter: 09/05/2003		
MOBIL CARWASH	***11501 SOUTH HALSTED STR***	***108-6***
NFA/NFR Letter: 11/15/2002		

EXECUTIVE SUMMARY

Site	Address	Map ID
E.J. BROWNLEE TRANSPORTATION NFA/NFR Letter: 04/01/1999	1001 WEST 115TH ST.	109-6
KENSINGTON SERV STATION	162 E KENSINGTON	117-7
CLARK OIL & REFINING NFA/NFR Letter: 01/09/1995	11555 SOUTH MICHIGAN AV	118-7
MICKEY'S AUTO SERVICE CENTER	***11656 SOUTH HALSTED AVE***	***121-6***
STUARTS CHEMICAL & PAINT	11740 FRONT ST.	122-7
HUFF & HUFF INC.	651 EAST 179TH ST.	131-12
GREATER CANAAN BAPTIST CHURCH NFA/NFR Letter: 12/12/2007	38 WEST 119TH STREET	132-11
CHICAGO, CITY OF	11900 SOUTH STATE ST.	133-11
BIG SAM'S PROPERTIES	333 WEST 119TH STREET	134-10,11
CHICAGO, CITY OF - DEPARTMENT	1220 WEST 119TH STREET	138-10
BULKOA INC NFA/NFR Letter: 04/08/2003	11861 S COTTAGE GROVE A	143-11
SANDHU PETROLEUM, INC.	11957 SOUTH HALSTED STR	145-10
PSC CONTAINER SERVICES, LLC	803 EAST 120TH ST.	147-12
KEYWELL CO. NFA/NFR Letter: 01/24/1996	***11900 SOUTH COTTAGE GRO***	***151-11***
INTERNATIONAL HARVESTER NFA/NFR Letter: 10/14/2010 NFA/NFR Letter: 10/14/2010	***1015 WEST 120TH STREET***	***155-10***
CHICAGO MALLEABLE CASTINGS	***1201 WEST 120TH STREET***	***156-10***
HANCOCK HOUSE LLC	***12045 SOUTH EMERALD AVE***	***160-10***
BANK OF COMMERCE AND IND NFA/NFR Letter: 07/12/1991	12300 S MICHIGAN AVE	169-11
RED'S CHECKPOINT NFA/NFR Letter: 07/11/2002	12535 SOUTH HALSTED ST.	178-10
PROGRESSIVE BAPTIST CHURCH	26 EAST 127TH ST.	184-11
CEDAR PARK CEMETERY	***12540 S HALSTED ST***	***188-10***
CHRIST CHURCH	12844 SOUTH HALSTED ST.	194-14
CHICAGO HOUSING AUTHORITY NFA/NFR Letter: 09/10/2007	***940 EAST 132ND STREET***	***205-16***

IL UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the Illinois State Fire Marshal's STC Facility List.

A review of the IL UST list, as provided by EDR, and dated 05/01/2012 has revealed that there are 141 IL UST sites within the searched area.

Site	Address	Map ID
CITGO SUPER WASH & WAX	9417 S. STATE STREET	4-2
BP	***400 EAST 95TH STREET***	***5-2***
SHELL STATION 1545-28	9500 S MARTIN LUTHER KI	5-2
VACANT LAND	333 E. 95TH STREET	6-2
MEDLEY MOVING & STORAGE, INC.	251 E 95TH ST	7-2
MOBIL GAS & FOOD MART	4 E. 95TH STREET	8-2
SS#15459 FAC#10443	36 W. 95TH ST.	9-2

EXECUTIVE SUMMARY

Site	Address	Map ID
ATLANTIC RICHFIELD CO	1 E 95TH ST	9-2
ABBOTT PARK FIELDHOUSE	49 E 95TH ST	10-2
CHICAGO STATE UNIVERSITY	9501 S DR KINGS DR	11-2
ANCHOR PRUDENTIAL HMO	9718 SOUTH HALSTED	13-1
SHELL	9802 S. HALSTED	15-1,3
CLARK GAS	9811 S. HALSTED	15-1,3
DRIVER SER FACILITY	9901 S MARTIN LUTHER KI	16-4
MOBIL #10769	9901 SOUTH HALSTEAD STR	18-3
BP	***9900 SOUTH HALSTED STRE***	***18-3***
#013611	9948 S HALSTED	19-3
O.S. CORPORATION D/B/A CITGO	10007 S. MICHIGAN AVENU	20-4
JOY AUTO SERVICE	10001 SOUTH HALSTED STR	21-3
FERNWOOD TOWING & TUNE-UPS	10101-10103 S ASHLAND	24-3
R & R MARATHON	446 E. 103RD STREET	26-4
METROPOLITAN FAMILY SERVICES	235E 103RD ST	27-4
#014816	214 E 103RD ST	27-4
VACANT JIFFY LUBE STORE 208	***350 EAST 103RD STREET***	***29-4***
VACANT BUILDING	415 E 103RD AVE THIRD P	30-4
G&J AUTOMOTIVE	122 E 103RD ST	32-4
E-Z GO #077	10301 S MICHIGAN AVE	32-4
SHELL STATION 1545-68	1 W 103RD ST STATE	33-4
MARATHON GAS STATION & MINI-MA	10301 S STATE ST	33-4
AMOCO SS #15991 FACILITY#11758	103RD & STATE 18599	34-4
CITGO	210 W. 103RD STREET	34-4
VACANT LOT	***201-217 EAST 23RD STREE***	***34-4***
MCCORMICK PLACE VACANT LOT	201-217 E. CERMAK RD.	34-4
CONSTRUCTION SITE	201-231 W. 87TH STREET	34-4
HARDY CORP	711 W 103RD ST	36-3
MARATHON GAS AND FOOD	10301 S. HALSTED STREET	39-3
AMERICAN IDEAL CLEANING CO., I	10351 S. MICHIGAN AVE.	42-4
VACANT PROPERTY	10400-10420 S. MICHIGAN	43-4
CHICAGO FIRE DEPARTMENT ENGINE	330 WEST 104TH STREET	45-3
ROSELAND PUMPING STATION	351 W 104TH ST	45-3
VACANT PROPERTY	10426 S. MICHIGAN AVENU	47-4
FERNWOOD PLAYGROUND PARK	10436 S WALLACE	49-3
OUR #52-9652-105	NWC HALSTED & 105TH ST	50-3
IL BELL TELEPHONE CO	413 W 105TH	51-3
AUTO REPAIR SHOP	10554 S. MICHIGAN AVENU	52-4
GT&T SERVICE CENTER INC	10635 S WENTWORTH AVE	58-4
CITGO GAS & MINI MART	10655 S HALSTED ST	59-3
VACANT RESIDENTIAL BUILDING	226-248 W 107TH PLACE	61-4
VAN VLISSINGEN PETER SCHOOL	***137 W 108TH PL***	***63-4,7***
VACANT APARTMENT BUILDING	10834 S PERRY AVE	65-4,7
ROSELAND AUTO SALES CO	27 E 110TH ST	68-7
RANSOM TRANSPORT BUS GARAGE	352 W 110TH ST	70-6,7
PULLMAN BRANCH LIBRARY	11011 S INDIANA	71-7
MUFFLER & BRAKE MAN, INC.	11038 SOUTH HALSTED	73-6
MUFFLER & BRAKE MAN CAR CARE C	11048 S HALSTED ST	73-6
SOUTHSIDE COLLEGE PREPATORY AC	***250 EAST 111TH ST.***	***74-7***
ROSELAND MARATHON	***2 WEST 111TH STREET***	***76-7***
PHILLIPS 66	11100 S. STATE STREET	76-7
ABANDONED SERVICE STATION	68 W 111TH ST	77-7
ANGELICA HEALTHCARE SERVGROUP	100 - 140 W. 111TH STRE	78-7
ROSELAND COMMUNITY HOSPITAL	45 WEST 111TH STREET	79-7
34 WARD OFFICE/CITY OF CHICAGO	***507 WEST 111TH STREET***	***82-6***
GJK PETROLEUM, INC.	734 W. 111TH STREET	83-6

EXECUTIVE SUMMARY

Site	Address	Map ID
KANG WON H	11201-227 S MICHIGAN AV	85-7
LONG-GARDEN-CENTER INC	11226 S HALSTED	87-6
DEVOTION UNISEX BEAUTY SALON	11300 S HALSTED ST	90-6
VACANT BULDING	11321 S WENTWORTH AVENU	91-7
WHITMAL OIL SER INC	11328 S HALSTED	92-6
PULLMAN CO	***65 WEST 113TH PLACE***	***93-7***
VACANT BUILDING	133-37 W 114TH ST THRID	94-7
MCDONALD’S CORP.	11421 S. HALSTED STREET	96-6
TORINO GARAGE	11439 S COTTAGE GROVE	97-7
GOODYEAR TIRE & RUBBER	11442 S MICHIGAN AVE	98-7
FORMER QUALITY MUFFLER SHOP	11453 S HALSTED ST	99-6
USED APPLLIANCE STORE	342-44 E. 115TH STREET	100-7
ILLINOIS CENTRAL RAILROAD	11500 S COTTAGE GROVE	101-7
SHERWIN WILLIAMS CHICAGO FACIL	549 E. 115TH ST.	101-7
CURTIS SCHOOL	32 E 115TH ST	102-7
ABANDONED GAS STATION	***2 WEST 115TH STREET***	***103-7***
TRIANGLE TRANSMISSION	***35 W 115TH ST***	***104-7***
ABANDONED SERVICE STATION	11500 S PERRY	105-7
CHA WAREHOUSE	833 W 115TH ST	107-6
AMOCO OIL	***11500 SOUTH HALSTED STR***	***108-6***
FORMER CHA WAREHOUSE	901 W. 115TH STREET	108-6
MOBIL CARWASH	***11501 SOUTH HALSTED STR***	***108-6***
0415 CLARK SER STATION	11525 S HALSTED ST	108-6
E J BROWNLEE TRANSPORTATION IN	1001 W 115TH ST	109-6
CATHOLIC CONVENT	11515 S. PRAIRIE AVENUE	110-7
KENSINGTON SERVICE STATION	162 E KENSINGTON	117-7
0707 CLARK SER STATION	11555 S MICHIGAN AVE	118-7
MICHIGAN CITGO	11600 S MICHIGAN AVE	120-7
ABANDONED SERVICE STATION	11700 S HALSTED	124-6
STUART INDUSTRIAL COATINGS INC	11740 S FRONT ST	125-7
VACANT LAND	11819 - 11849 SOUTH GRE	127-6,10
GREATOR CANAAN MBC/VACANT LOT	11856 S. LAFAYETTE	128-7,11
INLAND METALS REFINING CO INC	651 E 119TH ST	129-11,12
ABANDONED SERVICE STATION	11900 S STATE STREET	133-11
BIG SAM’S GROCERS	333 W. 119TH STREET	134-10,11
CONSTRUCTION SITE (FUTURE RJKC	1220 W. 119TH STREET	138-10
AMFORGE	1324 W. 119TH STREET	140-9,10
BULKOA INC	11861 S COTTAGE GROVE A	143-11
CONOCO PHILLIPS 66	11959 S. HALSTED	145-10
ALLWASTE CONTAINER SERVICES	803 E 120TH ST	147-12
PRAYER WARRIORS BAPTIST CHURCH	438 W. 120TH STREET	149-10
S G KEYWELL CO	11900 S COTTAGE GROVE A	151-11
DUTCH BOY	12000 SOUTH PEORIA ST.	153-10
FORMER WEST PULLMAN WORKS	1015 W 120TH ST	155-10
VACANT SITE	1210 W 120TH ST	156-10
VACANT LOT	1201 W. 120TH STREET	156-10
LIQUID CARBONIC CORP	12054 S W DOTY AVE	157-12
TRI CITY TANK WASH	11901 S COTTAGE GROVE	158-11,12
HANCOCK HOUSE, LLC	12045 S. EMERALD	160-10
CENTRAL STATES PIPE & SUPPLY I	12101 S PEORIA	163-10
POWER & LIGHT EVANGELIST CHURC	12257 S EMERALD ST	167-10
BANK OF COMMERCE & INDUSTRY	12300 S MICHIGAN AVE	169-11
METRA KYD YARD	12301 S INDIANA AVE	170-11
CAL GAS INC.	12304 S. HALSTED ST.	172-10
KYD 124TH ST SHOP	12357 S INDIANA AVE	174-11
METROPOLITAN WATER RECLAMATION	129 EAST 124TH PLACE	175-11

EXECUTIVE SUMMARY

Site	Address	Map ID
MWRD-125TH PUMPING STATION	129 E. 124TH PLACE	175-11
FRANKLIN GEORGE	12535 S HALSTED	178-10
BROWN ACADEMY	12607 S. UNION STREET	179-10
PROGRESSIVE BAPTIST CHURCH	26 E 127TH ST	184-11
COMMUNITY GAS	150 W. 127TH STREET	185-11
BLUE ISLAND CITGO	3196 WEST 127TH STREET	187-11
AIR PRODUCTS & CHEMICALS INC	12721 WENTWORTH AVE	187-11
CEDAR PARK CEMETERY ASSN INC	12540 S HALSTED ST	188-10
AMOOC SS #18717 FACILITY #2427	12701 SOUTH HALSTED	189-12
#008489	12731 S HALSTED	190-10
CONTINENTAL GRAIN CO	127TH & DOTY AVE	191-12
CHRIST CHURCH BAPTIST	12844 S HALSTED ST	194-14
TRIPLEX MARINE SERV	13100 S MORGAN ST	198-14
CALUMET WATER RECLAMATION PLAN	400 E. 130TH STREET	200-15
COOK COUNTY LUMBER CO	200 E 130TH ST	201-15
INTERNATIONAL TRANSP SER INC	130TH & INDIANA AVE	202-15
130TH CITGO	13002 S INDIANA	202-15
RIVERDALE VILLAGE OF	130TH & HALSTED ST	204-14
MAINTENANCE BUILDING	940 E. 132ND STREET	205-16
CARVER PARK NATATORIUM	939 E 132ND ST	205-16
SCHOOL / CHURCH	13300 S. LANGLEY	208-16
SKIPPER'S MARINA	13421 S VERNON	212-15

WI MANIFEST: Hazardous waste manifest information.

A review of the WI MANIFEST list, as provided by EDR, has revealed that there is 1 WI MANIFEST site within the searched area.

Site	Address	Map ID
MWRDGC METROPOLITAN WATER RECL	***400 E 130TH ST***	***200-15***

NY MANIFEST: Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

A review of the NY MANIFEST list, as provided by EDR, has revealed that there is 1 NY MANIFEST site within the searched area.

Site	Address	Map ID
KLEEN TOWNE CLEANERS	***11249 S HALSTED***	***88-6***

IL SPILLS: A listing of incidents reported to the Office of Emergency Response.

A review of the IL SPILLS list, as provided by EDR, and dated 07/18/2012 has revealed that there are 79 IL SPILLS sites within the searched area.

Site	Address	Map ID
Not reported	9417 S STATE ST	4-2
Not reported	400 E 95TH ST	5-2

EXECUTIVE SUMMARY

Site	Address	Map ID
Not reported	9500 S MARTIN LUTHER KI	5-2
Not reported	9501 S KING DR	5-2
Not reported	347 E 95TH ST	6-2
Not reported	251 E 95TH ST	7-2
Not reported	251 E 95TH ST	7-2
Not reported	251 E 95TH ST	7-2
Not reported	36 W 95TH ST	9-2
Not reported	49 E 95TH ST	10-2
Not reported	446 E 103RD ST	26-4
Not reported	350 E 103RD ST	29-4
Not reported	415 E 103RD ST	30-4
Not reported	10301 S STATE ST	33-4
Not reported	201 W 103RD ST	34-4
Not reported	201 W 103RD ST	34-4
Not reported	201-217 E 23RD ST	34-4
Not reported	105 W 103RD ST	35-4
Not reported	10301 S HALSTED	39-3
Not reported	351 W 104TH ST	45-3
Not reported	10426 S MICHIGAN AVE	47-4
Not reported	10450 S MICHIGAN AVE	48-4
Not reported	10554 S MICHIGAN AVE	52-4
Not reported	240 E 106TH ST	54-4
Not reported	352 W 110TH ST	70-6,7
Not reported	250 E 111TH ST	74-7
Not reported	4 E 111TH ST	76-7
Not reported	2 W 111TH	76-7
Not reported	2 W 111TH ST	76-7
Not reported	100-136 W 111TH ST	78-7
Not reported	420 W 111TH ST	81-6
Not reported	420 W. 111TH ST.	81-6
Not reported	419 W 111TH ST	81-6
Not reported	419 W 111TH ST	81-6
Not reported	507 W 111TH ST	82-6
Not reported	65 W 113TH PL	93-7
Not reported	135-39 W 114TH ST	94-7
Not reported	11442 S MICHIGAN AVE	98-7
Not reported	11453 S HALSTED ST	99-6
Not reported	342 E 115TH ST	100-7
Not reported	344 E 115TH ST	100-7
Not reported	2 W 115TH ST	103-7
Not reported	2 W 115TH ST	103-7
Not reported	35 W 115TH ST	104-7
Not reported	833 W 115TH ST	107-6
Not reported	1001 W 115TH ST	109-6
Not reported	11515 PRAIRIE	110-7
Not reported	162 E KENSINGTON AVE	117-7
Not reported	38 W 119TH ST	132-11
Not reported	11900 S STATE ST	133-11
Not reported	333 W 119TH ST	134-10,11
Not reported	1220 W 119TH ST	138-10
Not reported	1220 WEST 119TH ST.	138-10
Not reported	11957 S HALSTED ST	145-10
Not reported	803 E 120TH ST	147-12
Not reported	803 E 120TH ST	147-12
ALLWASTE CONTAINER SERVICES	803 E 120TH ST	147-12
Not reported	803 E 120TH ST	147-12

EXECUTIVE SUMMARY

Site	Address	Map ID
Not reported	803 E 120TH ST	147-12
KEYWELL CO.	***11900 SOUTH COTTAGE GRO***	***151-11***
Not reported	900 W 120TH ST	153-10
Not reported	1015 WEST 120TH ST	155-10
Not reported	1015 W 120TH ST	155-10
Not reported	1015 W 120TH ST	155-10
Not reported	1015 W 120TH ST	155-10
Not reported	1201 W 120TH ST	156-10
Not reported	12054 S DOTY AVE	157-12
Not reported	12045 S EMERALD AVE	160-10
Not reported	12101 S DOTY AVE	161-12
Not reported	11900 S COTTAGE GROVE A	162-11,12
Not reported	12300 S MICHIGAN AVE	169-11
Not reported	125TH ST & MORGAN	177-10
Not reported	12535 S HALSTED ST	178-10
Not reported	726 W 126TH ST	180-10
Not reported	26 E 127TH ST	184-11
Not reported	12701 S DOTY AVE	189-12
Not reported	12701 S DOTY AVE	189-12
Not reported	12900 S DOTY	192-12
Not reported	12844 S HALSTED ST	194-14

IL ENG CONTROLS: Sites with Engineering Controls.

A review of the IL ENG CONTROLS list, as provided by EDR, and dated 07/20/2012 has revealed that there are 6 IL ENG CONTROLS sites within the searched area.

Site	Address	Map ID
NEW LANGSTON HUGHES ELEMENTARY	***10320 SOUTH WENTWORTH A***	***41-4***
DAIRY FRESH FOODS, INC.	***10450 SOUTH MICHIGAN AV***	***48-4***
LAKEFRONT SUPPORTING HOUSING	***11023-11045 S WENTWORTH***	***80-7***
W.E. DAVIS COMPANY	***1220 -1314 WEST 119TH S***	***138-10***
INTERNATIONAL HARVESTER	***1015 WEST 120TH STREET***	***155-10***
HANCOCK HOUSE LLC	***12045 SOUTH EMERALD AVE***	***160-10***

IL INST CONTROL: Legal or administrative restrictions on land use and/or other activities (e.g., groundwater use restrictions) which effectively limit exposure to contamination may be employed as alternatives to removal or treatment of contamination.

A review of the IL INST CONTROL list, as provided by EDR, and dated 07/20/2012 has revealed that there are 9 IL INST CONTROL sites within the searched area.

Site	Address	Map ID
CHICAGO DEPARTMENT OF ENVIRONM	***501 EAST 103RD STREET***	***28-4***
ROSELAND PLACE	***10400-10420 SOUTH MICHI***	***43-4***
DAIRY FRESH FOODS, INC.	***10450 SOUTH MICHIGAN AV***	***48-4***
LAKEFRONT SUPPORTING HOUSING	***11023-11045 S WENTWORTH***	***80-7***
WIRA STUDY AREA NUMBER 4	***11801 SOUTH RACINE AVEN***	***126-6,10***
SHELDON HEIGHTS CHURCH OF CHRI	***11819-11849 SOUTH GREEN***	***127-6,10***
W.E. DAVIS COMPANY	***1220 -1314 WEST 119TH S***	***138-10***

EXECUTIVE SUMMARY

Site	Address	Map ID
INTERNATIONAL HARVESTER	***1015 WEST 120TH STREET***	***155-10***
HANCOCK HOUSE LLC	***12045 SOUTH EMERALD AVE***	***160-10***

IL SRP: Illinois Environmental Protection Agency, Site Remediation Program Database

A review of the IL SRP list, as provided by EDR, and dated 07/20/2012 has revealed that there are 26 IL SRP sites within the searched area.

Site	Address	Map ID
CHICAGO STATE UNIVERSITY	9500 SOUTH KING DRIVE	5-2
BP	***9900 SOUTH HALSTED STRE***	***18-3***
CHICAGO DEPARTMENT OF ENVIRONM	***501 EAST 103RD STREET***	***28-4***
NEW LANGSTON HUGHES ELEMENTARY	***10320 SOUTH WENTWORTH A***	***41-4***
ROSELAND PLACE	***10400-10420 SOUTH MICHI***	***43-4***
DAIRY FRESH FOODS, INC.	***10450 SOUTH MICHIGAN AV***	***48-4***
BETTY BRITE CLEANERS	***10630 SOUTH HALSTED STR***	***57-3***
LAKEFRONT SUPPORTING HOUSING	***11023-11045 S WENTWORTH***	***80-7***
KLEEN TOWNE CLEANERS	11249 SOUTH HALSTED ST	88-6
CHICAGO HOUSING AUTHORITY	***833 WEST 115TH STREET***	***107-6***
SHERWIN-WILLIAMS COMPANY BOILE	603 EAST KENSINGTON AVE	113-7
MICKEY’S AUTO SERVICE CENTER	***11656 SOUTH HALSTED AVE***	***121-6***
WIRA STUDY AREA NUMBER 4	***11801 SOUTH RACINE AVEN***	***126-6,10***
SHELDON HEIGHTS CHURCH OF CHRI	***11819-11849 SOUTH GREEN***	***127-6,10***
WEST PULLMAN STUDY AREA NO. 6	11931 SOUTH LOOMIS STRE	130-9
WIRA EAST INGERSOLL PROPERTY	920 WEST 119TH STREET	136-10
W.E. DAVIS COMPANY	***1220 -1314 WEST 119TH S***	***138-10***
OMNITRAX	11955 SOUTH MORGAN STRE	141-10
WEST PULLMAN IRON & METAL	11954 SOUTH PEORIA STRE	144-10
WIRA STUDY AREA 9	820 WEST 120TH STREET	152-10
WIRA STUDY AREA NUMBER 14	815-825 WEST 120TH STRE	152-10
DUTCH BOY PAINTS	12000 SOUTH PEORIA STRE	153-10
INTERNATIONAL HARVESTER	***1015 WEST 120TH STREET***	***155-10***
CHICAGO MALLEABLE CASTINGS	***1201 WEST 120TH STREET***	***156-10***
HANCOCK HOUSE LLC	***12045 SOUTH EMERALD AVE***	***160-10***
CHICAGO HOUSING AUTHORITY	***940 EAST 132ND STREET***	***205-16***

IL DRYCLEANERS: Any business interested in operating a drycleaning facility in Illinois needs to apply for a license through the Illinois Drycleaner Environmental Response trust Fund.

A review of the IL DRYCLEANERS list, as provided by EDR, and dated 05/28/2012 has revealed that there are 5 IL DRYCLEANERS sites within the searched area.

Site	Address	Map ID
AMERICAN IDEAL CLEANING COMPAN	10351 SOUTH MICHIGAN AV	42-4
BETTY BRITE CLEANERS	***10630 SOUTH HALSTED STR***	***57-3***
STAR CLEANERS	149 WEST 111TH STREET	80-7
JOHNS CLEANERS	11129 SOUTH HALSTED STR	84-6
BIG MEL’S LAUNDROMAT	12256 SOUTH HALSTED	168-10

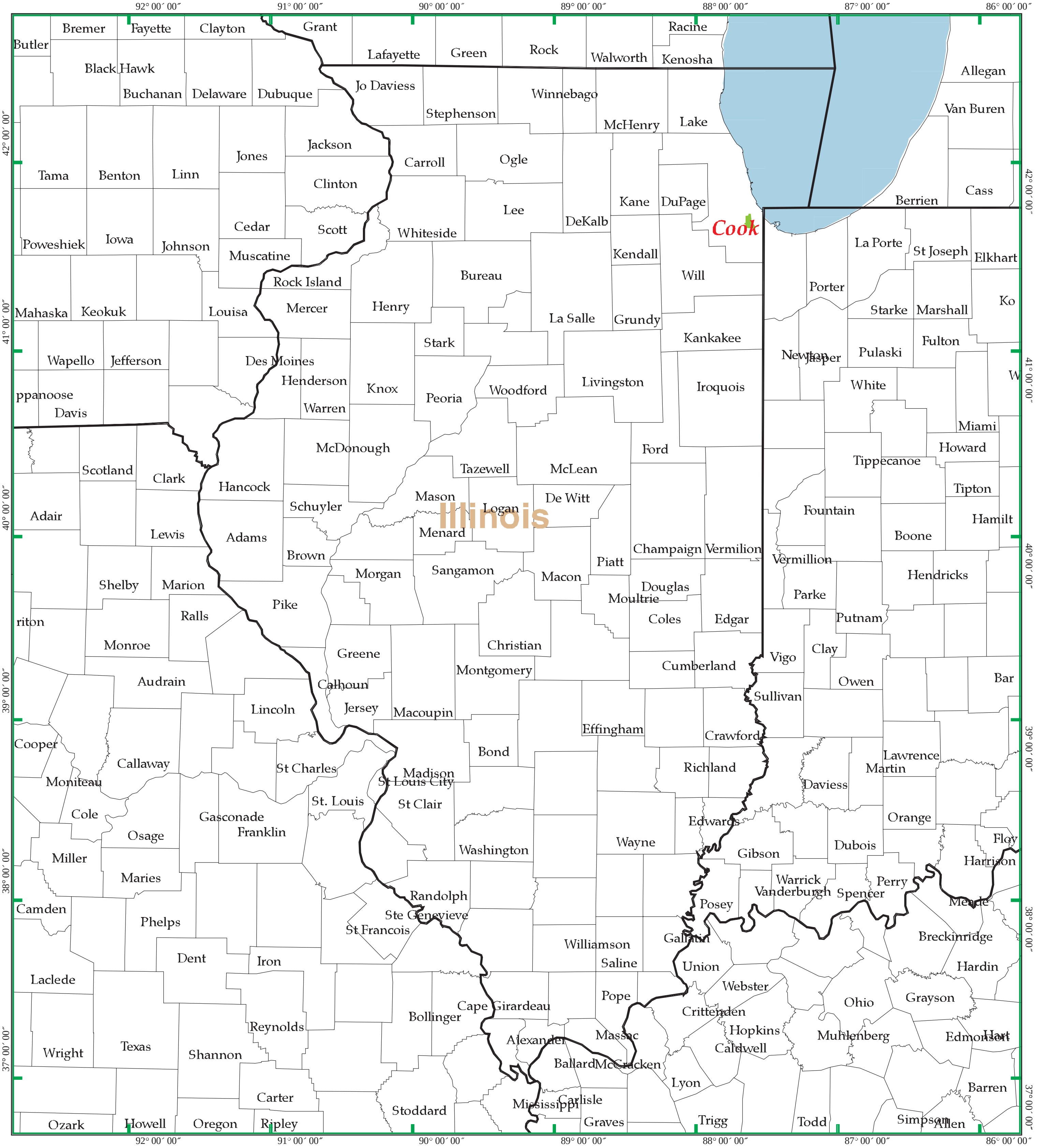
EXECUTIVE SUMMARY

Please refer to the end of the findings report for unmapped orphan sites due to poor or inadequate address information.

Section 1

Overview and Key Map

Overview Map



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86° 00´ 00˝
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40° 00´ 00˝
39° 00´ 00˝
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37° 00´ 00˝
Illinois
Cook
Bremer
Fayette
Clayton
Grant
Racine
Butler
Black Hawk
Lafayette
Green
Rock
Walworth
Kenosha
Allegan
Buchanan
Delaware
Dubuque
Jo Daviess
Winnebago
Stephenson
McHenry
Lake
Van Buren
Jackson
Jones
Carroll
Ogle
Tama
Benton
Linn
Clinton
Cass
Berrien
Kane
DuPage
Lee
Cedar
Scott
Whiteside
DeKalb
Poweshiek
Iowa
Johnson
La Porte
St Joseph
Elkhart
Kendall
Muscatine
Bureau
Will
Rock Island
Porter
Mahaska
Keokuk
Louisa
Mercer
Henry
La Salle
Grundy
Starke
Marshall
Ko
Stark
Kankakee
Fulton
Wapello
Jefferson
Des Moines
Newton
Jasper
Pulaski
Henderson
Knox
Peoria
Woodford
Livingston
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ppanoose
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Warren
Miami
McDonough
Ford
Howard
Tippecanoe
Scotland
Clark
Tazewell
McLean
Tipton
Hancock
Mason
De Witt
Adair
Schuyler
Logan
Fountain
Hamilt
Lewis
Menard
Boone
Adams
Champaign
Vermilion
Brown
Piatt
Vermillion
Shelby
Marion
Morgan
Sangamon
Macon
Hendricks
Douglas
Moultrie
Parke
Pike
riton
Ralls
Coles
Edgar
Putnam
Monroe
Christian
Greene
Vigo
Clay
Cumberland
Audrain
Montgomery
Calhoun
Owen
Bar
Jersey
Sullivan
Lincoln
Macoupin
Effingham
Crawford
Cooper
Bond
Callaway
St Charles
Madison
Lawrence
Richland
Martin
Moniteau
St Louis City
Daviess
St. Louis
St Clair
Cole
Gasconade
Edwards
Orange
Franklin
Osage
Wayne
Floy
Washington
Dubois
Miller
Gibson
Harrison
Maries
Warrick
Perry
Randolph
Vanderburgh
Spencer
Camden
Posey
Meade
Ste Genevieve
Phelps
St Francois
Breckinridge
Gallatin
Williamson
Dent
Saline
Iron
Union
Hardin
Laclede
Webster
Pope
Grayson
Cape Girardeau
Ohio
Crittenden
Bollinger
Reynolds
Hopkins
Muhlenberg
Alexander
Massac
Texas
Edmonson
Hart
Caldwell
Wright
Shannon
Ballard
McCracken
Lyon
Carter
Barren
Carlisle
Mississippi
Stoddard
Ozark
Howell
Oregon
Ripley
Graves
Trigg
Todd
Simpson
Allen
W

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90786 CTC RLE Hazardous Materials

N

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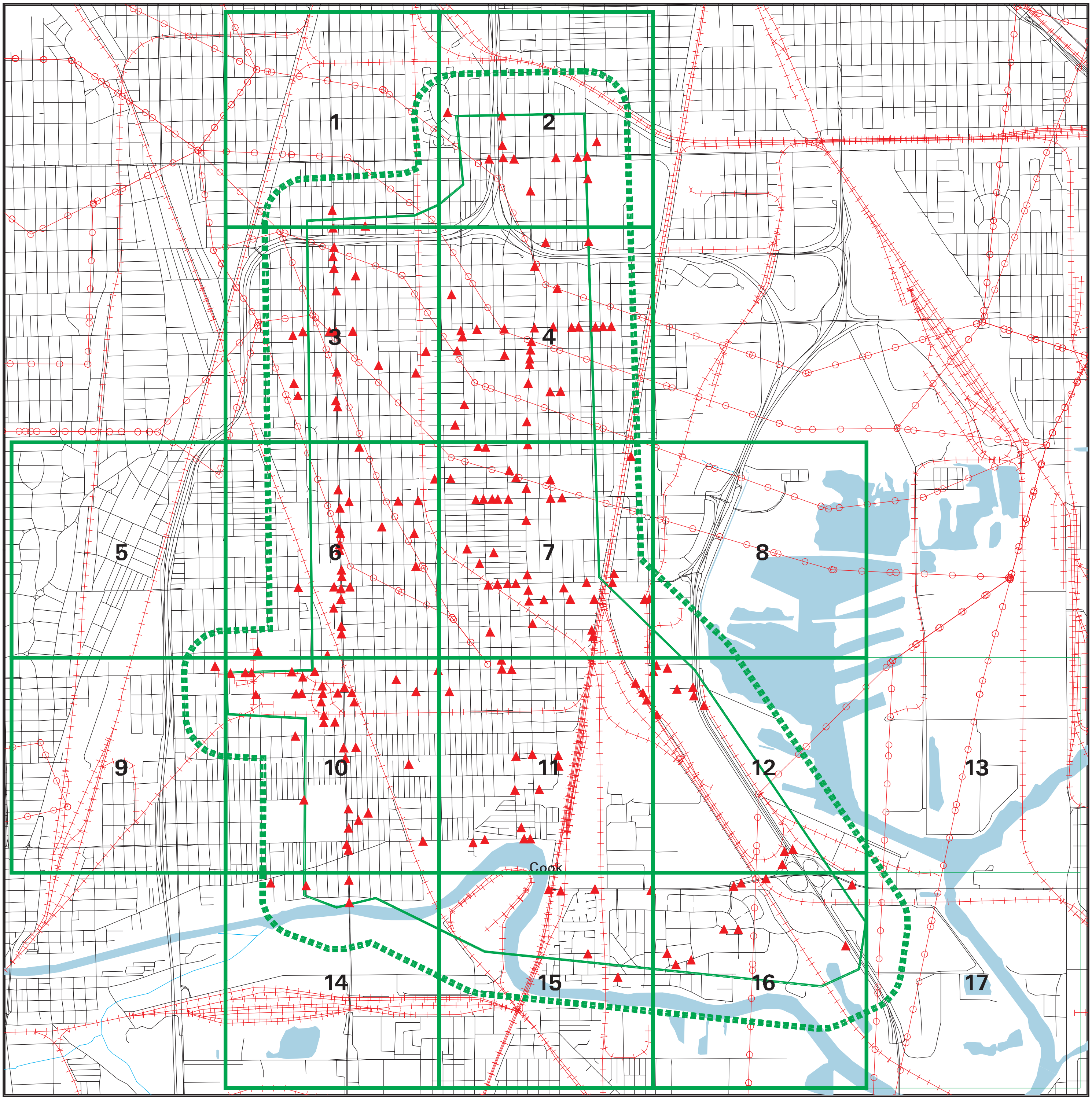
Key Map



EDR Environmental Data Resources Inc

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90786 CTC RLE Hazardous Materials

Legend

Roads
Waterways
Powerlines
Water
▲ Listed Sites
Major Roads
Railroads
Pipelines
Contour Lines
Study Boundary
Fault Lines

N

0 1/2 1

Scale in Miles

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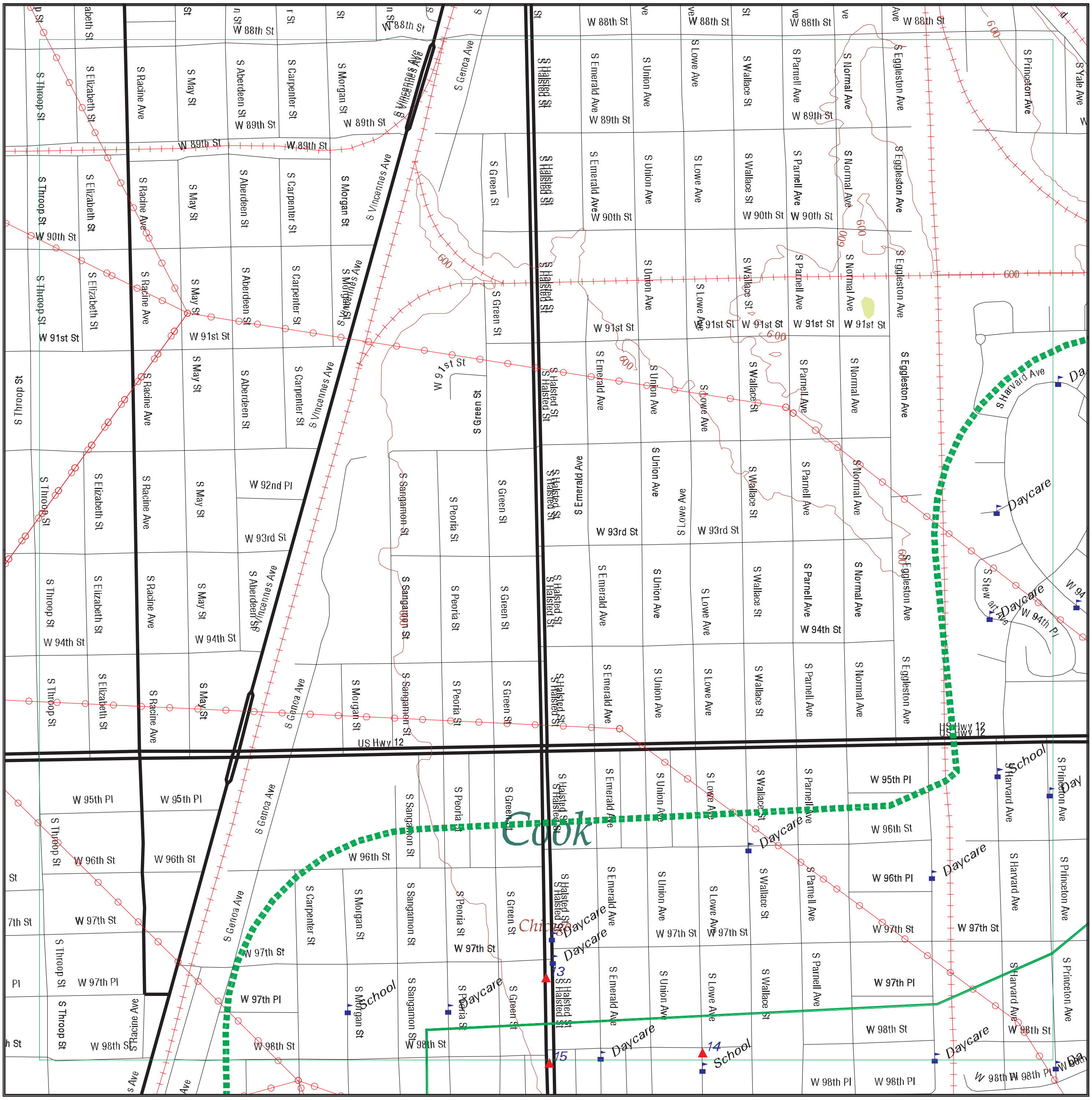
Section 2

Focus Maps and Findings

Focus Map 1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W 89th St
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W 93rd St
W 94th St
W 94th Pl
W 95th Pl
W 96th St
W 96th Pl
W 97th St
W 97th Pl
W 98th St
W 98th Pl
US Hwy 12
S Throop St
S Elizabeth St
S Racine Ave
S May St
S Aberdeen St
S Carpenter St
S Morgan St
S Vincennes Ave
S Genoa Ave
S Green St
S Sangamon St
S Peoria St
S Halsted St
S Emerald Ave
S Union Ave
S Lowe Ave
S Wallace St
S Parnell Ave
S Normal Ave
S Eggleston Ave
S Princeton Ave
S Yale Ave
S Harvard Ave
S Stewart Ave
600
Cook
Chicago
Daycare
School
13
14
15

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90786 CTC RLE Hazardous Materials

N

Legend

- Roads
- Waterways
- Powerlines
- Water
- Listed Sites
- Major Roads
- Railroads
- Pipelines
- Sensitive Receptors
- Contour Lines
- Study Boundary
- Fault Lines
- National Wetlands Inventory
- 100-Yr Flood Zones

0 1/8 1/4

Scale in Miles

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FOCUS MAP 1 SUMMARY

	Database	Total Plotted
FEDERAL RECORDS		
	Proposed NPL	0
	Delisted NPL	0
	CERCLIS	0
	CERC-NFRAP	0
	CORRACTS	0
	RCRA-TSDF	0
	RCRA-LQG	0
	RCRA-SQG	1
	RCRA-CESQG	0
	US ENG CONTROLS	0
	US INST CONTROL	0
	ERNS	0
	US BROWNFIELDS	0
STATE AND LOCAL RECORDS		
	SSU	0
	SWF/LF	0
	LUST	1
	UST	3
	SPILLS	0
	ENG CONTROLS	0
	INST CONTROL	0
	SRP	0
	DRYCLEANERS	0
	BROWNFIELDS	0
EDR PROPRIETARY RECORDS		
	Manufactured Gas Plants	0

NOTES:

Sites may be listed in more than one database

Map ID	Site	Database(s)	EPA ID Number
13	**ANCHOR PRUDENTIAL HMO** **9718 SOUTH HALSTED** **CHICAGO, IL 60620**	**UST**	**U003668571** **N/A**

UST:

Facility ID: 2038684
Facility Status: EXEMPT
Facility Type: OTHER SPECIAL SERVICE DISTRICT
Owner Name: Standard Bank Trust #6743
Owner Id: U0028511
Owner Address: 7800 West 95th Street
Owner City,St,Zip: Hickory Hills, IL 60457

Tank Number: 1
Tank Capacity: 3000
Tank Substance: Heating Oil
Last Used Date: 12/1/1973
OSFM First Notify Date: 5/5/1998
Tank Status: Exempt from registration
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: $0.00

Map ID	Site	Database(s)	EPA ID Number
14	**EVERS** **9811 S LOWE** **CHICAGO, IL 60628**	**RCRA-SQG**	**1001127034** **ILR000033118**

RCRA-SQG:

Date form received by agency: 01/10/1997
Facility name: EVERS
Facility address: 9811 S LOWE
CHICAGO, IL 60628
EPA ID: ILR000033118
Contact: EMMERINE CLARKSTON
Contact address: 9811 S LOWE
CHICAGO, IL 60628
Contact country: US
Contact telephone: (773) 535-2565
Contact email: Not reported
EPA Region: 05
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name: CHICAGO PUBLIC SCHOOLS
Owner/operator address: 1819 W PERSHING RD
CHICAGO, IL 60609
Owner/operator country: Not reported
Owner/operator telephone: (773) 535-7039
Legal status: District

Map ID	Site	Database(s)	EPA ID Number
	EVERS (Continued)		**1001127034**

Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Hazardous Waste Summary:

Waste code:	D008
Waste name:	LEAD
Violation Status:	No violations found

Map ID	Site	Database(s)	EPA ID Number
15	**SHELL** **9802 S. HALSTED** **CHICAGO, IL 60628**	**UST**	**U001142621** **N/A**

UST:

Facility ID:	2019884
Facility Status:	ACTIVE
Facility Type:	**SELF-SERVICE STATION**
Owner Name:	Khalid Siddiqui
Owner Id:	U0029824
Owner Address:	1823 West Hood Avenue, Suite C
Owner City,St,Zip:	Chicago, IL 60660
Tank Number:	1
Tank Capacity:	10000
Tank Substance:	Gasoline
Last Used Date:	Not reported
OSFM First Notify Date:	5/7/1986
Tank Status:	**Currently in use**
Red Tag Issue Date:	Not reported
Install Date:	Not reported
Green Tag Decal:	**K003789**
Green Tag Issue Date:	**6/18/2009**
Green Tag Expire Date:	**12/31/2011**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	$0.00
Tank Number:	2
Tank Capacity:	10000

SHELL (Continued) **U001142621**

Tank Substance: Gasoline
Last Used Date: Not reported
OSFM First Notify Date: 5/7/1986
Tank Status: Currently in use
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: K003789
Green Tag Issue Date: 6/18/2009
Green Tag Expire Date: 12/31/2011
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: $0.00

Tank Number: 3
Tank Capacity: 10000
Tank Substance: Gasoline
Last Used Date: Not reported
OSFM First Notify Date: 5/7/1986
Tank Status: Currently in use
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: K003789
Green Tag Issue Date: 6/18/2009
Green Tag Expire Date: 12/31/2011
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: $0.00

---

15 **CLARK GAS** **UST** **U001143133**
9811 S. HALSTED **N/A**
CHICAGO, IL 60628

UST:
Facility ID: 2007026
Facility Status: ACTIVE
Facility Type: SELF-SERVICE STATION
Owner Name: Petro Universal, Inc.
Owner Id: U0034143
Owner Address: 9811 S. Halsted
Owner City,St,Zip: Chicago, IL 60628

Tank Number: 1
Tank Capacity: 10000
Tank Substance: Gasoline
Last Used Date: Not reported
OSFM First Notify Date: 4/25/1986
Tank Status: Removed
Red Tag Issue Date: Not reported
Install Date: 1/1/1985
Green Tag Decal: N001766
Green Tag Issue Date: 2/28/2012
Green Tag Expire Date: 12/31/2014
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: $0.00

CLARK GAS (Continued) **U001143133**

Tank Number: 3
Tank Capacity: 10000
Tank Substance: Gasoline
Last Used Date: Not reported
OSFM First Notify Date: 4/25/1986
Tank Status: Removed
Red Tag Issue Date: Not reported
Install Date: 1/1/1985
Green Tag Decal: N001766
Green Tag Issue Date: 2/28/2012
Green Tag Expire Date: 12/31/2014
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: $0.00

Tank Number: 4
Tank Capacity: 10000
Tank Substance: Gasoline
Last Used Date: Not reported
OSFM First Notify Date: 4/25/1986
Tank Status: Removed
Red Tag Issue Date: Not reported
Install Date: 1/1/1985
Green Tag Decal: N001766
Green Tag Issue Date: 2/28/2012
Green Tag Expire Date: 12/31/2014
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: $0.00

Tank Number: 5
Tank Capacity: 8000
Tank Substance: Diesel Fuel
Last Used Date: Not reported
OSFM First Notify Date: 6/27/2000
Tank Status: Currently in use
Red Tag Issue Date: Not reported
Install Date: 4/17/2000
Green Tag Decal: N001766
Green Tag Issue Date: 2/28/2012
Green Tag Expire Date: 12/31/2014
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: $0.00

Tank Number: 6
Tank Capacity: 10000
Tank Substance: Gasoline
Last Used Date: Not reported
OSFM First Notify Date: 6/27/2000
Tank Status: Currently in use
Red Tag Issue Date: Not reported
Install Date: 4/17/2000
Green Tag Decal: N001766

Map ID	Site	Database(s)	EPA ID Number

CLARK GAS (Continued) **U001143133**

Green Tag Issue Date:	**2/28/2012**
Green Tag Expire Date:	**12/31/2014**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	$0.00

Tank Number:	7
Tank Capacity:	12000
Tank Substance:	Gasoline
Last Used Date:	Not reported
OSFM First Notify Date:	6/27/2000
Tank Status:	**Currently in use**
Red Tag Issue Date:	Not reported
Install Date:	4/17/2000
Green Tag Decal:	**N001766**
Green Tag Issue Date:	**2/28/2012**
Green Tag Expire Date:	**12/31/2014**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	$0.00

---

15 **EQUILON ENTERPRISES LLC** **LUST** **S104189763**
9811 HALSTED **N/A**
CHICAGO, IL 60628

LUST:

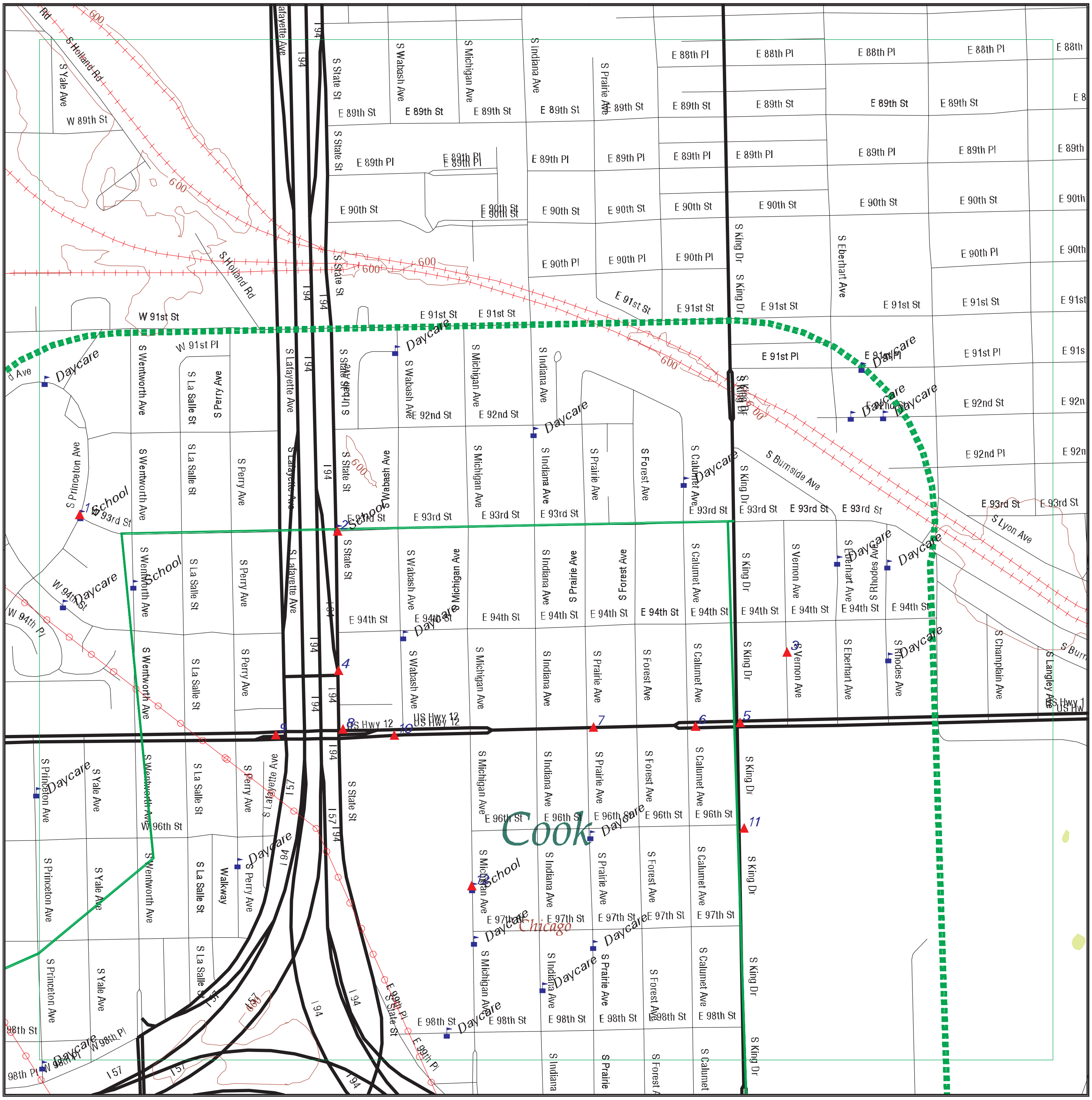
Incident Num:	990295
IL EPA Id:	0316495059
Product:	Unleaded Gas
IEMA Date:	02/10/1999
Project Manager:	Kuhlman
Project Manager Phone:	(217) 785-5715
Email:	Eric.Kuhlman@illinois.gov
PRP Name:	Equilon Enterprises LLC
PRP Contact:	John Robbins
PRP Address:	603 West Diehl Rd., Suite 103
PRP City,St,Zip:	Naperville, IL 60563
PRP Phone:	6302764206
Site Classification:	HIGH
Section 57.5(g) Letter:	732
Date Section 57.5(g) Letter:	Not reported
Non LUST Determination Letter:	Not reported
20 Report Received:	02/19/1999
45 Report Received:	02/26/1999
NFA/NFR Letter:	**09/14/2005**
NFR Date Recorded:	12/02/2005

Count: 13 records

FOCUS MAP 1 ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CALUMET PARK	1000166385	CHICAGO COPPER AND CHEMICAL COMPANY	INTERSECTION OF WINCHESTER RD & 127 ST.	60643	CERCLIS
CHICAGO	1012172115	ROSELAND COMMUNITY	110TH PLACE AND MICHIGAN, EAST SIDE OF STATE ST.		US BROWNFIELDS
CHICAGO	S109167302		549 115TH ST		LUST, SPILLS
CHICAGO	1002886378	US SCRAP	123RD & COTTAGE GROVE	60628	CERCLIS
CHICAGO	S101467236	PENN CENTRAL	810 E 124TH ST		SSU
CHICAGO	1006426238	76TH AND PARNELL	76TH AND PARNELL	60620	CERC-NFRAP
CHICAGO	S107926342	CHICAGO PROCESS ENGINEERING	7801 S CLAIRMONT	60620	SSU
CHICAGO	S109366427		6700 JEFFREY BLVD		LUST, SPILLS
CHICAGO	S108891646		11900 LOOMIS		LUST, SPILLS
CHICAGO	U003975090	NEW KENNEDY KING COLLEGE CAMPUS	6401 LOWE ST	60620	UST
CHICAGO	S107926349	LAKE CALUMET CLUSTER SITE	N OF 122ND	60628	SSU
CHICAGO	1001487618	FERNWOOD TOWING AND TUNE UPS	10101 10103 S HALSTED	60628	RCRA-SQG
CHICAGO	1012172077	BOYCE PARK	UNION AVE BETWEEN 42ND & ROOT STREETS		US BROWNFIELDS

Focus Map 2


Cook
Chicago
S Holland Rd
S Yale Ave
W 89th St
W 91st St
W 91st Pl
W 94th St
W 94th Pl
W 96th St
W 98th Pl
98th St
S Princeton Ave
S Wentworth Ave
S La Salle St
S Perry Ave
S Lafayette Ave
Walkway
I 94
I 57
S State St
S Wabash Ave
S Michigan Ave
S Indiana Ave
S Prairie Ave
S Forest Ave
S Calumet Ave
S King Dr
S Vernon Ave
S Eberhart Ave
S Rhodes Ave
S Champlain Ave
S Langley Ave
S Burnside Ave
S Lyon Ave
E 88th Pl
E 89th St
E 89th Pl
E 90th St
E 90th Pl
E 91st St
E 91st Pl
E 92nd St
E 92nd Pl
E 93rd St
E 94th St
E 96th St
E 97th St
E 98th St
E 99th Pl
US Hwy 12
600
Daycare
School
1
2
3
4
5
6
7
8
9
10
11

EDR DataMap® - Environmental Atlas

90786 CTC RLE Hazardous Materials

Legend

- Roads
- Major Roads
- Contour Lines
- National Wetlands Inventory
- Waterways
- Railroads
- Study Boundary
- 100-Yr Flood Zones
- Powerlines
- Pipelines
- Fault Lines
- Water
- ▲ Listed Sites
- Sensitive Receptors

N

0 1/8 1/4

Scale in Miles

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FOCUS MAP 2 SUMMARY

	Database	Total Plotted
FEDERAL RECORDS		
	Proposed NPL	0
	Delisted NPL	0
	CERCLIS	0
	CERC-NFRAP	0
	CORRACTS	0
	RCRA-TSDF	0
	RCRA-LQG	0
	RCRA-SQG	4
	RCRA-CESQG	2
	US ENG CONTROLS	0
	US INST CONTROL	0
	ERNS	1
	US BROWNFIELDS	0
STATE AND LOCAL RECORDS		
	SSU	0
	SWF/LF	0
	LUST	10
	UST	10
	SPILLS	10
	ENG CONTROLS	0
	INST CONTROL	0
	SRP	1
	DRYCLEANERS	0
	BROWNFIELDS	0
EDR PROPRIETARY RECORDS		
	Manufactured Gas Plants	0

NOTES:

Sites may be listed in more than one database

Map ID	Site	Database(s)	EPA ID Number
1	**TURNER DREW LANGUAGE ACADEMY** **9300 S PRINCETON AVE** **CHICAGO, IL 60620**	**RCRA-CESQG**	**1004696975** **ILR000061192**

RCRA-CESQG:

Date form received by agency:	02/08/1999
Facility name:	TURNER DREW LANGUAGE ACADEMY
Facility address:	9300 S PRINCETON AVE CHICAGO, IL 60620
EPA ID:	ILR000061192
Mailing address:	8501 W 191ST ST BOX 10 MOKENA, IL 60448
Contact:	THOMAS CONNELLY
Contact address:	9300 S PRINCETON AVE CHICAGO, IL 60620
Contact country:	US
Contact telephone:	(708) 923-0202
Contact email:	Not reported
EPA Region:	05
Classification:	Conditionally Exempt Small Quantity Generator
Description:	Handler: generates 100 kg or less of hazardous waste per calendar month, and accumulates 1000 kg or less of hazardous waste at any time; or generates 1 kg or less of acutely hazardous waste per calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste

Owner/Operator Summary:

Owner/operator name:	CHGO PUBLIC SCHOOLS
Owner/operator address:	1819 W PERSHING RD 6WW CHICAGO, IL 60609
Owner/operator country:	Not reported
Owner/operator telephone:	(773) 535-7038
Legal status:	District
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No

TURNER DREW LANGUAGE ACADEMY (Continued) **1004696975**

Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Hazardous Waste Summary:
Waste code: D006
Waste name: CADMIUM

Waste code: D008
Waste name: LEAD

Waste code: D009
Waste name: MERCURY

Violation Status: No violations found

---

2 **ERNS** **96507590**
GLISBEE SCHOOL, 9301 S. STATE **N/A**
CHICAGO, IL

Click this hyperlink while viewing on your computer to access additional ERNS detail in the EDR Site Report.

---

2 **GILLESPIE SCH** **RCRA-SQG** **1001116633**
9301 S STATE **ILR000026583**
CHICAGO, IL 60619

RCRA-SQG:
Date form received by agency: 08/30/1996
Facility name: GILLESPIE SCH
Facility address: 9301 S STATE
CHICAGO, IL 60619
EPA ID: ILR000026583
Mailing address: 1819 W PERSHING RD 6W N
CHICAGO, IL 60609
Contact: SPENCER ADAMS
Contact address: 1819 W PERSHING RD 6W N
CHICAGO, IL 60609
Contact country: US
Contact telephone: (312) 535-5065
Contact email: Not reported
EPA Region: 05
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:
Owner/operator name: CHICAGO PUBLIC SCHS
Owner/operator address: 1819 W PERSHING RD 6W N
CHICAGO, IL 60609

GILLESPIE SCH (Continued) **1001116633**

Owner/operator country: Not reported
Owner/operator telephone: (312) 535-7039
Legal status: District
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Hazardous Waste Summary:
Waste code: D008
Waste name: LEAD

Violation Status: No violations found

---

3 **CITY OF CHICAGO (ABANDONMENT)** **RCRA-SQG** **1005443427**
9431 S VERNON **ILR000113639**
CHICAGO, IL 60619

RCRA-SQG:
Date form received by agency: 06/17/2002
Facility name: CITY OF CHICAGO (ABANDONMENT)
Facility address: 9431 S VERNON
CHICAGO, IL 60619
EPA ID: ILR000113639
Mailing address: 30 N LASALLE 25TH FLOOR
CHICAGO, IL 60602
Contact: TERRY SHEAHAN
Contact address: 30 N LASALLE 25TH FLOOR
CHICAGO, IL 60602
Contact country: US
Contact telephone: (312) 744-7674
Contact email: Not reported
EPA Region: 05
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Map ID	Site	Database(s)	EPA ID Number

CITY OF CHICAGO (ABANDONMENT) (Continued) **1005443427**

Owner/operator name:	CITY OF CHICAGO (ABANDONMENT)
Owner/operator address:	9431 S VERNON CHICAGO, IL 60619
Owner/operator country:	Not reported
Owner/operator telephone:	(312) 744-7674
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	01/01/0001
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Hazardous Waste Summary:

Waste code:	D001
Waste name:	IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.
Violation Status:	No violations found

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4 **CITGO SUPER WASH & WAX** **UST** **U002222575**
9417 S. STATE STREET **N/A**
CHICAGO, IL 60617

UST:

Facility ID:	2034153
Facility Status:	ACTIVE
Facility Type:	**SELF-SERVICE STATION**
Owner Name:	F & F 786, Inc.
Owner Id:	U0034735
Owner Address:	9417 S. State
Owner City,St,Zip:	Chicago, IL 60619
Tank Number:	1
Tank Capacity:	3000
Tank Substance:	Gasoline
Last Used Date:	8/1/1965
OSFM First Notify Date:	6/1/1995
Tank Status:	**Exempt from registration**

CITGO SUPER WASH & WAX (Continued) **U002222575**

Red Tag Issue Date: Not reported
Install Date: 1/1/1901
Green Tag Decal: L003790
Green Tag Issue Date: 5/5/2010
Green Tag Expire Date: 12/31/2012
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

Tank Number: 2
Tank Capacity: 3000
Tank Substance: Gasoline
Last Used Date: 8/1/1965
OSFM First Notify Date: 6/1/1995
Tank Status: Exempt from registration
Red Tag Issue Date: Not reported
Install Date: 1/1/1901
Green Tag Decal: L003790
Green Tag Issue Date: 5/5/2010
Green Tag Expire Date: 12/31/2012
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

Tank Number: 3
Tank Capacity: 3000
Tank Substance: Gasoline
Last Used Date: 8/1/1965
OSFM First Notify Date: 6/1/1995
Tank Status: Exempt from registration
Red Tag Issue Date: Not reported
Install Date: 1/1/1901
Green Tag Decal: L003790
Green Tag Issue Date: 5/5/2010
Green Tag Expire Date: 12/31/2012
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

Tank Number: 4
Tank Capacity: 2000
Tank Substance: Heating Oil
Last Used Date: 8/1/1965
OSFM First Notify Date: 6/1/1995
Tank Status: Exempt from registration
Red Tag Issue Date: Not reported
Install Date: 1/1/1901
Green Tag Decal: L003790
Green Tag Issue Date: 5/5/2010
Green Tag Expire Date: 12/31/2012
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

Map ID	Site	Database(s)	EPA ID Number

CITGO SUPER WASH & WAX (Continued) **U002222575**

Tank Number:	5
Tank Capacity:	12000
Tank Substance:	Gasoline
Last Used Date:	Not reported
OSFM First Notify Date:	1/8/1998
Tank Status:	**Currently in use**
Red Tag Issue Date:	Not reported
Install Date:	10/9/1997
Green Tag Decal:	**L003790**
Green Tag Issue Date:	**5/5/2010**
Green Tag Expire Date:	**12/31/2012**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	$0.00

Tank Number:	6
Tank Capacity:	12000
Tank Substance:	Gasoline
Last Used Date:	Not reported
OSFM First Notify Date:	1/8/1998
Tank Status:	**Currently in use**
Red Tag Issue Date:	Not reported
Install Date:	10/9/1997
Green Tag Decal:	**L003790**
Green Tag Issue Date:	**5/5/2010**
Green Tag Expire Date:	**12/31/2012**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	$0.00

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4 **QUALITY CAR WASH** **LUST** **S104522540**
9417 SOUTH STATE ST. **N/A**
CHICAGO, IL 60619

LUST:

Incident Num:	951097
IL EPA Id:	0316445040
Product:	Gasoline
IEMA Date:	05/23/1995
Project Manager:	Piggush
Project Manager Phone:	(217) 782-3101
Email:	Michael.Piggush@illinois.gov
PRP Name:	Quality Car Wash
PRP Contact:	John Hill
PRP Address:	7936 South Vincennes
PRP City,St,Zip:	Chicago, IL 60620
PRP Phone:	Not reported
Site Classification:	Not reported
Section 57.5(g) Letter:	732
Date Section 57.5(g) Letter:	Not reported
Non LUST Determination Letter:	Not reported
20 Report Received:	11/22/1996
45 Report Received:	11/22/1996
NFA/NFR Letter:	**04/08/1997**
NFR Date Recorded:	04/14/1998

Map ID	Site	Database(s)	EPA ID Number
4	**9417 S STATE ST** **CHICAGO, IL**	**SPILLS**	**S111893798** **N/A**

SPILLS:

Incident ID:	19951097
Incident Date:	Not reported
Date Received:	05/23/1995
Facility Address:	9417 S STATE ST
Facility City:	CHICAGO
PRP Name:	QUALITY CAR WASH
AC:	Not reported

Map ID	Site	Database(s)	EPA ID Number
5	**AMOCO 5921** **400 E 95TH ST AND KING DR** **CHICAGO, IL 60619**	**RCRA-SQG**	**1000862425** **ILD984923268**

RCRA-SQG:

Date form received by agency:	08/20/1993
Facility name:	AMOCO 5921
Facility address:	400 E 95TH ST AND KING DR CHICAGO, IL 60619
EPA ID:	ILD984923268
Mailing address:	2021 SPRING RD 400 OAK BROOK, IL 60521
Contact:	LINDA CURRAN
Contact address:	2021 SPRING RD 400 OAK BROOK, IL 60521
Contact country:	US
Contact telephone:	(708) 990-1043
Contact email:	Not reported
EPA Region:	05
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	AMOCO OIL CO
Owner/operator address:	2021 SPRING RD 400 OAK BROOK, IL 60521
Owner/operator country:	Not reported
Owner/operator telephone:	(708) 990-1043
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No

AMOCO 5921 (Continued) **1000862425**

Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Hazardous Waste Summary:
Waste code: D001
Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Violation Status: No violations found

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5 **BP** **LUST** **U004128180**
400 EAST 95TH STREET **UST** **N/A**
CHICAGO, IL 60619

LUST:
Incident Num: 20051059
IL EPA Id: 0316475002
Product: Gasoline
IEMA Date: 07/29/2005
Project Manager: Kaiser
Project Manager Phone: (217) 524-4650
Email: Karl.Kaiser@illinois.gov
PRP Name: PAV2, LLC
PRP Contact: William Shaver
PRP Address: 24501 Ecourse Road
PRP City,St,Zip: Taylor, MI 48180
PRP Phone: 5742726955
Site Classification: Not reported
Section 57.5(g) Letter: P.A.
Date Section 57.5(g) Letter: Not reported
Non LUST Determination Letter: Not reported
20 Report Received: 08/10/2005
45 Report Received: 09/12/2005
NFA/NFR Letter: **Not reported**
NFR Date Recorded: Not reported

UST:
Facility ID: 2022992
Facility Status: ACTIVE
Facility Type: **SELF-SERVICE STATION**
Owner Name: JAN Petro, Inc.
Owner Id: U0035846
Owner Address: 3314 W. Albion Ave.
Owner City,St,Zip: Lincolnwood, IL 60712

Tank Number: 1
Tank Capacity: 6000
Tank Substance: Gasoline

Map ID	Site	Database(s)	EPA ID Number

BP (Continued) **U004128180**

Last Used Date: Not reported
OSFM First Notify Date: 4/25/1986
Tank Status: Currently in use
Red Tag Issue Date: Not reported
Install Date: 1/1/1975
Green Tag Decal: M003795
Green Tag Issue Date: 7/28/2011
Green Tag Expire Date: 12/31/2013
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: $0.00

Tank Number: 2
Tank Capacity: 6000
Tank Substance: Gasoline
Last Used Date: Not reported
OSFM First Notify Date: 4/25/1986
Tank Status: Currently in use
Red Tag Issue Date: Not reported
Install Date: 1/1/1975
Green Tag Decal: M003795
Green Tag Issue Date: 7/28/2011
Green Tag Expire Date: 12/31/2013
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: $0.00

Tank Number: 3
Tank Capacity: 6000
Tank Substance: Gasoline
Last Used Date: Not reported
OSFM First Notify Date: 4/25/1986
Tank Status: Currently in use
Red Tag Issue Date: Not reported
Install Date: 1/1/1975
Green Tag Decal: M003795
Green Tag Issue Date: 7/28/2011
Green Tag Expire Date: 12/31/2013
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: $0.00

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5 **SPILLS** **S108046226**
400 E 95TH ST **N/A**
CHICAGO, IL

SPILLS:
Incident ID: 20051059
Incident Date: Not reported
Date Received: 07/29/2005
Facility Address: 400 E 95TH ST
Facility City: CHICAGO
PRP Name: BP PRODUCTS NORTH AMERICA INC
AC: Not reported

Map ID	Site	Database(s)	EPA ID Number
5	**CHICAGO STATE UNIVERSITY** **9500 SOUTH KING DRIVE** **CHICAGO, IL 60628**	**SRP**	**S104491687** **N/A**

SRP:

IL EPA Id: 0316500005
US EPA Id: ILD068469824
Longitude: -87.61032
Latitude: 41.72012
Contact Name: Ronald Leahy
Contact Address: 9501South King Drive
Contact Address2: Office of Physical Plant
Contact City,St,Zip: Chicago, IL 606281598
Contact Phone: (312) 995-2140
Date Enrolled: 04/26/1994
Point Of Contact: Brian A. Delaney
Consultant Company: August Mack Environmental, Inc.
Consultant Address: 784 Busse Highway
Consultant Address2: Not reported
Consultant City,St,Zip: Park Ridge, IL 60068-
Consultant Phone: (630) 325-7121
Proj Mgr Assigned: Gross
Sec. 4 Letter Date: Not reported
NFR Recorded: Not reported
Active: False
Total Acres: Not reported
No Further Remediation Letter Dt: Not reported
Remediation Applicant Co: Chicago State University
Remediation Applicant Title: Mr.
Remediation Applicant Name: Not reported
Remediation Applicant Company: Not reported
Remediation Applicant Address: Not reported
Remediation Applicant Address 2: Not reported
Remediation Applicant City,St,Zip: Not reported
Illinois EPA: Not reported
Site Name: Not reported
NFR Letter: Not reported
NFR Letter Date Recorded: Not reported
Site Type: Not reported
Comprehensive/Focused: Not reported
Institutional Controls: Not reported
Barrier: Not reported
Worker Caution: Not reported
Acres: Not reported

Map ID	Site	Database(s)	EPA ID Number
5	**9500 S MARTIN LUTHER KING DR** **CHICAGO, IL**	**SPILLS**	**S111908478** **N/A**

SPILLS:

Incident ID: 20002169
Incident Date: Not reported
Date Received: 11/10/2000
Facility Address: 9500 S MARTIN LUTHER KING DR
Facility City: CHICAGO
PRP Name: EQUILON ENTERPRISES
AC: Not reported

Map ID	Site	Database(s)	EPA ID Number
5	**SHELL STATION 1545-28** **9500 S MARTIN LUTHER KING DR** **CHICAGO, IL 60628**	**UST**	**U000792152** **N/A**

UST:

Facility ID:	2007040
Facility Status:	CLOSED
Facility Type:	**GOLF COURSE**
Owner Name:	Equilon Enterprises, LLC
Owner Id:	U0027449
Owner Address:	603 Diehl Road, Suite 103
Owner City,St,Zip:	Naperville, IL 60563

Tank Number:	1
Tank Capacity:	8000
Tank Substance:	Gasoline
Last Used Date:	Not reported
OSFM First Notify Date:	4/25/1986
Tank Status:	**Removed**
Red Tag Issue Date:	Not reported
Install Date:	1/1/1971
Green Tag Decal:	**A000953**
Green Tag Issue Date:	**8/20/1999**
Green Tag Expire Date:	**12/31/2002**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	No

Tank Number:	2
Tank Capacity:	10000
Tank Substance:	Gasoline
Last Used Date:	Not reported
OSFM First Notify Date:	4/25/1986
Tank Status:	**Removed**
Red Tag Issue Date:	Not reported
Install Date:	1/1/1971
Green Tag Decal:	**A000953**
Green Tag Issue Date:	**8/20/1999**
Green Tag Expire Date:	**12/31/2002**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	No

Tank Number:	3
Tank Capacity:	10000
Tank Substance:	Gasoline
Last Used Date:	Not reported
OSFM First Notify Date:	4/25/1986
Tank Status:	**Removed**
Red Tag Issue Date:	Not reported
Install Date:	1/1/1971
Green Tag Decal:	**A000953**
Green Tag Issue Date:	**8/20/1999**
Green Tag Expire Date:	**12/31/2002**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	No

SHELL STATION 1545-28 (Continued) **U000792152**

Tank Number: 4
Tank Capacity: 1000
Tank Substance: Used Oil
Last Used Date: 8/9/1996
OSFM First Notify Date: 4/25/1986
Tank Status: Removed
Red Tag Issue Date: Not reported
Install Date: 1/1/1985
Green Tag Decal: A000953
Green Tag Issue Date: 8/20/1999
Green Tag Expire Date: 12/31/2002
Self Service Permit Inspection Date:Not reported
Self Service Permit Expire Date: Not reported
Fee Due: No

Tank Number: 5
Tank Capacity: 500
Tank Substance: Heating Oil
Last Used Date: 10/31/1970
OSFM First Notify Date: 11/24/1994
Tank Status: Exempt from registration
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: A000953
Green Tag Issue Date: 8/20/1999
Green Tag Expire Date: 12/31/2002
Self Service Permit Inspection Date:Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

Tank Number: 6
Tank Capacity: 1000
Tank Substance: Water
Last Used Date: 12/31/1973
OSFM First Notify Date: 9/27/2001
Tank Status: Exempt from registration
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: A000953
Green Tag Issue Date: 8/20/1999
Green Tag Expire Date: 12/31/2002
Self Service Permit Inspection Date:Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

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5 **SPILLS** **S108891681**
9501 S KING DR **N/A**
CHICAGO, IL

SPILLS:
Incident ID: 20071437
Incident Date: 10/26/2007
Date Received: 10/26/2007
Facility Address: 9501 S KING DR
Facility City: CHICAGO
PRP Name: Not reported

(Continued) **S108891681**

AC: Not reported

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5 **SHELL OIL CO.** **LUST** **S104792923**
9500 SOUTH MARTIN LUTHER KING DR. **N/A**
CHICAGO, IL 60628

LUST:

Incident Num:	20002169
IL EPA Id:	0316505016
Product:	Gasoline
IEMA Date:	11/10/2000
Project Manager:	Kuhlman
Project Manager Phone:	(217) 785-5715
Email:	Eric.Kuhlman@illinois.gov
PRP Name:	Equilon Enterprises
PRP Contact:	John Robbins
PRP Address:	603 Diehl, Suite 103
PRP City,St,Zip:	Naperville, IL 60563
PRP Phone:	6302764206
Site Classification:	High
Section 57.5(g) Letter:	732
Date Section 57.5(g) Letter:	Not reported
Non LUST Determination Letter:	Not reported
20 Report Received:	11/20/2000
45 Report Received:	11/13/2001
NFA/NFR Letter:	**05/27/2004**
NFR Date Recorded:	08/16/2004

Incident Num:	942284
IL EPA Id:	0316505016
Product:	Other Petro
IEMA Date:	10/10/1994
Project Manager:	Nickell
Project Manager Phone:	(217) 782-6762
Email:	Not reported
PRP Name:	Equilon Enterprises LLC
PRP Contact:	Lisa Schoedel
PRP Address:	603 Diehl Rd., Suite 103
PRP City,St,Zip:	Naperville, IL 60563
PRP Phone:	6302764206
Site Classification:	Not reported
Section 57.5(g) Letter:	732
Date Section 57.5(g) Letter:	01/04/1995
Non LUST Determination Letter:	Not reported
20 Report Received:	01/12/1995
45 Report Received:	01/11/1995
NFA/NFR Letter:	**Not reported**
NFR Date Recorded:	Not reported

6 **S.W.C. 95TH & MLK LLC** **LUST** **S108480371**
347 EAST 95TH STREET **N/A**
CHICAGO, IL 60619

LUST:
Incident Num: 20070110
IL EPA Id: 0316445057
Product: Fuel Oil
IEMA Date: 02/02/2007
Project Manager: Schwartzkopf
Project Manager Phone: (217) 557-8763
Email: Lizz.Schwartzkopf@illinois.gov
PRP Name: Not reported
PRP Contact: Not reported
PRP Address: Not reported
PRP City,St,Zip: Not reported
PRP Phone: Not reported
Site Classification: Not reported
Section 57.5(g) Letter: 734
Date Section 57.5(g) Letter: 10/11/2007
Non LUST Determination Letter: Not reported
20 Report Received: Not reported
45 Report Received: Not reported
NFA/NFR Letter: **Not reported**
NFR Date Recorded: Not reported

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6 **SPILLS** **S111921064**
347 E 95TH ST **N/A**
CHICAGO, IL

SPILLS:
Incident ID: 20070110
Incident Date: Not reported
Date Received: 02/02/2007
Facility Address: 347 E 95TH ST
Facility City: CHICAGO
PRP Name: SWC 95TH AND MLK LLC
AC: Not reported

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6 **VACANT LAND** **UST** **U003668302**
333 E. 95TH STREET **N/A**
CHICAGO, IL 60619

UST:
Facility ID: 2037435
Facility Status: CLOSED
Facility Type: **OTHER**
Owner Name: Rose Construction
Owner Id: U0032769
Owner Address: 9440 Enterprise Drive
Owner City,St,Zip: Mokena, IL 60448

Tank Number: 1
Tank Capacity: 4000
Tank Substance: Heating Oil
Last Used Date: 1/1/2005
OSFM First Notify Date: 9/29/1998
Tank Status: **Removed**

VACANT LAND (Continued) **U003668302**

Red Tag Issue Date:	Not reported
Install Date:	2/1/1989
Green Tag Decal:	**F002189**
Green Tag Issue Date:	**12/2/2004**
Green Tag Expire Date:	**12/31/2007**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	No

Tank Number:	2
Tank Capacity:	4000
Tank Substance:	Used Oil
Last Used Date:	1/1/2005
OSFM First Notify Date:	9/29/1998
Tank Status:	**Removed**
Red Tag Issue Date:	Not reported
Install Date:	2/1/1989
Green Tag Decal:	**F002189**
Green Tag Issue Date:	**12/2/2004**
Green Tag Expire Date:	**12/31/2007**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	No

Tank Number:	3
Tank Capacity:	550
Tank Substance:	Heating Oil
Last Used Date:	12/31/1973
OSFM First Notify Date:	3/22/2007
Tank Status:	**Exempt from registration**
Red Tag Issue Date:	Not reported
Install Date:	Not reported
Green Tag Decal:	**F002189**
Green Tag Issue Date:	**12/2/2004**
Green Tag Expire Date:	**12/31/2007**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	Not reported

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7 **MEDLEY MOVING & STORAGE, INC.** **UST** **U001142805**
251 E 95TH ST **N/A**
CHICAGO, IL 60619

UST:

Facility ID:	2006670
Facility Status:	CLOSED
Facility Type:	**PRIVATE INSTITUTION**
Owner Name:	Medley Moving & Storage Inc
Owner Id:	U0010054
Owner Address:	251 E 95Th St
Owner City,St,Zip:	Chicago, IL 60619

Tank Number:	1
Tank Capacity:	10000
Tank Substance:	Diesel Fuel
Last Used Date:	6/8/2000

MEDLEY MOVING & STORAGE, INC. (Continued) **U001142805**

OSFM First Notify Date:	3/24/1986
Tank Status:	**Removed**
Red Tag Issue Date:	Not reported
Install Date:	Not reported
Green Tag Decal:	**05093**
Green Tag Issue Date:	**8/18/1998**
Green Tag Expire Date:	**12/31/2001**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	No

Tank Number:	2
Tank Capacity:	10000
Tank Substance:	Heating Oil
Last Used Date:	12/1/1973
OSFM First Notify Date:	Not reported
Tank Status:	**Exempt from registration**
Red Tag Issue Date:	Not reported
Install Date:	Not reported
Green Tag Decal:	**05093**
Green Tag Issue Date:	**8/18/1998**
Green Tag Expire Date:	**12/31/2001**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	Not reported

Tank Number:	3
Tank Capacity:	10000
Tank Substance:	Heating Oil
Last Used Date:	12/1/1973
OSFM First Notify Date:	Not reported
Tank Status:	**Exempt from registration**
Red Tag Issue Date:	Not reported
Install Date:	Not reported
Green Tag Decal:	**05093**
Green Tag Issue Date:	**8/18/1998**
Green Tag Expire Date:	**12/31/2001**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	Not reported

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7 **SPILLS** **S111907087**
251 E 95TH ST **N/A**
CHICAGO, IL

SPILLS:

Incident ID:	20000774
Incident Date:	Not reported
Date Received:	04/27/2000
Facility Address:	251 E 95TH ST
Facility City:	CHICAGO
PRP Name:	MEADLWY MOVING & STORAGE
AC:	Not reported

7
MEDLEY’S MOVING & STORAGE
251 EAST 95TH ST.
CHICAGO, IL 60619
LUST
S104564421
N/A

LUST:

Incident Num:	20001183
IL EPA Id:	0318993017
Product:	Fuel Oil
IEMA Date:	06/21/2000
Project Manager:	Ransdell
Project Manager Phone:	(217) 557-6938
Email:	James.Ransdell@illinois.gov
PRP Name:	Medleys Moving & Storage
PRP Contact:	Howard Medley
PRP Address:	251 East 95th St.
PRP City,St,Zip:	Chicago, IL 60619
PRP Phone:	7738214000
Site Classification:	Not reported
Section 57.5(g) Letter:	732
Date Section 57.5(g) Letter:	11/02/2000
Non LUST Determination Letter:	Not reported
20 Report Received:	Not reported
45 Report Received:	Not reported
NFA/NFR Letter:	**Not reported**
NFR Date Recorded:	Not reported

Incident Num:	930643
IL EPA Id:	0318993017
Product:	Deisel
IEMA Date:	03/18/1993
Project Manager:	Benanti
Project Manager Phone:	(217) 524-4649
Email:	Trent.Benanti@illinois.gov
PRP Name:	Meadley’s Moving & Storage
PRP Contact:	Howard Meadley
PRP Address:	251 East 95th St.
PRP City,St,Zip:	Chicago, IL 60619
PRP Phone:	Not reported
Site Classification:	Not reported
Section 57.5(g) Letter:	731
Date Section 57.5(g) Letter:	Not reported
Non LUST Determination Letter:	Not reported
20 Report Received:	Not reported
45 Report Received:	Not reported
NFA/NFR Letter:	**06/23/2011**
NFR Date Recorded:	Not reported

7
251 E 95TH ST
CHICAGO, IL
SPILLS
S111907493
N/A

SPILLS:

Incident ID:	20001183
Incident Date:	Not reported
Date Received:	06/21/2000
Facility Address:	251 E 95TH ST
Facility City:	CHICAGO
PRP Name:	MEDLEYS MOVING & STORAGE
AC:	Not reported

Map ID	Site	Database(s)	EPA ID Number
7	**MEDLEY’S MOVING & STORAGE** **251 EAST 95TH ST.-B** **CHICAGO, IL 60619**	**LUST**	**S104524044** **N/A**

LUST:

Incident Num:	20000774
IL EPA Id:	0318993017
Product:	Deisel
IEMA Date:	04/27/2000
Project Manager:	Benanti
Project Manager Phone:	(217) 524-4649
Email:	Trent.Benanti@illinois.gov
PRP Name:	Medley’s Moving & Storage
PRP Contact:	Howard Medley
PRP Address:	251 East 95th St.-B
PRP City,St,Zip:	Chicago, IL 60619
PRP Phone:	7738214000
Site Classification:	Not reported
Section 57.5(g) Letter:	732
Date Section 57.5(g) Letter:	Not reported
Non LUST Determination Letter:	Not reported
20 Report Received:	05/25/2000
45 Report Received:	07/24/2000
NFA/NFR Letter:	**11/15/2000**
NFR Date Recorded:	02/01/2001

Map ID	Site	Database(s)	EPA ID Number
7	 **251 E 95TH ST** **CHICAGO, IL**	**SPILLS**	**S111887108** **N/A**

SPILLS:

Incident ID:	19930643
Incident Date:	Not reported
Date Received:	03/18/1993
Facility Address:	251 E 95TH ST
Facility City:	CHICAGO
PRP Name:	HOWARD MEDLEY
AC:	Not reported

Map ID	Site	Database(s)	EPA ID Number
8	**SHELL OIL CO.** **4 EAST 95TH ST.** **CHICAGO, IL 60619**	**LUST**	**S104528096** **N/A**

LUST:

Incident Num:	871758
IL EPA Id:	0316445022
Product:	Gasoline
IEMA Date:	10/29/1987
Project Manager:	Rife
Project Manager Phone:	Not reported
Email:	Not reported
PRP Name:	Equilon Enterprises LLC
PRP Contact:	Lisa Schoedel
PRP Address:	603 Diehl Rd., Suite 103
PRP City,St,Zip:	Naperville, IL 60563
PRP Phone:	6302764206
Site Classification:	Not reported
Section 57.5(g) Letter:	731

SHELL OIL CO. (Continued) **S104528096**

Date Section 57.5(g) Letter: Not reported
Non LUST Determination Letter: 1996-01-22
20 Report Received: 12/11/1987
45 Report Received: 10/15/1990
NFA/NFR Letter: Not reported
NFR Date Recorded: Not reported

8

MOBIL GAS & FOOD MART
4 E. 95TH STREET
CHICAGO, IL 60620

UST **U000174484**
N/A

UST:
Facility ID: 2007056
Facility Status: ACTIVE
Facility Type: SELF-SERVICE STATION
Owner Name: Rock Build Enterprises, Inc.
Owner Id: U0033996
Owner Address: 14123 South 85th Avenue
Owner City,St,Zip: Orland Park, IL 60462

Tank Number: 1
Tank Capacity: 12000
Tank Substance: Gasoline
Last Used Date: Not reported
OSFM First Notify Date: 4/25/1986
Tank Status: Currently in use
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: N001762
Green Tag Issue Date: 2/15/2012
Green Tag Expire Date: 12/31/2014
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: $0.00

Tank Number: 2
Tank Capacity: 8000
Tank Substance: Gasoline
Last Used Date: Not reported
OSFM First Notify Date: 4/25/1986
Tank Status: Currently in use
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: N001762
Green Tag Issue Date: 2/15/2012
Green Tag Expire Date: 12/31/2014
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: $0.00

Tank Number: 3
Tank Capacity: 6000
Tank Substance: Diesel Fuel
Last Used Date: Not reported
OSFM First Notify Date: 4/25/1986
Tank Status: Currently in use

Map ID	Site	Database(s)	EPA ID Number
	MOBIL GAS & FOOD MART (Continued)		**U000174484**

Red Tag Issue Date:	Not reported
Install Date:	Not reported
Green Tag Decal:	**N001762**
Green Tag Issue Date:	**2/15/2012**
Green Tag Expire Date:	**12/31/2014**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	$0.00

Map ID	Site	Database(s)	EPA ID Number
9	**AMOCO SERVICE STATION #15459.** **36 WEST 95TH ST.** **CHICAGO, IL 60628**	**LUST**	**S105059046** **N/A**

LUST:

Incident Num:	971123
IL EPA Id:	0316490013
Product:	Unleaded Gas
IEMA Date:	06/24/1997
Project Manager:	Piggush
Project Manager Phone:	(217) 782-3101
Email:	Michael.Piggush@illinois.gov
PRP Name:	Amoco Oil Co.
PRP Contact:	Lyle Bruce
PRP Address:	28100 Torch Pkwy., 6-S
PRP City,St,Zip:	Warrenville, IL 60555
PRP Phone:	Not reported
Site Classification:	HIGH
Section 57.5(g) Letter:	732
Date Section 57.5(g) Letter:	Not reported
Non LUST Determination Letter:	Not reported
20 Report Received:	06/27/1997
45 Report Received:	08/01/1997
NFA/NFR Letter:	**05/07/2003**
NFR Date Recorded:	07/17/2003

Map ID	Site	Database(s)	EPA ID Number
9	 **36 W 95TH ST** **CHICAGO, IL**	**SPILLS**	**S111898819** **N/A**

SPILLS:

Incident ID:	19971123
Incident Date:	Not reported
Date Received:	06/24/1997
Facility Address:	36 W 95TH ST
Facility City:	CHICAGO
PRP Name:	AMOCO OIL COMPANY
AC:	Not reported

Map ID	Site	Database(s)	EPA ID Number
9	**SS#15459 FAC#10443** **36 W. 95TH ST.** **CHICAGO, IL 60628**	**UST**	**U000864621** **N/A**

UST:

Facility ID:	2023039
Facility Status:	CLOSED
Facility Type:	**NONE**
Owner Name:	BP Amoco
Owner Id:	U0023834
Owner Address:	28100 Torch Parkway Suite 300
Owner City,St,Zip:	Warrenville, IL 60555

Tank Number:	1
Tank Capacity:	10000
Tank Substance:	Gasoline
Last Used Date:	Not reported
OSFM First Notify Date:	4/25/1986
Tank Status:	**Removed**
Red Tag Issue Date:	Not reported
Install Date:	Not reported
Green Tag Decal:	**Not reported**
Green Tag Issue Date:	**Not reported**
Green Tag Expire Date:	**Not reported**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	No

Tank Number:	2
Tank Capacity:	10000
Tank Substance:	Gasoline
Last Used Date:	Not reported
OSFM First Notify Date:	4/25/1986
Tank Status:	**Removed**
Red Tag Issue Date:	Not reported
Install Date:	Not reported
Green Tag Decal:	**Not reported**
Green Tag Issue Date:	**Not reported**
Green Tag Expire Date:	**Not reported**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	No

Tank Number:	3
Tank Capacity:	10000
Tank Substance:	Gasoline
Last Used Date:	Not reported
OSFM First Notify Date:	4/25/1986
Tank Status:	**Removed**
Red Tag Issue Date:	Not reported
Install Date:	Not reported
Green Tag Decal:	**Not reported**
Green Tag Issue Date:	**Not reported**
Green Tag Expire Date:	**Not reported**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	No

Map ID	Site	Database(s)	EPA ID Number
9	**AMOCO 15459** **36 W 95TH AND LAFAYETTE** **CHICAGO, IL 60628**	**RCRA-SQG**	**1000862583** **ILD984924860**

RCRA-SQG:

Date form received by agency: 09/02/1993
Facility name: AMOCO 15459
Facility address: 36 W 95TH AND LAFAYETTE
CHICAGO, IL 60628
EPA ID: ILD984924860
Mailing address: 2021 SPRING RD 400
OAK BROOK, IL 60521
Contact: LINDA CURRAN
Contact address: 2021 SPRING RD 400
OAK BROOK, IL 60521
Contact country: US
Contact telephone: (708) 990-2277
Contact email: Not reported
EPA Region: 05
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name: AMOCO OIL CO
Owner/operator address: 2021 SPRING RD 400
OAK BROOK, IL 60521
Owner/operator country: Not reported
Owner/operator telephone: (708) 990-2277
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:

U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Hazardous Waste Summary:

Waste code: D001
Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS

Map ID	Site	Database(s)	EPA ID Number
	AMOCO 15459 (Continued)		**1000862583**

CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Violation Status: No violations found

---

9 **ATLANTIC RICHFIELD CO**
1 E 95TH ST
CHICAGO, IL 60628

UST **U003559028**
N/A

UST:

Facility ID:	2011489
Facility Status:	CLOSED
Facility Type:	**NONE**
Owner Name:	Atlantic Richfield Co
Owner Id:	U0000926
Owner Address:	515 S Flower St
Owner City,St,Zip:	Los Angeles, CA 90071
Tank Number:	1
Tank Capacity:	550
Tank Substance:	Used Oil
Last Used Date:	1/1/1979
OSFM First Notify Date:	4/28/1986
Tank Status:	**Removed**
Red Tag Issue Date:	Not reported
Install Date:	Not reported
Green Tag Decal:	**Not reported**
Green Tag Issue Date:	**Not reported**
Green Tag Expire Date:	**Not reported**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	Not reported

10
49 E 95TH ST
CHICAGO, IL

SPILLS **S111888927**
N/A

SPILLS:

Incident ID:	19932467
Incident Date:	Not reported
Date Received:	09/15/1993
Facility Address:	49 E 95TH ST
Facility City:	CHICAGO
PRP Name:	CHICAGO PARK DISTRICT
AC:	Not reported

Map ID	Site	Database(s)	EPA ID Number
10	**ABBOTT PARK FIELDHOUSE** **49 E 95TH ST** **CHICAGO, IL 60619**	**UST**	**U000864953** **N/A**

UST:

Facility ID: 2030829
Facility Status: CLOSED
Facility Type: **OTHER**
Owner Name: Chicago Park District
Owner Id: U0002888
Owner Address: 541 North Fairbanks Court
Owner City,St,Zip: Chicago, IL 60611

Tank Number: 1
Tank Capacity: 8800
Tank Substance: Heating Oil
Last Used Date: 1/1/1974
OSFM First Notify Date: 7/1/1992
Tank Status: **Removed**
Red Tag Issue Date: Not reported
Install Date: 1/1/1902
Green Tag Decal: **Not reported**
Green Tag Issue Date: **Not reported**
Green Tag Expire Date: **Not reported**
Self Service Permit Inspection Date: **Not reported**
Self Service Permit Expire Date: **Not reported**
Fee Due: Not reported

Map ID	Site	Database(s)	EPA ID Number
10	**ABBOTT** **49 EAST 95TH ST.** **CHICAGO, IL 60619**	**LUST**	**S104523631** **N/A**

LUST:

Incident Num: 932446
IL EPA Id: 0316445035
Product: Fuel Oil
IEMA Date: 09/13/1993
Project Manager: NOT ASSIGNED
Project Manager Phone: Not reported
Email: Not reported
PRP Name: Chicago Park Dist.
PRP Contact: Masood Razvi
PRP Address: 425 East McFetridge Dr.
PRP City,St,Zip: Chicago, IL 60605
PRP Phone: Not reported
Site Classification: Not reported
Section 57.5(g) Letter: 732
Date Section 57.5(g) Letter: Not reported
Non LUST Determination Letter: Not reported
20 Report Received: 09/22/1993
45 Report Received: Not reported
NFA/NFR Letter: **Not reported**
NFR Date Recorded: Not reported

Map ID	Site	Database(s)	EPA ID Number
10	**ABBOTT** **45 EAST 95TH ST.** **CHICAGO, IL 60619**	**LUST**	**S104523621** **N/A**

LUST:

Incident Num: 932467
IL EPA Id: 0316445035
Product: Uset Oil
IEMA Date: 09/15/1993
Project Manager: NOT ASSIGNED
Project Manager Phone: Not reported
Email: Not reported
PRP Name: Chicago Park Dist.
PRP Contact: Robin Minor
PRP Address: 425 East McFetridge Dr.
PRP City,St,Zip: Chicago, IL 60605
PRP Phone: Not reported
Site Classification: Not reported
Section 57.5(g) Letter: 732
Date Section 57.5(g) Letter: Not reported
Non LUST Determination Letter: Not reported
20 Report Received: Not reported
45 Report Received: Not reported
NFA/NFR Letter: Not reported
NFR Date Recorded: Not reported

Map ID	Site	Database(s)	EPA ID Number
11	**CHICAGO STATE UNIVERSITY** **9501 S DR KINGS DR** **CHICAGO, IL 60628**	**UST**	**U001142270** **N/A**

UST:

Facility ID: 2017832
Facility Status: CLOSED
Facility Type: STATE
Owner Name: Chicago State University
Owner Id: U0002899
Owner Address: 9501 S Kings Dr
Owner City,St,Zip: Chicago, IL 60628

Tank Number: 1
Tank Capacity: 30000
Tank Substance: Diesel Fuel
Last Used Date: 11/17/1997
OSFM First Notify Date: 4/2/1986
Tank Status: Removed
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

Tank Number: 2
Tank Capacity: 20000
Tank Substance: Water
Last Used Date: 11/17/1997
OSFM First Notify Date: 2/25/1999

Map ID	Site	Database(s)	EPA ID Number

CHICAGO STATE UNIVERSITY (Continued) **U001142270**

Tank Status:	**Exempt from registration**
Red Tag Issue Date:	Not reported
Install Date:	11/7/1997
Green Tag Decal:	**Not reported**
Green Tag Issue Date:	**Not reported**
Green Tag Expire Date:	**Not reported**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	No

---

12 **HARLAN COMMUNITY ACADEMY HS** **RCRA-CESQG** **1004696723**
9652 S MICHIGAN AVE **ILR000056994**
CHICAGO, IL 60628

RCRA-CESQG:

Date form received by agency:	10/30/1998
Facility name:	HARLAN COMMUNITY ACADEMY HS
Facility address:	9652 S MICHIGAN AVE CHICAGO, IL 60628
EPA ID:	ILR000056994
Mailing address:	8501 W 191ST ST PO BOX 10 MOKENA, IL 60448
Contact:	THOMAS CONNELLY
Contact address:	8501 W 191ST ST PO BOX 10 MOKENA, IL 60448
Contact country:	US
Contact telephone:	(708) 923-0202
Contact email:	Not reported
EPA Region:	05
Classification:	Conditionally Exempt Small Quantity Generator
Description:	Handler: generates 100 kg or less of hazardous waste per calendar month, and accumulates 1000 kg or less of hazardous waste at any time; or generates 1 kg or less of acutely hazardous waste per calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste

Owner/Operator Summary:

Owner/operator name:	CHICAGO PUBLIC SCHOOLS
Owner/operator address:	1819 W PERSHING RD 6W CHICAGO, IL 60609
Owner/operator country:	Not reported
Owner/operator telephone:	(773) 535-7038
Legal status:	District
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

HARLAN COMMUNITY ACADEMY HS (Continued) **1004696723**

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Hazardous Waste Summary:

Waste code: D006
Waste name: CADMIUM

Waste code: D008
Waste name: LEAD

Waste code: D009
Waste name: MERCURY

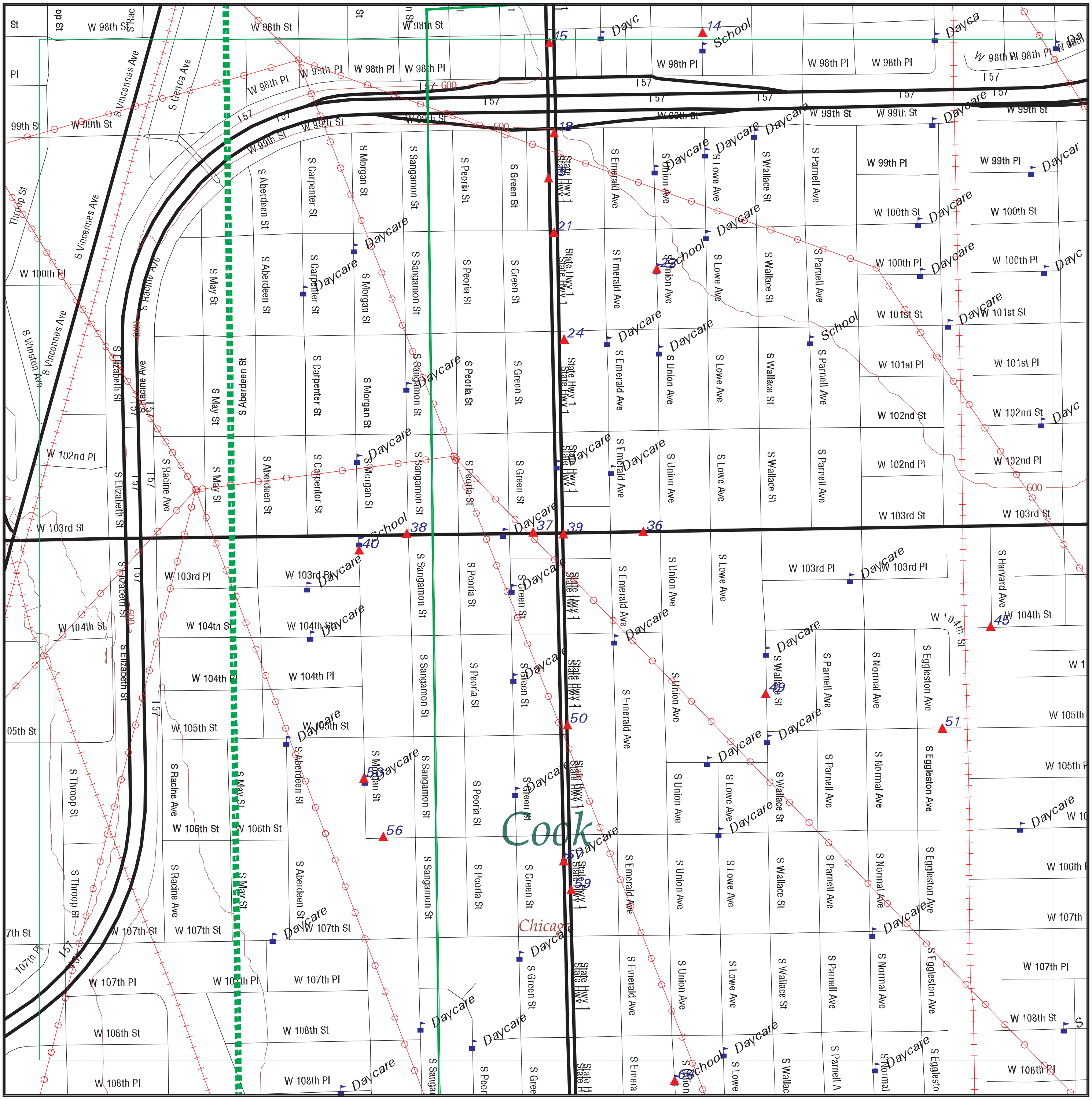
Violation Status: No violations found

Count: 11 records

FOCUS MAP 2 ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CHICAGO	1012172115	ROSELAND COMMUNITY	110TH PLACE AND MICHIGAN, EAST SIDE OF STATE ST.		US BROWNFIELDS
CHICAGO	S109167302		549 115TH ST		LUST, SPILLS
CHICAGO	1002886378	US SCRAP	123RD & COTTAGE GROVE	60628	CERCLIS
CHICAGO	S101467236	PENN CENTRAL	810 E 124TH ST		SSU
CHICAGO	U004179087	FORMER FILLING STATION	7296 S CHICAGO	60619	UST
CHICAGO	S110122357	DIE TECH	7230 S CHICAGO	60619	ENG CONTROLS, INST CONTROL, S
CHICAGO	U004128268	SOUTH CHICAGO ONE, INC.	7283 S CHICAGO AVE	60619	LUST, UST
CHICAGO	S107926342	CHICAGO PROCESS ENGINEERING	7801 S CLAIRMONT	60620	SSU
CHICAGO	S109366427		6700 JEFFREY BLVD		LUST, SPILLS
CHICAGO	S108891646		11900 LOOMIS		LUST, SPILLS
CHICAGO	S107926349	LAKE CALUMET CLUSTER SITE	N OF 122ND	60628	SSU

Focus Map 3


W 98th St
W 98th Pl
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W 108th Pl
I 57
600
State Hwy 1
S Vincennes Ave
S Genoa Ave
S Throop St
S Winston Ave
S Racine Ave
S Elizabeth St
S May St
S Aberdeen St
S Carpenter St
S Morgan St
S Sangamon St
S Peoria St
S Green St
S Emerald Ave
S Union Ave
S Lowe Ave
S Wallace St
S Parnell Ave
S Normal Ave
S Eggleston Ave
S Harvard Ave
Daycare
School
Cook
Chicago
14
15
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EDR DataMap® - Environmental Atlas

EDR Environmental Data Resources Inc

90786 CTC RLE Hazardous Materials

N

Legend

Roads
Major Roads
Contour Lines
National Wetlands Inventory
Waterways
Railroads
Study Boundary
100-Yr Flood Zones
Powerlines
Pipelines
Fault Lines
Water
▲ Listed Sites
Sensitive Receptors

0 1/8 1/4

Scale in Miles

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FOCUS MAP 3 SUMMARY

	Database	Total Plotted
FEDERAL RECORDS		
	Proposed NPL	0
	Delisted NPL	0
	CERCLIS	0
	CERC-NFRAP	0
	CORRACTS	0
	RCRA-TSDF	0
	RCRA-LQG	0
	RCRA-SQG	14
	RCRA-CESQG	1
	US ENG CONTROLS	0
	US INST CONTROL	0
	ERNS	1
	US BROWNFIELDS	0
STATE AND LOCAL RECORDS		
	SSU	0
	SWF/LF	0
	LUST	10
	UST	15
	SPILLS	2
	ENG CONTROLS	0
	INST CONTROL	0
	SRP	2
	DRYCLEANERS	1
	BROWNFIELDS	0
EDR PROPRIETARY RECORDS		
	Manufactured Gas Plants	0

NOTES:

Sites may be listed in more than one database

Map ID	Site	Database(s)	EPA ID Number
14	**EVERS** **9811 S LOWE** **CHICAGO, IL 60628**	**RCRA-SQG**	**1001127034** **ILR000033118**

RCRA-SQG:

Date form received by agency:	01/10/1997
Facility name:	EVERS
Facility address:	9811 S LOWE CHICAGO, IL 60628
EPA ID:	ILR000033118
Contact:	EMMERINE CLARKSTON
Contact address:	9811 S LOWE CHICAGO, IL 60628
Contact country:	US
Contact telephone:	(773) 535-2565
Contact email:	Not reported
EPA Region:	05
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	CHICAGO PUBLIC SCHOOLS
Owner/operator address:	1819 W PERSHING RD CHICAGO, IL 60609
Owner/operator country:	Not reported
Owner/operator telephone:	(773) 535-7039
Legal status:	District
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Hazardous Waste Summary:

Waste code:	D008
Waste name:	LEAD

Violation Status:	No violations found

Map ID	Site	Database(s)	EPA ID Number
15	**SHELL** **9802 S. HALSTED** **CHICAGO, IL 60628**	**UST**	**U001142621** **N/A**

UST:

Facility ID:	2019884
Facility Status:	ACTIVE
Facility Type:	**SELF-SERVICE STATION**
Owner Name:	Khalid Siddiqui
Owner Id:	U0029824
Owner Address:	1823 West Hood Avenue, Suite C
Owner City,St,Zip:	Chicago, IL 60660

Tank Number:	1
Tank Capacity:	10000
Tank Substance:	Gasoline
Last Used Date:	Not reported
OSFM First Notify Date:	5/7/1986
Tank Status:	**Currently in use**
Red Tag Issue Date:	Not reported
Install Date:	Not reported
Green Tag Decal:	**K003789**
Green Tag Issue Date:	**6/18/2009**
Green Tag Expire Date:	**12/31/2011**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	$0.00

Tank Number:	2
Tank Capacity:	10000
Tank Substance:	Gasoline
Last Used Date:	Not reported
OSFM First Notify Date:	5/7/1986
Tank Status:	**Currently in use**
Red Tag Issue Date:	Not reported
Install Date:	Not reported
Green Tag Decal:	**K003789**
Green Tag Issue Date:	**6/18/2009**
Green Tag Expire Date:	**12/31/2011**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	$0.00

Tank Number:	3
Tank Capacity:	10000
Tank Substance:	Gasoline
Last Used Date:	Not reported
OSFM First Notify Date:	5/7/1986
Tank Status:	**Currently in use**
Red Tag Issue Date:	Not reported
Install Date:	Not reported
Green Tag Decal:	**K003789**
Green Tag Issue Date:	**6/18/2009**
Green Tag Expire Date:	**12/31/2011**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	$0.00

Map ID	Site	Database(s)	EPA ID Number
15	**CLARK GAS** **9811 S. HALSTED** **CHICAGO, IL 60628**	**UST**	**U001143133** **N/A**

UST:

Facility ID: 2007026
Facility Status: ACTIVE
Facility Type: SELF-SERVICE STATION
Owner Name: Petro Universal, Inc.
Owner Id: U0034143
Owner Address: 9811 S. Halsted
Owner City,St,Zip: Chicago, IL 60628

Tank Number: 1
Tank Capacity: 10000
Tank Substance: Gasoline
Last Used Date: Not reported
OSFM First Notify Date: 4/25/1986
Tank Status: Removed
Red Tag Issue Date: Not reported
Install Date: 1/1/1985
Green Tag Decal: N001766
Green Tag Issue Date: 2/28/2012
Green Tag Expire Date: 12/31/2014
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: $0.00

Tank Number: 3
Tank Capacity: 10000
Tank Substance: Gasoline
Last Used Date: Not reported
OSFM First Notify Date: 4/25/1986
Tank Status: Removed
Red Tag Issue Date: Not reported
Install Date: 1/1/1985
Green Tag Decal: N001766
Green Tag Issue Date: 2/28/2012
Green Tag Expire Date: 12/31/2014
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: $0.00

Tank Number: 4
Tank Capacity: 10000
Tank Substance: Gasoline
Last Used Date: Not reported
OSFM First Notify Date: 4/25/1986
Tank Status: Removed
Red Tag Issue Date: Not reported
Install Date: 1/1/1985
Green Tag Decal: N001766
Green Tag Issue Date: 2/28/2012
Green Tag Expire Date: 12/31/2014
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: $0.00

Map ID	Site	Database(s)	EPA ID Number

CLARK GAS (Continued) **U001143133**

Tank Number:	5
Tank Capacity:	8000
Tank Substance:	Diesel Fuel
Last Used Date:	Not reported
OSFM First Notify Date:	6/27/2000
Tank Status:	**Currently in use**
Red Tag Issue Date:	Not reported
Install Date:	4/17/2000
Green Tag Decal:	**N001766**
Green Tag Issue Date:	**2/28/2012**
Green Tag Expire Date:	**12/31/2014**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	$0.00

Tank Number:	6
Tank Capacity:	10000
Tank Substance:	Gasoline
Last Used Date:	Not reported
OSFM First Notify Date:	6/27/2000
Tank Status:	**Currently in use**
Red Tag Issue Date:	Not reported
Install Date:	4/17/2000
Green Tag Decal:	**N001766**
Green Tag Issue Date:	**2/28/2012**
Green Tag Expire Date:	**12/31/2014**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	$0.00

Tank Number:	7
Tank Capacity:	12000
Tank Substance:	Gasoline
Last Used Date:	Not reported
OSFM First Notify Date:	6/27/2000
Tank Status:	**Currently in use**
Red Tag Issue Date:	Not reported
Install Date:	4/17/2000
Green Tag Decal:	**N001766**
Green Tag Issue Date:	**2/28/2012**
Green Tag Expire Date:	**12/31/2014**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	$0.00

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15 **EQUILON ENTERPRISES LLC** **LUST** **S104189763**
9811 HALSTED **N/A**
CHICAGO, IL 60628

LUST:

Incident Num:	990295
IL EPA Id:	0316495059
Product:	Unleaded Gas
IEMA Date:	02/10/1999
Project Manager:	Kuhlman
Project Manager Phone:	(217) 785-5715

Map ID	Site	Database(s)	EPA ID Number
	EQUILON ENTERPRISES LLC (Continued)		**S104189763**

Email:	Eric.Kuhlman@illinois.gov
PRP Name:	Equilon Enterprises LLC
PRP Contact:	John Robbins
PRP Address:	603 West Diehl Rd., Suite 103
PRP City,St,Zip:	Naperville, IL 60563
PRP Phone:	6302764206
Site Classification:	HIGH
Section 57.5(g) Letter:	732
Date Section 57.5(g) Letter:	Not reported
Non LUST Determination Letter:	Not reported
20 Report Received:	02/19/1999
45 Report Received:	02/26/1999
NFA/NFR Letter:	**09/14/2005**
NFR Date Recorded:	12/02/2005

18	**MOBIL OIL CORP SS A8B** **9901 S HALSTED** **CHICAGO, IL 60628**	**RCRA-SQG**	**1000612200** **ILD984824235**

RCRA-SQG:

Date form received by agency:	03/01/2000
Facility name:	MOBIL OIL CORP SS A8B
Site name:	MOBIL OIL CORP, #A8B
Facility address:	9901 S HALSTED CHICAGO, IL 60628
EPA ID:	ILD984824235
Mailing address:	3225 GALLOWS RD, STE-5D FAIRFAX, VA 22037
Contact:	RATRY VINAYA
Contact address:	Not reported Not reported
Contact country:	Not reported
Contact telephone:	(703) 846-5735
Contact email:	Not reported
EPA Region:	05
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	MOBIL OIL CORP
Owner/operator address:	Not reported Not reported
Owner/operator country:	Not reported
Owner/operator telephone:	Not reported
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No

Map ID	Site	Database(s)	EPA ID Number

MOBIL OIL CORP SS A8B (Continued) **1000612200**

Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Historical Generators:

Date form received by agency:	05/10/1991
Facility name:	MOBIL OIL CORP SS A8B
Classification:	Small Quantity Generator

Hazardous Waste Summary:

Waste code:	D000
Waste name:	Not Defined
Waste code:	D001
Waste name:	IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.
Waste code:	D008
Waste name:	LEAD
Violation Status:	No violations found

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18 **MOBIL #10769** **UST** **U000172643**
9901 SOUTH HALSTEAD STREET **N/A**
CHICAGO, IL 60628

UST:

Facility ID:	2008992
Facility Status:	ACTIVE
Facility Type:	**SELF-SERVICE STATION**
Owner Name:	JMJ Mobil
Owner Id:	U0033024
Owner Address:	9901 S. Halsted
Owner City,St,Zip:	Chicago, IL 60628
Tank Number:	1
Tank Capacity:	10000
Tank Substance:	Gasoline
Last Used Date:	Not reported
OSFM First Notify Date:	5/5/1986
Tank Status:	**Exempt from registration**
Red Tag Issue Date:	Not reported
Install Date:	Not reported
Green Tag Decal:	**L003829**

MOBIL #10769 (Continued) **U000172643**

Green Tag Issue Date: 12/1/2010
Green Tag Expire Date: 12/31/2012
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: $0.00

Tank Number: 2
Tank Capacity: 10000
Tank Substance: Gasoline
Last Used Date: Not reported
OSFM First Notify Date: 5/5/1986
Tank Status: Exempt from registration
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: L003829
Green Tag Issue Date: 12/1/2010
Green Tag Expire Date: 12/31/2012
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: $0.00

Tank Number: 3
Tank Capacity: 10000
Tank Substance: Gasoline
Last Used Date: Not reported
OSFM First Notify Date: 5/5/1986
Tank Status: Exempt from registration
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: L003829
Green Tag Issue Date: 12/1/2010
Green Tag Expire Date: 12/31/2012
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: $0.00

Tank Number: 4
Tank Capacity: 10000
Tank Substance: Gasoline
Last Used Date: Not reported
OSFM First Notify Date: 5/5/1986
Tank Status: Exempt from registration
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: L003829
Green Tag Issue Date: 12/1/2010
Green Tag Expire Date: 12/31/2012
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: $0.00

Tank Number: 5
Tank Capacity: 1000

MOBIL #10769 (Continued) **U000172643**

Tank Substance: Used Oil
Last Used Date: Not reported
OSFM First Notify Date: 5/5/1986
Tank Status: Exempt from registration
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: L003829
Green Tag Issue Date: 12/1/2010
Green Tag Expire Date: 12/31/2012
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: $0.00

Tank Number: 6
Tank Capacity: 10000
Tank Substance: Gasoline
Last Used Date: Not reported
OSFM First Notify Date: 12/19/1988
Tank Status: Currently in use
Red Tag Issue Date: Not reported
Install Date: 1/1/1986
Green Tag Decal: L003829
Green Tag Issue Date: 12/1/2010
Green Tag Expire Date: 12/31/2012
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: $0.00

Tank Number: 7
Tank Capacity: 10000
Tank Substance: Gasoline
Last Used Date: Not reported
OSFM First Notify Date: 12/19/1988
Tank Status: Currently in use
Red Tag Issue Date: Not reported
Install Date: 1/1/1986
Green Tag Decal: L003829
Green Tag Issue Date: 12/1/2010
Green Tag Expire Date: 12/31/2012
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: $0.00

Tank Number: 8
Tank Capacity: 10000
Tank Substance: Gasoline
Last Used Date: Not reported
OSFM First Notify Date: 12/19/1988
Tank Status: Currently in use
Red Tag Issue Date: Not reported
Install Date: 1/1/1986
Green Tag Decal: L003829
Green Tag Issue Date: 12/1/2010
Green Tag Expire Date: 12/31/2012

MOBIL #10769 (Continued) **U000172643**

Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: $0.00

Tank Number: 9
Tank Capacity: 10000
Tank Substance: Gasoline
Last Used Date: Not reported
OSFM First Notify Date: 12/19/1988
Tank Status: Currently in use
Red Tag Issue Date: Not reported
Install Date: 1/1/1986
Green Tag Decal: L003829
Green Tag Issue Date: 12/1/2010
Green Tag Expire Date: 12/31/2012
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: $0.00

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18 **BHAGATS AMOCO** **RCRA-SQG** **1000862667**
9900 S HALSTED **ILD984925701**
CHICAGO, IL 60628

RCRA-SQG:
Date form received by agency: 09/24/2007
Facility name: BHAGATS AMOCO
Facility address: 9900 S HALSTED
CHICAGO, IL 60628
EPA ID: ILD984925701
Contact: CHACKO CHANDY
Contact address: 9900 S HALSTED
CHICAGO, IL 60628
Contact country: US
Contact telephone: (773) 233-6661
Contact email: Not reported
EPA Region: 05
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:
Owner/operator name: CHACKO CHANDY
Owner/operator address: Not reported
Not reported
Owner/operator country: Not reported
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: 03/01/2003
Owner/Op end date: Not reported

Owner/operator name: IRFAN BHAGAT
Owner/operator address: 9900 S HALSTED

BHAGATS AMOCO (Continued) **1000862667**

	CHICAGO, IL 60628
Owner/operator country:	US
Owner/operator telephone:	Not reported
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	01/01/1997
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Historical Generators:

Date form received by agency:	09/13/1993
Facility name:	BHAGATS AMOCO
Site name:	AMOCO 15525
Classification:	Small Quantity Generator

Hazardous Waste Summary:

Waste code:	D001
Waste name:	IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.
Waste code:	D018
Waste name:	BENZENE

Violation Status: No violations found

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18 **BP**
9900 SOUTH HALSTED STREET
CHICAGO, IL 60628

LUST **U004128062**
UST **N/A**
SRP

LUST:

Incident Num:	971752
IL EPA Id:	0316535007
Product:	Gasoline
IEMA Date:	09/18/1997
Project Manager:	Carlock
Project Manager Phone:	(217) 782-6762

BP (Continued) **U004128062**

Email: Not reported
PRP Name: Amoco Oil Co.
PRP Contact: Lyle Bruce
PRP Address: 28100 Torch Pkwy., 6-S
PRP City,St,Zip: Warrenville, IL 60555
PRP Phone: 6309901048
Site Classification: Not reported
Section 57.5(g) Letter: 732
Date Section 57.5(g) Letter: Not reported
Non LUST Determination Letter: 2000-09-13
20 Report Received: 09/29/1997
45 Report Received: 11/03/1997
NFA/NFR Letter: Not reported
NFR Date Recorded: Not reported

UST:
Facility ID: 2010818
Facility Status: ACTIVE
Facility Type: SELF-SERVICE STATION
Owner Name: 9900 Halsted Corp.
Owner Id: U0036058
Owner Address: 9739 W. Irvine Park
Owner City,St,Zip: Schiller Park, IL 60167

Tank Number: 1
Tank Capacity: 500
Tank Substance: Used Oil
Last Used Date: 1/1/1988
OSFM First Notify Date: 4/25/1986
Tank Status: Removed
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: M003472
Green Tag Issue Date: 10/20/2011
Green Tag Expire Date: 12/31/2013
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: $0.00

Tank Number: 10
Tank Capacity: 550
Tank Substance: Used Oil
Last Used Date: Not reported
OSFM First Notify Date: 6/21/1994
Tank Status: Removed
Red Tag Issue Date: Not reported
Install Date: 11/1/1988
Green Tag Decal: M003472
Green Tag Issue Date: 10/20/2011
Green Tag Expire Date: 12/31/2013
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: $0.00

Tank Number: 2

BP (Continued) **U004128062**

Tank Capacity: 6000
Tank Substance: Gasoline
Last Used Date: 1/1/1988
OSFM First Notify Date: 4/25/1986
Tank Status: Removed
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: M003472
Green Tag Issue Date: 10/20/2011
Green Tag Expire Date: 12/31/2013
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: $0.00

Tank Number: 3
Tank Capacity: 8000
Tank Substance: Gasoline
Last Used Date: 1/1/1988
OSFM First Notify Date: 4/25/1986
Tank Status: Removed
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: M003472
Green Tag Issue Date: 10/20/2011
Green Tag Expire Date: 12/31/2013
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: $0.00

Tank Number: 4
Tank Capacity: 4000
Tank Substance: Gasoline
Last Used Date: 1/1/1988
OSFM First Notify Date: 4/25/1986
Tank Status: Removed
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: M003472
Green Tag Issue Date: 10/20/2011
Green Tag Expire Date: 12/31/2013
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: $0.00

Tank Number: 5
Tank Capacity: 4000
Tank Substance: Gasoline
Last Used Date: 1/1/1988
OSFM First Notify Date: 4/25/1986
Tank Status: Removed
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: M003472
Green Tag Issue Date: 10/20/2011

BP (Continued) **U004128062**

Green Tag Expire Date: **12/31/2013**
Self Service Permit Inspection Date: **Not reported**
Self Service Permit Expire Date: **Not reported**
Fee Due: $0.00

Tank Number: 6
Tank Capacity: 550
Tank Substance: Heating Oil
Last Used Date: 1/1/1988
OSFM First Notify Date: 6/21/1994
Tank Status: **Exempt from registration**
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: **M003472**
Green Tag Issue Date: **10/20/2011**
Green Tag Expire Date: **12/31/2013**
Self Service Permit Inspection Date: **Not reported**
Self Service Permit Expire Date: **Not reported**
Fee Due: Not reported

Tank Number: 7
Tank Capacity: 12000
Tank Substance: Gasoline
Last Used Date: Not reported
OSFM First Notify Date: 6/21/1994
Tank Status: **Currently in use**
Red Tag Issue Date: Not reported
Install Date: 11/1/1988
Green Tag Decal: **M003472**
Green Tag Issue Date: **10/20/2011**
Green Tag Expire Date: **12/31/2013**
Self Service Permit Inspection Date: **Not reported**
Self Service Permit Expire Date: **Not reported**
Fee Due: $0.00

Tank Number: 8
Tank Capacity: 12000
Tank Substance: Gasoline
Last Used Date: Not reported
OSFM First Notify Date: 6/21/1994
Tank Status: **Currently in use**
Red Tag Issue Date: Not reported
Install Date: 11/1/1988
Green Tag Decal: **M003472**
Green Tag Issue Date: **10/20/2011**
Green Tag Expire Date: **12/31/2013**
Self Service Permit Inspection Date: **Not reported**
Self Service Permit Expire Date: **Not reported**
Fee Due: $0.00

Tank Number: 9
Tank Capacity: 12000
Tank Substance: Gasoline

BP (Continued) **U004128062**

Last Used Date: Not reported
OSFM First Notify Date: 6/21/1994
Tank Status: Currently in use
Red Tag Issue Date: Not reported
Install Date: 11/1/1988
Green Tag Decal: M003472
Green Tag Issue Date: 10/20/2011
Green Tag Expire Date: 12/31/2013
Self Service Permit Inspection Date:Not reported
Self Service Permit Expire Date: Not reported
Fee Due: $0.00

SRP:
IL EPA Id: 0316535007
US EPA Id: ILD984925701
Longitude: -87.64345
Latitude: 41.71383
Contact Name: William Shaver
Contact Address: 24501 Ecorse Road
Contact Address2: Not reported
Contact City,St,Zip: Taylor, MI 48180-
Contact Phone: (574) 272-6955
Date Enrolled: 06/22/2005
Point Of Contact: Jason Brink
Consultant Company: Timmermans Environmental Services, Inc.
Consultant Address: 4455 Chicago Drive SW
Consultant Address2: Not reported
Consultant City,St,Zip: Grandville, MI 49418-1544
Consultant Phone: (616) 531-0503
Proj Mgr Assigned: Baldwin
Sec. 4 Letter Date: Not reported
NFR Recorded: Not reported
Active: True
Total Acres: 0.5
No Further Remediation Letter Dt: Not reported
Remediation Applicant Co: PAV2, LLC
Remediation Applicant Title: Executive V.P.
Remediation Applicant Name: Not reported
Remediation Applicant Company: Not reported
Remediation Applicant Address: Not reported
Remediation Applicant Address 2: Not reported
Remediation Applicant City,St,Zip: Not reported
Illinois EPA: Not reported
Site Name: Not reported
NFR Letter: Not reported
NFR Letter Date Recorded: Not reported
Site Type: Not reported
Comprehensive/Focused: Not reported
Institutional Controls: Not reported
Barrier: Not reported
Worker Caution: Not reported
Acres: Not reported

Map ID	Site	Database(s)	EPA ID Number
18	**MOBIL OIL CO.** **05A8B MOBILE ST./9901 SOUTH HALSTED** **CHICAGO, IL 60628**	**LUST**	**S103688309** **N/A**

LUST:
Incident Num: 980630
IL EPA Id: 0316535005
Product: Gasoline
IEMA Date: 03/24/1998
Project Manager: Weller
Project Manager Phone: (217) 524-4647
Email: Melinda.Weller@illinois.gov
PRP Name: Mobil Oil Corp.
PRP Contact: Mike Holland
PRP Address: Joliet Refinery, I-55 & Arsenal Rd.
PRP City,St,Zip: Channahon, IL 60410
PRP Phone: 8154237664
Site Classification: HIGH
Section 57.5(g) Letter: 732
Date Section 57.5(g) Letter: Not reported
Non LUST Determination Letter: Not reported
20 Report Received: 04/02/1998
45 Report Received: 05/08/1998
NFA/NFR Letter: Not reported
NFR Date Recorded: Not reported

Map ID	Site	Database(s)	EPA ID Number
18	**AMOCO OIL CO. #15525** **99TH & HALSTED** **CHICAGO, IL 60628**	**LUST**	**S103687480** **N/A**

LUST:
Incident Num: 941074
IL EPA Id: 0316535007
Product: Gasoline
IEMA Date: 05/13/1994
Project Manager: Weller
Project Manager Phone: (217) 524-4647
Email: Melinda.Weller@illinois.gov
PRP Name: Amoco Oil Co.
PRP Contact: Lyle Bruce
PRP Address: 28100 Torch Pkwy., 6-S
PRP City,St,Zip: Warrenville, IL 60555
PRP Phone: Not reported
Site Classification: Not reported
Section 57.5(g) Letter: 732
Date Section 57.5(g) Letter: Not reported
Non LUST Determination Letter: 1994-06-08
20 Report Received: 06/03/1994
45 Report Received: 06/29/1994
NFA/NFR Letter: Not reported
NFR Date Recorded: Not reported

Map ID	Site	Database(s)	EPA ID Number
19	**#013611** **9948 S HALSTED** **CHICAGO, IL 60628**	**UST**	**U000865680** **N/A**

UST:

Facility ID:	2016833
Facility Status:	INACTIVE
Facility Type:	**NONE**
Owner Name:	Phillips Petroleum Company
Owner Id:	U0011864
Owner Address:	13 D2 Phillips Building
Owner City,St,Zip:	Bartlesville, OK 74004

Tank Number:	1
Tank Capacity:	560
Tank Substance:	Used Oil
Last Used Date:	7/1/1976
OSFM First Notify Date:	4/16/1986
Tank Status:	**Out of service**
Red Tag Issue Date:	Not reported
Install Date:	Not reported
Green Tag Decal:	**Not reported**
Green Tag Issue Date:	**Not reported**
Green Tag Expire Date:	**Not reported**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	$100.00

Tank Number:	2
Tank Capacity:	4000
Tank Substance:	Gasoline
Last Used Date:	7/1/1976
OSFM First Notify Date:	4/16/1986
Tank Status:	**Out of service**
Red Tag Issue Date:	Not reported
Install Date:	Not reported
Green Tag Decal:	**Not reported**
Green Tag Issue Date:	**Not reported**
Green Tag Expire Date:	**Not reported**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	$100.00

Tank Number:	3
Tank Capacity:	4000
Tank Substance:	Gasoline
Last Used Date:	7/1/1976
OSFM First Notify Date:	4/16/1986
Tank Status:	**Out of service**
Red Tag Issue Date:	Not reported
Install Date:	Not reported
Green Tag Decal:	**Not reported**
Green Tag Issue Date:	**Not reported**
Green Tag Expire Date:	**Not reported**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	$100.00

Map ID	Site	Database(s)	EPA ID Number
	#013611 (Continued)		**U000865680**

Tank Number:	4
Tank Capacity:	4000
Tank Substance:	Gasoline
Last Used Date:	7/1/1976
OSFM First Notify Date:	4/16/1986
Tank Status:	**Out of service**
Red Tag Issue Date:	Not reported
Install Date:	Not reported
Green Tag Decal:	**Not reported**
Green Tag Issue Date:	**Not reported**
Green Tag Expire Date:	**Not reported**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	$100.00

Map ID	Site	Database(s)	EPA ID Number
21	**JOY AUTO REPAIR** **10001 S HALSTED** **CHICAGO, IL 60628**	**RCRA-SQG**	**1004697492** **ILR000077966**

RCRA-SQG:

Date form received by agency:	06/01/2000
Facility name:	JOY AUTO REPAIR
Facility address:	10001 S HALSTED CHICAGO, IL 60628
EPA ID:	ILR000077966
Contact:	WILL TURNER
Contact address:	10001 S HALSTED CHICAGO, IL 60628
Contact country:	US
Contact telephone:	(773) 298-8601
Contact email:	Not reported
EPA Region:	05
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	JOY AUTO REPAIR
Owner/operator address:	10001 S HALSTED CHICAGO, IL 60628
Owner/operator country:	Not reported
Owner/operator telephone:	(773) 298-8601
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No

JOY AUTO REPAIR (Continued) **1004697492**

On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Hazardous Waste Summary:

Waste code:	D001
Waste name:	IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.
Violation Status:	No violations found

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21 **JOY AUTO SERVICE** **UST** **U003298274**
10001 SOUTH HALSTED STREET **N/A**
CHICAGO, IL 60628

UST:

Facility ID:	2036186
Facility Status:	EXEMPT
Facility Type:	**NONE**
Owner Name:	Turner Denise
Owner Id:	U0015296
Owner Address:	6847 S Calumet Ave
Owner City,St,Zip:	Chicago, IL 60647

Tank Number:	1
Tank Capacity:	6000
Tank Substance:	Gasoline
Last Used Date:	12/31/1973
OSFM First Notify Date:	6/13/2000
Tank Status:	**Exempt from registration**
Red Tag Issue Date:	Not reported
Install Date:	Not reported
Green Tag Decal:	**Not reported**
Green Tag Issue Date:	**Not reported**
Green Tag Expire Date:	**Not reported**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	Not reported

Tank Number:	2
Tank Capacity:	6000
Tank Substance:	Gasoline
Last Used Date:	12/31/1973
OSFM First Notify Date:	6/13/2000
Tank Status:	**Exempt from registration**
Red Tag Issue Date:	Not reported

JOY AUTO SERVICE (Continued) **U003298274**

Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

Tank Number: 3
Tank Capacity: 6000
Tank Substance: Gasoline
Last Used Date: 12/31/1973
OSFM First Notify Date: 6/13/2000
Tank Status: Exempt from registration
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

Tank Number: 4
Tank Capacity: 500
Tank Substance: Heating Oil
Last Used Date: 12/31/1973
OSFM First Notify Date: 6/13/2000
Tank Status: Exempt from registration
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

Tank Number: 5
Tank Capacity: 500
Tank Substance: Used Oil
Last Used Date: 12/31/1973
OSFM First Notify Date: 6/13/2000
Tank Status: Exempt from registration
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

Map ID	Site	Database(s)	EPA ID Number
21	**BELL BROS 29 MIN CLEANERS INC** **10000 S HALSTED ST** **CHICAGO, IL 60628**	**RCRA-SQG**	**1001960552** **ILR000075119**

RCRA-SQG:

Date form received by agency:	02/25/2000
Facility name:	BELL BROS 29 MIN CLEANERS INC
Facility address:	10000 S HALSTED ST CHICAGO, IL 60628
EPA ID:	ILR000075119
Contact:	ALONZO BELL
Contact address:	10000 S HALSTED ST CHICAGO, IL 60628
Contact country:	US
Contact telephone:	(773) 774-5757
Contact email:	Not reported
EPA Region:	05
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	BELL BROS 29 MIN CLEANERS INC
Owner/operator address:	10000 S HALSTED CHICAGO, IL 60628
Owner/operator country:	Not reported
Owner/operator telephone:	(773) 774-5757
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Hazardous Waste Summary:

Waste code:	D001
Waste name:	IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET,

BELL BROS 29 MIN CLEANERS INC (Continued) **1001960552**

WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Violation Status: No violations found

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22 **FERNWOOD** **RCRA-SQG** **1001127030**
10041 S UNION **ILR000033076**
CHICAGO, IL 60628

RCRA-SQG:
Date form received by agency: 01/10/1997
Facility name: FERNWOOD
Facility address: 10041 S UNION
CHICAGO, IL 60628
EPA ID: ILR000033076
Contact: ERVIN BOND
Contact address: 10041 S UNION
CHICAGO, IL 60628
Contact country: US
Contact telephone: (773) 535-2700
Contact email: Not reported
EPA Region: 05
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:
Owner/operator name: CHICAGO PUBLIC SCHOOLS
Owner/operator address: 1819 W PERSHING RD
CHICAGO, IL, IL 60609
Owner/operator country: Not reported
Owner/operator telephone: (773) 535-7039
Legal status: District
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

FERNWOOD (Continued) **1001127030**

Hazardous Waste Summary:
Waste code: D008
Waste name: LEAD

Violation Status: No violations found

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24 **HESTER, FRANNY** **LUST** **S104529973**
10101-03 SOUTH HALSTED AVE. **N/A**
CHICAGO, IL 60628

LUST:
Incident Num: 991953
IL EPA Id: 0316495119
Product: Gasoline, Uset Oil
IEMA Date: 08/18/1999
Project Manager: Rothering
Project Manager Phone: (217) 785-1858
Email: Scott.Rothering@illinois.gov
PRP Name: Franny Hester
PRP Contact: Anna Davis
PRP Address: 2237 East 79th St.
PRP City,St,Zip: Chicago, IL 60649
PRP Phone: 7733566300
Site Classification: Not reported
Section 57.5(g) Letter: 732
Date Section 57.5(g) Letter: Not reported
Non LUST Determination Letter: Not reported
20 Report Received: 09/02/1999
45 Report Received: 01/31/2000
NFA/NFR Letter: Not reported
NFR Date Recorded: Not reported

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24 **FERNWOOD TOWING & TUNE-UPS** **UST** **U003668840**
10101-10103 S ASHLAND **N/A**
CHICAGO, IL 60628

UST:
Facility ID: 2039129
Facility Status: EXEMPT
Facility Type: NONE
Owner Name: Fannie Hester
Owner Id: U0028902
Owner Address: 2237 E 79th St C/O Anna Davis Maguire & Assoc Real Estate
Owner City,St,Zip: Chicago, IL 60644

Tank Number: 1
Tank Capacity: 2000
Tank Substance: Gasoline
Last Used Date: 12/31/1973
OSFM First Notify Date: 8/31/1999
Tank Status: Exempt from registration
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported

FERNWOOD TOWING & TUNE-UPS (Continued) **U003668840**

Self Service Permit Expire Date: Not reported
Fee Due: Not reported

Tank Number: 2
Tank Capacity: 550
Tank Substance: Used Oil
Last Used Date: 12/31/1973
OSFM First Notify Date: 8/31/1999
Tank Status: Exempt from registration
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

Tank Number: 3
Tank Capacity: 2000
Tank Substance: Gasoline
Last Used Date: 12/31/1973
OSFM First Notify Date: 8/31/1999
Tank Status: Exempt from registration
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

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36 **HARDY CORP** **UST** **U000791535**
711 W 103RD ST **N/A**
CHICAGO, IL 60628

UST:
Facility ID: 2001050
Facility Status: CLOSED
Facility Type: INDUSTRIAL / MANUFACTURING
Owner Name: Hardy Corp
Owner Id: U0006455
Owner Address: 711 W 103Rd St
Owner City,St,Zip: Chicago, IL 60628

Tank Number: 1
Tank Capacity: 3000
Tank Substance: Gasoline
Last Used Date: 5/1/1994
OSFM First Notify Date: 1/24/1986
Tank Status: Removed
Red Tag Issue Date: Not reported
Install Date: 1/1/1984
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported

Map ID	Site	Database(s)	EPA ID Number
	HARDY CORP (Continued)		**U000791535**

Green Tag Expire Date: **Not reported**
Self Service Permit Inspection Date: **Not reported**
Self Service Permit Expire Date: **Not reported**
Fee Due: Not reported

Map ID	Site	Database(s)	EPA ID Number
36	**HARDY CORP** **711 W 103RD ST** **CHICAGO, IL 60628**	**RCRA-SQG** **LUST**	**1000979049** **IL0000958884**

RCRA-SQG:

Date form received by agency:	11/30/1994
Facility name:	HARDY CORP
Facility address:	711 W 103RD ST CHICAGO, IL 60628
EPA ID:	IL0000958884
Contact:	WILLIAM HARDY
Contact address:	711 W 103RD ST CHICAGO, IL 60628
Contact country:	US
Contact telephone:	(312) 779-6600
Contact email:	Not reported
EPA Region:	05
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	HARDY CORP
Owner/operator address:	711 W 103RD ST CHICAGO, IL 60628
Owner/operator country:	Not reported
Owner/operator telephone:	(312) 779-6600
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Map ID	Site	Database(s)	EPA ID Number

HARDY CORP (Continued) **1000979049**

Hazardous Waste Summary:

Waste code:	D001
Waste name:	IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.
Violation Status:	No violations found

LUST:

Incident Num:	942827
IL EPA Id:	0316495065
Product:	Gasoline
IEMA Date:	12/15/1994
Project Manager:	NOT ASSIGNED
Project Manager Phone:	Not reported
Email:	Not reported
PRP Name:	Hardy Corp.
PRP Contact:	William Hardy
PRP Address:	711 West 103rd St.
PRP City,St,Zip:	Chicago, IL 60628
PRP Phone:	Not reported
Site Classification:	Not reported
Section 57.5(g) Letter:	732
Date Section 57.5(g) Letter:	Not reported
Non LUST Determination Letter:	Not reported
20 Report Received:	Not reported
45 Report Received:	Not reported
NFA/NFR Letter:	**Not reported**
NFR Date Recorded:	Not reported

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37 **DELITE CLEANERS**
816 W 103RD ST
CHICAGO, IL 60643

RCRA-SQG **1000612336**
ILD984825638

RCRA-SQG:

Date form received by agency:	11/02/1998
Facility name:	DELITE CLEANERS
Facility address:	816 W 103RD ST CHICAGO, IL 60643
EPA ID:	ILD984825638
Contact:	WILLIAM HOPKINS
Contact address:	816 W 103RD ST CHICAGO, IL 60643
Contact country:	US
Contact telephone:	(773) 233-2486
Contact email:	Not reported
EPA Region:	05
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Map ID	Site	Database(s)	EPA ID Number
	DELITE CLEANERS (Continued)		**1000612336**

Owner/Operator Summary:

Owner/operator name:	HOPKINS WILLIAM
Owner/operator address:	Not reported Not reported
Owner/operator country:	Not reported
Owner/operator telephone:	Not reported
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Hazardous Waste Summary:

Waste code:	F002
Waste name:	THE FOLLOWING SPENT HALOGENATED SOLVENTS: TETRACHLOROETHYLENE, METHYLENE CHLORIDE, TRICHLOROETHYLENE, 1,1,1-TRICHLOROETHANE, CHLOROBENZENE, 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE, ORTHO-DICHLOROBENZENE, TRICHLOROFLUOROMETHANE, AND 1,1,2-TRICHLOROETHANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE LISTED IN F001, F004, OR F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
Violation Status:	No violations found

38	**MCDONNELL CLEANERS** **932 W 103RD ST** **CHICAGO, IL 60643**	**RCRA-SQG**	**1000339273** **ILD097171318**

RCRA-SQG:

Date form received by agency:	02/11/1988
Facility name:	MCDONNELL CLEANERS
Facility address:	932 W 103RD ST CHICAGO, IL 60643
EPA ID:	ILD097171318
Contact:	JOHN MCDONNELL
Contact address:	932 W 103RD ST CHICAGO, IL 60643
Contact country:	US
Contact telephone:	(312) 238-2776

MCDONNELL CLEANERS (Continued) **1000339273**

Contact email:	Not reported
EPA Region:	05
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	MCDONNELL JOHN
Owner/operator address:	ADDRESS NOT REPORTED CITY NOT REPORTED, AK 99998
Owner/operator country:	Not reported
Owner/operator telephone:	(312) 555-1212
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	NAME NOT REPORTED
Owner/operator address:	ADDRESS NOT REPORTED CITY NOT REPORTED, AK 99998
Owner/operator country:	Not reported
Owner/operator telephone:	(312) 555-1212
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Hazardous Waste Summary:

Waste code:	F002
Waste name:	THE FOLLOWING SPENT HALOGENATED SOLVENTS: TETRACHLOROETHYLENE, METHYLENE CHLORIDE, TRICHLOROETHYLENE, 1,1,1-TRICHLOROETHANE, CHLOROBENZENE, 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE, ORTHO-DICHLOROBENZENE, TRICHLOROFLUOROMETHANE, AND 1,1,2-TRICHLOROETHANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE LISTED IN F001, F004, OR

MCDONNELL CLEANERS (Continued) **1000339273**

F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste code: F004
Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: CRESOLS AND CRESYLIC ACID, AND NITROBENZENE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Violation Status: No violations found

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39 **AMOCO 8614** **RCRA-SQG** **1000862415**
10301 S HALSTED ST **ILD984923169**
CHICAGO, IL 60628

RCRA-SQG:
Date form received by agency: 08/20/1993
Facility name: AMOCO 8614
Facility address: 10301 S HALSTED
CHICAGO, IL 60627
EPA ID: ILD984923169
Mailing address: 2021 SPRING RD 400
OAK BROOK, IL 60521
Contact: LINDA CURRAN
Contact address: 2021 SPRING RD 400
OAK BROOK, IL 60521
Contact country: US
Contact telephone: (708) 990-1043
Contact email: Not reported
EPA Region: 05
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:
Owner/operator name: AMOCO OIL CO
Owner/operator address: 2021 SPRING RD 400
OAK BROOK, IL 60521
Owner/operator country: Not reported
Owner/operator telephone: (708) 990-1043
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No

Map ID	Site	Database(s)	EPA ID Number

AMOCO 8614 (Continued) **1000862415**

Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Hazardous Waste Summary:

Waste code:	D001
Waste name:	IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.
Violation Status:	No violations found

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39 **MARATHON GAS AND FOOD** **UST** **U001141865**
10301 S. HALSTED STREET **N/A**
CHICAGO, IL 60628

UST:

Facility ID:	2022921
Facility Status:	CLOSED
Facility Type:	**SELF-SERVICE STATION**
Owner Name:	OK Gas and Food, Inc.
Owner Id:	U0031512
Owner Address:	10301 S. Halsted
Owner City,St,Zip:	Chicago, IL 60628
Tank Number:	1
Tank Capacity:	10000
Tank Substance:	Gasoline
Last Used Date:	1/16/2008
OSFM First Notify Date:	4/25/1986
Tank Status:	**Removed**
Red Tag Issue Date:	Not reported
Install Date:	1/1/1983
Green Tag Decal:	**G001584**
Green Tag Issue Date:	**4/11/2005**
Green Tag Expire Date:	**12/31/2008**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	No
Tank Number:	2
Tank Capacity:	10000
Tank Substance:	Gasoline
Last Used Date:	1/16/2008
OSFM First Notify Date:	4/25/1986
Tank Status:	**Removed**
Red Tag Issue Date:	Not reported
Install Date:	1/1/1983

MARATHON GAS AND FOOD (Continued) **U001141865**

Green Tag Decal:	**G001584**
Green Tag Issue Date:	**4/11/2005**
Green Tag Expire Date:	**12/31/2008**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	No

Tank Number:	3
Tank Capacity:	12000
Tank Substance:	Gasoline
Last Used Date:	1/16/2008
OSFM First Notify Date:	4/25/1986
Tank Status:	**Removed**
Red Tag Issue Date:	Not reported
Install Date:	1/1/1983
Green Tag Decal:	**G001584**
Green Tag Issue Date:	**4/11/2005**
Green Tag Expire Date:	**12/31/2008**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	No

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39 **MUSTAFA, KHADIM** **LUST** **S105958677**
10301 SOUTH HALSTED **N/A**
CHICAGO, IL 60628

LUST:

Incident Num:	20031090
IL EPA Id:	0316495046
Product:	Gasoline
IEMA Date:	07/23/2003
Project Manager:	Hale
Project Manager Phone:	(217) 782-1803
Email:	Sam.Hale@illinois.gov
PRP Name:	BP Products North America, Inc.
PRP Contact:	Harold Primack
PRP Address:	28100 Torch Parkway, 2S
PRP City,St,Zip:	Warrenville, IL 60555
PRP Phone:	6308367139
Site Classification:	Not reported
Section 57.5(g) Letter:	P.A.
Date Section 57.5(g) Letter:	Not reported
Non LUST Determination Letter:	Not reported
20 Report Received:	08/12/2003
45 Report Received:	09/08/2003
NFA/NFR Letter:	**11/21/2008**
NFR Date Recorded:	01/14/2010

Incident Num:	20080221
IL EPA Id:	0316495046
Product:	Gasoline
IEMA Date:	02/15/2008
Project Manager:	Hale
Project Manager Phone:	(217) 782-1803
Email:	Sam.Hale@illinois.gov
PRP Name:	Not reported
PRP Contact:	Not reported

MUSTAFA, KHADIM (Continued) **S105958677**

PRP Address: Not reported
PRP City,St,Zip: Not reported
PRP Phone: Not reported
Site Classification: Not reported
Section 57.5(g) Letter: 734
Date Section 57.5(g) Letter: Not reported
Non LUST Determination Letter: Not reported
20 Report Received: 03/31/2008
45 Report Received: 04/25/2008
NFA/NFR Letter: **07/30/2008**
NFR Date Recorded: 04/20/2009

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39 **SPILLS** **S109092833**
N/A

10301 S HALSTED
CHICAGO, IL

SPILLS:
Incident ID: 20080221
Incident Date: Not reported
Date Received: 02/15/2008
Facility Address: 10301 S HALSTED
Facility City: CHICAGO
PRP Name: MUSTAFA, KHADIM
AC: Not reported

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40 **RCRA-SQG** **1001127074**
ILR000033746

GARVEY
10309 S MORGAN
CHICAGO, IL 60643

RCRA-SQG:
Date form received by agency: 01/22/1997
Facility name: GARVEY
Facility address: 10309 S MORGAN
CHICAGO, IL 60643
EPA ID: ILR000033746
Contact: PATRICIA TAYLOR
Contact address: 10309 S MORGAN
CHICAGO, IL 60643
Contact country: US
Contact telephone: (773) 535-2763
Contact email: Not reported
EPA Region: 05
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:
Owner/operator name: CHICAGO PUBLIC SCHOOLS
Owner/operator address: 1819 W PERSHING RD
CHICAGO, IL 60609
Owner/operator country: Not reported
Owner/operator telephone: (773) 535-7039
Legal status: District

GARVEY (Continued) **1001127074**

Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Hazardous Waste Summary:
Waste code: D008
Waste name: LEAD

Violation Status: No violations found

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45 **CHICAGO FIRE DEPARTMENT ENGINE #93** **UST** **U004128232**
330 WEST 104TH STREET **N/A**
CHICAGO, IL 60622

UST:
Facility ID: 2030538
Facility Status: EXEMPT
Facility Type: **NONE**
Owner Name: City of Chicago, Department of Environment
Owner Id: U0020004
Owner Address: 30 North LaSalle Street, #300
Owner City,St,Zip: Chicago, IL 60612

Tank Number: 1
Tank Capacity: 0
Tank Substance: Heating Oil
Last Used Date: 9/1/1968
OSFM First Notify Date: 6/30/1992
Tank Status: **Exempt from registration**
Red Tag Issue Date: Not reported
Install Date: 1/1/1901
Green Tag Decal: **Not reported**
Green Tag Issue Date: **Not reported**
Green Tag Expire Date: **Not reported**
Self Service Permit Inspection Date: **Not reported**
Self Service Permit Expire Date: **Not reported**
Fee Due: Not reported

45 **ROSELAND PUMPING STATION** **UST** **U001142169**
351 W 104TH ST **N/A**
CHICAGO, IL 60628

UST:
Facility ID: 2020701
Facility Status: EXEMPT
Facility Type: CITY / TOWN
Owner Name: City of Chicago
Owner Id: U0020652
Owner Address: 121 North LaSalle Street Commissioners Office
Owner City,St,Zip: Chicago, IL 60602

Tank Number: 1
Tank Capacity: 550
Tank Substance: Diesel Fuel
Last Used Date: 6/1/1981
OSFM First Notify Date: 4/28/1986
Tank Status: Exempt from registration
Red Tag Issue Date: Not reported
Install Date: 1/1/1902
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date:Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

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45 **CHICAGO, CITY OF** **LUST** **S105225778**
351 WEST 104TH ST. **N/A**
CHICAGO, IL 60628

LUST:
Incident Num: 942419
IL EPA Id: 0316495048
Product: Deisel
IEMA Date: 10/27/1994
Project Manager: NOT ASSIGNED
Project Manager Phone: Not reported
Email: Not reported
PRP Name: City of Chicago
PRP Contact: Richard Wojcieszak
PRP Address: 1000 East Ohio St.
PRP City,St,Zip: Chicago, IL 60611
PRP Phone: Not reported
Site Classification: NFA
Section 57.5(g) Letter: 732
Date Section 57.5(g) Letter: Not reported
Non LUST Determination Letter: Not reported
20 Report Received: 11/07/1994
45 Report Received: 03/08/1995
NFA/NFR Letter: 09/19/1995
NFR Date Recorded: Not reported

Map ID	Site	Database(s)	EPA ID Number
45	**351 W 104TH ST** **CHICAGO, IL**	**SPILLS**	**S111892193** **N/A**

SPILLS:

Incident ID:	19942419
Incident Date:	Not reported
Date Received:	10/27/1994
Facility Address:	351 W 104TH ST
Facility City:	CHICAGO
PRP Name:	CHICAGO, CITY OF-DEPT OF WATER
AC:	Not reported

Map ID	Site	Database(s)	EPA ID Number
49	**FERNWOOD PLAYGROUND PARK** **10436 S WALLACE** **CHICAGO, IL 60605**	**UST**	**U001473580** **N/A**

UST:

Facility ID:	2032287
Facility Status:	INACTIVE/HEATING OIL
Facility Type:	**CITY / TOWN**
Owner Name:	Chicago Park District
Owner Id:	U0002888
Owner Address:	541 North Fairbanks Court
Owner City,St,Zip:	Chicago, IL 60611
Tank Number:	1
Tank Capacity:	1500
Tank Substance:	Heating Oil
Last Used Date:	1/1/1974
OSFM First Notify Date:	7/7/1993
Tank Status:	**Out of service**
Red Tag Issue Date:	Not reported
Install Date:	1/1/1960
Green Tag Decal:	**Not reported**
Green Tag Issue Date:	**Not reported**
Green Tag Expire Date:	**Not reported**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	$0.00

Map ID	Site	Database(s)	EPA ID Number
50	**OUR #52-9652-105** **NWC HALSTED & 105TH ST** **CHICAGO, IL 60628**	**UST**	**U000865963** **N/A**

UST:

Facility ID:	2020630
Facility Status:	EXEMPT
Facility Type:	**NONE**
Owner Name:	Union Oil Co Of California
Owner Id:	U0015371
Owner Address:	1650 E Gulf Rd
Owner City,St,Zip:	Schaumburg, IL 60196
Tank Number:	1
Tank Capacity:	550
Tank Substance:	Used Oil
Last Used Date:	6/1/1972

OUR #52-9652-105 (Continued) **U000865963**

OSFM First Notify Date:	4/30/1986
Tank Status:	**Exempt from registration**
Red Tag Issue Date:	Not reported
Install Date:	Not reported
Green Tag Decal:	**Not reported**
Green Tag Issue Date:	**Not reported**
Green Tag Expire Date:	**Not reported**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	Not reported

Tank Number:	2
Tank Capacity:	550
Tank Substance:	Used Oil
Last Used Date:	6/1/1972
OSFM First Notify Date:	4/30/1986
Tank Status:	**Exempt from registration**
Red Tag Issue Date:	Not reported
Install Date:	Not reported
Green Tag Decal:	**Not reported**
Green Tag Issue Date:	**Not reported**
Green Tag Expire Date:	**Not reported**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	Not reported

Tank Number:	3
Tank Capacity:	9500
Tank Substance:	Gasoline
Last Used Date:	6/1/1972
OSFM First Notify Date:	4/30/1986
Tank Status:	**Exempt from registration**
Red Tag Issue Date:	Not reported
Install Date:	Not reported
Green Tag Decal:	**Not reported**
Green Tag Issue Date:	**Not reported**
Green Tag Expire Date:	**Not reported**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	Not reported

Tank Number:	4
Tank Capacity:	9500
Tank Substance:	Gasoline
Last Used Date:	6/1/1972
OSFM First Notify Date:	4/30/1986
Tank Status:	**Exempt from registration**
Red Tag Issue Date:	Not reported
Install Date:	Not reported
Green Tag Decal:	**Not reported**
Green Tag Issue Date:	**Not reported**
Green Tag Expire Date:	**Not reported**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**

OUR #52-9652-105 (Continued) **U000865963**

Fee Due: Not reported

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51 **IL BELL TELEPHONE CO** **UST** **U001142608**
413 W 105TH **N/A**
CHICAGO, IL 60628

UST:
Facility ID: 2007809
Facility Status: CLOSED
Facility Type: **NONE**
Owner Name: Ameritech d/b/a AT&T
Owner Id: U0007227
Owner Address: 308 South Akard, Room 1701
Owner City,St,Zip: Dallas, TX 75202

Tank Number: 1
Tank Capacity: 6000
Tank Substance: Gasoline
Last Used Date: Not reported
OSFM First Notify Date: 4/8/1986
Tank Status: **Removed**
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: **Not reported**
Green Tag Issue Date: **Not reported**
Green Tag Expire Date: **Not reported**
Self Service Permit Inspection Date: **Not reported**
Self Service Permit Expire Date: **Not reported**
Fee Due: Not reported

Tank Number: 2
Tank Capacity: 6000
Tank Substance: Gasoline
Last Used Date: Not reported
OSFM First Notify Date: 4/8/1986
Tank Status: **Removed**
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: **Not reported**
Green Tag Issue Date: **Not reported**
Green Tag Expire Date: **Not reported**
Self Service Permit Inspection Date: **Not reported**
Self Service Permit Expire Date: **Not reported**
Fee Due: Not reported

Tank Number: 3
Tank Capacity: 550
Tank Substance: Used Oil
Last Used Date: Not reported
OSFM First Notify Date: 4/15/1988
Tank Status: **Removed**
Red Tag Issue Date: Not reported
Install Date: 1/1/1902
Green Tag Decal: **Not reported**
Green Tag Issue Date: **Not reported**
Green Tag Expire Date: **Not reported**

IL BELL TELEPHONE CO (Continued) **U001142608**

Self Service Permit Inspection Date: **Not reported**
Self Service Permit Expire Date: **Not reported**
Fee Due: Not reported

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51 **ILLINOIS BELL TELEPHONE** **LUST** **S104528083**
413 WEST 105TH STREET **N/A**
CHICAGO, IL 60628

LUST:

Incident Num:	880112
IL EPA Id:	0316495016
Product:	Not reported
IEMA Date:	02/02/1988
Project Manager:	Tucka
Project Manager Phone:	(217) 782-6762
Email:	Not reported
PRP Name:	Illinois Bell Telephone
PRP Contact:	Thomas Scheer
PRP Address:	900 North Villa
PRP City,St,Zip:	Villa Park, IL 60181
PRP Phone:	Not reported
Site Classification:	Not reported
Section 57.5(g) Letter:	731
Date Section 57.5(g) Letter:	Not reported
Non LUST Determination Letter:	Not reported
20 Report Received:	Not reported
45 Report Received:	Not reported
NFA/NFR Letter:	**03/21/2005**
NFR Date Recorded:	Not reported

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53 **MOUNT VERNON ELEMENTARY** **RCRA-CESQG** **1004696867**
10540 S MORGAN ST **ILR000059352**
CHICAGO, IL 60643

RCRA-CESQG:

Date form received by agency:	12/09/1998
Facility name:	MOUNT VERNON ELEMENTARY
Facility address:	10540 S MORGAN ST CHICAGO, IL 60643
EPA ID:	ILR000059352
Mailing address:	8501 W 191ST ST BOX 10 MOKENA, IL 60448
Contact:	THOMAS CONNELLY
Contact address:	8501 W 191ST ST BOX 10 MOKENA, IL 60448
Contact country:	US
Contact telephone:	(708) 923-0202
Contact email:	Not reported
EPA Region:	05
Classification:	Conditionally Exempt Small Quantity Generator
Description:	Handler: generates 100 kg or less of hazardous waste per calendar month, and accumulates 1000 kg or less of hazardous waste at any time; or generates 1 kg or less of acutely hazardous waste per calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or

MOUNT VERNON ELEMENTARY (Continued) **1004696867**

other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste

Owner/Operator Summary:

Owner/operator name:	CHICAGO PUBLIC SCHOOLS
Owner/operator address:	1819 W PERSHING RD 6WW CHICAGO, IL 60609
Owner/operator country:	Not reported
Owner/operator telephone:	(773) 535-7038
Legal status:	District
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Hazardous Waste Summary:

Waste code:	D006
Waste name:	CADMIUM
Waste code:	D008
Waste name:	LEAD
Waste code:	D009
Waste name:	MERCURY

Violation Status: No violations found

Map ID	Site	Database(s)	EPA ID Number
56	**1040 WEST 106TH ST** **CHICAGO, IL**	**ERNS**	**2003703238** **N/A**

Click this hyperlink while viewing on your computer to access additional ERNS detail in the EDR Site Report.

Map ID	Site	Database(s)	EPA ID Number
57	**WALGREEN N0 2300** **10620 S HALSTED ST** **CHICAGO, IL 60628**	**RCRA-SQG**	**1001213813** **ILR000046268**

RCRA-SQG:
Date form received by agency: 12/11/1997
Facility name: WALGREEN N0 2300
Facility address: 10620 S HALSTED ST
CHICAGO, IL 60628
EPA ID: ILR000046268
Mailing address: 4020 STIRRUP CREEK DR
DURHAM, NC 27703
Contact: RUSS ROELLER
Contact address: 4020 STIRRUP CREEK DR
DURHAM, NC 27703
Contact country: US
Contact telephone: (919) 484-3631
Contact email: Not reported
EPA Region: 05
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:
Owner/operator name: WALGREEN STORES
Owner/operator address: 200 WILMONT RD
DEERFIELD, IL 60015
Owner/operator country: Not reported
Owner/operator telephone: (847) 914-2500
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No

Map ID	Site	Database(s)	EPA ID Number
	WALGREEN N0 2300 (Continued)		**1001213813**

Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Hazardous Waste Summary:
Waste code: D011
Waste name: SILVER

Violation Status: No violations found

Map ID	Site	Database(s)	EPA ID Number
57	**BETTY BRITE CLEANERS** **10630 SOUTH HALSTED STREET** **CHICAGO, IL 60628**	**SRP** **DRYCLEANERS**	**S106346412** **N/A**

SRP:
IL EPA Id: 0316495007
US EPA Id: ILD103342267
Longitude: -87.64306
Latitude: 41.70038
Contact Name: Betty Ehman
Contact Address: 10630 South Halsted Street
Contact Address2: Not reported
Contact City,St,Zip: Chicago, IL 60628-
Contact Phone: (708) 494-6040
Date Enrolled: 03/01/2004
Point Of Contact: Michael C. Butler, P.E.
Consultant Company: Northern Environmental Technologies, Inc.
Consultant Address: 647 Academy Drive
Consultant Address2: Not reported
Consultant City,St,Zip: Northbrook, IL 60062-
Consultant Phone: (847) 562-8577
Proj Mgr Assigned: Landers
Sec. 4 Letter Date: Not reported
NFR Recorded: Not reported
Active: True
Total Acres: 0.450
No Further Remediation Letter Dt: Not reported
Remediation Applicant Co: Betty Brite Cleaners
Remediation Applicant Title: Ms.
Remediation Applicant Name: Not reported
Remediation Applicant Company: Not reported
Remediation Applicant Address: Not reported
Remediation Applicant Address 2: Not reported
Remediation Applicant City,St,Zip: Not reported
Illinois EPA: Not reported
Site Name: Not reported
NFR Letter: Not reported
NFR Letter Date Recorded: Not reported
Site Type: Not reported
Comprehensive/Focused: Not reported
Institutional Controls: Not reported
Barrier: Not reported
Worker Caution: Not reported
Acres: Not reported

BETTY BRITE CLEANERS (Continued) **S106346412**

DRYCLEANERS:
Facility Id: 5534-4100-01
DC No: DC-00489
Facility Contact: EUNICE KIM
License Expires: 12/31/2012

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57 **BETTY BRITE CLEANERS** **RCRA-SQG** **1000423104**
10630 S HALSTED **ILD103342267**
CHICAGO, IL 60628

RCRA-SQG:
Date form received by agency: 03/19/1987
Facility name: BETTY BRITE CLEANERS
Facility address: 10630 S HALSTED
CHICAGO, IL 60628
EPA ID: ILD103342267
Contact: MICHAEL WILLIAMS
Contact address: 10630 S HALSTED
CHICAGO, IL 60628
Contact country: US
Contact telephone: (312) 881-9822
Contact email: Not reported
EPA Region: 05
Land type: Facility is not located on Indian land. Additional information is not known.
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:
Owner/operator name: NAME NOT REPORTED
Owner/operator address: ADDRESS NOT REPORTED
CITY NOT REPORTED, AK 99998
Owner/operator country: Not reported
Owner/operator telephone: (312) 555-1212
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: BETTY BRITE INC
Owner/operator address: ADDRESS NOT REPORTED
CITY NOT REPORTED, AK 99998
Owner/operator country: Not reported
Owner/operator telephone: (312) 555-1212
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No

Map ID	Site	Database(s)	EPA ID Number

BETTY BRITE CLEANERS (Continued) **1000423104**

Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Hazardous Waste Summary:

Waste code:	F002
Waste name:	THE FOLLOWING SPENT HALOGENATED SOLVENTS: TETRACHLOROETHYLENE, METHYLENE CHLORIDE, TRICHLOROETHYLENE, 1,1,1-TRICHLOROETHANE, CHLOROBENZENE, 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE, ORTHO-DICHLOROBENZENE, TRICHLOROFLUOROMETHANE, AND 1,1,2-TRICHLOROETHANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE LISTED IN F001, F004, OR F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Facility Has Received Notices of Violations:

Regulation violated:	Not reported
Area of violation:	Not reported
Date violation determined:	Not reported
Date achieved compliance:	Not reported
Violation lead agency:	Not reported
Enforcement action:	Not reported
Enforcement action date:	Not reported
Enf. disposition status:	Not reported
Enf. disp. status date:	Not reported
Enforcement lead agency:	Not reported
Proposed penalty amount:	Not reported
Final penalty amount:	Not reported
Paid penalty amount:	Not reported

Evaluation Action Summary:

Evaluation date:	09/29/1997
Evaluation:	COMPLIANCE ASSISTANCE VISIT
Area of violation:	Not reported
Date achieved compliance:	Not reported
Evaluation lead agency:	EPA

---

59 **CITGO GAS & MINI MART** **UST** **U001143119**
10655 S HALSTED ST **N/A**
CHICAGO, IL 60628

UST:

Facility ID:	2007001
Facility Status:	ACTIVE
Facility Type:	**SELF-SERVICE STATION**
Owner Name:	Gagan Petroleum, Inc.
Owner Id:	U0029367

CITGO GAS & MINI MART (Continued) **U001143119**

Owner Address: 10655 S. Halsted St.
Owner City,St,Zip: Chicago, IL 99999

Tank Number: 1
Tank Capacity: 10000
Tank Substance: Gasoline
Last Used Date: 1/24/2000
OSFM First Notify Date: 4/25/1986
Tank Status: Removed
Red Tag Issue Date: Not reported
Install Date: 1/1/1985
Green Tag Decal: L003786
Green Tag Issue Date: 5/18/2010
Green Tag Expire Date: 12/31/2012
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: $0.00

Tank Number: 2
Tank Capacity: 10000
Tank Substance: Gasoline
Last Used Date: 1/24/2000
OSFM First Notify Date: 4/25/1986
Tank Status: Removed
Red Tag Issue Date: Not reported
Install Date: 1/1/1985
Green Tag Decal: L003786
Green Tag Issue Date: 5/18/2010
Green Tag Expire Date: 12/31/2012
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: $0.00

Tank Number: 3
Tank Capacity: 10000
Tank Substance: Gasoline
Last Used Date: 1/24/2000
OSFM First Notify Date: 4/25/1986
Tank Status: Removed
Red Tag Issue Date: Not reported
Install Date: 1/1/1985
Green Tag Decal: L003786
Green Tag Issue Date: 5/18/2010
Green Tag Expire Date: 12/31/2012
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: $0.00

Tank Number: 4
Tank Capacity: 1000
Tank Substance: Used Oil
Last Used Date: 8/9/1996
OSFM First Notify Date: 4/25/1986
Tank Status: Removed

CITGO GAS & MINI MART (Continued) **U001143119**

Red Tag Issue Date: Not reported
Install Date: 1/1/1985
Green Tag Decal: L003786
Green Tag Issue Date: 5/18/2010
Green Tag Expire Date: 12/31/2012
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: $0.00

Tank Number: 5
Tank Capacity: 10000
Tank Substance: Gasoline
Last Used Date: Not reported
OSFM First Notify Date: 6/5/2000
Tank Status: Currently in use
Red Tag Issue Date: Not reported
Install Date: 2/1/2000
Green Tag Decal: L003786
Green Tag Issue Date: 5/18/2010
Green Tag Expire Date: 12/31/2012
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: $0.00

Tank Number: 6
Tank Capacity: 6000
Tank Substance: Gasoline
Last Used Date: Not reported
OSFM First Notify Date: 6/5/2000
Tank Status: Currently in use
Red Tag Issue Date: Not reported
Install Date: 2/1/2000
Green Tag Decal: L003786
Green Tag Issue Date: 5/18/2010
Green Tag Expire Date: 12/31/2012
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: $0.00

Tank Number: 7
Tank Capacity: 4000
Tank Substance: Diesel Fuel
Last Used Date: Not reported
OSFM First Notify Date: 6/5/2000
Tank Status: Currently in use
Red Tag Issue Date: Not reported
Install Date: 2/1/2000
Green Tag Decal: L003786
Green Tag Issue Date: 5/18/2010
Green Tag Expire Date: 12/31/2012
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: $0.00

Map ID	Site	Database(s)	EPA ID Number
59	**SHELL OIL CO.** **10655 SOUTH HALSTED** **CHICAGO, IL 60628**	**LUST**	**S104528066** **N/A**

LUST:

Incident Num: 880583
IL EPA Id: 0316495044
Product: Gasoline
IEMA Date: 05/06/1988
Project Manager: Wallace
Project Manager Phone: (217) 524-1283
Email: Donna.Wallace@illinois.gov
PRP Name: Equilon Enterprises LLC
PRP Contact: Lisa Schoedel
PRP Address: 603 Diehl Rd., Suite 103
PRP City,St,Zip: Naperville, IL 60563
PRP Phone: 6302764206
Site Classification: Not reported
Section 57.5(g) Letter: 731
Date Section 57.5(g) Letter: Not reported
Non LUST Determination Letter: Not reported
20 Report Received: 06/26/1988
45 Report Received: 10/24/1990
NFA/NFR Letter: 09/07/1999
NFR Date Recorded: Not reported

Map ID	Site	Database(s)	EPA ID Number
64	**DUNNE** **10845 S UNION** **CHICAGO, IL 60628**	**RCRA-SQG**	**1001123586** **ILR000032904**

RCRA-SQG:

Date form received by agency: 01/08/1997
Facility name: DUNNE
Facility address: 10845 S UNION
CHICAGO, IL 60628
EPA ID: ILR000032904
Contact: DEAN THOMPSON
Contact address: 10845 S UNION
CHICAGO, IL 60628
Contact country: US
Contact telephone: (773) 535-5517
Contact email: Not reported
EPA Region: 05
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name: CHICAGO PUBLIC SCHOOLS
Owner/operator address: 1819 W PERSHING RD
CHICAGO, IL 60609
Owner/operator country: Not reported
Owner/operator telephone: (773) 535-7039
Legal status: District
Owner/Operator Type: Owner
Owner/Op start date: Not reported

Map ID	Site	Database(s)	EPA ID Number
	DUNNE (Continued)		**1001123586**

Owner/Op end date: Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Hazardous Waste Summary:

Waste code:	D008
Waste name:	LEAD

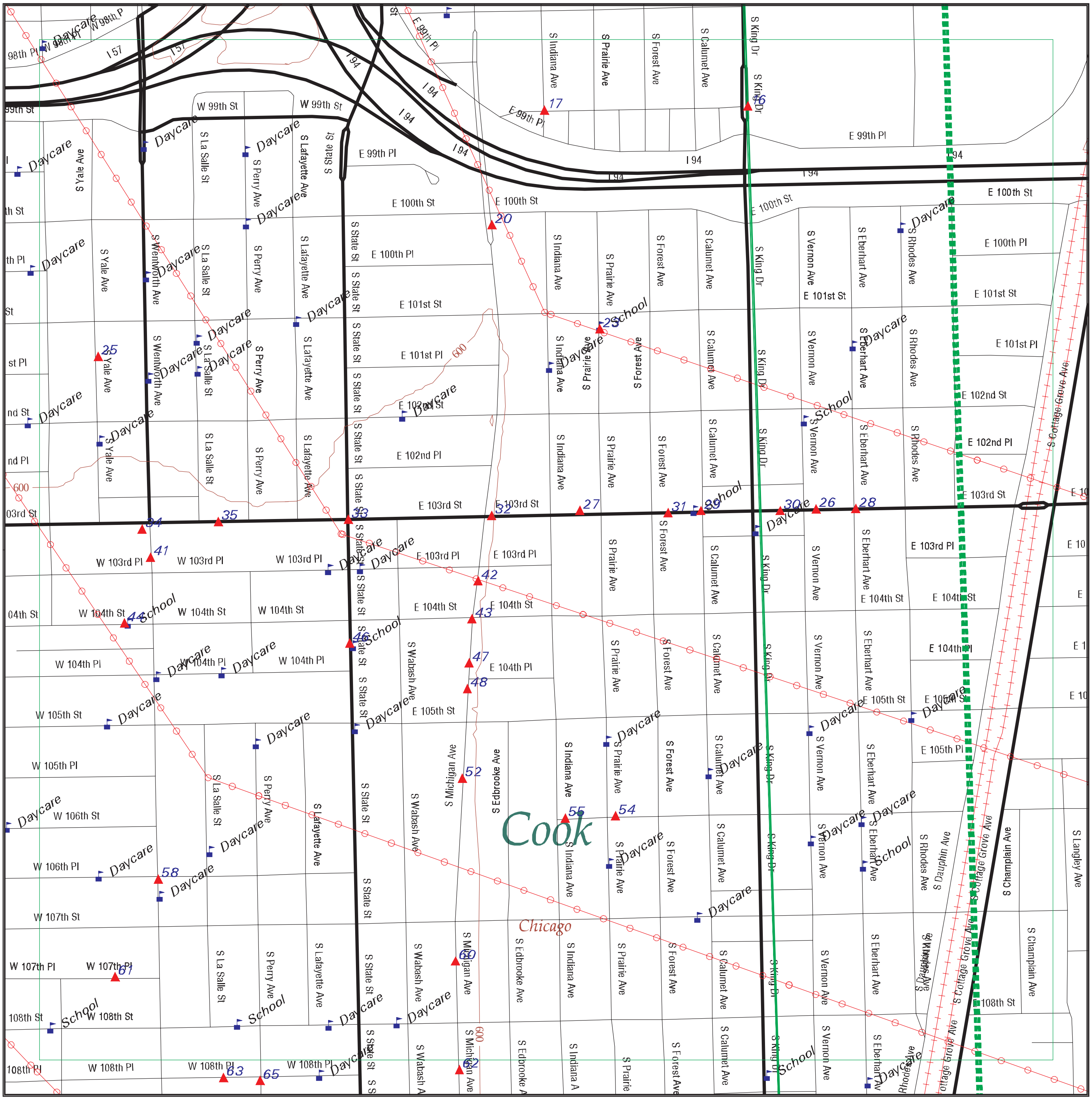
Violation Status: No violations found

Count: 12 records

FOCUS MAP 3 ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CALUMET PARK	1000166385	CHICAGO COPPER AND CHEMICAL COMPANY	INTERSECTION OF WINCHESTER RD & 127 ST.	60643	CERCLIS
CHICAGO	1010563423	COM ED	103RD & VINCIENNES	60643	RCRA-SQG
CHICAGO	1004692486	107TH ST SUB SHOP	1215 W 107TH	60628	RCRA-CESQG
CHICAGO	1012172115	ROSELAND COMMUNITY	110TH PLACE AND MICHIGAN, EAST SIDE OF STATE ST.		US BROWNFIELDS
CHICAGO	S109167302		549 115TH ST		LUST, SPILLS
CHICAGO	1002886378	US SCRAP	123RD & COTTAGE GROVE	60628	CERCLIS
CHICAGO	S101467236	PENN CENTRAL	810 E 124TH ST		SSU
CHICAGO	S109366427		6700 JEFFREY BLVD		LUST, SPILLS
CHICAGO	S108891646		11900 LOOMIS		LUST, SPILLS
CHICAGO	S107926349	LAKE CALUMET CLUSTER SITE	N OF 122ND	60628	SSU
CHICAGO	1001487618	FERNWOOD TOWING AND TUNE UPS	10101 10103 S HALSTED	60628	RCRA-SQG
CHICAGO	1012172077	BOYCE PARK	UNION AVE BETWEEN 42ND & ROOT STREETS		US BROWNFIELDS

Focus Map 4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S Perry Ave
S Lafayette Ave
S State St
S Wabash Ave
S Michigan Ave
S Edbrooke Ave
S Indiana Ave
S Prairie Ave
S Forest Ave
S Calumet Ave
S King Dr
S Vernon Ave
S Eberhart Ave
S Rhodes Ave
S Dauphin Ave
S Cottage Grove Ave
S Champlain Ave
S Langley Ave
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School
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Cook
Chicago
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EDR DataMap® - Environmental Atlas

90786 CTC RLE Hazardous Materials

Legend

- Roads
- Major Roads
- Contour Lines
- National Wetlands Inventory
- Waterways
- Railroads
- Study Boundary
- 100-Yr Flood Zones
- Powerlines
- Pipelines
- Fault Lines
- Water
- ▲ Listed Sites
- Sensitive Receptors

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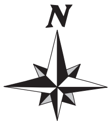

Scale in Miles

FOCUS MAP 4 SUMMARY

	Database	Total Plotted
FEDERAL RECORDS		
	Proposed NPL	0
	Delisted NPL	0
	CERCLIS	0
	CERC-NFRAP	0
	CORRACTS	0
	RCRA-TSDF	0
	RCRA-LQG	0
	RCRA-SQG	10
	RCRA-CESQG	5
	US ENG CONTROLS	0
	US INST CONTROL	0
	ERNS	4
	US BROWNFIELDS	0
STATE AND LOCAL RECORDS		
	SSU	0
	SWF/LF	0
	LUST	10
	UST	24
	SPILLS	12
	ENG CONTROLS	2
	INST CONTROL	3
	SRP	4
	DRYCLEANERS	1
	BROWNFIELDS	0
EDR PROPRIETARY RECORDS		
	Manufactured Gas Plants	0

NOTES:

Sites may be listed in more than one database

Map ID	Site	Database(s)	EPA ID Number
16	**DRIVER SER FACILITY** **9901 S MARTIN LUTHER KING DR** **CHICAGO, IL 60628**	**UST**	**U000792087** **N/A**

UST:

Facility ID:	2024664
Facility Status:	CLOSED
Facility Type:	**NONE**
Owner Name:	Secretary Of State
Owner Id:	U0013734
Owner Address:	Rm 189 Howlett Bldg
Owner City,St,Zip:	Springfield, IL 62756
Tank Number:	1
Tank Capacity:	10000
Tank Substance:	Diesel Fuel
Last Used Date:	Not reported
OSFM First Notify Date:	3/6/1989
Tank Status:	**Removed**
Red Tag Issue Date:	Not reported
Install Date:	Not reported
Green Tag Decal:	**Not reported**
Green Tag Issue Date:	**Not reported**
Green Tag Expire Date:	**Not reported**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	Not reported

Map ID	Site	Database(s)	EPA ID Number
16	**SECRETARY OF STATE - DRIVER FACILITY** **9901 DR MARTIN LUTHER KING** **CHICAGO, IL 60628**	**LUST**	**1008127443** **N/A**

LUST:

Incident Num:	932320
IL EPA Id:	0316495055
Product:	Non Petro
IEMA Date:	08/30/1993
Project Manager:	Nickell
Project Manager Phone:	(217) 782-6762
Email:	Not reported
PRP Name:	Illinois Secretary of State
PRP Contact:	Robert Orr
PRP Address:	Room 037, Howlett Bldg.
PRP City,St,Zip:	Springfield, IL 62756
PRP Phone:	Not reported
Site Classification:	Not reported
Section 57.5(g) Letter:	731
Date Section 57.5(g) Letter:	Not reported
Non LUST Determination Letter:	Not reported
20 Report Received:	09/17/1993
45 Report Received:	10/25/1993
NFA/NFR Letter:	**11/17/1995**
NFR Date Recorded:	Not reported

Map ID	Site	Database(s)	EPA ID Number
17	**SHEDD BRANCH SCHOOL** **200 E 99TH ST** **CHICAGO, IL 60628**	**RCRA-CESQG**	**1001123323** **ILR000028951**

RCRA-CESQG:

Date form received by agency: 12/24/2009
Facility name: SHEDD BRANCH SCHOOL
Facility address: 200 E 99TH ST
CHICAGO, IL 60628
EPA ID: ILR000028951
Mailing address: 8501 W 191ST ST BOX 10
MOKENA, IL 60448
Contact: THOMAS CONNELLY
Contact address: 200 E 99TH ST
CHICAGO, IL 60628
Contact country: US
Contact telephone: (708) 923-0202
Contact email: Not reported
EPA Region: 05
Classification: Conditionally Exempt Small Quantity Generator
Description: Handler: generates 100 kg or less of hazardous waste per calendar month, and accumulates 1000 kg or less of hazardous waste at any time; or generates 1 kg or less of acutely hazardous waste per calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste

Owner/Operator Summary:

Owner/operator name: CHICAGO PUBLIC SCHOOLS
Owner/operator address: 1819 W PERSHING RD 6WW
CHICAGO, IL 60609
Owner/operator country: Not reported
Owner/operator telephone: (312) 535-7039
Legal status: District
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:

U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No

Map ID	Site	Database(s)	EPA ID Number

SHEDD BRANCH SCHOOL (Continued) **1001123323**

Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 12/15/1998
Facility name: SHEDD BRANCH SCHOOL
Classification: Conditionally Exempt Small Quantity Generator

Hazardous Waste Summary:
Waste code: D006
Waste name: CADMIUM

Waste code: D008
Waste name: LEAD

Waste code: D009
Waste name: MERCURY

Waste code: D006
Waste name: CADMIUM

Waste code: D008
Waste name: LEAD

Waste code: D009
Waste name: MERCURY

Waste code: X002
Waste name: POLYCHLORINATED BIPHENOLS (PCBs)

Violation Status: No violations found

---

20 **SWEIS RAY TOWN AND COUNTRY MINI MART** **RCRA-SQG** **1000907509**
10007 S MICHIGAN AVE **IL0000802181**
CHICAGO, IL 60628

RCRA-SQG:
Date form received by agency: 09/20/1994
Facility name: SWEIS RAY TOWN AND COUNTRY MINI MART
Facility address: 10007 S MICHIGAN AVE
CHICAGO, IL 60628
EPA ID: IL0000802181
Mailing address: 9023 W PINE
ORLAND PARK, IL 60462
Contact: RAY SWEIS
Contact address: 10007 S MICHIGAN AVE
CHICAGO, IL 60628
Contact country: US
Contact telephone: (708) 460-8950
Contact email: Not reported
EPA Region: 05
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of

SWEIS RAY TOWN AND COUNTRY MINI MART (Continued) **1000907509**

hazardous waste at any time

Owner/Operator Summary:
Owner/operator name: NASSER MUHAMMAD
Owner/operator address: 10007 S MICHIGAN AVE
CHICAGO, IL 60628
Owner/operator country: Not reported
Owner/operator telephone: (312) 785-5110
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Hazardous Waste Summary:
Waste code: D001
Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Violation Status: No violations found

---

20 **TOWN & COUNTRY GAS MART** **LUST** **S104522883**
10007 SOUTH MICHIGAN AVE. **N/A**
CHICAGO, IL 60628

LUST:
Incident Num: 942453
IL EPA Id: 0316495064
Product: Uset Oil
IEMA Date: 11/01/1994
Project Manager: Zuehlke
Project Manager Phone: (217) 557-6937
Email: Wayne.Zuehlke@illinois.gov
PRP Name: Omar Muthane
PRP Contact: Not reported
PRP Address: 5901 North Cicero Avenue

TOWN & COUNTRY GAS MART (Continued) **S104522883**

PRP City,St,Zip:	Chicago, IL 60646
PRP Phone:	Not reported
Site Classification:	Not reported
Section 57.5(g) Letter:	732
Date Section 57.5(g) Letter:	Not reported
Non LUST Determination Letter:	Not reported
20 Report Received:	05/01/1995
45 Report Received:	05/26/1995
NFA/NFR Letter:	**01/27/2009**
NFR Date Recorded:	03/23/2009

---

20 **O.S. CORPORATION D/B/A CITGO** **UST** **U000865940**
10007 S. MICHIGAN AVENUE **N/A**
CHICAGO, IL 60628

UST:

Facility ID:	2026784
Facility Status:	ACTIVE
Facility Type:	**SELF-SERVICE STATION**
Owner Name:	Omar Muthanna
Owner Id:	U0032438
Owner Address:	Not reported
Owner City,St,Zip:	Not reported

Tank Number:	1
Tank Capacity:	4000
Tank Substance:	Gasoline
Last Used Date:	Not reported
OSFM First Notify Date:	2/14/1991
Tank Status:	**Currently in use**
Red Tag Issue Date:	Not reported
Install Date:	1/1/1974
Green Tag Decal:	**K003713**
Green Tag Issue Date:	**4/21/2009**
Green Tag Expire Date:	**12/31/2011**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	$0.00

Tank Number:	2
Tank Capacity:	4000
Tank Substance:	Gasoline
Last Used Date:	Not reported
OSFM First Notify Date:	2/14/1991
Tank Status:	**Currently in use**
Red Tag Issue Date:	Not reported
Install Date:	1/1/1974
Green Tag Decal:	**K003713**
Green Tag Issue Date:	**4/21/2009**
Green Tag Expire Date:	**12/31/2011**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	$0.00

Tank Number:	3
Tank Capacity:	6000

O.S. CORPORATION D/B/A CITGO (Continued) **U000865940**

Tank Substance: Gasoline
Last Used Date: Not reported
OSFM First Notify Date: 2/14/1991
Tank Status: Currently in use
Red Tag Issue Date: Not reported
Install Date: 1/1/1974
Green Tag Decal: K003713
Green Tag Issue Date: 4/21/2009
Green Tag Expire Date: 12/31/2011
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: $0.00

Tank Number: 4
Tank Capacity: 550
Tank Substance: Used Oil
Last Used Date: 1/1/1987
OSFM First Notify Date: 8/20/1996
Tank Status: Removed
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: K003713
Green Tag Issue Date: 4/21/2009
Green Tag Expire Date: 12/31/2011
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

Tank Number: 5
Tank Capacity: 1000
Tank Substance: Heating Oil
Last Used Date: 1/1/1987
OSFM First Notify Date: 8/20/1996
Tank Status: Removed
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: K003713
Green Tag Issue Date: 4/21/2009
Green Tag Expire Date: 12/31/2011
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

---

23 **BENNETT** **RCRA-SQG** **1001087388**
10115 S PRAIRIE AVE **ILR000021204**
CHICAGO, IL 60609

RCRA-SQG:
Date form received by agency: 12/23/1996
Facility name: BENNETT
Facility address: 10115 S PRAIRIE AVE
CHICAGO, IL 60609
EPA ID: ILR000021204
Contact: BARBARA ELLIS
Contact address: 10115 S PRAIRIE AVE
CHICAGO, IL 60609

BENNETT (Continued) **1001087388**

Contact country:	US
Contact telephone:	(773) 535-5460
Contact email:	Not reported
EPA Region:	05
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	CHICAGO PUBLIC SCHOOLS
Owner/operator address:	1819 W PERSHING RD CHICAGO, IL 60609
Owner/operator country:	Not reported
Owner/operator telephone:	(773) 535-7039
Legal status:	Municipal
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Hazardous Waste Summary:

Waste code:	D000
Waste name:	Not Defined
Waste code:	D008
Waste name:	LEAD
Violation Status:	No violations found

Map ID	Site	Database(s)	EPA ID Number
25	**10135 SOUTH YALE ST** **CHICAGO, IL**	**ERNS**	**2006796125** **N/A**

Click this hyperlink while viewing on your computer to access additional ERNS detail in the EDR Site Report.

Map ID	Site	Database(s)	EPA ID Number
26	**R & R MARATHON** **446 E. 103RD STREET** **CHICAGO, IL 60628**	**UST**	**U003971876** **N/A**

UST:

Facility ID: 2034334
Facility Status: ACTIVE
Facility Type: SELF-SERVICE STATION
Owner Name: R & R Gasoline, Inc.
Owner Id: U0033325
Owner Address: 446 E. 103rd Street
Owner City,St,Zip: Chicago, IL 60628

Tank Number: 1
Tank Capacity: 10000
Tank Substance: Gasoline
Last Used Date: Not reported
OSFM First Notify Date: 9/15/1995
Tank Status: Currently in use
Red Tag Issue Date: Not reported
Install Date: 6/15/1972
Green Tag Decal: J003813
Green Tag Issue Date: 2/6/2008
Green Tag Expire Date: 12/31/2010
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: $0.00

Tank Number: 2
Tank Capacity: 6000
Tank Substance: Gasoline
Last Used Date: Not reported
OSFM First Notify Date: 9/15/1995
Tank Status: Currently in use
Red Tag Issue Date: Not reported
Install Date: 6/15/1972
Green Tag Decal: J003813
Green Tag Issue Date: 2/6/2008
Green Tag Expire Date: 12/31/2010
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: $0.00

Tank Number: 3
Tank Capacity: 6000
Tank Substance: Gasoline
Last Used Date: Not reported
OSFM First Notify Date: 9/15/1995

R & R MARATHON (Continued) **U003971876**

Tank Status: **Currently in use**
Red Tag Issue Date: Not reported
Install Date: 4/6/1970
Green Tag Decal: **J003813**
Green Tag Issue Date: **2/6/2008**
Green Tag Expire Date: **12/31/2010**
Self Service Permit Inspection Date: **Not reported**
Self Service Permit Expire Date: **Not reported**
Fee Due: $0.00

Tank Number: 4
Tank Capacity: 2000
Tank Substance: Gasoline
Last Used Date: 1/1/1962
OSFM First Notify Date: Not reported
Tank Status: **Exempt from registration**
Red Tag Issue Date: Not reported
Install Date: 1/1/1956
Green Tag Decal: **J003813**
Green Tag Issue Date: **2/6/2008**
Green Tag Expire Date: **12/31/2010**
Self Service Permit Inspection Date: **Not reported**
Self Service Permit Expire Date: **Not reported**
Fee Due: Not reported

Tank Number: 5
Tank Capacity: 3000
Tank Substance: Gasoline
Last Used Date: 1/1/1962
OSFM First Notify Date: Not reported
Tank Status: **Exempt from registration**
Red Tag Issue Date: Not reported
Install Date: 1/1/1956
Green Tag Decal: **J003813**
Green Tag Issue Date: **2/6/2008**
Green Tag Expire Date: **12/31/2010**
Self Service Permit Inspection Date: **Not reported**
Self Service Permit Expire Date: **Not reported**
Fee Due: Not reported

Tank Number: 6
Tank Capacity: 4000
Tank Substance: Gasoline
Last Used Date: 1/1/1963
OSFM First Notify Date: Not reported
Tank Status: **Exempt from registration**
Red Tag Issue Date: Not reported
Install Date: 1/1/1962
Green Tag Decal: **J003813**
Green Tag Issue Date: **2/6/2008**
Green Tag Expire Date: **12/31/2010**
Self Service Permit Inspection Date: **Not reported**
Self Service Permit Expire Date: **Not reported**
Fee Due: Not reported

Map ID	Site	Database(s)	EPA ID Number
26	**KADALIMATTON, SIBI** **446 EAST 103RD ST.** **CHICAGO, IL 60628**	**LUST**	**S105815855** **N/A**

LUST:

Incident Num:	20030225
IL EPA Id:	0316495079
Product:	Unleaded Gas
IEMA Date:	02/20/2003
Project Manager:	Wallace
Project Manager Phone:	(217) 524-1283
Email:	Donna.Wallace@illinois.gov
PRP Name:	Sibi Kadalimatton
PRP Contact:	Not reported
PRP Address:	5745 Beba
PRP City,St,Zip:	Morton Grove, IL 60053
PRP Phone:	7738791522
Site Classification:	Not reported
Section 57.5(g) Letter:	P.A.
Date Section 57.5(g) Letter:	Not reported
Non LUST Determination Letter:	Not reported
20 Report Received:	05/14/2004
45 Report Received:	05/14/2004
NFA/NFR Letter:	**Not reported**
NFR Date Recorded:	Not reported

Map ID	Site	Database(s)	EPA ID Number
26	**446 E 103RD ST** **CHICAGO, IL**	**SPILLS**	**S111913067** **N/A**

SPILLS:

Incident ID:	20030225
Incident Date:	Not reported
Date Received:	02/20/2003
Facility Address:	446 E 103RD ST
Facility City:	CHICAGO
PRP Name:	UNKNOWN
AC:	Not reported

Map ID	Site	Database(s)	EPA ID Number
26	**ABA NORGETOWN** **437 E 103RD ST** **CHICAGO, IL 60628**	**RCRA-CESQG**	**1000612392** **ILD984826206**

RCRA-CESQG:

Date form received by agency:	01/13/1997
Facility name:	ABA NORGETOWN CLEANERS
Facility address:	437 E 103RD ST CHICAGO, IL 60628
EPA ID:	ILD984826206
Contact:	GARY ADOLPH
Contact address:	437 E 103RD ST CHICAGO, IL 60628
Contact country:	US
Contact telephone:	(312) 568-6674
Contact email:	Not reported
EPA Region:	05
Land type:	Facility is not located on Indian land. Additional information is not known.
Classification:	Conditionally Exempt Small Quantity Generator

ABA NORGETOWN (Continued) **1000612392**

Description:	Handler: generates 100 kg or less of hazardous waste per calendar month, and accumulates 1000 kg or less of hazardous waste at any time; or generates 1 kg or less of acutely hazardous waste per calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste

Owner/Operator Summary:

Owner/operator name:	ABA NORGETOWN
Owner/operator address:	Not reported Not reported
Owner/operator country:	Not reported
Owner/operator telephone:	Not reported
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	01/01/0001
Owner/Op end date:	Not reported

Owner/operator name:	ABA NORGETOWN
Owner/operator address:	Not reported Not reported
Owner/operator country:	Not reported
Owner/operator telephone:	Not reported
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Historical Generators:

Date form received by agency:	05/13/1991
Facility name:	ABA NORGETOWN CLEANERS

Map ID	Site	Database(s)	EPA ID Number

ABA NORGETOWN (Continued) **1000612392**

Classification: Small Quantity Generator

Hazardous Waste Summary:

Waste code:	D001
Waste name:	IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.
Waste code:	D008
Waste name:	LEAD
Waste code:	D001
Waste name:	IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.
Waste code:	D008
Waste name:	LEAD

Violation Status: No violations found

Evaluation Action Summary:

Evaluation date:	01/13/1997
Evaluation:	COMPLIANCE ASSISTANCE VISIT
Area of violation:	Not reported
Date achieved compliance:	Not reported
Evaluation lead agency:	State

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27 **METROPOLITAN FAMILY SERVICES** **UST** **U003668693**
235E 103RD ST **N/A**
CHICAGO, IL 60628

UST:

Facility ID:	2038836
Facility Status:	EXEMPT
Facility Type:	**NONE**
Owner Name:	Metropolitan Family Services
Owner Id:	U0027558
Owner Address:	14 E Jackson Blvd Suite 1400
Owner City,St,Zip:	Chicago, IL 60604
Tank Number:	1
Tank Capacity:	1000
Tank Substance:	Heating Oil
Last Used Date:	1/1/1960
OSFM First Notify Date:	Not reported
Tank Status:	**Exempt from registration**
Red Tag Issue Date:	Not reported
Install Date:	Not reported
Green Tag Decal:	**Not reported**

Map ID	Site	Database(s)	EPA ID Number
	METROPOLITAN FAMILY SERVICES (Continued)		**U003668693**

Green Tag Issue Date:	**Not reported**
Green Tag Expire Date:	**Not reported**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	Not reported

Map ID	Site	Database(s)	EPA ID Number
27	**#014816** **214 E 103RD ST** **CHICAGO, IL 60628**	**UST**	**U000865670** **N/A**

UST:

Facility ID:	2016843
Facility Status:	EXEMPT
Facility Type:	**NONE**
Owner Name:	Phillips Petroleum Company
Owner Id:	U0011864
Owner Address:	13 D2 Phillips Building
Owner City,St,Zip:	Bartlesville, OK 74004

Tank Number:	1
Tank Capacity:	6000
Tank Substance:	Gasoline
Last Used Date:	10/1/1979
OSFM First Notify Date:	4/16/1986
Tank Status:	**Exempt from registration**
Red Tag Issue Date:	Not reported
Install Date:	Not reported
Green Tag Decal:	**Not reported**
Green Tag Issue Date:	**Not reported**
Green Tag Expire Date:	**Not reported**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	$100.00

Tank Number:	2
Tank Capacity:	6000
Tank Substance:	Gasoline
Last Used Date:	10/1/1979
OSFM First Notify Date:	4/16/1986
Tank Status:	**Exempt from registration**
Red Tag Issue Date:	Not reported
Install Date:	Not reported
Green Tag Decal:	**Not reported**
Green Tag Issue Date:	**Not reported**
Green Tag Expire Date:	**Not reported**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	$100.00

Tank Number:	3
Tank Capacity:	560
Tank Substance:	Used Oil
Last Used Date:	10/1/1979
OSFM First Notify Date:	4/16/1986
Tank Status:	**Exempt from registration**
Red Tag Issue Date:	Not reported

#014816 (Continued) **U000865670**

Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: $100.00

28

CHICAGO DEPARTMENT OF ENVIRONMENT
501 EAST 103RD STREET
CHICAGO, IL 60628

INST CONTROL **S109143364**
SRP **N/A**

IL INSTUTIONAL CONTROL:

Illinois EPA Id: 0316495132
NFR Letter: 09/29/2009
Date NFR Recorded: Not reported
Type Of Site: Industrial/Commercial
Comprehensive / Focused: Focused
Remediation Applicant Title: Mr.
Remediation Applicant Name: Tawfik Tawil
RA Company: Millenium Investment & Development, Inc.
RA Address: 9224 South Oketo Avenue
RA Secondary Address: Not reported
RA City,St,Zip: Bridgeview, IL 60455-
Institutional Controls: Groundwater use restriction
Engineered Barriers: Not reported
Worker Caution: False
Acres: 0.497

SRP:

IL EPA Id: 0316495132
US EPA Id: Not reported
Longitude: -87.61091
Latitude: 41.70711
Contact Name: Tawfik Tawil
Contact Address: 9224 South Oketo Avenue
Contact Address2: Not reported
Contact City,St,Zip: Bridgeview, IL 60455-
Contact Phone: (630) 688-0277
Date Enrolled: 06/30/2008
Point Of Contact: Dana S. Rose
Consultant Company: Adept Environmental Solutions, Inc.
Consultant Address: 1100 South Waiola Avenue
Consultant Address2: Not reported
Consultant City,St,Zip: LaGrange, IL 60525-
Consultant Phone: (708) 352-9322
Proj Mgr Assigned: Smith
Sec. 4 Letter Date: Not reported
NFR Recorded: Not reported
Active: False
Total Acres: 0.497
No Further Remediation Letter Dt: 09/29/2009
Remediation Applicant Co: Millenium Investment & Development, Inc.
Remediation Applicant Title: Mr.
Remediation Applicant Name: Mr. Tawfik Tawil
Remediation Applicant Company: Millenium Investment & Development, Inc.
Remediation Applicant Address: 9224 South Oketo Avenue

CHICAGO DEPARTMENT OF ENVIRONMENT (Continued) **S109143364**

Remediation Applicant Address 2: Not reported
Remediation Applicant City,St,Zip: Bridgeview, IL 60455-
Illinois EPA: 0316495132
Site Name: Chicago Department of Environment
NFR Letter: 2009-09-29
NFR Letter Date Recorded: Not reported
Site Type: Industrial/Commercial
Comprehensive/Focused: Focused
Institutional Controls: Groundwater use restriction
Barrier: Not reported
Worker Caution: False
Acres: 0.497

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29 **VACANT JIFFY LUBE STORE 208** **LUST** **U002112807**
350 EAST 103RD STREET **UST** **N/A**
CHICAGO, IL 60628

LUST:
Incident Num: 950708
IL EPA Id: 0316505017
Product: Other Petro
IEMA Date: 04/10/1995
Project Manager: Putrich
Project Manager Phone: (217) 524-4827
Email: Steve.Putrich@illinois.gov
PRP Name: Pennzoil
PRP Contact: Dan McQuillen
PRP Address: P.O. Box 2967
PRP City,St,Zip: Houston, TX 77252-2967
PRP Phone: Not reported
Site Classification: Not reported
Section 57.5(g) Letter: 732
Date Section 57.5(g) Letter: 10/23/1995
Non LUST Determination Letter: Not reported
20 Report Received: Not reported
45 Report Received: Not reported
NFA/NFR Letter: **Not reported**
NFR Date Recorded: Not reported

UST:
Facility ID: 2033802
Facility Status: CLOSED
Facility Type: **PETROLEUM DISTRIBUTOR**
Owner Name: Jiffy Lube International
Owner Id: U0007899
Owner Address: 700 Milam - 10th Floor P.O. Box 2967
Owner City,St,Zip: Houston, TX 77002

Tank Number: 1
Tank Capacity: 2000
Tank Substance: Not reported
Last Used Date: Not reported
OSFM First Notify Date: 12/1/1994
Tank Status: **Removed**
Red Tag Issue Date: Not reported
Install Date: 1/1/1901

VACANT JIFFY LUBE STORE 208 (Continued) **U002112807**

Green Tag Decal:	**Not reported**
Green Tag Issue Date:	**Not reported**
Green Tag Expire Date:	**Not reported**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	Not reported

Tank Number:	2
Tank Capacity:	1000
Tank Substance:	Used Oil
Last Used Date:	Not reported
OSFM First Notify Date:	12/1/1994
Tank Status:	**Removed**
Red Tag Issue Date:	Not reported
Install Date:	1/1/1901
Green Tag Decal:	**Not reported**
Green Tag Issue Date:	**Not reported**
Green Tag Expire Date:	**Not reported**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	Not reported

Tank Number:	3
Tank Capacity:	1000
Tank Substance:	Not reported
Last Used Date:	Not reported
OSFM First Notify Date:	4/17/1995
Tank Status:	**Removed**
Red Tag Issue Date:	Not reported
Install Date:	1/1/1902
Green Tag Decal:	**Not reported**
Green Tag Issue Date:	**Not reported**
Green Tag Expire Date:	**Not reported**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	Not reported

Tank Number:	4
Tank Capacity:	1000
Tank Substance:	Heating Oil
Last Used Date:	Not reported
OSFM First Notify Date:	4/17/1995
Tank Status:	**Removed**
Red Tag Issue Date:	Not reported
Install Date:	1/1/1902
Green Tag Decal:	**Not reported**
Green Tag Issue Date:	**Not reported**
Green Tag Expire Date:	**Not reported**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	Not reported

29 **SPILLS** **S111893409**
N/A

350 E 103RD ST
CHICAGO, IL

SPILLS:
Incident ID: 19950708
Incident Date: Not reported
Date Received: 04/10/1995
Facility Address: 350 E 103RD ST
Facility City: CHICAGO
PRP Name: PENNZOIL
AC: Not reported

---

30 **LUST** **S105958607**
N/A

AGUILAR, ABEL
415 EAST 103RD ST.
CHICAGO, IL 60628

LUST:
Incident Num: 20030826
IL EPA Id: 0316495152
Product: Other Petro
IEMA Date: 06/04/2003
Project Manager: Hale
Project Manager Phone: (217) 782-1803
Email: Sam.Hale@illinois.gov
PRP Name: Not reported
PRP Contact: Not reported
PRP Address: Not reported
PRP City,St,Zip: Not reported
PRP Phone: Not reported
Site Classification: Not reported
Section 57.5(g) Letter: P.A.
Date Section 57.5(g) Letter: 10/27/2003
Non LUST Determination Letter: Not reported
20 Report Received: 07/22/2003
45 Report Received: 07/22/2003
NFA/NFR Letter: Not reported
NFR Date Recorded: Not reported

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30 **SPILLS** **S111914026**
N/A

415 E 103RD ST
CHICAGO, IL

SPILLS:
Incident ID: 20030826
Incident Date: Not reported
Date Received: 06/04/2003
Facility Address: 415 E 103RD ST
Facility City: CHICAGO
PRP Name: AGUILAR, ABEL
AC: Not reported

30

VACANT BUILDING
415 E 103RD AVE THIRD PARTY REMOVAL
CHICAGO, IL 60628

UST

U003907981
N/A

UST:

Facility ID:	2041666
Facility Status:	EXEMPT
Facility Type:	**NONE**
Owner Name:	Sheldon Liquors
Owner Id:	U0031274
Owner Address:	421 E 103rd
Owner City,St,Zip:	Chicago, IL 60628

Tank Number:	1
Tank Capacity:	1000
Tank Substance:	Heating Oil
Last Used Date:	Not reported
OSFM First Notify Date:	7/22/2003
Tank Status:	**Exempt from registration**
Red Tag Issue Date:	Not reported
Install Date:	Not reported
Green Tag Decal:	**Not reported**
Green Tag Issue Date:	**Not reported**
Green Tag Expire Date:	**Not reported**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	Not reported

31

WALGREENS NO 1069
319 E 103RD ST
CHICAGO, IL 60628

RCRA-SQG

1000612045
ILD984822635

RCRA-SQG:

Date form received by agency:	11/04/1997
Facility name:	WALGREENS NO 1069
Facility address:	319 E 103RD ST CHICAGO, IL 60628
EPA ID:	ILD984822635
Contact:	HENRY REDD
Contact address:	319 E 103RD ST CHICAGO, IL 60628
Contact country:	US
Contact telephone:	(773) 468-0600
Contact email:	Not reported
EPA Region:	05
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	WALGREENS
Owner/operator address:	319 E 103RD ST CHICAGO, IL 60628
Owner/operator country:	Not reported
Owner/operator telephone:	(773) 468-0600
Legal status:	Private

WALGREENS NO 1069 (Continued) **1000612045**

Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Hazardous Waste Summary:

Waste code:	D001
Waste name:	IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.
Waste code:	D011
Waste name:	SILVER
Violation Status:	No violations found

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32 **G&J AUTOMOTIVE** **UST** **U001142482**
122 E 103RD ST **N/A**
CHICAGO, IL 60628

UST:

Facility ID:	2026747
Facility Status:	CLOSED
Facility Type:	**NONE**
Owner Name:	G&J Automotive
Owner Id:	U0005572
Owner Address:	122 E 103Rd St
Owner City,St,Zip:	Chicago, IL 60628
Tank Number:	1
Tank Capacity:	8000
Tank Substance:	Gasoline
Last Used Date:	9/1/1988
OSFM First Notify Date:	1/22/1991
Tank Status:	**Removed**
Red Tag Issue Date:	Not reported
Install Date:	Not reported
Green Tag Decal:	**Not reported**

Map ID	Site	Database(s)	EPA ID Number

G&J AUTOMOTIVE (Continued) **U001142482**

Green Tag Issue Date:	**Not reported**
Green Tag Expire Date:	**Not reported**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	No

---

32 **WALGREENS STORE #5123** **RCRA-SQG** **1001960520**
10300 S MICHIGAN **ILR000074518**
CHICAGO, IL 60628

RCRA-SQG:

Date form received by agency:	02/02/2000
Facility name:	WALGREENS STORE #5123
Facility address:	10300 S MICHIGAN MICHIGAN & 103RD CHICAGO, IL 60628
EPA ID:	ILR000074518
Contact:	RUSS ROELLER
Contact address:	4020 STIRRUP CREEK DR #211 DURHAM, NC 27703
Contact country:	US
Contact telephone:	(919) 484-3631
Contact email:	Not reported
EPA Region:	05
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	WALGREEN STORES
Owner/operator address:	200 WILMOT RD DEERFIELD, IL 60013
Owner/operator country:	Not reported
Owner/operator telephone:	(847) 914-2500
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No

Map ID	Site	Database(s)	EPA ID Number
	WALGREENS STORE #5123 (Continued)		**1001960520**

Used oil transporter: No

Hazardous Waste Summary:
Waste code: D011
Waste name: SILVER

Violation Status: No violations found

Map ID	Site	Database(s)	EPA ID Number
32	**E-Z GO #077** **10301 S MICHIGAN AVE** **CHICAGO, IL 60628**	**UST**	**U001142061** **N/A**

UST:
Facility ID: 2017204
Facility Status: CLOSED
Facility Type: **NONE**
Owner Name: Bulk Petroleum Corporation
Owner Id: U0002119
Owner Address: 9653 North Granville Road
Owner City,St,Zip: Mequon, WI 53097

Tank Number: 1
Tank Capacity: 99
Tank Substance: Gasoline
Last Used Date: Not reported
OSFM First Notify Date: 3/18/1986
Tank Status: **Removed**
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: **Not reported**
Green Tag Issue Date: **Not reported**
Green Tag Expire Date: **Not reported**
Self Service Permit Inspection Date: **Not reported**
Self Service Permit Expire Date: **Not reported**
Fee Due: Not reported

Tank Number: 2
Tank Capacity: 99
Tank Substance: Gasoline
Last Used Date: Not reported
OSFM First Notify Date: 3/18/1986
Tank Status: **Removed**
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: **Not reported**
Green Tag Issue Date: **Not reported**
Green Tag Expire Date: **Not reported**
Self Service Permit Inspection Date: **Not reported**
Self Service Permit Expire Date: **Not reported**
Fee Due: Not reported

Tank Number: 3
Tank Capacity: 99
Tank Substance: Gasoline
Last Used Date: Not reported
OSFM First Notify Date: 3/18/1986

E-Z GO #077 (Continued) **U001142061**

Tank Status: **Removed**
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: **Not reported**
Green Tag Issue Date: **Not reported**
Green Tag Expire Date: **Not reported**
Self Service Permit Inspection Date: **Not reported**
Self Service Permit Expire Date: **Not reported**
Fee Due: Not reported

---

33 **SHELL STATION 1545-68** **UST** **U001473624**
1 W 103RD ST STATE **N/A**
CHICAGO, IL 60628

UST:
Facility ID: 2007051
Facility Status: CLOSED
Facility Type: **NONE**
Owner Name: Shell Oil Products
Owner Id: U0013849
Owner Address: P.O. Box 2099 Two Shell Plaza
Owner City,St,Zip: Houston, TX 77252

Tank Number: 1
Tank Capacity: 9520
Tank Substance: Gasoline
Last Used Date: Not reported
OSFM First Notify Date: 4/25/1986
Tank Status: **Removed**
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: **Not reported**
Green Tag Issue Date: **Not reported**
Green Tag Expire Date: **Not reported**
Self Service Permit Inspection Date: **Not reported**
Self Service Permit Expire Date: **Not reported**
Fee Due: Not reported

Tank Number: 2
Tank Capacity: 9520
Tank Substance: Gasoline
Last Used Date: Not reported
OSFM First Notify Date: 4/25/1986
Tank Status: **Removed**
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: **Not reported**
Green Tag Issue Date: **Not reported**
Green Tag Expire Date: **Not reported**
Self Service Permit Inspection Date: **Not reported**
Self Service Permit Expire Date: **Not reported**
Fee Due: Not reported

Tank Number: 3
Tank Capacity: 9520
Tank Substance: Gasoline

SHELL STATION 1545-68 (Continued) **U001473624**

Last Used Date: Not reported
OSFM First Notify Date: 4/25/1986
Tank Status: Removed
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

---

33 **SPILLS** **S111898514**
N/A

10301 S STATE ST
CHICAGO, IL

SPILLS:
Incident ID: 19970818
Incident Date: Not reported
Date Received: 05/09/1997
Facility Address: 10301 S STATE ST
Facility City: CHICAGO
PRP Name: AMOCO OIL CO
AC: Not reported

---

33 **MARATHON GAS STATION & MINI-MART** **UST** **U003914149**
N/A

10301 S STATE ST
CHICAGO, IL 60628

UST:
Facility ID: 2041743
Facility Status: NOT INSTALLED
Facility Type: NONE
Owner Name: Ali Mohsen
Owner Id: U0031358
Owner Address: 10301 S State St
Owner City,St,Zip: Chicago, IL 60628

Tank Number: 1
Tank Capacity: 8000
Tank Substance: Gasoline
Last Used Date: Not reported
OSFM First Notify Date: Not reported
Tank Status: Not Installed
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

Tank Number: 2
Tank Capacity: 12000

Map ID	Site	Database(s)	EPA ID Number

MARATHON GAS STATION & MINI-MART (Continued) **U003914149**

Tank Substance:	Gasoline
Last Used Date:	Not reported
OSFM First Notify Date:	Not reported
Tank Status:	**Not Installed**
Red Tag Issue Date:	Not reported
Install Date:	Not reported
Green Tag Decal:	**Not reported**
Green Tag Issue Date:	**Not reported**
Green Tag Expire Date:	**Not reported**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	Not reported

---

33 **AMOCO OIL CO. #15991** **LUST** **S104521516**
10301 SOUTH STATE ST. **N/A**
CHICAGO, IL 60610

LUST:

Incident Num:	970818
IL EPA Id:	0316085301
Product:	Other Petro
IEMA Date:	05/09/1997
Project Manager:	Piggush
Project Manager Phone:	(217) 782-3101
Email:	Michael.Piggush@illinois.gov
PRP Name:	Amoco Oil Co.
PRP Contact:	Lyle Bruce
PRP Address:	28100 Torch Pkwy., 6-S
PRP City,St,Zip:	Warrenville, IL 60555
PRP Phone:	Not reported
Site Classification:	HIGH
Section 57.5(g) Letter:	732
Date Section 57.5(g) Letter:	Not reported
Non LUST Determination Letter:	2002-11-01
20 Report Received:	Not reported
45 Report Received:	07/28/1997
NFA/NFR Letter:	**Not reported**
NFR Date Recorded:	Not reported

---

34 **AMOCO SS #15991 FACILITY#11758** **UST** **U001141959**
103RD & STATE 18599 **N/A**
CHICAGO, IL 60636

UST:

Facility ID:	2020358
Facility Status:	EXEMPT
Facility Type:	**NONE**
Owner Name:	BP Products North America, Inc.
Owner Id:	U0000552
Owner Address:	P. O. Box 6038 Environmental Compliance Department
Owner City,St,Zip:	Artesia, CA 90702
Tank Number:	1
Tank Capacity:	8000
Tank Substance:	Gasoline
Last Used Date:	7/1/1986

AMOCO SS #15991 FACILITY#11758 (Continued) **U001141959**

OSFM First Notify Date: 4/25/1986
Tank Status: Exempt from registration
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

Tank Number: 2
Tank Capacity: 8000
Tank Substance: Gasoline
Last Used Date: 7/1/1986
OSFM First Notify Date: 4/25/1986
Tank Status: Exempt from registration
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

Tank Number: 3
Tank Capacity: 6000
Tank Substance: Gasoline
Last Used Date: 7/1/1986
OSFM First Notify Date: 4/25/1986
Tank Status: Exempt from registration
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

Tank Number: 4
Tank Capacity: 550
Tank Substance: Used Oil
Last Used Date: 7/1/1986
OSFM First Notify Date: 4/25/1986
Tank Status: Exempt from registration
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported

AMOCO SS #15991 FACILITY#11758 (Continued) **U001141959**

Fee Due: Not reported

34
CITGO **UST** **U003805663**
210 W. 103RD STREET **N/A**
CHICAGO, IL 60628

UST:
Facility ID: 2040667
Facility Status: ACTIVE
Facility Type: **SELF-SERVICE STATION**
Owner Name: WG 8, Inc.
Owner Id: U0034928
Owner Address: 210 W. 103rd Street
Owner City,St,Zip: Chicago, IL 60628

Tank Number: 1
Tank Capacity: 15000
Tank Substance: Gasoline
Last Used Date: Not reported
OSFM First Notify Date: 3/12/2002
Tank Status: **Currently in use**
Red Tag Issue Date: Not reported
Install Date: 11/1/2001
Green Tag Decal: **N001777**
Green Tag Issue Date: **3/21/2012**
Green Tag Expire Date: **12/31/2014**
Self Service Permit Inspection Date: **Not reported**
Self Service Permit Expire Date: **Not reported**
Fee Due: $0.00

Tank Number: 2
Tank Capacity: 10000
Tank Substance: Gasoline
Last Used Date: Not reported
OSFM First Notify Date: 3/12/2002
Tank Status: **Currently in use**
Red Tag Issue Date: Not reported
Install Date: 11/1/2001
Green Tag Decal: **N001777**
Green Tag Issue Date: **3/21/2012**
Green Tag Expire Date: **12/31/2014**
Self Service Permit Inspection Date: **Not reported**
Self Service Permit Expire Date: **Not reported**
Fee Due: $0.00

---

34 **SPILLS** **S111878830**
201 W 103RD ST **N/A**
CHICAGO, IL

SPILLS:
Incident ID: 19903655
Incident Date: Not reported
Date Received: 12/10/1990
Facility Address: 201 W 103RD ST
Facility City: CHICAGO

Map ID	Site	Database(s)	EPA ID Number

(Continued) **S111878830**

PRP Name: F & DARDEN DRY CLEANERS
AC: Not reported

---

34 **SPILLS** **S111878463**
N/A

201 W 103RD ST
CHICAGO, IL

SPILLS:

Incident ID:	19903286
Incident Date:	Not reported
Date Received:	11/07/1990
Facility Address:	201 W 103RD ST
Facility City:	CHICAGO
PRP Name:	OXY USA INC.
AC:	Not reported

---

34 **LUST** **S103292372**
N/A

ONE HOUR MARTENIZING
201 WEST 103RD ST.
CHICAGO, IL 60628

LUST:

Incident Num:	903286
IL EPA Id:	0316495013
Product:	Gasoline
IEMA Date:	11/07/1990
Project Manager:	NOT ASSIGNED
Project Manager Phone:	Not reported
Email:	Not reported
PRP Name:	F & R Darden Corp.
PRP Contact:	Renee Darden
PRP Address:	201 West 103rd St.
PRP City,St,Zip:	Chicago, IL 60628
PRP Phone:	Not reported
Site Classification:	Not reported
Section 57.5(g) Letter:	731
Date Section 57.5(g) Letter:	Not reported
Non LUST Determination Letter:	Not reported
20 Report Received:	Not reported
45 Report Received:	Not reported
NFA/NFR Letter:	**02/27/1991**
NFR Date Recorded:	Not reported

Incident Num:	903655
IL EPA Id:	0316495013
Product:	Gasoline
IEMA Date:	12/11/1990
Project Manager:	Nifong
Project Manager Phone:	Not reported
Email:	Not reported
PRP Name:	Fred Darden
PRP Contact:	Not reported
PRP Address:	201 West 103rd St.
PRP City,St,Zip:	Chicago, IL 60606
PRP Phone:	Not reported
Site Classification:	Not reported
Section 57.5(g) Letter:	731

ONE HOUR MARTENIZING (Continued) **S103292372**

Date Section 57.5(g) Letter: Not reported
Non LUST Determination Letter: Not reported
20 Report Received: 02/29/1992
45 Report Received: 02/29/1992
NFA/NFR Letter: 02/27/1991
NFR Date Recorded: Not reported

34
201-217 E 23RD ST
CHICAGO, IL
SPILLS
S108045754
N/A

SPILLS:
Incident ID: 20040644
Incident Date: 05/04/2004
Date Received: 05/06/2004
Facility Address: 201-217 E 23RD ST
Facility City: CHICAGO
PRP Name: MPEA
AC: Not reported

34
VACANT LOT
201-217 EAST 23RD STREET
CHICAGO, IL 60616
LUST
UST
U003975109
N/A

LUST:
Incident Num: 20040644
IL EPA Id: 0316345050
Product: Uset Oil
IEMA Date: 05/06/2004
Project Manager: Rothering
Project Manager Phone: (217) 785-1858
Email: Scott.Rothering@illinois.gov
PRP Name: Not reported
PRP Contact: Not reported
PRP Address: Not reported
PRP City,St,Zip: Not reported
PRP Phone: Not reported
Site Classification: Not reported
Section 57.5(g) Letter: P.A.
Date Section 57.5(g) Letter: Not reported
Non LUST Determination Letter: Not reported
20 Report Received: 06/14/2004
45 Report Received: 10/01/2004
NFA/NFR Letter: 11/17/2004
NFR Date Recorded: 02/25/2005

UST:
Facility ID: 2042284
Facility Status: EXEMPT
Facility Type: NONE
Owner Name: Metropolitan Pier & Expostion Authority
Owner Id: U0031837
Owner Address: 301 E. Cermak Rd.
Owner City,St,Zip: Chicago, IL 60616

Tank Number: 1

VACANT LOT (Continued) **U003975109**

Tank Capacity:	300
Tank Substance:	Used Oil
Last Used Date:	12/31/1973
OSFM First Notify Date:	Not reported
Tank Status:	**Exempt from registration**
Red Tag Issue Date:	Not reported
Install Date:	Not reported
Green Tag Decal:	**Not reported**
Green Tag Issue Date:	**Not reported**
Green Tag Expire Date:	**Not reported**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	Not reported

---

34 **F & R QUALITY CLEANERS** **RCRA-SQG** **1000117870**
201 W. 103RD ST. **ILD982065310**
CHICAGO, IL 60628

RCRA-SQG:

Date form received by agency:	05/12/1987
Facility name:	ONE HOUR MARTINIZING
Facility address:	201 W 103RD ST CHICAGO, IL 60628
EPA ID:	ILD982065310
Contact:	RENEE DARDEN
Contact address:	201 W 103RD ST CHICAGO, IL 60628
Contact country:	US
Contact telephone:	(312) 821-6738
Contact email:	Not reported
EPA Region:	05
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	NAME NOT REPORTED
Owner/operator address:	ADDRESS NOT REPORTED CITY NOT REPORTED, AK 99998
Owner/operator country:	Not reported
Owner/operator telephone:	(312) 555-1212
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	F AND R DARDEN CORP
Owner/operator address:	ADDRESS NOT REPORTED CITY NOT REPORTED, AK 99998
Owner/operator country:	Not reported
Owner/operator telephone:	(312) 555-1212
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported

F & R QUALITY CLEANERS (Continued) **1000117870**

Owner/Op end date: Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Hazardous Waste Summary:

Waste code:	F002
Waste name:	THE FOLLOWING SPENT HALOGENATED SOLVENTS: TETRACHLOROETHYLENE, METHYLENE CHLORIDE, TRICHLOROETHYLENE, 1,1,1-TRICHLOROETHANE, CHLOROBENZENE, 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE, ORTHO-DICHLOROBENZENE, TRICHLOROFLUOROMETHANE, AND 1,1,2-TRICHLOROETHANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE LISTED IN F001, F004, OR F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Violation Status: No violations found

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34 **MCCORMICK PLACE VACANT LOT** **UST** **U003971916**
201-217 E. CERMAK RD. **N/A**
CHICAGO, IL 60616

UST:

Facility ID:	2042068
Facility Status:	EXEMPT
Facility Type:	**NONE**
Owner Name:	Metropolitan Pier & Expostion Authority
Owner Id:	U0031837
Owner Address:	301 E. Cermak Rd.
Owner City,St,Zip:	Chicago, IL 60616
Tank Number:	1
Tank Capacity:	1000
Tank Substance:	Heating Oil
Last Used Date:	12/31/1973
OSFM First Notify Date:	4/13/2004
Tank Status:	**Exempt from registration**
Red Tag Issue Date:	Not reported
Install Date:	1/1/1901
Green Tag Decal:	**Not reported**
Green Tag Issue Date:	**Not reported**
Green Tag Expire Date:	**Not reported**
Self Service Permit Inspection Date:	**Not reported**

MCCORMICK PLACE VACANT LOT (Continued) **U003971916**

Self Service Permit Expire Date: Not reported
Fee Due: Not reported

34
CONSTRUCTION SITE
201-231 W. 87TH STREET
CHICAGO, IL 60620
UST
U004060420
N/A

UST:
Facility ID: 2043357
Facility Status: EXEMPT
Facility Type: NONE
Owner Name: Berkshire - West 87th Street, LLC
Owner Id: U0033605
Owner Address: 41 Taylor Street
Owner City,St,Zip: Springfield, MA 011031205

Tank Number: 1
Tank Capacity: 3000
Tank Substance: Lubricating Oil
Last Used Date: 12/31/1973
OSFM First Notify Date: Not reported
Tank Status: Exempt from registration
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

Tank Number: 2
Tank Capacity: 1000
Tank Substance: Gasoline
Last Used Date: 12/31/1973
OSFM First Notify Date: Not reported
Tank Status: Exempt from registration
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

Tank Number: 3
Tank Capacity: 6500
Tank Substance: Heating Oil
Last Used Date: 12/31/1973
OSFM First Notify Date: Not reported
Tank Status: Exempt from registration
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported

CONSTRUCTION SITE (Continued) **U004060420**

Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

Tank Number: 4
Tank Capacity: 6500
Tank Substance: Heating Oil
Last Used Date: 12/31/1973
OSFM First Notify Date: Not reported
Tank Status: Exempt from registration
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

Tank Number: 5
Tank Capacity: 6500
Tank Substance: Heating Oil
Last Used Date: 12/31/1973
OSFM First Notify Date: Not reported
Tank Status: Exempt from registration
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

Tank Number: 6
Tank Capacity: 6500
Tank Substance: Heating Oil
Last Used Date: 12/31/1973
OSFM First Notify Date: Not reported
Tank Status: Exempt from registration
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

Tank Number: 7
Tank Capacity: 6500
Tank Substance: Heating Oil

CONSTRUCTION SITE (Continued) **U004060420**

Last Used Date: 12/31/1973
OSFM First Notify Date: Not reported
Tank Status: Exempt from registration
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

Tank Number: 8
Tank Capacity: 6500
Tank Substance: Heating Oil
Last Used Date: 12/31/1973
OSFM First Notify Date: Not reported
Tank Status: Exempt from registration
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

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35 **SPILLS** **S108045282**
105 W 103RD ST **N/A**
CHICAGO, IL

SPILLS:
Incident ID: 20040313
Incident Date: Not reported
Date Received: 03/10/2004
Facility Address: 105 W 103RD ST
Facility City: CHICAGO
PRP Name: UNKNOWN
AC: Not reported

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41 **NEW LANGSTON HUGHES ELEMENTARY SCHOOL** **ENG CONTROLS** **S108891246**
10320 SOUTH WENTWORTH AVENUE **SRP** **N/A**
CHICAGO, IL 60628

ENGINEERING CONTROLS:
Illinois Epa Id: 0316505045
NFR Letter: 08/03/2009
Date NFR Recorded: 09/10/2009
Type Of Site: Residential
Comprehensive / Focused: Comprehensive
Remediation Applicant Title: Ms.
Remediation Applicant Name: LeeAnn Tomas-Foster
RA Company: Public Building Commission of Chicago
RA Address: 50 West Washington Street
RA Secondary Address: Room 200

NEW LANGSTON HUGHES ELEMENTARY SCHOOL (Continued) **S108891246**

RA City,St,Zip: Chicago, IL 60602-
Institutional Controls: Not reported
Engineered Barriers: Clean soil barrier
Worker Caution: True
Acres: 3

SRP:

IL EPA Id: 0316505045
US EPA Id: Not reported
Longitude: -87.62958
Latitude: 41.70653
Contact Name: LeeAnn Tomas-Foster
Contact Address: 50 West Washington Street
Contact Address2: Room 200
Contact City,St,Zip: Chicago, IL 60602-
Contact Phone: (312) 930-5270
Date Enrolled: 09/06/2007
Point Of Contact: Ala E. Sassila, P.E.
Consultant Company: GSG Consultants, Inc.
Consultant Address: 855 West Adams Street
Consultant Address2: Suite 200
Consultant City,St,Zip: Chicago, IL 60607-
Consultant Phone: (312) 733-6262
Proj Mgr Assigned: Baldwin
Sec. 4 Letter Date: Not reported
NFR Recorded: 09/10/2009
Active: False
Total Acres: 3
No Further Remediation Letter Dt: 08/03/2009
Remediation Applicant Co: Public Building Commission of Chicago
Remediation Applicant Title: Ms.
Remediation Applicant Name: Ms. LeeAnn Tomas-Foster
Remediation Applicant Company: Public Building Commission of Chicago
Remediation Applicant Address: 50 West Washington Street
Remediation Applicant Address 2: Room 200
Remediation Applicant City,St,Zip: Chicago, IL 60602-
Illinois EPA: 0316505045
Site Name: New Langston Hughes Elementary School
NFR Letter: 2009-08-03
NFR Letter Date Recorded: 2009-09-10
Site Type: Residential
Comprehensive/Focused: Comprehensive
Institutional Controls: Not reported
Barrier: Clean soil barrier
Worker Caution: True
Acres: 3

Map ID	Site	Database(s)	EPA ID Number
42	**AMERICAN IDEAL** **10351 S MICHIGAN AVE** **CHICAGO, IL 60628**	**RCRA-SQG**	**1010563717** **ILR000151258**

RCRA-SQG:
Date form received by agency: 01/08/2008
Facility name: AMERICAN IDEAL
Facility address: 10351 S MICHIGAN AVE
CHICAGO, IL 60628
EPA ID: ILR000151258
Contact: KERRY KOHN
Contact address: Not reported
Not reported
Contact country: Not reported
Contact telephone: (773) 785-0687
Contact email: Not reported
EPA Region: 05
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:
Owner/operator name: AMERICAN IDEAL
Owner/operator address: Not reported
Not reported
Owner/operator country: Not reported
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 01/08/2008
Owner/Op end date: Not reported

Owner/operator name: AMERICAN IDEAL
Owner/operator address: Not reported
Not reported
Owner/operator country: Not reported
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: 01/08/2008
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No

AMERICAN IDEAL (Continued) **1010563717**

Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Hazardous Waste Summary:

Waste code:	D001
Waste name:	IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.
Violation Status:	No violations found

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42 **AMERICAN IDEAL CLEANING CO., INC.** **UST** **U001141846**
10351 S. MICHIGAN AVE. **N/A**
CHICAGO, IL 60628

UST:

Facility ID:	2022018
Facility Status:	CLOSED
Facility Type:	**COMMERCIAL / RETAIL**
Owner Name:	American Ideal Cleaning Co., Inc.
Owner Id:	U0000499
Owner Address:	10341 S. Michigan Ave.
Owner City,St,Zip:	Chicago, IL 60628

Tank Number:	1
Tank Capacity:	3000
Tank Substance:	Cleaning Solvent
Last Used Date:	1/1/1983
OSFM First Notify Date:	5/6/1986
Tank Status:	**Exempt from registration**
Red Tag Issue Date:	Not reported
Install Date:	1/1/1959
Green Tag Decal:	**G001592**
Green Tag Issue Date:	**4/21/2005**
Green Tag Expire Date:	**12/31/2008**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	Not reported

Tank Number:	2
Tank Capacity:	3000
Tank Substance:	Cleaning Solvent
Last Used Date:	1/1/1983
OSFM First Notify Date:	5/6/1986
Tank Status:	**Exempt from registration**
Red Tag Issue Date:	Not reported
Install Date:	1/1/1959
Green Tag Decal:	**G001592**
Green Tag Issue Date:	**4/21/2005**
Green Tag Expire Date:	**12/31/2008**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**

AMERICAN IDEAL CLEANING CO., INC. (Continued) **U001141846**

Fee Due: Not reported

Tank Number: 3
Tank Capacity: 1000
Tank Substance: Cleaning Solvent
Last Used Date: Not reported
OSFM First Notify Date: 5/6/1986
Tank Status: Exempt from registration
Red Tag Issue Date: Not reported
Install Date: 1/1/1976
Green Tag Decal: G001592
Green Tag Issue Date: 4/21/2005
Green Tag Expire Date: 12/31/2008
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: No

Tank Number: 4
Tank Capacity: 1000
Tank Substance: Cleaning Solvent
Last Used Date: Not reported
OSFM First Notify Date: 5/6/1986
Tank Status: Exempt from registration
Red Tag Issue Date: Not reported
Install Date: 1/1/1976
Green Tag Decal: G001592
Green Tag Issue Date: 4/21/2005
Green Tag Expire Date: 12/31/2008
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: No

Tank Number: 5
Tank Capacity: 6000
Tank Substance: Cleaning Solvent
Last Used Date: 8/16/2007
OSFM First Notify Date: 5/6/1986
Tank Status: Removed
Red Tag Issue Date: Not reported
Install Date: 10/1/1983
Green Tag Decal: G001592
Green Tag Issue Date: 4/21/2005
Green Tag Expire Date: 12/31/2008
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: No

Map ID	Site	Database(s)	EPA ID Number
42	**AMERICAN IDEAL CLEANING COMPANY INC** **10351 SOUTH MICHIGAN AVENUE** **CHICAGO, IL 60628**	**DRYCLEANERS**	**S106540576** **N/A**

DRYCLEANERS:
Facility Id: 1016-9687-01
DC No: DC-00747
Facility Contact: KERRY KOHN
License Expires: 12/31/2012

43	**ROSELAND PLACE** **10400-10420 SOUTH MICHIGAN AVENUE** **CHICAGO, IL 60628**	**INST CONTROL** **SRP**	**S106967073** **N/A**

IL INSTUTIONAL CONTROL:
Illinois EPA Id: 0316495164
NFR Letter: 09/30/2009
Date NFR Recorded: 10/06/2009
Type Of Site: Residential
Comprehensive / Focused: Comprehensive
Remediation Applicant Title: Ms.
Remediation Applicant Name: Deborah Dixon
RA Company: NHS Redevelopment Corporation
RA Address: 1279 North Milwaukee Avenue
RA Secondary Address: Not reported
RA City,St,Zip: Chicago, IL 60622-
Institutional Controls: Groundwater use restriction
Engineered Barriers: Not reported
Worker Caution: False
Acres: 1.95

SRP:
IL EPA Id: 0316495164
US EPA Id: ILR000141622
Longitude: -87.62109
Latitude: 41.70483
Contact Name: Deborah Dixon
Contact Address: 1279 North Milwaukee Avenue
Contact Address2: Suite 500
Contact City,St,Zip: Chicago, IL 60622-
Contact Phone: (773) 568-1020
Date Enrolled: 06/10/2005
Point Of Contact: Paul S. Bernstein
Consultant Company: MACTEC
Consultant Address: 5440 North Cumberland Avenue
Consultant Address2: Suite 250
Consultant City,St,Zip: Chicago, IL 60656-
Consultant Phone: (773) 693-6030
Proj Mgr Assigned: Rossi
Sec. 4 Letter Date: Not reported
NFR Recorded: 10/06/2009
Active: True
Total Acres: 1.95
No Further Remediation Letter Dt: 09/30/2009
Remediation Applicant Co: Roseland Place, Inc. NFP
Remediation Applicant Title: Vice President
Remediation Applicant Name: Ms. Deborah Dixon
Remediation Applicant Company: NHS Redevelopment Corporation
Remediation Applicant Address: 1279 North Milwaukee Avenue

ROSELAND PLACE (Continued) **S106967073**

Remediation Applicant Address 2: Not reported
Remediation Applicant City,St,Zip: Chicago, IL 60622-
Illinois EPA: 0316495164
Site Name: Roseland Place
NFR Letter: 2009-09-30
NFR Letter Date Recorded: 2009-10-06
Site Type: Residential
Comprehensive/Focused: Comprehensive
Institutional Controls: Groundwater use restriction
Barrier: Not reported
Worker Caution: False
Acres: 1.95

IL EPA Id: 0316495164
US EPA Id: ILR000141622
Longitude: -87.62109
Latitude: 41.70483
Contact Name: Deborah Dixon
Contact Address: 1279 North Milwaukee Avenue
Contact Address2: Suite 500
Contact City,St,Zip: Chicago, IL 60622-
Contact Phone: (773) 568-1020
Date Enrolled: 06/10/2005
Point Of Contact: Paul S. Bernstein
Consultant Company: MACTEC
Consultant Address: 5440 North Cumberland Avenue
Consultant Address2: Suite 250
Consultant City,St,Zip: Chicago, IL 60656-
Consultant Phone: (773) 693-6030
Proj Mgr Assigned: Rossi
Sec. 4 Letter Date: Not reported
NFR Recorded: 04/24/2007
Active: True
Total Acres: 1.95
No Further Remediation Letter Dt: 03/26/2007
Remediation Applicant Co: Roseland Place, Inc. NFP
Remediation Applicant Title: Vice President
Remediation Applicant Name: Ms. Deborah Dixon
Remediation Applicant Company: NHS Redevelopment Corporation
Remediation Applicant Address: 1279 North Milwaukee Avenue
Remediation Applicant Address 2: Not reported
Remediation Applicant City,St,Zip: Chicago, IL 60622-
Illinois EPA: 0316495164
Site Name: Roseland Place
NFR Letter: 2009-09-30
NFR Letter Date Recorded: 2009-10-06
Site Type: Residential
Comprehensive/Focused: Comprehensive
Institutional Controls: Groundwater use restriction
Barrier: Not reported
Worker Caution: False
Acres: 1.95

43 VACANT PROPERTY **UST U004051774**
10400-10420 S. MICHIGAN AVENUE **N/A**
CHICAGO, IL 60628

UST:
Facility ID: 2043289
Facility Status: EXEMPT
Facility Type: NONE
Owner Name: Neighborhood Housing Services of Chicago
Owner Id: U0033496
Owner Address: 11101 S. Michigan
Owner City,St,Zip: Chicago, IL 60628

Tank Number: 1
Tank Capacity: 2000
Tank Substance: Heating Oil
Last Used Date: 12/31/1973
OSFM First Notify Date: Not reported
Tank Status: Exempt from registration
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

Tank Number: 2
Tank Capacity: 2000
Tank Substance: Heating Oil
Last Used Date: 12/31/1973
OSFM First Notify Date: Not reported
Tank Status: Exempt from registration
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

Tank Number: 3
Tank Capacity: 275
Tank Substance: Waste Oil
Last Used Date: 12/31/1973
OSFM First Notify Date: Not reported
Tank Status: Exempt from registration
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

VACANT PROPERTY (Continued) **U004051774**

Tank Number:	4
Tank Capacity:	500
Tank Substance:	Heating Oil
Last Used Date:	12/31/1973
OSFM First Notify Date:	Not reported
Tank Status:	**Exempt from registration**
Red Tag Issue Date:	Not reported
Install Date:	Not reported
Green Tag Decal:	**Not reported**
Green Tag Issue Date:	**Not reported**
Green Tag Expire Date:	**Not reported**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	Not reported

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44 **HUGHES LANGSTON SCHOOL** **RCRA-CESQG** **1000986465**
226 W 104TH ST **ILD984868745**
CHICAGO, IL 60628

RCRA-CESQG:

Date form received by agency:	10/22/2009
Facility name:	HUGHES LANGSTON SCHOOL
Facility address:	226 W 104TH ST CHICAGO, IL 60628
EPA ID:	ILD984868745
Mailing address:	8501 W 191ST ST BOX 10 MOKENA, IL 60448
Contact:	THOMAS CONNELLY
Contact address:	8501 W 191ST ST BOX 10 MOKENA, IL 60448
Contact country:	US
Contact telephone:	(708) 923-0202
Contact email:	Not reported
EPA Region:	05
Classification:	Conditionally Exempt Small Quantity Generator
Description:	Handler: generates 100 kg or less of hazardous waste per calendar month, and accumulates 1000 kg or less of hazardous waste at any time; or generates 1 kg or less of acutely hazardous waste per calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste

Owner/Operator Summary:

Owner/operator name:	CHICAGO PUBLIC SCHOOLS
Owner/operator address:	1819 W PERSHING RD 6WW CHICAGO, IL 60609
Owner/operator country:	Not reported
Owner/operator telephone:	(773) 535-7038
Legal status:	Private

HUGHES LANGSTON SCHOOL (Continued) **1000986465**

Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Historical Generators:

Date form received by agency:	11/04/1998
Facility name:	HUGHES LANGSTON SCHOOL
Classification:	Conditionally Exempt Small Quantity Generator

Hazardous Waste Summary:

Waste code:	D000
Waste name:	Not Defined
Waste code:	D006
Waste name:	CADMIUM
Waste code:	D008
Waste name:	LEAD
Waste code:	D009
Waste name:	MERCURY
Waste code:	D000
Waste name:	Not Defined
Waste code:	D006
Waste name:	CADMIUM
Waste code:	D008
Waste name:	LEAD
Waste code:	D009
Waste name:	MERCURY
Waste code:	X002
Waste name:	POLYCHLORINATED BIPHENOLS (PCBs)

Violation Status: No violations found

Map ID	Site	Database(s)	EPA ID Number
46	**KOHN SCHOOL** **10414 S STATE ST** **CHICAGO, IL 60628**	**RCRA-CESQG**	**1004696761** **ILR000057521**

RCRA-CESQG:

Date form received by agency:	11/04/1998
Facility name:	KOHN SCHOOL
Facility address:	10414 S STATE ST CHICAGO, IL 60628
EPA ID:	ILR000057521
Mailing address:	8501 W 191ST ST PO BOX 10 MOKENA, IL 60448
Contact:	THOMAS CONNELLY
Contact address:	8501 W 191ST ST PO BOX 10 MOKENA, IL 60448
Contact country:	US
Contact telephone:	(708) 923-0202
Contact email:	Not reported
EPA Region:	05
Classification:	Conditionally Exempt Small Quantity Generator
Description:	Handler: generates 100 kg or less of hazardous waste per calendar month, and accumulates 1000 kg or less of hazardous waste at any time; or generates 1 kg or less of acutely hazardous waste per calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste

Owner/Operator Summary:

Owner/operator name:	CHICAGO PUBLIC SCHOOLS
Owner/operator address:	1819 W PERSHING RD 6WW CHICAGO, IL 60609
Owner/operator country:	Not reported
Owner/operator telephone:	(773) 535-7038
Legal status:	District
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No

KOHN SCHOOL (Continued) **1004696761**

User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Hazardous Waste Summary:
Waste code: D006
Waste name: CADMIUM

Waste code: D008
Waste name: LEAD

Waste code: D009
Waste name: MERCURY

Violation Status: No violations found

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47 **SPILLS** **S110278064**
10426 S MICHIGAN AVE **N/A**
CHICAGO, IL

SPILLS:
Incident ID: 20100068
Incident Date: 01/20/2010
Date Received: Not reported
Facility Address: 10426 S MICHIGAN AVE
Facility City: CHICAGO
PRP Name: Neighborhood Housing Services of Chicago
AC: Not reported

Incident ID: 20100068
Incident Date: Not reported
Date Received: 01/20/2010
Facility Address: 10426 S MICHIGAN AVE
Facility City: CHICAGO
PRP Name: NEIGHBORHOOD HOUSING SERVICES REDEVELOPMENT CORP O
AC: Not reported

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47 **VACANT PROPERTY** **UST** **U004151256**
10426 S. MICHIGAN AVENUE **N/A**
CHICAGO, IL 60628

UST:
Facility ID: 2044656
Facility Status: EXEMPT
Facility Type: **NONE**
Owner Name: Roseland Place Limited Partnership
Owner Id: U0035710
Owner Address: 1279 N. Milwaukee Ave., 5th Floor
Owner City,St,Zip: Chicago, IL 60622

Tank Number: 1
Tank Capacity: 3250
Tank Substance: Heating Oil
Last Used Date: 12/31/1973
OSFM First Notify Date: Not reported

Map ID	Site	Database(s)	EPA ID Number

VACANT PROPERTY (Continued) **U004151256**

Tank Status:	**Exempt from registration**
Red Tag Issue Date:	Not reported
Install Date:	Not reported
Green Tag Decal:	**Not reported**
Green Tag Issue Date:	**Not reported**
Green Tag Expire Date:	**Not reported**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	Not reported

Tank Number:	2
Tank Capacity:	500
Tank Substance:	Heating Oil
Last Used Date:	12/31/1973
OSFM First Notify Date:	Not reported
Tank Status:	**Exempt from registration**
Red Tag Issue Date:	Not reported
Install Date:	Not reported
Green Tag Decal:	**Not reported**
Green Tag Issue Date:	**Not reported**
Green Tag Expire Date:	**Not reported**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	Not reported

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47 **NEIGHBORHOOD HOUSING SERVICES REDEVELOPMENT CORP** **LUST** **S110122189**
10426 SOUTH MICHIGAN AVENUE **N/A**
CHICAGO, IL 60628

LUST:

Incident Num:	20100068
IL EPA Id:	0316495183
Product:	Fuel Oil
IEMA Date:	01/20/2010
Project Manager:	South
Project Manager Phone:	(217) 558-0347
Email:	Shirlene.South@illinois.gov
PRP Name:	Not reported
PRP Contact:	Not reported
PRP Address:	Not reported
PRP City,St,Zip:	Not reported
PRP Phone:	Not reported
Site Classification:	Not reported
Section 57.5(g) Letter:	734
Date Section 57.5(g) Letter:	Not reported
Non LUST Determination Letter:	Not reported
20 Report Received:	02/08/2010
45 Report Received:	03/10/2010
NFA/NFR Letter:	**06/09/2010**
NFR Date Recorded:	Not reported

Map ID	Site	Database(s)	EPA ID Number
48	**DAIRY FRESH FOODS, INC.** **10450 SOUTH MICHIGAN AVENUE** **CHICAGO, IL 60628**	**ENG CONTROLS** **INST CONTROL** **SRP**	**S106878785** **N/A**

ENGINEERING CONTROLS:

Illinois Epa Id:	0316515155
NFR Letter:	08/08/2006
Date NFR Recorded:	08/15/2006
Type Of Site:	Residential
Comprehensive / Focused:	Comprehensive
Remediation Applicant Title:	Mr.
Remediation Applicant Name:	Robert Helle
RA Company:	Roseland SLF Associates, L.P.
RA Address:	701 Lee Street
RA Secondary Address:	Suite 450
RA City,St,Zip:	Des Plaines, IL 60016-
Institutional Controls:	Groundwater use restriction
Engineered Barriers:	Asphalt barrier/Concrete barrier/Brick barrier
Worker Caution:	True
Acres:	1.669

IL INSTUTIONAL CONTROL:

Illinois EPA Id:	0316515155
NFR Letter:	08/08/2006
Date NFR Recorded:	08/15/2006
Type Of Site:	Residential
Comprehensive / Focused:	Comprehensive
Remediation Applicant Title:	Mr.
Remediation Applicant Name:	Robert Helle
RA Company:	Roseland SLF Associates, L.P.
RA Address:	701 Lee Street
RA Secondary Address:	Suite 450
RA City,St,Zip:	Des Plaines, IL 60016-
Institutional Controls:	Groundwater use restriction
Engineered Barriers:	Asphalt barrier/Concrete barrier/Brick barrier
Worker Caution:	True
Acres:	1.669

SRP:

IL EPA Id:	0316515155
US EPA Id:	Not reported
Longitude:	-87.62117
Latitude:	41.70400
Contact Name:	Robert Helle
Contact Address:	701 Lee Street
Contact Address2:	Suite 450
Contact City,St,Zip:	Des Plaines, IL 60016-
Contact Phone:	(847) 768-5105
Date Enrolled:	04/28/2005
Point Of Contact:	Lawrence A. DuBose, P.E.
Consultant Company:	Testing Service Corporation
Consultant Address:	360 South Main Place
Consultant Address2:	Not reported
Consultant City,St,Zip:	Carol Stream, IL 60188-
Consultant Phone:	(630) 462-2600
Proj Mgr Assigned:	Murphy
Sec. 4 Letter Date:	Not reported
NFR Recorded:	08/15/2006

DAIRY FRESH FOODS, INC. (Continued) **S106878785**

Active: False
Total Acres: 1.669
No Further Remediation Letter Dt: 08/08/2006
Remediation Applicant Co: Roseland SLF Associates, L.P.
Remediation Applicant Title: Vice President
Remediation Applicant Name: Mr. Robert Helle
Remediation Applicant Company: Roseland SLF Associates, L.P.
Remediation Applicant Address: 701 Lee Street
Remediation Applicant Address 2: Suite 450
Remediation Applicant City,St,Zip: Des Plaines, IL 60016-
Illinois EPA: 0316515155
Site Name: Dairy Fresh Foods, Inc.
NFR Letter: 2006-08-08
NFR Letter Date Recorded: 2006-08-15
Site Type: Residential
Comprehensive/Focused: Comprehensive
Institutional Controls: Groundwater use restriction
Barrier: Asphalt barrier/Concrete barrier/Brick barrier
Worker Caution: True
Acres: 1.669

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48 **SPILLS** **S108045279**
N/A

10450 S MICHIGAN AVE
CHICAGO, IL

SPILLS:
Incident ID: 20040788
Incident Date: 06/02/2004
Date Received: 06/02/2004
Facility Address: 10450 S MICHIGAN AVE
Facility City: CHICAGO
PRP Name: DAIRY FRESH FOODS
AC: Not reported

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52 **LUST** **S108891404**
N/A

C & O AUTO REBUILDERS
10554 SOUTH MICHIGAN AVENUE
CHICAGO, IL 60628

LUST:
Incident Num: 20071260
IL EPA Id: 0316495096
Product: Gasoline
IEMA Date: 09/14/2007
Project Manager: Putrich
Project Manager Phone: (217) 524-4827
Email: Steve.Putrich@illinois.gov
PRP Name: Not reported
PRP Contact: Not reported
PRP Address: Not reported
PRP City,St,Zip: Not reported
PRP Phone: Not reported
Site Classification: Not reported
Section 57.5(g) Letter: 734
Date Section 57.5(g) Letter: Not reported
Non LUST Determination Letter: Not reported

C & O AUTO REBUILDERS (Continued) **S108891404**

20 Report Received: 10/09/2007
45 Report Received: 10/30/2007
NFA/NFR Letter: 03/31/2008
NFR Date Recorded: 04/08/2008

52
10554 S MICHIGAN AVE
CHICAGO, IL
SPILLS **S108891605**
N/A

SPILLS:
Incident ID: 20071260
Incident Date: Not reported
Date Received: 09/14/2007
Facility Address: 10554 S MICHIGAN AVE
Facility City: CHICAGO
PRP Name: C&O AUTO REBUILDERS
AC: Not reported

52
AUTO REPAIR SHOP
10554 S. MICHIGAN AVENUE
CHICAGO, IL 60628
UST **U004110665**
N/A

UST:
Facility ID: 2043798
Facility Status: EXEMPT
Facility Type: COMMERCIAL / RETAIL
Owner Name: C & O Audo Rebuilders
Owner Id: U0034337
Owner Address: 10554 S. Michigan Avenue
Owner City,St,Zip: Chicago, IL 60628

Tank Number: 1
Tank Capacity: 1000
Tank Substance: Gasoline
Last Used Date: 12/31/1973
OSFM First Notify Date: 10/9/2007
Tank Status: Exempt from registration
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

Tank Number: 2
Tank Capacity: 1000
Tank Substance: Gasoline
Last Used Date: 12/31/1973
OSFM First Notify Date: 10/9/2007
Tank Status: Exempt from registration
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported

AUTO REPAIR SHOP (Continued) **U004110665**

Green Tag Issue Date:	**Not reported**
Green Tag Expire Date:	**Not reported**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	Not reported

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52 **MICHIGAN AVENUE COLLISION** **RCRA-SQG** **1001201777**
10554 S MICHIGAN **ILR000039289**
CHICAGO, IL 60628

RCRA-SQG:

Date form received by agency:	12/24/2009
Facility name:	MICHIGAN AVENUE COLLISION
Facility address:	10554 S MICHIGAN CHICAGO, IL 60628
EPA ID:	ILR000039289
Contact:	ROBT SIGEL
Contact address:	10554 S MICHIGAN CHICAGO, IL 60628
Contact country:	US
Contact telephone:	(773) 785-5586
Contact email:	Not reported
EPA Region:	05
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	MICHIGAN AVE COLLISION
Owner/operator address:	10554 S MICHIGAN CHICAGO, IL 60628
Owner/operator country:	Not reported
Owner/operator telephone:	(773) 785-5586
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Map ID	Site	Database(s)	EPA ID Number

MICHIGAN AVENUE COLLISION (Continued) **1001201777**

Historical Generators:

Date form received by agency:	06/13/1997
Facility name:	MICHIGAN AVENUE COLLISION
Classification:	Small Quantity Generator

Hazardous Waste Summary:

Waste code:	D001
Waste name:	IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.
Waste code:	D001
Waste name:	IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.
Violation Status:	No violations found

---

54 **ERNS** **2001569315**
N/A

240 EAST 106TH ST
CHICAGO, IL 0

Click this hyperlink while viewing on your computer to access additional ERNS detail in the EDR Site Report.

---

54 **ERNS** **2002600539**
N/A

240 EAST 106 TH STREET
CHICAGO, IL 0

Click this hyperlink while viewing on your computer to access additional ERNS detail in the EDR Site Report.

Map ID	Site	Database(s)	EPA ID Number
54	**240 E 106TH ST CHICAGO, IL**	**SPILLS**	**S111901490 N/A**

SPILLS:

Incident ID:	19981235
Incident Date:	05/25/1998
Date Received:	05/25/1998
Facility Address:	240 E 106TH ST
Facility City:	CHICAGO
PRP Name:	NORFOLK RAILROAD
AC:	Not reported

Map ID	Site	Database(s)	EPA ID Number
55	**CALUMET YARD 204 EAST 106TH STREET CHICAGO, IL**	**ERNS**	**93328488 N/A**

Click this hyperlink while viewing on your computer to access additional ERNS detail in the EDR Site Report.

Map ID	Site	Database(s)	EPA ID Number
58	**GT&T SERVICE CENTER INC 10635 S WENTWORTH AVE CHICAGO, IL 60628**	**UST**	**U000865955 N/A**

UST:

Facility ID:	2031587
Facility Status:	CLOSED
Facility Type:	**NONE**
Owner Name:	Trotter Lorenzo
Owner Id:	U0020981
Owner Address:	11352 S Parnell
Owner City,St,Zip:	Chicago, IL 60628

Tank Number:	1
Tank Capacity:	1000
Tank Substance:	Gasoline
Last Used Date:	1/1/1901
OSFM First Notify Date:	12/1/1992
Tank Status:	**Removed**
Red Tag Issue Date:	Not reported
Install Date:	1/1/1902
Green Tag Decal:	**Not reported**
Green Tag Issue Date:	**Not reported**
Green Tag Expire Date:	**Not reported**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	Not reported

Tank Number:	2
Tank Capacity:	1000
Tank Substance:	Gasoline
Last Used Date:	1/1/1901
OSFM First Notify Date:	12/1/1992
Tank Status:	**Removed**
Red Tag Issue Date:	Not reported

GT&T SERVICE CENTER INC (Continued) **U000865955**

Install Date: 1/1/1902
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

Tank Number: 3
Tank Capacity: 2000
Tank Substance: Gasoline
Last Used Date: 1/1/1901
OSFM First Notify Date: 12/1/1992
Tank Status: Removed
Red Tag Issue Date: Not reported
Install Date: 1/1/1902
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

---

58 **GTE SERVICE CTR INC** **RCRA-SQG** **1000453244**
10635 S WENTWORTH **ILD984792952**
CHICAGO, IL 60628

RCRA-SQG:
Date form received by agency: 09/10/1990
Facility name: GTE SERVICE CTR INC
Facility address: 10635 S WENTWORTH
CHICAGO, IL 60628
EPA ID: ILD984792952
Contact: LORENZO TROTTER
Contact address: 10635 S WENTWORTH
CHICAGO, IL 60628
Contact country: US
Contact telephone: Not reported
Contact email: Not reported
EPA Region: 05
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:
Owner/operator name: TROTTER LORENZO PRES
Owner/operator address: Not reported
Not reported
Owner/operator country: Not reported
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported

Map ID	Site	Database(s)	EPA ID Number

GTE SERVICE CTR INC (Continued) **1000453244**

Owner/Op end date: Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Hazardous Waste Summary:

Waste code:	D001
Waste name:	IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Violation Status: No violations found

---

60 **RAYS CLEANERS** **RCRA-SQG** **1000374355**
10738 S MICHIGAN AVE **ILD054589148**
CHICAGO, IL 60628

RCRA-SQG:

Date form received by agency:	04/06/1987
Facility name:	RAYS CLEANERS
Facility address:	10738 S MICHIGAN AVE CHICAGO, IL 60628
EPA ID:	ILD054589148
Contact:	RAYMOND BRADLEY
Contact address:	10738 S MICHIGAN AVE CHICAGO, IL 60628
Contact country:	US
Contact telephone:	(312) 928-2143
Contact email:	Not reported
EPA Region:	05
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name: NAME NOT REPORTED

RAYS CLEANERS (Continued) **1000374355**

Owner/operator address:	ADDRESS NOT REPORTED CITY NOT REPORTED, AK 99998
Owner/operator country:	Not reported
Owner/operator telephone:	(312) 555-1212
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	BRADLEY RAYMOND
Owner/operator address:	ADDRESS NOT REPORTED CITY NOT REPORTED, AK 99998
Owner/operator country:	Not reported
Owner/operator telephone:	(312) 555-1212
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Hazardous Waste Summary:

Waste code:	F002
Waste name:	THE FOLLOWING SPENT HALOGENATED SOLVENTS: TETRACHLOROETHYLENE, METHYLENE CHLORIDE, TRICHLOROETHYLENE, 1,1,1-TRICHLOROETHANE, CHLOROBENZENE, 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE, ORTHO-DICHLOROBENZENE, TRICHLOROFLUOROMETHANE, AND 1,1,2-TRICHLOROETHANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE LISTED IN F001, F004, OR F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Violation Status: No violations found

61 **VACANT RESIDENTIAL BUILDING** **UST** **U003715093**
226-248 W 107TH PLACE **N/A**
CHICAGO, IL 60628

UST:
Facility ID: 2039223
Facility Status: CLOSED
Facility Type: OTHER SPECIAL SERVICE DISTRICT
Owner Name: Daniel McGovern
Owner Id: U0028986
Owner Address: 10424 S Campbell
Owner City,St,Zip: Chicago, IL 60655

Tank Number: 1
Tank Capacity: 6000
Tank Substance: Heating Oil
Last Used Date: 4/1/1975
OSFM First Notify Date: 9/8/1999
Tank Status: Removed
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: No

Tank Number: 2
Tank Capacity: 3500
Tank Substance: Heating Oil
Last Used Date: 4/1/1975
OSFM First Notify Date: 9/8/1999
Tank Status: Removed
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: No

---

62 **COM ED** **RCRA-CESQG** **1004698372**
10847 S MICHIGAN AVE **ILR000106195**
CHICAGO, IL 60628

RCRA-CESQG:
Date form received by agency: 05/21/2001
Facility name: COM ED
Facility address: 10847 S MICHIGAN AVE
CHICAGO, IL 60628
EPA ID: ILR000106195
Mailing address: 19156 S 85TH PL
MOKENA, IL 60448
Contact: THOMAS CONNELLY
Contact address: 10847 S MICHIGAN AVE
CHICAGO, IL 60628
Contact country: US

COM ED (Continued) **1004698372**

Contact telephone:	(815) 469-7007
Contact email:	Not reported
EPA Region:	05
Classification:	Conditionally Exempt Small Quantity Generator
Description:	Handler: generates 100 kg or less of hazardous waste per calendar month, and accumulates 1000 kg or less of hazardous waste at any time; or generates 1 kg or less of acutely hazardous waste per calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste

Owner/Operator Summary:

Owner/operator name:	COM ED
Owner/operator address:	555 JOLIET RD BOLINGBROOK, IL 60440
Owner/operator country:	Not reported
Owner/operator telephone:	(630) 455-3448
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	01/01/0001
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Hazardous Waste Summary:

Waste code:	D008
Waste name:	LEAD
Waste code:	D009
Waste name:	MERCURY
Violation Status:	No violations found

Map ID	Site	Database(s)	EPA ID Number
63	**VAN VLISSINGEN PETER SCHOOL** **137 W 108TH PL** **CHICAGO, IL 60628**	**RCRA-SQG** **UST**	**1001127079** **ILR000033795**

RCRA-SQG:

Date form received by agency:	01/22/1997
Facility name:	VAN VLISSINGEN PETER SCHOOL
Facility address:	137 W 108TH PL CHICAGO, IL 60628
EPA ID:	ILR000033795
Contact:	MILICENT RUSSELL
Contact address:	137 W 108TH PL CHICAGO, IL 60628
Contact country:	US
Contact telephone:	(773) 535-5300
Contact email:	Not reported
EPA Region:	05
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	CHICAGO PUBLIC SCHOOLS
Owner/operator address:	1819 W PERSHING RD CHICAGO, IL 60609
Owner/operator country:	Not reported
Owner/operator telephone:	(773) 535-7039
Legal status:	District
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Hazardous Waste Summary:

Waste code:	D008
Waste name:	LEAD

Violation Status:	No violations found

Map ID	Site	Database(s)	EPA ID Number
	VAN VLISSINGEN PETER SCHOOL (Continued)		**1001127079**

UST:

Facility ID:	2039443
Facility Status:	EXEMPT
Facility Type:	**NONE**
Owner Name:	Chicago Public Schools
Owner Id:	U0029206
Owner Address:	125 S. Clark, 16th Floor
Owner City,St,Zip:	Chicago, IL 60603
Tank Number:	1
Tank Capacity:	6000
Tank Substance:	Heating Oil
Last Used Date:	12/31/1973
OSFM First Notify Date:	Not reported
Tank Status:	**Exempt from registration**
Red Tag Issue Date:	Not reported
Install Date:	Not reported
Green Tag Decal:	**Not reported**
Green Tag Issue Date:	**Not reported**
Green Tag Expire Date:	**Not reported**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	Not reported

Map ID	Site	Database(s)	EPA ID Number
65	**VACANT APARTMENT BUILDING** **10834 S PERRY AVE** **CHICAGO, IL 60628**	**UST**	**U003715200** **N/A**

UST:

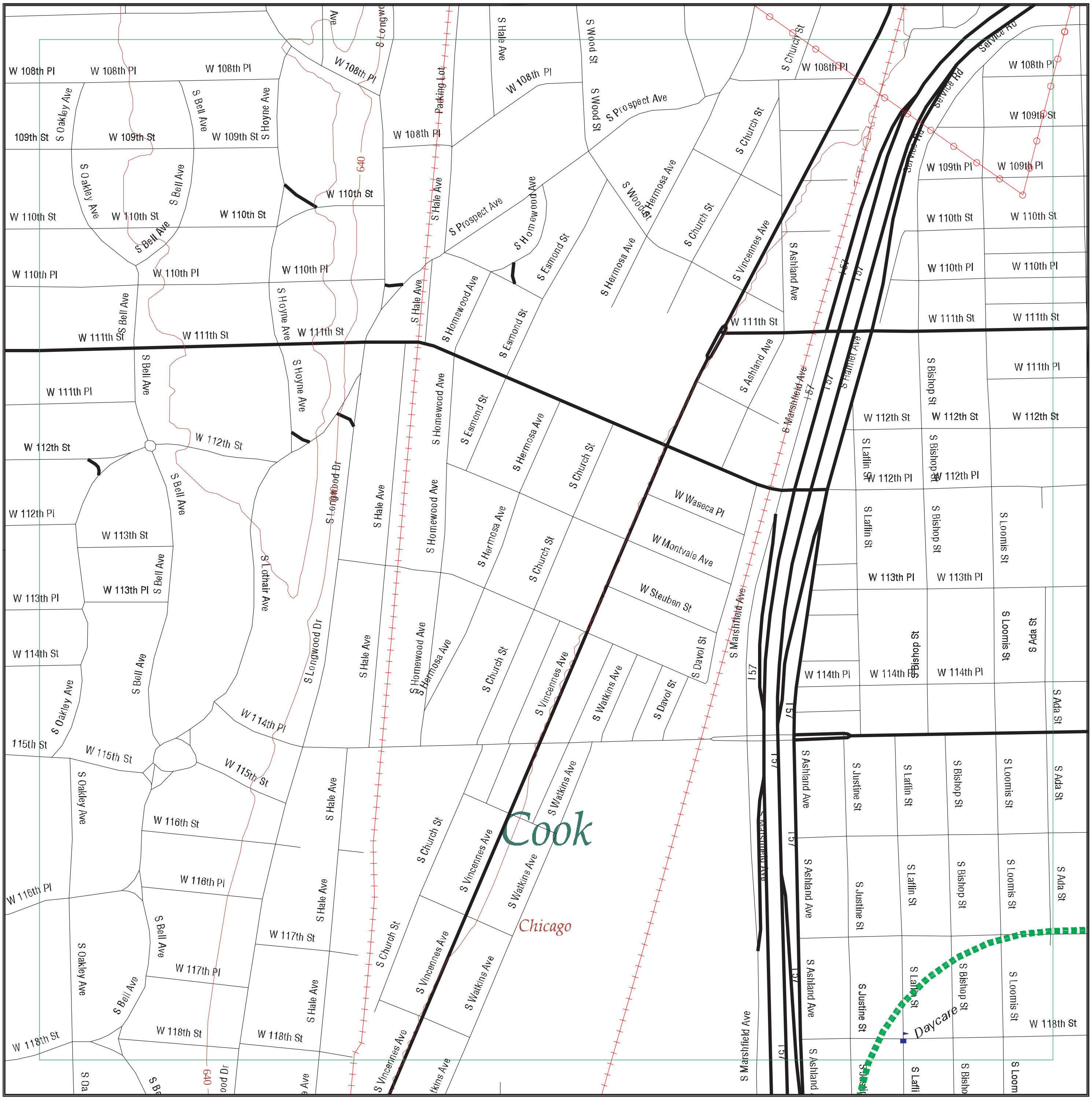
Facility ID:	2039442
Facility Status:	EXEMPT
Facility Type:	**NONE**
Owner Name:	Chicago Public Schools
Owner Id:	U0029206
Owner Address:	125 S. Clark, 16th Floor
Owner City,St,Zip:	Chicago, IL 60603
Tank Number:	1
Tank Capacity:	1600
Tank Substance:	Heating Oil
Last Used Date:	12/31/1973
OSFM First Notify Date:	Not reported
Tank Status:	**Exempt from registration**
Red Tag Issue Date:	Not reported
Install Date:	Not reported
Green Tag Decal:	**Not reported**
Green Tag Issue Date:	**Not reported**
Green Tag Expire Date:	**Not reported**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	Not reported

Count: 9 records

FOCUS MAP 4 ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CHICAGO	1004692486	107TH ST SUB SHOP	1215 W 107TH	60628	RCRA-CESQG
CHICAGO	1012172115	ROSELAND COMMUNITY	110TH PLACE AND MICHIGAN, EAST SIDE OF STATE ST.		US BROWNFIELDS
CHICAGO	S109167302		549 115TH ST		LUST, SPILLS
CHICAGO	1002886378	US SCRAP	123RD & COTTAGE GROVE	60628	CERCLIS
CHICAGO	S101467236	PENN CENTRAL	810 E 124TH ST		SSU
CHICAGO	1012126998	9705 S. COTTAGE GROVE	9705 S COTTAGE GROVE AVE	60628	US BROWNFIELDS
CHICAGO	S109366427		6700 JEFFREY BLVD		LUST, SPILLS
CHICAGO	S108891646		11900 LOOMIS		LUST, SPILLS
CHICAGO	S107926349	LAKE CALUMET CLUSTER SITE	N OF 122ND	60628	SSU

Focus Map 5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S Hale Ave
S Wood St
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W 108th Pl
Service Rd
Parking Lot
109th St
S Oakley Ave
W 109th St
S Bell Ave
W 109th St
S Hoyne Ave
W 108th Pl
S Wood St
S Prospect Ave
S Church St
Service Rd
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S Oakley Ave
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S Bishop St
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S Hermosa Ave
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W Montvale Ave
S Laflin St
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S Bell Ave
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W 113th Pl
W 113th Pl
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S Longwood Dr
S Hale Ave
S Homewood Ave
S Hermosa Ave
S Church St
S Vincennes Ave
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S Marshfield Ave
S Bishop St
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EDR DataMap® - Environmental Atlas

EDR Environmental Data Resources Inc

90786 CTC RLE Hazardous Materials

Legend

Roads	Waterways	Powerlines	Water	Listed Sites
Major Roads	Railroads	Pipelines		Sensitive Receptors
Contour Lines	Study Boundary	Fault Lines		
National Wetlands Inventory	100-Yr Flood Zones			

N

0 1/8 1/4

Scale in Miles

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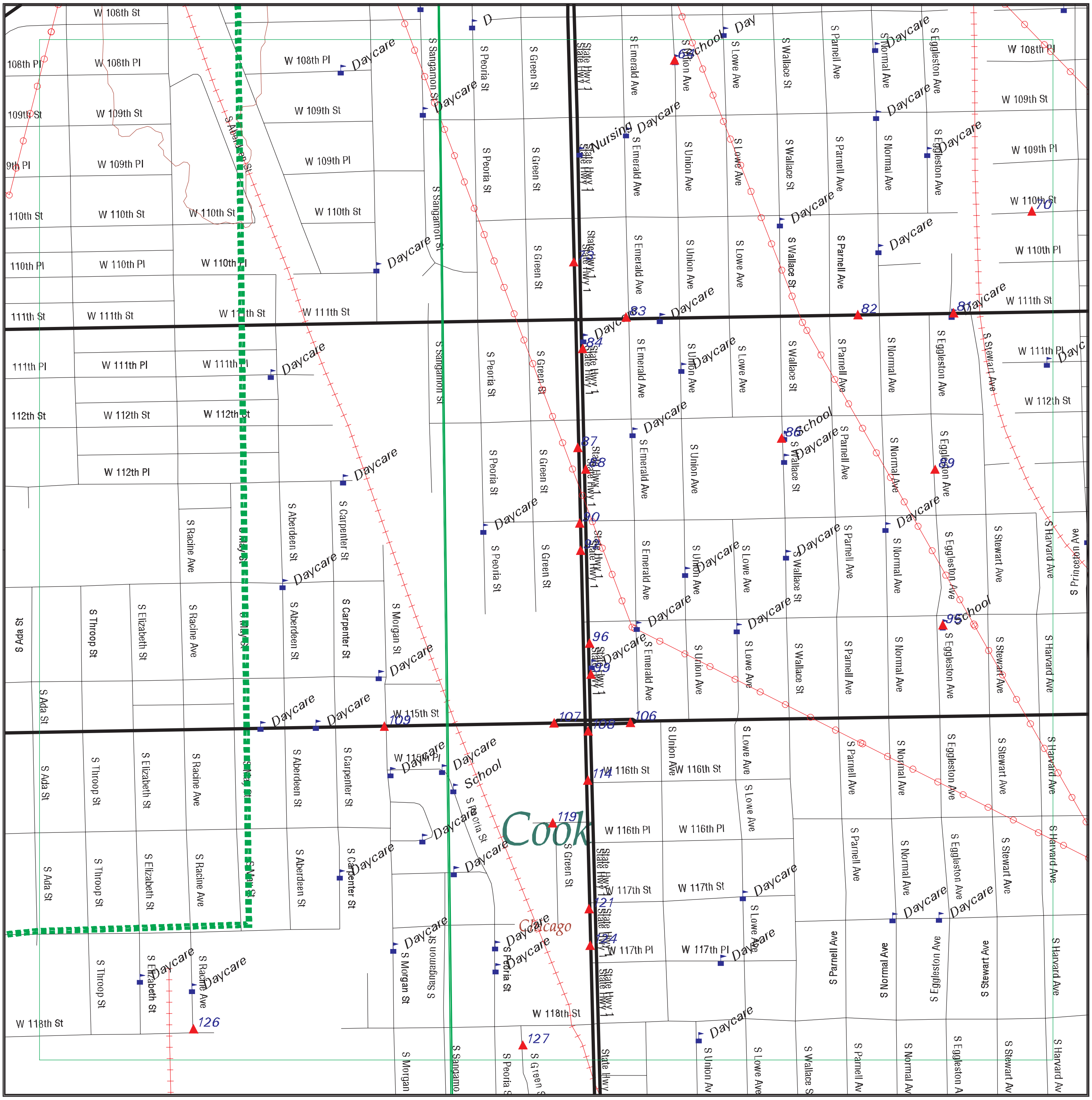
Count: 7 records

FOCUS MAP 5 ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CALUMET PARK	1000166385	CHICAGO COPPER AND CHEMICAL COMPANY	INTERSECTION OF WINCHESTER RD & 127 ST.	60643	CERCLIS
CALUMET PARK	U001964624	RACEWAY PK	SWC 130TH & ASHLAND	60643	UST
CHICAGO	1012172115	ROSELAND COMMUNITY	110TH PLACE AND MICHIGAN, EAST SIDE OF STATE ST.		US BROWNFIELDS
CHICAGO	S109167302		549 115TH ST		LUST, SPILLS
CHICAGO	S101467236	PENN CENTRAL	810 E 124TH ST		SSU
CHICAGO	S109366427		6700 JEFFREY BLVD		LUST, SPILLS
CHICAGO	S108891646		11900 LOOMIS		LUST, SPILLS

Focus Map 6


W 108th St
108th Pl
W 108th Pl
Daycare
D
Day
School
Nursing
W 109th St
109th St
W 109th Pl
9th Pl
110th St
W 110th St
110th Pl
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111th St
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111th Pl
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112th St
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W 115th St
W 115th Pl
W 116th St
W 116th Pl
W 117th St
W 117th Pl
W 118th St
S Aberdeen St
S Sangamon St
S Peoria St
S Green St
State Hwy 1
S Emerald Ave
S Union Ave
S Lowe Ave
S Wallace St
S Parnell Ave
S Normal Ave
S Eggleston Ave
S Stewart Ave
S Harvard Ave
S Princeton Ave
S Racine Ave
S May St
S Carpenter St
S Morgan St
S Ada St
S Throop St
S Elizabeth St
Cook
Chicago
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114
119
121
124
126
127

EDR DataMap® - Environmental Atlas

90786 CTC RLE Hazardous Materials

Legend

Roads	Waterways	Powerlines	Water	Listed Sites
Major Roads	Railroads	Pipelines		Sensitive Receptors
Contour Lines	Study Boundary	Fault Lines		
National Wetlands Inventory	100-Yr Flood Zones			

N

0 1/8 1/4

Scale in Miles

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FOCUS MAP 6 SUMMARY

	Database	Total Plotted
FEDERAL RECORDS		
	Proposed NPL	0
	Delisted NPL	0
	CERCLIS	0
	CERC-NFRAP	0
	CORRACTS	0
	RCRA-TSDF	0
	RCRA-LQG	1
	RCRA-SQG	10
	RCRA-CESQG	3
	US ENG CONTROLS	0
	US INST CONTROL	0
	ERNS	2
	US BROWNFIELDS	0
STATE AND LOCAL RECORDS		
	IL SSU	0
	IL SWF/LF	0
	IL LUST	11
	IL UST	18
	NY MANIFEST	1
	IL SPILLS	9
	IL ENG CONTROLS	0
	IL INST CONTROL	2
	IL SRP	5
	IL DRYCLEANERS	1
	IL BROWNFIELDS	0
EDR PROPRIETARY RECORDS		
	Manufactured Gas Plants	0

NOTES:

Sites may be listed in more than one database

Map ID	Site	Database(s)	EPA ID Number
64	**DUNNE** **10845 S UNION** **CHICAGO, IL 60628**	**RCRA-SQG**	**1001123586** **ILR000032904**

RCRA-SQG:
Date form received by agency: 01/08/1997
Facility name: DUNNE
Facility address: 10845 S UNION
CHICAGO, IL 60628
EPA ID: ILR000032904
Contact: DEAN THOMPSON
Contact address: 10845 S UNION
CHICAGO, IL 60628
Contact country: US
Contact telephone: (773) 535-5517
Contact email: Not reported
EPA Region: 05
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:
Owner/operator name: CHICAGO PUBLIC SCHOOLS
Owner/operator address: 1819 W PERSHING RD
CHICAGO, IL 60609
Owner/operator country: Not reported
Owner/operator telephone: (773) 535-7039
Legal status: District
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Hazardous Waste Summary:
Waste code: D008
Waste name: LEAD

Violation Status: No violations found

Map ID	Site	Database(s)	EPA ID Number
70	**WILLIAM RANSOM TRANSPORTATION** **352 WEST 110TH ST.** **CHICAGO, IL 60628**	**IL LUST**	**S104529463** **N/A**

LUST:

Incident Num: 990399
IL EPA Id: 0316495116
Product: Gasoline
IEMA Date: 02/19/1999
Project Manager: NOT ASSIGNED
Project Manager Phone: Not reported
Email: Not reported
PRP Name: William Ransom Transportation
PRP Contact: William Ransom, Sr.
PRP Address: 352 West 110th St.
PRP City,St,Zip: Chicago, IL 60628
PRP Phone: 7737858480
Site Classification: Not reported
Section 57.5(g) Letter: 732
Date Section 57.5(g) Letter: Not reported
Non LUST Determination Letter: Not reported
20 Report Received: 03/23/1999
45 Report Received: 05/21/1999
NFA/NFR Letter: Not reported
NFR Date Recorded: Not reported

Map ID	Site	Database(s)	EPA ID Number
70	**RANSOM TRANSPORT** **352 W 110TH ST** **CHICAGO, IL 60628**	**RCRA-CESQG**	**1004696953** **ILR000060863**

RCRA-CESQG:

Date form received by agency: 01/28/1999
Facility name: RANSOM TRANSPORT
Facility address: 352 W 110TH ST
CHICAGO, IL 60628
EPA ID: ILR000060863
Contact: WILLIAM RANSOM
Contact address: 352 W 110TH ST
CHICAGO, IL 60628
Contact country: US
Contact telephone: (773) 785-8480
Contact email: Not reported
EPA Region: 05
Classification: Conditionally Exempt Small Quantity Generator
Description: Handler: generates 100 kg or less of hazardous waste per calendar month, and accumulates 1000 kg or less of hazardous waste at any time; or generates 1 kg or less of acutely hazardous waste per calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste

Map ID	Site	Database(s)	EPA ID Number

RANSOM TRANSPORT (Continued) **1004696953**

Owner/Operator Summary:

Owner/operator name:	RANSOM TRANSORT
Owner/operator address:	352 W 110TH ST CHICAGO, IL 60628
Owner/operator country:	Not reported
Owner/operator telephone:	(773) 785-8480
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Hazardous Waste Summary:

Waste code:	D001
Waste name:	IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.
Violation Status:	No violations found

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70 **IL SPILLS** **S111903849**

352 W 110TH ST **N/A**
CHICAGO, IL

SPILLS:

Incident ID:	19990399
Incident Date:	Not reported
Date Received:	02/19/1999
Facility Address:	352 W 110TH ST
Facility City:	CHICAGO
PRP Name:	WILLIAM RANSOM TRANSPORTATION
AC:	Not reported

Map ID	Site	Database(s)	EPA ID Number
70	**352 WEST 110 ST** **CHICAGO, IL**	**ERNS**	**93301726** **N/A**

Click this hyperlink while viewing on your computer to access additional ERNS detail in the EDR Site Report.

Map ID	Site	Database(s)	EPA ID Number
70	**RANSOM TRANSPORT BUS GARAGE** **352 W 110TH ST** **CHICAGO, IL 60628**	**IL UST**	**U001142423** **N/A**

UST:

Facility ID:	2000983
Facility Status:	CLOSED
Facility Type:	**PRIVATE INSTITUTION**
Owner Name:	Eloyse Carney School Bus Ser
Owner Id:	U0004730
Owner Address:	352 W 110Th St
Owner City,St,Zip:	Chicago, IL 60628
Tank Number:	1
Tank Capacity:	6000
Tank Substance:	Gasoline
Last Used Date:	6/1/1998
OSFM First Notify Date:	1/21/1986
Tank Status:	**Removed**
Red Tag Issue Date:	Not reported
Install Date:	Not reported
Green Tag Decal:	**Not reported**
Green Tag Issue Date:	**Not reported**
Green Tag Expire Date:	**Not reported**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	Not reported

Map ID	Site	Database(s)	EPA ID Number
73	**MUFFLER & BRAKE MAN, INC.** **11038 SOUTH HALSTED** **CHICAGO, IL 60628**	**IL UST**	**U001142484** **N/A**

UST:

Facility ID:	2007242
Facility Status:	CLOSED
Facility Type:	**GOLF COURSE**
Owner Name:	Muffler & Brake Man Inc
Owner Id:	U0028764
Owner Address:	11038 South Halsted
Owner City,St,Zip:	Chicago, IL 60625
Tank Number:	1
Tank Capacity:	550
Tank Substance:	Used Oil
Last Used Date:	12/21/1998
OSFM First Notify Date:	9/19/1987
Tank Status:	**Removed**
Red Tag Issue Date:	Not reported
Install Date:	Not reported

Map ID	Site	Database(s)	EPA ID Number

MUFFLER & BRAKE MAN, INC. (Continued) **U001142484**

Green Tag Decal:	**Not reported**
Green Tag Issue Date:	**Not reported**
Green Tag Expire Date:	**Not reported**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	Not reported

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73 **MUFFLER & BRAKE MAN CAR CARE CTR** **IL UST** **U001473604**
11048 S HALSTED ST **N/A**
CHICAGO, IL 60628

UST:

Facility ID:	2032349
Facility Status:	CLOSED
Facility Type:	**OTHER**
Owner Name:	L B I Inc
Owner Id:	U0021841
Owner Address:	1905 Bernice Rd Ste 4
Owner City,St,Zip:	Lansing, IL 60438
Tank Number:	1
Tank Capacity:	550
Tank Substance:	Used Oil
Last Used Date:	4/1/1993
OSFM First Notify Date:	7/23/1993
Tank Status:	**Removed**
Red Tag Issue Date:	Not reported
Install Date:	1/1/1985
Green Tag Decal:	**Not reported**
Green Tag Issue Date:	**Not reported**
Green Tag Expire Date:	**Not reported**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	No

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81 **IL SPILLS** **S109699953**
420 W 111TH ST **N/A**
CHICAGO, IL

SPILLS:

Incident ID:	20090500
Incident Date:	Not reported
Date Received:	05/13/2009
Facility Address:	420 W 111TH ST
Facility City:	CHICAGO
PRP Name:	UNKNOWN
AC:	Not reported

Map ID	Site	Database(s)	EPA ID Number
81	**420 W. 111TH ST.** **CHICAGO, IL**	**IL SPILLS**	**S111924877** **N/A**

SPILLS:

Incident ID:	20090500
Incident Date:	05/13/2009
Date Received:	Not reported
Facility Address:	420 W. 111TH ST.
Facility City:	CHICAGO
PRP Name:	unknown
AC:	SR

Map ID	Site	Database(s)	EPA ID Number
81	**PENTECOSTAL TEMPLE CHURCH OF GOD** **415 THRU 419 W 111TH ST** **CHICAGO, IL 60643**	**RCRA-SQG**	**1000703753** **ILD984831958**

RCRA-SQG:

Date form received by agency:	07/25/1991
Facility name:	PENTECOSTAL TEMPLE CHURCH OF GOD
Facility address:	415 THRU 419 W 111TH ST CHICAGO, IL 60643
EPA ID:	ILD984831958
Mailing address:	10819 S MORGAN ST CHICAGO, IL 60643
Contact:	RICHARD EDWARDS
Contact address:	10819 S MORGAN ST CHICAGO, IL 60643
Contact country:	US
Contact telephone:	(312) 785-0117
Contact email:	Not reported
EPA Region:	05
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	REV RICHARD EDWARDS
Owner/operator address:	10819 S MORGAN CHICAGO, IL 60628
Owner/operator country:	Not reported
Owner/operator telephone:	(312) 785-0117
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No

PENTECOSTAL TEMPLE CHURCH OF GOD (Continued) **1000703753**

Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Hazardous Waste Summary:
Waste code: D001
Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Violation Status: No violations found

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81 **PENTICOSTAL TEMPLE** **IL LUST** **S104525751**
419 WEST 111TH ST. **N/A**
CHICAGO, IL 60628

LUST:
Incident Num: 912233
IL EPA Id: 0316205006
Product: Uset Oil
IEMA Date: 08/09/1991
Project Manager: Chappel
Project Manager Phone: (217) 785-3913
Email: Harry.A.Chappel@illinois.gov
PRP Name: Penticostal Temple Church of God & Christ
PRP Contact: Rev. Edward
PRP Address: 10819 South Morgan St.
PRP City,St,Zip: Chicago, IL 60643
PRP Phone: Not reported
Site Classification: Not reported
Section 57.5(g) Letter: 731
Date Section 57.5(g) Letter: Not reported
Non LUST Determination Letter: Not reported
20 Report Received: Not reported
45 Report Received: Not reported
NFA/NFR Letter: **Not reported**
NFR Date Recorded: Not reported

Incident Num: 913417
IL EPA Id: 0316205006
Product: Gasoline
IEMA Date: 11/22/1991
Project Manager: Chappel
Project Manager Phone: (217) 785-3913
Email: Harry.A.Chappel@illinois.gov
PRP Name: Penticostal Temple
PRP Contact: Pastor Edwards
PRP Address: 419 West 111th St.
PRP City,St,Zip: Chicago, IL 60628
PRP Phone: Not reported

PENTICOSTAL TEMPLE (Continued) **S104525751**

Site Classification: Not reported
Section 57.5(g) Letter: 731
Date Section 57.5(g) Letter: Not reported
Non LUST Determination Letter: Not reported
20 Report Received: Not reported
45 Report Received: Not reported
NFA/NFR Letter: Not reported
NFR Date Recorded: Not reported

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81 **IL SPILLS** **S111882409**
N/A

419 W 111TH ST
CHICAGO, IL

SPILLS:
Incident ID: 19913417
Incident Date: Not reported
Date Received: 11/22/1991
Facility Address: 419 W 111TH ST
Facility City: CHICAGO
PRP Name: PENTICOSTAL TEMPLE C.G.O.L.D.
AC: Not reported

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81 **IL SPILLS** **S111881226**
N/A

419 W 111TH ST
CHICAGO, IL

SPILLS:
Incident ID: 19912233
Incident Date: Not reported
Date Received: 08/09/1991
Facility Address: 419 W 111TH ST
Facility City: CHICAGO
PRP Name: PENTICOSTAL TEMPLE CHURCH
AC: Not reported

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81 **CHICAGO DEPT OF ENV (SPILL)** **RCRA-LQG** **1012178681**
11100 S STEWART AVE (SPILL) **ILR000157560**
CHICAGO, IL 60628

RCRA-LQG:
Date form received by agency: 03/09/2010
Facility name: CHICAGO DEPT OF ENV (SPILL)
Site name: CHICAGO DEPT OF ENVIRONMENT
Facility address: 11100 S STEWART AVE (SPILL)
CHICAGO, IL 60628
EPA ID: ILR000157560
Mailing address: 30 N LASALLE
CHICAGO, IL 60628
Contact: TERRY SHEAHAN
Contact address: Not reported
Not reported
Contact country: Not reported
Contact telephone: (312) 742-4806
Contact email: Not reported
EPA Region: 05

CHICAGO DEPT OF ENV (SPILL) (Continued) **1012178681**

Classification:	Large Quantity Generator
Description:	Handler: generates 1,000 kg or more of hazardous waste during any calendar month; or generates more than 1 kg of acutely hazardous waste during any calendar month; or generates more than 100 kg of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month; or generates 1 kg or less of acutely hazardous waste during any calendar month, and accumulates more than 1 kg of acutely hazardous waste at any time; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates more than 100 kg of that material at any time

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Historical Generators:

Date form received by agency:	03/01/2010
Facility name:	CHICAGO DEPT OF ENV (SPILL)
Classification:	Large Quantity Generator
Date form received by agency:	05/13/2009
Facility name:	CHICAGO DEPT OF ENV (SPILL)
Site name:	CHICAGO DEPT OF ENVIRONMENT
Classification:	Conditionally Exempt Small Quantity Generator

Biennial Reports:

Last Biennial Reporting Year: 2011

Annual Waste Handled:

Waste code:	D001
Waste name:	IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.
Amount (Lbs):	12000.4
Waste code:	D035

Map ID	Site	Database(s)	EPA ID Number
	CHICAGO DEPT OF ENV (SPILL) (Continued)		**1012178681**

Waste name: METHYL ETHYL KETONE
Amount (Lbs): 19650.5

Violation Status: No violations found

Map ID	Site	Database(s)	EPA ID Number
82	**34 WARD OFFICE/CITY OF CHICAGO** **507 WEST 111TH STREET** **CHICAGO, IL 60628**	**IL LUST** **IL UST**	**U004128304** **N/A**

LUST:

Incident Num:	20040732
IL EPA Id:	0316616397
Product:	Other Petro
IEMA Date:	05/21/2004
Project Manager:	South
Project Manager Phone:	(217) 558-0347
Email:	Shirlene.South@illinois.gov
PRP Name:	Not reported
PRP Contact:	Not reported
PRP Address:	Not reported
PRP City,St,Zip:	Not reported
PRP Phone:	Not reported
Site Classification:	Not reported
Section 57.5(g) Letter:	P.A.
Date Section 57.5(g) Letter:	Not reported
Non LUST Determination Letter:	Not reported
20 Report Received:	06/28/2004
45 Report Received:	07/23/2004
NFA/NFR Letter:	**08/24/2004**
NFR Date Recorded:	05/27/2005

UST:

Facility ID:	2042211
Facility Status:	EXEMPT
Facility Type:	**NONE**
Owner Name:	34 Ward Office/City of Chicago
Owner Id:	U0032031
Owner Address:	Not reported
Owner City,St,Zip:	Not reported
Tank Number:	1
Tank Capacity:	550
Tank Substance:	Heating Oil
Last Used Date:	12/31/1973
OSFM First Notify Date:	6/15/2004
Tank Status:	**Exempt from registration**
Red Tag Issue Date:	Not reported
Install Date:	Not reported
Green Tag Decal:	**Not reported**
Green Tag Issue Date:	**Not reported**
Green Tag Expire Date:	**Not reported**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	Not reported

82 **IL SPILLS** **S108046418**
N/A
507 W 111TH ST
CHICAGO, IL

SPILLS:
Incident ID: 20040732
Incident Date: Not reported
Date Received: 05/21/2004
Facility Address: 507 W 111TH ST
Facility City: CHICAGO
PRP Name: CHESTER WILSON
AC: Not reported

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82 **SEW CLEAN** **RCRA-SQG** **1000107577**
519 W 111TH ST **ILD013428487**
CHICAGO, IL 60628

RCRA-SQG:
Date form received by agency: 01/27/1989
Facility name: SEW CLEAN
Facility address: 519 W 111TH ST
CHICAGO, IL 60628
EPA ID: ILD013428487
Contact: JEROME SMITH
Contact address: 519 W 111TH ST
CHICAGO, IL 60628
Contact country: US
Contact telephone: (312) 264-2965
Contact email: Not reported
EPA Region: 05
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:
Owner/operator name: SMITH JEROME
Owner/operator address: ADDRESS NOT REPORTED
CITY NOT REPORTED, AK 99998
Owner/operator country: Not reported
Owner/operator telephone: (312) 555-1212
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: NAME NOT REPORTED
Owner/operator address: ADDRESS NOT REPORTED
CITY NOT REPORTED, AK 99998
Owner/operator country: Not reported
Owner/operator telephone: (312) 555-1212
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Map ID	Site	Database(s)	EPA ID Number

SEW CLEAN (Continued) **1000107577**

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Hazardous Waste Summary:

Waste code: D000
Waste name: Not Defined

Waste code: F002
Waste name: THE FOLLOWING SPENT HALOGENATED SOLVENTS: TETRACHLOROETHYLENE, METHYLENE CHLORIDE, TRICHLOROETHYLENE, 1,1,1-TRICHLOROETHANE, CHLOROBENZENE, 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE, ORTHO-DICHLOROBENZENE, TRICHLOROFLUOROMETHANE, AND 1,1,2-TRICHLOROETHANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE LISTED IN F001, F004, OR F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Violation Status: No violations found

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83 **GJK PETROLEUM, INC.**
734 W. 111TH STREET
CHICAGO, IL 60628

IL UST **U003152286**
N/A

UST:

Facility ID:	2016840
Facility Status:	ACTIVE
Facility Type:	**SELF-SERVICE STATION**
Owner Name:	GJK Petroleum, Inc.
Owner Id:	U0033661
Owner Address:	734 W. 111th Street
Owner City,St,Zip:	Chicago, IL 60628
Tank Number:	3
Tank Capacity:	10000
Tank Substance:	Gasoline
Last Used Date:	Not reported
OSFM First Notify Date:	3/5/1996
Tank Status:	**Currently in use**
Red Tag Issue Date:	Not reported
Install Date:	Not reported
Green Tag Decal:	**L003566**
Green Tag Issue Date:	**8/5/2010**
Green Tag Expire Date:	**12/31/2012**

GJK PETROLEUM, INC. (Continued) **U003152286**

Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	$0.00

Tank Number:	4
Tank Capacity:	10000
Tank Substance:	Gasoline
Last Used Date:	Not reported
OSFM First Notify Date:	3/5/1996
Tank Status:	**Currently in use**
Red Tag Issue Date:	Not reported
Install Date:	Not reported
Green Tag Decal:	**L003566**
Green Tag Issue Date:	**8/5/2010**
Green Tag Expire Date:	**12/31/2012**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	$0.00

Tank Number:	5
Tank Capacity:	10000
Tank Substance:	Gasoline
Last Used Date:	Not reported
OSFM First Notify Date:	3/5/1996
Tank Status:	**Currently in use**
Red Tag Issue Date:	Not reported
Install Date:	Not reported
Green Tag Decal:	**L003566**
Green Tag Issue Date:	**8/5/2010**
Green Tag Expire Date:	**12/31/2012**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	$0.00

Tank Number:	6
Tank Capacity:	6000
Tank Substance:	Gasoline
Last Used Date:	8/1/1979
OSFM First Notify Date:	4/16/1986
Tank Status:	**Exempt from registration**
Red Tag Issue Date:	Not reported
Install Date:	Not reported
Green Tag Decal:	**L003566**
Green Tag Issue Date:	**8/5/2010**
Green Tag Expire Date:	**12/31/2012**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	Not reported

Tank Number:	7
Tank Capacity:	6000
Tank Substance:	Gasoline
Last Used Date:	8/1/1979

GJK PETROLEUM, INC. (Continued) **U003152286**

OSFM First Notify Date: 4/16/1986
Tank Status: Exempt from registration
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: L003566
Green Tag Issue Date: 8/5/2010
Green Tag Expire Date: 12/31/2012
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

84
JOHNS CLEANERS **IL DRYCLEANERS** **S111826478**
11129 SOUTH HALSTED STREET **N/A**
CHICAGO, IL 60628

DRYCLEANERS:
Facility Id: 7000-0013-01
DC No: DC-01254
Facility Contact: BOK NAM LEE
License Expires: 12/31/2012

84
JOHNS CLEANERS **RCRA-SQG** **1004697801**
11129 S HALSTED **ILR000100230**
CHICAGO, IL 60628

RCRA-SQG:
Date form received by agency: 09/18/2000
Facility name: JOHNS CLEANERS
Facility address: 11129 S HALSTED
CHICAGO, IL 60628
EPA ID: ILR000100230
Contact: MYUNG OCK CHON
Contact address: 11129 S HALSTED
CHICAGO, IL 60628
Contact country: US
Contact telephone: (773) 264-8556
Contact email: Not reported
EPA Region: 05
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:
Owner/operator name: CHON MYUNG OCK
Owner/operator address: 11129 S HALSTED
CHICAGO, IL 60628
Owner/operator country: Not reported
Owner/operator telephone: (773) 264-8556
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 01/01/0001
Owner/Op end date: Not reported

Map ID	Site	Database(s)	EPA ID Number

JOHNS CLEANERS (Continued) **1004697801**

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Hazardous Waste Summary:

Waste code:	F002
Waste name:	THE FOLLOWING SPENT HALOGENATED SOLVENTS: TETRACHLOROETHYLENE, METHYLENE CHLORIDE, TRICHLOROETHYLENE, 1,1,1-TRICHLOROETHANE, CHLOROBENZENE, 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE, ORTHO-DICHLOROBENZENE, TRICHLOROFLUOROMETHANE, AND 1,1,2-TRICHLOROETHANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE LISTED IN F001, F004, OR F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
Violation Status:	No violations found

Map ID	Site	Database(s)	EPA ID Number
86	**FENGER SCH** **11220 S WALLACE** **CHICAGO, IL 60628**	**RCRA-CESQG**	**1004695757** **ILR000026559**

RCRA-CESQG:

Date form received by agency:	08/30/1996
Facility name:	FENGER SCH
Facility address:	11220 S WALLACE CHICAGO, IL 60628
EPA ID:	ILR000026559
Mailing address:	1819 W PERSHING RD 6W N CHICAGO, IL 60609
Contact:	LINDA LAYNE
Contact address:	1819 W PERSHING RD 6W N CHICAGO, IL 60609
Contact country:	US
Contact telephone:	(312) 535-5430
Contact email:	Not reported
EPA Region:	05
Classification:	Conditionally Exempt Small Quantity Generator
Description:	Handler: generates 100 kg or less of hazardous waste per calendar month, and accumulates 1000 kg or less of hazardous waste at any time; or generates 1 kg or less of acutely hazardous waste per calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste; or generates 100 kg or less

FENGER SCH (Continued) **1004695757**

of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste

Owner/Operator Summary:

Owner/operator name:	CHICAGO PUBLIC SCHS
Owner/operator address:	1819 W PERSHING RD 6W N CHICAGO, IL 60609
Owner/operator country:	Not reported
Owner/operator telephone:	(312) 535-7039
Legal status:	District
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Hazardous Waste Summary:

Waste code:	D008
Waste name:	LEAD

Violation Status: No violations found

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87 **LONG-GARDEN-CENTER INC** **IL UST** **U000865477**
11226 S HALSTED **N/A**
CHICAGO, IL 60628

UST:

Facility ID:	2006606
Facility Status:	CLOSED
Facility Type:	**NONE**
Owner Name:	Long Garden Center Inc
Owner Id:	U0009339
Owner Address:	11226 S Halsted
Owner City,St,Zip:	Chicago, IL 60628

Tank Number:	1
Tank Capacity:	1000

Map ID	Site	Database(s)	EPA ID Number

LONG-GARDEN-CENTER INC (Continued) **U000865477**

Tank Substance:	Gasoline
Last Used Date:	1/1/1993
OSFM First Notify Date:	3/25/1986
Tank Status:	**Removed**
Red Tag Issue Date:	Not reported
Install Date:	1/1/1970
Green Tag Decal:	**Not reported**
Green Tag Issue Date:	**Not reported**
Green Tag Expire Date:	**Not reported**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	Not reported

Map ID	Site	Database(s)	EPA ID Number
87	**LONGS GARDEN CENTER INC** **11226 S HALSTED** **CHICAGO, IL 60628**	**RCRA-SQG** **IL LUST**	**1001213751** **ILR000045344**

RCRA-SQG:

Date form received by agency:	11/24/1997
Facility name:	LONGS GARDEN CENTER INC
Facility address:	11226 S HALSTED CHICAGO, IL 60628
EPA ID:	ILR000045344
Contact:	GEORGE LONG
Contact address:	11226 S HALSTED CHICAGO, IL 60628
Contact country:	US
Contact telephone:	(773) 785-3129
Contact email:	Not reported
EPA Region:	05
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	LONGS GARDEN CENTER INC
Owner/operator address:	11226 S HALSTED CHICAGO, IL 60628
Owner/operator country:	Not reported
Owner/operator telephone:	(773) 785-3129
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No

LONGS GARDEN CENTER INC (Continued) **1001213751**

Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Hazardous Waste Summary:
Waste code: D001
Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Violation Status: No violations found

LUST:
Incident Num: 980313
IL EPA Id: 0316495100
Product: Gasoline
IEMA Date: 02/12/1998
Project Manager: Haskins
Project Manager Phone: (217) 782-6762
Email: Not reported
PRP Name: Long’s Garden Center, Inc.
PRP Contact: George Long
PRP Address: 11226 South Halsted
PRP City,St,Zip: Chicago, IL 60628
PRP Phone: 7737853129
Site Classification: Not reported
Section 57.5(g) Letter: 732
Date Section 57.5(g) Letter: Not reported
Non LUST Determination Letter: Not reported
20 Report Received: 03/25/1998
45 Report Received: 06/09/1998
NFA/NFR Letter: **02/19/1999**
NFR Date Recorded: 03/24/1999

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88 **KLEEN TOWNE CLEANERS** **RCRA-SQG** **1000206885**
11249 S HALSTED **NY MANIFEST** **ILD064381650**
CHICAGO, IL 60628

RCRA-SQG:
Date form received by agency: 11/18/1986
Facility name: KLEEN TOWNE CLEANERS
Facility address: 11249 S HALSTED
CHICAGO, IL 60628
EPA ID: ILD064381650
Contact: KARNEY BOYAJIAN
Contact address: 11249 S HALSTED
CHICAGO, IL 60628
Contact country: US
Contact telephone: (312) 785-2127
Contact email: Not reported

KLEEN TOWNE CLEANERS (Continued) **1000206885**

EPA Region:	05
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	NAME NOT REPORTED
Owner/operator address:	ADDRESS NOT REPORTED CITY NOT REPORTED, AK 99998
Owner/operator country:	Not reported
Owner/operator telephone:	(312) 555-1212
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	BOYAJIAN KARNEY
Owner/operator address:	ADDRESS NOT REPORTED CITY NOT REPORTED, AK 99998
Owner/operator country:	Not reported
Owner/operator telephone:	(312) 555-1212
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Hazardous Waste Summary:

Waste code:	F002
Waste name:	THE FOLLOWING SPENT HALOGENATED SOLVENTS: TETRACHLOROETHYLENE, METHYLENE CHLORIDE, TRICHLOROETHYLENE, 1,1,1-TRICHLOROETHANE, CHLOROBENZENE, 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE, ORTHO-DICHLOROBENZENE, TRICHLOROFLUOROMETHANE, AND 1,1,2-TRICHLOROETHANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE LISTED IN F001, F004, OR F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND

KLEEN TOWNE CLEANERS (Continued) **1000206885**

SPENT SOLVENT MIXTURES.

Violation Status: No violations found

NY MANIFEST:
EPA ID: ILD064381650
Country: USA
Mailing Name: KLEENTOWNE CLEANERS
Mailing Contact: SARKIS BOYAJIAN
Mailing Address: 11249 S HALSTED ST
Mailing Address 2: Not reported
Mailing City: CHICAGO
Mailing State: IL
Mailing Zip: 60628
Mailing Zip4: 4795
Mailing Country: USA
Mailing Phone: 773-785-2127

NY MANIFEST:
No Manifest Records Available

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88 **KLEEN TOWNE CLEANERS** **IL SRP** **S108255951**
11249 SOUTH HALSTED ST **N/A**
CHICAGO, IL 60628

SRP:
IL EPA Id: 0316495008
US EPA Id: ILD064381650
Longitude: -87.64190
Latitude: 41.68901
Contact Name: Karney Boyajian
Contact Address: 11249 South Halsted Street
Contact Address2: Not reported
Contact City,St,Zip: Chicago, IL 60628-
Contact Phone: (773) 785-2127
Date Enrolled: 07/02/2001
Point Of Contact: Christopher J. Lee
Consultant Company: Northern Environmental Technologies, Inc.
Consultant Address: 647 Academy Drive
Consultant Address2: Not reported
Consultant City,St,Zip: Northbrook, IL 60062-
Consultant Phone: (847) 562-8577
Proj Mgr Assigned: Murphy
Sec. 4 Letter Date: Not reported
NFR Recorded: Not reported
Active: False
Total Acres: 0.359
No Further Remediation Letter Dt: Not reported
Remediation Applicant Co: Kleene Towne Cleaners
Remediation Applicant Title: Mr.
Remediation Applicant Name: Not reported
Remediation Applicant Company: Not reported
Remediation Applicant Address: Not reported
Remediation Applicant Address 2: Not reported
Remediation Applicant City,St,Zip: Not reported
Illinois EPA: Not reported
Site Name: Not reported
NFR Letter: Not reported

Map ID	Site	Database(s)	EPA ID Number

KLEEN TOWNE CLEANERS (Continued) **S108255951**

NFR Letter Date Recorded:	Not reported
Site Type:	Not reported
Comprehensive/Focused:	Not reported
Institutional Controls:	Not reported
Barrier:	Not reported
Worker Caution:	Not reported
Acres:	Not reported

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89 **ERNS** **92265508**
N/A

11255 S EGGLESTON ST
CHICAGO, IL

Click this hyperlink while viewing on your computer to access additional ERNS detail in the EDR Site Report.

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90 **DEVOTION UNISEX BEAUTY SALON** **IL UST** **U001629884**
N/A

11300 S HALSTED ST
CHICAGO, IL 60628

UST:

Facility ID:	2032718
Facility Status:	EXEMPT
Facility Type:	**COMMERCIAL / RETAIL**
Owner Name:	Juanita Wilson
Owner Id:	U0022323
Owner Address:	11300 S Halsted St
Owner City,St,Zip:	Chicago, IL 60628
Tank Number:	1
Tank Capacity:	500
Tank Substance:	Heating Oil
Last Used Date:	1/1/1969
OSFM First Notify Date:	11/12/1993
Tank Status:	**Exempt from registration**
Red Tag Issue Date:	Not reported
Install Date:	1/1/1902
Green Tag Decal:	**Not reported**
Green Tag Issue Date:	**Not reported**
Green Tag Expire Date:	**Not reported**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	Not reported

Map ID	Site	Database(s)	EPA ID Number
92	**WHITMAL OIL SER INC** **11328 S HALSTED** **CHICAGO, IL 60628**	**IL UST**	**U001143309** **N/A**

UST:

Facility ID:	2000228
Facility Status:	CLOSED
Facility Type:	**OTHER**
Owner Name:	Whitmal Oil Ser Inc
Owner Id:	U0016354
Owner Address:	11328 S Halsted
Owner City,St,Zip:	Chicago, IL 60628

Tank Number:	1
Tank Capacity:	4000
Tank Substance:	Not reported
Last Used Date:	1/15/1998
OSFM First Notify Date:	9/17/1998
Tank Status:	**Removed**
Red Tag Issue Date:	Not reported
Install Date:	10/1/1987
Green Tag Decal:	**Not reported**
Green Tag Issue Date:	**Not reported**
Green Tag Expire Date:	**Not reported**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	Not reported

Tank Number:	2
Tank Capacity:	4000
Tank Substance:	Used Oil
Last Used Date:	1/15/1998
OSFM First Notify Date:	11/21/1987
Tank Status:	**Removed**
Red Tag Issue Date:	Not reported
Install Date:	10/1/1987
Green Tag Decal:	**Not reported**
Green Tag Issue Date:	**Not reported**
Green Tag Expire Date:	**Not reported**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	Not reported

Map ID	Site	Database(s)	EPA ID Number
95	**BRENAN SCHOOL** **11411 EGGLESTON** **CHICAGO, IL 60628**	**RCRA-SQG**	**1001116740** **ILR000027656**

RCRA-SQG:

Date form received by agency:	09/17/1996
Facility name:	BRENAN SCHOOL
Facility address:	11411 EGGLESTON CHICAGO, IL 60628
EPA ID:	ILR000027656
Contact:	FRANK BLAIR
Contact address:	11411 EGGLESTON CHICAGO, IL 60628
Contact country:	US
Contact telephone:	(312) 535-5340
Contact email:	Not reported

BRENAN SCHOOL (Continued) **1001116740**

EPA Region: 05
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:
Owner/operator name: CHICAGO PUBLIC SCHOOLS 6WN
Owner/operator address: 1819 W PERSHING RD
CHICAGO, IL 60609
Owner/operator country: Not reported
Owner/operator telephone: (312) 535-7039
Legal status: Municipal
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Hazardous Waste Summary:
Waste code: D008
Waste name: LEAD

Violation Status: No violations found

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96 **MCDONALD’S CORP.** **IL UST** **U004107018**
11421 S. HALSTED STREET **N/A**
CHICAGO, IL 60628

UST:
Facility ID: 2043655
Facility Status: EXEMPT
Facility Type: **NONE**
Owner Name: McDonald’s USA, LLC
Owner Id: U0030322
Owner Address: 4320 Winfield Rd., Suite 400
Owner City,St,Zip: Warrenville, IL 60555

Tank Number: 1
Tank Capacity: 1150

MCDONALD'S CORP. (Continued) **U004107018**

Tank Substance: Heating Oil
Last Used Date: 12/31/1973
OSFM First Notify Date: Not reported
Tank Status: Exempt from registration
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

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99 **IL SPILLS** **S111883100**
N/A
11453 S HALSTED ST
CHICAGO, IL

SPILLS:
Incident ID: 19920332
Incident Date: Not reported
Date Received: 02/05/1992
Facility Address: 11453 S HALSTED ST
Facility City: CHICAGO
PRP Name: FIRST COOK COMMUNITY BANK
AC: Not reported

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99 **QUALITY MUFFLER** **RCRA-SQG** **1000614937**
11453 S HALSTED **ILD984852525**
CHICAGO, IL 60628

RCRA-SQG:
Date form received by agency: 02/26/1992
Facility name: QUALITY MUFFLER
Facility address: 11453 S HALSTED
CHICAGO, IL 60628
EPA ID: ILD984852525
Mailing address: 2720 W DEVON
CHICAGO, IL 60659
Contact: ADAM EPSTEIN
Contact address: 2720 W DEVON
CHICAGO, IL 60659
Contact country: US
Contact telephone: (312) 761-2700
Contact email: Not reported
EPA Region: 05
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:
Owner/operator name: FIRST COOK COMMUNITY BANK
Owner/operator address: 2720 W DEVON
CHICAGO, IL 60659

QUALITY MUFFLER (Continued) **1000614937**

Owner/operator country: Not reported
Owner/operator telephone: (312) 761-2700
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Hazardous Waste Summary:
Waste code: D001
Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Violation Status: No violations found

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99 **FORMER QUALITY MUFFLER SHOP** **IL UST** **U001141777**
11453 S HALSTED ST **N/A**
CHICAGO, IL 60643

UST:

Facility ID:	2029904
Facility Status:	CLOSED
Facility Type:	**NONE**
Owner Name:	1St Cook Comm Bk Fsb
Owner Id:	U0019371
Owner Address:	2720 W Devon Ave
Owner City,St,Zip:	Chicago, IL 60659
Tank Number:	1
Tank Capacity:	10000
Tank Substance:	Gasoline
Last Used Date:	1/1/1989
OSFM First Notify Date:	5/4/1992
Tank Status:	**Removed**
Red Tag Issue Date:	Not reported
Install Date:	Not reported
Green Tag Decal:	**Not reported**

FORMER QUALITY MUFFLER SHOP (Continued) **U001141777**

Green Tag Issue Date: **Not reported**
Green Tag Expire Date: **Not reported**
Self Service Permit Inspection Date: **Not reported**
Self Service Permit Expire Date: **Not reported**
Fee Due: Not reported

Tank Number: 2
Tank Capacity: 8000
Tank Substance: Gasoline
Last Used Date: 1/1/1989
OSFM First Notify Date: 5/4/1992
Tank Status: **Removed**
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: **Not reported**
Green Tag Issue Date: **Not reported**
Green Tag Expire Date: **Not reported**
Self Service Permit Inspection Date: **Not reported**
Self Service Permit Expire Date: **Not reported**
Fee Due: Not reported

Tank Number: 3
Tank Capacity: 6000
Tank Substance: Gasoline
Last Used Date: 1/1/1989
OSFM First Notify Date: 5/4/1992
Tank Status: **Removed**
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: **Not reported**
Green Tag Issue Date: **Not reported**
Green Tag Expire Date: **Not reported**
Self Service Permit Inspection Date: **Not reported**
Self Service Permit Expire Date: **Not reported**
Fee Due: Not reported

Tank Number: 4
Tank Capacity: 2000
Tank Substance: Gasoline
Last Used Date: 1/1/1989
OSFM First Notify Date: 5/4/1992
Tank Status: **Removed**
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: **Not reported**
Green Tag Issue Date: **Not reported**
Green Tag Expire Date: **Not reported**
Self Service Permit Inspection Date: **Not reported**
Self Service Permit Expire Date: **Not reported**
Fee Due: Not reported

Tank Number: 5
Tank Capacity: 1000

FORMER QUALITY MUFFLER SHOP (Continued) **U001141777**

Tank Substance: Gasoline
Last Used Date: 1/1/1989
OSFM First Notify Date: 5/4/1992
Tank Status: Removed
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

Tank Number: 6
Tank Capacity: 550
Tank Substance: Used Oil
Last Used Date: 1/1/1989
OSFM First Notify Date: 5/4/1992
Tank Status: Removed
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

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99 **FIRST COOK COMM. BANK** **IL LUST** **S104525208**
11453 SOUTH HALSTED ST. **N/A**
CHICAGO, IL 60643

LUST:
Incident Num: 920332
IL EPA Id: 0316755040
Product: Gasoline
IEMA Date: 02/05/1992
Project Manager: Nickell
Project Manager Phone: (217) 782-6762
Email: Not reported
PRP Name: First Cook Comm. Bank
PRP Contact: Adam Epstein
PRP Address: 2720 West Devon Ave.
PRP City,St,Zip: Chicago, IL 60659
PRP Phone: Not reported
Site Classification: Not reported
Section 57.5(g) Letter: 731
Date Section 57.5(g) Letter: Not reported
Non LUST Determination Letter: Not reported
20 Report Received: 05/12/1992
45 Report Received: 05/22/1992
NFA/NFR Letter: 08/18/1992
NFR Date Recorded: Not reported

Map ID	Site	Database(s)	EPA ID Number
106	**COMMUNITY HIGH SCHOOL DIST. #218** **731 WEST 115TH ST.** **ALSIP, IL 60803**	**IL LUST**	**S105427986** **N/A**

LUST:

Incident Num:	922574
IL EPA Id:	0310035119
Product:	Fuel Oil
IEMA Date:	09/14/1992
Project Manager:	Steinheimer
Project Manager Phone:	Not reported
Email:	Not reported
PRP Name:	Community High School Dist. #218
PRP Contact:	John Hickey
PRP Address:	10701 Kilpatrick Ave.
PRP City,St,Zip:	Oak Lawn, IL 60453
PRP Phone:	Not reported
Site Classification:	Not reported
Section 57.5(g) Letter:	731
Date Section 57.5(g) Letter:	Not reported
Non LUST Determination Letter:	Not reported
20 Report Received:	10/08/1992
45 Report Received:	12/16/1992
NFA/NFR Letter:	**10/18/1995**
NFR Date Recorded:	Not reported

Map ID	Site	Database(s)	EPA ID Number
107	**CHA WAREHOUSE** **833 W 115TH ST** **CHICAGO, IL 60643**	**IL UST**	**U001142187** **N/A**

UST:

Facility ID:	2026770
Facility Status:	CLOSED
Facility Type:	**NONE**
Owner Name:	Chicago Housing Authority
Owner Id:	U0002876
Owner Address:	60 East Van Buren, 13th Floor
Owner City,St,Zip:	Chicago, IL 60605

Tank Number:	1
Tank Capacity:	550
Tank Substance:	Used Oil
Last Used Date:	Not reported
OSFM First Notify Date:	2/6/1991
Tank Status:	**Removed**
Red Tag Issue Date:	Not reported
Install Date:	Not reported
Green Tag Decal:	**Not reported**
Green Tag Issue Date:	**Not reported**
Green Tag Expire Date:	**Not reported**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	No

107 **IL SPILLS** **S111884588**
N/A

833 W 115TH ST
CHICAGO, IL

SPILLS:

Incident ID: 19921830
Incident Date: Not reported
Date Received: 07/07/1992
Facility Address: 833 W 115TH ST
Facility City: CHICAGO
PRP Name: CHICAGO HOUSING AUTHORITY
AC: Not reported

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107 **RCRA-SQG** **1000613607**
ILD984839035

CHICAGO HOSUING AUTHORITY
833 W 115TH ST
CHICAGO, IL 60643

RCRA-SQG:

Date form received by agency: 10/07/1991
Facility name: CHICAGO HOSUING AUTHORITY
Facility address: 833 W 115TH ST
CHICAGO, IL 60643
EPA ID: ILD984839035
Mailing address: 22 W MADISON ST RM 221
CHICAGO, IL 60602
Contact: EVON PARKS
Contact address: 22 W MADISON ST RM 221
CHICAGO, IL 60602
Contact country: US
Contact telephone: (312) 791-8500
Contact email: Not reported
EPA Region: 05
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name: CHICAGO HOUSING AUTHORITY
Owner/operator address: 22 W MADISON STE 400
CHICAGO, IL 60602
Owner/operator country: Not reported
Owner/operator telephone: (312) 791-8444
Legal status: Municipal
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:

U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No

Map ID	Site	Database(s)	EPA ID Number
	CHICAGO HOSUING AUTHORITY (Continued)		**1000613607**

Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Hazardous Waste Summary:

Waste code:	D001
Waste name:	IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.
Violation Status:	No violations found

Map ID	Site	Database(s)	EPA ID Number
107	**CHICAGO HOUSING AUTHORITY** **833 WEST 115TH STREET** **CHICAGO, IL 60643**	**IL LUST** **IL SRP**	**S104524777** **N/A**

LUST:

Incident Num:	921830
IL EPA Id:	0316755035
Product:	Uset Oil
IEMA Date:	07/07/1992
Project Manager:	Myers
Project Manager Phone:	(217) 785-7491
Email:	Dave.Myers@illinois.gov
PRP Name:	Chicago Housing Authority
PRP Contact:	Scott Ammarell
PRP Address:	60 East VanBuren, 12th Floor
PRP City,St,Zip:	Chicago, IL 60605
PRP Phone:	Not reported
Site Classification:	Not reported
Section 57.5(g) Letter:	731
Date Section 57.5(g) Letter:	Not reported
Non LUST Determination Letter:	Not reported
20 Report Received:	11/03/1994
45 Report Received:	11/22/1994
NFA/NFR Letter:	**11/01/2010**
NFR Date Recorded:	Not reported

SRP:

IL EPA Id:	0316755035
US EPA Id:	ILD984839035
Longitude:	-87.64337
Latitude:	41.68442
Contact Name:	Thomas Morabito
Contact Address:	141 West Jackson Boulevard
Contact Address2:	Suite 3540
Contact City,St,Zip:	Chicago, IL 60604-
Contact Phone:	(312) 327-2700
Date Enrolled:	06/25/2004
Point Of Contact:	Richard C. Thomas

Map ID	Site	Database(s)	EPA ID Number
	CHICAGO HOUSING AUTHORITY (Continued)		**S104524777**

Consultant Company:	Challenge Contractors, Inc.
Consultant Address:	2612 Flossmoor Road
Consultant Address2:	P.O. Box 333
Consultant City,St,Zip:	Flossmoor, IL 60422-
Consultant Phone:	(708) 206-0007
Proj Mgr Assigned:	Irwin
Sec. 4 Letter Date:	Not reported
NFR Recorded:	Not reported
Active:	False
Total Acres:	4.299
No Further Remediation Letter Dt:	Not reported
Remediation Applicant Co:	Preferred-Halsted LLC
Remediation Applicant Title:	Mr.
Remediation Applicant Name:	Not reported
Remediation Applicant Company:	Not reported
Remediation Applicant Address:	Not reported
Remediation Applicant Address 2:	Not reported
Remediation Applicant City,St,Zip:	Not reported
Illinois EPA:	Not reported
Site Name:	Not reported
NFR Letter:	Not reported
NFR Letter Date Recorded:	Not reported
Site Type:	Not reported
Comprehensive/Focused:	Not reported
Institutional Controls:	Not reported
Barrier:	Not reported
Worker Caution:	Not reported
Acres:	Not reported

Map ID	Site	Database(s)	EPA ID Number
108	**AMOCO OIL** **11500 SOUTH HALSTED STREET** **CHICAGO, IL 60628**	**IL LUST** **IL UST**	**U004110544** **N/A**

LUST:

Incident Num:	923184
IL EPA Id:	0316545010
Product:	Gasoline
IEMA Date:	11/12/1992
Project Manager:	Friedel
Project Manager Phone:	(217) 785-5736
Email:	Melinda.Friedel@illinois.gov
PRP Name:	Amoco Oil Co.
PRP Contact:	Lyle Bruce
PRP Address:	28100 Torch Pkwy., 6-S
PRP City,St,Zip:	Warrenville, IL 60555
PRP Phone:	Not reported
Site Classification:	Not reported
Section 57.5(g) Letter:	731
Date Section 57.5(g) Letter:	Not reported
Non LUST Determination Letter:	Not reported
20 Report Received:	12/01/1992
45 Report Received:	02/16/1993
NFA/NFR Letter:	**09/05/2003**
NFR Date Recorded:	09/25/2003

UST:

AMOCO OIL (Continued) **U004110544**

Facility ID: 2023001
Facility Status: ACTIVE
Facility Type: SELF-SERVICE STATION
Owner Name: Sania Oil Company
Owner Id: U0034353
Owner Address: 1002 Sean Circle
Owner City,St,Zip: Darien, IL 60561

Tank Number: 1
Tank Capacity: 10000
Tank Substance: Gasoline
Last Used Date: Not reported
OSFM First Notify Date: 4/25/1986
Tank Status: Currently in use
Red Tag Issue Date: Not reported
Install Date: 1/1/1979
Green Tag Decal: L003536
Green Tag Issue Date: 1/25/2010
Green Tag Expire Date: 12/31/2012
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: $0.00

Tank Number: 2
Tank Capacity: 10000
Tank Substance: Gasoline
Last Used Date: Not reported
OSFM First Notify Date: 4/25/1986
Tank Status: Currently in use
Red Tag Issue Date: Not reported
Install Date: 1/1/1979
Green Tag Decal: L003536
Green Tag Issue Date: 1/25/2010
Green Tag Expire Date: 12/31/2012
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: $0.00

Tank Number: 3
Tank Capacity: 10000
Tank Substance: Gasoline
Last Used Date: Not reported
OSFM First Notify Date: 4/25/1986
Tank Status: Currently in use
Red Tag Issue Date: Not reported
Install Date: 1/1/1979
Green Tag Decal: L003536
Green Tag Issue Date: 1/25/2010
Green Tag Expire Date: 12/31/2012
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: $0.00

108
FORMER CHA WAREHOUSE
901 W. 115TH STREET
CHICAGO, IL 60628

IL UST
U003971972
N/A

UST:
Facility ID: 2042212
Facility Status: EXEMPT
Facility Type: NONE
Owner Name: Preferred Development
Owner Id: U0027885
Owner Address: 141 W. Jackson
Owner City,St,Zip: Chicago, IL 60601

Tank Number: 1
Tank Capacity: 3000
Tank Substance: Heating Oil
Last Used Date: 12/31/1973
OSFM First Notify Date: Not reported
Tank Status: Exempt from registration
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

108
MOBIL CARWASH
11501 SOUTH HALSTED STREET
CHICAGO, IL 60628

IL LUST
IL UST
U000174475
N/A

LUST:
Incident Num: 990250
IL EPA Id: 0316495058
Product: Gasoline
IEMA Date: 02/05/1999
Project Manager: Malcom
Project Manager Phone: (217) 524-9140
Email: James.Malcom@illinois.gov
PRP Name: Equilon Enterprises LLC
PRP Contact: John Robbins
PRP Address: 603 Diehl Rd., Suite 103
PRP City,St,Zip: Naperville, IL 60563
PRP Phone: 6302764206
Site Classification: HIGH
Section 57.5(g) Letter: 732
Date Section 57.5(g) Letter: Not reported
Non LUST Determination Letter: Not reported
20 Report Received: 02/10/1999
45 Report Received: 02/26/1999
NFA/NFR Letter: 11/15/2002
NFR Date Recorded: 01/21/2003

UST:
Facility ID: 2007045
Facility Status: ACTIVE
Facility Type: SELF-SERVICE STATION
Owner Name: Rockbuild Enterprises, Inc.

MOBIL CARWASH (Continued) **U000174475**

Owner Id: U0034774
Owner Address: 14123 S. 85th Avenue
Owner City,St,Zip: Orland Park, IL 60462

Tank Number: 1
Tank Capacity: 9520
Tank Substance: Gasoline
Last Used Date: 6/1/2001
OSFM First Notify Date: 4/25/1986
Tank Status: Removed
Red Tag Issue Date: Not reported
Install Date: 1/1/1973
Green Tag Decal: M003429
Green Tag Issue Date: 4/20/2011
Green Tag Expire Date: 12/31/2013
Self Service Permit Inspection Date:Not reported
Self Service Permit Expire Date: Not reported
Fee Due: $0.00

Tank Number: 2
Tank Capacity: 9520
Tank Substance: Gasoline
Last Used Date: 6/1/2001
OSFM First Notify Date: 4/25/1986
Tank Status: Removed
Red Tag Issue Date: Not reported
Install Date: 1/1/1973
Green Tag Decal: M003429
Green Tag Issue Date: 4/20/2011
Green Tag Expire Date: 12/31/2013
Self Service Permit Inspection Date:Not reported
Self Service Permit Expire Date: Not reported
Fee Due: $0.00

Tank Number: 3
Tank Capacity: 7734
Tank Substance: Gasoline
Last Used Date: 6/1/2001
OSFM First Notify Date: 4/25/1986
Tank Status: Removed
Red Tag Issue Date: Not reported
Install Date: 1/1/1973
Green Tag Decal: M003429
Green Tag Issue Date: 4/20/2011
Green Tag Expire Date: 12/31/2013
Self Service Permit Inspection Date:Not reported
Self Service Permit Expire Date: Not reported
Fee Due: $0.00

Tank Number: 4
Tank Capacity: 4000
Tank Substance: Gasoline
Last Used Date: Not reported
OSFM First Notify Date: 3/5/2002

MOBIL CARWASH (Continued) **U000174475**

Tank Status:	**Currently in use**
Red Tag Issue Date:	Not reported
Install Date:	9/5/2001
Green Tag Decal:	**M003429**
Green Tag Issue Date:	**4/20/2011**
Green Tag Expire Date:	**12/31/2013**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	$0.00

Tank Number:	5
Tank Capacity:	8000
Tank Substance:	Gasoline
Last Used Date:	Not reported
OSFM First Notify Date:	3/5/2002
Tank Status:	**Currently in use**
Red Tag Issue Date:	Not reported
Install Date:	9/5/2001
Green Tag Decal:	**M003429**
Green Tag Issue Date:	**4/20/2011**
Green Tag Expire Date:	**12/31/2013**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	$0.00

Tank Number:	6
Tank Capacity:	12000
Tank Substance:	Gasoline
Last Used Date:	Not reported
OSFM First Notify Date:	3/5/2002
Tank Status:	**Currently in use**
Red Tag Issue Date:	Not reported
Install Date:	9/5/2001
Green Tag Decal:	**M003429**
Green Tag Issue Date:	**4/20/2011**
Green Tag Expire Date:	**12/31/2013**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	$0.00

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108 **0415 CLARK SER STATION** **IL UST** **U001142318**
11525 S HALSTED ST **N/A**
CHICAGO, IL 60628

UST:

Facility ID:	2009966
Facility Status:	CLOSED
Facility Type:	**NONE**
Owner Name:	Clark Retail Enterprises, Inc.
Owner Id:	U0003073
Owner Address:	3003 Butterfield Road, Suite 300
Owner City,St,Zip:	Oak Brook, IL 60523

Tank Number:	1
Tank Capacity:	5000
Tank Substance:	Gasoline

0415 CLARK SER STATION (Continued) **U001142318**

Last Used Date: Not reported
OSFM First Notify Date: 5/2/1986
Tank Status: Removed
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: 100

Tank Number: 2
Tank Capacity: 5000
Tank Substance: Gasoline
Last Used Date: Not reported
OSFM First Notify Date: 5/2/1986
Tank Status: Removed
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: 100

Tank Number: 3
Tank Capacity: 10000
Tank Substance: Gasoline
Last Used Date: Not reported
OSFM First Notify Date: 5/2/1986
Tank Status: Removed
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: 100

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109 **E.J. BROWNLEE TRANSPORTATION** **IL LUST** **S104528868**
1001 WEST 115TH ST. **N/A**
CHICAGO, IL 60643

LUST:
Incident Num: 981649
IL EPA Id: 0316755006
Product: Deisel
IEMA Date: 07/08/1998
Project Manager: Carlock
Project Manager Phone: (217) 782-6762
Email: Not reported
PRP Name: E.J. Brownlee Transportation
PRP Contact: Edison Brownlee

Map ID	Site	Database(s)	EPA ID Number
	E.J. BROWNLEE TRANSPORTATION (Continued)		**S104528868**

PRP Address: 1001 West 115th St.
PRP City,St,Zip: Chicago, IL 60643
PRP Phone: 7736601999
Site Classification: Not reported
Section 57.5(g) Letter: 732
Date Section 57.5(g) Letter: Not reported
Non LUST Determination Letter: Not reported
20 Report Received: 07/28/1998
45 Report Received: 12/18/1998
NFA/NFR Letter: 04/01/1999
NFR Date Recorded: 09/16/1999

Map ID	Site	Database(s)	EPA ID Number
109	**1001 W 115TH ST** **CHICAGO, IL**	**IL SPILLS**	**S111901904** **N/A**

SPILLS:
Incident ID: 19981649
Incident Date: Not reported
Date Received: 07/08/1998
Facility Address: 1001 W 115TH ST
Facility City: CHICAGO
PRP Name: EJ BROWNLEE TRANSPORTATION
AC: Not reported

Map ID	Site	Database(s)	EPA ID Number
109	**E J BROWNLEE TRANSPORTATION INC** **1001 W 115TH ST** **CHICAGO, IL 60643**	**IL UST**	**U001629852** **N/A**

UST:
Facility ID: 2032613
Facility Status: CLOSED
Facility Type: OTHER
Owner Name: Brownlee Edison
Owner Id: U0022158
Owner Address: 1001 W 115Th St
Owner City,St,Zip: Chicago, IL 60643

Tank Number: 1
Tank Capacity: 3000
Tank Substance: Gasoline
Last Used Date: Not reported
OSFM First Notify Date: 10/18/1993
Tank Status: Removed
Red Tag Issue Date: Not reported
Install Date: 1/1/1902
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

Map ID	Site	Database(s)	EPA ID Number
114	**PEP BOYS #891** **11550 SO HALSTED** **CHICAGO, IL 60648**	**RCRA-CESQG**	**1004696278** **ILR000043224**

RCRA-CESQG:

Date form received by agency: 10/07/1997
Facility name: PEP BOYS #891
Facility address: 11550 SO HALSTED
CHICAGO, IL 60648
EPA ID: ILR000043224
Mailing address: 3111 W ALLEGHENY AVE
PHILADELPHIA, PA 19132
Contact: JOHN KERELO
Contact address: 3111 W ALLEGHENY AVE
PHILADELPHIA, PA 19132
Contact country: US
Contact telephone: (215) 227-9277
Contact email: Not reported
EPA Region: 05
Classification: Conditionally Exempt Small Quantity Generator
Description: Handler: generates 100 kg or less of hazardous waste per calendar month, and accumulates 1000 kg or less of hazardous waste at any time; or generates 1 kg or less of acutely hazardous waste per calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste

Owner/Operator Summary:

Owner/operator name: THE PEP BOYS
Owner/operator address: 3111 W ALLEGHENY AVE
PHILADELPHIA, PA 19132
Owner/operator country: Not reported
Owner/operator telephone: (215) 227-9277
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:

U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No

PEP BOYS #891 (Continued) **1004696278**

Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Hazardous Waste Summary:
Waste code: D000
Waste name: Not Defined

Waste code: D001
Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Violation Status: No violations found

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119 **ROSELAND AUTO BODY** **RCRA-SQG** **1000203955**
821 W 116TH ST **ILD982209991**
CHICAGO, IL 60643

RCRA-SQG:
Date form received by agency: 08/12/1987
Facility name: ROSELAND AUTO BODY
Facility address: 821 W 116TH ST
CHICAGO, IL 60643
EPA ID: ILD982209991
Contact: AL DERE
Contact address: 821 W 116TH ST
CHICAGO, IL 60643
Contact country: US
Contact telephone: (312) 468-1515
Contact email: Not reported
EPA Region: 05
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:
Owner/operator name: NAME NOT REPORTED
Owner/operator address: ADDRESS NOT REPORTED
CITY NOT REPORTED, AK 99998
Owner/operator country: Not reported
Owner/operator telephone: (312) 555-1212
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: DERE AL
Owner/operator address: ADDRESS NOT REPORTED
CITY NOT REPORTED, AK 99998

Map ID	Site	Database(s)	EPA ID Number
	ROSELAND AUTO BODY (Continued)		**1000203955**

Owner/operator country:	Not reported
Owner/operator telephone:	(312) 555-1212
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Hazardous Waste Summary:

Waste code:	D000
Waste name:	Not Defined
Waste code:	D001
Waste name:	IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.
Waste code:	F003
Waste name:	THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NON-HALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS, AND, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
Waste code:	F005
Waste name:	THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF

Map ID	Site	Database(s)	EPA ID Number
	ROSELAND AUTO BODY (Continued)		**1000203955**

THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Violation Status: No violations found

121	**MICKEY'S AUTO SERVICE CENTER** **11656 SOUTH HALSTED AVENUE** **CHICAGO, IL 60628**	**IL LUST** **IL SRP**	**S104521684** **N/A**

LUST:

Incident Num:	970068
IL EPA Id:	0316495087
Product:	Gasoline, Other Petro
IEMA Date:	01/13/1997
Project Manager:	NOT ASSIGNED
Project Manager Phone:	Not reported
Email:	Not reported
PRP Name:	Public Petroleum Co.
PRP Contact:	James Packtor
PRP Address:	2500 West 36th St.
PRP City,St,Zip:	Chicago, IL 60632
PRP Phone:	Not reported
Site Classification:	Not reported
Section 57.5(g) Letter:	732
Date Section 57.5(g) Letter:	Not reported
Non LUST Determination Letter:	Not reported
20 Report Received:	Not reported
45 Report Received:	Not reported
NFA/NFR Letter:	**Not reported**
NFR Date Recorded:	Not reported

SRP:

IL EPA Id:	0316495087
US EPA Id:	Not reported
Longitude:	-87.64239
Latitude:	41.68166
Contact Name:	James Packtor
Contact Address:	2500 West 36th Street
Contact Address2:	Not reported
Contact City,St,Zip:	Chicago, IL 60632
Contact Phone:	(773) 376-2500
Date Enrolled:	02/04/1997
Point Of Contact:	Alisa S. Leyden
Consultant Company:	Leyden Environmental, Inc.
Consultant Address:	2711 South Wabash Avenue
Consultant Address2:	Not reported
Consultant City,St,Zip:	Chicago, IL 60616
Consultant Phone:	(312) 808-1476
Proj Mgr Assigned:	NA
Sec. 4 Letter Date:	Not reported
NFR Recorded:	Not reported
Active:	False
Total Acres:	Not reported
No Further Remediation Letter Dt:	Not reported
Remediation Applicant Co:	Public Petroleum
Remediation Applicant Title:	Mr.
Remediation Applicant Name:	Not reported
Remediation Applicant Company:	Not reported
Remediation Applicant Address:	Not reported

MICKEY'S AUTO SERVICE CENTER (Continued) **S104521684**

Remediation Applicant Address 2: Not reported
Remediation Applicant City,St,Zip: Not reported
Illinois EPA: Not reported
Site Name: Not reported
NFR Letter: Not reported
NFR Letter Date Recorded: Not reported
Site Type: Not reported
Comprehensive/Focused: Not reported
Institutional Controls: Not reported
Barrier: Not reported
Worker Caution: Not reported
Acres: Not reported

---

124 **ABANDONED SERVICE STATION** **IL UST** **U003762981**
11700 S HALSTED **N/A**
CHICAGO, IL 60628

UST:
Facility ID: 2040245
Facility Status: EXEMPT
Facility Type: **NONE**
Owner Name: City of Chicago Department of Environment
Owner Id: U0028125
Owner Address: 30 North LaSalle Street, 25th floor
Owner City,St,Zip: Chicago, IL 60602

Tank Number: 1
Tank Capacity: 8000
Tank Substance: Gasoline
Last Used Date: 12/31/1973
OSFM First Notify Date: Not reported
Tank Status: **Exempt from registration**
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: **Not reported**
Green Tag Issue Date: **Not reported**
Green Tag Expire Date: **Not reported**
Self Service Permit Inspection Date: **Not reported**
Self Service Permit Expire Date: **Not reported**
Fee Due: Not reported

Tank Number: 2
Tank Capacity: 8000
Tank Substance: Gasoline
Last Used Date: 12/31/1973
OSFM First Notify Date: Not reported
Tank Status: **Exempt from registration**
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: **Not reported**
Green Tag Issue Date: **Not reported**
Green Tag Expire Date: **Not reported**
Self Service Permit Inspection Date: **Not reported**
Self Service Permit Expire Date: **Not reported**
Fee Due: Not reported

Map ID	Site	Database(s)	EPA ID Number
126	**WIRA STUDY AREA NUMBER 4** **11801 SOUTH RACINE AVENUE** **CHICAGO, IL 60643**	**IL INST CONTROL** **IL SRP**	**S106121987** **N/A**

IL INSTUTIONAL CONTROL:

Illinois EPA Id:	0316755128
NFR Letter:	03/23/2011
Date NFR Recorded:	04/25/2011
Type Of Site:	Residential
Comprehensive / Focused:	Comprehensive
Remediation Applicant Title:	Mr.
Remediation Applicant Name:	Zachary Clayton
RA Company:	City of Chicago, Department of Environment
RA Address:	30 North LaSalle Street
RA Secondary Address:	2nd Floor
RA City,St,Zip:	Chicago, IL 60602-
Institutional Controls:	Groundwater use restriction
Engineered Barriers:	Not reported
Worker Caution:	False
Acres:	13.64

SRP:

IL EPA Id:	0316755128
US EPA Id:	Not reported
Longitude:	-87.65152
Latitude:	41.67927
Contact Name:	Kimberly Worthington
Contact Address:	30 North LaSalle Street
Contact Address2:	25th Floor
Contact City,St,Zip:	Chicago, IL 60602-
Contact Phone:	(312) 744-9139
Date Enrolled:	09/08/2003
Point Of Contact:	Carol L. Nissen, P.E.
Consultant Company:	Tetra Tech EM, Inc.
Consultant Address:	1 South Wacker Drive
Consultant Address2:	37th Floor
Consultant City,St,Zip:	Chicago, IL 60606-
Consultant Phone:	(312) 856-8700
Proj Mgr Assigned:	Landers
Sec. 4 Letter Date:	Not reported
NFR Recorded:	04/25/2011
Active:	False
Total Acres:	2
No Further Remediation Letter Dt:	03/23/2011
Remediation Applicant Co:	City of Chicago Department of Environment
Remediation Applicant Title:	Ms.
Remediation Applicant Name:	Mr. Zachary Clayton
Remediation Applicant Company:	City of Chicago, Department of Environment
Remediation Applicant Address:	30 North LaSalle Street
Remediation Applicant Address 2:	2nd Floor
Remediation Applicant City,St,Zip:	Chicago, IL 60602-
Illinois EPA:	0316755128
Site Name:	WIRA Study Area 4
NFR Letter:	2011-03-23
NFR Letter Date Recorded:	2011-04-25
Site Type:	Residential
Comprehensive/Focused:	Comprehensive
Institutional Controls:	Groundwater use restriction
Barrier:	Not reported

WIRA STUDY AREA NUMBER 4 (Continued) **S106121987**

Worker Caution:	False
Acres:	13.64

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127 **SHELDON HEIGHTS CHURCH OF CHRIST**
11819-11849 SOUTH GREEN STREET
CHICAGO, IL 60643

IL INST CONTROL **S105521066**
IL SRP **N/A**

IL INSTUTIONAL CONTROL:

Illinois EPA Id:	0316755117
NFR Letter:	10/19/2004
Date NFR Recorded:	11/23/2004
Type Of Site:	Residential
Comprehensive / Focused:	Comprehensive
Remediation Applicant Title:	Mr.
Remediation Applicant Name:	Willie Carter
RA Company:	Sheldon Heights Church of Christ
RA Address:	11325 South Halsted Street
RA Secondary Address:	Not reported
RA City,St,Zip:	Chicago, IL 60628-
Institutional Controls:	Groundwater use restriction
Engineered Barriers:	Not reported
Worker Caution:	False
Acres:	2.600

SRP:

IL EPA Id:	0316755117
US EPA Id:	ILR000117911
Longitude:	-87.64303
Latitude:	41.67911
Contact Name:	Willie Carter
Contact Address:	11325 South Halsted Street
Contact Address2:	Not reported
Contact City,St,Zip:	Chicago, IL 60628-
Contact Phone:	(773) 568-2929
Date Enrolled:	06/13/2002
Point Of Contact:	Adam M. Moghamis, P.E.
Consultant Company:	Applied GeoScience, Inc.
Consultant Address:	2385 Hammond Drive
Consultant Address2:	Suite 6
Consultant City,St,Zip:	Schaumburg, IL 60173-
Consultant Phone:	(847) 303-0300
Proj Mgr Assigned:	Catlin
Sec. 4 Letter Date:	Not reported
NFR Recorded:	11/23/2004
Active:	False
Total Acres:	2.600
No Further Remediation Letter Dt:	10/19/2004
Remediation Applicant Co:	Sheldon Heights Church of Christ
Remediation Applicant Title:	Mr.
Remediation Applicant Name:	Mr. Willie Carter
Remediation Applicant Company:	Sheldon Heights Church of Christ
Remediation Applicant Address:	11325 South Halsted Street
Remediation Applicant Address 2:	Not reported
Remediation Applicant City,St,Zip:	Chicago, IL 60628-
Illinois EPA:	0316755117
Site Name:	Sheldon Heights Church of Christ

Map ID	Site	Database(s)	EPA ID Number
	SHELDON HEIGHTS CHURCH OF CHRIST (Continued)		**S105521066**

NFR Letter:	2004-10-19
NFR Letter Date Recorded:	2004-11-23
Site Type:	Residential
Comprehensive/Focused:	Comprehensive
Institutional Controls:	Groundwater use restriction
Barrier:	Not reported
Worker Caution:	False
Acres:	2.600

Map ID	Site	Database(s)	EPA ID Number
127	**VACANT LAND** **11819 - 11849 SOUTH GREEN ST** **CHICAGO, IL 60643**	**IL UST**	**U003865079** **N/A**

UST:

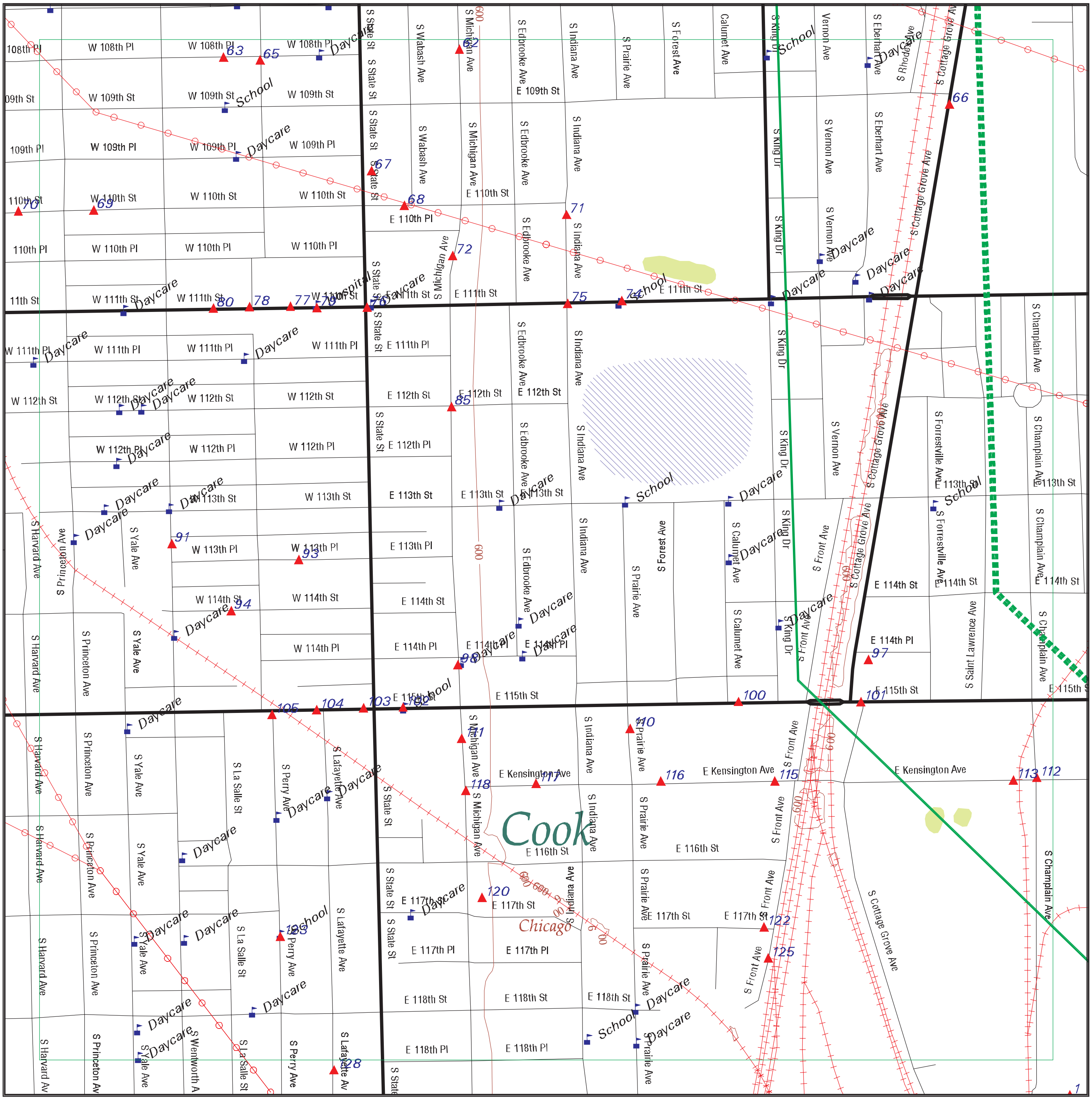
Facility ID:	2041273
Facility Status:	CLOSED
Facility Type:	**NONE**
Owner Name:	Sheldon Heights Church of Christ
Owner Id:	U0030886
Owner Address:	11325 S Halsted St
Owner City,St,Zip:	Chicago, IL 60628
Tank Number:	1
Tank Capacity:	500
Tank Substance:	Gasoline
Last Used Date:	1/1/1987
OSFM First Notify Date:	9/3/2002
Tank Status:	**Removed**
Red Tag Issue Date:	Not reported
Install Date:	1/1/1960
Green Tag Decal:	**Not reported**
Green Tag Issue Date:	**Not reported**
Green Tag Expire Date:	**Not reported**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	No

Count: 9 records

FOCUS MAP 6 ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CALUMET PARK	1000166385	CHICAGO COPPER AND CHEMICAL COMPANY	INTERSECTION OF WINCHESTER RD & 127 ST.	60643	CERCLIS
CHICAGO	1012172115	ROSELAND COMMUNITY	110TH PLACE AND MICHIGAN, EAST SIDE OF STATE ST.		US BROWNFIELDS
CHICAGO	S109167302		549 115TH ST		IL LUST, IL SPILLS
CHICAGO	1002886378	US SCRAP	123RD & COTTAGE GROVE	60628	CERCLIS
CHICAGO	S101467236	PENN CENTRAL	810 E 124TH ST		IL SSU
CHICAGO	S109366427		6700 JEFFREY BLVD		IL LUST, IL SPILLS
CHICAGO	S108891646		11900 LOOMIS		IL LUST, IL SPILLS
CHICAGO	S107926349	LAKE CALUMET CLUSTER SITE	N OF 122ND	60628	IL SSU
CHICAGO	1012172077	BOYCE PARK	UNION AVE BETWEEN 42ND & ROOT STREETS		US BROWNFIELDS

Focus Map 7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S Michigan Ave
S Edbrooke Ave
S Indiana Ave
S Prairie Ave
S Forest Ave
Calumet Ave
S Calumet Ave
S King Dr
Vernon Ave
S Vernon Ave
S Eberhart Ave
S Rhodes Ave
S Cottage Grove Ave
S Front Ave
S Forrestville Ave
S Saint Lawrence Ave
S Champlain Ave
S Harvard Ave
S Princeton Ave
S Yale Ave
S La Salle St
S Perry Ave
S Lafayette Ave
S Wentworth Ave
School
Daycare
Hospital
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90786 CTC RLE Hazardous Materials

Legend

- Roads
- Major Roads
- Contour Lines
- National Wetlands Inventory
- Waterways
- Railroads
- Study Boundary
- 100-Yr Flood Zones
- Powerlines
- Pipelines
- Fault Lines
- Water
- Listed Sites
- Sensitive Receptors

N

0 1/8 1/4

Scale in Miles

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FOCUS MAP 7 SUMMARY

	Database	Total Plotted
FEDERAL RECORDS		
	Proposed NPL	0
	Delisted NPL	0
	CERCLIS	2
	CERC-NFRAP	1
	CORRACTS	2
	RCRA-TSDF	1
	RCRA-LQG	1
	RCRA-SQG	9
	RCRA-CESQG	8
	US ENG CONTROLS	0
	US INST CONTROL	0
	ERNS	1
	US BROWNFIELDS	0
STATE AND LOCAL RECORDS		
	SSU	1
	SWF/LF	1
	LUST	15
	UST	30
	SPILLS	16
	ENG CONTROLS	1
	INST CONTROL	1
	SRP	2
	DRYCLEANERS	1
	BROWNFIELDS	0
EDR PROPRIETARY RECORDS		
	Manufactured Gas Plants	0

NOTES:

Sites may be listed in more than one database

Map ID	Site	Database(s)	EPA ID Number
62	**COM ED** **10847 S MICHIGAN AVE** **CHICAGO, IL 60628**	**RCRA-CESQG**	**1004698372** **ILR000106195**

RCRA-CESQG:

Date form received by agency:	05/21/2001
Facility name:	COM ED
Facility address:	10847 S MICHIGAN AVE CHICAGO, IL 60628
EPA ID:	ILR000106195
Mailing address:	19156 S 85TH PL MOKENA, IL 60448
Contact:	THOMAS CONNELLY
Contact address:	10847 S MICHIGAN AVE CHICAGO, IL 60628
Contact country:	US
Contact telephone:	(815) 469-7007
Contact email:	Not reported
EPA Region:	05
Classification:	Conditionally Exempt Small Quantity Generator
Description:	Handler: generates 100 kg or less of hazardous waste per calendar month, and accumulates 1000 kg or less of hazardous waste at any time; or generates 1 kg or less of acutely hazardous waste per calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste

Owner/Operator Summary:

Owner/operator name:	COM ED
Owner/operator address:	555 JOLIET RD BOLINGBROOK, IL 60440
Owner/operator country:	Not reported
Owner/operator telephone:	(630) 455-3448
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	01/01/0001
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No

COM ED (Continued) **1004698372**

Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Hazardous Waste Summary:
Waste code: D008
Waste name: LEAD

Waste code: D009
Waste name: MERCURY

Violation Status: No violations found

---

63 **VAN VLISSINGEN PETER SCHOOL** **RCRA-SQG** **1001127079**
137 W 108TH PL **UST** **ILR000033795**
CHICAGO, IL 60628

RCRA-SQG:
Date form received by agency: 01/22/1997
Facility name: VAN VLISSINGEN PETER SCHOOL
Facility address: 137 W 108TH PL
CHICAGO, IL 60628
EPA ID: ILR000033795
Contact: MILICENT RUSSELL
Contact address: 137 W 108TH PL
CHICAGO, IL 60628
Contact country: US
Contact telephone: (773) 535-5300
Contact email: Not reported
EPA Region: 05
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:
Owner/operator name: CHICAGO PUBLIC SCHOOLS
Owner/operator address: 1819 W PERSHING RD
CHICAGO, IL 60609
Owner/operator country: Not reported
Owner/operator telephone: (773) 535-7039
Legal status: District
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No

VAN VLISSINGEN PETER SCHOOL (Continued) **1001127079**

Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Hazardous Waste Summary:
Waste code: D008
Waste name: LEAD

Violation Status: No violations found

UST:
Facility ID: 2039443
Facility Status: EXEMPT
Facility Type: NONE
Owner Name: Chicago Public Schools
Owner Id: U0029206
Owner Address: 125 S. Clark, 16th Floor
Owner City,St,Zip: Chicago, IL 60603

Tank Number: 1
Tank Capacity: 6000
Tank Substance: Heating Oil
Last Used Date: 12/31/1973
OSFM First Notify Date: Not reported
Tank Status: Exempt from registration
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

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65 **VACANT APARTMENT BUILDING** **UST** **U003715200**
10834 S PERRY AVE **N/A**
CHICAGO, IL 60628

UST:
Facility ID: 2039442
Facility Status: EXEMPT
Facility Type: NONE
Owner Name: Chicago Public Schools
Owner Id: U0029206
Owner Address: 125 S. Clark, 16th Floor
Owner City,St,Zip: Chicago, IL 60603

Tank Number: 1
Tank Capacity: 1600
Tank Substance: Heating Oil
Last Used Date: 12/31/1973
OSFM First Notify Date: Not reported
Tank Status: Exempt from registration

Map ID	Site	Database(s)	EPA ID Number
	VACANT APARTMENT BUILDING (Continued)		**U003715200**

Red Tag Issue Date:	Not reported
Install Date:	Not reported
Green Tag Decal:	**Not reported**
Green Tag Issue Date:	**Not reported**
Green Tag Expire Date:	**Not reported**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	Not reported

Map ID	Site	Database(s)	EPA ID Number
66	**SHERWIN WILLIAMS CO** **10909 S COTTAGE GROVE AVE** **CHICAGO, IL 60628**	**CERC-NFRAP** **CORRACTS**	**1000371387** **ILD000672451**

CERC-NFRAP:

Site ID:	0507297
Federal Facility:	Not a Federal Facility
NPL Status:	Not on the NPL
Non NPL Status:	Deferred to RCRA

Program Priority:

Description:	RCRA Deferral Audit
Description:	RCRA Deferral - Lead Confirmed

CERCLIS-NFRAP Assessment History:

Action:	DISCOVERY
Date Started:	Not reported
Date Completed:	01/28/1992
Priority Level:	Not reported
Action:	PRELIMINARY ASSESSMENT
Date Started:	Not reported
Date Completed:	07/15/1993
Priority Level:	Deferred to RCRA (Subtitle C)
Action:	ARCHIVE SITE
Date Started:	Not reported
Date Completed:	12/11/1995
Priority Level:	Not reported

CORRACTS:

EPA ID:	ILD000672451
EPA Region:	05
Area Name:	ENTIRE FACILITY
Actual Date:	03/02/1992
Action:	CA225YE - Stabilization Measures Evaluation, This facility ,is amenable to stabilization activity based on the, status of corrective action work at the facility, technical factors, the degree of risk, timing considerations and administrative considerations
NAICS Code(s):	Not reported
Original schedule date:	Not reported
Schedule end date:	Not reported
EPA ID:	ILD000672451
EPA Region:	05

Map ID	Site	Database(s)	EPA ID Number
	SHERWIN WILLIAMS CO (Continued)		**1000371387**

Area Name: ENTIRE FACILITY
Actual Date: 03/02/1992
Action: CA075LO - CA Prioritization, Facility or area was assigned a low corrective action priority
NAICS Code(s): Not reported
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: ILD000672451
EPA Region: 05
Area Name: ENTIRE FACILITY
Actual Date: 03/16/1992
Action: CA050 - RFA Completed
NAICS Code(s): Not reported
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: ILD000672451
EPA Region: 05
Area Name: ENTIRE FACILITY
Actual Date: 05/01/2009
Action: CA070NO - RFA Determination Of Need For An RFI, RFI is Not Necessary
NAICS Code(s): Not reported
Original schedule date: Not reported
Schedule end date: Not reported

Map ID	Site	Database(s)	EPA ID Number
67	**109TH PLACE TEAR GAS** **SG WEST 109TH PLACE** **CHICAGO, IL 60628**	**CERCLIS**	**1000851385** **IL0000027714**

CERCLIS:
Site ID: 0507320
EPA ID: IL0000027714
Facility County: COOK
Short Name: 109TH PLACE TEAR GAS
Congressional District: 02
IFMS ID: 05ZW
SMSA Number: 1600
USGC Hydro Unit: 07120003
Federal Facility: Not a Federal Facility
DMNSN Number: Not reported
Site Orphan Flag: N
RCRA ID: Not reported
USGS Quadrangle: Not reported
Site Init By Prog: Not reported
NFRAP Flag: Not reported
Parent ID: Not reported
RST Code: Not reported
EPA Region: 05
Classification: Not reported
Site Settings Code: Not reported
NPL Status: Not on the NPL
DMNSN Unit Code: Not reported
RBRAC Code: Not reported
RResp Fed Agency Code: Not reported
Non NPL Status: Referred to Removal - NFRAP
Non NPL Status Date: 20020422
Site Fips Code: 17031

109TH PLACE TEAR GAS (Continued) **1000851385**

CC Concurrence Date: Not reported
CC Concurrence FY: Not reported
Alias EPA ID: Not reported
Site FUDS Flag: Not reported

CERCLIS Site Contact Name(s):
Contact ID: 5270175.00000
Contact Name: STAVROS EMMANOUIL
Contact Tel: (312) 886-1768
Contact Title: On-Scene Coordinator (OSC)
Contact Email: Not reported

Alias Comments: Not reported
Site Description: A MILITARY TEAR GAS GRENEDA WAS ACTIVATED BY A CHILD. TEAR GAS (ORTHO CHLORO BENZALMALENANITRILE) CONTAMINATED THE FIRST FLOOR OF THE HOUSE. EPA WAS CALLED ON SCENE BY THE CHICAGO DEPARTMENT OF ENVIRONMENT AND THE CHICAGO FIRE DEPARTMENT.

CERCLIS Assessment History:

Action Code: 001
Action: DISCOVERY
Date Started: Not reported
Date Completed: 10/15/1993
Priority Level: Not reported
Operable Unit: SITEWIDE
Primary Responsibility: EPA Fund-Financed
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 002
Action: Notice Letters Issued
Date Started: Not reported
Date Completed: 11/29/1993
Priority Level: Not reported
Operable Unit: SITEWIDE
Primary Responsibility: Federal Enforcement
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 001
Action: REMOVAL
Date Started: 09/30/1993
Date Completed: 01/12/1994
Priority Level: Cleaned up
Operable Unit: SITEWIDE
Primary Responsibility: EPA Fund-Financed
Planning Status: Primary
Urgency Indicator: Emergency
Action Anomaly: Not reported

109TH PLACE TEAR GAS (Continued) **1000851385**

For detailed financial records, contact EDR for a Site Report.:

Action Code: 001
Action: NON-NATIONAL PRIORITIES LIST POTENTIALLY RESPONSIBLE PARTY SEARCH
Date Started: 10/15/1993
Date Completed: 03/27/1996
Priority Level: No PRPs Identified
Operable Unit: SITEWIDE
Primary Responsibility: Federal Enforcement
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 001
Action: PRELIMINARY ASSESSMENT
Date Started: Not reported
Date Completed: 04/17/2002
Priority Level: NFRAP-Site does not qualify for the NPL based on existing information
Operable Unit: SITEWIDE
Primary Responsibility: State, Fund Financed
Planning Status: Primary
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Click this hyperlink while viewing on your computer to access
2 additional US CERCLIS Financial: record(s) in the EDR Site Report.

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68 **ROSELAND AUTO SALES CO** **UST** **U000865746**
27 E 110TH ST **N/A**
CHICAGO, IL 60628

UST:
Facility ID: 2014109
Facility Status: CLOSED
Facility Type: **NONE**
Owner Name: Roseland Auto Sales Co
Owner Id: U0013121
Owner Address: 10954 S Michigan Ave
Owner City,St,Zip: Chicago, IL 60628

Tank Number: 1
Tank Capacity: 300
Tank Substance: Used Oil
Last Used Date: Not reported
OSFM First Notify Date: 4/21/1986
Tank Status: **Removed**
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: **Not reported**
Green Tag Issue Date: **Not reported**
Green Tag Expire Date: **Not reported**
Self Service Permit Inspection Date: **Not reported**

ROSELAND AUTO SALES CO (Continued) **U000865746**

Self Service Permit Expire Date: Not reported
Fee Due: Not reported

Tank Number: 2
Tank Capacity: 250
Tank Substance: Used Oil
Last Used Date: Not reported
OSFM First Notify Date: 4/21/1986
Tank Status: Removed
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date:Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

Tank Number: 3
Tank Capacity: 500
Tank Substance: Not reported
Last Used Date: Not reported
OSFM First Notify Date: 4/21/1986
Tank Status: Removed
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date:Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

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69 **ROSELAND AUTO SALES INC** **RCRA-CESQG** **1004696195**
271 E 110TH ST **ILR000040303**
CHICAGO, IL 60628

RCRA-CESQG:
Date form received by agency:07/02/1997
Facility name: ROSELAND AUTO SALES INC
Facility address: 271 E 110TH ST
CHICAGO, IL 60628
EPA ID: ILR000040303
Mailing address: 10954 MICHIGAN AVE
CHICAGO, IL 60628
Contact: RAY ZEALEX
Contact address: 10954 MICHIGAN AVE
CHICAGO, IL 60628
Contact country: US
Contact telephone: (773) 785-6070
Contact email: Not reported
EPA Region: 05
Classification: Conditionally Exempt Small Quantity Generator
Description: Handler: generates 100 kg or less of hazardous waste per calendar month, and accumulates 1000 kg or less of hazardous waste at any time; or generates 1 kg or less of acutely hazardous waste per calendar

Map ID	Site	Database(s)	EPA ID Number

ROSELAND AUTO SALES INC (Continued) **1004696195**

month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste

Owner/Operator Summary:

Owner/operator name:	ROSELAND AUTO SALES INC
Owner/operator address:	10954 MICHIGAN AVE CHICAGO, IL 60628
Owner/operator country:	Not reported
Owner/operator telephone:	(773) 785-6070
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Hazardous Waste Summary:

Waste code:	D001
Waste name:	IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Violation Status: No violations found

Map ID	Site	Database(s)	EPA ID Number
70	**WILLIAM RANSOM TRANSPORTATION** **352 WEST 110TH ST.** **CHICAGO, IL 60628**	**LUST**	**S104529463** **N/A**

LUST:

Incident Num:	990399
IL EPA Id:	0316495116
Product:	Gasoline
IEMA Date:	02/19/1999
Project Manager:	NOT ASSIGNED
Project Manager Phone:	Not reported
Email:	Not reported
PRP Name:	William Ransom Transportation
PRP Contact:	William Ransom, Sr.
PRP Address:	352 West 110th St.
PRP City,St,Zip:	Chicago, IL 60628
PRP Phone:	7737858480
Site Classification:	Not reported
Section 57.5(g) Letter:	732
Date Section 57.5(g) Letter:	Not reported
Non LUST Determination Letter:	Not reported
20 Report Received:	03/23/1999
45 Report Received:	05/21/1999
NFA/NFR Letter:	**Not reported**
NFR Date Recorded:	Not reported

Map ID	Site	Database(s)	EPA ID Number
70	**RANSOM TRANSPORT** **352 W 110TH ST** **CHICAGO, IL 60628**	**RCRA-CESQG**	**1004696953** **ILR000060863**

RCRA-CESQG:

Date form received by agency:	01/28/1999
Facility name:	RANSOM TRANSPORT
Facility address:	352 W 110TH ST CHICAGO, IL 60628
EPA ID:	ILR000060863
Contact:	WILLIAM RANSOM
Contact address:	352 W 110TH ST CHICAGO, IL 60628
Contact country:	US
Contact telephone:	(773) 785-8480
Contact email:	Not reported
EPA Region:	05
Classification:	Conditionally Exempt Small Quantity Generator
Description:	Handler: generates 100 kg or less of hazardous waste per calendar month, and accumulates 1000 kg or less of hazardous waste at any time; or generates 1 kg or less of acutely hazardous waste per calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste

RANSOM TRANSPORT (Continued) **1004696953**

Owner/Operator Summary:

Owner/operator name:	RANSOM TRANSORT
Owner/operator address:	352 W 110TH ST CHICAGO, IL 60628
Owner/operator country:	Not reported
Owner/operator telephone:	(773) 785-8480
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Hazardous Waste Summary:

Waste code:	D001
Waste name:	IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Violation Status: No violations found

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70 **SPILLS** **S111903849**
N/A

352 W 110TH ST
CHICAGO, IL

SPILLS:

Incident ID:	19990399
Incident Date:	Not reported
Date Received:	02/19/1999
Facility Address:	352 W 110TH ST
Facility City:	CHICAGO
PRP Name:	WILLIAM RANSOM TRANSPORTATION
AC:	Not reported

Map ID	Site	Database(s)	EPA ID Number
70	**352 WEST 110 ST** **CHICAGO, IL**	**ERNS**	**93301726** **N/A**

Click this hyperlink while viewing on your computer to access additional ERNS detail in the EDR Site Report.

Map ID	Site	Database(s)	EPA ID Number
70	**RANSOM TRANSPORT BUS GARAGE** **352 W 110TH ST** **CHICAGO, IL 60628**	**UST**	**U001142423** **N/A**

UST:
Facility ID: 2000983
Facility Status: CLOSED
Facility Type: PRIVATE INSTITUTION
Owner Name: Eloyse Carney School Bus Ser
Owner Id: U0004730
Owner Address: 352 W 110Th St
Owner City,St,Zip: Chicago, IL 60628

Tank Number: 1
Tank Capacity: 6000
Tank Substance: Gasoline
Last Used Date: 6/1/1998
OSFM First Notify Date: 1/21/1986
Tank Status: Removed
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

Map ID	Site	Database(s)	EPA ID Number
71	**PULLMAN BRANCH LIBRARY** **11011 S INDIANA** **CHICAGO, IL 60628**	**UST**	**U001386539** **N/A**

UST:
Facility ID: 2032004
Facility Status: CLOSED
Facility Type: SCHOOL/COLLEGE
Owner Name: Chicago City Of
Owner Id: U0021498
Owner Address: 400 S State St Chicago Public Library
Owner City,St,Zip: Chicago, IL 60607

Tank Number: 1
Tank Capacity: 2000
Tank Substance: Heating Oil
Last Used Date: Not reported
OSFM First Notify Date: 4/13/1993
Tank Status: Removed
Red Tag Issue Date: Not reported
Install Date: 1/1/1902

PULLMAN BRANCH LIBRARY (Continued) **U001386539**

Green Tag Decal: **Not reported**
Green Tag Issue Date: **Not reported**
Green Tag Expire Date: **Not reported**
Self Service Permit Inspection Date: **Not reported**
Self Service Permit Expire Date: **Not reported**
Fee Due: Not reported

Tank Number: 2
Tank Capacity: 2000
Tank Substance: Heating Oil
Last Used Date: Not reported
OSFM First Notify Date: 4/13/1993
Tank Status: **Removed**
Red Tag Issue Date: Not reported
Install Date: 1/1/1902
Green Tag Decal: **Not reported**
Green Tag Issue Date: **Not reported**
Green Tag Expire Date: **Not reported**
Self Service Permit Inspection Date: **Not reported**
Self Service Permit Expire Date: **Not reported**
Fee Due: Not reported

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72 **WALGREENS 2210** **RCRA-SQG** **1001201905**
11040 S MICHIGAN AVE **ILR000041418**
CHICAGO, IL 60628

RCRA-SQG:
Date form received by agency: 08/08/1997
Facility name: WALGREENS 2210
Facility address: 11040 S MICHIGAN AVE
CHICAGO, IL 60628
EPA ID: ILR000041418
Mailing address: 200 WILMONT RD
DEERFIELD, IL 60015
Contact: FRED OWENS
Contact address: 200 WILMONT RD
DEERFIELD, IL 60015
Contact country: US
Contact telephone: (773) 928-6447
Contact email: Not reported
EPA Region: 05
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:
Owner/operator name: WALGREENS
Owner/operator address: 200 WILMONT RD
DEERFIELD, IL 60015
Owner/operator country: Not reported
Owner/operator telephone: (847) 940-2500
Legal status: Private
Owner/Operator Type: Owner

Map ID	Site	Database(s)	EPA ID Number
	WALGREENS 2210 (Continued)		**1001201905**

Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Hazardous Waste Summary:

Waste code:	D001
Waste name:	IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Violation Status: No violations found

Map ID	Site	Database(s)	EPA ID Number
74	**SOUTHSIDE COLLEGE PREPATORY ACADEMY** **250 EAST 111TH ST.** **CHICAGO, IL 60628**	**LUST** **UST**	**U003668849** **N/A**

LUST:

Incident Num:	992547
IL EPA Id:	0316505015
Product:	Other Petro
IEMA Date:	11/13/1999
Project Manager:	Ransdell
Project Manager Phone:	(217) 557-6938
Email:	James.Ransdell@illinois.gov
PRP Name:	Chicago Public Schools
PRP Contact:	Lynn Crivello
PRP Address:	125 South Clark, 17th Fl.
PRP City,St,Zip:	Chicago, IL 60603
PRP Phone:	7735533113
Site Classification:	Not reported
Section 57.5(g) Letter:	732
Date Section 57.5(g) Letter:	Not reported
Non LUST Determination Letter:	Not reported
20 Report Received:	Not reported
45 Report Received:	04/27/2000
NFA/NFR Letter:	**06/29/2000**
NFR Date Recorded:	10/16/2000

SOUTHSIDE COLLEGE PREPATORY ACADEMY (Continued) **U003668849**

UST:
Facility ID: 2039156
Facility Status: CLOSED
Facility Type: NONE
Owner Name: Chicago Board of Education (CPS)
Owner Id: U0026761
Owner Address: 125 S. Clark St. Suite 700
Owner City,St,Zip: Chicago, IL 60603

Tank Number: 1
Tank Capacity: 10000
Tank Substance: Heating Oil
Last Used Date: Not reported
OSFM First Notify Date: 9/17/1999
Tank Status: Removed
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: No

Tank Number: 2
Tank Capacity: 10000
Tank Substance: Heating Oil
Last Used Date: Not reported
OSFM First Notify Date: 9/17/1999
Tank Status: Removed
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: No

Tank Number: 3
Tank Capacity: 550
Tank Substance: Mineral Spirits
Last Used Date: 12/31/1973
OSFM First Notify Date: Not reported
Tank Status: Exempt from registration
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

74 **SPILLS** **S111905996**
N/A

250 E 111TH ST
CHICAGO, IL

SPILLS:
Incident ID: 19992547
Incident Date: Not reported
Date Received: 11/13/1999
Facility Address: 250 E 111TH ST
Facility City: CHICAGO
PRP Name: CHICAGO PUBLIC SCHOOLS
AC: Not reported

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74 **SOUTH SIDE PREP ACADEMY** **RCRA-SQG** **1001227871**
ILR000041434

250 E 111TH ST
CHICAGO, IL 60628

RCRA-SQG:
Date form received by agency: 12/24/2009
Facility name: SOUTH SIDE PREP ACADEMY
Facility address: 250 E 111TH ST
CHICAGO, IL 60628
EPA ID: ILR000041434
Mailing address: BOX 1
FLOSSMOOR, IL 60422
Contact: THOMAS CONNELLY
Contact address: 8501 W 191ST ST NO 10
MOKENAO, IL 60448
Contact country: US
Contact telephone: (708) 923-0202
Contact email: Not reported
EPA Region: 05
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:
Owner/operator name: CHICAGO PUBLIC SCHOOLS
Owner/operator address: 1819 W PERSHING RD 6WW
CHICAGO, IL 60609
Owner/operator country: Not reported
Owner/operator telephone: (773) 535-7038
Legal status: District
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No

SOUTH SIDE PREP ACADEMY (Continued) **1001227871**

Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Historical Generators:

Date form received by agency:	09/18/1998
Facility name:	SOUTH SIDE PREP ACADEMY
Classification:	Small Quantity Generator

Hazardous Waste Summary:

Waste code:	D001
Waste name:	IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.
Waste code:	D002
Waste name:	A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.
Waste code:	D006
Waste name:	CADMIUM
Waste code:	D008
Waste name:	LEAD
Waste code:	D009
Waste name:	MERCURY
Waste code:	D001
Waste name:	IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.
Waste code:	D002
Waste name:	A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN

SOUTH SIDE PREP ACADEMY (Continued) **1001227871**

THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.

Waste code: D006
Waste name: CADMIUM

Waste code: D008
Waste name: LEAD

Waste code: D009
Waste name: MERCURY

Waste code: X002
Waste name: POLYCHLORINATED BIPHENOLS (PCBs)

Violation Status: No violations found

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75 **PALMER PARK** **RCRA-CESQG** **1010563614**
201 E 111TH ST **ILR000150235**
CHICAGO, IL 60602

RCRA-CESQG:

Date form received by agency: 10/31/2007
Facility name: PALMER PARK
Facility address: 201 E 111TH ST
CHICAGO, IL 60602
EPA ID: ILR000150235
Mailing address: 541 N FAIRBANKS
CHICAGO, IL 60611
Contact: LEEANN THOMAS
Contact address: Not reported
Not reported
Contact country: Not reported
Contact telephone: (312) 742-4287
Contact email: Not reported
EPA Region: 05
Classification: Conditionally Exempt Small Quantity Generator
Description: Handler: generates 100 kg or less of hazardous waste per calendar month, and accumulates 1000 kg or less of hazardous waste at any time; or generates 1 kg or less of acutely hazardous waste per calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste

Owner/Operator Summary:

Owner/operator name: CHICAGO PARK DISTRICT
Owner/operator address: 541 N FAIRBANKS
CHICAGO, IL 60611
Owner/operator country: US
Owner/operator telephone: Not reported

PALMER PARK (Continued) **1010563614**

Legal status: Municipal
Owner/Operator Type: Owner
Owner/Op start date: 10/31/2007
Owner/Op end date: Not reported

Owner/operator name: CHICAGO PARK DISTRICT
Owner/operator address: 541 N FAIRBANKS
CHICAGO, IL 60611
Owner/operator country: US
Owner/operator telephone: Not reported
Legal status: Municipal
Owner/Operator Type: Operator
Owner/Op start date: 10/31/2007
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Hazardous Waste Summary:
Waste code: D008
Waste name: LEAD

Violation Status: No violations found

---

76 **SPILLS** **S111880597**
4 E 111TH ST **N/A**
CHICAGO, IL

SPILLS:
Incident ID: 19911600
Incident Date: Not reported
Date Received: 06/12/1991
Facility Address: 4 E 111TH ST
Facility City: CHICAGO
PRP Name: YMCA
AC: Not reported

76 **YMCA** **LUST** **S104525942**
4 EAST 111TH ST. **N/A**
CHICAGO, IL 60628

LUST:
Incident Num: 911600
IL EPA Id: 0316495043
Product: Jet Fuel
IEMA Date: 06/12/1991
Project Manager: Fernandes
Project Manager Phone: (217) 558-4071
Email: Suzanne.Fernandes@illinois.gov
PRP Name: YMCA
PRP Contact: Mike Dalgard
PRP Address: 755 West North Ave.
PRP City,St,Zip: Chicago, IL 60610
PRP Phone: Not reported
Site Classification: Not reported
Section 57.5(g) Letter: 731
Date Section 57.5(g) Letter: Not reported
Non LUST Determination Letter: Not reported
20 Report Received: Not reported
45 Report Received: Not reported
NFA/NFR Letter: 02/24/2009
NFR Date Recorded: Not reported

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76 **SPILLS** **S108045720**
2 W 111TH **N/A**
CHICAGO, IL

SPILLS:
Incident ID: 20041632
Incident Date: 11/21/2004
Date Received: 11/22/2004
Facility Address: 2 W 111TH
Facility City: CHICAGO
PRP Name: BP
AC: Not reported

---

76 **SPILLS** **S111923145**
2 W 111TH ST **N/A**
CHICAGO, IL

SPILLS:
Incident ID: 20080184
Incident Date: Not reported
Date Received: 02/07/2008
Facility Address: 2 W 111TH ST
Facility City: CHICAGO
PRP Name: BP PRODUCTS NORTH AMERICA
AC: Not reported

Map ID	Site	Database(s)	EPA ID Number
76	**ROSELAND MARATHON** **2 WEST 111TH STREET** **CHICAGO, IL 60628**	**LUST** **UST**	**U001141893** **N/A**

LUST:

Incident Num: 20080184
IL EPA Id: 0316495042
Product: Unleaded Gas
IEMA Date: 02/07/2008
Project Manager: Kaiser
Project Manager Phone: (217) 524-4650
Email: Karl.Kaiser@illinois.gov
PRP Name: Not reported
PRP Contact: Not reported
PRP Address: Not reported
PRP City,St,Zip: Not reported
PRP Phone: Not reported
Site Classification: Not reported
Section 57.5(g) Letter: 734
Date Section 57.5(g) Letter: Not reported
Non LUST Determination Letter: Not reported
20 Report Received: 02/29/2008
45 Report Received: 03/26/2008
NFA/NFR Letter: Not reported
NFR Date Recorded: Not reported

UST:

Facility ID: 2023171
Facility Status: ACTIVE
Facility Type: SELF-SERVICE STATION
Owner Name: Mohammed Zahir
Owner Id: U0030411
Owner Address: 2 W. 111th Street
Owner City,St,Zip: Chicago, IL 60628

Tank Number: 1
Tank Capacity: 10000
Tank Substance: Gasoline
Last Used Date: Not reported
OSFM First Notify Date: 4/25/1986
Tank Status: Currently in use
Red Tag Issue Date: Not reported
Install Date: 1/1/1984
Green Tag Decal: L003715
Green Tag Issue Date: 3/25/2010
Green Tag Expire Date: 12/31/2012
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: $0.00

Tank Number: 2
Tank Capacity: 10000
Tank Substance: Gasoline
Last Used Date: Not reported
OSFM First Notify Date: 4/25/1986
Tank Status: Currently in use
Red Tag Issue Date: Not reported
Install Date: 1/1/1984

ROSELAND MARATHON (Continued) **U001141893**

Green Tag Decal: L003715
Green Tag Issue Date: 3/25/2010
Green Tag Expire Date: 12/31/2012
Self Service Permit Inspection Date:Not reported
Self Service Permit Expire Date: Not reported
Fee Due: $0.00

Tank Number: 3
Tank Capacity: 12000
Tank Substance: Gasoline
Last Used Date: Not reported
OSFM First Notify Date: 4/25/1986
Tank Status: Currently in use
Red Tag Issue Date: Not reported
Install Date: 1/1/1984
Green Tag Decal: L003715
Green Tag Issue Date: 3/25/2010
Green Tag Expire Date: 12/31/2012
Self Service Permit Inspection Date:Not reported
Self Service Permit Expire Date: Not reported
Fee Due: $0.00

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76 **PHILLIPS 66** **UST** **U003971788**
11100 S. STATE STREET **N/A**
CHICAGO, IL 60628

UST:
Facility ID: 2017200
Facility Status: ACTIVE
Facility Type: SELF-SERVICE STATION
Owner Name: A. B. State Petroleum
Owner Id: U0032765
Owner Address: Not reported
Owner City,St,Zip: Not reported

Tank Number: 1
Tank Capacity: 10000
Tank Substance: Gasoline
Last Used Date: Not reported
OSFM First Notify Date: 3/18/1986
Tank Status: Currently in use
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: M003476
Green Tag Issue Date: 11/7/2011
Green Tag Expire Date: 12/31/2013
Self Service Permit Inspection Date:Not reported
Self Service Permit Expire Date: Not reported
Fee Due: $0.00

Tank Number: 2
Tank Capacity: 6000
Tank Substance: Gasoline
Last Used Date: Not reported
OSFM First Notify Date: 3/18/1986
Tank Status: Currently in use

PHILLIPS 66 (Continued) **U003971788**

Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: M003476
Green Tag Issue Date: 11/7/2011
Green Tag Expire Date: 12/31/2013
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: $0.00

Tank Number: 3
Tank Capacity: 6000
Tank Substance: Gasoline
Last Used Date: Not reported
OSFM First Notify Date: 3/18/1986
Tank Status: Currently in use
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: M003476
Green Tag Issue Date: 11/7/2011
Green Tag Expire Date: 12/31/2013
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: $0.00

Tank Number: 4
Tank Capacity: 6000
Tank Substance: Gasoline
Last Used Date: Not reported
OSFM First Notify Date: 3/18/1986
Tank Status: Currently in use
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: M003476
Green Tag Issue Date: 11/7/2011
Green Tag Expire Date: 12/31/2013
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: $0.00

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77 **ABANDONED SERVICE STATION** **UST** **U003769825**
68 W 111TH ST **N/A**
CHICAGO, IL 60628

UST:
Facility ID: 2040529
Facility Status: EXEMPT
Facility Type: NONE
Owner Name: City Of Chicago
Owner Id: U0024652
Owner Address: 30 North LaSalle Street, 25th Floor
Owner City,St,Zip: Chicago, IL 60602

Tank Number: 1
Tank Capacity: 3000
Tank Substance: Gasoline
Last Used Date: 12/31/1973

ABANDONED SERVICE STATION (Continued) **U003769825**

OSFM First Notify Date: Not reported
Tank Status: Does Not Exist
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

Tank Number: 2
Tank Capacity: 3000
Tank Substance: Gasoline
Last Used Date: 12/31/1973
OSFM First Notify Date: Not reported
Tank Status: Does Not Exist
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

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78 **SPILLS** **S108479871**
N/A
100-136 W 111TH ST
CHICAGO, IL

SPILLS:
Incident ID: 20070049
Incident Date: Not reported
Date Received: 01/18/2007
Facility Address: 100-136 W 111TH ST
Facility City: CHICAGO
PRP Name: ROSELAND MEDICAL CENTER
AC: Not reported

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78 **UST** **U001141972**
N/A
ANGELICA HEALTHCARE SERVGROUP
100 - 140 W. 111TH STREET
CHICAGO, IL 60628

UST:
Facility ID: 2008212
Facility Status: CLOSED
Facility Type: NONE
Owner Name: Angelica Corp.
Owner Id: U0000654
Owner Address: 10176 Corporate Square Dr
Owner City,St,Zip: Saint Louis, MO 63132

Tank Number: 1
Tank Capacity: 99
Tank Substance: Diesel Fuel

ANGELICA HEALTHCARE SERVGROUP (Continued) **U001141972**

Last Used Date: 8/1/1985
OSFM First Notify Date: 4/2/1986
Tank Status: Removed
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date:Not reported
Self Service Permit Expire Date: Not reported
Fee Due: No

Tank Number: 2
Tank Capacity: 99
Tank Substance: Diesel Fuel
Last Used Date: 8/1/1985
OSFM First Notify Date: 4/2/1986
Tank Status: Removed
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date:Not reported
Self Service Permit Expire Date: Not reported
Fee Due: No

Tank Number: 3
Tank Capacity: 99
Tank Substance: Gasoline
Last Used Date: 7/1/1985
OSFM First Notify Date: 4/2/1986
Tank Status: Removed
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date:Not reported
Self Service Permit Expire Date: Not reported
Fee Due: No

Tank Number: 4
Tank Capacity: 3000
Tank Substance: Solvent
Last Used Date: 12/31/1973
OSFM First Notify Date: Not reported
Tank Status: Exempt from registration
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date:Not reported

ANGELICA HEALTHCARE SERVGROUP (Continued) **U001141972**

Self Service Permit Expire Date: **Not reported**
Fee Due: Not reported

Tank Number: 5
Tank Capacity: 3000
Tank Substance: Solvent
Last Used Date: 12/31/1973
OSFM First Notify Date: Not reported
Tank Status: **Exempt from registration**
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: **Not reported**
Green Tag Issue Date: **Not reported**
Green Tag Expire Date: **Not reported**
Self Service Permit Inspection Date: **Not reported**
Self Service Permit Expire Date: **Not reported**
Fee Due: Not reported

Tank Number: 6
Tank Capacity: 3000
Tank Substance: Solvent
Last Used Date: 12/31/1973
OSFM First Notify Date: Not reported
Tank Status: **Exempt from registration**
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: **Not reported**
Green Tag Issue Date: **Not reported**
Green Tag Expire Date: **Not reported**
Self Service Permit Inspection Date: **Not reported**
Self Service Permit Expire Date: **Not reported**
Fee Due: Not reported

Tank Number: 7
Tank Capacity: 3000
Tank Substance: Solvent
Last Used Date: 12/31/1973
OSFM First Notify Date: Not reported
Tank Status: **Exempt from registration**
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: **Not reported**
Green Tag Issue Date: **Not reported**
Green Tag Expire Date: **Not reported**
Self Service Permit Inspection Date: **Not reported**
Self Service Permit Expire Date: **Not reported**
Fee Due: Not reported

Tank Number: 8
Tank Capacity: 2000
Tank Substance: Heating Oil
Last Used Date: 12/31/1973
OSFM First Notify Date: Not reported

ANGELICA HEALTHCARE SERVGROUP (Continued) **U001141972**

Tank Status:	**Exempt from registration**
Red Tag Issue Date:	Not reported
Install Date:	Not reported
Green Tag Decal:	**Not reported**
Green Tag Issue Date:	**Not reported**
Green Tag Expire Date:	**Not reported**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	Not reported

78
ROSELAND MEDICAL CENTER **LUST** **S108282965**
100-136 WEST 111TH STREET **N/A**
CHICAGO, IL 60628

LUST:

Incident Num:	20070049
IL EPA Id:	0316495173
Product:	Other Petro
IEMA Date:	01/18/2007
Project Manager:	Jones
Project Manager Phone:	(217) 524-1253
Email:	Steve.Jones@illinois.gov
PRP Name:	Not reported
PRP Contact:	Not reported
PRP Address:	Not reported
PRP City,St,Zip:	Not reported
PRP Phone:	Not reported
Site Classification:	Not reported
Section 57.5(g) Letter:	734
Date Section 57.5(g) Letter:	Not reported
Non LUST Determination Letter:	Not reported
20 Report Received:	02/06/2007
45 Report Received:	03/02/2007
NFA/NFR Letter:	**01/25/2008**
NFR Date Recorded:	02/19/2008

79
ROSELAND COMMUNITY HOSPITAL **UST** **U003668403**
45 WEST 111TH STREET **N/A**
CHICAGO, IL 60628

UST:

Facility ID:	2038282
Facility Status:	ACTIVE
Facility Type:	**PRIVATE INSTITUTION**
Owner Name:	Roseland Community Hospital
Owner Id:	U0028039
Owner Address:	45 West 111th Street
Owner City,St,Zip:	Chicago, IL 60628

Tank Number:	1
Tank Capacity:	6000
Tank Substance:	Diesel Fuel
Last Used Date:	Not reported
OSFM First Notify Date:	12/19/1998
Tank Status:	**Currently in use**
Red Tag Issue Date:	Not reported

ROSELAND COMMUNITY HOSPITAL (Continued) **U003668403**

Install Date: Not reported
Green Tag Decal: L007710
Green Tag Issue Date: 4/8/2010
Green Tag Expire Date: 12/31/2012
Self Service Permit Inspection Date:Not reported
Self Service Permit Expire Date: Not reported
Fee Due: $0.00

80
LAKEFRONT SUPPORTING HOUSING
11023-11045 S WENTWORTH
CHICAGO, IL 60628

ENG CONTROLS **1000204428**
INST CONTROL **ILD981960537**
SRP

ENGINEERING CONTROLS:
Illinois Epa Id: 0316495014
NFR Letter: 10/21/2005
Date NFR Recorded: 01/19/2006
Type Of Site: Residential
Comprehensive / Focused: Focused
Remediation Applicant Title: Mr.
Remediation Applicant Name: Robert Banta
RA Company: Lakefront Supportive Housing
RA Address: 247 South State Street
RA Secondary Address: Suite 810
RA City,St,Zip: Chicago, IL 60604-
Institutional Controls: Groundwater use restriction
Engineered Barriers: Clean soil barrier/Concrete barrier/Building foundation
Worker Caution: False
Acres: 1.575

IL INSTUTIONAL CONTROL:
Illinois EPA Id: 0316495014
NFR Letter: 10/21/2005
Date NFR Recorded: 01/19/2006
Type Of Site: Residential
Comprehensive / Focused: Focused
Remediation Applicant Title: Mr.
Remediation Applicant Name: Robert Banta
RA Company: Lakefront Supportive Housing
RA Address: 247 South State Street
RA Secondary Address: Suite 810
RA City,St,Zip: Chicago, IL 60604-
Institutional Controls: Groundwater use restriction
Engineered Barriers: Clean soil barrier/Concrete barrier/Building foundation
Worker Caution: False
Acres: 1.575

SRP:
IL EPA Id: 0316495014
US EPA Id: ILD981960537
Longitude: -87.62756
Latitude: 41.69306
Contact Name: Robert Banta
Contact Address: 247 South State Street
Contact Address2: Suite 810
Contact City,St,Zip: Chicago, IL 60640-
Contact Phone: (312) 447-4500
Date Enrolled: 05/22/2003

Map ID	Site	Database(s)	EPA ID Number

LAKEFRONT SUPPORTING HOUSING (Continued) **1000204428**

Point Of Contact:	Carl L. Dawes
Consultant Company:	Mostardi Platt Environmental
Consultant Address:	1520 Kensington Road
Consultant Address2:	Suite 204
Consultant City,St,Zip:	Oak Brook, IL 60523-2139
Consultant Phone:	(630) 993-2100
Proj Mgr Assigned:	Dunn
Sec. 4 Letter Date:	Not reported
NFR Recorded:	01/19/2006
Active:	False
Total Acres:	1.575
No Further Remediation Letter Dt:	10/21/2005
Remediation Applicant Co:	Lakefront Supportive Housing
Remediation Applicant Title:	Vice President
Remediation Applicant Name:	Mr. Robert Banta
Remediation Applicant Company:	Lakefront Supportive Housing
Remediation Applicant Address:	247 South State Street
Remediation Applicant Address 2:	Suite 810
Remediation Applicant City,St,Zip:	Chicago, IL 60604-
Illinois EPA:	0316495014
Site Name:	Angelica Health Services
NFR Letter:	2005-10-21
NFR Letter Date Recorded:	2006-01-19
Site Type:	Residential
Comprehensive/Focused:	Focused
Institutional Controls:	Groundwater use restriction
Barrier:	Clean soil barrier/Concrete barrier/Building foundation
Worker Caution:	False
Acres:	1.575

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80 **STAR CLEANERS** **RCRA-SQG** **1010317282**
149 W 111TH ST **ILR000144154**
CHICAGO, IL 60628

RCRA-SQG:

Date form received by agency:	10/27/2006
Facility name:	STAR CLEANERS
Facility address:	149 W 111TH ST CHICAGO, IL 60628
EPA ID:	ILR000144154
Contact:	KI KIM
Contact address:	Not reported Not reported
Contact country:	Not reported
Contact telephone:	(217) 555-1212
Contact email:	Not reported
EPA Region:	05
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	STAR CLEANERS

Map ID	Site	Database(s)	EPA ID Number
	STAR CLEANERS (Continued)		**1010317282**

Owner/operator address:	Not reported Not reported
Owner/operator country:	US
Owner/operator telephone:	Not reported
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	10/27/2006
Owner/Op end date:	Not reported

Owner/operator name:	STAR CLEANERS
Owner/operator address:	Not reported Not reported
Owner/operator country:	US
Owner/operator telephone:	Not reported
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	10/27/2006
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Hazardous Waste Summary:

Waste code:	D039
Waste name:	TETRACHLOROETHYLENE

Violation Status:	No violations found

Map ID	Site	Database(s)	EPA ID Number
80	**STAR CLEANERS** **149 WEST 111TH STREET** **CHICAGO, IL 60628**	**DRYCLEANERS**	**S111009271** **N/A**

DRYCLEANERS:

Facility Id:	2881-5610-04
DC No:	DC-00937
Facility Contact:	KI CHANG KIM
License Expires:	12/31/2012

85 **KANG WON H** **UST** **U003909406**
11201-227 S MICHIGAN AVE **N/A**
CHICAGO, IL 60628

UST:

Facility ID:	2036925
Facility Status:	EXEMPT
Facility Type:	**NONE**
Owner Name:	Kang Won H
Owner Id:	U0027063
Owner Address:	11201-227 S Michigan Ave
Owner City,St,Zip:	Chicago, IL 60628

Tank Number:	Not reported
Tank Capacity:	Not reported
Tank Substance:	Not reported
Last Used Date:	Not reported
OSFM First Notify Date:	Not reported
Tank Status:	**Not reported**
Red Tag Issue Date:	Not reported
Install Date:	Not reported
Green Tag Decal:	**Not reported**
Green Tag Issue Date:	**Not reported**
Green Tag Expire Date:	**Not reported**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	Not reported

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91 **VACANT BULDING** **UST** **U003193590**
11321 S WENTWORTH AVENUE **N/A**
CHICAGO, IL 60603

UST:

Facility ID:	2035824
Facility Status:	EXEMPT
Facility Type:	**PRIVATE INSTITUTION**
Owner Name:	Chicago Assoc For Retarded Citizens
Owner Id:	U0026078
Owner Address:	8South Michigan Avenue
Owner City,St,Zip:	Chicago, IL 60603

Tank Number:	1
Tank Capacity:	1000
Tank Substance:	Heating Oil
Last Used Date:	12/1/1973
OSFM First Notify Date:	5/30/1997
Tank Status:	**Exempt from registration**
Red Tag Issue Date:	Not reported
Install Date:	1/1/1902
Green Tag Decal:	**Not reported**
Green Tag Issue Date:	**Not reported**
Green Tag Expire Date:	**Not reported**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	Not reported

Tank Number:	2
Tank Capacity:	2000
Tank Substance:	Heating Oil

VACANT BULDING (Continued) **U003193590**

Last Used Date: 12/1/1973
OSFM First Notify Date: 5/30/1997
Tank Status: Exempt from registration
Red Tag Issue Date: Not reported
Install Date: 1/1/1902
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date:Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

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93 **PULLMAN CO** **LUST** **U001142600**
65 WEST 113TH PLACE **UST** **N/A**
CHICAGO, IL 60628

LUST:
Incident Num: 903598
IL EPA Id: 0316495033
Product: Deisel
IEMA Date: 12/04/1990
Project Manager: Davis
Project Manager Phone: (217) 785-7492
Email: Valerie.A.Davis@illinois.gov
PRP Name: Illinois Bell Telephone
PRP Contact: Thomas Scheer
PRP Address: 900 North Villa
PRP City,St,Zip: Villa Park, IL 60181
PRP Phone: Not reported
Site Classification: Not reported
Section 57.5(g) Letter: 731
Date Section 57.5(g) Letter: Not reported
Non LUST Determination Letter: Not reported
20 Report Received: Not reported
45 Report Received: Not reported
NFA/NFR Letter: 05/04/2004
NFR Date Recorded: 11/05/2004

UST:
Facility ID: 2007786
Facility Status: ACTIVE
Facility Type: UTILITY
Owner Name: AT&T Corp. d/b/a Illinois Bell
Owner Id: U0034340
Owner Address: 308 S. Akard, Room 1700
Owner City,St,Zip: Dallas, TX 75202

Tank Number: 1
Tank Capacity: 10000
Tank Substance: Diesel Fuel
Last Used Date: Not reported
OSFM First Notify Date: 12/11/1986
Tank Status: Removed
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: M006121
Green Tag Issue Date: 5/5/2011

PULLMAN CO (Continued) **U001142600**

Green Tag Expire Date:	**12/31/2013**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	$0.00

Tank Number:	2
Tank Capacity:	5760
Tank Substance:	Fuel Oil
Last Used Date:	1/1/1970
OSFM First Notify Date:	12/11/1986
Tank Status:	**Exempt from registration**
Red Tag Issue Date:	Not reported
Install Date:	Not reported
Green Tag Decal:	**M006121**
Green Tag Issue Date:	**5/5/2011**
Green Tag Expire Date:	**12/31/2013**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	Not reported

Tank Number:	3
Tank Capacity:	2500
Tank Substance:	Diesel Fuel
Last Used Date:	Not reported
OSFM First Notify Date:	2/21/1991
Tank Status:	**Currently in use**
Red Tag Issue Date:	Not reported
Install Date:	11/28/1990
Green Tag Decal:	**M006121**
Green Tag Issue Date:	**5/5/2011**
Green Tag Expire Date:	**12/31/2013**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	$0.00

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93 **SPILLS** **S111878773**
65 W 113TH PL **N/A**
CHICAGO, IL

SPILLS:

Incident ID:	19903598
Incident Date:	Not reported
Date Received:	12/04/1990
Facility Address:	65 W 113TH PL
Facility City:	CHICAGO
PRP Name:	ILLINOIS BELL
AC:	Not reported

94 **SPILLS** **S111910374**
N/A

135-39 W 114TH ST
CHICAGO, IL

SPILLS:
Incident ID: 20011638
Incident Date: Not reported
Date Received: 10/03/2001
Facility Address: 135-39 W 114TH ST
Facility City: CHICAGO
PRP Name: MARQUETTE BANK
AC: Not reported

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94 **LUST** **S105155384**
N/A

MARQUETTE BANK
135-39 WEST 114TH ST.
CHICAGO, IL 60628

LUST:
Incident Num: 20011638
IL EPA Id: 0316495139
Product: Gasoline
IEMA Date: 10/03/2001
Project Manager: Kuhlman
Project Manager Phone: (217) 785-5715
Email: Eric.Kuhlman@illinois.gov
PRP Name: Marquette Bank
PRP Contact: James McDonough
PRP Address: 8020 South Harlem Ave.
PRP City,St,Zip: Bridgeview, IL 60455
PRP Phone: 7739184541
Site Classification: Not reported
Section 57.5(g) Letter: 732
Date Section 57.5(g) Letter: Not reported
Non LUST Determination Letter: Not reported
20 Report Received: 10/17/2001
45 Report Received: 11/16/2001
NFA/NFR Letter: **Not reported**
NFR Date Recorded: Not reported

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94 **UST** **U003853337**
N/A

VACANT BUILDING
133-37 W 114TH ST THRID PARTY REMOVAL
CHICAGO, IL 60628

UST:
Facility ID: 2040973
Facility Status: EXEMPT
Facility Type: **NONE**
Owner Name: Marquette Bank
Owner Id: U0030607
Owner Address: 8020 S Harlem Ave
Owner City,St,Zip: Bridgeview, IL 60455

Tank Number: 1
Tank Capacity: 2000
Tank Substance: Gasoline
Last Used Date: 12/31/1973
OSFM First Notify Date: 10/18/2001
Tank Status: **Exempt from registration**

VACANT BUILDING (Continued) **U003853337**

Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

97
TORINO GARAGE **UST** **U001143217**
11439 S COTTAGE GROVE **N/A**
CHICAGO, IL 60628

UST:
Facility ID: 2001712
Facility Status: ACTIVE
Facility Type: COMMERCIAL / RETAIL
Owner Name: Torino Baking Co
Owner Id: U0015099
Owner Address: 318 E Kensington Co
Owner City,St,Zip: Chicago, IL 60628

Tank Number: 1
Tank Capacity: 10000
Tank Substance: Gasoline
Last Used Date: Not reported
OSFM First Notify Date: 2/20/1986
Tank Status: Currently in use
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: $0.00

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98 **SPILLS** **S111896002**
11442 S MICHIGAN AVE **N/A**
CHICAGO, IL

SPILLS:
Incident ID: 19960704
Incident Date: Not reported
Date Received: 04/30/1996
Facility Address: 11442 S MICHIGAN AVE
Facility City: CHICAGO
PRP Name: MUSA TADROS
AC: Not reported

Map ID	Site	Database(s)	EPA ID Number
98	**GOODYEAR TIRE & RUBBER** **11442 S MICHIGAN AVE** **CHICAGO, IL 60628**	**UST**	**U000865244** **N/A**

UST:

Facility ID: 2012823
Facility Status: CLOSED
Facility Type: GOLF COURSE
Owner Name: American Bank & Trust #120064-09
Owner Id: U0024861
Owner Address: 733 Spruce Rd
Owner City,St,Zip: Frankfort, IL 60423

Tank Number: 1
Tank Capacity: 500
Tank Substance: Used Oil
Last Used Date: 1/1/1993
OSFM First Notify Date: 4/15/1986
Tank Status: Removed
Red Tag Issue Date: Not reported
Install Date: 1/1/1969
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

Map ID	Site	Database(s)	EPA ID Number
98	**TADROS, MUSA** **11442 SOUTH MICHIGAN AVE.** **CHICAGO, IL 60628**	**LUST**	**S104522099** **N/A**

LUST:

Incident Num: 960704
IL EPA Id: 0316500008
Product: Uset Oil
IEMA Date: 04/30/1996
Project Manager: Blumhorst
Project Manager Phone: (217) 782-6762
Email: Not reported
PRP Name: Musa Tadros
PRP Contact: Not reported
PRP Address: 655 North La Grange Rd.
PRP City,St,Zip: Frankfort, IL 60423
PRP Phone: Not reported
Site Classification: Not reported
Section 57.5(g) Letter: 732
Date Section 57.5(g) Letter: Not reported
Non LUST Determination Letter: Not reported
20 Report Received: 05/16/1996
45 Report Received: 04/02/1997
NFA/NFR Letter: 01/27/1998
NFR Date Recorded: 10/21/1998

Map ID	Site	Database(s)	EPA ID Number
98	**GOODYEAR AUTO SERVICE CTR** **11442 S MICHIGAN AVE** **CHICAGO, IL 60628**	**RCRA-SQG**	**1000194572** **ILD149985640**

RCRA-SQG:

Date form received by agency:	11/03/1986
Facility name:	GOODYEAR AUTO SERVICE CTR
Facility address:	11442 S MICHIGAN AVE CHICAGO, IL 60628
EPA ID:	ILD149985640
Mailing address:	1501 NICHOLAS BLVD ELK GROVE VILLAGE, IL 60007
Contact:	H BROWN
Contact address:	1501 NICHOLAS BLVD ELK GROVE VILLAGE, IL 60007
Contact country:	US
Contact telephone:	(312) 640-5000
Contact email:	Not reported
EPA Region:	05
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	GOODYEAR TIRE AND RUBBER CO
Owner/operator address:	ADDRESS NOT REPORTED CITY NOT REPORTED, AK 99998
Owner/operator country:	Not reported
Owner/operator telephone:	(312) 555-1212
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	NAME NOT REPORTED
Owner/operator address:	ADDRESS NOT REPORTED CITY NOT REPORTED, AK 99998
Owner/operator country:	Not reported
Owner/operator telephone:	(312) 555-1212
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No

Map ID	Site	Database(s)	EPA ID Number

GOODYEAR AUTO SERVICE CTR (Continued) **1000194572**

User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Hazardous Waste Summary:

Waste code:	D001
Waste name:	IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.
Waste code:	X001
Waste name:	WASTE OILS
Violation Status:	No violations found

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100 **SPILLS** **S111920067**

342 E 115TH ST
CHICAGO, IL

N/A

SPILLS:

Incident ID:	20061096
Incident Date:	Not reported
Date Received:	08/29/2006
Facility Address:	342 E 115TH ST
Facility City:	CHICAGO
PRP Name:	FRIESON, PHYLLIS
AC:	Not reported

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100 **UST** **U004022836**

USED APPLLIANCE STORE
342-44 E. 115TH STREET
CHICAGO, IL 60628

N/A

UST:

Facility ID:	2043038
Facility Status:	EXEMPT
Facility Type:	**NONE**
Owner Name:	Frieson, Willie
Owner Id:	U0033097
Owner Address:	342-344 E. 115th Street
Owner City,St,Zip:	Chicago, IL 60628
Tank Number:	1
Tank Capacity:	1000
Tank Substance:	Heating Oil
Last Used Date:	12/31/1973
OSFM First Notify Date:	1/23/2006
Tank Status:	**Exempt from registration**
Red Tag Issue Date:	Not reported
Install Date:	Not reported
Green Tag Decal:	**Not reported**
Green Tag Issue Date:	**Not reported**

USED APPLLIANCE STORE (Continued) **U004022836**

Green Tag Expire Date: **Not reported**
Self Service Permit Inspection Date: **Not reported**
Self Service Permit Expire Date: **Not reported**
Fee Due: Not reported

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100 **FRIESON, PHYLLIS** **LUST** **S108187373**
342 EAST 115TH STREET **N/A**
CHICAGO, IL 60628

LUST:
Incident Num: 20061096
IL EPA Id: 0316495171
Product: Fuel Oil, Other Petro
IEMA Date: 08/29/2006
Project Manager: Covert
Project Manager Phone: (217) 785-3943
Email: Chris.Covert@illinois.gov
PRP Name: Not reported
PRP Contact: Not reported
PRP Address: Not reported
PRP City,St,Zip: Not reported
PRP Phone: Not reported
Site Classification: Not reported
Section 57.5(g) Letter: 734
Date Section 57.5(g) Letter: Not reported
Non LUST Determination Letter: Not reported
20 Report Received: 01/29/2007
45 Report Received: 01/29/2007
NFA/NFR Letter: **05/29/2007**
NFR Date Recorded: 08/08/1988

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100 **SPILLS** **S108046141**
344 E 115TH ST **N/A**
CHICAGO, IL

SPILLS:
Incident ID: 20051628
Incident Date: Not reported
Date Received: 12/06/2005
Facility Address: 344 E 115TH ST
Facility City: CHICAGO
PRP Name: FRIESON, WILLIE
AC: Not reported

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101 **ILLINOIS CENTRAL RAILROAD** **UST** **U003152193**
11500 S COTTAGE GROVE **N/A**
CHICAGO, IL 60430

UST:
Facility ID: 2035501
Facility Status: EXEMPT
Facility Type: **INDUSTRIAL / MANUFACTURING**
Owner Name: Lend Lease Realestate Investors
Owner Id: U0007233
Owner Address: 455 N Cityfront Plaza Dr Suite 3200

ILLINOIS CENTRAL RAILROAD (Continued) **U003152193**

Owner City,St,Zip:	Chicago, IL 60611
Tank Number:	1
Tank Capacity:	5000
Tank Substance:	Not reported
Last Used Date:	12/1/1973
OSFM First Notify Date:	1/24/1997
Tank Status:	**Exempt from registration**
Red Tag Issue Date:	Not reported
Install Date:	1/1/1902
Green Tag Decal:	**Not reported**
Green Tag Issue Date:	**Not reported**
Green Tag Expire Date:	**Not reported**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	Not reported
Tank Number:	2
Tank Capacity:	500
Tank Substance:	Gasoline
Last Used Date:	12/1/1973
OSFM First Notify Date:	1/24/1997
Tank Status:	**Exempt from registration**
Red Tag Issue Date:	Not reported
Install Date:	1/1/1902
Green Tag Decal:	**Not reported**
Green Tag Issue Date:	**Not reported**
Green Tag Expire Date:	**Not reported**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	Not reported
Tank Number:	3
Tank Capacity:	275
Tank Substance:	Gasoline
Last Used Date:	12/1/1973
OSFM First Notify Date:	1/24/1997
Tank Status:	**Exempt from registration**
Red Tag Issue Date:	Not reported
Install Date:	1/1/1902
Green Tag Decal:	**Not reported**
Green Tag Issue Date:	**Not reported**
Green Tag Expire Date:	**Not reported**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	Not reported
Tank Number:	4
Tank Capacity:	275
Tank Substance:	Not reported
Last Used Date:	12/1/1973
OSFM First Notify Date:	1/24/1997
Tank Status:	**Exempt from registration**
Red Tag Issue Date:	Not reported

ILLINOIS CENTRAL RAILROAD (Continued) **U003152193**

Install Date:	1/1/1902
Green Tag Decal:	**Not reported**
Green Tag Issue Date:	**Not reported**
Green Tag Expire Date:	**Not reported**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	Not reported

Tank Number:	5
Tank Capacity:	275
Tank Substance:	Not reported
Last Used Date:	12/1/1973
OSFM First Notify Date:	1/24/1997
Tank Status:	**Exempt from registration**
Red Tag Issue Date:	Not reported
Install Date:	1/1/1902
Green Tag Decal:	**Not reported**
Green Tag Issue Date:	**Not reported**
Green Tag Expire Date:	**Not reported**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	Not reported

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101 **ILLINOIS CENTRAL RAILROAD** **RCRA-SQG** **1001123410**
115TH & COTTAGE GROVE **ILR000030551**
CHICAGO, IL 60628

RCRA-SQG:

Date form received by agency:	11/14/1996
Facility name:	ILLINOIS CENTRAL RAILROAD
Facility address:	115TH & COTTAGE GROVE CHICAGO, IL 60628
EPA ID:	ILR000030551
Mailing address:	455 N CITY FRONT PLAZA DR CHICAGO, IL 60611
Contact:	MARIO SILLER
Contact address:	455 N CITY FRONT PLAZA DR CHICAGO, IL 60611
Contact country:	US
Contact telephone:	(708) 957-6566
Contact email:	Not reported
EPA Region:	05
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	ILLINOIS CENTRAL RAILROAD
Owner/operator address:	455 N CITY FRONT PLAZA DR CHICAGO, IL 60611
Owner/operator country:	Not reported
Owner/operator telephone:	(312) 755-7840
Legal status:	Private

ILLINOIS CENTRAL RAILROAD (Continued) **1001123410**

Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Hazardous Waste Summary:
Waste code: D001
Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Violation Status: No violations found

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101 **SHERWIN WILLIAMS CHICAGO FACILITY** **UST** **U004123100**
549 E. 115TH ST. **N/A**
CHICAGO, IL 60609

UST:

Facility ID:	2044116
Facility Status:	EXEMPT
Facility Type:	**COMMERCIAL / RETAIL**
Owner Name:	Sherwin Williams Company
Owner Id:	U0013875
Owner Address:	101 Prospect Avenue
Owner City,St,Zip:	Cleveland, OH 44115

Tank Number:	1
Tank Capacity:	1000
Tank Substance:	Heating Oil
Last Used Date:	12/31/1973
OSFM First Notify Date:	Not reported
Tank Status:	**Exempt from registration**
Red Tag Issue Date:	Not reported
Install Date:	Not reported
Green Tag Decal:	**Not reported**
Green Tag Issue Date:	**Not reported**
Green Tag Expire Date:	**Not reported**
Self Service Permit Inspection Date:	**Not reported**

SHERWIN WILLIAMS CHICAGO FACILITY (Continued) **U004123100**

Self Service Permit Expire Date: Not reported
Fee Due: Not reported

102
CURTIS SCHOOL
32 E 115TH ST
CHICAGO, IL 60628
UST
1002889106
N/A

UST:
Facility ID: 2040500
Facility Status: EXEMPT
Facility Type: NONE
Owner Name: Chicago Public Schools
Owner Id: U0028313
Owner Address: 125 S. Clark, 17th Floor
Owner City,St,Zip: Chicago, IL 60603

Tank Number: 1
Tank Capacity: 5000
Tank Substance: Heating Oil
Last Used Date: 12/31/1973
OSFM First Notify Date: Not reported
Tank Status: Exempt from registration
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

102
CURTIS ELEMENTARY
32 E 115TH ST
CHICAGO, IL 60628
RCRA-CESQG
1004696709
ILR000056796

RCRA-CESQG:
Date form received by agency: 10/27/1998
Facility name: CURTIS ELEMENTARY
Facility address: 32 E 115TH ST
CHICAGO, IL 60628
EPA ID: ILR000056796
Mailing address: 8501 W 191ST ST
PO BOX 10
MOKENA, IL 60448
Contact: THOMAS CONNELLY
Contact address: 8501 W 191ST ST PO BOX 10
MOKENA, IL 60448
Contact country: US
Contact telephone: (708) 923-0202
Contact email: Not reported
EPA Region: 05
Classification: Conditionally Exempt Small Quantity Generator
Description: Handler: generates 100 kg or less of hazardous waste per calendar month, and accumulates 1000 kg or less of hazardous waste at any time; or generates 1 kg or less of acutely hazardous waste per calendar month, and accumulates at any time: 1 kg or less of acutely hazardous

Map ID	Site	Database(s)	EPA ID Number
	CURTIS ELEMENTARY (Continued)		**1004696709**

waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste

Owner/Operator Summary:

Owner/operator name:	CHICAGO PUBLIC SCHOOLS
Owner/operator address:	1819 W PERSHING ROAD 6WW CHICAGO, IL 60609
Owner/operator country:	Not reported
Owner/operator telephone:	(773) 535-7038
Legal status:	District
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Hazardous Waste Summary:

Waste code:	D006
Waste name:	CADMIUM
Waste code:	D008
Waste name:	LEAD
Waste code:	D009
Waste name:	MERCURY
Violation Status:	No violations found

Map ID	Site	Database(s)	EPA ID Number
103	**ABANDONED GAS STATION** **2 WEST 115TH STREET** **CHICAGO, IL 60628**	**LUST** **UST**	**U003668168** **N/A**

LUST:

Incident Num:	980685
IL EPA Id:	0316495103
Product:	Gasoline
IEMA Date:	03/30/1998
Project Manager:	Harlow
Project Manager Phone:	(217) 524-7650
Email:	Robert.Harlow@illinois.gov
PRP Name:	Donna Cox
PRP Contact:	Not reported
PRP Address:	345 South Sacramento
PRP City,St,Zip:	Chicago, IL 60612
PRP Phone:	7737223797
Site Classification:	Not reported
Section 57.5(g) Letter:	732
Date Section 57.5(g) Letter:	Not reported
Non LUST Determination Letter:	Not reported
20 Report Received:	Not reported
45 Report Received:	Not reported
NFA/NFR Letter:	**Not reported**
NFR Date Recorded:	Not reported

Incident Num:	20111008
IL EPA Id:	0316495103
Product:	Gasoline
IEMA Date:	09/22/2011
Project Manager:	Not reported
Project Manager Phone:	Not reported
Email:	Not reported
PRP Name:	Not reported
PRP Contact:	Not reported
PRP Address:	Not reported
PRP City,St,Zip:	Not reported
PRP Phone:	Not reported
Site Classification:	Not reported
Section 57.5(g) Letter:	734
Date Section 57.5(g) Letter:	Not reported
Non LUST Determination Letter:	Not reported
20 Report Received:	Not reported
45 Report Received:	Not reported
NFA/NFR Letter:	**Not reported**
NFR Date Recorded:	Not reported

UST:

Facility ID:	2037063
Facility Status:	EXEMPT
Facility Type:	**GOLF COURSE**
Owner Name:	Cox Donna
Owner Id:	U0027202
Owner Address:	345 S Sacramento
Owner City,St,Zip:	Chicago, IL 60612

Tank Number:	1
Tank Capacity:	4000
Tank Substance:	Gasoline

Map ID	Site	Database(s)	EPA ID Number

ABANDONED GASSTATION (Continued) **U003668168**

Last Used Date: 12/31/1973
OSFM First Notify Date: 3/23/1998
Tank Status: Exempt from registration
Red Tag Issue Date: Not reported
Install Date: 1/1/1902
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

Tank Number: 2
Tank Capacity: 3000
Tank Substance: Gasoline
Last Used Date: 12/31/1973
OSFM First Notify Date: Not reported
Tank Status: Exempt from registration
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

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103 **SPILLS** **S111900940**
N/A

2 W 115TH ST
CHICAGO, IL

SPILLS:
Incident ID: 19980685
Incident Date: Not reported
Date Received: 03/30/1998
Facility Address: 2 W 115TH ST
Facility City: CHICAGO
PRP Name: COX, DONNA
AC: Not reported

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103 **SPILLS** **S111927173**
N/A

2 W 115TH ST
CHICAGO, IL

SPILLS:
Incident ID: 20111008
Incident Date: Not reported
Date Received: Not reported
Facility Address: 2 W 115TH ST
Facility City: CHICAGO
PRP Name: Donna Cox
AC: Not reported

Map ID	Site	Database(s)	EPA ID Number
104	**35 W 115TH ST** **CHICAGO, IL**	**SPILLS**	**S111905773** **N/A**

SPILLS:

Incident ID:	19992324
Incident Date:	Not reported
Date Received:	10/13/1999
Facility Address:	35 W 115TH ST
Facility City:	CHICAGO
PRP Name:	TRIANGLE TRANSMISSIONS
AC:	Not reported

Map ID	Site	Database(s)	EPA ID Number
104	**TRIANGLE TRANSMISSION** **35 W 115TH ST** **CHICAGO, IL 60628**	**RCRA-SQG** **LUST** **UST**	**1001493094** **ILR000067009**

RCRA-SQG:

Date form received by agency:	08/27/1999
Facility name:	TRIANGLE TRANSMISSION
Facility address:	35 W 115TH ST CHICAGO, IL 60628
EPA ID:	ILR000067009
Contact:	THERON AYTCH
Contact address:	35 W 115TH ST CHICAGO, IL 60628
Contact country:	US
Contact telephone:	(773) 458-0054
Contact email:	Not reported
EPA Region:	05
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	TRIANGLE TRANSMISSION
Owner/operator address:	35 W 115TH ST CHICAGO, IL 60628
Owner/operator country:	Not reported
Owner/operator telephone:	(773) 458-0054
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No

TRIANGLE TRANSMISSION (Continued) **1001493094**

User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Hazardous Waste Summary:
Waste code: D001
Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Violation Status: No violations found

LUST:
Incident Num: 992324
IL EPA Id: 0316495120
Product: Gasoline
IEMA Date: 10/13/1999
Project Manager: NOT ASSIGNED
Project Manager Phone: Not reported
Email: Not reported
PRP Name: Triangle Transmissions
PRP Contact: Pheron Aytch
PRP Address: 35 West 115th St.
PRP City,St,Zip: Chicago, IL 60628
PRP Phone: 7734680054
Site Classification: Not reported
Section 57.5(g) Letter: 732
Date Section 57.5(g) Letter: Not reported
Non LUST Determination Letter: Not reported
20 Report Received: 10/21/1999
45 Report Received: Not reported
NFA/NFR Letter: **Not reported**
NFR Date Recorded: Not reported

UST:
Facility ID: 2039271
Facility Status: EXEMPT
Facility Type: **GOLF COURSE**
Owner Name: Triangle Transmission
Owner Id: U0029023
Owner Address: 35 W 115th St
Owner City,St,Zip: Chicago, IL 60628

Tank Number: 1
Tank Capacity: 1000
Tank Substance: Gasoline
Last Used Date: 12/31/1973
OSFM First Notify Date: 10/21/1999
Tank Status: **Exempt from registration**
Red Tag Issue Date: Not reported
Install Date: Not reported

TRIANGLE TRANSMISSION (Continued) **1001493094**

Green Tag Decal:	**Not reported**
Green Tag Issue Date:	**Not reported**
Green Tag Expire Date:	**Not reported**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	Not reported

Tank Number:	2
Tank Capacity:	1000
Tank Substance:	Gasoline
Last Used Date:	12/31/1973
OSFM First Notify Date:	10/21/1999
Tank Status:	**Exempt from registration**
Red Tag Issue Date:	Not reported
Install Date:	Not reported
Green Tag Decal:	**Not reported**
Green Tag Issue Date:	**Not reported**
Green Tag Expire Date:	**Not reported**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	Not reported

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105 **ABANDONED SERVICE STATION** **UST** **U003762980**
11500 S PERRY **N/A**
CHICAGO, IL 60628

UST:

Facility ID:	2040244
Facility Status:	EXEMPT
Facility Type:	**NONE**
Owner Name:	City of Chicago Department of Environment
Owner Id:	U0028125
Owner Address:	30 North LaSalle Street, 25th floor
Owner City,St,Zip:	Chicago, IL 60602

Tank Number:	1
Tank Capacity:	6000
Tank Substance:	Gasoline
Last Used Date:	12/31/1973
OSFM First Notify Date:	Not reported
Tank Status:	**Exempt from registration**
Red Tag Issue Date:	Not reported
Install Date:	Not reported
Green Tag Decal:	**Not reported**
Green Tag Issue Date:	**Not reported**
Green Tag Expire Date:	**Not reported**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	Not reported

Tank Number:	2
Tank Capacity:	5000
Tank Substance:	Gasoline
Last Used Date:	12/31/1973
OSFM First Notify Date:	Not reported
Tank Status:	**Exempt from registration**

ABANDONED SERVICE STATION (Continued) **U003762980**

Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

Tank Number: 3
Tank Capacity: 5000
Tank Substance: Gasoline
Last Used Date: 12/31/1973
OSFM First Notify Date: Not reported
Tank Status: Exempt from registration
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

Tank Number: 4
Tank Capacity: 1000
Tank Substance: Used Oil
Last Used Date: 12/31/1973
OSFM First Notify Date: Not reported
Tank Status: Exempt from registration
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

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105 **CHICAGO, CITY OF** **LUST** **S104872169**
11500 SOUTH PERRY **N/A**
CHICAGO, IL 60628

LUST:
Incident Num: 20002342
IL EPA Id: 0316495135
Product: Gasoline, Uset Oil
IEMA Date: 12/12/2000
Project Manager: Tucka
Project Manager Phone: (217) 782-6762
Email: Not reported
PRP Name: City of Chicago
PRP Contact: Dave Graham
PRP Address: 30 North LaSalel St., 25th Fl.
PRP City,St,Zip: Chicago, IL 60602
PRP Phone: 3127443639

CHICAGO, CITY OF (Continued) **S104872169**

Site Classification: Not reported
Section 57.5(g) Letter: 732
Date Section 57.5(g) Letter: Not reported
Non LUST Determination Letter: 2001-04-20
20 Report Received: Not reported
45 Report Received: Not reported
NFA/NFR Letter: Not reported
NFR Date Recorded: Not reported

110
CATHOLIC CONVENT
11515 S. PRAIRIE AVENUE
CHICAGO, IL 60628
UST
U004014199
N/A

UST:
Facility ID: 2042879
Facility Status: EXEMPT
Facility Type: NONE
Owner Name: Methodist Youth Services, Inc.
Owner Id: U0032855
Owner Address: 954 W. Washington Blvd., #4E
Owner City,St,Zip: Chicago, IL 60607

Tank Number: 1
Tank Capacity: 2000
Tank Substance: Heating Oil
Last Used Date: 1/1/1960
OSFM First Notify Date: Not reported
Tank Status: Exempt from registration
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

110
11515 PRAIRIE
CHICAGO, IL
SPILLS
S108045361
N/A

SPILLS:
Incident ID: 20050964
Incident Date: Not reported
Date Received: 07/12/2005
Facility Address: 11515 PRAIRIE
Facility City: CHICAGO
PRP Name: METHODIST YOUTH SERVICES
AC: Not reported

Map ID	Site	Database(s)	EPA ID Number
111	**BETTY BRITE CLEANERS** **11518 S MICHIGAN AVE** **CHICAGO, IL 60628**	**RCRA-CESQG**	**1004693025** **ILD981954753**

RCRA-CESQG:

Date form received by agency:	03/29/2000
Facility name:	BETTY BRITE CLEANERS
Facility address:	11518 S MICHIGAN AVE CHICAGO, IL 60628
EPA ID:	ILD981954753
Contact:	MIKE HUSSAIN
Contact address:	11518 S MICHIGAN AVE CHICAGO, IL 60628
Contact country:	US
Contact telephone:	(773) 821-9379
Contact email:	Not reported
EPA Region:	05
Classification:	Conditionally Exempt Small Quantity Generator
Description:	Handler: generates 100 kg or less of hazardous waste per calendar month, and accumulates 1000 kg or less of hazardous waste at any time; or generates 1 kg or less of acutely hazardous waste per calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste

Owner/Operator Summary:

Owner/operator name:	NAME NOT REPORTED
Owner/operator address:	ADDRESS NOT REPORTED CITY NOT REPORTED, AK 99998
Owner/operator country:	Not reported
Owner/operator telephone:	(312) 555-1212
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	HUSSAIN HABIB
Owner/operator address:	11518 S MICHIGAN AVE CHICAGO, IL 60628
Owner/operator country:	Not reported
Owner/operator telephone:	(773) 821-9379
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No

BETTY BRITE CLEANERS (Continued) **1004693025**

Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Hazardous Waste Summary:
Waste code: D000
Waste name: Not Defined

Waste code: D039
Waste name: TETRACHLOROETHYLENE

Waste code: D040
Waste name: TRICHLOROETHYLENE

Waste code: F002
Waste name: THE FOLLOWING SPENT HALOGENATED SOLVENTS: TETRACHLOROETHYLENE, METHYLENE CHLORIDE, TRICHLOROETHYLENE, 1,1,1-TRICHLOROETHANE, CHLOROBENZENE, 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE, ORTHO-DICHLOROBENZENE, TRICHLOROFLUOROMETHANE, AND 1,1,2-TRICHLOROETHANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE LISTED IN F001, F004, OR F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Violation Status: No violations found

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112 **SHERWIN WILLIAMS CO**
11541 S CHAMPLAIN AVE
CHICAGO, IL 60628

CERCLIS **1000371369**
CORRACTS **60628SHRWN11**
RCRA-TSDF
RCRA-LQG

CERCLIS:
Site ID: 0500202
EPA ID: ILD005456439
Facility County: COOK
Short Name: SHERWIN WILLIAMS COMPANY,
Congressional District: 01
IFMS ID: Not reported
SMSA Number: 1600
USGC Hydro Unit: 07120003
Federal Facility: Not a Federal Facility
DMNSN Number: Not reported
Site Orphan Flag: N
RCRA ID: Y
USGS Quadrangle: Not reported
Site Init By Prog: Not reported
NFRAP Flag: Not reported
Parent ID: Not reported

SHERWIN WILLIAMS CO (Continued) **1000371369**

RST Code:	Not reported
EPA Region:	05
Classification:	Not reported
Site Settings Code:	Not reported
NPL Status:	Not on the NPL
DMNSN Unit Code:	Not reported
RBRAC Code:	Not reported
RResp Fed Agency Code:	Not reported
Non NPL Status:	ESI Start Needed
Non NPL Status Date:	19991123
Site Fips Code:	17031
CC Concurrence Date:	Not reported
CC Concurrence FY:	Not reported
Alias EPA ID:	Not reported
Site FUDS Flag:	Not reported

CERCLIS Site Alias Name(s):

Alias ID:	101
Alias Name:	SHERWIN WILLIAMS CO THE
Alias Address:	11541 S CHAMPLAIN AVE CHICAGO, IL 60628
Alias Comments:	Not reported

Site Description: Not reported

CERCLIS Assessment History:

Action Code:	001
Action:	DISCOVERY
Date Started:	Not reported
Date Completed:	08/01/1980
Priority Level:	Not reported
Operable Unit:	SITEWIDE
Primary Responsibility:	EPA Fund-Financed
Planning Status:	Not reported
Urgency Indicator:	Not reported
Action Anomaly:	Not reported

Action Code:	001
Action:	PRELIMINARY ASSESSMENT
Date Started:	Not reported
Date Completed:	09/01/1984
Priority Level:	Low priority for further assessment
Operable Unit:	SITEWIDE
Primary Responsibility:	State, Fund Financed
Planning Status:	Not reported
Urgency Indicator:	Not reported
Action Anomaly:	Not reported

Action Code:	001
Action:	SITE INSPECTION
Date Started:	Not reported
Date Completed:	06/11/1986
Priority Level:	Higher priority for further assessment
Operable Unit:	SITEWIDE
Primary Responsibility:	EPA Fund-Financed

SHERWIN WILLIAMS CO (Continued) **1000371369**

Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

CORRACTS:

EPA ID: ILD005456439
EPA Region: 05
Area Name: ENTIRE FACILITY
Actual Date: 01/22/2007
Action: CA400 - Date For Remedy Selection (CM Imposed)
NAICS Code(s): 32551
Paint and Coating Manufacturing
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: ILD005456439
EPA Region: 05
Area Name: ENTIRE FACILITY
Actual Date: 03/04/1998
Action: CA110 - RFI Workplan Received
NAICS Code(s): 32551
Paint and Coating Manufacturing
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: ILD005456439
EPA Region: 05
Area Name: ENTIRE FACILITY
Actual Date: 03/05/1998
Action: CA110 - RFI Workplan Received
NAICS Code(s): 32551
Paint and Coating Manufacturing
Original schedule date: 05/01/1998
Schedule end date: Not reported

EPA ID: ILD005456439
EPA Region: 05
Area Name: ENTIRE FACILITY
Actual Date: 03/26/1998
Action: CA077
NAICS Code(s): 32551
Paint and Coating Manufacturing
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: ILD005456439
EPA Region: 05
Area Name: ENTIRE FACILITY
Actual Date: 03/31/1994
Action: CA075HI - CA Prioritization, Facility or area was assigned a high corrective action priority
NAICS Code(s): 32551
Paint and Coating Manufacturing
Original schedule date: Not reported

SHERWIN WILLIAMS CO (Continued) **1000371369**

Schedule end date: Not reported

EPA ID: ILD005456439
EPA Region: 05
Area Name: ENTIRE FACILITY
Actual Date: 06/06/1991
Action: CA077
NAICS Code(s): 32551
Paint and Coating Manufacturing
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: ILD005456439
EPA Region: 05
Area Name: ENTIRE FACILITY
Actual Date: 07/06/1989
Action: CA050RF - RFA Completed, Assessment was an RFA
NAICS Code(s): 32551
Paint and Coating Manufacturing
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: ILD005456439
EPA Region: 05
Area Name: ENTIRE FACILITY
Actual Date: 07/06/1990
Action: CA070YE - RFA Determination Of Need For An RFI, RFI is Necessary
NAICS Code(s): 32551
Paint and Coating Manufacturing
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: ILD005456439
EPA Region: 05
Area Name: ENTIRE FACILITY
Actual Date: 07/16/1993
Action: CA016
NAICS Code(s): 32551
Paint and Coating Manufacturing
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: ILD005456439
EPA Region: 05
Area Name: ENTIRE FACILITY
Actual Date: 07/20/2001
Action: CA005EE
NAICS Code(s): 32551
Paint and Coating Manufacturing
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: ILD005456439
EPA Region: 05
Area Name: ENTIRE FACILITY
Actual Date: 07/22/1998
Action: CA077

SHERWIN WILLIAMS CO (Continued) **1000371369**

NAICS Code(s):	32551 Paint and Coating Manufacturing
Original schedule date:	Not reported
Schedule end date:	Not reported

EPA ID:	ILD005456439
EPA Region:	05
Area Name:	ENTIRE FACILITY
Actual Date:	08/25/2004
Action:	CA750YE - Migration of Contaminated Groundwater under Control, Yes, Migration of Contaminated Groundwater Under Control has been verified
NAICS Code(s):	32551 Paint and Coating Manufacturing
Original schedule date:	Not reported
Schedule end date:	Not reported

EPA ID:	ILD005456439
EPA Region:	05
Area Name:	ENTIRE FACILITY
Actual Date:	08/25/2004
Action:	CA725YE - Current Human Exposures Under Control, Yes, Current Human Exposures Under Control has been verified
NAICS Code(s):	32551 Paint and Coating Manufacturing
Original schedule date:	Not reported
Schedule end date:	Not reported

EPA ID:	ILD005456439
EPA Region:	05
Area Name:	ENTIRE FACILITY
Actual Date:	08/28/1997
Action:	CA750IN - Migration of Contaminated Groundwater under Control, More information is needed to make a determination
NAICS Code(s):	32551 Paint and Coating Manufacturing
Original schedule date:	Not reported
Schedule end date:	Not reported

EPA ID:	ILD005456439
EPA Region:	05
Area Name:	ENTIRE FACILITY
Actual Date:	08/28/1997
Action:	CA725IN - Current Human Exposures Under Control, More information is needed to make a determination
NAICS Code(s):	32551 Paint and Coating Manufacturing
Original schedule date:	Not reported
Schedule end date:	Not reported

EPA ID:	ILD005456439
EPA Region:	05
Area Name:	ENTIRE FACILITY
Actual Date:	09/27/1991
Action:	CA075HI - CA Prioritization, Facility or area was assigned a high corrective action priority
NAICS Code(s):	32551 Paint and Coating Manufacturing

SHERWIN WILLIAMS CO (Continued) **1000371369**

Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: ILD005456439
EPA Region: 05
Area Name: ENTIRE FACILITY
Actual Date: 09/28/1992
Action: CA086
NAICS Code(s): 32551
Paint and Coating Manufacturing
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: ILD005456439
EPA Region: 05
Area Name: ENTIRE FACILITY
Actual Date: 10/28/1998
Action: CA150 - RFI Workplan Approved
NAICS Code(s): 32551
Paint and Coating Manufacturing
Original schedule date: 05/01/2000
Schedule end date: Not reported

EPA ID: ILD005456439
EPA Region: 05
Area Name: ENTIRE FACILITY
Actual Date: 11/06/1997
Action: CA100DC - RFI Imposition, Focused data collection required for stabilization evaluation
NAICS Code(s): 32551
Paint and Coating Manufacturing
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: ILD005456439
EPA Region: 05
Area Name: ENTIRE FACILITY
Actual Date: 12/06/1999
Action: CA200 - RFI Approved
NAICS Code(s): 32551
Paint and Coating Manufacturing
Original schedule date: 05/01/2002
Schedule end date: Not reported

RCRA-TSDF:
Date form received by agency: 03/01/2010
Facility name: SHERWIN WILLIAMS CO
Facility address: 11541 S CHAMPLAIN AVE
CHICAGO, IL 60628
EPA ID: ILD005456439
Mailing address: 101 PROSPECT AVE NW-4M
CLEVELAND, OH 441151075
Contact: PAUL BARDING
Contact address: Not reported
Not reported
Contact country: Not reported
Contact telephone: (216) 515-4629

SHERWIN WILLIAMS CO (Continued) **1000371369**

Contact email: Not reported
EPA Region: 05
Land type: Private
Classification: TSDF
Description: Handler is engaged in the treatment, storage or disposal of hazardous waste
Classification: Large Quantity Generator
Description: Handler: generates 1,000 kg or more of hazardous waste during any calendar month; or generates more than 1 kg of acutely hazardous waste during any calendar month; or generates more than 100 kg of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month; or generates 1 kg or less of acutely hazardous waste during any calendar month, and accumulates more than 1 kg of acutely hazardous waste at any time; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates more than 100 kg of that material at any time

Owner/Operator Summary:
Owner/operator name: SHERWIN WILLIAMS CO
Owner/operator address: 101 PROSPECT AVE NW
CLEVELAND, OH 44115
Owner/operator country: US
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: 01/01/1900
Owner/Op end date: Not reported

Owner/operator name: THE SHERWIN WILLIAMS CO
Owner/operator address: 101 PROSPECT AVE NW
CITY NOT REPORTED, OH 99998
Owner/operator country: Not reported
Owner/operator telephone: (216) 566-2000
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: THE SHERWIN WILLIAMS CO
Owner/operator address: 101 PROSPECT AVE NW
CLEVELAND, OH 44115
Owner/operator country: Not reported
Owner/operator telephone: (216) 566-2000
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: SHERWIN WILLIAMS CO
Owner/operator address: 101 PROSPECT AVE NW
CLEVELAND, OH 44115
Owner/operator country: US
Owner/operator telephone: Not reported
Legal status: Private

SHERWIN WILLIAMS CO (Continued) **1000371369**

Owner/Operator Type:	Owner
Owner/Op start date:	01/01/1900
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Historical Generators:

Date form received by agency:	03/01/2008
Facility name:	SHERWIN WILLIAMS CO
Classification:	Large Quantity Generator
Date form received by agency:	12/31/2007
Facility name:	SHERWIN WILLIAMS CO
Classification:	Large Quantity Generator
Date form received by agency:	08/14/2007
Facility name:	SHERWIN WILLIAMS CO
Classification:	Large Quantity Generator
Date form received by agency:	03/01/2006
Facility name:	SHERWIN WILLIAMS CO
Classification:	Large Quantity Generator
Date form received by agency:	03/01/2004
Facility name:	SHERWIN WILLIAMS CO
Classification:	Large Quantity Generator
Date form received by agency:	03/01/2002
Facility name:	SHERWIN WILLIAMS CO
Classification:	Large Quantity Generator
Date form received by agency:	03/01/2000
Facility name:	SHERWIN WILLIAMS CO
Classification:	Large Quantity Generator
Date form received by agency:	03/01/1998
Facility name:	SHERWIN WILLIAMS CO
Classification:	Large Quantity Generator
Date form received by agency:	03/01/1996
Facility name:	SHERWIN WILLIAMS CO

SHERWIN WILLIAMS CO (Continued) **1000371369**

Classification: Large Quantity Generator

Date form received by agency: 03/01/1994
Facility name: SHERWIN WILLIAMS CO
Classification: Large Quantity Generator

Date form received by agency: 10/19/1993
Facility name: SHERWIN WILLIAMS CO
Site name: SHERWIN WILLIAMS KENSINGTON DSC
Classification: Large Quantity Generator

Date form received by agency: 03/01/1992
Facility name: SHERWIN WILLIAMS CO
Classification: Large Quantity Generator

Date form received by agency: 03/01/1991
Facility name: SHERWIN WILLIAMS CO
Site name: SHERWIN WILLIAMS KENSINGTON DSC
Classification: Not a generator, verified

Date form received by agency: 03/01/1990
Facility name: SHERWIN WILLIAMS CO
Classification: Large Quantity Generator

Date form received by agency: 11/22/1980
Facility name: SHERWIN WILLIAMS CO
Site name: SHERWIN WILLIAMS KENSINGTON DSC
Classification: Not a generator, verified

Date form received by agency: 08/18/1980
Facility name: SHERWIN WILLIAMS CO
Site name: SHERWIN WILLIAMS KENSINGTON DSC
Classification: Large Quantity Generator

Hazardous Waste Summary:
Waste code: D001
Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Waste code: D003
Waste name: A MATERIAL IS CONSIDERED TO BE A REACTIVE HAZARDOUS WASTE IF IT IS NORMALLY UNSTABLE, REACTS VIOLENTLY WITH WATER, GENERATES TOXIC GASES WHEN EXPOSED TO WATER OR CORROSIVE MATERIALS, OR IF IT IS CAPABLE OF DETONATION OR EXPLOSION WHEN EXPOSED TO HEAT OR A FLAME. ONE EXAMPLE OF SUCH WASTE WOULD BY WASTE GUNPOWDER.

Waste code: F003
Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NON-HALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS

SHERWIN WILLIAMS CO (Continued) **1000371369**

CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS, AND, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste code:	F004
Waste name:	THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: CRESOLS AND CRESYLIC ACID, AND NITROBENZENE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
Waste code:	F005
Waste name:	THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
Waste code:	K083
Waste name:	DISTILLATION BOTTOMS FROM ANILINE PRODUCTION
Waste code:	D001
Waste name:	IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.
Waste code:	D004
Waste name:	ARSENIC
Waste code:	D007
Waste name:	CHROMIUM
Waste code:	D009
Waste name:	MERCURY
Waste code:	D035
Waste name:	METHYL ETHYL KETONE
Waste code:	F003
Waste name:	THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NON-HALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS, AND, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT

SHERWIN WILLIAMS CO (Continued) **1000371369**

MIXTURES.

Waste code: F005
Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste code: LABP
Waste name: LAB PACK

Waste code: D000
Waste name: Not Defined

Waste code: D001
Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Waste code: D002
Waste name: A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.

Waste code: D003
Waste name: A MATERIAL IS CONSIDERED TO BE A REACTIVE HAZARDOUS WASTE IF IT IS NORMALLY UNSTABLE, REACTS VIOLENTLY WITH WATER, GENERATES TOXIC GASES WHEN EXPOSED TO WATER OR CORROSIVE MATERIALS, OR IF IT IS CAPABLE OF DETONATION OR EXPLOSION WHEN EXPOSED TO HEAT OR A FLAME. ONE EXAMPLE OF SUCH WASTE WOULD BY WASTE GUNPOWDER.

Waste code: F001
Waste name: THE FOLLOWING SPENT HALOGENATED SOLVENTS USED IN DEGREASING: TETRACHLOROETHYLENE, TRICHLOROETHYLENE, METHYLENE CHLORIDE, 1,1,1-TRICHLOROETHANE, CARBON TETRACHLORIDE, AND CHLORINATED FLUOROCARBONS; ALL SPENT SOLVENT MIXTURES/BLENDS USED IN DEGREASING CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste code: F002
Waste name: THE FOLLOWING SPENT HALOGENATED SOLVENTS: TETRACHLOROETHYLENE, METHYLENE CHLORIDE, TRICHLOROETHYLENE, 1,1,1-TRICHLOROETHANE, CHLOROBENZENE, 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE, ORTHO-DICHLOROBENZENE, TRICHLOROFLUOROMETHANE, AND

SHERWIN WILLIAMS CO (Continued) **1000371369**

1,1,2-TRICHLOROETHANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE LISTED IN F001, F004, OR F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste code: F003
Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NON-HALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS, AND, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste code: F004
Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: CRESOLS AND CRESYLIC ACID, AND NITROBENZENE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste code: F005
Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste code: F017
Waste name: Not Defined

Waste code: F018
Waste name: Not Defined

Waste code: K078
Waste name: K078

Waste code: K079
Waste name: K079

Waste code: K081
Waste name: K081

Waste code: K082
Waste name: K082

Waste code: K083
Waste name: DISTILLATION BOTTOMS FROM ANILINE PRODUCTION

Waste code: P003

Map ID	Site	Database(s)	EPA ID Number
	SHERWIN WILLIAMS CO (Continued)		**1000371369**

Waste name: ACROLEIN

Waste code: P005
Waste name: ALLYL ALCOHOL

Waste code: P008
Waste name: 4-AMINOPYRIDINE

Waste code: P011
Waste name: ARSENIC OXIDE AS2O3

Waste code: P014
Waste name: BENZENETHIOL

Waste code: P019
Waste name: Not Defined

Waste code: P022
Waste name: CARBON DISULFIDE

Waste code: P028
Waste name: BENZENE, (CHLOROMETHYL)-

Waste code: P029
Waste name: COPPER CYANIDE

Waste code: P030
Waste name: CYANIDES (SOLUBLE CYANIDE SALTS), NOT OTHERWISE SPECIFIED

Waste code: P052
Waste name: Not Defined

Waste code: P053
Waste name: Not Defined

Waste code: P054
Waste name: AZIRIDINE

Waste code: P087
Waste name: OSMIUM OXIDE OSO4, (T-4)-

Waste code: P090
Waste name: Not Defined

Waste code: P095
Waste name: CARBONIC DICHLORIDE

Waste code: P100
Waste name: Not Defined

Waste code: P101
Waste name: ETHYL CYANIDE

Waste code: P105
Waste name: SODIUM AZIDE

Waste code: U001

SHERWIN WILLIAMS CO (Continued) **1000371369**

Waste name: ACETALDEHYDE (I)

Waste code: U002
Waste name: ACETONE (I)

Waste code: U003
Waste name: ACETONITRILE (I,T)

Waste code: U004
Waste name: ACETOPHENONE

Waste code: U006
Waste name: ACETYL CHLORIDE (C,R,T)

Waste code: U007
Waste name: ACRYLAMIDE

Waste code: U008
Waste name: ACRYLIC ACID (I)

Waste code: U009
Waste name: ACRYLONITRILE

Waste code: U012
Waste name: ANILINE (I,T)

Waste code: U013
Waste name: Not Defined

Waste code: U017
Waste name: BENZAL CHLORIDE

Waste code: U019
Waste name: BENZENE (I,T)

Waste code: U020
Waste name: BENZENESULFONIC ACID CHLORIDE (C,R)

Waste code: U021
Waste name: BENZIDINE

Waste code: U023
Waste name: BENZENE, (TRICHLOROMETHYL)-

Waste code: U028
Waste name: 1,2-BENZENEDICARBOXYLIC ACID, BIS(2-ETHYLHEXYL) ESTER

Waste code: U031
Waste name: 1-BUTANOL (I)

Waste code: U032
Waste name: CALCIUM CHROMATE

Waste code: U033
Waste name: CARBONIC DIFLUORIDE

Waste code: U037

SHERWIN WILLIAMS CO (Continued) **1000371369**

Waste name: BENZENE, CHLORO-

Waste code: U039
Waste name: P-CHLORO-M-CRESOL

Waste code: U048
Waste name: O-CHLOROPHENOL

Waste code: U052
Waste name: CRESOL (CRESYLIC ACID)

Waste code: U053
Waste name: 2-BUTENAL

Waste code: U054
Waste name: Not Defined

Waste code: U055
Waste name: BENZENE, (1-METHYLETHYL)- (I)

Waste code: U056
Waste name: BENZENE, HEXAHYDRO- (I)

Waste code: U057
Waste name: CYCLOHEXANONE (I)

Waste code: U067
Waste name: ETHANE, 1,2-DIBROMO-

Waste code: U069
Waste name: 1,2-BENZENEDICARBOXYLIC ACID, DIBUTYL ESTER

Waste code: U070
Waste name: BENZENE, 1,2-DICHLORO-

Waste code: U071
Waste name: BENZENE, 1,3-DICHLORO-

Waste code: U072
Waste name: BENZENE, 1,4-DICHLORO-

Waste code: U073
Waste name: [1,1’-BIPHENYL]-4,4’-DIAMINE, 3,3’-DICHLORO-

Waste code: U074
Waste name: 2-BUTENE, 1,4-DICHLORO- (I,T)

Waste code: U076
Waste name: ETHANE, 1,1-DICHLORO-

Waste code: U077
Waste name: ETHANE, 1,2-DICHLORO-

Waste code: U078
Waste name: 1,1-DICHLOROETHYLENE

Waste code: U080

SHERWIN WILLIAMS CO (Continued) **1000371369**

Waste name: METHANE, DICHLORO-

Waste code: U081
Waste name: 2,4-DICHLOROPHENOL

Waste code: U082
Waste name: 2,6-DICHLOROPHENOL

Waste code: U088
Waste name: 1,2-BENZENEDICARBOXYLIC ACID, DIETHYL ESTER

Waste code: U092
Waste name: DIMETHYLAMINE (I)

Waste code: U102
Waste name: 1,2-BENZENEDICARBOXYLIC ACID, DIMETHYL ESTER

Waste code: U103
Waste name: DIMETHYL SULFATE

Waste code: U104
Waste name: Not Defined

Waste code: U105
Waste name: BENZENE, 1-METHYL-2,4-DINITRO-

Waste code: U106
Waste name: BENZENE, 2-METHYL-1,3-DINITRO-

Waste code: U107
Waste name: 1,2-BENZENEDICARBOXYLIC ACID, DIOCTYL ESTER

Waste code: U108
Waste name: 1,4-DIETHYLENEOXIDE

Waste code: U110
Waste name: DIPROPYLAMINE (I)

Waste code: U112
Waste name: ACETIC ACID ETHYL ESTER (I)

Waste code: U113
Waste name: ETHYL ACRYLATE (I)

Waste code: U115
Waste name: ETHYLENE OXIDE (I,T)

Waste code: U117
Waste name: ETHANE, 1,1’-OXYBIS-(I)

Waste code: U118
Waste name: ETHYL METHACRYLATE

Waste code: U119
Waste name: ETHYL METHANESULFONATE

Waste code: U122

Map ID	Site	Database(s)	EPA ID Number

SHERWIN WILLIAMS CO (Continued) **1000371369**

Waste name: FORMALDEHYDE

Waste code: U123
Waste name: FORMIC ACID (C,T)

Waste code: U124
Waste name: FURAN (I)

Waste code: U125
Waste name: 2-FURANCARBOXALDEHYDE (I)

Waste code: U126
Waste name: GLYCIDYLALDEHYDE

Waste code: U127
Waste name: BENZENE, HEXACHLORO-

Waste code: U128
Waste name: 1,3-BUTADIENE, 1,1,2,3,4,4-HEXACHLORO-

Waste code: U130
Waste name: 1,3-CYCLOPENTADIENE, 1,2,3,4,5,5-HEXACHLORO-

Waste code: U131
Waste name: ETHANE, HEXACHLORO-

Waste code: U133
Waste name: HYDRAZINE (R,T)

Waste code: U134
Waste name: HYDROFLUORIC ACID (C,T)

Waste code: U135
Waste name: HYDROGEN SULFIDE

Waste code: U140
Waste name: ISOBUTYL ALCOHOL (I,T)

Waste code: U145
Waste name: LEAD PHOSPHATE

Waste code: U147
Waste name: 2,5-FURANDIONE

Waste code: U149
Waste name: MALONONITRILE

Waste code: U150
Waste name: MELPHALAN

Waste code: U151
Waste name: MERCURY

Waste code: U152
Waste name: METHACRYLONITRILE (I, T)

Waste code: U154

SHERWIN WILLIAMS CO (Continued) **1000371369**

Waste name: METHANOL (I)

Waste code: U155
Waste name: 1,2-ETHANEDIAMINE, N,N-DIMETHYL-N’-2-PYRIDINYL-N’-(2-THIENYLMETHYL)-

Waste code: U159
Waste name: 2-BUTANONE (I,T)

Waste code: U160
Waste name: 2-BUTANONE, PEROXIDE (R,T)

Waste code: U161
Waste name: METHYL ISOBUTYL KETONE (I)

Waste code: U162
Waste name: METHYL METHACRYLATE (I,T)

Waste code: U165
Waste name: NAPHTHALENE

Waste code: U167
Waste name: 1-NAPHTHALENAMINE

Waste code: U168
Waste name: 2-NAPHTHALENAMINE

Waste code: U169
Waste name: BENZENE, NITRO-

Waste code: U170
Waste name: P-NITROPHENOL

Waste code: U171
Waste name: 2-NITROPROPANE (I,T)

Waste code: U183
Waste name: BENZENE, PENTACHLORO-

Waste code: U184
Waste name: ETHANE, PENTACHLORO-

Waste code: U185
Waste name: BENZENE, PENTACHLORONITRO-

Waste code: U186
Waste name: 1-METHYLBUTADIENE (I)

Waste code: U187
Waste name: ACETAMIDE, N-(4-ETHOXYPHENYL)-

Waste code: U188
Waste name: PHENOL

Waste code: U190
Waste name: 1,3-ISOBENZOFURANDIONE

Waste code: U194

SHERWIN WILLIAMS CO (Continued) **1000371369**

Waste name: 1-PROPANAMINE (I,T)

Waste code: U196
Waste name: PYRIDINE

Waste code: U201
Waste name: 1,3-BENZENEDIOL

Waste code: U202
Waste name: 1,2-BENZISOTHIAZOL-3(2H)-ONE, 1,1-DIOXIDE, & SALTS

Waste code: U207
Waste name: BENZENE, 1,2,4,5-TETRACHLORO-

Waste code: U208
Waste name: ETHANE, 1,1,1,2-TETRACHLORO-

Waste code: U209
Waste name: ETHANE, 1,1,2,2-TETRACHLORO-

Waste code: U210
Waste name: ETHENE, TETRACHLORO-

Waste code: U211
Waste name: CARBON TETRACHLORIDE

Waste code: U212
Waste name: Not Defined

Waste code: U213
Waste name: FURAN, TETRAHYDRO-(I)

Waste code: U218
Waste name: ETHANETHIOAMIDE

Waste code: U220
Waste name: BENZENE, METHYL-

Waste code: U221
Waste name: BENZENEDIAMINE, AR-METHYL-

Waste code: U223
Waste name: BENZENE, 1,3-DIISOCYANATOMETHYL- (R,T)

Waste code: U225
Waste name: BROMOFORM

Waste code: U226
Waste name: ETHANE, 1,1,1-TRICHLORO-

Waste code: U227
Waste name: ETHANE, 1,1,2-TRICHLORO-

Waste code: U228
Waste name: ETHENE, TRICHLORO-

Waste code: U229

SHERWIN WILLIAMS CO (Continued) **1000371369**

Waste name: Not Defined

Waste code: U230
Waste name: Not Defined

Waste code: U231
Waste name: Not Defined

Waste code: U232
Waste name: Not Defined

Waste code: U234
Waste name: BENZENE, 1,3,5-TRINITRO-

Waste code: U238
Waste name: CARBAMIC ACID, ETHYL ESTER

Waste code: U239
Waste name: BENZENE, DIMETHYL- (I,T)

Biennial Reports:

Last Biennial Reporting Year: 2011

Annual Waste Handled:
Waste code: D001
Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.
Amount (Lbs): 256148.7

Waste code: D004
Waste name: ARSENIC
Amount (Lbs): 289819.8

Waste code: D007
Waste name: CHROMIUM
Amount (Lbs): 289819.8

Waste code: D009
Waste name: MERCURY
Amount (Lbs): 216

Waste code: D035
Waste name: METHYL ETHYL KETONE
Amount (Lbs): 256148.7

Waste code: F003
Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NON-HALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NON-HALOGENATED

SHERWIN WILLIAMS CO (Continued) **1000371369**

SOLVENTS, AND, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
Amount (Lbs): 256148.7

Waste code: F005
Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
Amount (Lbs): 256148.7

Waste code: LABP
Waste name: LAB PACK
Amount (Lbs): 7599.3

Corrective Action Summary:
Event date: 07/06/1989
Event: RFA Completed, Assessment was an RFA.

Event date: 07/06/1990
Event: RFA Determination Of Need For An RFI, RFI is Necessary;

Event date: 06/06/1991
Event: CA077

Event date: 09/27/1991
Event: CA Prioritization, Facility or area was assigned a high corrective action priority.

Event date: 09/28/1992
Event: CA086

Event date: 07/16/1993
Event: CA016

Event date: 03/31/1994
Event: CA Prioritization, Facility or area was assigned a high corrective action priority.

Event date: 08/28/1997
Event: Current Human Exposures under Control, More information is needed to make a determination.

Event date: 08/28/1997
Event: Igration of Contaminated Groundwater under Control, More information is needed to make a determination.

Event date: 11/06/1997
Event: RFI Imposition, Focused data collection required for stabilization evaluation.

SHERWIN WILLIAMS CO (Continued) **1000371369**

Event date:	03/04/1998
Event:	RFI Workplan Received
Event date:	03/05/1998
Event:	RFI Workplan Received
Event date:	03/26/1998
Event:	CA077
Event date:	07/22/1998
Event:	CA077
Event date:	10/28/1998
Event:	RFI Workplan Approved
Event date:	12/06/1999
Event:	RFI Approved
Event date:	07/20/2001
Event:	CA005EE
Event date:	08/25/2004
Event:	Current Human Exposures under Control, Yes, Current Human Exposures Under Control has been verified. Based on a review of information contained in the EI determination, current human exposures are expected to be under control at the facility under current and reasonably expected conditions. This determination will be re-evaluated when the Agency/State becomes aware of significant changes at the facility.
Event date:	08/25/2004
Event:	Igration of Contaminated Groundwater under Control, Yes, Migration of Contaminated Groundwater Under Control has been verified. Based on a review of information contained in the EI determination, it has been determined that migration of contaminated groundwater is under control at the facility. Specifically, this determination indicates that the migration of contaminated groundwater is under control, and that monitoring will be conducted to confirm that contaminated groundwater remains within the existing area of contaminated groundwater. This determination will be re-evaluated when the Agency becomes aware of significant changes at the facility.
Event date:	01/22/2007
Event:	Date For Remedy Selection (CM Imposed)

Facility Has Received Notices of Violations:

Regulation violated:	Not reported
Area of violation:	TSD IS-Manifest/Records/Reporting
Date violation determined:	01/23/2007
Date achieved compliance:	Not reported
Violation lead agency:	State
Enforcement action:	Not reported
Enforcement action date:	Not reported
Enf. disposition status:	Not reported
Enf. disp. status date:	Not reported
Enforcement lead agency:	Not reported
Proposed penalty amount:	Not reported

SHERWIN WILLIAMS CO (Continued) **1000371369**

Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: Federal or State Statute
Date violation determined: 01/23/2007
Date achieved compliance: Not reported
Violation lead agency: State
Enforcement action: VIOLATION NOTICE (VN)
Enforcement action date: 04/09/2008
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: Federal or State Statute
Date violation determined: 01/23/2007
Date achieved compliance: Not reported
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: TSD IS-Manifest/Records/Reporting
Date violation determined: 01/23/2007
Date achieved compliance: Not reported
Violation lead agency: State
Enforcement action: VIOLATION NOTICE (VN)
Enforcement action date: 04/09/2008
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: SR - 724.197
Area of violation: TSD IS-Ground-Water Monitoring
Date violation determined: 08/18/1995
Date achieved compliance: 11/06/1997
Violation lead agency: State
Enforcement action: VIOLATION NOTICE (VN)
Enforcement action date: 11/13/1995
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported

SHERWIN WILLIAMS CO (Continued) **1000371369**

Paid penalty amount: Not reported

Regulation violated: SR - 722.134(a)
Area of violation: Generators - Pre-transport
Date violation determined: 09/22/1994
Date achieved compliance: 02/14/1995
Violation lead agency: State
Enforcement action: VIOLATION NOTICE (VN)
Enforcement action date: 10/24/1994
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: SR - 35 IAC 725.116
Area of violation: TSD - General
Date violation determined: 02/14/1992
Date achieved compliance: 11/06/1997
Violation lead agency: EPA
Enforcement action: FINAL CIVIL JUDICIAL ACTION FOR COMPLIANCE AND/OR MONETARY PENALTY
Enforcement action date: 11/06/1997
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: 4700000
Paid penalty amount: 4700000

Regulation violated: SR - 35 IAC 703.181
Area of violation: TSD - General
Date violation determined: 02/14/1992
Date achieved compliance: 11/06/1997
Violation lead agency: EPA
Enforcement action: FINAL CIVIL JUDICIAL ACTION FOR COMPLIANCE AND/OR MONETARY PENALTY
Enforcement action date: 11/06/1997
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: 4700000
Paid penalty amount: 4700000

Regulation violated: SR - 35 IAC 725.213
Area of violation: TSD - Closure/Post-Closure
Date violation determined: 02/14/1992
Date achieved compliance: 11/06/1997
Violation lead agency: EPA
Enforcement action: INITIAL CIVIL JUDICIAL ACTION FOR COMPLIANCE AND/OR MONETARY PENALTY
Enforcement action date: 07/16/1993
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

SHERWIN WILLIAMS CO (Continued) **1000371369**

Regulation violated: SR - 35 IAC 702.120
Area of violation: Permits - Application
Date violation determined: 02/14/1992
Date achieved compliance: 11/06/1997
Violation lead agency: EPA
Enforcement action: FINAL CIVIL JUDICIAL ACTION FOR COMPLIANCE AND/OR MONETARY PENALTY
Enforcement action date: 11/06/1997
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: 4700000
Paid penalty amount: 4700000

Regulation violated: SR - 35 IAC 725.273
Area of violation: TSD - Container Use and Management
Date violation determined: 02/14/1992
Date achieved compliance: 11/06/1997
Violation lead agency: EPA
Enforcement action: INITIAL CIVIL JUDICIAL ACTION FOR COMPLIANCE AND/OR MONETARY PENALTY
Enforcement action date: 07/16/1993
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: SR - 35 IAC 722.111
Area of violation: Generators - General
Date violation determined: 02/14/1992
Date achieved compliance: 11/06/1997
Violation lead agency: EPA
Enforcement action: FINAL CIVIL JUDICIAL ACTION FOR COMPLIANCE AND/OR MONETARY PENALTY
Enforcement action date: 11/06/1997
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: 4700000
Paid penalty amount: 4700000

Regulation violated: SR - 35 IAC 725.243(e)(5)
Area of violation: TSD - Financial Requirements
Date violation determined: 02/14/1992
Date achieved compliance: 11/06/1997
Violation lead agency: EPA
Enforcement action: FINAL CIVIL JUDICIAL ACTION FOR COMPLIANCE AND/OR MONETARY PENALTY
Enforcement action date: 11/06/1997
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: 4700000
Paid penalty amount: 4700000

Regulation violated: SR - 35 IAC 722.134(c)(i)(i)(i)

SHERWIN WILLIAMS CO (Continued) **1000371369**

Area of violation:	Generators - General
Date violation determined:	02/14/1992
Date achieved compliance:	11/06/1997
Violation lead agency:	EPA
Enforcement action:	FINAL CIVIL JUDICIAL ACTION FOR COMPLIANCE AND/OR MONETARY PENALTY
Enforcement action date:	11/06/1997
Enf. disposition status:	Not reported
Enf. disp. status date:	Not reported
Enforcement lead agency:	EPA
Proposed penalty amount:	Not reported
Final penalty amount:	4700000
Paid penalty amount:	4700000

Regulation violated:	SR - 35 IAC 725.151
Area of violation:	TSD - Contingency Plan and Emergency Procedures
Date violation determined:	02/14/1992
Date achieved compliance:	11/06/1997
Violation lead agency:	EPA
Enforcement action:	FINAL CIVIL JUDICIAL ACTION FOR COMPLIANCE AND/OR MONETARY PENALTY
Enforcement action date:	11/06/1997
Enf. disposition status:	Not reported
Enf. disp. status date:	Not reported
Enforcement lead agency:	EPA
Proposed penalty amount:	Not reported
Final penalty amount:	4700000
Paid penalty amount:	4700000

Regulation violated:	SR - 35 IAC 725.151
Area of violation:	TSD - Contingency Plan and Emergency Procedures
Date violation determined:	02/14/1992
Date achieved compliance:	11/06/1997
Violation lead agency:	EPA
Enforcement action:	INITIAL CIVIL JUDICIAL ACTION FOR COMPLIANCE AND/OR MONETARY PENALTY
Enforcement action date:	07/16/1993
Enf. disposition status:	Not reported
Enf. disp. status date:	Not reported
Enforcement lead agency:	EPA
Proposed penalty amount:	Not reported
Final penalty amount:	Not reported
Paid penalty amount:	Not reported

Regulation violated:	SR - 35 IAC 725.291
Area of violation:	TSD - Tank System Standards
Date violation determined:	02/14/1992
Date achieved compliance:	11/06/1997
Violation lead agency:	EPA
Enforcement action:	FINAL CIVIL JUDICIAL ACTION FOR COMPLIANCE AND/OR MONETARY PENALTY
Enforcement action date:	11/06/1997
Enf. disposition status:	Not reported
Enf. disp. status date:	Not reported
Enforcement lead agency:	EPA
Proposed penalty amount:	Not reported
Final penalty amount:	4700000
Paid penalty amount:	4700000

Regulation violated:	SR - 35 IAC 725.212
Area of violation:	TSD - Closure/Post-Closure

SHERWIN WILLIAMS CO (Continued) **1000371369**

Date violation determined: 02/14/1992
Date achieved compliance: 11/06/1997
Violation lead agency: EPA
Enforcement action: FINAL CIVIL JUDICIAL ACTION FOR COMPLIANCE AND/OR MONETARY PENALTY
Enforcement action date: 11/06/1997
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: 4700000
Paid penalty amount: 4700000

Regulation violated: SR - 35 IAC 725.291
Area of violation: TSD - Tank System Standards
Date violation determined: 02/14/1992
Date achieved compliance: 11/06/1997
Violation lead agency: EPA
Enforcement action: INITIAL CIVIL JUDICIAL ACTION FOR COMPLIANCE AND/OR MONETARY PENALTY
Enforcement action date: 07/16/1993
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: SR - 35 IAC 728.107
Area of violation: LDR - General
Date violation determined: 02/14/1992
Date achieved compliance: 11/06/1997
Violation lead agency: EPA
Enforcement action: FINAL CIVIL JUDICIAL ACTION FOR COMPLIANCE AND/OR MONETARY PENALTY
Enforcement action date: 11/06/1997
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: 4700000
Paid penalty amount: 4700000

Regulation violated: SR - 35 IAC 702.120
Area of violation: Permits - Application
Date violation determined: 02/14/1992
Date achieved compliance: 11/06/1997
Violation lead agency: EPA
Enforcement action: INITIAL CIVIL JUDICIAL ACTION FOR COMPLIANCE AND/OR MONETARY PENALTY
Enforcement action date: 07/16/1993
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: SR - 35 IAC 725.242
Area of violation: TSD - Closure/Post-Closure
Date violation determined: 02/14/1992

SHERWIN WILLIAMS CO (Continued) **1000371369**

Date achieved compliance: 11/06/1997
Violation lead agency: EPA
Enforcement action: INITIAL CIVIL JUDICIAL ACTION FOR COMPLIANCE AND/OR MONETARY PENALTY
Enforcement action date: 07/16/1993
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: SR - 35 IAC 725.243(e)(5)
Area of violation: TSD - Financial Requirements
Date violation determined: 02/14/1992
Date achieved compliance: 11/06/1997
Violation lead agency: EPA
Enforcement action: INITIAL CIVIL JUDICIAL ACTION FOR COMPLIANCE AND/OR MONETARY PENALTY
Enforcement action date: 07/16/1993
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: SR - 35 IAC 722.134(c)(i)(i)(i)
Area of violation: Generators - General
Date violation determined: 02/14/1992
Date achieved compliance: 11/06/1997
Violation lead agency: EPA
Enforcement action: INITIAL CIVIL JUDICIAL ACTION FOR COMPLIANCE AND/OR MONETARY PENALTY
Enforcement action date: 07/16/1993
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: SR - 35 IAC 725.295
Area of violation: TSD - Tank System Standards
Date violation determined: 02/14/1992
Date achieved compliance: 11/06/1997
Violation lead agency: EPA
Enforcement action: FINAL CIVIL JUDICIAL ACTION FOR COMPLIANCE AND/OR MONETARY PENALTY
Enforcement action date: 11/06/1997
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: 4700000
Paid penalty amount: 4700000

Regulation violated: SR - 35 IAC 725.115(b) 1(d)
Area of violation: TSD - General
Date violation determined: 02/14/1992
Date achieved compliance: 11/06/1997

SHERWIN WILLIAMS CO (Continued) **1000371369**

Violation lead agency: EPA
Enforcement action: FINAL CIVIL JUDICIAL ACTION FOR COMPLIANCE AND/OR MONETARY PENALTY
Enforcement action date: 11/06/1997
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: 4700000
Paid penalty amount: 4700000

Regulation violated: SR - 35 IAC 725.115(b) 1(d)
Area of violation: TSD - General
Date violation determined: 02/14/1992
Date achieved compliance: 11/06/1997
Violation lead agency: EPA
Enforcement action: INITIAL CIVIL JUDICIAL ACTION FOR COMPLIANCE AND/OR MONETARY PENALTY
Enforcement action date: 07/16/1993
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: SR - 35 IAC 703.181
Area of violation: TSD - General
Date violation determined: 02/14/1992
Date achieved compliance: 11/06/1997
Violation lead agency: EPA
Enforcement action: INITIAL CIVIL JUDICIAL ACTION FOR COMPLIANCE AND/OR MONETARY PENALTY
Enforcement action date: 07/16/1993
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: SR - 35 IAC 725.213
Area of violation: TSD - Closure/Post-Closure
Date violation determined: 02/14/1992
Date achieved compliance: 11/06/1997
Violation lead agency: EPA
Enforcement action: FINAL CIVIL JUDICIAL ACTION FOR COMPLIANCE AND/OR MONETARY PENALTY
Enforcement action date: 11/06/1997
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: 4700000
Paid penalty amount: 4700000

Regulation violated: SR - 35 IAC 725.242
Area of violation: TSD - Closure/Post-Closure
Date violation determined: 02/14/1992
Date achieved compliance: 11/06/1997
Violation lead agency: EPA

SHERWIN WILLIAMS CO (Continued) **1000371369**

Enforcement action: FINAL CIVIL JUDICIAL ACTION FOR COMPLIANCE AND/OR MONETARY PENALTY
Enforcement action date: 11/06/1997
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: 4700000
Paid penalty amount: 4700000

Regulation violated: SR - 35 IAC 722.120
Area of violation: TSD - Manifest/Records/Reporting
Date violation determined: 02/14/1992
Date achieved compliance: 11/06/1997
Violation lead agency: EPA
Enforcement action: FINAL CIVIL JUDICIAL ACTION FOR COMPLIANCE AND/OR MONETARY PENALTY
Enforcement action date: 11/06/1997
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: 4700000
Paid penalty amount: 4700000

Regulation violated: SR - 35 IAC 722.120
Area of violation: TSD - Manifest/Records/Reporting
Date violation determined: 02/14/1992
Date achieved compliance: 11/06/1997
Violation lead agency: EPA
Enforcement action: INITIAL CIVIL JUDICIAL ACTION FOR COMPLIANCE AND/OR MONETARY PENALTY
Enforcement action date: 07/16/1993
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: SR - 35 IAC 725.116
Area of violation: TSD - General
Date violation determined: 02/14/1992
Date achieved compliance: 11/06/1997
Violation lead agency: EPA
Enforcement action: INITIAL CIVIL JUDICIAL ACTION FOR COMPLIANCE AND/OR MONETARY PENALTY
Enforcement action date: 07/16/1993
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: SR - 35 IAC 722.111
Area of violation: Generators - General
Date violation determined: 02/14/1992
Date achieved compliance: 11/06/1997
Violation lead agency: EPA
Enforcement action: INITIAL CIVIL JUDICIAL ACTION FOR COMPLIANCE AND/OR MONETARY PENALTY

SHERWIN WILLIAMS CO (Continued) **1000371369**

Enforcement action date: 07/16/1993
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: SR - 35 IAC 725.212
Area of violation: TSD - Closure/Post-Closure
Date violation determined: 02/14/1992
Date achieved compliance: 11/06/1997
Violation lead agency: EPA
Enforcement action: INITIAL CIVIL JUDICIAL ACTION FOR COMPLIANCE AND/OR MONETARY PENALTY
Enforcement action date: 07/16/1993
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: SR - 35 IAC 725.113(b)
Area of violation: TSD - General
Date violation determined: 02/14/1992
Date achieved compliance: 11/06/1997
Violation lead agency: EPA
Enforcement action: FINAL CIVIL JUDICIAL ACTION FOR COMPLIANCE AND/OR MONETARY PENALTY
Enforcement action date: 11/06/1997
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: 4700000
Paid penalty amount: 4700000

Regulation violated: SR - 35 IAC 728.107
Area of violation: LDR - General
Date violation determined: 02/14/1992
Date achieved compliance: 11/06/1997
Violation lead agency: EPA
Enforcement action: INITIAL CIVIL JUDICIAL ACTION FOR COMPLIANCE AND/OR MONETARY PENALTY
Enforcement action date: 07/16/1993
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: SR - 35 IAC 725.247(f)(5)
Area of violation: TSD - Financial Requirements
Date violation determined: 02/14/1992
Date achieved compliance: 11/06/1997
Violation lead agency: EPA
Enforcement action: INITIAL CIVIL JUDICIAL ACTION FOR COMPLIANCE AND/OR MONETARY PENALTY
Enforcement action date: 07/16/1993

SHERWIN WILLIAMS CO (Continued) **1000371369**

Enf. disposition status:	Not reported
Enf. disp. status date:	Not reported
Enforcement lead agency:	EPA
Proposed penalty amount:	Not reported
Final penalty amount:	Not reported
Paid penalty amount:	Not reported

Regulation violated:	SR - 35 IAC 725.247(f)(5)
Area of violation:	TSD - Financial Requirements
Date violation determined:	02/14/1992
Date achieved compliance:	11/06/1997
Violation lead agency:	EPA
Enforcement action:	FINAL CIVIL JUDICIAL ACTION FOR COMPLIANCE AND/OR MONETARY PENALTY
Enforcement action date:	11/06/1997
Enf. disposition status:	Not reported
Enf. disp. status date:	Not reported
Enforcement lead agency:	EPA
Proposed penalty amount:	Not reported
Final penalty amount:	4700000
Paid penalty amount:	4700000

Regulation violated:	SR - 35 IAC 725.273
Area of violation:	TSD - Container Use and Management
Date violation determined:	02/14/1992
Date achieved compliance:	11/06/1997
Violation lead agency:	EPA
Enforcement action:	FINAL CIVIL JUDICIAL ACTION FOR COMPLIANCE AND/OR MONETARY PENALTY
Enforcement action date:	11/06/1997
Enf. disposition status:	Not reported
Enf. disp. status date:	Not reported
Enforcement lead agency:	EPA
Proposed penalty amount:	Not reported
Final penalty amount:	4700000
Paid penalty amount:	4700000

Regulation violated:	SR - 35 IAC 725.295
Area of violation:	TSD - Tank System Standards
Date violation determined:	02/14/1992
Date achieved compliance:	11/06/1997
Violation lead agency:	EPA
Enforcement action:	INITIAL CIVIL JUDICIAL ACTION FOR COMPLIANCE AND/OR MONETARY PENALTY
Enforcement action date:	07/16/1993
Enf. disposition status:	Not reported
Enf. disp. status date:	Not reported
Enforcement lead agency:	EPA
Proposed penalty amount:	Not reported
Final penalty amount:	Not reported
Paid penalty amount:	Not reported

Regulation violated:	SR - 35 IAC 725.113(b)
Area of violation:	TSD - General
Date violation determined:	02/14/1992
Date achieved compliance:	11/06/1997
Violation lead agency:	EPA
Enforcement action:	INITIAL CIVIL JUDICIAL ACTION FOR COMPLIANCE AND/OR MONETARY PENALTY
Enforcement action date:	07/16/1993
Enf. disposition status:	Not reported

SHERWIN WILLIAMS CO (Continued) **1000371369**

Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: SR - 722.134(a)
Area of violation: Generators - Pre-transport
Date violation determined: 08/05/1987
Date achieved compliance: 02/05/1988
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 11/06/1987
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: SR - 722.111
Area of violation: Generators - General
Date violation determined: 10/10/1986
Date achieved compliance: 02/26/1987
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 12/23/1986
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: SR - 725.193(d)(4)
Area of violation: TSD IS-Ground-Water Monitoring
Date violation determined: 03/31/1986
Date achieved compliance: 08/07/1986
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 04/03/1986
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: SR - 725.242(b)
Area of violation: TSD - Financial Requirements
Date violation determined: 03/27/1986
Date achieved compliance: 07/18/1986
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 04/01/1986
Enf. disposition status: Not reported
Enf. disp. status date: Not reported

SHERWIN WILLIAMS CO (Continued) **1000371369**

Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: SR - 725.243
Area of violation: TSD - Financial Requirements
Date violation determined: 03/27/1986
Date achieved compliance: 07/18/1986
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 04/01/1986
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: SR - 725.131
Area of violation: TSD - Preparedness and Prevention
Date violation determined: 01/17/1986
Date achieved compliance: 10/21/1994
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: SR - 725.116
Area of violation: TSD - General Facility Standards
Date violation determined: 01/17/1986
Date achieved compliance: 10/21/1994
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: SR - 703.154
Area of violation: TSD - General
Date violation determined: 01/17/1986
Date achieved compliance: 10/21/1994
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported

SHERWIN WILLIAMS CO (Continued) **1000371369**

Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 04/25/1985
Date achieved compliance: 07/24/1985
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 05/10/1985
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 04/25/1985
Date achieved compliance: 05/05/1986
Violation lead agency: State
Enforcement action: VIOLATION NOTICE (VN)
Enforcement action date: 06/18/1985
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 04/25/1985
Date achieved compliance: 05/05/1986
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 05/10/1985
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 04/25/1985
Date achieved compliance: 07/24/1985
Violation lead agency: State
Enforcement action: VIOLATION NOTICE (VN)
Enforcement action date: 06/18/1985
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported

SHERWIN WILLIAMS CO (Continued) **1000371369**

Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 01/07/1985
Date achieved compliance: 06/04/1985
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 02/05/1985
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 01/07/1985
Date achieved compliance: 06/04/1985
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 01/07/1985
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 12/14/1984
Date achieved compliance: 12/20/1984
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 12/10/1984
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 09/19/1984
Date achieved compliance: 12/21/1984
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 11/15/1984
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported

SHERWIN WILLIAMS CO (Continued) **1000371369**

Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 09/19/1984
Date achieved compliance: 12/21/1984
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 09/20/1984
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 08/17/1984
Date achieved compliance: 12/21/1984
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 08/20/1984
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 08/17/1984
Date achieved compliance: 12/21/1984
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 09/20/1984
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 08/09/1984
Date achieved compliance: 09/13/1984
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 08/20/1984
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

SHERWIN WILLIAMS CO (Continued) **1000371369**

Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 07/16/1984
Date achieved compliance: 12/21/1984
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 07/19/1984
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 05/17/1984
Date achieved compliance: 12/21/1984
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 02/15/1984
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 02/15/1984
Date achieved compliance: 01/24/1985
Violation lead agency: EPA
Enforcement action: INITIAL 3008(A) COMPLIANCE
Enforcement action date: 03/28/1984
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: 9500
Final penalty amount: 9500
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 02/15/1984
Date achieved compliance: 01/24/1985
Violation lead agency: EPA
Enforcement action: FINAL 3008(A) COMPLIANCE ORDER
Enforcement action date: 07/30/1984
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: 9500
Final penalty amount: 9500
Paid penalty amount: Not reported

Regulation violated: SR - 725.191

SHERWIN WILLIAMS CO (Continued) **1000371369**

Area of violation: TSD IS-Ground-Water Monitoring
Date violation determined: 11/03/1983
Date achieved compliance: 04/06/1984
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 12/01/1983
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: SR - 725.194
Area of violation: TSD IS-Ground-Water Monitoring
Date violation determined: 11/03/1983
Date achieved compliance: 04/06/1984
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 12/01/1983
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: SR - 725.193
Area of violation: TSD IS-Ground-Water Monitoring
Date violation determined: 11/03/1983
Date achieved compliance: 04/06/1984
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 12/01/1983
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: SR - 725.192
Area of violation: TSD IS-Ground-Water Monitoring
Date violation determined: 11/03/1983
Date achieved compliance: 04/06/1984
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 12/01/1983
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Evaluation Action Summary:
Evaluation date: 10/14/2008

Map ID	Site	Database(s)	EPA ID Number

SHERWIN WILLIAMS CO (Continued) **1000371369**

Evaluation:	NOT A SIGNIFICANT NON-COMPLIER
Area of violation:	Not reported
Date achieved compliance:	Not reported
Evaluation lead agency:	State
Evaluation date:	07/31/2008
Evaluation:	NON-FINANCIAL RECORD REVIEW
Area of violation:	Federal or State Statute
Date achieved compliance:	Not reported
Evaluation lead agency:	State
Evaluation date:	07/31/2008
Evaluation:	NON-FINANCIAL RECORD REVIEW
Area of violation:	TSD IS-Manifest/Records/Reporting
Date achieved compliance:	Not reported
Evaluation lead agency:	State
Evaluation date:	07/31/2008
Evaluation:	SIGNIFICANT NON-COMPLIER
Area of violation:	Federal or State Statute
Date achieved compliance:	Not reported
Evaluation lead agency:	State
Evaluation date:	07/31/2008
Evaluation:	SIGNIFICANT NON-COMPLIER
Area of violation:	TSD IS-Manifest/Records/Reporting
Date achieved compliance:	Not reported
Evaluation lead agency:	State
Evaluation date:	06/04/2008
Evaluation:	NON-FINANCIAL RECORD REVIEW
Area of violation:	TSD IS-Manifest/Records/Reporting
Date achieved compliance:	Not reported
Evaluation lead agency:	State
Evaluation date:	06/04/2008
Evaluation:	NON-FINANCIAL RECORD REVIEW
Area of violation:	Federal or State Statute
Date achieved compliance:	Not reported
Evaluation lead agency:	State
Evaluation date:	03/25/2008
Evaluation:	FINANCIAL RECORD REVIEW
Area of violation:	Federal or State Statute
Date achieved compliance:	Not reported
Evaluation lead agency:	State
Evaluation date:	03/25/2008
Evaluation:	FINANCIAL RECORD REVIEW
Area of violation:	TSD IS-Manifest/Records/Reporting
Date achieved compliance:	Not reported
Evaluation lead agency:	State
Evaluation date:	07/24/2007
Evaluation:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation:	Not reported
Date achieved compliance:	Not reported

SHERWIN WILLIAMS CO (Continued) **1000371369**

Evaluation lead agency: State

Evaluation date: 01/23/2007
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: TSD IS-Manifest/Records/Reporting
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 01/23/2007
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: Federal or State Statute
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 07/03/2002
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 08/18/1995
Evaluation: GROUNDWATER MONITORING EVALUATION
Area of violation: TSD IS-Ground-Water Monitoring
Date achieved compliance: 11/06/1997
Evaluation lead agency: State

Evaluation date: 03/27/1995
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: TSD - Financial Requirements
Date achieved compliance: 11/06/1997
Evaluation lead agency: State

Evaluation date: 03/27/1995
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: TSD - Closure/Post-Closure
Date achieved compliance: 11/06/1997
Evaluation lead agency: State

Evaluation date: 01/18/1995
Evaluation: FOLLOW-UP INSPECTION
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 09/22/1994
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - Pre-transport
Date achieved compliance: 02/14/1995
Evaluation lead agency: State

Evaluation date: 09/22/1994
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 09/22/1994

SHERWIN WILLIAMS CO (Continued) **1000371369**

Evaluation: FOLLOW-UP INSPECTION
Area of violation: Generators - Pre-transport
Date achieved compliance: 02/14/1995
Evaluation lead agency: State

Evaluation date: 04/20/1994
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: TSD - Closure/Post-Closure
Date achieved compliance: 11/06/1997
Evaluation lead agency: State

Evaluation date: 04/20/1994
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: TSD - Financial Requirements
Date achieved compliance: 11/06/1997
Evaluation lead agency: State

Evaluation date: 02/14/1992
Evaluation: CASE DEVELOPMENT INSPECTION
Area of violation: TSD - Tank System Standards
Date achieved compliance: 11/06/1997
Evaluation lead agency: EPA

Evaluation date: 02/14/1992
Evaluation: CASE DEVELOPMENT INSPECTION
Area of violation: TSD - Contingency Plan and Emergency Procedures
Date achieved compliance: 11/06/1997
Evaluation lead agency: EPA

Evaluation date: 02/14/1992
Evaluation: CASE DEVELOPMENT INSPECTION
Area of violation: Permits - Application
Date achieved compliance: 11/06/1997
Evaluation lead agency: EPA

Evaluation date: 02/14/1992
Evaluation: CASE DEVELOPMENT INSPECTION
Area of violation: LDR - General
Date achieved compliance: 11/06/1997
Evaluation lead agency: EPA

Evaluation date: 02/14/1992
Evaluation: CASE DEVELOPMENT INSPECTION
Area of violation: TSD - Container Use and Management
Date achieved compliance: 11/06/1997
Evaluation lead agency: EPA

Evaluation date: 02/14/1992
Evaluation: CASE DEVELOPMENT INSPECTION
Area of violation: TSD - Closure/Post-Closure
Date achieved compliance: 11/06/1997
Evaluation lead agency: EPA

Evaluation date: 02/14/1992
Evaluation: CASE DEVELOPMENT INSPECTION
Area of violation: Generators - General
Date achieved compliance: 11/06/1997

SHERWIN WILLIAMS CO (Continued) **1000371369**

Evaluation lead agency: EPA

Evaluation date: 02/14/1992
Evaluation: CASE DEVELOPMENT INSPECTION
Area of violation: TSD - General
Date achieved compliance: 11/06/1997
Evaluation lead agency: EPA

Evaluation date: 02/14/1992
Evaluation: CASE DEVELOPMENT INSPECTION
Area of violation: TSD - Financial Requirements
Date achieved compliance: 11/06/1997
Evaluation lead agency: EPA

Evaluation date: 02/14/1992
Evaluation: CASE DEVELOPMENT INSPECTION
Area of violation: TSD - Manifest/Records/Reporting
Date achieved compliance: 11/06/1997
Evaluation lead agency: EPA

Evaluation date: 01/08/1988
Evaluation: FOLLOW-UP INSPECTION
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 08/05/1987
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - Pre-transport
Date achieved compliance: 02/05/1988
Evaluation lead agency: State

Evaluation date: 10/10/1986
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 02/26/1987
Evaluation lead agency: State

Evaluation date: 03/31/1986
Evaluation: NON-FINANCIAL RECORD REVIEW
Area of violation: TSD IS-Ground-Water Monitoring
Date achieved compliance: 08/07/1986
Evaluation lead agency: State

Evaluation date: 03/27/1986
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: TSD - Financial Requirements
Date achieved compliance: 07/18/1986
Evaluation lead agency: State

Evaluation date: 01/17/1986
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - General Facility Standards
Date achieved compliance: 10/21/1994
Evaluation lead agency: State

Evaluation date: 01/17/1986

SHERWIN WILLIAMS CO (Continued) **1000371369**

Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - Preparedness and Prevention
Date achieved compliance: 10/21/1994
Evaluation lead agency: State

Evaluation date: 01/17/1986
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - General
Date achieved compliance: 10/21/1994
Evaluation lead agency: State

Evaluation date: 04/25/1985
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 07/24/1985
Evaluation lead agency: State

Evaluation date: 04/25/1985
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 05/05/1986
Evaluation lead agency: State

Evaluation date: 01/07/1985
Evaluation: NON-FINANCIAL RECORD REVIEW
Area of violation: Generators - General
Date achieved compliance: 06/04/1985
Evaluation lead agency: State

Evaluation date: 12/14/1984
Evaluation: NON-FINANCIAL RECORD REVIEW
Area of violation: Generators - General
Date achieved compliance: 12/20/1984
Evaluation lead agency: State

Evaluation date: 10/23/1984
Evaluation: GROUNDWATER MONITORING EVALUATION
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 09/19/1984
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: Generators - General
Date achieved compliance: 12/21/1984
Evaluation lead agency: State

Evaluation date: 09/19/1984
Evaluation: COMPLIANCE SCHEDULE EVALUATION
Area of violation: Generators - General
Date achieved compliance: 12/21/1984
Evaluation lead agency: State

Evaluation date: 08/17/1984
Evaluation: COMPLIANCE SCHEDULE EVALUATION
Area of violation: Generators - General
Date achieved compliance: 12/21/1984

SHERWIN WILLIAMS CO (Continued) **1000371369**

Evaluation lead agency: State

Evaluation date: 08/17/1984
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: Generators - General
Date achieved compliance: 12/21/1984
Evaluation lead agency: State

Evaluation date: 08/09/1984
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 09/13/1984
Evaluation lead agency: State

Evaluation date: 07/16/1984
Evaluation: NON-FINANCIAL RECORD REVIEW
Area of violation: Generators - General
Date achieved compliance: 12/21/1984
Evaluation lead agency: State

Evaluation date: 07/16/1984
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: Generators - General
Date achieved compliance: 12/21/1984
Evaluation lead agency: State

Evaluation date: 05/17/1984
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: Generators - General
Date achieved compliance: 12/21/1984
Evaluation lead agency: State

Evaluation date: 02/15/1984
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: Generators - General
Date achieved compliance: 01/24/1985
Evaluation lead agency: EPA

Evaluation date: 11/03/1983
Evaluation: GROUNDWATER MONITORING EVALUATION
Area of violation: TSD IS-Ground-Water Monitoring
Date achieved compliance: 04/06/1984
Evaluation lead agency: State

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113 **SHERWIN-WILLIAMS COMPANY BOILERHOUSE COMPLEX** **SRP** **S111678029**
603 EAST KENSINGTON AVENUE **N/A**
CHICAGO, IL 60628

SRP:
IL EPA Id: 0316500003
US EPA Id: ILD005456439
Longitude: -87.60814
Latitude: 41.68350
Contact Name: Gordon Kuntz
Contact Address: 101 Prospect Avenue, NW
Contact Address2: Not reported
Contact City,St,Zip: Cleveland, OH 44115-
Contact Phone: (216) 566-2889
Date Enrolled: 02/21/2012

Map ID	Site	Database(s)	EPA ID Number

SHERWIN-WILLIAMS COMPANY BOILERHOUSE COMPLEX (Continued) **S111678029**

Point Of Contact:	Jennifer Troast
Consultant Company:	Weston Solutions
Consultant Address:	750 East Bunker Court
Consultant Address2:	Suite 500
Consultant City,St,Zip:	Vernon Hills, IL 60061-
Consultant Phone:	(847) 918-4068
Proj Mgr Assigned:	Hall
Sec. 4 Letter Date:	Not reported
NFR Recorded:	Not reported
Active:	True
Total Acres:	2.870
No Further Remediation Letter Dt:	Not reported
Remediation Applicant Co:	The Sherwin-Williams Company
Remediation Applicant Title:	Mr.
Remediation Applicant Name:	Not reported
Remediation Applicant Company:	Not reported
Remediation Applicant Address:	Not reported
Remediation Applicant Address 2:	Not reported
Remediation Applicant City,St,Zip:	Not reported
Illinois EPA:	Not reported
Site Name:	Not reported
NFR Letter:	Not reported
NFR Letter Date Recorded:	Not reported
Site Type:	Not reported
Comprehensive/Focused:	Not reported
Institutional Controls:	Not reported
Barrier:	Not reported
Worker Caution:	Not reported
Acres:	Not reported

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115 **US SCRAP** **SWF/LF** **1008113237**
391 E KENSINGTON **N/A**
CHICAGO, IL 60628

IL WMRC_LF:

Region:	WMRC
General:	Not reported
IEPA ID Number:	316000022
Municipal Waste:	Not reported
Provisional IEPA ID:	Not reported
Septic:	Not reported
NIPC Map Number:	135
Animal:	Not reported
Owner Name:	U S SCRAP
Pathological:	Not reported
Operator:	U S SCRAP
Industrial:	Not reported
PO Box:	Not reported
Foundry Sand:	Not reported
Incinerator Ash:	Not reported
Slag:	Not reported
Hazardous:	Not reported
Hazardous Liquid:	Not reported
Radiation:	Not reported
Demolition:	X
Lat/Long:	414000/873600
Landscaping:	Not reported

Map ID	Site	Database(s)	EPA ID Number
	US SCRAP (Continued)		**1008113237**

Oil Field:	Not reported
Primemer ID:	3
Special:	Not reported
Township:	37N
Other:	Not reported
Range:	14E
Unknown:	Not reported
Section:	27
Quarter Section1:	NW
Quarter Section2:	Not reported
Quarter Section3:	Not reported
Quarter Section4:	Not reported
IEPA:	X
ISGS:	Not reported
PollutionControlBoard:	Not reported
IDM&M:	Not reported
DPH:	Not reported
Operational Status:	CLOSED NO FINAL COVER
Local Agency:	Not reported
Permit Status:	UNPERMITTED UNAUTHORIZED
Agency:	NIPC
IEPA Permit Date:	10174
Source Other:	Not reported
Close Date:	73074
Reaction:	Not reported
RCRA Facility:	Not reported
Date Discover:	Not reported
GW Monitoring:	YES
Date Cleaned:	Not reported
FD Site:	Not reported
Offsite Waste:	Not reported
Landfill Size:	Not reported
Random Dump:	Not reported
Size Fill:	Not reported
Open Dump:	Not reported
Leachate Collected:	Not reported
Abandonment:	Not reported
Other:	Not reported
Recompacted Clay:	Not reported
In-situ Clay:	Not reported
Secured Containers:	Not reported
Combination:	Not reported
Landfill:	X
None:	Not reported
Incineration:	Not reported
Other:	Not reported
Survace Impoundment:	Not reported
Land Application:	Not reported

115 **U.S. SCRAP** **SSU** **S101467254**
391 EAST KENSINGTON **N/A**
CHICAGO, IL 60628

SSU:
Facility ID: 0316000022
Facility Type: Manufacturer - Industrial
Lat/Long: 41.6839332 / -87.613449
Directions: Take I-55 North.
Region: Des Plaines
Current Program: USEPA
Project Manager: Nickell
Community Relations: McGinnis
SSU Status: Transferred
US EPA Id: ILD980679484
FOS: NA
Year Completed: Not reported
Year Entered: Not reported
Site Size: 9

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116 **GONNELLA BAKING CO** **RCRA-SQG** **1001218857**
318 E KENSINGTON **ILR000049858**
CHICAGO, IL 60628

RCRA-SQG:
Date form received by agency: 04/07/1998
Facility name: GONNELLA BAKING CO
Facility address: 318 E KENSINGTON
CHICAGO, IL 60628
EPA ID: ILR000049858
Contact: HOUSTON BICKHEM
Contact address: 318 E KENSINGTON
CHICAGO, IL 60628
Contact country: US
Contact telephone: (773) 821-1783
Contact email: Not reported
EPA Region: 05
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:
Owner/operator name: GONNELA BAKING
Owner/operator address: 318 E KENSINGTON
CHICAGO, IL 60628
Owner/operator country: Not reported
Owner/operator telephone: (773) 821-1783
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No

GONNELLA BAKING CO (Continued) **1001218857**

Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Hazardous Waste Summary:
Waste code: D001
Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Waste code: D002
Waste name: A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.

Violation Status: No violations found

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117 **SPILLS** **S111895505**
162 E KENSINGTON AVE **N/A**
CHICAGO, IL

SPILLS:
Incident ID: 19960207
Incident Date: Not reported
Date Received: 02/07/1996
Facility Address: 162 E KENSINGTON AVE
Facility City: CHICAGO
PRP Name: KENSINGTON SERVICE STATION
AC: Not reported

Map ID	Site	Database(s)	EPA ID Number
117	**KENSINGTON SERV STATION** **162 E KENSINGTON** **CHICAGO, IL 60628**	**LUST**	**1001086793** **ILR000015131**

LUST:

Incident Num:	960207
IL EPA Id:	0316505018
Product:	Gasoline
IEMA Date:	02/07/1996
Project Manager:	NOT ASSIGNED
Project Manager Phone:	Not reported
Email:	Not reported
PRP Name:	Kensington Service Station
PRP Contact:	Hector Vasquez
PRP Address:	162 East Kensington Ave.
PRP City,St,Zip:	Chicago, IL 60628
PRP Phone:	Not reported
Site Classification:	Not reported
Section 57.5(g) Letter:	732
Date Section 57.5(g) Letter:	Not reported
Non LUST Determination Letter:	Not reported
20 Report Received:	Not reported
45 Report Received:	Not reported
NFA/NFR Letter:	**Not reported**
NFR Date Recorded:	Not reported

Map ID	Site	Database(s)	EPA ID Number
117	**KENSINGTON SERVICE STATION** **162 E KENSINGTON** **CHICAGO, IL 60473**	**UST**	**U003042181** **N/A**

UST:

Facility ID:	2034581
Facility Status:	CLOSED
Facility Type:	**GOLF COURSE**
Owner Name:	Kensington Service Station
Owner Id:	U0024426
Owner Address:	162 E Kensington
Owner City,St,Zip:	Chicago, IL 60473

Tank Number:	1
Tank Capacity:	2000
Tank Substance:	Gasoline
Last Used Date:	1/1/1983
OSFM First Notify Date:	11/30/1995
Tank Status:	**Removed**
Red Tag Issue Date:	Not reported
Install Date:	1/1/1901
Green Tag Decal:	**Not reported**
Green Tag Issue Date:	**Not reported**
Green Tag Expire Date:	**Not reported**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	Not reported

Tank Number:	2
Tank Capacity:	2000
Tank Substance:	Gasoline
Last Used Date:	1/1/1983
OSFM First Notify Date:	11/30/1995

KENSINGTON SERVICE STATION (Continued) **U003042181**

Tank Status: **Removed**
Red Tag Issue Date: Not reported
Install Date: 1/1/1901
Green Tag Decal: **Not reported**
Green Tag Issue Date: **Not reported**
Green Tag Expire Date: **Not reported**
Self Service Permit Inspection Date: **Not reported**
Self Service Permit Expire Date: **Not reported**
Fee Due: Not reported

Tank Number: 3
Tank Capacity: 2000
Tank Substance: Gasoline
Last Used Date: 1/1/1983
OSFM First Notify Date: 11/30/1995
Tank Status: **Removed**
Red Tag Issue Date: Not reported
Install Date: 1/1/1901
Green Tag Decal: **Not reported**
Green Tag Issue Date: **Not reported**
Green Tag Expire Date: **Not reported**
Self Service Permit Inspection Date: **Not reported**
Self Service Permit Expire Date: **Not reported**
Fee Due: Not reported

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118 **0707 CLARK SER STATION** **UST** **U000172648**
11555 S MICHIGAN AVE **N/A**
CHICAGO, IL 60628

UST:
Facility ID: 2010017
Facility Status: CLOSED
Facility Type: **NONE**
Owner Name: Clark Retail Enterprises, Inc.
Owner Id: U0003073
Owner Address: 3003 Butterfield Road, Suite 300
Owner City,St,Zip: Oak Brook, IL 60523

Tank Number: 1
Tank Capacity: 6000
Tank Substance: Gasoline
Last Used Date: Not reported
OSFM First Notify Date: 5/2/1986
Tank Status: **Removed**
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: **Not reported**
Green Tag Issue Date: **Not reported**
Green Tag Expire Date: **Not reported**
Self Service Permit Inspection Date: **Not reported**
Self Service Permit Expire Date: **Not reported**
Fee Due: Not reported

Tank Number: 2
Tank Capacity: 6000
Tank Substance: Gasoline

0707 CLARK SER STATION (Continued) **U000172648**

Last Used Date:	Not reported
OSFM First Notify Date:	5/2/1986
Tank Status:	**Removed**
Red Tag Issue Date:	Not reported
Install Date:	Not reported
Green Tag Decal:	**Not reported**
Green Tag Issue Date:	**Not reported**
Green Tag Expire Date:	**Not reported**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	Not reported

Tank Number:	3
Tank Capacity:	7500
Tank Substance:	Gasoline
Last Used Date:	Not reported
OSFM First Notify Date:	5/2/1986
Tank Status:	**Removed**
Red Tag Issue Date:	Not reported
Install Date:	Not reported
Green Tag Decal:	**Not reported**
Green Tag Issue Date:	**Not reported**
Green Tag Expire Date:	**Not reported**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	Not reported

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118 **CLARK OIL & REFINING** **LUST** **S104525658**
11555 SOUTH MICHIGAN AVE. **N/A**
CHICAGO, IL 60628

LUST:

Incident Num:	912512
IL EPA Id:	0316535008
Product:	Gasoline
IEMA Date:	09/05/1991
Project Manager:	Lowder
Project Manager Phone:	(217) 785-5734
Email:	Mike.Lowder@illinois.gov
PRP Name:	Clark Oil & Refining
PRP Contact:	Johnna VanKeuran
PRP Address:	8182 Maryland Ave.
PRP City,St,Zip:	Clayton, MO 63105-3721
PRP Phone:	3147520533
Site Classification:	Not reported
Section 57.5(g) Letter:	731
Date Section 57.5(g) Letter:	Not reported
Non LUST Determination Letter:	Not reported
20 Report Received:	Not reported
45 Report Received:	05/28/1992
NFA/NFR Letter:	**01/09/1995**
NFR Date Recorded:	Not reported

Map ID	Site	Database(s)	EPA ID Number
120	**MICHIGAN CITGO** **11600 S MICHIGAN AVE** **CHICAGO, IL 60628**	**UST**	**U001142786** **N/A**

UST:

Facility ID:	2017681
Facility Status:	ACTIVE
Facility Type:	**SELF-SERVICE STATION**
Owner Name:	Michigan Citgo, Inc.
Owner Id:	U0031233
Owner Address:	11600 S Michigan Ave
Owner City,St,Zip:	Chicago, IL 60628

Tank Number:	1
Tank Capacity:	12000
Tank Substance:	Gasoline
Last Used Date:	Not reported
OSFM First Notify Date:	11/10/1986
Tank Status:	**Currently in use**
Red Tag Issue Date:	Not reported
Install Date:	Not reported
Green Tag Decal:	**M003457**
Green Tag Issue Date:	**8/24/2011**
Green Tag Expire Date:	**12/31/2013**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	$0.00

Tank Number:	2
Tank Capacity:	15000
Tank Substance:	Gasoline
Last Used Date:	Not reported
OSFM First Notify Date:	11/10/1986
Tank Status:	**Currently in use**
Red Tag Issue Date:	Not reported
Install Date:	Not reported
Green Tag Decal:	**M003457**
Green Tag Issue Date:	**8/24/2011**
Green Tag Expire Date:	**12/31/2013**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	$0.00

Tank Number:	3
Tank Capacity:	12000
Tank Substance:	Gasoline
Last Used Date:	Not reported
OSFM First Notify Date:	11/10/1986
Tank Status:	**Currently in use**
Red Tag Issue Date:	Not reported
Install Date:	Not reported
Green Tag Decal:	**M003457**
Green Tag Issue Date:	**8/24/2011**
Green Tag Expire Date:	**12/31/2013**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	$0.00

Map ID	Site	Database(s)	EPA ID Number
	MICHIGAN CITGO (Continued)		**U001142786**

Tank Number:	4
Tank Capacity:	6000
Tank Substance:	Kerosene
Last Used Date:	Not reported
OSFM First Notify Date:	11/10/1986
Tank Status:	**Currently in use**
Red Tag Issue Date:	Not reported
Install Date:	Not reported
Green Tag Decal:	**M003457**
Green Tag Issue Date:	**8/24/2011**
Green Tag Expire Date:	**12/31/2013**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	$0.00

Map ID	Site	Database(s)	EPA ID Number
122	**STUARTS CHEMICAL & PAINT** **11740 FRONT ST.** **CHICAGO, IL 60628**	**LUST**	**S104002394** **N/A**

LUST:

Incident Num:	900054
IL EPA Id:	0316005286
Product:	Non Petro
IEMA Date:	01/05/1990
Project Manager:	Heaton
Project Manager Phone:	(217) 524-3312
Email:	Mike.Heaton@illinois.gov
PRP Name:	Stuarts Ind.
PRP Contact:	Marla Kowlaski
PRP Address:	11740 Front St.
PRP City,St,Zip:	Chicago, IL 60628
PRP Phone:	Not reported
Site Classification:	Not reported
Section 57.5(g) Letter:	731
Date Section 57.5(g) Letter:	Not reported
Non LUST Determination Letter:	Not reported
20 Report Received:	Not reported
45 Report Received:	Not reported
NFA/NFR Letter:	**Not reported**
NFR Date Recorded:	Not reported

Map ID	Site	Database(s)	EPA ID Number
123	**SONGHAI LEARNING INSTITUTE** **11725 S PERRY AVE** **CHICAGO, IL 60628**	**RCRA-CESQG**	**1004696903** **ILR000059832**

RCRA-CESQG:

Date form received by agency:	12/15/1998
Facility name:	SONGHAI LEARNING INSTITUTE
Facility address:	11725 S PERRY AVE CHICAGO, IL 60628
EPA ID:	ILR000059832
Mailing address:	8501 W 191ST ST BOX 10 MOKENA, IL 60448
Contact:	THOMAS CONNELLY
Contact address:	8501 W 191ST ST BOX 10

SONGHAI LEARNING INSTITUTE (Continued) **1004696903**

	MOKENA, IL 60448
Contact country:	US
Contact telephone:	(708) 923-0202
Contact email:	Not reported
EPA Region:	05
Classification:	Conditionally Exempt Small Quantity Generator
Description:	Handler: generates 100 kg or less of hazardous waste per calendar month, and accumulates 1000 kg or less of hazardous waste at any time; or generates 1 kg or less of acutely hazardous waste per calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste

Owner/Operator Summary:

Owner/operator name:	CHICGO PUBLIC SCHOOLS
Owner/operator address:	1819 W PERSHING RD 6WW CHICAGO, IL 60609
Owner/operator country:	Not reported
Owner/operator telephone:	(773) 535-7038
Legal status:	District
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Hazardous Waste Summary:

Waste code:	D006
Waste name:	CADMIUM
Waste code:	D008
Waste name:	LEAD

SONGHAI LEARNING INSTITUTE (Continued) **1004696903**

Waste code: D009
Waste name: MERCURY

Violation Status: No violations found

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125 **AMERICAN CLYBOURN FINISHING CO** **RCRA-CESQG** **1000359773**
11730 S FRONT ST **ILT180010019**
CHICAGO, IL 60628

RCRA-CESQG:
Date form received by agency: 04/14/1995
Facility name: AMERICAN CLYBOURN FINISHING CO
Facility address: 11730 S FRONT ST
CHICAGO, IL 60628
EPA ID: ILT180010019
Contact: Not reported
Contact address: Not reported
Not reported
Contact country: Not reported
Contact telephone: Not reported
Contact email: Not reported
EPA Region: 05
Land type: Facility is not located on Indian land. Additional information is not known.
Classification: Conditionally Exempt Small Quantity Generator
Description: Handler: generates 100 kg or less of hazardous waste per calendar month, and accumulates 1000 kg or less of hazardous waste at any time; or generates 1 kg or less of acutely hazardous waste per calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste

Owner/Operator Summary:
Owner/operator name: FRANK J COLLINS
Owner/operator address: ADDRESS NOT REPORTED
CITY NOT REPORTED, AK 99998
Owner/operator country: Not reported
Owner/operator telephone: (312) 555-1212
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: NAME NOT REPORTED
Owner/operator address: ADDRESS NOT REPORTED
CITY NOT REPORTED, AK 99998
Owner/operator country: Not reported
Owner/operator telephone: (312) 555-1212
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: Not reported

AMERICAN CLYBOURN FINISHING CO (Continued) **1000359773**

Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Historical Generators:

Date form received by agency:	08/19/1980
Facility name:	AMERICAN CLYBOURN FINISHING CO
Classification:	Large Quantity Generator

Hazardous Waste Summary:

Waste code:	F001
Waste name:	THE FOLLOWING SPENT HALOGENATED SOLVENTS USED IN DEGREASING: TETRACHLOROETHYLENE, TRICHLOROETHYLENE, METHYLENE CHLORIDE, 1,1,1-TRICHLOROETHANE, CARBON TETRACHLORIDE, AND CHLORINATED FLUOROCARBONS; ALL SPENT SOLVENT MIXTURES/BLENDS USED IN DEGREASING CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Violation Status:	No violations found

Evaluation Action Summary:

Evaluation date:	02/28/1995
Evaluation:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation:	Not reported
Date achieved compliance:	Not reported
Evaluation lead agency:	State

Evaluation date:	06/23/1993
Evaluation:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation:	Not reported
Date achieved compliance:	Not reported
Evaluation lead agency:	State

Map ID	Site	Database(s)	EPA ID Number
125	**STUART INDUSTRIAL COATINGS INC** **11740 S FRONT ST** **CHICAGO, IL 60628**	**RCRA-SQG**	**1000614197** **ILD984845073**

RCRA-SQG:
Date form received by agency: 11/19/1991
Facility name: STUART INDUSTRIAL COATINGS INC
Facility address: 11740 S FRONT ST
CHICAGO, IL 60628
EPA ID: ILD984845073
Contact: CHARLES KOWALSKI
Contact address: 11740 S FRONT ST
CHICAGO, IL 60628
Contact country: US
Contact telephone: (312) 928-0202
Contact email: Not reported
EPA Region: 05
Land type: Private
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:
Owner/operator name: KOWALSKI CHARLES J
Owner/operator address: 11740 S FRONT ST
CHICAGO, IL 60628
Owner/operator country: Not reported
Owner/operator telephone: (312) 928-0202
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Hazardous Waste Summary:
Waste code: D001
Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE

STUART INDUSTRIAL COATINGS INC (Continued) **1000614197**

FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Waste code: F003
Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NON-HALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS, AND, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste code: F005
Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Violation Status: No violations found

Evaluation Action Summary:
Evaluation date: 02/24/1999
Evaluation: FOCUSED COMPLIANCE INSPECTION
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 06/23/1993
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

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125 **STUART INDUSTRIAL COATINGS INC** **UST** **U001143189**
11740 S FRONT ST **N/A**
CHICAGO, IL 60628

UST:
Facility ID: 2008210
Facility Status: CLOSED
Facility Type: **INDUSTRIAL / MANUFACTURING**
Owner Name: Stuart Industrial Coatings Inc
Owner Id: U0014654
Owner Address: 11740 S Front St
Owner City,St,Zip: Chicago, IL 60628

Tank Number: 1
Tank Capacity: 3000
Tank Substance: Not reported
Last Used Date: 11/1/1989

STUART INDUSTRIAL COATINGS INC (Continued) **U001143189**

OSFM First Notify Date: 4/28/1986
Tank Status: Removed
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

Tank Number: 2
Tank Capacity: 1000
Tank Substance: Not reported
Last Used Date: 11/1/1989
OSFM First Notify Date: 4/28/1986
Tank Status: Removed
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

Tank Number: 3
Tank Capacity: 1000
Tank Substance: Not reported
Last Used Date: 11/1/1989
OSFM First Notify Date: 4/28/1986
Tank Status: Removed
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

Tank Number: 4
Tank Capacity: 1000
Tank Substance: Not reported
Last Used Date: 11/1/1989
OSFM First Notify Date: 4/28/1986
Tank Status: Removed
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported

STUART INDUSTRIAL COATINGS INC (Continued) **U001143189**

Fee Due: Not reported

Tank Number: 5
Tank Capacity: 1000
Tank Substance: Not reported
Last Used Date: 11/1/1989
OSFM First Notify Date: 4/28/1986
Tank Status: Removed
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

Tank Number: 6
Tank Capacity: 1000
Tank Substance: Not reported
Last Used Date: 11/1/1989
OSFM First Notify Date: 4/28/1986
Tank Status: Removed
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

Tank Number: 7
Tank Capacity: 1000
Tank Substance: Not reported
Last Used Date: 11/1/1989
OSFM First Notify Date: 4/28/1986
Tank Status: Removed
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

Map ID	Site	Database(s)	EPA ID Number
128	**GREATOR CANAAN MBC/VACANT LOT** **11856 S. LAFAYETTE** **CHICAGO, IL 60607**	**UST**	**U004068153** **N/A**

UST:

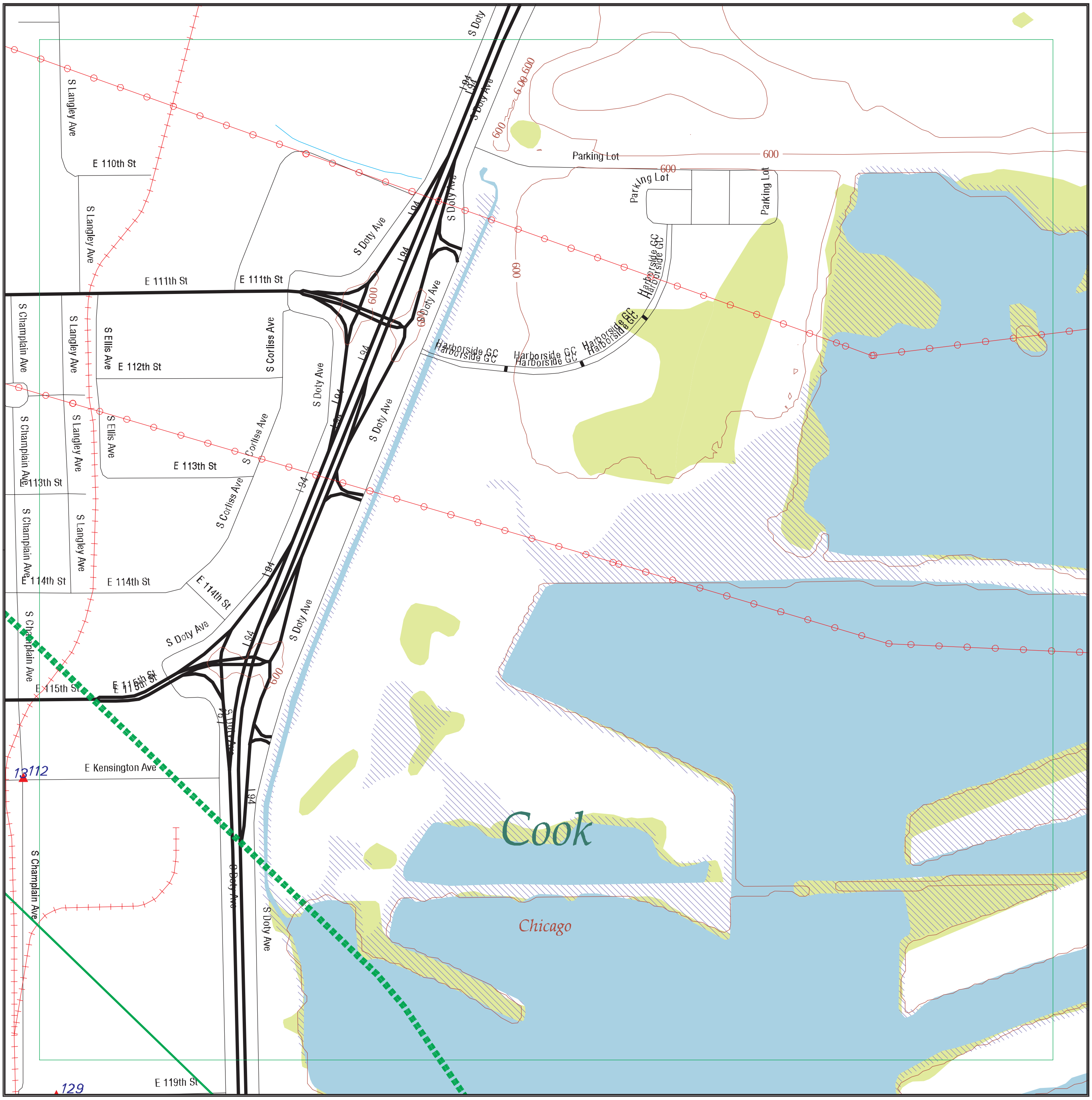
Facility ID:	2043476
Facility Status:	EXEMPT
Facility Type:	**NONE**
Owner Name:	Greater Canaan MBC
Owner Id:	U0033817
Owner Address:	35 W. 119th Street
Owner City,St,Zip:	Chicago, IL 60607
Tank Number:	1
Tank Capacity:	500
Tank Substance:	Heating Oil
Last Used Date:	12/31/1973
OSFM First Notify Date:	Not reported
Tank Status:	**Exempt from registration**
Red Tag Issue Date:	Not reported
Install Date:	Not reported
Green Tag Decal:	**Not reported**
Green Tag Issue Date:	**Not reported**
Green Tag Expire Date:	**Not reported**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	Not reported

Count: 9 records

FOCUS MAP 7 ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CHICAGO	1012172115	ROSELAND COMMUNITY	110TH PLACE AND MICHIGAN, EAST SIDE OF STATE ST.		US BROWNFIELDS
CHICAGO	S109167302		549 115TH ST		LUST, SPILLS
CHICAGO	1003870122	ILLINOIS CENTRAL RR TRACKS	119TH STREET EAST IL CENTRAL TRACKS	60628	CERC-NFRAP
CHICAGO	1002886378	US SCRAP	123RD & COTTAGE GROVE	60628	CERCLIS
CHICAGO	S101467236	PENN CENTRAL	810 E 124TH ST		SSU
CHICAGO	1012126998	9705 S. COTTAGE GROVE	9705 S COTTAGE GROVE AVE	60628	US BROWNFIELDS
CHICAGO	S109366427		6700 JEFFREY BLVD		LUST, SPILLS
CHICAGO	S108891646		11900 LOOMIS		LUST, SPILLS
CHICAGO	S107926349	LAKE CALUMET CLUSTER SITE	N OF 122ND	60628	SSU

Focus Map 8


S Doty
I 94
S Doty Ave
S Langley Ave
E 110th St
Parking Lot
600
Parking Lot
Parking Lot
Harborside GC
E 111th St
E 111th St
S Champlain Ave
S Langley Ave
S Ellis Ave
E 112th St
S Corliss Ave
S Doty Ave
S Champlain Ave
S Langley Ave
S Ellis Ave
S Corliss Ave
E 113th St
E 113th St
S Corliss Ave
S Champlain Ave
S Langley Ave
E 114th St
E 114th St
E 114th St
S Doty Ave
S Champlain Ave
E 115th St
E 115th St
E Kensington Ave
13112
S Champlain Ave
S Doty Ave
Cook
Chicago
129
E 119th St

EDR DataMap® - Environmental Atlas

90786 CTC RLE Hazardous Materials

Legend

- Roads
- Major Roads
- Contour Lines
- National Wetlands Inventory
- Waterways
- Railroads
- Study Boundary
- 100-Yr Flood Zones
- Powerlines
- Pipelines
- Fault Lines
- Water
- Listed Sites
- Sensitive Receptors

N

0 1/8 1/4

Scale in Miles

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FOCUS MAP 8 SUMMARY

Database	Total Plotted
FEDERAL RECORDS	
Proposed NPL	0
Delisted NPL	0
CERCLIS	1
CERC-NFRAP	0
CORRACTS	1
RCRA-TSDF	1
RCRA-LQG	1
RCRA-SQG	0
RCRA-CESQG	0
US ENG CONTROLS	0
US INST CONTROL	0
ERNS	0
US BROWNFIELDS	0
STATE AND LOCAL RECORDS	
SSU	0
SWF/LF	0
LUST	0
UST	0
SPILLS	0
ENG CONTROLS	0
INST CONTROL	0
SRP	0
DRYCLEANERS	0
BROWNFIELDS	0
EDR PROPRIETARY RECORDS	
Manufactured Gas Plants	0

NOTES:

Sites may be listed in more than one database

Map ID	Site	Database(s)	EPA ID Number
112	**SHERWIN WILLIAMS CO** **11541 S CHAMPLAIN AVE** **CHICAGO, IL 60628**	**CERCLIS** **CORRACTS** **RCRA-TSDF** **RCRA-LQG**	**1000371369** **60628SHRWN11**

CERCLIS:

Site ID:	0500202
EPA ID:	ILD005456439
Facility County:	COOK
Short Name:	SHERWIN WILLIAMS COMPANY,
Congressional District:	01
IFMS ID:	Not reported
SMSA Number:	1600
USGC Hydro Unit:	07120003
Federal Facility:	Not a Federal Facility
DMNSN Number:	Not reported
Site Orphan Flag:	N
RCRA ID:	Y
USGS Quadrangle:	Not reported
Site Init By Prog:	Not reported
NFRAP Flag:	Not reported
Parent ID:	Not reported
RST Code:	Not reported
EPA Region:	05
Classification:	Not reported
Site Settings Code:	Not reported
NPL Status:	Not on the NPL
DMNSN Unit Code:	Not reported
RBRAC Code:	Not reported
RResp Fed Agency Code:	Not reported
Non NPL Status:	ESI Start Needed
Non NPL Status Date:	19991123
Site Fips Code:	17031
CC Concurrence Date:	Not reported
CC Concurrence FY:	Not reported
Alias EPA ID:	Not reported
Site FUDS Flag:	Not reported

CERCLIS Site Alias Name(s):

Alias ID:	101
Alias Name:	SHERWIN WILLIAMS CO THE
Alias Address:	11541 S CHAMPLAIN AVE CHICAGO, IL 60628
Alias Comments:	Not reported

Site Description: Not reported

CERCLIS Assessment History:

Action Code:	001
Action:	DISCOVERY
Date Started:	Not reported
Date Completed:	08/01/1980
Priority Level:	Not reported
Operable Unit:	SITEWIDE
Primary Responsibility:	EPA Fund-Financed
Planning Status:	Not reported
Urgency Indicator:	Not reported
Action Anomaly:	Not reported

SHERWIN WILLIAMS CO (Continued) **1000371369**

Action Code: 001
Action: PRELIMINARY ASSESSMENT
Date Started: Not reported
Date Completed: 09/01/1984
Priority Level: Low priority for further assessment
Operable Unit: SITEWIDE
Primary Responsibility: State, Fund Financed
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

Action Code: 001
Action: SITE INSPECTION
Date Started: Not reported
Date Completed: 06/11/1986
Priority Level: Higher priority for further assessment
Operable Unit: SITEWIDE
Primary Responsibility: EPA Fund-Financed
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

CORRACTS:

EPA ID: ILD005456439
EPA Region: 05
Area Name: ENTIRE FACILITY
Actual Date: 01/22/2007
Action: CA400 - Date For Remedy Selection (CM Imposed)
NAICS Code(s): 32551
Paint and Coating Manufacturing
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: ILD005456439
EPA Region: 05
Area Name: ENTIRE FACILITY
Actual Date: 03/04/1998
Action: CA110 - RFI Workplan Received
NAICS Code(s): 32551
Paint and Coating Manufacturing
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: ILD005456439
EPA Region: 05
Area Name: ENTIRE FACILITY
Actual Date: 03/05/1998
Action: CA110 - RFI Workplan Received
NAICS Code(s): 32551
Paint and Coating Manufacturing
Original schedule date: 05/01/1998
Schedule end date: Not reported

SHERWIN WILLIAMS CO (Continued) **1000371369**

EPA ID: ILD005456439
EPA Region: 05
Area Name: ENTIRE FACILITY
Actual Date: 03/26/1998
Action: CA077
NAICS Code(s): 32551
Paint and Coating Manufacturing
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: ILD005456439
EPA Region: 05
Area Name: ENTIRE FACILITY
Actual Date: 03/31/1994
Action: CA075HI - CA Prioritization, Facility or area was assigned a high corrective action priority
NAICS Code(s): 32551
Paint and Coating Manufacturing
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: ILD005456439
EPA Region: 05
Area Name: ENTIRE FACILITY
Actual Date: 06/06/1991
Action: CA077
NAICS Code(s): 32551
Paint and Coating Manufacturing
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: ILD005456439
EPA Region: 05
Area Name: ENTIRE FACILITY
Actual Date: 07/06/1989
Action: CA050RF - RFA Completed, Assessment was an RFA
NAICS Code(s): 32551
Paint and Coating Manufacturing
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: ILD005456439
EPA Region: 05
Area Name: ENTIRE FACILITY
Actual Date: 07/06/1990
Action: CA070YE - RFA Determination Of Need For An RFI, RFI is Necessary
NAICS Code(s): 32551
Paint and Coating Manufacturing
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: ILD005456439
EPA Region: 05
Area Name: ENTIRE FACILITY
Actual Date: 07/16/1993
Action: CA016
NAICS Code(s): 32551

SHERWIN WILLIAMS CO (Continued) **1000371369**

Paint and Coating Manufacturing
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: ILD005456439
EPA Region: 05
Area Name: ENTIRE FACILITY
Actual Date: 07/20/2001
Action: CA005EE
NAICS Code(s): 32551
Paint and Coating Manufacturing
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: ILD005456439
EPA Region: 05
Area Name: ENTIRE FACILITY
Actual Date: 07/22/1998
Action: CA077
NAICS Code(s): 32551
Paint and Coating Manufacturing
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: ILD005456439
EPA Region: 05
Area Name: ENTIRE FACILITY
Actual Date: 08/25/2004
Action: CA750YE - Migration of Contaminated Groundwater under Control, Yes, Migration of Contaminated Groundwater Under Control has been verified
NAICS Code(s): 32551
Paint and Coating Manufacturing
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: ILD005456439
EPA Region: 05
Area Name: ENTIRE FACILITY
Actual Date: 08/25/2004
Action: CA725YE - Current Human Exposures Under Control, Yes, Current Human Exposures Under Control has been verified
NAICS Code(s): 32551
Paint and Coating Manufacturing
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: ILD005456439
EPA Region: 05
Area Name: ENTIRE FACILITY
Actual Date: 08/28/1997
Action: CA750IN - Migration of Contaminated Groundwater under Control, More information is needed to make a determination
NAICS Code(s): 32551
Paint and Coating Manufacturing
Original schedule date: Not reported
Schedule end date: Not reported

SHERWIN WILLIAMS CO (Continued) **1000371369**

EPA ID:	ILD005456439
EPA Region:	05
Area Name:	ENTIRE FACILITY
Actual Date:	08/28/1997
Action:	CA725IN - Current Human Exposures Under Control, More information is needed to make a determination
NAICS Code(s):	32551 Paint and Coating Manufacturing
Original schedule date:	Not reported
Schedule end date:	Not reported

EPA ID:	ILD005456439
EPA Region:	05
Area Name:	ENTIRE FACILITY
Actual Date:	09/27/1991
Action:	CA075HI - CA Prioritization, Facility or area was assigned a high corrective action priority
NAICS Code(s):	32551 Paint and Coating Manufacturing
Original schedule date:	Not reported
Schedule end date:	Not reported

EPA ID:	ILD005456439
EPA Region:	05
Area Name:	ENTIRE FACILITY
Actual Date:	09/28/1992
Action:	CA086
NAICS Code(s):	32551 Paint and Coating Manufacturing
Original schedule date:	Not reported
Schedule end date:	Not reported

EPA ID:	ILD005456439
EPA Region:	05
Area Name:	ENTIRE FACILITY
Actual Date:	10/28/1998
Action:	CA150 - RFI Workplan Approved
NAICS Code(s):	32551 Paint and Coating Manufacturing
Original schedule date:	05/01/2000
Schedule end date:	Not reported

EPA ID:	ILD005456439
EPA Region:	05
Area Name:	ENTIRE FACILITY
Actual Date:	11/06/1997
Action:	CA100DC - RFI Imposition, Focused data collection required for stabilization evaluation
NAICS Code(s):	32551 Paint and Coating Manufacturing
Original schedule date:	Not reported
Schedule end date:	Not reported

EPA ID:	ILD005456439
EPA Region:	05
Area Name:	ENTIRE FACILITY
Actual Date:	12/06/1999

SHERWIN WILLIAMS CO (Continued) **1000371369**

Action:	CA200 - RFI Approved
NAICS Code(s):	32551 Paint and Coating Manufacturing
Original schedule date:	05/01/2002
Schedule end date:	Not reported

RCRA-TSDF:

Date form received by agency:	03/01/2010
Facility name:	SHERWIN WILLIAMS CO
Facility address:	11541 S CHAMPLAIN AVE CHICAGO, IL 60628
EPA ID:	ILD005456439
Mailing address:	101 PROSPECT AVE NW-4M CLEVELAND, OH 441151075
Contact:	PAUL BARDING
Contact address:	Not reported Not reported
Contact country:	Not reported
Contact telephone:	(216) 515-4629
Contact email:	Not reported
EPA Region:	05
Land type:	Private
Classification:	TSDF
Description:	Handler is engaged in the treatment, storage or disposal of hazardous waste
Classification:	Large Quantity Generator
Description:	Handler: generates 1,000 kg or more of hazardous waste during any calendar month; or generates more than 1 kg of acutely hazardous waste during any calendar month; or generates more than 100 kg of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month; or generates 1 kg or less of acutely hazardous waste during any calendar month, and accumulates more than 1 kg of acutely hazardous waste at any time; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates more than 100 kg of that material at any time

Owner/Operator Summary:

Owner/operator name:	SHERWIN WILLIAMS CO
Owner/operator address:	101 PROSPECT AVE NW CLEVELAND, OH 44115
Owner/operator country:	US
Owner/operator telephone:	Not reported
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	01/01/1900
Owner/Op end date:	Not reported

Owner/operator name:	THE SHERWIN WILLIAMS CO
Owner/operator address:	101 PROSPECT AVE NW CITY NOT REPORTED, OH 99998
Owner/operator country:	Not reported
Owner/operator telephone:	(216) 566-2000
Legal status:	Private

SHERWIN WILLIAMS CO (Continued) **1000371369**

Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: THE SHERWIN WILLIAMS CO
Owner/operator address: 101 PROSPECT AVE NW
CLEVELAND, OH 44115
Owner/operator country: Not reported
Owner/operator telephone: (216) 566-2000
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: SHERWIN WILLIAMS CO
Owner/operator address: 101 PROSPECT AVE NW
CLEVELAND, OH 44115
Owner/operator country: US
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 01/01/1900
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 03/01/2008
Facility name: SHERWIN WILLIAMS CO
Classification: Large Quantity Generator

Date form received by agency: 12/31/2007
Facility name: SHERWIN WILLIAMS CO
Classification: Large Quantity Generator

Date form received by agency: 08/14/2007
Facility name: SHERWIN WILLIAMS CO
Classification: Large Quantity Generator

Date form received by agency: 03/01/2006
Facility name: SHERWIN WILLIAMS CO

Map ID	Site	Database(s)	EPA ID Number
	SHERWIN WILLIAMS CO (Continued)		**1000371369**

Classification: Large Quantity Generator

Date form received by agency: 03/01/2004
Facility name: SHERWIN WILLIAMS CO
Classification: Large Quantity Generator

Date form received by agency: 03/01/2002
Facility name: SHERWIN WILLIAMS CO
Classification: Large Quantity Generator

Date form received by agency: 03/01/2000
Facility name: SHERWIN WILLIAMS CO
Classification: Large Quantity Generator

Date form received by agency: 03/01/1998
Facility name: SHERWIN WILLIAMS CO
Classification: Large Quantity Generator

Date form received by agency: 03/01/1996
Facility name: SHERWIN WILLIAMS CO
Classification: Large Quantity Generator

Date form received by agency: 03/01/1994
Facility name: SHERWIN WILLIAMS CO
Classification: Large Quantity Generator

Date form received by agency: 10/19/1993
Facility name: SHERWIN WILLIAMS CO
Site name: SHERWIN WILLIAMS KENSINGTON DSC
Classification: Large Quantity Generator

Date form received by agency: 03/01/1992
Facility name: SHERWIN WILLIAMS CO
Classification: Large Quantity Generator

Date form received by agency: 03/01/1991
Facility name: SHERWIN WILLIAMS CO
Site name: SHERWIN WILLIAMS KENSINGTON DSC
Classification: Not a generator, verified

Date form received by agency: 03/01/1990
Facility name: SHERWIN WILLIAMS CO
Classification: Large Quantity Generator

Date form received by agency: 11/22/1980
Facility name: SHERWIN WILLIAMS CO
Site name: SHERWIN WILLIAMS KENSINGTON DSC
Classification: Not a generator, verified

Date form received by agency: 08/18/1980
Facility name: SHERWIN WILLIAMS CO
Site name: SHERWIN WILLIAMS KENSINGTON DSC
Classification: Large Quantity Generator

Hazardous Waste Summary:
Waste code: D001
Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF

SHERWIN WILLIAMS CO (Continued) **1000371369**

LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Waste code: D003
Waste name: A MATERIAL IS CONSIDERED TO BE A REACTIVE HAZARDOUS WASTE IF IT IS NORMALLY UNSTABLE, REACTS VIOLENTLY WITH WATER, GENERATES TOXIC GASES WHEN EXPOSED TO WATER OR CORROSIVE MATERIALS, OR IF IT IS CAPABLE OF DETONATION OR EXPLOSION WHEN EXPOSED TO HEAT OR A FLAME. ONE EXAMPLE OF SUCH WASTE WOULD BY WASTE GUNPOWDER.

Waste code: F003
Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NON-HALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS, AND, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste code: F004
Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: CRESOLS AND CRESYLIC ACID, AND NITROBENZENE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste code: F005
Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste code: K083
Waste name: DISTILLATION BOTTOMS FROM ANILINE PRODUCTION

Waste code: D001
Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Waste code: D004
Waste name: ARSENIC

SHERWIN WILLIAMS CO (Continued) **1000371369**

Waste code:	D007
Waste name:	CHROMIUM
Waste code:	D009
Waste name:	MERCURY
Waste code:	D035
Waste name:	METHYL ETHYL KETONE
Waste code:	F003
Waste name:	THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NON-HALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS, AND, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
Waste code:	F005
Waste name:	THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
Waste code:	LABP
Waste name:	LAB PACK
Waste code:	D000
Waste name:	Not Defined
Waste code:	D001
Waste name:	IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.
Waste code:	D002
Waste name:	A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.
Waste code:	D003
Waste name:	A MATERIAL IS CONSIDERED TO BE A REACTIVE HAZARDOUS WASTE IF IT IS NORMALLY UNSTABLE, REACTS VIOLENTLY WITH WATER, GENERATES TOXIC GASES

SHERWIN WILLIAMS CO (Continued) **1000371369**

WHEN EXPOSED TO WATER OR CORROSIVE MATERIALS, OR IF IT IS CAPABLE OF DETONATION OR EXPLOSION WHEN EXPOSED TO HEAT OR A FLAME. ONE EXAMPLE OF SUCH WASTE WOULD BY WASTE GUNPOWDER.

Waste code: F001
Waste name: THE FOLLOWING SPENT HALOGENATED SOLVENTS USED IN DEGREASING: TETRACHLOROETHYLENE, TRICHLOROETHYLENE, METHYLENE CHLORIDE, 1,1,1-TRICHLOROETHANE, CARBON TETRACHLORIDE, AND CHLORINATED FLUOROCARBONS; ALL SPENT SOLVENT MIXTURES/BLENDS USED IN DEGREASING CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste code: F002
Waste name: THE FOLLOWING SPENT HALOGENATED SOLVENTS: TETRACHLOROETHYLENE, METHYLENE CHLORIDE, TRICHLOROETHYLENE, 1,1,1-TRICHLOROETHANE, CHLOROBENZENE, 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE, ORTHO-DICHLOROBENZENE, TRICHLOROFLUOROMETHANE, AND 1,1,2-TRICHLOROETHANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE LISTED IN F001, F004, OR F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste code: F003
Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NON-HALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS, AND, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste code: F004
Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: CRESOLS AND CRESYLIC ACID, AND NITROBENZENE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste code: F005
Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste code: F017
Waste name: Not Defined

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	SHERWIN WILLIAMS CO (Continued)		**1000371369**

Waste code: F018
Waste name: Not Defined

Waste code: K078
Waste name: K078

Waste code: K079
Waste name: K079

Waste code: K081
Waste name: K081

Waste code: K082
Waste name: K082

Waste code: K083
Waste name: DISTILLATION BOTTOMS FROM ANILINE PRODUCTION

Waste code: P003
Waste name: ACROLEIN

Waste code: P005
Waste name: ALLYL ALCOHOL

Waste code: P008
Waste name: 4-AMINOPYRIDINE

Waste code: P011
Waste name: ARSENIC OXIDE AS2O3

Waste code: P014
Waste name: BENZENETHIOL

Waste code: P019
Waste name: Not Defined

Waste code: P022
Waste name: CARBON DISULFIDE

Waste code: P028
Waste name: BENZENE, (CHLOROMETHYL)-

Waste code: P029
Waste name: COPPER CYANIDE

Waste code: P030
Waste name: CYANIDES (SOLUBLE CYANIDE SALTS), NOT OTHERWISE SPECIFIED

Waste code: P052
Waste name: Not Defined

Waste code: P053
Waste name: Not Defined

Waste code: P054
Waste name: AZIRIDINE

SHERWIN WILLIAMS CO (Continued) **1000371369**

Waste code: P087
Waste name: OSMIUM OXIDE OSO4, (T-4)-

Waste code: P090
Waste name: Not Defined

Waste code: P095
Waste name: CARBONIC DICHLORIDE

Waste code: P100
Waste name: Not Defined

Waste code: P101
Waste name: ETHYL CYANIDE

Waste code: P105
Waste name: SODIUM AZIDE

Waste code: U001
Waste name: ACETALDEHYDE (I)

Waste code: U002
Waste name: ACETONE (I)

Waste code: U003
Waste name: ACETONITRILE (I,T)

Waste code: U004
Waste name: ACETOPHENONE

Waste code: U006
Waste name: ACETYL CHLORIDE (C,R,T)

Waste code: U007
Waste name: ACRYLAMIDE

Waste code: U008
Waste name: ACRYLIC ACID (I)

Waste code: U009
Waste name: ACRYLONITRILE

Waste code: U012
Waste name: ANILINE (I,T)

Waste code: U013
Waste name: Not Defined

Waste code: U017
Waste name: BENZAL CHLORIDE

Waste code: U019
Waste name: BENZENE (I,T)

Waste code: U020
Waste name: BENZENESULFONIC ACID CHLORIDE (C,R)

SHERWIN WILLIAMS CO (Continued) **1000371369**

Waste code:	U021
Waste name:	BENZIDINE
Waste code:	U023
Waste name:	BENZENE, (TRICHLOROMETHYL)-
Waste code:	U028
Waste name:	1,2-BENZENEDICARBOXYLIC ACID, BIS(2-ETHYLHEXYL) ESTER
Waste code:	U031
Waste name:	1-BUTANOL (I)
Waste code:	U032
Waste name:	CALCIUM CHROMATE
Waste code:	U033
Waste name:	CARBONIC DIFLUORIDE
Waste code:	U037
Waste name:	BENZENE, CHLORO-
Waste code:	U039
Waste name:	P-CHLORO-M-CRESOL
Waste code:	U048
Waste name:	O-CHLOROPHENOL
Waste code:	U052
Waste name:	CRESOL (CRESYLIC ACID)
Waste code:	U053
Waste name:	2-BUTENAL
Waste code:	U054
Waste name:	Not Defined
Waste code:	U055
Waste name:	BENZENE, (1-METHYLETHYL)- (I)
Waste code:	U056
Waste name:	BENZENE, HEXAHYDRO- (I)
Waste code:	U057
Waste name:	CYCLOHEXANONE (I)
Waste code:	U067
Waste name:	ETHANE, 1,2-DIBROMO-
Waste code:	U069
Waste name:	1,2-BENZENEDICARBOXYLIC ACID, DIBUTYL ESTER
Waste code:	U070
Waste name:	BENZENE, 1,2-DICHLORO-
Waste code:	U071
Waste name:	BENZENE, 1,3-DICHLORO-

SHERWIN WILLIAMS CO (Continued) **1000371369**

Waste code: U072
Waste name: BENZENE, 1,4-DICHLORO-

Waste code: U073
Waste name: [1,1’-BIPHENYL]-4,4’-DIAMINE, 3,3’-DICHLORO-

Waste code: U074
Waste name: 2-BUTENE, 1,4-DICHLORO- (I,T)

Waste code: U076
Waste name: ETHANE, 1,1-DICHLORO-

Waste code: U077
Waste name: ETHANE, 1,2-DICHLORO-

Waste code: U078
Waste name: 1,1-DICHLOROETHYLENE

Waste code: U080
Waste name: METHANE, DICHLORO-

Waste code: U081
Waste name: 2,4-DICHLOROPHENOL

Waste code: U082
Waste name: 2,6-DICHLOROPHENOL

Waste code: U088
Waste name: 1,2-BENZENEDICARBOXYLIC ACID, DIETHYL ESTER

Waste code: U092
Waste name: DIMETHYLAMINE (I)

Waste code: U102
Waste name: 1,2-BENZENEDICARBOXYLIC ACID, DIMETHYL ESTER

Waste code: U103
Waste name: DIMETHYL SULFATE

Waste code: U104
Waste name: Not Defined

Waste code: U105
Waste name: BENZENE, 1-METHYL-2,4-DINITRO-

Waste code: U106
Waste name: BENZENE, 2-METHYL-1,3-DINITRO-

Waste code: U107
Waste name: 1,2-BENZENEDICARBOXYLIC ACID, DIOCTYL ESTER

Waste code: U108
Waste name: 1,4-DIETHYLENEOXIDE

Waste code: U110
Waste name: DIPROPYLAMINE (I)

SHERWIN WILLIAMS CO (Continued) **1000371369**

Waste code: U112
Waste name: ACETIC ACID ETHYL ESTER (I)

Waste code: U113
Waste name: ETHYL ACRYLATE (I)

Waste code: U115
Waste name: ETHYLENE OXIDE (I,T)

Waste code: U117
Waste name: ETHANE, 1,1’-OXYBIS-(I)

Waste code: U118
Waste name: ETHYL METHACRYLATE

Waste code: U119
Waste name: ETHYL METHANESULFONATE

Waste code: U122
Waste name: FORMALDEHYDE

Waste code: U123
Waste name: FORMIC ACID (C,T)

Waste code: U124
Waste name: FURAN (I)

Waste code: U125
Waste name: 2-FURANCARBOXALDEHYDE (I)

Waste code: U126
Waste name: GLYCIDYLALDEHYDE

Waste code: U127
Waste name: BENZENE, HEXACHLORO-

Waste code: U128
Waste name: 1,3-BUTADIENE, 1,1,2,3,4,4-HEXACHLORO-

Waste code: U130
Waste name: 1,3-CYCLOPENTADIENE, 1,2,3,4,5,5-HEXACHLORO-

Waste code: U131
Waste name: ETHANE, HEXACHLORO-

Waste code: U133
Waste name: HYDRAZINE (R,T)

Waste code: U134
Waste name: HYDROFLUORIC ACID (C,T)

Waste code: U135
Waste name: HYDROGEN SULFIDE

Waste code: U140
Waste name: ISOBUTYL ALCOHOL (I,T)

Map ID	Site	Database(s)	EPA ID Number

SHERWIN WILLIAMS CO (Continued) **1000371369**

Waste code:	U145
Waste name:	LEAD PHOSPHATE
Waste code:	U147
Waste name:	2,5-FURANDIONE
Waste code:	U149
Waste name:	MALONONITRILE
Waste code:	U150
Waste name:	MELPHALAN
Waste code:	U151
Waste name:	MERCURY
Waste code:	U152
Waste name:	METHACRYLONITRILE (I, T)
Waste code:	U154
Waste name:	METHANOL (I)
Waste code:	U155
Waste name:	1,2-ETHANEDIAMINE, N,N-DIMETHYL-N’-2-PYRIDINYL-N’-(2-THIENYLMETHYL)-
Waste code:	U159
Waste name:	2-BUTANONE (I,T)
Waste code:	U160
Waste name:	2-BUTANONE, PEROXIDE (R,T)
Waste code:	U161
Waste name:	METHYL ISOBUTYL KETONE (I)
Waste code:	U162
Waste name:	METHYL METHACRYLATE (I,T)
Waste code:	U165
Waste name:	NAPHTHALENE
Waste code:	U167
Waste name:	1-NAPHTHALENAMINE
Waste code:	U168
Waste name:	2-NAPHTHALENAMINE
Waste code:	U169
Waste name:	BENZENE, NITRO-
Waste code:	U170
Waste name:	P-NITROPHENOL
Waste code:	U171
Waste name:	2-NITROPROPANE (I,T)
Waste code:	U183
Waste name:	BENZENE, PENTACHLORO-

SHERWIN WILLIAMS CO (Continued) **1000371369**

Waste code: U184
Waste name: ETHANE, PENTACHLORO-

Waste code: U185
Waste name: BENZENE, PENTACHLORONITRO-

Waste code: U186
Waste name: 1-METHYLBUTADIENE (I)

Waste code: U187
Waste name: ACETAMIDE, N-(4-ETHOXYPHENYL)-

Waste code: U188
Waste name: PHENOL

Waste code: U190
Waste name: 1,3-ISOBENZOFURANDIONE

Waste code: U194
Waste name: 1-PROPANAMINE (I,T)

Waste code: U196
Waste name: PYRIDINE

Waste code: U201
Waste name: 1,3-BENZENEDIOL

Waste code: U202
Waste name: 1,2-BENZISOTHIAZOL-3(2H)-ONE, 1,1-DIOXIDE, & SALTS

Waste code: U207
Waste name: BENZENE, 1,2,4,5-TETRACHLORO-

Waste code: U208
Waste name: ETHANE, 1,1,1,2-TETRACHLORO-

Waste code: U209
Waste name: ETHANE, 1,1,2,2-TETRACHLORO-

Waste code: U210
Waste name: ETHENE, TETRACHLORO-

Waste code: U211
Waste name: CARBON TETRACHLORIDE

Waste code: U212
Waste name: Not Defined

Waste code: U213
Waste name: FURAN, TETRAHYDRO-(I)

Waste code: U218
Waste name: ETHANETHIOAMIDE

Waste code: U220
Waste name: BENZENE, METHYL-

SHERWIN WILLIAMS CO (Continued) **1000371369**

Waste code:	U221
Waste name:	BENZENEDIAMINE, AR-METHYL-
Waste code:	U223
Waste name:	BENZENE, 1,3-DIISOCYANATOMETHYL- (R,T)
Waste code:	U225
Waste name:	BROMOFORM
Waste code:	U226
Waste name:	ETHANE, 1,1,1-TRICHLORO-
Waste code:	U227
Waste name:	ETHANE, 1,1,2-TRICHLORO-
Waste code:	U228
Waste name:	ETHENE, TRICHLORO-
Waste code:	U229
Waste name:	Not Defined
Waste code:	U230
Waste name:	Not Defined
Waste code:	U231
Waste name:	Not Defined
Waste code:	U232
Waste name:	Not Defined
Waste code:	U234
Waste name:	BENZENE, 1,3,5-TRINITRO-
Waste code:	U238
Waste name:	CARBAMIC ACID, ETHYL ESTER
Waste code:	U239
Waste name:	BENZENE, DIMETHYL- (I,T)

Biennial Reports:

Last Biennial Reporting Year: 2011

Annual Waste Handled:

Waste code:	D001
Waste name:	IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.
Amount (Lbs):	256148.7
Waste code:	D004
Waste name:	ARSENIC
Amount (Lbs):	289819.8

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Waste code: D007
Waste name: CHROMIUM
Amount (Lbs): 289819.8

Waste code: D009
Waste name: MERCURY
Amount (Lbs): 216

Waste code: D035
Waste name: METHYL ETHYL KETONE
Amount (Lbs): 256148.7

Waste code: F003
Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NON-HALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS, AND, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
Amount (Lbs): 256148.7

Waste code: F005
Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
Amount (Lbs): 256148.7

Waste code: LABP
Waste name: LAB PACK
Amount (Lbs): 7599.3

Corrective Action Summary:

Event date: 07/06/1989
Event: RFA Completed, Assessment was an RFA.

Event date: 07/06/1990
Event: RFA Determination Of Need For An RFI, RFI is Necessary;

Event date: 06/06/1991
Event: CA077

Event date: 09/27/1991
Event: CA Prioritization, Facility or area was assigned a high corrective action priority.

Event date: 09/28/1992
Event: CA086

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Event date: 07/16/1993
Event: CA016

Event date: 03/31/1994
Event: CA Prioritization, Facility or area was assigned a high corrective action priority.

Event date: 08/28/1997
Event: Current Human Exposures under Control, More information is needed to make a determination.

Event date: 08/28/1997
Event: Igration of Contaminated Groundwater under Control, More information is needed to make a determination.

Event date: 11/06/1997
Event: RFI Imposition, Focused data collection required for stabilization evaluation.

Event date: 03/04/1998
Event: RFI Workplan Received

Event date: 03/05/1998
Event: RFI Workplan Received

Event date: 03/26/1998
Event: CA077

Event date: 07/22/1998
Event: CA077

Event date: 10/28/1998
Event: RFI Workplan Approved

Event date: 12/06/1999
Event: RFI Approved

Event date: 07/20/2001
Event: CA005EE

Event date: 08/25/2004
Event: Current Human Exposures under Control, Yes, Current Human Exposures Under Control has been verified. Based on a review of information contained in the EI determination, current human exposures are expected to be under control at the facility under current and reasonably expected conditions. This determination will be re-evaluated when the Agency/State becomes aware of significant changes at the facility.

Event date: 08/25/2004
Event: Igration of Contaminated Groundwater under Control, Yes, Migration of Contaminated Groundwater Under Control has been verified. Based on a review of information contained in the EI determination, it has been determined that migration of contaminated groundwater is under control at the facility. Specifically, this determination indicates that the migration of contaminated groundwater is under control, and that monitoring will be conducted to confirm that contaminated groundwater

SHERWIN WILLIAMS CO (Continued) **1000371369**

remains within the existing area of contaminated groundwater. This determination will be re-evaluated when the Agency becomes aware of significant changes at the facility.

Event date: 01/22/2007
Event: Date For Remedy Selection (CM Imposed)

Facility Has Received Notices of Violations:
Regulation violated: Not reported
Area of violation: TSD IS-Manifest/Records/Reporting
Date violation determined: 01/23/2007
Date achieved compliance: Not reported
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: Federal or State Statute
Date violation determined: 01/23/2007
Date achieved compliance: Not reported
Violation lead agency: State
Enforcement action: VIOLATION NOTICE (VN)
Enforcement action date: 04/09/2008
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: Federal or State Statute
Date violation determined: 01/23/2007
Date achieved compliance: Not reported
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: TSD IS-Manifest/Records/Reporting
Date violation determined: 01/23/2007
Date achieved compliance: Not reported
Violation lead agency: State
Enforcement action: VIOLATION NOTICE (VN)
Enforcement action date: 04/09/2008

SHERWIN WILLIAMS CO (Continued) **1000371369**

Enf. disposition status:	Not reported
Enf. disp. status date:	Not reported
Enforcement lead agency:	State
Proposed penalty amount:	Not reported
Final penalty amount:	Not reported
Paid penalty amount:	Not reported
Regulation violated:	SR - 724.197
Area of violation:	TSD IS-Ground-Water Monitoring
Date violation determined:	08/18/1995
Date achieved compliance:	11/06/1997
Violation lead agency:	State
Enforcement action:	VIOLATION NOTICE (VN)
Enforcement action date:	11/13/1995
Enf. disposition status:	Not reported
Enf. disp. status date:	Not reported
Enforcement lead agency:	State
Proposed penalty amount:	Not reported
Final penalty amount:	Not reported
Paid penalty amount:	Not reported
Regulation violated:	SR - 722.134(a)
Area of violation:	Generators - Pre-transport
Date violation determined:	09/22/1994
Date achieved compliance:	02/14/1995
Violation lead agency:	State
Enforcement action:	VIOLATION NOTICE (VN)
Enforcement action date:	10/24/1994
Enf. disposition status:	Not reported
Enf. disp. status date:	Not reported
Enforcement lead agency:	State
Proposed penalty amount:	Not reported
Final penalty amount:	Not reported
Paid penalty amount:	Not reported
Regulation violated:	SR - 35 IAC 725.116
Area of violation:	TSD - General
Date violation determined:	02/14/1992
Date achieved compliance:	11/06/1997
Violation lead agency:	EPA
Enforcement action:	FINAL CIVIL JUDICIAL ACTION FOR COMPLIANCE AND/OR MONETARY PENALTY
Enforcement action date:	11/06/1997
Enf. disposition status:	Not reported
Enf. disp. status date:	Not reported
Enforcement lead agency:	EPA
Proposed penalty amount:	Not reported
Final penalty amount:	4700000
Paid penalty amount:	4700000
Regulation violated:	SR - 35 IAC 703.181
Area of violation:	TSD - General
Date violation determined:	02/14/1992
Date achieved compliance:	11/06/1997
Violation lead agency:	EPA
Enforcement action:	FINAL CIVIL JUDICIAL ACTION FOR COMPLIANCE AND/OR MONETARY PENALTY
Enforcement action date:	11/06/1997
Enf. disposition status:	Not reported

SHERWIN WILLIAMS CO (Continued) **1000371369**

Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: 4700000
Paid penalty amount: 4700000

Regulation violated: SR - 35 IAC 725.213
Area of violation: TSD - Closure/Post-Closure
Date violation determined: 02/14/1992
Date achieved compliance: 11/06/1997
Violation lead agency: EPA
Enforcement action: INITIAL CIVIL JUDICIAL ACTION FOR COMPLIANCE AND/OR MONETARY PENALTY
Enforcement action date: 07/16/1993
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: SR - 35 IAC 702.120
Area of violation: Permits - Application
Date violation determined: 02/14/1992
Date achieved compliance: 11/06/1997
Violation lead agency: EPA
Enforcement action: FINAL CIVIL JUDICIAL ACTION FOR COMPLIANCE AND/OR MONETARY PENALTY
Enforcement action date: 11/06/1997
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: 4700000
Paid penalty amount: 4700000

Regulation violated: SR - 35 IAC 725.273
Area of violation: TSD - Container Use and Management
Date violation determined: 02/14/1992
Date achieved compliance: 11/06/1997
Violation lead agency: EPA
Enforcement action: INITIAL CIVIL JUDICIAL ACTION FOR COMPLIANCE AND/OR MONETARY PENALTY
Enforcement action date: 07/16/1993
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: SR - 35 IAC 722.111
Area of violation: Generators - General
Date violation determined: 02/14/1992
Date achieved compliance: 11/06/1997
Violation lead agency: EPA
Enforcement action: FINAL CIVIL JUDICIAL ACTION FOR COMPLIANCE AND/OR MONETARY PENALTY
Enforcement action date: 11/06/1997
Enf. disposition status: Not reported
Enf. disp. status date: Not reported

SHERWIN WILLIAMS CO (Continued) **1000371369**

Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: 4700000
Paid penalty amount: 4700000

Regulation violated: SR - 35 IAC 725.243(e)(5)
Area of violation: TSD - Financial Requirements
Date violation determined: 02/14/1992
Date achieved compliance: 11/06/1997
Violation lead agency: EPA
Enforcement action: FINAL CIVIL JUDICIAL ACTION FOR COMPLIANCE AND/OR MONETARY PENALTY
Enforcement action date: 11/06/1997
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: 4700000
Paid penalty amount: 4700000

Regulation violated: SR - 35 IAC 722.134(c)(i)(i)(i)
Area of violation: Generators - General
Date violation determined: 02/14/1992
Date achieved compliance: 11/06/1997
Violation lead agency: EPA
Enforcement action: FINAL CIVIL JUDICIAL ACTION FOR COMPLIANCE AND/OR MONETARY PENALTY
Enforcement action date: 11/06/1997
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: 4700000
Paid penalty amount: 4700000

Regulation violated: SR - 35 IAC 725.151
Area of violation: TSD - Contingency Plan and Emergency Procedures
Date violation determined: 02/14/1992
Date achieved compliance: 11/06/1997
Violation lead agency: EPA
Enforcement action: FINAL CIVIL JUDICIAL ACTION FOR COMPLIANCE AND/OR MONETARY PENALTY
Enforcement action date: 11/06/1997
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: 4700000
Paid penalty amount: 4700000

Regulation violated: SR - 35 IAC 725.151
Area of violation: TSD - Contingency Plan and Emergency Procedures
Date violation determined: 02/14/1992
Date achieved compliance: 11/06/1997
Violation lead agency: EPA
Enforcement action: INITIAL CIVIL JUDICIAL ACTION FOR COMPLIANCE AND/OR MONETARY PENALTY
Enforcement action date: 07/16/1993
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA

SHERWIN WILLIAMS CO (Continued) **1000371369**

Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: SR - 35 IAC 725.291
Area of violation: TSD - Tank System Standards
Date violation determined: 02/14/1992
Date achieved compliance: 11/06/1997
Violation lead agency: EPA
Enforcement action: FINAL CIVIL JUDICIAL ACTION FOR COMPLIANCE AND/OR MONETARY PENALTY
Enforcement action date: 11/06/1997
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: 4700000
Paid penalty amount: 4700000

Regulation violated: SR - 35 IAC 725.212
Area of violation: TSD - Closure/Post-Closure
Date violation determined: 02/14/1992
Date achieved compliance: 11/06/1997
Violation lead agency: EPA
Enforcement action: FINAL CIVIL JUDICIAL ACTION FOR COMPLIANCE AND/OR MONETARY PENALTY
Enforcement action date: 11/06/1997
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: 4700000
Paid penalty amount: 4700000

Regulation violated: SR - 35 IAC 725.291
Area of violation: TSD - Tank System Standards
Date violation determined: 02/14/1992
Date achieved compliance: 11/06/1997
Violation lead agency: EPA
Enforcement action: INITIAL CIVIL JUDICIAL ACTION FOR COMPLIANCE AND/OR MONETARY PENALTY
Enforcement action date: 07/16/1993
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: SR - 35 IAC 728.107
Area of violation: LDR - General
Date violation determined: 02/14/1992
Date achieved compliance: 11/06/1997
Violation lead agency: EPA
Enforcement action: FINAL CIVIL JUDICIAL ACTION FOR COMPLIANCE AND/OR MONETARY PENALTY
Enforcement action date: 11/06/1997
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported

SHERWIN WILLIAMS CO (Continued) **1000371369**

Final penalty amount: 4700000
Paid penalty amount: 4700000

Regulation violated: SR - 35 IAC 702.120
Area of violation: Permits - Application
Date violation determined: 02/14/1992
Date achieved compliance: 11/06/1997
Violation lead agency: EPA
Enforcement action: INITIAL CIVIL JUDICIAL ACTION FOR COMPLIANCE AND/OR MONETARY PENALTY
Enforcement action date: 07/16/1993
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: SR - 35 IAC 725.242
Area of violation: TSD - Closure/Post-Closure
Date violation determined: 02/14/1992
Date achieved compliance: 11/06/1997
Violation lead agency: EPA
Enforcement action: INITIAL CIVIL JUDICIAL ACTION FOR COMPLIANCE AND/OR MONETARY PENALTY
Enforcement action date: 07/16/1993
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: SR - 35 IAC 725.243(e)(5)
Area of violation: TSD - Financial Requirements
Date violation determined: 02/14/1992
Date achieved compliance: 11/06/1997
Violation lead agency: EPA
Enforcement action: INITIAL CIVIL JUDICIAL ACTION FOR COMPLIANCE AND/OR MONETARY PENALTY
Enforcement action date: 07/16/1993
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: SR - 35 IAC 722.134(c)(i)(i)(i)
Area of violation: Generators - General
Date violation determined: 02/14/1992
Date achieved compliance: 11/06/1997
Violation lead agency: EPA
Enforcement action: INITIAL CIVIL JUDICIAL ACTION FOR COMPLIANCE AND/OR MONETARY PENALTY
Enforcement action date: 07/16/1993
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: Not reported

SHERWIN WILLIAMS CO (Continued) **1000371369**

Paid penalty amount:	Not reported
Regulation violated:	SR - 35 IAC 725.295
Area of violation:	TSD - Tank System Standards
Date violation determined:	02/14/1992
Date achieved compliance:	11/06/1997
Violation lead agency:	EPA
Enforcement action:	FINAL CIVIL JUDICIAL ACTION FOR COMPLIANCE AND/OR MONETARY PENALTY
Enforcement action date:	11/06/1997
Enf. disposition status:	Not reported
Enf. disp. status date:	Not reported
Enforcement lead agency:	EPA
Proposed penalty amount:	Not reported
Final penalty amount:	4700000
Paid penalty amount:	4700000
Regulation violated:	SR - 35 IAC 725.115(b) 1(d)
Area of violation:	TSD - General
Date violation determined:	02/14/1992
Date achieved compliance:	11/06/1997
Violation lead agency:	EPA
Enforcement action:	FINAL CIVIL JUDICIAL ACTION FOR COMPLIANCE AND/OR MONETARY PENALTY
Enforcement action date:	11/06/1997
Enf. disposition status:	Not reported
Enf. disp. status date:	Not reported
Enforcement lead agency:	EPA
Proposed penalty amount:	Not reported
Final penalty amount:	4700000
Paid penalty amount:	4700000
Regulation violated:	SR - 35 IAC 725.115(b) 1(d)
Area of violation:	TSD - General
Date violation determined:	02/14/1992
Date achieved compliance:	11/06/1997
Violation lead agency:	EPA
Enforcement action:	INITIAL CIVIL JUDICIAL ACTION FOR COMPLIANCE AND/OR MONETARY PENALTY
Enforcement action date:	07/16/1993
Enf. disposition status:	Not reported
Enf. disp. status date:	Not reported
Enforcement lead agency:	EPA
Proposed penalty amount:	Not reported
Final penalty amount:	Not reported
Paid penalty amount:	Not reported
Regulation violated:	SR - 35 IAC 703.181
Area of violation:	TSD - General
Date violation determined:	02/14/1992
Date achieved compliance:	11/06/1997
Violation lead agency:	EPA
Enforcement action:	INITIAL CIVIL JUDICIAL ACTION FOR COMPLIANCE AND/OR MONETARY PENALTY
Enforcement action date:	07/16/1993
Enf. disposition status:	Not reported
Enf. disp. status date:	Not reported
Enforcement lead agency:	EPA
Proposed penalty amount:	Not reported
Final penalty amount:	Not reported
Paid penalty amount:	Not reported

SHERWIN WILLIAMS CO (Continued) **1000371369**

Regulation violated:	SR - 35 IAC 725.213
Area of violation:	TSD - Closure/Post-Closure
Date violation determined:	02/14/1992
Date achieved compliance:	11/06/1997
Violation lead agency:	EPA
Enforcement action:	FINAL CIVIL JUDICIAL ACTION FOR COMPLIANCE AND/OR MONETARY PENALTY
Enforcement action date:	11/06/1997
Enf. disposition status:	Not reported
Enf. disp. status date:	Not reported
Enforcement lead agency:	EPA
Proposed penalty amount:	Not reported
Final penalty amount:	4700000
Paid penalty amount:	4700000

Regulation violated:	SR - 35 IAC 725.242
Area of violation:	TSD - Closure/Post-Closure
Date violation determined:	02/14/1992
Date achieved compliance:	11/06/1997
Violation lead agency:	EPA
Enforcement action:	FINAL CIVIL JUDICIAL ACTION FOR COMPLIANCE AND/OR MONETARY PENALTY
Enforcement action date:	11/06/1997
Enf. disposition status:	Not reported
Enf. disp. status date:	Not reported
Enforcement lead agency:	EPA
Proposed penalty amount:	Not reported
Final penalty amount:	4700000
Paid penalty amount:	4700000

Regulation violated:	SR - 35 IAC 722.120
Area of violation:	TSD - Manifest/Records/Reporting
Date violation determined:	02/14/1992
Date achieved compliance:	11/06/1997
Violation lead agency:	EPA
Enforcement action:	FINAL CIVIL JUDICIAL ACTION FOR COMPLIANCE AND/OR MONETARY PENALTY
Enforcement action date:	11/06/1997
Enf. disposition status:	Not reported
Enf. disp. status date:	Not reported
Enforcement lead agency:	EPA
Proposed penalty amount:	Not reported
Final penalty amount:	4700000
Paid penalty amount:	4700000

Regulation violated:	SR - 35 IAC 722.120
Area of violation:	TSD - Manifest/Records/Reporting
Date violation determined:	02/14/1992
Date achieved compliance:	11/06/1997
Violation lead agency:	EPA
Enforcement action:	INITIAL CIVIL JUDICIAL ACTION FOR COMPLIANCE AND/OR MONETARY PENALTY
Enforcement action date:	07/16/1993
Enf. disposition status:	Not reported
Enf. disp. status date:	Not reported
Enforcement lead agency:	EPA
Proposed penalty amount:	Not reported
Final penalty amount:	Not reported
Paid penalty amount:	Not reported

Regulation violated:	SR - 35 IAC 725.116

SHERWIN WILLIAMS CO (Continued) **1000371369**

Area of violation: TSD - General
Date violation determined: 02/14/1992
Date achieved compliance: 11/06/1997
Violation lead agency: EPA
Enforcement action: INITIAL CIVIL JUDICIAL ACTION FOR COMPLIANCE AND/OR MONETARY PENALTY
Enforcement action date: 07/16/1993
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: SR - 35 IAC 722.111
Area of violation: Generators - General
Date violation determined: 02/14/1992
Date achieved compliance: 11/06/1997
Violation lead agency: EPA
Enforcement action: INITIAL CIVIL JUDICIAL ACTION FOR COMPLIANCE AND/OR MONETARY PENALTY
Enforcement action date: 07/16/1993
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: SR - 35 IAC 725.212
Area of violation: TSD - Closure/Post-Closure
Date violation determined: 02/14/1992
Date achieved compliance: 11/06/1997
Violation lead agency: EPA
Enforcement action: INITIAL CIVIL JUDICIAL ACTION FOR COMPLIANCE AND/OR MONETARY PENALTY
Enforcement action date: 07/16/1993
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: SR - 35 IAC 725.113(b)
Area of violation: TSD - General
Date violation determined: 02/14/1992
Date achieved compliance: 11/06/1997
Violation lead agency: EPA
Enforcement action: FINAL CIVIL JUDICIAL ACTION FOR COMPLIANCE AND/OR MONETARY PENALTY
Enforcement action date: 11/06/1997
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: 4700000
Paid penalty amount: 4700000

Regulation violated: SR - 35 IAC 728.107
Area of violation: LDR - General

SHERWIN WILLIAMS CO (Continued) **1000371369**

Date violation determined: 02/14/1992
Date achieved compliance: 11/06/1997
Violation lead agency: EPA
Enforcement action: INITIAL CIVIL JUDICIAL ACTION FOR COMPLIANCE AND/OR MONETARY PENALTY
Enforcement action date: 07/16/1993
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: SR - 35 IAC 725.247(f)(5)
Area of violation: TSD - Financial Requirements
Date violation determined: 02/14/1992
Date achieved compliance: 11/06/1997
Violation lead agency: EPA
Enforcement action: INITIAL CIVIL JUDICIAL ACTION FOR COMPLIANCE AND/OR MONETARY PENALTY
Enforcement action date: 07/16/1993
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: SR - 35 IAC 725.247(f)(5)
Area of violation: TSD - Financial Requirements
Date violation determined: 02/14/1992
Date achieved compliance: 11/06/1997
Violation lead agency: EPA
Enforcement action: FINAL CIVIL JUDICIAL ACTION FOR COMPLIANCE AND/OR MONETARY PENALTY
Enforcement action date: 11/06/1997
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: 4700000
Paid penalty amount: 4700000

Regulation violated: SR - 35 IAC 725.273
Area of violation: TSD - Container Use and Management
Date violation determined: 02/14/1992
Date achieved compliance: 11/06/1997
Violation lead agency: EPA
Enforcement action: FINAL CIVIL JUDICIAL ACTION FOR COMPLIANCE AND/OR MONETARY PENALTY
Enforcement action date: 11/06/1997
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: 4700000
Paid penalty amount: 4700000

Regulation violated: SR - 35 IAC 725.295
Area of violation: TSD - Tank System Standards
Date violation determined: 02/14/1992

SHERWIN WILLIAMS CO (Continued) **1000371369**

Date achieved compliance: 11/06/1997
Violation lead agency: EPA
Enforcement action: INITIAL CIVIL JUDICIAL ACTION FOR COMPLIANCE AND/OR MONETARY PENALTY
Enforcement action date: 07/16/1993
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: SR - 35 IAC 725.113(b)
Area of violation: TSD - General
Date violation determined: 02/14/1992
Date achieved compliance: 11/06/1997
Violation lead agency: EPA
Enforcement action: INITIAL CIVIL JUDICIAL ACTION FOR COMPLIANCE AND/OR MONETARY PENALTY
Enforcement action date: 07/16/1993
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: SR - 722.134(a)
Area of violation: Generators - Pre-transport
Date violation determined: 08/05/1987
Date achieved compliance: 02/05/1988
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 11/06/1987
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: SR - 722.111
Area of violation: Generators - General
Date violation determined: 10/10/1986
Date achieved compliance: 02/26/1987
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 12/23/1986
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: SR - 725.193(d)(4)
Area of violation: TSD IS-Ground-Water Monitoring
Date violation determined: 03/31/1986
Date achieved compliance: 08/07/1986

SHERWIN WILLIAMS CO (Continued) **1000371369**

Violation lead agency:	State
Enforcement action:	WRITTEN INFORMAL
Enforcement action date:	04/03/1986
Enf. disposition status:	Not reported
Enf. disp. status date:	Not reported
Enforcement lead agency:	State
Proposed penalty amount:	Not reported
Final penalty amount:	Not reported
Paid penalty amount:	Not reported

Regulation violated:	SR - 725.242(b)
Area of violation:	TSD - Financial Requirements
Date violation determined:	03/27/1986
Date achieved compliance:	07/18/1986
Violation lead agency:	State
Enforcement action:	WRITTEN INFORMAL
Enforcement action date:	04/01/1986
Enf. disposition status:	Not reported
Enf. disp. status date:	Not reported
Enforcement lead agency:	State
Proposed penalty amount:	Not reported
Final penalty amount:	Not reported
Paid penalty amount:	Not reported

Regulation violated:	SR - 725.243
Area of violation:	TSD - Financial Requirements
Date violation determined:	03/27/1986
Date achieved compliance:	07/18/1986
Violation lead agency:	State
Enforcement action:	WRITTEN INFORMAL
Enforcement action date:	04/01/1986
Enf. disposition status:	Not reported
Enf. disp. status date:	Not reported
Enforcement lead agency:	State
Proposed penalty amount:	Not reported
Final penalty amount:	Not reported
Paid penalty amount:	Not reported

Regulation violated:	SR - 725.131
Area of violation:	TSD - Preparedness and Prevention
Date violation determined:	01/17/1986
Date achieved compliance:	10/21/1994
Violation lead agency:	State
Enforcement action:	Not reported
Enforcement action date:	Not reported
Enf. disposition status:	Not reported
Enf. disp. status date:	Not reported
Enforcement lead agency:	Not reported
Proposed penalty amount:	Not reported
Final penalty amount:	Not reported
Paid penalty amount:	Not reported

Regulation violated:	SR - 725.116
Area of violation:	TSD - General Facility Standards
Date violation determined:	01/17/1986
Date achieved compliance:	10/21/1994
Violation lead agency:	State

SHERWIN WILLIAMS CO (Continued) **1000371369**

Enforcement action:	Not reported
Enforcement action date:	Not reported
Enf. disposition status:	Not reported
Enf. disp. status date:	Not reported
Enforcement lead agency:	Not reported
Proposed penalty amount:	Not reported
Final penalty amount:	Not reported
Paid penalty amount:	Not reported

Regulation violated:	SR - 703.154
Area of violation:	TSD - General
Date violation determined:	01/17/1986
Date achieved compliance:	10/21/1994
Violation lead agency:	State
Enforcement action:	Not reported
Enforcement action date:	Not reported
Enf. disposition status:	Not reported
Enf. disp. status date:	Not reported
Enforcement lead agency:	Not reported
Proposed penalty amount:	Not reported
Final penalty amount:	Not reported
Paid penalty amount:	Not reported

Regulation violated:	Not reported
Area of violation:	Generators - General
Date violation determined:	04/25/1985
Date achieved compliance:	07/24/1985
Violation lead agency:	State
Enforcement action:	WRITTEN INFORMAL
Enforcement action date:	05/10/1985
Enf. disposition status:	Not reported
Enf. disp. status date:	Not reported
Enforcement lead agency:	State
Proposed penalty amount:	Not reported
Final penalty amount:	Not reported
Paid penalty amount:	Not reported

Regulation violated:	Not reported
Area of violation:	Generators - General
Date violation determined:	04/25/1985
Date achieved compliance:	05/05/1986
Violation lead agency:	State
Enforcement action:	VIOLATION NOTICE (VN)
Enforcement action date:	06/18/1985
Enf. disposition status:	Not reported
Enf. disp. status date:	Not reported
Enforcement lead agency:	State
Proposed penalty amount:	Not reported
Final penalty amount:	Not reported
Paid penalty amount:	Not reported

Regulation violated:	Not reported
Area of violation:	Generators - General
Date violation determined:	04/25/1985
Date achieved compliance:	05/05/1986
Violation lead agency:	State
Enforcement action:	WRITTEN INFORMAL

SHERWIN WILLIAMS CO (Continued) **1000371369**

Enforcement action date: 05/10/1985
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 04/25/1985
Date achieved compliance: 07/24/1985
Violation lead agency: State
Enforcement action: VIOLATION NOTICE (VN)
Enforcement action date: 06/18/1985
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 01/07/1985
Date achieved compliance: 06/04/1985
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 02/05/1985
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 01/07/1985
Date achieved compliance: 06/04/1985
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 01/07/1985
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 12/14/1984
Date achieved compliance: 12/20/1984
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 12/10/1984

Map ID	Site	Database(s)	EPA ID Number
	SHERWIN WILLIAMS CO (Continued)		**1000371369**

Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 09/19/1984
Date achieved compliance: 12/21/1984
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 11/15/1984
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 09/19/1984
Date achieved compliance: 12/21/1984
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 09/20/1984
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 08/17/1984
Date achieved compliance: 12/21/1984
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 08/20/1984
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 08/17/1984
Date achieved compliance: 12/21/1984
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 09/20/1984
Enf. disposition status: Not reported

SHERWIN WILLIAMS CO (Continued) **1000371369**

Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 08/09/1984
Date achieved compliance: 09/13/1984
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 08/20/1984
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 07/16/1984
Date achieved compliance: 12/21/1984
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 07/19/1984
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 05/17/1984
Date achieved compliance: 12/21/1984
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 02/15/1984
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 02/15/1984
Date achieved compliance: 01/24/1985
Violation lead agency: EPA
Enforcement action: INITIAL 3008(A) COMPLIANCE
Enforcement action date: 03/28/1984
Enf. disposition status: Not reported
Enf. disp. status date: Not reported

SHERWIN WILLIAMS CO (Continued) **1000371369**

Enforcement lead agency: EPA
Proposed penalty amount: 9500
Final penalty amount: 9500
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 02/15/1984
Date achieved compliance: 01/24/1985
Violation lead agency: EPA
Enforcement action: FINAL 3008(A) COMPLIANCE ORDER
Enforcement action date: 07/30/1984
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: 9500
Final penalty amount: 9500
Paid penalty amount: Not reported

Regulation violated: SR - 725.191
Area of violation: TSD IS-Ground-Water Monitoring
Date violation determined: 11/03/1983
Date achieved compliance: 04/06/1984
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 12/01/1983
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: SR - 725.194
Area of violation: TSD IS-Ground-Water Monitoring
Date violation determined: 11/03/1983
Date achieved compliance: 04/06/1984
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 12/01/1983
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: SR - 725.193
Area of violation: TSD IS-Ground-Water Monitoring
Date violation determined: 11/03/1983
Date achieved compliance: 04/06/1984
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 12/01/1983
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State

Map ID	Site	Database(s)	EPA ID Number

SHERWIN WILLIAMS CO (Continued) **1000371369**

Proposed penalty amount:	Not reported
Final penalty amount:	Not reported
Paid penalty amount:	Not reported

Regulation violated:	SR - 725.192
Area of violation:	TSD IS-Ground-Water Monitoring
Date violation determined:	11/03/1983
Date achieved compliance:	04/06/1984
Violation lead agency:	State
Enforcement action:	WRITTEN INFORMAL
Enforcement action date:	12/01/1983
Enf. disposition status:	Not reported
Enf. disp. status date:	Not reported
Enforcement lead agency:	State
Proposed penalty amount:	Not reported
Final penalty amount:	Not reported
Paid penalty amount:	Not reported

Evaluation Action Summary:

Evaluation date:	10/14/2008
Evaluation:	NOT A SIGNIFICANT NON-COMPLIER
Area of violation:	Not reported
Date achieved compliance:	Not reported
Evaluation lead agency:	State

Evaluation date:	07/31/2008
Evaluation:	NON-FINANCIAL RECORD REVIEW
Area of violation:	Federal or State Statute
Date achieved compliance:	Not reported
Evaluation lead agency:	State

Evaluation date:	07/31/2008
Evaluation:	NON-FINANCIAL RECORD REVIEW
Area of violation:	TSD IS-Manifest/Records/Reporting
Date achieved compliance:	Not reported
Evaluation lead agency:	State

Evaluation date:	07/31/2008
Evaluation:	SIGNIFICANT NON-COMPLIER
Area of violation:	Federal or State Statute
Date achieved compliance:	Not reported
Evaluation lead agency:	State

Evaluation date:	07/31/2008
Evaluation:	SIGNIFICANT NON-COMPLIER
Area of violation:	TSD IS-Manifest/Records/Reporting
Date achieved compliance:	Not reported
Evaluation lead agency:	State

Evaluation date:	06/04/2008
Evaluation:	NON-FINANCIAL RECORD REVIEW
Area of violation:	TSD IS-Manifest/Records/Reporting
Date achieved compliance:	Not reported
Evaluation lead agency:	State

Evaluation date:	06/04/2008
Evaluation:	NON-FINANCIAL RECORD REVIEW

SHERWIN WILLIAMS CO (Continued) **1000371369**

Area of violation: Federal or State Statute
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 03/25/2008
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: Federal or State Statute
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 03/25/2008
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: TSD IS-Manifest/Records/Reporting
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 07/24/2007
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 01/23/2007
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: TSD IS-Manifest/Records/Reporting
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 01/23/2007
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: Federal or State Statute
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 07/03/2002
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 08/18/1995
Evaluation: GROUNDWATER MONITORING EVALUATION
Area of violation: TSD IS-Ground-Water Monitoring
Date achieved compliance: 11/06/1997
Evaluation lead agency: State

Evaluation date: 03/27/1995
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: TSD - Financial Requirements
Date achieved compliance: 11/06/1997
Evaluation lead agency: State

Evaluation date: 03/27/1995
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: TSD - Closure/Post-Closure
Date achieved compliance: 11/06/1997
Evaluation lead agency: State

Map ID	Site	Database(s)	EPA ID Number
	SHERWIN WILLIAMS CO (Continued)		**1000371369**

Evaluation date: 01/18/1995
Evaluation: FOLLOW-UP INSPECTION
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 09/22/1994
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - Pre-transport
Date achieved compliance: 02/14/1995
Evaluation lead agency: State

Evaluation date: 09/22/1994
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 09/22/1994
Evaluation: FOLLOW-UP INSPECTION
Area of violation: Generators - Pre-transport
Date achieved compliance: 02/14/1995
Evaluation lead agency: State

Evaluation date: 04/20/1994
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: TSD - Closure/Post-Closure
Date achieved compliance: 11/06/1997
Evaluation lead agency: State

Evaluation date: 04/20/1994
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: TSD - Financial Requirements
Date achieved compliance: 11/06/1997
Evaluation lead agency: State

Evaluation date: 02/14/1992
Evaluation: CASE DEVELOPMENT INSPECTION
Area of violation: TSD - Tank System Standards
Date achieved compliance: 11/06/1997
Evaluation lead agency: EPA

Evaluation date: 02/14/1992
Evaluation: CASE DEVELOPMENT INSPECTION
Area of violation: TSD - Contingency Plan and Emergency Procedures
Date achieved compliance: 11/06/1997
Evaluation lead agency: EPA

Evaluation date: 02/14/1992
Evaluation: CASE DEVELOPMENT INSPECTION
Area of violation: Permits - Application
Date achieved compliance: 11/06/1997
Evaluation lead agency: EPA

Evaluation date: 02/14/1992
Evaluation: CASE DEVELOPMENT INSPECTION
Area of violation: LDR - General

SHERWIN WILLIAMS CO (Continued) **1000371369**

Date achieved compliance: 11/06/1997
Evaluation lead agency: EPA

Evaluation date: 02/14/1992
Evaluation: CASE DEVELOPMENT INSPECTION
Area of violation: TSD - Container Use and Management
Date achieved compliance: 11/06/1997
Evaluation lead agency: EPA

Evaluation date: 02/14/1992
Evaluation: CASE DEVELOPMENT INSPECTION
Area of violation: TSD - Closure/Post-Closure
Date achieved compliance: 11/06/1997
Evaluation lead agency: EPA

Evaluation date: 02/14/1992
Evaluation: CASE DEVELOPMENT INSPECTION
Area of violation: Generators - General
Date achieved compliance: 11/06/1997
Evaluation lead agency: EPA

Evaluation date: 02/14/1992
Evaluation: CASE DEVELOPMENT INSPECTION
Area of violation: TSD - General
Date achieved compliance: 11/06/1997
Evaluation lead agency: EPA

Evaluation date: 02/14/1992
Evaluation: CASE DEVELOPMENT INSPECTION
Area of violation: TSD - Financial Requirements
Date achieved compliance: 11/06/1997
Evaluation lead agency: EPA

Evaluation date: 02/14/1992
Evaluation: CASE DEVELOPMENT INSPECTION
Area of violation: TSD - Manifest/Records/Reporting
Date achieved compliance: 11/06/1997
Evaluation lead agency: EPA

Evaluation date: 01/08/1988
Evaluation: FOLLOW-UP INSPECTION
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 08/05/1987
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - Pre-transport
Date achieved compliance: 02/05/1988
Evaluation lead agency: State

Evaluation date: 10/10/1986
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 02/26/1987
Evaluation lead agency: State

SHERWIN WILLIAMS CO (Continued) **1000371369**

Evaluation date: 03/31/1986
Evaluation: NON-FINANCIAL RECORD REVIEW
Area of violation: TSD IS-Ground-Water Monitoring
Date achieved compliance: 08/07/1986
Evaluation lead agency: State

Evaluation date: 03/27/1986
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: TSD - Financial Requirements
Date achieved compliance: 07/18/1986
Evaluation lead agency: State

Evaluation date: 01/17/1986
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - General Facility Standards
Date achieved compliance: 10/21/1994
Evaluation lead agency: State

Evaluation date: 01/17/1986
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - Preparedness and Prevention
Date achieved compliance: 10/21/1994
Evaluation lead agency: State

Evaluation date: 01/17/1986
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - General
Date achieved compliance: 10/21/1994
Evaluation lead agency: State

Evaluation date: 04/25/1985
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 07/24/1985
Evaluation lead agency: State

Evaluation date: 04/25/1985
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 05/05/1986
Evaluation lead agency: State

Evaluation date: 01/07/1985
Evaluation: NON-FINANCIAL RECORD REVIEW
Area of violation: Generators - General
Date achieved compliance: 06/04/1985
Evaluation lead agency: State

Evaluation date: 12/14/1984
Evaluation: NON-FINANCIAL RECORD REVIEW
Area of violation: Generators - General
Date achieved compliance: 12/20/1984
Evaluation lead agency: State

Evaluation date: 10/23/1984
Evaluation: GROUNDWATER MONITORING EVALUATION
Area of violation: Not reported

SHERWIN WILLIAMS CO (Continued) **1000371369**

Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 09/19/1984
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: Generators - General
Date achieved compliance: 12/21/1984
Evaluation lead agency: State

Evaluation date: 09/19/1984
Evaluation: COMPLIANCE SCHEDULE EVALUATION
Area of violation: Generators - General
Date achieved compliance: 12/21/1984
Evaluation lead agency: State

Evaluation date: 08/17/1984
Evaluation: COMPLIANCE SCHEDULE EVALUATION
Area of violation: Generators - General
Date achieved compliance: 12/21/1984
Evaluation lead agency: State

Evaluation date: 08/17/1984
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: Generators - General
Date achieved compliance: 12/21/1984
Evaluation lead agency: State

Evaluation date: 08/09/1984
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 09/13/1984
Evaluation lead agency: State

Evaluation date: 07/16/1984
Evaluation: NON-FINANCIAL RECORD REVIEW
Area of violation: Generators - General
Date achieved compliance: 12/21/1984
Evaluation lead agency: State

Evaluation date: 07/16/1984
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: Generators - General
Date achieved compliance: 12/21/1984
Evaluation lead agency: State

Evaluation date: 05/17/1984
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: Generators - General
Date achieved compliance: 12/21/1984
Evaluation lead agency: State

Evaluation date: 02/15/1984
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: Generators - General
Date achieved compliance: 01/24/1985
Evaluation lead agency: EPA

Map ID	Site	Database(s)	EPA ID Number
	SHERWIN WILLIAMS CO (Continued)		**1000371369**

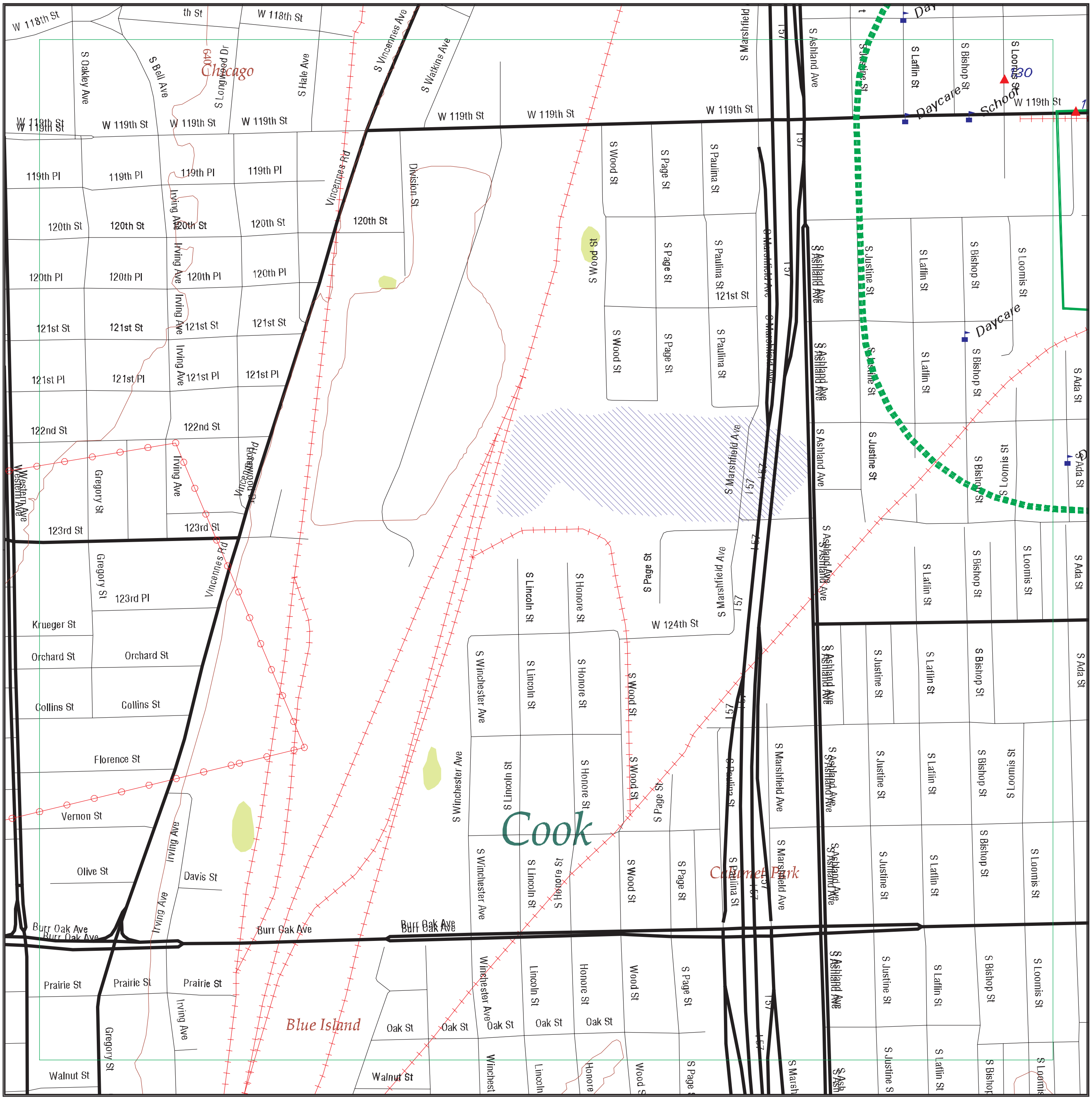
Evaluation date: 11/03/1983
Evaluation: GROUNDWATER MONITORING EVALUATION
Area of violation: TSD IS-Ground-Water Monitoring
Date achieved compliance: 04/06/1984
Evaluation lead agency: State

Count: 23 records

FOCUS MAP 8 ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CALUMET CITY	1008144866	ANTONIETTI CONSTRUCTION PIT	146TH & BURNHAM AVE	60633	SWF/LF
CHICAGO	1012172115	ROSELAND COMMUNITY	110TH PLACE AND MICHIGAN, EAST SIDE OF STATE ST.		US BROWNFIELDS
CHICAGO	1003870420	CHICAGO REGIONAL PORT DIST	111TH & DOTY AVE	60633	CERC-NFRAP
CHICAGO	S108111043	CHICAGO REGIONAL PORT DISTRICT	111TH & CALUMET EXPY	60617	SWF/LF
CHICAGO	1010784332	COMED	113TH & TORRENCE	60617	RCRA-LQG
CHICAGO	S109167302		549 115TH ST		LUST, SPILLS
CHICAGO	S108112646	PAXTON LANDFILL CORP #2	116TH & OGELSBY	60617	SWF/LF
CHICAGO	1014389970	COMED	119TH & PAULINA	60617	RCRA-SQG
CHICAGO	1003870122	ILLINOIS CENTRAL RR TRACKS	119TH STREET EAST IL CENTRAL TRACKS	60628	CERC-NFRAP
CHICAGO	S101215364	U.S. DRUM	2400 E 119TH ST	60633	SSU
CHICAGO	1002886378	US SCRAP	123RD & COTTAGE GROVE	60628	CERCLIS
CHICAGO	S108111042	CHICAGO MSD #4	124TH & OGELSBY	60617	SWF/LF
CHICAGO	S101467236	PENN CENTRAL	810 E 124TH ST		SSU
CHICAGO	1002886490	METRO SANITARY DISTRICT #3	125TH STREET & DOTY AVENUE	60628	CERC-NFRAP
CHICAGO	S108939041	USX REALTY DEVELOPMENT PBR	3426 89TH ST E	60617	SWF/LF
CHICAGO	S107926345	VAN VLISSINGEN PROPERTY	96TH & VAN VLISSINGEN RD	60617	SSU
CHICAGO	U003853346	FORMER PULLMAN FACTORY	11302 CORLISS AVE	60628	UST
CHICAGO	S109366427		6700 JEFFREY BLVD		LUST, SPILLS
CHICAGO	S108891646		11900 LOOMIS		LUST, SPILLS
CHICAGO	S108111040	CHICAGO MSD #2	OBRIEN LCK & DAM RD	60633	SWF/LF
CHICAGO	S107926349	LAKE CALUMET CLUSTER SITE	N OF 122ND	60628	SSU
CHICAGO	S108111350	ENVIROTHERM	11700 STONY IS	60617	SWF/LF
CHICAGO	1008150443	PAXTON LANDFILL CORP	TORRENCE AVE	60617	SWF/LF

Focus Map 9


W 118th St
th St
W 118th St
S Oakley Ave
S Bell Ave
Chicago
S Longwood Dr
S Hale Ave
S Vincennes Ave
S Watkins Ave
S Marshfield
I 57
S Ashland Ave
S Justine St
S Laflin St
S Bishop St
S Loomis St
Daycare
School
130
W 119th St
119th Pl
120th St
120th Pl
121st St
121st Pl
122nd St
123rd St
123rd Pl
Irving Ave
Vincennes Rd
Division St
S Wood St
S Page St
S Paulina St
S Marshfield Ave
S Ada St
Western Ave
Gregory St
Krueger St
Orchard St
Collins St
Florence St
Vernon St
Olive St
Davis St
Burr Oak Ave
Prairie St
Walnut St
Oak St
S Lincoln St
S Honore St
S Winchester Ave
W 124th St
Cook
Calumet Park
Blue Island

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Legend

- Roads
- Major Roads
- Contour Lines
- National Wetlands Inventory
- Waterways
- Railroads
- Study Boundary
- 100-Yr Flood Zones
- Powerlines
- Pipelines
- Fault Lines
- Water
- Listed Sites
- Sensitive Receptors

N

0 1/8 1/4

Scale in Miles

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FOCUS MAP 9 SUMMARY

	Database	Total Plotted
FEDERAL RECORDS		
	Proposed NPL	0
	Delisted NPL	0
	CERCLIS	0
	CERC-NFRAP	0
	CORRACTS	0
	RCRA-TSDF	0
	RCRA-LQG	0
	RCRA-SQG	0
	RCRA-CESQG	0
	US ENG CONTROLS	0
	US INST CONTROL	0
	ERNS	0
	US BROWNFIELDS	0
STATE AND LOCAL RECORDS		
	SSU	0
	SWF/LF	0
	LUST	0
	UST	1
	SPILLS	0
	ENG CONTROLS	0
	INST CONTROL	0
	SRP	1
	DRYCLEANERS	0
	BROWNFIELDS	0
EDR PROPRIETARY RECORDS		
	Manufactured Gas Plants	0

NOTES:

Sites may be listed in more than one database

Map ID	Site	Database(s)	EPA ID Number
130	**WEST PULLMAN STUDY AREA NO. 6** **11931 SOUTH LOOMIS STREET** **CHICAGO, IL 60643**	**SRP**	**S104491753** **N/A**

SRP:

IL EPA Id: 0316755104
US EPA Id: Not reported
Longitude: -87.65269
Latitude: 41.67681
Contact Name: David Reynolds
Contact Address: 30 North LaSalle Street
Contact Address2: 25th Floor
Contact City,St,Zip: Chicago, IL 60602-
Contact Phone: (312) 742-0123
Date Enrolled: 09/23/1999
Point Of Contact: Carol L. Nissen, P.E.
Consultant Company: Tetra Tech EM, Inc.
Consultant Address: 200 East Randolph Drive
Consultant Address2: Suite 4700
Consultant City,St,Zip: Chicago, IL 60601-
Consultant Phone: (312) 856-8700
Proj Mgr Assigned: Frierdich
Sec. 4 Letter Date: Not reported
NFR Recorded: Not reported
Active: False
Total Acres: 9.570
No Further Remediation Letter Dt: 06/21/2002
Remediation Applicant Co: City of Chicago, Dept. of Environment
Remediation Applicant Title: Deputy Comm.
Remediation Applicant Name: Mr. David Reynolds
Remediation Applicant Company: City of Chicago Department of Environment
Remediation Applicant Address: 30 North LaSalle Street
Remediation Applicant Address 2: 25th Floor
Remediation Applicant City,St,Zip: Chicago, IL 60602-
Illinois EPA: 0316755104
Site Name: West Pullman Study Area No. 6
NFR Letter: 2005-09-20
NFR Letter Date Recorded: 2005-09-30
Site Type: Industrial/Commercial
Comprehensive/Focused: Comprehensive
Institutional Controls: Not reported
Barrier: Not reported
Worker Caution: False
Acres: 9.570

IL EPA Id: 0316755104
US EPA Id: Not reported
Longitude: -87.65269
Latitude: 41.67681
Contact Name: David Reynolds
Contact Address: 30 North LaSalle Street
Contact Address2: 25th Floor
Contact City,St,Zip: Chicago, IL 60602-
Contact Phone: (312) 742-0123
Date Enrolled: 09/23/1999
Point Of Contact: Carol L. Nissen, P.E.
Consultant Company: Tetra Tech EM, Inc.
Consultant Address: 200 East Randolph Drive

WEST PULLMAN STUDY AREA NO. 6 (Continued) **S104491753**

Consultant Address2: Suite 4700
Consultant City,St,Zip: Chicago, IL 60601-
Consultant Phone: (312) 856-8700
Proj Mgr Assigned: Frierdich
Sec. 4 Letter Date: Not reported
NFR Recorded: 09/30/2005
Active: False
Total Acres: 9.570
No Further Remediation Letter Dt: 09/20/2005
Remediation Applicant Co: City of Chicago, Dept. of Environment
Remediation Applicant Title: Deputy Comm.
Remediation Applicant Name: Mr. David Reynolds
Remediation Applicant Company: City of Chicago Department of Environment
Remediation Applicant Address: 30 North LaSalle Street
Remediation Applicant Address 2: 25th Floor
Remediation Applicant City,St,Zip: Chicago, IL 60602-
Illinois EPA: 0316755104
Site Name: West Pullman Study Area No. 6
NFR Letter: 2005-09-20
NFR Letter Date Recorded: 2005-09-30
Site Type: Industrial/Commercial
Comprehensive/Focused: Comprehensive
Institutional Controls: Not reported
Barrier: Not reported
Worker Caution: False
Acres: 9.570

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140 **AMFORGE** **UST** **U004110692**
1324 W. 119TH STREET **N/A**
CHICAGO, IL 60643

UST:
Facility ID: 2043836
Facility Status: EXEMPT
Facility Type: VACANT
Owner Name: City of Chicago Department of Environment
Owner Id: U0028125
Owner Address: 30 North LaSalle Street, 25th floor
Owner City,St,Zip: Chicago, IL 60602

Tank Number: 1
Tank Capacity: 500
Tank Substance: Fuel Oil
Last Used Date: 12/31/1973
OSFM First Notify Date: Not reported
Tank Status: Exempt from registration
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

Tank Number: 2

AMFORGE (Continued) **U004110692**

Tank Capacity: 2000
Tank Substance: Gasoline
Last Used Date: 12/31/1973
OSFM First Notify Date: Not reported
Tank Status: Exempt from registration
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

Tank Number: 3
Tank Capacity: 1000
Tank Substance: Gasoline
Last Used Date: 12/31/1973
OSFM First Notify Date: Not reported
Tank Status: Exempt from registration
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

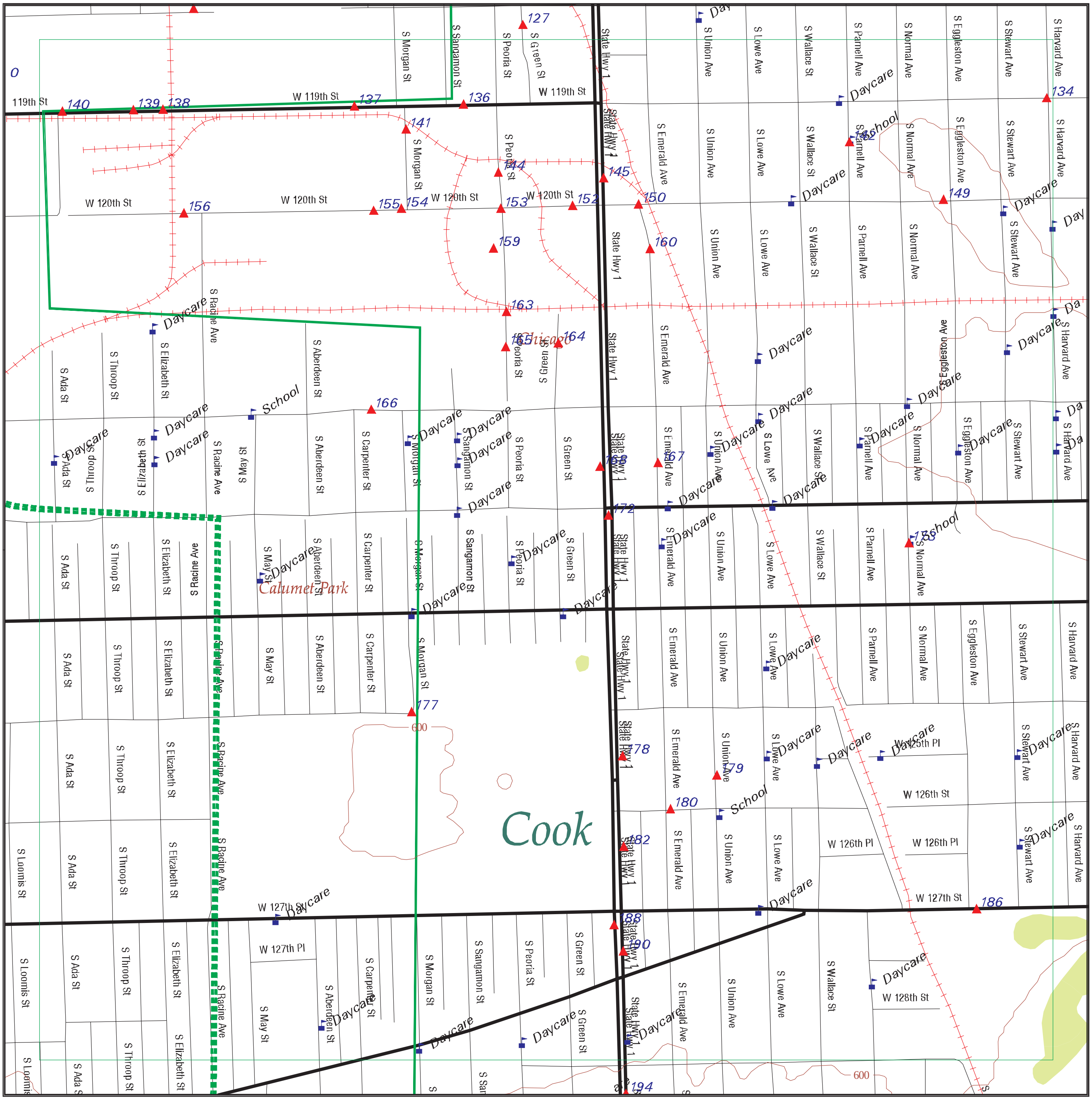
Tank Number: 4
Tank Capacity: 1000
Tank Substance: Gasoline
Last Used Date: 12/31/1973
OSFM First Notify Date: Not reported
Tank Status: Exempt from registration
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

Count: 27 records

FOCUS MAP 9 ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
BLUE ISLAND	1014476085	2001 W 119TH - TOD SITE 11	2001 W 119TH SAINT FREDERICKS CORP	60406	US BROWNFIELDS
BLUE ISLAND	1014476095	2021 120TH ST - TOD SITE 1E	2021 120TH SAINT GREATER OPEN &	60406	US BROWNFIELDS
BLUE ISLAND	1014476096	2025 120TH ST - TOD SITE 1D	2025 120TH SAINT GREATER OPEN &	60406	US BROWNFIELDS
BLUE ISLAND	1014476091	2011 120TH ST - TOD SITE 1G	2011 120TH SAINT MAYTAG	60406	US BROWNFIELDS
BLUE ISLAND	1014476098	2029 120TH PL - TOD SITE 1C	2029 120TH PL GREATER OPEN DEV &	60406	US BROWNFIELDS
BLUE ISLAND	1004694615	BLUE ISLAND CITY OF WATER DEPT	122ND AND HIGHLAND	60406	RCRA-CESQG
BLUE ISLAND	1014476038	12301 VINCENNES AVE - TOD SITE 3A	12301ST VINCENNES AVE W & W AUTO	60406	US BROWNFIELDS
BLUE ISLAND	S108113026	SEXTON	123RD ST & CALIFORNIA	60406	SWF/LF
BLUE ISLAND	1003108961	CLARK/BLUE ISLAND	CLARK REFINERY, 13100 S KEDZIE	60406	CERCLIS
BLUE ISLAND	1003073091	DIVISION STREET BRIDGE MERCURY SPILL	2000 W DIVISION ST	60406	CERC-NFRAP
BLUE ISLAND	S105015149	CLARK BLUE ISLAND REFINERY	1300 S KEDZIE	60406	SSU
BLUE ISLAND	1014390104	NE MIXED-USE COMMERCIAL PARK	12200 S MARSHFIELD AVE	60406	RCRA-CESQG
BLUE ISLAND	1014476046	12451 VINCENNES AVE - TOD SITE 3F	12451 VINCENNES AVE SOUTH PARK	60406	US BROWNFIELDS
BLUE ISLAND	1014476045	12431 VINCENNES AVE - TOD SITE 3E	12431 VINCENNES AVENUE PARK	60406	US BROWNFIELDS
CALUMET PARK	U004183412	TRUE NORTH LOCATION 1967	1620 W 127TH ST	60643	UST
CALUMET PARK	1004696111	EARL SCHEIB PAINT & BODY	1731 W 127TH	60643	RCRA-CESQG
CALUMET PARK	1000166385	CHICAGO COPPER AND CHEMICAL COMPANY	INTERSECTION OF WINCHESTER RD & 127 ST.	60643	CERCLIS
CALUMET PARK	U001964624	RACEWAY PK	SWC 130TH & ASHLAND	60643	UST
CALUMET PARK	S106779089	CHICAGO COPPER & CHEMICAL	12300 S WINCHESTER AVE	60643	SRP
CHICAGO	1012172115	ROSELAND COMMUNITY	110TH PLACE AND MICHIGAN, EAST SIDE OF STATE ST.		US BROWNFIELDS
CHICAGO	S109167302		549 115TH ST		LUST, SPILLS
CHICAGO	S106526645	UNNAMED PARCEL	122ND ST		BROWNFIELDS
CHICAGO	S101467236	PENN CENTRAL	810 E 124TH ST		SSU
CHICAGO	S109366427		6700 JEFFREY BLVD		LUST, SPILLS
CHICAGO	S108891646		11900 LOOMIS		LUST, SPILLS
CHICAGO	S110335776	BEVERLY PROFESSIONAL BUILDERS	10054 S WESTERN AVE	60643	ENG CONTROLS, INST CONTROL, S
CHICAGO	1004696188	HUMANA HEALTH CARE SVCS	983 S WESTERN AVE	60643	RCRA-CESQG

Focus Map 10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S Sangamon St
S Peoria St
S Green St
S Union Ave
S Lowe Ave
S Wallace St
S Parnell Ave
S Normal Ave
S Eggleston Ave
S Stewart Ave
S Harvard Ave
S Emerald Ave
S Racine Ave
S Aberdeen St
S Carpenter St
S May St
S Ada St
S Throop St
S Elizabeth St
S Loomis St
Chicago
Calumet Park
Cook
Daycare
School
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90786 CTC RLE Hazardous Materials

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Legend

Roads	Waterways	Powerlines	Water	Listed Sites
Major Roads	Railroads	Pipelines		Sensitive Receptors
Contour Lines	Study Boundary	Fault Lines		
National Wetlands Inventory	100-Yr Flood Zones			

0 1/8 1/4

Scale in Miles

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FOCUS MAP 10 SUMMARY

	Database	Total Plotted
FEDERAL RECORDS		
	Proposed NPL	0
	Delisted NPL	0
	CERCLIS	4
	CERC-NFRAP	1
	CORRACTS	1
	RCRA-TSDF	0
	RCRA-LQG	0
	RCRA-SQG	9
	RCRA-CESQG	4
	US ENG CONTROLS	0
	US INST CONTROL	0
	ERNS	1
	US BROWNFIELDS	1
STATE AND LOCAL RECORDS		
	SSU	1
	SWF/LF	0
	LUST	8
	UST	18
	SPILLS	14
	ENG CONTROLS	3
	INST CONTROL	5
	SRP	12
	DRYCLEANERS	1
	BROWNFIELDS	0
EDR PROPRIETARY RECORDS		
	Manufactured Gas Plants	0

NOTES:

Sites may be listed in more than one database

Map ID	Site	Database(s)	EPA ID Number
126	**WIRA STUDY AREA NUMBER 4** **11801 SOUTH RACINE AVENUE** **CHICAGO, IL 60643**	**INST CONTROL** **SRP**	**S106121987** **N/A**

IL INSTUTIONAL CONTROL:

Illinois EPA Id: 0316755128
NFR Letter: 03/23/2011
Date NFR Recorded: 04/25/2011
Type Of Site: Residential
Comprehensive / Focused: Comprehensive
Remediation Applicant Title: Mr.
Remediation Applicant Name: Zachary Clayton
RA Company: City of Chicago, Department of Environment
RA Address: 30 North LaSalle Street
RA Secondary Address: 2nd Floor
RA City,St,Zip: Chicago, IL 60602-
Institutional Controls: Groundwater use restriction
Engineered Barriers: Not reported
Worker Caution: False
Acres: 13.64

SRP:

IL EPA Id: 0316755128
US EPA Id: Not reported
Longitude: -87.65152
Latitude: 41.67927
Contact Name: Kimberly Worthington
Contact Address: 30 North LaSalle Street
Contact Address2: 25th Floor
Contact City,St,Zip: Chicago, IL 60602-
Contact Phone: (312) 744-9139
Date Enrolled: 09/08/2003
Point Of Contact: Carol L. Nissen, P.E.
Consultant Company: Tetra Tech EM, Inc.
Consultant Address: 1 South Wacker Drive
Consultant Address2: 37th Floor
Consultant City,St,Zip: Chicago, IL 60606-
Consultant Phone: (312) 856-8700
Proj Mgr Assigned: Landers
Sec. 4 Letter Date: Not reported
NFR Recorded: 04/25/2011
Active: False
Total Acres: 2
No Further Remediation Letter Dt: 03/23/2011
Remediation Applicant Co: City of Chicago Department of Environment
Remediation Applicant Title: Ms.
Remediation Applicant Name: Mr. Zachary Clayton
Remediation Applicant Company: City of Chicago, Department of Environment
Remediation Applicant Address: 30 North LaSalle Street
Remediation Applicant Address 2: 2nd Floor
Remediation Applicant City,St,Zip: Chicago, IL 60602-
Illinois EPA: 0316755128
Site Name: WIRA Study Area 4
NFR Letter: 2011-03-23
NFR Letter Date Recorded: 2011-04-25
Site Type: Residential
Comprehensive/Focused: Comprehensive
Institutional Controls: Groundwater use restriction
Barrier: Not reported

WIRA STUDY AREA NUMBER 4 (Continued) **S106121987**

Worker Caution: False
Acres: 13.64

---

127 SHELDON HEIGHTS CHURCH OF CHRIST **INST CONTROL S105521066**
11819-11849 SOUTH GREEN STREET **SRP N/A**
CHICAGO, IL 60643

IL INSTUTIONAL CONTROL:
Illinois EPA Id: 0316755117
NFR Letter: 10/19/2004
Date NFR Recorded: 11/23/2004
Type Of Site: Residential
Comprehensive / Focused: Comprehensive
Remediation Applicant Title: Mr.
Remediation Applicant Name: Willie Carter
RA Company: Sheldon Heights Church of Christ
RA Address: 11325 South Halsted Street
RA Secondary Address: Not reported
RA City,St,Zip: Chicago, IL 60628-
Institutional Controls: Groundwater use restriction
Engineered Barriers: Not reported
Worker Caution: False
Acres: 2.600

SRP:
IL EPA Id: 0316755117
US EPA Id: ILR000117911
Longitude: -87.64303
Latitude: 41.67911
Contact Name: Willie Carter
Contact Address: 11325 South Halsted Street
Contact Address2: Not reported
Contact City,St,Zip: Chicago, IL 60628-
Contact Phone: (773) 568-2929
Date Enrolled: 06/13/2002
Point Of Contact: Adam M. Moghamis, P.E.
Consultant Company: Applied GeoScience, Inc.
Consultant Address: 2385 Hammond Drive
Consultant Address2: Suite 6
Consultant City,St,Zip: Schaumburg, IL 60173-
Consultant Phone: (847) 303-0300
Proj Mgr Assigned: Catlin
Sec. 4 Letter Date: Not reported
NFR Recorded: 11/23/2004
Active: False
Total Acres: 2.600
No Further Remediation Letter Dt: 10/19/2004
Remediation Applicant Co: Sheldon Heights Church of Christ
Remediation Applicant Title: Mr.
Remediation Applicant Name: Mr. Willie Carter
Remediation Applicant Company: Sheldon Heights Church of Christ
Remediation Applicant Address: 11325 South Halsted Street
Remediation Applicant Address 2: Not reported
Remediation Applicant City,St,Zip: Chicago, IL 60628-
Illinois EPA: 0316755117
Site Name: Sheldon Heights Church of Christ

Map ID	Site	Database(s)	EPA ID Number

SHELDON HEIGHTS CHURCH OF CHRIST (Continued) **S105521066**

NFR Letter:	2004-10-19
NFR Letter Date Recorded:	2004-11-23
Site Type:	Residential
Comprehensive/Focused:	Comprehensive
Institutional Controls:	Groundwater use restriction
Barrier:	Not reported
Worker Caution:	False
Acres:	2.600

---

127 **VACANT LAND** **UST** **U003865079**
11819 - 11849 SOUTH GREEN ST **N/A**
CHICAGO, IL 60643

UST:

Facility ID:	2041273
Facility Status:	CLOSED
Facility Type:	**NONE**
Owner Name:	Sheldon Heights Church of Christ
Owner Id:	U0030886
Owner Address:	11325 S Halsted St
Owner City,St,Zip:	Chicago, IL 60628
Tank Number:	1
Tank Capacity:	500
Tank Substance:	Gasoline
Last Used Date:	1/1/1987
OSFM First Notify Date:	9/3/2002
Tank Status:	**Removed**
Red Tag Issue Date:	Not reported
Install Date:	1/1/1960
Green Tag Decal:	**Not reported**
Green Tag Issue Date:	**Not reported**
Green Tag Expire Date:	**Not reported**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	No

---

134 **BIG SAM’S GROCERS** **UST** **U004110603**
333 W. 119TH STREET **N/A**
CHICAGO, IL 60628

UST:

Facility ID:	2043706
Facility Status:	EXEMPT
Facility Type:	**NONE**
Owner Name:	Big Sam’s Properties
Owner Id:	U0034216
Owner Address:	333 W. 119th Street
Owner City,St,Zip:	Chicago, IL 60628
Tank Number:	1
Tank Capacity:	1000
Tank Substance:	Fuel Oil
Last Used Date:	12/31/1973
OSFM First Notify Date:	Not reported

BIG SAM’S GROCERS (Continued) **U004110603**

Tank Status: Exempt from registration
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

Tank Number: 2
Tank Capacity: 2500
Tank Substance: Gasoline
Last Used Date: 12/31/1973
OSFM First Notify Date: Not reported
Tank Status: Exempt from registration
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

Tank Number: 3
Tank Capacity: 2000
Tank Substance: Gasoline
Last Used Date: 12/31/1973
OSFM First Notify Date: Not reported
Tank Status: Exempt from registration
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

Tank Number: 4
Tank Capacity: 4000
Tank Substance: Gasoline
Last Used Date: 12/31/1973
OSFM First Notify Date: Not reported
Tank Status: Exempt from registration
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

Map ID	Site	Database(s)	EPA ID Number
134	**333 W 119TH ST** **CHICAGO, IL**	**SPILLS**	**S111921908** **N/A**

SPILLS:
Incident ID: 20070843
Incident Date: Not reported
Date Received: 06/20/2007
Facility Address: 333 W 119TH ST
Facility City: CHICAGO
PRP Name: BIG SAMS PROPERTIES LLC
AC: Not reported

Map ID	Site	Database(s)	EPA ID Number
134	**BIG SAM’S PROPERTIES** **333 WEST 119TH STREET** **CHICAGO, IL 60628**	**LUST**	**S108649986** **N/A**

LUST:
Incident Num: 20070843
IL EPA Id: 0316505043
Product: Gasoline, Uset Oil
IEMA Date: 06/20/2007
Project Manager: Not reported
Project Manager Phone: Not reported
Email: Not reported
PRP Name: Not reported
PRP Contact: Not reported
PRP Address: Not reported
PRP City,St,Zip: Not reported
PRP Phone: Not reported
Site Classification: Not reported
Section 57.5(g) Letter: 734
Date Section 57.5(g) Letter: Not reported
Non LUST Determination Letter: Not reported
20 Report Received: Not reported
45 Report Received: Not reported
NFA/NFR Letter: Not reported
NFR Date Recorded: Not reported

Map ID	Site	Database(s)	EPA ID Number
136	**WIRA EAST INGERSOLL PROPERTY** **920 WEST 119TH STREET** **CHICAGO, IL 60643**	**SRP**	**S106121984** **N/A**

SRP:
IL EPA Id: 0316755125
US EPA Id: Not reported
Longitude: -87.64740
Latitude: 41.67873
Contact Name: Kimberly Worthington
Contact Address: 30 North LaSalle Street
Contact Address2: Room 2500
Contact City,St,Zip: Chicago, IL 60602-
Contact Phone: (312) 744-4034
Date Enrolled: 06/02/2003
Point Of Contact: Carol L. Nissen, P.E.
Consultant Company: Tetra Tech, Inc.
Consultant Address: 200 East Randolph Drive
Consultant Address2: Suite 4700

WIRA EAST INGERSOLL PROPERTY (Continued) **S106121984**

Consultant City,St,Zip: Chicago, IL 60601-
Consultant Phone: (312) 856-8700
Proj Mgr Assigned: Landers
Sec. 4 Letter Date: Not reported
NFR Recorded: Not reported
Active: False
Total Acres: 3
No Further Remediation Letter Dt: Not reported
Remediation Applicant Co: City of Chicago, Department of Environment
Remediation Applicant Title: Ms.
Remediation Applicant Name: Not reported
Remediation Applicant Company: Not reported
Remediation Applicant Address: Not reported
Remediation Applicant Address 2: Not reported
Remediation Applicant City,St,Zip: Not reported
Illinois EPA: Not reported
Site Name: Not reported
NFR Letter: Not reported
NFR Letter Date Recorded: Not reported
Site Type: Not reported
Comprehensive/Focused: Not reported
Institutional Controls: Not reported
Barrier: Not reported
Worker Caution: Not reported
Acres: Not reported

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137 **US GEAR CORP/HEAT TREAT CORP** **RCRA-CESQG** **1000394164**
1020-1120 W 119TH ST **ILD093160018**
CHICAGO, IL 60643

RCRA-CESQG:
Date form received by agency: 07/21/2009
Facility name: US GEAR CORP/HEAT TREAT CORP
Facility address: 1020-1120 W 119TH ST
CHICAGO, IL 60643
EPA ID: ILD093160018
Mailing address: 1020 W 119TH ST
CHICAGO, IL 60643
Contact: PETE HAMBY
Contact address: Not reported
Not reported
Contact country: Not reported
Contact telephone: (773) 821-5450
Telephone ext.: 531
Contact email: PETE@USGEAR.COM
EPA Region: 05
Land type: Private
Classification: Conditionally Exempt Small Quantity Generator
Description: Handler: generates 100 kg or less of hazardous waste per calendar month, and accumulates 1000 kg or less of hazardous waste at any time; or generates 1 kg or less of acutely hazardous waste per calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely

US GEAR CORP/HEAT TREAT CORP (Continued) **1000394164**

hazardous waste during any calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste

Owner/Operator Summary:

Owner/operator name:	CHICAGO TITLE LAND TRUST CO
Owner/operator address:	171 N CLARK ST CHICAGO, IL 60601
Owner/operator country:	US
Owner/operator telephone:	Not reported
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	04/29/1998
Owner/Op end date:	Not reported

Owner/operator name:	AXLE TECH INTERNATIONAL LLC
Owner/operator address:	Not reported Not reported
Owner/operator country:	Not reported
Owner/operator telephone:	Not reported
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	11/19/2008
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Historical Generators:

Date form received by agency:	11/01/2007
Facility name:	US GEAR CORP/HEAT TREAT CORP
Site name:	HEAT TREAT CORP OF AMERICA
Classification:	Not a generator, verified

Date form received by agency:	02/19/1987
Facility name:	US GEAR CORP/HEAT TREAT CORP
Site name:	HEAT TREAT CORP OF AMERICA
Classification:	Large Quantity Generator

Map ID	Site	Database(s)	EPA ID Number

US GEAR CORP/HEAT TREAT CORP (Continued) **1000394164**

Hazardous Waste Summary:

Waste code:	D001
Waste name:	IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.
Waste code:	D002
Waste name:	A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.
Waste code:	D003
Waste name:	A MATERIAL IS CONSIDERED TO BE A REACTIVE HAZARDOUS WASTE IF IT IS NORMALLY UNSTABLE, REACTS VIOLENTLY WITH WATER, GENERATES TOXIC GASES WHEN EXPOSED TO WATER OR CORROSIVE MATERIALS, OR IF IT IS CAPABLE OF DETONATION OR EXPLOSION WHEN EXPOSED TO HEAT OR A FLAME. ONE EXAMPLE OF SUCH WASTE WOULD BY WASTE GUNPOWDER.
Violation Status:	No violations found

Evaluation Action Summary:

Evaluation date:	09/20/1990
Evaluation:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation:	Not reported
Date achieved compliance:	Not reported
Evaluation lead agency:	EPA

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138 **SPILLS** **S110278075**
N/A

1220 W 119TH ST
CHICAGO, IL

SPILLS:

Incident ID:	20100193
Incident Date:	03/02/2010
Date Received:	Not reported
Facility Address:	1220 W 119TH ST
Facility City:	CHICAGO
PRP Name:	City of Chicago - Department of Environment
AC:	Not reported
Incident ID:	20100193
Incident Date:	Not reported
Date Received:	03/02/2010
Facility Address:	1220 W 119TH ST
Facility City:	CHICAGO
PRP Name:	CHICAGO DEPT OF ENVIRONMENT
AC:	Not reported

Map ID	Site	Database(s)	EPA ID Number
138	**CHICAGO, CITY OF - DEPARTMENT OF ENVIRONMENT 1220 WEST 119TH STREET CHICAGO, IL 60643**	**LUST**	**S110150344 N/A**

LUST:

Incident Num: 20100193
IL EPA Id: 0316755014
Product: Fuel Oil
IEMA Date: 03/02/2010
Project Manager: Not reported
Project Manager Phone: Not reported
Email: Not reported
PRP Name: Not reported
PRP Contact: Not reported
PRP Address: Not reported
PRP City,St,Zip: Not reported
PRP Phone: Not reported
Site Classification: Not reported
Section 57.5(g) Letter: 734
Date Section 57.5(g) Letter: Not reported
Non LUST Determination Letter: Not reported
20 Report Received: 03/09/2010
45 Report Received: Not reported
NFA/NFR Letter: Not reported
NFR Date Recorded: Not reported

Incident Num: 20110956
IL EPA Id: 0316755014
Product: Gasoline
IEMA Date: 09/06/2011
Project Manager: Not reported
Project Manager Phone: Not reported
Email: Not reported
PRP Name: Not reported
PRP Contact: Not reported
PRP Address: Not reported
PRP City,St,Zip: Not reported
PRP Phone: Not reported
Site Classification: Not reported
Section 57.5(g) Letter: 734
Date Section 57.5(g) Letter: Not reported
Non LUST Determination Letter: Not reported
20 Report Received: 09/12/2011
45 Report Received: Not reported
NFA/NFR Letter: Not reported
NFR Date Recorded: Not reported

Map ID	Site	Database(s)	EPA ID Number
138	**CONSTRUCTION SITE (FUTURE RJKCCC) 1220 W. 119TH STREET CHICAGO, IL 60643**	**UST**	**U004151264 N/A**

UST:

Facility ID: 2044654
Facility Status: EXEMPT
Facility Type: CONSTRUCTION
Owner Name: The Salvation Army
Owner Id: U0013378
Owner Address: PO Box 43095
Owner City,St,Zip: Chicago, IL 60643

CONSTRUCTION SITE (FUTURE RJKCCC) (Continued) **U004151264**

Tank Number:	1
Tank Capacity:	50000
Tank Substance:	Heating Oil
Last Used Date:	12/31/1973
OSFM First Notify Date:	Not reported
Tank Status:	**Exempt from registration**
Red Tag Issue Date:	Not reported
Install Date:	Not reported
Green Tag Decal:	**Not reported**
Green Tag Issue Date:	**Not reported**
Green Tag Expire Date:	**Not reported**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	Not reported

Tank Number:	2
Tank Capacity:	50000
Tank Substance:	Heating Oil
Last Used Date:	12/31/1973
OSFM First Notify Date:	Not reported
Tank Status:	**Exempt from registration**
Red Tag Issue Date:	Not reported
Install Date:	Not reported
Green Tag Decal:	**Not reported**
Green Tag Issue Date:	**Not reported**
Green Tag Expire Date:	**Not reported**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	Not reported

Tank Number:	3
Tank Capacity:	10000
Tank Substance:	Heating Oil
Last Used Date:	12/31/1973
OSFM First Notify Date:	Not reported
Tank Status:	**Exempt from registration**
Red Tag Issue Date:	Not reported
Install Date:	Not reported
Green Tag Decal:	**Not reported**
Green Tag Issue Date:	**Not reported**
Green Tag Expire Date:	**Not reported**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	Not reported

Tank Number:	4
Tank Capacity:	160
Tank Substance:	Heating Oil
Last Used Date:	12/31/1973
OSFM First Notify Date:	Not reported
Tank Status:	**Exempt from registration**
Red Tag Issue Date:	Not reported
Install Date:	Not reported
Green Tag Decal:	**Not reported**

CONSTRUCTION SITE (FUTURE RJKCCC) (Continued) **U004151264**

Green Tag Issue Date: **Not reported**
Green Tag Expire Date: **Not reported**
Self Service Permit Inspection Date: **Not reported**
Self Service Permit Expire Date: **Not reported**
Fee Due: Not reported

Tank Number: 5
Tank Capacity: 3000
Tank Substance: Heating Oil
Last Used Date: 12/31/1973
OSFM First Notify Date: 12/3/2010
Tank Status: **Exempt from registration**
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: **Not reported**
Green Tag Issue Date: **Not reported**
Green Tag Expire Date: **Not reported**
Self Service Permit Inspection Date: **Not reported**
Self Service Permit Expire Date: **Not reported**
Fee Due: Not reported

Tank Number: 6
Tank Capacity: 1000
Tank Substance: Heating Oil
Last Used Date: 12/31/1973
OSFM First Notify Date: 10/5/2011
Tank Status: **Exempt from registration**
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: **Not reported**
Green Tag Issue Date: **Not reported**
Green Tag Expire Date: **Not reported**
Self Service Permit Inspection Date: **Not reported**
Self Service Permit Expire Date: **Not reported**
Fee Due: Not reported

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138 **SPILLS** **S111927136**
1220 WEST 119TH ST. **N/A**
CHICAGO, IL

SPILLS:
Incident ID: 20110956
Incident Date: Not reported
Date Received: Not reported
Facility Address: 1220 WEST 119TH ST.
Facility City: CHICAGO
PRP Name: City of Chicago Department of Environment
AC: Not reported

Map ID	Site	Database(s)	EPA ID Number
138	**W.E. DAVIS COMPANY** **1220 -1314 WEST 119TH STREET** **CHICAGO, IL 60643**	**ENG CONTROLS** **INST CONTROL** **SRP**	**S104491750** **N/A**

ENGINEERING CONTROLS:
Illinois Epa Id: 0316755014
NFR Letter: 02/10/2012
Date NFR Recorded: 02/17/2012
Type Of Site: Residential
Comprehensive / Focused: Comprehensive
Remediation Applicant Title: Ms.
Remediation Applicant Name: Kimberly Worthington
RA Company: City of Chicago
RA Address: 30 North LaSalle Street
RA Secondary Address: Suite 200
RA City,St,Zip: Chicago, IL 60602-
Institutional Controls: Groundwater use restriction
Engineered Barriers: Asphalt barrier/Concrete barrier/Clean soil barrier
Worker Caution: True
Acres: 18.76

IL INSTUTIONAL CONTROL:
Illinois EPA Id: 0316755014
NFR Letter: 02/10/2012
Date NFR Recorded: 02/17/2012
Type Of Site: Residential
Comprehensive / Focused: Comprehensive
Remediation Applicant Title: Ms.
Remediation Applicant Name: Kimberly Worthington
RA Company: City of Chicago
RA Address: 30 North LaSalle Street
RA Secondary Address: Suite 200
RA City,St,Zip: Chicago, IL 60602-
Institutional Controls: Groundwater use restriction
Engineered Barriers: Asphalt barrier/Concrete barrier/Clean soil barrier
Worker Caution: True
Acres: 18.76

SRP:
IL EPA Id: 0316755014
US EPA Id: ILD005523162
Longitude: -87.65380
Latitude: 41.67808
Contact Name: David Reynolds
Contact Address: 30 North LaSalle Street
Contact Address2: 25th Floor
Contact City,St,Zip: Chicago, IL 60602-
Contact Phone: (312) 742-0123
Date Enrolled: 06/09/1999
Point Of Contact: Carol Nissen, P.E.
Consultant Company: Tetra Tech EM, Inc.
Consultant Address: 200 East Randolph Drive
Consultant Address2: Suite 4700
Consultant City,St,Zip: Chicago, IL 60601-
Consultant Phone: (312) 856-8700
Proj Mgr Assigned: Frierdich
Sec. 4 Letter Date: Not reported
NFR Recorded: 02/17/2012

W.E. DAVIS COMPANY (Continued) **S104491750**

Active: False
Total Acres: 18.76
No Further Remediation Letter Dt: 02/10/2012
Remediation Applicant Co: City of Chicago, Dept. of Environment
Remediation Applicant Title: Mr.
Remediation Applicant Name: Ms. Kimberly Worthington
Remediation Applicant Company: City of Chicago
Remediation Applicant Address: 30 North LaSalle Street
Remediation Applicant Address 2: Suite 200
Remediation Applicant City,St,Zip: Chicago, IL 60602-
Illinois EPA: 0316755014
Site Name: W.E. Davis Company
NFR Letter: 2012-02-10
NFR Letter Date Recorded: 2012-02-17
Site Type: Residential
Comprehensive/Focused: Comprehensive
Institutional Controls: Groundwater use restriction
Barrier: Asphalt barrier/Concrete barrier/Clean soil barrier
Worker Caution: True
Acres: 18.76

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139 **FORMER AMFORGE FACILITY** **US BROWNFIELDS** **1009912690**
1250 W. 119TH STREET **N/A**
CHICAGO, IL 60643

US BROWNFIELDS:
Recipient name: Chicago, City of
Grant type: BCRLF
Property name: Former AmForge Facility
Property #: 252032039-41, 252032526013-14, 2520327013-14, 2520328034-35.078-079.146
Parcel size: 17.4
Latitude: 41.67771
Longitude: -87.65267
HCM label: Address Matching-House Number
Map scale: Not reported
Point of reference: Entrance Point of a Facility or Station
Datum: World Geodetic System of 1984
ACRES property ID: 27681
Start date: 18-APR-01
Completed date: 05-APR-06
Acres cleaned up: Not reported
Cleanup funding: 2220000
Cleanup funding source: Local Funding
Assessment funding: Not reported
Assessment funding source: Not reported
Redevelopment funding: Not reported
Redev. funding source: Not reported
Redev. funding entity name: Not reported
Redevelopment start date: Not reported
Assessment funding entity: Not reported
Cleanup funding entity: City of Chicago
Grant type: N/A
Accomplishment type: Not reported
Ownership entity: Government
Current owner: Not reported
Did owner change: N
Cleanup required: Yes

FORMER AMFORGE FACILITY (Continued) **1009912690**

Video available: No
Photo available: No
Institutional controls required: Y
IC Category proprietary controls: Not reported
IC cat. info. devices: Y
IC cat. gov. controls: Y
IC cat. enforcement permit tools: Not reported
IC in place date: Not reported
IC in place: No
State/tribal program date: 02-JUN-99
State/tribal program ID: 0316329007
State/tribal NFA date: Not reported
Air contaminated: Not reported
Air cleaned: Not reported
Asbestos found: Not reported
Asbestos cleaned: Not reported
Controled substance found: Not reported
Controled substance cleaned: Not reported
Drinking water affected: Not reported
Drinking water cleaned: Not reported
Groundwater affected: Y
Groundwater cleaned: Y
Lead contaminant found: Y
Lead cleaned up: Y
No media affected: Not reported
Unknown media affected: Not reported
Other cleaned up: Not reported
Other metals found: Not reported
Other metals cleaned: Not reported
Other contaminants found: Not reported
Other contams found description: Not reported
PAHs found: Y
PAHs cleaned up: Y
PCBs found: Y
PCBs cleaned up: Y
Petro products found: Y
Petro products cleaned: Y
Sediments found: Not reported
Sediments cleaned: Not reported
Soil affected: Y
Soil cleaned up: Y
Surface water cleaned: Not reported
Unknown found: Not reported
VOCs found: Not reported
VOCs cleaned: Not reported
Cleanup other description: Not reported
Num. of cleanup and re-dev. jobs: Not reported
Past use greenspace acreage: Not reported
Past use residential acreage: Not reported
Past use commercial acreage: Not reported
Past use industrial acreage: 17.4
Future use greenspace acreage: Not reported
Future use residential acreage: 17.4
Future use commercial acreage: Not reported
Future use industrial acreage: Not reported
Greenspace acreage and type: Not reported
Superfund Fed. landowner flag: Not reported

FORMER AMFORGE FACILITY (Continued) **1009912690**

Recipient name: Chicago, City of
Grant type: BCRLF
Property name: Former AmForge Facility
Property #: 252032039-41, 252032526013-14, 2520327013-14, 2520328034-35.078-079.146
Parcel size: 17.4
Latitude: 41.67771
Longitude: -87.65267
HCM label: Address Matching-House Number
Map scale: Not reported
Point of reference: Entrance Point of a Facility or Station
Datum: World Geodetic System of 1984
ACRES property ID: 27681
Start date: 18-APR-01
Completed date: 05-APR-06
Acres cleaned up: Not reported
Cleanup funding: 500000
Cleanup funding source: US EPA - Brownfields RLF Loan
Assessment funding: Not reported
Assessment funding source: Not reported
Redevelopment funding: Not reported
Redev. funding source: Not reported
Redev. funding entity name: Not reported
Redevelopment start date: Not reported
Assessment funding entity: Not reported
Cleanup funding entity: Not reported
Grant type: N/A
Accomplishment type: Not reported
Ownership entity: Government
Current owner: Not reported
Did owner change: N
Cleanup required: Yes
Video available: No
Photo available: No
Institutional controls required: Y
IC Category proprietary controls: Not reported
IC cat. info. devices: Y
IC cat. gov. controls: Y
IC cat. enforcement permit tools: Not reported
IC in place date: Not reported
IC in place: No
State/tribal program date: 02-JUN-99
State/tribal program ID: 0316329007
State/tribal NFA date: Not reported
Air contaminated: Not reported
Air cleaned: Not reported
Asbestos found: Not reported
Asbestos cleaned: Not reported
Controled substance found: Not reported
Controled substance cleaned: Not reported
Drinking water affected: Not reported
Drinking water cleaned: Not reported
Groundwater affected: Y
Groundwater cleaned: Y
Lead contaminant found: Y
Lead cleaned up: Y
No media affected: Not reported
Unknown media affected: Not reported

FORMER AMFORGE FACILITY (Continued) **1009912690**

Other cleaned up:	Not reported
Other metals found:	Not reported
Other metals cleaned:	Not reported
Other contaminants found:	Not reported
Other contams found description:	Not reported
PAHs found:	Y
PAHs cleaned up:	Y
PCBs found:	Y
PCBs cleaned up:	Y
Petro products found:	Y
Petro products cleaned:	Y
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Y
Soil cleaned up:	Y
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	Not reported
VOCs cleaned:	Not reported
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	17.4
Future use greenspace acreage:	Not reported
Future use residential acreage:	17.4
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported

Recipient name:	Chicago, City of
Grant type:	BCRLF
Property name:	Former AmForge Facility
Property #:	252032039-41, 252032526013-14, 2520327013-14, 2520328034-35.078-079.146
Parcel size:	17.4
Latitude:	41.67771
Longitude:	-87.65267
HCM label:	Address Matching-House Number
Map scale:	Not reported
Point of reference:	Entrance Point of a Facility or Station
Datum:	World Geodetic System of 1984
ACRES property ID:	27681
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	410000
Assessment funding source:	Local Funding
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	City of Chicago
Cleanup funding entity:	Not reported

FORMER AMFORGE FACILITY (Continued) **1009912690**

Grant type: N/A
Accomplishment type: Phase II Environmental Assessment
Ownership entity: Government
Current owner: Not reported
Did owner change: N
Cleanup required: Yes
Video available: No
Photo available: No
Institutional controls required: Y
IC Category proprietary controls: Not reported
IC cat. info. devices: Y
IC cat. gov. controls: Y
IC cat. enforcement permit tools: Not reported
IC in place date: Not reported
IC in place: No
State/tribal program date: 02-JUN-99
State/tribal program ID: 0316329007
State/tribal NFA date: Not reported
Air contaminated: Not reported
Air cleaned: Not reported
Asbestos found: Not reported
Asbestos cleaned: Not reported
Controled substance found: Not reported
Controled substance cleaned: Not reported
Drinking water affected: Not reported
Drinking water cleaned: Not reported
Groundwater affected: Y
Groundwater cleaned: Y
Lead contaminant found: Y
Lead cleaned up: Y
No media affected: Not reported
Unknown media affected: Not reported
Other cleaned up: Not reported
Other metals found: Not reported
Other metals cleaned: Not reported
Other contaminants found: Not reported
Other contams found description: Not reported
PAHs found: Y
PAHs cleaned up: Y
PCBs found: Y
PCBs cleaned up: Y
Petro products found: Y
Petro products cleaned: Y
Sediments found: Not reported
Sediments cleaned: Not reported
Soil affected: Y
Soil cleaned up: Y
Surface water cleaned: Not reported
Unknown found: Not reported
VOCs found: Not reported
VOCs cleaned: Not reported
Cleanup other description: Not reported
Num. of cleanup and re-dev. jobs: Not reported
Past use greenspace acreage: Not reported
Past use residential acreage: Not reported
Past use commercial acreage: Not reported
Past use industrial acreage: 17.4

FORMER AMFORGE FACILITY (Continued) **1009912690**

Future use greenspace acreage: Not reported
Future use residential acreage: 17.4
Future use commercial acreage: Not reported
Future use industrial acreage: Not reported
Greenspace acreage and type: Not reported
Superfund Fed. landowner flag: Not reported

Recipient name: Chicago, City of
Grant type: BCRLF
Property name: Former AmForge Facility
Property #: 252032039-41, 252032526013-14, 2520327013-14, 2520328034-35.078-079.146
Parcel size: 17.4
Latitude: 41.67771
Longitude: -87.65267
HCM label: Address Matching-House Number
Map scale: Not reported
Point of reference: Entrance Point of a Facility or Station
Datum: World Geodetic System of 1984
ACRES property ID: 27681
Start date: Not reported
Completed date: Not reported
Acres cleaned up: Not reported
Cleanup funding: Not reported
Cleanup funding source: Not reported
Assessment funding: 10000
Assessment funding source: Local Funding
Redevelopment funding: Not reported
Redev. funding source: Not reported
Redev. funding entity name: Not reported
Redevelopment start date: Not reported
Assessment funding entity: City of Chicago
Cleanup funding entity: Not reported
Grant type: N/A
Accomplishment type: Phase I Environmental Assessment
Ownership entity: Government
Current owner: Not reported
Did owner change: N
Cleanup required: Yes
Video available: No
Photo available: No
Institutional controls required: Y
IC Category proprietary controls: Not reported
IC cat. info. devices: Y
IC cat. gov. controls: Y
IC cat. enforcement permit tools: Not reported
IC in place date: Not reported
IC in place: No
State/tribal program date: 02-JUN-99
State/tribal program ID: 0316329007
State/tribal NFA date: Not reported
Air contaminated: Not reported
Air cleaned: Not reported
Asbestos found: Not reported
Asbestos cleaned: Not reported
Controled substance found: Not reported
Controled substance cleaned: Not reported
Drinking water affected: Not reported

FORMER AMFORGE FACILITY (Continued) **1009912690**

Drinking water cleaned: Not reported
Groundwater affected: Y
Groundwater cleaned: Y
Lead contaminant found: Y
Lead cleaned up: Y
No media affected: Not reported
Unknown media affected: Not reported
Other cleaned up: Not reported
Other metals found: Not reported
Other metals cleaned: Not reported
Other contaminants found: Not reported
Other contams found description: Not reported
PAHs found: Y
PAHs cleaned up: Y
PCBs found: Y
PCBs cleaned up: Y
Petro products found: Y
Petro products cleaned: Y
Sediments found: Not reported
Sediments cleaned: Not reported
Soil affected: Y
Soil cleaned up: Y
Surface water cleaned: Not reported
Unknown found: Not reported
VOCs found: Not reported
VOCs cleaned: Not reported
Cleanup other description: Not reported
Num. of cleanup and re-dev. jobs: Not reported
Past use greenspace acreage: Not reported
Past use residential acreage: Not reported
Past use commercial acreage: Not reported
Past use industrial acreage: 17.4
Future use greenspace acreage: Not reported
Future use residential acreage: 17.4
Future use commercial acreage: Not reported
Future use industrial acreage: Not reported
Greenspace acreage and type: Not reported
Superfund Fed. landowner flag: Not reported

Recipient name: Chicago, City of
Grant type: BCRLF
Property name: Former AmForge Facility
Property #: 252032039-41, 252032526013-14, 2520327013-14, 2520328034-35.078-079.146
Parcel size: 17.4
Latitude: 41.67771
Longitude: -87.65267
HCM label: Address Matching-House Number
Map scale: Not reported
Point of reference: Entrance Point of a Facility or Station
Datum: World Geodetic System of 1984
ACRES property ID: 27681
Start date: Not reported
Completed date: Not reported
Acres cleaned up: Not reported
Cleanup funding: Not reported
Cleanup funding source: Not reported
Assessment funding: 1800000

FORMER AMFORGE FACILITY (Continued) **1009912690**

Assessment funding source: Local Funding
Redevelopment funding: Not reported
Redev. funding source: Not reported
Redev. funding entity name: Not reported
Redevelopment start date: Not reported
Assessment funding entity: City of Chicago
Cleanup funding entity: Not reported
Grant type: N/A
Accomplishment type: Supplemental Assessment
Ownership entity: Government
Current owner: Not reported
Did owner change: N
Cleanup required: Yes
Video available: No
Photo available: No
Institutional controls required: Y
IC Category proprietary controls: Not reported
IC cat. info. devices: Y
IC cat. gov. controls: Y
IC cat. enforcement permit tools: Not reported
IC in place date: Not reported
IC in place: No
State/tribal program date: 02-JUN-99
State/tribal program ID: 0316329007
State/tribal NFA date: Not reported
Air contaminated: Not reported
Air cleaned: Not reported
Asbestos found: Not reported
Asbestos cleaned: Not reported
Controled substance found: Not reported
Controled substance cleaned: Not reported
Drinking water affected: Not reported
Drinking water cleaned: Not reported
Groundwater affected: Y
Groundwater cleaned: Y
Lead contaminant found: Y
Lead cleaned up: Y
No media affected: Not reported
Unknown media affected: Not reported
Other cleaned up: Not reported
Other metals found: Not reported
Other metals cleaned: Not reported
Other contaminants found: Not reported
Other contams found description: Not reported
PAHs found: Y
PAHs cleaned up: Y
PCBs found: Y
PCBs cleaned up: Y
Petro products found: Y
Petro products cleaned: Y
Sediments found: Not reported
Sediments cleaned: Not reported
Soil affected: Y
Soil cleaned up: Y
Surface water cleaned: Not reported
Unknown found: Not reported
VOCs found: Not reported

FORMER AMFORGE FACILITY (Continued) **1009912690**

VOCs cleaned: Not reported
Cleanup other description: Not reported
Num. of cleanup and re-dev. jobs: Not reported
Past use greenspace acreage: Not reported
Past use residential acreage: Not reported
Past use commercial acreage: Not reported
Past use industrial acreage: 17.4
Future use greenspace acreage: Not reported
Future use residential acreage: 17.4
Future use commercial acreage: Not reported
Future use industrial acreage: Not reported
Greenspace acreage and type: Not reported
Superfund Fed. landowner flag: Not reported

Property Description: Currently vacant. Previously owned or operated by Arvinmeritor, Nailite Int'l and Graham Partners, Inc. for the manufacturing of brakes for rail cars. (PPF-Former AmForge Facility, 1/17/07)

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140 **AMFORGE** **UST** **U004110692**
1324 W. 119TH STREET **N/A**
CHICAGO, IL 60643

UST:
Facility ID: 2043836
Facility Status: EXEMPT
Facility Type: **VACANT**
Owner Name: City of Chicago Department of Environment
Owner Id: U0028125
Owner Address: 30 North LaSalle Street, 25th floor
Owner City,St,Zip: Chicago, IL 60602

Tank Number: 1
Tank Capacity: 500
Tank Substance: Fuel Oil
Last Used Date: 12/31/1973
OSFM First Notify Date: Not reported
Tank Status: **Exempt from registration**
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: **Not reported**
Green Tag Issue Date: **Not reported**
Green Tag Expire Date: **Not reported**
Self Service Permit Inspection Date: **Not reported**
Self Service Permit Expire Date: **Not reported**
Fee Due: Not reported

Tank Number: 2
Tank Capacity: 2000
Tank Substance: Gasoline
Last Used Date: 12/31/1973
OSFM First Notify Date: Not reported
Tank Status: **Exempt from registration**
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: **Not reported**
Green Tag Issue Date: **Not reported**
Green Tag Expire Date: **Not reported**
Self Service Permit Inspection Date: **Not reported**

AMFORGE (Continued) **U004110692**

Self Service Permit Expire Date: Not reported
Fee Due: Not reported

Tank Number: 3
Tank Capacity: 1000
Tank Substance: Gasoline
Last Used Date: 12/31/1973
OSFM First Notify Date: Not reported
Tank Status: Exempt from registration
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

Tank Number: 4
Tank Capacity: 1000
Tank Substance: Gasoline
Last Used Date: 12/31/1973
OSFM First Notify Date: Not reported
Tank Status: Exempt from registration
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

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141 **OMNITRAX** **SRP** **S106121983**
11955 SOUTH MORGAN STREET **N/A**
CHICAGO, IL 60643

SRP:
IL EPA Id: 0316755122
US EPA Id: Not reported
Longitude: -87.64597
Latitude: 41.67651
Contact Name: Michael Ogborn
Contact Address: 252 Clayton Street
Contact Address2: 4th Floor
Contact City,St,Zip: Denver, CO 80206-
Contact Phone: (303) 393-0033
Date Enrolled: 04/03/2003
Point Of Contact: Daniel M. Caplice, P.E.
Consultant Company: K-Plus Environmental Services
Consultant Address: 600 West Van Buren Street
Consultant Address2: Suite 1000
Consultant City,St,Zip: Chicago, IL 60607-
Consultant Phone: (312) 207-1600
Proj Mgr Assigned: Hall
Sec. 4 Letter Date: Not reported

OMNITRAX (Continued) **S106121983**

NFR Recorded: Not reported
Active: True
Total Acres: 2.600
No Further Remediation Letter Dt: Not reported
Remediation Applicant Co: Chicago Rail Link, LLC
Remediation Applicant Title: Mr.
Remediation Applicant Name: Not reported
Remediation Applicant Company: Not reported
Remediation Applicant Address: Not reported
Remediation Applicant Address 2: Not reported
Remediation Applicant City,St,Zip: Not reported
Illinois EPA: Not reported
Site Name: Not reported
NFR Letter: Not reported
NFR Letter Date Recorded: Not reported
Site Type: Not reported
Comprehensive/Focused: Not reported
Institutional Controls: Not reported
Barrier: Not reported
Worker Caution: Not reported
Acres: Not reported

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142 **WEST PULLMAN SCHOOL** **RCRA-CESQG** **1004696956**
11941 S PARNELL AVE **ILR000060954**
CHICAGO, IL 60628

RCRA-CESQG:
Date form received by agency: 02/05/1999
Facility name: WEST PULLMAN SCHOOL
Facility address: 11941 S PARNELL AVE
CHICAGO, IL 60628
EPA ID: ILR000060954
Mailing address: 8501 W 191ST ST BOX 10
MOKENA, IL 60448
Contact: THOMAS CONNELLY
Contact address: 11941 S PARNELL AVE
CHICAGO, IL 60628
Contact country: US
Contact telephone: (708) 923-0202
Contact email: Not reported
EPA Region: 05
Classification: Conditionally Exempt Small Quantity Generator
Description: Handler: generates 100 kg or less of hazardous waste per calendar month, and accumulates 1000 kg or less of hazardous waste at any time; or generates 1 kg or less of acutely hazardous waste per calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste

WEST PULLMAN SCHOOL (Continued) **1004696956**

Owner/Operator Summary:

Owner/operator name:	CHGO PUBLIC SCHOOLS
Owner/operator address:	1819 W PERSHING RD 6WW CHICAGO, IL 60609
Owner/operator country:	Not reported
Owner/operator telephone:	(773) 535-7038
Legal status:	District
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Hazardous Waste Summary:

Waste code:	D006
Waste name:	CADMIUM
Waste code:	D008
Waste name:	LEAD
Waste code:	D009
Waste name:	MERCURY

Violation Status: No violations found

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144 **WEST PULLMAN IRON AND METAL CO** **CERC-NFRAP** **1002885169**
11954 S PEORIA AVE **ILD005428651**
CHICAGO, IL 60643

CERC-NFRAP:

Site ID:	0500196
Federal Facility:	Not a Federal Facility
NPL Status:	Not on the NPL
Non NPL Status:	NFRAP-Site does not qualify for the NPL based on existing information

CERCLIS-NFRAP Assessment History:

Action:	DISCOVERY
Date Started:	Not reported
Date Completed:	06/01/1980
Priority Level:	Not reported
Action:	PRELIMINARY ASSESSMENT

WEST PULLMAN IRON AND METAL CO (Continued) **1002885169**

Date Started: Not reported
Date Completed: 03/01/1984
Priority Level: Low priority for further assessment

Action: SITE INSPECTION
Date Started: Not reported
Date Completed: 12/01/1984
Priority Level: NFRAP-Site does not qualify for the NPL based on existing information

Action: HAZARD RANKING SYSTEM PACKAGE
Date Started: Not reported
Date Completed: 12/20/1985
Priority Level: NFRAP-Site does not qualify for the NPL based on existing information

Action: ARCHIVE SITE
Date Started: Not reported
Date Completed: 10/31/1995
Priority Level: Not reported

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144 **WEST PULLMAN IRON & METAL** **SRP** **1003071152**
11954 SOUTH PEORIA STREET **N/A**
CHICAGO, IL 60643

SRP:
IL EPA Id: 0316750008
US EPA Id: ILD005428651
Longitude: -87.64539
Latitude: 41.67703
Contact Name: David Reynolds
Contact Address: 30 North LaSalle Street
Contact Address2: 25th Floor
Contact City,St,Zip: Chicago, IL 60602-
Contact Phone: (312) 742-0123
Date Enrolled: 06/06/2001
Point Of Contact: Carol L. Nissen, P.E.
Consultant Company: Tetra Tech EM, Inc.
Consultant Address: 200 East Randolph Drive
Consultant Address2: Suite 4700
Consultant City,St,Zip: Chicago, IL 60601-
Consultant Phone: (312) 946-6411
Proj Mgr Assigned: Salch
Sec. 4 Letter Date: Not reported
NFR Recorded: Not reported
Active: False
Total Acres: 1.8
No Further Remediation Letter Dt: Not reported
Remediation Applicant Co: City of Chicago, Department of Environment
Remediation Applicant Title: Mr.
Remediation Applicant Name: Not reported
Remediation Applicant Company: Not reported
Remediation Applicant Address: Not reported
Remediation Applicant Address 2: Not reported
Remediation Applicant City,St,Zip: Not reported
Illinois EPA: Not reported
Site Name: Not reported
NFR Letter: Not reported
NFR Letter Date Recorded: Not reported
Site Type: Not reported

WEST PULLMAN IRON & METAL (Continued) **1003071152**

Comprehensive/Focused: Not reported
Institutional Controls: Not reported
Barrier: Not reported
Worker Caution: Not reported
Acres: Not reported

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145 **SPILLS** **S108045376**
N/A

11957 S HALSTED ST
CHICAGO, IL

SPILLS:
Incident ID: 20041132
Incident Date: Not reported
Date Received: 08/12/2004
Facility Address: 11957 S HALSTED ST
Facility City: CHICAGO
PRP Name: SANDHU PETROLEUM
AC: Not reported

Incident ID: 20041362
Incident Date: Not reported
Date Received: 09/30/2004
Facility Address: 11957 S HALSTEAD ST
Facility City: CHICAGO
PRP Name: SAND HU PETROLEUM INC.
AC: Not reported

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145 **SANDHU PETROLEUM, INC.** **LUST** **S106655963**
N/A

11957 SOUTH HALSTED STREET
CHICAGO, IL 60628

LUST:
Incident Num: 20041132
IL EPA Id: 0316495159
Product: Gasoline
IEMA Date: 08/12/2004
Project Manager: South
Project Manager Phone: (217) 558-0347
Email: Shirlene.South@illinois.gov
PRP Name: Not reported
PRP Contact: Not reported
PRP Address: Not reported
PRP City,St,Zip: Not reported
PRP Phone: Not reported
Site Classification: Not reported
Section 57.5(g) Letter: P.A.
Date Section 57.5(g) Letter: Not reported
Non LUST Determination Letter: Not reported
20 Report Received: 09/03/2004
45 Report Received: 09/28/2004
NFA/NFR Letter: **Not reported**
NFR Date Recorded: Not reported

Incident Num: 20041362
IL EPA Id: 0316495159

Map ID	Site	Database(s)	EPA ID Number

SANDHU PETROLEUM, INC. (Continued) **S106655963**

Product:	Other Petro
IEMA Date:	09/30/2004
Project Manager:	South
Project Manager Phone:	(217) 558-0347
Email:	Shirlene.South@illinois.gov
PRP Name:	Not reported
PRP Contact:	Not reported
PRP Address:	Not reported
PRP City,St,Zip:	Not reported
PRP Phone:	Not reported
Site Classification:	Not reported
Section 57.5(g) Letter:	P.A.
Date Section 57.5(g) Letter:	Not reported
Non LUST Determination Letter:	Not reported
20 Report Received:	10/21/2004
45 Report Received:	Not reported
NFA/NFR Letter:	**Not reported**
NFR Date Recorded:	Not reported

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145 **CONOCO PHILLIPS 66** **UST** **U000865211**
11959 S. HALSTED **N/A**
CHICAGO, IL 60628

UST:

Facility ID:	2014700
Facility Status:	ACTIVE
Facility Type:	**SELF-SERVICE STATION**
Owner Name:	Sandhu Petroleum Corporation Number 2
Owner Id:	U0024145
Owner Address:	301 North Hough Street
Owner City,St,Zip:	Barrington, IL 60010

Tank Number:	1
Tank Capacity:	6000
Tank Substance:	Gasoline
Last Used Date:	Not reported
OSFM First Notify Date:	3/6/1986
Tank Status:	**Currently in use**
Red Tag Issue Date:	Not reported
Install Date:	3/1/1982
Green Tag Decal:	**M003430**
Green Tag Issue Date:	**4/22/2011**
Green Tag Expire Date:	**12/31/2013**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	$0.00

Tank Number:	2
Tank Capacity:	6000
Tank Substance:	Gasoline
Last Used Date:	Not reported
OSFM First Notify Date:	3/6/1986
Tank Status:	**Currently in use**
Red Tag Issue Date:	Not reported
Install Date:	3/1/1982
Green Tag Decal:	**M003430**
Green Tag Issue Date:	**4/22/2011**

CONOCO PHILLIPS 66 (Continued) **U000865211**

Green Tag Expire Date: 12/31/2013
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: $0.00

Tank Number: 3
Tank Capacity: 6000
Tank Substance: Gasoline
Last Used Date: Not reported
OSFM First Notify Date: 3/6/1986
Tank Status: Currently in use
Red Tag Issue Date: Not reported
Install Date: 3/1/1982
Green Tag Decal: M003430
Green Tag Issue Date: 4/22/2011
Green Tag Expire Date: 12/31/2013
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: $0.00

Tank Number: 4
Tank Capacity: 1000
Tank Substance: Kerosene
Last Used Date: 9/4/2004
OSFM First Notify Date: 3/6/1986
Tank Status: Removed
Red Tag Issue Date: Not reported
Install Date: 3/1/1984
Green Tag Decal: M003430
Green Tag Issue Date: 4/22/2011
Green Tag Expire Date: 12/31/2013
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: $0.00

Tank Number: 5
Tank Capacity: 1000
Tank Substance: Kerosene
Last Used Date: 9/4/2004
OSFM First Notify Date: 3/6/1986
Tank Status: Removed
Red Tag Issue Date: Not reported
Install Date: 3/1/1984
Green Tag Decal: M003430
Green Tag Issue Date: 4/22/2011
Green Tag Expire Date: 12/31/2013
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: $0.00

Tank Number: 6
Tank Capacity: 1500
Tank Substance: Diesel Fuel

CONOCO PHILLIPS 66 (Continued) **U000865211**

Last Used Date: Not reported
OSFM First Notify Date: 7/18/2005
Tank Status: Currently in use
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: M003430
Green Tag Issue Date: 4/22/2011
Green Tag Expire Date: 12/31/2013
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: $0.00

Tank Number: 7
Tank Capacity: 1500
Tank Substance: Kerosene
Last Used Date: Not reported
OSFM First Notify Date: 7/18/2005
Tank Status: Currently in use
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: M003430
Green Tag Issue Date: 4/22/2011
Green Tag Expire Date: 12/31/2013
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: $0.00

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149 **PRAYER WARRIORS BAPTIST CHURCH** **UST** **U004051810**
438 W. 120TH STREET **N/A**
CHICAGO, IL 60628

UST:
Facility ID: 2043168
Facility Status: EXEMPT
Facility Type: NONE
Owner Name: Prayer Warriors Baptist Church
Owner Id: U0033283
Owner Address: 438 W. 120th Street
Owner City,St,Zip: Chicago, IL 60628

Tank Number: 1
Tank Capacity: 2000
Tank Substance: Gasoline
Last Used Date: 12/31/1973
OSFM First Notify Date: 3/17/2006
Tank Status: Exempt from registration
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

Map ID	Site	Database(s)	EPA ID Number
150	**12000 SOUTH EMERALD** **CHICAGO, IL**	**ERNS**	**2003704549** **N/A**

Click this hyperlink while viewing on your computer to access additional ERNS detail in the EDR Site Report.

Map ID	Site	Database(s)	EPA ID Number
152	**WIRA STUDY AREA 9** **820 WEST 120TH STREET** **CHICAGO, IL 60643**	**SRP**	**S106121986** **N/A**

SRP:

IL EPA Id:	0316755127
US EPA Id:	Not reported
Longitude:	-87.64379
Latitude:	41.67622
Contact Name:	Kimberly Worthington
Contact Address:	30 North LaSalle Street
Contact Address2:	Room 2500
Contact City,St,Zip:	Chicago, IL 60602-
Contact Phone:	(312) 744-4034
Date Enrolled:	06/02/2003
Point Of Contact:	Carol L. Nissen, P.E.
Consultant Company:	Tetra Tech, Inc.
Consultant Address:	200 East Randolph Drive
Consultant Address2:	Suite 4700
Consultant City,St,Zip:	Chicago, IL 60601-
Consultant Phone:	(312) 856-8700
Proj Mgr Assigned:	Landers
Sec. 4 Letter Date:	Not reported
NFR Recorded:	Not reported
Active:	False
Total Acres:	3
No Further Remediation Letter Dt:	Not reported
Remediation Applicant Co:	City of Chicago Department of Environment
Remediation Applicant Title:	Ms.
Remediation Applicant Name:	Not reported
Remediation Applicant Company:	Not reported
Remediation Applicant Address:	Not reported
Remediation Applicant Address 2:	Not reported
Remediation Applicant City,St,Zip:	Not reported
Illinois EPA:	Not reported
Site Name:	Not reported
NFR Letter:	Not reported
NFR Letter Date Recorded:	Not reported
Site Type:	Not reported
Comprehensive/Focused:	Not reported
Institutional Controls:	Not reported
Barrier:	Not reported
Worker Caution:	Not reported
Acres:	Not reported

Map ID	Site	Database(s)	EPA ID Number
152	**WIRA STUDY AREA NUMBER 14** **815-825 WEST 120TH STREET** **CHICAGO, IL 60643**	**SRP**	**S106499834** **N/A**

SRP:

IL EPA Id: 0316725130
US EPA Id: Not reported
Longitude: -87.64342
Latitude: 41.67551
Contact Name: David Graham
Contact Address: 30 North LaSalle Street
Contact Address2: 25th Floor
Contact City,St,Zip: Chicago, IL 60602-
Contact Phone: (312) 744-3639
Date Enrolled: 06/04/2004
Point Of Contact: Carol L. Nissen, P.E.
Consultant Company: Tetra Tech EM, Inc.
Consultant Address: 200 East Randolph Drive
Consultant Address2: Suite 4700
Consultant City,St,Zip: Chicago, IL 60601-
Consultant Phone: (312) 856-8700
Proj Mgr Assigned: Landers
Sec. 4 Letter Date: Not reported
NFR Recorded: Not reported
Active: False
Total Acres: 5
No Further Remediation Letter Dt: Not reported
Remediation Applicant Co: City of Chicago Department of Environment
Remediation Applicant Title: Mr.
Remediation Applicant Name: Not reported
Remediation Applicant Company: Not reported
Remediation Applicant Address: Not reported
Remediation Applicant Address 2: Not reported
Remediation Applicant City,St,Zip: Not reported
Illinois EPA: Not reported
Site Name: Not reported
NFR Letter: Not reported
NFR Letter Date Recorded: Not reported
Site Type: Not reported
Comprehensive/Focused: Not reported
Institutional Controls: Not reported
Barrier: Not reported
Worker Caution: Not reported
Acres: Not reported

Map ID	Site	Database(s)	EPA ID Number
153	**900 W 120TH ST** **CHICAGO, IL**	**SPILLS**	**S111893990** **N/A**

SPILLS:

Incident ID: 19951289
Incident Date: Not reported
Date Received: 06/16/1995
Facility Address: 900 W 120TH ST
Facility City: CHICAGO
PRP Name: MELROSE TRANSPORT SYSTEM
AC: Not reported

Map ID	Site	Database(s)	EPA ID Number
153	**DUTCH BOY** **12000 SOUTH PEORIA ST.** **CHICAGO, IL 60643**	**UST**	**U003668676** **N/A**

UST:

Facility ID: 2038815
Facility Status: CLOSED
Facility Type: NONE
Owner Name: N L Industries Inc
Owner Id: U0028689
Owner Address: 16825 N Chase Dr Suite 1200
Owner City,St,Zip: Houston, TX 77060

Tank Number: 1
Tank Capacity: 30000
Tank Substance: Not reported
Last Used Date: 12/31/1984
OSFM First Notify Date: 5/13/1999
Tank Status: Removed
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: No

Tank Number: 2
Tank Capacity: 30000
Tank Substance: Not reported
Last Used Date: 12/31/1984
OSFM First Notify Date: 5/13/1999
Tank Status: Removed
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: No

Tank Number: 3
Tank Capacity: 30000
Tank Substance: Mineral Spirits
Last Used Date: 12/31/1984
OSFM First Notify Date: 5/13/1999
Tank Status: Removed
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: No

DUTCH BOY (Continued) **U003668676**

Tank Number: 4
Tank Capacity: 10000
Tank Substance: Not reported
Last Used Date: 12/31/1984
OSFM First Notify Date: 5/13/1999
Tank Status: Removed
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: No

Tank Number: 5
Tank Capacity: 10000
Tank Substance: Not reported
Last Used Date: 12/31/1984
OSFM First Notify Date: 5/13/1999
Tank Status: Removed
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: No

Tank Number: 6
Tank Capacity: 10000
Tank Substance: Not reported
Last Used Date: 12/31/1984
OSFM First Notify Date: 5/13/1999
Tank Status: Removed
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: No

Tank Number: 7
Tank Capacity: 10000
Tank Substance: Not reported
Last Used Date: 12/31/1984
OSFM First Notify Date: 5/13/1999
Tank Status: Removed
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported

DUTCH BOY (Continued) **U003668676**

Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: No

Tank Number: 8
Tank Capacity: 10000
Tank Substance: Mineral Spirits
Last Used Date: 12/31/1984
OSFM First Notify Date: 5/13/1999
Tank Status: Removed
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: No

Tank Number: 9
Tank Capacity: 10000
Tank Substance: Not reported
Last Used Date: 12/31/1984
OSFM First Notify Date: 5/13/1999
Tank Status: Removed
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: No

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153 **DUTCH BOY PAINTS** **SRP** **S104491477**
12000 SOUTH PEORIA STREET **N/A**
CHICAGO, IL 60643

SRP:
IL EPA Id: 0316005116
US EPA Id: ILD083084954
Longitude: -87.64498
Latitude: 41.67517
Contact Name: David Reynolds
Contact Address: 30 North LaSalle Street
Contact Address2: 25th Floor
Contact City,St,Zip: Chicago, IL 60643-
Contact Phone: (312) 742-0123
Date Enrolled: 06/09/1999
Point Of Contact: Frances B. Hodge
Consultant Company: Tetra Tech EM, Inc.
Consultant Address: 200 East Randolph Drive
Consultant Address2: Suite 4700
Consultant City,St,Zip: Chicago, IL 60601-

DUTCH BOY PAINTS (Continued) **S104491477**

Consultant Phone: (312) 856-8700
Proj Mgr Assigned: Gross
Sec. 4 Letter Date: Not reported
NFR Recorded: Not reported
Active: True
Total Acres: 5
No Further Remediation Letter Dt: Not reported
Remediation Applicant Co: City of Chicago, Dept. of Environment
Remediation Applicant Title: Mr.
Remediation Applicant Name: Not reported
Remediation Applicant Company: Not reported
Remediation Applicant Address: Not reported
Remediation Applicant Address 2: Not reported
Remediation Applicant City,St,Zip: Not reported
Illinois EPA: Not reported
Site Name: Not reported
NFR Letter: Not reported
NFR Letter Date Recorded: Not reported
Site Type: Not reported
Comprehensive/Focused: Not reported
Institutional Controls: Not reported
Barrier: Not reported
Worker Caution: Not reported
Acres: Not reported

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154 **INGERSOLL** **CERCLIS** **1009218883**
1000 WEST 120TH STREET **ILN000510053**
CHICAGO, IL 60643

CERCLIS:
Site ID: 0510053
EPA ID: ILN000510053
Facility County: COOK
Short Name: INGERSOLL
Congressional District: 02
IFMS ID: B5CW
SMSA Number: Not reported
USGC Hydro Unit: Not reported
Federal Facility: Not a Federal Facility
DMNSN Number: Not reported
Site Orphan Flag: Not reported
RCRA ID: Not reported
USGS Quadrangle: Not reported
Site Init By Prog: R
NFRAP Flag: Not reported
Parent ID: Not reported
RST Code: Not reported
EPA Region: 05
Classification: Not reported
Site Settings Code: Not reported
NPL Status: Not on the NPL
DMNSN Unit Code: Not reported
RBRAC Code: Not reported
RResp Fed Agency Code: Not reported
Non NPL Status: Removal Only Site (No Site Assessment Work Needed)
Non NPL Status Date: 20050815
Site Fips Code: 17031

INGERSOLL (Continued) **1009218883**

CC Concurrence Date: Not reported
CC Concurrence FY: Not reported
Alias EPA ID: Not reported
Site FUDS Flag: Not reported

CERCLIS Site Contact Name(s):

Contact ID: 5270178.00000
Contact Name: CHARLES M. GEBIEN
Contact Tel: (312) 353-7645
Contact Title: On-Scene Coordinator (OSC)
Contact Email: Not reported

Contact ID: 5271197.00000
Contact Name: THOMAS COOK
Contact Tel: (312) 886-7182
Contact Title: On-Scene Coordinator (OSC)
Contact Email: Not reported

Alias Comments: Not reported
Site Description: Not reported

CERCLIS Assessment History:

Action Code: 001
Action: REMOVAL
Date Started: 01/18/2006
Date Completed: 06/13/2009
Priority Level: Cleaned up
Operable Unit: SITEWIDE
Primary Responsibility: EPA Fund-Financed
Planning Status: Approved
Urgency Indicator: Time Critical
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 001
Action: ISSUE REQUEST LETTERS (104E)
Date Started: Not reported
Date Completed: 10/07/2011
Priority Level: Not reported
Operable Unit: SITEWIDE
Primary Responsibility: Federal Enforcement
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Click this hyperlink while viewing on your computer to access
293 additional US CERCLIS Financial: record(s) in the EDR Site Report.

Map ID	Site	Database(s)	EPA ID Number
155	**INTERNATIONAL HARVESTER** **1015 WEST 120TH STREET** **CHICAGO, IL 60643**	**LUST** **ENG CONTROLS** **INST CONTROL** **SRP**	**S108490996** **N/A**

LUST:

Incident Num: 20091219
IL EPA Id: 0316005005
Product: Uset Oil
IEMA Date: 11/05/2009
Project Manager: Not reported
Project Manager Phone: Not reported
Email: Not reported
PRP Name: Not reported
PRP Contact: Not reported
PRP Address: Not reported
PRP City,St,Zip: Not reported
PRP Phone: Not reported
Site Classification: Not reported
Section 57.5(g) Letter: 734
Date Section 57.5(g) Letter: Not reported
Non LUST Determination Letter: Not reported
20 Report Received: 12/04/2009
45 Report Received: Not reported
NFA/NFR Letter: 10/14/2010
NFR Date Recorded: Not reported

Incident Num: 20091282
IL EPA Id: 0316005005
Product: Other Petro
IEMA Date: 11/18/2009
Project Manager: Not reported
Project Manager Phone: Not reported
Email: Not reported
PRP Name: Not reported
PRP Contact: Not reported
PRP Address: Not reported
PRP City,St,Zip: Not reported
PRP Phone: Not reported
Site Classification: Not reported
Section 57.5(g) Letter: 734
Date Section 57.5(g) Letter: Not reported
Non LUST Determination Letter: Not reported
20 Report Received: Not reported
45 Report Received: Not reported
NFA/NFR Letter: 10/14/2010
NFR Date Recorded: Not reported

ENGINEERING CONTROLS:

Illinois Epa Id: 0316005005
NFR Letter: 10/14/2010
Date NFR Recorded: 11/22/2010
Type Of Site: Industrial/Commercial
Comprehensive / Focused: Comprehensive
Remediation Applicant Title: Ms.
Remediation Applicant Name: Edith Ardiente
RA Company: Navistar, Inc.
RA Address: 4201 Winfield Road
RA Secondary Address: Not reported

INTERNATIONAL HARVESTER (Continued) **S108490996**

RA City,St,Zip: Warrenville, IL 60555-
Institutional Controls: Groundwater use restriction
Engineered Barriers: Asphalt barrier/Concrete barrier
Worker Caution: True
Acres: 20.75

IL INSTUTIONAL CONTROL:
Illinois EPA Id: 0316005005
NFR Letter: 10/14/2010
Date NFR Recorded: 11/22/2010
Type Of Site: Industrial/Commercial
Comprehensive / Focused: Comprehensive
Remediation Applicant Title: Ms.
Remediation Applicant Name: Edith Ardiente
RA Company: Navistar, Inc.
RA Address: 4201 Winfield Road
RA Secondary Address: Not reported
RA City,St,Zip: Warrenville, IL 60555-
Institutional Controls: Groundwater use restriction
Engineered Barriers: Asphalt barrier/Concrete barrier
Worker Caution: True
Acres: 20.75

SRP:
IL EPA Id: 0316005005
US EPA Id: ILD005213285
Longitude: -87.64700
Latitude: 41.67562
Contact Name: Edith Ardiente
Contact Address: 303 East Wacker Drive
Contact Address2: Suite 360
Contact City,St,Zip: Chicago, IL 60601-
Contact Phone: (312) 836-3920
Date Enrolled: 04/01/1996
Point Of Contact: Gregory Vanderlaan
Consultant Company: ARCADIS, Inc.
Consultant Address: 10 South Riverside Plaza
Consultant Address2: Suite 1900
Consultant City,St,Zip: Chicago, IL 60606-
Consultant Phone: Not reported
Proj Mgr Assigned: Gross
Sec. 4 Letter Date: Not reported
NFR Recorded: 11/22/2010
Active: False
Total Acres: 20.75
No Further Remediation Letter Dt: 10/14/2010
Remediation Applicant Co: Navistar, Inc.
Remediation Applicant Title: Ms.
Remediation Applicant Name: Ms. Edith Ardiente
Remediation Applicant Company: Navistar, Inc.
Remediation Applicant Address: 4201 Winfield Road
Remediation Applicant Address 2: Not reported
Remediation Applicant City,St,Zip: Warrenville, IL 60555-
Illinois EPA: 0316005005
Site Name: International Harvester
NFR Letter: 2010-10-14

INTERNATIONAL HARVESTER (Continued) **S108490996**

NFR Letter Date Recorded: 2010-11-22
Site Type: Industrial/Commercial
Comprehensive/Focused: Comprehensive
Institutional Controls: Groundwater use restriction
Barrier: Asphalt barrier/Concrete barrier
Worker Caution: True
Acres: 20.75

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155 **SPILLS** **S111925600**
N/A
1015 WEST 120TH ST
CHICAGO, IL

SPILLS:
Incident ID: 20091282
Incident Date: 11/18/2009
Date Received: Not reported
Facility Address: 1015 WEST 120TH ST
Facility City: CHICAGO
PRP Name: City of Chicago
AC: Not reported

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155 **SPILLS** **S111925520**
N/A
1015 W 120TH ST
CHICAGO, IL

SPILLS:
Incident ID: 20091219
Incident Date: 11/05/2009
Date Received: Not reported
Facility Address: 1015 W 120TH ST
Facility City: CHICAGO
PRP Name: City of Chicago - Department of Environment
AC: Not reported

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155 **FORMER WEST PULLMAN WORKS** **UST** **U003762830**
N/A
1015 W 120TH ST
CHICAGO, IL 60643

UST:
Facility ID: 2039998
Facility Status: EXEMPT
Facility Type: **NONE**
Owner Name: City of Chicago Department of Environment
Owner Id: U0028125
Owner Address: 30 North LaSalle Street, 25th floor
Owner City,St,Zip: Chicago, IL 60602

Tank Number: 1
Tank Capacity: 5000
Tank Substance: Heating Oil
Last Used Date: 12/31/1973
OSFM First Notify Date: Not reported
Tank Status: **Exempt from registration**
Red Tag Issue Date: Not reported

FORMER WEST PULLMAN WORKS (Continued) **U003762830**

Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

Tank Number: 2
Tank Capacity: 5000
Tank Substance: Heating Oil
Last Used Date: 12/31/1973
OSFM First Notify Date: Not reported
Tank Status: Exempt from registration
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

Tank Number: 3
Tank Capacity: 2500
Tank Substance: Heating Oil
Last Used Date: 12/31/1973
OSFM First Notify Date: Not reported
Tank Status: Exempt from registration
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

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155 **INTERNATIONAL HARVESTER CO W P** **CERCLIS** **1000216851**
1015 W 120TH ST **CORRACTS** **ILD005213285**
CHICAGO, IL 60643

CERCLIS:
Site ID: 0500184
EPA ID: ILD005213285
Facility County: COOK
Short Name: INTERNATIONAL HARVESTER
Congressional District: 02
IFMS ID: 05YE
SMSA Number: 1600
USGC Hydro Unit: 07120003
Federal Facility: Not a Federal Facility
DMNSN Number: Not reported
Site Orphan Flag: N
RCRA ID: Not reported
USGS Quadrangle: Not reported

INTERNATIONAL HARVESTER CO W P (Continued) **1000216851**

Site Init By Prog: Not reported
NFRAP Flag: Not reported
Parent ID: Not reported
RST Code: Not reported
EPA Region: 05
Classification: Not reported
Site Settings Code: Not reported
NPL Status: Not on the NPL
DMNSN Unit Code: Not reported
RBRAC Code: Not reported
RResp Fed Agency Code: Not reported
Non NPL Status: Referred to Removal - NFRAP
Non NPL Status Date: 20010118
Site Fips Code: 17031
CC Concurrence Date: Not reported
CC Concurrence FY: Not reported
Alias EPA ID: Not reported
Site FUDS Flag: Not reported

CERCLIS Site Contact Name(s):
Contact ID: 5270200.00000
Contact Name: PAUL STEADMAN
Contact Tel: Not reported
Contact Title: On-Scene Coordinator (OSC)
Contact Email: Not reported

CERCLIS Site Alias Name(s):
Alias ID: 201
Alias Name: CALUMET HARVESTER
Alias Address: Not reported
IL
Alias ID: 301
Alias Name: INTERNATIONAL HARVESTER, INC.
Alias Address: 401 N. MICHIGAN AVE.
CHICAGO, IL 60611
Alias ID: 302
Alias Name: WEST PULLMAN WORKS
Alias Address: Not reported
Not reported
Alias Comments: Not reported
Site Description: ABANDONED 21 ACRE SITE WITH HIGH LEVELS OF PAH’S (E.G. PYRENE, PHEHANTHRNE, FLUORENE). HEAVY METALS AND ASBESTOS CONTAM INATION.ABANDONED 21 ACRE SITE WITH HIGH LEVELS OF PAH’S (E.G. PYRENE, PHEHANTHRNE, FLUORENE). HEAVY METALS AND ASBESTOS CONTAMINATION.

CERCLIS Assessment History:

Action Code: 001
Action: DISCOVERY
Date Started: Not reported
Date Completed: 06/17/1987
Priority Level: Not reported
Operable Unit: SITEWIDE
Primary Responsibility: EPA Fund-Financed
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

INTERNATIONAL HARVESTER CO W P (Continued) **1000216851**

Action Code:	001
Action:	PRELIMINARY ASSESSMENT
Date Started:	Not reported
Date Completed:	08/10/1987
Priority Level:	Higher priority for further assessment
Operable Unit:	SITEWIDE
Primary Responsibility:	State, Fund Financed
Planning Status:	Not reported
Urgency Indicator:	Not reported
Action Anomaly:	Not reported

Action Code:	001
Action:	SITE INSPECTION
Date Started:	Not reported
Date Completed:	10/22/1990
Priority Level:	Higher priority for further assessment
Operable Unit:	SITEWIDE
Primary Responsibility:	State, Fund Financed
Planning Status:	Not reported
Urgency Indicator:	Not reported
Action Anomaly:	Not reported

Action Code:	001
Action:	NON-NATIONAL PRIORITIES LIST POTENTIALLY RESPONSIBLE PARTY SEARCH
Date Started:	10/01/1995
Date Completed:	01/26/1996
Priority Level:	Search Complete, Viable PRPs
Operable Unit:	SITEWIDE
Primary Responsibility:	Federal Enforcement
Planning Status:	Primary
Urgency Indicator:	Not reported
Action Anomaly:	Not reported

CORRACTS:

EPA ID:	ILD005213285
EPA Region:	05
Area Name:	ENTIRE FACILITY
Actual Date:	03/11/1993
Action:	CA225YE - Stabilization Measures Evaluation, This facility ,is amenable to stabilization activity based on the, status of corrective action work at the facility, technical factors, the degree of risk, timing considerations and administrative considerations
NAICS Code(s):	33272 33299 333111 Turned Product and Screw, Nut, and Bolt Manufacturing All Other Fabricated Metal Product Manufacturing Farm Machinery and Equipment Manufacturing
Original schedule date:	Not reported
Schedule end date:	Not reported

EPA ID:	ILD005213285
EPA Region:	05
Area Name:	ENTIRE FACILITY

Map ID	Site	Database(s)	EPA ID Number

INTERNATIONAL HARVESTER CO W P (Continued) **1000216851**

Actual Date:	12/28/1992
Action:	CA075HI - CA Prioritization, Facility or area was assigned a high corrective action priority
NAICS Code(s):	33272 33299 333111 Turned Product and Screw, Nut, and Bolt Manufacturing All Other Fabricated Metal Product Manufacturing Farm Machinery and Equipment Manufacturing
Original schedule date:	Not reported
Schedule end date:	Not reported

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155 **SPILLS** **S110122202**
N/A

1015 W 120TH ST
CHICAGO, IL

SPILLS:

Incident ID:	20091282
Incident Date:	Not reported
Date Received:	11/18/2009
Facility Address:	1015 W 120TH ST
Facility City:	CHICAGO
PRP Name:	CHICAGO, CITY OF
AC:	Not reported

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155 **SPILLS** **S111906193**
N/A

1015 W 120TH ST
CHICAGO, IL

SPILLS:

Incident ID:	19992745
Incident Date:	Not reported
Date Received:	12/13/1999
Facility Address:	1015 W 120TH ST
Facility City:	CHICAGO
PRP Name:	WEST PULLMAN ASSOCIATES
AC:	Not reported

---

156 **VACANT SITE** **UST** **U003909424**
N/A

1210 W 120TH ST
CHICAGO, IL 60628

UST:

Facility ID:	2040504
Facility Status:	EXEMPT
Facility Type:	**NONE**
Owner Name:	City of Chicago/Dept Of Environment
Owner Id:	U0002865
Owner Address:	30 North LaSalle Street, 25th Floor
Owner City,St,Zip:	Chicago, IL 60602
Tank Number:	Not reported
Tank Capacity:	Not reported
Tank Substance:	Not reported
Last Used Date:	Not reported
OSFM First Notify Date:	Not reported
Tank Status:	**Not reported**

VACANT SITE (Continued) **U003909424**

Red Tag Issue Date:	Not reported
Install Date:	Not reported
Green Tag Decal:	**Not reported**
Green Tag Issue Date:	**Not reported**
Green Tag Expire Date:	**Not reported**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	Not reported

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156 **EXELON SOLAR PLANT** **RCRA-CESQG** **1012178820**
1201 W 120TH ST **ILR000158964**
CHICAGO, IL 60628

RCRA-CESQG:

Date form received by agency:	08/13/2009
Facility name:	EXELON SOLAR PLANT
Facility address:	1201 W 120TH ST CHICAGO, IL 60628
EPA ID:	ILR000158964
Mailing address:	10 S DEARBORN ST 48TH FL CHICAGO, IL 60680
Contact:	JOHN R SEMINOFF
Contact address:	Not reported Not reported
Contact country:	Not reported
Contact telephone:	(510) 344-6917
Contact email:	JOHN.SEMINOFF@SUNPOWERCORP.COM
EPA Region:	05
Classification:	Conditionally Exempt Small Quantity Generator
Description:	Handler: generates 100 kg or less of hazardous waste per calendar month, and accumulates 1000 kg or less of hazardous waste at any time; or generates 1 kg or less of acutely hazardous waste per calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste

Owner/Operator Summary:

Owner/operator name:	CITY OF CHICAGO
Owner/operator address:	Not reported Not reported
Owner/operator country:	Not reported
Owner/operator telephone:	Not reported
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	01/01/1997
Owner/Op end date:	Not reported
Owner/operator name:	EXELON CORP
Owner/operator address:	Not reported

EXELON SOLAR PLANT (Continued) **1012178820**

Not reported
Owner/operator country: Not reported
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: 01/01/1997
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Hazardous Waste Summary:
Waste code: D001
Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Violation Status: No violations found

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156 **VACANT LOT** **UST** **U004142073**
1201 W. 120TH STREET **N/A**
CHICAGO, IL 60643

UST:
Facility ID: 2044576
Facility Status: EXEMPT
Facility Type: **VACANT**
Owner Name: City of Chicago Department of Environment
Owner Id: U0028125
Owner Address: 30 North LaSalle Street, 25th floor
Owner City,St,Zip: Chicago, IL 60602

Tank Number: 1
Tank Capacity: 600
Tank Substance: Heating Oil
Last Used Date: 12/31/1973
OSFM First Notify Date: Not reported
Tank Status: **Exempt from registration**
Red Tag Issue Date: Not reported
Install Date: Not reported

VACANT LOT (Continued) **U004142073**

Green Tag Decal: **Not reported**
Green Tag Issue Date: **Not reported**
Green Tag Expire Date: **Not reported**
Self Service Permit Inspection Date: **Not reported**
Self Service Permit Expire Date: **Not reported**
Fee Due: Not reported

Tank Number: 2
Tank Capacity: 25000
Tank Substance: Heating Oil
Last Used Date: 12/31/1973
OSFM First Notify Date: Not reported
Tank Status: **Exempt from registration**
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: **Not reported**
Green Tag Issue Date: **Not reported**
Green Tag Expire Date: **Not reported**
Self Service Permit Inspection Date: **Not reported**
Self Service Permit Expire Date: **Not reported**
Fee Due: Not reported

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156 **SPILLS** **S109953892**
N/A

1201 W 120TH ST
CHICAGO, IL

SPILLS:
Incident ID: 20091066
Incident Date: 09/28/2009
Date Received: Not reported
Facility Address: 1201 W 120TH ST
Facility City: CHICAGO
PRP Name: City of Chicago - Department of Environment
AC: Not reported

Incident ID: 20091066
Incident Date: 09/15/2009
Date Received: 09/28/2009
Facility Address: 1201 W 120TH ST
Facility City: CHICAGO
PRP Name: CHICAGO DEPT OF ENVIRONMENTAL
AC: Not reported

Incident ID: 20091219
Incident Date: Not reported
Date Received: 11/05/2009
Facility Address: 1201 W 120TH ST
Facility City: CHICAGO
PRP Name: CHICAGO DEPT OF ENVIRONMENT
AC: Not reported

Map ID	Site	Database(s)	EPA ID Number
156	**CHICAGO MALLEABLE CASTINGS** **1201 WEST 120TH STREET** **CHICAGO, IL 60643**	**LUST** **SRP**	**S104491749** **N/A**

LUST:

Incident Num:	20091066
IL EPA Id:	0316725027
Product:	Other Petro
IEMA Date:	09/28/2009
Project Manager:	Not reported
Project Manager Phone:	Not reported
Email:	Not reported
PRP Name:	Not reported
PRP Contact:	Not reported
PRP Address:	Not reported
PRP City,St,Zip:	Not reported
PRP Phone:	Not reported
Site Classification:	Not reported
Section 57.5(g) Letter:	734
Date Section 57.5(g) Letter:	Not reported
Non LUST Determination Letter:	Not reported
20 Report Received:	01/11/2010
45 Report Received:	01/11/2010
NFA/NFR Letter:	**Not reported**
NFR Date Recorded:	Not reported

SRP:

IL EPA Id:	0316725027
US EPA Id:	ILR000158964
Longitude:	-87.65435
Latitude:	41.67515
Contact Name:	David Reynolds
Contact Address:	30 North LaSalle Street
Contact Address2:	25th Floor
Contact City,St,Zip:	Chicago, IL 60602-
Contact Phone:	(312) 742-0123
Date Enrolled:	06/09/1999
Point Of Contact:	Frances B. Hodge
Consultant Company:	Tetra Tech EM, Inc.
Consultant Address:	200 East Randolph Drive
Consultant Address2:	Suite 4700
Consultant City,St,Zip:	Chicago, IL 60601-
Consultant Phone:	(312) 946-6440
Proj Mgr Assigned:	Gross
Sec. 4 Letter Date:	Not reported
NFR Recorded:	Not reported
Active:	False
Total Acres:	9.570
No Further Remediation Letter Dt:	Not reported
Remediation Applicant Co:	City of Chicago, Dept. of Environment
Remediation Applicant Title:	Mr.
Remediation Applicant Name:	Not reported
Remediation Applicant Company:	Not reported
Remediation Applicant Address:	Not reported
Remediation Applicant Address 2:	Not reported
Remediation Applicant City,St,Zip:	Not reported
Illinois EPA:	Not reported
Site Name:	Not reported
NFR Letter:	Not reported

CHICAGO MALLEABLE CASTINGS (Continued) **S104491749**

NFR Letter Date Recorded: Not reported
Site Type: Not reported
Comprehensive/Focused: Not reported
Institutional Controls: Not reported
Barrier: Not reported
Worker Caution: Not reported
Acres: Not reported

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159 **DUTCH BOY**
WEST PULLMAN 12042 SOUTH PEORIA STREET
CHICAGO, IL 60643

CERCLIS **1000401248**
ILD980265797

CERCLIS:
Site ID: 0500529
EPA ID: ILD980265797
Facility County: COOK
Short Name: DUTCH BOY
Congressional District: 02
IFMS ID: 05VG
SMSA Number: 1600
USGC Hydro Unit: 07120003
Federal Facility: Not a Federal Facility
DMNSN Number: Not reported
Site Orphan Flag: N
RCRA ID: Not reported
USGS Quadrangle: Not reported
Site Init By Prog: Not reported
NFRAP Flag: Not reported
Parent ID: Not reported
RST Code: Not reported
EPA Region: 05
Classification: Not reported
Site Settings Code: Not reported
NPL Status: Not on the NPL
DMNSN Unit Code: Not reported
RBRAC Code: Not reported
RResp Fed Agency Code: Not reported
Non NPL Status: Referred to Removal - NFRAP
Non NPL Status Date: 20000505
Site Fips Code: 17031
CC Concurrence Date: Not reported
CC Concurrence FY: Not reported
Alias EPA ID: Not reported
Site FUDS Flag: Not reported

CERCLIS Site Contact Name(s):
Contact ID: 5271200.00000
Contact Name: KENNETH THEISEN
Contact Tel: (312) 886-1959
Contact Title: On-Scene Coordinator (OSC)
Contact Email: Not reported

Contact ID: 5271035.00000
Contact Name: JANET POPE
Contact Tel: (312) 353-0628
Contact Title: Community Involvement Coordinator

DUTCH BOY (Continued) **1000401248**

Contact Email: Not reported

Contact ID: 5000191.00000
Contact Name: DION NOVAK
Contact Tel: (312) 886-4737
Contact Title: Remedial Project Manager (RPM)
Contact Email: novak.dion@epa.gov

CERCLIS Site Alias Name(s):
Alias ID: 101
Alias Name: CARTER WHITE LEAD NL IND
Alias Address: WEST PULLMAN 12042 S PEORIA ST
CHICAGO, IL 60643
Alias ID: 102
Alias Name: DUTCH BOY
Alias Address: Not reported
Not reported
Alias ID: 103
Alias Name: CARTER WHITE LEAD NATIONAL INDUSTRIES
Alias Address: WEST PULLMAN 12042 SOUTH PEORIA STREET
CHICAGO, IL 60643
Alias Comments: Not reported
Site Description: Associated with International Harvester site

CERCLIS Assessment History:

Action Code: 001
Action: DISCOVERY
Date Started: Not reported
Date Completed: 06/01/1981
Priority Level: Not reported
Operable Unit: SITEWIDE
Primary Responsibility: EPA Fund-Financed
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

Action Code: 001
Action: PRELIMINARY ASSESSMENT
Date Started: Not reported
Date Completed: 03/01/1984
Priority Level: Low priority for further assessment
Operable Unit: SITEWIDE
Primary Responsibility: State, Fund Financed
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

Action Code: 001
Action: SITE INSPECTION
Date Started: Not reported
Date Completed: 12/01/1984
Priority Level: NFRAP-Site does not qualify for the NPL based on existing information
Operable Unit: SITEWIDE
Primary Responsibility: EPA Fund-Financed

DUTCH BOY (Continued) **1000401248**

Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

Action Code: 001
Action: HAZARD RANKING SYSTEM PACKAGE
Date Started: Not reported
Date Completed: 03/31/1986
Priority Level: NFRAP-Site does not qualify for the NPL based on existing information
Operable Unit: SITEWIDE
Primary Responsibility: EPA Fund-Financed
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

Action Code: 001
Action: UNILATERAL ADMIN ORDER
Date Started: Not reported
Date Completed: 03/26/1996
Priority Level: Not reported
Operable Unit: SITEWIDE
Primary Responsibility: Federal Enforcement
Planning Status: Primary
Urgency Indicator: Not reported
Action Anomaly: Not reported

Action Code: 001
Action: NON-NATIONAL PRIORITIES LIST POTENTIALLY RESPONSIBLE PARTY SEARCH
Date Started: 10/01/1995
Date Completed: 08/08/1996
Priority Level: Search Complete, Viable PRPs
Operable Unit: SITEWIDE
Primary Responsibility: Federal Enforcement
Planning Status: Primary
Urgency Indicator: Not reported
Action Anomaly: Not reported

Action Code: 002
Action: NON-NATIONAL PRIORITIES LIST POTENTIALLY RESPONSIBLE PARTY SEARCH
Date Started: 04/09/1997
Date Completed: 04/23/1997
Priority Level: Search Complete, No Viable PRPs
Operable Unit: SITEWIDE
Primary Responsibility: Federal Enforcement
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

Action Code: 001
Action: ISSUE REQUEST LETTERS (104E)
Date Started: Not reported
Date Completed: 05/08/2002

DUTCH BOY (Continued) **1000401248**

Priority Level: Not reported
Operable Unit: SITEWIDE
Primary Responsibility: Federal Enforcement
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

Action Code: 002
Action: ISSUE REQUEST LETTERS (104E)
Date Started: Not reported
Date Completed: 08/08/2004
Priority Level: Not reported
Operable Unit: SITEWIDE
Primary Responsibility: Federal Enforcement
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

Action Code: 001
Action: POTENTIALLY RESPONSIBLE PARTY REMOVAL
Date Started: 05/06/1999
Date Completed: 09/17/2007
Priority Level: Cleaned up
Operable Unit: SITEWIDE
Primary Responsibility: Responsible Party
Planning Status: Primary
Urgency Indicator: Time Critical
Action Anomaly: Not reported

Action Code: 001
Action: ADMINISTRATIVE ORDER ON CONSENT
Date Started: Not reported
Date Completed: 09/03/2009
Priority Level: Not reported
Operable Unit: SITEWIDE
Primary Responsibility: Federal Enforcement
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

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159 **DUTCH BOY PAINT** **SSU** **S101467563**
12042 SOUTH PEORIA **N/A**
CHICAGO, IL 60643

SSU:
Facility ID: 0316005116
Facility Type: Manufacturer - Paint
Lat/Long: 41.6750984 / -87.644447
Directions: Take I-55 North.
Region: Des Plaines
Current Program: SRP
Project Manager: Frierdich
Community Relations: Britton
SSU Status: Transferred

DUTCH BOY PAINT (Continued) **S101467563**

US EPA Id: ILP083084954
FOS: NA
Year Completed: N/A
Year Entered: Not reported
Site Size: 5.25

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160 **HANCOCK HOUSE LLC**
12045 SOUTH EMERALD AVENUE
CHICAGO, IL 60628

LUST **S109685129**
ENG CONTROLS **N/A**
INST CONTROL
SRP

LUST:
Incident Num: 20100844
IL EPA Id: 0316495178
Product: Gasoline
IEMA Date: 08/04/2010
Project Manager: Not reported
Project Manager Phone: Not reported
Email: Not reported
PRP Name: Not reported
PRP Contact: Not reported
PRP Address: Not reported
PRP City,St,Zip: Not reported
PRP Phone: Not reported
Site Classification: Not reported
Section 57.5(g) Letter: 734
Date Section 57.5(g) Letter: Not reported
Non LUST Determination Letter: Not reported
20 Report Received: 08/10/2010
45 Report Received: 10/17/2011
NFA/NFR Letter: **Not reported**
NFR Date Recorded: Not reported

ENGINEERING CONTROLS:
Illinois Epa Id: 0316495178
NFR Letter: 11/29/2011
Date NFR Recorded: 01/26/2012
Type Of Site: Residential
Comprehensive / Focused: Comprehensive
Remediation Applicant Title: Ms.
Remediation Applicant Name: Brigite Grossman
RA Company: Hancock House LLC
RA Address: 345 North Canal Street
RA Secondary Address: Not reported
RA City,St,Zip: Chicago, IL 60606-
Institutional Controls: Groundwater use restriction
Engineered Barriers: Asphalt barrier/Concrete barrier/Building foundation
Worker Caution: True
Acres: 1

IL INSTUTIONAL CONTROL:
Illinois EPA Id: 0316495178
NFR Letter: 11/29/2011
Date NFR Recorded: 01/26/2012
Type Of Site: Residential
Comprehensive / Focused: Comprehensive
Remediation Applicant Title: Ms.

HANCOCK HOUSE LLC (Continued) **S109685129**

Remediation Applicant Name: Brigite Grossman
RA Company: Hancock House LLC
RA Address: 345 North Canal Street
RA Secondary Address: Not reported
RA City,St,Zip: Chicago, IL 60606-
Institutional Controls: Groundwater use restriction
Engineered Barriers: Asphalt barrier/Concrete barrier/Building foundation
Worker Caution: True
Acres: 1

SRP:
IL EPA Id: 0316495178
US EPA Id: Not reported
Longitude: -87.64096
Latitude: 41.67434
Contact Name: Brigite Grossman
Contact Address: 345 North Canal Street
Contact Address2: Not reported
Contact City,St,Zip: Chicago, IL 60606-
Contact Phone: (312) 560-4560
Date Enrolled: 05/19/2009
Point Of Contact: Michael D. Monteith
Consultant Company: LFR, Inc.
Consultant Address: 630 Tollgate Road
Consultant Address2: Suite D
Consultant City,St,Zip: Elgin, IL 60123-
Consultant Phone: (847) 649-2037
Proj Mgr Assigned: Mehra
Sec. 4 Letter Date: Not reported
NFR Recorded: 01/26/2012
Active: False
Total Acres: 1
No Further Remediation Letter Dt: 11/29/2011
Remediation Applicant Co: Hancock House LLC
Remediation Applicant Title: Ms.
Remediation Applicant Name: Ms. Brigite Grossman
Remediation Applicant Company: Hancock House LLC
Remediation Applicant Address: 345 North Canal Street
Remediation Applicant Address 2: Not reported
Remediation Applicant City,St,Zip: Chicago, IL 60606-
Illinois EPA: 0316495178
Site Name: Hancock House LLC
NFR Letter: 2011-11-29
NFR Letter Date Recorded: 2012-01-26
Site Type: Residential
Comprehensive/Focused: Comprehensive
Institutional Controls: Groundwater use restriction
Barrier: Asphalt barrier/Concrete barrier/Building foundation
Worker Caution: True
Acres: 1

160 **HANCOCK HOUSE, LLC** **UST** **U004158192**
12045 S. EMERALD **N/A**
CHICAGO, IL 60628

UST:
Facility ID: 2044775
Facility Status: EXEMPT
Facility Type: **COMMERCIAL / RETAIL**
Owner Name: Hancock House, LLC
Owner Id: U0035891
Owner Address: 345 N. Canal Street #301
Owner City,St,Zip: Chicago, IL 60606

Tank Number: 1
Tank Capacity: 1000
Tank Substance: Gasoline
Last Used Date: 12/31/1973
OSFM First Notify Date: Not reported
Tank Status: **Exempt from registration**
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: **Not reported**
Green Tag Issue Date: **Not reported**
Green Tag Expire Date: **Not reported**
Self Service Permit Inspection Date: **Not reported**
Self Service Permit Expire Date: **Not reported**
Fee Due: Not reported

Tank Number: 2
Tank Capacity: 550
Tank Substance: Gasoline
Last Used Date: 12/31/1973
OSFM First Notify Date: Not reported
Tank Status: **Exempt from registration**
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: **Not reported**
Green Tag Issue Date: **Not reported**
Green Tag Expire Date: **Not reported**
Self Service Permit Inspection Date: **Not reported**
Self Service Permit Expire Date: **Not reported**
Fee Due: Not reported

Tank Number: 3
Tank Capacity: 400
Tank Substance: Diesel Fuel
Last Used Date: 12/31/1973
OSFM First Notify Date: Not reported
Tank Status: **Exempt from registration**
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: **Not reported**
Green Tag Issue Date: **Not reported**
Green Tag Expire Date: **Not reported**
Self Service Permit Inspection Date: **Not reported**
Self Service Permit Expire Date: **Not reported**
Fee Due: Not reported

HANCOCK HOUSE, LLC (Continued) **U004158192**

Tank Number:	4
Tank Capacity:	400
Tank Substance:	Diesel Fuel
Last Used Date:	12/31/1973
OSFM First Notify Date:	Not reported
Tank Status:	**Exempt from registration**
Red Tag Issue Date:	Not reported
Install Date:	Not reported
Green Tag Decal:	**Not reported**
Green Tag Issue Date:	**Not reported**
Green Tag Expire Date:	**Not reported**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	Not reported

Tank Number:	5
Tank Capacity:	400
Tank Substance:	Diesel Fuel
Last Used Date:	12/31/1973
OSFM First Notify Date:	Not reported
Tank Status:	**Exempt from registration**
Red Tag Issue Date:	Not reported
Install Date:	Not reported
Green Tag Decal:	**Not reported**
Green Tag Issue Date:	**Not reported**
Green Tag Expire Date:	**Not reported**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	Not reported

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160 **SPILLS** **S110613538**
N/A

12045 S EMERALD AVE
CHICAGO, IL

SPILLS:

Incident ID:	20100844
Incident Date:	08/04/2010
Date Received:	Not reported
Facility Address:	12045 S EMERALD AVE
Facility City:	CHICAGO
PRP Name:	Hancock House LLC
AC:	Not reported

Incident ID:	20100844
Incident Date:	Not reported
Date Received:	08/04/2010
Facility Address:	12045 S EMERALD AVE
Facility City:	CHICAGO
PRP Name:	HANCOCK HOUSE LLC
AC:	Not reported

163 CENTRAL STATES PIPE & SUPPLY INC UST U000791028
12101 S PEORIA N/A
CHICAGO, IL 60643

UST:
Facility ID: 2029216
Facility Status: INACTIVE/HEATING OIL
Facility Type: NONE
Owner Name: Central States Pipe & Supply Inc
Owner Id: U0018573
Owner Address: 12101 S Peoria
Owner City,St,Zip: Chicago, IL 60643

Tank Number: 1
Tank Capacity: 1000
Tank Substance: Heating Oil
Last Used Date: 1/1/1901
OSFM First Notify Date: 1/28/1992
Tank Status: Out of service
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

Tank Number: 2
Tank Capacity: 1000
Tank Substance: Heating Oil
Last Used Date: 1/1/1901
OSFM First Notify Date: 1/28/1992
Tank Status: Out of service
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

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164 SOUTH GREEN PLATING SHOP CERCLIS 1007985322
12130 SOUTH GREEN ST ILN000509237
CHICAGO, IL 60620

CERCLIS:
Site ID: 0509237
EPA ID: ILN000509237
Facility County: COOK
Short Name: SOUTH GREEN PLATING SHOP
Congressional District: 01
IFMS ID: B5AA
SMSA Number: Not reported
USGC Hydro Unit: Not reported
Federal Facility: Not a Federal Facility
DMNSN Number: Not reported
Site Orphan Flag: Not reported

Map ID	Site	Database(s)	EPA ID Number

SOUTH GREEN PLATING SHOP (Continued) **1007985322**

RCRA ID:	Not reported
USGS Quadrangle:	Not reported
Site Init By Prog:	R
NFRAP Flag:	Not reported
Parent ID:	Not reported
RST Code:	Not reported
EPA Region:	05
Classification:	Not reported
Site Settings Code:	Not reported
NPL Status:	Not on the NPL
DMNSN Unit Code:	Not reported
RBRAC Code:	Not reported
RResp Fed Agency Code:	Not reported
Non NPL Status:	Removal Only Site (No Site Assessment Work Needed)
Non NPL Status Date:	20041006
Site Fips Code:	17031
CC Concurrence Date:	Not reported
CC Concurrence FY:	Not reported
Alias EPA ID:	Not reported
Site FUDS Flag:	Not reported

CERCLIS Site Contact Name(s):

Contact ID:	5270375.00000
Contact Name:	MICHAEL HARRIS
Contact Tel:	(312) 886-0760
Contact Title:	On-Scene Coordinator (OSC)
Contact Email:	Not reported

Alias Comments:	Not reported
Site Description:	Former plating shop with elevated levels of cyanide, chromium, cadmium and lead contamination.

CERCLIS Assessment History:

Action Code:	001
Action:	NON-NATIONAL PRIORITIES LIST POTENTIALLY RESPONSIBLE PARTY SEARCH
Date Started:	10/02/2004
Date Completed:	10/04/2004
Priority Level:	Not reported
Operable Unit:	SITEWIDE
Primary Responsibility:	Federal Enforcement
Planning Status:	Not reported
Urgency Indicator:	Not reported
Action Anomaly:	Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code:	001
Action:	REMOVAL
Date Started:	05/16/2005
Date Completed:	07/28/2005
Priority Level:	Cleaned up
Operable Unit:	SITEWIDE
Primary Responsibility:	EPA Fund-Financed
Planning Status:	Primary
Urgency Indicator:	Time Critical
Action Anomaly:	Not reported

Map ID	Site	Database(s)	EPA ID Number
	SOUTH GREEN PLATING SHOP (Continued)		**1007985322**

For detailed financial records, contact EDR for a Site Report.:

Action Code:	001
Action:	ISSUE REQUEST LETTERS (104E)
Date Started:	Not reported
Date Completed:	08/16/2005
Priority Level:	Not reported
Operable Unit:	SITEWIDE
Primary Responsibility:	Federal Enforcement
Planning Status:	Not reported
Urgency Indicator:	Not reported
Action Anomaly:	Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code:	001
Action:	Notice Letters Issued
Date Started:	Not reported
Date Completed:	08/16/2005
Priority Level:	Not reported
Operable Unit:	SITEWIDE
Primary Responsibility:	Federal Enforcement
Planning Status:	Not reported
Urgency Indicator:	Not reported
Action Anomaly:	Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code:	002
Action:	ISSUE REQUEST LETTERS (104E)
Date Started:	Not reported
Date Completed:	12/29/2005
Priority Level:	Not reported
Operable Unit:	SITEWIDE
Primary Responsibility:	Federal Enforcement
Planning Status:	Not reported
Urgency Indicator:	Not reported
Action Anomaly:	Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code:	003
Action:	ISSUE REQUEST LETTERS (104E)
Date Started:	Not reported
Date Completed:	05/09/2006
Priority Level:	Not reported
Operable Unit:	SITEWIDE
Primary Responsibility:	Federal Enforcement
Planning Status:	Not reported
Urgency Indicator:	Not reported
Action Anomaly:	Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code:	004

Map ID	Site	Database(s)	EPA ID Number

SOUTH GREEN PLATING SHOP (Continued) **1007985322**

Action:	ISSUE REQUEST LETTERS (104E)
Date Started:	Not reported
Date Completed:	11/02/2006
Priority Level:	Not reported
Operable Unit:	SITEWIDE
Primary Responsibility:	Federal Enforcement
Planning Status:	Not reported
Urgency Indicator:	Not reported
Action Anomaly:	Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code:	005
Action:	ISSUE REQUEST LETTERS (104E)
Date Started:	Not reported
Date Completed:	03/20/2008
Priority Level:	Not reported
Operable Unit:	SITEWIDE
Primary Responsibility:	Federal Enforcement
Planning Status:	Not reported
Urgency Indicator:	Not reported
Action Anomaly:	Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code:	006
Action:	ISSUE REQUEST LETTERS (104E)
Date Started:	Not reported
Date Completed:	02/05/2009
Priority Level:	Not reported
Operable Unit:	SITEWIDE
Primary Responsibility:	Federal Enforcement
Planning Status:	Not reported
Urgency Indicator:	Not reported
Action Anomaly:	Not reported

For detailed financial records, contact EDR for a Site Report.:

Click this hyperlink while viewing on your computer to access
69 additional US CERCLIS Financial: record(s) in the EDR Site Report.

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165 **HARBOR TOOL MFG INC** **RCRA-SQG** **1004698325**
12140 S PEORIA AVE **ILR000105692**
CHICAGO, IL 60643

RCRA-SQG:

Date form received by agency:	05/14/2001
Facility name:	HARBOR TOOL MFG INC
Facility address:	12140 S PEORIA AVE CHICAGO, IL 60643
EPA ID:	ILR000105692
Contact:	ARNOLD LORENZINI
Contact address:	12140 S PEORIA AVE CHICAGO, IL 60643
Contact country:	US
Contact telephone:	(773) 468-3120

Map ID	Site	Database(s)	EPA ID Number

HARBOR TOOL MFG INC (Continued) **1004698325**

Contact email:	Not reported
EPA Region:	05
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	STRATTA JOHN
Owner/operator address:	12140 S PEORIA AVE CHICAGO, IL 60643
Owner/operator country:	Not reported
Owner/operator telephone:	(773) 468-3120
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	01/01/0001
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Hazardous Waste Summary:

Waste code:	D005
Waste name:	BARIUM
Violation Status:	No violations found

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166 **MODERN STEEL** **RCRA-SQG** **1001816935**
1010 W 122RD ST **ILR000068262**
CHICAGO, IL 60643

RCRA-SQG:

Date form received by agency:	10/20/1999
Facility name:	MODERN STEEL
Facility address:	1010 W 122RD ST CHICAGO, IL 60643
EPA ID:	ILR000068262
Mailing address:	30 N LASALLE ST 15TH FLR CHICAGO, IL 60602
Contact:	RENANTE MARANTE
Contact address:	30 N LASALLE ST 15TH FLR

MODERN STEEL (Continued) **1001816935**

	CHICAGO, IL 60602
Contact country:	US
Contact telephone:	(312) 742-0123
Contact email:	Not reported
EPA Region:	05
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	CITY OF CHGO DEPT OF ENV
Owner/operator address:	30 N LASALLE ST 25TH FLR CHICAGO, IL 60602
Owner/operator country:	Not reported
Owner/operator telephone:	(312) 742-0123
Legal status:	Municipal
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Hazardous Waste Summary:

Waste code:	D002
Waste name:	A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.

Violation Status: No violations found

167
POWER & LIGHT EVANGELIST CHURCH
12257 S EMERALD ST
CHICAGO, IL 60628
UST
U003668010
N/A

UST:
Facility ID: 2036855
Facility Status: EXEMPT
Facility Type: NONE
Owner Name: Power & Light Evangelist Church
Owner Id: U0027012
Owner Address: Pob 288421
Owner City,St,Zip: Chicago, IL 60628

Tank Number: 1
Tank Capacity: 3000
Tank Substance: Heating Oil
Last Used Date: 1/1/1973
OSFM First Notify Date: 1/1/1902
Tank Status: Exempt from registration
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date:Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

168
BIG MEL’S LAUNDROMAT
12256 SOUTH HALSTED
CHICAGO, IL 60628
DRYCLEANERS
S106540629
N/A

DRYCLEANERS:
Facility Id: 2373-6879-01
DC No: DC-00846
Facility Contact: MELVIN STANTON
License Expires: 12/31/2012

168
BIG MELS CLEANERS
12256 S HALSTED
CHICAGO, IL 60628
RCRA-SQG
1000123948
ILD984781849

RCRA-SQG:
Date form received by agency: 03/08/1990
Facility name: BIG MELS CLEANERS
Facility address: 12256 S HALSTED
CHICAGO, IL 60643
EPA ID: ILD984781849
Contact: MELVIN STANTON
Contact address: 12256 S HALSTED
CHICAGO, IL 60643
Contact country: US
Contact telephone: (312) 568-2026
Contact email: Not reported
EPA Region: 05
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of

BIG MELS CLEANERS (Continued) **1000123948**

hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	STANTON MELVIN
Owner/operator address:	ADDRESS NOT REPORTED CITY NOT REPORTED, AK 99998
Owner/operator country:	Not reported
Owner/operator telephone:	(312) 555-1212
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	NAME NOT REPORTED
Owner/operator address:	ADDRESS NOT REPORTED CITY NOT REPORTED, AK 99998
Owner/operator country:	Not reported
Owner/operator telephone:	(312) 555-1212
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Hazardous Waste Summary:

Waste code:	D000
Waste name:	Not Defined

Waste code:	F002
Waste name:	THE FOLLOWING SPENT HALOGENATED SOLVENTS: TETRACHLOROETHYLENE, METHYLENE CHLORIDE, TRICHLOROETHYLENE, 1,1,1-TRICHLOROETHANE, CHLOROBENZENE, 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE, ORTHO-DICHLOROBENZENE, TRICHLOROFLUOROMETHANE, AND 1,1,2-TRICHLOROETHANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE LISTED IN F001, F004, OR F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Map ID	Site	Database(s)	EPA ID Number
	BIG MELS CLEANERS (Continued)		**1000123948**

Violation Status: No violations found

Map ID	Site	Database(s)	EPA ID Number
172	**CAL GAS INC.** **12304 S. HALSTED ST.** **CALUMET PARK, IL 60827**	**UST**	**U003668717** **N/A**

UST:

Facility ID:	2038892
Facility Status:	ACTIVE
Facility Type:	**SELF-SERVICE STATION**
Owner Name:	Cal Gas Station, Inc.
Owner Id:	U0028693
Owner Address:	12304 S. Halsted St.
Owner City,St,Zip:	Calumet Park, IL 60827

Tank Number:	1
Tank Capacity:	8000
Tank Substance:	Gasoline
Last Used Date:	Not reported
OSFM First Notify Date:	8/23/2000
Tank Status:	**Currently in use**
Red Tag Issue Date:	Not reported
Install Date:	4/19/2000
Green Tag Decal:	**L001224**
Green Tag Issue Date:	**2/3/2010**
Green Tag Expire Date:	**12/31/2012**
Self Service Permit Inspection Date:	**2/3/2010**
Self Service Permit Expire Date:	**12/31/2012**
Fee Due:	$0.00

Tank Number:	2
Tank Capacity:	12000
Tank Substance:	Gasoline
Last Used Date:	Not reported
OSFM First Notify Date:	8/23/2000
Tank Status:	**Currently in use**
Red Tag Issue Date:	Not reported
Install Date:	4/19/2000
Green Tag Decal:	**L001224**
Green Tag Issue Date:	**2/3/2010**
Green Tag Expire Date:	**12/31/2012**
Self Service Permit Inspection Date:	**2/3/2010**
Self Service Permit Expire Date:	**12/31/2012**
Fee Due:	$0.00

Map ID	Site	Database(s)	EPA ID Number
172	**AAMCO** **12307 S HALSTED** **CHICAGO, IL 60628**	**RCRA-SQG**	**1010317178** **ILR000142984**

RCRA-SQG:

Date form received by agency:	08/17/2006
Facility name:	AAMCO
Facility address:	12307 S HALSTED CHICAGO, IL 60628
EPA ID:	ILR000142984
Contact:	DAN PISKE

Map ID	Site	Database(s)	EPA ID Number
	AAMCO (Continued)		**1010317178**

Contact address:	Not reported Not reported
Contact country:	Not reported
Contact telephone:	(773) 568-4747
Contact email:	Not reported
EPA Region:	05
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	AAMCO
Owner/operator address:	Not reported Not reported
Owner/operator country:	US
Owner/operator telephone:	Not reported
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	08/17/2006
Owner/Op end date:	Not reported

Owner/operator name:	AAMCO
Owner/operator address:	Not reported Not reported
Owner/operator country:	US
Owner/operator telephone:	Not reported
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	08/17/2006
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Hazardous Waste Summary:

Waste code:	D001
Waste name:	IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE

Map ID	Site	Database(s)	EPA ID Number

AAMCO (Continued) **1010317178**

FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Violation Status: No violations found

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173 **METCALFE SCHOOL** **RCRA-SQG** **1001116711**
12339 S NORMAL **ILR000027367**
CHICAGO, IL 60628

RCRA-SQG:

Date form received by agency:	09/12/1996
Facility name:	METCALFE SCHOOL
Facility address:	12339 S NORMAL CHICAGO, IL 60628
EPA ID:	ILR000027367
Mailing address:	1819 W PERSHING RD CHICAGO, IL 60609
Contact:	ALBERT FOSTER JR
Contact address:	1819 W PERSHING RD CHICAGO, IL 60609
Contact country:	US
Contact telephone:	(312) 535-5590
Contact email:	Not reported
EPA Region:	05
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	CHICAGO PUBLIC SCHOOLS
Owner/operator address:	1819 W PERSHING RD CHICAGO, IL 60609
Owner/operator country:	Not reported
Owner/operator telephone:	(312) 535-7039
Legal status:	District
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No

METCALFE SCHOOL (Continued) **1001116711**

Used oil transfer facility: No
Used oil transporter: No

Hazardous Waste Summary:
Waste code: D008
Waste name: LEAD

Violation Status: No violations found

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177 **SPILLS** **S109327375**
125TH ST & MORGAN **N/A**
CHICAGO, IL

SPILLS:
Incident ID: 20081522
Incident Date: Not reported
Date Received: 10/10/2008
Facility Address: 125TH ST & MORGAN
Facility City: CHICAGO
PRP Name: COMED
AC: Not reported

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178 **SPILLS** **S111880261**
12535 S HALSTED ST **N/A**
CHICAGO, IL

SPILLS:
Incident ID: 19911261
Incident Date: Not reported
Date Received: 05/11/1991
Facility Address: 12535 S HALSTED ST
Facility City: CHICAGO
PRP Name: GEORGE FRANKLIN II
AC: Not reported

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178 **RED’S CHECKPOINT** **LUST** **S104526016**
12535 SOUTH HALSTED ST. **N/A**
CHICAGO, IL 60632

LUST:
Incident Num: 911261
IL EPA Id: 0316585075
Product: Unleaded Gas
IEMA Date: 05/10/1991
Project Manager: Malcom
Project Manager Phone: (217) 524-9140
Email: James.Malcom@illinois.gov
PRP Name: George Franklin II
PRP Contact: Not reported
PRP Address: 12535 South Halsted St.
PRP City,St,Zip: Chicago, IL 60632
PRP Phone: Not reported
Site Classification: Not reported
Section 57.5(g) Letter: 731
Date Section 57.5(g) Letter: Not reported

RED’S CHECKPOINT (Continued) **S104526016**

Non LUST Determination Letter: Not reported
20 Report Received: 10/17/1994
45 Report Received: 07/28/1998
NFA/NFR Letter: 07/11/2002
NFR Date Recorded: 07/25/2002

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178 **FRANKLIN GEORGE** **UST** **U001142473**
12535 S HALSTED **N/A**
CHICAGO, IL 60628

UST:
Facility ID: 2001206
Facility Status: CLOSED
Facility Type: GOLF COURSE
Owner Name: Franklin George
Owner Id: U0005425
Owner Address: 12535 S Halsted
Owner City,St,Zip: Chicago, IL 60628

Tank Number: 1
Tank Capacity: 6000
Tank Substance: Gasoline
Last Used Date: Not reported
OSFM First Notify Date: 3/7/1986
Tank Status: Removed
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

Tank Number: 2
Tank Capacity: 6000
Tank Substance: Gasoline
Last Used Date: Not reported
OSFM First Notify Date: 3/7/1986
Tank Status: Removed
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

Tank Number: 3
Tank Capacity: 6000
Tank Substance: Gasoline
Last Used Date: Not reported
OSFM First Notify Date: 3/7/1986
Tank Status: Removed
Red Tag Issue Date: Not reported

FRANKLIN GEORGE (Continued) **U001142473**

Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

Tank Number: 4
Tank Capacity: 1000
Tank Substance: Used Oil
Last Used Date: Not reported
OSFM First Notify Date: 3/7/1986
Tank Status: Removed
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

---

179 **BROWN ACADEMY** **UST** **U003914184**
12607 S. UNION STREET **N/A**
CHICAGO, IL 60628

UST:
Facility ID: 2041804
Facility Status: EXEMPT
Facility Type: OTHER
Owner Name: Chicago Board of Education (CPS)
Owner Id: U0026761
Owner Address: 125 S. Clark St. Suite 700
Owner City,St,Zip: Chicago, IL 60603

Tank Number: 1
Tank Capacity: 6000
Tank Substance: Heating Oil
Last Used Date: 12/31/1973
OSFM First Notify Date: 8/21/2003
Tank Status: Exempt from registration
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

Map ID	Site	Database(s)	EPA ID Number
179	**NANSEN SCHOOL** **12607 S UNION** **CHICAGO, IL 60628**	**RCRA-SQG**	**1001116716** **ILR000027417**

RCRA-SQG:

Date form received by agency: 09/12/1996
Facility name: NANSEN SCHOOL
Facility address: 12607 S UNION
CHICAGO, IL 60628
EPA ID: ILR000027417
Mailing address: 1819 W PERSHING RD
CHICAGO, IL 60609
Contact: KAREN WILSON
Contact address: 1819 W PERSHING RD
CHICAGO, IL 60609
Contact country: US
Contact telephone: (312) 535-5385
Contact email: Not reported
EPA Region: 05
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name: CHICAGO PUBLIC SCHOOLS
Owner/operator address: 1819 W PERSHING RD
CHICAGO, IL 60609
Owner/operator country: Not reported
Owner/operator telephone: (312) 535-7039
Legal status: District
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:

U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Hazardous Waste Summary:

Waste code: D008
Waste name: LEAD

Map ID	Site	Database(s)	EPA ID Number
	NANSEN SCHOOL (Continued)		**1001116716**

Violation Status: No violations found

Map ID	Site	Database(s)	EPA ID Number
180	**726 W 126TH ST** **CHICAGO, IL**	**SPILLS**	**S111891422** **N/A**

SPILLS:

Incident ID:	19941648
Incident Date:	Not reported
Date Received:	07/25/1994
Facility Address:	726 W 126TH ST
Facility City:	CHICAGO
PRP Name:	UNKNOWN
AC:	Not reported

Map ID	Site	Database(s)	EPA ID Number
182	**WALGREENS #0186** **12635 S HALSTED** **CHICAGO, IL 60643**	**RCRA-CESQG**	**1004696258** **ILR000042465**

RCRA-CESQG:

Date form received by agency:	09/05/1997
Facility name:	WALGREENS #0186
Facility address:	12635 S HALSTED CHICAGO, IL 60643
EPA ID:	ILR000042465
Contact:	MARCELLUS GORDON
Contact address:	12635 S HALSTED CHICAGO, IL 60643
Contact country:	US
Contact telephone:	(773) 468-6200
Contact email:	Not reported
EPA Region:	05
Classification:	Conditionally Exempt Small Quantity Generator
Description:	Handler: generates 100 kg or less of hazardous waste per calendar month, and accumulates 1000 kg or less of hazardous waste at any time; or generates 1 kg or less of acutely hazardous waste per calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste

Owner/Operator Summary:

Owner/operator name:	WALGREENS
Owner/operator address:	12635 S HALSTED CHICAGO, IL 60643
Owner/operator country:	Not reported
Owner/operator telephone:	(773) 468-6200
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported

WALGREENS #0186 (Continued) **1004696258**

Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Hazardous Waste Summary:
Waste code: X003
Waste name: OTHER STATE REGULATED WASTES [i.e., DIESEL FUEL, GASOLINE AND HOME HEATING OIL]

Violation Status: No violations found

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186 **NACME STEEL PROCESSING LLC** **RCRA-SQG** **1001218837**
429 W 127TH ST **ILR000049544**
CHICAGO, IL 60628

RCRA-SQG:
Date form received by agency: 03/01/2010
Facility name: NACME STEEL PROCESSING LLC
Facility address: 429 W 127TH ST
CHICAGO, IL 60007
EPA ID: ILR000049544
Contact: JOHN DUBROCK
Contact address: Not reported
Not reported
Contact country: Not reported
Contact telephone: (773) 468-2800
Contact email: Not reported
EPA Region: 05
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:
Owner/operator name: NACME STEEL PROCESSING LLC
Owner/operator address: 4506 W CLINE AVE
EAST CHICAGO, IN 46312
Owner/operator country: US
Owner/operator telephone: Not reported
Legal status: Private

NACME STEEL PROCESSING LLC (Continued) **1001218837**

Owner/Operator Type:	Owner
Owner/Op start date:	03/27/2003
Owner/Op end date:	Not reported
Owner/operator name:	NACME STEEL PROCESSING LLC
Owner/operator address:	429 W 127TH ST CHICAGO, IL 60628
Owner/operator country:	US
Owner/operator telephone:	Not reported
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	03/27/2003
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	Yes
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Historical Generators:

Date form received by agency:	04/01/2006
Facility name:	NACME STEEL PROCESSING LLC
Classification:	Not a generator, verified
Date form received by agency:	06/12/1998
Facility name:	NACME STEEL PROCESSING LLC
Classification:	Large Quantity Generator

Hazardous Waste Summary:

Waste code:	D002
Waste name:	A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.
Waste code:	K062
Waste name:	SPENT PICKLE LIQUOR GENERATED BY STEEL FINISHING OPERATIONS OF FACILITIES WITHIN THE IRON AND STEEL INDUSTRY (SIC CODES 331 AND 332).

Biennial Reports:

NACME STEEL PROCESSING LLC (Continued) **1001218837**

Last Biennial Reporting Year: 2011

Annual Waste Handled:

Waste code:	D002
Waste name:	A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.
Amount (Lbs):	30871
Waste code:	K062
Waste name:	SPENT PICKLE LIQUOR GENERATED BY STEEL FINISHING OPERATIONS OF FACILITIES WITHIN THE IRON AND STEEL INDUSTRY (SIC CODES 331 AND 332).
Amount (Lbs):	30871
Violation Status:	No violations found

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188 **CEDAR PARK CEMETERY ASSN INC** **UST** **U001142098**
12540 S HALSTED ST **N/A**
CHICAGO, IL 60643

UST:

Facility ID:	2006553
Facility Status:	CLOSED
Facility Type:	**OTHER**
Owner Name:	Cedar Park Cemetery Assn Inc
Owner Id:	U0002617
Owner Address:	12540 S Halsted St
Owner City,St,Zip:	Chicago, IL 60643
Tank Number:	1
Tank Capacity:	1150
Tank Substance:	Gasoline
Last Used Date:	1/1/1993
OSFM First Notify Date:	3/25/1986
Tank Status:	**Removed**
Red Tag Issue Date:	Not reported
Install Date:	Not reported
Green Tag Decal:	**Not reported**
Green Tag Issue Date:	**Not reported**
Green Tag Expire Date:	**Not reported**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	Not reported
Tank Number:	2
Tank Capacity:	1000
Tank Substance:	Gasoline
Last Used Date:	1/1/1993
OSFM First Notify Date:	3/25/1986
Tank Status:	**Removed**
Red Tag Issue Date:	Not reported
Install Date:	Not reported
Green Tag Decal:	**Not reported**

CEDAR PARK CEMETERY ASSN INC (Continued) **U001142098**

Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

Tank Number: 3
Tank Capacity: 1000
Tank Substance: Gasoline
Last Used Date: 1/1/1993
OSFM First Notify Date: 3/25/1986
Tank Status: Removed
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

Tank Number: 4
Tank Capacity: 1050
Tank Substance: Heating Oil
Last Used Date: 1/1/1993
OSFM First Notify Date: 3/25/1986
Tank Status: Removed
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

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188 **CEDAR PARK CEMETERY**
12540 S HALSTED ST
CHICAGO, IL 60643

RCRA-SQG **1001077035**
LUST **ILR000013557**

RCRA-SQG:
Date form received by agency: 12/24/2009
Facility name: CEDAR PARK CEMETERY
Facility address: 12540 S HALSTED ST
CHICAGO, IL 60643
EPA ID: ILR000013557
Contact: ROBERT ROTHSCHILD
Contact address: 12540 S HALSTED ST
CHICAGO, IL 60643
Contact country: US
Contact telephone: (312) 785-8840
Contact email: Not reported
EPA Region: 05
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of

hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:
Owner/operator name: CEDAR PARK CEMETARY
Owner/operator address: 12540 S HALSTED
CHICAGO, IL 60643
Owner/operator country: Not reported
Owner/operator telephone: (312) 785-8840
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 11/28/1995
Facility name: CEDAR PARK CEMETERY
Classification: Small Quantity Generator

Hazardous Waste Summary:
Waste code: D001
Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Waste code: D001
Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

CEDAR PARK CEMETERY (Continued) **1001077035**

Violation Status: No violations found

LUST:
Incident Num: 952568
IL EPA Id: 0316755067
Product: Gasoline
IEMA Date: 12/22/1995
Project Manager: NOT ASSIGNED
Project Manager Phone: Not reported
Email: Not reported
PRP Name: Cedar Park Cemetery
PRP Contact: Alma Fox
PRP Address: 12540 South Halsted
PRP City,St,Zip: Chicago, IL 60643
PRP Phone: Not reported
Site Classification: Not reported
Section 57.5(g) Letter: 732
Date Section 57.5(g) Letter: Not reported
Non LUST Determination Letter: Not reported
20 Report Received: Not reported
45 Report Received: Not reported
NFA/NFR Letter: **Not reported**
NFR Date Recorded: Not reported

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190 **#008489** **UST** **U000172589**
12731 S HALSTED **N/A**
CHICAGO, IL 60628

UST:
Facility ID: 2016822
Facility Status: EXEMPT
Facility Type: **NONE**
Owner Name: Phillips Petroleum Company
Owner Id: U0011864
Owner Address: 13 D2 Phillips Building
Owner City,St,Zip: Bartlesville, OK 74004

Tank Number: 1
Tank Capacity: 6000
Tank Substance: Gasoline
Last Used Date: 7/1/1976
OSFM First Notify Date: 4/16/1986
Tank Status: **Exempt from registration**
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: **Not reported**
Green Tag Issue Date: **Not reported**
Green Tag Expire Date: **Not reported**
Self Service Permit Inspection Date: **Not reported**
Self Service Permit Expire Date: **Not reported**
Fee Due: $0.00

Tank Number: 2
Tank Capacity: 6000
Tank Substance: Gasoline
Last Used Date: 7/1/1976
OSFM First Notify Date: 4/16/1986

#008489 (Continued) **U000172589**

Tank Status: **Exempt from registration**
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: **Not reported**
Green Tag Issue Date: **Not reported**
Green Tag Expire Date: **Not reported**
Self Service Permit Inspection Date: **Not reported**
Self Service Permit Expire Date: **Not reported**
Fee Due: $0.00

Tank Number: 3
Tank Capacity: 560
Tank Substance: Used Oil
Last Used Date: 7/1/1976
OSFM First Notify Date: 4/16/1986
Tank Status: **Exempt from registration**
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: **Not reported**
Green Tag Issue Date: **Not reported**
Green Tag Expire Date: **Not reported**
Self Service Permit Inspection Date: **Not reported**
Self Service Permit Expire Date: **Not reported**
Fee Due: $0.00

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194 **YOUNGS AUTO SUPPLY INC** **RCRA-SQG** **1000315322**
12853 S HALSTED **ILD025355173**
CHICAGO, IL 60628

RCRA-SQG:
Date form received by agency: 10/02/1986
Facility name: YOUNGS AUTO SUPPLY INC
Facility address: 12853 S HALSTED
CHICAGO, IL 60628
EPA ID: ILD025355173
Contact: VINCE PALERMO
Contact address: 12853 S HALSTED
CHICAGO, IL 60628
Contact country: US
Contact telephone: (312) 568-0001
Contact email: Not reported
EPA Region: 05
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:
Owner/operator name: PALERMO JOSEPH
Owner/operator address: ADDRESS NOT REPORTED
CITY NOT REPORTED, AK 99998
Owner/operator country: Not reported
Owner/operator telephone: (312) 555-1212
Legal status: Private

YOUNGS AUTO SUPPLY INC (Continued) **1000315322**

Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: NAME NOT REPORTED
Owner/operator address: ADDRESS NOT REPORTED
CITY NOT REPORTED, AK 99998
Owner/operator country: Not reported
Owner/operator telephone: (312) 555-1212
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Hazardous Waste Summary:
Waste code: D000
Waste name: Not Defined

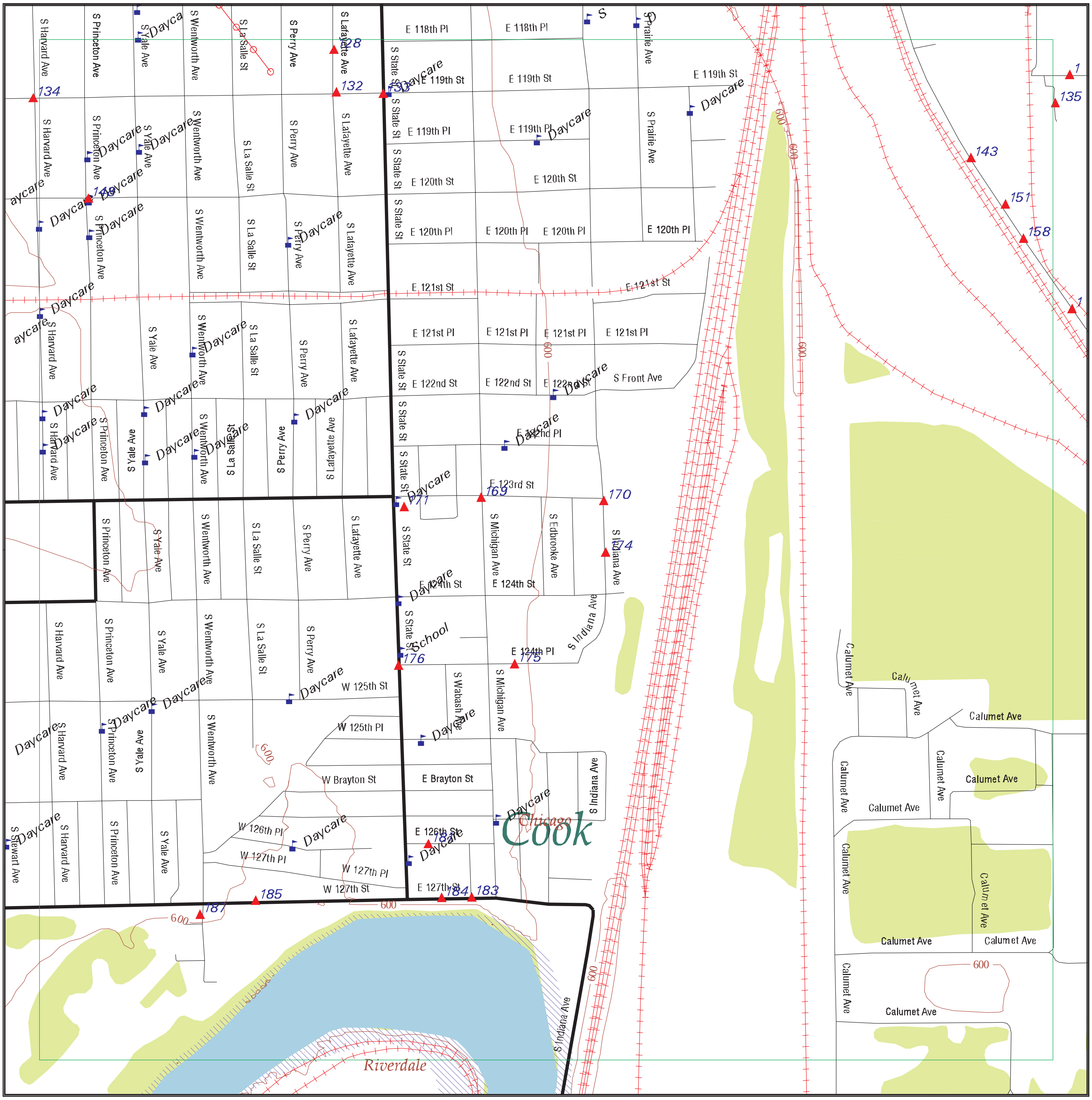
Waste code: D001
Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Violation Status: No violations found

Count: 17 records FOCUS MAP 10 ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CALUMET PARK	U004183412	TRUE NORTH LOCATION 1967	1620 W 127TH ST	60643	UST
CALUMET PARK	1004696111	EARL SCHEIB PAINT & BODY	1731 W 127TH	60643	RCRA-CESQG
CALUMET PARK	1000166385	CHICAGO COPPER AND CHEMICAL COMPANY	INTERSECTION OF WINCHESTER RD & 127 ST.	60643	CERCLIS
CHICAGO	1012172115	ROSELAND COMMUNITY	110TH PLACE AND MICHIGAN, EAST SIDE OF STATE ST.		US BROWNFIELDS
CHICAGO	S109167302		549 115TH ST		LUST, SPILLS
CHICAGO	1003870122	ILLINOIS CENTRAL RR TRACKS	119TH STREET EAST IL CENTRAL TRACKS	60628	CERC-NFRAP
CHICAGO	S106526645	UNNAMED PARCEL	122ND ST		BROWNFIELDS
CHICAGO	1002886378	US SCRAP	123RD & COTTAGE GROVE	60628	CERCLIS
CHICAGO	1003870058	LAKE CALUMET QUAD	810 E 124TH ST	60628	CERC-NFRAP
CHICAGO	S101467236	PENN CENTRAL	810 E 124TH ST		SSU
CHICAGO	1002886490	METRO SANITARY DISTRICT #3	125TH STREET & DOTY AVENUE	60628	CERC-NFRAP
CHICAGO	S105743962	GASGO SERVICE STATION	150 W 127TH ST	60628	LUST
CHICAGO	S109366427		6700 JEFFREY BLVD		LUST, SPILLS
CHICAGO	S108891646		11900 LOOMIS		LUST, SPILLS
CHICAGO	S107926349	LAKE CALUMET CLUSTER SITE	N OF 122ND	60628	SSU
CHICAGO	1012172077	BOYCE PARK	UNION AVE BETWEEN 42ND & ROOT STREETS		US BROWNFIELDS
RIVERDALE	S106121908	TWIN OUTDOOR THEATER	13701 S UNION AVE	60827	SRP

Focus Map 11


S Harvard Ave
S Princeton Ave
S Yale Ave
S Wentworth Ave
S La Salle St
S Perry Ave
S Lafayette Ave
S State St
S Stewart Ave
S Michigan Ave
S Wabash Ave
S Edbrooke Ave
S Indiana Ave
S Prairie Ave
S Front Ave
E 118th Pl
E 119th St
E 119th Pl
E 120th St
E 120th Pl
E 121st St
E 121st Pl
E 122nd St
E 122nd Pl
E 123rd St
E 124th St
E 124th Pl
W 125th St
W 125th Pl
W Brayton St
E Brayton St
E 126th St
W 126th Pl
W 127th Pl
W 127th St
E 127th St
Calumet Ave
Daycare
School
Chicago
Cook
Riverdale
600
1
134
128
132
133
135
143
148
151
158
169
170
171
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181
183
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187

EDR DataMap® - Environmental Atlas

EDR Environmental Data Resources Inc

90786 CTC RLE Hazardous Materials

N

Legend

- Roads
- Major Roads
- Contour Lines
- National Wetlands Inventory
- Waterways
- Railroads
- Study Boundary
- 100-Yr Flood Zones
- Powerlines
- Pipelines
- Fault Lines
- Water
- ▲ Listed Sites
- Sensitive Receptors

0 1/8 1/4

Scale in Miles

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FOCUS MAP 11 SUMMARY

	Database	Total Plotted
FEDERAL RECORDS		
	Proposed NPL	0
	Delisted NPL	0
	CERCLIS	1
	CERC-NFRAP	1
	CORRACTS	1
	RCRA-TSDF	0
	RCRA-LQG	0
	RCRA-SQG	6
	RCRA-CESQG	3
	US ENG CONTROLS	0
	US INST CONTROL	0
	ERNS	1
	US BROWNFIELDS	0
STATE AND LOCAL RECORDS		
	SSU	1
	SWF/LF	0
	LUST	7
	UST	16
	SPILLS	7
	ENG CONTROLS	0
	INST CONTROL	0
	SRP	0
	DRYCLEANERS	0
	BROWNFIELDS	0
EDR PROPRIETARY RECORDS		
	Manufactured Gas Plants	0

NOTES:

Sites may be listed in more than one database

Map ID	Site	Database(s)	EPA ID Number
128	**GREATOR CANAAN MBC/VACANT LOT** **11856 S. LAFAYETTE** **CHICAGO, IL 60607**	**UST**	**U004068153** **N/A**

UST:
Facility ID: 2043476
Facility Status: EXEMPT
Facility Type: NONE
Owner Name: Greater Canaan MBC
Owner Id: U0033817
Owner Address: 35 W. 119th Street
Owner City,St,Zip: Chicago, IL 60607

Tank Number: 1
Tank Capacity: 500
Tank Substance: Heating Oil
Last Used Date: 12/31/1973
OSFM First Notify Date: Not reported
Tank Status: Exempt from registration
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

Map ID	Site	Database(s)	EPA ID Number
129	**INLAND METAL REFINING COMPANY INCORPORATION** **651 EAST 119TH STREET** **CHICAGO, IL 60628**	**CERC-NFRAP** **CORRACTS** **SSU**	**1000151808** **ILD980503213**

CERC-NFRAP:
Site ID: 0500577
Federal Facility: Not a Federal Facility
NPL Status: Not on the NPL
Non NPL Status: NFRAP-Site does not qualify for the NPL based on existing information

CERCLIS-NFRAP Site Alias Name(s):
Alias Name: INLAND METAL REFINING CO INC
Alias Address: 651 E 119TH ST
CHICAGO, IL 60628

CERCLIS-NFRAP Assessment History:
Action: DISCOVERY
Date Started: Not reported
Date Completed: 09/01/1980
Priority Level: Not reported

Action: PRELIMINARY ASSESSMENT
Date Started: Not reported
Date Completed: 05/16/1985
Priority Level: Higher priority for further assessment

Action: SITE INSPECTION
Date Started: Not reported
Date Completed: 09/23/1986
Priority Level: NFRAP-Site does not qualify for the NPL based on existing information

INLAND METAL REFINING COMPANY INCORPORATION (Continued) **1000151808**

Action:	HAZARD RANKING SYSTEM PACKAGE
Date Started:	Not reported
Date Completed:	09/23/1986
Priority Level:	NFRAP-Site does not qualify for the NPL based on existing information

Action:	ARCHIVE SITE
Date Started:	Not reported
Date Completed:	10/31/1991
Priority Level:	Not reported

CORRACTS:

EPA ID:	ILD980503213
EPA Region:	05
Area Name:	ENTIRE FACILITY
Actual Date:	06/01/1987
Action:	CA050 - RFA Completed
NAICS Code(s):	Not reported
Original schedule date:	Not reported
Schedule end date:	Not reported

EPA ID:	ILD980503213
EPA Region:	05
Area Name:	ENTIRE FACILITY
Actual Date:	06/01/1987
Action:	CA070YE - RFA Determination Of Need For An RFI, RFI is Necessary
NAICS Code(s):	Not reported
Original schedule date:	Not reported
Schedule end date:	Not reported

EPA ID:	ILD980503213
EPA Region:	05
Area Name:	ENTIRE FACILITY
Actual Date:	09/27/1991
Action:	CA075ME - CA Prioritization, Facility or area was assigned a medium corrective action priority
NAICS Code(s):	Not reported
Original schedule date:	Not reported
Schedule end date:	Not reported

SSU:

Facility ID:	0316500001
Facility Type:	Refinery
Lat/Long:	41.6781311 / -87.605331
Directions:	Take I-55 North.
Region:	Des Plaines
Current Program:	SSU
Project Manager:	Kershaw
Community Relations:	Frost
SSU Status:	Backlog
US EPA Id:	ILD980503213
FOS:	NA
Year Completed:	Not reported
Year Entered:	Not reported
Site Size:	5

Map ID	Site	Database(s)	EPA ID Number
129	**INLAND METALS REFINING CO INC** **651 E 119TH ST** **CHICAGO, IL 60628**	**UST**	**U000865355** **N/A**

UST:
Facility ID: 2013533
Facility Status: CLOSED
Facility Type: **NONE**
Owner Name: Inland Metals Refining Co Inc
Owner Id: U0007543
Owner Address: 651 E 119Th St
Owner City,St,Zip: Chicago, IL 60628

Tank Number: 1
Tank Capacity: 1000
Tank Substance: Gasoline
Last Used Date: Not reported
OSFM First Notify Date: 5/8/1986
Tank Status: **Removed**
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: **Not reported**
Green Tag Issue Date: **Not reported**
Green Tag Expire Date: **Not reported**
Self Service Permit Inspection Date: **Not reported**
Self Service Permit Expire Date: **Not reported**
Fee Due: Not reported

Map ID	Site	Database(s)	EPA ID Number
132	 **38 W 119TH ST** **CHICAGO, IL**	**SPILLS**	**S111920638** **N/A**

SPILLS:
Incident ID: 20061440
Incident Date: Not reported
Date Received: 11/15/2006
Facility Address: 38 W 119TH ST
Facility City: CHICAGO
PRP Name: GREATER CANAAN BAPTIST CHURCH
AC: Not reported

Map ID	Site	Database(s)	EPA ID Number
132	**GREATER CANAAN BAPTIST CHURCH** **38 WEST 119TH STREET** **CHICAGO, IL 60628**	**LUST**	**S108255716** **N/A**

LUST:
Incident Num: 20061440
IL EPA Id: 0316495172
Product: Other Petro
IEMA Date: 11/15/2006
Project Manager: Rahman
Project Manager Phone: (217) 782-9848
Email: Mohammed.Rahman@illinois.gov
PRP Name: Not reported
PRP Contact: Not reported
PRP Address: Not reported
PRP City,St,Zip: Not reported
PRP Phone: Not reported

Map ID	Site	Database(s)	EPA ID Number

GREATER CANAAN BAPTIST CHURCH (Continued) **S108255716**

Site Classification:	Not reported
Section 57.5(g) Letter:	734
Date Section 57.5(g) Letter:	Not reported
Non LUST Determination Letter:	Not reported
20 Report Received:	02/26/2007
45 Report Received:	02/26/2007
NFA/NFR Letter:	**12/12/2007**
NFR Date Recorded:	07/18/2008

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133 **SPILLS** **S111902545**
N/A

11900 S STATE ST
CHICAGO, IL

SPILLS:

Incident ID:	19982290
Incident Date:	Not reported
Date Received:	09/15/1998
Facility Address:	11900 S STATE ST
Facility City:	CHICAGO
PRP Name:	UNKNOWN
AC:	Not reported

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133 **LUST** **S105225839**
N/A

CHICAGO, CITY OF
11900 SOUTH STATE ST.
CHICAGO, IL 60628

LUST:

Incident Num:	982290
IL EPA Id:	0316495107
Product:	Gasoline
IEMA Date:	09/15/1998
Project Manager:	Kuhlman
Project Manager Phone:	(217) 785-5715
Email:	Eric.Kuhlman@illinois.gov
PRP Name:	City of Chicago, Dept. of Environment
PRP Contact:	Renante Marante
PRP Address:	30 North La Salle St., 25th Fl.
PRP City,St,Zip:	Chicago, IL 60602
PRP Phone:	3127420123
Site Classification:	Not reported
Section 57.5(g) Letter:	732
Date Section 57.5(g) Letter:	Not reported
Non LUST Determination Letter:	1998-10-08
20 Report Received:	Not reported
45 Report Received:	Not reported
NFA/NFR Letter:	**Not reported**
NFR Date Recorded:	Not reported

Map ID	Site	Database(s)	EPA ID Number
133	**ABANDONED SERVICE STATION 11900 S STATE STREET CHICAGO, IL 60628**	**UST**	**U003668364 N/A**

UST:

Facility ID: 2038145
Facility Status: CLOSED
Facility Type: NONE
Owner Name: Unknown
Owner Id: U0018799
Owner Address: Unknown
Owner City,St,Zip: Unknown, IL 0

Tank Number: 1
Tank Capacity: 4000
Tank Substance: Gasoline
Last Used Date: Not reported
OSFM First Notify Date: Not reported
Tank Status: Orphan Tank
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: No

Tank Number: 2
Tank Capacity: 4000
Tank Substance: Gasoline
Last Used Date: Not reported
OSFM First Notify Date: Not reported
Tank Status: Orphan Tank
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: No

Tank Number: 3
Tank Capacity: 4000
Tank Substance: Gasoline
Last Used Date: Not reported
OSFM First Notify Date: Not reported
Tank Status: Orphan Tank
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: No

ABANDONED SERVICE STATION (Continued) **U003668364**

Tank Number: 4
Tank Capacity: 4000
Tank Substance: Gasoline
Last Used Date: Not reported
OSFM First Notify Date: Not reported
Tank Status: Orphan Tank
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: No

Tank Number: 5
Tank Capacity: 8000
Tank Substance: Gasoline
Last Used Date: Not reported
OSFM First Notify Date: Not reported
Tank Status: Orphan Tank
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: No

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134 **BIG SAM’S GROCERS** **UST** **U004110603**
333 W. 119TH STREET **N/A**
CHICAGO, IL 60628

UST:
Facility ID: 2043706
Facility Status: EXEMPT
Facility Type: NONE
Owner Name: Big Sam’s Properties
Owner Id: U0034216
Owner Address: 333 W. 119th Street
Owner City,St,Zip: Chicago, IL 60628

Tank Number: 1
Tank Capacity: 1000
Tank Substance: Fuel Oil
Last Used Date: 12/31/1973
OSFM First Notify Date: Not reported
Tank Status: Exempt from registration
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

BIG SAM’S GROCERS (Continued) **U004110603**

Tank Number:	2
Tank Capacity:	2500
Tank Substance:	Gasoline
Last Used Date:	12/31/1973
OSFM First Notify Date:	Not reported
Tank Status:	**Exempt from registration**
Red Tag Issue Date:	Not reported
Install Date:	Not reported
Green Tag Decal:	**Not reported**
Green Tag Issue Date:	**Not reported**
Green Tag Expire Date:	**Not reported**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	Not reported

Tank Number:	3
Tank Capacity:	2000
Tank Substance:	Gasoline
Last Used Date:	12/31/1973
OSFM First Notify Date:	Not reported
Tank Status:	**Exempt from registration**
Red Tag Issue Date:	Not reported
Install Date:	Not reported
Green Tag Decal:	**Not reported**
Green Tag Issue Date:	**Not reported**
Green Tag Expire Date:	**Not reported**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	Not reported

Tank Number:	4
Tank Capacity:	4000
Tank Substance:	Gasoline
Last Used Date:	12/31/1973
OSFM First Notify Date:	Not reported
Tank Status:	**Exempt from registration**
Red Tag Issue Date:	Not reported
Install Date:	Not reported
Green Tag Decal:	**Not reported**
Green Tag Issue Date:	**Not reported**
Green Tag Expire Date:	**Not reported**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	Not reported

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134 **SPILLS** **S111921908**
N/A

333 W 119TH ST
CHICAGO, IL

SPILLS:

Incident ID:	20070843
Incident Date:	Not reported
Date Received:	06/20/2007
Facility Address:	333 W 119TH ST
Facility City:	CHICAGO
PRP Name:	BIG SAMS PROPERTIES LLC

Map ID	Site	Database(s)	EPA ID Number
	(Continued)		**S111921908**

AC:	Not reported

Map ID	Site	Database(s)	EPA ID Number
134	**BIG SAM’S PROPERTIES** **333 WEST 119TH STREET** **CHICAGO, IL 60628**	**LUST**	**S108649986** **N/A**

LUST:

Incident Num:	20070843
IL EPA Id:	0316505043
Product:	Gasoline, Uset Oil
IEMA Date:	06/20/2007
Project Manager:	Not reported
Project Manager Phone:	Not reported
Email:	Not reported
PRP Name:	Not reported
PRP Contact:	Not reported
PRP Address:	Not reported
PRP City,St,Zip:	Not reported
PRP Phone:	Not reported
Site Classification:	Not reported
Section 57.5(g) Letter:	734
Date Section 57.5(g) Letter:	Not reported
Non LUST Determination Letter:	Not reported
20 Report Received:	Not reported
45 Report Received:	Not reported
NFA/NFR Letter:	**Not reported**
NFR Date Recorded:	Not reported

Map ID	Site	Database(s)	EPA ID Number
135	**LAKE CALUMET SMELTING** **11901 S. CHAMPLAIN AVE.** **CHICAGO, IL 60628**	**CERCLIS**	**1007646528** **ILN000509228**

CERCLIS:

Site ID:	0509228
EPA ID:	ILN000509228
Facility County:	COOK
Short Name:	LAKE CALUMET SMELTING
Congressional District:	01
IFMS ID:	B5FM
SMSA Number:	Not reported
USGC Hydro Unit:	Not reported
Federal Facility:	Not a Federal Facility
DMNSN Number:	5.70000
Site Orphan Flag:	Not reported
RCRA ID:	Not reported
USGS Quadrangle:	Not reported
Site Init By Prog:	S
NFRAP Flag:	Not reported
Parent ID:	Not reported
RST Code:	Not reported
EPA Region:	05
Classification:	Not reported
Site Settings Code:	Not reported
NPL Status:	Not on the NPL
DMNSN Unit Code:	ACRE
RBRAC Code:	Not reported

Map ID	Site	Database(s)	EPA ID Number
	LAKE CALUMET SMELTING (Continued)		**1007646528**

RResp Fed Agency Code: Not reported
Non NPL Status: Assessment Complete - Decision Needed
Non NPL Status Date: 20110715
Site Fips Code: 17031
CC Concurrence Date: Not reported
CC Concurrence FY: Not reported
Alias EPA ID: Not reported
Site FUDS Flag: Not reported

Alias Comments: Not reported
Site Description: Former secondary smelter of non-ferrous metals such as lead and tin. Smelting these metals created bulk units of babbitt and solder. Not currently known if any metal fabrication was done or if cleaning solvents were used on-site. Preliminary XRF data indicates heavy metal contamination on the soil surface throughout the site as well as on flooring of former sturctures. Residential neighborhoods within 1/4 miles of the property.

CERCLIS Assessment History:

Action Code: 001
Action: PRE-CERCLIS SCREENING
Date Started: Not reported
Date Completed: 09/29/2004
Priority Level: Not reported
Operable Unit: SITEWIDE
Primary Responsibility: State, Fund Financed
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

Action Code: 001
Action: DISCOVERY
Date Started: Not reported
Date Completed: 10/18/2004
Priority Level: Not reported
Operable Unit: SITEWIDE
Primary Responsibility: EPA Fund-Financed
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

Action Code: 001
Action: PRELIMINARY ASSESSMENT
Date Started: 09/30/2005
Date Completed: 03/20/2008
Priority Level: Low priority for further assessment
Operable Unit: SITEWIDE
Primary Responsibility: State, Fund Financed
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

Action Code: 001
Action: SITE INSPECTION
Date Started: 04/15/2008

Map ID	Site	Database(s)	EPA ID Number
	LAKE CALUMET SMELTING (Continued)		**1007646528**

Date Completed:	07/15/2011
Priority Level:	Assessment Complete - Decision Needed
Operable Unit:	SITEWIDE
Primary Responsibility:	State, Fund Financed
Planning Status:	Not reported
Urgency Indicator:	Not reported
Action Anomaly:	Not reported

Map ID	Site	Database(s)	EPA ID Number
143	**SCHNEIDER TANK LINES** **11861 SOUTH COTTAGE GROVE AVENUE** **CHICAGO, IL 60628**	**RCRA-SQG**	**1000312551** **ILD981789035**

RCRA-SQG:

Date form received by agency:	10/02/1986
Facility name:	SCHNEIDER TANK LINES
Facility address:	11861 S COTTAGE GROVE AVE CHICAGO, IL 60628
EPA ID:	ILD981789035
Contact:	ARTHUR FAVERTY
Contact address:	11861 S COTTAGE GROVE AVE CHICAGO, IL 60628
Contact country:	US
Contact telephone:	(312) 928-8040
Contact email:	Not reported
EPA Region:	05
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	NAME NOT REPORTED
Owner/operator address:	ADDRESS NOT REPORTED CITY NOT REPORTED, AK 99998
Owner/operator country:	Not reported
Owner/operator telephone:	(312) 555-1212
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported
Owner/operator name:	BULKOA
Owner/operator address:	ADDRESS NOT REPORTED CITY NOT REPORTED, AK 99998
Owner/operator country:	Not reported
Owner/operator telephone:	(312) 555-1212
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No

Map ID	Site	Database(s)	EPA ID Number

SCHNEIDER TANK LINES (Continued) **1000312551**

Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Hazardous Waste Summary:

Waste code:	D000
Waste name:	Not Defined
Waste code:	D001
Waste name:	IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.
Violation Status:	No violations found

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143 **BULKOA INC** **UST** **U003152281**
11861 S COTTAGE GROVE AVE **N/A**
CHICAGO, IL 60628

UST:

Facility ID:	2023462
Facility Status:	CLOSED
Facility Type:	**INDUSTRIAL / MANUFACTURING**
Owner Name:	Bulkoa Inc
Owner Id:	U0025760
Owner Address:	11861 S Cottage Grove Ave
Owner City,St,Zip:	Chicago, IL 60628
Tank Number:	1
Tank Capacity:	4000
Tank Substance:	Gasoline
Last Used Date:	Not reported
OSFM First Notify Date:	6/27/1986
Tank Status:	**Removed**
Red Tag Issue Date:	Not reported
Install Date:	Not reported
Green Tag Decal:	**Not reported**
Green Tag Issue Date:	**Not reported**
Green Tag Expire Date:	**Not reported**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	Not reported

BULKOA INC (Continued) **U003152281**

Tank Number: 2
Tank Capacity: 4000
Tank Substance: Diesel Fuel
Last Used Date: Not reported
OSFM First Notify Date: 6/27/1986
Tank Status: Removed
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

Tank Number: 3
Tank Capacity: 4000
Tank Substance: Diesel Fuel
Last Used Date: Not reported
OSFM First Notify Date: 6/27/1986
Tank Status: Removed
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

Tank Number: 4
Tank Capacity: 10000
Tank Substance: Diesel Fuel
Last Used Date: Not reported
OSFM First Notify Date: 6/27/1986
Tank Status: Removed
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

Tank Number: 5
Tank Capacity: 10000
Tank Substance: Not reported
Last Used Date: 12/1/1973
OSFM First Notify Date: 1/1/2002
Tank Status: Exempt from registration
Red Tag Issue Date: Not reported
Install Date: 1/1/1902
Green Tag Decal: Not reported

BULKOA INC (Continued) **U003152281**

Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

Tank Number: 6
Tank Capacity: 1000
Tank Substance: Not reported
Last Used Date: 12/1/1973
OSFM First Notify Date: 1/1/2002
Tank Status: Exempt from registration
Red Tag Issue Date: Not reported
Install Date: 1/1/1902
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

Tank Number: 7
Tank Capacity: 1000
Tank Substance: Not reported
Last Used Date: 12/1/1973
OSFM First Notify Date: 1/1/1902
Tank Status: Exempt from registration
Red Tag Issue Date: Not reported
Install Date: 1/1/1902
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

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143 **BULKOA INC** **LUST** **1000271640**
11861 S COTTAGE GROVE AVE **ILD000667154**
CHICAGO, IL 60628

LUST:
Incident Num: 971905
IL EPA Id: 0316515005
Product: Gasoline, Deisel
IEMA Date: 10/07/1997
Project Manager: Wallace
Project Manager Phone: (217) 524-1283
Email: Donna.Wallace@illinois.gov
PRP Name: Bulkoa
PRP Contact: Patrick Gaughan
PRP Address: 11861 South Cottage Grove
PRP City,St,Zip: Chicago, IL 60628
PRP Phone: 7732642200
Site Classification: HIGH
Section 57.5(g) Letter: 732
Date Section 57.5(g) Letter: Not reported

BULKOA INC (Continued) **1000271640**

Non LUST Determination Letter: Not reported
20 Report Received: 10/20/1997
45 Report Received: 01/20/1998
NFA/NFR Letter: 04/08/2003
NFR Date Recorded: 07/28/2003

Map ID	Site	Database(s)	EPA ID Number
143	**CLEAN HARBORS ENV SERVICES** **11861 COTTAGE GROVE-BLDG 13** **CHICAGO, IL 60628**	**RCRA-SQG**	**1001487584** **ILR000065797**

RCRA-SQG:
Date form received by agency: 12/17/2007
Facility name: CLEAN HARBORS ENV SERVICES
Facility address: 11861 COTTAGE GROVE-BLDG 13
CHICAGO, IL 60628
EPA ID: ILR000065797
Contact: RON PFEIFER
Contact address: 11861 COTTAGE GROVE-BLDG 13
CHICAGO, IL 60628
Contact country: US
Contact telephone: (773) 468-1186
Contact email: Not reported
EPA Region: 05
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:
Owner/operator name: MARLEY COOLING
Owner/operator address: 11861 COTTAGE GROVE/10
CHICAGO, IL 60620
Owner/operator country: Not reported
Owner/operator telephone: (773) 995-0611
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Map ID	Site	Database(s)	EPA ID Number
	CLEAN HARBORS ENV SERVICES (Continued)		**1001487584**

Historical Generators:

Date form received by agency: 07/19/1999
Facility name: CLEAN HARBORS ENV SERVICES
Site name: MARLEY COOLING
Classification: Small Quantity Generator

Hazardous Waste Summary:

Waste code: D001
Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Violation Status: No violations found

Map ID	Site	Database(s)	EPA ID Number
148	**COMED-MANHOLE** **120TH ST & PRINCETON** **CHICAGO, IL 60628**	**RCRA-SQG**	**1010317138** **ILR000142562**

RCRA-SQG:

Date form received by agency: 03/01/2008
Facility name: COMED-MANHOLE
Facility address: 120TH ST & PRINCETON
CHICAGO, IL 60628
EPA ID: ILR000142562
Mailing address: THREE LINCOLN CTR 3RD FL
OAKBROOK TERRACE, IL 60181
Contact: NEENA HEMMADY
Contact address: Not reported
Not reported
Contact country: Not reported
Contact telephone: (630) 576-6724
Contact email: Not reported
EPA Region: 05
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name: COMED
Owner/operator address: THREE LINCOLN CTR 3RD FL
OAKBROOK TERRACE, IL 60181
Owner/operator country: US
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 01/01/1976
Owner/Op end date: Not reported

Owner/operator name: COM ED
Owner/operator address: THREE LINCOLN CTR 3RD FL

COMED-MANHOLE (Continued) **1010317138**

OAKBROOK TERRACE, IL 60181
Owner/operator country: US
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: 01/01/1976
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 03/01/2007
Facility name: COMED-MANHOLE
Site name: COMED
Classification: Conditionally Exempt Small Quantity Generator

Date form received by agency: 07/20/2006
Facility name: COMED-MANHOLE
Site name: COM ED
Classification: Large Quantity Generator

Violation Status: No violations found

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151 **KEYWELL LLC** **RCRA-CESQG** **1004693217**
11900 COTTAGE GROVE AVE **ILD984804831**
CHICAGO, IL 60628

RCRA-CESQG:
Date form received by agency: 01/29/1996
Facility name: KEYWELL LLC
Facility address: 11900 COTTAGE GROVE AVE
CHICAGO, IL 60628
EPA ID: ILD984804831
Contact: RONALD GOSTEK
Contact address: 11900 COTTAGE GROVE AVE
CHICAGO, IL 60628
Contact country: US
Contact telephone: (312) 660-2060
Contact email: Not reported
EPA Region: 05
Classification: Conditionally Exempt Small Quantity Generator
Description: Handler: generates 100 kg or less of hazardous waste per calendar month, and accumulates 1000 kg or less of hazardous waste at any time;

KEYWELL LLC (Continued) **1004693217**

or generates 1 kg or less of acutely hazardous waste per calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Historical Generators:

Date form received by agency:	03/01/1992
Facility name:	KEYWELL LLC
Site name:	KEYWELL CORP
Classification:	Large Quantity Generator

Hazardous Waste Summary:

Waste code:	D001
Waste name:	IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.
Waste code:	D002
Waste name:	A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.

Violation Status: No violations found

Map ID	Site	Database(s)	EPA ID Number
151	**KEYWELL CO.** **11900 SOUTH COTTAGE GROVE AVE.** **CHICAGO, IL 60628**	**LUST** **SPILLS**	**S108045374** **N/A**

LUST:

Incident Num:	902351
IL EPA Id:	0316495035
Product:	Unleaded Gas
IEMA Date:	08/16/1990
Project Manager:	Rife
Project Manager Phone:	Not reported
Email:	Not reported
PRP Name:	Keywell Co.
PRP Contact:	Ron Gostek
PRP Address:	11900 South Cottage Grove Ave.
PRP City,St,Zip:	Chicago, IL 60628
PRP Phone:	Not reported
Site Classification:	Not reported
Section 57.5(g) Letter:	731
Date Section 57.5(g) Letter:	Not reported
Non LUST Determination Letter:	Not reported
20 Report Received:	02/29/1992
45 Report Received:	02/29/1992
NFA/NFR Letter:	**01/24/1996**
NFR Date Recorded:	Not reported

Incident Num:	942202
IL EPA Id:	0316495035
Product:	Deisel
IEMA Date:	09/26/1994
Project Manager:	Lowder
Project Manager Phone:	(217) 785-5734
Email:	Mike.Lowder@illinois.gov
PRP Name:	Keywell Corp.
PRP Contact:	Ron Gostek
PRP Address:	11900 South Cottage Grove Ave.
PRP City,St,Zip:	Chicago, IL 60628
PRP Phone:	Not reported
Site Classification:	Not reported
Section 57.5(g) Letter:	732
Date Section 57.5(g) Letter:	Not reported
Non LUST Determination Letter:	1994-11-01
20 Report Received:	Not reported
45 Report Received:	Not reported
NFA/NFR Letter:	**Not reported**
NFR Date Recorded:	Not reported

SPILLS:

Incident ID:	20040961
Incident Date:	07/09/2004
Date Received:	07/09/2004
Facility Address:	11900 COTTAGE GROVE
Facility City:	CHICAGO
PRP Name:	BIG O MOVERS AND STORAGE INC
AC:	Not reported

Map ID	Site	Database(s)	EPA ID Number
151	**S G KEYWELL CO** **11900 S COTTAGE GROVE AVE** **CHICAGO, IL 60628**	**UST**	**U001143038** **N/A**

UST:
Facility ID: 2012567
Facility Status: CLOSED
Facility Type: NONE
Owner Name: S G Keywell Co
Owner Id: U0013327
Owner Address: 11900 S Cottage Grove Ave
Owner City,St,Zip: Chicago, IL 60628

Tank Number: 1
Tank Capacity: 2000
Tank Substance: Gasoline
Last Used Date: 8/1/1990
OSFM First Notify Date: 4/23/1986
Tank Status: Removed
Red Tag Issue Date: Not reported
Install Date: 1/1/1971
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

Tank Number: 2
Tank Capacity: 2000
Tank Substance: Gasoline
Last Used Date: 8/1/1990
OSFM First Notify Date: 4/23/1986
Tank Status: Removed
Red Tag Issue Date: Not reported
Install Date: 1/1/1975
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

Map ID	Site	Database(s)	EPA ID Number
158	**TRI CITY TANK WASH** **11901 S COTTAGE GROVE** **CHICAGO, IL 60628**	**UST**	**U001143228** **N/A**

UST:
Facility ID: 2014827
Facility Status: INACTIVE
Facility Type: NONE
Owner Name: Tri City Tank Wash
Owner Id: U0015198
Owner Address: 11901 S Cottage Grove
Owner City,St,Zip: Chicago, IL 60628

Tank Number: 1
Tank Capacity: 99
Tank Substance: Not reported

TRI CITY TANK WASH (Continued) **U001143228**

Last Used Date: Not reported
OSFM First Notify Date: 4/15/1986
Tank Status: Out of service
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

Tank Number: 2
Tank Capacity: 99
Tank Substance: Not reported
Last Used Date: Not reported
OSFM First Notify Date: 4/15/1986
Tank Status: Out of service
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

Tank Number: 3
Tank Capacity: 99
Tank Substance: Not reported
Last Used Date: Not reported
OSFM First Notify Date: 4/15/1986
Tank Status: Out of service
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

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162 **SPILLS** **S111877539**
11900 S COTTAGE GROVE AVE **N/A**
CHICAGO, IL

SPILLS:
Incident ID: 19902351
Incident Date: Not reported
Date Received: 08/17/1990
Facility Address: 11900 S COTTAGE GROVE AVE
Facility City: CHICAGO
PRP Name: SAMUEL G. KEYWELL CO.
AC: Not reported

169 **SPILLS** **S111879154**
N/A

12300 S MICHIGAN AVE
CHICAGO, IL

SPILLS:
Incident ID: 19910147
Incident Date: Not reported
Date Received: 01/16/1991
Facility Address: 12300 S MICHIGAN AVE
Facility City: CHICAGO
PRP Name: BANK OF COMMERCE & INDUSTRY
AC: Not reported

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169 **UST** **U001142019**
N/A

BANK OF COMMERCE & INDUSTRY
12300 S MICHIGAN AVE
CHICAGO, IL 60631

UST:
Facility ID: 2026423
Facility Status: CLOSED
Facility Type: NONE
Owner Name: Bank Of Commerce & Industry
Owner Id: U0001126
Owner Address: 6100 N Nw Hwy
Owner City,St,Zip: Chicago, IL 60631

Tank Number: 1
Tank Capacity: 8000
Tank Substance: Gasoline
Last Used Date: 1/1/1980
OSFM First Notify Date: 10/29/1990
Tank Status: Removed
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

Tank Number: 2
Tank Capacity: 3000
Tank Substance: Gasoline
Last Used Date: 1/1/1980
OSFM First Notify Date: 10/29/1990
Tank Status: Removed
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

Tank Number: 3
Tank Capacity: 3000

BANK OF COMMERCE & INDUSTRY (Continued) **U001142019**

Tank Substance: Gasoline
Last Used Date: 1/1/1980
OSFM First Notify Date: 10/29/1990
Tank Status: Removed
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

169
BANK OF COMMERCE AND IND
12300 S MICHIGAN AVE
CHICAGO, IL 60628
LUST
1000462986
ILD984812545

LUST:
Incident Num: 910147
IL EPA Id: 0316495037
Product: Gasoline
IEMA Date: 01/16/1991
Project Manager: Lowder
Project Manager Phone: (217) 785-5734
Email: Mike.Lowder@illinois.gov
PRP Name: Bank of Commerce & Industry
PRP Contact: Donald Houder
PRP Address: 6100 North Northwest Hwy.
PRP City,St,Zip: Chicago, IL 60631
PRP Phone: Not reported
Site Classification: Not reported
Section 57.5(g) Letter: 731
Date Section 57.5(g) Letter: Not reported
Non LUST Determination Letter: Not reported
20 Report Received: 02/29/1992
45 Report Received: 02/29/1992
NFA/NFR Letter: 07/12/1991
NFR Date Recorded: Not reported

170
METRA KYD YARD
12301 S INDIANA AVE
CHICAGO, IL 60628
UST
U001629890
N/A

UST:
Facility ID: 2032641
Facility Status: ACTIVE
Facility Type: COUNTY
Owner Name: Metra Ne Il Regional Rr Corp
Owner Id: U0010172
Owner Address: 547 W Jackson Blvd
Owner City,St,Zip: Chicago, IL 60661

Tank Number: 1
Tank Capacity: 10000
Tank Substance: Gasoline
Last Used Date: Not reported

Map ID	Site	Database(s)	EPA ID Number
	METRA KYD YARD (Continued)		**U001629890**

OSFM First Notify Date:	10/18/1993
Tank Status:	**Currently in use**
Red Tag Issue Date:	12/3/2009
Install Date:	9/25/1992
Green Tag Decal:	**M006112**
Green Tag Issue Date:	**6/7/2011**
Green Tag Expire Date:	**12/31/2013**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	$0.00

Tank Number:	2
Tank Capacity:	10000
Tank Substance:	Diesel Fuel
Last Used Date:	Not reported
OSFM First Notify Date:	10/18/1993
Tank Status:	**Currently in use**
Red Tag Issue Date:	12/3/2009
Install Date:	9/25/1992
Green Tag Decal:	**M006112**
Green Tag Issue Date:	**6/7/2011**
Green Tag Expire Date:	**12/31/2013**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	$0.00

Map ID	Site	Database(s)	EPA ID Number
170	**METRA** **12301 S INDIANA AVE** **CHICAGO, IL 60628**	**RCRA-SQG**	**1001024735** **ILR000007096**

RCRA-SQG:

Date form received by agency:	03/01/2008
Facility name:	METRA
Facility address:	12301 S INDIANA AVE CHICAGO, IL 60628
EPA ID:	ILR000007096
Mailing address:	547 W JACKSON CHICAGO, IL 60661
Contact:	RONALD COUPET
Contact address:	Not reported Not reported
Contact country:	Not reported
Contact telephone:	(312) 322-6907
Contact email:	Not reported
EPA Region:	05
Land type:	Other land type
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	METRA
Owner/operator address:	547 W JACKSON 4 EAST

METRA (Continued) **1001024735**

CHICAGO, IL 60661
Owner/operator country: US
Owner/operator telephone: Not reported
Legal status: Other
Owner/Operator Type: Operator
Owner/Op start date: 06/01/1974
Owner/Op end date: Not reported

Owner/operator name: METRA
Owner/operator address: 547 W JACKSON 4 EAST
CHICAGO, IL 60661
Owner/operator country: US
Owner/operator telephone: Not reported
Legal status: Other
Owner/Operator Type: Owner
Owner/Op start date: 06/01/1974
Owner/Op end date: Not reported

Owner/operator name: REGIONAL COMMUTER RR CORP
Owner/operator address: 547 W JACKSON BLVD
CHICAGO, IL 60661
Owner/operator country: US
Owner/operator telephone: (312) 322-6900
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 01/01/1974
Owner/Op end date: Not reported

Owner/operator name: REGIONAL COMMUTER RR CORP
Owner/operator address: 547 W JACKSON BLVD
CHICAGO, IL 60661
Owner/operator country: US
Owner/operator telephone: (312) 322-6900
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: 01/01/1974
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:

METRA (Continued) **1001024735**

Date form received by agency: 05/02/2007
Facility name: METRA
Site name: METRA KYD
Classification: Large Quantity Generator

Date form received by agency: 03/01/2007
Facility name: METRA
Classification: Small Quantity Generator

Date form received by agency: 02/23/2007
Facility name: METRA
Site name: METRA KYD
Classification: Large Quantity Generator

Date form received by agency: 07/21/1995
Facility name: METRA
Site name: METRA RR KENSINGTON YARD
Classification: Small Quantity Generator

Hazardous Waste Summary:
Waste code: D001
Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Waste code: D005
Waste name: BARIUM

Waste code: D008
Waste name: LEAD

Waste code: D009
Waste name: MERCURY

Waste code: D018
Waste name: BENZENE

Waste code: D035
Waste name: METHYL ETHYL KETONE

Waste code: D039
Waste name: TETRACHLOROETHYLENE

Violation Status: No violations found

Evaluation Action Summary:
Evaluation date: 02/09/2007
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Map ID	Site	Database(s)	EPA ID Number
171	**GOMPERS SCH** **12302 S STATE** **CHICAGO, IL 60609**	**RCRA-SQG**	**1001116634** **ILR000026591**

RCRA-SQG:

Date form received by agency:	08/30/1996
Facility name:	GOMPERS SCH
Facility address:	12302 S STATE CHICAGO, IL 60609
EPA ID:	ILR000026591
Mailing address:	1819 W PERSHING RD 6W N CHICAGO, IL 60609
Contact:	DIANE GRISSET
Contact address:	1819 W PERSHING RD 6W N CHICAGO, IL 60609
Contact country:	US
Contact telephone:	(312) 535-5475
Contact email:	Not reported
EPA Region:	05
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	CHICAGO PUBLIC SCHS
Owner/operator address:	1819 W PERSHING RD 6W N CHICAGO, IL 60609
Owner/operator country:	Not reported
Owner/operator telephone:	(312) 535-7039
Legal status:	District
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Hazardous Waste Summary:

Waste code:	D008
Waste name:	LEAD

GOMPERS SCH (Continued) **1001116634**

Violation Status:	No violations found

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174 **KYD 124TH ST SHOP** **UST** **U000791903**
12357 S INDIANA AVE **N/A**
CHICAGO, IL 60628

UST:

Facility ID:	2026259
Facility Status:	CLOSED
Facility Type:	**NONE**
Owner Name:	Metra
Owner Id:	U0011093
Owner Address:	547 West Jackson Boulevard
Owner City,St,Zip:	Chicago, IL 60661
Tank Number:	1
Tank Capacity:	250
Tank Substance:	Lube Oil
Last Used Date:	6/1/1975
OSFM First Notify Date:	7/27/1990
Tank Status:	**Removed**
Red Tag Issue Date:	Not reported
Install Date:	Not reported
Green Tag Decal:	**Not reported**
Green Tag Issue Date:	**Not reported**
Green Tag Expire Date:	**Not reported**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	No

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175 **METROPOLITAN WATER RECLAMATION DIST.** **UST** **U003668649**
129 EAST 124TH PLACE **N/A**
CHICAGO, IL 60628

UST:

Facility ID:	2038782
Facility Status:	EXEMPT
Facility Type:	**NONE**
Owner Name:	Metropolitan-Water Reclamation Dist.
Owner Id:	U0028605
Owner Address:	100 East Erie
Owner City,St,Zip:	Chicago, IL 60611
Tank Number:	1
Tank Capacity:	13000
Tank Substance:	Heating Oil
Last Used Date:	12/31/1973
OSFM First Notify Date:	Not reported
Tank Status:	**Exempt from registration**
Red Tag Issue Date:	Not reported
Install Date:	Not reported
Green Tag Decal:	**Not reported**
Green Tag Issue Date:	**Not reported**
Green Tag Expire Date:	**Not reported**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	$0.00

Map ID	Site	Database(s)	EPA ID Number

METROPOLITAN WATER RECLAMATION DIST. (Continued) **U003668649**

Tank Number:	2
Tank Capacity:	13000
Tank Substance:	Heating Oil
Last Used Date:	12/31/1973
OSFM First Notify Date:	Not reported
Tank Status:	**Exempt from registration**
Red Tag Issue Date:	Not reported
Install Date:	Not reported
Green Tag Decal:	**Not reported**
Green Tag Issue Date:	**Not reported**
Green Tag Expire Date:	**Not reported**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	$0.00

Tank Number:	3
Tank Capacity:	13000
Tank Substance:	Heating Oil
Last Used Date:	12/31/1973
OSFM First Notify Date:	Not reported
Tank Status:	**Exempt from registration**
Red Tag Issue Date:	Not reported
Install Date:	Not reported
Green Tag Decal:	**Not reported**
Green Tag Issue Date:	**Not reported**
Green Tag Expire Date:	**Not reported**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	$0.00

Tank Number:	4
Tank Capacity:	13000
Tank Substance:	Heating Oil
Last Used Date:	12/31/1973
OSFM First Notify Date:	Not reported
Tank Status:	**Exempt from registration**
Red Tag Issue Date:	Not reported
Install Date:	Not reported
Green Tag Decal:	**Not reported**
Green Tag Issue Date:	**Not reported**
Green Tag Expire Date:	**Not reported**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	$0.00

---

175 **MWRD-125TH PUMPING STATION** **UST** **U003668651**
129 E. 124TH PLACE **N/A**
CHICAGO, IL 60628

UST:

Facility ID:	2038784
Facility Status:	EXEMPT
Facility Type:	**NONE**
Owner Name:	Metropolitan Water Reclamation Dist.
Owner Id:	U0028606
Owner Address:	100 East Erie

MWRD-125TH PUMPING STATION (Continued) **U003668651**

Owner City,St,Zip: Chicago, IL 60611

Tank Number: 1
Tank Capacity: 320
Tank Substance: Kerosene
Last Used Date: 12/31/1973
OSFM First Notify Date: Not reported
Tank Status: Exempt from registration
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: $0.00

---

176 **OWENS JESSE COMMUNITY ACADEMY** **RCRA-CESQG** **1004696856**
12450 S STATE ST **ILR000059196**
CHICAGO, IL 60628

RCRA-CESQG:
Date form received by agency: 12/14/1998
Facility name: OWENS JESSE COMMUNITY ACADEMY
Facility address: 12450 S STATE ST
CHICAGO, IL 60628
EPA ID: ILR000059196
Mailing address: 8501 W 191ST ST BOX 10
MOKENA, IL 60448
Contact: THOMAS CONNELLY
Contact address: 8501 W 191ST ST BOX 10
MOKENA, IL 60448
Contact country: US
Contact telephone: (708) 923-0202
Contact email: Not reported
EPA Region: 05
Classification: Conditionally Exempt Small Quantity Generator
Description: Handler: generates 100 kg or less of hazardous waste per calendar month, and accumulates 1000 kg or less of hazardous waste at any time; or generates 1 kg or less of acutely hazardous waste per calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste

Owner/Operator Summary:
Owner/operator name: CHGO PUBLIC SCHOOLS
Owner/operator address: 1819 W PERSHING RD 6WW
CHICAGO, IL 60609
Owner/operator country: Not reported

Map ID	Site	Database(s)	EPA ID Number

OWENS JESSE COMMUNITY ACADEMY (Continued) **1004696856**

Owner/operator telephone: (773) 535-7038
Legal status: District
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Hazardous Waste Summary:
Waste code: D006
Waste name: CADMIUM

Waste code: D008
Waste name: LEAD

Waste code: D009
Waste name: MERCURY

Violation Status: No violations found

---

181 **ERNS** **2000541927**
N/A
25 EAST 126TH STREET
CHICAGO, IL 60628

Click this hyperlink while viewing on your computer to access additional ERNS detail in the EDR Site Report.

---

183 **COM ED** **RCRA-SQG** **1009217017**
48 E 127TH ST **ILR000140020**
CHICAGO, IL 60628

RCRA-SQG:
Date form received by agency: 02/08/2006
Facility name: COM ED
Facility address: 48 E 127TH ST
CHICAGO, IL 60628
EPA ID: ILR000140020
Mailing address: 3 LINCOLN CTR 3RD FLR
OAK BROOK, IL 60181

COM ED (Continued) **1009217017**

Contact: NEENA HEMMADY
Contact address: Not reported
Not reported
Contact country: Not reported
Contact telephone: (630) 576-6724
Contact email: Not reported
EPA Region: 05
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:
Owner/operator name: COM ED
Owner/operator address: Not reported
Not reported
Owner/operator country: US
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 02/08/2006
Owner/Op end date: Not reported

Owner/operator name: COM ED
Owner/operator address: Not reported
Not reported
Owner/operator country: US
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: 02/08/2006
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Hazardous Waste Summary:
Waste code: D008
Waste name: LEAD

Map ID	Site	Database(s)	EPA ID Number

COM ED (Continued) **1009217017**

Violation Status: No violations found

---

184 **SPILLS** **S111908134**
N/A

26 E 127TH ST
CHICAGO, IL

SPILLS:

Incident ID:	20001824
Incident Date:	Not reported
Date Received:	09/25/2000
Facility Address:	26 E 127TH ST
Facility City:	CHICAGO
PRP Name:	PROGRESSIVE BAPTIST CHURCH
AC:	Not reported

---

184 **UST** **U003762917**
N/A

PROGRESSIVE BAPTIST CHURCH
26 E 127TH ST
CHICAGO, IL 60628

UST:

Facility ID:	2040115
Facility Status:	EXEMPT
Facility Type:	**NONE**
Owner Name:	John Digby Jr
Owner Id:	U0029777
Owner Address:	10622 S Eberhart Ave
Owner City,St,Zip:	Chicago, IL 60628
Tank Number:	1
Tank Capacity:	500
Tank Substance:	Heating Oil
Last Used Date:	1/1/1970
OSFM First Notify Date:	10/19/2000
Tank Status:	**Exempt from registration**
Red Tag Issue Date:	Not reported
Install Date:	Not reported
Green Tag Decal:	**Not reported**
Green Tag Issue Date:	**Not reported**
Green Tag Expire Date:	**Not reported**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	Not reported

---

184 **LUST** **S104792803**
N/A

PROGRESSIVE BAPTIST CHURCH
26 EAST 127TH ST.
CHICAGO, IL 60628

LUST:

Incident Num:	20001824
IL EPA Id:	0316495133
Product:	Other Petro
IEMA Date:	09/26/2000
Project Manager:	Tucka
Project Manager Phone:	(217) 782-6762
Email:	Not reported
PRP Name:	Progressive Baptist Church

PROGRESSIVE BAPTIST CHURCH (Continued) **S104792803**

PRP Contact: Rev. J.D. Digby Jr.
PRP Address: 735 East 134th St.
PRP City,St,Zip: Chicago, IL 60627
PRP Phone: 7739288889
Site Classification: Not reported
Section 57.5(g) Letter: 732
Date Section 57.5(g) Letter: 04/09/2001
Non LUST Determination Letter: Not reported
20 Report Received: Not reported
45 Report Received: Not reported
NFA/NFR Letter: **Not reported**
NFR Date Recorded: Not reported

---

185 **COMMUNITY GAS** **UST** **U000173441**
150 W. 127TH STREET **N/A**
CHICAGO, IL 60628

UST:
Facility ID: 2025044
Facility Status: ACTIVE
Facility Type: **SELF-SERVICE STATION**
Owner Name: M & R Sahloul
Owner Id: U0033772
Owner Address: 150 S. 127th Street
Owner City,St,Zip: Chicago, IL 60618

Tank Number: 1
Tank Capacity: 6000
Tank Substance: Diesel Fuel
Last Used Date: Not reported
OSFM First Notify Date: 3/10/1989
Tank Status: **Currently in use**
Red Tag Issue Date: Not reported
Install Date: 1/1/1985
Green Tag Decal: **L003565**
Green Tag Issue Date: **7/27/2010**
Green Tag Expire Date: **12/31/2012**
Self Service Permit Inspection Date: **Not reported**
Self Service Permit Expire Date: **Not reported**
Fee Due: $0.00

Tank Number: 2
Tank Capacity: 2000
Tank Substance: Kerosene
Last Used Date: Not reported
OSFM First Notify Date: 3/10/1989
Tank Status: **Currently in use**
Red Tag Issue Date: Not reported
Install Date: 1/1/1985
Green Tag Decal: **L003565**
Green Tag Issue Date: **7/27/2010**
Green Tag Expire Date: **12/31/2012**
Self Service Permit Inspection Date: **Not reported**
Self Service Permit Expire Date: **Not reported**
Fee Due: $0.00

COMMUNITY GAS (Continued) **U000173441**

Tank Number: 3
Tank Capacity: 7500
Tank Substance: Gasoline
Last Used Date: 7/1/2003
OSFM First Notify Date: 3/10/1989
Tank Status: Removed
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: L003565
Green Tag Issue Date: 7/27/2010
Green Tag Expire Date: 12/31/2012
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: $0.00

Tank Number: 4
Tank Capacity: 6000
Tank Substance: Gasoline
Last Used Date: Not reported
OSFM First Notify Date: 3/10/1989
Tank Status: Currently in use
Red Tag Issue Date: Not reported
Install Date: 1/1/1985
Green Tag Decal: L003565
Green Tag Issue Date: 7/27/2010
Green Tag Expire Date: 12/31/2012
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: $0.00

Tank Number: 5
Tank Capacity: 7500
Tank Substance: Gasoline
Last Used Date: Not reported
OSFM First Notify Date: 3/10/1989
Tank Status: Currently in use
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: L003565
Green Tag Issue Date: 7/27/2010
Green Tag Expire Date: 12/31/2012
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: $0.00

---

187 **BLUE ISLAND CITGO** **UST** **U003152164**
3196 WEST 127TH STREET **N/A**
BLUE ISLAND, IL 60407

UST:
Facility ID: 2035464
Facility Status: ACTIVE
Facility Type: SELF-SERVICE STATION
Owner Name: Madji Darwish
Owner Id: U0025277
Owner Address: 3196 West 127Th Street

BLUE ISLAND CITGO (Continued) **U003152164**

Owner City,St,Zip: Blue Island, IL 60407

Tank Number: 1
Tank Capacity: 15000
Tank Substance: Gasoline
Last Used Date: Not reported
OSFM First Notify Date: 8/6/1998
Tank Status: Currently in use
Red Tag Issue Date: Not reported
Install Date: 4/8/1997
Green Tag Decal: L001285
Green Tag Issue Date: 5/18/2010
Green Tag Expire Date: 12/31/2012
Self Service Permit Inspection Date:5/18/2010
Self Service Permit Expire Date: 12/31/2012
Fee Due: $0.00

Tank Number: 2
Tank Capacity: 10000
Tank Substance: Gasoline
Last Used Date: Not reported
OSFM First Notify Date: 8/6/1998
Tank Status: Currently in use
Red Tag Issue Date: Not reported
Install Date: 4/8/1997
Green Tag Decal: L001285
Green Tag Issue Date: 5/18/2010
Green Tag Expire Date: 12/31/2012
Self Service Permit Inspection Date:5/18/2010
Self Service Permit Expire Date: 12/31/2012
Fee Due: $0.00

---

187 **AIR PRODUCTS & CHEMICALS INC** **UST** **U001141824**
12721 WENTWORTH AVE **N/A**
CHICAGO, IL 60628

UST:
Facility ID: 2020533
Facility Status: CLOSED
Facility Type: INDUSTRIAL / MANUFACTURING
Owner Name: Air Products And Chemical Inc
Owner Id: U0026451
Owner Address: Po Box 538
Owner City,St,Zip: Allentown, PA 18105

Tank Number: 1
Tank Capacity: 10000
Tank Substance: Diesel Fuel
Last Used Date: 9/22/1997
OSFM First Notify Date: 5/19/1987
Tank Status: Removed
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date:Not reported

AIR PRODUCTS & CHEMICALS INC (Continued) **U001141824**

Self Service Permit Expire Date: Not reported
Fee Due: Not reported

---

187 **AIRGAS SPECIALTY GASES** **RCRA-CESQG** **1000128672**
12722 S WENTWORTH AVE **ILD097167860**
CHICAGO, IL 60628

RCRA-CESQG:
Date form received by agency: 03/12/2009
Facility name: AIRGAS SPECIALTY GASES
Facility address: 12722 S WENTWORTH AVE
CHICAGO, IL 60628
EPA ID: ILD097167860
Contact: CURT STEWART
Contact address: Not reported
Not reported
Contact country: Not reported
Contact telephone: (773) 785-3000
Telephone ext.: 15
Contact email: CURTIS.STEWART@AIRGAS.COM
EPA Region: 05
Land type: Private
Classification: Conditionally Exempt Small Quantity Generator
Description: Handler: generates 100 kg or less of hazardous waste per calendar month, and accumulates 1000 kg or less of hazardous waste at any time; or generates 1 kg or less of acutely hazardous waste per calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste

Owner/Operator Summary:
Owner/operator name: AIRGAS INC
Owner/operator address: 6340 SUGARLOAF PKWY STE 300
DULUTH, GA 30097
Owner/operator country: US
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 03/01/2002
Owner/Op end date: Not reported

Owner/operator name: CURT STEWART
Owner/operator address: 6340 SUGARLOAF PKWY STE 300
DULUTH, GA 30097
Owner/operator country: US
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: 03/01/2002

Map ID	Site	Database(s)	EPA ID Number

AIRGAS SPECIALTY GASES (Continued) **1000128672**

Owner/Op end date: Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Historical Generators:

Date form received by agency:	01/31/1997
Facility name:	AIRGAS SPECIALTY GASES
Site name:	AIR PRODUCTS AND CHEMICALS INC
Classification:	Not a generator, verified

Date form received by agency:	04/01/1985
Facility name:	AIRGAS SPECIALTY GASES
Site name:	AIR PRODUCTS AND CHEMICALS INC
Classification:	Large Quantity Generator

Hazardous Waste Summary:

Waste code:	D001
Waste name:	IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Waste code:	D002
Waste name:	A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.

Violation Status: No violations found

Evaluation Action Summary:

Evaluation date:	11/19/1996
Evaluation:	COMPLIANCE ASSISTANCE VISIT
Area of violation:	Not reported

AIRGAS SPECIALTY GASES (Continued) **1000128672**

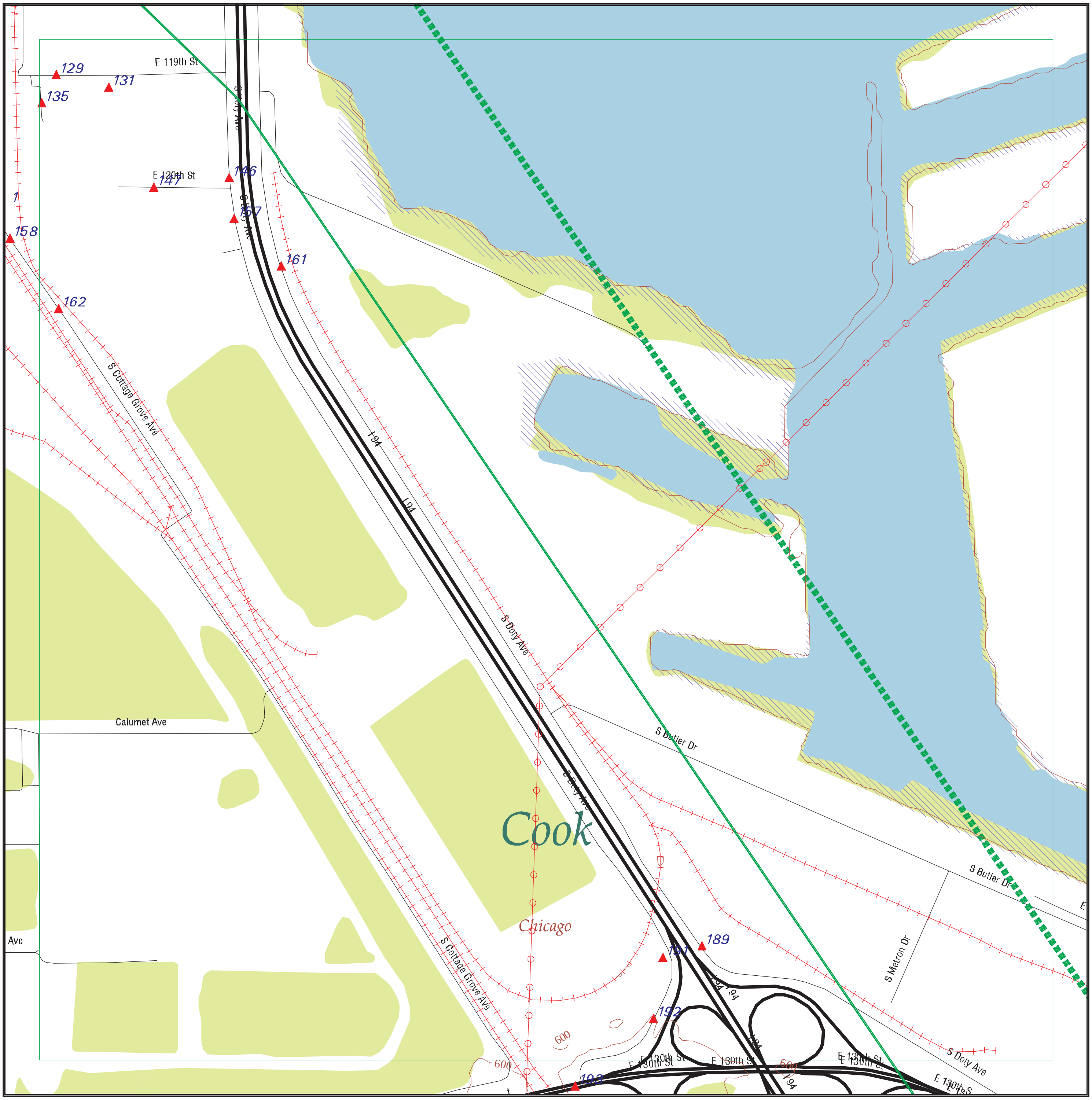
Date achieved compliance: Not reported
Evaluation lead agency: State

Count: 14 records

FOCUS MAP 11 ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CHICAGO	1012172115	ROSELAND COMMUNITY	110TH PLACE AND MICHIGAN, EAST SIDE OF STATE ST.		US BROWNFIELDS
CHICAGO	S109167302		549 115TH ST		LUST, SPILLS
CHICAGO	1003870122	ILLINOIS CENTRAL RR TRACKS	119TH STREET EAST IL CENTRAL TRACKS	60628	CERC-NFRAP
CHICAGO	S106526645	UNNAMED PARCEL	122ND ST		BROWNFIELDS
CHICAGO	1002886378	US SCRAP	123RD & COTTAGE GROVE	60628	CERCLIS
CHICAGO	1003870058	LAKE CALUMET QUAD	810 E 124TH ST	60628	CERC-NFRAP
CHICAGO	S101467236	PENN CENTRAL	810 E 124TH ST		SSU
CHICAGO	1002886490	METRO SANITARY DISTRICT #3	125TH STREET & DOTY AVENUE	60628	CERC-NFRAP
CHICAGO	S105743962	GASGO SERVICE STATION	150 W 127TH ST	60628	LUST
CHICAGO	1012126998	9705 S. COTTAGE GROVE	9705 S COTTAGE GROVE AVE	60628	US BROWNFIELDS
CHICAGO	S109366427		6700 JEFFREY BLVD		LUST, SPILLS
CHICAGO	S108891646		11900 LOOMIS		LUST, SPILLS
CHICAGO	S107926349	LAKE CALUMET CLUSTER SITE	N OF 122ND	60628	SSU
RIVERDALE	S105427839	PM AG PROD. INC.	3550 S INDIANA AVE	60827	LUST

Focus Map 12


E 119th St
129
131
135
E 120th St
147
146
S Doty Ave
157
1
158
161
162
S Cottage Grove Ave
I 94
I 94
S Doty Ave
Calumet Ave
S Doty Ave
S Butler Dr
Cook
Chicago
Ave
S Butler Dr
S Metron Dr
189
191
192
193
600
600
600
S Cottage Grove Ave
E 130th St
E 130th St
E 130th St
I 94
S Doty Ave
E 130th St

EDR DataMap® - Environmental Atlas

90786 CTC RLE Hazardous Materials

Legend

- Roads
- Major Roads
- Contour Lines
- National Wetlands Inventory
- Waterways
- Railroads
- Study Boundary
- 100-Yr Flood Zones
- Powerlines
- Pipelines
- Fault Lines
- Water
- Listed Sites
- Sensitive Receptors

N

0 1/8 1/4

Scale in Miles

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FOCUS MAP 12 SUMMARY

	Database	Total Plotted
FEDERAL RECORDS		
	Proposed NPL	0
	Delisted NPL	0
	CERCLIS	1
	CERC-NFRAP	2
	CORRACTS	1
	RCRA-TSDF	0
	RCRA-LQG	1
	RCRA-SQG	3
	RCRA-CESQG	1
	US ENG CONTROLS	0
	US INST CONTROL	0
	ERNS	4
	US BROWNFIELDS	0
STATE AND LOCAL RECORDS		
	SSU	1
	SWF/LF	0
	LUST	2
	UST	6
	SPILLS	11
	ENG CONTROLS	0
	INST CONTROL	0
	SRP	0
	DRYCLEANERS	0
	BROWNFIELDS	0
EDR PROPRIETARY RECORDS		
	Manufactured Gas Plants	0

NOTES:

Sites may be listed in more than one database

Map ID	Site	Database(s)	EPA ID Number
129	**INLAND METAL REFINING COMPANY INCORPORATION** **651 EAST 119TH STREET** **CHICAGO, IL 60628**	**CERC-NFRAP** **CORRACTS** **SSU**	**1000151808** **ILD980503213**

CERC-NFRAP:

Site ID:	0500577
Federal Facility:	Not a Federal Facility
NPL Status:	Not on the NPL
Non NPL Status:	NFRAP-Site does not qualify for the NPL based on existing information

CERCLIS-NFRAP Site Alias Name(s):

Alias Name:	INLAND METAL REFINING CO INC
Alias Address:	651 E 119TH ST CHICAGO, IL 60628

CERCLIS-NFRAP Assessment History:

Action:	DISCOVERY
Date Started:	Not reported
Date Completed:	09/01/1980
Priority Level:	Not reported
Action:	PRELIMINARY ASSESSMENT
Date Started:	Not reported
Date Completed:	05/16/1985
Priority Level:	Higher priority for further assessment
Action:	SITE INSPECTION
Date Started:	Not reported
Date Completed:	09/23/1986
Priority Level:	NFRAP-Site does not qualify for the NPL based on existing information
Action:	HAZARD RANKING SYSTEM PACKAGE
Date Started:	Not reported
Date Completed:	09/23/1986
Priority Level:	NFRAP-Site does not qualify for the NPL based on existing information
Action:	ARCHIVE SITE
Date Started:	Not reported
Date Completed:	10/31/1991
Priority Level:	Not reported

CORRACTS:

EPA ID:	ILD980503213
EPA Region:	05
Area Name:	ENTIRE FACILITY
Actual Date:	06/01/1987
Action:	CA050 - RFA Completed
NAICS Code(s):	Not reported
Original schedule date:	Not reported
Schedule end date:	Not reported
EPA ID:	ILD980503213
EPA Region:	05
Area Name:	ENTIRE FACILITY
Actual Date:	06/01/1987
Action:	CA070YE - RFA Determination Of Need For An RFI, RFI is Necessary

Map ID	Site	Database(s)	EPA ID Number

INLAND METAL REFINING COMPANY INCORPORATION (Continued) **1000151808**

NAICS Code(s):	Not reported
Original schedule date:	Not reported
Schedule end date:	Not reported

EPA ID:	ILD980503213
EPA Region:	05
Area Name:	ENTIRE FACILITY
Actual Date:	09/27/1991
Action:	CA075ME - CA Prioritization, Facility or area was assigned a medium corrective action priority
NAICS Code(s):	Not reported
Original schedule date:	Not reported
Schedule end date:	Not reported

SSU:

Facility ID:	0316500001
Facility Type:	Refinery
Lat/Long:	41.6781311 / -87.605331
Directions:	Take I-55 North.
Region:	Des Plaines
Current Program:	SSU
Project Manager:	Kershaw
Community Relations:	Frost
SSU Status:	Backlog
US EPA Id:	ILD980503213
FOS:	NA
Year Completed:	Not reported
Year Entered:	Not reported
Site Size:	5

---

129 **INLAND METALS REFINING CO INC** **UST** **U000865355**
651 E 119TH ST **N/A**
CHICAGO, IL 60628

UST:

Facility ID:	2013533
Facility Status:	CLOSED
Facility Type:	**NONE**
Owner Name:	Inland Metals Refining Co Inc
Owner Id:	U0007543
Owner Address:	651 E 119Th St
Owner City,St,Zip:	Chicago, IL 60628

Tank Number:	1
Tank Capacity:	1000
Tank Substance:	Gasoline
Last Used Date:	Not reported
OSFM First Notify Date:	5/8/1986
Tank Status:	**Removed**
Red Tag Issue Date:	Not reported
Install Date:	Not reported
Green Tag Decal:	**Not reported**
Green Tag Issue Date:	**Not reported**
Green Tag Expire Date:	**Not reported**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	Not reported

Map ID	Site	Database(s)	EPA ID Number
131	**HUFF & HUFF INC.** **651 EAST 179TH ST.** **CHICAGO, IL 60607**	**LUST**	**S103292398** **N/A**

LUST:

Incident Num: 891954
IL EPA Id: 0316280047
Product: Deisel
IEMA Date: 10/04/1989
Project Manager: NOT ASSIGNED
Project Manager Phone: Not reported
Email: Not reported
PRP Name: Huff & Huff Inc.
PRP Contact: Linda Huff
PRP Address: 512 West Burlington, Suite 100
PRP City,St,Zip: La Grange, IL 60525
PRP Phone: Not reported
Site Classification: Not reported
Section 57.5(g) Letter: 731
Date Section 57.5(g) Letter: Not reported
Non LUST Determination Letter: Not reported
20 Report Received: Not reported
45 Report Received: Not reported
NFA/NFR Letter: Not reported
NFR Date Recorded: Not reported

Map ID	Site	Database(s)	EPA ID Number
135	**LAKE CALUMET SMELTING** **11901 S. CHAMPLAIN AVE.** **CHICAGO, IL 60628**	**CERCLIS**	**1007646528** **ILN000509228**

CERCLIS:

Site ID: 0509228
EPA ID: ILN000509228
Facility County: COOK
Short Name: LAKE CALUMET SMELTING
Congressional District: 01
IFMS ID: B5FM
SMSA Number: Not reported
USGC Hydro Unit: Not reported
Federal Facility: Not a Federal Facility
DMNSN Number: 5.70000
Site Orphan Flag: Not reported
RCRA ID: Not reported
USGS Quadrangle: Not reported
Site Init By Prog: S
NFRAP Flag: Not reported
Parent ID: Not reported
RST Code: Not reported
EPA Region: 05
Classification: Not reported
Site Settings Code: Not reported
NPL Status: Not on the NPL
DMNSN Unit Code: ACRE
RBRAC Code: Not reported
RResp Fed Agency Code: Not reported
Non NPL Status: Assessment Complete - Decision Needed
Non NPL Status Date: 20110715
Site Fips Code: 17031
CC Concurrence Date: Not reported
CC Concurrence FY: Not reported

LAKE CALUMET SMELTING (Continued) **1007646528**

Alias EPA ID: Not reported
Site FUDS Flag: Not reported

Alias Comments: Not reported
Site Description: Former secondary smelter of non-ferrous metals such as lead and tin. Smelting these metals created bulk units of babbitt and solder. Not currently known if any metal fabrication was done or if cleaning solvents were used on-site. Preliminary XRF data indicates heavy metal contamination on the soil surface throughout the site as well as on flooring of former sturctures. Residential neighborhoods within 1/4 miles of the property.

CERCLIS Assessment History:

Action Code: 001
Action: PRE-CERCLIS SCREENING
Date Started: Not reported
Date Completed: 09/29/2004
Priority Level: Not reported
Operable Unit: SITEWIDE
Primary Responsibility: State, Fund Financed
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

Action Code: 001
Action: DISCOVERY
Date Started: Not reported
Date Completed: 10/18/2004
Priority Level: Not reported
Operable Unit: SITEWIDE
Primary Responsibility: EPA Fund-Financed
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

Action Code: 001
Action: PRELIMINARY ASSESSMENT
Date Started: 09/30/2005
Date Completed: 03/20/2008
Priority Level: Low priority for further assessment
Operable Unit: SITEWIDE
Primary Responsibility: State, Fund Financed
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

Action Code: 001
Action: SITE INSPECTION
Date Started: 04/15/2008
Date Completed: 07/15/2011
Priority Level: Assessment Complete - Decision Needed
Operable Unit: SITEWIDE
Primary Responsibility: State, Fund Financed
Planning Status: Not reported
Urgency Indicator: Not reported

LAKE CALUMET SMELTING (Continued) **1007646528**

Action Anomaly: Not reported

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146 **BULKMATIC TRANSPORT CO** **RCRA-SQG** **1000271480**
12000 S DOTY AVE **ILD053220711**
CHICAGO, IL 60628

RCRA-SQG:
Date form received by agency: 07/28/1980
Facility name: BULKMATIC TRANSPORT CO
Facility address: 12000 S DOTY AVE
CHICAGO, IL 60628
EPA ID: ILD053220711
Contact: CHUCK APPELQUIST
Contact address: 12000 S DOTY AVE
CHICAGO, IL 60628
Contact country: US
Contact telephone: (312) 568-1300
Contact email: Not reported
EPA Region: 05
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:
Owner/operator name: NAME NOT REPORTED
Owner/operator address: ADDRESS NOT REPORTED
CITY NOT REPORTED, AK 99998
Owner/operator country: Not reported
Owner/operator telephone: (312) 555-1212
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: JB INC
Owner/operator address: ADDRESS NOT REPORTED
CITY NOT REPORTED, AK 99998
Owner/operator country: Not reported
Owner/operator telephone: (312) 555-1212
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No

Map ID	Site	Database(s)	EPA ID Number

BULKMATIC TRANSPORT CO (Continued) **1000271480**

Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Hazardous Waste Summary:

Waste code: D001

Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Violation Status: No violations found

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147 **ERNS** **2011991453**
N/A

803 EAST 120TH ST.
CHICAGO, IL 60628

Click this hyperlink while viewing on your computer to access additional ERNS detail in the EDR Site Report.

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147 **ERNS** **2011992401**
N/A

803 EAST 120TH ST.
CHICAGO, IL 60628

Click this hyperlink while viewing on your computer to access additional ERNS detail in the EDR Site Report.

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147 **SPILLS** **S111927203**
N/A

803 E 120TH ST
CHICAGO, IL

SPILLS:

Incident ID:	20111056
Incident Date:	Not reported
Date Received:	Not reported
Facility Address:	803 E 120TH ST
Facility City:	CHICAGO
PRP Name:	Quala Services, LLC
AC:	VN

Map ID	Site	Database(s)	EPA ID Number

147
803 E 120TH ST
CHICAGO, IL
SPILLS **S111887106**
N/A

SPILLS:

Incident ID:	19930641
Incident Date:	Not reported
Date Received:	03/17/1993
Facility Address:	803 E 120TH ST
Facility City:	CHICAGO
PRP Name:	ALL WASTE CONTAINER SERVICES
AC:	Not reported

147
ALLWASTE CONTAINER SERVICES
803 E 120TH ST
CHICAGO, IL
SPILLS **1008124151**
N/A

SPILLS:

Incident ID:	20111225
Incident Date:	11/12/2011
Date Received:	03/05/2012
Facility Address:	803 E 120TH ST
Facility City:	CHICAGO
PRP Name:	Quala Services, LLC
AC:	SR

147
803 E 120TH ST
CHICAGO, IL
SPILLS **S111882010**
N/A

SPILLS:

Incident ID:	19913018
Incident Date:	10/22/1991
Date Received:	10/22/1991
Facility Address:	803 E 120TH ST
Facility City:	CHICAGO
PRP Name:	SCHNEIDER NATIONAL BULK CAR.
AC:	Not reported

147
803 E 120TH ST
CHICAGO, IL
SPILLS **S111927204**
N/A

SPILLS:

Incident ID:	20111057
Incident Date:	Not reported
Date Received:	Not reported
Facility Address:	803 E 120TH ST
Facility City:	CHICAGO
PRP Name:	Quala Services, LLC
AC:	VN

Map ID	Site	Database(s)	EPA ID Number
147	**PSC CONTAINER SERVICES, LLC** **803 EAST 120TH ST.** **CHICAGO, IL 60628**	**LUST**	**S104524045** **N/A**

LUST:
Incident Num: 930641
IL EPA Id: 0316535003
Product: Deisel
IEMA Date: 03/17/1993
Project Manager: Benanti
Project Manager Phone: (217) 524-4649
Email: Trent.Benanti@illinois.gov
PRP Name: PSC Container Services, LLC
PRP Contact: Garry Risse
PRP Address: 2 South Concourse Pkwy., Suite 750
PRP City,St,Zip: Atlanta, GA 30324
PRP Phone: Not reported
Site Classification: Not reported
Section 57.5(g) Letter: 731
Date Section 57.5(g) Letter: Not reported
Non LUST Determination Letter: Not reported
20 Report Received: 04/08/1993
45 Report Received: 05/03/1993
NFA/NFR Letter: **Not reported**
NFR Date Recorded: Not reported

Map ID	Site	Database(s)	EPA ID Number
147	**QUALA SERVICES LLC** **803 E 120TH ST** **CHICAGO, IL 60628**	**RCRA-LQG**	**1000462652** **ILD984808022**

RCRA-LQG:
Date form received by agency: 02/17/2011
Facility name: QUALA SERVICES LLC
Facility address: 803 E 120TH ST
CHICAGO, IL 60628
EPA ID: ILD984808022
Contact: BEVERLY M BURTON
Contact address: 101 S FRANKLIN ST STE 101
TAMPA, FL 33602
Contact country: US
Contact telephone: (813) 466-8424
Contact email: BBURTON@QUALAWASH.COM
EPA Region: 05
Land type: Private
Classification: Large Quantity Generator
Description: Handler: generates 1,000 kg or more of hazardous waste during any calendar month; or generates more than 1 kg of acutely hazardous waste during any calendar month; or generates more than 100 kg of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month; or generates 1 kg or less of acutely hazardous waste during any calendar month, and accumulates more than 1 kg of acutely hazardous waste at any time; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates more than 100 kg of that material at any time

Owner/Operator Summary:

Map ID	Site	Database(s)	EPA ID Number

QUALA SERVICES LLC (Continued) **1000462652**

Owner/operator name: QUALA SERVICES LLC
Owner/operator address: 101 S FRANKLIN ST STE 101
TAMPA, FL 33602
Owner/operator country: US
Owner/operator telephone: (813) 466-8424
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: 12/20/1990
Owner/Op end date: Not reported

Owner/operator name: QUALA SERVICES LLC
Owner/operator address: 101 S FRANKLIN ST STE 101
TAMPA, FL 33602
Owner/operator country: US
Owner/operator telephone: (813) 466-8424
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 12/20/1990
Owner/Op end date: Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Historical Generators:

Date form received by agency: 03/01/2010
Facility name: QUALA SERVICES LLC
Site name: PSC CONTAINER SVCS LLC
Classification: Large Quantity Generator

Date form received by agency: 03/01/2008
Facility name: QUALA SERVICES LLC
Site name: PSC CONTAINER SERVICES LLC
Classification: Large Quantity Generator

Date form received by agency: 01/30/2008
Facility name: QUALA SERVICES LLC
Site name: PSC CONTAINER SERVICES LLC
Classification: Large Quantity Generator

Date form received by agency: 03/01/2006
Facility name: QUALA SERVICES LLC
Site name: ALLWASTE CONTAINER SVC

QUALA SERVICES LLC (Continued) **1000462652**

Classification: Large Quantity Generator

Date form received by agency: 03/01/2004
Facility name: QUALA SERVICES LLC
Site name: ALLWASTE CONTAINER SVC
Classification: Large Quantity Generator

Date form received by agency: 03/01/2002
Facility name: QUALA SERVICES LLC
Site name: ALLWASTE CONTAINER SERVICE
Classification: Large Quantity Generator

Date form received by agency: 03/01/2000
Facility name: QUALA SERVICES LLC
Site name: ALLWASTE CONTAINER SERVICE
Classification: Large Quantity Generator

Date form received by agency: 04/13/1998
Facility name: QUALA SERVICES LLC
Site name: ALLWASTE CONTAINER SERVICE INC
Classification: Large Quantity Generator

Date form received by agency: 03/01/1998
Facility name: QUALA SERVICES LLC
Site name: ALLWASTE CONTAINER SERVICE
Classification: Large Quantity Generator

Date form received by agency: 03/01/1996
Facility name: QUALA SERVICES LLC
Site name: ALLWASTE CONTAINER SERVICE
Classification: Large Quantity Generator

Date form received by agency: 03/01/1994
Facility name: QUALA SERVICES LLC
Site name: ALLWASTE CONTAINER SERVICE
Classification: Large Quantity Generator

Date form received by agency: 03/01/1992
Facility name: QUALA SERVICES LLC
Site name: ALLWASTE CONTAINER SERVICE
Classification: Large Quantity Generator

Hazardous Waste Summary:
Waste code: D001
Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Waste code: D004
Waste name: ARSENIC

Waste code: D005
Waste name: BARIUM

QUALA SERVICES LLC (Continued) **1000462652**

Waste code: D006
Waste name: CADMIUM

Waste code: D007
Waste name: CHROMIUM

Waste code: D008
Waste name: LEAD

Waste code: D009
Waste name: MERCURY

Waste code: D010
Waste name: SELENIUM

Waste code: D011
Waste name: SILVER

Waste code: D012
Waste name: ENDRIN

Waste code: D018
Waste name: BENZENE

Waste code: D019
Waste name: CARBON TETRACHLORIDE

Waste code: D020
Waste name: CHLORDANE

Waste code: D021
Waste name: CHLOROBENZENE

Waste code: D022
Waste name: CHLOROFORM

Waste code: D023
Waste name: O-CRESOL

Waste code: D024
Waste name: M-CRESOL

Waste code: D025
Waste name: P-CRESOL

Waste code: D026
Waste name: CRESOL

Waste code: D027
Waste name: 1,4-DICHLOROBENZENE

Waste code: D028
Waste name: 1,2-DICHLOROETHANE

Biennial Reports:

Last Biennial Reporting Year: 2011

QUALA SERVICES LLC (Continued) **1000462652**

Annual Waste Handled:
Waste code: D001
Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.
Amount (Lbs): 94163.2

Waste code: D002
Waste name: A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.
Amount (Lbs): 440

Waste code: U001
Waste name: ACETALDEHYDE (I)
Amount (Lbs): 93723.2

Waste code: U019
Waste name: BENZENE (I,T)
Amount (Lbs): 93723.2

Waste code: U122
Waste name: FORMALDEHYDE
Amount (Lbs): 93723.2

Waste code: U188
Waste name: PHENOL
Amount (Lbs): 93723.2

Waste code: U389
Waste name: CARBAMOTHIOIC ACID, BIS(1-METHYLETHYL)-, S-(2,3,3-TRICHLORO-2-PROPENYL) ESTER (OR) TRIALLATE
Amount (Lbs): 1320

Facility Has Received Notices of Violations:
Regulation violated: Not reported
Area of violation: Permits - General Information
Date violation determined: 09/29/2009
Date achieved compliance: 07/09/2010
Violation lead agency: EPA
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 05/17/2010
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: Not reported

Map ID	Site	Database(s)	EPA ID Number
	QUALA SERVICES LLC (Continued)		**1000462652**

Paid penalty amount:	Not reported
Regulation violated:	Not reported
Area of violation:	LDR - General
Date violation determined:	09/29/2009
Date achieved compliance:	07/09/2010
Violation lead agency:	EPA
Enforcement action:	WRITTEN INFORMAL
Enforcement action date:	05/17/2010
Enf. disposition status:	Not reported
Enf. disp. status date:	Not reported
Enforcement lead agency:	EPA
Proposed penalty amount:	Not reported
Final penalty amount:	Not reported
Paid penalty amount:	Not reported
Regulation violated:	Not reported
Area of violation:	Generators - Pre-transport
Date violation determined:	09/29/2009
Date achieved compliance:	07/09/2010
Violation lead agency:	EPA
Enforcement action:	WRITTEN INFORMAL
Enforcement action date:	05/17/2010
Enf. disposition status:	Not reported
Enf. disp. status date:	Not reported
Enforcement lead agency:	EPA
Proposed penalty amount:	Not reported
Final penalty amount:	Not reported
Paid penalty amount:	Not reported
Regulation violated:	Not reported
Area of violation:	Generators - Records/Reporting
Date violation determined:	09/29/2009
Date achieved compliance:	07/09/2010
Violation lead agency:	EPA
Enforcement action:	WRITTEN INFORMAL
Enforcement action date:	05/17/2010
Enf. disposition status:	Not reported
Enf. disp. status date:	Not reported
Enforcement lead agency:	EPA
Proposed penalty amount:	Not reported
Final penalty amount:	Not reported
Paid penalty amount:	Not reported
Regulation violated:	Not reported
Area of violation:	Generators - General
Date violation determined:	09/29/2009
Date achieved compliance:	07/09/2010
Violation lead agency:	EPA
Enforcement action:	WRITTEN INFORMAL
Enforcement action date:	05/17/2010
Enf. disposition status:	Not reported
Enf. disp. status date:	Not reported
Enforcement lead agency:	EPA
Proposed penalty amount:	Not reported
Final penalty amount:	Not reported
Paid penalty amount:	Not reported

QUALA SERVICES LLC (Continued) **1000462652**

Regulation violated: SR - 722.134(a)
Area of violation: Generators - Pre-transport
Date violation determined: 01/04/1991
Date achieved compliance: 02/08/1991
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 02/08/1991
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Evaluation Action Summary:
Evaluation date: 09/29/2009
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - Records/Reporting
Date achieved compliance: 07/09/2010
Evaluation lead agency: EPA

Evaluation date: 09/29/2009
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Permits - General Information
Date achieved compliance: 07/09/2010
Evaluation lead agency: EPA

Evaluation date: 09/29/2009
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - Pre-transport
Date achieved compliance: 07/09/2010
Evaluation lead agency: EPA

Evaluation date: 09/29/2009
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 07/09/2010
Evaluation lead agency: EPA

Evaluation date: 09/29/2009
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: LDR - General
Date achieved compliance: 07/09/2010
Evaluation lead agency: EPA

Evaluation date: 05/19/1994
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 05/19/1994
Evaluation: FOCUSED COMPLIANCE INSPECTION
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

QUALA SERVICES LLC (Continued) **1000462652**

Evaluation date: 01/04/1991
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - Pre-transport
Date achieved compliance: 02/08/1991
Evaluation lead agency: State

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147 **ALLWASTE CONTAINER SERVICES**
803 E 120TH ST
CHICAGO, IL 60628
UST **U001142641**
N/A

UST:
Facility ID: 2013510
Facility Status: CLOSED
Facility Type: **PRIVATE INSTITUTION**
Owner Name: Phillips Services Corp
Owner Id: U0007681
Owner Address: 803 E 120th St
Owner City,St,Zip: Chicago, IL 60628

Tank Number: 1
Tank Capacity: 12000
Tank Substance: Diesel Fuel
Last Used Date: Not reported
OSFM First Notify Date: 6/30/1986
Tank Status: **Removed**
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: **Not reported**
Green Tag Issue Date: **Not reported**
Green Tag Expire Date: **Not reported**
Self Service Permit Inspection Date: **Not reported**
Self Service Permit Expire Date: **Not reported**
Fee Due: Not reported

Tank Number: 2
Tank Capacity: 4000
Tank Substance: Diesel Fuel
Last Used Date: Not reported
OSFM First Notify Date: 6/30/1986
Tank Status: **Removed**
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: **Not reported**
Green Tag Issue Date: **Not reported**
Green Tag Expire Date: **Not reported**
Self Service Permit Inspection Date: **Not reported**
Self Service Permit Expire Date: **Not reported**
Fee Due: Not reported

Tank Number: 3
Tank Capacity: 12000
Tank Substance: Heating Oil
Last Used Date: Not reported
OSFM First Notify Date: 6/30/1986
Tank Status: **Removed**
Red Tag Issue Date: Not reported
Install Date: Not reported

Map ID	Site	Database(s)	EPA ID Number
	ALLWASTE CONTAINER SERVICES (Continued)		**U001142641**

Green Tag Decal:	**Not reported**
Green Tag Issue Date:	**Not reported**
Green Tag Expire Date:	**Not reported**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	No

Map ID	Site	Database(s)	EPA ID Number
147	**NORTRU INC TRANSPORTATION GROUP** **801 E 120TH ST** **CHICAGO, IL 60628**	**RCRA-SQG**	**1004694142** **ILD984890822**

RCRA-SQG:

Date form received by agency:	10/22/2009
Facility name:	NORTRU INC TRANSPORTATION GROUP
Facility address:	801 E 120TH ST CHICAGO, IL 60628
EPA ID:	ILD984890822
Contact:	JEFFREY O DAVIS
Contact address:	801 E 120TH ST CHICAGO, IL 60628
Contact country:	US
Contact telephone:	(313) 824-5303
Contact email:	JDAVIS@PSCNOW.COM
EPA Region:	05
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	NORTRU
Owner/operator address:	801 E 120TH ST CHICAGO, IL 60628
Owner/operator country:	US
Owner/operator telephone:	Not reported
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	03/13/2002
Owner/Op end date:	Not reported
Owner/operator name:	PSC ENVIRONMENTAL SVCS INC
Owner/operator address:	5151 SAN FELIPE DR STE 1600 HOUSTON, TX 77056
Owner/operator country:	US
Owner/operator telephone:	Not reported
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	03/13/2002
Owner/Op end date:	Not reported
Owner/operator name:	WATKINS MOTOR LINES
Owner/operator address:	1144 W GRIFFIN RD PO BOX 95002 LAKELAND, FL 32804
Owner/operator country:	Not reported
Owner/operator telephone:	(813) 687-4545

NORTRU INC TRANSPORTATION GROUP (Continued) **1004694142**

Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	Yes

Universal Waste Summary:

Waste type:	Batteries
Accumulated waste on-site:	Yes
Generated waste on-site:	Not reported
Waste type:	Lamps
Accumulated waste on-site:	Yes
Generated waste on-site:	Not reported
Waste type:	Pesticides
Accumulated waste on-site:	Yes
Generated waste on-site:	Not reported
Waste type:	Thermostats
Accumulated waste on-site:	Yes
Generated waste on-site:	Not reported

Historical Generators:

Date form received by agency:	10/11/2007
Facility name:	NORTRU INC TRANSPORTATION GROUP
Classification:	Small Quantity Generator
Date form received by agency:	06/29/1992
Facility name:	NORTRU INC TRANSPORTATION GROUP
Site name:	HIGHWAY TRANSPORT
Classification:	Conditionally Exempt Small Quantity Generator

Hazardous Waste Summary:

Waste code:	D000
Waste name:	Not Defined
Waste code:	D001
Waste name:	IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF

NORTRU INC TRANSPORTATION GROUP (Continued) **1004694142**

LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Waste code: D008
Waste name: LEAD

Waste code: D018
Waste name: BENZENE

Waste code: D039
Waste name: TETRACHLOROETHYLENE

Violation Status: No violations found

---

157 **PRAXAIR DISTRIBUTION INC** **RCRA-CESQG** **1004476903**
12054 SOUTHWEST DOTY AVENUE **ILD082545732**
CHICAGO, IL 60628

RCRA-CESQG:
Date form received by agency: 03/01/2000
Facility name: PRAXAIR DISTRIBUTION INC
Facility address: 12054 SW DOTY AVE
CHICAGO, IL 60628
EPA ID: ILD082545732
Mailing address: 12000 ROOSEVELT RD
HILLSIDE, IL 60162
Contact: DEBBIE BOE
Contact address: Not reported
Not reported
Contact country: Not reported
Contact telephone: (773) 568-8840
Contact email: Not reported
EPA Region: 05
Classification: Conditionally Exempt Small Quantity Generator
Description: Handler: generates 100 kg or less of hazardous waste per calendar month, and accumulates 1000 kg or less of hazardous waste at any time; or generates 1 kg or less of acutely hazardous waste per calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No

Map ID	Site	Database(s)	EPA ID Number

PRAXAIR DISTRIBUTION INC (Continued) **1004476903**

Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Historical Generators:

Date form received by agency:	02/12/1998
Facility name:	PRAXAIR DISTRIBUTION INC
Classification:	Conditionally Exempt Small Quantity Generator

Date form received by agency:	03/01/1996
Facility name:	PRAXAIR DISTRIBUTION INC
Site name:	LIQUID CARBONIC INDUSTRIES
Classification:	Large Quantity Generator

Violation Status: No violations found

---

157 **SPILLS** **S111901168**
N/A

12054 S DOTY AVE
CHICAGO, IL

SPILLS:

Incident ID:	19980913
Incident Date:	04/22/1998
Date Received:	04/22/1998
Facility Address:	12054 S DOTY AVE
Facility City:	CHICAGO
PRP Name:	PRAXAIR INC
AC:	Not reported

---

157 **LIQUID CARBONIC CORP** **UST** **U001142744**
N/A

12054 S W DOTY AVE
CHICAGO, IL 60628

UST:

Facility ID:	2018568
Facility Status:	CLOSED
Facility Type:	**NONE**
Owner Name:	Liquid Carbonic Corp
Owner Id:	U0009226
Owner Address:	810 Jorie Blvd
Owner City,St,Zip:	Oak Brook, IL 60521

Tank Number:	1
Tank Capacity:	2500
Tank Substance:	Diesel Fuel
Last Used Date:	9/14/1995
OSFM First Notify Date:	4/1/1986
Tank Status:	**Removed**
Red Tag Issue Date:	Not reported

Map ID	Site	Database(s)	EPA ID Number
	LIQUID CARBONIC CORP (Continued)		**U001142744**

Install Date: Not reported
Green Tag Decal: **Not reported**
Green Tag Issue Date: **Not reported**
Green Tag Expire Date: **Not reported**
Self Service Permit Inspection Date: **Not reported**
Self Service Permit Expire Date: **Not reported**
Fee Due: Not reported

158	**TRI CITY TANK WASH** **11901 S COTTAGE GROVE** **CHICAGO, IL 60628**	**UST**	**U001143228** **N/A**

UST:

Facility ID: 2014827
Facility Status: INACTIVE
Facility Type: **NONE**
Owner Name: Tri City Tank Wash
Owner Id: U0015198
Owner Address: 11901 S Cottage Grove
Owner City,St,Zip: Chicago, IL 60628

Tank Number: 1
Tank Capacity: 99
Tank Substance: Not reported
Last Used Date: Not reported
OSFM First Notify Date: 4/15/1986
Tank Status: **Out of service**
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: **Not reported**
Green Tag Issue Date: **Not reported**
Green Tag Expire Date: **Not reported**
Self Service Permit Inspection Date: **Not reported**
Self Service Permit Expire Date: **Not reported**
Fee Due: Not reported

Tank Number: 2
Tank Capacity: 99
Tank Substance: Not reported
Last Used Date: Not reported
OSFM First Notify Date: 4/15/1986
Tank Status: **Out of service**
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: **Not reported**
Green Tag Issue Date: **Not reported**
Green Tag Expire Date: **Not reported**
Self Service Permit Inspection Date: **Not reported**
Self Service Permit Expire Date: **Not reported**
Fee Due: Not reported

Tank Number: 3
Tank Capacity: 99
Tank Substance: Not reported
Last Used Date: Not reported
OSFM First Notify Date: 4/15/1986

Map ID	Site	Database(s)	EPA ID Number

TRI CITY TANK WASH (Continued) **U001143228**

Tank Status:	**Out of service**
Red Tag Issue Date:	Not reported
Install Date:	Not reported
Green Tag Decal:	**Not reported**
Green Tag Issue Date:	**Not reported**
Green Tag Expire Date:	**Not reported**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	Not reported

---

161 **SPILLS** **S111896851**
N/A

12101 S DOTY AVE
CHICAGO, IL

SPILLS:

Incident ID:	19961553
Incident Date:	08/27/1996
Date Received:	08/27/1996
Facility Address:	12101 S DOTY AVE
Facility City:	CHICAGO
PRP Name:	MEDUSA PORTLAND CEMENT
AC:	Not reported

---

161 **ERNS** **96505325**
N/A

12101 S. DOTY
CHICAGO, IL 60633

Click this hyperlink while viewing on your computer to access additional ERNS detail in the EDR Site Report.

---

161 **ERNS** **99628634**
N/A

12101 SOUTH DOTY AVE DOCK ON CALUMET RIVER SLIP 3
CHICAGO, IL

Click this hyperlink while viewing on your computer to access additional ERNS detail in the EDR Site Report.

---

162 **SPILLS** **S111877539**
N/A

11900 S COTTAGE GROVE AVE
CHICAGO, IL

SPILLS:

Incident ID:	19902351
Incident Date:	Not reported
Date Received:	08/17/1990
Facility Address:	11900 S COTTAGE GROVE AVE
Facility City:	CHICAGO
PRP Name:	SAMUEL G. KEYWELL CO.

(Continued) **S111877539**

AC: Not reported

---

189 **AMOOC SS #18717 FACILITY #24277**
12701 SOUTH HALSTED
CHICAGO, IL 60600

UST **U001141866**
N/A

UST:

Facility ID: 2023194
Facility Status: CLOSED
Facility Type: NONE
Owner Name: BP Products North America, Inc.
Owner Id: U0000552
Owner Address: P. O. Box 6038 Environmental Compliance Department
Owner City,St,Zip: Artesia, CA 90702

Tank Number: 1
Tank Capacity: 6000
Tank Substance: Gasoline
Last Used Date: 1/1/1989
OSFM First Notify Date: 4/25/1986
Tank Status: Removed
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

Tank Number: 2
Tank Capacity: 6000
Tank Substance: Gasoline
Last Used Date: 1/1/1989
OSFM First Notify Date: 4/25/1986
Tank Status: Removed
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

Tank Number: 3
Tank Capacity: 8000
Tank Substance: Gasoline
Last Used Date: 1/1/1989
OSFM First Notify Date: 4/25/1986
Tank Status: Removed
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported

Map ID	Site	Database(s)	EPA ID Number
	AMOOC SS #18717 FACILITY #24277 (Continued)		**U001141866**

Self Service Permit Inspection Date: **Not reported**
Self Service Permit Expire Date: **Not reported**
Fee Due: Not reported

189	**12701 S DOTY AVE** **CHICAGO, IL**	**SPILLS**	**S111884590** **N/A**

SPILLS:

Incident ID:	19921832
Incident Date:	Not reported
Date Received:	07/07/1992
Facility Address:	12701 S DOTY AVE
Facility City:	CHICAGO
PRP Name:	RESERVE IRON & METAL
AC:	Not reported

189	**12701 S DOTY AVE** **CHICAGO, IL**	**SPILLS**	**S111905694** **N/A**

SPILLS:

Incident ID:	19992245
Incident Date:	09/30/1999
Date Received:	10/01/1999
Facility Address:	12701 S DOTY AVE
Facility City:	CHICAGO
PRP Name:	TRANS SCHENK
AC:	Not reported

189	**METAL MANAGEMENT MIDWEST INC** **12701 S DOTY AVE-B** **CHICAGO, IL 60633**	**RCRA-SQG**	**1014472131** **ILR000166009**

RCRA-SQG:

Date form received by agency:	03/28/2011
Facility name:	METAL MANAGEMENT MIDWEST INC
Facility address:	12701 S DOTY AVE-B CHICAGO, IL 60633
EPA ID:	ILR000166009
Contact:	DANIEL KOLLMON
Contact address:	12701 S DOTY AVE-B CHICAGO, IL 60633
Contact country:	US
Contact telephone:	(773) 383-9420
Contact email:	DANIEL.KOLLMON@SIMSMM.COM
EPA Region:	05
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Map ID	Site	Database(s)	EPA ID Number
	METAL MANAGEMENT MIDWEST INC (Continued)		**1014472131**

Owner/Operator Summary:

Owner/operator name:	METAL MGT MIDWEST INC
Owner/operator address:	999 MCCLINTOCK BURR RIDGE, IL 60527
Owner/operator country:	US
Owner/operator telephone:	(630) 288-9400
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	05/23/2011
Owner/Op end date:	Not reported

Owner/operator name:	METAL MGT MIDWEST INC
Owner/operator address:	999 MCCLINTOCK BURR RIDGE, IL 60527
Owner/operator country:	US
Owner/operator telephone:	(630) 288-9400
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	05/23/2011
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Hazardous Waste Summary:

Waste code:	D001
Waste name:	IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Violation Status: No violations found

Map ID	Site	Database(s)	EPA ID Number
191	**CONTINENTAL GRAIN CO** **127TH & DOTY AVE** **CHICAGO, IL 60633**	**UST**	**U000791610** **N/A**

UST:

Facility ID: 2008867
Facility Status: CLOSED
Facility Type: PORT DISTRICT
Owner Name: Il International Port Dist
Owner Id: U0007390
Owner Address: 3600 E 95Th
Owner City,St,Zip: Chicago, IL 60617

Tank Number: 1
Tank Capacity: 1000
Tank Substance: Gasoline
Last Used Date: 9/1/1995
OSFM First Notify Date: 4/30/1986
Tank Status: Removed
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

Tank Number: 2
Tank Capacity: 3000
Tank Substance: Diesel Fuel
Last Used Date: Not reported
OSFM First Notify Date: 4/30/1986
Tank Status: Removed
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

Map ID	Site	Database(s)	EPA ID Number
192	 **12900 S DOTY** **CHICAGO, IL**	**SPILLS**	**S108045432** **N/A**

SPILLS:

Incident ID: 20041479
Incident Date: Not reported
Date Received: 10/25/2004
Facility Address: 12900 S DOTY
Facility City: CHICAGO
PRP Name: UNKNOWN
AC: Not reported

Map ID	Site	Database(s)	EPA ID Number
193	**CALUMET NU-EARTH DIST CENTER** **NORTH 130TH ST & DOTY AVE** **CHICAGO, IL 60628**	**CERC-NFRAP**	**1003870307** **ILD980903686**

CERC-NFRAP:

Site ID:	0500927
Federal Facility:	Not a Federal Facility
NPL Status:	Not on the NPL
Non NPL Status:	NFRAP-Site does not qualify for the NPL based on existing information

CERCLIS-NFRAP Assessment History:

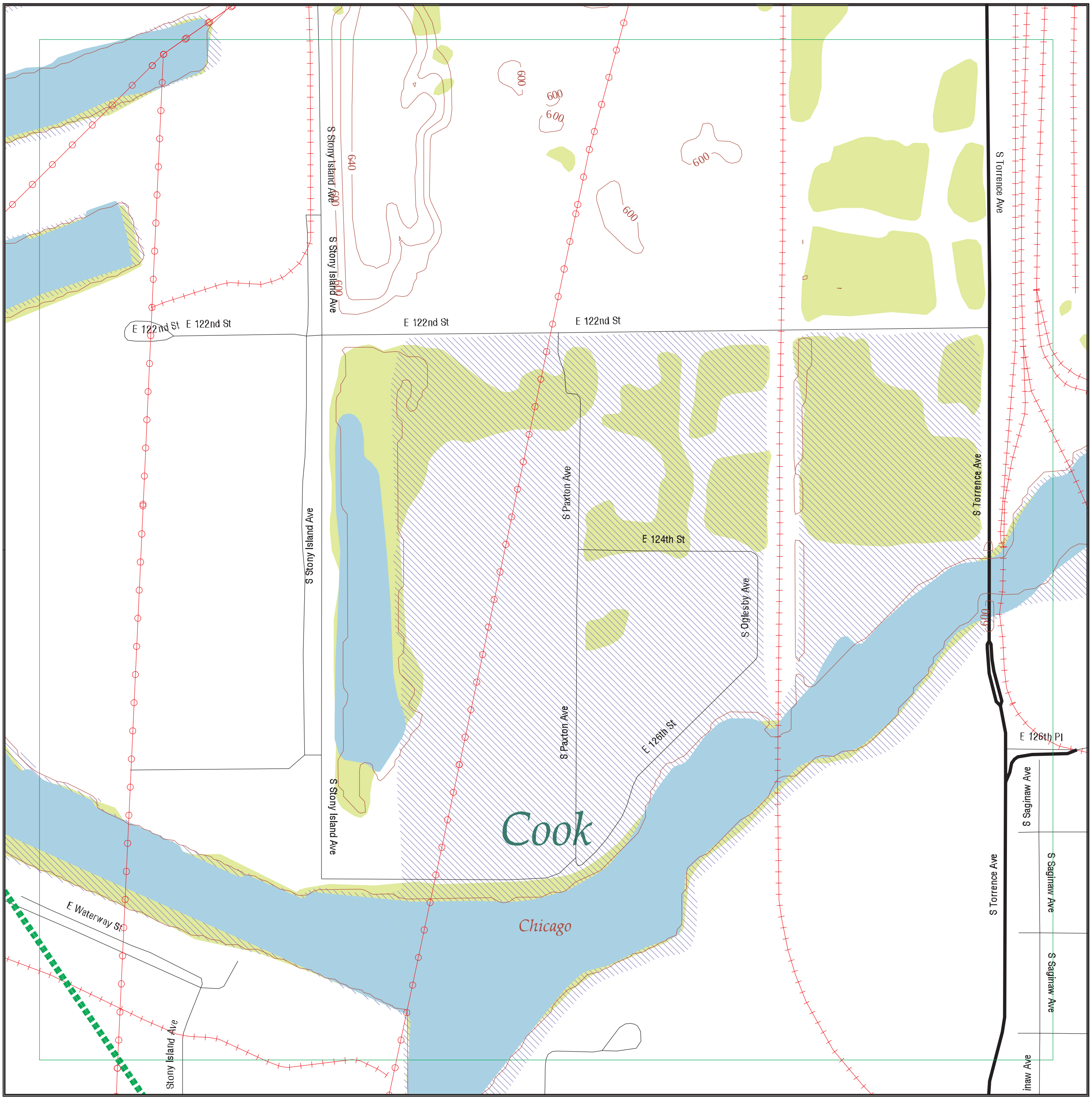
Action:	DISCOVERY
Date Started:	Not reported
Date Completed:	12/01/1984
Priority Level:	Not reported
Action:	PRELIMINARY ASSESSMENT
Date Started:	Not reported
Date Completed:	12/01/1984
Priority Level:	Low priority for further assessment
Action:	SITE INSPECTION
Date Started:	Not reported
Date Completed:	09/20/1985
Priority Level:	NFRAP-Site does not qualify for the NPL based on existing information
Action:	HAZARD RANKING SYSTEM PACKAGE
Date Started:	Not reported
Date Completed:	12/20/1985
Priority Level:	NFRAP-Site does not qualify for the NPL based on existing information
Action:	ARCHIVE SITE
Date Started:	Not reported
Date Completed:	10/31/1991
Priority Level:	Not reported

Count: 27 records

FOCUS MAP 12 ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CALUMET CITY	1008144866	ANTONIETTI CONSTRUCTION PIT	146TH & BURNHAM AVE	60633	SWF/LF
CHICAGO	1012172115	ROSELAND COMMUNITY	110TH PLACE AND MICHIGAN, EAST SIDE OF STATE ST.		US BROWNFIELDS
CHICAGO	1003870420	CHICAGO REGIONAL PORT DIST	111TH & DOTY AVE	60633	CERC-NFRAP
CHICAGO	S108111043	CHICAGO REGIONAL PORT DISTRICT	111TH & CALUMET EXPY	60617	SWF/LF
CHICAGO	S109167302		549 115TH ST		LUST, SPILLS
CHICAGO	S108112646	PAXTON LANDFILL CORP #2	116TH & OGELSBY	60617	SWF/LF
CHICAGO	1014389970	COMED	119TH & PAULINA	60617	RCRA-SQG
CHICAGO	1003870122	ILLINOIS CENTRAL RR TRACKS	119TH STREET EAST IL CENTRAL TRACKS	60628	CERC-NFRAP
CHICAGO	S101215364	U.S. DRUM	2400 E 119TH ST	60633	SSU
CHICAGO	1002886378	US SCRAP	123RD & COTTAGE GROVE	60628	CERCLIS
CHICAGO	S108111042	CHICAGO MSD #4	124TH & OGELSBY	60617	SWF/LF
CHICAGO	S101467236	PENN CENTRAL	810 E 124TH ST		SSU
CHICAGO	1002886490	METRO SANITARY DISTRICT #3	125TH STREET & DOTY AVENUE	60628	CERC-NFRAP
CHICAGO	1004695029	ARMY COE LOCK DAM 01	134TH AND CALUMET RIVER	60633	RCRA-CESQG
CHICAGO	S108939041	USX REALTY DEVELOPMENT PBR	3426 89TH ST E	60617	SWF/LF
CHICAGO	U003838643	95TH STREET PROPERTY	95TH ST & COLFAZ AVE	60617	UST
CHICAGO	1001228053	CDOT/BRIDGES	95TH ST BRIDGE/CALUMET RIVER	60617	RCRA-LQG
CHICAGO	S107926345	VAN VLISSINGEN PROPERTY	96TH & VAN VLISSINGEN RD	60617	SSU
CHICAGO	U004158163	T. J. OBRIEN LOCK & DAM	13400 S CALUMET RIV	60633	UST
CHICAGO	1012126998	9705 S. COTTAGE GROVE	9705 S COTTAGE GROVE AVE	60628	US BROWNFIELDS
CHICAGO	S109366427		6700 JEFFREY BLVD		LUST, SPILLS
CHICAGO	S108891646		11900 LOOMIS		LUST, SPILLS
CHICAGO	S108111040	CHICAGO MSD #2	OBRIEN LCK & DAM RD	60633	SWF/LF
CHICAGO	S107926349	LAKE CALUMET CLUSTER SITE	N OF 122ND	60628	SSU
CHICAGO	S108111350	ENVIROTHERM	11700 STONY IS	60617	SWF/LF
CHICAGO	1008150443	PAXTON LANDFILL CORP	TORRENCE AVE	60617	SWF/LF
RIVERDALE	S103690079	RIVERDALE, VILLAGE OF	130TH & HALSTED ST	60827	LUST

Focus Map 13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EDR DataMap® - Environmental Atlas

90786 CTC RLE Hazardous Materials

Legend

- Roads
- Major Roads
- Contour Lines
- 🟩 National Wetlands Inventory
- Waterways
- Railroads
- Study Boundary
- ▨ 100-Yr Flood Zones
- Powerlines
- Pipelines
- Fault Lines
- 🟦 Water
- ▲ Listed Sites
- Sensitive Receptors

N

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Scale in Miles

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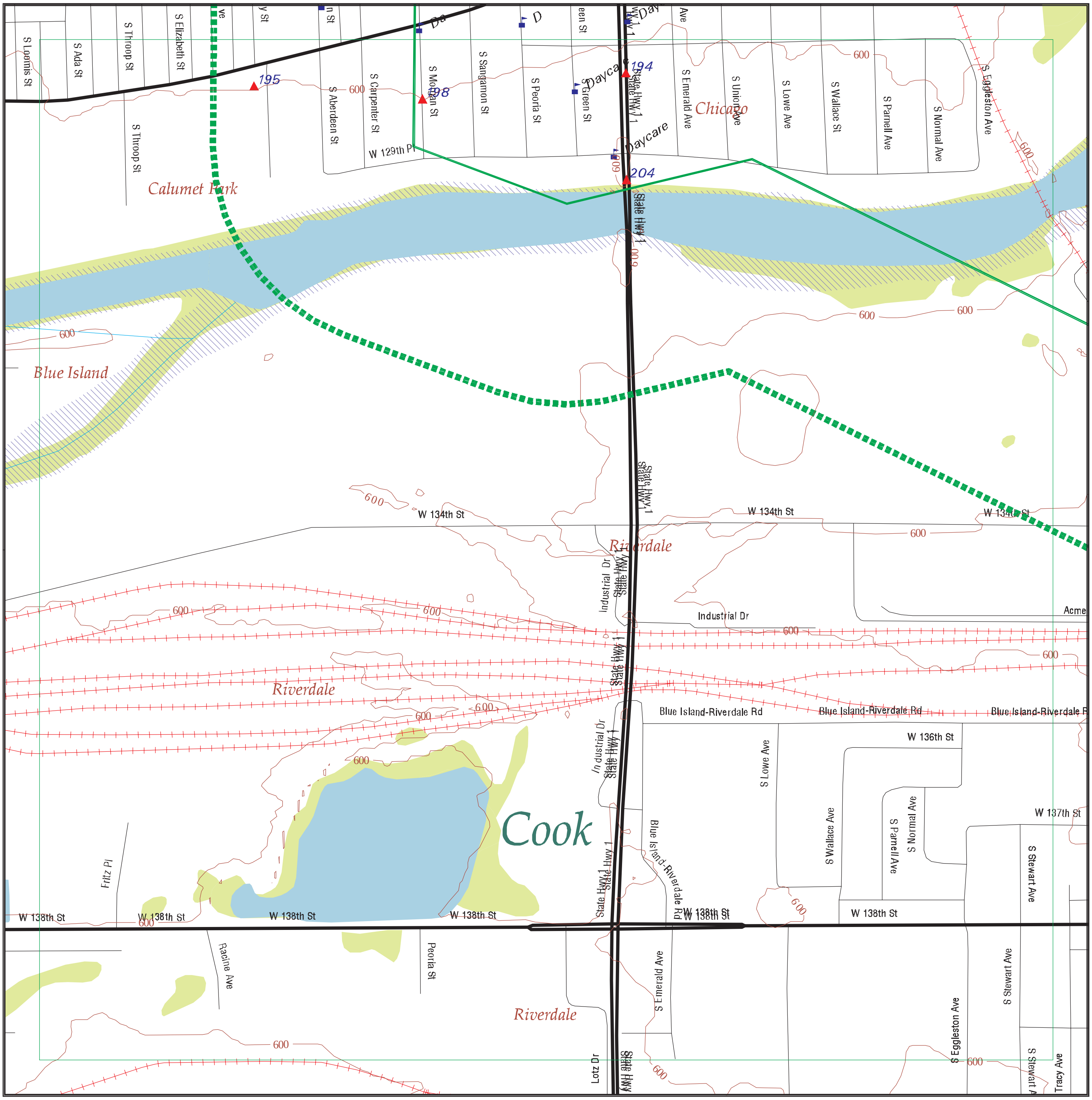
Count: 20 records

FOCUS MAP 13 ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CALUMET CITY	1014390033	COMED	100TH & TORRENCE	60633	RCRA-SQG
CALUMET CITY	1008144866	ANTONIETTI CONSTRUCTION PIT	146TH & BURNHAM AVE	60633	SWF/LF
CHICAGO	1012172115	ROSELAND COMMUNITY	110TH PLACE AND MICHIGAN, EAST SIDE OF STATE ST.		US BROWNFIELDS
CHICAGO	S108111043	CHICAGO REGIONAL PORT DISTRICT	111TH & CALUMET EXPY	60617	SWF/LF
CHICAGO	1010784332	COMED	113TH & TORRENCE	60617	RCRA-LQG
CHICAGO	S109167302		549 115TH ST		LUST, SPILLS
CHICAGO	S108112646	PAXTON LANDFILL CORP #2	116TH & OGELSBY	60617	SWF/LF
CHICAGO	S109756592	CLEAN HARBORS	118TH & STONY ISLAND RD	60633	MANIFEST
CHICAGO	S109756593	CLEAN HARBORS OF CHICAGO INC	118TH & STONY ISLAND RD	60633	MANIFEST
CHICAGO	S101215364	U.S. DRUM	2400 E 119TH ST	60633	SSU
CHICAGO	S106526645	UNNAMED PARCEL	122ND ST		BROWNFIELDS
CHICAGO	S108111042	CHICAGO MSD #4	124TH & OGELSBY	60617	SWF/LF
CHICAGO	S101467236	PENN CENTRAL	810 E 124TH ST		SSU
CHICAGO	S108939041	USX REALTY DEVELOPMENT PBR	3426 89TH ST E	60617	SWF/LF
CHICAGO	S107926345	VAN VLISSINGEN PROPERTY	96TH & VAN VLISSINGEN RD	60617	SSU
CHICAGO	S109366427		6700 JEFFREY BLVD		LUST, SPILLS
CHICAGO	S108891646		11900 LOOMIS		LUST, SPILLS
CHICAGO	S108111040	CHICAGO MSD #2	OBRIEN LCK & DAM RD	60633	SWF/LF
CHICAGO	S108111350	ENVIROTHERM	11700 STONY IS	60617	SWF/LF
CHICAGO	1008150443	PAXTON LANDFILL CORP	TORRENCE AVE	60617	SWF/LF

Focus Map 14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S Carpenter St
S Morgan St
S Sangamon St
S Peoria St
S Green St
S Emerald Ave
S Union Ave
S Lowe Ave
S Wallace St
S Parnell Ave
S Normal Ave
S Eggleston Ave
W 129th Pl
195
198
194
204
Daycare
Chicago
Calumet Park
Blue Island
State Hwy 1
600
W 134th St
Riverdale
Industrial Dr
Acme
Blue Island-Riverdale Rd
W 136th St
W 137th St
S Stewart Ave
Cook
Fritz Pl
W 138th St
Racine Ave
Peoria St
S Emerald Ave
S Eggleston Ave
Lotz Dr
Tracy Ave

EDR Environmental Data Resources Inc

EDR DataMap® - Environmental Atlas

90786 CTC RLE Hazardous Materials

N

Legend

Roads

Major Roads

Contour Lines

National Wetlands Inventory

Waterways

Railroads

Study Boundary

100-Yr Flood Zones

Powerlines

Pipelines

Fault Lines

Water

▲ Listed Sites

Sensitive Receptors

0 1/8 1/4

Scale in Miles

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FOCUS MAP 14 SUMMARY

	Database	Total Plotted
FEDERAL RECORDS		
	Proposed NPL	0
	Delisted NPL	0
	CERCLIS	0
	CERC-NFRAP	1
	CORRACTS	0
	RCRA-TSDF	0
	RCRA-LQG	0
	RCRA-SQG	1
	RCRA-CESQG	0
	US ENG CONTROLS	0
	US INST CONTROL	0
	ERNS	0
	US BROWNFIELDS	0
STATE AND LOCAL RECORDS		
	SSU	0
	SWF/LF	0
	LUST	1
	UST	3
	SPILLS	1
	ENG CONTROLS	0
	INST CONTROL	0
	SRP	0
	DRYCLEANERS	0
	BROWNFIELDS	0
EDR PROPRIETARY RECORDS		
	Manufactured Gas Plants	0

NOTES:

Sites may be listed in more than one database

Map ID	Site	Database(s)	EPA ID Number
194	**YOUNGS AUTO SUPPLY INC** **12853 S HALSTED** **CHICAGO, IL 60628**	**RCRA-SQG**	**1000315322** **ILD025355173**

RCRA-SQG:

Date form received by agency: 10/02/1986
Facility name: YOUNGS AUTO SUPPLY INC
Facility address: 12853 S HALSTED
CHICAGO, IL 60628
EPA ID: ILD025355173
Contact: VINCE PALERMO
Contact address: 12853 S HALSTED
CHICAGO, IL 60628
Contact country: US
Contact telephone: (312) 568-0001
Contact email: Not reported
EPA Region: 05
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name: PALERMO JOSEPH
Owner/operator address: ADDRESS NOT REPORTED
CITY NOT REPORTED, AK 99998
Owner/operator country: Not reported
Owner/operator telephone: (312) 555-1212
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: NAME NOT REPORTED
Owner/operator address: ADDRESS NOT REPORTED
CITY NOT REPORTED, AK 99998
Owner/operator country: Not reported
Owner/operator telephone: (312) 555-1212
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:

U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No

Map ID	Site	Database(s)	EPA ID Number

YOUNGS AUTO SUPPLY INC (Continued) **1000315322**

Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Hazardous Waste Summary:

Waste code:	D000
Waste name:	Not Defined
Waste code:	D001
Waste name:	IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.
Violation Status:	No violations found

---

194 **CHRIST CHURCH BAPTIST** **UST** **U003762893**
12844 S HALSTED ST **N/A**
CHICAGO, IL 60643

UST:

Facility ID:	2040075
Facility Status:	EXEMPT
Facility Type:	**NONE**
Owner Name:	Christ Church Baptist
Owner Id:	U0029746
Owner Address:	12844 S Halsted St
Owner City,St,Zip:	Chicago, IL 60643
Tank Number:	1
Tank Capacity:	1000
Tank Substance:	Heating Oil
Last Used Date:	12/31/1973
OSFM First Notify Date:	Not reported
Tank Status:	**Exempt from registration**
Red Tag Issue Date:	Not reported
Install Date:	Not reported
Green Tag Decal:	**Not reported**
Green Tag Issue Date:	**Not reported**
Green Tag Expire Date:	**Not reported**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	Not reported

194
CHRIST CHURCH
12844 SOUTH HALSTED ST.
CHICAGO, IL 60628
LUST
S104530683
N/A

LUST:
Incident Num: 20000796
IL EPA Id: 0316495130
Product: Other Petro
IEMA Date: 05/01/2000
Project Manager: NOT ASSIGNED
Project Manager Phone: Not reported
Email: Not reported
PRP Name: Christ Church
PRP Contact: Rev. Lee Toussaint
PRP Address: 12844 South Halsted St.
PRP City,St,Zip: Chicago, IL 60628
PRP Phone: 7088498711
Site Classification: Not reported
Section 57.5(g) Letter: 732
Date Section 57.5(g) Letter: Not reported
Non LUST Determination Letter: Not reported
20 Report Received: Not reported
45 Report Received: Not reported
NFA/NFR Letter: Not reported
NFR Date Recorded: Not reported

194
12844 S HALSTED ST
CHICAGO, IL
SPILLS
S111907108
N/A

SPILLS:
Incident ID: 20000796
Incident Date: Not reported
Date Received: 05/01/2000
Facility Address: 12844 S HALSTED ST
Facility City: CHICAGO
PRP Name: CHRIST CHURCH
AC: Not reported

195
CIZCAR ET AL/VACANT LOT
1137-1141 VERMONT AVE
CALUMET PARK, IL 60409
CERC-NFRAP
1002886325
ILD980500144

CERC-NFRAP:
Site ID: 0500575
Federal Facility: Not a Federal Facility
NPL Status: Not on the NPL
Non NPL Status: NFRAP-Site does not qualify for the NPL based on existing information

CERCLIS-NFRAP Assessment History:
Action: DISCOVERY
Date Started: Not reported
Date Completed: 08/01/1980
Priority Level: Not reported

Action: CONSENT DECREE
Date Started: Not reported
Date Completed: 03/25/1982

Map ID	Site	Database(s)	EPA ID Number

CIZCAR ET AL/VACANT LOT (Continued) **1002886325**

Priority Level: Not reported

Action: Lodged By DOJ
Date Started: Not reported
Date Completed: 03/25/1982
Priority Level: Not reported

Action: PRELIMINARY ASSESSMENT
Date Started: Not reported
Date Completed: 02/01/1984
Priority Level: Low priority for further assessment

Action: SITE INSPECTION
Date Started: Not reported
Date Completed: 03/31/1986
Priority Level: NFRAP-Site does not qualify for the NPL based on existing information

Action: ARCHIVE SITE
Date Started: Not reported
Date Completed: 08/23/1993
Priority Level: Not reported

---

198 **TRIPLEX MARINE SERV** **UST** **U000181285**
13100 S MORGAN ST **N/A**
RIVERDALE, IL 60627

UST:
Facility ID: 2028752
Facility Status: CLOSED
Facility Type: **NONE**
Owner Name: Triplex Marine Serv
Owner Id: U0018321
Owner Address: 13100 S Morgan St
Owner City,St,Zip: Riverdale, IL 60627

Tank Number: 1
Tank Capacity: 4000
Tank Substance: Gasoline
Last Used Date: Not reported
OSFM First Notify Date: 11/19/1991
Tank Status: **Removed**
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: **Not reported**
Green Tag Issue Date: **Not reported**
Green Tag Expire Date: **Not reported**
Self Service Permit Inspection Date: **Not reported**
Self Service Permit Expire Date: **Not reported**
Fee Due: No

Map ID	Site	Database(s)	EPA ID Number
204	**RIVERDALE VILLAGE OF 130TH & HALSTED ST RIVERDALE, IL 60627**	**UST**	**U001134487 N/A**

UST:

Facility ID:	2001711
Facility Status:	CLOSED
Facility Type:	**NONE**
Owner Name:	Riverdale Village Of
Owner Id:	U0012804
Owner Address:	325 W 142nd St
Owner City,St,Zip:	Riverdale, IL 60827

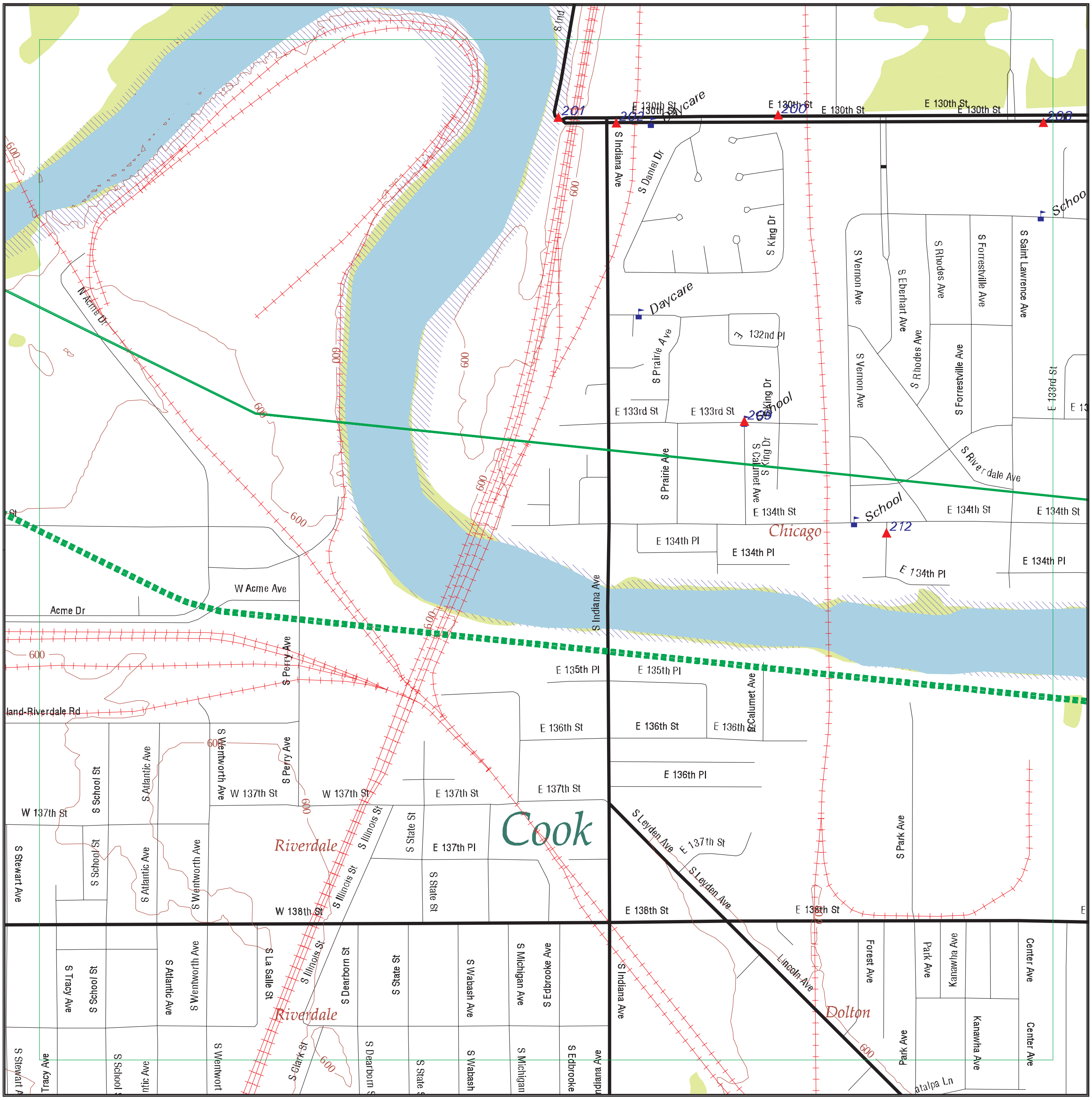
Tank Number:	1
Tank Capacity:	500
Tank Substance:	Gasoline
Last Used Date:	Not reported
OSFM First Notify Date:	1/16/1986
Tank Status:	**Removed**
Red Tag Issue Date:	Not reported
Install Date:	Not reported
Green Tag Decal:	**Not reported**
Green Tag Issue Date:	**Not reported**
Green Tag Expire Date:	**Not reported**
Self Service Permit Inspection Date:	**Not reported**
Self Service Permit Expire Date:	**Not reported**
Fee Due:	Not reported

Count: 20 records

FOCUS MAP 14 ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
BLUE ISLAND	S108113026	SEXTON	123RD ST & CALIFORNIA	60406	SWF/LF
BLUE ISLAND	1014476128	2833 W. 139TH ST - TOD 12E	2833 W 139TH SAINT VACANT LOT	60406	US BROWNFIELDS
BLUE ISLAND	1014476133	2853 W. 139TH ST - TOD SITE 12C	2853 W 139TH SAINT CITY OWNED VACANT	60406	US BROWNFIELDS
BLUE ISLAND	1014476132	2849 W. 139TH ST - TOD SITE 12B	2849 W 139TH SAINT VACANT CHURCH PROP	60406	US BROWNFIELDS
BLUE ISLAND	1014476129	2837 W. 139TH ST - TOD SITE 12F	2837 W 139TH SAINT VACANT LOT	60406	US BROWNFIELDS
BLUE ISLAND	1014476130	2841 W. 139TH ST - TOD SITE 12G	2841 W 139TH SAINT CITY OWNED VACANT	60406	US BROWNFIELDS
BLUE ISLAND	1004693546	KILSBY ROBERTS	2850 W 139TH ST	60406	RCRA-CESQG
BLUE ISLAND	1003108961	CLARK/BLUE ISLAND	CLARK REFINERY, 13100 S KEDZIE	60406	CERCLIS
BLUE ISLAND	S105015149	CLARK BLUE ISLAND REFINERY	1300 S KEDZIE	60406	SSU
CALUMET PARK	1000166385	CHICAGO COPPER AND CHEMICAL COMPANY	INTERSECTION OF WINCHESTER RD & 127 ST.	60643	CERCLIS
CHICAGO	1012172115	ROSELAND COMMUNITY	110TH PLACE AND MICHIGAN, EAST SIDE OF STATE ST.		US BROWNFIELDS
CHICAGO	S109167302		549 115TH ST		LUST, SPILLS
CHICAGO	1002886378	US SCRAP	123RD & COTTAGE GROVE	60628	CERCLIS
CHICAGO	S101467236	PENN CENTRAL	810 E 124TH ST		SSU
CHICAGO	S109366427		6700 JEFFREY BLVD		LUST, SPILLS
CHICAGO	S108891646		11900 LOOMIS		LUST, SPILLS
CHICAGO	S107926349	LAKE CALUMET CLUSTER SITE	N OF 122ND	60628	SSU
CHICAGO	1012172077	BOYCE PARK	UNION AVE BETWEEN 42ND & ROOT STREETS		US BROWNFIELDS
RIVERDALE	S103292952	RIVERDALE PLATING	6860 W 134TH ST	60827	LUST
RIVERDALE	S106121908	TWIN OUTDOOR THEATER	13701 S UNION AVE	60827	SRP

Focus Map 15


S Ind
201
202
Daycare
E 130th St
200
E 130th St
E 130th St
E 130th St
208
Schoo
S Indiana Ave
S Daniel Dr
S King Dr
S Vernon Ave
S Eberhart Ave
S Rhodes Ave
S Forrestville Ave
S Saint Lawrence Ave
Daycare
E 132nd Pl
S Prairie Ave
S King Dr
School
209
S Vernon Ave
S Rhodes Ave
S Forrestville Ave
E 133rd St
E 13
E 133rd St
E 133rd St
S Prairie Ave
S Calumet Ave
S King Dr
S Riverdale Ave
E 134th St
School
212
E 134th St
E 134th St
Chicago
E 134th Pl
E 134th Pl
E 134th Pl
E 134th Pl
N Acme Dr
600
W Acme Ave
Acme Dr
S Indiana Ave
S Perry Ave
land-Riverdale Rd
E 135th Pl
E 135th Pl
E 136th St
E 136th St
E 136th St
S Calumet Ave
E 136th Pl
S School St
S Atlantic Ave
S Wentworth Ave
S Perry Ave
W 137th St
W 137th St
W 137th St
E 137th St
E 137th St
S Illinois St
S State St
E 137th Pl
Cook
S Leyden Ave
E 137th St
S Leyden Ave
S Park Ave
S Stewart Ave
S School St
S Atlantic Ave
S Wentworth Ave
Riverdale
S Illinois St
S State St
W 138th St
E 138th St
E 138th St
E
S Tracy Ave
S School St
S Atlantic Ave
S Wentworth Ave
S La Salle St
S Illinois St
S Dearborn St
S State St
S Wabash Ave
S Michigan Ave
S Edbrooke Ave
S Indiana Ave
Lincoln Ave
Forest Ave
Park Ave
Kanawha Ave
Center Ave
Riverdale
Dolton
Park Ave
Kanawha Ave
Center Ave
S Stewart A
Tracy Ave
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ntic Ave
S Wentwort
S Clark St
S Dearborn
S State
S Wabash
S Michigan
S Edbrooke
ndiana Ave
atalpa Ln
600

EDR Environmental Data Resources Inc

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90786 CTC RLE Hazardous Materials

N

Legend

- ▨ Roads
- ▨ Major Roads
- ▨ Contour Lines
- 🟩 National Wetlands Inventory
- ▨ Waterways
- ▨ Railroads
- ▨ Study Boundary
- ▨ 100-Yr Flood Zones
- ▨ Powerlines
- ▨ Pipelines
- ▨ Fault Lines
- 🟦 Water
- ▲ Listed Sites
- ▨ Sensitive Receptors

0 1/8 1/4

Scale in Miles

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FOCUS MAP 15 SUMMARY

	Database	Total Plotted
FEDERAL RECORDS		
	Proposed NPL	0
	Delisted NPL	0
	CERCLIS	1
	CERC-NFRAP	0
	CORRACTS	0
	RCRA-TSDF	0
	RCRA-LQG	0
	RCRA-SQG	2
	RCRA-CESQG	1
	US ENG CONTROLS	0
	US INST CONTROL	0
	ERNS	1
	US BROWNFIELDS	0
STATE AND LOCAL RECORDS		
	IL SSU	0
	IL SWF/LF	0
	IL LUST	0
	IL UST	5
	WI MANIFEST	1
	IL SPILLS	0
	IL ENG CONTROLS	0
	IL INST CONTROL	0
	IL SRP	0
	IL DRYCLEANERS	0
	IL BROWNFIELDS	0
EDR PROPRIETARY RECORDS		
	Manufactured Gas Plants	0

NOTES:

Sites may be listed in more than one database

Map ID	Site	Database(s)	EPA ID Number
200	**MWRDGC METROPOLITAN WATER RECLAMATION DI** **400 E 130TH ST** **CHICAGO, IL 60628**	**RCRA-CESQG** **WI MANIFEST**	**1000131012** **ILD000870832**

RCRA-CESQG:

Date form received by agency:	03/01/1998
Facility name:	MWRDGC METROPOLITAN WATER RECLAMATION DI
Site name:	MWRDGC
Facility address:	400 E 130TH ST CHICAGO, IL 60628
EPA ID:	ILD000870832
Mailing address:	2918 E 95TH ST CHICAGO, IL 60617
Contact:	WILLIAM PAPKE
Contact address:	Not reported Not reported
Contact country:	Not reported
Contact telephone:	(312) 821-2349
Contact email:	Not reported
EPA Region:	05
Land type:	Private
Classification:	Conditionally Exempt Small Quantity Generator
Description:	Handler: generates 100 kg or less of hazardous waste per calendar month, and accumulates 1000 kg or less of hazardous waste at any time; or generates 1 kg or less of acutely hazardous waste per calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Historical Generators:

Date form received by agency:	03/01/1996
Facility name:	MWRDGC METROPOLITAN WATER RECLAMATION DI
Site name:	MWRDGC

MWRDGC METROPOLITAN WATER RECLAMATION DI (Continued) **1000131012**

Classification: Large Quantity Generator

Date form received by agency: 02/15/1996
Facility name: MWRDGC METROPOLITAN WATER RECLAMATION DI
Classification: Conditionally Exempt Small Quantity Generator

Facility Has Received Notices of Violations:
Regulation violated: SR - 722.141(a)
Area of violation: Generators - General
Date violation determined: 09/07/1999
Date achieved compliance: 12/07/1999
Violation lead agency: State
Enforcement action: VIOLATION NOTICE (VN)
Enforcement action date: 11/05/1999
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: SR - 722.141(a)
Area of violation: Generators - General
Date violation determined: 09/07/1999
Date achieved compliance: 12/07/1999
Violation lead agency: State
Enforcement action: VIOLATION NOTICE (VN)
Enforcement action date: 09/13/1999
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Evaluation Action Summary:
Evaluation date: 09/07/1999
Evaluation: NON-FINANCIAL RECORD REVIEW
Area of violation: Generators - General
Date achieved compliance: 12/07/1999
Evaluation lead agency: State

Evaluation date: 01/29/1991
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

WI MANIFEST:
Year: 10
EPA ID: ILD000870832
FID: Not reported
ACT Code: 203
ACT Status: A
ACT Code 1: 203
ACT Name: HW Generator - Very Small
Contact First Name: Not reported

MWRDGC METROPOLITAN WATER RECLAMATION DI (Continued) **1000131012**

Contact Last Name: Not reported
Contact Title: Not reported
Contact Address: Not reported
Contact State: Not reported
Contact City: Not reported
Contact Zip: Not reported
Contact Telephone: Not reported
Contact Extention: Not reported
Contact Email Address: Not reported
Shipped: -
Year: Not reported
Manifest DOC ID: Not reported
Copy Type: Not reported
Gen EPA ID: Not reported
Gen Date: Not reported
TSD Date: Not reported
TSD EPA ID: Not reported
GEN Copy Revd Date: Not reported
TSG Copy Revd Date: Not reported

Transport: -
Year: Not reported
Manifest Doc ID: Not reported
Transporter EPA ID: Not reported
Transport Order Num: Not reported
Transport Date: Not reported

Waste:
Year: Not reported
Manifest DOC ID: Not reported
Waste Page No: Not reported
Waste Line No: Not reported
Waste Code: Not reported
Waste Amount: Not reported
Unit of Measure: Not reported
Waste LBS: Not reported

Year: 09
EPA ID: ILD000870832
FID: Not reported
ACT Code: 203
ACT Status: A
ACT Code 1: 203
ACT Name: HW Generator - Very Small
Contact First Name: Not reported
Contact Last Name: Not reported
Contact Title: Not reported
Contact Address: Not reported
Contact State: Not reported
Contact City: Not reported
Contact Zip: Not reported
Contact Telephone: Not reported
Contact Extention: Not reported
Contact Email Address: Not reported
Shipped: -
Year: Not reported

MWRDGC METROPOLITAN WATER RECLAMATION DI (Continued) **1000131012**

Manifest DOC ID: Not reported
Copy Type: Not reported
Gen EPA ID: Not reported
Gen Date: Not reported
TSD Date: Not reported
TSD EPA ID: Not reported
GEN Copy Revd Date: Not reported
TSG Copy Revd Date: Not reported

Transport: -
Year: Not reported
Manifest Doc ID: Not reported
Transporter EPA ID: Not reported
Transport Order Num: Not reported
Transport Date: Not reported

Waste:
Year: Not reported
Manifest DOC ID: Not reported
Waste Page No: Not reported
Waste Line No: Not reported
Waste Code: Not reported
Waste Amount: Not reported
Unit of Measure: Not reported
Waste LBS: Not reported

Year: 08
EPA ID: ILD000870832
FID: Not reported
ACT Code: 203
ACT Status: A
ACT Code 1: 203
ACT Name: HW Generator - Very Small
Contact First Name: Not reported
Contact Last Name: Not reported
Contact Title: Not reported
Contact Address: Not reported
Contact State: Not reported
Contact City: Not reported
Contact Zip: Not reported
Contact Telephone: Not reported
Contact Extention: Not reported
Contact Email Address: Not reported
Shipped: -
Year: Not reported
Manifest DOC ID: Not reported
Copy Type: Not reported
Gen EPA ID: Not reported
Gen Date: Not reported
TSD Date: Not reported
TSD EPA ID: Not reported
GEN Copy Revd Date: Not reported
TSG Copy Revd Date: Not reported

Transport: -
Year: Not reported

MWRDGC METROPOLITAN WATER RECLAMATION DI (Continued) **1000131012**

Manifest Doc ID: Not reported
Transporter EPA ID: Not reported
Transport Order Num: Not reported
Transport Date: Not reported

Waste:
Year: Not reported
Manifest DOC ID: Not reported
Waste Page No: Not reported
Waste Line No: Not reported
Waste Code: Not reported
Waste Amount: Not reported
Unit of Measure: Not reported
Waste LBS: Not reported

Year: 07
EPA ID: ILD000870832
FID: 0
ACT Code: 203
ACT Status: A
ACT Code 1: 203
ACT Name: HW Generator - Very Small
Contact First Name: Not reported
Contact Last Name: Not reported
Contact Title: Not reported
Contact Address: Not reported
Contact State: Not reported
Contact City: Not reported
Contact Zip: 0
Contact Telephone: 0
Contact Extention: Not reported
Contact Email Address: Not reported
Shipped: -
Year: Not reported
Manifest DOC ID: Not reported
Copy Type: Not reported
Gen EPA ID: Not reported
Gen Date: Not reported
TSD Date: Not reported
TSD EPA ID: Not reported
GEN Copy Revd Date: Not reported
TSG Copy Revd Date: Not reported

Transport: -
Year: Not reported
Manifest Doc ID: Not reported
Transporter EPA ID: Not reported
Transport Order Num: Not reported
Transport Date: Not reported

Waste:
Year: Not reported
Manifest DOC ID: Not reported
Waste Page No: Not reported
Waste Line No: Not reported

MWRDGC METROPOLITAN WATER RECLAMATION DI (Continued) **1000131012**

Waste Code: Not reported
Waste Amount: Not reported
Unit of Measure: Not reported
Waste LBS: Not reported

Year: 06
EPA ID: ILD000870832
FID: 0
ACT Code: 203
ACT Status: A
ACT Code 1: 203
ACT Name: HW Generator - Very Small
Contact First Name: Not reported
Contact Last Name: Not reported
Contact Title: Not reported
Contact Address: Not reported
Contact State: Not reported
Contact City: Not reported
Contact Zip: Not reported
Contact Telephone: Not reported
Contact Extention: Not reported
Contact Email Address: Not reported
Shipped: -
Year: Not reported
Manifest DOC ID: Not reported
Copy Type: Not reported
Gen EPA ID: Not reported
Gen Date: Not reported
TSD Date: Not reported
TSD EPA ID: Not reported
GEN Copy Revd Date: Not reported
TSG Copy Revd Date: Not reported

Transport: -
Year: Not reported
Manifest Doc ID: Not reported
Transporter EPA ID: Not reported
Transport Order Num: Not reported
Transport Date: Not reported

Waste:
Year: Not reported
Manifest DOC ID: Not reported
Waste Page No: Not reported
Waste Line No: Not reported
Waste Code: Not reported
Waste Amount: Not reported
Unit of Measure: Not reported
Waste LBS: Not reported

Year: 05
EPA ID: ILD000870832
FID: 0
ACT Code: 203
ACT Status: A

MWRDGC METROPOLITAN WATER RECLAMATION DI (Continued) **1000131012**

ACT Code 1:	203
ACT Name:	HW Generator - Very Small
Contact First Name:	Not reported
Contact Last Name:	Not reported
Contact Title:	Not reported
Contact Address:	Not reported
Contact State:	Not reported
Contact City:	Not reported
Contact Zip:	0
Contact Telephone:	0
Contact Extention:	Not reported
Contact Email Address:	Not reported
Shipped:	-
Year:	Not reported
Manifest DOC ID:	Not reported
Copy Type:	Not reported
Gen EPA ID:	Not reported
Gen Date:	Not reported
TSD Date:	Not reported
TSD EPA ID:	Not reported
GEN Copy Revd Date:	Not reported
TSG Copy Revd Date:	Not reported

Transport:	-
Year:	Not reported
Manifest Doc ID:	Not reported
Transporter EPA ID:	Not reported
Transport Order Num:	Not reported
Transport Date:	Not reported

Waste:

Year:	Not reported
Manifest DOC ID:	Not reported
Waste Page No:	Not reported
Waste Line No:	Not reported
Waste Code:	Not reported
Waste Amount:	Not reported
Unit of Measure:	Not reported
Waste LBS:	Not reported

---

200 **CALUMET WATER RECLAMATION PLANT** **IL UST** **U001142814**
400 E. 130TH STREET **N/A**
CHICAGO, IL 60628

UST:

Facility ID:	2018929
Facility Status:	ACTIVE
Facility Type:	**CITY / TOWN**
Owner Name:	Metropolitan Water Reclamation District
Owner Id:	U0010188
Owner Address:	100 East Erie Street
Owner City,St,Zip:	Chicago, IL 60611

Tank Number:	1
Tank Capacity:	15000
Tank Substance:	Diesel Fuel

CALUMET WATER RECLAMATION PLANT (Continued) **U001142814**

Last Used Date: Not reported
OSFM First Notify Date: 1/7/1987
Tank Status: Currently in use
Red Tag Issue Date: Not reported
Install Date: 1/1/1979
Green Tag Decal: L003680
Green Tag Issue Date: 3/11/2010
Green Tag Expire Date: 12/31/2012
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: $0.00

Tank Number: 2
Tank Capacity: 6000
Tank Substance: Diesel Fuel
Last Used Date: Not reported
OSFM First Notify Date: 1/7/1987
Tank Status: Currently in use
Red Tag Issue Date: Not reported
Install Date: 1/1/1976
Green Tag Decal: L003680
Green Tag Issue Date: 3/11/2010
Green Tag Expire Date: 12/31/2012
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: $0.00

Tank Number: 3
Tank Capacity: 6000
Tank Substance: Gasoline
Last Used Date: Not reported
OSFM First Notify Date: 1/7/1987
Tank Status: Currently in use
Red Tag Issue Date: Not reported
Install Date: 1/1/1982
Green Tag Decal: L003680
Green Tag Issue Date: 3/11/2010
Green Tag Expire Date: 12/31/2012
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: $0.00

---

201 **COOK COUNTY LUMBER CO** **IL UST** **U001142356**
200 E 130TH ST **N/A**
CHICAGO, IL 60627

UST:
Facility ID: 2003404
Facility Status: CLOSED
Facility Type: NONE
Owner Name: Cook County Lumber Co
Owner Id: U0003394
Owner Address: 200 E 130Th St
Owner City,St,Zip: Chicago, IL 60627

Tank Number: 1

COOK COUNTY LUMBER CO (Continued) **U001142356**

Tank Capacity: 1000
Tank Substance: Gasoline
Last Used Date: Not reported
OSFM First Notify Date: 3/18/1986
Tank Status: Removed
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

---

202 **INTERNATIONAL TRANSP SER INC** **IL UST** **U000160789**
130TH & INDIANA AVE **N/A**
RIVERDALE, IL 60627

UST:
Facility ID: 2001838
Facility Status: CLOSED
Facility Type: NONE
Owner Name: International Transp Ser Inc
Owner Id: U0007571
Owner Address: 3300 Ne Expressway Ste 1-M
Owner City,St,Zip: Atlanta, GA 30341

Tank Number: 1
Tank Capacity: 10000
Tank Substance: Diesel Fuel
Last Used Date: Not reported
OSFM First Notify Date: 2/13/1986
Tank Status: Removed
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

---

202 **PULLMAN FACTORY** **CERCLIS** **1000289828**
130TH ST & INDIANA **ILD981959208**
CHICAGO, IL 60643

CERCLIS:
Site ID: 0501149
EPA ID: ILD981959208
Facility County: COOK
Short Name: PULLMAN FACTORY
Congressional District: 02
IFMS ID: B5JE
SMSA Number: 1600
USGC Hydro Unit: 07120003
Federal Facility: Not a Federal Facility

PULLMAN FACTORY (Continued) **1000289828**

DMNSN Number: Not reported
Site Orphan Flag: N
RCRA ID: Not reported
USGS Quadrangle: Not reported
Site Init By Prog: Not reported
NFRAP Flag: Not reported
Parent ID: Not reported
RST Code: Not reported
EPA Region: 05
Classification: Not reported
Site Settings Code: Not reported
NPL Status: Not on the NPL
DMNSN Unit Code: Not reported
RBRAC Code: Not reported
RResp Fed Agency Code: Not reported
Non NPL Status: HRS Start Needed
Non NPL Status Date: 20000120
Site Fips Code: 17031
CC Concurrence Date: Not reported
CC Concurrence FY: Not reported
Alias EPA ID: Not reported
Site FUDS Flag: Not reported

Alias Comments: Not reported
Site Description: Not reported

CERCLIS Assessment History:

Action Code: 001
Action: DISCOVERY
Date Started: Not reported
Date Completed: 06/17/1987
Priority Level: Not reported
Operable Unit: SITEWIDE
Primary Responsibility: EPA Fund-Financed
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

Action Code: 001
Action: PRELIMINARY ASSESSMENT
Date Started: Not reported
Date Completed: 08/14/1987
Priority Level: Low priority for further assessment
Operable Unit: SITEWIDE
Primary Responsibility: State, Fund Financed
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

Action Code: 001
Action: SITE INSPECTION
Date Started: Not reported
Date Completed: 10/19/1990
Priority Level: Higher priority for further assessment
Operable Unit: SITEWIDE

Map ID	Site	Database(s)	EPA ID Number
	PULLMAN FACTORY (Continued)		**1000289828**

Primary Responsibility: State, Fund Financed
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

Action Code: 001
Action: EXPANDED SITE INSPECTION
Date Started: 12/21/1993
Date Completed: 01/13/1995
Priority Level: Recommended for HRS Scoring
Operable Unit: SITEWIDE
Primary Responsibility: EPA Fund-Financed
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

Map ID	Site	Database(s)	EPA ID Number
202	**130TH CITGO** **13002 S INDIANA** **CHICAGO, IL 60627**	**IL UST**	**U003971940** **N/A**

UST:

Facility ID: 2042131
Facility Status: NOT INSTALLED
Facility Type: NONE
Owner Name: Sibi Kabalimato
Owner Id: U0031927
Owner Address: 1519 W 81st St
Owner City,St,Zip: Chicago, IL 60620

Tank Number: 1
Tank Capacity: 8000
Tank Substance: Gasoline
Last Used Date: Not reported
OSFM First Notify Date: Not reported
Tank Status: Not Installed
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

Tank Number: 2
Tank Capacity: 10000
Tank Substance: Gasoline
Last Used Date: Not reported
OSFM First Notify Date: Not reported
Tank Status: Not Installed
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported

130TH CITGO (Continued) **U003971940**

Self Service Permit Inspection Date: **Not reported**
Self Service Permit Expire Date: **Not reported**
Fee Due: Not reported

---

202 **SMITH TIRE SERVICE** **RCRA-SQG** **1001024401**
13004 S INDIANA **ILR000003749**
CHICAGO, IL 60627

RCRA-SQG:
Date form received by agency: 12/24/2009
Facility name: SMITH TIRE SERVICE
Facility address: 13004 S INDIANA
CHICAGO, IL 60627
EPA ID: ILR000003749
Contact: WILLIE SMITH
Contact address: 520 W 127TH PL
CHICAGO, IL 60627
Contact country: US
Contact telephone: (312) 468-4134
Contact email: Not reported
EPA Region: 05
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:
Owner/operator name: SMITH WILLIE
Owner/operator address: 520 W 127TH PL
CHICAGO, IL 60627
Owner/operator country: Not reported
Owner/operator telephone: (312) 568-9847
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Map ID	Site	Database(s)	EPA ID Number

SMITH TIRE SERVICE (Continued) **1001024401**

Historical Generators:

Date form received by agency:	04/28/1995
Facility name:	SMITH TIRE SERVICE
Classification:	Small Quantity Generator

Hazardous Waste Summary:

Waste code:	D001
Waste name:	IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.
Waste code:	D001
Waste name:	IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.
Violation Status:	No violations found

---

203 **ERNS** **98467878**
N/A

633 EAST 130TH ST.
DOLTON, IL 60419

Click this hyperlink while viewing on your computer to access additional ERNS detail in the EDR Site Report.

---

209 **RCRA-SQG** **1001123582**
ILR000032862

DUBOIS
330 E 133RD ST
CHICAGO, IL 60627

RCRA-SQG:

Date form received by agency:	01/08/1997
Facility name:	DUBOIS
Facility address:	330 E 133RD ST CHICAGO, IL 60627
EPA ID:	ILR000032862
Contact:	JOYCE JOHNSON
Contact address:	330 E 133RD ST CHICAGO, IL 60627
Contact country:	US
Contact telephone:	(773) 535-5582
Contact email:	Not reported
EPA Region:	05
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous

Map ID	Site	Database(s)	EPA ID Number

DUBOIS (Continued) **1001123582**

waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	CHICAGO PUBLIC SCHOOLS
Owner/operator address:	1819 W PERSHING RD CHICAGO, IL 60609
Owner/operator country:	Not reported
Owner/operator telephone:	(773) 535-7039
Legal status:	District
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Hazardous Waste Summary:

Waste code:	D008
Waste name:	LEAD
Violation Status:	No violations found

---

212 **SKIPPER'S MARINA** **IL UST** **U000865873**
13421 S VERNON **N/A**
CHICAGO, IL 60827

UST:

Facility ID:	2007724
Facility Status:	ACTIVE
Facility Type:	**MARINA**
Owner Name:	Earl Strombeck
Owner Id:	U0014025
Owner Address:	13421 S Vernon
Owner City,St,Zip:	Chicago, IL 608271806
Tank Number:	1
Tank Capacity:	1000
Tank Substance:	Gasoline
Last Used Date:	1/1/1997
OSFM First Notify Date:	4/26/1986
Tank Status:	**Removed**
Red Tag Issue Date:	Not reported

SKIPPER'S MARINA (Continued) **U000865873**

Install Date: Not reported
Green Tag Decal: K003801
Green Tag Issue Date: 9/1/2009
Green Tag Expire Date: 12/31/2011
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: $0.00

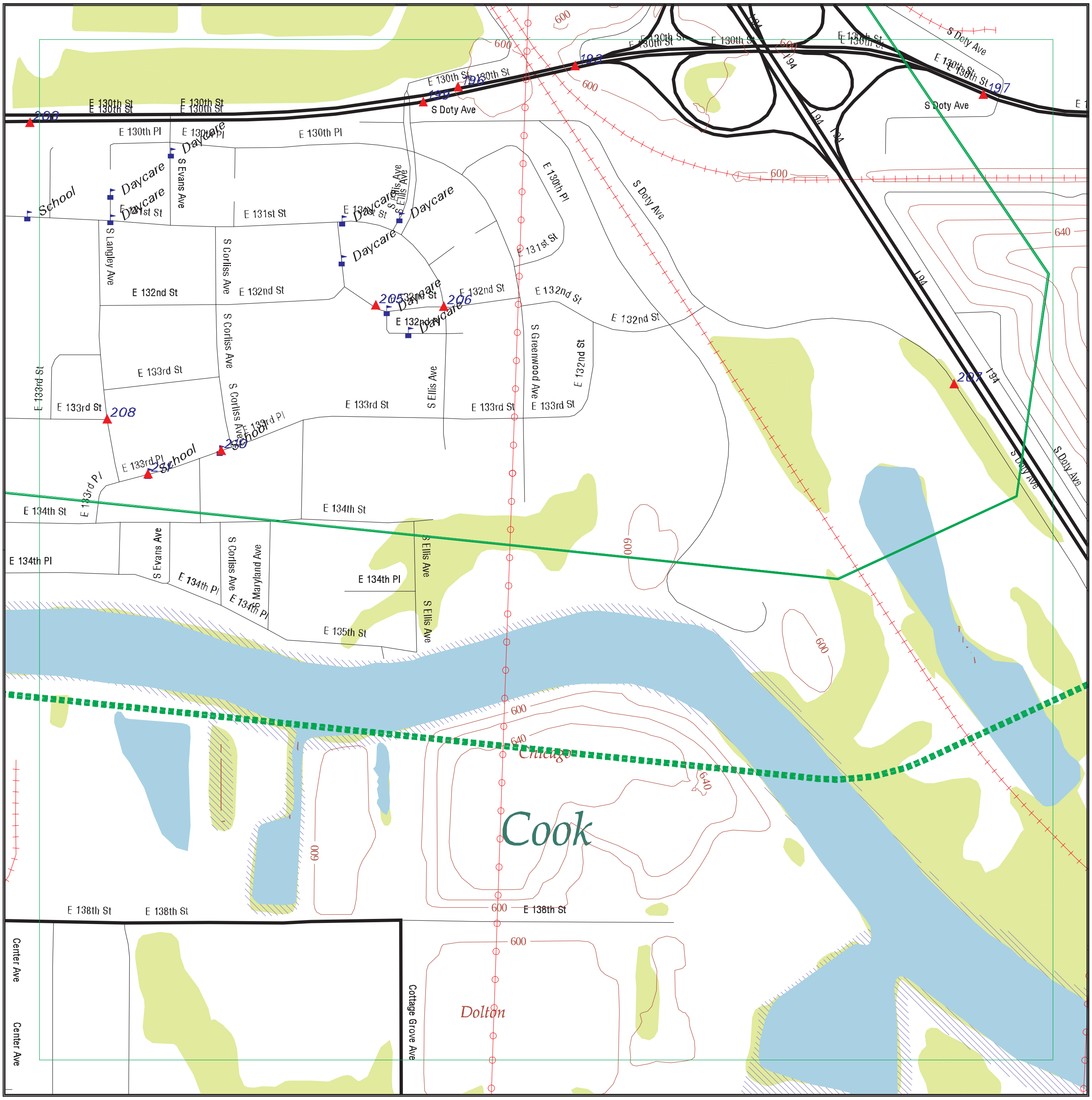
Tank Number: 2
Tank Capacity: 6000
Tank Substance: Gasoline
Last Used Date: Not reported
OSFM First Notify Date: 4/26/1986
Tank Status: Currently in use
Red Tag Issue Date: Not reported
Install Date: 6/30/1975
Green Tag Decal: K003801
Green Tag Issue Date: 9/1/2009
Green Tag Expire Date: 12/31/2011
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: $0.00

Count: 11 records

FOCUS MAP 15 ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CHICAGO	1012172115	ROSELAND COMMUNITY	110TH PLACE AND MICHIGAN, EAST SIDE OF STATE ST.		US BROWNFIELDS
CHICAGO	S109167302		549 115TH ST		IL LUST, IL SPILLS
CHICAGO	1002886378	US SCRAP	123RD & COTTAGE GROVE	60628	CERCLIS
CHICAGO	S101467236	PENN CENTRAL	810 E 124TH ST		IL SSU
CHICAGO	S109366427		6700 JEFFREY BLVD		IL LUST, IL SPILLS
CHICAGO	S108891646		11900 LOOMIS		IL LUST, IL SPILLS
CHICAGO	S107926349	LAKE CALUMET CLUSTER SITE	N OF 122ND	60628	IL SSU
DOLTON	1012209907	DOLTON HAZMAT	DOLTON AVE EXIT ON THE BISHOP FORD	60419	CERCLIS
RIVERDALE	S103690079	RIVERDALE, VILLAGE OF	130TH & HALSTED ST	60827	IL LUST
RIVERDALE	S103292952	RIVERDALE PLATING	6860 W 134TH ST	60827	IL LUST
RIVERDALE	S105427839	PM AG PROD. INC.	3550 S INDIANA AVE	60827	IL LUST

Focus Map 16


E 130th St
E 130th Pl
E 130th St
S Doty Ave
I 94
198
196
199
197
200
600
640
School
Daycare
S Evans Ave
E 131st St
S Langley Ave
S Corliss Ave
S Ellis Ave
E 132nd St
205
206
E 133rd St
E 133rd Pl
208
210
211
207
S Greenwood Ave
E 134th St
E 134th Pl
S Maryland Ave
E 135th St
Chicago
Cook
E 138th St
Center Ave
Cottage Grove Ave
Dolton

EDR Environmental Data Resources Inc

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90786 CTC RLE Hazardous Materials

Legend

Roads

Major Roads

Contour Lines

National Wetlands Inventory

Waterways

Railroads

Study Boundary

100-Yr Flood Zones

Powerlines

Pipelines

Fault Lines

Water

Listed Sites

Sensitive Receptors

N

0 1/8 1/4

Scale in Miles

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FOCUS MAP 16 SUMMARY

	Database	Total Plotted
FEDERAL RECORDS		
	Proposed NPL	0
	Delisted NPL	0
	CERCLIS	0
	CERC-NFRAP	1
	CORRACTS	0
	RCRA-TSDF	0
	RCRA-LQG	0
	RCRA-SQG	6
	RCRA-CESQG	3
	US ENG CONTROLS	0
	US INST CONTROL	0
	ERNS	3
	US BROWNFIELDS	0
STATE AND LOCAL RECORDS		
	SSU	0
	SWF/LF	0
	LUST	1
	UST	3
	SPILLS	0
	ENG CONTROLS	0
	INST CONTROL	0
	SRP	1
	DRYCLEANERS	0
	BROWNFIELDS	0
EDR PROPRIETARY RECORDS		
	Manufactured Gas Plants	0

NOTES:

Sites may be listed in more than one database

Map ID	Site	Database(s)	EPA ID Number
193	**CALUMET NU-EARTH DIST CENTER** **NORTH 130TH ST & DOTY AVE** **CHICAGO, IL 60628**	**CERC-NFRAP**	**1003870307** **ILD980903686**

CERC-NFRAP:
Site ID: 0500927
Federal Facility: Not a Federal Facility
NPL Status: Not on the NPL
Non NPL Status: NFRAP-Site does not qualify for the NPL based on existing information

CERCLIS-NFRAP Assessment History:
Action: DISCOVERY
Date Started: Not reported
Date Completed: 12/01/1984
Priority Level: Not reported

Action: PRELIMINARY ASSESSMENT
Date Started: Not reported
Date Completed: 12/01/1984
Priority Level: Low priority for further assessment

Action: SITE INSPECTION
Date Started: Not reported
Date Completed: 09/20/1985
Priority Level: NFRAP-Site does not qualify for the NPL based on existing information

Action: HAZARD RANKING SYSTEM PACKAGE
Date Started: Not reported
Date Completed: 12/20/1985
Priority Level: NFRAP-Site does not qualify for the NPL based on existing information

Action: ARCHIVE SITE
Date Started: Not reported
Date Completed: 10/31/1991
Priority Level: Not reported

Map ID	Site	Database(s)	EPA ID Number
196	**CHICAGO, CITY OF** **1100 E 130TH PL** **CHICAGO, IL 60628**	**RCRA-SQG**	**1006930428** **ILR000122952**

RCRA-SQG:
Date form received by agency: 07/31/2003
Facility name: CHICAGO, CITY OF
Facility address: 1100 E 130TH PL
CHICAGO, IL 60628
EPA ID: ILR000122952
Mailing address: 30 N LASALLE 25TH FL
CHICAGO, IL 60602
Contact: TERRY SHEAHAN
Contact address: Not reported
Not reported
Contact country: Not reported
Contact telephone: (312) 742-4806
Contact email: Not reported
EPA Region: 05
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous

CHICAGO, CITY OF (Continued) **1006930428**

waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name: CITY OF CHICAGO
Owner/operator address: Not reported
Not reported
Owner/operator country: Not reported
Owner/operator telephone: Not reported
Legal status: Municipal
Owner/Operator Type: Owner
Owner/Op start date: 07/31/2003
Owner/Op end date: Not reported

Owner/operator name: CITY OF CHICAGO
Owner/operator address: Not reported
Not reported
Owner/operator country: Not reported
Owner/operator telephone: Not reported
Legal status: Municipal
Owner/Operator Type: Operator
Owner/Op start date: 07/31/2003
Owner/Op end date: Not reported

Handler Activities Summary:

U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Hazardous Waste Summary:

Waste code: D001
Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Violation Status: No violations found

197 **MOBILE STORAGE GROUP** **RCRA-SQG** **1000907064**
1465 E 130TH ST **IL0000366484**
CHICAGO, IL 60633

RCRA-SQG:
Date form received by agency: 06/14/1994
Facility name: THREE QS AUTO INC
Facility address: 1465 E 130TH ST
CHICAGO, IL 60633
EPA ID: IL0000366484
Contact: WARREN QUARCINI
Contact address: 1465 E 130TH ST
CHICAGO, IL 60633
Contact country: US
Contact telephone: (312) 646-1600
Contact email: Not reported
EPA Region: 05
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:
Owner/operator name: THREE QS AUTO INC
Owner/operator address: 1465 E 130TH ST
CHICAGO, IL 60633
Owner/operator country: Not reported
Owner/operator telephone: (312) 646-1600
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Hazardous Waste Summary:
Waste code: D000
Waste name: Not Defined

Waste code: F002
Waste name: THE FOLLOWING SPENT HALOGENATED SOLVENTS: TETRACHLOROETHYLENE,

Map ID	Site	Database(s)	EPA ID Number
	MOBILE STORAGE GROUP (Continued)		**1000907064**

METHYLENE CHLORIDE, TRICHLOROETHYLENE, 1,1,1-TRICHLOROETHANE, CHLOROBENZENE, 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE, ORTHO-DICHLOROBENZENE, TRICHLOROFLUOROMETHANE, AND 1,1,2-TRICHLOROETHANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE LISTED IN F001, F004, OR F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Violation Status: No violations found

Map ID	Site	Database(s)	EPA ID Number
199	**LAND & LAKES TRANSFER STATION** **1258-1300 E 130TH ST** **CHICAGO, IL 60827**	**RCRA-SQG**	**1004697781** **ILR000081000**

RCRA-SQG:

Date form received by agency:	09/01/2000
Facility name:	LAND & LAKES TRANSFER STATION
Facility address:	1258-1300 E 130TH ST CHICAGO, IL 60827
EPA ID:	ILR000081000
Mailing address:	123 N NORTHWEST HWY PARK RIDGE, IL 60068
Contact:	WM KARPAS
Contact address:	123 N NORTHWEST HWY PARK RIDGE, IL 60068
Contact country:	US
Contact telephone:	(847) 825-5000
Contact email:	Not reported
EPA Region:	05
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	MARINA DEVELOPMENTS INC
Owner/operator address:	123 N NORTHWEST HWY PARK RIDGE, IL 60068
Owner/operator country:	Not reported
Owner/operator telephone:	(847) 825-5000
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No

LAND & LAKES TRANSFER STATION (Continued) **1004697781**

Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Hazardous Waste Summary:
Waste code: D000
Waste name: Not Defined

Waste code: D010
Waste name: SELENIUM

Waste code: D018
Waste name: BENZENE

Violation Status: No violations found

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203 **ERNS** **98467878**
633 EAST 130TH ST. **N/A**
DOLTON, IL 60419

Click this hyperlink while viewing on your computer to access additional ERNS detail in the EDR Site Report.

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205 **CHICAGO HOUSING AUTHORITY** **LUST** **S108649962**
940 EAST 132ND STREET **SRP** **N/A**
CHICAGO, IL 60627

LUST:
Incident Num: 20070682
IL EPA Id: 0316545003
Product: Gasoline
IEMA Date: 05/21/2007
Project Manager: Jones
Project Manager Phone: (217) 524-1253
Email: Steve.Jones@illinois.gov
PRP Name: Not reported
PRP Contact: Not reported
PRP Address: Not reported
PRP City,St,Zip: Not reported
PRP Phone: Not reported
Site Classification: Not reported
Section 57.5(g) Letter: 734
Date Section 57.5(g) Letter: Not reported
Non LUST Determination Letter: Not reported
20 Report Received: 07/12/2007
45 Report Received: 08/08/2007
NFA/NFR Letter: 09/10/2007
NFR Date Recorded: 10/29/2007

SRP:
IL EPA Id: 0316545003

Map ID	Site	Database(s)	EPA ID Number
	CHICAGO HOUSING AUTHORITY (Continued)		**S108649962**

US EPA Id:	ILD981098395
Longitude:	-87.59881
Latitude:	41.65668
Contact Name:	John Gerut
Contact Address:	60 East Van Buren Street
Contact Address2:	13th Floor
Contact City,St,Zip:	Chicago, IL 60605-
Contact Phone:	(312) 913-7586
Date Enrolled:	11/23/2011
Point Of Contact:	Ala E. Sassila, P.E.
Consultant Company:	GSG Consultants, Inc.
Consultant Address:	855 West Adams Street
Consultant Address2:	Suite 200
Consultant City,St,Zip:	Chicago, IL 60607-
Consultant Phone:	(312) 733-6262
Proj Mgr Assigned:	Smith
Sec. 4 Letter Date:	Not reported
NFR Recorded:	Not reported
Active:	True
Total Acres:	2.589
No Further Remediation Letter Dt:	Not reported
Remediation Applicant Co:	Chicago Housing Authority
Remediation Applicant Title:	Mr.
Remediation Applicant Name:	Not reported
Remediation Applicant Company:	Not reported
Remediation Applicant Address:	Not reported
Remediation Applicant Address 2:	Not reported
Remediation Applicant City,St,Zip:	Not reported
Illinois EPA:	Not reported
Site Name:	Not reported
NFR Letter:	Not reported
NFR Letter Date Recorded:	Not reported
Site Type:	Not reported
Comprehensive/Focused:	Not reported
Institutional Controls:	Not reported
Barrier:	Not reported
Worker Caution:	Not reported
Acres:	Not reported

Map ID	Site	Database(s)	EPA ID Number
205	**MAINTENANCE BUILDING** **940 E. 132ND STREET** **CHICAGO, IL 60661**	**UST**	**U004107042** **N/A**

UST:

Facility ID:	2043650
Facility Status:	EXEMPT
Facility Type:	**NONE**
Owner Name:	Chicago Housing Authority
Owner Id:	U0002876
Owner Address:	60 East Van Buren, 13th Floor
Owner City,St,Zip:	Chicago, IL 60605
Tank Number:	1
Tank Capacity:	1000
Tank Substance:	Gasoline
Last Used Date:	12/31/1973
OSFM First Notify Date:	Not reported

MAINTENANCE BUILDING (Continued) **U004107042**

Tank Status: Exempt from registration
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

205
CARVER PARK NATATORIUM
939 E 132ND ST
CHICAGO, IL 60627
UST
U001142250
N/A

UST:
Facility ID: 2030903
Facility Status: CLOSED
Facility Type: OTHER SPECIAL SERVICE DISTRICT
Owner Name: Chicago Park District
Owner Id: U0002888
Owner Address: 541 North Fairbanks Court
Owner City,St,Zip: Chicago, IL 60611

Tank Number: 1
Tank Capacity: 5000
Tank Substance: Heating Oil
Last Used Date: 10/1/1974
OSFM First Notify Date: 7/1/1992
Tank Status: Abandoned in place
Red Tag Issue Date: Not reported
Install Date: 1/1/1956
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

205
CARVER PARK
939 E 132ND ST
CHICAGO, IL 60627
RCRA-CESQG
1010563392
ILR000148049

RCRA-CESQG:
Date form received by agency: 07/20/2007
Facility name: CARVER PARK
Facility address: 939 E 132ND ST
CHICAGO, IL 60627
EPA ID: ILR000148049
Mailing address: 425 E MCFETRIDGE
CHICAGO, IL 60605
Contact: LEEANN THOMAS
Contact address: Not reported
Not reported
Contact country: Not reported
Contact telephone: (312) 742-4287
Contact email: Not reported

CARVER PARK (Continued) **1010563392**

EPA Region: 05
Classification: Conditionally Exempt Small Quantity Generator
Description: Handler: generates 100 kg or less of hazardous waste per calendar month, and accumulates 1000 kg or less of hazardous waste at any time; or generates 1 kg or less of acutely hazardous waste per calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste

Owner/Operator Summary:
Owner/operator name: CHICAGO PARK DISTRICT
Owner/operator address: Not reported
Not reported
Owner/operator country: Not reported
Owner/operator telephone: Not reported
Legal status: Municipal
Owner/Operator Type: Owner
Owner/Op start date: 07/20/2007
Owner/Op end date: Not reported

Owner/operator name: CHICAGO PARK DISTRICT
Owner/operator address: Not reported
Not reported
Owner/operator country: Not reported
Owner/operator telephone: Not reported
Legal status: Municipal
Owner/Operator Type: Operator
Owner/Op start date: 07/20/2007
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

CARVER PARK (Continued) **1010563392**

Hazardous Waste Summary:
Waste code: D008
Waste name: LEAD

Violation Status: No violations found

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205 **ERNS** **2004710762**
941 E 132ND STREET **N/A**
CHICAGO, IL

Click this hyperlink while viewing on your computer to access additional ERNS detail in the EDR Site Report.

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205 **ALTGELD GARDENS** **RCRA-CESQG** **1004697962**
977 E 132ND STREET **ILR000101980**
CHICAGO, IL 60627

RCRA-CESQG:
Date form received by agency: 12/01/2000
Facility name: ALTGELD GARDENS
Facility address: 977 E 132ND STREET
CHICAGO, IL 60627
EPA ID: ILR000101980
Mailing address: 19156 S 85TH PLACE
MOIENA, IL 60448
Contact: THOOMAS CONNELLY
Contact address: 19156 S 85TH PLACE
MOIENA, IL 60448
Contact country: US
Contact telephone: (815) 469-7007
Contact email: Not reported
EPA Region: 05
Classification: Conditionally Exempt Small Quantity Generator
Description: Handler: generates 100 kg or less of hazardous waste per calendar month, and accumulates 1000 kg or less of hazardous waste at any time; or generates 1 kg or less of acutely hazardous waste per calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste

Owner/Operator Summary:
Owner/operator name: CHICAGO HOUSING AUTHORITY
Owner/operator address: 626 W JACKSON BLVD
CHICAGO, IL 60606
Owner/operator country: Not reported
Owner/operator telephone: (312) 567-7775

ALTGELD GARDENS (Continued) **1004697962**

Legal status:	State
Owner/Operator Type:	Owner
Owner/Op start date:	01/01/0001
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Hazardous Waste Summary:

Waste code:	D008
Waste name:	LEAD
Waste code:	D009
Waste name:	MERCURY
Violation Status:	No violations found

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206 **ERNS** **99618837**
N/A

13201 SOUTH ELLIS
CHICAGO, IL

Click this hyperlink while viewing on your computer to access additional ERNS detail in the EDR Site Report.

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207 **RCRA-SQG** **1001116670**
ILR000026955

CARVER MILITARY ACADEMY
13100 S DOTY AVE
CHICAGO, IL 60827

RCRA-SQG:

Date form received by agency:	07/05/2000
Facility name:	CARVER MILITARY ACADEMY
Facility address:	13100 S DOTY AVE CHICAGO, IL 608271516
EPA ID:	ILR000026955
Contact:	KAREN RAYMOND
Contact address:	13100 S DOTY AVE CHICAGO, IL 608271516
Contact country:	US
Contact telephone:	(773) 535-5250
Contact email:	Not reported

Map ID	Site	Database(s)	EPA ID Number
	CARVER MILITARY ACADEMY (Continued)		**1001116670**

EPA Region:	05
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	CHICAGO PUBLIC SCHOOLS
Owner/operator address:	13100 S DOTY AVE CHICAGO, IL 60827
Owner/operator country:	Not reported
Owner/operator telephone:	(773) 535-5250
Legal status:	District
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Hazardous Waste Summary:

Waste code:	D001
Waste name:	IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.
Waste code:	D002
Waste name:	A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.
Waste code:	D003

CARVER MILITARY ACADEMY (Continued) **1001116670**

Waste name: A MATERIAL IS CONSIDERED TO BE A REACTIVE HAZARDOUS WASTE IF IT IS NORMALLY UNSTABLE, REACTS VIOLENTLY WITH WATER, GENERATES TOXIC GASES WHEN EXPOSED TO WATER OR CORROSIVE MATERIALS, OR IF IT IS CAPABLE OF DETONATION OR EXPLOSION WHEN EXPOSED TO HEAT OR A FLAME. ONE EXAMPLE OF SUCH WASTE WOULD BY WASTE GUNPOWDER.

Waste code: D004
Waste name: ARSENIC

Waste code: D007
Waste name: CHROMIUM

Waste code: D009
Waste name: MERCURY

Waste code: F002
Waste name: THE FOLLOWING SPENT HALOGENATED SOLVENTS: TETRACHLOROETHYLENE, METHYLENE CHLORIDE, TRICHLOROETHYLENE, 1,1,1-TRICHLOROETHANE, CHLOROBENZENE, 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE, ORTHO-DICHLOROBENZENE, TRICHLOROFLUOROMETHANE, AND 1,1,2-TRICHLOROETHANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE LISTED IN F001, F004, OR F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste code: F005
Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste code: P119
Waste name: AMMONIUM VANADATE

Waste code: U052
Waste name: CRESOL (CRESYLIC ACID)

Waste code: U112
Waste name: ACETIC ACID ETHYL ESTER (I)

Waste code: U122
Waste name: FORMALDEHYDE

Waste code: U123
Waste name: FORMIC ACID (C,T)

Waste code: U154
Waste name: METHANOL (I)

Waste code: U196
Waste name: PYRIDINE

Waste code: U220

CARVER MILITARY ACADEMY (Continued) **1001116670**

Waste name: BENZENE, METHYL-

Waste code: U228
Waste name: ETHENE, TRICHLORO-

Violation Status: No violations found

208
SCHOOL / CHURCH
13300 S. LANGLEY
CHICAGO, IL 60627
UST
U004138018
N/A

UST:
Facility ID: 2044351
Facility Status: EXEMPT
Facility Type: PRIVATE INSTITUTION
Owner Name: Our Lady of the Garden
Owner Id: U0035305
Owner Address: 13300 S. Langley
Owner City,St,Zip: Chicago, IL 60827

Tank Number: 1
Tank Capacity: 3000
Tank Substance: Heating Oil
Last Used Date: 12/31/1973
OSFM First Notify Date: Not reported
Tank Status: Exempt from registration
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date:Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

210
WHEATLEY PHYLLIS CENTER
902 E 133RD PL
CHICAGO, IL 60627
RCRA-CESQG
1004696979
ILR000061234

RCRA-CESQG:
Date form received by agency:02/08/1999
Facility name: WHEATLEY PHYLLIS CENTER
Facility address: 902 E 133RD PL
CHICAGO, IL 60627
EPA ID: ILR000061234
Mailing address: 8501 W 191ST ST BOX 10
MOKENA, IL 60448
Contact: THOMAS CONNELLY
Contact address: 8501 W 191ST ST BOX 10
MOKENA, IL 60448
Contact country: US
Contact telephone: (708) 923-0202
Contact email: Not reported
EPA Region: 05
Classification: Conditionally Exempt Small Quantity Generator
Description: Handler: generates 100 kg or less of hazardous waste per calendar month, and accumulates 1000 kg or less of hazardous waste at any time;

WHEATLEY PHYLLIS CENTER (Continued) **1004696979**

or generates 1 kg or less of acutely hazardous waste per calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste

Owner/Operator Summary:

Owner/operator name:	CHGO PUBLIC SCHOOLS 6WW
Owner/operator address:	1819 W PERSHING RD CHICAGO, IL 60609
Owner/operator country:	Not reported
Owner/operator telephone:	(773) 535-7038
Legal status:	District
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Hazardous Waste Summary:

Waste code:	D006
Waste name:	CADMIUM
Waste code:	D008
Waste name:	LEAD
Waste code:	D009
Waste name:	MERCURY
Violation Status:	No violations found

Map ID	Site	Database(s)	EPA ID Number
210	**CARVER PRIMARY** **901 E 133RD PL** **CHICAGO, IL 60627**	**RCRA-SQG**	**1001123533** **ILR000032375**

RCRA-SQG:
Date form received by agency: 12/30/1996
Facility name: CARVER PRIMARY
Facility address: 901 E 133RD PL
CHICAGO, IL 60627
EPA ID: ILR000032375
Contact: LINDA RANDOLPH
Contact address: 901 E 133RD PL
CHICAGO, IL 60627
Contact country: US
Contact telephone: (773) 535-5674
Contact email: Not reported
EPA Region: 05
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:
Owner/operator name: CHICAGO PUBLIC SCHOOLS
Owner/operator address: 1819 W PERSHING RD
CHICAGO, IL 60609
Owner/operator country: Not reported
Owner/operator telephone: (773) 535-7039
Legal status: District
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Hazardous Waste Summary:
Waste code: D008
Waste name: LEAD

Violation Status: No violations found

Map ID	Site	Database(s)	EPA ID Number
211	**CARVER MIDDLE** **801 E 133RD PL** **CHICAGO, IL 60627**	**RCRA-SQG**	**1001123534** **ILR000032383**

RCRA-SQG:
Date form received by agency: 12/30/1996
Facility name: CARVER MIDDLE
Facility address: 801 E 133RD PL
CHICAGO, IL 60627
EPA ID: ILR000032383
Contact: CARRIE CLARK
Contact address: 801 E 133RD PL
CHICAGO, IL 60627
Contact country: US
Contact telephone: (773) 535-5656
Contact email: Not reported
EPA Region: 05
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:
Owner/operator name: CHICAGO PUBLIC SCHOOLS
Owner/operator address: 1819 W PERSHING RD
CHICAGO, IL 60609
Owner/operator country: Not reported
Owner/operator telephone: (773) 535-7039
Legal status: District
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

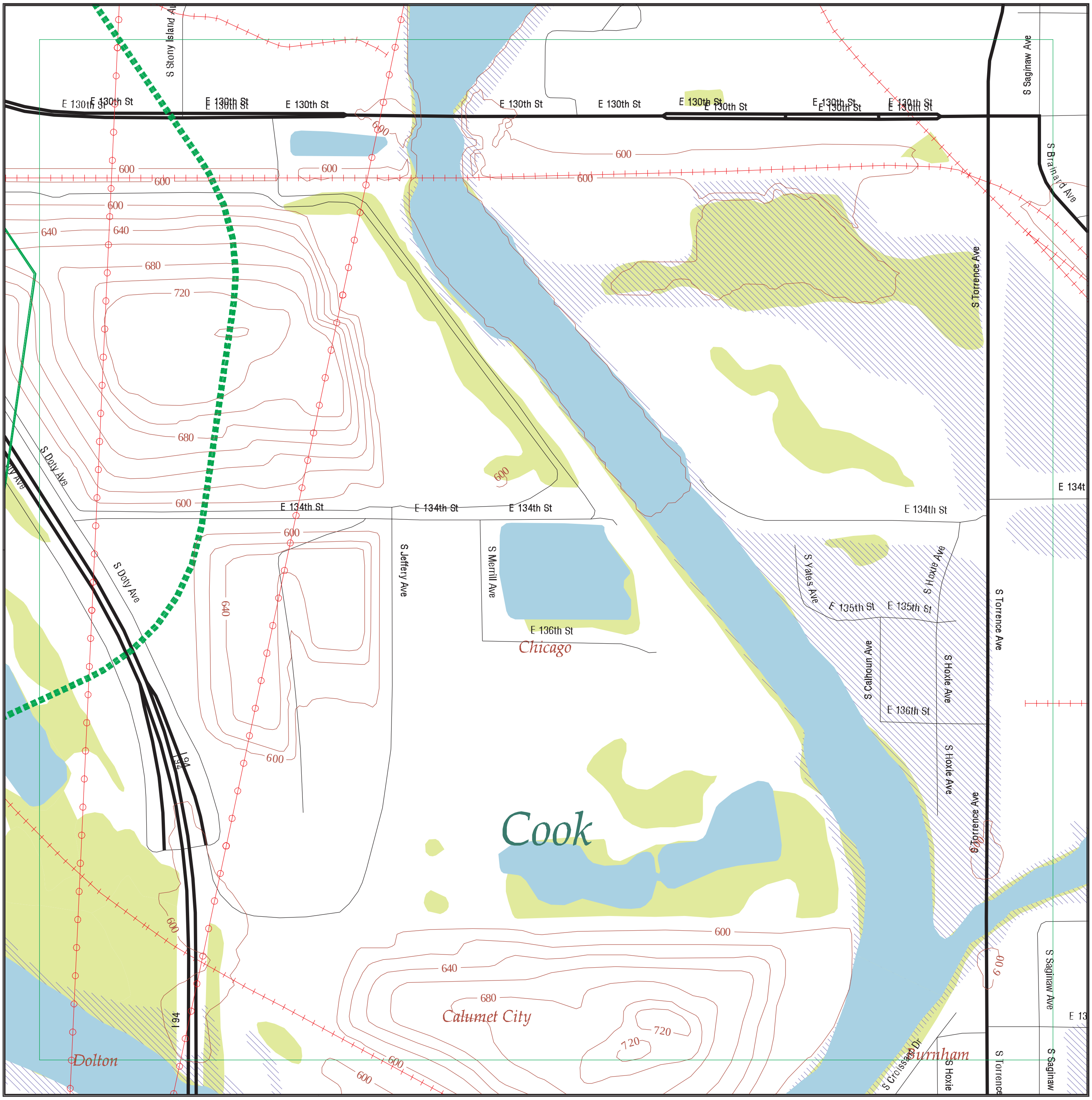
Hazardous Waste Summary:
Waste code: D008
Waste name: LEAD

Violation Status: No violations found

Count: 21 records FOCUS MAP 16 ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CALUMET CITY	1008144866	ANTONIETTI CONSTRUCTION PIT	146TH & BURNHAM AVE	60633	SWF/LF
CHICAGO	1012172115	ROSELAND COMMUNITY	110TH PLACE AND MICHIGAN, EAST SIDE OF STATE ST.		US BROWNFIELDS
CHICAGO	1003870420	CHICAGO REGIONAL PORT DIST	111TH & DOTY AVE	60633	CERC-NFRAP
CHICAGO	S109167302		549 115TH ST		LUST, SPILLS
CHICAGO	S101215364	U.S. DRUM	2400 E 119TH ST	60633	SSU
CHICAGO	1002886378	US SCRAP	123RD & COTTAGE GROVE	60628	CERCLIS
CHICAGO	S101467236	PENN CENTRAL	810 E 124TH ST		SSU
CHICAGO	1002886490	METRO SANITARY DISTRICT #3	125TH STREET & DOTY AVENUE	60628	CERC-NFRAP
CHICAGO	1004695029	ARMY COE LOCK DAM 01	134TH AND CALUMET RIVER	60633	RCRA-CESQG
CHICAGO	U003853346	FORMER PULLMAN FACTORY	11302 CORLISS AVE	60628	UST
CHICAGO	1012126998	9705 S. COTTAGE GROVE	9705 S COTTAGE GROVE AVE	60628	US BROWNFIELDS
CHICAGO	S109366427		6700 JEFFREY BLVD		LUST, SPILLS
CHICAGO	S108891646		11900 LOOMIS		LUST, SPILLS
CHICAGO	S108111040	CHICAGO MSD #2	OBRIEN LCK & DAM RD	60633	SWF/LF
CHICAGO	S107926349	LAKE CALUMET CLUSTER SITE	N OF 122ND	60628	SSU
DOLTON	U001629479	MARINE SERV	140TH COTTAGE GRV	60419	UST
DOLTON	1003870419	DOLTON MUNI LDFL	140TH ST & COTTAGE GROVE	60419	CERC-NFRAP
DOLTON	1006930445	THORNRIDGE HIGH SCHOOL	15000 COTTAGE GROVE	60419	RCRA-SQG
DOLTON	1012209907	DOLTON HAZMAT	DOLTON AVE EXIT ON THE BISHOP FORD	60419	CERCLIS
RIVERDALE	S103690079	RIVERDALE, VILLAGE OF	130TH & HALSTED ST	60827	LUST
RIVERDALE	S103292952	RIVERDALE PLATING	6860 W 134TH ST	60827	LUST

Focus Map 17


E 130th St
S Stony Island Av
S Saginaw Ave
S Brainard Ave
S Torrence Ave
S Doty Ave
E 134th St
S Jeffery Ave
S Merrill Ave
E 136th St
Chicago
S Yates Ave
S Hoxie Ave
E 135th St
S Calhoun Ave
Cook
I94
Calumet City
Dolton
Burnham
S Croissant Dr
600
640
680
720

EDR Environmental Data Resources Inc

EDR DataMap® - Environmental Atlas

90786 CTC RLE Hazardous Materials

Legend

- Roads
- Major Roads
- Contour Lines
- National Wetlands Inventory
- Waterways
- Railroads
- Study Boundary
- 100-Yr Flood Zones
- Powerlines
- Pipelines
- Fault Lines
- Water
- Listed Sites
- Sensitive Receptors

N

0 1/8 1/4

Scale in Miles

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Count: 28 records

FOCUS MAP 17 ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CALUMET CITY	1012172074	BLOCK A - 15 PROPERTIES IN TIF DISTRICT	(STATE LINE ROAD FROM 153RD ST. TO 152ND. ST.)	60409	US BROWNFIELDS
CALUMET CITY	1012172075	BLOCK B - 75 PROPERTIES IN TIF DISTRICT	(STATE LINE ROAD FROM 154TH ST. TO 153RD. ST.)	60409	US BROWNFIELDS
CALUMET CITY	1014390033	COMED	100TH & TORRENCE	60633	RCRA-SQG
CALUMET CITY	1010317482	COM ED	129TH & CARONDOLET	60409	RCRA-SQG
CALUMET CITY	1008144866	ANTONIETTI CONSTRUCTION PIT	146TH & BURNHAM AVE	60633	SWF/LF
CALUMET CITY	U001133551	SHELL STATION 1182-02	147TH & TORRENCE AVE	60409	UST
CALUMET CITY	1001076920	SHELL OIL CO	147TH AND TORRENCE	60409	RCRA-SQG
CALUMET CITY	U004115056	GREEN LAKE POOL & BUILDINGS	159TH ST & TORRENCE AVE	60409	UST
CALUMET CITY	S108966686	FOREST PRESERVE DISTRICT OF COOK COUNTY	NE COR OF 159TH & TORRENCE ST	60409	LUST
CALUMET CITY	S109366537	FOREST PRESERVE DISTRICT OF COOK COUNTY	NE CORNER 159TH ST & TORRENCE AVE	60409	SRP
CALUMET CITY	1014349679	696 STATE LINE ROAD/A	696 STATE LINE RD	60409	US BROWNFIELDS
CALUMET CITY	1012172139	WENDY'S RESTAURANT	550-552 STATE LINE ROAD	60409	US BROWNFIELDS
CALUMET CITY	1012178502	BENCO CHEMICALS	700 STATE ST-C	60409	RCRA-CESQG
CALUMET CITY	S108414130	620/634 STATE LINE RD.	634 STATE LINE AVE	60409	BROWNFIELDS
CHICAGO	1012172115	ROSELAND COMMUNITY	110TH PLACE AND MICHIGAN, EAST SIDE OF STATE ST.		US BROWNFIELDS
CHICAGO	1003870420	CHICAGO REGIONAL PORT DIST	111TH & DOTY AVE	60633	CERC-NFRAP
CHICAGO	S109167302		549 115TH ST		LUST, SPILLS
CHICAGO	S109756592	CLEAN HARBORS	118TH & STONY ISLAND RD	60633	MANIFEST
CHICAGO	S109756593	CLEAN HARBORS OF CHICAGO INC	118TH & STONY ISLAND RD	60633	MANIFEST
CHICAGO	S101215364	U.S. DRUM	2400 E 119TH ST	60633	SSU
CHICAGO	S101467236	PENN CENTRAL	810 E 124TH ST		SSU
CHICAGO	1004695029	ARMY COE LOCK DAM 01	134TH AND CALUMET RIVER	60633	RCRA-CESQG
CHICAGO	S109366427		6700 JEFFREY BLVD		LUST, SPILLS
CHICAGO	S108891646		11900 LOOMIS		LUST, SPILLS
CHICAGO	S108111040	CHICAGO MSD #2	OBRIEN LCK & DAM RD	60633	SWF/LF
DOLTON	1012209907	DOLTON HAZMAT	DOLTON AVE EXIT ON THE BISHOP FORD	60419	CERCLIS
RIVERDALE	S103690079	RIVERDALE, VILLAGE OF	130TH & HALSTED ST	60827	LUST
RIVERDALE	S103292952	RIVERDALE PLATING	6860 W 134TH ST	60827	LUST

Section 3

County Level Orphan Sites

Count: 4347 records COOK COUNTY, IL - ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CHICAGO	91242062	79 ST & CENTRAL 47ST OF CICERO	79 ST & CENTRAL 47ST OF CICERO		ERNS
CHICAGO	S108968213		RD & OLDFIELD RD		SPILLS
CHICAGO	S111877705		NORTH & LASALLE		SPILLS
CHICAGO	S111882937		NORTH & ASHLAND		SPILLS
CHICAGO	90189323	126 ST & FRONTAGE BY METRO SANITARY DIST	126 ST & FRONTAGE BY METRO SANITARY DIST		ERNS
CHICAGO	90189321	I94 & 130TH SW QUADRANT	I94 & 130TH SW QUADRANT		ERNS
CHICAGO	S111925634		I - RAMP 55ATPULASKI RD		SPILLS
CHICAGO	S111908406		I - 90ATWILSON AVE		SPILLS
CHICAGO	S111913846		I - 190ATMANNHEIM RD		SPILLS
CHICAGO	2011964313	MP 00518 CALUMET YARD DEARBORN DIVISION	MP 00518		ERNS
CHICAGO	2009898893	MP: 09514	MP: 09514		ERNS
CHICAGO	2008898893	MP: 09514	MP: 09514		ERNS
CHICAGO	92282850	1465 E. 100 AND 30TH ST.	1465 E. 100 AND 30TH ST.		ERNS
CHICAGO	S111914075		10000TH W OHARE & OHARE AIRPORT 60666		SPILLS
CHICAGO	S109953775		100TH & DORCHESTER		SPILLS
CHICAGO	8714920	100TH & EWING (ONE BLOCK EAST)	100TH & EWING (ONE BLOCK EAST)		ERNS
CHICAGO	2012103741		S 100TH ST		ERNS
CHICAGO	S111925275		100TH		SPILLS
CHICAGO	S111922136		100TH ST		SPILLS
CHICAGO	S111903512		3259 E 100TH SAINT KCBX TERMINALS COM		SPILLS
CHICAGO	S111891992		W 100TH & S PLYMOUTH CT		SPILLS
CHICAGO	S109327349		101ST & HARLEM AVE		SPILLS
CHICAGO	S111880789		6205 W 101ST ST		SPILLS
CHICAGO	98445288	E 103 STREET MILE POST 510.5	E 103 STREET MILE POST 510.5		ERNS
CHICAGO	S108045277		103RD ST		SPILLS
CHICAGO	S111875405		103RD & YELLOW FREIGHT		SPILLS
CHICAGO	S111875748		103RD & CALUMET		SPILLS
CHICAGO	S111898938		103RD & SPRINGFIELD		SPILLS
CHICAGO	S111877819		103RD ST & STONY ISLAND AVE		SPILLS
CHICAGO	S111903230		325 E 103RD ROW		SPILLS
CHICAGO	S111879357		103RD & DOTY STS		SPILLS
CHICAGO	S111894735		103RD ST & CALUMET CANAL		SPILLS
CHICAGO	S111890747		1100 103RD ST		SPILLS
CHICAGO	S111892600		7711 W 103RD ST		SPILLS
CHICAGO	S111880466		4001 E 103RD AVE		SPILLS
CHICAGO	2002592420	103RD AND KEDZIE	103RD AND KEDZIE	0	ERNS
CHICAGO	2009900518	104TH STREET	104TH STREET		ERNS
CHICAGO	2008900518	104TH STREET	104TH STREET		ERNS
CHICAGO	S111893119		104TH & TORRANCE AVE		SPILLS
CHICAGO	2000531564	104TH STREET	104TH STREET	0	ERNS
CHICAGO	S111907794		4898 E 105TH ST		SPILLS
CHICAGO	S111922937		2016 E 106ST ST		SPILLS
CHICAGO	98455926	106TH STREET	106TH STREET		ERNS

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CHICAGO	S111891910		2040 E 106TH SAINT LANDERS YD		SPILLS
CHICAGO	S111925410		2040 E 106TH SAINT CALUMET RAIL YD		SPILLS
CHICAGO	S111882082		2040 E 106TH		SPILLS
CHICAGO	S111889611		2040 106TH ST		SPILLS
CHICAGO	S111912043		2040 E 106TH		SPILLS
CHICAGO	S111919236		2040 E 106TH CALUMET YARD		SPILLS
CHICAGO	S111882964		106TH AVE & INDIANAPOLIS BLVD		SPILLS
CHICAGO	S111878270		3033 106TH ST		SPILLS
CHICAGO	S111879978		2040 E 106TH		SPILLS
CHICAGO	S111915160		1040 W 106TH		SPILLS
CHICAGO	S111875510		2040 E 106TH SAINT RAIL YARDS		SPILLS
CHICAGO	S111881087		106TH ST & AVE O		SPILLS
CHICAGO	S111902576		106TH ST		SPILLS
CHICAGO	S111889998		106TH & AVE B		SPILLS
CHICAGO	90186751	107TH AND TORRENCE AVE. LISTALL COMPANY	107TH AND TORRENCE AVE. LISTALL COMPANY		ERNS
CHICAGO	S111904594		801 107TH ST		SPILLS
CHICAGO	S111894183		1215 W 107TH		SPILLS
CHICAGO	S111878613		107TH & TORRENCE		SPILLS
CHICAGO	S108045299		108TH ST & STONEY IS		SPILLS
CHICAGO	94374534	108TH AND BUFFALO AVE	108TH AND BUFFALO AVE		ERNS
CHICAGO	2004735469	109TH ST AND MICHIGAN AVE	109TH ST AND MICHIGAN AVE		ERNS
CHICAGO	S111899635		109TH ST		SPILLS
CHICAGO	S111898484		109TH 109TH ST & COTTAGE AVE		SPILLS
CHICAGO	2005608751	2040 EAST 10TH ST	2040 EAST 10TH ST		ERNS
CHICAGO	2007321070	11.90	11.90		ERNS
CHICAGO	S111875977		1100TH & KEDZIE		SPILLS
CHICAGO	1012172115	ROSELAND COMMUNITY	110TH PLACE AND MICHIGAN, EAST SIDE OF STATE ST.		US BROWNFIELDS
CHICAGO	S111886669		352 W 110TH		SPILLS
CHICAGO	S111896440		110TH ST		SPILLS
CHICAGO	8865144	111ST AND LANE	111ST AND LANE		ERNS
CHICAGO	2010946025	111 TH STREET	111TH ST		ERNS
CHICAGO	2012101140		111TH ST		ERNS
CHICAGO	S111908715		6040 W 111TH ST		SPILLS
CHICAGO	S111879301		111TH & MONTERY		SPILLS
CHICAGO	S111880670		111TH & LANGLEY		SPILLS
CHICAGO	S111914359		111TH W		SPILLS
CHICAGO	2000551947	112TH STREET	112TH STREET	0	ERNS
CHICAGO	8850281	114TH ST AND TORRENCE AVE	114TH ST AND TORRENCE AVE		ERNS
CHICAGO	S111915596		752 E 114TH W		SPILLS
CHICAGO	2009922898	115TH AND DOTY RD	115TH AND DOTY RD		ERNS
CHICAGO	S109167302		549 115TH ST		LUST, SPILLS
CHICAGO	2006808077	115TH ST.	115TH ST.		ERNS
CHICAGO	S111877798		115TH & KENSINGTON		SPILLS
CHICAGO	S111876815		3200 W 115TH KEDZIE		SPILLS
CHICAGO	S111901591		115TH ST		SPILLS
CHICAGO	S111925540		115TH ST		SPILLS
CHICAGO	S111925539		115TH ST & I 94 DOTY		SPILLS

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CHICAGO	S111875316		116TH & BURLING		SPILLS
CHICAGO	S111898477		116TH ST & S BARLEY AVE		SPILLS
CHICAGO	S111913243		118TH SAINT COTTAGE GRV		SPILLS
CHICAGO	S111913680		1200 W 11TH ST		SPILLS
CHICAGO	S111883453		735 E 11TH ST		SPILLS
CHICAGO	S111911683		3118 W 11TH ST		SPILLS
CHICAGO	S111882526		2626 W 11TH ST		SPILLS
CHICAGO	96490464	900 WEST 120ST / 2ND SEWER DRAIN AT CORNER OF MORGAN ST	900 WEST 120ST / 2ND SEWER DRAIN AT CORNER OF MORGAN ST		ERNS
CHICAGO	99645303	120TH AND MORGAN	120TH AND MORGAN		ERNS
CHICAGO	2008886792	120TH ST AND MORGAN	120TH ST AND MORGAN		ERNS
CHICAGO	S111924227		120TH ST & MORGAN		SPILLS
CHICAGO	S111880149		120TH ST & RACINE AVE		SPILLS
CHICAGO	S111897595		120TH S TORRENCE AVE		SPILLS
CHICAGO	S111909286		1855 E 121ST ST		SPILLS
CHICAGO	94389275	122ND AND TORRENCE	122ND AND TORRENCE		ERNS
CHICAGO	99646447	122ND AND INDIANA	122ND AND INDIANA		ERNS
CHICAGO	S106526645	UNNAMED PARCEL	122ND ST		BROWNFIELDS
CHICAGO	S110363616		122ND & PRINCETON		SPILLS
CHICAGO	S111895143		1855 W 122ND ST		SPILLS
CHICAGO	S111909484		122ND ST & STONY ISLAND AVE		SPILLS
CHICAGO	S111878392		122ND & TORRENCE AVE		SPILLS
CHICAGO	S111926232		122ND ST & PRINCETON		SPILLS
CHICAGO	S111898012		122ND ST & STONY ISLAND RD		SPILLS
CHICAGO	S111912859		122ND ST & TORRENCE ST		SPILLS
CHICAGO	S111902613		1701 E 122TH ST		SPILLS
CHICAGO	94395307	123RD AND STONEY ISLAND	123RD AND STONEY ISLAND		ERNS
CHICAGO	S101467236	PENN CENTRAL	810 E 124TH ST		SSU
CHICAGO	2011996953		E 126TH ST		ERNS
CHICAGO	S111918596		126TH & DOTY AVE		SPILLS
CHICAGO	S111894230		127TH & CARONDOLET STS		SPILLS
CHICAGO	S111912696		150 W 127TH		SPILLS
CHICAGO	S111898770		128TH & ESCANEBA		SPILLS
CHICAGO	2012102522		MP 1290		ERNS
CHICAGO	S111876826		12958TH S CARONDOLET & D AUTO		SPILLS
CHICAGO	89109245	MP 13 ASHLAND AVE. YARD	MP 13 ASHLAND AVE. YARD		ERNS
CHICAGO	1005636372	ILLINOIS MINING CORP INC	130TH W OF TORRENCE AVE		SPILLS
CHICAGO	2009897414	130TH ST	130TH ST		ERNS
CHICAGO	2008897414	130TH ST	130TH ST		ERNS
CHICAGO	2006810974	130TH ST.	130TH ST.		ERNS
CHICAGO	S108669473		130TH ST & I 94 EB		SPILLS
CHICAGO	S111885360		130TH ST & CALUMET EXPY		SPILLS
CHICAGO	2011995829		130TH ST		ERNS
CHICAGO	S111891972		E 130TH ST		SPILLS
CHICAGO	S111877064		4300 W 130TH ST		SPILLS
CHICAGO	S111927317		130TH ST AND TORRENCE AVE		SPILLS
CHICAGO	S111908455		130TH ST		SPILLS

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CHICAGO	S111914525		1100 E 130TH PL		SPILLS
CHICAGO	S111901336		130TH & STONY IS		SPILLS
CHICAGO	S111894790		130TH ST & TORRENCE ST		SPILLS
CHICAGO	S111878584		130TH ST SW		SPILLS
CHICAGO	S110685145		130TH ST & COTTAGE GROVE AVE		SPILLS
CHICAGO	2011993812		1310		ERNS
CHICAGO	S111892985		131ST ST & TRUMBLE ST		SPILLS
CHICAGO	S111921716		940 E 132ND ST		SPILLS
CHICAGO	S111899942		133RD & AVE K		SPILLS
CHICAGO	S111920503		133RD ST & AVE K		SPILLS
CHICAGO	2009905686	134TH ST AND CALUMAT RIVER	134TH ST AND CALUMAT RIVER		ERNS
CHICAGO	2008905686	134TH ST AND CALUMAT RIVER	134TH ST AND CALUMAT RIVER		ERNS
CHICAGO	2011966840	134TH ST. NEAR AVENUE O	134TH SAINT NEAR AVE		ERNS
CHICAGO	S111878642		134TH & STATE LINE		SPILLS
CHICAGO	S111888946		1350TH & 60 N LAKE SHORE DR		SPILLS
CHICAGO	S111924465		135TH AND NEW AVE		SPILLS
CHICAGO	92250546	137TH ST AND HOXIE ST	137TH ST AND HOXIE ST		ERNS
CHICAGO	S111882838		137TH ST & HOXIE		SPILLS
CHICAGO	S111882727		612 E 138TH ST		SPILLS
CHICAGO	S111896483		138TH ST & CALUMET EXPY		SPILLS
CHICAGO	S111900160		138TH & I 94		SPILLS
CHICAGO	S111906591		612 E 138TH ST		SPILLS
CHICAGO	S111892394		138TH ST & CALUMET EXPY		SPILLS
CHICAGO	S111898774		138TH ST & I 94		SPILLS
CHICAGO	S111881930		826 E 138TH ST		SPILLS
CHICAGO	S111915551		138TH & I 94		SPILLS
CHICAGO	S111881111		440 E 138TH ST		SPILLS
CHICAGO	S111907124		440 E 138TH ST		SPILLS
CHICAGO	S111898712		440 E 138TH ST		SPILLS
CHICAGO	S111912667		440 E 138TH ST		SPILLS
CHICAGO	S111912668		440 E 138TH ST		SPILLS
CHICAGO	2012102531		13TH AND SAINT SUBWAY STHY		ERNS
CHICAGO	S111910596		13TH & MORGAN STS		SPILLS
CHICAGO	S111886354		1400TH & W 111TH ST		SPILLS
CHICAGO	S111882902		1400TH W DIVISION & NOBLE		SPILLS
CHICAGO	S111906779		1425 OR 1431 W TAYLOR ST		SPILLS
CHICAGO	8858752	14TH AND WESTERN GLOBAL I RR YARD	14TH AND WESTERN GLOBAL I RR YARD		ERNS
CHICAGO	90159722	14TH AND HALSTED	14TH AND HALSTED		ERNS
CHICAGO	1001024395	GTB AUTO	2407 E 14TH ST		RCRA-SQG
CHICAGO	99651692	14TH STREET YARD AT CANAL (SOUTHERN END OF NORTH YARD BETWEE	14TH STREET YARD AT CANAL (SOUTHERN END OF NORTH YARD BETWEE		ERNS
CHICAGO	S111887196		14TH & INDIANA		SPILLS
CHICAGO	S111875747		14TH & CANAL BURLINGTON NORTHERN YARD		SPILLS
CHICAGO	S111892249		14TH PL & SANGAMON		SPILLS
CHICAGO	S111908909		14TH & HALSTED STS		SPILLS
CHICAGO	S111908862		14TH & CANAL STS		SPILLS
CHICAGO	S111906274		159TH & SIBLEY BLVD		SPILLS

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CHICAGO	S111887661		15TH & CANAL ST		SPILLS
CHICAGO	S111887610		15TH ST & CANAL ST		SPILLS
CHICAGO	S111906022		15TH ST & CANAL		SPILLS
CHICAGO	S111902392		15TH ST & LAKE MICHIGAN FLD		SPILLS
CHICAGO	S111906546		15TH ST & LAKEFRONT MEIGS FLD		SPILLS
CHICAGO	S111919525		1150 W 15TH		SPILLS
CHICAGO	S111888789		15TH ST & LAKEFRONT		SPILLS
CHICAGO	S111884000		15TH ST & LAKE MICHIGAN FLD		SPILLS
CHICAGO	S111882819		15TH & LAKEFRONT FLD		SPILLS
CHICAGO	S111878273		163RD SAINT TOLL PLZ		SPILLS
CHICAGO	S111879761		167TH & CICERO		SPILLS
CHICAGO	2009904959	W. 16TH ST AND S. UNION AVE	W. 16TH ST AND S. UNION AVE		ERNS
CHICAGO	2008904959	W. 16TH ST AND S. UNION AVE	W. 16TH ST AND S. UNION AVE		ERNS
CHICAGO	S109327396		16TH ST & JEFFERSON BRG		SPILLS
CHICAGO	S111880523		2558 W 16TH		SPILLS
CHICAGO	S111892287		1956 S 17TH ST		SPILLS
CHICAGO	S111876974		17TH & WATWORTH		SPILLS
CHICAGO	S111894343		1820TH W 14TH ST & IN ALY		SPILLS
CHICAGO	2007305206	18TH ST YARD	18TH ST YARD		ERNS
CHICAGO	92292345	18TH ST BRIDGE	18TH ST BRIDGE		ERNS
CHICAGO	2009921297	18TH ST. & ROOSEVELT ST.	18TH ST. & ROOSEVELT ST.		ERNS
CHICAGO	2010959606	18TH STREET	18TH ST		ERNS
CHICAGO	S111886026		18TH ST & CHICAGO RIV		SPILLS
CHICAGO	S111887491		18TH & CLARK STS		SPILLS
CHICAGO	S111884255		18TH & CLARK		SPILLS
CHICAGO	S111892387		18TH PL & WOOD ST		SPILLS
CHICAGO	S108045676		18TH ST & THE CHICAGO RIV		SPILLS
CHICAGO	S108047105		1ST & 4 MI N OF PULASKI MM 288 HWY		SPILLS
CHICAGO	S111887583		NB 1ST AVE & GOLFVIEW		SPILLS
CHICAGO	S111910709		1ST & 2ND W OF CENTRAL AVE EXIT		SPILLS
CHICAGO	S111925271		1ST & S 5 MILE N OF 103RD ST 300 FEET DR		SPILLS
CHICAGO	S111907669		1ST & 4 MILE W OF COUNTY LINE RD		SPILLS
CHICAGO	S111891726		1ST & N 2 MILE		SPILLS
CHICAGO	S111912632		1ST & 4 MILE FROM CALIFORNIA AVE MIL		SPILLS
CHICAGO	S111919834		N 200TH STATE LAKE & STATE ST		SPILLS
CHICAGO	S111890337		2040TH E 106TH ST & RR YARD		SPILLS
CHICAGO	S111903428		1345 21ST ST		SPILLS
CHICAGO	S111909292		21ST ST & CANAL PORT AVE		SPILLS
CHICAGO	S111880437		1349 W 21ST		SPILLS
CHICAGO	S108045853		22ND & MORGAN ST		SPILLS
CHICAGO	93327475	22ND AND ARCHER ST	22ND AND ARCHER ST		ERNS
CHICAGO	89128107	22ND AND FEDERAL	22ND AND FEDERAL		ERNS
CHICAGO	S111888150		22ND & CLARK ST		SPILLS
CHICAGO	S111887811		22ND ST & WESTERN AVE		SPILLS
CHICAGO	S111890014		350 E 22ND ST		SPILLS
CHICAGO	S111890359		22TH & CALUMET		SPILLS
CHICAGO	S111895799		2332ND & W CHICAGO AVE		SPILLS

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CHICAGO	2003650960	23RD AND MICHIGAN STREET	23RD AND MICHIGAN STREET		ERNS
CHICAGO	S111883427		2550 W 23RD		SPILLS
CHICAGO	94368624	24TH AND UNION STREET NORTH OF I-95	24TH AND UNION STREET NORTH OF I-95		ERNS
CHICAGO	S111890697		24TH & UNION		SPILLS
CHICAGO	S111903927		1345 W 24TH ST		SPILLS
CHICAGO	S111879755		252ND E OHIO ST & FAIRBANKS		SPILLS
CHICAGO	S111927266		2543RD WEST COLUMBUS & LANDERS RAILYARD		SPILLS
CHICAGO	S111890225		2543RD COLUMBUS DR & IN THE LANDERS YARD		SPILLS
CHICAGO	2005617641	426 WEST 25TH STREET	426 W 25TH ST		ERNS
CHICAGO	S111909431		426 N 25TH PL		SPILLS
CHICAGO	S111922268		436 S 25TH PL		SPILLS
CHICAGO	S111925762		426 W 25TH PLACE CANAL ST		SPILLS
CHICAGO	S111894802		25TH PL & SACRAMENTO AVE		SPILLS
CHICAGO	S111896743		2429 W 25TH AVE		SPILLS
CHICAGO	S111925001		436 W 25TH PLACE CANAL ST		SPILLS
CHICAGO	S111890711		2600TH & EDISON ST		SPILLS
CHICAGO	96474197	26TH AND FEDERAL ST	26TH AND FEDERAL ST		ERNS
CHICAGO	2003644943	26TH STREET AND FEDERAL STREET	26TH STREET AND FEDERAL STREET		ERNS
CHICAGO	2008873723	26TH STREET ON THE RED LINE	26TH STREET ON THE RED LINE		ERNS
CHICAGO	S111907471		436 W 26TH PL		SPILLS
CHICAGO	S111889908		26TH ST & FEDERAL		SPILLS
CHICAGO	S111910796		26TH & WENTWORTH		SPILLS
CHICAGO	S111926601		5601 W 26TH ST		SPILLS
CHICAGO	S111920961		26TH & CANAL ST		SPILLS
CHICAGO	S111924220		26TH		SPILLS
CHICAGO	S111892718		26TH ST & FEDERAL		SPILLS
CHICAGO	S111919539		26TH & CANAL ST		SPILLS
CHICAGO	S111895388		26TH & FEDERAL		SPILLS
CHICAGO	S111913858		26TH & FEDERAL		SPILLS
CHICAGO	S110685274		5601 W 26TH ST		SPILLS
CHICAGO	98428956	27TH AND FEDERAL STREETS	27TH AND FEDERAL STREETS		ERNS
CHICAGO	98464382	27TH AND FEDERAL ST	27TH AND FEDERAL ST		ERNS
CHICAGO	S111903103		27TH & FEDERAL ST		SPILLS
CHICAGO	S111900849		27TH & FEDERAL		SPILLS
CHICAGO	S108047067		I 290 WBINBETWEENHARLEM & 1ST AVE		SPILLS
CHICAGO	S111891919		I 290 EB AT		SPILLS
CHICAGO	S111877875		I 290 WB		SPILLS
CHICAGO	S111906792		I 290 WB		SPILLS
CHICAGO	S111908034		I 290 NEAREXIT 24 W		SPILLS
CHICAGO	S108047071		I 294 SB		SPILLS
CHICAGO	S110613499		I 294 & I 88 NBMP		SPILLS
CHICAGO	S110363820		I 294 & I 90 SB		SPILLS
CHICAGO	S111926310		I 294		SPILLS
CHICAGO	S111901815		I 294 SBMP 22		SPILLS
CHICAGO	S111911769		HWY 294 SBMILEPOST 17		SPILLS
CHICAGO	S111884259		I 294 & I 80		SPILLS
CHICAGO	S111926180		I 294		SPILLS

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CHICAGO	S111920540		I 294 SBMP 31		SPILLS
CHICAGO	S111914599		I 294 & CERMAC RD		SPILLS
CHICAGO	S111896748		I 294 & NEAR THE 1ST TOLL PLAZA NORTHB		SPILLS
CHICAGO	S111919394		I 294 NBNEARCICERO AVE		SPILLS
CHICAGO	S111914117		I 294 NB		SPILLS
CHICAGO	S111893237		I 294 SBATJOLIET RD		SPILLS
CHICAGO	S111925566		I 294 SBMP 20		SPILLS
CHICAGO	S111925567		I 294 SOUTHBOUNDMP 20		SPILLS
CHICAGO	S111901305		I 294 NEARARLINGTON HEIGHTS		SPILLS
CHICAGO	S111910862		29TH & KEDZIE		SPILLS
CHICAGO	92270141	2ND POLE NORTH OF 74TH ST IN AN ALLEY WEST OF	2ND POLE NORTH OF 74TH ST IN AN ALLEY WEST OF		ERNS
CHICAGO	S111920359		2ND BLOCKS E OF 63RD ST & I 94		SPILLS
CHICAGO	S111883783		MM 301		SPILLS
CHICAGO	2006802234	31ST AND ASHLAND AVE.	31ST AND ASHLAND AVE.		ERNS
CHICAGO	S111908683		31ST		SPILLS
CHICAGO	S111891505		1100 E 31ST ST		SPILLS
CHICAGO	S111877001		4421 W 31ST		SPILLS
CHICAGO	S111897125		31ST ST & WOOD		SPILLS
CHICAGO	S111918870		215 W 31ST		SPILLS
CHICAGO	S111894090		31ST & KENTON AVE		SPILLS
CHICAGO	89121211	32ND ST AND CENTRAL PARK AVE	32ND ST AND CENTRAL PARK AVE		ERNS
CHICAGO	S111902053		444 W 330TH ST		SPILLS
CHICAGO	S111894273		3348TH W WARREN BLVD & HOMAN AVE		SPILLS
CHICAGO	S111889654		33RD & LAWNDALE		SPILLS
CHICAGO	S111894094		4500 W 33RD ST		SPILLS
CHICAGO	S111897564		N 3401ST AVE & ROSCOE		SPILLS
CHICAGO	S111881418		34TH & PULASKI		SPILLS
CHICAGO	S111911117		I 355 NBMP 265		SPILLS
CHICAGO	S111904092		3555TH W BELMONT & AMPO		SPILLS
CHICAGO	99638174	WEST 35TH STREET BRIDGE	WEST 35TH STREET BRIDGE		ERNS
CHICAGO	2008882825	35TH ST. BRIDGE	35TH ST. BRIDGE		ERNS
CHICAGO	S111911913		1954 W 35TH SAINT IN ALY		SPILLS
CHICAGO	S111897664		35TH & ASHLAND		SPILLS
CHICAGO	S111919560		1810 35TH ST		SPILLS
CHICAGO	S111894121		35TH & STATE ST		SPILLS
CHICAGO	S111890028		5400 S 35TH ST		SPILLS
CHICAGO	S111897980		35TH & KEDZIE		SPILLS
CHICAGO	S111896843		W 3642ND ST & LAWNDALE AVE		SPILLS
CHICAGO	2007318725	36TH AND PULASKI	36TH AND PULASKI		ERNS
CHICAGO	S111922036		36TH & PULASKI		SPILLS
CHICAGO	S111880537		3021 W 36TH		SPILLS
CHICAGO	S111879503		3000 W 36TH		SPILLS
CHICAGO	91220394	3021 WEST 36TH STREET (WEST OF HWY 41)	3021 WEST 36TH STREET (WEST OF HWY 41)		ERNS
CHICAGO	2002591202	103 36TH SOUTH AVE O.	103 36TH SOUTH AVE O.	0	ERNS
CHICAGO	S111915590		3782ND & 2ND W 79TH ST		SPILLS
CHICAGO	S111876347		37TH & LITHUANICA		SPILLS

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CHICAGO	S111897052		3025 W 37TH ST		SPILLS
CHICAGO	S111883506		1365 W 37TH		SPILLS
CHICAGO	2002608251	37TH STREET	37TH STREET	0	ERNS
CHICAGO	S111908583		3611 W 38TH SAINT RAIL YARD		SPILLS
CHICAGO	S111925402		3611 W 38TH SAINT CORWITH YARD		SPILLS
CHICAGO	S111919287		3611 W 38TH SAINT CORWITH YARD		SPILLS
CHICAGO	S111919275		3557 38TH ST		SPILLS
CHICAGO	S111919234		3811 W 38TH SAINT CORWITH YARD		SPILLS
CHICAGO	S111880783		3960TH W IRVING PARK & PULASKI		SPILLS
CHICAGO	S109953825		39TH & CICERO		SPILLS
CHICAGO	S111925323		39TH		SPILLS
CHICAGO	S111878496		39TH & KEDZIE		SPILLS
CHICAGO	S111900446		2600 39TH ST		SPILLS
CHICAGO	S111877189		39TH & MORTEN		SPILLS
CHICAGO	2002617674	40TH AND ALBANY AVE	40TH AND ALBANY AVE	0	ERNS
CHICAGO	S111893100		40TH ST & ASHLAND AVE		SPILLS
CHICAGO	S111878687		4040 W 40TH		SPILLS
CHICAGO	2000550320	40TH AND ASHLAND	40TH AND ASHLAND	0	ERNS
CHICAGO	90166402	41ST AND PULASKI	41ST AND PULASKI		ERNS
CHICAGO	S111913718		41ST & PULASKI		SPILLS
CHICAGO	S111905301		41ST & SPRINGFIELD		SPILLS
CHICAGO	2008907906	4950 WEST 41TH STREET	4950 WEST 41TH STREET		ERNS
CHICAGO	S111902644		1445 W 42ND		SPILLS
CHICAGO	S111897127		1445 W 42ND		SPILLS
CHICAGO	S111880182		1445 W 42ND		SPILLS
CHICAGO	S111906165		42ND & ASHLAND STS		SPILLS
CHICAGO	S111909024		I 435 & PRAVEN RD		SPILLS
CHICAGO	S111887549		43RD ST & LAKE SHORE DR		SPILLS
CHICAGO	S111919153		43RD & CANAL ST		SPILLS
CHICAGO	S111893707		4454TH & N ELSTON AVE		SPILLS
CHICAGO	S108046312		44TH		SPILLS
CHICAGO	93308263	44TH STREET BETWEEN INDIANA AND MICHIGAN AVE	44TH STREET BETWEEN INDIANA AND MICHIGAN AVE		ERNS
CHICAGO	S111887079		44TH SAINT BETWEEN INDIAN & MICHIGAN AVE		SPILLS
CHICAGO	S111884406		44TH & BLACKSTONE		SPILLS
CHICAGO	2004733997	45TH AND STATE ST.	45TH AND STATE ST.		ERNS
CHICAGO	89106127	45TH ST OFF OF HALSTON	45TH ST OFF OF HALSTON		ERNS
CHICAGO	S111888261		45TH & ASHLAND		SPILLS
CHICAGO	S111907955		45TH ST & RACINE		SPILLS
CHICAGO	S111905790		4700TH & WELL STS		SPILLS
CHICAGO	99651668	361 WEST 47TH	361 WEST 47TH		ERNS
CHICAGO	99650024	47TH ST TERMINAL	47TH ST TERMINAL		ERNS
CHICAGO	S108669575		47TH ST		SPILLS
CHICAGO	S108480057		47TH ST		SPILLS
CHICAGO	S111927304		361 47TH ST		SPILLS
CHICAGO	S111922938		2300 W 47TH		SPILLS
CHICAGO	S111922791		47TH ST		SPILLS

Count: 4347 records COOK COUNTY, IL - ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CHICAGO	S111914233		47TH SAINT YARD		SPILLS
CHICAGO	S111895986		47TH ST & DAN RYAN EXPY		SPILLS
CHICAGO	S111894714		12000 W 4800 N		SPILLS
CHICAGO	S108047758		W 48TH & S CANAL ST		SPILLS
CHICAGO	S111885475		3428 N 48TH PL		SPILLS
CHICAGO	S111909951		1100 48TH ST		SPILLS
CHICAGO	S111878705		48TH PL & OAKLEY		SPILLS
CHICAGO	S111883259		1100 W 48TH		SPILLS
CHICAGO	2004732527	49TH AND VINCENNES	49TH AND VINCENNES		ERNS
CHICAGO	98436895	49TH AND MICHIGAN	49TH AND MICHIGAN		ERNS
CHICAGO	2007315427	49TH AND CERMAK ST	49TH AND CERMAK ST		ERNS
CHICAGO	S111907447		49TH & PRAIRIE STS		SPILLS
CHICAGO	S111891317		49TH SAINT IN THE DAN RYAN EXPY		SPILLS
CHICAGO	S111895516		49TH ST & WABASH AVE		SPILLS
CHICAGO	S111888798		47 W 49TH ST		SPILLS
CHICAGO	S111901380		49TH & MICHIGAN		SPILLS
CHICAGO	2000669045	OF 49TH AND PRAIRIE STREET	OF 49TH AND PRAIRIE STREET		ERNS
CHICAGO	S111907791		2200 W 4TH ST		SPILLS
CHICAGO	S111927766		5000TH 41ST ST & CHICAGO SANITARY SHIP CANAL		SPILLS
CHICAGO	S111919606		500TH W MADISON MADISON & CANAL ST		SPILLS
CHICAGO	S111896668		5035TH W 55TH ST & CHICAGO MID WAY		SPILLS
CHICAGO	2007312186	50TH ST YARD	50TH ST YARD		ERNS
CHICAGO	S111926084		CD 513		SPILLS
CHICAGO	90165019	51ST AND MOBILE RD. CLOROX BLDG	51ST AND MOBILE RD. CLOROX BLDG		ERNS
CHICAGO	2000541439	506 WEST 51ST	506 WEST 51ST	0	ERNS
CHICAGO	2000548268	51ST STREET	51ST STREET	0	ERNS
CHICAGO	98465428	51ST ST YARD	51ST ST YARD		ERNS
CHICAGO	2007303728	51ST AND CHICAGO	51ST AND CHICAGO		ERNS
CHICAGO	S111897822		51ST SAINT YARD		SPILLS
CHICAGO	S111906455		51ST & NORMAL		SPILLS
CHICAGO	S111889239		51ST & CORNELL		SPILLS
CHICAGO	S111882002		5620 W 51ST		SPILLS
CHICAGO	S111903862		51ST & CALUMET AVE		SPILLS
CHICAGO	S111906790		506 W 51ST		SPILLS
CHICAGO	S111903188		51ST & NORMAL		SPILLS
CHICAGO	S111910277		506 ST 51ST ST		SPILLS
CHICAGO	S111879756		51ST & HALSTED		SPILLS
CHICAGO	S111883239		2301 W 51ST		SPILLS
CHICAGO	99651475	506 WEST 51TH ST.	506 WEST 51TH ST.		ERNS
CHICAGO	S111890796		5252ND PALMER AVE & WEBBER HS		SPILLS
CHICAGO	S111900682		5345TH W 55TH ST & MIDWAY AP		SPILLS
CHICAGO	2011994278		5385		ERNS
CHICAGO	S110122311		I 55 & PULASKI ROAD RAMP		SPILLS
CHICAGO	S109327589		I 55 & I 294 SBMP		SPILLS
CHICAGO	S111887551		I 55 NB		SPILLS
CHICAGO	S111912371		I 55 NB		SPILLS
CHICAGO	S111884297		I 55 RIGHTHAND LANE		SPILLS

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CHICAGO	S111902492		I 55 SBMM 28894		SPILLS
CHICAGO	S111922930		I 55 NB & LEMONT RD AND OLDFIELD RD		SPILLS
CHICAGO	S111900509		I 55 & PULASKI RD		SPILLS
CHICAGO	S111897651		I 55 RAMP WBASHLAND AVE		SPILLS
CHICAGO	S111896039		I 55 & HARLEM AVE		SPILLS
CHICAGO	S111894932		I 55 MPEEATASHLAND ST		SPILLS
CHICAGO	S111898860		I 55 & WOOD		SPILLS
CHICAGO	S111895979		I 55 NB & CICERO AVE		SPILLS
CHICAGO	S111899470		55ST YARD		SPILLS
CHICAGO	2007318421	55TH STREET STATION	55TH STREET STATION		ERNS
CHICAGO	S111887481		28800 W 55TH ST		SPILLS
CHICAGO	S111883143		55TH NENA & ARCHER		SPILLS
CHICAGO	S111882156		55TH & CICERO		SPILLS
CHICAGO	S111883850		5035 W 55TH SAINT MIDWAY AIRPORT		SPILLS
CHICAGO	S111903929		55TH & LAGRANGE RD		SPILLS
CHICAGO	S111883276		4950 W 55TH		SPILLS
CHICAGO	S111901394		55TH & COUNTRY LINE RD EXIT		SPILLS
CHICAGO	S111880505		5657TH N BROADWAY & HOLLYWOOD		SPILLS
CHICAGO	2010951078	57TH AND KENTON	57TH		ERNS
CHICAGO	2010957052	57TH STREET	57TH ST		ERNS
CHICAGO	91238388	58TH AND PRAIRIE	58TH AND PRAIRIE		ERNS
CHICAGO	89111593	59TH AND HORNE	59TH AND HORNE		ERNS
CHICAGO	2009925992	59TH AND PRARIE	59TH AND PRARIE		ERNS
CHICAGO	2010940083	59TH AND MASSASOTT	59TH		ERNS
CHICAGO	S111218553		59TH ST & HALSTED		SPILLS
CHICAGO	S111885320		59TH & WENTWORTH		SPILLS
CHICAGO	S111909924		2101 W 59TH		SPILLS
CHICAGO	S111882253		59TH & BISHOP		SPILLS
CHICAGO	S111926929		59TH ST		SPILLS
CHICAGO	S111905285		2801 W 59TH		SPILLS
CHICAGO	S111881755		3301 W 59TH		SPILLS
CHICAGO	S111915272		2101 59TH ST		SPILLS
CHICAGO	S111908487		59TH SAINT BETWEEN DAMON & WESTERN		SPILLS
CHICAGO	S111908378		2101 W 59TH		SPILLS
CHICAGO	S111900002		4452 W 5TH ST		SPILLS
CHICAGO	S111884620		60TH & DORCHESTER		SPILLS
CHICAGO	S111349402		61ST ST		SPILLS
CHICAGO	S111921253		61ST & ELLIS ST		SPILLS
CHICAGO	S111890702		61ST & CICERO		SPILLS
CHICAGO	S111909762		6000 W 623RD ST		SPILLS
CHICAGO	91233172	62ND & LASALLE (EAST SIDE OF TRACKS)	62ND & LASALLE (EAST SIDE OF TRACKS)		ERNS
CHICAGO	S108046564		63RD SAINT INTERMODLE FACILITY		SPILLS
CHICAGO	2004721985	63RD AND ASHLAND	63RD AND ASHLAND		ERNS
CHICAGO	2006814764	63RD STREET	63RD STREET		ERNS
CHICAGO	2008883760	63RD STREET RAIL YARD	63RD STREET RAIL YARD		ERNS
CHICAGO	S111349563		63RD & PULASKI		SPILLS
CHICAGO	S109327514		63RD SAINT ENGLEWOOD YARD		SPILLS

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CHICAGO	S110824974		2800 W 63RD		SPILLS
CHICAGO	2006814727	63RD ST INTERMODAL RAMP	63RD ST INTERMODAL RAMP		ERNS
CHICAGO	2006818594	63RD AND STATE STREET	63RD AND STATE STREET		ERNS
CHICAGO	2010954740	63RD STREET	63RD ST		ERNS
CHICAGO	S111887350		63RD & UNION		SPILLS
CHICAGO	S111886430		5400 W 63RD SAINT MIDWAY AVIATION SUP		SPILLS
CHICAGO	S111881447		63RD & HOMAN		SPILLS
CHICAGO	S111925459		5000 W 63RD SAINT MIDWAY AP		SPILLS
CHICAGO	S111875746		6400 W 63RD		SPILLS
CHICAGO	S111900462		3515 W 63RD SAINT CHICAGO PD 8TH		SPILLS
CHICAGO	S111877019		63RD SAINT LOREL		SPILLS
CHICAGO	S111901688		63RD ST		SPILLS
CHICAGO	S111895740		63RD & LARAMIE		SPILLS
CHICAGO	S111915495		63RD & OAKLEY		SPILLS
CHICAGO	S111927894		7030 W 63RD		SPILLS
CHICAGO	S111890750		63RD & (ST		SPILLS
CHICAGO	S111880671		63RD & KOSTNER		SPILLS
CHICAGO	S111894905		63RD & INDIANA STS		SPILLS
CHICAGO	S108046554		6300 N 6420		SPILLS
CHICAGO	S111878677		64TH & DAN RYAN EXPY		SPILLS
CHICAGO	S111882808		64TH & COTTAGE GRV		SPILLS
CHICAGO	S111888399		66TH & WENTWORTH		SPILLS
CHICAGO	S108891628		67TH AVE & WESTERN AVE		SPILLS
CHICAGO	S111888074		67TH & STONY ISLAND AVE		SPILLS
CHICAGO	S111901190		432 E 67TH ST		SPILLS
CHICAGO	S111919162		67TH ST & MICHIGAN AVE		SPILLS
CHICAGO	877558	AT 69TH AND HARLEM	AT 69TH AND HARLEM		ERNS
CHICAGO	S111909195		69TH SAINT DAN RYAN EXPRESS WAY		SPILLS
CHICAGO	91238491	71ST AND PALLESKY	71ST AND PALLESKY		ERNS
CHICAGO	2011963845	AT THE INSECTION OF 71ST AND BENNETT NONE	71ST		ERNS
CHICAGO	S111888166		71ST & STATE ST		SPILLS
CHICAGO	S111878525		499 W 71ST		SPILLS
CHICAGO	S111877483		71ST ST & LAKE SHORE DR		SPILLS
CHICAGO	2000531550	71ST STREET AND KEDZIE AVE	71ST STREET AND KEDZIE AVE	0	ERNS
CHICAGO	872272	72ND & SAYER	72ND & SAYER		ERNS
CHICAGO	S110824843		73RD ST		SPILLS
CHICAGO	S111895872		73RD & KEDZIE AVE		SPILLS
CHICAGO	S111885537		74TH & WOODS ST		SPILLS
CHICAGO	S111878127		74TH & HARDING		SPILLS
CHICAGO	S111923518		7501ST S LAWNDALE & 33RD HAYFORD		SPILLS
CHICAGO	2009896730	75TH STREET AT	75TH STREET AT		ERNS
CHICAGO	2009905642	75TH ST. & SW HWY	75TH ST. & SW HWY		ERNS
CHICAGO	2008896730	75TH STREET AT	75TH STREET AT		ERNS
CHICAGO	2008905642	75TH ST. & SW HWY	75TH ST. & SW HWY		ERNS
CHICAGO	S111894639		75TH & BELL ST		SPILLS
CHICAGO	S108046690		76TH & CICERO PARKING LOT OF FORD CIT MALL		SPILLS
CHICAGO	S111925251		1400 W 76TH		SPILLS

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CHICAGO	2007324296	78TH AND PHILLIPS STREET	78TH AND PHILLIPS STREET		ERNS
CHICAGO	S111907714		78TH & WOODLAWN STS		SPILLS
CHICAGO	1004696268	PUBLIC STORAGE	2640 W 79TH		RCRA-CESQG
CHICAGO	S111887212		79TH & PERRY		SPILLS
CHICAGO	S111895139		79TH & KEDZIE AVE		SPILLS
CHICAGO	S111923553		79TH ST & WESTERN AVE		SPILLS
CHICAGO	S111876849		79TH & MERRILL		SPILLS
CHICAGO	S111921806		79TH & CICERO		SPILLS
CHICAGO	S111899140		79TH & KEDZIE		SPILLS
CHICAGO	S111899413		79TH & KILPATRICK		SPILLS
CHICAGO	873714	7TH FLOOR	7TH FLOOR		ERNS
CHICAGO	2008876881	INTERSTATE 80 EASTBOUND	INTERSTATE 80 EASTBOUND		ERNS
CHICAGO	S111907569		I 80 TOLLBOOTH 45		SPILLS
CHICAGO	S111885209		81ST & INDIANA		SPILLS
CHICAGO	S108046748		822ND N ROCKWELL & N KEATING		SPILLS
CHICAGO	S111886154		8250TH & S COTTAGE GROVE AVE		SPILLS
CHICAGO	S111888213		83RD & PULASKI		SPILLS
CHICAGO	S111876908		1111 E 83RD		SPILLS
CHICAGO	S111898513		2501 E 83RD		SPILLS
CHICAGO	S111883741		83RD & STATE ST		SPILLS
CHICAGO	S111883654		86TH SAINT GATE		SPILLS
CHICAGO	S108046297		440 2 87TH ST		SPILLS
CHICAGO	S111887646		87TH & COTTAGE RD		SPILLS
CHICAGO	S111896937		1730 87TH ST		SPILLS
CHICAGO	S111902165		1400 87TH ST		SPILLS
CHICAGO	S111878094		87TH ST & KING AVE		SPILLS
CHICAGO	S111876074		87TH & MARTIN LUTHER KING DR		SPILLS
CHICAGO	S111898018		87TH & MARTIN LUTHER DR		SPILLS
CHICAGO	S109953838		I 88 E & HIGHLAND AVE		SPILLS
CHICAGO	S111915633		89TH & RACINE		SPILLS
CHICAGO	S109700073		I 90 MP 48		SPILLS
CHICAGO	S111885631		I 90 ONSHOULDERSBDANRYAN & I 94 AT 79TH ST		SPILLS
CHICAGO	S111927573		I 90 WB		SPILLS
CHICAGO	S111876495		I 90 & N I 94 NB		SPILLS
CHICAGO	S111896119		I 90 & I 290 MM		SPILLS
CHICAGO	S111901056		I 90 & I 94 EB		SPILLS
CHICAGO	S111899135		I 90 94 AT 410 AVENUE		SPILLS
CHICAGO	S111895712		I 90 WB		SPILLS
CHICAGO	S111894927		I 90 NEATARMITAGE AVE		SPILLS
CHICAGO	S111883615		125 I 90 WB		SPILLS
CHICAGO	S111883537		I 90 EBMPOTOLL ROAD		SPILLS
CHICAGO	S108480169		I 90 WB		SPILLS
CHICAGO	2000540207	ROUTE 90	ROUTE 90	0	ERNS
CHICAGO	S111880871		9059TH S WESTERN & 91ST		SPILLS
CHICAGO	2008880922	90TH STREET	90TH STREET		ERNS
CHICAGO	S111911279		90TH & ANTHONY ST		SPILLS
CHICAGO	S111891107		925ND & KIMBARK		SPILLS

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CHICAGO	93309560	92ND ST BRIDGE	92ND ST BRIDGE		ERNS
CHICAGO	S111877738		3125 E 92ND		SPILLS
CHICAGO	2000516161	93RD AND SANGAMON STREETS	93RD AND SANGAMON STREETS	0	ERNS
CHICAGO	S109953773		I 94 NB		SPILLS
CHICAGO	S110122315		I 94 EBEXIT 73		SPILLS
CHICAGO	S111349598		I 94		SPILLS
CHICAGO	S109366492		I 94 EBEXIT 68		SPILLS
CHICAGO	2011966167	INTERSTATE 94 EASTBOUND BEFORE THE FULLERTON EXIT	I 94 EASTBOUNDBEFORETHEFULLERTON		ERNS
CHICAGO	S111885871		I 94 NBATPOLK ST		SPILLS
CHICAGO	S111898276		I 94 & 59TH SAINT ENTRANCE RAMP		SPILLS
CHICAGO	S111927566		I 94 & 55TH SAINT EXIT		SPILLS
CHICAGO	S111904380		I 94 EB & MONTROSE		SPILLS
CHICAGO	S111910037		I 94 & 130TH ST NB		SPILLS
CHICAGO	S111912362		I 94 WBEXIT 59B		SPILLS
CHICAGO	S111883105		I 94 & OGDEN ST		SPILLS
CHICAGO	S111910894		I 94 & I 90 AT IRVING PARK RD		SPILLS
CHICAGO	S111925806		I 94 EASTBOUND		SPILLS
CHICAGO	S111893668		I 94 NB		SPILLS
CHICAGO	S111914933		I 94 MM 64 S		SPILLS
CHICAGO	S111903237		I 94 WB		SPILLS
CHICAGO	S111896729		I 94 NB		SPILLS
CHICAGO	S111920177		I 94 S & EXIT 33A		SPILLS
CHICAGO	S111920168		I 94 EXIT 33A S		SPILLS
CHICAGO	S111920145		I 94 SB		SPILLS
CHICAGO	98424429	94TH AND DAN RYAN EXP	94TH AND DAN RYAN EXP		ERNS
CHICAGO	98444633	95TH STREET AT THE BOAT DOCKS	95TH STREET AT THE BOAT DOCKS		ERNS
CHICAGO	2008885493	95TH AND ASHLAND	95TH AND ASHLAND		ERNS
CHICAGO	S109327559		95TH ST & CHICAGO SKWY		SPILLS
CHICAGO	2010936475	95TH AND VINCENNES	95TH		ERNS
CHICAGO	S111885252		1421 2 95TH ST		SPILLS
CHICAGO	2012105009		95TH AND VINCENNES ST		ERNS
CHICAGO	S111881440		2647 E 95TH		SPILLS
CHICAGO	S111876565		4001 E 95TH SAINT CALUMET HBR		SPILLS
CHICAGO	S111910538		95TH ST & COLFAX		SPILLS
CHICAGO	S111888906		49 E 95TH SAINT ABBOTT PARK		SPILLS
CHICAGO	S111904651		1123 E 95TH AVE		SPILLS
CHICAGO	S111920554		95TH & WENTWORTH		SPILLS
CHICAGO	2010951454	MILE POST 9.69	969		ERNS
CHICAGO	2011992364		96TH BLOCK OF COMMERCIAL AVE		ERNS
CHICAGO	2007301682	97TH STREET	97TH STREET		ERNS
CHICAGO	97408920	97TH STREET YARD NORFOLK SOUTHERN RR	97TH STREET YARD NORFOLK SOUTHERN RR		ERNS
CHICAGO	S111920983		97TH SAINT ROCK IS		SPILLS
CHICAGO	876733	99TH ST AND CENTRAL PARK	99TH ST AND CENTRAL PARK		ERNS
CHICAGO	875165	99TH ST. AND AVE. J	99TH ST. AND AVE. J		ERNS
CHICAGO	S111890848		99TH & HALSTEAD		SPILLS
CHICAGO	2000537597	99TH STREET AND WESTERN AVE	99TH STREET AND WESTERN AVE	0	ERNS

Count: 4347 records COOK COUNTY, IL - ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CHICAGO	S111912210		5414 S ABERDEEN		SPILLS
CHICAGO	S111900403		406 N ABERDEEN		SPILLS
CHICAGO	S111915133		114 N ABERDEEN		SPILLS
CHICAGO	2011963768	616 SOUTH ACCESS RD	616 S ACCESS RD		ERNS
CHICAGO	S111912541		611 N ACCESS RD		SPILLS
CHICAGO	S111902943		609 S ACCESS RD		SPILLS
CHICAGO	876135	ACROSS FROM 3440 NORTH LAKESHORE DR, IN BELMONT HARBOR	ACROSS FROM 3440 NORTH LAKESHORE DR, IN BELMONT HARBOR		ERNS
CHICAGO	2010960900	12245 SOUTH ADA	12245 S ADA		ERNS
CHICAGO	S111888659		11250 S ADA		SPILLS
CHICAGO	S111899285		172 N ADA		SPILLS
CHICAGO	S111877769		ADAMS & SANGAMON		SPILLS
CHICAGO	S111895246		1130 W ADAMS		SPILLS
CHICAGO	S111904649		1029 W ADAMS		SPILLS
CHICAGO	S111902090		927 W ADAMS		SPILLS
CHICAGO	S111883547		1114 W ADAMS		SPILLS
CHICAGO	S111913912		1127 W ADAMS		SPILLS
CHICAGO	S111887356		6001 W ADDISON		SPILLS
CHICAGO	S111926696		5200 W ADDISON		SPILLS
CHICAGO	S111912256		3323 W ADDISON AVE		SPILLS
CHICAGO	S111904712		5935 W ADDISON RD		SPILLS
CHICAGO	S111907993		1801 W ADDISON RD		SPILLS
CHICAGO	S111925267		2436 ADDISON ST		SPILLS
CHICAGO	S111903324		4601 W ADDISON		SPILLS
CHICAGO	S111875851		6000 ADDISON		SPILLS
CHICAGO	S111922758		3159 W ADDISON		SPILLS
CHICAGO	S111905549		5935 W ADDISON		SPILLS
CHICAGO	S111896798		6519 W ADDISON AVE		SPILLS
CHICAGO	S111877287		7560 W ADDISON		SPILLS
CHICAGO	S111876140		3555 W ADDISON		SPILLS
CHICAGO	S111888785		2800 W ADDISON		SPILLS
CHICAGO	S111896716		4550 W ADDISON AVE		SPILLS
CHICAGO	S111876013		7560 W ADDISON		SPILLS
CHICAGO	S111876008		4633 ADDISON AVE		SPILLS
CHICAGO	S111883985		4440 W ADDISON		SPILLS
CHICAGO	S111878561		7200 W ADDISON		SPILLS
CHICAGO	S111902548		2500 W ADDISON		SPILLS
CHICAGO	S111876607		3700 W ADDISON		SPILLS
CHICAGO	89124407	ADJACENT TO 9300 S. SANGAMON	ADJACENT TO 9300 S. SANGAMON		ERNS
CHICAGO	S111927545		2319 W AGUSTA BLVD		SPILLS
CHICAGO	S111905860		4560 W AGUSTA BLVD		SPILLS
CHICAGO	S111887521		3206 W AINSLIE		SPILLS
CHICAGO	94382241	AIRCRAFT PARKING LOT NORTH END OF OHARE INT AIRPORT	AIRCRAFT PARKING LOT NORTH END OF OHARE INT AIRPORT		ERNS
CHICAGO	S111877908		US AIRFORCEBASE		SPILLS
CHICAGO	2007319807	ALBANY GRADE CROSSING ON THE BROWN LINE	ALBANY GRADE CROSSING ON THE BROWN LINE		ERNS
CHICAGO	S111885146		ALBANY ST & CHICAGO AVE		SPILLS

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CHICAGO	S111878211		3610 S ALBANY		SPILLS
CHICAGO	S111918682		2417 N ALBANY		SPILLS
CHICAGO	S111902233		3700 S ALBANY		SPILLS
CHICAGO	S111905680		744 W ALDINE		SPILLS
CHICAGO	92296598	ALLEY ADJACENT TO 1669 FARWELL AVE	ALLEY ADJACENT TO 1669 FARWELL AVE		ERNS
CHICAGO	98419775	ALLEY AT 4920 NORTH KENMORE AVENUE	ALLEY AT 4920 NORTH KENMORE AVENUE		ERNS
CHICAGO	97417233	ALLEY NEAR HOLMAN AND 23RD STREET	ALLEY NEAR HOLMAN AND 23RD STREET		ERNS
CHICAGO	90155144	ALLEY BEHIND 3737 N. ASHLAND	ALLEY BEHIND 3737 N. ASHLAND		ERNS
CHICAGO	89118759	IN ALLEY BEHIND, 111 WEST WINONA	IN ALLEY BEHIND, 111 WEST WINONA		ERNS
CHICAGO	99626121	ALLEY BEHIND RUETERS BAKERY/7175 WEST GRAND AVE	ALLEY BEHIND RUETERS BAKERY/7175 WEST GRAND AVE		ERNS
CHICAGO	S111879642		1300 W ALTGELD AVE		SPILLS
CHICAGO	S111913999		5940 W ALTGELD		SPILLS
CHICAGO	S111887832		ALWASTE COMPANY SOUTH COTTAGE GRV		SPILLS
CHICAGO	S111881951		2844 N ALY MILWAUKEE AVE		SPILLS
CHICAGO	S111896501		AMB & OHARE AIRPORT		SPILLS
CHICAGO	92264268	AMERICAN AIRLINES FREIGHT TERMINAL	AMERICAN AIRLINES FREIGHT TERMINAL		ERNS
CHICAGO	S109700034		AMERICAN AIRLINES HANGER 1		SPILLS
CHICAGO	S109700033		AMERICAN AIRLINES HANGER 1		SPILLS
CHICAGO	S111909909		AMERICAN AIRLINES HANGER OHARE		SPILLS
CHICAGO	S111909487		AMERICAN AIRLINES GATE G19		SPILLS
CHICAGO	S111924903		AMERICAN AIRLINES HANGAR 1		SPILLS
CHICAGO	8718690	AMOCO STATION WEST PETERSON ST	AMOCO STATION WEST PETERSON ST		ERNS
CHICAGO	S108045529		1463 AND 1465 W HUBBARD		SPILLS
CHICAGO	93329071	71 ST AND PULASKI ST ADJACENT TO DOMINICKS	71 ST AND PULASKI ST ADJACENT TO DOMINICKS		ERNS
CHICAGO	89127613	130 ST AND TORENCE AVE	130 ST AND TORENCE AVE		ERNS
CHICAGO	873985	130 AND TORRANCE AVENUE JUST SOUTH OF SOUTH SHORE RAIL ROAD	130 AND TORRANCE AVENUE JUST SOUTH OF SOUTH SHORE RAIL ROAD		ERNS
CHICAGO	89119785	A AND B ARE 5 BLOCKS APART.	A AND B ARE 5 BLOCKS APART.		ERNS
CHICAGO	99638599	I-94 AND 130TH STREET	I-94 AND 130TH STREET		ERNS
CHICAGO	98466955	39 TH AND RACIN NEAR RAILROAD	39 TH AND RACIN NEAR RAILROAD		ERNS
CHICAGO	2000670407	AND COLUMBUS ST.	AND COLUMBUS ST.		ERNS
CHICAGO	S111927439		4500 W ANNE LORI PL		SPILLS
CHICAGO	S111912212		3418 W ANSLIE ST		SPILLS
CHICAGO	S111882269		7740 S ANTHONY		SPILLS
CHICAGO	2002598671	ANTHONY STREET	ANTHONY STREET	0	ERNS
CHICAGO	93324425	APEX DOCK ON THE ILLINOIS RIVER	APEX DOCK ON THE ILLINOIS RIVER		ERNS
CHICAGO	S111887926		APEX DOCK		SPILLS
CHICAGO	S108046848		ARCHER & KOSTER AVE		SPILLS
CHICAGO	2004712427	ARCHER AVENUE & KOSTER AVENUE	ARCHER AVENUE & KOSTER AVENUE		ERNS
CHICAGO	S111887303		4400 S ARCHER		SPILLS
CHICAGO	S111885938		4710 S ARCHER		SPILLS
CHICAGO	S111900032		4546 S ARCHER		SPILLS
CHICAGO	S111909973		ARCHER & LOCKWOOD		SPILLS
CHICAGO	S111907499		5434 S ARCHER		SPILLS
CHICAGO	S111925457		ARCHER & CANAL		SPILLS
CHICAGO	S111925458		ARCHER		SPILLS

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CHICAGO	S111882732		4555 S ARCHER		SPILLS
CHICAGO	S111908313		6150 S ARCHER		SPILLS
CHICAGO	S111910533		3956 S ARCHER		SPILLS
CHICAGO	S111924484		ARCHER AND CLARK STS		SPILLS
CHICAGO	S111877409		ARCHER & CENTRAL		SPILLS
CHICAGO	S111893743		3402 S ARCHER		SPILLS
CHICAGO	S111899851		5552 ARCHER		SPILLS
CHICAGO	S111877291		6824 W ARCHER		SPILLS
CHICAGO	S111880751		5889 ARCHER AVE		SPILLS
CHICAGO	S111905725		ARCHER & CICERO AVE		SPILLS
CHICAGO	S111924727		6751 W ARCHER		SPILLS
CHICAGO	S111900992		3583 S ARCHER		SPILLS
CHICAGO	2002608327	AREA 2 GARAGE	AREA 2 GARAGE	0	ERNS
CHICAGO	96501842	2900 WEST ARGYLE FRANCISCO ST AT RIVER PARK	2900 WEST ARGYLE FRANCISCO ST AT RIVER PARK		ERNS
CHICAGO	S111900910		4014 W ARGYLE		SPILLS
CHICAGO	S111894232		1333 ARGYLE ST		SPILLS
CHICAGO	S111911967		4701 W ARMATAGE AVE		SPILLS
CHICAGO	S108047902		ARMITAGE		SPILLS
CHICAGO	S111899643		3839 W ARMITAGE		SPILLS
CHICAGO	S111891969		3920 W ARMITAGE		SPILLS
CHICAGO	S111890623		1955 W ARMITAGE		SPILLS
CHICAGO	S111904745		1135 W ARMITAGE		SPILLS
CHICAGO	S111892222		1135 W ARMITAGE RD		SPILLS
CHICAGO	S111893394		2518 ARMITAGE AVE		SPILLS
CHICAGO	S111892624		2052 W ARMITAGE		SPILLS
CHICAGO	S111883582		6803 ARMITAGE		SPILLS
CHICAGO	S111910152		4740 W ARMITAGE		SPILLS
CHICAGO	S111884834		4447 W ARMITAGE		SPILLS
CHICAGO	S111895626		2317 W ARMITAGE		SPILLS
CHICAGO	S111890355		3400 W ARMITAGE		SPILLS
CHICAGO	S111912634		1768 W ARMITAGE		SPILLS
CHICAGO	S111894278		3247 W ARMNITAGE		SPILLS
CHICAGO	S111912324		2745 ARMSTRONG CT		SPILLS
CHICAGO	S111901434		5419 W ARMSTRONG		SPILLS
CHICAGO	S111880653		5353 N ARMSTRONG AVE		SPILLS
CHICAGO	S108045921		2525 S ARTEGIAN		SPILLS
CHICAGO	S111881808		4825 ARTHINGTON		SPILLS
CHICAGO	S111907628		2954 W ARTHUR ST		SPILLS
CHICAGO	S111891841		4324 S ARTISEN ST		SPILLS
CHICAGO	91232602	3901 ASHLAND AVE	3901 ASHLAND AVE		ERNS
CHICAGO	96517432	ASHLAND AVE MILEPOST UNKNOWN	ASHLAND AVE MILEPOST UNKNOWN		ERNS
CHICAGO	2004733058	ASHLAND AVENUE	ASHLAND AVENUE		ERNS
CHICAGO	90151129	ASHLAND AVE YARD	ASHLAND AVE YARD		ERNS
CHICAGO	2009914875	4024 ASHLAND AVENUE	4024 ASHLAND AVENUE		ERNS
CHICAGO	2008914875	4024 ASHLAND AVENUE	4024 ASHLAND AVENUE		ERNS
CHICAGO	2005620314	4024 ASHLAND AVE	4024 ASHLAND AVE		ERNS

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CHICAGO	2005604687	ASHLAND AVE	ASHLAND AVE		ERNS
CHICAGO	2005601210	4024 ASHLAND AVENUE	4024 ASHLAND AVENUE		ERNS
CHICAGO	2005615233	4107 ASHLAND AVE.	4107 ASHLAND AVE.		ERNS
CHICAGO	2006807909	4024 ASHLAND AVE	4024 ASHLAND AVE		ERNS
CHICAGO	2006797514	4024 ASHLAND AVE	4024 ASHLAND AVE		ERNS
CHICAGO	S111888048		6630 S ASHLAND		SPILLS
CHICAGO	S111887349		4810 S ASHLAND		SPILLS
CHICAGO	S111887205		6501 N ASHLAND		SPILLS
CHICAGO	S111887600		5257 S ASHLAND		SPILLS
CHICAGO	S111885804		4008 S ASHLAND		SPILLS
CHICAGO	S111896674		7531 ASHLAND AVE		SPILLS
CHICAGO	S111877168		7531 S ASHLAND		SPILLS
CHICAGO	S111905995		ASHLAND AVE		SPILLS
CHICAGO	S111900270		2522 N ASHLAND		SPILLS
CHICAGO	S111900269		2522 N ASHLAND		SPILLS
CHICAGO	S111878491		3434 N ASHLAND		SPILLS
CHICAGO	S111927483		4024 ASHLAND AVE		SPILLS
CHICAGO	S111912485		9131 S ASHLAND		SPILLS
CHICAGO	S111913577		4016 S ASHLAND		SPILLS
CHICAGO	S111882740		649 N ASHLAND		SPILLS
CHICAGO	S111878983		100 S ASHLAND		SPILLS
CHICAGO	S111902676		4024 ASHLAND AVE		SPILLS
CHICAGO	S111897809		3656 N ASHLAND		SPILLS
CHICAGO	S111875322		4024 S ASHLAND		SPILLS
CHICAGO	S111925244		4024 ASHLAND AVE		SPILLS
CHICAGO	S111911966		133 S ASHLAND		SPILLS
CHICAGO	S111902630		3931 N ASHLAND		SPILLS
CHICAGO	S111888954		7225 S ASHLAND		SPILLS
CHICAGO	S111888621		11859 ASHLAND		SPILLS
CHICAGO	S111878225		3715 ASHLAND AVE		SPILLS
CHICAGO	S111876462		2545 N ASHLAND		SPILLS
CHICAGO	S111881752		3901 ASHLAND		SPILLS
CHICAGO	S111898942		625 N ASHLAND		SPILLS
CHICAGO	S111892788		1000 N ASHLAND		SPILLS
CHICAGO	S111920063		401 N ASHLAND		SPILLS
CHICAGO	S111895462		3332 N ASHLAND		SPILLS
CHICAGO	S111891530		7520 S ASHLAND		SPILLS
CHICAGO	S111882029		5343 S ASHLAND		SPILLS
CHICAGO	S111922702		ASHLAND AVE		SPILLS
CHICAGO	S111920039		4224 ASHLAND AVE		SPILLS
CHICAGO	S111889871		2352 S ASHLAND		SPILLS
CHICAGO	S111924249		4024 ASHLAND AVE		SPILLS
CHICAGO	S111905030		415 N ASHLAND		SPILLS
CHICAGO	S111905871		2200 S ASHLAND		SPILLS
CHICAGO	S111899471		6837 S ASHLAND		SPILLS
CHICAGO	S111889175		7101 S ASHLAND		SPILLS
CHICAGO	S111879432		8345 S ASHLAND		SPILLS

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CHICAGO	S111919969		4024 ASHLAND AVE		SPILLS
CHICAGO	S111919211		4024 ASHLAND AVE		SPILLS
CHICAGO	S111915218		7059 S ASHLAND		SPILLS
CHICAGO	S111882512		3700 S ASHLAND		SPILLS
CHICAGO	S111881216		ASHLAND & LAWRENCE		SPILLS
CHICAGO	S111909172		8701 S ASHLAND		SPILLS
CHICAGO	S111889497		4123 N ASHLAND		SPILLS
CHICAGO	S111875588		3737 N ASHLAND		SPILLS
CHICAGO	S111920317		2800 N ASHLAND		SPILLS
CHICAGO	S111891756		OF ASHLAND AVE		SPILLS
CHICAGO	S111880143		2459 N ASHLAND		SPILLS
CHICAGO	S111879985		9420 S ASHLAND		SPILLS
CHICAGO	S111919890		4024 ASHLAND AVE		SPILLS
CHICAGO	S111919871		2730 N ASHLAND		SPILLS
CHICAGO	S111895708		6630 S ASHLAND		SPILLS
CHICAGO	S111888774		ASHLAND YARD		SPILLS
CHICAGO	S111905457		325 N ASHLAND		SPILLS
CHICAGO	S111880683		7059 ASHLAND ST		SPILLS
CHICAGO	S111903522		5900 S ASHLAND		SPILLS
CHICAGO	S111903492		649 N ASHLAND		SPILLS
CHICAGO	S111901940		2020 N ASHLAND		SPILLS
CHICAGO	S111901581		3535 S ASHLAND		SPILLS
CHICAGO	S111903829		5257 S ASHLAND		SPILLS
CHICAGO	S111890400		3130 S ASHLAND		SPILLS
CHICAGO	S111875987		2020 N ASHLAND		SPILLS
CHICAGO	S111879066		ASHLAND & 22ND ST		SPILLS
CHICAGO	S111924188		4024 ASHLAND AVE		SPILLS
CHICAGO	S111915565		8640 S ASHLAND		SPILLS
CHICAGO	S111915294		7101 S ASHLAND		SPILLS
CHICAGO	S111914633		348 ASHLAND AVE		SPILLS
CHICAGO	S111910200		2100 S ASHLAND		SPILLS
CHICAGO	S111884403		5026 N ASHLAND		SPILLS
CHICAGO	S111749785		1430 S ASHLAND		SPILLS
CHICAGO	S109366444		ASIG MOUNT PROSPECT RD NW		SPILLS
CHICAGO	S111924323		RD ASIG MOUNT PROSPECT ENTRANCE H NW		SPILLS
CHICAGO	92253228	ASPHALT RECOVERY SYSTEMS 4835 SOUTH MORGA	ASPHALT RECOVERY SYSTEMS 4835 SOUTH MORGAN		ERNS
CHICAGO	94393029	M-5 AT ACCESS RD AT OHARE AIRPORT BETWEEN TERMINAL 3 AND INT	M-5 AT ACCESS RD AT OHARE AIRPORT BETWEEN TERMINAL 3 AND INT		ERNS
CHICAGO	2009900532	I-57 AT 99TH & HALSTEAD EXIT	I-57 AT 99TH & HALSTEAD EXIT		ERNS
CHICAGO	2008900532	I-57 AT 99TH & HALSTEAD EXIT	I-57 AT 99TH & HALSTEAD EXIT		ERNS
CHICAGO	S111894433		2363 W AUGDEN AVE		SPILLS
CHICAGO	S111888908		4501 W AUGUST BLVD		SPILLS
CHICAGO	S111885906		2405 W AUGUSTA		SPILLS
CHICAGO	S111894681		1700 W AUGUSTA		SPILLS
CHICAGO	S111906482		1260 W AUGUSTA		SPILLS
CHICAGO	S111918585		1949 W AUGUSTA		SPILLS
CHICAGO	S111897818		4801 S AUSTIN		SPILLS

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CHICAGO	S111875905		1900 N AUSTIN		SPILLS
CHICAGO	S111898927		3020 N AUSTIN		SPILLS
CHICAGO	89108912	NORTH AVE AND LASALLE ST	NORTH AVE AND LASALLE ST		ERNS
CHICAGO	S109167113		1425 SW AVE		SPILLS
CHICAGO	S111889368		6131 NORTHWEST AVE		SPILLS
CHICAGO	S111889367		6060 NORTHWEST AVE		SPILLS
CHICAGO	S111909940		1425 SOUTHWEST AVE		SPILLS
CHICAGO	S111905664		10558 AVE NORTH		SPILLS
CHICAGO	S111875954		11610 AVE O		SPILLS
CHICAGO	S111912313		11835 S AVE 0		SPILLS
CHICAGO	S111901173		AVE 0 & 116TH ST		SPILLS
CHICAGO	S111909089		5600 NORTH AVE		SPILLS
CHICAGO	S111899915		12949 AVE O		SPILLS
CHICAGO	S111927231		6740 W AVE		SPILLS
CHICAGO	S111907771		732 SOUTHWEST AVE		SPILLS
CHICAGO	S111898055		11610 AVE O		SPILLS
CHICAGO	S111927791		1425 SW AVE		SPILLS
CHICAGO	S111908413		13600 S AVE N		SPILLS
CHICAGO	S111896019		11610 AVE O		SPILLS
CHICAGO	S111912702		AVE N		SPILLS
CHICAGO	S111897832		NORTH AVE		SPILLS
CHICAGO	91217612	AVE. O & 111TH STREET	AVE. O & 111TH STREET		ERNS
CHICAGO	2005616197	6547 N AVENDALE	6547 N AVENDALE		ERNS
CHICAGO	90169860	11610 AVENUE ZERO	11610 AVENUE ZERO		ERNS
CHICAGO	S111888413		4024 N AVERS		SPILLS
CHICAGO	S111907712		388 N AVERS ST		SPILLS
CHICAGO	S111906041		3360 N AVONDALE		SPILLS
CHICAGO	S111907972		3388 AVONDALE ST		SPILLS
CHICAGO	S111906266		6501 N AVONDALE BLVD		SPILLS
CHICAGO	S111892650		6479 N AVONDALE		SPILLS
CHICAGO	94366797	MM B514	MM B514		ERNS
CHICAGO	99650012	IN BACK OF CAR DEALER	IN BACK OF CAR DEALER		ERNS
CHICAGO	S111912436		8500 S BAKER		SPILLS
CHICAGO	S111905021		13359 S BALTIMORE ST		SPILLS
CHICAGO	S111898806		8491 S BALTIMORE		SPILLS
CHICAGO	92297014	BARR YARD FACILITY	BARR YARD FACILITY		ERNS
CHICAGO	94368478	BARR YARD	BARR YARD		ERNS
CHICAGO	94407403	BARR RAIL YARD TRACK F2	BARR RAIL YARD TRACK F2		ERNS
CHICAGO	S110278199		BARR YARD		SPILLS
CHICAGO	2007308409	BARR RAILYARD	BARR RAILYARD		ERNS
CHICAGO	S111890670		BARR YARD		SPILLS
CHICAGO	S111893146		BARR YARD		SPILLS
CHICAGO	S111896779		BARR YARD IN		SPILLS
CHICAGO	S111892664		BARR YARD		SPILLS
CHICAGO	S111891412		S BARR YARD 13600		SPILLS
CHICAGO	S111907524		BARR RAILYARD		SPILLS
CHICAGO	S111910961		4921 W BARRISON ST		SPILLS

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CHICAGO	2012107030		BEDFORD PARK		ERNS
CHICAGO	93317876	BEHIND QUARRY ON 28TH AND HALLSTON	BEHIND QUARRY ON 28TH AND HALLSTON		ERNS
CHICAGO	93312357	BEHIND BUS STATION AT FOSTER STREET	BEHIND BUS STATION AT FOSTER STREET		ERNS
CHICAGO	8867774	BEHIND FORD MOTOR CO	BEHIND FORD MOTOR CO		ERNS
CHICAGO	S111909791		6650 W BELDEN AVE		SPILLS
CHICAGO	S111909066		6650 W BELDEN AVE		SPILLS
CHICAGO	S111905676		7003 S BELL		SPILLS
CHICAGO	S111891060		4244 N BELL		SPILLS
CHICAGO	S111923381		7100 S BELL		SPILLS
CHICAGO	S111907306		6301 S BELL		SPILLS
CHICAGO	S111877683		342 N BELL		SPILLS
CHICAGO	S111907143		4117 N BELL ST		SPILLS
CHICAGO	2001552751	SH BELL OLD DRY DOCK SLIP	SH BELL OLD DRY DOCK SLIP	0	ERNS
CHICAGO	S111926441		7320 W BELLMONT		SPILLS
CHICAGO	S111882675		7055 W BELLMONT AVE		SPILLS
CHICAGO	S111884055		4200 W BELLMONT AVE		SPILLS
CHICAGO	S111905727		6809 BELLMONT AVE		SPILLS
CHICAGO	2001562904	BELLMONT ROAD	BELLMONT ROAD	0	ERNS
CHICAGO	93349990	BELMONT AND KEDZEE STS	BELMONT AND KEDZEE STS		ERNS
CHICAGO	2004724076	3200 NORTH BELMONT	3200 NORTH BELMONT		ERNS
CHICAGO	2003702829	BELMONT HARBOR	BELMONT HARBOR		ERNS
CHICAGO	S111887682		5001 W BELMONT		SPILLS
CHICAGO	S111886379		4549 BELMONT		SPILLS
CHICAGO	S111885935		3968 W BELMONT		SPILLS
CHICAGO	S111887621		4500 W BELMONT		SPILLS
CHICAGO	S111904780		3500 W BELMONT		SPILLS
CHICAGO	S111899228		1415 W BELMONT		SPILLS
CHICAGO	S111895053		4820 W BELMONT		SPILLS
CHICAGO	S111875235		5400 W BELMONT		SPILLS
CHICAGO	S111898905		5142 W BELMONT		SPILLS
CHICAGO	S111893069		2227 W BELMONT		SPILLS
CHICAGO	S111921792		2858 W BELMONT		SPILLS
CHICAGO	S111894478		4401 W BELMONT		SPILLS
CHICAGO	S111881972		3927 W BELMONT		SPILLS
CHICAGO	S111906293		4700 W BELMONT		SPILLS
CHICAGO	S111888499		6419 BELMONT		SPILLS
CHICAGO	S111899454		5811 W BELMONT		SPILLS
CHICAGO	S111890737		6546 W BELMONT		SPILLS
CHICAGO	S111882827		1525 W BELMONT		SPILLS
CHICAGO	S111898676		3409 W BELMONT		SPILLS
CHICAGO	S111897570		3045 W BELMONT ST		SPILLS
CHICAGO	S111878548		6757 W BELMONT		SPILLS
CHICAGO	S111884819		2001 W BELMONT		SPILLS
CHICAGO	S111899039		5410 W BELMONT		SPILLS
CHICAGO	S111911378		5900 W BELMONT		SPILLS
CHICAGO	S111883236		3416 W BELMONT		SPILLS
CHICAGO	2000533030	BELMONT HARBOR	BELMONT HARBOR	0	ERNS

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CHICAGO	S109953676		1608 W BELMONTE AVE		SPILLS
CHICAGO	S111925406		1608 W BELMONTE AVE		SPILLS
CHICAGO	96486114	BELT RAILWAY YARD MP: UNKNOWN	BELT RAILWAY YARD MP: UNKNOWN		ERNS
CHICAGO	S111899119		1457 W BELTMONT AVE		SPILLS
CHICAGO	S111920275		2415 W BEMONT AVE		SPILLS
CHICAGO	S111905126		5600 N BENARD		SPILLS
CHICAGO	S111911325		BENSENVILLE RAILROAD YARD		SPILLS
CHICAGO	99621260	BENSONVILLE YARD BETWEEN MANHEIM AND YORK ROAD	BENSONVILLE YARD BETWEEN MANHEIM AND YORK ROAD		ERNS
CHICAGO	S111911109		5555 N BERNARD AVE		SPILLS
CHICAGO	S111909587		1641 W BERRY		SPILLS
CHICAGO	2002625685	3237 W BERTAEU	3237 W BERTAEU	0	ERNS
CHICAGO	S111875681		4514 BERTEAU		SPILLS
CHICAGO	S111900173		4404 W BERTEAU		SPILLS
CHICAGO	2000542071	BERWIN STATION	BERWIN STATION	0	ERNS
CHICAGO	2010952538	BERWYN STATION RED LINE	BERWYN STA		ERNS
CHICAGO	S111882698		1824 N BESLY		SPILLS
CHICAGO	S111888654		10000 BESSIE COLEMAN RD		SPILLS
CHICAGO	S111904847		1000 BESSIE COLEMAN DR		SPILLS
CHICAGO	S111892588		560 BESSIECOLEMAN DR		SPILLS
CHICAGO	91233983	BETWEEN 4.5 TO 5.0	BETWEEN 4.5 TO 5.0		ERNS
CHICAGO	94360249	BETWEEN MAJOR ST AND PARKSIDE AT THE SOUTH EAST CORNER OF 62	BETWEEN MAJOR ST AND PARKSIDE AT THE SOUTH EAST CORNER OF 62		ERNS
CHICAGO	2000534642	BETWEEN LEMONT AND	BETWEEN LEMONT AND	0	ERNS
CHICAGO	99626004	BETWEEN LOWE AND WALLACE TO 81ST STREET	BETWEEN LOWE AND WALLACE TO 81ST STREET		ERNS
CHICAGO	98433927	BETWEEN ADAMS AND JACKSON STREET AT UNION STATION OUTFALL	BETWEEN ADAMS AND JACKSON STREET AT UNION STATION OUTFALL		ERNS
CHICAGO	S111893339		BETWEEN 8514 S KENNETH & N MICHIGAN AVE		SPILLS
CHICAGO	S111906832		BETWEEN GRAYSLAKE & CHICAGO		SPILLS
CHICAGO	S111910210		BETWEEN 111TH & 112TH ON SOUTH AVE N		SPILLS
CHICAGO	S108046717		800 E BISHOP FORD EXPY		SPILLS
CHICAGO	S110278077		12500 S BISHOP FRD		SPILLS
CHICAGO	S111876709		823 W BLACK HAWK		SPILLS
CHICAGO	S111898039		1419 W BLACKHAWK		SPILLS
CHICAGO	S111875500		823 W BLACKHAWK		SPILLS
CHICAGO	98455783	80000 SOUTH BLACKSTONE	80000 SOUTH BLACKSTONE		ERNS
CHICAGO	93345927	4400 BLOCK OF ADDISON ST NEXT TO SPRAGUE IRON WORKS	4400 BLOCK OF ADDISON ST NEXT TO SPRAGUE IRON WORKS		ERNS
CHICAGO	2004727492	2700 BLOCK OF WEST GRAND	2700 BLOCK OF WEST GRAND		ERNS
CHICAGO	98429208	5700 BLOCK OF NORTH MOBILE AVE IN THE MIDDLE OF THE ALLEY	5700 BLOCK OF NORTH MOBILE AVE IN THE MIDDLE OF THE ALLEY		ERNS
CHICAGO	2009922293	1300 BLOCK OF WESTERN AVE.	1300 BLOCK OF WESTERN AVE.		ERNS
CHICAGO	S109327504		600 BLOCK OF KINZIE		SPILLS
CHICAGO	S111884785		3800 BLOCK OF W TAYLOR ST		SPILLS
CHICAGO	S111877926		5000 BLOCK OF CENTRAL AVE		SPILLS
CHICAGO	S111911159		3221 BLOCK OF S WALLACE		SPILLS
CHICAGO	S111881362		2700 BLOCK OF W GRAND AVE		SPILLS

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CHICAGO	S111919579		4300 BLOCK OF W FOSTER		SPILLS
CHICAGO	S111895449		4500 BLOCK OF W BERTEAU AVE		SPILLS
CHICAGO	S111919397		1200 BLOCK W OF NORTH AVENUE OF BRG S		SPILLS
CHICAGO	2002598894	2300 BLOCK OF NORTH AVE	2300 BLOCK OF NORTH AVE	0	ERNS
CHICAGO	S111903661		5000 BLOOMINGDALE AVE		SPILLS
CHICAGO	S111907691		4940 BLOOMINGDALE AVE		SPILLS
CHICAGO	S111890714		2530 W BLOOMINGDALE		SPILLS
CHICAGO	2003653270	BLUE LINE / O’HARE BRANCH	BLUE LINE / O’HARE BRANCH		ERNS
CHICAGO	2009908230	BLUE LINE CENTRAL STATION	BLUE LINE CENTRAL STATION		ERNS
CHICAGO	2008908230	BLUE LINE CENTRAL STATION	BLUE LINE CENTRAL STATION		ERNS
CHICAGO	2010938905	BLUE LINE	BLUE LINE		ERNS
CHICAGO	S111913352		2584 S BLUE IS		SPILLS
CHICAGO	S111924578		160 S BLUE ISLAND AVE		SPILLS
CHICAGO	S111892462		2584 S BLUE IS		SPILLS
CHICAGO	S111878148		2655 S BLUE ISLAND AVE		SPILLS
CHICAGO	S111907798		2524 S BLUE IS		SPILLS
CHICAGO	S111889753		1801 SOUTHWEST BLVD		SPILLS
CHICAGO	S111896192		1535 N BOSWORTH		SPILLS
CHICAGO	S111914709		1650 N BOSWORTH ST		SPILLS
CHICAGO	S111891070		41 BRAINARD AVENUE TO 130TH AND S AVE		SPILLS
CHICAGO	S108047339		N BRANCH RD & DIVISION ST		SPILLS
CHICAGO	94395395	NORTH BRANCH	NORTH BRANCH		ERNS
CHICAGO	877940	NORTH BRANCH OF THE CHICAGO RIVER	NORTH BRANCH OF THE CHICAGO RIVER		ERNS
CHICAGO	8714268	NORTH BRANCH	NORTH BRANCH		ERNS
CHICAGO	89118757	SO. BRANCH OF CHGO RIVER BETW LAKE & RAN	SO. BRANCH OF CHGO RIVER BETW LAKE & RAN	-	ERNS
CHICAGO	S111891018		S BRANCH CHICAGO RIV		SPILLS
CHICAGO	S111877919		932 N BRANCH ST		SPILLS
CHICAGO	S111900952		1200 N BRANCH ST		SPILLS
CHICAGO	90188490	922 NORTH BRANCH STREET	922 NORTH BRANCH STREET		ERNS
CHICAGO	99633000	SOUTH BREAK WALL / 63RD STREET BEACH	SOUTH BREAK WALL / 63RD STREET BEACH		ERNS
CHICAGO	91227080	6601 N BRIDGE BLVD	6601 N BRIDGE BLVD		ERNS
CHICAGO	S111881181		6601 N BRIDGE BLVD		SPILLS
CHICAGO	2006801026	BRIGHTON PARK	BRIGHTON PARK		ERNS
CHICAGO	S111349440		5821 N BROADWAY		SPILLS
CHICAGO	S111886763		4900 N BROADWAY		SPILLS
CHICAGO	S111887507		4849 N BROADWAY		SPILLS
CHICAGO	S111887501		5625 N BROADWAY		SPILLS
CHICAGO	S111887779		5156 N BROADWAY		SPILLS
CHICAGO	S111897919		4117 N BROADWAY		SPILLS
CHICAGO	S111884883		3440 N BROADWAY		SPILLS
CHICAGO	S111910986		5657 N BROADWAY		SPILLS
CHICAGO	S111876296		5427 N BROADWAY		SPILLS
CHICAGO	S111899247		2836 N BROADWAY		SPILLS
CHICAGO	S111912165		6231 BROADWAY		SPILLS
CHICAGO	S111877353		5427 N BROADWAY IN ALY		SPILLS
CHICAGO	S111911692		3012 N BROADWAY		SPILLS
CHICAGO	S111905888		3829 N BROADWAY		SPILLS

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CHICAGO	S111906834		5027 N BROADWAY		SPILLS
CHICAGO	S111926518		5343 BROADWAY AVE		SPILLS
CHICAGO	S111882856		4916 N BROADWAY		SPILLS
CHICAGO	S111882855		4925 N BROADWAY		SPILLS
CHICAGO	S111882854		4925 N BROADWAY		SPILLS
CHICAGO	S111899411		2840 N BROADWAY		SPILLS
CHICAGO	S111889471		5719 N BROADWAY		SPILLS
CHICAGO	S111927855		3531 N BROADWAY		SPILLS
CHICAGO	S111877180		5427 N BROADWAY		SPILLS
CHICAGO	S111895976		4843 BROADWAY		SPILLS
CHICAGO	2010960866	BROWN LINE AT KEDZIE STATION	BROWN LINE AT KEDZIE STA		ERNS
CHICAGO	S111887767		1939 W BRYN MAWR ST		SPILLS
CHICAGO	S111883885		1404 W BRYN MAWR ST		SPILLS
CHICAGO	S111905127		3434 W BRYN MAWR		SPILLS
CHICAGO	S111889215		3426 W BRYN MAWR		SPILLS
CHICAGO	S111915544		6123 W BRYN MAWR		SPILLS
CHICAGO	93337686	3131 W BRYNMAWR	3131 W BRYNMAWR		ERNS
CHICAGO	S111891567		3131 N BRYNMAWR AVE		SPILLS
CHICAGO	S111907390		8702 S BUFFALO ST		SPILLS
CHICAGO	S111911437		9002 S BUFFALO		SPILLS
CHICAGO	S108047785		BUILDING SERVICE CTR		SPILLS
CHICAGO	S108046885		BUILDING UNITED AIRLINES		SPILLS
CHICAGO	S111887390		BUILDING OHARE AIRPORT		SPILLS
CHICAGO	2011994509		BUILDING SOUTH CARGO RD		ERNS
CHICAGO	S111924536		BUILDING OHARE INTERNATIONAL A		SPILLS
CHICAGO	S111906378		BURHAM HBR		SPILLS
CHICAGO	S111891899		11600 S BURLEY		SPILLS
CHICAGO	S111902409		11600 BURLEY AVE		SPILLS
CHICAGO	S111900767		11600 BURLEY AVE		SPILLS
CHICAGO	S111894536		110600 BURLEY AVE		SPILLS
CHICAGO	S111889147		11600 S BURLEY		SPILLS
CHICAGO	S111878621		11600 S BURLEY		SPILLS
CHICAGO	S111880564		11600 S BURLEY		SPILLS
CHICAGO	S111898997		11800 S BURLEY		SPILLS
CHICAGO	90180914	11600 BURLY AVE	11600 BURLY AVE		ERNS
CHICAGO	90186778	11600 BURLY AVE	11600 BURLY AVE		ERNS
CHICAGO	93331311	BURNHAM PARK HARBOR	BURNHAM PARK HARBOR		ERNS
CHICAGO	94370999	BURNHAM PARK HARBOR MARINA	BURNHAM PARK HARBOR MARINA		ERNS
CHICAGO	2004727889	BURNHAM HARBOR	BURNHAM HARBOR		ERNS
CHICAGO	2009913512	BURNHAM HARBOR	BURNHAM HARBOR		ERNS
CHICAGO	2008913512	BURNHAM HARBOR	BURNHAM HARBOR		ERNS
CHICAGO	2011986593		BURNHAM HBR		ERNS
CHICAGO	S111877590		BURNHAM HBR		SPILLS
CHICAGO	2001566538	BURNHAM HARBOR	BURNHAM HARBOR	0	ERNS
CHICAGO	2000547571	BURNHAM HARBOR YACHT CLUB	BURNHAM HARBOR YACHT CLUB	0	ERNS
CHICAGO	90184467	BURNS DITCH R&C MARINA	BURNS DITCH R&C MARINA		ERNS
CHICAGO	S111882677		70 W BURTON		SPILLS

COOK COUNTY, IL - ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CHICAGO	S108046892		CAL SAG RIV		SPILLS
CHICAGO	91236336	CAL SAG CHANNEL (6 MI E. OF INDIANA AVE)	CAL SAG CHANNEL (6 MI E. OF INDIANA AVE)		ERNS
CHICAGO	91205743	CALAMUT RAIL YARD	CALAMUT RAIL YARD		ERNS
CHICAGO	S111892119		6200 N CALDWELL		SPILLS
CHICAGO	S111891835		2501 N CALIFORNI AVE		SPILLS
CHICAGO	S111886757		958 N CALIFORNIA		SPILLS
CHICAGO	S111887519		1741 N CALIFORNIA		SPILLS
CHICAGO	S111903102		4637 S CALIFORNIA		SPILLS
CHICAGO	S111881901		925 N CALIFORNIA		SPILLS
CHICAGO	S111896620		4658 S CALIFORNIA		SPILLS
CHICAGO	S111884704		CALIFORNIA & ARMITAGE		SPILLS
CHICAGO	S111902177		3711 S CALIFORNIA		SPILLS
CHICAGO	S111893838		CALIFORNIA & WASHINGTON		SPILLS
CHICAGO	S111877444		3301 S CALIFORNIA		SPILLS
CHICAGO	S111884627		1647 N CALIFORNIA		SPILLS
CHICAGO	S111894587		3151 S CALIFORNIA		SPILLS
CHICAGO	S111879294		6655 S CALIFORNIA		SPILLS
CHICAGO	S111879281		1655 N CALIFORNIA		SPILLS
CHICAGO	S111876477		501 S CALIFORNIA		SPILLS
CHICAGO	S111898539		320 N CALIFORNIA		SPILLS
CHICAGO	S111883048		2000 CALIFORNIA		SPILLS
CHICAGO	S111901748		2339 N CALIFORNIA		SPILLS
CHICAGO	S111900508		4925 S CALIFORNIA		SPILLS
CHICAGO	S111902394		502 S CALIFORNIA		SPILLS
CHICAGO	S111902385		6736 N CALIFORNIA		SPILLS
CHICAGO	S111895024		1500 CALIFORNIA		SPILLS
CHICAGO	S111920561		3500 N CALIFORNIA		SPILLS
CHICAGO	S111918977		916 S CALIFORNIA		SPILLS
CHICAGO	S111892384		837 N CALIFORNIA		SPILLS
CHICAGO	S111880141		2026 S CALIFORNIA		SPILLS
CHICAGO	S111915135		3114 N CALIFORNIA		SPILLS
CHICAGO	S111899764		2531 N CALIFORNIA ST		SPILLS
CHICAGO	S111889124		4201 N CALIFORNIA		SPILLS
CHICAGO	S111894023		3401 S CALIFORNIA		SPILLS
CHICAGO	S111891724		3541 S CALIFORNIA		SPILLS
CHICAGO	S111912804		340 S CALIFORNIA ST		SPILLS
CHICAGO	S111912805		340 S CALIFORNIA ST		SPILLS
CHICAGO	S111913887		2710 N CALIFORNIA		SPILLS
CHICAGO	99649653	CALSAG HARBOR BETWEEN MM 305 AND 306.5	CALSAG HARBOR BETWEEN MM 305 AND 306.5		ERNS
CHICAGO	92271530	CALUMEP RIVER	CALUMEP RIVER		ERNS
CHICAGO	S108046893		CALUMET RIV		SPILLS
CHICAGO	2009919708	CALUMET YARD	CALUMET YARD		ERNS
CHICAGO	2010933382	CALUMET RIVER 9402 SOUTH EWING AVE.	9402 CALUMET RIV S		ERNS
CHICAGO	2007321724	CALUMET RAILYARD	CALUMET RAILYARD		ERNS
CHICAGO	2010949502	CALUMET RIVER	CALUMET RIV		ERNS
CHICAGO	2006789187	CALUMET RIVER	CALUMET RIVER		ERNS
CHICAGO	S111886949		CALUMET YARD		SPILLS

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CHICAGO	S111885994		CALUMET RIV		SPILLS
CHICAGO	S111884983		6217 S CALUMET		SPILLS
CHICAGO	S111887496		CALUMET YARD & 106TH ST		SPILLS
CHICAGO	S111875416		4151 S CALUMET		SPILLS
CHICAGO	S111883222		3920 S CALUMET		SPILLS
CHICAGO	S111927484		3259 CALUMET RIV E		SPILLS
CHICAGO	S111922328		CALUMET YARD		SPILLS
CHICAGO	S111908596		CALUMET RIV		SPILLS
CHICAGO	S111900155		CALUMET EXPRESSWAY AT COTTAGE AVE		SPILLS
CHICAGO	S111891884		CALUMET YARDS		SPILLS
CHICAGO	S111908122		5817 S CALUMET		SPILLS
CHICAGO	S111927844		2926 CALUMET RIV E		SPILLS
CHICAGO	S111915066		2822 S CALUMET		SPILLS
CHICAGO	S111894015		3130 N CAMBELL		SPILLS
CHICAGO	S110613600		CAMPBELL RD & IOWA DR		SPILLS
CHICAGO	S111887622		212 S CAMPBELL		SPILLS
CHICAGO	S111892900		10200 S CAMPBELL		SPILLS
CHICAGO	S111912463		2930 N CAMPBELL		SPILLS
CHICAGO	S111901814		3245 N CAMPBELL		SPILLS
CHICAGO	S111892671		2700 N CAMPBELL		SPILLS
CHICAGO	S111892082		300 N CAMPBELL AVE		SPILLS
CHICAGO	S111919759		5703 S CAMPBELL		SPILLS
CHICAGO	S108047914		436 W CANAL ST		SPILLS
CHICAGO	S108047895		CANAL ST		SPILLS
CHICAGO	S108046896		CANAL ST		SPILLS
CHICAGO	91228231	CANAL STREET RAMP CHICAGO	CANAL STREET RAMP CHICAGO		ERNS
CHICAGO	2002597953	CANAL STREET YARD	CANAL STREET YARD	0	ERNS
CHICAGO	2011966290	CANAL STREET	CANAL ST		ERNS
CHICAGO	S111887901		840 N CANAL		SPILLS
CHICAGO	2012104231		CANAL STREET AND 25TH ST		ERNS
CHICAGO	S111876502		155 N CANAL		SPILLS
CHICAGO	S111922227		2148 S CANAL		SPILLS
CHICAGO	S111910488		CANAL		SPILLS
CHICAGO	S111881718		1514 S CANAL		SPILLS
CHICAGO	S111925763		426 W CANAL ST		SPILLS
CHICAGO	S111905014		2148 S CANAL PRT		SPILLS
CHICAGO	S111925132		436 W CANAL ST		SPILLS
CHICAGO	S111926582		1800 S CANAL RD		SPILLS
CHICAGO	S111920433		CANAL ST		SPILLS
CHICAGO	S111883676		CANAL & MADISON ST		SPILLS
CHICAGO	S111896706		1802 CANAL ST		SPILLS
CHICAGO	S111927595		210 S CANAL		SPILLS
CHICAGO	S110685241		1800 S CANAL		SPILLS
CHICAGO	S111907076		2601 CANNON DR		SPILLS
CHICAGO	99647114	RR CAR NO.GATX22983 2040 E. 106TH ST MP B510/RR YARD	RR CAR NO.GATX22983 2040 E. 106TH ST MP B510/RR YARD		ERNS
CHICAGO	S111879803		12800 S CARBONDOLET AVE		SPILLS

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CHICAGO	S111894135		300 W CARFIELD BLVD		SPILLS
CHICAGO	92263363	CARGO FACILITY O'HARE AIRPORT	CARGO FACILITY O'HARE AIRPORT		ERNS
CHICAGO	S110613734		CARGO FUEL FACILITY OHARE AP		SPILLS
CHICAGO	S111349447		SW CARGO FACILITY OHARE AIRPORT		SPILLS
CHICAGO	U003984894	DELTA AIR LINES/O'HARE INTERNATIONAL AIRPORT	SW CARGO AREA		UST
CHICAGO	S111891065		511 CARGO RD		SPILLS
CHICAGO	S111896980		CARGO RD		SPILLS
CHICAGO	S111883856		CARGO FACILITY OHARE INTERNATI		SPILLS
CHICAGO	S111907727		610 CARGO NORTH BLDG		SPILLS
CHICAGO	S111877817		SW CARGO RD		SPILLS
CHICAGO	S111926512		CARGO FUEL FACILITY OHARE AIRP		SPILLS
CHICAGO	S111892245		844 N CARIBE		SPILLS
CHICAGO	S111878166		1512 W CARMEN		SPILLS
CHICAGO	S108045639		1747 W CARMENT		SPILLS
CHICAGO	2008862757	1250 CAROLINA AVE.	1250 CAROLINA AVE.		ERNS
CHICAGO	S109092838		1250 CAROLINA AVE		SPILLS
CHICAGO	S111885461		12260 S CARONDOLET		SPILLS
CHICAGO	S111896210		12260 S CARONDOLET		SPILLS
CHICAGO	S111900589		12260 S CARONDOLET		SPILLS
CHICAGO	S111896514		12260 S CARONDOLET		SPILLS
CHICAGO	S111896476		12260 S CARONDOLET		SPILLS
CHICAGO	S111896143		12260 S CARONDOLET		SPILLS
CHICAGO	S111877600		12260 S CARONDOLET		SPILLS
CHICAGO	S111895250		212 N CARPENTER		SPILLS
CHICAGO	S111898164		742 N CARPENTER AVE		SPILLS
CHICAGO	S111890965		2155 S CARPENTER		SPILLS
CHICAGO	S111882601		1044 CARPENTER		SPILLS
CHICAGO	S111888932		3120 W CARROL ST		SPILLS
CHICAGO	S111900365		1901 W CARROL ST		SPILLS
CHICAGO	S111885009		3114 W CARROLL ST		SPILLS
CHICAGO	S111884953		2900 W CARROLL		SPILLS
CHICAGO	S111887538		2040 W CARROLL		SPILLS
CHICAGO	S111903738		1220 W CARROLL ST		SPILLS
CHICAGO	S111900539		3039 W CARROLL ST		SPILLS
CHICAGO	S111893099		1658 CARROLL AVE		SPILLS
CHICAGO	S111899170		1220 W CARROLL		SPILLS
CHICAGO	S111895404		3021 W CARROLL ST		SPILLS
CHICAGO	S111905468		2925 W CARROLL		SPILLS
CHICAGO	S111899418		3005 W CARROLL ST		SPILLS
CHICAGO	S111894938		1700 W CARROLL		SPILLS
CHICAGO	S111892946		2100 W CARROLL		SPILLS
CHICAGO	S111896007		1805 W CARROLL ST		SPILLS
CHICAGO	S111897853		1700 W CARROLL ST		SPILLS
CHICAGO	S111913102		2550 W CATALPA		SPILLS
CHICAGO	S111881209		1122 W CATALPA		SPILLS
CHICAGO	S111904525		2601 W CATALPA		SPILLS

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CHICAGO	2009918160	MP: CD515	MP: CD515		ERNS
CHICAGO	2007311320	MM CD515	MM CD515		ERNS
CHICAGO	2011989792		CD517		ERNS
CHICAGO	94389597	CENTRAL AND DIVERSY	CENTRAL AND DIVERSY		ERNS
CHICAGO	S109327563		CENTRAL & ROOSEVELT NEW ROCKNEY SCHOOL		SPILLS
CHICAGO	S111888433		5248 S CENTRAL		SPILLS
CHICAGO	S111891640		CENTRAL & DIVERSEY ST		SPILLS
CHICAGO	S111875281		4780 S CENTRAL UNINCORPORATED AREA		SPILLS
CHICAGO	S111905611		1250 N CENTRAL PARK		SPILLS
CHICAGO	S111890916		627 N CENTRAL PARK ST		SPILLS
CHICAGO	S111879289		4075 N CENTRAL		SPILLS
CHICAGO	S111878394		6425 S CENTRAL		SPILLS
CHICAGO	S111906605		CENTRAL INTERMODAL FACILITY CO		SPILLS
CHICAGO	S111889756		5923 S CENTRAL		SPILLS
CHICAGO	S111880908		3935 N CENTRAL PARK		SPILLS
CHICAGO	S111902836		5708 S CENTRAL ST		SPILLS
CHICAGO	S111877253		1802 CENTRAL RD		SPILLS
CHICAGO	S111891373		6900 S CENTRAL		SPILLS
CHICAGO	S111908416		645 CENTRAL AVE		SPILLS
CHICAGO	S111901319		6013 CENTRAL AVE		SPILLS
CHICAGO	S111901316		6013 CENTRAL AVE		SPILLS
CHICAGO	S111898988		1546 N CENTRAL		SPILLS
CHICAGO	S111882059		1440 W CERMAC RD		SPILLS
CHICAGO	92293268	1111 WEST CERMACK ST	1111 WEST CERMACK ST		ERNS
CHICAGO	93334397	1111 WEST CERMACK	1111 WEST CERMACK		ERNS
CHICAGO	S111905319		1111 W CERMACK RD		SPILLS
CHICAGO	S111912357		3855 W CERMACK		SPILLS
CHICAGO	S111900882		1111 W CERMACK RD		SPILLS
CHICAGO	S111894614		1111 W CERMACK		SPILLS
CHICAGO	S111905580		1130 W CERMACK		SPILLS
CHICAGO	S111883365		CERMACK & ASHLAND		SPILLS
CHICAGO	S111910399		ON CERMACK AVE BETWEEN WABASH & MICHIGAN AVE		SPILLS
CHICAGO	S111907663		3148 W CERMACK RD		SPILLS
CHICAGO	S111893382		1111 W CERMACK		SPILLS
CHICAGO	91207322	4204 WEST CERMACK ST.	4204 WEST CERMACK ST.		ERNS
CHICAGO	89118761	CERMAK & MONROE STREET	CERMAK & MONROE STREET		ERNS
CHICAGO	S111885759		977 W CERMAK		SPILLS
CHICAGO	S111886131		1111 W CERMAK		SPILLS
CHICAGO	S111885967		1111 CERMAK		SPILLS
CHICAGO	S111884657		4401 W CERMAK		SPILLS
CHICAGO	S111881358		3925 W CERMAK		SPILLS
CHICAGO	S111893702		4454 W CERMAK		SPILLS
CHICAGO	S111880157		1234 W CERMAK		SPILLS
CHICAGO	S111927783		1111 W CERMAK		SPILLS
CHICAGO	S111901595		CERMAK & CLARK STS		SPILLS
CHICAGO	2012101308		4936 S CHAMPLAIN		ERNS
CHICAGO	S111910701		11541 S CHAMPLAIN		SPILLS

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CHICAGO	S111876350		11541 S CHAMPLIN		SPILLS
CHICAGO	S111885588		3300 E CHELTENHEM AVE		SPILLS
CHICAGO	S111878878		3300 E CHELTMAHN PL		SPILLS
CHICAGO	8867772	CHEMICAL SYSTEMS	CHEMICAL SYSTEMS		ERNS
CHICAGO	S111897551		1301 N CHERRY ST		SPILLS
CHICAGO	S111900491		361 W CHESTNUT		SPILLS
CHICAGO	S108046904		CHICAGO SHIP 318		SPILLS
CHICAGO	S108047916		CHICAGO MIDWAY AIRPORT AT CENT & W 55TH AVE		SPILLS
CHICAGO	2003647496	CHICAGO O'HARE	CHICAGO O'HARE		ERNS
CHICAGO	2004727490	ON CHICAGO & GRAND AVE	ON CHICAGO & GRAND AVE		ERNS
CHICAGO	2009921306	CHICAGO RIVER	CHICAGO RIVER		ERNS
CHICAGO	2009906499	CHICAGO YARD	CHICAGO YARD		ERNS
CHICAGO	2009910273	SOUTH CHICAGO SUB DISTRICT	SOUTH CHICAGO SUB DISTRICT		ERNS
CHICAGO	2009894848	CHICAGO UNION TERMINAL	CHICAGO UNION TERMINAL		ERNS
CHICAGO	2008910273	SOUTH CHICAGO SUB DISTRICT	SOUTH CHICAGO SUB DISTRICT		ERNS
CHICAGO	2008894848	CHICAGO UNION TERMINAL	CHICAGO UNION TERMINAL		ERNS
CHICAGO	S109700006		7256 S CHICAGO ST		SPILLS
CHICAGO	2008906499	CHICAGO YARD	CHICAGO YARD		ERNS
CHICAGO	S109327564		CHICAGO SANITARY SHIP CANAL		SPILLS
CHICAGO	S109366454		CHICAGO SANITARY SHIP CANAL		SPILLS
CHICAGO	S109366453		CHICAGO OHARE AP		SPILLS
CHICAGO	2006806423	CHICAGO O' HARE AIRPORT	CHICAGO O' HARE AIRPORT		ERNS
CHICAGO	2011964102	CHICAGO STATION BLUE LINE	CHICAGO STA		ERNS
CHICAGO	S111887922		CHICAGO RIV		SPILLS
CHICAGO	S111886376		7934 S CHICAGO AVE		SPILLS
CHICAGO	S111885775		8164 S CHICAGO AVE		SPILLS
CHICAGO	S111886967		CHICAGO CANAL		SPILLS
CHICAGO	2012103416		CHICAGO OHARE		ERNS
CHICAGO	S111905375		4224 W CHICAGO		SPILLS
CHICAGO	S111888712		6711 S CHICAGO		SPILLS
CHICAGO	S111875764		CHICAGO AVE & HUDSON		SPILLS
CHICAGO	S111883209		7130 S CHICAGO AVE		SPILLS
CHICAGO	S111903398		CHICAGO OHARE AIRPORT		SPILLS
CHICAGO	S111878498		2500 W CHICAGO		SPILLS
CHICAGO	S111911795		CHICAGO RIVER OF 18TH ST N		SPILLS
CHICAGO	S111891924		9100 S CHICAGO AVE		SPILLS
CHICAGO	S111877968		9347 S CHICAGO AVE		SPILLS
CHICAGO	S111903012		4346 W CHICAGO		SPILLS
CHICAGO	S111889258		CHICAGO OHARA AIRPORT		SPILLS
CHICAGO	S111909564		CHICAGO RIV		SPILLS
CHICAGO	S111924402		CHICAGO OHARE AIRPORT		SPILLS
CHICAGO	S111904600		8410 S CHICAGO AVE		SPILLS
CHICAGO	S111890504		8900 S CHICAGO SKWY		SPILLS
CHICAGO	S111910432		9343 S CHICAGO AVE		SPILLS
CHICAGO	S111919644		CHICAGO AVE & CALIFORNIA AVE		SPILLS
CHICAGO	S111890490		4950 CHICAGO BEACH DR		SPILLS
CHICAGO	S111889188		8640 S CHICAGO		SPILLS

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CHICAGO	S111925131		407 W CHICAGO		SPILLS
CHICAGO	S111884145		CHICAGO FD CRASH OHARA FLD		SPILLS
CHICAGO	S111896774		7757 S CHICAGO AVE		SPILLS
CHICAGO	S111925112		7256 S CHICAGO ST		SPILLS
CHICAGO	S111891440		755 CHICAGO OHARA INT		SPILLS
CHICAGO	S111892070		405 W CHICAGO		SPILLS
CHICAGO	S111908897		7301 S CHICAGO AVE		SPILLS
CHICAGO	S111890789		8108 S CHICAGO AVE		SPILLS
CHICAGO	S111877227		CHICAGO HBR & INDIANA		SPILLS
CHICAGO	S111909220		7287 S CHICAGO ST		SPILLS
CHICAGO	S111903121		7000 S CHICAGO AVE		SPILLS
CHICAGO	S111907542		6859 S CHICAGO AVE		SPILLS
CHICAGO	S111920681		3319 W CHICAGO		SPILLS
CHICAGO	S111912730		7605 S CHICAGO AVE		SPILLS
CHICAGO	S111912731		7605 S CHICAGO AVE		SPILLS
CHICAGO	S111882801		777 E CHICAGO AVE		SPILLS
CHICAGO	S111906185		9070 S CHICAGO		SPILLS
CHICAGO	S111900619		6838 S CHICAGO AVE		SPILLS
CHICAGO	S111876578		CHICAGO YARDS		SPILLS
CHICAGO	S111926745		CHICAGO RIV		SPILLS
CHICAGO	2010948714	BY CHICAGO’S UNION STATION	BY CHICAGOS UNION STA		ERNS
CHICAGO	S111887730		4800 S CHICAOG BEECHER DR		SPILLS
CHICAGO	S111906049		2300 CHILDRENS PLZ		SPILLS
CHICAGO	S111901266		3915 N CHRISTIANA		SPILLS
CHICAGO	S111878588		865 N CHRISTIANA		SPILLS
CHICAGO	S111907949		2133 W CHURCHILL		SPILLS
CHICAGO	94383435	22 S CICERO EMPTY BUILDING	22 S CICERO EMPTY BUILDING		ERNS
CHICAGO	98450755	CICERO AVE.	CICERO AVE.		ERNS
CHICAGO	S111218770		4900 N CICERO		SPILLS
CHICAGO	S111887311		6000 N CICERO ST		SPILLS
CHICAGO	S111888134		6219 S CICERO		SPILLS
CHICAGO	S111885930		6301 CICERO AVE		SPILLS
CHICAGO	S111885263		7601 S CICERO		SPILLS
CHICAGO	S111899316		8515 S CICERO		SPILLS
CHICAGO	S111890662		3801 S CICERO AVE		SPILLS
CHICAGO	S111910757		2500 N CICERO		SPILLS
CHICAGO	S111905333		119 S CICERO		SPILLS
CHICAGO	S111900252		3255 N CICERO		SPILLS
CHICAGO	S111900253		3255 N CICERO		SPILLS
CHICAGO	S111892874		1001 N CICERO		SPILLS
CHICAGO	S111913621		1914 N CICERO		SPILLS
CHICAGO	S111881393		8330 S CICERO		SPILLS
CHICAGO	S111906088		3544 N CICERO		SPILLS
CHICAGO	S111878792		7905 S CICERO		SPILLS
CHICAGO	S111904331		3350 N CICERO		SPILLS
CHICAGO	S111903315		7401 S CICERO		SPILLS
CHICAGO	S111884204		CICERO & PETERSON		SPILLS

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CHICAGO	S111878754		2515 N CICERO		SPILLS
CHICAGO	S111918726		632 N CICERO		SPILLS
CHICAGO	S111906353		5200 S CICERO		SPILLS
CHICAGO	S111911848		1949 N CICERO ST		SPILLS
CHICAGO	S111919040		4247 S CICERO		SPILLS
CHICAGO	S111920459		749 S CICERO		SPILLS
CHICAGO	S111904206		4600 S CICERO		SPILLS
CHICAGO	S111892698		2950 N CICERO		SPILLS
CHICAGO	S111908115		7201 S CICERO		SPILLS
CHICAGO	S111881139		5140 S CICERO		SPILLS
CHICAGO	S111896027		7401 S CICERO		SPILLS
CHICAGO	S111898025		CICERO GATE		SPILLS
CHICAGO	S111878051		2758 N CICERO		SPILLS
CHICAGO	S111927771		4401 N CICERO		SPILLS
CHICAGO	S111902286		CICERO AVE		SPILLS
CHICAGO	S111902238		3300 N CICERO		SPILLS
CHICAGO	S111920677		4325 N CICERO		SPILLS
CHICAGO	S111894323		CICERO AVE & I 55		SPILLS
CHICAGO	S111927938		CICERO YARD		SPILLS
CHICAGO	S111898725		5945 NORTHWEST CIR		SPILLS
CHICAGO	96516420	CITCO TERMINAL ADDRESS UNKNOWN	CITCO TERMINAL ADDRESS UNKNOWN		ERNS
CHICAGO	S111909065		1840 N CLAIBORNE		SPILLS
CHICAGO	S111907075		5739 S CLAIRMONT AVE		SPILLS
CHICAGO	S111884865		4501 N CLAKE		SPILLS
CHICAGO	S111907000		5739 S CLAREMONT		SPILLS
CHICAGO	S108046415		50512 N CLARK		SPILLS
CHICAGO	94407483	CLARK OIL BLUE ISLAND//CAL SAG	CLARK OIL BLUE ISLAND//CAL SAG		ERNS
CHICAGO	96515012	CLARK BLUE ISLAND	CLARK BLUE ISLAND		ERNS
CHICAGO	S111886134		4001 CLARK ST		SPILLS
CHICAGO	S111885900		6304 N CLARK		SPILLS
CHICAGO	S111909598		6000 N CLARK		SPILLS
CHICAGO	S111881356		2684 W CLARK ST		SPILLS
CHICAGO	S111890593		3650 N CLARK		SPILLS
CHICAGO	S111875602		CLARK & ELM		SPILLS
CHICAGO	S111907234		6800 CLARK ST		SPILLS
CHICAGO	S111884150		CLARK & IRVING		SPILLS
CHICAGO	S111893033		6525 N CLARK		SPILLS
CHICAGO	S111900408		3836 N CLARK		SPILLS
CHICAGO	S111879353		3721 N CLARK		SPILLS
CHICAGO	S111923610		CLARK & CERMAK		SPILLS
CHICAGO	S111901095		7201 N CLARKE ST		SPILLS
CHICAGO	90170305	CLARKE OIL 131ST AND KEEZIE AVE	CLARKE OIL 131ST AND KEEZIE AVE		ERNS
CHICAGO	S111899378		2626 N CLAYBORN		SPILLS
CHICAGO	S111908648		2660 N CLAYBOURN		SPILLS
CHICAGO	S111899224		1970 N CLAYBOURN AVE		SPILLS
CHICAGO	S111911677		2472 N CLAYBOURN		SPILLS
CHICAGO	90174033	CLEARING EAST YARD	CLEARING EAST YARD		ERNS

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CHICAGO	S111895183		500 W CLEVELAND ST		SPILLS
CHICAGO	S111900640		3133 N CLIBOURN		SPILLS
CHICAGO	2006796407	CLINTON STREET AND LAKE STREET	CLINTON STREET AND LAKE STREET		ERNS
CHICAGO	S111885090		CLINTON & HARRISON		SPILLS
CHICAGO	S111887185		740 S CLINTON		SPILLS
CHICAGO	2011983620		CLINTON AND CANAL ST		ERNS
CHICAGO	S111912608		324 N CLINTON		SPILLS
CHICAGO	S111903638		700 S CLINTON		SPILLS
CHICAGO	S111896031		1830 S CLINTON		SPILLS
CHICAGO	S111892369		4050 N CLOVER		SPILLS
CHICAGO	S111907230		2746 N CLYBORN		SPILLS
CHICAGO	S111879071		2901 N CLYBORN		SPILLS
CHICAGO	98449420	CLYBOURN AND MAGNOLIA STREETS	CLYBOURN AND MAGNOLIA STREETS		ERNS
CHICAGO	S111886704		CLYBOURN & FULLERTON		SPILLS
CHICAGO	S111881457		2660 N CLYBOURN		SPILLS
CHICAGO	S111912364		2261 CLYBOURN		SPILLS
CHICAGO	S111902201		CLYBOURN & MAGNOLIA		SPILLS
CHICAGO	S111901813		2020 N CLYBOURN		SPILLS
CHICAGO	S111896173		1275 CLYBOURN AVE		SPILLS
CHICAGO	S111919003		2791 N CLYBOURN		SPILLS
CHICAGO	S111880983		2245 N CLYBOURN ST		SPILLS
CHICAGO	S111915094		2283 N CLYBOURN		SPILLS
CHICAGO	S111891729		2145 N CLYBOURN		SPILLS
CHICAGO	S111890371		2600 N CLYBOURN		SPILLS
CHICAGO	2000669016	TH CLYBOURN	TH CLYBOURN		ERNS
CHICAGO	98461976	1501 N CLYBOURNE	1501 N CLYBOURNE		ERNS
CHICAGO	S111893640		2740 N CLYBOURNE AVE		SPILLS
CHICAGO	S111892041		1531 W CLYBOURNE AVE		SPILLS
CHICAGO	S111879206		3068 N CLYBURN		SPILLS
CHICAGO	94355689	1400 COASTMASTER DR	1400 COASTMASTER DR		ERNS
CHICAGO	S111908978		9500 S COLFAX		SPILLS
CHICAGO	S111909306		8721 S COLLEGE GRV		SPILLS
CHICAGO	S111906068		5201 S COLLEGE GRV		SPILLS
CHICAGO	94361432	2543 WEST COLULMBUS	2543 WEST COLULMBUS		ERNS
CHICAGO	S111894505		2543 W COLUMBIA DR		SPILLS
CHICAGO	90184210	COLUMBIA AVE. CLEARING YARD	COLUMBIA AVE. CLEARING YARD		ERNS
CHICAGO	2011968968	LANDERS YARD 543 WEST COLUMBUS AVE	543 W COLUMBUS AVE		ERNS
CHICAGO	2011983239		347 N COLUMBUS		ERNS
CHICAGO	S111899652		2543 W COLUMBUS DR		SPILLS
CHICAGO	S111890295		2543 COLUMBUS DR		SPILLS
CHICAGO	S111890237		2543 COLUMBUS DR		SPILLS
CHICAGO	S111923004		2543 W COLUMBUS		SPILLS
CHICAGO	S111897235		2543 W COLUMBUS DR		SPILLS
CHICAGO	S111909362		3363 COLUMBUS AVE		SPILLS
CHICAGO	S111890526		2043 COLUMBUS AVE		SPILLS
CHICAGO	S111898777		3491 W COLUMBUS DR		SPILLS
CHICAGO	S111895402		2543 W COLUMBUS DR		SPILLS

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CHICAGO	S111880044		3485 W COLUMBUS		SPILLS
CHICAGO	S111901353		2543 W COLUMBUS DR		SPILLS
CHICAGO	S111899737		2543 W COLUMBUS DR		SPILLS
CHICAGO	S111890334		2543 COLUMBUS DR		SPILLS
CHICAGO	S111908248		8557 S COMMERCIAL		SPILLS
CHICAGO	S111915092		9127 S COMMERCIAL		SPILLS
CHICAGO	S111898832		9100 S COMMERCIAL		SPILLS
CHICAGO	8714257	COMMONWEALTH EDISON?	COMMONWEALTH EDISON?		ERNS
CHICAGO	S110122235		2100 COMMONWEALTH		SPILLS
CHICAGO	S111889670		CONCORD F GATE OHARA AP		SPILLS
CHICAGO	S111888165		CONGRESS & DEARBORN		SPILLS
CHICAGO	S111888158		561 W CONGRESS		SPILLS
CHICAGO	S111894801		316 W CONGRESS PKWY		SPILLS
CHICAGO	94370891	CONRAIL RAIL YARD 63RD STATE ST	CONRAIL RAIL YARD 63RD STATE ST		ERNS
CHICAGO	S111884256		CONRAIL YARD 47TH ST		SPILLS
CHICAGO	94363657	103 CONSTANCE AVE	103 CONSTANCE AVE		ERNS
CHICAGO	S111887609		6907 CONSTANCE AVE		SPILLS
CHICAGO	94358493	COOK COUNTY BUILDING 118 NORTH CLARK ST	COOK COUNTY BUILDING 118 NORTH CLARK ST		ERNS
CHICAGO	S108047341		N COR OF 18TH & BLUE IS		SPILLS
CHICAGO	S111349599		COR OF 53RD		SPILLS
CHICAGO	S111902425		COR DEVON & KEDZIE		SPILLS
CHICAGO	S111879966		SE COR 35TH & INDIANA		SPILLS
CHICAGO	S111902170		11130 S CORLISS		SPILLS
CHICAGO	S111876981		11100 S CORLISS		SPILLS
CHICAGO	S111904124		4805 W CORNELIA		SPILLS
CHICAGO	S111883722		7828 S CORNELL		SPILLS
CHICAGO	S111904973		1711 W CORNELLIA		SPILLS
CHICAGO	2003637212	5701 SOUTH CORNELLL DRIVE	5701 SOUTH CORNELLL DRIVE		ERNS
CHICAGO	S108047370		NW CORNER W AUGUSTA BLVD & KOLMAR AVE		SPILLS
CHICAGO	90158422	SW CORNER LAKE MICHIGAN FROM E. CHICAGO TO CENTER OF LAKE MI	SW CORNER LAKE MICHIGAN FROM E. CHICAGO TO CENTER OF LAKE MI		ERNS
CHICAGO	2000526527	CORNER OF 7021	CORNER OF 7021	0	ERNS
CHICAGO	U003769793	VACANT LOT	SW CORNER OF CENTRAL & FILLMORE		UST
CHICAGO	S111885866		NW CORNER OF CHICAGO AVE & KILPATRICK		SPILLS
CHICAGO	S111893831		W CORNER OF HANGER AREA & OHARA		SPILLS
CHICAGO	S111910967		CORNER OF MONTROSE & RAVENSWOOD		SPILLS
CHICAGO	S111924076		CORNER OF ROOSEVELT AND CENTRA RDS		SPILLS
CHICAGO	S111906413		SE CORNER OF 60TH ST & DORCHESTER AVE		SPILLS
CHICAGO	S111907029		CORNER OF EVERGREEN & HICKORY		SPILLS
CHICAGO	S111907911		NW CORNER OF ASHLAND & WASHBURNE AVE		SPILLS
CHICAGO	S111907910		SW CORNER OF ASHLAND & WASHBURNE AVE		SPILLS
CHICAGO	S111907909		SE CORNER OF PAULINA ST & ROOSEVELT RD		SPILLS
CHICAGO	S111907908		NE CORNER OF PAULINA ST & WASHBURNE AVE		SPILLS
CHICAGO	S111908554		CORNER OF OHIO & DAMEN		SPILLS
CHICAGO	S111898135		SW CORNER OF MADISON & WELLS ST		SPILLS
CHICAGO	S111894436		NW CORNER OF HANGAR AREA		SPILLS
CHICAGO	S111927929		SE CORNER OF IRVING PARK RD		SPILLS

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CHICAGO	S111893288		CORNER OF WESTERN AVE & ADDISON AVE		SPILLS
CHICAGO	2002590248	CORNER OF ROSEVELT AND BLUE ISLAND	CORNER OF ROSEVELT AND BLUE ISLAND	0	ERNS
CHICAGO	2000531554	CORNER OF PINE GROVE AND	CORNER OF PINE GROVE AND	0	ERNS
CHICAGO	S111885575		12260 S CORONDOLET		SPILLS
CHICAGO	S111884011		12260 S CORONDOLET AVE		SPILLS
CHICAGO	S111881984		11260 S CORONDOLETT AVE		SPILLS
CHICAGO	S111909441		2413 W CORTEZ		SPILLS
CHICAGO	S111893341		4520 W CORTEZ		SPILLS
CHICAGO	S111878992		1509 W CORTLAND		SPILLS
CHICAGO	S111884334		4500 W CORTLAND		SPILLS
CHICAGO	S111918764		2940 W CORTLAND		SPILLS
CHICAGO	S111897230		5834 W CORTLAND		SPILLS
CHICAGO	S111883723		4501 W CORTLAND		SPILLS
CHICAGO	S111925633		1509 W CORTLAND		SPILLS
CHICAGO	S111902572		1509 W CORTLAND		SPILLS
CHICAGO	8860817	CORWITH SWITCHING YARD;TRAIN MASTER 312-890-5082	CORWITH SWITCHING YARD;TRAIN MASTER 312-890-5082		ERNS
CHICAGO	S110122299		CORWITH YARD		SPILLS
CHICAGO	2006798826	CORWITH YARD	CORWITH YARD		ERNS
CHICAGO	S111877460		1140 N COSTNER ST		SPILLS
CHICAGO	S108046497		5818 S COTTAGE DR WASHINGTON PARK		SPILLS
CHICAGO	S111885698		8722 S COTTAGE GRV		SPILLS
CHICAGO	S111885007		4414 S COTTAGE GRV		SPILLS
CHICAGO	S111886270		8701 S COTTAGE AVE		SPILLS
CHICAGO	S111886592		5818 S COTTAGE GRV		SPILLS
CHICAGO	S111924950		8127 S COTTAGE GRV		SPILLS
CHICAGO	S111907485		8540 S COTTAGE GRV		SPILLS
CHICAGO	S111893504		10909 COTTAGE GROVE AVE		SPILLS
CHICAGO	S111891976		11900 S COTTAGE GRV		SPILLS
CHICAGO	S111876295		6700 S COTTAGE GRV		SPILLS
CHICAGO	S111899600		11861 S COTTAGE GRV		SPILLS
CHICAGO	S111882111		5601 S COTTAGE GRV		SPILLS
CHICAGO	S111902454		9811 S COTTAGE GRV		SPILLS
CHICAGO	S111895457		7560 S COTTAGE GRV		SPILLS
CHICAGO	S111906570		8540 S COTTAGE GRV		SPILLS
CHICAGO	S111906569		8600 S COTTAGE GRV		SPILLS
CHICAGO	S111897700		6352 S COTTAGE GRV		SPILLS
CHICAGO	S111908954		4257 S COTTAGE GROVE RD		SPILLS
CHICAGO	S111878296		4601 S COTTAGE GRV		SPILLS
CHICAGO	S111908141		4533 S COTTAGE GRV		SPILLS
CHICAGO	S111896307		8651 S COTTAGE GRV		SPILLS
CHICAGO	S111907546		8600 S COTTAGE GRV		SPILLS
CHICAGO	S111911514		9452 S COTTAGE GRV		SPILLS
CHICAGO	S111893660		2049 W COULTER		SPILLS
CHICAGO	S111895142		230 COURT ST		SPILLS
CHICAGO	S110824890		COURTLAND & CLYBOURNE		SPILLS
CHICAGO	S111885368		4701 W COURTLAND AVE		SPILLS

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CHICAGO	S111899675		3737 W COURTLAND ST		SPILLS
CHICAGO	S111878871		1825 W COURTLAND		SPILLS
CHICAGO	S111881183		2940 COURTLAND ST		SPILLS
CHICAGO	2012102059		CRAIGIN JCT		ERNS
CHICAGO	94391080	CRAWFORD SUBSTATION	CRAWFORD SUBSTATION		ERNS
CHICAGO	89107064	CRAWFORD GENERATING STA. 3501 PULASKI RD.	CRAWFORD GENERATING STA. 3501 PULASKI RD.		ERNS
CHICAGO	S111912302		3501 CRAWFORD GENERATING STA S		SPILLS
CHICAGO	S111927685		6346 NORTH CRK		SPILLS
CHICAGO	S111885640		946 N CROSBY		SPILLS
CHICAGO	S111910509		946 N CROSBY		SPILLS
CHICAGO	S111914620		5318 W CRYSTAL		SPILLS
CHICAGO	S111896702		2619 W CULLERTON		SPILLS
CHICAGO	S111915350		2456 W CULLOM		SPILLS
CHICAGO	S111896154		4938 W CULLUM		SPILLS
CHICAGO	S111905250		4452 W CUNNISON		SPILLS
CHICAGO	S111218489		0 D29		SPILLS
CHICAGO	S111925127		6500 W DAKIN		SPILLS
CHICAGO	S111902249		6535 W DAKIN		SPILLS
CHICAGO	98444510	DALTON YACHT MARINA/ MARINE SERVICES COTTAGE GROVE AVE	DALTON YACHT MARINA/ MARINE SERVICES COTTAGE GROVE AVE		ERNS
CHICAGO	S111887197		2608 S DAMEN		SPILLS
CHICAGO	S111888995		3201 N DAMEN		SPILLS
CHICAGO	S111905657		3306 N DAMEN		SPILLS
CHICAGO	S111908000		5941 S DAMEN		SPILLS
CHICAGO	S111890616		3000 S DAMEN		SPILLS
CHICAGO	S111905625		2309 N DAMEN		SPILLS
CHICAGO	S111905311		2501 N DAMEN		SPILLS
CHICAGO	S111902640		6159 S DAMEN		SPILLS
CHICAGO	S111904589		3000 S DAMEN		SPILLS
CHICAGO	S111894214		6502 S DAMEN		SPILLS
CHICAGO	S111893772		3000 S DAMEN		SPILLS
CHICAGO	S111892179		7050 S DAMEN		SPILLS
CHICAGO	S111927093		3501 DAMEN AVE		SPILLS
CHICAGO	S111920502		DAMEN & W WEBSTER 2300		SPILLS
CHICAGO	S111908121		2801 N DAMEN		SPILLS
CHICAGO	S111882868		4917 N DAMEN		SPILLS
CHICAGO	S111901352		2501 N DAMEN		SPILLS
CHICAGO	S111877243		2064 N DAMEN		SPILLS
CHICAGO	S111892578		7050 S DAMEN		SPILLS
CHICAGO	S111910144		7242 N DAMEN		SPILLS
CHICAGO	S111875923		500 S DAMIEN		SPILLS
CHICAGO	S108046065		3100 S DAMON		SPILLS
CHICAGO	2002600737	2600 SOUTH DAMON	2600 SOUTH DAMON	0	ERNS
CHICAGO	S111349576		3220 N DAMON AVE		SPILLS
CHICAGO	S108891547		2921 N DAMON		SPILLS
CHICAGO	S111877593		2608 S DAMON		SPILLS
CHICAGO	S111914248		2500 S DAMON AVE		SPILLS

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CHICAGO	S111909125		2639 S DAMON AVE		SPILLS
CHICAGO	S111907832		3000 S DAMON IMX YARD		SPILLS
CHICAGO	S111915714		2608 S DAMON AVE		SPILLS
CHICAGO	S111890741		3000 S DAMON AVE		SPILLS
CHICAGO	S111910237		1238 N DAMON AVE		SPILLS
CHICAGO	S111889397		3354 N DAMON AVE		SPILLS
CHICAGO	S111882355		2501 N DAMON		SPILLS
CHICAGO	S111913930		3354 N DAMON AVE		SPILLS
CHICAGO	S109953799		DAN RYAN EXPY & 67TH ST		SPILLS
CHICAGO	S111925297		DAN RYAN NB AT 67TH ST		SPILLS
CHICAGO	S111880140		4700 S DAN RYAN EXPY		SPILLS
CHICAGO	S111914835		SB DAN RYAN AT 35TH ST		SPILLS
CHICAGO	S111905781		4700 S DAN RYAN EXPY		SPILLS
CHICAGO	S111910075		DAN RYAN EXPY & 47TH ST		SPILLS
CHICAGO	S111882372		1535 N DATON ST		SPILLS
CHICAGO	S111922152		1440 N DAYTON		SPILLS
CHICAGO	S111885269		2001 S DEARBORN		SPILLS
CHICAGO	S111904353		509 N DEARBORN		SPILLS
CHICAGO	S111907648		2624 S DEARBORN		SPILLS
CHICAGO	S111882430		3255 DEARBORN AVE		SPILLS
CHICAGO	S111880697		DEARBORN & ERIE		SPILLS
CHICAGO	S111900106		650 N DEARBORN		SPILLS
CHICAGO	S111909872		641 N DEARBORNE		SPILLS
CHICAGO	S111911135		111 N DEERBORN		SPILLS
CHICAGO	S111884487		253 E DELAWARE ST		SPILLS
CHICAGO	S111878780		DELLA AIR LINES OHARA		SPILLS
CHICAGO	S111903945		3481 N DELMONT HARBOR DR		SPILLS
CHICAGO	S111895352		DELTA AIT LINES CARGO FACILITY		SPILLS
CHICAGO	S111914140		4815 W DEMING ST		SPILLS
CHICAGO	8711762	EAST DEPARTURE YARD	EAST DEPARTURE YARD		ERNS
CHICAGO	S111913549		210 S DES PLAINS ST		SPILLS
CHICAGO	S111878606		300 N DES PLAINS AVE		SPILLS
CHICAGO	S110824891		100000 DESSIE COLEMAN DR		SPILLS
CHICAGO	S111926746		10000 DESSIE COLEMAN DR		SPILLS
CHICAGO	S111897962		3113 W DEVOE AVE		SPILLS
CHICAGO	S110363804		DEVON & KIMBALL		SPILLS
CHICAGO	S111885011		3034 W DEVON		SPILLS
CHICAGO	S111910731		2828 W DEVON ST		SPILLS
CHICAGO	S111895157		1700 W DEVON ST		SPILLS
CHICAGO	S111926288		DEVON & N CAMPBELL AVE		SPILLS
CHICAGO	S111908640		7237 W DEVON ST		SPILLS
CHICAGO	S111892477		2225 W DEVON		SPILLS
CHICAGO	S111879144		3535 W DEVON		SPILLS
CHICAGO	S111899792		2225 W DEVON		SPILLS
CHICAGO	S111885423		5841 W DICKENS		SPILLS
CHICAGO	S111878809		5851 W DICKENS		SPILLS
CHICAGO	S111905069		5801 W DICKENS		SPILLS

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CHICAGO	S111902609		6201 W DICKENS		SPILLS
CHICAGO	89111614	E. DIKE LOADING/UNLOADING PAD	E. DIKE LOADING/UNLOADING PAD		ERNS
CHICAGO	99626468	DIRECTLY ACROSS STREET FM 2154 WEST WARRE	DIRECTLY ACROSS STREET FM 2154 WEST WARREN		ERNS
CHICAGO	S111892065		3820 W DIVERSERY		SPILLS
CHICAGO	S111885937		2401 W DIVERSEY		SPILLS
CHICAGO	S111885933		5610 W DIVERSEY		SPILLS
CHICAGO	S111897940		4720 W DIVERSEY		SPILLS
CHICAGO	S111877987		4601 W DIVERSEY		SPILLS
CHICAGO	S111895189		2916 W DIVERSEY ST		SPILLS
CHICAGO	S111907432		4626 W DIVERSEY ST		SPILLS
CHICAGO	S111912325		6347 W DIVERSEY		SPILLS
CHICAGO	S111884680		4200 W DIVERSEY		SPILLS
CHICAGO	S111896513		920 W DIVERSEY		SPILLS
CHICAGO	S111905253		1725 W DIVERSEY		SPILLS
CHICAGO	S111882083		4919 W DIVERSEY		SPILLS
CHICAGO	S111898525		3820 W DIVERSEY		SPILLS
CHICAGO	S111891511		5412 W DIVERSEY		SPILLS
CHICAGO	S111902920		5059 W DIVERSEY		SPILLS
CHICAGO	S111889214		1901 W DIVERSEY		SPILLS
CHICAGO	S111909109		5433 W DIVERSEY		SPILLS
CHICAGO	S111889495		1826 W DIVERSEY		SPILLS
CHICAGO	S111881926		1301 W DIVERSEY		SPILLS
CHICAGO	S111878692		4000 W DIVERSEY		SPILLS
CHICAGO	S111896337		6002 W DIVERSEY		SPILLS
CHICAGO	S111892094		4700 W DIVERSEY		SPILLS
CHICAGO	S111875469		3201 W DIVERSEY		SPILLS
CHICAGO	S111876584		6625 W DIVERSEY		SPILLS
CHICAGO	S111883504		6902 W DIVERSEY AVE		SPILLS
CHICAGO	S108480122		DIVERSEY PKWY LINCOLN AVE & N SEMINARY		SPILLS
CHICAGO	2000668929	T DIVERSEY ST	T DIVERSEY ST		ERNS
CHICAGO	S111880720		5049 W DIVERSTY		SPILLS
CHICAGO	2010962009	DIVERSY BRIDGE	DIVERSY BRG		ERNS
CHICAGO	S111879666		5002 W DIVERSY AVE		SPILLS
CHICAGO	S111883797		5955 W DIVERSY		SPILLS
CHICAGO	S111884177		6435 W DIVERSY AVE		SPILLS
CHICAGO	S111880565		5601 DIVERSY		SPILLS
CHICAGO	S111915409		4356 W DIVERSY		SPILLS
CHICAGO	S111878045		DIVERSY HARBOR DIVERSY PKWY		SPILLS
CHICAGO	S111349396		1071 W DIVISION		SPILLS
CHICAGO	2010947297	DIVISION AND HALSTED BRIDGE	DIVISION AND HALSTED BRG		ERNS
CHICAGO	S111886034		3954 DIVISION		SPILLS
CHICAGO	S111885978		2805 W DIVISION		SPILLS
CHICAGO	S111910732		834 W DIVISION		SPILLS
CHICAGO	S111903064		3353 W DIVISION		SPILLS
CHICAGO	S111891599		4500 W DIVISION		SPILLS
CHICAGO	S111884340		4857 W DIVISION		SPILLS
CHICAGO	S111911046		5035 W DIVISION		SPILLS

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CHICAGO	S111892445		4431 W DIVISION		SPILLS
CHICAGO	S111878200		3401 W DIVISION		SPILLS
CHICAGO	S111891854		901 DIVISION ST		SPILLS
CHICAGO	S111898449		4824 W DIVISION		SPILLS
CHICAGO	S111882907		1334 W DIVISION		SPILLS
CHICAGO	S111882834		2751 W DIVISION AVE		SPILLS
CHICAGO	S111900098		5035 W DIVISION		SPILLS
CHICAGO	S111912726		3855 W DIVISION		SPILLS
CHICAGO	2001563085	DIVISION STREET	DIVISION STREET	0	ERNS
CHICAGO	S111885202		9930 S DOBSON		SPILLS
CHICAGO	S111882593		8133 S DOBSON		SPILLS
CHICAGO	S111891332		8133 S DOBSON		SPILLS
CHICAGO	98446488	J DOCK BURNHAM NEAR SOLDIERS FIE	J DOCK BURNHAM NEAR SOLDIERS FIE		ERNS
CHICAGO	89117859	DOCK #10 JACKSON PARK INNER HARBOR	DOCK #10 JACKSON PARK INNER HARBOR		ERNS
CHICAGO	8867935	DOCK-E	DOCK-E		ERNS
CHICAGO	S111905005		12101 S DODY AVE		SPILLS
CHICAGO	S111903494		DOLLAR RENT A CAR INC OHARE AP		SPILLS
CHICAGO	96507592	8633 DORCHSTER	8633 DORCHSTER		ERNS
CHICAGO	S109700137		W DOTY AVE BETWEEN 126TH & 127TH ST		SPILLS
CHICAGO	S111878421		S DOTY AVE		SPILLS
CHICAGO	S111902403		DOTY ST		SPILLS
CHICAGO	S111903583		10300 S DOTY		SPILLS
CHICAGO	S111925091		DOTY AVE BETWEEN 126TH W & 127TH ST		SPILLS
CHICAGO	2011992370		1400 DOWNS DR		ERNS
CHICAGO	96509929	DUMPING FORM HOLES IN BUILDING	DUMPING FORM HOLES IN BUILDING		ERNS
CHICAGO	8710194	DUMPSTER NEXT TO NOTIFIERS HOUSE IN AN ALLEY	DUMPSTER NEXT TO NOTIFIERS HOUSE IN AN ALLEY		ERNS
CHICAGO	92295829	DUPAGE RIVER	DUPAGE RIVER		ERNS
CHICAGO	S111919105		DUPO YARD		SPILLS
CHICAGO	2009911946	DUSABLE HARBOR MARINA	DUSABLE HARBOR MARINA		ERNS
CHICAGO	2008911946	DUSABLE HARBOR MARINA	DUSABLE HARBOR MARINA		ERNS
CHICAGO	2007319183	2921 NORTH EAMON	2921 NORTH EAMON		ERNS
CHICAGO	91237140	11600 SOUTH EARLY AVENUE	11600 SOUTH EARLY AVENUE		ERNS
CHICAGO	2011991495		40 MI EAST OF CHICAGO ON LAKE		ERNS
CHICAGO	S111888583		1 N EAST LAKE TER		SPILLS
CHICAGO	S111912744		7431 S EAST END		SPILLS
CHICAGO	90165774	39.5 NM EAST OF NORTH BROOK ON 080 RADIO	39.5 NM EAST OF NORTH BROOK ON 080 RADIO		ERNS
CHICAGO	S111888509		2806 W EASTWOOD		SPILLS
CHICAGO	S111900752		EB		SPILLS
CHICAGO	2000668614	EET AND KEDZIE AV	EET AND KEDZIE AV		ERNS
CHICAGO	S111904584		9050 S EGGLESTON		SPILLS
CHICAGO	S111887445		3950 EIGHTH NARRANGANSETT		SPILLS
CHICAGO	S111893035		1251 W EISENHOWER EXPY		SPILLS
CHICAGO	S111889597		600 N ELAINE		SPILLS
CHICAGO	S111884962		4433 N ELFTON AVE		SPILLS
CHICAGO	S111925150		9423 S ELIZABETH		SPILLS
CHICAGO	S111879840		6737 ELIZABETH		SPILLS

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CHICAGO	S111887934		2929 S ELLIS		SPILLS
CHICAGO	S111887836		2929 S ELLIS		SPILLS
CHICAGO	S111900113		5200 S ELLIS		SPILLS
CHICAGO	S111875511		5640 S ELLIS		SPILLS
CHICAGO	S111907997		2228 N ELLSTON AVE		SPILLS
CHICAGO	S111905287		2604 N ELLSTON		SPILLS
CHICAGO	S111895681		6747 N ELMHURST		SPILLS
CHICAGO	S111926974		2750 N ELSON AVE		SPILLS
CHICAGO	S110825030		2752 N ELSTON		SPILLS
CHICAGO	S111888055		5555 ELSTON AVE		SPILLS
CHICAGO	S111886780		4185 N ELSTON		SPILLS
CHICAGO	S111885824		2480 ELSTON AVE		SPILLS
CHICAGO	S111909949		2062 ELSTON AVE		SPILLS
CHICAGO	S111884911		1401 N ELSTON		SPILLS
CHICAGO	S111913619		1330 N ELSTON		SPILLS
CHICAGO	S111884365		5332 N ELSTON		SPILLS
CHICAGO	S111906121		495 N ELSTON		SPILLS
CHICAGO	S111900915		4721 N ELSTON		SPILLS
CHICAGO	S111893533		1357 N ELSTON		SPILLS
CHICAGO	S111882697		2665 ELSTON AVE		SPILLS
CHICAGO	S111906394		4939 N ELSTON		SPILLS
CHICAGO	S111924587		1901 N ELSTON		SPILLS
CHICAGO	S111895124		3148 N ELSTON		SPILLS
CHICAGO	S111882128		1004 N ELSTON		SPILLS
CHICAGO	S111883806		2407 N ELSTON		SPILLS
CHICAGO	S111898954		5733 N ELSTON		SPILLS
CHICAGO	S111901419		4721 N ELSTON		SPILLS
CHICAGO	S111892447		2315 N ELSTON		SPILLS
CHICAGO	S111907723		2212 N ELSTON		SPILLS
CHICAGO	S111878875		1765 N ELSTON		SPILLS
CHICAGO	S111877868		4505 N ELSTON		SPILLS
CHICAGO	S111892192		3918 ELSTON AVE		SPILLS
CHICAGO	S111877836		4060 N ELSTON		SPILLS
CHICAGO	S111920921		2900 N ELSTON		SPILLS
CHICAGO	S111918867		2600 N ELSTON		SPILLS
CHICAGO	S111894133		5979 ELSTON AVE		SPILLS
CHICAGO	S111893342		5200 N ELSTON		SPILLS
CHICAGO	S111881028		5705 ELSTON AVE		SPILLS
CHICAGO	S111880989		5555 N ELSTON		SPILLS
CHICAGO	S111888753		3401 N ELSTON		SPILLS
CHICAGO	S111892609		1661 N ELSTON		SPILLS
CHICAGO	S111901618		3101 N ELSTON		SPILLS
CHICAGO	S111892934		2604 ELSTON AVE		SPILLS
CHICAGO	S111919792		3246 N ELSTON		SPILLS
CHICAGO	S111900296		3428 N ELSTON		SPILLS
CHICAGO	S111900297		3428 N ELSTON		SPILLS
CHICAGO	S111900597		4258 N ELSTON		SPILLS

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CHICAGO	S111911452		5312 N ELSTON		SPILLS
CHICAGO	S111909071		4201 S EMERAL		SPILLS
CHICAGO	S111908689		4100 S EMERALD		SPILLS
CHICAGO	S111920336		1400 S EMERALD		SPILLS
CHICAGO	S111915064		11020 S EMERALD		SPILLS
CHICAGO	8862413	EMPIRE HARD CHROME INC	EMPIRE HARD CHROME INC		ERNS
CHICAGO	S108046592		6800 SOUTHEAST END AVE		SPILLS
CHICAGO	S108047759		W END OF TRAK		SPILLS
CHICAGO	91225392	NORTH END OF MONROE ST HARBOR	NORTH END OF MONROE ST HARBOR		ERNS
CHICAGO	2003708369	SOUTH END	SOUTH END		ERNS
CHICAGO	89106785	END OF MONROE ST MONROE ST HARBOR	END OF MONROE ST MONROE ST HARBOR		ERNS
CHICAGO	8864519	SOUTH END OF BELMONT HARBOR LAKE MICHIGAN	SOUTH END OF BELMONT HARBOR LAKE MICHIGAN		ERNS
CHICAGO	S111884927		4300 WEST END AVE		SPILLS
CHICAGO	90187130	SOUTH END OF NAVY PIER	SOUTH END OF NAVY PIER		ERNS
CHICAGO	S111877997		1901 N ENGINE		SPILLS
CHICAGO	S111927213		6050 S ENGLESIDE AVE		SPILLS
CHICAGO	S111924137		ENGLEWOOD YARD 63RD ST		SPILLS
CHICAGO	S111898816		500 ENGLEWOOD ST		SPILLS
CHICAGO	2011990843		ENTRANCE TO CALUMET RIV		ERNS
CHICAGO	S110685277		EOLA YARD		SPILLS
CHICAGO	S111889640		700 W ERIE		SPILLS
CHICAGO	S111926580		2140 W ERIE		SPILLS
CHICAGO	S111907609		1250 W ERIE		SPILLS
CHICAGO	S111890459		4600 W ERIE		SPILLS
CHICAGO	S110685237		2140 W ERIE		SPILLS
CHICAGO	S111891267		1945 W EVERGREEN ST		SPILLS
CHICAGO	S111903211		1841 W EVERGREEN ST		SPILLS
CHICAGO	S111884345		9330 EWING AVE		SPILLS
CHICAGO	S111903003		9331 S EWING		SPILLS
CHICAGO	S111883342		9651 S EWING		SPILLS
CHICAGO	S111888940		7670 S EXCHANGE ST		SPILLS
CHICAGO	S111900830		7101 S EXCHANGE		SPILLS
CHICAGO	S111881280		7149 S EXCHANGE		SPILLS
CHICAGO	96506222	EXIT 63 NORTHBOUND I-90	EXIT 63 NORTHBOUND I-90		ERNS
CHICAGO	99651995	I-290W EXIT 13B	I-290W EXIT 13B		ERNS
CHICAGO	S109092825		NB EXIT		SPILLS
CHICAGO	S111899812		NB EXIT		SPILLS
CHICAGO	S111910965		513 EXPRESS CENTER DR		SPILLS
CHICAGO	S111898541		EXPRESSWAY NEAR FOSTER AVE & I 94		SPILLS
CHICAGO	S111913213		194 EXT 59C WB		SPILLS
CHICAGO	8869549	FACILITY	FACILITY		ERNS
CHICAGO	S111883933		710 FAIRBANKS		SPILLS
CHICAGO	S111897212		1414 S FAIRFIELD		SPILLS
CHICAGO	S111881134		2914 N FAIRFIELD		SPILLS
CHICAGO	S111912566		3001 W FAIRMONT AVE		SPILLS
CHICAGO	S111899016		2120 W FARAGUT		SPILLS
CHICAGO	S111876452		2103 W FARRAGUT		SPILLS

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CHICAGO	S111904011		2051 W FARRGUT		SPILLS
CHICAGO	2006819483	FAYER AVENUE AND	FAYER AVENUE AND		ERNS
CHICAGO	S111899841		3450 S FEDERAL		SPILLS
CHICAGO	S111881792		2025 W FERDINAND		SPILLS
CHICAGO	S111888757		4221 W FERDINAND		SPILLS
CHICAGO	S111897285		3611 W FILLMORE		SPILLS
CHICAGO	S111898752		3700 W FILLMORE		SPILLS
CHICAGO	S111898515		3842 W FILMORE		SPILLS
CHICAGO	S111910890		2542 W FILMORE AVE		SPILLS
CHICAGO	S111920130		2848 W FILMORE		SPILLS
CHICAGO	S111912303		1111 FISK GENERATING STA W		SPILLS
CHICAGO	S111892904		2613 W FLETCHER		SPILLS
CHICAGO	S111897531		2617 W FLETCHER		SPILLS
CHICAGO	S111913681		2540 W FLOURNOY		SPILLS
CHICAGO	S111884217		5201 W FLOURNOY		SPILLS
CHICAGO	S111884188		5000 W FLOURNOY		SPILLS
CHICAGO	S111882568		8229 FOREST PRESERRVE DR		SPILLS
CHICAGO	2000530733	4541 SOUTH FORESTVILLE	4541 SOUTH FORESTVILLE	0	ERNS
CHICAGO	8869682	FOREWAY EXPRESS TERMINAL 6200 SOUTHEAST AVENUE (312)352-0850	FOREWAY EXPRESS TERMINAL 6200 SOUTHEAST AVENUE (312)352-0850		ERNS
CHICAGO	S111875253		11740 FORONT ST		SPILLS
CHICAGO	S111895616		6300 W FORSTER AVE		SPILLS
CHICAGO	2012104791		50 FORT OF DEARBORN AVE E		ERNS
CHICAGO	94366999	FOSTER AVE ON THE RIVER	FOSTER AVE ON THE RIVER		ERNS
CHICAGO	S111886953		2464 W FOSTER		SPILLS
CHICAGO	S111885675		1745 W FOSTER		SPILLS
CHICAGO	S111891020		1800 W FOSTER		SPILLS
CHICAGO	S111878398		4635 W FOSTER		SPILLS
CHICAGO	S111908579		2322 W FOSTER		SPILLS
CHICAGO	S111875629		1800 W FOSTER		SPILLS
CHICAGO	S111924308		1923 W FOSTER ST		SPILLS
CHICAGO	S111880930		3112 FOSTER AVE		SPILLS
CHICAGO	2012107374		FRANCISCO STATION N MANOR AVE		ERNS
CHICAGO	S111902688		4750 N FRANCISCO AVE		SPILLS
CHICAGO	S111910692		4300 N FRANCISCO ST		SPILLS
CHICAGO	S111899005		6519 N FRANCISCO		SPILLS
CHICAGO	S111926675		1 S FRANKLIN		SPILLS
CHICAGO	S111913473		1504 N FREMONT		SPILLS
CHICAGO	S108669591		6000 E FT IN AIR 15		SPILLS
CHICAGO	S111894314		1340 W FULERTON		SPILLS
CHICAGO	S111893463		2111 W FULERTON		SPILLS
CHICAGO	98430046	FULLERTON 1000 WEST DEPAL UNIVERSITY MAINT. DRIVEWAY	FULLERTON 1000 WEST DEPAL UNIVERSITY MAINT. DRIVEWAY		ERNS
CHICAGO	S111887414		FULLERTON & ASHLAND		SPILLS
CHICAGO	S111886933		5021 W FULLERTON		SPILLS
CHICAGO	S111887511		1350 W FULLERTON		SPILLS
CHICAGO	S111898277		1320 W FULLERTON		SPILLS

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CHICAGO	S111891048		1880 W FULLERTON ST		SPILLS
CHICAGO	S111908315		3417 W FULLERTON		SPILLS
CHICAGO	S111877461		1880 W FULLERTON		SPILLS
CHICAGO	S111909707		1900 W FULLERTON ST		SPILLS
CHICAGO	S111884329		5055 W FULLERTON		SPILLS
CHICAGO	S111900842		6001 W FULLERTON		SPILLS
CHICAGO	S111902670		3918 W FULLERTON		SPILLS
CHICAGO	S111889967		4401 W FULLERTON		SPILLS
CHICAGO	S111910536		4444 FULLERTON		SPILLS
CHICAGO	S111903021		1917 W FULLERTON		SPILLS
CHICAGO	S111927267		3959 W FULLERTON		SPILLS
CHICAGO	S111905159		1655 FULLERTON AVE		SPILLS
CHICAGO	S111927101		4140 W FULLERTON		SPILLS
CHICAGO	S111889537		4444 W FULLERTON		SPILLS
CHICAGO	S111904540		4900 W FULLERTON		SPILLS
CHICAGO	S111915676		5000 W FULLERTON		SPILLS
CHICAGO	S111894733		1718 W FULLERTON		SPILLS
CHICAGO	S111890773		2357 W FULLERTON		SPILLS
CHICAGO	S111877204		1650 W FULLERTON		SPILLS
CHICAGO	S111880749		2357 W FULLERTON		SPILLS
CHICAGO	S111880664		1106 W FULLERTON		SPILLS
CHICAGO	S111889432		1880 W FULLERTON		SPILLS
CHICAGO	S111912266		1400 W FULLTERTON AVE		SPILLS
CHICAGO	S111886711		FULTON & UNION STS		SPILLS
CHICAGO	S111877990		3006 W FULTON		SPILLS
CHICAGO	S111881407		1642 W FULTON		SPILLS
CHICAGO	S111891010		2950 W FULTON		SPILLS
CHICAGO	S111912411		3216 FULTON		SPILLS
CHICAGO	S111892267		832 W FULTON MARKET ST		SPILLS
CHICAGO	S111911765		832 W FULTON MARKET ST		SPILLS
CHICAGO	S111922251		1227 W FULTON		SPILLS
CHICAGO	S111908748		1000 W FULTON		SPILLS
CHICAGO	S111896900		1642 W FULTON		SPILLS
CHICAGO	S111878334		5055 W FULTON		SPILLS
CHICAGO	S111893696		2501 W FULTON		SPILLS
CHICAGO	S111883285		832 W FULTON MARKET ST		SPILLS
CHICAGO	S111914896		1813 W FULTON		SPILLS
CHICAGO	S111904577		1745 FULTON ST		SPILLS
CHICAGO	S111897131		1325 W FULTON AVE		SPILLS
CHICAGO	S111907796		1325 W FULTON		SPILLS
CHICAGO	S111892086		832 W FULTON MARKET ST		SPILLS
CHICAGO	S111889459		2128 W FULTON IN ALY		SPILLS
CHICAGO	S111880758		2051 W FULTON AVE		SPILLS
CHICAGO	S111900638		2401 W FULTON		SPILLS
CHICAGO	S111900976		2201 W FULTON		SPILLS
CHICAGO	96474553	2000 GAL ABANDONED STORAGE TANK / DURING TANK REMOVAL	2000 GAL ABANDONED STORAGE TANK / DURING TANK REMOVAL		ERNS

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CHICAGO	98438241	000 GAL / CONTRACTOR LEFT VALVOPEN	000 GAL / CONTRACTOR LEFT VALVOPEN		ERNS
CHICAGO	S111349414		2630 N GARDEN AVE		SPILLS
CHICAGO	S110613603		9555 W GARFIELD		SPILLS
CHICAGO	S111926398		9555 W GARFIELD		SPILLS
CHICAGO	S111900592		GATE OF K 19TH & RAMP OHARE AIRPORT		SPILLS
CHICAGO	94360367	GENERAL MILLS SLIP	GENERAL MILLS SLIP		ERNS
CHICAGO	94399152	GENERAL MARINE MOUTH OF CALCAG RIVER MILE 333	GENERAL MARINE MOUTH OF CALCAG RIVER MILE 333		ERNS
CHICAGO	S111895101		9351 GENOA AVE		SPILLS
CHICAGO	S111882567		9536 S GENOA		SPILLS
CHICAGO	S111919131		5744 GEORGE ST		SPILLS
CHICAGO	S111892933		1303 W GEORGE		SPILLS
CHICAGO	S111892932		1224 N GEORGE		SPILLS
CHICAGO	S111907303		2711 W GLADYS ST		SPILLS
CHICAGO	S111898194		2720 W GLADYS		SPILLS
CHICAGO	2005610546	GLEN YARD	GLEN YARD		ERNS
CHICAGO	S111889981		6632 N GLENWOOD		SPILLS
CHICAGO	S111875234		5800 GLENWOOD		SPILLS
CHICAGO	2008870345	GLOBAL ONE RAIL YARD	GLOBAL ONE RAIL YARD		ERNS
CHICAGO	S111925831		W GLOBAL 2		SPILLS
CHICAGO	S111913094		GLOBAL FREE YARD ROCKWELL SUBD		SPILLS
CHICAGO	S111919138		GLOBAL 1		SPILLS
CHICAGO	S111914935		GLOBAL ONE		SPILLS
CHICAGO	S111904975		GLOBAL 1		SPILLS
CHICAGO	S111904568		GOBLE ONE		SPILLS
CHICAGO	S111877289		2401 GRACE ST		SPILLS
CHICAGO	2003709193	GRADE CROSSING	GRADE CROSSING		ERNS
CHICAGO	2008875091	GRADE CROSSING	GRADE CROSSING		ERNS
CHICAGO	2008881150	GRAND AVENUE	GRAND AVENUE		ERNS
CHICAGO	S111877458		2027 W GRAND		SPILLS
CHICAGO	S111899558		6655 W GRAND AVE		SPILLS
CHICAGO	S111896464		6935 W GRAND AVE		SPILLS
CHICAGO	S111888951		6918 W GRAND AVE		SPILLS
CHICAGO	S111896878		6935 W GRAND AVE		SPILLS
CHICAGO	S111922968		6505 W GRAND AVE		SPILLS
CHICAGO	S111904634		7020 W GRAND AVE		SPILLS
CHICAGO	S111900790		6655 W GRAND AVE		SPILLS
CHICAGO	S111879242		6704 W GRAND AVE		SPILLS
CHICAGO	S111879241		6722 W GRAND AVE		SPILLS
CHICAGO	S111879240		6750 W GRAND AVE		SPILLS
CHICAGO	S111905502		3834 W GRAND		SPILLS
CHICAGO	S111883260		5555 W GRAND		SPILLS
CHICAGO	S111881218		3175 N GRAND AVE		SPILLS
CHICAGO	S111900727		3965 W GRAND		SPILLS
CHICAGO	S111897656		3909 W GRAND		SPILLS
CHICAGO	S111893345		GRAND AVE & ORLEANS ST		SPILLS
CHICAGO	S111891073		1339 W GRAND		SPILLS

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CHICAGO	S111925618		7001 W GRAND AVE		SPILLS
CHICAGO	S111910267		6914 W GRAND		SPILLS
CHICAGO	S111878605		6801 W GRAND AVE		SPILLS
CHICAGO	S111903795		3955 W GRAND		SPILLS
CHICAGO	S111894051		2816 GRAND AVE		SPILLS
CHICAGO	S111889874		1807 W GRANDVILLE		SPILLS
CHICAGO	S111907420		5035 W GRANT AVE		SPILLS
CHICAGO	S111911509		5145 W GRANT		SPILLS
CHICAGO	2010960437	GRANVILLE AND RIDGE	GRANVILLE		ERNS
CHICAGO	S111900739		2447 W GRANVILLE		SPILLS
CHICAGO	S111904032		2700 S GREEN ST		SPILLS
CHICAGO	S111907232		106 S GREENBAY AVE		SPILLS
CHICAGO	S111877938		1320 W GREENLEAF		SPILLS
CHICAGO	S111885304		2512 N GREENVIEW		SPILLS
CHICAGO	S111902387		4542 N GREENVIEW		SPILLS
CHICAGO	S111905211		3928 N GREENVIEW ST		SPILLS
CHICAGO	S111895425		9000 S GREENWOOD ST		SPILLS
CHICAGO	99626883	ST. GREGORY HIGH SCHOOL 1637 WEST BRYN MAWR ROAD	ST. GREGORY HIGH SCHOOL 1637 WEST BRYN MAWR ROAD		ERNS
CHICAGO	S111924972		4400 W GRENSHAW		SPILLS
CHICAGO	S111897142		7041 S GRN ST IN THE ALLEY		SPILLS
CHICAGO	S111915291		8915 S GRN BAY		SPILLS
CHICAGO	2010936059	4820 WEST GUNNINSON	4820 W GUNNINSON		ERNS
CHICAGO	S111911295		5918 W GUNNISON		SPILLS
CHICAGO	S111906606		6601 W GUNNISON		SPILLS
CHICAGO	S111920129		5930 W GUNNISON		SPILLS
CHICAGO	S111911414		2525 W GUNNISON AVE		SPILLS
CHICAGO	S111883939		2000 W HADDON		SPILLS
CHICAGO	94378941	830 HAINES RIGHT OFF HOOKER	830 HAINES RIGHT OFF HOOKER		ERNS
CHICAGO	S111891184		830 HAINES		SPILLS
CHICAGO	S111898079		10449 S HALE		SPILLS
CHICAGO	2010929894	4500 S. HALFTED STREET	4500 S HALFTED ST		ERNS
CHICAGO	S111883818		928 HALG OHARE ARFS		SPILLS
CHICAGO	2003648226	1130 SOUTH HALSTAD	1130 SOUTH HALSTAD		ERNS
CHICAGO	S111906302		3737 S HALSTAD ST		SPILLS
CHICAGO	94371388	HALSTEAD STREET	HALSTEAD STREET		ERNS
CHICAGO	97413488	901 N HALSTEAD GREY HOUND MAINTENANCE CENTER	901 N HALSTEAD GREY HOUND MAINTENANCE CENTER		ERNS
CHICAGO	2008887158	4118 S HALSTEAD	4118 S HALSTEAD		ERNS
CHICAGO	2008880664	HALSTEAD @ HUBBARD	HALSTEAD @ HUBBARD		ERNS
CHICAGO	2010948540	2615 N HALSTEAD	2615 N HALSTEAD		ERNS
CHICAGO	S111885666		3600 N HALSTEAD		SPILLS
CHICAGO	S111885939		11500 S HALSTEAD		SPILLS
CHICAGO	S111887110		2300 S HALSTEAD		SPILLS
CHICAGO	S111910763		4512 S HALSTEAD		SPILLS
CHICAGO	S111903056		9420 S HALSTEAD		SPILLS
CHICAGO	S111912365		7100 HALSTEAD AVE		SPILLS

Count: 4347 records COOK COUNTY, IL - ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CHICAGO	S111912978		1234 N HALSTEAD		SPILLS
CHICAGO	S111912979		1234 N HALSTEAD		SPILLS
CHICAGO	S111926011		2600 N HALSTEAD		SPILLS
CHICAGO	S111905948		111 S HALSTEAD ST		SPILLS
CHICAGO	S111893111		3024 S HALSTEAD AVE		SPILLS
CHICAGO	S111911697		2145 N HALSTEAD		SPILLS
CHICAGO	S111900784		7808 S HALSTEAD		SPILLS
CHICAGO	S111921061		112 S HALSTEAD		SPILLS
CHICAGO	S111903489		4187 S HALSTEAD		SPILLS
CHICAGO	S111914110		5901 S HALSTEAD		SPILLS
CHICAGO	S108047026		HALSTED ST		SPILLS
CHICAGO	S110613501		2615 N HALSTED		SPILLS
CHICAGO	2005630618	HALSTED STREET	HALSTED STREET		ERNS
CHICAGO	2007319874	HALSTED STREET	HALSTED STREET		ERNS
CHICAGO	S111925906		HALSTED		SPILLS
CHICAGO	S111913799		4200 S HALSTED		SPILLS
CHICAGO	S111910568		1218 S HALSTED		SPILLS
CHICAGO	S111882312		HALSTED AVE W		SPILLS
CHICAGO	S111903745		9811 HALSTED		SPILLS
CHICAGO	S111896992		950 S HALSTED		SPILLS
CHICAGO	S111895268		12540 S HALSTED		SPILLS
CHICAGO	S111912243		13600 S HALSTED		SPILLS
CHICAGO	S111903700		11501 HALSTED ST		SPILLS
CHICAGO	S111900568		11226 S HALSTED		SPILLS
CHICAGO	S111897767		11656 S HALSTED		SPILLS
CHICAGO	S111879314		8259 S HALSTED		SPILLS
CHICAGO	S111927370		365 N HALSTED		SPILLS
CHICAGO	S111927342		40 S HALSTED		SPILLS
CHICAGO	S111913452		170 N HALSTED		SPILLS
CHICAGO	S111905255		13600 S HALSTED ST		SPILLS
CHICAGO	S111898547		2600 N HALSTED		SPILLS
CHICAGO	S111889283		9458 S HALSTED		SPILLS
CHICAGO	S111922150		5833 S HALSTED		SPILLS
CHICAGO	S111892429		2733 N HALSTED		SPILLS
CHICAGO	S111921198		HALSTED & HUBBARD		SPILLS
CHICAGO	S111893787		2723 S HALSTED		SPILLS
CHICAGO	S111891503		711 HALSTED		SPILLS
CHICAGO	S111927240		2300 S HALSTED		SPILLS
CHICAGO	S111927238		2300 S HALSTED		SPILLS
CHICAGO	S111921739		4834 S HALSTED		SPILLS
CHICAGO	S111918745		HALSTED ST		SPILLS
CHICAGO	S111881265		6659 S HALSTED		SPILLS
CHICAGO	S111925751		8605 S HALSTED		SPILLS
CHICAGO	S111894501		1560 N HALSTED AVE		SPILLS
CHICAGO	S111890866		901 N HALSTED		SPILLS
CHICAGO	S111924820		1560 N HALSTED		SPILLS
CHICAGO	S111919033		4512 S HALSTED		SPILLS

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CHICAGO	S111920289		HALSTED ST		SPILLS
CHICAGO	S111908149		2857 S HALSTED		SPILLS
CHICAGO	S111899448		9900 S HALSTED		SPILLS
CHICAGO	S111881003		8801 S HALSTED		SPILLS
CHICAGO	S111905402		10101 S HALSTED AVE		SPILLS
CHICAGO	S111889107		3000 N HALSTED		SPILLS
CHICAGO	S111880767		7100 S HALSTED AVE		SPILLS
CHICAGO	S111919434		HALSTED & KINZIE YARD		SPILLS
CHICAGO	S111927720		3740 N HALSTED		SPILLS
CHICAGO	S111914463		10301 S HALSTED		SPILLS
CHICAGO	S111907558		2145 N HALSTED		SPILLS
CHICAGO	S111911558		2834 N HALSTED		SPILLS
CHICAGO	S111910193		10630 S HALSTED		SPILLS
CHICAGO	S111904830		3539 N HALSTED		SPILLS
CHICAGO	S108480128		HALSTED ST		SPILLS
CHICAGO	S108046821		9500 S HALSTRAD		SPILLS
CHICAGO	S111898193		2630 HAMDEN CT		SPILLS
CHICAGO	S111880970		5956 S HAMILTON		SPILLS
CHICAGO	S111894412		3823 N HAMILTON		SPILLS
CHICAGO	S111920189		7850 S HAMILTON		SPILLS
CHICAGO	S111910159		3215 S HAMIMTON ST		SPILLS
CHICAGO	S111888291		1800 N HAMLIN ST		SPILLS
CHICAGO	S111925519		HANGER 755		SPILLS
CHICAGO	S111889509		HANGER 755		SPILLS
CHICAGO	S111890043		HANGER 2		SPILLS
CHICAGO	2001570505	HANGER 2 BLDG 725	HANGER 2 BLDG 725	0	ERNS
CHICAGO	94364406	HARBOR NEAR NAVY PIER CHESTNUT & LAKESHOR DR	HARBOR NEAR NAVY PIER CHESTNUT & LAKESHORE DR		ERNS
CHICAGO	2000669619	HARBOR	HARBOR		ERNS
CHICAGO	S111913179		3132 N HARDING		SPILLS
CHICAGO	S111920811		1956 N HARDING		SPILLS
CHICAGO	S108047373		O HARE AIRPORT & UNITED HANGAR BLVG 710		SPILLS
CHICAGO	2007309784	HARLEM STREET	HARLEM STREET		ERNS
CHICAGO	U001965186	SHELL SER STATION	7550 N HARLEM MILWAUKEE		UST
CHICAGO	S111887273		3611 N HARLEM		SPILLS
CHICAGO	S111876556		6800 N HARLEM ST		SPILLS
CHICAGO	S111911102		2919 N HARLEM AVE		SPILLS
CHICAGO	S111900902		2001 N HARLEM		SPILLS
CHICAGO	S111900521		2001 N HARLEM AVE		SPILLS
CHICAGO	S111892489		1801 N HARLEM AVE		SPILLS
CHICAGO	S111901780		3200 N HARLEM		SPILLS
CHICAGO	S111895514		5837 S HARLEM		SPILLS
CHICAGO	S111876180		3330 N HARLEM		SPILLS
CHICAGO	S111879221		6256 N HARLEM		SPILLS
CHICAGO	S111882566		5709 S HARLEM		SPILLS
CHICAGO	S111899505		1957 N HARLEM AVE		SPILLS
CHICAGO	S111898470		2801 N HARLEM AVE		SPILLS

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CHICAGO	S111879191		6800 N HARLEM		SPILLS
CHICAGO	S111879433		1823 N HARLEM AVE		SPILLS
CHICAGO	S111914235		1733 N HARLEM		SPILLS
CHICAGO	S111892364		HARLEM AVE & I 55		SPILLS
CHICAGO	S111892359		7550 N HARLEM		SPILLS
CHICAGO	S111893361		4051 N HARLEM		SPILLS
CHICAGO	S111906761		1733 N HARLEM AVE		SPILLS
CHICAGO	S111910974		3434 N HARLEN		SPILLS
CHICAGO	S111888469		5129 S HARPER		SPILLS
CHICAGO	S111912572		530 S HARPER AVE		SPILLS
CHICAGO	S111883170		9315 S HARPER		SPILLS
CHICAGO	S111880043		5129 S HARPER		SPILLS
CHICAGO	U003104599	MEDICAL CENTER COMM	224359 W HARRISON		UST
CHICAGO	S111887979		3305 W HARRISON		SPILLS
CHICAGO	S111888248		707 W HARRISON		SPILLS
CHICAGO	S111876439		3801 W HARRISON		SPILLS
CHICAGO	S111900827		3707 W HARRISON		SPILLS
CHICAGO	S111894454		4519 W HARRISON		SPILLS
CHICAGO	S111894895		HARRISON & RACINE AVES		SPILLS
CHICAGO	S111876051		3801 W HARRISON		SPILLS
CHICAGO	90182371	HAYFORD INTERLOCKING PLANT 75TH AND HARDIE	HAYFORD INTERLOCKING PLANT 75TH AND HARDIE		ERNS
CHICAGO	S111895209		4544 HAZEL ST		SPILLS
CHICAGO	93352173	4837 NORTH HERMINAGES	4837 NORTH HERMINAGES		ERNS
CHICAGO	S111894215		4625 HERMITAGE AVE		SPILLS
CHICAGO	S111878314		4200 S HERMITAGE		SPILLS
CHICAGO	S111890832		1942 N HERMITAGE		SPILLS
CHICAGO	S111880926		4863 N HERMITAGE IN THE ALLEY BEHIND		SPILLS
CHICAGO	S111900056		435 N HERMITAGE ST		SPILLS
CHICAGO	S111885663		HERTZ SERVICE RETURN OHARE AIR		SPILLS
CHICAGO	2002600940	HICK BRIDGE	HICK BRIDGE	0	ERNS
CHICAGO	S111886098		7159 W HIGGINS		SPILLS
CHICAGO	S111875374		6716 W HIGGINS		SPILLS
CHICAGO	S111910018		820 W HIGGINS AVE		SPILLS
CHICAGO	S111912382		6417 W HIGGINS		SPILLS
CHICAGO	S111903948		6436 W HIGGINS		SPILLS
CHICAGO	S111899229		6842 W HIGGINS		SPILLS
CHICAGO	S111923035		7133 W HIGGINS		SPILLS
CHICAGO	S111889494		5765 W HIGGINS		SPILLS
CHICAGO	S111906848		7201 W HIGGINS		SPILLS
CHICAGO	S111882786		6020 HIGGINS AVE		SPILLS
CHICAGO	S111898638		2201 W HIGHLAND		SPILLS
CHICAGO	S111915225		1743 HIGHLAND AVE		SPILLS
CHICAGO	S111884462		2883 S HILLOCK ST		SPILLS
CHICAGO	S111912226		6257 W HOLBROOK		SPILLS
CHICAGO	S111900181		HOLMAN & 23RD ST		SPILLS
CHICAGO	S111908084		1830 S HOLMAN AVE		SPILLS
CHICAGO	S109327479		4118 S HOLSTEAD		SPILLS

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CHICAGO	S111924234		4118 S HOLSTEAD		SPILLS
CHICAGO	S111883868		2857 S HOLSTED		SPILLS
CHICAGO	S111876775		HOLY CROSS HOSPITAL & 2701ST W 68TH ST		SPILLS
CHICAGO	S111909312		913 HOMAN AVE		SPILLS
CHICAGO	S111906649		234 N HOMAN		SPILLS
CHICAGO	S111913259		2650 S HOMAN		SPILLS
CHICAGO	S111919204		2612 S HOMAN		SPILLS
CHICAGO	S111914452		HOMAN AVE		SPILLS
CHICAGO	S111900938		11600 S HOMAN		SPILLS
CHICAGO	S111749680		43 N HOMAN		SPILLS
CHICAGO	S111912237		2419 W HOMER		SPILLS
CHICAGO	S111911881		4819 HOMER		SPILLS
CHICAGO	S111884173		5142 W HOMER		SPILLS
CHICAGO	900104022	HONEY CRUST BAKERY (312)376-0350 3822 SOUTH MORGAN ST	HONEY CRUST BAKERY (312)376-0350 3822 SOUTH MORGAN ST		ERNS
CHICAGO	2009896503	3550 W. HONEYSIDE AVE.	3550 W. HONEYSIDE AVE.		ERNS
CHICAGO	2008896503	3550 W. HONEYSIDE AVE.	3550 W. HONEYSIDE AVE.		ERNS
CHICAGO	S111884726		1000 N HOOKER		SPILLS
CHICAGO	S111879820		12300 S HOUSTON		SPILLS
CHICAGO	2011963459	HOWARD YARD	HOWARD YARD		ERNS
CHICAGO	2010943926	HOWARD STREET TERMINAL	HOWARD ST		ERNS
CHICAGO	S111904581		1771 W HOWARD		SPILLS
CHICAGO	S111893617		1529 W HOWARD ST		SPILLS
CHICAGO	S111888463		1155 N HOWE		SPILLS
CHICAGO	S111879482		13518 S HOXIE		SPILLS
CHICAGO	S111887768		7115 S HOYNE		SPILLS
CHICAGO	S111913745		4856 HOYNE		SPILLS
CHICAGO	S111883382		226 S HOYNE		SPILLS
CHICAGO	S111888936		11071 S HOYNE ST		SPILLS
CHICAGO	S111894405		4848 S HOYNE		SPILLS
CHICAGO	S111913844		7342 S HOYNE		SPILLS
CHICAGO	S111913778		1446 W HUBBARD		SPILLS
CHICAGO	S111903702		1146 W HUBBARD		SPILLS
CHICAGO	S111909710		2246 W HUBBARD		SPILLS
CHICAGO	S111911028		1725 HUBBARD ST		SPILLS
CHICAGO	S111881245		2121 W HUBBARD		SPILLS
CHICAGO	S111902854		333 W HUBBARD		SPILLS
CHICAGO	S111903486		1373 W HUBBARD		SPILLS
CHICAGO	S111890683		1519 N HUDSON		SPILLS
CHICAGO	S111896938		1800 N HUMBULDT BLVD		SPILLS
CHICAGO	S111891944		11600 HURLEY AVE		SPILLS
CHICAGO	S111906032		942 W HURON		SPILLS
CHICAGO	S111880971		409 W HURON		SPILLS
CHICAGO	S111920822		469 W HURON		SPILLS
CHICAGO	S111915329		333 E HURON		SPILLS
CHICAGO	S111899580		410 E HURRON ST		SPILLS
CHICAGO	S108047098		HWY		SPILLS

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CHICAGO	S111887325		5450 NORTHWEST HWY		SPILLS
CHICAGO	S111888275		5707 NORTHWEST HWY		SPILLS
CHICAGO	S111926439		6060 NORTHWEST HWY		SPILLS
CHICAGO	S111900204		5292 NORTHWEST HWY		SPILLS
CHICAGO	S111908625		6643 NORTHWEST HWY		SPILLS
CHICAGO	S111889939		6060 NORTHWEST HWY		SPILLS
CHICAGO	S111879323		5349 NORTHWEST HWY		SPILLS
CHICAGO	S111884598		5688 NORTHWEST HWY		SPILLS
CHICAGO	S111883789		5677 NORTHWEST HWY		SPILLS
CHICAGO	S111883788		5601 NORTHWEST HWY		SPILLS
CHICAGO	S111902878		5932 NORTHWEST HWY		SPILLS
CHICAGO	S111898406		5978 NORTHWEST HWY		SPILLS
CHICAGO	S111906239		5540 NORTHWEST HWY		SPILLS
CHICAGO	S111882437		5328 NORTHWEST HWY		SPILLS
CHICAGO	S111889070		5210 NORTHWEST HWY		SPILLS
CHICAGO	S111880779		6405 NORTHWEST HWY		SPILLS
CHICAGO	S111898878		5990 NORTHWEST HWY		SPILLS
CHICAGO	S111893992		5810 NORTHWEST HWY		SPILLS
CHICAGO	S111897518		5400 NORTHWEST HWY		SPILLS
CHICAGO	S111890344		5860 NORTHWEST HWY		SPILLS
CHICAGO	94389410	I-190	I-190		ERNS
CHICAGO	2000534767	ROUTE I-290	ROUTE I-290	0	ERNS
CHICAGO	S111891411		ON IL RIV		SPILLS
CHICAGO	S111892173		ILCALSAG 333MM		SPILLS
CHICAGO	8862767	ILL SCRAP PROCESSING	ILL SCRAP PROCESSING		ERNS
CHICAGO	2002624541	ILLINOIS WATER WAY MILE 319.4	ILLINOIS WATER WAY MILE 319.4	0	ERNS
CHICAGO	98430979	ILLINOIS RIVER MM300	ILLINOIS RIVER MM300		ERNS
CHICAGO	2000534026	ILLINOIS AND COLUMBUS ST.	ILLINOIS AND COLUMBUS ST.	0	ERNS
CHICAGO	99633038	ILLINOIS MARINE FLEET MILE 300 M/V ROSS PICKETT	ILLINOIS MARINE FLEET MILE 300 M/V ROSS PICKETT		ERNS
CHICAGO	2007310111	ILLINOIS AVE AND MCCLURG AVENUE	ILLINOIS AVE AND MCCLURG AVENUE		ERNS
CHICAGO	2008871775	ILLINOIS RIVER	ILLINOIS RIVER		ERNS
CHICAGO	S111907456		201 E ILLINOIS		SPILLS
CHICAGO	S111926005		ILLINOIS RIV		SPILLS
CHICAGO	S111907572		ILLINOIS & COLUMBUS STS		SPILLS
CHICAGO	S111925018		ILLINOIS RIV		SPILLS
CHICAGO	92289906	IMX FACILITY 26TH AND 31ST AVE	IMX FACILITY 26TH AND 31ST AVE		ERNS
CHICAGO	S111888437		IMX RAILYARD ON WESTERN AVE		SPILLS
CHICAGO	S111879297		9915 S IN ALY		SPILLS
CHICAGO	S111902081		W IN FLIGHT 5		SPILLS
CHICAGO	S111910684		6600 S INBOUND SKYWAY NEAR THE ST		SPILLS
CHICAGO	S111914280		INDIAN ROAD WOODS FRST		SPILLS
CHICAGO	S111885760		2241 S INDIANA		SPILLS
CHICAGO	S111883212		3730 S INDIANA		SPILLS
CHICAGO	S111905655		INDIANA ROAD PARK		SPILLS
CHICAGO	S111910042		1730 S INDIANA		SPILLS
CHICAGO	S111884346		1730 S INDIANA		SPILLS

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CHICAGO	S111905096		13701 S INDIANA		SPILLS
CHICAGO	S111881915		5000 S INDIANA		SPILLS
CHICAGO	S111904954		13759 S INDIANA AVE		SPILLS
CHICAGO	S111915566		13333 S INDIANA		SPILLS
CHICAGO	S111888759		10300 INDIANAPOLIS BLVD		SPILLS
CHICAGO	90173269	INDIANAPOLIS BLVD BRIDGE INDIANA HARBOR CANAL EAST OF CHICAG	INDIANAPOLIS BLVD BRIDGE INDIANA HARBOR CANAL EAST OF CHICAG		ERNS
CHICAGO	S111895476		711 INDUSTRIAL DR		SPILLS
CHICAGO	S111893530		MP INT OF 94		SPILLS
CHICAGO	S111924479		INT 94		SPILLS
CHICAGO	S111899051		INT OGDON & OAKLEY ST		SPILLS
CHICAGO	2008859473	INTERMODAL YARD	INTERMODAL YARD		ERNS
CHICAGO	2008859472	INTERMODAL YARD	INTERMODAL YARD		ERNS
CHICAGO	S108047234		INTERSECTION OF 30TH ST & KEDZIE ST		SPILLS
CHICAGO	S108047858		INTERSECTION OF DUNLAP & HARVARD		SPILLS
CHICAGO	93341562	INTERSECTION OF DAMEN AVE AND CHURCHILL	INTERSECTION OF DAMEN AVE AND CHURCHILL		ERNS
CHICAGO	2010936858	INTERSECTION OF MANNHEIM ROAD	INTERSECTION OF MANNHEIM RD		ERNS
CHICAGO	S111894498		INTERSECTION OF DAMEN & ARCHER		SPILLS
CHICAGO	S111925598		INTERSECTION OF WOOD ST AND WA ST		SPILLS
CHICAGO	S111913948		INTERSECTION OF 47TH ST & LEANINGTON ST		SPILLS
CHICAGO	S111886694		INTERSECTIONOF 83RD & STATE ST		SPILLS
CHICAGO	S111888696		INTERSECTIONOF 37TH & STATE STS		SPILLS
CHICAGO	S111912516		2954 W IRIVING PARK RD		SPILLS
CHICAGO	S111911904		7501 W IRIVING PARK RD		SPILLS
CHICAGO	S111890148		3604 S IRON		SPILLS
CHICAGO	S111881629		3700 S IRON		SPILLS
CHICAGO	S111886858		2337 IRVINE PARK RD		SPILLS
CHICAGO	S111885562		4001 W IRVING		SPILLS
CHICAGO	S111886380		953 IRVING PARK		SPILLS
CHICAGO	S111880190		2033 W IRVING PARK		SPILLS
CHICAGO	S111881428		3020 W IRVING PARK		SPILLS
CHICAGO	S111907476		6100 IRVING RD		SPILLS
CHICAGO	S111898600		3541 W IRVING PARK		SPILLS
CHICAGO	S111901186		777 IRVING PARK RD		SPILLS
CHICAGO	S111877073		IRVING PARK & KENEDY EXPY		SPILLS
CHICAGO	S111878401		7800 W IRVING PARK RD		SPILLS
CHICAGO	S111923083		IRVING PARK RD & CARGO RD		SPILLS
CHICAGO	S111907683		953 IRVING PARK RD		SPILLS
CHICAGO	S111927131		13609 W IRVING PARK RD		SPILLS
CHICAGO	S111893012		11501 W IRVING PARK RD		SPILLS
CHICAGO	S111892347		4323 W IRVING		SPILLS
CHICAGO	S111875552		8000 IRVING PARK RD		SPILLS
CHICAGO	S111882935		4001 W IRVING PARK		SPILLS
CHICAGO	S111911648		841 W IRVING PAEK RD		SPILLS
CHICAGO	S111880750		841 W IRVING PARK		SPILLS
CHICAGO	S111915050		11560 W IRVING PARK RD		SPILLS
CHICAGO	S111924998		2834 IRVING PARK RD		SPILLS

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CHICAGO	S111913990		11560 W IRVING PARK RD		SPILLS
CHICAGO	S111882362		4816 W IRVING PARK		SPILLS
CHICAGO	S110613713		2508 W JACKSON ST		SPILLS
CHICAGO	2010932920	BUSINESS DISTRICT 358 W. JACKSON ST.	358 W JACKSON ST		ERNS
CHICAGO	S111887249		209 W JACKSON		SPILLS
CHICAGO	S111885980		5201 W JACKSON		SPILLS
CHICAGO	S111887884		5201 W JACKSON		SPILLS
CHICAGO	2012101868		77 W JACKSON ST		ERNS
CHICAGO	S111912575		JACKSON PARK GOLF DRIVING RANG DR		SPILLS
CHICAGO	S111913625		4546 W JACKSON		SPILLS
CHICAGO	S111884884		1645 W JACKSON		SPILLS
CHICAGO	S111925491		3236 W JACKSON		SPILLS
CHICAGO	S111925492		3236 W JACKSON		SPILLS
CHICAGO	S111911695		JACKSON PARK HAYES AVE		SPILLS
CHICAGO	S111881270		2100 W JACKSON		SPILLS
CHICAGO	S111907782		1001 W JACKSON		SPILLS
CHICAGO	S111926494		2508 W JACKSON ST		SPILLS
CHICAGO	S111915553		330 W JACKSON		SPILLS
CHICAGO	S111908348		1010 E JACKSON BLVD		SPILLS
CHICAGO	S111883501		1655 W JACKSON		SPILLS
CHICAGO	S111877812		827 S JEFFERSON		SPILLS
CHICAGO	S111884638		1401 S JEFFERSON		SPILLS
CHICAGO	S111889615		1400 S JEFFERSON		SPILLS
CHICAGO	S111914939		7601 S JEFFERSON		SPILLS
CHICAGO	S111883593		1400 S JEFFERSON		SPILLS
CHICAGO	S111912836		180 N JEFFERSON		SPILLS
CHICAGO	S111912837		180 N JEFFERSON		SPILLS
CHICAGO	S111899009		1400 S JEFFERSON		SPILLS
CHICAGO	S111910682		6701 S JEFFERY		SPILLS
CHICAGO	S111888739		6701 S JEFFERY		SPILLS
CHICAGO	S108891660		6701 S JEFFREY		SPILLS
CHICAGO	S109366427		6700 JEFFREY BLVD		LUST, SPILLS
CHICAGO	S111910683		6701 S JEFFREY BLVD		SPILLS
CHICAGO	S111883975		9336 S JEFFREY		SPILLS
CHICAGO	99609148	JFK EXPRESSWAY (RT 90) WEST JUST BEFORE THE 45B EXIT	JFK EXPRESSWAY (RT 90) WEST JUST BEFORE THE 45B EXIT		ERNS
CHICAGO	S109327404		1912 S JOURDAN COURT PEORIA ST		SPILLS
CHICAGO	S111885499		JULIEN & WOOD ST		SPILLS
CHICAGO	94378888	JUST SOUTH OF WASHINGTON ST BRIDGE	JUST SOUTH OF WASHINGTON ST BRIDGE		ERNS
CHICAGO	2007324003	JUST N.E. OF SOLDIER FIELD	JUST N.E. OF SOLDIER FIELD		ERNS
CHICAGO	S111902745		6755 S JUSTINE		SPILLS
CHICAGO	S111890318		309 N JUSTINE		SPILLS
CHICAGO	2000518027	135 SOUTH KADZIE	135 SOUTH KADZIE	0	ERNS
CHICAGO	S111919671		5310 S KARLOV		SPILLS
CHICAGO	S111907501		3115 N KEATING ST		SPILLS
CHICAGO	S111898382		5801 KEATING ST		SPILLS
CHICAGO	S111902616		1438 N KEATING		SPILLS

Count: 4347 records COOK COUNTY, IL - ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CHICAGO	S108669593		6033 N KEDALE AVE		SPILLS
CHICAGO	93350395	2759 SOUTH KEDSE AVE	2759 SOUTH KEDSE AVE		ERNS
CHICAGO	S111876900		10759 S KEDSIE		SPILLS
CHICAGO	S111886081		3920 N KEDVALE		SPILLS
CHICAGO	S111884525		1921 N KEDVALE		SPILLS
CHICAGO	94407837	3000 SOUTH KEDZIE SCRAP YARD	3000 SOUTH KEDZIE SCRAP YARD		ERNS
CHICAGO	S111885628		7300 S KEDZIE		SPILLS
CHICAGO	S111886517		3350 N KEDZIE		SPILLS
CHICAGO	S111888296		8700 S KEDZIE		SPILLS
CHICAGO	S111888442		3001 S KEDZIE		SPILLS
CHICAGO	S111888408		2122 N KEDZIE		SPILLS
CHICAGO	S111885391		7300 S KEDZIE		SPILLS
CHICAGO	S111888368		4000 S KEDZIE		SPILLS
CHICAGO	S111877816		3316 N KEDZIE		SPILLS
CHICAGO	S111910595		N KEDZIE AVE		SPILLS
CHICAGO	S111880294		10758 S KEDZIE		SPILLS
CHICAGO	S111900017		5604 N KEDZIE		SPILLS
CHICAGO	S111875974		5808 S KEDZIE		SPILLS
CHICAGO	S111876949		1031 S KEDZIE		SPILLS
CHICAGO	S111910046		4831 S KEDZIE		SPILLS
CHICAGO	S111922462		1701 N KEDZIE		SPILLS
CHICAGO	S111895557		2847 S KEDZIE		SPILLS
CHICAGO	S111877425		5050 KEDZIE AVE		SPILLS
CHICAGO	S111912412		7100 S KEDZIE		SPILLS
CHICAGO	S111899270		3720 N KEDZIE		SPILLS
CHICAGO	S111923987		3301 KEDZIE AVE		SPILLS
CHICAGO	S111908732		101 N KEDZIE		SPILLS
CHICAGO	S111905596		4235 N KEDZIE		SPILLS
CHICAGO	S111890918		1020 N KEDZIE		SPILLS
CHICAGO	S111909533		2800 S KEDZIE		SPILLS
CHICAGO	S111922101		4447 N KEDZIE		SPILLS
CHICAGO	S111876848		1201 S KEDZIE		SPILLS
CHICAGO	S111893723		727 N KEDZIE		SPILLS
CHICAGO	S111876366		4054 N KEDZIE		SPILLS
CHICAGO	S111927168		11040 S KEDZIE		SPILLS
CHICAGO	S111922672		4801 S KEDZIE		SPILLS
CHICAGO	S111919188		2614 S KEDZIE		SPILLS
CHICAGO	S111905518		2021 N KEDZIE		SPILLS
CHICAGO	S111905493		5359 N KEDZIE		SPILLS
CHICAGO	S111899858		1116 N KEDZIE		SPILLS
CHICAGO	S111878143		8200 S KEDZIE		SPILLS
CHICAGO	S111919080		7100 KEDZIE		SPILLS
CHICAGO	S111882493		5050 S KEDZIE		SPILLS
CHICAGO	S111901715		11900 S KEDZIE AVE		SPILLS
CHICAGO	S111894964		5035 N KEDZIE		SPILLS
CHICAGO	S111881916		3247 S KEDZIE		SPILLS
CHICAGO	S111920353		2551 S KEDZIE		SPILLS

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CHICAGO	S111920903		2657 S KEDZIE		SPILLS
CHICAGO	S111878644		6659 N KEDZIE		SPILLS
CHICAGO	S111899132		7625 S KEDZIE		SPILLS
CHICAGO	S111897576		3200 S KEDZIE		SPILLS
CHICAGO	S111896348		10320 S KEDZIE		SPILLS
CHICAGO	S111892109		4910 N KEDZIE		SPILLS
CHICAGO	S111880940		358 S KEDZIE		SPILLS
CHICAGO	S111880825		3947 S KEDZIE		SPILLS
CHICAGO	S111876720		3247 S KEDZIE		SPILLS
CHICAGO	S111880682		7100 S KEDZIE ST		SPILLS
CHICAGO	S111904136		5441 N KEDZIE		SPILLS
CHICAGO	S111914097		5040 N KEDZIE		SPILLS
CHICAGO	S111912849		642 N KEDZIE		SPILLS
CHICAGO	S111912850		642 N KEDZIE		SPILLS
CHICAGO	S111910172		228 S KEDZIE		SPILLS
CHICAGO	S111897377		4646 S KEDZIE		SPILLS
CHICAGO	S111897336		11900 S KEDZIE AVE		SPILLS
CHICAGO	S111912810		3747 N KEDZIE		SPILLS
CHICAGO	S111912811		3747 N KEDZIE		SPILLS
CHICAGO	S111883969		3100 N KEDZIE		SPILLS
CHICAGO	S111902571		412 N KEDZIE		SPILLS
CHICAGO	S111876629		3247 S KEDZIE		SPILLS
CHICAGO	S111920182		4837 S KEDZIE		SPILLS
CHICAGO	S111920124		5440 S KEDZIE		SPILLS
CHICAGO	S111911511		4140 N KEDZIE		SPILLS
CHICAGO	94367889	6900 S KEELER ST	6900 S KEELER ST		ERNS
CHICAGO	90164999	69 KEELER STREET	69 KEELER STREET		ERNS
CHICAGO	S111910602		930 N KENMORE		SPILLS
CHICAGO	S111900364		4920 N KENMORE		SPILLS
CHICAGO	S111878670		4208 KENMORE AVE		SPILLS
CHICAGO	S109700090		NW KENNEDY EXPY & NORTH AVE		SPILLS
CHICAGO	S111903042		SB KENNEDY EXPY		SPILLS
CHICAGO	S111925176		NW KENNEDY EXPRESSWAY AT NORTH AVE		SPILLS
CHICAGO	S111749663		300 S KENNEDY EXPY		SPILLS
CHICAGO	S111925061		2324 S KENNETH		SPILLS
CHICAGO	S111907521		KENOSHA SUBDIVISION		SPILLS
CHICAGO	2006805030	400 N. KENTON AVE	400 N. KENTON AVE		ERNS
CHICAGO	S111890713		1636 N KENTON		SPILLS
CHICAGO	S108046186		3701 W KENZIE		SPILLS
CHICAGO	S111902173		3701 W KENZIE		SPILLS
CHICAGO	S108045321		11039 S KEZIE AVE		SPILLS
CHICAGO	S111891776		4411 S KILBARE		SPILLS
CHICAGO	8850526	1645 S KILBORN ST	1645 S KILBORN ST		ERNS
CHICAGO	2011993247		1821 S KILBORN		ERNS
CHICAGO	S111875834		356 N KILBORN		SPILLS
CHICAGO	2010956033	1821 SOUTH KILBOURN	1821 S KILBOURN		ERNS
CHICAGO	2010956034	1821 SOUTH KILBOURN	1821 S KILBOURN		ERNS

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CHICAGO	S111888019		N KILBOURN & W BYRON		SPILLS
CHICAGO	S111892847		2816 S KILBOURN		SPILLS
CHICAGO	S111877630		1330 S KILBOURN		SPILLS
CHICAGO	S111919186		1730 N KILBOURN		SPILLS
CHICAGO	S111898486		750 N KILBOURN		SPILLS
CHICAGO	S111880599		6249 S KILBOURN		SPILLS
CHICAGO	S111898682		5152 S KILBOURN		SPILLS
CHICAGO	S111912840		1821 KILBOURN AVE		SPILLS
CHICAGO	S111886847		2816 S KILBOURNE		SPILLS
CHICAGO	S111884664		902 KILBOURNE ST		SPILLS
CHICAGO	S111876879		1440 S KILBOURNE AVE		SPILLS
CHICAGO	S111876447		3200 S KILBOURNE ST		SPILLS
CHICAGO	S111878673		4940 S KILBOURNE AVE		SPILLS
CHICAGO	S111879169		1810 N KILBOURNE		SPILLS
CHICAGO	S111911634		1810 N KILBOURNE		SPILLS
CHICAGO	S111890018		715 N KILBOURNE		SPILLS
CHICAGO	S111883554		22 N KILDAIR AVE		SPILLS
CHICAGO	S111894670		2100 N KILDARE		SPILLS
CHICAGO	S111893166		1630 N KILDARE		SPILLS
CHICAGO	S111904816		4400 S KILDARE		SPILLS
CHICAGO	S111901228		4220 S KILDARE BLVD		SPILLS
CHICAGO	S111924072		4220 S KILDARE		SPILLS
CHICAGO	S111877664		2649 N KILDARE ST		SPILLS
CHICAGO	S111877382		2649 N KILDARE		SPILLS
CHICAGO	S111894182		2100 N KILDARE ST		SPILLS
CHICAGO	S111879962		4400 S KILDARE BLVD		SPILLS
CHICAGO	S111901304		4220 S KILDARE BLVD		SPILLS
CHICAGO	S111901420		4220 S KILDEAR BLVD		SPILLS
CHICAGO	S111920649		4201 N KILPATRIC AVE		SPILLS
CHICAGO	2010930105	KILPATRICK ST	KILPATRICK ST		ERNS
CHICAGO	S111886128		4117 N KILPATRICK		SPILLS
CHICAGO	S111893210		400 N KILPATRICK		SPILLS
CHICAGO	S111883938		1657 KILPATRICK		SPILLS
CHICAGO	S111884767		4201 N KILPATRICK ST		SPILLS
CHICAGO	S111907795		800 N KILPATRICK		SPILLS
CHICAGO	S111881598		3250 N KILPATRICK		SPILLS
CHICAGO	S111910258		1657 N KILPATRICK		SPILLS
CHICAGO	S111885936		3200 N KIMBALL		SPILLS
CHICAGO	S111883796		5200 N KIMBALL		SPILLS
CHICAGO	S111881168		5155 KIMBALL AVE		SPILLS
CHICAGO	S111908447		5155 KIMBALL		SPILLS
CHICAGO	S111915311		7330 S KIMBART		SPILLS
CHICAGO	S111877515		3330 N KIMBELL		SPILLS
CHICAGO	S111878502		5060 KIMBERLY		SPILLS
CHICAGO	S111879373		5060 N KIMBERLY ST		SPILLS
CHICAGO	S111876640		5155 KIMNBALL		SPILLS
CHICAGO	S111922716		KINDER MORGAN STOLT TERMINAL		SPILLS

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CHICAGO	S111920445		KINDER MORGAN DOCK		SPILLS
CHICAGO	2009904890	600 WEST KINDIE	600 WEST KINDIE		ERNS
CHICAGO	2008904890	600 WEST KINDIE	600 WEST KINDIE		ERNS
CHICAGO	S109953771		OF KING DR		SPILLS
CHICAGO	S111899680		7850 KING DR		SPILLS
CHICAGO	S111925269		OF KING DR		SPILLS
CHICAGO	S111912936		KING DR & 26TH ST		SPILLS
CHICAGO	871114	KINGSBURY TRANSMISSION SUBSTATION//370 WEST GRANT AVE	KINGSBURY TRANSMISSION SUBSTATION//370 WEST GRANT AVE		ERNS
CHICAGO	2000521705	KINGSBURY AND OHIO STREETS	KINGSBURY AND OHIO STREETS	0	ERNS
CHICAGO	98437399	KINGSBURY STREET AND NORTH AVE.	KINGSBURY STREET AND NORTH AVE.		ERNS
CHICAGO	S111906666		KINGSBURY & OHIO		SPILLS
CHICAGO	S111922142		1800 N KINGSBURY		SPILLS
CHICAGO	S111904272		1436 N KINGSBURY		SPILLS
CHICAGO	S111886172		9 W KINSEY ST		SPILLS
CHICAGO	S111902807		4201 W KINSEY		SPILLS
CHICAGO	S111904668		1750 W KINSIE		SPILLS
CHICAGO	2011996803		KINZIE ST & FULTON ST		ERNS
CHICAGO	S111881368		4656 W KINZIE		SPILLS
CHICAGO	S111879257		4656 W KINZIE		SPILLS
CHICAGO	S111876836		KINZIE & DES PLAINES		SPILLS
CHICAGO	S111926098		600 W KINZIE		SPILLS
CHICAGO	S111893287		1456 KINZIE ST		SPILLS
CHICAGO	S111890345		1650 W KINZIE		SPILLS
CHICAGO	S111915295		600 W KINZIE AVE		SPILLS
CHICAGO	S111884192		4125 N KISTNER		SPILLS
CHICAGO	S111909432		4222 S KNOX		SPILLS
CHICAGO	S111893839		4243 S KNOX		SPILLS
CHICAGO	S111905612		6051 S KNOX		SPILLS
CHICAGO	S111890944		3315 N KNOX		SPILLS
CHICAGO	S111904627		4333 S KNOX		SPILLS
CHICAGO	S111881185		4358 S KNOX		SPILLS
CHICAGO	S111908891		4242 S KNOX		SPILLS
CHICAGO	S111908890		4243 S KNOX		SPILLS
CHICAGO	S111903050		3136 S KOLIN ST		SPILLS
CHICAGO	S108045958		2660 N KOLMAR		SPILLS
CHICAGO	S111901525		3123 N KOLMAR		SPILLS
CHICAGO	S111875259		1745 KOLMAR AVE		SPILLS
CHICAGO	S111890799		5033 N KOLMAR		SPILLS
CHICAGO	94376715	KOPPERS DOCK	KOPPERS DOCK		ERNS
CHICAGO	2010936208	KOPPER’S - ILLINOIS RIVER MILE 317	KOPPERS ILLINOIS RIV		ERNS
CHICAGO	S111891058		KOPPERS DOCK IN		SPILLS
CHICAGO	S111349455		5225 S KOSTNER		SPILLS
CHICAGO	S111887978		7101 S KOSTNER		SPILLS
CHICAGO	2011983894		5225 S KOSTNER		ERNS
CHICAGO	S111910740		7200 KOSTNER		SPILLS
CHICAGO	S111907481		932 KOSTNER RD		SPILLS

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CHICAGO	S111875327		1500 W KOSTNER		SPILLS
CHICAGO	S111912124		3702 N KOSTNER		SPILLS
CHICAGO	S111905264		1270 S KOSTNER ST		SPILLS
CHICAGO	S111927291		1800 N KOSTNER		SPILLS
CHICAGO	S111903863		3600 S KOSTNER		SPILLS
CHICAGO	S111898148		1100 S KOSTNER		SPILLS
CHICAGO	S111921546		3600 S KOSTNER		SPILLS
CHICAGO	S111899477		KOSTNER & EISENHOWER EXPY		SPILLS
CHICAGO	S111915644		7101 S KOSTNER		SPILLS
CHICAGO	S111905740		1300 N KOSTNER ST		SPILLS
CHICAGO	S111876837		1334 N KROSTNER		SPILLS
CHICAGO	2000530517	5142 SOUTH LACROSSE STREET	5142 SOUTH LACROSSE STREET	0	ERNS
CHICAGO	S108046596		6900 S LAFAYETTE RIGHT OFF DAN RYAN EXPY		SPILLS
CHICAGO	S111895035		6152 S LAFAYETTE		SPILLS
CHICAGO	S111878698		8456 LAFAYETTE		SPILLS
CHICAGO	S111878530		1600 S LAFLIN		SPILLS
CHICAGO	S111904684		2400 S LAFLIN		SPILLS
CHICAGO	S111920382		2150 S LAFLIN		SPILLS
CHICAGO	S111914345		9155 S LAFLIN AVE		SPILLS
CHICAGO	S111909187		2441 S LAFLIN		SPILLS
CHICAGO	S111893132		901 S LAGRANGE		SPILLS
CHICAGO	S108047276		LAKE MICHIGAN		SPILLS
CHICAGO	93331465	LAKE MICHIGAN AT BURNHAM HARBOR	LAKE MICHIGAN AT BURNHAM HARBOR		ERNS
CHICAGO	93331555	LAKE MICHIGAN 1 MI E OF THE 4 MI CRIB	LAKE MICHIGAN 1 MI E OF THE 4 MI CRIB		ERNS
CHICAGO	89114226	LAKE MICHIGAN, BY BANK ST	LAKE MICHIGAN, BY BANK ST		ERNS
CHICAGO	89100836	LAKE MICHIGAN ADJACENT ILLINOIS RIVER LOCKS	LAKE MICHIGAN ADJACENT ILLINOIS RIVER LOCKS		ERNS
CHICAGO	2000534034	2900 LAKE SHORE DRIVE	2900 LAKE SHORE DRIVE	0	ERNS
CHICAGO	2009926425	LAKE MICHIGAN	LAKE MICHIGAN		ERNS
CHICAGO	2005615981	4400 NORTH LAKE SHORE DR.	4400 NORTH LAKE SHORE DR.		ERNS
CHICAGO	2008878901	LAKE MICHIGAN	LAKE MICHIGAN		ERNS
CHICAGO	2008867313	LAKE STREET	LAKE STREET		ERNS
CHICAGO	2007328830	LAKE CALUMET	LAKE CALUMET		ERNS
CHICAGO	S111890682		LAKE MICHIGAN		SPILLS
CHICAGO	S111890681		1604 W LAKE		SPILLS
CHICAGO	S111884771		S LAKE LAKE SHORE DR		SPILLS
CHICAGO	S111889627		4611 W LAKE		SPILLS
CHICAGO	S111924364		5050 W LAKE		SPILLS
CHICAGO	S111925665		LAKE MICHIGAN FRONT		SPILLS
CHICAGO	S111889106		2650 LAKE VIEW		SPILLS
CHICAGO	S111915464		5130 S LAKE PARK		SPILLS
CHICAGO	S111891730		LAKE MICHIGAN MONTROSE HBRS		SPILLS
CHICAGO	90172929	LAKE MICHIGAN	LAKE MICHIGAN		ERNS
CHICAGO	2000521849	WEST LAKE STREET	WEST LAKE STREET	0	ERNS
CHICAGO	96506171	285 LAKEPORT	285 LAKEPORT		ERNS
CHICAGO	S111886622		860 LAKESHORE DR		SPILLS
CHICAGO	S111888228		1000 LAKESHORE DR		SPILLS

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CHICAGO	S111886999		3180 N LAKESHORE DR		SPILLS
CHICAGO	S111894145		2400 LAKEVIEW		SPILLS
CHICAGO	S111887122		3127 N LAKEWOOD		SPILLS
CHICAGO	S111885810		2940 N LAKEWOOD		SPILLS
CHICAGO	S111903424		2325 N LAKEWOOD		SPILLS
CHICAGO	2010950649	4911 SOUTH LAMON ST	4911 S LAMON ST		ERNS
CHICAGO	S110613565		4911 S LAMOND ST		SPILLS
CHICAGO	98459275	LAMONT ROAD 2 MILES SOUTH OF I-55	LAMONT ROAD 2 MILES SOUTH OF I-55		ERNS
CHICAGO	S111894990		4711 N LAMONT AVE		SPILLS
CHICAGO	S111906983		275 LAND WEIR RD		SPILLS
CHICAGO	S111926468		LANDER RAILROAD YARD		SPILLS
CHICAGO	S109953757		LANDERS RAIL YARD		SPILLS
CHICAGO	94363189	LANDERS YARD	LANDERS YARD		ERNS
CHICAGO	S110613678		LANDERS		SPILLS
CHICAGO	2006788888	LANDERS RAIL YARD	LANDERS RAIL YARD		ERNS
CHICAGO	S111894234		LANDERS YARD		SPILLS
CHICAGO	S111925254		LANDERS RAILYARD		SPILLS
CHICAGO	S111893784		LANDERS YARD NORFOLK SOUTHERN		SPILLS
CHICAGO	S111897716		LANDERS YARDS		SPILLS
CHICAGO	S111876541		1101 S LANGLEY		SPILLS
CHICAGO	S111914213		1101 S LANGLEY ST		SPILLS
CHICAGO	S111885627		4410 S LAPORTE ST		SPILLS
CHICAGO	S111891875		4501 N LAPORTE		SPILLS
CHICAGO	S111912538		720 N LARABEE ST		SPILLS
CHICAGO	S111901863		324 S LARAMIE		SPILLS
CHICAGO	S111877402		1010 S LARAMIE		SPILLS
CHICAGO	S111904587		1825 N LARAMIE ST		SPILLS
CHICAGO	S111922800		LARAMIE & ROOSEVELT		SPILLS
CHICAGO	S111900803		4001 N LARAMIE		SPILLS
CHICAGO	S111884468		2013 LARAMIE ST		SPILLS
CHICAGO	S111889801		3900 S LARAMIE AVE		SPILLS
CHICAGO	S111904477		1825 N LARAMIE ST		SPILLS
CHICAGO	99608302	2929 LARGE WESTERN AVE	2929 LARGE WESTERN AVE		ERNS
CHICAGO	S111904479		4753 N LARIMAN		SPILLS
CHICAGO	S111902945		900 N LARRABBE		SPILLS
CHICAGO	S111905705		1409 N LARRABEE		SPILLS
CHICAGO	S111895411		844 N LARRABEE		SPILLS
CHICAGO	99607893	LASALLE AND WACKER	LASALLE AND WACKER		ERNS
CHICAGO	S111885520		135 S LASALLE		SPILLS
CHICAGO	S111898568		135 S LASALLE		SPILLS
CHICAGO	S111892870		327 S LASALLE ST		SPILLS
CHICAGO	S111891966		5923 S LASALLE		SPILLS
CHICAGO	S111884308		121 N LASALLE ST		SPILLS
CHICAGO	S111906404		1660 N LASALLE		SPILLS
CHICAGO	S111908258		427 S LASALLE ST		SPILLS
CHICAGO	S111897786		203 N LASALLE		SPILLS
CHICAGO	S111909407		530 N LASALLE ST		SPILLS

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CHICAGO	S111906329		345 N LASALLE ST		SPILLS
CHICAGO	S111883712		LASALLE & HARRISON		SPILLS
CHICAGO	S111893068		327 S LASALLE ST		SPILLS
CHICAGO	S111891812		920 N LASALLE		SPILLS
CHICAGO	S111890116		633 S LASALLE ST		SPILLS
CHICAGO	S111889725		721 N LASALLE ST		SPILLS
CHICAGO	S111903164		707 S LASALLE ST		SPILLS
CHICAGO	S111927724		3100 S LASALLE		SPILLS
CHICAGO	S111920245		2150 S LASLIN		SPILLS
CHICAGO	S111897376		350 N LASLIN		SPILLS
CHICAGO	2004731395	6300 SOUTH LATORBE AVE	6300 SOUTH LATORBE AVE		ERNS
CHICAGO	S111891220		2250 N LATROBE		SPILLS
CHICAGO	S111876621		1946 N LATROBE		SPILLS
CHICAGO	S111903749		2250 N LATROSE		SPILLS
CHICAGO	2009907082	LAURENS AND KENNEDY STREET	LAURENS AND KENNEDY STREET		ERNS
CHICAGO	2008907082	LAURENS AND KENNEDY STREET	LAURENS AND KENNEDY STREET		ERNS
CHICAGO	91215262	LAWERANCE & FRANCISCO STREET	LAWERANCE & FRANCISCO STREET		ERNS
CHICAGO	S111882211		4625 W LAWERENCE		SPILLS
CHICAGO	S111900134		W LAWN PARK & 4233RD W 65TH ST		SPILLS
CHICAGO	2010927643	7601 S. LAWNDALE ST.	7601 S LAWNDALE ST		ERNS
CHICAGO	S111888417		7601 S LAWNDALE		SPILLS
CHICAGO	S111892879		5007 S LAWNDALE		SPILLS
CHICAGO	S111881828		7601 S LAWNDALE		SPILLS
CHICAGO	S111898231		3401 S LAWNDALE		SPILLS
CHICAGO	S111895069		7601 S LAWNDALE		SPILLS
CHICAGO	S111925796		7601 S LAWNDALE		SPILLS
CHICAGO	S111878706		LAWNDALE GARAGE ON CERMAC RD		SPILLS
CHICAGO	S111911834		3314 S LAWNDALE ST		SPILLS
CHICAGO	S111882950		3445 S LAWNDALE		SPILLS
CHICAGO	S111895014		2626 S LAWNDALE		SPILLS
CHICAGO	S111881633		7700 S LAWNDALE		SPILLS
CHICAGO	S111891120		7601 S LAWNDALE		SPILLS
CHICAGO	S111879139		7601 S LAWNDALE		SPILLS
CHICAGO	S111915708		3307 S LAWNDALE		SPILLS
CHICAGO	S111892632		5007 S LAWNDALE		SPILLS
CHICAGO	S111904484		2700 S LAWNDALE		SPILLS
CHICAGO	2008873502	3200 WEST LAWRENCE & KEDCCI	3200 WEST LAWRENCE & KEDCCI		ERNS
CHICAGO	S111885501		1063 LAWRENCE AVE		SPILLS
CHICAGO	S111886338		2800 W LAWRENCE		SPILLS
CHICAGO	S111891024		1124 W LAWRENCE		SPILLS
CHICAGO	S111884351		3111 W LAWRENCE		SPILLS
CHICAGO	S111904688		4825 LAWRENCE		SPILLS
CHICAGO	S111910860		LAWRENCE & AUSTIN		SPILLS
CHICAGO	S111923119		2800 W LAWRENCE		SPILLS
CHICAGO	S111904632		3139 W LAWRENCE		SPILLS
CHICAGO	S111920945		2754 W LAWRENCE		SPILLS
CHICAGO	S111909157		2960 W LAWRENCE		SPILLS

Count: 4347 records

COOK COUNTY, IL - ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CHICAGO	S111895981		2306 W LAWRENCE		SPILLS
CHICAGO	8713139	LAYSTORM MFG CO.	LAYSTORM MFG CO.		ERNS
CHICAGO	S111885584		2828 S LCK		SPILLS
CHICAGO	S111885632		3417 S LEAVITT		SPILLS
CHICAGO	S111885509		2550 S LEAVITT		SPILLS
CHICAGO	S111904756		337 S LEAVITT		SPILLS
CHICAGO	S111888901		2555 S LEAVITT		SPILLS
CHICAGO	S111883374		457 N LEAVITT		SPILLS
CHICAGO	S111884825		212 S LEAVITT		SPILLS
CHICAGO	S111910205		2641 S LEAVITT AVE		SPILLS
CHICAGO	S111914370		600 N LEAVITTE ST		SPILLS
CHICAGO	S111896636		1934 N LECLAIR AVE		SPILLS
CHICAGO	90157722	18340 S. LECLAIRE "BACKYARD"	18340 S. LECLAIRE "BACKYARD"		ERNS
CHICAGO	2005624364	LECLAIRE AVE	LECLAIRE AVE		ERNS
CHICAGO	S111895533		3235 NORTH LECLAIRE		SPILLS
CHICAGO	S111878648		3949 N LECLARE		SPILLS
CHICAGO	S111927268		5318 W LELAND		SPILLS
CHICAGO	S111889180		1501 W LELAND ST		SPILLS
CHICAGO	S111908108		3708 LELAND		SPILLS
CHICAGO	2000670910	LEMONT AND CHICAGO	LEMONT AND CHICAGO		ERNS
CHICAGO	S111888754		4935 W LEMOYNE		SPILLS
CHICAGO	S111895485		5834 LEONARD AVE		SPILLS
CHICAGO	8713060	LESTER (LAST NAME UNK)	LESTER (LAST NAME UNK)		ERNS
CHICAGO	S111901189		10 N LEVITT		SPILLS
CHICAGO	S111920373		2730 S LEVITT		SPILLS
CHICAGO	S111909052		2650 LEXINGTON ST		SPILLS
CHICAGO	S111913266		4500 W LEXINGTON		SPILLS
CHICAGO	S111880165		4700 W LEXINGTON		SPILLS
CHICAGO	S111884835		5301 W LEXINGTON		SPILLS
CHICAGO	S111881008		717 W LIBERTY		SPILLS
CHICAGO	S111888144		2000 LINCOLN AVE		SPILLS
CHICAGO	S111899632		6211 N LINCOLN		SPILLS
CHICAGO	S111902147		4257 N LINCOLN		SPILLS
CHICAGO	S111898934		LINCOLN OASIS & I 80		SPILLS
CHICAGO	S111905546		3740 N LINCOLN		SPILLS
CHICAGO	S111914223		5785 LINCOLN AVE		SPILLS
CHICAGO	S111907642		3144 N LINCOLN		SPILLS
CHICAGO	S111893610		5943 N LINCOLN		SPILLS
CHICAGO	S111897073		5601 N LINCOLN ST		SPILLS
CHICAGO	S111893236		6101 LINCOLN AVE		SPILLS
CHICAGO	S111897679		NW LINE BETWEEN HARVARD IL		SPILLS
CHICAGO	S111876459		1500 LINN WHITE DR		SPILLS
CHICAGO	S111907433		2300 LISTER AVE		SPILLS
CHICAGO	S111884196		2227 N LISTER		SPILLS
CHICAGO	S111881385		LITTLE CALUMET RIV		SPILLS
CHICAGO	S111883817		LOADING DOCK OHARA AIRPORT		SPILLS
CHICAGO	98457733	LOCOMOTIVE (CR6400) FUEL TANK/ DERAILMENT OF 2 LOCOMOTIVES O	LOCOMOTIVE (CR6400) FUEL TANK/ DERAILMENT OF 2 LOCOMOTIVES O		ERNS

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CHICAGO	S111922884		1600 S LOMBARD		SPILLS
CHICAGO	S111898597		2000 N LONG		SPILLS
CHICAGO	S111884549		1434 N LONG ST		SPILLS
CHICAGO	S111896323		6429 S LONG		SPILLS
CHICAGO	S111907085		1833 N LONG ST		SPILLS
CHICAGO	91233431	7601 S LONGDALE	7601 S LONGDALE		ERNS
CHICAGO	S110613526		LOOMIS SLIP		SPILLS
CHICAGO	S108891646		11900 LOOMIS		LUST, SPILLS
CHICAGO	S111890919		1911 S LOOMIS		SPILLS
CHICAGO	S111927324		LOOMIS SLIP NEAR 5TH POWER STA		SPILLS
CHICAGO	S111892919		2500 S LOOMIS		SPILLS
CHICAGO	S111915597		6869 S LOOMIS		SPILLS
CHICAGO	S111885427		4163 S LOWE		SPILLS
CHICAGO	S111882122		5925 S LOWE		SPILLS
CHICAGO	S111925728		5959 S LOWE		SPILLS
CHICAGO	S111880153		7430 LOWE ST		SPILLS
CHICAGO	S111908065		3501 S LOWE ST		SPILLS
CHICAGO	S111919464		3843 S LOWELL		SPILLS
CHICAGO	S111880728		LUFTHANSA CARGO TERMINAL & OHARE		SPILLS
CHICAGO	S111885015		LUMBER ST		SPILLS
CHICAGO	S111887825		2255 S LUMBER		SPILLS
CHICAGO	S111888436		1600 LUMBER ST		SPILLS
CHICAGO	S111899983		1600 S LUMBER		SPILLS
CHICAGO	S111901497		1400 S LUMBER		SPILLS
CHICAGO	S111895780		1600 S LUMBER		SPILLS
CHICAGO	S111888860		1600 S LUMBER		SPILLS
CHICAGO	S111881103		1500 S LUMBER		SPILLS
CHICAGO	S111878067		2147 S LUMBER		SPILLS
CHICAGO	S111892948		1600 LUMBER ST		SPILLS
CHICAGO	S111926465		1600 S LUMBER		SPILLS
CHICAGO	S111909168		4545 W LYNDALE		SPILLS
CHICAGO	S111898016		4545 W LYNDALE		SPILLS
CHICAGO	S111911869		LYNX CARGO RAMP		SPILLS
CHICAGO	S111906155		8836 S MACKINAW		SPILLS
CHICAGO	S108046393		500 W MADISON MM 6 GENEVA SUB		SPILLS
CHICAGO	2010963447	504 W MADISON	504 W MADISON		ERNS
CHICAGO	S111888053		1800 W MADISON		SPILLS
CHICAGO	S111887272		5727 W MADISON		SPILLS
CHICAGO	S111886438		29 E MADISON		SPILLS
CHICAGO	S111909475		2316 W MADISON AVE		SPILLS
CHICAGO	S111909290		2316 W MADISON AVE		SPILLS
CHICAGO	S111909289		2316 W MADISON AVE		SPILLS
CHICAGO	S111902145		1200 W MADISON AVE		SPILLS
CHICAGO	S111912956		5727 W MADISON		SPILLS
CHICAGO	S111912957		5727 W MADISON		SPILLS
CHICAGO	S111922361		500 W MADISON		SPILLS
CHICAGO	S111896484		1500 W MADISON		SPILLS

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CHICAGO	S111918760		901 MADISON		SPILLS
CHICAGO	S111891539		4700 W MADISON		SPILLS
CHICAGO	S111927167		4111 W MADISON		SPILLS
CHICAGO	S111908496		4940 W MADISON AVE		SPILLS
CHICAGO	S111891430		1633 W MADISON		SPILLS
CHICAGO	S111904969		2324 W MADISON		SPILLS
CHICAGO	S111890783		5118 W MADISON AVE		SPILLS
CHICAGO	S111893604		1633 W MADISON		SPILLS
CHICAGO	S111914735		3801 W MADISON AVE		SPILLS
CHICAGO	S111890392		2320 W MADISON		SPILLS
CHICAGO	S111927432		MAIN LINE CD 5097 & RAIL		SPILLS
CHICAGO	S111892931		14 N MAIN		SPILLS
CHICAGO	S111926463		2 MAIN TRAK		SPILLS
CHICAGO	91203326	MAIN RAIL YARD	MAIN RAIL YARD		ERNS
CHICAGO	S111885453		4900 S MAJOR		SPILLS
CHICAGO	S111883026		4900 S MAJOR		SPILLS
CHICAGO	S111913627		6126 S MANARD		SPILLS
CHICAGO	S111904609		4400 N MANGO		SPILLS
CHICAGO	S111920461		E MANHEIM PROVISO YARD		SPILLS
CHICAGO	S110363845		MANNHEIM RD & IRVING PARK RD		SPILLS
CHICAGO	S111926036		MANNHEIM RD AND IRVING PARK RD		SPILLS
CHICAGO	S111887888		13915 MAPLE ST		SPILLS
CHICAGO	S111891974		3250 MAPLE AVE		SPILLS
CHICAGO	S111907793		7356 S MAPLE		SPILLS
CHICAGO	S111903460		3901 W MAPLE AVE		SPILLS
CHICAGO	S111901990		3715 S MAPLEWOOD ST		SPILLS
CHICAGO	S111894472		1541 N MAPLEWOOD		SPILLS
CHICAGO	S111901610		3715 S MAPLEWOOD		SPILLS
CHICAGO	S111893945		5527 N MAPLEWOOD		SPILLS
CHICAGO	S111898086		1800 N MARCEY		SPILLS
CHICAGO	S111920778		4215 S MARFHIELD AVE		SPILLS
CHICAGO	98449599	37FT PC MARGARET MARY BURNHAM HABR SLIP Q-49	37FT PC MARGARET MARY BURNHAM HABR SLIP Q-49		ERNS
CHICAGO	94364363	MARINE OIL TERMINAL CICERO AVE	MARINE OIL TERMINAL CICERO AVE		ERNS
CHICAGO	S111893190		8400 S MARLAND AVE		SPILLS
CHICAGO	S111888440		403 E MARQUETTE		SPILLS
CHICAGO	S111899130		2010 W MARQUETTE		SPILLS
CHICAGO	S111898346		2010 W MARQUETTE		SPILLS
CHICAGO	S111914996		1600 W MARQUETTE AVE		SPILLS
CHICAGO	S111881909		MARSHALL BLVD		SPILLS
CHICAGO	2010928212	111 MARSHFIELD	111 MARSHFIELD		ERNS
CHICAGO	S111895513		2700 N MARSHFIELD		SPILLS
CHICAGO	S111906532		3342 N MARSHFIELD ST		SPILLS
CHICAGO	S108045920		2524 S MARTIN LUTHER KING DR		SPILLS
CHICAGO	876689	9500 MARTIN LUTHER KING DR SHELL GAS STATION	9500 MARTIN LUTHER KING DR SHELL GAS STATION		ERNS
CHICAGO	S110363727		4415 S MARTIN LUTHER KING DR		SPILLS

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CHICAGO	S111886424		2400 S MARTIN LUTHER KING JR DR		SPILLS
CHICAGO	S111885931		5514 S MARTIN LUTHER KING		SPILLS
CHICAGO	S111888099		3357 S MARTIN LUTHER KING DR		SPILLS
CHICAGO	S111905100		2211 S MARTIN LUTHER KING JR BLVD		SPILLS
CHICAGO	S111905953		6341 S MARTIN LUTHER KING JR DR		SPILLS
CHICAGO	S111895483		3731 MARTIN SERVICE STA W		SPILLS
CHICAGO	S111899823		2211 S MARTIN LUTHER KING DR		SPILLS
CHICAGO	S111888781		9901 MARTIN LUTHER KING DR		SPILLS
CHICAGO	S111880660		2501 S MARTIN LUTHER KING DR		SPILLS
CHICAGO	S111903812		2211 S MARTIN LUTHER KING DR		SPILLS
CHICAGO	S111903811		2211 S MARTIN LUTHER KING DR		SPILLS
CHICAGO	S111892058		9500 S MARTIN LUTHER KING		SPILLS
CHICAGO	2000544679	MARTIN LUTHER KING DRIVE	MARTIN LUTHER KING DRIVE	0	ERNS
CHICAGO	S111889565		8018 MARYLAND		SPILLS
CHICAGO	S111883527		4350 N MASON ST		SPILLS
CHICAGO	S111886220		5437 S MASSASOIT		SPILLS
CHICAGO	96484236	MATERIAL WAS IN CONCRETE CONTAINMENT / ABSORBENT MATERIAL AP	MATERIAL WAS IN CONCRETE CONTAINMENT / ABSORBENT MATERIAL AP		ERNS
CHICAGO	S111901191		6901 S MAY		SPILLS
CHICAGO	S111893109		14 N MAY		SPILLS
CHICAGO	S111907831		8150 S MAY		SPILLS
CHICAGO	S111888380		405 MCCLUD CT		SPILLS
CHICAGO	S111880965		3906 W MCLEAN		SPILLS
CHICAGO	S111923993		2245 N MCVICKER		SPILLS
CHICAGO	S111906637		5214 S MCVICKERS		SPILLS
CHICAGO	S111895290		1727 MEDILL LN		SPILLS
CHICAGO	S111876278		1147 MEDILL		SPILLS
CHICAGO	S111914927		2635 W MEDILL		SPILLS
CHICAGO	S111897668		1727 W MEIDILL		SPILLS
CHICAGO	93323553	3234,3236,3240,5606 WEST MELROSE	3234,3236,3240,5606 WEST MELROSE		ERNS
CHICAGO	8749	MERCHANT MART AT WELLS AND NEW ORLEANS, 15TH FLOOR, WEST WIN	MERCHANT MART AT WELLS AND NEW ORLEANS, 15TH FLOOR, WEST WIN		ERNS
CHICAGO	93352422	4700 SOUTH MERIMAC RAIL YARD	4700 SOUTH MERIMAC RAIL YARD		ERNS
CHICAGO	S111889719		4700 S MERIMAC AVE		SPILLS
CHICAGO	2004715154	METRA 45	METRA 45		ERNS
CHICAGO	2004721184	METRO NORTH LINE ON MILWAUKEE DISTRICT	METRO NORTH LINE ON MILWAUKEE DISTRICT		ERNS
CHICAGO	2002594346	2230 MICHGAN AVE	2230 MICHGAN AVE	0	ERNS
CHICAGO	94400021	MICHIGAN AND EAST WACKER	MICHIGAN AND EAST WACKER		ERNS
CHICAGO	S110613624		1508 MICHIGAN AVE		SPILLS
CHICAGO	S111887271		3103 S MICHIGAN		SPILLS
CHICAGO	S111891930		1533 S MICHIGAN		SPILLS
CHICAGO	S111896187		7101 S MICHIGAN		SPILLS
CHICAGO	S111892227		10007 S MICHIGAN		SPILLS
CHICAGO	S111920371		2337 S MICHIGAN		SPILLS
CHICAGO	S111880659		3900 S MICHIGAN		SPILLS
CHICAGO	S111920742		1400 S MICHIGAN		SPILLS
CHICAGO	S111881504		11555 S MICHIGAN		SPILLS

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CHICAGO	99631717	MICKE'S DRIVE INN 7829 SOUTHWESTERN AVE	MICKE'S DRIVE INN 7829 SOUTHWESTERN AVE		ERNS
CHICAGO	S108047305		MIDWAY AIRPORT B TERMINAL GATE		SPILLS
CHICAGO	S111349468		MIDWAY AIRPORT		SPILLS
CHICAGO	S111887306		MIDWAY AIRPORT		SPILLS
CHICAGO	S111885496		MIDWAY AIRPORT		SPILLS
CHICAGO	S111911940		MIDWAY AIRPORT SIGNATURE W		SPILLS
CHICAGO	S111911939		MIDWAY AIRPORT GATE B3		SPILLS
CHICAGO	S111889593		MIDWAY AP CONCOURSE C		SPILLS
CHICAGO	S111922749		MIDWAY AIRPORT TERMINAL GATE A		SPILLS
CHICAGO	S111902413		MIDWAY AIRPORT		SPILLS
CHICAGO	S111892344		MIDWAY AIRPORT		SPILLS
CHICAGO	S111927889		MIDWAY AIRPORT GATE B12		SPILLS
CHICAGO	S111927765		MIDWAY AIRPORT 8B9		SPILLS
CHICAGO	S111927661		MIDWAY AIRPORT		SPILLS
CHICAGO	S111912794		MIDWAY AP		SPILLS
CHICAGO	S111885148		MIDWAYAIRPORT 58TH & CICERO		SPILLS
CHICAGO	92254689	MILE MARKER 318	MILE MARKER 318		ERNS
CHICAGO	93333205	MILE 318.8 CHICAGO SANITARY CANAL	MILE 318.8 CHICAGO SANITARY CANAL		ERNS
CHICAGO	96516421	MILE 317.4 RIGHT BANK	MILE 317.4 RIGHT BANK		ERNS
CHICAGO	2002618930	MILE MARKER 317.1	MILE MARKER 317.1	0	ERNS
CHICAGO	93302748	MILE MARKER 277.5	MILE MARKER 277.5		ERNS
CHICAGO	2000523929	MILE 329 LITTLE CALUMAT RIVER	MILE 329 LITTLE CALUMAT RIVER	0	ERNS
CHICAGO	2002590669	MILE POST C11	MILE POST C11	0	ERNS
CHICAGO	99640528	MILE 297.5 ON ILLINOIS RIVER	MILE 297.5 ON ILLINOIS RIVER		ERNS
CHICAGO	99650005	MILE MARKER 306 ON CHICAGO SHIP CANAL	MILE MARKER 306 ON CHICAGO SHIP CANAL		ERNS
CHICAGO	2006791836	MILE 330	MILE 330		ERNS
CHICAGO	2009904976	MILE POST C10.5	MILE POST C10.5		ERNS
CHICAGO	2009908640	MILE MARKER 299.90	MILE MARKER 299.90		ERNS
CHICAGO	2008904976	MILE POST C10.5	MILE POST C10.5		ERNS
CHICAGO	2008876999	MILE CD 518	MILE CD 518		ERNS
CHICAGO	2007315926	MILE POST: CD 517	MILE POST: CD 517		ERNS
CHICAGO	2008908640	MILE MARKER 299.90	MILE MARKER 299.90		ERNS
CHICAGO	2008874437	MILE POST 09514	MILE POST 09514		ERNS
CHICAGO	2008893703	MILE POST 1.0	MILE POST 1.0		ERNS
CHICAGO	S111888448		1 MILE E OF 4 MILE CRIB LAKE		SPILLS
CHICAGO	2001566873	MILE POST 00518	MILE POST 00518	0	ERNS
CHICAGO	2000540433	MILE 317.5 OF THE	MILE 317.5 OF THE	0	ERNS
CHICAGO	2000547095	MILE POST 510	MILE POST 510	0	ERNS
CHICAGO	96477228	MILEPOST B510	MILEPOST B510		ERNS
CHICAGO	2009915231	MILEPOST 8.4	MILEPOST 8.4		ERNS
CHICAGO	2009925953	MILEPOST 12.7	MILEPOST 12.7		ERNS
CHICAGO	2008915231	MILEPOST 8.4	MILEPOST 8.4		ERNS
CHICAGO	2010931620	MILEPOST C10.8 LANDERS YARD INTERMODAL	MILEPOST C108		ERNS
CHICAGO	2010928741	MILEPOST B510	MILEPOST B510		ERNS
CHICAGO	2007321733	MILEPOST 3.7	MILEPOST 3.7		ERNS
CHICAGO	2010942057	MILEPOST CD517	MILEPOST CD517		ERNS
CHICAGO	2010937997	MILEPOST JJJ36	MILEPOST JJJ36		ERNS

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CHICAGO	2010938289	MILEPOST: CD513	MILEPOST CD513		ERNS
CHICAGO	2012106766		MILEPOST CD513		ERNS
CHICAGO	2012103708		MILEPOST UW2		ERNS
CHICAGO	2012101576		MILEPOST CD5097		ERNS
CHICAGO	2012101577		MILEPOST CD7097		ERNS
CHICAGO	98433484	MILEPOST:10.8	MILEPOST:10.8		ERNS
CHICAGO	98441240	MILEPOST:18.0 CANAL STREET YARD	MILEPOST:18.0 CANAL STREET YARD		ERNS
CHICAGO	97410621	MILEPOST:B510.5	MILEPOST:B510.5		ERNS
CHICAGO	97407442	MILEPOST:C-10.8	MILEPOST:C-10.8		ERNS
CHICAGO	S111926883		MILEPOSTS TO D 29		SPILLS
CHICAGO	S109167339		MILES E OF JOLIET		SPILLS
CHICAGO	S111902788		2 MILES S OF		SPILLS
CHICAGO	S111904758		5225 S MILLARD		SPILLS
CHICAGO	S111905770		5600 S MILLARD		SPILLS
CHICAGO	S111349448		MILWAUKEE BETWEEN CANAL		SPILLS
CHICAGO	S111349496		5475 N MILWAUKEE		SPILLS
CHICAGO	S111889683		5514 MILWAUKEE AVE		SPILLS
CHICAGO	S111882729		1820 N MILWAUKEE		SPILLS
CHICAGO	S111925434		1801 N MILWAUKEE		SPILLS
CHICAGO	S111905270		1874 N MILWAUKEE		SPILLS
CHICAGO	S111894177		3845 N MILWAUKEE		SPILLS
CHICAGO	S111902941		4625 N MILWAUKEE		SPILLS
CHICAGO	S111919991		1424 N MILWAUKEE		SPILLS
CHICAGO	S111896814		2037 N MILWAUKEE		SPILLS
CHICAGO	S108045622		1701 N MILWAUKIE		SPILLS
CHICAGO	2007313834	MM09514	MM09514		ERNS
CHICAGO	8714111	MOBIL SERVICE STATION 6700 S. JEFFREY ST	MOBIL SERVICE STATION 6700 S. JEFFREY ST		ERNS
CHICAGO	S111900885		9901 S MOBILE ST		SPILLS
CHICAGO	S111898543		1606 N MOBILE		SPILLS
CHICAGO	S111902610		5625 S MOBILE		SPILLS
CHICAGO	2010962542	2457 WEST MOFFIT	2457 W MOFFIT		ERNS
CHICAGO	S111899935		8650 S MOGAN		SPILLS
CHICAGO	S111887980		4920 S MONITOR		SPILLS
CHICAGO	S111895493		1152 N MONITOR ST		SPILLS
CHICAGO	91227365	MONROE STREET HARBOR	MONROE STREET HARBOR		ERNS
CHICAGO	97406258	MONROE STREET OUTER HARBOR	MONROE STREET OUTER HARBOR		ERNS
CHICAGO	2011993183		MONROE ST		ERNS
CHICAGO	S111903036		400 E MONROE		SPILLS
CHICAGO	S111891600		5222 W MONROE		SPILLS
CHICAGO	S111909035		1065 W MONROE		SPILLS
CHICAGO	S111896884		2608 W MONROE AVE		SPILLS
CHICAGO	S111893740		711 W MONROE		SPILLS
CHICAGO	S111881214		MONROE HARBOR LAKE		SPILLS
CHICAGO	S111914622		2347 W MONROE		SPILLS
CHICAGO	S111892151		1040 W MONROE		SPILLS
CHICAGO	S111901930		2419 W MONROE		SPILLS
CHICAGO	S111911366		400 E MONROE		SPILLS

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CHICAGO	S111919202		1512 W MONTANA		SPILLS
CHICAGO	S111891428		5045 W MONTANA		SPILLS
CHICAGO	S111902911		1830 W MONTEREY		SPILLS
CHICAGO	S111900669		1830 W MONTERY AVENUE CHICAGO PD 22ND STA		SPILLS
CHICAGO	S111900633		1830 W MONTERY		SPILLS
CHICAGO	S111918752		3041 N MONTICELLO		SPILLS
CHICAGO	S111890417		5030 N MONTICELLO		SPILLS
CHICAGO	S111914849		3601 W MONTORESE		SPILLS
CHICAGO	2005615909	MONTROS HARBOR	MONTROS HARBOR		ERNS
CHICAGO	91236314	MONTROSE HARBOR	MONTROSE HARBOR		ERNS
CHICAGO	94391125	MONTROSE HARBOR LAKE MICHIGAN	MONTROSE HARBOR LAKE MICHIGAN		ERNS
CHICAGO	94391456	MONTROSE AVE MONTROSE HARBOR	MONTROSE AVE MONTROSE HARBOR		ERNS
CHICAGO	2003647189	MONTROSE HARBOR	MONTROSE HARBOR		ERNS
CHICAGO	8710205	2800 W. MONTROSE GAS STATION FOR SALE	2800 W. MONTROSE GAS STATION FOR SALE		ERNS
CHICAGO	90169605	MONTROSE AT THE MOUTH OF THE HARBOR	MONTROSE AT THE MOUTH OF THE HARBOR		ERNS
CHICAGO	99642573	MONTROSE DRIVE	MONTROSE DRIVE		ERNS
CHICAGO	S110824860		MONTROSE WB		SPILLS
CHICAGO	S111910756		3601 W MONTROSE		SPILLS
CHICAGO	S111899977		2537 W MONTROSE		SPILLS
CHICAGO	S111926718		MONTROSE ALONT THE KENNEDY EDE JCT		SPILLS
CHICAGO	S111927396		4269 W MONTROSE		SPILLS
CHICAGO	S111908703		4455 W MONTROSE		SPILLS
CHICAGO	S111898219		5520 W MONTROSE		SPILLS
CHICAGO	S111889598		7330 W MONTROSE		SPILLS
CHICAGO	S111910904		810 W MONTROSE		SPILLS
CHICAGO	S111903636		3359 W MONTROSE		SPILLS
CHICAGO	S111889887		2742 W MONTROSE		SPILLS
CHICAGO	S111919870		2450 W MONTROSE		SPILLS
CHICAGO	S111880799		6350 MONTROSE		SPILLS
CHICAGO	S111904951		2424 MONTROSE AVE		SPILLS
CHICAGO	S111879923		2000 W MONTROSE		SPILLS
CHICAGO	S111883556		6001 W MONTROSE		SPILLS
CHICAGO	S111903805		3448 W MONTROSE		SPILLS
CHICAGO	S111897845		2955 W MONTROSE		SPILLS
CHICAGO	2008888071	MONTROSS STATION	MONTROSS STATION		ERNS
CHICAGO	S111885745		1548 S MORGAN		SPILLS
CHICAGO	S111886103		MORGAN & JACKSON		SPILLS
CHICAGO	S111886089		4000 S MORGAN		SPILLS
CHICAGO	S111887146		7900 S MORGAN		SPILLS
CHICAGO	S111887805		3800 S MORGAN		SPILLS
CHICAGO	S111886969		1601 S MORGAN		SPILLS
CHICAGO	S111892869		4309 S MORGAN		SPILLS
CHICAGO	S111890271		4837 S MORGAN		SPILLS
CHICAGO	S111909900		1451 MORGAN AVE		SPILLS
CHICAGO	S111892427		3800 S MORGAN		SPILLS
CHICAGO	S111878898		8051 S MORGAN		SPILLS
CHICAGO	S111898084		318 S MORGAN		SPILLS

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CHICAGO	S111900688		1140 S MORGAN		SPILLS
CHICAGO	S111890751		3800 S MORGAN		SPILLS
CHICAGO	S111890739		3800 S MORGAN RD		SPILLS
CHICAGO	S111904125		4848 S MORGAN		SPILLS
CHICAGO	S111915382		8900 S MORGAN		SPILLS
CHICAGO	S111900133		MOUNT GREENWOOD PARK & 3721ST W 111TH ST		SPILLS
CHICAGO	S111908511		5115 N MOUNT CLAIR		SPILLS
CHICAGO	S111908889		MOUNT PROSPECT RD		SPILLS
CHICAGO	S111912846		MOUNT PROSPECT & TOUGHY OHARE AIRPORT		SPILLS
CHICAGO	93302749	MOUTH OF CHICAGO RIVER AT LOCK	MOUTH OF CHICAGO RIVER AT LOCK		ERNS
CHICAGO	89113350	MOUTH OF BURNHAM HARBOR AT APPROX 2300 S LAKESHORE	MOUTH OF BURNHAM HARBOR AT APPROX 2300 S LAKESHORE		ERNS
CHICAGO	S111899847		4043 N MOZART		SPILLS
CHICAGO	97410255	MPB510	MPB510		ERNS
CHICAGO	2007325433	MULTI UNIT BUILDING	MULTI UNIT BUILDING		ERNS
CHICAGO	S111924180		10459 S MUSKEGAN AVE		SPILLS
CHICAGO	S109167338		4868 4870 N CLARK ST		SPILLS
CHICAGO	S108669664		N		SPILLS
CHICAGO	S111912510		6015 23 N FAIRFIELD		SPILLS
CHICAGO	2002594261	N/A	N/A	0	ERNS
CHICAGO	2010956232	NAGLE ST	NAGLE ST		ERNS
CHICAGO	S111889590		5201 N NAGLE		SPILLS
CHICAGO	S111879468		5759 N NAGLE		SPILLS
CHICAGO	2000543395	NAGLE AVE.	NAGLE AVE.	0	ERNS
CHICAGO	S111927245		7400 S NARAAGAUSETT		SPILLS
CHICAGO	2011992898		7400 S NARAGAUSATTE		ERNS
CHICAGO	2009894288	NARRAGANSEET AVE	NARRAGANSEET AVE		ERNS
CHICAGO	2008894288	NARRAGANSEET AVE	NARRAGANSEET AVE		ERNS
CHICAGO	S111894469		3600 NARRAGANSETT		SPILLS
CHICAGO	S111890464		3134 N NARRAGANSETT		SPILLS
CHICAGO	S111901949		1701 N NARRAGANSETT		SPILLS
CHICAGO	S111902100		5330 S NASHVILLE		SPILLS
CHICAGO	S111902121		2323 N NATCHEZ AVE		SPILLS
CHICAGO	S111891852		2248 N NATCHEZ AVE		SPILLS
CHICAGO	S111911839		2101 N NATCHEZ		SPILLS
CHICAGO	S111890051		2248 N NATCHEZ AVE		SPILLS
CHICAGO	2010931300	1943 NORTH NATOMA AVE.	1943 N NATOMA AVE		ERNS
CHICAGO	93320083	NAVY PIER	NAVY PIER		ERNS
CHICAGO	94375184	NAVY PIER SOUTHSIDE OF PIER	NAVY PIER SOUTHSIDE OF PIER		ERNS
CHICAGO	90186681	NAVY PIER SOUTH SIDE	NAVY PIER SOUTH SIDE		ERNS
CHICAGO	90157711	NAVY PIER	NAVY PIER		ERNS
CHICAGO	8864001	NAVY PIER	NAVY PIER		ERNS
CHICAGO	2000529972	NAVY PIER IN CHICAGO	NAVY PIER IN CHICAGO	0	ERNS
CHICAGO	2007327046	NAVY PIER	NAVY PIER		ERNS
CHICAGO	S111885022		NAVY PIER		SPILLS
CHICAGO	S111880711		NAVY PIER		SPILLS
CHICAGO	S108480186		NAVY PIER		SPILLS

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CHICAGO	S111896931		NB		SPILLS
CHICAGO	2003702300	NEAR 48TH ST	NEAR 48TH ST		ERNS
CHICAGO	2000549597	NEAR CANAL AND LAKE STREET	NEAR CANAL AND LAKE STREET	0	ERNS
CHICAGO	2000547713	NEAR EXIT 115 STREET	NEAR EXIT 115 STREET	0	ERNS
CHICAGO	99648314	NEAR AIRPORT WEST OF HIGGINS RD ON THUEY RD	NEAR AIRPORT WEST OF HIGGINS RD ON THUEY RD		ERNS
CHICAGO	S111895256		NEAR 25TH & CALIFORNIA		SPILLS
CHICAGO	S111920473		NEAR SAINT EXIT STHY		SPILLS
CHICAGO	S111901926		RD NEAR 103 E		SPILLS
CHICAGO	S111927623		NEAR WEST 79TH ST XING		SPILLS
CHICAGO	2001569847	NEAR ADDISON STATION	NEAR ADDISON STATION	0	ERNS
CHICAGO	2000528773	NEAR WESTERN STREET ON THE BLUE LINE	NEAR WESTERN STREET ON THE BLUE LINE	0	ERNS
CHICAGO	2011964700	NEAREST CROSS STREETS KILBOURN AND KINZIE STREETS	NEAREST CROSS STREETS KILBOURN STS		ERNS
CHICAGO	S108046927		643 NEARPULASKI RD		SPILLS
CHICAGO	S111898366		2952 W NELSON		SPILLS
CHICAGO	S111899829		5838 N NEVA		SPILLS
CHICAGO	94388379	NEW EDITION TO THE UNIVERSITY HOSPITAL	NEW EDITION TO THE UNIVERSITY HOSPITAL		ERNS
CHICAGO	98445339	NEW HOSPITAL SE CORNER OF HURON ST AND ST. CLAIR ST	NEW HOSPITAL SE CORNER OF HURON ST AND ST. CLAIR ST		ERNS
CHICAGO	S111349489		NEW FEDEX CARGO BLDG		SPILLS
CHICAGO	S111892433		2360 N NEWCASTLE		SPILLS
CHICAGO	S111887007		1255 N NOBLE		SPILLS
CHICAGO	S111903487		417 N NOBLE		SPILLS
CHICAGO	2010944765	NONE	NONE		ERNS
CHICAGO	2010947372	NONE	NONE		ERNS
CHICAGO	2011990715		NONE		ERNS
CHICAGO	2011981876		NONE		ERNS
CHICAGO	96497189	NORFOLK SOUTHERN YARD 103RD ST AND DOTY AVE	NORFOLK SOUTHERN YARD 103RD ST AND DOTY AVE		ERNS
CHICAGO	94353725	NORFOLK SOUTHERN DIESEL SHOP AT CHICAGO TRAIN YARD	NORFOLK SOUTHERN DIESEL SHOP AT CHICAGO TRAIN YARD		ERNS
CHICAGO	90159432	NORFOLK SOUTHER RAIL YARD	NORFOLK SOUTHER RAIL YARD		ERNS
CHICAGO	2010928863	NORFOLK SOUTHERN MILE POST 521.1	5211 NORFOLK SOUTHERN		ERNS
CHICAGO	90161024	NORFOLK SOUTHERN RAIL YRD	NORFOLK SOUTHERN RAIL YRD		ERNS
CHICAGO	2004714035	12931 SOUTH NORMA	12931 SOUTH NORMA		ERNS
CHICAGO	S111909056		7851 NORMAL ST		SPILLS
CHICAGO	S111909405		3839 NORMAL AVE		SPILLS
CHICAGO	S111876178		5100 S NORMAL		SPILLS
CHICAGO	S111926532		5834 S NORMAL		SPILLS
CHICAGO	S111907937		2351 N NORMANDY		SPILLS
CHICAGO	S111900721		11236 NORRENCE AVE		SPILLS
CHICAGO	S111887394		301 E NORTH WATER		SPILLS
CHICAGO	S111881459		1137 N NORTH BR		SPILLS
CHICAGO	S111912229		6600 W NORTH AVE		SPILLS
CHICAGO	S111895554		6810 W NORTH AVE		SPILLS
CHICAGO	S111912083		4500 W NORTH AVE N ALY		SPILLS

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CHICAGO	S111904804		6938 W NORTH AVE		SPILLS
CHICAGO	S111908171		7020 W NORTH AVE		SPILLS
CHICAGO	S111902714		926 N NORTHBRANCH AVE		SPILLS
CHICAGO	S111878812		922 N NORTHBRANCH		SPILLS
CHICAGO	S111877046		1092 N NORTHBRANCH		SPILLS
CHICAGO	S111897490		1150 N NORTHBRANCH		SPILLS
CHICAGO	S111886564		1371 N NORTHBRANCH		SPILLS
CHICAGO	S111884020		1150 N NORTHBRANCH		SPILLS
CHICAGO	S111907246		6300 W NORTHWEST HWY		SPILLS
CHICAGO	S109327519		6750 NORTHWESTERN AVE		SPILLS
CHICAGO	S109327393		1656 NORTHWESTERN AVE		SPILLS
CHICAGO	S111218390	SHELL OIL PRODUCTS US	45 NORTHWESTERN		LUST
CHICAGO	S111923504		1800 NORTHWESTERN AVE		SPILLS
CHICAGO	S111898119		333 NORTHWESTERN AVE		SPILLS
CHICAGO	S111920556		1600 NORTHWESTERN		SPILLS
CHICAGO	S111899062		49 NORTHWESTERN AVE		SPILLS
CHICAGO	S111894106		6600 NORTHWESTERN AVE		SPILLS
CHICAGO	S111913975		1651 NORTHWESTERN AVE		SPILLS
CHICAGO	S111900331		6652 NORTHWESTERN AVE		SPILLS
CHICAGO	S111918193		45 NOTRHWESTERN		SPILLS
CHICAGO	97408922	NSRR LANDERS YARD 2543 WEST COLOMBUS DRIV	NSRR LANDERS YARD 2543 WEST COLOMBUS DRIVE		ERNS
CHICAGO	2004715516	O'HARA AIRPORT	O'HARA AIRPORT		ERNS
CHICAGO	93311285	O'HARE AIRPORT SOUTH POL	O'HARE AIRPORT SOUTH POL		ERNS
CHICAGO	91238794	O'HARE INTL AIRPORT POB 66144	O'HARE INTL AIRPORT POB 66144		ERNS
CHICAGO	92266249	O'HARE AFB REFUELING APRON	O'HARE AFB REFUELING APRON		ERNS
CHICAGO	91236320	O'HARE AIRPORT->HIGGINS RD + MANNHEIM #4	O'HARE AIRPORT->HIGGINS RD + MANNHEIM #4		ERNS
CHICAGO	2002625470	O'HARE INTERNATIONAL AIRPORT	O'HARE INTERNATIONAL AIRPORT	0	ERNS
CHICAGO	8870782	O'HARE AIRPORT	O'HARE AIRPORT		ERNS
CHICAGO	89101914	O'HARE INTERNATIONAL AIRPORT (312)686-5211, TWA OPERATIONS,	O'HARE INTERNATIONAL AIRPORT (312)686-5211, TWA OPERATIONS,		ERNS
CHICAGO	89106683	O'HARE FIELD	O'HARE FIELD		ERNS
CHICAGO	2009897823	O'HARE TERMAINAL	O'HARE TERMAINAL		ERNS
CHICAGO	2008897823	O'HARE TERMAINAL	O'HARE TERMAINAL		ERNS
CHICAGO	2007316978	O'HARE AIRPORT	O'HARE AIRPORT		ERNS
CHICAGO	90181005	O'HARE INTERNATIONAL AIRPORT CARGO AREA	O'HARE INTERNATIONAL AIRPORT CARGO AREA		ERNS
CHICAGO	8714913	418 W. OAK	418 W. OAK		ERNS
CHICAGO	S111908663		6800 OAK PARK AVE		SPILLS
CHICAGO	S111908972		2211 N OAK PARK AVE		SPILLS
CHICAGO	S111899549		2221 W OAKDALE		SPILLS
CHICAGO	S111875539		1250 W OAKDALE		SPILLS
CHICAGO	S111891087		517 OAKDALE		SPILLS
CHICAGO	S111880915		350 W OAKDALE		SPILLS
CHICAGO	S111884902		4040 S OAKENWALD		SPILLS
CHICAGO	S111894659		518 N OAKLEY ST		SPILLS
CHICAGO	S111890310		4140 S OAKLEY		SPILLS
CHICAGO	S111900380		1337 S OAKLEY		SPILLS
CHICAGO	S111900381		1337 S OAKLEY		SPILLS

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CHICAGO	S111915479		610 S OAKLEY		SPILLS
CHICAGO	S111881098		339 N OAKLEY		SPILLS
CHICAGO	S111910140		2825 N OAKLEY		SPILLS
CHICAGO	S111895977		4343 S OAKLEY BLVD		SPILLS
CHICAGO	S111912663		3900 S OAKWOOD		SPILLS
CHICAGO	91237841	SOUTH OF 115 ST WEST OF GREEN ST	SOUTH OF 115 ST WEST OF GREEN ST		ERNS
CHICAGO	94373036	WEST OF FRANSISCO NORTH OF LUNT IN AN UNNAMED ALLEY	WEST OF FRANSISCO NORTH OF LUNT IN AN UNNAMED ALLEY		ERNS
CHICAGO	93326794	W. OF CLYBOURNE ON WEBSTER AVE	W. OF CLYBOURNE ON WEBSTER AVE		ERNS
CHICAGO	93303038	N OF 54TH ST & EAST OF HERMITHGE RD	N OF 54TH ST & EAST OF HERMITHGE RD		ERNS
CHICAGO	94381906	SOUTH OF THE ARGYLE ST BRIDGE ON THE WEST BANK	SOUTH OF THE ARGYLE ST BRIDGE ON THE WEST BANK		ERNS
CHICAGO	S109550473		S OF 130TH ST		SPILLS
CHICAGO	2008883200	NORTH OF 45TH AVE.	NORTH OF 45TH AVE.		ERNS
CHICAGO	S109327619		N OF 45TH ST & E OF STATE ST		SPILLS
CHICAGO	2007321007	SOUTH OF 31ST STREET	SOUTH OF 31ST STREET		ERNS
CHICAGO	S111886747		N OF 54TH ST E		SPILLS
CHICAGO	S111886996		N OF ALLEY BETWEEN BARRY & FLETCHER STS		SPILLS
CHICAGO	S111889709		N OF 47TH SAINT ON DAN RYAN EXPY		SPILLS
CHICAGO	S111922322		S OF 31ST & E OF KARLOV		SPILLS
CHICAGO	S111896469		W OF SACRAMENTO AVE & N OF BELLMONT AVE		SPILLS
CHICAGO	S111890906		W OF FRANCISCO ST N		SPILLS
CHICAGO	S111884595		E OF ASHLAND AVE		SPILLS
CHICAGO	S111911664		N OF 18TH ON BANK OF CHICAGO RIV W		SPILLS
CHICAGO	S111883295		E OF COTTAGE GROVE AVE		SPILLS
CHICAGO	S111924749		S OF 130TH ST		SPILLS
CHICAGO	S111879544		E OF ALY & LASLIN		SPILLS
CHICAGO	S111911416		S OF 116TH SAINT PROBABLY 5		SPILLS
CHICAGO	90181857	EAST OF CHICAGO LAKE MICHIGAN	EAST OF CHICAGO LAKE MICHIGAN		ERNS
CHICAGO	92289021	OFF OF JARVIS AVE	OFF OF JARVIS AVE		ERNS
CHICAGO	92288359	I-55 OFFRAMP TO SOUTH 35TH ST	I-55 OFFRAMP TO SOUTH 35TH ST		ERNS
CHICAGO	1012172065	3701 W. OGDAN	3701 W. OGDAN		US BROWNFIELDS
CHICAGO	99626470	OGDEN SLIP	OGDEN SLIP		ERNS
CHICAGO	99623878	OGDEN SLIP OFF THE CHICAGO RIVER	OGDEN SLIP OFF THE CHICAGO RIVER		ERNS
CHICAGO	S111922533		3450 W OGDEN		SPILLS
CHICAGO	S111906986		4150 OGDEN AVE		SPILLS
CHICAGO	S111877927		2600 W OGDEN		SPILLS
CHICAGO	S111883865		2424 W OGDEN		SPILLS
CHICAGO	S111882138		2256 OGDEN AVE		SPILLS
CHICAGO	S111913280		3315 W OGDEN		SPILLS
CHICAGO	S111884215		2241 OGDEN AVE		SPILLS
CHICAGO	S111902061		355 OGDEN AVE		SPILLS
CHICAGO	S111906624		3801 OGDEN AVE		SPILLS
CHICAGO	S111927160		167 N OGDEN		SPILLS
CHICAGO	S111905835		3124 W OGDEN		SPILLS
CHICAGO	S111899124		4040 OGDEN AVE		SPILLS
CHICAGO	S111889137		333 OGDEN AVE		SPILLS

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CHICAGO	S111915595		3423 W OGDEN		SPILLS
CHICAGO	S111897839		221 N OGDEN		SPILLS
CHICAGO	91231203	OGDEN SLIP LAKESHORE DRIVE	OGDEN SLIP LAKESHORE DRIVE		ERNS
CHICAGO	2000519176	OGDEN JUNCTION	OGDEN JUNCTION	0	ERNS
CHICAGO	S111906955		3139 W OGDON AVE		SPILLS
CHICAGO	S111880103		7900 S OGELSBY ST		SPILLS
CHICAGO	S111876096		333 N OGEON AVE		SPILLS
CHICAGO	S111927336		OGILVIE TRANSPORTATION CENTER ST & FULTON ST		SPILLS
CHICAGO	S111908219		7900 S OGLESBY		SPILLS
CHICAGO	96516129	OHARA FIELD 10000 WEST OHARA FIELD	OHARA FIELD 10000 WEST OHARA FIELD		ERNS
CHICAGO	S109699842		10000 W OHARA		SPILLS
CHICAGO	2010933730	O'HARA AIRPORT TAXIWAKI, SOUTH OF AIRFIELD	OHARA AIRPORT TAXIWAKI SOUTH O		ERNS
CHICAGO	S111905665		611 OHARA CARGO RD		SPILLS
CHICAGO	S111904070		OHARA AIRPORT TRUCK FILL AREA		SPILLS
CHICAGO	S111875356		OHARA FLD		SPILLS
CHICAGO	S111884344		OHARA FLD		SPILLS
CHICAGO	S111877932		OHARA INTERNATIONAL AP		SPILLS
CHICAGO	S111877911		OHARA INTERNATIONAL CARGO AREA		SPILLS
CHICAGO	S111903650		OHARA INTERNATIONAL AP		SPILLS
CHICAGO	S111889601		10000 OHARA FLD		SPILLS
CHICAGO	S111884552		OHARA AP CARGO AREA GATE		SPILLS
CHICAGO	S111883008		OHARA FLD		SPILLS
CHICAGO	S111876395		OHARA FLD		SPILLS
CHICAGO	S111909004		OHARA AIRPORT		SPILLS
CHICAGO	S111893608		OHARA INTERNATIONAL AP & ARS		SPILLS
CHICAGO	S111925005		10000 W OHARA		SPILLS
CHICAGO	S108045240		10000 OHARE RD		SPILLS
CHICAGO	S108047382		OHARE AP NE RAMP		SPILLS
CHICAGO	2004730063	OHARE AIRPORT	OHARE AIRPORT		ERNS
CHICAGO	S110122279		755 OHARE AIRPORT NORTHWEST AIRLIN		SPILLS
CHICAGO	S110278059		10000 W OHARE DR		SPILLS
CHICAGO	S109550572		OHARE AP AMERICAN AIRLINES FUE CTR		SPILLS
CHICAGO	S109550534		OHARE AP BLDG		SPILLS
CHICAGO	S109550614		OHARE AP		SPILLS
CHICAGO	U001135163	O'HARE NURSARY	10000 W OHARE ST		UST
CHICAGO	S111218688		OHARE FLD		SPILLS
CHICAGO	S111888021		OHARE INT AIRPORT AF		SPILLS
CHICAGO	S111887282		OHARE AIRPORT		SPILLS
CHICAGO	S111885338		OHARE FLD		SPILLS
CHICAGO	S111885043		OHARE FIELD MANHEIM RD		SPILLS
CHICAGO	S111887913		OHARE AIRPORT		SPILLS
CHICAGO	S111886218		OHARE INTERNATIONAL AIRPORT HA		SPILLS
CHICAGO	S111888085		OHARE AIRPORT		SPILLS
CHICAGO	2012102621		OHARE AIRPORT		ERNS
CHICAGO	2011983614		OHARE AIRPORT		ERNS
CHICAGO	S111888666		OHARE AIRPORT		SPILLS
CHICAGO	S111912570		10000 W OHARE OUTSIDE GATE F 10		SPILLS

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CHICAGO	S111913759		OHARE AIRPORT GATE L5		SPILLS
CHICAGO	S111909948		OHARE INTERNATIONAL AIRPORT TE		SPILLS
CHICAGO	S111909889		OHARE INTERNATIONAL AIRPORT BLDG		SPILLS
CHICAGO	S111909884		723 OHARE INTERNATIONAL AIRPORT BLDG		SPILLS
CHICAGO	S111909829		1000 W OHARE AIRPORT		SPILLS
CHICAGO	S111913641		10000 W OHARE ST		SPILLS
CHICAGO	S111903044		OHARE AP & TRUCK FILL AREA		SPILLS
CHICAGO	S111898610		10000 W OHARE		SPILLS
CHICAGO	S111896964		OHARE AIRPORT		SPILLS
CHICAGO	S111895195		OHARE AIRPORT HERTZ RENT A CAR		SPILLS
CHICAGO	S111927473		OHARE AIRPORT CARGO BLDG		SPILLS
CHICAGO	S111910016		OHARE INTERNATIONAL AIRPORT TE		SPILLS
CHICAGO	S111913003		10000 W OHARE AVE		SPILLS
CHICAGO	S111883901		OHARE FLD & CARGO FACILITY		SPILLS
CHICAGO	S111904723		OHARE INTERNATIONAL AP		SPILLS
CHICAGO	S111908006		10000 W OHARE ST		SPILLS
CHICAGO	S111903996		OHARE INTERNATIONAL AIRPORT		SPILLS
CHICAGO	S111891959		OHARE AIRPORT		SPILLS
CHICAGO	S111927456		502 W OHARE		SPILLS
CHICAGO	S111924904		OHARE AIRPORT AMERICAN AIRLINE		SPILLS
CHICAGO	S111912416		10000 W OHARE		SPILLS
CHICAGO	S111924620		OHARE AIRPORT		SPILLS
CHICAGO	S111906062		OHARE INTERNATIONAL AIRPORT		SPILLS
CHICAGO	S111904822		726 OHARE AIRPORT BLDG		SPILLS
CHICAGO	S111891929		OHARE AIRPORT		SPILLS
CHICAGO	S111878442		OHARE AIRPORT		SPILLS
CHICAGO	S111927354		OHARE CARGO AREA RD		SPILLS
CHICAGO	S111909822		OHARE AIRPORT HANGER		SPILLS
CHICAGO	S111924580		OHARE AIRPORT FUEL CTR		SPILLS
CHICAGO	S111896466		OHARE AIRPORT		SPILLS
CHICAGO	S111912191		10000 W OHARE		SPILLS
CHICAGO	S111875892		OHARE AIRPORT		SPILLS
CHICAGO	S111927263		OHARE AIRPORT		SPILLS
CHICAGO	S111910933		OHARE INTERNATIONAL AIRPORT TE		SPILLS
CHICAGO	S111903916		OHARE INTERNATIONAL AP		SPILLS
CHICAGO	S111903881		OHARE AIRPORT TRUCK FILL AREA		SPILLS
CHICAGO	S111913065		10000 W OHARE		SPILLS
CHICAGO	S111913054		OHARE AIRPORT		SPILLS
CHICAGO	S111921804		OHARE AIRPORT BLDG		SPILLS
CHICAGO	S111921784		OHARE FLD		SPILLS
CHICAGO	S111898143		10000 W OHARE		SPILLS
CHICAGO	S111897702		OHARE AIRPORT BY TERMINAL 5		SPILLS
CHICAGO	S111892175		OHARE AIRPORT AMERICAN AIRLINE		SPILLS
CHICAGO	S111927156		606 OHARE FUELING SOUTHWEST CARGO BLDG		SPILLS
CHICAGO	S111910607		OHARE INTERNATIONAL AIRPORT GA		SPILLS
CHICAGO	S111898476		OHARE AIRPORT LAKE		SPILLS
CHICAGO	S111903593		OHARE AIRPORT		SPILLS

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CHICAGO	S111897424		OHARE AIRPORT OIL STA		SPILLS
CHICAGO	S111884075		OHARE AIR FORCE BASE		SPILLS
CHICAGO	S111902315		OHARE INTERNATIONAL AP		SPILLS
CHICAGO	S111894428		OHARE AIRPORT BLDG		SPILLS
CHICAGO	S111920800		OHARE AP FUEL FARM LOADING RAC		SPILLS
CHICAGO	S111907138		OHARE AIRPORT		SPILLS
CHICAGO	S111905441		OHARE AIRPORT		SPILLS
CHICAGO	S111901377		OHARE AP		SPILLS
CHICAGO	S111880592		OHARE INTERNATIONAL AIRPORT		SPILLS
CHICAGO	S111883597		OHARE INTERNATIONAL AIRPORT		SPILLS
CHICAGO	S111877178		OHARE AIRPORT		SPILLS
CHICAGO	S111876015		OHARE INTERNATIONAL AIRPORT		SPILLS
CHICAGO	S111914131		OHARE INTERNATIONAL AIRPORT BLDG		SPILLS
CHICAGO	S111908014		OHARE INTERNATIONAL AIRPORT TE		SPILLS
CHICAGO	S111900292		OHARE AIRPORT		SPILLS
CHICAGO	S111897360		OHARE INTERNATIONAL AIRPORT		SPILLS
CHICAGO	S111895652		OHARE OASIS		SPILLS
CHICAGO	S111912817		OHARE AIRPORT BLDG		SPILLS
CHICAGO	S111911483		OHARE INTERNATIONAL AIRPORT TE & GATE B 17		SPILLS
CHICAGO	S111910127		OHARE AIRPORT EAST OF AMC		SPILLS
CHICAGO	S111908362		OHARE INTERNATIONAL AIRPORT		SPILLS
CHICAGO	S111897495		OHARE AIRPORT		SPILLS
CHICAGO	S111927028		OHARE TERMINAL 5		SPILLS
CHICAGO	S111889203		OHAREAIRPORTHANGAR 5A		SPILLS
CHICAGO	S111898281		43 E OHIO		SPILLS
CHICAGO	S111902091		N OHIO ST		SPILLS
CHICAGO	S111902033		1000 E OHIO		SPILLS
CHICAGO	S111908136		OHIO & GRAND STS		SPILLS
CHICAGO	S111906256		1000 E OHIO		SPILLS
CHICAGO	S111883579		450 E OHIO		SPILLS
CHICAGO	94354816	N. OKETO ST	N. OKETO ST		ERNS
CHICAGO	S111890513		5205 N OKETO		SPILLS
CHICAGO	92269315	OLD STREET WALL INSIDE HARBOR	OLD STREET WALL INSIDE HARBOR		ERNS
CHICAGO	S110613668		OLD HWY 10 ON THE RAMP		SPILLS
CHICAGO	S111926457		OLD 10 - ON THE RAMP		SPILLS
CHICAGO	S111887563		6551 N OLMSTED		SPILLS
CHICAGO	S111890471		6645 N OLPHANT AVE		SPILLS
CHICAGO	S111905547		30 W ONTARIO		SPILLS
CHICAGO	S111883249		30 W ONTARIO		SPILLS
CHICAGO	S111878589		76 W ONTARIO		SPILLS
CHICAGO	S111898153		ORD ALSF OHARE INTERNATIONAL A		SPILLS
CHICAGO	S111884809		ORD ASR 4		SPILLS
CHICAGO	S111909500		863 N ORLEANS		SPILLS
CHICAGO	S111906819		1546 N ORLEANS		SPILLS
CHICAGO	S108046501		5900 S OUTBOUND DAN RYAN EXPY		SPILLS
CHICAGO	S111896029		OUTBOUND RAMP		SPILLS
CHICAGO	S108480188		FT OVER LAKE		SPILLS

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CHICAGO	S111914369		UN PACIFIC RAIL YARD ON CANAL		SPILLS
CHICAGO	S111892291		3348 S PALASKI		SPILLS
CHICAGO	S111910482		4343 S PALASKI RD		SPILLS
CHICAGO	S111914392		4650 N PALASKI RD		SPILLS
CHICAGO	S111901287		3900 W PALMER		SPILLS
CHICAGO	S111881904		3563 PALMER ST		SPILLS
CHICAGO	S111905693		4600 W PALMSTER ST		SPILLS
CHICAGO	2009927055	PARK MANOR	PARK MANOR		ERNS
CHICAGO	2011991335		4111 W PARKER		ERNS
CHICAGO	S111927200		4111 W PARKER		SPILLS
CHICAGO	S111918997		4547 W PARKER		SPILLS
CHICAGO	S111877796		1434 N PARKSIDE		SPILLS
CHICAGO	S111875666		3315 S PARNELL		SPILLS
CHICAGO	91202957	MI PAST 326 N BRANCH CHGO RIVER W KINZIE	MI PAST 326 N BRANCH CHGO RIVER W KINZIE		ERNS
CHICAGO	S111911236		4552 W PATTERSON ST		SPILLS
CHICAGO	S111926461		3000 PATTERSON RD		SPILLS
CHICAGO	8857613	1443 PAULINA	1443 PAULINA		ERNS
CHICAGO	S111883908		421 PAULINA ST		SPILLS
CHICAGO	S111902515		2500 S PAULINA		SPILLS
CHICAGO	S111913115		5214 N PAULINA		SPILLS
CHICAGO	S111923400		2500 S PAULINA		SPILLS
CHICAGO	S111897771		1811 S PAULINA		SPILLS
CHICAGO	S111922987		8727 S PAULINA		SPILLS
CHICAGO	S111879136		1924 PAULINA ST		SPILLS
CHICAGO	S111882431		2651 N PAULINA		SPILLS
CHICAGO	S111901393		4311 N PAULINA		SPILLS
CHICAGO	S111919322		2712 N PAULINA		SPILLS
CHICAGO	S111883670		9606 S PAXTON		SPILLS
CHICAGO	S111885703		25 E PEARSON		SPILLS
CHICAGO	S111888962		41 E PEARSON		SPILLS
CHICAGO	S111883632		2558 W PEDERSON		SPILLS
CHICAGO	S111908651		11500 S PERRY		SPILLS
CHICAGO	94366239	3800 PERSHING RD	3800 PERSHING RD		ERNS
CHICAGO	S111887440		1050 PERSHING RD		SPILLS
CHICAGO	S111886288		2101 W PERSHING		SPILLS
CHICAGO	S111922162		2655 W PERSHING		SPILLS
CHICAGO	S111892487		1000 W PERSHING		SPILLS
CHICAGO	S111893458		1819 PERSHING RD		SPILLS
CHICAGO	S111890488		3800 PERSHING RD		SPILLS
CHICAGO	S111915529		1700 W PERSHING		SPILLS
CHICAGO	S111908076		1700 W PERSHING		SPILLS
CHICAGO	S111907094		1400 W PERSHING		SPILLS
CHICAGO	S111896240		454 E PERSHING		SPILLS
CHICAGO	S111890802		2500 PERTERSON AVE		SPILLS
CHICAGO	S111899334		3553 W PETERSEN AVE		SPILLS
CHICAGO	S111900069		4123 W PETERSEN AVE		SPILLS
CHICAGO	S111924937		2838 W PETERSON		SPILLS

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CHICAGO	S111912549		3400 W PETERSON		SPILLS
CHICAGO	S111892889		2542 N PETERSON AVE		SPILLS
CHICAGO	S111900222		2554 W PETERSON ST		SPILLS
CHICAGO	S111900223		2554 W PETERSON ST		SPILLS
CHICAGO	S111900537		3401 PETERSON AVE		SPILLS
CHICAGO	S111883870		3800 W PETERSON		SPILLS
CHICAGO	S111908745		2501 W PETERSON		SPILLS
CHICAGO	S111892787		2812 W PETERSON		SPILLS
CHICAGO	S111921200		2424 W PETERSON		SPILLS
CHICAGO	S111893754		2935 W PETERSON		SPILLS
CHICAGO	S111878761		4025 W PETERSON		SPILLS
CHICAGO	S111883758		3200 PETERSON		SPILLS
CHICAGO	S111898094		3016 W PETERSON		SPILLS
CHICAGO	S111891657		4343 W PETERSON		SPILLS
CHICAGO	S111892892		2108 N PETTERSON AVE		SPILLS
CHICAGO	S111892891		2107 N PETTERSON		SPILLS
CHICAGO	S111892890		2544 N PETTERSON AVE		SPILLS
CHICAGO	S111892888		2540 N PETTERSON AVE		SPILLS
CHICAGO	S111892887		2538 N PETTERSON AVE		SPILLS
CHICAGO	S111892886		2536 N PETTERSON AVE		SPILLS
CHICAGO	S111892885		2534 N PETTERSON AVE		SPILLS
CHICAGO	S111884261		3401 PETTERSON AVE		SPILLS
CHICAGO	S111909797		5625 W PHILMOORE		SPILLS
CHICAGO	S111890810		PIGGY BACK RAMP		SPILLS
CHICAGO	2000668618	F PINE GROVE AND ADISON	F PINE GROVE AND ADISON		ERNS
CHICAGO	S111911996		5500 W PINE		SPILLS
CHICAGO	S111891349		2756 PINE GRV		SPILLS
CHICAGO	S111905197		3805 N PLAINFIELD		SPILLS
CHICAGO	877438	PLYMOUTH CT & EISENHOWER PARKWAY PLYMOUT CT PSS	PLYMOUTH CT & EISENHOWER PARKWAY PLYMOUTH CT PSS		ERNS
CHICAGO	8867459	PMC SPECIALITY	PMC SPECIALITY		ERNS
CHICAGO	875664	PMC CORPORATION OR SHERWIN WILLIAMS 115TH ST AND CHAMPLAIN A	PMC CORPORATION OR SHERWIN WILLIAMS 115TH ST AND CHAMPLAIN A		ERNS
CHICAGO	S111887302		S POL OHARE AIRPORT		SPILLS
CHICAGO	2000552216	700 NORTH POLASKI	700 NORTH POLASKI	0	ERNS
CHICAGO	2010956157	POLK STATION	POLK STA		ERNS
CHICAGO	S111885212		3450 W POLK		SPILLS
CHICAGO	2012104402		1634 W POLK		ERNS
CHICAGO	S111905690		2661 POLK ST		SPILLS
CHICAGO	S111896528		5048 POLK ST		SPILLS
CHICAGO	S111896201		5048 POLK ST		SPILLS
CHICAGO	S111927496		1634 W POLK		SPILLS
CHICAGO	S108047409		POPLAR & ARCHER AVE		SPILLS
CHICAGO	S111894440		3522 W POTOMAC ST		SPILLS
CHICAGO	S111892090		4055 W POTOMAC		SPILLS
CHICAGO	S111885365		3525 W POTOMIC AVE		SPILLS
CHICAGO	S111349389		5226 POTTAWATOMIE		SPILLS

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CHICAGO	S111885056		4120 S PR		SPILLS
CHICAGO	S111885188		5734 S PR		SPILLS
CHICAGO	S111913448		5910 S PR		SPILLS
CHICAGO	S111880835		1915 S PR		SPILLS
CHICAGO	S111902589		1918 S PR		SPILLS
CHICAGO	S111883214		3748 S PRAIRIE ST		SPILLS
CHICAGO	S111908224		6028 PRAIRIE AVE		SPILLS
CHICAGO	S111882375		58 PRAIRIE ST		SPILLS
CHICAGO	S111911813		1712 W PRATT ST		SPILLS
CHICAGO	S111878257		1622 W PRATT		SPILLS
CHICAGO	S111926559		1340 W PRATT		SPILLS
CHICAGO	S111890346		3101 PRATT AVE		SPILLS
CHICAGO	2001559682	PREMIERE WHAREHOUSES	PREMIERE WHAREHOUSES	0	ERNS
CHICAGO	S111898233		39 PRINCETON		SPILLS
CHICAGO	91227438	PRIVATE DRIVEWAY 3175 N. GRAND	PRIVATE DRIVEWAY 3175 N. GRAND		ERNS
CHICAGO	8875211	PRIVATE CITIZEN	PRIVATE CITIZEN		ERNS
CHICAGO	91223529	PROPERTY TAX NO. PIN 26- 07-157-008. ON 100 ST	PROPERTY TAX NO. PIN 26- 07-157-008. ON 100 ST		ERNS
CHICAGO	S108047414		PROVISO		SPILLS
CHICAGO	2004724880	PROVISO YARD	PROVISO YARD		ERNS
CHICAGO	2000550784	PROVISO RAIL YARD	PROVISO RAIL YARD	0	ERNS
CHICAGO	2000525104	PROVISO	PROVISO	0	ERNS
CHICAGO	98456856	PROVISO YARD	PROVISO YARD		ERNS
CHICAGO	S111909017		PROVISO YARD		SPILLS
CHICAGO	S111902105		PROVISO YARD		SPILLS
CHICAGO	S111906881		PROVISO YARD		SPILLS
CHICAGO	S111918825		PROVISO YARD		SPILLS
CHICAGO	S111900702		PROVISO YARD & W MADISON ST		SPILLS
CHICAGO	S111910341		PROVISO YARD		SPILLS
CHICAGO	S111902614		PROVISO YARD		SPILLS
CHICAGO	98451458	5838 NORTH PUASKI RD	5838 NORTH PUASKI RD		ERNS
CHICAGO	S111879661		4646 S PUILASKI RD		SPILLS
CHICAGO	S108047918		OF PULASKI ST		SPILLS
CHICAGO	97407460	PULASKI AVE NORTH OF STEVENSON EXPRESSWAY	PULASKI AVE NORTH OF STEVENSON EXPRESSWAY		ERNS
CHICAGO	89118756	PULASKI RD & SANITARY SHIP CANAL	PULASKI RD & SANITARY SHIP CANAL		ERNS
CHICAGO	2008886505	PULASKI AND FERDINAN STRS	PULASKI AND FERDINAN STRS		ERNS
CHICAGO	2010941633	3501 S. PULASKI	3501 S PULASKI		ERNS
CHICAGO	2010950374	PULASKI AND CONGRESS	PULASKI		ERNS
CHICAGO	S111218699		6500 S PULASKI		SPILLS
CHICAGO	S111885735		3500 S PULASKI		SPILLS
CHICAGO	S111885715		3500 S PULASKI		SPILLS
CHICAGO	S111885574		3925 N PULASKI		SPILLS
CHICAGO	S111887313		4560 N PULASKI AVE		SPILLS
CHICAGO	S111886512		3925 N PULASKI		SPILLS
CHICAGO	S111886468		5255 N PULASKI		SPILLS
CHICAGO	S111886058		2801 W PULASKI		SPILLS
CHICAGO	S111888307		5151 N PULASKI		SPILLS

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CHICAGO	S111885291		3348 S PULASKI		SPILLS
CHICAGO	S111885369		4500 S PULASKI AVE		SPILLS
CHICAGO	S111905353		826 PULASKI ST		SPILLS
CHICAGO	S111896579		6029 N PULASKI AVE		SPILLS
CHICAGO	S111879725		3400 S PULASKI		SPILLS
CHICAGO	S111879688		3400 S PULASKI		SPILLS
CHICAGO	S111877979		4433 S PULASKI		SPILLS
CHICAGO	S111925325		2345 S PULASKI		SPILLS
CHICAGO	S111892862		3800 S PULASKI		SPILLS
CHICAGO	S111877100		2444 N PULASKI		SPILLS
CHICAGO	S111878981		7401 S PULASKI		SPILLS
CHICAGO	S111882660		4154 N PULASKI AVE		SPILLS
CHICAGO	S111904779		3250 S PULASKI		SPILLS
CHICAGO	S111902481		5500 S PULASKI		SPILLS
CHICAGO	S111925451		5901 S PULASKI		SPILLS
CHICAGO	S111923232		400 N PULASKI		SPILLS
CHICAGO	S111908734		700 N PULASKI		SPILLS
CHICAGO	S111903029		4625 N PULASKI		SPILLS
CHICAGO	S111888590		8251 S PULASKI		SPILLS
CHICAGO	S111878413		6100 N PULASKI		SPILLS
CHICAGO	S111914261		39 N PULASKI		SPILLS
CHICAGO	S111902424		4250 N PULASKI		SPILLS
CHICAGO	S111900135		2200 N PULASKI		SPILLS
CHICAGO	S111891193		7400 S PULASKI		SPILLS
CHICAGO	S111875637		3501 S PULASKI		SPILLS
CHICAGO	S111878380		3501 PULASKI AVE		SPILLS
CHICAGO	S111878350		3741 S PULASKI AVE		SPILLS
CHICAGO	S111922781		400 N PULASKI		SPILLS
CHICAGO	S111878741		5838 N PULASKI		SPILLS
CHICAGO	S111927154		3501 S PULASKI		SPILLS
CHICAGO	S111919290		PULASKI & OGDEN AVE		SPILLS
CHICAGO	S111876797		1230 N PULASKI		SPILLS
CHICAGO	S111920485		6242 S PULASKI		SPILLS
CHICAGO	S111914914		1900 S PULASKI AVE		SPILLS
CHICAGO	S111903582		1747 N PULASKI		SPILLS
CHICAGO	S111908477		5456 S PULASKI		SPILLS
CHICAGO	S111902328		5838 N PULASKI		SPILLS
CHICAGO	S111894132		5860 N PULASKI		SPILLS
CHICAGO	S111889787		4448 N PULASKI AVE		SPILLS
CHICAGO	S111921283		400 N PULASKI		SPILLS
CHICAGO	S111880080		5114 S PULASKI		SPILLS
CHICAGO	S111889738		4118 N PULASKI		SPILLS
CHICAGO	S111905447		3501 S PULASKI		SPILLS
CHICAGO	S111901366		1923 N PULASKI		SPILLS
CHICAGO	S111908861		4859 S PULASKI		SPILLS
CHICAGO	S111908849		5801 N PULASKI AVE		SPILLS
CHICAGO	S111908067		6214 N PULASKI		SPILLS

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CHICAGO	S111900066		2200 N PULASKI		SPILLS
CHICAGO	S111901971		5609 S PULASKI		SPILLS
CHICAGO	S111897410		6225 S PULASKI ST		SPILLS
CHICAGO	S111876049		10301 S PULASKI		SPILLS
CHICAGO	S111875481		3249 S PULASKI		SPILLS
CHICAGO	S111914486		308 N PULASKI AVE		SPILLS
CHICAGO	S111892051		3050 N PULASKI AVE		SPILLS
CHICAGO	S111890045		4461 N PULASKI AVE		SPILLS
CHICAGO	S111879084		4302 S PULASKI		SPILLS
CHICAGO	S111879082		4900 S PULASKI		SPILLS
CHICAGO	S111924202		3348 S PULASKI		SPILLS
CHICAGO	S111914957		1500 S PULASKI		SPILLS
CHICAGO	S111896220		4340 S PULASKI AVE		SPILLS
CHICAGO	S111876975		6200 S PULASKI		SPILLS
CHICAGO	S111875777		4639 N PULASKI		SPILLS
CHICAGO	S111919340		400 N PULASKI		SPILLS
CHICAGO	S111913902		743 N PULASKI		SPILLS
CHICAGO	S111883482		6311 N PULASKI		SPILLS
CHICAGO	S110685232		40234 N PULASKI		SPILLS
CHICAGO	S111881030		4140 W PULLERTON		SPILLS
CHICAGO	S111877014		3042 S QUINN		SPILLS
CHICAGO	U004082459	2001-03 RACE, INC.	2001 RACE ST		UST
CHICAGO	S111894840		4545 W RACE ST		SPILLS
CHICAGO	S111895324		4545 W RACE ST		SPILLS
CHICAGO	S108046140		3435 S RACINE		SPILLS
CHICAGO	S111887438		2015 S RACINE		SPILLS
CHICAGO	S111887117		4650 S RACINE		SPILLS
CHICAGO	S111885256		3134 N RACINE ST		SPILLS
CHICAGO	2011982152		3500 RACINE		ERNS
CHICAGO	S111896657		4545 S RACINE		SPILLS
CHICAGO	S111880267		4545 S RACINE		SPILLS
CHICAGO	S111910058		4545 S RACINE BUILDING 4549		SPILLS
CHICAGO	S111912454		10507 S RACINE		SPILLS
CHICAGO	S111909590		3340 S RACINE		SPILLS
CHICAGO	S111897168		4750 N RACINE ST		SPILLS
CHICAGO	S111893730		218 N RACINE		SPILLS
CHICAGO	S111881994		4551 S RACINE		SPILLS
CHICAGO	S111882928		RACINE AVE & MILWAUKEE AVE		SPILLS
CHICAGO	S111881164		4551 S RACINE		SPILLS
CHICAGO	S111907813		11830 S RACINE ST		SPILLS
CHICAGO	S111879972		3425 N RACINE		SPILLS
CHICAGO	S111906799		7944 RACINE AVE		SPILLS
CHICAGO	S111904462		222 S RACINE		SPILLS
CHICAGO	S111903516		100 S RACINE		SPILLS
CHICAGO	S111895363		8257 S RACINE		SPILLS
CHICAGO	S111884002		4740 N RACINE		SPILLS
CHICAGO	S111906201		2141 S RACINE		SPILLS

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CHICAGO	S111882349		11731 S RACINE		SPILLS
CHICAGO	S111914385		1312 S RACINE		SPILLS
CHICAGO	2000672067	TH RACINE AVE	TH RACINE AVE		ERNS
CHICAGO	94394439	RAIL YARD TRACK 15	RAIL YARD TRACK 15		ERNS
CHICAGO	2009922369	RAIL YARD	RAIL YARD		ERNS
CHICAGO	2009907064	RAIL YARD	RAIL YARD		ERNS
CHICAGO	2008888947	RAIL YARD	RAIL YARD		ERNS
CHICAGO	2008907064	RAIL YARD	RAIL YARD		ERNS
CHICAGO	S110363854		RAIL LINE CD 513		SPILLS
CHICAGO	89112004	RAIL MILE POST 510	RAIL MILE POST 510		ERNS
CHICAGO	98438453	RAILYARD CHICAGO 2040 EAST 106TH ST CHICAGO	RAILYARD CHICAGO 2040 EAST 106TH ST CHICAGO		ERNS
CHICAGO	2011971442	RAILYARD DIESEL SHOP 400 N. PULASKI	N RAILYARD DIESEL SHOP 400		ERNS
CHICAGO	S111894241		N RAMP NEAR 5320		SPILLS
CHICAGO	S111901184		RAMP SB & CICERO AVE		SPILLS
CHICAGO	S111901805		RAMP BETWEEN DAN RYAN & STEVENSON EXPY		SPILLS
CHICAGO	S111895329		WEST RAMP		SPILLS
CHICAGO	89119300	I-55, RAMP TO MARTIN LUTHER KING DR	I-55, RAMP TO MARTIN LUTHER KING DR		ERNS
CHICAGO	98447408	RANDOLF AND COLUMBUS ST	RANDOLF AND COLUMBUS ST		ERNS
CHICAGO	2009925379	RANDOLPH & LAKE SHORE DR.	RANDOLPH & LAKE SHORE DR.		ERNS
CHICAGO	S111886973		RANDOLPH ST & LAKE SHORE DR		SPILLS
CHICAGO	S111902077		RANDOLPH & COLUMBUS STS		SPILLS
CHICAGO	S111876361		600 RANDOLPH		SPILLS
CHICAGO	S111901719		300 E RANDOLPH		SPILLS
CHICAGO	S111877288		225 W RANDOLPH		SPILLS
CHICAGO	S111896352		RANDOLPH & HALSTEAD		SPILLS
CHICAGO	S111925666		RANDOLPH & LAKE FRONT		SPILLS
CHICAGO	S111909242		RANDOLPH & WASHINGTON STS		SPILLS
CHICAGO	S111903484		1240 W RANDOLPH		SPILLS
CHICAGO	S111909084		4343 N RAVENSWOOD		SPILLS
CHICAGO	S111882543		6445 N RAVENSWOOD		SPILLS
CHICAGO	S111913944		4325 N RAVENSWOOD		SPILLS
CHICAGO	S111901227		4510 N RAVENSWOODS		SPILLS
CHICAGO	S111886929		5115 N RAVENWOOD		SPILLS
CHICAGO	2012100545		W RD UNKNOWN SHEEN INCIDENT 1111		ERNS
CHICAGO	S111889376		6323 N RDG		SPILLS
CHICAGO	S111880227		6401 N RDG		SPILLS
CHICAGO	91235192	4551 S. RECINE ST.	4551 S. RECINE ST.		ERNS
CHICAGO	2005618378	RED LINE	RED LINE		ERNS
CHICAGO	90184306	REPUBLIC ENG. STEEL INC. 11610 S. AVE. O	REPUBLIC ENG. STEEL INC. 11610 S. AVE. O		ERNS
CHICAGO	S111905965		6518 N RICHMOND		SPILLS
CHICAGO	S111888680		6601 RIDGE BLVD		SPILLS
CHICAGO	S111920240		7330 RIDGELAND		SPILLS
CHICAGO	S111884632		5100 N RIDGEWAY		SPILLS
CHICAGO	S111912367		RIGHT BANK OF THE ILLINOIS RIV		SPILLS
CHICAGO	S108046207		3858 W RIGHTWOOD		SPILLS
CHICAGO	2005631002	3858 WEST RIGHTWOOD	3858 WEST RIGHTWOOD		ERNS

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CHICAGO	S111912146		1640 W RIGHTWOOD		SPILLS
CHICAGO	S111901896		1310 RITCHIE CT		SPILLS
CHICAGO	S109092962		RIV CALUMET		SPILLS
CHICAGO	S111911050		N RIV BRANCH OF THE CHICAGO OF CALIF S		SPILLS
CHICAGO	S111904280		RIV MP 11		SPILLS
CHICAGO	S111905205		RIV ILLINOIS MP 278		SPILLS
CHICAGO	S111900973		RIV ILLINOIS NEAR HAVANAH MARINE		SPILLS
CHICAGO	96487268	RIVER CANAL IN FRONT OF MERCHANDISE MART ORLEANS AND WELL	RIVER CANAL IN FRONT OF MERCHANDISE MART ORLEANS AND WELL		ERNS
CHICAGO	2009899019	RIVER CITY MARINA	RIVER CITY MARINA		ERNS
CHICAGO	2008899019	RIVER CITY MARINA	RIVER CITY MARINA		ERNS
CHICAGO	2007320879	RIVER MILE 318	RIVER MILE 318		ERNS
CHICAGO	S111889961		RIVER		SPILLS
CHICAGO	S111896319		5540 NE RIVER RD		SPILLS
CHICAGO	2010934829	ROCK ISLAND RAIL YARD, MILEPOST: CD510, SUBDIVISION: DEARBOR	ROCK IS		ERNS
CHICAGO	S111890595		6834 ROCKET AUTO MALL W		SPILLS
CHICAGO	2000518948	ROCKWELL SUBDIVISION	ROCKWELL SUBDIVISION	0	ERNS
CHICAGO	S111888318		3001 N ROCKWELL		SPILLS
CHICAGO	S111887052		6203 N ROCKWELL AVE		SPILLS
CHICAGO	S111907374		4100 ROCKWELL NORTH BRANCH OF CHICA RIV		SPILLS
CHICAGO	S111882296		40101 N ROCKWELL		SPILLS
CHICAGO	S111891917		2800 S ROCKWELL		SPILLS
CHICAGO	S111905125		1825 N ROCKWELL		SPILLS
CHICAGO	S111898196		7400 S ROCKWELL		SPILLS
CHICAGO	S111903855		3022 N ROCKWELL		SPILLS
CHICAGO	S111902913		30143 N ROCKWELL		SPILLS
CHICAGO	S111888851		5747 N ROCKWELL		SPILLS
CHICAGO	S111911607		3145 N ROCKWELL		SPILLS
CHICAGO	S111894403		4130 N ROCKWELL		SPILLS
CHICAGO	S111901970		1825 N ROCKWELL		SPILLS
CHICAGO	S111901609		3715 S ROCKWELL		SPILLS
CHICAGO	S111884021		3500 N ROCKWELL		SPILLS
CHICAGO	S111879087		3029 N ROCKWELL		SPILLS
CHICAGO	S111879077		3029 N ROCKWELL		SPILLS
CHICAGO	S111886629		7240 N ROGERS		SPILLS
CHICAGO	1000177452	FORMER PARCO PRODUCTS INC FACILITY	4710 ROOSEVELT RD		CERC-NFRAP, CORRACTS
CHICAGO	S111885979		534 W ROOSEVELT		SPILLS
CHICAGO	S111887049		3803 W ROOSEVELT		SPILLS
CHICAGO	S111887522		2950 W ROOSEVELT		SPILLS
CHICAGO	S111879635		5700 W ROOSEVELT		SPILLS
CHICAGO	S111909573		5300 W ROOSEVELT ST		SPILLS
CHICAGO	S111876814		3159 ROOSEVELT RD		SPILLS
CHICAGO	S111882014		ROOSEVELT RD & WESTERN		SPILLS
CHICAGO	S111922797		1303 ROOSEVELT RD		SPILLS
CHICAGO	S111898776		7500 W ROOSEVELT RD		SPILLS
CHICAGO	S111880385		ROOSEVELT & OGDEN		SPILLS

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CHICAGO	S111902783		3731 W ROOSEVELT		SPILLS
CHICAGO	S111884942		636 W ROOT		SPILLS
CHICAGO	S111895928		636 W ROOT		SPILLS
CHICAGO	S111881753		636 ROOT ST		SPILLS
CHICAGO	S111877638		636 W ROOT		SPILLS
CHICAGO	S111908965		428 ROOT ST		SPILLS
CHICAGO	2005601156	ROSCO ST	ROSCO ST		ERNS
CHICAGO	S108047761		W ROSCOE ST		SPILLS
CHICAGO	S111894729		2239 W ROSCOE		SPILLS
CHICAGO	S111906289		2740 W ROSEMONT		SPILLS
CHICAGO	98452740	ROUND HOUSE	ROUND HOUSE		ERNS
CHICAGO	93303252	IL ROUTE 137 NEAR GREAT LAKES NAVAL	IL ROUTE 137 NEAR GREAT LAKES NAVAL		ERNS
CHICAGO	S111891837		6030 N RUST ST		SPILLS
CHICAGO	S111922723		RYAN & 30TH ST		SPILLS
CHICAGO	S111886862		7257 59 S JEFFERY		SPILLS
CHICAGO	S111879467		1200 600 S TORRENCE AVE		SPILLS
CHICAGO	S111896321		2419 E S SHORE DR		SPILLS
CHICAGO	S111922442		6320 SACRAMENTO		SPILLS
CHICAGO	S111908731		630 N SACRAMENTO		SPILLS
CHICAGO	S111912898		2811 N SACRAMENTO		SPILLS
CHICAGO	S111912899		2811 N SACRAMENTO		SPILLS
CHICAGO	S111925039		SACRAMENTO & GRAND MP 23		SPILLS
CHICAGO	S111890798		22451 N SACRAMENTO		SPILLS
CHICAGO	S111925630		550 N SACRAMENTO AVE		SPILLS
CHICAGO	S111925629		550 N SACRAMENTO AVE		SPILLS
CHICAGO	S111900104		318 S SACRAMENTO ST		SPILLS
CHICAGO	S111901566		810 N SACRAMENTO		SPILLS
CHICAGO	876449	6101 SOUTH SACREMENTO	6101 SOUTH SACREMENTO		ERNS
CHICAGO	S111893206		3100 S SACREMENTO		SPILLS
CHICAGO	S111893118		404 N SACREMENTO		SPILLS
CHICAGO	S111892115		1400 N SACREMENTO		SPILLS
CHICAGO	S111925030		500 N SACREMENTO BLVD		SPILLS
CHICAGO	S111912857		2628 S SACREMENTO ST		SPILLS
CHICAGO	98427468	SADDLE TANK OF TANKER TRUCK/TRUCK SLID ON ICE IN PARKING LOT	SADDLE TANK OF TANKER TRUCK/TRUCK SLID ON ICE IN PARKING LOT		ERNS
CHICAGO	8857165	SAFETY-KLEEN	SAFETY-KLEEN		ERNS
CHICAGO	2009901502	SAG CANAL	SAG CANAL		ERNS
CHICAGO	2008901502	SAG CANAL	SAG CANAL		ERNS
CHICAGO	2007332346	SAG CHANNEL, MILE MARKER 329	SAG CHANNEL, MILE MARKER 329		ERNS
CHICAGO	S111910549		SAG CANAL		SPILLS
CHICAGO	S108669662		SAINT WB EXIT		SPILLS
CHICAGO	S111885657		SAINT EXIT		SPILLS
CHICAGO	S111887912		3729 S SAINT LOUIS		SPILLS
CHICAGO	S111906725		3200 S SAINT LOUIS		SPILLS
CHICAGO	S111898317		2333 W SAINT PAUL ST		SPILLS
CHICAGO	S111924159		SAINT CHARLES AIR LINE BRIDGE ST		SPILLS
CHICAGO	S111894264		SAINT LAWRENCE & 95TH ST		SPILLS

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CHICAGO	S111891909		4938 N SAINT LOUIS		SPILLS
CHICAGO	S111906950		SAINT EXIT		SPILLS
CHICAGO	S111878333		1908 S SAINT LOUIS		SPILLS
CHICAGO	S111902895		SAINT EXIT		SPILLS
CHICAGO	S111888769		5500 N SAINT LOUIS		SPILLS
CHICAGO	S111879542		1908 S SAINT LOUIS		SPILLS
CHICAGO	S111915460		4319 S SAINT LAWRENCE		SPILLS
CHICAGO	93339633	LA SALLE	LA SALLE		ERNS
CHICAGO	S111913344		901 N SANGAMON		SPILLS
CHICAGO	S111909761		325 S SANGAMON AVE		SPILLS
CHICAGO	S111909078		3750 S SANGAMON		SPILLS
CHICAGO	S111905510		6300 S SANGAMON		SPILLS
CHICAGO	S111882978		335 S SANGAMON		SPILLS
CHICAGO	S111895743		901 N SANGAMON		SPILLS
CHICAGO	S111927935		123 N SANGAMON		SPILLS
CHICAGO	S111927865		3608 S SANGAMON		SPILLS
CHICAGO	2001557824	3750 SOUTH SANGANON	3750 SOUTH SANGANON	0	ERNS
CHICAGO	91233492	SANITARIA AND SHIP CANAL	SANITARIA AND SHIP CANAL		ERNS
CHICAGO	92294756	SANITARY SHIP CANAL	SANITARY SHIP CANAL		ERNS
CHICAGO	S111881835		SANITARY & SHIP CANAL		SPILLS
CHICAGO	91236307	SANITARY& SHIP CANAL @ I-55 DAMEN BRIDGE	SANITARY& SHIP CANAL @ I-55 DAMEN BRIDGE		ERNS
CHICAGO	S111902410		5248 S SAWYER ST		SPILLS
CHICAGO	S111880077		2357 S SAWYER		SPILLS
CHICAGO	S111885611		2227 SAYER ST N		SPILLS
CHICAGO	S111879595		6300 S SAYRE		SPILLS
CHICAGO	S111910985		SB		SPILLS
CHICAGO	S111884439		88 W SCHILLER		SPILLS
CHICAGO	S111896971		427 W SCOTT		SPILLS
CHICAGO	S111890290		345 W SCOTT		SPILLS
CHICAGO	S111925210		640 W SCOTT		SPILLS
CHICAGO	8863319	ON SE CORNER OF 45TH AND ASHLAND 4501 S. ASHLAND	ON SE CORNER OF 45TH AND ASHLAND 4501 S. ASHLAND		ERNS
CHICAGO	8869431	SEARS TOWER,29TH FLOOR,ELECTRICAL EQUIPMENT ROOM INTERSECTIO	SEARS TOWER,29TH FLOOR,ELECTRICAL EQUIPMENT ROOM INTERSECTIO		ERNS
CHICAGO	S111923042		SECURITY POST		SPILLS
CHICAGO	S111907297		1441 N SEDGEWICH		SPILLS
CHICAGO	S109953715		1805 SEDGWICK AVE		SPILLS
CHICAGO	S111925200		1805 SEDGWICK AVE		SPILLS
CHICAGO	S111902638		7409 SEELEY		SPILLS
CHICAGO	2000519383	6644 SELEY	6644 SELEY	0	ERNS
CHICAGO	S111349429		3216 N SEMINARY		SPILLS
CHICAGO	2011983101		3216 N SEMINARY		ERNS
CHICAGO	S111895720		2500 S SENOUR		SPILLS
CHICAGO	98429516	1111 WEST SERMACK ROAD	1111 WEST SERMACK ROAD		ERNS
CHICAGO	S111909626		SERVICE CTR		SPILLS
CHICAGO	S111891628		4600 W SHAKESPEARE		SPILLS
CHICAGO	96479823	SHEEN SIZE:1MI X UNKNOWN/RAINBOW	SHEEN SIZE:1MI X UNKNOWN/RAINBOW		ERNS

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CHICAGO	98423866	SHEEN SIZE: UNKNOWN / THIRD PARTY REPORTS OIL SLICK	SHEEN SIZE: UNKNOWN / THIRD PARTY REPORTS OIL SLICK		ERNS
CHICAGO	98458737	SHEEN SIZE: 300-400 YDS X 75 YDS / RAINBOW COLORED / SHEEN H	SHEEN SIZE: 300-400 YDS X 75 YDS / RAINBOW COLORED / SHEEN H		ERNS
CHICAGO	98452229	SHEEN SIZE:100 FT X 20 FT / COLOR: RAINBOW	SHEEN SIZE:100 FT X 20 FT / COLOR: RAINBOW		ERNS
CHICAGO	98448303	SHEEN SIZE: 100 YDS X UNKNOWN WIDTH RAINBOW COLORED	SHEEN SIZE: 100 YDS X UNKNOWN WIDTH RAINBOW COLORED		ERNS
CHICAGO	98469237	SHEEN SIZE: 8-20 FT X 1/2 MILE / COLOR: LIGHT RAINBOW / DIES	SHEEN SIZE: 8-20 FT X 1/2 MILE / COLOR: LIGHT RAINBOW / DIES		ERNS
CHICAGO	98436673	SHEEN SIZE: 30 X 15 FEET COLOR: YELLOW	SHEEN SIZE: 30 X 15 FEET COLOR: YELLOW		ERNS
CHICAGO	98448707	SHEEN SIZE: FOOTBALL FIELD / IN MARINA GOING TO RIVER / RAIN	SHEEN SIZE: FOOTBALL FIELD / IN MARINA GOING TO RIVER / RAIN		ERNS
CHICAGO	S111883878		1555 N SHEFFIELD		SPILLS
CHICAGO	S111890621		1714 N SHEFFIELD		SPILLS
CHICAGO	S111895791		1723 W SHEFFIELD		SPILLS
CHICAGO	S111877862		3532 N SHEFFIELD		SPILLS
CHICAGO	S111880861		1630 N SHEFFIELD		SPILLS
CHICAGO	S111904160		2345 SHEFFIELD AVE		SPILLS
CHICAGO	S111886130		5816 SHERIDAN RD		SPILLS
CHICAGO	S111885096		1034 SHERIDAN RD		SPILLS
CHICAGO	S111899665		5556 N SHERIDAN		SPILLS
CHICAGO	S111892457		7740 N SHERIDAN		SPILLS
CHICAGO	S111896801		1152 SHERIDAN RD		SPILLS
CHICAGO	S111906295		6601 N SHERIDAN		SPILLS
CHICAGO	S111906471		5556 W SHERIDAN		SPILLS
CHICAGO	S111894796		2930 N SHERIDAN		SPILLS
CHICAGO	S111900312		7740 N SHERIDAN		SPILLS
CHICAGO	S111882763		6590 N SHERIDAN		SPILLS
CHICAGO	S111879757		7550 N SHERIDAN		SPILLS
CHICAGO	S111886233		3241 S SHIELDS		SPILLS
CHICAGO	S111896666		3250 S SHIELDS		SPILLS
CHICAGO	S111882236		3229 S SHIELDS		SPILLS
CHICAGO	S111892450		3208 S SHIELDS		SPILLS
CHICAGO	S111900729		3226 S SHIELDS		SPILLS
CHICAGO	S111887324		7337 S SHORE DR		SPILLS
CHICAGO	S111886440		7022 S SHORE DR		SPILLS
CHICAGO	S111898057		7901 S SHORE DR		SPILLS
CHICAGO	S111880690		7050 S SHORE DR		SPILLS
CHICAGO	S111911359		5491 S SHORE DR		SPILLS
CHICAGO	S111890331		7715 S SHORE DR		SPILLS
CHICAGO	2000670414	E SHORE DRIVE	E SHORE DRIVE		ERNS
CHICAGO	S111877457		7034 S SHR		SPILLS
CHICAGO	94391406	SOUTH SIDE OF LOWER WACKER DRIVE INTERSEC CLARK ABOVE	SOUTH SIDE OF LOWER WACKER DRIVE INTERSECT CLARK ABOVE		ERNS
CHICAGO	8875208	EAST SIDE PARKING LOT	EAST SIDE PARKING LOT		ERNS
CHICAGO	8856310	EAST SIDE BELMONT HARBOUR	EAST SIDE BELMONT HARBOUR		ERNS
CHICAGO	98437355	WEST SIDE BURNHAM HARBOR FIRST DOCK NORT OF THE HARBOR MAST	WEST SIDE BURNHAM HARBOR FIRST DOCK NORTH OF THE HARBOR MAST		ERNS

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CHICAGO	S111892533		E SIDE OF STONY IS		SPILLS
CHICAGO	S111893508		4559 SIMONDS DR		SPILLS
CHICAGO	2008875743	SLIP 22	SLIP 22		ERNS
CHICAGO	S111906844		1328 W SMT		SPILLS
CHICAGO	2012105223		11800 S SONEY ISLAND AVE		ERNS
CHICAGO	98445525	SOURCE:OVERSIZED GLASS JAR CONTAINING 3 GLASS CYLANDERS INSI	SOURCE:OVERSIZED GLASS JAR CONTAINING 3 GLASS CYLANDERS INSI		ERNS
CHICAGO	2009925390	116 54 SOUTH THROOP	116 54 SOUTH THROOP		ERNS
CHICAGO	2008860563	900 OF SOUTH ASHLEN AVE	900 OF SOUTH ASHLEN AVE		ERNS
CHICAGO	2012100548		8756361 12600 SOUTH TORRENCE A		ERNS
CHICAGO	S111925858		12500 SOUTH		SPILLS
CHICAGO	873474	SOUTHBOUND FROM LOCKS BTWN CHICAGO RIVER LAKE MICHIGAN	SOUTHBOUND FROM LOCKS BTWN CHICAGO RIVER & LAKE MICHIGAN		ERNS
CHICAGO	S111885928		3601 N SOUTHPORT		SPILLS
CHICAGO	S111885495		3137 N SOUTHPORT		SPILLS
CHICAGO	S111878119		2748 N SOUTHPORT		SPILLS
CHICAGO	2007330921	1425 SOUTHWESTERN AVE	1425 SOUTHWESTERN AVE		ERNS
CHICAGO	S109366337		1425 SOUTHWESTERN AVE		SPILLS
CHICAGO	2011988534		10222 SOUTHWESTERN AVE		ERNS
CHICAGO	2011992609		1425 SOUTHWESTERN AVE		ERNS
CHICAGO	S111895146		10402 SOUTHWESTERN AVE		SPILLS
CHICAGO	S111903718		4711 SOUTHWESTERN AVE		SPILLS
CHICAGO	S111891623		7858 SOUTHWESTERN AVE		SPILLS
CHICAGO	S111911199		4515 SOUTHWESTERN BLVD		SPILLS
CHICAGO	S111906652		4724 SOUTHWESTERN AVE		SPILLS
CHICAGO	S111896446		2502 SOUTHWESTERN AVE		SPILLS
CHICAGO	S111924448		1425 SOUTHWESTERN AVE		SPILLS
CHICAGO	S111902967		3815 SOUTHWESTERN		SPILLS
CHICAGO	S111921939		10700 SOUTHWESTERN AVE		SPILLS
CHICAGO	S111901745		7400 SOUTHWESTERN AVE		SPILLS
CHICAGO	S111891517		4318 SOUTHWESTERN AVE		SPILLS
CHICAGO	S111906912		6603 SOUTHWESTERN AVE		SPILLS
CHICAGO	S111906911		6606 SOUTHWESTERN AVE		SPILLS
CHICAGO	S111899529		5370 SOUTHWESTERN AVE		SPILLS
CHICAGO	S111897698		10133 SOUTHWESTERN AVE		SPILLS
CHICAGO	S111911868		10257 SOUTHWESTERN AVE		SPILLS
CHICAGO	S111896355		2512 SOUTHWESTERN		SPILLS
CHICAGO	S111920220		1425 SOUTHWESTERN		SPILLS
CHICAGO	S111895389		1425 SOUTHWESTERN AVE		SPILLS
CHICAGO	S111927875		1425 SOUTHWESTERN AVE		SPILLS
CHICAGO	S108046095		3201 SOUTHWESTERN AVE		SPILLS
CHICAGO	S111909669		5515 S SOYER AVE		SPILLS
CHICAGO	94391108	3500 N SPALDING	3500 N SPALDING		ERNS
CHICAGO	S111912014		5148 N SPALDING		SPILLS
CHICAGO	S111913690		535 N SPAULDING		SPILLS
CHICAGO	S111901710		3018 S SPAULDING ST		SPILLS
CHICAGO	S111895582		1750 N SPRINGFIELD		SPILLS

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CHICAGO	S111919064		1938 N SPRINGFIELD		SPILLS
CHICAGO	S111890732		1747 N SPRINGFIELD		SPILLS
CHICAGO	91200423	22 ND ST AND ASHLAND ST	22 ND ST AND ASHLAND ST		ERNS
CHICAGO	S111910036		ST		SPILLS
CHICAGO	S111912360		2101 W ST 59TH ST		SPILLS
CHICAGO	S111894256		ST		SPILLS
CHICAGO	S111893142		ST		SPILLS
CHICAGO	S111927201		N ST ALOYSIUS PARISH 1510		SPILLS
CHICAGO	S111889364		STAGING AREA B MOUNT PROSPECTS FLD		SPILLS
CHICAGO	S111909606		4101 S STATE		SPILLS
CHICAGO	S111901197		553 S STATE		SPILLS
CHICAGO	S111898356		8701 S STATE		SPILLS
CHICAGO	S111897367		STATION		SPILLS
CHICAGO	S111919017		8301 S STEWART		SPILLS
CHICAGO	S111900362		6201 S STEWART		SPILLS
CHICAGO	99627482	STOLT HAVEN DOCK CALSAG MI 327.9	STOLT HAVEN DOCK CALSAG MI 327.9		ERNS
CHICAGO	92252272	12500 S STONEY ISLAND CHICAGO STEEL AND PICKEL	12500 S STONEY ISLAND CHICAGO STEEL AND PICKEL		ERNS
CHICAGO	S110278076		12200 S STONEY IS		SPILLS
CHICAGO	S110824930		5800 S STONEY IS		SPILLS
CHICAGO	2011966883	12200 S STONEY ISLAND	12200 S STONEY IS		ERNS
CHICAGO	S110363765		7550 S STONEY ISLAND AVE		SPILLS
CHICAGO	2010938620	7550 SOUTH STONEY ISLAND AVE	7550 S STONEY ISLAND AVE		ERNS
CHICAGO	2007307178	10101 SOUTH STONEY ISLAND	10101 SOUTH STONEY ISLAND		ERNS
CHICAGO	S111926972		11800 S STONEY ISLAND AVE		SPILLS
CHICAGO	S111879366		11700 S STONEY IS		SPILLS
CHICAGO	S111926165		11800 S STONEY ISLAND AVE		SPILLS
CHICAGO	S111925660		11800 S STONEY IS		SPILLS
CHICAGO	S111925661		11800 S STONEY IS		SPILLS
CHICAGO	S111926127		11900 S STONEY ISLAND AVE		SPILLS
CHICAGO	S111926102		122200 S STONEY ISLAND AVE		SPILLS
CHICAGO	2010928199	ETHANOL UNLOADING RACK 12200 SOUTH STONEY ISLAND AVE	12200 S STONEYISLAND AVE		ERNS
CHICAGO	92254413	11700 S. STONY ISL. AVE	11700 S. STONY ISL. AVE		ERNS
CHICAGO	S111886765		8300 S STONY IS		SPILLS
CHICAGO	S111886413		11700 STONY ISLAND AVE		SPILLS
CHICAGO	S111885934		8600 S STONY IS		SPILLS
CHICAGO	S111885885		11700 S STONY AVE		SPILLS
CHICAGO	S111903117		11800 S STONY IS		SPILLS
CHICAGO	S111896675		11800 S STONY IS		SPILLS
CHICAGO	S111884943		18800 S STONY ISLAND AVE		SPILLS
CHICAGO	S111905984		11800 S STONY IS		SPILLS
CHICAGO	S111893201		8555 S STONY IS		SPILLS
CHICAGO	S111877481		11800 S STONY IS		SPILLS
CHICAGO	S111910021		12200 S STONY IS		SPILLS
CHICAGO	S111912300		11800 S STONY IS		SPILLS
CHICAGO	S111883141		11700 S STONY AVE		SPILLS

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CHICAGO	S111881396		8950 S STONY IS		SPILLS
CHICAGO	S111890618		1220 S STONY ISLAND AVE		SPILLS
CHICAGO	S111883079		11700 S STONY IS		SPILLS
CHICAGO	S111907328		12901 S STONY IS		SPILLS
CHICAGO	S111889262		6650 STONY IS		SPILLS
CHICAGO	S111903654		8702 S STONY IS		SPILLS
CHICAGO	S111892481		12500 S STONY IS		SPILLS
CHICAGO	S111926788		5800 S STONY IS		SPILLS
CHICAGO	S111882589		12200 S STONY IS		SPILLS
CHICAGO	S111908227		11700 STONY ISLAND AVE		SPILLS
CHICAGO	S111899162		11800 S STONY IS		SPILLS
CHICAGO	S111878711		8720 S STONY ISLAND PKWY		SPILLS
CHICAGO	S111882565		6963 S STONY IS		SPILLS
CHICAGO	S111905216		11800 S STONY IS		SPILLS
CHICAGO	S111893050		10101 S STONY IS		SPILLS
CHICAGO	S111892351		7250 STONY ISLAND AVE		SPILLS
CHICAGO	S111878089		11700 S STONY IS		SPILLS
CHICAGO	S111876742		11700 S STONY IS		SPILLS
CHICAGO	S111894129		12200 S STONY IS		SPILLS
CHICAGO	S111914826		5748 S STONY IS		SPILLS
CHICAGO	S111886574		11800 S STONY IS		SPILLS
CHICAGO	S111902823		11800 S STONY IS		SPILLS
CHICAGO	S111907597		8702 S STONY IS		SPILLS
CHICAGO	S111882370		11700 S STONY AVE		SPILLS
CHICAGO	S111903788		7300 S STONY IS		SPILLS
CHICAGO	S111893955		11800 S STONY IS		SPILLS
CHICAGO	S111883965		7169 S STONY IS		SPILLS
CHICAGO	S111897509		8702 S STONY IS		SPILLS
CHICAGO	98463427	STORAGE TANK ABOVE GROUND / CAUSE UNKNOW	STORAGE TANK ABOVE GROUND / CAUSE UNKNOWN		ERNS
CHICAGO	8713142	DA STUART OIL CO	DA STUART OIL CO		ERNS
CHICAGO	S111902795		8400 S STUART		SPILLS
CHICAGO	2011971898	MILE POST 3.82 SUBDIVISION HARVAD	382 SUBDIVISION HARVAD		ERNS
CHICAGO	2012107483		- SUBDIVISION SOUTH CHICAGO		ERNS
CHICAGO	S104792906	HUYNH, NAM	1328 W SUMMIT		LUST
CHICAGO	S111904771		4820 W SUNNYSIDE		SPILLS
CHICAGO	S111904417		5420 W SUNNYSIDE		SPILLS
CHICAGO	S111904834		2212 W SUNNYSIDE		SPILLS
CHICAGO	S111888133		259 E SUPERIOR		SPILLS
CHICAGO	S111875761		SUPERIOR & ORLEANS ST NW COR		SPILLS
CHICAGO	S111882731		417 W SUPERIOR		SPILLS
CHICAGO	S111911979		2001 W SUPERIOR RD		SPILLS
CHICAGO	S111888968		1455 W SUPERIOR		SPILLS
CHICAGO	S111911678		1829 N SUPERIOR ST		SPILLS
CHICAGO	S111880128		SUPERIOR ST & FAIRBANKS CT		SPILLS
CHICAGO	S111905783		360 W SUPERIOR		SPILLS
CHICAGO	2006799199	314 WEST SUPPERIOR	314 WEST SUPPERIOR		ERNS
CHICAGO	S108047374		610 SWEST CARGO		SPILLS

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CHICAGO	S111877245		TAB CHEMICAL COMPANY & 4801ST S AUSTIN		SPILLS
CHICAGO	S111927868		TAFT AVENUE AND IRVING PARK RD		SPILLS
CHICAGO	90181001	928 TAG/ARF FAC.	928 TAG/ARF FAC.		ERNS
CHICAGO	90183057	928 TAG/ARF FAC.	928 TAG/ARF FAC.		ERNS
CHICAGO	S111921390		7263 S TALCOTT AVE		SPILLS
CHICAGO	S111894371		7432 W TALCOTT		SPILLS
CHICAGO	97412379	2412 N TALLMAN	2412 N TALLMAN		ERNS
CHICAGO	S111915208		5838 S TALMAN ST		SPILLS
CHICAGO	S111895751		4814 N TALMAN ST		SPILLS
CHICAGO	S111898829		3637 TALMAN		SPILLS
CHICAGO	96516458	TANK TRUCK/VALVE ON TANK ACCIDENTALLY OPENED	TANK TRUCK/VALVE ON TANK ACCIDENTALLY OPENED		ERNS
CHICAGO	879839	RR TANK CAR NO.NATX 29908, RR MILE 510 CHICAGO DIST FORT WAY	RR TANK CAR NO.NATX 29908, RR MILE 510 CHICAGO DIST FORT WAY		ERNS
CHICAGO	98457221	TANK FARM 4	TANK FARM 4		ERNS
CHICAGO	94372706	TAYLOR AND HOYNE ST	TAYLOR AND HOYNE ST		ERNS
CHICAGO	S111887268		2537 W TAYLOR		SPILLS
CHICAGO	S111894677		2900 W TAYLOR AVE		SPILLS
CHICAGO	S111913489		TAYLOR ST		SPILLS
CHICAGO	S111913435		3050 W TAYLOR		SPILLS
CHICAGO	S111895465		TAYLOR & DES PLAINES		SPILLS
CHICAGO	S111908553		1717 W TAYLOR		SPILLS
CHICAGO	S111890880		TAYLOR & HOYNE STS		SPILLS
CHICAGO	S111888741		4243 W TAYLOR		SPILLS
CHICAGO	S111899048		840 W TAYLOR		SPILLS
CHICAGO	S109366450		C TERMINAL OHARE FLD		SPILLS
CHICAGO	S111218725		TERMINAL 5		SPILLS
CHICAGO	S111924466		C TERMINAL AT OHARE FLD		SPILLS
CHICAGO	S111921971		TERMINAL 5		SPILLS
CHICAGO	S111911572		W TERMINAL 2		SPILLS
CHICAGO	S109366336		13700 S TERRY		SPILLS
CHICAGO	S111924314		13700 S TERRY		SPILLS
CHICAGO	872210	IN THE FACTORY THERE	IN THE FACTORY THERE		ERNS
CHICAGO	2008883715	THE MOUTH OF THE CHICAGO RIVER	THE MOUTH OF THE CHICAGO RIVER		ERNS
CHICAGO	S111900324		THE ELSDON YARD ON 51ST ST		SPILLS
CHICAGO	S111924611		520 THEDEARBORNSUBDIVISIONNEARUNIO AVE		SPILLS
CHICAGO	S111886227		4950 W THOMAS		SPILLS
CHICAGO	S111876389		4950 W THOMAS		SPILLS
CHICAGO	S111897519		4520 W THOMAS		SPILLS
CHICAGO	2000531893	THOMAS STREET	THOMAS STREET	0	ERNS
CHICAGO	S111890649		10400 THROOP ST		SPILLS
CHICAGO	S111895555		10403 S THROOP		SPILLS
CHICAGO	S111895225		2141 THROOP ST		SPILLS
CHICAGO	S111883395		1612 N THROOP		SPILLS
CHICAGO	98427144	GO TO CARANDOLET AVE GO W. ON 126 ST. TO TERMINAL 2926 EAST	GO TO CARANDOLET AVE GO W. ON 126 ST. TO TERMINAL 2926 EAST		ERNS
CHICAGO	S111894196		ON TO		SPILLS

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CHICAGO	S111878972		13511 S TORENCE		SPILLS
CHICAGO	S111878436		11236 S TORENCE AVE		SPILLS
CHICAGO	S111895491		11236 S TORENCE AVE		SPILLS
CHICAGO	99637648	11236 TORRANCE AVE	11236 TORRANCE AVE		ERNS
CHICAGO	S111905597		11236 TORRANCE AVE		SPILLS
CHICAGO	S111902659		11236 TORRANCE AVE		SPILLS
CHICAGO	S111894493		11236 S TORRANCE AVE		SPILLS
CHICAGO	93332215	TORRENCE AVE BRIDGE MILE MARKER 328.1	TORRENCE AVE BRIDGE MILE MARKER 328.1		ERNS
CHICAGO	S111885099		11700 TORRENCE		SPILLS
CHICAGO	S111887213		10302 TORRENCE		SPILLS
CHICAGO	2011985606		13227 S TORRENCE		ERNS
CHICAGO	S111905391		11236 TORRENCE AVE		SPILLS
CHICAGO	S111909315		11236 S TORRENCE		SPILLS
CHICAGO	S111897261		11236 TORRENCE AVE		SPILLS
CHICAGO	S111891610		122201 TORRENCE		SPILLS
CHICAGO	S111903957		11236 TORRENCE AVE		SPILLS
CHICAGO	S111902710		11236 TORRENCE AVE		SPILLS
CHICAGO	S111901179		11236 TORRENCE AVE		SPILLS
CHICAGO	S111901455		11236 TORRENCE AVE		SPILLS
CHICAGO	S111909764		11236 S TORRENCE		SPILLS
CHICAGO	S111913519		13327 S TORRENCE YARD		SPILLS
CHICAGO	S111901781		11236 TORRENCE AVE		SPILLS
CHICAGO	S111902104		11236 TORRENCE AVE		SPILLS
CHICAGO	S111900766		11236 TORRENCE AVE		SPILLS
CHICAGO	S111898746		11236 TORRENCE AVE		SPILLS
CHICAGO	S111889481		13000 S TORRENCE		SPILLS
CHICAGO	S111896050		11236 S TORRENCE		SPILLS
CHICAGO	S111902798		11236 TORRENCE AVE		SPILLS
CHICAGO	S111905729		11236 TORRENCE AVE		SPILLS
CHICAGO	S111895349		11236 TORRENCE AVE		SPILLS
CHICAGO	S111906758		10050 S TORRENCE		SPILLS
CHICAGO	S111911510		TORRENCE AVENUE ABOUT 111TH ST		SPILLS
CHICAGO	S111899515		2620 W TOUCHY AVE		SPILLS
CHICAGO	S111877417		11601 W TOUGHY AVE		SPILLS
CHICAGO	S111890367		6401 W TOUGHY AVE		SPILLS
CHICAGO	S111883888		TOUHEY & WESTERN		SPILLS
CHICAGO	S111887307		11601 W TOUHY AVE		SPILLS
CHICAGO	S111888456		11601 TOUHY OHARE AIRPORT		SPILLS
CHICAGO	S111898642		3514 W TOUHY		SPILLS
CHICAGO	S111911183		TOUHY AVE & MOUNT PROSPECT RD HANGER		SPILLS
CHICAGO	S111883440		11601 W TOUHY OHARE INT AIRPORT		SPILLS
CHICAGO	S111893683		11601 W TOUHY AVE		SPILLS
CHICAGO	S111881647		7706 W TOUHY		SPILLS
CHICAGO	S111882443		11601 W TOUHY		SPILLS
CHICAGO	S111889117		6000 W TOUHY		SPILLS
CHICAGO	S111914080		TOUHY & PROSPECT ST		SPILLS
CHICAGO	S111900922		11601 W TOUHY AVE		SPILLS

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CHICAGO	S108480172		OF TOUHY AVE		SPILLS
CHICAGO	2000519233	TRACK 5	TRACK 5	0	ERNS
CHICAGO	2000544477	TRACKS	TRACKS	0	ERNS
CHICAGO	2001555601	TRAIN DERAILMENT	TRAIN DERAILMENT	0	ERNS
CHICAGO	S111891925		4343 S TRIPP		SPILLS
CHICAGO	S111875554		3030 N TRIPP		SPILLS
CHICAGO	S111896507		2851 S TROY		SPILLS
CHICAGO	S111905070		2100 S TROY		SPILLS
CHICAGO	S111905907		3836 N TROY		SPILLS
CHICAGO	S111919974		2849 S TROY		SPILLS
CHICAGO	S111883683		2727 S TROY		SPILLS
CHICAGO	S111892140		2431 S TROY		SPILLS
CHICAGO	S111914562		2141 S TROY		SPILLS
CHICAGO	S108047160		N TRUCK IS		SPILLS
CHICAGO	S111903578		401 N TRUMBULL		SPILLS
CHICAGO	S111886937		4100 S UN		SPILLS
CHICAGO	S111903107		4300 S UN		SPILLS
CHICAGO	S111899240		360 N UN		SPILLS
CHICAGO	S111925742		3700 S UN		SPILLS
CHICAGO	S111925743		3700 S UN		SPILLS
CHICAGO	S111892924		5000 S UN		SPILLS
CHICAGO	S111908824		2205 S UN		SPILLS
CHICAGO	94364292	UNDER NEATH THE BRIDGE AT MADISON AVE IN THE CHICAGO RIVER	UNDER NEATH THE BRIDGE AT MADISON AVE IN THE CHICAGO RIVER		ERNS
CHICAGO	1012172077	BOYCE PARK	UNION AVE BETWEEN 42ND & ROOT STREETS		US BROWNFIELDS
CHICAGO	S109550607		UNION AVE		SPILLS
CHICAGO	S111899041		360 N UNION ST		SPILLS
CHICAGO	S111889204		UNITED AIRLINES & KITCHEN OHARE AIRPORT		SPILLS
CHICAGO	91201187	UNITED AIRLINES OHARE TERMINAL NO. 1	UNITED AIRLINES OHARE TERMINAL NO. 1		ERNS
CHICAGO	S111925507		7122 UNIVERSITY		SPILLS
CHICAGO	S108047843		UNKNOWN		SPILLS
CHICAGO	S108047836		UNKNOWN		SPILLS
CHICAGO	S108047834		UNKNOWN		SPILLS
CHICAGO	S108047832		UNKNOWN		SPILLS
CHICAGO	S108047830		UNKNOWN		SPILLS
CHICAGO	S108047828		UNKNOWN		SPILLS
CHICAGO	S108047825		UNKNOWN		SPILLS
CHICAGO	S108047813		UNKNOWN		SPILLS
CHICAGO	S108047808		UNKNOWN		SPILLS
CHICAGO	S108047803		UNKNOWN		SPILLS
CHICAGO	S108047795		UNKNOWN		SPILLS
CHICAGO	S108047794		UNKNOWN		SPILLS
CHICAGO	S108047793		UNKNOWN		SPILLS
CHICAGO	S108047600		UNKNOWN		SPILLS
CHICAGO	S109700127		UNKNOWN		SPILLS
CHICAGO	S109167215		UNKNOWN		SPILLS
CHICAGO	S108047820		UNKNOWN		SPILLS

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CHICAGO	S111887120		UNKNOWN		SPILLS
CHICAGO	S111911935		UNKNOWN		SPILLS
CHICAGO	S111882598		UNKNOWN		SPILLS
CHICAGO	S111905044		UNKNOWN		SPILLS
CHICAGO	S111883280		UNKNOWN		SPILLS
CHICAGO	S111912652		UNKNOWN		SPILLS
CHICAGO	S111879931		URBAN AREA		SPILLS
CHICAGO	91226485	USAFR AND AIR GUARD BASE O’HARE AIRPORT BLDG NO.4	USAFR AND AIR GUARD BASE O’HARE AIRPORT BLDG NO.4		ERNS
CHICAGO	8857978	VACANT AREA BET.POLK & TAYLOR E OF CANAL	VACANT AREA BET.POLK & TAYLOR E OF CANAL		ERNS
CHICAGO	S111908778		VAN BUREN & WABASH		SPILLS
CHICAGO	S111896178		9700 S VAN VLISSIGEN		SPILLS
CHICAGO	S111880063		1014 W VAN BUREN		SPILLS
CHICAGO	S111879524		2630 W VANBURAN		SPILLS
CHICAGO	S111888140		VANBUREN & ASHLAND		SPILLS
CHICAGO	S111876564		1030 W VANBUREN		SPILLS
CHICAGO	S111911975		71 W VANBUREN ST		SPILLS
CHICAGO	S111911681		9431 S VERNON		SPILLS
CHICAGO	S109699841		10000 VESSIE COLEMAN DR		SPILLS
CHICAGO	S111925006		10 000 VESSIE COLEMAN DR		SPILLS
CHICAGO	2000532134	VICINITY OF 49TH	VICINITY OF 49TH	0	ERNS
CHICAGO	S111900909		9858 S VINCENNES ST		SPILLS
CHICAGO	S111906387		1201 S VINCENNES		SPILLS
CHICAGO	S111881359		7801 S VINCENNES		SPILLS
CHICAGO	S111905191		11816 S VINCENNES		SPILLS
CHICAGO	S111888766		11163 S VINCENNES		SPILLS
CHICAGO	S111880752		7114 VINCENNES AVE		SPILLS
CHICAGO	S111915029		8654 S VINCENNES		SPILLS
CHICAGO	S111893309		7936 S VINCENNES		SPILLS
CHICAGO	S111897959		10658 S VINCENNES		SPILLS
CHICAGO	S111897844		10658 S VINCENNES		SPILLS
CHICAGO	S111876993		VINCENTVILLE YARDS		SPILLS
CHICAGO	S111899176		9906 S VINNCENNES AVE		SPILLS
CHICAGO	S111890990		4764 N VIRGINIA		SPILLS
CHICAGO	S111892224		5 W		SPILLS
CHICAGO	S111880018		1914 16 W IRVING PARK RD		SPILLS
CHICAGO	S111889328		2155 WABANSIA		SPILLS
CHICAGO	S111911181		2255 W WABANSIA		SPILLS
CHICAGO	S111894579		1843 W WABANSIA ST		SPILLS
CHICAGO	S111877892		2213 W WABANSIA		SPILLS
CHICAGO	S111893375		1401 W WABANSIA		SPILLS
CHICAGO	S111887893		1220 WABASH		SPILLS
CHICAGO	S111884984		6215 S WABASH		SPILLS
CHICAGO	S111887493		137 N WABASH		SPILLS
CHICAGO	S111896665		218 S WABASH		SPILLS
CHICAGO	S111913362		9402 S WABASH		SPILLS
CHICAGO	S111906459		5100 S WABASH		SPILLS

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CHICAGO	S111927389		WABASH AVE AND CHICAGO RIV		SPILLS
CHICAGO	S111927380		4654 S WABASH		SPILLS
CHICAGO	S111913446		8823 S WABASH		SPILLS
CHICAGO	S111901423		1515 WABASH		SPILLS
CHICAGO	S111897239		2705 S WABASH		SPILLS
CHICAGO	S111902448		4256 S WABASH		SPILLS
CHICAGO	S111883759		1608 S WABASH		SPILLS
CHICAGO	S111898104		1415 S WABASH ST		SPILLS
CHICAGO	S111876072		1758 S WABASH		SPILLS
CHICAGO	S111914807		600 S WABASH		SPILLS
CHICAGO	S111893632		219 S WABASH		SPILLS
CHICAGO	S111878563		2111 S WABASH		SPILLS
CHICAGO	2000521948	WABASH YARD	WABASH YARD	0	ERNS
CHICAGO	S111885179		20 N WACKER		SPILLS
CHICAGO	S111890261		311 S WACKER		SPILLS
CHICAGO	S111900757		2204 S WALBASH AVE		SPILLS
CHICAGO	S111885136		411 N WALCOTT		SPILLS
CHICAGO	S111910247		1600 S WALCOTT ST		SPILLS
CHICAGO	S111908808		9952 WALDON PKWY		SPILLS
CHICAGO	92293814	WEST WALL OF TURNING BASIN	WEST WALL OF TURNING BASIN		ERNS
CHICAGO	91236316	WEST WALL OF BURNHAM HARBOR	WEST WALL OF BURNHAM HARBOR		ERNS
CHICAGO	S111882205		8201 S WALLACE		SPILLS
CHICAGO	S111891305		4500 S WALLACE		SPILLS
CHICAGO	S111901230		8201 S WALLACE AVE		SPILLS
CHICAGO	S111892599		2330 S WALLACE		SPILLS
CHICAGO	98434467	8201 SOUTH WALLAS AVE	8201 SOUTH WALLAS AVE		ERNS
CHICAGO	S111897291		2234 W WALNUT		SPILLS
CHICAGO	S111894595		2000 W WALNUT		SPILLS
CHICAGO	S111905779		2332 W WALNUT		SPILLS
CHICAGO	2004733570	140 WALTON ST	140 WALTON ST		ERNS
CHICAGO	S111887409		163 E WALTON		SPILLS
CHICAGO	S111883863		315 W WALTON		SPILLS
CHICAGO	S111881957		1322 W WALTON		SPILLS
CHICAGO	S111877252		3144 W WALTON		SPILLS
CHICAGO	S111913617		4820 W WARNER		SPILLS
CHICAGO	2001554430	WARREN ST	WARREN ST	0	ERNS
CHICAGO	S110613587		1712 W WARREN		SPILLS
CHICAGO	2010951565	1712 WEST WARREN ST.	1712 W WARREN ST		ERNS
CHICAGO	S111895840		1621 W WASHBURN ST		SPILLS
CHICAGO	S111910800		221 N WASHENAW AVE		SPILLS
CHICAGO	94378898	WASHINGTON ST BRIDGE	WASHINGTON ST BRIDGE		ERNS
CHICAGO	S111886202		4353 W WASHINGTON		SPILLS
CHICAGO	S111885312		651 W WASHINGTON		SPILLS
CHICAGO	S111896609		915 W WASHINGTON		SPILLS
CHICAGO	S111890212		55 E WASHINGTON		SPILLS
CHICAGO	S111889890		2627 WASHINGTON BLVD		SPILLS
CHICAGO	S111896149		1145 W WASHINGTON		SPILLS

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CHICAGO	S111883294		1045 W WASHINGTON		SPILLS
CHICAGO	S111920406		740 W WASHINGTON		SPILLS
CHICAGO	S111914841		909 WASHINGTON ST		SPILLS
CHICAGO	S111927892		1605 N WASHINGTON AVE		SPILLS
CHICAGO	S111927788		1245 W WASHINGTON		SPILLS
CHICAGO	S111883491		1304 W WASHINGTON		SPILLS
CHICAGO	S111877107		735 S WASHTENAW		SPILLS
CHICAGO	S111926670		1260 S WASHTENAW		SPILLS
CHICAGO	S111896441		5802 N WASHTENAW		SPILLS
CHICAGO	S111893809		3250 N WASHTENAW		SPILLS
CHICAGO	S111900082		801 S WASHTENAW		SPILLS
CHICAGO	S111900933		3724 S WASHTENAW		SPILLS
CHICAGO	S111894331		3250 N WASHTENAW		SPILLS
CHICAGO	92264733	40W SOUTH WATER MARKET	40W SOUTH WATER MARKET		ERNS
CHICAGO	98434885	WATER AND SOME KIND OF CHEMICALS	WATER AND SOME KIND OF CHEMICALS		ERNS
CHICAGO	S111887555		23 S WATER MARKET		SPILLS
CHICAGO	S111905413		445 E WATER ST		SPILLS
CHICAGO	90180221	3210 WATLING PLANT 3	3210 WATLING PLANT 3		ERNS
CHICAGO	S111911093		2255 W WAVANSIA		SPILLS
CHICAGO	S111879675		2510 N WAYNE		SPILLS
CHICAGO	S109092813		WB		SPILLS
CHICAGO	S111896503		1334 W WEBSTER		SPILLS
CHICAGO	S111890715		1471 W WEBSTER		SPILLS
CHICAGO	S111886989		911 WEED ST		SPILLS
CHICAGO	S111900937		1001 W WEED		SPILLS
CHICAGO	94355692	WELL ST BRIDGE	WELL ST BRIDGE		ERNS
CHICAGO	2006819150	WELLER AND LAKE STREETS	WELLER AND LAKE STREETS		ERNS
CHICAGO	2008866609	WELLINGTON AVE.	WELLINGTON AVE.		ERNS
CHICAGO	S111879189		1701 W WELLINGTON		SPILLS
CHICAGO	2000671191	H WELLS ST	H WELLS ST		ERNS
CHICAGO	S108669706		WENTWORTH AVE & CERMACK		SPILLS
CHICAGO	S111888398		6550 S WENTWORTH		SPILLS
CHICAGO	S111881887		4600 S WENTWORTH		SPILLS
CHICAGO	S111891981		1800 S WENTWORTH		SPILLS
CHICAGO	S111882078		1934 S WENTWORTH		SPILLS
CHICAGO	S111906575		7626 S WENTWORTH ST		SPILLS
CHICAGO	S111902013		6601 S WENTWORTH		SPILLS
CHICAGO	S111878620		6543 S WENTWORTH		SPILLS
CHICAGO	S108045271		10258 S WEST AVE		SPILLS
CHICAGO	2005616447	600 WEST	600 WEST		ERNS
CHICAGO	S111879781		211 S WEST HILL ST		SPILLS
CHICAGO	S108045996		290 WESTBOUND		SPILLS
CHICAGO	94391467	I-290 WESTBOUND/EAST OF ASHLAND AVE	I-290 WESTBOUND/EAST OF ASHLAND AVE		ERNS
CHICAGO	S111898397		4005 W WESTEND		SPILLS
CHICAGO	S111879285		11030 S WESTER AVE		SPILLS
CHICAGO	S108046688		7600 WESTERN ST		SPILLS
CHICAGO	93331395	WESTERN AVE BETWEEN 26TH AND 31ST STS AT THE RAIL	WESTERN AVE BETWEEN 26TH AND 31ST STS AT THE RAIL		ERNS

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CHICAGO	2002593093	1400 SOUTH WESTERN BLVD	1400 SOUTH WESTERN BLVD	0	ERNS
CHICAGO	974084921	WESTERN AVE. RAILYARD 2741 WEST GRAND	WESTERN AVE. RAILYARD 2741 WEST GRAND		ERNS
CHICAGO	974084920	WESTERN AVE. RAILYARD 2741 WEST GRAND	WESTERN AVE. RAILYARD 2741 WEST GRAND		ERNS
CHICAGO	2009909153	WESTERN AVENUE	WESTERN AVENUE		ERNS
CHICAGO	2008909153	WESTERN AVENUE	WESTERN AVENUE		ERNS
CHICAGO	2008877190	WESTERN STATION	WESTERN STATION		ERNS
CHICAGO	S110824846		5102 S WESTERN		SPILLS
CHICAGO	2006784912	7600 WESTERN ST.	7600 WESTERN ST.		ERNS
CHICAGO	S111887275		1414 S WESTERN		SPILLS
CHICAGO	S111886759		6150 N WESTERN		SPILLS
CHICAGO	S111913491		WESTERN & ROCKWELL		SPILLS
CHICAGO	S111909338		1425 S WESTERN ST		SPILLS
CHICAGO	S111922484		2072 N WESTERN		SPILLS
CHICAGO	S111890955		6455 S WESTERN		SPILLS
CHICAGO	S111905914		2801 N WESTERN		SPILLS
CHICAGO	S111884545		7740 WESTERN AVE		SPILLS
CHICAGO	S111918691		WESTERN AVE & SW HWY LANDERS INTERMODAL YARD		SPILLS
CHICAGO	S111899511		8659 WESTERN		SPILLS
CHICAGO	S111914197		6515 WESTERN AVE		SPILLS
CHICAGO	S111918955		14625 S WESTERN		SPILLS
CHICAGO	S111918631		2133 N WESTERN		SPILLS
CHICAGO	S111880985		7900 S WESTERN		SPILLS
CHICAGO	S111894411		3200 S WESTERN		SPILLS
CHICAGO	S111898374		3223 S WESTERN		SPILLS
CHICAGO	S111915386		225 N WESTERN AREA		SPILLS
CHICAGO	S111906762		WESTERN & IRVING PARK STS		SPILLS
CHICAGO	S111903771		WESTERN AVE		SPILLS
CHICAGO	S111906184		WESTERN AVE		SPILLS
CHICAGO	S111900618		4346 N WESTERN		SPILLS
CHICAGO	90157530	11044 SOUTH WESTERN AVE IN AN ALLEY TO THE WEST OF ABOVE ADD	11044 SOUTH WESTERN AVE IN AN ALLEY TO THE WEST OF ABOVE ADD		ERNS
CHICAGO	2002593045	1400 SOUTH WESTERN BLVD	1400 SOUTH WESTERN BLVD	0	ERNS
CHICAGO	2011991097		7748 WESTGLENLAKE AVE		ERNS
CHICAGO	2011993259		WESTMONT		ERNS
CHICAGO	99610647	1425 SOUTH WESTON GLOBAL YARD	1425 SOUTH WESTON GLOBAL YARD		ERNS
CHICAGO	S111903934		1425 S WESTON		SPILLS
CHICAGO	S111893554		3943 N WHIPPLE		SPILLS
CHICAGO	S111912437		1745 N WHIPPLE		SPILLS
CHICAGO	S111895905		319 N WHIPPLE		SPILLS
CHICAGO	S111884226		319 N WHIPPLE		SPILLS
CHICAGO	S111890404		4801 S WHIPPLE		SPILLS
CHICAGO	S108480121		BP WHITTING FACILITY		SPILLS
CHICAGO	2010938096	5500 N. WILCOCK	5500 N WILCOCK		ERNS
CHICAGO	2009916797	3937 WILCOTT ROAD	3937 WILCOTT ROAD		ERNS
CHICAGO	S110363742		5500 N WILCOX		SPILLS
CHICAGO	S111910988		4219 W WILCOX		SPILLS
CHICAGO	S111909507		1754 N WILMOT		SPILLS

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CHICAGO	2004743433	WILSON ST AND MAIN	WILSON ST AND MAIN		ERNS
CHICAGO	2005632034	105 W WILSON STREET	105 W WILSON ST		ERNS
CHICAGO	S111908769		2751 W WILSON CHICAGO RIV		SPILLS
CHICAGO	S111900202		4808 WILSON AVE		SPILLS
CHICAGO	S111926870		4850 W WILSON		SPILLS
CHICAGO	S111899857		931 W WILSON		SPILLS
CHICAGO	S111893367		OF WILSON AVE		SPILLS
CHICAGO	S111901526		1915 N WINCHESTER		SPILLS
CHICAGO	S111882930		4836 WINCHESTER AVE		SPILLS
CHICAGO	S111897095		1610 N WINCHESTER		SPILLS
CHICAGO	S111891114		1742 N WINCHESTER		SPILLS
CHICAGO	S111894446		8804 S WINCHESTER		SPILLS
CHICAGO	S111880578		4550 N WINCHESTER		SPILLS
CHICAGO	S111919386		7372 N WINCHESTER		SPILLS
CHICAGO	S111894899		1276 WINFIELD MOODY MED CTR N		SPILLS
CHICAGO	S111899923		1801 W WINNEMAC		SPILLS
CHICAGO	S111915710		4826 W WINNEMAC ST		SPILLS
CHICAGO	S108046362		4822 W WINNEMACK		SPILLS
CHICAGO	S111885364		940 W WINONA		SPILLS
CHICAGO	S111881205		1436 W WINONA		SPILLS
CHICAGO	S111887251		4949 S WINTHROP		SPILLS
CHICAGO	S111897777		5934 N WINTHROP		SPILLS
CHICAGO	S111877851		5900 N WINTHROP		SPILLS
CHICAGO	S111877012		5900 WINTHROP		SPILLS
CHICAGO	90179382	WISCONSON STEEL WORK SITE 106TH ST. AND TORRENCE AVE.	WISCONSON STEEL WORK SITE 106TH ST. AND TORRENCE AVE.		ERNS
CHICAGO	874879	WITCO CHEMICAL CO., 6200 WEST 51ST ST	WITCO CHEMICAL CO., 6200 WEST 51ST ST		ERNS
CHICAGO	S111902182		800 S WLS		SPILLS
CHICAGO	S111924451		800 SOUTH WLS		SPILLS
CHICAGO	S111921021		4027 S WLS		SPILLS
CHICAGO	S111878623		5454 N WOLCOT		SPILLS
CHICAGO	S111885606		2434 S WOLCOTT		SPILLS
CHICAGO	S111890696		4331 N WOLCOTT		SPILLS
CHICAGO	S111913579		919 N WOLCOTT		SPILLS
CHICAGO	S111904020		5435 N WOLCOTT		SPILLS
CHICAGO	S111906995		350 N WOLCOTT ST		SPILLS
CHICAGO	S111903004		3210 S WOLCOTT		SPILLS
CHICAGO	S111877048		2764 N WOLCOTT		SPILLS
CHICAGO	S111881061		5555 N WOLCOTT		SPILLS
CHICAGO	S111897894		1378 N WOLCOTT ST		SPILLS
CHICAGO	S111911375		915 N WOLCOTT		SPILLS
CHICAGO	S111918649		WOLF CRK & PROVISO RD		SPILLS
CHICAGO	S111903989		2305 W WOLFRAM		SPILLS
CHICAGO	S111906327		2706 N WOLPOTT		SPILLS
CHICAGO	S110122336		WOOD ST & WASHINGTON ST		SPILLS
CHICAGO	S111912323		6316 S WOOD		SPILLS
CHICAGO	S111893096		1824 S WOOD RD		SPILLS

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CHICAGO	S111922733		WOOD ST & ASHLAND AVE		SPILLS
CHICAGO	S111908075		2501 E WOOD		SPILLS
CHICAGO	S111885909		7700 S WOODLAWN		SPILLS
CHICAGO	S111906005		7345 S WOODLAWN		SPILLS
CHICAGO	S111908913		7905 S WOODLAWN		SPILLS
CHICAGO	S109366389		3211 S WOODS ST		SPILLS
CHICAGO	S111878366		833 S WOODS ST		SPILLS
CHICAGO	S110613575		WRIGHTWOOD & COSTNER		SPILLS
CHICAGO	S111888057		4132 W WRIGHTWOOD		SPILLS
CHICAGO	S111926374		WRIGHTWOOD		SPILLS
CHICAGO	S111910994		1 S YARD1400WESTERN AVE		SPILLS
CHICAGO	S111927845		1 YARD1425WESTERN AVE		SPILLS
CHICAGO	S111926647		3 N YORK		SPILLS
CHICAGO	S111904229		1819 YORK RD		SPILLS
CHICAGO	S111890130		6825 N YORK RD		SPILLS
CHICAGO	S110685334		3 N YORK		SPILLS
CHICAGO	S109366324		10510 W ZEMKE RD		SPILLS
CHICAGO	S111924380		10510 W ZEMKE RD		SPILLS
COOK COUNTY	2011981404	MP 1.33 ABERDEEN ST	MP 1.33 ABERDEEN ST		ERNS
COOK COUNTY	2011973076	2040 EAST 106TH ST	2040 EAST 106TH ST		ERNS
COOK COUNTY	2010946140	11TH AND CANAL	11TH AND CANAL		ERNS
COOK COUNTY	2011972549	5601 W 26TH ST	5601 W 26TH ST		ERNS
COOK COUNTY	2011972669	MP 29.8 200 YARDS WEST OF BURNHAM AVE	MP 29.8 200 YARDS WEST OF BURNHAM AVE		ERNS
COOK COUNTY	2011980248	MP 6.1	MP 6.1		ERNS
COOK COUNTY	S111927636		8500 W. 68TH ST.		SPILLS
COOK COUNTY	2011980370	8500 W. 68TH STREET	8500 W. 68TH STREET		ERNS
COOK COUNTY	2011974764	7300 WEST 71ST ST	7300 WEST 71ST ST		ERNS
COOK COUNTY	2011972239	7351 SOUTH 78TH AVE	7351 SOUTH 78TH AVE		ERNS
COOK COUNTY	2010960150	95TH AND VINCENNES	95TH AND VINCENNES		ERNS
COOK COUNTY	2010943534	ON A BEARING OF 020 DEG (NNE)	ON A BEARING OF 020 DEG (NNE)		ERNS
COOK COUNTY	2011973021	4551 WEST ADAMS BLVD	4551 WEST ADAMS BLVD		ERNS
COOK COUNTY	2008915423	2436 ADDISON STREET	2436 ADDISON STREET		ERNS
COOK COUNTY	2011977407	87 AND LAGRANGE ST.	87 AND LAGRANGE ST.		ERNS
COOK COUNTY	2011972225	C AND M SUBDIVISION MP B 0.0 TO B 2.9	C AND M SUBDIVISION MP B 0.0 TO B 2.9		ERNS
COOK COUNTY	2011979907	ASHLAND AVE YARD NONE	ASHLAND AVE YARD NONE		ERNS
COOK COUNTY	2011972006	BARR YARD MILE POST DD2 SUBDIVISION CHICAGO	BARR YARD MILE POST DD2 SUBDIVISION CHICAGO		ERNS
COOK COUNTY	2011978847	BEHIND DOCKSIDE STEEL 11828 SOUTH STONY ISLAND AVE.	BEHIND DOCKSIDE STEEL 11828 SOUTH STONY ISLAND AVE.		ERNS
COOK COUNTY	2011973396	BELMONT AND SHEFFIELD ROAD	BELMONT AND SHEFFIELD ROAD		ERNS
COOK COUNTY	2011977640	BENSENVILLE RAILYARD. 11306 FRANKLIN AVE.	BENSENVILLE RAILYARD. 11306 FRANKLIN AVE.		ERNS
COOK COUNTY	2011974200	BENSONVILLE INTERMODEL / ENTRANCE 4 10800 FRANKLIN AVE	BENSONVILLE INTERMODEL / ENTRANCE 4 10800 FRANKLIN AVE		ERNS
COOK COUNTY	2011981499	BENSONVILLE YARD	BENSONVILLE YARD		ERNS
COOK COUNTY	2009899057	BETWEEN MILE POST CD 520	BETWEEN MILE POST CD 520		ERNS
COOK COUNTY	2008899057	BETWEEN MILE POST CD 520	BETWEEN MILE POST CD 520		ERNS
COOK COUNTY	2011974035	BETWEEN RIVER ROAD AND PEARSON ST. MILEPOST: 16.7	BETWEEN RIVER ROAD AND PEARSON ST. MILEPOST: 16.7		ERNS

City	EDR ID	Site Name	Site Address	Zip	Database(s)
COOK COUNTY	S111927088		BURNHAM AVE. & BRAINERD AVE		SPILLS
COOK COUNTY	2011972659	BURNHAM AVE, MP 29.8	BURNHAM AVE, MP 29.8		ERNS
COOK COUNTY	2011980118	BURNHAM HARBOR //UNKNOWN SHEEN INCIDENT SLIP P54	BURNHAM HARBOR //UNKNOWN SHEEN INCIDENT SLIP P54		ERNS
COOK COUNTY	2011981381	CARONDELET AVE	CARONDELET AVE		ERNS
COOK COUNTY	2011977694	MP; CD515, RAILYARD	MP; CD515, RAILYARD		ERNS
COOK COUNTY	2011975560	CHATHAM, IL CHATHAM STREET	CHATHAM, IL CHATHAM STREET		ERNS
COOK COUNTY	2009899072	CHICAGO UNION STATION	CHICAGO UNION STATION		ERNS
COOK COUNTY	2009906666	CHICAGO RIVER	CHICAGO RIVER		ERNS
COOK COUNTY	2008899072	CHICAGO UNION STATION	CHICAGO UNION STATION		ERNS
COOK COUNTY	2008906666	CHICAGO RIVER	CHICAGO RIVER		ERNS
COOK COUNTY	2010954447	CHICAGO	CHICAGO		ERNS
COOK COUNTY	S111927095		5700 S CICERO AVE (MIDWAY AIRPORT)		SPILLS
COOK COUNTY	2011977864	CLOSE TO A BUSINESS 13800 S. HALSTEAD	CLOSE TO A BUSINESS 13800 S. HALSTEAD		ERNS
COOK COUNTY	2011981839		DEERBORN SUBDIVISION		ERNS
COOK COUNTY	2011979504	FOOD PROCESSING PLANT 945 WEST 38TH ST.	FOOD PROCESSING PLANT 945 WEST 38TH ST.		ERNS
COOK COUNTY	2011977876	FOOD PROCESSOR 2816 S KILBORN AVE	FOOD PROCESSOR 2816 S KILBORN AVE		ERNS
COOK COUNTY	2011976365	GRADE CROSSING THORNTON RD.	GRADE CROSSING THORNTON RD.		ERNS
COOK COUNTY	2011978150	4805 SOUTH HARLEM AVE	4805 SOUTH HARLEM AVE		ERNS
COOK COUNTY	2011980065	AT ICE HOUSE SPUR TRACK NONE	AT ICE HOUSE SPUR TRACK NONE		ERNS
COOK COUNTY	2011980749	INTERSECTION OF 175TH ST AND COMMUNITY ST	INTERSECTION OF 175TH ST AND COMMUNITY ST		ERNS
COOK COUNTY	2011977731	LAKE MICHIGAN WILLAMETTE PUMPING STATION NORTHSHORE CHANNEL	LAKE MICHIGAN WILLAMETTE PUMPING STATION NORTHSHORE CHANNEL		ERNS
COOK COUNTY	2011975662	301 WEST LAKE ST	301 WEST LAKE ST		ERNS
COOK COUNTY	2011979313	LANDERS RAIL YARD (MILEPOST: 09514 / DEARBORN DIVISION) 7540	LANDERS RAIL YARD (MILEPOST: 09514 / DEARBORN DIVISION) 7540		ERNS
COOK COUNTY	2011974989	MAIN STREET	MAIN STREET		ERNS
COOK COUNTY	2011979082	200 N MANNHEIM	200 N MANNHEIM		ERNS
COOK COUNTY	2009919045	MILE 12.2	MILE 12.2		ERNS
COOK COUNTY	2009898297	MILE POST 16.86	MILE POST 16.86		ERNS
COOK COUNTY	2008898297	MILE POST 16.86	MILE POST 16.86		ERNS
COOK COUNTY	2010933409	MILE POST DC27 NONE	MILE POST DC27 NONE		ERNS
COOK COUNTY	2011980032	MILE POST DC9.9	MILE POST DC9.9		ERNS
COOK COUNTY	2011972397	MILEPOST 6.5 NONE	MILEPOST 6.5 NONE		ERNS
COOK COUNTY	2011976175	MOUNT PROSPECT ROAD AND U.S. 14	MOUNT PROSPECT ROAD AND U.S. 14		ERNS
COOK COUNTY	2010937358	NONE	NONE		ERNS
COOK COUNTY	2010944507	O'BRIEN LOCKS SG 226.0	O'BRIEN LOCKS SG 226.0		ERNS
COOK COUNTY	2011979226	O'HARE AIRPORT	O'HARE AIRPORT		ERNS
COOK COUNTY	2011974979	NORTH OF 67TH STREET ON MAIN 2 6630 SOUTH KENTON	NORTH OF 67TH STREET ON MAIN 2 6630 SOUTH KENTON		ERNS
COOK COUNTY	2008883971	OFF OF LAKE STREET	OFF OF LAKE STREET		ERNS
COOK COUNTY	2011979830	OGDEN SLIP, WEST END, CHICAGO, ILLINOIS 455 E ILLINOIS ST SU	OGDEN SLIP, WEST END, CHICAGO, ILLINOIS 455 E ILLINOIS ST SU		ERNS
COOK COUNTY	S111927768		13700 PERRY AVE.		SPILLS
COOK COUNTY	2011974832	17401 SO POLASKI	17401 SO POLASKI		ERNS
COOK COUNTY	2011980534	PORT OF CHICAGO 2150 STONEY ISLAND AVE. CHICAGO	PORT OF CHICAGO 2150 STONEY ISLAND AVE. CHICAGO		ERNS

City	EDR ID	Site Name	Site Address	Zip	Database(s)
COOK COUNTY	2011981629	5226 POTTAWATOMIE	5226 POTTAWATOMIE		ERNS
COOK COUNTY	2011980221	PROVISO RAIL YARD 5050 WEST LAKE ST	PROVISO RAIL YARD 5050 WEST LAKE ST		ERNS
COOK COUNTY	2011982154		3500 RACINE		ERNS
COOK COUNTY	2011974559	1111 SMITH ST	1111 SMITH ST		ERNS
COOK COUNTY	2008886889	STATE ST.	STATE ST.		ERNS
COOK COUNTY	2008870404	STATE ROUTE 53 N	STATE ROUTE 53 N		ERNS
COOK COUNTY	2011973999	STORM DRAIN 120 EMERALD DRIVE	STORM DRAIN 120 EMERALD DRIVE		ERNS
COOK COUNTY	2011973706	SUB: CHICAGO ON BNSF MILE 9.6	SUB: CHICAGO ON BNSF MILE 9.6		ERNS
COOK COUNTY	2006799783	TEST	TEST		ERNS
COOK COUNTY	2011976311	THE SOUTH EAST CORNER OF CHICAGO AVE AND DAVIS STREET NONE	THE SOUTH EAST CORNER OF CHICAGO AVE AND DAVIS STREET NONE		ERNS
COOK COUNTY	2011976259	TORRENCE AVE 130TH ST	TORRENCE AVE 130TH ST		ERNS
COOK COUNTY	2006784297	B3 TRACK	B3 TRACK		ERNS
COOK COUNTY	2011978519	UNION STATION	UNION STATION		ERNS
COOK COUNTY	2011976419	556 WATERS EDGE	556 WATERS EDGE		ERNS
COOK COUNTY	S111927287		1425 S. WESTERN AVE		SPILLS
COOK COUNTY	S111927239		7327 S. WOODLAWN AVE.		SPILLS

Section 4

EPA Waste Code Addendum

SECTION 4 - EPA WASTE CODES

There are no epa codes to report for this search area.

Section 5

Databases Searched and Update Dates

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

FEDERAL RECORDS

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 03/30/2012
Date Data Arrived at EDR: 04/05/2012
Date Made Active in Reports: 05/15/2012
Number of Days to Update: 40

Source: EPA
Telephone: N/A
Last EDR Contact: 07/05/2012
Next Scheduled EDR Contact: 10/22/2012
Data Release Frequency: Quarterly

DELISTED NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 03/30/2012
Date Data Arrived at EDR: 04/05/2012
Date Made Active in Reports: 05/15/2012
Number of Days to Update: 40

Source: EPA
Telephone: N/A
Last EDR Contact: 07/05/2012
Next Scheduled EDR Contact: 10/22/2012
Data Release Frequency: Quarterly

CERCLIS: Comprehensive Environmental Response, Compensation, and Liability Information System

CERCLIS contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 12/27/2011
Date Data Arrived at EDR: 02/27/2012
Date Made Active in Reports: 03/12/2012
Number of Days to Update: 14

Source: EPA
Telephone: 703-412-9810
Last EDR Contact: 07/05/2012
Next Scheduled EDR Contact: 09/10/2012
Data Release Frequency: Quarterly

CERCLIS-NFRAP: CERCLIS No Further Remedial Action Planned

Archived sites are sites that have been removed and archived from the inventory of CERCLIS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.

Date of Government Version: 12/28/2011
Date Data Arrived at EDR: 02/27/2012
Date Made Active in Reports: 03/12/2012
Number of Days to Update: 14

Source: EPA
Telephone: 703-412-9810
Last EDR Contact: 07/05/2012
Next Scheduled EDR Contact: 09/10/2012
Data Release Frequency: Quarterly

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 08/19/2011
Date Data Arrived at EDR: 08/31/2011
Date Made Active in Reports: 01/10/2012
Number of Days to Update: 132

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 08/07/2012
Next Scheduled EDR Contact: 11/26/2012
Data Release Frequency: Quarterly

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA’s comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 03/15/2012
Date Data Arrived at EDR: 04/04/2012
Date Made Active in Reports: 05/15/2012
Number of Days to Update: 41

Source: Environmental Protection Agency
Telephone: 312-886-6186
Last EDR Contact: 07/02/2012
Next Scheduled EDR Contact: 10/15/2012
Data Release Frequency: Quarterly

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA’s comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 03/15/2012
Date Data Arrived at EDR: 04/04/2012
Date Made Active in Reports: 05/15/2012
Number of Days to Update: 41

Source: Environmental Protection Agency
Telephone: 312-886-6186
Last EDR Contact: 07/02/2012
Next Scheduled EDR Contact: 10/15/2012
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA’s comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 03/15/2012
Date Data Arrived at EDR: 04/04/2012
Date Made Active in Reports: 05/15/2012
Number of Days to Update: 41

Source: Environmental Protection Agency
Telephone: 312-886-6186
Last EDR Contact: 07/02/2012
Next Scheduled EDR Contact: 10/15/2012
Data Release Frequency: Quarterly

RCRA-CESQG: RCRA - Conditionally Exempt Small Quantity Generators

RCRAInfo is EPA’s comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 03/15/2012
Date Data Arrived at EDR: 04/04/2012
Date Made Active in Reports: 05/15/2012
Number of Days to Update: 41

Source: Environmental Protection Agency
Telephone: 312-886-6186
Last EDR Contact: 07/02/2012
Next Scheduled EDR Contact: 10/15/2012
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 12/30/2011	Source: Environmental Protection Agency
Date Data Arrived at EDR: 12/30/2011	Telephone: 703-603-0695
Date Made Active in Reports: 01/10/2012	Last EDR Contact: 06/11/2012
Number of Days to Update: 11	Next Scheduled EDR Contact: 09/24/2012
	Data Release Frequency: Varies

US INST CONTROL: Sites with Institutional Controls

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 12/30/2011	Source: Environmental Protection Agency
Date Data Arrived at EDR: 12/30/2011	Telephone: 703-603-0695
Date Made Active in Reports: 01/10/2012	Last EDR Contact: 06/11/2012
Number of Days to Update: 11	Next Scheduled EDR Contact: 09/24/2012
	Data Release Frequency: Varies

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 04/02/2012	Source: National Response Center, United States Coast Guard
Date Data Arrived at EDR: 04/03/2012	Telephone: 202-267-2180
Date Made Active in Reports: 06/14/2012	Last EDR Contact: 07/02/2012
Number of Days to Update: 72	Next Scheduled EDR Contact: 10/15/2012
	Data Release Frequency: Annually

US BROWNFIELDS: A Listing of Brownfields Sites

Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 06/27/2011	Source: Environmental Protection Agency
Date Data Arrived at EDR: 06/27/2011	Telephone: 202-566-2777
Date Made Active in Reports: 09/13/2011	Last EDR Contact: 06/25/2012
Number of Days to Update: 78	Next Scheduled EDR Contact: 10/08/2012
	Data Release Frequency: Semi-Annually

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2009	Source: EPA/NTIS
Date Data Arrived at EDR: 03/01/2011	Telephone: 800-424-9346
Date Made Active in Reports: 05/02/2011	Last EDR Contact: 06/01/2012
Number of Days to Update: 62	Next Scheduled EDR Contact: 09/10/2012
	Data Release Frequency: Biennially

STATE AND LOCAL RECORDS

SSU: State Sites Unit Listing

The State Response Action Program database identifies the status of all sites under the responsibility of the Illinois EPA's State Sites Unit.

Date of Government Version: 07/10/2012
Date Data Arrived at EDR: 07/12/2012
Date Made Active in Reports: 08/02/2012
Number of Days to Update: 21

Source: Illinois Environmental Protection Agency
Telephone: 217-524-4826
Last EDR Contact: 07/12/2012
Next Scheduled EDR Contact: 11/12/2012
Data Release Frequency: Semi-Annually

LF WMRC: Waste Management & Research Center Landfill Database

The Waste Management & Research Center Landfill Database includes records from the Department of Public Health, Department of Mines & Minerals, Illinois Environmental Protection Agency, State Geological Survey, Northeastern Illinois Planning Commission and Pollution Control Board.

Date of Government Version: 12/31/2001
Date Data Arrived at EDR: 10/06/2006
Date Made Active in Reports: 11/06/2006
Number of Days to Update: 31

Source: Department of Natural Resources
Telephone: 217-333-8940
Last EDR Contact: 09/18/2009
Next Scheduled EDR Contact: 12/28/2009
Data Release Frequency: No Update Planned

SWF/LF: Available Disposal for Solid Waste in Illinois - Solid Waste Landfills Subject to State Surcharge

Solid Waste Facilities/Landfill Sites. SWF/LF type records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. Depending on the state, these may be active or inactive facilities or open dumps that failed to meet RCRA Subtitle D Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 12/31/2010
Date Data Arrived at EDR: 12/21/2011
Date Made Active in Reports: 12/23/2011
Number of Days to Update: 2

Source: Illinois Environmental Protection Agency
Telephone: 217-785-8604
Last EDR Contact: 08/03/2012
Next Scheduled EDR Contact: 11/12/2012
Data Release Frequency: Annually

IL NIPC: Solid Waste Landfill Inventory

Solid Waste Landfill Inventory. NIPC is an inventory of active and inactive solid waste disposal sites, based on state, local government and historical archive data. Included are numerous sites which previously had never been identified largely because there was no obligation to register such sites prior to 1971.

Date of Government Version: 08/01/1988
Date Data Arrived at EDR: 08/01/1994
Date Made Active in Reports: 08/12/1994
Number of Days to Update: 11

Source: Northeastern Illinois Planning Commission
Telephone: 312-454-0400
Last EDR Contact: 05/23/2006
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

LUST: Leaking Underground Storage Tank Sites

Leaking Underground Storage Tank Incident Reports. LUST records contain an inventory of reported leaking underground storage tank incidents. Not all states maintain these records, and the information stored varies by state.

Date of Government Version: 03/22/2012
Date Data Arrived at EDR: 05/01/2012
Date Made Active in Reports: 05/15/2012
Number of Days to Update: 14

Source: Illinois Environmental Protection Agency
Telephone: 217-782-6762
Last EDR Contact: 07/31/2012
Next Scheduled EDR Contact: 11/12/2012
Data Release Frequency: Semi-Annually

UST: Underground Storage Tank Facility List

Registered Underground Storage Tanks. UST's are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA) and must be registered with the state department responsible for administering the UST program. Available information varies by state program.

Date of Government Version: 05/01/2012
Date Data Arrived at EDR: 05/01/2012
Date Made Active in Reports: 06/01/2012
Number of Days to Update: 31

Source: Illinois State Fire Marshal
Telephone: 217-785-0969
Last EDR Contact: 07/31/2012
Next Scheduled EDR Contact: 11/12/2012
Data Release Frequency: Quarterly

SPILLS: State spills

A listing of incidents reported to the Office of Emergency Response.

Date of Government Version: 07/18/2012
Date Data Arrived at EDR: 07/23/2012
Date Made Active in Reports: 07/30/2012
Number of Days to Update: 7

Source: Illinois EPA
Telephone: 217-558-1677
Last EDR Contact: 07/12/2012
Next Scheduled EDR Contact: 10/29/2012
Data Release Frequency: Varies

ENG CONTROLS: Sites with Engineering Controls

Sites using of engineered barriers (e.g., asphalt or concrete paving).

Date of Government Version: 07/20/2012
Date Data Arrived at EDR: 07/24/2012
Date Made Active in Reports: 07/30/2012
Number of Days to Update: 6

Source: Illinois Environmental Protection Agency
Telephone: 217-782-6761
Last EDR Contact: 07/24/2012
Next Scheduled EDR Contact: 11/05/2012
Data Release Frequency: Quarterly

Inst Control: Institutional Controls

Legal or administrative restrictions on land use and/or other activities (e.g., groundwater use restrictions) which effectively limit exposure to contamination may be employed as alternatives to removal or treatment of contamination.

Date of Government Version: 07/20/2012
Date Data Arrived at EDR: 07/24/2012
Date Made Active in Reports: 07/30/2012
Number of Days to Update: 6

Source: Illinois Environmental Protection Agency
Telephone: 217-782-6761
Last EDR Contact: 07/24/2012
Next Scheduled EDR Contact: 11/05/2012
Data Release Frequency: Quarterly

SRP: Site Remediation Program Database

The database identifies the status of all voluntary remediation projects administered through the pre-notice site cleanup program (1989 to 1995) and the site remediation program (1996 to the present).

Date of Government Version: 07/20/2012
Date Data Arrived at EDR: 07/24/2012
Date Made Active in Reports: 07/30/2012
Number of Days to Update: 6

Source: Illinois Environmental Protection Agency
Telephone: 217-785-9407
Last EDR Contact: 07/24/2012
Next Scheduled EDR Contact: 11/05/2012
Data Release Frequency: Semi-Annually

DRYCLEANERS: Illinois Licensed Drycleaners

Any retail drycleaning facility in Illinois must apply for a license through the Illinois Drycleaner Environmental Response Trust Fund. Drycleaner Environmental Response Trust Fund of Illinois.

Date of Government Version: 05/28/2012
Date Data Arrived at EDR: 05/31/2012
Date Made Active in Reports: 06/18/2012
Number of Days to Update: 18

Source: Drycleaner Environmental Response Trust Fund of Illinois
Telephone: 800-765-4041
Last EDR Contact: 05/31/2012
Next Scheduled EDR Contact: 09/10/2012
Data Release Frequency: Varies

BROWNFIELDS: Municipal Brownfields Redevelopment Grant Program Project Descriptions

The Illinois Municipal Brownfields Redevelopment Grant Program (MBRGP) offers grants worth a maximum of $240,000 each to municipalities to assist in site investigation activities, development of cleanup objectives, and performance of cleanup activities. Brownfields are abandoned or underused industrial and/or commercial properties that are contaminated (or thought to be contaminated) and have an active potential for redevelopment.

Date of Government Version: 06/28/2012	Source: Illinois Environmental Protection Agency
Date Data Arrived at EDR: 06/29/2012	Telephone: 217-785-3486
Date Made Active in Reports: 07/27/2012	Last EDR Contact: 07/26/2012
Number of Days to Update: 28	Next Scheduled EDR Contact: 11/12/2012
	Data Release Frequency: Varies

BROWNFIELDS: Redevelopment Assessment Database

The Office of Site Evaluations Redevelopment Assessment database identifies the status of all properties within the State in which the Illinois EPA's Office of Site Evaluation has conducted a municipal Brownfield Redevelopment Assessment.

Date of Government Version: 05/01/2012	Source: Illinois Environmental Protection Agency
Date Data Arrived at EDR: 05/01/2012	Telephone: 217-524-1658
Date Made Active in Reports: 05/16/2012	Last EDR Contact: 07/31/2012
Number of Days to Update: 15	Next Scheduled EDR Contact: 11/12/2012
	Data Release Frequency: Varies

EDR PROPRIETARY RECORDS

Manufactured Gas Plants: EDR Proprietary Manufactured Gas Plants

The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A	Source: EDR, Inc.
Date Data Arrived at EDR: N/A	Telephone: N/A
Date Made Active in Reports: N/A	Last EDR Contact: N/A
Number of Days to Update: N/A	Next Scheduled EDR Contact: N/A
	Data Release Frequency: No Update Planned

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data

Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 05/21/2012	Source: Department of Energy & Environmental Protection
Date Data Arrived at EDR: 05/22/2012	Telephone: 860-424-3375
Date Made Active in Reports: 05/31/2012	Last EDR Contact: 05/22/2012
Number of Days to Update: 9	Next Scheduled EDR Contact: 09/03/2012
	Data Release Frequency: Annually

NJ MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 12/31/2010	Source: Department of Environmental Protection
Date Data Arrived at EDR: 07/20/2011	Telephone: N/A
Date Made Active in Reports: 08/11/2011	Last EDR Contact: 07/19/2012
Number of Days to Update: 22	Next Scheduled EDR Contact: 10/29/2012
	Data Release Frequency: Annually

NY MANIFEST: Facility and Manifest Data

Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 05/01/2012
Date Data Arrived at EDR: 05/09/2012
Date Made Active in Reports: 06/14/2012
Number of Days to Update: 36

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 08/09/2012
Next Scheduled EDR Contact: 11/19/2012
Data Release Frequency: Annually

PA MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 12/31/2010
Date Data Arrived at EDR: 04/27/2012
Date Made Active in Reports: 06/05/2012
Number of Days to Update: 39

Source: Department of Environmental Protection
Telephone: 717-783-8990
Last EDR Contact: 07/19/2012
Next Scheduled EDR Contact: 11/05/2012
Data Release Frequency: Annually

RI MANIFEST: Manifest information

Hazardous waste manifest information

Date of Government Version: 12/31/2011
Date Data Arrived at EDR: 06/22/2012
Date Made Active in Reports: 07/31/2012
Number of Days to Update: 39

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 02/27/2012
Next Scheduled EDR Contact: 06/11/2012
Data Release Frequency: Annually

WI MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 12/31/2010
Date Data Arrived at EDR: 08/19/2011
Date Made Active in Reports: 09/15/2011
Number of Days to Update: 27

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 07/16/2012
Next Scheduled EDR Contact: 10/01/2012
Data Release Frequency: Annually

Oil/Gas Pipelines: This data was obtained by EDR from the USGS in 1994. It is referred to by USGS as GeoData Digital Line Graphs from 1:100,000-Scale Maps. It was extracted from the transportation category including some oil, but primarily gas pipelines.

Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:
Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association’s annual survey of hospitals.

Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics’ primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools
  Source: National Center for Education Statistics
  Telephone: 202-502-7300
  The National Center for Education Statistics' primary database on private school locations in the United States.
Daycare Centers: Homes & Centers Listing
  Source: Department of Children & Family Services
  Telephone: 312-814-4150

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 2003 & 2011 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 and 2005 from the U.S. Fish and Wildlife Service.

STREET AND ADDRESS INFORMATION

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12000 SOUTH EMERALD
CHICAGO, IL

Inquiry Number:
November 2, 2012

EDR Site Report™

EDR® Environmental Data Resources Inc

440 Wheelers Farms Road
Milford, CT 06461
Toll Free: 800.352.0050
www.edrnet.com

TABLE OF CONTENTS

The EDR-Site Report™ is a comprehensive presentation of government filings on a facility identified in a search of federal, state and local environmental databases. The report is divided into three sections:

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Summary of facility filings including a review of the following areas: waste management, waste disposal, multi-media issues, and Superfund liability.

Section 2: Facility Detail Reports . . . . Page 4

All available detailed information from databases where sites are identified.

Section 3: Databases and Update Information. . . . . Page 7

Name, source, update dates, contact phone number and description of each of the databases for this report.

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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SECTION 1: FACILITY SUMMARY

FACILITY AREA	FACILITY 1 12000 SOUTH EMERALD CHICAGO, IL EDR ID #2003704549
WASTE MANAGEMENT Facility generates hazardous waste (RCRA)	NO
Facility treats, stores, or disposes of hazardous waste on-site (RCRA/TSDF)	NO
Facility has received Notices of Violations (RCRA/VIOL)	NO
Facility has been subject to RCRA administrative actions (RAATS)	NO
Facility has been subject to corrective actions (CORRACTS)	NO
Facility handles PCBs (PADS)	NO
Facility uses radioactive materials (MLTS)	NO
Facility manages registered aboveground storage tanks (AST)	NO
Facility manages registered underground storage tanks (UST)	NO
Facility has reported leaking underground storage tank incidents (LUST)	NO
Facility has reported emergency releases to the soil (ERNS)	**YES - p4**
Facility has reported hazardous material incidents to DOT (HMIRS)	NO
WASTE DISPOSAL Facility is a Superfund Site (NPL)	NO
Facility has a known or suspect abandoned, inactive or uncontrolled hazardous waste site (CERCLIS)	NO
Facility has a reported Superfund Lien on it (LIENS)	NO
Facility is listed as a state hazardous waste site (SHWS)	NO
Facility has disposed of solid waste on-site (SWF/LF)	NO
MULTIMEDIA Facility uses toxic chemicals and has notified EPA under SARA Title III, Section 313 (TRIS)	NO
Facility produces pesticides and has notified EPA under Section 7 of FIFRA (SSTS)	NO
Facility manufactures or imports toxic chemicals on the TSCA list (TSCA)	NO
Facility has inspections under FIFRA, TSCA or EPCRA (FTTS)	NO
Facility is listed in EPA's index system (FINDS)	NO
Facility is listed in a county/local unique database (LOCAL)	NO
POTENTIAL SUPERFUND LIABILITY Facility has a list of potentially responsible parties PRP	NO
TOTAL (YES)	1

SECTION 2: FACILITY DETAIL REPORTS

WASTE MANAGEMENT

Facility has reported emergency releases to the soil

DATABASE: Emergency Response Notification System (ERNS)

12000 SOUTH EMERALD
CHICAGO, IL
EDR ID #2003704549

ERNS:
Site ID: 2003704549
Incident cause: OPERATOR ERROR
Incident desc: THE CALLER REPORTED RELEASE OF HYDRAULIC OIL FROM TRACTOR WHEN DRIVER HIT FIRE HYDRANT AND PUNCTURED OIL PAN.
Incident type: MOBILE
Incident date: 20031105
Incident TG: OCCURRED
Inc location: Not reported
Incident address: 12000 SOUTH EMERALD
CHICAGO, IL
Distance from city: Not reported
Lat/Long: 0/0
Lat/Long quad: /
Incident date: 11/05/2003
Township/section/range: //
WMD flag: Not reported
Rad flag: Not reported
Bio flag: Not reported
Amt material flag: Not reported
Military: Not reported
LNG flag: Not reported

Fire involved: No
Fire extinguished: Unknown
Any evacuees: No
Number of evacs: Not reported
Who evacuated: Not reported
Radius of evacuation: Not reported
Any injuries: No
Number injured: Not reported
Number hospitalized: Not reported
Any fatalities: No
Any damage: No
Damage amount: Not reported
Air corridor desc: Not reported
Air corridor closed: Not reported
Water description: Not reported
Water closed: No
Water closed time: Not reported
Road closed: No
Road closed desc: Not reported
Road closed time: Not reported
Closure direction: Not reported
Major artery: No
Track closed: No
Track closed time: Not reported
Tr. close direction: Not reported
Track description: Not reported
Media interest: NONE
Medium affected: WATER
Additional medium: STORM DRAIN
Body of water: STORM DRAIN
Tributary: UNKNOWN
Near river: Not reported
Release secured: Yes
Est. duration of rel.: Not reported
Release rate: Not reported
Rel. rate units: Not reported
Rel. per units: Not reported
Remedial action: CONTRACTOR HAS BEEN HIRED, LAND CLEAN UP COMPLETED, MATERIAL IN WATER IS NON RECOVERABLE
Agency on scene: Not reported
Other agency: Not reported
State agency notified: Not reported
Fed. agency notified: Not reported
Structure name: Not reported
Structure type: Not reported
Struct. operator: Not reported
Weather: CLEAR

SECTION 2: FACILITY DETAIL REPORTS

...Continued...

Air temp: 0
Wind speed: 0
Wind speed unit: Not reported
Wind direction: Not reported
Water contaminated: No
Sheen size: Not reported
Sheen size units: Not reported
Sheen color: Not reported
Sheen direction: Not reported
Sheen odor: Not reported
Sheen length: Not reported
Sheen len. units: Not reported
Sheen width: Not reported
Sheen wid. units: Not reported
Wave condit: Not reported
Current speed: 0
Current speed units: Not reported
Current direction: Not reported
Water temp: Not reported
Allision: Not reported
Employees injured: Not reported
Employee fatalities: Not reported
Passengers injured: Not reported
Passenger fatalities: Not reported
Occupant fatalities: Not reported
Community impact: No
Offshore: No
Addition info: THE CALLER HAD NO ADDITIONAL INFORMATION.

Aircraft type: Not reported
Aircraft model: Not reported
Aircraft ID: Not reported
Aircraft fuel cap: Not reported
Capacity units: Not reported
Fuel onboard: Not reported
Fuel units: Not reported
Spot number: Not reported
AC hanger: Not reported
AC runway: Not reported
Mile marker: Not reported
Building ID: Not reported
Type fixed obj: Not reported
Power gen facility: Unknown
Generation capacity: Not reported
Fuel type: Not reported
NPDES: Not reported
NPDES compliance: Unknown
Pipe type: Not reported
DOT regulated: Unknown
Pipe above: ABOVE
Exposed underwtr: No
Pipe covered: Unknown
Railroad hotline: Not reported
Grade crossing: No
Location subdivision: Not reported
Railroad milepost: Not reported
Vehicle type: Not reported
Crossing device: Not reported
Device operational: Yes
DOT crossing #: Not reported
Brakes failed: No
Tank description: Not reported
Above ground tank: ABOVE
Tank regulated: Unknown
Tank ID: Not reported
Tank regulated by: Not reported
Tank capacity: Not reported
Capacity units: Not reported
Actual amount: Not reported
Amount units: Not reported
Transportable container: Unknown
Platform rig name: Not reported
Platform letter: Not reported
Local area ID: Not reported
Local block ID: 0
OCSG number: 0
State lease #: Not reported
Pier dock #: Not reported
Berth slip #: Not reported
Initial continuous rel #: Not reported
Cont. rel permit: Not reported
Allision: No
Structure type: Not reported
Structure: Not reported
Structure operator: U

Air bag deployed: Not reported
Date time normal srvc: Not reported
Service disruption time: Not reported
Transit bus flag: Not reported
Begin date: Not reported
End date: Not reported
Change date: Not reported

Call received date: 20031105
Complete date: 20031105
Call Taker: AMB7531
Call Type: INC
Responsible Party: UNKNOWN
RP telephone: 6516862591
RP tel type: PRIMARY
RP telephone: 0
RP tel type: Not reported
Responsible company: TRANSPORT AMERICA
RC organization type: PRIVATE ENTERPRISE
PR address: 1715 YANKEE DOODLE ROAD
EAGAN, MN
Initial caller: Not reported
Initial caller tel: Not reported
Initially reported comp.: Not reported
On behalf: Not reported
Source: TELEPHONE

Spilled material name: HYDRAULIC OIL
Material CHRIS code: OHY
Mat. CAS number: 000000-00-0
Material UN #: Not reported
Amount of spilled mat.: 11
Mat. amount unit: GALLON(S)
Mat. reached water: YES
Amount in water: 5
Amount in water units: GALLON(S)

Involved vehicle #: TA6397
Trailer #: Not reported
Vehicle Year: Not reported
Vehicle make: Not reported
Vehicle model: Not reported
Vehicle type: TRACTOR TRAILER TRUCK
Veh. fuel cap: Not reported
Cargo capacity: Not reported
Cargo cap units: Not reported
Cargo amount: Not reported
Cargo amount units: Not reported
HAZMAT: No
Carrier licensed: Unknown
Hazmat non-compliance: Unknown

SECTION 3: DATABASES AND UPDATE DATES

To maintain currency of the following federal, state and local databases, EDR contacts the appropriate government agency on a monthly or quarterly basis as required.

Elapsed ASTM days: Provides confirmation that this report meets or exceeds the 90-day updating requirement of the ASTM standard.

DATABASES FOUND IN THIS REPORT

ERNS: Emergency Response Notification System
Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 04/02/2012
Database Release Frequency: Annually
Date of Last EDR Contact: 10/02/2012
Date of Next Scheduled Update: 01/14/2013

Appendix C
2014-2015 Red Line Extension Project Update

2014–2015 Red Line Extension Project Update

From 2012-2014, CTA evaluated benefits and impacts of four alternatives: the No Build Alternative, the Bus Rapid Transit Alternative (along Michigan Avenue), the Union Pacific Railroad (UPRR) Rail Alternative, and the Halsted Alternative. CTA evaluated three options of the UPRR Rail Alternative: Right-of-Way Option, East Option, and West Option. CTA also evaluated two options of the UPRR Rail Alternative 130th Street station: a South Station Option and a West Station Option. Based on the project description provided in Section 2 of this technical memorandum, CTA analyzed the impacts of these alternatives and station options. The benefits and impacts are included in the technical memoranda prepared in 2012-2014.

In August 2014, based on the technical analysis and public input, CTA announced the NEPA Preferred Alternative—the UPRR Rail Alternative. Additional conceptual engineering was conducted on the UPRR Rail Alternative to refine the East and West Option alignments. In addition, CTA is considering only the South Station Option of the 130th Street Station.

In late 2014 and early 2015, CTA conducted additional engineering and revised assumptions on the East and West Options to refine the alignments. The refinement of the East and West Options consisted of the following items:

- For the segment of the alignment along I-57, CTA shifted the proposed alignment from the median of I-57 to the north side of I-57 within the existing expressway right-of-way. The construction would be less complex, safer for construction workers, and have a shorter duration. The shift would also allow for fewer impacts to Wendell Smith Park for the East Option, and would allow for no permanent impacts to Wendell Smith Park for the West Option.

- CTA modified the curve speeds as the alignment heads south from I-57 along the UPRR tracks. The curve speed for both the East and West Options would be 35 mph.

- CTA shifted the East Option alignment near 103rd Street station to minimize impacts to Block Park and the Roseland Pumping Station.

- CTA modified the curves south of 103rd Street for both the East and West Options to 55 mph to maximize the train speed.

- CTA refined the layout of the 120th Street yard and shop to optimize yard operations. The refined layout of the yard would accommodate 340 train cars.

The refinement of the East and West Option alignments minimizes potential impacts to parks while providing flexibility for future design phases. The Draft Environmental Impact Statement contains the benefits and impacts of the refined East and West Option alignments and supersedes information presented in other chapters of this technical memorandum.

The refined East and West Option alignments would have no additional or different impacts from those described in the technical memoranda for the following resource areas: construction, transportation, land use and economic development, historic and cultural resources, safety and security, hazardous materials, indirect and cumulative, air quality, floodplains, vegetation and wildlife habitat, threatened and endangered species, and geology and soils.

Appendix S
Water Resources Technical Memorandum

RED AHEAD
Moving Ahead to a Better Red

Red Line Extension

Chicago Red Line Extension Project

Water Resources

Technical Memorandum

January 22, 2013
Updated July 28, 2015

Prepared for:
Chicago Transit Authority
567 W. Lake Street
Chicago, IL 60661

Prepared by:
CWC Transit Group
125 S. Wacker Drive
Suite 600
Chicago, IL 60606

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Abbreviations

API	Area of Potential Impact
BRT	Bus Rapid Transit
CCSMP	Cook County Stormwater Management Plan
CFR	Code of Federal Regulations
CTA	Chicago Transit Authority
CWA	Clean Water Act
DWRM	Division of Water Resource Management
EcoCAT	Ecological Compliance Assessment Tool
EIS	Environmental Impact Statement
IDNR	Illinois Department of Natural Resources
IEPA	Illinois Environmental Protection Agency
ILCS	Illinois Compiled Statutes
ILRDSS	Illinois River Decision Support System
ISWS	Illinois State Water Survey
MWRD	Metropolitan Water Reclamation District of Greater Chicago
NEPA	National Environmental Policy Act
NPDES	National Pollution Discharge Elimination System
NRCS	Natural Resources Conservation Service
NWI	National Wetlands Inventory
RLE	Red Line Extension
ROW	right-of-way
TARP	Tunnel and Reservoir Plan
TMDLs	Total Maximum Daily Loads
UPRR	Union Pacific Railroad
USACE	U.S. Army Corps of Engineers
USC	United States Code
USDA	U.S. Department of Agriculture
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
WMO	Watershed Management Ordinance

Section 1
Summary

This technical memorandum analyzes the potential impacts of the Red Line Extension (RLE) Project on water resources, including surface and groundwater resources, the local drainage system, water quality, and wetlands. Potential impacts on floodplains are not discussed in this technical memorandum; potential impacts on floodplains will be included in the Draft Environmental Impact Statement (EIS).

The areas of potential impact (APIs) for the water resources evaluation included an area 500 feet on either side of the alternative centerlines; the API is different for each alternative and each alternative option. In order to determine alternative-specific impacts on water resources, existing data on surface and groundwater resources, drainage patterns, water quality, the water supply, and wetlands were reviewed. A field visit was conducted to evaluate potential wetlands.

Lake Michigan is the dominant topographic feature in the region and is approximately 4.8 miles from the RLE alignment at its closest point. Lake Calumet is in the eastern portion of the project area, and the Little Calumet River flows along the southern boundary of the project area. The project area is urbanized and is primarily made up of commercial and residential development. The APIs are in portions of two watersheds: the Chicago/Calumet watershed and the Lake Michigan watershed. The features of all alternatives would be within the Chicago/Calumet watershed. The Lake Michigan watershed is to the east of Union Pacific Railroad (UPRR) Rail Alternative Segment UB; the only portion of the project area that would be in the Lake Michigan watershed is an access road (Illinois River Decision Support System [ILRDSS] 2009). The APIs are not within the Inland Waterway Coastal Zone boundary or a sole source aquifer. The Little Calumet River is on the Illinois 303(d) list of impaired waterways; it is listed as impaired for mercury, polychlorinated biphenyls, aldrin, iron, dissolved oxygen, total phosphorus, and silver (Illinois Environmental Protection Agency [IEPA] 2012b). No Total Maximum Daily Loads (TMDLs) have been developed for this portion of the Little Calumet River. Due to the predominance of impervious surfaces throughout the APIs, minimal percolation to the underlying groundwater occurs.

Potential wetlands were identified at the sites of the Bus Rapid Transit (BRT) Alternative 130th Street park & ride; UPRR Rail Alternative South Station Option and West Station Option; and the 120th Street yard and shop. All sites are highly disturbed and hydrophytic vegetation is present. It is likely that large portions of these sites would be considered wetlands, but not all of the areas may be jurisdictional wetlands subject to regulation. As a basis for impact analysis and to evaluate the maximum potential impact, the following areas (approximate) were considered to be potential wetlands:

- 1.5 to 9 acres of the BRT Alternative 130th Street park & ride site (final impact acreage will be dependent on a formal wetland delineation)

- 14 acres in the vicinity of the UPRR Rail Alternative 120th Street yard and shop location
- 7 acres associated with the UPRR Rail Alternative South Station Option
- 6 acres associated with the UPRR Rail Alternative West Station Option

It is likely that some surface water connections exist between these wetland areas and the Little Calumet River, making some of these areas jurisdictional wetlands. It is more likely that a surface water connection exists from the sites of the BRT Alternative park & ride and UPRR Rail Alternative stations to the river than from the yard site to the river. Due to the highly disturbed topography, a connection would require extensive research and fieldwork to confirm. The fieldwork and formal wetland delineation would take place at the time of the permit application, concurrent with final design.

This analysis identifies maximum potential wetland impacts; formal wetland delineations and confirmation of impacts would be performed following the determination of an environmentally preferred alternative and concurrent with final design. Actual impacts would likely be fewer and/or smaller than the maximum impacts described in this report. Table 1-1 (at the end of this section) summarizes the impacts on water resources including drainage, groundwater, water quality, and wetlands.

The physical modifications associated with the alternatives would result in impacts on the existing stormwater drainage infrastructure, particularly where park & ride facilities would be constructed. These alterations would not greatly affect the direction of drainage through the project area and would not change drainage within the watershed. Following mitigation, there would be no adverse permanent impacts on stormwater drainage associated with the alternatives.

Mitigation options proposed herein would be confirmed during the design and engineering process in the event that contaminated groundwater was encountered and it was determined that there would be the potential for the contamination to spread. Additional best management practices that would address potential impacts from encountering contaminated groundwater and groundwater dewatering are proposed in the *Hazardous Materials Technical Memorandum*.

There would be no adverse permanent or construction impacts on water quality associated with the alternatives following mitigation. The transit system would replace automobile trips and there would be an associated reduction in roadway pollutants. The introduction of new impervious surfaces would have the potential to increase the concentration and accumulation of runoff contaminants; however, there would be no adverse permanent or construction impacts following mitigation. Due to the predominance of impervious surfaces throughout the project area, minimal percolation to the underlying groundwater occurs in the APIs. Therefore, any potential increases in contaminated surface water runoff would have no adverse impact on groundwater quality.

The RLE Project, with compensatory mitigation, either through creation, restoration, enhancement, or preservation of wetlands, would result in no adverse permanent impacts on affected wetlands in the APIs. There are several potential underutilized or vacant industrial land areas, with a connection to the Little Calumet River, that exist within 3 miles of the alternative alignments; these land areas could be restored as compensatory mitigation. Construction staging areas would be sited outside of wetlands as much as possible, but if there were any temporary impacts, those areas would be reconstructed as wetlands following construction.

Development of the BRT Alternative, UPRR Rail Alternative, or Halsted Rail Alternative in combination with related renovation, new construction, and transportation projects identified in the vicinity of the proposed project would not contribute to substantial cumulative water quality, hydrology, and/or drainage impacts.

Updated July 28, 2015
In August 2014, based on the technical analysis and public input until then, CTA announced the NEPA Preferred Alternative—the UPRR Rail Alternative. CTA is considering two alignment (route) options of this alternative: the East Option and the West Option. At this time, CTA is also considering only the South Station Option of the 130th Street Station. In late 2014 and early 2015, CTA conducted additional engineering on the East and West Options to refine the East and West Option alignments. Appendix G of this technical memorandum summarizes the refined alignments and any additional or different impacts that would result. The information in Appendix G supersedes information presented in other chapters of this technical memorandum.

Table 1-1: Maximum Potential Water Resources Impacts

	Permanent				Construction			
	Drainage	Groundwater	Water Quality	Wetlands	Drainage	Groundwater	Water Quality	Wetlands
No Build Alternative	No impacts	No impacts	No impacts	No wetlands - No impacts	No impacts	No impacts	No impacts	No wetlands - No impacts
BRT Alternative	No adverse impacts	No adverse impacts	No adverse impacts after mitigation	Compensatory mitigation	No adverse impacts after mitigation	No adverse impacts after mitigation	No adverse impacts after mitigation	Compensatory mitigation
UPRR Rail Alternative ROW Option Segment UA	No adverse impacts after mitigation - pump station	No adverse impacts	No adverse impacts after mitigation	No wetlands - No impacts	No adverse impacts after mitigation	No adverse impacts after mitigation	No adverse impacts after mitigation	No wetlands - No impacts
UPRR Rail Alternative East Option Segment UA	No adverse impacts after mitigation - pump station	No adverse impacts	No adverse impacts after mitigation	No wetlands - No impacts	No adverse impacts after mitigation - pump station	No adverse impacts after mitigation	No adverse impacts after mitigation	No wetlands - No impacts
UPRR Rail Alternative West Option Segment UA	No adverse impacts after mitigation	No adverse impacts	No adverse impacts after mitigation	No wetlands - No impacts	No adverse impacts after mitigation	No adverse impacts after mitigation	No adverse impacts after mitigation	No wetlands - No impacts
UPRR Rail Alternative Segment UB	No adverse impacts after mitigation	No adverse impacts	No adverse impacts after mitigation	Compensatory mitigation	No adverse impacts after mitigation	No adverse impacts after mitigation	No adverse impacts after mitigation	Compensatory mitigation
UPRR Rail Alternative 120th Street Yard & Shop	No adverse impacts after mitigation	No adverse impacts	No adverse impacts after mitigation	Compensatory mitigation	No adverse impacts after mitigation	No adverse impacts after mitigation	No adverse impacts after mitigation	Compensatory mitigation
Halsted Rail Alternative Segment HA	No adverse impacts after mitigation	No adverse impacts	No adverse impacts after mitigation	No wetlands - No impacts	No adverse impacts after mitigation	No adverse impacts after mitigation	No adverse impacts after mitigation	No wetlands - No impacts

	Permanent				Construction			
	Drainage	Groundwater	Water Quality	Wetlands	Drainage	Groundwater	Water Quality	Wetlands
Halsted Rail Alternative Segment HB	No adverse impacts after mitigation	No adverse impacts	No adverse impacts after mitigation	No wetlands - No impacts	No adverse impacts after mitigation	No adverse impacts after mitigation	No adverse impacts after mitigation	No wetlands - No impacts
Halsted Rail Alternative 119th Street Yard & Shop	No adverse impacts after mitigation	No adverse impacts	No adverse impacts after mitigation	No wetlands - No impacts	No adverse impacts after mitigation	No adverse impacts after mitigation	No adverse impacts after mitigation	No wetlands - No impacts

Notes:
BRT = Bus Rapid Transit, UPRR = Union Pacific Railroad, ROW = right-of-way

Section 2
Project Description

The Chicago Transit Authority (CTA) is proposing to extend the Red Line from the existing 95th Street Terminal to the vicinity of 130th Street, subject to the availability of funding. The proposed Red Line Extension (RLE) would include four stations. Each station would include bus transfer and parking facilities. This project is one part of the Red Ahead Program to extend and enhance the entire Red Line. The CTA is also planning 95th Street Terminal improvements that are anticipated to be completed prior to the proposed RLE construction.

The project area is 11 miles south of the Chicago central business district (commonly referred to as the Loop) and encompasses approximately 20 square miles. The boundaries of the project area are 95th Street on the north, Ashland Avenue on the west, Stony Island Avenue on the east, and the Calumet-Sag Channel/Little Calumet River and 134th Street on the south. The I-57 Expressway and I-94 Bishop Ford Freeway cross the western and eastern edges of the project area, respectively. Lake Calumet is in the eastern portion of the project area. The project area encompasses parts of nine community areas in the City of Chicago and the eastern section of the Village of Calumet Park. Chicago community areas include Beverly, Washington Heights, Roseland, Morgan Park, Pullman, West Pullman, Riverdale, Hegewisch, and South Deering. The project area comprises residential (primarily single family), industrial (both existing and vacant), transportation (including freight), and commercial development.

The Draft Environmental Impact Statement (EIS) focuses on the following alternatives (shown in Figure 2-1), which emerged from the Alternatives Analysis and the National Environmental Policy Act (NEPA) scoping process:

- No Build Alternative
- Bus Rapid Transit (BRT) Alternative
- Union Pacific Railroad (UPRR) Rail Alternative
  - Right-of-Way (ROW) Option
  - East Option
  - West Option
- Halsted Rail Alternative

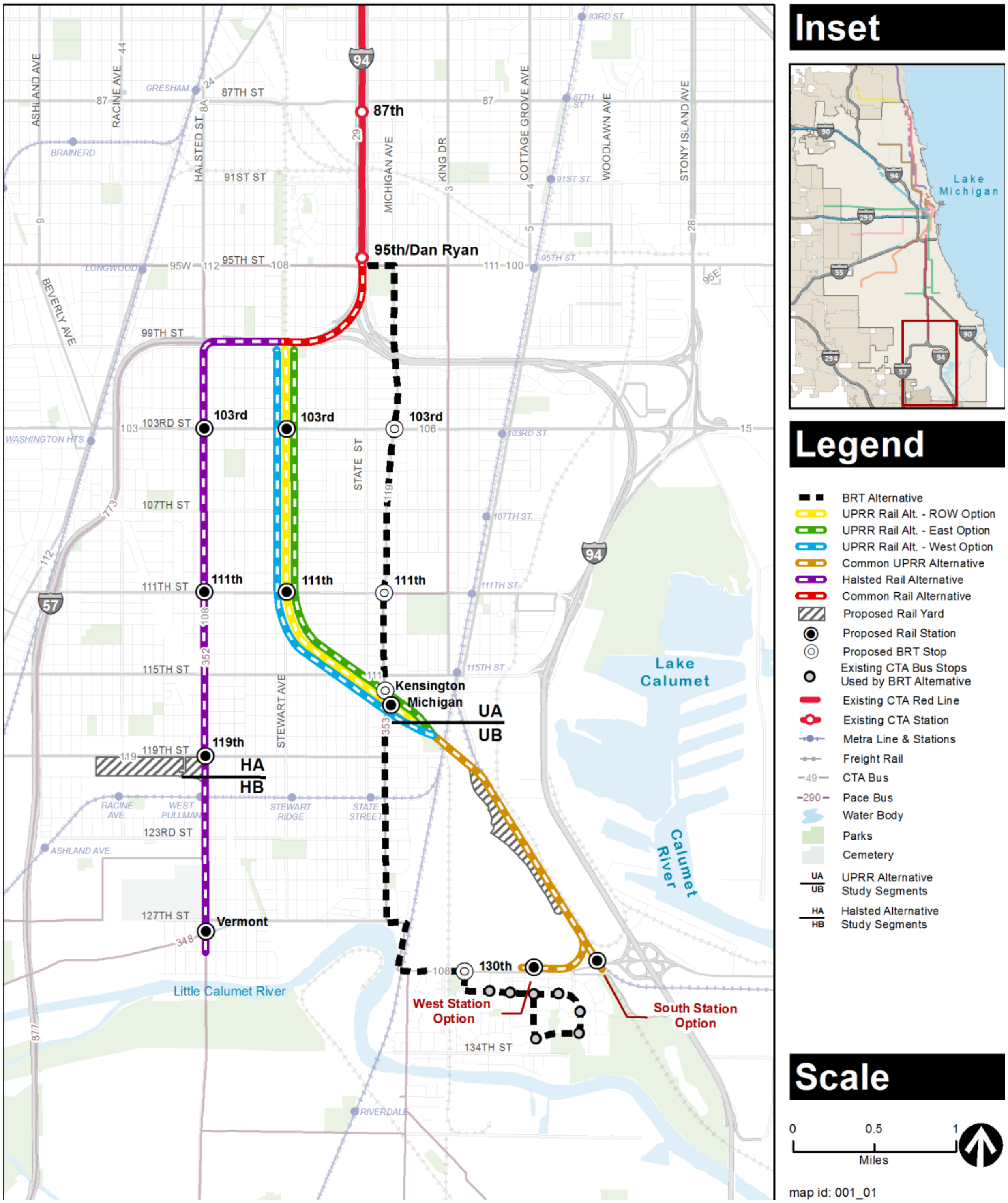

Inset
Lake Michigan
Legend
BRT Alternative
UPRR Rail Alt. - ROW Option
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
Common UPRR Alternative
Halsted Rail Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Proposed BRT Stop
Existing CTA Bus Stops Used by BRT Alternative
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
CTA Bus
Pace Bus
Water Body
Parks
Cemetery
UPRR Alternative Study Segments
Halsted Alternative Study Segments
Scale
0
0.5
1
Miles
map id: 001_01
87th
95th/Dan Ryan
103rd
103rd
103rd
111th
111th
111th
119th
Vermont
Kensington
Michigan
130th
UA
UB
HA
HB
West Station Option
South Station Option
Lake Calumet
Calumet River
Little Calumet River
ASHLAND AVE
RACINE AVE
HALSTED ST
MICHIGAN AVE
KING DR
COTTAGE GROVE AVE
WOODLAWN AVE
STONY ISLAND AVE
STATE ST
STEWART AVE
BEVERLY AVE
87TH ST
91ST ST
95TH ST
99TH ST
103RD ST
107TH ST
111TH ST
115TH ST
119TH ST
123RD ST
127TH ST
134TH ST
GRESHAM
BRAINERD
LONGWOOD
WASHINGTON HTS
83RD ST
87TH ST
91ST ST
95TH ST
103RD ST
107TH ST
111TH ST
115TH ST
RACINE AVE
WEST PULLMAN
STEWART RIDGE
STATE STREET
ASHLAND AVE
RIVERDALE
94
57
94

Figure 2-1: Red Line Extension Project Alternatives

The No Build Alternative is a required alternative as part of the NEPA environmental analysis and is used for comparison purposes to assess the relative benefits and impacts of extending the Red Line. The No Build Alternative is carried into the Draft EIS phase of the project development regardless of its performance versus the build alternatives under consideration. No new infrastructure would be constructed as part of the No Build Alternative other than committed transportation improvements that are already in the Chicago Metropolitan Agency for Planning (CMAP) Fiscal Year 2010–2015 Transportation Improvement Program (TIP) and the improvements to 95th Street Terminal. The TIP projects within the project area consist of four bridge reconstructions, several road improvement projects including resurfacing and coordination of signal timing on 95th Street, work on Metra's facilities, construction of a bicycle/pedestrian multi-use trail, and preservation of historic facilities. The No Build Alternative includes regular maintenance of existing track and structures, and bus transit service would be focused on the preservation of existing services and projects. All elements of the No Build Alternative are included in each of the other alternatives. Under this alternative, travel times would not improve from existing conditions.

The BRT Alternative (formerly referred to as the Transportation Systems Management Alternative) is a 5.0-mile, limited-stop, enhanced BRT route, which would operate 24 hours per day between the existing 95th Street Terminal and the intersection of 130th Street and Eberhart Avenue. No dedicated bus lanes would be provided for the BRT Alternative; however, parking lanes would be removed for some portions of the alignment and four stops with improved bus shelters and park & ride facilities would be created at 103rd Street and Michigan Avenue, 111th Street and Michigan Avenue, Kensington Avenue and Michigan Avenue, and 130th Street and Eberhart Avenue. Although BRT service elements would not continue south of the 130th Street stop, the bus route would continue through Altgeld Gardens along the existing route with six stops. The BRT Alternative would be consistent with bus routing changes that may occur as part of improvements to the 95th Street Terminal. Under this alternative, travel times between 130th Street and the Loop would improve over existing conditions.

The UPRR Rail Alternative is a 5.3-mile extension of the heavy rail transit Red Line from its existing 95th Street Terminal to 130th Street, just west of I-94. The Chicago Transit Board designated the UPRR Rail Alternative as the Locally Preferred Alternative at its August 12, 2009 board meeting. This alternative includes construction and operation of new heavy rail transit tracks, mostly in existing transportation corridors. The UPRR Rail Alternative has three options for alignment (ROW, East, and West), all of which would include operation on elevated structure from 95th Street to just past the Canadian National/Metra Electric District tracks near 119th Street. The alignment would then transition to at-grade through an industrial area with no public through streets, terminating at 130th Street in the vicinity of Altgeld Gardens. Four new stations would be constructed at 103rd Street, 111th Street, Michigan Avenue, and 130th Street. The 130th Street station would be the terminal station, with two options under evaluation: the South Station Option and the West Station Option. A new yard and shop facility would be sited near 120th Street and Cottage Grove Avenue. The bus routes in the vicinity of the UPRR Rail Alternative would be modified to enhance connectivity between the Red Line and the bus network. The hours

of operation for the UPRR Rail Alternative would be the same as for the current Red Line (24 hours every day of the year), and the service frequency is expected to be the same as current service. Under this alternative, travel times between 130th Street and the Loop would improve substantially over existing conditions.

The Halsted Rail Alternative is a 5.0-mile heavy rail transit extension of the existing Red Line. In this alternative, the Red Line would operate on an elevated structure running south from 95th Street along I-57 until Halsted Street. The alignment would then turn south and continue along Halsted Street to the intersection of Halsted Street and Vermont Avenue near 127th Street. This alternative would include four new stations at 103rd Street, 111th Street, 119th Street, and Vermont Avenue. A new yard and shop would be sited west of Halsted Street and between the 119th Street and Vermont Avenue stations. The bus routes in the vicinity of the Halsted Rail Alternative would be modified to enhance connectivity to the Red Line. The hours of operation for the Halsted Rail Alternative would be the same as for the current Red Line (24 hours every day of the year), and the service frequency is expected to be the same as current service. Under this alternative, travel times between 127th Street and the Loop would improve substantially over existing conditions. This alternative would not extend rail to Altgeld Gardens, which would be served by bus connecting to the Vermont station.

Section 3
Methods for Impact Evaluation

This analysis included an evaluation of the existing water resources, including wetlands, within an API of 500 feet around each alternative alignment. The analysis also resulted in the identification of proposed best management practices and mitigation measures to avoid, minimize, mitigate, and compensate for adverse impacts. Although floodplain impacts are not analyzed in this technical report, the EIS document reports the results of the floodplain analysis.

3.1 Regulatory Framework

This section describes federal, state, regional, and local regulations and requirements related to water resources.

3.1.1 Federal

3.1.1.1 Clean Water Act (33 United States Code 1251)

The Clean Water Act (CWA) establishes the basic structure for regulating discharges of pollutants into waters of the United States and gives the U.S. Environmental Protection Agency (USEPA) the authority to implement pollution control programs and actions, such as setting wastewater standards for industries.

3.1.1.2 Clean Water Act (Section 303(d))

Section 303(d) of the CWA requires states, territories, and authorized tribes to develop a list of water quality-impaired segments of waterways. The 303(d) list includes water bodies that do not meet water quality standards for their specified beneficial uses, even after point sources of pollution have the minimum required levels of pollution control technology. The law requires that jurisdictions establish priority rankings for water bodies on their 303(d) lists and implement a process, called TMDLs, to meet water quality standards.

Section 4 describes the existing condition of waterways and groundwater in the project area, established beneficial uses, and associated TMDLs. These water quality regulations would be applicable during construction and operation of the project alternatives.

3.1.1.3 Clean Water Act (Section 401)

Section 401 of the CWA requires a State Water Quality Certification to show that the proposed project will comply with State water quality standards for any activity that results in a discharge to a water body. In the event that a proposed alternative requires permitting under CWA Section 404 (described below, Section 404 regulates the discharge of dredged or fill material into waters of the United States), a water quality certification is required under CWA Section 401. These regulatory requirements are applicable during construction.

3.1.1.4 Clean Water Act - National Pollution Discharge Elimination System (Section 402)

The National Pollution Discharge Elimination System (NPDES) permit process provides a regulatory mechanism for the control of point source discharges—a municipal or industrial discharge from a specific location or pipe—to surface waters of the United States. Two exceptions that are regulated under the NPDES program are (1) diffuse source discharges caused by general construction that disturb more than 1 acre, and (2) stormwater discharges from municipal stormwater systems that are a separate system in which runoff is carried through a developed conveyance system to specific discharge locations.

The NPDES program regulates pollution generated by runoff from construction, industrial activities, and general and urban land use, including runoff from streets. Federal stormwater regulations require municipalities to obtain NPDES permits for stormwater discharges from municipal storm drains to surface waters. In 1990, USEPA established final regulations for stormwater discharges through the implementation of Section 402(p) of the CWA. The two permits that enforce Section 402(p), the General Industrial Permit and the General Construction Permit, are major attempts to control non-point source pollutants that discharge to local storm drain systems and receiving waters in urban runoff. A General Construction Permit would be required during construction of the proposed alternatives.

3.1.1.5 Clean Water Act (Section 404)

Section 404 of the CWA authorizes the U.S. Army Corps of Engineers (USACE) to issue permits for the discharge of dredged or fill material into waters of the United States, including wetlands (33 United States Code [USC] 1344). The USEPA guidelines (40 Code of Federal Regulations [CFR] 230 et seq.), USACE regulatory guidelines (33 CFR 320 et seq.), and NEPA guidelines (40 CFR 1500 et seq.) are the substantive environmental criteria used to evaluate permit applications submitted to USACE. The USEPA's guidelines suggest a sequential approach to project planning; mitigation measures are considered only after the applicant shows that no practicable alternatives are available to achieve the basic project purpose with a lesser environmental impact. The USACE evaluation of permit applications includes an analysis of practicable alternatives, which is the primary screening mechanism used to determine the appropriateness of permitting a discharge. Section 404(b)(1) guidelines prohibit discharges of dredged or fill material into waters of the United States, including wetlands, if a practicable alternative to the proposed discharge exists that would have less adverse impacts on the aquatic ecosystem (provided that the alternative does not cause other significant adverse environmental impacts) (40 CFR 230[a]).

The 1987 USACE *Wetland Delineation Manual* (USACE 1987) is the current federal delineation manual used in the CWA Section 404 for the identification and delineation of wetlands. The three parameters for defining wetlands are as follows:

- Hydric soils (soils formed under saturation, flooding, or ponding conditions long enough during the growing season to develop anaerobic conditions)

- Wetland hydrology (“areas that are periodically inundated or have soils saturated to the surface at some time during the growing season” [USACE 1987])
- Hydrophytic vegetation (vegetation that thrives in wet conditions)

All three parameters are required “under normal circumstances” for a location to be considered a wetland. Determining whether normal circumstances exist in a disturbed area “involves an evaluation of the extent and relative permanence of the physical alteration of wetland hydrology and hydrophytic vegetation” and consideration of the “purpose and cause of the physical alterations to hydrology and vegetation” (USACE 1987). The Supreme Court refined the requirements for wetlands to be considered jurisdictional based on its 2001 decision *Solid Waste Agency of Northern Cook County v. USACE*, which concluded that a wetland is required to be hydrologically connected to a jurisdictional water of the United States.

3.1.1.6 Rivers and Harbors Appropriation Act of 1899 (33 United States Code 403)

Section 10 of the Rivers and Harbors Act of 1899 (33 USC 403) prohibits the unauthorized obstruction or alteration of any navigable water of the United States. This section provides that the construction of any structure in or over any navigable water of the United States, or the accomplishment of any other work affecting the course, location, condition, or physical capacity of such waters is unlawful unless the work has been recommended by the Chief of Engineers and authorized by the Secretary of the Army. The Secretary of the Army's approval authority has since been delegated to the Chief of Engineers.

3.1.1.7 Sole Source Aquifers (40 Code of Federal Regulations 149)

Sole source aquifer designation is one tool to protect drinking water supplies in areas with few or no alternative sources to the groundwater resource, and where, if contamination occurred, using an alternative source would be extremely expensive. The designation protects an area's groundwater resource by requiring USEPA to review all proposed projects within the designated area that will receive federal financial assistance. All proposed projects receiving federal funds are subject to review, to ensure that the projects do not endanger the groundwater source.

The USEPA defines a sole or principal source aquifer as one that supplies at least 50 percent of the drinking water consumed in the area overlying the aquifer. These areas may have no alternative drinking water source(s) that could physically, legally, and economically supply all those who depend upon the aquifer for drinking water. For convenience, all designated sole or principal source aquifers are referred to as "sole source aquifers."

3.1.1.8 Protection of Wetlands (Executive Order 11990)

Executive Order 11990 directs federal agencies to minimize the destruction, loss, or degradation of wetlands. It also assures the protection, preservation, and enhancement of the nation’s wetlands to the fullest extent practicable during the planning, construction, funding, and operation of transportation facilities and projects.

3.1.1.9 Floodplain Management (Executive Order 11988)

Executive Order 11988 directs federal agencies to avoid conducting, allowing, or supporting actions on a floodplain. The order requires that the federal agency evaluate the potential effects of any actions that it may take in a floodplain.

3.1.2 State

Title 17 of the Illinois Administrative Code covers conservation; Part 3704 covers Regulation of Public Waters. The Division of Water Resource Management (DWRM) of the Illinois Department of Natural Resources (IDNR) issues permits for construction and other activities in public waters of the State. Public waters may generally be described as commercially navigable lakes and streams of the State and the backwater areas of those streams. There are certain public rights in public waters that are reserved for the citizens of the State.

The DWRM reviews proposed activities in public waters to ensure that the public's rights are not diminished by the activity. Activities that require review are not limited to construction. A permit is issued to demonstrate that the activity does not diminish the public's rights. A construction project in public waters may also require review under Parts 3700 (Construction in Floodways of Rivers, Lakes, and Streams), 3702 (Construction and Maintenance of Dams), or 3708 (Floodway Construction in Northeastern Illinois), as well as the Part 3704 rules. A number of common, minor construction activities regulated under Part 3704 are automatically authorized by statewide permits or by Regional Permit No. 3 (Authorizing Construction of Minor Projects in Northeastern Illinois Regulatory Floodways). A permit application submittal to DWRM is not needed for a construction activity that meets the terms and conditions of one or more of these statewide or regional permits.

3.1.2.1 Illinois Coastal Program

The Illinois Coastal Management Program was approved in November 2011. The program defines Inland Waterway Coastal Zone Boundaries, which consist of waterways close to the shore of Lake Michigan and designated land on either side of waterways. These areas are subject to the requirements of the federal Coastal Zone Management Act.

3.1.2.2 Illinois Interagency Wetland Policy Act of 1989

The Illinois Interagency Wetlands Policy Act of 1989 (the Act [20 Illinois Compiled Statues (ILCS) 830 et seq.]) is intended to ensure that there is no overall net loss of the State's existing wetland acres or their functional values resulting from State-supported activities.

The Act charges State agencies with a further duty to "preserve, enhance, and create wetlands where necessary to increase the quality and quantity of the State's wetland resource base" (20 ILCS 830/1-4). The Act uses the same definition for wetlands as defined in the 1987 USACE *Wetland Delineation Manual* used by federal agencies in implementation of the federal CWA.

All three parameters (hydric soils, wetland hydrology, and hydrophytic vegetation) are required for a location to be considered a wetland. However, areas that have been restored or created as the result of mitigation or planned construction projects, and that function as wetlands, are also defined as wetlands under the Act even when all three wetland parameters are not yet present.

3.1.2.3 Illinois Rivers, Lakes, and Streams Act

The Illinois Rivers, Lakes, and Streams Act regulates construction in floodplains and focuses on preserving the hydrological integrity of the State's public waters. There are two separate but similar floodplain regulatory programs established in the Illinois Rivers, Lakes, and Streams Act. One is for the six metropolitan counties in northeastern Illinois: Cook, DuPage, Kane, Lake, McHenry, and Will. The second program is for the rest of Illinois. The purpose of both programs is to "protect the rights, safety, and welfare of private and public landowners by the regulation of floodway development, [because] construction activities which restrict a stream's capacity to carry flood flows may result in channel instability and increased flood damages to neighboring properties" (State of Illinois 1994). The Northeastern Illinois Program requires permits be issued for construction in any regulated floodway.

3.1.3 Local

3.1.3.1 Cook County Watershed Management Ordinance

The Metropolitan Water Reclamation District of Greater Chicago (MWRD) began developing a countywide stormwater management regulatory ordinance to be known as the Cook County Watershed Management Ordinance (WMO) in 2007. The WMO's goal is to establish uniform, minimum, countywide stormwater management regulations. Components that may be regulated under the WMO include drainage and detention, floodplain management, wetland protection, stream habitat and riparian environment protection, soil erosion and sediment control, and water quality.

3.1.3.2 Cook County Stormwater Management Plan

On February 15, 2007, the MWRD's Board of Commissioners adopted the Cook County Stormwater Management Plan (CCSMP) by ordinance. The CCSMP is a high-level organizational plan wherein the overall framework for the countywide program is established and which MWRD is required to adopt as a first step in establishing its countywide stormwater management program. The CCSMP is not a regulatory ordinance and does not set forth any rules, regulations, or standards to which a municipality will be held or be required to enforce.

3.1.3.3 City of Chicago Stormwater Management Ordinance

It is the policy of the City of Chicago to encourage and promote programs with the following goals:

- Minimize the negative stormwater impacts of new development and redevelopment.
- Protect and conserve land and water resources in conjunction with orderly and responsible property development.
- Prevent pollution of local waters, groundwater, and land.

- Minimize stormwater flows into the combined sewer system by minimizing impervious surfaces, promoting infiltration, or discharging to local waters, where appropriate.

- Preserve the natural characteristics of stream corridors in order to moderate flood and stormwater impacts, improve water quality, reduce soil erosion, protect aquatic and riparian habitat, provide recreational opportunities, provide aesthetic benefits, and enhance community and economic development.

- Preserve the natural hydrologic and hydraulic functions of watercourses, floodplains, and wetlands.

- Facilitate existing and future intergovernmental agreements for stormwater management.

- Manage stormwater on the site of a regulated development to the fullest feasible extent.

To achieve these goals, the primary stormwater management objectives for development sites are to (1) reduce impervious areas, (2) capture stormwater on site, and (3) either use or retain the stormwater on-site for evaporation and absorption into the ground. Stormwater that is not used or retained may be discharged into a city-owned combined sewer, storm sewer, or open waterway.

3.1.3.4 Village of Calumet Park

Chapter 151 of the Calumet Park Code of Ordinances regulates Flood Protection and Prevention in order to maintain the "Village's eligibility in the National Flood Insurance Program; to minimize potential losses due to periodic flooding including loss of life, loss of property, health and safety hazards, disruption of commerce and governmental services, extraordinary public expenditures for flood protection and relief, and impairment of the tax base, all of which adversely affect the public health, safety and general welfare; and to preserve and enhance the quality of surface waters, conserve economic and natural values and provide for the wise utilization of water and related land resources" (Village of Calumet Park 2008).

Calumet Park Ordinance 98-712 prohibits the use of groundwater as a potable water supply.

3.2 Impact Analysis Thresholds

While NEPA does not specify federal thresholds of significance for impacts on water resources, it does require that EISs be integrated with the environmental analyses and related surveys and studies required by other federal statutes. Based upon the regulatory framework established by the regulations discussed in Section 3.1, a qualitative evaluation was performed to evaluate potential impacts on water resources.

For the purpose of this EIS, an impact would be adverse if it would do any of the following:

- Violate any applicable water quality standards or waste discharge requirements.

- Affect the rate or change the direction of movement of existing groundwater contaminants, or expand the area affected by contaminants.
- Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table.
- Substantially alter the existing drainage pattern of the site or area, including the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on- or off-site.
- Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.
- Destruction, loss, or degradation of wetlands, including any net loss of their functional values.
- Discharges of dredged or fill material into wetlands.
- Otherwise substantially degrade water quality.

3.3 Area of Potential Impact

The APIs for the water resources evaluation extend 500 feet on either side of the project alternative centerlines; the API is different for each alternative and each alternative option. The RLE alternatives are shown in Figure 2-1. Given that the project would occur in a highly urbanized environment, the effects of construction and operation on water resources would not be expected to extend beyond 500 feet.

3.4 Methods

Existing data sources were reviewed to evaluate potential impacts on water resources. The evaluation of potential wetland impacts included a field reconnaissance to establish the potential presence and condition of wetlands within the project area. The potential permanent and/or construction effects of each alternative on identified water resources were evaluated. Measures to avoid, minimize, mitigate, and compensate for potential adverse impacts were proposed.

3.4.1 Review Existing Data

In order to determine alternative-specific impacts on water resources, existing data on surface and groundwater resources, drainage patterns, water quality, and water supply were reviewed. Existing TMDLs and NPDES permits, which could affect the project, were also reviewed. Information from USEPA Region V was reviewed to determine whether the project area has any sole source aquifers. The APIs were reviewed to determine whether they are within the designated coastal zone.

Existing wetland data was obtained from the U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) and also from the updated coverage prepared by Ducks Unlimited under contract with USFWS. To help locate wetland sites that may have been missed, the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Web Soil Survey website was used, where available, to locate areas of potentially hydric soils. The IDNR Ecological Compliance Assessment Tool (EcoCAT) was reviewed to identify resources mapped by IDNR.

3.4.2 Field Review

A general field reconnaissance was conducted to identify potential wetlands within the project area. Aerial photographs were used to evaluate existing mapped wetlands and to help pinpoint potential sensitive areas that may not be included in any of the existing wetland maps or inventories. Potential wetlands within the APIs were evaluated to locate any potential wetland resources intersecting the project area.

The 1987 USACE *Wetland Delineation Manual* was used to determine the presence of wetlands in the project area; the *Wetland Delineation Manual* defines areas as wetland if they meet all three parameters (hydric soils, wetland hydrology, and hydrophytic vegetation). Reconnaissance level wetland assessments were completed and no formal wetland delineations were conducted, although an estimate of wetland size was calculated from aerial photographs after the field review confirmed the presence and extent of wetland areas. Using the USACE manual, each potential wetland site was evaluated for the presence or absence of hydric soils, the dominance of hydrophytic vegetation, and the presence or absence of wetland hydrology.

3.4.3 Impact Analysis

Potential impacts that would be associated with the alternatives were identified, then categorized and analyzed separately based on whether the impacts would be related to permanent activities or construction-period activities. Results of the field survey were used to determine whether wetlands might be present and whether they might be affected within the project area. Wetland resources were described at a reconnaissance level of detail and each alternative was assessed for potential impacts on wetlands within the project area.

Permanent impacts on water resources could result from stormwater runoff, changes in impervious surfaces throughout the APIs (resulting in changes to groundwater infiltration), and surface water and groundwater contamination. Each of these potential permanent impacts was analyzed in relation to applicable permits and regulations.

Construction-related potential impacts on water resources could result from stormwater runoff as well as impacts on the existing drainage infrastructure. Existing water quality conditions and beneficial uses in project area watersheds were assessed. Water quality regulations that would apply to construction of the project alternatives were identified. Each of the alternatives was analyzed for potential construction-related surface water sedimentation impacts generated by erosion and runoff from construction staging areas. Possible groundwater contamination resulting from implementation of the alternatives was considered. Mitigation options were identified to address these potential effects in accordance with applicable NPDES permit requirements and other water resources regulations.

For potential wetlands identified in the API of the NEPA preferred alternative, formal wetland delineations would be performed at the time of permit application submittal, concurrent with final design, to refine the specific area of impacts. The NEPA analysis would support the permit application and review in compliance with wetlands regulations as appropriate. This analysis identifies maximum potential wetland impacts; formal wetland delineations and confirmation of impacts would be performed for the NEPA preferred alternative. Actual impacts would likely be fewer and/or smaller than the maximum impacts described in this report.

Each project alternative was qualitatively assessed for potential impacts on water resources within the project area and recommendations were identified for avoiding and minimizing water resources impacts, as well as potential mitigation measures.

Section 4
Affected Environment

Lake Michigan is the dominant topographic feature in the region and is approximately 4.8 miles from the project area at its closest point near the UPRR Rail Alternative alignment. Lake Calumet is in the eastern portion of the project area, and the Little Calumet River flows along the southern boundary of the project area. The project area is urbanized and is primarily made up of commercial and residential development. Figure 4-1 depicts a regional view of the project area and identifies Lake Calumet and the Little Calumet River.

4.1 Municipal Water Supply/Wastewater Collection

The City of Chicago Department of Water Management is responsible for treating and supplying potable water in the project area. Lake Michigan is the drinking water source for Chicago and its suburbs. Groundwater is not a drinking water source within the project area. The Jardine Water Purification Plant draws raw water from Lake Michigan and serves the northern areas of the City and suburbs, while the South Water Purification Plant draws raw water from Lake Michigan and serves southern areas of the City and suburbs. The Village of Calumet Park also receives water from Lake Michigan.

The MWRD is responsible for wastewater collection and treatment in the project area, including the Village of Calumet Park, which has a combined sewer system to collect both sanitary sewage and stormwater runoff. This agency maintains regional sewer interceptors within the project area.

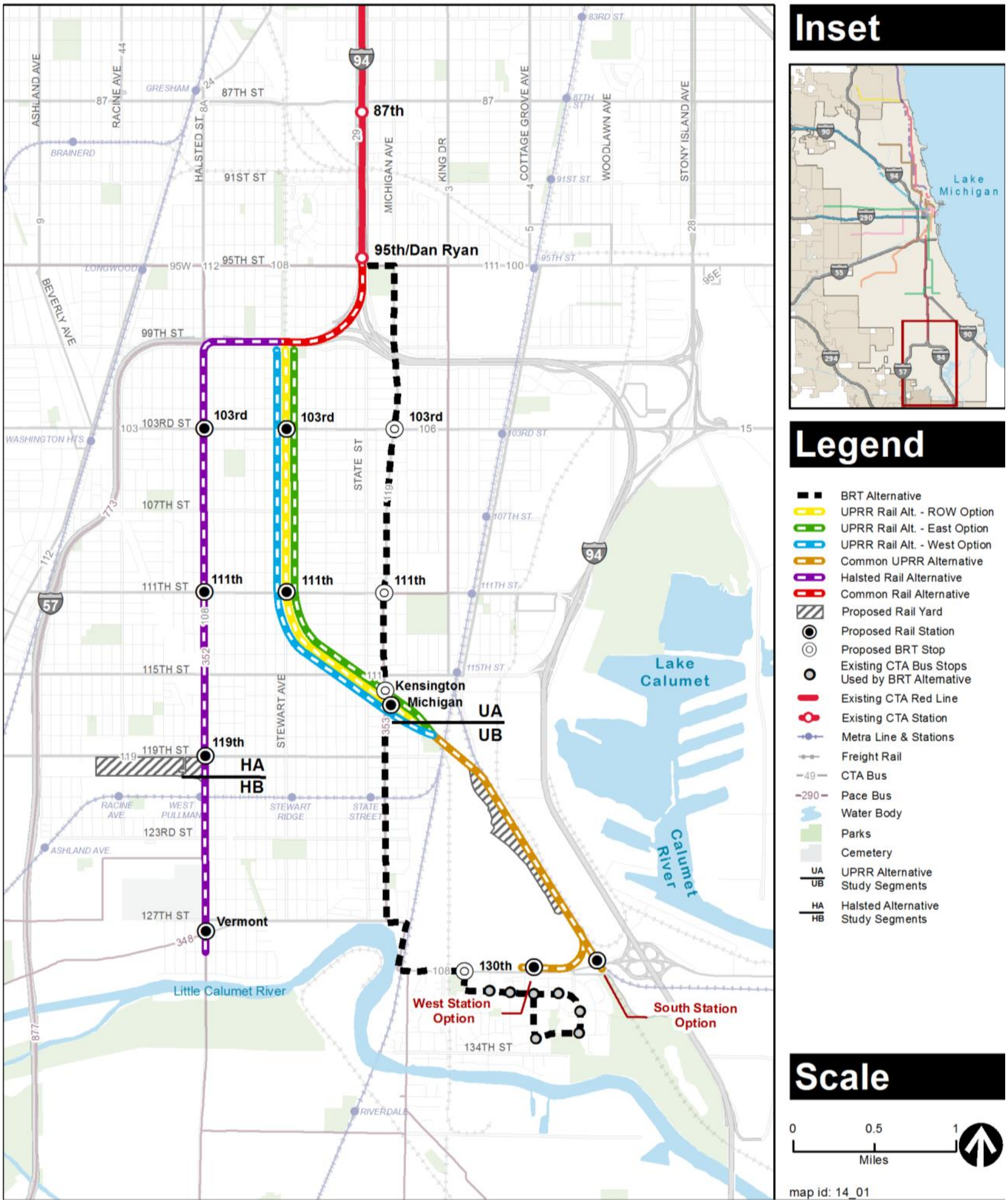
4.2 Surface Water

4.2.1 Regional Surface Water Setting and Conditions

The APIs are in two watersheds: the Chicago/Calumet watershed and the Lake Michigan watershed. The features of all alternatives would be within the Chicago/Calumet watershed. The Lake Michigan watershed is to the east of Segment UB; the only portion of the project that would be in the Lake Michigan watershed is an access road (ILRDSS 2009).

The Lake Michigan watershed (U.S. Geological Survey [USGS] Cataloging Unit 04040002) lies along the Lake Michigan shoreline, and has a drainage area of about 90 square miles (ILRDSS 2011b). The Chicago/Calumet watershed (USGS Cataloging Unit 07120003) lies directly west of the Lake Michigan watershed, and covers about 580 square miles. Both watersheds are primarily residential and urban, with some forests throughout. The far south of the Chicago/Calumet watershed contains a few agricultural areas (ILRDSS 2011a).

Lake Michigan borders Illinois, Indiana, Michigan, and Wisconsin. It is the second largest Great Lake by volume, with 1,180 cubic miles of water. Lake Michigan is the third largest Great Lake by area.


Inset
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BRT Alternative
UPRR Rail Alt. - ROW Option
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Water Body
Parks
Cemetery
UPRR Alternative Study Segments
Halsted Alternative Study Segments
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95th/Dan Ryan
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Kensington
Michigan
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Figure 4-1: Project Area including Waterbodies

The climate for the project area is typically continental with cold winters and warm summers. The average temperature for the project area is around 52 degrees Fahrenheit (°F), with the average high around 83°F in the summer and the average low around 21°F in the winter. There are about 130 rain days per year (Illinois State Water Survey [ISWS] - Illinois State Climatologist Data 2012). Lake Michigan moderates the regional temperature and causes cooler summers and warmer winters (ISWS - Institute of Natural Resource Sustainability 2012) than other areas of the state. Per the Chicago Climate Change Task Force (2007), peak runoff is predicted to increase and levels in Lake Michigan are likely to decrease. Peak flows in local rivers are expected to increase slightly, increasing the risk of flooding and associated damages.

Local topography typically varies less than 40 feet, with a minimum elevation of 580 feet and a maximum elevation of 620 feet above sea level.

4.2.2 Local Surface Water Setting and Conditions

The alternative alignments would not cross or come in contact with any local water bodies.

The Little Calumet River flows along the southern boundary of the project area. The Little Calumet River flows to the west, away from Lake Michigan. The river flows into the Cal-Sag Channel then into the Chicago Sanitary and Ship Canal, and then into the Des Plaines River.

Lake Calumet is approximately 0.5 mile east of the UPRR Rail Alternative alignment. The lake is owned by the Illinois International Port District and is 8.6 acres in size.

Lake Calumet lies within the Inland Waterway Coastal Zone boundary, but the APIs do not. The inland waterway corridor consists of both the waterway and designated land area on either side of the waterway, and meets the requirements of federal regulations and guidelines for the inclusion within the coastal zone of rivers (waterways), on which uses may have direct impacts on coastal waters (IDNR 2011).

4.2.3 Surface Water Drainage

Storm drains throughout the project area divert water into the Tunnel and Reservoir Plan (TARP), maintained by MWRD. The TARP is a system of deep rock tunnels and surface reservoirs that capture, convey, and store combined sewage during storms until it can be distributed to MWRD's treatment plants as capacity becomes available. The project area is along the Mainstream tunnel of the TARP system (MWRD 2012b). The combined sewers in the Village of Calumet Park carry runoff to the MWRD interceptors. Stormwater runoff exceeding MWRD interceptor capacity is conveyed to the TARP system. In the event of high flows, TARP discharges to the Little Calumet River, which receives discharges from 15 permitted outfalls (MWRD 2012a).

4.3 Groundwater

Groundwater in the project area is in the deep bedrock Cambrian-Ordovician aquifers. Wells drilled into this aquifer range from 800 to 1,500 feet deep. The estimated sustained yield for the Cambrian-Ordovician aquifer system is 65 million gallons per day; by 1979, pumping from this aquifer reached 182.9 million gallons per day. This pumping caused the groundwater levels to drop over 850 feet by 1980. Lake Michigan became a water resource to DuPage, Kane, Lake, McHenry, and Will counties in the early 1980s. Current withdrawals from the Cambrian-Ordovician aquifers are close to the estimated sustainable yield (ISWS - Center for Groundwater Science 2012).

Smaller aquifers overlying the Cambrian-Ordovician aquifers are not widespread and are not utilized for municipal or private water use. Shallow perched groundwater is commonly identified in the Chicago area, though the substrate materials confining the water are characterized as discontinuous lenses and are not laterally continuous. Groundwater generally flows from areas of higher surface elevation to areas of lower surface elevation and toward the nearest surface water body. The flow direction for groundwater underlying the site is assumed to be to the northeast towards Lake Michigan. Localized perched groundwater may flow toward shallower surface water bodies such as Lake Calumet, the Calumet River, or the Little Calumet River.

There are no sole source aquifers in the project area. The closest sole source aquifer is the St. Joseph Aquifer System in northern Indiana, about 70 miles to the east (USEPA Ground Water Branch 2012).

4.4 Water Quality

4.4.1 Surface Water Quality

Urban stormwater runoff from the project area may have negative impacts on surface water quality. Runoff washes residues from the land surface, including deposits from street surfaces, parking surfaces, facility grounds, vehicles, pesticides, and pet waste into the storm drain system.

The Little Calumet River is regulated under the Secondary Contact and Indigenous Aquatic Life Standards. Water bodies regulated under this standard are suited for secondary contact uses and are capable of supporting indigenous aquatic life (IEPA 2012a).

The Little Calumet River is on Illinois 303(d) list of impaired waterways; it is listed as impaired for mercury, polychlorinated biphenyls, aldrin, iron, dissolved oxygen, total phosphorus, and silver (IEPA 2012b). A TMDL analysis has not been developed for this segment of the Little Calumet River system.

4.4.2 Groundwater Quality

The Cambrian-Ordovician aquifers are known to contain high concentrations of naturally occurring barium and radium. The greatest risk for deep aquifer contamination is through contaminant pathways such as abandoned wells; however, vertical migration of chemicals from the land surface poses a low risk of groundwater contamination. Based on information from the Illinois Groundwater Consortium, concentrations of chloride and total dissolved solids have increased in shallow aquifers in the last 20 years (ISWS - Center for Groundwater Science 2012).

4.5 Wetlands

4.5.1 Bus Rapid Transit Alternative

A data review obtained the following about existing conditions within the BRT Alternative API:

- Aerial Photographs

  A review of the aerial photographs confirmed that the API is heavily urbanized and is characterized by paved surfaces and structures (Google Earth 2012). Few, if any, potential wetland areas would be expected to occur in the API based on the review of aerial photographs.

- IDNR EcoCAT

  A review of the IDNR EcoCAT identified no wetlands (IDNR 2012). Appendix A contains the EcoCAT report.

- NRCS Soil

  The NRCS Web Soil Survey website defines four soil types within the BRT Alternative API as hydric soils, as described in Table 4-1 (USDA 2012a, USDA 2012k).

Table 4-1: Hydric Soils within Bus Rapid Transit Alternative Area of Potential Impact

Location	Approximate Distance from Alignment	Soil Type
Southeast quadrant of the intersection of 98th Street and Indiana Avenue	440 feet east	232A
Southwest quadrant of the intersection of 117th Street and Indiana Avenue	Adjacent to the west	2232A
South of the intersection of 130th Street and the UPRR tracks	Adjacent to the south	69A
South of the intersection of 130th Street and Eberhart Avenue, along Eberhart Avenue	Along the alignment	2232A

Notes:
UPRR = Union Pacific Railroad
See references USDA 2012a and USDA 2012k for soil type definitions

Appendix B includes a summary of information from the NRCS Web Soil Survey website.

- NWI

  The NWI classifies several wetland areas within the BRT Alternative API. Updated wetland coverage was confirmed using the Ducks Unlimited web database; data is summarized in Table 4-2 (Ducks Unlimited 2012) and shown on Figure 4-2. Table 4-2 provides the wetland location, approximate distance from the alignment, wetland category, and wetland type.

Wetland categories correspond to the classification nomenclature that best describes the habitat; definitions are included in Appendix C.

Table 4-2: National Wetland Inventory Areas within Bus Rapid Transit Alternative Area of Potential Impact

Location	Approximate Distance from Alignment	Wetland Category	Wetland Type
Little Calumet River	50 feet west	R2UBH	Riverine
Kensington Marsh - north of 130th Street, west of the MWRD facility	350 feet north	LTU2BKh	Wetland Type Not Provided
North of the intersection of 130th Street and Eberhart Avenue, south of the MWRD facility, on the 130th Street park & ride site	On the 130th Street park & ride site	PFO1C	Freshwater Shrub/Forested Wetland
Northeast of the intersection of 130th Street and Eberhart Avenue, south of the MWRD facility, west of the MWRD access road, on the 130th Street park & ride site	On the 130th Street park & ride site	PEM1Ch	Freshwater Emergent Wetland
North of 130th Street and east of the 130th Street park & ride site	130 feet east	PFO1C	Freshwater Forested/Shrub Wetland
North of 130th Street and east of the 130th Street park & ride site	400 feet east	PEM1Ch	Freshwater Emergent Wetland

Notes:
MWRD = Metropolitan Water Reclamation District of Greater Chicago
See reference Ducks Unlimited 2012 for more info on Wetland Types

- Field Visit

A field visit was conducted on August 8, 2012 to look for evidence of potential wetlands within the BRT Alternative API. Wetland resources were evaluated at a reconnaissance level of detail; no formal wetland delineations were conducted. The field reconnaissance found some standing water, indicative of potential wetland areas at the proposed 130th Street park & ride location.

The BRT Alterative 130th Street park & ride site is highly disturbed in both soil and topography. Although hydrophytic vegetation is present, the results of this cursory field investigation were inconclusive. As a basis for impact analysis and to evaluate the maximum potential impact, between approximately 1.5 and 9 acres of the 130th Street park & ride site are considered a potential wetland, dependent on a formal wetland delineation. It is likely that there is a surface water connection between this wetland area and the Little Calumet River, indicating that this is a jurisdictional wetland.

Following the determination of an environmentally preferred alternative and as the design is finalized, a formal wetland delineation would be conducted and the amount and type of impact would be refined. As part of obtaining permits for work on the project, mitigation would be needed if wetlands would be affected. Coordination with the local USACE district is recommended.

4.5.2 Union Pacific Railroad Rail Alternative

4.5.2.1 Segment UA

A data review obtained the following about existing conditions within the UPRR Rail Alternative Segment UA API:

- Aerial Photographs

  A review of the aerial photographs confirmed that most of the API is heavily urbanized and is characterized by paved surfaces and structures (Google Earth 2012). Few, if any, potential wetland areas would be expected to occur in the API in Segment UA.

- IDNR EcoCAT

  A review of the IDNR EcoCAT found no wetlands (IDNR 2012). Appendix A contains the EcoCAT report.

- NRCS Soil

  The NRCS Web Soil Survey website defines one soil type within the UPRR Rail Alternative Segment UA API as hydric soil, as described in Table 4-3 (USDA 2012a, USDA 2012k).

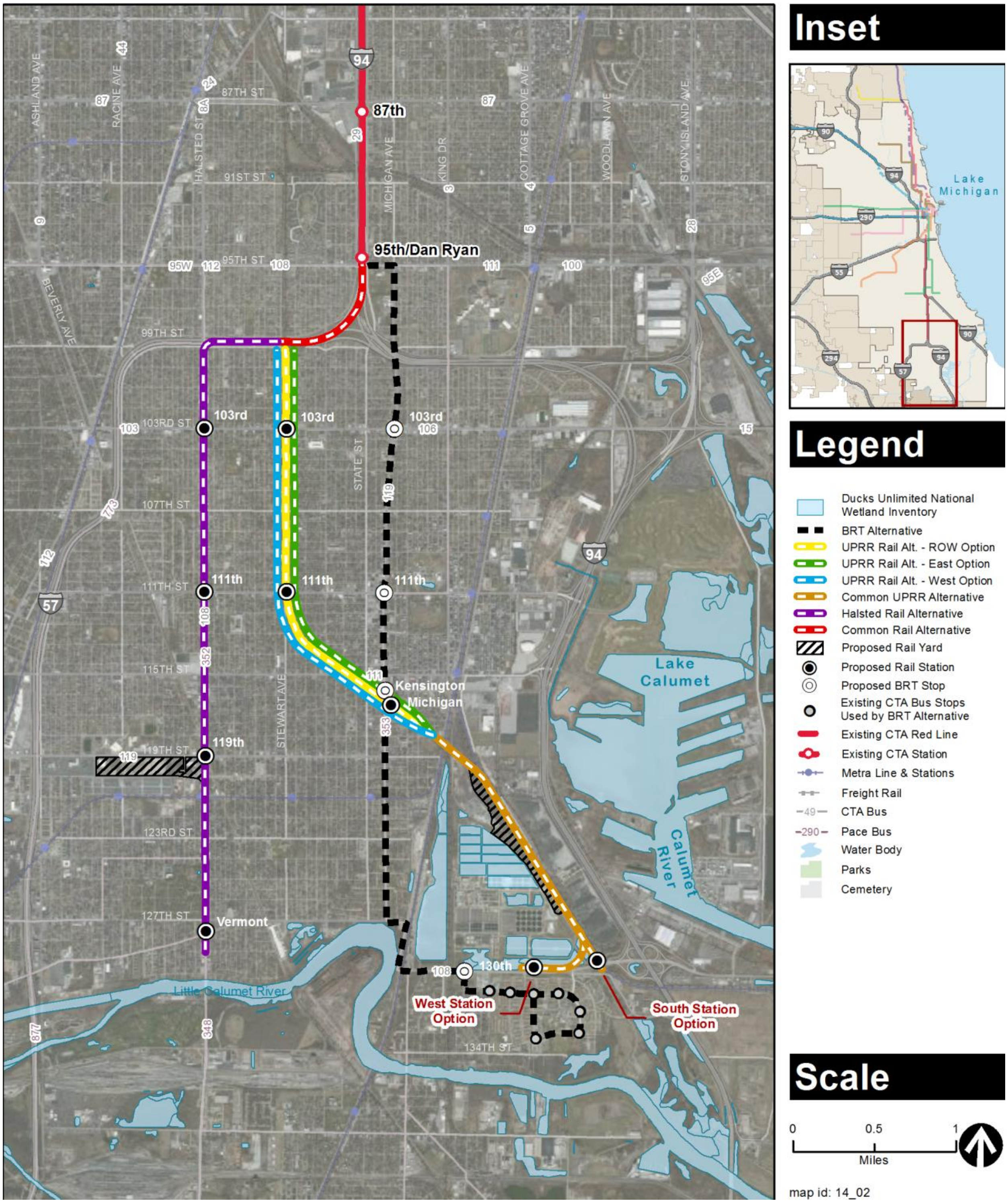
Inset
Lake Michigan
90
94
290
55
294
57
Legend
Ducks Unlimited National Wetland Inventory
BRT Alternative
UPRR Rail Alt. - ROW Option
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
Common UPRR Alternative
Halsted Rail Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Proposed BRT Stop
Existing CTA Bus Stops Used by BRT Alternative
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
CTA Bus
Pace Bus
Water Body
Parks
Cemetery
Scale
0
0.5
1
Miles
map id: 14_02
87th
95th/Dan Ryan
103rd
103rd
103rd
111th
111th
111th
119th
Vermont
Kensington
Michigan
130th
West Station Option
South Station Option
Lake Calumet
Calumet River
Little Calumet River
87TH ST
91ST ST
95TH ST
99TH ST
103RD ST
107TH ST
111TH ST
115TH ST
119TH ST
123RD ST
127TH ST
134TH ST
ASHLAND AVE
RACINE AVE
HALSTED ST
BEVERLY AVE
STEWART AVE
STATE ST
MICHIGAN AVE
KING DR
COTTAGE GROVE AVE
WOODLAWN AVE
STONY ISLAND AVE
94
57

Figure 4-2: Ducks Unlimited National Wetland Inventory Map

Table 4-3: Hydric Soils within Segment UA of Union Pacific Railroad Rail Alternative Area of Potential Impact

Location	Distance from Alignment	Soil Type
Southwest quadrant of the intersection of 117th Street and Indiana Avenue	0 feet	2232A

Notes:
See references USDA 2012a, USDA 2012k for more info on soil types

A summary of information from the NRCS Web Soil Survey website is included in Appendix B.

- NWI

  The NWI does not classify any wetland areas within Segment UA of the UPRR Rail Alternative API.

- Field Visit

  A field visit was conducted on August 13, 2012 to look for evidence of potential wetlands along Segment UA of the UPRR Rail Alternative alignment. Wetland resources were evaluated at a reconnaissance level of detail; no formal wetland delineations were conducted. The field reconnaissance found no evidence of potential wetland areas.

4.5.2.2 Segment UB

A data review obtained the following about existing conditions within Segment UB of the UPRR Rail Alternative API:

- Aerial Photographs

  Aerial photographs display potentially sensitive areas east of the Canadian National/Metra Electric crossing along the southern end of the UPRR Rail Alternative API, between the MWRD treatment plant and the Northern Indiana Commuter Transportation District/Chicago South Shore & South Bend Railroad tracks. A review of the aerial photographs confirmed that most of the API is heavily urbanized and is characterized by paved surfaces and structures (Google Earth 2012). Few, if any, potential wetland areas would be expected to occur in the API other than in the vicinity of the 120th Street yard and shop, South Station Option, and West Station Option.

- IDNR EcoCAT

  A review of the IDNR EcoCAT found no wetlands (IDNR 2012). Appendix A contains the EcoCAT report.

- NRCS Soil

  The NRCS Web Soil Survey website defines two soil types within Segment UB of the UPRR Rail Alternative API as hydric soils, as described in Table 4-4 (USDA 2012a, USDA 2012k).

Table 4-4: Hydric Soils within Segment UB of the Union Pacific Railroad Rail Alternative Area of Potential Impact

Location	Distance from Alignment	Soil Type
Southwest quadrant of the intersection of 117th Street and Indiana Avenue	0 feet	2232A
Kensington Park	70 feet to the southwest	232A

Notes:
See references USDA 2012a, USDA 2012k for more info on soil types

A summary of information from the NRCS Web Soil Survey website is included in Appendix B.

- NWI

  The NWI classifies several wetland areas within Segment UB of the UPRR Rail Alternative API. Updated wetland coverage was confirmed using the Ducks Unlimited web database; data is summarized in Table 4-5 (Ducks Unlimited 2012) and shown on Figure 4-2 in relation to the API. Table 4-5 provides the wetland location, approximate distance from the alignment, wetland category, and wetland type. Wetland categories correspond to the classification nomenclature that best describes the habitat; definitions are included in Appendix C. The MWRD drying ponds, which are within the API, are classified as freshwater ponds.

Table 4-5: National Wetland Inventory Areas within Segment UB of the Union Pacific Railroad Rail Alternative Area of Potential Impact

Location	Approximate Distance from Alignment	Wetland Category	Wetland Type
Five MWRD drying ponds	75-200 feet west	PUBKh	Freshwater Ponds
West of UPRR Rail Alternative, south of yard, north of South Station Option site	180 feet west	PUBGx	Freshwater Pond
Along South Station Option site, north of 130th Street	0 feet	PEM1Kh	Freshwater Forested/Shrub Wetland
West of South Station Option site, north of 130th Street	58 feet west	PUBKh	Freshwater Pond
Along West Station Option site, north of 130th Street	0 feet	PEM1Kh	Freshwater Forested/Shrub Wetland
Along West Station Option site, north of 130th Street	0 feet	PEM1Ch	Freshwater Emergent Wetland
North of West Station Option site, north of 130th Street	100 feet north	PUBKh	Freshwater Pond

Location	Approximate Distance from Alignment	Wetland Category	Wetland Type
Along West Station Option site, north of 130th Street	0 feet	PFO1C	Freshwater Forested/Shrub Wetland
West of West Station Option site, north of 130th Street	25 feet west	PEM1Ch	Freshwater Emergent Wetland
West of West Station Option site, north of 130th Street	415 feet west	PFO1C	Freshwater Forested/Shrub Wetland

Notes:
MWRD = Metropolitan Water Reclamation District of Greater Chicago, UPRR = Union Pacific Railroad
See reference Ducks Unlimited 2012 for more info on wetland types

- Field Visit

A field visit was conducted on August 13, 2012 to look for evidence of potential wetlands along the UPRR Rail Alternative alignment. The field visit focused on the area along the southern end of the UPRR Rail Alternative alignment, in Segment UB, from the Canadian National/Metra Electric crossing to 130th Street, as shown in Figure 4-3. Wetland resources were evaluated at a reconnaissance level of detail; no formal wetland delineations were conducted. During the site visit, notes regarding potential wetland hydrology, soils, and vegetation were collected. Soils within four hand-dug test pits were evaluated for hydric characteristics. Test pits were dug at representative locations where there appeared to be differences in the vegetation, topography, or soils. Several test pits were dug in an attempt to identify variations in soils that could be useful in differentiating between wetland and non-wetland areas. Test pit locations (Figure 4-3) were in the vicinity of the 120th Street yard and shop. Appendix D contains photographs from the field visit.

The area in the vicinity of the 120th Street yard and shop is highly disturbed. The area is characterized by a young cottonwood forest with pockets of phragmites. At the time of the field visit, the cottonwoods were generally 6 inches in diameter. Based on historical aerial photos (Google Earth 1998, 2002, 2004, 2005, 2007, 2008, 2009, 2010, 2011, 2012), the area to the southwest of the Northern Indiana Commuter Transportation District/Chicago South Shore & South Bend Railroad train tracks began to become forested around 2005/2007 (Google Earth 2012). Table 4-6 summarizes the plants identified throughout the area.

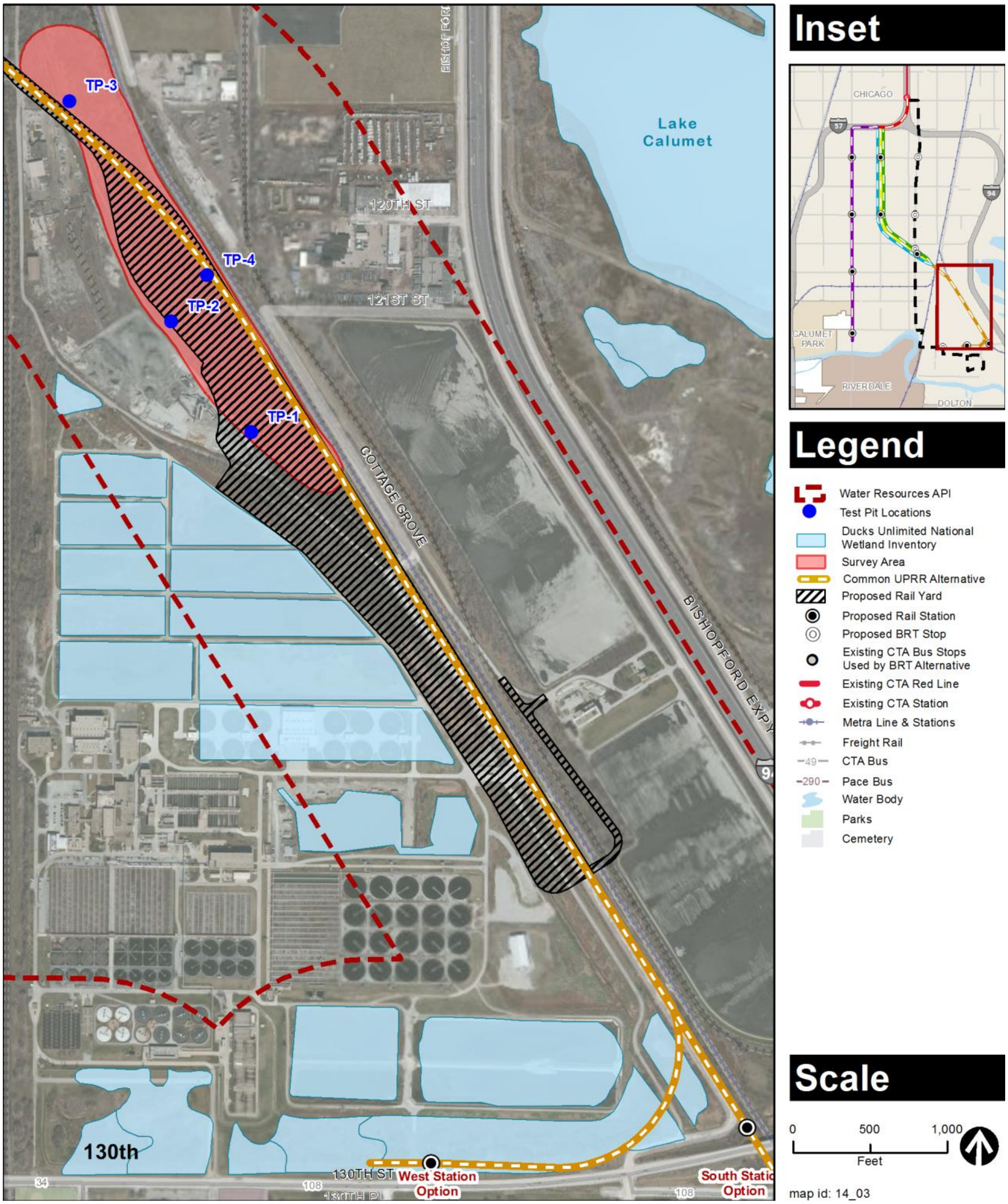
TP-3
TP-4
TP-2
TP-1
Lake Calumet
120TH ST
121ST ST
BISHOP FORD
COTTAGE GROVE
BISHOPFORD EXPY
94
130th
130TH ST
West Station Option
South Station Option
130TH PL
34
108
Inset
CHICAGO
57
94
CALUMET PARK
RIVERDALE
DOLTON
Legend
Water Resources API
Test Pit Locations
Ducks Unlimited National Wetland Inventory
Survey Area
Common UPRR Alternative
Proposed Rail Yard
Proposed Rail Station
Proposed BRT Stop
Existing CTA Bus Stops Used by BRT Alternative
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
49 CTA Bus
290 Pace Bus
Water Body
Parks
Cemetery
Scale
0
500
1,000
Feet
map id: 14_03

Figure 4-3: Field Survey Area and Test Pit Locations

Table 4-6: Plants Identified in the Union Pacific Railroad Rail Alternative Area of Potential Impact

Scientific Name	Common Name	Wetland Indicator Status
Acer negundo	boxelder	FACW-
Daucus carota	Queen Anne's lace	--
Phragmites australis	common reed	FACW+
Populous deltoides	eastern cottonwood	FAC+
Prunus virginiana	chokecherry	FAC-
Rhamnus cathartica	common buckthorn	FACU
Rhus typhina	staghorn sumac	--
Ulmus americana	American elm	FACW

Notes:

- **FACW** = Facultative Wetland (usually occurs in wetlands but occasionally found in non-wetland), **FAC** = Facultative (equally likely to occur in wetlands or non-wetlands)**, FACU** = Facultative Upland (usually occurs in non-wetlands, but occasionally found on wetlands)
- A positive (+) or negative (-) sign more specifically defines the regional frequency of occurrence in wetlands.
- References: USDA 2012b, USDA 2012c, USDA 2012d, USDA 2012e, USDA 2012f, USDA 2012g, USDA 2012h, USDA 2012i, USDA 2012j

The soils appeared to be highly disturbed and likely include material imported from other locations. Railroad ties and potential slag were identified throughout the area. Four test pits were hand dug (using a shovel) to evaluate for hydric soil characteristics. Figure 4-2 shows the test pit locations. The evaluated soils appeared to be imported fill; the soil was heavily compacted shortly below the ground surface. Test pits TP-1, TP-2, and TP-3 showed similar dark, organic soils with unnatural objects, including slag. From 0 to 8 inches below grade, test pit TP-4 had organic soils; from 8 inches to the bottom of the text pit was sand with red features. Data collected from the test pits is presented in Appendix E and summarized in Table 4-7.

Table 4-7: August 2012 Field Visit Summary

Test Pit	Hydrophytic Vegetation Present?	Wetland Hydrology Present?	Hydric Soil Present?
TP-1	Yes	Unknown	No
TP-2	Yes	Unknown	No
TP-3	Yes	Unknown	Yes
TP-4	Yes	Unknown	No

The 2012 January–August period was the warmest and fourth driest on record in Illinois. During January–August 2012, statewide average precipitation was a total of 17.5 inches, 7.3 inches below normal. The statewide average temperature during January–August was 59.0°F, 4.2°F above normal (ISWS - Prairie Research Institute 2012). These unusually dry conditions may have contributed to the lack of evident signs of seepage, springs, or ponding visible during the field survey of the 120th Street yard and shop location; however, it is possible that the soil could be saturated to the surface during the spring. The area surveyed has flat topography; there were no obvious drainages and there were depressions where there was some standing water. The flat topography, combined with the highly compacted soils, likely holds water at the surface for the required two weeks in the spring growing season, leading to the preponderance of wetland vegetation observed.

Both the South Station Option and West Station Option terminal locations include a drainage ditch (along the north side of 130th Street, south of the MWRD facility); phragmites were identified in the drainage ditch.

The soils and topography of the 120th Street yard and shop site, the South Station Option site, and the West Station Option site are all highly disturbed. Although the vegetation is predominantly hydrophytic, the results of this cursory field investigation were inconclusive. As a basis for impact analysis and to evaluate the maximum potential impact, approximately 14 acres in the vicinity of the 120th Street yard and shop, 7 acres associated with the South Station Option, and 6 acres associated with the West Station Option are considered potential wetlands. It is likely that there is a surface water connection between these wetland areas and the Little Calumet River, making these jurisdictional wetlands. It is more likely that a surface water connection exists from the proposed stations to the river than from the yard site to the river, but due to the highly disturbed topography a connection would require extensive research and fieldwork to confirm. The fieldwork would take place at the time of the permit application, concurrent with final design.

This analysis identifies maximum potential wetland impacts; formal wetland delineations and confirmation of impacts would be performed for the NEPA preferred alternative. Actual impacts would likely be fewer and/or smaller than the maximum impacts described in this report. As part of obtaining permits for work on the project, mitigation would be needed. Coordination with the local USACE district is recommended.

4.5.3 Halsted Rail Alternative

4.5.3.1 Segment HA

A data review obtained the following information about existing conditions within Segment HA of the Halsted Rail Alternative API:

- Aerial Photographs

  A review of the aerial photographs confirmed that the Halsted Rail Alternative API is heavily urbanized and is characterized by paved surfaces and structures (Google Earth 2012). Few, if any, potential wetland areas would be expected to occur in the API based on the review of aerial photographs.

- IDNR EcoCAT

  A review of the IDNR EcoCAT identified no wetlands in Segment HA of the Halsted Rail Alternative API (IDNR 2012). Appendix A contains the EcoCAT report.

- NRCS Soil

  The NRCS Web Soil Survey website defines no soil types within the Halsted Rail Alternative API as hydric soils (USDA 2012a, USDA 2012k). Sites containing soils classified as "not hydric" are unlikely to contain wetlands. Appendix B contains a summary of information from the NRCS Web Soil Survey website.

- NWI

  The NWI classifies no wetland areas within Segment HA of the Halsted Rail Alternative API.

- Field Visit

  A field visit was conducted on August 13, 2012 to look for evidence of potential wetlands within the Halsted Rail Alternative API. Wetland resources were evaluated at a reconnaissance level of detail and no formal wetland delineations were conducted. The field reconnaissance found no evidence of potential wetland areas.

  The USACE *Wetland Delineation Manual* defines areas as wetland if they meet all three parameters (hydric soils, wetland hydrology, and hydrophytic vegetation). No areas along the Halsted Rail Alternative Segment HA would be considered a wetland according to this definition.

4.5.3.2 Segment HB

A data review obtained the following information about existing conditions within Segment HB of the Halsted Rail Alternative API:

- Aerial Photographs

  A review of the aerial photographs confirmed that the Halsted Rail Alternative API is heavily urbanized and is characterized by paved surfaces and structures (Google Earth 2012). Few, if any, potential wetland areas would be expected to occur in the API based on the review of aerial photographs.

- IDNR EcoCAT

  A review of the IDNR EcoCAT identified the Riverdale Marsh within the vicinity of the southern end of the Halsted Rail Alternative alignment (IDNR 2012). No other wetlands were identified in Segment HB of the Halsted Rail Alternative API. Appendix A contains the EcoCAT report.

- NRCS Soil

  The NRCS Web Soil Survey website defines no soil types within the Halsted Rail Alternative API as hydric soils (USDA 2012a, USDA 2012k). Sites containing soils classified as "not hydric" are unlikely to contain wetlands. Appendix B contains a summary of information from the NRCS Web Soil Survey website.

- NWI

  The NWI classifies two wetland areas within the Halsted Rail Alternative API. Updated wetland coverage was confirmed using the Ducks Unlimited web database; the data is summarized in Table 4-8 (Ducks Unlimited 2012) and shown on Figure 4-2. Table 4-8 provides the wetland location, approximate distance from the alignment, wetland category, and wetland type. Wetland categories correspond to the classification nomenclature that best describes the habitat; definitions are included in Appendix C.

Table 4-8: National Wetland Inventory Areas within Halsted Rail Alternative Area of Potential Impact

Location	Approximate Distance from Alignment	Wetland Category	Wetland Type
Northwest of intersection of 125th Street and Halsted Avenue, in Cedar Park Cemetery	120 feet west	PUBGx	Freshwater Pond
Little Calumet River	100 feet south	R2UBH	Riverine

Notes:
See reference Ducks Unlimited 2012 for more information on wetland types

- Field Visit

  A field visit was conducted on August 13, 2012 to look for evidence of potential wetlands within the Halsted Rail Alternative API. Wetland resources were evaluated at a reconnaissance level of detail and no formal wetland delineations were conducted. The field reconnaissance found no evidence of potential wetland areas.

  The USACE *Wetland Delineation Manual* defines areas as wetland if they meet all three parameters (hydric soils, wetland hydrology, and hydrophytic vegetation). No areas along the Halsted Rail Alternative Segment HB would be considered a wetland according to this definition.

4.6 Floodplains

There are no floodplains in the APIs; see map in Appendix F.

Section 5
Impacts and Mitigation

5.1 No Build Alternative

The No Build Alternative represents existing conditions for water resources in the project area.

5.1.1 Permanent Impacts and Mitigation - No Build Alternative

It is anticipated that there would be no permanent impacts on water resources as a result of the No Build Alternative.

5.1.2 Construction Impacts and Mitigation - No Build Alternative

It is anticipated that there would be no construction impacts on water resources as a result of the No Build Alternative.

5.2 Bus Rapid Transit Alternative

5.2.1 Permanent Impacts and Mitigation - Bus Rapid Transit Alternative

5.2.1.1 Drainage Impacts

The physical modifications associated with the BRT Alternative would result in impacts on the existing stormwater drainage infrastructure, particularly where park & ride facilities would be constructed. These alterations would not greatly affect the direction of drainage through the project area and would not change drainage within the watershed. There would be no adverse permanent impacts on stormwater drainage associated with the BRT Alternative.

With the exception of the park & ride facilities at 102nd Street and 130th Street, proposed construction would take place on already impervious land, and therefore would not substantially increase the amount or peak flow rate of stormwater runoff entering the storm drain system. The decrease in pervious area in the vicinity of the 102nd Street and 130th Street park & ride facilities could be mitigated by incorporating new stormwater management structures.

An additional potential mitigation measure to protect water resources is listed below.

- Establishing an erosion control plan prior to the initiation of construction. The erosion control plan could include the following:
    - Use of natural drainage, detention ponds, sediment ponds, or infiltration pits to allow runoff to collect and reduce or prevent erosion
    - Use of barriers to direct and slow the rate of runoff and to filter out large-sized sediments
    - Use of down-drains or chutes to carry runoff from the top of a slope to the bottom

5.2.1.2 Groundwater Impacts

There would be no adverse permanent groundwater impacts associated with the BRT Alternative.

5.2.1.3 Water Quality Impacts

There would be no adverse permanent water quality impacts associated with the BRT Alternative. The BRT Alternative would supplement the existing #34 bus route along Michigan Avenue; the transit system would replace automobile trips and there would be an associated reduction in roadway pollutants. There would be a minimal change from existing conditions in the buildup of typical runoff contaminants that collect on streets (i.e., oil, grease, and metals).

The introduction of new impervious surfaces resulting from the construction of park & ride facilities associated with the BRT Alternative would have the potential to increase the concentration and accumulation of runoff contaminants. Due to the predominance of impervious surfaces throughout the project area, minimal percolation to the underlying groundwater occurs in the API. Therefore, any potential increases in contaminated surface water runoff would have no adverse impact on groundwater quality.

Potential impacts on water resources stemming from both construction and operation could be mitigated with the following measures as appropriate:

- Project design that includes properly designed and maintained biological oil and grease removal systems in new storm drain systems to treat water before it leaves project construction areas
- Proper storage of hazardous materials to prevent contact with precipitation and runoff
- Development and maintenance of an effective monitoring and cleanup program for spills and leaks of hazardous materials
- Placement of equipment to be repaired or maintained in covered areas on a pad of absorbent material to contain leaks, spills, or small discharges
- Periodic and consistent removal of landscape and construction debris
- Removal of any significant chemical residue on the project sites through appropriate methods
- Use of non-toxic alternatives for any necessary applications of herbicides or fertilizers
- Installation of detention basins or other landscaping features to remove suspended solids by settlement
- Periodic monitoring of runoff water quality before discharge from the site and into the storm drainage system

5.2.1.4 Wetland Impacts

The BRT Alternative park & ride facility could affect between 1.5 and 9 acres of wetlands, dependent on a formal wetland delineation. Following compensatory mitigation, either through creation, restoration, enhancement, or preservation of wetlands, the BRT Alternative would have no adverse permanent impacts on wetlands in the API. Compensatory mitigation is regulated under the 2008 CWA Section 404 Final Compensatory Mitigation Rule and is intended to replace lost aquatic resource functions and area with the goal of "no net loss" of wetlands (USEPA 2008). Compensatory mitigation should take place on public or private land at or adjacent to the impact site or at another location generally within the same watershed where it is most likely to replace lost functions. There are several potential underutilized or vacant industrial land areas, with a connection to the Little Calumet River, that exist within 3 miles of the alignment; these land areas could be restored as compensatory mitigation.

5.2.2 Construction Impacts and Mitigation - Bus Rapid Transit Alternative

5.2.2.1 Drainage Impacts

The physical modifications associated with the BRT Alternative would result in potential impacts on the existing stormwater drainage infrastructure, particularly where park & ride lots and structures would be constructed. These alterations would not greatly affect the direction or volume of drainage through the API. In areas where construction could result in the need to relocate certain drainage infrastructure, temporary lines would be installed during the construction period.

In addition to the mitigation measures recommended in Section 5.2.1.1, controlled use of water for irrigation and dust control is also recommended to avoid off-site runoff.

5.2.2.2 Groundwater Impacts

There would be a potential need for dewatering by removing groundwater from the construction site by pumping if groundwater were encountered during construction. Dewatering during construction could temporarily affect local shallow groundwater levels. Given the likelihood of encountering contaminated groundwater, compliance with federal, state, and local laws and regulations (as described in the *Hazardous Materials Technical Memorandum*) would be required during construction.

5.2.2.3 Water Quality Impacts

Water quality impacts could result from construction of the BRT Alternative. Construction would have the potential to increase erosion and sedimentation around proposed construction and staging areas. Grading associated with construction could result in a temporary increase in the amount of suspended solids in stormwater running off construction sites. In the case of a storm event, construction site runoff would result in sheet erosion of exposed soil. If not adequately controlled, contaminated runoff from these areas would have the potential to degrade surface water quality.

The impacts of construction of the BRT Alternative on water quality would be minor because the project area is already highly urbanized. In order to ensure that surface water runoff would not have adverse impacts on water quality, human health, or safety, appropriate measures would be taken to control runoff during implementation. Some examples of these mitigation measures include establishing an erosion control plan, ensuring the proper storage and handling of hazardous materials including paints, solvents, fuels, and hydraulic fluids, and periodic monitoring of the water quality of runoff leaving the site. Section 5.2.1.3 summarizes proposed mitigation measures.

5.2.2.4 Wetland Impacts

Compensatory mitigation would be needed for construction related, temporary impacts on wetlands. Construction staging areas would be sited outside of wetlands as much as possible, but if there were any temporary impacts, those areas would be reconstructed as wetlands following construction.

5.3 Union Pacific Railroad Rail Alternative - Right-of-Way Option

5.3.1 Permanent Impacts and Mitigation - Union Pacific Railroad Rail Alternative - Right-of-Way Option

5.3.1.1 Segment UA

5.3.1.1.1 Drainage Impacts

The physical modifications associated with the UPRR Rail Alternative ROW Option would result in impacts on the existing stormwater drainage infrastructure. These alterations would not greatly affect the direction of drainage through the project area and would not change drainage within the watershed.

Much of the proposed construction would take place on already impervious land and therefore would not significantly increase the amount or peak flow rate of stormwater runoff entering the storm drain system. Pervious area is anticipated to decrease in the following areas under the ROW Option: along I-57, through the northwest corner of Wendell Smith Park and across the UPRR ROW to the west of Wendell Smith Park, around stations, and at the park & ride facilities and substations. The decrease in pervious area could be mitigated by incorporating new stormwater management structures.

After mitigation, there would be no adverse permanent stormwater drainage impacts associated with the UPRR Rail Alternative ROW Option.

The Roseland Pump Station is east of the UPRR Rail Alternative ROW Option at 104th Street. The Roseland Pump Station is a major water distribution facility supplying water to the City of Chicago and surrounding suburbs. There are underground pipes and structures running west from the pump station. Other major underground pipes and structures include the 10-foot-diameter Stewart Avenue water tunnel, the 10-foot-diameter sewer underneath Wentworth

Avenue near 114th Street, and the 17.5-foot, horseshoe-shaped MWRD Calumet Intercepting Sewer tunnel. Stormwater drainage and water structures would need to be designed to accommodate the pump station and other underground utilities.

Section 5.2.1.1 summarizes proposed mitigation measures.

5.3.1.1.2 Groundwater Impacts

There would be no adverse permanent groundwater impacts associated with the UPRR Rail Alternative ROW Option.

5.3.1.1.3 Water Quality Impacts

The operation of the Red Line under the ROW Option would replace automobile trips; there would be an associated reduction in runoff contaminants that collect on streets (i.e., oil, grease, and metals). For this reason, the ROW Option is anticipated to have a minor but positive water quality impact.

The introduction of new impervious surfaces would have the potential to increase the concentration and accumulation of runoff contaminants. Due to the predominance of impervious surfaces throughout the project area, minimal percolation to the underlying groundwater occurs in the API. Therefore, any potential increases in contaminated surface water runoff would have no adverse impact on groundwater quality.

After mitigation, there would be no adverse permanent water quality impacts associated with the UPRR Rail Alternative ROW Option. Section 5.2.1.3 summarizes proposed mitigation measures.

5.3.1.1.4 Wetland Impacts

Because there are no wetlands in Segment UA of the UPRR Rail Alternative, there would be no permanent impacts on wetlands.

5.3.1.2 Segment UB

5.3.1.2.1 Drainage Impacts

The physical modifications associated with the UPRR Rail Alternative ROW Option would result in impacts on the existing stormwater drainage infrastructure. These alterations would not greatly affect the direction of drainage through the project area and would not change drainage within the watershed.

Much of the proposed construction would take place on already impervious land and therefore would not substantially increase the amount or peak flow rate of stormwater runoff entering the storm drain system. Pervious area is anticipated to decrease in the following areas under the ROW Option: around stations, at the park & ride facilities, and from north of Kensington Park where the UPRR Rail Alternative splits from the existing UPRR tracks through the southern end of the UPRR Rail Alternative, including both terminal options. The decrease in pervious area could be mitigated by incorporating new stormwater management structures.

After mitigation, there would be no adverse permanent stormwater drainage impacts associated with the UPRR Rail Alternative ROW Option. Section 5.2.1.1 summarizes proposed mitigation measures.

5.3.1.2.2 Groundwater Impacts

There would be no adverse permanent groundwater impacts associated with the UPRR Rail Alternative ROW Option.

5.3.1.2.3 Water Quality Impacts

See Section 5.3.1.1.3.

5.3.1.2.4 Wetland Impacts

The UPRR Rail Alternative ROW Option South Station Option and West Station Option facilities could affect approximately 7 and 6 acres of wetlands, respectively. Following compensatory mitigation these options would have no adverse permanent impacts on wetlands in the API. Section 5.2.1.4 discusses compensatory mitigation.

5.3.2 Construction Impacts and Mitigation - Union Pacific Railroad Rail Alternative - Right-of-Way Option

5.3.2.1 Segment UA

5.3.2.1.1 Drainage Impacts

The physical modifications associated with the UPRR Rail Alternative ROW Option would result in impacts on the existing stormwater drainage infrastructure. These alterations would not greatly affect the direction of drainage through the project area and would not change drainage within the watershed. In areas where construction could result in the need to relocate certain drainage infrastructure, temporary lines would be installed during the construction period. Care would need to be taken during construction in the vicinity of the Roseland Pump Station at 104th Street, as well as the other underground utilities called out in Section 5.3.1.1.1, in order to not damage existing structures. Proposed mitigation measures are summarized in Section 5.2.1.1 and 5.2.2.1.

5.3.2.1.2 Groundwater Impacts

See Section 5.2.2.2.

5.3.2.1.3 Water Quality Impacts

See Section 5.2.2.3.

5.3.2.1.4 Wetland Impacts

Because there are no wetlands in Segment UA of the UPRR Rail Alternative, there would be no construction impacts on wetlands.

5.3.2.2 Segment UB

5.3.2.2.1 Drainage Impacts

See Section 5.3.2.1.1.

5.3.2.2.2 Groundwater Impacts

See Section 5.2.2.2.

5.3.2.2.3 Water Quality Impacts

See Section 5.2.2.3.

5.3.2.2.4 Wetland Impacts

See Section 5.2.2.4.

5.3.3 120th Street Yard and Shop

5.3.3.1 Permanent Impacts and Mitigation

5.3.3.1.1 Drainage Impacts

The physical modifications associated with the UPRR Rail Alternative 120th Street yard and shop would result in impacts on the existing stormwater drainage infrastructure. These alterations would not greatly affect the direction of drainage through the project area and would not change drainage within the watershed.

The proposed construction would take place on pervious area; the decrease in pervious area could be mitigated by incorporating new stormwater management structures.

After mitigation, there would be no adverse permanent stormwater drainage impacts associated with the UPRR Rail Alternative 120th Street yard and shop. Section 5.2.1.1 summarizes proposed mitigation measures.

5.3.3.1.2 Groundwater Impacts

There would be no adverse permanent groundwater impacts associated with the UPRR Rail Alternative 120th Street yard and shop.

5.3.3.1.3 Water Quality Impacts

The introduction of new impervious surfaces would have the potential to increase the concentration and accumulation of runoff contaminants. After mitigation, there would be no adverse permanent water quality impacts associated with the 120th Street yard and shop. Section 5.2.1.3 summarizes proposed mitigation measures.

5.3.3.1.4 Wetland Impacts

Development of the 120th Street yard and shop facility could affect approximately 14 acres of wetlands. Following compensatory mitigation, the 120th Street yard and shop would have no adverse permanent impacts on wetlands in the API. Compensatory mitigation is discussed in Section 5.2.1.4.

5.3.3.2 Construction Impacts and Mitigation

5.3.3.2.1 Drainage Impacts

See Section 5.3.2.1.1.

5.3.3.2.2 Groundwater Impacts

See Section 5.2.2.2.

5.3.3.2.3 Water Quality Impacts

See Section 5.2.2.3.

5.3.3.2.4 Wetland Impacts

See Section 5.2.2.4.

5.4 Union Pacific Railroad Rail Alternative - East Option

5.4.1 Permanent Impacts and Mitigation - Union Pacific Railroad Rail Alternative - East Option

5.4.1.1 Segment UA

5.4.1.1.1 Drainage Impacts

Impacts associated with the UPRR Rail Alternative East Option would be similar to those discussed in Section 5.3.1.1.1. The UPRR Rail Alternative East Option alignment would be closer to the Roseland Pump Station than the ROW Option alignment; consequently, it would be more complex from a drainage standpoint. Stormwater drainage and water structures would need to be designed to accommodate the pump station as well as the other underground utilities called out in Section 5.3.1.1.1. Section 5.2.1.1 summarizes proposed mitigation measures.

5.4.1.1.2 Groundwater Impacts

There would be no adverse permanent groundwater impacts associated with the UPRR Rail Alternative East Option.

5.4.1.1.3 Water Quality Impacts

See Section 5.3.1.1.3.

5.4.1.1.4 Wetland Impacts

Because there are no wetlands in Segment UA of the UPRR Rail Alternative, there would be no permanent impacts on wetlands.

5.4.1.2 Segment UB

See Section 5.3.1.2.

5.4.2 Construction Impacts and Mitigation - Union Pacific Railroad Rail Alternative - East Option

5.4.2.1 Segment UA

5.4.2.1.1 Drainage Impacts

See Section 5.3.2.1.1. Additional care would need to be taken in the vicinity of the Roseland Pump Station at 104th Street and near the other underground utilities called out in Section 5.3.1.1.1. Mitigation measures are summarized in Section 5.2.1.1 and 5.2.2.1.

5.4.2.1.2 Groundwater Impacts

See Section 5.2.2.2.

5.4.2.1.3 Water Quality Impacts

See Section 5.2.2.3.

5.4.2.1.4 Wetland Impacts

Because there are no wetlands in Segment UA along the UPRR Rail Alternative, there would be no construction impacts on wetlands.

5.4.2.2 Segment UB

See Section 5.3.2.2.

5.4.3 120th Street Yard and Shop

See Section 5.3.3.

5.5 Union Pacific Railroad Rail Alternative - West Option

5.5.1 Permanent Impacts and Mitigation - Union Pacific Railroad Rail Alternative - West Option

5.5.1.1 Segment UA

5.5.1.1.1 Drainage Impacts

The physical modifications associated with the UPRR Rail Alternative West Option would result in impacts on the existing stormwater drainage infrastructure. These alterations would not greatly affect the direction of drainage through the project area and would not change drainage within the watershed.

Much of the proposed construction would take place on already impervious land and therefore would not substantially increase the amount or peak flow rate of stormwater runoff entering the storm drain system. Pervious area is anticipated to decrease in the following areas under the West Option: along I-57, along Fernwood Parkway, around stations, and at the park & ride facilities and substations. The decrease in pervious area could be mitigated by incorporating new stormwater management structures.

After mitigation, there would be no adverse permanent impacts on stormwater drainage associated with the UPRR Rail Alternative West Option. Section 5.2.1.1 summarizes proposed mitigation measures. Among the build alternatives, the UPRR Rail Alternative West Option would have the least impact on the Roseland Pump Station.

5.5.1.1.2 Groundwater Impacts

There would be no adverse permanent groundwater impacts associated with the UPRR Rail Alternative West Option.

5.5.1.1.3 Water Quality Impacts

See Section 5.3.1.1.3.

5.5.1.1.4 Wetland Impacts

Because there are no wetlands in Segment UA of the UPRR Rail Alternative, there would be no permanent impacts on wetlands.

5.5.1.2 Segment UB

See Section 5.3.1.2.

5.5.2 Construction Impacts and Mitigation - Union Pacific Railroad Rail Alternative - West Option

5.5.2.1 Segment UA

5.5.2.1.1 Drainage Impacts

See Section 5.3.2.1.1.

5.5.2.1.2 Groundwater Impacts

See Section 5.2.2.2.

5.5.2.1.3 Water Quality Impacts

See Section 5.2.2.3.

5.5.2.1.4 Wetland Impacts

Because there are no wetlands in Segment UA of the UPRR Rail Alternative, there would be no construction impacts on wetlands.

5.5.2.2 Segment UB

See Section 5.3.2.2.

5.5.3 120th Street Yard and Shop

See Section 5.3.3.

5.6 Halsted Rail Alternative

5.6.1 Permanent Impacts and Mitigation - Halsted Rail Alternative

5.6.1.1 Segment HA

5.6.1.1.1 Drainage Impacts

The physical modifications associated with the Halsted Rail Alternative would result in impacts on the existing stormwater drainage infrastructure. These alterations would not greatly affect the direction of drainage through the project area and would not change drainage within the watershed.

Much of the proposed construction would take place on already impervious land and therefore would not substantially increase the amount or peak flow rate of stormwater runoff entering the storm drain system. Pervious area is anticipated to decrease along I-57 and around stations, park & ride facilities, and substations. The decrease in pervious area could be mitigated by incorporating new stormwater management structures.

After mitigation there would be no adverse permanent stormwater drainage impacts associated with the Halsted Rail Alternative. Section 5.2.1.1 summarizes proposed mitigation measures.

5.6.1.1.2 Groundwater Impacts

There would be no adverse permanent groundwater impacts associated with the Halsted Rail Alternative.

5.6.1.1.3 Water Quality Impacts

See Section 5.3.1.1.3.

5.6.1.1.4 Wetland Impacts

Because there are no wetlands in Segment HA of the Halsted Rail Alternative, there would be no permanent impacts on wetlands.

5.6.1.2 Segment HB

5.6.1.2.1 Drainage Impacts

The physical modifications associated with the Halsted Rail Alternative would result in impacts on the existing stormwater drainage infrastructure. These alterations would not greatly affect the direction of drainage through the project area and would not change drainage within the watershed.

Much of the proposed construction would take place on already impervious land and therefore would not substantially increase the amount or peak flow rate of stormwater runoff entering the storm drain system. Pervious area is anticipated to decrease along I-57 and around stations, park & ride facilities, and substations. The decrease in pervious area could be mitigated by incorporating new stormwater management structures.

After mitigation, the Halsted Rail Alternative would have no adverse permanent impacts on stormwater drainage. Section 5.2.1.1 summarizes proposed mitigation measures.

5.6.1.2.2 Groundwater Impacts

The Halsted Rail Alternative would have no adverse permanent impacts on groundwater.

5.6.1.2.3 Water Quality Impacts

See Section 5.3.1.1.3.

5.6.1.2.4 Wetland Impacts

Because there are no wetlands in Segment HB of the Halsted Rail Alternative, there would be no permanent impacts on wetlands.

5.6.2 Construction Impacts and Mitigation - Halsted Rail Alternative

5.6.2.1 Segment HA

5.6.2.1.1 Drainage Impacts

See Section 5.3.2.1.1.

5.6.2.1.2 Groundwater Impacts

See Section 5.2.2.2.

5.6.2.1.3 Water Quality Impacts

See Section 5.2.2.3.

5.6.2.1.4 Wetland Impacts

Because there are no wetlands in Segment HA of the Halsted Rail Alternative, there would be no construction impacts on wetlands.

5.6.2.2 Segment HB

5.6.2.2.1 Drainage Impacts

See Section 5.3.2.1.1.

5.6.2.2.2 Groundwater Impacts

See Section 5.2.2.2.

5.6.2.2.3 Water Quality Impacts

See Section 5.2.2.3.

5.6.2.2.4 Wetland Impacts

Because there are no wetlands in Segment HB of the Halsted Rail Alternative, there would be no construction impacts on wetlands.

5.6.3 119th Street Yard and Shop

5.6.3.1 Permanent Impacts and Mitigation

5.6.3.1.1 Drainage Impacts

The physical modifications associated with the Halsted Rail Alternative 119th Street yard and shop would result in impacts on the existing stormwater drainage infrastructure. These alterations would not greatly affect the direction of drainage through the project area and would not change drainage within the watershed.

Much of the proposed construction would take place on already impervious land and therefore would not substantially increase the amount or peak flow rate of stormwater runoff entering the storm drain system. The decrease in pervious area could be mitigated by incorporating new stormwater management structures.

After mitigation, the development of the 119th Street yard and shop would have no adverse permanent impacts on stormwater drainage. Section 5.2.1.1 summarizes proposed mitigation measures.

5.6.3.1.2 Groundwater Impacts

There would be no adverse permanent groundwater impacts associated with the 119th Street yard and shop.

5.6.3.1.3 Water Quality Impacts

See Section 5.3.1.1.3.

5.6.3.1.4 Wetland Impacts

Because there are no wetlands at the 119th Street yard and shop site, there would be no permanent impacts on wetlands.

5.6.3.2 Construction Impacts and Mitigation

5.6.3.2.1 Drainage Impacts

See Section 5.3.2.1.1.

5.6.3.2.2 Groundwater Impacts

See Section 5.2.2.2.

5.6.3.2.3 Water Quality Impacts

See Section 5.2.2.3.

5.6.3.2.4 Wetland Impacts

Because there are no wetlands at the 119th Street yard and shop site, there would be no construction impacts on wetlands.

Section 6
Impacts Remaining After Mitigation

6.1 No Build Alternative

After mitigation, there would be no effects on water resources.

6.2 Bus Rapid Transit Alternative

After mitigation, there would be no effects on water resources.

6.3 Union Pacific Railroad Rail Alternative - Right-of-Way Option

After mitigation, there would be no effects on water resources.

6.4 Union Pacific Railroad Rail Alternative - East Option

After mitigation, there would be no effects on water resources.

6.5 Union Pacific Railroad Rail Alternative - West Option

After mitigation, there would be no effects on water resources.

6.6 Halsted Rail Alternative

After mitigation, there would be no effects on water resources.

Section 7
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Appendix A
EcoCAT Report

EcoCAT
Ecological Compliance Assessment Tool

Applicant: CDM Smith
Contact: Claudia Lea
Address: 125 S Wacker Drive
Suite 600
Chicago, IL 60606

IDNR Project #: 1304095
Date: 09/12/2012

Project: CTA Red Line Extension Project
Address: 95th Street Terminal, Chicago

Description: The Chicago Transit Authority (CTA) is proposing to extend the Red Line from the 95th Street Station to the vicinity of 130th Street.

Natural Resource Review Results

This project was submitted for information only. It is not a consultation under Part 1075.

The Illinois Natural Heritage Database contains no record of State-listed threatened or endangered species, Illinois Natural Area Inventory sites, dedicated Illinois Nature Preserves, or registered Land and Water Reserves in the vicinity of the project location.

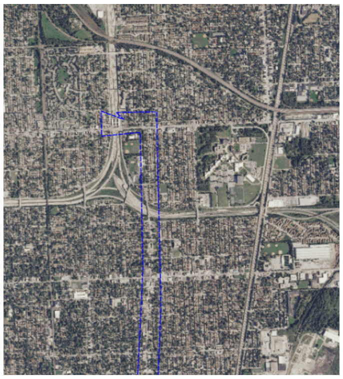
Location

The applicant is responsible for the accuracy of the location submitted for the project.

County: Cook

Township, Range, Section:

37N, 14E, 3
37N, 14E, 4
37N, 14E, 9
37N, 14E, 10
37N, 14E, 15
37N, 14E, 22



IL Department of Natural Resources Contact

Impact Assessment Section
217-785-5500
Division of Ecosystems & Environment

Disclaimer

The Illinois Natural Heritage Database cannot provide a conclusive statement on the presence, absence, or condition of natural resources in Illinois. This review reflects the information existing in the Database at the time of this inquiry, and should not be regarded as a final statement on the site being considered, nor should it be a substitute for detailed site surveys or field surveys required for environmental assessments. If additional protected resources are encountered during the project's implementation, compliance with applicable statutes and regulations is required.

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EcoCAT
Ecological Compliance Assessment Tool

Applicant:	CDM Smith	*IDNR Project #:*	1304098
Contact:	Claudia Lea	Date:	09/12/2012
Address:	125 S Wacker Drive Suite 600 Chicago, IL 60606		

Project: CTA Red Line Extension
Address: 95th Street Terminal, Chicago

Description: The Chicago Transit Authority (CTA) is proposing to extend the Red Line from the 95th Street Station to the vicinity of 130th Street.

Natural Resource Review Results

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Location

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County: Cook

Township, Range, Section:
37N, 14E, 3
37N, 14E, 4
37N, 14E, 8
37N, 14E, 9
37N, 14E, 10

IL Department of Natural Resources Contact
Impact Assessment Section
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Division of Ecosystems & Environment

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EcoCAT
Ecological Compliance Assessment Tool

Applicant: CDM Smith
Contact: Claudia Lea
Address: 125 S Wacker Drive
Suite 600
Chicago, IL 60606

IDNR Project #: 1304099
Date: 09/12/2012

Project: CTA Red Line Extension
Address: 95th Street Terminal, Chicago

Description: The Chicago Transit Authority (CTA) is proposing to extend the Red Line from the 95th Street Station to the vicinity of 130th Street.

Natural Resource Review Results

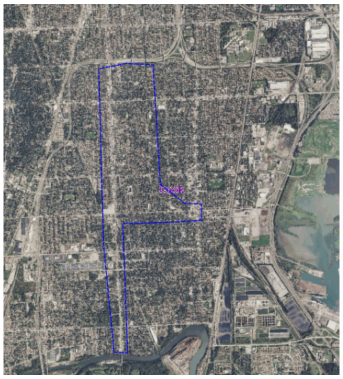
This project was submitted for information only. It is not a consultation under Part 1075.

The Illinois Natural Heritage Database shows the following protected resources may be in the vicinity of the project location:

Riverdale Marsh INAI Site
Black-Crowned Night Heron *(Nycticorax nycticorax)*
Little Blue Heron *(Egretta caerulea)*
Yellow-Crowned Night Heron *(Nyctanassa violacea)*
Yellow-Headed Blackbird *(Xanthocephalus xanthocephalus)*

Location

The applicant is responsible for the accuracy of the location submitted for the project.



County: Cook

Township, Range, Section:

37N, 14E, 8
37N, 14E, 9
37N, 14E, 16
37N, 14E, 17
37N, 14E, 20
37N, 14E, 21
37N, 14E, 22
37N, 14E, 28
37N, 14E, 29
37N, 14E, 32
37N, 14E, 33

IL Department of Natural Resources Contact

Impact Assessment Section
217-785-5500
Division of Ecosystems & Environment

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EcoCAT
Ecological Compliance Assessment Tool

Applicant:	CDM Smith	*IDNR Project #:*	1304096
Contact:	Claudia Lea	Date:	09/12/2012
Address:	125 S Wacker Drive Suite 600 Chicago, IL 60606		

Project: CTA Red Line Extension
Address: 95th Street Terminal, Chicago

Description: The Chicago Transit Authority (CTA) is proposing to extend the Red Line from the 95th Street Station to the vicinity of 130th Street.

Natural Resource Review Results

This project was submitted for information only. It is not a consultation under Part 1075.

The Illinois Natural Heritage Database shows the following protected resources may be in the vicinity of the project location:

Lake Calumet INAI Site
Blanding'S Turtle *(Emydoidea blandingii)*
Common Moorhen *(Gallinula chloropus)*
Little Blue Heron *(Egretta caerulea)*
Peregrine Falcon *(Falco peregrinus)*
Yellow-Crowned Night Heron *(Nyctanassa violacea)*
Yellow-Headed Blackbird *(Xanthocephalus xanthocephalus)*

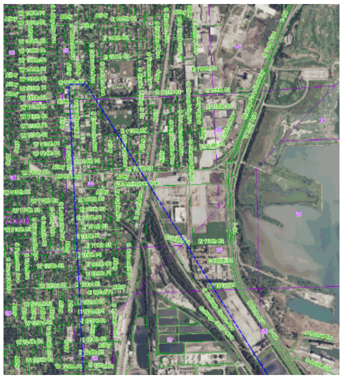
Location

The applicant is responsible for the accuracy of the location submitted for the project.

County: Cook

Township, Range, Section:

37N, 14E, 15	37N, 14E, 22
37N, 14E, 26	37N, 14E, 27
37N, 14E, 28	37N, 14E, 33
37N, 14E, 34	37N, 14E, 35



IL Department of Natural Resources Contact
Impact Assessment Section
217-785-5500
Division of Ecosystems & Environment

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Privacy

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Applicant: CDM Smith
Contact: Claudia Lea
Address: 125 S Wacker Drive
Suite 600
Chicago, IL 60606

IDNR Project #: 1304295
Date: 09/18/2012

Project: CTA Red Line Extension Project
Address: 95th Street Terminal, Chicago

Description: The Chicago Transit Authority (CTA) is proposing to extend the Red Line from the 95th Street Station to the vicinity of 130th Street.

Natural Resource Review Results

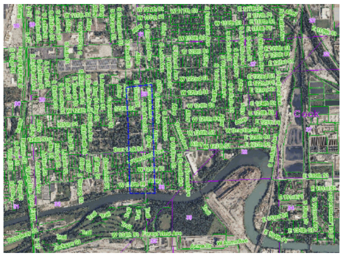
This project was submitted for information only. It is not a consultation under Part 1075.

The Illinois Natural Heritage Database shows the following protected resources may be in the vicinity of the project location:

Riverdale Marsh INAI Site
Black-Crowned Night Heron *(Nycticorax nycticorax)*

Location

The applicant is responsible for the accuracy of the location submitted for the project.



County: Cook

Township, Range, Section:

37N, 14E, 28
37N, 14E, 29
37N, 14E, 32
37N, 14E, 33

IL Department of Natural Resources Contact

Impact Assessment Section
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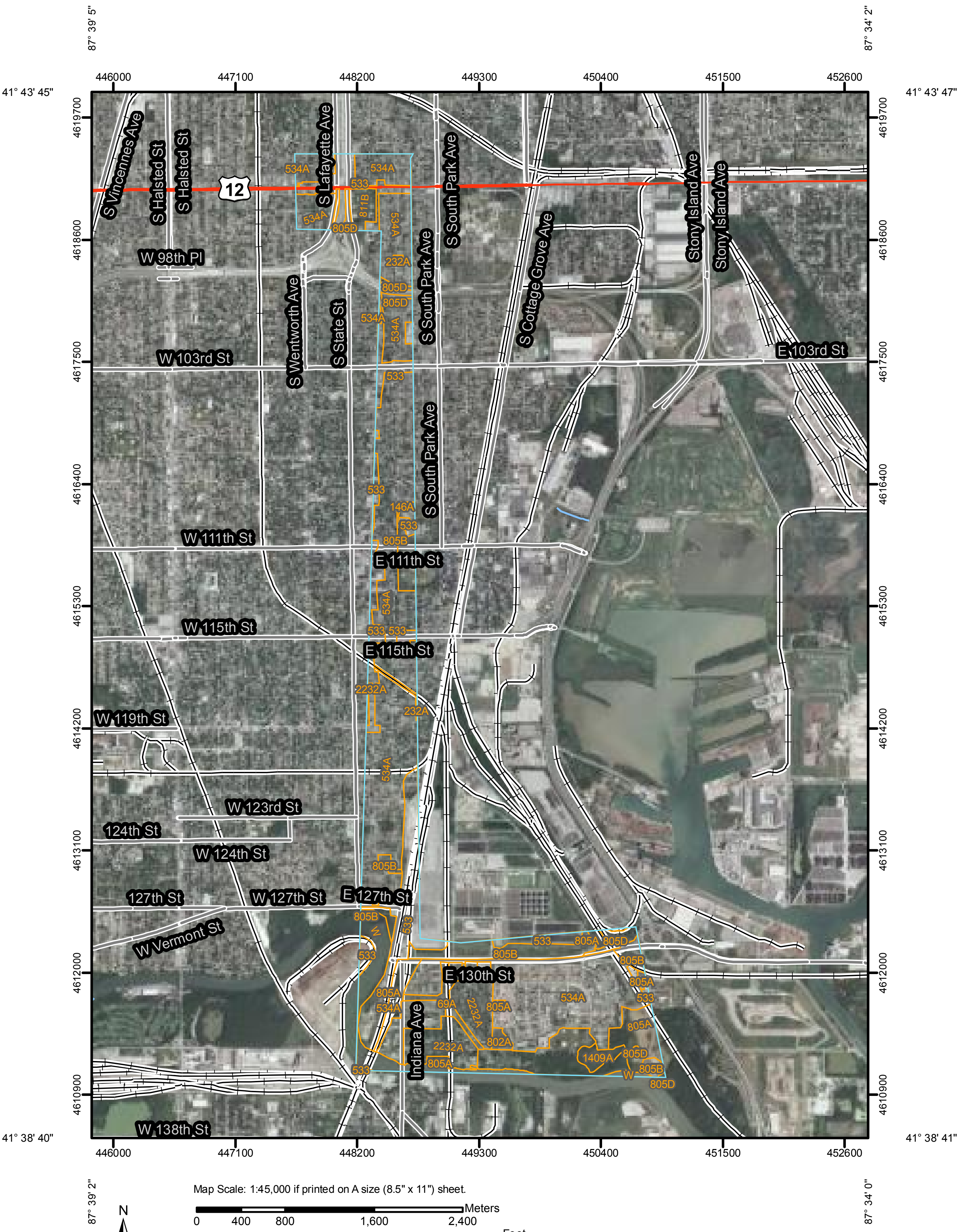
Appendix B
Natural Resources Conservation Service Web Soil Survey Summary

Soil Map—Cook County, Illinois
(RLE TSM/BRT Alternative)


87° 39' 5"
87° 34' 2"
446000
447100
448200
449300
450400
451500
452600
41° 43' 45"
41° 43' 47"
4619700
4618600
4617500
4616400
4615300
4614200
4613100
4612000
4610900
S Vincennes Ave
S Halsted St
S Halsted St
12
S Lafayette Ave
534A
534A
533
534A
811B
805D
534A
S South Park Ave
W 98th Pl
232A
805D
805D
534A
534A
S South Park Ave
S Wentworth Ave
S State St
S Cottage Grove Ave
Stony Island Ave
Stony Island Ave
W 103rd St
E 103rd St
533
533
146A
533
805B
S South Park Ave
W 111th St
E 111th St
534A
W 115th St
533
533
E 115th St
2232A
232A
W 119th St
534A
W 123rd St
124th St
W 124th St
805B
127th St
W 127th St
E 127th St
W Vermont St
805B
W
533
533
533
805A
805D
805B
805B
E 130th St
805A
534A
533
805A
534A
69A
2232A
805A
805A
802A
Indiana Ave
2232A
805A
1409A
805D
805B
W
805D
533
W 138th St
41° 38' 40"
41° 38' 41"
87° 39' 2"
87° 34' 0"
Map Scale: 1:45,000 if printed on A size (8.5" x 11") sheet.
N
Meters
0
400
800
1,600
2,400
Feet
0
1,500
3,000
6,000
9,000

Natural Resources Conservation Service

Web Soil Survey
National Cooperative Soil Survey

9/13/2012

MAP LEGEND

Area of Interest (AOI)
▭ Area of Interest (AOI)

Soils
▭ Soil Map Units

Special Point Features
ʊ Blowout
☒ Borrow Pit
✳ Clay Spot
◆ Closed Depression
✕ Gravel Pit
∴ Gravelly Spot
Ⓐ Landfill
Λ Lava Flow
ѱ Marsh or swamp
⚒ Mine or Quarry
◎ Miscellaneous Water
◉ Perennial Water
∨ Rock Outcrop
+ Saline Spot
∷ Sandy Spot
≡ Severely Eroded Spot
◇ Sinkhole
ʒ Slide or Slip
ø Sodic Spot
≣ Spoil Area
◊ Stony Spot
ꝏ Very Stony Spot
ψ Wet Spot
▲ Other

Special Line Features
∿ Gully
⋯ Short Steep Slope
⌒ Other

Political Features
● Cities

Water Features
∼ Streams and Canals

Transportation
┼┼┼ Rails
〰 Interstate Highways
∼ US Routes
≈ Major Roads

MAP INFORMATION

Map Scale: 1:45,000 if printed on A size (8.5" × 11") sheet.

The soil surveys that comprise your AOI were mapped at 1:12,000.

Please rely on the bar scale on each map sheet for accurate map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
Coordinate System: UTM Zone 16N NAD83

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Cook County, Illinois
Survey Area Data: Version 6, Nov 2, 2011

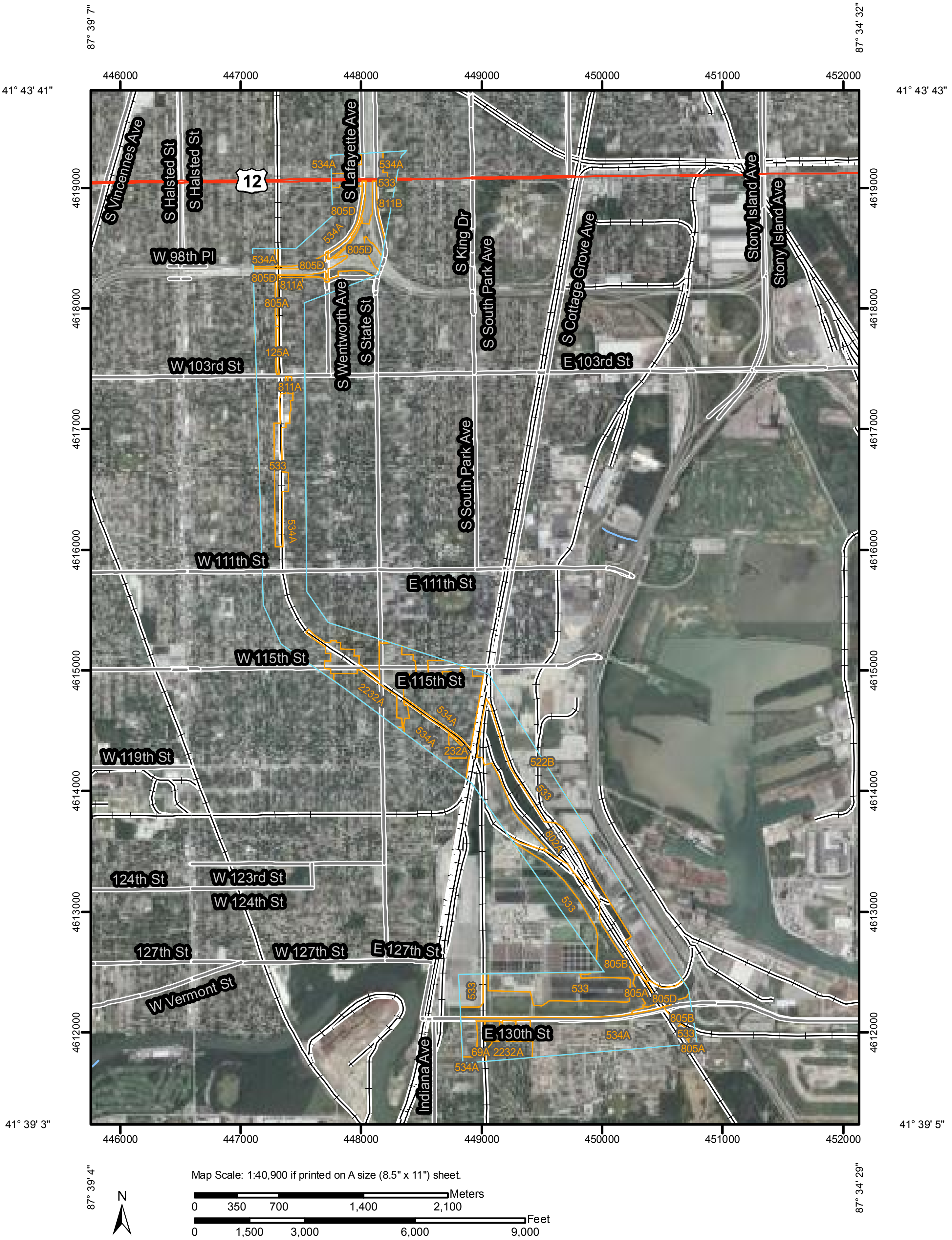
Date(s) aerial images were photographed: 7/30/2007; 8/3/2007

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Cook County, Illinois (IL031)			
Map Unit Symbol	**Map Unit Name**	**Acres in AOI**	**Percent of AOI**
69A	Milford silty clay loam, 0 to 2 percent slopes	17.7	1.1%
146A	Elliott silt loam, 0 to 2 percent slopes	1.8	0.1%
232A	Ashkum silty clay loam, 0 to 2 percent slopes	2.7	0.2%
533	Urban land	264.9	16.3%
534A	Urban land-Orthents, clayey, complex, nearly level	834.7	51.2%
802A	Orthents, loamy, nearly level	6.7	0.4%
802B	Orthents, loamy, undulating	5.0	0.3%
805A	Orthents, clayey, nearly level	151.0	9.3%
805B	Orthents, clayey, undulating	109.3	6.7%
805D	Orthents, clayey, rolling	31.6	1.9%
811B	Alfic Udarents, clayey, 2 to 6 percent slopes	19.6	1.2%
1409A	Aquents, clayey, undrained, nearly level	14.0	0.9%
2049A	Orthents, loamy-Urban land-Watseka complex, 0 to 2 percent slopes	0.1	0.0%
2232A	Orthents, clayey-Urban land-Ashkum complex, 0 to 2 percent slopes	99.4	6.1%
W	Water	71.2	4.4%
Totals for Area of Interest		**1,629.8**	**100.0%**

Soil Map—Cook County, Illinois
(RLE UPRR Alternative)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87° 34' 32"
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452000
41° 43' 41"
41° 43' 43"
4619000
4618000
4617000
4616000
4615000
4614000
4613000
4612000
S Vincennes Ave
S Halsted St
S Halsted St
12
S Lafayette Ave
534A
534A
533
811B
805D
534A
805D
534A
805D
805D
811A
805A
125A
811A
533
534A
W 98th Pl
S Wentworth Ave
S State St
S King Dr
S South Park Ave
S Cottage Grove Ave
Stony Island Ave
Stony Island Ave
W 103rd St
E 103rd St
S South Park Ave
W 111th St
E 111th St
W 115th St
E 115th St
2232A
534A
534A
232A
522B
533
802A
533
W 119th St
124th St
W 123rd St
W 124th St
127th St
W 127th St
E 127th St
W Vermont St
805B
533
533
805A
805D
805B
533
805A
E 130th St
534A
69A
2232A
534A
Indiana Ave
41° 39' 3"
41° 39' 5"
446000
447000
448000
449000
450000
451000
452000
87° 39' 4"
87° 34' 29"
N
Meters
0
350
700
1,400
2,100
Feet
0
1,500
3,000
6,000
9,000

Map Scale: 1:40,900 if printed on A size (8.5" x 11") sheet.

MAP LEGEND

Area of Interest (AOI)
- □ Area of Interest (AOI)

Soils
- □ Soil Map Units

Special Point Features
- ʊ Blowout
- ☒ Borrow Pit
- ⋇ Clay Spot
- ◆ Closed Depression
- ✕ Gravel Pit
- ∴ Gravelly Spot
- ⊘ Landfill
- Λ Lava Flow
- ⩚ Marsh or swamp
- ⚒ Mine or Quarry
- ◎ Miscellaneous Water
- ◉ Perennial Water
- ∨ Rock Outcrop
- + Saline Spot
- ⁙ Sandy Spot
- ≡ Severely Eroded Spot
- ◇ Sinkhole
- ≫ Slide or Slip
- ø Sodic Spot
- ≣ Spoil Area
- ◊ Stony Spot
- ◊◊ Very Stony Spot
- ψ Wet Spot
- ▲ Other

Special Line Features
- ~ Gully
- ⋯ Short Steep Slope
- ^ Other

Political Features
- ● Cities

Water Features
- ~ Streams and Canals

Transportation
- ┼┼┼ Rails
- ~ Interstate Highways
- ~ US Routes
- ≈ Major Roads

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Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
Coordinate System: UTM Zone 16N NAD83

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Survey Area Data: Version 6, Nov 2, 2011

Date(s) aerial images were photographed: 7/30/2007; 8/3/2007

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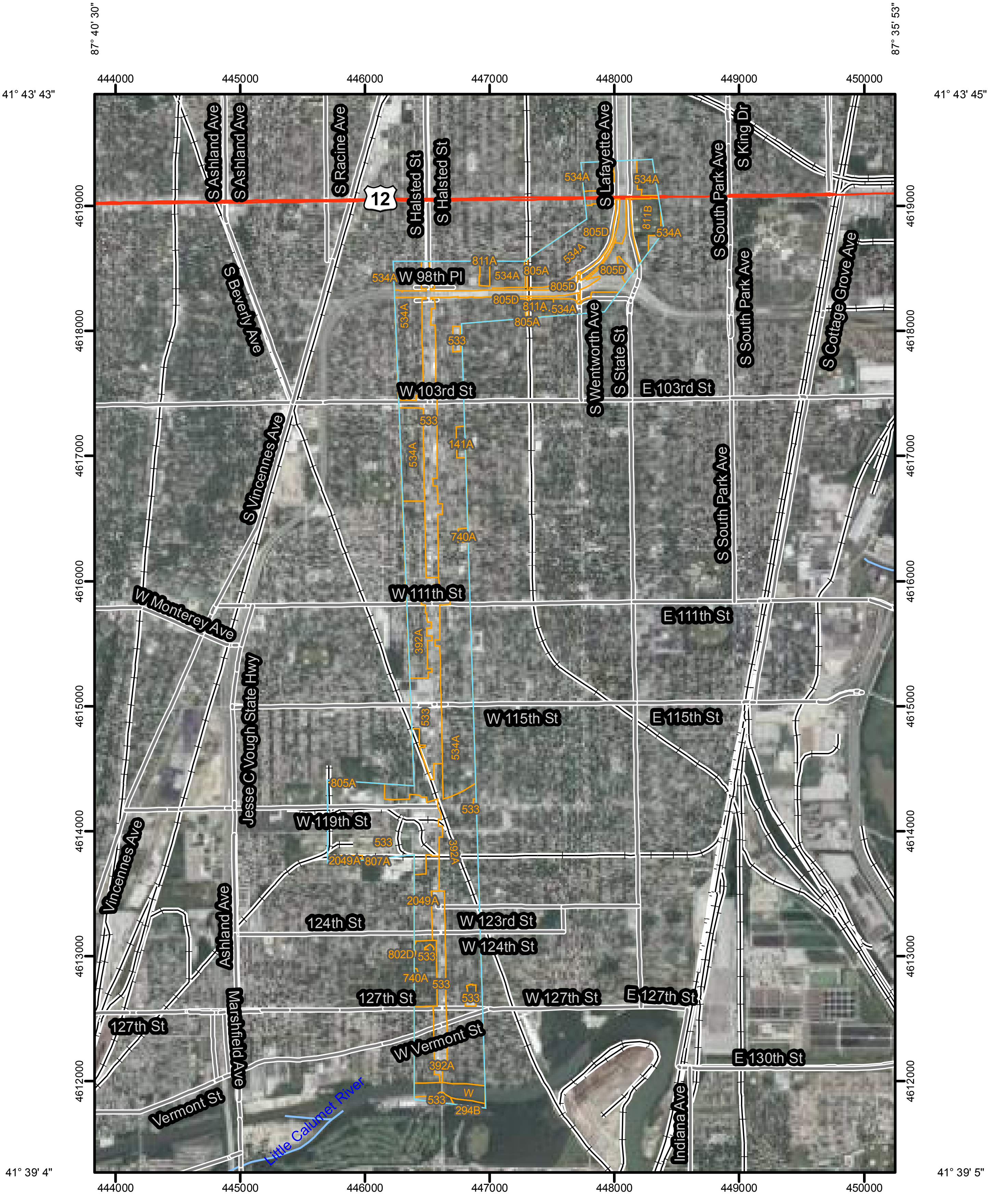
Cook County, Illinois (IL031)			
Map Unit Symbol	**Map Unit Name**	**Acres in AOI**	**Percent of AOI**
69A	Milford silty clay loam, 0 to 2 percent slopes	7.7	0.6%
125A	Selma loam, 0 to 2 percent slopes	2.1	0.2%
232A	Ashkum silty clay loam, 0 to 2 percent slopes	4.6	0.3%
522B	Orthents, clayey, refuse substratum, undulating	0.1	0.0%
533	Urban land	432.1	31.4%
534A	Urban land-Orthents, clayey, complex, nearly level	590.1	42.9%
802A	Orthents, loamy, nearly level	90.6	6.6%
802B	Orthents, loamy, undulating	5.0	0.4%
805A	Orthents, clayey, nearly level	14.4	1.0%
805B	Orthents, clayey, undulating	111.7	8.1%
805D	Orthents, clayey, rolling	55.8	4.1%
811A	Alfic Udarents, clayey, 0 to 2 percent slopes	5.4	0.4%
811B	Alfic Udarents, clayey, 2 to 6 percent slopes	11.4	0.8%
2232A	Orthents, clayey-Urban land-Ashkum complex, 0 to 2 percent slopes	43.4	3.2%
Totals for Area of Interest		**1,374.3**	**100.0%**

Soil Map—Cook County, Illinois
(RLE Halsted Rail Alternative)


87° 40' 30"
87° 35' 53"
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41° 43' 43"
41° 43' 45"
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4612000
S Ashland Ave
S Ashland Ave
S Racine Ave
12
S Halsted St
S Halsted St
S Lafayette Ave
S South Park Ave
S King Dr
534A
534A
534A
805D
811B
534A
534A
811A
805A
805D
805D
534A
W 98th Pl
534A
805D
811A
534A
805A
534A
533
S Beverly Ave
S Wentworth Ave
S State St
S South Park Ave
S Cottage Grove Ave
W 103rd St
E 103rd St
S Vincennes Ave
533
534A
141A
740A
S South Park Ave
W Monterey Ave
W 111th St
E 111th St
392A
533
534A
Jesse C Vough State Hwy
W 115th St
E 115th St
805A
533
W 119th St
533
392A
2049A
807A
Vincennes Ave
Ashland Ave
2049A
124th St
W 123rd St
W 124th St
802D
533
740A
533
533
127th St
W 127th St
E 127th St
127th St
Marshfield Ave
W Vermont St
392A
E 130th St
533
W
294B
Vermont St
Little Calumet River
Indiana Ave
41° 39' 4"
41° 39' 5"
87° 40' 27"
87° 35' 51"

Map Scale: 1:41,200 if printed on A size (8.5" x 11") sheet.

N

Meters
0 350 700 1,400 2,100

Feet
0 1,500 3,000 6,000 9,000

Natural Resources
Conservation Service

Web Soil Survey
National Cooperative Soil Survey

9/13/2012

MAP LEGEND

Area of Interest (AOI)

- ▭ Area of Interest (AOI)

Soils

- ▭ Soil Map Units

Special Point Features

- ⊍ Blowout
- ⊠ Borrow Pit
- ⋇ Clay Spot
- ◆ Closed Depression
- ✕ Gravel Pit
- ∴ Gravelly Spot
- Ⓐ Landfill
- Λ Lava Flow
- ⫫ Marsh or swamp
- ⚒ Mine or Quarry
- ◎ Miscellaneous Water
- ◉ Perennial Water
- ∨ Rock Outcrop
- + Saline Spot
- ⁙ Sandy Spot
- ≡ Severely Eroded Spot
- ◇ Sinkhole
- ⅋ Slide or Slip
- ø Sodic Spot
- ≣ Spoil Area
- ◊ Stony Spot
- ∞ Very Stony Spot
- ψ Wet Spot
- ▲ Other

Special Line Features

- ∾ Gully
- ⋯ Short Steep Slope
- ⌒ Other

Political Features

- ● Cities

Water Features

- ∼ Streams and Canals

Transportation

- ┼┼┼ Rails
- ∼ Interstate Highways
- ∼ US Routes
- ≈ Major Roads

MAP INFORMATION

Map Scale: 1:41,200 if printed on A size (8.5" × 11") sheet.

The soil surveys that comprise your AOI were mapped at 1:12,000.

Please rely on the bar scale on each map sheet for accurate map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
Coordinate System: UTM Zone 16N NAD83

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Cook County, Illinois
Survey Area Data: Version 6, Nov 2, 2011

Date(s) aerial images were photographed: 7/30/2007; 8/3/2007

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Cook County, Illinois (IL031)			
Map Unit Symbol	**Map Unit Name**	**Acres in AOI**	**Percent of AOI**
141A	Wesley fine sandy loam, 0 to 2 percent slopes	4.2	0.3%
293A	Andres silt loam, 0 to 2 percent slopes	0.6	0.0%
294B	Symerton silt loam, 2 to 5 percent slopes	2.9	0.2%
392A	Urban land-Orthents, loamy, complex, nearly level	273.7	21.9%
533	Urban land	348.4	27.8%
534A	Urban land-Orthents, clayey, complex, nearly level	480.8	38.4%
740A	Darroch silt loam, 0 to 2 percent slopes	23.2	1.9%
802D	Orthents, loamy, rolling	0.8	0.1%
805A	Orthents, clayey, nearly level	2.2	0.2%
805D	Orthents, clayey, rolling	41.6	3.3%
807A	Orthents, loamy-skeletal, nearly level	0.1	0.0%
811A	Alfic Udarents, clayey, 0 to 2 percent slopes	8.0	0.6%
811B	Alfic Udarents, clayey, 2 to 6 percent slopes	21.6	1.7%
2049A	Orthents, loamy-Urban land-Watseka complex, 0 to 2 percent slopes	27.5	2.2%
W	Water	16.3	1.3%
Totals for Area of Interest		**1,251.9**	**100.0%**

Appendix C
Wetlands and Deepwater Habitats Classification

WETLANDS AND DEEPWATER HABITATS CLASSIFICATION

System: M - Marine

- Subsystem: 1 - Subtidal
  - Class: RB – Rock Bottom
    - Subclass: 1 Bedrock
    - 2 Rubble
  - UB – Unconsolidated Bottom
    - 1 Cobble-Gravel
    - 2 Sand
    - 3 Mud
  - AB – Aquatic Bed
    - 1 Algal
    - 3 Rooted Vascular
  - RF – Reef
    - 1 Coral
    - 3 Worm
- 2 - Intertidal
  - AB – Aquatic Bed
    - 1 Algal
    - 3 Rooted Vascular
  - RF – Reef
    - 1 Coral
    - 3 Worm
  - RS – Rocky Shore
    - 1 Bedrock
    - 2 Rubble
  - US – Unconsolidated Shore
    - 1 Cobble-Gravel
    - 2 Sand
    - 3 Mud
    - 4 Organic

System: E - Estuarine

- Subsystem: 1 - Subtidal
  - Class: RB – Rock Bottom
    - Subclass: 1 Bedrock
    - 2 Rubble
  - UB – Unconsolidated Bottom
    - 1 Cobble-Gravel
    - 2 Sand
    - 3 Mud
    - 4 Organic
  - AB – Aquatic Bed
    - 1 Algal
    - 3 Rooted Vascular
    - 4 Floating Vascular
  - RF – Reef
    - 2 Mollusk
    - 3 Worm
- 2 - Intertidal
  - AB – Aquatic Bed
    - 1 Algal
    - 3 Rooted Vascular
    - 4 Floating Vascular
  - RF – Reef
    - 2 Mollusk
    - 3 Worm
  - SB – Streambed
    - 1 Bedrock
    - 2 Rubble
    - 3 Cobble-Gravel
    - 4 Sand
    - 5 Mud
    - 6 Organic
  - RS – Rocky Shore
    - 1 Bedrock
    - 2 Rubble
  - US – Unconsolidated Shore
    - 1 Cobble-Gravel
    - 2 Sand
    - 3 Mud
    - 4 Organic
  - EM – Emergent
    - 1 Persistent
    - 2 Non-persistent
    - 5 *Phragmites australis*
  - SS – Scrub-Shrub
    - 1 Broad-Leaved Deciduous
    - 2 Needle-Leaved Deciduous
    - 3 Broad-Leaved Evergreen
    - 4 Needle-Leaved Evergreen
    - 5 Dead
    - 6 Deciduous
    - 7 Evergreen
  - FO – Forested
    - 1 Broad-Leaved Deciduous
    - 2 Needle-Leaved Deciduous
    - 3 Broad-Leaved Evergreen
    - 4 Needle-Leaved Evergreen
    - 5 Dead
    - 6 Deciduous
    - 7 Evergreen

System: R - Riverine

Subsystem: 1 - Tidal; 2 – Lower Perennial; 3 – Upper Perennial; 4* - Intermittent; 5* – Unknown Perennial

- Class: RB** – Rock Bottom
  - Subclass: 1 Bedrock
  - 2 Rubble
- UB – Unconsolidated Bottom
  - 1 Cobble-Gravel
  - 2 Sand
  - 3 Mud
  - 4 Organic
- SB** – Streambed
  - 1 Bedrock
  - 2 Rubble
  - 3 Cobble-Gravel
  - 4 Sand
  - 5 Mud
  - 6 Organic
  - 7 Vegetated
- AB – Aquatic Bed
  - 1 Algal
  - 2 Aquatic Moss
  - 3 Rooted Vascular
  - 4 Floating Vascular
- RS – Rocky Shore
  - 1 Bedrock
  - 2 Rubble
- US – Unconsolidated Shore
  - 1 Cobble-Gravel
  - 2 Sand
  - 3 Mud
  - 4 Organic
  - 5 Vegetated
- EM – Emergent
  - 2 Nonpersistent

* **Intermittent** is limited to the **Streambed** Class;
Unknown Perennial is limited to **Unconsolidated Bottom** Class code **R5UB** only
** **Rock Bottom** is not permitted for the **Lower Perennial** Subsystem;
Streambed is limited to **Tidal** and **Intermittent** Subsystems

Classification of Wetlands and Deepwater Habitats of the United States, Cowardin *et al*. 1979

WETLANDS AND DEEPWATER HABITATS CLASSIFICATION

System: L - Lacustrine

- Subsystem: 1 - Limnetic
  - Class: RB – Rock Bottom
    - Subclass: 1 Bedrock, 2 Rubble
  - Class: UB – Unconsolidated Bottom
    - Subclass: 1 Cobble-Gravel, 2 Sand, 3 Mud, 4 Organic
  - Class: AB – Aquatic Bed
    - Subclass: 1 Algal, 2 Aquatic Moss, 3 Rooted Vascular, 4 Floating Vascular
- Subsystem: 2 - Littoral
  - Class: RB – Rock Bottom
    - Subclass: 1 Bedrock, 2 Rubble
  - Class: UB – Unconsolidated Bottom
    - Subclass: 1 Cobble-Gravel, 2 Sand, 3 Mud, 4 Organic
  - Class: AB – Aquatic Bed
    - Subclass: 1 Algal, 2 Aquatic Moss, 3 Rooted Vascular, 4 Floating Vascular
  - Class: RS – Rocky Shore
    - Subclass: 1 Bedrock, 2 Rubble
  - Class: US – Unconsolidated Shore
    - Subclass: 1 Cobble-Gravel, 2 Sand, 3 Mud, 4 Organic, 5 Vegetated
  - Class: EM – Emergent
    - Subclass: 2 Nonpersistent

System: P - Palustrine

- Class: RB – Rock Bottom
  - Subclass: 1 Bedrock, 2 Rubble
- Class: UB – Unconsolidated Bottom
  - Subclass: 1 Cobble-Gravel, 2 Sand, 3 Mud, 4 Organic
- Class: AB – Aquatic Bed
  - Subclass: 1 Algal, 2 Aquatic Moss, 3 Rooted Vascular, 4 Floating Vascular
- Class: US – Unconsolidated Shore
  - Subclass: 1 Cobble-Gravel, 2 Sand, 3 Mud, 4 Organic, 5 Vegetated
- Class: ML – Moss-Lichen
  - Subclass: 1 Moss, 2 Lichen
- Class: EM – Emergent
  - Subclass: 1 Persistent, 2 Nonpersistent, 5 *Phragmites australis*
- Class: SS – Scrub-Shrub
  - Subclass: 1 Broad-Leaved Deciduous, 2 Needle-Leaved Deciduous, 3 Broad-Leaved Evergreen, 4 Needle-Leaved Evergreen, 5 Dead, 6 Deciduous, 7 Evergreen
- Class: FO – Forested
  - Subclass: 1 Broad-Leaved Deciduous, 2 Needle-Leaved Deciduous, 3 Broad-Leaved Evergreen, 4 Needle-Leaved Evergreen, 5 Dead, 6 Deciduous, 7 Evergreen

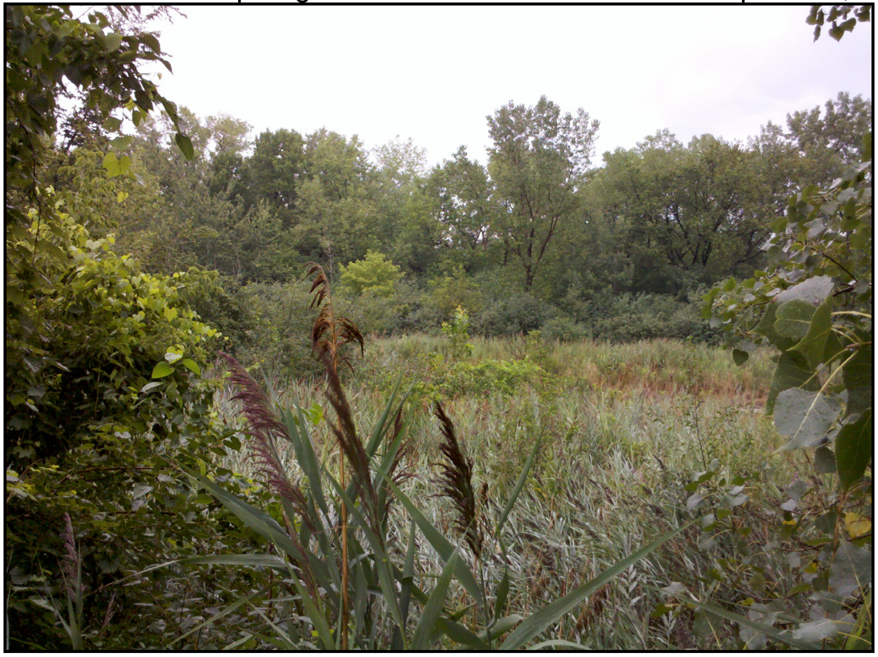
MODIFIERS

In order to more adequately describe the wetland and deepwater habitats, one or more of the water regime, water chemistry, soil, or special modifiers may be applied at the class or lower level in the hierarchy. The farmed modifier may also be applied to the ecological system.

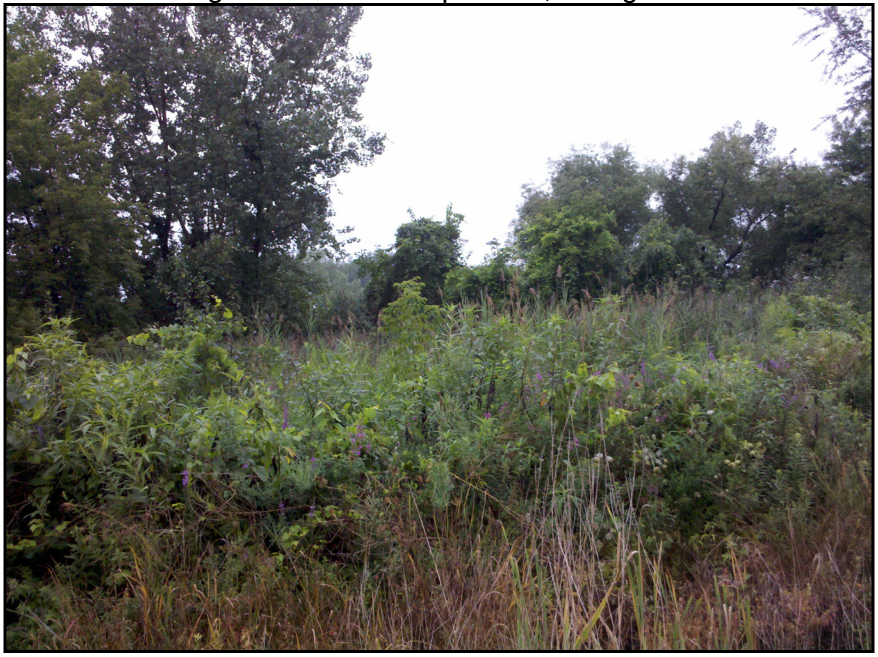
Water Regime			Special Modifiers	Water Chemistry			Soil
Nontidal	**Saltwater Tidal**	**Freshwater Tidal**		**Coastal Halinity**	**Inland Salinity**	**pH Modifiers for all Fresh Water**	
A Temporarily Flooded	L Subtidal	S Temporarily Flooded-Tidal	b Beaver	1 Hyperhaline	7 Hypersaline	a Acid	g Organic
B Saturated	M Irregularly Exposed	R Seasonally Flooded-Tidal	d Partly Drained/Ditched	2 Euhaline	8 Eusaline	t Circumneutral	n Mineral
C Seasonally Flooded	N Regularly Flooded	T Semipermanently Flooded-Tidal	f Farmed	3 Mixohaline (Brackish)	9 Mixosaline	i Alkaline	
E Seasonally Flooded/ Saturated	P Irregularly Flooded	V Permanently Flooded-Tidal	h Diked/Impounded	4 Polyhaline	0 Fresh		
F Semipermanently Flooded			r Artificial	5 Mesohaline			
G Intermittently Exposed			s Spoil	6 Oligohaline			
H Permanently Flooded			x Excavated	0 Fresh			
J Intermittently Flooded							
K Artificially Flooded							

Appendix D
Photographs from August 13, 2012 Field Visit

Potential wetland area with phragmites and cottonwoods near test pit TP-1, facing east



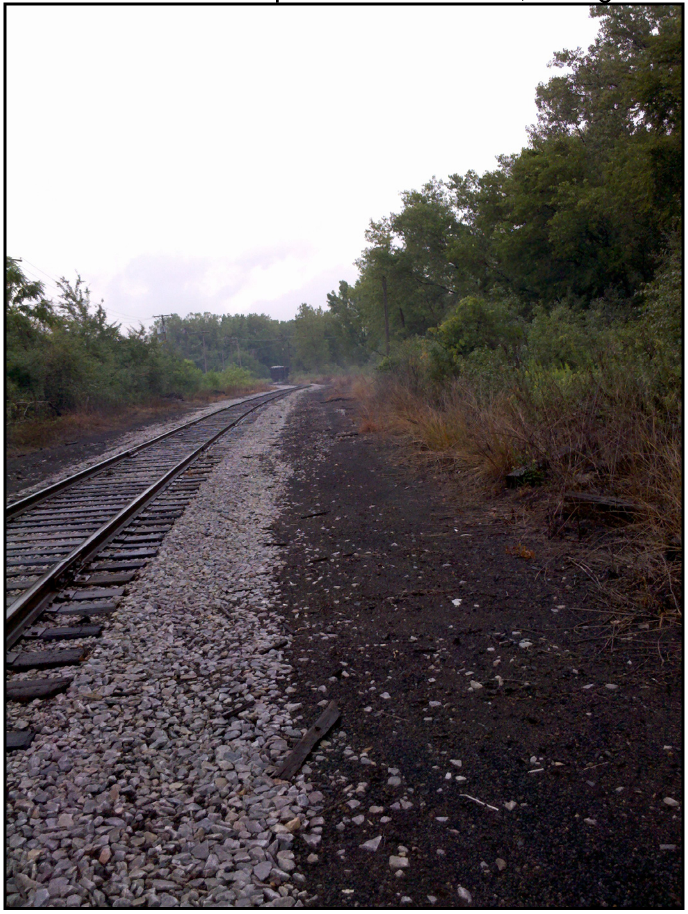
Vegetation near test pit TP-1, facing west



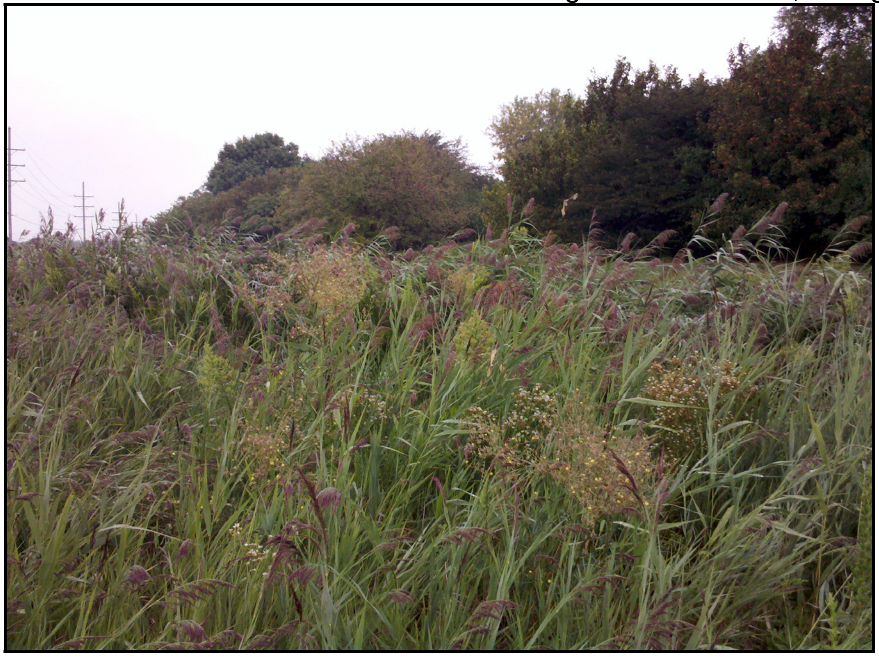
Along existing train tracks near test pit TP-2, facing northwest

Vegetation near TP-3, facing northwest

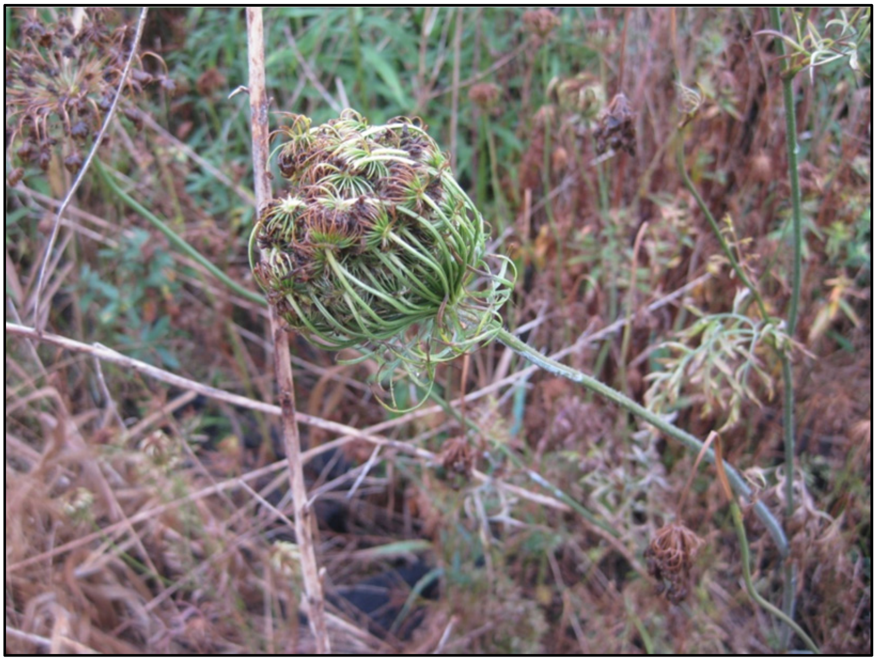
Train tracks between test pits TP-3 and TP-4, facing northwest

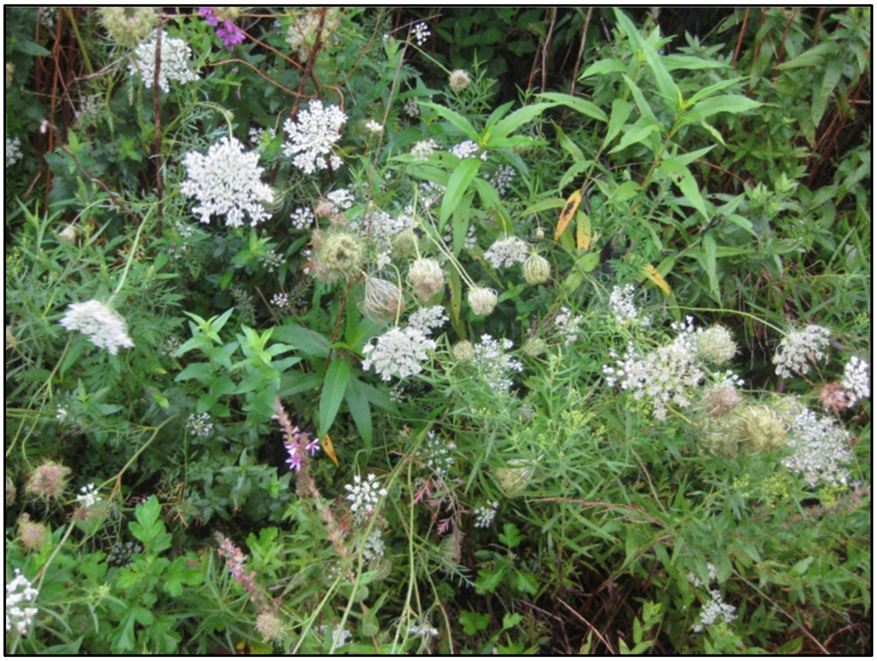


Phragmites near intersection of 130th Street and Cottage Grove Avenue, facing northwest

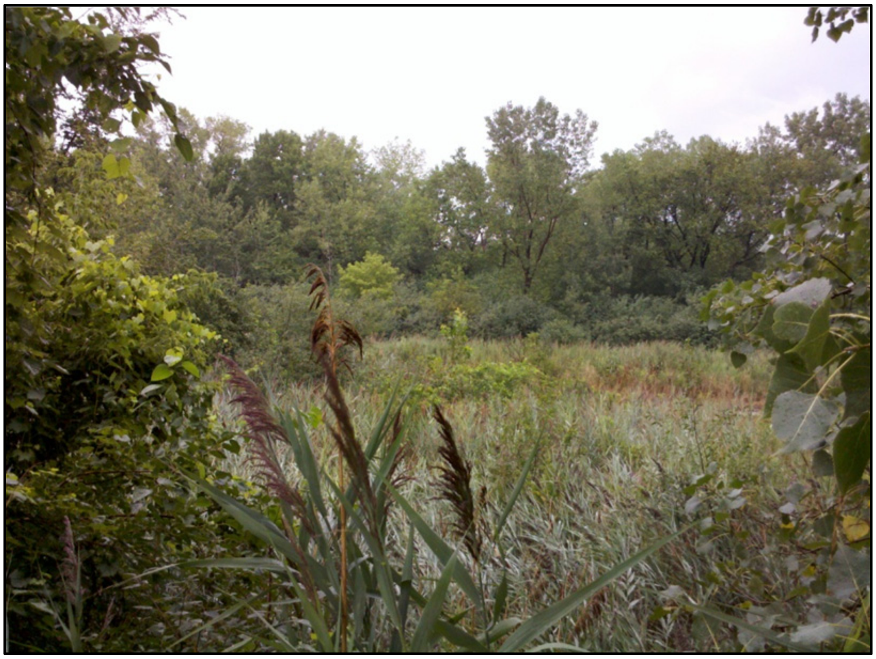


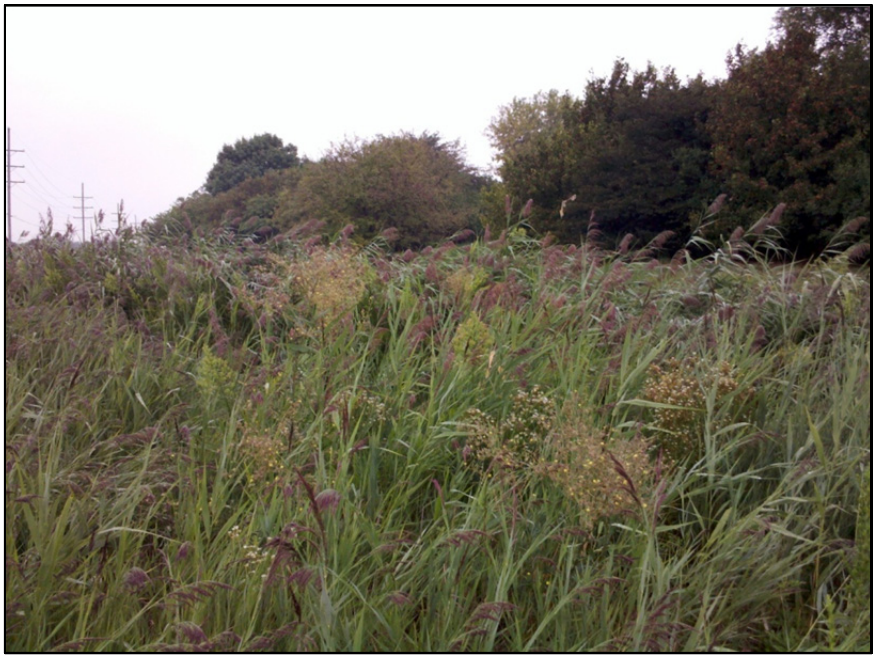
Scientific name: *Daucus carota*
Common name: Queen Anne's lace



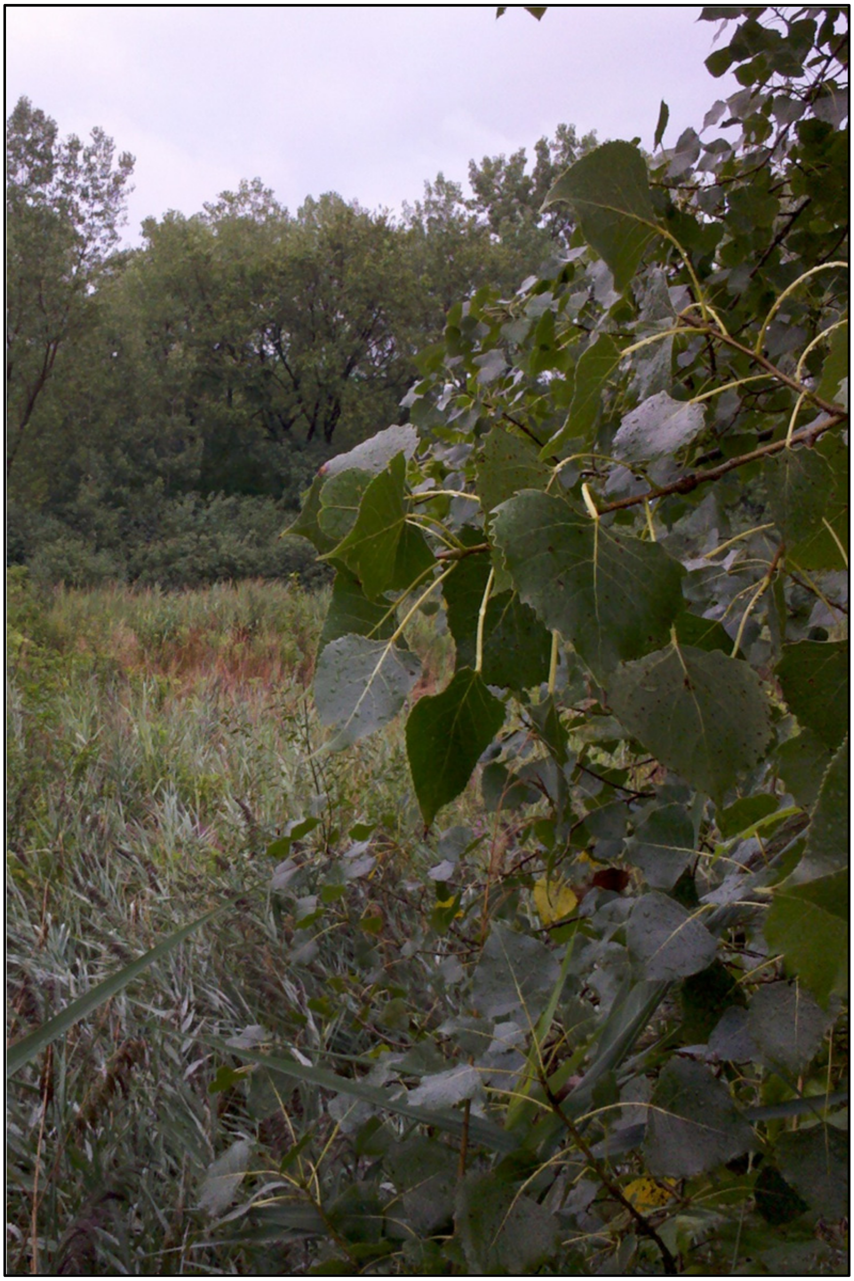


Scientific Name: *Phragmites australis*
Common Name: common reed

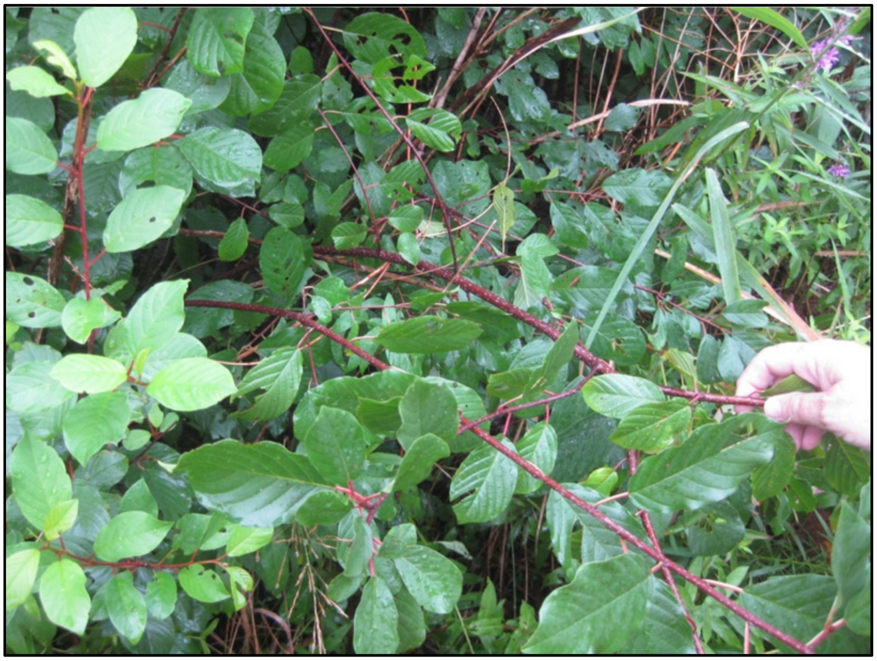




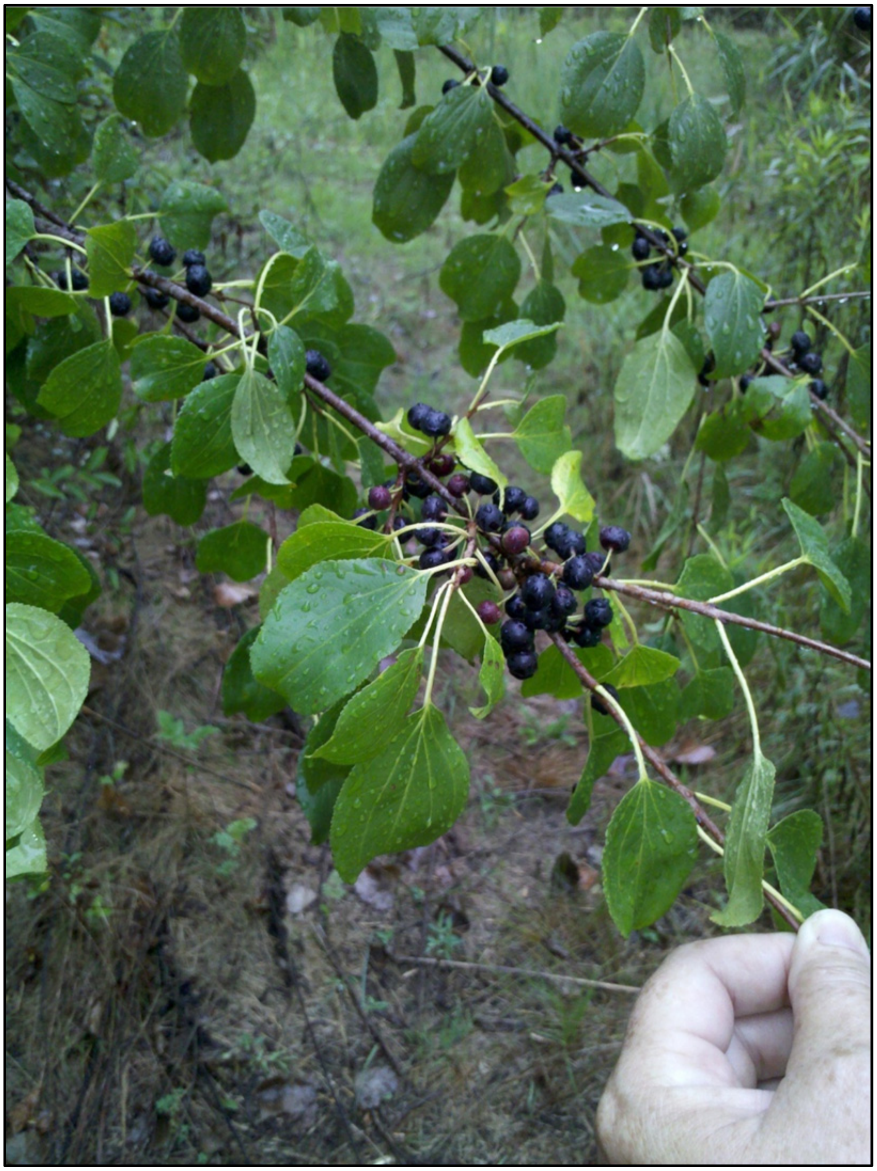
Scientific name: *Populous deltoides*
Common name: eastern cottonwood



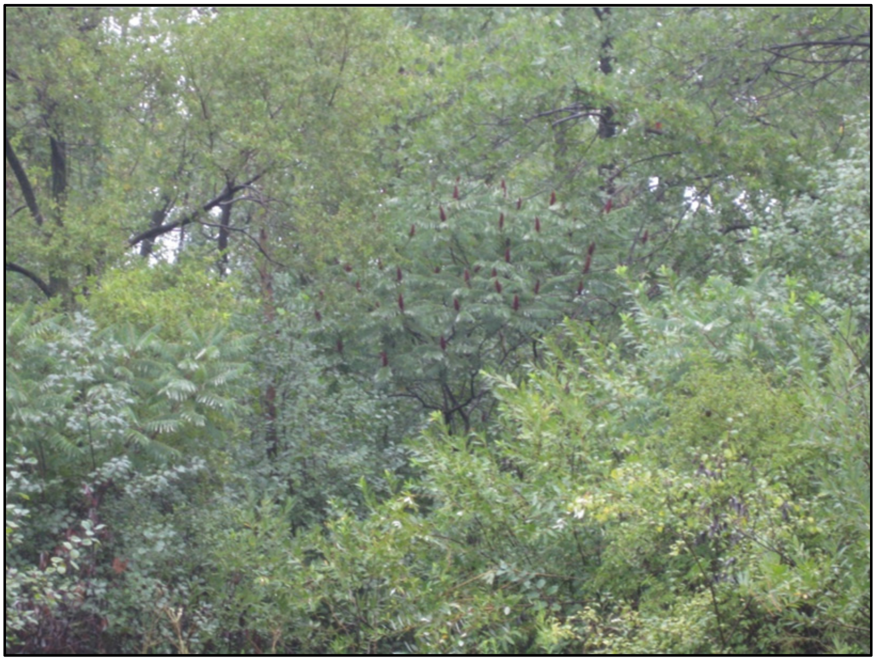
Scientific name: *Prunus virginiana*
Common name: chokecherry

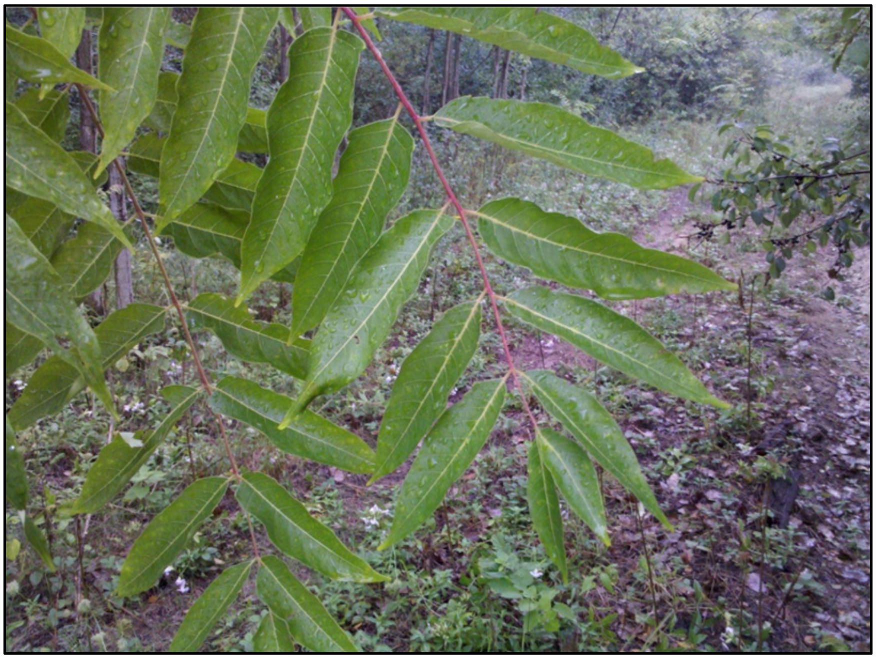


Scientific name: *Rhamnus cathartica*
Common name: common buckthorn

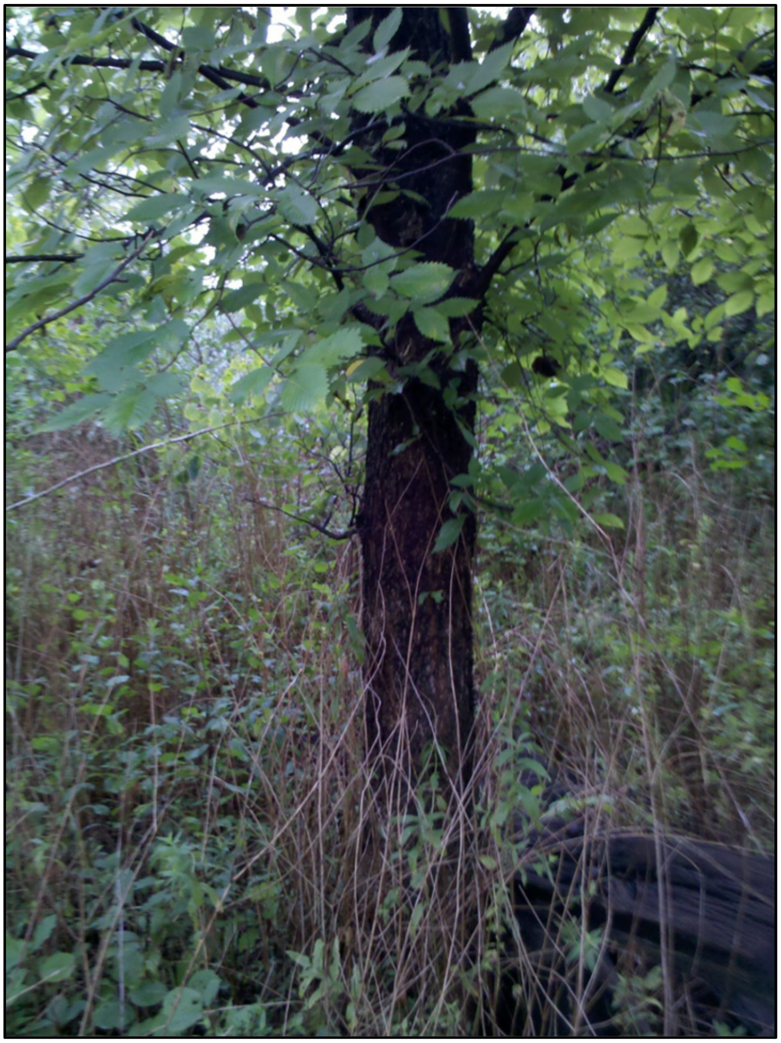


Scientific name: *Rhus typhina*
Common name: staghorn sumac





Scientific name: *Ulmus americana*
Common name: American elm



Appendix E
Soil Sample Summary

Sampling Point	**TP-1**
Location	UPRR Rail Alternative
City	Chicago
County	Cook
State	IL
Sampling Date	August 13, 2012

Is vegetation significantly disturbed?	Yes
Is soil significantly disturbed?	Yes
Is hydrology disturbed?	Yes

Is hydrophytic vegetation present?	Yes
Is hydric soil present?	Indeterminate/disturbed
Is wetland hydrology present?	Unknown/dry season

Vegetation

Type	Indicator Status
Populous deltoids (eastern cottonwood)	FAC+
Phragmites australis (phragmites)	FACW+
Daucus carota (Queen Anne's Lace)	--
Prunus virginiana (Chokecherry)	FAC-

Legend: OBL - Obligate Wetland; FACW - Facultative Wetland; FAC - Facultative;
FACU - Facultative Upland; UPL - Obligate Upland
(+) and (-) indicate regional frequency of occurrence in wetlands

Soil

0"-12" -- 2.5Y 2.5/1 (black)
uniformly same color to 12" below grade
50% small gravel, some fines including silts

Hydrology

No surface water present
No water table present
No saturation present
No obvious hydrology at the time of the field survey

Sampling Point	**TP-2**
Location	UPRR Rail Alternative
City	Chicago
County	Cook
State	IL
Sampling Date	August 13, 2012

Is vegetation significantly disturbed?	Yes
Is soil significantly disturbed?	Yes
Is hydrology disturbed?	Yes

Is hydrophytic vegetation present?	Yes
Is hydric soil present?	Indeterminate/disturbed
Is wetland hydrology present?	Unknown/dry season

Vegetation

Type	Indicator Status
Populous deltoids (eastern cottonwood)	FAC+
Daucus carota (Queen Anne's Lace)	--
Ulmus americana (American Elm)	FACW

Legend: OBL - Obligate Wetland; FACW - Facultative Wetland; FAC - Facultative;
FACU - Facultative Upland; UPL - Obligate Upland
(+) and (-) indicate regional frequency of occurrence in wetlands

Soil

0"-2" -- 10 YR 2/1 (black) organic
2"-7" -- 5 Y 3/1 (very dark gray) gravelly fill
7"-9" -- 5 Y 2.5/2 (black)

Hydrology

No surface water present
No water table present
No saturation present
No obvious hydrology at the time of the field survey

Sampling Point	**TP-3**
Location	UPRR Rail Alternative
City	Chicago
County	Cook
State	IL
Sampling Date	August 13, 2012

Is vegetation significantly disturbed?	Yes
Is soil significantly disturbed?	Yes
Is hydrology disturbed?	Yes

Is hydrophytic vegetation present?	Yes
Is hydric soil present?	Indeterminate/disturbed
Is wetland hydrology present?	Unknown/dry season

Vegetation

Type	Indicator Status
Populous deltoids (eastern cottonwood)	FAC+
Daucus carota (Queen Anne's Lace)	--
Rhus typhina (Staghorn sumac)	--

Legend: OBL - Obligate Wetland; FACW - Facultative Wetland; FAC - Facultative;
FACU - Facultative Upland; UPL - Obligate Upland
(+) and (-) indicate regional frequency of occurrence in wetlands

Soil

0"-3" -- organic

3"-12" -- 5 Y 4/1 (dark gray) compacted clay/silt; potentially fill; potentially hydric

Hydrology

No surface water present
No water table present
No saturation present
No obvious hydrology at the time of the field survey

Sampling Point	**TP-4**
Location	UPRR Rail Alternative
City	Chicago
County	Cook
State	IL
Sampling Date	August 13, 2012
Is vegetation significantly disturbed?	Yes
Is soil significantly disturbed?	Yes
Is hydrology disturbed?	Yes
Is hydrophytic vegetation present?	Yes
Is hydric soil present?	Indeterminate/disturbed
Is wetland hydrology present?	Unknown/dry season

Vegetation

Type	Indicator Status
Populous deltoids (eastern cottonwood)	FAC+
Daucus carota (Queen Anne's Lace)	--
Rhus typhina (Staghorn sumac)	--

Legend: OBL - Obligate Wetland; FACW - Facultative Wetland; FAC - Facultative;
FACU - Facultative Upland; UPL - Obligate Upland
(+) and (-) indicate regional frequency of occurrence in wetlands

Soil

0"-8" -- 10 YR 2/1 organic
8"-12" -- 10 YR 7/3 with red features (7.5 YR 5/8)

Hydrology

No surface water present
No water table present
No saturation present
No obvious hydrology at the time of the field survey

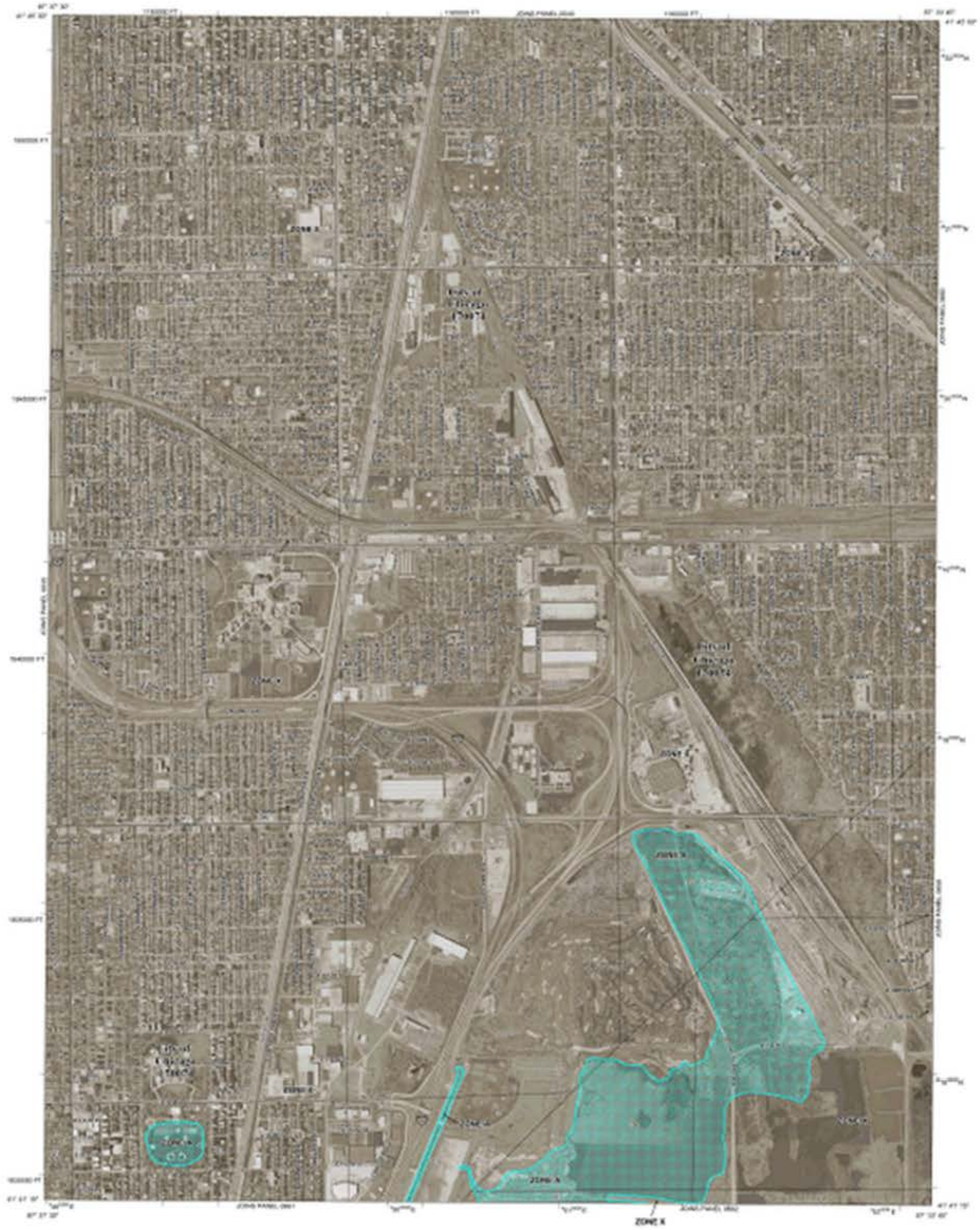
Appendix F
FEMA FIRM Summary

Map Number 17031C0655J

NOTES TO USERS

PANEL INDEX

Panel Not Printed


ZONE X
City of Chicago
170074
ZONE A
ZONE X

LEGEND

SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

FLOODWAY AREAS IN ZONE AE

OTHER FLOOD AREAS

OTHER AREAS

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

MAP SCALE 1" = 1000'

PANEL 0655J

NFIP

NATIONAL FLOOD INSURANCE PROGRAM

FIRM

FLOOD INSURANCE RATE MAP

COOK COUNTY, ILLINOIS

AND INCORPORATED AREAS

PANEL 655 OF 832

MAP NUMBER 17031C0655J

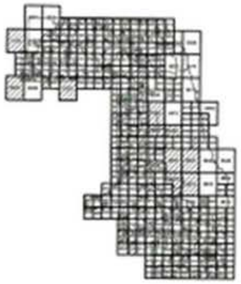
MAP REVISED AUGUST 19, 2008

Federal Emergency Management Agency

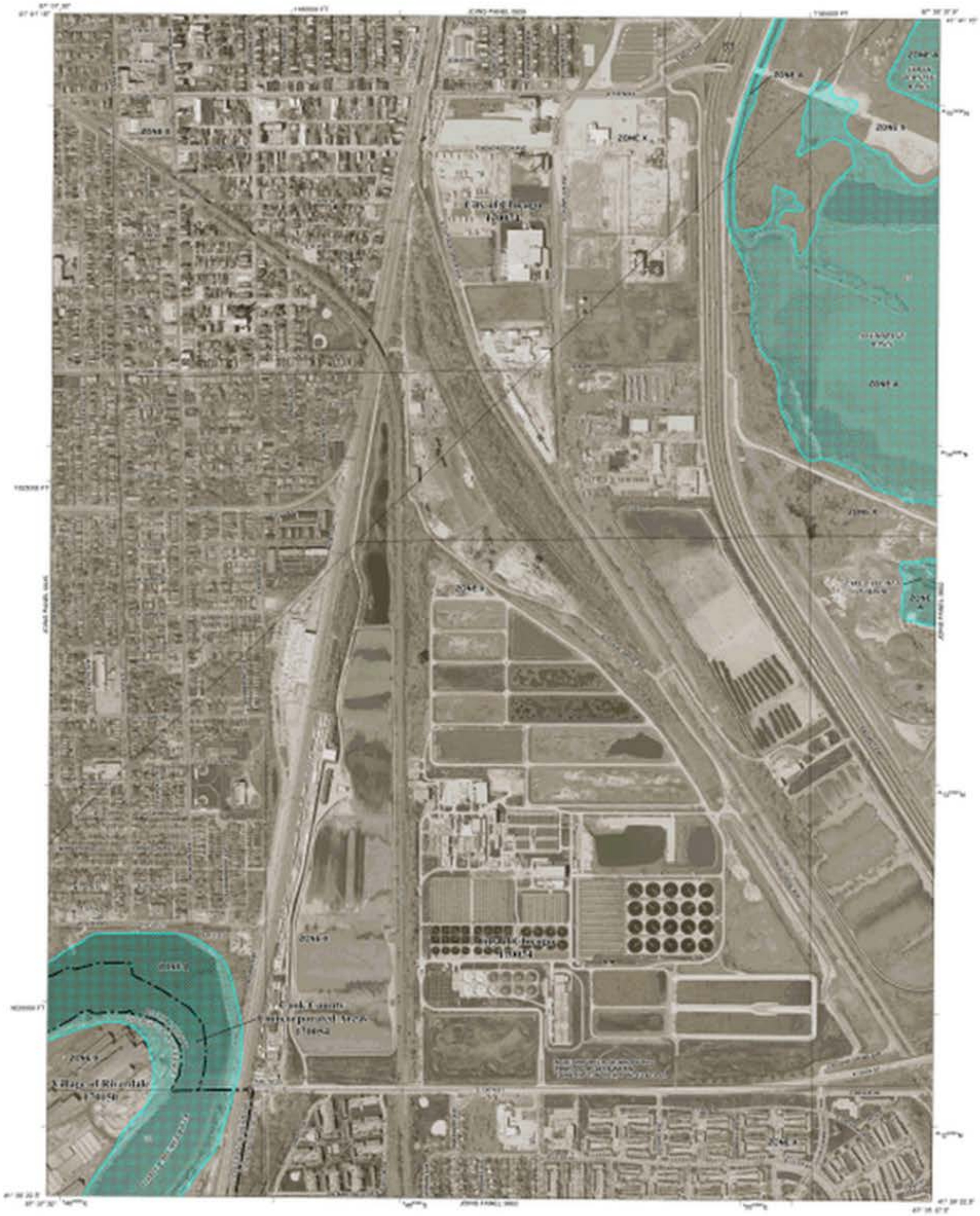
Map Number 17031C0661J

NOTES TO USERS

PANEL INDEX



Panel Not Printed



LEGEND

SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

FLOODWAY AREAS IN ZONE AE

OTHER FLOOD AREAS

OTHER AREAS

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

MAP SCALE 1" = 500'

NFIP

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0661J

FIRM
FLOOD INSURANCE RATE MAP
COOK COUNTY, ILLINOIS
AND INCORPORATED AREAS

PANEL 661 OF 832

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

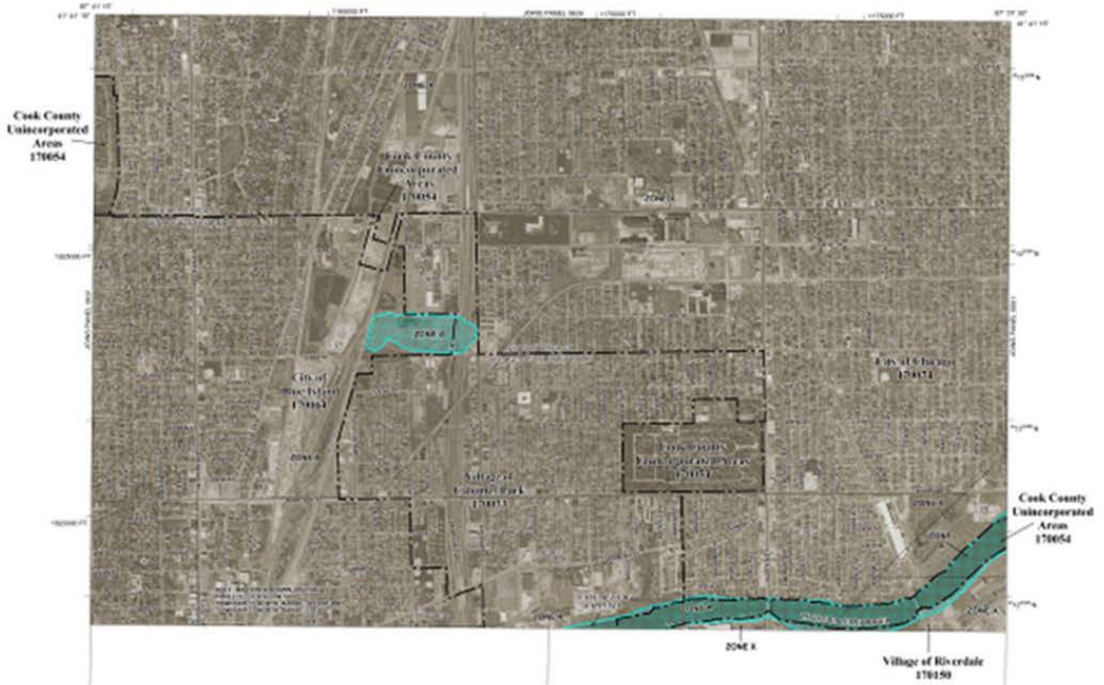
MAP NUMBER
17031C0661J

MAP REVISED
AUGUST 19, 2008

Federal Emergency Management Agency

Map Number 17031C0645J

NOTES TO USERS


Cook County
Unincorporated
Areas
170054
City of Chicago
170074
ZONE A
ZONE X
Village of Riverdale
170150

THIS AREA SHOWN AT A SCALE OF 1" = 500'
ON MAP NUMBER 17031C0643

THIS AREA SHOWN AT A SCALE OF 1" = 500'
ON MAP NUMBER 17031C0644

PANEL INDEX

Panel Not Printed

LEGEND

MAP SCALE 1" = 1000'

NATIONAL FLOOD INSURANCE PROGRAM

NFIP

PANEL 0645J

FIRM
FLOOD INSURANCE RATE MAP
COOK COUNTY, ILLINOIS
AND INCORPORATED AREAS

PANEL 645 OF 832

MAP NUMBER
17031C0645J

MAP REVISED
AUGUST 19, 2008

Federal Emergency Management Agency

Appendix G
2014-2015 Red Line Extension Project Update

2014–2015 Red Line Extension Project Update

From 2012-2014, CTA evaluated benefits and impacts of four alternatives: the No Build Alternative, the Bus Rapid Transit Alternative (along Michigan Avenue), the Union Pacific Railroad (UPRR) Rail Alternative, and the Halsted Alternative. CTA evaluated three options of the UPRR Rail Alternative: Right-of-Way Option, East Option, and West Option. CTA also evaluated two options of the UPRR Rail Alternative 130th Street station: a South Station Option and a West Station Option. Based on the project description provided in Section 2 of this technical memorandum, CTA analyzed the impacts of these alternatives and station options. The benefits and impacts are included in the technical memoranda prepared in 2012–2014.

In August 2014, based on the technical analysis and public input, CTA announced the NEPA Preferred Alternative—the UPRR Rail Alternative. Additional conceptual engineering was conducted on the UPRR Rail Alternative to refine the East and West Option alignments. In addition, CTA is considering only the South Station Option of the 130th Street Station.

In late 2014 and early 2015, CTA conducted additional engineering and revised assumptions on the East and West Options to refine the alignments. The refinement of the East and West Options consisted of the following items:

- For the segment of the alignment along I-57, CTA shifted the proposed alignment from the median of I-57 to the north side of I-57 within the existing expressway right-of-way. The construction would be less complex, safer for construction workers, and have a shorter duration. The shift would also allow for fewer impacts to Wendell Smith Park for the East Option, and would allow for no permanent impacts to Wendell Smith Park for the West Option.

- CTA modified the curve speeds as the alignment heads south from I-57 along the UPRR tracks. The curve speed for both the East and West Options would be 35 mph.

- CTA shifted the East Option alignment near 103rd Street station to minimize impacts to Block Park and the Roseland Pumping Station.

- CTA modified the curves south of 103rd Street for both the East and West Options to 55 mph to maximize the train speed.

- CTA refined the layout of the 120th Street yard and shop to optimize yard operations. The refined layout of the yard would accommodate 340 train cars.

The refinement of the East and West Option alignments minimizes potential impacts to parks while providing flexibility for future design phases. The Draft Environmental Impact Statement contains the benefits and impacts of the refined East and West Option alignments and supersedes information presented in other chapters of this technical memorandum

Water Resources

In August 2015, CTA completed a wetland delineation of the areas identified as containing potential wetlands and applied the general procedures detailed in the 1987 USACE *Wetland Delineation Manual* and the 2010 *Regional Supplement-Midwest Region*.

Based on the results of the wetland delineation, CTA identified 15 wetland areas totaling 15.34 acres of potentially affected wetlands at the site of the 130th Street station and the 120th Street yard and shop. All wetland areas throughout this area are of low floristic quality and wetland function.

The wetland delineation report is included with this appendix, and contains detailed information about the fieldwork and findings.

Hey and Associates, Inc.

15-0218

WETLAND DELINEATION REPORT

CTA RED LINE EXTENSION – LAKE CALUMET

CHICAGO, COOK COUNTY, ILLINOIS

PREPARED FOR:

CDM Smith
14432 SE Eastgate Way, Suite 100
Bellevue, WA 98007

SEPTEMBER 16, 2015

Revised October 1, 2015

26575 W. COMMERCE DRIVE, SUITE 601, VOLO, ILLINOIS 60073
OFFICE (847) 740-0888 FAX (847) 740-2888

INTRODUCTION

A wetland delineation of the 78.9-acre permanent project envelope for the southern portion of the Chicago Transit Authority's Red Line Extension, near Lake Calumet was conducted on August 13 and 19, 2015. The site is located west of Interstate 94 (Bishop Ford Expressway), north of 130th Street, along the east side of the Metropolitan Water Reclamation District of Greater Chicago's (MWRD) Calumet Waste Water Treatment plant within the City of Chicago, Cook County, Illinois (Exhibit 1). The site is further located in Sections 22, 26, and 27, Township 37 North, Range 14 East. The project permanent envelope includes Cottage Grove Avenue, parts of the MWRD property, railroad lines, and other disturbed urban-industrial landscapes. The property has been disturbed by various grading, dumping, and filling activities over the past decades.

EXISTING DATA

The United States Geological Survey (USGS) topographic map indicates open water at the locations of the MWRD sewage lagoons and sludge drying beds (Exhibit 2), but does not indicate any wetlands or blue line streams within the defined project permanent envelope. The National Wetland Inventory (NWI) map similarly depicts the sewage lagoons and sludge drying beds, but also indicates the presence of wetlands within the project permanent envelope (Exhibit 3) that are designated PF01/EMCd (palustrine, forested, broad-leaved deciduous/emergent seasonally flooded, partially drained/ditched). The Flood Insurance Rate Map indicates no mapped floodplain or floodway within the project permanent envelope (Exhibit 4). The USGS Hydrologic Atlas indicates no flood of record waters within the project permanent envelope (Exhibit 5). The Cook County Soil Survey (Exhibit 6) shows six (6) different soil series of orthents, or urban land within the project permanent envelope.

WETLAND DELINEATION

Wetlands within the project permanent envelope were delineated by Vincent Mosca and Jeffrey Mengler, PWS of Hey and Associates, Inc. using procedures outlined in the 1987 Corps of Engineers' (Corps) Wetland Delineation Manual and the 2010 Regional Supplement: Midwest Region. The entire property was inspected, with areas supporting wetland plant species prioritized for investigation. If inspection revealed that wetland plant species comprised more than 50 percent of the plant cover, the suspected wetland was further examined for field indicators of hydric soil and hydrology. The Corps-accepted field indicators of hydric soil include: gleyed and low chroma matrix and mottle colors, and iron and manganese concretions. Necessary hydric soil indicators were field verified in the wetland area if possible. In most cases in this project permanent envelope, the gravel and fill precluded investigation with hand tools, and the disturbed profiles would not have been illuminating. The Corps-approved field indicators of hydrology include: visual observation or photographic evidence of soil inundation or saturation during the growing season, oxidized channels associated with living roots and rhizomes, water marks, drift lines, waterborne sediment deposits, waterstained leaves, surface scoured areas and drainage patterns. Wetland hydrologic criteria were met in the areas delineated as wetland.

Lists of observed plant species in the wetland areas were compiled and data were gathered to complete Corps jurisdictional dataforms. A native vegetative quality rating was calculated for each wetland using the Floristic Quality Assessment (FQA) of Swink and Wilhelm as published in *Plants of the Chicago Region,* 1994. The FQA method assigns to plant species a rating that reflects the fundamental conservatism that the species exhibits for natural habitats. A native species that exhibits specific adaptations to a narrow spectrum of the environment is given a high rating. Conversely, a ubiquitous species that exhibits adaptations to a broad spectrum of environmental variables is given a low rating. Utilizing this method, a Floristic Quality Index (FQI) is derived for a given area. The FQI is an indication of native vegetative quality for an area: generally 1-19 indicates low vegetative quality, 20-35 indicates high vegetative quality and above 35 indicates "Natural Area" quality.

RESULTS

Fifteen (15) wetlands totaling 15.34 acres within the project permanent envelope were delineated on the property (Exhibit 7). The wetland boundaries shown on an aerial photograph in Exhibit 7 were recorded with sub-meter accuracy GPS unit in the field on August 13 and 19, 2015. Lists of the observed plant species for the wetland areas are given in Exhibit 8. The Corps' jurisdictional dataforms for upland and wetland areas are included as Exhibit 9. Georeferenced representative color photographs of the upland and wetland areas are provided in Exhibit 10.

Following is a table that summarizes the delineated wetlands. Wetland acreages were calculated based upon the sub-meter accuracy GPS data imported into a Geographical Information System (GIS).

Table 1. Summary of Wetlands within Project Limits.

Wetland	Area within Project Limits (acres)	Total Wetland Area (acres)	FQI[1]	Native Mean C[2]	HQAR[3]	Wetland Type	Dominant Vegetation
1 & 2	0.19	0.38	3.89	1.38	No	Drainage swale	Common reed (*Phragmites australis*)
3	0.83	0.83	6.36	4.5	No[4]	Marsh	Common reed and purple loosestrife (*Lythrum salicaria*)
4	0.07	1.85	6.43	2.43	No	Drainage swale	Common reed
5	2.73	2.73	4.95	1.75	No	Drainage swale	Common reed
6	2.26	2.26	11.13	2.43	No	Drainage swale & degraded wet prairie	Common reed
7	1.63	1.63	13.68	2.79	No	Drainage swale & degraded wet prairie	Common reed
8	1.61	1.77	6.43	2.43	No	Degraded marsh	Common reed
9	1.09	1.09	2.04	0.83	No	Drainage swale/marsh	Common reed
10	0.07	0.07	6.43	2.43	No	Drainage ditch	Common reed
11	0.05	n/a	3.00	1.50	No	Drainage ditch	Common reed
12	3.56	3.56	3.00	1.50	No	Degraded marsh	Common reed
13	0.53	0.66	2.86	1.17	No	Wooded	Box Elder (Acer negundo), Common reed (*Phragmites australis*)
14	0.20	0.88	4.00	1.33	No	Drainage swale	Common reed
15	0.52	n/a	2.00	1.00	No	Drainage swale	Common reed
TOTAL	15.34	17.71					

[1] The Floristic Quality Index (FQI) is an indication of native vegetative quality for an area: generally 1-19 indicates low vegetative quality, 20-35 indicates high vegetative quality and above 35 indicates "Natural Area" quality.

[2] The Native Mean C is an indication of native vegetative quality for an area. Areas with value of 3.5 or greater are considered high quality.

[3] The Chicago District U.S. Army Corps of Engineers has designated various Waters of the United States to be high-quality aquatic resources (HQARs). This designation is based on the definitions found within the Regional Permit Program that became effective April 1, 2007.

[4] While this area has a Native Mean C of greater than 3.5, it was based on the presence of only two native species. The remainder of the vegetation was comprised of non-native species and would not be considered high quality in any ecological assessment.

Wetlands 1 and 2 are both part of the same drainage swale along the east-west portion of South Cottage Grove Avenue, just north of 135th Street. It is dominated by common reed and defined on the south by the 135th Street embankment, on the north and west by the Cottage Grove Avenue entrance off 135th Street, and on the east by a railroad access road. It is of very low floristic quality and wetland function, and has debris and trash scattered throughout it.

Wetland 3 is on the north side of the east-west portion of South Cottage Grove Avenue, and is connected to Wetland areas 5 and 9. It is dominated by common reed. It is defined by a gravel road and fill on all sides. This was one of the few areas that had standing water during the August 2015 assessment. It is of low quality and function. It should be noted that the mean C value is 4.5, which suggests a high quality area, but this mean C value is based on the only 2 native species observed – the other 4 species were all invasive non-native species.

Wetland 4 is another drainage swale that runs from the entrance to the MWRD Calumet Wastewater Treatment Plant (WWTP) west along 135th Street. It is entirely dominated by common reed. The north boundary is defined by a mowed embankment up to the WWTP facility fence, and the southern boundary is defined by 135th Street and shoulder. The mowed area was composed of typical upland turf and weed species and not hydrophytic species, indicating that the edge of mowing corresponded with the edge of wetland. Wetland 4 appears to receive drainage from 135th Street via several stormsewers that create the undulating southern boundary.

Wetland 5 is a drainage swale that runs along the west side of South Cottage Grove Avenue from Wetland 3 north to the entrance and gatehouse for the Calumet WWTP. It is dominated by common reed, with patches of sandbar willow (*Salix interior*) and cottonwood trees (*Populus deltoides*). The eastern boundary is defined by Cottage Grove Avenue and the western boundary is a chain-link fence and mowed turf grass within the MRWDGC property.

Wetland 6 is a wet prairie drainage swale along a Indiana Harbor Belt Railroad line that does not appear to have frequent use. It is generally bounded by the railroad ballast on the west side and higher ground dominated by common buckthorn (*Rhamnus cathartica*) on the east side. Dominant vegetation was common reed, though pockets of native plant species were observed.

Similarly, Wetland 7 is a drainage swale on the west side of the same Indiana Harbor Belt Railroad line through the site. It is also bounded by the railroad ballast and higher ground covered in common buckthorn. It is of moderate floristic quality when calculated to include the scattered native wet prairie species observed, but is largely dominated by the invasive common reed.

Wetland 8 is an area of degraded marsh inside the MWRD Calumet WWTP perimeter fence, located just southeast of the gatehouse and entrance. It is surrounded by areas of fill/gravel that are much higher in elevation than the ground in the wetland area. The embankments around this wetland pocket are very steep and eroded, often at a 1:1 slope or steeper. The vegetation was dominated by common reed. It is an area of very low quality.

Wetland 9 is connected to Wetland 3 and ultimately Wetland 5. At the southern end of Wetland 5, these 3 wetland areas form a u-shaped marsh swale around a gravel fill pad that is 3-4 feet higher in elevation. This area is bounded by the MWRD Calumet WWTP entrance road and Cottage Grove Avenue. The vegetation was dominated by common reed, and it is of low quality.

Wetland 10 is a small drainage ditch that runs from the 135th Street bridge over the Indiana Harbor Belt Railroad/Metra South Shore rail lines, to Cottage Grove Avenue. It is generally lined by cottonwoods and dead green ash (*Fraxinus pennsylvanica*) with common reed dominant in the ditch. The ditch was also littered with old tires and other refuse.

Wetland 11 is a small part of a wet area between the gravel railroad access road, and the Metra South Shore rail line. Most of the wetland is outside of the project limits and is dominated by common reed.

Wetland 12 is a marsh area located just north of the MWRD Calumet WWTP gatehouse. It is bounded by gravel access roads on the east and west sides, and the entrance road on the south. On the north side the wetland gives way to higher ground dominated by common buckthorn and a variety of upland weeds. The marsh is dominated by common reed.

Wetland 13 is a small wetland drainage swale located between the Metra South Shore Electric railroad line and the Indiana Harbor Belt Railroad freight line. It is dominated by common reed and is bounded by railroad ballast.

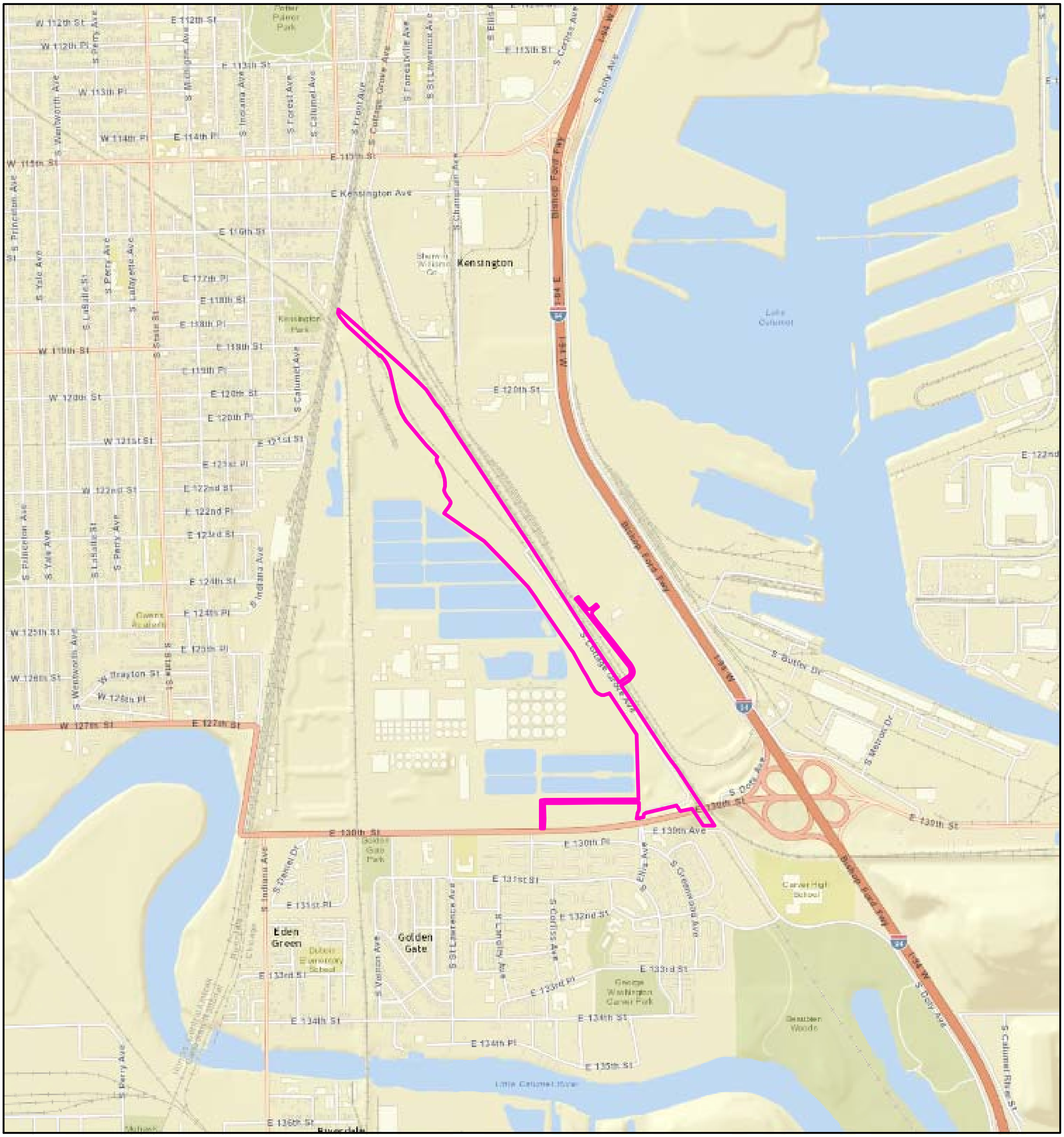
Wetland 14 is a swale located on the east side of the Indiana Harbor Belt Railroad/Metra South Shore line, but west of the MWRD fence around some sludge drying beds and other facilities. It is partially wooded by box elder and cottonwood but in open areas remains dominated by common reed.

Wetland 15 refers to a narrow drainage swale dominated by common reed located along a MWRD gravel access road in the northwest part of the project permanent envelope. It is of very low quality.

There are no High Quality Aquatic Resources on the subject property or mapped on adjacent properties. All wetlands observed were dominated by the invasive common reed, often in dense monotypic stands. The surrounding land is primarily developed urban or industrial landscapes.

SUMMARY AND CONCLUSIONS

The wetland delineation revealed 15 wetland areas totaling 15.34 acres within the project permanent envelope as depicted on Exhibit 7. All wetlands were of low quality and dominated by the invasive common reed. Most of the wetland boundaries are defined by fill and other manmade features. A jurisdictional determination will need to be requested from the U.S. Army Corps of Engineers to determine if the wetlands are under their Clean Water Act jurisdiction or if they are isolated wetlands of Cook County.


E 112th St
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Peter Palmer Park
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E Kensington Ave
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E 134th St
E 134th Pl
E 135th St
E 136th St
Eden Green
Golden Gate
Golden Gate Park
George Washington Carver Park
Carver High School
Lake Calumet
Little Calumet River
Beaubien Woods
Riverdale
S Princeton Ave
S Yale Ave
S Wentworth Ave
S LaSalle St
S Perry Ave
S Lafayette Ave
S State St
S Michigan Ave
S Indiana Ave
S Forest Ave
S Calumet Ave
S Front Ave
S Cottage Grove Ave
S Forrestville Ave
S St Lawrence Ave
S Champlain Ave
S Ellis Ave
S Corliss Ave
S Doty Ave
S Butler Dr
S Manor Dr
S Greenwood Ave
S Langley Ave
S Vernon Ave
S Calumet River St
Bishop Ford Fwy
I-94 W
I-94 E

Scale:

0 2,000
Feet

Orientation:

Legend:

▭ Project Permanent Envelope

Project Number: 15-0218

Latest Revision: 10/1/2015

Prepared by:

Hey and Associates, Inc.

Engineering, Ecology and Landscape Architecture

Project Name:

CTA Red Line Extension

Prepared for:

CDM Smith

Location Information:

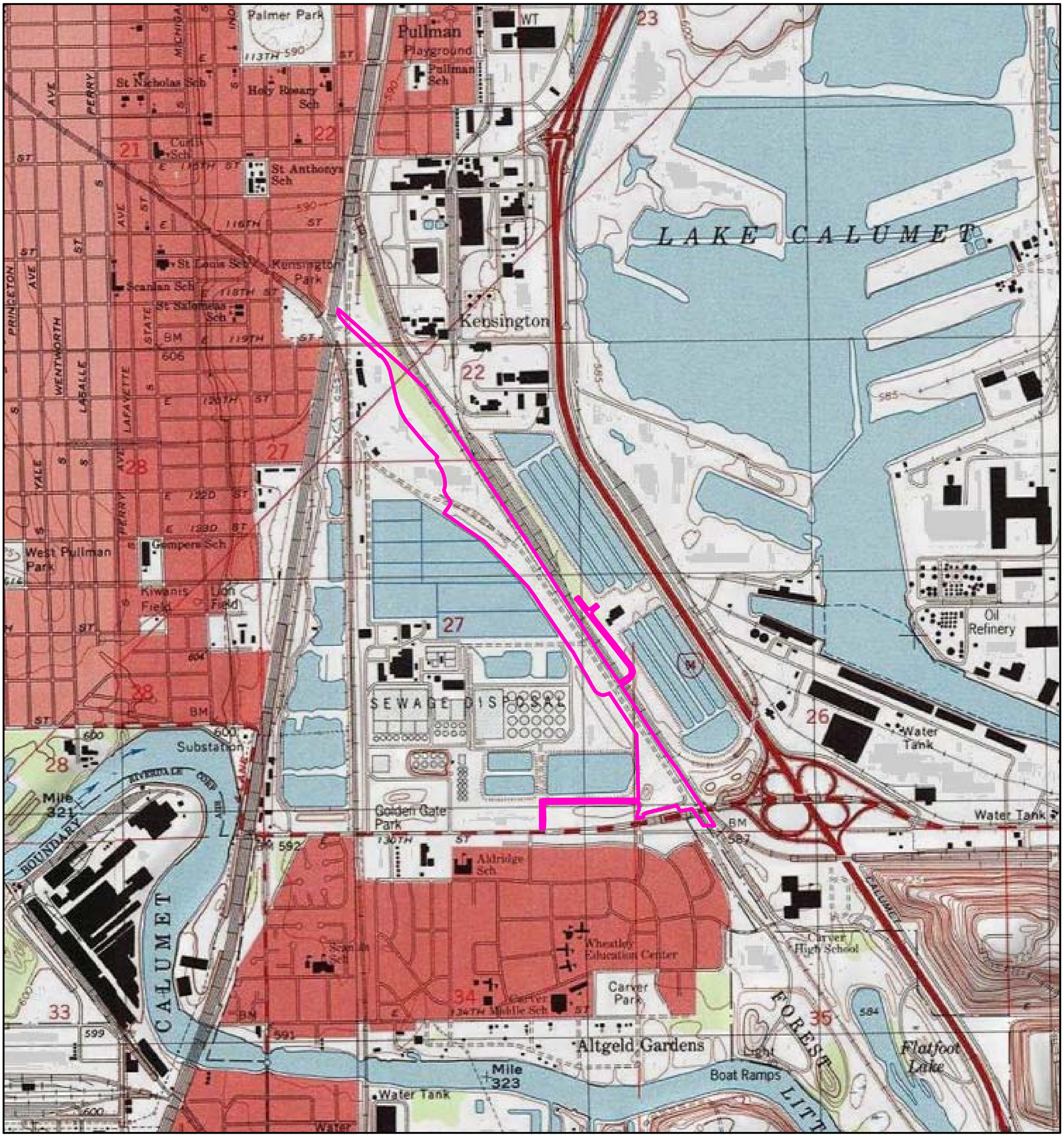
T.37N.-R.14E., Sections 22, 26 & 27

Exhibit Title:

Project Location

Exhibit:

1


Palmer Park
Pullman
Playground
Pullman Sch
WT
23
113TH
St Nicholas Sch
Holy Rosary Sch
22
21
Curtis Sch
115TH ST
St Anthonys Sch
116TH ST
LAKE CALUMET
St Louis Sch
Kensington Park
Scanlan Sch
118TH ST
St Salomeas Sch
Kensington
119TH ST
BM 606
120TH ST
22
585
27
28
122D ST
123D ST
Gompers Sch
West Pullman Park
Kiwanis Field
Lion Field
27
Oil Refinery
SEWAGE DISPOSAL
26
Water Tank
Substation
28
Mile 321
Golden Gate Park
BM 587
Water Tank
BM 592
130TH ST
Aldridge Sch
BOUNDARY
CALUMET
Carver High School
Wheatley Education Center
Scanlan Sch
34
Carver Middle Sch
Carver Park
33
35
FOREST
Altgeld Gardens
Flatfoot Lake
Boat Ramps
Mile 323
Water Tank
Water
PRINCETON AVE
WENTWORTH
LASALLE
LAFAYETTE
PERRY
STATE
MICHIGAN
INDIANA
YALE

Scale:

0 2,000
Feet

Orientation:

Legend:

▭ Project Permanent Envelope

Project Number: 15-0218

Latest Revision: 10/1/2015

Prepared by:

Hey and Associates, Inc.

Engineering, Ecology and Landscape Architecture

Project Name:

CTA Red Line Extension

Prepared for:

CDM Smith

Location Information:

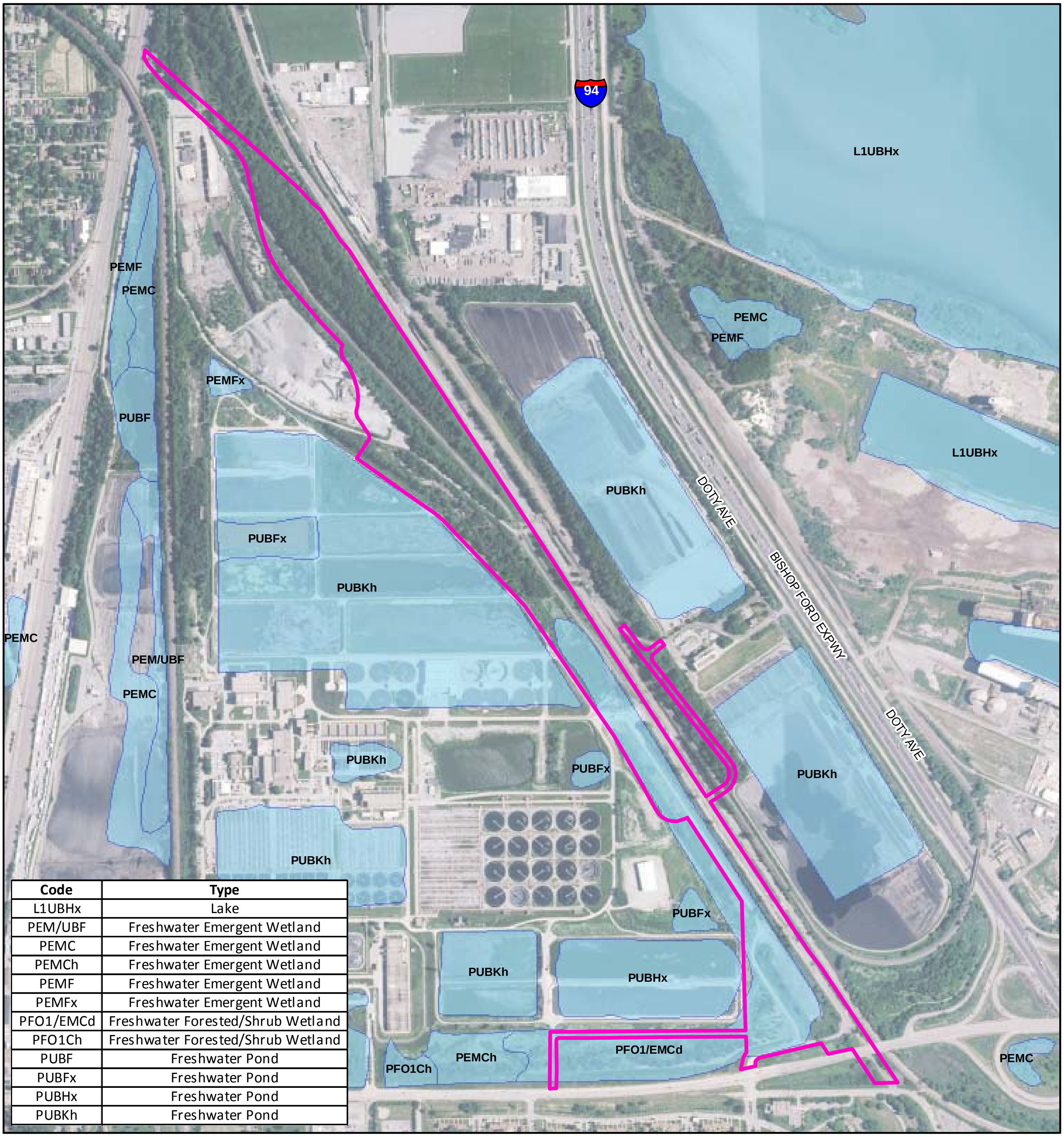
Lake Calumet Quadrangle

Exhibit Title:

U.S.G.S. Topographic Map

Exhibit:

2


94
L1UBHx
PEMF
PEMC
PEMC
PEMF
PEMFx
PUBF
L1UBHx
PUBKh
DOTY AVE
PUBFx
PUBKh
BISHOP FORD EXPWY
PEMC
PEM/UBF
PEMC
PUBKh
PUBFx
PUBKh
DOTY AVE
PUBKh
PUBFx
PUBKh
PUBHx
PFO1/EMCd
PEMCh
PFO1Ch
PEMC

Code	Type
L1UBHx	Lake
PEM/UBF	Freshwater Emergent Wetland
PEMC	Freshwater Emergent Wetland
PEMCh	Freshwater Emergent Wetland
PEMF	Freshwater Emergent Wetland
PEMFx	Freshwater Emergent Wetland
PFO1/EMCd	Freshwater Forested/Shrub Wetland
PFO1Ch	Freshwater Forested/Shrub Wetland
PUBF	Freshwater Pond
PUBFx	Freshwater Pond
PUBHx	Freshwater Pond
PUBKh	Freshwater Pond

Scale:

0 1,000
Feet

Orientation:

Legend:

🟦 National Wetland Inventory

▭ Project Permanent Envelope

Project Name:

CTA Red Line Extension

Prepared for:

CDM Smith

Project Number: 15-0218

Latest Revision: 10/1/2015

Prepared by:

NWI Date:

1981

Hey and Associates, Inc.

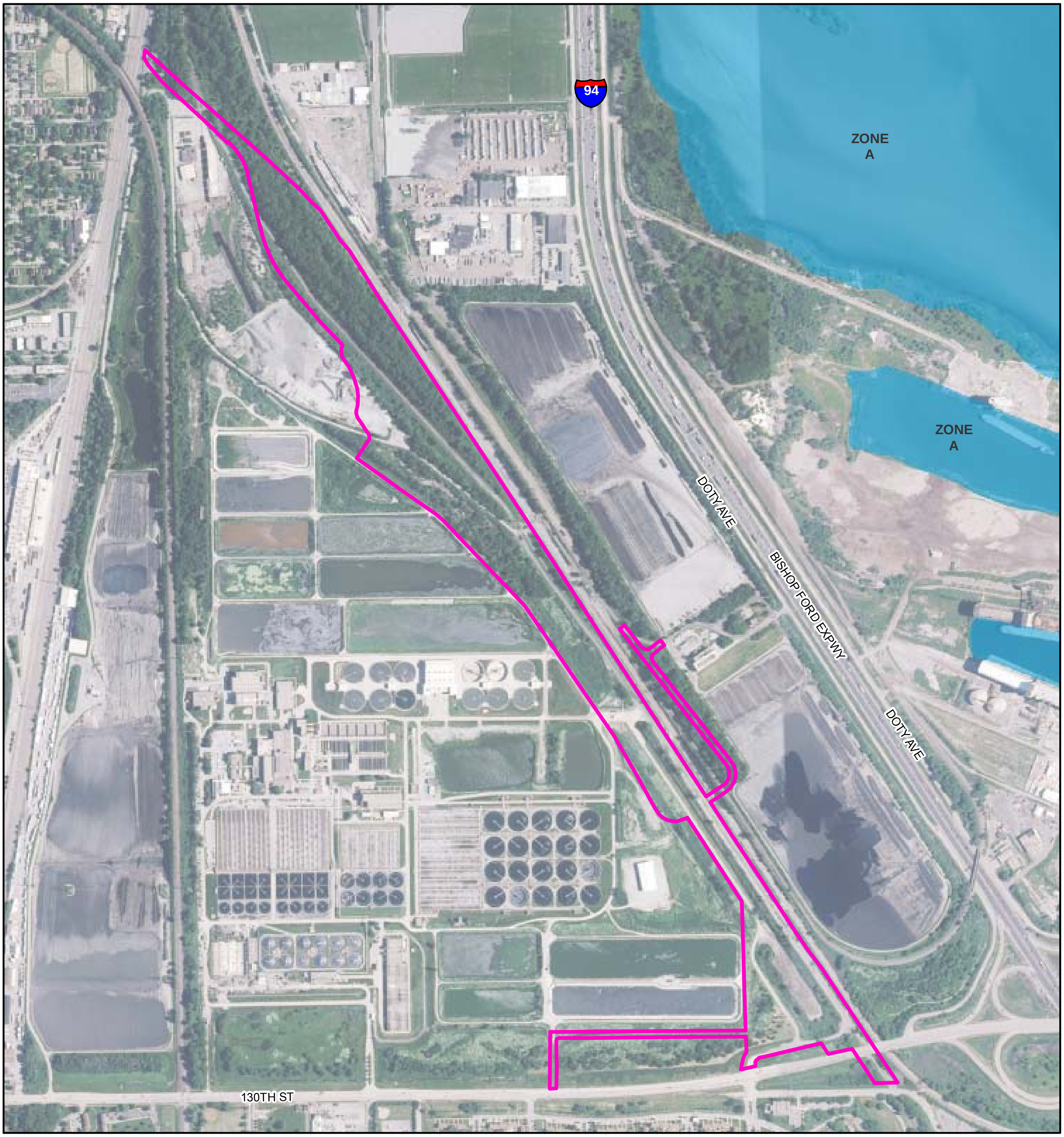
Engineering, Ecology and Landscape Architecture

Exhibit Title:

National Wetland Inventory

Exhibit:

3


94
ZONE A
ZONE A
DOTY AVE
BISHOP FORD EXPWY
DOTY AVE
130TH ST

Scale:

0 1,000 Feet

Orientation:

Legend:

🟦 100 Year Flood Zone

▭ Project Permanent Envelope

Project Number: 15-0218

Latest Revision: 10/1/2015

Prepared by:

Hey and Associates, Inc.

Engineering, Ecology and Landscape Architecture

Project Name:

CTA Red Line Extension

Prepared for:

CDM Smith

Panel #:

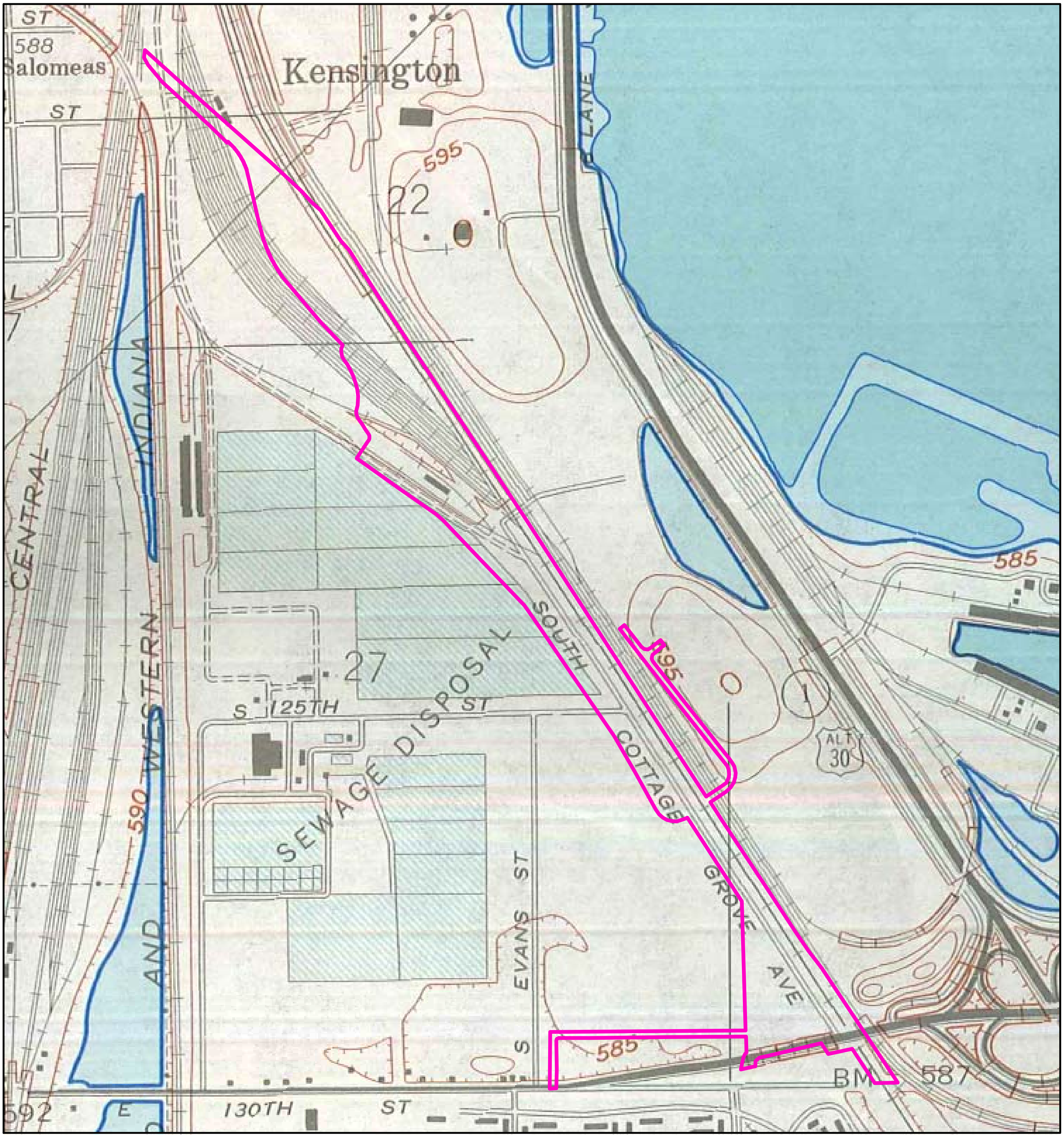
17031C0661J

Exhibit Title:

Flood Insurance Rate Map

Exhibit:

4


ST
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Kensington
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595
22
LANE
CENTRAL
INDIANA
WESTERN
AND
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S 125TH ST
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Scale:

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Orientation:

Legend:

▭ Project Permanent Envelope

Project Number: 15-0218

Latest Revision: 10/1/2015

Prepared by:

Hey and Associates, Inc.

Engineering, Ecology and Landscape Architecture

Project Name:

CTA Red Line Extension

Prepared for:

CDM Smith

Hydro Atlas Date:

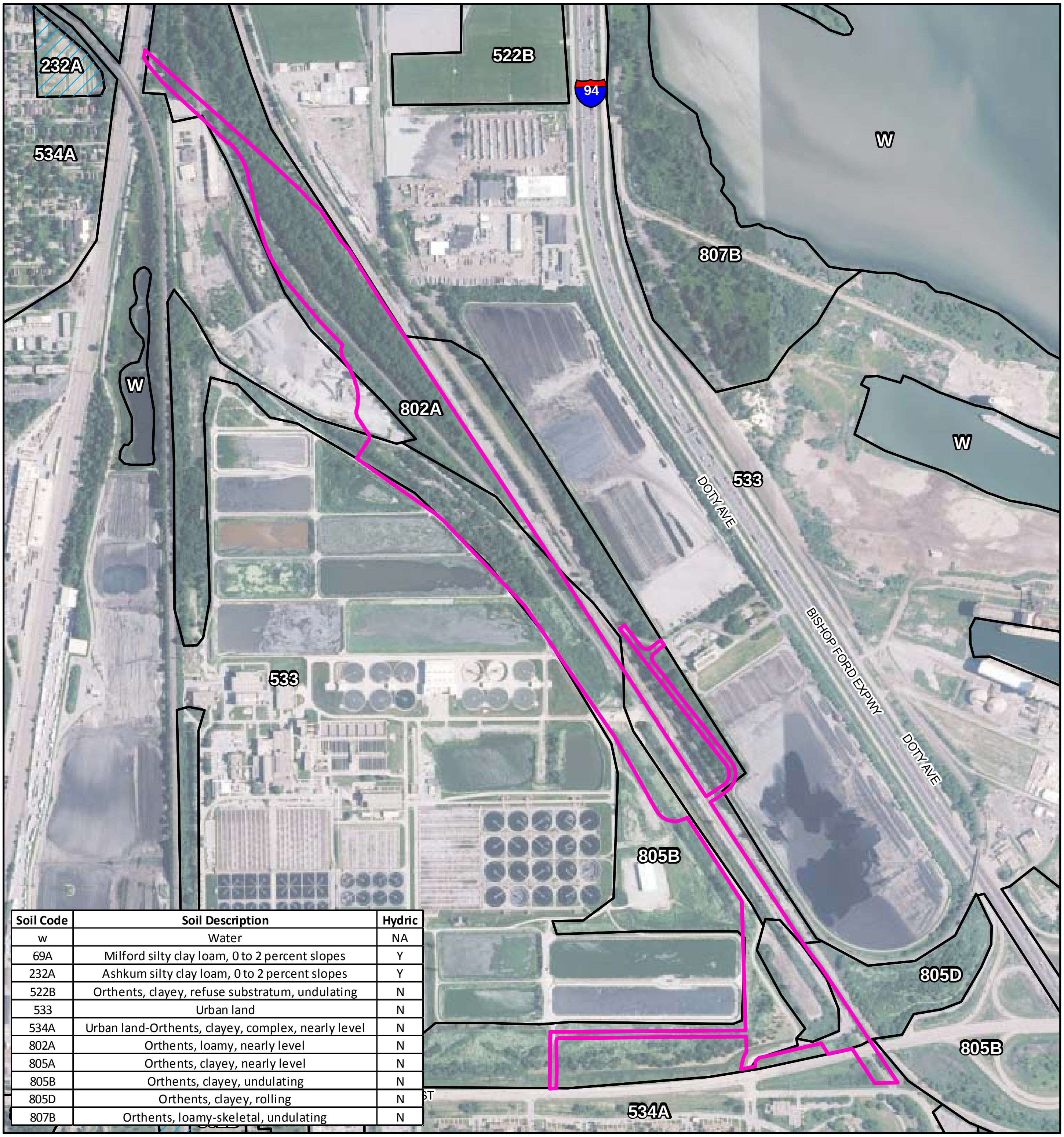
1966

Exhibit Title:

U.S.G.S Hydrologic Atlas

Exhibit:

5


232A
522B
94
534A
W
807B
W
802A
W
533
DOTY AVE
533
BISHOP FORD EXPWY
DOTY AVE
805B
805D
805B
534A
ST

Soil Code	Soil Description	Hydric
w	Water	NA
69A	Milford silty clay loam, 0 to 2 percent slopes	Y
232A	Ashkum silty clay loam, 0 to 2 percent slopes	Y
522B	Orthents, clayey, refuse substratum, undulating	N
533	Urban land	N
534A	Urban land-Orthents, clayey, complex, nearly level	N
802A	Orthents, loamy, nearly level	N
805A	Orthents, clayey, nearly level	N
805B	Orthents, clayey, undulating	N
805D	Orthents, clayey, rolling	N
807B	Orthents, loamy-skeletal, undulating	N

Scale:

0 1,000
Feet

Orientation:

Legend:

▨ Hydric Soils

☐ Soil Units

🟪 Project Permanent Envelope

Project Number: 15-0218

Latest Revision: 10/1/2015

Prepared by:

Hey and Associates, Inc.

Engineering, Ecology and Landscape Architecture

Project Name:

CTA Red Line Extension

Prepared for:

CDM Smith

Soil Survey Date:

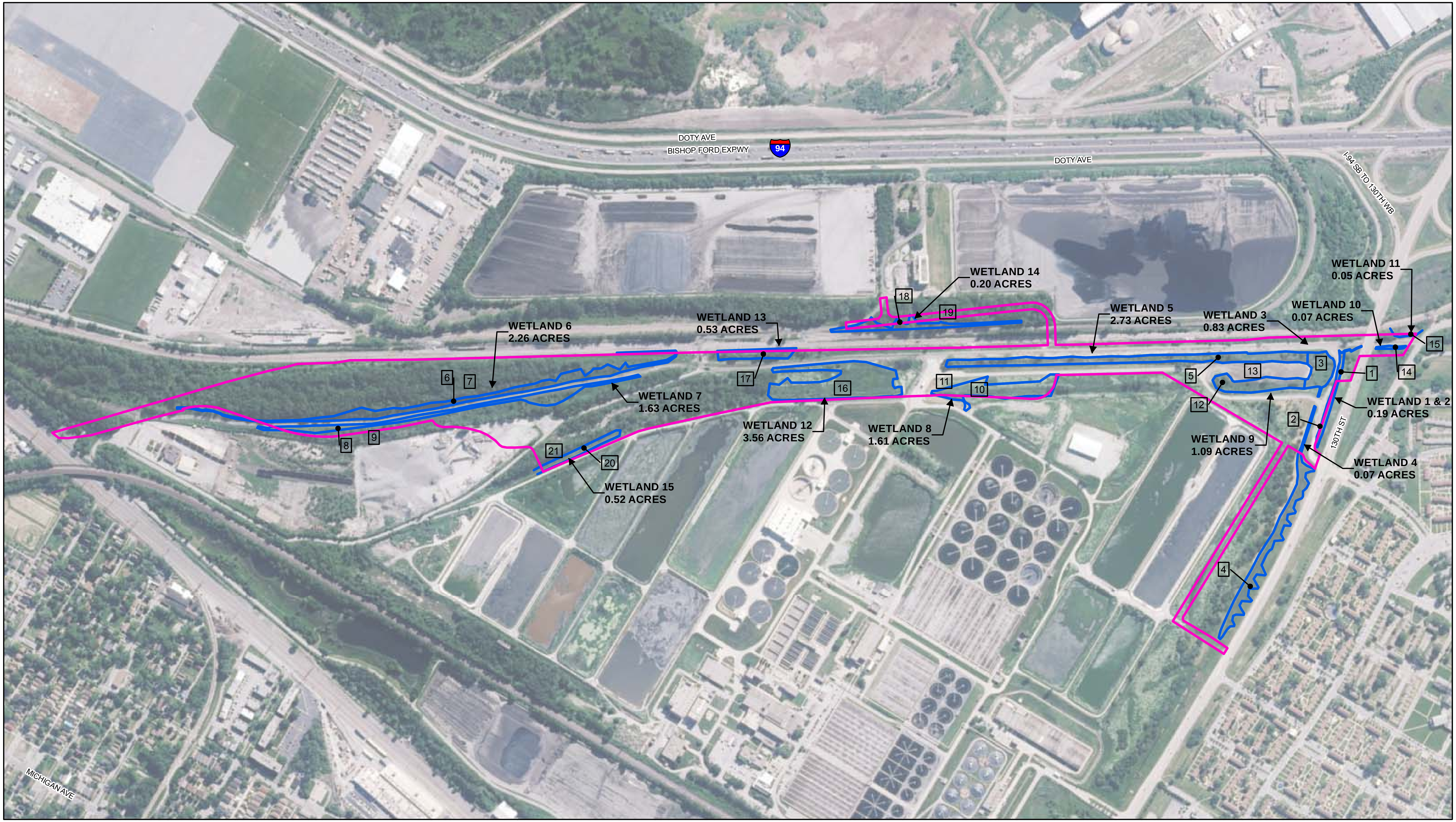
2012

Exhibit Title:

NRCS Soil Survey

Exhibit:

6


DOTY AVE
BISHOP FORD EXPWY
94
DOTY AVE
I-94 SB TO 130TH WB
WETLAND 14
0.20 ACRES
WETLAND 11
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WETLAND 10
0.07 ACRES
WETLAND 5
2.73 ACRES
WETLAND 3
0.83 ACRES
WETLAND 13
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WETLAND 6
2.26 ACRES
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19
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12
17
16
11
10
6
7
WETLAND 7
1.63 ACRES
WETLAND 1 & 2
0.19 ACRES
WETLAND 12
3.56 ACRES
WETLAND 8
1.61 ACRES
2
130TH ST
WETLAND 9
1.09 ACRES
WETLAND 4
0.07 ACRES
8
9
21
20
WETLAND 15
0.52 ACRES
4
MICHIGAN AVE

Prepared by:

Hey and Associates, Inc.

Engineering, Ecology and Landscape Architecture

Scale:

0 600 Feet

Project Number: 15-0218

Orientation:

Latest Revision: 10/1/2015

Legend:

☒ Data Point

▢ Surveyed Wetland Boundary (Labled wetland acreages for area within Project Permanent Envelope only)

▢ Project Permanent Envelope

Project Name:

CTA Red Line Extension

Prepared For:

CDM Smith

Aerial Date:

2014

Exhibit Title:

Wetland Boundary

Exhibit:

7

The following floristic inventories, prepared by Hey and Associates, Inc., follow the nomenclature given in the National Wetland Plant List: (Lichvar, R. W., M. Butterwick, N.C. Melvin, and W. N. Kirchner 2014); The National Wetland Plant List 2014 Update of Wetland Ratings. (Phytoneuron 2014-41:1-42); and bio data/nomenclature follows Kartesz, J. T., 2013 *Floristic Synthesis of North America. Version 1.0 Biota of North American Program.* It also provides local synonymies based on Swink and Wilhelm's 1994 *Plants of the Chicago Region.*

Each species is listed with its database acronym and coefficient of conservatism (0 = weedy, 10 = conservative), and followed by its corresponding National Wetland Category (OBL = obligate wetland species, FACW = facultative wetland, FAC - facultative species, FACU = facultative upland, UPL = upland species), habit, duration, and nativity. Native taxa are those species believed to have been present in the Chicago region prior to European settlement.

The conservatism metric information above the species list provides analysis of the vegetative quality of the site. It shows the total number of species present (species richness), the mean coefficient of conservatism (Mean C), the floristic quality index (FQAI), and mean wetness; calculated separately for native species only and then including the adventive species (W/Adventives). The Mean C datum indicates the average coefficient of conservatism. The FQAI is derived by multiplying the Mean C by the square root of the number of species. If the FQAI of an area registers in the middle 30's or higher, one can be relatively certain that there is sufficient native character to be of rather profound environmental importance in terms of a regional natural area perspective. The wet indicator value indicates the mean or average wet indicator category for all species present, natives only and then with adventives – numbers less than 0 indicate hydrophytic vegetation, while numbers greater than 0 correspond to the upland vegetation categories. The table also provides the number of species in each physiognomic or habit class, native versus adventive along with their percentage of the total inventory.

Source: Herman, B., Sliwinski, R. and S. Whitaker. 2013. Chicago Region FQA (Floristic Quality Assessment) Calculator. U.S. Army Corps of Engineers, Chicago, IL. Version September 29, 2014

Project Number: 15-0218

Project Name:
CTA Red Line Extension

Hey and Associates, Inc.
Engineering, Ecology and Landscape Architecture

Exhibit Title:
Observed Wetland Species

Exhibit:
8

SITE: Wetland 1 & 2 - CTA Red Line Extension
LOCALE: Lake Calumet
BY: J Mengler, V Mosca
DATE: 8/13/2015

CONSERVATISM-BASED METRICS

MEAN C (NATIVE SPECIES)	**1.38**
MEAN C (ALL SPECIES)	0.85
MEAN C (NATIVE TREES)	1.50
MEAN C (NATIVE SHRUBS)	1.00
MEAN C (NATIVE HERBACEOUS)	1.00
FQAI (NATIVE SPECIES)	**3.89**
FQAI (ALL SPECIES)	3.05
ADJUSTED FQAI	10.79
% C VALUE 0	0.46
% C VALUE 1-3	0.54
% C VALUE 4-6	0.00
% C VALUE 7-10	0.00

ADDITIONAL METRICS

SPECIES RICHNESS (ALL)	13
SPECIES RICHNESS (NATIVE)	8
% NON-NATIVE	0.38
WET INDICATOR (ALL)	-0.23
WET INDICATOR (NATIVE)	-0.50
% HYDROPHYTE (MIDWEST)	0.77
% NATIVE PERENNIAL	0.62
% NATIVE ANNUAL	0.00
% ANNUAL	0.00
% PERENNIAL	0.92

SPECIES ACRONYM	**SPECIES NAME (NWPL/ MOHLENBROCK)**	**SPECIES (SYNONYM)**	**COMMON NAME**	**C VALUE**	**MIDWEST WET INDICATOR**	**HABIT**	**DURATION**	**NATIVITY**
acesai	*Acer saccharinum*	*Acer saccharinum*	Silver Maple	0	FACW	Tree	Perennial	Native
artvul	*Artemisia vulgaris*	*ARTEMISIA VULGARIS*	Common Mugwort	0	UPL	Forb	Perennial	Adventive
consep	*Calystegia sepium*	*Convolvulus sepium*	Hedge False Bindweed	1	FAC	Forb	Perennial	Native
diplac	*Dipsacus laciniatus*	*DIPSACUS LACINIATUS*	Cut-Leaf Teasel	0	UPL	Forb	Biennial	Adventive
frapen	*Fraxinus pennsylvanica*	*Fraxinus pennsylvanica subintegerrima*	Green Ash	1	FACW	Tree	Perennial	Native
lytsal	*Lythrum salicaria*	*LYTHRUM SALICARIA*	Purple Loosestrife	0	OBL	Forb	Perennial	Adventive
phrausu	*Phragmites australis ssp. australis*	*Phragmites australis*	Common Reed	0	FACW	Grass	Perennial	Adventive
popdel	*Populus deltoides*	*Populus deltoides*	Eastern Cottonwood	2	FAC	Tree	Perennial	Native
rhacat	*Rhamnus cathartica*	*RHAMNUS CATHARTICA*	European Buckthorn	0	FAC	Shrub	Perennial	Adventive
salint	*Salix interior*	*Salix interior*	Sandbar Willow	1	FACW	Shrub	Perennial	Native
solalt	*Solidago altissima*	*Solidago altissima*	Tall Goldenrod	1	FACU	Forb	Perennial	Native
ulmame	*Ulmus americana*	*Ulmus americana*	American Elm	3	FACW	Tree	Perennial	Native
vitrip	*Vitis riparia*	*Vitis riparia*	River-Bank Grape	2	FACW	Vine	Perennial	Native

SITE: Wetland 3 - CTA Red Line Extension
LOCALE: Lake Calumet
BY: J Mengler, V Mosca
DATE: 8/13/2015

CONSERVATISM-BASED METRICS

MEAN C (NATIVE SPECIES)	**4.50**
MEAN C (ALL SPECIES)	1.50
MEAN C (NATIVE TREES)	2.00
MEAN C (NATIVE SHRUBS)	7.00
MEAN C (NATIVE HERBACEOUS)	n/a
FQAI (NATIVE SPECIES)	**6.36**
FQAI (ALL SPECIES)	3.67
ADJUSTED FQAI	25.98
% C VALUE 0	0.67
% C VALUE 1-3	0.17
% C VALUE 4-6	0.00
% C VALUE 7-10	0.17

ADDITIONAL METRICS

SPECIES RICHNESS (ALL)	6
SPECIES RICHNESS (NATIVE)	2
% NON-NATIVE	0.67
WET INDICATOR (ALL)	-0.67
WET INDICATOR (NATIVE)	-0.50
% HYDROPHYTE (MIDWEST)	0.83
% NATIVE PERENNIAL	0.33
% NATIVE ANNUAL	0.00
% ANNUAL	0.00
% PERENNIAL	0.83

SPECIES ACRONYM	**SPECIES NAME (NWPL/ MOHLENBROCK)**	**SPECIES (SYNONYM)**	**COMMON NAME**	**C VALUE**	**MIDWEST WET INDICATOR**	**HABIT**	**DURATION**	**NATIVITY**
diplac	*Dipsacus laciniatus*	*DIPSACUS LACINIATUS*	Cut-Leaf Teasel	0	UPL	Forb	Biennial	Adventive
lytsal	*Lythrum salicaria*	*LYTHRUM SALICARIA*	Purple Loosestrife	0	OBL	Forb	Perennial	Adventive
phrausu	*Phragmites australis ssp. australis*	*Phragmites australis*	Common Reed	0	FACW	Grass	Perennial	Adventive
popdel	*Populus deltoides*	*Populus deltoides*	Eastern Cottonwood	2	FAC	Tree	Perennial	Native
ribame	*Ribes americanum*	*Ribes americanum*	Wild Black Currant	7	FACW	Shrub	Perennial	Native
typang	*Typha angustifolia*	*Typha angustifolia*	Narrow-Leaf Cat-Tail	0	OBL	Forb	Perennial	Adventive

SITE: Wetland 4 - CTA Red Line Extension
LOCALE: Lake Calumet
BY: J Mengler, V Mosca
DATE: 8/13/2015

CONSERVATISM-BASED METRICS

MEAN C (NATIVE SPECIES)	**2.43**
MEAN C (ALL SPECIES)	1.00
MEAN C (NATIVE TREES)	n/a
MEAN C (NATIVE SHRUBS)	n/a
MEAN C (NATIVE HERBACEOUS)	2.67
FQAI (NATIVE SPECIES)	**6.43**
FQAI (ALL SPECIES)	4.12
ADJUSTED FQAI	15.58
% C VALUE 0	0.59
% C VALUE 1-3	0.24
% C VALUE 4-6	0.18
% C VALUE 7-10	0.00

ADDITIONAL METRICS

SPECIES RICHNESS (ALL)	17
SPECIES RICHNESS (NATIVE)	7
% NON-NATIVE	0.59
WET INDICATOR (ALL)	-0.18
WET INDICATOR (NATIVE)	-0.43
% HYDROPHYTE (MIDWEST)	0.59
% NATIVE PERENNIAL	0.41
% NATIVE ANNUAL	0.00
% ANNUAL	0.00
% PERENNIAL	0.82

SPECIES ACRONYM	SPECIES NAME (NWPL/ MOHLENBROCK)	SPECIES (SYNONYM)	COMMON NAME	C VALUE	MIDWEST WET INDICATOR	HABIT	DURATION	NATIVITY
arcmin	*Arctium minus*	*ARCTIUM MINUS*	Lesser Burrdock	0	FACU	Forb	Biennial	Adventive
ascinc	*Asclepias incarnata*	*Asclepias incarnata*	Swamp Milkweed	4	OBL	Forb	Perennial	Native
consep	*Calystegia sepium*	*Convolvulus sepium*	Hedge False Bindweed	1	FAC	Forb	Perennial	Native
carnut	*Carduus nutans*	*CARDUUS NUTANS*	Nodding Plumeless-Thistle	0	FACU	Forb	Biennial	Adventive
cirarv	*Cirsium arvense*	*CIRSIUM ARVENSE*	Canadian Thistle	0	FACU	Forb	Perennial	Adventive
diplac	*Dipsacus laciniatus*	*DIPSACUS LACINIATUS*	Cut-Leaf Teasel	0	UPL	Forb	Biennial	Adventive
solgra	*Euthamia graminifolia*	*Solidago graminifolia nuttallii*	Flat-Top Goldentop	4	FACW	Forb	Perennial	Native
polsca	*Fallopia scandens*	*Polygonum scandens*	Climbing Black-Bindweed	1	FAC	Vine	Perennial	Native
lytsal	*Lythrum salicaria*	*LYTHRUM SALICARIA*	Purple Loosestrife	0	OBL	Forb	Perennial	Adventive
phrausu	*Phragmites australis ssp. australis*	*Phragmites australis*	Common Reed	0	FACW	Grass	Perennial	Adventive
phyame	*Phytolacca americana*	*Phytolacca americana*	American Pokeweed	1	FACU	Forb	Perennial	Native
scipun	*Schoenoplectus pungens*	*Scirpus pungens*	Three-Square	5	OBL	Sedge	Perennial	Native
soldul	*Solanum dulcamara*	*SOLANUM DULCAMARA*	Climbing Nightshade	0	FAC	Vine	Perennial	Adventive
solalt	*Solidago altissima*	*Solidago altissima*	Tall Goldenrod	1	FACU	Forb	Perennial	Native
solsem	*Solidago sempervirens*	*SOLIDAGO SEMPERVIRENS*	Seaside Goldenrod	0	FACW	Forb	Perennial	Adventive
sonuli	*Sonchus arvensis ssp. uliginosus*	*SONCHUS ULIGINOSUS*	Field Sow-Thistle	0	FACU	Forb	Perennial	Adventive
typang	*Typha angustifolia*	*Typha angustifolia*	Narrow-Leaf Cat-Tail	0	OBL	Forb	Perennial	Adventive

SITE: Wetland 5 - CTA Red Line Extension
LOCALE: Lake Calumet
BY: J Mengler, V Mosca
DATE: 8/13/2015

CONSERVATISM-BASED METRICS

MEAN C (NATIVE SPECIES)	**1.75**
MEAN C (ALL SPECIES)	1.08
MEAN C (NATIVE TREES)	2.00
MEAN C (NATIVE SHRUBS)	4.00
(NATIVE HERBACEOUS)	0.00
FQAI (NATIVE SPECIES)	**4.95**
FQAI (ALL SPECIES)	3.88
ADJUSTED FQAI	13.73
% C VALUE 0	0.62
% C VALUE 1-3	0.31
% C VALUE 4-6	0.00
% C VALUE 7-10	0.08

ADDITIONAL METRICS

SPECIES RICHNESS (ALL)	13
SPECIES RICHNESS (NATIVE)	8
% NON-NATIVE	0.38
WET INDICATOR (ALL)	-0.23
WET INDICATOR (NATIVE)	0.00
% HYDROPHYTE (MIDWEST)	0.69
% NATIVE PERENNIAL	0.38
% NATIVE ANNUAL	0.15
% ANNUAL	0.23
% PERENNIAL	0.69

SPECIES ACRONYM	**SPECIES NAME (NWPL/ MOHLENBROCK)**	**SPECIES (SYNONYM)**	**COMMON NAME**	**C VALUE**	**MIDWEST WET INDICATOR**	**HABIT**	**DURATION**	**NATIVITY**
ambart	*Ambrosia artemisiifolia*	*Ambrosia artemisiifolia elatior*	Annual Ragweed	0	FACU	Forb	Annual	Native
ambtri	*Ambrosia trifida*	*Ambrosia trifida*	Great Ragweed	0	FAC	Forb	Annual	Native
branig	*Brassica nigra*	*BRASSICA NIGRA*	Black Mustard	0	UPL	Forb	Annual	Adventive
lytsal	*Lythrum salicaria*	*LYTHRUM SALICARIA*	Purple Loosestrife	0	OBL	Forb	Perennial	Adventive
oenbie	*Oenothera biennis*	*Oenothera biennis*	Evening Primrose	0	FACU	Forb	Biennial	Native
parqui	*Parthenocissus quinquefolia*	*Parthenocissus quinquefolia*	Virginia-Creeper	2	FACU	Vine	Perennial	Native
phrausu	*Phragmites australis ssp. australis*	*Phragmites australis*	Common Reed	0	FACW	Grass	Perennial	Adventive
popdel	*Populus deltoides*	*Populus deltoides*	Eastern Cottonwood	2	FAC	Tree	Perennial	Native
rhacat	*Rhamnus cathartica*	*RHAMNUS CATHARTICA*	European Buckthorn	0	FAC	Shrub	Perennial	Adventive
ribame	*Ribes americanum*	*Ribes americanum*	Wild Black Currant	7	FACW	Shrub	Perennial	Native
salint	*Salix interior*	*Salix interior*	Sandbar Willow	1	FACW	Shrub	Perennial	Native
typang	*Typha angustifolia*	*Typha angustifolia*	Narrow-Leaf Cat-Tail	0	OBL	Forb	Perennial	Adventive
vitrip	*Vitis riparia*	*Vitis riparia*	River-Bank Grape	2	FACW	Vine	Perennial	Native

SITE: Wetland 6 - CTA Red Line Extension
LOCALE: Lake Calumet
BY: J Mengler, V Mosca
DATE: 8/13/2015

CONSERVATISM-BASED METRICS

MEAN C (NATIVE SPECIES)	**2.43**
MEAN C (ALL SPECIES)	1.59
MEAN C (NATIVE TREES)	1.00
MEAN C (NATIVE SHRUBS)	1.00
MEAN C (NATIVE HERBACEOUS)	2.76
FQAI (NATIVE SPECIES)	**11.13**
FQAI (ALL SPECIES)	9.02
ADJUSTED FQAI	19.67
% C VALUE 0	0.50
% C VALUE 1-3	0.25
% C VALUE 4-6	0.22
% C VALUE 7-10	0.03

ADDITIONAL METRICS

SPECIES RICHNESS (ALL)	32
SPECIES RICHNESS (NATIVE)	21
% NON-NATIVE	0.34
WET INDICATOR (ALL)	-0.06
WET INDICATOR (NATIVE)	-0.14
% HYDROPHYTE (MIDWEST)	0.66
% NATIVE PERENNIAL	0.53
% NATIVE ANNUAL	0.06
% ANNUAL	0.09
% PERENNIAL	0.78

SPECIES ACRONYM	**SPECIES NAME (NWPL/ MOHLENBROCK)**	**SPECIES (SYNONYM)**	**COMMON NAME**	**C VALUE**	**MIDWEST WET INDICATOR**	**HABIT**	**DURATION**	**NATIVITY**
aceneg	*Acer negundo*	*Acer negundo var. violaceum*	Box Elder	0	FAC	Tree	Perennial	Native
agralb	*Agrostis gigantea*	*AGROSTIS ALBA*	Red Top	0	FACW	Grass	Perennial	Adventive
acnalt	*Amaranthus tuberculatus*	*Acnida altissima*	Rough-Fruit Amaranth	0	OBL	Forb	Annual	Native
ambtri	*Ambrosia trifida*	*Ambrosia trifida*	Great Ragweed	0	FAC	Forb	Annual	Native
andger	*Andropogon gerardii*	*Andropogon gerardii*	Big Bluestem	5	FAC	Grass	Perennial	Native
arcmin	*Arctium minus*	*ARCTIUM MINUS*	Lesser Burrdock	0	FACU	Forb	Biennial	Adventive
artvul	*Artemisia vulgaris*	*ARTEMISIA VULGARIS*	Common Mugwort	0	UPL	Forb	Perennial	Adventive
ascinc	*Asclepias incarnata*	*Asclepias incarnata*	Swamp Milkweed	4	OBL	Forb	Perennial	Native
cirdis	*Cirsium discolor*	*Cirsium discolor*	Field Thistle	2	FACU	Forb	Biennial	Native
comcom	*Commelina communis*	*COMMELINA COMMUNIS*	Asiatic Dayflower	0	FACU	Forb	Annual	Adventive
cypstr	*Cyperus strigosus*	*Cyperus strigosus*	Straw-Color Flat Sedge	1	FACW	Sedge	Perennial	Native
daucar	*Daucus carota*	*DAUCUS CAROTA*	Queen Anne’s Lace	0	UPL	Forb	Biennial	Adventive
eupalt	*Eupatorium altissimum*	*Eupatorium altissimum*	Tall Boneset	0	UPL	Forb	Perennial	Native
solgra	*Euthamia graminifolia*	*Solidago graminifolia nuttallii*	Flat-Top Goldentop	4	FACW	Forb	Perennial	Native
polsca	*Fallopia scandens*	*Polygonum scandens*	Climbing Black-Bindweed	1	FAC	Vine	Perennial	Native
gaubie	*Gaura biennis*	*Gaura biennis*	Biennial Beeblossom	2	FACU	Forb	Biennial	Native
helgro	*Helianthus grosseserratus*	*Helianthus grosseserratus*	Saw-Tooth Sunflower	2	FACW	Forb	Perennial	Native
hyppun	*Hypericum punctatum*	*Hypericum punctatum*	Spotted St. John's-Wort	4	FAC	Forb	Perennial	Native
liapyc	*Liatris pycnostachya*	*Liatris pycnostachya*	Priarie Blazing Star	8	FAC	Forb	Perennial	Native
lycame	*Lycopus americanus*	*Lycopus americanus*	Cut-Leaf Water-Horehound	5	OBL	Forb	Perennial	Native
lytsal	*Lythrum salicaria*	*LYTHRUM SALICARIA*	Purple Loosestrife	0	OBL	Forb	Perennial	Adventive
phrausu	*Phragmites australis ssp. australis*	*Phragmites australis*	Common Reed	0	FACW	Grass	Perennial	Adventive
physub	*Physalis subglabrata*	*Physalis subglabrata*	Smooth Ground Cherry	0	UPL	Forb	Perennial	Native
popdel	*Populus deltoides*	*Populus deltoides*	Eastern Cottonwood	2	FAC	Tree	Perennial	Native
rhacat	*Rhamnus cathartica*	*RHAMNUS CATHARTICA*	European Buckthorn	0	FAC	Shrub	Perennial	Adventive

SPECIES ACRONYM	**SPECIES NAME (NWPL/ MOHLENBROCK)**	**SPECIES (SYNONYM)**	**COMMON NAME**	**C VALUE**	**MIDWEST WET INDICATOR**	**HABIT**	**DURATION**	**NATIVITY**
samcan	*Sambucus nigra ssp. canadensis*	*Sambucus canadensis*	Elderberry	1	FACW	Shrub	Perennial	Native
sapoff	*Saponaria officinalis*	*SAPONARIA OFFICINALIS*	Bouncing-Bett	0	FACU	Forb	Perennial	Adventive
andsco	*Schizachyrium scoparium*	*Andropogon scoparius*	Little Bluestem	5	FACU	Grass	Perennial	Native
soldul	*Solanum dulcamara*	*SOLANUM DULCAMARA*	Climbing Nightshade	0	FAC	Vine	Perennial	Adventive
solalt	*Solidago altissima*	*Solidago altissima*	Tall Goldenrod	1	FACU	Forb	Perennial	Native
typang	*Typha angustifolia*	*Typha angustifolia*	Narrow-Leaf Cat-Tail	0	OBL	Forb	Perennial	Adventive
verhas	*Verbena hastata*	*Verbena hastata*	Blue Vervain	4	FACW	Forb	Perennial	Native

SITE: Wetland 7 - CTA Red Line Extension
LOCALE: Lake Calumet
BY: J Mengler, V Mosca
DATE: 8/13/2015

CONSERVATISM-BASED METRICS

MEAN C (NATIVE SPECIES)	**2.79**
MEAN C (ALL SPECIES)	2.03
MEAN C (NATIVE TREES)	n/a
MEAN C (NATIVE SHRUBS)	0.00
MEAN C (NATIVE HERBACEOUS)	2.79
FQAI (NATIVE SPECIES)	**13.68**
FQAI (ALL SPECIES)	11.66
ADJUSTED FQAI	23.81
% C VALUE 0	0.45
% C VALUE 1-3	0.18
% C VALUE 4-6	0.33
% C VALUE 7-10	0.03

ADDITIONAL METRICS

SPECIES RICHNESS (ALL)	33
SPECIES RICHNESS (NATIVE)	24
% NON-NATIVE	0.27
WET INDICATOR (ALL)	-0.18
WET INDICATOR (NATIVE)	-0.21
% HYDROPHYTE (MIDWEST)	0.67
% NATIVE PERENNIAL	0.52
% NATIVE ANNUAL	0.09
% ANNUAL	0.09
% PERENNIAL	0.76

SPECIES ACRONYM	**SPECIES NAME (NWPL/ MOHLENBROCK)**	**SPECIES (SYNONYM)**	**COMMON NAME**	**C VALUE**	**MIDWEST WET INDICATOR**	**HABIT**	**DURATION**	**NATIVITY**
achmil	*Achillea millefolium*	*ACHILLEA MILLEFOLIUM*	Common Yarrow	0	FACU	Forb	Perennial	Adventive
agralb	*Agrostis gigantea*	*AGROSTIS ALBA*	Red Top	0	FACW	Grass	Perennial	Adventive
andger	*Andropogon gerardii*	*Andropogon gerardii*	Big Bluestem	5	FAC	Grass	Perennial	Native
artvul	*Artemisia vulgaris*	*ARTEMISIA VULGARIS*	Common Mugwort	0	UPL	Forb	Perennial	Adventive
ascsyr	*Asclepias syriaca*	*Asclepias syriaca*	Common Milkweed	0	FACU	Forb	Perennial	Native
cirdis	*Cirsium discolor*	*Cirsium discolor*	Field Thistle	2	FACU	Forb	Biennial	Native
cypstr	*Cyperus strigosus*	*Cyperus strigosus*	Straw-Color Flat Sedge	1	FACW	Sedge	Perennial	Native
daucar	*Daucus carota*	*DAUCUS CAROTA*	Queen Anne’s Lace	0	UPL	Forb	Biennial	Adventive
eriann	*Erigeron annuus*	*Erigeron annuus*	Eastern Daisy Fleabane	0	FACU	Forb	Biennial	Native
erican	*Erigeron canadensis*	*Erigeron canadensis*	Canadian Horseweed	0	FACU	Forb	Annual	Native
eupalt	*Eupatorium altissimum*	*Eupatorium altissimum*	Tall Boneset	0	UPL	Forb	Perennial	Native
eupper	*Eupatorium perfoliatum*	*Eupatorium perfoliatum*	Common Boneset	4	OBL	Forb	Perennial	Native
solgra	*Euthamia graminifolia*	*Solidago graminifolia nuttallii*	Flat-Top Goldentop	4	FACW	Forb	Perennial	Native
rhafra	*Frangula alnus*	*RHAMNUS FRANGULA*	Glossy Buckthorn	0	FACW	Shrub	Perennial	Adventive
helgro	*Helianthus grosseserratus*	*Helianthus grosseserratus*	Saw-Tooth Sunflower	2	FACW	Forb	Perennial	Native
hyppun	*Hypericum punctatum*	*Hypericum punctatum*	Spotted St. John's-Wort	4	FAC	Forb	Perennial	Native
jundud	*Juncus dudleyi*	*Juncus dudleyi*	Dudley's Rush	4	FACW	Forb	Perennial	Native
juntor	*Juncus torreyi*	*Juncus torreyi*	Torrey's Rush	4	FACW	Forb	Perennial	Native
laccan	*Lactuca canadensis*	*Lactuca canadensis*	Canadian Blue Lettuce	2	FACU	Forb	Biennial	Native
lycame	*Lycopus americanus*	*Lycopus americanus*	Cut-Leaf Water-Horehound	5	OBL	Forb	Perennial	Native
lytsal	*Lythrum salicaria*	*LYTHRUM SALICARIA*	Purple Loosestrife	0	OBL	Forb	Perennial	Adventive
muhglo	*Muhlenbergia glomerata*	*Muhlenbergia glomerata*	Spiked Muhly	10	FACW	Grass	Perennial	Native
oenbie	*Oenothera biennis*	*Oenothera biennis*	Evening Primrose	0	FACU	Forb	Biennial	Native
pancap	*Panicum capillare*	*Panicum capillare*	Common Panic Grass	1	FAC	Grass	Annual	Native

SPECIES ACRONYM	SPECIES NAME (NWPL/ MOHLENBROCK)	SPECIES (SYNONYM)	COMMON NAME	C VALUE	MIDWEST WET INDICATOR	HABIT	DURATION	NATIVITY
pandic	*Panicum dichotomiflorum*	*Panicum dichotomiflorum*	Fall Panic Grass	0	FACW	Grass	Annual	Native
panvir	*Panicum virgatum*	*Panicum virgatum*	Switch Grass	5	FAC	Grass	Perennial	Native
pendig	*Penstemon digitalis*	*Penstemon digitalis*	Foxglove Beardtongue	4	FAC	Forb	Perennial	Native
phrausu	*Phragmites australis ssp. australis*	*Phragmites australis*	Common Reed	0	FACW	Grass	Perennial	Adventive
scipen	*Scirpus pendulus*	*Scirpus pendulus*	Rufous Bulrush	4	OBL	Sedge	Perennial	Native
soldul	*Solanum dulcamara*	*SOLANUM DULCAMARA*	Climbing Nightshade	0	FAC	Vine	Perennial	Adventive
solsem	*Solidago sempervirens*	*SOLIDAGO SEMPERVIRENS*	Seaside Goldenrod	0	FACW	Forb	Perennial	Adventive
traohi	*Tradescantia ohiensis*	*Tradescantia ohiensis*	Spiderwort	2	FACU	Forb	Perennial	Native
verhas	*Verbena hastata*	*Verbena hastata*	Blue Vervain	4	FACW	Forb	Perennial	Native

SITE:	Wetland 8 - CTA Red Line Extension
LOCALE:	Lake Calumet
BY:	J Mengler, V Mosca
DATE:	8/19/2015

CONSERVATISM-BASED METRICS

MEAN C (NATIVE SPECIES)	**2.43**
MEAN C (ALL SPECIES)	1.21
MEAN C (NATIVE TREES)	2.00
MEAN C (NATIVE SHRUBS)	1.00
MEAN C (NATIVE HERBACEOUS)	2.67
FQAI (NATIVE SPECIES)	**6.43**
FQAI (ALL SPECIES)	4.54
ADJUSTED FQAI	17.17
% C VALUE 0	0.57
% C VALUE 1-3	0.21
% C VALUE 4-6	0.21
% C VALUE 7-10	0.00

ADDITIONAL METRICS

SPECIES RICHNESS (ALL)	14
SPECIES RICHNESS (NATIVE)	7
% NON-NATIVE	0.50
WET INDICATOR (ALL)	-0.21
WET INDICATOR (NATIVE)	-0.57
% HYDROPHYTE (MIDWEST)	0.79
% NATIVE PERENNIAL	0.36
% NATIVE ANNUAL	0.14
% ANNUAL	0.14
% PERENNIAL	0.79

SPECIES ACRONYM	**SPECIES NAME (NWPL/ MOHLENBROCK)**	**SPECIES (SYNONYM)**	**COMMON NAME**	**C VALUE**	**MIDWEST WET INDICATOR**	**HABIT**	**DURATION**	**NATIVITY**
ambtri	*Ambrosia trifida*	*Ambrosia trifida*	Great Ragweed	0	FAC	Forb	Annual	Native
cirarv	*Cirsium arvense*	*CIRSIUM ARVENSE*	Canadian Thistle	0	FACU	Forb	Perennial	Adventive
diplac	*Dipsacus laciniatus*	*DIPSACUS LACINIATUS*	Cut-Leaf Teasel	0	UPL	Forb	Biennial	Adventive
echlob	*Echinocystis lobata*	*Echinocystis lobata*	Wild Cucumber	5	FACW	Vine	Annual	Native
polsca	*Fallopia scandens*	*Polygonum scandens*	Climbing Black-Bindweed	1	FAC	Vine	Perennial	Native
jundud	*Juncus dudleyi*	*Juncus dudleyi*	Dudley's Rush	4	FACW	Forb	Perennial	Native
juntor	*Juncus torreyi*	*Juncus torreyi*	Torrey's Rush	4	FACW	Forb	Perennial	Native
lytsal	*Lythrum salicaria*	*LYTHRUM SALICARIA*	Purple Loosestrife	0	OBL	Forb	Perennial	Adventive
phrausu	*Phragmites australis ssp. australis*	*Phragmites australis*	Common Reed	0	FACW	Grass	Perennial	Adventive
popdel	*Populus deltoides*	*Populus deltoides*	Eastern Cottonwood	2	FAC	Tree	Perennial	Native
salfra	*Salix fragilis*	*SALIX FRAGILIS*	Crack Willow	0	UPL	Tree	Perennial	Adventive
salint	*Salix interior*	*Salix interior*	Sandbar Willow	1	FACW	Shrub	Perennial	Native
soldul	*Solanum dulcamara*	*SOLANUM DULCAMARA*	Climbing Nightshade	0	FAC	Vine	Perennial	Adventive
solsem	*Solidago sempervirens*	*SOLIDAGO SEMPERVIRENS*	Seaside Goldenrod	0	FACW	Forb	Perennial	Adventive

SITE: Wetland 9 - CTA Red Line Extension
LOCALE: Lake Calumet
BY: J Mengler, V Mosca
DATE: 8/19/2015

CONSERVATISM-BASED METRICS

MEAN C (NATIVE SPECIES)	**0.83**
MEAN C (ALL SPECIES)	0.45
MEAN C (NATIVE TREES)	1.00
MEAN C (NATIVE SHRUBS)	n/a
MEAN C (NATIVE HERBACEOUS)	0.33
FQAI (NATIVE SPECIES)	**2.04**
FQAI (ALL SPECIES)	1.51
ADJUSTED FQAI	6.15
% C VALUE 0	0.73
% C VALUE 1-3	0.27
% C VALUE 4-6	0.00
% C VALUE 7-10	0.00

ADDITIONAL METRICS

SPECIES RICHNESS (ALL)	11
SPECIES RICHNESS (NATIVE)	6
% NON-NATIVE	0.45
WET INDICATOR (ALL)	-0.18
WET INDICATOR (NATIVE)	0.00
% HYDROPHYTE (MIDWEST)	0.82
% NATIVE PERENNIAL	0.36
% NATIVE ANNUAL	0.18
% ANNUAL	0.18
% PERENNIAL	0.82

SPECIES ACRONYM	**SPECIES NAME (NWPL/ MOHLENBROCK)**	**SPECIES (SYNONYM)**	**COMMON NAME**	**C VALUE**	**MIDWEST WET INDICATOR**	**HABIT**	**DURATION**	**NATIVITY**
aceneg	*Acer negundo*	*Acer negundo var. violaceum*	Box Elder	0	FAC	Tree	Perennial	Native
ambtri	*Ambrosia trifida*	*Ambrosia trifida*	Great Ragweed	0	FAC	Forb	Annual	Native
consep	*Calystegia sepium*	*Convolvulus sepium*	Hedge False Bindweed	1	FAC	Forb	Perennial	Native
erican	*Erigeron canadensis*	*Erigeron canadensis*	Canadian Horseweed	0	FACU	Forb	Annual	Native
lytsal	*Lythrum salicaria*	*LYTHRUM SALICARIA*	Purple Loosestrife	0	OBL	Forb	Perennial	Adventive
moralb	*Morus alba*	*MORUS ALBA*	White Mulberry	0	FAC	Tree	Perennial	Adventive
phaaru	*Phalaris arundinacea*	*PHALARIS ARUNDINACEA*	Reed Canary Grass	0	FACW	Grass	Perennial	Adventive
phrausu	*Phragmites australis ssp. australis*	*Phragmites australis*	Common Reed	0	FACW	Grass	Perennial	Adventive
popdel	*Populus deltoides*	*Populus deltoides*	Eastern Cottonwood	2	FAC	Tree	Perennial	Native
salfra	*Salix fragilis*	*SALIX FRAGILIS*	Crack Willow	0	UPL	Tree	Perennial	Adventive
vitrip	*Vitis riparia*	*Vitis riparia*	River-Bank Grape	2	FACW	Vine	Perennial	Native

SITE: Wetland 10 - CTA Red Line Extension
LOCALE: Lake Calumet
BY: J Mengler
DATE: 8/13/2015

CONSERVATISM-BASED METRICS

MEAN C (NATIVE SPECIES)	1.50
MEAN C (ALL SPECIES)	0.75
MEAN C (NATIVE TREES)	1.50
MEAN C (NATIVE SHRUBS)	n/a
MEAN C (NATIVE HERBACEOUS)	1.00
FQAI (NATIVE SPECIES)	3.00
FQAI (ALL SPECIES)	2.12
ADJUSTED FQAI	10.61
% C VALUE 0	0.50
% C VALUE 1-3	0.50
% C VALUE 4-6	0.00
% C VALUE 7-10	0.00

ADDITIONAL METRICS

SPECIES RICHNESS (ALL)	8
SPECIES RICHNESS (NATIVE)	4
% NON-NATIVE	0.50
WET INDICATOR (ALL)	-0.13
WET INDICATOR (NATIVE)	-0.25
% HYDROPHYTE (MIDWEST)	0.63
% NATIVE PERENNIAL	0.50
% NATIVE ANNUAL	0.00
% ANNUAL	0.00
% PERENNIAL	0.88

SPECIES ACRONYM	SPECIES NAME (NWPL/ MOHLENBROCK)	SPECIES (SYNONYM)	COMMON NAME	C VALUE	MIDWEST WET INDICATOR	HABIT	DURATION	NATIVITY
arcmin	*Arctium minus*	*ARCTIUM MINUS*	Lesser Burrdock	0	FACU	Forb	Biennial	Adventive
artvul	*Artemisia vulgaris*	*ARTEMISIA VULGARIS*	Common Mugwort	0	UPL	Forb	Perennial	Adventive
frapen	*Fraxinus pennsylvanica*	*Fraxinus pennsylvanica subintegerrima*	Green Ash	1	FACW	Tree	Perennial	Native
lytsal	*Lythrum salicaria*	*LYTHRUM SALICARIA*	Purple Loosestrife	0	OBL	Forb	Perennial	Adventive
phrausu	*Phragmites australis ssp. australis*	*Phragmites australis*	Common Reed	0	FACW	Grass	Perennial	Adventive
popdel	*Populus deltoides*	*Populus deltoides*	Eastern Cottonwood	2	FAC	Tree	Perennial	Native
solalt	*Solidago altissima*	*Solidago altissima*	Tall Goldenrod	1	FACU	Forb	Perennial	Native
vitrip	*Vitis riparia*	*Vitis riparia*	River-Bank Grape	2	FACW	Vine	Perennial	Native

SITE: Wetland 11 - CTA Red Line Extension
LOCALE: Lake Calumet
BY: J Mengler, V Mosca
DATE: 8/19/2015

CONSERVATISM-BASED METRICS

MEAN C (NATIVE SPECIES)	2.00
MEAN C (ALL SPECIES)	1.00
MEAN C (NATIVE TREES)	2.00
MEAN C (NATIVE SHRUBS)	n/a
MEAN C (NATIVE HERBACEOUS)	n/a
FQAI (NATIVE SPECIES)	2.83
FQAI (ALL SPECIES)	2.00
ADJUSTED FQAI	14.14
% C VALUE 0	0.50
% C VALUE 1-3	0.50
% C VALUE 4-6	0.00
% C VALUE 7-10	0.00

ADDITIONAL METRICS

SPECIES RICHNESS (ALL)	4
SPECIES RICHNESS (NATIVE)	2
% NON-NATIVE	0.50
WET INDICATOR (ALL)	-1.00
WET INDICATOR (NATIVE)	-0.50
% HYDROPHYTE (MIDWEST)	1.00
% NATIVE PERENNIAL	0.50
% NATIVE ANNUAL	0.00
% ANNUAL	0.00
% PERENNIAL	1.00

SPECIES ACRONYM	**SPECIES NAME (NWPL/**	**SPECIES (SYNONYM)**	**COMMON NAME**	**C VALUE**	**MIDWEST WET INDICATOR**	**HABIT**	**DURATION**	**NATIVITY**
lytsal	*Lythrum salicaria*	*LYTHRUM SALICARIA*	Purple Loosestrife	0	OBL	Forb	Perennial	Adventive
phrausu	*Phragmites australis ssp. australis*	*Phragmites australis*	Common Reed	0	FACW	Grass	Perennial	Adventive
popdel	*Populus deltoides*	*Populus deltoides*	Eastern Cottonwood	2	FAC	Tree	Perennial	Native
vitrip	*Vitis riparia*	*Vitis riparia*	River-Bank Grape	2	FACW	Vine	Perennial	Native

SITE: Wetland 12 - CTA Red Line Extension
LOCALE: Lake Calumet
BY: J Mengler, V Mosca
DATE: 8/13/2015

CONSERVATISM-BASED METRICS

MEAN C (NATIVE SPECIES)	1.50
MEAN C (ALL SPECIES)	0.67
MEAN C (NATIVE TREES)	1.50
MEAN C (NATIVE SHRUBS)	0.00
MEAN C (NATIVE HERBACEOUS)	1.00
FQAI (NATIVE SPECIES)	3.00
FQAI (ALL SPECIES)	2.00
ADJUSTED FQAI	10.00
% C VALUE 0	0.56
% C VALUE 1-3	0.44
% C VALUE 4-6	0.00
% C VALUE 7-10	0.00

ADDITIONAL METRICS

SPECIES RICHNESS (ALL)	9
SPECIES RICHNESS (NATIVE)	4
% NON-NATIVE	0.56
WET INDICATOR (ALL)	-0.11
WET INDICATOR (NATIVE)	-0.25
% HYDROPHYTE (MIDWEST)	0.67
% NATIVE PERENNIAL	0.44
% NATIVE ANNUAL	0.00
% ANNUAL	0.00
% PERENNIAL	0.89

SPECIES ACRONYM	SPECIES NAME (NWPL/ MOHLENBROCK)	SPECIES (SYNONYM)	COMMON NAME	C VALUE	MIDWEST WET INDICATOR	HABIT	DURATION	NATIVITY
arcmin	*Arctium minus*	*ARCTIUM MINUS*	Lesser Burrdock	0	FACU	Forb	Biennial	Adventive
artvul	*Artemisia vulgaris*	*ARTEMISIA VULGARIS*	Common Mugwort	0	UPL	Forb	Perennial	Adventive
Frapen	*Fraxinus pennsylvanica*	*Fraxinus pennsylvanica subintegerrima*	Green Ash	1	FACW	Tree	Perennial	Native
lytsal	*Lythrum salicaria*	*LYTHRUM SALICARIA*	Purple Loosestrife	0	OBL	Forb	Perennial	Adventive
phrausu	*Phragmites australis ssp. australis*	*Phragmites australis*	Common Reed	0	FACW	Grass	Perennial	Adventive
popdel	*Populus deltoides*	*Populus deltoides*	Eastern Cottonwood	2	FAC	Tree	Perennial	Native
rhacat	*Rhamnus cathartica*	*RHAMNUS CATHARTICA*	European Buckthorn	0	FAC	Shrub	Perennial	Adventive
solalt	*Solidago altissima*	*Solidago altissima*	Tall Goldenrod	1	FACU	Forb	Perennial	Native
vitrip	*Vitis riparia*	*Vitis riparia*	River-Bank Grape	2	FACW	Vine	Perennial	Native

SITE: Wetland 13 - CTA Red Line Extension
LOCALE: Lake Calumet
BY: J Mengler, V Mosca
DATE: 8/19/2015

CONSERVATISM-BASED METRICS

MEAN C (NATIVE SPECIES)	1.17
MEAN C (ALL SPECIES)	0.78
MEAN C (NATIVE TREES)	1.00
MEAN C (NATIVE SHRUBS)	1.00
MEAN C (NATIVE HERBACEOUS)	1.00
FQAI (NATIVE SPECIES)	2.86
FQAI (ALL SPECIES)	2.33
ADJUSTED FQAI	9.53
% C VALUE 0	0.44
% C VALUE 1-3	0.56
% C VALUE 4-6	0.00
% C VALUE 7-10	0.00

ADDITIONAL METRICS

SPECIES RICHNESS (ALL)	9
SPECIES RICHNESS (NATIVE)	6
% NON-NATIVE	0.33
WET INDICATOR (ALL)	-0.67
WET INDICATOR (NATIVE)	-0.17
% HYDROPHYTE (MIDWEST)	0.89
% NATIVE PERENNIAL	0.67
% NATIVE ANNUAL	0.00
% ANNUAL	0.00
% PERENNIAL	1.00

SPECIES ACRONYM	**SPECIES NAME (NWPL/ MOHLENBROCK)**	**SPECIES (SYNONYM)**	**COMMON NAME**	**C VALUE**	**MIDWEST WET INDICATOR**	**HABIT**	**DURATION**	**NATIVITY**
aceneg	*Acer negundo*	*Acer negundo var. violaceum*	Box Elder	0	FAC	Tree	Perennial	Native
consep	*Calystegia sepium*	*Convolvulus sepium*	Hedge False Bindweed	1	FAC	Forb	Perennial	Native
lytsal	*Lythrum salicaria*	*LYTHRUM SALICARIA*	Purple Loosestrife	0	OBL	Forb	Perennial	Adventive
phrausu	*Phragmites australis ssp. australis*	*Phragmites australis*	Common Reed	0	FACW	Grass	Perennial	Adventive
popdel	*Populus deltoides*	*Populus deltoides*	Eastern Cottonwood	2	FAC	Tree	Perennial	Native
samcan	*Sambucus nigra ssp. canadensis*	*Sambucus canadensis*	Black Elderberry	1	FACW	Shrub	Perennial	Native
solalt	*Solidago altissima*	*Solidago altissima*	Tall Goldenrod	1	FACU	Forb	Perennial	Native
typang	*Typha angustifolia*	*Typha angustifolia*	Narrow-Leaf Cat-Tail	0	OBL	Forb	Perennial	Adventive
vitrip	*Vitis riparia*	*Vitis riparia*	River-Bank Grape	2	FACW	Vine	Perennial	Native

SITE:	Wetland 14 - CTA Red Line Extension
LOCALE:	Lake Calumet
BY:	J Mengler, V Mosca
DATE:	8/19/2015

CONSERVATISM-BASED METRICS

MEAN C (NATIVE SPECIES)	1.33
MEAN C (ALL SPECIES)	0.86
MEAN C (NATIVE TREES)	1.67
MEAN C (NATIVE SHRUBS)	0.00
MEAN C (NATIVE HERBACEOUS)	1.00
FQAI (NATIVE SPECIES)	4.00
FQAI (ALL SPECIES)	3.21
ADJUSTED FQAI	10.69
% C VALUE 0	0.50
% C VALUE 1-3	0.50
% C VALUE 4-6	0.00
% C VALUE 7-10	0.00

ADDITIONAL METRICS

SPECIES RICHNESS (ALL)	14
SPECIES RICHNESS (NATIVE)	9
% NON-NATIVE	0.36
WET INDICATOR (ALL)	-0.29
WET INDICATOR (NATIVE)	-0.44
% HYDROPHYTE (MIDWEST)	0.79
% NATIVE PERENNIAL	0.57
% NATIVE ANNUAL	0.07
% ANNUAL	0.07
% PERENNIAL	0.86

SPECIES ACRONYM	SPECIES NAME (NWPL/ MOHLENBROCK)	SPECIES (SYNONYM)	COMMON NAME	C VALUE	MIDWEST WET INDICATOR	HABIT	DURATION	NATIVITY
aceneg	*Acer negundo*	*Acer negundo var. violaceum*	Box Elder	0	FAC	Tree	Perennial	Native
ambtri	*Ambrosia trifida*	*Ambrosia trifida*	Great Ragweed	0	FAC	Forb	Annual	Native
arcmin	*Arctium minus*	*ARCTIUM MINUS*	Lesser Burrdock	0	FACU	Forb	Biennial	Adventive
consep	*Calystegia sepium*	*Convolvulus sepium*	Hedge False Bindweed	1	FAC	Forb	Perennial	Native
phaaru	*Phalaris arundinacea*	*PHALARIS ARUNDINACEA*	Reed Canary Grass	0	FACW	Grass	Perennial	Adventive
phrausu	*Phragmites australis ssp. australis*	*Phragmites australis*	Common Reed	0	FACW	Grass	Perennial	Adventive
popdel	*Populus deltoides*	*Populus deltoides*	Eastern Cottonwood	2	FAC	Tree	Perennial	Native
rhacat	*Rhamnus cathartica*	*RHAMNUS CATHARTICA*	European Buckthorn	0	FAC	Shrub	Perennial	Adventive
solalt	*Solidago altissima*	*Solidago altissima*	Tall Goldenrod	1	FACU	Forb	Perennial	Native
sonuli	*Sonchus arvensis ssp. uliginosus*	*SONCHUS ULIGINOSUS*	Field Sow-Thistle	0	FACU	Forb	Perennial	Adventive
typlat	*Typha latifolia*	*Typha latifolia*	Broad-Leaf Cat-Tail	1	OBL	Forb	Perennial	Native
ulmame	*Ulmus americana*	*Ulmus americana*	American Elm	3	FACW	Tree	Perennial	Native
urtpro	*Urtica dioica ssp. gracilis*	*Urtica procera*	Tall Nettle	2	FACW	Forb	Perennial	Native
vitrip	*Vitis riparia*	*Vitis riparia*	River-Bank Grape	2	FACW	Vine	Perennial	Native

SITE: Wetland 15 - CTA Red Line Extension
LOCALE: Lake Calumet
BY: J Mengler, V Mosca
DATE: 8/19/2015

CONSERVATISM-BASED METRICS

MEAN C (NATIVE SPECIES)	1.00
MEAN C (ALL SPECIES)	0.50
MEAN C (NATIVE TREES)	0.00
MEAN C (NATIVE SHRUBS)	0.00
MEAN C (NATIVE HERBACEOUS)	1.00
FQAI (NATIVE SPECIES)	2.00
FQAI (ALL SPECIES)	1.41
ADJUSTED FQAI	7.07
% C VALUE 0	0.63
% C VALUE 1-3	0.38
% C VALUE 4-6	0.00
% C VALUE 7-10	0.00

ADDITIONAL METRICS

SPECIES RICHNESS (ALL)	8
SPECIES RICHNESS (NATIVE)	4
% NON-NATIVE	0.50
WET INDICATOR (ALL)	-0.63
WET INDICATOR (NATIVE)	0.00
% HYDROPHYTE (MIDWEST)	0.88
% NATIVE PERENNIAL	0.50
% NATIVE ANNUAL	0.00
% ANNUAL	0.00
% PERENNIAL	1.00

SPECIES ACRONYM	SPECIES NAME (NWPL/ MOHLENBROCK)	SPECIES (SYNONYM)	COMMON NAME	C VALUE	MIDWEST WET INDICATOR	HABIT	DURATION	NATIVITY
aceneg	*Acer negundo*	*Acer negundo var. violaceum*	Box Elder	0	FAC	Tree	Perennial	Native
consep	*Calystegia sepium*	*Convolvulus sepium*	Hedge False Bindweed	1	FAC	Forb	Perennial	Native
lytsal	*Lythrum salicaria*	*LYTHRUM SALICARIA*	Purple Loosestrife	0	OBL	Forb	Perennial	Adventive
phrausu	*Phragmites australis ssp. australis*	*Phragmites australis*	Common Reed	0	FACW	Grass	Perennial	Adventive
rhacat	*Rhamnus cathartica*	*RHAMNUS CATHARTICA*	European Buckthorn	0	FAC	Shrub	Perennial	Adventive
solalt	*Solidago altissima*	*Solidago altissima*	Tall Goldenrod	1	FACU	Forb	Perennial	Native
typang	*Typha angustifolia*	*Typha angustifolia*	Narrow-Leaf Cat-Tail	0	OBL	Forb	Perennial	Adventive
vitrip	*Vitis riparia*	*Vitis riparia*	River-Bank Grape	2	FACW	Vine	Perennial	Native

Project Number: 15-0218

Project Name:
CTA Red Line Extension

Hey and Associates, Inc.
Engineering, Ecology and Landscape Architecture

Exhibit Title:
Jurisdictional Data Forms

Exhibit:
#9

15-0218 CDM-Smith -- CTA Red Line Extension

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site Lake Calumet CTA Red Line Extension City/County: Cook Sampling Date: 8/13/2015
Applicant/Owner: CTA/MWRD State: Illinois Sampling Point: 1
Investigator(s): J Mengler, V Mosca Section, Township, Range: T34N R14E S26
Landform (hillslope, terrace, etc.): ditch Local relief (concave, convex, none): ditch
Slope (%): ______ Lat: 41.660019 Long: -87.595429 Datum: ______
Soil Map Unit Name: urban land-orthents clayey complex, nearly level NWI Classification: none
Are climatic/hydrologic conditions of the site typical for this time of the year? Y (If no, explain in remarks)
Are vegetation ______, soil Y, or hydrology ______ significantly disturbed? Y
Are vegetation ______, soil ______, or hydrology ______ naturally problematic? N
Are "normal circumstances" present? Y

SUMMARY OF FINDINGS

(If needed, explain any answers in remarks.)

Hydrophytic vegetation present? Y
Hydric soil present? ______
Wetland hydrology present? Y

Is the sampled area within a wetland? Y
If yes, optional wetland site ID: Wetland 1

Remarks: (Explain alternative procedures here or in a separate report.)

Relied primarily upon vegetation and landscape position due to dry time of season, and mostly urbanland/fill for substrate.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 9 m)	Absolute % Cover	Dominant Species	Indicator Status
1 *Populus deltoides*	20	Y	FAC
2 *Acer saccharinum*	20	Y	FACW
3 *Ulmus americana*	5	N	FACW
4			
5			
	45	= Total Cover	
Sapling/Shrub stratum (Plot size: 4.6 m)			
1 *Salix interior*	15	Y	FACW
2 *Populus deltoides*	10	Y	FAC
3 *Fraxinus pennsylvanica*	5	N	FACW
4			
5			
	30	= Total Cover	
Herb stratum (Plot size: 1 m sq)			
1 *Phragmites australis*	95	Y	FACW
2			
3			
4			
5			
6			
7			
8			
9			
10			
	95	= Total Cover	
Woody vine stratum (Plot size: 1 m sq)			
1			
2			
	0	= Total Cover	

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 5 (A)
Total Number of Dominant Species Across all Strata: 5 (B)
Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:			
OBL species	0	x 1 =	0
FACW species	140	x 2 =	280
FAC species	30	x 3 =	90
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column totals	170 (A)		370 (B)

Prevalence Index = B/A = 2.18

Hydrophytic Vegetation Indicators:

___ Rapid test for hydrophytic vegetation
X Dominance test is >50%
X Prevalence index is ≤3.0*
___ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)
___ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic vegetation present? Y

Remarks: (Include photo numbers here or on a separate sheet)

SOIL

Sampling Point: 1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

___ Histisol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ 2 cm Muck (A10)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ 5 cm Mucky Peat or Peat (S3)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils:

___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ Dark Surface (S7) (**LRR K, L)**
___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Very Shallow Dark Surface (TF12)
___ Other (explain in remarks)

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):
Type: gravel, ballast, fill
Depth (inches): not determined

Hydric soil present? ______

Remarks:

Area mapped as urban land, and located along road at base of another road embankment. Probe refusal within 2-4 inches due to gravel and fill.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

X Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
X Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
X Sparsely Vegetated Concave Surface (B8)
___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ True Aquatic Plants (B14)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Gauge or Well Data (D9)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

___ Surface Soil Cracks (B6)
X Drainage Patterns (B10)
___ Dry-Season Water Table (C2)
___ Crayfish Burrows (C8)
___ Saturation Visible on Aerial Imagery (C9)
___ Stunted or Stressed Plants (D1)
___ Geomorphic Position (D2)
___ FAC-Neutral Test (D5)

Field Observations:

	Yes		No		Depth (inches):	
Surface water present?	Yes		No	X	Depth (inches):	
Water table present?	Yes		No	X	Depth (inches):	
Saturation present? (includes capillary fringe)	Yes	X	No		Depth (inches):	0

Wetland hydrology present? Y

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Saturation within ditch channel lined by hydrophytes.

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Lake Calumet CTA Red Line Extension   City/County: Cook   Sampling Date: 8/13/2015
Applicant/Owner: CTA/MWRD   State: Illinois   Sampling Point: 2
Investigator(s): J Mengler, V Mosca   Section, Township, Range: T37N, R14E, S26
Landform (hillslope, terrace, etc.): ditch   Local relief (concave, convex, none): ditch
Slope (%): ____   Lat: 41.6906323   Long: -87.6205465   Datum: ____
Soil Map Unit Name: urban land-orthents clayey complex, nearly level   NWI Classification: none
Are climatic/hydrologic conditions of the site typical for this time of the year? Y   (If no, explain in remarks)
Are vegetation ____, soil Y, or hydrology ____ significantly disturbed? Y   Are "normal circumstances" present? Y
Are vegetation ____, soil ____, or hydrology ____ naturally problematic? N

SUMMARY OF FINDINGS

(If needed, explain any answers in remarks.)

Hydrophytic vegetation present?	Y		
Hydric soil present?		**Is the sampled area within a wetland?**	Y
Wetland hydrology present?	Y	If yes, optional wetland site ID:	Wetland 2

Remarks: (Explain alternative procedures here or in a separate report.)

Relied primarily upon vegetation and landscape position due to dry time of season, and mostly urbanland/fill for substrate.

VEGETATION -- Use scientific names of plants.

	Absolute % Cover	Dominant Species	Indicator Status
Tree Stratum (Plot size: 9 m)			
1			
2			
3			
4			
5			
	0	= Total Cover	
Sapling/Shrub stratum (Plot size: 4.6 m)			
1			
2			
3			
4			
5			
	0	= Total Cover	
Herb stratum (Plot size: 1 m sq)			
1 *Phragmites australis*	95	Y	FACW
2			
3			
4			
5			
6			
7			
8			
9			
10			
	95	= Total Cover	
Woody vine stratum (Plot size: 1 m sq)			
1			
2			
	0	= Total Cover	

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across all Strata: 1 (B)
Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:				
OBL species	0	x 1 =	0	
FACW species	95	x 2 =	190	
FAC species	0	x 3 =	0	
FACU species	0	x 4 =	0	
UPL species	0	x 5 =	0	
Column totals	95	(A)	190	(B)

Prevalence Index = B/A = 2.00

Hydrophytic Vegetation Indicators:

___ Rapid test for hydrophytic vegetation
X Dominance test is >50%
X Prevalence index is ≤3.0*
___ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)
___ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic vegetation present? Y

Remarks: (Include photo numbers here or on a separate sheet)

SOIL

Sampling Point: 2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

- ___ Histisol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils:

- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L)**
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (explain in remarks)

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):
Type: gravel, ballast, fill
Depth (inches): not determined

Hydric soil present? ______

Remarks:

Area mapped as urban land, and located along road at base of another road embankment. Probe refusal within 2-4 inches due to gravel and fill.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- X Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- X Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- X Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- X Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)

Field Observations:
Surface water present? Yes ___ No X Depth (inches): 0-Jan
Water table present? Yes ___ No X Depth (inches): ___
Saturation present? Yes X No ___ Depth (inches): 0
(includes capillary fringe)

Wetland hydrology present? Y

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Saturation within ditch channel lined by hydrophytes.

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site Lake Calumet CTA Red Line Extension City/County: Cook Sampling Date: 8/13/2015
Applicant/Owner: CTA/MWRD State: Illinois Sampling Point: 3
Investigator(s): J Mengler, V Mosca Section, Township, Range: T37N, R14E, S26
Landform (hillslope, terrace, etc.): ditch Local relief (concave, convex, none): ditch
Slope (%): ______ Lat: 41.660463 Long: -87.59576 Datum: ______
Soil Map Unit Name: urban land-orthents clayey complex, nearly level NWI Classification: none
Are climatic/hydrologic conditions of the site typical for this time of the year? Y (If no, explain in remarks)
Are vegetation ______, soil Y, or hydrology ______ significantly disturbed? Y Are "normal circumstances" present? Y
Are vegetation ______, soil ______, or hydrology ______ naturally problematic? N

SUMMARY OF FINDINGS

(If needed, explain any answers in remarks.)

Hydrophytic vegetation present?	Y		
Hydric soil present?		**Is the sampled area within a wetland?**	Y
Wetland hydrology present?	Y	If yes, optional wetland site ID:	Wetland 3

Remarks: (Explain alternative procedures here or in a separate report.)

Relied primarily upon vegetation and landscape position due to dry time of season, and mostly urbanland/fill for substrate.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 9 m)	Absolute % Cover	Dominant Species	Indicator Status
1			
2			
3			
4			
5			
	0 = Total Cover		
Sapling/Shrub stratum (Plot size: 4.6 m)			
1			
2			
3			
4			
5			
	0 = Total Cover		
Herb stratum (Plot size: 1 m sq)			
1 *Phragmites australis*	95	Y	FACW
2 *Lythrum salicaria*	10	N	OBL
3			
4			
5			
6			
7			
8			
9			
10			
	105 = Total Cover		
Woody vine stratum (Plot size: 1 m sq)			
1			
2			
	0 = Total Cover		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across all Strata: 1 (B)
Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:			
OBL species	10	x 1 =	10
FACW species	95	x 2 =	190
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column totals	105 (A)		200 (B)
Prevalence Index = B/A =			1.90

Hydrophytic Vegetation Indicators:

- ___ Rapid test for hydrophytic vegetation
- X Dominance test is >50%
- X Prevalence index is ≤3.0*
- ___ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)
- ___ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic vegetation present? Y

Remarks: (Include photo numbers here or on a separate sheet)

SOIL

Sampling Point: 3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type*	Loc**	Texture	Remarks

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

___ Histisol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ 2 cm Muck (A10)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ 5 cm Mucky Peat or Peat (S3)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils:

___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ Dark Surface (S7) (**LRR K, L)**
___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Very Shallow Dark Surface (TF12)
___ Other (explain in remarks)

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):
Type: gravel, ballast, fill
Depth (inches): not determined

Hydric soil present? ___

Remarks:

Area mapped as urban land, and located between gravel parking lot and gravel road. Probe refusal within 2-4 inches due to gravel and fill.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
X Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
X Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ True Aquatic Plants (B14)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Gauge or Well Data (D9)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

___ Surface Soil Cracks (B6)
X Drainage Patterns (B10)
___ Dry-Season Water Table (C2)
___ Crayfish Burrows (C8)
___ Saturation Visible on Aerial Imagery (C9)
___ Stunted or Stressed Plants (D1)
___ Geomorphic Position (D2)
___ FAC-Neutral Test (D5)

Field Observations:

Surface water present?	Yes		No	X	Depth (inches):	
Water table present?	Yes		No	X	Depth (inches):	
Saturation present? (includes capillary fringe)	Yes	X	No		Depth (inches):	0

Wetland hydrology present? Y

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Saturation within ditch/swale channel at lowest point in local landscape.

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Lake Calumet CTA Red Line Extension
City/County: Cook
Sampling Date: 8/13/2015
Applicant/Owner: CTA/MWRD
State: Illinois
Sampling Point: 4
Investigator(s): J Mengler, V Mosca
Section, Township, Range: T37N, R14E, S27
Landform (hillslope, terrace, etc.): swale at toe of slope
Local relief (concave, convex, none): swale
Slope (%):
Lat: 41.659641
Long: -87.599965
Datum:
Soil Map Unit Name: orthents, clayey undulating
NWI Classification: PF01/EMCd
Are climatic/hydrologic conditions of the site typical for this time of the year? Y (If no, explain in remarks)
Are vegetation ____, soil Y, or hydrology ____ significantly disturbed? Y
Are vegetation ____, soil ____, or hydrology ____ naturally problematic? N
Are "normal circumstances" present? Y

SUMMARY OF FINDINGS

(If needed, explain any answers in remarks.)

Hydrophytic vegetation present?	Y	**Is the sampled area within a wetland?**	Y
Hydric soil present?			
Wetland hydrology present?	Y	If yes, optional wetland site ID:	Wetland 4

Remarks: (Explain alternative procedures here or in a separate report.)

Relied primarily upon vegetation and landscape position due to dry time of season, and mostly urbanland/fill for substrate.

VEGETATION -- Use scientific names of plants.

	Absolute % Cover	Dominant Species	Indicator Status
Tree Stratum (Plot size: 9 m)			
1			
2			
3			
4			
5			
	0	= Total Cover	
Sapling/Shrub stratum (Plot size: 4.6 m)			
1			
2			
3			
4			
5			
	0	= Total Cover	
Herb stratum (Plot size: 1 m sq)			
1 *Phragmites australis*	100	Y	FACW
2 *Lythrum salicaria*	20	N	OBL
3			
4			
5			
6			
7			
8			
9			
10			
	120	= Total Cover	
Woody vine stratum (Plot size: 1 m sq)			
1			
2			
	0	= Total Cover	

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC:	1	(A)
Total Number of Dominant Species Across all Strata:	1	(B)
Percent of Dominant Species that are OBL, FACW, or FAC:	100.00%	(A/B)

Prevalence Index Worksheet

Total % Cover of:				
OBL species	20	x 1 =	20	
FACW species	100	x 2 =	200	
FAC species	0	x 3 =	0	
FACU species	0	x 4 =	0	
UPL species	0	x 5 =	0	
Column totals	120	(A)	220	(B)
Prevalence Index = B/A =			1.83	

Hydrophytic Vegetation Indicators:

- ___ Rapid test for hydrophytic vegetation
- X Dominance test is >50%
- X Prevalence index is ≤3.0*
- ___ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)
- ___ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic vegetation present? Y

Remarks: (Include photo numbers here or on a separate sheet)

SOIL

Sampling Point: 4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type*	Loc**	Texture	Remarks

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

___ Histisol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ 2 cm Muck (A10)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ 5 cm Mucky Peat or Peat (S3)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils:

___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ Dark Surface (S7) (**LRR K, L)**
___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Very Shallow Dark Surface (TF12)
___ Other (explain in remarks)

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):
Type: gravel, ballast, fill
Depth (inches): not determined

Hydric soil present? ______

Remarks:

Area mapped as urban land, and located road and berm around sewage lagoons.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
X Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
X Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ True Aquatic Plants (B14)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Gauge or Well Data (D9)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

___ Surface Soil Cracks (B6)
X Drainage Patterns (B10)
___ Dry-Season Water Table (C2)
___ Crayfish Burrows (C8)
___ Saturation Visible on Aerial Imagery (C9)
___ Stunted or Stressed Plants (D1)
___ Geomorphic Position (D2)
___ FAC-Neutral Test (D5)

Field Observations:
Surface water present? Yes ______ No X Depth (inches): ______
Water table present? Yes ______ No X Depth (inches): ______
Saturation present? (includes capillary fringe) Yes X No ______ Depth (inches): 0

Wetland hydrology present? Y

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Saturation within swale channel at lowest point in local landscape.

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site Lake Calumet CTA Red Line Extension City/County: Cook Sampling Date: 8/13/2015
Applicant/Owner: CTA/MWRD State: Illinois Sampling Point: 5
Investigator(s): J Mengler, V Mosca Section, Township, Range: T37N, R14E, S26 & 27
Landform (hillslope, terrace, etc.): swale Local relief (concave, convex, none): swale
Slope (%): ______ Lat: 41.663596 Long: -87.598043 Datum: ______
Soil Map Unit Name: orthents, loamy, nearly level NWI Classification: none
Are climatic/hydrologic conditions of the site typical for this time of the year? Y (If no, explain in remarks)
Are vegetation ______, soil Y, or hydrology ______ significantly disturbed? Y
Are vegetation ______, soil ______, or hydrology ______ naturally problematic? N
Are "normal circumstances" present? Y

SUMMARY OF FINDINGS

(If needed, explain any answers in remarks.)

Hydrophytic vegetation present?	Y		
Hydric soil present?		**Is the sampled area within a wetland?**	Y
Wetland hydrology present?	Y	If yes, optional wetland site ID:	Wetland 5

Remarks: (Explain alternative procedures here or in a separate report.)

Relied primarily upon vegetation and landscape position due to dry time of season, and mostly urbanland/fill for substrate.

VEGETATION -- Use scientific names of plants.

	Absolute % Cover	Dominant Species	Indicator Status
Tree Stratum (Plot size: 9 m)			
1			
2			
3			
4			
5			
	0	= Total Cover	
Sapling/Shrub stratum (Plot size: 4.6 m)			
1			
2			
3			
4			
5			
	0	= Total Cover	
Herb stratum (Plot size: 1 m sq)			
1 *Phragmites australis*	100	Y	FACW
2			
3			
4			
5			
6			
7			
8			
9			
10			
	100	= Total Cover	
Woody vine stratum (Plot size: 1 m sq)			
1			
2			
	0	= Total Cover	

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across all Strata: 1 (B)
Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:				
OBL species	0	x 1 =	0	
FACW species	100	x 2 =	200	
FAC species	0	x 3 =	0	
FACU species	0	x 4 =	0	
UPL species	0	x 5 =	0	
Column totals	100	(A)	200	(B)

Prevalence Index = B/A = 2.00

Hydrophytic Vegetation Indicators:

- ___ Rapid test for hydrophytic vegetation
- X Dominance test is >50%
- X Prevalence index is ≤3.0*
- ___ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)
- ___ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic vegetation present? Y

Remarks: (Include photo numbers here or on a separate sheet)

SOIL

Sampling Point: 5

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type*	Loc**	Texture	Remarks

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

___ Histisol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ 2 cm Muck (A10)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ 5 cm Mucky Peat or Peat (S3)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils:

___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ Dark Surface (S7) (**LRR K, L)**
___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Very Shallow Dark Surface (TF12)
___ Other (explain in remarks)

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):
Type: gravel, ballast, fill
Depth (inches): not determined

Hydric soil present? ___

Remarks:

Area mapped as urban land, and located between roads

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
X Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
X Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ True Aquatic Plants (B14)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Gauge or Well Data (D9)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

___ Surface Soil Cracks (B6)
X Drainage Patterns (B10)
___ Dry-Season Water Table (C2)
___ Crayfish Burrows (C8)
___ Saturation Visible on Aerial Imagery (C9)
___ Stunted or Stressed Plants (D1)
___ Geomorphic Position (D2)
___ FAC-Neutral Test (D5)

Field Observations:

Surface water present?	Yes		No	X	Depth (inches):	
Water table present?	Yes		No	X	Depth (inches):	
Saturation present? (includes capillary fringe)	Yes	X	No		Depth (inches):	0

Wetland hydrology present? Y

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Saturation within drainage swale along road.

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site Lake Calumet CTA Red Line Extension City/County: Cook Sampling Date: 8/13/2015
Applicant/Owner: CTA/MWRD State: Illinois Sampling Point: 6
Investigator(s): J Mengler, V Mosca Section, Township, Range: T37N, R14E, S27
Landform (hillslope, terrace, etc.): swale Local relief (concave, convex, none): swale
Slope (%): ____ Lat: 41.669077 Long: -87.601542 Datum: ____
Soil Map Unit Name: orthents, loamy, nearly level NWI Classification: none
Are climatic/hydrologic conditions of the site typical for this time of the year? Y (If no, explain in remarks)
Are vegetation ____, soil Y, or hydrology ____ significantly disturbed? Y Are "normal circumstances" present? Y
Are vegetation ____, soil ____, or hydrology ____ naturally problematic? N

SUMMARY OF FINDINGS

(If needed, explain any answers in remarks.)

Hydrophytic vegetation present?	Y	**Is the sampled area within a wetland?**	Y
Hydric soil present?			
Wetland hydrology present?	Y	If yes, optional wetland site ID:	Wetland 6

Remarks: (Explain alternative procedures here or in a separate report.)

Relied primarily upon vegetation and landscape position due to dry time of season, and mostly urbanland/fill for substrate.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 9 m)	Absolute % Cover	Dominant Species	Indicator Status
1			
2			
3			
4			
5			
	0	= Total Cover	
Sapling/Shrub stratum (Plot size: 4.6 m)			
1			
2			
3			
4			
5			
	0	= Total Cover	
Herb stratum (Plot size: 1 m sq)			
1 *Phragmites australis*	80	Y	FACW
2 *Lythrum salicaria*	10	N	OBL
3 *Typha angustifolia*	10	N	OBL
4 *Helianthus grosseserratus*	2	N	FACW
5 *Verbena hastata*	2	N	FACW
6			
7			
8			
9			
10			
	104	= Total Cover	
Woody vine stratum (Plot size: 1 m sq)			
1			
2			
	0	= Total Cover	

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across all Strata: 1 (B)
Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:			
OBL species	20	x 1 =	20
FACW species	84	x 2 =	168
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column totals	104 (A)		188 (B)

Prevalence Index = B/A = 1.81

Hydrophytic Vegetation Indicators:

- ____ Rapid test for hydrophytic vegetation
- X Dominance test is >50%
- X Prevalence index is ≤3.0*
- ____ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)
- ____ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic vegetation present? Y

Remarks: (Include photo numbers here or on a separate sheet)

SOIL

Sampling Point: 6

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type*	Loc**	Texture	Remarks

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

___ Histisol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ 2 cm Muck (A10)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ 5 cm Mucky Peat or Peat (S3)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils:

___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ Dark Surface (S7) (**LRR K, L)**
___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Very Shallow Dark Surface (TF12)
___ Other (explain in remarks)

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):
Type: gravel, ballast, fill
Depth (inches): not determined

Hydric soil present? ___

Remarks:

Area mapped as urban land, and located between road and railroad.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
X Water Marks (B1)
X Sediment Deposits (B2)
___ Drift Deposits (B3)
X Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
X Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ True Aquatic Plants (B14)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Gauge or Well Data (D9)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

___ Surface Soil Cracks (B6)
X Drainage Patterns (B10)
___ Dry-Season Water Table (C2)
___ Crayfish Burrows (C8)
___ Saturation Visible on Aerial Imagery (C9)
___ Stunted or Stressed Plants (D1)
___ Geomorphic Position (D2)
___ FAC-Neutral Test (D5)

Field Observations:

Surface water present?	Yes		No	X	Depth (inches):	
Water table present?	Yes		No	X	Depth (inches):	
Saturation present? (includes capillary fringe)	Yes	X	No		Depth (inches):	0

Wetland hydrology present? Y

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Saturation within drainage swale along railroad.

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site Lake Calumet CTA Red Line Extension City/County: Cook Sampling Date: 8/13/2015

Applicant/Owner: CTA/MWRD State: Illinois Sampling Point: 7

Investigator(s): J Mengler, V Mosca Section, Township, Range: T37N, R14E, S27

Landform (hillslope, terrace, etc.): swale Local relief (concave, convex, none): swale

Slope (%): ____ Lat: 41.669077 Long: -87.601542 Datum: ____

Soil Map Unit Name: orthents, loamy, nearly level NWI Classification: none

Are climatic/hydrologic conditions of the site typical for this time of the year? Y (If no, explain in remarks)

Are vegetation ____, soil Y, or hydrology ____ significantly disturbed? Y

Are vegetation ____, soil ____, or hydrology ____ naturally problematic? N

Are "normal circumstances" present? Y

SUMMARY OF FINDINGS

(If needed, explain any answers in remarks.)

Hydrophytic vegetation present? Y

Hydric soil present? ____

Wetland hydrology present? N

Is the sampled area within a wetland? N

If yes, optional wetland site ID: ____

Remarks: (Explain alternative procedures here or in a separate report.)

Relied primarily upon vegetation and landscape position due to dry time of season, and mostly urbanland/fill for substrate.

VEGETATION -- Use scientific names of plants.

	Absolute % Cover	Dominant Species	Indicator Status
Tree Stratum (Plot size: 9 m)			
1			
2			
3			
4			
5			
	0	= Total Cover	
Sapling/Shrub stratum (Plot size: 4.6 m)			
1 *Rhamnus cathartica*	100	Y	FAC
2			
3			
4			
5			
	100	= Total Cover	
Herb stratum (Plot size: 1 m sq)			
1	80	Y	
2	10	N	
3	10	N	
4	2	N	
5	2	N	
6			
7			
8			
9			
10			
	104	= Total Cover	
Woody vine stratum (Plot size: 1 m sq)			
1			
2			
	0	= Total Cover	

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across all Strata: 2 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 50.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:			
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	100	x 3 =	300
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column totals	100 (A)		300 (B)

Prevalence Index = B/A = 3.00

Hydrophytic Vegetation Indicators:

- ____ Rapid test for hydrophytic vegetation
- ____ Dominance test is >50%
- X Prevalence index is ≤3.0*
- ____ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)
- ____ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic vegetation present? Y

Remarks: (Include photo numbers here or on a separate sheet)

SOIL

Sampling Point: 7

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture	Remarks

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

___ Histisol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ 2 cm Muck (A10)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ 5 cm Mucky Peat or Peat (S3)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils:

___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ Dark Surface (S7) (**LRR K, L)**
___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Very Shallow Dark Surface (TF12)
___ Other (explain in remarks)

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):
Type: gravel, ballast, fill
Depth (inches): not determined

Hydric soil present? ___

Remarks:

Area mapped as urban land, and 2-3 feet higher in elevation than adjacent wetland swales.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ True Aquatic Plants (B14)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Gauge or Well Data (D9)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

___ Surface Soil Cracks (B6)
___ Drainage Patterns (B10)
___ Dry-Season Water Table (C2)
___ Crayfish Burrows (C8)
___ Saturation Visible on Aerial Imagery (C9)
___ Stunted or Stressed Plants (D1)
___ Geomorphic Position (D2)
___ FAC-Neutral Test (D5)

Field Observations:
Surface water present? Yes ___ No X Depth (inches): ___
Water table present? Yes ___ No X Depth (inches): ___
Saturation present? (includes capillary fringe) Yes ___ No X Depth (inches): 0

Wetland hydrology present? N

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

2-3 feet higher in elevation than adjacent wetland swales with no evidence of hydrology

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Lake Calumet CTA Red Line Extension City/County: Cook Sampling Date: 8/13/2015
Applicant/Owner: CTA/MWRD State: Illinois Sampling Point: 8
Investigator(s): J Mengler, V Mosca Section, Township, Range: T37N, R14E, S22 & 27
Landform (hillslope, terrace, etc.): swale Local relief (concave, convex, none): swale
Slope (%): ____ Lat: 41.672876 Long: -87.607044 Datum: ____
Soil Map Unit Name: orthents, loamy, nearly level NWI Classification: none
Are climatic/hydrologic conditions of the site typical for this time of the year? Y (If no, explain in remarks)
Are vegetation ____, soil Y, or hydrology ____ significantly disturbed? Y Are "normal circumstances" present? Y
Are vegetation ____, soil ____, or hydrology ____ naturally problematic? N

SUMMARY OF FINDINGS

(If needed, explain any answers in remarks.)

Hydrophytic vegetation present? Y
Hydric soil present? ____
Wetland hydrology present? Y

Is the sampled area within a wetland? Y
If yes, optional wetland site ID: Wetland 7

Remarks: (Explain alternative procedures here or in a separate report.)

Relied primarily upon vegetation and landscape position due to dry time of season, and mostly urbanland/fill for substrate.

VEGETATION -- Use scientific names of plants.

	Absolute % Cover	Dominant Species	Indicator Status
Tree Stratum (Plot size: 9 m)			
1			
2			
3			
4			
5			
= Total Cover	0		
Sapling/Shrub stratum (Plot size: 4.6 m)			
1			
2			
3			
4			
5			
= Total Cover	0		
Herb stratum (Plot size: 1 m sq)			
1 *Phragmites australis*	80	Y	FACW
2 *Lythrum salicaria*	10	N	OBL
3 *Solidago graminifolia*	10	N	FACW
4 *Helianthus grosseserratus*	2	N	FACW
5 *Verbena hastata*	2	N	FACW
6			
7			
8			
9			
10			
= Total Cover	104		
Woody vine stratum (Plot size: 1 m sq)			
1			
2			
= Total Cover	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across all Strata: 1 (B)
Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:			
OBL species	10	x 1 =	10
FACW species	94	x 2 =	188
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column totals	104 (A)		198 (B)

Prevalence Index = B/A = 1.90

Hydrophytic Vegetation Indicators:

- ____ Rapid test for hydrophytic vegetation
- X Dominance test is >50%
- X Prevalence index is ≤3.0*
- ____ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)
- ____ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic vegetation present? Y

Remarks: (Include photo numbers here or on a separate sheet)

SOIL

Sampling Point: 8

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

- ___ Histisol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils:

- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L)**
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (explain in remarks)

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type: gravel, ballast, fill

Depth (inches): not determined

Hydric soil present? ___

Remarks:

Area mapped as urban land, and located between railroad and gravel contractor yard.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- X Water Marks (B1)
- X Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- X Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- X Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface water present? Yes ___ No X Depth (inches): ___

Water table present? Yes ___ No X Depth (inches): ___

Saturation present? (includes capillary fringe) Yes X No ___ Depth (inches): 0

Wetland hydrology present? Y

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Saturation within drainage swale along railroad.

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site Lake Calumet CTA Red Line Extension City/County: Cook Sampling Date: 8/13/2015
Applicant/Owner: CTA/MWRD State: Illinois Sampling Point: 9
Investigator(s): J Mengler, V Mosca Section, Township, Range: T37N, R14E, S27
Landform (hillslope, terrace, etc.): swale Local relief (concave, convex, none): swale
Slope (%): ______ Lat: 41.669077 Long: -87.601542 Datum: ______
Soil Map Unit Name: orthents, loamy, nearly level NWI Classification: none
Are climatic/hydrologic conditions of the site typical for this time of the year? Y (If no, explain in remarks)
Are vegetation ______, soil Y, or hydrology ______ significantly disturbed? Y
Are vegetation ______, soil ______, or hydrology ______ naturally problematic? N
Are "normal circumstances" present? Y

SUMMARY OF FINDINGS

(If needed, explain any answers in remarks.)

Hydrophytic vegetation present?	Y	**Is the sampled area within a wetland?**	N
Hydric soil present?		If yes, optional wetland site ID:	
Wetland hydrology present?	N		

Remarks: (Explain alternative procedures here or in a separate report.)

Relied primarily upon vegetation and landscape position due to dry time of season, and mostly urbanland/fill for substrate.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 9 m)	Absolute % Cover	Dominant Species	Indicator Status
1			
2			
3			
4			
5			
	0	= Total Cover	
Sapling/Shrub stratum (Plot size: 4.6 m)			
1 *Rhamnus cathartica*	100	Y	FAC
2			
3			
4			
5			
	100	= Total Cover	
Herb stratum (Plot size: 1 m sq)			
1	80	Y	
2	10	N	
3	10	N	
4	2	N	
5	2	N	
6			
7			
8			
9			
10			
	104	= Total Cover	
Woody vine stratum (Plot size: 1 m sq)			
1			
2			
	0	= Total Cover	

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC:	1	(A)
Total Number of Dominant Species Across all Strata:	2	(B)
Percent of Dominant Species that are OBL, FACW, or FAC:	50.00%	(A/B)

Prevalence Index Worksheet

Total % Cover of:				
OBL species	0	x 1 =	0	
FACW species	0	x 2 =	0	
FAC species	100	x 3 =	300	
FACU species	0	x 4 =	0	
UPL species	0	x 5 =	0	
Column totals	100	(A)	300	(B)
Prevalence Index = B/A =			3.00	

Hydrophytic Vegetation Indicators:

- ___ Rapid test for hydrophytic vegetation
- ___ Dominance test is >50%
- X Prevalence index is ≤3.0*
- ___ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)
- ___ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic vegetation present? Y

Remarks: (Include photo numbers here or on a separate sheet)

SOIL

Sampling Point: 9

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type*	Loc**	Texture	Remarks

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

___ Histisol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ 2 cm Muck (A10)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ 5 cm Mucky Peat or Peat (S3)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils:

___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ Dark Surface (S7) (**LRR K, L)**
___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Very Shallow Dark Surface (TF12)
___ Other (explain in remarks)

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):
Type: gravel, ballast, fill
Depth (inches): not determined

Hydric soil present? ______

Remarks:

Area mapped as urban land, and 2-3 feet higher in elevation than adjacent wetland swales.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ True Aquatic Plants (B14)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Gauge or Well Data (D9)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

___ Surface Soil Cracks (B6)
___ Drainage Patterns (B10)
___ Dry-Season Water Table (C2)
___ Crayfish Burrows (C8)
___ Saturation Visible on Aerial Imagery (C9)
___ Stunted or Stressed Plants (D1)
___ Geomorphic Position (D2)
___ FAC-Neutral Test (D5)

Field Observations:
Surface water present? Yes ______ No X Depth (inches): ______
Water table present? Yes ______ No X Depth (inches): ______
Saturation present? (includes capillary fringe) Yes ______ No X Depth (inches): 0

Wetland hydrology present? N

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

2-3 feet higher in elevation than adjacent wetland swales with no evidence of hydrology

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site Lake Calumet CTA Red Line Extension City/County: Cook Sampling Date: 8/19/2015
Applicant/Owner: CTA/MWRD State: Illinois Sampling Point: 10
Investigator(s): J Mengler, V Mosca Section, Township, Range: T37N, R14E, S27
Landform (hillslope, terrace, etc.): swale Local relief (concave, convex, none): swale
Slope (%): ______ Lat: 41.65712 Long: -87.600738 Datum: ______
Soil Map Unit Name: orthents, loamy, nearly level NWI Classification: none
Are climatic/hydrologic conditions of the site typical for this time of the year? Y (If no, explain in remarks)
Are vegetation ______, soil Y , or hydrology ______ significantly disturbed? Y Are "normal circumstances" present? Y
Are vegetation ______, soil ______ , or hydrology ______ naturally problematic? N

SUMMARY OF FINDINGS

(If needed, explain any answers in remarks.)

Hydrophytic vegetation present?	Y	**Is the sampled area within a wetland?**	Y
Hydric soil present?		If yes, optional wetland site ID:	Wetland 8
Wetland hydrology present?	Y		

Remarks: (Explain alternative procedures here or in a separate report.)

Relied primarily upon vegetation and landscape position due to dry time of season, and mostly urbanland/fill for substrate.

VEGETATION -- Use scientific names of plants.

	Absolute % Cover	Dominant Species	Indicator Status
Tree Stratum (Plot size: 9 m)			
1			
2			
3			
4			
5			
	0	= Total Cover	
Sapling/Shrub stratum (Plot size: 4.6 m)			
1			
2			
3			
4			
5			
	0	= Total Cover	
Herb stratum (Plot size: 1 m sq)			
1 *Phragmites australis*	100	Y	FACW
2			
3			
4			
5			
6			
7			
8			
9			
10			
	100	= Total Cover	
Woody vine stratum (Plot size: 1 m sq)			
1			
2			
	0	= Total Cover	

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC:	1	(A)
Total Number of Dominant Species Across all Strata:	1	(B)
Percent of Dominant Species that are OBL, FACW, or FAC:	100.00%	(A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species	0	x 1 =	0
FACW species	100	x 2 =	200
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column totals	100	(A)	200 (B)
Prevalence Index = B/A =	2.00		

Hydrophytic Vegetation Indicators:

- ___ Rapid test for hydrophytic vegetation
- X Dominance test is >50%
- X Prevalence index is ≤3.0*
- ___ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)
- ___ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic vegetation present? Y

Remarks: (Include photo numbers here or on a separate sheet)

SOIL

Sampling Point: 10

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

___ Histisol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ 2 cm Muck (A10)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ 5 cm Mucky Peat or Peat (S3)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils:

___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ Dark Surface (S7) (**LRR K, L)**
___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Very Shallow Dark Surface (TF12)
___ Other (explain in remarks)

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):
Type: gravel, ballast, fill
Depth (inches): not determined

Hydric soil present? ___

Remarks:

Area mapped as urban land, and located between gravel roads.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
X Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ True Aquatic Plants (B14)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Gauge or Well Data (D9)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

___ Surface Soil Cracks (B6)
X Drainage Patterns (B10)
___ Dry-Season Water Table (C2)
___ Crayfish Burrows (C8)
___ Saturation Visible on Aerial Imagery (C9)
___ Stunted or Stressed Plants (D1)
___ Geomorphic Position (D2)
___ FAC-Neutral Test (D5)

Field Observations:

Surface water present? Yes ___ No X Depth (inches): ___
Water table present? Yes ___ No X Depth (inches): ___
Saturation present? (includes capillary fringe) Yes X No ___ Depth (inches): 0

Wetland hydrology present? Y

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Saturation within drainage swale along roads.

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Lake Calumet CTA Red Line Extension City/County: Cook Sampling Date: 8/19/2015
Applicant/Owner: CTA/MWRD State: Illinois Sampling Point: 11
Investigator(s): J Mengler, V Mosca Section, Township, Range: T37N, R14E, S27
Landform (hillslope, terrace, etc.): swale Local relief (concave, convex, none): swale
Slope (%): ______ Lat: 41.665712 Long: -87.600738 Datum: ______
Soil Map Unit Name: orthents, loamy, nearly level NWI Classification: none
Are climatic/hydrologic conditions of the site typical for this time of the year? Y (If no, explain in remarks)
Are vegetation ______, soil Y, or hydrology ______ significantly disturbed? Y Are "normal circumstances" present? Y
Are vegetation ______, soil ______, or hydrology ______ naturally problematic? N

SUMMARY OF FINDINGS

(If needed, explain any answers in remarks.)

Hydrophytic vegetation present?	Y	**Is the sampled area within a wetland?**	N
Hydric soil present?		If yes, optional wetland site ID:	
Wetland hydrology present?	N		

Remarks: (Explain alternative procedures here or in a separate report.)

Relied primarily upon vegetation and landscape position due to dry time of season, and mostly urbanland/fill for substrate.

VEGETATION -- Use scientific names of plants.

	Absolute % Cover	Dominant Species	Indicator Status
Tree Stratum (Plot size: 9 m)			
1			
2			
3			
4			
5			
= Total Cover	0		
Sapling/Shrub stratum (Plot size: 4.6 m)			
1			
2			
3			
4			
5			
= Total Cover	0		
Herb stratum (Plot size: 1 m sq)			
1 *Ambrosia trifida*			FAC
2 *Artemisia vulgaris*			UPL
3 *Melilotus albus*			FACU
4 *Arctium minus*			FACU
5 *Lotus corniculata*			FACU
6			
7			
8			
9			
10			
= Total Cover	0		
Woody vine stratum (Plot size: 1 m sq)			
1			
2			
= Total Cover	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)
Total Number of Dominant Species Across all Strata: 0 (B)
Percent of Dominant Species that are OBL, FACW, or FAC: 0.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:			
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column totals	0 (A)		0 (B)

Prevalence Index = B/A = ______

Hydrophytic Vegetation Indicators:

- ___ Rapid test for hydrophytic vegetation
- ___ Dominance test is >50%
- ___ Prevalence index is ≤3.0*
- ___ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)
- ___ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic vegetation present? N

Remarks: (Include photo numbers here or on a separate sheet)

SOIL

Sampling Point: 11

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

___ Histisol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ 2 cm Muck (A10)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ 5 cm Mucky Peat or Peat (S3)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils:

___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ Dark Surface (S7) (**LRR K, L)**
___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Very Shallow Dark Surface (TF12)
___ Other (explain in remarks)

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):
Type: gravel, ballast, fill
Depth (inches): not determined

Hydric soil present? ______

Remarks:

Area mapped as urban land, and 2-4 feet higher in elevation than adjacent wetland swales.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ True Aquatic Plants (B14)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Gauge or Well Data (D9)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

___ Surface Soil Cracks (B6)
___ Drainage Patterns (B10)
___ Dry-Season Water Table (C2)
___ Crayfish Burrows (C8)
___ Saturation Visible on Aerial Imagery (C9)
___ Stunted or Stressed Plants (D1)
___ Geomorphic Position (D2)
___ FAC-Neutral Test (D5)

Field Observations:
Surface water present? Yes ___ No X Depth (inches): ___
Water table present? Yes ___ No X Depth (inches): ___
Saturation present? (includes capillary fringe) Yes ___ No X Depth (inches): 0

Wetland hydrology present? N

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

2-4 feet higher in elevation than adjacent wetland swales with no evidence of hydrology

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site Lake Calumet CTA Red Line Extension City/County: Cook Sampling Date: 8/19/2015

Applicant/Owner: CTA/MWRD State: Illinois Sampling Point: 12

Investigator(s): J Mengler, V Mosca Section, Township, Range: T37N, R14E, S26

Landform (hillslope, terrace, etc.): swale Local relief (concave, convex, none): swale

Slope (%): ____ Lat: 41.661704 Long: -87.597341 Datum: ____

Soil Map Unit Name: orthents, clayey, undulating NWI Classification: PF01/EMCd

Are climatic/hydrologic conditions of the site typical for this time of the year? Y (If no, explain in remarks)

Are vegetation ____ , soil Y , or hydrology ____ significantly disturbed? Y Are "normal circumstances" present? Y

Are vegetation ____ , soil ____ , or hydrology ____ naturally problematic? N

SUMMARY OF FINDINGS

(If needed, explain any answers in remarks.)

Hydrophytic vegetation present? Y

Hydric soil present? ____

Wetland hydrology present? Y

Is the sampled area within a wetland? Y

If yes, optional wetland site ID: Wetland 9

Remarks: (Explain alternative procedures here or in a separate report.)

Relied primarily upon vegetation and landscape position due to dry time of season, and mostly urbanland/fill for substrate.

VEGETATION -- Use scientific names of plants.

	Absolute % Cover	Dominant Species	Indicator Status
Tree Stratum (Plot size: 9 m)			
1			
2			
3			
4			
5			
	0	= Total Cover	
Sapling/Shrub stratum (Plot size: 4.6 m)			
1			
2			
3			
4			
5			
	0	= Total Cover	
Herb stratum (Plot size: 1 m sq)			
1 *Phragmites australis*	100	Y	FACW
2			
3			
4			
5			
6			
7			
8			
9			
10			
	100	= Total Cover	
Woody vine stratum (Plot size: 1 m sq)			
1			
2			
	0	= Total Cover	

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC:	1	(A)
Total Number of Dominant Species Across all Strata:	1	(B)
Percent of Dominant Species that are OBL, FACW, or FAC:	100.00%	(A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species	0	x 1 =	0	
FACW species	100	x 2 =	200	
FAC species	0	x 3 =	0	
FACU species	0	x 4 =	0	
UPL species	0	x 5 =	0	
Column totals	100	(A)	200	(B)

Prevalence Index = B/A = 2.00

Hydrophytic Vegetation Indicators:

- ____ Rapid test for hydrophytic vegetation
- X Dominance test is >50%
- X Prevalence index is ≤3.0*
- ____ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)
- ____ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic vegetation present? Y

Remarks: (Include photo numbers here or on a separate sheet)

SOIL

Sampling Point: 12

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

___ Histisol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ 2 cm Muck (A10)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ 5 cm Mucky Peat or Peat (S3)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils:

___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ Dark Surface (S7) (**LRR K, L)**
___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Very Shallow Dark Surface (TF12)
___ Other (explain in remarks)

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type: gravel, ballast, fill
Depth (inches): not determined

Hydric soil present? ___

Remarks:

Area mapped as urban land, and located between gravel parking pad and road.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

___ Surface Water (A1)
___ High Water Table (A2)
X Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
X Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ True Aquatic Plants (B14)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Gauge or Well Data (D9)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

___ Surface Soil Cracks (B6)
X Drainage Patterns (B10)
___ Dry-Season Water Table (C2)
___ Crayfish Burrows (C8)
___ Saturation Visible on Aerial Imagery (C9)
___ Stunted or Stressed Plants (D1)
___ Geomorphic Position (D2)
___ FAC-Neutral Test (D5)

Field Observations:

Surface water present? Yes ___ No X Depth (inches): ___
Water table present? Yes ___ No X Depth (inches): ___
Saturation present? Yes X No ___ Depth (inches): 0
(includes capillary fringe)

Wetland hydrology present? Y

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Saturation within drainage swale along higher ground.

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site Lake Calumet CTA Red Line Extension City/County: Cook Sampling Date: 8/19/2015
Applicant/Owner: CTA/MWRD State: Illinois Sampling Point: 13
Investigator(s): J Mengler, V Mosca Section, Township, Range: T37N, R14E, S26
Landform (hillslope, terrace, etc.): swale Local relief (concave, convex, none): swale
Slope (%): ______ Lat: 41.661704 Long: -87.597341 Datum: ______
Soil Map Unit Name: orthents, loamy, nearly level NWI Classification: none
Are climatic/hydrologic conditions of the site typical for this time of the year? Y (If no, explain in remarks)
Are vegetation ______, soil Y , or hydrology ______ significantly disturbed? Y Are "normal circumstances"
Are vegetation ______, soil ______, or hydrology ______ naturally problematic? N present? Y

SUMMARY OF FINDINGS

(If needed, explain any answers in remarks.)

Hydrophytic vegetation present?	Y	
Hydric soil present?		**Is the sampled area within a wetland?** N
Wetland hydrology present?	N	If yes, optional wetland site ID: ______

Remarks: (Explain alternative procedures here or in a separate report.)

Relied primarily upon vegetation and landscape position due to dry time of season, and mostly urbanland/fill for substrate.

VEGETATION -- Use scientific names of plants.

	Absolute % Cover	Dominant Species	Indicator Status
Tree Stratum (Plot size: 9 m)			
1			
2			
3			
4			
5			
	0	= Total Cover	
Sapling/Shrub stratum (Plot size: 4.6 m)			
1			
2			
3			
4			
5			
	0	= Total Cover	
Herb stratum (Plot size: 1 m sq)			
1 *Polygonum lapathifolium*	10	Y	FACW
2 *Carduus nutans*	10	Y	FACU
3 *Medicago lupulina*	10	Y	FACU
4 *Helianthus annuus*	10	Y	FACU
5 *Acnida altissima*	10	Y	OBL
6 *Lotus corniculata*	10	Y	FACU
7			
8			
9			
10			
	60	= Total Cover	
Woody vine stratum (Plot size: 1 m sq)			
1			
2			
	0	= Total Cover	

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC:	2	(A)
Total Number of Dominant Species Across all Strata:	6	(B)
Percent of Dominant Species that are OBL, FACW, or FAC:	33.33%	(A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species	10	x 1 =	10	
FACW species	10	x 2 =	20	
FAC species	0	x 3 =	0	
FACU species	40	x 4 =	160	
UPL species	0	x 5 =	0	
Column totals	60	(A)	190	(B)

Prevalence Index = B/A = 3.17

Hydrophytic Vegetation Indicators:

___ Rapid test for hydrophytic vegetation
___ Dominance test is >50%
___ Prevalence index is ≤3.0*
___ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)
___ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic vegetation present? N

Remarks: (Include photo numbers here or on a separate sheet)

SOIL

Sampling Point: 13

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type*	Loc**	Texture	Remarks

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

___ Histisol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ 2 cm Muck (A10)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ 5 cm Mucky Peat or Peat (S3)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils:

___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ Dark Surface (S7) (**LRR K, L)**
___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Very Shallow Dark Surface (TF12)
___ Other (explain in remarks)

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):
Type: gravel, ballast, fill
Depth (inches): not determined

Hydric soil present? ___

Remarks:

Area mapped as urban land, and a gravel parking pad 2-4 feet higher than surrounding wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ True Aquatic Plants (B14)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Gauge or Well Data (D9)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

___ Surface Soil Cracks (B6)
___ Drainage Patterns (B10)
___ Dry-Season Water Table (C2)
___ Crayfish Burrows (C8)
___ Saturation Visible on Aerial Imagery (C9)
___ Stunted or Stressed Plants (D1)
___ Geomorphic Position (D2)
___ FAC-Neutral Test (D5)

Field Observations:
Surface water present? Yes ___ No X Depth (inches): ___
Water table present? Yes ___ No X Depth (inches): ___
Saturation present? (includes capillary fringe) Yes ___ No X Depth (inches): 0

Wetland hydrology present? N

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

2-4 feet higher in elevation than adjacent wetland swales with no evidence of hydrology

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site Lake Calumet CTA Red Line Extension City/County: Cook Sampling Date: 8/13/2015
Applicant/Owner: CTA/MWRD State: Illinois Sampling Point: 14
Investigator(s): J Mengler, V Mosca Section, Township, Range: T37N, R14E, S26
Landform (hillslope, terrace, etc.): swale Local relief (concave, convex, none): swale
Slope (%): ______ Lat: 41.659598 Long: -87.594462 Datum: ______
Soil Map Unit Name: urban land- orthents, clayey, complex, nearly level NWI Classification: none
Are climatic/hydrologic conditions of the site typical for this time of the year? Y (If no, explain in remarks)
Are vegetation ______, soil Y, or hydrology ______ significantly disturbed? Y Are "normal circumstances" present? Y
Are vegetation ______, soil ______, or hydrology ______ naturally problematic? N

SUMMARY OF FINDINGS

(If needed, explain any answers in remarks.)

Hydrophytic vegetation present? Y
Hydric soil present? ______
Wetland hydrology present? Y

Is the sampled area within a wetland? Y
If yes, optional wetland site ID: Wetland 10

Remarks: (Explain alternative procedures here or in a separate report.)

Relied primarily upon vegetation and landscape position due to dry time of season, and mostly urbanland/fill for substrate.

VEGETATION -- Use scientific names of plants.

	Absolute % Cover	Dominant Species	Indicator Status
Tree Stratum (Plot size: 9 m)			
1			
2			
3			
4			
5			
	0 = Total Cover		
Sapling/Shrub stratum (Plot size: 4.6 m)			
1			
2			
3			
4			
5			
	0 = Total Cover		
Herb stratum (Plot size: 1 m sq)			
1 *Phragmites australis*	100	Y	FACW
2			
3			
4			
5			
6			
7			
8			
9			
10			
	100 = Total Cover		
Woody vine stratum (Plot size: 1 m sq)			
1			
2			
	0 = Total Cover		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across all Strata: 1 (B)
Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:			
OBL species	0	x 1 =	0
FACW species	100	x 2 =	200
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column totals	100	(A)	200 (B)

Prevalence Index = B/A = 2.00

Hydrophytic Vegetation Indicators:

___ Rapid test for hydrophytic vegetation
X Dominance test is >50%
X Prevalence index is ≤3.0*
___ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)
___ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic vegetation present? Y

Remarks: (Include photo numbers here or on a separate sheet)

SOIL

Sampling Point: 14

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

___ Histisol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ 2 cm Muck (A10)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ 5 cm Mucky Peat or Peat (S3)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils:

___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ Dark Surface (S7) (**LRR K, L)**
___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Very Shallow Dark Surface (TF12)
___ Other (explain in remarks)

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):
Type: gravel, ballast, fill
Depth (inches): not determined

Hydric soil present? ___

Remarks:

Area mapped as urban land, and located at base of roadway embankment and along railroad

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

___ Surface Water (A1)
___ High Water Table (A2)
X Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
X Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ True Aquatic Plants (B14)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Gauge or Well Data (D9)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

___ Surface Soil Cracks (B6)
X Drainage Patterns (B10)
___ Dry-Season Water Table (C2)
___ Crayfish Burrows (C8)
___ Saturation Visible on Aerial Imagery (C9)
___ Stunted or Stressed Plants (D1)
___ Geomorphic Position (D2)
___ FAC-Neutral Test (D5)

Field Observations:
Surface water present? Yes ___ No X Depth (inches): ___
Water table present? Yes ___ No X Depth (inches): ___
Saturation present? (includes capillary fringe) Yes X No ___ Depth (inches): 0

Wetland hydrology present? Y

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Saturation within drainage swale along higher ground, wet mud among old tires.

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Lake Calumet CTA Red Line Extension City/County: Cook Sampling Date: 8/19/2015
Applicant/Owner: CTA/MWRD State: Illinois Sampling Point: 15
Investigator(s): J Mengler, V Mosca Section, Township, Range: T37N R14E S26
Landform (hillslope, terrace, etc.): ditch Local relief (concave, convex, none): ditch
Slope (%): ______ Lat: 41.660019 Long: -87.595429 Datum: ______
Soil Map Unit Name: urban land-orthents clayey complex, nearly level NWI Classification: none
Are climatic/hydrologic conditions of the site typical for this time of the year? Y (If no, explain in remarks)
Are vegetation ______, soil Y, or hydrology ______ significantly disturbed? Y Are "normal circumstances" present? Y
Are vegetation ______, soil ______, or hydrology ______ naturally problematic? N
(If needed, explain any answers in remarks.)

SUMMARY OF FINDINGS

Hydrophytic vegetation present?	Y		
Hydric soil present?		**Is the sampled area within a wetland?**	Y
Wetland hydrology present?	Y	If yes, optional wetland site ID:	Wetland 11

Remarks: (Explain alternative procedures here or in a separate report.)

Relied primarily upon vegetation and landscape position due to dry time of season, and mostly urbanland/fill for substrate.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 9 m)	Absolute % Cover	Dominant Species	Indicator Status
1			
2			
3			
4			
5			
	0	= Total Cover	
Sapling/Shrub stratum (Plot size: 4.6 m)			
1 *Salix interior*			FACW
2			
3			
4			
5			
	0	= Total Cover	
Herb stratum (Plot size: 1 m sq)			
1 *Phragmites australis*	100	Y	FACW
2			
3			
4			
5			
6			
7			
8			
9			
10			
	100	= Total Cover	
Woody vine stratum (Plot size: 1 m sq)			
1			
2			
	0	= Total Cover	

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across all Strata: 1 (B)
Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:				
OBL species	0	x 1 =	0	
FACW species	100	x 2 =	200	
FAC species	0	x 3 =	0	
FACU species	0	x 4 =	0	
UPL species	0	x 5 =	0	
Column totals	100	(A)	200	(B)

Prevalence Index = B/A = 2.00

Hydrophytic Vegetation Indicators:

- ___ Rapid test for hydrophytic vegetation
- X Dominance test is >50%
- X Prevalence index is ≤3.0*
- ___ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)
- ___ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic vegetation present? Y

Remarks: (Include photo numbers here or on a separate sheet)

SOIL

Sampling Point: 15

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture	Remarks

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

___ Histisol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ 2 cm Muck (A10)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ 5 cm Mucky Peat or Peat (S3)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils:

___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ Dark Surface (S7) (**LRR K, L)**
___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Very Shallow Dark Surface (TF12)
___ Other (explain in remarks)

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):
Type: gravel, ballast, fill
Depth (inches): not determined

Hydric soil present? ___

Remarks:

Area mapped as urban land, and located along road at base of a railroad embankment. Probe refusal within 2-4 inches due to gravel and fill.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

X Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ True Aquatic Plants (B14)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Gauge or Well Data (D9)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

___ Surface Soil Cracks (B6)
X Drainage Patterns (B10)
___ Dry-Season Water Table (C2)
___ Crayfish Burrows (C8)
___ Saturation Visible on Aerial Imagery (C9)
___ Stunted or Stressed Plants (D1)
___ Geomorphic Position (D2)
___ FAC-Neutral Test (D5)

Field Observations:
Surface water present? Yes ___ No X Depth (inches): ___
Water table present? Yes ___ No X Depth (inches): ___
Saturation present? Yes X No ___ Depth (inches): 0
(includes capillary fringe)

Wetland hydrology present? Y

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Lake Calumet CTA Red Line Extension City/County: Cook Sampling Date: 8/19/2015
Applicant/Owner: CTA/MWRD State: Illinois Sampling Point: 16
Investigator(s): J Mengler, V Mosca Section, Township, Range: T37N R14E S27
Landform (hillslope, terrace, etc.): ditch Local relief (concave, convex, none): ditch
Slope (%): ____ Lat: 41.667542 Long: -87.602091 Datum: ____
Soil Map Unit Name: urban land-orthents clayey complex, nearly level NWI Classification: none
Are climatic/hydrologic conditions of the site typical for this time of the year? Y (If no, explain in remarks)
Are vegetation ____, soil Y, or hydrology ____ significantly disturbed? Y Are "normal circumstances" present? Y
Are vegetation ____, soil ____, or hydrology ____ naturally problematic? N

SUMMARY OF FINDINGS

(If needed, explain any answers in remarks.)

Hydrophytic vegetation present?	Y		
Hydric soil present?		**Is the sampled area within a wetland?**	Y
Wetland hydrology present?	Y	If yes, optional wetland site ID:	Wetland 12

Remarks: (Explain alternative procedures here or in a separate report.)

Relied primarily upon vegetation and landscape position due to dry time of season, and mostly urbanland/fill for substrate.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 9 m)	Absolute % Cover	Dominant Species	Indicator Status
1			
2			
3			
4			
5			
	0 = Total Cover		
Sapling/Shrub stratum (Plot size: 4.6 m)			
1			
2			
3			
4			
5			
	0 = Total Cover		
Herb stratum (Plot size: 1 m sq)			
1 *Phragmites australis*	100	Y	FACW
2			
3			
4			
5			
6			
7			
8			
9			
10			
	100 = Total Cover		
Woody vine stratum (Plot size: 1 m sq)			
1			
2			
	0 = Total Cover		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across all Strata: 1 (B)
Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:			
OBL species	0	x 1 =	0
FACW species	100	x 2 =	200
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column totals	100	(A)	200 (B)

Prevalence Index = B/A = 2.00

Hydrophytic Vegetation Indicators:

- ____ Rapid test for hydrophytic vegetation
- X Dominance test is >50%
- X Prevalence index is ≤3.0*
- ____ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)
- ____ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic vegetation present? Y

Remarks: (Include photo numbers here or on a separate sheet)

SOIL

Sampling Point: 16

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

___ Histisol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ 2 cm Muck (A10)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ 5 cm Mucky Peat or Peat (S3)

___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils:

___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ Dark Surface (S7) (**LRR K, L)**
___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Very Shallow Dark Surface (TF12)
___ Other (explain in remarks)

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):
Type: gravel, ballast, fill
Depth (inches): not determined

Hydric soil present? ___

Remarks:

Area mapped as urban land, and located along road at base of a road embankment. Probe refusal within 2-4 inches due to gravel and fill.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

X Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
___ Water-Stained Leaves (B9)

___ Aquatic Fauna (B13)
___ True Aquatic Plants (B14)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Gauge or Well Data (D9)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

___ Surface Soil Cracks (B6)
X Drainage Patterns (B10)
___ Dry-Season Water Table (C2)
___ Crayfish Burrows (C8)
___ Saturation Visible on Aerial Imagery (C9)
___ Stunted or Stressed Plants (D1)
___ Geomorphic Position (D2)
___ FAC-Neutral Test (D5)

Field Observations:
Surface water present? Yes X No ___ Depth (inches): 0-2
Water table present? Yes ___ No X Depth (inches): ___
Saturation present? (includes capillary fringe) Yes X No ___ Depth (inches): 0

Wetland hydrology present? Y

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Lake Calumet CTA Red Line Extension City/County: Cook Sampling Date: 8/19/2015
Applicant/Owner: CTA/MWRD State: Illinois Sampling Point: 17
Investigator(s): J Mengler, V Mosca Section, Township, Range: T37N R14E S27
Landform (hillslope, terrace, etc.): ditch Local relief (concave, convex, none): ditch
Slope (%): ____ Lat: 41.669078 Long: -87.602444 Datum: ____
Soil Map Unit Name: urban land-orthents clayey complex, nearly level NWI Classification: none
Are climatic/hydrologic conditions of the site typical for this time of the year? Y (If no, explain in remarks)
Are vegetation ____ , soil Y , or hydrology ____ significantly disturbed? Y Are "normal circumstances" present? Y
Are vegetation ____ , soil ____ , or hydrology ____ naturally problematic? N

SUMMARY OF FINDINGS

(If needed, explain any answers in remarks.)

Hydrophytic vegetation present? Y
Hydric soil present? ____
Wetland hydrology present? Y

Is the sampled area within a wetland? Y
If yes, optional wetland site ID: Wetland 13

Remarks: (Explain alternative procedures here or in a separate report.)

Relied primarily upon vegetation and landscape position due to dry time of season, and mostly urbanland/fill for substrate.

VEGETATION -- Use scientific names of plants.

	Absolute % Cover	Dominant Species	Indicator Status
Tree Stratum (Plot size: 9 m)			
1			
2			
3			
4			
5			
	0	= Total Cover	
Sapling/Shrub stratum (Plot size: 4.6 m)			
1			
2			
3			
4			
5			
	0	= Total Cover	
Herb stratum (Plot size: 1 m sq)			
1 *Phragmites australis*	100	Y	FACW
2			
3			
4			
5			
6			
7			
8			
9			
10			
	100	= Total Cover	
Woody vine stratum (Plot size: 1 m sq)			
1			
2			
	0	= Total Cover	

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across all Strata: 1 (B)
Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:			
OBL species	0	x 1 =	0
FACW species	100	x 2 =	200
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column totals	100	(A)	200 (B)

Prevalence Index = B/A = 2.00

Hydrophytic Vegetation Indicators:

- ____ Rapid test for hydrophytic vegetation
- X Dominance test is >50%
- X Prevalence index is ≤3.0*
- ____ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)
- ____ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic vegetation present? Y

Remarks: (Include photo numbers here or on a separate sheet)

SOIL

Sampling Point: 17

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

___ Histisol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ 2 cm Muck (A10)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ 5 cm Mucky Peat or Peat (S3)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils:

___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ Dark Surface (S7) (**LRR K, L)**
___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Very Shallow Dark Surface (TF12)
___ Other (explain in remarks)

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):
Type: gravel, ballast, fill
Depth (inches): not determined

Hydric soil present? ___

Remarks:

Area mapped as urban land, and located along railroad embankment. Probe refusal within 2-4 inches due to gravel and fill.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

X Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ True Aquatic Plants (B14)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Gauge or Well Data (D9)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

___ Surface Soil Cracks (B6)
X Drainage Patterns (B10)
___ Dry-Season Water Table (C2)
___ Crayfish Burrows (C8)
___ Saturation Visible on Aerial Imagery (C9)
___ Stunted or Stressed Plants (D1)
___ Geomorphic Position (D2)
___ FAC-Neutral Test (D5)

Field Observations:
Surface water present? Yes X No ___ Depth (inches): 0-2
Water table present? Yes ___ No X Depth (inches): ___
Saturation present? (includes capillary fringe) Yes X No ___ Depth (inches): 0

Wetland hydrology present? Y

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Lake Calumet CTA Red Line Extension City/County: Cook Sampling Date: 8/19/2015
Applicant/Owner: CTA/MWRD State: Illinois Sampling Point: 18
Investigator(s): J Mengler, V Mosca Section, Township, Range: T37N R14E S27
Landform (hillslope, terrace, etc.): ditch Local relief (concave, convex, none): ditch
Slope (%): Lat: 41.667289 Long: -87.600100 Datum:
Soil Map Unit Name: urban land-orthents clayey complex, nearly level NWI Classification: none
Are climatic/hydrologic conditions of the site typical for this time of the year? Y (If no, explain in remarks)
Are vegetation ___, soil Y, or hydrology ___ significantly disturbed? Y Are "normal circumstances" present? Y
Are vegetation ___, soil ___, or hydrology ___ naturally problematic? N

SUMMARY OF FINDINGS

(If needed, explain any answers in remarks.)

Hydrophytic vegetation present?	Y		
Hydric soil present?		**Is the sampled area within a wetland?**	Y
Wetland hydrology present?	Y	If yes, optional wetland site ID:	Wetland 14

Remarks: (Explain alternative procedures here or in a separate report.)

Relied primarily upon vegetation and landscape position due to dry time of season, and mostly urbanland/fill for substrate.

VEGETATION -- Use scientific names of plants.

	Absolute % Cover	Dominant Species	Indicator Status
Tree Stratum (Plot size: 9 m)			
1			
2			
3			
4			
5			
	0	= Total Cover	
Sapling/Shrub stratum (Plot size: 4.6 m)			
1			
2			
3			
4			
5			
	0	= Total Cover	
Herb stratum (Plot size: 1 m sq)			
1 *Phragmites australis*	100	Y	FACW
2			
3			
4			
5			
6			
7			
8			
9			
10			
	100	= Total Cover	
Woody vine stratum (Plot size: 1 m sq)			
1 *Vitis riparia*	20	Y	FACW
2 *Convolvulus sepium*	15	Y	FAC
	35	= Total Cover	

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC:	3	(A)
Total Number of Dominant Species Across all Strata:	3	(B)
Percent of Dominant Species that are OBL, FACW, or FAC:	100.00%	(A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species	0	x 1 =	0
FACW species	100	x 2 =	200
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column totals	100 (A)		200 (B)
Prevalence Index = B/A =	2.00		

Hydrophytic Vegetation Indicators:

- ___ Rapid test for hydrophytic vegetation
- X Dominance test is >50%
- X Prevalence index is ≤3.0*
- ___ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)
- ___ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic vegetation present? Y

Remarks: (Include photo numbers here or on a separate sheet)

SOIL

Sampling Point: 18

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type*	Loc**	Texture	Remarks

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

___ Histisol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ 2 cm Muck (A10)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ 5 cm Mucky Peat or Peat (S3)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils:

___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ Dark Surface (S7) (**LRR K, L)**
___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Very Shallow Dark Surface (TF12)
___ Other (explain in remarks)

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):
Type: gravel, ballast, fill
Depth (inches): not determined

Hydric soil present? ___

Remarks:

Area mapped as urban land, and located between gravel roads. Probe refusal within 2-4 inches due to gravel and fill.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

X Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ True Aquatic Plants (B14)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Gauge or Well Data (D9)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

___ Surface Soil Cracks (B6)
X Drainage Patterns (B10)
___ Dry-Season Water Table (C2)
___ Crayfish Burrows (C8)
___ Saturation Visible on Aerial Imagery (C9)
___ Stunted or Stressed Plants (D1)
___ Geomorphic Position (D2)
___ FAC-Neutral Test (D5)

Field Observations:

Surface water present?	Yes	X	No		Depth (inches):	0-2
Water table present?	Yes		No	X	Depth (inches):	
Saturation present? (includes capillary fringe)	Yes	X	No		Depth (inches):	0

Wetland hydrology present? Y

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Lake Calumet CTA Red Line Extension
City/County: Cook
Sampling Date: 8/19/2015
Applicant/Owner: CTA/MWRD
State: Illinois
Sampling Point: 19
Investigator(s): J Mengler, V Mosca
Section, Township, Range: T37N R14E S27
Landform (hillslope, terrace, etc.): ditch
Local relief (concave, convex, none): ditch
Slope (%):
Lat: 41.667289
Long: -87.600100
Datum:
Soil Map Unit Name: urban land-orthents clayey complex, nearly level
NWI Classification: none
Are climatic/hydrologic conditions of the site typical for this time of the year? Y (If no, explain in remarks)
Are vegetation ___, soil Y, or hydrology ___ significantly disturbed? Y
Are vegetation ___, soil ___, or hydrology ___ naturally problematic? N
Are "normal circumstances" present? Y

SUMMARY OF FINDINGS

(If needed, explain any answers in remarks.)

Hydrophytic vegetation present?	N		
Hydric soil present?		**Is the sampled area within a wetland?**	N
Wetland hydrology present?	N	If yes, optional wetland site ID:	

Remarks: (Explain alternative procedures here or in a separate report.)

Relied primarily upon vegetation and landscape position due to dry time of season, and mostly urbanland/fill for substrate.

VEGETATION -- Use scientific names of plants.

	Absolute % Cover	Dominant Species	Indicator Status
Tree Stratum (Plot size: 9 m)			
1 *Morus alba*	40	Y	FAC
2 *Acer negundo*	20	Y	FAC
3			
4			
5			
	60	= Total Cover	
Sapling/Shrub stratum (Plot size: 4.6 m)			
1 *Prunus serotina*	15	Y	FACU
2			
3			
4			
5			
	15	= Total Cover	
Herb stratum (Plot size: 1 m sq)			
1 *Eupatorium rugosum*	10	Y	FACU
2 *Arctium minus*	10	Y	FACU
3 *Geum laciniatum*	5	Y	FACW
4			
5			
6			
7			
8			
9			
10			
	25	= Total Cover	
Woody vine stratum (Plot size: 1 m sq)			
1			
2			
	0	= Total Cover	

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC:	3	(A)
Total Number of Dominant Species Across all Strata:	6	(B)
Percent of Dominant Species that are OBL, FACW, or FAC:	50.00%	(A/B)

Prevalence Index Worksheet

Total % Cover of:				
OBL species	0	x 1 =	0	
FACW species	5	x 2 =	10	
FAC species	60	x 3 =	180	
FACU species	35	x 4 =	140	
UPL species	0	x 5 =	0	
Column totals	100	(A)	330	(B)
Prevalence Index = B/A =			3.30	

Hydrophytic Vegetation Indicators:

___ Rapid test for hydrophytic vegetation
___ Dominance test is >50%
___ Prevalence index is ≤3.0*
___ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)
___ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic vegetation present? N

Remarks: (Include photo numbers here or on a separate sheet)

SOIL

Sampling Point: 19

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type*	Loc**	Texture	Remarks

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

___ Histisol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ 2 cm Muck (A10)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ 5 cm Mucky Peat or Peat (S3)

___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils:

___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ Dark Surface (S7) (**LRR K, L)**
___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Very Shallow Dark Surface (TF12)
___ Other (explain in remarks)

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):
Type: gravel, ballast, fill
Depth (inches): not determined

Hydric soil present? ______

Remarks:

Area mapped as urban land, and located between gravel roads. Probe refusal within 2-4 inches due to gravel and fill.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
___ Water-Stained Leaves (B9)

___ Aquatic Fauna (B13)
___ True Aquatic Plants (B14)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Gauge or Well Data (D9)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

___ Surface Soil Cracks (B6)
___ Drainage Patterns (B10)
___ Dry-Season Water Table (C2)
___ Crayfish Burrows (C8)
___ Saturation Visible on Aerial Imagery (C9)
___ Stunted or Stressed Plants (D1)
___ Geomorphic Position (D2)
___ FAC-Neutral Test (D5)

Field Observations:

Surface water present?	Yes		No	X	Depth (inches):	
Water table present?	Yes		No	X	Depth (inches):	
Saturation present? (includes capillary fringe)	Yes		No	X	Depth (inches):	

Wetland hydrology present? N

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No evidence of hydrology observed, Ground cover mostly dry undisturbed leaf litter.

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site Lake Calumet CTA Red Line Extension City/County: Cook Sampling Date: 8/19/2015
Applicant/Owner: CTA/MWRD State: Illinois Sampling Point: 20
Investigator(s): J Mengler, V Mosca Section, Township, Range: T37N R14E S27
Landform (hillslope, terrace, etc.): ditch Local relief (concave, convex, none): ditch
Slope (%): ____ Lat: 41.671562 Long: -87.607147 Datum: ____
Soil Map Unit Name: urban land-orthents clayey complex, nearly level NWI Classification: none
Are climatic/hydrologic conditions of the site typical for this time of the year? Y (If no, explain in remarks)
Are vegetation ____, soil Y, or hydrology ____ significantly disturbed? Y Are "normal circumstances" present? Y
Are vegetation ____, soil ____, or hydrology ____ naturally problematic? N

SUMMARY OF FINDINGS (If needed, explain any answers in remarks.)

Hydrophytic vegetation present?	Y		
Hydric soil present?		**Is the sampled area within a wetland?**	Y
Wetland hydrology present?	Y	If yes, optional wetland site ID:	Wetland 15

Remarks: (Explain alternative procedures here or in a separate report.)

Relied primarily upon vegetation and landscape position due to dry time of season, and mostly urbanland/fill for substrate.

VEGETATION -- Use scientific names of plants.

	Absolute % Cover	Dominant Species	Indicator Status
Tree Stratum (Plot size: 9 m)			
1			
2			
3			
4			
5			
	0	= Total Cover	
Sapling/Shrub stratum (Plot size: 4.6 m)			
1			
2			
3			
4			
5			
	0	= Total Cover	
Herb stratum (Plot size: 1 m sq)			
1 *Phragmites australis*	100	Y	FACW
2			
3			
4			
5			
6			
7			
8			
9			
10			
	100	= Total Cover	
Woody vine stratum (Plot size: 1 m sq)			
1			
2			
	0	= Total Cover	

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC:	1	(A)
Total Number of Dominant Species Across all Strata:	1	(B)
Percent of Dominant Species that are OBL, FACW, or FAC:	100.00%	(A/B)

Prevalence Index Worksheet

Total % Cover of:				
OBL species	0	x 1 =	0	
FACW species	100	x 2 =	200	
FAC species	0	x 3 =	0	
FACU species	0	x 4 =	0	
UPL species	0	x 5 =	0	
Column totals	100	(A)	200	(B)
Prevalence Index = B/A =	2.00			

Hydrophytic Vegetation Indicators:

- ___ Rapid test for hydrophytic vegetation
- X Dominance test is >50%
- X Prevalence index is ≤3.0*
- ___ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)
- ___ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic vegetation present? Y

Remarks: (Include photo numbers here or on a separate sheet)

SOIL

Sampling Point: 20

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

___ Histisol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ 2 cm Muck (A10)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ 5 cm Mucky Peat or Peat (S3)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils:

___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ Dark Surface (S7) (**LRR K, L)**
___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Very Shallow Dark Surface (TF12)
___ Other (explain in remarks)

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):
Type: gravel, ballast, fill
Depth (inches): not determined

Hydric soil present? ___

Remarks:

Area mapped as urban land, and along steep road embankment. Probe refusal within 2-4 inches due to gravel and fill.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

X Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ True Aquatic Plants (B14)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Gauge or Well Data (D9)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

___ Surface Soil Cracks (B6)
X Drainage Patterns (B10)
___ Dry-Season Water Table (C2)
___ Crayfish Burrows (C8)
___ Saturation Visible on Aerial Imagery (C9)
___ Stunted or Stressed Plants (D1)
___ Geomorphic Position (D2)
___ FAC-Neutral Test (D5)

Field Observations:
Surface water present? Yes ___ No X Depth (inches): ___
Water table present? Yes ___ No X Depth (inches): ___
Saturation present? Yes X No ___ Depth (inches): 0
(includes capillary fringe)

Wetland hydrology present? Y

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site Lake Calumet CTA Red Line Extension City/County: Cook Sampling Date: 8/19/2015
Applicant/Owner: CTA/MWRD State: Illinois Sampling Point: 21
Investigator(s): J Mengler, V Mosca Section, Township, Range: T37N R14E S27
Landform (hillslope, terrace, etc.): ditch Local relief (concave, convex, none): ditch
Slope (%): ______ Lat: 41.671562 Long: -87.607147 Datum: ______
Soil Map Unit Name: urban land-orthents clayey complex, nearly level NWI Classification: none
Are climatic/hydrologic conditions of the site typical for this time of the year? Y (If no, explain in remarks)
Are vegetation ______, soil Y, or hydrology ______ significantly disturbed? Y Are "normal circumstances" present? Y
Are vegetation ______, soil ______, or hydrology ______ naturally problematic? N

SUMMARY OF FINDINGS

(If needed, explain any answers in remarks.)

Hydrophytic vegetation present?	N	**Is the sampled area within a wetland?**	N
Hydric soil present?		If yes, optional wetland site ID:	
Wetland hydrology present?	N		

Remarks: (Explain alternative procedures here or in a separate report.)

Relied primarily upon vegetation and landscape position due to dry time of season, and mostly urbanland/fill for substrate.

VEGETATION -- Use scientific names of plants.

	Absolute % Cover	Dominant Species	Indicator Status
Tree Stratum (Plot size: 9 m)			
1			
2			
3			
4			
5			
	0	= Total Cover	
Sapling/Shrub stratum (Plot size: 4.6 m)			
1 *Rhamnus cathartica*	80	Y	FAC
2 *Morus alba*	20	Y	FAC
3			
4			
5			
	100	= Total Cover	
Herb stratum (Plot size: 1 m sq)			
1 *Glechoma hederacea*	15	Y	FACU
2 *Arctium minus*	15	Y	FACU
3			
4			
5			
6			
7			
8			
9			
10			
	30	= Total Cover	
Woody vine stratum (Plot size: 1 m sq)			
1			
2			
	0	= Total Cover	

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC:	2	(A)
Total Number of Dominant Species Across all Strata:	4	(B)
Percent of Dominant Species that are OBL, FACW, or FAC:	50.00%	(A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species	0	x 1 =	0	
FACW species	0	x 2 =	0	
FAC species	100	x 3 =	300	
FACU species	30	x 4 =	120	
UPL species	0	x 5 =	0	
Column totals	130	(A)	420	(B)

Prevalence Index = B/A = 3.23

Hydrophytic Vegetation Indicators:

___ Rapid test for hydrophytic vegetation
___ Dominance test is >50%
___ Prevalence index is ≤3.0*
___ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)
___ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic vegetation present? N

Remarks: (Include photo numbers here or on a separate sheet)

SOIL

Sampling Point: 21

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

___ Histisol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ 2 cm Muck (A10)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ 5 cm Mucky Peat or Peat (S3)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils:

___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ Dark Surface (S7) (**LRR K, L)**
___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Very Shallow Dark Surface (TF12)
___ Other (explain in remarks)

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):
Type: gravel, ballast, fill
Depth (inches): not determined

Hydric soil present? ___

Remarks:

Area mapped as urban land, and along steep road embankment. Probe refusal within 2-4 inches due to gravel and fill.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ True Aquatic Plants (B14)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Gauge or Well Data (D9)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

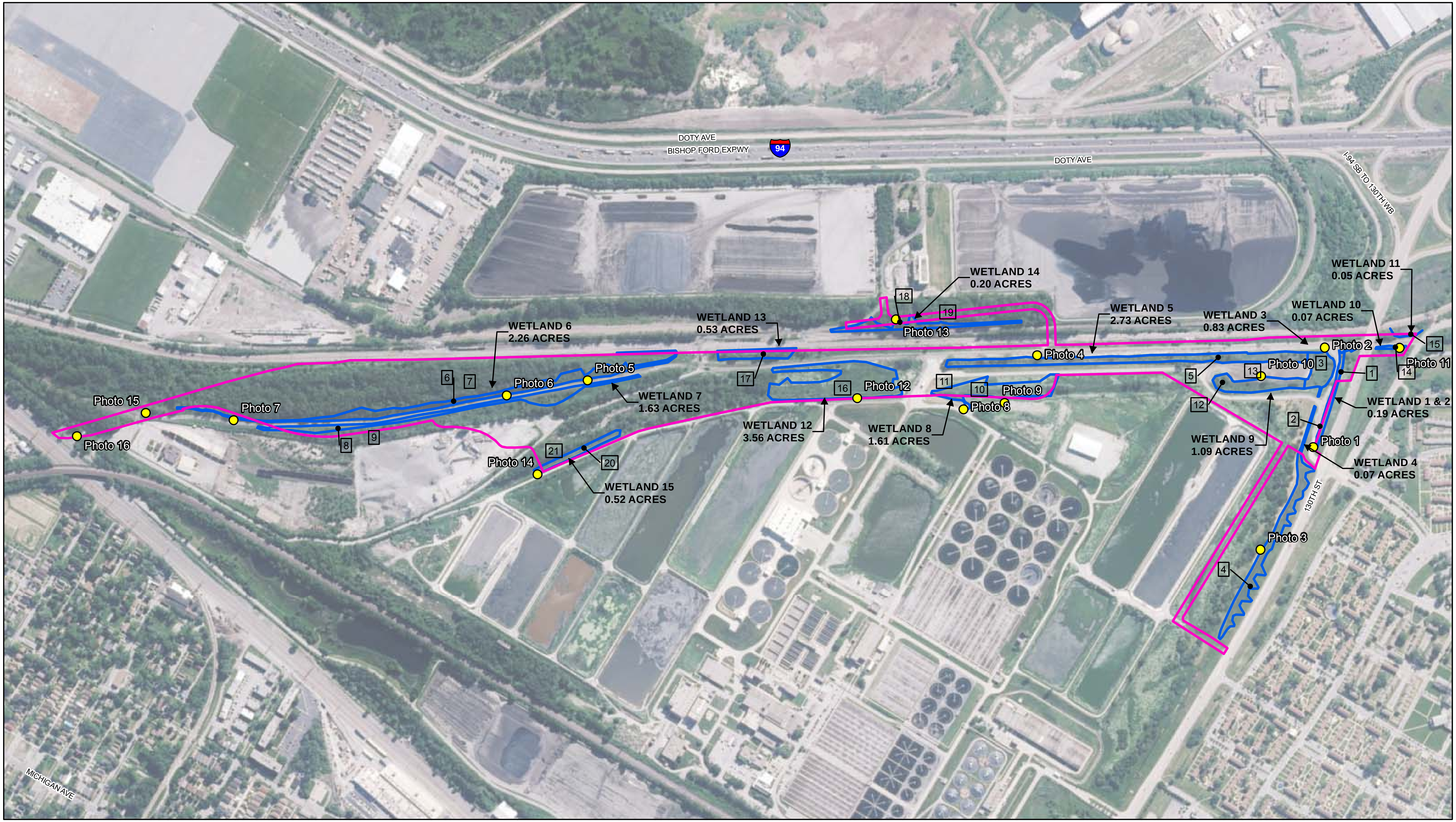
___ Surface Soil Cracks (B6)
___ Drainage Patterns (B10)
___ Dry-Season Water Table (C2)
___ Crayfish Burrows (C8)
___ Saturation Visible on Aerial Imagery (C9)
___ Stunted or Stressed Plants (D1)
___ Geomorphic Position (D2)
___ FAC-Neutral Test (D5)

Field Observations:
Surface water present? Yes ___ No X Depth (inches): ___
Water table present? Yes ___ No X Depth (inches): ___
Saturation present? Yes ___ No X Depth (inches): ___
(includes capillary fringe)

Wetland hydrology present? N

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:


DOTY AVE
BISHOP FORD EXPWY
94
DOTY AVE
I-94 SB TO 130TH WB
WETLAND 14
0.20 ACRES
WETLAND 11
0.05 ACRES
WETLAND 10
0.07 ACRES
WETLAND 13
0.53 ACRES
WETLAND 5
2.73 ACRES
WETLAND 3
0.83 ACRES
WETLAND 6
2.26 ACRES
18
19
Photo 13
Photo 2
15
Photo 4
Photo 11
Photo 10
3
13
14
1
5
Photo 5
Photo 6
6
7
17
16
Photo 12
11
10
Photo 9
Photo 8
12
Photo 15
Photo 7
WETLAND 7
1.63 ACRES
WETLAND 1 & 2
0.19 ACRES
2
Photo 1
WETLAND 12
3.56 ACRES
WETLAND 8
1.61 ACRES
WETLAND 9
1.09 ACRES
WETLAND 4
0.07 ACRES
Photo 16
8
9
21
20
Photo 14
WETLAND 15
0.52 ACRES
130TH ST
Photo 3
4
MICHIGAN AVE

Prepared by:

Hey and Associates, Inc.
Engineering, Ecology and Landscape Architecture

Scale:
0 600
Feet

Project Number: 15-0218

Orientation:

Latest Revision: 10/5/2015

Legend:

☒ Data Point

● Photo Locations

— Surveyed Wetland Boundary (Labled wetland acreas for Project Permanent Envelope only)

▭ Project Permanent Envelope

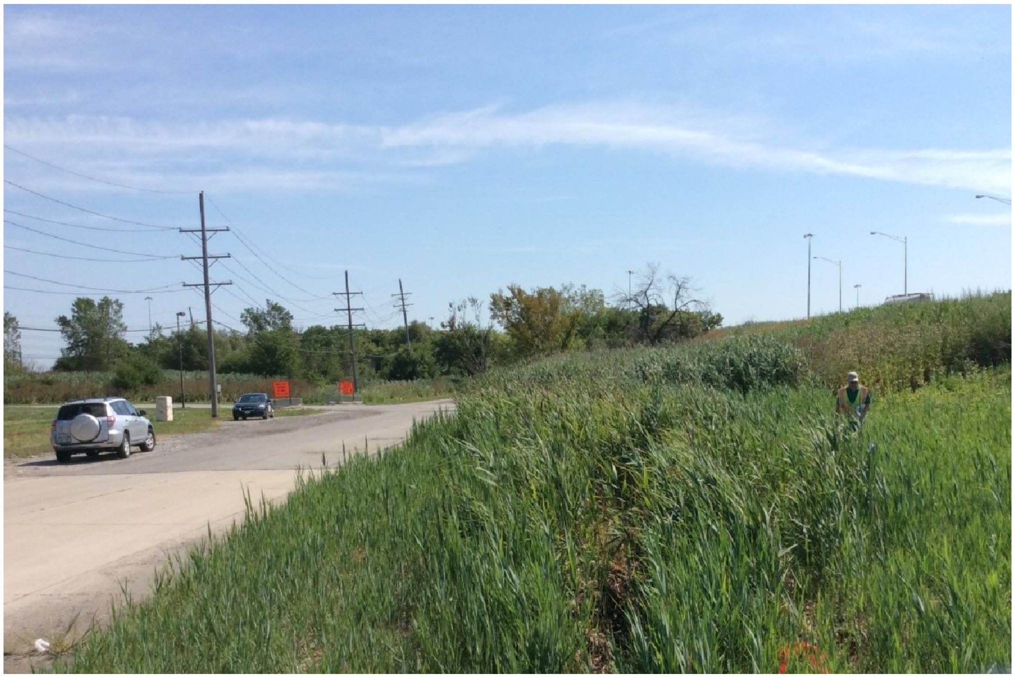
Project Name:
CTA Red Line Extension

Prepared For:
CDM Smith

Aerial Date:
2014

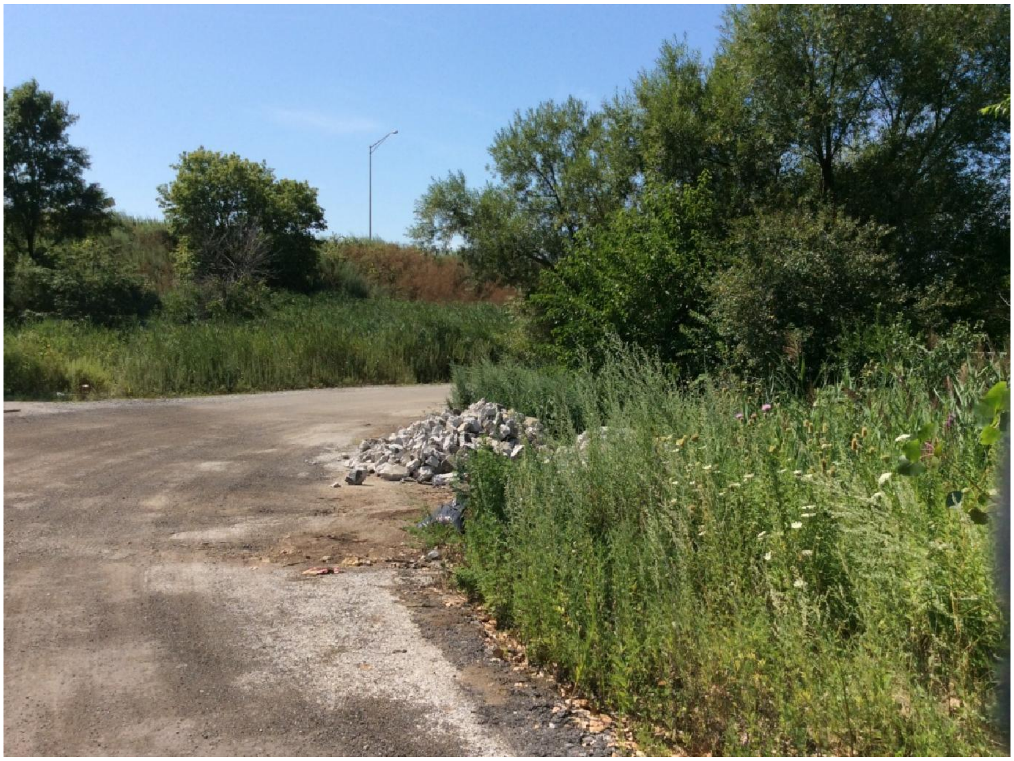
Exhibit Title:
Photograph Locations

Exhibit:
10



Photograph 1:

Wetland 1 looking east from west end.



Photograph 2:

Existing fly dumping piles along Cottage Grove Road and edge of Wetland 3.

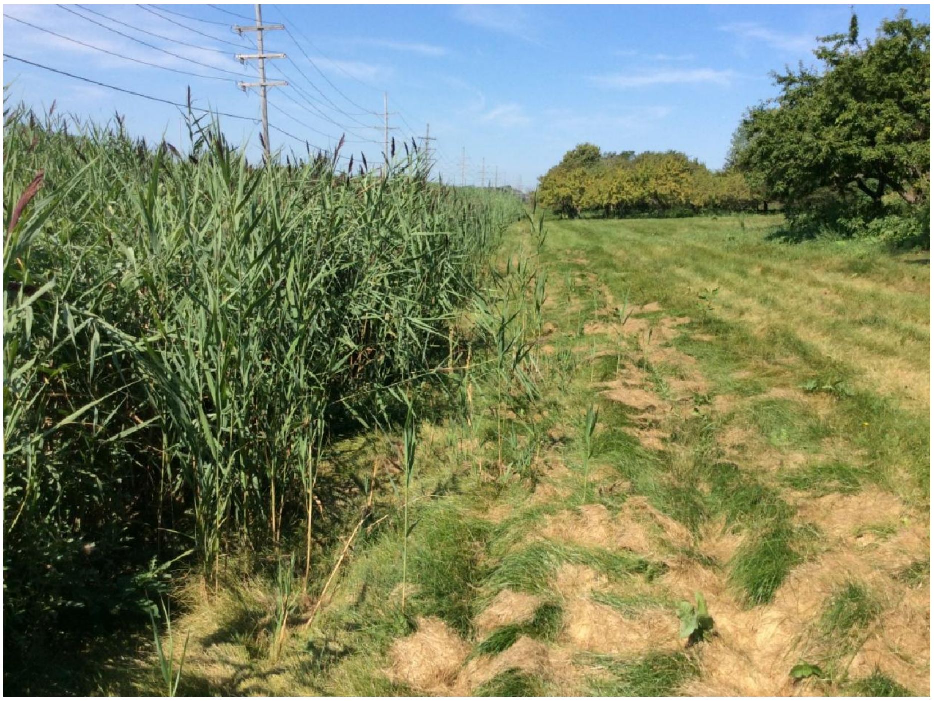
Project Number: 15-0218

Project Name:
CTA Red Line Extension

Hey and Associates, Inc.
Engineering, Ecology and Landscape Architecture

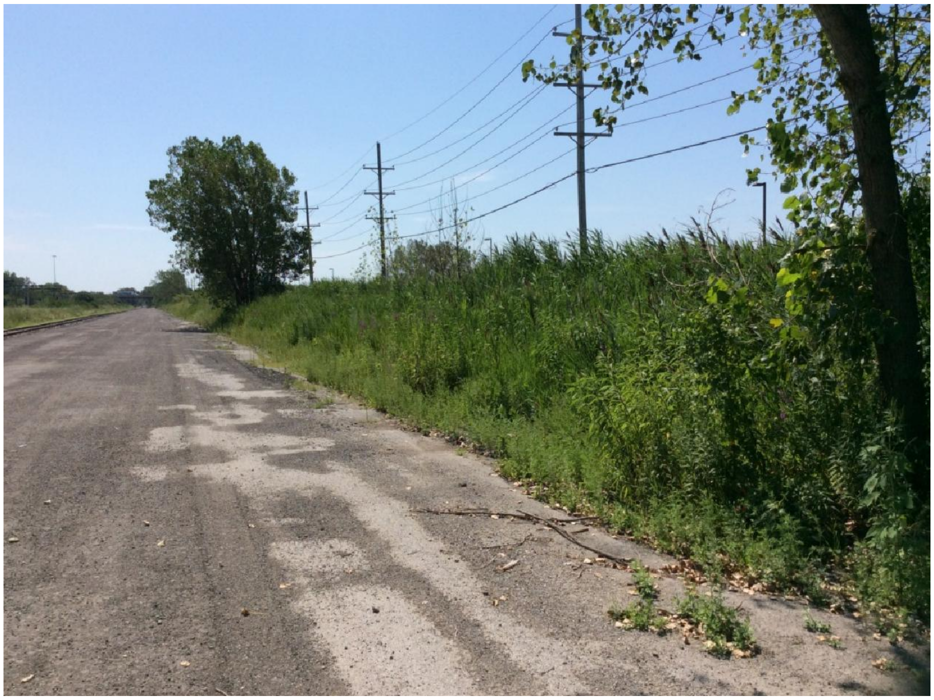
Exhibit Title: **Representative Photographs**

Exhibit: **#10**



Photograph 3:

North edge of Wetland 4 looking west – mostly out of project area.



Photograph 4:

Edge of Wetland 5 along Cottage Grove Road looking south.

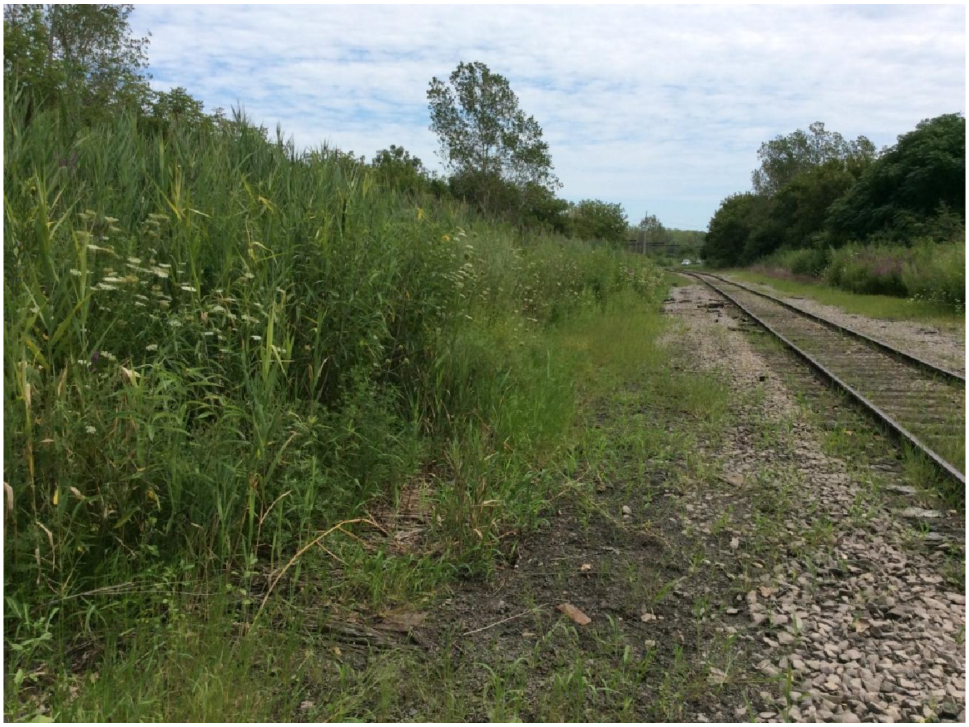
Project Number: 15-0218

Hey and Associates, Inc.
Engineering, Ecology and Landscape Architecture

Project Name:
CTA Red Line Extension

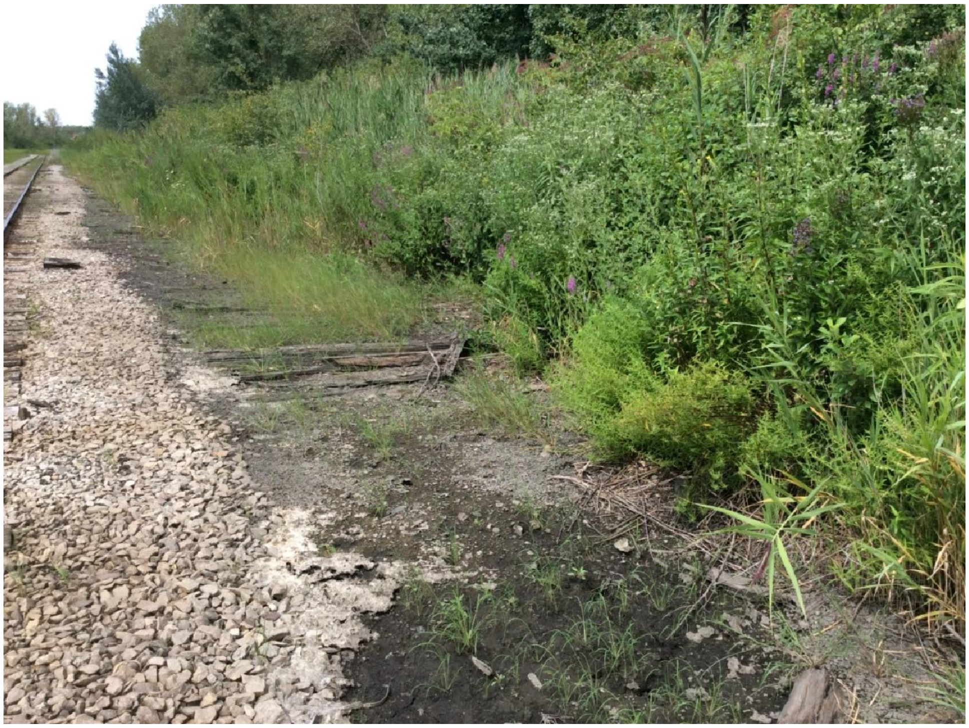
Exhibit Title:
Representative Photographs

Exhibit:
#10



Photograph 5:

Wetland 6 along railroad looking south.



Photograph 6:

Evidence of hydrology along railroad and edge of Wetland 6.

Project Number: 15-0218

Project Name:
CTA Red Line Extension

Hey and Associates, Inc.
Engineering, Ecology and Landscape Architecture

Exhibit Title:
Representative Photographs

Exhibit:
#10

Photograph 7:

Remnant prairie plants in Wetland 7 along railroad.

Photograph 8:

Mowed edge of Wetland 8.

Photograph 9:

Existing upland gravel area next to Wetland 8.

Photograph 10:

Wetland 9.

Project Number: 15-0218

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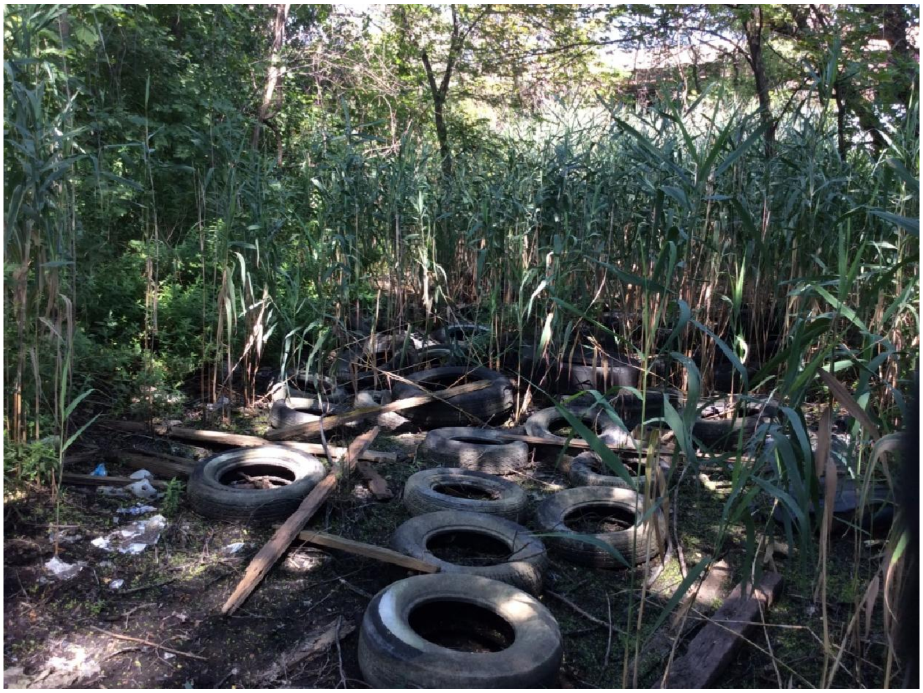
Engineering, Ecology and Landscape Architecture

Project Name:
CTA Red Line Extension

Exhibit Title:
Representative Photographs

Exhibit:
#10



Photograph 11:

Existing trash piles in Wetland 10.

Photograph 12:

Wetland 12.

Project Number: 15-0218

Project Name:
CTA Red Line Extension

Hey and Associates, Inc.
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Exhibit Title:
Representative Photographs

Exhibit:
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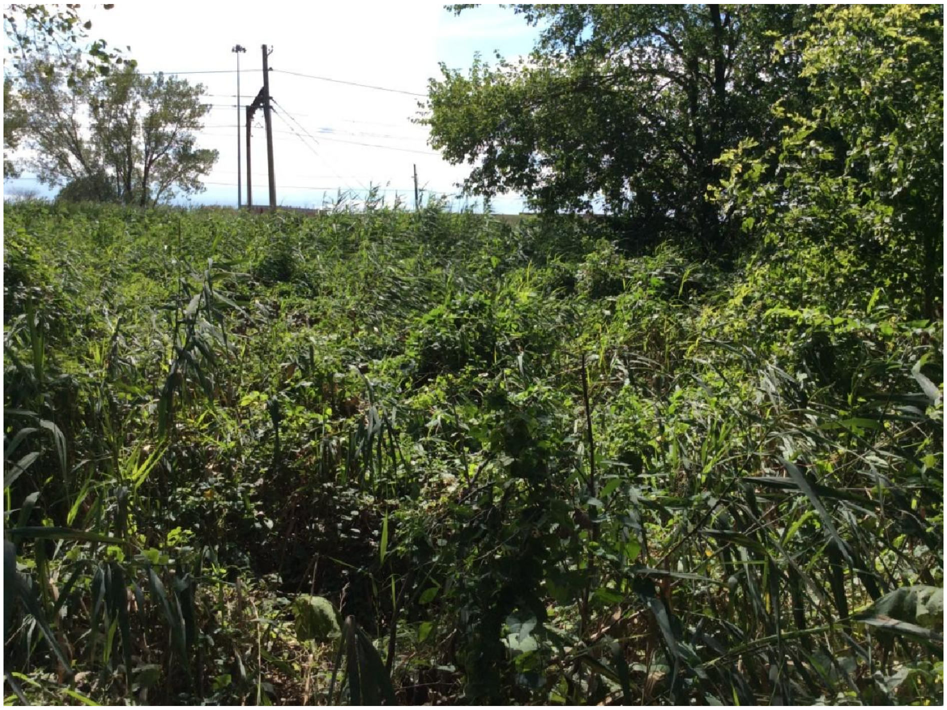
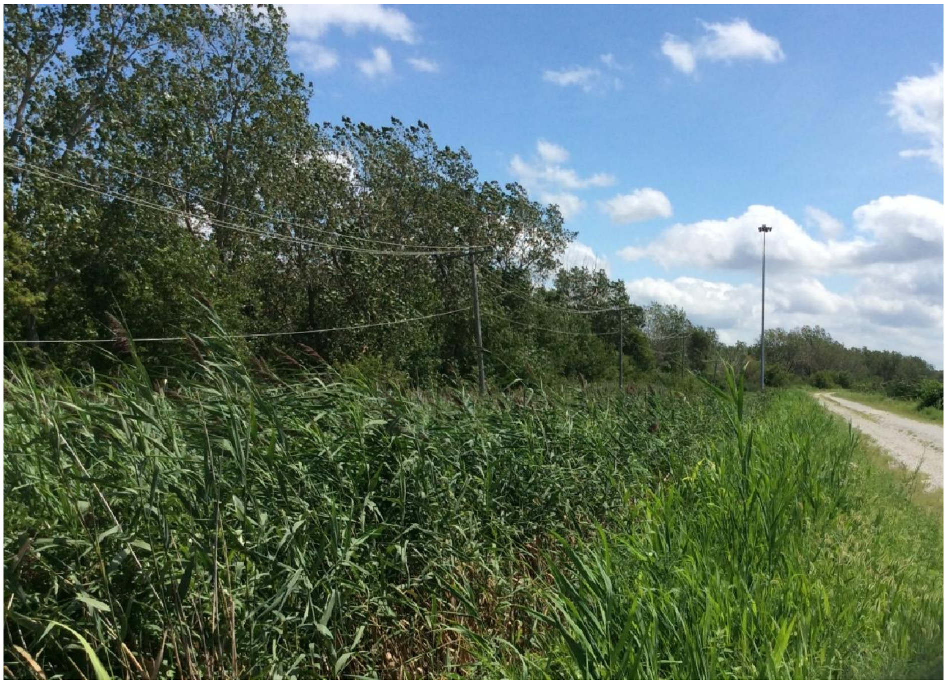


Photograph 13:

Wetland 14.



Photograph 14:

Wetland 15.

Project Number: 15-0218

Project Name:

CTA Red Line Extension

Hey and Associates, Inc.

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Exhibit Title:

Representative Photographs

Exhibit:

#10

Photograph 15:

Upland in northwest finger of project area looking north.

Photograph 16:

Northwest extent of project area.

Project Number: 15-0218

Hey and Associates, Inc.
Engineering, Ecology and Landscape Architecture

Project Name:
CTA Red Line Extension

Exhibit Title: **Representative Photographs**

Exhibit: **#10**

Appendix T
Cumulative Impacts Technical Memorandum

Chicago Red Line Extension Project

Cumulative Impacts

Technical Memorandum

January 20, 2014
Updated September 9, 2015

Prepared for:
Chicago Transit Authority
567 W. Lake Street
Chicago, IL 60661

Prepared by:
CWC Transit Group
125 S. Wacker Drive
Suite 600
Chicago, IL 60606

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Appendix A 2014-2015 Red Line Extension Project Update

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Abbreviations

BRC	Belt Railway of Chicago
BRT	Bus Rapid Transit
CDOT	Chicago Department of Transportation
CEQ	Council on Environmental Quality
CMAP	Chicago Metropolitan Agency for Planning
CN	Canadian National
CREATE	Chicago Region Environmental and Transportation Efficiency
CTA	Chicago Transit Authority
EIS	Environmental Impact Statement
IDOT	Illinois Department of Transportation
IHB	Indiana Harbor Belt Railroad
NEPA	National Environmental Policy Act
ME	Metra Electric
NICTD	Northern Indiana Commuter Transportation District
NOAA	National Oceanic and Atmospheric Administration
NS	Norfolk Southern
Pace	Pace Suburban Bus
RLE	Red Line Extension
RPM	Red and Purple Modernization
ROW	right-of-way
TIF	tax-increment financing
TIP	Transportation Improvement Program
UPRR	Union Pacific Railroad

Section 1
Summary

This technical memorandum analyzes the potential cumulative impacts that would occur with the implementation of the Red Line Extension (RLE) Project. The alternatives analyzed include the No Build Alternative, Bus Rapid Transit (BRT) Alternative, Union Pacific Railroad (UPRR) Rail Alternative Right-of-Way Option (ROW Option), UPRR Rail Alternative East Option (East Option), UPRR Rail Alternative West Option (West Option), and the Halsted Rail Alternative.

The No Build Alternative would not involve any construction and would not have cumulative impacts. The No Build Alternative would not result in the cumulative benefits from transit improvement, as the build alternatives would. The BRT Alternative would have beneficial cumulative impacts due to improved transit facilities, improved access and mobility, and reduction in air emissions. The UPRR Rail Alternative options all would have similar beneficial cumulative impacts due to transit improvements, improved land use and economic development, improved access and mobility, and reduction in air emissions.

The Chicago Department of Transportation (CDOT) is preparing the Far South Railroad Relocation Feasibility Study, which examines a possible project to move the existing freight operations out of the UPRR corridor, leaving the corridor vacant. The Chicago Transit Authority (CTA) would implement the ROW Option only if this separate project occurs prior to the RLE. If the relocation project does not occur, then the CTA would need to choose either the East Option or West Option in order to pursue the UPRR Rail Alternative. The ROW Option would have more beneficial cumulative impacts than the East and West Options when considered cumulatively with relocation of the UPRR, a separate project that would occur prior to implementation of the ROW Option. Due to the elimination of freight rail, there would be less noise and vibration and fewer traffic delays associated with the ROW Option than with the other UPRR Rail Alternative options.

The East and West Options would have adverse cumulative impacts for transportation and safety and security. In the East and West Options, the existing UPRR tracks would not be relocated as part of a separate, unrelated project, and highway-rail grade crossings would remain at 101st Street, 103rd Street, 107th Street, 109th Street, 111th Street, Wentworth Avenue, 115th Street, and State Street. The number of trains using the existing UPRR tracks would increase substantially under the Chicago Region Environmental and Transportation Efficiency (CREATE) Program. This increase in trains may result in increased traffic, commuter delays, and increase in potential for crash frequency. Mitigation measures to address the increased potential for vehicular and pedestrian crashes can include pedestrian gates at sidewalks, intertrack fence, and fence along the parking area and ROW. To mitigate for commuter delays caused by traffic, passenger trains and UPRR freight train schedules can be synchronized to avoid or reduce trains crossing at peak hours such as morning rush hour.

The Halsted Rail Alternative would have beneficial cumulative impacts due to transit improvements, improved land use and economic development, improved access and mobility, and reduction in air emissions.

Updated July 27, 2015

In August 2014, based on the technical analysis and public input until then, CTA announced the NEPA Preferred Alternative—the UPRR Rail Alternative. CTA is considering two alignment (route) options of this alternative: the East Option and the West Option. At this time, CTA is also considering only the South Station Option of the 130th Street Station. In late 2014 and early 2015, CTA conducted additional engineering on the East and West Options to refine the East and West Option alignments. Appendix A of this technical memorandum summarizes the refined alignments and any additional or different impacts that would result. The information in Appendix A supersedes information presented in other chapters of this technical memorandum.

Section 2
Project Description

The CTA proposes to extend the Red Line from the existing 95th Street Terminal to the vicinity of 130th Street, subject to the availability of funding. The proposed RLE would include four stations. Each station would include bus transfer and parking facilities. This project is one part of the Red Ahead Program to extend and enhance the entire Red Line. The CTA is also planning 95th Street Terminal improvements that are anticipated to be completed prior to the proposed RLE construction.

The project area is 11 miles south of the Chicago central business district (commonly referred to as the Loop) and encompasses approximately 20 square miles. The boundaries of the project area are 95th Street on the north, Ashland Avenue on the west, Stony Island Avenue on the east, and the Calumet-Sag Channel/Little Calumet River and 134th Street on the south. The I-57 Expressway and I-94 Bishop Ford Freeway cross the western and eastern edges of the project area, respectively. Lake Calumet is in the eastern portion of the project area. The project area encompasses parts of nine community areas in the City of Chicago and the eastern section of the Village of Calumet Park. Chicago community areas include Beverly, Washington Heights, Roseland, Morgan Park, Pullman, West Pullman, Riverdale, Hegewisch, and South Deering. The project area comprises residential (primarily single family), industrial (both existing and vacant), transportation (including freight), and commercial development.

The Draft Environmental Impact Statement (EIS) focuses on the following alternatives (shown in Figure 2-1), which emerged from the Alternatives Analysis and the National Environmental Policy Act (NEPA) scoping process:

- No Build Alternative
- BRT Alternative
- UPRR Rail Alternative
    - ROW Option
    - East Option
    - West Option
- Halsted Rail Alternative

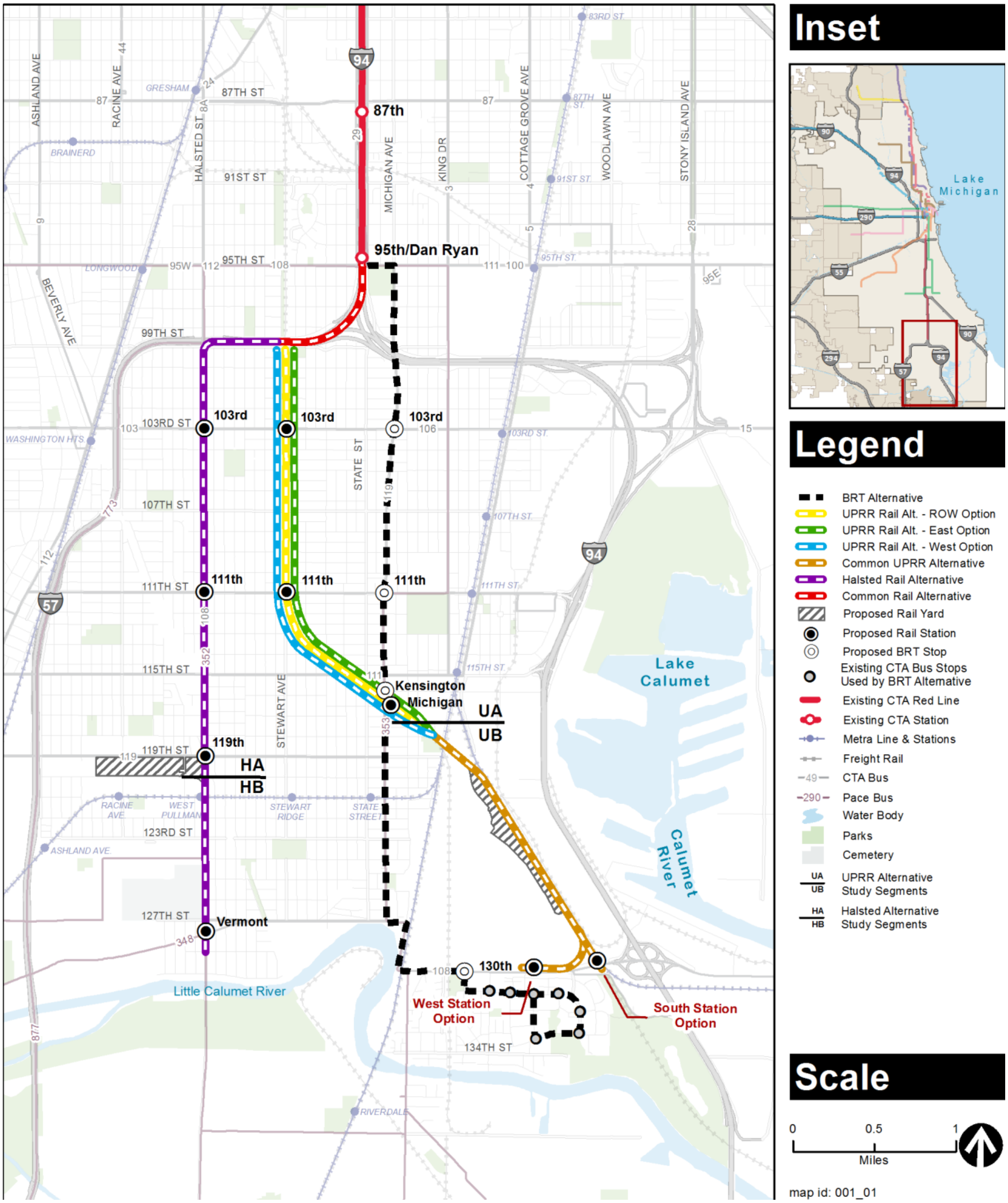
87TH ST
87th
91ST ST
95th/Dan Ryan
95TH ST
99TH ST
103RD ST
103rd
103rd
103rd
107TH ST
111TH ST
111th
111th
111th
115TH ST
Kensington
Michigan
UA
UB
119TH ST
119th
HA
HB
123RD ST
127TH ST
Vermont
130th
West Station Option
South Station Option
134TH ST
Little Calumet River
Lake Calumet
Calumet River
ASHLAND AVE
RACINE AVE
HALSTED ST
MICHIGAN AVE
KING DR
COTTAGE GROVE AVE
WOODLAWN AVE
STONY ISLAND AVE
STATE ST
STEWART AVE
BEVERLY AVE
GRESHAM
BRAINERD
LONGWOOD
WASHINGTON HTS.
RACINE AVE
WEST PULLMAN
STEWART RIDGE
STATE STREET
ASHLAND AVE
RIVERDALE
83RD ST
87TH ST
91ST ST
95TH ST
103RD ST
107TH ST
111TH ST
115TH ST
94
57
Inset
Lake Michigan
90
94
290
55
294
57
Legend
BRT Alternative
UPRR Rail Alt. - ROW Option
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
Common UPRR Alternative
Halsted Rail Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Proposed BRT Stop
Existing CTA Bus Stops Used by BRT Alternative
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
49 CTA Bus
290 Pace Bus
Water Body
Parks
Cemetery
UA UB UPRR Alternative Study Segments
HA HB Halsted Alternative Study Segments
Scale
0
0.5
1
Miles
map id: 001_01

Figure 2-1: Red Line Extension Project Alternatives

The No Build Alternative is a required alternative as part of the NEPA environmental analysis and is used for comparison purposes to assess the relative benefits and impacts of extending the Red Line. The No Build Alternative is carried into the Draft EIS phase of the project development regardless of its performance versus the build alternatives under consideration. No new infrastructure would be constructed as part of the No Build Alternative other than committed transportation improvements that are already in the Chicago Metropolitan Agency for Planning (CMAP) Fiscal Year 2010–2015 Transportation Improvement Program (TIP), which includes the improvements to 95th Street Terminal. The TIP projects within the project area consist of four bridge reconstructions, several road improvement projects including resurfacing and coordination of signal timing on 95th Street, work on Metra's facilities, construction of a bicycle/pedestrian multi-use trail, and preservation of historic facilities. The No Build Alternative includes regular maintenance of existing track and structures, and bus transit service would be focused on the preservation of existing services and projects. All elements of the No Build Alternative are included in each of the other alternatives. Under this alternative, travel times would not improve from existing conditions.

The BRT Alternative (formerly referred to as the Transportation Systems Management Alternative) is a 5.0-mile, limited-stop, enhanced BRT route, which is assumed to operate 24 hours per day between the existing 95th Street Terminal and the intersection of 130th Street and Eberhart Avenue. No dedicated bus lanes would be provided for the BRT Alternative; however, parking lanes would be removed for some portions of the alignment and four stops with improved bus shelters and park & ride facilities would be created at 103rd Street and Michigan Avenue, 111th Street and Michigan Avenue, Kensington Avenue and Michigan Avenue, and 130th Street and Eberhart Avenue. Although BRT service elements would not continue south of the 130th Street stop, the bus route would continue through Altgeld Gardens along the existing route with six stops. The BRT Alternative would be consistent with bus routing changes that may occur as part of improvements to the 95th Street Terminal. Under this alternative, travel times between 130th Street and the Loop would improve over existing conditions.

The UPRR Rail Alternative is a 5.3-mile extension of the heavy rail transit Red Line from its existing 95th Street Terminal to 130th Street, just west of I-94. The Chicago Transit Board designated the UPRR Rail Alternative as the Locally Preferred Alternative at its August 12, 2009 board meeting. This alternative includes construction and operation of new heavy rail transit tracks, mostly in existing transportation corridors. The UPRR Rail Alternative has three options for alignment (ROW, East, and West), all of which would include operation on elevated structure from 95th Street to just past the Canadian National/Metra Electric District (CN/ME District) tracks near 119th Street. The alignment would then transition to at-grade through an industrial area with no public through streets, terminating at 130th Street in the vicinity of Altgeld Gardens. Four new stations would be constructed at 103rd Street, 111th Street, Michigan Avenue, and 130th Street. The 130th Street station would be the terminal station, with two options under evaluation: the South Station Option and the West Station Option. A new yard and shop facility would be sited near 120th Street and Cottage Grove Avenue. The bus routes in the vicinity of the UPRR Rail Alternative would be modified to enhance connectivity between the Red Line and the bus network. The hours of operation and service frequency for the UPRR Rail Alternative are assumed to be the same as for the current Red Line. Under this alternative, travel times between 130th Street and the Loop would improve substantially over existing conditions.

The Halsted Rail Alternative is a 5.0-mile heavy rail transit extension of the existing Red Line. In this alternative, the Red Line would operate on an elevated structure running south from 95th Street along I-57 until Halsted Street. The alignment would then turn south and continue along Halsted Street to the intersection of Halsted Street and Vermont Avenue near 127th Street. This alternative would include four new stations at 103rd Street, 111th Street, 119th Street, and Vermont Avenue. The Vermont Avenue station would be the terminal station. A new yard and shop would be sited west of Halsted Street and between the 119th Street and Vermont Avenue stations. The bus routes in the vicinity of the Halsted Rail Alternative would be modified to enhance connectivity to the Red Line. The hours of operation and service frequency for the Halsted Rail Alternative are assumed to be the same as for the current Red Line. Under this alternative, travel times between 127th Street and the Loop would improve substantially over existing conditions. This alternative would not extend rail to Altgeld Gardens, which would be served by bus connecting to the Vermont terminal station.

Section 3
Methods for Impact Evaluation

3.1 Regulatory Framework

3.1.1 Federal

The National Environmental Policy Act of 1969 ([NEPA] 42 United States Code 4332) requires that federal agencies consider environmental impacts before taking actions that could affect the human environment. As interpreted by the Council on Environmental Quality (CEQ), NEPA requires that "reasonably foreseeable" direct, indirect, and cumulative effects of a proposed action be considered in the decision-making process. As defined by the CEQ, the term "effects" includes "ecological, aesthetic, historic, cultural, economic, social, or health" effects.

The CEQ defines a cumulative impact as an impact on the environment that results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions. Cumulative impacts can result from individually minor, but collectively significant, actions taking place over a period of time.

3.1.2 State

The State of Illinois Department of Natural Resources defines Cumulative Effects in its regulations governing impacts on endangered species (17 Illinois Administrative Code Part 1075):

> "Direct and indirect effects of a proposed action(s) together with the identifiable effects of actions that are interrelated or interdependent with the action. Indirect effects are those that are caused by the action but are later in time or farther in distance. Interrelated actions are those that are a part of a larger action. Interdependent actions are those that have independent utility apart from the action."

3.1.3 Local

There are no local requirements for cumulative effect analyses.

3.2 Impact Analysis Thresholds

Each resource area was analyzed independently to determine whether the impacts of the proposed alternatives would meet a threshold of significance. These analyses were presented in separate technical memoranda for each of the resource areas.

A cumulative impact would occur if an alternative had environmental impacts that were individually limited, but cumulatively considerable. "Cumulatively considerable" means that the incremental effects of an individual project would be significant when viewed in connection with the impacts of past projects, the impacts of other current projects, and the impacts of probable future projects or expected growth.

The standards for "cumulatively considerable" were based on the established significance thresholds for each resource area or professional judgment if thresholds were not established for that resource. Determinations regarding whether a cumulative impact would be "considerable" also considered the effectiveness of mitigation measures in reducing the impact on a resource.

Compliance with previously approved plans or mitigation programs was an indicator that an impact would not be significant. Depending on the discipline area, a project's inclusion in a regional plan or projection may be a measure of whether the project would contribute to cumulative impacts.

3.3 Area of Potential Impact

The area of potential impact for each resource is presented in a separate technical memorandum specific to each resource (see Section 7, References). In general, the impact areas for cumulative impacts are broader geographic areas than those for direct impacts. The area of potential impact for cumulative impacts reflects the distribution of the individual resource and is not limited to the project area; it consists instead of the boundaries specific to the resource, such as the construction limits for a transportation improvement, private development, or other public infrastructure project that is near enough to the project and being performed at the same time, potentially inducing cumulative impacts.

3.4 Methods

The following resources were used in developing methods and determining cumulative impacts:

- Environmental Impact and Related Procedures (Code of Federal Regulations Title 23 Part 771).
- *Consideration of Cumulative Impacts in EPA Review of NEPA Document*s (U. S. Environmental Protection Agency 1999)
- *Considering Cumulative Effects Under the National Environmental Policy Act* (CEQ 1997)
- *National Cooperative Highway Research Program Report 466 - Desk Reference for Estimating the Indirect Effects of Proposed Transportation Projects* (Transportation Research Board 2002)

Information on proposed actions within the study area was reviewed to determine whether the action was appropriate to include in the cumulative analysis. The future action information was obtained from multiple public agencies. The future actions include transportation projects and rail projects (through CREATE). Many of the resources used were from online sources; however, some project information was obtained from public comments during the scoping process. The future project information was obtained from the following agencies or programs:

- CMAP
- City of Chicago
- CREATE
- Illinois Department of Transportation (IDOT)
- Metra
- Metropolitan Water Reclamation District of Greater Chicago
- Northeastern Indiana Commuter Transportation District (NICTD)
- Pace
- Regional Transit Authority
- Village of Calumet Park

Cumulative impacts analysis considers the past, present, and reasonably foreseeable future actions. The past conditions were addressed in the Affected Environment section. The cumulative analysis started with the present day conditions and included the reasonably foreseeable future conditions to the year 2030.

The following steps were used to determine the cumulative impacts for each of the resource categories:

- Define the baseline existing conditions for the resources, ecosystems, and communities. This step was documented in the technical memorandum for each resource as part of the Affected Environment section and in the description of the No Build Alternative.
- Identify the impacts of the proposed alternatives. Present the impacts as part of the analysis in the technical memorandum.
- Identify the present and reasonably foreseeable future actions and their possible impacts.
- Identify cumulative impacts for each resource.
- Identify mitigation measures for cumulative impacts, if appropriate.
- Summarize all of the cumulative impacts for the RLE Project.

The results of the final step above are included in this technical memorandum. If the RLE Project would have no direct impacts on a resource or discipline area, then there would also not be any cumulative impacts.

Section 4
Affected Environment

The project area encompasses a diverse mix of land uses including residential, commercial, and light industrial. Each RLE alternative alignment, except for that of the BRT Alternative, would begin at the existing 95th Street Terminal and would run south along I-94, then curve west to follow I-57.

The BRT Alternative would operate between the existing 95th Street Terminal and the intersection of 130th Street and Eberhart Avenue. The corridor consists of one- to two-story residential and light commercial structures. On-street parking and generous sidewalks flank both sides of Michigan Avenue. The portion of the route south of 120th Place is partially lined with trees and consists of mostly residential. The portion of the BRT Alternative alignment south of Michigan Avenue runs through a low-density residential and light commercial district until 130th Street and Eberhart Avenue, near the Altgeld Gardens neighborhood.

South of I-57 the UPRR Rail Alternative alignment runs along an existing railroad corridor that is surrounded by a mix of residential and light commercial districts. The UPRR Rail Alternative alignment south of Michigan Avenue runs along the Metropolitan Water Reclamation District property and terminates just north of the Altgeld Gardens neighborhood.

The Halsted Rail Alternative alignment runs south along Halsted Street through a light commercial and retail corridor surrounded by residential districts. Large sidewalks and parking lanes flank both sides of Halsted Street, while the street itself contains two through lanes in either direction. The Halsted Rail Alternative alignment runs past Cedar Park Cemetery and terminates north of the bridge that carries Halsted Street over the Little Calumet River.

The following tables identify projects within the general project area that are either anticipated to be completed prior to the start of RLE construction in 2022 or that may be under construction during the RLE's proposed construction period of 2022–2026.

The project list was developed from information available from the City of Chicago, CMAP, CREATE, IDOT, Illinois State Toll Highway Authority, and CTA.

4.1 Transportation Improvement Program

Table 4-1 lists the infrastructure improvement projects that are already in the CMAP Fiscal Year 2010–2015 TIP. The projects listed in Table 4-1 are expected to be completed prior to 2022.

Table 4-1: 2010-2015 Chicago Metropolitan Agency for Planning Transportation Improvement Program Projects in the Project Area; Projects Assumed in No Build Alternative

Agency	Location	Project	Expected Completion Date
IDOT	I-94 Bishop Ford Expressway from Stony Island Avenue feeder; includes Blue Island Avenue	Repair/replace two bridges	2016
IDOT	Bridge over I-94 Bishop Ford Expressway at 111th Street	Repair bridge	2013
IDOT	I-57 from US 30 (Lincoln Highway) to I-94 (Dan Ryan Expressway/Mainline)	Repair bridge	2013
CDOT	95th Street from Western Avenue to Ewing Avenue	Coordinate traffic signal timing	2016
IDOT	Vermont Street from Western Avenue to 127th Street	Resurface road	2013
IDOT	IL 1 (Halsted Street) from 127th Street to 152nd Street	Resurface road	2013
IDOT	127th Street from Ashland Avenue to Carpenter Street	Resurface road	2014
IDOT	CREATE Western Avenue Corridor	Includes CREATE projects WA1 through WA5, WA7, WA10, WA11	2015
IDOT	CREATE East-West Corridor	Include CREATE projects EW-1, EW-2, EW-3, EW-4	2021
Metra	Regionwide	Acquire shop facility and/or equipment; work on rail tower or yard; work on vehicle maintenance facility	2016
Metra	Metra 3246 Catenary Wire, ME	Replace catenary wire at selected locations along the ME District right of way.	2014
IDOT	Bike Facility: Palos Heights - Cal-Sag Multi-Use Greenway from Centennial Trail to Burnham Greenway	Build bicycle and pedestrian facility	2014
IDOT	Hotel Florence from 11111 South Forestville, Pullman Historic District	Preserve historic facility	2012
IDOT	North Pullman Historic District Area	Conduct landscaping, preserve historic facility	2013

Notes: IDOT = Illinois Department of Transportation, CREATE = Chicago Region Environmental and Transportation Efficiency, CDOT= Chicago Department of Transportation, ME = Metra Electric

4.2 Fiscally Constrained Major Capital Projects

The *GO TO 2040 Comprehensive Regional Plan* (GO TO 2040, CMAP 2010) is a comprehensive plan for the Chicago land region. The plan outlines goals in the following areas: livable communities, human capital, efficient government, and regional mobility. *GO TO 2040* describes strategies focused on regional mobility: investing in transportation, improving public transportation, and creating a more efficient freight network. The projects listed in Table 4-2 are some of the fiscally constrained major transportation projects that may have the potential for cumulative impacts with the RLE. The expected construction dates of these projects in relation to the RLE are identified in Table 4-2.

Table 4-2: *GO TO 2040* Fiscally Constrained Major Capital Projects

Agency	Project Name	Description	Timeframe of Action in Relation to RLE Project
IDOT/Tollway	I-294/I-57 Interchange	Construction of proposed interchange at the junction of the two interstates.	Before
IDOT	I-80 Add Lanes	Construction of two lanes from River Road to I-294	Before
Metra	Metra Rock Island Improvements	Construction of a third track to the 9-mile double-track portion of the Rock Island District Line. A new flyover bridge over the NS Railroad at 63rd Street, new bi-directional signals, several new bridges over city streets, and the expansion and modernization of the 47th Street Yard.	Before
Metra	SouthWest Service Improvements	Service will be rerouted to terminate at LaSalle Station. Construction of a 2-mile segment beginning west of Belt Junction to carry trains over the parallel NS service along 74th Street over the Rock Island District tracks.	Concurrent
CDOT	West Loop Transportation Center	Construction of a proposed transportation terminal located between the Eisenhower Expressway and Lake Street. As part of this project, improvements to Union Station will be done to increase capacity.	Concurrent
CTA	Red Purple Modernization Project	Reconstruction improvements of the existing rail and stations between Belmont and Howard stations on the Red Line, and between Howard and Linden stations on the Evanston Branch.	Before/Concurrent

Notes: RLE = Red Line Extension, IDOT= Illinois Department of Transportation, Tollway = Illinois State Toll Highway Authority, CDOT = Chicago Department of Transportation, CTA = Chicago Transit Authority, NS = Norfolk Southern

4.3 State, Regional, and Local Plans

Table 4-3 lists the other actions or studies within or near the project area that are not included in either the TIP or are on the list of fiscally constrained projects. Many of the actions listed in Table 4-3 establish an outline of strategies to improve the livability and safety in the City of Chicago. Although most of these do not list specific planned projects, they may lead to future projects within the project area.

Table 4-3: Existing, Current, and Reasonably Foreseeable Future Actions

Location and Action	Description of Action	Timeframe of Action in Relation to RLE Project
Illinois Department of Natural Resources		
Illinois Coastal Management Program	Environmental Impact Statement was prepared through NOAA. Plan was adopted in 2011. Plan for preserving, restoring, and protecting the coastal resources in Illinois. In the little Calumet and Grand Calumet River corridors, Lake Calumet and Calumet River and surrounding wetland areas and degraded industrial areas will be addressed.	Concurrent
Millennium Reserve	Millennium Reserve stretches from downtown Chicago east to the Indiana border and southwest to Midewin National Tallgrass Prairie in Wilmington, Illinois. The immediate focus within this area is the Calumet Core region, encompassing numerous neighborhoods on Chicago's south side, the southeast lakefront, and 35 south suburban municipalities. Governed by Illinois State Executive Order 13-03.	Before
Illinois Department of Transportation FY 2012-2017 Highway Improvement Program		
I-90/94 at 63rd Street	Bridge replacement and utility adjustments	Before
IL 1 (Halsted Street)	Little Calumet River, Bridge Repair	Before
111th Street FAU 1583	Resurfacing Vincennes Avenue to Halsted Street	Before
138th Street and Ashland Avenue	Pump station and drainage	Before
135th Street and Ashland Avenue Bridge	Bridge Rehabilitation	Before
Wood Street Reconstruction	Wood Street from Little Calumet River to US 6 Reconstruction	Before
Eggleston Ave Phase 1	US Routes 12/20 to 95th Street at Eggleston Avenue	Before
IDOT High Speed Rail	High Speed Rail - Chicago to St. Louis	Before
Illinois State Toll Highway Authority (Tollway)		
Move Illinois: The Illinois Tollway Driving the Future	Reconstruct 8 Lanes of I-294 95th Street to Balmoral Avenue.	After
Move Illinois: The Illinois Tollway Driving the Future	I-294/I-57 interchange. New ramps, structures and toll plazas. New ramps to and from Memphis and 147th Street ramps.	Before

Location and Action	Description of Action	Timeframe of Action in Relation to RLE Project
Indiana Department of Transportation		
Indiana State Rail Plan	NICTD is completing a bypass of the Kensington Station in Illinois, which will give the South Shore line a second route through the Kensington Interlocking.	Before
Illiana Expressway Feasibility Study	The Illiana study area is in southern Will County and northern Kankakee County in Illinois and southern Lake County in Indiana. The study area is generally between I-65 on the east, I-55 on the west, US 30 on the north, and north Kankakee County on the south. The study proposes an east-west corridor extending from I-55 to I-65 with potential interchange to I-57. A record of decision was issued for the Illiana Corridor in January 2013.	Concurrent
Northwest Indiana Regional Development Authority		
Comprehensive Economic Strategic Plan - Phase II	As part of the West Lake Corridor expansion project, plans to expand the NICTD line from Munster to the existing South Shore line in Chicago.	Concurrent
Forest Preserve District of Cook County		
Final Capital Improvement Plan 2012-2016.	Proposed bike and equestrian trails including the Cal-Sag Trail, Beaubien Woods parking projects and site identification, and Dan Ryan woods paved trail	Before
Chicago Transit Authority		
Ashland Bus Rapid Transit	Analysis of potential service options on Western and Ashland Avenues in a study area extending approximately 21 miles in length from about Howard Street on the north, Western Avenue on the west, Ashland Avenue on the east, and 95th Street on the south	Concurrent
City of Chicago		
Chicago Climate Action Plan	This plan lists five strategies to make the City of Chicago more resilient to the effects of Climate Change, including improved transportation options. The following actions are listed under this strategy: invest in more transit, expand transit incentives, promote transit-oriented development, improve fleet efficiency, switch to cleaner fuels, make walking and biking easier, support intercity rail, and improve freight movement.	Concurrent
Chicago Railroad Economic Opportunity Plan	Study examined Chicago's industrial corridors for the sustainability of the railroad industry. The Calumet Industrial Corridor was identified as one of the five areas most suitable for rail-based industries to be studied in depth. Within this corridor the following projects are included: the NS grade crossings at Torrence Avenue and 130th Street out of the Ford Assembly Plant and the connection from CREATE's east-west corridor from Pullman Junction to the NS mainline.	Concurrent

Location and Action	Description of Action	Timeframe of Action in Relation to RLE Project
Chicago Streets for Cycling Plan	Chicago Streets for Cycling Plan 2020 is a complementary plan to Bike 2015 Plan. The three principles in the plan are to provide a bicycle accommodation within ½ mile of every Chicagoan, provide a greater number of bikeways where more people live, and increase the amount of infrastructure where ridership is high, while establishing a strong backbone of infrastructure where ridership is currently lower. The plan calls for 100 miles of protected bike lanes, 10 miles of neighborhood greenways, 20 miles of bike lanes on Neighborhood Bike Routes, and continuous bikeways on three Spoke Routes by 2015. The plan calls for the following by 2020: continuous bikeways on all Spoke Routes, an additional 50 miles of protected bike lanes, an additional 30 miles of neighborhood greenways, an additional 40 miles of bike lanes on Neighborhood Bike Routes, and marking and/or signage on all Neighborhood Bike Routes.	Concurrent
Chicago Pedestrian Plan	The Chicago Pedestrian Plan has the following goals: 1) Improve pedestrian safety by eventually eliminating pedestrian fatalities, designing and building safer streets for pedestrians, and improving safety by reducing crime. 2) Improve connectivity by identifying and eliminating gaps and barriers in the pedestrian network, improving pedestrian connectivity to transit, and improving at-grade railroad crossings. 3) Increase livability by increasing the amount and quality of pedestrian space and increasing activity in pedestrian space. 4) Improve health by increasing the number of pedestrian trips for enjoyment, school, work, and daily errands and increasing the mode share of pedestrian trips.	Concurrent
Far South Railroad Relocation Study	Study to potentially relocate the UPRR to another railroad ROW.	Before
South Lakefront Corridor Transit Study	CDOT and Department of Housing and Economic Development have commissioned this study to identify ways to improve public transportation in the corridor, enhance mobility for residents, and increase access to jobs located throughout the city and surrounding areas. The study area includes northern stops on the Red Line and the Metra Electric District line.	Concurrent

Location and Action	Description of Action	Timeframe of Action in Relation to RLE Project
Transit Friendly Development Guide/Station Area Typology Study	The Transit Friendly Development Guide designates each rail station with one of seven typologies that are common across the rail system. The designations are intended to shape the public's expectations about potential development while identifying the nearby zoning and infrastructure assets that maximize each station as a community anchor.	Concurrent
Calumet Area Land use Plan	Study lists potential uses for land. Document intended to direct future development in the Calumet area.	Concurrent
Ford Calumet Environmental Center	A proposed center for research and learning located within the Hegewisch Marsh area, a 130-acre wetland undergoing restoration.	Concurrent
Chicago Union Station Master Plan	The study identified potential ideals for adding tracks and platforms, as well as increasing the capacity of the station. Long-term concepts include developing a new station facility at 300 South Riverside or proposing a new commuter and intercity passenger train station on the 200 South Riverside block.	Concurrent
North Pullman TIF District	The North Pullman TIF District was created to promote ongoing investment in the district’s existing buildings and vacant properties, especially the retail and commercial buildings on 103rd Street and the 11.5-acre Union Foundry site near 104th Street and Maryland Avenue. Expires in 2033.	Concurrent/After
West Pullman Industrial TIF District	Created to support ongoing industrial investments within the West Pullman Industrial Park. Intended to foster the area’s revitalization through site assembly efforts, soil remediation projects, and numerous infrastructure improvements. Infrastructure projects included were the reconstruction of 119th Street, 120th Street, and Morgan Street, and portions of Loomis Street and Racine Avenue. Expires in 2021.	Concurrent
Calumet River TIF District	Redevelopment plan for area includes plan for remediation	Concurrent
Mercy Housing	Pullman Wheelworks: A nationally registered Historical building at 901 E. 104th Street. The project includes a renovation of the 210-unit rental complex.	Before
Urban Land Institute - Pullman Study	Study recommends redeveloping the area in phases as a mixed-use development. The study recommends reuse of existing buildings.	Before
Chicago Neighborhood Initiatives - Pullman Park	Pullman Park will be a 180-acre, sustainable, mixed-use development that provides retail services, diverse recreational opportunities, and quality housing to the greater Pullman and Roseland Communities on the south side of Chicago. The first phase of development will include the reconstruction of Doty Avenue and a new 150,000-square-foot Walmart store.	Concurrent

Location and Action	Description of Action	Timeframe of Action in Relation to RLE Project
Chicago Park District		
2012-2016 Capital Improvement Plan	Development of Calumet area properties is part of the 2012-2016 Plan. Properties include Hegewisch Marsh Expansion, Big Marsh Expansion, Kensington Park, Park development - 114th Street and Champlain Avenue, West Pullman Transition plan access improvements, and Palmer Field House.	Concurrent
Friends of the Cal-Sag Trail	Proposed trail along the Little Calumet River and Cal-Sag Channel.	Before
Chicago State University		
Master Plan	Master plan includes campus improvements, proposed buildings, and a transit facility for a proposed Metra station and CTA bus turnaround.	Concurrent
CREATE		
Traffic Control System Blue Island (B15) - Signalization of Blue Island Yard Running Tracks	The project includes installation of new bi-directional computerized traffic control system between the intersections of 140th Street and Western Avenue in Blue Island and the intersection of 140th Street and Indiana Avenue in Dolton, Illinois, to improve speed of freight trains, reducing freight conflicts with Amtrak.	Before
75th Street Corridor Improvement Project	Includes CREATE projects EW2, GS19, P2, and P3[1]	Before
EW2 & P2	The project will consider reconfiguring and building a third BRC main track and constructing a flyover to connect the Metra Southwest Service to the Rock Island Line in the vicinity of 74th Street and Normal Avenue and 75th Street and Parnell Avenue.	Before
P3	This project will consider constructing a bridge that significantly reduces conflicts between CSX and BRC, Metra (Rock Island District) and NS.	Before
GS19	The project will consider a road-rail grade separation of 71st Street and CSX freight.	Before
95th Street & Union Pacific Grade Separation (GS21a)	95th Street and Eggleston Avenue. The project will consider eliminating the at-grade crossing of 95th Street and two UPRR tracks with an overpass or underpass for vehicles using 95th Street.	Concurrent
Cottage Grove & IHB/CSX Grade Separation (GS23a)	The project will consider eliminating at-grade crossing of Cottage Grove Avenue and the four IHB and CSX tracks with an overpass or underpass for vehicles.	Concurrent

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[1] Table 4-1 lists the CREATE projects that have been included in the 2010-2015 Transportation Improvement Program.

Location and Action	Description of Action	Timeframe of Action in Relation to RLE Project
Canadian National Railway		
Logistics Park	Proposed Logistics Park that will connect directly to CN's Chicago Intermodal Terminal. Located south of I-80/294 between Ashland Avenue and Dixie Highway.	Concurrent
Metra		
Southeast Corridor Alternatives Analysis	33.2 miles of proposed line from LaSalle Street Station to terminal near Balmoral Park. Would run along the following four existing railroad ROWs: Joint Union Pacific/CSX Transportation freight corridor from Balmoral Park to Dolton junction, UPRR from Dolton Junction to Oakdale Junction, Chicago Rail Link From Oakdale Junction to Gresham Interlocking, Metra Rock Island District from Gresham interlocking to LaSalle Street Station. Ten new stations and three existing stations (existing Rock Island District stations).	Concurrent/After
Metropolitan Water Reclamation District		
Calumet Waste Water Treatment Plant	Proposed improvements to the Calumet Waste Water Treatment Plant disinfection system.	Before
Village of Riverdale		
Northeast Riverdale Sewer System	New storm sewers and existing sewer improvements.	Before
Calumet-Sangamon Bike Trail Project:	33 miles of constructed bike trail through Riverdale.	Before
Private		
Crown Commercial Real Estate & Development – Roseland Plaza	Roseland Plaza redevelopment would be adjacent to the Michigan Avenue station. The proposal includes a strip mall within a 91,000-square-foot property with 250 parking spaces. There would be 49,000 square feet of commercial space, which would include a grocery store, pharmacy, clothing store, and a bank. The City's Community Development Commission designated the developer in February 2005. The City approved the sale of its land and land write-down costs in May 2009. The developer modified its proposal and received approval of its Planned Development application from the Chicago Plan Commission in October 2011.	Before/Concurrent

Notes: NOAA = National Oceanic and Atmospheric Administration, IDOT = Illinois Department of Transportation, NICTD = Northern Indiana Commuter Transportation District, NS = Norfolk Southern, CREATE = Chicago Region Environmental and Transportation Efficiency, ROW = right-of-way, UPRR = Union Pacific Railroad, CDOT = Chicago Department of Transportation, CTA = Chicago Transit Authority, TIF = tax-increment financing, BRC = Belt Railway of Chicago, IHB = Indiana Harbor Belt Railroad, CN = Canadian National

Section 5
Impacts and Mitigations

5.1 No Build Alternative

The No Build Alternative is defined as the existing transportation system plus any committed transportation improvements that are already in the CMAP Fiscal Year 2010–2015 TIP. Table 4-1 lists the TIP projects within the project area, consisting of four bridge reconstructions, several road improvement projects including resurfacing and coordination of signal timing, work on Metra's facilities, construction of a bicycle/pedestrian multi-use trail, and preservation of historic facilities.

The No Build Alternative would not contribute to cumulative benefits or impacts for the following resources: transportation; land use and economic development; displacements and relocations; parklands and community facilities; visual and aesthetic conditions; noise and vibration; safety and security; historic and cultural resources; hazardous materials; water resources; wetlands; floodplains; vegetation and wildlife habitat; threatened or endangered species; geology and soils; energy; and environmental justice. These resources could be independently affected by the project and were analyzed separately. Only resources that would incur cumulative impacts due to multiple projects are presented in this section. The following sections discuss environmental resources with the potential to be subject to cumulative benefits or impacts with the No Build Alternative.

5.1.1 Neighborhood and Community Impacts

Although the No Build Alternative would not have adverse cumulative impacts, the lack of improved transportation options and lack of new infrastructure would do little to reverse the disinvestment in the project area that has occurred over the past several decades.

5.1.2 Air Quality

The Red and Purple Modernization (RPM) Project is a reasonably foreseeable action that would result in beneficial air quality impacts, as it is anticipated to have an increase in ridership with a corresponding reduction in trips made by vehicles. The cumulative impacts would result in a reduction of air emissions and would be beneficial. The air quality benefits of the No Build Alternative would be smaller in scale than those of any of the other RLE alternatives.

5.2 Bus Rapid Transit Alternative

The BRT Alternative is a 5.5-mile long BRT route that would provide an enhanced bus route with transit signal priority along the existing #34 South Michigan bus route. Four stops with improved bus shelters and parking would be created at 103rd Street and Michigan Avenue, 111th Street and Michigan Avenue, Kensington Avenue and Michigan Avenue, and 130th Street and Eberhart Avenue.

The BRT Alternative would not contribute to cumulative benefits or impacts for the following resources: transportation; land use and economic development; displacements and relocations; visual and aesthetic conditions; noise and vibration; safety and security; historic and cultural resources; hazardous materials; water resources; wetlands; floodplains; vegetation and wildlife habitat; threatened or endangered species; geology and soils; energy; and environmental justice. These resources could be independently affected by the project and were analyzed separately. Only resources that would incur cumulative impacts due to multiple projects are presented in this section. The following sections discuss environmental resources with the potential to be subject to cumulative benefits or impacts with the BRT Alternative.

5.2.1 Neighborhood and Community Impacts

The minimal improvements of transportation options and new infrastructure would do little to reverse the disinvestment in the project area that has occurred over the past several decades. The cumulative impacts on neighborhood and communities would not be adverse and would not require mitigation measures.

5.2.2 Parklands and Community Facilities

The construction and operation of the BRT Alternative would not reduce the overall health of the parklands and/or community facilities in the project area. Improved transit in the project area would result in improved access to parklands and community facilities beyond the project area and within walking distance of CTA's greater rail network.

5.2.3 Air Quality

The RPM Project is a reasonably foreseeable action that would result in beneficial air quality impacts, as it is anticipated to have an increase in ridership with a corresponding reduction in trips made by vehicles. The cumulative impacts would be beneficial due to the reduction of air emissions.

5.3 Union Pacific Railroad Rail Alternative - Right-of-Way Option

The UPRR Rail Alternative would extend the Red Line from the existing 95th Street Terminal to 130th Street, just west of I-94. Under the UPRR Rail Alternative ROW Option (ROW Option) the CTA tracks would be placed in the UPRR ROW between I-57 and the CN/ME tracks. As part of a separate project, the existing freight operations would be moved out of the UPRR corridor, leaving the corridor vacant. The CTA could implement the ROW Option only if this separate project occurs prior to RLE. Four stations would be included in the ROW Option: 103rd Street, 111th Street, Michigan Avenue, and 130th Street. One terminal station at 130th Street is under evaluation with two options: the South Station Option and the West Station Option. Substations are tentatively proposed for the following locations: west of the CTA tracks between 104th and 105th Streets, west of the CTA tracks between Perry and Lafayette Avenues, and west of the CTA tracks north of the proposed parking structure for the South Station Option or along the curve of the CTA tracks near 130th Street for the West Station Option. An additional substation within the 120th Street yard and shop facility is proposed.

The ROW Option would not contribute to cumulative benefits or impacts for the following resources: displacements and relocations; visual and aesthetic conditions; historic and cultural resources; hazardous materials; water resources; wetlands; floodplains; vegetation and wildlife habitat; threatened or endangered species; geology and soils; energy; and environmental justice. These resources could be independently affected by the project and were analyzed separately. Only resources that would incur cumulative impacts due to multiple projects are presented in this section. The following sections discuss environmental resources with the potential to be subject to cumulative benefits or impacts with the ROW Option.

5.3.1 Transportation

There could be beneficial impacts on traffic due to the relocation of the UPRR. There would be fewer traffic delays with the ROW Option than with the East or West Options.

5.3.2 Noise and Vibration

There could be beneficial impacts on noise and vibration from the ROW Option when considering the relocation of the UPRR. Because UPRR freight operations would be relocated, the ROW Option would result in less noise and vibration than under the No Build Alternative, and would result in less noise and vibration than the East and West Options would.

5.3.3 Safety and Security

The ROW Option could have beneficial impacts on safety due to the relocation of the UPRR. The relocation of the UPRR would eliminate conflicts between freight trains and motor vehicles or pedestrians accessing the transit facilities.

5.3.4 Land Use and Economic Development

Land use and economic development impacts for the UPRR Rail Alternative were analyzed for two segments in the project area, Segment UA and UB, as shown on Figure 2-1.

5.3.4.1 Segment UA

Implementation of the ROW Option would have a beneficial cumulative impact on land use and economic development due to new employment accessibility, attraction of new development adjacent to RLE stations, and overall livability improvements. The private sector would likely perceive the ROW Option as a public sector commitment to improve the overall project area and regain confidence in the area’s economic development market. The affected neighborhoods include Washington Heights, Roseland, and West Pullman. The UPRR ROW Option would only be implemented if the UPRR were relocated as part of a separate, independent project prior to the construction of the UPRR ROW Option. This action would benefit adjacent residential neighborhoods that would be relieved of the noise, vibration, and traffic delays caused by the UPRR operations.

5.3.4.2 Segment UB

The cumulative land use and economic development impacts would be similar to those described for Segment UA (Section 5.3.1.1). The cumulative land use and economic development impacts would be considered beneficial in West Pullman and Riverdale.

5.3.5 Neighborhood and Community Impacts

The retail and commercial space on the ground floor of the Michigan Avenue station's park & ride garage, combined with the proposed Roseland Plaza north of the station site, would help activate the neighborhood and enhance the station's role as a focal point of community activity and services. The station and retail improvements may contribute to a southward expansion of the current commercial and entertainment district along Michigan Avenue between 111th and 113th Streets. The relocation of the UPRR would benefit adjacent residential neighborhoods that would be relieved of the noise, vibration, and traffic delays caused by the UPRR operations.

5.3.6 Parklands and Community Facilities

The construction and operation of the ROW Option would not reduce the overall health of the parklands and/or community facilities in the project area. Improved transit in the project area would result in improved access to parklands and community facilities beyond the project area and within walking distance of CTA's greater rail network.

5.3.7 Air Quality

The RPM Project is a reasonably foreseeable action that would result in beneficial air quality impacts, as it is anticipated to have an increase in ridership with a corresponding reduction in trips made by vehicles. The cumulative impacts would be beneficial due to the reduction of air emissions.

5.4 Union Pacific Railroad Rail Alternative - East Option

In the UPRR Rail Alternative East Option (East Option), the CTA tracks would be placed immediately adjacent to and east of the UPRR ROW between I-57 and the CN/ME tracks. The UPRR is evaluating adding a third track to the east of its two existing tracks. The East Option would include substations at the following locations: west of the UPRR tracks between 104th and 105th Streets, west of the UPRR tracks between Perry Avenue and Lafayette Avenue, and west of the CTA tracks south of the proposed yard near the 130th Street station. An additional substation within the 120th Street yard and shop facility is proposed. Four stations would be included in the East Option: 103rd Street, 111th Street, Michigan Avenue, and 130th Street. One terminal station at 130th Street is under evaluation with two options: the South Station Option and the West Station Option.

The East Option would have no or limited impacts on the following resources: displacements and relocations; visual and aesthetic conditions; noise and vibration; historic and cultural resources; hazardous materials; water resources; wetlands; floodplains; vegetation and wildlife habitat; threatened or endangered species; geology and soils; energy; and environmental justice. This alternative would therefore not contribute to cumulative impacts for the environmental resources listed above. The environmental resources that have the potential to be subject to cumulative impacts are discussed in the following sections for the East Option.

5.4.1 Transportation

The CREATE 75th Street Corridor Improvement Project would increase freight volumes substantially by the forecasted 2029 build year. Because the UPRR tracks would remain with the East Option, freight trains may have potential impacts on pedestrian and vehicular traffic near the proposed stations, which could affect travel times for bus transit serving the stations and increase delays for commuters who choose to park and ride. Potential mitigation measures could include the coordination of passenger and UPRR freight train schedules to avoid or reduce trains crossing at peak hours such as morning rush hour. CTA train and bus schedules could also be coordinated with passenger and UPRR trains to reduce commuter delays.

5.4.2 Land Use and Economic Development

Cumulative land use and economic development impacts for the East Option would be similar to those stated in Section 5.3.4 for the ROW Option for Segments UA and UB, with the exception of the additional benefits of the ROW Option considered cumulatively with the UPRR relocation project, a separate project that would occur before implementation of the UPRR ROW Option.

5.4.3 Neighborhood and Community Impacts

Cumulative neighborhood and community impacts for the East Option would be similar to those stated in Section 5.3.5 for the ROW Option, with the exception of the additional benefits that the ROW Option would have due to the prior relocation of the UPRR.

5.4.4 Parklands and Community Facilities

Cumulative parklands and community facilities impacts for the East Option would be similar to those stated in Section 5.3.6 for the ROW Option.

5.4.5 Safety and Security

In addition to the expected increase in automobile and pedestrian traffic volumes as a result of the RLE Project when compared to the No Build Alternative, the full implementation of the CREATE program would increase the number of trains using the UPRR tracks from 26 to 48 per day. The proposed Metra SouthEast Service Line, if implemented, could also increase the number of passenger trains per day on the line beyond the existing two Amtrak trains per day. The increase in train volumes could correlate to an increase in potential crash frequency at highway-rail grade crossings. This increase in crash potential would be an adverse impact at the existing highway-rail grade crossings along the UPRR tracks at 101st Street, 103rd Street, 107th Street, 109th Street, 111th Street, Wentworth Avenue, 115th Street, and State Street. All of these crossings currently have gates on both roadway approaches and flashing lights. Crash potential could be further mitigated by installing safety protection technologies for vehicles and pedestrians to prevent drivers from going around the gates, and by installing pedestrian gates on the sidewalks.

5.4.6 Air Quality

Cumulative air quality impacts for the East Option would be similar to those stated in Section 5.3.7 for the ROW Option.

5.5 Union Pacific Railroad Rail Alternative - West Option

In the UPRR Rail Alternative West Option (West Option), the CTA tracks would be placed immediately adjacent to and west of the UPRR ROW between I-57 on the north end and the UPRR tracks near Kensington Park on the south end. The West Option would include substations at the following locations: east of the UPRR tracks between 105th Street and 105th Place, west of the UPRR tracks between Perry Avenue and Lafayette Avenue, and east of the CTA tracks south of the proposed yard near the 130th Street station. An additional substation within the 120th Street yard and shop facility is proposed. Four stations would be included in the West Option: 103rd Street, 111th Street, Michigan Avenue, and 130th Street. One terminal station with two options is under evaluation for the 130th Street station: the South Station Option and the West Station Option.

The West Option would have limited or no impacts on the following resources: displacements and relocations; visual and aesthetic conditions; noise and vibration; historic and cultural resources; hazardous materials; water resources; wetlands; floodplains; vegetation and wildlife habitat; threatened or endangered species; geology and soils; energy; and environmental justice. This alternative would therefore not contribute to substantial cumulative impacts for the environmental resources listed above. The environmental resources that have the potential to be subject to cumulative impacts are discussed in the following sections for the West Option.

5.5.1 Transportation

Cumulative transportation impacts for the West Option would be similar to those stated in Section 5.4.1 for the East Option.

5.5.2 Land Use and Economic Development

Cumulative land use and economic development impacts for the West Option would be similar to those stated in Section 5.3.4 for the ROW Option for Segments UA and UB with the exception of the additional benefits of the ROW Option considered cumulatively with the UPRR relocation project.

5.5.3 Neighborhood and Community Impacts

Cumulative neighborhood and community impacts for the West Option would be similar to those stated in Section 5.3.5 for the ROW Option with the exception of the additional benefits of the ROW Option considered cumulatively with the UPRR relocation project.

5.5.4 Parklands and Community Facilities

Cumulative parklands and community facilities impacts for the West Option would be similar to those stated in Section 5.3.6 for the ROW Option.

5.5.5 Safety and Security

Cumulative safety and security impacts for the West Option would be similar to those stated in Section 5.4.5 for the East Option.

5.5.6 Air Quality

Cumulative air quality impacts for the West Option would be similar to those stated in Section 5.3.7 for the ROW Option.

5.6 120th Street Yard and Shop

There would be no cumulative impacts associated with the 120th Street yard and shop.

5.7 Halsted Rail Alternative

The proposed Halsted Rail Alternative is a 5-mile extension of the existing Red Line. It would operate on an elevated structure running south from 95th Street along I-57 until Halsted Street. It would then turn south and continue along Halsted Street to the intersection of Halsted Street and Vermont Avenue near 127th Street. Four stations would be built at 103rd Street, 111th Street, 119th Street, and Vermont Avenue.

The Halsted Rail Alternative would have limited or no impacts on the following resources: transportation; displacements and relocations; neighborhoods and community facilities; visual and aesthetic conditions; noise and vibration; safety and security; historic and cultural resources; hazardous materials; water resources; wetlands; floodplains; vegetation and wildlife habitat; threatened or endangered species; geology and soils; energy; and environmental justice. This alternative would therefore not contribute to substantial cumulative impacts for the environmental resources listed above. The environmental resources that have the potential to be subject to cumulative impacts are discussed in the following sections for the Halsted Rail Alternative.

5.7.1 Land Use and Economic Development

Land use and economic development impacts for the Halsted Rail Alternative were analyzed for two segments in the project area, Segment HA and HB, as shown on Figure 2-1.

5.7.1.1 Segment HA

Cumulative land use and economic development impacts for the Halsted Rail Alternative would be similar to those stated in Section 5.3.4 for the UPRR ROW Option including the community of Morgan Park. The cumulative land use and economic development impacts would be beneficial for Washington Heights, Roseland, West Pullman, and Morgan Park.

5.7.1.2 Segment HB

The cumulative land use and economic development impacts would be similar to those stated in Section 5.3.4 for the UPRR ROW Option with the exception that only West Pullman would receive beneficial cumulative impacts from the Halsted Rail Alternative.

5.7.2 Parklands and Community Facilities

The construction and operation of the Halsted Rail Alternative would not reduce the overall health of the parklands and/or community facilities in the project area. Improved transit in the project area would result in improved access to parklands and community facilities beyond the project area and within walking distance of CTA's greater rail network.

5.7.3 Air Quality

The RPM Project is a reasonably foreseeable action that would result in beneficial air quality impacts, as it is anticipated to have an increase in ridership with a corresponding reduction in trips made by vehicles. The cumulative impacts would be beneficial due to the reduction of air emissions.

5.8 119th Street Yard and Shop

There would be no cumulative impacts associated with the 119th Street yard and shop.

Section 6
Impacts Remaining After Mitigation

6.1 No Build Alternative

Because there would be no adverse cumulative impacts, no mitigation measures would be required for the No Build Alternative.

6.2 Bus Rapid Transit Alternative

Because there would be no adverse cumulative impacts, no mitigation measures would be needed for the BRT Alternative. There would be beneficial cumulative impacts on air quality due to the reduction in air emissions.

6.3 Union Pacific Railroad Rail Alternative – Right-of-Way Option

Because there would be no adverse cumulative impacts, no mitigation measures would be needed for the ROW Option. The ROW Option would have beneficial impacts for land use and economic development, neighborhoods and communities, parklands, and air quality.

6.4 Union Pacific Railroad Rail Alternative – East Option

6.4.1 Transportation

There would be no adverse impacts remaining after the mitigation measures discussed in Section 5.4.1 are implemented.

6.4.2 Land Use and Economic Development

There would be beneficial cumulative impacts on land use and economic development; therefore, no mitigation measures would be needed.

6.4.3 Neighborhood and Community Impacts

There would be beneficial cumulative impacts on neighborhoods and communities; therefore, no mitigation measures would be needed.

6.4.4 Parklands and Community Facilities

There would be beneficial cumulative impacts on parklands and community facilities; therefore, no mitigation measures would be needed.

6.4.5 Safety and Security

There would be no adverse impacts remaining after mitigation measures discussed in Section 5.4.5 are implemented.

6.4.6 Air Quality

There would be beneficial impacts on air quality with or without the RPM Project, a reasonably foreseeable action. No mitigation measures would be required.

6.5 Union Pacific Railroad Rail Alternative – West Option

6.5.1 Transportation

There would be no adverse impacts remaining after the mitigation measures discussed in Section 5.4.1 are implemented.

6.5.2 Land Use and Economic Development

There would be beneficial cumulative impacts on land use and economic development; therefore, no mitigation measures would be needed.

6.5.3 Neighborhood and Community Impacts

There would be beneficial cumulative impacts on neighborhoods and communities; therefore, no mitigation measures would be needed.

6.5.4 Parklands and Community Facilities

There would be beneficial cumulative impacts on parklands and community facilities; therefore, no mitigation measures would be needed.

6.5.5 Safety and Security

There would be no adverse impacts remaining after the mitigation measures discussed in Section 5.4.5 are implemented.

6.5.6 Air Quality

There would be beneficial impacts on air quality with or without the RPM Project, a reasonably foreseeable action. No mitigation measures would be needed.

6.6 120th Street Yard and Shop

There would be no cumulative impacts for the 120th Street yard and shop; therefore, no mitigation measures would be needed.

6.7 Halsted Rail Alternative

6.7.1 Land Use and Economic Development

There would be beneficial cumulative impacts on land use and economic development; therefore no mitigation measures would be needed.

6.7.2 Parklands and Community Facilities

There would be beneficial cumulative impacts on parklands and community facilities; therefore, no mitigation measures would be needed.

6.7.3 Air Quality

There would be beneficial impacts on air quality with or without the RPM Project, a reasonably foreseeable action. No mitigation measures would be needed.

6.8 119th Street Yard and Shop

There would be no cumulative impacts associated with the 119th Street yard and shop; therefore, no mitigation measures would be needed.

Section 7
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Appendix A
2014-2015 Red Line Extension Project Update

2014–2015 Red Line Extension Project Update

From 2012-2014, CTA evaluated benefits and impacts of four alternatives: the No Build Alternative, the Bus Rapid Transit Alternative (along Michigan Avenue), the Union Pacific Railroad (UPRR) Rail Alternative, and the Halsted Alternative. CTA evaluated three options of the UPRR Rail Alternative: Right-of-Way Option, East Option, and West Option. CTA also evaluated two options of the UPRR Rail Alternative 130th Street station: a South Station Option and a West Station Option. Based on the project description provided in Section 2 of this technical memorandum, CTA analyzed the impacts of these alternatives and station options. The benefits and impacts are included in the technical memoranda prepared in 2012-2014.

In August 2014, based on the technical analysis and public input, CTA announced the NEPA Preferred Alternative—the UPRR Rail Alternative. Additional conceptual engineering was conducted on the UPRR Rail Alternative to refine the East and West Option alignments. In addition, CTA is considering only the South Station Option of the 130th Street Station.

In late 2014 and early 2015, CTA conducted additional engineering and revised assumptions on the East and West Options to refine the alignments. The refinement of the East and West Options consisted of the following items:

- For the segment of the alignment along I-57, CTA shifted the proposed alignment from the median of I-57 to the north side of I-57 within the existing expressway right-of-way. The construction would be less complex, safer for construction workers, and have a shorter duration. The shift would also allow for fewer impacts to Wendell Smith Park for the East Option, and would allow for no permanent impacts to Wendell Smith Park for the West Option.

- CTA modified the curve speeds as the alignment heads south from I-57 along the UPRR tracks. The curve speed for both the East and West Options would be 35 mph.

- CTA shifted the East Option alignment near 103rd Street station to minimize impacts to Block Park and the Roseland Pumping Station.

- CTA modified the curves south of 103rd Street for both the East and West Options to 55 mph to maximize the train speed.

- CTA refined the layout of the 120th Street yard and shop to optimize yard operations. The refined layout of the yard would accommodate 340 train cars.

The refinement of the East and West Option alignments minimizes potential impacts to parks while providing flexibility for future design phases. The Draft Environmental Impact Statement contains the benefits and impacts of the refined East and West Option alignments and supersedes information presented in other chapters of this technical memorandum.

The refined East and West Option alignments would have no additional or different impacts from those described in the technical memoranda for the following resource areas: construction, transportation, land use and economic development, historic and cultural resources, safety and security, hazardous materials, indirect and cumulative, air quality, floodplains, vegetation and wildlife habitat, threatened and endangered species, and geology and soils.

Appendix U
Air Quality Technical Memorandum

RED AHEAD
Moving Ahead to a Better Red

Red Line Extension

Chicago Red Line Extension Project

Air Quality
Technical Memorandum

June 21, 2013
Updated July 27, 2015

Prepared for:
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cta

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Abbreviations

BRT	Bus Rapid Transit
CAA	Clean Air Act
CFR	Code of Federal Regulations
CH4	methane
CMAP	Chicago Metropolitan Agency for Planning
CO	carbon monoxide
CO2	carbon dioxide
CO2e	carbon dioxide equivalent
CTA	Chicago Transit Authority
EIS	Environmental Impact Statement
FMVECP	Federal Motor Vehicle Emissions Control Program
FTA	Federal Transit Administration
FHWA	Federal Highway Administration
GHG	greenhouse gas
GWP	Global Warming Potential
IAAQS	Illinois Ambient Air Quality Standards
IDOT	Illinois Department of Transportation
IEPA	Illinois Environmental Protection Agency
LOS	level of service
MSAT	mobile source air toxics
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
N2O	nitrous oxide
NO2	nitrogen dioxide
NOx	oxides of nitrogen
PM10	particulate matter with an aerodynamic diameter of 10 micrometers and less
PM2.5	particulate matter with an aerodynamic diameter of 2.5 micrometers and less
ppb	parts per billion
ppm	parts per million
RLE	Red Line Extension
ROW	right-of-way
RPM	Red and Purple Modernization
RTP	Regional Transportation Plan
SIP	State Implementation Plan
TIP	Transportation Improvement Program
tpy	tons per year

UPRR	Union Pacific Railroad
USC	United States Code
USEPA	U.S. Environmental Protection Agency
VMT	vehicle-miles traveled
VOCs	volatile organic compounds
µg/m3	micrograms per cubic meter

Section 1
Summary

This technical memorandum analyzes the potential impacts of the Red Line Extension (RLE) Project on carbon monoxide (CO) hot spots, project-related greenhouse gas (GHG) emissions, fine particulate matter (particulate matter with an aerodynamic diameter of 2.5 micrometers and less [$PM_{2.5}$]) hot spots, mobile source air toxics (MSAT), impacts of construction, possible mitigation measures, and cumulative impacts.

The project area is in Cook County, Illinois, which has been designated as a nonattainment area with respect to the ozone national ambient air quality standard (NAAQS). The U.S. Environmental Protection Agency (USEPA) has also designated it as a nonattainment area with respect to the $PM_{2.5}$ NAAQS. The Illinois Environmental Protection Agency (IEPA) is seeking a redesignation from USEPA to attainment for $PM_{2.5}$. Because the RLE Project is in a “Moderate” ozone nonattainment area, it is the Federal Transit Administration’s (FTA’s) responsibility, as the federal funding agency, to ensure that the proposed project conforms to the Illinois State Implementation Plan (SIP).

Conformity can be demonstrated by showing that the proposed project is included in a conforming Regional Transportation Plan (RTP). The RLE Project is included in the Chicago Metropolitan Agency for Planning’s (CMAP’s) *GO TO 2040,* which is a conforming RTP published in 2010. Therefore, this project conforms to the objectives of the SIP, and further demonstration of the project compliance with the transportation conformity rule is not required. However, for the purpose of National Environmental Policy Act (NEPA) disclosure, an evaluation of project impacts was conducted.

Based on the results of the air quality analysis presented here, all build alternatives of the RLE Project would provide a regional net air quality benefit.

Based on the results of the CO modeling analysis at selected traffic intersections in the project area, implementation of any of the RLE Project build alternatives would not lead to exceedances of the Illinois Ambient Air Quality Standards (IAAQS) and NAAQS and no adverse air quality impacts are expected to occur with any of the build alternatives. Based on the CO hot spot analysis, no air quality mitigation measures would be required for any of the traffic intersections analyzed for any of the build alternatives.

The FMVECP (Federal Motor Vehicle Emission Control Program) (40 United States Code [USC] § 7521), which has been very effective in controlling emissions of all of the criteria pollutants, has little or no impact on GHG emissions from motor vehicles. The same technology that leads to more efficient fuel use also leads to lower carbon dioxide (CO_2) emissions. Because estimated changes in vehicle-miles traveled (VMT) would be quite small, the changes in GHG emissions in the project area would also be quite small. Compared to the No Build Alternative, the total carbon dioxide equivalent (CO_2e) emissions from any of the alternatives would be about 0.02 percent lower. Indirect emissions from the fossil-fueled power plants would increase because of increased electrical energy demand for the project.

The $PM_{2.5}$ emissions factors for motor vehicles in the Chicago area are expected to decline by over 38 percent between 2012 and 2030. In addition, VMT in the project area under all of the build alternatives (including VMT generated by additional bus operations) would be slightly lower than under the No Build Alternative VMT, by about 0.02 percent, due to passenger diversions to the RLE Project. When taken together, the regional $PM_{2.5}$ emissions with implementation of the build alternatives would be slightly lower than with the No Build Alternative. In addition to the federal exhaust emissions control programs and fuel reformulation programs, statewide efforts to reduce congestion and vehicle idling are also expected to have a direct benefit by reducing $PM_{2.5}$ concentrations at the local level.

The USEPA's FMVECP is expected to reduce MSAT emissions by 54 percent in the project area between 2012 and 2030. In addition, VMT in the project area for all build alternatives are expected to be slightly lower than under the No Build Alternative, by about 0.02 percent, due to passenger diversions to the Red Line. When taken together, regional MSAT emissions under any of the build alternatives in 2030 would be slightly lower than with the No Build Alternative.

The potential air quality impacts during construction would primarily be associated with dust and vehicle exhaust emissions. The IEPA has strict guidelines for controlling fugitive dust, diesel soot emissions, and GHG emissions. Impacts on local traffic movements could also result from trucks and construction equipment entering and leaving the construction sites and staging areas. There would be no adverse air quality impacts due to construction activities because mitigation measures would be incorporated into the project construction plan.

To minimize air quality impacts during construction, CTA would direct the contractor to prepare and implement a Dust Control Plan; retrofit diesel-powered equipment and vehicles to have emission control devices and use ultra-low sulfur diesel to control diesel particulate emissions; and develop a plan to allow construction trucks to access and egress the construction sites and staging area without adverse impacts on the local traffic. These plans would follow the guidelines from Illinois Department of Transportation (IDOT). The GHG emissions during construction could also be minimized by limiting truck and equipment idling times, maintaining equipment in proper working order, using alternative fuels for generators, reducing electricity consumption at the construction sites, and substituting single occupancy vehicle use with carpooling, shuttle vans, and transit passes for construction workers.

Updated July 27, 2015. In August 2014, based on the technical analysis and public input until then, CTA announced the NEPA Preferred Alternative—the UPRR Rail Alternative. CTA is considering two alignment (route) options of this alternative: the East Option and the West Option. At this time, CTA is also considering only the South Station Option of the 130th Street Station. In late 2014 and early 2015, CTA conducted additional engineering on the East and West Options to refine the East and West Option alignments. Appendix A of this technical memorandum summarizes the refined alignments and any additional or different impacts that would result. The information in Appendix A supersedes information presented in other chapters of this technical memorandum.

Section 2
Project Description

The Chicago Transit Authority (CTA) is proposing to extend the Red Line from the existing 95th Street Terminal to the vicinity of 130th Street, subject to the availability of funding. The proposed RLE would include four stations. Each station would include bus transfer and parking facilities. This project is one part of the Red Ahead Program to extend and enhance the entire Red Line. The CTA is also planning 95th Street Terminal improvements that are anticipated to be completed prior to the proposed RLE construction.

The project area is 11 miles south of the Chicago central business district (commonly referred to as the Loop) and encompasses approximately 20 square miles. The boundaries of the project area are 95th Street on the north, Ashland Avenue on the west, Stony Island Avenue on the east, and the Calumet-Sag Channel/Little Calumet River and 134th Street on the south. The I-57 Expressway and I-94 Bishop Ford Freeway cross the western and eastern edges of the project area, respectively. Lake Calumet is in the eastern portion of the project area. The project area encompasses parts of nine community areas in the City of Chicago and the eastern section of the Village of Calumet Park. Chicago community areas include Beverly, Washington Heights, Roseland, Morgan Park, Pullman, West Pullman, Riverdale, Hegewisch, and South Deering. The project area comprises residential (primarily single family), industrial (both existing and vacant), transportation (including freight), and commercial development.

The Draft Environmental Impact Statement (EIS) focuses on the following alternatives (shown in Figure 2-1), which emerged from the Alternatives Analysis and the NEPA scoping process:

- No Build Alternative
- Bus Rapid Transit (BRT) Alternative
- Union Pacific Railroad (UPRR) Rail Alternative
  - Right-of-Way (ROW) Option
  - East Option
  - West Option
- Halsted Rail Alternative

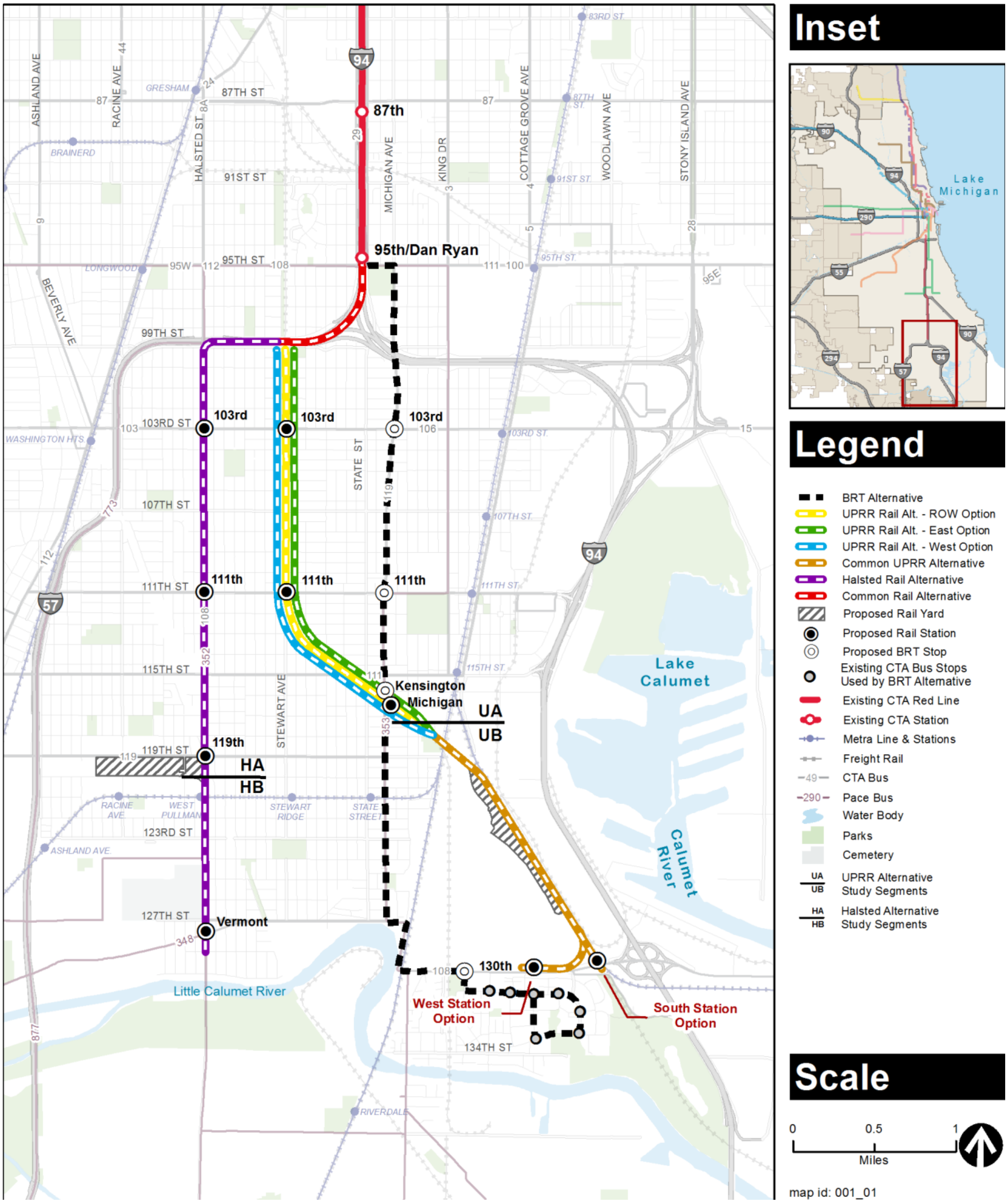
Inset
Lake Michigan
Legend
BRT Alternative
UPRR Rail Alt. - ROW Option
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
Common UPRR Alternative
Halsted Rail Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Proposed BRT Stop
Existing CTA Bus Stops Used by BRT Alternative
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
49 CTA Bus
290 Pace Bus
Water Body
Parks
Cemetery
UA UB UPRR Alternative Study Segments
HA HB Halsted Alternative Study Segments
Scale
0 0.5 1
Miles
map id: 001_01
87th
95th/Dan Ryan
103rd
111th
Kensington
Michigan
119th
Vermont
130th
UA
UB
HA
HB
West Station Option
South Station Option
Lake Calumet
Calumet River
Little Calumet River
87TH ST
91ST ST
95TH ST
99TH ST
103RD ST
107TH ST
111TH ST
115TH ST
119TH ST
123RD ST
127TH ST
134TH ST
ASHLAND AVE
RACINE AVE
HALSTED ST
MICHIGAN AVE
STATE ST
KING DR
COTTAGE GROVE AVE
WOODLAWN AVE
STONY ISLAND AVE
STEWART AVE
BEVERLY AVE
GRESHAM
BRAINERD
LONGWOOD
WASHINGTON HTS
RACINE AVE
WEST PULLMAN
STEWART RIDGE
STATE STREET
ASHLAND AVE
RIVERDALE
83RD ST
87TH ST
91ST ST
95TH ST
103RD ST
107TH ST
111TH ST
115TH ST
94
57
95E

Figure 2-1: Red Line Extension Project Alternatives

The No Build Alternative is a required alternative as part of the NEPA environmental analysis and is used for comparison purposes to assess the relative benefits and impacts of extending the Red Line. The No Build Alternative is carried into the Draft EIS phase of the project development regardless of its performance versus the build alternatives under consideration. No new infrastructure would be constructed as part of the No Build Alternative other than committed transportation improvements that are already in the CMAP Fiscal Year 2010–2015 Transportation Improvement Program (TIP) and the improvements to 95th Street Terminal. The TIP projects within the project area consist of four bridge reconstructions, several road improvement projects including resurfacing and coordination of signal timing on 95th Street, work on Metra's facilities, construction of a bicycle/pedestrian multi-use trail, and preservation of historic facilities. The No Build Alternative includes regular maintenance of existing track and structures, and bus transit service would be focused on the preservation of existing services and projects. All elements of the No Build Alternative are included in each of the other alternatives. Under this alternative, travel times would not improve from existing conditions.

The BRT Alternative (formerly referred to as the Transportation Systems Management Alternative) is a 5.0-mile, limited-stop, enhanced BRT route, which is assumed to operate 24 hours per day between the existing 95th Street Terminal and the intersection of 130th Street and Eberhart Avenue. No dedicated bus lanes would be provided for the BRT Alternative; however, parking lanes would be removed for some portions of the alignment and four stops with improved bus shelters and park & ride facilities would be created at 103rd Street and Michigan Avenue, 111th Street and Michigan Avenue, Kensington Avenue and Michigan Avenue, and 130th Street and Eberhart Avenue. Although BRT service elements would not continue south of the 130th Street stop, the bus route would continue through Altgeld Gardens along the existing route with six stops. The BRT Alternative would be consistent with bus routing changes that may occur as part of improvements to the 95th Street Terminal. Under this alternative, travel times between 130th Street and the Loop would improve over existing conditions.

The UPRR Rail Alternative is a 5.3-mile extension of the heavy rail transit Red Line from its existing 95th Street Terminal to 130th Street, just west of I-94. The Chicago Transit Board designated the UPRR Rail Alternative as the Locally Preferred Alternative at its August 12, 2009 board meeting. This alternative includes construction and operation of new heavy rail transit tracks, mostly in existing transportation corridors. The UPRR Rail Alternative has three options for alignment (ROW, East, and West), all of which would include operation on elevated structure from 95th Street to just past the Canadian National/Metra Electric District tracks near 119th Street. The alignment would then transition to at-grade through an industrial area with no public through streets, terminating at 130th Street in the vicinity of Altgeld Gardens. Four new stations would be constructed at 103rd Street, 111th Street, Michigan Avenue, and 130th Street. The 130th Street station would be the terminal station, with two options under evaluation: the South Station Option and the West Station Option. A new yard and shop facility would be sited near 120th Street and Cottage Grove Avenue. The bus routes in the vicinity of the UPRR Rail Alternative would be modified to enhance connectivity between the Red Line and the bus network. The hours of operation and service frequency for the UPRR Rail Alternative are assumed to be the same as

for the current Red Line. Under this alternative, travel times between 130th Street and the Loop would improve substantially over existing conditions.

The Halsted Rail Alternative is a 5.0-mile heavy rail transit extension of the existing Red Line. In this alternative, the Red Line would operate on an elevated structure running south from 95th Street along I-57 until Halsted Street. The alignment would then turn south and continue along Halsted Street to the intersection of Halsted Street and Vermont Avenue near 127th Street. This alternative would include four new stations at 103rd Street, 111th Street, 119th Street, and Vermont Avenue. The Vermont Avenue station would be the terminal station. A new yard and shop would be sited west of Halsted Street and between the 119th Street and Vermont Avenue stations. The bus routes in the vicinity of the Halsted Rail Alternative would be modified to enhance connectivity to the Red Line. The hours of operation and service frequency for the Halsted Rail Alternative are assumed to be the same as for the current Red Line. Under this alternative, travel times between 127th Street and the Loop would improve substantially over existing conditions. This alternative would not extend rail to Altgeld Gardens, which would be served by bus connecting to the Vermont terminal station.

Section 3
Methods for Impact Evaluation

3.1 Regulatory Framework

3.1.1 Federal

Under authority of the Clean Air Act (CAA) and its amendments, the USEPA has established NAAQS for criteria pollutants to protect the public health and welfare (U.S. Congress 1970, 1977, 1990). The criteria pollutants that are of greatest significance to the transportation sector include CO, nitrogen dioxide (NO_2), ozone, particulate matter with an aerodynamic diameter of 10 micrometers and less (PM_{10}) and particulate matter with an aerodynamic diameter of 2.5 micrometers and less ($PM_{2.5}$). The NAAQS are summarized in Table 3-1. Although not shown in this table, the IAAQS are identical to the NAAQS.

3.1.2 State

The RLE Project and its associated stations would be in Cook County, Illinois. This county has been designated by the USEPA as a moderate nonattainment area with respect to the 8-hour ozone NAAQS. Cook County is also a nonattainment area for $PM_{2.5}$ and for lead. Illinois, through its SIP, specifies target dates for achieving compliance with the NAAQS, and identifies specific emission reduction goals for nonattainment or maintenance areas.

The RLE Project is included in a conforming RTP. Therefore, a regional analysis of project emissions would not be required for purposes of demonstrating compliance with the transportation conformity rules.

3.1.3 Local

There are no local ordinances that address transportation projects such as the RLE Project. There are also no local regulations that pertain to emissions of CAA criteria pollutants. Emissions of CO from parking facilities are not, for example, covered by local regulations.

Table 3-1: National Ambient Air Quality Standards for Criteria Pollutants

Pollutant	Standard Type	Averaging Period	National	Form
Carbon Monoxide	Primary	1-hour	40 mg/m^3 (35 ppm)$^{(1)}$	Not to be exceeded more than once per year
		8-hour	10 mg/m^3 (9 ppm)	
Lead	Primary and Secondary	Rolling 3-Month	0.15 µg/m^3 $^{(2)}$	Not to be exceeded
Nitrogen Dioxide	Primary	1-hour	100 ppb	98th percentile, averaged over 3 years
	Primary and Secondary	Annual	53 ppb$^{(3)}$ (100 µg/m^3)	Annual arithmetic mean
Ozone	Primary and Secondary	8-hour	0.075 ppm$^{(5)}$	Annual fourth-highest daily maximum 8-hr concentration, averaged over 3 years
PM$_{10}$	Primary and Secondary	24-hour	150 µg/m^3	Not to be exceeded more than once per year on average over 3 years
PM$_{2.5}$	Primary and Secondary	Annual	15 µg/m^3 $^{(6)}$	Annual arithmetic mean, averaged over 3 years
	Primary and Secondary	24-hour	35 µg/m^3 $^{(6)}$	98th percentile, averaged over 3 years
Sulfur Dioxide	Primary	1-hour	75 ppb $^{(7)}$	99th percentile of 1-hour daily maximum concentrations, averaged over 3 years
	Secondary	3-hour	0.5 ppm	Not to be exceeded more than once per year

Source: USEPA, National Primary and Secondary Ambient Air Quality Standards (40 Code of Federal Regulations 50)

(1) The units of pollutant concentrations are in milligrams per cubic meter (mg/m^3), micrograms per cubic meter (µg/m^3), parts per million by volume (ppm), or parts per billion by volume (ppb).

2) Final rule signed October 15, 2008. The 1978 lead standard (1.5 µg/m^3 as a calendar quarterly average) remains in effect until 1 year after an area is designated for the 2008 standard, except that in designated nonattainment areas for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved. The metropolitan Chicago area is no longer subject to the 1978 lead standard.

(3) The official level of the annual NO$_2$ standard is 0.053 ppm, equal to 53 ppb, which is shown here for the purpose of clearer comparison to the 1-hour NO$_2$ standard.

(4) USEPA revoked the 1-hour ozone standard in most areas of the United States.

(5) Final rule signed March 12, 2008. The 1997 ozone standard (0.08 ppm, annual fourth-highest daily maximum 8-hour concentration, averaged over 3 years) and related implementation rules remain in place. EPA revoked the 1-hour ozone standard (0.12 ppm, not to be exceeded more than once per year) in most areas of the United States as of June 15, 2005, although some areas have continued obligations under that standard ("anti-backsliding"). The 1-hour ozone standard is attained when the expected number of days per calendar year with maximum hourly average concentrations above 0.12 ppm is less than or equal to 1.

(6) The PM$_{2.5}$ standards are referenced to local conditions of temperature and pressure rather than standard conditions (760 mm and 25 degrees C).

(7) Final rule signed June 2, 2010. The 1971 annual and 24-hour sulfur dioxide standards were revoked in that same rulemaking. However, these standards remain in effect until 1 year after an area is designated for the 2010 standard, except in designated nonattainment areas for the 1971 standards, where the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standard are approved. The metropolitan Chicago area is no longer subject to the 1971 annual and 24-hour sulfur dioxide standards.

3.2 Impact Analysis Thresholds

3.2.1 During Construction

There is no quantitative basis for impact thresholds during construction, with the exception of the NAAQS for such pollutants as particulate matter (PM_{10} and $PM_{2.5}$) and CO. Most state transportation and environmental review agencies expect to see dust control and traffic management addressed and mitigated. The IDOT, for instance, has formal requirements for the contractor to prepare a Dust Control Plan, a Traffic Management Plan, and emission controls and low sulfur fuels for diesel-powered equipment.

3.2.2 During Operation

The impact thresholds during operation are the NAAQS. The thresholds for criteria pollutants during project operation are limited to controlling emissions that affect the nonattainment or maintenance status of the pollutants. For ozone nonattainment, the controls are focused on the precursors; namely, oxides of nitrogen (NOx) and volatile organic compounds (VOCs).

The SIP provides the emissions control strategy and implementation schedules for achieving and maintaining the NAAQS, such as the 8-hour ozone standard. If a proposed transportation project is in the RTP, and the RTP conforms to the SIP, then a separate conformity analysis of the specific project is not warranted because its impacts on region-wide emissions have already been taken into account.

Some states have impact thresholds for MSAT that are either related to emissions or exposure levels. But neither IEPA nor the FTA has any such requirements. Likewise, there are no quantitative impact thresholds for GHG emissions. Many states, including Illinois, have policies or guidance that encourage project proponents to minimize GHG emissions through conservation (using less energy) and use of alternative fuels (using less fossil fuel and more renewable energy such as solar or wind).

3.3 Area of Potential Impact

For an air quality assessment, impacts could be regional or localized; thus, the area of potential impact has both a regional and a local component. The regional component follows the analysis area adopted by the traffic analysis, which is a corridor bounded on the south by a varying boundary that includes 134th Street, on the north by 91st Street, on the west by a varying boundary that includes Halsted Street, and on the east by a varying boundary that includes I-94. The local component would be limited to the individual stations, their associated parking facilities, and nearby intersections affected by traffic entering and exiting the stations.

3.4 Methods

3.4.1 Air Quality Effects

The overall air quality effects from project operations are normally evaluated by quantifying the selected criteria pollutant emissions on a regional basis, and at local hot spots where motor vehicle congestion can take place. The RLE Project is included in a conforming RTP, and a corridor-wide emissions inventory analysis is therefore not necessary to demonstrate transportation conformity. The IEPA is trying to seek a re-designation of its $PM_{2.5}$ nonattainment status from USEPA. The RLE Project is not considered to be a project of local air quality concern (for example, a project that involves a significant increase in diesel buses or trucks). Under these circumstances, therefore, a qualitative hot spot analysis of $PM_{2.5}$ was prepared for the existing conditions, and the No Build Alternative, the BRT Alternative, the UPRR Rail Alternative (with its three options), and the Halsted Rail Alternative for the year 2030.

3.4.2 CO Hot Spot Analysis

A project-level CO hot spot analysis is performed as part of the NEPA process, for purposes of identifying and disclosing substantial impacts, and to evaluate possible mitigation measures. CO concentrations caused by local traffic at critical intersections must be estimated for comparison with the federal and state 1-hour and 8-hour CO standards. Concentrations must be estimated using the current, state-of-the-art approved emission factor programs and a dispersion model approved by USEPA to determine whether sensitive receptors would experience new or worsened violations of the federal CO standards.

Local CO dispersion modeling analysis was conducted at three "worst case" selected intersections for each project alternative. The "worst case" intersections for each alternative were selected based on level of service and total traffic volumes during the peak hour, as described in the USEPA's (1992) *Guideline for Modeling Carbon Monoxide from Roadway Intersections*. Table 3-2 presents the list of intersections selected for detailed analysis by project alternative. The listed ID numbers correspond to ID numbers in the *Transportation Technical Memorandum*. Figure 3-1 shows the location of each of the intersections analyzed.

The CO emission factors were developed using the USEPA's MOBILE6.2 program (USEPA 2004) and guidance from IEPA. Intersections were evaluated using EPA's CAL3QHC program (USEPA 1993). The estimated maximum 1-hour CO concentrations at each intersection were used to determine the 8-hour CO concentrations by multiplying the 1-hour concentration by a persistence factor approved by the IEPA of 0.7 (IEPA Personal communication 2012).

Total CO concentrations were derived by adding the modeled maximum concentrations to a background level to account for CO sources other than the traffic at the intersection being modeled. The background values represent worst-case, ambient CO levels that are assumed to occur independently of the vehicle traffic being analyzed. The nearest representative monitoring site to the project area is at 321 S. Franklin Street in Chicago. In consultation with IEPA (IEPA Personal communication 2012), background levels of 3.0 parts per million (ppm) for the 1-hour concentration and 1.7 ppm for 8-hour concentration were used based on the highest second-highest measured concentrations from the most recent 3 full years of monitoring data (2009–2011). These background levels are intended to represent worst-case urban conditions. The background concentrations were conservatively held constant for all analysis years and project alternatives. The maximum 1-hour and 8-hour CO concentrations (including an appropriate background concentration) were compared to the NAAQS for CO to determine impacts.

Table 3-2: Intersections Selected for the Detailed Air Quality Analysis by Alternative

Alternative	ID No.	Intersection Name	LOS	Total Volume
Existing	5	98th Place and Halsted Street	F	3,506
	14	103rd Street and Vincennes Avenue and Beverly Avenue	F	3,023
	59	119th Street and Ashland Avenue	F	1,922
No Build	5	98th Place and Halsted Street	F	3,742
	14	103rd Street and Vincennes Avenue and Beverly Avenue	F	3,598
	59	119th Street and Ashland Avenue	F	3,511
Bus Rapid Transit	5	98th Place and Halsted Street	F	3,688
	59	119th Street and Ashland Avenue	F	2,267
	73	130th Street and Indiana Avenue	F	2,602
Union Pacific Railroad Rail*	5	98th Place and Halsted Street	F	3,770
	62	119th Street and State Street	F	1,713
	73	130th Street and Indiana Avenue	F	3,479
Halsted Rail	5	98th Place and Halsted Street	F	3,771
	68	127th Street and Halsted Street	F	3,543
	70	127th Street and Vermont Avenue and Wallace Street	F	3,054

Source: KM Chng Environmental Inc., November 2012.

Notes:

LOS (level of service) and total volume data are for the peak hour.

Total volume is the number of vehicles entering an intersection from all approaches in the peak hour.

* = Results are the same for all UPRR Options.

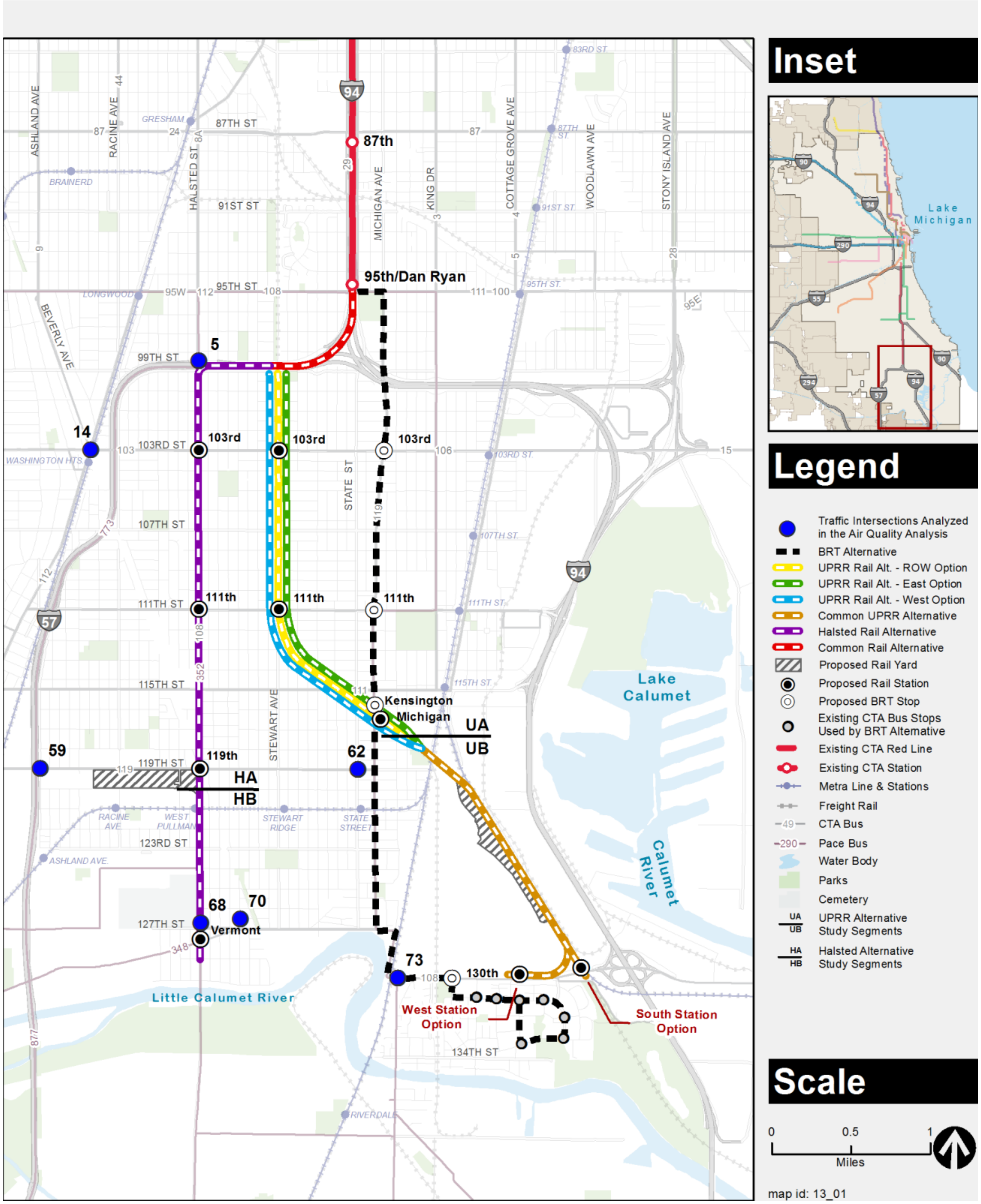
Inset
Lake Michigan
90
94
290
55
294
57
Legend
● Traffic Intersections Analyzed in the Air Quality Analysis
BRT Alternative
UPRR Rail Alt. - ROW Option
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
Common UPRR Alternative
Halsted Rail Alternative
Common Rail Alternative
▨ Proposed Rail Yard
Proposed Rail Station
Proposed BRT Stop
Existing CTA Bus Stops Used by BRT Alternative
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
49 CTA Bus
290 Pace Bus
Water Body
Parks
Cemetery
UA UB UPRR Alternative Study Segments
HA HB Halsted Alternative Study Segments
Scale
0
0.5
1
Miles
map id: 13_01
87th
95th/Dan Ryan
5
14
103rd
103rd
103rd
111th
111th
111th
Kensington
Michigan
UA
UB
59
62
119th
HA
HB
68
70
Vermont
73
130th
West Station Option
South Station Option
ASHLAND AVE
RACINE AVE
HALSTED ST
MICHIGAN AVE
KING DR
COTTAGE GROVE AVE
WOODLAWN AVE
STONY ISLAND AVE
STATE ST
STEWART AVE
BEVERLY AVE
87TH ST
91ST ST
95TH ST
99TH ST
103RD ST
107TH ST
111TH ST
115TH ST
119TH ST
123RD ST
127TH ST
134TH ST
GRESHAM
BRAINERD
LONGWOOD
WASHINGTON HTS
RACINE AVE
WEST PULLMAN
STEWART RIDGE
STATE STREET
ASHLAND AVE.
RIVERDALE
83RD ST
87TH ST
91ST ST
95TH ST
103RD ST
107TH ST
111TH ST
115TH ST
Lake Calumet
Calumet River
Little Calumet River
94
57
95E

Figure 3-1: Traffic Intersections Analyzed in the Air Quality Analysis

3.4.3 Greenhouse Gases

A GHG is a gas in the atmosphere that absorbs and emits radiation within the thermal infrared range. Some GHGs are emitted by natural sources, such as respiration of plants and living organisms. GHGs can also be man-made, with sources such as the combustion of fossil fuels in transportation, residential space heating and utility power plants. Greenhouse gases act like a blanket around Earth, trapping energy in the atmosphere and causing it to warm. This phenomenon is called the greenhouse effect and is natural and necessary to support life on Earth. However, the buildup of GHG can change Earth's climate and result in dangerous effects on human health and welfare and on ecosystems. The primary GHG in the Earth's atmosphere are water vapor, carbon dioxide, methane, nitrous oxide, and ozone. In addition, sulfur hexafluoride (SF6) is also a known GHG and is used in transformers and electrical equipment. Water vapor is not regulated in any way and ozone is regulated under the CAA; therefore, these two compounds will not be addressed further in this technical memorandum.

Of the GHGs that are implicated in global climate change, CO_2 is the most dominant GHG in the atmosphere, by far. The GHGs differ in their ability to trap heat. For example, 1 ton of emissions of CO_2 has a different effect than 1 ton of emissions of methane. To compare emissions of different GHGs, emissions were computed using a weighting factor called a Global Warming Potential (GWP). To use a GWP, the heat-trapping ability of 1 metric ton (1,000 kilograms) of CO_2 is taken as the standard, and emissions are expressed in terms of CO_2e. Therefore, the GWP of CO_2 is 1. The GWP of methane is 21, while the GWP of nitrous oxide is 310. Total GHG emissions were determined by converting CO_2, methane (CH_4), and N_2O emissions from each of the major source categories into total CO_2e emissions by multiplying each compound by its respective GWP and summing the results.

The CO_2e emissions were estimated for the existing conditions and each of the project alternatives in 2030. The USEPA's MOBILE6.2 program was used to determine CO_2 emission factors from motor vehicles (cars, trucks, and buses). Emission factors for CH_4 and nitrous oxide N_2O were taken from Table 13.4 of *The Climate Registry - General Reporting Protocol* (TCR 2012). Vehicle fuel economy was assumed to be the national average of 23.8 miles per gallon (taken from Table 4-23 of the *National Transportation Statistics Report*, [Bureau of Transportation Statistics 2011]). Emission factors were combined with motor vehicle-generated VMT to estimate GHG emissions.

The quantitative assessment of project-related GHG benefits and/or impacts on climate change was conducted in accordance with the *Illinois Climate Change Advisory Group's Final Recommendations to the Governor (ICCAG 2007)*. These changes in GHG emissions reflect differences in VMT, travel speed, fuel consumption, and delay along the project corridor. This comparison of GHG emissions was supplemented by a qualitative assessment of project-related GHG benefits and/or impacts on global climate change. If any of the project alternatives were to lead to increased electricity use, this increase could lead to increased GHG emissions from local power plants supplying electricity to the grid.

The FTA issued new New Starts Guidance in January 2013 (Federal Transit Administration, *Proposed New Starts and Small Starts Policy Guidance*, January 9, 2013), which provides rates for converting VMT to CO, NOx, $PM_{2.5}$, VOCs, and GHG (CO_2e). The guidance was not available at the time this analysis was prepared; it was released long after the GHG analysis for this project was completed and the analysis has not been redone. The GHG emission factors used in this analysis are conservative (about 20 percent higher than the new FTA values). Thus, while the magnitude of the GHG impacts (actually improvements) would be smaller when using the FTA values, the overall conclusions would not change.

3.4.4 $PM_{2.5}$ Hot Spot Analysis

A hot spot analysis is defined in 40 Code of Federal Regulations (CFR) 93.101 as an estimation of likely future localized $PM_{2.5}$ pollutant concentrations and a comparison of those concentrations to the relevant air quality standards. A hot spot analysis assesses the air quality impacts on a scale smaller than an entire nonattainment or maintenance area. Such an analysis is a means of demonstrating that a transportation project meets CAA conformity requirements to support state and local air quality goals with respect to potential localized air quality impacts.

The qualitative $PM_{2.5}$ hot spot analysis followed USEPA's latest guidance (USEPA 2006). The analysis was based on direct emissions only. No precursor or secondary reaction products were taken into account. Based on the USEPA guidance, construction phase impacts were not required to be addressed in the $PM_{2.5}$ hot spot analysis. The method chosen to complete the $PM_{2.5}$ analysis is a combination of (1) performing and evaluating air quality studies for the proposed project location, and (2) using results of other studies for the general project location, including the Illinois SIP for $PM_{2.5}$ (CMAP 2008, 2010a, 2010b, 2010c). Various federal regulations requiring lower particulate emissions and fuel reformulations, including low-sulfur diesel fuels, have a significant role in reducing $PM_{2.5}$ emissions from mobile sources.

3.4.5 Mobile Source Air Toxics

Mobile source air toxics (MSAT) are compounds emitted from highway vehicles and non-road equipment and that are known or suspected to cause cancer or other serious health and environmental effects. Mobile sources are responsible for direct emissions of air toxics and contribute to precursor emissions that react to form secondary pollutants. The NEPA process requires the examination and avoidance of potential impacts on the natural and human environment when considering approval of proposed transportation projects.

The RLE Project would not have a high potential of MSAT effects, because direct emissions of MSAT from motor vehicles on the roadways are expected to decrease substantially with time. Project impacts on air toxics were assessed qualitatively, following the Federal Highway Administration's (FHWA's) 2009 guidelines (FHWA 2009). A qualitative analysis provides a basis for identifying and comparing the potential differences among MSAT emissions, if any, from the various alternatives. The qualitative assessment presented here is derived in part from a study conducted by the FHWA titled *A Methodology for Evaluating Mobile Source Air Toxic Emissions Among Transportation Project Alternatives* (FHWA 2011).

This assessment includes a description and discussion of national trend data projecting substantial overall reductions in emissions due to stricter engine and fuel regulations issued by USEPA, a discussion of information that is incomplete or unavailable for a project-specific assessment of MSAT impacts in compliance with the Council on Environmental Quality regulations (40 CFR 1502.22(b)), and a summary of current studies regarding the health impacts of MSAT, in compliance with 40 CFR 150.22(b). A qualitative comparison of MSAT from the various project alternatives was developed from the estimates of VMT, which were used as a surrogate for indicating trends in MSAT emissions.

3.4.6 Construction Impacts

Potential air quality impacts during construction were addressed qualitatively for construction vehicle emissions, including particulate matter (PM_{10} and $PM_{2.5}$) emissions and fugitive dust emissions. The focus of the assessment was to identify various mitigation measures to minimize or avoid these potential impacts.

3.4.7 Mitigation Measures

Mitigation of emissions during construction activities was addressed in Section 3.4.6. Following construction, operation of the project would result in no direct emissions. There could be an overall decrease in motor vehicle emissions due to diversion of passengers from motor vehicles to transit. During operation, none of the build alternatives would be likely to lead to any of the following:

- Emissions causing or contributing to a new violation of the NAAQS in the project area.
- An increase in the frequency or severity of an existing violation of the NAAQS.
- A delay of timely attainment of the NAAQS or other emissions reduction milestones in the project area.

Therefore, no mitigation measures would be needed for operation of the project.

Section 4
Affected Environment

As described in Section 3.1.2, Cook County, Illinois has been designated as a moderate nonattainment area with respect to the 8-hour ozone NAAQS. The IEPA, through the SIP, specifies target dates for achieving compliance with the ozone standard, and identifies specific emission reduction goals for NO_2 and non-methane hydrocarbons, which are precursors of ozone. The USEPA has designated Cook County a nonattainment area for $PM_{2.5}$, but current air quality data show that Cook County is meeting the $PM_{2.5}$ NAAQS. The IEPA has requested a redesignation, but to date, the USEPA has not acted on this request. The USEPA has designated a portion of Cook County a nonattainment area for lead, but that nonattainment area is not in the project area.

Because the project would occur in a “moderate” ozone nonattainment area, it is the FTA's responsibility, as the federal lead agency, to ensure that the proposed project conforms to the Illinois SIP. A "conforming" project is defined as one that meets the SIP's objectives of eliminating or reducing the severity and number of violations of the NAAQS and achieving expeditious attainment of those standards.

Federally funded transit projects are subject to the USEPA transportation conformity rule (40 CFR Part 93 Subpart A). Conformity is demonstrated by showing that the proposed project is included in a conforming RTP and also meets the project-level requirements contained in the transportation conformity rule. The Long-Range RTP for the region is the *2030 Regional Transportation Plan for Northeastern Illinois* ([2030 RTP] CMAP 2008). The Board of the CMAP and the Metropolitan Planning Organization Policy Committee approved an update to the 2030 RTP on October 8 and October 9, 2008, respectively. The region’s TIP, *Federal Fiscal Year 2010–2015 Transportation Improvement Program* (CMAP 2010) was accepted by the U.S. Department of Transportation on October 25, 2010, following approvals by the CMAP Metropolitan Planning Organization Policy Committee, IDOT, IEPA, and USEPA. All of the projects in the TIP are included in the conforming 2030 RTP. The 2030 RTP was replaced by the *GO TO 2040* comprehensive regional plan (CMAP 2010) in January 2012. The updated RTP (*GO TO 2040)* continues to carry the RLE Project. Because the RLE Project is in a conforming RTP, a regional analysis of project emissions is not required to demonstrate compliance with the transportation conformity rule.

4.1 Measured Ambient Air Quality Concentrations

This section summarizes measured ambient air quality data for the region including the project area. The IEPA maintains a statewide network of monitoring stations that continuously measure pollutant concentrations in the ambient air. These stations provide data to assess compliance with the NAAQS and the IAAQS and to evaluate the effectiveness of pollution control strategies. The pollutants of concern are CO, NOx, Ozone, PM_{10}, $PM_{2.5}$, and sulfur dioxide. Table 4-1 presents the maximum ambient concentrations for these pollutants measured at representative monitoring stations nearest to the project corridor for the most recently available full year of data, calendar year 2011. As shown in Table 4-1, except for one exceedance of the 8-hour ozone at the Lawndale Street Station, there were no exceedances in the project area of any of the NAAQS or IAAQS in 2011.

Table 4-1: Measured Ambient Air Quality in the Project Area for 2011

Pollutant	Monitor Location	Averaging Period	Monitored Value	Standard
Carbon Monoxide	321 S. Franklin (Chicago, IL)	1-hour	3.3 ppm	35.0 ppm
Carbon Monoxide	321 S. Franklin (Chicago, IL)	8-hour	1.5 ppm	9.0 ppm
Nitrogen Dioxide	321 S. Franklin (Chicago, IL)	1-hour	89 ppb	100 ppb
Ozone	7801 Lawndale (Chicago, IL)	8-hour	**0.082 ppm**	0.075 ppm
PM_{10}	750 Dundee Rd. (Northbrook, IL)	24-hour	38 µg/m^3	150 µg/m^3
$PM_{2.5}$	3535 E.114th St. (Chicago, IL)	24-hour	28.5 µg/m^3	35 µg/m^3
$PM_{2.5}$	3535 E.114th St. (Chicago, IL)	Annual	12.6 µg/m^3	15.0 µg/m^3
Sulfur Dioxide	7801 Lawndale (Chicago, IL)	1-hour	29 ppb	75 ppb
Sulfur Dioxide	7801 Lawndale (Chicago, IL)	24-hour	7 ppb	140 ppb

Source: EPA, Airdata website (http://www.epa.gov/airdata), Monitor Values Report accessed October 15, 2012.
Units of measure are parts per million (ppm) or parts per billion (ppb) by volume, and micrograms per cubic meter of air (µg/m3).
Values in **bold** exceed the applicable standard, but do not constitute a violation.

4.2 CO Hot Spot Analysis

Following the methods described in Section 3.4.2, a CO hot spot analysis was conducted for the existing conditions using EPA's MOBILE6.2 emission factors program and EPA's CAL3QHC dispersion model. A summary of the modeled maximum 1-hour CO concentrations at each of the street intersections selected for analysis (98th Place and Halsted Street, 103rd Street and Vincennes Avenue and Beverly Avenue, and 119th Street and Ashland Avenue) is presented in Table 4-2. These concentrations include a background level of 3.0 parts per million (ppm), which was determined to remain constant with time. The 8-hour CO concentrations were estimated by multiplying the modeled 1-hour results (without the background) by a persistence factor of 0.7 and adding a background of 1.7 ppm (also assumed to remain constant with time). A summary of the modeled maximum 8-hour CO concentrations for the selected intersections for the existing conditions is also presented in Table 4-2.

Table 4-2: Estimated Maximum 1-Hour and 8-Hour Carbon Monoxide Concentrations for the Existing Conditions

ID No.	Intersection Description	Maximum 1-hour* (ppm)	Maximum 8-hour** (ppm)
5	98th Place and Halsted Street	5.7	3.6
14	103rd Street and Vincennes Avenue and Beverly Avenue	5.1	3.2
59	119th Street and Ashland Avenue	5.0	3.1

Source: KM Chng Environmental Inc., 2012.

* Values include a background 1-hour CO concentration of 3.0 ppm.

** Values include a background 8-hour CO concentration of 1.7 ppm.

ppm = parts per million

As shown in Table 4-2, the maximum modeled 1-hour CO concentration at any of the three intersections analyzed for the existing conditions was estimated to be 5.7 ppm, including a background concentration of 3.0 ppm, for the intersection of 98th Place and Halsted Street. This maximum 1-hour CO concentration occurred at a receptor located along the southbound approach of Halsted Street about 3 meters from the intersection with 98th Place. All of the modeled 1-hour CO concentrations for the existing conditions were well below the 1-hour CO National and Illinois standard of 35 ppm.

The maximum 8-hour CO concentration for the existing conditions occurred at the same receptor at the same intersection as the 1-hour concentration and was estimated to be 3.6 ppm, including a background CO concentration of 1.7 ppm. All of the modeled 8-hour CO concentrations for the existing conditions were also well below the corresponding 8-hour CO National and Illinois standards of 9 ppm.

4.3 Greenhouse Gas Analysis

A GHG is a gas in the atmosphere that absorbs and emits radiation within the thermal infrared range. The quantitative assessment of project-related GHG benefits and/or impacts on climate change presented here was conducted to reflect the changes in GHG emissions based on differences in VMT, travel speed, fuel consumption, and delay along the project corridor.

The six-county Chicago metropolitan area, including Cook County, was estimated to have emissions of about 105 million metric tons of CO_2e in calendar year 2000. The transportation sector was responsible for up to 31 percent of the CO_2 emissions, and on-road vehicles generated approximately 90 percent of the CO_2e emissions from transportation sources (McGraw et al. 2010).

The GHG emissions in the project area for the existing conditions in 2012 were estimated to be about 53,048,993 tons per year (tpy) of CO_2, about 1,704 tpy of CH4, and about 2,613 tpy of N_2O.

When converted to total CO_2e using the GWP conversion factors, the total GHG is 53,894,714 tpy of CO_2e.

4.4 $PM_{2.5}$ Hot Spot Analysis

The method chosen to complete the qualitative $PM_{2.5}$ analysis is a combination of (1) performing and evaluating air quality studies for the proposed project location, and (2) using results of other studies for the general project location (including the Illinois SIP for $PM_{2.5}$).

Diesel particulate matter is part of a complex mixture that makes up diesel exhaust. Diesel exhaust is commonly found throughout the environment and is estimated by EPA to contribute to the human health risk. Diesel exhaust is composed of two phases, either gas or particle and both phases contribute to the risk. The gas phase is composed of many of the urban hazardous air pollutants, such as acetaldehyde, acrolein, benzene, 1,3-butadiene, formaldehyde and polycyclic aromatic hydrocarbons. The particle phase also has many different types of particles that can be classified by size or composition. The sizes of diesel particulates that are of greatest health concern are those that are in the categories of fine and ultra-fine particles. The composition of these fine and ultra-fine particles may be composed of elemental carbon with adsorbed compounds such as organic compounds, sulfate, nitrate, metals and other trace elements. Diesel exhaust is emitted from a broad range of diesel engines; the on road diesel engines of trucks, buses and cars and the off road diesel engines that include locomotives, marine vessels, and heavy duty equipment.

Diesel exhaust causes health effects from both short-term or acute exposures and also long-term chronic exposures, such as repeated occupational exposures. The type and severity of health effects depends upon several factors including the amount of chemical one is exposed to and the length of time one is exposed. Individuals also react differently to different levels of exposure. There is limited information on exposure to just diesel particulate matter but there is enough evidence to indicate that inhalation exposure to diesel exhaust causes acute and chronic health effects. Acute exposure to diesel exhaust may cause irritation to the eyes, nose, throat and lungs, and some neurological effects such as lightheadedness. Acute exposure may also elicit a cough or nausea as well as exacerbate asthma. Based upon human and laboratory studies, there is considerable evidence that diesel exhaust is a likely carcinogen. Human epidemiological studies demonstrate an association between exposure to diesel exhaust and increased lung cancer rates in occupational settings.

The USEPA has designated Cook County as a nonattainment area for $PM_{2.5}$, but current air quality data show that Cook County is meeting the $PM_{2.5}$ NAAQS. As noted above, the IEPA has also requested a redesignation to attainment status, but to date, the USEPA has not acted on this request. Following joint guidance issued by EPA and FHWA (USEPA 2006), the following qualitative assessment of $PM_{2.5}$ hot spot analysis was conducted. Air quality monitoring of $PM_{2.5}$ in Cook County and across the state shows a decrease in $PM_{2.5}$ concentrations of 24 percent over the past decade (2001–2010). For the existing conditions, monitored ambient $PM_{2.5}$ concentrations in the vicinity of the RLE Project show no exceedances of the $PM_{2.5}$ standard in 2011 (the most recent year for which complete data is available).

4.5 Mobile Source Air Toxics Analysis

Mobile source air toxics are emitted from motor vehicles and non-road construction equipment. The MSAT can be present in the fuels, formed from incomplete combustion of fossil fuels, or formed as secondary reaction products from the combustion emissions in the atmosphere. A qualitative comparison of MSAT from the various project alternatives was developed from the estimates of VMT, which were used as a surrogate for indicating trends in MSAT, and the comparisons are provided below. Although a qualitative analysis cannot identify and measure health impacts from MSAT, it provides a basis for comparing and contrasting the various alternatives with respect to MSAT emissions. The qualitative analysis of MSAT for this project assumes the change in the amount of MSAT emitted between the No Build and the RLE Project Alternatives will be proportional to the change in the project-related VMT.

Mobile source air toxics are a subset of the 188 air toxics defined by the CAA. Most air toxics originate from human-made sources, including on-road mobile sources, non-road mobile sources (e.g., airplanes), and stationary sources (e.g., factories or refineries). Metal air toxics also result from engine wear or from impurities in oil or gasoline. The USEPA has assessed the list of 188 air toxics in its latest rule on the Control of Hazardous Air Pollutants from Mobile Sources and identified a group of 93 compounds emitted from mobile sources that are listed in its Integrated Risk Information System. There currently are no established ambient air quality standards for MSAT. In accordance with the FHWA's guidance regarding air toxic analysis (FHWA 2009), a qualitative assessment of MSAT is also included in the air quality analysis.

Of the many MSAT that are regulated by the USEPA, six are judged to be significant for transportation sources partly because of their suspected carcinogenicity and their relative abundance in vehicle exhaust. According to USEPA's *Control of Emissions of Hazardous Air Pollutants from Mobile Sources Final Rule* (USEPA 2007), these six priority MSAT include benzene, acrolein, formaldehyde, 1,3-butadiene, acetaldehyde, and diesel particulate matter. As a result of the FMVECP (40 USC § 7521), the FHWA estimates that even with an assumed 64 percent increase in VMT from 2000 to 2020, emissions of the various non-diesel MSAT would decrease by 57 to 65 percent. For diesel particulates and diesel organic gases, the reduction was estimated at 87 percent. A qualitative comparison of MSAT from the various project alternatives was developed from the estimates of VMT, which were used as a surrogate for indicating trends in MSAT emissions.

Section 5
Impacts and Mitigations

This section describes the analyses performed and assesses the results in comparison to the No Build Alternative.

5.1 No Build Alternative

The No Build Alternative in 2030 is defined as the existing transportation system plus any committed transportation improvements that are already in the CMAP Fiscal Year 2010–2015 TIP. The TIP projects within the project area include four bridge reconstructions, several road improvement projects including resurfacing and coordination of signal timing, work on Metra's facilities, construction of a bicycle/pedestrian multi-use trail, and preservation of historic facilities. No new infrastructure would be constructed as part of the No Build Alternative.

5.1.1 Permanent Impacts and Mitigations – No Build Alternative

With the No Build Alternative, there would be no changes in ridership due to the proposed RLE Project; therefore, there would be no changes in direct emissions due to the proposed project. The Red Line trains run on electricity; therefore, they cause no direct emissions. Their electricity comes from the electric utility grid, which may include local, fossil-fueled power plants. No increase in electrical power consumption would be expected under the No Build Alternative; therefore, no change in indirect emissions would be expected with the No Build Alternative.

5.1.1.1 CO Hot Spot Analysis

A summary of the modeled maximum 1-hour CO concentrations at all of the street intersections selected for analysis is presented in Table 5-1. A summary of the modeled maximum 8-hour CO concentrations for the selected intersections is presented in Table 5-2. For comparison purposes, the results for all project alternatives are presented in these tables. The three "worst case" intersections for each alternative were selected based on level of service (LOS) and total traffic volumes during the peak hour, as required by USEPA guidance (USEPA 1992). These intersections may not be the same for each alternative based on the traffic analysis LOS results.

As shown in Table 5-1, the maximum modeled 1-hour CO concentration at any of the three intersections analyzed for the No Build Alternative (98th Place and Halsted Street, 103rd Street and Vincennes Avenue and Beverly Avenue, and 119th Street and Ashland Avenue) was estimated to be 5.1 ppm, including a background concentration of 3.0 ppm, and occurred at the intersection of 98th Place and Halsted Street. This maximum 1-hour CO concentration occurred at a receptor located along the eastbound departure of 98th Place about 3 meters from the intersection with Halsted Street. All of the modeled 1-hour CO concentrations for the No Build Alternative were well below the 1-hour CO National and Illinois standards of 35 ppm.

Table 5-1: Summary of Estimated Maximum 1-hour Carbon Monoxide Concentrations* by Project Alternative

ID No.	Intersection Description	Existing (ppm)	No Build (ppm)	BRT (ppm)	UPRR (ppm)	Halsted (ppm)
5	98th Place and Halsted Street	5.7	5.1	5.1	5.1	5.1
14	103rd Street and Vincennes Avenue and Beverly Avenue	5.1	4.9	na	na	na
59	119th Street and Ashland Avenue	5.0	4.6	4.7	na	na
62	119th Street and State Street	na	na	na	3.9	na
68	127th Street and Halsted Street	na	na	na	na	4.6
70	127th Street and Wallace Street and Vermont Avenue	na	na	na	na	4.7
73	130th Street and Indiana Avenue	na	na	4.4	4.8	na

Source: KM Chng Environmental Inc., 2012.
* Values include a background 1-hour CO concentration of 3.0 ppm.
na means this intersection was not analyzed for this alternative.
ppm = parts per million, BRT = Bus Rapid Transit, UPRR = Union Pacific Railroad

As shown in Table 5-2, the maximum 8-hour CO concentration for the No Build Alternative was for the same receptor at the same intersection as the 1-hour concentration and was estimated to be 3.2 ppm, including a background CO concentration of 1.7 ppm. All of the modeled 8-hour CO concentrations for the No Build Alternative were also well below the corresponding 8-hour CO National and Illinois standards of 9 ppm.

Table 5-2: Summary of Estimated Maximum 8-Hour Carbon Monoxide Concentrations* by Project Alternative

ID No.	Intersection Description	Existing (ppm)	No Build (ppm)	BRT (ppm)	UPRR (ppm)	Halsted (ppm)
5	98th Place and Halsted Street	3.6	3.2	3.2	3.2	3.2
14	103rd Street and Vincennes Avenue and Beverly Avenue	3.2	3.0	na	na	na
59	119th Street and Ashland Avenue	3.1	2.8	2.9	na	na
62	119th Street and State Street	na	na	na	2.3	na
68	127th Street and Halsted Street	na	na	na	na	2.8
70	127th Street and Vermont Avenue and Wallace Street	na	na	na	na	2.9
73	130th Street and Indiana Avenue	na	na	2.7	3.0	na

Source: KM Chng Environmental Inc., 2012.

* Values include a background 8-hour CO concentration of 1.7 ppm.

na means this intersection was not analyzed for this alternative.

ppm = parts per million, BRT = Bus Rapid Transit, UPRR = Union Pacific Railroad

5.1.1.2 Greenhouse Gas Analysis

A quantitative assessment of project-related GHG benefits and/or impacts on climate change was conducted to reflect the changes in GHG emissions based on differences in VMT, travel speed, fuel consumption, and delay along the project corridor. There would be no growth in VMTs or delay due to the RLE Project in the No Build Alternative. Following the methods described in Section 3.4.3, emissions of GHG were estimated for each of the project alternatives.

A summary of the results of that analysis is presented in Table 5-3 by alternative for comparison purposes. The No Build Alternative would not be expected to change the ridership or to result in changes in diversion from motor vehicles to trains. However, some growth in VMT for the project corridor that would be unrelated to the proposed project would still take place. The increases in regional VMT would lead to increases in GHG (CO_2e) emissions under the No Build Alternative.

Table 5-3: Project-Related Greenhouse Gas Emissions by Project Alternative

Alternative	CO_2 (tpy)	CH_4 (tpy)	N_20 (tpy)	Total GHG (tpy)	GWP* (tons CO2e/year)
Existing Conditions	53,048,993	1,704	2,613	53,053,310	53,894,714
No Build Alternative	62,539,690	1,980	3,036	62,544,707	63,522,530
BRT Alternative	62,532,636	1,980	3,036	62,537,652	63,515,365
UPRR Rail Alternative	62,527,538	1,979	3,036	62,532,553	63,510,186
Halsted Rail Alternative	62,528,056	1,979	3,036	62,533,071	63,510,713

Source: KM Chng Environmental Inc., 2012.
Notes:
CO_2 = carbon dioxide, CH_4 = methane, N_2O = nitrous oxide, GHG = greenhouse gas, tpy = tons per year, GWP = Global Warming Potential in units of tons of carbon dioxide equivalents per year (CO_2e/year), BRT = Bus Rapid Transit, UPRR = Union Pacific Railroad

With the No Build Alternative, estimated project-related GHG emissions would be about 62,539,690 tpy of CO_2, about 1,980 tpy of CH4, and about 3,036 tpy of N_2O. These emissions would be an increase of 17.9, 16.1, and 16.2 percent, respectively when compared to the existing conditions GHG emissions. The sum of project-related GHG emissions for the No Build Alternative is 62,544,707 tpy or about 18 percent more than the 53,053,310 tpy of total project-related GHG emissions for the existing conditions.

When converted to total CO_2e emissions using the GWP conversion factors, the total emissions of project-related CO_2e for the No Build Alternative would be 63,522,530 tpy of CO_2e. Compared to the existing conditions CO_2e emissions of 53,894,714 tpy, this would be an increase of about 18 percent.

5.1.1.3 $PM_{2.5}$ Hot Spot Analysis

For the No Build Alternative in 2030, project-related $PM_{2.5}$ emissions in the Northeastern Illinois Nonattainment Area (CMAP 2008) were estimated to be 1,981 tpy. Specifically, $PM_{2.5}$ emissions factors for motor vehicles in the Chicago area are expected to decline by over 38 percent between 2012 and 2030. However, VMT in the project area in the No Build Alternative are expected to increase compared to the existing conditions VMT by about 14 percent. When taken together, these two factors would result in a reduction in regional $PM_{2.5}$ emissions by 2030. In addition to the federal exhaust emissions control programs and fuel reformulation programs, statewide efforts to reduce congestion and vehicle idling are also expected to have a direct benefit by reducing $PM_{2.5}$ concentrations at the local level.

In its conformity analysis, CMAP concluded that the *GO TO 2040* plan and the TIP meet all applicable requirements for conformity for the annual $PM_{2.5}$ standard; *GO TO 2040* and the TIP have also been recommended for approval by USDOT.

5.1.1.4 MSAT Analysis

A qualitative comparison of MSAT from the various project alternatives was developed from the estimates of VMT, which were used as a surrogate for indicating trends in MSAT emissions, and the comparisons are provided below.

The No Build Alternative would not be expected to change the ridership or result in substantial diversion from motor vehicles to trains. The EPA's FMVECP is expected to reduce MSAT emissions by about 54 percent in the project area between 2012 and 2030. However, VMT in the project area in the No Build Alternative are expected to increase compared to the existing conditions VMT by about 14 percent. When taken together, these two factors would result in a reduction in regional MSAT emissions for the No Build Alternative compared to the existing conditions.

5.1.2 Construction Impacts and Mitigations – No Build Alternative

Under the No Build Alternative, no new infrastructure would be constructed. However, it is assumed that necessary repairs to keep the Red Line running would take place. Therefore, there would be no new emissions due to construction, except for projects that were already planned. Potential impacts on air quality due to the No Build Alternative would be minimal and no mitigation is proposed for the No Build Alternative.

5.1.3 Cumulative Impacts and Mitigations – No Build Alternative

The only project that might be related to the No Build Alternative with respect to air quality impacts is CTA's Red and Purple Modernization (RPM) Project. Without improvements to the existing Red Line, the RLE might not be able to achieve its full potential. The impact on air quality would not be adverse.

5.2 Bus Rapid Transit Alternative

The proposed Bus Rapid Transit Alternative (BRT Alternative) is a BRT route that would operate between the existing 95th Street Terminal and the intersection of 130th Street and Eberhart Avenue via 95th Street, Michigan Avenue, 127th Street, Indiana Avenue, and 130th Street. Four stops with improved bus shelters would be created at 103rd Street and Michigan Avenue, 111th Street and Michigan Avenue, Kensington Avenue and Michigan Avenue, and 130th Street and Eberhart Avenue. The bus route would continue through Altgeld Gardens with stops at 131st Street and Langley Avenue, 131st Street and Corliss Avenue, 131st Street and Ingleside Avenue, 132nd Street and Ellis Avenue, 133rd Street and Ellis Avenue, and 133rd Place and Corliss Avenue. The BRT Alternative would be consistent with bus routing changes that may occur as part of improvements to the 95th Street Terminal.

5.2.1 Permanent Impacts and Mitigations - Bus Rapid Transit Alternative

The Red Line trains run on electricity; therefore, they cause no direct emissions. Their electricity comes from the electric utility grid, which may include local, fossil-fueled power plants. No increase in direct project-related emissions from Red Line Trains would be expected under the BRT Alternative. However, with the increase in bus miles travelled, a slight change in direct emissions would be expected with the BRT Alternative.

5.2.1.1 CO Hot Spot Analysis

A summary of the modeled maximum 1-hour CO concentrations at each of the street intersections selected for analysis (98th Place and Halsted Street, 103rd Street and Vincennes Avenue and Beverly Avenue, and 119th Street and Ashland Avenue) is presented in Table 5-1. A summary of the modeled maximum 8-hour CO concentrations for the selected intersections is also presented in Table 5-2. The three “worst case” intersections for each alternative were selected based on LOS and total traffic volumes during the peak hour, as required by USEPA guidance (USEPA 1992). These intersections may not be the same for each alternative based on the traffic analysis LOS results.

As shown in Table 5-1, the maximum modeled 1-hour CO concentration at any of the three intersections analyzed for the BRT Alternative was estimated to be 5.1 ppm, including a background concentration of 3.0 ppm, and occurred at the intersection of 98th Place and Halsted Street. This maximum 1-hour CO concentration occurred at a receptor located along the eastbound departure of 98th Place about 3 meters from the intersection with Halsted Street. All of the modeled 1-hour CO concentrations for the BRT Alternative were well below the 1-hour CO National and Illinois standards of 35 ppm.

As also shown in Table 5-2, the maximum 8-hour CO concentration for the BRT Alternative occurred at the same receptor at the same intersection as the 1-hour concentration and was estimated to be 3.2 ppm, including a background CO concentration of 1.7 ppm. All of the modeled 8-hour CO concentrations for the BRT Alternative were also well below the corresponding 8-hour CO National and Illinois standards of 9 ppm.

Based on the above analysis, no mitigation measures would be required for any of the traffic intersections analyzed for the BRT Alternative. Also, no adverse air quality impacts from CO emissions are expected to occur with this alternative.

5.2.1.2 Greenhouse Gas Analysis

This quantitative assessment of project-related GHG benefits and/or impacts on climate change presented here was conducted based on the methods described in Section 3.4.3. The BRT Alternative is expected to cause a small change in ridership to divert from motor vehicles to transit, and to also cause a very small increase in additional BRT Alternative bus VMT. This would lead to a small decrease in VMT of 31,182. Thus, this decrease in VMT would lead to a small decrease in GHG emissions under the BRT Alternative.

As shown in Table 5-3, the estimated BRT Alternative project-related GHG emissions would be about 62,532,636 tpy of CO_2, about 1,980 tpy of CH4, and about 3,036 tpy of N_2O. When compared to the existing conditions, project-related GHG emissions for the BRT Alternative would represent an increase of over 16 percent for each pollutant. However, when the BRT Alternative GHG emissions are compared to the No Build Alternative GHG emissions, they would be smaller by about 0.01 percent for each pollutant.

The sum of project-related GHG emissions for the BRT Alternative is 62,537,652 tpy or about 15 percent higher than the 53,053,310 tpy of total project-related GHG emissions for the existing conditions. However, the sum of project-related GHG emissions for the BRT Alternative is about 0.01 percent less than the 62,544,707 tpy of total project-related GHG emissions for the No Build Alternative.

When converted to total CO_2e emissions using the GWP conversion factors, the total project-related GHG emissions for the BRT Alternative would be 63,515,365 tpy of CO_2 equivalents. Total project-related CO_2e emissions for the BRT Alternative would be about 15 percent higher than the 53,894,714 tpy of total project-related CO_2e emissions for the existing conditions. However, compared to the No Build Alternative, the CO_2e emissions for the BRT Alternative would be about 0.01 percent lower in total CO_2e emissions. Therefore, no adverse air quality impacts from GHG emissions are anticipated due to this alternative.

5.2.1.3 $PM_{2.5}$ Hot Spot Analysis

The $PM_{2.5}$ emissions factors for motor vehicles in the Chicago area are expected to decline by over 38 percent between 2012 and 2030. In addition, VMT in the project area in the BRT Alternative (including VMT generated by additional bus operations) are expected to be slightly lower than in the No Build Alternative VMT, by about 0.01 percent, due to passenger diversions. When taken together, these two factors would result in the BRT Alternative having slightly lower regional $PM_{2.5}$ emissions than the No Build Alternative. In addition to the federal exhaust emissions control programs and fuel reformulation programs, statewide efforts to reduce congestion and vehicle idling are also expected to have a direct benefit by reducing $PM_{2.5}$ concentrations at the local level.

In its conformity analysis, CMAP concluded that the *GO TO 2040* plan and the TIP meet all applicable requirements for conformity for the annual $PM_{2.5}$ standard; *GO TO 2040* and the TIP have also been recommended for approval by USDOT. Therefore, no adverse air quality impacts from $PM_{2.5}$ emissions are anticipated due to this alternative.

5.2.1.4 MSAT Analysis

The EPA's FMVECP is expected to reduce MSAT emissions by about 54 percent in the project area between 2012 and 2030. In addition, VMT in the project area with the BRT Alternative (including VMT generated by additional bus operations) are expected to be slightly lower than in the No Build Alternative VMT, by about 0.01 percent, due to passenger diversions. When taken together, these factors would result in the regional MSAT emissions with the BRT Alternative being slightly lower than with the No Build Alternative. Therefore, no adverse air quality impacts from MSAT emissions are anticipated due to this alternative.

5.2.2 Construction Impacts and Mitigations – Bus Rapid Transit Alternative

Construction activities for the BRT Alternative would be grouped by type of work and location. Overall schedule and coordination would be phased and scheduled to maintain CTA operations at the 95th Street Terminal and 98th Street Yard and Shop, and to maintain vehicular traffic on affected expressways and roadways. Construction for the BRT corridor could be sequenced to coordinate with CTA operations at the 95th Street Terminal.

Emissions from construction equipment would occur during site preparation activities such as grading, installing curbs, or grubbing and removal of vegetation to prepare a site for construction. Impacts during construction would be primarily associated with fugitive dust and emissions from on-road and non-road vehicles. The equipment producing these emissions could include haul trucks, concrete trucks, front-end loaders, excavators, cranes, drill rigs, compressors, flatbed trucks, and generators. Most state air quality agencies, including IEPA, have strict guidelines for controlling fugitive dust (usually by good housekeeping practices), diesel particulate emissions (by exhaust emission controls and use of low sulfur fuels), and GHG emissions (by limiting equipment operations such as excessive idling and by using alternative fuels).

Construction activities can also result in traffic disruption, rerouting, and temporary shutdown of traffic. Traffic disruption, such as decreased roadway capacity or detouring, can lead to increased traffic congestion, thereby increasing motor vehicle exhaust emissions on nearby roadways, and resulting in elevated localized pollutant concentrations. Temporary shutdown of traffic would occur at nighttime and during low traffic volume intervals per IDOT approval. Work would be sequenced to minimize impacts on adjacent roadways and commercial and residential buildings. Existing utilities would be protected during construction of the BRT stations, park & ride facilities, and traffic signal improvements.

Proper traffic management during the construction period would mitigate any potential adverse effects. This would include finding less congested routes for construction-related truck traffic, creating temporary detours for regular roadways where capacities have been diminished, providing traffic control, routing trucks away from residential neighborhoods, and restricting construction activities during hours of high traffic volumes on the existing roadways. Staging areas and worker parking areas would be established away from sensitive receptors.

Many state agencies such as IDOT require the contractor to develop a Dust Control Plan that would address in detail how dust would be controlled at all times at the construction site, the staging areas, and the access and egress routes. The agencies also require all diesel-powered equipment and vehicles to be retrofitted with emissions control devices and to use ultra-low sulfur diesel to control diesel particulate emissions.

CTA would require the contractor to develop a plan and schedule to allow construction trucks to access and egress the construction sites and staging areas without excessive disruption and impacts on residences and commercial establishments.

Compared with the other two build alternatives, construction activities for the BRT Alternative would be noticeably fewer and smaller in scale. With the use of appropriate mitigation measures as described above, no violations of any of the IAAQS are anticipated for this alternative. Therefore, with appropriate mitigation measures in place, no adverse air quality impacts due to construction activities are anticipated due to this alternative.

5.2.3 Cumulative Impacts and Mitigations – Bus Rapid Transit Alternative

The only project that might be related to the BRT Alternative with respect to air quality impacts is CTA's RPM Project. Without improvements to the existing Red Line, the RLE might not be able to achieve its full potential. The impact on air quality with or without the RPM Project would not be adverse.

5.3 Union Pacific Railroad Rail Alternative

The UPRR Alternative would extend the heavy rail transit Red Line from the existing 95th Street Terminal to 130th Street, just west of I-94. The UPRR Rail Alternative would be an extension of the existing Red Line. Three UPRR Rail Alternative options for the segment between I-57 and the CN/Metra Electric tracks are assessed here:

- ROW Option: CTA tracks placed in the UPRR ROW.
- East Option: CTA tracks placed immediately adjacent to and east of the UPRR ROW.
- West Option: CTA tracks placed immediately adjacent to and west of the UPRR ROW.

The air quality analysis presented here applies to the project area as a whole. Because nearly all of the project-related air pollutant emissions would come from motor vehicles and because the project-related motor vehicles would move throughout the entire project area, the results of the air quality analysis apply equally to all of the UPRR options mentioned above, as well as to the 120th Street yard and shop. That is, it makes no difference in the analysis whether the Red Line Trains would be on the UPRR ROW, on the east side, or on the west side of the ROW; the pollutant emissions would be the same in each case. In addition, the air pollutant emissions associated with the 120th Street yard and shop would be quite unsubstantial. Further separate analysis of the 120th Street yard and shop was not conducted. Therefore, the UPRR Rail Alternative and all of its options are discussed as only one alternative.

5.3.1 Permanent Impacts and Mitigations – Union Pacific Railroad Rail Alternative

The Red Line trains run on electricity; therefore, they cause no direct emissions. Their electricity comes from the electric utility grid, which may include local, fossil-fueled power plants. An increase in indirect emissions due to electrical power consumption by the Red Line trains would be expected under the UPRR Rail Alternative.

5.3.1.1 CO Hot Spot Analysis

A summary of the modeled maximum 1-hour CO concentrations at each of the street intersections selected for analysis (98th Place and Halsted Street, 119th Street and State Street, and 130th Street and Indiana Avenue) is presented in Table 5-1. A summary of the modeled maximum 8-hour CO concentrations for the selected intersections is also presented in Table 5-2. The three "worst case" intersections for each alternative were selected based on LOS and total traffic volumes during the peak hour, as required by USEPA guidance (USEPA 1992). These intersections may not be the same for each alternative based on the traffic analysis LOS results.

As shown in Table 5-1, the maximum modeled 1-hour CO concentration at any of the three intersections analyzed for the UPRR Rail Alternative was estimated to be 5.1 ppm, including a background concentration of 3.0 ppm, and occurred at the intersection of 98th Place and Halsted Street. This maximum 1-hour CO concentration occurred at a receptor located along the eastbound departure of 98th Place about 3 meters from the intersection with Halsted Street. All of the modeled 1-hour CO concentrations for the UPRR Rail Alternative were well below the 1-hour CO National and Illinois standards of 35 ppm.

As also shown in Table 5-2, the maximum 8-hour CO concentration for the UPRR Rail Alternative occurred at the same receptor at the same intersection as the 1-hour concentration and was estimated to be 3.2 ppm, including a background CO concentration of 1.7 ppm. All of the modeled 8-hour CO concentrations for the UPRR Rail Alternative were also well below the corresponding 8-hour CO National and Illinois standards of 9 ppm.

Based on the above analysis, no mitigation measures would be required for any of the traffic intersections analyzed for the UPRR Rail Alternative. Also, no adverse air quality impacts from CO emissions are expected to occur with this alternative.

5.3.1.2 Greenhouse Gas Analysis

This quantitative assessment of project-related GHG benefits and/or impacts on climate change presented here was conducted based on the methods described in Section 3.4.3. The UPRR Rail Alternative is expected to cause a small change in ridership to divert from motor vehicles to trains leading to a small decrease in VMT of 53,718. Thus, this decrease in VMT would lead to a small decrease in GHG emissions under the UPRR Rail Alternative.

As shown in Table 5-3, the UPRR Rail Alternative project-related GHG emissions would be about 62,527,538 tpy of CO_2, about 1,979 tpy of CH4, and about 3,036 tpy of N_2O. When compared to the existing conditions, project-related GHG emissions for the UPRR Rail Alternative would be an increase of over 16 percent for each pollutant. However, when compared to the No Build Alternative GHG emissions, these results would be 0.02 percent lower for each pollutant.

When converted to total CO_2e using the GWP conversion factors, the total of GHG emissions for the UPRR Rail Alternative would be 63,510,186 tpy of CO_2 equivalents. Total project-related CO_2e emissions for the UPRR Rail Alternative would be about 17.9 percent higher than the 53,894,714 tpy of total project-related CO_2e emissions for the existing conditions. However, compared to the

No Build Alternative, GHG emissions for the UPRR Rail Alternative would be about 0.02 percent lower in total CO_2e emissions. Therefore, no adverse air quality impacts from GHG emissions are anticipated due to this alternative.

5.3.1.3 $PM_{2.5}$ Hot Spot Analysis

The $PM_{2.5}$ emissions factors for motor vehicles in the Chicago area are expected to decline by over 38 percent between 2012 and 2030. In addition, VMT in the project area in the UPRR Rail Alternative would be slightly lower than the No Build Alternative VMT, by about 0.02 percent, due to passenger diversions to the Red Line. When taken together, these two parameters would result in reduction in existing regional $PM_{2.5}$ emissions with the UPRR Rail Alternative. In addition to the federal exhaust emissions control programs and fuel reformulation programs, statewide efforts to reduce congestion and vehicle idling are also expected to have a direct benefit by reducing $PM_{2.5}$ concentrations at the local level.

In its conformity analysis, CMAP concluded that the *GO TO 2040* plan and the TIP meet all applicable requirements for conformity for the annual $PM_{2.5}$ standard; *GO TO 2040* and the TIP have also been recommended for approval by USDOT. Therefore, no adverse air quality impacts from $PM_{2.5}$ emissions are anticipated due to this alternative.

5.3.1.4 MSAT Analysis

The EPA's FMVECP is expected to reduce MSAT emissions by 54 percent in the project area between 2012 and 2030. In addition, VMT in the project area in the UPRR Rail Alternative would be slightly lower than the No Build Alternative VMT, by about 0.02 percent, due to passenger diversions. When taken together, this would result in MSAT emissions with the UPRR Rail Alternative being lower than under the No Build Alternative. Therefore, no adverse air quality impacts from MSAT emissions are anticipated due to this alternative.

5.3.2 Construction Impacts and Mitigations – Union Pacific Railroad Rail Alternative

Construction activities for all of the UPRR Rail Alternative options would be grouped by type of work and location. Overall schedule and coordination would be phased and scheduled to maintain CTA operations at the 95th Street Terminal and 98th Street Yard and Shop, and to maintain vehicular traffic on affected expressways and roadways. Special or temporary track work might be required between the 95th Street Terminal and the 98th Street Yard and Shop. Because construction would occur in the middle of the expressway, road closures and traffic diversions would occur. The corridor is divided into seven segments for the purposes of describing construction activities; construction for individual segments or groups of adjacent segments could be sequenced to coordinate with CTA operations at the 95th Street Terminal. See Section 5.2.2 for a discussion of emissions, construction sequencing, traffic management, dust control, and construction truck access that would also apply to the UPRR Rail Alternative.

Compared with the other two build alternatives, construction activities for the UPRR Rail Alternative would be the most extensive of any of the three build alternatives being analyzed. However, with the use of appropriate mitigation measures as described above, no violations of any of the IAAQS or NAAQS are anticipated due to this alternative. Therefore, with appropriate mitigation measures in place, no adverse air quality impacts due to construction activities are anticipated due to this alternative.

5.3.3 Cumulative Impacts and Mitigations – Union Pacific Railroad Rail Alternative

The only project that might be related to the UPRR Rail Alternative with respect to air quality impacts is CTA's RPM Project. Without improvements to the existing Red Line, the RLE might not be able to achieve its full potential. The impact on air quality with or without the RPM Project would not be adverse.

5.4 Halsted Rail Alternative

The Halsted Rail Alternative would include a 5-mile extension of the existing Red Line. It would operate on an elevated structure running south from 95th Street along I-57 until Halsted Street. It would then turn south and continue along Halsted Street to the intersection of Halsted Street and Vermont Avenue near 127th Street. Four stations would be at 103rd Street, 111th Street, 119th Street, and Vermont Avenue.

The air quality analysis presented here applies to the project area as a whole. Because nearly all of the project-related air pollutant emissions would come from motor vehicles and because the project-related motor vehicles would move throughout the entire project area, the air quality analysis applies equally to each part of the Halsted Rail Alternative. In addition, the air pollutant emissions associated with the 119th Street yard and shop would be quite unsubstantial. Therefore, the Halsted Rail Alternative is discussed here in its entirety, rather than by segment or feature.

5.4.1 Permanent Impacts and Mitigations – Halsted Rail Alternative

The Red Line trains run on electricity; therefore, they cause no direct emissions. Their electricity comes from the electric utility grid, which may include local, fossil-fueled power plants. An increase in indirect emissions due to electrical power consumption by the Red Line trains would be expected under the Halsted Rail Alternative.

5.4.1.1 CO Hot Spot Analysis

A summary of the modeled maximum 1-hour CO concentrations at each of the street intersections selected for analysis (98th Place and Halsted Street, 127th Street and Halsted Street, and 127th Street and Wallace Street and Vermont Avenue) is presented in Table 5-1. A summary of the modeled maximum 8-hour CO concentrations for the selected intersections is also presented in Table 5-2.

As shown in Table 5-1, the maximum modeled 1-hour CO concentration at any of the three intersections analyzed for the Halsted Rail Alternative was estimated to be 5.1 ppm, including a background concentration of 3.0 ppm, and occurred at the intersection of 98th Place and Halsted Street. This maximum 1-hour CO concentration occurred at a receptor located along the eastbound departure of 98th Place about 3 meters from the intersection with Halsted Street. All of the modeled 1-hour CO concentrations for the Halsted Rail Alternative were well below the 1-hour CO National and Illinois standards of 35 ppm.

As also shown in Table 5-2, the maximum 8-hour CO concentration for the Halsted Rail Alternative occurred at the same receptor at the same intersection as for the 1-hour concentration and was estimated to be 3.2 ppm, including a background CO concentration of 1.7 ppm. All of the modeled 8-hour CO concentrations for the Halsted Rail Alternative were also well below the corresponding 8-hour CO National and Illinois standards of 9 ppm.

Based on the above analysis, no mitigation measures would be required for any of the traffic intersections analyzed for the Halsted Rail Alternative. Also, no adverse air quality impacts from CO emissions are expected to occur with this alternative.

5.4.1.2 Greenhouse Gas Analysis

This quantitative assessment of project-related GHG benefits and/or impacts on climate change presented here was conducted based on the methods described in Section 3.4.3. The Halsted Rail Alternative is expected to cause a small change in ridership to divert from motor vehicles to trains leading to a small decrease in VMT of 51,427. Thus, this decrease in VMT would lead to a slightly lower amount of GHG emissions under the Halsted Rail Alternative compared to the No Build Alternative.

As shown in Table 5-3, the Halsted Rail Alternative project-related GHG emissions would be about 62,528,056 tpy of CO_2, about 1,979 tpy of CH4, and about 3,036 tpy of N_2O. These results would be an increase of over 16 percent for each pollutant when compared to the existing conditions GHG emissions. When compared to the No Build Alternative GHG emissions, GHG emissions for the Halsted Rail Alternative would be 0.02 percent lower.

When converted to total CO_2e using the GWP conversion factors, the total emissions of GHGs for the Halsted Rail Alternative would be 63,510,713 tpy of CO_2 equivalents. Total project-related CO_2e emissions for the Halsted Rail Alternative would be about 18 percent higher than the 53,894,714 tpy of total project-related CO_2e emissions for the existing conditions. However, compared to the No Build Alternative, the CO_2e emissions for the Halsted Rail Alternative would be lower by about 0.02 percent. Therefore, no adverse air quality impacts from GHG emissions are anticipated due to this alternative.

5.4.1.3 $PM_{2.5}$ Hot Spot Analysis

The $PM_{2.5}$ emissions factors for motor vehicles in the Chicago area are expected to decline by over 38 percent between 2012 and 2030. In addition, VMT in the project area in the Halsted Rail Alternative would be slightly lower than the No Build Alternative VMT, by about 0.02 percent, due to passenger diversions. When taken together, these two parameters would result in a small reduction in existing regional $PM_{2.5}$ emissions with the Halsted Rail Alternative. In addition to the federal exhaust emissions control programs and fuel reformulation programs, statewide efforts to reduce congestion and vehicle idling are also expected to have a direct benefit by reducing $PM_{2.5}$ concentrations at the local level.

In its conformity analysis, CMAP concluded that the *GO TO 2040* plan and the TIP meet all applicable requirements for conformity for the annual $PM_{2.5}$ standard; *GO TO 2040* and the TIP have also been recommended for approval by USDOT. Therefore, no adverse air quality impacts from $PM_{2.5}$ emissions are anticipated due to this alternative.

5.4.1.4 MSAT Analysis

The EPA's FMVECP is expected to reduce MSAT emissions by 54 percent in the project area between 2012 and 2030. In addition, VMT in the project area in the Halsted Rail Alternative would be slightly lower than the No Build Alternative VMT, by about 0.02, percent due to passenger diversions. When taken together, these results would result in regional MSAT emissions with the Halsted Rail Alternative being lower than the No Build Alternative. Therefore, no adverse air quality impacts from MSAT emissions are anticipated due to this alternative.

5.4.2 Construction Impacts and Mitigations – Halsted Rail Alternative

Construction activities for the Halsted Rail Alternatives would be grouped by type of work and location. Overall schedule and coordination of all construction segments would be phased and scheduled to maintain CTA operations at the 95th Street Terminal and 98th Street Yard and Shop, and vehicular traffic on affected expressways and roadways. Special or temporary track work might be required between the 95th Street Terminal and the 98th Street Yard and Shop. Because construction would occur in the middle of the expressway, road closures and traffic diversions would occur. The corridor is divided into five segments for the purposes of describing construction activities; construction for individual segments or groups of adjacent segments could be sequenced to coordinate with CTA operations at the 95th Street Terminal. See Section 5.2.2 for a discussion of emissions, construction sequencing, traffic management, dust control, and construction truck access that would also apply to the UPRR Rail Alternative.

Compared with the other two build alternatives, construction activities for the Halsted Rail Alternative would be less than the UPRR Rail Alternative and somewhat more than the BRT Alternative. However, with the use of appropriate mitigation measures as described above, no violations of any of the IAAQS or NAAQS are anticipated due to this alternative. Therefore, with appropriate mitigation measures in place, no adverse air quality impacts due to construction activities are anticipated due to this alternative.

5.4.3 Cumulative Impacts and Mitigations – Halsted Rail Alternative

The only project that might be related to the Halsted Rail Alternative with respect to air quality impacts is CTA's RPM Project. Without improvements to the existing Red Line, the RLE might not be able to achieve its full potential. The impact on air quality with or without the RPM Project would not be adverse. However, the basis for the regional plan and the TIP would have changed, possibly triggering a need to update the SIP.

Section 6
Impacts Remaining After Mitigation

Based on the results of the air quality analysis presented here, all build alternatives of the RLE Project would provide a regional net air quality benefit when compared to existing conditions or the No Build Alternative.

6.1 Bus Rapid Transit Alternative

With the BRT Alternative, no adverse air quality impacts were identified in any the air quality analyses performed for this alternative. The CO hot spot analysis demonstrated compliance with the IAAQS and NAAQS for CO; the GHG analysis showed fewer GHG emissions compared to the No Build Alternative; the $PM_{2.5}$ assessment demonstrated that lower $PM_{2.5}$ emissions are likely compared to the No Build Alternative; and the assessment of MSAT also demonstrated that lower emissions of MSAT are likely compared to the No Build Alternative.

6.2 Union Pacific Railroad Rail Alternative

As described previously, the air quality analysis presented here applies equally to all of the UPRR Rail Alternative options, as well as to the 120th Street yard and shop. With the UPRR Rail Alternative, no adverse air quality impacts were identified in any the air quality analyses performed for this alternative. The CO hot spot analysis demonstrated compliance with the IAAQS and NAAQS for CO; the GHG analysis showed lower GHG emissions compared to the No Build Alternative; the $PM_{2.5}$ assessment demonstrated that lower $PM_{2.5}$ emissions than with the No Build Alternative would be likely; and the assessment of MSAT also demonstrated that lower emissions of MSAT than with the No Build Alternative would be likely.

6.3 Halsted Rail Alternative

No adverse air quality impacts were identified for the Halsted Rail Alternative. The CO hot spot analysis demonstrated compliance with the IAAQS and NAAQS for CO; the GHG analysis showed lower GHG emissions compared to the No Build Alternative; the $PM_{2.5}$ assessment demonstrated that lower $PM_{2.5}$ emissions than with the No Build Alternative would be likely; and the assessment of MSAT also demonstrated that lower emissions of MSAT than with the No Build Alternative would be likely.

Based on the results of the air quality analysis presented here, all build alternatives of the RLE Project would provide a regional net air quality benefit when compared to existing conditions or the No Build Alternative.

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Appendix A
2014-2015 Red Line Extension Project Update

2014–2015 Red Line Extension Project Update

From 2012-2014, CTA evaluated benefits and impacts of four alternatives: the No Build Alternative, the Bus Rapid Transit Alternative (along Michigan Avenue), the Union Pacific Railroad (UPRR) Rail Alternative, and the Halsted Alternative. CTA evaluated three options of the UPRR Rail Alternative: Right-of-Way Option, East Option, and West Option. CTA also evaluated two options of the UPRR Rail Alternative 130th Street station: a South Station Option and a West Station Option. Based on the project description provided in Section 2 of this technical memorandum, CTA analyzed the impacts of these alternatives and station options. The benefits and impacts are included in the technical memoranda prepared in 2012-2014.

In August 2014, based on the technical analysis and public input, CTA announced the NEPA Preferred Alternative–the UPRR Rail Alternative. Additional conceptual engineering was conducted on the UPRR Rail Alternative to refine the East and West Option alignments. In addition, CTA is considering only the South Station Option of the 130th Street Station.

In late 2014 and early 2015, CTA conducted additional engineering and revised assumptions on the East and West Options to refine the alignments. The refinement of the East and West Options consisted of the following items:

- For the segment of the alignment along I-57, CTA shifted the proposed alignment from the median of I-57 to the north side of I-57 within the existing expressway right-of-way. The construction would be less complex, safer for construction workers, and have a shorter duration. The shift would also allow for fewer impacts to Wendell Smith Park for the East Option, and would allow for no permanent impacts to Wendell Smith Park for the West Option.

- CTA modified the curve speeds as the alignment heads south from I-57 along the UPRR tracks. The curve speed for both the East and West Options would be 35 mph.

- CTA shifted the East Option alignment near 103rd Street station to minimize impacts to Block Park and the Roseland Pumping Station.

- CTA modified the curves south of 103rd Street for both the East and West Options to 55 mph to maximize the train speed.

- CTA refined the layout of the 120th Street yard and shop to optimize yard operations. The refined layout of the yard would accommodate 340 train cars.

The refinement of the East and West Option alignments minimizes potential impacts to parks while providing flexibility for future design phases. The Draft Environmental Impact Statement contains the benefits and impacts of the refined East and West Option alignments and supersedes information presented in other chapters of this technical memorandum.

The refined East and West Option alignments would have no additional or different impacts from those described in the technical memoranda for the following resource areas: construction, transportation, land use and economic development, historic and cultural resources, safety and security, hazardous materials, indirect and cumulative, air quality, floodplains, vegetation and wildlife habitat, threatened and endangered species, and geology and soils.

Appendix V
Biological Resources Technical Memorandum

RED AHEAD
Moving Ahead to a Better Red

Red Line Extension

Chicago Red Line Extension Project

Biological Resources

Technical Memorandum

May 6, 2013
Updated July 27, 2015

Prepared for:
Chicago Transit Authority
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Abbreviations

API	area of potential impact
BGEPA	Bald and Golden Eagle Protection Act
BRT	Bus Rapid Transit
CN	Canadian National
CFR	Code of Federal Regulations
CTA	Chicago Transit Authority
EcoCAT	Illinois Ecological Compliance Assessment Tool
EIS	Environmental Impact Statement
ESA	Endangered Species Act
FTA	Federal Transit Administration
IDNR	Illinois Department of Natural Resources
IESA	Illinois Endangered Species Act
ILCS	Illinois Compiled Statutes
MBTA	Migratory Bird Treaty Act
NEPA	National Environmental Policy Act
NMFS	National Marine Fisheries Service
NWI	National Wetlands Inventory
RLE	Red Line Extension
ROW	right-of-way
UPRR	Union Pacific Railroad
USC	United States Code
USFWS	U.S. Fish and Wildlife Service

Section 1
Summary

This technical memorandum analyzes the potential impacts of the Red Line Extension (RLE) Project on biological resources, including threatened and endangered species and their habitats, vegetation, and other wildlife habitats.

The purpose of the vegetation and wildlife habitat investigation is to describe the existing biological resources (plants, animals, and fish) in the RLE Project vicinity and to evaluate potential impacts on vegetation and wildlife habitats. The area of potential impact (API) for the biological resources evaluation included an area ¼ mile on either side of the alternative centerlines; the API is different for each alternative and each alternative option. Vegetation that provides wildlife habitat occurs in portions of the API around each proposed alternative alignment, stations, and maintenance yards. Local regulations protect some trees and the investigation evaluated the potential impacts on trees as well as on wildlife habitats.

The purpose of the threatened and endangered species investigation is to describe threatened and endangered species that may occur in the project area and the existing habitat conditions including any designated critical habitats. The analysis evaluated potential impacts on species and the habitats of species listed as threatened or endangered by either the federal government or the State of Illinois. Threatened and endangered species or their habitats are found in some portions of the API around each proposed alternative alignment and around stations and maintenance yards. The species most likely to be present is the peregrine falcon and it may be found throughout all of the alternatives' APIs.

The Bus Rapid Transit (BRT) Alternative, Union Pacific Railroad (UPRR) Rail Alternative, and Halsted Rail Alternative each have the potential to require the removal of trees within the API. Most of the trees potentially affected under the BRT Alternative occur at the park & ride facility locations; trees along the UPRR Rail Alternative alignment occur in a narrow band immediately adjacent to the proposed rail line, in the vicinity of the proposed 120th Street yard and shop, and at properties along the corridor. The trees along the Halsted Rail Alternative alignment occur primarily in the median and the sidewalks of Halsted Street. These narrow bands of trees have a lower value to wildlife than blocks of habitat and thus reduce the potential for street tree removal to affect wildlife. Tree removal in any part of the API might affect birds protected under the Migratory Bird Treaty Act (MBTA) and, depending on what part of the API the trees are in, tree removal might also be regulated by local ordinances.

Tree removal has the potential to adversely affect vegetation and wildlife; however, with implementation of mitigation measures, potential impacts on vegetation and wildlife would be less than adverse. Operation of the Red Line following construction of any of the alternatives would have no measurable impact on vegetation and wildlife habitat.

There is a combined total of 114 federal- and state-listed species that potentially occur in Cook County. Listed species with a potential to occur within the API include one bird species (peregrine falcon) and two plant species (hairy white violet and spotted coral-root orchid). There are no known nesting pairs of peregrine falcons within the API, and none of the alternatives would adversely affect foraging habitat. A field visit in August 2012 confirmed no potential habitat for the two plant species.

The conclusion of this investigation is that none of the alternatives would have adverse impacts on listed animal and plant species and no mitigation measures for listed species would be required. Operation of the Red Line following construction of any of the alternatives would have no measurable impacts on listed species.

Development of the BRT Alternative, UPRR Rail Alternative, or Halsted Rail Alternative in combination with related renovation, new construction, and transportation projects identified in the vicinity of the proposed project would not contribute to substantial cumulative impacts on listed species.

The remainder of this memorandum discusses the methods used in the evaluation (Section 3), the affected environment (Section 4), potential impacts and mitigation measures (Section 5), and impacts (none anticipated) that may remain after mitigation (Section 6).

Updated July 27, 2015

In August 2014, based on the technical analysis and public input until then, CTA announced the NEPA Preferred Alternative—the UPRR Rail Alternative. CTA is considering two alignment (route) options of this alternative: the East Option and the West Option. At this time, CTA is also considering only the South Station Option of the 130th Street Station. In late 2014 and early 2015, CTA conducted additional engineering on the East and West Options to refine the East and West Option alignments. Appendix C of this technical memorandum summarizes the refined alignments and any additional or different impacts that would result. The information in Appendix C supersedes information presented in other chapters of this technical memorandum.

Section 2
Project Description

The Chicago Transit Authority (CTA) is proposing to extend the Red Line from the existing 95th Street Terminal to the vicinity of 130th Street, subject to the availability of funding. The proposed RLE would include four stations. Each station would include bus transfer and parking facilities. This project is one part of the Red Ahead Program to extend and enhance the entire Red Line. The CTA is also planning 95th Street Terminal improvements that are anticipated to be completed prior to the proposed RLE construction.

The project area is 11 miles south of the Chicago central business district (commonly referred to as the Loop) and encompasses approximately 20 square miles. The boundaries of the project area are 95th Street on the north, Ashland Avenue on the west, Stony Island Avenue on the east, and the Calumet-Sag Channel/Little Calumet River and 134th Street on the south. The I-57 Expressway and I-94 Bishop Ford Freeway cross the western and eastern edges of the project area, respectively. Lake Calumet is in the eastern portion of the project area. The project area encompasses parts of nine community areas in the City of Chicago and the eastern section of the Village of Calumet Park. Chicago community areas include Beverly, Washington Heights, Roseland, Morgan Park, Pullman, West Pullman, Riverdale, Hegewisch, and South Deering. The project area comprises residential (primarily single family), industrial (both existing and vacant), transportation (including freight), and commercial development.

The Draft Environmental Impact Statement (EIS) focuses on the following alternatives (shown in Figure 2-1), which emerged from the Alternatives Analysis and the National Environmental Policy Act (NEPA) scoping process:

- No Build Alternative
- BRT Alternative
- UPRR Rail Alternative
    - Right-of-Way (ROW) Option
    - East Option
    - West Option
- Halsted Rail Alternative

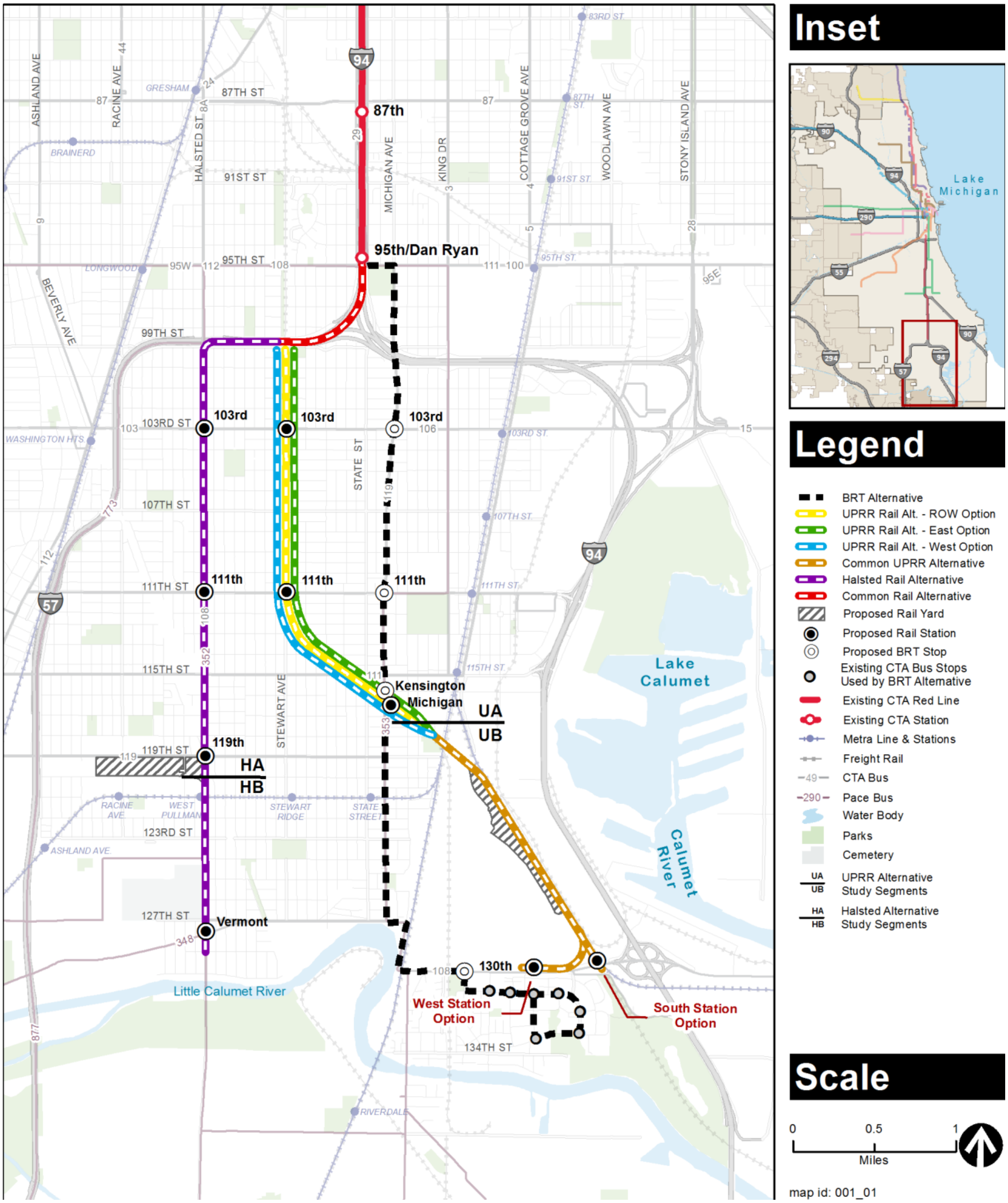

Inset
Lake Michigan
90
94
290
55
294
57
Legend
BRT Alternative
UPRR Rail Alt. - ROW Option
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
Common UPRR Alternative
Halsted Rail Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Proposed BRT Stop
Existing CTA Bus Stops Used by BRT Alternative
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
49 CTA Bus
290 Pace Bus
Water Body
Parks
Cemetery
UA UB UPRR Alternative Study Segments
HA HB Halsted Alternative Study Segments
Scale
0
0.5
1
Miles
map id: 001_01
87th
95th/Dan Ryan
103rd
111th
119th
Vermont
Kensington
Michigan
130th
UA
UB
HA
HB
West Station Option
South Station Option
Lake Calumet
Calumet River
Little Calumet River
87TH ST
91ST ST
95TH ST
99TH ST
103RD ST
107TH ST
111TH ST
115TH ST
119TH ST
123RD ST
127TH ST
134TH ST
ASHLAND AVE
RACINE AVE
HALSTED ST
MICHIGAN AVE
KING DR
COTTAGE GROVE AVE
WOODLAWN AVE
STONY ISLAND AVE
STATE ST
STEWART AVE
BEVERLY AVE
GRESHAM
BRAINERD
LONGWOOD
WASHINGTON HTS.
RACINE AVE
WEST PULLMAN
STEWART RIDGE
STATE STREET
ASHLAND AVE
RIVERDALE
83RD ST
87TH ST
91ST ST
95TH ST
103RD ST
107TH ST
111TH ST
115TH ST
94
57

Figure 2-1: Red Line Extension Project Alternatives

The No Build Alternative is a required alternative as part of the NEPA environmental analysis and is used for comparison purposes to assess the relative benefits and impacts of extending the Red Line. The No Build Alternative is carried into the Draft EIS phase of the project development regardless of its performance versus the build alternatives under consideration. No new infrastructure would be constructed as part of the No Build Alternative other than committed transportation improvements that are already in the Chicago Metropolitan Agency for Planning Fiscal Year 2010–2015 Transportation Improvement Program and the improvements to 95th Street Terminal. The Transportation Improvement Program projects within the project area consist of four bridge reconstructions, several road improvement projects including resurfacing and coordination of signal timing on 95th Street, work on Metra's facilities, construction of a bicycle/pedestrian multi-use trail, and preservation of historic facilities. The No Build Alternative includes regular maintenance of existing track and structures, and bus transit service would be focused on the preservation of existing services and projects. All elements of the No Build Alternative are included in each of the other alternatives. Under this alternative, travel times would not improve from existing conditions.

The BRT Alternative (formerly referred to as the Transportation Systems Management Alternative) is a 5.0-mile, limited-stop, enhanced BRT route, which is assumed to operate 24 hours per day between the existing 95th Street Terminal and the intersection of 130th Street and Eberhart Avenue. No dedicated bus lanes would be provided for the BRT Alternative; however, parking lanes would be removed for some portions of the alignment and four stops with improved bus shelters and park & ride facilities would be created at 103rd Street and Michigan Avenue, 111th Street and Michigan Avenue, Kensington Avenue and Michigan Avenue, and 130th Street and Eberhart Avenue. Although BRT service elements would not continue south of the 130th Street stop, the bus route would continue through Altgeld Gardens along the existing route with six stops. The BRT Alternative would be consistent with bus routing changes that may occur as part of improvements to the 95th Street Terminal. Under this alternative, travel times between 130th Street and the Loop would improve over existing conditions.

The UPRR Rail Alternative is a 5.3-mile extension of the heavy rail transit Red Line from its existing 95th Street Terminal to 130th Street, just west of I-94. The Chicago Transit Board designated the UPRR Rail Alternative as the Locally Preferred Alternative at its August 12, 2009 board meeting. This alternative includes construction and operation of new heavy rail transit tracks, mostly in existing transportation corridors. The UPRR Rail Alternative has three options for alignment (ROW, East, and West), all of which would include operation on elevated structure from 95th Street to just past the Canadian National/Metra Electric District tracks near 119th Street. The alignment would then transition to at-grade through an industrial area with no public through streets, terminating at 130th Street in the vicinity of Altgeld Gardens. Four new stations would be constructed at 103rd Street, 111th Street, Michigan Avenue, and 130th Street. The 130th Street station would be the terminal station, with two options under evaluation: the South Station Option and the West Station Option. A new yard and shop facility would be sited near 120th Street and Cottage Grove Avenue. The bus routes in the vicinity of the UPRR Rail Alternative would be modified to enhance connectivity between the Red Line and the bus network. The hours of operation and service frequency for the UPRR Rail Alternative are assumed to be the same as

for the current Red Line. Under this alternative, travel times between 130th Street and the Loop would improve substantially over existing conditions.

The Halsted Rail Alternative is a 5.0-mile heavy rail transit extension of the existing Red Line. In this alternative, the Red Line would operate on an elevated structure running south from 95th Street along I-57 until Halsted Street. The alignment would then turn south and continue along Halsted Street to the intersection of Halsted Street and Vermont Avenue near 127th Street. This alternative would include four new stations at 103rd Street, 111th Street, 119th Street, and Vermont Avenue. The Vermont Avenue station would be the terminal station. A new yard and shop would be sited west of Halsted Street and between the 119th Street and Vermont Avenue stations. The bus routes in the vicinity of the Halsted Rail Alternative would be modified to enhance connectivity to the Red Line. The hours of operation and service frequency for the Halsted Rail Alternative are assumed to be the same as for the current Red Line. Under this alternative, travel times between 127th Street and the Loop would improve substantially over existing conditions. This alternative would not extend rail to Altgeld Gardens, which would be served by bus connecting to the Vermont terminal station.

Section 3
Methods for Impact Evaluation

This technical memorandum on biological resources includes consideration of threatened and endangered species, vegetation, and wildlife habitats.

3.1 Regulatory Framework

3.1.1 Federal

3.1.1.1 National Environmental Policy Act

The National Environmental Policy Act (NEPA) requires a discussion of environmental impacts of a proposal and of a reasonable range of alternatives including the No Build Alternative (40 Code of Federal Regulations [CFR] 1502.1). NEPA does not specify federal thresholds of significance for impacts on vegetation, wildlife habitats, and threatened and endangered species. However, NEPA requires considerations of both context and intensity in determining the significance of potential impacts on a resource. Context means that the significance of an action must be analyzed in the context of the affected region and the locality and not just from a federal perspective. Intensity means that the analysis must consider unique characteristics of the geographic area, such as proximity to ecologically critical areas and whether the action threatens a violation of federal, state, or local laws or requirements imposed for the protection of the environment (40 CFR 1508.27).

In addition, federal courts look to resource agencies such as the Illinois Department of Natural Resources (IDNR) as the public sector subject matter experts, and failure on the part of the lead agency to adequately respond to their comments or address their concerns can present problems during litigation. A NEPA document that does not adequately address the requirements of applicable state laws may be viewed as not legally sufficient (American Association of State Highway and Transportation Officials 2006).

Section 1502.25 of the NEPA regulations further requires that draft EISs be prepared concurrently and integrated with environmental analyses and related surveys and studies required by other federal statutes, including the Endangered Species Act (ESA, 16 United States Code [USC] 1531 et seq.), the MBTA, and others (40 CFR 1502.25).

3.1.1.2 Endangered Species Act

The ESA and subsequent amendments provide for the conservation of threatened and endangered species and the ecosystems upon which they depend. Threatened species are those that are likely to become endangered within all or most of their range in the near future. Endangered species are species that are present in such low numbers that they are in danger of becoming extinct. Section 7 of the ESA requires federal agencies to aid in the conservation of listed species, and to ensure that the activities of federal agencies will not jeopardize the continued existence of listed species or adversely modify designated critical habitat. Critical habitat includes those areas determined to be essential to conservation of a listed species. At the federal level, the United States Fish and

Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS) are responsible for administration of the ESA.

Section 7 of the ESA requires that all federal agencies consult with the Secretary of the Interior on any prospective agency action if an endangered species or a threatened species may be present in the area affected by the project and if implementation of such action will likely affect such species (16 USC 1531). As part of that consultation, the agency must determine whether any species that is listed or proposed to be listed may be present in the area of the proposed action (Section 7(c)). If any such species may be present, then the agency shall conduct a biological assessment for the purpose of identifying any endangered species or threatened species that are likely to be affected by the proposed action. Such assessment may be undertaken as part of a federal agency's compliance with the requirements of Section 102 of NEPA (42 USC 4332).

The ESA makes it unlawful for a person to take a listed animal without a permit. Take is defined as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or attempt to engage in any such conduct." The USFWS regulations define harass as "to intentionally or negligently, through act or omission, create the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavior patterns such as breeding, feeding, and sheltering." The threshold for an impact under the ESA is, therefore, very low. For example, any action that could cause an individual of a listed species to alter a breeding location (such as nesting in a different spot due to vegetation clearing) or alter feeding behavior, even for a short period of time (such as foraging in a different portion of an open space area due to construction noise), would be considered harassment.

Under the ESA, federal agencies must also determine whether a proposed project is likely to jeopardize the continued existence of listed species or adversely modify designated critical habitat. For the purpose of this EIS, an adverse impact would be one that would be likely to result in a take of a listed species, and/or jeopardize the continued existence of any endangered or threatened species, and/or destroy or adversely modify designated critical habitat.

There are at least seven federal-listed species in Cook County; none of these species is under the jurisdiction of NMFS. The ESA effects determinations for each listed species are provided in this technical memorandum where it is possible to make such a determination. If there may be an impact (either beneficial or adverse) on a listed species, then Federal Transit Administration (FTA) would initiate coordination with USFWS under Section 7 of the ESA to determine whether the project would jeopardize the continued existence of the species and to identify appropriate conservation measures to limit a take (50 CFR 402). This consultation process would occur during the preparation of a Final EIS. USFWS may develop conservation measures during the consultation process to offset potential impacts on federal-listed species. These conservation measures may be based on the mitigation measures developed through the NEPA process, as appropriate. An incidental take permit may also be issued through that process.

3.1.1.3 Migratory Bird Treaty Act

The MBTA decrees that all migratory birds and their parts (including eggs, nests, and feathers) are fully protected. Nearly all native North American bird species are protected by the MBTA. Under the MBTA, taking, killing, or possessing migratory birds is unlawful. Projects that are likely to result in taking of birds protected under the MBTA require the issuance of take permits from the USFWS. Activities that would require such a permit include destruction of migratory bird nesting habitat during the nesting season when eggs or young are likely to be present. Under the MBTA, surveys are required to determine whether nests would be disturbed and, if so, a buffer area with a specified radius around the nest would be established so that no disturbance or intrusion would be allowed until the young had fledged and left the nest. The size of the buffer area would vary depending on species and local conditions (e.g., presence of busy roads), and would be based on the professional judgment of a monitoring biologist.

3.1.1.4 Fish and Wildlife Coordination Act

The Fish and Wildlife Coordination Act requires consultation with USFWS and IDNR where the "waters of any stream or other body of water are proposed or authorized, permitted or licensed to be … modified" by any agency under a federal permit or license. Consultation is to be undertaken for the purpose of preventing loss of and damage to wildlife resources (16 USC 662). The Fish and Wildlife Coordination Act applies to all fish and wildlife resources that may be present in the project area, if there are stream or wetland impacts.

3.1.1.5 Bald and Golden Eagle Protection Act

Bald eagles, delisted in 2007, are primarily protected under the Bald and Golden Eagle Protection Act (BGEPA). Administered by the USFWS, this law provides for the protection of the bald eagle (*Haliaeetus leucocephalus*) and the golden eagle (*Aquila chrysaetos*) by prohibiting, except under certain specified conditions, the taking, possession, and commerce of such birds. The BGEPA prohibits unregulated take and makes it illegal to kill, wound, pursue, shoot, shoot at, poison, capture, trap, collect, molest, or disturb bald or golden eagles. If disturbance will occur in potential violation of the act, a permit to authorize take of eagles is required. This permit authorizes incidental take of bald and golden eagles, as well as bald eagle incidental take that complies with the terms and conditions of a previously granted Section 7 incidental take statement. Projects permitted under the BGEPA do not need a permit under the MBTA. Both bald and golden eagles occur in Illinois and would be found primarily along rivers and lakeshore areas with suitable habitat.

3.1.2 State

3.1.2.1 Illinois Endangered Species Act

The IDNR is responsible for administration of the Illinois Endangered Species Act (IESA, 520 Illinois Compiled Statutes [ILCS] 10). Like the federal ESA, the IESA contains procedures for consultation between the project proponent (in this case CTA) and IDNR. The agency proposing an action would prepare a Detailed Action Report to assist the consultation process with IDNR. In cases where there may be an adverse impact on listed species, IDNR will provide recommended mitigation measures to avoid those impacts (Illinois Administrative Code Part 1075). There are approximately 114 species listed by the State of Illinois in Cook County (IDNR 2011).

3.1.2.2 Illinois Compiled Statutes

The IDNR has the authority to manage and regulate all fish and wildlife of the state. The 520 ILCS 5 Wildlife Code states that "the ownership of and title to all wild birds and wild mammals within the jurisdiction of the State are hereby declared to be in the State, and no wild birds or wild mammals shall be taken or killed, in any manner or at any time" without authorization of IDNR (520 ILCS 5/2.1). The 515 ILCS Fish and Aquatic Life Code provides similar authority over all fish and aquatic life, including reptiles and amphibians.

3.1.3 Local

The City of Chicago and the Village of Calumet Park do not have specific policies or regulations related to threatened or endangered species. In addition, the Village of Calumet Park does not have specific regulations related to vegetation or wildlife habitats.

3.1.3.1 City of Chicago

Administered by the Chicago Bureau of Forestry in the Department of Streets and Sanitation, the Chicago Landscape Ordinance prohibits the removal of landscape trees without a permit (Chicago No Date). This ordinance specifies tree replacement standards and protection measures to be employed during construction. No person other than the deputy commissioner shall plant, remove, trim, spray or chemically inject or treat, or in any way affect the general health or structure of a parkway tree or shrub (vegetation planted along streets) without first having obtained a permit to do so (Municipal Code of Chicago 10-32-060). There is no minimum size tree that is exempt from this regulation. The landscape ordinance requires the planting of trees along streets (parkway trees), parking lots, and principal buildings (principal buildings are undefined in the Municipal Code of Chicago). The ordinance does not require parkway trees to be installed or maintained when below or within 50 feet of an elevated rail line (Municipal Code of Chicago 17-11-0103-B).

Chicago's *Urban Forest Agenda* recognizes the value of urban forests to the city and sets a goal of increasing the urban forest canopy from 17 percent (the 2008 level) to 20 percent by 2020 (Chicago 2009). From 1991 through 2007 over 112,000 trees were planted within the City (Chicago 2009).

In February 2006, Chicago adopted the *Chicago Nature and Wildlife Plan*, a strategy to enhance the health and diversity of wildlife within the city. Developed by the Chicago Department of Planning and Development and the Mayor's Nature and Wildlife Committee with support from over 30 conservation organizations, this Plan, which was updated in 2011, is now part of the City of Chicago's formal planning and development initiatives. The Boards of Commissioners of the Chicago Park District and the Forest Preserve District of Cook County have also directed their staffs to work closely towards achieving the objectives of the *Chicago Nature and Wildlife Plan* (Chicago 2006b).

The southern edge of the project area is near the Calumet Industrial Corridor, which is governed by a special set of landscaping requirements that differ slightly from the standard City of Chicago requirements (Chicago Municipal Code 10-32-17-11-0401) (Chicago 2004). The Calumet Industrial Corridor is set within the Calumet Open Space Reserve and the landscaping requirements are intended to reflect the integration of the area with significant areas of natural wildlife habitats. While these regulations may not apply directly to the proposed project, a potential station at 130th Street may be required to conform to the standards that apply to projects immediately west of I-94. These requirements emphasize more naturalistic design standards, such as planting landscaping trees in clusters and the use of native plant species.

The project area is also very close to portions of the Calumet Open Space Reserve, which is governed by the adopted *Calumet Open Space Reserve Plan* (Chicago 2005a). This plan identifies 4,877 acres of open space and natural habitats that are protected or are planned to be protected in the Lake Calumet area.

3.2 Impact Analysis Thresholds

The NEPA regulations do not specify federal thresholds of significance for impacts on threatened and endangered species, vegetation, or wildlife habitats. However, Section 1502.25 of NEPA requires that draft EISs be prepared concurrently and integrated with environmental analyses and related surveys and studies required by other federal statutes including the ESA (16 USC 1531 et seq.) (40 CFR 1502.25). Therefore, for the purpose of this EIS, an impact on a threatened or endangered species would be adverse if it would

- Result in a take of a listed species,
- Jeopardize the continued existence of any listed species, or
- Destroy or adversely modify designated critical habitat.

With respect to impacts on vegetation and wildlife habitats, the significance of potential impacts may also be related to the degree to which a proposal is consistent with federal, state, and local regulations and policies. Potential impacts on vegetation and wildlife habitat are evaluated qualitatively based on whether each alternative would result in the following:

- An adverse impact, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species by USFWS or IDNR.
- An adverse impact on any riparian, wetland, or aquatic habitat or other sensitive natural community.
- Substantial interference with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impedance of the use of native wildlife nursery sites.

- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

- Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan.

Potential adverse impacts are further evaluated based on their location and potential duration and intensity.

3.3 Area of Potential Impact

For potential impacts on threatened and endangered species, designated critical habitats, vegetation, and other wildlife habitats an area within ¼ mile of the proposed alignments, stations, park & ride lots, and maintenance yards for each of the project alternatives was evaluated. The selection of a ¼-mile radius as the API represents a conservative approach for evaluating potential impacts on biological resources from changes to existing habitats and the introduction of noise, light, and construction impacts. The ¼-mile radius is intended to identify sensitive wildlife species and their habitats that may be subject to impacts that may travel larger distances (e.g., light and noise). Given that the project is in a highly urbanized environment with high existing levels of noise, light, and human activity, the impacts of construction and operation on available habitats and associated wildlife would not be expected to extend beyond ¼ mile. Because the potential alignments differ among alternatives, the API also varies. Identified construction areas (including staging areas) were included in the API.

Under ESA an "action area" would be identified that corresponds to the API for the NEPA preferred alternative specified in the Final EIS. If there would be an impact on a listed species, then FTA would consult with USFWS about proposed activities within the action area. The action area would be described in the Final EIS. Under IESA, if there would be an adverse impact on a state-listed species, FTA and CTA would consult with IDNR to develop a conservation plan and measures to minimize and/or mitigate adverse impacts on listed species.

3.4 Methods

The purpose of this biological resources investigation is to describe the existing resources in the RLE Project vicinity and to evaluate potential impacts on listed species and their habitats. Biological resources, including listed species, vegetation, and wildlife habitats within the project area, would be protected by federal, state, and local laws and policies, depending on the specific resources, their location, and applicable federal, state, or local laws. Resources within ¼ mile of each proposed alternative alignment, stations, and maintenance yards were evaluated.

Objectives of this study included the following:

- Identify any federal- or state-listed species reported to potentially occur within the project area and other important biological resources.

- Describe potential threatened and endangered species habitats, fish and wildlife habitat conditions, and plant communities that may be affected by the project.
- Describe potential impacts on biological resources that may result from the project alternatives, including short-term construction impacts, long-term operational impacts, and cumulative impacts.
- Propose mitigation measures to avoid, minimize, and compensate for any adverse impacts.

The methods used to evaluate potential impacts on biological resources included several steps:

- A review of existing data sources.
- Reconnaissance-level field review to establish the presence and existing condition of resources within the project area.
- An evaluation of the potential impacts of construction and operation of each alternative on any of the identified resources.
- Development of proposed mitigation measures for identified impacts, as appropriate.

Each step is described below.

3.4.1 Review Existing Data

The Illinois Ecological Compliance Assessment Tool (EcoCAT) and IDNR lists of species of concern within Cook County were reviewed to identify listed plants and animals with the potential to occur in the project area (IDNR 2012). The USFWS database for species likely to occur in Cook County was also consulted (USFWS 2012). This step included the identification and description of habitat requirements of each listed species that has the potential to occur in Cook County.

Habitats that are potentially present in the project area were identified through existing data sources such as the USFWS National Wetlands Inventory (NWI), the updated NWI mapping created by Ducks Unlimited under contract with the USFWS, the most current available aerial photography, and other data sources that were available from entities such as the City of Chicago.

Habitat areas with the potential to support listed species or other important biological resources were highlighted for field verification in a subsequent step. Wetlands and riparian areas (habitats along the banks of a water course that provide both water and land resources) are important habitat features.

3.4.2 Field Review

Reconnaissance level field verification of identified habitat areas was conducted to confirm the existing condition of each area. Field reviews were conducted on May 15, 16, and 17, 2012; August 13, 2012; and October 15, 2012. The field review included parks and other public open spaces within

¼ mile of either side of the proposed alignments and within ¼ mile of proposed construction staging areas, stations, park & ride lots, and maintenance yards. Undeveloped areas that appear to provide habitat were also investigated to assess their condition and value for wildlife.

Any area of potential habitat for listed species within the API was field verified. The field review consisted of visual observation and photographic documentation of all parks and open space areas. These areas were assessed for their potential to support listed species and/or migratory birds during the breeding season. The condition of each area was noted, including factors such as understory vegetation and levels of human activity that may affect the suitability of each area for use by wildlife.

The existing conditions were used to describe the environmental baseline under the ESA. The environmental baseline represents a basal set of conditions to which the impacts of the proposed action were added. The environmental baseline conditions are specific for each species.

3.4.3 Impact Analysis Methods

The results of the field review were used to determine whether listed species, vegetation and wildlife habitats, including sensitive ecological areas, wetlands, wildlife migratory corridors, and/or habitat conservation areas, occur within the project area. With respect to listed species, the impact evaluation included an assessment of the potential for listed species to be present in the project area, an assessment of existing habitat conditions, the potential impacts of construction and operation of each alternative, and the importance of the existing environment with respect to maintaining each listed species. With respect to vegetation and other wildlife habitats, the impact evaluation included an assessment of whether the project could potentially have direct or indirect impacts, through impacts on individuals or their habitat. If there would be a potential for either direct or indirect impacts, mitigation measures would be required to address those impacts.

3.4.3.1 Threatened and Endangered Species Effects Determination

The USFWS and IDNR identify which listed species occur in Cook County. Those species do not occur uniformly throughout the County and may not occur within the project area. During the field reconnaissance, a qualified biologist determined whether suitable habitat is present for many species. If suitable habitat is not present, the species would not occur within the project area and there would be "*no effect*" on that species from proposed activities within the project area. For those species for which there may be suitable habitat present and which are likely to be present, an effects determination is made based on the following criteria:

- The relevance of the environmental baseline to the species' current status.
- Whether the proposed action would restore, maintain, or degrade the existing baseline conditions.
- The potential impacts of the proposed alternatives on each listed species.

- A determination of whether the species could be expected to survive with an adequate potential for recovery given the impacts of the project, the environmental baseline and any cumulative impacts, and considering measures for survival and recovery specific to all life stages.

If the project could have impacts on threatened or endangered species, by affecting either individuals or habitat, there would be a potential for adverse impacts. If federal-listed species could be affected, FTA would coordinate with USFWS to develop conservation measures to address those impacts. For state-listed species, IDNR would be consulted and mitigation measures would be developed.

If either the Record of Decision or construction occurs more than two years after the consultation on impacts on listed species, then the conclusions of this impact analysis would be reviewed to confirm the results are still valid. This review would include confirmation that the list of species potentially affected has not changed and that there has not been a significant change in the existing condition that would affect the impact analysis conclusions. If the impact analysis review shows that there would be an impact on a new listed species or on one that was not previously affected, then the consultation would need to be re-initiated.

3.4.3.2 Vegetation and Wildlife Habitats Impact Analysis

The results of the field review were used to determine whether valuable vegetation and wildlife habitats occur within the project area. For the build alternatives, the evaluation of potential impacts on vegetation included potential disturbance of protected vegetation, including street trees. Street trees were counted and are tabulated in Section 4. The evaluation of potential impacts on wildlife habitat included a review of areas where mature trees that may provide potential nesting sites for raptors and other birds might be disturbed. These mature trees may be found in parks, cemeteries, and in undeveloped vegetated parcels along the proposed alignments, and around proposed stations, park & ride lots, and maintenance yards. For the analysis of potential impacts on wildlife habitat, these areas were noted as areas of potential habitat and did not include individual tree counts. Removal or disturbance of trees during the nesting season could affect habitat or individuals of special-status species; therefore, an evaluation of these potential impacts for all proposed alternatives was performed.

Areas of potentially sensitive habitats, such as riparian or wetland areas, were identified and assessed for their condition and value for wildlife. Recommendations for avoiding and minimizing impacts on vegetation and wildlife habitats, as well as potential mitigation activities, were developed.

Section 4
Affected Environment

4.1 Vegetation and Wildlife Habitat

Vegetation in the API consists primarily of parkway trees and landscaping around buildings. The API has some remnants of natural vegetation left in small pockets or nature preserves and there may be areas where vegetation has re-established itself following disturbance. Urban wildlife is adapted to this mix of conventional landscaping and remnant patches that comprises the urban vegetative community. When patches of natural vegetation or nature preserves are of a significant size or are connected to other natural areas, a greater diversity of wildlife may be present. Migratory birds may use a wide variety of vegetation types during migration and may be found even in very urbanized landscapes, such as those found in the API. Section 4.2 discusses the listed species identified as potentially occurring within the project area.

In addition to providing wildlife habitat, vegetation in the urban landscape provides a variety of benefits to the human community, including the following:

- Improved air quality
- Reduction of greenhouse gases
- Reduction of the urban heat island effect
- Shade for houses, reducing energy use
- Increased psychological well-being
- Improved aesthetics
- Increased property values
- Stormwater attenuation

In 1837, the City of Chicago incorporated with *Urbs in Horto* (City in a Garden) as its motto (Chicago 2009). Today, Chicago's urban forest comprises over 3.6 million trees, the value of which exceeds $7 million for carbon sequestration and air pollution reduction, not including the carbon storage value of $14.8 million dollars and structural value of $2.3 billion (Chicago 2011). Further value can be seen in the stormwater management, noise abatement, and public health benefits of trees. As described in Section 3.1.3.1, the Chicago Trees Initiative has committed to increasing Chicago's tree canopy (Chicago 2011).

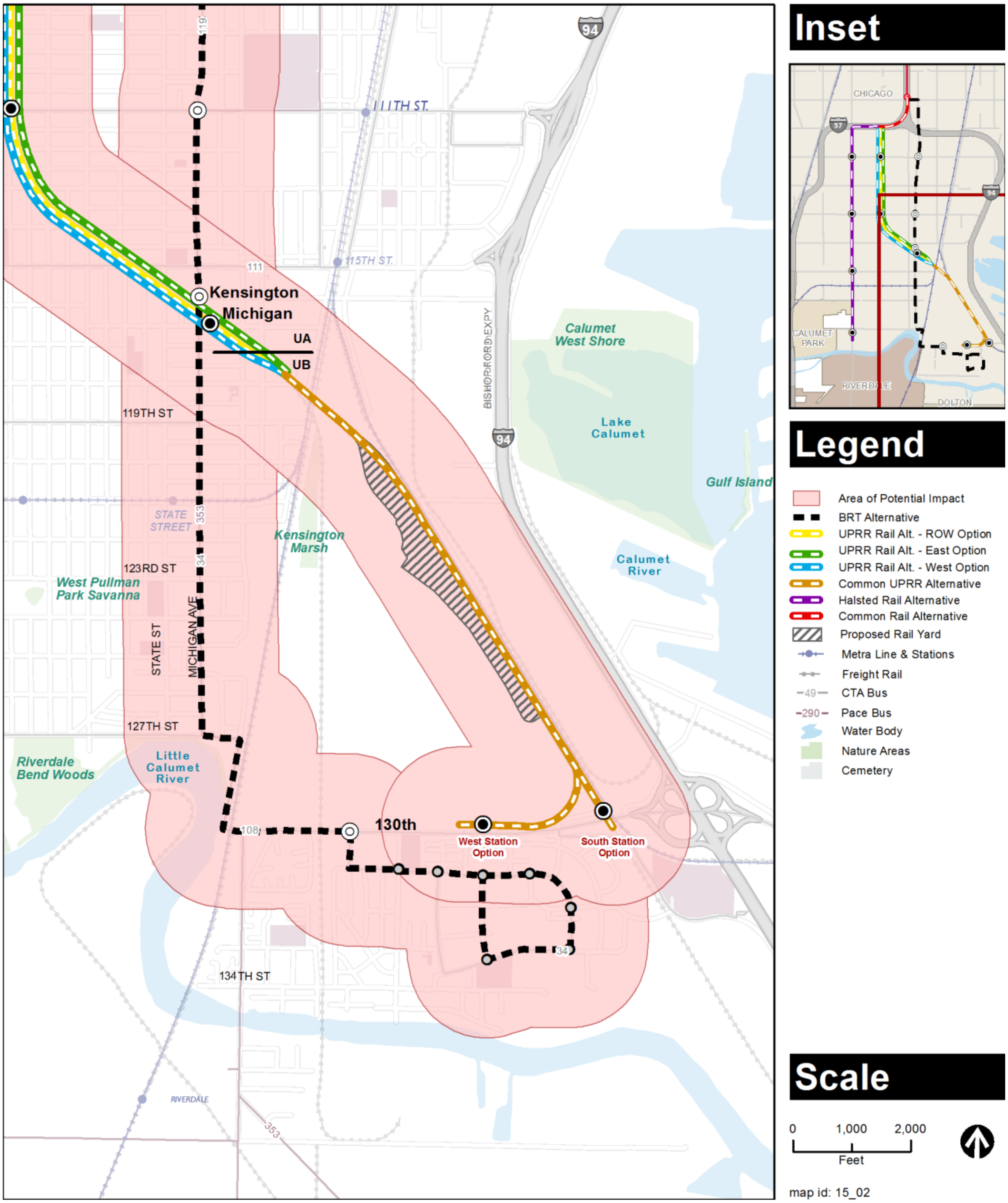
Based on an inventory of city land, the *Chicago Nature and Wildlife Plan* identifies over 4,800 acres of existing prairies, savannas, dunes, woodlands, wetlands, and riparian edges and 920 acres potentially suitable for restoration (Chicago 2006b). That plan identifies the following habitat types:

- Woodland/Forest (1,772 acres in Chicago) - An area with more than 50 percent tree cover.
- Wetland (535 acres in Chicago) - An area saturated with water for a sufficient part of the year that supports emergent reeds, grasses and other aquatic plants.
- Riparian/Water Edge (290 acres in Chicago) - A transitional area between dry and wet environments.
- Beach/Dune (22 acres in Chicago) - A hill or ridge of sand piled by the wind that supports plant life.
- Prairie/Grassland (170 acres in Chicago) - An area dominated by grasses or one possessing less than 10 percent tree cover.
- Savannas (36 acres in Chicago) - An area with 10 to 50 percent tree cover and a native grass and wildflower understory.
- City neighborhoods: Parks, yards, city streets.

The natural habitats of Chicago and its adjacent suburbs support more than 400 species of mammals, birds, reptiles, amphibians, and fish (Chicago 2006b). Of those 400 species, about 300 are birds. Chicago is on the Mississippi Flyway, which is part of a larger bird migration route that extends from the Mackenzie Valley in northwest Canada, along the Great Lakes, and down the Mississippi River Valley. Each year, more than 250 species of migratory birds use this flyway to travel between their winter homes in the southern United States and Central and South America, and their summer homes in North America. With Lake Michigan to the east and farmland to the far west, Chicago's green spaces, especially those with native plants and trees, provide a variety of plant life and habitat for resting and refueling. About 50 species of resident native birds also find a range of suitable habitats in Chicago (Chicago 2006a).

Based on the habitat types described in the *Chicago Nature and Wildlife Plan*, woodland forest and city neighborhoods habitat types are present within the API. "Woodland forest" occurs primarily in the area near the 120th Street yard and shop, but there are also a number of patches along the UPRR Rail Alternative alignment between 107th Street and 111th Street and around Kensington Park. All other portions of the API would be considered "city neighborhoods." Nature areas within the API that are designated in the *Chicago Nature and Wildlife Plan* (Chicago 2006b) are shown in relation to the API on Figure 4-1 and include the following:

- West Pullman Park Savanna - 401 W. 123rd Street, west of Princeton Street between 123rd and 124th Street. This site of an ancient river bluff remnant is host to a grove of over 60 white, red, and black oak and hickory trees (Chicago 2005e).


111TH ST.
115TH ST.
Kensington
Michigan
UA
UB
119TH ST
STATE STREET
123RD ST
127TH ST
STATE ST
MICHIGAN AVE
BISHOP FORD EXPY
Calumet West Shore
Lake Calumet
Gulf Island
Calumet River
Kensington Marsh
West Pullman Park Savanna
Riverdale Bend Woods
Little Calumet River
130th
West Station Option
South Station Option
134TH ST
RIVERDALE
94
353
34
108
111
119
Inset
CHICAGO
CALUMET PARK
RIVERDALE
DOLTON
57
94
Legend
Area of Potential Impact
BRT Alternative
UPRR Rail Alt. - ROW Option
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
Common UPRR Alternative
Halsted Rail Alternative
Common Rail Alternative
Proposed Rail Yard
Metra Line & Stations
Freight Rail
49 CTA Bus
290 Pace Bus
Water Body
Nature Areas
Cemetery
Scale
0
1,000
2,000
Feet

map id: 15_02

Figure 4-1: Nature Areas Identified in the *Chicago Nature & Wildlife Plan* within the Areas of Potential Impact

- Riverdale Bend Woods - 12700 S. Stewart Avenue, near 127th Street along the Little Calumet River. This site is part of the Calumet Open Space Reserve (Chicago 2005d).

- Kensington Marsh - 12400 S. Indiana Avenue, north of the Metropolitan Water Reclamation District's Calumet Plant on 130th Street. This marsh was built in 1986 as part of United States Army Corps of Engineers mitigation project, consisting of open water, wetlands, and upland habitat (Chicago 2005c).

- Outside of the project area but just to the east of the UPRR Rail Alternative is Calumet West Shore and Gull Island site, at 11500 Doty Avenue, with over 228 acres of wooded areas, meadows, wetlands, and mud flats on the western shore of Lake Calumet (Chicago 2005b). This site is approximately 0.9 mile to the east of the project, as shown in Figure 4-1.

The IDNR EcoCAT database, which records information based on historical records within the nearest Section/Township/Range, was reviewed. A review of the IDNR EcoCAT database identified the Lake Calumet Illinois Natural Areas Inventory Sites near Lake Calumet west of the UPRR Rail Alternative alignment and the Riverdale Marsh Site beyond the southern end of the Halsted Rail Alternative alignment at the intersection of 138th Street and Halsted Street. The IDNR EcoCAT database recorded occurrences of seven listed species within the sections that encompass the project area, including black-crowned night heron (*Nycticorax nycticorax*), Blanding's turtle (*Emydoidea blandingii*), common moorhen (*Gallinule chloropus*), little blue heron (*Egretta caerulea*), peregrine falcon (*Falco peregrinus*), yellow-crowned night heron (*Nyctanassa violacea*), and yellow-headed blackbird (*Xanthocephalus xanthocephalus*).

These historic records are not necessarily for locations within the API, so even with this more focused data, it is necessary to compare each species' habitat requirements with the existing habitats within the project area. It is also important to understand that this historical data does not provide proof of absence. Results from the IDNR EcoCAT database review are presented in Appendix A.

A review of the NWI information identified wetland areas within the API. See the *Water Resources Technical Memorandum* for more information about wetlands.

Based on inspection of aerial photography, all areas within ¼ mile of the proposed project alignments that appeared to contain approximately ½ acre or more of contiguous habitat cover were identified. In a heavily urbanized area, this area provides a minimum amount of cover where wildlife not generally found in residential yards might be found. During the field investigation, all of these areas were visited and evaluated. With the exception of the forested habitats in the vicinity of the 120th Street yard and shop (approximately 14 acres), none of these areas would support wildlife communities that are significantly different from the surrounding residential and commercial areas.

Trees within the proposed construction footprint of each alternative were counted. Trees may provide nesting and foraging sites for migratory birds and certain trees may be protected by local ordinances. Field surveys were conducted in May and August 2012. An inventory of the number of trees was developed. The City of Chicago landscape ordinance does not apply to trees within 50 feet of a railroad; however, for the purposes of this evaluation, such trees were included as they provide an indicator of the habitat values that might be affected by each alternative.

When applications for local construction permits are filed, it may be necessary to prepare more detailed tree inventories and to update the results of this investigation as some trees would have been removed and others may have been planted.

Tables 4-1, 4-2, and 4-3 show the amount of vegetation or potential wildlife habitat that would be potentially affected by each alternative. The data is shown by vegetation segment. Trees are not evenly distributed along the project corridor, and work in some areas could have greater impacts on vegetation and wildlife than in other segments. In addition, some portions of the UPRR Rail and Halsted Rail Alternative alignments would follow similar routes; therefore, the data is presented by sub-segments to better identify the differences between alternatives.

Portions of the BRT and Halsted Rail Alternative alignments would be within street ROWs and would have the potential to affect street trees; therefore, the data presents the number of trees potentially affected by each alternative. The UPRR Rail Alternative would have the potential to affect blocks of habitat rather than individual street trees; therefore, acres of potentially affected habitat are provided in Table 4-2. As described below, blocks of habitat may provide greater wildlife benefits than street trees, while street trees may be protected by local ordinance.

Figure 4-2 shows the project area including the vegetation segments for which the data in Tables 4-1, 4-2, and 4-3 are presented. The vegetation segments for each alternative are defined as follows:

- BRT Alternative - from the 95th Street Terminal to the 130th Street stop
- UPRR Rail Alternative:
    - Vegetation Segment UA-1: From the 95th Street Terminal to the beginning of the horizontal curve at the UPRR crossing
    - Vegetation Segment UA-2: The horizontal curve at the UPRR crossing
    - Vegetation Segment UA-3: From the end of the horizontal curve at the UPRR crossing to the Canadian National (CN)/Metra Electric crossing
    - Vegetation Segment UB: From the CN/Metra Electric crossing to the beginning of the 130th Street station sites
    - South Station Option
    - West Station Option
    - 120th Street Yard and Shop

- Halsted Rail Alternative:
    - Vegetation Segment HA-1: From the 95th Street Terminal along the I-57 corridor to the beginning of the horizontal curve at the I-57 crossing
    - Vegetation Segment HA-2: The horizontal curve at the I-57 crossing
    - Vegetation Segment HA-3: From the end of the horizontal curve at the I-57 crossing to the 119th Street station
    - Vegetation Segment HB: From the 119th Street station to Vermont Avenue
    - 119th Street Yard and Shop

Table 4-1: Potentially Affected Vegetation - Bus Rapid Transit Alternative

Vegetation Segment	Number of Street/Landscape Trees
BRT Alternative	90
Total	**90**

Table 4-2: Potentially Affected Vegetation - Union Pacific Railroad Rail Alternative (acres)

Alignment Segment	Vegetation Segment	Right-of-Way Option	East Option	West Option
UA	Segment UA-1	1.1	1.1	1.1
	Segment UA-2	0.1	0.2	0.2
	Segment UA-3	2.8	7.5	13.3
UB	Segment UB	9.5	9.3	9.3
	South Station Option	1.0	1.0	1.0
	West Station Option	9.2	9.2	9.2
	120th Street Yard and Shop	41.9	41.9	41.9
Total		**65.6**	**70.2**	**76.0**

Table 4-3: Potentially Affected Vegetation - Halsted Rail Alternative

Alignment Segment	Vegetation Segment	Number of Street/Landscape Trees	Acres of Urban Habitat
HA	Segment HA-1	54	n/a
	Segment HA-2	2	n/a
	Segment HA-3	350	n/a
HB	Segment HB	114	n/a
	119th Street Yard and Shop	n/a	7.0
Total		**516**	**7.0**

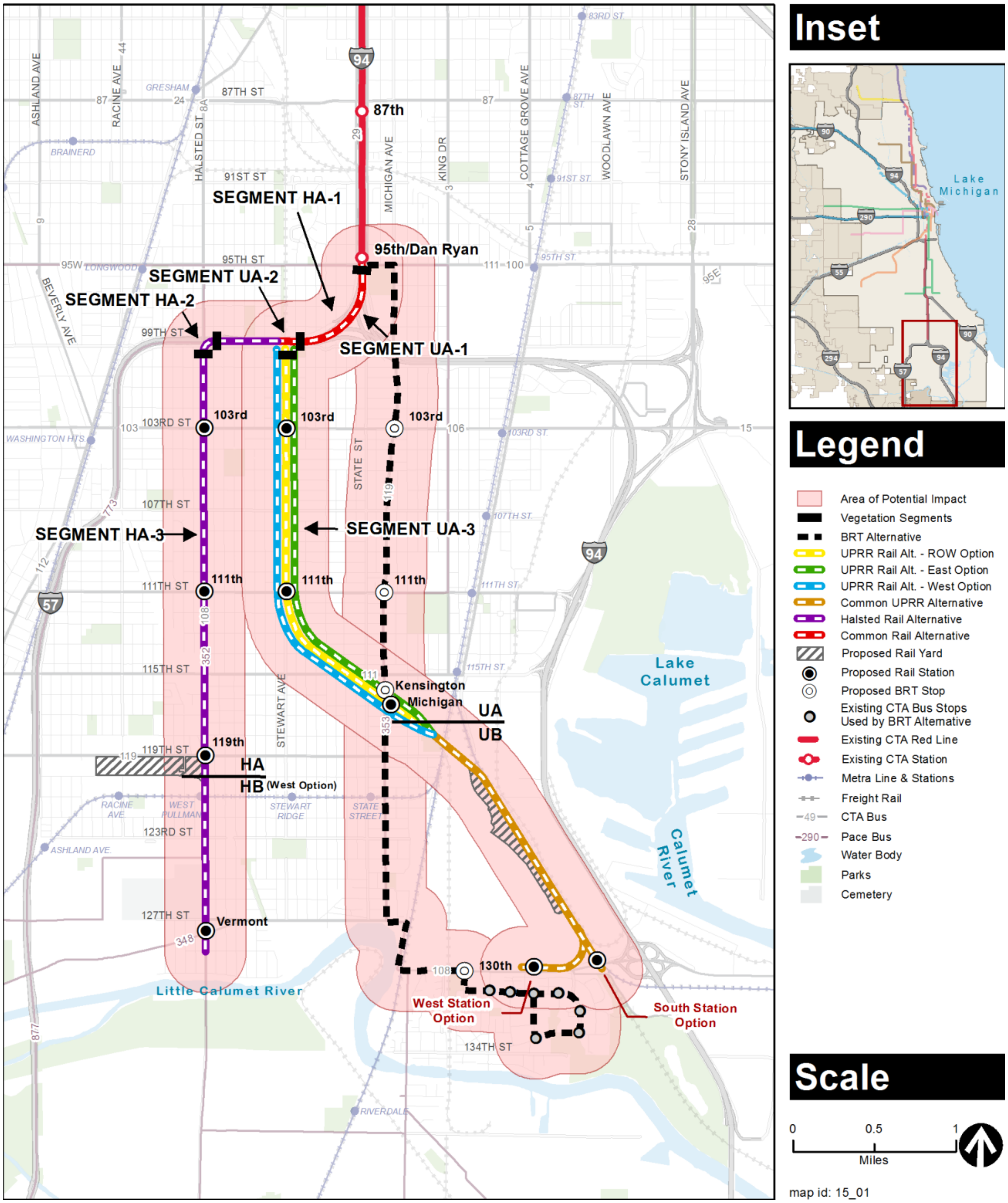

SEGMENT HA-1
SEGMENT UA-2
SEGMENT HA-2
SEGMENT UA-1
SEGMENT HA-3
SEGMENT UA-3
87th
95th/Dan Ryan
103rd
103rd
103rd
111th
111th
111th
119th
Kensington
Michigan
UA
UB
HA
HB (West Option)
Vermont
130th
West Station Option
South Station Option
Lake Calumet
Calumet River
Little Calumet River
87TH ST
91ST ST
95TH ST
99TH ST
103RD ST
107TH ST
111TH ST
115TH ST
119TH ST
123RD ST
127TH ST
134TH ST
ASHLAND AVE
RACINE AVE
HALSTED ST
MICHIGAN AVE
KING DR
COTTAGE GROVE AVE
WOODLAWN AVE
STONY ISLAND AVE
STATE ST
STEWART AVE
BEVERLY AVE
GRESHAM
BRAINERD
LONGWOOD
WASHINGTON HTS.
RACINE AVE
WEST PULLMAN
STEWART RIDGE
STATE STREET
ASHLAND AVE.
RIVERDALE
83RD ST
87TH ST
91ST ST
95TH ST
103RD ST
107TH ST
111TH ST
115TH ST
Inset
Lake Michigan
Legend
Area of Potential Impact
Vegetation Segments
BRT Alternative
UPRR Rail Alt. - ROW Option
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
Common UPRR Alternative
Halsted Rail Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Proposed BRT Stop
Existing CTA Bus Stops Used by BRT Alternative
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
49 CTA Bus
290 Pace Bus
Water Body
Parks
Cemetery
Scale
0
0.5
1
Miles
map id: 15_01

Figure 4-2: Project Area including Segments

The trees potentially affected by the BRT Alternative (Table 4-1) are in the park & ride sites; some of these trees are parkway trees along streets in sidewalks and some are landscape trees on private lands around buildings.

The trees potentially affected by the UPRR Rail Alternative (Table 4-2) are in backyards and abandoned industrial parcels and along the railroad embankment. West of the UPRR tracks between 108th and 111th Streets, several abandoned industrial parcels have regrown with a mix of native and non-native trees, small trees, and shrubs. These patches of habitat are disconnected from other larger habitat patches, but they have developed several vegetative layers and have a good understory of shrubs, small trees and herbaceous cover. This provides a variety of habitats for urban adapted species. These areas are likely to support a greater variety and number of urban wildlife species than the narrow bands of trees along the railroad embankment further to the south. These areas would be more valuable for wildlife than most street trees or isolated specimen trees in backyards.

Many of the trees along the UPRR Rail Alternative alignment are in narrow bands along the existing rail corridor. Some of the trees included are parkway trees planted along streets in sidewalks and some are landscape trees on private lands around buildings. Narrow rows of trees provide many of the benefits identified by the Chicago Urban Forest Agenda (Chicago 2009). However, they provide fewer wildlife benefits than if the same number of trees were organized into a clump. Due to their mobility, some migratory bird species may utilize these trees during migration. In addition, there is the potential for migratory birds to use existing mature trees within the project area for breeding. The frequent passing of trains and the associated noise and vibration would reduce the value of narrow bands of trees for bird use.

Most of these areas are isolated from other parks or patches of habitat and thus would not be as valuable as might be expected based on the number of trees alone. The forested areas are affected by human disturbances and urban influences, such as traffic and rail noise, trash, and light pollution. The forested areas that are becoming established at the south end of the UPRR Rail Alternative alignment represent the best habitat within the entire API, followed closely by the patches along the West Option between 108th and 111th Streets.

Minimal habitat exists along the Halsted Rail Alternative alignment (Table 4-3); trees are primarily in the median and sidewalks of Halsted Street. The habitat within the proposed maintenance yard for the Halsted Rail Alternative is composed of vegetation that has re-established in several patches following abandonment of previous urban uses. It is not as well developed as similar patches found along the UPRR Rail Alternative West Option alignment.

Large birds such as herons, hawks, and eagles make large nests that persist through the winter months. These birds will return to the same nesting territory year after year and reuse the same nests. Their nests can be very visible in the winter when the leaves are off the trees. No large nests indicating the presence of herons, hawks, or eagles were observed in the API during the May, August, or October 2012 field visits. Eagles perch on tall trees near water or open spaces or on the ground in more open areas. There do not appear to be suitable perching areas for eagles within the API.

During a field visit on October 15, 2012, monk parakeet (*Myiopsitta monachus*) nests were identified in and around a cell phone tower at the northeast corner of 119th Street and Halsted Street. Approximately six nests were identified within the cell phone tower, and green monk parakeets were seen entering and exiting the nests. Photos of the nests are included in Appendix B.

The Cedar Park Cemetery at 12540 South Halsted Street in Calumet Park is home to a small herd of non-native Japanese Sika deer (*Cervus nippon*). The herd has been living in the cemetery since the 1920s and they graze off the land. The deer do not leave the confines of the cemetery. The Cedar Park Cemetery also contains several patches of habitat where there is an understory layer under the mature tree canopy. Areas with an understory layer of shrubs and small trees are more valuable for wildlife than areas that only contain mature trees with maintained grass underneath. These habitat areas are not in areas that would be affected by any of the alternatives.

4.2 Threatened and Endangered Species

There are 114 federal- and state-listed species that potentially occur within Cook County. Listed species include those listed as threatened, endangered, or candidates for listing as threatened or endangered. The entire API is within Cook County. Table 4-4 lists each species, its status (e.g., federally threatened, state endangered), a brief description of its habitat requirements, and an assessment of whether the species has the potential to occur within the API. Each species' habitat requirements were compared against the existing habitats within the API to determine the likelihood that a species could occur within the project area. Only those species that could potentially occur within the project area are considered further. The shaded row in Table 4-4 indicates the species with the potential to occur within the API.

The IDNR EcoCAT database was consulted for information about known occurrences of listed species within the project area. The IDNR EcoCAT database identified seven species within the sections that encompass the project area, as discussed in Section 4.0 (Appendix A). These species are most likely included due to the proximity of the API to the Little Calumet River and natural areas next to the river and do not occur within the API. Other than the peregrine falcon (discussed below), there is no suitable habitat for the other six species in the API.

Table 4-4: Listed Species in Cook County

Cook County, Illinois Federal- and State-Listed Species			
Species	Status	Habitat Requirements	Likelihood of Occurrence
Invertebrates			
Slippershell (freshwater mussel) *Alasmidonta viridis*	ST	Creeks and headwaters of rivers in sand or gravel substrates with high gradients or riffles. Occasionally in larger rivers and lakes and in mud substrates.	Unlikely, habitat does not occur in the project area.
Elfin Skimmer (dragonfly) *Nannothemis bella*	ST	Bogs and occasionally in calcareous fens with sedge meadows and marl deposits.	Unlikely, habitat does not occur in the project area.
Eryngium Stem Borer (moth) *Papaipema eryngii*	SE	Mesic and wet-mesic prairie. In Illinois, associated with moderately disturbed to relatively undisturbed prairie.	Unlikely, habitat does not occur in the project area.
Hine's Emerald Dragonfly *Somatochlora hineana*	FE, CH, SE	Spring fed wetlands, wet meadows, and marshes. Project area is not within designated critical habitat.	Unlikely, habitat does not occur in the project area.
Amphibians			
Mudpuppy (salamander) *Necturus maculosus*	ST	Rivers, lakes, and other permanent water sources with hard cover such as rocks, logs, and overhangs. Will also utilize debris, reeds, mud, stream banks, and other areas.	Unlikely, habitat does not occur in the project area.
Reptiles			
Blanding's Turtle *Emydoidea blandingii*	SE	Quiet waters in marshes, prairie wetlands, wet sedge meadows, and shallow, vegetated portions of lakes.	Unlikely, habitat does not occur in the project area.
Kirtland's Snake *Clonophis kirtlandi*	ST	Prairie wetlands, wet meadows, and grassy edges of creeks, ditches, and ponds, usually in association with crayfish burrows. Has been found in damp habitat remnants in vacant lots of urban settings.	Unlikely, habitat does not occur in the project area.
Eastern Massasauga *Sistrurus catenatus catenatus*	FC, SE	Wet areas including wet prairies, marshes, and low areas along rivers and lakes. Also uses adjacent uplands during part of the year. Often hibernates in crayfish burrows but may also be found under logs and tree roots or in small mammal burrows.	Unlikely, habitat does not occur in the project area.

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Cook County, Illinois Federal- and State-Listed Species			
Species	Status	Habitat Requirements	Likelihood of Occurrence
Fish			
Longnose Sucker *Catostomus catostomus*	ST	Cool, spring-fed creeks, lakes and their tributary streams.	Unlikely, habitat does not occur in the project area.
Iowa Darter *Etheostoma exile*	ST	Cool, clear to slightly turbid, slow moving vegetated brooks and weedy portions of glacial lakes, marshes and ponds.	Unlikely, habitat does not occur in the project area.
Banded Killifish *Fundulus diaphanus*	ST	Shallow, clear and quiet water streams, rivers, ponds and lakes with sand, gravel or mud substrates. Often found near submerged aquatic vegetation.	Unlikely, habitat does not occur in the project area.
Blackchin Shiner *Notropis heterodon*	ST	Very clear waters of glacial lakes and marshes with an abundance of submerged aquatic vegetation.	Unlikely, habitat does not occur in the project area.
Birds*			
Least Bittern *Ixobrychus exilis*	ST	Emergent vegetation in freshwater marshes and occasionally saltwater or brackish marshes.	Unlikely, habitat does not occur in the project area.
Snowy Egret *Egretta thula*	SE	Emergent wetlands associated with freshwater marshes and along the periphery of large water bodies.	Unlikely, habitat does not occur in the project area.
Little Blue Heron *Egretta caerulea*	SE	Swamps, estuaries, rivers, ponds, and lakes.	Unlikely, habitat does not occur in the project area.
Black-crowned Night Heron *Nycticorax nycticorax*	SE	Forests, scrub/shrub, marshes, and ponds serve as nesting, roosting, and foraging habitats. Colonies may be located in wooded swamps, coastal dune forests, vegetated dredge spoil islands, scrub thickets, or marshes in close proximity to water. Migratory.	Unlikely, habitat does not occur in the project area.
Yellow-crowned Night Heron *Nyctanassa violacea*	SE	Nest on barrier islands, dredge spoil islands, and bay islands that contain forested wetlands or scrub/shrub thickets. Colonies may be located in dense shrubby thickets, forests with an open understory or suburban parks and yards that offer suitable habitat. Migratory.	Unlikely, habitat does not occur in the project area.
Osprey *Pandion haliaetus*	SE	Nests in all forested vegetation types with large trees near water, as well as on platforms erected in less optimal habitat. Migratory.	Unlikely, habitat does not occur in the project area.

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Cook County, Illinois Federal- and State-Listed Species			
Species	Status	Habitat Requirements	Likelihood of Occurrence
Peregrine Falcon *Falco peregrinus*	ST	Nests on cliff ledges above or near open water including lakes, ponds, rivers, and seas. Uses a wide variety of foraging habitats, including croplands and riparian areas along rivers, ponds, marshes, and meadows, and open areas where avian prey are vulnerable, including pastures, grasslands, mountain valleys, and gorges. Migratory.	Potential to occur in suitable habitat within the project area.
King Rail *Rallus elegans*	SE	Emergent vegetation in freshwater marshes and brackish tidal marshes.	Unlikely, habitat does not occur in the project area.
Common Moorhen *Gallinula chloropus*	SE	Freshwater and brackish marshes, lakes, canals and ponds with cattails and other aquatic vegetation.	Unlikely, habitat does not occur in the project area.
Piping Plover *Charadrius melodus*	FE	Wide, flat, open, sandy beaches with very little grass or other vegetation. Nesting territories often include small creeks or wetlands.	Unlikely, habitat does not occur in the project area.
Upland Sandpiper *Bartramia longicauda*	SE	Open prairies, grasslands, pastures, wet meadows and hayfields.	Unlikely, habitat does not occur in the project area.
Wilson's Phalarope *Phalaropus tricolor*	SE	Nests in shallow, prairie wetlands. During migration, inhabits shallow ponds, flooded fields, and sometimes mudflats.	Unlikely, habitat does not occur in the project area.
Black Tern *Chlidonias niger*	SE	Nests in emergent vegetation along the shoreline periphery of freshwater lakes, wetlands, and marshes along rivers and ponds. Forages in wet meadows, pastures, agricultural fields, and water.	Unlikely, habitat does not occur in the project area.
Yellow-headed Blackbird *Xanthocephalus xanthocephalus*	SE	Nests in deep-water marshes, sloughs, forested wetlands, and along lake edges. Can sometimes be found in huge flocks in open fields and pastures during migration and in winter.	Unlikely, habitat does not occur in the project area.
Mammals			
Franklin's Ground Squirrel *Spermophilus franklinii*	ST	Tall grass and mid-grass prairies. Also uses riparian areas (marsh edges), forest-field edges, fields, hedgerows, and unmowed strips along railroad rights-of-way and roadsides. Generally avoids short grass habitats. Nests are in underground burrows.	Unlikely, habitat does not occur in the project area.

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Cook County, Illinois Federal- and State-Listed Species			
Species	Status	Habitat Requirements	Likelihood of Occurrence
Plants			
Shadbush *Amelanchier interior*	ST	Dry woods, bluffs above rivers, rocky areas and slopes, banks of streams, fields, thickets, and sandy areas; less often in wetlands.	Unlikely, habitat does not occur in the project area. Field survey did not detect.
Shadbush Amelanchier sanguinea	SE	Margins of woods, river ledges, shorelines, rocky slopes, crevices of open rock faces and cliffs, non-calcareous to slightly calcareous sites.	Unlikely, habitat does not occur in the project area.
Marram Grass *Ammophila breviligulata*	SE	Drier areas of sandy beaches and unstabilized or partially stabilized sand dunes along coastal areas including the Great Lakes.	Unlikely, habitat does not occur in the project area.
Wooly Milkweed *Asclepias lanuginosa*	SE	Dry, sandy, or gravelly hillside prairies.	Unlikely, habitat does not occur in the project area.
Mead's Milkweed *Asclepias meadii*	FT	Moderately wet (mesic) to moderately dry (dry mesic) upland tallgrass prairie or glade/barren habitat characterized by vegetation adapted for drought and fire. Persists in stable late-successional prairie.	Unlikely, habitat does not occur in the project area.
Oval Milkweed *Asclepias ovalifolia*	SE	Hill prairies and dry sand prairies, typical savannas and sandy savannas, and openings in upland oak woodlands.	Unlikely, habitat does not occur in the project area.
Forked Aster *Aster furcatus*	ST	Glacial moraines, sedge meadows or woodland ponds.	Unlikely, habitat does not occur in the project area.
American Slough Grass *Beckmannia syzigachne*	SE	Marshes, low wet ground or “sloughs,” floodplains, pond shores, lakes, streams, ditches, and other types of open wetland habitats.	Unlikely, habitat does not occur in the project area.
Kittentails *Besseya bullii*	ST	Dry sand prairies, dry gravel prairies, hill prairies, barren savannas, thinly wooded bluffs, and sandy or gravelly riverbanks.	Unlikely, habitat does not occur in the project area.
Northern Grape Fern *Botrychium multifidum*	SE	Old pastures, meadows, woodland margins, riverbanks, and bottomlands in subacid soil.	Unlikely, habitat does not occur in the project area.
Dwarf Grape Fern *Botrychium simplex*	SE	Meadows, barrens, and woods, usually in subacid soil.	Unlikely, habitat does not occur in the project area.
Sea Rocket *Cakile edentula*	ST	Sand shores and low dunes, often found on the ridge of wind-blown sand behind the high-tide line of beaches.	Unlikely, habitat does not occur in the project area.

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Cook County, Illinois Federal- and State-Listed Species			
Species	Status	Habitat Requirements	Likelihood of Occurrence
Grass Pink Orchid *Calopogon tuberosus*	SE	Moist prairie and acid-soiled boggy areas, typically growing in sphagnum.	Unlikely, habitat does not occur in the project area.
Golden Sedge *Carex aurea*	ST	Moist, open or shaded habitats, especially meadows and seepage slopes, usually on basic soils.	Unlikely, habitat does not occur in the project area.
Sedge *Carex bromoides*	ST	Soggy deciduous woodlands, muddy margins and shallow water of vernal pools in wooded areas, hardwood swamps, typical seeps and gravelly seeps in wooded areas, bogs, edges of marshes, and sedge meadows. Found in higher quality natural areas.	Unlikely, habitat does not occur in the project area.
Sedge *Carex echinata*	SE	Bogs, swamps, peaty or sandy shores of streams or lakes, wet meadows, usually in acidic soils.	Unlikely, habitat does not occur in the project area.
Sedge *Carex formosa*	SE	Mesic to dry deciduous forests and ravines, moist meadows, usually associated with calcareous soils.	Unlikely, habitat does not occur in the project area.
Sedge *Carex garberi*	SE	Moist shores, meadows, fens, on base-rich soils.	Unlikely, habitat does not occur in the project area.
Swollen Sedge *Carex intumescens*	ST	Dry-mesic to wet coniferous, mixed, and deciduous forests, forest openings, thickets, wet meadows, ditches.	Unlikely, habitat does not occur in the project area.
Tuckerman's Sedge *Carex tuckermanii*	SE	Deciduous swamp forests, thickets, often along streams or pond shores, wet meadows.	Unlikely, habitat does not occur in the project area.
Little Green Sedge *Carex viridula*	ST	Sandy to rocky, often marly, open or marshy shores, beach pools, and interdunal swales; often in early successional habitats with bare soil.	Unlikely, habitat does not occur in the project area.
Pretty Sedge *Carex woodii*	ST	Usually dry, calcareous woodlands.	Unlikely, habitat does not occur in the project area.
Leatherleaf *Chamaedaphne calyculata*	ST	Boreal and subarctic peatlands, margins of boggy swamps and streams in coniferous forests, pocosins in coastal plain, often forming dense thickets.	Unlikely, habitat does not occur in the project area.
Seaside Spurge *Chamaesyce polygonifolia*	SE	Sandy beaches and dunes along Lake Michigan.	Unlikely, habitat does not occur in the project area.
Spotted Wintergreen *Chimaphila maculata*	SE	Coniferous, mixed, and deciduous forests, xeric sand communities.	Unlikely, habitat does not occur in the project area.

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Cook County, Illinois
Federal- and State-Listed Species

Species	Status	Habitat Requirements	Likelihood of Occurrence
Pitcher's (Dune) Thistle *Cirsium pitcheri*	ST	Beach and dune habitats around lakes Huron, Michigan, and Superior. Was extirpated from portions of its former range at the southern end of Lake Michigan.	Unlikely, habitat does not occur in the project area.
Sweetfern *Comptonia peregrina*	SE	Dry, sterile, sandy to rocky soils in pinelands or pine barrens, clearings, or edges of woodlots.	Unlikely, habitat does not occur in the project area.
Spotted Coral-root Orchid *Corallorhiza maculata*	ST	Habitats vary from deciduous forests and mixed coniferous/deciduous forests to predominantly coniferous forests.	Unlikely, habitat does not occur in the project area. Field survey did not detect.
White Lady's Slipper *Cypripedium candidum*	ST	Mesic to wet prairies and fen meadows, very rarely open wooded slopes.	Unlikely, habitat does not occur in the project area.
Leafy-prairie Clover *Dalea foliosa*	FE, SE	Prairie remnants along the Des Plains River in Illinois, in thin soils over limestone substrate.	Unlikely, habitat does not occur in the project area.
Hairgrass Deschampsia flexuosa	SE	Oak savanna and woodland habitat.	Unlikely, habitat does not occur in the project area.
Northern Panic Grass *Dichanthelium boreale*	SE	Semi-open areas in damp or sandy woodlands, thickets, or on banks.	Unlikely, habitat does not occur in the project area.
Narrow-leaved Sundew *Drosera intermedia*	ST	Constantly moist to wet bogs, fens, and marshes. It prefers nutrient free soils, such as sphagnum peat moss or sandy ground, and open, sunny habitats.	Unlikely, habitat does not occur in the project area.
Round-leaved Sundew *Drosera rotundifolia*	SE	Most often bogs, but also swamps, rotting logs, mossy crevices in rocks, or damp sand along stream, lake, or pond margins.	Unlikely, habitat does not occur in the project area.
Capitate Spikerush *Eleocharis olivacea*	SE	A variety of wet, open situations: shores, pond margins, bog mats, fields; often in deeper water than many other spike-rushes.	Unlikely, habitat does not occur in the project area.
Few-flowered Spikerush *Eleocharis pauciflora*	SE	Damp calcareous shores, ledges and swamps.	Unlikely, habitat does not occur in the project area.
Spike Rush *Eleocharis rostellata*	ST	Very wet calcareous or brackish fens, springs, shores.	Unlikely, habitat does not occur in the project area.
Bearded Wheat Grass *Elymus trachycaulus*	ST	Adapted to a wide range of soils and climates. Grows in very dry to very boggy habitats. In Illinois, found in mesic prairies and wet dolomite outcrops.	Unlikely, habitat does not occur in the project area.

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Queen-of-the-prairie *Filipendula rubra*	SE	Fens, calcium-rich peat producing wetlands.	Unlikely, habitat does not occur in the project area.
Northern Cranesbill *Geranium bicknellii*	SE	Woodland openings, sandy Black Oak woodlands, typical and sandy savannas, and rocky outcrops.	Unlikely, habitat does not occur in the project area.
Tall Sunflower *Helianthus giganteus*	SE	Thickets, swamps, and meadows.	Unlikely, habitat does not occur in the project area.
Kalm's St. John's Wort *Hypericum kalmianum*	SE	Moist; dunes, shores; in rocky, sandy soil.	Unlikely, habitat does not occur in the project area.
Richardson's Rush *Juncus alpinus*	SE	Wet, open to semi-open situations; in sandy, usually calcareous soil: shores of lakes and ponds, marshes, ditches, wet meadows, and wet areas of abandoned limestone quarries.	Unlikely, habitat does not occur in the project area.
Ground Juniper *Juniperus communis*	ST	Dry, open, rocky, wooded hillsides, sand terraces, maritime escarpments, and on exposed slopes and plateaus. It is found on dunes or dune heath in coastal areas, on isolated mountains, and may spread into fields and pastures.	Unlikely, habitat does not occur in the project area.
Pale Vetchling *Lathyrus ochroleucus*	ST	Open woods, thickets, and clearings on well drained, usually calcareous substrate.	Unlikely, habitat does not occur in the project area.
Prairie Bush Clover *Lespedeza leptostachya*	FT, SE	Dry to mesic prairies with gravelly soil.	Unlikely, habitat does not occur in the project area.
Blazing Star *Liatris scariosa* var. *nieuwlandii*	ST	Savannas and prairies or at woodland edges or forest openings, primarily on aged glacial till or loess soils.	Unlikely, habitat does not occur in the project area.
Indian Cucumber Root *Medeola virginiana*	SE	Moist slopes, mesic woods.	Unlikely, habitat does not occur in the project area.
Slender Sandwort *Minuartia patula*	ST	Prairies, meadows, limestone barrens, and rocky outcrops in sandy, clayey, or gravelly soils.	Unlikely, habitat does not occur in the project area.
Small Sundrops *Oenothera perennis*	ST	Dry to moist open ground, open woods, fields, and meadows.	Unlikely, habitat does not occur in the project area.

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Species	Status	Habitat Requirements	Likelihood of Occurrence
Heart-leaved Plantain *Plantago cordata*	SE	Wet woods, sloughs, rocky streambeds, springs.	Unlikely, habitat does not occur in the project area.
Orange Fringed Orchid *Platanthera ciliaris*	SE	Moist sandy and peaty meadows, marshes, prairies, pine savannas, open woods, wet wooded flats, seeping slopes, roadsides, dry wooded slopes, sphagnum bogs.	Unlikely, habitat does not occur in the project area.
Wood Orchid *Platanthera clavellata*	SE	Sphagnum bogs, sphagnous seeps and meadows, wet sandy and peaty meadows, marshes, low woods, wet prairies, and roadsides.	Unlikely, habitat does not occur in the project area.
Tubercled Orchid *Platanthera flava* var. *herbiola*	ST	Alluvial forests, riparian thickets, wet meadows, wet prairies, seeps, salt marshes.	Unlikely, habitat does not occur in the project area.
Eastern Prairie Fringed Orchid *Platanthera leucophaea*	FT, SE	Moist to mesic black soil prairies, sand prairies, thickets, pothole marshes, and fens.	Unlikely, habitat does not occur in the project area.
Purple Fringed Orchid *Platanthera psycodes*	SE	Alluvial and swamp forests, stream banks, riparian meadows, moist and seeping slopes, marshes, roadside banks, ditches, old fields.	Unlikely, habitat does not occur in the project area.
Weak Bluegrass *Poa languida*	SE	Along the edges of wetlands on gravelly, well drained, calcareous substrates.	Unlikely, habitat does not occur in the project area.
Snake-mouth *Pogonia ophioglossoides*	SE	Sphagnum bogs, poor fens, moist acidic sandy meadows and prairies, open wet woods, wet pine flatwoods, pine savannas, cypress swamps, sandy-peaty stream banks, seepage slopes, ditches, roadcuts, rarely calcareous fens.	Unlikely, habitat does not occur in the project area.
Downy Solomon's Seal *Polygonatum pubescens*	SE	Rich, moist, wooded slopes and coves.	Unlikely, habitat does not occur in the project area.
Carey's Heartsease *Polygonum careyi*	SE	Moist, open to semi-open areas, often in sandy soil: swamps, thickets, riverbeds, sand prairies, and disturbed areas such as fields, meadows, clearings, recent barns, and cultivated ground.	Unlikely, habitat does not occur in the project area.
Balsam Poplar *Populus balsamifera*	SE	Open, rich, low woods, cool, seasonally wet soils, bog margins in boreal forests, aspen parklands, montane streamsides, rocky slopes, gallery forests within tundra.	Unlikely, habitat does not occur in the project area.
Grass-leaved Pondweed Potamogeton gramineus	ST	Ponds, lakes, streams, and rivers.	Unlikely, habitat does not occur in the project area.

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ST - State Threatened

Cook County, Illinois Federal- and State-Listed Species			
Species	Status	Habitat Requirements	Likelihood of Occurrence
Fern Pondweed *Potamogeton robbinsii*	SE	Shallow to deep water of ponds, lakes, and slow-flowing rivers.	Unlikely, habitat does not occur in the project area.
Beaked Rush *Rhynchospora alba*	ST	Acid, sphagnous, boggy, open sites, poor fens, often on floating mats or peaty interstices of rocky shores.	Unlikely, habitat does not occur in the project area.
Purple-flowering Raspberry *Rubus odoratus*	SE	Moist, shady places; woodland edges.	Unlikely, habitat does not occur in the project area.
Dwarf Raspberry *Rubus pubescens*	ST	Rich, moist mixed woodland and boreal forests, bog hummocks, thickets, and stream margins.	Unlikely, habitat does not occur in the project area.
Bristly Blackberry *Rubus schneideri*	ST	Wet, open habitats; often occurs on sand prairies or shrub prairies.	Unlikely, habitat does not occur in the project area.
Bulrush *Scirpus hattorianus*	SE	Moist meadows, marshes, and ditches.	Unlikely, habitat does not occur in the project area.
Royal Catchfly *Silene regia*	SE	Dry, mesic barrens and prairies.	Unlikely, habitat does not occur in the project area.
Mountain Blue-eyed Grass *Sisyrinchium montanum*	SE	Moist, sandy meadows and open woods.	Unlikely, habitat does not occur in the project area.
Green-fruited Burreed *Sparganium emersum*	SE	Still to flowing eutrophic and mesotrophic, circumneutral to somewhat alkaline waters.	Unlikely, habitat does not occur in the project area.
Yellow-lipped Ladies' Tresses *Spiranthes lucida*	SE	Rocky and sandy riverbanks, calcareous seeps, fens.	Unlikely, habitat does not occur in the project area.
Great Chickweed *Stellaria pubera*	SE	Rich deciduous woods, alluvial bottomlands.	Unlikely, habitat does not occur in the project area.
Lakeside Daisy *Tetraneuris herbacea*	SE	Alvars (limestone flats), openings in woods.	Unlikely, habitat does not occur in the project area.
False Asphodel *Tofieldia glutinosa*	ST	Open, calcareous fens and sedge meadows.	Unlikely, habitat does not occur in the project area.
Ear-leafed Foxglove *Tomanthera auriculata*	ST	Disturbed prairies and savannas, thickets containing grasses and occasional shrubs, woodland borders, abandoned fields.	Unlikely, habitat does not occur in the project area.

Status Legend
Federally protected:
FE - Federal Endangered (listed)
FT - Federal Threatened (listed)
FC - Federal Candidate
CH - Critical habitat has been designated (federal) in Cook County.

State Protected:
SE - State Endangered
ST - State Threatened

Cook County, Illinois
Federal- and State-Listed Species

Species	Status	Habitat Requirements	Likelihood of Occurrence
Star-flower *Trientalis borealis*	SE	Moist to wet coniferous forest, open heath lands, mature northern hardwood forests.	Unlikely, habitat does not occur in the project area.
Slender Bog Arrow Grass *Triglochin palustris*	ST	Coastal and mountain marsh areas and moist alkaline meadows.	Unlikely, habitat does not occur in the project area.
Nodding Trillium *Trillium cernuum*	SE	Rich, mostly deciduous forest southward, mixed deciduous-coniferous forests, swamps, moist coniferous forests northward.	Unlikely, habitat does not occur in the project area.
Flat-leaved Bladderwort *Utricularia intermedia*	ST	Shallow ponds, slow-moving streams, and wet sedge or rush meadows.	Unlikely, habitat does not occur in the project area.
Small Bladderwort *Utricularia minor*	SE	Shallow waters or sometimes emergent on the wet margins of pools.	Unlikely, habitat does not occur in the project area.
Large Cranberry *Vaccinium macrocarpon*	SE	Bogs, swamps, mires, wet shores and headlands.	Unlikely, habitat does not occur in the project area.
Small Cranberry *Vaccinium oxycoccos*	SE	Half buried in sphagnum hummocks in bogs, fens, muskeg, arctic-alpine tundra.	Unlikely, habitat does not occur in the project area.
Marsh Speedwell *Veronica scutellata*	ST	Marshes, wet meadows, low areas along springs, low muddy areas along ponds, and swamps.	Unlikely, habitat does not occur in the project area.
Hairy White Violet *Viola blanda*	SE	Dry to very moist woods, thickets, clearings, forested fens and mesic forests on river bluffs.	Unlikely, habitat does not occur in the project area. Field survey did not detect.
Canada Violet *Viola canadensis*	SE	Moist, open, wooded areas.	Unlikely, habitat does not occur in the project area.

Status Legend
Federally protected:
FE - Federal Endangered (listed)
FT - Federal Threatened (listed)
FC - Federal Candidate
CH - Critical habitat has been designated (federal) in Cook County.

State Protected:
SE - State Endangered
ST - State Threatened

Cook County, Illinois Federal- and State-Listed Species			
Species	Status	Habitat Requirements	Likelihood of Occurrence
Dog Violet *Viola conspersa*	ST	Moist woodlands, meadows.	Unlikely, habitat does not occur in the project area.

Sources
Species lists from
USFWS, Midwest Region, Federally Endangered, Threatened, Proposed, and Candidate Species, revised March 2012, Accessed at:
http://www.fws.gov/midwest/endangered/lists/illinois-cty.html
Illinois Natural Heritage Database, Threatened and Endangered Species by County as of September 12, 2011, Accessed at:
http://www.dnr.illinois.gov/ESPB/Documents/ETListCounty2011.pdf
Species Accounts from:
Herkert and Ebinger 2002, IDNR 2012, Minnesota Department of Natural Resources 2012, NatureServe Explorer 2012, Northern Ontario Plant Database 2012, Nyboer and Ebinger 2004, Robert W. Freckmann Herbarium 2012, USFWS 2012

* Birds receive additional federal protection through the Migratory Bird Treaty Act (excludes house sparrows, rock pigeons, European starlings) and the Bald and Golden Eagle Protection Act.

Status Legend
Federally protected:
FE - Federal Endangered (listed)
FT - Federal Threatened (listed)
FC - Federal Candidate
CH - Critical habitat has been designated (federal) in Cook County.

State Protected:
SE - State Endangered
ST - State Threatened

Peregrine falcons are large falcons that are specialized for capturing smaller birds in the air. They typically nest on cliff ledges and in urban areas they have been found nesting on ledges of tall buildings and high bridges. The EcoCAT database returned several records for peregrine falcons within the sections/townships/ranges that encompass the project area. There are no known nesting pairs within the API. Tall buildings that would be likely to be attractive to nesting falcons do not appear to occur within the API. Falcons could be expected to forage for small birds and pigeons throughout the project area. They would be found flying high above the project area and perched on buildings and other structures within the project area. Although peregrine falcons are migratory, falcons have been observed in the Chicago area in the winter in recent years. With the exception of the 120th Street yard and shop site, the project area is characterized by dense residential, multifamily, and commercial uses that contain a wide variety of structures and activity levels. There is no part of the API that would be expected to provide unique or particularly rich foraging habitat for peregrine falcons. However, the semi-natural habitats in the vicinity of the 120th Street yard and shop site, and large parks and open spaces (such as large cemeteries) might be expected to provide slightly greater foraging opportunities for falcons. In addition, the API represents a small proportion of a falcon’s foraging territory.

Section 5
Impacts and Mitigations

The BRT Alternative, UPRR Rail Alternative, and Halsted Rail Alternative would all have the potential to adversely affect vegetation and wildlife habitat during construction; however, with the implementation of the proposed mitigation measures, potential impacts would be less than adverse. Operation of the Red Line following construction of any of the alternatives would have no measurable impact on listed species.

Development of the BRT Alternative, UPRR Rail Alternative, or Halsted Rail Alternative in combination with related renovation, new construction, and transportation projects identified in the vicinity of the proposed project would not contribute to substantial cumulative impacts on listed species.

5.1 No Build Alternative

The No Build Alternative represents existing conditions for biological resources in the project area.

5.1.1 Permanent Impacts and Mitigations - No Build Alternative

There would be no permanent impacts anticipated on biological resources as a result of the No Build Alternative.

5.1.2 Construction Impacts and Mitigations - No Build Alternative

There would be no construction impacts anticipated on biological resources as a result of the No Build Alternative.

5.2 Bus Rapid Transit Alternative

The BRT Alternative API has existing bus service, and there would be minimal change in activity levels.

5.2.1 Permanent Impacts and Mitigations - Bus Rapid Transit Alternative

There would be some loss of vegetation at the 130th Street park & ride lot. However, this area is isolated from other habitats by 130th Street and the Metropolitan Water Reclamation District treatment plant. The area has some trees, but they do not appear to be mature. The area would provide minimal potential for migratory bird use. Therefore, with compliance with local tree protection ordinances, potential impacts would not be adverse. After mitigation, there would be no measurable impacts on biological resources remaining.

5.2.2 Construction Impacts and Mitigations - Bus Rapid Transit Alternative

A small number of trees would likely be removed as a result of construction activities under the BRT Alternative. Most of the removal would likely occur at the park & ride facilities.

Local tree protection ordinances address the values that trees provide to the human environment. Removal of trees may have adverse impacts on the human environment as well as wildlife habitat. Compliance with local tree protection ordinances would result in less than adverse impacts on the human environment from tree removal. Additional mitigation measures may be required to reduce potential impacts on wildlife habitat.

During project permitting, a detailed tree inventory would need to be prepared for each work zone. Compliance with local tree protection ordinances would be required to address potential impacts on trees.

If construction occurs at night, then the necessary lighting would generate a temporary adverse impact on wildlife. Throughout much of the corridor, there is considerable night lighting close to the proposed alignments. Light impacts would not be expected to affect birds during the spring or fall migration because migrating birds would experience greater light impacts from the surrounding urban areas. With the implementation of mitigation measures to avoid impacts on nesting migratory birds (described below), potential light impacts during construction would not be adverse.

In summary, construction impacts under the BRT Alternative would include potential adverse impacts on the following vegetation and wildlife habitat resources:

- The urban tree inventory, due to tree removal. This impact would be reduced to a less than adverse level by compliance with local tree protection regulations.
- Migratory birds wherever tree clearing occurs. This impact would be reduced to a less than adverse level by the implementation of mitigation measures.

Mitigation measures would be required for compliance with the MBTA, with local tree protection ordinances, and to reduce potential impacts on wildlife habitat. Bird species that may utilize trees that could be removed or disturbed during construction could be affected. Potential mitigation measures that would reduce adverse impacts would include the following:

- Tree removal would be timed as much as possible to occur outside the migratory bird nesting season, which occurs generally from April 1–September 15 and as early as March 1 for some species.
- If construction must occur during the nesting season, two biological surveys would be conducted: one 15 days prior and a second 72 hours prior to the construction that would remove or disturb suitable nesting habitat. The surveys would be performed by a biologist with experience conducting breeding bird surveys. The biologist would prepare survey reports

documenting the presence or absence of any protected bird in the habitat to be removed and any other such habitat within 300 feet of the construction work area. If a protected bird is found, surveys would be continued in order to locate any nests. If an active nest is located, construction within 300 feet of the nest would be postponed until the nest is vacated and juveniles have fledged and when there is no evidence of a second attempt at nesting.

- Avoidance measures would be incorporated into the design of the project during preliminary engineering where feasible. However, if construction of the project requires removal of a protected tree, a permit would be required in accordance with applicable local codes and ordinances of the city in which the affected tree is located. Tree removal permits may require replanting of protected trees within the project area or at another location to mitigate for the removal of these trees. Replanting would be done according to the ratios required by tree removal permits and in a size that is appropriate for the species and setting as determined by an arborist. In addition, planted trees would be maintained such that ninety percent are in good condition after six months and irrigation would be carried out until the tree is established.

After mitigation, there would be no measurable impacts on biological resources remaining.

5.3 Union Pacific Railroad Rail Alternative - Right-of-Way Option

5.3.1 Permanent Impacts and Mitigations - Union Pacific Railroad Rail Alternative - Right-of-Way Option

5.3.1.1 Segment UA (Vegetation Segments UA-1 to UA-3)

Vegetation segments UA-1 to UA-3 from the 95th Street Terminal to approximately 119th Street are in areas with existing rail service and urban levels of activity. Although the number of trains through the corridor would increase under the UPRR Rail Alternative, the noise and lighting levels would not increase appreciably from the existing condition.

Of all the alternatives, the ROW Option would have the least impact on existing vegetation, primarily removing young trees from the I-57 median. However, this area is isolated from other habitats by the freeways. In addition, these trees do not appear to be mature. The area would provide minimal potential for migratory bird use. Therefore, with compliance with local tree protection ordinances, potential impacts would not be adverse.

In addition, the largest block of habitat between 110th and 111th Streets would be affected by the proposed park & ride. This area has multiple vegetation layers and relatively mature trees, providing a relatively good patch of habitat for urban adapted species. The area would be used by migratory birds. Mitigation measures would be implemented during construction to avoid potential impacts (Section 5.2.2). After mitigation, there would be no measurable impacts on biological resources remaining.

5.3.1.2 Segment UB (Vegetation Segments UB and Station Options)

While a relatively large amount of habitat would be affected in Vegetation Segment UB, the area is dominated by young cottonwood trees and invasive, non-native species and represents low quality habitat. It is fragmented and somewhat isolated by the surrounding industrial and transportation land uses. The area provides habitat for migratory birds and may be somewhat more valuable than other areas due to its proximity to designated natural areas near Lake Calumet and the Calumet River. However, this added value would only be useful to more mobile species such as birds that can overcome the industrial and land use barriers between the API and other more natural areas.

Operations in Vegetation Segment UB would further fragment the existing habitats and introduce new activity levels into the area. Because the forest cover is not mature, the vegetation is dominated by early successional and invasive, non-native species. Because the area is surrounded by heavy industrial and transportation land uses, the area likely only provides habitat for urban-adapted species. Therefore, the potential impacts would not likely be adverse.

The 130th Street station South and West option sites of the UPRR Rail Alternative are in areas with existing rail service and urban levels of activity.

After mitigation, there would be no measurable impacts on biological resources remaining.

5.3.2 Construction Impacts and Mitigations - Union Pacific Railroad Rail Alternative - Right-of-Way Option

5.3.2.1 Segment UA (Vegetation Segments UA-1 to UA-3)

A small number of trees would likely be removed as a result of construction activities in Segments UA-1 to UA-3 of the ROW Option. Most of the removal would likely occur at the park & ride facilities, and in the median of the freeway just south of the 95th Street Terminal.

As described for the BRT Alternative, compliance with local tree protection ordinances would result in less than adverse impacts on the human environment from tree removal. Additional mitigation measures may be required to reduce potential impacts on wildlife habitat. As it would be for the BRT Alternative, a detailed tree inventory would need to be prepared for each work zone during project permitting.

Night construction would generate a temporary adverse impact on wildlife, as described for the BRT Alternative. With the implementation of mitigation measures to avoid impacts on nesting migratory birds, potential light impacts during construction would not be adverse (See Section 5.2.2).

In summary, construction impacts under the UPRR Rail Alternative would include potential adverse impacts on the following vegetation and wildlife habitat resources:

- The urban tree inventory, due to tree removal. This impact would be reduced to a less than adverse level by compliance with local tree protection regulations.

- Migratory birds wherever tree clearing occurs. This impact would be reduced to a less than adverse level by the implementation of mitigation measures.

Potential mitigation measures that would reduce adverse impacts are discussed in Section 5.2.2. After mitigation, there would be no measurable impacts on biological resources remaining.

5.3.2.2 Segment UB (Vegetation Segments UB and Station Options)

Trees would be removed as a result of construction activities in UPRR Rail Alternative Segment UB. Some additional trees and low quality habitat, dominated by non-native invasive species, would be affected in the South and West Station Option locations.

As described for the BRT Alternative, compliance with local tree protection ordinances would result in less than adverse impacts on the human environment from tree removal. Additional mitigation measures may be required to reduce potential impacts on wildlife habitat. As it would be for the BRT Alternative, a detailed tree inventory would need to be prepared for each work zone during project permitting.

Night construction would generate a temporary adverse impact on wildlife, as described for the BRT Alternative. With the implementation of mitigation measures to avoid impacts on nesting migratory birds, potential light impacts during construction would not be adverse (See Section 5.2.2).

In summary, construction impacts under the UPRR Rail Alternative would include potential adverse impacts on the following vegetation and wildlife habitat resources:

- The urban tree inventory, due to tree removal. This impact would be reduced to a less than adverse level by compliance with local tree protection regulations.

- Migratory birds wherever tree clearing occurs. This impact would be reduced to a less than adverse level by the implementation of mitigation measures.

Potential mitigation measures that would reduce adverse impacts are discussed in Section 5.2.2. After mitigation, there would be no measurable impacts on biological resources remaining.

5.3.3 120th Street Yard and Shop

5.3.3.1 Permanent Impacts and Mitigations

See Section 5.3.1.2.

5.3.3.2 Construction Impacts and Mitigations

See Section 5.3.2.2.

Potential mitigation measures that would reduce adverse impacts are discussed in Section 5.2.2.

5.4 Union Pacific Railroad Rail Alternative - East Option

5.4.1 Permanent Impacts and Mitigations - Union Pacific Railroad Rail Alternative - East Option

5.4.1.1 Segment UA (Vegetation Segments UA-1 to UA-3)

See Section 5.3.1.1. Although the East Option would affect a larger amount of vegetation than the ROW Option, the potential impacts would be similar to those described in Section 5.3.1.

5.4.1.2 Segment UB (Vegetation Segments UB and Station Options)

See Section 5.3.1.2.

5.4.2 Construction Impacts and Mitigations - Union Pacific Railroad Rail Alternative - East Option

5.4.2.1 Segment UA (Vegetation Segments UA-1 to UA-3)

See Section 5.3.2.1. Although the East Option would affect a larger amount of vegetation than the ROW Option, the potential impacts would be similar to those described in Section 5.3.2.1.

5.4.2.2 Segment UB (Vegetation Segments UB and Station Options)

See Section 5.3.2.2.

5.4.3 120th Street Yard and Shop

See Section 5.3.4.

5.5 Union Pacific Railroad Rail Alternative - West Option

5.5.1 Permanent Impacts and Mitigations - Union Pacific Railroad Rail Alternative - West Option

5.5.1.1 Segment UA (Vegetation Segments UA-1 to UA-3)

See Section 5.3.1.1. Of the UPRR options, the West Option would affect the greatest amount of vegetation, including several patches with relatively diverse vegetation regenerating in abandoned industrial sites between 108th and 111th Streets. The potential impacts would be similar to those described in Section 5.3.1.1.

5.5.1.2 Segment UB (Vegetation Segments UB and Station Options)

See Section 5.3.1.2.

5.5.2 Construction Impacts and Mitigations - Union Pacific Railroad Rail Alternative - West Option

5.5.2.1 Segment UA (Vegetation Segments UA-1 to UA-3)

See Section 5.3.2.1.

5.5.2.2 Segment UB (Vegetation Segments UB and Station Options)

See Section 5.3.2.2.

5.5.3 120th Street Yard and Shop

See Section 5.3.4.

5.6 Halsted Rail Alternative

5.6.1 Permanent Impacts and Mitigations - Halsted Rail Alternative

5.6.1.1 Segment HA (Vegetation Segments HA-1 to HA-3)

Halsted Street is currently developed with commercial land uses. The operation of an elevated rail line would have no impact on vegetation and wildlife habitats along this route.

5.6.1.2 Segment HB (Vegetation Segment HB)

Halsted Street is currently developed with commercial land uses. The operation of an elevated rail line would have no impact on vegetation and wildlife habitats along this route.

5.6.2 Construction Impacts and Mitigations - Halsted Rail Alternative

5.6.2.1 Segment HA (Vegetation Segments HA-1 to HA-3)

A number of trees would likely be removed as a result of construction activities under the Halsted Rail Alternative. Most of the removal would likely affect trees from the Halsted Street median and sidewalks.

Compliance with local tree protection ordinances would result in less than adverse impacts on the human environment from tree removal. Additional mitigation measures, such as the measures to protect migratory birds as described in Section 5.2.2, may be required to reduce potential impacts on wildlife habitat. As it would be for the BRT Alternative and UPRR Rail Alternative, a detailed tree inventory would need to be prepared for each work zone during project permitting.

Night construction would generate a temporary adverse impact on wildlife, as described for the BRT Alternative. With the implementation of mitigation measures to avoid impacts on nesting migratory birds, potential light impacts during construction would not be adverse (See Section 5.2.2).

In summary, construction impacts under the Halsted Rail Alternative would include potential adverse impacts on the following vegetation and wildlife habitat resources:

- The urban tree inventory, due to tree removal. This impact would be reduced to a less than adverse level by compliance with local tree protection regulations.
- Migratory birds wherever tree clearing occurs. This impact would be reduced to a less than adverse level by the implementation of mitigation measures.

Suitable habitat for listed plant species does not appear to be present in the API.

Potential mitigation measures that would reduce adverse impacts are discussed in Section 5.2.2. After mitigation, there would be no measurable impacts on biological resources remaining.

5.6.2.2 Segment HB (Vegetation Segment HB)

See Section 5.6.2.1.

5.6.3 119th Street Yard and Shop

5.6.3.1 Permanent Impacts and Mitigations

There are a few relatively small patches of regenerating vegetation within the proposed yard and shop area that would be used by migratory birds. Mitigation measures would be implemented during construction to avoid potential impacts.

5.6.3.2 Construction Impacts and Mitigations

See Section 5.6.2.

Section 6
Impacts Remaining After Mitigation

6.1 No Build Alternative

After mitigation, no measurable impacts on biological resources would remain.

6.2 Bus Rapid Transit Alternative

After mitigation, no measurable impacts on biological resources would remain.

6.3 Union Pacific Railroad Rail Alternative - Right-of-Way Option

After mitigation, no measurable impacts on biological resources would remain.

6.4 Union Pacific Railroad Rail Alternative - East Option

After mitigation, no measurable impacts on biological resources would remain.

6.5 Union Pacific Railroad Rail Alternative - West Option

After mitigation, no measurable impacts on biological resources would remain.

6.6 Halsted Rail Alternative

After mitigation, no measurable impacts on biological resources would remain.

Section 7
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Appendix A
EcoCAT Report

EcoCAT
Ecological Compliance Assessment Tool

Applicant:	CDM Smith	*IDNR Project #:*	1304095
Contact:	Claudia Lea	Date:	09/12/2012
Address:	125 S Wacker Drive Suite 600 Chicago, IL 60606		

Project: CTA Red Line Extension Project
Address: 95th Street Terminal, Chicago

Description: The Chicago Transit Authority (CTA) is proposing to extend the Red Line from the 95th Street Station to the vicinity of 130th Street.

Natural Resource Review Results

This project was submitted for information only. It is not a consultation under Part 1075.

The Illinois Natural Heritage Database contains no record of State-listed threatened or endangered species, Illinois Natural Area Inventory sites, dedicated Illinois Nature Preserves, or registered Land and Water Reserves in the vicinity of the project location.

Location

The applicant is responsible for the accuracy of the location submitted for the project.

County: Cook

Township, Range, Section:

37N, 14E, 3
37N, 14E, 4
37N, 14E, 9
37N, 14E, 10
37N, 14E, 15
37N, 14E, 22

IL Department of Natural Resources Contact

Impact Assessment Section
217-785-5500
Division of Ecosystems & Environment

Disclaimer

The Illinois Natural Heritage Database cannot provide a conclusive statement on the presence, absence, or condition of natural resources in Illinois. This review reflects the information existing in the Database at the time of this inquiry, and should not be regarded as a final statement on the site being considered, nor should it be a substitute for detailed site surveys or field surveys required for environmental assessments. If additional protected resources are encountered during the project's implementation, compliance with applicable statutes and regulations is required.

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EcoCAT
Ecological Compliance Assessment Tool

Applicant:	CDM Smith	*IDNR Project #:*	1304098
Contact:	Claudia Lea	Date:	09/12/2012
Address:	125 S Wacker Drive Suite 600 Chicago, IL 60606		

Project: CTA Red Line Extension
Address: 95th Street Terminal, Chicago

Description: The Chicago Transit Authority (CTA) is proposing to extend the Red Line from the 95th Street Station to the vicinity of 130th Street.

Natural Resource Review Results

This project was submitted for information only. It is not a consultation under Part 1075.

The Illinois Natural Heritage Database contains no record of State-listed threatened or endangered species, Illinois Natural Area Inventory sites, dedicated Illinois Nature Preserves, or registered Land and Water Reserves in the vicinity of the project location.

Location

The applicant is responsible for the accuracy of the location submitted for the project.

County: Cook

Township, Range, Section:

37N, 14E, 3
37N, 14E, 4
37N, 14E, 8
37N, 14E, 9
37N, 14E, 10

IL Department of Natural Resources Contact

Impact Assessment Section
217-785-5500
Division of Ecosystems & Environment

Disclaimer

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EcoCAT
Ecological Compliance Assessment Tool

Applicant: CDM Smith
Contact: Claudia Lea
Address: 125 S Wacker Drive
Suite 600
Chicago, IL 60606

IDNR Project #: 1304099
Date: 09/12/2012

Project: CTA Red Line Extension
Address: 95th Street Terminal, Chicago

Description: The Chicago Transit Authority (CTA) is proposing to extend the Red Line from the 95th Street Station to the vicinity of 130th Street.

Natural Resource Review Results

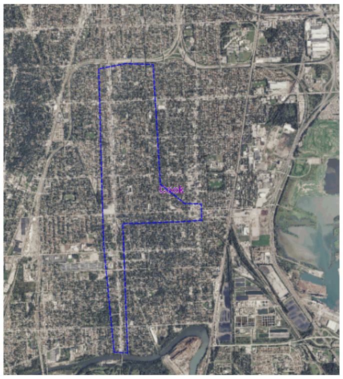
This project was submitted for information only. It is not a consultation under Part 1075.

The Illinois Natural Heritage Database shows the following protected resources may be in the vicinity of the project location:

Riverdale Marsh INAI Site
Black-Crowned Night Heron *(Nycticorax nycticorax)*
Little Blue Heron *(Egretta caerulea)*
Yellow-Crowned Night Heron *(Nyctanassa violacea)*
Yellow-Headed Blackbird *(Xanthocephalus xanthocephalus)*

Location

The applicant is responsible for the accuracy of the location submitted for the project.



County: Cook

Township, Range, Section:

37N, 14E, 8
37N, 14E, 9
37N, 14E, 16
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37N, 14E, 20
37N, 14E, 21
37N, 14E, 22
37N, 14E, 28
37N, 14E, 29
37N, 14E, 32
37N, 14E, 33

IL Department of Natural Resources Contact
Impact Assessment Section
217-785-5500
Division of Ecosystems & Environment

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EcoCAT
Ecological Compliance Assessment Tool

ILLINOIS DEPARTMENT OF NATURAL RESOURCES

Applicant: CDM Smith
Contact: Claudia Lea
Address: 125 S Wacker Drive
Suite 600
Chicago, IL 60606

IDNR Project #: 1304096
Date: 09/12/2012

Project: CTA Red Line Extension
Address: 95th Street Terminal, Chicago

Description: The Chicago Transit Authority (CTA) is proposing to extend the Red Line from the 95th Street Station to the vicinity of 130th Street.

Natural Resource Review Results

This project was submitted for information only. It is not a consultation under Part 1075.

The Illinois Natural Heritage Database shows the following protected resources may be in the vicinity of the project location:

Lake Calumet INAI Site
Blanding'S Turtle *(Emydoidea blandingii)*
Common Moorhen *(Gallinula chloropus)*
Little Blue Heron *(Egretta caerulea)*
Peregrine Falcon *(Falco peregrinus)*
Yellow-Crowned Night Heron *(Nyctanassa violacea)*
Yellow-Headed Blackbird *(Xanthocephalus xanthocephalus)*

Location

The applicant is responsible for the accuracy of the location submitted for the project.

County: Cook

Township, Range, Section:
37N, 14E, 15
37N, 14E, 26
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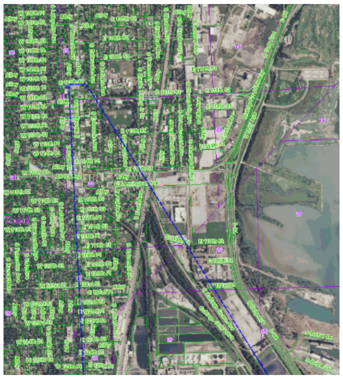
37N, 14E, 35



IL Department of Natural Resources Contact
Impact Assessment Section
217-785-5500
Division of Ecosystems & Environment

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EcoCAT
Ecological Compliance Assessment Tool

Applicant: CDM Smith
Contact: Claudia Lea
Address: 125 S Wacker Drive
Suite 600
Chicago, IL 60606

IDNR Project #: 1304295
Date: 09/18/2012

Project: CTA Red Line Extension Project
Address: 95th Street Terminal, Chicago

Description: The Chicago Transit Authority (CTA) is proposing to extend the Red Line from the 95th Street Station to the vicinity of 130th Street.

Natural Resource Review Results

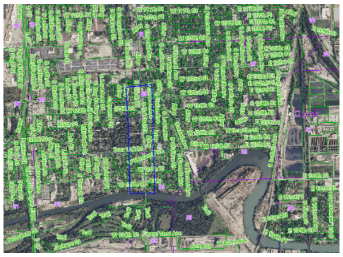
This project was submitted for information only. It is not a consultation under Part 1075.

The Illinois Natural Heritage Database shows the following protected resources may be in the vicinity of the project location:

Riverdale Marsh INAI Site
Black-Crowned Night Heron *(Nycticorax nycticorax)*

Location

The applicant is responsible for the accuracy of the location submitted for the project.



County: Cook

Township, Range, Section:
37N, 14E, 28
37N, 14E, 29
37N, 14E, 32
37N, 14E, 33

IL Department of Natural Resources Contact
Impact Assessment Section
217-785-5500
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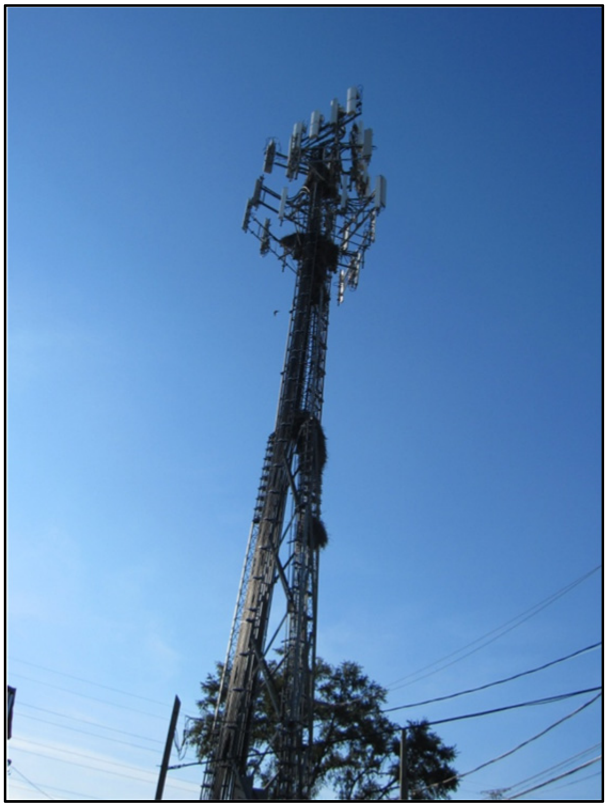
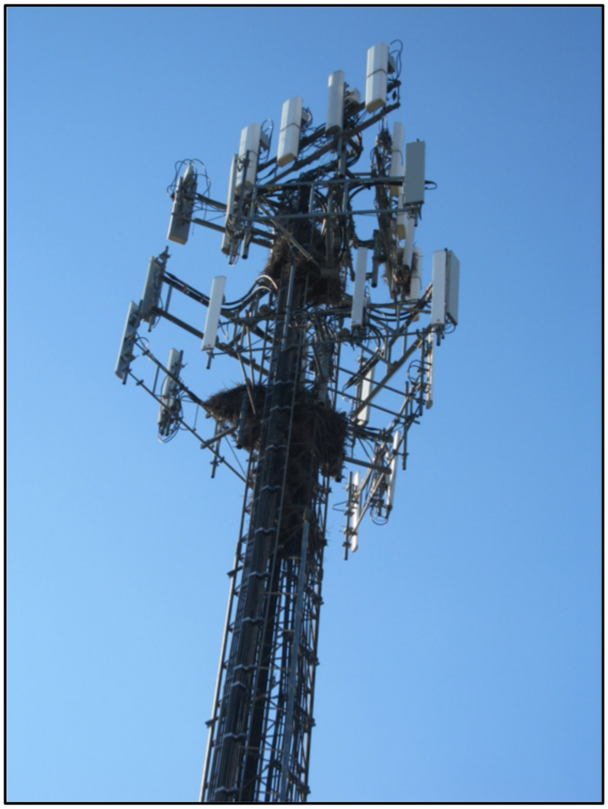
Appendix B
Monk Parakeet Photographs

Cell phone tower at the northwest corner of 119th Street and Emerald Avenue with monk parakeet nests





Appendix C
2014-2015 Red Line Extension Project Update

2014–2015 Red Line Extension Project Update

From 2012-2014, CTA evaluated benefits and impacts of four alternatives: the No Build Alternative, the Bus Rapid Transit Alternative (along Michigan Avenue), the Union Pacific Railroad (UPRR) Rail Alternative, and the Halsted Alternative. CTA evaluated three options of the UPRR Rail Alternative: Right-of-Way Option, East Option, and West Option. CTA also evaluated two options of the UPRR Rail Alternative 130th Street station: a South Station Option and a West Station Option. Based on the project description provided in Section 2 of this technical memorandum, CTA analyzed the impacts of these alternatives and station options. The benefits and impacts are included in the technical memoranda prepared in 2012-2014.

In August 2014, based on the technical analysis and public input, CTA announced the NEPA Preferred Alternative—the UPRR Rail Alternative. Additional conceptual engineering was conducted on the UPRR Rail Alternative to refine the East and West Option alignments. In addition, CTA is considering only the South Station Option of the 130th Street Station.

In late 2014 and early 2015, CTA conducted additional engineering and revised assumptions on the East and West Options to refine the alignments. The refinement of the East and West Options consisted of the following items:

- For the segment of the alignment along I-57, CTA shifted the proposed alignment from the median of I-57 to the north side of I-57 within the existing expressway right-of-way. The construction would be less complex, safer for construction workers, and have a shorter duration. The shift would also allow for fewer impacts to Wendell Smith Park for the East Option, and would allow for no permanent impacts to Wendell Smith Park for the West Option.

- CTA modified the curve speeds as the alignment heads south from I-57 along the UPRR tracks. The curve speed for both the East and West Options would be 35 mph.

- CTA shifted the East Option alignment near 103rd Street station to minimize impacts to Block Park and the Roseland Pumping Station.

- CTA modified the curves south of 103rd Street for both the East and West Options to 55 mph to maximize the train speed.

- CTA refined the layout of the 120th Street yard and shop to optimize yard operations. The refined layout of the yard would accommodate 340 train cars.

The refinement of the East and West Option alignments minimizes potential impacts to parks while providing flexibility for future design phases. The Draft Environmental Impact Statement contains the benefits and impacts of the refined East and West Option alignments and supersedes information presented in other chapters of this technical memorandum.

The refined East and West Option alignments would have no additional or different impacts from those described in the technical memoranda for the following resource areas: construction, transportation, land use and economic development, historic and cultural resources, safety and security, hazardous materials, indirect and cumulative, air quality, floodplains, vegetation and wildlife habitat, threatened and endangered species, and geology and soils.

Appendix W
Energy Technical Memorandum

RED AHEAD
Moving Ahead to a Better Red

Red Line Extension

Chicago Red Line Extension Project

Energy
Technical Memorandum

July 10, 2013
Updated July 28, 2015

Prepared for:
Chicago Transit Authority
567 W. Lake Street
Chicago, IL 60661

Prepared by:
CWC Transit Group
125 S. Wacker Drive
Suite 600
Chicago, IL 60606

cta

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Appendix A: 2014-2015 Red Line Extension Project Update

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Abbreviations

API	area of potential impact
BRT	Bus Rapid Transit
BTU	British thermal unit
CMAP	Chicago Metropolitan Agency for Planning
CTA	Chicago Transit Authority
EIS	Environmental Impact Statement
NEPA	National Environmental Policy Act
PJM	PJM Interconnection
RLE	Red Line Extension
ROW	right-of-way
SAFETEA-LU	Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users
UPRR	Union Pacific Railroad
USC	United States Code
VMT	vehicle miles traveled

Section 1
Summary

This technical memorandum presents the potential effects of the Red Line Extension (RLE) Project on transportation-related energy consumption including fossil fuels and electric energy. Energy usage is associated with construction and operation of the proposed project. Net energy demand is associated with changes in travel patterns and mode choice within the regional transportation network related to the project.

Two components of energy consumption were examined: long-term energy consumption and short-term energy consumption. Long-term energy consumption is ongoing energy use that continues year after year. Analysis of long-term energy consumption changes included regional transportation-related energy consumption based on vehicle miles traveled (VMT) and transit operations. Annual VMT is the total number of miles driven by all vehicles within a year in a defined a geographic area. Annual VMT is an output of the Chicago Metropolitan Agency for Planning (CMAP) Travel Demand Model. Transit operations include energy for vehicle propulsion and operation of stations. The second component, short-term energy use, includes construction impacts, which are temporary. Construction impacts include production of materials used in construction and the operation of construction equipment.

Energy impacts are determined by comparing the energy consumption of build alternatives versus the No Build Alternative for the horizon year of 2030. Table 1-1 presents a summary of the energy for long-term energy consumption. As Table 1-1 shows, the difference in projected energy use (regional transportation plus transit operations) between any of the build alternatives and the No Build Alternative would not be greater than the margin of error for regional modeling.

The projected annual transportation-related energy consumption in the region for the No Build Alternative is approximately 368 trillion British thermal units (BTU), based on output from the CMAP Regional Travel Model. The projected regional travel demand for each of the build alternatives is marginally smaller than for the No Build Alternative. The build alternatives would result in 11.4 to 19.6 million fewer annual VMT than with the No Build Alternative.

All of the build alternatives would require energy for operations. The net difference in energy use for any of the build alternatives would be less than +/- 0.02 percent, which is smaller than the margin of error for regional modeling. The difference in energy use between any of the alternatives and the No Build Alternative (368 trillion BTU for regional vehicular travel in 2030) would be negligible and would not have an impact on regional energy consumption.

Table 1-1: Estimated Annual Long-Term Energy Use of Alternatives for Year 2030

Alternative	Estimated Annual Energy Use - Trillion BTU
No Build	368.3
Bus Rapid Transit	368.3
UPRR Rail Options	368.3
Halsted Rail	368.3

Total long-term energy is the sum of energy for regional vehicular travel, transit operations, and station energy.

The total operational energy is rounded to four significant digits, which is appropriate for the confidence level in the regional travel demand modeling. To show differences in estimated operational energy, display of five to six significant digits would be required.

BTU = British thermal unit, UPRR = Union Pacific Railroad

Energy would be required for construction of any of the build alternatives. For the rail alternatives, energy would be used for the production of the guideway and station components (including steel, cement, copper, and glass). Energy would also be used for the operation of construction equipment. Energy use by construction equipment would be localized and temporary. Construction energy use for the rail alternatives would be relatively large, because the rail alternatives would involve construction of elevated structures and substantial elevated stations. Table 1-2 summarizes energy consumption for construction. Construction energy use for the Bus Rapid Transit (BRT) Alternative would be relatively small. The BRT Alternative would use existing at-grade streets; therefore, construction of elevated guideways would not be required. Stops for the BRT Alternative would be at grade and would occupy a smaller footprint than the stations in the rail alternatives.

Table 1-2: Estimated Short-Term Energy Use of Alternatives

Alternative	Construction Energy Use - Billion BTU
No Build	0
Bus Rapid Transit	91
UPRR Rail - ROW Option	6,130
UPRR Rail - East Option	6,110
UPRR Rail - West Option	6,120
Halsted Rail	6,650

Notes:
Energy use is rounded in this summary table
BTU = British thermal unit, UPRR = Union Pacific Railroad,
ROW = right-of-way

The one-time irreversible commitment of energy resources for construction would amount to less than 1.3 percent of the total annual energy consumption for Cook County, which is 530 trillion BTU (CNT Energy 2009). Construction of any alternative would not have an impact on energy consumption in the area of potential impact (API), Cook County, or the Chicago Metropolitan Area.

Updated July 28, 2015
In August 2014, based on the technical analysis and public input until then, CTA announced the NEPA Preferred Alternative—the UPRR Rail Alternative. CTA is considering two alignment (route) options of this alternative: the East Option and the West Option. At this time, CTA is also considering only the South Station Option of the 130th Street Station. In late 2014 and early 2015, CTA conducted additional engineering on the East and West Options to refine the East and West Option alignments. Appendix A of this technical memorandum summarizes the refined alignments and any additional or different impacts that would result. The information in Appendix A supersedes information presented in other chapters of this technical memorandum.

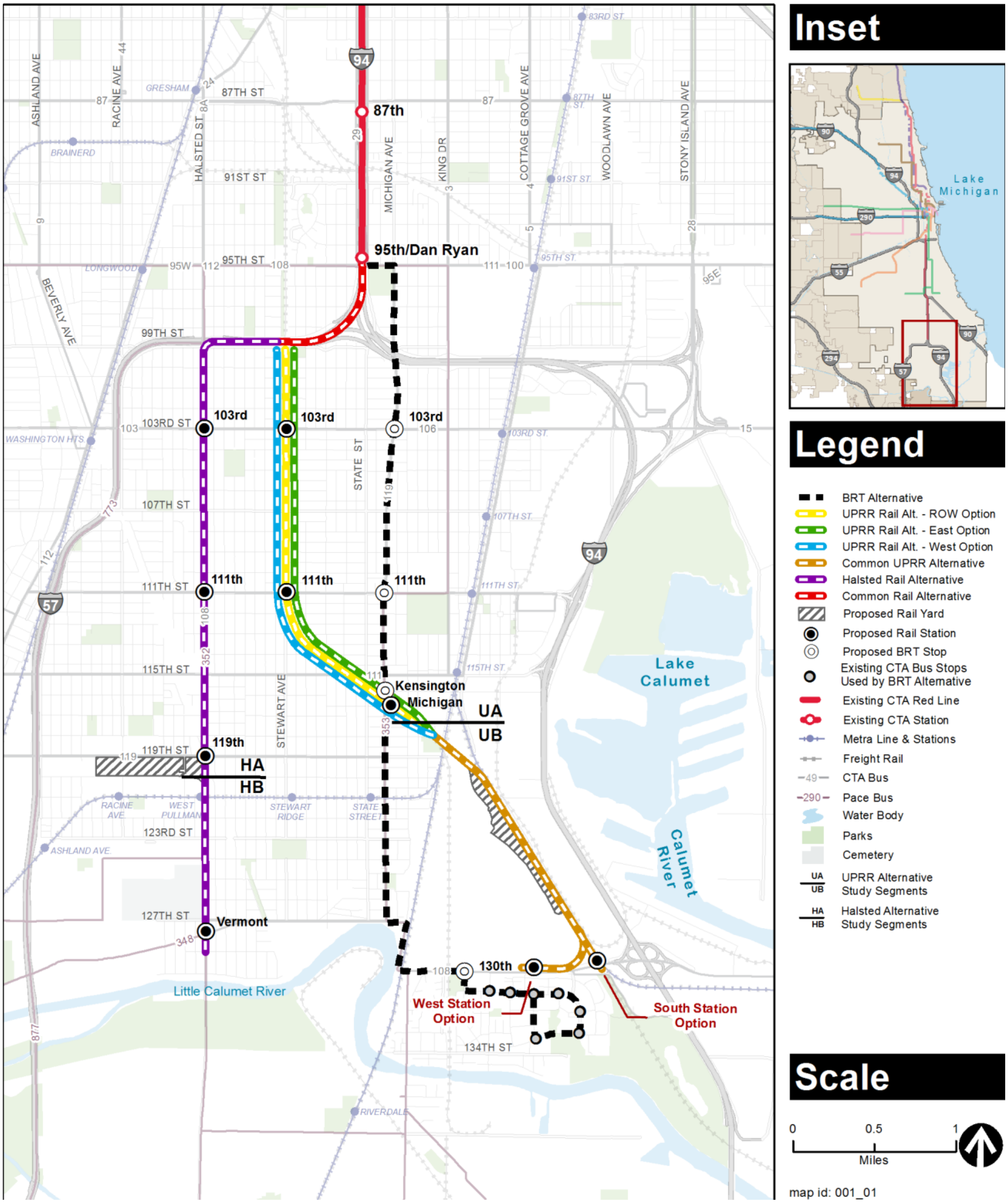
Section 2
Project Description

The Chicago Transit Authority (CTA) is proposing to extend the Red Line from the existing 95th Street Terminal to the vicinity of 130th Street, subject to the availability of funding. The proposed RLE would include four stations. Each station would include bus transfer and parking facilities. This project is one part of the Red Ahead Program to extend and enhance the entire Red Line. The CTA is also planning 95th Street Terminal improvements that are anticipated to be completed prior to the proposed RLE construction.

The project area is 11 miles south of the Chicago central business district (commonly referred to as the Loop) and encompasses approximately 20 square miles. The boundaries of the project area are 95th Street on the north, Ashland Avenue on the west, Stony Island Avenue on the east, and the Calumet-Sag Channel/Little Calumet River and 134th Street on the south. The I-57 Expressway and I-94 Bishop Ford Freeway cross the western and eastern edges of the project area, respectively. Lake Calumet is in the eastern portion of the project area. The project area encompasses parts of nine community areas in the City of Chicago and the eastern section of the Village of Calumet Park. Chicago community areas include Beverly, Washington Heights, Roseland, Morgan Park, Pullman, West Pullman, Riverdale, Hegewisch, and South Deering. The project area comprises residential (primarily single family), industrial (both existing and vacant), transportation (including freight), and commercial development.

The Draft Environmental Impact Statement (EIS) focuses on the following alternatives (shown in Figure 2-1), which emerged from the Alternatives Analysis and the National Environmental Policy Act (NEPA) scoping process:

- No Build Alternative
- BRT Alternative
- Union Pacific Railroad (UPRR) Rail Alternative
    - Right-of-Way (ROW) Option
    - East Option
    - West Option
- Halsted Rail Alternative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95th/Dan Ryan
103rd
103rd
103rd
111th
111th
111th
119th
Kensington
Michigan
UA
UB
HA
HB
Vermont
130th
West Station Option
South Station Option
87TH ST
91ST ST
95TH ST
99TH ST
103RD ST
107TH ST
111TH ST
115TH ST
119TH ST
123RD ST
127TH ST
134TH ST
ASHLAND AVE
RACINE AVE
HALSTED ST
MICHIGAN AVE
KING DR
COTTAGE GROVE AVE
WOODLAWN AVE
STONY ISLAND AVE
STATE ST
STEWART AVE
BEVERLY AVE
GRESHAM
BRAINERD
LONGWOOD
WASHINGTON HTS.
RACINE AVE
WEST PULLMAN
STEWART RIDGE
STATE STREET
ASHLAND AVE.
RIVERDALE
83RD ST
87TH ST
91ST ST
95TH ST
103RD ST
107TH ST
111TH ST
115TH ST
Lake Calumet
Calumet River
Little Calumet River
Inset
Lake Michigan
Legend
BRT Alternative
UPRR Rail Alt. - ROW Option
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
Common UPRR Alternative
Halsted Rail Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Proposed BRT Stop
Existing CTA Bus Stops Used by BRT Alternative
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
49 CTA Bus
290 Pace Bus
Water Body
Parks
Cemetery
UA UB UPRR Alternative Study Segments
HA HB Halsted Alternative Study Segments
Scale
0
0.5
1
Miles
map id: 001_01

Figure 2-1: Red Line Extension Project Alternatives

The No Build Alternative is a required alternative as part of the NEPA environmental analysis and is used for comparison purposes to assess the relative benefits and impacts of extending the Red Line. The No Build Alternative is carried into the Draft EIS phase of the project development regardless of its performance versus the build alternatives under consideration. No new infrastructure would be constructed as part of the No Build Alternative other than committed transportation improvements that are already in the CMAP Fiscal Year 2010–2015 Transportation Improvement Program and the improvements to 95th Street Terminal. The Transportation Improvement Program projects within the project area consist of four bridge reconstructions, several road improvement projects including resurfacing and coordination of signal timing on 95th Street, work on Metra's facilities, construction of a bicycle/pedestrian multi-use trail, and preservation of historic facilities. The No Build Alternative includes regular maintenance of existing track and structures, and bus transit service would be focused on the preservation of existing services and projects. All elements of the No Build Alternative are included in each of the other alternatives. Under this alternative, travel times would not improve from existing conditions.

The BRT Alternative (formerly referred to as the Transportation Systems Management Alternative) is a 5.0-mile, limited-stop, enhanced BRT route, which is assumed to operate 24 hours per day between the existing 95th Street Terminal and the intersection of 130th Street and Eberhart Avenue. No dedicated bus lanes would be provided for the BRT Alternative; however, parking lanes would be removed for some portions of the alignment and four stops with improved bus shelters and park & ride facilities would be created at 103rd Street and Michigan Avenue, 111th Street and Michigan Avenue, Kensington Avenue and Michigan Avenue, and 130th Street and Eberhart Avenue. Although BRT service elements would not continue south of the 130th Street stop, the bus route would continue through Altgeld Gardens along the existing route with six stops. The BRT Alternative would be consistent with bus routing changes that may occur as part of improvements to the 95th Street Terminal. Under this alternative, travel times between 130th Street and the Loop would improve over existing conditions.

The UPRR Rail Alternative is a 5.3-mile extension of the heavy rail transit Red Line from its existing 95th Street Terminal to 130th Street, just west of I-94. The Chicago Transit Board designated the UPRR Rail Alternative as the Locally Preferred Alternative at its August 12, 2009 board meeting. This alternative includes construction and operation of new heavy rail transit tracks, mostly in existing transportation corridors. The UPRR Rail Alternative has three options for alignment (ROW, East, and West), all of which would include operation on elevated structure from 95th Street to just past the Canadian National/Metra Electric District tracks near 119th Street. The alignment would then transition to at-grade through an industrial area with no public through streets, terminating at 130th Street in the vicinity of Altgeld Gardens. Four new stations would be constructed at 103rd Street, 111th Street, Michigan Avenue, and 130th Street. The 130th Street station would be the terminal station, with two options under evaluation: the South Station Option and the West Station Option. A new yard and shop facility would be sited near 120th Street and Cottage Grove Avenue. The bus routes in the vicinity of the UPRR Rail Alternative would be modified to enhance connectivity between the Red Line and the bus network. The hours of operation and service frequency for the UPRR Rail Alternative are assumed to be the same as

for the current Red Line. Under this alternative, travel times between 130th Street and the Loop would improve substantially over existing conditions.

The Halsted Rail Alternative is a 5.0-mile heavy rail transit extension of the existing Red Line. In this alternative, the Red Line would operate on an elevated structure running south from 95th Street along I-57 until Halsted Street. The alignment would then turn south and continue along Halsted Street to the intersection of Halsted Street and Vermont Avenue near 127th Street. This alternative would include four new stations at 103rd Street, 111th Street, 119th Street, and Vermont Avenue. The Vermont Avenue station would be the terminal station. A new yard and shop would be sited west of Halsted Street and between the 119th Street and Vermont Avenue stations. The bus routes in the vicinity of the Halsted Rail Alternative would be modified to enhance connectivity to the Red Line. The hours of operation and service frequency for the Halsted Rail Alternative are assumed to be the same as for the current Red Line. Under this alternative, travel times between 127th Street and the Loop would improve substantially over existing conditions. This alternative would not extend rail to Altgeld Gardens, which would be served by bus connecting to the Vermont terminal station.

Section 3
Methods for Impact Evaluation

3.1 Regulatory Framework

3.1.1 Federal

The National Environmental Policy Act of 1969 (NEPA) requires that federal agencies consider environmental impacts before taking actions that could affect the human environment. As interpreted by the Council on Environmental Quality, NEPA requires that “reasonably foreseeable” impacts of a proposed action be considered in the decision making process. As defined by NEPA, the term “impacts” includes “aesthetic, historic, cultural, economic, social, or health” impacts. Energy use is one of the environmental elements typically assessed in NEPA documentation. Applicable federal regulation for the analysis of transit projects also includes the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) Public Law 109-59, August 10, 2005. SAFETEA-LU focuses on reducing traffic congestion, increasing intermodal connectivity, and protecting the environment. SAFETEA-LU gives state and local transportation decision makers more flexibility over previous legislation for solving transportation problems in their communities (Federal Highway Administration 2005). The Federal Public Transportation Act of 2012, effective October 1, 2012, continues reference to NEPA and does not alter the regulatory framework regarding evaluation of alternatives with regard to energy.

Title 42 of the United States Code (USC) concerns public health and welfare and has 159 chapters. The following sections of Title 42 of the USC focus on energy conservation, reduced reliance on foreign energy sources (mainly petroleum), use of alternative fuels, and increased efficiency in energy use:

- Providing for improved energy efficiency in motor vehicles (42 USC 6201)
- Increasing economic efficiency by meeting future needs for energy services at the lowest cost, considering technologies that improve the efficiency of energy end use, while conserving energy supplies such as oil (42 USC 13401)
- Reducing air, water, and other environmental impacts (including emissions of greenhouse gases) related to energy production, distribution, transportation, and use by development of an environmentally sustainable energy system (42 USC 13401)
- Reducing demand for oil in the transportation sector for all motor vehicles (42 USC 13431)

The Energy Policy Act of 2005 was amended and now supersedes several previous energy policy acts, including the National Energy Act of 1978 (PL 95-619), the Energy Policy and Conservation Act Amendments of 1985 (PL 99-58), and the Energy Policy Act of 1992 (PL 102-486). The Energy Policy Act of 2005 includes transportation-related provisions that reduce reliance on foreign energy sources (mainly petroleum) and increase use of recovered mineral content in federally funded projects involving procurement of cement or concrete.

3.1.2 State

The Illinois Sustainable Energy Plan (State of Illinois 2005) includes both a Renewable Energy Portfolio Standard and an Energy Efficiency Portfolio Standard for energy production and consumption in Illinois. This plan recommends an increase in percent of renewable energy in the portfolio of electric energy suppliers. There is no guidance in the plan for energy impact assessment.

3.1.3 Local

The City of Chicago's Energy Conservation Code was adopted by the City Council on November 5, 2008. The code is underpinned by the American Society of Heating, Refrigerating and Air-Conditioning Engineers/Illuminating Engineering Society of North America 90.1-2004. The code is related to residential and commercial buildings. While the code does not provide guidance for energy assessment of transportation systems, the code’s discussion of heat island effects may be applicable during design.

The Village of Calumet Park’s Code of Ordinances (§152.08) adopts the International Energy Conservation Code. The International Energy Conservation Code establishes minimum requirements for energy efficiency of commercial and residential buildings, but does not provide guidance for energy assessment of transportation systems.

3.2 Impact Analysis Thresholds

NEPA does not set specific thresholds of significance for energy impacts. Title 40 Code of Federal Regulations § 1502.16(e) directs that EISs include a discussion of the “energy requirements and conservation potential of various alternatives…natural or depletable resource requirements, and conservation potential of various alternatives,” and potential mitigation measures. For the purpose of this EIS, an impact would be adverse if it would result in a permanent increase in annual energy or fuel usage that could not be accommodated by the regional (Cook County) supply.

3.3 Area of Potential Impact

The project area is 11 miles south of the City of Chicago’s central business district (commonly referred to as the Loop) and encompasses approximately 20 square miles. The boundaries of the project area are 95th Street on the north, Ashland Avenue on the west, Stony Island Avenue on the east, and the Calumet-Sag Channel/Little Calumet River and 134th Street on the south. The I-57 Expressway (I-57) and I-94 Bishop Ford Freeway (I-94) cross the western and eastern edges of the project area, respectively. Lake Calumet is in the eastern portion of the project area. The South Red Line currently terminates at the 95th Street Terminal. The API (Figure 3-1) for the operational energy analysis was defined as follows:

- On the north by 91st Street (four blocks north of the existing 95th Street Terminal)
- On the south by a varying boundary that includes Jackson Street/134th Street (four blocks south of both the UPRR Rail Alternative and Halsted Rail Alternative terminal) station locations
- On the east by a varying boundary that includes Martin Luther King Drive, Michigan Avenue, and I-94 (from the north to south)
- On the west by a varying boundary that includes Halsted Avenue, Vincennes Avenue, and I-57 (from north to south)

While the project would occur within the API, both long-term (vehicular and transit operations) and short-term (construction) energy use associated with the project would extend well outside the API. Changes in vehicular energy use would be regional because a portion of travelers would change modes from automobile to transit for trips between the project area and downtown Chicago. Because changes in vehicular energy use would be regional, the regional CMAP travel demand model was used to assess changes in VMT. This regional model includes the six-county metropolitan area.

Energy for transit operations and for construction was determined for the API; however, energy use would be distributed well beyond the API. Only energy use caused by the project is assessed in this document. For transit operations, energy generation can be dispersed over a wide region. For instance, electric power generation for rail transit can take place anywhere within a 13-state region. Manufacture of materials (such as rail, reinforcement steel, and cement) for the project would also be distributed well beyond the API. Construction energy includes manufacture of components, transportation to the project site, and the localized construction activities.

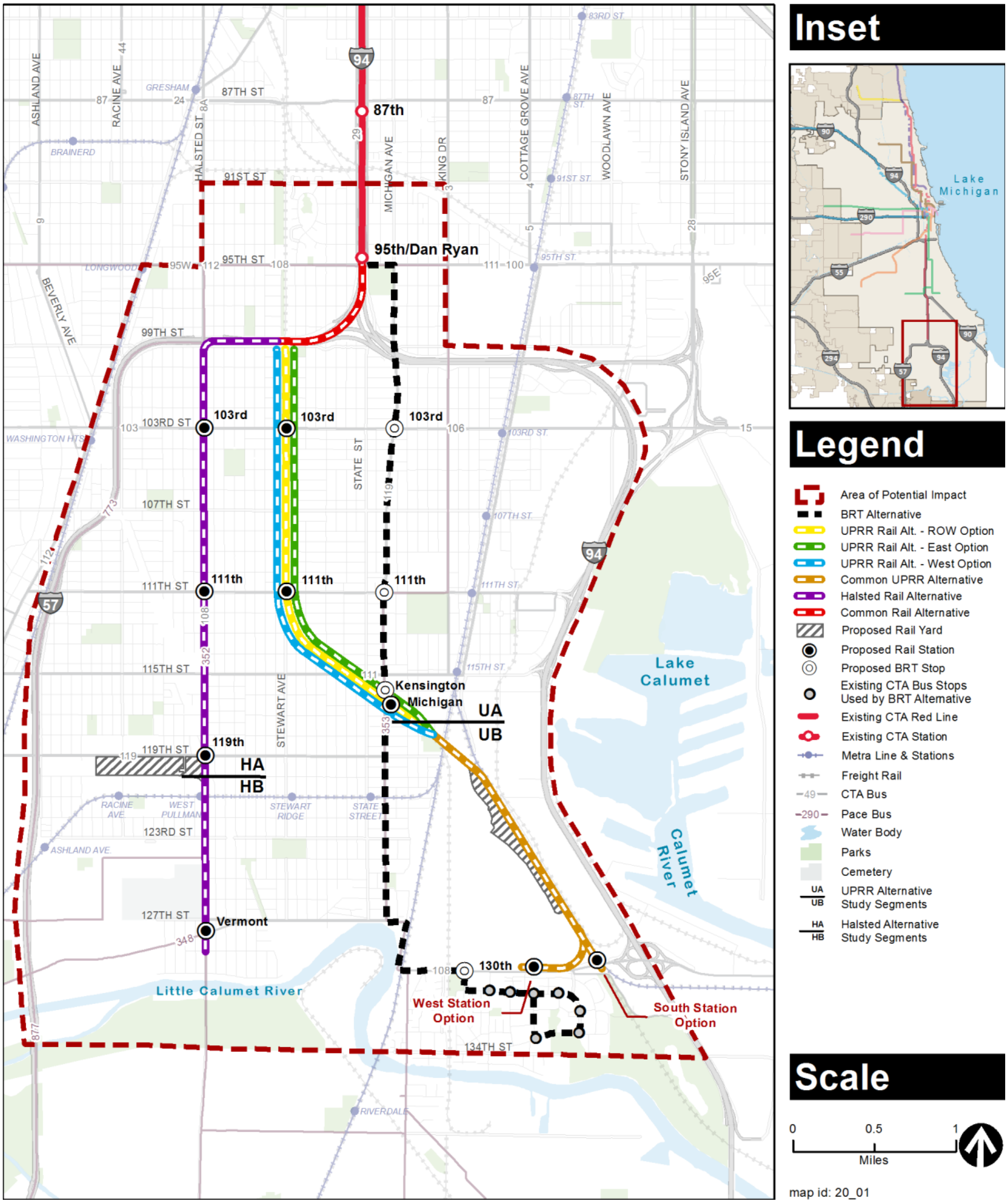
Inset
Lake Michigan
Legend
Area of Potential Impact
BRT Alternative
UPRR Rail Alt. - ROW Option
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
Common UPRR Alternative
Halsted Rail Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Proposed BRT Stop
Existing CTA Bus Stops Used by BRT Alternative
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
CTA Bus
Pace Bus
Water Body
Parks
Cemetery
UA UB UPRR Alternative Study Segments
HA HB Halsted Alternative Study Segments
Scale
0
0.5
1
Miles
map id: 20_01
87th
95th/Dan Ryan
103rd
111th
Kensington
Michigan
119th
Vermont
130th
UA
UB
HA
HB
West Station Option
South Station Option
Lake Calumet
Calumet River
Little Calumet River
87TH ST
91ST ST
95TH ST
99TH ST
103RD ST
107TH ST
111TH ST
115TH ST
119TH ST
123RD ST
127TH ST
134TH ST
ASHLAND AVE
RACINE AVE
HALSTED ST
MICHIGAN AVE
KING DR
COTTAGE GROVE AVE
WOODLAWN AVE
STONY ISLAND AVE
STATE ST
STEWART AVE
BEVERLY AVE
GRESHAM
BRAINERD
LONGWOOD
WASHINGTON HTS
RACINE AVE
WEST PULLMAN
STEWART RIDGE
STATE STREET
ASHLAND AVE
RIVERDALE
83RD ST
87TH ST
91ST ST
95TH ST
103RD ST
107TH ST
111TH ST
115TH ST
94
57

Figure 3-1: Energy Area of Potential Impact

3.4 Methods

The following methods were used to determine impacts for energy consumption under the No Build Alternative and the build alternatives.

The construction and operation (bus operations and stops, or rail operations and stations) energy usage was calculated for each of the build alternatives. The alternatives considered for the RLE were measured against the baseline conditions (No Build Alternative). The methods for calculating long-term (regional vehicular travel and transit operations) and short-term (construction) energy usage are described below.

Long-Term Energy Analysis

The baseline energy consumption was determined from the total regional VMT for the No Build Alternative in 2030, as estimated by the CMAP regional travel demand model. The entire CMAP region was used in assessing vehicular travel, because the project would affect travel outside of the API. The VMT was then converted to BTU using 3,650 BTU per vehicle mile traveled, a value derived from an estimated achieved fuel economy of 34.5 miles per gallon for cars and light trucks in 2025 from Corporate Average Fuel Economy standards (National Highway Traffic Safety Administration 2012).[1] (Miles traveled by transit vehicles, other than those associated with the project, would not differ among the alternatives; therefore, separating out transit vehicles and applying different energy consumption factors is not necessary to calculate the difference in energy use between the build alternatives and the No Build Alternative.) Any of the build alternatives would result in lower regional VMT than with the No Build Alternative, and would thus result in less vehicular energy consumption than the No Build Alternative. Energy consumption by vehicles is primarily in the form of gasoline and diesel fuel.

For the BRT Alternative, operational energy consumption was calculated from additional annual bus miles and the national average BTU per bus mile from the United States Department of Energy's Energy Data Book (Edition 31). The BRT stop energy was calculated from total platform area and estimated energy use per square foot (primarily for lighting) from *Transit Cooperative Research Board Project J-11/Task 9* (Center for Neighborhood Technology 2010).[2]

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[1] A gallon of gasoline supplies 125,000 BTU. A gallon of diesel fuel supplies 139,000 BTU. For future years, the estimated 2025 achievable fleet-wide fuel economy of 34.5 miles per gallon is used (forecast under the Corporate Average Fuel Economy "No Action" Alternative). Diesel was estimated to make up a higher percentage of fleets (compared to only 2.9 percent in 2012) because diesel automobiles get better mileage per gallon than gasoline automobiles. For the energy calculations, 6.6 percent was used for the percentage of diesel vehicles in future analysis years.

[2] Average building energy use for the buildings in the research is 89,900 BTU per square foot per year, with 52 percent used for heating, ventilation, and air conditioning, and 20 percent used for lighting. For BRT platforms, where the primary energy use is lighting, 20 percent (or 18,000 BTU per square foot) was applied.

For the rail alternatives, operational energy consumption was calculated from the total additional annual railcar miles and the average kilowatt-hour per revenue car mile provided by CTA.[3] Kilowatt-hours were then converted to BTU. Station energy was calculated based on similar CTA Red Line elevated stations (based on 2010 data provided by CTA). Table 3-1 lists the energy use factors for operations.

Table 3-1: Energy Use Factors for Operations

Operational Element	Operational Energy Use (BTU)	Primary Source of Energy
Transit Bus	36,000 BTU/vehicle mile	Diesel Fuel
CTA Railcar	26,785 BTU/revenue car mile	Electricity
Platform Lighting	18,000 Annual BTU/square foot	Electricity
ADA Accessible Elevated Station	1,700 Million BTU Annually/station	Electricity
Elevators	25,000,000 Annual BTU (each)	Electricity
Escalators	70,000,000 Annual BTU (each)	Electricity

BTU = British thermal unit, CTA = Chicago Transit Authority, ADA = Americans with Disabilities Act

Construction Energy Analysis

The construction energy consumption was evaluated for each of the build alternatives to determine the short-term impacts of the project on the regional energy use. Capital cost estimates were used to determine the construction energy consumption by applying an energy cost factor from *Energy and Transportation Systems* (California Department of Transportation 1983). Energy was expressed using BTU. The reference document states energy use per construction dollar (shown in Table 3-2) should be viewed as “informed estimates.” Energy use includes both manufacture of components and construction activities to install the components.

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[3] A revenue car mile is one CTA rail car traveling 1 mile while in revenue service. Energy use per revenue car mile was provided by CTA. The figure is for 2010 and is based on the system-wide average. The energy use may decrease with future vehicles and use of regenerative braking.

Table 3-2: Energy Factors for Construction

Construction Element	Construction Energy Cost Factor (BTU/$)[1]	Typical Elements
Track and Guideway	5,940	Structures, Track, Steel, Concrete
Stations	5,940	Platform, Canopy, Stairs, Escalator, Elevator, Station House
Facilities	7,310	Maintenance Building and Yard
Site Work	5,940	Utilities, Excavation, Removal, Hauling
Systems	9,130	Communications, Signals, Fare Collection, Traction Power, Substations

BTU = British thermal unit

1. Construction energy per dollar figures are for 2012, derived from *Energy and Transportation Systems* (California Department of Transportation 1983).

Section 4
Affected Environment

According to the City of *Chicago Climate Action Plan*, prepared in 2008, 21 percent of the city's greenhouse gas emissions are produced by cars, trucks, buses, and trains. Regional daily VMT are projected by the CMAP 2030 regional travel model to be 276,438,000. On an average weekday, over 1.6 million trips are made on CTA trains and buses (as of January 2013). If these trips were made in passenger vehicles rather than on CTA trains and buses, several hundred thousand vehicles would potentially be added to the regional roads each weekday.

To reduce its emission of greenhouse gases and energy use, the CTA is implementing the use of diesel-electric hybrid buses and exploring green technologies such as all-electric buses. The CTA has upgraded its support vehicle fleet to include hybrid-electric vehicles, vehicles that can use E-85 fuel, and vehicles that run on compressed natural gas. The E-85 fuel and compressed natural gas have a lower equivalent BTU amount than gasoline. The CTA is working to decrease the environmental impact of rail stations, offices, and maintenance facilities by implementing sustainable features in new buildings and retrofitting existing buildings to increase energy efficiency. The CTA currently uses approximately 9.8 trillion BTU annually for rail operations. (As Section 5 describes, any of the rail alternatives would result in 1.3 percent more energy use than the No Build Alternative.)

The CTA receives its power from Commonwealth Edison Company (purchased primarily from alternative retail electricity suppliers). Commonwealth Edison is part of the PJM Interconnection (PJM, a regional transmission organization) territory, which includes all or part of 13 states and the District of Columbia. The PJM region has 214,000 square miles, a population of about 60 million and a peak demand of 158,448 megawatts (in 2011). Renewable energy sources account for 5.3 percent of the total generating capacity for the region, which is 185,600 megawatts. The difference between the peak demand and the existing generating capacity is called the surplus generating capacity and is equal to 27,000 megawatts. (As Section 5 describes, the additional demand from the project would be less than 0.02 percent of the surplus generating capacity in the regional transmission territory.) As of June 27, 2011 there were 88,674 megawatts of planned generating station projects (in addition to existing generating capacity) for the PJM, and renewable energy sources account for 48.3 percent of the proposed projects. (PJM 2012)

Section 5
Impacts and Mitigations

This section describes the energy impacts for each of the four alternatives under consideration for the RLE Project, including the No Build Alternative. Impacts are discussed in three categories for each alternative: long-term operational impacts, short-term construction impacts, and cumulative impacts. Long-term operational impacts would occur after the project is fully constructed and operational. Long-term impacts include both regional vehicular travel and transit operations. Construction impacts would occur during the construction phase of the project and would be temporary in nature. Cumulative impacts would result from the incremental impact of the alternative combined with other past, present, and reasonably foreseeable future actions.

While other technical memoranda analyze alternatives by segment, the affected environment for energy is regional and widespread. (Compare the affected environment for energy with that of noise, for example. Noise generation occurs along the corridor and affects receptors adjacent to the corridor, and analysis within any discrete geographic area can be performed. Energy use, in contrast, is regional. Energy sources—whether for electricity, gasoline, or manufacture of construction components—extend far beyond the corridor.) See further discussion on page 3-3 of this technical memorandum.

A summary of impacts is presented and discussed below for all alternatives. Please see Sections 5.1 through 5.6 for specific details regarding impacts for the alternatives.

Table 5-1 provides a summary of the differences in long-term energy between the build alternatives and the No Build Alternative. The total long-term energy use for the No Build Alternative in 2030 would be approximately 368 trillion BTU, almost all of which would be the energy use of regional vehicular travel. The BRT Alternative would result in slightly less energy use than the No Build Alternative. The rail alternatives would require slightly more long-term energy than the No Build Alternative. Compared to the energy use for the No Build Alternative, the difference in energy use with any build alternative would be less than 0.02 percent of the total long-term energy use. The scale of the difference (less than 65 billion BTU annually) would be very small in comparison to the total operational energy use (approximately 368 trillion BTU annually). The percentage difference (less than 0.02 percent) would be less than the margin of error for regional modeling and less than the margin of error for assumptions regarding future automobile, bus, and rail vehicle energy efficiency. The additional demand from the project would be less than 0.02 percent of the surplus generating capacity in the regional transmission territory (See Section 4). Operation of any of the alternatives would not have an impact on regional energy consumption.

Table 5-2 provides a summary of the construction energy for alternatives. Energy used for construction is a one-time irreversible commitment of resources. Construction energy for the BRT Alternative would be relatively small compared to the rail alternatives, as the BRT Alternative features would be at grade. In contrast, construction for the rail alternatives would involve elevated structures and substantial stations.

Table 5-1: Estimated Difference in Long-Term Energy Use of Alternatives for Year 2030 (Billion BTU Annually)

Alternative	Regional Vehicular Travel	Operation of Alternative	Energy Use at Stations	Total Long-Term Energy
No Build	0	0	0	0
Bus Rapid Transit	(41.5)	21	0.2	(20.3)
UPRR Rail	(71.6)	128	6.8	63.2
Halsted Rail	(68.5)	121	7.5	59.9

() Parentheses indicate a negative difference in energy use (a lower estimate of energy use than for the No Build Alternative). All UPRR Rail Alternative Options would have the same operational energy use. Transit operational energy (including transit vehicle operations and energy use at stops/stations) for any of the rail alternatives would represent an increase of approximately 1.3 percent over existing CTA rail energy use.

BTU = British thermal unit, UPRR = Union Pacific Railroad

Table 5-2: Estimated Short-Term Energy Use of Alternatives

Alternative	Construction Energy Use - Billion BTU
No Build	0
Bus Rapid Transit	91
UPRR Rail - ROW Option	6,130
UPRR Rail - East Option	6,110
UPRR Rail - West Option	6,120
Halsted Rail	6,650

Energy use is rounded in this summary table.

BTU = British thermal unit, UPRR = Union Pacific Railroad,
ROW = right-of-way

5.1 No Build Alternative

The No Build Alternative is the baseline against which the build alternatives are compared. The baseline condition (year 2030 conditions) is the energy usage that would occur under the No Build Alternative. The energy usage under this alternative is based on the predicted increase (from existing conditions) in VMT if none of the build alternatives are implemented.

5.1.1 Permanent Impacts and Mitigations - No Build Alternative

Under the No Build Alternative, travel patterns are assumed to remain the same as under existing conditions. Existing bus routes within the project area are expected to remain the same as under existing conditions. Regional daily VMT is projected by the CMAP 2030 regional travel model to be 276,438,000 miles per day.

5.1.2 Construction Impacts and Mitigations - No Build Alternative

No new infrastructure would be constructed as part of the No Build Alternative other than projects already committed through the CMAP Transportation Improvement Program and regular maintenance of existing track and structures. This alternative would not result in energy impacts related to construction activities.

5.2 Bus Rapid Transit Alternative

The BRT Alternative would add a limited-stop, enhanced bus route along the existing #34 Michigan Avenue bus route to 130th Street. The BRT Alternative would utilize traffic signal priority at signalized intersections along 95th Street, Michigan Avenue, and 130th Street. No dedicated bus lanes would be provided for the BRT Alternative. The BRT Alternative would require a net increase of twelve 60-foot articulated buses plus two spares.

The BRT Alternative bus would run 24 hours per day. Bus frequencies would be adjusted during peak periods to a 4-minute frequency between 6 AM and 8 PM on weekdays and a 12-minute frequency on the existing route #34 to better serve anticipated demand.

5.2.1 Permanent Impacts and Mitigations - Bus Rapid Transit Alternative

Permanent (long-term) impacts would include three components: change in regional VMT, energy use for the transit vehicles, and energy use for the stops. The BRT Alternative would decrease regional VMT due to changes in vehicular trip distance (as BRT stops with the project would be closer to trip origins) and mode shift from personal vehicles to transit. The projected regional daily VMT for this alternative in the CMAP 2030 model would be 276,407,000, or approximately 31,000 VMT per day lower (less than 0.02 percent) than with the No Build Alternative. At 3,650 BTU per vehicle mile traveled, this would equate to an annual difference in energy use of 41.5 billion BTU.

The BRT Alternative would result in approximately 583,000 more bus miles annually than with the No Build Alternative. At 36,000 BTU/bus-mile, energy use for bus operations associated with this alternative would be 21 billion BTU more than with the No Build Alternative (U.S. Department of Energy 2012).

The third component of energy use is the operation of additional bus stops. The BRT stops would have bus shelters; therefore, the energy use would primarily be for lighting. Using 18,000 BTU per square foot of platform, the BRT platforms would require approximately 216 million BTU annually. Energy consumption for stops would be primarily electric energy.

As shown in Table 5-1, the total annual operational energy for the BRT Alternative would be approximately 20.3 billion BTU less than with the No Build Alternative. The total annual difference in long-term energy includes the total of the difference in energy for regional vehicular travel plus operational energy requirements for the transit vehicles and BRT stops.

5.2.2 Construction Impacts and Mitigations - Bus Rapid Transit Alternative

Energy impacts from construction activities were computed based on typical values for construction categories. Table 5-3 provides a summary of construction energy consumption for the BRT Alternative. Construction energy use would be a very small fraction of energy use in the region. The estimated 91 billion BTU for construction of the BRT Alternative would be less than 0.02 percent of the Cook County annual energy use, which is 530 trillion BTU. This 0.02 percent portion is well within the variations in annual energy use due to fluctuations in average temperature, regional employment, and manufacturing. The BRT Alternative would result in no construction energy impact and no mitigation is proposed.

Table 5-3: Estimated Energy Consumption from Construction Activities - Bus Rapid Transit Alternative

Construction Component	BTU/2012$	Construction Estimate (2012 $1,000)	Billion BTU	Typical Elements
Guideway	5,940	239	1	Concrete, Reinforcing Steel
Stops	5,940	702	4	Concrete, Reinforcing Steel, Canopy, Conduits, Lighting Fixtures
Maintenance Facilities	7,310	0	0	Maintenance Building, Equipment, Heating, Ventilation, Air Conditioning
Site Work	5,940	7,990	48	Earthwork, Removals, Utility Relocations
Systems	9,130	4,130	38	Signals, Fare Vending, Communications, Traffic Signal Priority System
Total Estimated Construction BTU			91	

BTU = British thermal units *All construction estimates in this document use April 2013 draft estimates.*

5.3 Union Pacific Railroad Rail Alternative - Right-of-Way Option

The UPRR Rail Alternative ROW Option would place the CTA tracks in the UPRR ROW between I-57 and the Canadian National/Metra Electric tracks. The UPRR trains would relocate to another corridor as part of a separate, earlier project that may occur regardless of RLE implementation.

Operation for the ROW Option would have train sets consisting of eight cars. Although the proposed platform design would accommodate ten-car trains, the service plan would be for eight-car trains as are in operation today. The hours of operation for the UPRR Rail Alternative would be the same as for the current Red Line, which operates 24 hours every day of the year.

5.3.1 Permanent Impacts and Mitigations - Union Pacific Railroad Rail Alternative - Right-of-Way Option

The ROW Option would result in lower regional VMT than the No Build Alternative because of vehicular trip distance changes (people would be nearer to transit stations) and mode changes (people would change their travel mode from personal vehicles to transit). The projected regional daily VMT for the UPRR Rail Alternative in the CMAP 2030 model is 276,384,000, which would be approximately 53,700 VMT per day less than with the No Build Alternative. At 3,650 BTU per vehicle mile traveled, the annual energy use with the ROW Option would be 71.6 billion BTU less than with the No Build Alternative.

The ROW Option would result in approximately 4,774,000 more railcar-miles annually than with the No Build Alternative. At 26,785 BTU/railcar-mile, annual energy use for rail operations associated with the ROW Option would be 127,873 million BTU more than with the No Build Alternative. Energy use per railcar-mile is based on CTA's actual traction power use and actual revenue railcar-miles.

The third component of energy use is operation of stations. Using the methods described in Section 3.4, the four stations associated with the ROW Option would use approximately 6.8 billion BTU annually.

The total annual long-term energy for the ROW Option would be a 63.2 billion BTU higher than it would be with the No Build Alternative. The rail alternatives would be more operationally intensive than the BRT Alternative, so overall energy use would be greater. The rail alternatives would provide six times the annual passenger capacity of the BRT Alternative.

5.3.2 Construction Impacts and Mitigations - Union Pacific Railroad Rail Alternative - Right-of-Way Option

Energy impacts from construction activities were computed based on typical values for construction categories. Construction energy use would vary slightly between the UPRR Rail Alternative options. For the UPRR Rail Alternative ROW Option, Table 5-4 provides a summary of the energy use during construction. Construction energy use would be a very small fraction of energy use in the region—approximately 6 trillion BTU compared to the total annual Cook County energy consumption of 530 trillion BTU, or less than 1.2 percent of the total annual Cook County energy consumption. There would be no temporary energy impacts and no mitigation is proposed.

Table 5-4: Estimated Energy Consumption from Construction Activities - Union Pacific Railroad Rail Alternative - Right-of-Way Option

Construction Component	BTU/2012$	Construction Estimate (2012 $1,000)	Billion BTU	Typical Elements
Track and Guideway	5,940	245,000	1,455	Structural Steel, Track, Concrete, Reinforcing Steel
Stations	5,940	138,000	820	Concrete, Reinforcing Steel, Canopy, Conduits, Lighting Fixtures, Glass
Maintenance Facilities	7,310	154,000	1,126	Maintenance Building, Equipment, Heating, Ventilation, Air Conditioning
Site Work	5,940	104,000	618	Earthwork, Removals, Utility Relocations

Systems	9,130	231,000	2,109	Signals, Fare Vending, Communications, Traction Power, Substations
Total Estimated Construction BTU			6,128	

BTU = British thermal units

5.4 Union Pacific Railroad Rail Alternative - East Option

In the UPRR Rail Alternative East Option, CTA tracks would be placed immediately adjacent to and east of the UPRR ROW between I-57 and the Canadian National/Metra Electric tracks. The service plan would be for eight-car trains and 24-hour service, as described for the ROW Option in Section 5.3.

5.4.1 Permanent Impacts and Mitigations - Union Pacific Railroad Rail Alternative - East Option

Because the operational energy consumption is calculated based on regional VMT and operation of the trains and stations, the energy consumption for the UPRR Rail Alternative East Option would be the same as for the ROW Option. The total annual operational energy would be 68.6 billion BTU more than with the No Build Alternative.

5.4.2 Construction Impacts and Mitigations - Union Pacific Railroad Rail Alternative - East Option

Table 5-5 provides a summary of construction-related energy use for the UPRR Rail Alternative East Option. Construction energy use would be a very small fraction of the energy use in the region—approximately 6 trillion BTU compared to the total annual Cook County energy consumption of 530 trillion BTU, or less than 1.2 percent of the total annual Cook County energy consumption. There would be no temporary impacts on energy and no mitigation is proposed.

Table 5-5: Estimated Energy Consumption from Construction Activities - Union Pacific Railroad Rail Alternative - East Option

Construction Component	BTU/2012$	Construction Estimate (2012 $1,000)	Billion BTU	Typical Elements
Track and Guideway	5,940	243,000	1,443	Structural Steel, Track, Concrete, Reinforcing Steel
Stations	5,940	138,000	820	Concrete, Reinforcing Steel, Canopy, Conduits, Lighting Fixtures, Glass
Maintenance Facilities	7,310	154,000	1,126	Maintenance Building, Equipment, Heating, Ventilation, Air Conditioning
Site Work	5,940	100,000	594	Earthwork, Removals, Utility Relocations
Systems	9,130	233,000	2,127	Signals, Fare Vending, Communications, Traction Power, Substations
Total Estimated Construction BTU			6,110	

BTU = British thermal units

5.5 Union Pacific Railroad Rail Alternative - West Option

In the UPRR Rail Alternative West Option, CTA tracks would be placed immediately adjacent to and west of the UPRR ROW between I-57 on the north end and the UPRR tracks near Kensington Park on the south end. The service plan would be for eight-car trains and 24-hour service, as described for the ROW Option in Section 5.3.

5.5.1 Permanent Impacts and Mitigations - Union Pacific Railroad Rail Alternative - West Option

Because the operational energy consumption is calculated based on regional VMT and operation of the trains and stations, the energy consumption for the UPRR Rail Alternative West Option would be the same as for the ROW and East Options. The total annual operational energy would be 68.6 billion BTU more than it would be with the No Build Alternative.

5.5.2 Construction Impacts and Mitigations - Union Pacific Railroad Rail Alternative - West Option

Table 5-6 provides a summary of construction-related energy use for the UPRR Rail Alternative West Option. Construction energy use would be a very small fraction of the energy use in the region—approximately 6 trillion BTU compared to the total annual Cook County energy consumption of 530 trillion BTU, or less than 1.2 percent of the total annual Cook County energy consumption. There would be no temporary energy impacts and no mitigation is proposed.

Table 5-6: Estimated Energy Consumption from Construction Activities - Union Pacific Railroad Rail Alternative - West Option

Construction Component	BTU/2012$	Construction Estimate (2012 $1,000)	Billion BTU	Typical Elements
Track and Guideway	5,940	246,000	1,461	Structural Steel, Track, Concrete, Reinforcing Steel
Stations	5,940	138,000	820	Concrete, Reinforcing Steel, Canopy, Conduits, Lighting Fixtures, Glass
Maintenance Facilities	7,310	154,000	1,126	Maintenance Building, Equipment, Heating, Ventilation, Air Conditioning
Site Work	5,940	102,000	606	Earthwork, Removals, Utility Relocations
Systems	9,130	231,000	2,109	Signals, Fare Vending, Communications, Traction Power, Substations
Total Estimated Construction BTU			6,122	

BTU = British thermal unit

5.6 Halsted Rail Alternative

The proposed Halsted Rail Alternative is a 5.0-mile extension of the existing Red Line. It would operate on an elevated structure running south from 95th Street along I-57 until Halsted Street. The service plan would be for eight-car trains and 24-hour service, as described for the ROW Option in Section 5.3.

5.6.1 Permanent Impacts and Mitigations - Halsted Rail Alternative

The Halsted Rail Alternative would result in lower regional VMT than the No Build Alternative because of vehicular trip distance changes (people would be nearer to transit stations) and mode changes (people would change their travel mode from personal vehicles to transit). The projected regional daily VMT for the Halsted Rail Alternative in the CMAP 2030 model is 276,387,000, which would be approximately 51,400 vehicle miles per day less than with the No Build Alternative. At 3,650 BTU per vehicle mile traveled, the annual energy use would be 68.5 billion BTU less than with the No Build Alternative.

The Halsted Rail Alternative would result in approximately 4,504,000 more railcar-miles annually than with the No Build Alternative. At 26,785 BTU/railcar-mile, additional annual energy use for rail operations associated with this alternative would be 121 billion BTU more than with the No Build Alternative.

The four stations associated with the Halsted Rail Alternative would use approximately 7.5 billion BTU annually. This energy use would be higher than with the UPRR Alternative options because the Halsted Alternative's side platforms would require additional vertical circulation.

The total annual long-term energy for the Halsted Rail Alternative would be a 59.9 billion BTU higher than it would be with the No Build Alternative.

5.6.2 Construction Impacts and Mitigations - Halsted Rail Alternative

Table 5-7 provides a summary of the energy use during construction for the Halsted Rail Alternative. Construction energy use would be a very small fraction of energy use in the region—approximately 7 trillion BTU compared to the total annual Cook County energy consumption of 530 trillion BTU, or less than 1.3 percent of the total annual Cook County energy consumption. There would be no temporary energy impacts and no mitigation is proposed.

Table 5-7: Estimated Energy Consumption from Construction Activities - Halsted Rail Alternative

Construction Component	BTU/2012$	Construction Estimate (2012 $1,000)	Billion BTU	Typical Elements
Track and Guideway	5,940	337,000	2,002	Structural Steel, Track, Concrete, Reinforcing Steel
Stations	5,940	140,000	832	Concrete, Reinforcing Steel, Canopy, Conduits, Lighting Fixtures, Glass
Maintenance Facilities	7,310	147,000	1,075	Maintenance Building, Equipment, Heating, Ventilation, Air Conditioning
Site Work	5,940	93,000	552	Earthwork, Removals, Utility Relocations
Systems	9,130	240,000	2,191	Signals, Fare Vending, Communications, Traction Power, Substations
Total Estimated Construction BTU			6,652	

BTU = British thermal unit

5.7 Cumulative Impacts

As energy use for all build alternatives would be a small fraction of regional energy use, and as projected surplus generating capacity also far outweighs energy use for any build alternative, there would be no cumulative impacts.

There are no planned major highway projects (such as I-94 or I-57) that would affect regional energy use. Other than the 95th Street Terminal, there are no planned CTA projects in the projects beyond the RLE Project. One CREATE (Chicago Region Environmental and Transportation Efficiency Program) project (grade separation of 95th Street and the Union Pacific tracks, CREATE project GS21a) is located within the project area and is listed as a future grade separation project that depends on future availability of funding.

Section 6
Conclusions

For any of the build alternatives, the permanent changes in energy use would amount to less than 0.02 percent of transportation-related energy use for the region (63 billion BTU more for the UPRR Alternative than for the No Build Alternative, which would require 368 trillion BTU). The energy needed for operations would be far less than the existing surplus generating capacity for the region (which is 17 percent greater than existing generating demand). The net difference in energy use for any of the build alternatives would be less than +/- 0.02 percent, which is smaller than the margin of error for regional modeling. The difference in energy use would be negligible for any of the alternatives compared to the energy use for the No Build Alternative (368 trillion BTU for regional vehicular travel in 2030) and would not have an impact on regional energy consumption.

For all of the build alternatives, the total temporary construction energy use would be less than 1.3 percent of the total annual energy consumption in Cook County. Construction energy use would be spread out over the duration of construction, approximately 3 to 5 years. The one-time irreversible commitment of energy resources for construction would have negligible impacts, if any.

Section 7
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Appendix A
2014-2015 Red Line Extension Project Update

2014–2015 Red Line Extension Project Update

From 2012-2014, CTA evaluated benefits and impacts of four alternatives: the No Build Alternative, the Bus Rapid Transit Alternative (along Michigan Avenue), the Union Pacific Railroad (UPRR) Rail Alternative, and the Halsted Alternative. CTA evaluated three options of the UPRR Rail Alternative: Right-of-Way Option, East Option, and West Option. CTA also evaluated two options of the UPRR Rail Alternative 130th Street station: a South Station Option and a West Station Option. Based on the project description provided in Section 2 of this technical memorandum, CTA analyzed the impacts of these alternatives and station options. The benefits and impacts are included in the technical memoranda prepared in 2012-2014.

In August 2014, based on the technical analysis and public input, CTA announced the NEPA Preferred Alternative—the UPRR Rail Alternative. Additional conceptual engineering was conducted on the UPRR Rail Alternative to refine the East and West Option alignments. In addition, CTA is considering only the South Station Option of the 130th Street Station.

In late 2014 and early 2015, CTA conducted additional engineering and revised assumptions on the East and West Options to refine the alignments. The refinement of the East and West Options consisted of the following items:

- For the segment of the alignment along I-57, CTA shifted the proposed alignment from the median of I-57 to the north side of I-57 within the existing expressway right-of-way. The construction would be less complex, safer for construction workers, and have a shorter duration. The shift would also allow for fewer impacts to Wendell Smith Park for the East Option, and would allow for no permanent impacts to Wendell Smith Park for the West Option.
- CTA modified the curve speeds as the alignment heads south from I-57 along the UPRR tracks. The curve speed for both the East and West Options would be 35 mph.
- CTA shifted the East Option alignment near 103rd Street station to minimize impacts to Block Park and the Roseland Pumping Station.
- CTA modified the curves south of 103rd Street for both the East and West Options to 55 mph to maximize the train speed.
- CTA refined the layout of the 120th Street yard and shop to optimize yard operations. The refined layout of the yard would accommodate 340 train cars.

The refinement of the East and West Option alignments minimizes potential impacts to parks while providing flexibility for future design phases. The Draft Environmental Impact Statement contains the benefits and impacts of the refined East and West Option alignments and supersedes information presented in other chapters of this technical memorandum

Energy

CTA revised cost estimates for the East and West Options after completing the additional engineering on those options in late 2014 and early 2015. Based on the refined alignments, the East Option would use approximately 6,130 billion BTU for construction and the West Option would use approximately 6,170 billion BTU for construction.

The one-time irreversible commitment of energy resources for construction would amount to less than 1.2 percent of the total annual energy consumption for Cook County, which is 530 trillion BTU (CNT Energy 2009).

Appendix X
Environmental Justice Technical Memorandum

Chicago Red Line Extension Project

Environmental Justice

Technical Memorandum

May 8, 2015
Updated September 13, 2015

Prepared for:
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Abbreviations

API	area of potential impact
BRT	Bus Rapid Transit
CMAP	Chicago Metropolitan Agency for Planning
CO	carbon monoxide
CTA	Chicago Transit Authority
EIS	Environmental Impact Statement
EO	Executive Order
FSRRFS	Far South Railroad Relocation Feasibility Study
FTA	Federal Transit Administration
GHG	greenhouse gases
LEP	limited English proficiency
MSAT	mobile source air toxics
NEPA	National Environmental Policy Act
NRHP	National Register of Historic Places
PM2.5	particulate matter smaller than 2.5 micrometers
RLE	Red Line Extension
ROW	right-of-way
Uniform Act	Uniform Relocation and Real Property Assistance Act of 1970
UPRR	Union Pacific Railroad
USDOT	United States Department of Transportation

Section 1
Summary

This technical memorandum analyzes the potential impacts of the Red Line Extension (RLE) Project on Environmental Justice. The Environmental Justice analysis and outreach process was undertaken to accomplish the following goals, consistent with Federal Transit Administration (FTA) Circular 4703.1, *Environmental Justice Policy Guidance for Federal Transit Administration* (August 2012), and Circular 4702.1B, *Title VI Requirements and Guidelines for Federal Transit Administration Recipients* (October 2012):

- To avoid, minimize, or mitigate disproportionately high and adverse human health and environmental effects, including social and economic effects, on minority populations and low-income populations.
- To ensure the full and fair participation by all potentially affected communities in the transportation decision-making process.
- To prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority and low-income populations.

The analysis and outreach process is also consistent with the legislation that defines requirements for Environmental Justice compliance: the February 1994 Executive Order (EO) 12898, *Federal Action to Address Environmental Justice in Minority Populations and Low-Income Populations,* and the May 2012 U.S. Department of Transportation (USDOT) Order 5610.2, *Order to Address Environmental Justice in Minority Populations and Low-Income Populations*.

Although projects in areas comprising entirely Environmental Justice populations do not necessarily preclude disproportionately high and adverse effect findings, the following characteristics are true of the project area and the RLE alternatives:

- The entire project area comprises predominantly minority populations. No community in the project area contains less than 92.9 percent minority populations, and the project area as a whole contains 97.9 percent minority populations.
- All of the impacts and benefits of the alternatives would accrue to the same minority populations, and few project benefits would occur outside the project area.
- The purpose of this community-initiated project includes connecting disadvantaged communities to Chicago's major employment and activity centers in an effort to spur economic development and improve livability. The project would help remediate the geographic isolation and lack of employment and development opportunities that currently exist in the project area.

Given these findings, none of the alternatives would result in disproportionately high and adverse effects on Environmental Justice populations. Some alternatives would still have adverse impacts on Environmental Justice communities; however, these impacts would not be disproportionate. In some instances, impacts would remain adverse despite implementation of mitigation measures, as shown in Table 1-1 and described further in Section 5. These remaining adverse impacts would be associated with the change in community and visual character caused by locating an elevated rail structure and parking structures in low-density residential areas. In the case of the Halsted Rail Alternative, impacts would also stem from the proximity of the elevated rail structure to historic resources.

Table 1-1: Adverse Impacts Remaining After Mitigation by Alternative (Not Disproportionate)

Impact Category	No Build	BRT	UPRR ROW Option	UPRR East Option	UPRR West Option	Halsted
Displacements	No	No	No	No	No	No
Land Use and Economic Development	No	No	No	No	No	Yes
Noise and Vibration	No	No	No	No	No	No
Energy	No	No	No	No	No	No
Air Quality and Climate Change	No	No	No	No	No	No
Biological Resources	No	No	No	No	No	No
Hazardous Materials	No	No	No	No	No	No
Neighborhood and Community	No	No	No	Yes	Yes	Yes
Parklands and Community Facilities	No	No	No	No	No	No
Safety and Security	No	No	No	No	No	No
Visual and Aesthetic Conditions	No	No	No	Yes	Yes	Yes
Water Resources	No	No	No	No	No	No
Transportation	No	No	No	No	No	No
Historic and Cultural Resources	No	No	No	No	No	Yes
Geology and Soils	No	No	No	No	No	No
Cumulative	No	No	No	No	No	No

BRT = Bus Rapid Transit, UPRR = Union Pacific Railroad, ROW = Right-of-Way

Reference to the public involvement summary in Section 7 to be added following completion of the Environmental Justice outreach process.

Updated July 29, 2015

In August 2014, based on the technical analysis and public input until then, CTA announced the NEPA Preferred Alternative—the UPRR Rail Alternative. CTA is considering two alignment (route) options of this alternative: the East Option and the West Option. At this time, CTA is also considering only the South Station Option of the 130th Street Station. In late 2014 and early 2015, CTA conducted additional engineering on the East and West Options to refine the East and West Option alignments. Appendix B of this technical memorandum summarizes the refined alignments and any additional or different impacts that would result. The information in Appendix B supersedes information presented in other chapters of this technical memorandum.

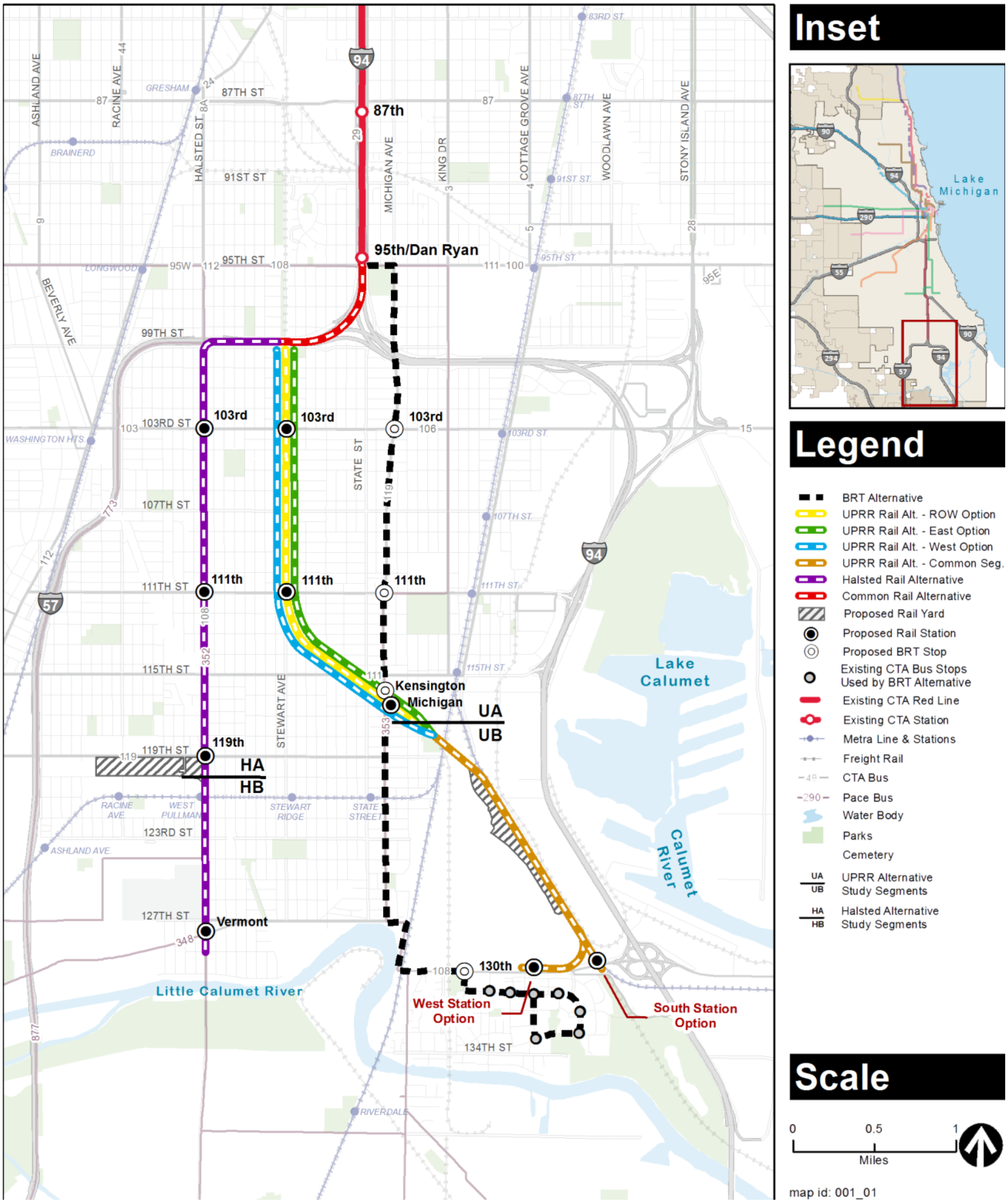
Section 2
Project Description

The Chicago Transit Authority (CTA) is proposing to extend the Red Line from the existing 95th Street Terminal to the vicinity of 130th Street, subject to the availability of funding. The proposed RLE would include four stations. Each station would include bus transfer and parking facilities. This project is one part of the Red Ahead Program to extend and enhance the entire Red Line. The CTA is also planning 95th Street Terminal improvements that are anticipated to be completed prior to the proposed RLE construction.

The project area is 11 miles south of the Chicago central business district (commonly referred to as the Loop) and encompasses approximately 20 square miles. The boundaries of the project area are 95th Street on the north, Ashland Avenue on the west, Stony Island Avenue on the east, and the Calumet-Sag Channel/Little Calumet River and 134th Street on the south. The I-57 Expressway and I-94 Bishop Ford Freeway cross the western and eastern edges of the project area, respectively. Lake Calumet is in the eastern portion of the project area. The project area encompasses parts of nine community areas in the City of Chicago and the eastern section of the Village of Calumet Park. Chicago community areas include Beverly, Washington Heights, Roseland, Morgan Park, Pullman, West Pullman, Riverdale, Hegewisch, and South Deering. The project area comprises residential (primarily single family), industrial (both existing and vacant), transportation (including freight), and commercial development.

The Draft Environmental Impact Statement (EIS) focuses on the following alternatives (shown in Figure 2-1), which emerged from the Alternatives Analysis and the National Environmental Policy Act (NEPA) scoping process:

- No Build Alternative
- Bus Rapid Transit (BRT) Alternative
- Union Pacific Railroad (UPRR) Rail Alternative
    - Right-of-Way (ROW) Option
    - East Option
    - West Option
- Halsted Rail Alternative


87th
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Vermont
130th
West Station Option
South Station Option
Lake Calumet
Calumet River
Little Calumet River
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Lake Michigan
Legend
BRT Alternative
UPRR Rail Alt. - ROW Option
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
UPRR Rail Alt. - Common Seg.
Halsted Rail Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Proposed BRT Stop
Existing CTA Bus Stops Used by BRT Alternative
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
CTA Bus
Pace Bus
Water Body
Parks
Cemetery
UPRR Alternative Study Segments
Halsted Alternative Study Segments
Scale
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1
Miles
map id: 001_01

Figure 2-1: Red Line Extension Project Alternatives

The No Build Alternative is a required alternative as part of the NEPA environmental analysis and is used for comparison purposes to assess the relative benefits and impacts of extending the Red Line. The No Build Alternative is carried into the Draft EIS phase of the project development regardless of its performance versus the build alternatives under consideration. No new infrastructure would be constructed as part of the No Build Alternative other than committed transportation improvements that are already in the Chicago Metropolitan Agency for Planning (CMAP) Fiscal Year 2010–2015 Transportation Improvement Program, which includes the improvements to 95th Street Terminal. The Transportation Improvement Program projects within the project area consist of four bridge reconstructions, several road improvement projects including resurfacing and coordination of signal timing on 95th Street, work on Metra's facilities, construction of a bicycle/pedestrian multi-use trail, and preservation of historic facilities. The No Build Alternative includes regular maintenance of existing track and structures, and bus transit service would be focused on the preservation of existing services and projects. All elements of the No Build Alternative are included in each of the other alternatives. Under this alternative, travel times would not improve from existing conditions.

The BRT Alternative (formerly referred to as the Transportation Systems Management Alternative) is a 5.0-mile, limited-stop, enhanced BRT route, which is assumed to operate 24 hours per day between the existing 95th Street Terminal and the intersection of 130th Street and Eberhart Avenue. No dedicated bus lanes would be provided for the BRT Alternative; however, parking lanes would be removed for some portions of the alignment and four stops with improved bus shelters and park & ride facilities would be created at 103rd Street and Michigan Avenue, 111th Street and Michigan Avenue, Kensington Avenue and Michigan Avenue, and 130th Street and Eberhart Avenue. Although BRT service elements would not continue south of the 130th Street stop, the bus route would continue through Altgeld Gardens along the existing route with six stops. The BRT Alternative would be consistent with bus routing changes that may occur as part of improvements to the 95th Street Terminal. Under this alternative, travel times between 130th Street and the Loop would improve over existing conditions.

The UPRR Rail Alternative is a 5.3-mile extension of the heavy rail transit Red Line from its existing 95th Street Terminal to 130th Street, just west of I-94. The Chicago Transit Board designated the UPRR Rail Alternative as the Locally Preferred Alternative at its August 12, 2009 board meeting. This alternative includes construction and operation of new heavy rail transit tracks, mostly in existing transportation corridors. The UPRR Rail Alternative has three options for alignment (ROW, East, and West), all of which would include operation on elevated structure from 95th Street to just past the Canadian National/Metra Electric District tracks near 119th Street. The alignment would then transition to at-grade through an industrial area with no public through streets, terminating at 130th Street in the vicinity of Altgeld Gardens. Four new stations would be constructed at 103rd Street, 111th Street, Michigan Avenue, and 130th Street. The 130th Street station would be the terminal station, with two options under evaluation: the South Station Option and the West Station Option. A new yard and shop facility would be sited near 120th Street and Cottage Grove Avenue. The bus routes in the vicinity of the UPRR Rail Alternative would be modified to enhance connectivity between the Red Line and the bus network. The hours of operation and service frequency for the UPRR Rail Alternative are assumed to be the same as

for the current Red Line. Under this alternative, travel times between 130th Street and the Loop would improve substantially over existing conditions.

The Halsted Rail Alternative is a 5.0-mile heavy rail transit extension of the existing Red Line. In this alternative, the Red Line would operate on an elevated structure running south from 95th Street along I-57 until Halsted Street. The alignment would then turn south and continue along Halsted Street to the intersection of Halsted Street and Vermont Avenue near 127th Street. This alternative would include four new stations at 103rd Street, 111th Street, 119th Street, and Vermont Avenue. The Vermont Avenue station would be the terminal station. A new yard and shop would be sited west of Halsted Street and between the 119th Street and Vermont Avenue stations. The bus routes in the vicinity of the Halsted Rail Alternative would be modified to enhance connectivity to the Red Line. The hours of operation and service frequency for the Halsted Rail Alternative are assumed to be the same as for the current Red Line. Under this alternative, travel times between 127th Street and the Loop would improve substantially over existing conditions. This alternative would not extend rail to Altgeld Gardens, which would be served by bus connecting to the Vermont terminal station.

Section 3
Methods for Impact Evaluation

According to EO 12898 signed in February 1994 and the guidance provided in FTA Circular 4703.1, *Environmental Justice Policy Guidance for Federal Transit Administration* issued in August 2012, the Environmental Justice process and analysis developed for the RLE Project is designed to achieve the following:

- Avoid, minimize, or mitigate disproportionately high and adverse human health and environmental effects, including social and economic effects, on minority populations and low-income populations.
- Ensure the full and fair participation by all potentially affected communities in the transportation decision-making process.
- Prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority and low-income populations.

The Environmental Justice analysis for the RLE Project is consistent with the August 2012 FTA Circular and is tailored to the unique characteristics and needs of the population in the area. Because the entire project area consists of predominantly African American populations with some Spanish-speaking groups, as discussed further in Section 4, all public outreach efforts were targeted to Environmental Justice populations. In addition to traditional public meetings and internet-based outreach, information about the project and opportunities for input were provided through newsletters, standing community group meetings, and individual stakeholder interviews to ensure full and fair participation. Information gathered during stakeholder interviews was used to plan focused, grassroots meetings to work through community concerns and identify appropriate mitigation measures. All outreach was conducted in both English and Spanish languages. Concerns about potential impacts raised during outreach were analyzed in conjunction with the impacts from the other RLE technical reports to determine whether disproportionately high and adverse effects would potentially occur. The results of the impact analysis are presented in detail in Section 5.

3.1 Regulatory Framework

The following subsections summarize the federal and related state laws that define Environmental Justice requirements for federally funded transit projects. The Environmental Justice analysis and outreach process for the RLE Project was conducted in accordance with these requirements. The methods outlined in the cited guidance documents were used to develop the methods for this analysis, as described in Sections 3.2 through 3.4 below.

3.1.1 Federal

Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Population and Low-Income Populations* (1994), requires each federal agency "to make achieving Environmental Justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority and low-income populations" (Federal Register, Volume 59, No. 32, 7629-7633, February 16, 1994). Each federal agency must analyze the environmental impacts, including human health, economic, and social impacts, of federal actions including impacts on minority and low-income communities, when such analysis is required by NEPA. Federal agencies are also required to provide opportunities for community input in the NEPA process, identify potential impacts and mitigation measures in consultation with affected communities, and improve the accessibility of meetings, crucial documents, and notices (Council on Environmental Quality 1997).

As discussed above, FTA issued its most recent guidance for meeting the requirements of EO 12898 as Circular 4703.1 in August 2012. The circular provides recommendations for the following:

- Identifying low-income and minority populations using Census data, outreach, and field observations.
- Determining whether disproportionately high and adverse effects would occur as a result of the project.
- Implementing traditional and non-traditional public outreach methods to ensure effective engagement of minority and low-income communities in the planning and decision-making process.
- Incorporating Environmental Justice into the NEPA process.

These recommendations have been incorporated as guiding principles into the analysis and outreach performed for the RLE Project. More detailed information regarding the specific methods used to comply with these recommendations is provided in Section 3.4.

Executive Order 13166 (2000), *Improving Access to Services for Persons with Limited English Proficiency (LEP),* requires that people who are not proficient in the English language have access to meaningful communications about and participation in any program or activity receiving federal assistance. It requires federal agencies to examine the services they provide for persons who, as a result of national origin, have LEP. It calls for agencies to identify whether LEP populations are in need of their services, and to develop and implement a system to provide those services so LEP persons can have meaningful access to them. The LEP analysis for the RLE Project is attached to this technical memorandum as Appendix A. The LEP analysis states that outreach for the project should be conducted in both English and Spanish languages.

In May 2012, the USDOT issued Order 5610.2, *Order to Address Environmental Justice in Minority Populations and Low-Income Populations,* in compliance with the February 1994 EO 12898. It provides guidance for transportation agencies to achieve Environmental Justice and establishes a policy to promote the principles of Environmental Justice in all USDOT programs, policies, and activities. It also requires that Environmental Justice principles be fully considered throughout planning and decision-making processes. The Environmental Justice analysis for the RLE Project incorporates the direction from Order 5610.2 (May 2012) as referenced and interpreted in FTA Circular 4703.1 (August 2012).

Title VI, which is related to Environmental Justice, imposes a statutory obligation on FTA recipients to (1) ensure that the level and quality of public transportation service is provided equitably without regard to race, color, or national origin; (2) promote full and fair participation in public transportation decision-making without regard to race, color, or national origin; and (3) ensure meaningful access to transit-related programs and activities by persons with LEP. A separate Title VI analysis will be prepared for this project by CTA.

3.1.2 State

Article XI of the *Constitution of the State of Illinois* (Article XI) establishes the legislative responsibility of the state "to provide and maintain a healthful environment for the benefit of this and future generations" and provides each person with the individual right to a "healthful environment" (Illinois General Assembly, Constitution of the State of Illinois).

In furtherance of Article XI, State Bill 2193, referred to as the Environmental Justice Act, was enacted on August 16, 2011 and established the Commission on Environmental Justice in the state of Illinois. The Commission on Environmental Justice is charged with advising state entities on Environmental Justice issues, reviewing and analyzing current state laws and policies, and recommending options to rectify Environmental Justice concerns. This Act ensures that no segment of the population in the state of Illinois, "regardless of race, national origin, age, or income, should bear disproportionately high or adverse effects of environmental pollution" (Illinois General Assembly, Public Act 097-0391). Demographic analysis of elderly populations is included in Section 4 to address these goals.

3.1.3 Local

Local agencies are subject to the above federal and state laws, as applicable. Cook County, the City of Chicago, and the Village of Calumet Park do not have additional regulatory requirements pertaining to Environmental Justice.

3.2 Impact Analysis Thresholds

3.2.1 Environmental Justice Populations

The FTA's Circular 4703.1 (August 2012) recommends identifying minority and low-income populations using a combination of Census data analysis and non-traditional data gathering techniques such as outreach to community-based organizations. Census data was used to preliminarily identify minority and low-income populations. Preliminary identifications were then supplemented with field visits (windshield and walking surveys conducted in 2012) and stakeholder outreach to confirm the presence of minority and low-income populations. Based on field observation and research, the Census tract and block-group boundaries used do not artificially dilute or inflate the affected minority population and/or low-income population findings, and allow for differentiation of impacts around the yard and shop locations versus those around the alternative alignments. A LEP analysis was also performed to identify populations in the project area who are linguistically isolated and do not speak English well. The LEP analysis results are included in this technical memorandum as Appendix A.

3.2.2 Disproportionately High and Adverse Effects

Once Environmental Justice populations were identified in all parts of the project area, analysis was performed to identify potentially adverse impacts and to verify that no disproportionately high and adverse effects would occur. The August 2012 FTA Circular 4701.3 cites USDOT Order 5610.2, issued in May 2012, to define adverse impacts. The topics comprising adverse impacts, ranging from community impacts to natural environment impacts, are analyzed in the RLE technical memoranda. Potentially adverse impacts are discussed in Section 5 of this report, as the entire project area consists of Environmental Justice communities. The circular also cites the USDOT order's definition of a disproportionately high and adverse effect on human health or the environment as one that would be predominantly borne by a minority population and/or a low-income population, or would be suffered by the minority population and/or low-income population and would be appreciably more severe or greater in magnitude than the adverse impact that would be suffered by the non-minority population and/or non-low-income population.

Disproportionately high and adverse effects would only be possible if the project area contained both Environmental Justice and non-Environmental Justice populations, and there would be unevenness in the level of impacts and benefits between the two. Because all of the populations that would benefit from and be affected by the project comprise predominantly minority and/or low-income persons, disproportionately high and adverse effects would not occur. Section 5 describes the analysis, which identified the adverse impacts that would occur in minority and low-income communities (i.e., all of the impacts of the alternatives, none of which would be disproportionately high and adverse), and addressed the concerns raised during the outreach process.

Identification of mitigation measures is required for any identified disproportionately high and adverse effects on Environmental Justice populations. Because no such impacts would result from any of the RLE alternatives, there is no requirement to identify mitigation measures beyond those presented in other RLE technical memoranda (and summarized in Section 5 of this report).

3.2.3 Receipt of Benefits

Similarly to the analysis of potentially adverse impacts described in Section 3.2.2, the RLE technical memoranda were also reviewed to identify the benefits of the project. Analysis was performed to verify that the benefits of the alternatives would be distributed evenly throughout the project area, and that they would accrue simultaneously to all of the adversely affected communities.

3.3 Area of Potential Impact

The area of potential impact (API) for analyzing permanent, construction, and cumulative impacts was established based on FTA Circular 4703.1 (August 2012), which recommends the following:

- Identifying the presence of district minority and/or low-income communities residing both within and in proximity to the project or activity.
- Identifying those minority and/or low-income groups that utilize or are dependent on natural resources and the human environment that could be potentially affected by the proposed action.

The API is also based on the findings of the other RLE technical memoranda relevant to Environmental Justice, most of which are focused within a one-block radius of the proposed alignments. Potential benefits of the project, such as improved transit access, would accrue to the larger catchment areas around the station locations, roughly ½ mile. The combined area of potential benefits and impacts covers most of the project area designated in the *Purpose and Need Report*.

Identification of Environmental Justice populations affected by the RLE Project was conducted pursuant to NEPA guidance (40 Code of Federal Regulations 1508) and FTA Circular 4703.1 (August 2012). For the purposes of locating minority communities, the API includes blocks/block groups within the project area defined in the Purpose and Need Statement. This API results in an area of approximately ½ mile around the proposed ROW for the each of the alternatives, with some modifications to account for key geographic features such as waterways and major streets. Impacts are reported based on the API assumed for each resource in its technical memorandum.

3.4 Methods

The FTA's Circular 4703.1 (August 2012) outlines a process of analyzing demographic data to identify the presence of Environmental Justice populations, identifying adverse effects that may be disproportionately high and adverse, evaluating benefits, and achieving meaningful public engagement in the decision-making process. The RLE Project incorporated the guiding principles of the circular through the following analytical and outreach steps:

- Demographic Analysis and Initial Community Outreach - Socioeconomic data from the 2010 Census and the American Community Survey were used to describe the population in the project area. Income, ethnicity, employment, age, housing characteristics, and English proficiency were used in conjunction with field observations and stakeholder interviews to help identify the presence of Environmental Justice populations. Results of the data analysis are provided in Section 4, and the LEP analysis is presented in Appendix A. The results show that the entire project area consists of predominantly minority populations, with some concentrations of low-income groups. Pockets of Spanish-speaking populations were also identified, indicating the need for outreach in both English and Spanish languages.

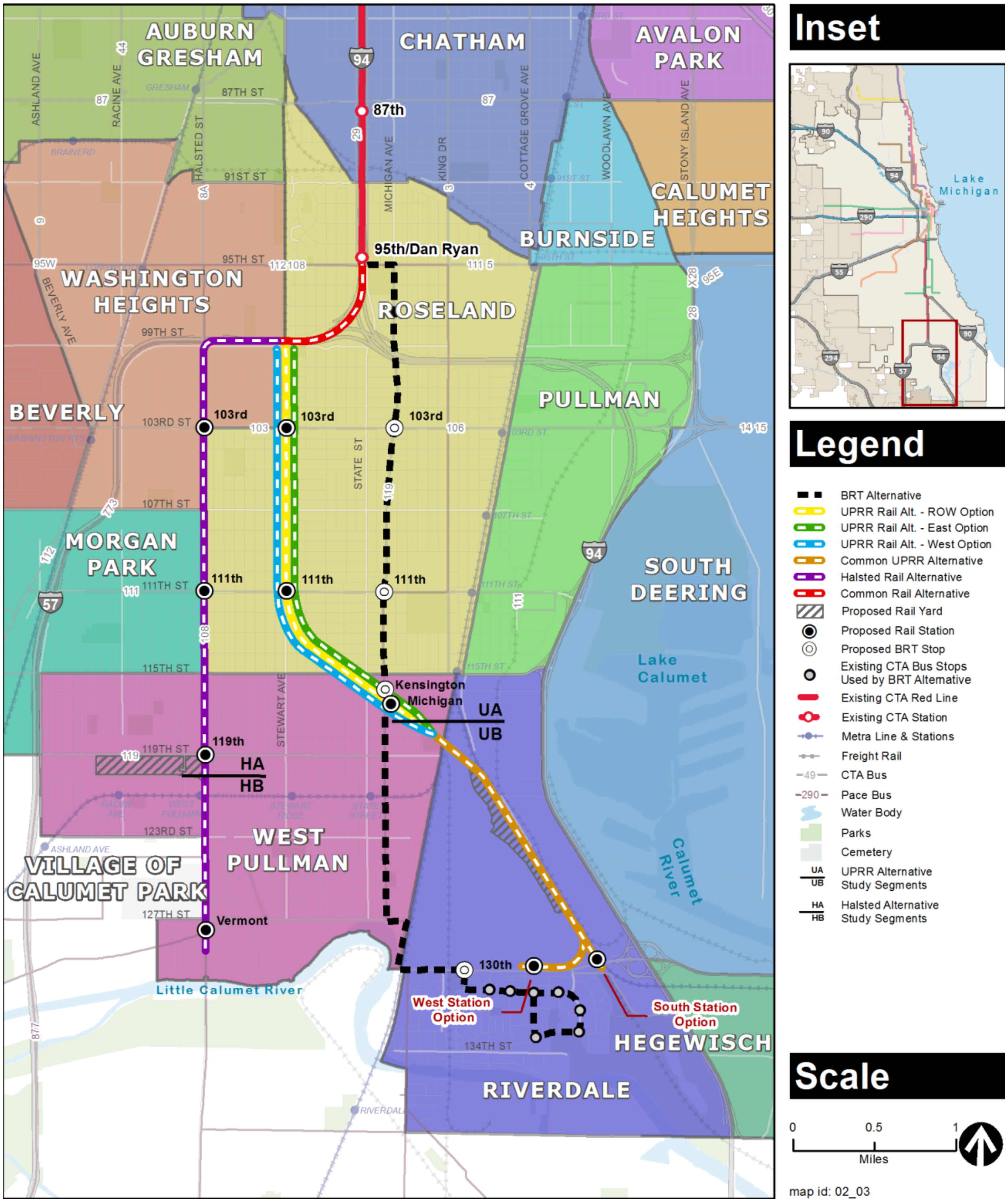
- Environmental Analysis to Identify Adverse Impacts and Benefits - All of the benefits and impacts of the projects would accrue to the same minority and low-income populations. As such, the RLE Project, as a community-initiated project intended to spur mobility and economic development in minority and low-income communities, would not have the potential for disproportionately high and adverse effects. The Environmental Justice-specific environmental analysis focused on identifying all adverse impacts and mitigations of the alternatives because they would all affect Environmental Justice populations. Benefits that offset the potential impacts were also identified and included in the analysis. Identification of additional mitigations specifically for Environmental Justice purposes would not be necessary for the RLE Project, because none of the effects would be disproportionately high and adverse. No additional mitigation measures—beyond those identified in the other RLE technical memoranda—would be needed to meet Environmental Justice requirements. Section 5 presents the results of the environmental analysis.

- Engagement with Environmental Justice Populations in the Public Outreach and Decision-Making Process - The stakeholder interview process and CTA's ongoing community relations efforts helped identify effective outreach methods. Traditional outreach methods such as public meetings and comment periods were augmented by non-traditional outreach. Non-traditional activities included website postings, presentations at standing meetings of local community groups, e-mail and direct mail newsletters, and one-on-one meetings with elected officials and community group leaders. Section 7 presents the results of the outreach process.

- Incorporation of Input from Environmental Justice Populations into the NEPA Process: - *To be filled in after outreach is completed.*

Section 4
Affected Environment

This section describes the low-income, minority, and LEP populations in the project area, which constitute the Environmental Justice populations for the purposes of this technical analysis. Elderly and disabled populations are also identified per state guidance. Demographic statistics were gathered at the most detailed level available from the U.S. Census Bureau for race, ethnicity, income, and age and were analyzed at the census block group level to define the Environmental Justice areas. Within the project area, all of the block groups were identified as Environmental Justice areas based on minority statues. Concentrations of block groups in the Roseland and Riverdale community areas were identified as Environmental Justice areas based on low-income as well as minority status. The Environmental Justice populations discussed in this report were identified through a combination of year 2010 U.S. Census data, American Community Survey data, public outreach, and field reconnaissance. Adverse impacts would be likely to occur within a ¼-mile radius of the project infrastructure, whereas beneficial impacts would accrue to a larger area of approximately ½ mile or more around the station locations. The area within ½ mile of station locations and within ¼ mile of the alternative alignments comprises the API for the Environmental Justice analysis. Census data is reported at the block group level. Based on field observation and research, these boundaries do not artificially dilute or inflate the affected minority population and/or low-income population findings, and allow for differentiation of impacts around the yard and shop locations versus those around the alternative alignments. The affected communities and concentrations of resources in the project area are shown in Figure 4-1 and Figure 4-2, respectively. The character of each community is described in greater detail in the *Neighborhood and Community Impacts Technical Memorandum*.


AUBURN GRESHAM
CHATHAM
AVALON PARK
CALUMET HEIGHTS
BURNSIDE
WASHINGTON HEIGHTS
ROSELAND
PULLMAN
BEVERLY
MORGAN PARK
SOUTH DEERING
WEST PULLMAN
VILLAGE OF CALUMET PARK
HEGEWISCH
RIVERDALE
87th
95th/Dan Ryan
103rd
103rd
103rd
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87TH ST
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115TH ST
119TH ST
123RD ST
127TH ST
134TH ST
ASHLAND AVE
RACINE AVE
HALSTED ST
BEVERLY AVE
MICHIGAN AVE
KING DR
COTTAGE GROVE AVE
WOODLAWN AVE
STONY ISLAND AVE
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Metra Line & Stations
Freight Rail
49 CTA Bus
290 Pace Bus
Water Body
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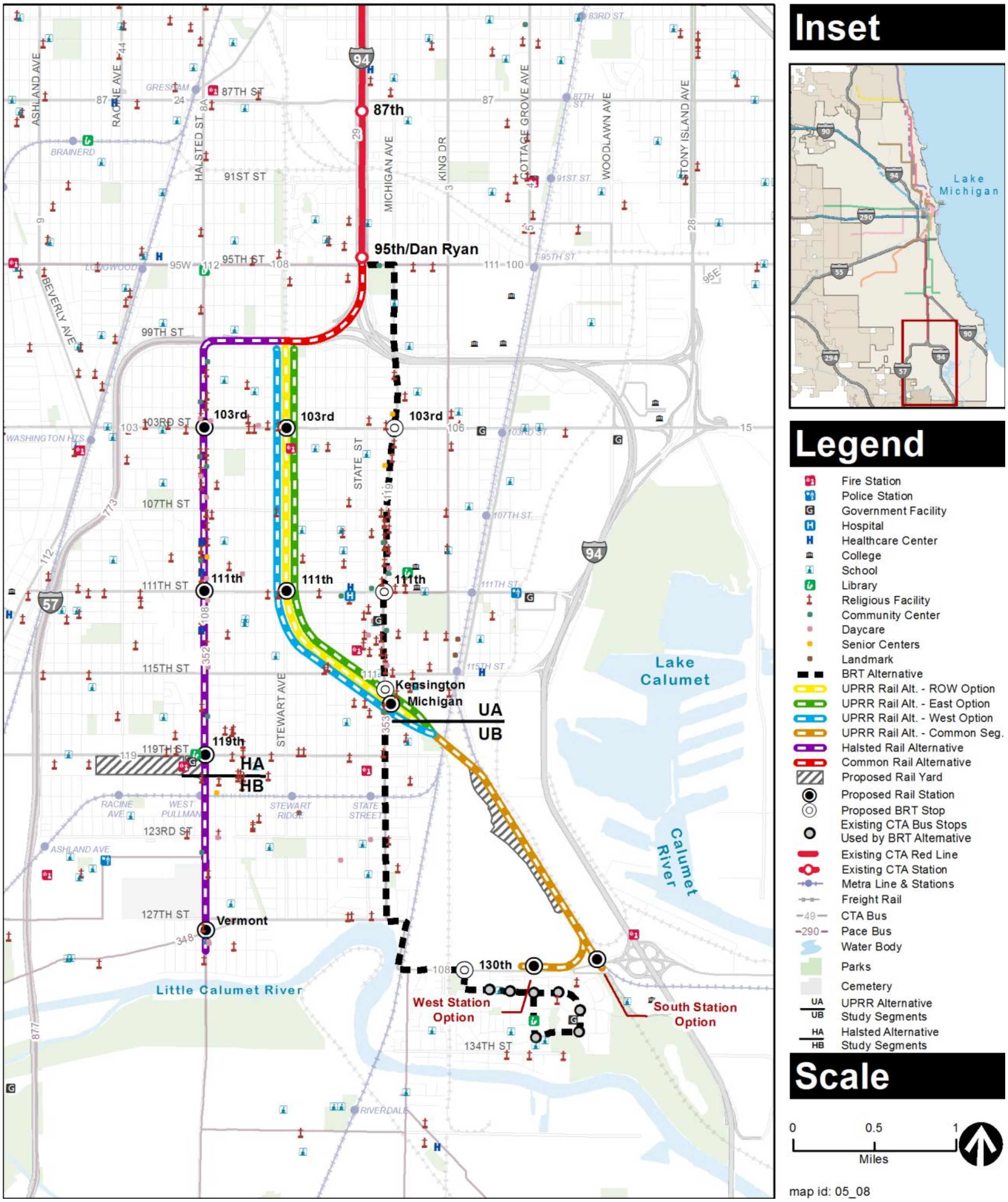
Figure 4-1: Community Areas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GRESHAM
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WASHINGTON HTS
WEST PULLMAN
STEWART RIDGE
STATE STREET
RIVERDALE
Inset
Lake Michigan
Legend
Fire Station
Police Station
Government Facility
Hospital
Healthcare Center
College
School
Library
Religious Facility
Community Center
Daycare
Senior Centers
Landmark
BRT Alternative
UPRR Rail Alt. - ROW Option
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
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Metra Line & Stations
Freight Rail
CTA Bus
Pace Bus
Water Body
Parks
Cemetery
UPRR Alternative Study Segments
Halsted Alternative Study Segments
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Figure 4-2: Concentrations of Community Resources

Key community resources include parks, schools, libraries, police facilities, fire department facilities, community centers, religious institutions, hospitals, and other places that serve as neighborhood focal points and contribute to community character and identity. The *Neighborhood and Community Impacts Technical Memorandum* provides additional detail on specific resources within ¼ mile of the proposed alignments.

4.1 Minority Groups

Minority persons include the following, as defined by the May 2012 USDOT Order 5610.2 and referenced in the August 2012 FTA Circular 4703.1:

- Black (a person having origins in any of the black racial groups of Africa).
- Hispanic (a person of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race).
- Asian American (a person having origins in any of the original peoples of the Far East, Southeast Asia, the Indian subcontinent, or the Pacific Islands).
- American Indian and Alaskan Native (a person having origins in any of the original people of the Americas and who maintains cultural identification through tribal affiliation or community recognition).

This analysis defines a minority population as a population that meets one or both of the following descriptions:

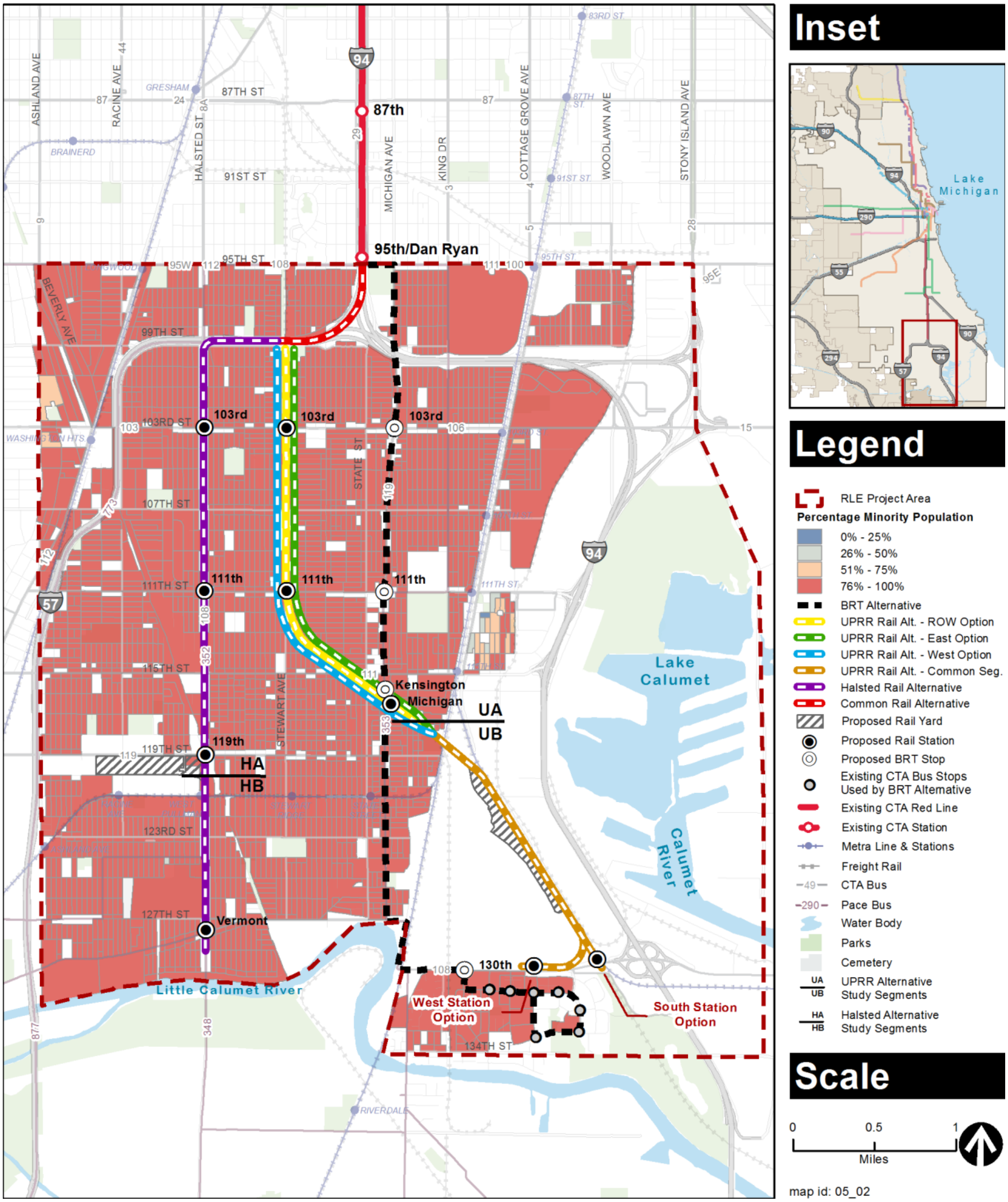
- Any readily identifiable group of persons and/or a community who live in geographic proximity, and if circumstances warrant, geographically dispersed/transient persons (such as migrant workers or Native Americans), who experience common conditions of exposure or impact.
- A group consisting of persons classified by the U.S. Census Bureau as minority, including those persons of two or more races.

As shown in Table 4-1, the 2010 U.S. Census was used to identify minority populations in the project area as a whole and the specific affected communities in the API. Most of the populated portions of the project area contain predominantly minority populations; the project area population consists of 97.9 percent minority persons. In the API, the communities with the highest percentage of minority persons are Roseland and Riverdale, followed closely by Washington Heights, West Pullman, and Morgan Park. The community with the smallest percentage of minority persons in the API is Pullman, which still has a high minority percentage of 92.9 percent. Figure 4-3 identifies the percent minority populations in the project area at the census block level. The large blocks in the southeastern portion of the API have low populations.

Table 4-1: Percent of Population that is Minority

Area	Minority Populations
City of Chicago	68.3%
Project Area	97.9%
Affected Communities	
Washington Heights	99.4%
Roseland	99.5%
Morgan Park	99.0%
West Pullman	99.4%
Pullman	92.9%
Riverdale	99.5%
Village of Calumet Park	96.4%

Source: U.S. Census Bureau, 2010 Census, Summary File 1, Table P5-Hispanic or Latino Origin by Race, by Block.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MICHIGAN AVE
KING DR
COTTAGE GROVE AVE
WOODLAWN AVE
STONY ISLAND AVE
STATE ST
STEWART AVE
87TH ST
91ST ST
95TH ST
99TH ST
103RD ST
107TH ST
111TH ST
115TH ST
119TH ST
123RD ST
127TH ST
134TH ST
BEVERLY AVE
GRESHAM
BRAINERD
RIVERDALE
Inset
Lake Michigan
Legend
RLE Project Area
Percentage Minority Population
0% - 25%
26% - 50%
51% - 75%
76% - 100%
BRT Alternative
UPRR Rail Alt. - ROW Option
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
UPRR Rail Alt. - Common Seg.
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Common Rail Alternative
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Freight Rail
CTA Bus
Pace Bus
Water Body
Parks
Cemetery
UPRR Alternative Study Segments
Halsted Alternative Study Segments
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map id: 05_02

Figure 4-3: Minority Populations - Percentage

Source: U.S. Census Bureau, 2010 Census, Summary File 1, Table P5 - Hispanic or Latino Origin by Race, by Block

The racial composition of the project area is shown in Table 4-2. All communities in the project area have a majority Black or African American population, ranging from just above 89 percent in the Village of Calumet Park to approximately 97 percent in Roseland and Washington Heights. After Black or African American, the second largest ethnicity in the API is Hispanic at 4 percent. Of the communities in the API, Pullman has the highest percentage of Hispanic persons at 7.8 percent, followed by the Village of Calumet Park at 6.2 percent and West Pullman at 5.1 percent. Pullman also has the highest percentage of white persons at 7.1 percent, followed by the Village of Calumet Park at 3.6 percent.

Table 4-2: Racial Composition within the Area of Potential Impact as a Whole

Area	White Alone	Black or African-American Alone	American Indian/ Native Alaskan Alone	Asian Alone	Native Hawaiian and other Pacific Islander Alone	Some other Race Alone	Multiracial	Hispanic not Alone
City of Chicago	31.7%	32.4%	0.0%	5.4%	0.0%	0.0%	1.3%	28.9%
Project Area	2.1%	92.7%	0.2%	0.1%	0.0%	0.1%	1.0%	4.0%
Affected Communities								
Washington Heights	0.6%	96.9%	0.2%	0.0%	0.0%	0.1%	0.9%	1.3%
Roseland	0.5%	97.3%	0.2%	0.1%	0.0%	0.1%	0.9%	1.0%
Morgan Park	1.0%	96.3%	0.0%	0.3%	0.1%	0.1%	1.0%	1.2%
West Pullman	0.6%	93.1%	0.2%	0.0%	0.0%	0.0%	1.0%	5.1%
Pullman	7.1%	83.6%	0.1%	0.1%	0.0%	0.1%	1.2%	7.8%
Riverdale	0.5%	96.4%	0.1%	0.0%	0.0%	0.1%	0.8%	2.0%
Village of Calumet Park	3.6%	89.1%	0.1%	0.3%	0.0%	0.1%	0.6%	6.2%

Source: U.S. Census Bureau, 2010 Census, Summary File 1, Table P5 - Hispanic or Latino Origin by Race, by Block.
Note: Hispanic population includes persons who identify as white or some other race, or combination of races.

4.2 Low-Income Groups

The low-income classification applies to persons whose median household income is at or below the U.S. Department of Health and Human Services poverty guidelines (USDOT Order 5610.2(a), May 2012). Median household income data in the 2006–2010 American Community Survey is reported in 2010 dollars. In order to compare the 2012 poverty guidelines with data in 2010 dollars, the 2012 guidelines were adjusted to 2010 dollars using the Consumer Price Index Inflation Calculator used by the U.S. Department of Labor, Bureau of Labor Statistics (Table 4-3).

Table 4-3: U.S. Department of Health and Human Services 2012 Poverty Guideline

Persons in Household	2012 Poverty Guideline	Adjusted Poverty Guideline (2010 dollars)
1	$11,170	$10,586
2	$15,130	$14,339
3	$19,090	$18,092
4	$23,050	$21,845
5	$27,010	$25,598
6	$30,970	$29,351
7	$34,930	$33,104
8	$38,890	$36,857

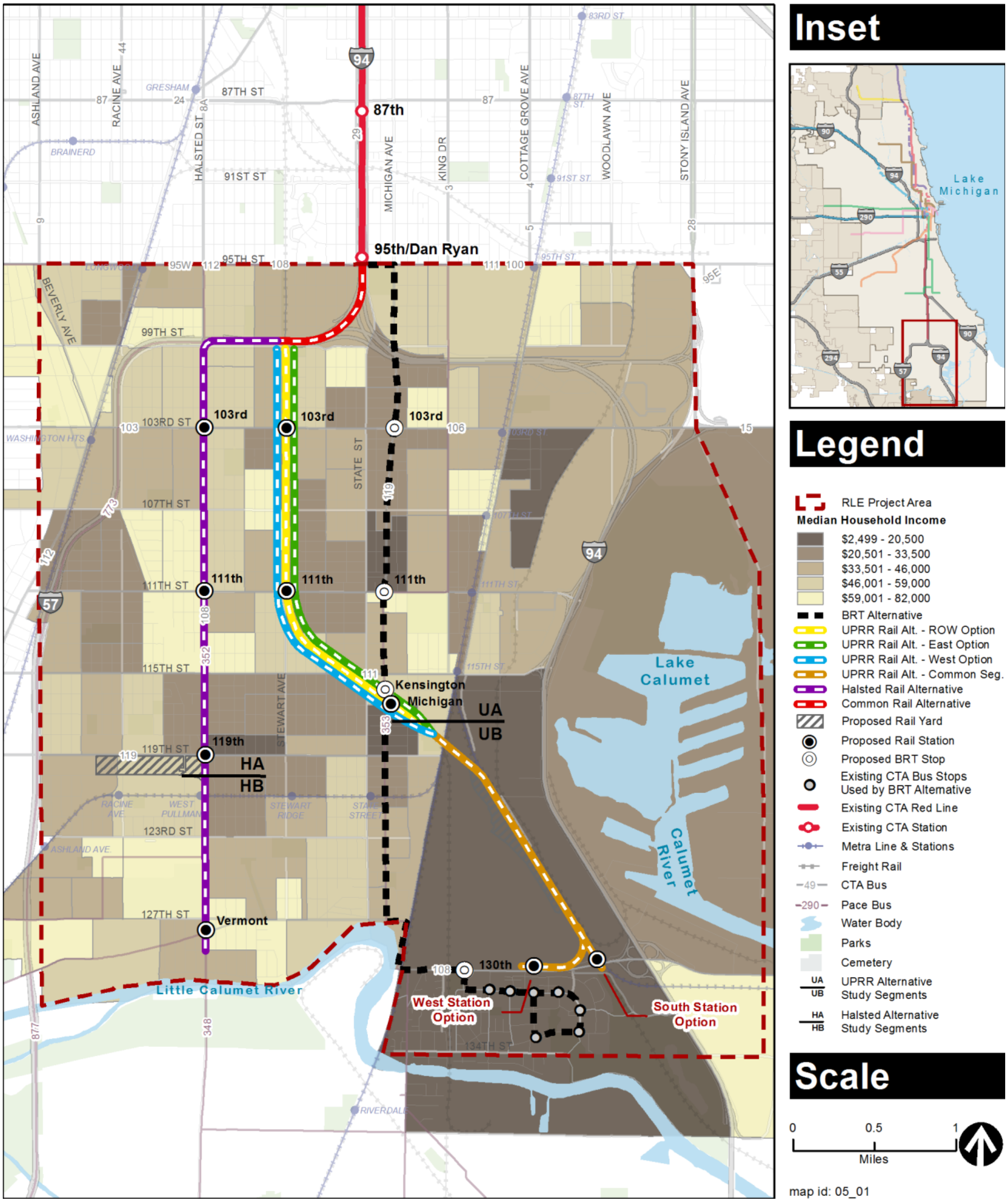
Source: U.S. Department of Health and Human Services, 2012 http://aspe.hhs.gov/poverty/12poverty.shtml
United States Department of Labor, Bureau of Labor Statistics, 2012
http://www.bls.gov/data/inflation_calculator.htm

According to the 2006–2010 American Community Survey, the median household income in the project area was $41,710, which is less than the median household income ($46,877) for the City of Chicago (2006–2010 American Community Survey 5-Year Estimates). As shown in Table 4-4, the community with the lowest median household income in the API is Riverdale with $11,181, which is substantially lower than the median household income for the project area and the City of Chicago. The community with the highest median household income is the Village of Calumet ($53,785). Figure 4-4 shows median household income in the project area. The large blocks in the southeastern portion of the API have low populations.

Table 4-4: Median Household Income in Affected Communities

Area	Median Household Income
City of Chicago	$46,877
Project Area	$41,710
Affected Communities	
Washington Heights	$48,659
Roseland	$41,922
Morgan Park	$42,977
West Pullman	$38,963
Pullman	$43,647
Riverdale	$11,181
Village of Calumet Park	$53,785

Source: U.S. Census Bureau, 2006-2010 American Community Survey, Table B19001 - Household Income in the Past 12 Months (in 2010 Inflation-Adjusted Dollars), by Block Group


Inset
Lake Michigan
Legend
RLE Project Area
Median Household Income
$2,499 - 20,500
$20,501 - 33,500
$33,501 - 46,000
$46,001 - 59,000
$59,001 - 82,000
BRT Alternative
UPRR Rail Alt. - ROW Option
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
UPRR Rail Alt. - Common Seg.
Halsted Rail Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Proposed BRT Stop
Existing CTA Bus Stops Used by BRT Alternative
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
49 CTA Bus
290 Pace Bus
Water Body
Parks
Cemetery
UA UB UPRR Alternative Study Segments
HA HB Halsted Alternative Study Segments
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95th/Dan Ryan
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Kensington
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119th
Vermont
130th
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West Station Option
South Station Option
Lake Calumet
Calumet River
Little Calumet River
ASHLAND AVE
RACINE AVE
HALSTED ST
MICHIGAN AVE
KING DR
COTTAGE GROVE AVE
WOODLAWN AVE
STONY ISLAND AVE
STATE ST
STEWART AVE
BEVERLY AVE
87TH ST
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103RD ST
107TH ST
111TH ST
115TH ST
119TH ST
123RD ST
127TH ST
134TH ST
GRESHAM
BRAINERD
WASHINGTON HTS
RIVERDALE
94
57

Figure 4-4: Median Household Income

Source: U.S. Census Bureau, 2006-2010 American Community Survey, Table B19001 - Household Income in the Past 12 Months (in 2010 Inflation-Adjusted Dollars), by Block Group

According to the U.S. Department of Health and Human Services 2012 Poverty Guidelines (see Table 3-1), only ten block groups in the project area have populations with median household income below poverty guidelines. As shown in Table 4-5, seven of the ten block groups are in Riverdale, two are in West Pullman, and one is in Roseland. Two block groups in Riverdale have a very low median household income of $2,499, and both of them are in the Altgeld Gardens public housing complex. Figure 4-5 shows the low-income population at the census block group level. The shaded area in the southeastern portion of the API has minimal population between 115th and 130th Streets. The majority of the population in this shaded area is south of 130th Street. Table 4-5 shows that the seven low-income block groups in Riverdale make up the entire community area, illustrating the substantial presence of poverty in Riverdale. Low-income status was determined by comparing the median household income of each block group and the average household size for its census tract with the poverty guidelines shown in Table 4-3. Low income is also a transit dependency factor because residents with limited income may not be able to afford access to an automobile.

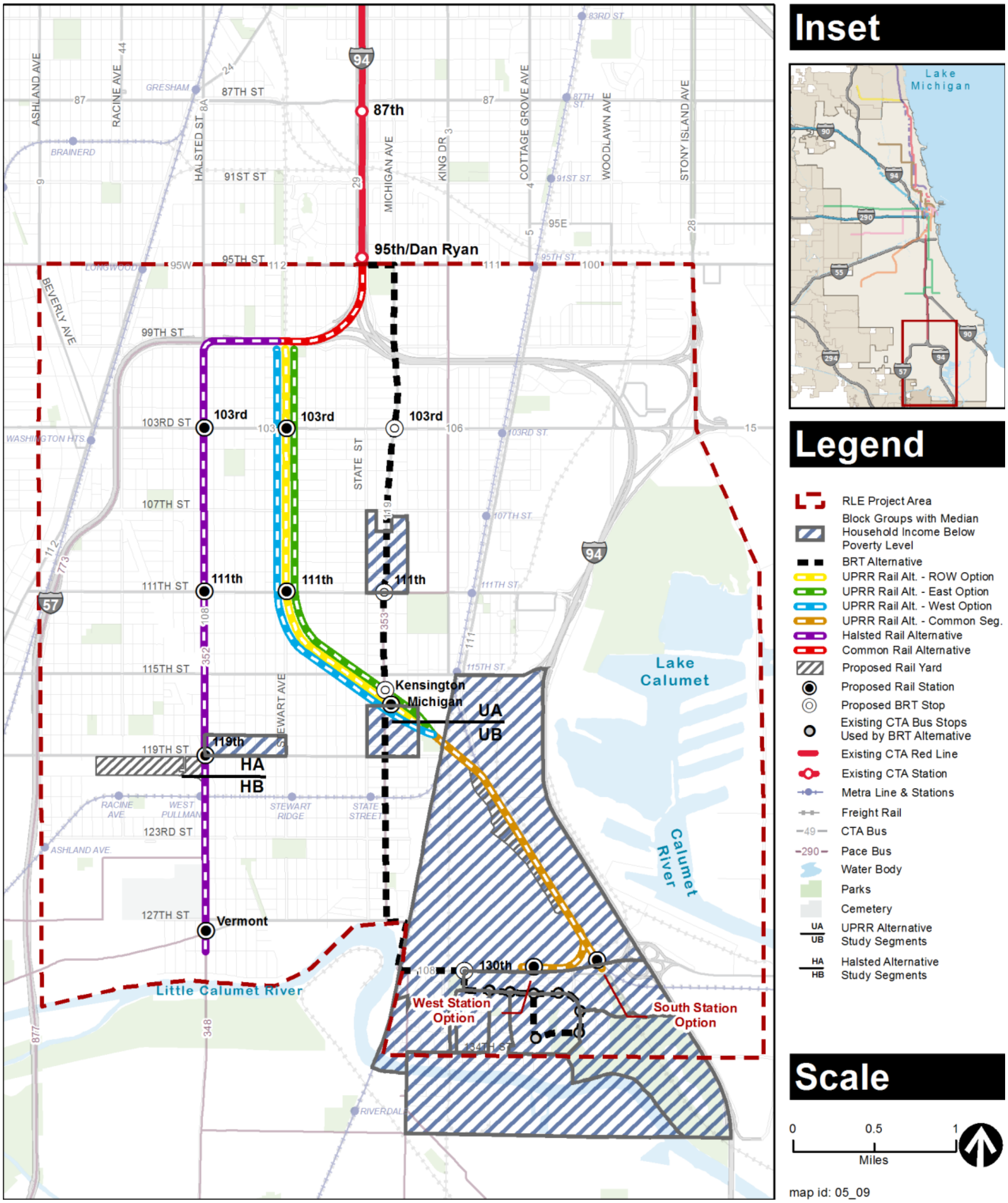
Table 4-5: Block Groups with Populations Below Poverty Level in the Area of Potential Impact

Community Area	Median Household Income	Average Household Size	Block Group
Riverdale	$11,859	2.68	Block Group 1, Census Tract 5401.01
Riverdale	$17,788	2.68	Block Group 2, Census Tract 5401.01
Riverdale	$2,499	2.68	Block Group 3, Census Tract 5401.01
Riverdale	$2,499	2.68	Block Group 4, Census Tract 5401.01
Riverdale	$14,390	3.07	Block Group 1, Census Tract 5401.02
Riverdale	$13,713	3.07	Block Group 2, Census Tract 5401.02
Riverdale	$15,521	3.07	Block Group 3, Census Tract 5401.02
West Pullman	$14,522	2.68	Block Group 2, Census Tract 5301
West Pullman	$18,375	3.71	Block Group 3, Census Tract 5302
Roseland	$17,656	2.42	Block Group 2, Census Tract 4909.01

Household income poverty guidelines adjusted to 2010 dollars and average household size.

Sources: U.S. Census Bureau, 2006-2010 American Community Survey, Table B19001 - Household Income in the Past 12 Months (In 2010 Inflation-Adjusted Dollars), by Block Group;

U.S. Census Bureau, 2006-2010 American Community Survey, Table B25010 - Average Household Size of Occupied Housing Units by Tenure, by Census Tract.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South Station Option
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Calumet River
Little Calumet River
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COTTAGE GROVE AVE
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STONY ISLAND AVE
STATE ST
STEWART AVE
BEVERLY AVE
GRESHAM
BRAINERD
LONGWOOD
WASHINGTON HTS
RACINE AVE
WEST PULLMAN
STEWART RIDGE
STATE STREET
RIVERDALE
Inset
Lake Michigan
Legend
RLE Project Area
Block Groups with Median Household Income Below Poverty Level
BRT Alternative
UPRR Rail Alt. - ROW Option
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
UPRR Rail Alt. - Common Seg.
Halsted Rail Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Proposed BRT Stop
Existing CTA Bus Stops Used by BRT Alternative
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
CTA Bus
Pace Bus
Water Body
Parks
Cemetery
UPRR Alternative Study Segments
Halsted Alternative Study Segments
Scale
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1
Miles
map id: 05_09

Figure 4-5: Low-Income Block Groups

Sources: U.S. Census Bureau, 2006-2010 American Community Survey, Table B19001 - Household Income in the Past 12 Months (In 2010 Inflation-Adjusted Dollars), by Block Group;

U.S. Census Bureau, 2006-2010 American Community Survey, Table B25010 - Average Household Size of Occupied Housing Units by Tenure, by Census Tract.

As shown in Table 4-6, the unemployment rate for the entire project area is 19.0 percent. The unemployment rates for the individual community areas range from a low of 17.0 percent in Morgan Park to a high of 34.8 percent in Riverdale. Unemployment in the project area is generally higher than in the rest of the City of Chicago, which has an overall unemployment rate of 12.0 percent.

Table 4-6: Unemployment Rates in Affected Communities

Area	Unemployment Rate
City of Chicago	12.0%
Project Area	19.0%
Affected Communities	
Washington Heights	18.8%
Roseland	21.2%
Morgan Park	17.0%
West Pullman	18.5%
Pullman	21.4%
Riverdale	34.8%
Village of Calumet Park	17.4%

Source: U.S. Census Bureau, U.S. 2010 Census, 2011 ACS 5-year estimates, Table S2301, All Census Tracts within Cook County
Note: Data not available at block group level

According to the real estate website zillow.com, the median Chicago home price in October 2012 was approximately $161,100, and the median rent was $1,501. Home and rental prices in the project area neighborhoods are 20 to 50 percent lower than the citywide median (Table 4-7). Compared to Chicago as a whole, the project area has lower median household income and home prices, and higher unemployment in most RLE community areas (see Tables 4-4, 4-6, and 4-7).

Table 4-7: October 2012 Average Home and Rental Prices in Affected Communities

Area	Average Home Price	Average Monthly Rental Price
City of Chicago	$161,100	$1,501
Affected Communities		
Washington Heights	$112,300	$1,257
Roseland	$85,200	$1,232
Morgan Park	$113,500	$1,277
West Pullman	$92,700	$1,228
Pullman	$91,500	$1,213
Riverdale	N/A	N/A
Village of Calumet Park	$75,200	$1,219

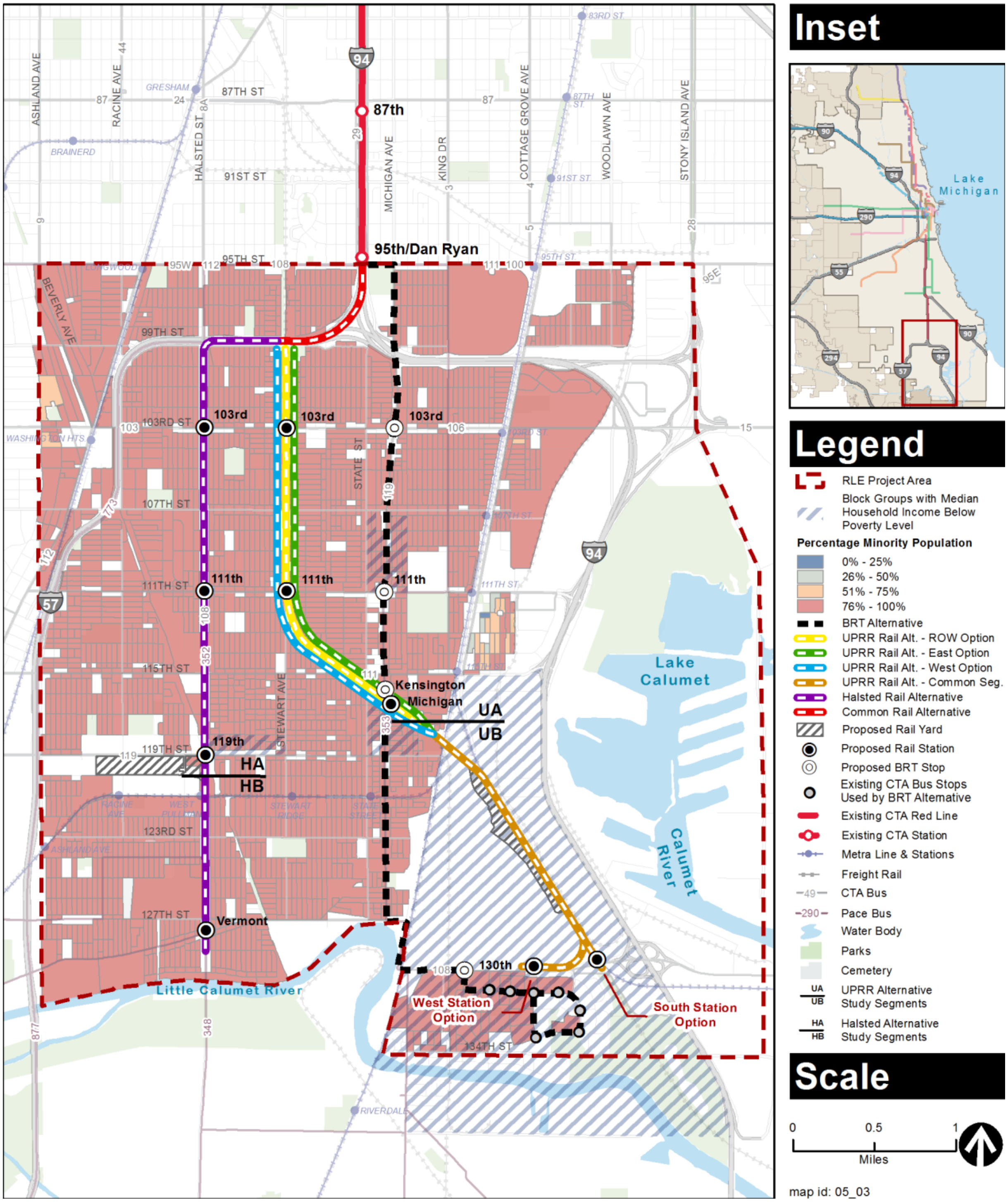
Sources: zillow.com, Chicago Home Prices and Home Values in Illinois (October 2012b); zillow.com, Calumet Park Home Prices and Home Values in Illinois (October 2012a)

According to CMAP's *Red Line South Extension Livability Report* (CMAP and Developing Communities Project 2012), there is a shortage of jobs within the project area and a lack of transit access to jobs in neighboring communities. Distance to employment centers is greater in the project area than in many other parts of the city, so lack of convenient access to rail transit is a major barrier to employment. While there is CTA bus, Pace bus, and Metra rail service, there are limited options for connecting to the CTA rail system that ends at the 95th Street Terminal. There are also no stations with park & ride facilities along the Dan Ryan branch of the Red Line, which precludes residents from accessing the stations by car unless dropped off (kiss & ride). Residents often choose to use bus service instead of Metra service because Metra has a higher fare structure and more limited schedule than the bus system; however, only a limited number of buses provide 24-hour service. The *Red Line South Extension Livability Report* characterizes commute times in the project area as long and requiring multiple transfers. Traffic congestion, largely due to trip delays from at-grade freight railroad crossings, also impedes access to employment outside the project area.

4.3 Minority and Low-Income Groups

Figure 4-6 shows areas where low-income and minority populations overlap. These areas include the block groups that make up Altgeld Gardens, Golden Gate, and Eden Green in Riverdale; the majority of Block Group 2, Census Tract 5301 in West Pullman (east of Halsted Street and west of Stewart Avenue between 118th Street and 119th Street); the majority of Block Group 3, Census Tract 5302 in West Pullman (east of State Street and west of Prairie Avenue between 116th Street and 119th Street); and the majority of Block Group 2, Census Tract 4909.01 in Roseland (east of State Street and west of Michigan Avenue between 107th Street and 111th Street). The large blocks in the southeastern portion of the API have low populations.

As discussed above, there are limited transportation options for reaching to the Red Line's 95th Street Terminal from many project area communities. Nearly all of the identified low-income and minority areas are geographically and/or physically isolated from the 95th Street Terminal. The closest population (Block Group 2, Census Tract 4909.01 in Roseland) is 1.5 miles from the 95th Street Terminal; however, pedestrian access is impaired by the Interstate 94/Interstate 57 (I-94/I-57) interchange. Altgeld Gardens is approximately 6 miles from the 95th Street Terminal. In addition, bus service is limited and inconsistent. Only a limited number of buses provide 24-hour service. A section of CTA bus route #34 operates part-time between the Altgeld Gardens housing complex and the 95th Street Terminal.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95th/Dan Ryan
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West Station Option
South Station Option
Lake Calumet
Calumet River
Little Calumet River
ASHLAND AVE
RACINE AVE
HALSTED ST
MICHIGAN AVE
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BRAINERD
WASHINGTON HTS
RIVERDALE
94
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Inset
Lake Michigan
90
94
290
55
294
57
Legend
RLE Project Area
Block Groups with Median Household Income Below Poverty Level
Percentage Minority Population
0% - 25%
26% - 50%
51% - 75%
76% - 100%
BRT Alternative
UPRR Rail Alt. - ROW Option
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
UPRR Rail Alt. - Common Seg.
Halsted Rail Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Proposed BRT Stop
Existing CTA Bus Stops Used by BRT Alternative
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Existing CTA Station
Metra Line & Stations
Freight Rail
49 CTA Bus
290 Pace Bus
Water Body
Parks
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UA UB UPRR Alternative Study Segments
HA HB Halsted Alternative Study Segments
Scale
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Figure 4-6: Low-Income and Minority Populations - Percentage

Sources: U.S. Census Bureau, 2006-2010 American Community Survey, Table B19001 - Household Income in the Past 12 Months (In 2010 Inflation-Adjusted Dollars), by Block Group;
U.S. Census Bureau, 2006-2010 American Community Survey, Table B25010 - Average Household Size of Occupied Housing Units by Tenure, by Census Tract;

U.S. Census Bureau, 2010 Census, Summary File 1, Table P5 - Hispanic or Latino Origin by Race, by Block.

4.4 Limited English Proficiency Groups

Limited English Proficiency (LEP) persons are defined as individuals for whom English is not their primary language and who have a limited ability to read, write, speak, or understand English. It includes people who reported to the U.S. Census Bureau that they speak English less than very well, not well, or not at all (Circular 4702.1B, October 2012).

The U.S. Census Bureau collects information about the ability of people to speak English and about those living in a linguistically isolated household. A linguistically isolated household is defined as one in which no member, 14 years of age or older, speaks only English or speaks a non-English language and speaks English very well. This definition means that all members of a linguistically isolated household 14 years old and over have at least some difficulty with English (U.S. Census Bureau).

According to the 2010 U.S. Census, English is the most spoken language at home in the project area, with 92.6 percent of households speaking English only. As shown in Table 4-8, Spanish is the second most spoken language at home, with over 6 percent of households speaking Spanish. The largest Spanish-speaking populations live in the Village of Calumet Park, where 15.5 percent of households speak Spanish. Pullman and West Pullman also have a large percentage of Spanish-speaking households with 10.4 percent and 6.7 percent of homes speaking Spanish, respectively. Specific census tracts in the West Pullman and South Deering neighborhoods and the Village of Calumet Park reported that over 30 percent of households speak Spanish.

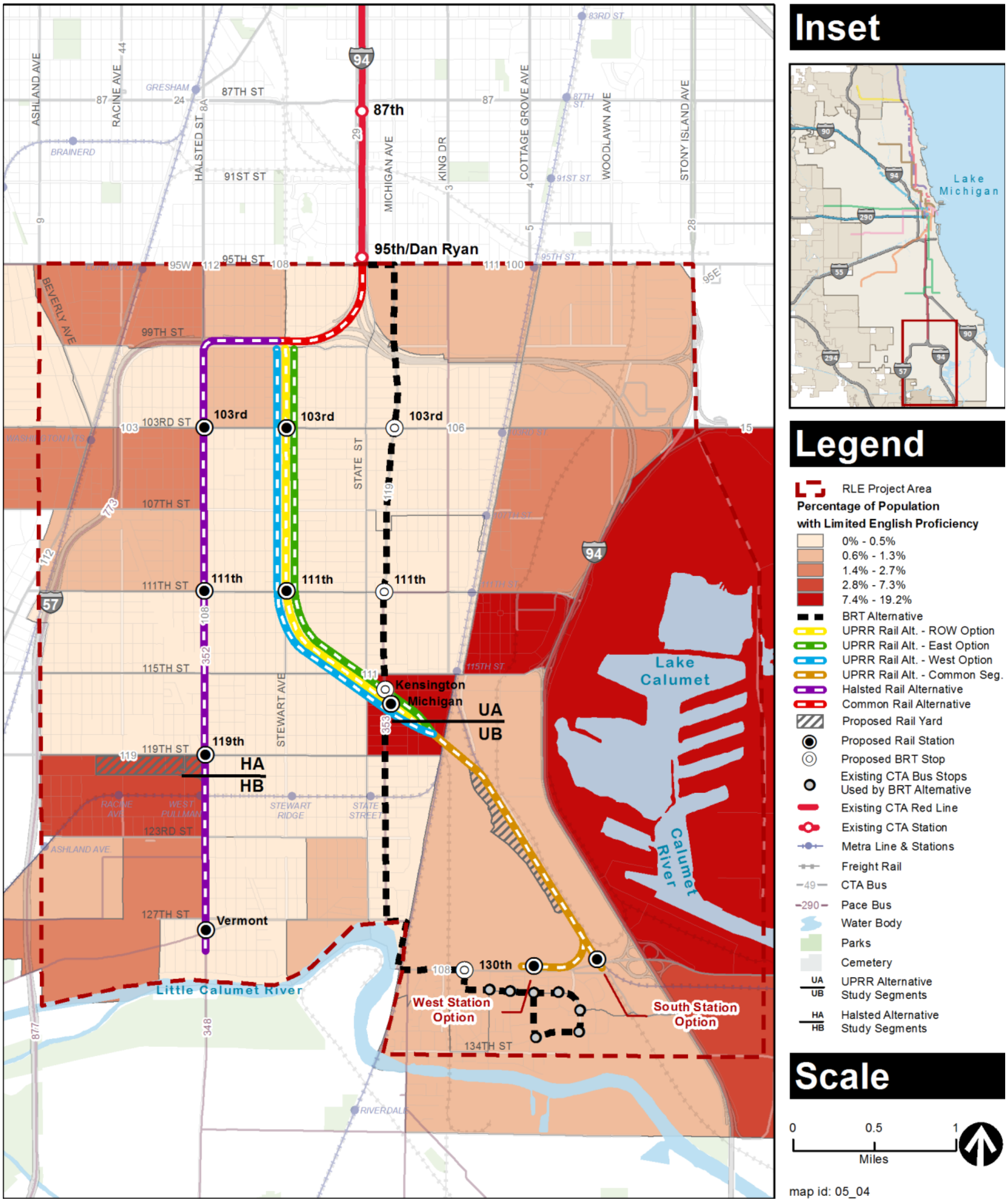
A LEP assessment (Appendix A) was conducted for the project area in 2009. While the LEP assessment was based on year 2000 Census data, its findings remain consistent with current field observations and 2010 Census data. According to the LEP study, 1 percent of households within census tracts in the project area are linguistically isolated, meaning that all household members over the age of 14 had at least some difficulty speaking English.

Table 4-8: Languages Spoken at Home within the Affected Communities

Area	English Only	Spanish or Spanish Creole	Other Indo-European languages	Asian and Pacific Island languages	Other Languages
City of Chicago	64.7%	24.2%	6.4%	3.5%	1.3%
Project Area	92.6%	6.3%	0.6%	0.1%	0.4%
Affected Communities					
Washington Heights	97.0%	1.8%	0.2%	0%	1.1%
Roseland	98.5%	0.9%	0.5%	0.1%	0.1%
Morgan Park	95.7%	2.3%	1.5%	0.5%	0.1%
West Pullman	92.8%	6.7%	0.2%	0%	0.4%
Pullman	89.4%	10.4%	0.3%	0%	0%
Riverdale	96.2%	2.9%	0%	0.5%	0.5%
Village of Calumet Park	82.7%	15.5%	1.3%	0.1%	0.5%

Source: U.S. Census Bureau, 2010 American Community Survey 5-year estimates, Table S160, by Census Tract
Note: Data not available at block group level at the time of analysis

Figure 4-7 identifies the percentage of LEP populations in the project area. As illustrated in Figure 4-7, the highest percentages of LEP groups in the project area are in West Pullman, east of State Street between 115th Street and 119th Street; in Pullman east of the Metra Electric District line between 111th Street and 119th Street; and near Calumet Lake. The primary area where LEP populations are located is in West Pullman. The large tracts in the southeastern portion of the API have low populations. Due to the existence of LEP populations and because Spanish is the most frequently spoken non-English language in the project area, public outreach includes Spanish translation. The full LEP Assessment is attached as Appendix A.


Inset
Lake Michigan
Legend
RLE Project Area
Percentage of Population with Limited English Proficiency
0% - 0.5%
0.6% - 1.3%
1.4% - 2.7%
2.8% - 7.3%
7.4% - 19.2%
BRT Alternative
UPRR Rail Alt. - ROW Option
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
UPRR Rail Alt. - Common Seg.
Halsted Rail Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Proposed BRT Stop
Existing CTA Bus Stops Used by BRT Alternative
Existing CTA Red Line
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Parks
Cemetery
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123RD ST
127TH ST
134TH ST
GRESHAM
BRAINERD
WASHINGTON HTS
STEWART RIDGE
STATE STREET
WEST PULLMAN
RIVERDALE
94
57

Figure 4-7: Population that has Limited English Proficiency - Percentage

Source: U.S. Census Bureau, 2010 American Community Survey 5-year estimates, Table S1601, by Census Tract

Note: Data not available at block group level at the time of analysis

4.5 Elderly Groups

According to the 2010 U.S. Census, 13.7 percent of the population in the project area is elderly, defined as 65 years and older. As shown in Table 4-9, the areas with the highest percentages of elderly persons are Washington Heights (16.7 percent) and Morgan Park (16.3 percent). The lowest percentage of elderly persons is in Riverdale (2.8 percent). Figure 4-8 shows the percentages of persons that are elderly by block group. The block with the highest percentage of elderly persons is in West Pullman. The large blocks in the southeastern portion of the API have low populations. Elderly groups can have higher levels of transit dependency than the rest of the population because some elderly people are no longer able to operate automobiles.

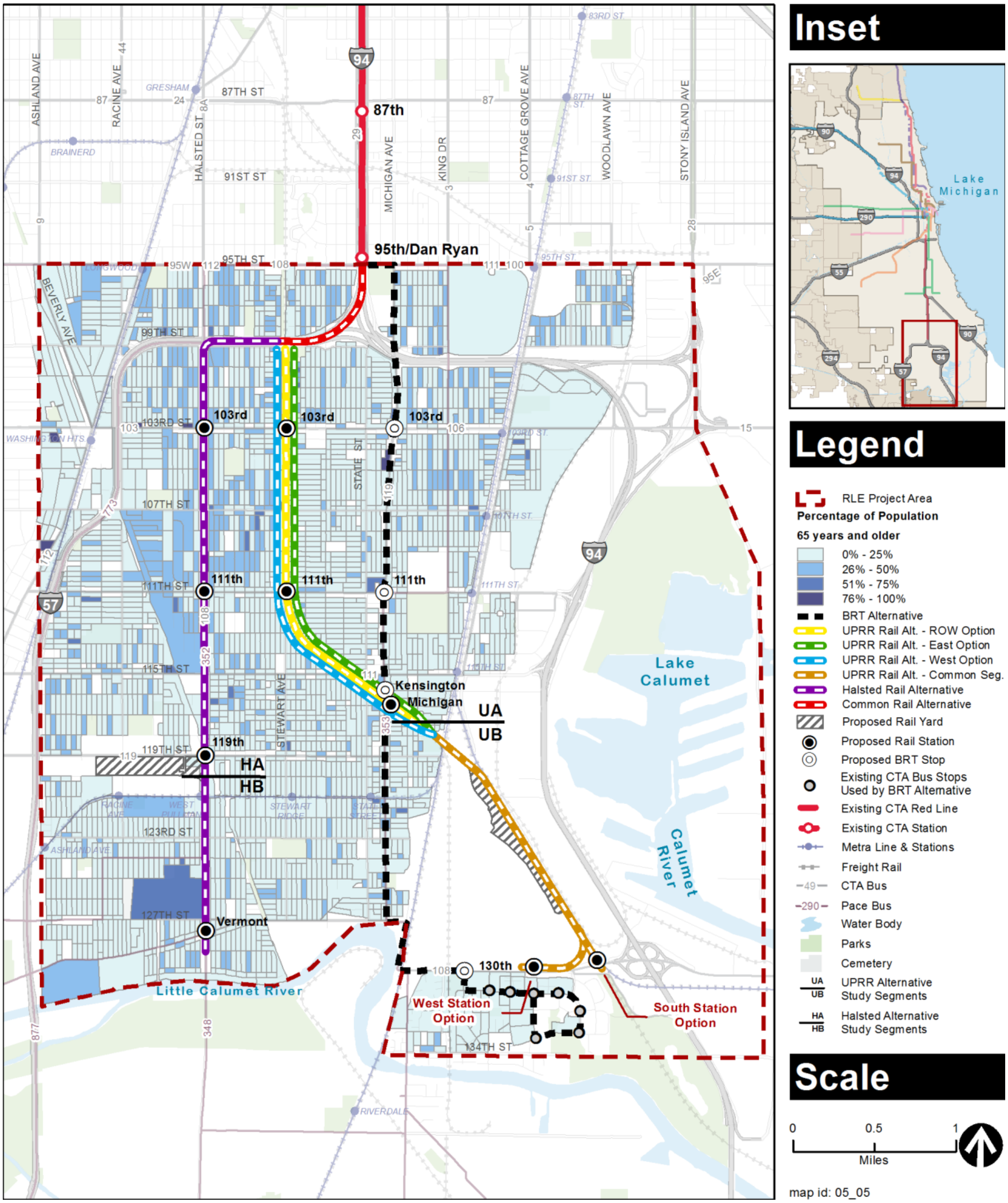
There are several senior housing facilities throughout the project area. A representative list includes the following:

- Senior Suites of Washington Heights, 848 W. 103rd Street in Roseland
- Victory Centre of Roseland, 10450 S. Michigan Avenue in Roseland
- Emil Jones Jr. Senior Housing, 19 E. 110th Place in Roseland
- Roseland Manor, 11717 S. State Street in West Pullman
- Bridge of Hope Inc., 11909 S. State Street in West Pullman
- Calumet Township Senior Citizen, 12633 S. Ashland Avenue in the Village of Calumet Park
- Golden Community Living Center, 12730 Aberdeen Street in the Village of Calumet Park

Table 4-9: Percentage of Population 65 Years and Older in Affected Communities

Area	Percentage of Population 65 Years and Older
City of Chicago	10.3%
Project Area	13.7%
Affected Communities	
Washington Heights	16.7%
Roseland	15.4%
Morgan Park	16.3%
West Pullman	13.0%
Pullman	11.2%
Riverdale	2.8%
Village of Calumet Park	11.4%

Source: U.S. Census Bureau, 2010 Census, Table P12 - Age by Sex, by Block


Inset
Lake Michigan
Legend
RLE Project Area
Percentage of Population
65 years and older
0% - 25%
26% - 50%
51% - 75%
76% - 100%
BRT Alternative
UPRR Rail Alt. - ROW Option
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
UPRR Rail Alt. - Common Seg.
Halsted Rail Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Proposed BRT Stop
Existing CTA Bus Stops Used by BRT Alternative
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
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Pace Bus
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COTTAGE GROVE AVE
WOODLAWN AVE
STONY ISLAND AVE
STATE ST
STEWART AVE
BEVERLY AVE
GRESHAM
BRAINERD
WASHINGTON HTS
RIVERDALE
94
57

Figure 4-8: Elderly Populations - Percentage

Source: U.S. Census Bureau, 2010 Census, Table P12 - Age by Sex, by Block

4.6 People with Disabilities

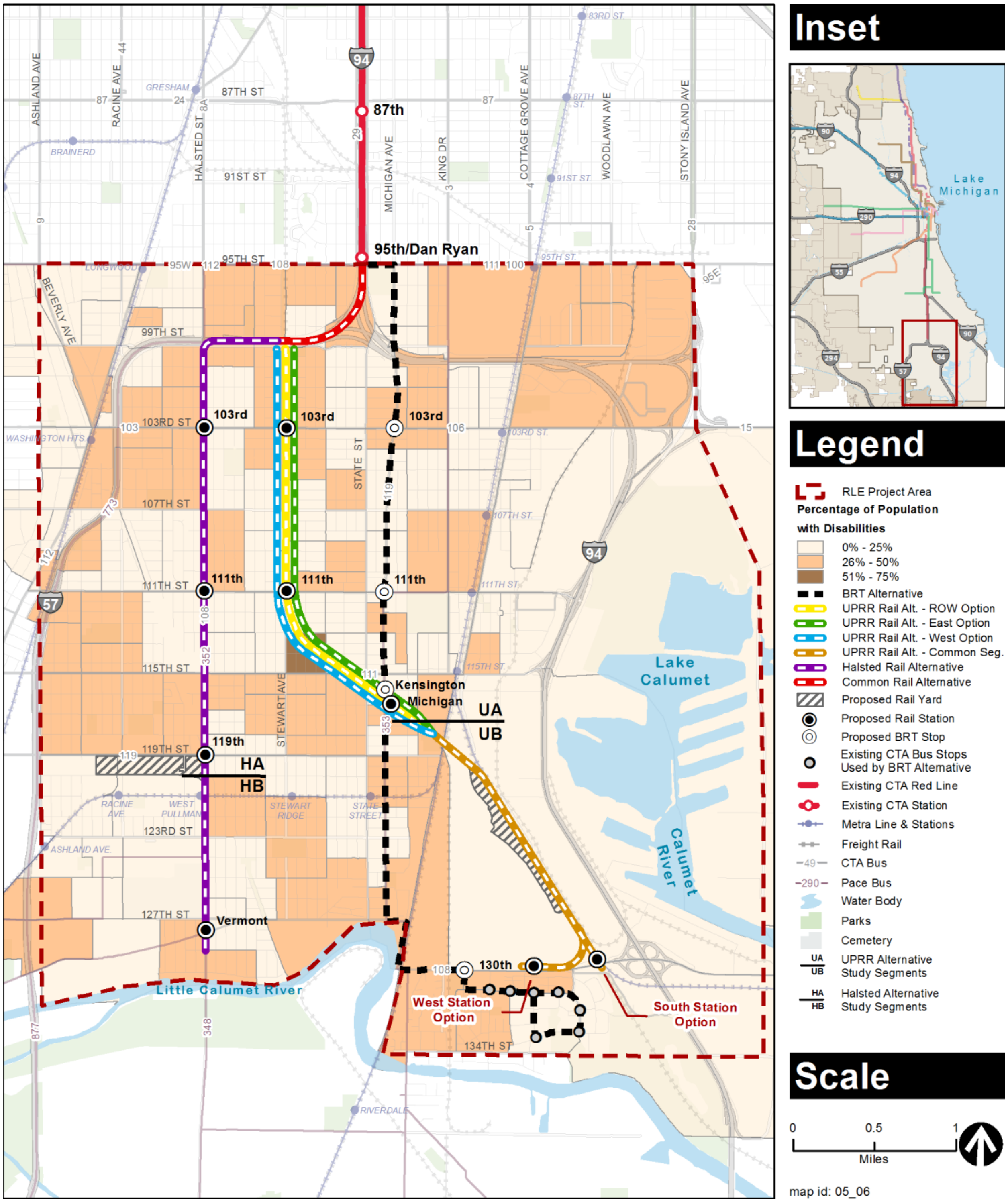
According to the 2000 U.S. Census (data was not yet available for the 2010 U.S. Census), nearly one quarter of the population in the API (24.8 percent) is disabled. As shown in Table 4-10, 10.8 percent of the disabled population is male, and 14.0 percent is female.

Table 4-10: Percentage of Population with Disabilities within the Area of Potential Impact as a Whole

Area	Percentage of Population with Disabilities	Percent of Disabled Population that is Male	Percent of Disabled Population that is Female
Area of Potential Impact	24.8%	10.8%	14.0%

Source: U.S. Census Bureau, 2000 Census, Table P21- Disability Status by Sex, by Block Group

Limited transit access in the project area is of particular concern for seniors and people with disabilities. In addition, a lack of park & ride facilities precludes residents from accessing transit stops by car unless dropped off (kiss & ride), requiring seniors and people with disabilities to depend on others for transportation. People with disabilities can frequently be transit dependent if they have a disability that prevents them from driving. Figure 4-9 shows the percentages of populations with disabilities. The large blocks in the southeastern portion of the API have low populations.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STONY ISLAND AVE
STATE ST
STEWART AVE
BEVERLY AVE
Inset
Lake Michigan
Legend
RLE Project Area
Percentage of Population with Disabilities
0% - 25%
26% - 50%
51% - 75%
BRT Alternative
UPRR Rail Alt. - ROW Option
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
UPRR Rail Alt. - Common Seg.
Halsted Rail Alternative
Common Rail Alternative
Proposed Rail Yard
Proposed Rail Station
Proposed BRT Stop
Existing CTA Bus Stops Used by BRT Alternative
Existing CTA Red Line
Existing CTA Station
Metra Line & Stations
Freight Rail
CTA Bus
Pace Bus
Water Body
Parks
Cemetery
UPRR Alternative Study Segments
Halsted Alternative Study Segments
Scale
0
0.5
1
Miles
map id: 05_06

Figure 4-9: Population with Disabilities - Percentage

Source: U.S. Census Bureau, 2000 Census, Table P21 - Disability Status by Sex, by Block Group

4.7 Identification of Environmental Justice Populations

The project area was evaluated in the above subsections using census tract and block group level data. Based on field observation and research, these geographic boundaries do not artificially dilute or inflate the affected minority population and/or low-income population findings. Every community area in the project area comprises mostly minority populations, ranging from Pullman with an 83.6 percent minority population to Roseland with a 97.3 percent minority population. The project area has an average median household income ($41,710 annually) that is lower than the citywide average ($46,877 annually) and has substantial pockets of low-income populations in community areas such as Riverdale ($11,181 annually). As such, the analyzed demographic data indicates that the entire project area and API are made up solely of Environmental Justice communities.

Section 5
Impacts and Mitigations

The August 2012 FTA Circular 4703.1 *Environmental Justice Policy Guidance for Federal Transit Administration* and subsequent FTA webinar presentations indicate that projects in areas consisting entirely of Environmental Justice populations do not necessarily preclude disproportionately high and adverse effect findings; however, the following characteristics are true of the project area and the alternatives:

- The entire project area is predominantly minority populations. No community in the project area contains less than 92.9 percent minority populations, and the project area as a whole contains 97.9 percent minority populations.
- All of the impacts and benefits of the alternatives would accrue to the same minority populations, and few project benefits would occur outside the project area.
- The purpose of this community-initiated project includes connecting disadvantaged communities to Chicago's major employment and activity centers in an effort to spur economic development and improve livability. The project would help remediate the geographic isolation and lack of employment and development opportunities that currently exist in the project area.

Given these findings, none of the alternatives would result in disproportionately high and adverse effects on Environmental Justice populations. Some alternatives would still have adverse impacts on Environmental Justice communities; however, these impacts would not be disproportionate. In some instances, impacts would remain adverse despite implementation of mitigation measures. To provide a complete picture of how the RLE Project would affect Environmental Justice populations, this section summarizes the adverse impacts that would occur in Environmental Justice communities and the associated candidate mitigation measures. The mitigation measures identified in this section are preliminary, and are intended for public review. They will be finalized during the Final EIS process, after the NEPA Preferred Alternative has been designated.

5.1 No Build Alternative

The No Build Alternative would not involve any new construction for the RLE Project. There would be no major service improvements or new transportation infrastructure beyond projects that are listed in CMAP's *GO TO 2040* plan and Transportation Improvement Program. The transit network within the project area would remain largely the same as it is now.

5.1.1 Permanent Impacts and Mitigations - No Build Alternative

The No Build Alternative would not have any adverse impacts within Environmental Justice communities. The communities in the project area are, however, currently underserved by the CTA rail system compared to many other parts of Chicago, and the No Build Alternative would lack the beneficial increase in economic development and livability that the build alternatives would provide.

5.1.2 Construction Impacts and Mitigations - No Build Alternative

No construction would occur as part of the No Build Alternative.

5.2 Bus Rapid Transit Alternative

In addition to the provisions of the No Build Alternative, the BRT Alternative would provide enhanced bus service and stops from the existing 95th Street Terminal southward along Michigan Avenue to Altgeld Gardens in the Riverdale community. Surface parking lots would be added at the 103rd Street and 111th Street stops, and three-story parking garages would be added at the Kensington Avenue and 130th Street stops to accommodate park & ride customers.

5.2.1 Permanent Impacts and Mitigations - Bus Rapid Transit Alternative

5.2.1.1 Topics with No Adverse Permanent Impacts

- Air Quality and Climate Change: No adverse air quality impacts from carbon monoxide (CO), greenhouse gases (GHG), particulate matter smaller than 2.5 micrometers ($PM_{2.5}$), or mobile source air toxics (MSAT) emissions are anticipated.

- Hazardous Materials: Operating BRT service and park & ride facilities would not change the existing types of hazardous materials used, stored, or transported. There would be no adverse permanent impacts related to hazardous materials.

- Historic and Cultural Resources: Three resources near the BRT alignment have been identified as eligible for listing on the National Register of Historic Places (NRHP). No adverse effects on historic resources are anticipated to occur.

- Land Use and Economic Development: Although BRT can spur economic development, the BRT Alternative would lack exclusive ROW, station facilities, and other rail-like features that are typically needed to generate development interests. With just compensation per the Uniform Relocation and Real Property Assistance Act of 1970 (Uniform Act), the impact of displacements on surrounding commercial and residential land uses not be adverse, and associated economic development impacts would be beneficial. There would be no adverse permanent impacts on land use or on economic development.

- Neighborhood and Community Impacts: The BRT Alternative would be an overall beneficial change in the character and cohesion of the affected communities, but not to the same extent as the rail alternatives. The BRT Alternative would slightly shorten travel times for people who access community resources and activity centers near the stop locations by transit. This benefit would be minor because the BRT Alternative would lack rail-like features to further enhance bus service and attract new riders. No adverse impacts on community resources would occur. Impacts would be beneficial overall; no mitigation measures would be required.

- Energy: Based on the assumptions for vehicles needed for operation of the BRT Alternative, the amount of fuel consumed would not affect local or regional fuel availability, or require the development of new energy sources. No adverse impacts would occur.

- Geology and Soils: Operation of the BRT Alternative is not expected to affect the geology or soil resources in the project area.

- Cumulative: No adverse cumulative impacts are expected.

5.2.1.2 Topics with No Adverse Permanent Impacts After Mitigation

- Biological Resources: Impacts on vegetation at the 130th Street park & ride would not be adverse with compliance with local tree protection ordinances, including tree replacement. No other biological resources impacts would be adverse.

- Displacements: The BRT Alternative would require fewer permanent acquisitions and displacements than the other build alternatives. Three buildings would be displaced, of which one would be a single-family residence and one would be a commercial property. With just compensation and relocation assistance per the Uniform Act, the permanent impacts would not be adverse.

- Safety and Security: There would be no adverse permanent impacts resulting from the BRT Alternative with the inclusion of mitigation measures to enhance safety, which would include installation of new traffic signals and/or other pedestrian crossing treatments, and location of stops in Altgeld Gardens in visible and well-populated areas.

- Visual and Aesthetic Conditions: The implementation of the BRT Alternative overall would have minimal impact on the visual and aesthetic conditions in the project area other than the addition of a three-story parking garage at the Kensington Avenue stop and at the 130th Street stop. Mitigation to reduce visual impacts would include shielding exterior lighting and providing special consideration for lighting placement adjacent to sensitive areas such as residential communities; providing landscaping and/or visual screening at park & ride locations where possible; designing the parking structure to match the character of the surrounding fabric; and using urban design techniques to reduce massing. The permanent visual impacts would not be adverse after mitigation.

- Water Resources: There would be no adverse permanent impacts on groundwater. There would be no adverse permanent impacts on stormwater drainage or water quality after mitigation. Stormwater drainage mitigation measures would include incorporating new stormwater management structures and establishing an erosion control plan, particularly at the locations of garages and park & ride lots. Water quality mitigation measures would include installation of properly designed and maintained biological oil and grease removal systems; proper storage of hazardous materials, development and maintenance of an effective monitoring and cleanup program for spills and leaks of hazardous materials, proper storage and maintenance of equipment, installation of detention basins to remove suspended solids, and regular monitoring of runoff water quality. Following compensatory mitigation, either through creation, restoration, enhancement, or preservation of wetlands, there would be no adverse permanent impacts on wetlands.

- Transportation: There would be seven intersections during the weekday AM peak and 10 intersections during the PM peak where the BRT Alternative would increase traffic congestion beyond applicable thresholds. Mitigation measures such as optimization of signal cycles, removal of segments of on-street parking near BRT stops, and restriping through lanes and turn lanes would render traffic conditions no worse than under the No Build Alternative. The alternative would not affect freight transportation or bicycle facilities. Adequate park & ride capacity would be provided at BRT stops to prevent spillover parking into surrounding neighborhoods. Beneficial pedestrian impacts would result from upgrading intersections with ADA-compliant curb ramps, replacing deteriorated sections of sidewalk, and improving bus shelters.

5.2.1.3 Topics with Adverse Permanent Impacts After Mitigation

- Noise and Vibration: Residential receptors, as well as 35 community facilities that are noise-sensitive receptors, would be subject to moderate noise impacts after mitigation. These noise impacts would not be mitigated, because noise barriers are not feasible along the route. Buses already operate along the proposed route, and the BRT Alternative would not substantially change the character of the existing noise. No disproportionate impacts due to noise and vibration are anticipated.

- Parklands and Community Facilities: The BRT Alternative would not pass through any parklands and would not displace any community facilities. There are 35 community facilities that are noise-sensitive receptors that would have moderate noise impacts after mitigation. These community facilities are already situated along major streets with buses under existing conditions. By improving travel time, BRT Alternative operation would improve access to parklands and community facilities within walking distance (½ mile) of the BRT stop locations when compared to the No Build Alternative. No disproportionate impacts on parklands and community facilities are anticipated.

5.2.2 Construction Impacts and Mitigations - Bus Rapid Transit Alternative

5.2.2.1 Topics with No Adverse Construction Impacts

- Displacements: Because all construction activities would occur on land acquired for the park & ride facilities, there would be no temporary displacement or relocation construction impacts.

- Historic and Cultural Resources: There would be no adverse construction effects on historic resources.

- Land Use and Economic Development: There would be no adverse construction impacts on land use or economic development.

- Noise and Vibration: Construction noise is expected to consist of parking structure construction and minor activity at the bus stop areas. Construction noise levels are not expected to exceed the FTA construction noise limits.

- Energy: Construction of the BRT Alternative is not expected to require an amount of fuel and other energy resources that would affect local or regional fuel and energy sources, or require the development of new sources.

- Geology and Soils: The BRT Alternative would require few changes to surficial geology and soils, which have been affected by prior development in all parts of the alignment. Excavation would be primarily needed at park & ride facilities, and is not expected to have adverse impacts.

- Cumulative: No adverse cumulative impacts are expected to occur. There are not currently any foreseeable nearby projects of sufficient magnitude to cause impacts that would be under construction at the same time as RLE. Should such a project occur, CTA would coordinate construction activities to minimize impacts.

5.2.2.2 Topics with No Adverse Construction Impacts After Mitigation

- Air Quality and Climate Change: Compared with the other build alternatives, construction activities for the BRT Alternative would be noticeably fewer and smaller in scale. Proper traffic management during the construction period would mitigate any potential adverse impacts. A Dust Control Plan would address in detail how dust would be controlled at all times at the construction sites, the staging areas, and the access and egress routes. With appropriate mitigation measures in place, no adverse air quality impacts due to construction activities are anticipated.

- Biological Resources: Compliance with local tree protection ordinances would result in less than adverse impacts on the human environment from tree removal. Mitigation measures may be required to reduce potential impacts on wildlife habitat, including preparing a detailed tree inventory, timing tree removal to occur outside the migratory bird nesting season, performing biological surveys if construction must occur during the nesting season, and replanting trees as required by applicable local codes and ordinances. There would be no adverse construction impacts on biological resources after mitigation.

- Hazardous Materials: Construction of the BRT Alternative would result in generation of a large quantity of soil that could contain contaminated materials requiring off-site disposal. Contaminated materials potentially encountered could include heavy metals, asbestos-containing material, and lead-based paint. Mitigation measures would include compliance with federal, state, and local laws and regulations regarding hazardous materials; focused site assessments for areas where earthmoving activities would occur; asbestos, lead-based paint, and hazardous material surveys of building or structures; a Contaminated Material Management Plan; Health and Safety Plans for construction activities; Spill Prevention, Control, and Countermeasure Plans; and Construction Stormwater Pollution Prevention

Plans. There would be no adverse construction impacts relating to hazardous materials after mitigation.

- Neighborhood and Community Impacts: Impacts on the West Pullman community would not be adverse provided that best management practices are employed and nighttime construction near residences is limited to the extent practicable. Construction-related community impacts would be minimal for the 130th Street park & ride given the site's isolated location north of 130th Street. Construction of bus shelters, traffic signal control systems, and parking structures would be temporary, and could be scheduled so as not to conflict with community events. Construction impacts on community resources would not be adverse, and no mitigation measures would be required. Construction activities would not impede mobility to the extent that they would cause adverse impacts. The BRT Alternative would create temporary construction jobs, which could have a beneficial impact on community development; however, the employment increase would be greater for the rail alternatives. Impacts would not be adverse overall, and no mitigation measures would be required.

- Parklands and Community Facilities: Impacts on parklands and community facilities would include temporary air quality and noise impacts and temporary changes in access. Mitigation measures would include using construction best management practices, alerting park and community facility users of construction activities, providing safe and clearly marked detour routes, and designating alternate parking. There would be no adverse construction impacts on parklands or community facilities after mitigation.

- Safety and Security: The limited scope of work compared to other alternatives would minimize the risk of incidents resulting in fatalities, injuries, or criminal acts such as vandalism or theft on construction sites. To mitigate risks, contractors would be expected to develop a Construction Safety and Security Plan, perform job safety analysis, monitor safety and security activities, and comply with any other manuals and policies. The contractor would take prompt and decisive corrective action on safety deficiencies identified at the work site. Access for emergency services would not be restricted, and the impacts would not be adverse.

- Visual and Aesthetic Conditions: At locations where park & ride structures and lots would be created, impacts might include construction fencing, demolition of existing buildings or clearing of vacant lots, temporary street closures and related signage, or temporary lighting or entrances. The CTA would attempt to maintain as much existing vegetation as practical during construction, and minimize temporary construction impacts on the neighborhood with measures such as limiting light trespassing from night lighting. Best management practices and debris-free construction areas would mitigate temporary visual impacts from the construction sites. There would be no adverse construction impacts after mitigation.

- Water Resources: There would be no adverse construction impacts on water resources after mitigation. Stormwater drainage mitigation measures would include incorporating new stormwater management structures and establishing an erosion control plan, including for construction activities at the locations of garages and park & ride lots. Water quality mitigation measures would include installing properly designed and maintained biological oil and grease removal systems, proper storage of hazardous materials, development and maintenance of an effective monitoring and cleanup program for spills and leaks of hazardous materials, proper storage and maintenance of equipment, periodic removal of landscape and construction debris, installation of detention basins to remove suspended solids, and regular monitoring of runoff water quality. Following compensatory mitigation, either through creation, restoration, enhancement, or preservation of wetlands, there would be no adverse permanent impacts on wetlands.

- Transportation: Construction of parking structures, park & ride lots, and bus shelters could result in temporary intermittent disruption of traffic, existing transit service, movement of freight vehicles, on-street parking availability, and pedestrian and bicycle circulation. Temporary lane and sidewalk closures would occur with detours provided to maintain access. With adherence to established construction management guidelines for rerouting traffic and transit service, no adverse construction impacts would occur.

5.2.2.3 Topics with Adverse Construction Impacts After Mitigation

No adverse construction impacts would remain after mitigation.

5.3 Union Pacific Railroad Rail Alternative - Right-of-Way Option

The UPRR Rail Alternative ROW Option would involve an extension of the Red Line from its current terminus at the 95th Street Terminal southward to 130th Street in the vicinity of Altgeld Gardens via existing highway medians and railroad corridors. The three options for the UPRR Rail Alternative are analyzed in two geographic segments:

- Segment UA: from the 95th Street Terminal to the Michigan Avenue station area, including the communities of Roseland, Washington Heights, and West Pullman

- Segment UB: south of the Michigan Avenue station area, in the Riverdale community

New stations would be constructed at 103rd Street on the boundary between the Roseland and Washington Heights communities, at 111th Street in Roseland, at Michigan Avenue in West Pullman, and at 130th Street in Riverdale. All stations would have bus turnarounds and park & ride facilities. The park & ride facilities would be primarily surface parking lots, but multi-level parking structures would be constructed at the Michigan Avenue and 130th Street stations.

The Chicago Department of Transportation is preparing the Far South Railroad Relocation Feasibility Study (FSRRFS). The study examines a possible project to move the existing freight operations out of the UPRR corridor, leaving the corridor vacant. The CTA would implement the ROW Option only if this separate project occurs prior to RLE. If the relocation project does not occur, then the CTA would need to choose either the East Option or West Option in order to pursue the UPRR Rail Alternative. Of the three options under consideration, the ROW Option would have the fewest adverse impacts. The East and West Options would have greater impacts due to the UPRR's requirement that the RLE tracks be located at least 50 feet from the active freight tracks, which would push the CTA elevated structure into the residential communities adjacent to the UPRR ROW.

5.3.1 Permanent Impacts and Mitigations - Union Pacific Railroad Rail Alternative - Right-of-Way Option

5.3.1.1 Segment UA

5.3.1.1.1 Topics with No Adverse Permanent Impacts

- Air Quality and Climate Change: No adverse air quality impacts from CO, GHG, $PM_{2.5}$, or MSAT emissions are anticipated.

- Historic and Cultural Resources: Six resources in Segment UA have been identified as eligible for listing on the NRHP. No adverse effects on historic resources are anticipated to occur.

- Noise and Vibration: Because of the reduction in noise level due to replacing the freight operations with the rail transit operations, noise mitigation would not be required. By using continuously welded rail, vibration levels would be below the FTA impact criterion, requiring no mitigation measures. No adverse noise or vibration impacts are anticipated.

- Energy: Energy consumption would increase due to the addition of new tracks and stations to the rail system; however, this increase in energy would not be adverse, as it is not expected to affect local or regional energy availability or require the development of new sources. Some beneficial reduction in fuel consumption would occur if the RLE Project were to cause motorists to begin using transit for some trips.

- Geology and Soils: Operation of the ROW Option would not cause adverse changes to geology or soil resources.

- Cumulative: No cumulative adverse impacts are expected.

5.3.1.1.2 Topics with No Adverse Permanent Impacts After Mitigation

- Biological Resources: Of the UPRR Rail Alternative options, the ROW Option would have the least impact on existing vegetation. With compliance with local tree protection ordinances, potential impacts would not be adverse.

- Displacements: The ROW Option would have the fewest displacement impacts of the UPRR Rail Alternative options. In Segment UA, 20 buildings would need to be displaced, of which 2 would be commercial properties, 1 would be a multi-family residential property, and 15 would be single-family homes. With just compensation and relocation assistance per the Uniform Act, the permanent impacts would not be adverse.

- Hazardous Materials: Operation of ROW Option has the potential to result in the release of hazardous materials and/or petroleum products into the environment from accidental spills or from maintenance activities that require earthmoving in contaminated areas. Measures to avoid such occurrences would include adherence to applicable federal, state, and local regulations, as well as CTA's existing system-wide hazardous material usage, storage, and disposal plans and procedures. There would be no adverse permanent impacts related to hazardous materials after mitigation.

- Land Use and Economic Development: The travel time savings for all UPRR Rail Alternative Options would support existing land uses and economic development. The park & ride lots at the 103rd Street, 111th Street, and Michigan Avenue stations, the substation just north of Michigan Avenue station, and the parking garage at the Michigan Avenue station would be inconsistent with adjacent land uses. These land uses consist of primarily single-family residential neighborhoods, with occasional commercial and apartment buildings. Mitigations include zoning variances, screening, landscaping, lighting appropriate for adjacent land uses, and appropriate architectural design and massing. Property displacements would be mitigated through just compensation and relocation assistance as required by the Uniform Act. There would be no adverse permanent impacts on land use following proposed mitigation measures. The overall impact on local economic development would be beneficial.

- Neighborhood and Community Impacts: Adverse visual character impacts on the community surrounding Wendell Smith Park could be avoided if the area beneath the elevated structure remained open for park use and new trees were planted to shield views of the elevated structure from homes fronting the park. If the potential UPRR relocation project being studied in the FSRRFS is implemented, it would be possible to allow for more crossing locations along the former freight ROW to enhance the connection between communities on both sides of the tracks. The 103rd Street and 111th Street stations would create transit hubs and would help revive the neighborhood with pedestrian activity. At the Michigan Avenue station, despite the concentration of residential displacements, the overall impacts of the station would be beneficial, and would contribute to a potential new activity center that could enhance the connection between the communities. There would be no adverse permanent neighborhood and community impacts after mitigation. The ROW Option would substantially reduce travel times between neighborhoods in the project area, and would enhance their connection with major job and activity centers to the north. The new transit service and the subsequent increase in pedestrian traffic could attract new businesses to the area and support the growth and enhancement of these neighborhood retail and service nodes. The station would serve as a transit hub that brings additional commuters and visitors to the area, which could further boost economic development. The result would be an overall increase in community livability. The mobility and development impacts of the ROW Option would be beneficial.

- Parklands and Community Facilities: The ROW Option alignment would pass through Wendell Smith Park but would not displace any community facilities; this impact would largely leave the functional and recreational use of the park intact and impacts would not be adverse after mitigation. By improving travel time, operation of the ROW Option would improve access to parklands and community facilities within walking distance (½ mile) of the station locations. The parking garage at the Michigan Avenue station would provide space for retail and community facilities, which would result in a benefit to the community overall.

- Safety and Security: The impact of the ROW Option would not be adverse with mitigation. A large volume of pedestrians would be expected to cross the major streets near the stations without positive traffic control. This impact would be mitigated through the installation of traffic signals, median refuge islands, and/or other pedestrian crossing treatments as applicable, resulting in no adverse permanent impacts after mitigation. Impacts on security at parking facilities would be mitigated by implementing open design and would not be adverse after mitigation. New train stations would be unlikely to have much, if any, impact on neighborhood crime. Suggested mitigation measures would be security surveillance cameras and sidewalk lighting along commercial streets within approximately one block of train station entrances.

- Visual and Aesthetic Conditions: Views near Michigan Avenue station and park & ride would substantially change due to the addition of a multi-story garage, but would not be adverse impacts after mitigation. Mitigation to reduce visual impacts would include shielding exterior lighting and providing special consideration for lighting placement adjacent to sensitive areas such as residential communities; providing landscaping and/or visual screening at park & ride locations where possible; designing the parking structure to match the character of the surrounding fabric; and using urban design techniques to reduce massing.

- Water Resources: There would be no adverse permanent impacts on groundwater. There are no wetlands in Segment UA. Pervious area is anticipated to decrease in some areas; the decrease in pervious area could be mitigated by incorporating new stormwater management structures and establishing an erosion control plan. Major underground pipes and structures could be affected by the ROW Option; stormwater drainage and water structures would need to be designed to accommodate the pump station and other underground utilities. The rail service would replace automobile trips; there would be an associated reduction in runoff contaminants that collect on streets. For this reason, the ROW Option is anticipated to have a minor but positive water quality impact. Due to the predominance of impervious surfaces throughout the project area, minimal percolation to the underlying groundwater occurs in the API; therefore, any potential increases in contaminated surface water runoff would have no adverse impact on groundwater quality. There would be no adverse permanent impacts on stormwater after mitigation.

- Transportation: There would be four intersections in the AM peak and six intersections in the PM peak in Segment UA where the ROW Option would increase traffic congestion beyond applicable thresholds, largely due to cars accessing the park & ride facilities at stations. Mitigation measures such as optimization of signal cycles and removal of some on-street parking near stations would render traffic conditions no worse than under the No Build Alternative. The park & ride facilities may also draw some motorists away from nearby highways, thereby improving traffic flow for automobiles and freight trucks. It is assumed for the ROW Option that existing UPRR freight operations would be relocated away from the existing corridor as a separate project prior to RLE implementation. The ROW Option would therefore have no impact on freight rail operations. Existing bus routes would be adjusted to interface better with the RLE stations and service. New pedestrian and bicycle facilities would also be included near stations to provide safe access, which would improve transit connections. Transit access to the project area would substantially improve, particularly for low-income residents who do not have access to automobiles. The overall transportation impacts would be beneficial.

5.3.1.1.3 Topics with Adverse Permanent Impacts After Mitigation

No adverse impacts would remain after mitigation.

5.3.1.2 Segment UB

5.3.1.2.1 Topics with No Adverse Permanent Impacts

- Air Quality and Climate Change: No adverse air quality impacts from CO, GHG, $PM_{2.5}$, or MSAT emissions are anticipated.

- Historic and Cultural Resources: One resource in Segment UB has been identified as eligible for listing on the NRHP. No adverse effects on historic resources are anticipated to occur.

- Neighborhood and Community Impacts: No communities or neighborhoods exist in Segment UB north of 130th Street, because the area is industrial. As such, there would be no impacts north of 130th Street. Impacts from the South Station Option and West Station Option would be beneficial overall. The RLE would allow residents to easily access community resources in other neighborhoods, and perhaps serve as a focal point for the development of additional community resources in Riverdale. The UPRR Rail Alternative would substantially reduce travel times between the Washington Heights, Roseland, West Pullman, and Riverdale communities, and would enhance their connection with major job and activity centers north of the project area. The UPRR Rail Alternative would improve transit accessibility and provide residents with fast, reliable transit service to job centers to the north and areas where more services are available. Riverdale residents who do have automobiles would also benefit from having a new transit alternative to driving.

- Noise and Vibration: The alignment in Segment UB would be located primarily in vacant and industrial areas, which do not contain noise-sensitive land uses. Some residences are present near the Michigan Avenue and 130th Street station areas. By using continuously welded rail, vibration levels would be below the FTA impact criterion, requiring no mitigation measures. No adverse noise or vibration impacts are anticipated.

- Parklands and Community Facilities: The ROW Option alignment would not pass through any parkland and would not displace any community facilities in Segment UB. By improving travel time, operations in Segment UB would improve access to parklands and community facilities within walking distance (½ mile) of the station location when compared to the No Build Alternative. No adverse impacts on parklands or community facilities are anticipated.

- Energy: Compared to existing conditions, energy consumption would increase due to the addition of new tracks and stations to the rail system; however, this increase in energy would not be adverse, as it is not expected to affect local or regional energy availability, or require the development of new sources. Some beneficial reduction in fuel consumption would occur if the RLE Project were to cause motorists to begin using transit for some trips.

- Geology and Soils: Operation of the ROW Option would not cause adverse changes to geology or soil resources.

- Cumulative: No cumulative adverse impacts are expected.

5.3.1.2.2 Topics with No Adverse Permanent Impacts After Mitigation

- Biological Resources: Some removal of vegetation would be needed. Given the non-mature forest cover and the surrounding industrial land uses, impacts on biological resources would not be adverse with compliance with local tree protection ordinances.

- Displacements: One non-residential building would be displaced. With just compensation and relocation assistance per the Uniform Act, the permanent impacts would not be adverse, because there is available vacant land in the project area.

- Hazardous Materials: Given the proximity of Segment UB to an adjacent active railroad, there is the potential for impacts due to releases of hazardous materials potentially being transported and from hazardous materials used in the routine operation and maintenance of the railroad. These materials potentially exist along the railroad currently, but the UPRR Rail Alternative would bring transit vehicles closer to them. Measures to avoid such occurrences would include adherence to applicable federal, state, and local regulations, as well as CTA's existing system-wide hazardous material usage, storage, and disposal plans and procedures. There would be no adverse permanent impacts related to hazardous materials after mitigation.

- Land Use and Economic Development: The limited impact of displacements on project area land use in Segment UB would not be adverse, and associated economic development impacts would be beneficial. Facilities would be designed to be compatible with surrounding uses, which are primarily industrial and include some residences near the 130th Street station location. Due to improved access for residents, commuters, employees, and visitors, the overall land use and economic development impacts would be beneficial.

- Safety and Security: The impact on major incidents would not be adverse. For potential impacts on pedestrian safety at the 130th Street station, a traffic signal, sidewalks, curb ramps, and marked crosswalks are included in the design, so there would be no adverse impact given these improvements. Impacts on security at parking facilities would be mitigated by implementing open design and would not be adverse after mitigation. Because the 130th Street station would not be centered in a neighborhood, the impacts on neighborhood security would not be adverse. Overall safety and security impacts would not be adverse after mitigation.

- Visual and Aesthetic Conditions: Permanent visual impacts would not be adverse after mitigation. Minimal visual changes would occur, and would mostly pertain to the addition of a multi-story parking structure at the 130th Street station. Mitigations to reduce visual impacts would include shielding exterior lighting and providing special consideration for lighting placement adjacent to sensitive areas such as residential communities; providing landscaping and/or visual screening at park & ride locations where possible; designing the parking structure to match the character of the surrounding fabric; and using urban design techniques to reduce massing.

- Water Resources: Pervious area is anticipated to decrease in some areas; the decrease in pervious area could be mitigated by incorporating new stormwater management structures and establishing an erosion control plan. The RLE Project would replace automobile trips; there would be an associated reduction in runoff contaminants that collect on streets. For this reason, the alternative is anticipated to have a minor but positive water quality impact. Due to the predominance of impervious surfaces throughout the project area, minimal percolation to the underlying groundwater occurs in the API. There would be no adverse permanent impacts on groundwater quality. There would be no permanent adverse impacts on stormwater drainage, water quality, or wetlands.

- Transportation: There would be seven intersections in the AM peak and nine intersections in the PM peak in Segment UB where the ROW Option would increase traffic congestion beyond applicable thresholds, largely due to cars accessing the park & ride facilities at stations. Mitigation measures such as optimization of signal cycles, adding turn lanes, restricting turns at some intersections, and restriping existing lanes would render traffic conditions no worse than under the No Build Alternative. The park & ride facilities may also draw some motorists away from nearby highways, thereby improving traffic flow for automobiles and freight trucks. The UPRR Rail Alternative would not affect Canadian National and Indiana Harbor Belt operations, and would therefore have no impact on freight rail. Existing bus routes would be adjusted to interface better with the RLE stations and service. New pedestrian and bicycle facilities would also be included near stations to provide safe access, which would improve transit connections. Transit access to the project area would substantially improve, particularly for low-income residents who do not have access to automobiles. The overall transportation impacts would be beneficial.

5.3.1.2.3 Topics with Adverse Permanent Impacts After Mitigation
No adverse impacts would remain after mitigation.

5.3.2 Construction Impacts and Mitigations - Union Pacific Railroad Rail Alternative - Right-of-Way Option

5.3.2.1 Segment UA

5.3.2.1.1 Topics with No Adverse Construction Impacts
- Displacements: Because all construction activities would occur on land acquired for the permanent ROW, there would be no temporary displacement or relocation construction impacts.

- Historic and Cultural Resources: There would be no adverse construction effects on historic resources.

- Noise and Vibration: Based on the types of construction equipment and activities identified in the *Description of Construction and Phasing for Environmental Impact Statement Build Alternatives* (Description of Construction), construction noise levels are not expected to exceed the FTA construction noise limits.

- Energy: The construction activities identified in the Description of Construction would not require fuel consumption and energy use at a scale that would adversely affect energy availability, and would not require development of new energy sources. No adverse impacts would occur.

- Geology and Soils: The ROW Option would require few changes to surficial geology and soils, which have been affected by prior development in all parts of the alignment. Excavation would be primarily needed for the elevated structure supports, at-grade trackbeds, and park & ride facilities. Excavation activities are not expected to have adverse impacts.

- Cumulative: No adverse cumulative impacts are expected to occur. There are not currently any foreseeable nearby projects of sufficient magnitude to cause impacts that would be under construction at the same time as RLE. Should such a project occur, CTA would coordinate construction activities to minimize impacts.

5.3.2.1.2 Topics with No Adverse Construction Impacts After Mitigation

- Air Quality and Climate Change: No adverse air quality impacts due to construction activities are anticipated after mitigation. Proper traffic management during the construction period would mitigate any potential adverse effects. A Dust Control Plan would address in detail how dust would be controlled at all times at the construction site, the staging areas, and the access and egress routes.

- Biological Resources: There would be no adverse construction impacts on biological resources after mitigation. Compliance with local tree protection ordinances would mitigate the impacts of tree removal. As needed, mitigation measures to reduce potential impacts on wildlife habitat would be performed, including preparing a detailed tree inventory, timing tree removal to occur outside the migratory bird nesting season, performing biological surveys if construction must occur during the nesting season, and replanting trees as required by applicable local codes and ordinances.

- Hazardous Materials: There would be no adverse construction impacts relating to hazardous materials after mitigation. Construction would result in generation of a large quantity of soil that could contain contaminated materials requiring off-site disposal. Contaminated materials potentially encountered could include heavy metals, asbestos-containing material, and lead-based paint. Mitigation measures would include compliance with federal, state, and local laws and regulations regarding hazardous materials; focused site assessments for areas where earthmoving activities would occur; hazardous materials surveys of buildings; a Contaminated Material Management Plan; Health and Safety Plans for construction activities; Spill Prevention, Control, and Countermeasure Plans; and Construction Stormwater Pollution Prevention Plans.

- Land Use and Economic Development: Construction would take up to 3 years and would cause temporary impacts on adjacent residential neighborhoods due to noise, vibration, fugitive dust, truck traffic, and roadway detours. Mitigation methods would include focusing construction activities primarily during the least impactful times of day and other best management practices. There would be short-term beneficial economic impacts from construction jobs. The land use impacts from construction would not be adverse after mitigation. The overall economic development impact from construction would be beneficial.

- Neighborhood and Community Impacts: Community disruption would occur while construction activities are performed for the UPRR Rail Alternative, with intensive construction occurring over a period of approximately 3 years. Storage of materials, equipment, and trucks would introduce temporary intermittent visual impacts within communities, but these impacts would not be adverse given their temporary nature and CTA's use of best management practices. Temporary dust, noise, and visual impacts would occur. Construction would be temporary, and major activities would be scheduled so as not to conflict with community events to the extent possible. Businesses around the alignment and parking structure could be affected by construction activities, construction-related traffic, and road and sidewalk closures. This potentially adverse impact would be mitigated through early notification of construction activities, provision of temporary alternate access routes, and advertising programs to increase the visibility of affected businesses during construction.

- Parklands and Community Facilities: Construction activities would occur in Wendell Smith Park and would temporarily affect this park. The elevated structure would pass through the northwest corner of the park property. The temporary inaccessibility of part of the park would not adversely affect park function, and impacts would be mitigated through best management practices and coordination with community members and the Chicago Park District. Construction activities would generate temporary noise and air quality impacts, and/or change access to or parking around the parks. These impacts would be temporary in nature and would be mitigated through the use of construction best management practices; by alerting parkland users of construction activities; and by providing clearly marked detour routes and alternate parking. Coordination with the Chicago Park District would result in options to mitigate impacts on any of the organized park activities; for example, the recreational activities could be temporarily relocated to a nearby park while construction was underway. After mitigation, construction of the ROW Option would not adversely affect the parks in Segment UA. Construction of the ROW Option would temporarily affect New Christian Joy Missionary Baptist Church because it is adjacent to the proposed ROW. After mitigations similar to those for parks, this church would not have adverse impacts.

- Safety and Security: Impacts on emergency services, including access to the construction site and travel around the site would not be adverse after mitigation, which would include minimizing detour lengths.

- Visual and Aesthetic Conditions: The visual impacts related to construction would not be adverse after mitigation. At locations where park & ride structures and lots would be created, impacts would include construction fencing, demolition of existing buildings or clearing of vacant lots, temporary street closures and related signage, or temporary lighting or entrances. The CTA would attempt to maintain as much existing vegetation as practical during construction, and would minimize temporary construction impacts on the neighborhood with measures such as limiting light trespassing from night lighting. Best management practices and debris-free construction areas would mitigate temporary visual impacts from the construction sites.

- Water Resources: There would be no adverse construction impacts on drainage, groundwater, or water quality after mitigation. There would be no adverse construction impacts on water resources after mitigation. Stormwater drainage mitigation measures would include incorporating new stormwater management structures and establishing an erosion control plan, including for construction activities at the locations of garages and park & ride lots. Water quality mitigation measures would include installing properly designed and maintained biological oil and grease removal systems, proper storage of hazardous materials, development and maintenance of an effective monitoring and cleanup program for spills and leaks of hazardous materials, proper storage and maintenance of equipment, periodic removal of landscape and construction debris, installation of detention basins to remove suspended solids, and regular monitoring of runoff water quality. Care would need to be taken during construction in the vicinity of the Roseland Pump Station at 104th Street, as well as other underground utilities identified, in order to not damage existing structures. There are no wetlands in Segment UA.

- Transportation: Construction of rail facilities, parking structures, and park & ride lots would require lane and sidewalk closures that would temporarily reduce roadway capacity. These closures may lead to temporarily increased travel times for both motorists and transit riders, and bus stop locations may be temporarily relocated. Bicycles and pedestrians would need to be rerouted around work areas. Detours would be provided to maintain access. Lanes on I-57 may also need to be temporarily closed to accommodate rail construction in the median, which would affect automobiles and freight trucks. Temporary closure of full sections of I-57 may also be needed. Closures would be scheduled during low-traffic periods to the extent feasible to minimize impacts. It is assumed for the ROW Option that existing UPRR freight operations would be relocated away from the existing corridor as part of a separate project prior to RLE implementation. The ROW Option construction would therefore have no impact on freight rail operations. With adherence to established construction management guidelines for rerouting traffic and transit service, no adverse construction impacts would occur after mitigation.

5.3.2.1.3 Topics with Adverse Construction Impacts After Mitigation

No adverse impacts would remain after mitigation.

5.3.2.2 Segment UB

5.3.2.2.1 Topics with No Adverse Construction Impacts

- Displacements: Because all construction activities would occur on land acquired for the permanent ROW, there would be no temporary displacement or relocation impacts associated solely with the construction phase.

- Historic and Cultural Resources: There would be no adverse construction effects on historic resources.

- Noise and Vibration: Based on the types of construction equipment and activities identified in the Description of Construction, construction noise levels are not expected to exceed the FTA construction noise limits.

- Energy: The construction activities identified in the Description of Construction would not require fuel consumption and energy use at a scale that would adversely affect energy availability, and would not require development of new energy sources. No adverse impacts would occur.

- Geology and Soils: The ROW Option would require few changes to surficial geology and soils, which have been affected by prior development in all parts of the alignment. Excavation would be primarily needed for the elevated structure supports, at-grade trackbeds, and park & ride facilities. Excavation activities are not expected to have adverse impacts.

- Cumulative: No adverse cumulative impacts are expected to occur. There are not currently any foreseeable nearby projects of sufficient magnitude to cause impacts that would be under construction at the same time as RLE. Should such a project occur, CTA would coordinate construction activities to minimize impacts.

5.3.2.2.2 Topics with No Adverse Construction Impacts After Mitigation

- Air Quality and Climate Change: No adverse air quality impacts due to construction activities are anticipated after mitigation. Proper traffic management during the construction period would mitigate any potential adverse effects. A Dust Control Plan would address in detail how dust would be controlled at all times at the construction site, the staging areas, and the access and egress routes.

- Biological Resources: There would be no adverse construction impacts on biological resources after mitigation. Compliance with local tree protection ordinances would mitigate the impacts of tree removal. As needed, mitigation measures to reduce potential impacts on wildlife habitat would be performed, including preparing a detailed tree inventory, timing tree removal to occur outside the migratory bird nesting season, performing biological surveys if construction must occur during the nesting season, and replanting trees as required by applicable local codes and ordinances.

- Hazardous Materials: There would be no adverse construction impacts relating to hazardous materials after mitigation. Construction would result in generation of a large quantity of soil that could contain contaminated materials requiring off-site disposal. Contaminated materials potentially encountered could include heavy metals, asbestos-containing material, and lead-based paint. Mitigation measures would include compliance with federal, state, and local laws and regulations regarding hazardous materials; focused site assessments for areas where earthmoving activities would occur; hazardous materials surveys of buildings; a Contaminated Material Management Plan; Health and Safety Plans for construction activities; Spill Prevention, Control, and Countermeasure Plans; and Construction Stormwater Pollution Prevention Plans.

- Land Use and Economic Development: Construction would take up to 3 years and would cause temporary impacts on adjacent residential neighborhoods due to noise, vibration, fugitive dust, truck traffic, and roadway detours. Mitigation methods would include focusing construction activities primarily during the least impactful times of day and other best management practices. There would be short-term beneficial economic impacts from construction jobs. The land use impacts from construction would not be adverse after mitigation. The overall economic development impact from construction would be beneficial.

- Neighborhood and Community Impacts: Impacts on the Riverdale community would not be adverse provided that best management practices were employed and nighttime construction near residences was limited to the extent practicable. Community disruption would occur during construction activities for the UPRR Rail Alternative, with intensive construction occurring over a period of approximately 3 years. Overall there are few residences and businesses along Segment UB north of 130th Street. Storage of materials, equipment, and trucks would introduce temporary intermittent visual impacts within communities, but these impacts would not be adverse given their temporary nature and CTA's use of best management practices. Temporary dust, noise, and visual impacts would occur. Construction would be temporary, and major activities would be scheduled so as not to conflict with community events to the extent possible. This potentially adverse impact would be mitigated through early notification of construction activities, provision of temporary alternate access routes, and advertising programs to increase the visibility of affected businesses during construction.

- Parklands and Community Facilities: No parklands would be displaced in Segment UB. Aldridge Elementary School is near the 130th Street West Station Option site and would have impacts associated with construction activities. The adverse impacts would be mitigated using construction best management practices, clearly marked detour routes, and notification to the school regarding the construction schedule.

- Safety and Security: Impacts on emergency services, including access to the construction site and travel around the site, would not be adverse after mitigation, which would include minimizing detour lengths.

- Visual and Aesthetic Conditions: At locations where park & ride structures and lots would be created, impacts might include construction fencing, demolition of existing buildings or clearing of vacant lots, temporary street closures and related signage, or temporary lighting or entrances. The CTA would attempt to maintain as much existing vegetation as practical during construction, and minimize temporary construction impacts on the neighborhood with measures such as limiting light trespassing from night lighting. Best management practices and debris-free construction areas would mitigate temporary visual impacts from the construction sites. There would be no adverse construction impacts after mitigation.

- Water Resources: There would be no adverse construction impacts on water resources after mitigation. Stormwater drainage mitigation measures would include incorporating new stormwater management structures and establishing an erosion control plan, including for construction activities at the locations of garages and park & ride lots. Water quality mitigation measures would include installing properly designed and maintained biological oil and grease removal systems, proper storage of hazardous materials, development and maintenance of an effective monitoring and cleanup program for spills and leaks of hazardous materials, proper storage and maintenance of equipment, periodic removal of landscape and construction debris, installation of detention basins to remove suspended solids, and regular monitoring of runoff water quality. After compensatory mitigation, either through creation, restoration, enhancement, or preservation of wetlands, there would be no adverse permanent impacts on wetlands.

- Transportation: Construction of rail facilities, parking structures, and park & ride lots would require lane and sidewalk closures that would temporarily reduce roadway capacity. These closures may lead to temporarily increased travel times for both motorists and transit riders, and bus stop locations may be temporarily relocated. Bicycles and pedestrians would need to be rerouted around work areas. Detours would be provided to maintain access, and closures would be scheduled during low-traffic periods to the extent feasible to minimize impacts. Construction would also be phased to minimize disruption to passenger and freight rail services. With adherence to established construction management guidelines for rerouting traffic and transit service, no adverse construction impacts would occur after mitigation.

5.3.2.2.3 Topics with Adverse Construction Impacts After Mitigation

No adverse impacts would remain after mitigation.

5.3.3 120th Street Yard and Shop

5.3.3.1 Permanent Impacts and Mitigations

5.3.3.1.1 Topics with No Adverse Permanent Impacts

- Air Quality and Climate Change: No adverse air quality impacts from CO, GHG, $PM_{2.5}$, or MSAT emissions are anticipated.

- Historic and Cultural Resources: No properties identified as eligible for listing on the NRHP lie in the vicinity of the yard and shop location; therefore, no effects are anticipated.

- Neighborhood and Community Impacts: The 120th Street yard and shop would be located in industrial and vacant areas, away from residences and community-oriented businesses and resources. As such, no community impacts would result from operation of the facility.

- Noise and Vibration: Because there are no sensitive receptors in the vicinity of the 120th Street yard and shop, and because of the much lower amount of train activity in and out of the facility and the lower train speeds compared to other parts of the project corridor, the noise levels generated in this area would be substantially lower than the noise levels generated along other parts of the project corridor. As a result, the noise generated at the 120th Street yard and shop would not exceed the FTA impact criteria at the nearest sensitive receptors.

- Parklands and Community Facilities: There are no parklands or community facilities in, adjacent to, or within 500 feet of the proposed ROW for the 120th Street yard and shop. As such, there would be no impacts on parklands or community facilities as a result of the operation and/or construction of the 120th Street yard and shop.

- Transportation: Under the ROW Option, there would be no permanent impacts on bicycle or pedestrians, because the existing site is a combination of industrial and vacant land. Pedestrian access by the general public would be restricted and discouraged. Because of the location of the yard, no public transportation or parking facilities would be affected by this alternative. Some parking would be provided for yard employees.

- Energy: Yard and shop operation would require additional fuel and energy resources, but not to the extent that it would affect local or regional fuel and energy availability, or require development of new energy sources. As such, no adverse impacts would occur.

- Geology and Soils: Operation of the 120th Street yard and shop would not cause adverse changes to geology or soil resources.

- Cumulative: No cumulative adverse impacts are expected.

5.3.3.1.2 Topics with No Adverse Permanent Impacts After Mitigation

- Biological Resources: Given the non-mature forest cover and the surrounding industrial land uses, impacts on biological resources would not be adverse with compliance with local tree protection ordinances.

- Displacements: The permanent envelope for the yard and shop would displace three buildings within the Riverdale neighborhood, of which none contain residences or commercial businesses. With just compensation and relocation assistance per the Uniform Act, the permanent impacts would not be adverse, because there is available vacant land in the project area.

- Hazardous Materials: There would be no adverse permanent impacts related to hazardous materials after mitigation. Operation of yard and shop would have the potential to result in the release of hazardous materials and/or petroleum products into the environment from accidental spills or from maintenance activities that require earthmoving in contaminated areas. Measures to avoid such occurrences would include adherence to applicable federal, state, and local regulations, as well as CTA's existing system-wide hazardous material usage, storage, and disposal plans and procedures.

- Land Use and Economic Development: The yard and shop would be located within an industrial area; the facilities would be designed to be consistent with existing land uses. The land use and economic impacts would not be adverse.

- Safety and Security: Impacts on security at the 120th Street yard and shop would not be adverse after mitigation. Mitigation measures would include complying with relevant design standards to minimize intrusion and prevent graffiti.

- Visual and Aesthetic Conditions: Due to the location in a low-density light industrial area, impacts would be minimal. Additional measures for the 120th Street yard and shop would include designing the shop facility structure to be aesthetically compatible with surrounding uses and screening the yard through fencing, walls, or vegetation wherever necessary and possible.

- Water Resources: There would be no adverse permanent impacts on groundwater. There would be no adverse permanent impacts on stormwater drainage or water quality associated with the 120th Street yard and shop after mitigation. Pervious area is anticipated to decrease in some areas; the decrease in pervious area could be mitigated by incorporating new stormwater management structures and establishing an erosion control plan. The introduction of new impervious surfaces would have the potential to increase the concentration and accumulation of runoff contaminants. Following compensatory mitigation, there would be no adverse permanent impacts on wetlands.

5.3.3.1.3 Topics with Adverse Permanent Impacts After Mitigation

No adverse impacts would remain after mitigation.

5.3.3.2 Construction Impacts and Mitigations

5.3.3.2.1 Topics with No Adverse Construction Impacts

- Displacements: Because all construction activities would occur on land acquired for the permanent ROW, there would be no temporary displacement or relocation construction impacts.

- Historic and Cultural Resources: No properties identified as eligible for listing on the NRHP lie in the vicinity of the yard and shop location; therefore, no effects are anticipated.

- Land Use and Economic Development: Because the yard and shop would be located in a heavy industrial area, the construction activities would not be adverse for land use or economic development.

- Neighborhood and Community Impacts: The 120th Street yard and shop would be located in industrial and vacant areas, away from residences and community-oriented businesses and resources. Construction activities would be far enough from established communities that no impacts would occur.

- Noise and Vibration: Based on the construction activities and equipment identified in the Description of Construction, and with noise-reducing construction practices, construction noise levels are not expected to exceed the FTA construction noise limits. No sensitive receptors are near the yard and shop site.

- Parklands and Community Facilities: There are no parklands or community facilities in, adjacent to, or within 500 feet of the proposed ROW for the 120th Street yard and shop. As such, there would be no impacts on parklands or community facilities as a result of the operation and/or construction of the 120th Street yard and shop.

- Energy: Yard and shop construction activities identified in the Description of Construction would not require fuel consumption and energy use at a scale that would adversely affect energy availability, and would not require development of new energy sources. No adverse impacts would occur.

- Geology and Soils: Construction of the 120th Street yard and shop would require few changes to surficial geology and soils, which have been affected by prior development in all parts of the site. Excavation would be primarily needed for the at-grade trackbeds and shop buildings. Excavation activities are not expected to have adverse impacts.

- Cumulative: No adverse cumulative impacts are expected to occur. There are not currently any foreseeable nearby projects of sufficient magnitude to cause impacts that would be under construction at the same time as RLE. Should such a project occur, CTA would coordinate construction activities to minimize impacts.

5.3.3.2.2 Topics with No Adverse Construction Impacts After Mitigation

- Air Quality and Climate Change: No adverse air quality impacts due to construction activities are anticipated after mitigation. Proper traffic management during the construction period would mitigate any potential adverse effects. A Dust Control Plan would address in detail how dust would be controlled at all times at the construction site, the staging areas, and the access and egress routes.

- Biological Resources: There would be no adverse construction impacts on biological resources after mitigation. Compliance with local tree protection ordinances would mitigate the impacts of tree removal. As needed, mitigation measures to reduce potential impacts on wildlife habitat would be performed, including preparing a detailed tree inventory, timing tree removal to occur outside the migratory bird nesting season, performing biological surveys if construction must occur during the nesting season, and replanting trees as required by applicable local codes and ordinances.

- Hazardous Materials: There would be no adverse construction impacts relating to hazardous materials after mitigation. Construction would result in generation of a large quantity of soil that could contain contaminated materials requiring off-site disposal. Contaminated materials potentially encountered could include heavy metals, asbestos-containing material, and lead-based paint. Mitigation measures would include compliance with federal, state, and local laws and regulations regarding hazardous materials; focused site assessments for areas where earthmoving activities would occur; hazardous materials surveys of buildings; a Contaminated Material Management Plan; Health and Safety Plans for construction activities; Spill Prevention, Control, and Countermeasure Plans; and Construction Stormwater Pollution Prevention Plans.

- Safety and Security: Impacts on emergency services, including access to the construction site and travel around the site, would not be adverse after mitigation, which would include minimizing detour lengths.

- Visual and Aesthetic Conditions: Construction impacts would be minor and not adverse after mitigation for the 120th Street yard and shop, due to its location in a low-density area and the nature of at-grade construction. Impacts might include construction fencing, demolition of existing buildings or clearing of vacant lots, temporary street closures and related signage, or temporary lighting or entrances. The CTA would attempt to maintain as much existing vegetation as practical during construction, and minimize temporary construction impacts on the neighborhood with measures such as limiting light trespassing from night lighting. Best management practices and debris-free construction areas would mitigate temporary visual impacts from the construction sites.

- Water Resources: There would be no adverse construction impacts on water resources in the vicinity of the 120th Street yard and shop after mitigation. Stormwater drainage mitigation measures would include incorporating new stormwater management structures and establishing an erosion control plan. Water quality mitigation measures would include installing properly designed and maintained biological oil and grease removal systems, proper storage of hazardous materials, development and maintenance of an effective monitoring and cleanup program for spills and leaks of hazardous materials, proper storage and maintenance of equipment, periodic removal of landscape and construction debris, installation of detention basins to remove suspended solids, and regular monitoring of runoff water quality.

- Transportation: During new track roadbed construction for the 120th Street yard and shop and the new access road for the existing Metropolitan Water Reclamation District facility, construction over and adjacent to the Northern Indiana Commuter Transit District/Chicago South Shore & South Bend Railroad would occur. During these construction activities, flagging operations and scheduled track closures would occur. Construction would be phased to minimize impacts on operations of the Metropolitan Water Reclamation District and Northern Indiana Commuter Transit District/Chicago South Shore & South Bend Railroad.

5.3.3.2.3 Topics with Adverse Construction Impacts After Mitigation

No adverse impacts would remain after mitigation.

5.4 Union Pacific Railroad Rail Alternative - East Option

The UPRR Rail Alternative East Option would involve an extension of the Red Line from its current terminus at the 95th Street Terminal southward to 130th Street in the vicinity of Altgeld Gardens via existing highway medians and railroad corridors. The three options for the UPRR Rail Alternative are analyzed in two geographic segments, as described above in Section 5.3 for the ROW Option. The East Option alignment would run along the eastern side of the UPRR ROW in Segment UA. The alignment in Segment UB is the same for all three options.

New stations would be constructed at 103rd Street on the boundary between the Roseland and Washington Heights communities, at 111th Street in Roseland, at Michigan Avenue in West Pullman, and at 130th Street in Riverdale. All stations would have bus turnarounds and park & ride facilities. The park & ride facilities would be primarily surface parking lots, but multi-level parking structures would be constructed at the Michigan Avenue and 130th Street stations. To ensure analysis of the maximum foreseeable impacts, it is assumed for the East and West Options that the possible project being studied in the FSRRFS would not have occurred prior to RLE construction and UPRR would continue freight operations in its existing ROW. Compared to the ROW Option, the East and West Options would have greater impacts due to the UPRR's requirement that the CTA tracks be located at least 50 feet from the active freight tracks. Particularly for the East Option, which would have the greatest number of building displacements, this requirement would push the elevated structure into the residential communities adjacent to the UPRR ROW.

5.4.1 Permanent Impacts and Mitigations - Union Pacific Railroad Rail Alternative - East Option

5.4.1.1 Segment UA

5.4.1.1.1 Topics with No Adverse Permanent Impacts

- Air Quality and Climate Change: No adverse air quality impacts from CO, GHG, $PM_{2.5}$, or MSAT emissions are anticipated.

- Historic and Cultural Resources: Six resources in Segment UA have been identified as eligible for listing on the NRHP. No adverse effects on historic resources are anticipated to occur as a result of the East Option.

- Energy: Energy consumption would increase due to the addition of new tracks and stations to the rail system; however, this increase in energy would not be adverse, as it is not expected to affect local or regional energy availability or require the development of new sources. Some beneficial reduction in fuel consumption would occur if the RLE Project were to cause motorists to begin using transit for some trips.

- Geology and Soils: Operation of the East Option would not cause adverse changes to geology or soil resources.

- Cumulative: No cumulative adverse impacts are expected.

5.4.1.1.2 Topics with No Adverse Permanent Impacts After Mitigation

- Biological Resources: The East Option would affect a larger amount of vegetation than the ROW Option. With compliance with local tree protection ordinances, potential impacts would not be adverse.

- Displacements: The East Option would have the most impacts of the UPRR Rail Alternative options. In Segment UA, 107 buildings would be displaced, of which 81 would be single-family residences, 13 would be multi-family buildings, 3 would be commercial structures, and 1 would be a place of worship. With just compensation and relocation assistance per the Uniform Act, the permanent impacts would not be adverse, because there is available vacant land in the project area.

- Hazardous Materials: Given the proximity of the UPRR track to the alignment for the East Option, there would be the potential for impacts due to releases of hazardous materials being transported and from hazardous materials used in the routine operation and maintenance of the UPRR. These materials potentially exist along the railroad currently, but the UPRR Rail Alternative would bring transit vehicles closer to them. There would be no adverse permanent impacts related to hazardous materials after mitigation. The impacts and mitigation measures would be similar to those for the ROW Option, as discussed above in Section 5.3.1.1.

- Land Use and Economic Development: The park & ride lots at the 103rd Street and 111th Street stations, and the parking garage at the Michigan Avenue station would be inconsistent with adjacent land uses due to the primarily residential and commercial nature of the areas around the proposed stations. These land uses consist of primarily single-family residential neighborhoods, with occasional commercial and apartment buildings. There would be no adverse permanent impacts on land use after proposed mitigation measures, as there could be new development spurred by the new station. The overall impact on local economic development would be beneficial. These impacts and mitigation measures would be similar to those for the ROW Option, as discussed above in Section 5.3.1.1.

- Noise and Vibration: There would be a substantial number of affected receptors where the train speeds reach 55 mph. Noise-affected residential receptors along the project corridor would require mitigation. A 3- to 4-foot-high noise barrier installed along the outer tracks of the aerial structure would reduce the wheel/rail noise that would propagate into the surrounding community. There would be no adverse noise impacts after mitigation. No adverse vibration impacts are anticipated.

- Parklands and Community Facilities: In segment UA, the East Option alignment would pass through the corner of Wendell Smith Park and the western portion of Block Park, and would displace Now Faith Church of God Holiness. The church could be relocated within the neighborhood. The East Option would largely leave the functional and recreational use of the parks intact and impacts would not be adverse after mitigation. By improving travel time, operation of the East Option would improve access to parklands and community facilities within walking distance (½ mile) of the station locations. The parking garage at the Michigan Avenue station would provide space for retail and community facilities; this space would result in a benefit to the community overall.

- Safety and Security: The impact on major incidents would not be adverse. A large volume of pedestrians would be expected to cross the major streets near the stations without positive traffic control. This impact would be mitigated through the installation of traffic signals, median refuge islands, and/or other pedestrian crossing treatments, resulting in no adverse permanent impacts after mitigation. Traffic signals would need to be interconnected with the railroad crossing warning devices. Impacts on security at parking facilities would be mitigated by implementing open design and would not be adverse after mitigation. New train stations would be unlikely to have much, if any, impact on neighborhood crime. Suggested mitigation measures would be security surveillance cameras and sidewalk lighting along commercial streets within approximately one block of train station entrances. Impacts on neighborhood security would not be adverse after mitigation. Overall safety and security impacts would not be adverse after mitigation. The East Option would directly increase the number of vehicles (mostly buses) and pedestrians crossing the UPRR tracks at 103rd Street and 111th Street compared to the No Build Alternative, and could indirectly induce land development that would further increase traffic volumes. The risk of vehicle crashes would be mitigated by installing safety protection technologies for vehicles and pedestrians. Given that transit passengers are often in a hurry, and given the likely delays to pedestrians due to the expected increase in freight volumes over existing conditions, it is reasonable to assume that some pedestrians may choose to take unacceptable safety risks by crossing the tracks while the signals are flashing. This adverse impact could be mitigated by incorporating a grade separation structure or providing pedestrian crossing gates at sidewalks.

- Water Resources: The East Option alignment would be closer to the Roseland Pump Station than the ROW Option alignment; consequently, it would be more complex from a drainage standpoint. There would be no adverse permanent impacts on water resources in Segment UA of the East Option. The impacts and mitigation measures would be similar to those for the ROW Option, described above in Section 5.3.1.1.2.

- Transportation: There would be four intersections in the AM peak and six intersections in the PM peak in Segment UA where the East Option would increase traffic congestion beyond applicable thresholds, largely due to cars accessing the park & ride facilities at stations. Mitigation measures such as optimization of signal cycles and removal of some on-street parking near stations would render traffic conditions no worse than under the No Build Alternative. The park & ride facilities may also draw some motorists away from nearby highways, thereby improving traffic flow for automobiles and freight trucks. The East Option would therefore have no impact on freight rail operations, because the rail line would be elevated above the UPRR ROW and no new grade crossings would be added. Existing bus routes would be adjusted to interface better with the RLE stations and service. New pedestrian and bicycle facilities would also be included near stations to provide safe access, including across the existing freight tracks, which would improve transit connections. Transit access to the project area would substantially improve, particularly for low-income residents who do not have access to automobiles. The overall transportation impacts would be beneficial.

5.4.1.1.3 Topics with Adverse Permanent Impacts After Mitigation

- Visual and Aesthetic Conditions: The elevated structure would cause adverse visual impacts at 117th Street and Prairie Avenue. Mitigation measures would reduce the impacts, but due to the proximity of the elevated structure to residential areas, the impacts would remain adverse despite mitigation. Mitigation measures to reduce visual impacts would include landscaping, using urban design techniques to reduce massing, and creating pedestrian-friendly surroundings.

- Neighborhood and Community Impacts: The East Option would have permanent adverse impacts on community character and cohesion that could not be mitigated due to the visual encroachment of the elevated structure into the neighborhood at 117th Street and Prairie Avenue in West Pullman. Mitigation measures for impacts on community character, including planting additional landscaping, would not be sufficient to offset this permanent impact. The East Option alignment would pass through the northwestern corner of Wendell Smith Park and the western portion of Block Park, and would displace Now Faith Church of God Holiness. The church could be relocated within the neighborhood. The East Option would largely leave the functional and recreational use of the parks intact and impacts would not be adverse after mitigation. Other impacts, benefits, and mitigation measures would be similar to those for the ROW Option, as discussed above in Section 5.3.1.1.2.

5.4.1.2 Segment UB

Impacts in Segment UB would be the same for all of the UPRR Rail Alternative options. Impacts and mitigation measures for Segment UB are discussed above in Section 5.3.1.2.

5.4.2 Construction Impacts and Mitigations - Union Pacific Railroad Rail Alternative - East Option

5.4.2.1 Segment UA

5.4.2.1.1 Topics with No Adverse Construction Impacts

- Displacements: Because all construction activities would occur on land acquired for the permanent ROW, there would be no temporary displacement or relocation construction impacts.

- Historic and Cultural Resources: There would be no adverse construction effects on historic resources.

- Noise and Vibration: Based on the construction activities and equipment described in the Description of Construction, construction noise levels are not expected to exceed the FTA construction noise limits using noise-reducing construction practices.

- Energy: The construction activities identified in the Description of Construction would not require fuel consumption and energy use at a scale that would adversely affect energy availability, and would not require development of new energy sources. No adverse impacts would occur.

- Geology and Soils: The East Option would require few changes to surficial geology and soils, which have been affected by prior development in all parts of the alignment. Excavation would be primarily needed for the elevated structure supports, at-grade trackbeds, and park & ride facilities. Excavation activities are not expected to have adverse impacts.

- Cumulative: No adverse cumulative impacts are expected to occur. There are not currently any foreseeable nearby projects of sufficient magnitude to cause impacts that would be under construction at the same time as RLE. Should such a project occur, CTA would coordinate construction activities to minimize impacts.

5.4.2.1.2 Topics with No Adverse Construction Impacts After Mitigation

- Air Quality and Climate Change: No adverse air quality impacts due to construction activities are anticipated after mitigation. Impacts and mitigation measures would be the same as those for the ROW Option, discussed above in Section 5.3.2.1.

- Biological Resources: Although the East Option would affect a larger amount of vegetation than the ROW Option, there would be no adverse construction impacts on biological resources after mitigation. Impacts and mitigation measures would be the same as those for the ROW Option, discussed above in Section 5.3.2.1.

- Hazardous Materials: There would be no adverse construction impacts relating to hazardous materials after mitigation. Impacts and mitigation measures would be the same as those for the ROW Option, discussed above in Section 5.3.2.1.

- Land Use and Economic Development: Land use impacts from construction would not be adverse. Economic development impacts from construction would be beneficial. Impacts and mitigation measures would be the same as those for the ROW Option, discussed above in Section 5.3.2.1.

- Neighborhood and Community Impacts: There would be no adverse construction impacts relating to neighborhood and community impacts after mitigation. Impacts and mitigation measures would be the same as those for the ROW Option, discussed above in Section 5.3.2.1.

- Parklands and Community Facilities: No parkland or community facilities would have adverse construction impacts after mitigations. Impacts and mitigation measures would be the same as those for the ROW Option, discussed above in Section 5.3.2.1.

- Safety and Security: Impacts on emergency services, including access to the construction site and travel around the site, would not be adverse after mitigations, which include minimizing detour lengths.

- Visual and Aesthetic Conditions: The visual impacts related to construction would not be adverse after mitigation. The impacts and mitigation measures would be the similar to those for the ROW Option, discussed above in Section 5.3.2.1.

- Water Resources: The East Option alignment would be closer to the Roseland Pump Station than the ROW Option; consequently, additional care would need to be taken in the vicinity of the Roseland Pump Station and near the other underground utilities during construction. There would be no adverse construction impacts on water resources in Segment UA of the East Option. The impacts and mitigation measures would be the same as those for the ROW Option, discussed above in Section 5.3.2.1.

- Transportation: Construction of rail facilities, parking structures, and park & ride lots would require lane and sidewalk closures that would temporarily reduce roadway capacity. These closures may lead to temporarily increased travel times for both motorists and transit riders, and bus stop locations may be temporarily relocated. Bicycles and pedestrians would need to be rerouted around work areas. Detours would be provided to maintain access. Lanes on I-57 may also need to be temporarily closed to accommodate rail construction in the median, which would affect automobiles and freight trucks. Temporary closure of full sections of I-57 may also be needed. Closures would be scheduled during low-traffic periods to the extent feasible to minimize impacts. The UPRR freight tracks would remain active during construction. Temporary intermittent track closures may be needed; however, construction would be staged to minimize disruption. With adherence to established construction management guidelines for rerouting traffic and transit service, no adverse construction impacts would occur after mitigation.

5.4.2.1.3 Topics with Adverse Construction Impacts After Mitigation

No adverse impacts would remain after mitigation.

5.4.2.2 Segment UB

Impacts in Segment UB would be the same for all of the UPRR Rail Alternative options. Construction impacts and mitigation measures for Segment UB are discussed above in Section 5.3.2.2.

5.4.3 120th Street Yard and Shop

Impacts of the 120th Street yard and shop would be the same for all of the UPRR Rail Alternative options. Impacts and mitigation measures for 120th Street yard and shop are discussed above in Section 5.3.3.

5.5 Union Pacific Railroad Rail Alternative - West Option

The UPRR Rail Alternative West Option would include extension of the Red Line from its current terminus at 95th Street Terminal southward to 130th Street in the vicinity of Altgeld Gardens via existing highway medians and railroad corridors. The three options for the UPRR Rail Alternative are analyzed in two geographic segments, as described above in Section 5.3 for the ROW Option. The West Option alignment would run along the western side of the UPRR ROW in Segment UA. The alignment in Segment UB is the same for all three options.

New stations would be constructed at 103rd Street on the boundary between the Roseland and Washington Heights communities, at 111th Street in Roseland, at Michigan Avenue in West Pullman, and at 130th Street in Riverdale. All stations would have bus turnarounds and park & ride facilities. The park & ride facilities would be primarily surface parking lots, but multi-level parking structures would be constructed at the Michigan Avenue and 130th Street stations. To ensure analysis of the maximum foreseeable impacts, it is assumed for the East and West Options that the possible project being studied in the FSRRFS would not have occurred prior to RLE construction and UPRR would continue freight operations in its existing ROW. Compared to the ROW Option, the East and West Options would have greater displacement impacts due to the UPRR's requirement that the CTA tracks be located at least 50 feet from the active freight tracks. The West Option would require fewer displacements than the East Option, and a greater proportion of the displacements would be industrial instead of residential.

5.5.1 Permanent Impacts and Mitigations - Union Pacific Railroad Rail Alternative - West Option

5.5.1.1 Segment UA

5.5.1.1.1 Topics with No Adverse Permanent Impacts

- Air Quality and Climate Change: No adverse air quality impacts from CO, GHG, $PM_{2.5}$, or MSAT emissions are anticipated.

- Historic and Cultural Resources: Six resources in Segment UA have been identified as eligible for listing on the NRHP. No adverse effects on historic resources are anticipated to occur.

- Energy: Energy consumption would increase due to the addition of new tracks and stations to the rail system; however, this increase in energy would not be adverse, as it is not expected to affect local or regional energy availability or require the development of new sources. Some beneficial reduction in fuel consumption would occur if the RLE Project were to cause motorists to begin using transit for some trips.

- Geology and Soils: Operation of the West Option would not cause adverse changes to geology or soil resources.

- Cumulative: No cumulative adverse impacts are expected.

5.5.1.1.2 Topics with No Adverse Permanent Impacts After Mitigation

- Biological Resources: The West Option would affect the greatest amount of vegetation compared to the other UPRR Rail Alternative options. With compliance with local tree protection ordinances, potential impacts would not be adverse.

- Displacements: The West Option would have fewer impacts than the East Option, but more than the ROW Option. In Segment UA, 47 buildings would be removed, of which 22 would be single-family residences, 8 would be commercial properties, 2 would be mixed-use properties, and 1 would be a place of worship. With just compensation and relocation assistance per the Uniform Act, the permanent impacts would not be adverse, because there is available vacant land in the project area.

- Hazardous Materials: Given the proximity of the UPRR track to the alignment for the West Option, there would be the potential for impacts due to releases of hazardous materials being transported and from hazardous materials used in the routine operation and maintenance of the UPRR. These materials potentially exist along the railroad currently, but the UPRR Rail Alternative would bring transit vehicles closer to them. There would be no adverse permanent impacts related to hazardous materials after mitigation. These impacts and mitigation measures would be similar to those for the ROW Option, as described above in Section 5.3.1.1.

- Land Use and Economic Development: The West Option would affect the adjacent land uses along Fernwood Parkway, because it would be incompatible with the existing single-family residential development. Mitigation would include additional street trees along the west side of Eggleston Avenue and an evergreen tree buffer along the east side of Eggleston Avenue. The park & ride lots at the 103rd Street and 111th Street stations, the substation at 105th Street, and the parking garage at the Michigan Avenue Station would be inconsistent with adjacent land uses. These land uses consist of primarily single-family residential neighborhoods, with occasional commercial and apartment buildings. The West Option would displace the most commercial structures of any of the UPRR Rail Alternative Options; however, some are not fully utilized. The overall impact on land uses would not be adverse after mitigation. The overall impact on local economic development would be beneficial. The impacts and mitigation measures would be similar to those for the ROW Option, as discussed above in Section 5.3.1.1.

- Noise and Vibration: There would be no adverse noise impacts after mitigation. No adverse vibration impacts are anticipated. Impacts and mitigation measures would be similar to those for the East Option, as discussed above in Section 5.4.1.1.

- Parklands and Community Facilities: In segment UA, the West Option alignment would pass through the corner of Wendell Smith Park and most of Fernwood Parkway. No community facilities would be displaced. The West Option would largely leave the functional and recreational use of the parks intact and impacts would not be adverse after mitigation. Mitigation measures would include replacement parkland elsewhere in the surrounding neighborhoods, or improvement of existing park facilities. By improving travel time, operation of the West Option would improve access to parklands and community facilities within walking distance (½ mile) of the station locations. The parking garage at the Michigan Avenue station would provide space for retail and community facilities; this space would result in a benefit to the community overall.

- Safety and Security: The impact on major incidents would not be adverse. A large volume of pedestrians would be expected to cross the major streets near the stations without positive traffic control. This impact would be mitigated through the installation of traffic signals, median refuge islands, and/or other pedestrian crossing treatments as applicable in coordination with the results of traffic studies completed during the final design phase, resulting in no adverse permanent impacts after mitigation. The West Option would directly increase the number of vehicles (mostly buses) and pedestrians crossing the UPRR tracks at 103rd Street and 111th Street compared to the No Build Alternative, and could indirectly induce land development that would further increase traffic volumes. The risk of vehicle crashes would be mitigated by installing safety protection technologies for vehicles and pedestrians. Given that transit passengers are often in a hurry, and given the likely delays to pedestrians due to the expected increase in freight volumes over existing conditions, it is reasonable to assume that some pedestrians may choose to take unacceptable safety risks by crossing the tracks while the signals are flashing. Compared to the East Option, the volume of pedestrians crossing the tracks would be lower for the West Option because the parking lots would be located on the same side of the tracks as the stations. This adverse impact could be mitigated by incorporating a grade separation structure or providing pedestrian crossing gates at sidewalks. Traffic signals would need to be interconnected with the railroad crossing warning devices. Impacts on security at parking facilities would be mitigated by implementing open design and would not be adverse after mitigation. New train stations would be unlikely to have much, if any, impact on neighborhood crime. Suggested mitigation measures would be security surveillance cameras and sidewalk lighting along commercial streets within approximately one block of train station entrances. Impacts on neighborhood security would not be adverse after mitigation. Overall safety and security impacts would not be adverse after mitigation.

- Water Resources: Of the UPRR Rail Alternative option alignments, the West Option alignment would be furthest from the Roseland Pump Station and would have the least potential impact on underground pipes and structures around the pump station. There would be no adverse permanent impacts on water resources in Segment UA of the West Option. The impacts and mitigation measures would be similar to those for the ROW Option, described above in Section 5.3.1.1.2.

- Transportation: There would be four intersections in the AM peak and six intersections in the PM peak in Segment UA where the West Option would increase traffic congestion beyond applicable thresholds, largely due to cars accessing the park & ride facilities at stations. Mitigation measures such as optimization of signal cycles and removal of some on-street parking near stations would render traffic conditions no worse than under the No Build Alternative. The park & ride facilities may also draw some motorists away from nearby highways, thereby improving traffic flow for automobiles and freight trucks. The West Option would therefore have no impact on freight rail operations, because the rail line would be elevated above the UPRR ROW and no new grade crossings would be added. Existing bus routes would be adjusted to interface better with the RLE stations and service. New pedestrian and bicycle facilities would also be included near stations to provide safe access, including across the existing freight tracks, which would improve transit connections. Transit access to the project area would substantially improve, particularly for low-income residents who do not have access to automobiles. The overall transportation impacts would be beneficial.

5.5.1.1.3 Topics with Adverse Permanent Impacts After Mitigation

- Visual and Aesthetic Conditions: The elevated structure would cause adverse visual impacts between 99th Street and 103rd Street, near the 103rd Street station, and near the Michigan Avenue station park & ride facility. Mitigation measures to reduce visual impacts would include providing landscaping and replanting vegetation where possible, designing the park & ride facility to match the character of the surrounding neighborhood, using urban design techniques to reduce massing, and creating pedestrian-friendly surroundings. Exterior lighting would be shielded and carefully placed when adjacent to sensitive areas such as residential communities. The impacts would remain adverse after mitigation.

- Neighborhood and Community Impacts: The West Option would have permanent adverse impacts on community character and cohesion that could not be mitigated due to the visual encroachment of the elevated structure into the neighborhood between 99th and 103rd Streets in Washington Heights. The 103rd Street station in Roseland and Washington Heights and the Michigan Avenue station park & ride in West Pullman would also cause adverse visual impacts because they would change the scale, density, and character of the local community. Mitigation measures for impacts on community character, including planting additional landscaping, would not be sufficient to offset this permanent impact. The West Option alignment would pass through Fernwood Parkway, and would displace the Grace Temple Church of God Established in Christ. The church could be relocated within the neighborhood. CTA would keep the area beneath the track structure in Fernwood Parkway open for use, and improve park space elsewhere in the neighborhood. Mitigation measures, including screening the structure with additional landscaping, would not be sufficient to offset this impact.

5.5.1.2 Segment UB

Impacts in Segment UB would be the same for all of the UPRR Rail Alternative options. Impacts and mitigation measures for Segment UB are discussed above in Section 5.3.1.2.

5.5.2 Construction Impacts and Mitigations - Union Pacific Railroad Rail Alternative - West Option

5.5.2.1 Segment UA

5.5.2.1.1 Topics with No Adverse Construction Impacts

- Displacements: Because all construction activities would occur on land acquired for the permanent ROW, there would be no temporary displacement or relocation construction impacts.

- Historic and Cultural Resources: There would be no adverse construction effects on historic resources.

- Noise and Vibration: Based on the construction activities and equipment described in the Description of Construction, construction noise levels are not expected to exceed the FTA construction noise limits using noise-reducing construction practices.

- Energy: The construction activities identified in the Description of Construction would not require fuel consumption and energy use at a scale that would adversely affect energy availability, and would not require development of new energy sources. No adverse impacts would occur.

- Geology and Soils: The West Option would require few changes to surficial geology and soils, which have been affected by prior development in all parts of the alignment. Excavation would be primarily needed for the elevated structure supports, at-grade trackbeds, and park & ride facilities. Excavation activities are not expected to have adverse impacts.

- Cumulative: No adverse cumulative impacts are expected to occur. There are not currently any foreseeable nearby projects of sufficient magnitude to cause impacts that would be under construction at the same time as RLE. Should such a project occur, CTA would coordinate construction activities to minimize impacts.

5.5.2.1.2 Topics with No Adverse Construction Impacts After Mitigation

- Air Quality and Climate Change: No adverse air quality impacts due to construction activities are anticipated after mitigation. Impacts and mitigation measures would be the same as those for the ROW Option, discussed above in Section 5.3.2.1.

- Biological Resources: Although the West Option would affect the greatest amount of vegetation compared to the other UPRR Rail Alternative options, there would be no adverse construction impacts on biological resources after mitigation. Impacts and mitigation measures would be the same as those for the ROW Option, discussed above in Section 5.3.2.1.

- Hazardous Materials: There would be no adverse construction impacts relating to hazardous materials after mitigation. Impacts and mitigation measures would be the same as those for the ROW Option, discussed above in Section 5.3.2.1.

- Land Use and Economic Development: The land use impacts from construction would not be adverse after mitigation. The economic development impacts from construction would be beneficial. Impacts and mitigation measures would be the same as those for the ROW Option, discussed above in Section 5.3.2.1.

- Neighborhood and Community Impacts: There would be no adverse construction impacts relating to neighborhood and community impacts after mitigation. Impacts and mitigation measures would be the same as those for the ROW Option, discussed above in Section 5.3.2.1.

- Parklands and Community Facilities: No parkland or community facilities would have adverse construction impacts after mitigations. Impacts and mitigation measures would be the same as those for the ROW Option, discussed above in Section 5.3.2.1.

- Safety and Security: Impacts on emergency services, including access to the construction site and travel around the site would not be adverse after mitigations, which include minimizing detour lengths.

- Visual and Aesthetic Conditions: The visual impacts related to construction would not be adverse after mitigation. The impacts and mitigation measures would be similar to those for the ROW Option, discussed above in Section 5.3.2.1.

- Water Resources: Of the UPRR Rail Alternative option alignments, the West Option alignment would be furthest from the Roseland Pump Station and have the least potential impact on the underground pipes and structures around the pump station. There would be no adverse construction impacts on water resources in Segment UA of the West Option. Impacts and mitigation measures would be the same as those for the ROW Option, discussed above in Section 5.3.2.1.

- Transportation: Construction of rail facilities, parking structures, and park & ride lots would require lane and sidewalk closures that would temporarily reduce roadway capacity. These closures may lead to temporarily increased travel times for both motorists and transit riders, and bus stop locations may be temporarily relocated. Bicycles and pedestrians would need to be rerouted around work areas. Detours would be provided to maintain access. Lanes on I-57 may also need to be temporarily closed to accommodate rail construction in the median, which would affect automobiles and freight trucks. Temporary closure of full sections of I-57 may also be needed. Closures would be scheduled during low-traffic periods to the extent feasible to minimize impacts. The UPRR freight tracks would remain active during construction. Temporary intermittent track closures may be needed; however, construction would be staged to minimize disruption. With adherence to established construction management guidelines for rerouting traffic and transit service, no adverse construction impacts would occur after mitigation.

5.5.2.1.3 Topics with Adverse Construction Impacts After Mitigation

No adverse impacts would remain after mitigation

5.5.2.2 Segment UB

Impacts in Segment UB would be the same for all of the UPRR Rail Alternative options. Construction impacts and mitigation measures for Segment UB are discussed above in Section 5.3.2.2.

5.5.3 120th Street Yard and Shop

Impacts of the 120th Street yard and shop would be the same for all of the UPRR Rail Alternative options. Impacts and mitigation measures for 120th Street yard and shop are discussed above in Section 5.3.3.

5.6 Halsted Rail Alternative

The Halsted Rail Alternative would involve extension of the Red Line from its current terminus at the 95th Street Terminal southward to Vermont Avenue via existing highway medians and the median of Halsted Street. The Halsted Rail Alternative is analyzed in two geographic segments:

- Segment HA: From the 95th Street Terminal to the 119th Street yard and shop area, including the communities of Roseland, Washington Heights, Morgan Park, and part of West Pullman

- Segment HB: south of the 119th Street yard and shop area, in the West Pullman community and the Village of Calumet Park

New stations would be constructed at 103rd Street on the boundary between the Roseland and Washington Heights community areas, at 111th Street on the boundary between the Roseland and Morgan Park community areas, at 119th Street in the West Pullman area, and at Vermont Avenue in West Pullman. All stations would have bus turnarounds and park & ride facilities. The park & ride facilities would be primarily surface parking lots; however, a multi-level parking structure would be constructed at the Vermont Avenue station.

5.6.1 Permanent Impacts and Mitigations - Halsted Rail Alternative

5.6.1.1 Segment HA

5.6.1.1.1 Topics with No Adverse Permanent Impacts

- Air Quality and Climate Change: No adverse air quality impacts from CO, GHG, $PM_{2.5}$, or MSAT emissions are anticipated.

- Biological Resources: Halsted Street is currently developed with commercial land uses. The introduction of an elevated rail line would have no impact on vegetation and wildlife habitats along this route.

- Energy: Energy consumption would increase due to the addition of new tracks and stations to the rail system; however, this increase in energy would not be adverse, as it is not expected to affect local or regional energy availability, or require the development of new sources. Some beneficial reduction in fuel consumption would occur if the RLE Project were to cause motorists to begin using transit for some trips.

- Geology and Soils: Operation of the Halsted Rail Alternative would not cause adverse changes to geology or soil resources.

- Cumulative: No cumulative adverse impacts are expected.

5.6.1.1.2 Topics with No Adverse Permanent Impacts After Mitigation

- Displacements: The Halsted Rail Alternative would have the fewest displaced residences and the most displaced commercial buildings of the rail alternatives. A total of 17 buildings would be displaced in Segment HA, of which 11 would be commercial buildings and 4 would be mixed-use buildings. With just compensation and relocation assistance per the Uniform Act, the permanent impacts would not be adverse, because there is available vacant land in the project area.

- Hazardous Materials: Operation of the Halsted Rail Alternative would have the potential to result in the release of hazardous materials and/or petroleum products into the environment from accidental spills. Spills are most likely to occur during activities such as equipment and grounds maintenance. Materials typically used for these activities include fuel, oil, paints, solvents, cleaning agents, herbicides, and pesticides. Adherence to applicable federal, state, and local regulations, as well as CTA's existing system-wide hazardous material usage, storage, and disposal plans and procedures, would minimize the potential for impacts.

- Land Use and Economic Development: The substations at 101st Street, 110th Street, and 118th Street, and the park & ride lots at the 103rd Street and 111th Street stations would be inconsistent with adjacent land uses. These uses consist primarily of street-facing commercial developments along Halsted Street, with single-family residential on surrounding blocks. The Halsted Rail Alternative would require the most commercial building displacements of the alternatives under consideration for the RLE Project; however, some of the lost commercial space would be replaced on the ground floor of the station parking facilities or in new development incentivized by the new transit line. Mitigations include zoning variances, screening, landscaping, lighting appropriate for adjacent land uses, and appropriate architectural design and massing. Property displacements would be mitigated through just compensation and relocation assistance as required by the Uniform Act. There would be no adverse permanent impacts on land use following proposed mitigation measures. The overall impact on local economic development would be beneficial.

- Noise and Vibration: There would be a substantial number of affected receptors in areas where the train speeds would reach 55 mph. Noise-affected residential receptors along the project corridor would require mitigation. A 3- to 4-foot-high noise barrier installed along the outer tracks of the aerial structure would reduce the wheel-rail noise that would propagate into the surrounding community. There would be moderate (not adverse) noise impacts after mitigation. No adverse vibration impacts are anticipated.

- Parklands and Community Facilities: The Halsted Rail Alternative Segment HA would not pass through any parkland; however, the alternative would displace one community facility, the Illinois Department of Employment Security office, which could be relocated nearby. After mitigation, the operation of the Halsted Rail Alternative would not result in adverse impacts. By improving travel time, operation of the ROW Option would improve access to community facilities within walking distance (½ mile) of the station locations.

- Neighborhood and Community Impacts: The overall community character impact of adding the elevated structure to the neighborhood would be negative, but not adverse. The Halsted Rail Alternative would displace one community resource in Segment HA: the Illinois Department of Employment Security office, which would be moved to another location nearby to avoid adverse impacts. See Section 5.3.1.1.2 for proposed mitigation measures.

- Safety and Security: The impact on major incidents would not be adverse. A large volume of pedestrians would be expected to cross the major streets near the stations without positive traffic control. This impact would be mitigated through the installation of traffic signals, median refuge islands, and/or other pedestrian crossing treatments as applicable in coordination with the results of traffic studies completed during the final design phase, resulting in no adverse permanent impacts after mitigation. Impacts on security at parking facilities would be mitigated by implementing open design and would not be adverse after mitigation. New train stations would be unlikely to have much, if any, impact on neighborhood crime. Overall safety and security impacts would not be adverse after mitigation.

- Water Resources: There would be no adverse permanent impacts on water resources in Segment HA after mitigation. Pervious area is anticipated to decrease in some areas; the decrease in pervious area could be mitigated by incorporating new stormwater management structures and establishing an erosion control plan. The rail service would replace automobile trips; there would be an associated reduction in runoff contaminants that collect on streets. For this reason, the Halsted Rail Alternative is anticipated to have a minor but positive water quality impact. Due to the predominance of impervious surfaces throughout the project area, minimal percolation to the underlying groundwater occurs in the API; therefore, any potential increases in contaminated surface water runoff would have no adverse impact on groundwater quality. There would be no adverse permanent impacts on stormwater after mitigation.

- Transportation: There would be four intersections in the AM peak and six intersections in the PM peak in Segment HA where the Halsted Rail Alternative would increase traffic congestion beyond applicable thresholds, largely due to cars accessing the park & ride facilities at stations. Mitigation measures such as optimization of signal cycles would render traffic conditions no worse than under the No Build Alternative. The park & ride facilities may also draw some motorists away from nearby highways, thereby improving traffic flow for automobiles and freight trucks. The Halsted Rail Alternative would have no impact on freight rail operations, because it would only cross above the UPRR ROW in the median of I-57. Existing bus routes would be adjusted to interface better with the RLE stations and service. New pedestrian and bicycle facilities would also be included near stations to provide safe access, which would improve transit connections. The Halsted Rail Alternative would also provide a convenient point for bicyclists to access the Major Taylor Trail at 119th Street. Transit access to the project area would substantially improve, particularly for low-income residents who do not have access to automobiles. The overall transportation impacts would be beneficial.

5.6.1.1.3 Topics with Adverse Permanent Impacts After Mitigation

- Historic and Cultural Resources: Three resources and one district in Segment HA have been identified as eligible for listing on the NRHP. One of the resources would be adversely affected due to alteration of setting: the substation at 10227 S. Halsted Street.

- Visual and Aesthetic Conditions: The Halsted Rail Alternative would have adverse impacts at the transition from the I-57 ROW to Halsted Street. The visual impact due to the height of the elevated structure could not be mitigated.

5.6.1.2 Segment HB

5.6.1.2.1 Topics with No Adverse Permanent Impacts

- Air Quality and Climate Change: No adverse air quality impacts from CO, GHG, $PM_{2.5}$, or MSAT emissions are anticipated.

- Biological Resources: Halsted Street is currently developed with commercial land uses. The introduction of an elevated rail line would have no impact on vegetation and wildlife habitats along this route.

- Energy: Energy consumption would increase due to the addition of new tracks and stations to the rail system; however, this increase in energy would not be adverse, as it is not expected to affect local or regional energy availability, or require the development of new sources. Some beneficial reduction in fuel consumption would occur if the RLE Project were to cause motorists to begin using transit for some trips.

- Geology and Soils: Operation of the Halsted Rail Alternative would not cause adverse changes to geology or soil resources.

- Cumulative: No cumulative adverse impacts are expected.

5.6.1.2.2 Topics with No Adverse Permanent Impacts After Mitigation

- Displacements: The Halsted Rail Alternative would have the fewest displaced single-family residences and the most displaced commercial buildings of the rail alternatives. A total of 15 buildings would be displaced in Segment HB, of which 11 would be single-family residences and 4 would be commercial properties. With just compensation and relocation assistance per the Uniform Act, the permanent impacts would not be adverse, because there is available vacant land in the project area.

- Hazardous Materials: There would be no adverse permanent impacts related to hazardous materials after mitigation. Impacts and mitigation measures for Segment HB would be the same as those for Segment HA, as discussed above in Section 5.6.1.1.

- Noise and Vibration: No severe noise impacts would remain after mitigation. No adverse vibration impacts are anticipated. Impacts and mitigation measures for Segment HB would be the same as those for Segment HA, as discussed above in Section 5.6.1.1.

- Parklands and Community Facilities: The Halsted Rail Alternative Segment HB alignment would not pass through any parkland or displace any community facilities. By improving travel time, operation of the alternative would improve access to community facilities within walking distance (½ mile) of the station locations.

- Safety and Security: The impact on major incidents would not be adverse. A large volume of pedestrians would be expected to cross the major streets near the stations without positive traffic control. This impact would be mitigated through the installation of traffic signals, median refuge islands, and/or other pedestrian crossing treatments as applicable in coordination with the results of traffic studies completed during the final design phase, resulting in no adverse permanent impacts after mitigation. Impacts on security at parking facilities would be mitigated by implementing open design and would not be adverse after mitigation. New train stations would be unlikely to have much, if any, impact on neighborhood crime. Overall safety and security impacts would not be adverse after mitigation.

- Water Resources: There would be no adverse permanent impacts on water resources in Segment HB after mitigation. Impacts and mitigation measures for Segment HB would be the same as those for Segment HA, as discussed above in Section 5.6.1.1.

- Transportation: There would be nine intersections in the AM peak and nine intersections in the PM peak in Segment HB where the Halsted Rail Alternative would increase traffic congestion beyond applicable thresholds, largely due to cars accessing the park & ride facilities at stations. Mitigation measures such as optimization of signal cycles, addition of turn lanes, and restriping of through and turn lanes would render traffic conditions no worse than under the No Build Alternative. The park & ride facilities may also draw some motorists away from nearby highways, thereby improving traffic flow for automobiles and freight trucks. There are no freight rail tracks in the area, and the Halsted Rail Alternative would have no impact on passenger rail operations, because it would only cross above the Metra Electric District tracks at Halsted Street. Existing bus routes would be adjusted to interface better with the RLE stations and service. New pedestrian and bicycle facilities would also be included near stations to provide safe access, which would improve transit connections. Transit access to the project area would substantially improve, particularly for low-income residents who do not have access to automobiles. Unlike the BRT and UPRR Rail Alternatives, the Halsted Rail Alternative would not serve the Altgeld Gardens public housing project. The overall transportation impacts would be beneficial.

5.6.1.2.3 Topics with Adverse Permanent Impacts After Mitigation

- Historic and Cultural Resources: Two resources in Segment HB have been identified as eligible for listing on the NRHP, and both are anticipated to be adversely affected due to change in setting: the church at 12433-12439 S. Halsted Street and the cemetery gatehouse at 12540 S. Halsted Street.

- Land Use and Economic Development: The substation at 126th Street would be inconsistent with adjacent land uses, which are primarily single-story homes. Due to the large size of the garage at the Vermont Avenue station, the impact on existing land use character would be adverse. Some commercial displacements would be necessary; however, some of the lost commercial space could be replaced on the ground floor of the station parking facilities or in new development incentivized by the new transit line. Mitigations include zoning variances, screening, landscaping, lighting appropriate for adjacent land uses, and appropriate architectural design and massing. Property displacements would be mitigated through just compensation and relocation assistance as required by the Uniform Act. There would be no adverse permanent impacts on land use following proposed mitigation measures other than the garage at the Vermont Avenue station. The overall impact on local economic development would be beneficial.

- Neighborhood and Community Impacts: The Halsted Rail Alternative would have an adverse impact on visual character that cannot be mitigated in the West Pullman community along Green Street between Vermont Avenue and 128th Place. The single-family homes on the east side of the block would be acquired and removed to construct a seven-story park & ride garage. The garage would be out of scale and inconsistent with the single-story residential character of the neighborhood. No available mitigation measures would effectively offset this adverse impact.

- Visual and Aesthetic Conditions: The Vermont Street station would have adverse impacts after mitigation. Mitigations to reduce visual impacts would include shielding exterior lighting and providing special consideration for lighting placement adjacent to sensitive areas such as residential communities; providing landscaping and/or visual screening at park & ride locations where possible; designing the parking structure to match the character of the surrounding fabric; and using urban design techniques to reduce massing. The height of the park & ride structure at Vermont Station and its proximity to residences would cause an adverse visual impact despite mitigation.

5.6.2 Construction Impacts and Mitigations - Halsted Rail Alternative

5.6.2.1 Segment HA

5.6.2.1.1 Topics with No Adverse Construction Impacts

- Displacements: Because all construction activities would occur on land acquired for the permanent ROW, there would be no temporary displacement or relocation construction impacts.

- Noise and Vibration: Based on the types of construction equipment and activities identified in the Description of Construction, construction noise levels are not expected to exceed the FTA construction noise limits.

- Energy: The construction activities identified in the Description of Construction would not require fuel consumption and energy use at a scale that would adversely affect energy availability, and would not require development of new energy sources. No adverse impacts would occur.

- Geology and Soils: The Halsted Rail Alternative would require few changes to surficial geology and soils, which have been affected by prior development in all parts of the alignment. Excavation would be primarily needed for the elevated structure supports, at-grade trackbeds, and park & ride facilities. Excavation activities are not expected to have adverse impacts.

- Cumulative: No adverse cumulative impacts are expected to occur. There are not currently any foreseeable nearby projects of sufficient magnitude to cause impacts that would be under construction at the same time as RLE. Should such a project occur, CTA would coordinate construction activities to minimize impacts.

5.6.2.1.2 Topics with No Adverse Construction Impacts After Mitigation

- Air Quality and Climate Change: No adverse air quality impacts due to construction activities are anticipated after mitigation. Impacts and mitigation measures would be similar to those for the UPRR Rail Alternative, as described above in Section 5.3.2.1.

- Biological Resources: There would be no adverse construction impacts on biological resources after mitigation. Impacts and mitigation measures would be similar to those for the UPRR Rail Alternative, as described above in Section 5.3.2.1.

- Hazardous Materials: There would be no adverse construction impacts related to hazardous materials after mitigation. Impacts and mitigation measures would be similar to those for the UPRR Rail Alternative, as described above in Section 5.3.2.1.

- Land Use and Economic Development: The land use impacts from construction would not be adverse after mitigation. Due to the nature and size of the small businesses along Halsted Street, some businesses might not be able to maintain their customer base and could potentially lose business from construction-related disruptions. Mitigation methods would include focusing construction activities primarily during the least impactful times of day and other best management practices. There would be short-term beneficial economic impacts from construction jobs. Due to the short-term nature of construction activities, these impacts would not be adverse.

- Parklands and Community Facilities: After mitigation, no parkland or community facilities would have adverse construction impacts. Construction activities would generate temporary noise and air quality impacts, and change access to parks and community facilities. These impacts would be temporary in nature and would be mitigated through the use of construction best management practices; by alerting users of construction activities; and by providing clearly marked detour routes and alternate parking.

- Neighborhood and Community Impacts: Construction activities would be more disruptive than they would be under the UPRR Rail Alternative, because the Halsted Rail Alternative elevated structure would be built in the median of a major commercial street instead of on private, off-street ROW. Community disruption would occur during construction activities, with intensive construction occurring over a period of approximately 3 years. Storage of materials, equipment, and trucks would introduce temporary intermittent visual impacts within communities, but these impacts would not be adverse given their temporary nature and CTA's use of best management practices. Temporary dust, noise, and visual impacts would occur. Construction would be temporary, and major activities would be scheduled so as not to conflict with community events to the extent possible. Businesses around the alignment and parking structure could be affected by construction activities, construction-related traffic, and road and sidewalk closures. This potentially adverse impact would be mitigated through early notification of construction activities, provision of temporary alternate access routes, and advertising programs to increase the visibility of affected businesses during construction.

- Safety and Security: Impacts on emergency services, including access to the construction site and travel around the site, would not be adverse after mitigation, which includes minimizing detour lengths.

- Visual and Aesthetic Conditions: The visual impacts related to construction would not be adverse after mitigation. At locations where park & ride facilities would be created, impacts would include construction fencing, demolition of existing buildings or clearing of vacant lots, temporary street closures and related signage, or temporary lighting or entrances. The CTA would attempt to maintain as much existing vegetation as practical during construction, and would minimize temporary construction impacts on the neighborhood with measures such as limiting light trespassing from night lighting. Best management practices and debris-free construction areas would mitigate temporary visual impacts from the construction sites.

- Water Resources: There would be no adverse construction impacts on drainage, groundwater, or water quality after mitigation. There would be no adverse construction impacts on water resources after mitigation. Stormwater drainage mitigation measures would include incorporating new stormwater management structures and establishing an erosion control plan, including for construction activities at the locations of garages and park & ride lots. Water quality mitigation measures would include installing properly designed and maintained biological oil and grease removal systems, proper storage of hazardous materials, development and maintenance of an effective monitoring and cleanup program for spills and leaks of hazardous materials, proper storage and maintenance of equipment, periodic removal of landscape and construction debris, installation of detention basins to remove suspended solids, and regular monitoring of runoff water quality.

- Transportation: Construction of rail facilities, parking structures, and park & ride lots would require lane and sidewalk closures that would temporarily reduce roadway capacity. Temporary full closures of sections of Halsted Street would be needed for superstructure placement. These closures would cause temporarily increased travel times for both motorists and transit riders, and bus stop locations may be temporarily relocated. Bicycles and pedestrians would need to be rerouted around work areas. Detours would be provided to maintain access. Lanes on I-57 may also need to be temporarily closed to accommodate rail construction in the median, which would affect automobiles and freight trucks. Temporary full closure of sections of I-57 may also be needed. Closures would be scheduled during low-traffic periods to the extent feasible to minimize impacts. The UPRR freight tracks would remain active during construction. Temporary intermittent track closures may be needed to construct the elevated track in the median of I-57; however, construction would be staged to minimize disruption. With adherence to established construction management guidelines for rerouting traffic and transit service, no adverse construction impacts would occur after mitigation.

5.6.2.1.3 Topics with Adverse Construction Impacts After Mitigation

- Historic and Cultural Resources: Three resources and one district in Segment HA have been identified as eligible for listing on the NRHP. One of the resources would be adversely affected due to alteration of setting: the substation at 10227 S. Halsted Street.

5.6.2.2 Segment HB

5.6.2.2.1 Topics with No Adverse Construction Impacts

- Displacements: Because all construction activities would occur on land acquired for the permanent ROW, there would be no temporary displacement or relocation construction impacts.

- Noise and Vibration: Based on the types of construction equipment and activities identified in the Description of Construction, construction noise levels are not expected to exceed the FTA construction noise limits.

- Energy: The construction activities identified in the Description of Construction would not require fuel consumption and energy use at a scale that would adversely affect energy availability, and would not require development of new energy sources. No adverse impacts would occur.

- Geology and Soils: The Halsted Rail Alternative would require few changes to surficial geology and soils, which have been affected by prior development in all parts of the alignment. Excavation would be primarily needed for the elevated structure supports and park & ride facilities. Excavation activities are not expected to have adverse impacts.

- Cumulative: No adverse cumulative impacts are expected to occur. There are not currently any foreseeable nearby projects of sufficient magnitude to cause impacts that would be under construction at the same time as RLE. Should such a project occur, CTA would coordinate construction activities to minimize impacts.

5.6.2.2.2 Topics with No Adverse Construction Impacts After Mitigation

- Air Quality and Climate Change: No adverse air quality impacts due to construction activities are anticipated after mitigation. Impacts and mitigation measures would be similar to those for the UPRR Rail Alternative, as described above in Section 5.3.2.1.

- Biological Resources: There would be no adverse construction impacts on biological resources after mitigation. Impacts and mitigation measures would be similar to those for the UPRR Rail Alternative, as described above in Section 5.3.2.1.

- Hazardous Materials: There would be no adverse construction impacts related to hazardous materials after mitigation. Impacts and mitigation measures would be similar to those for the UPRR Rail Alternative, as described above in Section 5.3.2.1.

- Neighborhood and Community Impacts: There would be no adverse construction impacts on neighborhoods and communities after mitigation. Impacts and mitigation measures would be similar to those for Segment HA, as described above in Section 5.6.2.1.

- Parklands and Community Facilities: After mitigation, no parkland or community facilities would have adverse construction impacts. Impacts and mitigation measures would be similar to those for Segment HA, as described above in Section 5.6.2.1.

- Safety and Security: Impacts on emergency services, including access to the construction site and travel around the site, would not be adverse after mitigation, which includes minimizing detour lengths.

- Visual and Aesthetic Conditions: Construction impacts would be longer in nature at the Vermont Avenue station than at others along the RLE due to the need to construct a multi-level parking structure. Otherwise, impacts and mitigations would be similar to those for Segment HA, as described above in Section 5.6.2.1.

- Land Use and Economic Development: The land use impacts from construction would not be adverse after mitigation. Due to the nature and size of the small businesses along Halsted Street, some businesses might not be able to maintain their customer base and could potentially lose business from construction-related disruptions. This effect would be less pronounced in Segment HB because there are fewer businesses along this portion of Halsted Street than in Segment HA. Mitigation methods would include focusing construction activities primarily during the least impactful times of day and other best management practices. There would be short-term beneficial economic impacts from construction jobs. Due to the short-term nature of construction activities, these impacts would not be adverse.

- Water Resources: There would be no adverse construction impacts on water resources after mitigation. Impacts and mitigation measures would be similar to those for the UPRR Rail Alternative, as discussed above in Section 5.3.2.1.

- Transportation: Construction of rail facilities, parking structures, and park & ride lots would require lane and sidewalk closures that would temporarily reduce roadway capacity. Temporary full closures of sections of Halsted Street would be needed for superstructure placement. These closures would cause temporarily increased travel times for both motorists and transit riders, and bus stop locations may be temporarily relocated. Bicycles and pedestrians would need to be rerouted around work areas. Closures would be scheduled during low-traffic periods to the extent feasible to minimize impacts. The Metra Electric District passenger rail tracks would remain active during construction. Temporary intermittent track closures may be needed to construct the elevated track in the median of Halsted Street; however, construction would be staged to minimize disruption. With adherence to established construction management guidelines for rerouting traffic and transit service, no adverse construction impacts would occur after mitigation.

5.6.2.2.3 Topics with Adverse Construction Impacts After Mitigation

- Historic and Cultural Resources: Two resources in Segment HB have been identified as eligible for listing on the NRHP, and both are anticipated to be adversely affected due to change in setting: the church at 12433-12439 S. Halsted Street and the cemetery gatehouse at 12540 S. Halsted Street.

5.6.3 119th Street Yard and Shop

5.6.3.1 Permanent Impacts and Mitigations

5.6.3.1.1 Topics with No Adverse Permanent Impacts

- Air Quality and Climate Change: No adverse air quality impacts from CO, GHG, $PM_{2.5}$, or MSAT emissions are anticipated.

- Noise and Vibration: The noise generated at the 119th Street yard and shop would not exceed the FTA impact criteria at the residential receptors along 119th Street. As a result, noise mitigation would not be required for the 119th Street yard and shop. No adverse vibration impacts are anticipated.

- Transportation There would be no permanent adverse impacts on bicycle or pedestrian access resulting from the 119th Street yard and shop. Pedestrian access by the general public would be restricted and discouraged. Existing sidewalk near the yard along 119th, 120th, and Peoria Streets would remain. Because of the location of the yard, no public transportation would be affected. Existing on-street parking on Peoria Street would not be affected. Some parking would be provided for yard employees.

- Energy: Yard and shop operation would require additional fuel and energy resources, but not to the extent that it would affect local or regional fuel and energy availability, or require development of new energy sources. As such, no adverse impacts would occur.

- Geology and Soils: Operation of the 119th Street yard and shop would not cause adverse changes to geology or soil resources.

- Cumulative: No cumulative adverse impacts are expected.

5.6.3.1.2 Topics with No Adverse Permanent Impacts After Mitigation

- Biological Resources: There are a few relatively small patches of regenerating vegetation within the yard and shop area that could be used by migratory birds. Mitigation measures would be implemented during construction to avoid potential impacts. Mitigation measures may be required to reduce potential impacts on wildlife habitat, including preparing a detailed tree inventory, timing tree removal to occur outside the migratory bird nesting season, performing biological surveys if construction must occur during the nesting season, and replanting trees as required by applicable local codes and ordinances. There would be no adverse construction impacts on biological resources after mitigation.

- Displacements: The permanent envelope would affect six buildings within the West Pullman neighborhood, of which two would be mixed-use buildings and one would be a place of worship. With just compensation and relocation assistance per the Uniform Act, the permanent impacts would not be adverse, because there is available vacant land in the project area for relocation purposes.

- Hazardous Materials: There would be no adverse permanent impacts related to hazardous materials after mitigation. Operation of yard and shop would have the potential to result in the release of hazardous materials and/or petroleum products into the environment from accidental spills or from maintenance activities that require earthmoving in contaminated areas, which potentially exist on site. Additional information regarding such locations is provided in Section 4 of the *Hazardous Materials Technical Memorandum*. Measures to avoid such occurrences would include adherence to applicable federal, state, and local regulations, as well as CTA's existing system-wide hazardous material usage, storage, and disposal plans and procedures.

- Land Use and Economic Development: The yard and shop, as well as adjacent substation, would be located within an industrial area; therefore, these facilities would be consistent with existing land uses. The impact on existing land uses would not be adverse. The overall economic development impact would be beneficial.

- Neighborhood and Community Impacts: Neither the park & ride lot or the yard and shop facility would contribute to the growth and development of the community, which would reduce the overall potential of the Halsted Rail Alternative to encourage new development in the 119th Street station area; however, development could still occur in the remainder of the station area. Removal of the church and other property along Halsted Street would not be adverse after compliance with the Uniform Act. Other buildings in the area could be upgraded and adapted as replacements. There would be no adverse permanent impacts on neighborhoods and communities after mitigation.

- Parklands and Community Facilities: The 119th Street yard and shop would not pass through any parkland; however, the ROW would displace a place of worship, as discussed above under Neighborhood and Community Impacts.

- Safety and Security: Impacts on security at the 119th Street yard and shop would not be adverse after mitigation. Mitigation measures would include complying with relevant design standards to minimize intrusion and prevent graffiti.

- Visual and Aesthetic Conditions: The yard and shop would dramatically change the character and scale of the surrounding area, which includes light commercial and residential neighborhoods. Mitigations to reduce visual impacts would include shielding exterior lighting and providing special consideration for lighting placement adjacent to sensitive areas such as residential communities and providing landscaping and/or visual screening around the yard and shop where possible. Additional measures for the yard and shop would include designing the shop facility to be aesthetically compatible with surrounding structures and screening the yard through fencing, walls, or vegetation wherever necessary and possible. The permanent visual impacts would not be adverse after mitigation.

- Water Resources: There would be no adverse permanent impacts on water resources at the 119th Street yard and shop property after mitigation. Impacts and mitigation measures would be similar to those described for the UPRR Rail Alternative's 120th Street yard and shop above in Section 5.3.3.1.

5.6.3.1.3 Topics with Adverse Permanent Impacts After Mitigation

- Historic and Cultural Resources: One resource in the vicinity of the 119th Street yard and shop has been identified as eligible for listing on the NRHP, and is anticipated to be adversely affected due to alteration of setting: the Fire Department house at 931 W. 120th Street.

5.6.3.2 Construction Impacts and Mitigations

5.6.3.2.1 Topics with No Adverse Construction Impacts

- Displacements: Because all construction activities would occur on land acquired for the permanent ROW, there would be no temporary displacement or relocation construction impacts.

- Land Use and Economic Development: Because the yard and shop would be located in an industrial area, the construction activities would not be adverse for land use or economic development.

- Noise and Vibration: Based on the construction activities and equipment identified in the Description of Construction, construction noise levels are not expected to exceed the FTA construction noise limits using noise-reducing construction practices.

- Energy: Yard and shop construction activities identified in the Description of Construction would not require fuel consumption and energy use at a scale that would adversely affect energy availability, and would not require development of new energy sources. No adverse impacts would occur.

- Geology and Soils: Construction of the 119th Street yard and shop would require few changes to surficial geology and soils, which have been affected by prior development in all parts of the site. Excavation would be primarily needed for the at-grade trackbeds and shop buildings. Excavation activities are not expected to have adverse impacts.

- Cumulative: No adverse cumulative impacts are expected to occur. There are not currently any foreseeable nearby projects of sufficient magnitude to cause impacts that would be under construction at the same time as RLE. Should such a project occur, CTA would coordinate construction activities to minimize impacts.

5.6.3.2.2 Topics with No Adverse Construction Impacts After Mitigation

- Air Quality and Climate Change: No adverse air quality impacts due to construction activities are anticipated after mitigation. Proper traffic management during the construction period would mitigate any potential adverse effects. A Dust Control Plan would address in detail how dust would be controlled at all times at the construction site, the staging areas, and the access and egress routes.

- Biological Resources: There would be no adverse construction impacts on biological resources after mitigation. Impacts and mitigation measures would be similar to those described for the UPRR Rail Alternative's 120th Street yard and shop above in Section 5.3.3.2.

- Hazardous Materials: There would be no adverse construction impacts relating to hazardous materials after mitigation. Construction would result in generation of a large quantity of soil that could contain contaminated materials requiring off-site disposal. Such soils potentially exist on-site, and additional information regarding such locations is provided in Section 4 of the *Hazardous Materials Technical Memorandum*. Contaminated materials potentially encountered could include heavy metals, asbestos-containing material, and lead-based paint. Mitigation measures would include compliance with federal, state, and local laws and regulations regarding hazardous materials; focused site assessments for areas where earthmoving activities would occur; hazardous materials surveys of buildings; a Contaminated Material Management Plan; Health and Safety Plans for construction activities; Spill Prevention, Control, and Countermeasure Plans; and Construction Stormwater Pollution Prevention Plans.

- Neighborhood and Community Impacts: Temporary dust, noise, and visual impacts would occur on an intermittent basis, but impacts would not be adverse provided that best management practices were employed and nighttime construction near residences were limited to the extent practicable.

- Parklands and Community Facilities: After mitigation, no parkland or community facilities would have adverse construction impacts. Mitigation would include relocation of the displaced church, as described under operation impacts above in Section 5.6.3.1.

- Safety and Security: Impacts on emergency services, including access to the construction site and travel around the site, would not be adverse after mitigation, which includes minimizing detour lengths.

- Visual and Aesthetic Conditions: The construction of the yard and shop would last 1 to 3 years and would have high visual impacts. The removal of existing buildings and parking lots, including associated debris, would be more substantial than other locations along the project corridor. The visual impacts related to construction would not be adverse after mitigation. The CTA would attempt to maintain as much existing vegetation as practical during construction, and minimize temporary construction impacts on the neighborhood with measures such as limiting light trespassing from night lighting. Best management practices and debris-free construction areas would mitigate temporary visual impacts from the construction sites.

- Water Resources: There would be no adverse construction impacts on water resources at the 119th Street yard and shop property after mitigation. Impacts and mitigation measures would be similar to those described for the UPRR Rail Alternative's 120th Street yard and shop above in Section 5.3.3.2.

- Transportation: The construction associated with the 119th Street yard and shop would temporarily affect the physical capacity of roadways and intersections requiring detours at 120th Street and Halsted Street. Superstructure erection would require temporary closure of all traffic along sections of Halsted Street. This may cause increased travel times for automobiles and transit users, and possibly shift traffic volumes to other streets. Bus stop locations may be temporarily closed or relocated during construction activities, and detours would be necessary. Temporary lane closures on portions of 119th Street and 120th Street may occur due to maintenance of traffic activities during construction. With adherence to established construction management guidelines for rerouting traffic and transit service, no adverse construction impacts would occur after mitigation.

5.6.3.2.3 Topics with Adverse Construction Impacts After Mitigation

- Historic and Cultural Resources: One resource in the vicinity of the 119th Street yard and shop has been identified as eligible for listing on the NRHP, and is anticipated to be adversely affected due to alteration of setting: the Fire Department house at 931 W. 120th Street.

Section 6
Impacts Remaining After Mitigation

As discussed above in Section 5, none of the alternatives would have disproportionately high and adverse effects on Environmental Justice populations. The entire project area comprises predominantly minority populations. All of the impacts and benefits of the alternatives would accrue to the same minority populations, and few project benefits would occur outside the project area. Some of the alternatives would, however, still result in non-disproportionate adverse impacts that cannot be mitigated, as summarized in the following subsections and in Table 6-1. Construction and cumulative impacts are discussed under each of the other impact categories where applicable.

Table 6-1: Adverse Impacts Remaining After Mitigation by Alternative (Not Disproportionate)

Impact Category	No Build	BRT	UPRR ROW Option	UPRR East Option	UPRR West Option	Halsted
Displacements	No	No	No	No	No	No
Land Use and Economic Development	No	No	No	No	No	Yes
Noise and Vibration	No	No	No	No	No	No
Energy	No	No	No	No	No	No
Air Quality and Climate Change	No	No	No	No	No	No
Biological Resources	No	No	No	No	No	No
Hazardous Materials	No	No	No	No	No	No
Neighborhood and Community	No	No	No	Yes	Yes	Yes
Parklands and Community Facilities	No	No	No	No	No	No
Safety and Security	No	No	No	No	No	No
Visual and Aesthetic Conditions	No	No	No	Yes	Yes	Yes
Water Resources	No	No	No	No	No	No
Transportation	No	No	No	No	No	No
Historic and Cultural Resources	No	No	No	No	No	Yes
Geology and Soils	No	No	No	No	No	No
Cumulative	No	No	No	No	No	No

BRT = Bus Rapid Transit, UPRR = Union Pacific Railroad, ROW = Right-of-Way

6.1 No Build Alternative

No adverse impacts would occur as a result of the No Build Alternative. As such, there would be no disproportionately high and adverse effects on low-income and minority populations. The communities in the project area are, however, currently underserved by the CTA rail system compared to many other parts of Chicago, and the No Build Alternative would lack the beneficial increase in economic development and livability that the build alternatives would provide.

6.2 Bus Rapid Transit Alternative

The BRT Alternative would result in permanent noise and vibration impacts that would affect both residences and community facilities along the alignment. Impacts would not disproportionately affect minority or low-income populations.

6.3 Union Pacific Railroad Rail Alternative - Right-of-Way Option

6.3.1 Segment UA

The ROW Option would have no adverse impacts after mitigation. As such, there would be no disproportionately high and adverse effects on low-income and minority populations.

6.3.2 Segment UB

The ROW Option would have no adverse impacts after mitigation. As such, there would be no disproportionately high and adverse effects on low-income and minority populations.

6.3.3 120th Street Yard and Shop

The 120th Street yard and shop would have no adverse impacts after mitigation. As such, there would be no disproportionately high and adverse effects on low-income and minority populations.

6.4 Union Pacific Railroad Rail Alternative - East Option

6.4.1 Segment UA

The East Option would have adverse impacts remaining after mitigation in Segment UA in the following categories:

- Visual and Aesthetic Conditions (related to community visual character north of I-57 and at 117th Street and Prairie Avenue)
- Neighborhood and Community Impacts (related to community visual character north of I-57 and at 117th Street and Prairie Avenue)

Impacts and benefits would occur entirely within the same minority and low-income communities. As such, no disproportionately high and adverse effects on minority or low-income communities would occur.

6.4.2 Segment UB

The East Option would have no adverse impacts after mitigation in Segment UB. As such, there would be no disproportionately high and adverse effects on low-income and minority populations.

6.4.3 120th Street Yard and Shop

The 120th Street yard and shop would have no adverse impacts after mitigation. As such, there would be no disproportionately high and adverse effects on low-income and minority populations.

6.5 Union Pacific Railroad Rail Alternative - West Option

6.5.1 Segment UA

The West Option would have adverse impacts remaining after mitigation in Segment UA in the following categories:

- Visual and Aesthetic Conditions (related to community visual character north of I-57, between 99th and 103rd Streets, near 103rd Street station, and near Michigan Avenue station)
- Neighborhood and Community Impacts (related to community visual character north of I-57, between 99th and 103rd Streets, near 103rd Street station, and near Michigan Avenue station)

Impacts and benefits would occur entirely within the same minority and low-income communities. As such, no disproportionately high and adverse effects on minority or low-income communities would occur.

6.5.2 Segment UB

The West Option would have no adverse impacts after mitigation in Segment UB. As such, there would be no disproportionately high and adverse effects on low-income and minority populations.

6.5.3 120th Street Yard and Shop

The 120th Street yard and shop would have no adverse impacts after mitigation. As such, there would be no disproportionately high and adverse effects on low-income and minority populations.

6.6 Halsted Rail Alternative

6.6.1 Segment HA

The Halsted Rail Alternative would have adverse impacts remaining after mitigation in Segment HA in the following categories:

- Historic and Cultural Resources
- Visual and Aesthetic Conditions (related to community visual character at the transition from I-57 to Halsted Street)

Impacts and benefits would occur entirely within the same minority and low-income communities. As such, no disproportionately high and adverse effects on minority or low-income communities would occur.

6.6.2 Segment HB

The Halsted Rail Alternative would have adverse impacts remaining after mitigation in Segment HB in the following categories:

- Historic and Cultural Resources
- Land Use and Economic Development
- Neighborhood and Community Impacts (related to community visual character at Vermont Station)
- Visual and Aesthetic Conditions (related to community visual character at Vermont Station)

Impacts and benefits would occur entirely within the same minority and low-income communities. As such, no disproportionately high and adverse effects on minority or low-income communities would occur.

6.6.3 119th Street Yard and Shop

The 119th Street yard and shop would have adverse impacts remaining after mitigation in the category of Historic and Cultural Resources. Impacts and benefits would occur entirely within the same minority and low-income communities. As such, no disproportionately high and adverse effects on minority or low-income communities would occur.

Section 7
Environmental Justice Public Involvement

Public involvement summary to be added following completion of the Environmental Justice outreach process.

Section 8
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Appendix A
Limited English Proficiency (LEP) Assessment

CWC Transit Group

Memorandum

To: *CTA*

From: *CWC Transit Group*

Date: *July 13, 2009*

Subject: *Red Line Extension Limited English Proficiency Assessment*

Upon further analysis of the Limited English Proficiency (LEP) needs of the CTA Red Line Extension Project Area, we have determined that public outreach materials should be prepared in both English and Spanish.

Looking at census data within each tract adjacent to the Locally Preferred Alternative (LPA) we see that there are several tracts where over 35% of the citizens speak Spanish/Spanish Creole. Construction of the Red Line Extension Project can have large impacts on the community, even more so on the properties adjacent to the LPA. The CTA needs to ensure that every citizen potentially affected by this project is made aware of possible impacts on their neighborhood.

Analysis was conducted at the tract level by specifically selecting those tracts adjacent to the LPA Right of Way (ROW). Refer to the attached LEP Baseline Report (Enclosure 1) and the corresponding Census Tract map (Enclosure 2) for detailed data on the specific tracts and languages used within each.

Enclosures:

1. ***LEP Baseline Report***
2. ***Map of Census Tracts along LPA ROW***

cc: ***Melissa Peters***

Limited English Proficiency (LEP) Baseline Report

CTA Red Line

Executive Order 13166 "Improving Access to Services for Persons with Limited English Proficiency" requires all recipients of federal funds to provide meaningful access to persons who are limited in their English proficiency (LEP). The United States (U.S.) Department of Justice defines LEP individuals as those "who do not speak English as their primary language and who have a limited ability to read, write, speak, or understand English" (67 FR 41459). Data about LEP populations was gathered in the U.S. Census 2000. For data analysis purposes, the Census divides the states of the United States into counties and divides counties into tracts.

Within area tracts, Census data record the presence of persons who describe their ability to speak English as less than "Very Well." The table below shows the percentages of adults who speak English less than "Very Well" by language category. Additionally, 175 households or 1.0% of households within area tracts reported to the Census that their household was linguistically isolated, meaning that all household members over the age of fourteen had at least some difficulty with English. Thus, Census data indicate the presence of LEP populations.

Table. Census Data: Percent of Adult Speakers Who Speak English Less than Very Well*

		Percent of Adult Speakers Who Speak English Less than Very Well			
Census Geographies	**Total Adult Population**	**Spanish Language Speakers**	**Other Indo European Language Speakers**	**Asian and Pacific Island Language Speakers**	**Other Language Speakers**
Tracts					
Tract 4906.00 Cook County	1,331	0.6%	0.0%	0.5%	0.0%
Tract 4907.00 Cook County	2,709	0.6%	0.3%	0.0%	0.2%
Tract 4910.00 Cook County	4,356	0.7%	0.4%	0.4%	0.0%
Tract 4911.00 Cook County	3,986	0.7%	0.0%	0.0%	0.0%
Tract 4912.00 Cook County	1,949	0.3%	0.3%	0.0%	0.0%
Tract 4913.00 Cook County	2,470	1.5%	0.3%	0.0%	0.0%
Tract 5104.00 Cook County	33	15.2%	0.0%	0.0%	0.0%
Tract 5301.00 Cook County	1,993	21.9%	0.0%	0.0%	0.0%
Tract 5302.00 Cook County	4,577	1.0%	0.0%	0.7%	0.0%

Tract 5305.00 Cook County	10,336	0.6%	0.7%	0.0%	0.3%
Tract 5306.00 Cook County	2,699	0.7%	1.2%	0.0%	0.0%
Tract 5401.00 Cook County	5,305	2.8%	0.0%	0.0%	0.0%

Data Source: United States Census 2000 (Table P19) as of February 9, 2008 for persons age 18 and older.

* The data on ability to speak English represent the Census respondent's own perception about his ability to speak English (United States Census 2000 Metadata).

Since LEP is partially defined as a limited ability to read and write English, literacy data were also consulted. Indirect literacy estimates for adults were calculated by the National Center for Education Statistics based on 2003 survey data for states and counties. None of the geographies in study area meet the requirements to be included in the National Institute for Literacy study; thus, literacy data is not available. In conclusion, the data indicate the likelihood of LEP populations in the area.

To determine the languages of the LEP populations, Census data were consulted for project area tracts. The table below details the top five languages spoken by the total adult population (LEP and non-LEP) for each tract.

Table. Census Data: Top Five Languages Spoken by the Adult Population

Census Geographies	**Language 1**	**Language 2**	**Language 3**	**Language 4**	**Language 5**
Tracts					
Tract 4906.00 Cook County	English 93.2%	Spanish/Spanish Creole 2.3%	Tagalog 2.3%	French (Patois, Cajun) 1.8%	Korean 0.4%
Tract 4907.00 Cook County	English 96.4%	Spanish/Spanish Creole 2.1%	German 0.6%	Hebrew 0.5%	Korean 0.4%
Tract 4910.00 Cook County	English 96.9%	Spanish/Spanish Creole 2.2%	Tagalog 0.4%	French (Patois, Cajun) 0.4%	Korean 0.2%
Tract 4911.00 Cook County	English 97.7%	Spanish/Spanish Creole 1.3%	Japanese 0.4%	German 0.3%	Italian 0.2%
Tract 4912.00 Cook County	English 96.8%	French (Patois, Cajun) 1.0%	Spanish/Spanish Creole 0.9%	Tagalog 0.8%	German 0.3%
Tract 4913.00 Cook County	English 96.8%	Spanish/Spanish Creole 2.1%	French Creole 0.9%	French (Patois, Cajun) 0.3%	-
Tract 5104.00 Cook County	English 60.6%	Spanish/Spanish Creole 39.4%	-	-	-
Tract 5301.00 Cook County	English 59.5%	Spanish/Spanish Creole	Other Slavic languages	German 0.6%	Italian 0.4%

		38.9%	0.7%		
Tract 5302.00 Cook County	English 96.2%	Spanish/Spanish Creole 2.6%	Tagalog 0.7%	German 0.2%	Other Pacific Island languages 0.2%
Tract 5305.00 Cook County	English 94.3%	Spanish/Spanish Creole 2.1%	French (Patois, Cajun) 1.1%	Arabic 0.8%	German 0.6%
Tract 5306.00 Cook County	English 96.6%	Spanish/Spanish Creole 1.7%	Polish 1.0%	Russian 0.3%	French (Patois, Cajun) 0.3%
Tract 5401.00 Cook County	English 95.1%	Spanish/Spanish Creole 4.8%	Italian 0.1%	-	-
Data Source: United States Census 2000 (Table PCT10) as of February 9, 2008.					

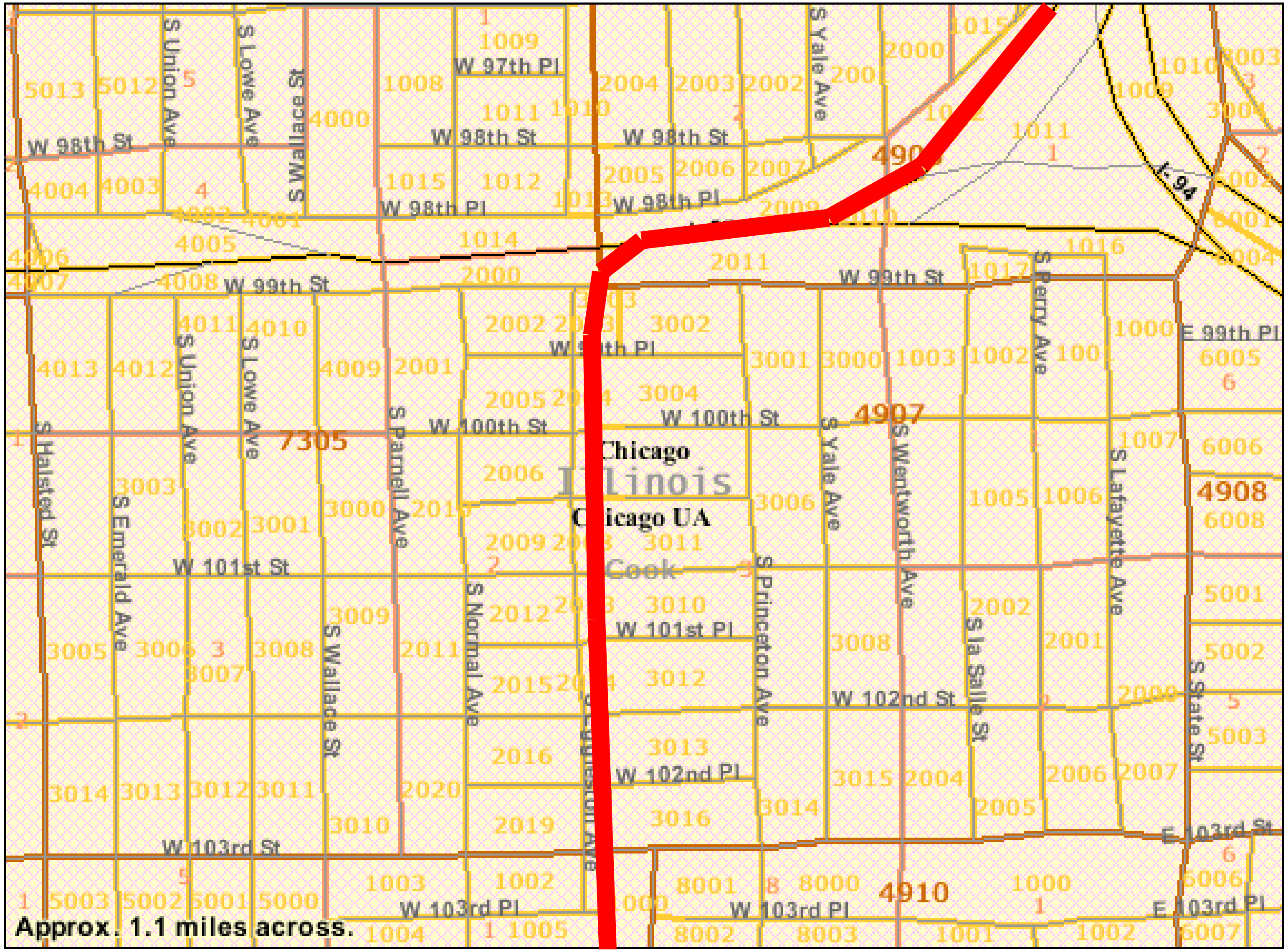
Therefore, the tracts data does not indicate the presence of LEP language groups that exceed the Department of Justice's Safe Harbor threshold of 5% or 1,000 persons. [However, the following measures will be taken to ensure LEP persons meaningful access: enter any measures to be taken to ensure meaningful access if applicable]. Thus, the requirements of Executive Order 13166 appear to be satisfied.

Citations

- "Improving Access to Services for Persons with Limited English Proficiency," 3 Code of Federal Regulations 13166. 2001 ed.
- "Guidance to Federal Financial Assistance Recipients Regarding Title VI Prohibition Against National Origin Discrimination Affecting Limited English Proficient Persons," 67 Federal Register 117 (18 June 2002), pp. 41459.
- U.S. Bureau of the Census. Census 2000: Summary File 3. Washington: The Bureau, 2008.
- National Center for Education Statistics. "State & County Estimates of Low Literacy." National Assessment of Adult Literacy. 2009. http://nces.ed.gov/naal/estimates/Index.aspx.
- National Center for Education Statistics. Common Core of Data. Washington: NCES.

Legend

- Census Tract Boundary
- Block Group Boundary
- Block Boundary
- Major Road
- Street
- Stream/Waterbody



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S Normal Ave
S Princeton Ave
S Yale Ave
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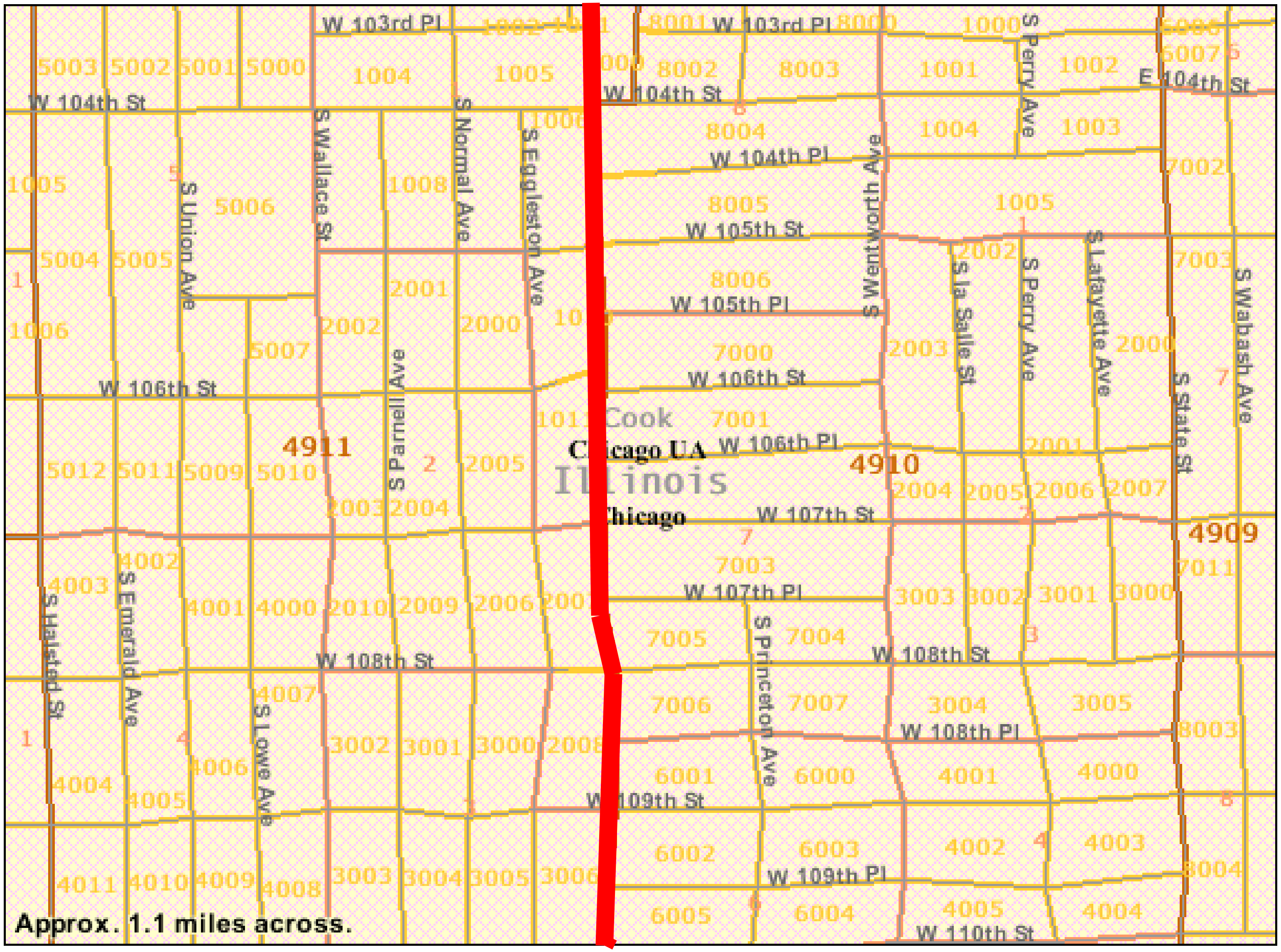
S Perry Ave
S la Salle St
S Lafayette Ave
S State St
I-94
7305
4907
4908
4910
490
Chicago
Illinois
Chicago UA
Cook
Approx. 1.1 miles across.

Census Tract, Block Group, and Block Location Map

Legend

- Census Tract Boundary
- Block Group Boundary
- Block Boundary
- Major Road
- Street
- Stream/Waterbody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Illinois
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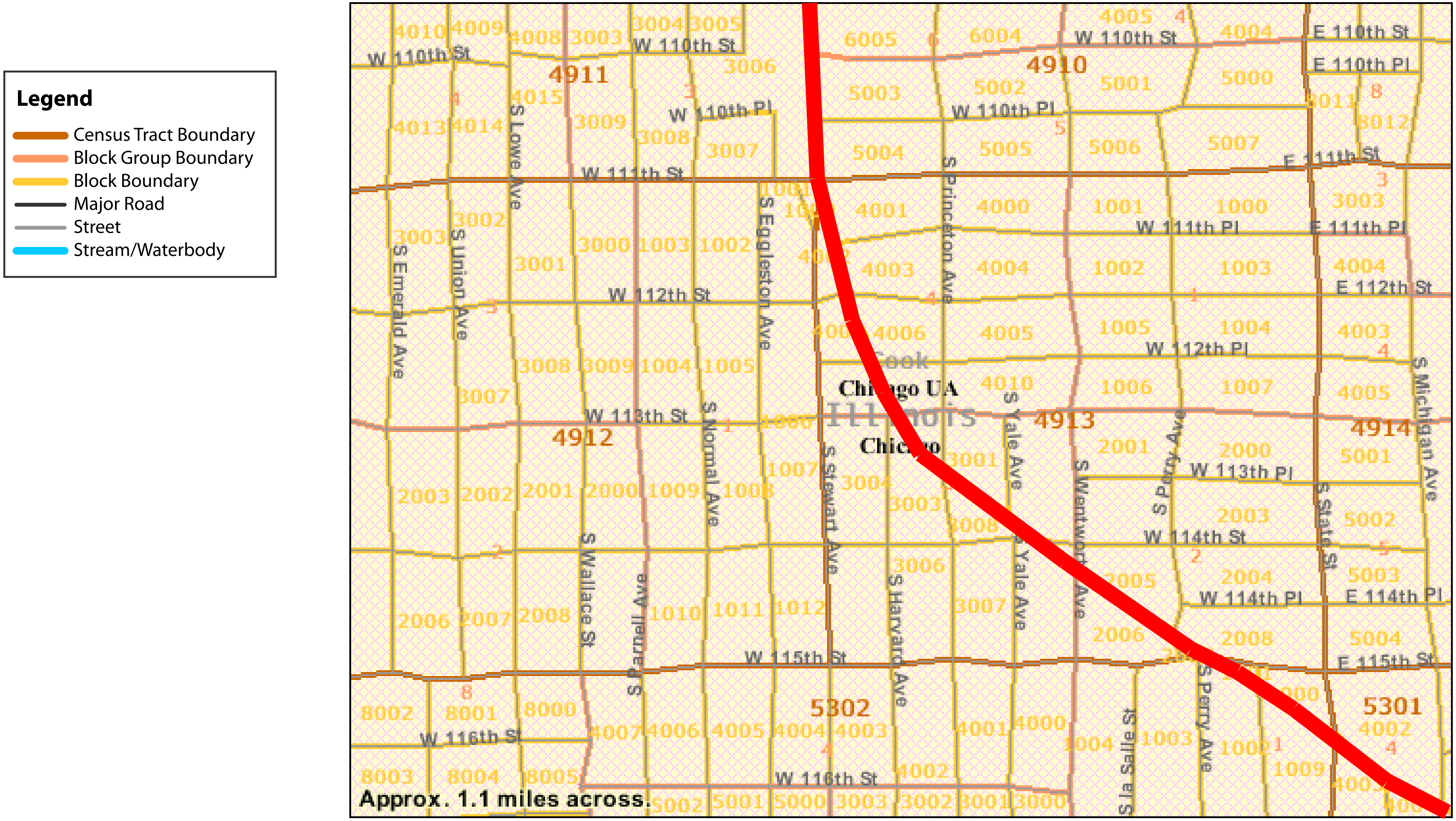
Approx. 1.1 miles across.

Census Tract, Block Group, and Block Location Map


Legend
Census Tract Boundary
Block Group Boundary
Block Boundary
Major Road
Street
Stream/Waterbody
4910
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5301
5302
W 110th St
W 110th Pl
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S Harvard Ave
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S Yale Ave
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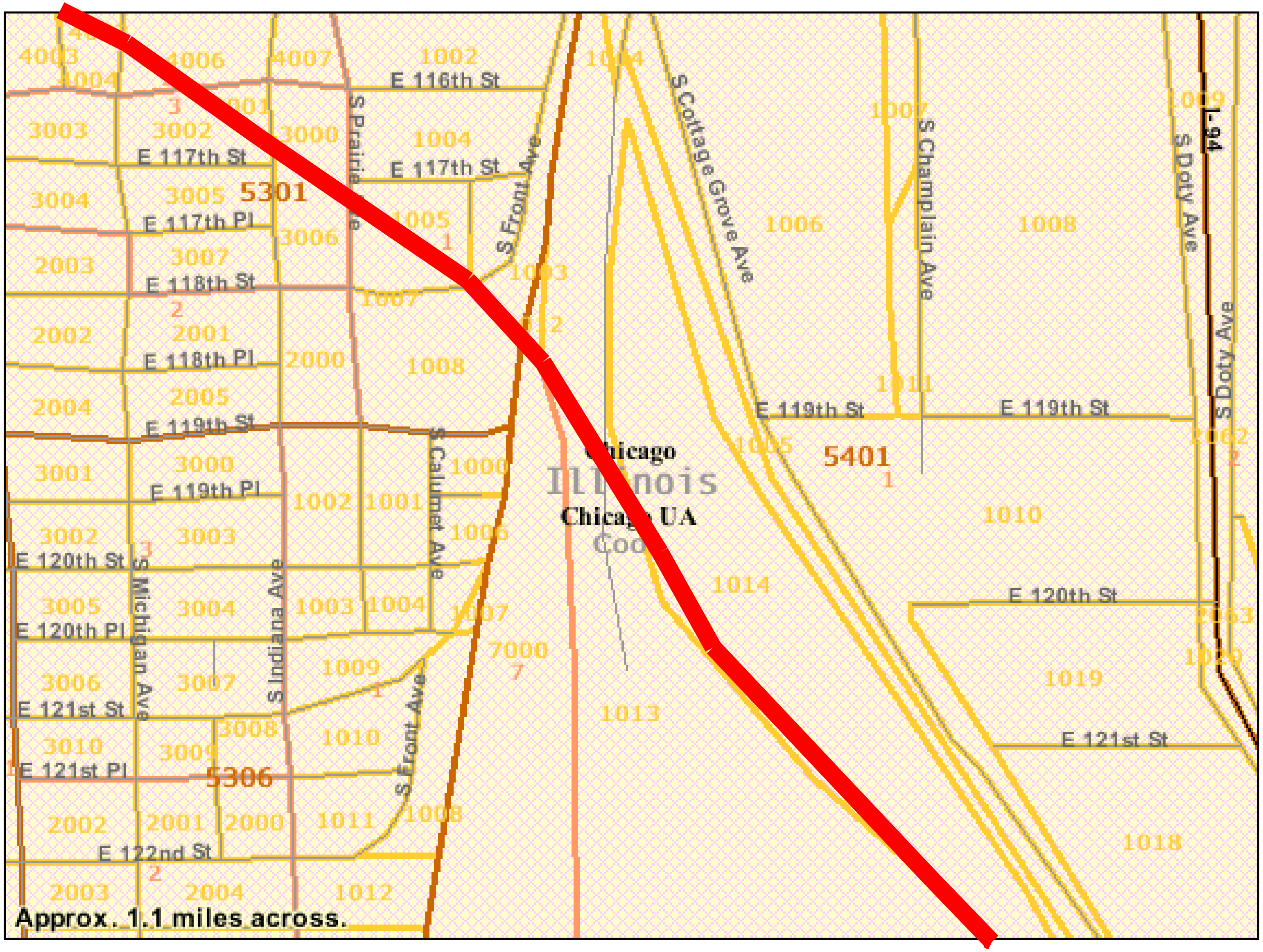
S la Salle St
S State St
S Michigan Ave
Cook
Chicago UA
Illinois
Chicago
Approx. 1.1 miles across.

Census Tract, Block Group, and Block Location Map

Legend

- Census Tract Boundary
- Block Group Boundary
- Block Boundary
- Major Road
- Street
- Stream/Waterbody


5301
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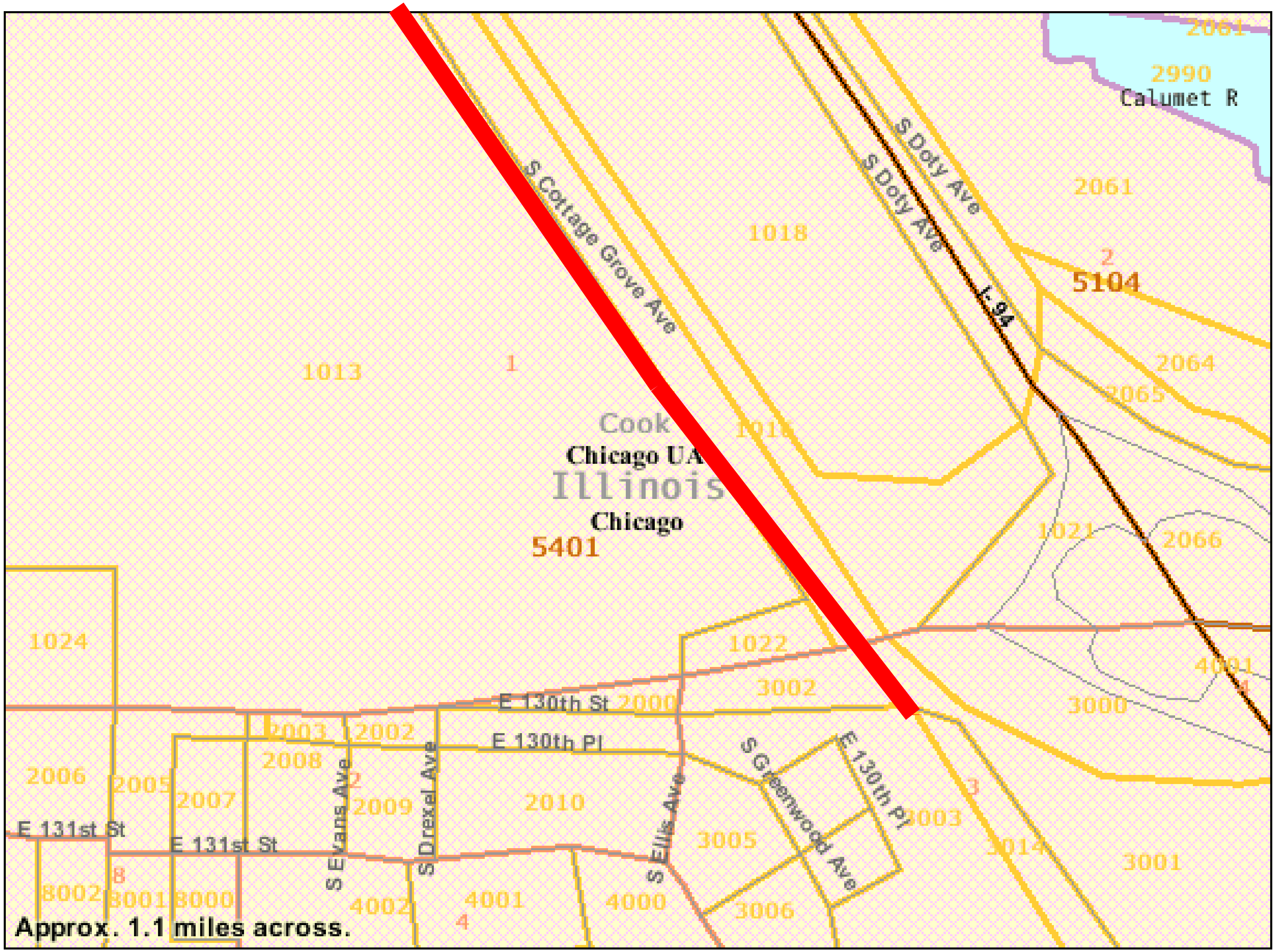
E 121st St
E 121st Pl
E 122nd St
S Prairie Ave
S Front Ave
S Calumet Ave
S Michigan Ave
S Indiana Ave
S Cottage Grove Ave
S Champlain Ave
S Doty Ave
I-94
Chicago
Illinois
Chicago UA
Cook
Approx. 1.1 miles across.

Census Tract, Block Group, and Block Location Map

Legend

- ▬ Census Tract Boundary
- ▬ Block Group Boundary
- ▬ Block Boundary
- ▬ Major Road
- ▬ Street
- ▬ Stream/Waterbody


2061
2990
Calumet R
S Doty Ave
S Doty Ave
S Cottage Grove Ave
2061
1018
2
5104
I-94
2064
2065
1013
1
Cook
1016
Chicago UA
Illinois
Chicago
5401
1021
2066
1024
1022
4001
4
3002
3000
E 130th St
2000
2003
2002
E 130th Pl
S Greenwood Ave
E 130th Pl
2008
2006
2005
2007
S Evans Ave
2
2009
S Drexel Ave
2010
S Ellis Ave
3
3003
3005
3014
3001
E 131st St
E 131st St
8
8002
8001
8000
4002
4001
4
4000
3006
Approx. 1.1 miles across.

Census Tract, Block Group, and Block Location Map

Appendix B
2014–2015 Red Line Extension Project Update

2014–2015 Red Line Extension Project Update

From 2012-2014, CTA evaluated benefits and impacts of four alternatives: the No Build Alternative, the Bus Rapid Transit Alternative (along Michigan Avenue), the Union Pacific Railroad (UPRR) Rail Alternative, and the Halsted Alternative. CTA evaluated three options of the UPRR Rail Alternative: Right-of-Way Option, East Option, and West Option. CTA also evaluated two options of the UPRR Rail Alternative 130th Street station: a South Station Option and a West Station Option. Based on the project description provided in Section 2 of this technical memorandum, CTA analyzed the impacts of these alternatives and station options. The benefits and impacts are included in the technical memoranda prepared in 2012-2014.

In August 2014, based on the technical analysis and public input, CTA announced the NEPA Preferred Alternative—the UPRR Rail Alternative. Additional conceptual engineering was conducted on the UPRR Rail Alternative to refine the East and West Option alignments. In addition, CTA is considering only the South Station Option of the 130th Street Station.

In late 2014 and early 2015, CTA conducted additional engineering and revised assumptions on the East and West Options to refine the alignments. The refinement of the East and West Options consisted of the following items:

- For the segment of the alignment along I-57, CTA shifted the proposed alignment from the median of I-57 to the north side of I-57 within the existing expressway right-of-way. The construction would be less complex, safer for construction workers, and have a shorter duration. The shift would also allow for fewer impacts to Wendell Smith Park for the East Option, and would allow for no permanent impacts to Wendell Smith Park for the West Option.

- CTA modified the curve speeds as the alignment heads south from I-57 along the UPRR tracks. The curve speed for both the East and West Options would be 35 mph.

- CTA shifted the East Option alignment near 103rd Street station to minimize impacts to Block Park and the Roseland Pumping Station.

- CTA modified the curves south of 103rd Street for both the East and West Options to 55 mph to maximize the train speed.

- CTA refined the layout of the 120th Street yard and shop to optimize yard operations. The refined layout of the yard would accommodate 340 train cars.

The refinement of the East and West Option alignments minimizes potential impacts to parks while providing flexibility for future design phases. The Draft Environmental Impact Statement contains the benefits and impacts of the refined East and West Option alignments and supersedes information presented in other chapters of this technical memorandum

Environmental Justice

The refined East and West Option alignments would result in additional adverse impacts which were not discussed in this technical memorandum. These adverse impacts, which are summarized below, were reviewed to determine their effect on EJ communities.

The refined alignment along the I-57 corridor in the Roseland community area would result in adverse visual impacts and adverse impacts related to community character and cohesion for both the East and West Option. The elevated track structure along the I-57 corridor would cause adverse visual impacts because of the change in the visual setting in the highway right-of-way along the north side of I-57 in Roseland.

Considering the impacts, mitigation measures, and benefits, the East and West Options' permanent impact on community character and permanent visual impact would not be appreciably more severe or greater in magnitude than similar effects elsewhere in CTA's rail system. The mitigation measures proposed are similar in nature to those for other CTA projects and have been proposed by CTA consistently in EJ and non-EJ communities alike. The project offers substantial benefits that would accrue to the resident EJ populations. Although the alternative would still have adverse impacts on EJ communities, these impacts would not be disproportionately high or adverse. As such, no EJ-specific mitigation measures beyond those identified in the other technical memoranda would be required.

Appendix Y
Section 4(f) Replacement Park Analysis Technical Memorandum

Chicago Red Line Extension Project

Section 4(f) Replacement Park Analysis

Technical Memorandum

August 24, 2016

Prepared for:
Chicago Transit Authority
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Chicago, IL 60661

Prepared by:
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Section 1
Introduction

The Chicago Transit Authority (CTA), as project sponsor to the Federal Transit Administration (FTA), proposes to extend the existing Red Line heavy rail transit service 5.3 miles south from the existing 95th Street Terminal to Chicago's Far South Side. The proposed extension would include four new stations near 103rd Street, 111th Street, Michigan Avenue, and 130th Street. Each new station would include bus and parking facilities.

The proposed Union Pacific Railroad (UPRR) Rail Alternative would extend the Red Line from the existing 95th Street Terminal to 130th Street. The UPRR Rail Alternative alignment would run south along I-94 from the 95th Street Terminal, then curve west along the north side of I-57 for nearly ½ mile until reaching the UPRR corridor in the vicinity of Eggleston Avenue. The alignment would turn south to follow the UPRR corridor. Two options are being considered for the alignment along the UPRR corridor: the East Option and the West Option. The CTA elevated structure would be located either east or west of the existing UPRR corridor. The alignment would follow the UPRR corridor to Prairie Avenue, where it would cross over the Canadian National/Metra Electric District tracks near 119th Street. South of this point, the East and West Options would follow the same alignment southeast along the Northern Indiana Commuter Transportation District/Chicago South Shore & South Bend Railroad right-of-way using a portion of the Norfolk Southern Railway and Consolidated Rail Corporation rights-of-ways to the terminus (end) of the RLE at 130th Street. **Figure 1** is a project overview map.

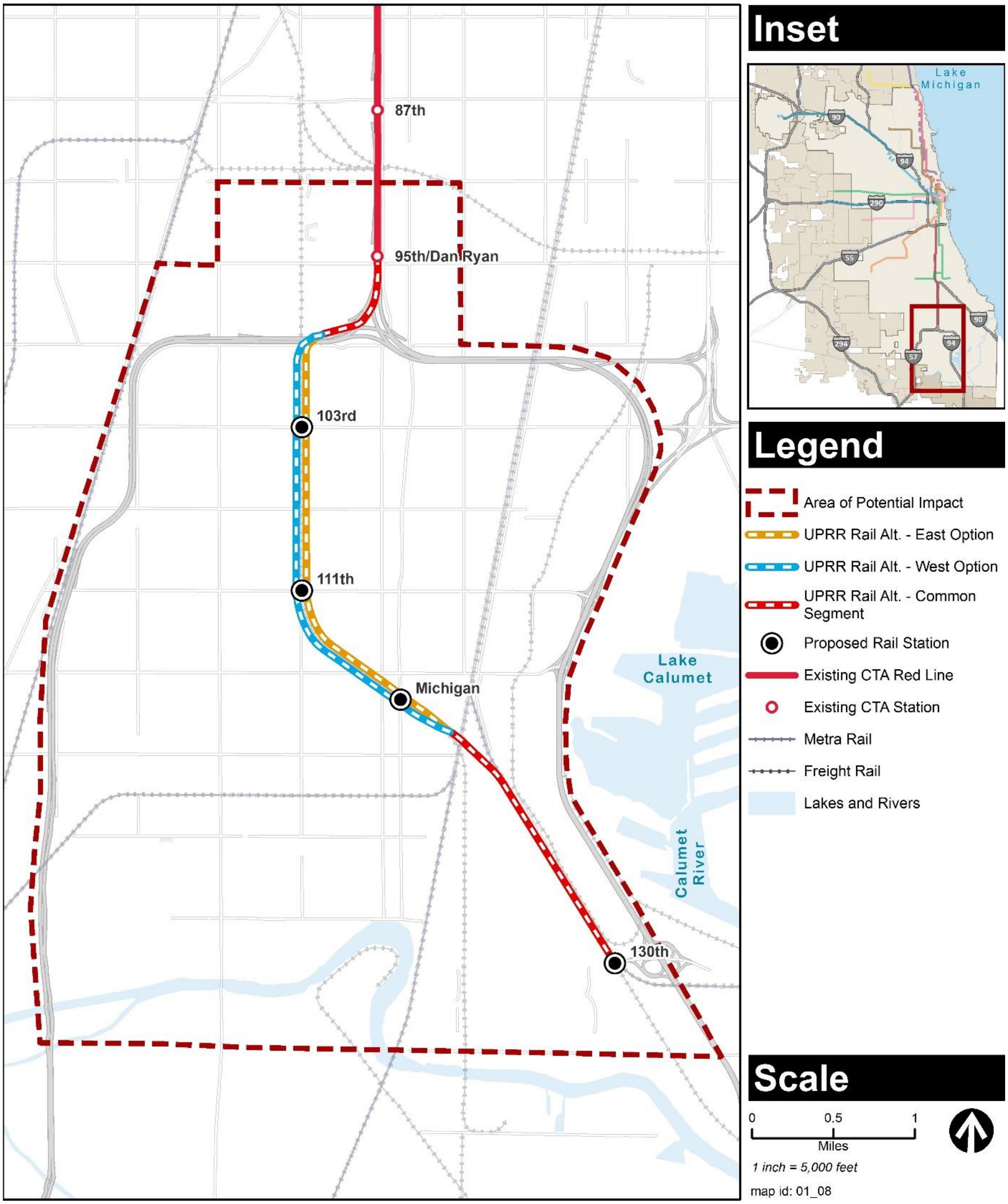
87th
95th/Dan Ryan
103rd
111th
Michigan
130th
Lake Calumet
Calumet River
Inset
Lake Michigan
90
94
290
55
294
57
Legend
Area of Potential Impact
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
UPRR Rail Alt. - Common Segment
Proposed Rail Station
Existing CTA Red Line
Existing CTA Station
Metra Rail
Freight Rail
Lakes and Rivers
Scale
0
0.5
1
Miles
1 inch = 5,000 feet
map id: 01_08

Figure 1: Red Line Extension Project Overview Map

As shown in **Figure 2**, impacts to existing parks would occur under either the East or West Option. Under the East Option, a new elevated Red Line structure would be constructed, affecting the northwest corner of Wendell Smith Park and affecting a portion of the western parcel of Block Park. Approximately 0.7 acre of Wendell Smith Park and 0.9 acre of Block Park would be affected by the East Option. Both Wendell Smith Park and Block Park would continue to provide park space to the surrounding community after implementation of the East Option, but park area would be reduced. Under the West Option, a new elevated Red Line structure would be constructed over a portion of Fernwood Parkway from 99th Street to 103rd Street between the existing UPRR tracks and Eggleston Avenue. Approximately 1.9 acres of Fernwood Parkway would be affected by the West Option. **Table 1** provides a summary of affected park area by the East and West Options.

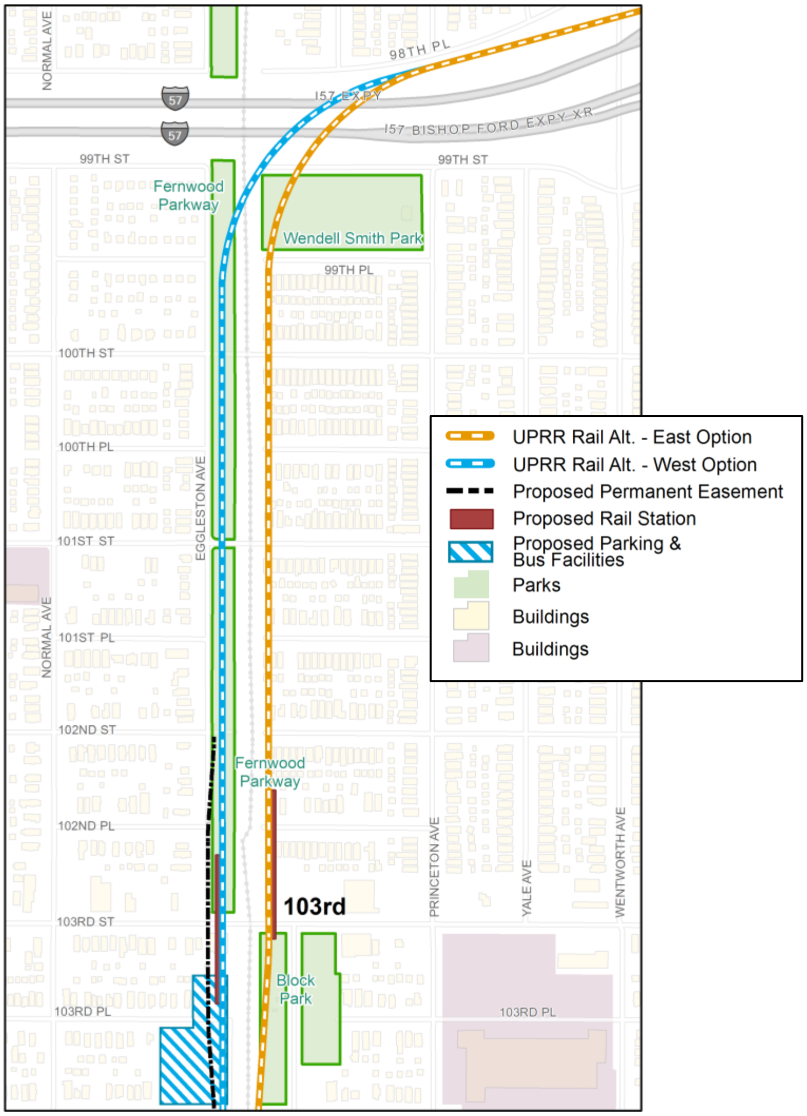
NORMAL AVE
98TH PL
I57 EXPY
57
57
I57 BISHOP FORD EXPY XR
99TH ST
99TH ST
Fernwood Parkway
Wendell Smith Park
99TH PL
100TH ST
100TH PL
EGGLESTON AVE
101ST ST
NORMAL AVE
101ST PL
102ND ST
Fernwood Parkway
102ND PL
PRINCETON AVE
YALE AVE
WENTWORTH AVE
103rd
103RD ST
Block Park
103RD PL
103RD PL
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
Proposed Permanent Easement
Proposed Rail Station
Proposed Parking & Bus Facilities
Parks
Buildings
Buildings

Figure 2: Overview of Park Impacts

Table 1: Parklands Affected by UPRR Rail Alternative Options

Parkland	Address	Community Area (Ward)	East Option	West Option
Wendell Smith Park	9912 S. Princeton Avenue	Roseland (Ward 9)	0.7 acre	-
Fernwood Parkway	9501 S. Eggleston Avenue	Washington Heights (Ward 9)	-	1.9 acres
Block Park	346 W. 104th Street	Roseland (Ward 34)	0.9 acre	-
Total			***1.6 acres***	***1.9 acres***

CTA developed preliminary mitigation measures, taking into account impacts on both park acreage and the attributes, features, and amenities of each park. These mitigation measures were developed so that the result of implementation of either UPRR Alternative option would result in no adverse impact on parks after mitigation. Mitigation measures are further detailed in subsequent sections of this technical memorandum. A major feature of these mitigation measures includes developing replacement parkland in or near the community areas affected as well as replacement of any of the park attributes, features, or amenities affected by the construction of the RLE Project.

1.1 Purpose of this Technical Memorandum

Section 4(f) of the United States Department of Transportation (USDOT) Act of 1966 is a federal law that established requirements for USDOT (including FTA) consideration of publicly owned parks/recreational areas that are accessible to the general public, publicly owned wildlife/waterfowl refuges, and publicly or privately owned historic sites of federal, state, or local significance in developing transportation projects. In addition to general environmental regulations under the National Environmental Policy Act of 1966, Section 4(f) provides further protection of park resources affected as a result of major capital improvement projects.

Based on discussions with FTA and coordination with the Chicago Park District (CPD) in 2015 on park impacts and proposed mitigation measures for this project, a Section 4(f) preliminary "*de minimis*" finding was proposed for park impacts resulting from this project after mitigation proposed. A *de minimis* impact for parks, recreation areas, or wildlife/waterfowl areas is defined in 23 CFR § 774.17 as one that is determined to not adversely affect the features, attributes, or activities qualifying a property for protection under Section 4(f). The provision allows avoidance, minimization, mitigation, and enhancement measures to be considered in making the *de minimis* determination.

Concurrence from CPD as well as review and comment from the public are necessary to confirm a *de minimis* determination.

As part of the Draft Environmental Impact Statement (EIS) and Section 4(f) preliminary determinations being made, FTA recommended that CTA conduct additional coordination with CPD on the process to be followed for implementation of proposed mitigation measures and on replacement park options. The purpose of this coordination and additional analysis was three-fold:

- To demonstrate to FTA that land is available for replacement park mitigation and confirm that there would be no adverse effect findings through implementation of mitigation measures
- To conduct more detailed coordination with CPD on processes that will take place to fulfill mitigation measures
- To develop more visual and detailed ideas for public input as part of the Draft EIS and Section 4(f) public hearing

This memorandum provides documentation of CPD coordination and additional analysis of replacement park options and mitigation measures proposed to support the preliminary Section 4(f) *de minimis* impact finding.

Section 2
Summary of Park Impacts and Mitigation Proposed

The following provides a more detailed description of impacts and proposed mitigation measures. These impacts and mitigation measures served as a starting point for coordination with CPD on the process and potential replacement of parkland affected by the RLE Project. On August 17, 2015, CPD concurred with these impact findings and that impacts resulting from either the East or West Option would not be adverse after implementation of proposed mitigation measures.

2.1 Wendell Smith Park Impacts and Mitigation Measures (East Option)

The East Option alignment would run through the northwestern corner of Wendell Smith Park. Elevated track structure supports would be placed permanently in the park space. Of the 4.7 acres of the park, approximately 0.7 acre would be overlapped by the elevated structure and its associated clearances. Piers would be located in the park, and the bottom of the elevated structure would be approximately 15 feet above ground level.

The following attributes and features of the park are within or adjacent to the overlap area:

- **Paved Walking Path/Trees/Bench** - An existing paved walking path is maintained along the entire rectangular perimeter of the park. The westernmost north-south portion of the walking trail and a small portion of the northwestern edge of the walking path would be overlapped by the track structure. A number of small trees line the existing walking path and would be used by the overlap with tracks. In addition, there are two benches located along the westernmost north-south walking path within the overlapping area.

- **Baseball Field** - There are two baseball fields within Wendell Smith Park. The sand-filled baseball field on the northeast portion of the park is a junior-size baseball field. A small portion of the existing outfield/open space would be within the overlapped area, but would not affect the ability to use the baseball field. The second baseball field is a smaller, junior-sized baseball field in the southwest corner of the park. This smaller junior baseball field contains a backstop and bench. Because of the proposed overlap area, the backstop, bench, and space behind this backstop would be used.

Mitigation measures proposed for Wendell Smith Park include the following:

- Replacement of lands used (acreage) with lands of reasonably equivalent usefulness and location and of at least comparable value. The replacement land would be used to construct new park space in or near the Roseland community area to enhance park land availability for the surrounding community. New park area created through this replacement acreage would be constructed in accordance with CPD standards and facilitate CPD master planning goals and objectives.

- Reconstruction of the two smaller junior-sized baseball field facilities within Wendell Smith Park to provide one larger baseball field facility in this park. This mitigation measure was developed based on coordination with CPD to ensure that the attributes, features, and activities within the park are not adversely affected as a result of this option and this measure would enhance existing baseball facilities and activities within the park. Additional outreach to the public will be conducted to share concepts for replacement proposed within Wendell Smith Park and receive further input.

- Relocation and replacement of the smaller, junior-sized baseball field on replacement park land based on coordination with CPD and outreach to the public so that the attributes, features, and activities are not adversely affected by the use of the northwest corner of the park.
- Replacement and relocation of facilities affected by the project including sidewalks, paths, benches, trees, and other facilities within the park.
- Restoration and landscaping of disturbed areas.
- Incorporation of design features where necessary to reduce or minimize impacts of use on the Section 4(f) property. Such features would be designed in a manner that would enhance the park but not adversely affect the safety of the transit facility.

2.2 Block Park Impacts and Mitigation Measures (East Option)

The East Option alignment would run through the west parcel of Block Park, and the elevated structure and its associated clearances would overlap 0.9 acre of park space. Elevated track structure supports would be placed permanently in the west parcel of the park space. An auxiliary station entrance would also be located in the park, along the western edge of the existing parcel. The affected parcel includes an isolated portion of the park's open space and a communications tower, and does not currently serve a recreational use. The key recreational features of the park, walking trails and benches, are on the other side of Harvard Avenue in the east parcel of the park.

Mitigation measures proposed for Block Park include the following:

- Replacement of lands used (acreage) with lands of reasonably equivalent usefulness and location and of at least comparable value. The replacement land would be used to construct additional new park space in or near the Roseland community area to enhance park land availability for the surrounding community. New park space created through this replacement acreage would be constructed in accordance with CPD standards and facilitate CPD master planning goals and objectives.
- Restoration and landscaping of disturbed areas.
- Incorporation of design features where necessary to reduce or minimize impacts of use on the Section 4(f) property. Such features would be designed in a manner that would enhance the park but not adversely affect the safety of the transit facility.

- While not related to the attributes, features, or activities of the park, additional mitigation measures would include coordination with the City of Chicago regarding relocation of the communications tower.

2.3 Fernwood Parkway Impacts and Mitigation Measures (West Option)

The West Option track structure would run through two of the four parcels that make up Fernwood Parkway between 101st and 103rd Streets. Elevated track structure supports would be placed permanently in the parkway. Approximately 1.9 acres of the parkway would be overlapped by the elevated structure and its associated clearances. The parkway functions as open space, and does not contain recreational amenities.

Mitigation measures proposed for Fernwood Parkway include the following:

- Replacement of lands used (acreage) with lands of reasonably equivalent usefulness and location and of at least comparable value. The replacement land would be used to construct replacement park space in or near the Washington Heights community area to enhance park land availability for the surrounding community. New park space created through this replacement acreage would be constructed in accordance with CPD standards and facilitate CPD master planning goals and objectives.

- Potential installation of a new bicycle path beneath the elevated track structure. This new bicycle path would be subject to use by CTA for track structure maintenance. While this mitigation measure is not related to the attributes, features, or amenities within the existing park, this measure would enhance the existing unused green space and better connect parks and the newly proposed transit infrastructure. A preliminary analysis as part of the Draft EIS confirmed the feasibility of this bicycle path. Additional coordination with the City of Chicago Department of Transportation will confirm the feasibility of this measure.

- Restoration and landscaping of disturbed areas.

- Incorporation of design features where necessary to reduce or minimize impacts of use on the Section 4(f) property. Such features would be designed in a manner that would enhance the green space but not adversely affect the safety of the transit facility.

2.4 Chicago Park District Coordination

CTA held early coordination meetings with CPD on April 18, 2011; July 23, 2013; May 8, 2014; and April 8, 2015 to provide CPD staff with preliminary information on the RLE Project, purpose and need, identification and refinement of alternatives, and potential impacts on parks, and to discuss potential mitigation measures.

On June 8, 2015, CTA provided CPD with information on park impact findings and proposed mitigation measures. On August 17, 2015, CPD provided its concurrence that after implementation of the proposed mitigation measures there would be no adverse impact on parks from either option under evaluation for the RLE Project.

After discussions with FTA in fall 2015, CTA and CPD held additional coordination meetings to further refine mitigation measures and processes to be followed in fulfilling mitigation requirements:

- **October 8, 2015:** CTA and CPD coordination meeting to review scope of work for further developing park mitigation measures and to outline coordination steps and schedule.
- **March 10, 2016:** CTA and CPD coordination meeting to review field investigation findings and confirm 12 potential replacement park sites for further analysis.
- **April 6, 2016:** CTA and CPD coordination meeting to discuss replacement park suitability analysis findings and to further refine 3 potential replacement park options for development of site plans.
- **May 18, 2016:** Joint meeting with CTA, CPD, and the City of Chicago Department of Planning and Development (DPD) to review the proposed 3 replacement park site options; city-owned property, land uses, and other city-owned infrastructure potentially affected by the project and/or proposed as part of the 3 potential replacement park sites; and to understand any other DPD-related planning and/or economic development initiatives in the area.
- **June 15, 2016:** CTA and CPD coordination meeting to review draft replacement park option concept plans and replacement of affected amenities within Wendell Smith Park.

The coordination meetings held in late 2015 and 2016 helped to further identify and agree upon appropriate replacement of amenities within Wendell Smith Park and potential new replacement park options to share with the public for further input. CTA worked with landscape architects, park planners, and other urban planners to develop potential replacement park sites and replacement of amenities within Wendell Smith Park. Meeting notes from these meetings and correspondence between CTA and the Chicago Park District are provided in **Attachment 1** of this technical memorandum.

These coordination meetings also helped to solidify key considerations for replacement park options, and developed a more detailed understanding of how mitigation measures would need to be implemented:

- CPD requested that CTA focus replacement park options on sites that could accommodate a new park rather than developing smaller green space or pocket park sites.
- CPD requested that new park options meet CPD standards for new park size. All new CPD parks are required to be 2 acres in size or greater. Mitigation measures proposed to address impacts from implementation of the RLE Project will ensure replacement of the acreage of

identified park impacts (1.6 and 1.9 acres for the East and West Options, respectively). The investigation to identify potential replacement park sites focused on sites that would be a minimum of 1.6 or 1.9 acres in size, with preference given to sites that allowed for 2 acres or more of replacement park.

- CPD requested that replacement park options be near the project area and affected community and support CPD's agency goals and objectives of providing parks within a ½-mile radius of all residents in Chicago. Priority for replacement park options was therefore given to sites that would be located near affected parks and/or to sites that helped fill a current gap in park sites within these community areas.

- CPD will require CTA and FTA to conduct a Phase I Environmental Site Assessment (ESA) before purchase of property to confirm any existing or potential environmental contamination liabilities.

    - As part of this current analysis within the Draft EIS, CPD agreed that information and analysis contained in the environmental database search report prepared by Environmental Data Resources, Inc. (EDR) would provide a sufficient level of detail to evaluate replacement park options. EDR reports are a standard tool used to identify historic or existing environmental concerns, and are usually a first step in a Phase I ESA.

    - Once a single option is chosen for the RLE Project and a potential replacement park option is confirmed, CTA and FTA will conduct the Phase I ESA before acquisition of land. Clean up of any hazardous materials identified will be addressed by CTA and FTA such that the site is in suitable park condition when turned over to CPD for building the replacement park.

- CPD will consider public comments received as part of the RLE Project in further development of replacement parks and amenity needs. Only amenities identified in the mitigation requirements as part of the RLE Project should be included in concepts at this time.

Coordination with CPD will continue through the Final EIS to finalize replacement park options and other mitigation measures.

Section 3
Replacement Park Identification Process

A four-step, iterative process was developed to identify potential replacement park sites, as shown in **Figure 3**. This process allowed the project team to first identify as many potentially eligible properties as possible and continue to narrow sites using professional judgment and suitability criteria, in coordination with feedback from CPD staff.

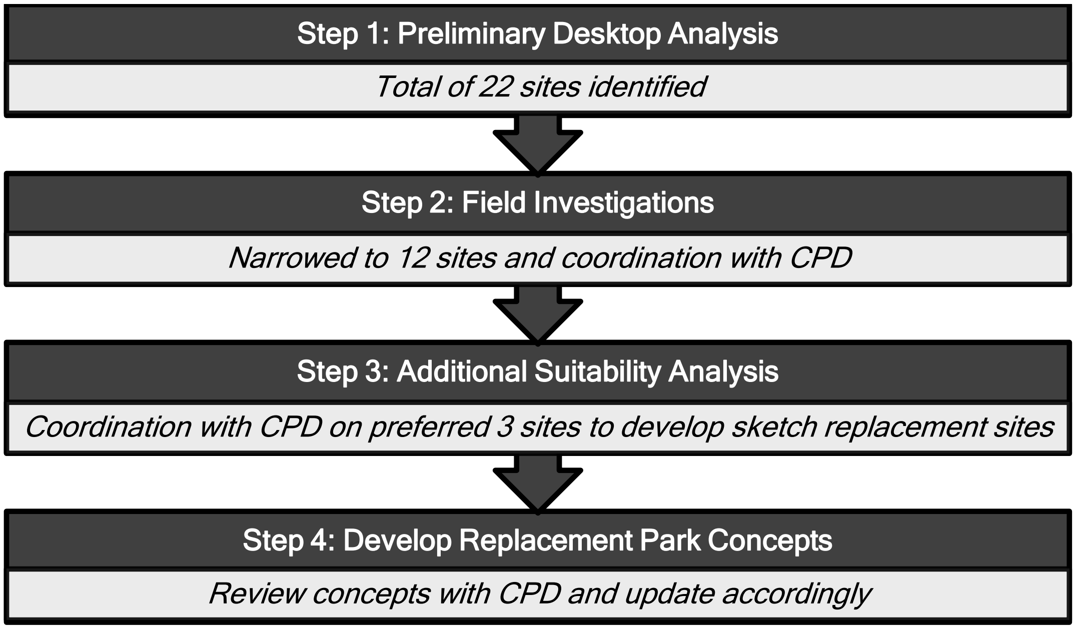
Step 1: Preliminary Desktop Analysis
Total of 22 sites identified
Step 2: Field Investigations
Narrowed to 12 sites and coordination with CPD
Step 3: Additional Suitability Analysis
Coordination with CPD on preferred 3 sites to develop sketch replacement sites
Step 4: Develop Replacement Park Concepts
Review concepts with CPD and update accordingly

Figure 3: Replacement Park Identification Process

CTA and CPD agreed that given the timeline of the potential acquisition of replacement park property and the need for additional public input into the process, it was best to narrow the potential sites to the top three ranked sites analyzed and develop conceptual site plans for each.

The following sections provide additional details on each of the steps conducted.

3.1 Desktop and Geospatial Analysis

A desktop and Geographic Information Systems (GIS) analysis was conducted first to identify potential park sites. As noted earlier, the preliminary focus for identification of potential park sites was two-fold: to identify potential sites that would provide acre-for-acre replacement park of affected parkland from the RLE Project (1.6 acres for the East Option or 1.9 acres for the West Option), and to meet CPD standards for new park acreage (at least 2 acres).

In addition, CTA considered the following priorities for the East Option:

- Ability to replace total acreage affected

- Ability to replace park within Roseland community area

- Ability to accommodate a new junior-sized baseball field to address impacts on the existing junior-sized baseball field in Wendell Smith Park. This included a review of nearby existing parks with available open space for a new junior-sized baseball field as well as a review of properties with the potential for inclusion of a new junior-sized baseball field.

CTA considered the following priorities for the West Option:

- Ability to replace total acreage affected

- Ability to replace park within Washington Heights community area or adjacent community area (Fernwood Parkway south of I-57/I-94)

The initial analysis consisted of visual desktop inspections and further review in the field.

The GIS analysis identified available vacant properties for potential park sites using four main data sources: (1) City-owned vacant properties database, (2) City of Chicago database on 311 calls regarding open and vacant buildings, (3) vacant and abandoned building violations, and (4) Chicago Metropolitan Agency for Planning (CMAP) 2010 land use inventory of vacant properties. CTA evaluated parcels within ½-mile, 1-mile, 2-mile, and 3-miles of potential park impacts.

City-owned vacant parcels were identified as having the greatest potential for potential park sites given the anticipated ease of working between agencies to acquire land. In addition, identifying vacant and abandoned properties provided the project team with information on potentially underinvested lands near the project area where development of parks might provide additional amenities to the community area and/or incentivize additional investment.

The primary criteria for the desktop and GIS analysis were to identify contiguous vacant properties totaling 1.6 acres or greater, location near the affected parks, distance from other existing parks where replacement of acreage might help enhance existing parks, and adequate layout for a junior-sized baseball field (for East Option only).

A total of 22 sites were identified as part of the desktop and GIS analysis. **Figure 4** shows the 22 site locations that were identified as part of the desktop analysis for further field identification. These sites were located in 17 main areas; because some areas contained multiple site options, some sites were identified as “A”, “B,” or “C.” In addition, Gano Park (an existing park just north of sites 14 and 15 on **Figure 4**) was identified as an existing park that might have an appropriate layout to allow for a junior-sized baseball field.

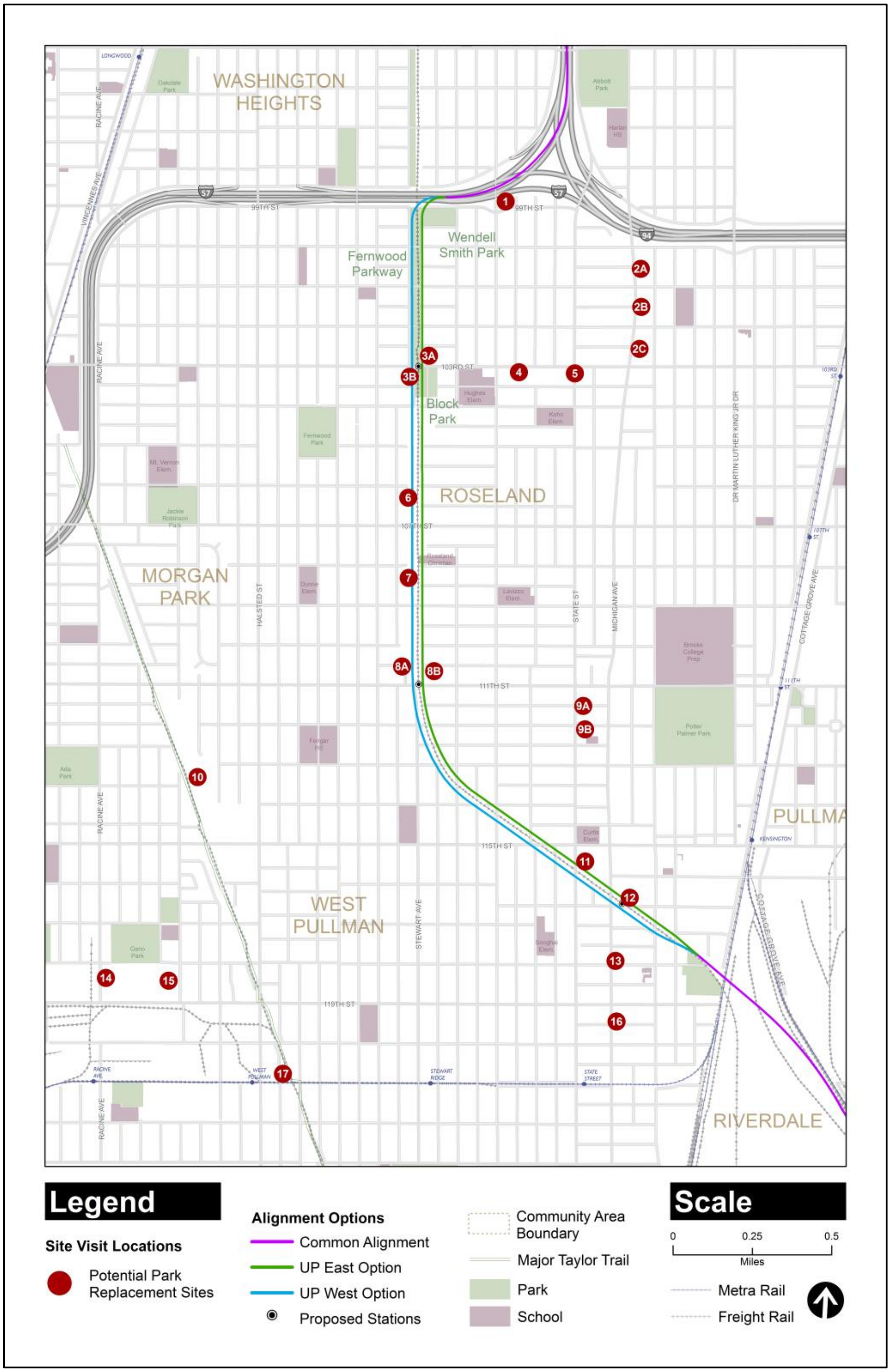
WASHINGTON HEIGHTS
Fernwood Parkway
Wendell Smith Park
Block Park
ROSELAND
MORGAN PARK
WEST PULLMAN
PULLMA
RIVERDALE
99TH ST
103RD ST
107TH ST
111TH ST
115TH ST
119TH ST
RACINE AVE
VINCENNES AVE
HALSTED ST
STEWART AVE
STATE ST
MICHIGAN AVE
DR MARTIN LUTHER KING JR DR
COTTAGE GROVE AVE
57
94
1
2A
2B
2C
3A
3B
4
5
6
7
8A
8B
9A
9B
10
11
12
13
14
15
16
17
Legend
Site Visit Locations
Potential Park Replacement Sites
Alignment Options
Common Alignment
UP East Option
UP West Option
Proposed Stations
Community Area Boundary
Major Taylor Trail
Park
School
Scale
0
0.25
0.5
Miles
Metra Rail
Freight Rail

Figure 4: Desktop and GIS Analysis Site Identification (22 Sites)

Table 2 provides additional information about these 22 sites. **Attachment 2** of this technical memorandum provides additional information on each of these sites, including aerials and parcel ID numbers.

Table 2: Desktop Analysis Replacement Park Identification

Site ID	Size (acres)	Location	Community Area/Ward
1	1.7	Wentworth Avenue/99th Street	Roseland/Ward 9
2A	1.2	Michigan Avenue/100th Street	Roseland/Ward 9
2B	2.0	Michigan Avenue/101st Street	Roseland/Ward 9
2C	1.4	Michigan Avenue/102nd Street	Roseland/Ward 9
3A	0.8	103rd Street/Harvard Avenue	Roseland/Ward 9
3B	2.1	103rd Street/Eggleston Avenue	Roseland/Ward 34
4	1.2	103rd Street/Wentworth Avenue	Roseland/Ward 34
5	2.8	103rd Street/State Street	Roseland/Ward 34
6	3.4	107th Street/Eggleston Avenue	Roseland/Ward 34
7	3.3	109th Street/Eggleston Avenue	Roseland/Ward 34
8A	3.9	111th Street/Eggleston Avenue	Roseland/Ward 34
8B	2.5	111th Street/West of UPRR Railroad	Roseland/Ward 34
9A	2.2	112th Street/State Street	Roseland/Ward 9
9B	1.9	112th Street/State Street	Roseland/Ward 9
10	6.0	Adjacent to Major Taylor Trail	Morgan Park/Ward 34
11	5.9	115th Street/State Street	West Pullman/Ward 9
12	2.2	Michigan Avenue/Kensington Avenue	West Pullman/Ward 9
13	0.9	118th Street/Michigan Avenue	West Pullman/Ward 9
14	1.7	119th Street/Racine Avenue	West Pullman/Ward 34
15	3.9	119th Street/Morgan Street	West Pullman/Ward 34
16	1.5	Michigan Avenue/120th Street	West Pullman/Ward 9
17	1.9	120th Street/Halsted Street	West Pullman/Ward 34

One important note regarding the desktop and GIS analysis findings is that no potential park sites were identified within the Washington Heights community area, although there are already several parks in this community area, particularly north of I-57. While initial GIS investigations identified several vacant properties in Washington Heights, the properties were not large enough nor contiguous to support a new park. A bike and pedestrian path along 89th Street between Loomis Street and Vincennes Avenue was considered early in the analysis, but based on coordination with CPD, the site would not serve as park acreage replacement or be manageable by CPD; as such, it was removed from consideration. One vacant property of suitable size was identified between 89th and 90th Streets, but is not contiguous and is separated by Loomis Street. Use of this site would require additional, costly roadway reconfigurations; therefore, this site was eliminated. **Attachment 2** provides aerials of these considered but eliminated sites.

While the West Option would impact Fernwood Parkway in Washington Heights, the area of impact within Fernwood Parkway is south of the I-57. This area, while technically designated as within Washington Heights, is more associated with the nearby Roseland community area to the south (i.e., both are south of the interstate and share similar surrounding land uses and community character). Based on discussions with CPD, it was agreed that reviewing sites within 1 mile of the area of impact (south of I-57) would be preferable.

3.2 Field Investigations

CTA conducted field investigations on February 17 and 18, 2016 to further analyze the 22 potential sites as well as to evaluate the potential to provide a replacement baseball field in Gano Park. **Attachment 3** provides field visit findings and detailed considerations for all sites.

Of the 22 sites reviewed, 10 sites were eliminated based on the field investigations (Sites 1, 2A, 2C, 3A, 4, 5, 8B, 13, 14, and 16). Primary reasons for elimination were because of the following:

- Insufficient size (would not meet the minimum 1.6 and 1.9 acres affected by either the East or West Option, or CPD's standard of a minimum of 2 acres)
- High noise levels, safety concerns because of compromised views, or location near heavily traveled streets
- Non-contiguous parcels (would require parks on both sides of a roadway or would require major street reconfigurations to provide a continuous park space; not preferable for cost, safety, and park layout)
- Active use parcels determined to be difficult to purchase given their location and current land uses

The field investigation at Gano Park determined that the available grassed area in this park would be unsuitable for a baseball field replacement for several reasons: (1) an existing retention basin makes the site unsuitable for active recreation, (2) the available area would not be sufficient to accommodate a junior-sized baseball field, (3) there already is a baseball field in this park, and (4) this park would be a substantial distance from the community area where park impacts would occur.

3.3 Suitability Analysis

After the field investigation, 12 sites remained for further suitability analysis. Eight of these 12 sites (Sites 2B, 9A, 9B, 10, 11, 12, 15, and 17) were determined to be available for use as a replacement park site for either the East or West Option. Four of these 12 sites (Sites 3B, 8A, 6, and 7) were determined to be feasible options for the East Option only.

The 12 sites fell into one or more of three main categories that were initially determined to be favorable for park siting:

- Adjacent to proposed RLE Project (alignment or stations)

- Underutilized/vacant commercial areas (transit-oriented development opportunity areas)
- Providing connections to Major Taylor Trail or existing parks

Additionally, some sites were identified within the Morgan Park and West Pullman community areas but would be further from the project area. These sites were retained for the suitability analysis given other favorable factors at these locations, including larger sizes of available land and ability to co-locate parks with existing Metra rail, existing parks, trail systems, or community facilities such as senior centers.

CTA conducted a suitability analysis using six areas of consideration (see **Figure 5**). Each park was assigned a low, medium, or high rating (values of 1, 3, or 5, respectively) based on a qualitative and quantitative assessment of the criteria.

Location

- Distance from area of impact
- Distance from proposed stations or from other major park/trail systems
- Ability to serve an area currently not served by parks (no existing parks within 1/2-mile buffer of residents)

Ownership/ Availability

- Current vacant/abandoned or for sale properties
- City-owned property availability
- Ability to combine multiple parcels

Surrounding Land Uses/Zoning Compatibility

- Adjacent use of residential/commercial/ schools
- Best and highest uses (economic uses versus park/recreational uses)

Safety and Security

- Visibility and clear views for police scrutiny/public safety
- Emergency access/response ability

High-Level Cost Considerations

- Need for building acquisitions/demolition
- Need for street relocations, relocation of cell towers or other facilities

Environmental Factors

(EDR Findings)

- Federal, state, local environmental database listings
- Historical site uses and adjacent site uses
- Overall potential for contamination requiring remediation or gaps in available data to determine potential for contamination

Figure 5: Suitability Analysis Criteria

CTA evaluated sites using GIS based on their distance from the area of impacts, distance from proposed stations and other major trail systems or existing parks, and the ability for sites to fill existing gaps in park access. Existing gaps in parks were identified by placing a ½-mile buffer around existing parks to determine areas where parks were located more than ½-mile from residents. Based on coordination with CPD, sites that could fill existing gaps within communities were given extra points, while sites that were already under consideration for other park projects received negative points.

CTA consulted the City-managed property owner databases to identify land ownership, with additional weight given to properties that are currently vacant and/or City-owned because City-owned properties would be easier to acquire. Property title information was used to supplement this analysis.

CTA also reviewed land use and zoning for the sites and the properties surrounding them. Additional points were given to sites that could serve as catalysts for additional development by providing attractive park spaces within underdeveloped areas. Ranking consideration took into account whether park uses would provide the highest and best use of the property given land use and zoning both on the property and adjacent properties.

Safety considerations included a review of sites for clear views for police monitoring, street access issues, or issues that could arise in providing emergency access.

CTA also evaluated high-level cost considerations including whether costly street relocations or configurations would be needed. CTA also considered whether properties were already open space or if demolition would be needed, adding to costs for implementation.

Finally, CTA reviewed EDR report findings to evaluate the risk of encountering hazardous materials at each site. The EDR report provided historical site uses (Sanborn maps and aerial photographs) and a summary of site listings in environmental databases, which could indicate the presence of hazardous materials on the property. The EDR report would be one part of the Phase I ESAs that would be performed as part of property acquisition, and provides information related to environmental fatal flaws.

Attachment 4 contains additional details on considerations for each site on each of the six criteria. **Attachment 5** contains a summary of information from the EDR report.

Table 3 provides a summary matrix of the suitability analysis scoring. CTA reviewed the top three ranked sites with CPD and based on coordination, these three sites were selected for further development of replacement park concept plans.

Table 3: Site Suitability Analysis Summary

Criterion	2B	3B	6	7	8A	9A	9B	10	11	12	15	17
Location	5	5	5	5	5	1	1	3	1	3	1	1
Additional Weighting for Sites Filling an Existing CPD Park Gap	1	0	0	1	1	0	0	-1	0	0	0	0
Vacancy/Availability of Acquisition	3	1	5	3	5	1	1	5	3	5	5	3
Land Use/Zoning Compatibility	5	3	3	3	5	1	1	3	1	5	1	3
Safety/Security	5	5	1	1	5	3	3	3	5	5	5	1
Environmental Factors	3	3	3	3	3	3	3	5	3	3	1	3
Cost Considerations	3	5	3	5	5	1	3	5	3	5	3	5
TOTAL SCORING:	**25**	**22**	**20**	**21**	**29**	**10**	**12**	**23**	**16**	**26**	**16**	**16**

Note: Total scoring in red text indicates the top three ranked sites (Sites 2B, 8A, 12).

Section 4
Replacement Park Concepts

Based on the suitability analysis and coordination with CPD, three potential replacement park sites (sites 2B, 8A, and 12) were identified as the best candidate sites; CTA developed conceptual plans for public review and comment for those three sites. CTA reviewed the initial park concepts provided in this section with CPD and updated them based on CPD's comments. Based on public input on potential replacement park sites, the Final EIS will indicate public preference for the replacement park location.

All property needed for these replacement park sites would be voluntarily acquired from willing sellers. No eminent domain takings are proposed to fulfill the mitigation measures for new replacement park locations.[1] While some replacement parcels are City-owned property, additional outreach to private property owners would be conducted during the Final EIS (closer in time to when the property would be acquired) to confirm whether property can be purchased. If a property owner is not willing to sell a subject property, which is identified as an optional site for replacement park and is needed to fulfill mitigation requirements, other replacement park sites will be pursued. If none of the properties identified for replacement park in the EIS can be voluntarily acquired, CTA and CPD will coordinate further to identify potential sites using similar analysis and process and most up to date property availability data to confirm available replacement park sites. The feasibility of acquiring replacement park locations and process to be followed by CTA, CPD, and property owners in fulfilling replacement park mitigation will be documented in the Final EIS to ensure implementation of mitigation measures and confirm environmental findings. No property acquisition would occur until after the NEPA environmental phase is completed (i.e., when FTA issues a Record of Decision for the Final EIS).

4.1 Replacement Option Site 2B

The replacement option for Site 2B is located along Michigan Avenue near 101st Street and could serve as a 2.1- to 2.2-acre new replacement park appropriate for either the East or West Option. The site is approximately ¾-mile from the proposed RLE corridor and would fulfill an existing gap in park facilities in this community area. **Figures 6, 7, and 8** show existing park conditions as well as two park concepts for this site.

Concept 1 for this site would include passive park space with a walking path, trees, and landscaping. CTA would purchase existing vacant land for this to provide this park. All acquisition would be based on the ability to voluntarily acquire property from property owners.

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[1] It is important to note that there is a difference between a taking under eminent domain for the RLE Project itself (right-of-way needs for the new transportation facility proposed) and what is proposed for the replacement park sites, which would be a voluntary acquisition from property owners. Voluntary acquisition from willing sellers is proposed for replacement park sites such that mitigation measures proposed do not cause additional environmental impact from the RLE Project.

Concept 2 for this site would include voluntary acquisition of vacant property and require voluntary acquisition of one active use parcel on Indiana Avenue. Voluntary acquisition of this active use parcel would provide adequate space for a junior-sized baseball field, approximately 175 feet in diameter from home plate to the center field pocket. Other amenities, such as walking path, landscaping, and trees would be similar to those proposed for Concept 1.

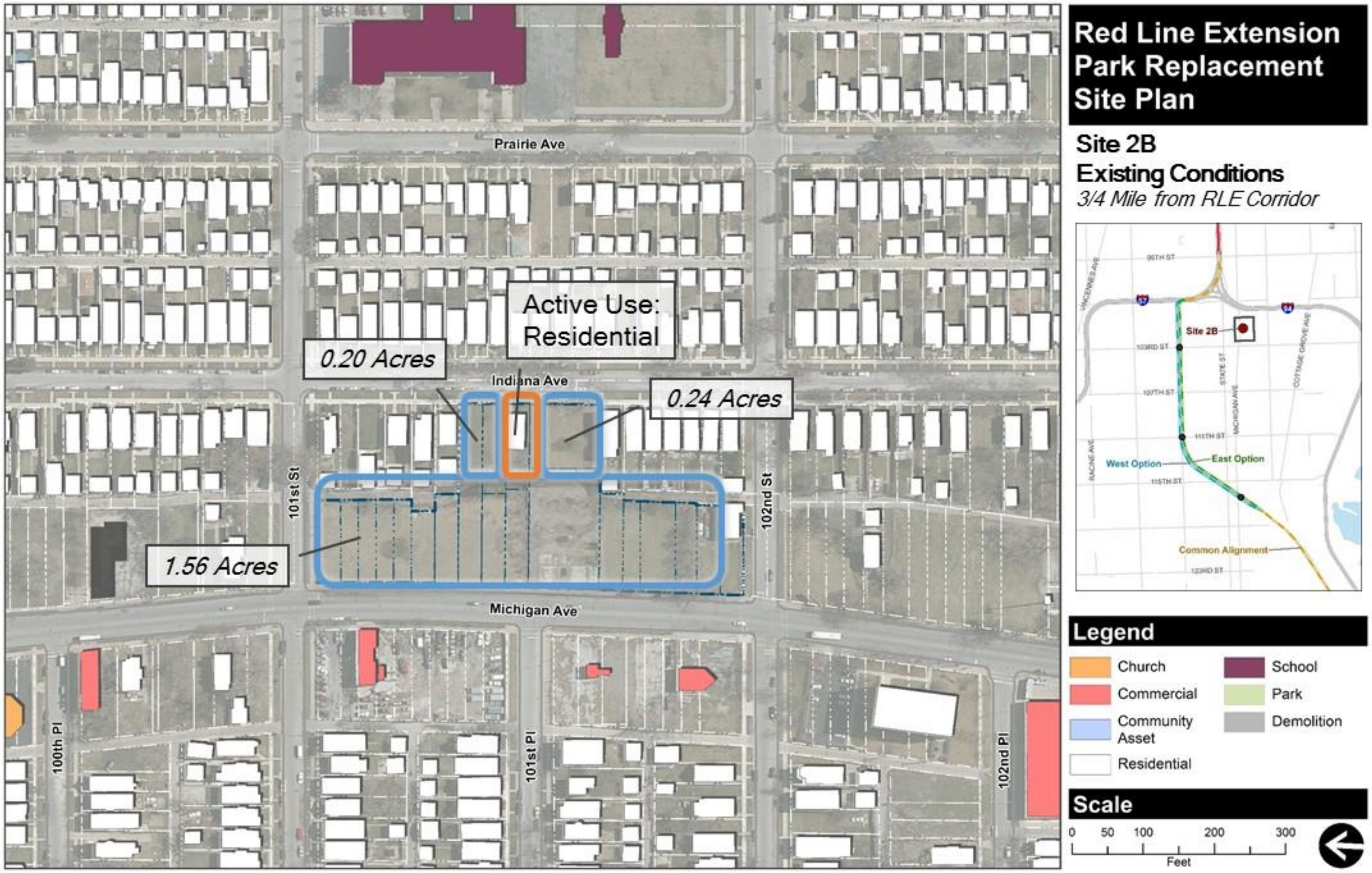
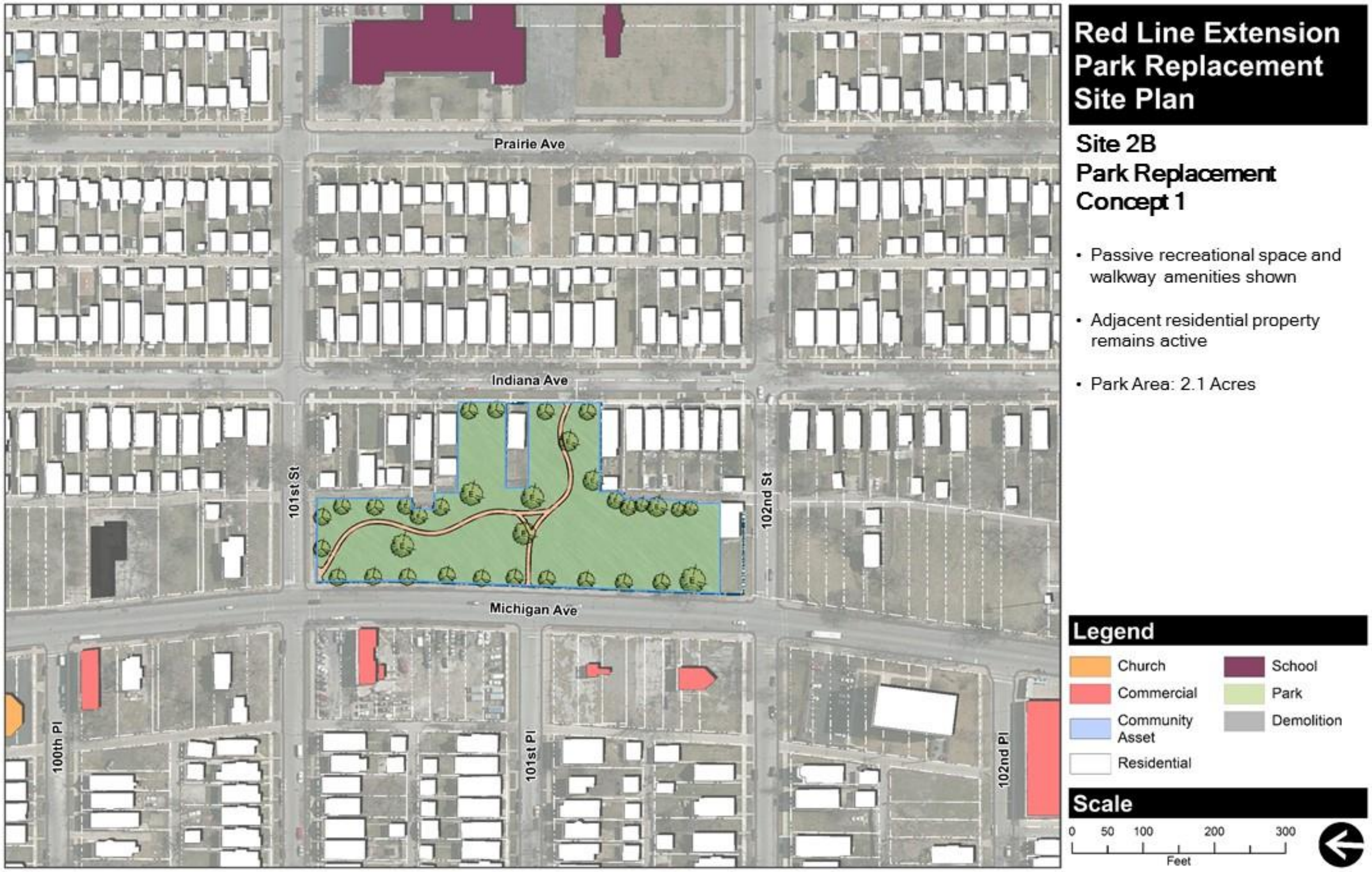

Red Line Extension Park Replacement Site Plan
Site 2B
Existing Conditions
3/4 Mile from RLE Corridor
Prairie Ave
Active Use: Residential
0.20 Acres
Indiana Ave
0.24 Acres
1.56 Acres
101st St
102nd St
Michigan Ave
100th Pl
101st Pl
102nd Pl
Site 2B
West Option
East Option
Common Alignment
95TH ST
103RD ST
107TH ST
111TH ST
115TH ST
Legend
Church
School
Commercial
Park
Community Asset
Demolition
Residential
Scale
0
50
100
200
300
Feet

Figure 6: Site 2B Existing Conditions

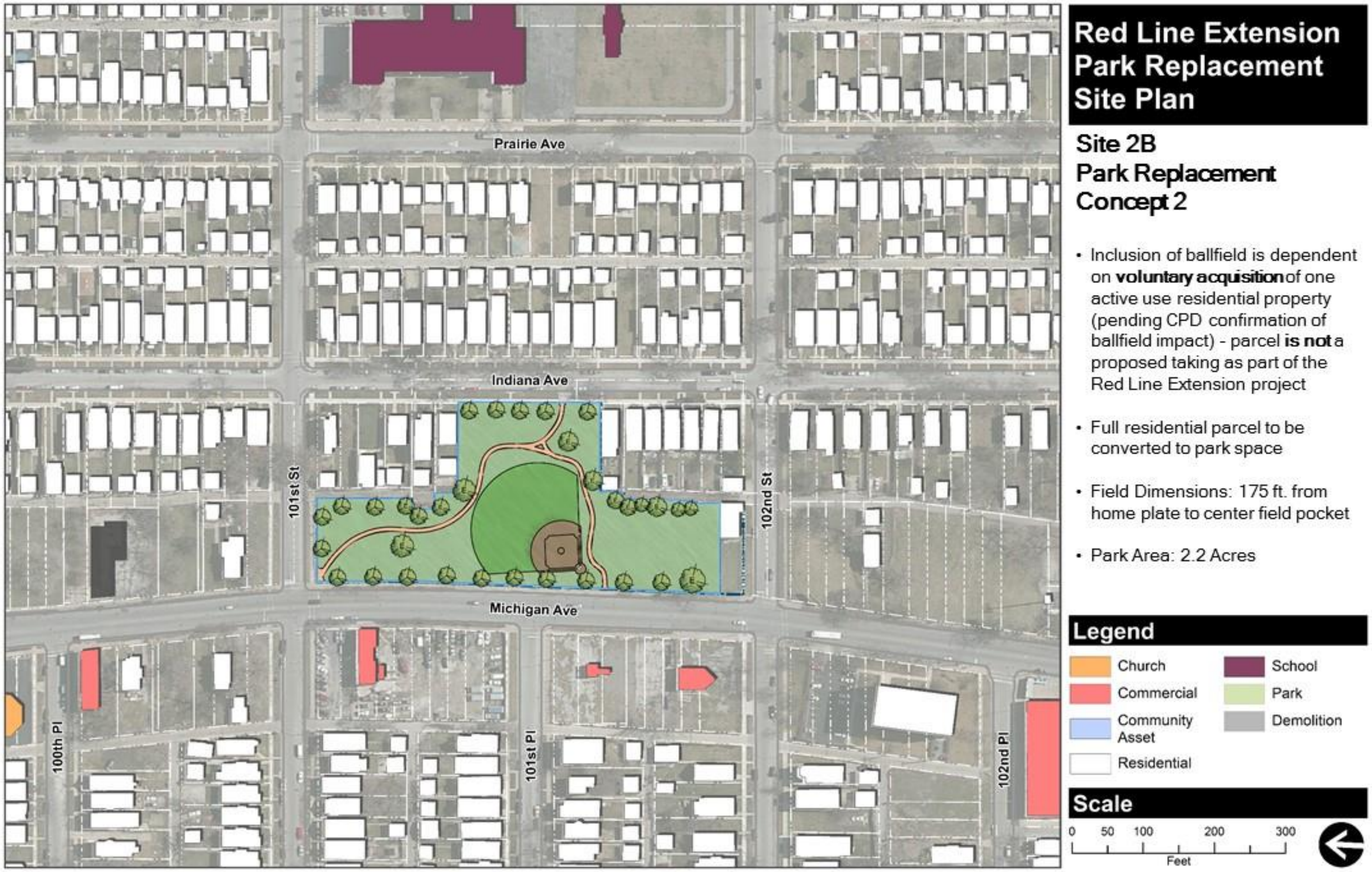

Prairie Ave
Indiana Ave
Michigan Ave
101st St
102nd St
100th Pl
101st Pl
102nd Pl
Legend
Church
Commercial
Community Asset
Residential
School
Park
Demolition
Scale
0
50
100
200
300
Feet

Red Line Extension Park Replacement Site Plan

Site 2B Park Replacement Concept 1

- Passive recreational space and walkway amenities shown
- Adjacent residential property remains active
- Park Area: 2.1 Acres

Figure 7: Site 2B Park Concept 1


Prairie Ave
Indiana Ave
Michigan Ave
101st St
102nd St
100th Pl
101st Pl
102nd Pl
Legend
🟧 Church
🟥 Commercial
🟦 Community Asset
⬜ Residential
🟪 School
🟩 Park
⬜ Demolition
Scale
0 50 100 200 300
Feet

Red Line Extension Park Replacement Site Plan

Site 2B Park Replacement Concept 2

- Inclusion of ballfield is dependent on **voluntary acquisition** of one active use residential property (pending CPD confirmation of ballfield impact) - parcel **is not** a proposed taking as part of the Red Line Extension project
- Full residential parcel to be converted to park space
- Field Dimensions: 175 ft. from home plate to center field pocket
- Park Area: 2.2 Acres

Figure 8: Site 2B Park Concept 2

4.2 Replacement Option Site 8A

The replacement option for Site 8A is located along 111th Street near Eggleston Street and is adjacent to the proposed elevated track structure and 111th Street station. This site could serve as a 2-acre new replacement park for the East Option only. A park & ride facility is proposed on a portion of this site as part of the East Option. This site would not be large enough to be a replacement park under the West Option because a park & ride facility is proposed at this site. This site is within ½-mile of Wendell Smith Park and Block Park. **Figures 9 and 10** show existing conditions as well as a replacement park concept for this location.

The concept for this site would allow for co-location of the new park with a new park & ride surface lot. A junior-sized baseball field, approximately 175 feet in diameter from home plate to the center field pocket, would be provided on the north side of the parcel. This site would involve voluntary acquisition of vacant property to accommodate the new park as well as acquisition of City-owned property for the park & ride lot. This site would provide additional connectivity between the new replacement park and nearby community facilities (a youth center and the Agape Community Center).

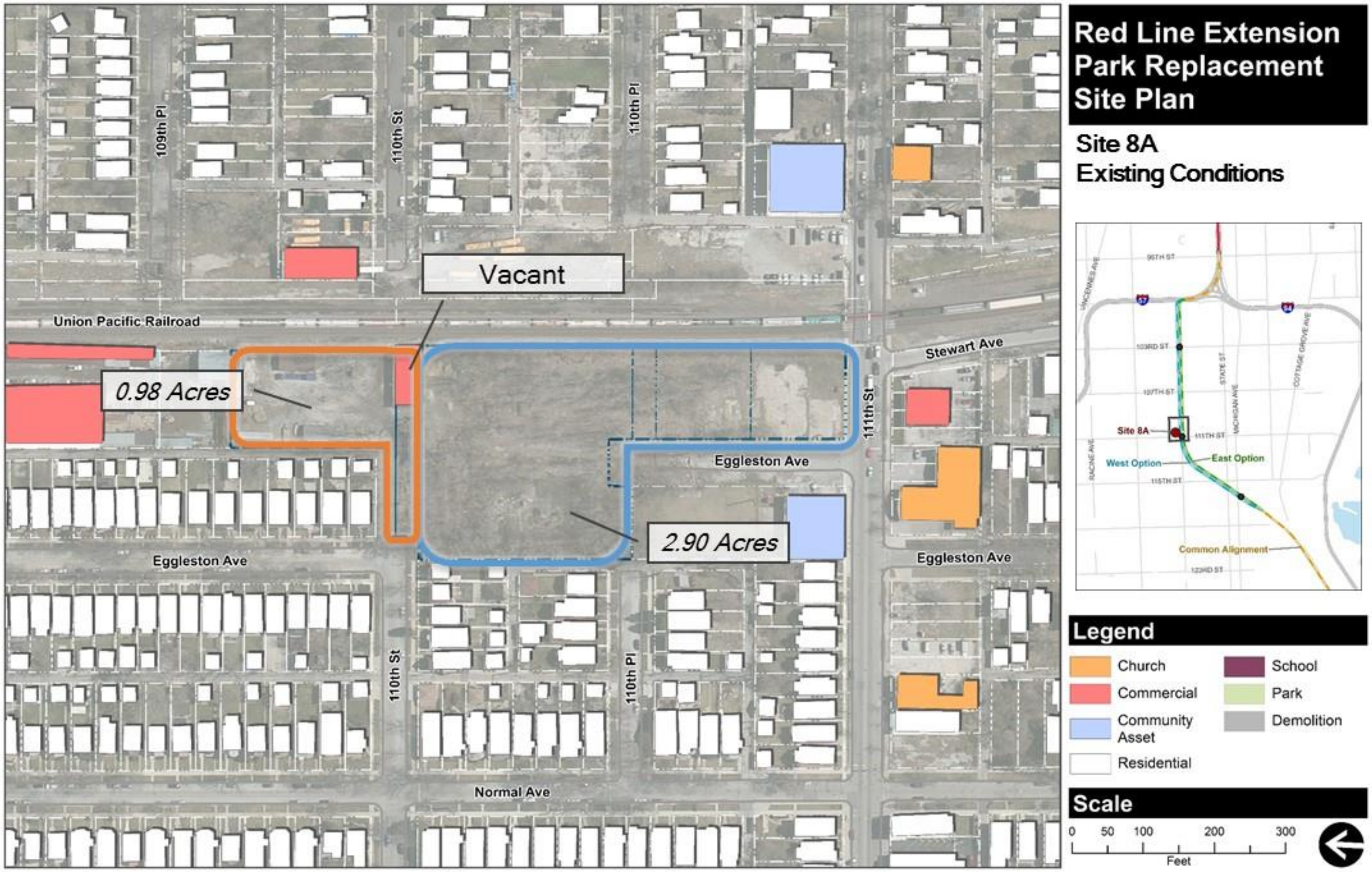
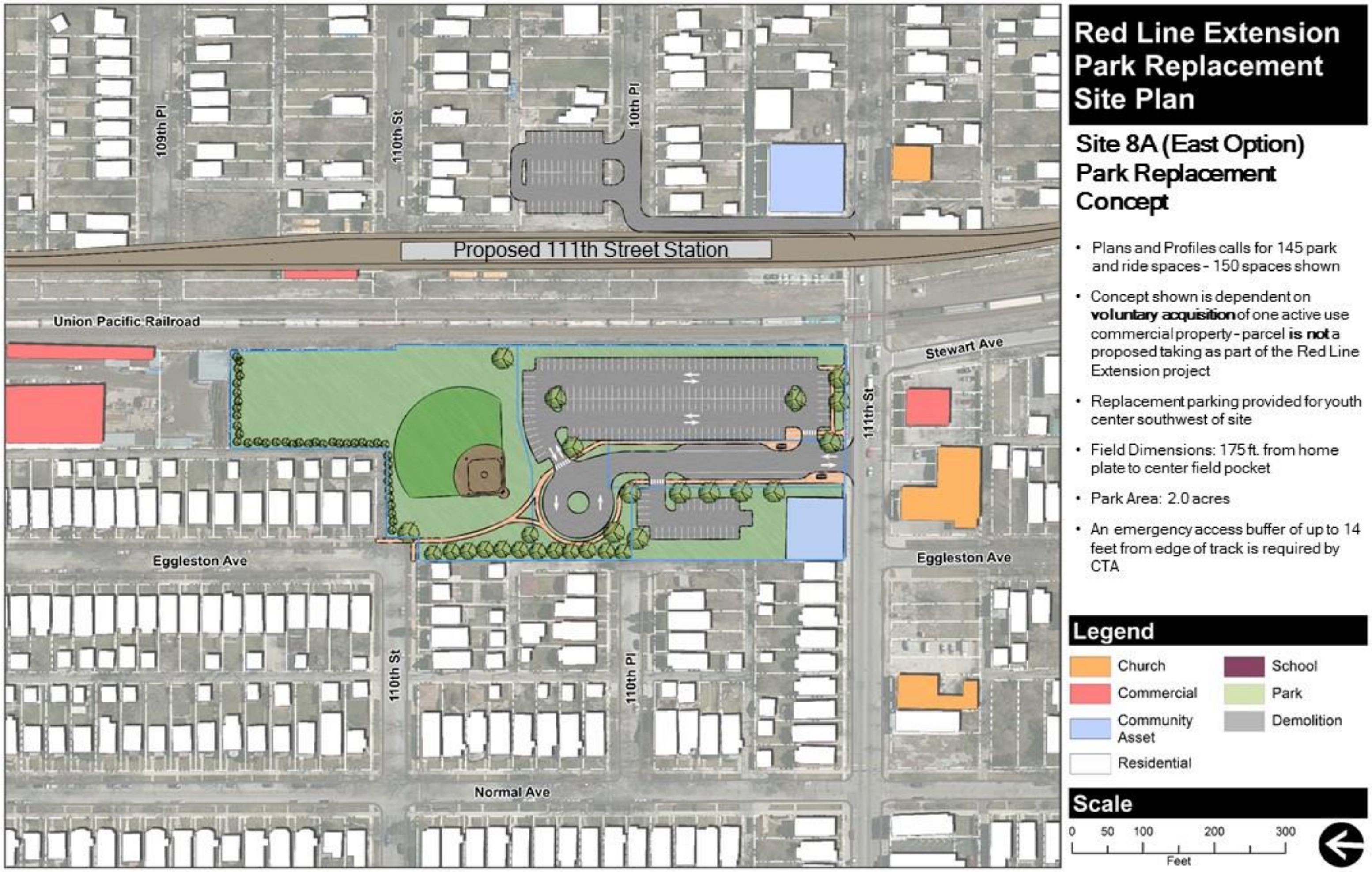

Red Line Extension Park Replacement Site Plan
Site 8A Existing Conditions
Vacant
Union Pacific Railroad
0.98 Acres
2.90 Acres
109th Pl
110th St
110th Pl
111th St
Stewart Ave
Eggleston Ave
Eggleston Ave
Eggleston Ave
Normal Ave
95TH ST
103RD ST
107TH ST
Site 8A
111TH ST
115TH ST
123RD ST
West Option
East Option
Common Alignment
VINCENNES AVE
RACINE AVE
STATE ST
MICHIGAN AVE
COTTAGE GROVE AVE
Legend
Church
Commercial
Community Asset
Residential
School
Park
Demolition
Scale
0
50
100
200
300
Feet

Figure 9: Site 8A Existing Conditions


109th Pl
110th St
110th Pl
Proposed 111th Street Station
Union Pacific Railroad
Stewart Ave
111th St
Eggleston Ave
Eggleston Ave
110th St
110th Pl
Normal Ave
Legend
Church
School
Commercial
Park
Community Asset
Demolition
Residential
Scale
0
50
100
200
300
Feet

Red Line Extension Park Replacement Site Plan

Site 8A (East Option) Park Replacement Concept

- Plans and Profiles calls for 145 park and ride spaces - 150 spaces shown
- Concept shown is dependent on **voluntary acquisition** of one active use commercial property - parcel **is not** a proposed taking as part of the Red Line Extension project
- Replacement parking provided for youth center southwest of site
- Field Dimensions: 175 ft. from home plate to center field pocket
- Park Area: 2.0 acres
- An emergency access buffer of up to 14 feet from edge of track is required by CTA

Figure 10: Site 8A Park Concept

4.3 Replacement Option Site 12

The replacement option for Site 12 is located along Michigan Avenue near Kensington Avenue and adjacent to the proposed elevated track structure and Michigan Avenue station. This site could serve as a 2.4-acre new replacement park for either the East or West Option. **Figures 11, 12, and 13** show existing conditions and proposed concept plans for this site under both the East and West Options.

Under the East Option, two park & ride lots are proposed near Michigan Avenue station. A 175-space surface parking lot is proposed northeast of the tracks, and a three-story parking garage accommodating 825 parking spaces is proposed southwest of the tracks. Under the East Option park concept, all 1,000 parking spaces would need to be provided on the southwestern parcel so that the northeastern parcel could be used for the park. This park concept would be adjacent to the proposed Michigan Avenue station and would allow for co-location of the new park with the new proposed transit facility. Voluntary acquisition of the northeastern parcel would be used under this concept.

Under the West Option, one five-story garage with 1,000 parking spaces is proposed on the southwest side of the tracks (no changes to the proposed parking would occur). This park concept would be adjacent to the proposed Michigan Avenue station, within walking distance. Voluntary acquisition of property on the southwestern parcel would be used under this concept.

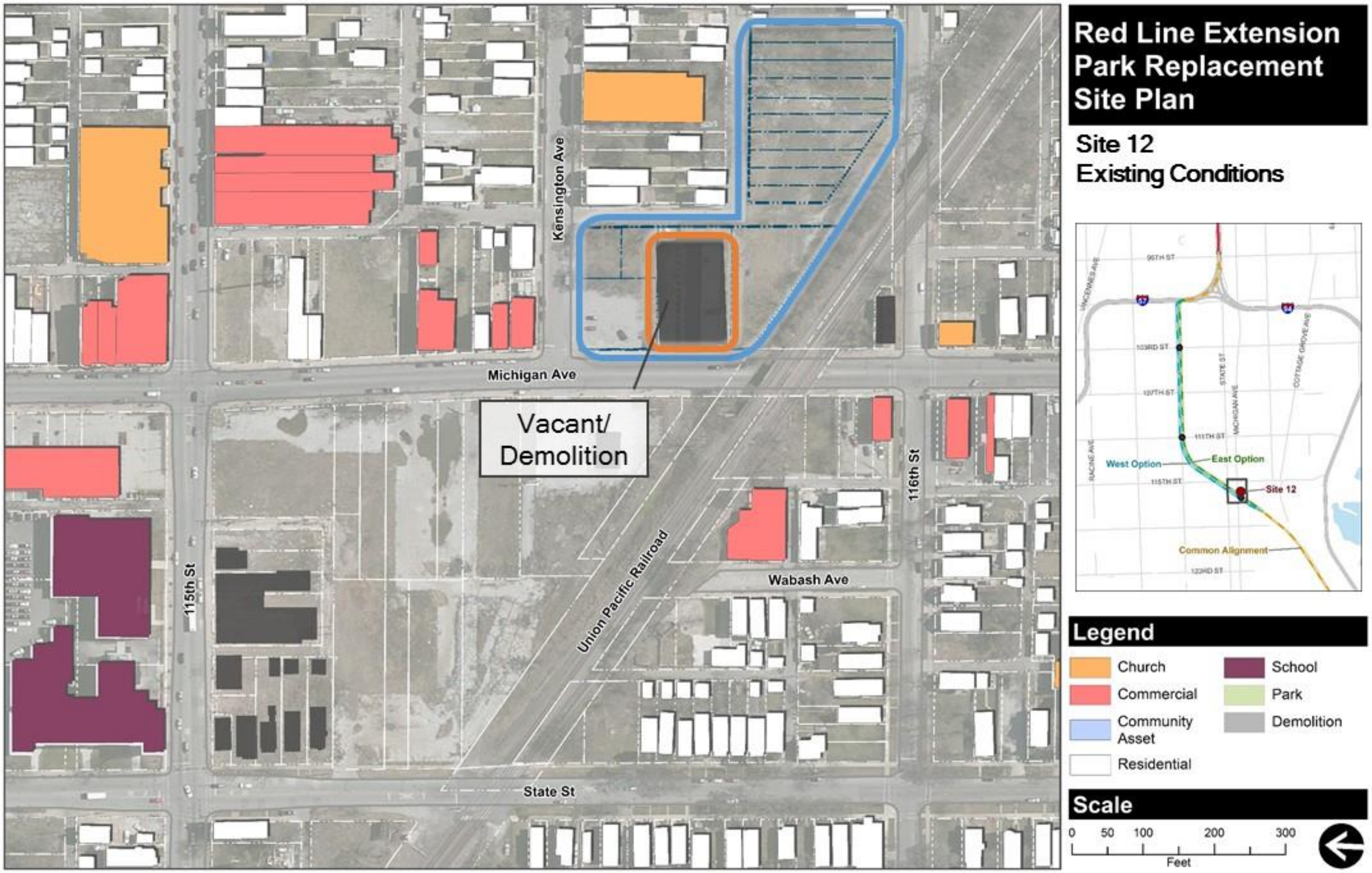
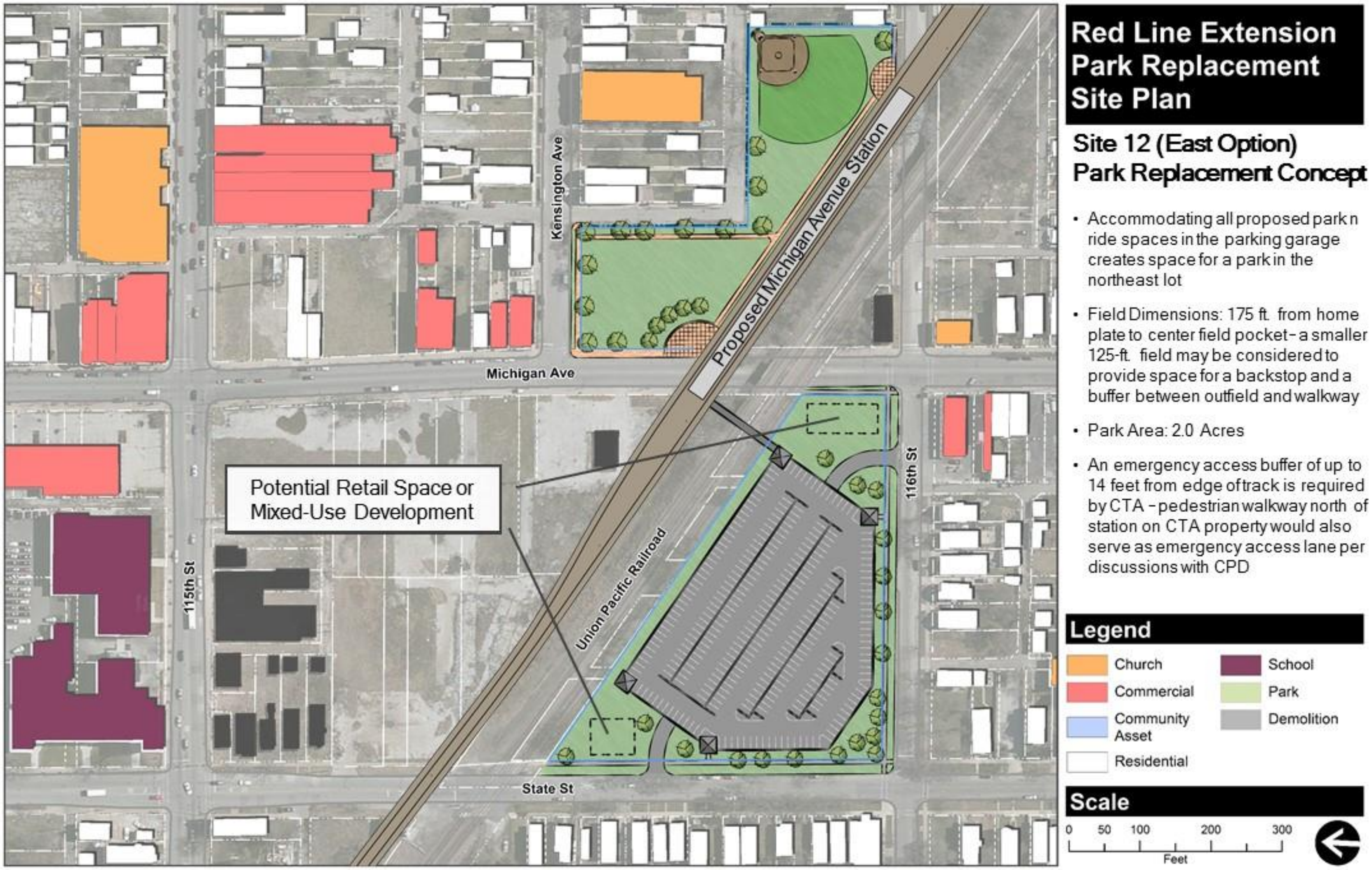

Red Line Extension Park Replacement Site Plan
Site 12
Existing Conditions
Kensington Ave
Michigan Ave
Vacant/ Demolition
116th St
115th St
Union Pacific Railroad
Wabash Ave
State St
95TH ST
VINCENNES AVE
57
94
103RD ST
107TH ST
STATE ST
MICHIGAN AVE
COTTAGE GROVE AVE
111TH ST
RACINE AVE
West Option
East Option
115TH ST
Site 12
Common Alignment
123RD ST
Legend
Church
School
Commercial
Park
Community Asset
Demolition
Residential
Scale
0
50
100
200
300
Feet

Figure 11: Site 12 Existing Conditions

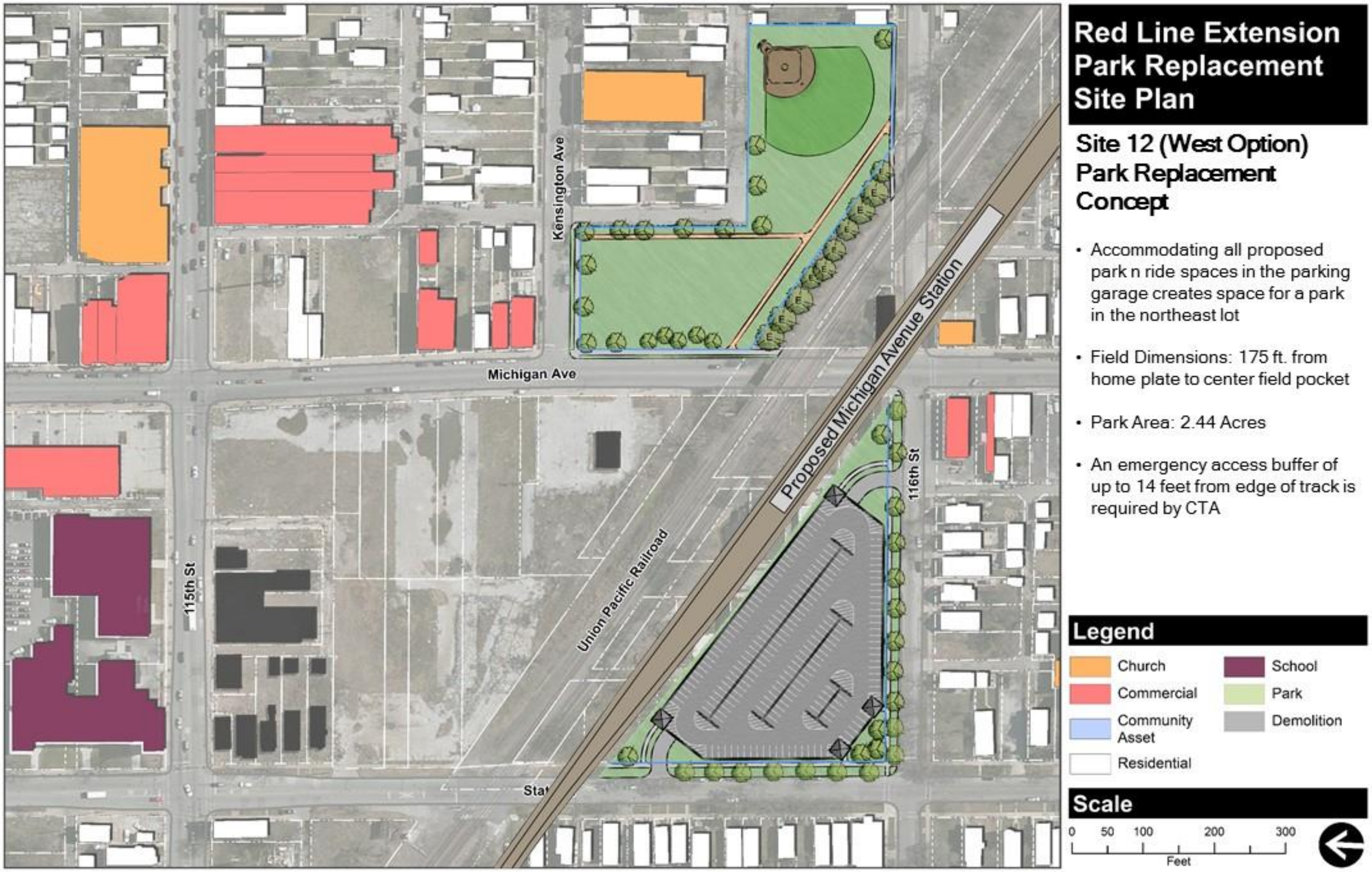

Kensington Ave
Michigan Ave
Proposed Michigan Avenue Station
Potential Retail Space or Mixed-Use Development
116th St
115th St
Union Pacific Railroad
State St
Legend
Church
School
Commercial
Park
Community Asset
Demolition
Residential
Scale
0
50
100
200
300
Feet

Red Line Extension Park Replacement Site Plan

Site 12 (East Option) Park Replacement Concept

- Accommodating all proposed park n ride spaces in the parking garage creates space for a park in the northeast lot
- Field Dimensions: 175 ft. from home plate to center field pocket - a smaller 125-ft. field may be considered to provide space for a backstop and a buffer between outfield and walkway
- Park Area: 2.0 Acres
- An emergency access buffer of up to 14 feet from edge of track is required by CTA - pedestrian walkway north of station on CTA property would also serve as emergency access lane per discussions with CPD

Figure 12: Site 12 East Option Park Concept



Kensington Ave
Michigan Ave
Proposed Michigan Avenue Station
116th St
115th St
Union Pacific Railroad
Stat
E

Red Line Extension Park Replacement Site Plan

Site 12 (West Option) Park Replacement Concept

- Accommodating all proposed park n ride spaces in the parking garage creates space for a park in the northeast lot
- Field Dimensions: 175 ft. from home plate to center field pocket
- Park Area: 2.44 Acres
- An emergency access buffer of up to 14 feet from edge of track is required by CTA

Legend

🟧	Church	🟪	School
🟥	Commercial	🟩	Park
🟦	Community Asset	⬜	Demolition
⬜	Residential		

Scale

0
50
100
200
300
Feet

Figure 13: Site 12 West Option Park Concept

Section 5
Changes to Existing Parks

5.1 Wendell Smith Park - Amenities Replacement

The West Option would avoid use of Wendell Smith Park and would not have permanent impacts to the park. The East Option would impact Wendell Smith Park; specifically, the East Option would impact one junior-sized baseball field, which is the smaller of the two baseball fields as well as the walking path, benches, and landscaping. Mitigation measures are proposed so that the attributes, features, and activities of the park are not adversely affected and include replacement of these amenities within Wendell Smith Park as well as replacement park acreage with new parkland (potential sites for this replacement park are provided in Replacement Park Concepts above). **Figures 14 and 15** provide conceptual views of the RLE alignment for the East and West Option, respectively. **Figure 16** provides a conceptual plan for replacement of affected amenities within Wendell Smith Park should the East Option be selected.

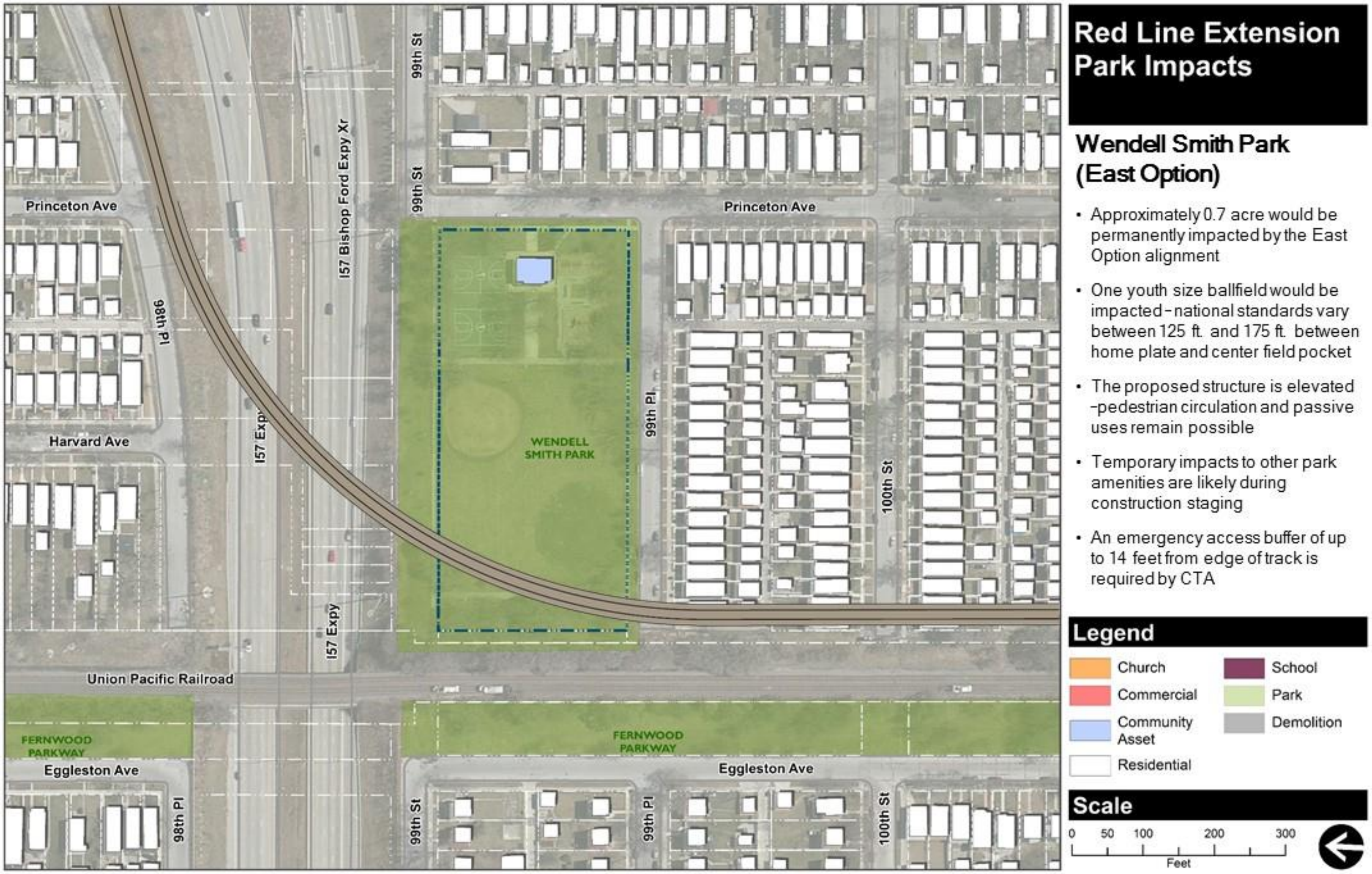
Replacement within Wendell Smith Park would include the following:

- Replacement and re-routing of the walking path within Wendell Smith Park. A fence dividing the elevated rail structure from the park is a preliminary recommendation based on coordination with CPD.

- Replacement of benches and landscaping, including trees along the re-routed walking path.

- Replacement of the affected smaller junior-sized baseball field with a complete replacement of the existing baseball field amenities by providing one larger baseball field. This larger baseball field was recommended based on coordination between CTA and CPD to enhance activities and amenities of the park.

A new junior-sized baseball field of similar size would be constructed at another site if the East Option were selected. Concepts for the new junior-sized baseball field are shown in **Section 4** of this report.



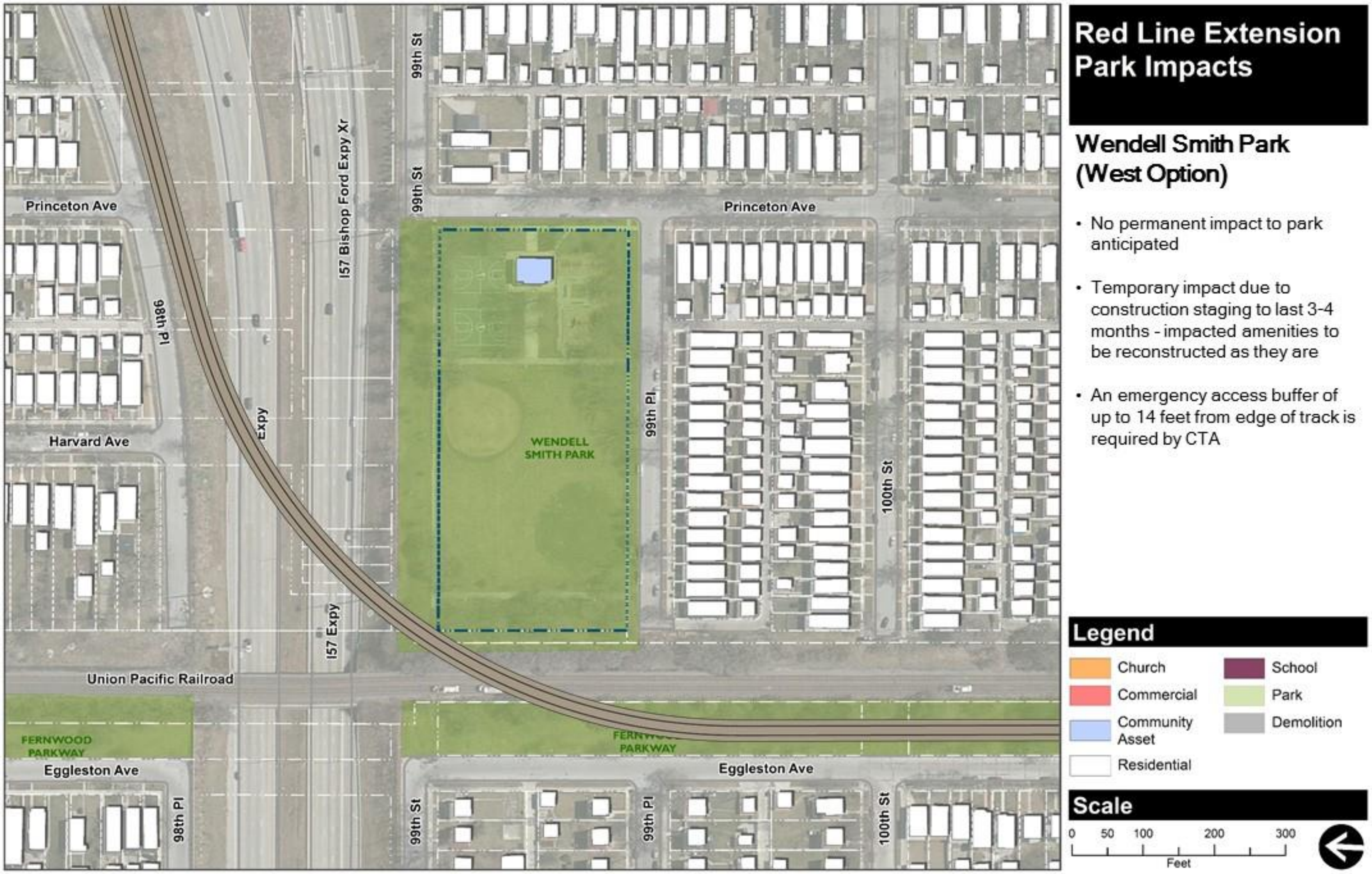
Princeton Ave
98th Pl
Harvard Ave
I57 Expy
I57 Bishop Ford Expy Xr
99th St
99th St
I57 Expy
WENDELL SMITH PARK
99th Pl
Princeton Ave
100th St
Union Pacific Railroad
FERNWOOD PARKWAY
FERNWOOD PARKWAY
Eggleston Ave
Eggleston Ave
98th Pl
99th St
99th Pl
100th St
Legend
Church
School
Commercial
Park
Community Asset
Demolition
Residential
Scale
0
50
100
200
300
Feet

Red Line Extension Park Impacts

Wendell Smith Park (East Option)

- Approximately 0.7 acre would be permanently impacted by the East Option alignment
- One youth size ballfield would be impacted - national standards vary between 125 ft. and 175 ft. between home plate and center field pocket
- The proposed structure is elevated -pedestrian circulation and passive uses remain possible
- Temporary impacts to other park amenities are likely during construction staging
- An emergency access buffer of up to 14 feet from edge of track is required by CTA

Figure 14: East Option Alignment near Wendell Smith Park



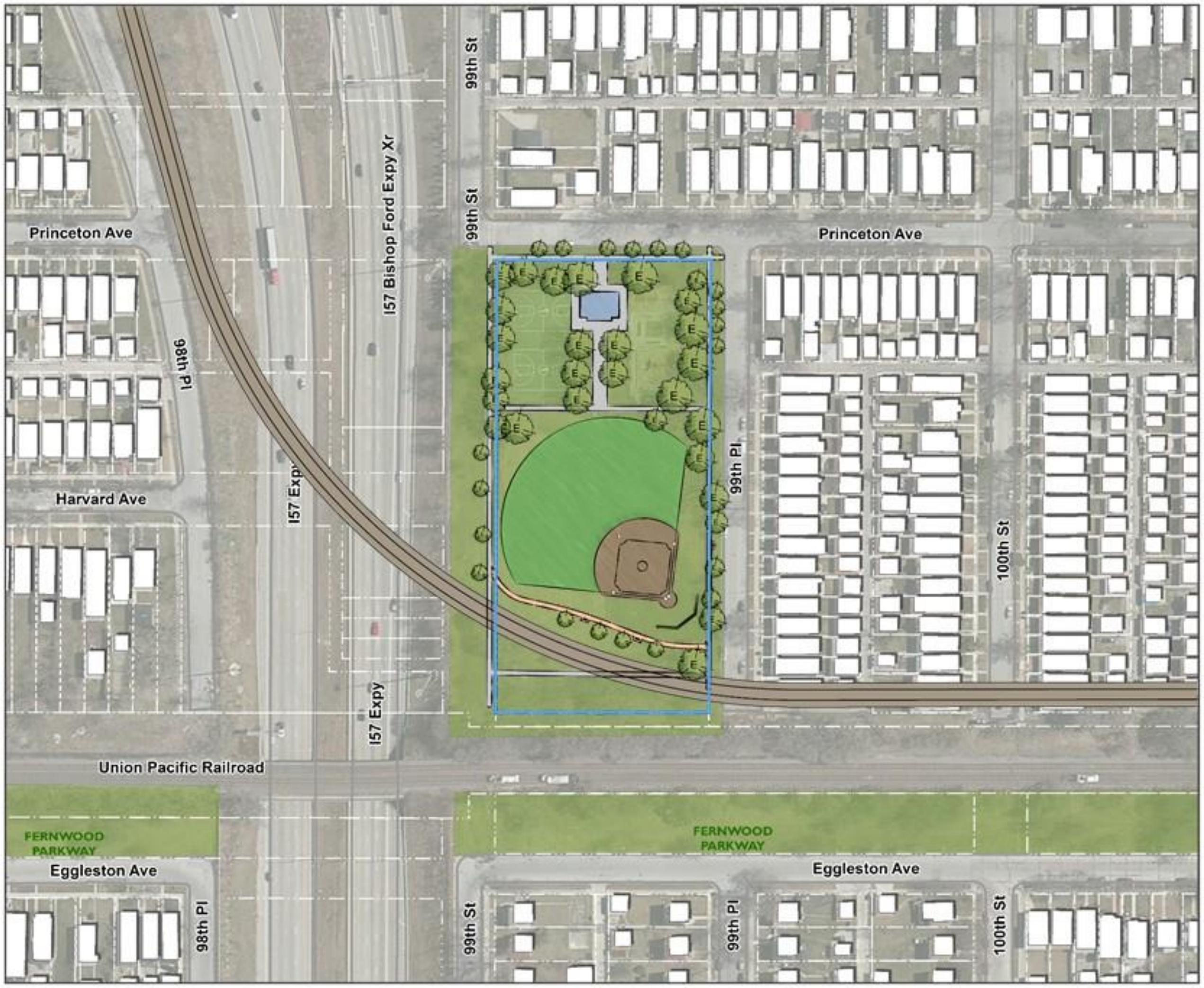
Red Line Extension Park Impacts

Wendell Smith Park (West Option)

- No permanent impact to park anticipated
- Temporary impact due to construction staging to last 3-4 months - impacted amenities to be reconstructed as they are
- An emergency access buffer of up to 14 feet from edge of track is required by CTA

Princeton Ave
Princeton Ave
98th Pl
Harvard Ave
Expy
I57 Bishop Ford Expy Xr
99th St
99th St
I57 Expy
WENDELL SMITH PARK
99th Pl
100th St
Union Pacific Railroad
FERNWOOD PARKWAY
FERNWOOD PARKWAY
Eggleston Ave
Eggleston Ave
98th Pl
99th St
99th Pl
100th St
Legend
Church
School
Commercial
Park
Community Asset
Demolition
Residential
Scale
0
50
100
200
300
Feet

Figure 15: West Option Alignment near Wendell Smith Park


99th St
99th St
157 Bishop Ford Expy Xr
Princeton Ave
98th Pl
Harvard Ave
157 Expy
157 Expy
Princeton Ave
99th Pl
100th St
Union Pacific Railroad
FERNWOOD PARKWAY
FERNWOOD PARKWAY
Eggleston Ave
Eggleston Ave
98th Pl
99th St
99th Pl
100th St

Red Line Extension Park Impacts Site Plan

Wendell Smith Park (East Option) Amenity Replacement Concept

- Two replacement ballfields do not fit in park due to the need to reroute the walkway on CPD property and spacing needs for backstops
- A high school sized field was reviewed, but does not fit in the park - a slightly smaller field size was identified which would fit
- Field Dimensions: 250 feet from home plate to center field pocket, 70 foot base lines (11-12 year old recommendations)
- An emergency access buffer of up to 14 feet from edge of track is required by CTA

Legend

🟧	Church	🟪	School
🟥	Commercial	🟩	Park
🟦	Community Asset	▨	Demolition
⬜	Residential		

Scale

0 50 100 200 300
Feet

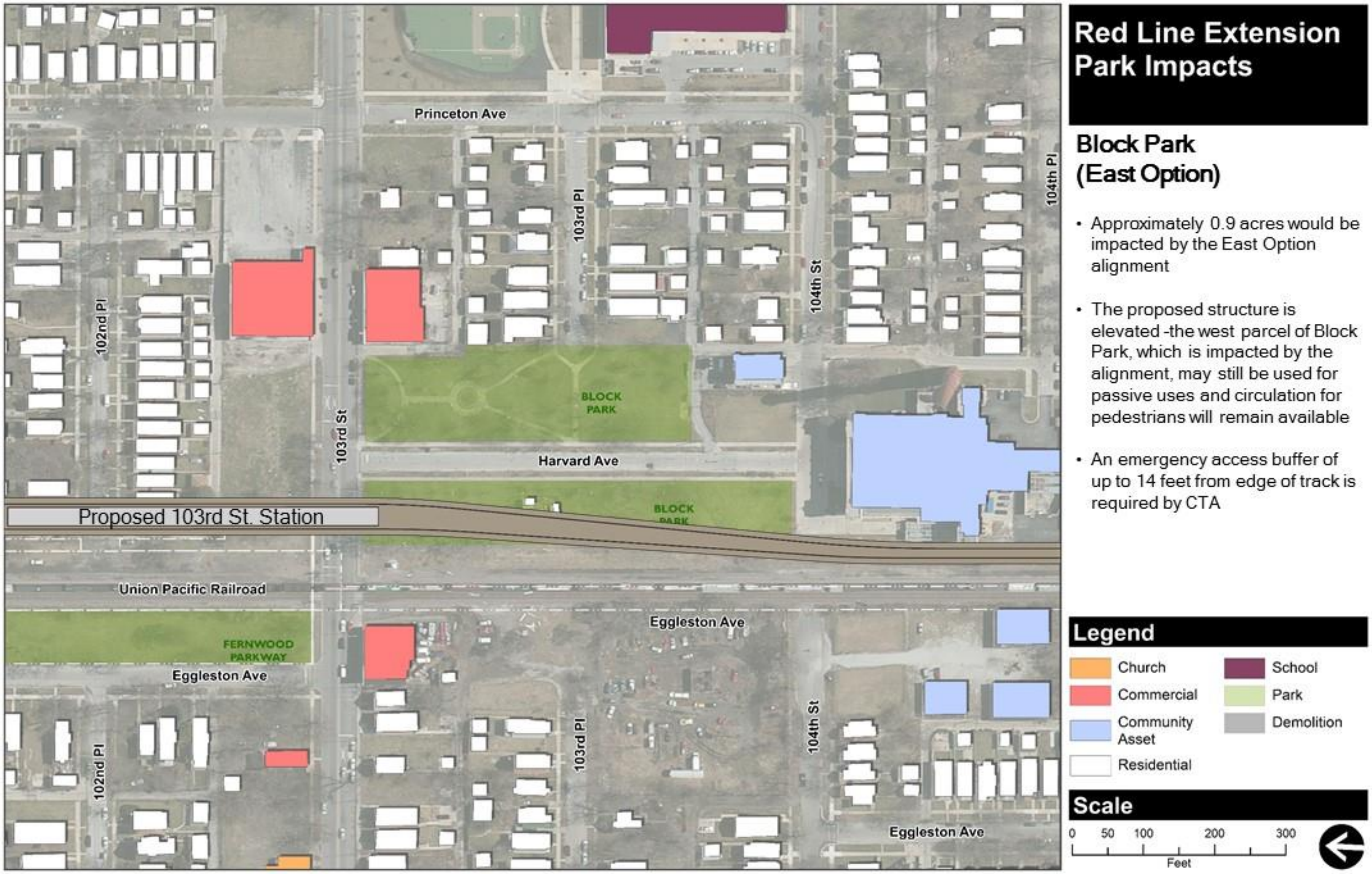
Figure 16: Wendell Smith Park Concept (East Option)

5.2 Block Park

Under the East Option, there would be impacts to Block Park. **Figure 17** shows how the East Option would impact the park. Mitigation measures would include replacement of the affected acreage of the park with new parkland, as described in the Replacement Park Concepts above.

Block Park is divided into two parcels by Harvard Avenue, which provides emergency access for the nearby fire station. As part of the East Option, the western parcel would be used by the proposed elevated track structure and 103rd Street station. There are currently no park amenities on the western parcel. The eastern parcel, where park amenities are currently provided, would not be used as part of the RLE Project; the eastern parcel would continue to function as a park.

Mitigation measures for impacts on this property would also include restoration and landscaping of disturbed areas and incorporation of design features, where necessary, to reduce or minimize impacts. Features would be designed such that they would enhance the park but not adversely affect the safety of the transit facility.



Princeton Ave
103rd Pl
104th St
104th Pl
102nd Pl
103rd St
BLOCK PARK
Harvard Ave
BLOCK PARK
Proposed 103rd St. Station
Union Pacific Railroad
Eggleston Ave
FERNWOOD PARKWAY
Eggleston Ave
102nd Pl
103rd Pl
104th St
Eggleston Ave
Legend
Church
School
Commercial
Park
Community Asset
Demolition
Residential
Scale
0 50 100 200 300
Feet

Red Line Extension Park Impacts

Block Park (East Option)

- Approximately 0.9 acres would be impacted by the East Option alignment
- The proposed structure is elevated -the west parcel of Block Park, which is impacted by the alignment, may still be used for passive uses and circulation for pedestrians will remain available
- An emergency access buffer of up to 14 feet from edge of track is required by CTA

Figure 17: East Option Alignment near Block Park

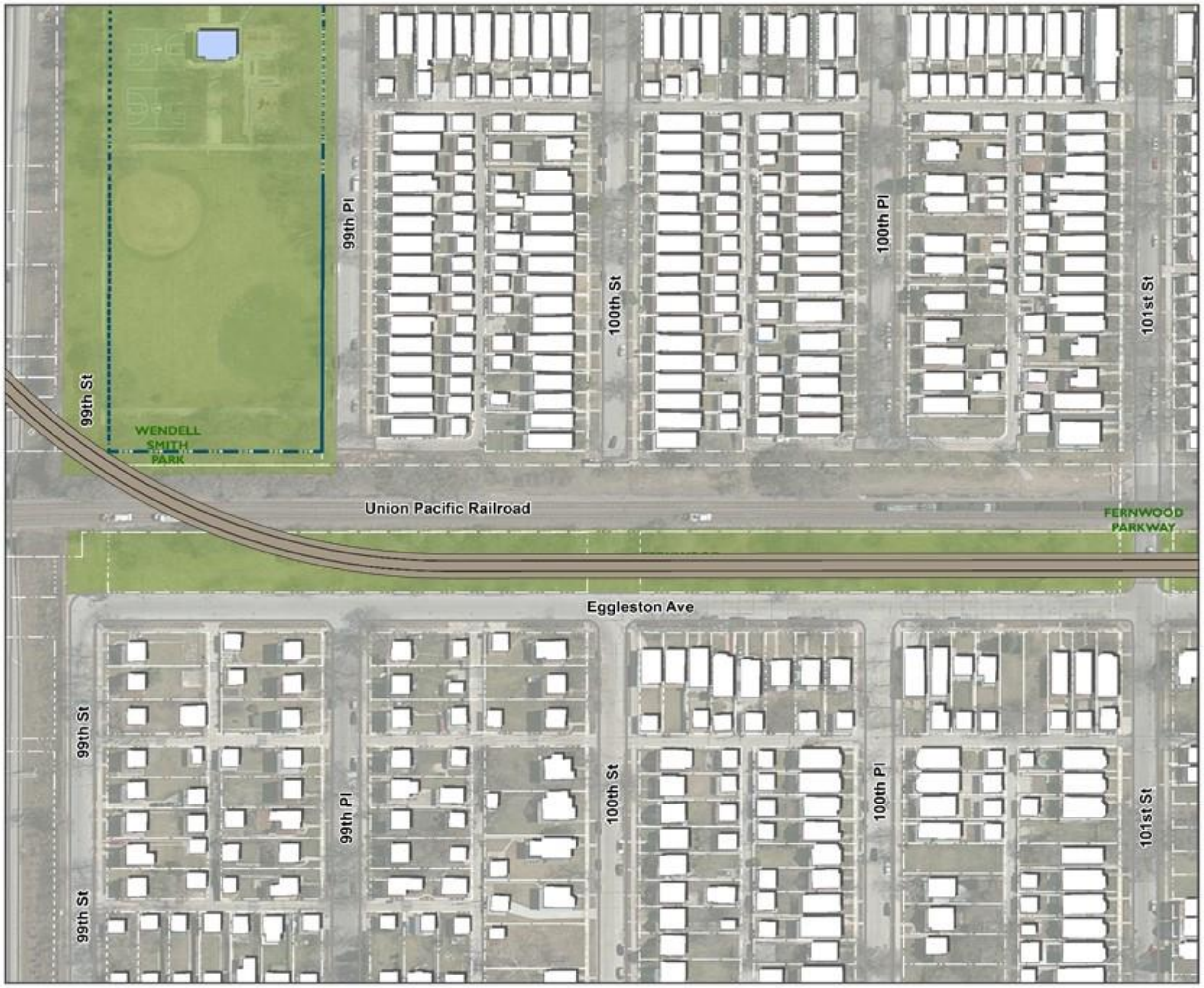
5.3 Fernwood Parkway

Under the West Option, there would be impacts to Fernwood Parkway. **Figures 18 and 19** show how the West Option would impact the park. Mitigation measures would include replacement of the affected acreage of the park with new parkland, as described in the Replacement Park Concepts above.

As part of the West Option, approximately 1.9 acres of Fernwood Parkway would be used to accommodate the proposed elevated track structure and 103rd Street station.

Mitigation measures for impacts on this property would also include restoration and landscaping of disturbed areas and incorporation of design features, where necessary, to reduce or minimize impacts. Features would be designed such that they would enhance the park but not adversely affect the safety of the transit facility.

In addition, because the area beneath the proposed elevated structure within Fernwood Parkway is large, there is the potential to provide a bicycle path along this affected area and near the proposed 103rd Street station. Additional coordination with the Chicago Department of Transportation, who is responsible for implementation of the bicycle program in Chicago, will be conducted to determine final feasibility of this bicycle path.


99th St
99th Pl
100th St
100th Pl
101st St
WENDELL SMITH PARK
Union Pacific Railroad
FERNWOOD PARKWAY
Eggleston Ave

Red Line Extension Park Impacts

Fernwood Parkway 99th Street to 101st Street (West Option)

- Approximately 1.9 acres would be impacted by the West Option tracks
- The proposed structure is elevated - Fernwood Parkway may still be used for passive uses and circulation for pedestrians will remain available
- The area underneath the tracks and between the structure and Eggleston Avenue may be suitable for multimodal improvements, such as a pedestrian and bicycle path
- An emergency access buffer of up to 14 feet from edge of track is required by CTA

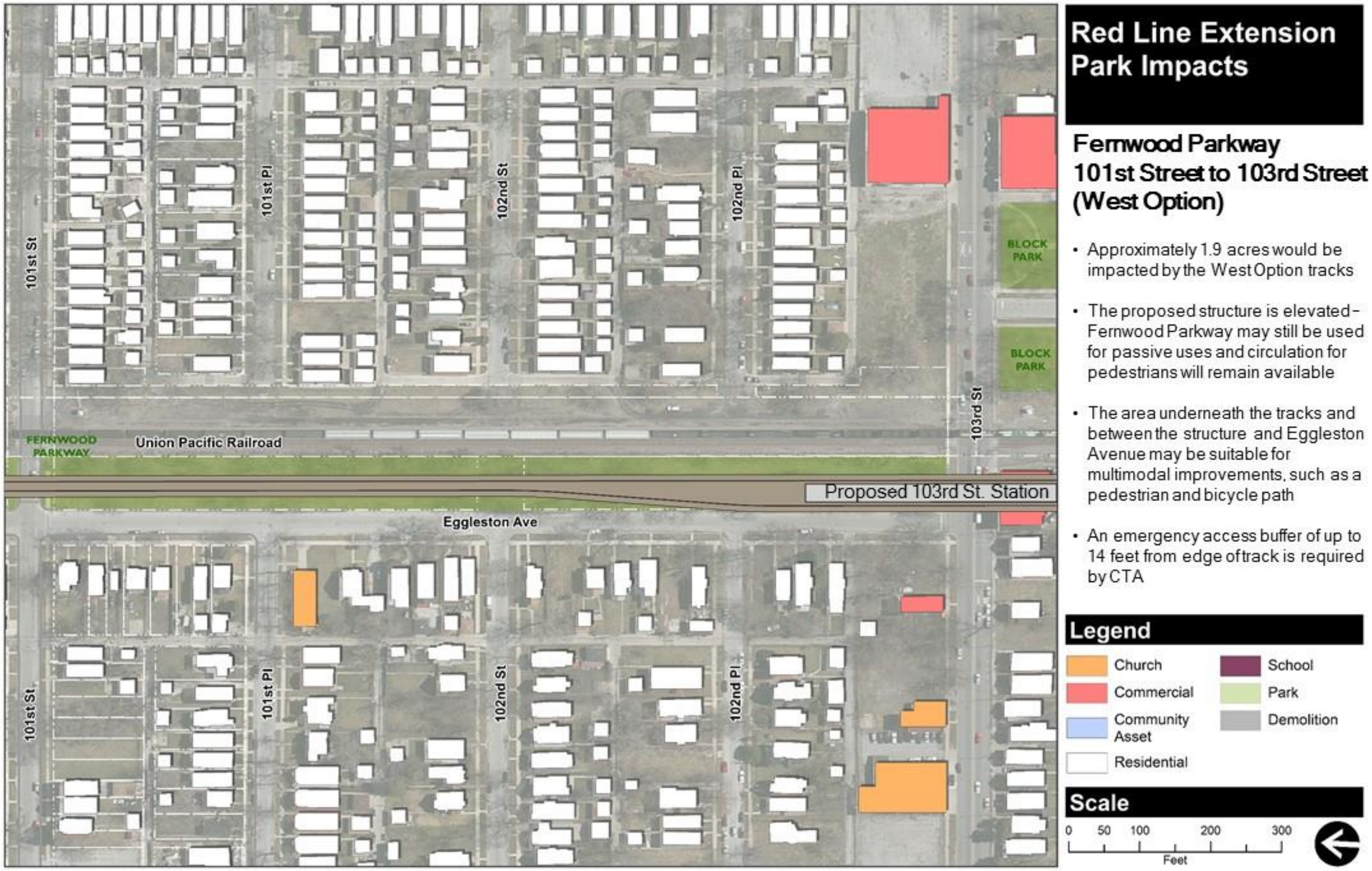
Legend

- 🟧 Church
- 🟥 Commercial
- 🟦 Community Asset
- ⬜ Residential
- 🟪 School
- 🟩 Park
- ▨ Demolition

Scale

0 50 100 200 300
Feet

Figure 18: West Option Alignment near Fernwood Parkway (north)


101st St
101st Pl
102nd St
102nd Pl
103rd St
BLOCK PARK
BLOCK PARK
FERNWOOD PARKWAY
Union Pacific Railroad
Proposed 103rd St. Station
Eggleston Ave
101st St
101st Pl
102nd St
102nd Pl
Legend
Church
Commercial
Community Asset
Residential
School
Park
Demolition
Scale
0
50
100
200
300
Feet

Red Line Extension Park Impacts

Fernwood Parkway 101st Street to 103rd Street (West Option)

- Approximately 1.9 acres would be impacted by the West Option tracks
- The proposed structure is elevated – Fernwood Parkway may still be used for passive uses and circulation for pedestrians will remain available
- The area underneath the tracks and between the structure and Eggleston Avenue may be suitable for multimodal improvements, such as a pedestrian and bicycle path
- An emergency access buffer of up to 14 feet from edge of track is required by CTA

Figure 19: West Option Alignment near Fernwood Parkway (south)

Section 6
Conclusions

The purpose of the Section 4(f) additional park analysis was to fulfill three main goals, as described above. Based on the findings detailed within this report, the following have been accomplished as part of this additional analysis for the Draft EIS:

- The analysis demonstrates that land is available for the proposed replacement park mitigation. CTA initially identified 22 potential sites. Based on continued coordination with CPD in further developing park concepts and processes for implementing mitigation measures, there would be no adverse effects after implementation of these measures. Park space and amenities in these community areas would be enhanced by implementation of replacement parkland and more active park uses.

- CTA coordinated with CPD to outline processes for implementation of these mitigation measures. After public comment on replacement park concepts as part of the Draft EIS, as part of the Final EIS a preferred replacement park option will be identified based on public comments. Property acquisition is not permissible before completion of Final EIS and the final replacement park location will be confirmed with property owners and CPD following completion of the NEPA process. Further environmental analysis in the form of a Phase I ESA will be conducted as part of property acquisition and before construction of the RLE Project.

- CTA developed park concepts at three sites as well as a site concept for replacement/relocation of amenities within Wendell Smith Park. This information will be useful in obtaining meaningful public input on park impacts and mitigation proposed as part the Draft EIS and Section 4(f) public hearing.

The next step for coordination on park impacts is to provide information from this analysis and the Draft EIS to the public for comment as part of the public hearing on the RLE Project Draft EIS and Section 4(f) Analysis. Based on public comments received on the environmental impacts and mitigation measures proposed, FTA and CTA will select a preferred UPRR option to move forward into a Final EIS.

CTA will continue to coordinate with CPD and other agencies throughout the next stages of this process. It is anticipated that a preferred replacement park site will be identified as part of the Final EIS. Additional coordination with property owners for voluntary acquisition of land will occur following completion of the environmental phase of this project. Once property is acquired, additional environmental site assessment in the form of a Phase I ESA will be conducted before construction.

Attachments

Attachment 1: Chicago Park District Coordination

Attachment 2: Desktop and Geospatial Analysis Results

Attachment 3: Field Visit Findings

Attachment 4: Suitability Analysis Assessment Notes

Attachment 5: Environmental Database Report Findings

Attachment 6: Park Concept Renderings

Attachment 1: Chicago Park District Coordination

CHICAGO TRANSIT AUTHORITY

567 West Lake Street
Chicago, Illinois 60661-1498
TEL 312 664-7200
www.transitchicago.com

June 8, 2015

Mr. Rob Rejman
Director of Planning and Construction
Chicago Park District
541 N. Fairbanks Court
Chicago, IL 60611

Re: CTA Red Line Extension (RLE) Project

Dear Mr. Rejman:

The Chicago Transit Authority (CTA) and Federal Transit Administration (FTA) are continuing efforts to prepare an Environmental Impact Statement (EIS) for the proposed Red Line Extension (RLE) Project in accordance with the National Environmental Policy Act (NEPA).The proposed project would extend the Red Line from the existing 95th Street Terminal to 130th Street, subject to the availability of funding.

CTA recently met with your agency on April 8, 2015 and presented information about the East and West options of the Union Pacific Railroad alignment, potential park impacts, and preliminary mitigation measures for each of the alignment options. In follow up to that meeting, this letter provides additional supporting information on the project, park impacts, and preliminary mitigation measures for further input from your agency. As the official with jurisdiction over these properties, CTA would like additional input from your agency on the following:

1. Confirmation on the attached documentation regarding primary activities and functions that take place at each of the three park properties that would be affected by the options under consideration, including which of these activities and functions constitute the primary purpose of these parks.

2. The views of your agency on the significance of each of these parks in terms of their existing availability and function in meeting the objectives of the Chicago Park District and the surrounding community as well as the impacts and/or benefits of the proposed project with mitigation measures implemented as proposed.

3. Comments and recommendations from your agency on the proposed mitigation measures for impacts and use of each park, including identification of any appropriate replacement park locations for the proposed project mitigation measures.

4. The views of your agency on whether, after implementation of these mitigation measures, the impacts presented would be adverse to the activities, features, or attributes of each park.

We also welcome any other feedback from your agency that would be useful in understanding the views, goals, and objectives of the Chicago Park District in relationship to the proposed RLE Project. Your input will be used and reflected in the Draft EIS and Section 4(f) Evaluation that is being prepared. Section 4(f) of the USDOT Act of 1966 protects significant historic resources as well as publicly owned recreation areas, parks, and wildlife refuges. Once your views on these matters are appropriately incorporated into the document, CTA and FTA will be providing documentation to your agency on the environmental impacts and Section 4(f) findings and will seek concurrence from the Chicago Park District on the determination made. Additional coordination meetings will be scheduled with your agency, as needed, to ensure proper coordination.

At this time, CTA expects to release the Draft EIS and Section 4(f) Evaluation for public review and comment in spring 2016. A public hearing will be scheduled at that time to take public comments on the environmental findings in the Draft EIS and Section 4(f) Evaluation. Based on the technical analysis conducted and public input received, a Final EIS/Record of Decision will be prepared. The Final EIS/Record of Decision will document the results of the Draft EIS process, confirm whether the East or West Option will be constructed, and include a list of committed final mitigation measures for the option chosen. CTA and FTA will continue to work with your agency through this process to keep you informed on the status of this project and to conduct follow up coordination activities, as needed. Additional information about the project is available at: transitchicago.com/RedEIS.

If you have any questions, please do not hesitate to contact me. Thank you for your participation on this project.

Sincerely,

Sonali

Sonali Tandon
Senior Project Manager, Planning
Chicago Transit Authority
312.681.4246
standon@transitchicago.com

cc:

Michael Lange, Chicago Park District
Doreen O’Donnell, Chicago Park District
Reginald Arkell, Federal Transit Administration
Mark Assam, Federal Transit Administration

Project Overview and Description

The Chicago Transit Authority (CTA), as project sponsor to the Federal Transit Administration (FTA), proposes to construct the Red Line Extension (RLE) Project to extend the existing Red Line heavy rail transit service approximately 5 miles south from the existing 95th Street Terminal to 130th Street on Chicago's Far South Side. The project area for the RLE is approximately 11 miles south of the Loop (Chicago's central business district).

The National Environmental Policy Act of 1969 (NEPA) mandates the consideration of environmental impacts before approval of any federally funded project that may have significant impacts on the environment or where impacts have not yet been determined. FTA and CTA are currently preparing a Draft Environmental Impact Statement (EIS) for this project in accordance with NEPA and other applicable regulations, including Section 106 of the National Historic Preservation Act (NHPA), Section 4(f) of the United States Department of Transportation (USDOT) Act of 1966, joint guidance and regulations from FTA and the Federal Highway Administration (FHWA), and other agency regulations and guidelines.

After extensive planning and study, the Chicago Transit Board designated the Union Pacific Railroad (UPRR) Rail Alternative as the Locally Preferred Alternative (LPA) for this project on August 12, 2009. The UPRR Alternative route would run south along I-94 from the 95th Street Terminal, then curve west along the north side of I-57 (within the I-57 right-of-way) for nearly ½ mile until reaching the UPRR corridor in the vicinity of Eggleston Avenue. The alignment would turn south to follow the UPRR corridor.

Two options are being considered for the alignment along the UPRR corridor. The CTA elevated structure would be located either east or west of the existing UPRR corridor. The alignment would follow the UPRR corridor to Prairie Avenue, where it would cross over the Canadian National/Metra Electric District (CN/ME) tracks near 119th Street. South of this point, the East and West Options would follow the same alignment southeast along the NICTD/Chicago South Shore & South Bend Railroad (CSS & SBRR) right-of-way using a portion of the Indiana Harbor Belt Railroad (IHB) right-of-way to the terminus (end) of the RLE at 130th Street.

As described, two UPRR Alternative options for the segment of the proposed route between I-57 and the CN/ME tracks near 119th Street are under further evaluation:

- East Option - The CTA elevated structure would be placed immediately adjacent to the east side of the UPRR right-of-way.

- West Option - The CTA elevated structure would be placed immediately adjacent to the west side of the UPRR right-of-way.

An overview map of the project and alignment options is provided in **Figure 1**.

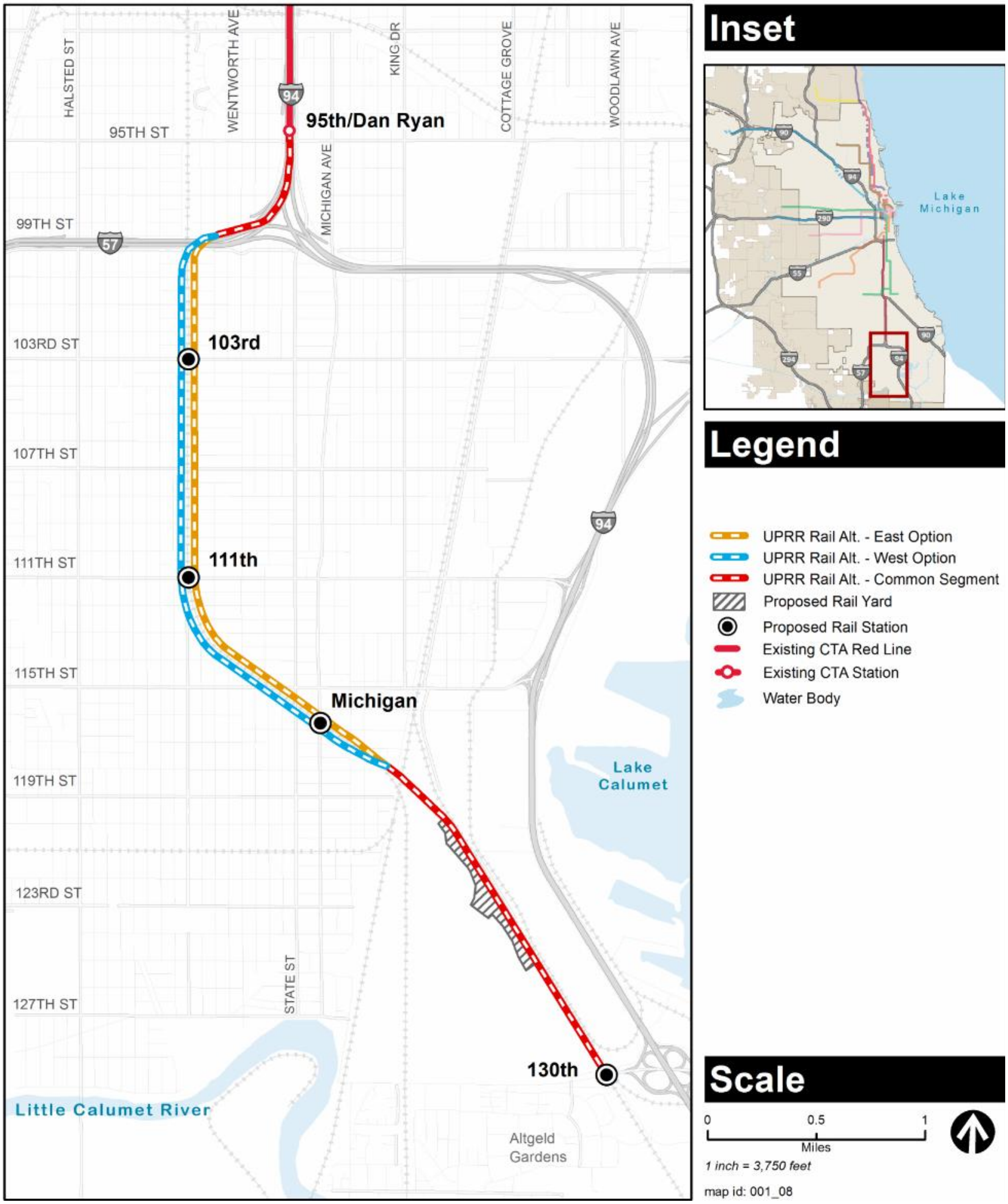

HALSTED ST
WENTWORTH AVE
KING DR
COTTAGE GROVE
WOODLAWN AVE
94
95th/Dan Ryan
95TH ST
MICHIGAN AVE
99TH ST
57
103RD ST
103rd
107TH ST
111TH ST
111th
115TH ST
Michigan
119TH ST
Lake Calumet
123RD ST
STATE ST
127TH ST
130th
Little Calumet River
Altgeld Gardens
Inset
Lake Michigan
90
290
55
294
Legend
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
UPRR Rail Alt. - Common Segment
Proposed Rail Yard
Proposed Rail Station
Existing CTA Red Line
Existing CTA Station
Water Body
Scale
0
0.5
1
Miles
1 inch = 3,750 feet
map id: 001_08

Figure 1: Union Pacific Railroad Alternative Options

Park Impact Overview

All public parks within 500 feet of the proposed right-of-way and within ½ mile around the locations of proposed stations were analyzed for potential impacts as a result of implementing the project. **Table 1** summarizes park impacts as a result of each UPRR alignment option. **Figure 2** shows the locations of all parks in the vicinity of the project. The following section provides further details on the park or parks impacted by each alignment option.

Table 1: Park and Recreational Resources Impacts Overview

Park or Recreational Resource Name	Address	Impact Findings	
		East Option	West Option
Wendell Smith Park	9912 S. Princeton Avenue	0.7 acres	-
Fernwood Parkway	9501 S. Eggleston Avenue	-	1.9 acres
Block Park	346 W. 104th Street	0.9 acres	-
Total		*1.6 acres*	*1.9 acres*

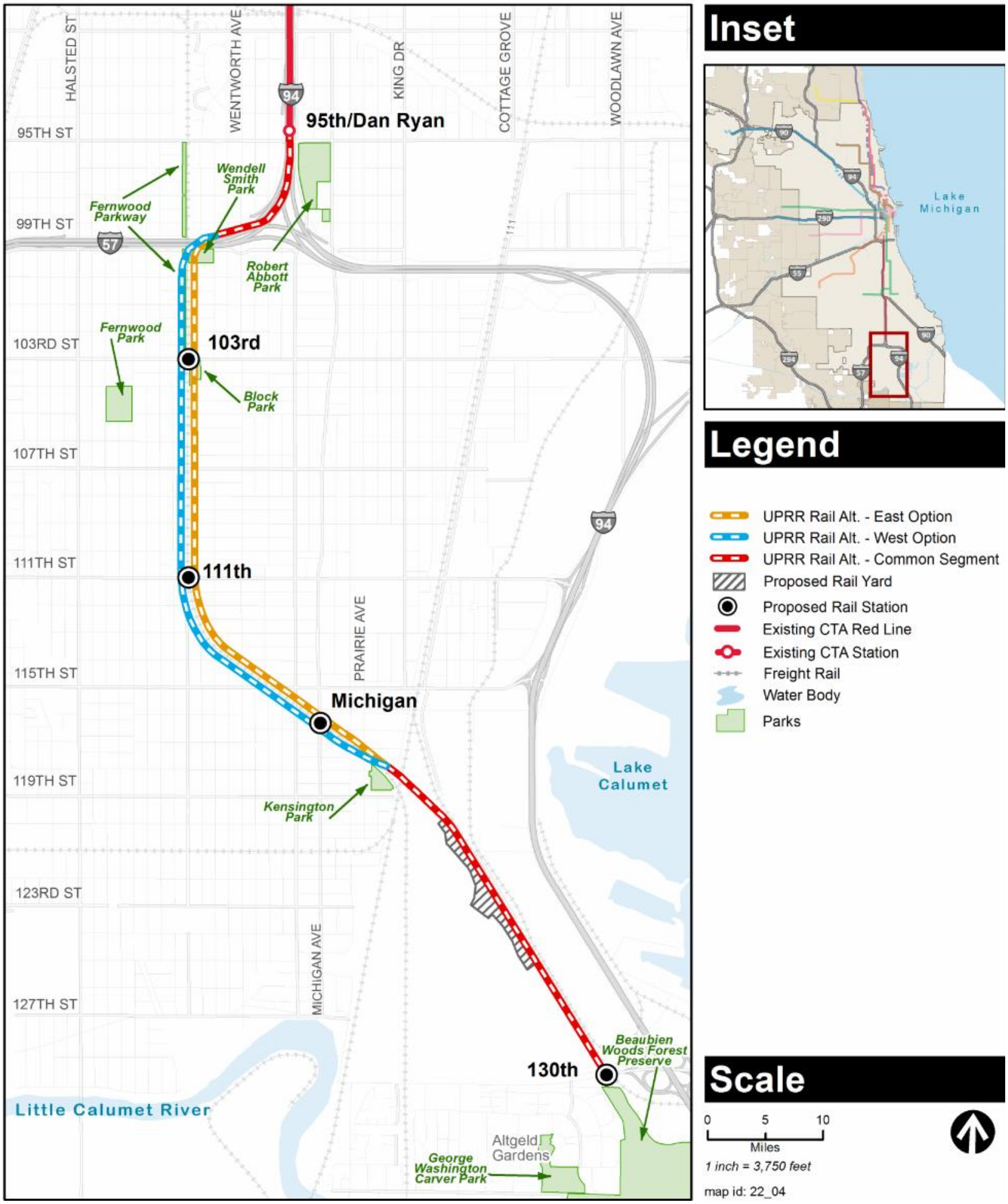

HALSTED ST
WENTWORTH AVE
KING DR
COTTAGE GROVE
WOODLAWN AVE
95TH ST
99TH ST
103RD ST
107TH ST
111TH ST
115TH ST
119TH ST
123RD ST
127TH ST
PRAIRIE AVE
MICHIGAN AVE
94
57
95th/Dan Ryan
103rd
111th
Michigan
130th
Fernwood Parkway
Wendell Smith Park
Robert Abbott Park
Fernwood Park
Block Park
Kensington Park
Lake Calumet
Little Calumet River
Beaubien Woods Forest Preserve
Altgeld Gardens
George Washington Carver Park
Inset
Lake Michigan
90
290
55
294
Legend
UPRR Rail Alt. - East Option
UPRR Rail Alt. - West Option
UPRR Rail Alt. - Common Segment
Proposed Rail Yard
Proposed Rail Station
Existing CTA Red Line
Existing CTA Station
Freight Rail
Water Body
Parks
Scale
0
5
10
Miles
1 inch = 3,750 feet
map id: 22_04

Figure 2: Publicly Owned Park and Recreational Properties Adjacent to the Project

UPRR Alternative East Option - Park Impacts

Two park resources would be used as result of the East Option: Wendell Smith Park and Block Park, which are further described below.

Wendell Smith Park

Wendell Smith Park is approximately 4.7 acres (340 feet wide by 610 feet long) and is an actively used facility with basketball courts, baseball fields, a play lot, recreation building, and 0.3 mile of walking trails. Regularly scheduled activities at Wendell Smith Park include basketball tournaments, baseball/softball games, and concerts. The park is also actively used by day camps and for activities organized by the Chicago Park District.

The East Option alignment would run through the northwestern corner of the park, as shown in Error! Reference source not found.. Of the 4.7 acres of the park, approximately 0.7 acre would be overlapped by the elevated structure and its associated clearances. The overlap area includes open space, trees, benches, and a portion of the park's walking trail. The outfield of an existing baseball field would be used. Piers would be located in the park, and the bottom of the elevated structure would be approximately 15 feet above ground level. Because a permanent easement is proposed, the land within the easement would be considered a permanent incorporation (direct use) of the park facilities. Temporary closure of the overlapped portion of Wendell Smith Park would be necessary during construction.

Preliminary Mitigation Measures

Mitigation and enhancement measures are proposed that would result in no adverse effect to the features, attributes, and activities of the park after implementation, as follows:

- Replacement of impacted park space. Payment would be the fair market value of the land and improvements taken or improvements to the remaining site equal to the fair market value of the land and improvements taken. Location of replacement property would be further defined in coordination with the Chicago Park District.

- Relocation or replacement of the baseball field based on further coordination with the Chicago Park District and outreach to the public so that the attributes, features, and activities are not adversely affected by the use of the northwest corner of the park.

- Replacement of facilities affected by the project including sidewalks, paths, benches, lights, trees, and other facilities within the park.

- Restoration and landscaping of disturbed areas.

- Incorporation of design features where necessary to reduce or minimize impacts of use on the Section 4(f) property. Such features would be designed in a manner that would enhance the park but not adversely affect the safety of the transit facility.

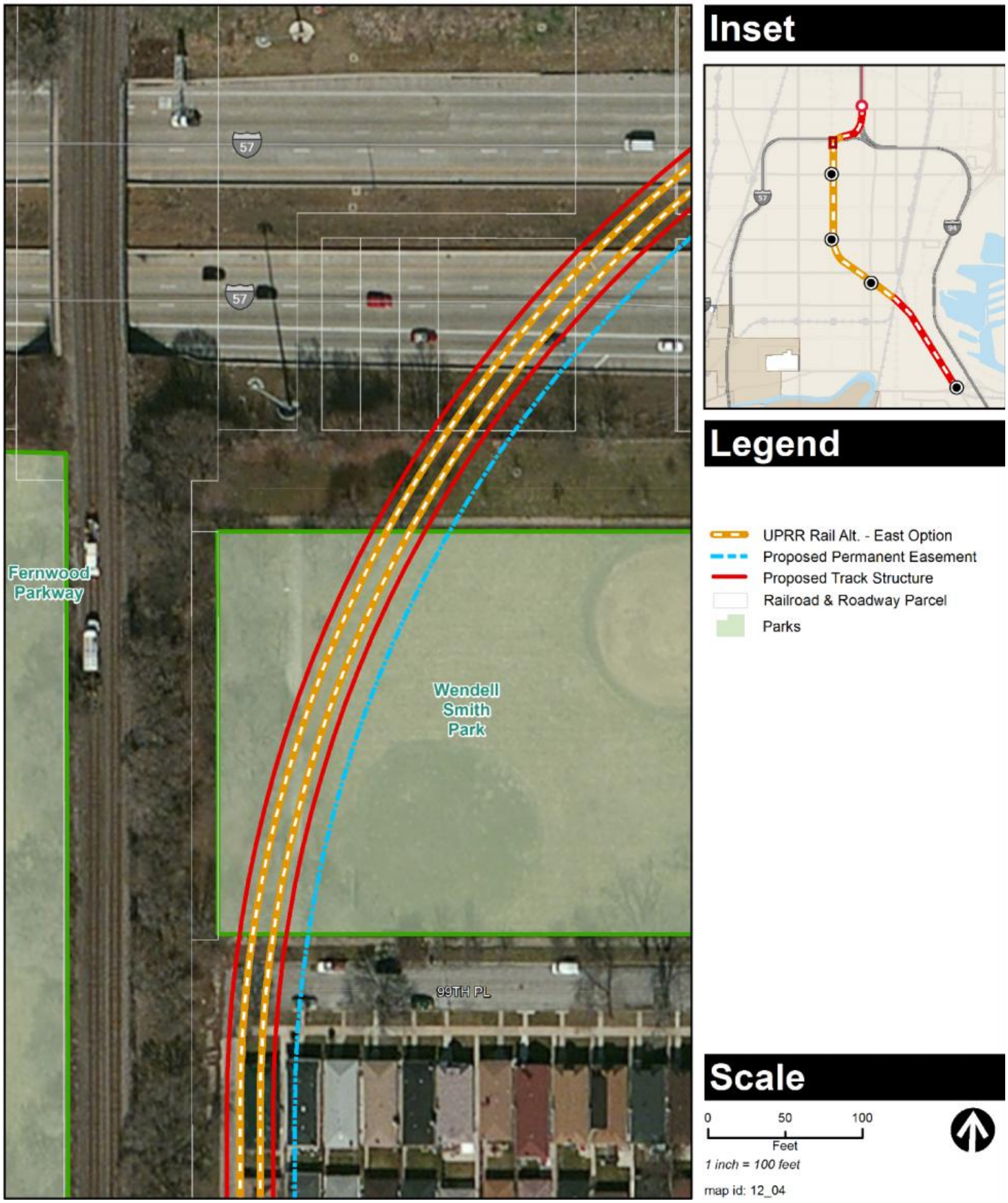

57
57
Fernwood Parkway
Wendell Smith Park
99TH PL
Inset
Legend
UPRR Rail Alt. - East Option
Proposed Permanent Easement
Proposed Track Structure
Railroad & Roadway Parcel
Parks
Scale
0
50
100
Feet
1 inch = 100 feet
map id: 12_04

Figure 3: Impacts on Wendell Smith Park – -Union Pacific Railroad Alternative East Option

Block Park

Block Park is a passive green space and is divided into two parcels by Harvard Avenue. The east parcel is approximately 1.4 acres (130 feet wide by 460 feet long) and includes amenities such as benches, walking paths, and sidewalks. The west parcel is approximately 1.3 acres (90 feet wide by 600 feet long) and is open space with a sidewalk and no other park amenities. In addition, a radio tower and two utility structures are on the west parcel. Photos of Block Park are shown in **Figures 4** and **5**.

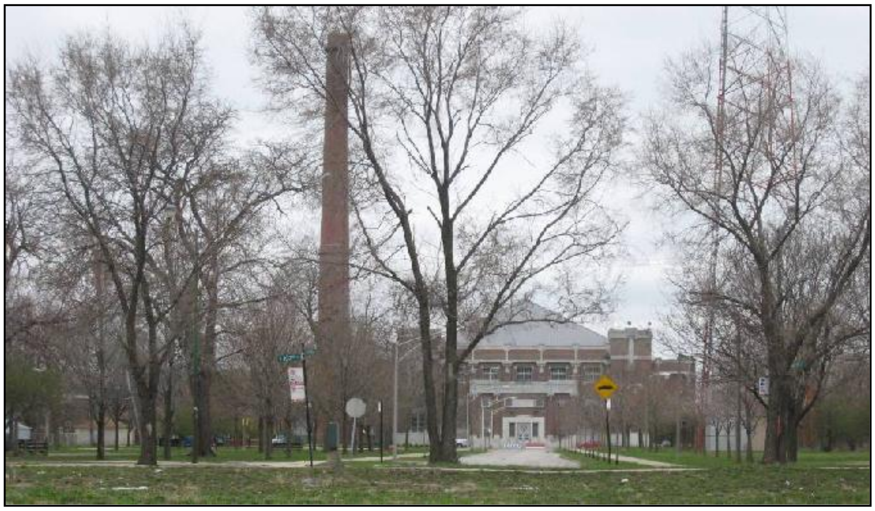


Figure 4: Block Park with the Roseland Pumping Station in the Background (facing south)

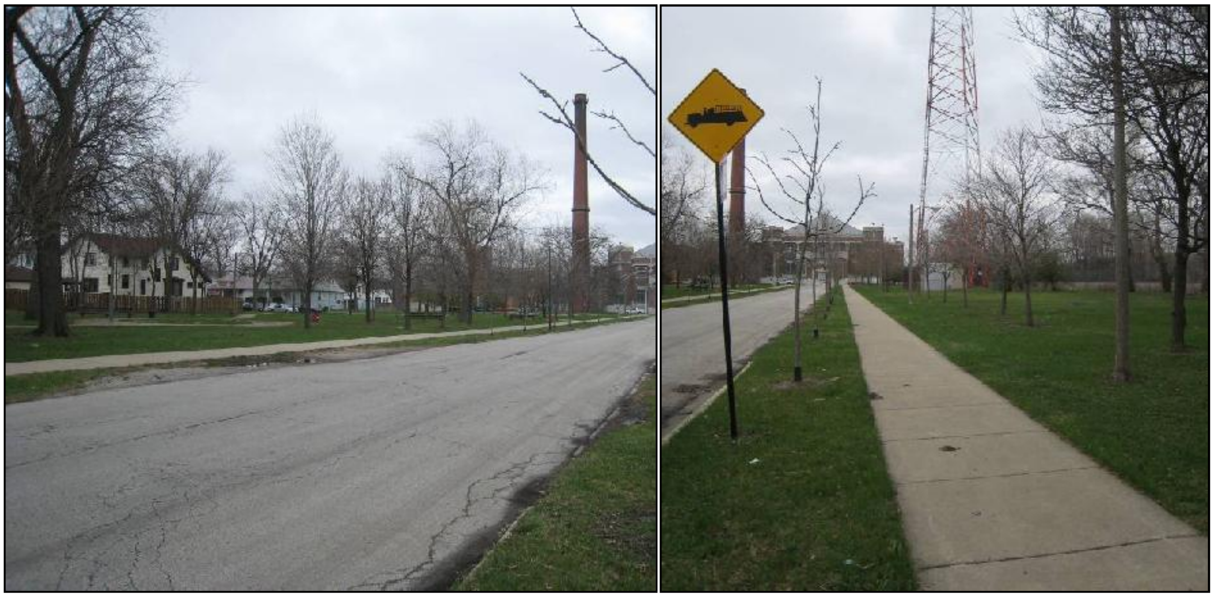


Figure 5: East Parcel (left) and West Parcel (right) of Block Park

The East Option alignment would run through the west parcel of Block Park, and would overlap 0.9 acre of park space with the elevated structure and its associated clearances, as shown in Error! Reference source not found.. A secondary station entrance would also be located in the park, along its western edge. The affected parcel includes an isolated portion of the park's open space and a communications tower, and does not currently serve a recreational use. The key recreational features of the park, walking trails and benches, are on the other side of Harvard Avenue in the east parcel of the park. Because the East Option alignment elevated structure would overlap a portion of this park, there would be a permanent incorporation (direct use) of this passive greenspace. Some temporary closure of the overlapped area would be necessary during construction.

Preliminary Mitigation Measures

Mitigation and enhancement measures are proposed that would result in no adverse effect to the features, attributes, and activities of the park after implementation. CTA and the Chicago Park District are currently coordinating to define any additional or alternative mitigation measures that may be necessary:

- Replacement of impacted park space. Payment would be the fair market value of the land and improvements taken or improvements to the remaining site equal to the fair market value of the land and improvements taken. Location of replacement property would be further defined in coordination with the Chicago Park District. Providing enhanced park connectivity to the proposed station area at 103rd Street and other CPD park projects in the nearby area could be considered to enhance the attributes, features and activities of this existing passive green space.

- Restoration and landscaping of disturbed areas.

- Incorporation of design features where necessary to reduce or minimize impacts of use on the Section 4(f) property. Such features would be designed in a manner that would enhance the park but not adversely affect the safety of the transit facility.

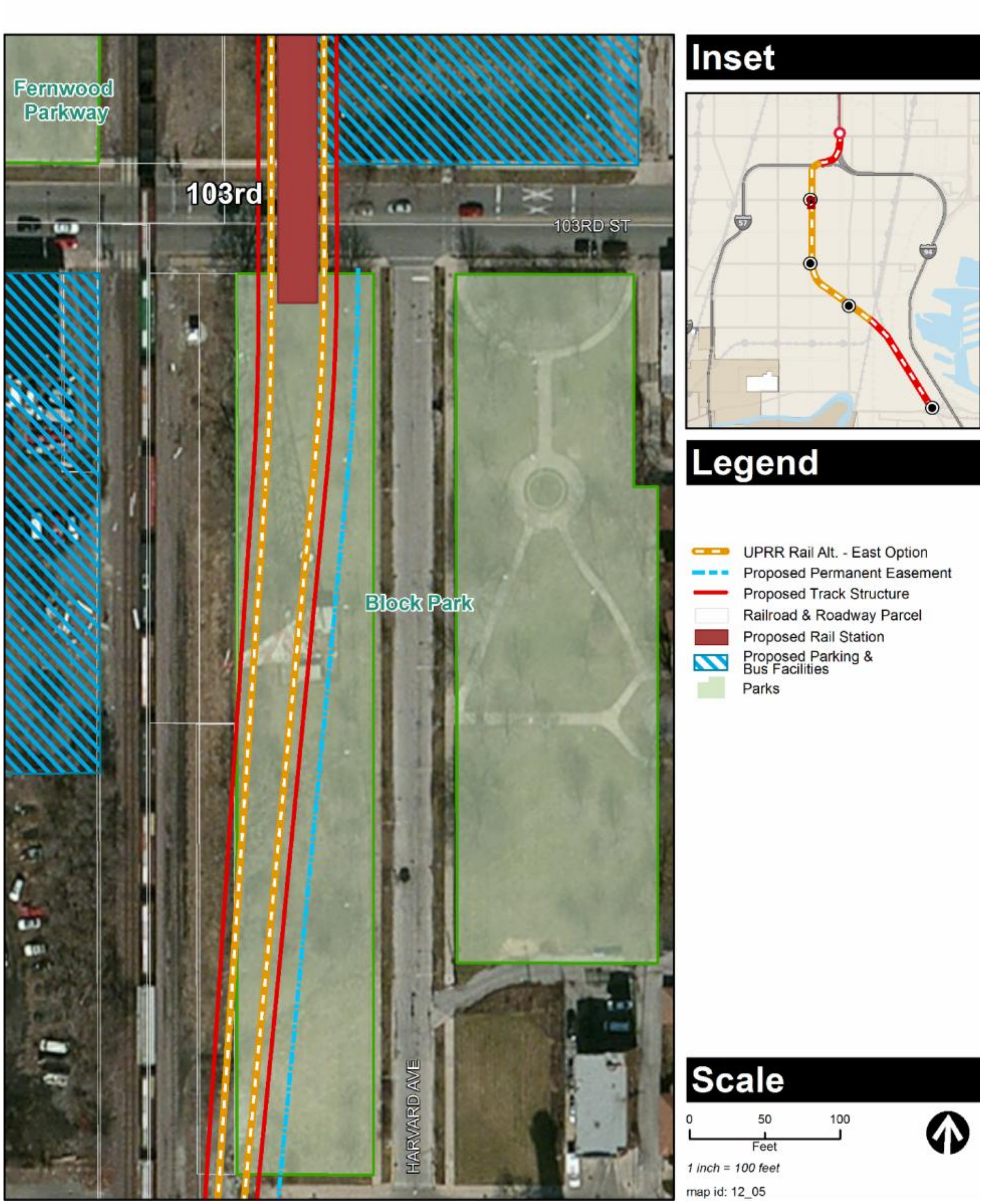

Fernwood Parkway
103rd
103RD ST
Block Park
HARVARD AVE
Inset
Legend
UPRR Rail Alt. - East Option
Proposed Permanent Easement
Proposed Track Structure
Railroad & Roadway Parcel
Proposed Rail Station
Proposed Parking & Bus Facilities
Parks
Scale
0
50
100
Feet
1 inch = 100 feet
map id: 12_05

Figure 6: Impacts on Block Park - East Option

UPRR Alternative West Option - Park Impacts

One park resource would be used as result of the West Option—Fernwood Parkway—which is further described below.

Fernwood Parkway

Fernwood Parkway is a passive green space, and is divided into two parcels separated by 101st Street. The northern parcel, from 99th Street to 101st Street, is approximately 2.4 acres (78 feet wide by 1,325 feet long). The southern parcel, from 101st Street to 103rd Street, is approximately 2.9 acres (78 feet wide by 1,277 feet long). Both the north and south parcels of Fernwood Parkway serve as open space and do not contain recreational facilities or amenities such as sidewalks or benches. Some trees are planted within the park and a chain-link fence separates the green space from the existing at-grade UPRR tracks. **Figures 7 and 8** shows Fernwood Parkway facing north and south.

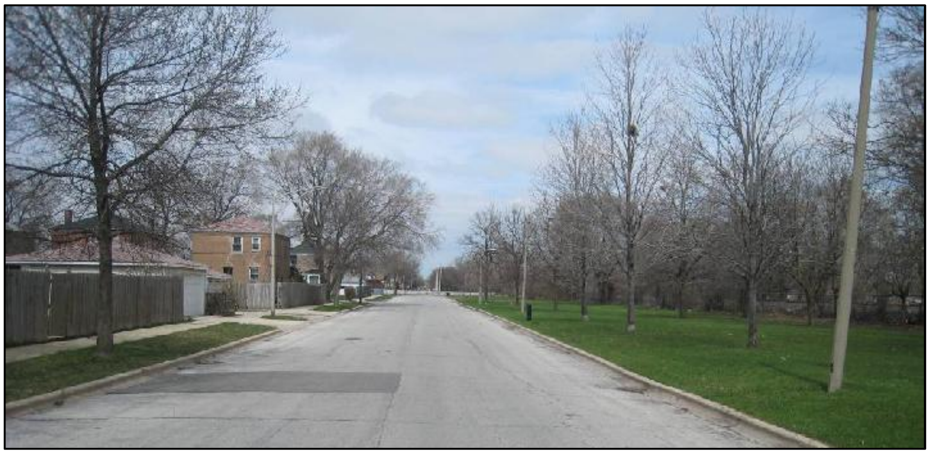


Figure 7: Fernwood Parkway at 100th Street and Eggleston Avenue (facing north)

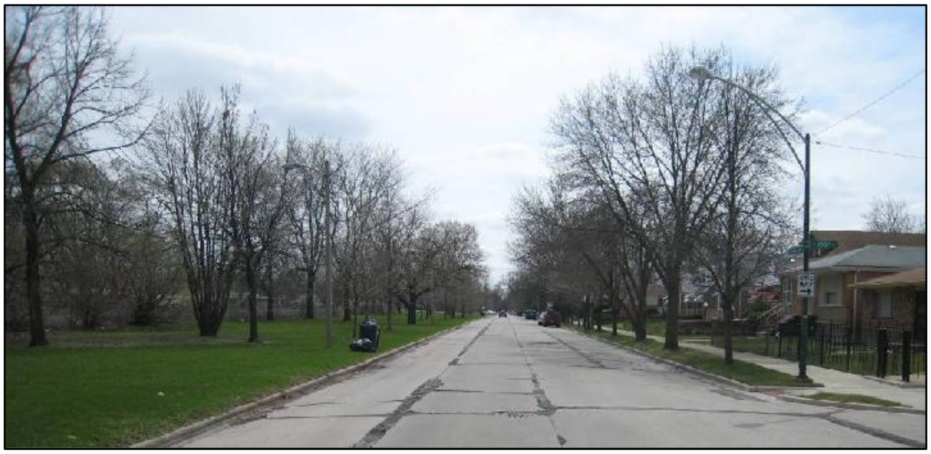


Figure 8: Fernwood Parkway at 100th Street and Eggleston Avenue (facing south)

The West Option track structure would run through two of the four parcels that make up Fernwood Parkway between 101st and 103rd Streets. Approximately 1.9 acres of the parkway would be overlapped by the elevated structure and its associated clearances (see Error! Reference source not found.). The parkway functions as open space, and does not contain recreational amenities. Temporary closure of the section of the overlapped section of the parkway would be necessary during construction. Public use of the parkway could resume after construction, as long as the area beneath the elevated track structure is reopened, but much of the parkway between 101st and 103rd Streets would be permanently overlapped and shaded by the structure. Elevated track structure supports would be placed permanently in the park space. Because the West Option alignment elevated structure would overlap a portion of this park, there would be a permanent incorporation (direct use) of this passive green space.

Preliminary Mitigation Measures

Mitigation and enhancement measures are proposed that would result in no adverse effect to the features, attributes, and activities of the park after implementation, as follows:

- Replacement of impacted park space. Payment would be the fair market value of the land and improvements taken or improvements to the remaining site equal to the fair market value of the land and improvements taken. Location of replacement property would be further defined in coordination with the Chicago Park District.

- Potential installation of a new bicycle path beneath the elevated track structure, subject to use for CTA maintenance, which would enhance the existing unused green space and better connect parks and the newly proposed transit infrastructure.

- Restoration and landscaping of disturbed areas.

- Incorporation of design features where necessary to reduce or minimize impacts of use on the Section 4(f) property. Such features would be designed in a manner that would enhance the green space but not adversely affect the safety of the transit facility.

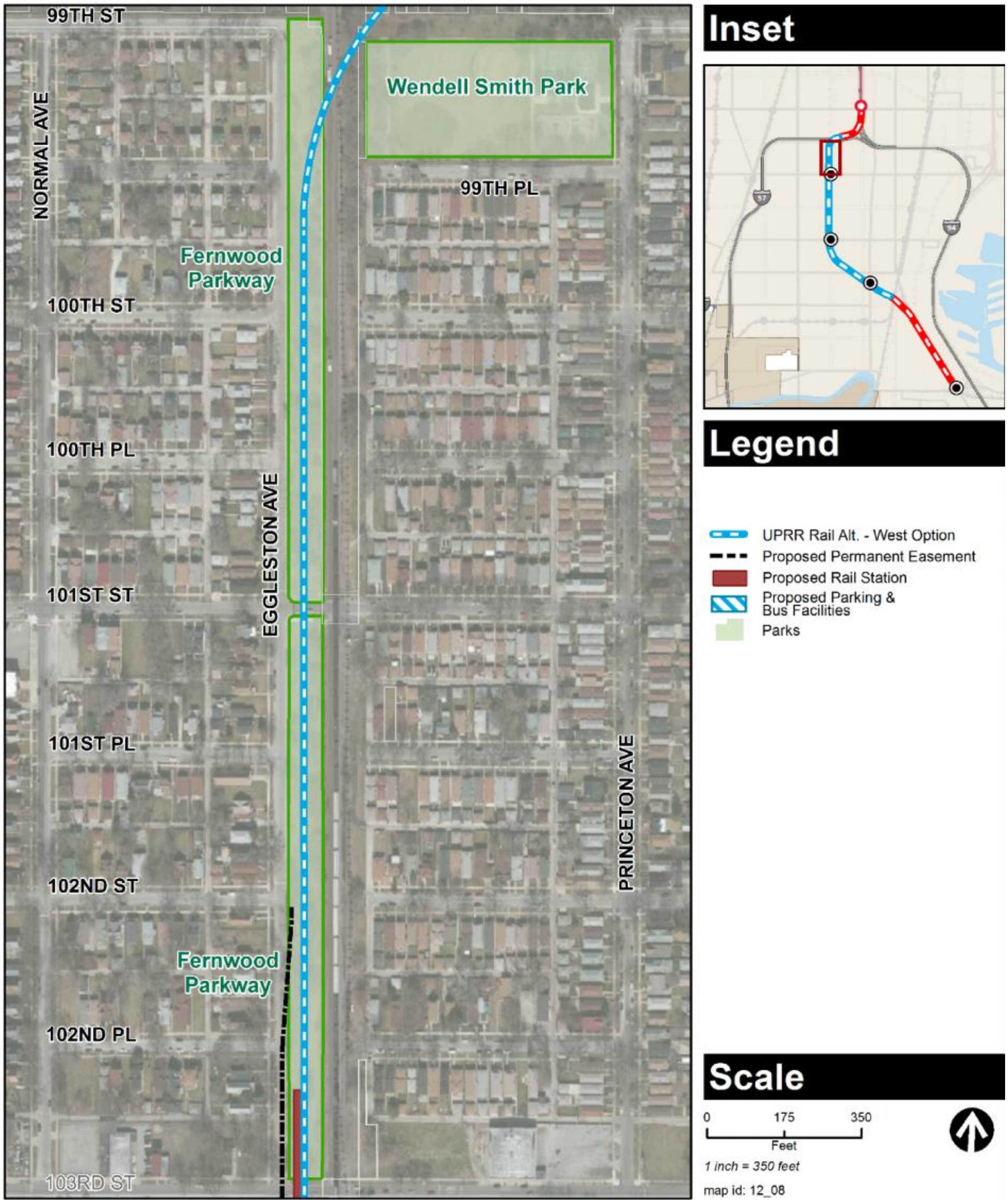

99TH ST
NORMAL AVE
Wendell Smith Park
99TH PL
Fernwood Parkway
100TH ST
100TH PL
EGGLESTON AVE
101ST ST
101ST PL
PRINCETON AVE
102ND ST
Fernwood Parkway
102ND PL
103RD ST
Inset
Legend
UPRR Rail Alt. - West Option
Proposed Permanent Easement
Proposed Rail Station
Proposed Parking & Bus Facilities
Parks
Scale
0
175
350
Feet
1 inch = 350 feet
map id: 12_08

Figure 9: Impacts on Fernwood Parkway - Union Pacific Railroad Alternative West Option

chicago park district

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NATIONAL GOLD MEDAL AWARD
FOR EXCELLENCE IN THE FIELD OF PARK AND RECREATION MANAGEMENT

August 17, 2015

Sonali Tandon
Chicago Transit Authority
567 West Lake Street
Chicago, IL 60661

Re: CTA Red Line Extension (RLE) Project

Dear Ms. Tandon:

The Chicago Park District (CPD) appreciates the opportunity to review the draft of the proposed park impacts for the CTA Red Line Extension (RLE) Project dated June 8, 2015. Any proposed mitigation measures should include fully developed replacement property with the appropriate replacement improvements in the community area. The CPD's priorities for replacement park sites is to expand existing parks.

CPD's neighborhood parks range in size from 2-5 acres in size. These are parks that contain indoor and/or outdoor recreation facilities and typically include a playground and/or other sport fields. The standard for new parks is a minimum of two (2) acres in size. If Recognized Environmental Conditions are identified in the Phase 1 Environmental Site Assessment (ESA) then a Phase 2 ESA is required. If there are exceedances of the Illinois Environmental Protection Agency's (IEPA) TACO Tier 1 Residential Standards, then the property is required to receive a Comprehensive No Further Remediation (NFR) Letter from the IEPA's Site Remediation Program.

The documentation regarding primary activities and functions that occur in each of the three parks is accurate. CPD concurs conceptually with the proposed mitigation measures as outlined in the coordination package.

Wendell Smith (#272) Park is a 4.7-acre neighborhood park that primary serves the population within a ½ mile. Improvements include two basketball courts, two baseball fields, a playground, recreation building and .3 miles of walking trails. In addition to the areas described in the letter, the overlap area includes space behind the existing baseball backstop. Preliminary mitigation measures should include replacement property located in the Roseland Community area constructed in accordance with Chicago Park District standards.

Block (#1005) Park is a 2.95-acre passive park that provides informal active recreational uses or other accessory uses. The east option alignment affects the entire function of the 1.3 acre west parcel, including the accessory communication tower space. Preliminary mitigation measures should include replacement property located in the Roseland Community area constructed in accordance with Chicago Park District standards. Additionally, mitigation and replacement of the communications and utility structures is required.

Fernwood (#1215) Parkway is an 8.63-acre linear passive park that provides informal active recreational uses or other accessory uses. The parkway functions as open space and provides a quiet natural setting for park users. The Chicago Park District would not program or maintain areas beneath the elevated track structures. Preliminary mitigation measures should include replacement property located in the Washington Heights Community area constructed in accordance with Chicago Park District standards.

The suggested mitigations strategies coupled with the above comments should address all the adverse impacts on the Parks. We look forward to a successful collaboration.

Sincerely,

Rob Rejman
Director of Planning and Construction

RR/ml

cc: Doreen O'Donnell, Research and Planning Manger
Michael Lange, Senior Project Manager

MEETING NOTES

RE:	**Chicago Park District Coordination Meeting** **Chicago Transit Authority Red Line Extension Project**
DATE:	**October 8, 2015, 9:00 a.m.**
LOCATION:	**Chicago Park District, 541 N. Fairbanks Court, Chicago, IL**

ATTENDEES:

Name	*Initials*	*Organization*
Leah Mooney	LM	CTA
Sonali Tandon	ST	CTA
Jenifer Palmer	JP	CWC Transit Group
Michael Lange	MH	CPD

PREPARED BY:	**Jenifer Palmer**
ISSUE DATE:	**October 19, 2015**

MEETING NOTES:

- Sonali Tandon (CTA) thanked CPD for their time and provided an update on the status of the Red Line Extension Project.

- CTA recently submitted the first draft of the Draft EIS document to FTA for their review. The reviews and updates to the document will continue through the fall and into early 2016. CTA and FTA expect to be ready to public the Draft EIS for public comment and hold public hearings in May 2016.

- CTA received CPD's response letter regarding potential park impacts and proposed mitigation measures that would result from implementation of either the RLE East or West alignment options. CTA updated the Draft Environmental Impact Statement (EIS) document prior to submitting to FTA to reflect this correspondence to date. Based on the feedback received from CPD, CTA is proposing *de minimis* findings for park impacts following implementation of mitigation measures since after these measures are taken into account, there would be no adverse impact to parks from either alignment option.

- CTA has also shared communications to date between CTA and CPD with FTA for their input. Based on coordination with FTA, they would like CTA to further develop replacement park/relocation of facilities mitigation measures. This will help to support the *de minimis* findings and will allow the public to provide more meaningful input on the proposed mitigation measures. To that end, CTA has prepared a scope of work for additional consultant services in further identifying replacement park options and relocation of impacted facilities. The draft scope of work was provided to CPD in advance of this meeting to gain their input.

- CTA and CPD staff reviewed the draft scope of work. In general, CPD agrees with the process outlined in the scope for identifying potential replacement park locations. ML noted that in addition to what is outlined, CPD typically conducts environmental screening (e.g. consulting sandborn maps, historic uses of sites, etc) in the form of a Phase 1 ESA when identifying any new feasible park location.

- CTA noted that a number of environmental screenings have been done within the corridor to date and could be used, as appropriate, for this analysis. More specific site information would need to be gathered. CTA will review the potential for a Phase 1 ESA of sites as well as costs associated with that additional scope. It could be that the same information provided in a Phase 1 ESA are available through existing analysis and data or combination of reviewing data described within the scope of work. If not practical at this juncture of the project, commitments could be outlined in further developing the mitigation measures on requirements like a Phase 1 ESA following public input in May 2016 and in developing the Final EIS documentation.

- Because implementation timelines for obtaining new park sites will ultimately be based on the timeline for the Draft and Final EIS and securing federal, state and local funding for the project, CTA is most concerned with laying out some potential options for replacement parks and more specifically, identifying the process and commitments for doing this. While consultant staff may be able to identify suitable replacement park and amenity locations in this phase, those properties may or may not be available when replacement actually occurs. As such, it is equally important to both identify potential replacement parks and outline the requirements for carrying out mitigation measures.

- CPD also mentioned that they have some guidelines/standards for new park development that could be shared with consultant staff to support development of viable replacement options. As a matter of policy, CPD is focused on developing safe parks that are well connected to the transportation network. CPD also attempts to develop parks that are at least 2 acres in size. In addition, parks that are city-owned properties already may allow for more efficient implementation options since they would need to consider similar environmental impacts to any lands that they own. CPD is most interested in replacement options that could expand connectivity and park facilities over smaller pocket parks in the neighborhood but which lack this same level of connectivity.

- CPD provided early analysis done for potential replacement parcels so that the consultant team can consider this in their analysis. CPD only conducted very preliminary investigations into this area to date. CTA and CPD staff reviewed each potentially impacted park to identify any guidelines or general considerations that might apply to looking at replacement options and relocation of facilities impacted. CPD expects acre for acre replacement park land and facilities impacted.

- CTA noted that once the scope of work is finalized, consultant staff will be beginning field visits and initial investigations. In scheduling field visits, CTA asked whether there are an park supervisors or area managers that the team might be able to coordinate with and CPD noted that area managers might be best since they are in charge of larger areas/multiple parks and may have some larger insights on existing uses and community park needs. CPD will provide available contact information so that this coordination can occur.

- CTA asked whether there are any park advisory councils in the area that the team should be coordinating with in understanding issues or obtaining more input on community needs. CPD will check to see if there is a park advisory council in this area.

- CTA thanked CPD again for their time. As the consultant team begins their investigations, the expectation is that we will be setting up regular coordination meetings through Spring 2016 to share developments and results in this process and obtain additional input and recommendations from CPD staff. There may not be a need to meet next month, but once this study actually begins, it may make sense to have monthly coordination. With holidays and the schedule for completing Draft EIS documentation prior to publishing, we would hope to complete coordination activities for further developing these measures through March 2016. Additional coordination would occur to share public input once the Draft EIS is published as well to determine appropriate next steps.

MEETING NOTES

RE: **Chicago Park District Coordination Meeting**
Chicago Transit Authority Red Line Extension Project

DATE: **March 10, 2016, 10:00 a.m.**

LOCATION: **Chicago Park District, 541 N. Fairbanks Court, Chicago, IL**

ATTENDEES:

Name	***Initials***	***Organization***
Leah Dawson Mooney	LM	CTA
Sonali Tandon	ST	CTA
Michael Lange	ML	CPD
Jenifer Palmer	JP	CWC Transit Group
Dave Sousa	DS	CWC Transit Group
Cody McChane	CM	CWC Transit Group

PREPARED BY: **Cody McChane**

ISSUE DATE: **March 15, 2016**

MEETING NOTES:

- Michael Lange suggested that due to an ongoing conflict, monthly coordination meetings should be rescheduled from Thursday to Wednesday mornings.

- Sonali Tandon (CTA) thanked CPD for their time, provided a recap of the work that has been done since the previous CPD Coordination Meeting on October 19, 2015, and discussed the purpose of the meeting.

- Jenifer Palmer (CWC) provided an overview of the Red Line Extension (RLE) Project and reviewed the potential park replacement site identification process undertaken by CWC and CTA. Preliminary analysis focused on identifying sites that would replace affected parkland (1.6 or 1.9 acres depending on the alignment option) and meeting CPD guidelines for new park acreage (2 to 5 acres). Considerations for the East Option also included locating sites within the Roseland community area and replacement of an affected ballfield. Considerations for the West Option also included locating sites within the Washington Heights community area. The initial investigation yielded 22 potential sites, 10 of which were eliminated from consideration following field investigation due to insufficient acreage, environmental concerns, non-contiguous available parcels or required crossing or reconfiguration of major roadways, or active uses currently onsite.

- CWC found no viable replacement sites within the Washington Heights community area that met all required criteria. The team discussed that due to the lack of viable options and the physical barrier of I-57 between Fernwood Parkway and northern Washington Heights, it may be difficult to find a replacement site in Washington Heights. CTA asked if it would be acceptable to locate a replacement site in another adjacent community area. ML agreed that a replacement site could be located in another adjacent community area. CWC requested that this allowance be made in writing for the federal environmental documentation with the Federal Transit Administration.

- JP reviewed the 12 park replacement sites considered potentially viable after field investigation. The replacement park sites fell into three categories: (1) sites adjacent to the RLE alignment, where a park could enhance a proposed station location and its potential for redevelopment; (2) under-utilized commercial areas with large amounts of vacancy and pending redevelopment; and (3) vacant sites with connection to existing parks such as Gano Park and/or the Major Taylor Trail.

- CWC identified nine sites as potential replacement park sites for either the East or West Options. The remaining three sites identified would only be viable for the East Option due to their location along the west side of the current UP right-of-way (ROW). Benefits and drawbacks of each site were discussed.

- Multiple potential sites are located on or near commercial corridors, and a park may not be the highest and best use in terms of zoning in these locations. CPD typically consults with Chicago Department of Planning and Development (DPD) to determine criteria for best use in these situations. The team discussed that in an area with disinvestment, parks can help spur development. CDM Smith has experience with park master plans, assessing supply and demand of parkland and amenities, and using parks as catalysts for these types of reinvestment.

- CPD’s first priority is to locate replacement parks within 0.5-mile of affected parkland. However if this is not possible, ideal locations would fill an existing gap where there is not currently a park within a 0.5-mile walkshed. Site 2B was referenced as one site that may fill such a gap. Sites distant from the anticipated impact but close to an existing park, such as sites 9A and 9B, do not fill as great a need and therefore are less preferred.

  Multiple potential sites would be adjacent to proposed CTA stations and on parcels that are currently under consideration by CTA for park & rides. CWC has performed only a high-level analysis to date, and additional analysis will be done as the RLE project moves into future stages of planning.

- Sites 6, 7, and 8 are located between the UP ROW and an alley, with the rear of houses facing the sites. Parks in these locations may present security concerns as they would not be very visible from major streets.

- Soil suitability is likely to be an issue for all sites. There is particular concern for the ability of soil at Site 10 to sustain healthy grass and trees. Due to the urban environment, soil remediation may be necessary at all sites before constructing a park.

- In the past, CTA discussed with DPD that the property on which Site 11 is located is proposed to be developed with an Aldi grocery store; however, development hasn't occurred and the project status is unsure. If Site 11 moves forward into the next stage of consideration, coordination with DPD would be necessary. Sites 11 and 12 are positioned for redevelopment because they are close to a proposed CTA station and the existing Metra station, and they are close to the Michigan Avenue commercial corridor.

- ML suggested consulting with Kathy Dickhut of DPD, who manages sustainability and has expertise in the preservation of industrial uses, for sites near manufacturing/industrial uses such as Site 15. There is a priority within the City to not displace limited remaining industrial property.

- ML reported that CPD is currently evaluating both Sites 10 and 17 for possible acquisition and conversion to new parkland because they are adjacent to the Major Taylor Trail. CPD may be able to share additional information on these sites. However, if CPD moves forward, these sites would likely not qualify for park replacement purposes.

- JP presented proposed criteria for the next phase of site analysis, which will include (1) proximity to area of impact, (2) environmental site analysis (EDR reports), (3) ownership availability, (4) surrounding land us/zoning compatibility, (5) accessibility, and (6) generalized cost of acquisition and construction. ML, ST, and JP concurred on the proposed criteria. JP reiterated that there will be no Phase I ESA completed for potential sites at this time, due to uncertainty of alignment and other compounding factors. CWC will complete an environmental screening similar in content to a Phase I ESA in the interim. JP noted that the outcome of this investigation is to keep multiple park replacement site options for each RLE Option. This will allow for presentation and further input between CPD, CTA, DPD, community stakeholders, and members of the public.

- Criteria for a replacement ballfield were discussed. CWC reported measuring the potentially affected ballfield (which would be affected by the East Option only) at roughly 130 feet in diameter, suitable as a "tot lot" or for tee-ball. DS reported that published standards only address little league fields which are larger than the affected field. ML reported that replacement in kind may be appropriate for CPD and he will discuss with his colleagues. CWC requested clarification of mitigation requirements in writing for purposes of the federal environmental documentation.

- CPD's decision process was discussed. Heather Gleason is the new director. ML will need to update her on this project. Once the sites are narrowed down, they will take it to their General Superintendent and CEO and to get his buy-in. CPD only needs to take it to their Board if they are planning to dispose land or acquire or accept land. They have to show the disposition and the acquisition simultaneously. CWC noted that the acquisition of land and further definition of site replacement would not occur at this phase of the environmental planning process. Once an alignment option is chosen at the end of the Draft Environmental Impact Statement (EIS) phase, a Final EIS will be prepared and CTA would perform additional detailed analysis of chosen sites.

As such, no Board approvals or acquisitions are anticipated until the end of environmental planning phases.

- CTA will hold a public hearing for the Draft EIS (tentatively scheduled for October). CPD is willing to help coordinate and provide space, likely in Palmer Park. There could be benefit to work with people in the community (small stakeholder group and aldermen) in the summer before the public hearing to discuss the park mitigation process and to gather community input. CPD would be willing to participate in the meeting. There are no park advisory councils in these neighborhoods, but CPD Area Managers are active with community leaders and have a finger on the pulse of the community and park needs. Area Managers can be useful for coordination as well, and CPD will invite the Area Manager for the study area to the next coordination meeting. Individual park supervisors might also contribute to the discussion because they know the individuals and families that use parks.

- Leah Dawson Mooney (CTA) suggested site visit to show potential sites to CPD, which could help with the decision-making process.

Action Items

- CTA will update monthly coordination meetings to Wednesday as per CPD request.

- CPD will review the potential sites discussed in this meeting and will provide feedback within one week on:
    1. Initial site options discussed today and any sites that may be further eliminated from secondary suitability analysis screening
    2. Ability to modify mitigation options for the West Option to adjacent community areas outside of Washington Heights
    3. Ballfield replacement size criteria
    4. Proposed suitability criteria

- CPD will reach out to the local Area Manager for parks in the replacement park area and invite that contact to attend the next monthly coordination meeting in April.

- CWC will initiate the analysis of suitability criteria discussed, and report findings of most suitable replacement site options during the next monthly meeting.

- CWC will provide any modifications to mitigation proposed in the Draft EIS based on CPD input above in writing for CPD concurrence for federal environmental documentation purposes.

MEETING NOTES

RE: **Chicago Park District Coordination Meeting**
Chicago Transit Authority Red Line Extension Project

DATE: **April 6, 2016, 10:00 a.m.**

LOCATION: **Chicago Park District, 541 N. Fairbanks Court, Chicago, IL**

ATTENDEES:

Name	*Initials*	*Organization*
Leah Dawson Mooney	LM	CTA
Sonali Tandon	ST	CTA
Doreen O'Donnell	DO	CPD
Michael Lange	ML	CPD
Jenifer Palmer	JP	CWC Transit Group
Cody McChane	CM	CWC Transit Group

PREPARED BY: **Cody McChane**

ISSUE DATE: **April 14, 2016**

MEETING NOTES:

- Jenifer Palmer (CWC) provided an overview of the Red Line Extension (RLE) Project and reviewed the potential park replacement site identification process undertaken by CWC and CTA. Preliminary analysis focused on identifying sites that would replace affected parkland (1.6 or 1.9 acres depending on the alignment option) and meeting CPD guidelines for new park acreage (2 to 5 acres). The initial investigation yielded 22 potential sites, 10 of which were eliminated from consideration following field investigation due to insufficient acreage, environmental concerns, non-contiguous available parcels or required crossing or reconfiguration of major roadways, or active uses currently onsite.

- After the last meeting with CPD, CWC and CTA completed a Suitability Analysis for the remaining 12 sites that included six criteria: (1) proximity to area of impact, (2) ownership/availability, (3) surrounding land use/zoning compatibility, (4) safety and security, (5) high level cost considerations, and (6) environmental factors (EDR reports). Each site was given a score of low, medium, or high for each of these unweighted factors. CWC and CTA presented the six sites with the highest scores to CPD. Two additional sites were also reviewed as close scoring contenders or where additional inputs were needed for scoring purposes and further refinement of viable replacement park options.

- Leah Dawson Mooney (CTA) asked CPD for feedback on the Sustainability Analysis process and criteria. Michael Lange (CPD) suggested assigning increased weight to site locations. Doreen O'Donnell (CPD) stated that locating a park in a community area of need is a high priority for CPD, and locations that are not very close to the affected parks can be assigned a high score for location if they help to fill an existing park access gap, defined as the lack of park space within a ½-mile walk shed. Within the study area, West Pullman and Roseland have some identified park needs, while Morgan Park is not identified as a community in need of additional park space.

- CWC also assigned higher scores to potential sites that are proximate to existing parkland such as the Major Taylor Trail, or that connect well with bicycle facilities and transit, including proximity to planned Red Line stations. CTA has not typically looked at park integration near major transit stations in other projects such as the Brown Line on the north side of Chicago. However, the addition of parks and other open space has been shown to spur economic development in underdeveloped areas and may be appropriate in the context of this project area.

- Sonali Tandon (CTA) clarified that project design and construction has not yet been funded. The identification of potential park replacement sites is an iterative process that can evolve to suit the needs of CPD as it moves forward. Because the RLE project timeline is long-term and environmental factors and site availability may change by the time the project receives funding, this study will provide a toolbox for use when the project moves into the land acquisition phase. The study outlines a decision-making process that will clarify to the Federal Transit Authority and stakeholders how park replacement sites are identified and indicate availability of replacement park sites.

- JP presented the six sites identified that earned the highest scores in the Suitability Analysis, in order from the highest to the lowest score.

    - Site 8A is a large parcel of land that would allow for the activation of varying uses due to its size and shape, and is adjacent to a community center and a family services center. The site would be a viable option for both the east and west rail alignments under consideration, which would help increase flexibility and streamline the public input process. Its location would also fill a park access need.

    - Site 3B also would allow for multiple uses, and would complement existing Block Park on the opposite side of the proposed rail alignment. This would be an option for the east alignment only.

    - Both sites 8A and 3B are adjacent to proposed CTA stations. Their strong connection to transit helped them score highly in the Suitability Analysis, but portions of both parcels have been identified as potential park and ride sites. The 103rd St. and 111th St. stations are intermediate stations and would only need to provide parking for the community, whereas the terminal station on the line must provide parking for larger populations. Both sites are adjacent to other parcels that have been identified as potential alternative park and ride locations. At the proposed 103rd station (Site 3B), there is a potential for further utilizing a potential park and ride location on the east side of the tracks as an alternative to this site. At the proposed 111th station (Site 8A), no additional park and ride locations are currently identified and modification of proposed park and ride plans at that location would need further CTA consideration.

  - Site 7 would offer the ability to create bicycle and pedestrian connections due to its linear orientation, and is near Roseland Christian School but across the proposed alignment. The site abuts an alley and the rear of residential properties, and earned a lower score for safety and security. A cell phone tower is located on the site. CPD clarified that they require that transferred land must be "free and clear" of all structures.

  - Site 12 is adjacent to a proposed transit station and includes buildings that will be demolished by the city. A portion of this site is also currently identified for a proposed park and ride as part of the RLE Project and CTA would need to reconsider plans at this location if further considered for park replacement. The site is adjacent to Site 11, which is currently slated for a planned development by the city.

  - CTA will coordinate with the Chicago Department of Planning and Development (DPD) on all potential sites, including monitoring the status of Site 11.

  - Site 6 includes a large amount of acreage but would be an option for the east alignment only. Like site 7, it abuts an alley and the rear of residential parcels and safety and security would be an issue to be addressed. Two buildings on the south end were identified as vacant by the Property Appraiser but would need to be checked using a title search. The use of these properties would allow access to 107th and improve connectivity and safety and security.

  - Site 10 is a very large area that is adjacent to the Major Taylor Trail. It is located in Morgan Park, which has not been identified by CPD as a community in need of park space. CPD is also in the process of acquiring additional land in that community area, and adding another large park may be politically difficult. Site 10 was eliminated from consideration.

- Two additional sites did not score as highly but are still under consideration. Site 2B may require the acquisition of one or two currently active residential parcels. However it would be served well by the CTA bus system and would help to fill a park access gap identified by CPD. Site 11 may be under consideration pending DPD's update on the potential for a planned development. Both Sites 11 and 12 require further discussion with DPD on anticipated plans at those locations on coordination of park replacement as well as proposed park and ride plans.

- JP provided an overview of the next steps required. About six sites are still under consideration, we want to narrow that down to three final options to present at public meetings. CWC and CTA will create concept plans and cost estimates upon confirmation of these three options.

- Future analysis of sites will include consideration of wards, and Aldermanic support is crucial to land acquisition and park creation.

- CPD is in the process of creating new parks or small open spaces in both Roseland and West Pullman. CPD will overlay the remaining potential replacement sites on their parks access map and report their findings. CWC and CTA will change the location/proximity score accordingly.

- CWC and CTA will draft revised mitigation measures language to include changes to proximity requirements and identification of access gaps and communities of need, and the in kind replacement of the junior ball field in Wendell Smith Park, and send to CPD for concurrence.

- The next step is to coordinate with DPD, and they will be invited to the next monthly meeting on May 11, 2016. Erika Sellke, Kathy Dickhut, and Nelson Chueng were identified as staff members that should be involved from DPD.

Action Items:

- CTA to coordinate meeting between CPD, DPD, and project team for next monthly coordination meeting.

- CPD will overlay the remaining potential replacement sites on their parks access map and report their findings. CWC and CTA will change the location/proximity score accordingly and also evaluate higher weight for this criterion.

- CTA to provide updated mitigation measures correspondence to CPD for confirmation/concurrence.

MEETING NOTES

RE: **Chicago Park District and Department of Planning and Development Coordination Meeting**
Chicago Transit Authority Red Line Extension Project

DATE: **May 18, 2016, 2:30 p.m.**

LOCATION: **Chicago Park District, 541 N. Fairbanks Court, Chicago, IL**

ATTENDEES:

Name	*Initials*	*Organization*
Leah Dawson Mooney	LM	CTA
Sonali Tandon	ST	CTA
Doreen O'Donnell	DO	CPD
Michael Lange	ML	CPD
Meg Gustafson	MG	DPD
Erika Sellke	ES	DPD
Jenifer Palmer (call-in)	JP	CWC Transit Group
Cody McChane	CM	CWC Transit Group

PREPARED BY: **Cody McChane**

ISSUE DATE: **June 1, 2016**

MEETING NOTES:

- Sonali Tandon (CTA) provided an overview of the Red Line Extension (RLE) Project and reviewed the potential park replacement site identification process undertaken by CWC and CTA. Preliminary analysis focused on identifying sites that would replace affected parkland (1.6 or 1.9 acres depending on the alignment option) and meeting CPD guidelines for new park acreage (2 to 5 acres). The initial investigation yielded 22 potential sites, 10 of which were eliminated from consideration following field investigation due to insufficient acreage, environmental concerns, non-contiguous available parcels or required crossing or reconfiguration of major roadways, or active uses currently onsite. Eight sites currently remain under consideration following a suitability analysis that scored sites based on location, availability, land use/zoning compatibility, safety and security, environmental factors, and cost considerations. Three final sites are to be selected for further development and presentation to the public.

- CPD prefers sites that are within one mile of the proposed transit corridor, are not within one half mile of an existing park, and help fill a half-mile park access gap. CPD provided maps depicting “Final Focus Areas” that are not within one half mile of a park. Sites 2B and 8A meet these three criteria.

- Meg Gustafson (DPD) confirmed that the city-owned parcel data that has been used by CTA and CWC is the most current data available. At this time, CTA is not requesting to prevent development on city-owned parcels under consideration for use as replacement parkland due to project uncertainty.

- Attendees reviewed the final eight sites under consideration.

    - Site 2B – A Chicago Housing Authority project, likely senior housing, may be located nearby. This is a preferred site for CPD due to its proximity to the proposed corridor and affected parks, and ability to expand half-mile access. It is also a viable site for both the east and west options.

    - Site 3B – A park and ride lot has been proposed at this site, but its precise location and size can be readdressed. This site is viable for the east option only. CPD prefers this site as an alternate under the east option as it would be an expansion of Fernwood Parkway.

    - Site 6 – This site is only viable under the east option, and is very close to Fernwood Park.

    - Site 7 – This site contains a cell/communications tower. Removal would likely require contracting a private company. City rules and process for tower removal will need to be documented regardless of park site selection due to the tower located in Block Park.

    - Site 8A – This is a preferred site for CPD because it is very close to one of the Final Focus Areas for half-mile access, and is viable for both the east and west options. A park and ride lot has also been proposed at this site, but its precise location and size can be readdressed.

    - Site 10 – This site is removed from consideration, because Morgan Park is not a community of need and the site does not meet CPD’s three criteria above.

    - Site 11 – This site is a Planned Development, but is not currently owned by the city. It was originally reserved for an Aldi grocery store but this hasn’t happened yet. The community would prefer a grocery store in that location. The Planned Development designation likely has a sunset clause of ten years, DPD will check and report back. Because this site is very large, it may be feasible to incorporate park and ride and transit-oriented development in one site. The park could serve the Elementary school next to the site and may also help incentivize development of the rest of the parcel; however developers usually prefer frontage on major streets (State St., Michigan Ave., and 115th St.), and rear of the site maybe left for park space, which is not ideal.

    - Site 12 – One or two parcels are currently city-owned, and the structures fronting Michigan Avenue are slated for demolition. CPD favors site 12 over site 11 because they would prefer their own site as opposed to coordinating space with a park and ride lot and transit-oriented development. This site would be next to the proposed Michigan station and could serve as a “gateway” to the Pullman Community Area.

- Attendees discussed the value of creating parks on commercial corridors and whether it constitutes highest and best use. Within the context of the study area, park space can help incentivize much needed economic development. DPD stated that they are okay with parks in the sites as discussed.

- Attendees agreed that the final sites moving forward will be 2B, 8A, and either 11 or 12, pending DPD feedback. Site 3B will be an alternate for the East Option.

- Aldermanic feedback will be solicited once the final three sites are confirmed.

- Regarding disposition of land from CPD to CTA, the Transfer Act will need to be consulted. CPD may be able to dispose land directly to CTA, or may need to go through the city. Block Park is owned by the Department of Water Management and leased to CPD. This could pose issues with acquisition in the event that the east option is chosen.

MEETING NOTES

RE: **Chicago Park District Coordination Meeting**
Chicago Transit Authority Red Line Extension Project

DATE: **June 15, 2016, 10:00 a.m.**

LOCATION: **Chicago Park District, 541 N. Fairbanks Court, Chicago, IL**

ATTENDEES:

Name	***Initials***	***Organization***
Sonali Tandon	ST	CTA
Doreen O'Donnell	DO	CPD
Michael Lange	ML	CPD
Jenifer Palmer (call-in)	JP	CWC Transit Group
Dave Sousa	DS	CWC Transit Group
Cody McChane	CM	CWC Transit Group

PREPARED BY: **Cody McChane**

ISSUE DATE: **August 3, 2016**

MEETING NOTES:

- Dave Sousa (CWC) provided an overview of the site selection process and the meeting agenda.

- CWC presented site plan sketches for Wendell Smith Park and the three potential replacement park sites. Multiple options for each site were presented because the East Option and West Option influence site dimensions and requirements differently and because there are currently active uses at some sites.

- CPD mentioned that the information on their website could be inaccurate, and that there are two intact and actively used ballfields at Wendell Smith Park. There is currently no t-ball programming at the southwest field. The main use for that smaller ballfield is informal kickball.

- Under the East Option, reconstruction of pathways, trees, and likely both ballfields will be necessary because construction staging will need to take place in Wendell Smith Park.

- The ballfields that currently exist in Wendell Smith Park do not comply with Little League standards, and two such fields would not fit in the park. CPD agreed that replacement fields only need to comply with Pony League regulations, and two such fields would fit in the park under the East Option as shown. The fields should have outfield fences to prevent players from running onto the adjacent field or backing into a pier supporting the elevated rail structure that would be nearby.

- CTA will own the land within 15 feet of the eastern edge of the alignment, and park amenities such as the walkway and path should not be placed west of that line. CPD recommended that CTA consider placing a fence at the property line. Such a fence would likely create a conflict point with one of the Pony League fields, and if so two fields would not fit in the park.

- CPD suggested building one larger high school-sized field on the site rather than both fields to provide the greatest level of improvement to the field amenity. In this case, the field should be reoriented so that home plate is in the southwest corner for best sun lighting.

- Site 2B, at 101st Street and Michigan Avenue, would be viable under both the West and East Options. A ballfield replacement would be possible only with voluntary acquisition of an active use residential parcel. A replacement park without a ballfield and without acquisition of this parcel would still be 2 acres.

- A fence is not required around a replacement ballfield at this site, though CPD usually puts a fence around parks to help define boundaries and discourage fly dumping. Fences do not need to be depicted in future sketches.

- Gateway features as shown in the site plan sketch for site 2B, Version 2 should be excluded at this point. Future sketches will depict the site without gateway features.

- Site 2B, Version 1, currently shows acquisition of the active use residential parcel. This should be shown in Version 2, with Version 1 showing the parcel remaining with the current owner. Property owners cannot be displaced for the construction of park amenities, and all public materials must be clear that Version 2 is dependent on voluntary acquisition only.

- The site plan for site 8A under the East Option depicts both a replacement park and park and ride lot. Current plans call for 145 parking spaces total at the site (200 total near the station) but that could be refined in later stages, possibly leaving more space for a park. The current site plan shows 2.0 acres of park space.

- The site plan for site 8A shows a new parking lot for the youth center near the site, because Eggleston Avenue, which the youth center currently uses for parking, would be made into a bus driveway. CTA/CWC will coordinate with DPD regarding whether a parking designation has been made for the youth center that makes parking on Eggleston an official use.

- A park at site 8A would require voluntary acquisition of a commercial parcel that may not be vacant. This is to be made clear on all public materials. The property owner will be included in displacements outreach for the West Option, however under the East Option the property would not be displaced.

- The site plan for 8A under the West Option shows that there is not enough space available for a 2-acre park in addition to the park and ride lot called for in current plans. Projected parking needs may be reduced in future steps, which could clear 2 acres for a park, but that discussion will be tabled until the Final EIS is prepared.

- The sketch for site 12 under the West Option depicts a 2.4-acre park with a Pony League size field. Under the East Option, the field is reduced to a t-ball field, generally recommended for children under 6 years old.

- The sketch for site 12 under the East Option shows an emergency access road parallel to the proposed rail station. CTA will check if this can be a dual-purpose sidewalk path and access road so that it can be integrated with park space and located on CPD property to avoid duplication of walkways.

- In Version 2 of site 12 under the East Option, with the rail station relocated to the west side of Michigan Avenue, an expanded park is shown to account for the narrowing of track right of way without the station being adjacent to the park. The site plan should instead mirror Version 1 for public presentation to facilitate visual understanding.

- CPD confirmed that parking will not be required at a replacement park.

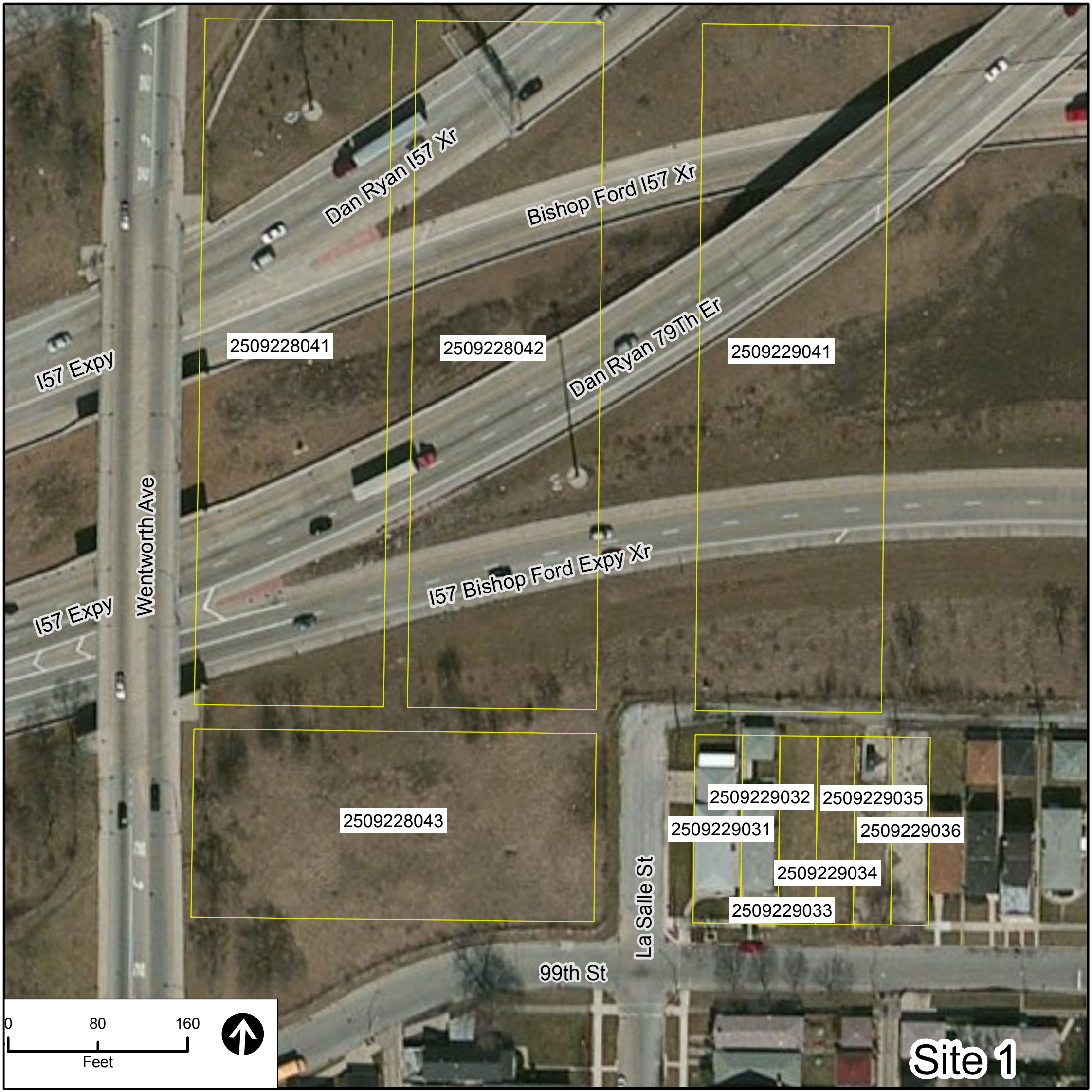
- CPD generally constructs ballfields with clay infields instead of grass to reduce maintenance needs and costs. CWC will depict ballfields at all sites with clay infields and backstops, and without dugouts, in future sketches.

- Basketball courts could be polarizing and should not be shown in the concepts. CPD will not be constructing amenities in the replacement park. Because impacted amenities must be replaced in kind, CTA will be required only to provide passive recreation space (grass), trees, and walking paths in addition to a ballfield, if needed. Future sketches of all potential replacement sites will depict passive recreation space and street and shade trees instead of basketball and tennis courts, playgrounds, and other active use amenities other than replacement ballfields. CTA suggested that when presenting these concepts to public, it would be good to get feedback on what additional features would people like to see in these parks.

- CPD noted that it would also be useful to show impacts to Fernwood Parkway and Block Park for public consumption and understanding.

- CWC will update all site plans and provide to CPD. Another in-person meeting is likely not necessary.

Attachment 2: Desktop and Geospatial Analysis Results



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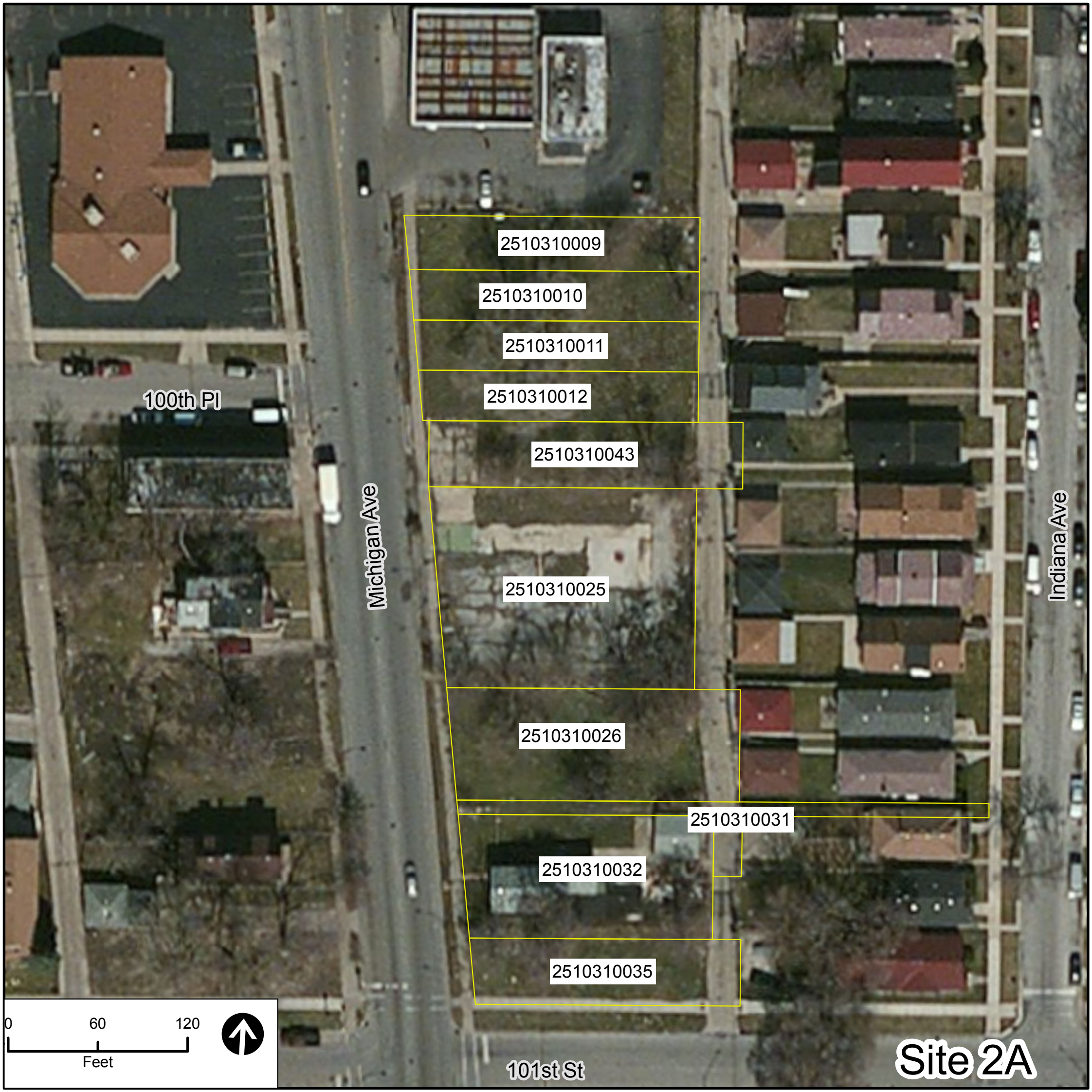
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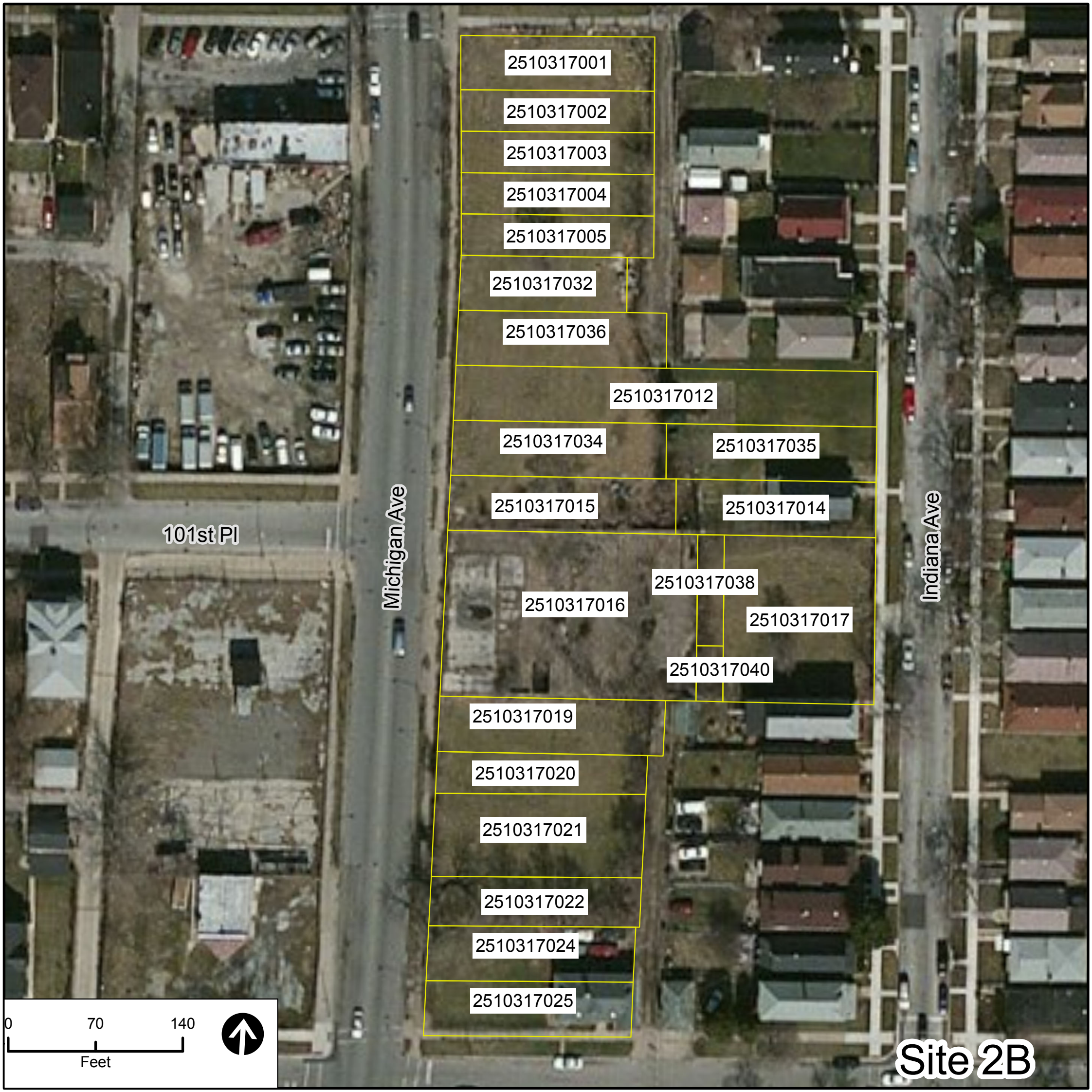
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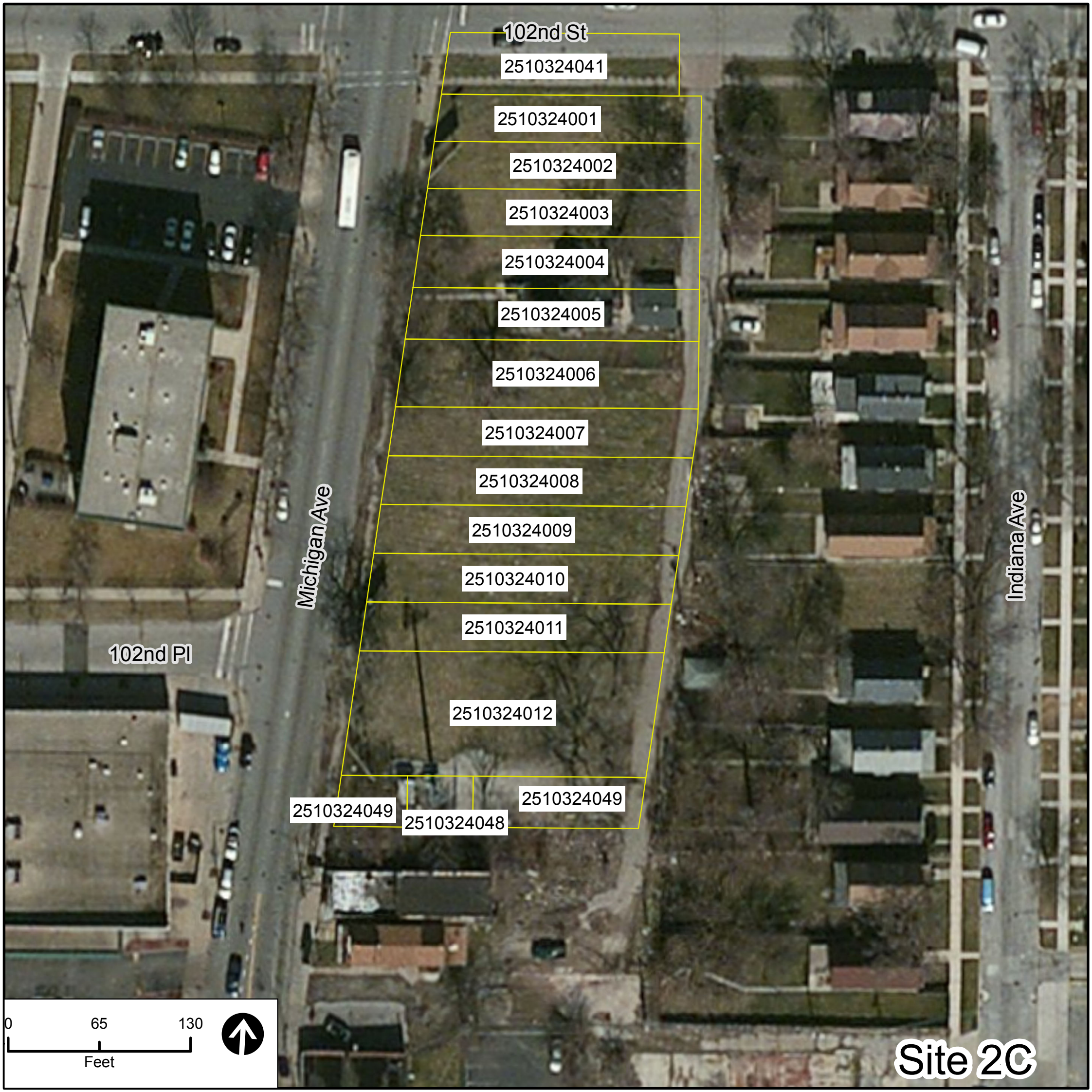

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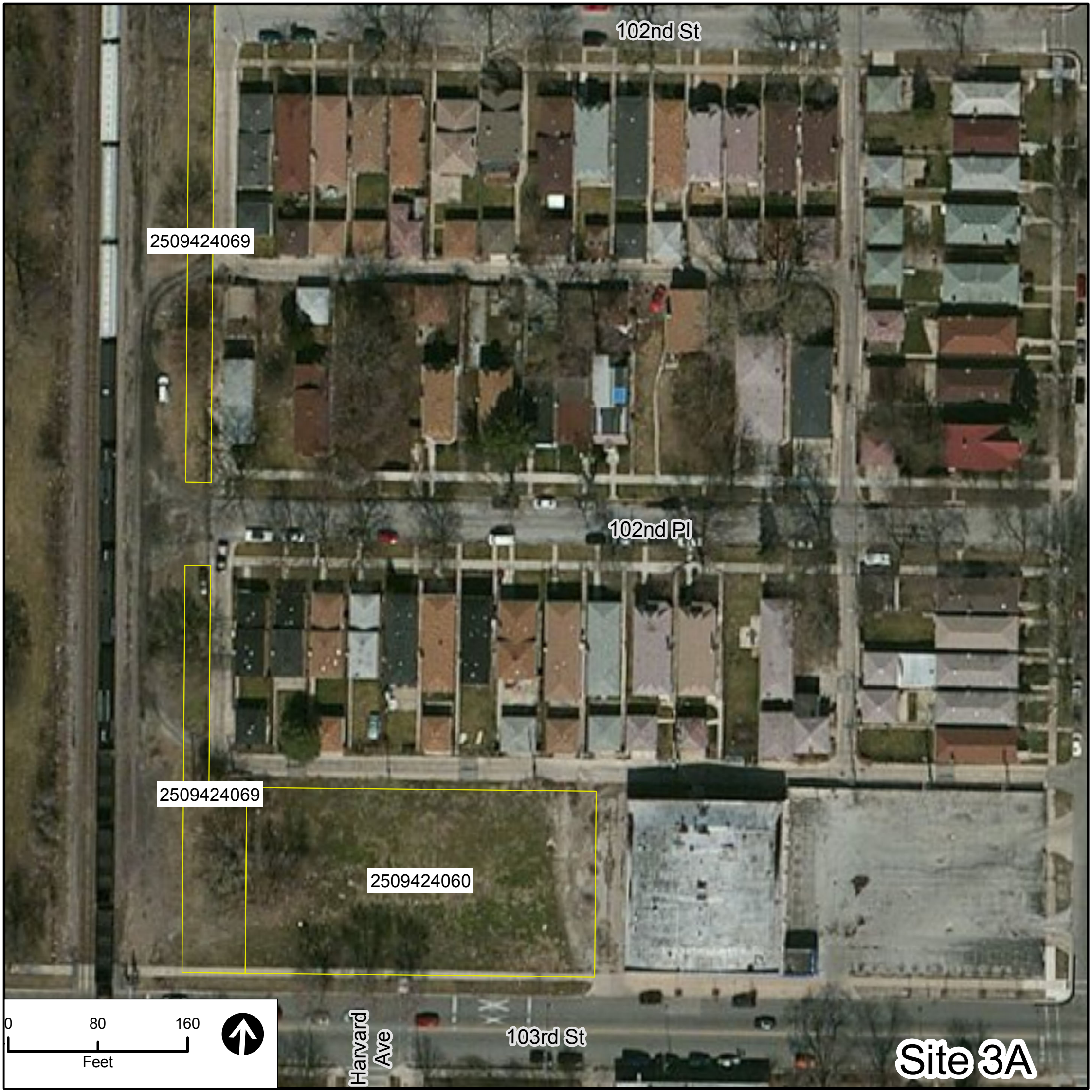
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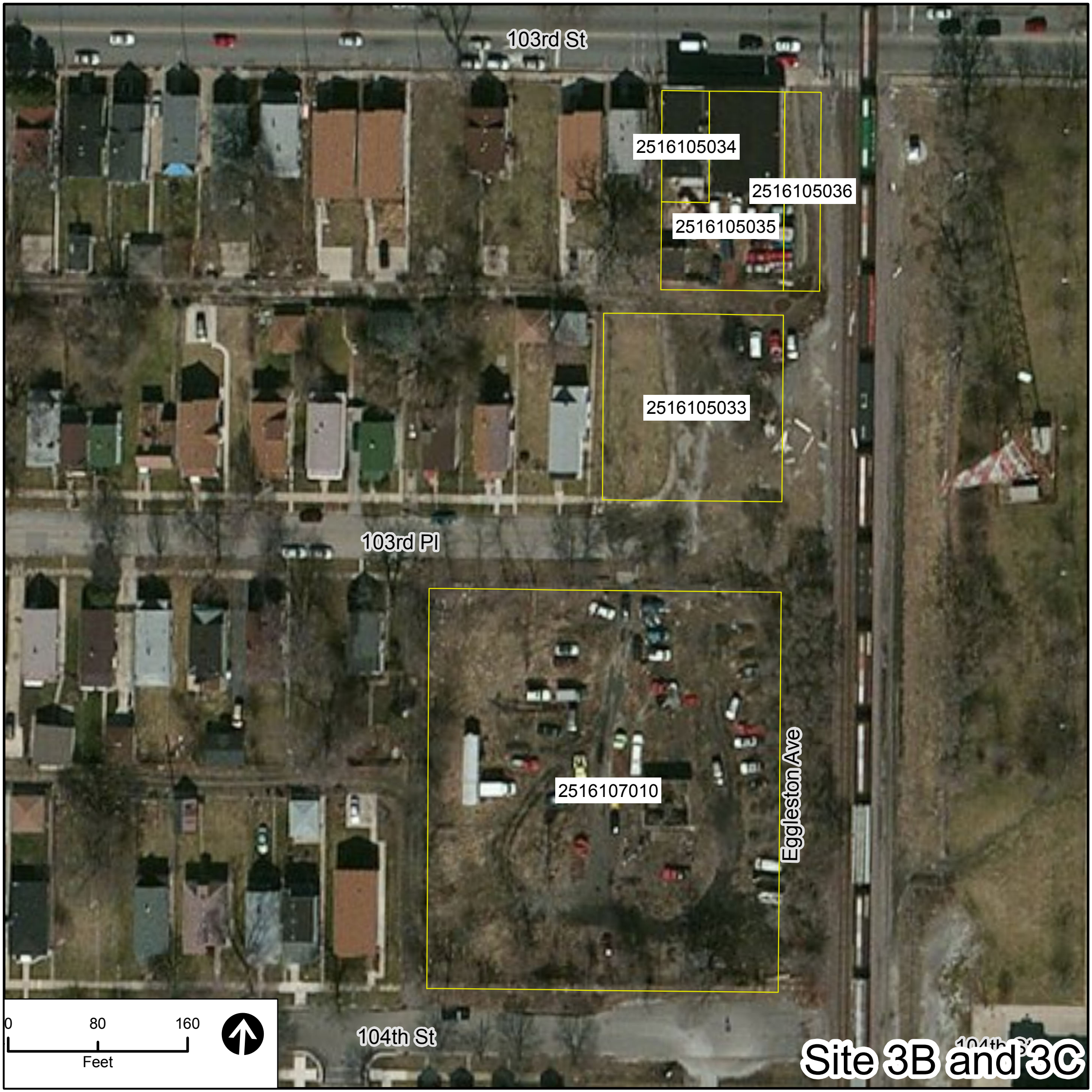

Site 3B and 3C

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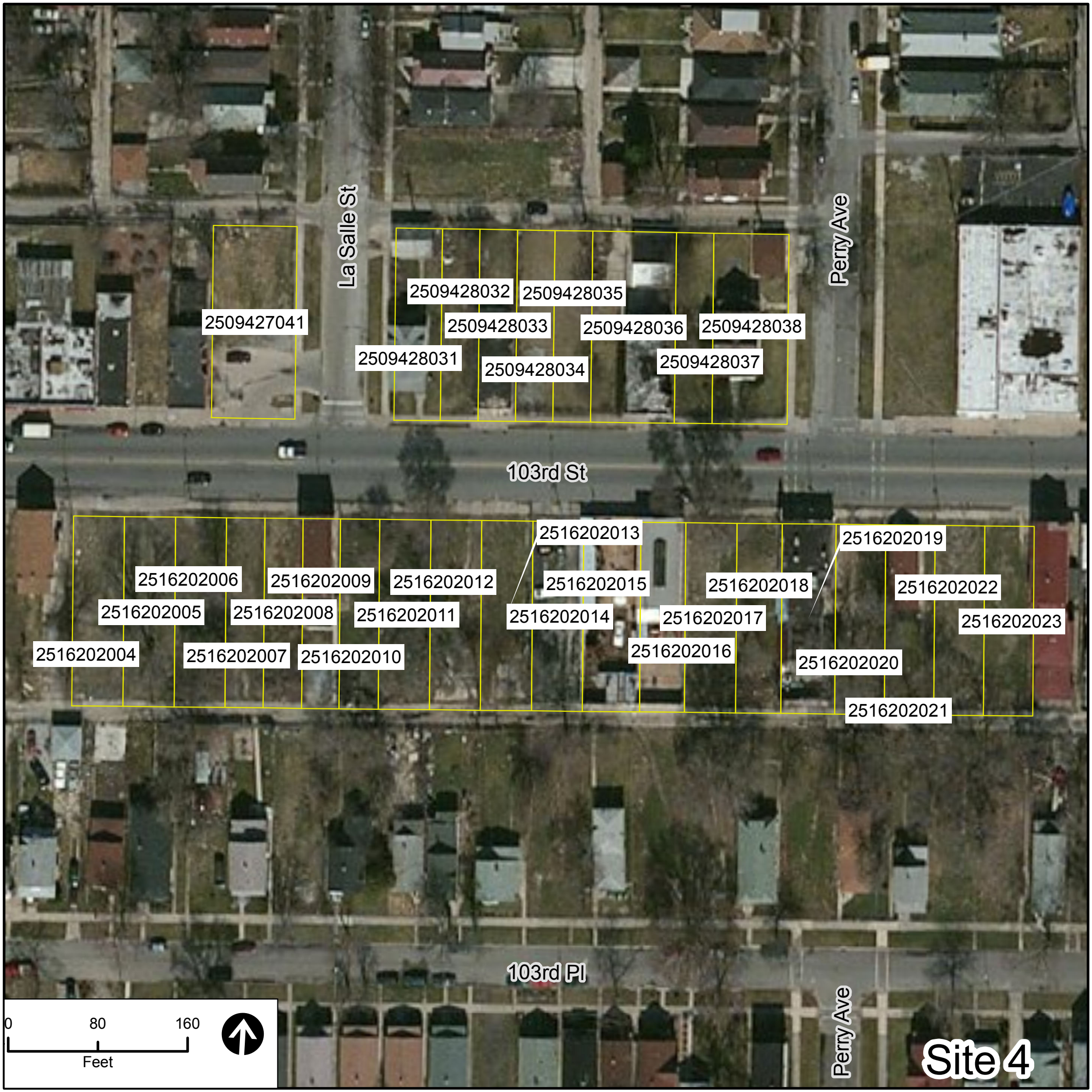
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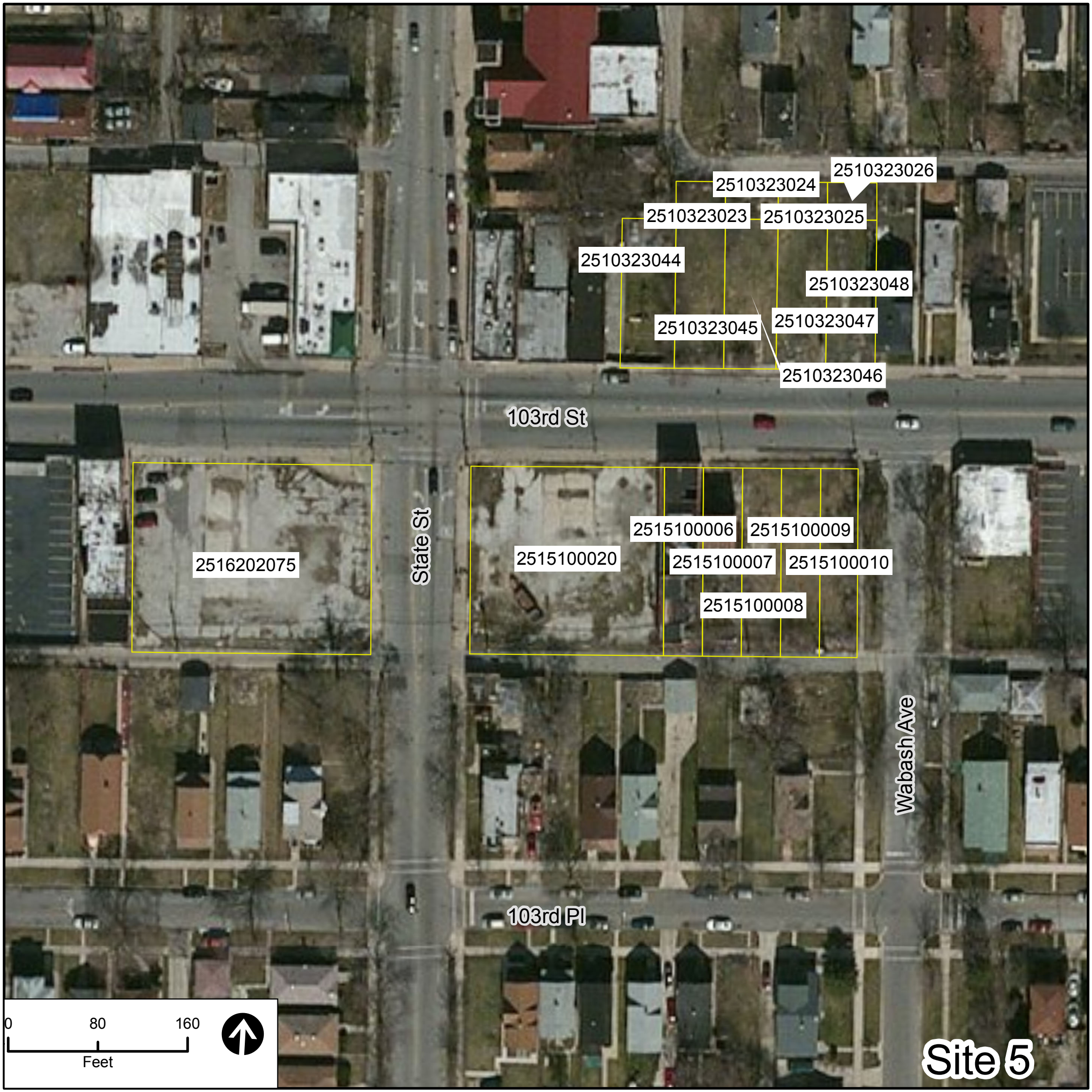
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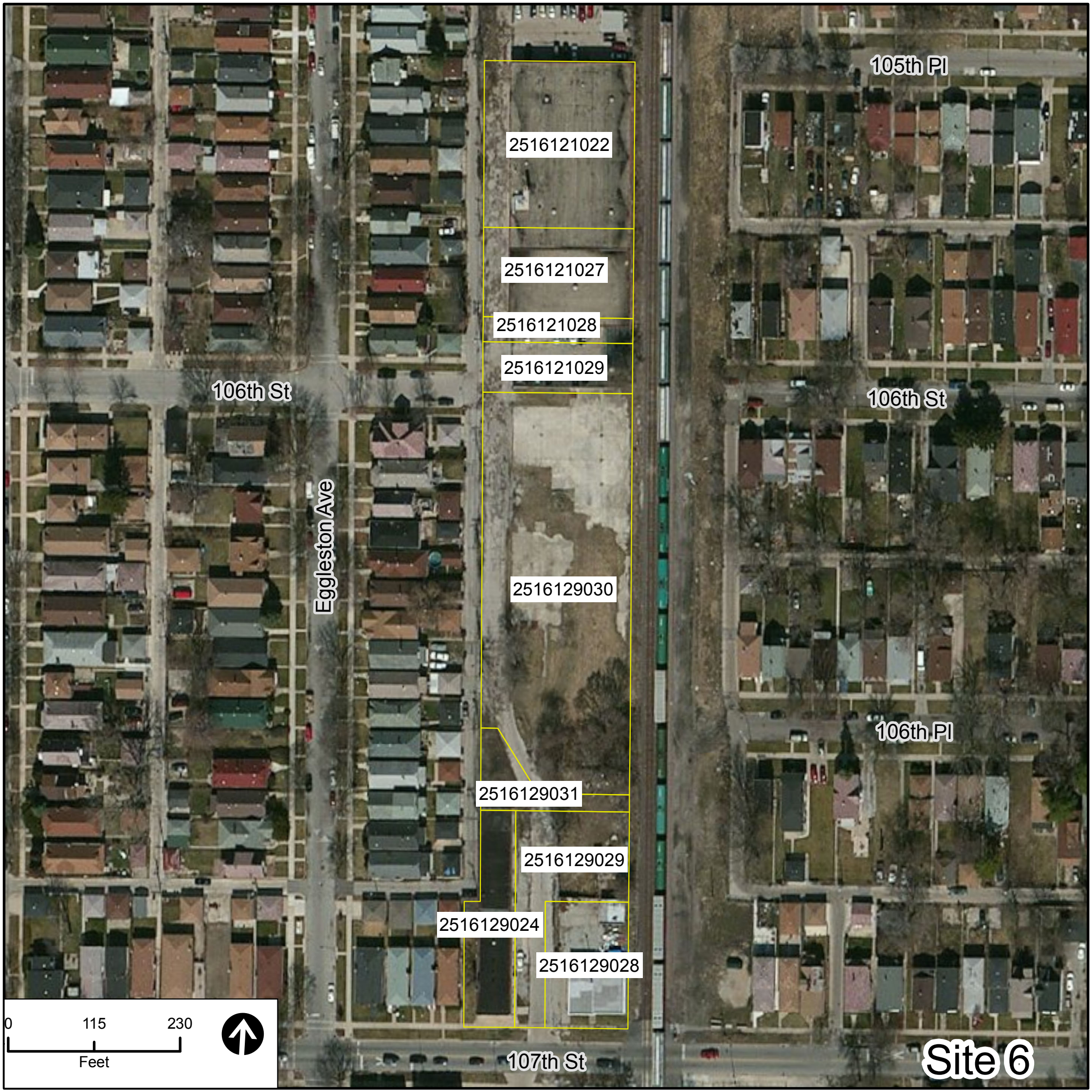
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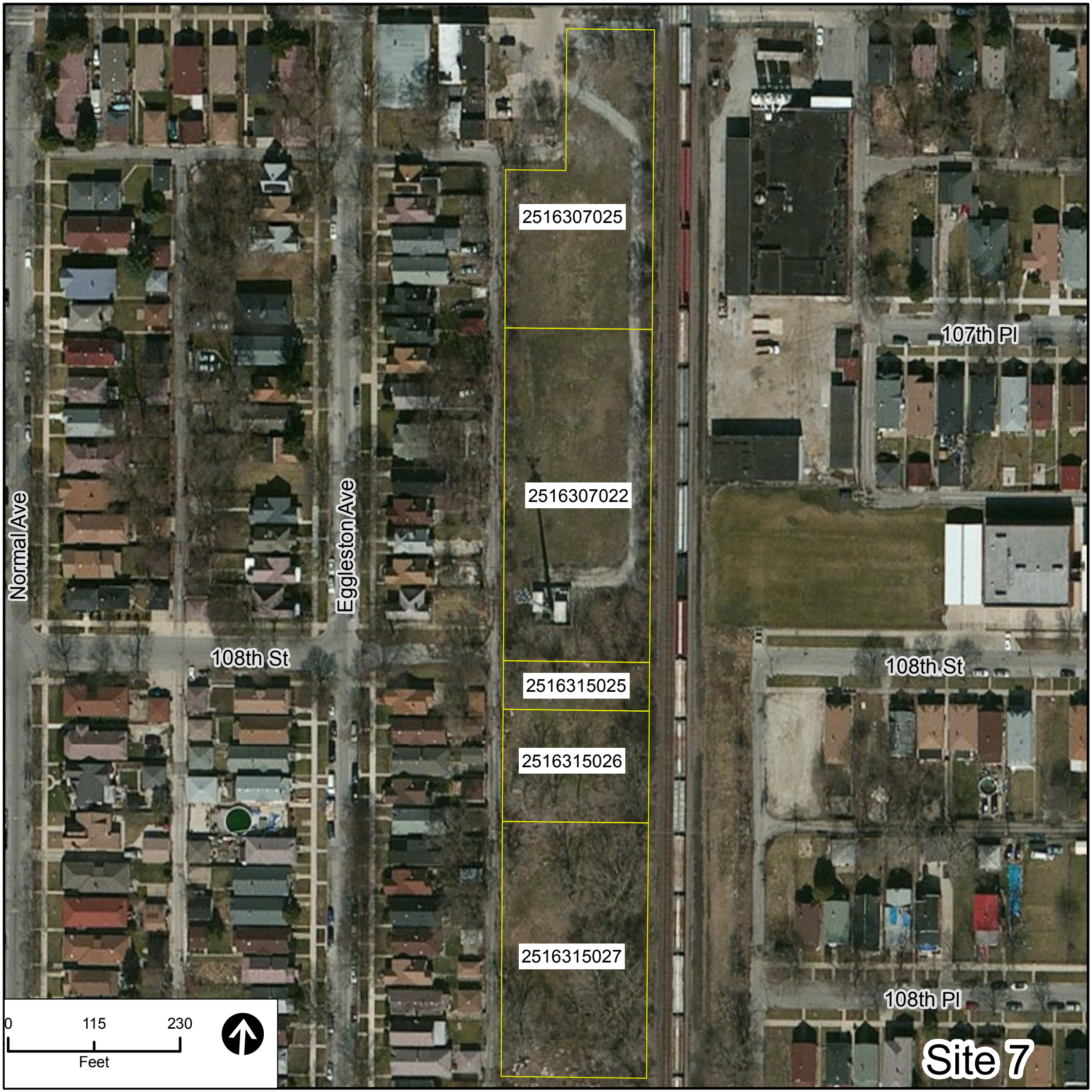
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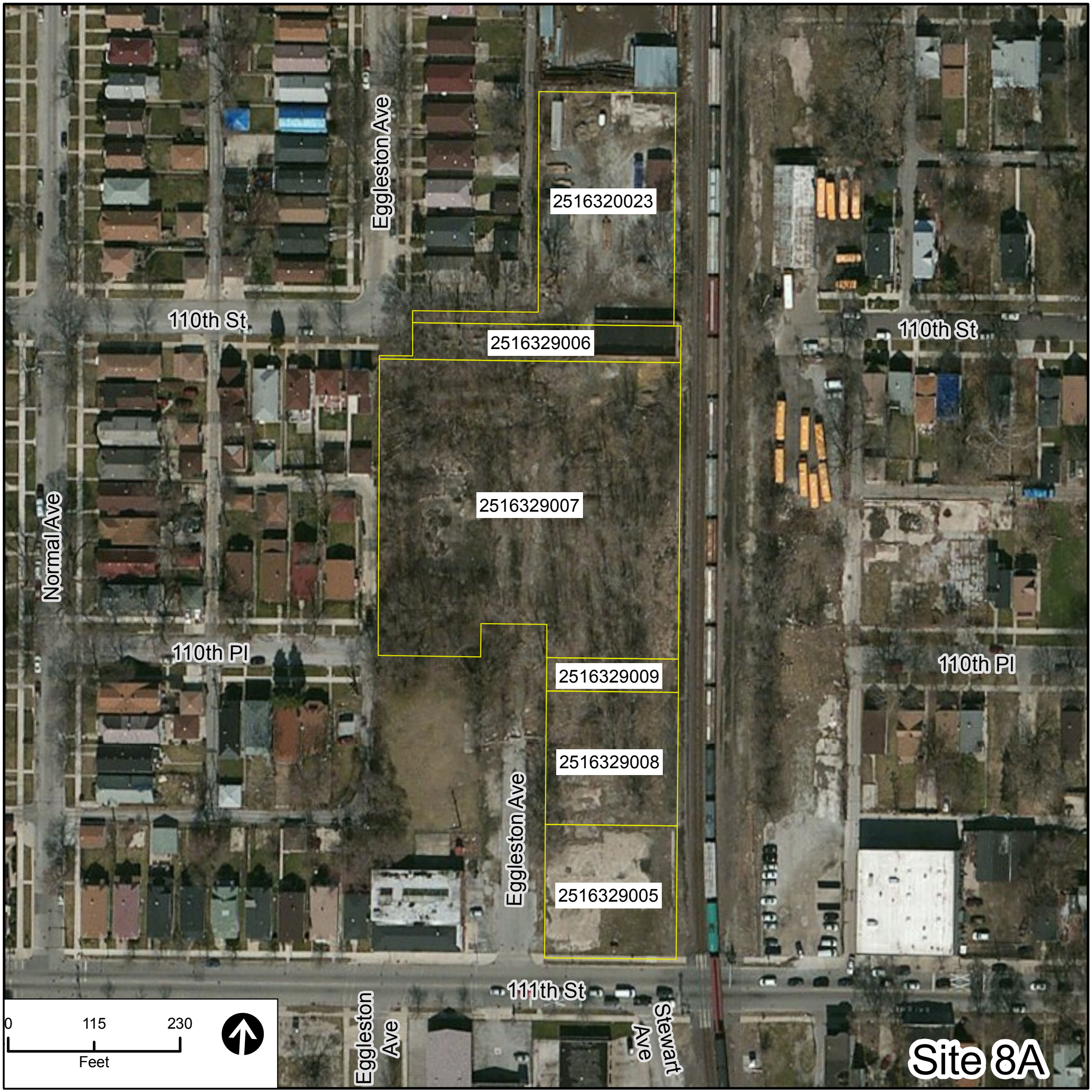
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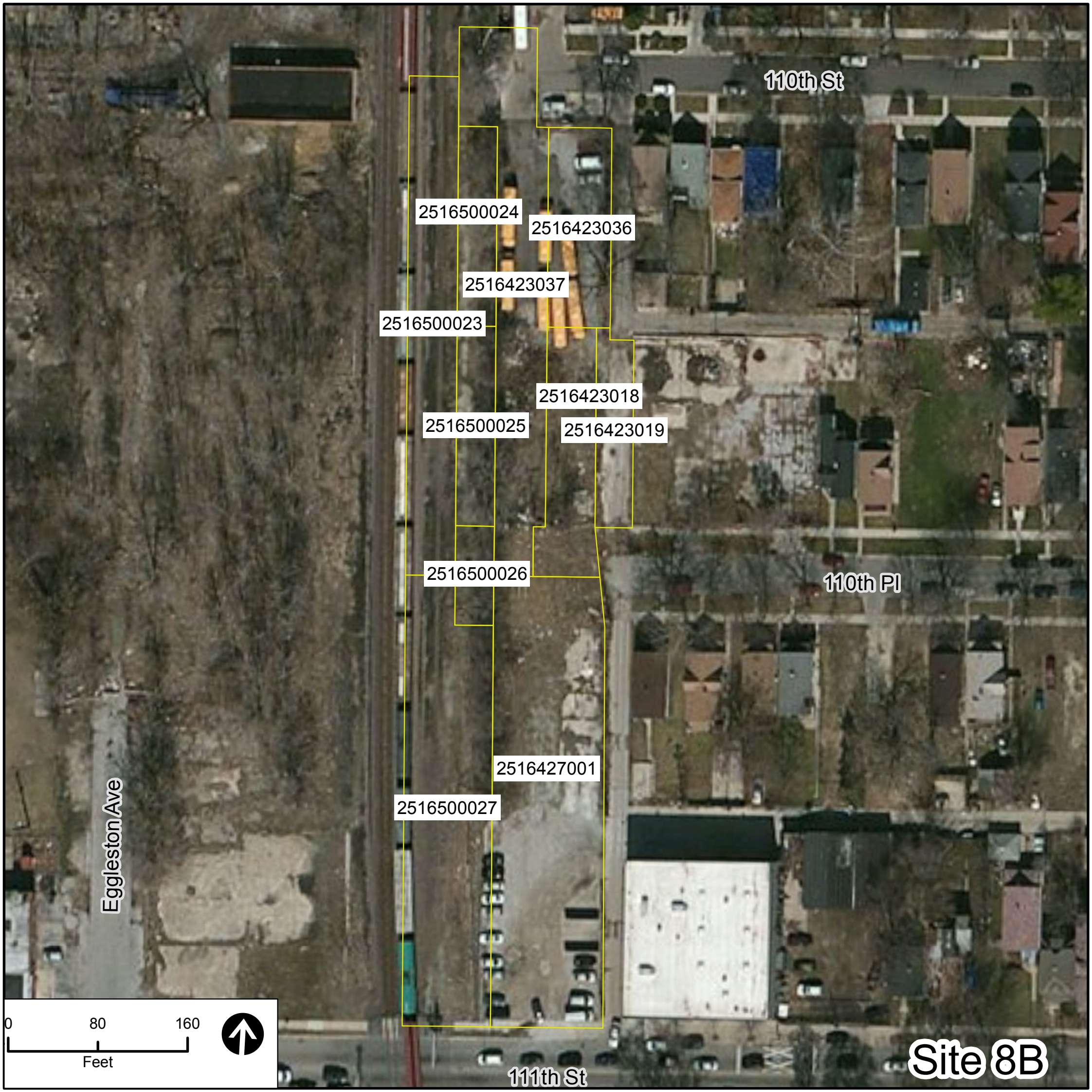
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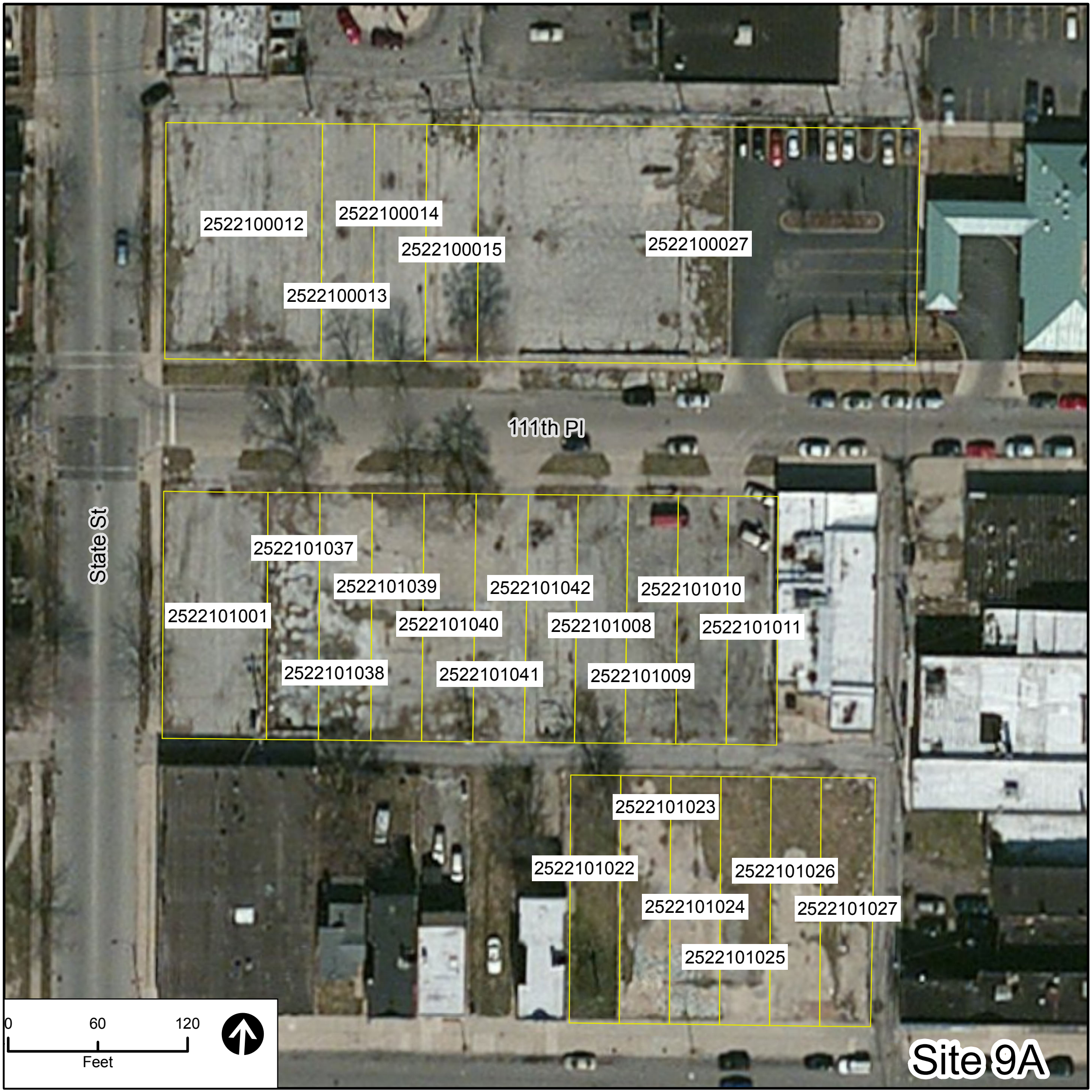
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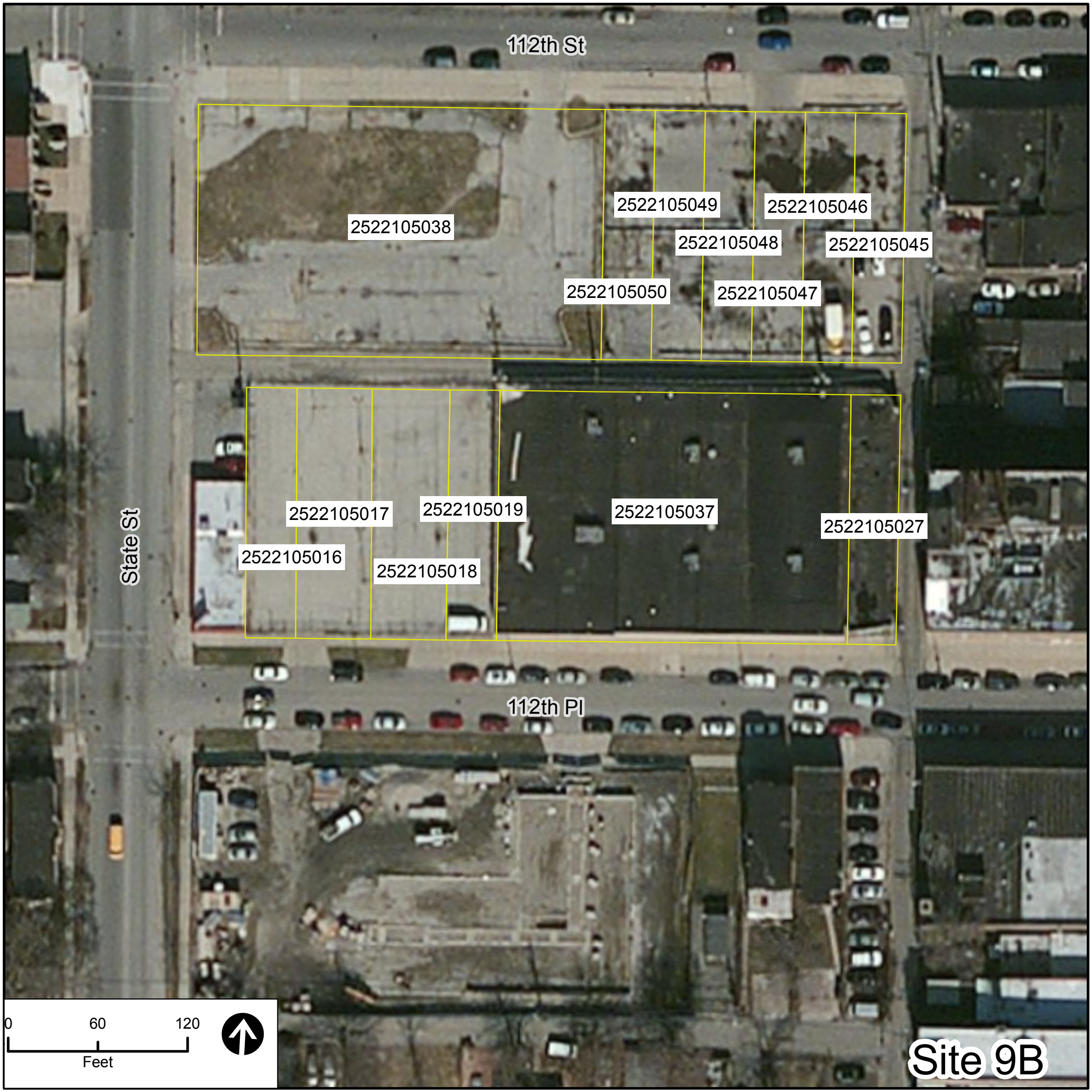
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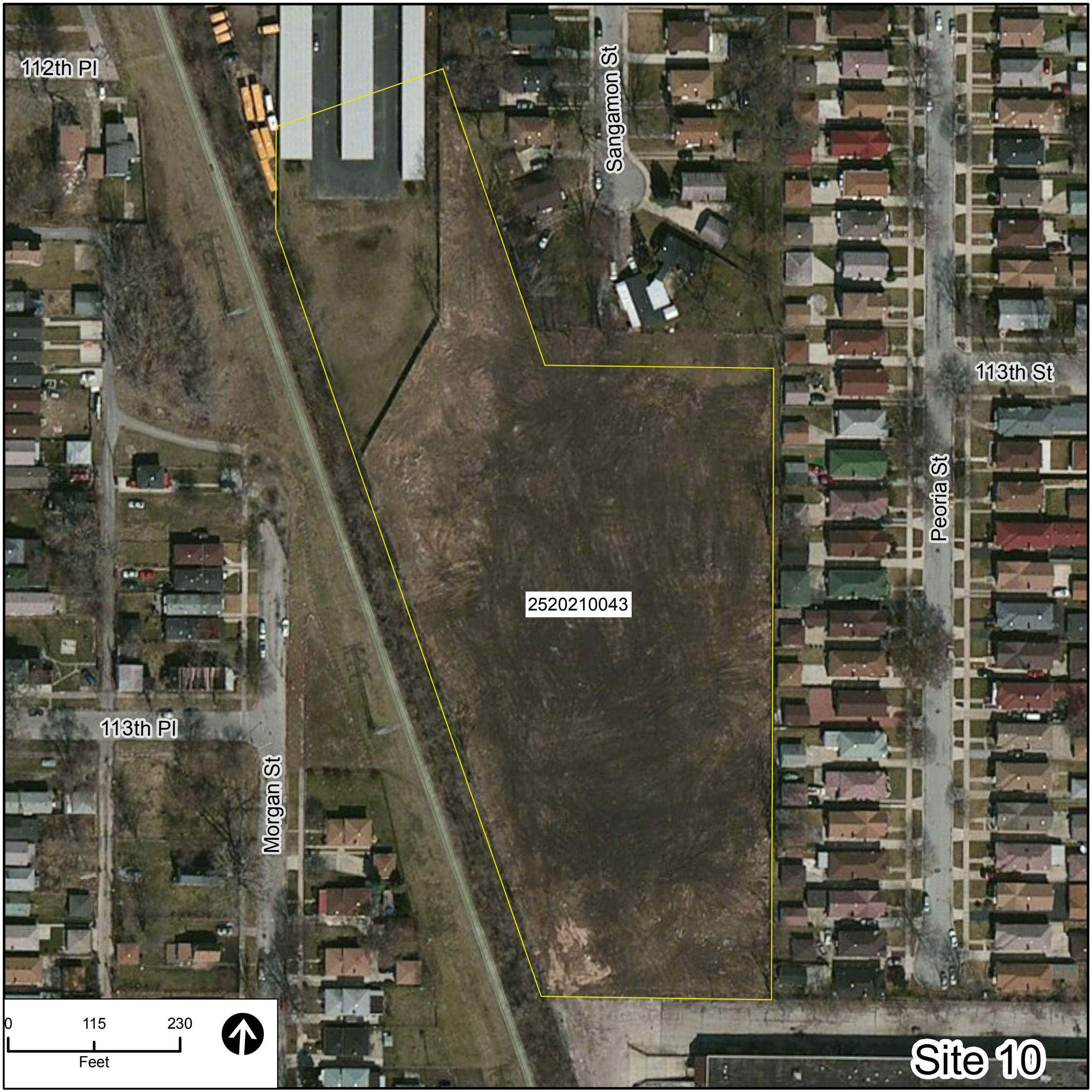
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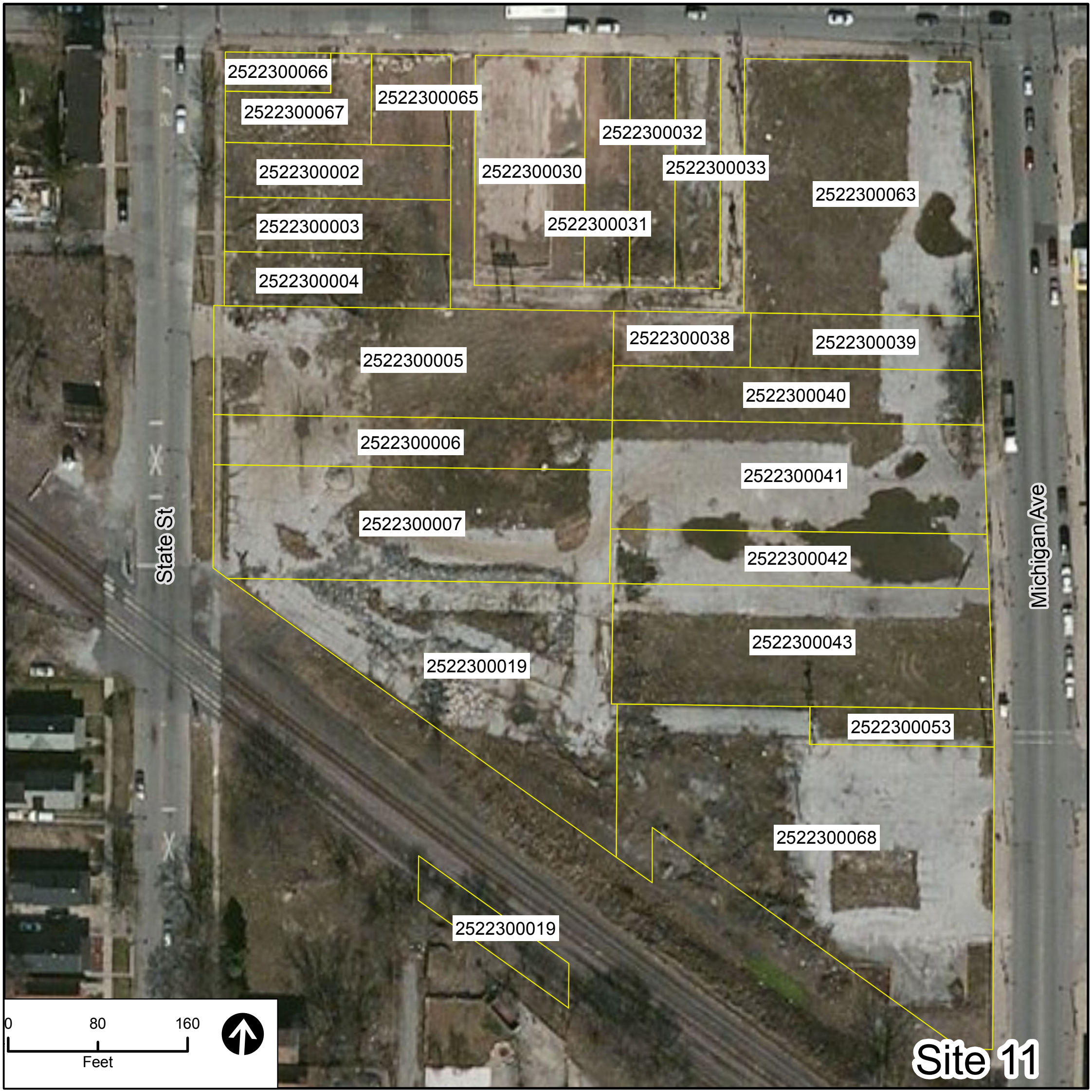
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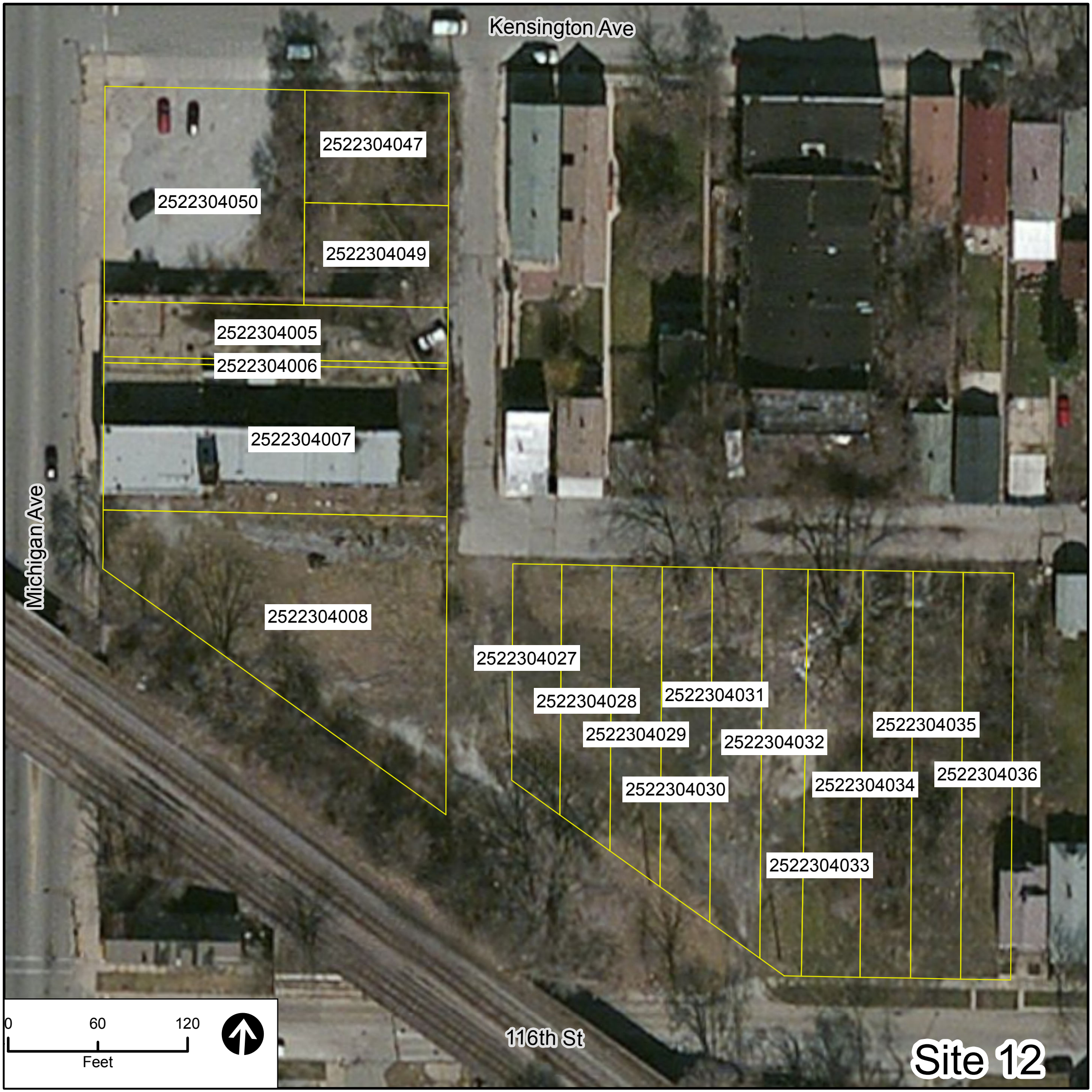
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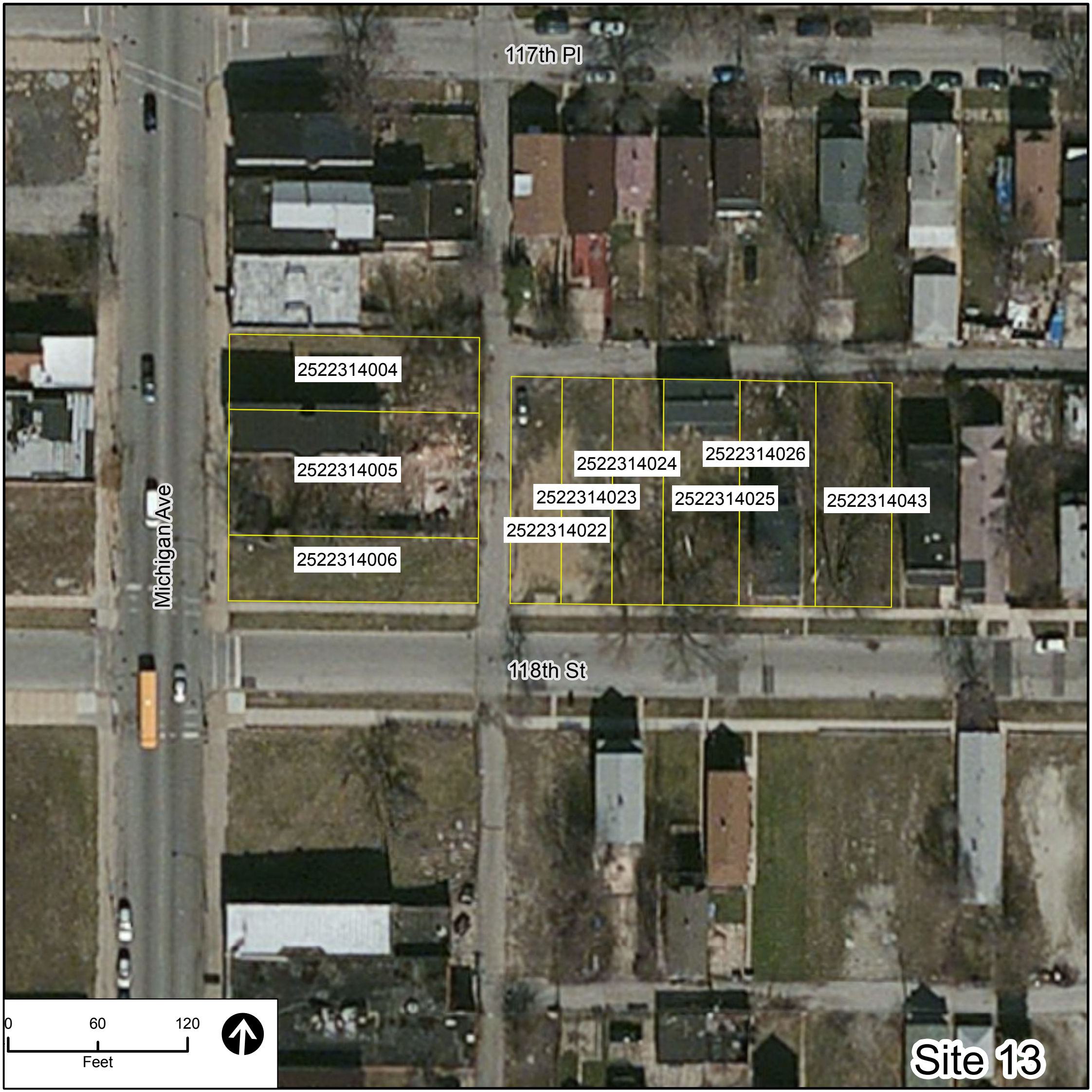
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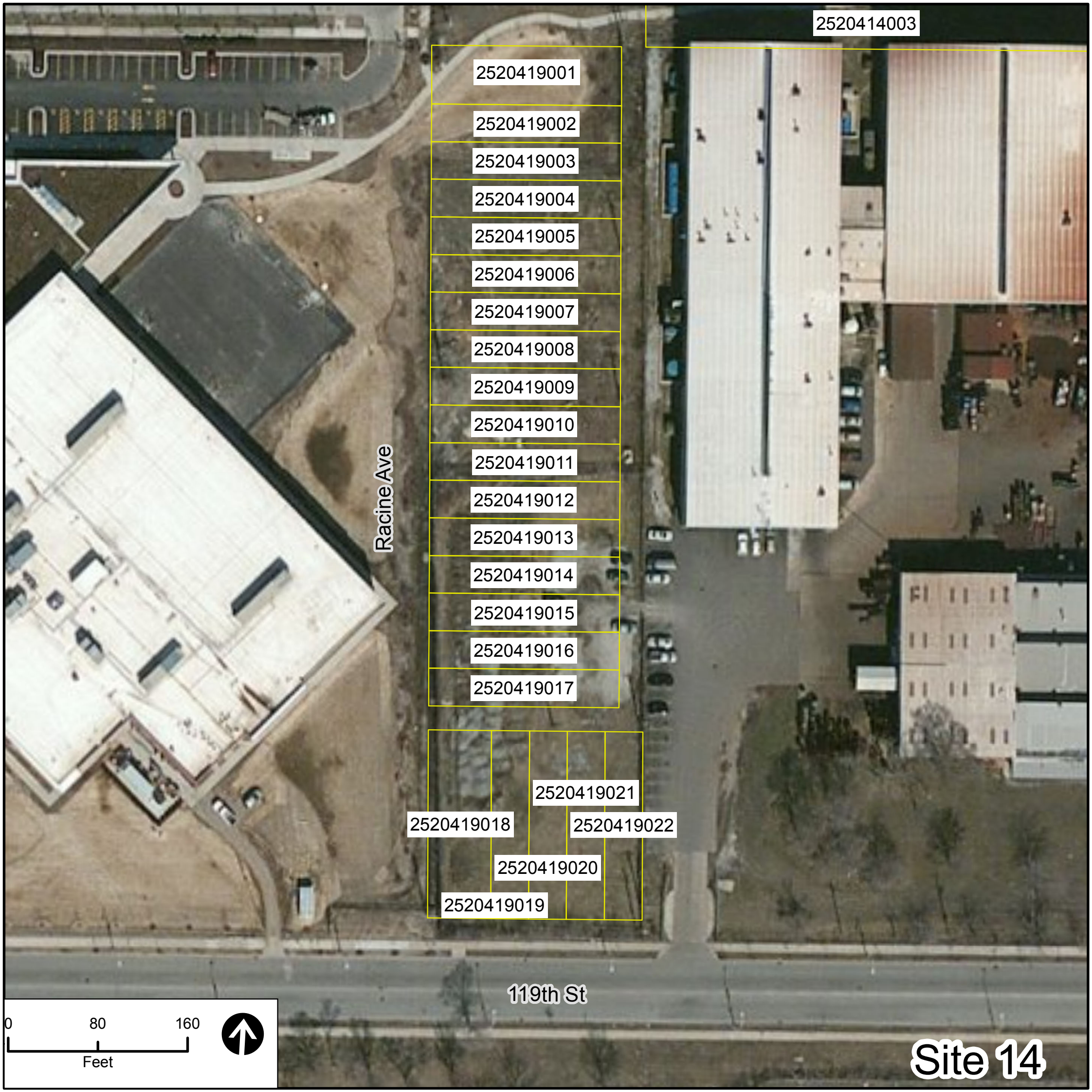
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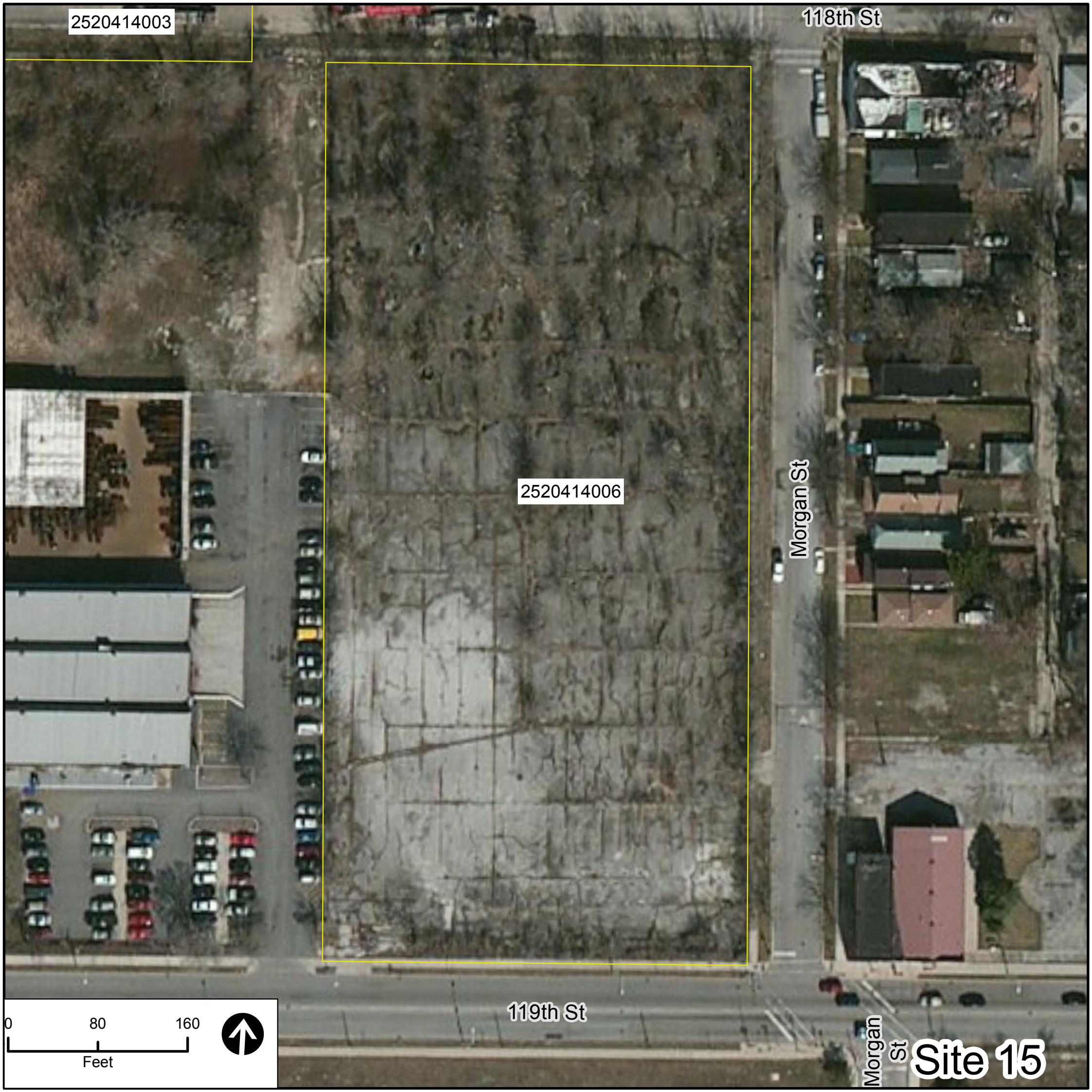
Site 14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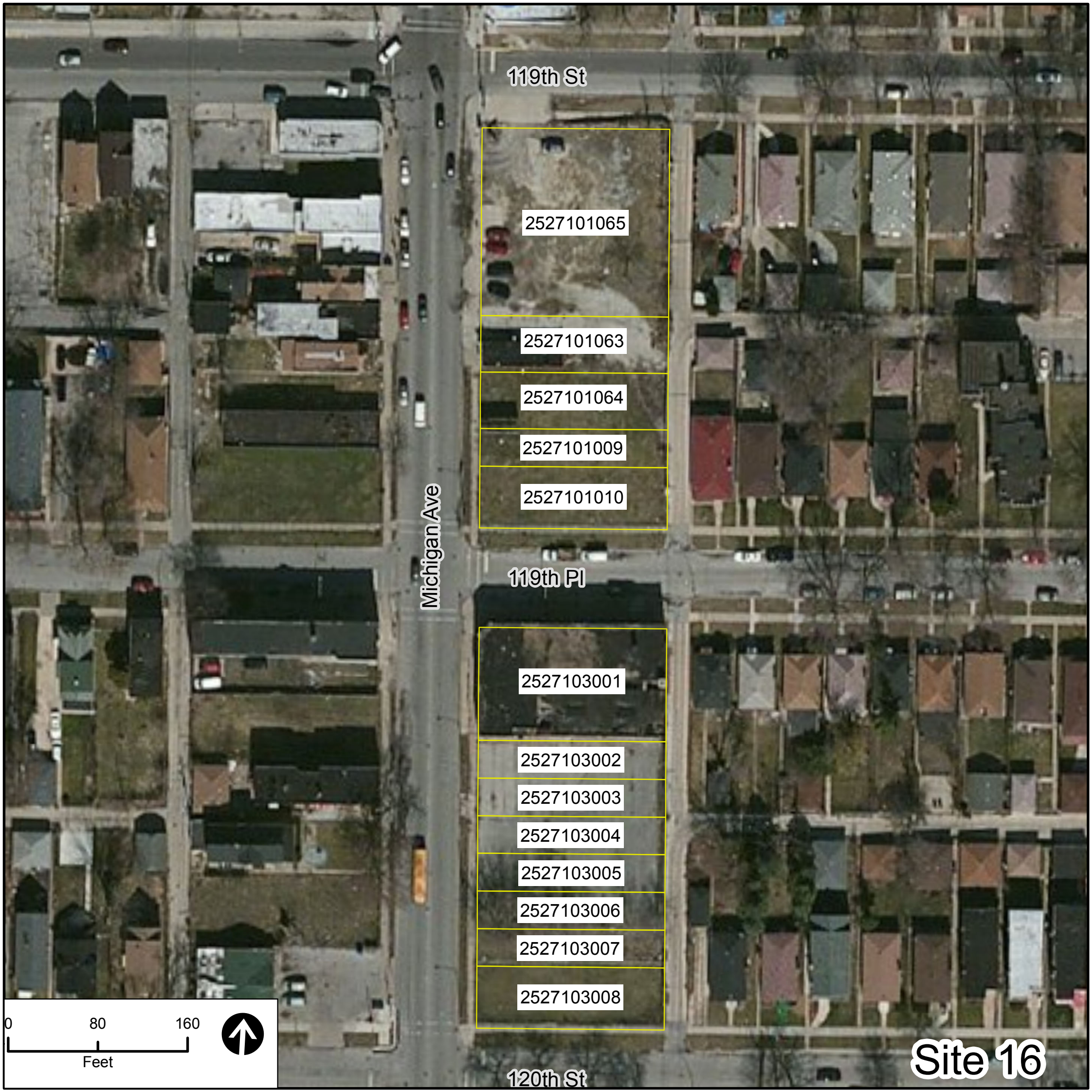
Site 15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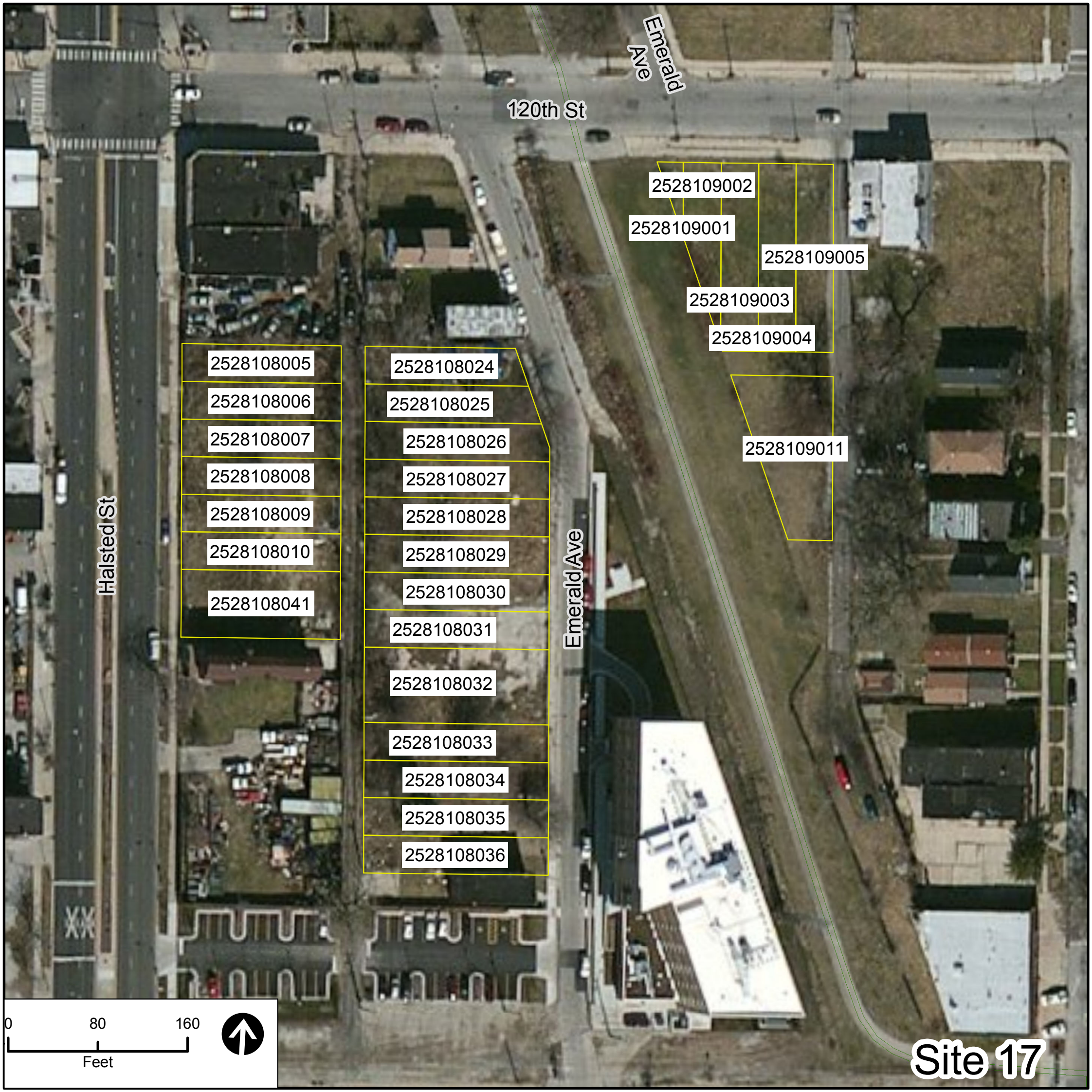
2527101065
2527101063
2527101064
2527101009
2527101010
Michigan Ave
119th Pl
2527103001
2527103002
2527103003
2527103004
2527103005
2527103006
2527103007
2527103008
120th St
0
80
160
Feet
Site 16


Emerald Ave
120th St
2528109002
2528109001
2528109005
2528109003
2528109004
2528109011
2528108005
2528108006
2528108007
2528108008
2528108009
2528108010
2528108041
2528108024
2528108025
2528108026
2528108027
2528108028
2528108029
2528108030
2528108031
2528108032
2528108033
2528108034
2528108035
2528108036
Halsted St
Emerald Ave
0
80
160
Feet

Site 17

Considerations within Washington Heights Community Area (West Option – Fernwood Parkway Mitigation)

Washington Heights Community Area

Replacement park within Washington Heights community area was noted for mitigation of the West Option (Fernwood Parkway)

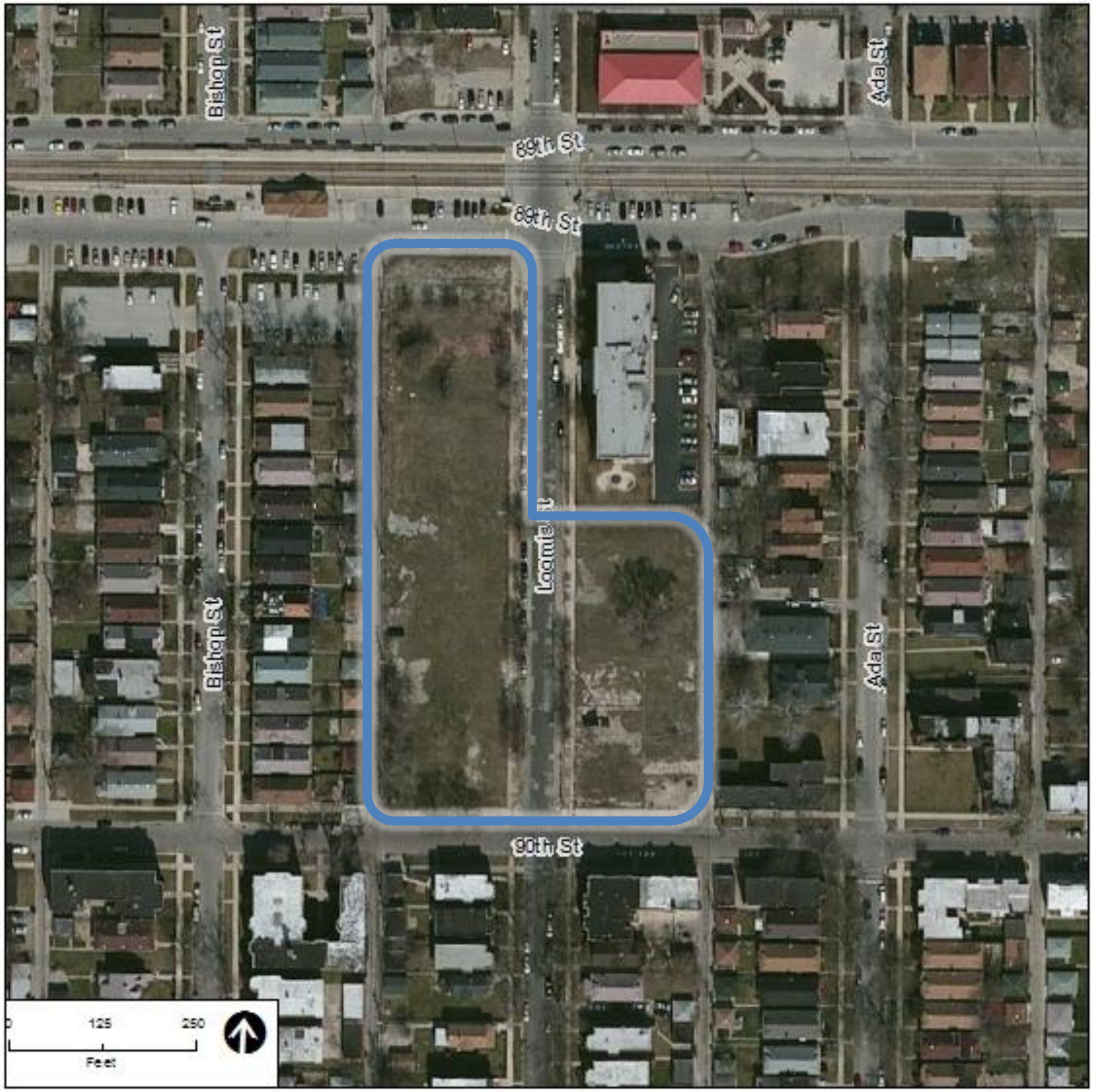
While Fernwood Parkway is located within the Washington Heights community area, field reviews and GIS analysis indicated that there are no suitable replacement park locations in this area

Washington Heights is separated by the interstate, which divides this neighborhood

Fernwood Parkway is more closely identifiable with Roseland community area due to transportation facilities and land uses

Two areas were initially identified, but removed from further consideration due to:

- Acreage insufficiency
- Non contiguous parcels needed for park acreage replacement, and would require additional roadway reconfigurations
- Some linear space was identified for bike/ped connection, but would not provide for park acreage replacement


Bishop St
Ada St
89th St
89th St
Loomis St
Bishop St
Ada St
90th St
0
125
250
Feet

WH- 1 (Eliminated)

Washington Heights Community

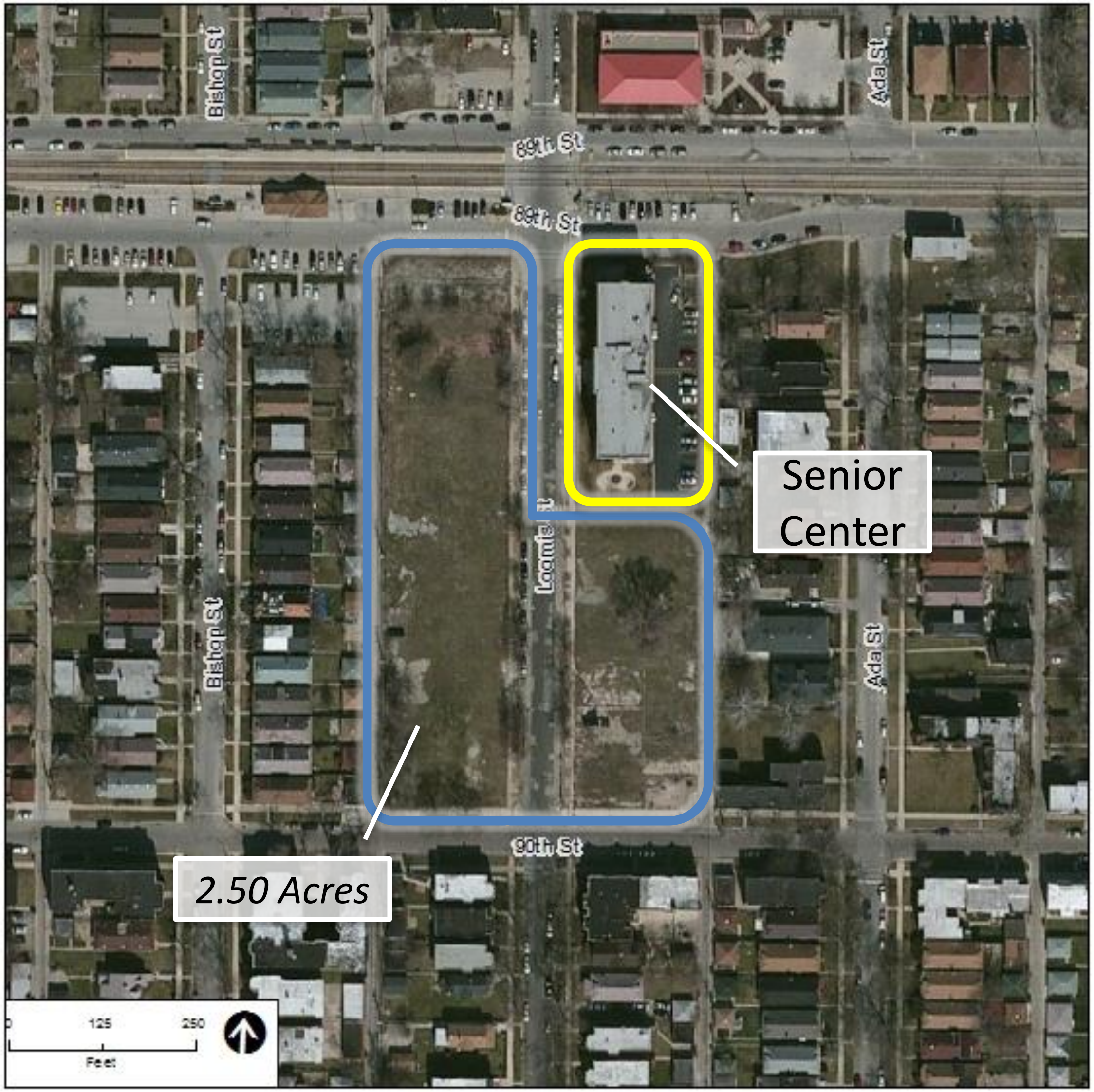
Ward 21

Ballfield Suitability:

- Up to 250'

Field Notes/ Considerations

- Requires removal of ½ block of Loomis St. and cul-de-sac.
- Adjacent to a senior center


Bishop St
89th St
89th St
Ada St
Loomis St
Bishop St
Ada St
90th St
0
125
250
Feet

Senior Center

2.50 Acres

WH-1

(Eliminated)

Washington Heights Community

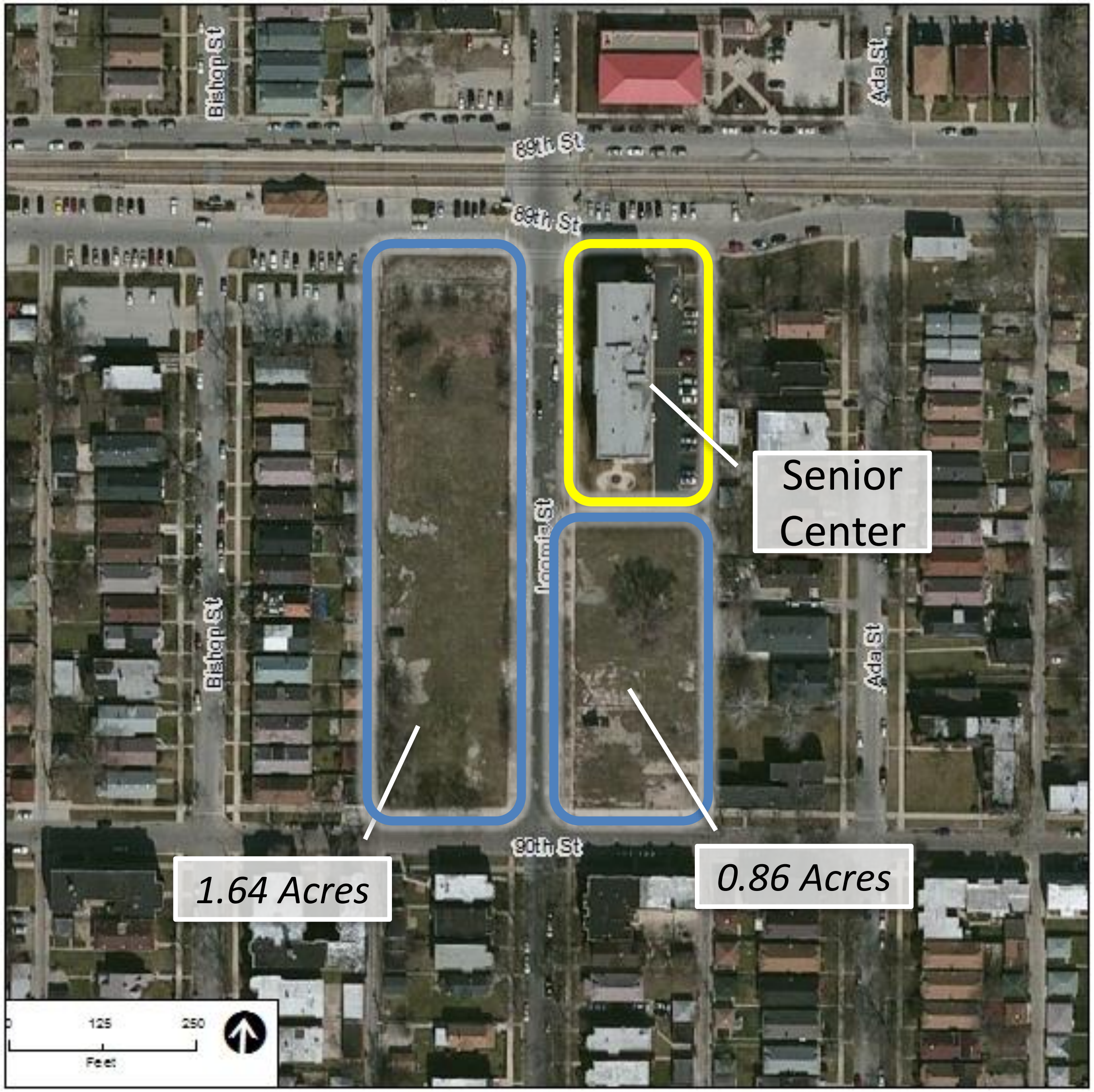
Ward 21

Ballfield Suitability:

- Up to 250’

Field Notes/ Considerations

- Requires removal of ½ block of Loomis St. and cul-de-sac.
- Adjacent to a senior center


89th St
89th St
Bishop St
Ada St
Loomis St
Bishop St
Ada St
90th St
Senior Center
1.64 Acres
0.86 Acres
0 125 250
Feet

WH-1 (Eliminated)

Washington Heights Community

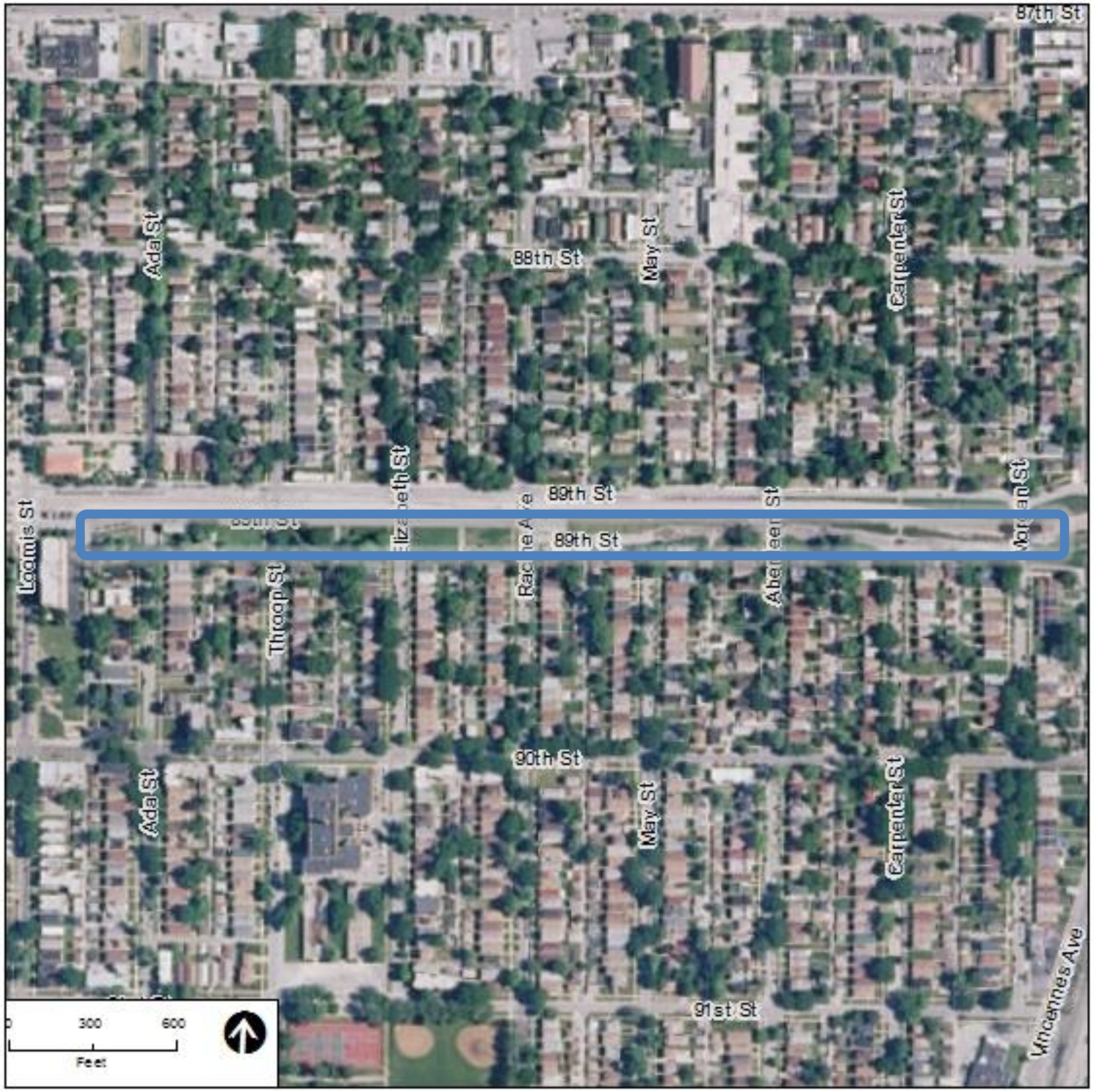
Ward 21

Ballfield Suitability:

- Up to 250’

Field Notes/ Considerations

- Requires removal of ½ block of Loomis St. and cul-de-sac.
- Adjacent to a senior center


87th St
Ada St
88th St
May St
Carpenter St
Loomis St
Elizabeth St
89th St
Racine Ave
Aberdeen St
Morgan St
89th St
Throop St
90th St
Ada St
May St
Carpenter St
91st St
Vincennes Ave
0
300
600
Feet

WH-2 (Eliminated)

Washington Heights Community

Ward 21

Field Notes/ Considerations

- Potential location for a pedestrian and bicycle path
- May provide connection to existing Vincennes Ave. bike lane
- Does not provide replacement park acreage capability

Considerations within Washington Heights Community Area (West Option – Fernwood Parkway Mitigation)

Washington Heights Community Area

Replacement park within Washington Heights community area was noted for mitigation of the West Option (Fernwood Parkway)

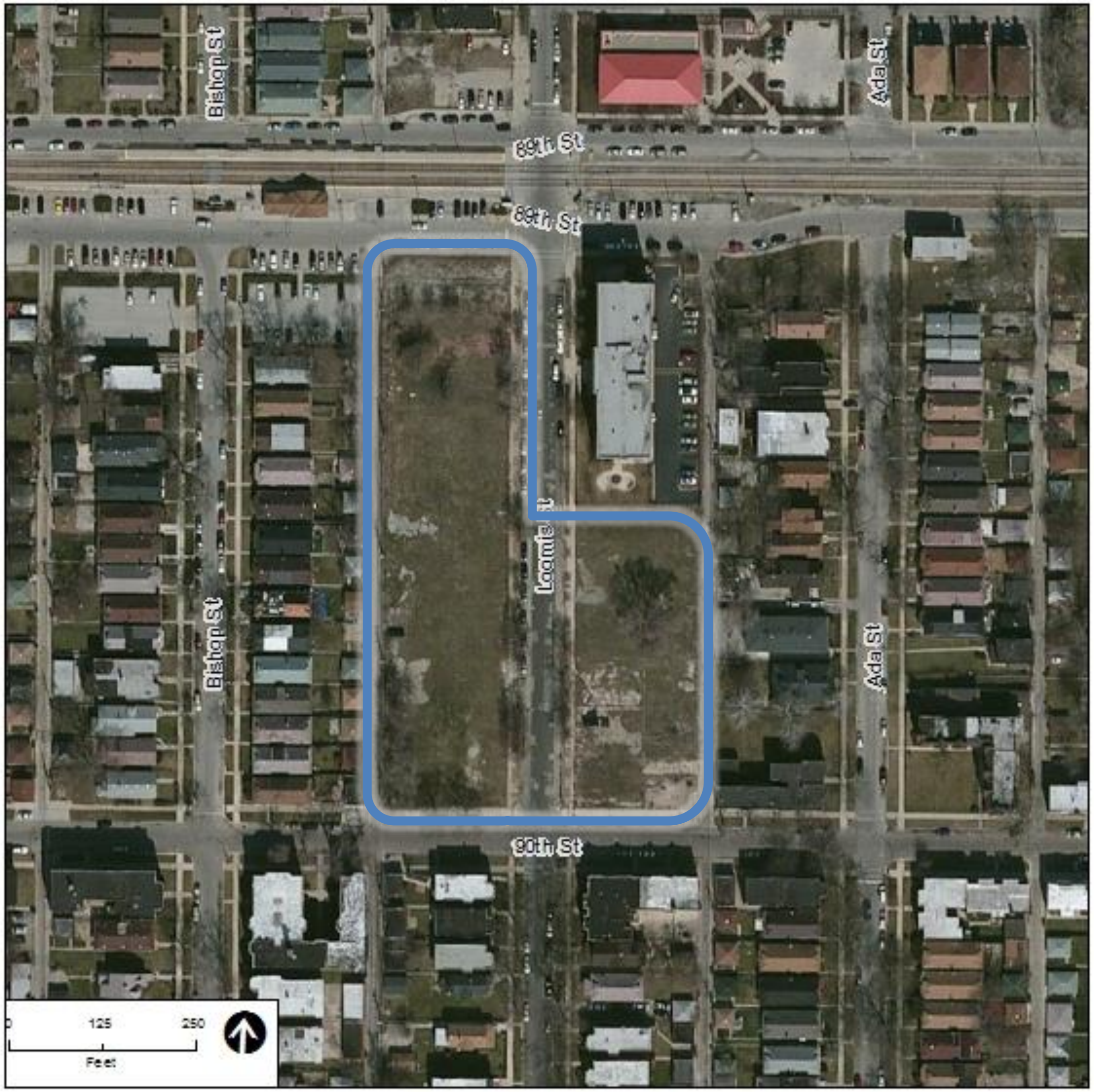
While Fernwood Parkway is located within the Washington Heights community area, field reviews and GIS analysis indicated that there are no suitable replacement park locations in this area

Washington Heights is separated by the interstate, which divides this neighborhood

Fernwood Parkway is more closely identifiable with Roseland community area due to transportation facilities and land uses

Two areas were initially identified, but removed from further consideration due to:

- Acreage insufficiency
- Non contiguous parcels needed for park acreage replacement, and would require additional roadway reconfigurations
- Some linear space was identified for bike/ped connection, but would not provide for park acreage replacement


Bishop St
Ada St
89th St
89th St
Loomis St
Bishop St
Ada St
90th St
0
125
250
Feet

WH- 1 (Eliminated)

Washington Heights Community

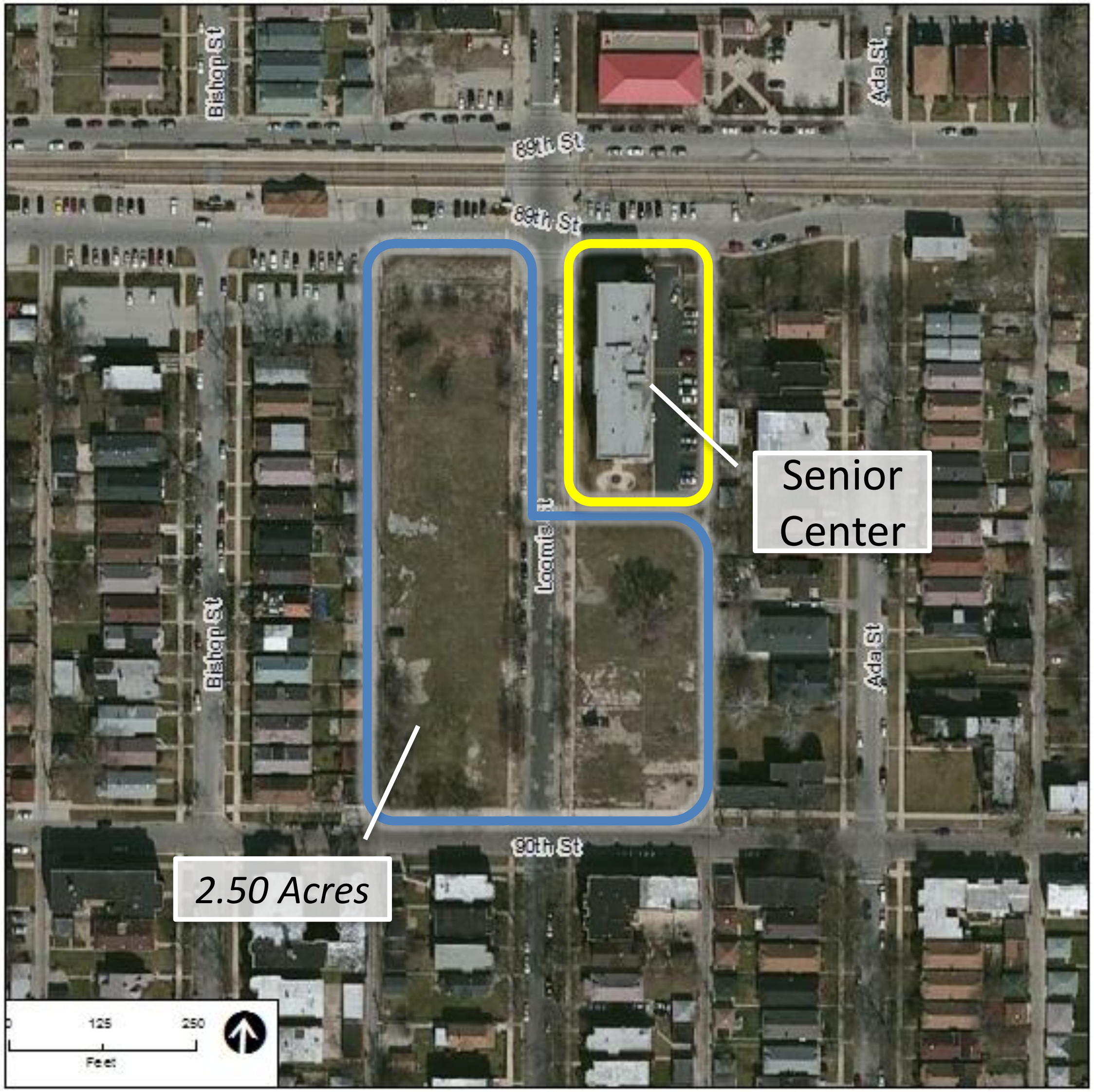
Ward 21

Ballfield Suitability:

- Up to 250’

Field Notes/ Considerations

- Requires removal of ½ block of Loomis St. and cul-de-sac.
- Adjacent to a senior center


Bishop St
89th St
89th St
Ada St
Loomis St
Bishop St
Ada St
90th St
Senior Center
2.50 Acres
0
125
250
Feet

WH-1

(Eliminated)

Washington Heights Community

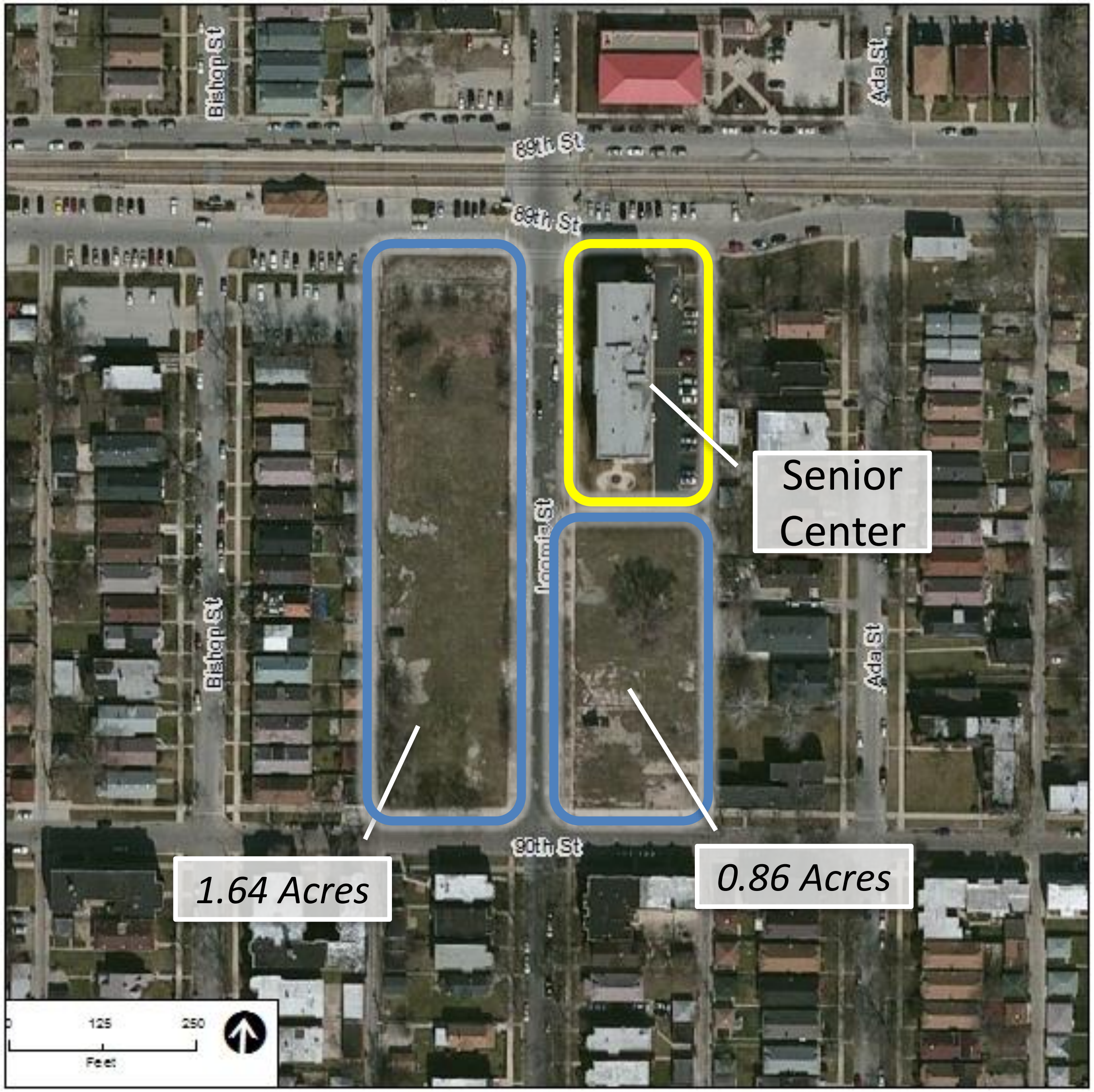
Ward 21

Ballfield Suitability:

- Up to 250’

Field Notes/ Considerations

- Requires removal of ½ block of Loomis St. and cul-de-sac.
- Adjacent to a senior center


Bishop St
89th St
Ada St
89th St
Loomis St
Senior Center
Bishop St
Ada St
90th St
1.64 Acres
0.86 Acres
0
125
250
Feet

WH-1 (Eliminated)

Washington Heights Community

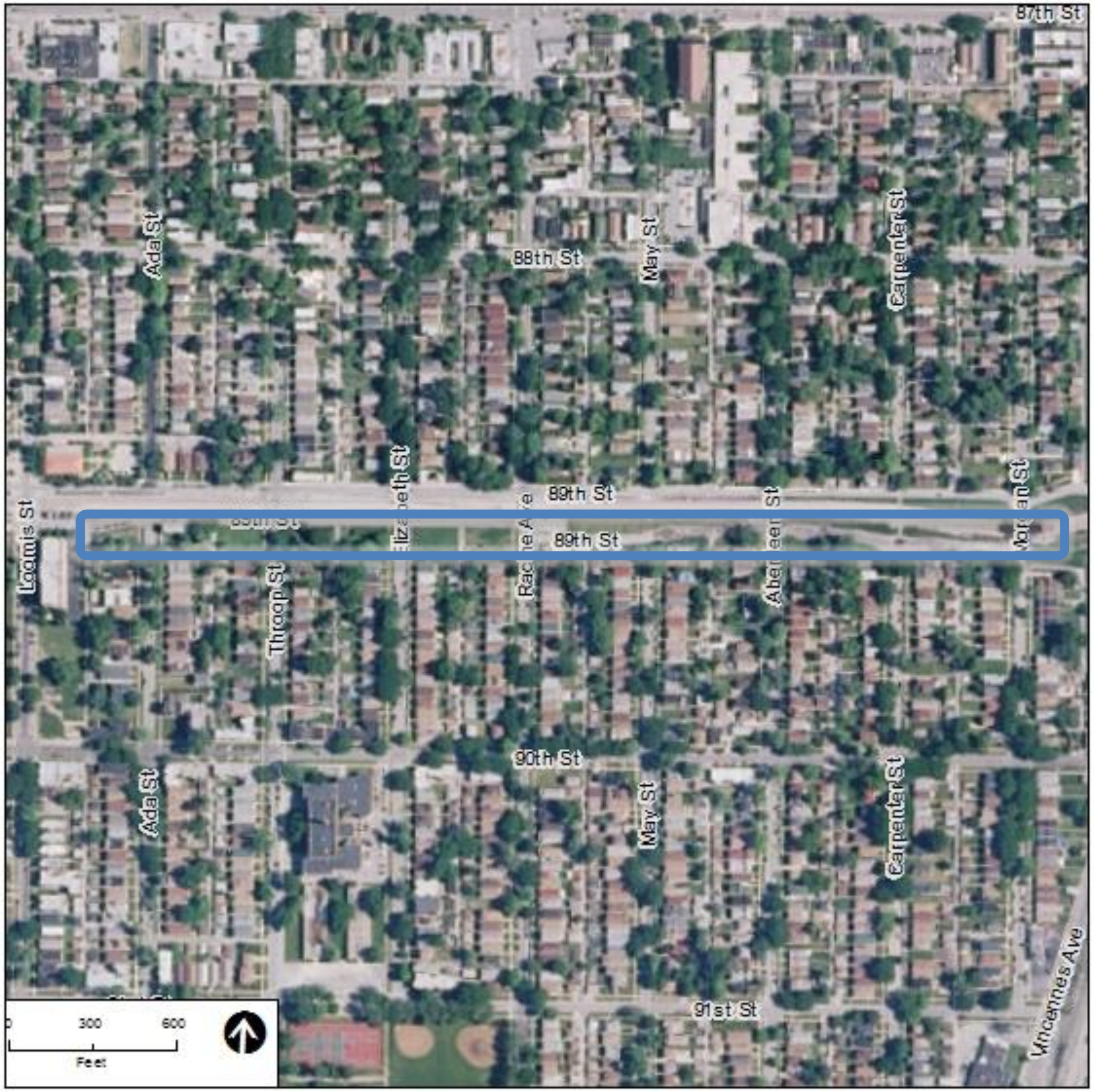
Ward 21

Ballfield Suitability:

- Up to 250’

Field Notes/ Considerations

- Requires removal of ½ block of Loomis St. and cul-de-sac.
- Adjacent to a senior center


87th St
Ada St
88th St
May St
Carpenter St
Loomis St
89th St
89th St
Throop St
Racine Ave
Aberdeen St
90th St
Ada St
May St
Carpenter St
91st St
Vincennes Ave
0
300
600
Feet

WH-2 (Eliminated)

Washington Heights Community

Ward 21

Field Notes/ Considerations

- Potential location for a pedestrian and bicycle path
- May provide connection to existing Vincennes Ave. bike lane
- Does not provide replacement park acreage capability

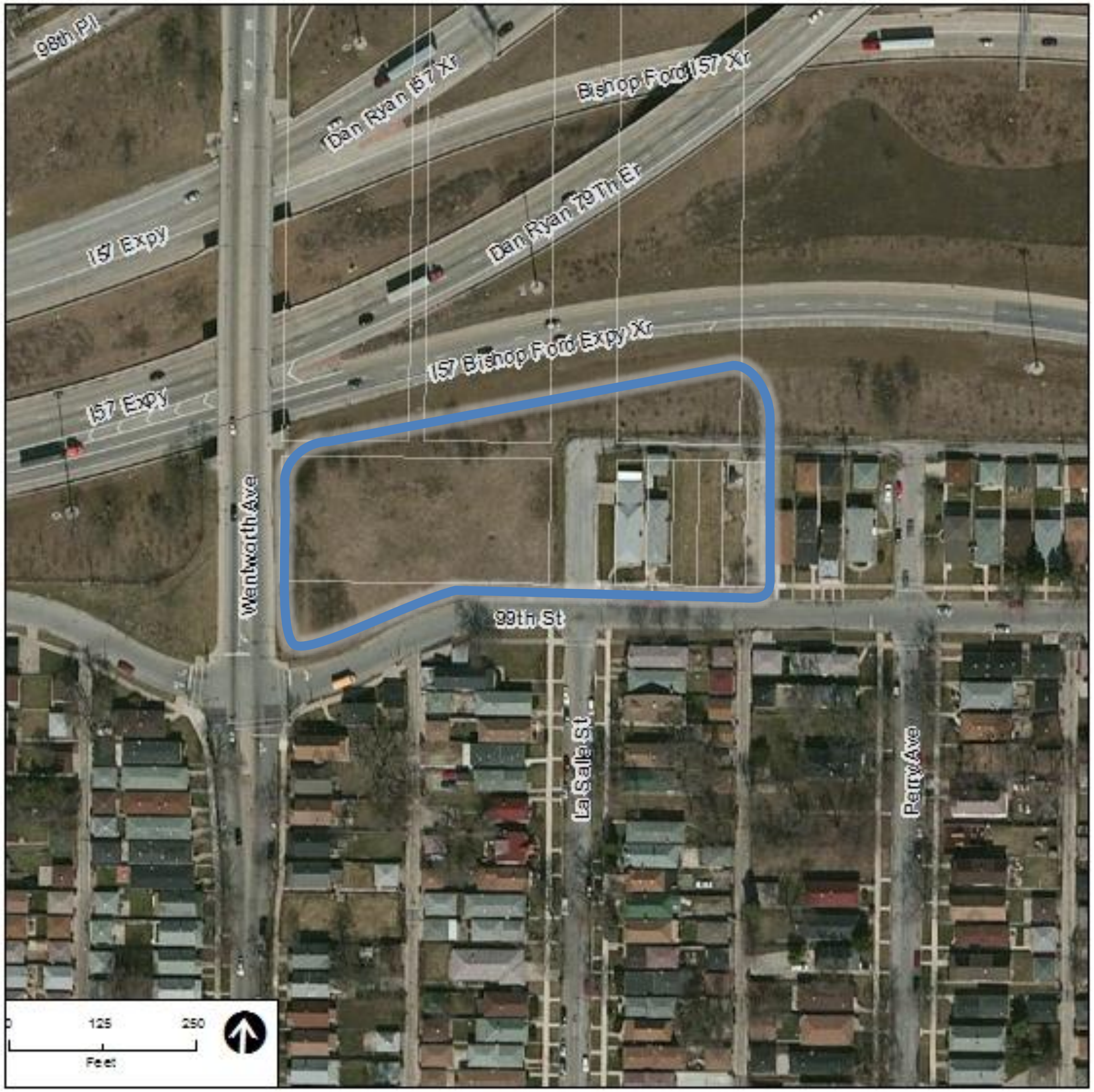
Attachment 3: Field Visit Findings

Red Line Extension Park Replacement Site Analysis

Field Visit Findings

February 2016

Considerations within Roseland Community Area (East and West Options)


98th Pl
Dan Ryan I57 Xr
Bishop Ford I57 Xr
I57 Expy
Dan Ryan 79Th Er
I57 Bishop Ford Expy Xr
I57 Expy
Wentworth Ave
99th St
La Salle St
Perry Ave
0
125
250
Feet

Site 1

Roseland Community

Ward 9

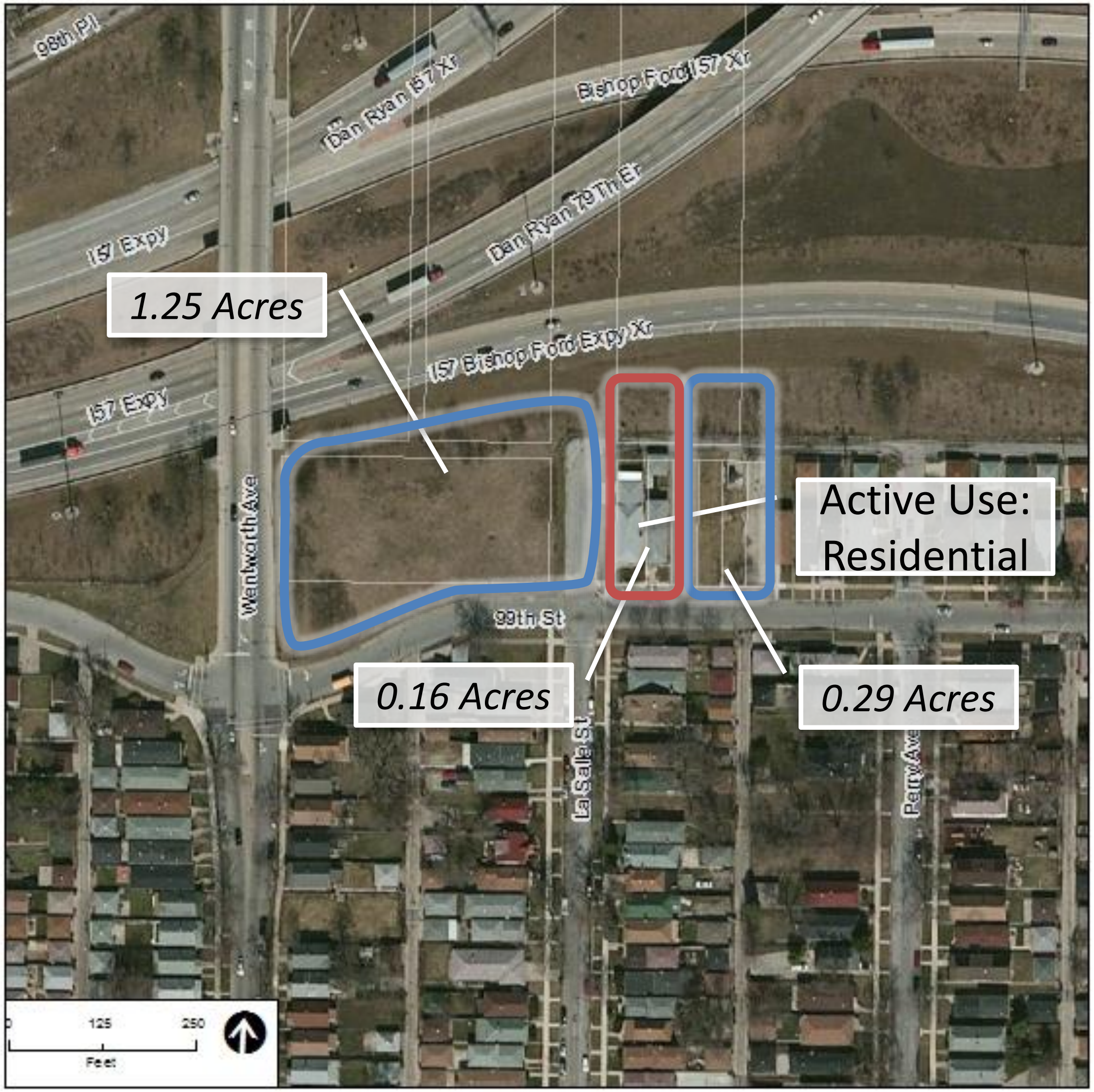
1.7 Acres

Field Notes/ Considerations

Eliminated from further consideration due to:

- Requires acquisition of two active parcels to meet acreage requirements
- Noise from adjacent freeway is an environmental concern
- Freeway ROW constricts available land and ballfield replacement potential

East and West Option


98th Pl
Dan Ryan I57 Xr
Bishop Ford I57 Xr
I57 Expy
Dan Ryan 79Th Er
I57 Bishop Ford Expy Xr
I57 Expy
1.25 Acres
Active Use: Residential
Wentworth Ave
99th St
0.16 Acres
0.29 Acres
La Salle St
Perry Ave
0
125
250
Feet

Site 1

Roseland Community

Ward 9

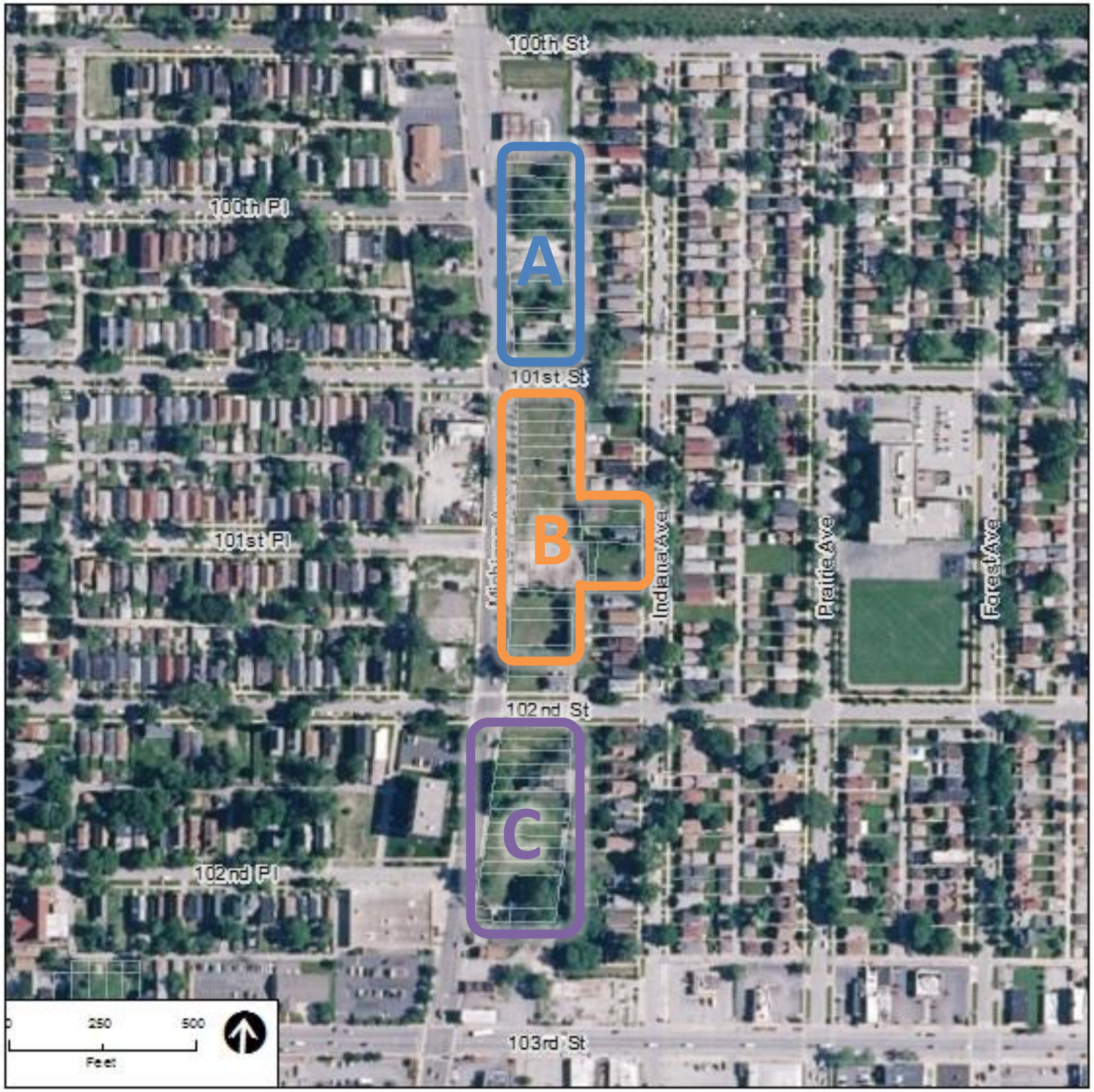
1.7 Acres

Field Notes/ Considerations

Eliminated from further consideration due to:

- Requires acquisition of two active parcels to meet acreage requirements
- Noise from adjacent freeway is an environmental concern
- Freeway ROW constricts available land and ballfield replacement potential

East and West Option


100th St
100th Pl
A
101st St
B
101st Pl
Indiana Ave
Prairie Ave
Forest Ave
102nd St
C
102nd Pl
103rd St
0
250
500
Feet

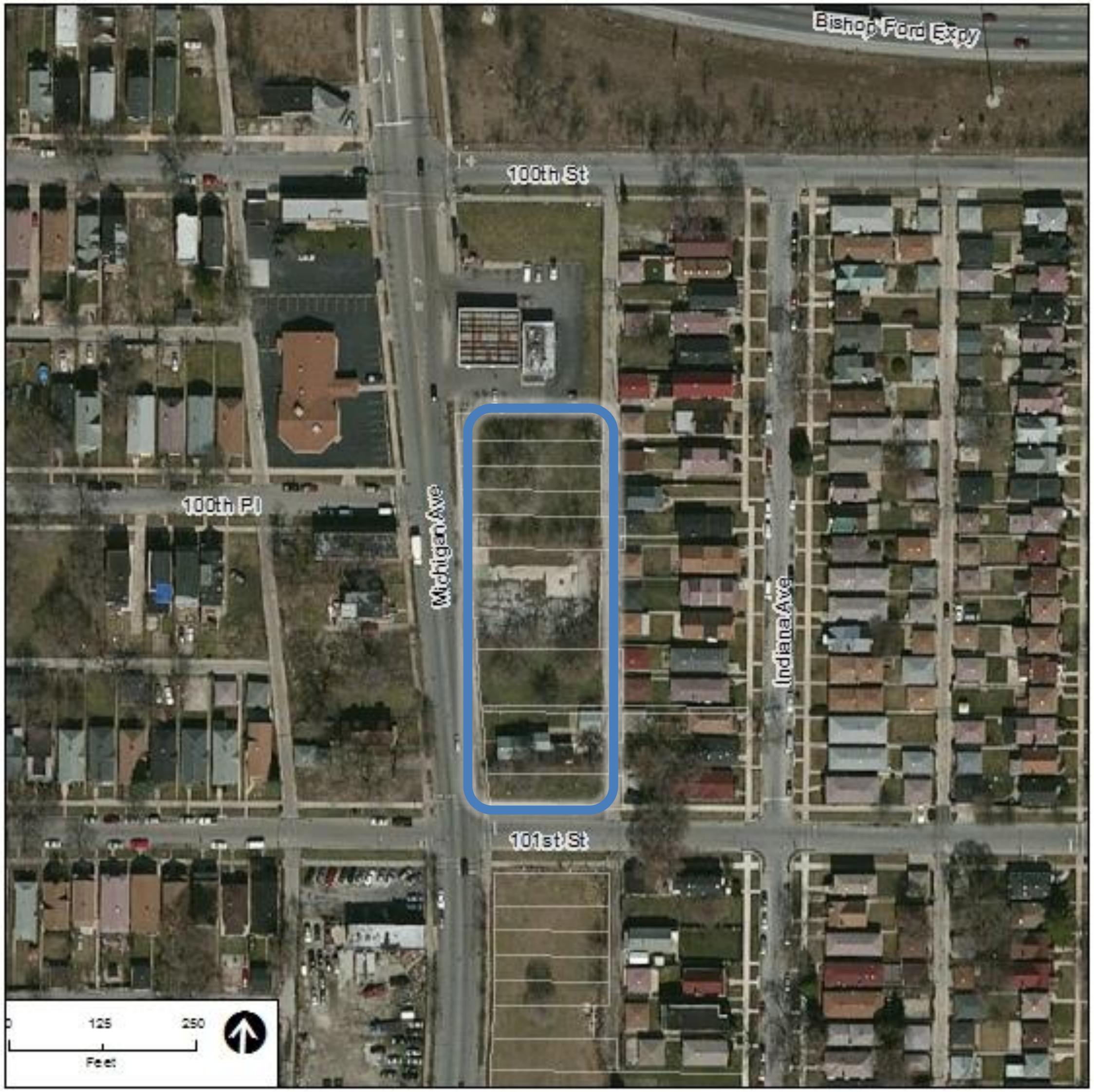
Site 2

Roseland Community

Ward 9

Consists of 3 parcels: 2A, 2B, 2C

Michigan Ave. between 100th St. and 103rd St.


Bishop Ford Expy
100th St
100th Pl
Michigan Ave
Indiana Ave
101st St
0
125
250
Feet

Site 2A

Roseland Community

Ward 9

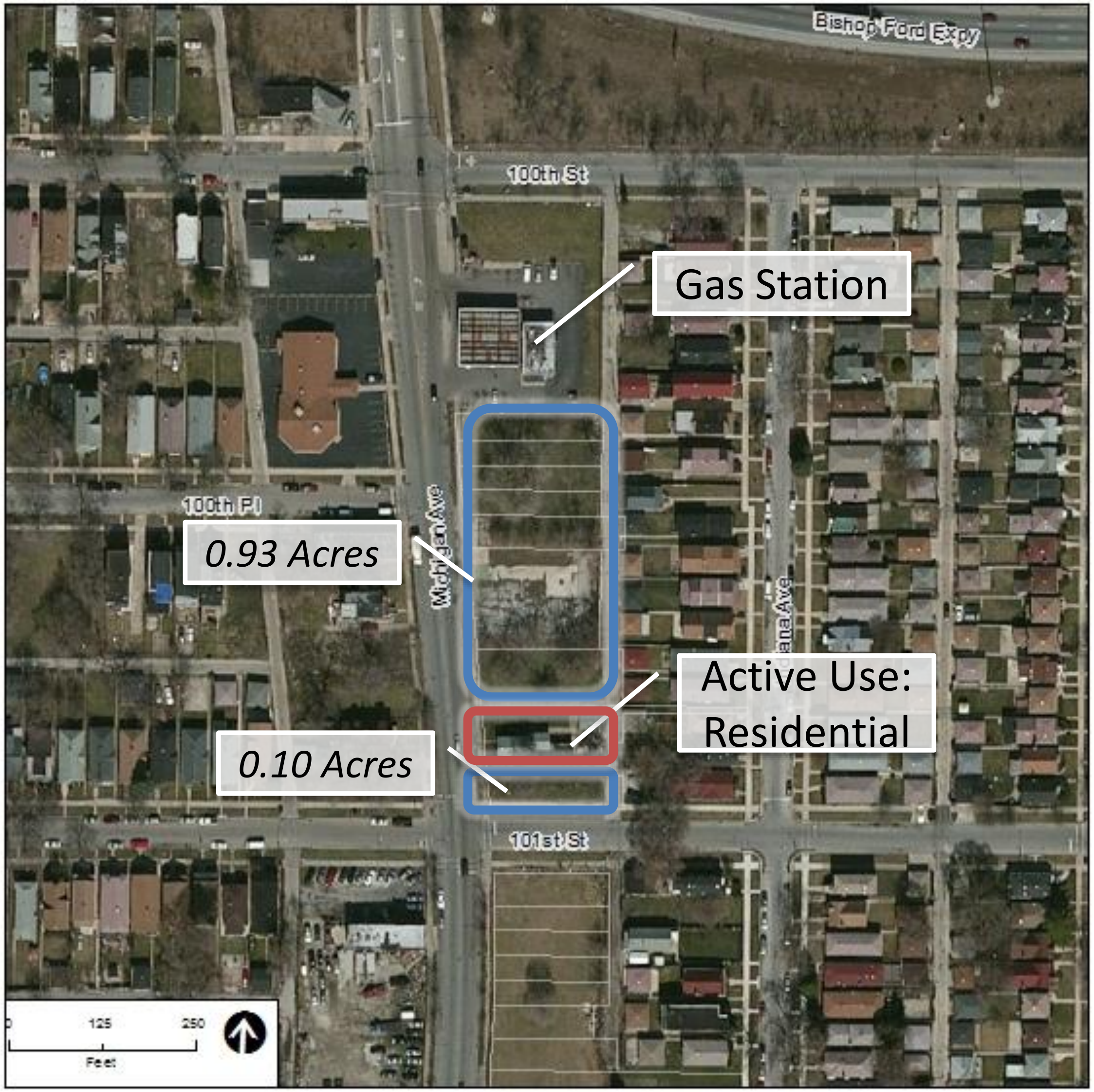
1.21 Acres

Field Notes/ Considerations

Eliminated from further screening due to:

- Acreage not sufficient for replacement for either alignment option park impacts
- Requires acquisition of active parcels to meet acreage requirement
- Adjacent to active gas station; concerns about land use compatibility given adjacent use

East and West Option


Bishop Ford Expy
100th St
Gas Station
100th Pl
0.93 Acres
Michigan Ave
Indiana Ave
Active Use: Residential
0.10 Acres
101st St
0
125
250
Feet

Site 2A

Roseland Community

Ward 9

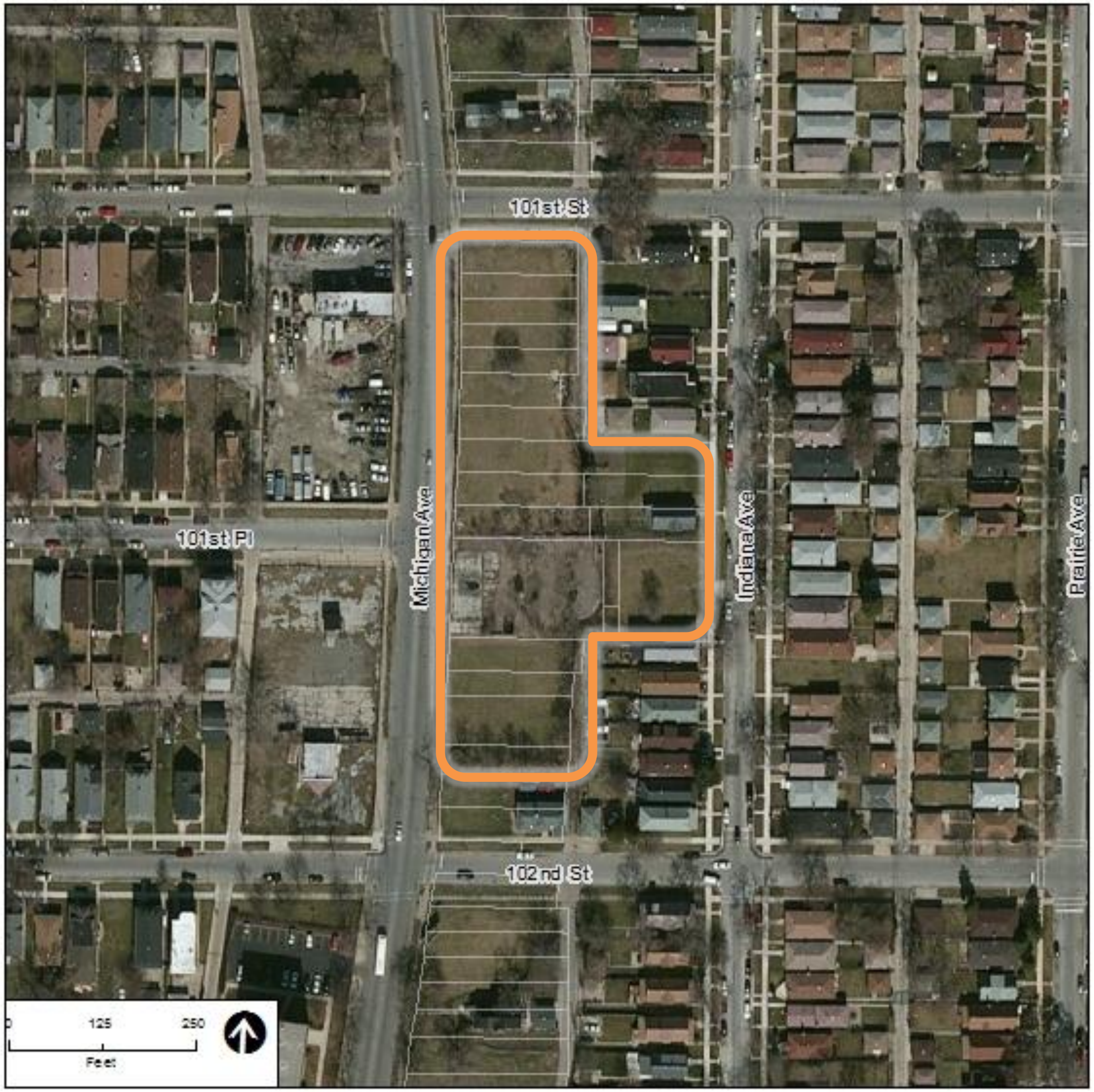
1.21 Acres

Field Notes/ Considerations

Eliminated from further screening due to:

- Acreage not sufficient for replacement for either alignment option park impacts
- Requires acquisition of active parcels to meet acreage requirement
- Adjacent to active gas station; concerns about land use compatibility given adjacent use

East and West Option


101st St
101st Pl
Michigan Ave
Indiana Ave
Prairie Ave
102nd St
0
125
250
Feet

Site 2B

Roseland Community

Ward 9

2.0 Acres

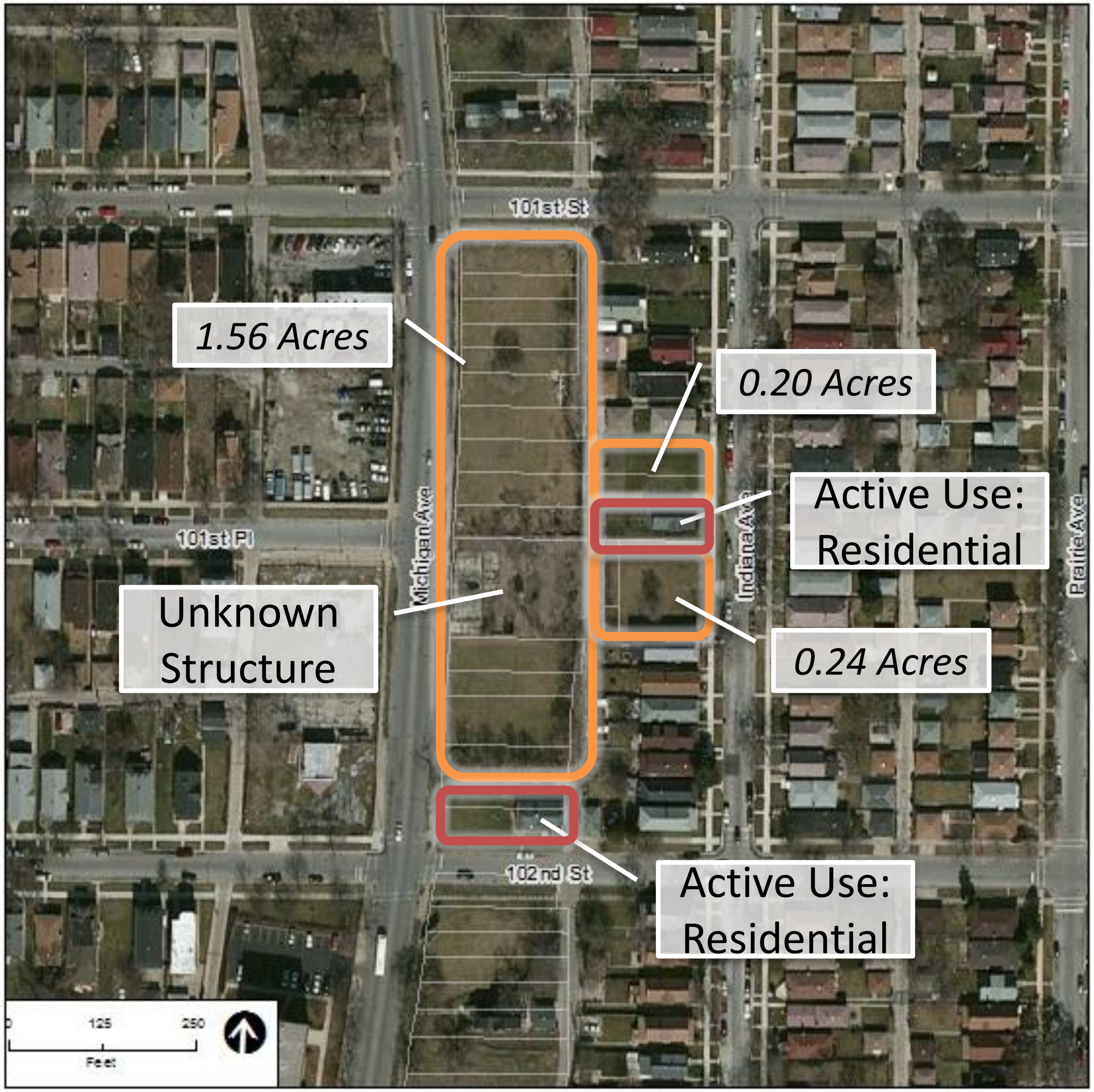
Ballfield Suitability:

- Up to 225’

Field Notes/ Considerations

- One block from school
- Located on a commercial corridor; highest and best land use may be a consideration
- Requires acquisition of active residence to accommodate ballfield
- Requires construction on either side of residence to meet acreage requirements

East and West Option


101st St
1.56 Acres
0.20 Acres
Active Use: Residential
101st Pl
Michigan Ave
Indiana Ave
Prairie Ave
Unknown Structure
0.24 Acres
102nd St
Active Use: Residential
0
125
250
Feet

Site 2B

Roseland Community

Ward 9

2.0 Acres

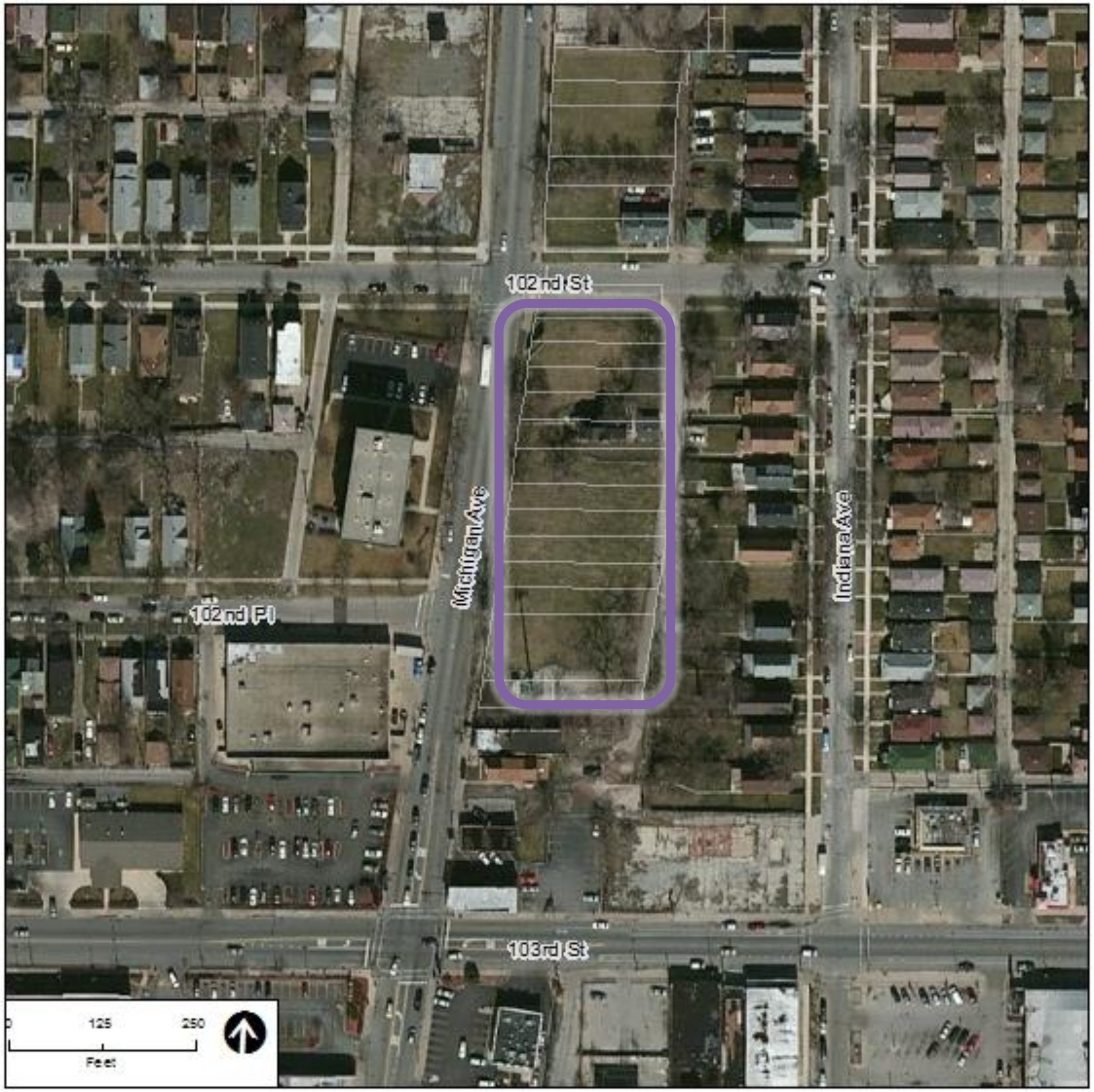
Ballfield Suitability:

- Up to 225’

Field Notes/ Considerations

- One block from school
- Located on a commercial corridor; highest and best land use may be a consideration
- Requires acquisition of 2 active residences to accommodate ballfield
- Requires construction on either side of residence to meet acreage requirements

East and West Option


102nd St
Michigan Ave
Indiana Ave
102nd Pl
103rd St
0
125
250
Feet

Site 2C

Roseland Community

Ward 9

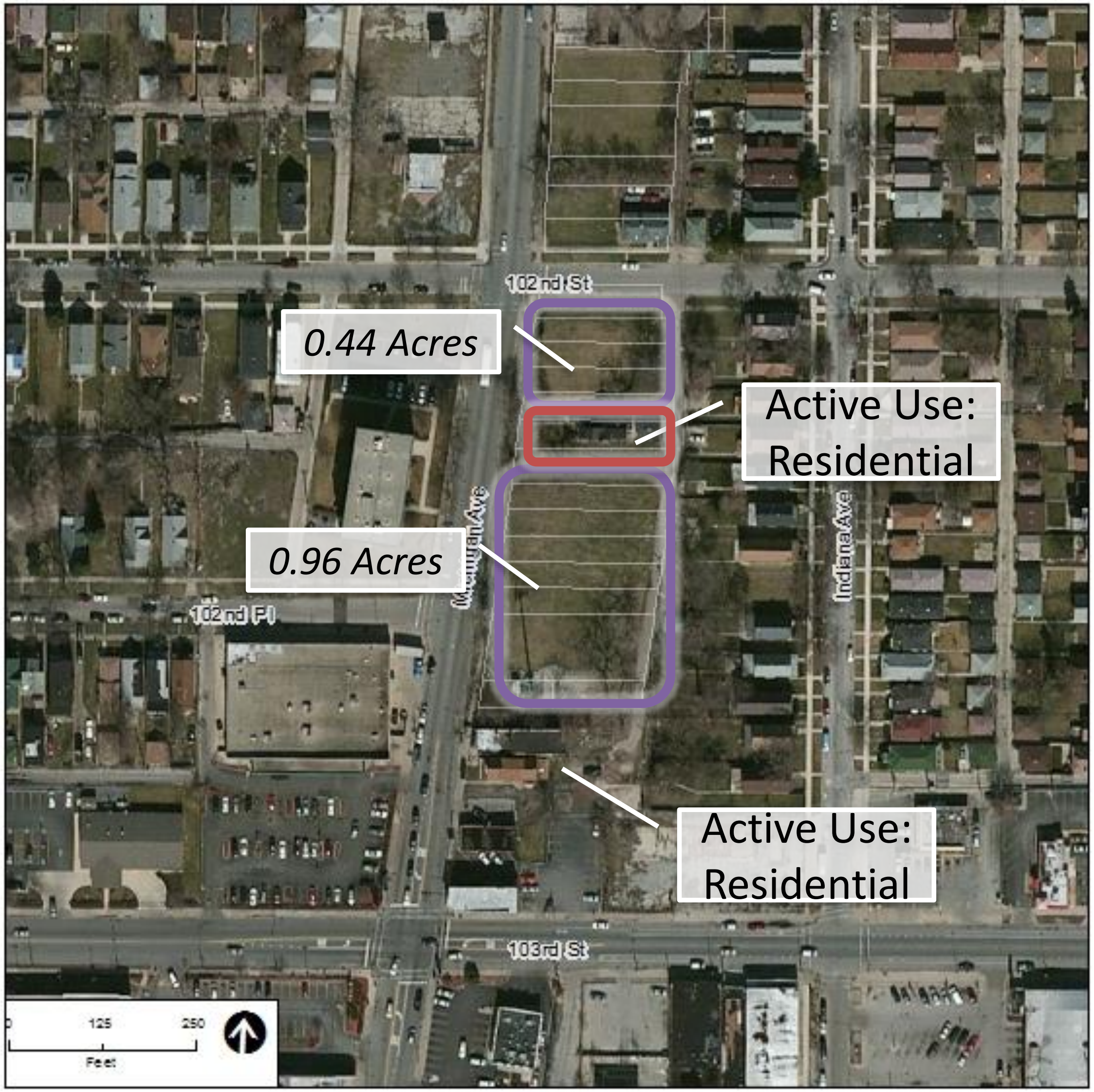
1.4 Acres

Field Notes/ Considerations

Eliminated from further screening due to:

- Does not meet replacement acreage requirement for either alignment option
- Requires acquisition of active parcels to meet acreage requirements

East and West Option


102nd St
Michigan Ave
Indiana Ave
102nd Pl
103rd St
0
125
250
Feet

0.44 Acres

Active Use: Residential

0.96 Acres

Active Use: Residential

Site 2C

Roseland Community

Ward 9

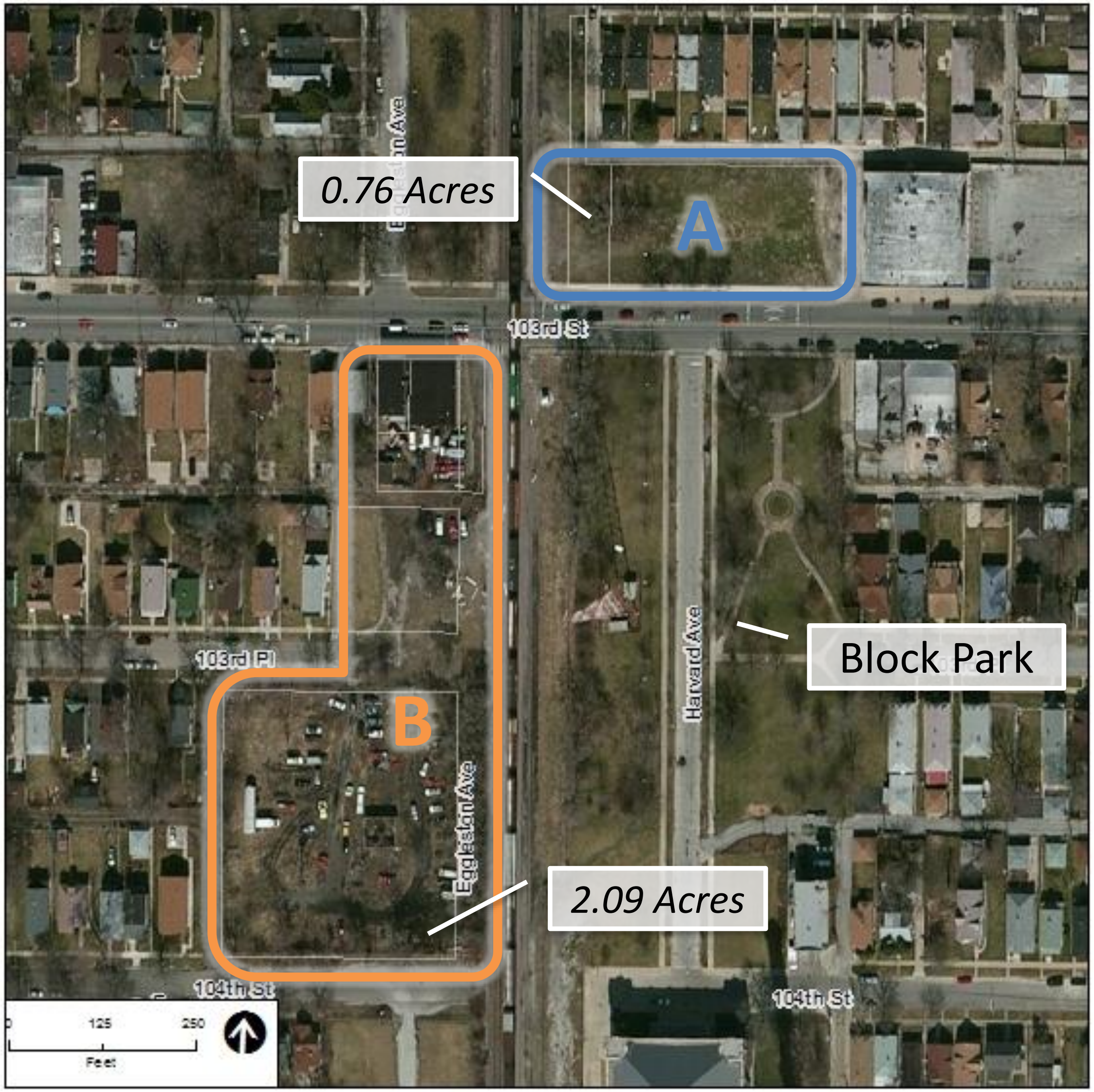
1.4 Acres

Field Notes/ Considerations

Eliminated from further screening due to:

- Does not meet replacement acreage requirement for either alignment option
- Requires acquisition of active parcels to meet acreage requirements

East and West Option

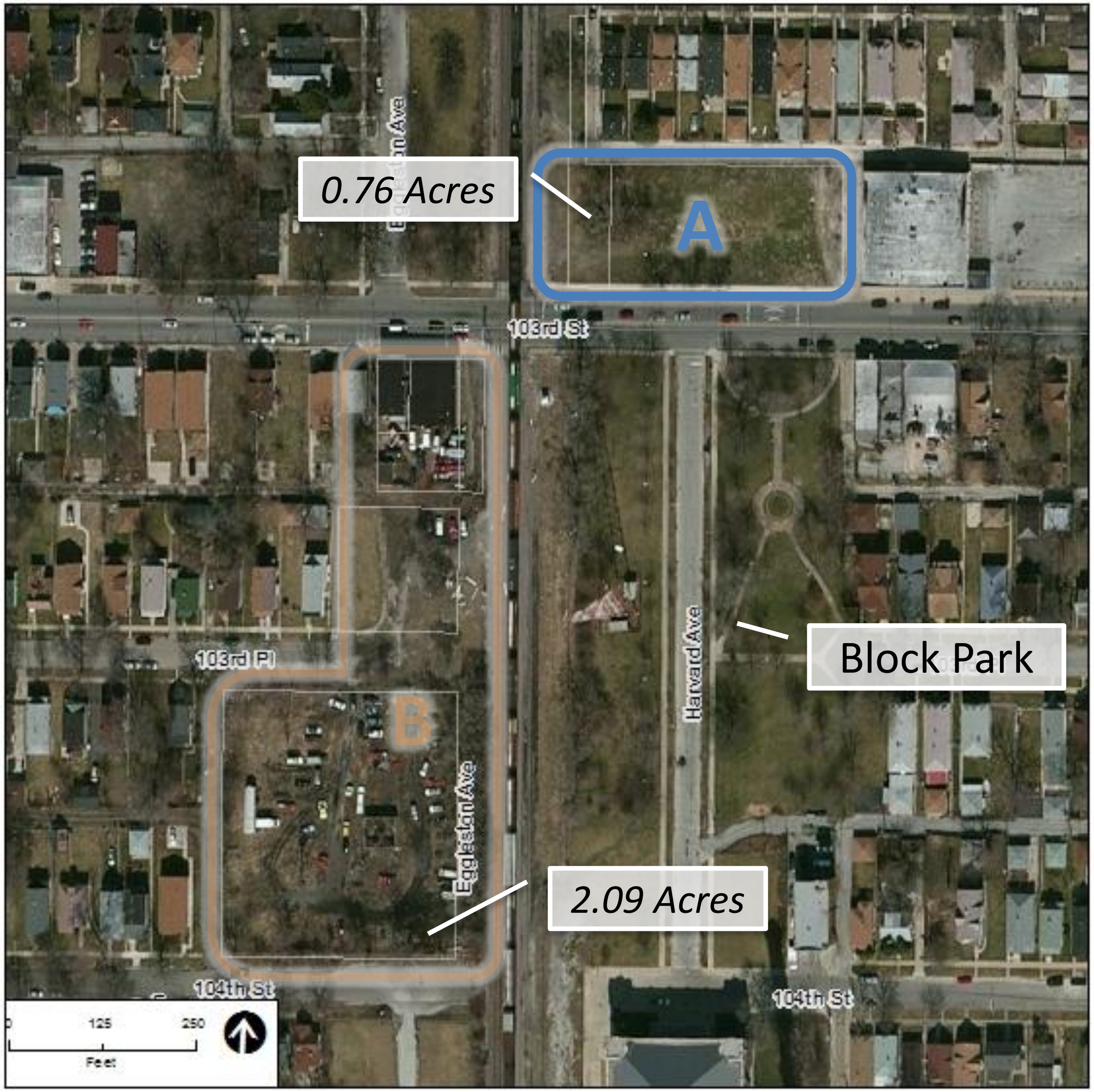

0.76 Acres
A
Eggleston Ave
103rd St
103rd Pl
B
Eggleston Ave
Harvard Ave
Block Park
2.09 Acres
104th St
104th St
0
125
250
Feet

Site 3

Roseland Community

Wards 9 & 34

Consists of 2 Parcels: 3A, 3B


Eggleston Ave
0.76 Acres
A
103rd St
Block Park
Harvard Ave
103rd Pl
B
Eggleston Ave
2.09 Acres
104th St
104th St
0
125
250
Feet

Site 3A

Roseland Community

Ward 9

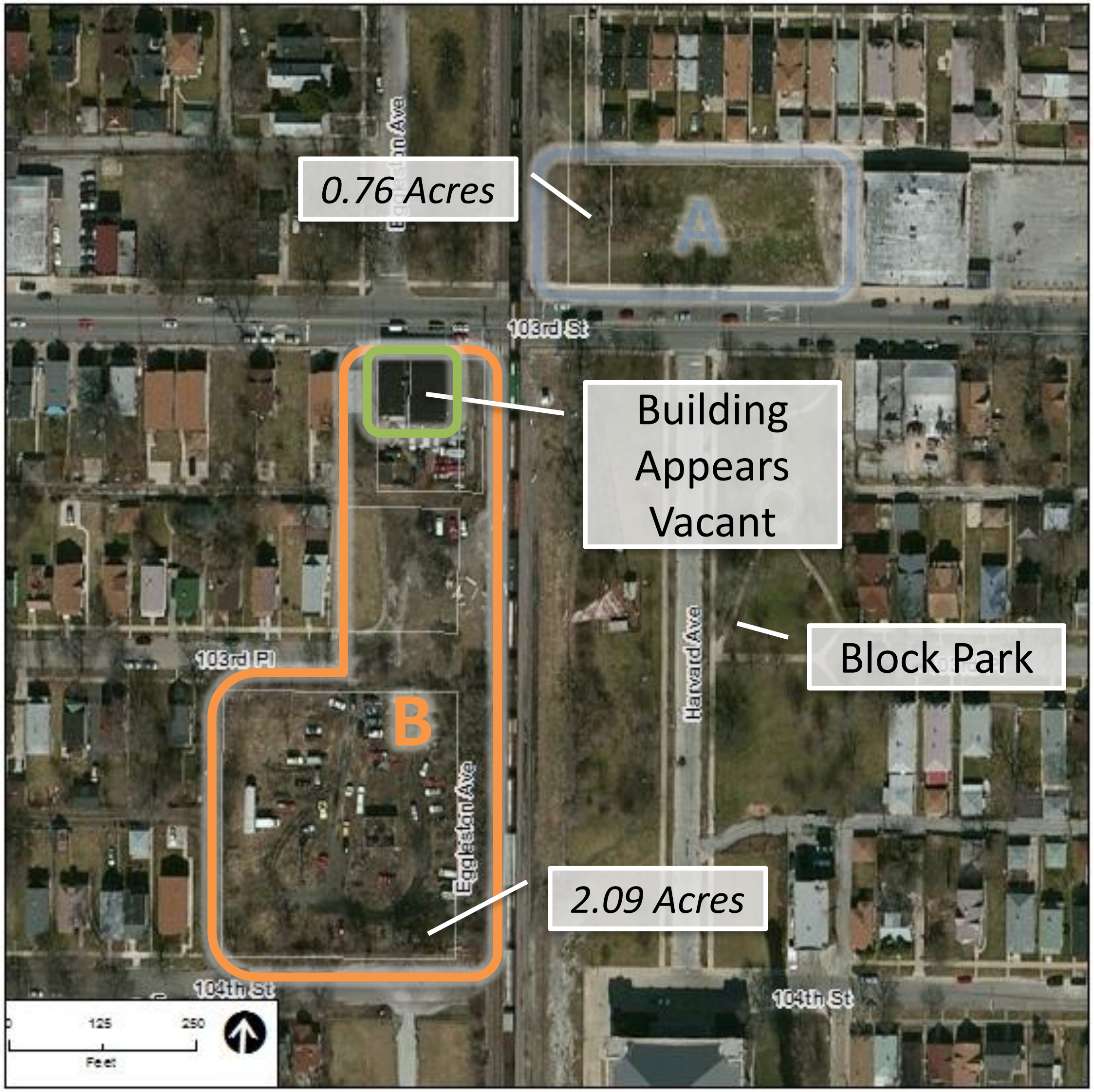
0.76 Acres

Field Notes/ Considerations

Eliminated from further screening due to:

- Acreage not sufficient on its own for either alignment option and was reviewed for combination with Site 3B
- Under consideration for Park and Ride location along with a portion of Site 3B; will need to reconsider needs if used as park
- Would still divide Block Park, but might be able to create a ped bridge or crossing to make area more cohesive
- Located near station and on a commercial corridor (103rd St.); park may not be best use.

East and West Option


0.76 Acres
A
Eggleston Ave
103rd St
Building Appears Vacant
Block Park
Harvard Ave
103rd Pl
B
Eggleston Ave
2.09 Acres
104th St
104th St
125
250
Feet

Site 3B

Roseland Community

Ward 34

2.09 Acres

Field Notes/ Considerations

- Under consideration for Park and Ride location at proposed 103rd Street station; would require consideration of Site 3A for bus and parking operations at proposed station instead
- Located near station and on a predominately commercial corridor; consideration for highest and best use
- Meets replacement acreage requirements

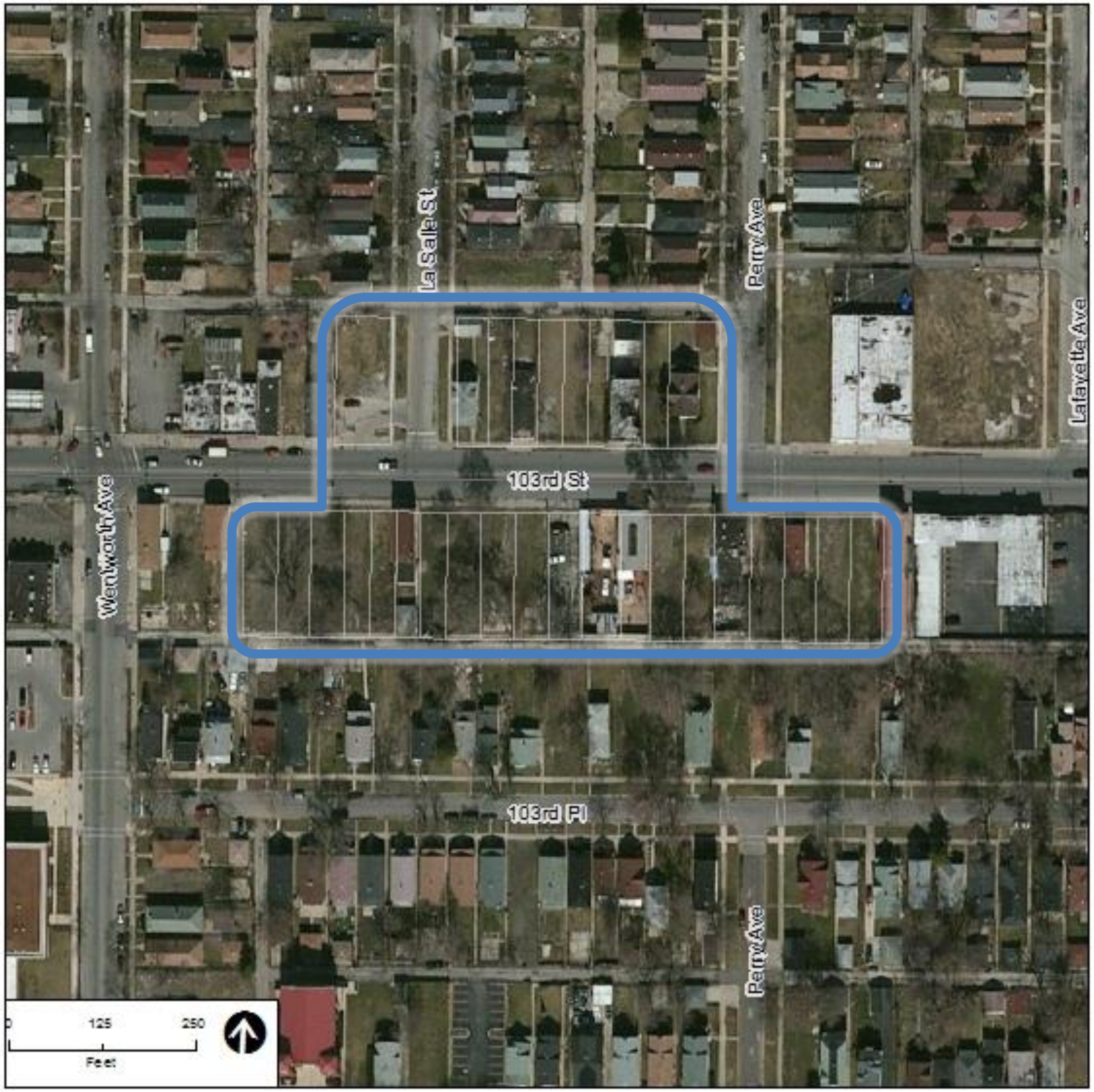
East Option, West Option TBD

Site 4

Roseland Community

Ward 34

1.21 Acres

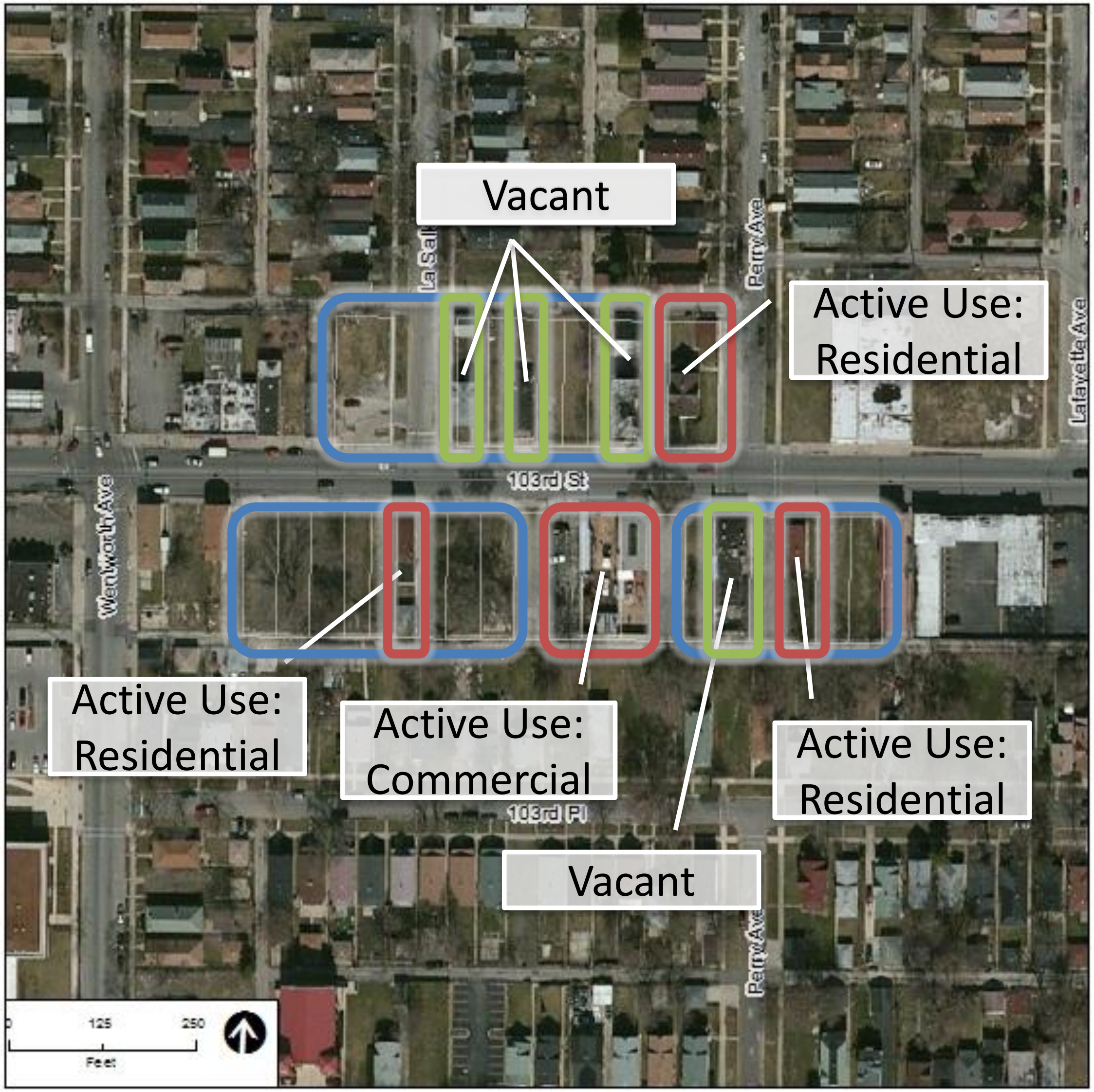

La Salle St
Perry Ave
Lafayette Ave
Wentworth Ave
103rd St
103rd Pl
Perry Ave
0
125
250
Feet

Field Notes/ Considerations

Eliminated from further screening due to:

- Acreage not sufficient to serve as replacement for either alignment option
- Vacancy is not contiguous; requires acquisition of multiple active parcels to meet acreage requirement
- Located on a commercial corridor; park may not be highest/best use

East and West Option


Vacant
Active Use: Residential
La Salle
Perry Ave
Lafayette Ave
103rd St
Wentworth Ave
Active Use: Residential
Active Use: Commercial
Active Use: Residential
103rd Pl
Vacant
Perry Ave
0
125
250
Feet

Site 4

Roseland Community

Ward 34

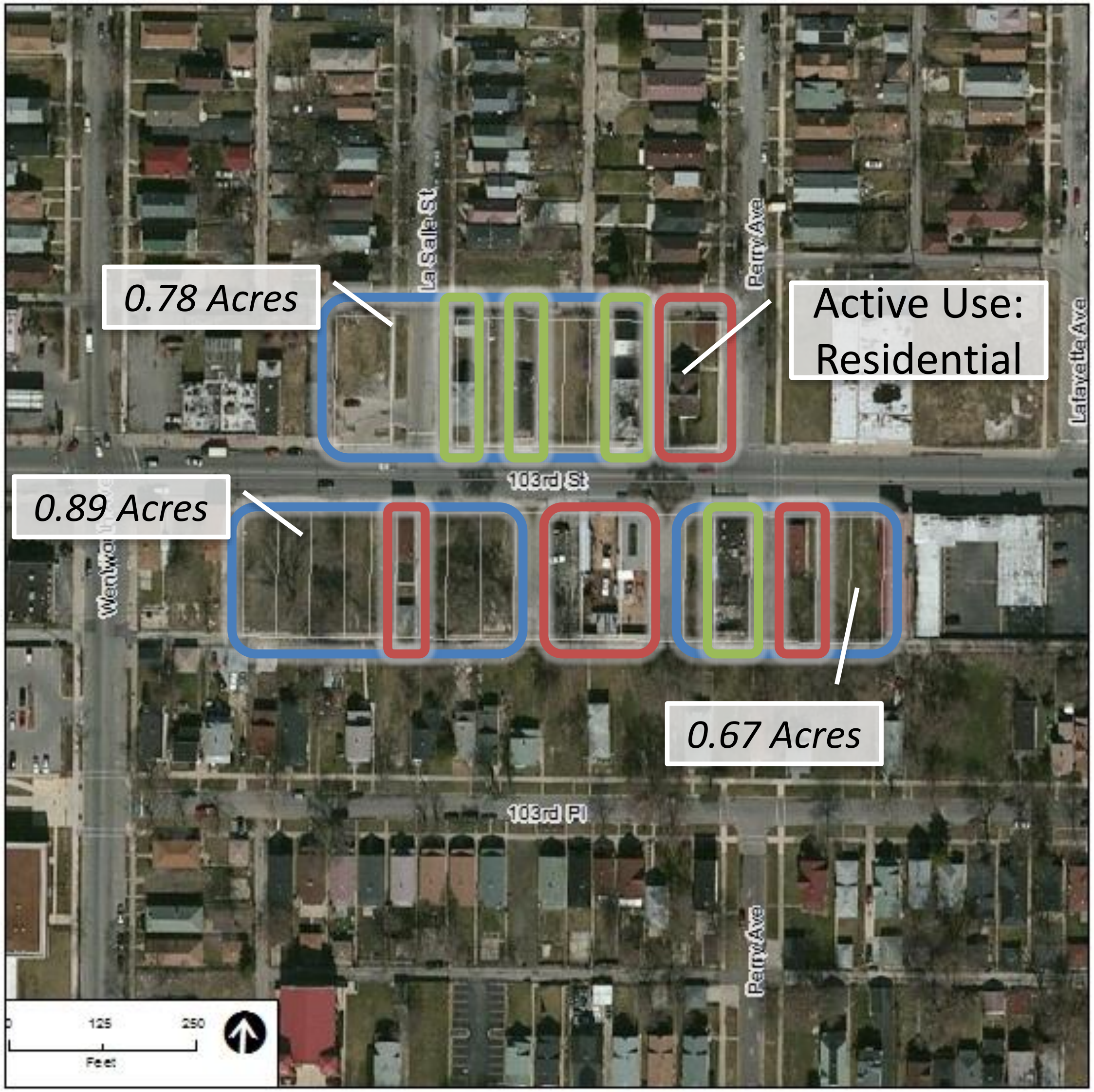
1.21 Acres

Field Notes/ Considerations

Eliminated from further screening due to:

- Acreage not sufficient to serve as replacement for either alignment option
- Vacancy is not contiguous; requires acquisition of multiple active parcels to meet acreage requirement
- Located on a commercial corridor; park may not be highest/best use

East and West Option


0.78 Acres
Active Use: Residential
0.89 Acres
0.67 Acres
La Salle St
Perry Ave
Lafayette Ave
103rd St
Wentworth Ave
103rd Pl
Perry Ave
0
125
250
Feet

Site 4

Roseland Community

Ward 34

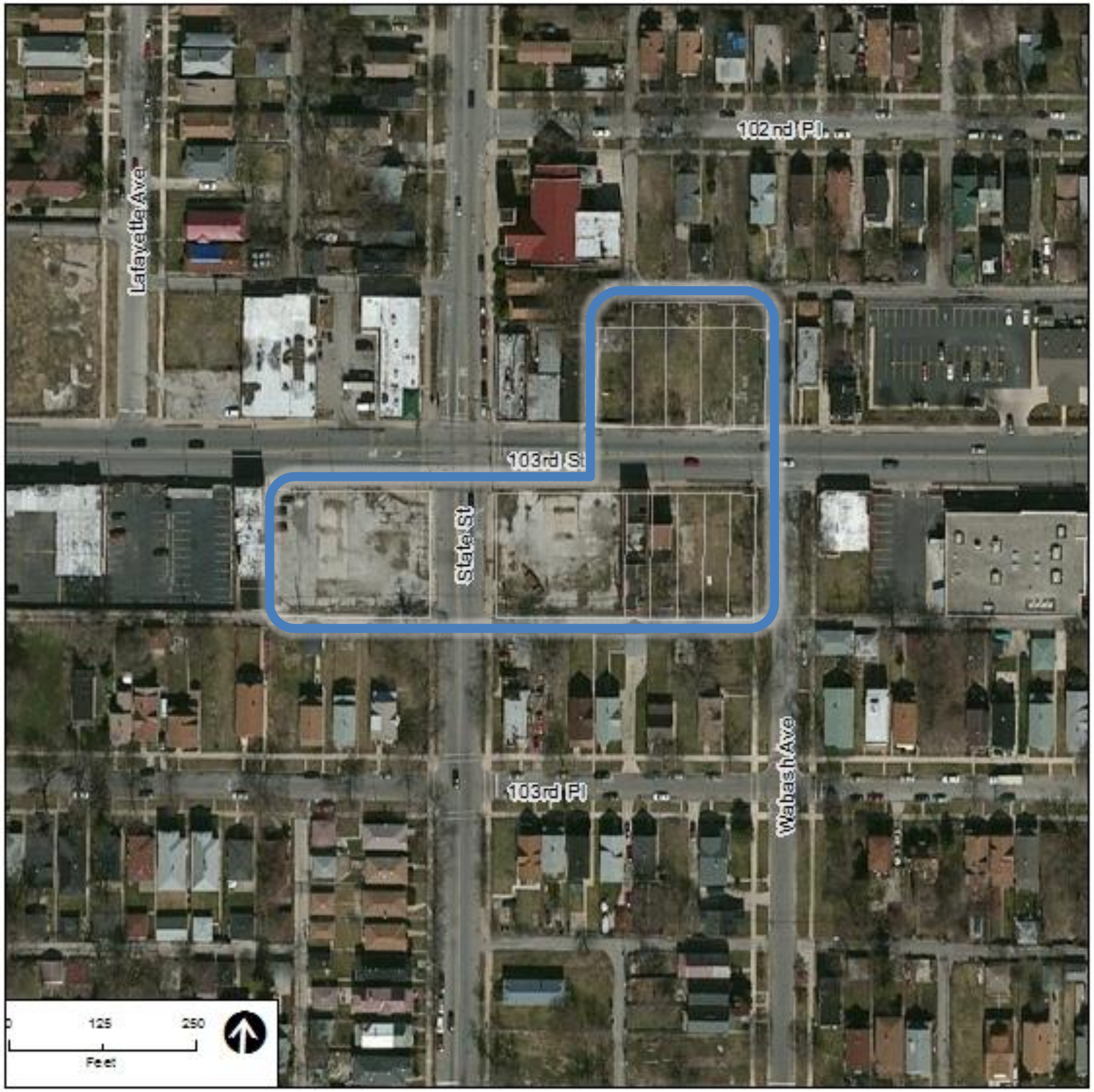
1.21 Acres

Field Notes/ Considerations

Eliminated from further screening due to:

- Acreage not sufficient to serve as replacement for either alignment option
- Vacancy is not contiguous; requires acquisition of multiple active parcels to meet acreage requirement
- Located on a commercial corridor; park may not be highest/best use

East and West Option


102nd Pl.
Lafayette Ave
103rd St
State St
Wabash Ave
103rd Pl
0
125
250
Feet

Site 5

Roseland Community

Ward 34

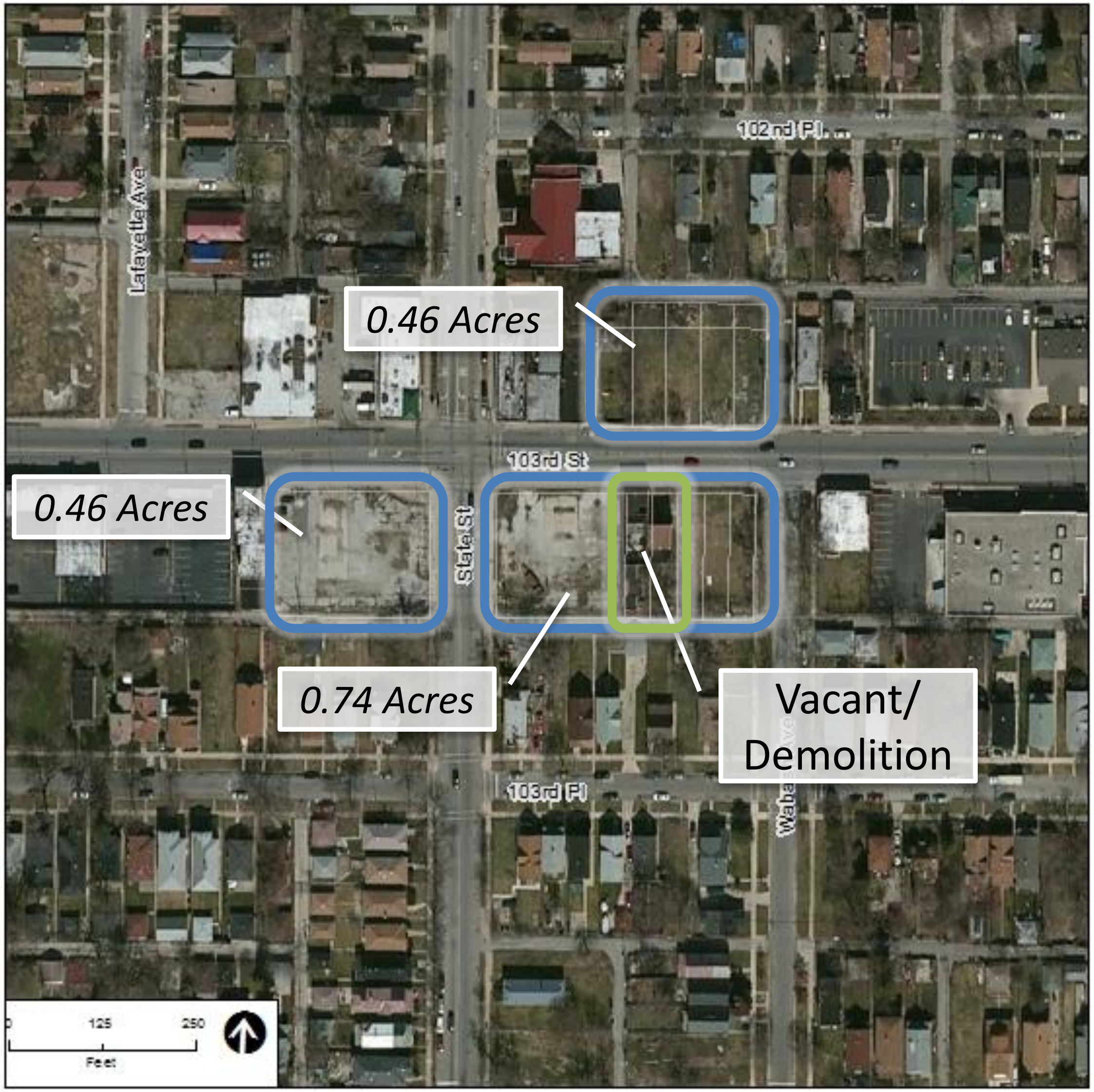
2.78 Acres

Field Notes/ Considerations

Eliminated from further screening due to:

- Identified additional vacant/demolished property adjacent to initially identified parcels
- Requires crossing of major streets (State and 103rd) to meet acreage requirement for either alignment
- Located on a commercial corridor (103rd St.); park may not be highest/best use

East and West Option


102nd Pl.
103rd St
103rd Pl
State St
Lafayette Ave
Waba
0
125
250
Feet

0.46 Acres

0.46 Acres

0.74 Acres

Vacant/ Demolition

Site 5

Roseland Community

Ward 34

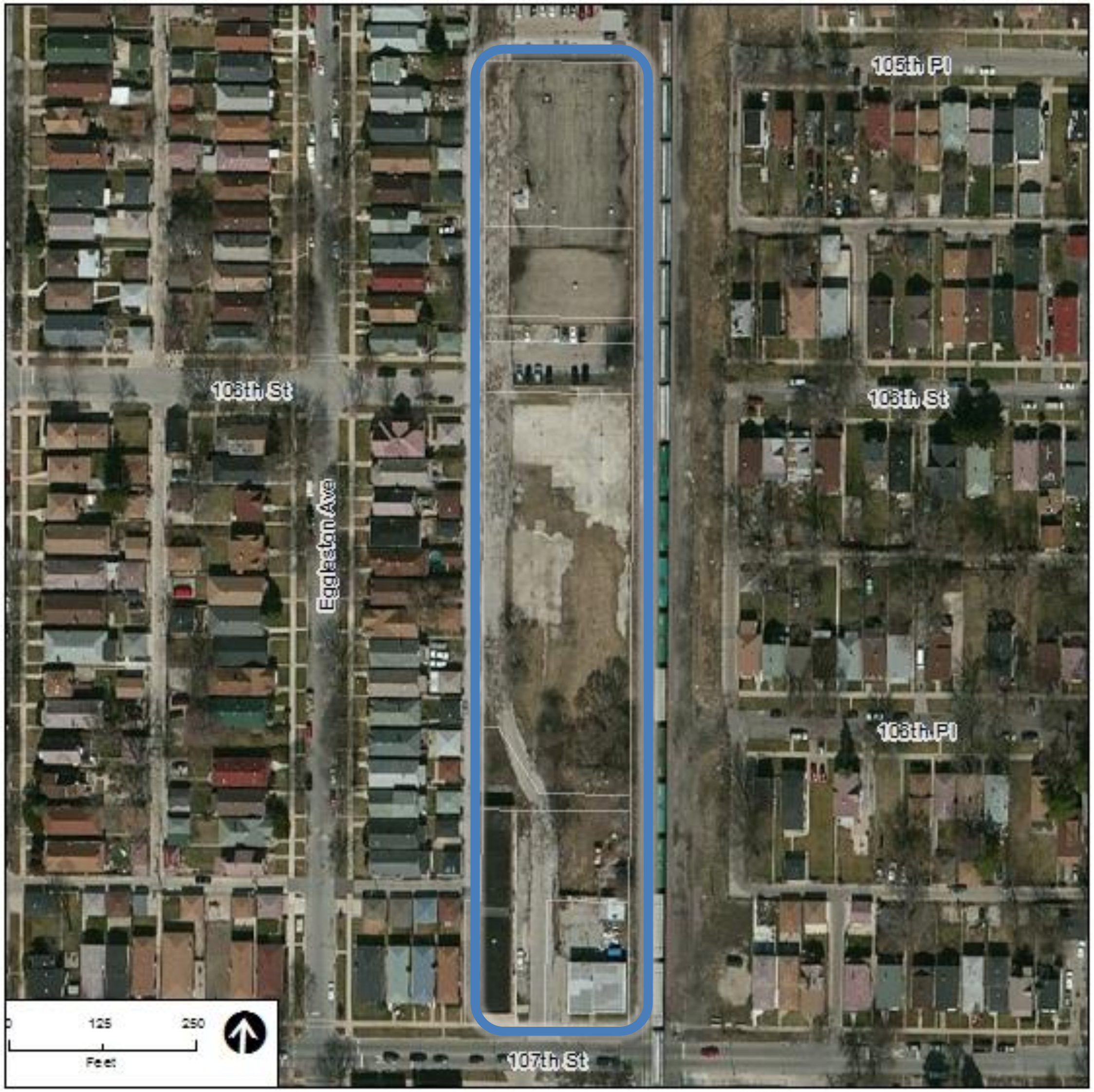
2.78 Acres

Field Notes/ Considerations

Eliminated from further screening due to:

- Identified additional vacant/demolished property adjacent to initially identified parcels
- Requires crossing of major streets (State and 103rd) to meet acreage requirement for either alignment
- Located on a commercial corridor (103rd St.); park may not be highest/best use

East and West Option


105th Pl
106th St
106th St
Eggleston Ave
106th Pl
107th St
0
125
250
Feet

Site 6

Roseland Community

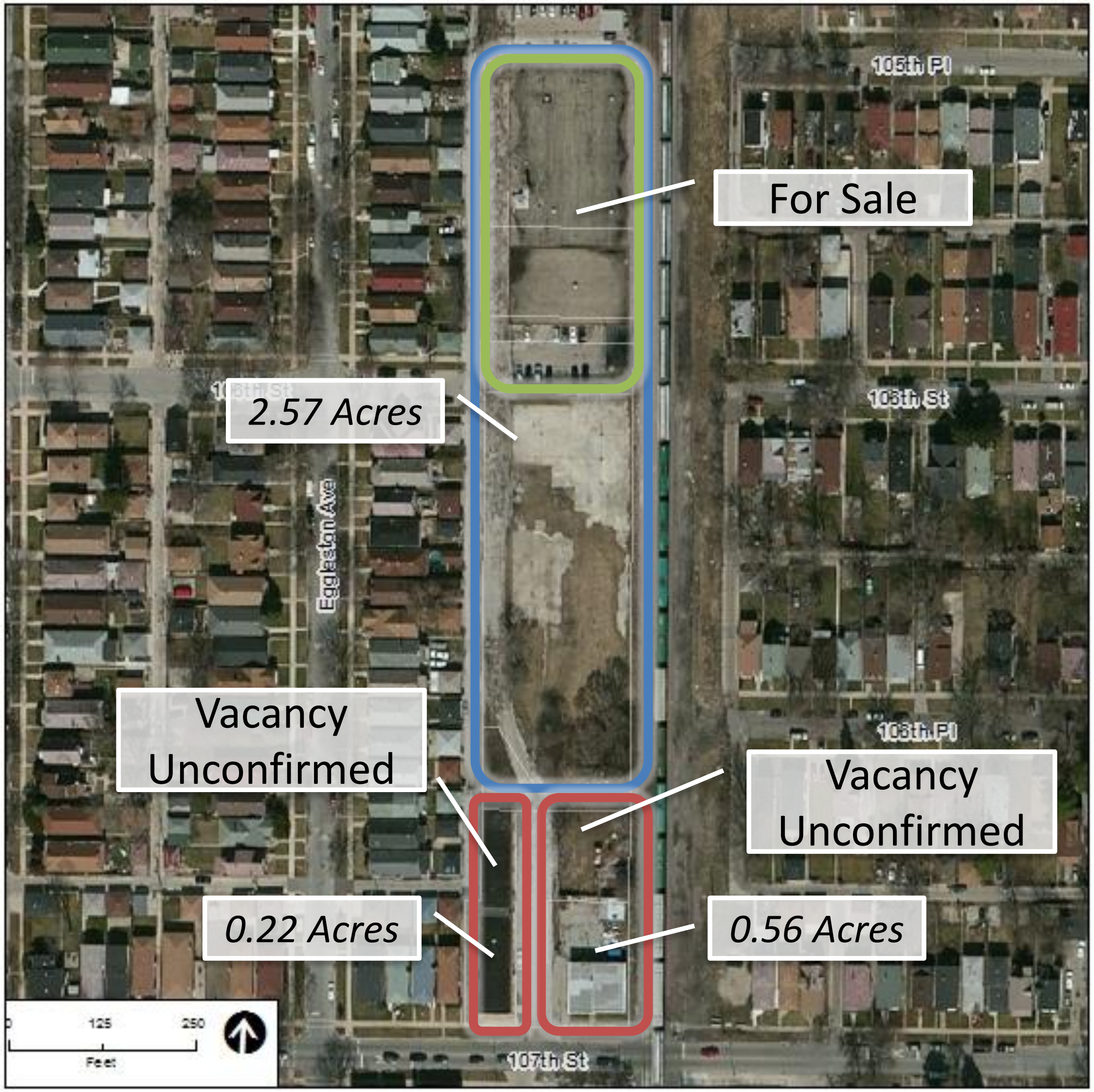
Ward 34

3.35 Acres

Field Notes/ Considerations

- Directly abuts alleyway/house garages
- Acreage will be compromised (linear) if West Option is chosen; additional acreage estimation needed to determine
- May require acquisition of active property to connect to 107th St.
- Acreage will be reduced with western alignment option
- Potential for ped/bike connection with Site 3 to the north and Site 7 to the south

East Option Only


105th Pl
For Sale
106th St
2.57 Acres
106th St
Eggleston Ave
Vacancy Unconfirmed
106th Pl
Vacancy Unconfirmed
0.22 Acres
0.56 Acres
0
125
250
Feet
107th St

Site 6

Roseland Community

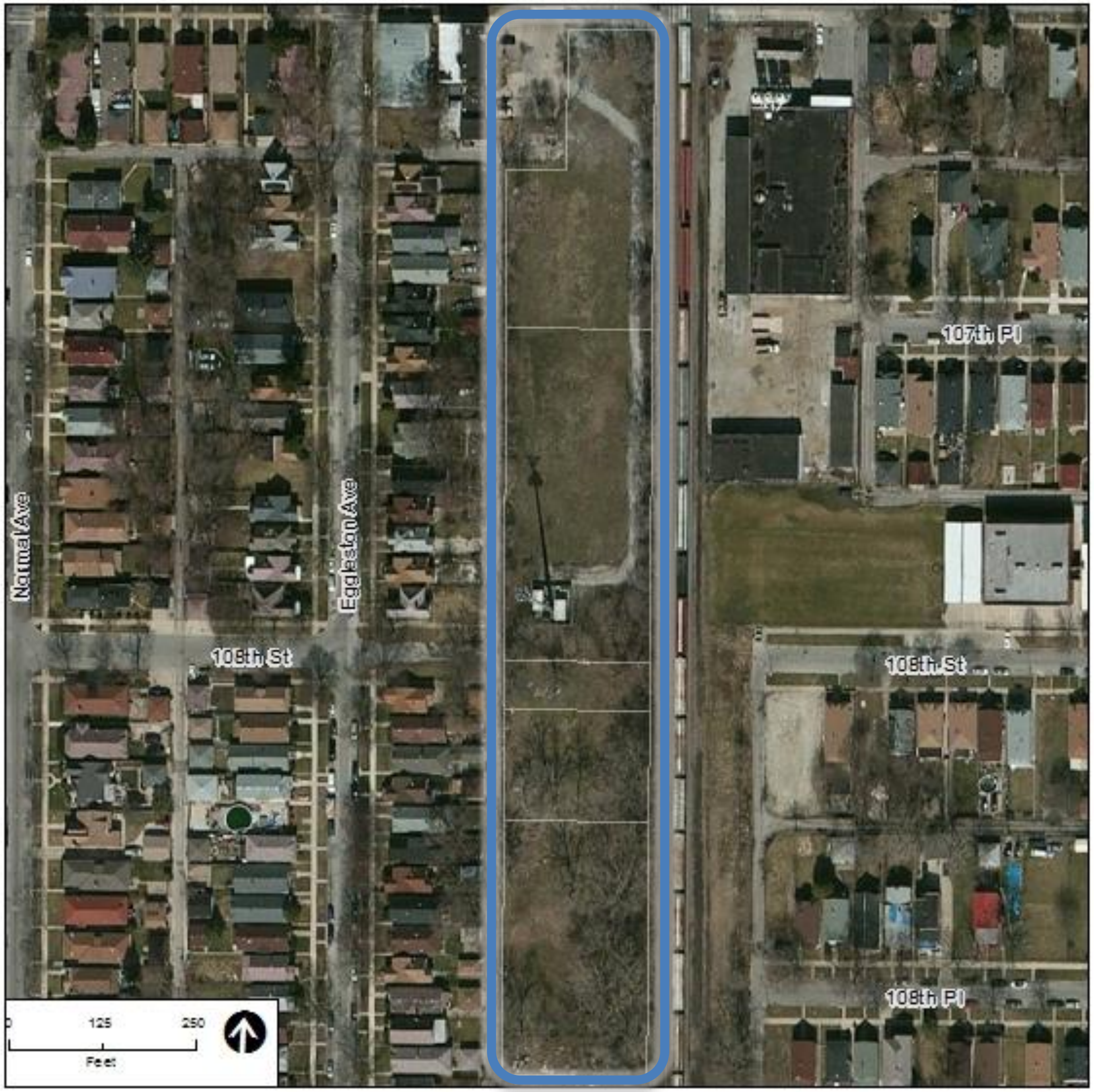
Ward 34

3.35 Acres

Field Notes/ Considerations

- Directly abuts alleyway/house garages
- May require acquisition of active property to connect to 107th St.
- Acreage will be reduced with western alignment option
- Potential for ped/bike connection with Site 3B to the north and Site 7 to the south

East Option Only


Normal Ave
Eggleston Ave
108th St
107th Pl
108th St
108th Pl
0
125
250
Feet

Site 7

Roseland Community

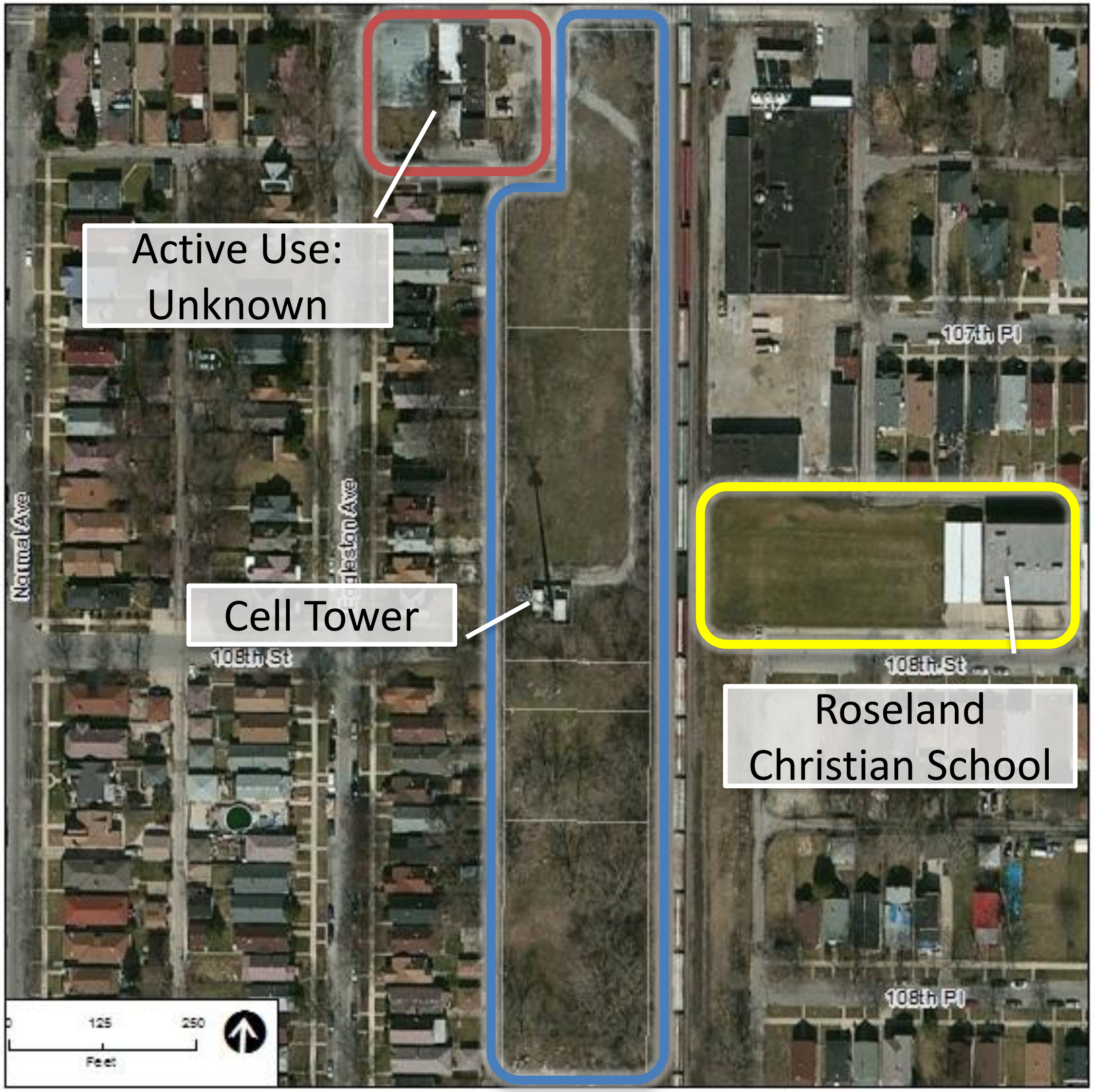
Ward 34

3.32 Acres

Field Notes/ Considerations

- Directly abuts alleyway/house garages
- Adjacent to school
- Light industrial use located directly south of site
- Acreage will be reduced with western alignment option
- Potential for ped/bike connection with Site 6 to the north
- Requires removal of cell tower

East Option Only


Active Use: Unknown
Cell Tower
Roseland Christian School
Normal Ave
Eggleston Ave
107th Pl
108th St
108th St
108th Pl
0
125
250
Feet

Site 7

Roseland Community

Ward 34

3.32 Acres

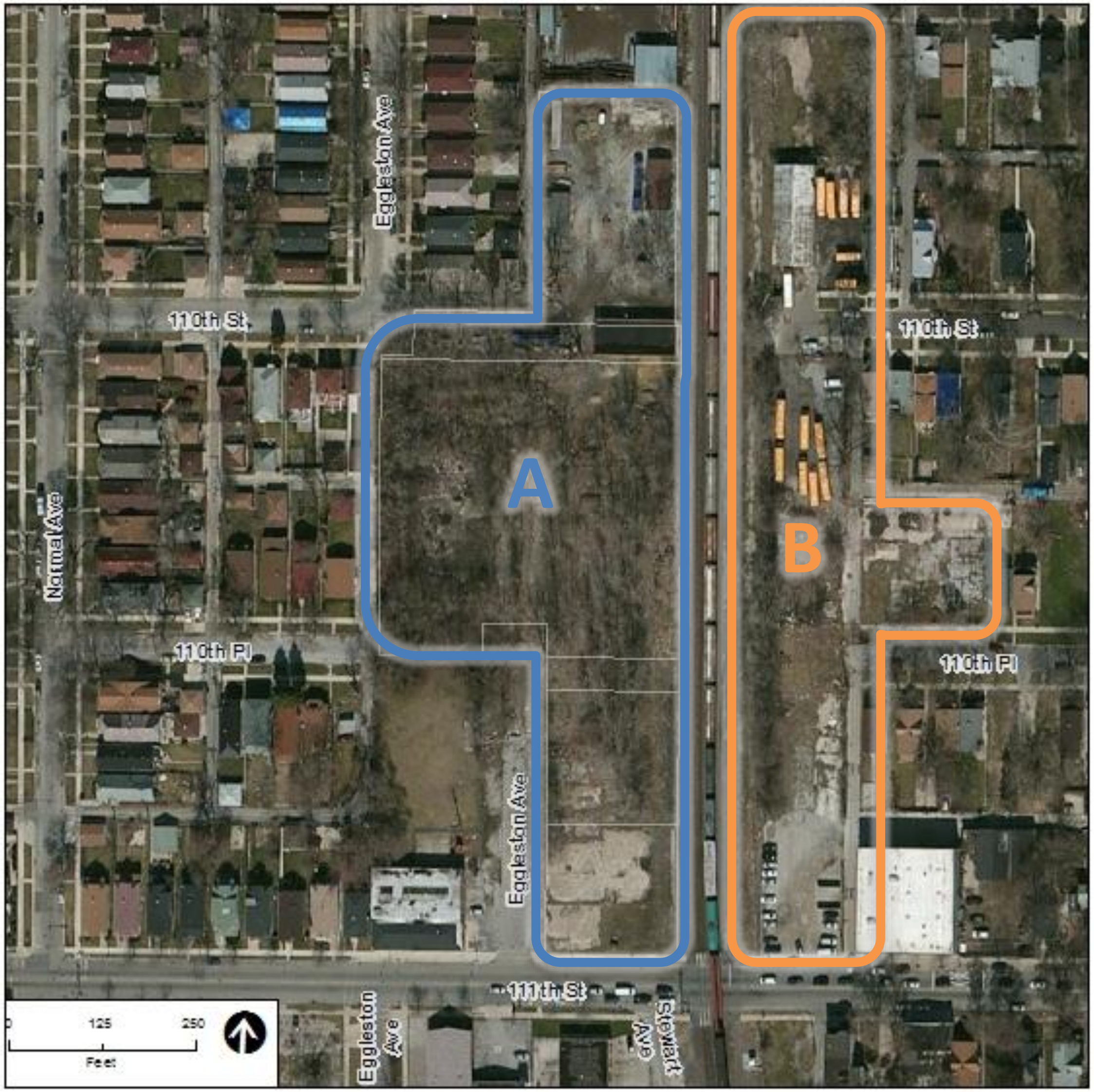
Field Notes/ Considerations

- Directly abuts alleyway/house garages
- Adjacent to school
- Light industrial use located directly south of site
- Acreage will be reduced with western alignment option
- Potential for ped/bike connection with Site 6 to the north
- Requires removal of cell tower

East Option Only

RED AHEAD

Red Line Extension

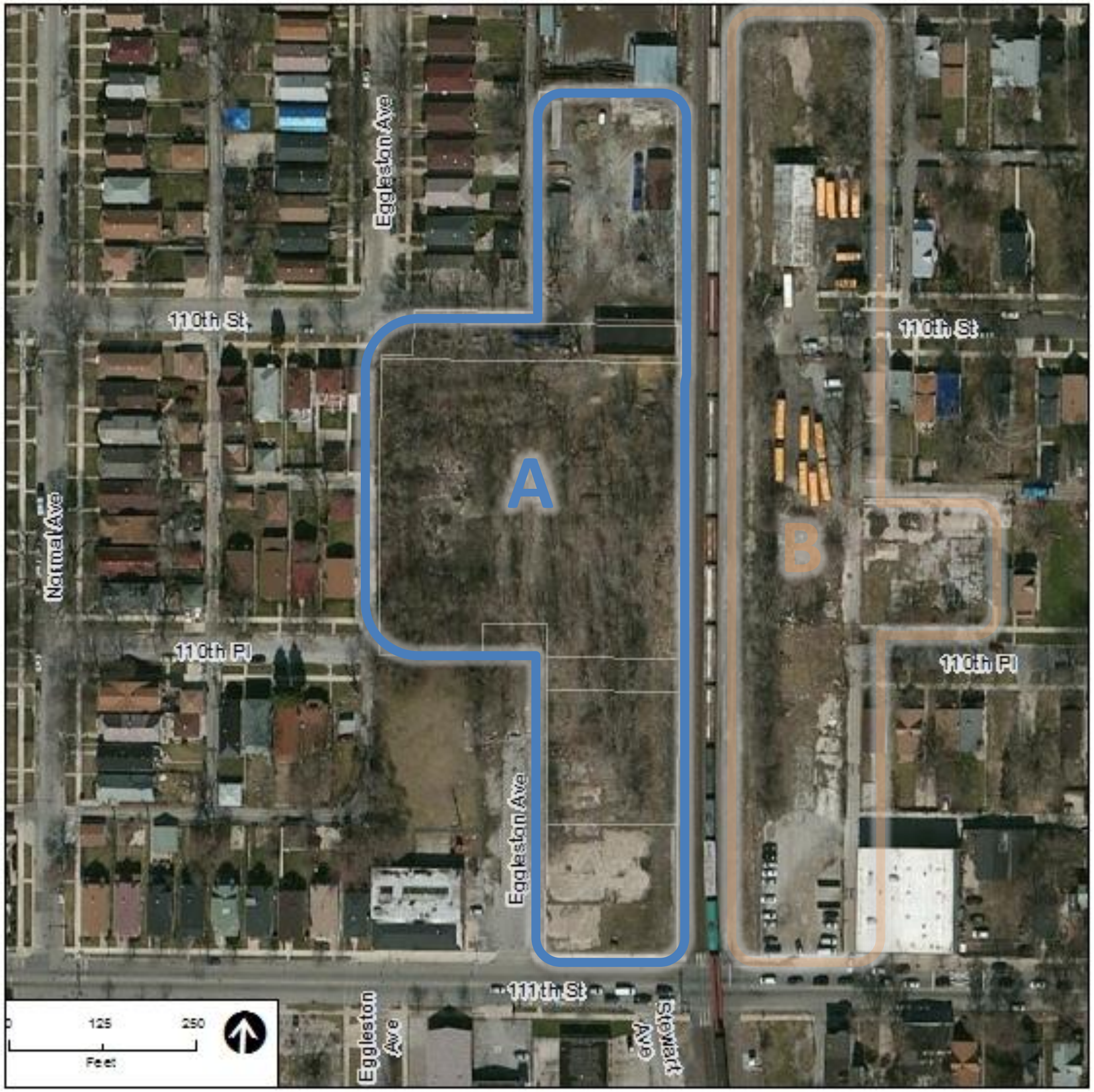

Eggleston Ave
110th St
110th St
Normal Ave
A
B
110th Pl
110th Pl
Eggleston Ave
111th St
Eggleston Ave
Stewart Ave
0
125
250
Feet

Site 8

Roseland Community

Ward 34

Consists of 2 parcels: 8A and 8B


Eggleston Ave
110th St
110th St
Normal Ave
A
B
110th Pl
110th Pl
Eggleston Ave
111th St
Eggleston Ave
Stewart Ave
0
125
250
Feet

Site 8A

Roseland Community

Ward 34

3.88 Acres

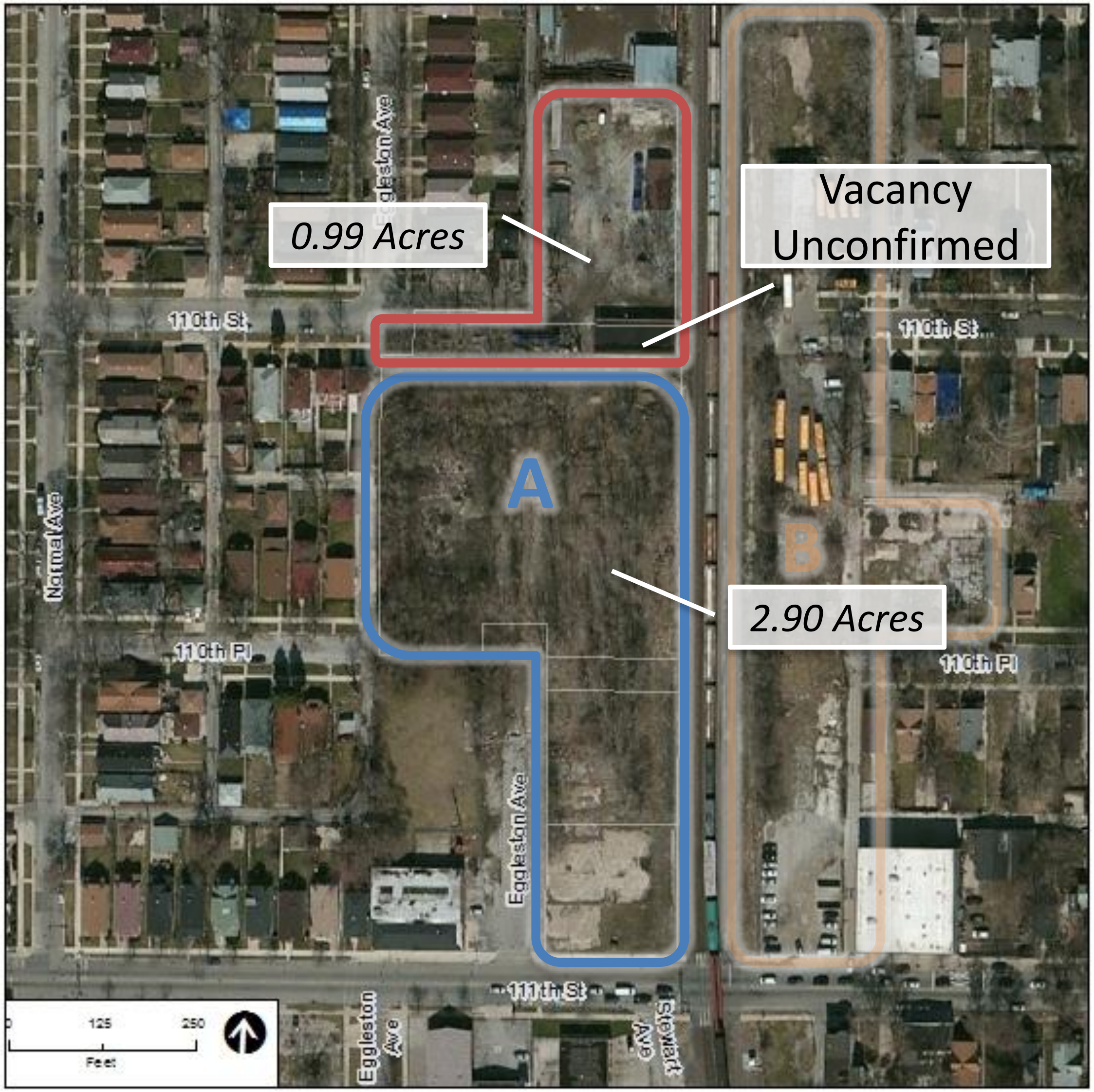
Ballfield Suitability:

- Up to 250’

Field Notes/ Considerations

- Acreage will be reduced with western alignment
- Under consideration for park and ride location
- Located next to station and on commercial corridor; park may not be best use
- Noted signage “Home of future Logos Baptist Church on 111th Street; ownership TBD
- Potential for use as part of UPRR West Option TBD

East Option, West Option TBD


0.99 Acres
Vacancy Unconfirmed
2.90 Acres
A
B
Eggleston Ave
Normal Ave
110th St
110th Pl
111th St
Stewart Ave
0
125
250
Feet

Site 8A

Roseland Community

Ward 34

3.88 Acres

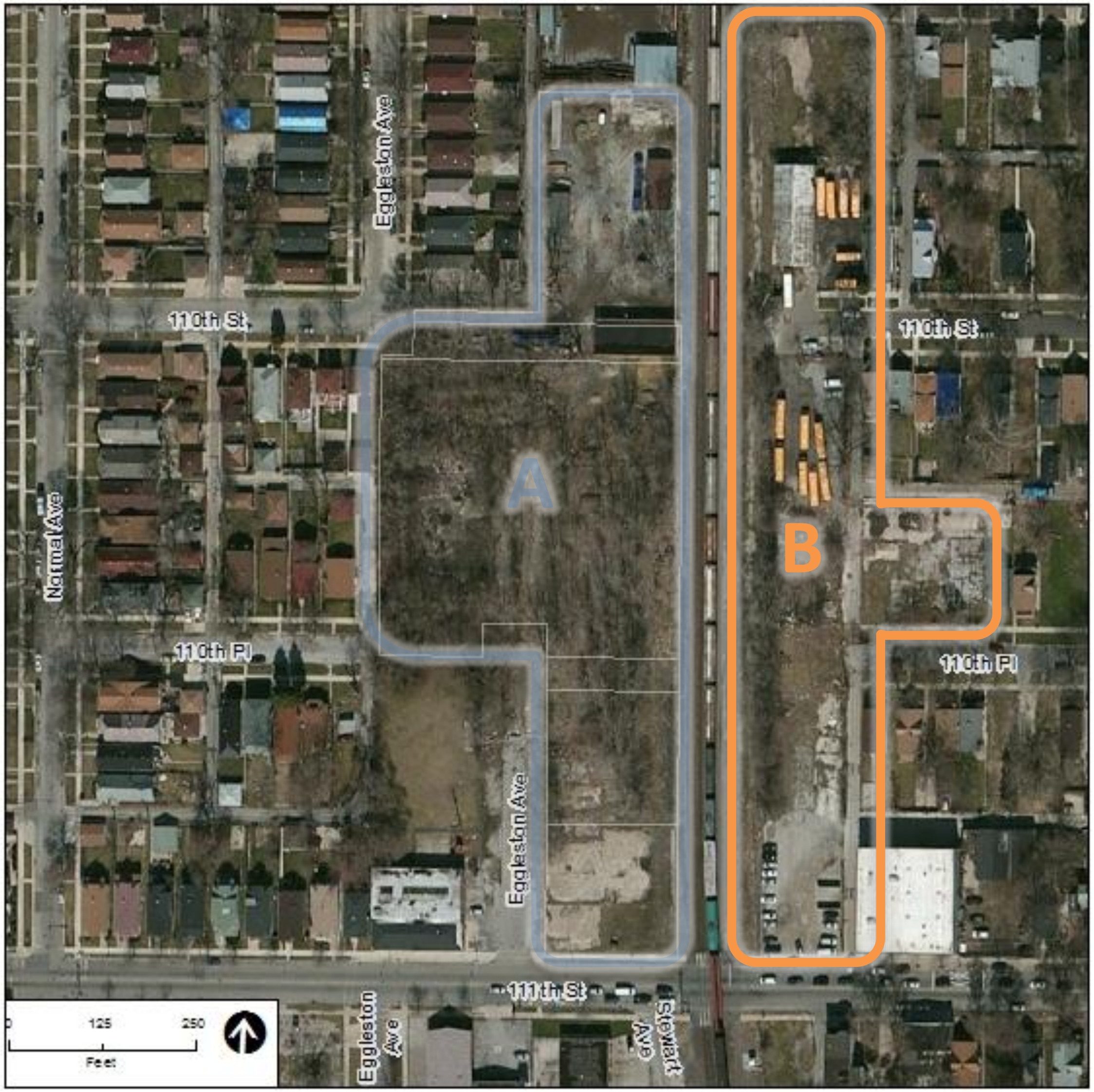
Ballfield Suitability:

- Up to 250’

Field Notes/ Considerations

- Acreage will be reduced with western alignment
- Under consideration for park and ride location
- Located next to station and on commercial corridor; park may not be best use
- Potential for use as part of UPRR West Option TBD

East Option, West Option TBD


Eggleston Ave
110th St
110th St
A
B
Normal Ave
110th Pl
110th Pl
Eggleston Ave
111th St
Eggleston Ave
Stewart Ave
0
125
250
Feet

Site 8B

Roseland Community

Ward 34

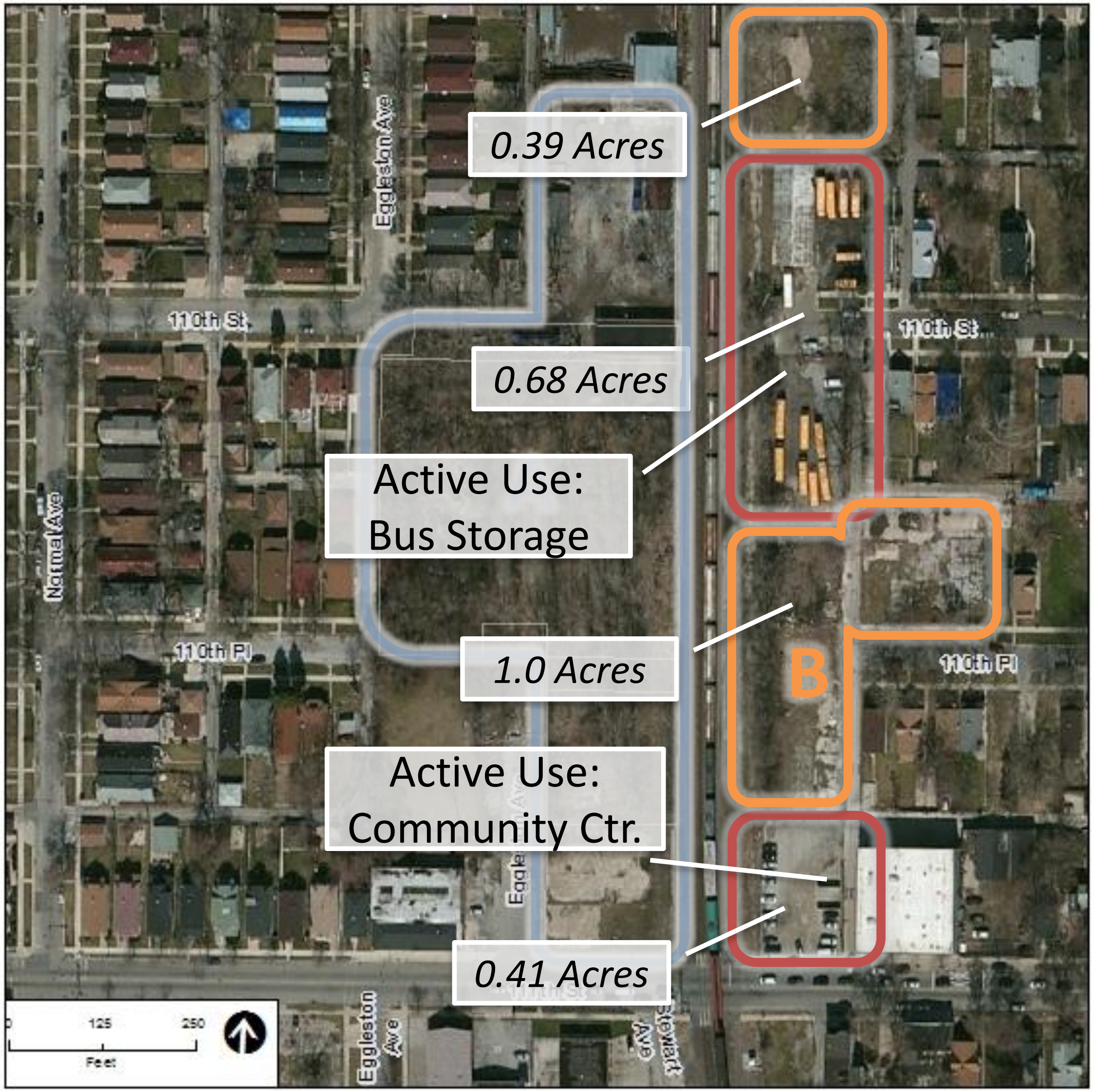
2.48 Acres

Field Notes/ Considerations

Eliminated from further screening due to:

- Requires acquisition of active parcels to meet acreage requirement
- Acreage will be reduced with eastern alignment
- Under consideration for park and ride location
- Located next to station and on commercial corridor; park may not be best use

West Option


0.39 Acres
0.68 Acres
Active Use:
Bus Storage
1.0 Acres
Active Use:
Community Ctr.
0.41 Acres
B
110th St
110th St
110th Pl
110th Pl
Eggleston Ave
Normal Ave
Eggleston Ave
Stewart Ave
0
125
250
Feet

Site 8B

Roseland Community

Ward 34

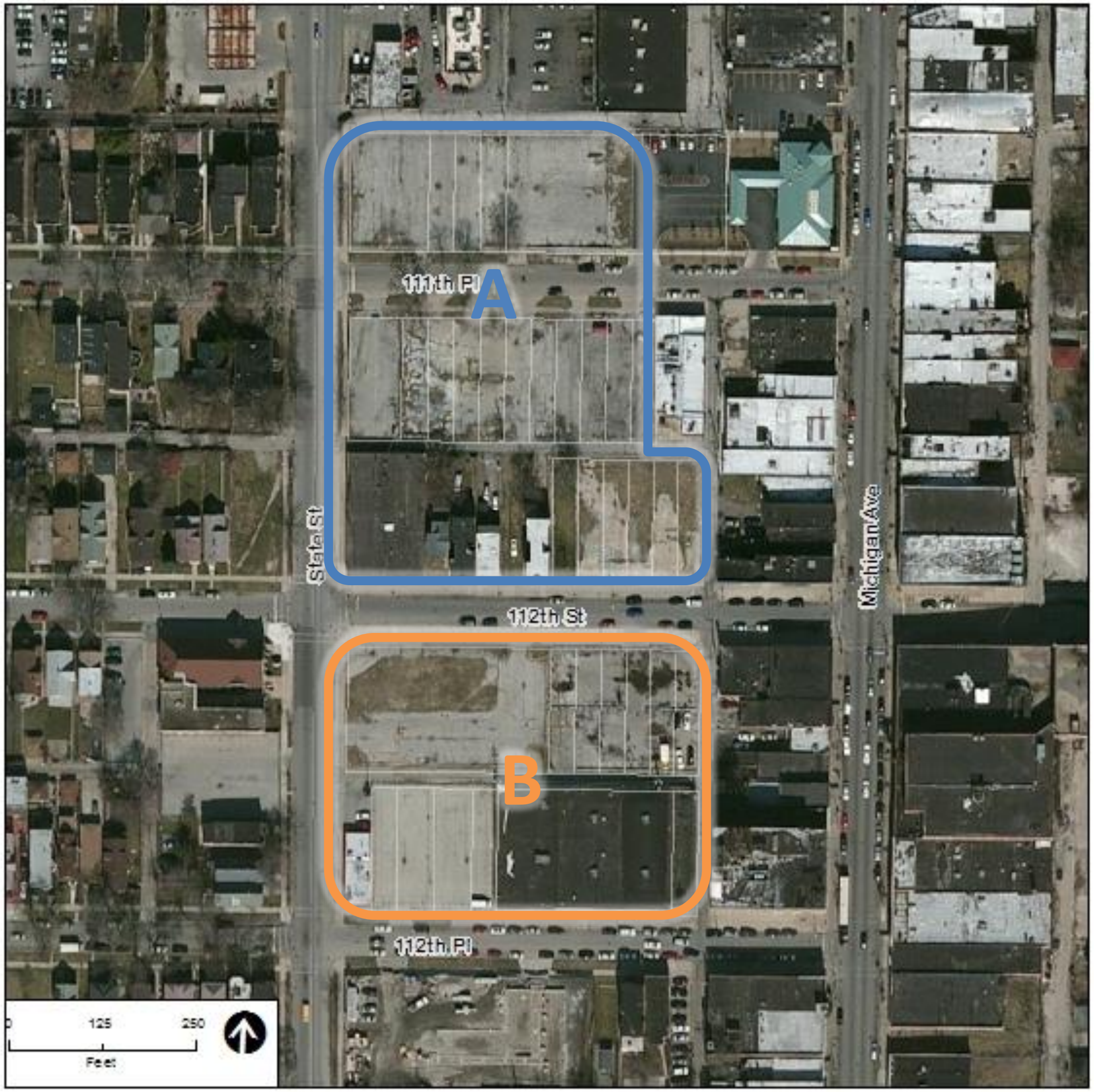
2.48 Acres

Field Notes/ Considerations

Eliminated from further screening due to:

- Requires acquisition of active parcels to meet acreage requirement
- Acreage will be reduced with eastern alignment
- Under consideration for park and ride location
- Located next to station and on commercial corridor; park may not be best use

West Option

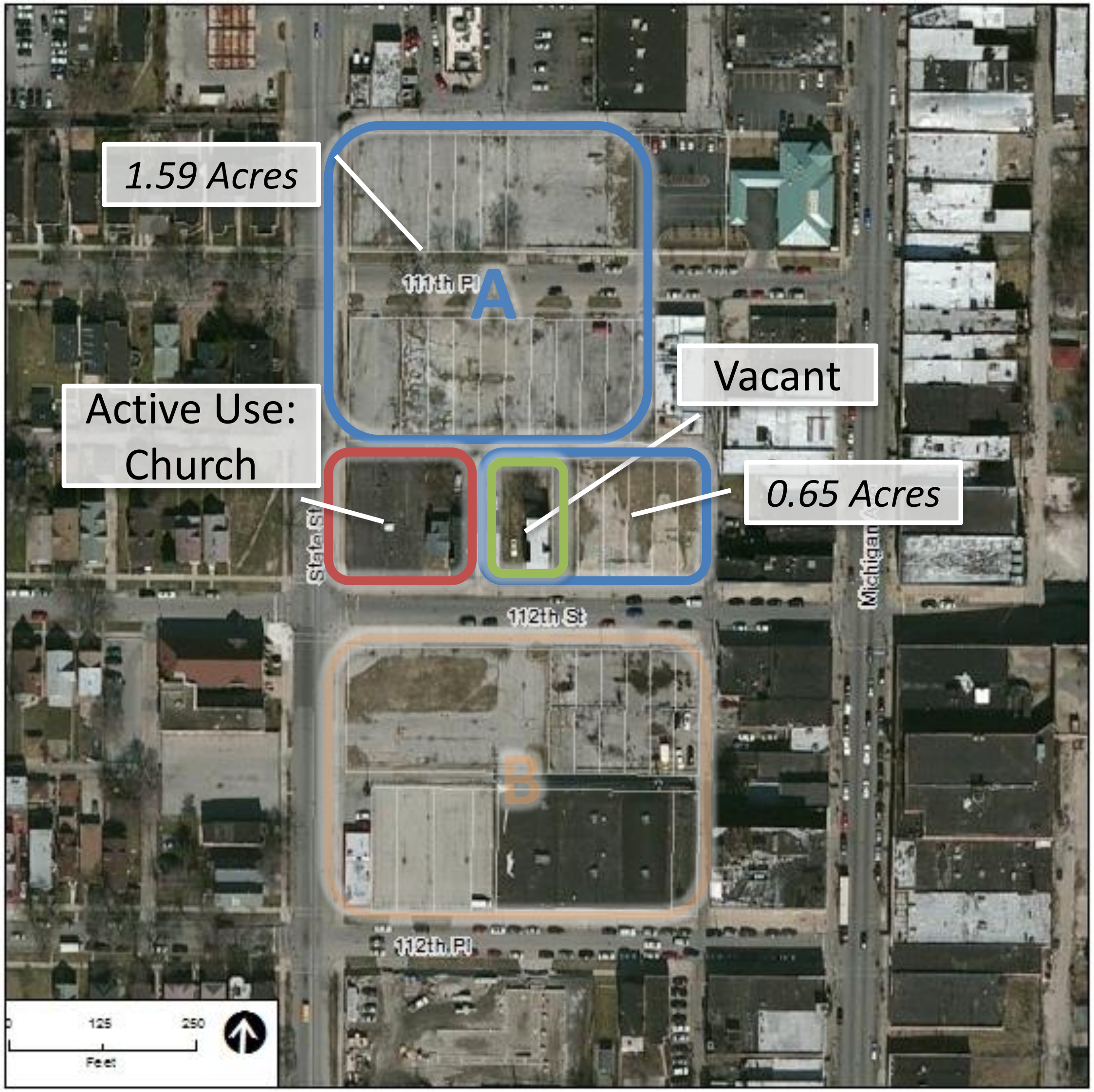

111th Pl
A
State St
112th St
B
Michigan Ave
112th Pl
0
125
250
Feet

Site 9

Roseland Community

Ward 9

Consists of 2 parcels: 9A and 9B


1.59 Acres
A
111th Pl
Active Use: Church
Vacant
0.65 Acres
State St
Michigan
112th St
B
112th Pl
0
125
250
Feet

Site 9A

Roseland Community

Ward 9

2.24 Acres

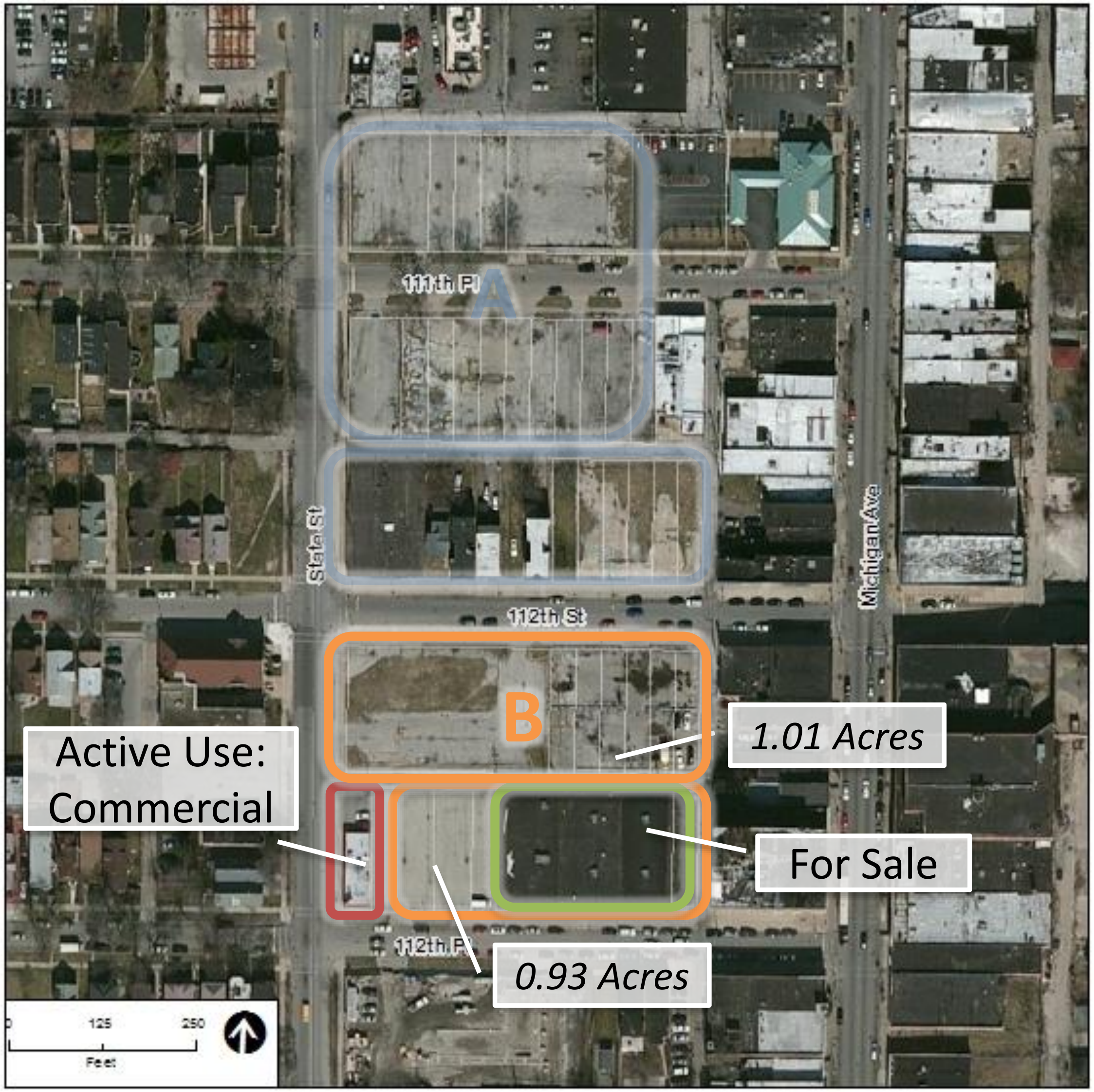
Ballfield Suitability:

- Up to 250’

Field Notes/ Considerations

- Requires removal of ½ block of 111th Pl. and cul-de-sac.
- Located in commercial district, park may not be best use.
- Sizeable distance away from proposed park impacts

East and West Option


111th Pl
A
State St
Michigan Ave
112th St
B
1.01 Acres
Active Use: Commercial
For Sale
112th Pl
0.93 Acres
0
125
250
Feet

Site 9B

Roseland Community

Ward 9

1.94 Acres

Ballfield Suitability:

- Up to 250’

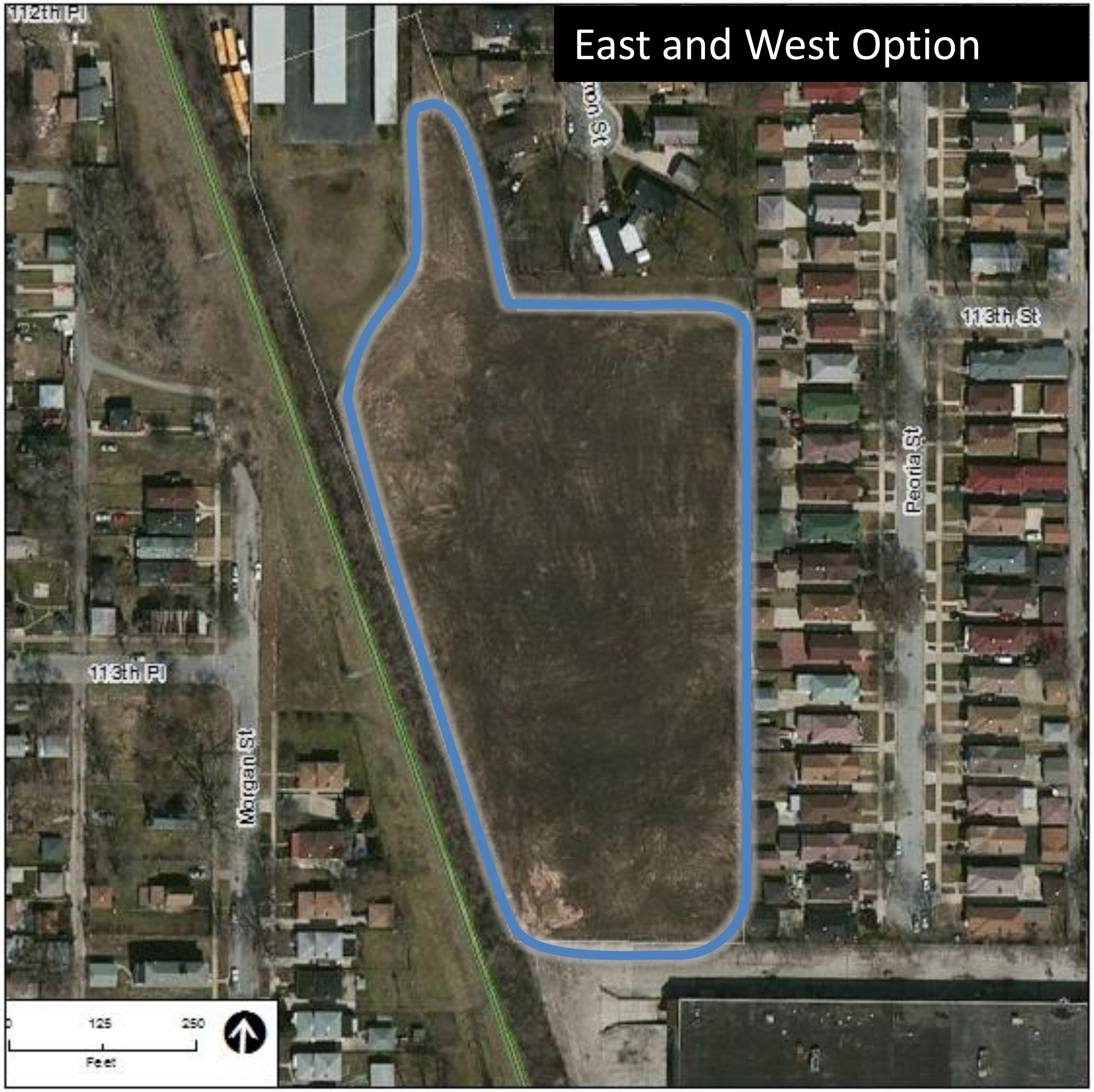
Field Notes/ Considerations

- Requires acquisition and demolition of structure that contains the Alderman’s office
- Located in a commercial district; park may not be best use.
- Sizeable distance away from proposed park impacts

East and West Option

Other Community Areas Reviewed

- Morgan Park (Site 10)
- West Pullman (Sites 11-17)


East and West Option
112th Pl
113th St
Peoria St
113th Pl
Morgan St
0
125
250
Feet

Site 10

Morgan Park Community

Ward 34

6.0 Acres

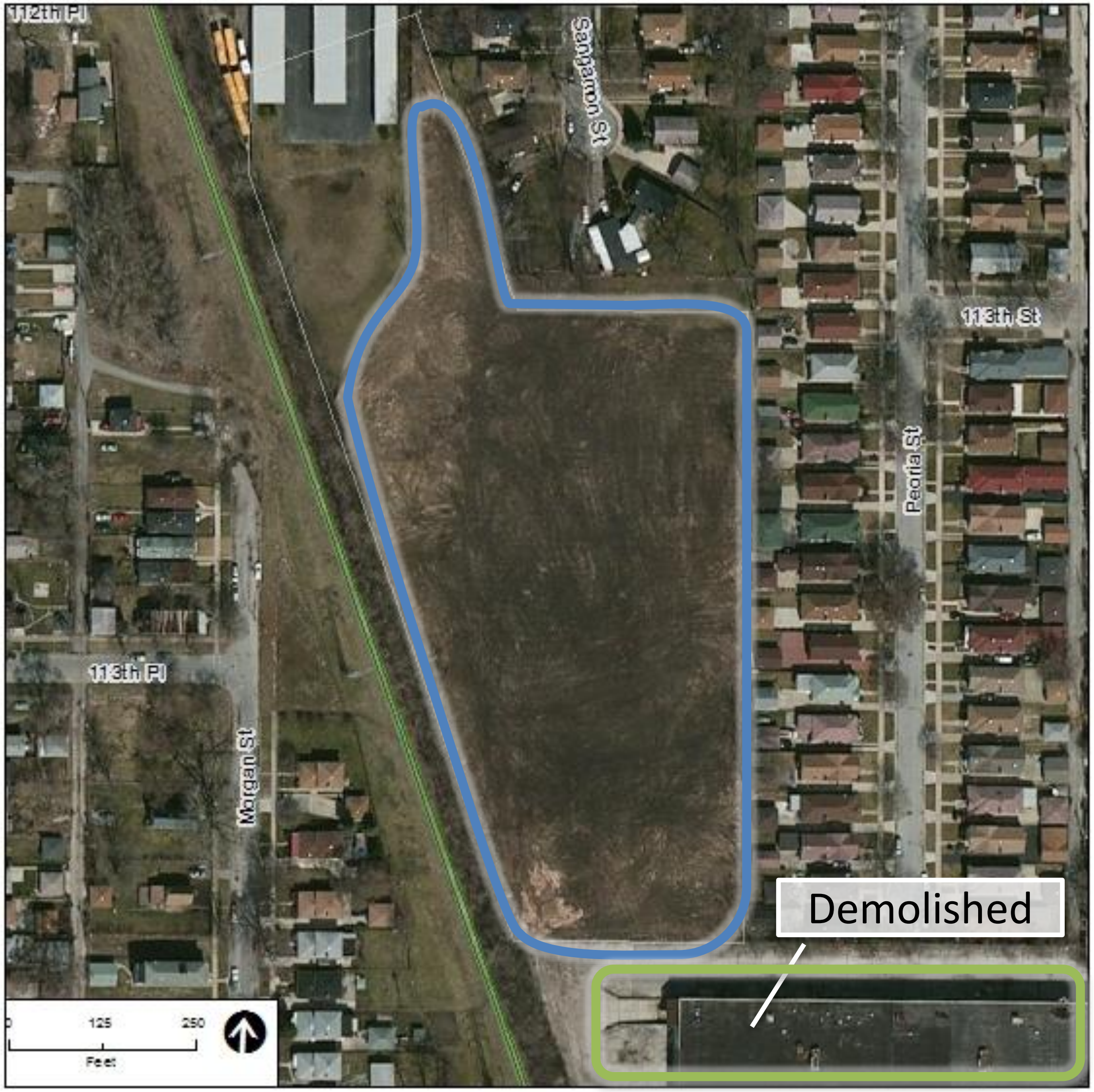
Ballfield Suitability:

- Up to 250’

Field Notes/ Considerations

- Adjacent to Major Taylor Trail and park
- Large vacant commercial area to the south
- Would connect two neighborhoods currently divided by parcel
- Currently little street visibility
- Serves neighborhood around Fenger HS (Roseland)

East and West Option


112th Pl
Sangamon St
113th St
Peoria St
113th Pl
Morgan St
0
125
250
Feet

Demolished

Site 10

Morgan Park Community

Ward 34

6.0 Acres

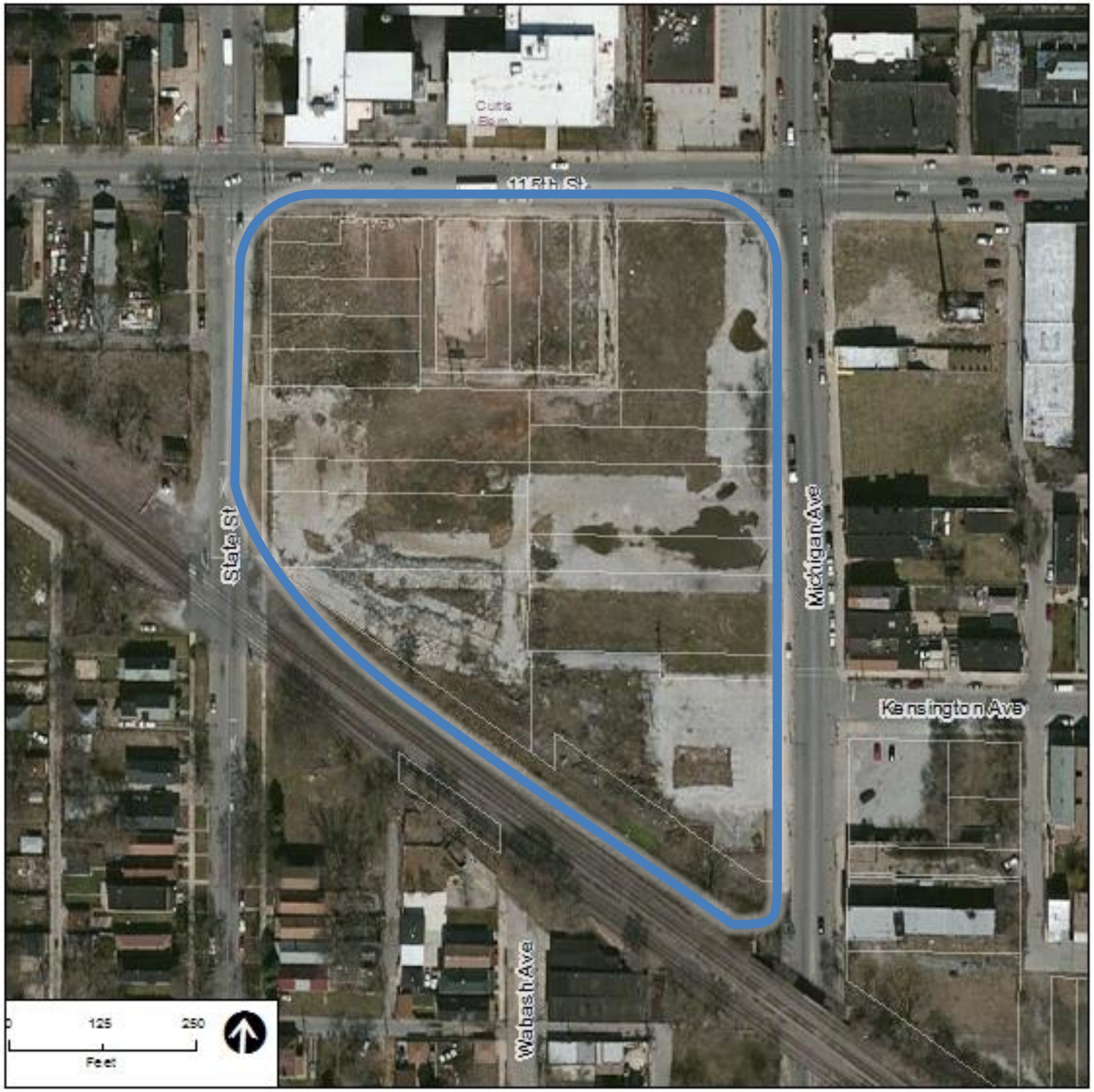
Ballfield Suitability:

- Up to 250’

Field Notes/ Considerations

- Adjacent to Major Taylor Trail and park
- Large vacant commercial area to the south
- Would connect two neighborhoods currently divided by parcel
- Currently little street visibility
- Serves neighborhood around Fenger HS (Roseland)

East and West Option


115th St
State St
Michigan Ave
Kensington Ave
Wabash Ave
Curtis
0
125
250
Feet

Site 11

West Pullman Community

Ward 9

5.86 Acres

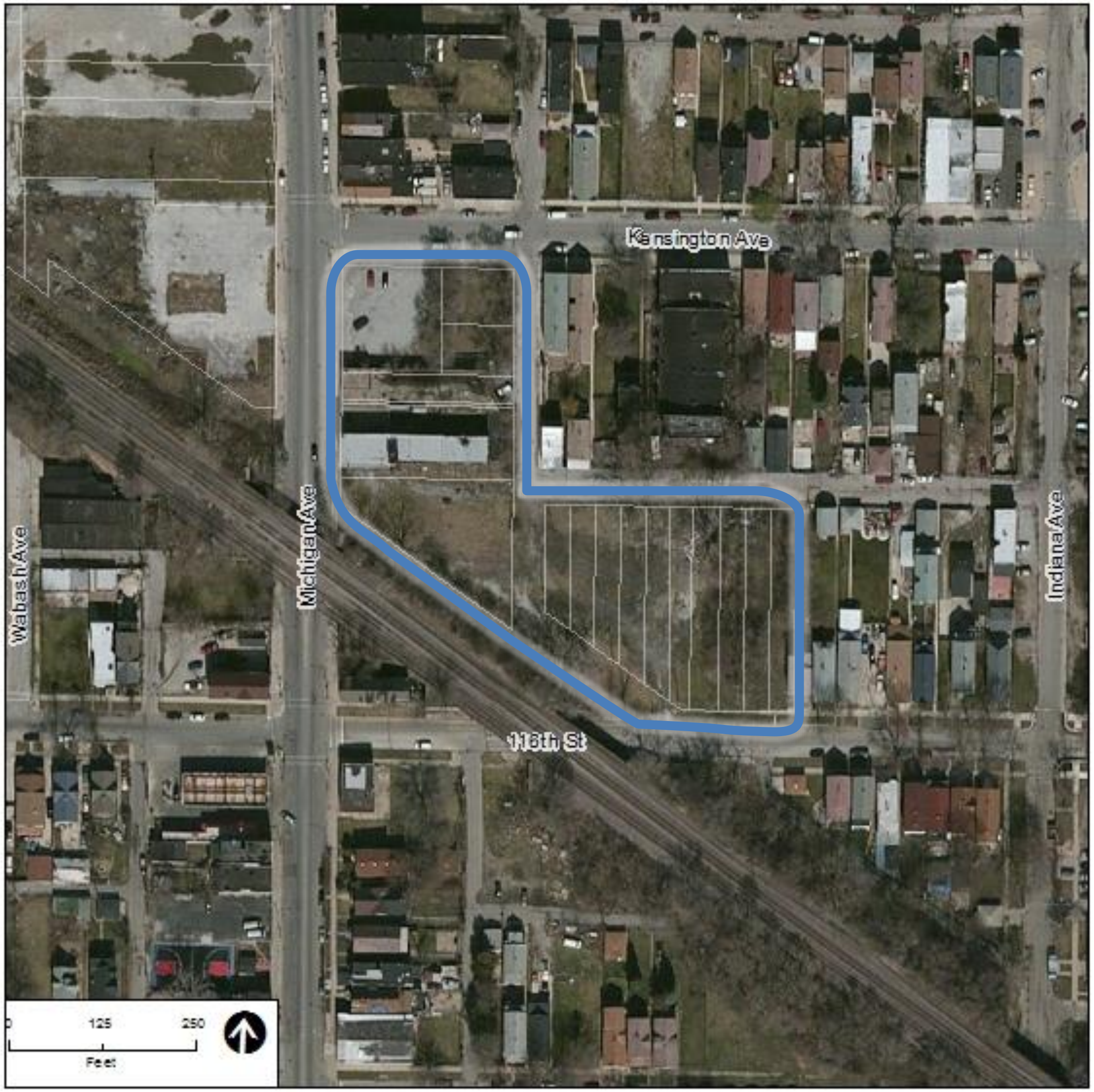
Ballfield Suitability:

- Up to 250’

Field Notes/ Considerations

- Under consideration for Planned Development – will need to check status
- Located next to station and on commercial corridor; park may not be best use
- Outside of community area where parks are directly impacted

East and West Option


Kensington Ave
Michigan Ave
Wabash Ave
Indiana Ave
116th St
0
125
250
Feet

Site 12

West Pullman Community

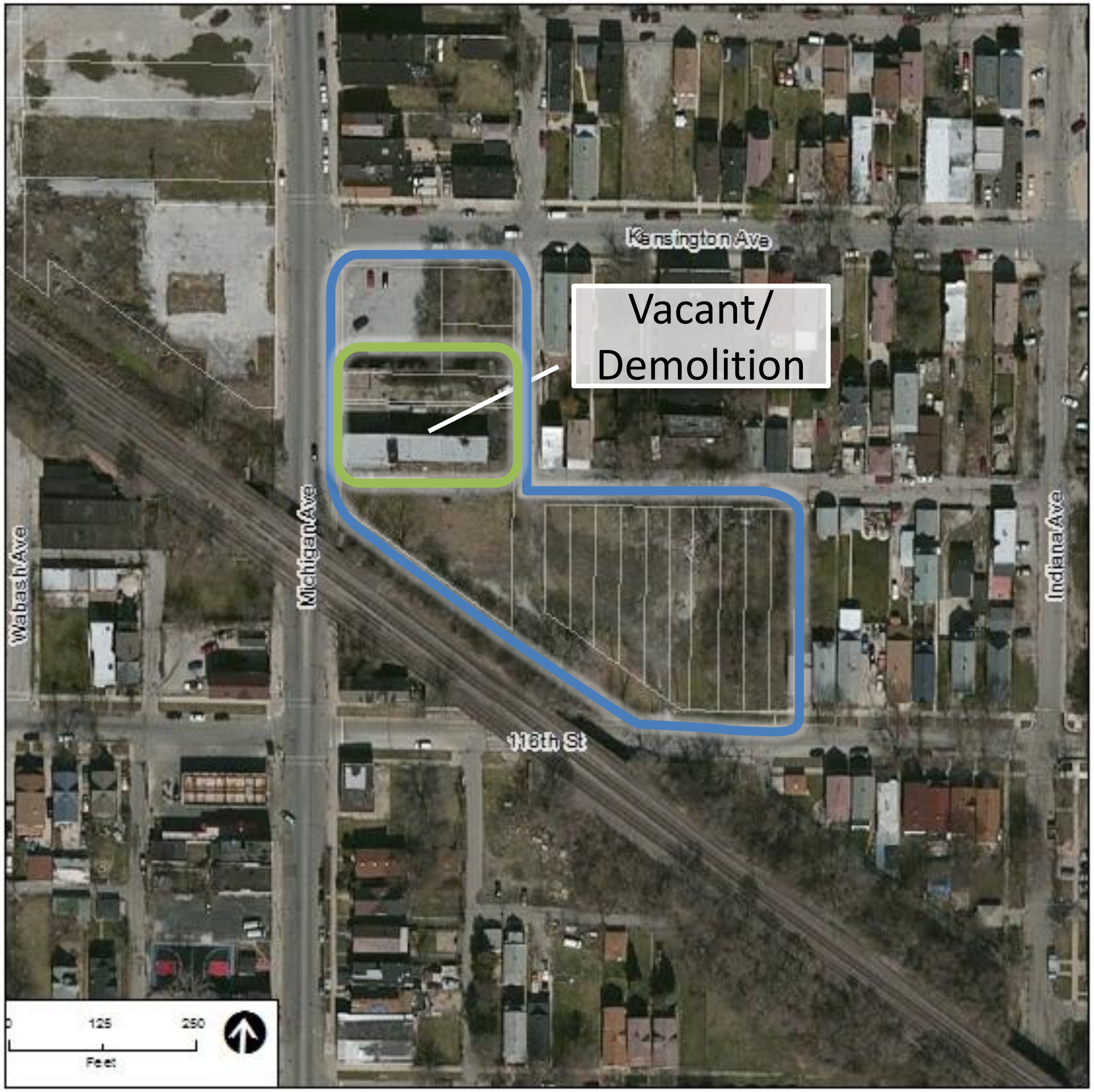
Ward 9

2.20 Acres

Field Notes/ Considerations

- Located next to proposed station and on commercial corridor; park may not be best use
- Acreage will be reduced with eastern alignment option
- Outside of community area where parks are directly impacted

East and West Option


Kensington Ave
Vacant/ Demolition
Wabash Ave
Michigan Ave
Indiana Ave
116th St
0
125
250
Feet

Site 12

West Pullman Community

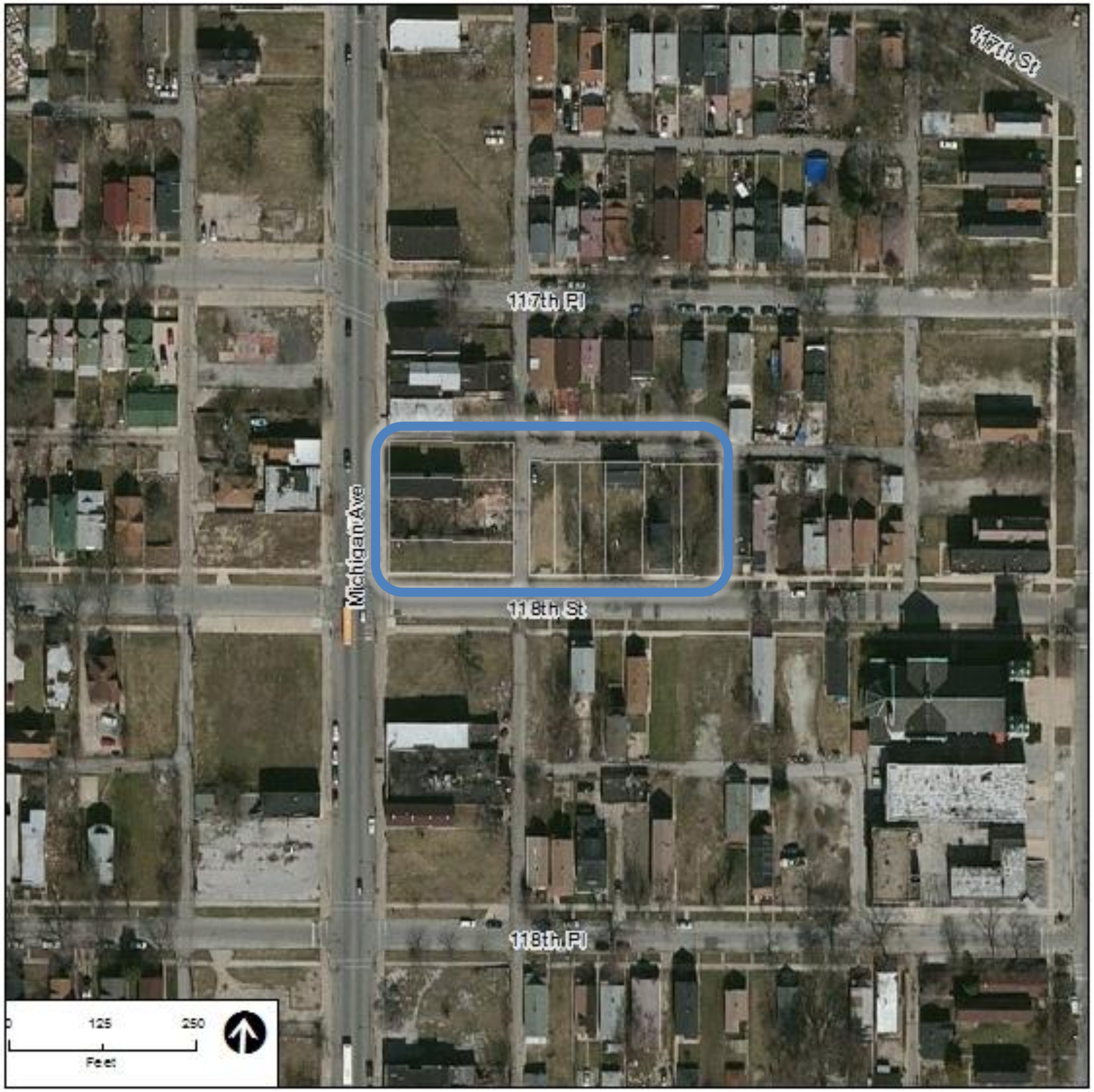
Ward 9

2.20 Acres

Field Notes/ Considerations

- Located next to proposed station and on commercial corridor; park may not be best use
- Acreage will be reduced with eastern alignment option
- Outside of community area where parks are directly impacted

East and West Option


117th St
117th Pl
Michigan Ave
118th St
118th Pl
0
125
250
Feet

Site 13

West Pullman Community

Ward 9

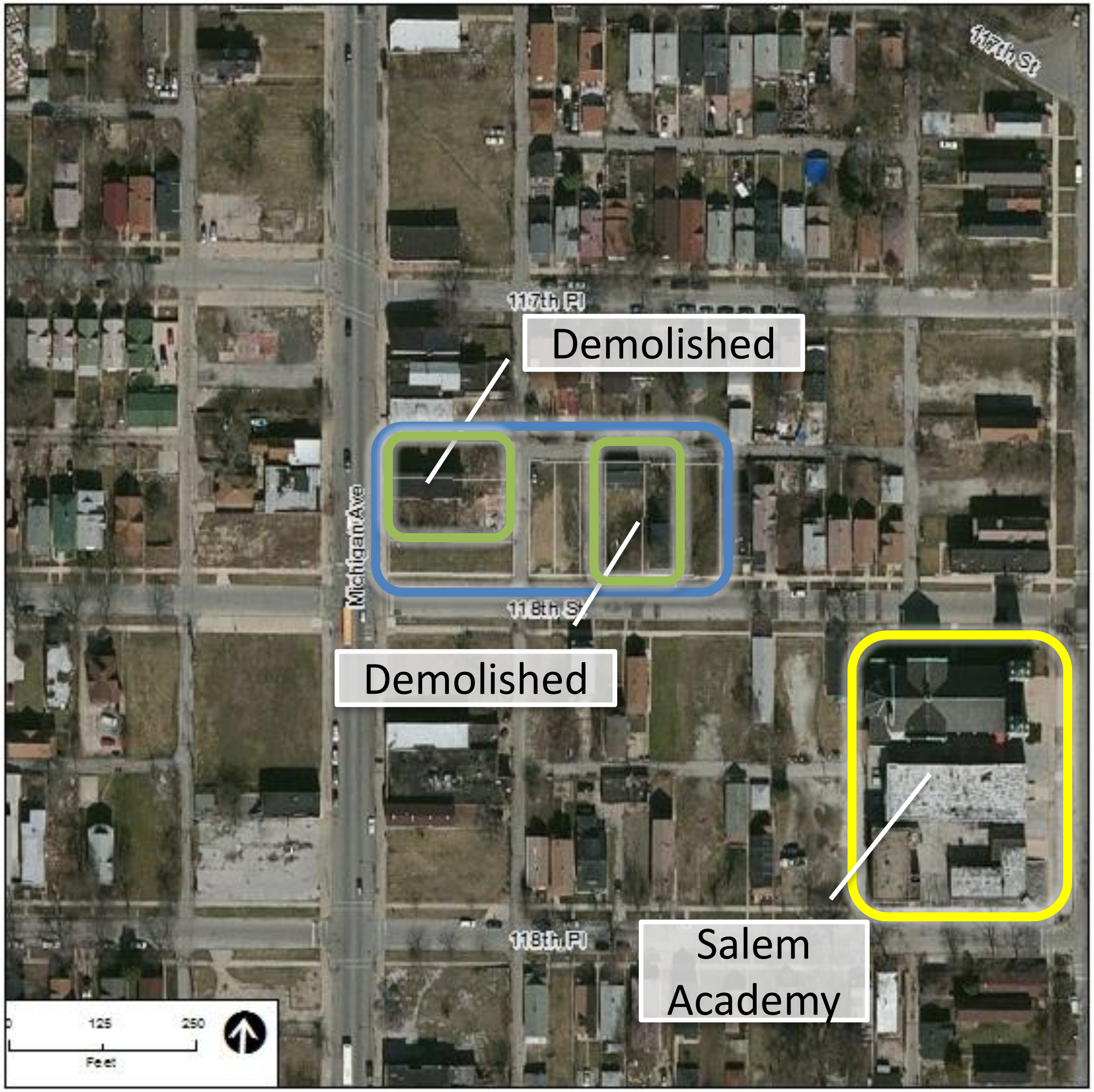
0.87 Acres

Field Notes/ Considerations

Eliminated from further screening due to:

- Insufficient to meet acreage requirements
- Adjacent to school and church
- Outside of community area where parks are directly impacted

East and West Option


117th St
117th Pl
Demolished
Michigan Ave
118th St
Demolished
Salem Academy
118th Pl
0
125
250
Feet

Site 13

West Pullman Community

Ward 9

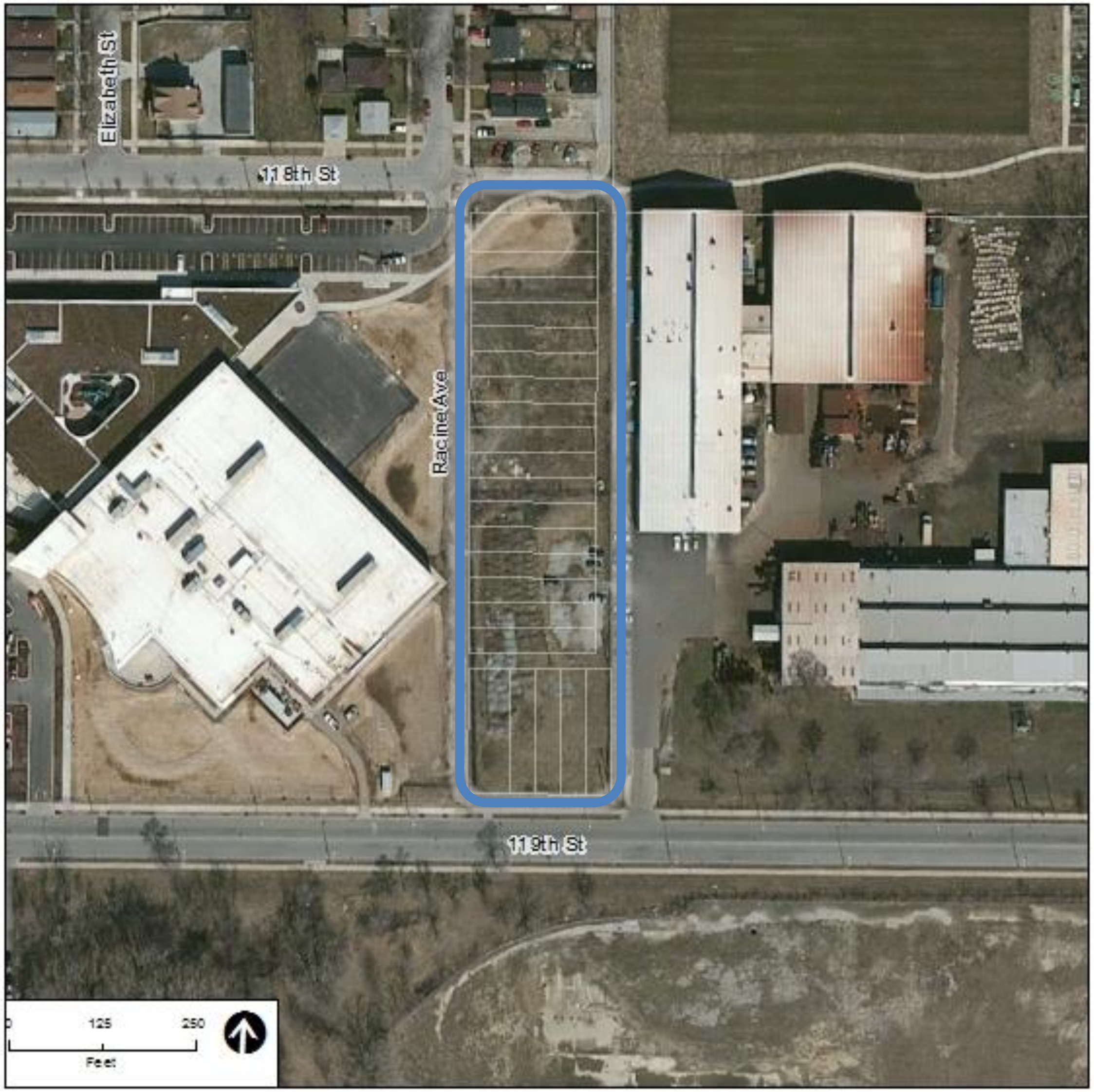
0.87 Acres

Field Notes/ Considerations

Eliminated from further screening due to:

- Insufficient to meet acreage requirements
- Adjacent to school and church
- Outside of community area where parks are directly impacted

East and West Option


Elizabeth St
118th St
Racine Ave
119th St
0
125
250
Feet

Site 14

West Pullman Community

Ward 34

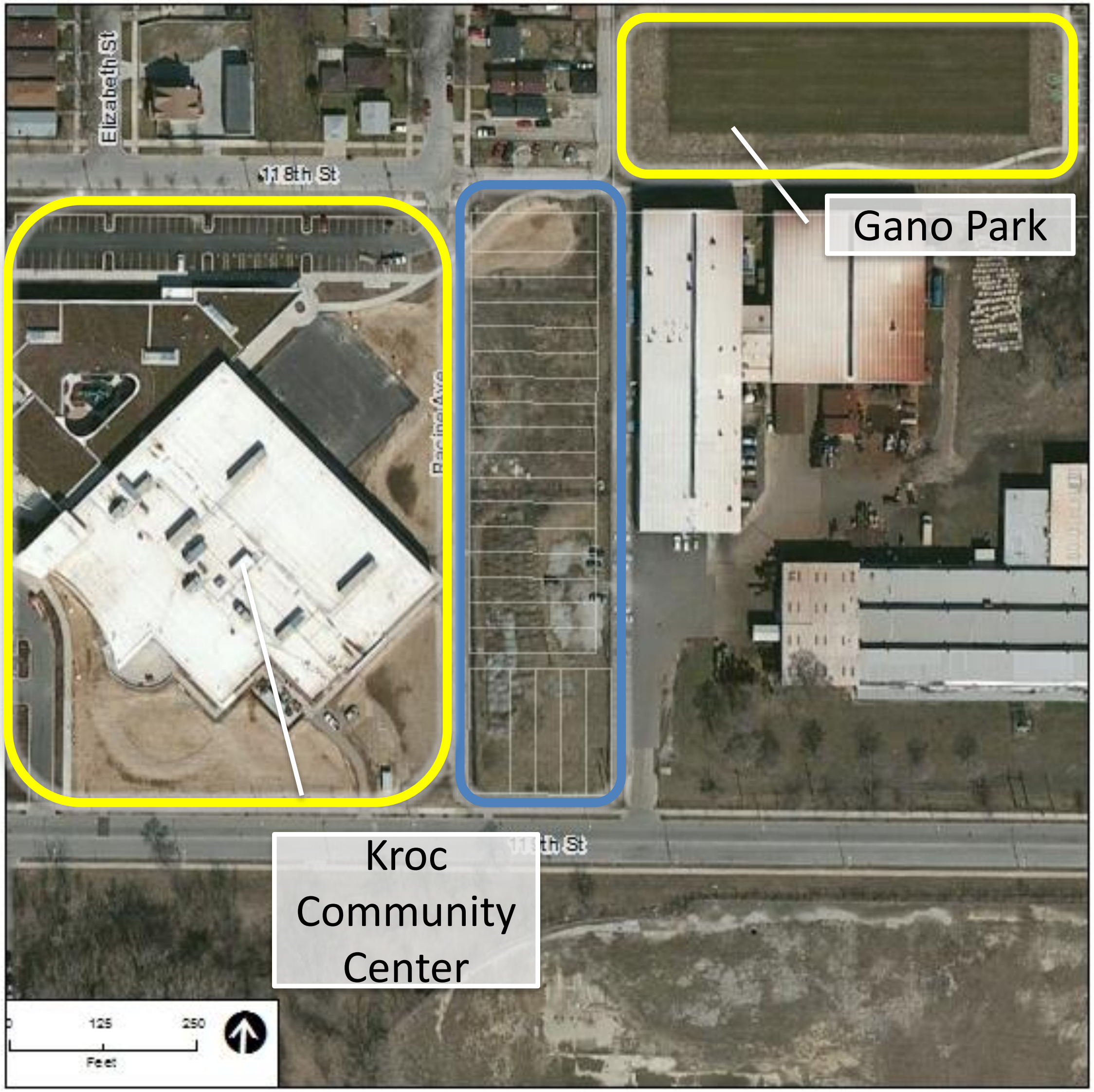
1.69 Acres

Field Notes/ Considerations

Eliminated from further screening due to:

- Adjacent to Gano Park and Kroc Community Center
- Adjacent to manufacturing; park may not be best use
- Manufacturing facility currently using as parking
- Outside of community area where parks are directly impacted

East and West Option


Elizabeth St
118th St
Racine Ave
Gano Park
Kroc Community Center
119th St
0
125
250
Feet

Site 14

West Pullman Community

Ward 34

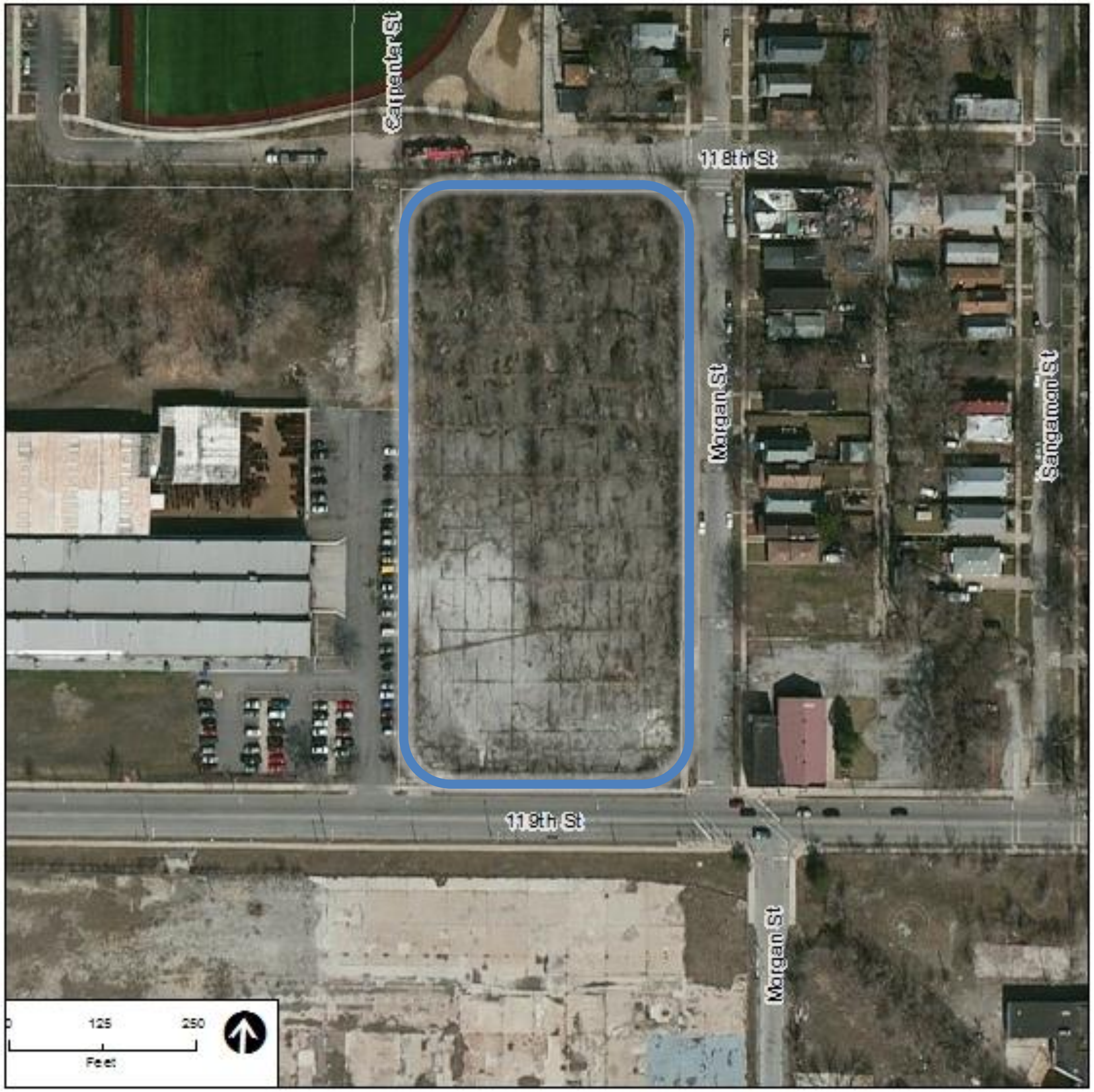
1.69 Acres

Field Notes/ Considerations

Eliminated from further screening due to:

- Adjacent to Gano Park and Kroc Community Center
- Adjacent to manufacturing; park may not be best use
- Manufacturing facility currently using as parking
- Outside of community area where parks are directly impacted

East and West Option


Carpenter St
118th St
Morgan St
Sangamon St
119th St
Morgan St
0
125
250
Feet

Site 15

West Pullman Community

Ward 34

3.89 Acres

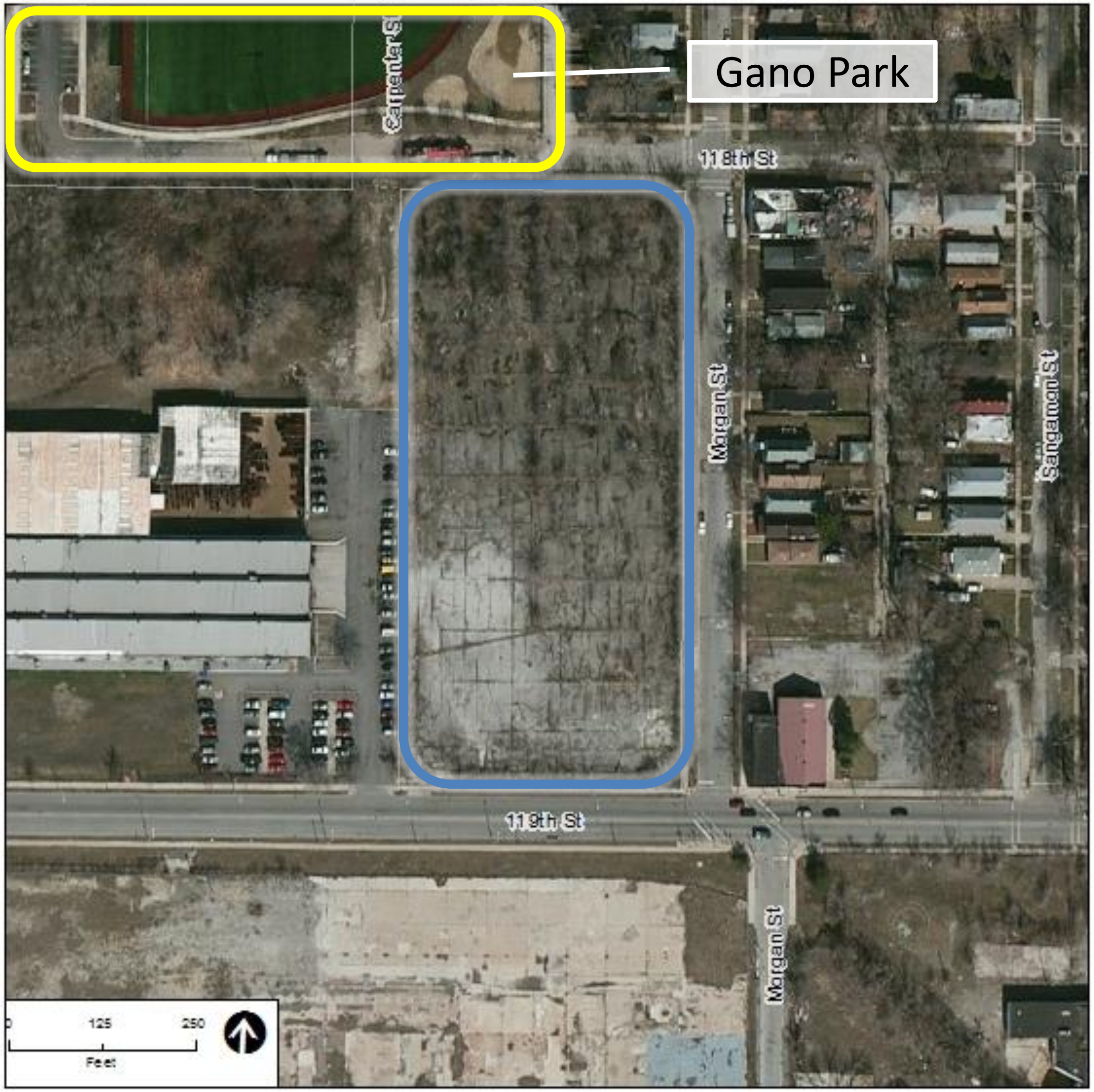
Ballfield Suitability:

- Up to 250’

Field Notes/ Considerations

- Adjacent to Gano Park
- Park directly north of these limits
- Adjacent to manufacturing; park may not be best use
- Large vacant lot directly south
- Outside of community area where parks are directly impacted

East and West Option


Gano Park
Carpenter St
118th St
Morgan St
Sangamon St
119th St
Morgan St
0
125
250
Feet

Site 15

West Pullman Community

Ward 34

3.89 Acres

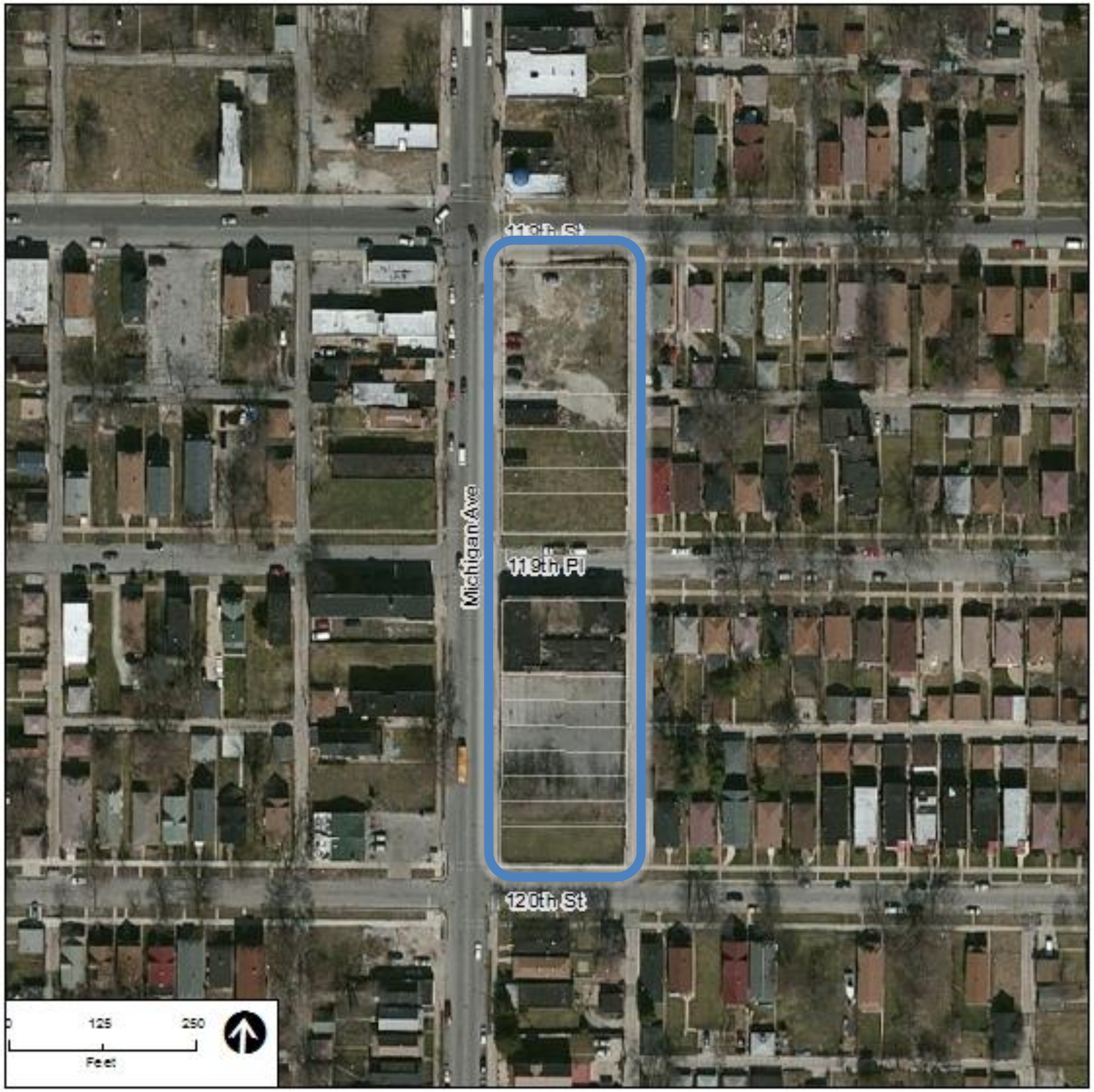
Ballfield Suitability:

- Up to 250’

Field Notes/ Considerations

- Adjacent to Gano Park
- Park directly north of these limits
- Adjacent to manufacturing; park may not be best use
- Large vacant lot directly south
- Outside of community area where parks are directly impacted

East and West Option


119th St
Michigan Ave
119th Pl
120th St
0
125
250
Feet

Site 16

West Pullman Community

Ward 9

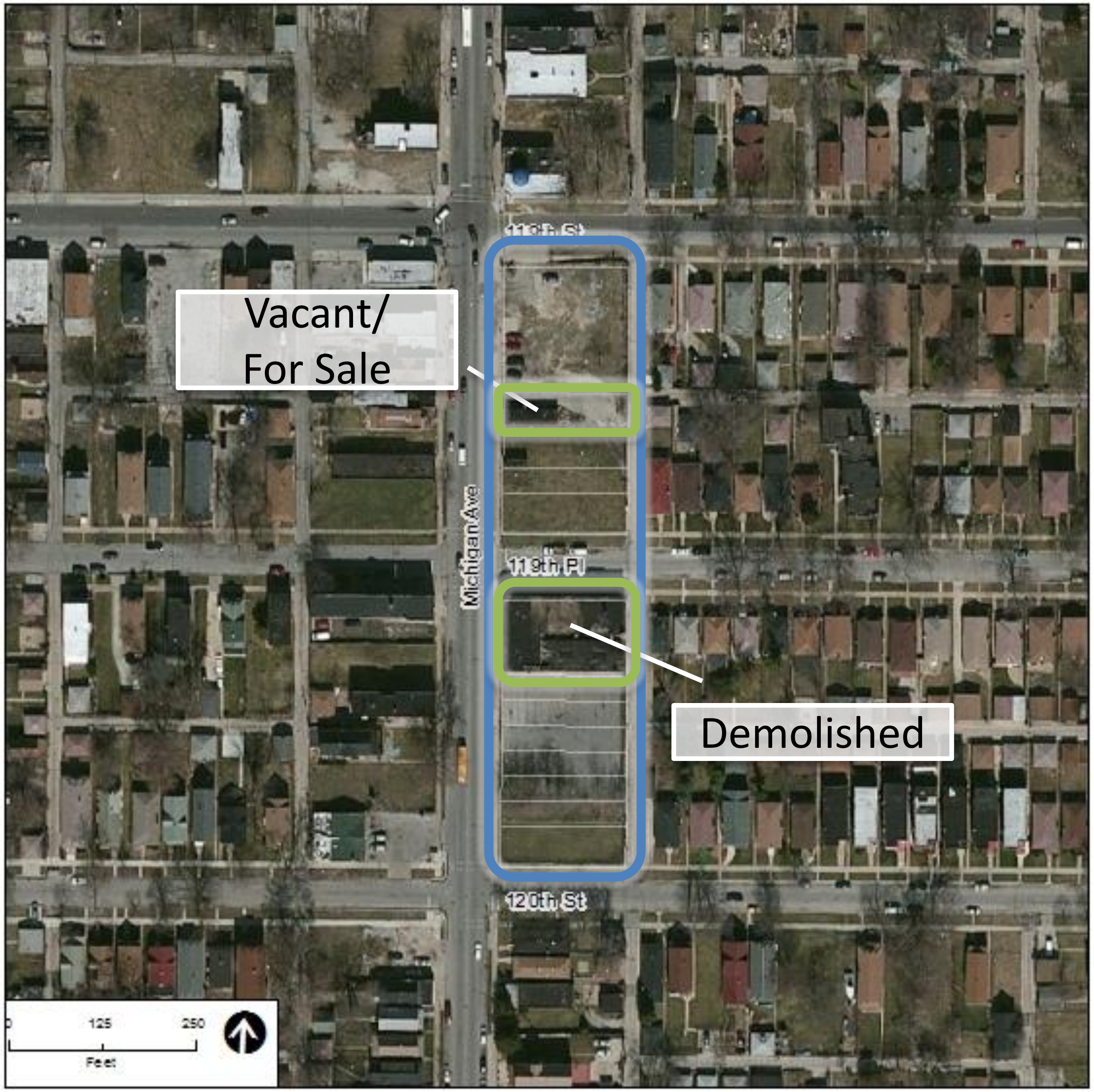
1.53 Acres

Field Notes/ Considerations

Eliminated from further screening due to:

- Requires removal of ½ block of 119th Pl. and cul-de-sac
- Insufficient to meet acreage requirements
- Lots are 125' deep
- Outside of community area where parks are directly impacted

East and West Option


119th St
Vacant/
For Sale
Michigan Ave
119th Pl
Demolished
120th St
0
125
250
Feet

Site 16

West Pullman Community

Ward 9

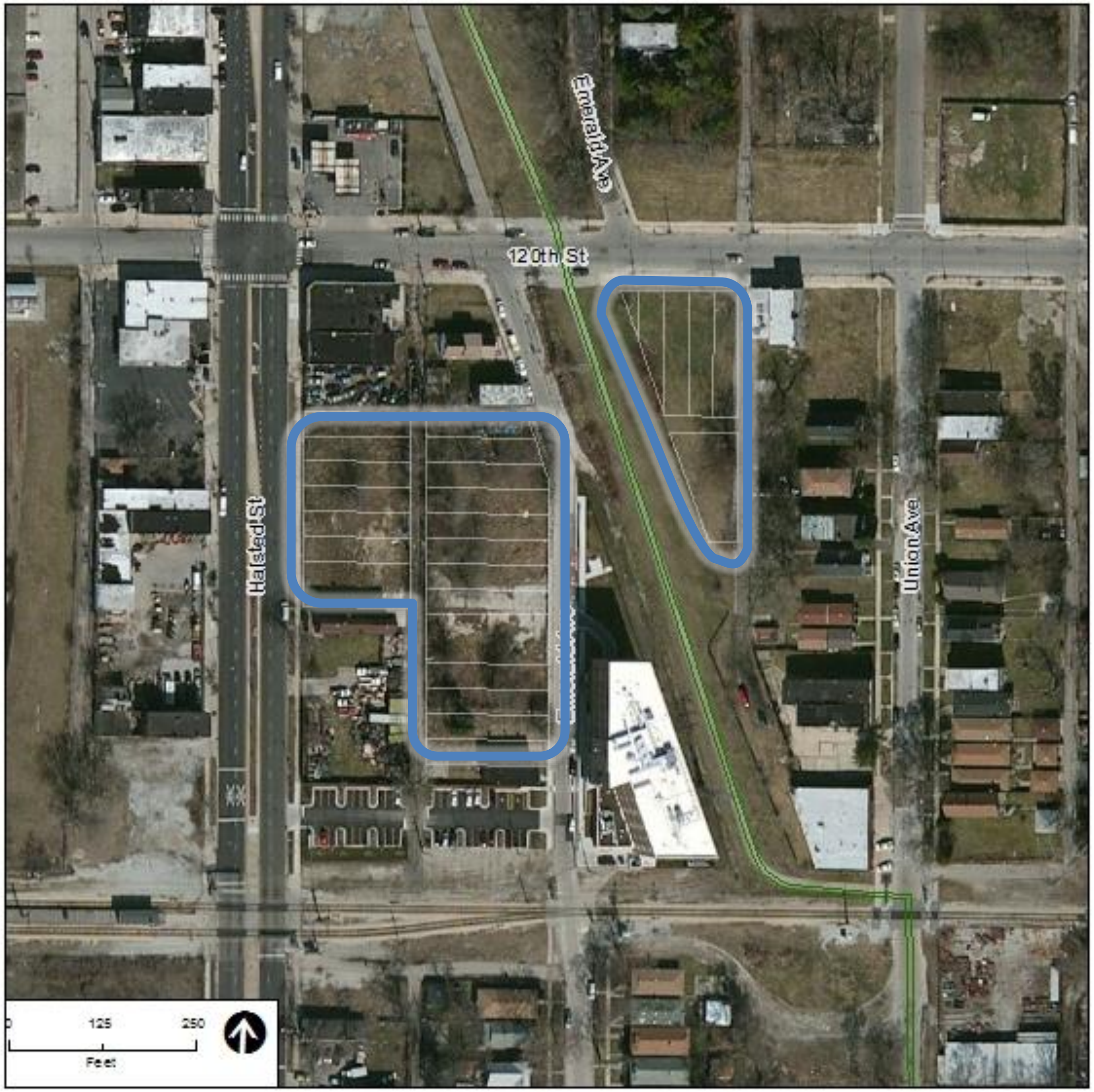
1.53 Acres

Field Notes/ Considerations

Eliminated from further screening due to:

- Requires removal of ½ block of 119th Pl. and cul-de-sac
- Insufficient to meet acreage requirements
- Lots are 125' deep
- Outside of community area where parks are directly impacted

East and West Option


Emerald Ave
120th St
Halsted St
Union Ave
0
125
250
Feet

Site 17

West Pullman Community

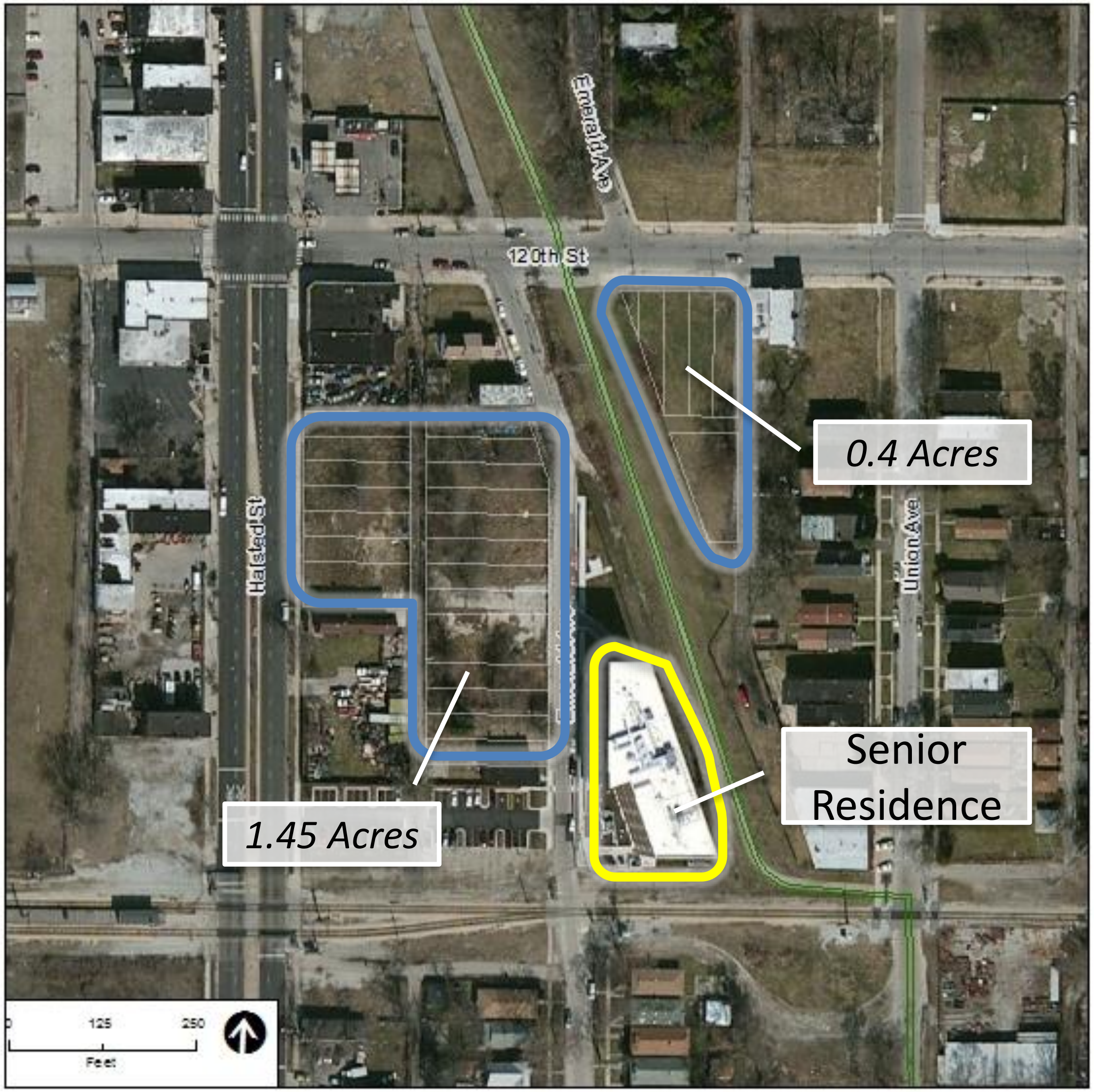
Ward 34

1.85 Acres

Field Notes/ Considerations

- Adjacent to Major Taylor Trail and park
- Adjacent to city-owned senior residence
- Adjacent to West Pullman Metra station
- May meet 1.9 acre requirement when parcels are combined
- Located on commercial corridor (Halsted); park may not be best use
- Outside of community area where parks are directly impacted

East and West Option


Emerald Ave
120th St
Halsted St
Union Ave
0.4 Acres
Senior Residence
1.45 Acres
0
125
250
Feet

Site 17

West Pullman Community

Ward 34

1.85 Acres

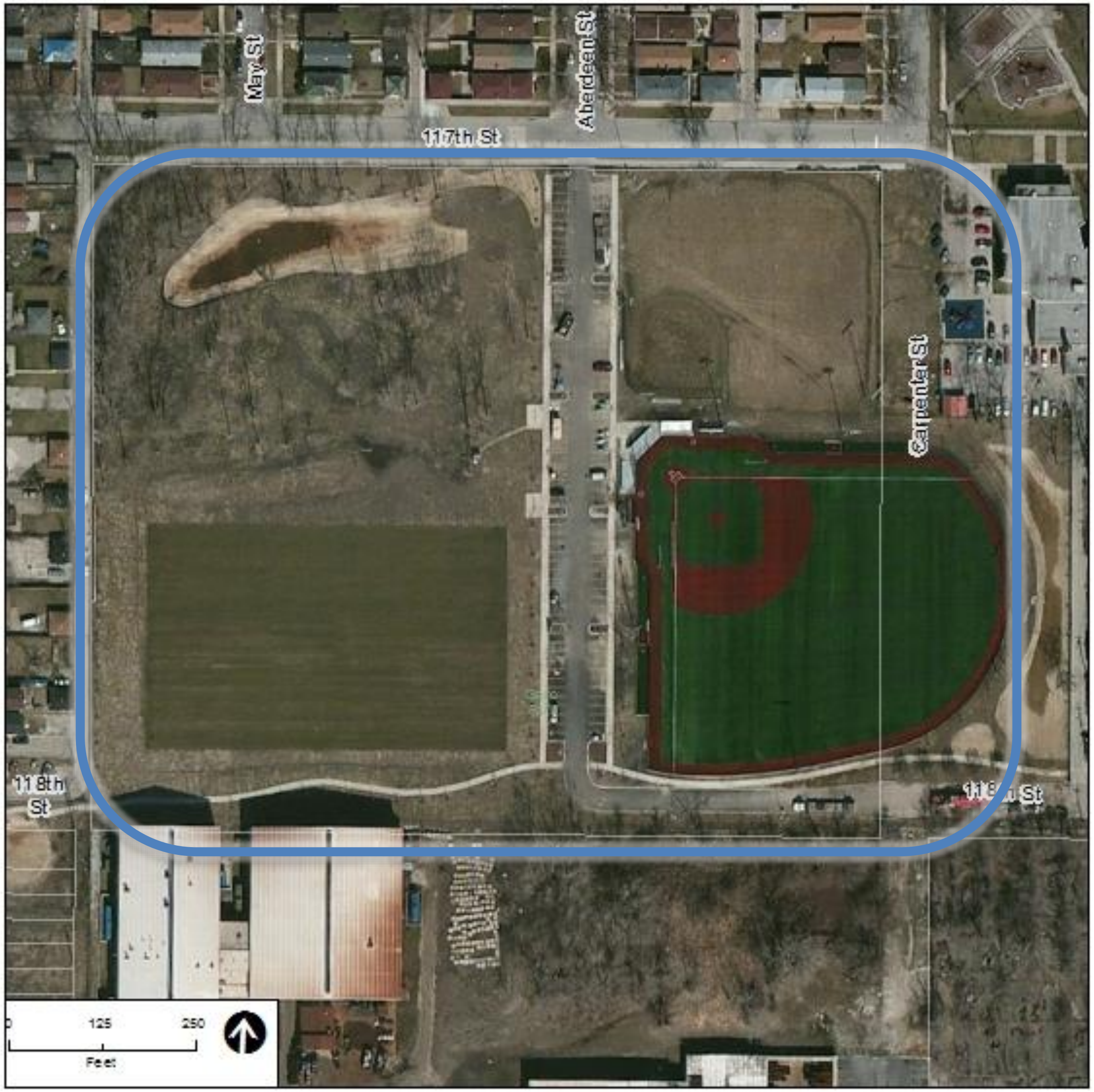
Field Notes/ Considerations

- Adjacent to Major Taylor Trail and park
- Adjacent to city-owned senior residence
- Adjacent to West Pullman Metra station
- May meet 1.9 acre requirement when parcels are combined
- Located on commercial corridor (Halsted); park may not be best use
- Outside of community area where parks are directly impacted

East and West Option

Existing Gano Park Reviewed for Potential Ballfield Replacement Option

(East Option Only)


117th St
May St
Aberdeen St
Carpenter St
118th St
118th St
0
125
250
Feet

Gano Park

West Pullman Community

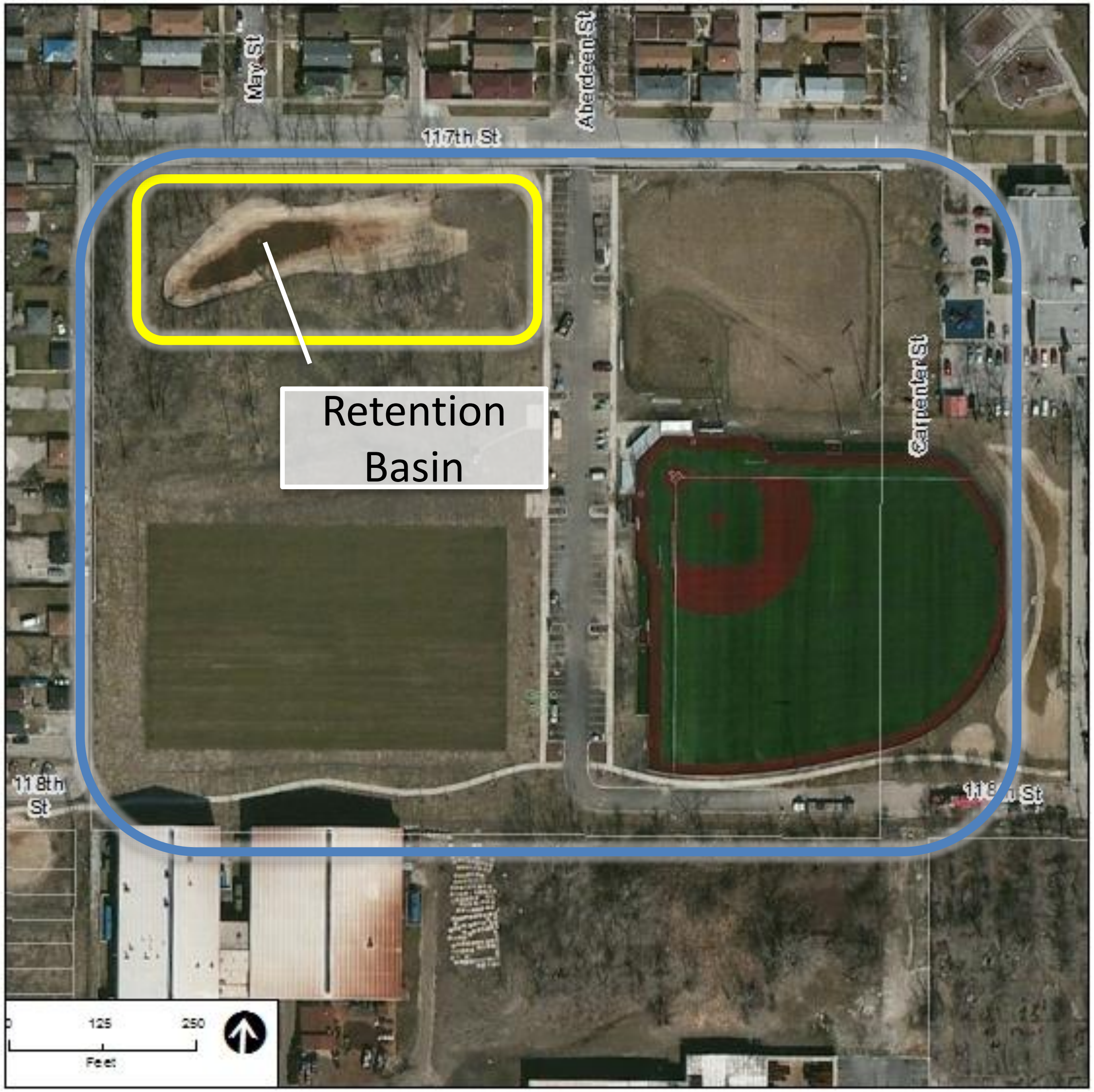
Ward 34

Field Notes/ Considerations

Eliminated from further evaluation as a ballfield replacement site due to:

- Retention basin makes site unsuitable for active recreation
- Space available not sufficient
- Adjacent ballfield already located within park
- Outside of community are directly impacted

East and West Option


May St
Aberdeen St
117th St
Carpenter St
118th St
118th St
Retention Basin
0
125
250
Feet

Gano Park

West Pullman Community

Ward 34

Field Notes/ Considerations

Eliminated from further evaluation as a ballfield replacement site due to:

- Retention basin makes site unsuitable for active recreation
- Space available not sufficient
- Adjacent ballfield already located within park
- Outside of community are directly impacted

East and West Option

Attachment 4: Suitability Analysis Assessment Notes

The following are notes on the 12 sites that were screened for suitability as replacement park locations for the Red Line Extension park impacts. A qualitative assessment of six factors was conducted and for each factor, a high, medium, or low suitability score was assigned. High, medium and low scores were then translated into numerical scores as follows:

- High = 5
- Medium = 3
- Low = 1

Total scores were developed for each replacement options by adding up all factors equally. One additional weighting factor was included based on subsequent coordination with CPD – additional points were provided to sites fulfilling a gap in existing parkland within surrounding community areas where park impacts are proposed to occur. Negative points were associated with properties that are not near the park area and slated for park improvements as part of other CPD projects.

A summary of the ratings for all properties is provided below and additional details are provided on ranking considerations for each property reviewed.

Criteria	2B	3B	6	7	8A	9A	9B	10	11	12	15	17
Location/Proximity	5	5	5	5	5	1	1	3	1	3	1	1
Additional Weighting of Sites Filling an Existing CPD Park Gap	1	0	0	1	1	0	0	-1	0	0	0	0
Vacancy/Availability of Acquisition	3	1	5	3	5	1	1	5	3	5	5	3
Land Use/Zoning Compatibility	5	3	3	3	5	1	1	3	1	5	1	3
Safety/Security	5	5	1	1	5	3	3	3	5	5	5	1
Environmental Factors (EDR)	3	3	3	3	3	3	3	5	3	3	1	3
Cost Considerations	3	5	3	5	5	1	3	5	3	5	3	5
TOTAL SCORING:	**25**	**22**	**20**	**21**	**29**	**10**	**12**	**23**	**16**	**26**	**16**	**16**

Site 2B – Total Score = 25

Location/Proximity: Score 5

- Within one mile of impacted parks for both East and West Options and would serve similar community
- Is in an area where there are less available parks in the immediate area for residents
- Per CPD coordination, additional weighting given to site as it would help to fulfill a current identified gap in parks

Vacancy/Availability: Score 3

- Meets acreage requirements of mitigation measures and new park standards.
- Majority of land is currently vacant with a minimal number of property owners (3 private property owners and one City of Chicago property)
- Would require acquisition of at least 1 active, privately owned residential properties to provide a baseball field replacement

Land Use/Zoning Compatibility: Score 5

- Current zoning – Residential (RS-1) and surrounding zoning business and commercial (B1-1, C1-1) is compatible with park uses
- Location is along Michigan Avenue, a corridor that is currently disinvested; park uses would be compatible with current land use and zoning and enhance community character area

Safety/Security: Score 5

- Highly visible site location along arterial commercial corridor
- Clear views for police scrutiny; ease of access for emergency services

Environmental Factors (EDR): Score 3

- Risk assessed Medium; see EDR report for further details on potential for contamination

Cost Considerations: Score 3

- Low to medium costs, and may require demolition of one building if acquiring/demolishing active use residential parcel

Site 3B – Total Score = 22

Location/Proximity: Score 5

- Directly adjacent to proposed station at 103rd Street
- Size and shape of parcel is ideal for multi-uses within park setting
- Within .5 miles from either East or West alignment option impacts

Vacancy/Availability: Score 1

- City owned property and vacancy available
- Would compromise existing planned park and ride as part of the RLE Project

Land Use/Zoning Compatibility: Score 3

- Current zoning – Residential (RS-2) and surrounding zoning residential (RS-2), park (POS-2), and commercial (C1-1 and C2-1); generally compatible uses for a park
- Directly adjacent to Block Park to the west of the proposed alignment; park space already exists and may not be the best use for this site location given other nearby park availability

Safety/Security: Score 5

- Highly visible site location along arterial active corridor and adjacent to proposed station
- Clear views for police scrutiny; ease of access for emergency services

Environmental Factors (EDR): Score 3

- Risk assessed Medium; see EDR report for further details on potential for contamination

Cost Considerations: Score 5

- Low/Medium cost and would require demolition of one existing building

Site 6 - Total Score = 20

Location/Proximity: Score 5

- Adjacent to proposed station/alignment with potential for connecting access
- Within .5 miles from either East or West alignment option impacts

Vacancy/Availability: Score 5

- All parcels shown as available/vacant in Property Appraiser database
- Several parcels comprising the site are city owned, and there are a limited number (3) other property owners to obtain property; for sale sign noted on field investigation

Land Use/Zoning Compatibility: Score 3

- Current zoning – Limited manufacturing/business park(M1-1) and surrounding zoning residential (RS-2) is generally compatible for park use

Safety/Security: Score 1

- Emergency access available but may be difficult given location behind existing residential
- Views may be obscured and safety concerns may prevail as it faces garages/backs of homes on an alleyway and the alignment would run on the west of the park

Environmental Factors (EDR): Score 3

- Risk assessed Medium; see EDR report for further details on potential for contamination

Cost Considerations: Score 3

- Low to medium costs, and would require demolition of one building on 107th Street

Site 7 - Total Score = 20

Location/Proximity: Score 5

- Adjacent to proposed station/alignment with potential for connecting access
- Within one mile of either East or West alignment option impacts

Vacancy/Availability: Score 3

- Vacant site and large acreage
- One owner to work with on acquisition per Property Appraiser database

Land Use/Zoning Compatibility: Score 3

- Current zoning – Limited manufacturing/business park(M1-1) and surrounding zoning residential (RS-2) is generally compatible for park use

Safety/Security: Score 1

- Emergency access available but may be difficult given location behind existing residential
- Views may be obscured as it faces garages/backs of homes on an alleyway and the alignment would run on the west of the park

Environmental Factors (EDR): Score 3

- Risk assessed Medium; see EDR report for further details on potential for contamination

Cost Considerations: Score 5

- Low cost anticipated; additional costs may apply if existing cell tower is required to be relocated

Site 8A – Total Score = 28

Location/Proximity: Score 5

- Directly adjacent to proposed station at 111th Street
- Within one mile of either East or West alignment options

Vacancy/Availability: Score 5

- Large contiguous parcel that exceeds replacement acreage requirement
- Currently proposed as a park and ride location for RLE Project; park could be accommodated in tandem with park and ride
- Majority of property is city owned, with one additional parcel that would need to be acquired to accommodate park replacement and park and ride

Land Use/Zoning Compatibility: Score 5

- Current zoning – Limited manufacturing/business park(M1-1) and surrounding zoning residential (RS-2) and business/commercial (B1-1, C1-1) is generally compatible with park uses
- Zoning designation appears to be related to legacy uses and rezoning is compatible with current and adjacent uses
- Adjacent to existing community facilities and would enhance community center features within neighborhood

Safety/Security: Score 5

- Highly visible site location along arterial commercial corridor
- Clear views for police scrutiny; ease of access for emergency services

Environmental Factors (EDR): Score 3

- Risk assessed Medium; see EDR report for further details on potential for contamination

Cost Considerations: Score 5

- Low cost; no building demolitions needed and city-owned acquisition anticipated

Site 9A - Total Score = 10

Location/Proximity: Score 1

- This site is located a substantial distance from the RLE corridor and stations proposed and is more than 2 miles from the area of park impact.

- Other parks available nearby and would not fulfill existing park gap

Vacancy/Availability: Score 1

- Currently a number of active commercial uses existing at or nearby the location, including the local alderman's office, restaurants, and other commercial office uses.

Land Use/Zoning Compatibility: Score 1

- Current zoning – Residential (RS-1) and surrounding zoning business and commercial (B1-1, C1-1). May not provide the best compatibility for park uses and may compromise commercial redevelopment opportunities at this location.

Safety/Security: Score 3

- Highly visible site location along arterial commercial corridor

- Clear views for police scrutiny; ease of access for emergency services

Environmental Factors (EDR): Score 1

- Risk assessed High; see EDR report for further details on potential for contamination

Cost Considerations: Score 1

- High costs due to street re-routes that would be needed to combine parcels into suitable park space; additional building demolition needed and unknown remediation costs

Site 9B – Total Score = 12

Location/Proximity: Score 1

- This site is located a substantial distance from the RLE corridor and stations proposed and is more than 2 miles from the area of park impact.

- Other parks available nearby and would not fulfill existing park gap

Vacancy/Availability: Score 1

- Currently a number of active commercial uses existing at or nearby the location, including the local alderman's office, restaurants, and other commercial office uses.

Land Use/Zoning Compatibility: Score 1

- Current zoning – Residential (RS-1) and surrounding zoning business and commercial (B1-1, C1-1). May not provide the best compatibility for park uses and may compromise commercial redevelopment opportunities at this location.

Safety/Security: Score 3

- Generally visible site location near an arterial commercial corridor; set back may impede views slightly

- Clear views for police scrutiny; ease of access for emergency services

Environmental Factors (EDR): Score 3

- Risk assessed Medium; see EDR report for further details on potential for contamination

Cost Considerations: Score 3

- Medium costs, requiring demolition of buildings and relocation of alderman's office

Site 10 - Total Score = 23

Location/Proximity: Score 3

- Located more than 2 miles from RLE Project area and area of park impacts
- Adjacent to Major Taylor Trail and would provide additional park land in this area
- Lower weighting prescribed to this site as CPD has existing plans for developing this property as parkland separately and in the near-term

Vacancy/Availability: Score 5

- Large vacant property available for purchase
- Minimal property owners for outreach on purchase

Land Use/Zoning Compatibility: Score 3

- Current zoning – Residential (RS-1) and surrounding zoning business and commercial (B1-1, C1-1) is generally compatible with park uses

Safety/Security: Score 3

- Generally visible site location along existing Major Taylor Trail and residences
- Clear views for police scrutiny; ease of access for emergency services

Environmental Factors (EDR): Score 5

- Risk assessed Low; see EDR report for further details on potential for contamination

Cost Considerations: Score 5

- Low anticipated costs. Medium level costs if additional soil remediation is needed based on field visit investigations

Site 11 - Total Score = 16

Location/Proximity: Score 1

- Located more than 2 miles from RLE Project area and area of park impacts

Vacancy/Availability: Score 3

- Under consideration by the City as a Planned Unit Development; additional coordination with city would be needed on availability of land

Land Use/Zoning Compatibility: Score 1

- Current zoning – Residential (RS-1) and surrounding zoning business and commercial (B1-1, C1-1) is generally compatible with park uses

- Large parcel with commercial development potential; park use may not be best and highest use for the property and may impact ability for commercial redevelopment in corridor

Safety/Security: Score 5

- Highly visible site location along arterial commercial corridor

- Clear views for police scrutiny; ease of access for emergency services

Environmental Factors (EDR): Score 3

- Risk assessed Medium; see EDR report for further details on potential for contamination

Cost Considerations: Score 3

- Medium costs given paved area currently existing and need to remove/relocate utilities (i.e., telephone piles and power lines) on properties

Site 12 – Total Score = 26

Location/Proximity: Score 3

- Located more than 2 miles from RLE Project area and area of park impacts
- Located near proposed 116th Street station and would allow for development of this station with co-located station as part of RLE Project

Vacancy/Availability: Score 5

- Currently vacant property and based on field investigations, one building remaining is scheduled for demolition currently

Land Use/Zoning Compatibility: Score 5

- Current zoning – Residential (RS-1) and surrounding zoning business and commercial (B1-1, C1-1) is generally compatible with park uses
- Near proposed station location and park use may help to spur commercial economic development and nearby transit-oriented development potential

Safety/Security: Score 5

- Highly visible site location along arterial commercial corridor
- Clear views for police scrutiny; ease of access for emergency services

Environmental Factors (EDR): Score 3

- Risk assessed Medium; see EDR report for further details on potential for contamination

Cost Considerations: Score 5

- Low costs anticipated. Medium level costs if additional remediation is needed to address pending demolition of building on proposed site

Site 15 - Total Score = 16

Location/Proximity: Score 1

- Located more than 2 miles from RLE Project area and area of park impacts

- Adjacent to already existing parkland and community facilities in this area are already well served by parks and amenities

Vacancy/Availability: Score 5

- One property owner (city-owned) and currently vacant land

Land Use/Zoning Compatibility: Score 1

- Current zoning – Residential (RS-1) and surrounding zoning business and commercial (B1-1, C1-1) is generally compatible with park uses

- Adjacent to some manufacturing uses and may not be best compatibility of uses to incorporate parkland in this area

Safety/Security: Score 5

- Highly visible site location along arterial commercial corridor

- Clear views for police scrutiny; ease of access for emergency services

Environmental Factors (EDR): Score 1

- Risk assessed High; see EDR report for further details on potential for contamination

Cost Considerations: Score 3

- Medium costs given that site currently consists of paved areas and based on previous manufacturing uses there is an unknown level of remediation that may be needed on the property

Site 17 - Total Score = 16

Location/Proximity: Score 1

- Located more than 2 miles from RLE Project area and area of park impacts
- Requires combination of properties to meet 1.9 acres, and does not meet CPD standards for new park

Vacancy/Availability: Score 3

- Lands are vacant and voluntary acquisition is highly probable
- Combined parcel ownership may be more cumbersome as there are at least 7 property owners associated with combined land

Land Use/Zoning Compatibility: Score 3

- Current zoning – Residential (RS-1) and surrounding zoning business and commercial (B1-1, C1-1) is generally compatible with park uses
- Located within commercial corridor and park use is not considered highest and best use of land

Safety/Security: Score 1

- Highly visible site location along arterial commercial corridor
- Clear views for police scrutiny; ease of access for emergency services

Environmental Factors (EDR): Score 3

- Risk assessed Medium; see EDR report for further details on potential for contamination

Cost Considerations: Score 5

- Low costs, no building demolition required

Attachment 5: Environmental Database Report Findings

Introduction

CWC reviewed an environmental database search report, prepared by Environmental Data Resources, Inc. (EDR), to identify listings in the databases for each of the potential park replacement sites and for properties within the search radii established in the ASTM standard. The EDR report identified each subject property in the available environmental regulatory agency databases. The EDR report also identified numerous adjoining properties in the regulatory databases. Not all of the findings present an environmental concern for the subject property due to their relative location to the subject property, direction of groundwater flow, regulatory status of no further action required, or type of reported activities. In addition, the list of orphan sites (sites reported as potentially being in the project area, but which could not be mapped due to inadequate or incomplete address information) were reviewed.

Each potential park replacement site was assigned a level of concern based on the following criteria:

- **High Concern** - Sites with known/probable soil, groundwater, or soil gas contamination that not been remediated, or where remediation was incomplete or undocumented. Other considerations include the type and mobility of any contamination, distance to the project, and groundwater impacts.

- **Moderate Concern** - Sites with known/potential soil, groundwater, or soil gas contamination and where remediation is in progress or was completed with restrictions in place, or contaminants do not appear to pose a concern for the project. Sites may also be considered a Moderate Concern based on the type and intensity of former land use (e.g., chemical manufacturers, machine shops, gas stations, laundromats), even though they did not otherwise have an environmental database listing. Sites where hazardous materials or petroleum products may have been or are stored, but where there is no known contamination associated with the property based on all available information.

- **Low Concern** - There is no evidence of hazardous materials or petroleum products having been stored onsite, and there is no known contamination associated with the property based on all available information. They may include hazardous material generator sites, sites with permitted air toxic emissions, or sites with spills or leaks that were subsequently remediated and are no longer a concern.

Site 2B (near 101st Street and Michigan Avenue)

Environmental Records Review

- **Subject Property:** The Site was not listed in any of the databases searched by EDR.

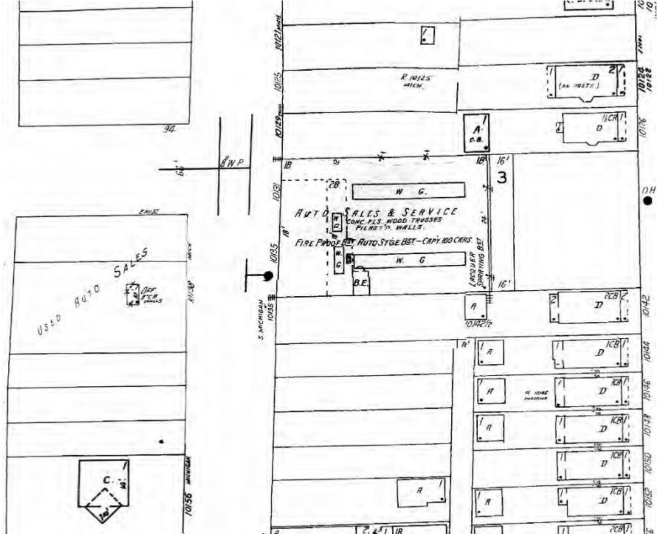
- **NPL, CERCLIS, CERCLIS NFRAP:** There are no NPL, CERCLIS, or CERCLIS NFRAP sites within 1 mile of the subject property.

Historical Records Review

- **Sanborn Maps**

  - 1911: Private residences are shown on the Site.

  - 1938, 1950, 1975: A building is shown on the Site (10131 S. Michigan Avenue, parcel 2510317016) as "Auto Sales and Service" with a capacity of 100 cars with a "Lacquer Spraying" area.


10121 MICH.
R. 10125 MICH.
D (ON POSTS)
10124
10125
10129
A C.B.
94
10126
WP
18
18
16'
3
2B
W. G.
D.H.
10131
AUTO SALES & SERVICE
CONC. FLS. WOOD TRUSSES
PILAST'D. WALLS
FIRE PROOF BST. AUTO STGE BST.—CAP'Y 100 CARS
W. G.
LACQUER SPRAYING BST.
16'
B.E.
10135
USED AUTO SALES
OFF.
10130
S. MICHIGAN 10135
A
D
10142
10142½
10144
10146
10148
10150
10152
C.
10156
MICHIGAN

  - 1987: The "Auto Sales and Service" shares the same space with "Salem Baptist Church." The "Lacquer Spraying" area in the southeast corner of the property is still shown.

  - 1989, 1991, 2002, 2004: Property unlabeled.

- **Aerial Photographs**

  - 1938: Large building in the location of the "Auto Sales and Service" building as shown on the Sanborn map. A large building that matches the footprint of Bennett Elementary School is to the east of the Site. Residential area surrounding the property.

  - 1959: Large car lot on the property at the western adjacent corner of S. Michigan Ave and E. 101st Place, across from the “Auto Sales and Service” building.
  - 1973: The car lot is larger than shown in the 1959 aerial photograph, now spanning from E. 101st Street to E. 102nd Street along the western side of S. Michigan Ave and on the parcels to the north of the “Auto Sales and Service” building to E. 101st Street.
  - 1978: Further expansion of the car lot, with car lot added to the adjacent parcels to the south of the “Auto Sales and Service” building to E. 102nd Street.
  - 1983: All the car lots are now abandoned with the exception of the lot on the corner of E. 102nd St and S. Michigan Street.
  - 1993: Lots north and south of the “Auto Sales and Service” property is empty and building appears to be demolished. Car lots have reappeared on lots located across S. Michigan Street ranging from E. 101st Street to E. 102nd Street.

Environmental Concern Rating: Medium Concern

- Hazardous materials or petroleum products may have been stored onsite, but there is no known contamination associated with the property based on all available information.

Site 3B (near 103rd Street and Eggleston Avenue)

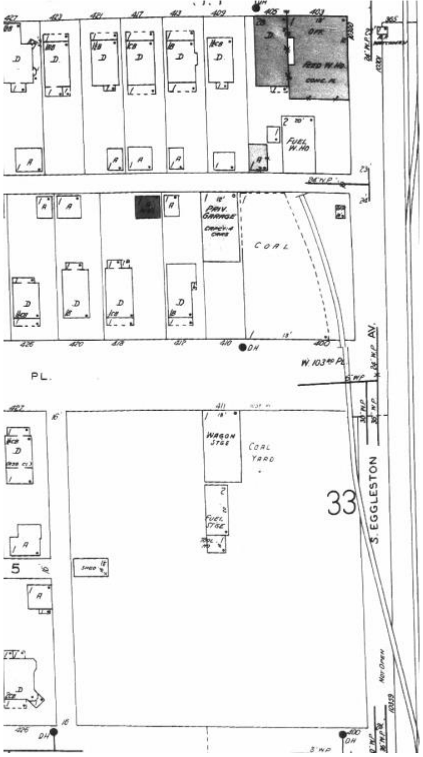
Environmental Records Review

- **Subject Property**
    - A parcel associated with the Site (403 W. 103rd Street, parcel 2516105035) is listed in the CDPH environmental dataset with complaints. The EDR Report does not provide additional details about the CDPH records.
    - A parcel associated with the Site (405 W. 103rd Street, parcel 2516105034) is listed in the CDPH environmental dataset for Asbestos and Demolition Notifications. The EDR Report does not provide additional details about the CDPH records.
    - A parcel associated with the Site (405 W. 103rd Place, closest parcel number is 2516107010) is listed in the CDPH environmental dataset with complaints. The EDR Report does not provide additional details about the CDPH records.
- **Nearby Properties**
    - The Roseland Pumping Station (0.036 mile southeast of the subject property at 351 W. 104th Street) has active air monitoring for compliance and is under the State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards. The latest results were in 2014, and the site was monitored for NOx, Particulates, PM10, PM 2.5, SO2, VOM, CO2, CO, CF4, and COG.
- **NPL, CERCLIS, CERCLIS NFRAP:** There are no NPL, CERCLIS, or CERCLIS NFRAP sites within 1 mile of the subject property.

Historical Records Review

- **Sanborn Maps**
    - 1911: Coal shed and railroad spur located in northern portion of Site (400 W. 103rd Place, parcel 2516105033).
    - 1938: Fuel storage added to the central portion of the Site (401 W. 103rd Place, parcel 251610701). Fuel warehouse added to northern portion of Site (403 W. 103rd Street, parcel 2516105035).

  - 1950: Coal yard has expanded to southern portion of Site, next to the Fuel Storage area.


427
423
421
417
413
409
405
403
OFF.
FEED W. HO.
CONC. FL.
FUEL W. HO.
PRIV. GARAGE
COAL
426
420
418
412
410
400
DH
W. 103RD PL.
PL.
411
WAGON STGE
COAL YARD
FUEL STGE
SHED
33
S. EGGLESTON
AV.
5
NOT OPEN
10359

  - 1975: A construction yard is present on the southern portion of Site (401 W. 103rd Place, parcel 2516107010). The fuel storage and coal yard are no longer present.

  - 1987: The construction yard has transitioned to a junk yard. The fuel warehouse is no longer present.

  - 2002: The Site is mostly vacant with the exception of residences in the northern portion (403 and 405 W. 103rd Street, parcel numbers 2516105035 and 2516105034). The railroad spur is no longer present.

- **Aerial Photographs**

  - 1938: Site appears to be darker than surrounding properties.

  - 1964: There appears to be three or four aboveground storage tanks (ASTs) on the southern portion of the Site (parcel 251610701).

  - 1978: A junk yard can be seen in the 1978 aerial photograph. Debris spans a large portion of the Site (parcels 251610701 and 2516105033). The debris is last seen in the 1994 aerial photograph. The junk yard area is vacant in the 1999 aerial photograph.

  - 2007, 2009, 2010, 2011, 2012: Junk yard area has miscellaneous debris.

Environmental Concern Rating: Medium Concern

- Hazardous materials or petroleum products may have been stored onsite, but there is no known contamination associated with the property based on all available information.

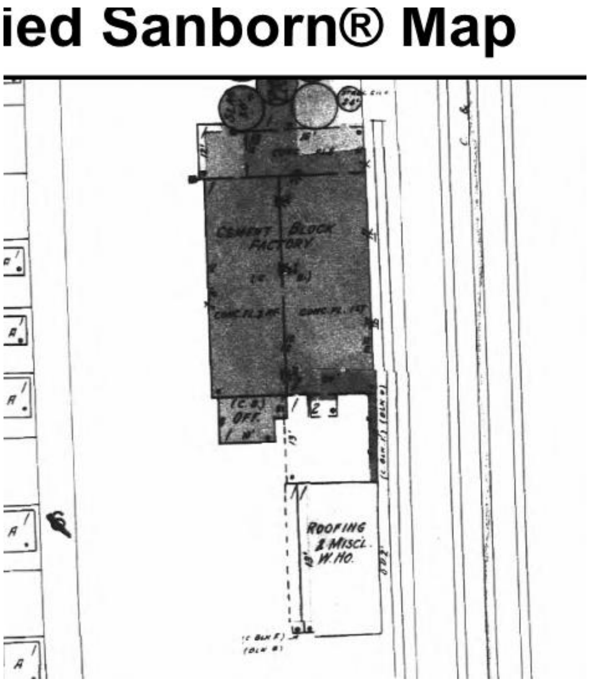
Site 6

Environmental Records Review

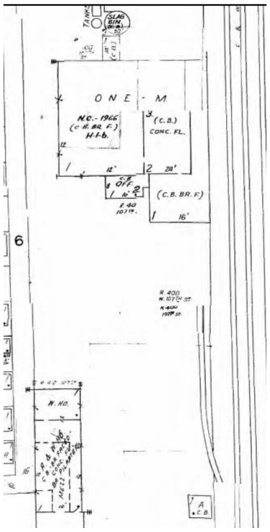
- **Subject Property**
  - The southern portion of Site (400 W. 107th Street, parcel 2516129028) is listed in the CDPH environmental dataset was records of enforcement, inspections, and tanks. The EDR Report does not provide additional details about the CDPH records.
- **Nearby Properties**
  - The adjacent parcel to the north (411 W. 105th Street, parcel 251612024 [listed as 413 W. 105th Street in the EDR Report]) is listed as the Illinois Bell Telephone Company, a RCRA Non-Generator site.
  - The Roseland Pumping Station (0.187 mile north of the subject property at 351 W. 104th Street) has active air monitoring for compliance and is under the State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards. The latest results were in 2014, and the site was monitored for NOx, Particulates, PM10, PM 2.5, SO2, VOM, CO2, CO, CF4, and COG.
- **NPL, CERCLIS, CERCLIS NFRAP:** There are no NPL, CERCLIS, or CERLCIS NFRAP sites within 1 mile of the subject property.

Historical Records Review

- **Sanborn Maps**
  - 1950: A “Cement Block Factory” with several tanks is located on the central portion of the Site (10638 S. Stewart Avenue, parcel 2516129030). A railroad spur is shown running along the east side of the building.


ied Sanborn® Map
CEMENT BLOCK FACTORY
CONC. FL.
(C.B.) OFF.
2
ROOFING & MISCL. W.HO.
R
R
R
R
R

- 1987: A “slag bin” and tanks are located on the central portion of the Site (10638 S. Stewart Avenue, parcel 2516129030). The “Cement Block Factory” has been replaced by a building identified as “One-M.” The railroad spur appears to stop south of the building.


TANK
SLAG BIN
ONE - M
(C.B.)
CONC. FL.
OFF.
(C.B. BR. F.)
6
R 400 W. 107th ST.
W. HO.

- 2002: The Site is mostly vacant, with only one building on the southern portion of the Site (400 W. 107th Street, parcel 2516129028).

- **Aerial Photographs**
  - 1964: Potential ASTs (possibly the slag bin/tanks referenced in the Sanborn Maps) appear behind the building on the central portion of the Site.
  - 1984: There appears to be debris on southern portion of Site (400 W. 107th Street, parcel 2516129028).
  - 2007: Miscellaneous small containers are located on the property to the north of the Site (411 W. 105th Street, parcel 2516121024).

Environmental Concern Rating: Medium Concern

- Hazardous materials or petroleum products may have been stored onsite, but there is no known contamination associated with the property based on all available information.

Site 7

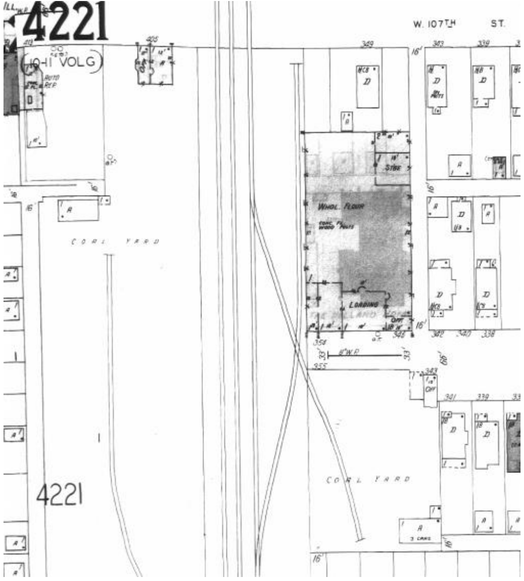
Environmental Records Review

- **Subject Property**
  - The northern portion of the Site (405 W. 107th Street, parcel 2516307025) was listed in the CDPH environmental dataset as having records of permits. The EDR Report does not provide additional details about the CDPH records.
  - The northern portion of the Site (407–411 W. 107th Street) was listed in the CDPH environmental dataset with records of complaints and inspections. The EDR Report does not provide additional details about the CDPH records.
  - A portion of the Site (401–411 W. 107th Street), described as a vacant lot, is listed in the Bureau of Land database.
- Nearby Properties
  - The adjacent property to the south (410 W. 109th Street, parcel 2516315024) has a history of auto stations (listed as Harris Transmission Company from 1999–2002).
- **NPL, CERCLIS, CERCLIS NFRAP:** There are no NPL, CERCLIS, or CERLCIS NFRAP sites within 1 mile of the subject property.

Historical Records Review

- **Sanborn Maps**
  - 1939: A “coal yard” and railroad spur are located on the Site (parcels 2516315027, 2516315025, and 2516307022). An additional “coal yard” is located across the train tracks

from the Site to the east, east (347 W. 107th Place, parcel 2516401001).


4221
CHI VOLG
AUTO REP
W. 107TH ST.
405
349
343
339
COAL YARD
WHOL. FLOUR
STGE
LOADING
OFF
351
355
342
340
338
343
341
339
COAL YARD
3 CARS
4221
16'

- ○ 1989-2004: The coal yard is no longer shown. The railroad spur is still present on the Site.

- **Aerial Photographs**
  - ○ 1938: The Site appears to be darker than the surrounding properties. The coal yard to the east also appears darker.
  - ○ 1984: The Site appears to be covered by debris.
  - ○ 1988: Miscellaneous debris is shown on the central portion of the Site (405 W. 108th Street, parcel 25163150250).
  - ○ 1999: Miscellaneous debris is shown on the property south of the Site (410 W. 109th Street, parcel 25163150240).

Environmental Concern Rating: Medium Concern

- Hazardous materials or petroleum products may have been stored onsite, but there is no known contamination associated with the property based on all available information.

Site 8 (near Eggleston Avenue and 111th Street)

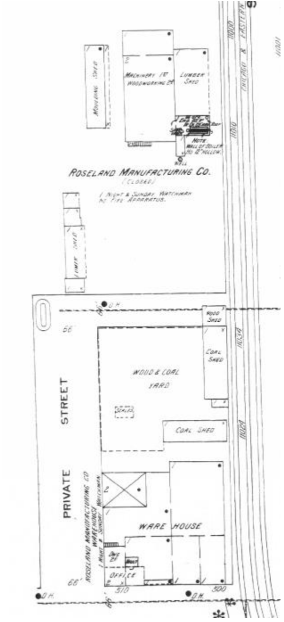
Environmental Records Review

- **Subject Property**
    - A parcel within the Site is listed with complaints and inspections in the CDPH environmental dataset (401 W. 110th Street, parcel 2516329006). The EDR Report does not provide additional details about the CDPH records.
- **Nearby Properties**
    - The adjacent property to the south of the Site (Chicago Dept of Env (Spill) at 11100 S. Stewart Avenue, no parcel number given) is listed as a RCRA Non-Generator site. This may be an error; on Google Maps the property (Roseland Tune-Up Center, 401 W. 111th Street, parcel 2521107008) is an auto station and LUST site (located 0.033 mile south).
    - The adjacent parcel to the south of the Site (Pentecostal Temple at 419 W. 111th Street, 0.016 mile south-southwest from Site, parcel 2521107001) is an active LUST site. The EDR Report does not provide additional details about the LUST site. Pentecostal Temple is also a RCRA-SQG.
    - Ransom Transportation (352 W. 110th Street, parcel 25164190140, 0.033 mile northeast of the Site) is a RCRA-CESQC and an active LUST site. The EDR Report does not provide additional details about the LUST site.
- **NPL, CERCLIS, CERCLIS NFRAP:** There are no NPL, CERLCIS, or CERCLIS NFRAP sites located within 1 mile of the Site.

Historical Records Review

- **Sanborn Maps**
    - 1897: The northern portion of the Site (412 W. 109th Street, parcel 2516320023) is shown as “Roseland Manufacturing Corporation (closed).” A “Wood and Coal Yard” with two coal sheds is shown on the southern portion of Site (11037 and 41 S. Eggleston Avenue, parcel 2516329009, and 2516329008). The warehouse for “Roseland Manufacturing Co. Warehouse” is shown on the southern portion of the Site (402 E. 111th Street, parcel

2516329005).


MOULDING SHED
MACHINERY 1ST WOODWORKING 2D
LUMBER SHED
NOTE WALL OF BOILER HO. 12" HOLLOW
ROSELAND MANUFACTURING CO.
(CLOSED)
1 NIGHT & SUNDAY WATCHMAN NO FIRE APPARATUS.
LUMBER SHED
CHICAGO & EASTERN
11100
11010
11034
11024
11001
D.H.
66
WOOD SHED
COAL SHED
WOOD & COAL YARD
SCALES
COAL SHED
PRIVATE STREET
ROSELAND MANUFACTURING CO WAREHOUSE 1 NIGHT & SUNDAY WATCHMAN
WARE HOUSE
OFFICE
66'
510
500

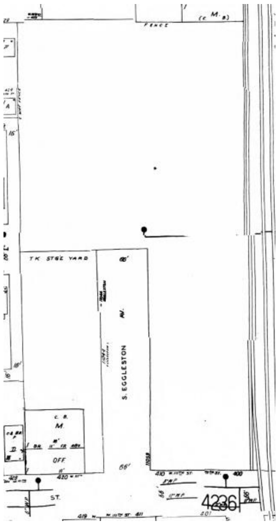
- 1911: The businesses in 1897 were replaced by "Roseland Mill and Lumber Co." Area now shown as a lumber yard.

- 1939: Site identified as lumber yards as part of the "A.T. Stewart Lumber Co. Roseland Yard."

- 1950: "Metal Working and Paint Dipping" building, assumed to be associated with the current business on Site, is shown on adjacent parcel to the west (420 W. 111th Street, parcel 25163290003). The Site is identified as "Roseland Mill and Lumber Co."

- 1989: The Site is vacant. "TK Stage Yard" is shown in the adjacent property to the west.

- 1992, 2002, 2004: The Site is vacant.


FENCE
(C M. B)
TK STGE YARD
S. EGGLESTON AV.
66'
C. B.
M
OFF
420
ST.
410 W. 111TH ST.
400
4236
419 W. 111TH ST.

- **Aerial Photographs**
    - 1973: Aerial photograph shows miscellaneous containers in the adjacent property to the west. There appears to be a small pool in the southern portion of property (also shown on the 1978 aerial photograph).

Environmental Concern Rating: Medium Concern

- Hazardous materials or petroleum products may have been stored onsite, but there is no known contamination associated with the property based on all available information.

Site 9A (near 111th Place and State Street)

Environmental Records Review

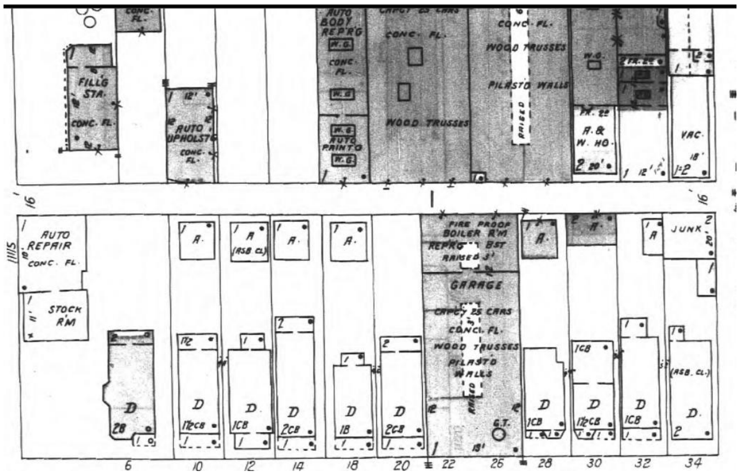
- **Subject Property**
    - A parcel in the southern portion of the Site (24 E. 112th Street, parcel 2522101023) is listed in the CDPH environmental dataset for Asbestos and Demolition Notifications and inspections. The EDR Report does not provide additional details about the CDPH records.
    - A parcel in the southern portion of the Site (12 E. 112th Street, parcel 2522101018) has a record of historical cleaners. (Neals Laundromat, 2006)
    - A parcel in the southern portion of the Site (14 E. 112th Street, parcel 2522101019) is listed in the CDPH environmental dataset with records of complaints and inspections. The EDR Report does not provide additional details about the CDPH records.
    - A parcel in the southern portion of the Site (34 E. 112th Street, parcel 2522101027) is listed in the CDPH environmental dataset with records of inspections. The EDR Report does not provide additional details about the CDPH records.
    - A parcel in the southern portion of the Site (16 E. 112th Street, parcel 2522101020) is listed in the CDPH environmental dataset with records of complaints, Asbestos and Demolition Notifications, and inspections. The EDR Report does not provide additional details about the CDPH records.
- **Nearby Properties**
    - Amoco (0.009 mile north-northwest of the Site at 2 W. 111th Place, parcel 2521203025), is listed as a RCRA Non-Generator with waste characterized as “ignitable waste” and “benzene.”
    - Roseland Marathon (0.073 mile north-northwest of the Site at 2 W. 111th Street, parcel 2516430043) is an active LUST site. The EDR Report does not provide additional details about the LUST site. The EDR Report states that there are several other USTs on this property.
- **NPL, CERCLIS, CERCLIS NFRAP**
    - 109th Place Tear Gas is a CERCLIS site located 0.237 mile north of the Site (the address is shown in the EDR Report as “SG West 109th Place”).
    - There are no NPL or NFRAP CERCLIS sites located within 1 mile of the Site.

Historical Records Review

- **Sanborn Maps**

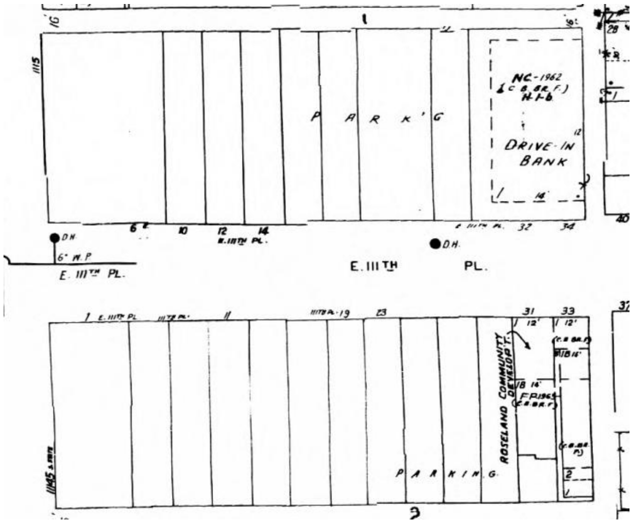
    - 1897: “Roseland Bottling Works” is shown on the western parcel of the Site (6 E. 111th Street, parcel 2522100012). In 1911, there appears to be a tank (illegible label) within the “Bottling Works” business.

    - 1939: An auto repair business is located in northwestern portion of Site (6 E. 111th Street, parcel 2522100012). A parking garage is located on northern portion of Site (32 E. 111th Street, parcel 2522100027). A filling station is located in the adjacent parcel to the north (1 E. 111th Street, parcel 2522100028). Several automotive businesses are shown in adjacent parcels to the north.


CONC. FL.
FILL'G STA.
CONC. FL.
AUTO UPHOLST'G
CONC. FL.
AUTO BODY REP'R'G
CONC. FL.
AUTO PAINT'G
CAPCY 25 CARS
CONC. FL.
WOOD TRUSSES
CONC. FL.
WOOD TRUSSES
PILASTD WALLS
RAISED
A. & W. HO.
VAC.
16
AUTO REPAIR
CONC. FL.
1115
STOCK R'M
A.
A (ASB. CL.)
FIRE PROOF BOILER R'M
REP'R'G BST
RAISED 3'
GARAGE
CAPCY 25 CARS
CONC. FL.
WOOD TRUSSES
PILASTD WALLS
G.T.
JUNK
(ASB. CL.)
D
6
10
12
14
18
20
22
26
28
30
32
34

    - 1950: A welding business is shown in the northwestern portion of Site where the auto repair was in 1939.

- 1989: Parking lots span most of the Site. The automotive businesses in the adjacent parcels to the north are not shown.


PARK'G
NC-1962
(C.B.BR.F.)
H-F-6
DRIVE-IN
BANK
D.H.
6" W.P.
E. 111TH PL.
E. 111TH PL.
D.H.
ROSELAND COMMUNITY DEVELOPT.
PARKING
1115
1145

- **Aerial Photographs**
  - No significant findings.

Environmental Concern Rating: Medium Concern

- Hazardous materials or petroleum products may have been stored onsite, but there is no known contamination associated with the property based on all available information.

Site 9B (near 112th Street and State Street)

Environmental Records Review

- **Subject Property:** The Site was not listed in any of the databases searched by EDR.
- **Nearby Properties**
    - Amoco (0.1 mile north-northwest of the Site at 2 W. 111th Place, parcel 2521203025), is listed as a RCRA Non-Generator with waste characterized as “ignitable waste” and “benzene.”
    - Roseland Marathon (0.15 mile north-northwest of the Site at 2 W. 111th Street, parcel 2516430043) is an active LUST site. The EDR Report does not provide additional details about the LUST site. The EDR Report states that there are several other USTs on this property.
    - Illinois Bell, located 0.163 mile south-southwest of the Site, is a RCRA Non-Generator with waste characterized as “ignitable waste, corrosive waste, and lead.”
    - There is an unnamed Brownfield site located 0.197 mile south of the Site (3 W. 114th Street, parcel 2521229037 [closest parcel number]). The Brownfield site is suspected to be an abandoned service station. The property is now owned by the City of Chicago.
- **NPL, CERCLIS, CERCLIS NFRAP**
    - 109th Place Tear Gas is a CERCLIS site located 0.237 mile north of the Site (the address is shown in the EDR Report as “SG West 109th Place”).
    - There are no NPL or CERCLIS NFRAP sites within 1 mile of the subject property.

Historical Records Review

- **Sanborn Maps**
    - 1989: Paint shop located on the eastern portion of the Site (34 E. 112th Place, parcel 2522105027).
- **Aerial Photographs**
    - No significant findings.

Environmental Concern Rating: Medium Concern

- Hazardous materials or petroleum products may have been stored onsite, but there is no known contamination associated with the property based on all available information.

Site 10 (near 113th Street and Peoria Street)

Environmental Records Review

- **Subject Property**: The Site was not listed in any of the databases searched by EDR.

- **NPL, CERCLIS, CERCLIS NFRAP**: There are no NPL, CERCLIS, or CERCLIS-NFRAP sites located within 1 mile of the Site.

Historical Records Review

- **Sanborn Maps**
    - 1989: Start of Sanborn Maps, vacant. No notables for area/site.

- **Aerial Photographs**
    - Aerial photographs show that Site has never been developed.

Environmental Concern Rating: Low Concern

- There is no evidence of hazardous materials or petroleum products having been stored onsite, and there is no known contamination associated with the property based on all available information.

Site 11 (near 115th Street and State Street)

Environmental Records Review

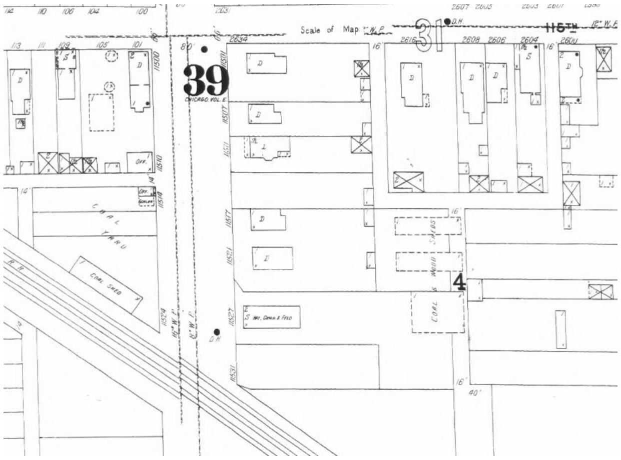
- **Subject Property**: The Site was not listed in any of the databases searched by EDR.

- **NPL, CERCLIS, CERCLIS NFRAP**: There are no NPL, CERCLIS, or CERCLIS-NFRAP sites located within 1 mile of the Site.

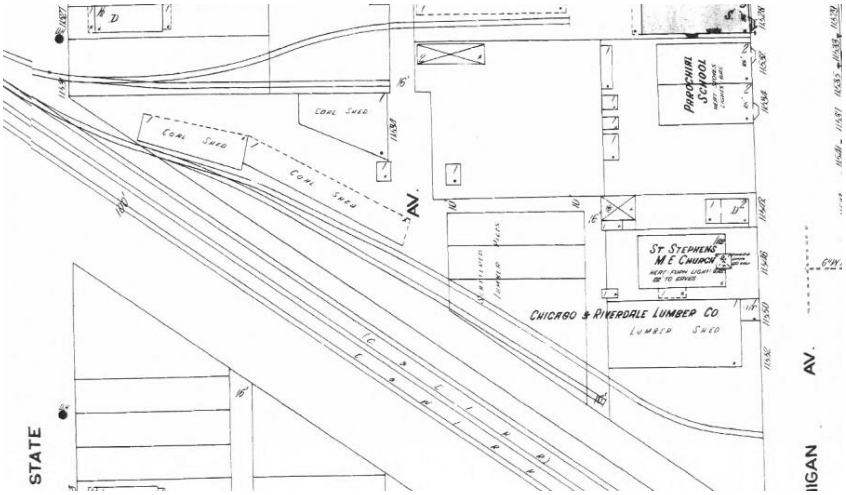
Historical Records Review

- **Sanborn Maps**

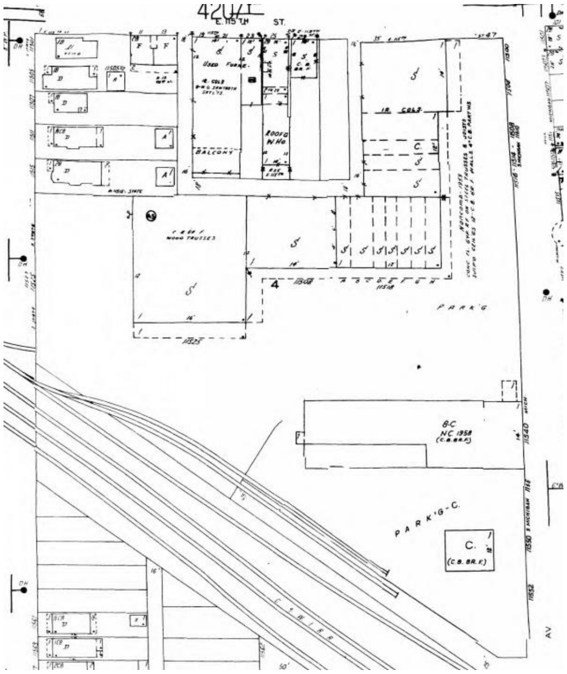
    - 1897: “Coal and Wood Sheds” located in the center of the Site (11527 S. State Street, parcel 2522300007).”Coal Shed and Coal Yard” also located in adjacent parcel to the west (11514 S. State Street, parcel 2521407029).


Scale of Map
115TH
39
CHICAGO VOL. E
31
4
COAL YARD
COAL SHED
OFF.
COAL & WOOD SHEDS
COAL
HAY, GRAIN & FEED
R.R.
16" W.P.
8" W.P.
12" W.P.
D.H.
11500
11501
11507
11510
11511
11514
11517
11521
11524
11527
11531
2634
2616
2608
2606
2604
2600
2607
2605
2603
2601
114
113
111
110
109
106
105
104
101
100
80'
40'
16'
14'

    - 1911: Multiple coal sheds and railroad spurs added to the southwestern portion of the Site (11562 S. Wabash Avenue, parcel 2522300019). “Chicago and Riverdale Lumber Company” established in the southeastern portion of the Site (11552 and 11578 S. Michigan Avenue, parcels 2522300068 and 2522300058).


COAL SHED
COAL SHED
COAL SHED
PAROCHIAL SCHOOL
ST STEPHENS M.E. CHURCH
CHICAGO & RIVERDALE LUMBER CO.
LUMBER SHED
AV.
AV.
STATE
IGAN

- ○ 1939: "Reading Coal Co. Coal Yard" established on central portion of the Site (11562 S. Wasbash Avenue, parcel 2522300019 and 11517 to 11527 S. State Street, parcels 2522300005 to 2522300007). "Filling Station" added to western boundary of same parcels.
- ○ 1950: Coal yard is no longer on Site. Coal yard gone, "Auto Body Repair and Painting" shop located on eastern portion of the Site (11530 S. Michigan Avenue, parcel 2522300042).
- ○ 1989: Large building established in the central portion of the Site. No Sanborn maps between 1950 and 1989.


4207
E. 115TH ST.
PARK'G
PARK'G-C.
AV

- **Aerial Photographs**
    - 1938: Coal yard referenced in Sanborn map present in the aerial photograph.
    - 1952: Central portion of the Site appears to be vacant.
    - 1959: Large building that is referenced in the 1989 Sanborn map is seen in the aerial photograph.
    - 2007: Large building has been demolished. The Site is vacant with the exception of a cluster of buildings in the northwestern corner of the Site.
    - 2012: Site is completely vacant.

Environmental Concern Rating: Medium Concern

- Hazardous materials or petroleum products may have been stored onsite, but there is no known contamination associated with the property based on all available information.

Site 12 (near Michigan Avenue and Kensington Avenue)

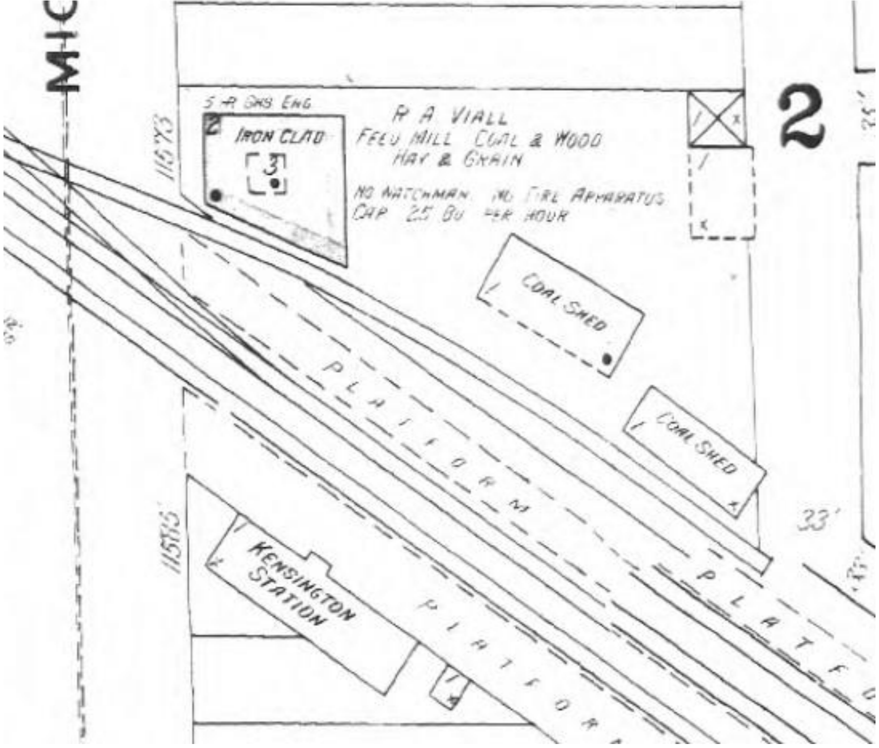
Environmental Records Review

- **Subject Property**
    - Northwestern parcel of the Site (Clark Oil and Refining, 11555 S. Michigan Avenue, parcel 2522304050) is a historical LUST site. The Site received an NFA/NFR letter on January 9, 1995. This parcel also appears in the IL SPILLS and IL BOL database as a LUST site.
- **Nearby Properties**
    - Tony's Auto Body, in the adjacent parcel to the north (0.047 mile to the northeast of the Site, 157 E. Kensington Avenue, parcel 2522304022) is listed in the RCRA-CESQG database with waste characterized as "ignitable waste." This parcel is also listed as a historical auto station.
    - Kensington Service Station (0.055 mile northeast of the Site at 162 E. Kensington Avenue, parcel 2522301044) is an active LUST site. There is no NFA/NFR letter associated with the LUST.
    - An active LUST station, identified as "Abandoned Gas Station," is located 0.177 mile northwest of the Site at 2 W. 115th Street, parcel 252123003. There is no NFA/NFR letter associated with the LUST.
    - Triangle Transmission (0.208 mile northwest of the Site at 35 W. 115th Street, parcel 2521230023 [closest parcel number]) is an active LUST site. There is no NFA/NFR letter associated with the LUST.
    - A US Brownfields site is located 0.258 mile north-northwest of the Site at 3 W. 114th Street. The property is suspected to be an abandoned service station, and is owned by the City of Chicago. The EDR Report provides no additional information.
- **NPL, CERCLIS, CERCLIS NFRAP:** There are no NPL, CERLCIS, or CERCLIS NFRAP sites located within 1 mile of the Site.

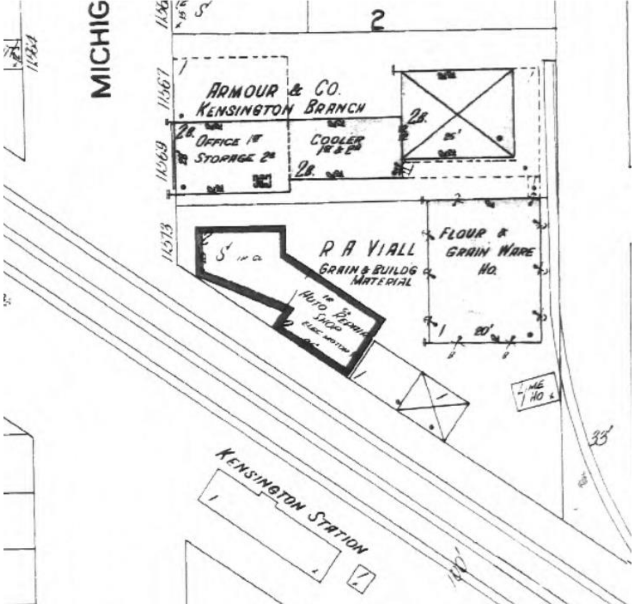
Historical Records Review

- **Sanborn Maps**
    - 1897: "R.A. Viall Feed Mill Coal and Wood" located on southwestern corner of the Site (11579 S. Michigan Avenue, parcel 2522304008). Kensington Station located on adjacent

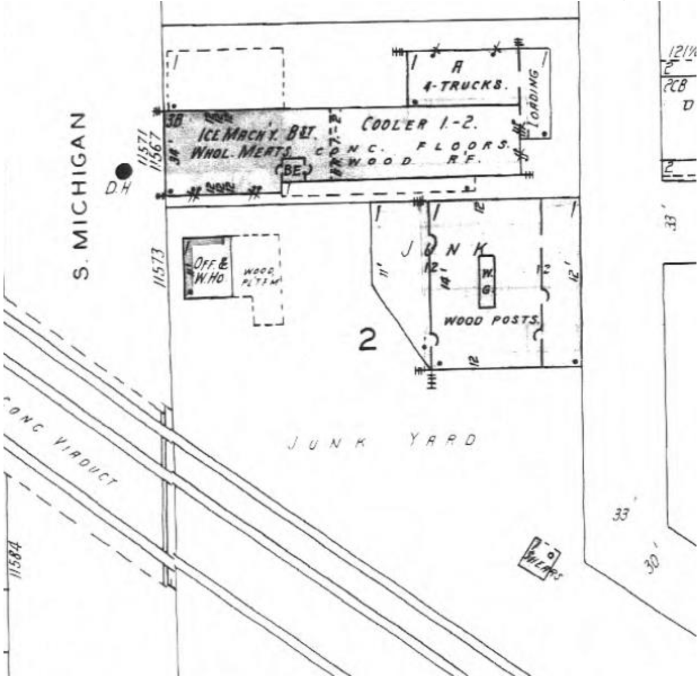
parcel to the southwest (11583 S. Michigan Avenue, parcel 2522304009).


MIC
2
5 H GAS ENG
IRON CLAD
3
11573
R A VIALL
FEED MILL COAL & WOOD
HAY & GRAIN
NO WATCHMAN NO FIRE APPARATUS
CAP 25 BU PER HOUR
COAL SHED
COAL SHED
PLATFORM
PLATFO
PLATFOR
11585
KENSINGTON STATION
33'

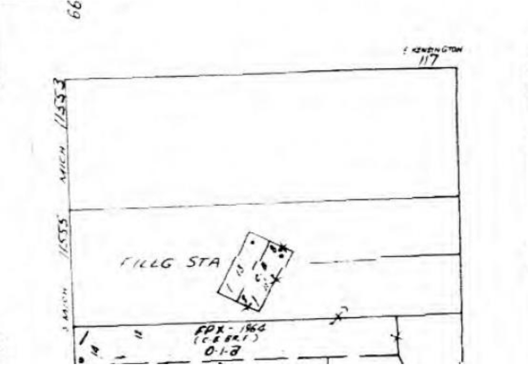
- 1911: Portion of "R.A. Viall Feed Mill Coal and Wood" replaced by an auto repair shop. Lime house added to the southeastern corner of the same parcel (11579 S. Michigan Avenue, parcel 2522304008). The coal sheds and railroad spurs have been removed from the parcel.


MICHIG
2
11567
11569
ARMOUR & CO.
KENSINGTON BRANCH
OFFICE 1st
STORAGE 2d
COOLER 1st & 2d
25'
11573
R A VIALL
GRAIN & BUILDG MATERIAL
1st AUTO REPAIR SHOP
FLOUR & GRAIN WARE HO.
20'
LIME HO
33'
KENSINGTON STATION

- 1939: The entire southwestern parcel was converted to a junk yard (parcel 11579 S. Michigan Avenue, parcel 2522304008). “Ice Machine and Wholesale Meats” business added to northern portion of Site (11567 S. Michigan Avenue, parcel 2522304007).


S. MICHIGAN
ICE MACH'Y. BT. WHOL. MEATS
COOLER 1-2.
4-TRUCKS.
LOADING
CONC. FLOORS. WOOD R.F.
OFF.& W.HO
JUNK
WOOD POSTS
2
JUNK YARD
CONC VIADUCT
11571
11567
11573
11584
D.H

- 1989: Junk yard has been removed from the Site. A filling station has been added to the northern portion of the Site (11555 S. Michigan Avenue, parcel 252230405).


66
E KENSINGTON
117
11553
MICH
11555
FILLG STA
FPX - 1964
0-1-2

- 1992: Filling station have been removed from the Site.
- 2002: Northern portion of the Site was utilized as a parking lot (11555 S. Michigan Avenue, parcel 2522304050).

- **Aerial Photographs**
  - 1938: Yard that appears to have the same footprint as “R.A. Viall Feed Mill Coal and Wood” referenced in the Sanborn maps is present in the aerial photograph.

Environmental Concern Rating: Medium Concern

- Hazardous materials or petroleum products may have been stored onsite, but there is no known contamination associated with the property based on all available information.

Site 15 (1000 E. 118th Street)

Environmental Records Review

- **Subject Property**
    - The Site (1000 E. 118th Street, parcel 2520414006) is listed in the CDPH environmental dataset as having tanks. The EDR Report does not provide additional details about the CDPH records.

- **NPL, CERCLIS, CERCLIS NFRAP**
    - Ingersoll, adjacent to the Site, at 1000 W. 120th Street, parcel 2529203003 [closest parcel number]) is a CERLIS site. The CERLIS site has a “Removal Only Site (No Site Assessment Work Needed” as is a non-NPL site. The property is also listed as a RCRA-NonGen with waste characterized as “quenching bath residues from oil baths” and “spent cyanide solutions.”

    - Former West Pullman Works, adjacent to the Site, at 1015 W. 120th Street (parcel 2529203003) is a CERCLIS site. The CERCLIS site shares the same parcel as the Ingersoll business above. The CERCLIS site has the following description: “Abandoned 21-acre site with high levels of PAHs, heavy metals, and asbestos.” This property is also listed as a RCRA-NonGen with many waste characterizations. The same property is also listed under “International Harvester – Former West Pullman Works” as a former LUST site; an NFA/NFR letter was received in November 2010.

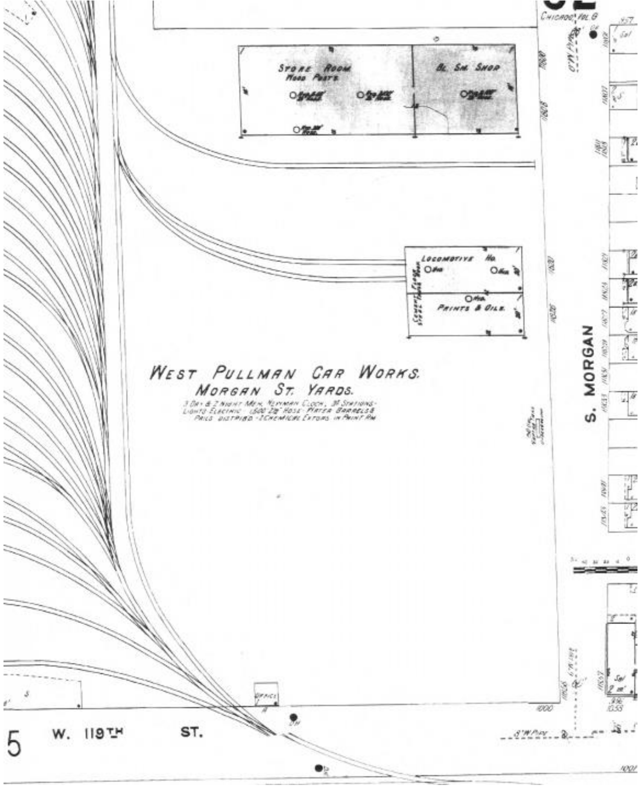
    - West Pullman Iron and Metal (located 0.156 mile southeast of the Site at 11954 S. Peoria Street, parcel 2529201021) is a CERCLIS NFRAP site. The site was archived in October 1995.

    - Dutch Boy (located 0.213 mile east-southeast of the Site at 12042 S. Peoria Street, parcel 2529203002 [closest parcel]) is a CERCLIS site. The site description states that it is associated with the International Harvester business mentioned above. The site was given NFRAP status in December 1984.

Historical Records Review

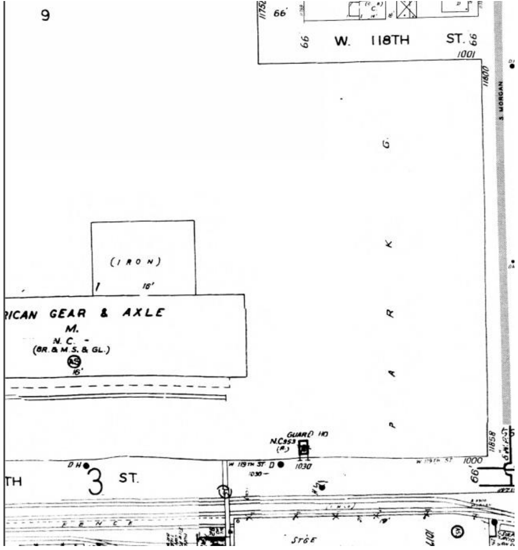
- **Sanborn Maps**
    - 1911: Site was a portion of the larger “West Pullman Car Works, Morgan Street Yards” facility. There is a paints and oils storage and locomotive storage building in the northern

portion of the Site.


STORE ROOM
BL. SM. SHOP
LOCOMOTIVE
PAINTS & OILS
WEST PULLMAN CAR WORKS.
MORGAN ST. YARDS.
S. MORGAN
5
W. 119TH ST.

- 1939: “West Pullman Car Works…” has been removed from the Site. The Site is vacant in the Sanborn map.

- 1989: Site is labeled as a parking lot. The parking lot appears to serve “American Gear and Axle” that is established on the western adjacent property (1100 W. 119th Street, parcel 2520414005). This appears to the last Sanborn map in 2004.


9
W. 118TH ST.
S. MORGAN
P A R K
(IRON)
RICAN GEAR & AXLE
M.
3 ST.

- **Aerial Photographs**
  - 1952: Southern portion of the Site appears to be used as a parking lot.
  - 1959: The Site is paved entirely, there are no buildings on the Site. There appears to be miscellaneous debris on the western boundary of the Site.
  - 1962: The southern portion of the Site is being used as a parking lot.
  - 1988: There are two pools on the northern portion of parking lot. This could be the result of stormwater.
  - 2005: The northern portion of the Site is overgrown.

Environmental Concern Rating: High Concern

- Hazardous materials or petroleum products may have been stored onsite, and proximity to historic release sites indicate a high concern.

Site 17 (near 120th Street and Halsted Street)

Environmental Records Review

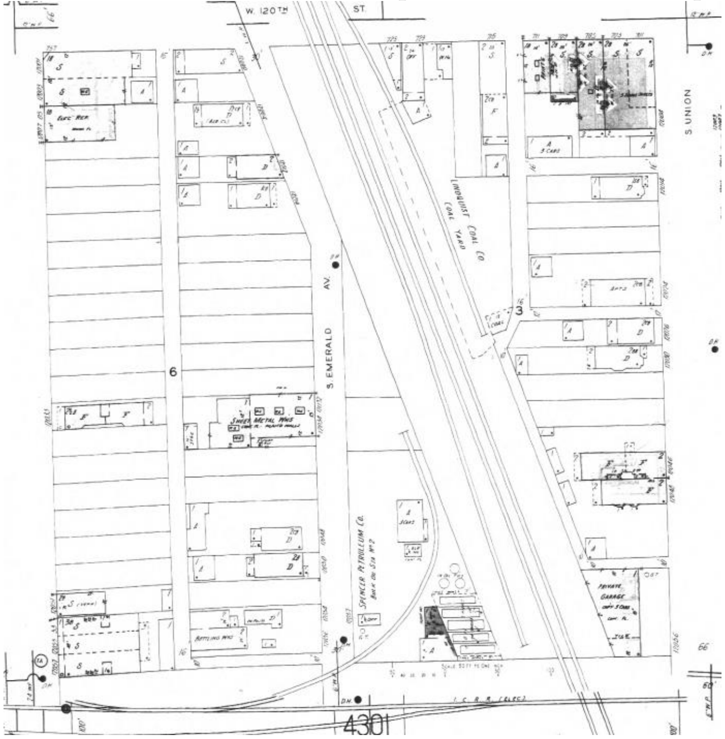
- **Subject Property**
    - Parcel 2528108036 associated with the Site (12048 S. Emerald Avenue) is listed in the CDPH environmental dataset with complaints, Asbestos and Demolition Notifications, and inspections. The EDR Report does not provide additional details about the CDPH records.
    - Parcel 2528108032 associated with the Site (12034 S. Emerald Avenue) is listed in the CDPH environmental dataset with complaints and inspections. The EDR Report does not provide additional details about the CDPH records. The same parcel is listed as a historical auto station (Mack's Auto Styling, 1999-2001).
    - Parcel 2528109001 associated with the Site (725 W. 120th Street) is listed as a historical cleaner.
- **Nearby Properties**
    - Hancock House (located 0.007 mile southeast of the Site at 12045 S. Emerald Avenue, parcel 2528109010) has five active USTs. The site is an active LUST site. The LUST does not have a NFA/NFR letter. There is an Illinois Institutional Control on this property that received an NFR letter in January 2012.
    - A property identified as ComEd Manhole (located 0.032 mile northwest of the Site at the intersection of W. 120th Street and S. Halsted Street [EDR does not provide a specific address]) is a RCRA Non-Gen with waste characterized as "lead."
    - Conoco Phillips 66 (located 0.062 mile north-northwest of the Site at 11959 S. Halsted Street, parcel 2528100011) has five active USTs. The same property is listed as Sandhu Petroleum Inc., (located at 11957 S. Halsted Street) is an active LUST site. The LUST has not received an associated NFA/NFR letter.
- **NPL, CERCLIS, CERCLIS NFRAP**
    - South Green Plating Shop (located 0.124 mile southwest of the Site at 12130 S. Green Street, parcel 2529209047) is a CERCLIS site. The CERCLIS site is described as a "former plating shop with elevated levels of cyanide, chromium, cadmium, and lead contamination." The site has a Non-NPL status of "Removal Only Site (No Site Assessment Work Needed." The site is also listed as a RCRA Non-Gen with waste characterized as "ignitable/corrosive waste" and "lead."
    - Dutch Boy Paints (located 0.155 mile west of the Site at 12042 S. Peoria Street, parcel 2529203002 [closest parcel]) is a CERCLIS site. The site is associated with the International

Harvester Site which is described to be associated with the Former West Pullman Works, which has a description of “Abandoned 21 acre site with high levels of PAHs, heavy metals, and asbestos.”

- West Pullman Iron and Metal (located 0.157 mile west-northwest of the Site at 11954 S. Peoria Street, parcel 2529201021) is a CERCLIS NFRAP site. The site was archived in October 1995.
- There are no NPL sites within 1 mile of the subject property.

Historical Records Review

- **Sanborn Maps**
  - 1911: The central adjacent parcel (12045 S. Emerald Avenue, parcel 2528109010) is labeled as a coal shed in the northern portion and a “cement block wks” in the southern portion. A railroad spur also runs across this parcel.
  - 1939: The parcels surrounding parcel 2528109003 (721 W. 120th Street) associated with the Site are labeled as Lundquist Coal Company Coal Yard. There is a parking garage in the southeastern portion of the Site (12054 S. Union Avenue, parcel 25281090250). Sheet Metal Works business is located at the central portion of the Site (12034 S. Emerald Avenue, parcel 2528108032). The central adjacent parcel (12045 S. Emerald Avenue, parcel 2528109010) is now labeled as Spencer Petroleum Company, with several tanks.



  - 1950: Central adjacent parcel (12045 S. Emerald Avenue, parcel 2528109010) is now labeled as “Bulk Oil Storage (Not in Operation).”

  - 1989: Central adjacent parcel (12045 S. Emerald Avenue, parcel 2528109010) is now vacant. Sheet metal business and Lundquist Coal Company is no longer on Site. Landscaping material yard established in western adjacent parcel (12029 S. Halsted Street, parcel 2528108041). No significant changes to last Sanborn available in 2004.

- **Aerial Photographs**

  - No significant findings from the aerial photographs.

Environmental Concern Rating: Medium Concern

- Hazardous materials or petroleum products may have been stored onsite, but there is no known contamination associated with the property based on all available information.

Attachment 6: Park Concept Renderings

Note that appearance of project elements (such as park amenities, trees, landscaping, pathways, etc.) in visualizations is intended to show scale of project elements. Actual placement and construction appearance may differ based on design decisions for colors, textures, finishes, and choice of specific features.

Wendell Smith Park

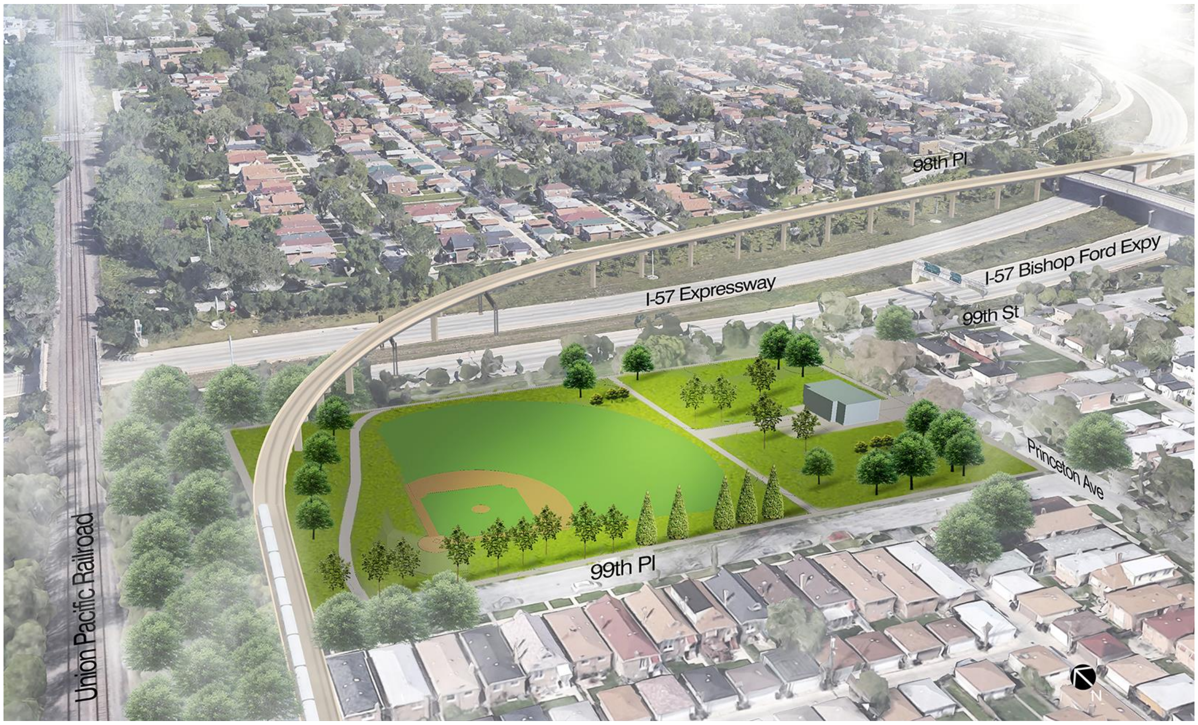

98th Pl
I-57 Expressway
I-57 Bishop Ford Expy
99th St
Princeton Ave
99th Pl
Union Pacific Railroad
N

Figure 1: Overhead Visualization of Wendell Smith Park

Site 2B

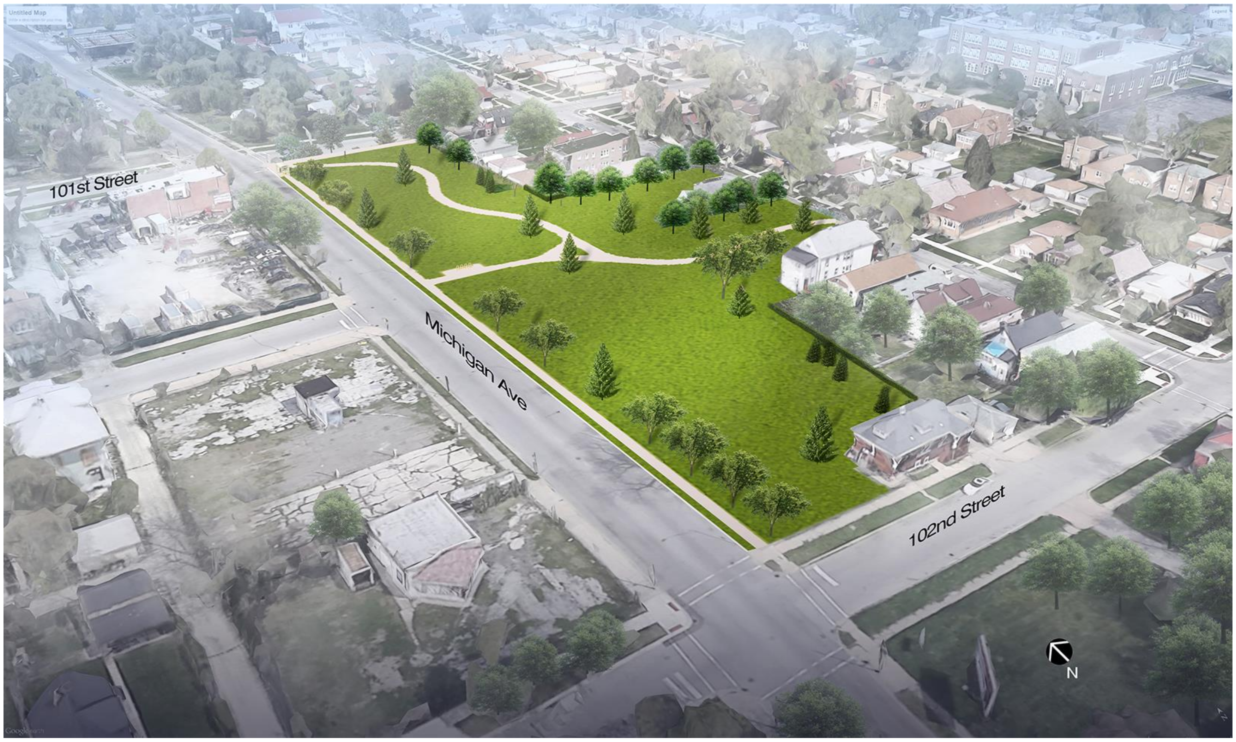

101st Street
Michigan Ave
102nd Street
N

Figure 2: Overhead Visualization of Site 2B

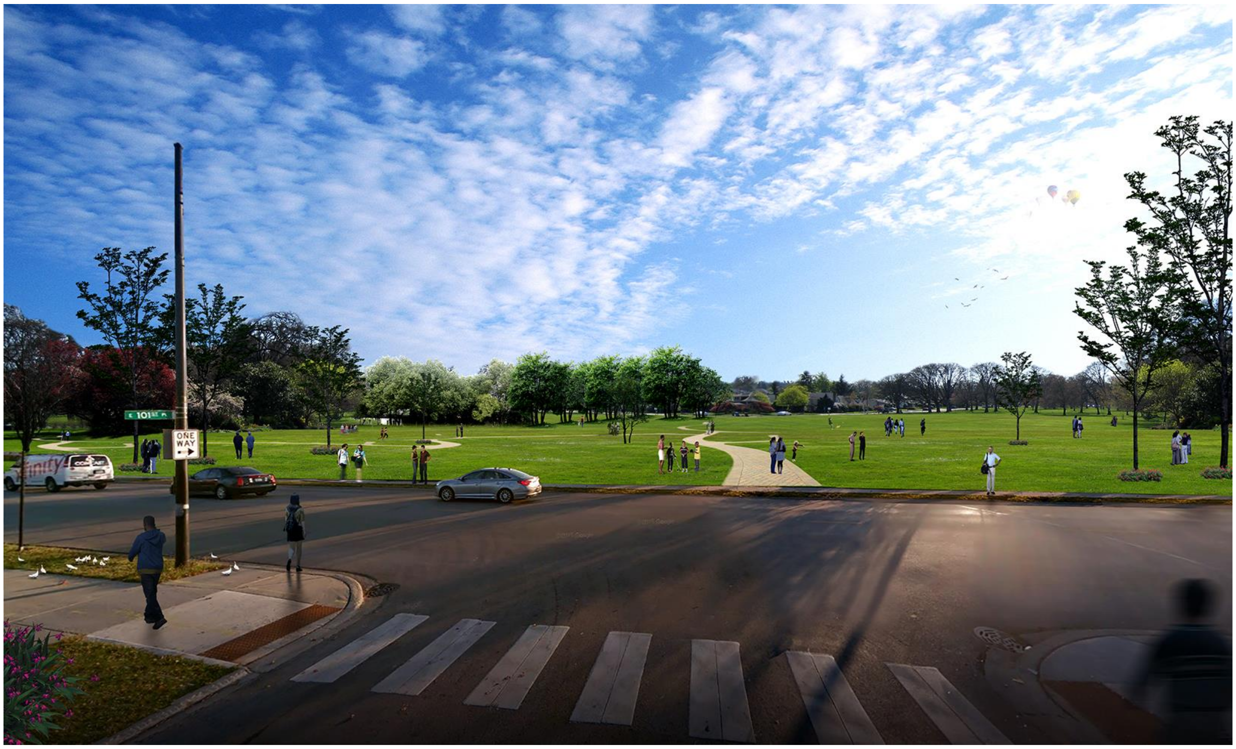


Figure 3: Eye-Level Visualization of Site 2B

Site 8A

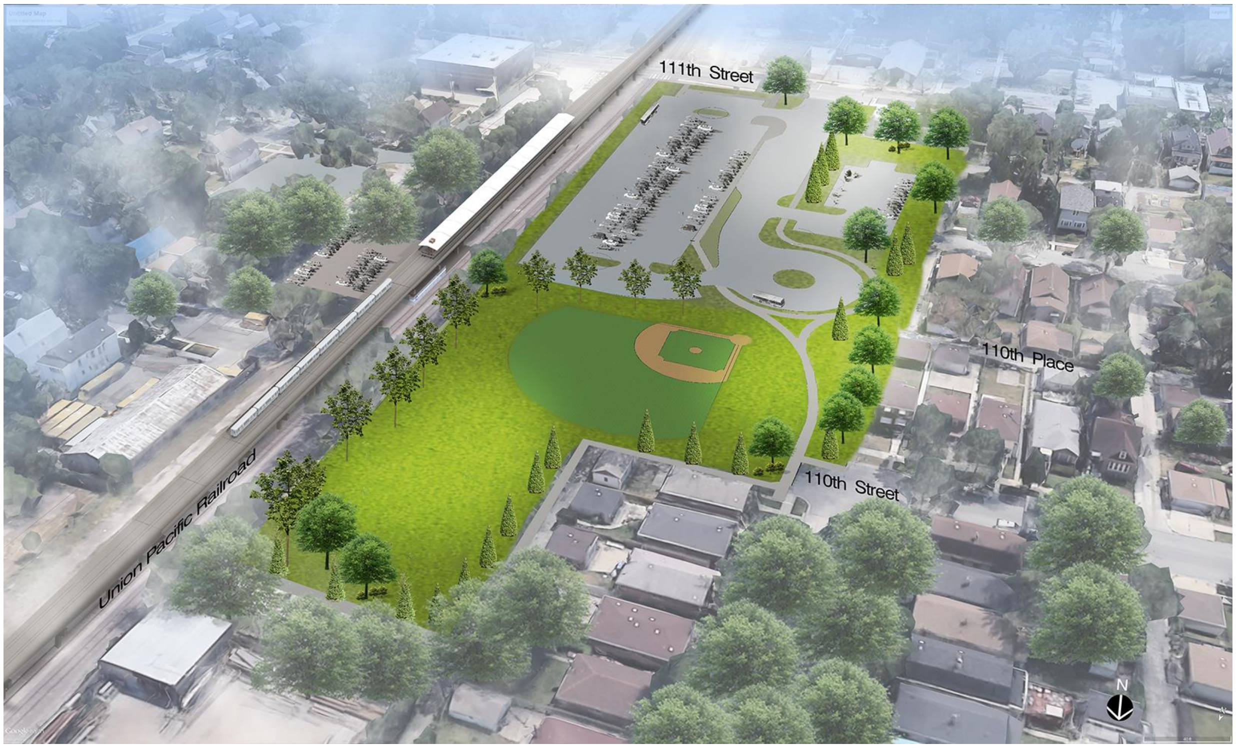

111th Street
110th Place
110th Street
Union Pacific Railroad
N

Figure 4: Overhead Visualization of Site 8A

Site 12

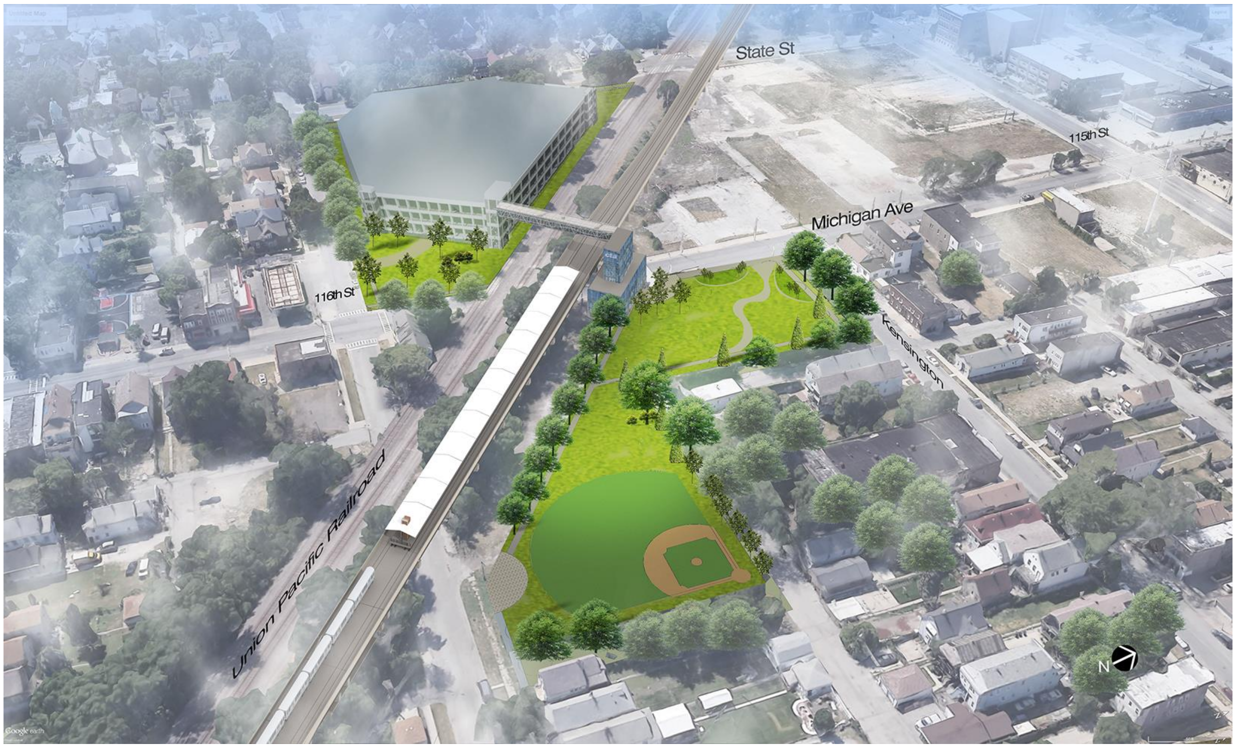

State St
115th St
Michigan Ave
Kensington
116th St
Union Pacific Railroad
N

Figure 5: Overhead Visualization of Site 12

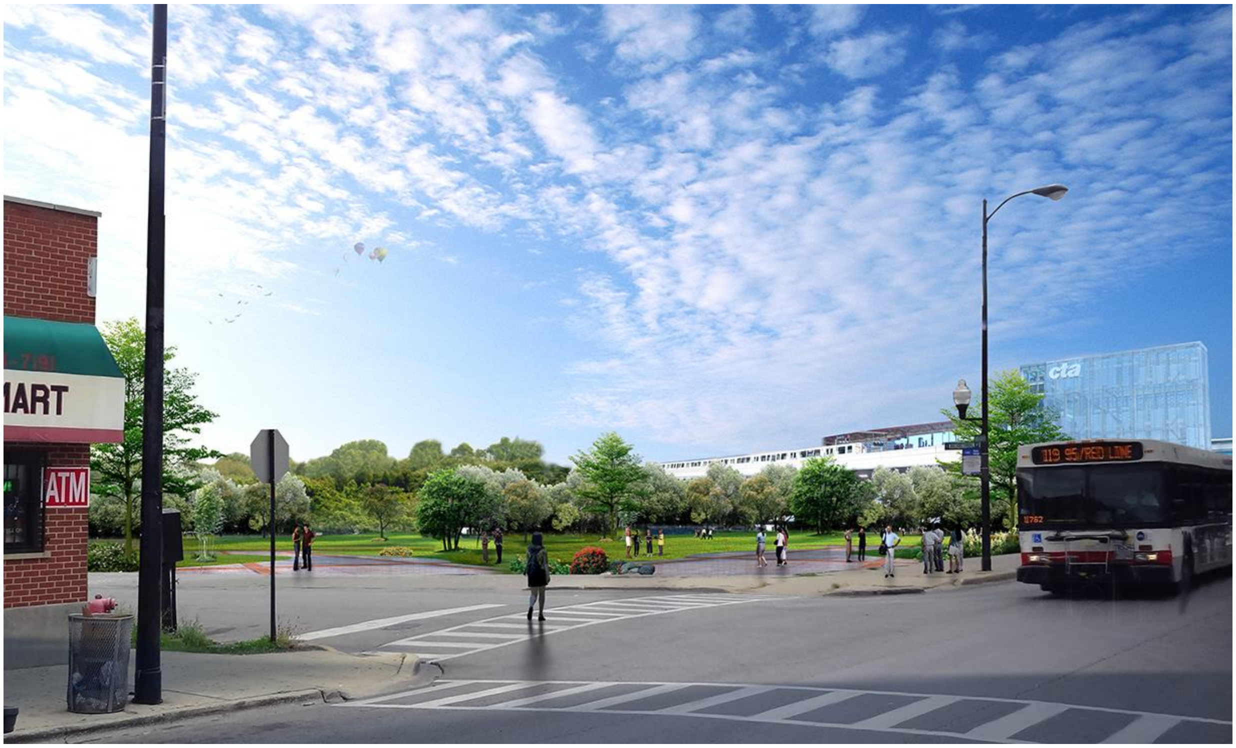

MART
ATM
cta
119 95/RED LINE

Figure 6: Eye-Level Visualization of Site 12